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For technical service call: 1-800-248-9606



Hours: 8:30 am - 6:00 pm EST (Monday - Friday)

Use Of Clevite® engine bearings & engine parts, Perfect Circle® piston rings and Victor Reinz® gaskets products in aircraft or other specialty equipment may be a violation of Local, State or Federal Regulatory Agency laws, rules and regulations.

These products are intended solely for automotive applications. Under absolutely NO circumstances should these products ever be used in non-automotive applications including, without limitation, aircraft engines, medical equipment, atomic energy devices or reactors.

"Federal, State and local laws restrict the removal, rendering inoperative, or in some cases the modification of factory installed emission devices or systems. California restricts the use of parts which could increase emissions in vehicles designed for use on public streets or highways. The sale or installation on emission controlled vehicles of certain emission control components not approved by the California Air Resources Board, which alter or modify the original design or performance of such vehicle's emission control system is prohibited. Some of the parts listed and offered for sale in this catalog may fall within the above restrictions. Such parts are intended only for use on off-road vehicles competing in competitive events or on other types of vehicles which are exempt from the applicable emission control laws. Installation of these parts on vehicles subject to emission control laws may be prohibited.

MAHLE Clevite recommends that the applicable emission control laws be reviewed before considering the installation of add-on or modified parts."

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Manufacturer Specific Catalogs



To meet the needs of the industry, MAHLE Clevite has produced a series of Manufacturer Specific Catalogs. In these catalogs, you will be provided with the precise information you need for selected applications or market segments – avoiding the time-consuming exercise of looking through large and confusing multi-manufacturer catalogs; getting you the necessary information more quickly and easily.

In these Manufacturer Specific catalogs, MAHLE Clevite has also included numerical listings and interchanges for all the parts in the catalog for fast and easy look-up.

In addition to this catalog, the following catalogs are/or will be available:

- AGCO®
- Asian Industrial
- Case®/IH, Ford/New Holland®
- Caterpillar®
- Cummins®
- Industrial
- International® Truck, Navistar®
- John Deere®
- Mack®, Volvo®

As each catalog is completed, they can be found online at www.mahleclevite.com

Please Note: All manufacturer's names, symbols, numbers and descriptions are used for reference purposes only and it is not implied that any part is the product of these manufacturers.

CLEVITE® PERFECT CIRCLE® VICTOR REINZ GASKETS

How To Use This Catalog

This catalog is divided into seven distinct categories. These categories are spread across a two-page format with line numbers separating each engine or model application data.

Below is suggested method to follow, when using this catalog:

1. Find the vehicle or engine in the Model/ Engine Index. Please note the serial number is required to determine the proper “Line No.” for some models.
2. Turn to the “Line No.” indicated in the Model/ Engine Index.
3. Scan across form left to right to locate the parts required.

Specifications are shown in the numerical listings. A detailed description of the left and right hand pages broken down by the seven distinct categories is listed below:

The **First Section** is located on the left hand page with the heading “Cylinder Kits.” Parts in this section include Sleeve Assemblies and/or Rebore Kits, Sleeves, Pistons, Piston Rings, Piston Pins and Rod Bushings.

The **Second Section** is located on the right hand page with the heading “Gasket Sets”. Parts listed in this section include Overhaul Sets, Head Sets, Lower Sets, Oil Pan Sets and In-Frame Kits.

The **Third Section** is located on the right hand page with the heading “Valve Train Parts”. Parts listed in this section include Exhaust or Intake Valves, Valve Guides, Valve Springs and Valve Keepers.

Located below the third section is the **Fourth Section**, listing Camshafts/Timing Components. The listing includes any important information needed to determine the correct camshaft and gears for the particular engine(s) listed.

Located below the fourth section is the **Fifth Section**, listing Crankshafts.

Located below the fifth section is the **Sixth Section**, listing Oil Pumps.

The **Seventh Section** is located on the far right hand page with the heading “Bearings”. Parts listed in this section include Connecting Rod Bearings, Main Bearing Sets, Individual Main Bearings, Camshaft Bearing Sets, Thrust Washer Sets and Shim Sets. Also listed next to the part number are the undersizes available for that particular part and the standard shaft diameter.

Sleeve Assemblies

MAHLE Clevite sleeve assemblies include the following components: cylinder sleeve (wet and dry), piston, piston pin, lock rings, piston ring set and sleeve sealing rings.

Heavy duty aluminum, iron and steel components provide the structural strength and dimensional integrity to give OE equivalent performance and life. Depending on the application, contemporary design features listed below are included.

Pistons

1. Ni-resist top grooves to control groove wear.
2. Balancing for smooth engine operation.

Piston Pins

1. High strength steels meet structural requirements to prevent pin breakage or deflection.
2. Case hardened to provide long lasting wear surfaces.
3. A high degree of dimensional and surface finish control are the final requirements for strength and long life.

Piston Rings

1. Latest, high strength materials to protect against fatigue breakage.
2. Chrome and moly plated O.D. finishes provide long lasting wear surfaces.
3. Chrome plated and nitrided steel oil rings give good oil control.

Sleeves

1. Sleeve material is carefully manufactured to give longest possible service life with the least amount of wear.
2. Heat treated as required.
3. Firewalls and head gasket beads are included to enhance gasket performance and life.
4. Cross-hatched, plateau honed finish on all I.D.'s provides proper sealing and surfaces for piston rings.

Sleeve Sealing Rings

1. Selected up-to-date compounds give good resistance to compression and thermal set, tearing and leaking.
2. Round, rectangular and square configurations are designed to meet the specific needs of different engines.



For Non-Sleeved Engines

MAHLE Clevite rebore kits include the following components: pistons, piston pins, lock rings and piston rings. Depending on the application, contemporary design features as listed below are included.

Pistons

1. Ni-resist top grooves to control groove wear.
2. Balancing for smooth engine operation.

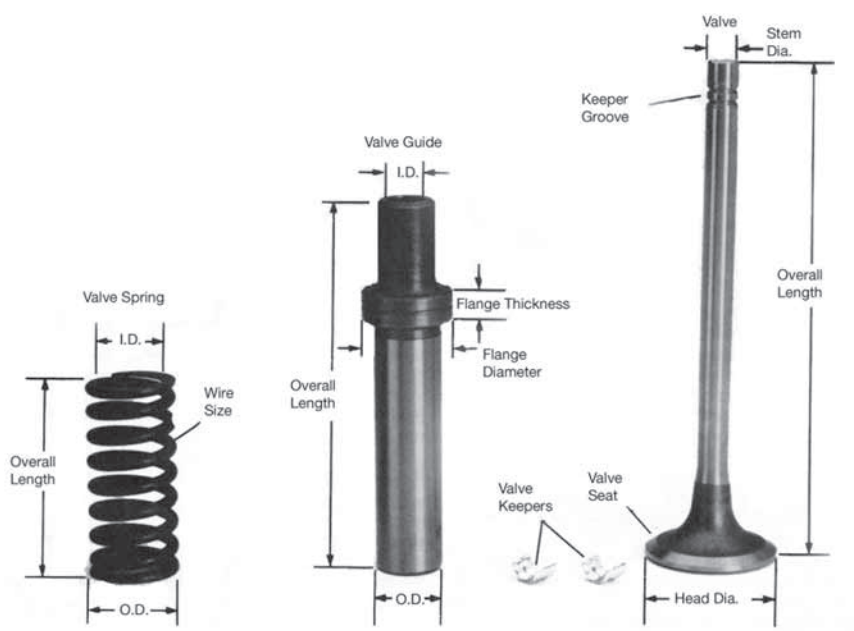
Piston Pins

1. High strength steels meet structural requirements to prevent pin breakage or deflection.
2. Case hardened to provide long lasting wear surfaces.
3. A high degree of dimensional and surface finish control are the final requirements for strength and long life.

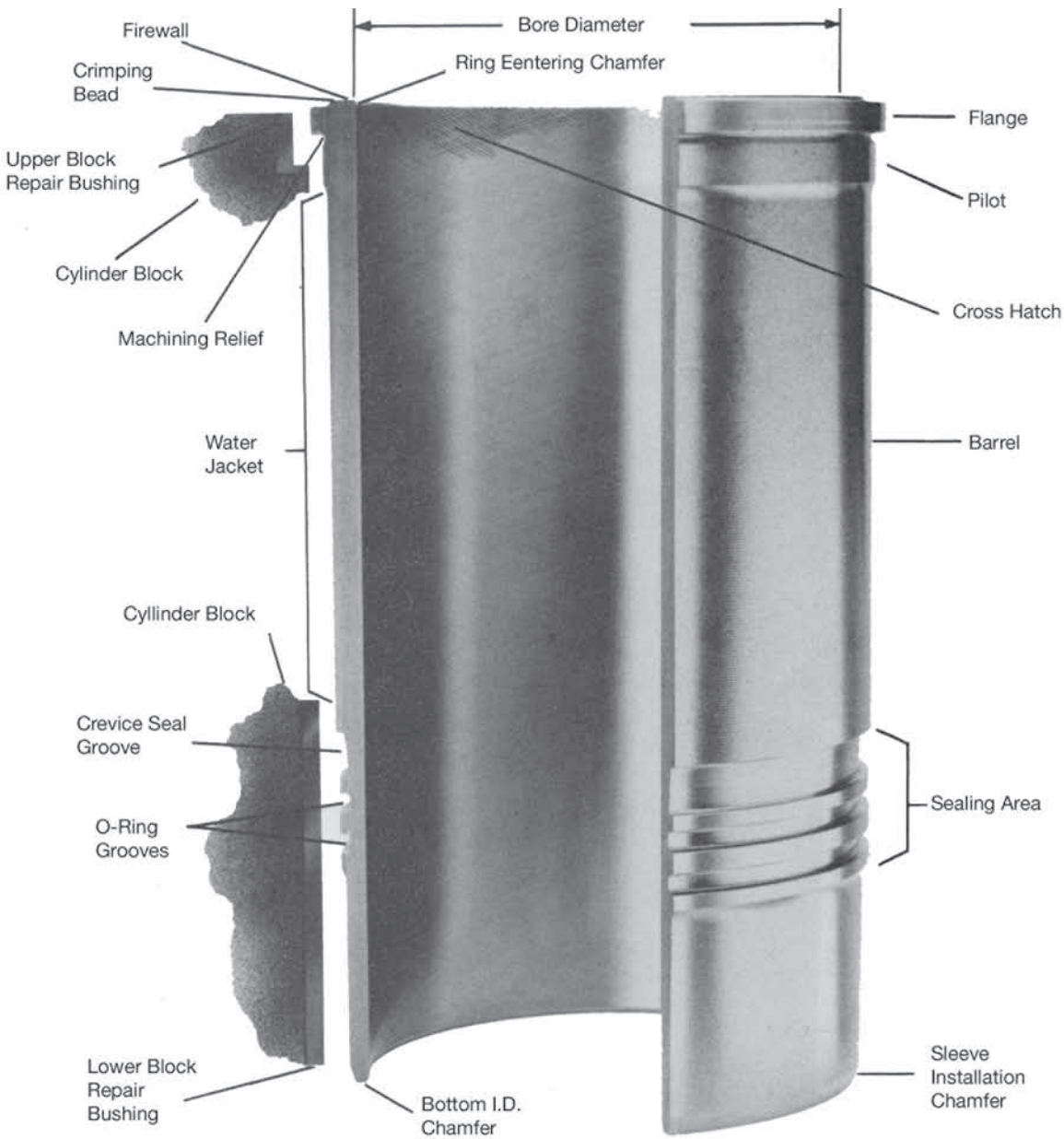
Piston Rings

1. Latest, high strength materials to protect against fatigue breakage.
2. Chrome and moly plated O.D. finishes provide long lasting wear surfaces.
3. Chrome plated and nitrided steel oil rings give good oil control.

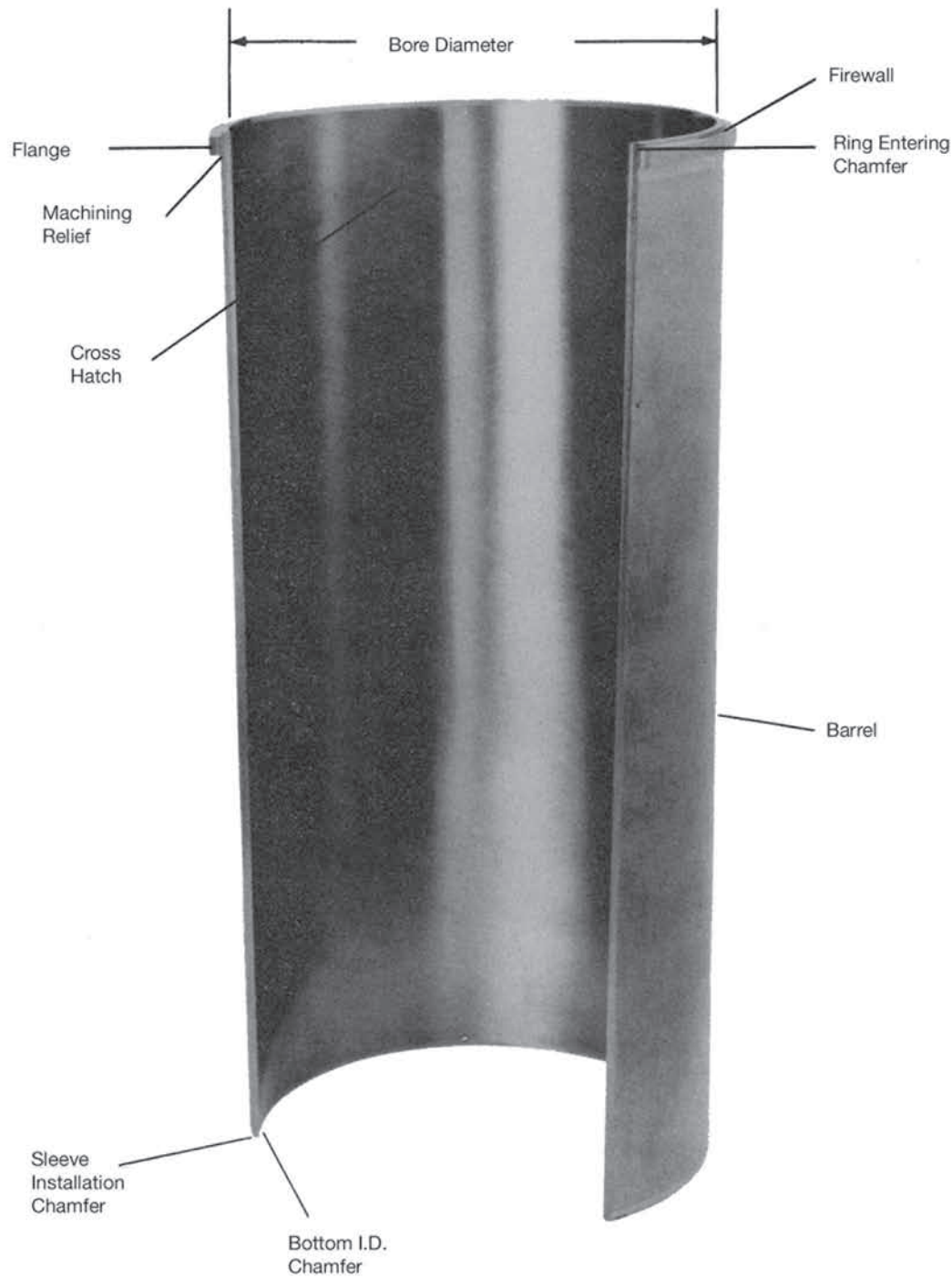




Wet Sleeve Nomenclature

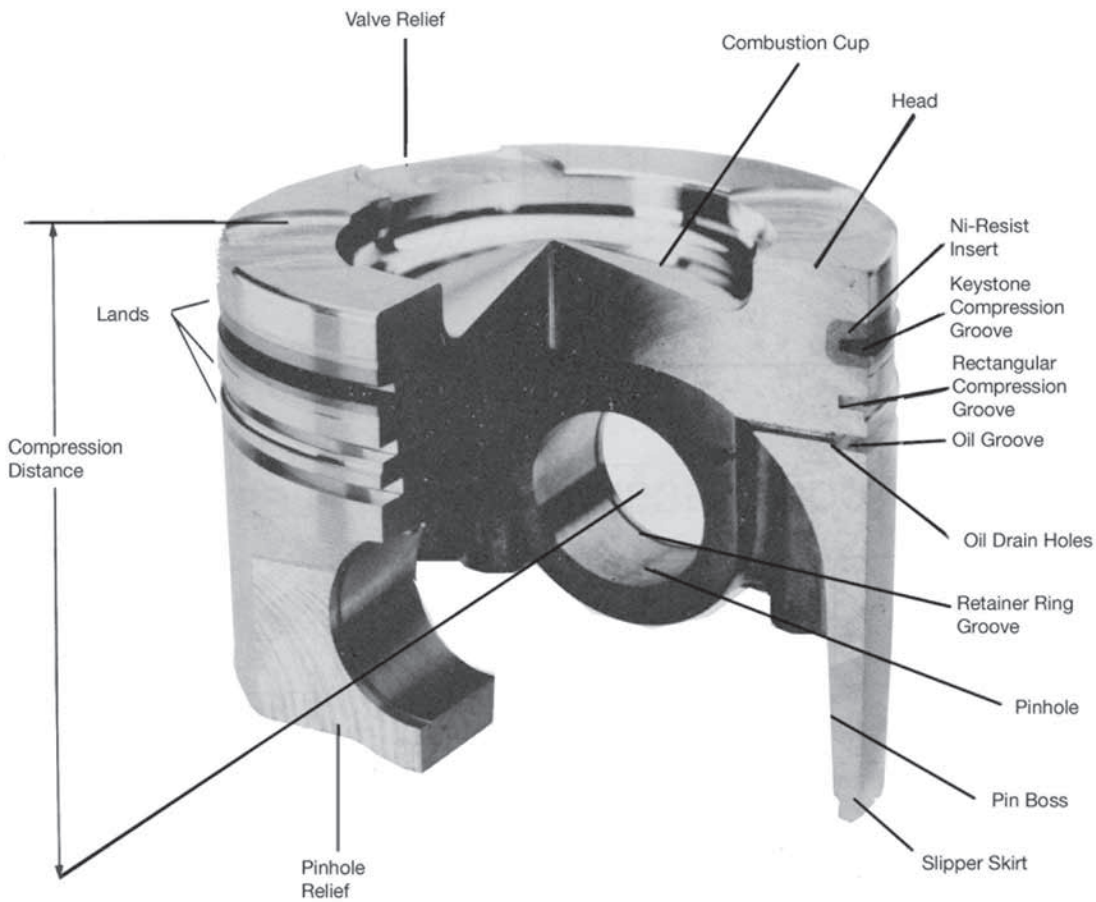


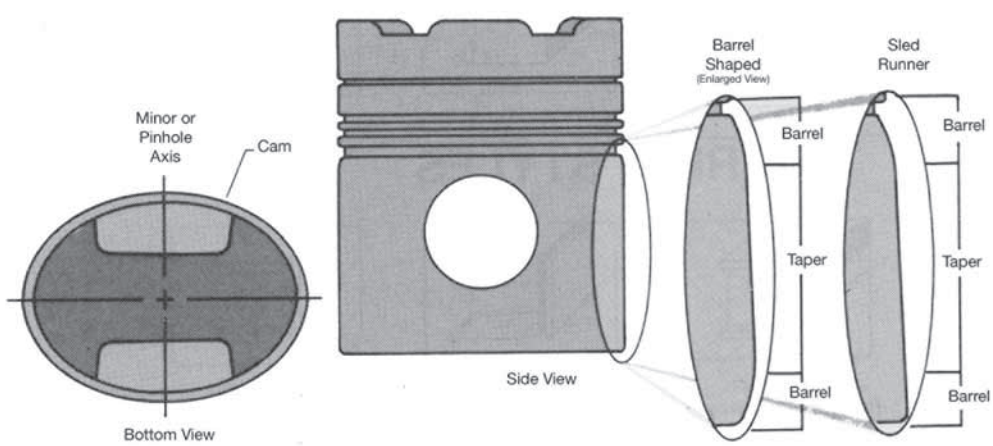
Dry Sleeve Nomenclature



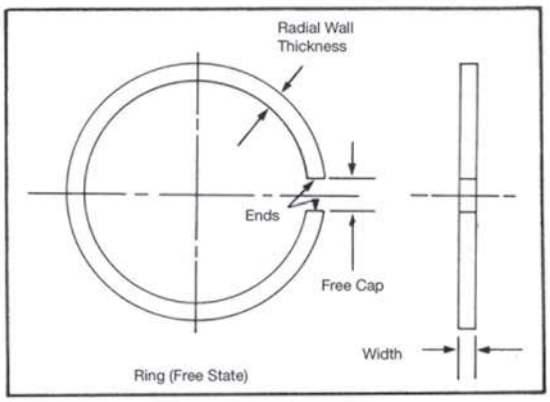
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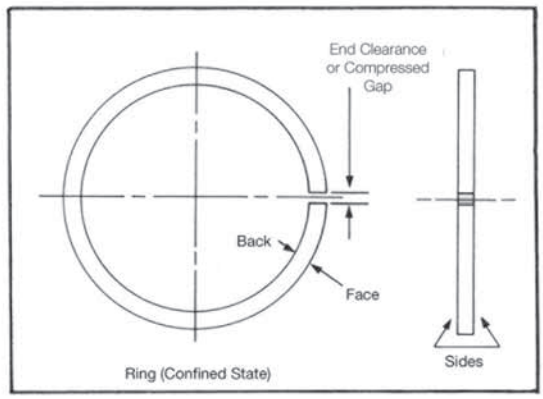
Piston Nomenclature



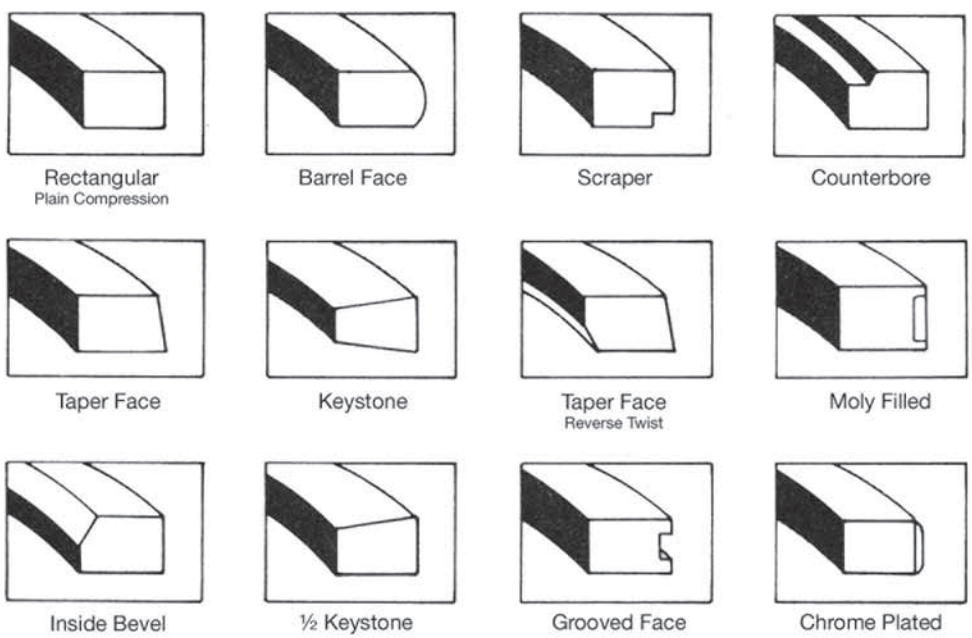


Piston Ring Styles

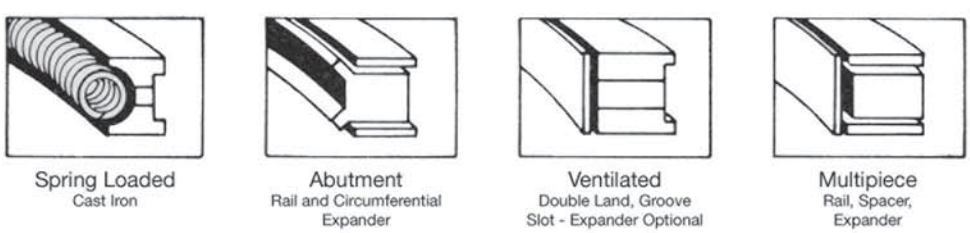




Compression Ring Styles



Oil Ring Styles



Gasket Set Terminology

Full Gasket Set
Includes all gaskets normally required for a total disassembly of the engine or complete out-of-frame overhaul, including standard front and rear seals.

In-frame Gasket Set
Includes all gaskets normally required to do an in-frame overhaul. This would include all the gaskets required to remove and replace all cylinder heads and pan gasket.

Head Gasket Set
Includes all gaskets normally required to remove and replace a cylinder head. Caution should be exercised in ordering head gasket sets as sets can be offered in single cylinder, multi-cylinder or complete engine sets. There are cases where multiple sets are required to service all cylinder heads on one engine. Selected head gasket sets are available with oversize head gaskets to compensate for machining of components.

Oil Pan Set
Includes all gaskets normally required to remove and replace the oil pan.

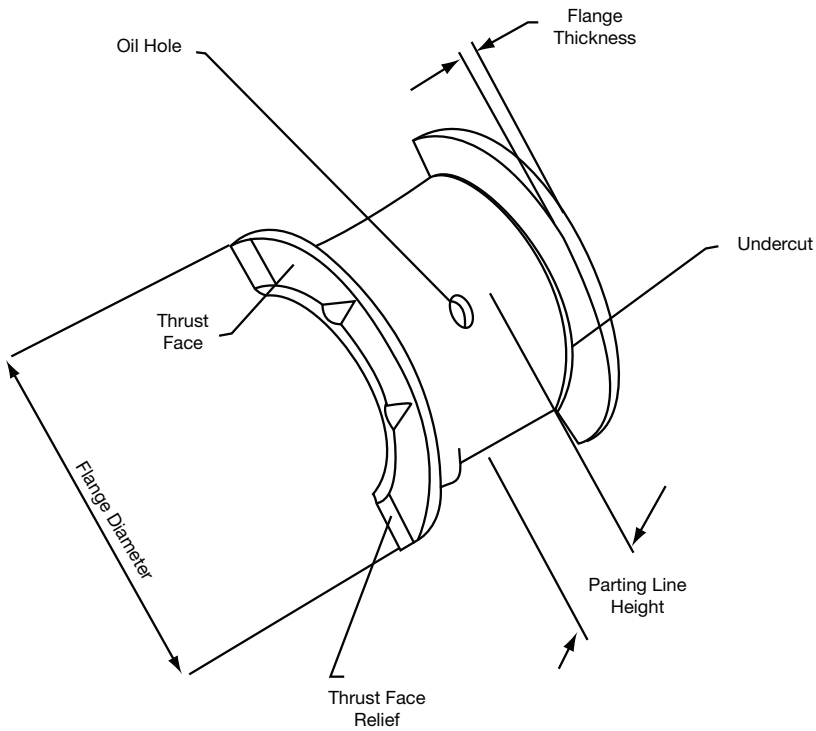
Cylinder Head Gasket
Includes single head gasket only and no supporting gaskets. These are available separately for popular applications. Selected head gaskets are available in oversize to compensate for machining of components.

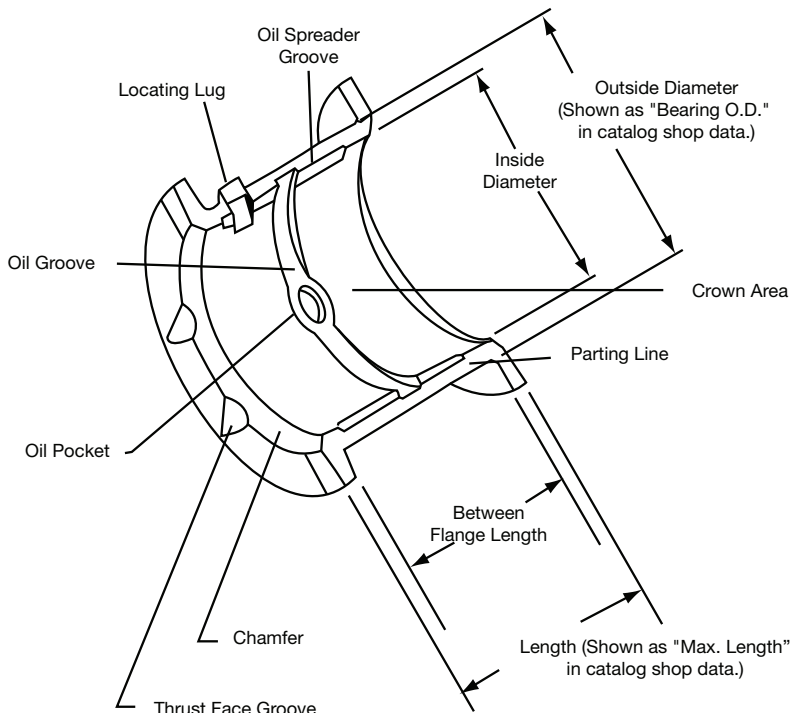
Timing Cover Set
Includes all gaskets and standard seals normally required to access and service timing chains or gears. Selected sets also include crankshaft repair sleeves.

Manifold Gasket Set
Includes all gaskets normally required to remove and replace either intake or exhaust manifolds. Intake and exhaust sets are ordered separately and are available for popular applications.

Valve Cover and Push Rod Cover Set
Includes all gasket normally required to remove and replace either valve covers or push rods covers. Valve cover and push rod cover sets are ordered separately and are available for popular applications.

Bearing Nomenclature





Bearing Terminology

B-60, B-90, C-60, G-60
Indicates a bearing with a finished inside diameter to fit .060" or .090" diameter journal. This bearing has a heavy lining and can be machined or align bored to any size down to and including standard.

Bearing Outside Diameter Or Housing Bore
The minimum to maximum diameter of the hole in the engine block or the connecting rod.

Crush
When the bearing half is in its place in the housing bore, there is a slight bit of material that extends above the housing bore. When the assembly is torqued to proper specification, force is then exerting onto the OD of the bearing causing a press fit. Crush also aids in bore distortion, and heat transfer by increasing the surface contact with the bearing and the bore. Clevite Performance bearings have added crush for heat transfer and bearing retention. The amount of crush will vary depending on application.

Eccentricity
A gradual reduction in the bearing wall thickness starting at the crown and ending at approximately .380" from the parting lines.

Full Annular Grooved
Bearings having an oil groove cut from parting line to parting line in the internal surface of the half shell. When two grooved halves are joined, this creates a groove in the internal surface around the total circumference of the bearing.

Inside Diameter
The distance between the inner surfaces of the assembled bearing.

Main T/W Set
Main thrust washer set.

Maximum Bearing Length
The maximum length that the bearing may have (including the flange when it applies). The actual length is usually less than this value.

Maximum Wall At Crown
The maximum thickness of the bearing wall at 90° from the parting lines. The actual thickness is usually less than this value.

Standard Shaft Diameter
The minimum to maximum size of the standard main crankshaft journal, connecting rod journal or camshaft journal.

Semi
Indicates a bearing with a semi-finished inside diameter. This bearing requires a machining or align boring operation after assembling in housing and may be sized down to any undersize including standard.

Vertical Oil Clearance
The difference between the assembled inside diameter of the bearing and the outside diameter of the shaft, measured at 90° from the bearing parting lines.

The numbers listed next to the headings below correspond to the part identification numbers listed on the following pages. These numbers will help to identify our part numbers, nomenclature, prefix and or suffix for common parts in our product line.

Engine

Series	Description
211-1000	Valves
212-1000	Valve Springs
213-1000	Valve Lifters
214-1000	Rocker Arm Parts
214-2000	Rocker Arms
215-4000	Push Rods
216-1000	Valve Stem Seals
216-2000	Roto Mechanisms
216-3000	Roto Cap Assemblies
216-4000	Valve Spring Retainers
216-5000	Valve Locks
216-7000	Engine Fasteners
217-3000	Valve Guides
218-3000	Valve Seat Inserts
219-	Expansion Plugs
223-1000	Wrist Pins
223-3000	Piston Pin Bushings
223-5000	Lock Rings
223-7000	“O” Rings
223-8000	Shims, Insert Rings
224-1000	Pistons
226-1000	Sleeve Assemblies
226-4000	Sleeves
226-8000	Repair Sleeves
229-1000	Camshafts
230-1000	Rocker Arm Assemblies
230-3000	Rocker Arm Shafts
247-5000	Crankshafts
601-3000	Oil Coolers
A-B-C	Valve Spring Inserts
8-	Timing Gears
9-	Sprockets and Chains
S-	Timing Sprockets

Gaskets

Series	Description
4000 & 6000	Rear Main/Timing Cover Seals
43-5999	Cylinder Head Gaskets (single)
CH-	Cylinder Head Gaskets (multi)
CS-	Conversion Sets “Lower”
EK-	In-Frame Sets
FS-	Full Gasket Sets
HS-	Head Gasket Sets “Upper”
JV500-	Rear Main or Timing Cover Sets
MS-	Intake or Exhaust Manifold Sets
OS-	Oil Pan Gasket Sets
PS-	Push Rod (Side) Cover Gasket Set
SS-	Front or Rear Main Seal (Includes Repair Sleeve)
VS-	Valve Cover Gasket Set

Bearings

223-3000	Piston Pin Bushings
CB-	Connecting Rod Bearing
MB-	Individual Main Bearing
MS-	Main Bearing Set
SH-	Cam Bearing
SM-	Shim Set
TW-	Thrust Washer

Bearing Suffix

-AL	Aluminum Alloy or Seal Backed with an Aluminum Alloy Lining
-B	Steel or Bronze Backed with a Babbitt Lining
-C	Steel Backed With Copper Lead Lining
-G	Steel Backed with TriMetal Copper Lead Matrix
-F	Flanged Bearing
-M	Steel Backed with Micro Babbitt Lining
-P	Steel Backed Intermediated Layer of TriMetal Copper-Lead Alloy with a .001” Electroplated Lead-Tin Overlay
-S	Indicates “Set”
-W	Thrust Washer WL-lower, WU-upper

Bore Diameter	Length	3/32” Wall*	Part Number	1/8” Wall*	Part Number
2.5000	6.5000	2.6895	226-8152		
2.8125	8.2500	3.0020	226-8162		
3.0000	9.2500	3.1910	226-8050		
3.1250	8.1250	3.3160	226-8036		
3.1250	9.2500	3.3160	226-8051	3.3785	226-8002
3.1875	6.5000	3.3785	226-8027		
3.1875	9.2500	3.3785	226-8052	3.4410	226-8003
3.2500	8.1250	3.4410	226-8026	3.4410	226-8026
3.2500	9.2500	3.4410	226-8053	3.5035	226-8004
3.2677	6.500 ‡	3.4595	226-8074		
3.3070	6.5000	3.4975	226-8127		
3.3125	9.2500	3.5035	226-8054	3.5660	226-8005
3.3750	9.2500	3.5660	226-8055		
3.4375	7.5000	3.6290	226-8045		
3.4375	9.2500	3.6285	226-8056	3.6910	226-8006
3.5000	5.2500	3.6905	226-8089		
+ 3.500	5.812 †	3.6280	226-8069		
3.5000	9.2500	3.6910	226-8057		
3.5625	7.2500	3.7535	226-8029		
3.6250	10.2500	3.8160	226-8059		
3.6600	5.0600	3.8515	226-8103		
3.6875	10.2500	3.8785	226-8060		
3.7500	6.0600	3.9410	226-8040		
3.7500	10.2500	3.9410	226-8061	4.0035	226-8010
3.7800	5.5000	3.9710	226-8105	4.0335	226-8104
3.8000	6.0000	3.9915	226-8078		
3.8125	10.2500	4.0035	226-8062		
3.8750	5.8750	4.0660	226-8033		
3.8750	6.2500	4.0660	226-8135		
3.8750	10.2500	4.0660	226-8063	4.1285	226-8012
3.9375	6.7500	4.1280	226-8114		
3.9630	6.7500	4.2545	226-8138		
4.0000	5.5000	4.1915	226-8075	4.2540	226-8076
4.0000	6.0600	4.1910	226-8032		
4.0000	10.2500	4.1910	226-8064	4.2535	226-8014
4.0500	6.2500	4.2410	226-8071	4.3035	226-8070
4.0900	6.7500	4.3795	226-8137		
4.1250	10.2500	4.3160	226-8065	4.3785	226-8015

Bore Diameter	Length	3/32” Wall*	Part Number	1/8” Wall*	Part Number
4.1875	12.2500	4.4410	226-8023		
4.2000	8.2500	4.3620	226-8072		
4.2500	12.2500	4.4410	226-8066	4.5035	226-8016
4.3125	12.2500			4.5655	226-8143
4.3600	6.2500	4.5505	226-8097	4.6130	226-8096
4.3750	12.2500	4.5660	226-8067	4.6280	226-8144
4.5000	8.8120	4.6910	226-8139		
4.5000	12.2500	4.6910	226-8068	4.7535	226-8018
4.6250	12.2500	4.8155	226-8145	4.8780	226-8146
4.7500	12.2500			5.0030	226-8148
5.0000	12.7500			5.2530	226-8149
5.1250	14.0000			5.3790	226-8150
5.2500	15.0000			5.5040	226-8151
5.5000	10.2500			5.7540	226-8164
5.5000	17.0000			5.7540	226-8153
5.7500	17.0000			6.0040	226-8154
6.0000	17.0000			6.2540	226-8155
6.1250	17.0000			6.3790	226-8156
6.7500	19.0000			7.0040	226-8158
7.0000	22.0000			7.2540	226-8159
7.5000	22.0000			7.7540	226-8161

‡ .080 wall + Finished/honed bore

† .075 wall * Fin O.D. +/- .001

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-9441	0.125	1/8	0.340	Thread Type (Square)	Steel
219-9618	0.125	1/8	0.300	Thread Type (Hex)	Steel
219-9900	0.125	1/8	0.375	Thread Type (Slotted)	Steel
219-9440	0.250	1/4	0.375	Thread Type (Hex)	Steel
219-9573	0.250	1/4	0.375	Thread Type (Hex)	
219-9901	0.250	1/4	0.460	Thread Type (Hex)	Steel
219-9902	0.250	1/4	0.460	Thread Type (Hex)	Steel
219-9903	0.250	1/4	0.500	Thread Type (Square)	Steel
219-2166	0.260	1/4	0.135	Cup Type (Shallow)	Steel
219-3105	0.273	17/64	0.200	Cup Type (Deep)	Steel
219-3128	0.313	5/16	0.296	Cup Type (Deep)	Steel
219-2162	0.317	5/16	0.205	Cup Type (Deep)	Steel
219-3189	0.317	5/16	0.205	Cup Type (Deep)	Steel
219-3101	0.339	11/32	0.241	Cup Type (Deep)	Steel
219-9442	0.375	3/8	0.460	Thread Type (Hex)	Steel
219-9443	0.375	3/8	0.375	Thread Type (Hex)	Steel
219-9904	0.375	3/8	0.360	Thread Type (Hex)	Steel
219-2185	0.383	3/8	0.160	Cup Type (Deep)	Steel
219-3188	0.404	25/64	0.265	Cup Type (Deep)	Steel
219-1037	0.438	7/16		Disc Type	Steel
219-3093	0.439	7/16	0.156	Cup Type (Deep)	Steel
219-2156	0.442	11mm	0.191	Cup Type (Shallow)	Steel
219-3088	0.446	29/64	0.203	Cup Type (Deep)	Steel
219-2160	0.455	11.5mm	0.210	Cup Type (Shallow)	Steel
219-3193	0.473	15/32	0.265	Cup Type (Deep)	Steel
219-2165	0.475	15/32	0.200	Cup Type (Shallow)	Steel
219-1046	0.500	1/2		Disc Type	Steel
219-4019	0.500	1/2		EZ-Seal Type (Rubber)	Rubber
219-9444	0.500	1/2	0.500	Thread Type (Hex)	Steel
219-3169	0.510	1/2	0.258	Cup Type (Deep)	Steel
219-3087	0.515	33/64	0.187	Cup Type (Deep)	Steel
219-3095	0.526	1/2	0.312	Cup Type (Deep)	Steel
219-8095	0.526	1/2	0.312	Cup Type (Deep)	Brass
219-3097	0.539	35/64	0.250	Cup Type (Deep)	Steel
219-2098	0.541	35/64	0.187	Cup Type (Shallow)	Steel
219-2164	0.562	9/16	0.196	Cup Type (Shallow)	Steel
219-1047	0.563	9/16		Disc Type	Steel
219-2163	0.567	14.4mm	0.265	Cup Type (Shallow)	Steel
219-3184	0.567	37/64	0.350	Cup Type (Deep)	Steel

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-3094	0.570	37/64	0.203	Cup Type (Deep)	Steel
219-3048	0.571	9/16	0.250	Cup Type (Deep)	Steel
219-8048	0.571	9/16	0.250	Cup Type (Deep)	Brass
219-2189	0.576	14.5mm	0.218	Cup Type (Shallow)	Steel
219-3054	0.592	19/32	0.281	Cup Type (Deep)	Steel
219-1002	0.625	5/8		Disc Type	Steel
219-4017	0.625	5/8		EZ-Seal Type (Rubber)	Rubber
219-1136	0.630	16mm		Disc Type	Steel
219-3052	0.630	5/8	0.250	Cup Type (Deep)	Steel
219-2169	0.631	5/8	0.190	Cup Type (Shallow)	Steel
219-2167	0.635	5/8	0.235	Cup Type (Shallow)	Steel
219-3178	0.642	16.5mm	0.358	Cup Type (Deep)	Steel
219-2188	0.662	21/32	0.235	Cup Type (Deep)	Steel
219-1045	0.688	11/16		Disc Type	Steel
219-3144	0.695	11/16	0.250	Cup Type (Deep)	Steel
219-2197	0.700	45/64	0.205	Cup Type (Shallow)	Steel
219-1135	0.709	18mm		Disc Type	Steel
219-7153	0.709	18mm	0.235	Cup Type (Shallow)	Brass
219-2153	0.717	18mm	0.235	Cup Type (Shallow)	Steel
219-5038	0.748	3/4	0.246	Cup Type (Deep)	Stainless Steel
219-8038	0.748	3/4	0.250	Cup Type (Deep)	Brass
219-1003	0.750	3/4		Disc Type	Steel
219-3038	0.750	3/4	0.265	Cup Type (Deep)	Steel
219-4001	0.750	3/4		EZ-Seal Type (Rubber)	Rubber
219-4016	0.750	3/4		EZ-Seal Type (Rubber)	Rubber
219-6003	0.751	3/4		Disc Type	Brass
219-2180	0.795	20mm	0.312	Cup Type (Shallow)	Steel
219-2151	0.798	20mm	0.238	Cup Type (Shallow)	Steel
219-7151	0.798	20mm	0.238	Cup Type (Shallow)	Brass
219-3200	0.812	13/16	0.312	Cup Type (Deep)	Steel
219-2190	0.823	13/16	0.237	Cup Type (Shallow)	Steel
219-1132	0.827	21mm		Disc Type	Steel
219-3190	0.829	21mm	0.315	Cup Type (Deep)	Steel
219-8190	0.843	21.4mm		Cup Type (Deep)	Brass
219-1006	0.875	7/8		Disc Type	Steel
219-4002	0.875	7/8		EZ-Seal Type (Rubber)	Rubber
219-4015	0.875	7/8		EZ-Seal Type (Rubber)	Rubber
219-3029	0.888	7/8	0.312	Cup Type (Deep)	Steel
219-5029	0.888	7/8	0.250	Cup Type (Deep)	Stainless Steel

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-8029	0.888	7/8	0.312	Cup Type (Deep)	Brass
219-3072	0.912	29/32	0.390	Cup Type (Deep)	Steel
219-3077	0.922	59/64	0.312	Cup Type (Deep)	Steel
219-1007	0.938	1-5/16		Disc Type	Steel
219-1131	0.945	24mm		Disc Type	Steel
219-3039	0.945	15/16	0.375	Cup Type (Deep)	Steel
219-8039	0.945	15/16	0.375	Cup Type (Deep)	Brass
219-2187	0.951	24mm	0.272	Cup Type (Shallow)	Steel
219-2152	0.994	25mm	0.274	Cup Type (Shallow)	Steel
219-2158	0.996	25mm	0.270	Cup Type (Shallow)	Steel
219-7152	0.996	25mm	0.270	Cup Type (Shallow)	Brass
219-7158	0.996	25mm	0.270	Cup Type (Shallow)	Brass
219-1008	1.000	1		Disc Type	Steel
219-4003	1.000	1		EZ-Seal Type (Rubber)	Rubber
219-4014	1.000	1		EZ-Seal Type (Rubber)	Rubber
219-5016	1.000	1	0.330	Cup Type (Deep)	Stainless Steel
219-6008	1.001	1		Disc Type	Brass
219-3016	1.009	1	0.295	Cup Type (Deep)	Steel
219-8016	1.009	1	0.281	Cup Type (Deep)	Brass
219-3191	1.030	26mm		Cup Type (Deep)	Steel
219-1009	1.063	1-1/16		Disc Type	Steel
219-3086	1.071	1-1/16	0.640	Cup Type (Deep)	Steel
219-3174	1.073	1-5/64	0.280	Cup Type (Deep)	Steel
219-2168	1.115	28mm	0.341	Cup Type (Shallow)	Steel
219-7168	1.115	28mm	0.341	Cup Type (Deep)	Brass
219-1010	1.125	1-1/8		Disc Type	Steel
219-4004	1.125	1-1/8		EZ-Seal Type (Rubber)	Rubber
219-6010	1.126	1-1/8		Disc Type	Brass
219-3025	1.133	1-1/8	0.437	Cup Type (Deep)	Steel
219-8025	1.133	1-1/8	0.437	Cup Type (Deep)	Brass
219-5025	1.137	1-1/8	0.330	Cup Type (Deep)	Stainless Steel
219-1021	1.188	1-3/16		Disc Type	Steel
219-6021	1.188	1-3/16		Disc Type	Brass
219-3172	1.195	30mm	0.320	Cup Type (Deep)	Steel
219-8172	1.195	30mm	0.320	Cup Type (Deep)	Brass
219-3134	1.201	1-13/64	0.420	Cup Type (Deep)	Steel
219-3017	1.228	1-7/32	0.531	Cup Type (Deep)	Steel
219-8017	1.228	1-7/32	0.531	Cup Type (Deep)	Brass
219-1011	1.250	1-1/4		Disc Type	Steel

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-3099	1.250	1-1/4	0.341	Cup Type (Deep)	Steel
219-4005	1.250	1-1/4		EZ-Seal Type (Rubber)	Rubber
219-6011	1.251	1-1/4		Disc Type	Brass
219-3204	1.255	1-1/4	0.437	Cup Type (Deep)	Steel
219-8204	1.255	1-1/4	0.437	Cup Type (Deep)	Brass
219-2110	1.260	1-1/4	0.312	Cup Type (Shallow)	Steel
219-5110	1.260	1-1/4	0.325	Cup Type (Deep)	Steel
219-7110	1.260	1-1/4	0.312	Cup Type (Shallow)	Brass
219-3173	1.272	32mm	0.400	Cup Type (Deep)	Steel
219-8173	1.272	32mm	0.400	Cup Type (Deep)	Brass
219-1023	1.313	1-5/16		Disc Type	Steel
219-2127	1.323	1-21/64	0.281	Cup Type (Shallow)	Steel
219-2186	1.335	1-21/64	0.300	Cup Type (Deep)	Steel
219-3179	1.348	34.3mm	0.500	Cup Type (Deep)	Steel
219-8179	1.348	34.3mm	0.500	Cup Type (Deep)	Brass
219-1012	1.375	1-3/8		Disc Type	Steel
219-4006	1.375	1-3/8		EZ-Seal Type (Rubber)	Rubber
219-1133	1.378	35mm		Disc Type	Steel
219-6012	1.378	1-3/8		Disc Type	Brass
219-6133	1.378	35mm		Disc Type	Brass
219-2193	1.385	1-3/8	0.340	Cup Type (Shallow)	Steel
219-3080	1.385	1-3/8	0.500	Cup Type (Deep)	Steel
219-8080	1.385	1-3/8	0.500	Cup Type (Deep)	Brass
219-3171	1.394	35mm	0.408	Cup Type (Deep)	Steel
219-8171	1.394	35mm	0.408	Cup Type (Deep)	Brass
219-2182	1.448	1-7/16	0.431	Cup Type (Deep)	Steel
219-3187	1.448	36.5mm	0.397	Cup Type (Deep)	Steel
219-8187	1.448	36.5mm	0.312	Cup Type (Deep)	Brass
219-1102	1.484	1-31/64		Disc Type	Steel
219-6102	1.487	1-31/64		Disc Type	Brass
219-1013	1.500	1-1/2		Disc Type	Steel
219-4007	1.500	1-1/2		EZ-Seal Type (Rubber)	Rubber
219-2184	1.507	38mm	0.312	Cup Type (Shallow)	Steel
219-3133	1.507	1-1/2	0.325	Cup Type (Deep)	Steel
219-6013	1.507	1-1/2		Disc Type	Brass
219-8133	1.507	1-1/2	0.325	Cup Type (Deep)	Brass
219-8184	1.507	38mm	0.312	Cup Type (Deep)	Brass
219-3085	1.508	1-1/2	0.625	Cup Type (Deep)	Steel
219-8030	1.508	1-1/2	0.625	Cup Type (Deep)	Brass

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-8085	1.508	1-1/2	0.625	Cup Type (Deep)	Brass
219-5133	1.509	1-1/2	0.310	Cup Type (Deep)	Stainless Steel
219-3030	1.517	1-1/2	0.375	Cup Type (Deep)	Steel
219-2181	1.571	1-9/16	0.305	Cup Type (Deep)	Steel
219-1134	1.575	40mm		Disc Type	Steel
219-7159	1.575	40mm	0.288	Cup Type (Shallow)	Brass
219-2159	1.585	40mm	0.283	Cup Type (Shallow)	Steel
219-3199	1.587	41mm	0.470	Cup Type (Deep)	Steel
219-3176	1.590	40mm	0.456	Cup Type (Deep)	Steel
219-8176	1.590	40mm	0.456	Cup Type (Deep)	Brass
219-1014	1.625	1-5/8		Disc Type	Steel
219-4008	1.625	1-5/8		EZ-Seal Type (Rubber)	Rubber
219-6014	1.628	1-5/8		Disc Type	Brass
219-3183	1.630	1-41/64	0.568	Cup Type (Deep)	Steel
219-3186	1.633	41.5mm	0.343	Cup Type (Deep)	Steel
219-3041	1.635	1-5/8	0.593	Cup Type (Deep)	Steel
219-5126	1.635	1-5/8	0.593	Cup Type (Deep)	Stainless Steel
219-8041	1.635	1-5/8	0.593	Cup Type (Deep)	Brass
219-2183	1.638	1-41/64	0.350	Cup Type (Deep)	Steel
219-7183	1.638	1-41/64	0.350	Cup Type (Shallow)	Brass
219-2126	1.640	1-5/8	0.365	Cup Type (Shallow)	Steel
219-7126	1.640	1-5/8	0.365	Cup Type (Shallow)	Brass
219-3196	1.663	42.3mm	0.519		
219-8196	1.663	42.3mm	0.519	Cup Type (Deep)	Brass
219-3177	1.675	42.6mm	0.378	Cup Type (Deep)	Steel
219-2076	1.703	1-45/64	0.281	Cup Type (Shallow)	Steel
219-7076	1.704	1-45/64	0.281	Cup Type (Shallow)	Brass
219-1103	1.734	1-47/64		Disc Type	Steel
219-1015	1.750	1-3/4		Disc Type	Steel
219-4009	1.750	1-3/4		EZ-Seal Type (Rubber)	Rubber
219-6015	1.753	1-3/4		Disc Type	Brass
219-2057	1.758	1-3/4	0.250	Cup Type (Shallow)	Steel
219-3075	1.758	1-3/4	0.363	Cup Type (Deep)	Steel
219-3082	1.758	1-3/4	0.593	Cup Type (Deep)	Steel
219-5075	1.758	1-3/4	0.350	Cup Type (Deep)	Steel
219-8075	1.758	1-3/4	0.363	Cup Type (Deep)	Brass
219-8082	1.758	1-3/4	0.593	Cup Type (Deep)	Brass
219-3168	1.765	44.5mm	0.533	Cup Type (Deep)	Steel
219-3198	1.765	1-49/64	0.406	Cup Type (Deep)	Steel

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-3076	1.783	1-3/4	0.380	Cup Type (Deep)	Steel
219-3175	1.788	45mm	0.470	Cup Type (Deep)	Steel
219-8175	1.788	45mm	0.470	Cup Type (Deep)	Brass
219-2096	1.802	1-51/64	0.250	Cup Type (Shallow)	Steel
219-2173	1.825	1-53/64	0.350	Cup Type (Shallow)	Steel
219-2155	1.843	46.5mm	0.290	Cup Type (Shallow)	Steel
219-7155	1.843	46.5mm	0.290	Cup Type (Shallow)	Brass
219-1020	1.875	1-7/8		Disc Type	Steel
219-4013	1.875	1-7/8		EZ-Seal Type (Rubber)	Rubber
219-6020	1.878	1-7/8		Disc Type	Brass
219-3180	1.883	1-7/8	0.473	Cup Type (Deep)	Steel
219-2161	1.885	1-7/8	0.265	Cup Type (Deep)	Steel
219-3050	1.888	1-7/8	0.447	Cup Type (Deep)	Steel
219-5050	1.888	1-7/8	0.380	Cup Type (Deep)	Stainless Steel
219-8050	1.888	1-7/8	0.447	Cup Type (Deep)	Brass
219-3167	1.901	1-29/32	0.600	Cup Type (Deep)	Steel
219-8167	1.901	1-29/32	0.600	Cup Type (Deep)	Brass
219-2172	1.921	1-59/64	0.235	Cup Type (Shallow)	Steel
219-1043	1.938	1-15/16		Disc Type	Steel
219-3040	1.943	1-15/16	0.800	Cup Type (Deep)	Steel
219-8040	1.943	1-15/16	0.800	Cup Type (Deep)	Brass
219-2196	1.956	1-61/64	0.718	Cup Type (Deep)	Steel
219-3042	1.956	1-61/64	0.718	Cup Type (Deep)	Steel
219-8042	1.956	1-61/64	0.718	Cup Type (Deep)	Brass
219-3185	1.975	50mm	0.596	Cup Type (Deep)	Steel
219-2058	1.978	1-31/32	0.218	Cup Type (Shallow)	Steel
219-8185	1.983	50mm	0.474	Cup Type (Deep)	Brass
219-3170	1.985	50mm	0.474	Cup Type (Deep)	Steel
219-8170	1.985	50mm	0.474	Cup Type (Deep)	Brass
219-1026	2.000	2		Disc Type	Steel
219-4010	2.000	2		EZ-Seal Type (Rubber)	Rubber
219-3194	2.003	2	0.415	Cup Type (Deep)	Steel
219-6026	2.003	2		Disc Type	Brass
219-5066	2.005	2	0.350	Cup Type (Deep)	Steel
219-3201	2.010	2.00	0.438	Cup Type (Deep)	Steel
219-2083	2.013	2-1/64	0.240	Cup Type (Shallow)	Steel
219-3069	2.017	2-1/64	0.590	Cup Type (Deep)	Steel
219-8069	2.017	2-1/64	0.406	Cup Type (Deep)	Brass
219-2066	2.020	2	0.406	Cup Type (Shallow)	Steel

Part #	Plug Size (Decimal)*	Plug Size	Plug Height*	Plug Type	Material
219-7066	2.020	2	0.406	Cup Type (Shallow)	Brass
219-2059	2.062	2-1/16	0.343	Cup Type (Shallow)	Steel
219-7059	2.062	2-1/16	0.343	Cup Type (Shallow)	Brass
219-1068	2.063	2-1/16		Disc Type	Steel
219-3112	2.065	2-1/16	0.510	Cup Type (Deep)	Steel
219-2150	2.098	2-3/32	0.270	Cup Type (Shallow)	Steel
219-3131	2.098	2-3/32	0.610	Cup Type (Deep)	Steel
219-2078	2.101	2-7/64	0.296	Cup Type (Shallow)	Steel
219-1129	2.105	2.105		Disc Type	Steel
219-3181	2.106	2-7/64	0.360	Cup Type (Deep)	Steel
219-1044	2.125	2-1/8		Disc Type	Steel
219-4011	2.125	2-1/8		EZ-Seal Type (Rubber)	Rubber
219-2170	2.135	2-9/64	0.360	Cup Type (Shallow)	Steel
219-3084	2.146	2-9/64	0.600	Cup Type (Deep)	Steel
219-2071	2.148	2-5/32	0.328	Cup Type (Shallow)	Steel
219-3195	2.156	2-5/32	0.358	Cup Type (Deep)	Steel
219-7074	2.181	2-3/16	0.343	Cup Type (Shallow)	Brass
219-2074	2.188	2-3/16	0.344	Cup Type (Shallow)	Steel
219-3147	2.194	2-3/16	0.343	Cup Type (Deep)	Steel
219-2154	2.221	2-7/32	0.305	Cup Type (Shallow)	Steel
219-1022	2.250	2-1/4		Disc Type	Steel
219-4012	2.250	2-1/4		EZ-Seal Type (Rubber)	Rubber
219-3081	2.258	2-1/4	0.812	Cup Type (Deep)	Steel
219-2157	2.262	2-1/4	0.350	Cup Type (Shallow)	Steel
219-3090	2.262	2-17/64	0.355	Cup Type (Deep)	Steel
219-1137	2.280	2.280		Disc Type	Steel
219-3092	2.390	2-25/64	0.310	Cup Type (Deep)	Steel
219-3132	2.497	2-1/2	0.495	Cup Type (Deep)	Steel
219-2194	2.500	2-1/2	0.411	Cup Type (Shallow)	Steel
219-5132	2.500	2-1/2	0.387	Cup Type (Deep)	Steel
219-3089	2.575	2-37/64	0.301	Cup Type (Deep)	Steel

3 CYLINDER

Engine	Fuel	Line Numbers
3AD-152	Diesel	15

4 CYLINDER

Engine	Fuel	Line Numbers
125 CID	Gas	19
4.248	Diesel	22, 23
4A-236	Diesel	16
6000	Diesel	6
6000 MKII	Diesel	5
7000	Diesel	6
7000 MKII	Diesel	5
B125	Gas	19
B15	Gas	19
G149	Gas	20
G201	Gas	21
G226	Gas	10, 18

6 CYLINDER

Engine	Fuel	Line Numbers
D3500 MKII	Diesel	13
D3700 MKII	Diesel	3, 13
DA262	Diesel	8, 9
G262	Gas	14
10000	Diesel	4, 7
10000 MKII	Diesel	4, 7
11000	Diesel	4, 7
11000 MKII	Diesel	4, 7
16000H	Diesel	11
17000 MKII	Diesel	11, 12
21000 MKII	Diesel	11, 12
21000H	Diesel	11
25000	Diesel	11
25000 MKII	Diesel	11, 12
6138LT	Diesel	11
6138T	Diesel	11
649	Diesel	1
649T Turbocharged	Diesel	17
670	Diesel	3, 13
670I	Diesel	3, 13
670T	Diesel	3, 13
685T	Diesel	4, 7

6 CYLINDER CONTINUED

Engine	Fuel	Line Numbers
6D262	Diesel	8, 9
D262	Diesel	8, 9
D2800	Diesel	1
D2900	Diesel	2
D3400	Diesel	3
D3400 MKII	Diesel	13
D3500	Diesel	3

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
1	**649, D2800; Diesel; Cyl.6** Combine F, Cotton Picker 860, Wheel Tractor 180, 185D, 190, 190XT	**Kit Number**		**400-1000**		**400-5000**
		Sleeve Assembly	6	226-1766	6	226-1766
		Rod Bearing	6	CB-1355P	6	CB-1355P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-1623P	1	MS-1623P
		Undersizes		P-10-20		P-10-20
		Head Set	1	HS3803W	1	HS3803W
		Lower Set / Oil Pan Set	1	CS3803	1	OS20935A
2	**D2900; Diesel; Cyl.6** Combine G, L, M, Wheel Loader TL-345B, TL-545, Wheel Tractor 200, 7000, 7010PD, 7010PS	**Kit Number**		**400-1001**		**400-5001**
		Sleeve Assembly	6	226-1777	6	226-1777
		Rod Bearing	6	CB-1355P	6	CB-1355P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-1623P	1	MS-1623P
		Undersizes		P-10-20		P-10-20
		Head Set	1	HS3803W	1	HS3803W
		Lower Set / Oil Pan Set	1	CS3803	1	OS20935A
3	**670T, D3400, 670, D3700 MKII, 670I, D3500; Diesel; Cyl.6** Combine L, N5, N6, N7, Wheel Loader TL-645, Wheel Tractor 210, 220, 7030, 7040, 7045, 7045PS, 7050, 7060, 7060PS, 8030, 8050, 8070, D21 1-1/2" Piston Pin Diameter. Slotted Oil Hole For Late Engines With Piston Cooling Through The Rod.	**Kit Number**		**400-1002**		**400-5002**
		Sleeve Assembly	6	226-1470	6	226-1470
		Rod Bearing	6	CB-1354P	6	CB-1354P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-2002P	1	MS-2002P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS4888	1	HS4888
		Lower Set / Oil Pan Set	1	CS4888	1	OS32482
		Timing Cover Seal Set	1	48160		
		Rear Main Seal Set	1	SS47882		
4	**11000 MKII, 10000, 11000, 685T, 10000 MKII; Diesel; Cyl.6** Crawler Tractor HD11, HD11B, HD11E, HD11EC, HD11EP, Grader 100C, 150C, 200C, 45, D30, M100, M100B, Wheel Loader TL-20, TL-30, TL-745, TL-745B, TL-745C, TL-745H, TR-160, Wheel Tractor 160 HD11 Tractor from S/N 6427; HD11B, HD11E, HD11EC, HD11EP from S/N 10001; TL745, TL745H to S/N 11-18336; Deep Cup Piston. Rod Bearing Has Offset Oil Slot. Late Style Main Bearing With Oil Slot.	**Kit Number**				**400-5003**
		Sleeve Assembly			6	226-1711
		Rod Bearing			6	CB-1369P
		Undersizes				P-10
		Main Bearing Set			1	MS-1619P
		Undersizes				P-10-20

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
5	**7000 MKII, 6000 MKII; Diesel; Cyl.4** Crawler Tractor HD6A, HD6B, HD6E, HD6EP, HD7G, Grader 145, 145T, M60, M70, Wheel Loader TL-14D, TL-16D, Wheel Tractor 170, 175 HD6A, HD6B, HD6E, HD6EP from S/N 13322; Deep Cup Piston. Rod Bearing Has Offset Oil Slot. Late Style Main Bearing With Oil Slot.	**Kit Number**				**400-5004**
		Sleeve Assembly			4	226-1711
		Rod Bearing			4	CB-1369P
		Undersizes				P-10
		Main Bearing Set			1	MS-1632P
		Undersizes				P-10-20
6	**7000, 6000; Diesel; Cyl.4** Crawler Tractor HD6A, HD6B, HD6E, HD6EP, HD7G, Grader 145, 145T, M60, M70, Wheel Loader TL-14D, TL-16D, Wheel Tractor 170, 175 HD6A,HD6B, HD6E, HD6EP from S/N 13322; Shallow Piston Cup. Rod Bearing Has Offset Oil Slot. Late Style Main Bearing With Oil Slot.	**Kit Number**				**400-5005**
		Sleeve Assembly			4	226-1737
		Rod Bearing			4	CB-1369P
		Undersizes				P-10
		Main Bearing Set			1	MS-1632P
		Undersizes				P-10-20
7	**11000 MKII, 10000, 11000, 685T, 10000 MKII; Diesel; Cyl.6** Crawler Tractor HD11, HD11B, HD11E, HD11EC, HD11EP, HD12G, HD12GB, Grader 100C, 150C, 200C, 45, D30, M100, M100B, Wheel Loader TL-20, TL-30, TL-745, TL-745B, TL-745C, TR-160, Wheel Tractor 160, HD12G, HD12GB HD11 from S/N 6427; HD11B, HD11E, HD11EC, HD11EP, HD12G, HD12GB from S/N 10001; TL745, TL745C from S/N 11-18337; Shallow Cup Piston. Rod Bearing Has Offset Oil Slot. Late Style Main Bearing With Oil Slot.	**Kit Number**				**400-5006**
		Sleeve Assembly			6	226-1737
		Rod Bearing			6	CB-1369P
		Undersizes				P-10
		Main Bearing Set			1	MS-1619P
		Undersizes				P-10-20
8	**D262, 6D262, DA262; Diesel; Cyl.6** Combine A, Wheel Loader TL-10, TL-11, TL-12, TL-14, Wheel Tractor D17D Engine DA262 to S/N 117087; Engine 6D262 from S/N 117087; Combine -A Engine S/N 122397 to D-01680; Pressed On Flywheel Housing Retainer.	**Kit Number**	**400-1007**			**400-5007**
		Sleeve Assembly	6	226-1361	6	226-1361
		Rod Bearing	6	CB-458P	6	CB-458P
		Undersizes		P-2-10-20-30-40		P-2-10-20-30-40
		Main Bearing Set	1	MS-227P	1	MS-227P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3293VC	1	HS3293VC
		Oil Pan Set			1	OS20910
9	**D262, 6D262, DA262; Diesel; Cyl.6** Combine A, Wheel Loader TL-10, TL-11, TL-12, TL-14, Wheel Tractor D17D Engine DA262 to S/N 117087; Engine 6D262 from S/N 117087; Combine-A Engine S/N 122397 To D-01680; Bolted-On Flywheel Housing Retainer.	**Kit Number**	**400-1008**			**400-5008**
		Sleeve Assembly	6	226-1361	6	226-1361
		Rod Bearing	6	CB-458P	6	CB-458P
		Undersizes		P-2-10-20-30-40		P-2-10-20-30-40
		Main Bearing Set	1	MS-227P	1	MS-227P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3293VW	1	HS3293VC
		Oil Pan Set			1	OS20910

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
10	**G226; Gasoline; Cyl.4** Combine E, Super 100SP, Grader D, DG, M65, Wheel Loader TL-10, TL-11, TL-12, Wheel Tractor 170, 175, D17, D17 Series IV D17 Series IV to S/N 72458; Power Booster Kit 4-1/8" Bore.	**Kit Number**		**400-1009**		**400-5009**
		Sleeve Assembly	4	226-1799	4	226-1799
		Rod Bearing	4	CB-526P	4	CB-526P
		Undersizes		P-2-10-20-30		P-2-10-20-30
		Main Bearing Set	1	MS-878AL	1	MS-878AL
		Undersizes		AL-10-20		AL-10-20
		Full Gasket Set / Head Set	1	FS3162	1	HS3162
		Oil Pan Set			1	OS30236
11	**21000H, 16000H, 25000, 21000 MKII, 25000 MKII, 6138T, 17000 MKII, 6138LT; Diesel; Cyl.6** Crawler Loader TL-40D, Crawler Tractor HD16B, HD16D, HD16DC, HD16P, HD21, HD21P, Wheel Loader TL-945B, Wheel Tractor 260B, 261B 17000 MKII to S/N 17-03006; 21000 MKII to S/N 21-13092; 25000 MKII to S/N 25-04576; HD16P from S/N 5901; HD21P from S/N 12501; 2" Piston Pin Diameter.	**Kit Number**				**400-5010**
		Sleeve Assembly			6	226-1712
		Rod Bearing			6	CB-1632P
		Undersizes				P-10-20-30
		Main Bearing Set			1	MS-1530P
		Undersizes				P-10
		Thrust Washer Set			1	TW-134S
		Head Set			1	HS54136
		Oil Pan Set			1	OS32187
12	**25000 MKII, 21000 MKII, 17000 MKII; Diesel; Cyl.6** Crawler Loader TL-40D, Scraper 260A, 260E, Wheel Tractor 260D, 260P, D40 17000 MKII from S/N 17-03007; 21000 MKII from S/N 21-13093; 25000 MKII from S/N 25-04577; 2-1/4" Piston Pin Diameter.	**Kit Number**				**400-5011**
		Sleeve Assembly			6	226-1648
		Rod Bearing			6	CB-1632P
		Undersizes				P-10-20-30
		Main Bearing Set			1	MS-1530P
		Undersizes				P-10
		Thrust Washer Set			1	TW-134S
		Head Set			1	HS54136
		Oil Pan Set			1	OS32187
13	**670T, D3400 MKII, 670, D3700 MKII, 670I, D3500 MKII; Diesel; Cyl.6** Combine L, N5, N6, N7, Wheel Loader TL-645, Wheel Tractor 210, 220, 7030, 7040, 7045, 7045PS, 7050, 7060, 7060PS, 8030, 8050, 8070, D21 1-3/4" Piston Pin Diameter; Slotted Oil Hole For Late Engines With Piston Cooling Through The Rod.	**Kit Number**		**400-1012**		**400-5012**
		Sleeve Assembly	6	226-1826	6	226-1826
		Rod Bearing	6	CB-1354P	6	CB-1354P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-2002P	1	MS-2002P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS4888	1	HS4888
		Lower Set / Oil Pan Set	1	CS4888	1	OS32482
		Timing Cover Seal Set	1	48160		
		Rear Main Seal Set	1	SS47882		
14	**G262; Gasoline; Cyl.6** Combine Gleaner, Gleaner C, Gleaner F, Cotton Picker 616, 622, 801, 802, Wheel Tractor D19	**Kit Number**		**400-1013**		**400-5013**
		Sleeve Assembly	6	226-1467	6	226-1467
		Rod Bearing	6	CB-458P	6	CB-458P
		Undersizes		P-2-10-20-30		P-2-10-20-30
		Main Bearing Set	1	MS-227P	1	MS-227P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3300VC	1	HS3300VC
		Oil Pan Set			1	OS20910

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
15	**3AD-152; Diesel; Cyl.3** Wheel Tractor 160 Direct Injection; Perkins	**Kit Number**		**400-1014**		**400-5014**
		Sleeve Assembly	3	226-1515	3	226-1515
		Rod Bearing	3	CB-560AL	3	CB-560AL
		Undersizes		AL-10-20-30-40		AL-10-20-30-40
		Main Bearing Set	1	MS-772AL	1	MS-772AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Head Set	1	HS85201	1	HS85201
		Lower Set / Oil Pan Set	1	CS85098	1	OS87033
16	**4A-236; Diesel; Cyl.4** Wheel Tractor 170 Engine To S/N 4203049; Perkins engine	**Kit Number**		**400-1015**		**400-5015**
		Sleeve Assembly	4	226-1516	4	226-1516
		Rod Bearing	4	CB-667AL	4	CB-667AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-830AL	1	MS-830AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-121S	1	TW-121S
		Head Set	1	HS85202	1	HS85202
		Lower Set / Oil Pan Set	1	CS85202	1	OS87033
17	**649T Turbocharged; Diesel; Cyl.6** Wheel Tractor 7010 Turbocharged	**Kit Number**		**400-1016**		**400-5016**
		Sleeve Assembly	6	226-1777	6	226-1777
		Rod Bearing	6	CB-1355P	6	CB-1355P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-1621P	1	MS-1621P
		Undersizes		P-10-20		P-10-20
		Head Set	1	HS3803W	1	HS3803W
		Lower Set / Oil Pan Set	1	CS3803	1	OS20935A
18	**G226; Gasoline; Cyl.4** Cotton Picker 622, 801, 802, Grader DG, Wheel Tractor D17 To 5000 Ft. Altitude; 4" Bore.	**Kit Number**		**400-1017**		**400-5017**
		Sleeve Assembly	4	226-1360	4	226-1360
		Rod Bearing	4	CB-526P	4	CB-526P
		Undersizes		P-2-10-20-30		P-2-10-20-30
		Main Bearing Set	1	MS-878AL	1	MS-878AL
		Undersizes		AL-10-20		AL-10-20
		Full Gasket Set / Head Set	1	FS3162	1	HS3162
		Oil Pan Set			1	OS30236
19	**125 CID, B15, B125; Gasoline; Cyl.4** Combine 60H, Power Unit B15, Wheel Tractor 1B, B, C, CA, RC from S/N CE161090, and from S/N CR54231	**Kit Number**		**400-1018**		**400-5018**
		Sleeve Assembly	4	226-1259	4	226-1259
		Rod Bearing	4	CB-179P	4	CB-179P
		Undersizes		P-2-10-20-30		P-2-10-20-30
		Main Bearing Set	1	MS-211P	1	MS-211P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1606	1	HS1606
		Oil Pan Set			1	OS30653

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
20	**G149; Gasoline; Cyl.4** Baler 10, 303, Combine 66, 72, 90, Crawler Tractor 140, H3, Forklift RT40, Harvester 50, Wheel Tractor 1400, D10, D12, D14, D15 D10 series II and III from S/N 3501; natural gas overbored to 3.500" D10 series I to S/N 3501; D12 series II and III from S/N 3001; natural gas overbored to 3.500" D12 series I to S/N 3001; D15 to S/N 9001	**Kit Number**		**400-1019**		**400-5019**
		Sleeve Assembly	4	226-1359	4	226-1359
		Rod Bearing	4	CB-781AL	4	CB-781AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-902AL	1	MS-902AL
		Undersizes		AL-10-20		AL-10-20
		Full Gasket Set / Head Set	1	FS3145	1	HS3145
		Oil Pan Set			1	OS30653
21	**G201; Gasoline; Cyl.4** Wheel Tractor WC 4-1/8" Overbore Conversion	**Kit Number**		**400-1020**		**400-5020**
		Sleeve Assembly	4	226-1401	4	226-1401
		Rod Bearing	4	CB-526P	4	CB-526P
		Undersizes		P-2-10-20-30		P-2-10-20-30
		Main Bearing Set	1	MS-209P	1	MS-209P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3162	1	HS3162
		Oil Pan Set			1	OS30236
22	**4.248; Diesel; Cyl.4** Loader 354, 840, Wheel Tractor D175 Engine to S/N 4203049; Perkins Engine	**Kit Number**		**400-1021**		
		Sleeve Assembly	4	226-1670		
		Rod Bearing	4	CB-667AL		
		Undersizes		AL-10-20-30		
		Main Bearing Set	1	MS-830AL		
		Undersizes		AL-10-20-30		
		Thrust Washer Set	1	TW-121S		
		Head Set	1	HS85202		
		Lower Set	1	CS85202		
23	**4.248; Diesel; Cyl.4** Loader 354, 840, Wheel Tractor D175 Engine from S/N 4203050; Perkins Engine	**Kit Number**		**400-1022**		
		Sleeve Assembly	4	226-1670		
		Rod Bearing	4	CB-667AL		
		Undersizes		AL-10-20-30		
		Main Bearing Set	1	MS-830AL		
		Undersizes		AL-10-20-30		
		Thrust Washer Set	1	TW-316S		
		Head Set	1	HS85202		
		Lower Set	1	CS85202		

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Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
1	**F2L912; Diesel; Cyl.2**	**Kit Number**				**419-5000**
	Dowel Pin Type Thrust Washer	**Sleeve Assembly**			2	226-1885
		Rod Bearing			2	CB-1053P
		Undersizes				P-25mm
		Main Bearing Set			3	MB-198P
		Undersizes				P-50mm
		Thrust Washer Set			1	TW-249S
		Head Set			2	HS3742
		Cylinder Head Gasket			2	3742
2	**F3L912; Diesel; Cyl.3**	**Kit Number**				**419-5001**
	Dowel Pin Type Thrust Washer	**Sleeve Assembly**			3	226-1885
		Rod Bearing			3	CB-1053P
		Undersizes				P-25mm
		Main Bearing Set			4	MB-198P
		Undersizes				P-50mm
		Thrust Washer Set			1	TW-249S
		Head Set			3	HS3742
		Cylinder Head Gasket			3	3742
3	**F4L912; Diesel; Cyl.4**	**Kit Number**				**419-5002**
	Dowel Pin Type Thrust Washer	**Sleeve Assembly**			4	226-1885
		Rod Bearing			4	CB-1053P
		Undersizes				P-25mm
		Main Bearing Set			5	MB-198P
		Undersizes				P-50mm
		Thrust Washer Set			1	TW-249S
		Head Set			4	HS3742
		Cylinder Head Gasket			4	3742
4	**F5L912; Diesel; Cyl.5**	**Kit Number**				**419-5003**
	Dowel Pin Type Thrust Washer	**Sleeve Assembly**			5	226-1885
		Rod Bearing			5	CB-1053P
		Undersizes				P-25mm
		Main Bearing Set			6	MB-198P
		Undersizes				P-50mm
		Thrust Washer Set			1	TW-249S
		Head Set			5	HS3742
		Cylinder Head Gasket			5	3742
5	**F6L912; Diesel; Cyl.6**	**Kit Number**				**419-5004**
	Dowel Pin Type Thrust Washer	**Sleeve Assembly**			6	226-1885
		Rod Bearing			6	CB-1053P
		Undersizes				P-25mm
		Main Bearing Set			7	MB-198P
		Undersizes				P-50mm
		Thrust Washer Set			1	TW-249S
		Head Set			6	HS3742
		Cylinder Head Gasket			6	3742

3 CYLINDER

Engine	Fuel	Line Numbers
3.152	Diesel	1, 2
3A152	Diesel	1, 2
D3.152	Diesel	3

4 CYLINDER

Engine	Fuel	Line Numbers
4.203	Diesel	7, 8
4.236	Diesel	6
4.248	Diesel	11, 12
4A203	Diesel	7, 8
A4.248	Diesel	11, 12
AD4.203	Diesel	9
D4.203	Diesel	9
G176	Gas	17
Z120	Gas	13
Z129	Gas	15
Z134	Gas	16
Z145	Gas	16

6 CYLINDER

Engine	Fuel	Line Numbers
6.354	Diesel	4, 18
A6.354	Diesel	4, 18
T6.354	Diesel	5
T6.354.4 Turbocharged	Diesel	10

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
1	**3.152, 3A152; Diesel; Cyl.3** Wheel Tractor MF203D, MF205D, MF35D, MF50D For Engines Built From 1959 To 1981; to S/N 1935854; Without Direct Injection.	**Kit Number**		**433-1000**		**433-5000**
		Sleeve Assembly	3	226-1454	3	226-1454
		Rod Bearing	3	CB-560AL	3	CB-560AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-772AL	1	MS-772AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-130S	1	TW-130S
		Head Set	1	HS85098	1	HS85098
		Lower Set / Oil Pan Set	1	CS85098	1	OS87033
2	**3.152, 3A152; Diesel; Cyl.3** Wheel Tractor MF203D, MF205D, MF35D, MF50D For Engines Built From 1959 To 1981; From S/N 1935854; Without Direct Injection.	**Kit Number**		**433-1001**		**433-5001**
		Sleeve Assembly	3	226-1447	3	226-1447
		Rod Bearing	3	CB-560AL	3	CB-560AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-772AL	1	MS-772AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-130S	1	TW-130S
		Head Set	1	HS85098	1	HS85098
		Lower Set / Oil Pan Set	1	CS85098	1	OS87033
3	**D3.152; Diesel; Cyl.3** Crawler Tractor MF2244D, Wheel Loader MF200, Wheel Tractor MF135D, MF150D, MF20D, MF2135D, MF230D, MF235D, MF245D, MF35D, MF40D, MF50D Direct Injection	**Kit Number**		**433-1002**		**433-5002**
		Sleeve Assembly	3	226-1515	3	226-1515
		Rod Bearing	3	CB-560AL	3	CB-560AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-772AL	1	MS-772AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-130S	1	TW-130S
		Head Set	1	HS85201	1	HS85201
		Lower Set / Oil Pan Set	1	CS4805W	1	OS87033
4	**A6.354, 6.354; Diesel; Cyl.6** Combine 550, MF510, Wheel Tractor MF1100D, MF2675, MF400, MF44B, MF450S, MF80 Perkins Engine; Flange Type Sleeve; From S/N 8504190; Except Turbocharged.	**Kit Number**		**433-1003**		**433-5003**
		Sleeve Assembly	6	226-1453	6	226-1453
		Rod Bearing	6	CB-667AL	6	CB-667AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-757AL	1	MS-757AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-316S	1	TW-316S
		Head Set	1	HS85182	1	HS85182
		Lower Set / Oil Pan Set	1	CS85182	1	OS87083
5	**T6.354; Diesel; Cyl.6** Combine 750, 760, MF750, MF760, Wheel Tractor MF1105D, MF1130D, MF1135D, MF2675, MF2705 From S/N 8504190	**Kit Number**				**433-5020**
		Sleeve Assembly			6	226-1546
		Rod Bearing			6	CB-1209AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-757AL
		Undersizes				AL-10-20-30
		Thrust Washer Set			1	TW-316S
		Head Set			1	HS4811Y
		Oil Pan Set			1	OS87083

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
6	**4.236; Diesel; Cyl.4** Wheel Loader MF470D, Wheel Tractor MF175D, MF180D, MF184, MF255D, MF265D, MF31D Engine To S/N 4203049; For Engines Built From 1964 To 1981; For Flanged Sleeve Engines Or To Convert To One.	**Kit Number**		**433-1004**		**433-5004**
		Sleeve Assembly	4	226-1516	4	226-1516
		Rod Bearing	4	CB-667AL	4	CB-667AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-830AL	1	MS-830AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Thrust Washer Set	1	TW-121S	1	TW-121S
		Head Set	1	HS85202	1	HS85202
		Lower Set / Oil Pan Set	1	CS4808W	1	OS87083
7	**4.203, 4A203; Diesel; Cyl.4** Wheel Loader MF356D, Wheel Tractor MF300, MF65D Engine From S/N 2820093; Regular	**Kit Number**				**433-5005**
		Sleeve Assembly			4	226-1447
		Rod Bearing			4	CB-560AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-773AL
		Undersizes				AL-10-20
		Thrust Washer Set			1	TW-130S
		Head Set			1	HS85100
8	**4.203, 4A203; Diesel; Cyl.4** Wheel Loader MF356D, Wheel Tractor MF300, MF65D Engine to S/N 2820093; Regular	**Kit Number**				**433-5006**
		Sleeve Assembly			4	226-1454
		Rod Bearing			4	CB-560AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-773AL
		Undersizes				AL-10-20
		Thrust Washer Set			1	TW-130S
		Head Set			1	HS85100
9	**AD4.203, D4.203; Diesel; Cyl.4** Combine MF300, Wheel Tractor MF165D, MF255D, MF300, MF302D, MF304D, MF30D, MF3165D, MF356D, MF40B, MF50AD, MF65D Direct Injection; From 1960 To 1977	**Kit Number**		**433-1007**		**433-5007**
		Sleeve Assembly	4	226-1515	4	226-1515
		Rod Bearing	4	CB-560AL	4	CB-560AL
		Undersizes		AL-10-20-30-40		AL-10-20-30
		Main Bearing Set	1	MS-773AL	1	MS-773AL
		Undersizes		AL-10-20		AL-10-20
		Thrust Washer Set	1	TW-130S	1	TW-130S
		Head Set	1	HS85124	1	HS85124
		Lower Set	1	CS85124X		
10	**T6.354.4 Turbocharged; Diesel; Cyl.6** Application Undefined MF2620, MF2680, MFRX95, RX85, RX88, TX750, TX850 For Engines Built From 1970; Rings Fitted To Piston; Not For Marine Engines.	**Kit Number**				**433-5008**
		Sleeve Assembly			6	226-1823
		Rod Bearing			6	CB-1209AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-1548AL
		Undersizes				AL-10
		Thrust Washer Set			1	TW-316S

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
11	**A4.248, 4.248; Diesel; Cyl.4** Wheel Tractor MF11, MF165, MF175, MF180, MF185, MF255, MF265, MF275, MF300, MF31, MF33, MF350, MF470, MF50, MF6500, Application Undefined MF168, MF177, MF178, MF186, MF187, MF188, MF487, MF587, MF87, MF95, MF99 Direct Injection; For Engines Built From 1963; Rings Fitted To Piston; Thrust Washer Set, To S/N 4203049	**Kit Number**				**433-5009**
		Sleeve Assembly			4	226-1670
		Rod Bearing			4	CB-667AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-830AL
		Undersizes				AL-10-20-30
		Thrust Washer Set			1	TW-121S
		Head Set			1	HS85202
12	**A4.248, 4.248; Diesel; Cyl.4** Wheel Tractor MF11, MF165, MF175, MF180, MF185, MF255, MF265, MF275, MF300, MF31, MF33, MF350, MF470, MF50, MF6500, Application Undefined MF168, MF177, MF178, MF186, MF187, MF188, MF487, MF587, MF87, MF95, MF99 Direct Injection; For Engines Built From 1963; Rings Fitted To Piston; Thrust Washer Set, From S/N 4203050	**Kit Number**				**433-5010**
		Sleeve Assembly			4	226-1670
		Rod Bearing			4	CB-667AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-830AL
		Undersizes				AL-10-20-30
		Thrust Washer Set			1	TW-316S
		Head Set			1	HS85202
13	**Z120; Gasoline; Cyl.4** Application Undefined TE20, TO20 Continental; Non-Flanged Main Set; 3.250" Overbore Assembly.	**Kit Number**		**433-1014**		**433-5014**
		Sleeve Assembly	4	226-1312	4	226-1312
		Rod Bearing	4	CB-362P	4	CB-362P
		Undersizes		P-2-10-20-30-40		P-2-10-20-30-40
		Main Bearing Set	1	MS-260P	1	MS-260P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1865	1	HS1865
		Oil Pan Set			1	OS20659
14	**Z129; Gasoline; Cyl.4** Application Undefined TO30 Continental; 3.375" Overbore Assembly.	**Kit Number**		**433-1015**		**433-5015**
		Sleeve Assembly	4	226-1313	4	226-1313
		Rod Bearing	4	CB-362P	4	CB-362P
		Undersizes		P-2-10-20-30-40-C60		P-2-10-20-30-40-C60
		Main Bearing Set	1	MS-260P	1	MS-260P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1865	1	HS1865
		Oil Pan Set			1	OS20659
15	**Z134; Gasoline; Cyl.4** Wheel Tractor MF204, MF2135D, MF2200, MF50, MH50, Application Undefined MF202, TO35, TO40 Continental; 3.375" Overbore.	**Kit Number**		**433-1016**		**433-5016**
		Sleeve Assembly	4	226-1313	4	226-1313
		Rod Bearing	4	CB-362P	4	CB-362P
		Undersizes		P-2-10-20-30-40-C60		P-2-10-20-30-40-C60
		Main Bearing Set	1	MS-202P	1	MS-202P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3097	1	HS3097
		Oil Pan Set			1	OS20659

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
16	**Z145; Gasoline; Cyl.4** Wheel Tractor MF135, MF150 Continental	**Kit Number**		**433-1017**		**433-5017**
		Sleeve Assembly	4	226-1508	4	226-1508
		Rod Bearing	4	CB-362P	4	CB-362P
		Undersizes		P-2-10-20-30-40		P-2-10-20-30-40
		Main Bearing Set	1	MS-202P	1	MS-202P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS3097	1	HS3097
		Oil Pan Set			1	OS20659
17	**G176; Gasoline; Cyl.4** Wheel Tractor MF164, MF3165, MF65 Continental; 3.655" Overbore Assembly.	**Kit Number**		**433-1018**		**433-5018**
		Sleeve Assembly	4	226-1493	4	226-1493
		Rod Bearing	4	CB-616P	4	CB-616P
		Undersizes		P-10-20-30		P-10-20-30
		Main Bearing Set	1	MS-566P-10	1	MS-566P-10
		Undersizes		P-10-30		P-10-30
		Full Gasket Set / Head Set	1	FS3171	1	HS3171
		Timing Cover Seal Set / Oil Pan Set	1	49276	1	OS20837
18	**A6.354, 6.354; Diesel; Cyl.6** Combine 550, MF510, Wheel Tractor 550, MF1100D, MF400, MF44B, MF450S, MF80 Flange Type Sleeve; 6.354 Perkins From S/N 8060154 to 8504189 Excludes Turbocharged; A6354 Perkins To S/N 8504189 Excludes Turbocharged.	**Kit Number**		**433-1019**		**433-5019**
		Sleeve Assembly	6	226-1453	6	226-1453
		Rod Bearing	6	CB-667AL	6	CB-667AL
		Undersizes		AL-10-20-30		AL-10-20-30
		Main Bearing Set	1	MS-757AL	1	MS-757AL
		Undersizes		AL-10-20		AL-10-20
		Thrust Washer Set	1	TW-121S	1	TW-121S
		Head Set	1	HS85182	1	HS85182
		Lower Set / Oil Pan Set	1	CS85182	1	OS87083

4 CYLINDER

Engine	Fuel	Line Numbers
166D	Diesel	13
Super 166D	Diesel	14

6 CYLINDER

Engine	Fuel	Line Numbers
177D	LP Gas	15
177HC	LP Gas	15
188D	Diesel	6
188HC	LP Gas	5
188LP	LP Gas	5
190 DLB	Diesel	12
231	LP Gas	5
231	Gas	8
231	Diesel	6, 7
265	Gas	8
265	Diesel	7, 12
310	Gas	3
310	Diesel	1, 4
310 Turbocharged	Diesel	1
6.354	Diesel	9
Super 177D	LP Gas	15
Super 177D	Diesel	2
Super 177HC	LP Gas	15
Super 177HC	Diesel	2
T6.354	Diesel	10
VRD232	Diesel	2
VRD283	Diesel	11
VRD310	Diesel	4

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
1	**310, 310 Turbocharged; Diesel; Cyl.6** Wheel Tractor 1855, 1855T, 1950T, 1955T 310 To S/N 8504189; 1855 From S/N 22000	**Kit Number**		**436-1000**		**436-5000**
		Sleeve Assembly	6	226-1636	6	226-1636
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-676P	1	MS-676P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS3842VC	1	HS3842VC
		Lower Set / Oil Pan Set	1	CS3842	1	OS31413
		Timing Cover Seal Set	1	62414		
		Rear Main Seal Set	1	62656		
2	**VRD232, Super 177D, Super 177HC; Diesel; Cyl.6** Wheel Tractor 1550, 1555, 770D, 770HC, Super 77D, Super 77HC Over Bored To 3 5/8" With 2.250 Rod Crankpin; From Engine S/N 6503	**Kit Number**		**436-1001**		**436-5001**
		Sleeve Assembly	6	226-1611	6	226-1611
		Rod Bearing	6	CB-451P	6	CB-451P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-406P	1	MS-406P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1919	1	HS1919
		Oil Pan Set			1	OS31413
3	**310; Gasoline; Cyl.6** Wheel Tractor 1850, 1855 1850 From S/N 150421; 1855 From S/N 220000	**Kit Number**		**436-1002**		**436-5002**
		Sleeve Assembly	6	226-1853	6	226-1853
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-676P	1	MS-676P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS3809W	1	HS3809W
		Lower Set / Oil Pan Set	1	CS3809	1	OS31413
4	**VRD310, 310; Diesel; Cyl.6** Wheel Tractor 1750, 1755 Waukesha VRD310 Diesel Engine.	**Kit Number**		**436-1003**		**436-5003**
		Sleeve Assembly	6	226-1521	6	226-1521
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-676P	1	MS-676P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS3842VC	1	HS3842VC
		Lower Set / Oil Pan Set	1	CS3842	1	OS31413
		Timing Cover Seal Set	1	62414		
		Rear Main Seal Set	1	62656		
5	**231, 188HC, 188LP; Gasoline; LP Gas; Cyl.6** Wheel Tractor 88HC, 88LP 188HC To Tractor S/N 6502; 188LP To Tractor S/N 6502; 3.750" Overbore Assembly.	**Kit Number**		**436-1004**		**436-5004**
		Sleeve Assembly	6	226-1283	6	226-1283
		Rod Bearing	6	CB-451P	6	CB-451P
		Undersizes		P-10-20-30		P-10-20-30
		Main Bearing Set	1	MS-349P	1	MS-349P
		Undersizes		P-10-20		P-10-20
		Full Gasket Set / Head Set	1	FS1857	1	HS1857
		Oil Pan Set			1	OS31413

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
6	**188D, 231; Diesel; Cyl.6** Wheel Tractor 88D 188D To Tractor S/N 6502; 3.750" Overbore	**Kit Number**		**436-1015**		**436-5015**
		Sleeve Assembly	6	226-1283	6	226-1283
		Rod Bearing	6	CB-451P	6	CB-451P
		Undersizes		P-10-20-30		P-10-20-30
		Main Bearing Set	1	MS-349P	1	MS-349P
		Undersizes		P-10-20		P-10-20
		Full Gasket Set / Head Set	1	FS1857	1	HS1857
		Oil Pan Set			1	OS31413
7	**265, 231; Diesel; Cyl.6** Wheel Tractor 880D, Super 88D Engine From S/N 6503	**Kit Number**		**436-1007**		**436-5007**
		Sleeve Assembly	6	226-1283	6	226-1283
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-349P	1	MS-349P
		Undersizes		P-10-20		P-10-20
		Full Gasket Set / Head Set	1	FS1920	1	HS1920
		Oil Pan Set			1	OS31413
8	**265, 231; Gasoline; Cyl.6** Wheel Tractor Super 88HC Engine From S/N 6503	**Kit Number**		**436-1008**		**436-5008**
		Sleeve Assembly	6	226-1283	6	226-1283
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-349P	1	MS-349P
		Undersizes		P-10-20		P-10-20
		Full Gasket Set / Head Set	1	FS1857	1	HS1857
		Oil Pan Set			1	OS31413
9	**6.354; Diesel; Cyl.6** Combine 5542, 7300, 7600, Wheel Tractor 1850, 31079 Perkins Diesel Engine Non-Turbocharged; Engine S/N 8060154 to 8504189; Tractor From S/N 150421	**Kit Number**		**436-1009**		**436-5009**
		Sleeve Assembly	6	226-1453	6	226-1453
		Rod Bearing	6	CB-667AL	6	CB-667AL
		Undersizes		AL-10-20-30-40		AL-10-20-30-40
		Main Bearing Set	1	MS-757AL	1	MS-757AL
		Undersizes		AL-10-20		AL-10-20
		Thrust Washer Set	1	TW-121S	1	TW-121S
		Head Set	1	HS85182	1	HS85182
		Lower Set / Oil Pan Set	1	CS85182	1	OS87083
10	**T6.354; Diesel; Cyl.6** Combine 7800, Wheel Tractor 2-105 Engine From S/N 8504190; Perkins Diesel; Exc. 6.354.4	**Kit Number**				**436-5017**
		Sleeve Assembly			6	226-1546
		Rod Bearing			6	CB-1209AL
		Undersizes				AL-10-20-30
		Main Bearing Set			1	MS-757AL
		Undersizes				AL-10-20
		Thrust Washer Set			1	TW-316S
		Head Set			1	HS4811Y
		Oil Pan Set			1	OS87083

Line	Application	Part Description	Qty	Overhaul	Qty	In-Frame
11	**VRD283; Diesel; Cyl.6** Wheel Tractor 1650, 1655, 25600, 28522, 28581, G750 Engine From S/N 187586; Waukesha Diesel.	**Kit Number**		**436-1010**		**436-5010**
		Sleeve Assembly	6	226-1549	6	226-1549
		Rod Bearing	6	CB-703P	6	CB-703P
		Undersizes		P-10-20-30-40		P-10-20-30-40
		Main Bearing Set	1	MS-676P	1	MS-676P
		Undersizes		P-10-20-30		P-10-20-30
		Head Set	1	HS3842VC	1	HS3842VC
		Lower Set / Oil Pan Set	1	CS3842	1	OS31413
12	**265, 190 DLB; Diesel; Cyl.6** Wheel Tractor 1600 Engine From S/N 124420; Waukesha Engine	**Kit Number**		**436-1011**		**436-5011**
		Sleeve Assembly	6	226-1283	6	226-1283
		Rod Bearing	6	CB-450P	6	CB-450P
		Undersizes		P-10		P-10
		Main Bearing Set	1	MS-349P	1	MS-349P
		Undersizes		P-10-20		P-10-20
		Head Set	1	HS3322W	1	HS3322W
		Lower Set / Oil Pan Set	1	CS3322W	1	OS31413
13	**166D; Diesel; Cyl.4** Wheel Tractor 66D, 66HC Engine To S/N 6503; 3 5/16" Bore; Overbored To 3 5/8" With 2" Rod Crankpin.	**Kit Number**		**436-1012**		**436-5012**
		Sleeve Assembly	4	226-1611	4	226-1611
		Rod Bearing	4	CB-446P	4	CB-446P
		Undersizes		P-10-20		P-10-20
		Main Bearing Set	1	MS-405P	1	MS-405P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1876	1	HS1876
		Oil Pan Set			1	OS30662
14	**Super 166D; LP Gas; Diesel; Cyl.4** Wheel Tractor 550D, 550HC, 660D, 660HC, 66D, 66HC, 66LP, Super 55D, Super 55HC, Super 66D, Super 66HC, Super 66LP Engine From S/N 6503; 3 1/2" Bore, Overbored to 3 5/8" w/2.250 Rod Crankpin	**Kit Number**		**436-1013**		**436-5013**
		Sleeve Assembly	4	226-1611	4	226-1611
		Rod Bearing	4	CB-451P	4	CB-451P
		Undersizes		P-10-20-30		P-10-20-30
		Main Bearing Set	1	MS-405P	1	MS-405P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1876	1	HS1876
		Oil Pan Set			1	OS30662
15	**Super 177HC, 177HC, 177D, Super 177D; Diesel; Gasoline; LP Gas; Cyl.6** Wheel Tractor 77D, 77HC, 77LP Engine To S/N 6503; 177D And Super 177D Diesel; 177HC And Super 177HC Super Gasoline; Overbored To 3 5/8" With 2" Rod Crankpin	**Kit Number**		**436-1014**		**436-5014**
		Sleeve Assembly	6	226-1611	6	226-1611
		Rod Bearing	6	CB-446P	6	CB-446P
		Undersizes		P-10-20		P-10-20
		Main Bearing Set	1	MS-406P	1	MS-406P
		Undersizes		P-10-20-30		P-10-20-30
		Full Gasket Set / Head Set	1	FS1919	1	HS1919
		Oil Pan Set			1	OS31415

MODEL and ENGINE INDEX

WHEEL TRACTORS

Model	Fuel		Line No.
AC210	Diesel	670/670I/670T Allis Chalmers	52
AC210	Diesel	D3400/D3500 (Non MKII) Allis Chalmers	53
AC210	Diesel	D3400/D3500/D3700 MKII Allis Chalmers	53
AC220	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
AC220	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
AC220	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
B	Gasoline	116/125 Allis Chalmers	5
B	Gasoline	B125/CE Allis Chalmers	7
B15	Gasoline	116/125 Allis Chalmers	5
B125	Gasoline	116/125 Allis Chalmers	5
BE	Gasoline	116/125 Allis Chalmers	5
BE	Gasoline	B125/CE Allis Calmers	7
C	Gasoline	116/125 Allis Chalmers	5
C	Gasoline	B125/CE Allis Chalmers	7
CA	Gasoline	116/125 Allis Chalmers	5
CA	Gasoline	B125/CE Allis Chalmers	7
CB	Gasoline	116/125 Allis Chalmers	5
CB	Gasoline	B125/CE Allis Chalmers	7
CE	Gasoline	116/125 Allis Chalmes	5
CE	Gasoline	B125/CE Allis Chalmers	7
D10	Gasoline	G138 Allis Chalmers	8
D10	Gasoline	G139 Allis Chalmers	8
D10	Gasoline	149 Allis Chalmers	21
D10	Gasoline	G160 Allis Chalmers	27
D12	Gasoline	G138 Allis Chalmers	8
D12	Gasoline	G139 Allis Chalmers	8
D12	Gasoline	G149 Allis Chalmers	21
D12	Gasoline	G160 Allis Chalmers	27
D14	Gasoline	G138 Allis Chalmers	8
D14	Gasoline	G139 Allis Chalmers	8
D14	Gasoline	G149 Allis Chalmers	21
D14	Gasoline	G160 Allis Chalmers	27
D15	Gasoline	G138 Allis Chalmers	8
D15	Gasoline	G139 Allis Chalmers	8
D15	Gasoline	G149 Allis Chalmers	21
D15	Gasoline	G160 Allis Chalmers	27
D15D	Diesel	4D175/4DA175 Buda	22
D16	Gasoline	GO339 Hercules	47
D17	Gasoline	G226 Allis Chalmers	46
D17	Diesel	6BD230 Buda	17
D17 Series IV	Gasoline	G226 Allis Chalmers	46
D17D	Diesel	6D262/6DA262 Buda	25
D17G	Diesel	6BD230 Buda	17
D17G	Gasoline	G226 Allis Chalmers	46
D19	Gasoline	6G262 Buda	24
D19D	Diesel	6D262/6DA262 Buda	25
D21	Diesel	670/670I/670T MKII Allis Chalmers	52
D21	Diesel	D3400/D3500 (Non MKII) Allis Chalmers	53
D21	Diesel	D3400/D3500/D3700 MKII Allis Chalmers	53
D272	Diesel	D3.152/AD3.152 Perkins	26
D40	Diesel	25000 MKII Allis Chalmers	68
D40	Diesel	16000H/21000H/25000 Allis Chalmers	65
D40	Diesel	6138-I/LT/T/21000 MKII Allis Chalmers	69
G	Gasoline	N62 Continental	1
GA	Gasoline	N62 Continental	1
H7	Diesel	6000/7000 MKII Allis Chalmers	55
I40	Gasoline	G149 Allis Chalmers	21
I40	Gasoline	G160 Allis Chalmers	27
I400	Diesel	4D175/4DA175 Buda	22
I60	Diesel	175 4D175/4DA175 Buda	22
I60	Gasoline	G160 Allis Chalmers	27
I600G	Gasoline	G160 Allis Chalmers	27
IB	Gasoline	116/125 Allis Chalmers	5
N62	Gasoline	N62 Continental	1
RC	Gasoline	116/125 Allis Chalmers	5
TL14DA	Diesel	6D273 Buda	31
W	Gasoline	G201 Allis Chalmers	45
W	Gasoline	G226 Allis Chalmers	46
WD45	Diesel	6D262/6DA262 Buda	25
WC	Gasoline	G201 Allis Chalmers	45
WC	Gasoline	G226 Allis Chalmers	46
WD	Gasoline	G201 Allis Chalmers	45
WD	Gasoline	G226 Allis Chalmers	46
WD45D	Diesel	6BD230 Buda	17
WD45	Gasoline	G201 Allis Chalmers	45
WD45	Gasoline	G226 Allis Chalmers	46
WF	Gasoline	G201 Allis Chalmers	45
WF	Gasoline	G226 Allis Chalmers	46
WP	Gasoline	G226 Allis Chalmers	46
WSP	Gasoline	G226 Allis Chalmers	46
WT	Gasoline	G226 Allis Chalmers	46
160D	Diesel	152 D3.152/AD3.152 Perkins	26
160	Diesel	516 10000/11000, MKII Allis Chalmers	59,60
170	Diesel	236 4.236/A4.236 Perkins	36
170 Series	Diesel	344 6000/7000, MKII Allis Chalmers	55
170	Diesel	248 4.248 Perkins	44
170	Gasoline	226 G226 Allis Chalmers	46
170G	Gasoline	226 G226 Allis Chalmers	46
175	Diesel	200 D2200 Allis Chalmers	34
175 Series	Diesel	344 6000/7000, MKII Allis Chalmers	55
175	Gasoline	200 G2200 Allis Chalmers	35
175	Diesel	236 4.236/A4.236 Perkins	36
175	Gasoline	226 G226 Allis Chalmers	46
180	Gasoline	301 2900/G2900 Allis Chalmers	40
180	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
180	Diesel	301 D2800/2900 (649T) Allis Chalmers	38
180	Gasoline	265 G2500 Allis Chalmers	29
180	Gasoline	301 G2800 Allis Chalmers	39
185	Gasoline	265 G2500 Allis Chalmers	29
185	Gasoline	301 2900/G2900 Allis Chalmers	40
185	Gasoline	301 G2800 Allis Chalmers	39
185D	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
185D	Diesel	301 D2800/D2900 (649T) Allis Chalmers	38
190	Gasoline	265 G2500 Allis Chalmers	29
190	Gasoline	301 2600/G2900 Allis Chalmers	40
190	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
190	Diesel	301 D2800/D2900 (649T) Allis Chalmers	38
190	Gasoline	301 G2800 Allis Chalmers	39

WHEEL LOADERS

Model	Fuel		Line No.
T10	Gasoline	226 G226 Allis Chalmers	46
T11	Gasoline	226 G226 Allis Chalmers	46
T12	Gasoline	226 G226 Allis Chalmers	46
T160	Diesel	516 ADS516/HD516/6D1516 Buda	57
TL-6	Gasoline	116/125 Allis Chalmers	5
TL-6D	Gasoline	226 G226 Allis Chalmers	46
TL-10	Diesel	230 6D230/6DA230 Buda	15
TL-10	Diesel	262 6D262/6DA262 Buda	25
TL-11	Diesel	230 6D230/6DA230 Buda	15
TL-11	Diesel	262 6D262/6da262 Buda	25
TL-12	Diesel	262 6D262/6da262 Buda	25
TL-14	Diesel	230 6D230/6DA230 Buda	15
TL-14	Gasoline	262 6G262 Buda	24
TL-14	Diesel	262 6D262/6DA262 Buda	25
TL-14D	Diesel	344 6000/7000, MKII Allis Chalmers	55
TL-14D	Diesel	344 6000/7000 & MKII Buda	56
TL-14DA	Diesel	262 6D262/6DA262 Buda	25
TL-14DS	Diesel	262 6D262/6DA262 Buda	25
TL-16	Gasoline	339 GO336 Hercules	47
TL-16D	Diesel	344 6000/7000 Allis Chalmers	55
TL-16D	Diesel	344 6000/7000 & MKII Buda	56
TL-20	Diesel	516 ADS516/HD516/6D1516 Buda	57

MODEL and ENGINE INDEX

WHEEL TRACTORS

Model	Fuel		Line No.
190XT	Gasoline	301 G2800 Allis Chalmers	39
190XT	Gasoline	301 2900/G2900 Allis Chalmers	40
190XT	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
190XT	Diesel	301 D2800/D2900 (649T) Allis Chalmers	38
190XT	Gasoline	265 G2500 Allis Chalmers	29
190XT III	Gasoline	301 G2900 Allis Chalmers	40
190XT III	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
190XT III	Diesel	301 D2800/D2900 (649T) Allis Chalmers	38
200	Gasoline	265 G2500 Allis Chalmers	29
200	Diesel	301 D2900 (649) Allis Chalmers	38
200	Gasoline	301 G2800 Allis Chalmers	39
200	Gasoline	2900/G2900 Allis Chalmers	40
200D	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
200D	Diesel	301 D2900 (649T) Allis Chalmers	38
260	Diesel	844 17000 MKII Allis Chalmers	66
260D	Diesel	844 16000/21000 Allis Chalmers	64
260D	Diesel	844 25000 MKII Allis Chalmers	68
260D	Diesel	844 6138-I/LT/T/31000 MKII Allis Chalmers	69
260P	Diesel	844 16000/21000 Allis Chalmers	64
260P	Diesel	844 25000 MKII Allis Chalmers	68
260P	Diesel	844 6138-I/LT/T/21000 MKII Allis Chalmers	69
261B	Diesel	844 17000 MKII Allis Chalmers	66
440	Diesel	555 V555 Cummins	62
649	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
649T	Diesel	301 D2900 (649T) Allis Chalmers	38
6G	Diesel	344 6000/7000, MKII Allis Chalmers	55
2200	Diesel	200 D2200 Allis Chalmers	34
2200	Gasoline	200 G2200 Allis Chalmers	35
3400	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
3400	Diesel	426 D3400/D3500 Allis Chalmers	53
3400	Diesel	426 D3400/D3500/D3700, MKII Allis Chalmers	53
3500	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
3500	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53,53
6040	Diesel	152 D3.152/AD3.152 Perkins	26
6060	Diesel	200 D2200 Allis Chalmers	34
6060	Gasoline	200 G2200 Allis Chalmers	35
6060FWD	Diesel	200 D2200 Allis Chalmers	34
6060FWD	Gasoline	200 G2200 Allis Chalmers	35
6070	Diesel	200 433T Allis Chalmers	33
6080	Diesel	200 D2200 Allis Chalmers	34
6080	Gasoline	200 G2200 Allis Chalmers	35
7000	Diesel	301 D2800/D2900 Allis Chalmers	37
7000	Diesel	301 D2900 Allis Chalmers	38
7000	Gasoline	301 2900/G2900 Allis Chalmers	40
7010	Diesel	301 D2900 (649T) Allis Chalmers	38
7010PD	Diesel	301 D2900 (649T) Allis Chalmers	38
7010PD	Gasoline	301 2900/G2900 Allis Chalmers	40
7010PS	Diesel	301 D2900 (649T) Allis Chalmers	38
7010PS	Gasoline	301 2900/G2900 Allis Chalmers	40
7030	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7030	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7030	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7040	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7040	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7040	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7040PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7040PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7040PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7045	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7045	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7045	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7045PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7045PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7045PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7050	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7050	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7050	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7060	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7060	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7060	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7060PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7060PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7060PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7080	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7080	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7080	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7085	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7085	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7085	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
7580	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
7580	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
7580	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8010PD	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
8010PD	Diesel	301 D2900 (649T) Allis Chalmers	38
8010PS	Diesel	301 D2800/D2900 (649) Allis Chalmers	37
8010PS	Diesel	301 D2900 (649T) Allis Chalmers	38
8030	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8030	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8030	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8030PD	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8030PD	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8030PD	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8030PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8030PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8030PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8050PD	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8050PD	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8050PD	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8050PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8050PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8050PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8070PD	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8070PD	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8070PD	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
8070PS	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
8070PS	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
8070PS	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53

WHEEL LOADERS

Model	Fuel		Line No.
TL-20	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60
TL-30	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59
TL-30	Diesel	516 685T10000/11000, MKII Allis Chalmers	60
TL-40	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
TL-40	Diesel	844 25000 MKII Allis Chalmers	68
TL-40	Diesel	844 6138-I/LT/T/21000 MKII Allis Chalmers	69
TL-40D	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
TL-345B	Gasoline	301 G2800 Allis Chalmers	39
TL-345B	Diesel	301 D2900 Allis Chalmers	38
TL-545	Gasoline	301 G2800 Allis Chalmers	39
TL-545	Gasoline	301 2900/G2900 Allis Chalmers	40
TL-545	Diesel	301 D2900 (649T) Allis Chalmers	38
TL-645	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
TL-645	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
TL-645	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
TL-714B	Diesel	236 4.236/A4.236 Perkins	36
TL-715B	Diesel	236 4.236/A4.236 Perkins	36
TL-745	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60
TL-745B	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60
TL-745C	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60
TL-745H	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60
TL-945B	Diesel	844 6138-I/LT/T/21000 MKII Allis Chalmers	69

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WHEEL LOADERS

Model	Fuel		Line No.
TR-160	Diesel	516 ADS516/HD516/6D1516 Buda	57
TR-160	Diesel	516 685T/10000/11000, MKII Allis Chalmers	59,60

CRAWLER TRACTORS

Model	Fuel		Line No.
H3	Gasoline	149 G149 Allis Chalmers	21
H4	Gasoline	200 G2200 Allis Chalmers	35
HD3	Gasoline	153 G153 Allis Chalmers	10
HD3	Diesel	175 4D175/4DA175 Buda	22
HD4	Diesel	200 D2200 Allis Chalmers	34
HD5	Diesel	142 2-71Detroit Diesel	48
HD5B	Diesel	142 2-71 Detroit Diesel	48
HD6	Diesel	344 HD344 Buda	54
HD6A	Diesel	344 6000/7000, MKII Allis Chalmers	55
HD6A	Diesel	344 6000/7000 MKII Allis Chalmers	56
HD6B	Diesel	344 6000/7000 MKII Allis Chalmers	55,56
HD6E	Diesel	344 6000/7000 MKII Allis Chalmers	55,56
HD6EP	Diesel	344 6000/7000 MKII Allis Chalmers	55,56
HD6G	Diesel	344 6000/7000 MKII Allis Chalmers	55,56
HD6LTS	Diesel	344 6000/7000 MKII Allis Chalmers	55,56
HD7	Diesel	213 3.71 Detroit Diesel	49
HD7	Diesel	426 670/670-I/670T, MKII Allis Chalmers	52
HD7	Diesel	426 D3400/D3500 (Non MKII) Allis Chalmers	53
HD7	Diesel	426 D3400/D3500/D3700 MKII Allis Chalmers	53
HD7G	Diesel	213 3-71 Detroit Diesel	49
HD7G	Diesel	344 6000/7000, MKII Allis Chalmers	55,56
HD7W	Diesel	213 3-71Detroit Diesel	49
HD9	Diesel	284 4-71 Detroit Diesel	50
HD10	Diesel	284 4-71 Detroit Diesel	50
HD10W	Diesel	284 4-71 Detroit Diesel	50
HD11	Diesel	516 ADS516/HD516/6D1516 Buda	57
HD11	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD11B	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD11E	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD11EC	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60

COMBINES-GRADERS-HARVESTERS-BACKHOES-SCRAPERS-PICKERS-BALERS

Model	Fuel		Line No.
A	Gasoline	116/125 Allis Chalmers Harvester	5
A	Gasoline	230 6B230 Buda Combine	16
A	Gasoline	237 Hercules Combine	19
A	Gasoline	262 Allis Chalmers Combine	23
A	Diesel	262 Buda Combine	25
A11	Gasoline	230 Buda Combine	16
A11	Gasoline	237 Hercules Combine	19
AC	Gasoline	125 Allis Chalmers Harvester	7
AD30	Diesel	213 Detroit Diesel Grader	49
AD40	Diesel	284 Detroit Diesel Grader	50
AH	Gasoline	230 Buda Combine	16
AH	Gasoline	237 Hercules Combine	19
B	Gasoline	125 Allis Chalmers Baler	7
B	Gasoline	125 Allis Chalmers Harvester	7
B	Gasoline	230 Buda Combine	16
B	Gasoline	237 Hercules Combine	19
BD30	Diesel	213 Detroit Diesel Grader	49
C	Gasoline	116/125 Allis Chalmers Harvester	5
C	Gasoline	262 Allis Chalmers Combine	23
C	Gasoline	262 Buda Combine	24
C	Diesel	262 Buda Combine	25
C11-4C	Gasoline	262 Buda Combine	24
CH	Gasoline	262 Allis Chalmers Harvester	23
CH	Gasoline	262 Buda Harvester	24
Cornhead	Gasoline	237 Hercules Combine	19
CR	Gasoline	262 Buda Combine	24
D	Diesel	153 Buda Grader	9
D	Diesel	230 Buda Grader	17
D	Gasoline	230 Buda Grader	18
D	Gasoline	262 Buda Grader	24
DD	Gasoline	262 Buda Grader	24
D	Gasoline	201 Allis Chalmers Grader	45
D	Gasoline	226 Allis Chalmers Grader	46
D30	Diesel	516 Allis Chalmers Grader	59,60
DD	Diesel	262 Buda Grader	25
DG	Gasoline	226 Allis Chalmers Grader	46
E	Gasoline	226 Allis Chalmers Combine	46
F	Gasoline	262 Allis Chalmers Combine	24
F	Diesel	301 Allis Chalmers Combine	37,38
F2	Diesel	200 Allis Chalmers Combine	32
F3	Diesel	200 Allis Chalmers Combine	34
G	Gasoline	301 Allis Chalmers Combine	40
G	Diesel	301 Allis Chalmers Combine	38
J2	Gasoline	120 Ford Combine	2
J3	Gasoline	120 Ford Combine	2
K	Diesel	200 Allis Chalmers Combine	33
K2	Diesel	200 Allis Chalmers Combine	33
L	Gasoline	301 Allis Chalmers Combine	40
L2	Gasoline	301 Allis Chalmers Combine	40
L3	Diesel	301 Allis Chalmers Combine	37,38
L3	Gasoline	301 Allis Chalmers Combine	40
L5	Diesel	426 Allis Chalmers Combine	52,53
L6	Diesel	426 Allis Chalmers Combine	52,53
M	Gasoline	301 Allis Chalmers Combine	40
M100	Diesel	516 Allis Chalmers Combine	59,60
M100B	Diesel	516 Allis Chalmers Combine	59,60
M2	Gasoline	301 Allis Chalmers Combine	40
M3	Gasoline	301 Allis Chalmers Combine	40
M3	Diesel	301 Allis Chalmers Combine	37,38
M60	Diesel	344 Allis Chalmers Grader	55,56
M65	Diesel	262 Buda Grader	25
M7	Diesel	344 Allis Chalmers Grader	55
M70	Diesel	344 Allis Chalmers Grader	55,56
MH3	Diesel	301 Allis Chalmers Combine	37,38
MH3	Gasoline	301 Allis Chalmers Combine	40
N5	Diesel	426 Allis Chalmers Combine	52,53
N6	Diesel	426 Allis Chalmers Combine	52,53
N7	Diesel	426 Allis Chalmers Combine	52,53
NF	Diesel	426 Allis Chalmers Combine	52,53
P8	Gasoline	108 Wisconsin Combine	4
P80	Gasoline	108 Wisconsin Combine	4
R	Gasoline	230 Buda Combine	16
R	Gasoline	237 Hercules Combine	19
R	Gasoline	262 Allis Chalmers Combine	23
R7	Diesel	516 Allis Chalmers Combine	58
S	Gasoline	108 Wisconsin Combine	4
SP	Gasoline	237 Hercules Combine	19
SPH88	Gasoline	339 Hercules Combine	47
SP-Rice Special	Gasoline	237 Hercules Combine	19
Super 100SP	Gasoline	226 Allis Chalmers Combine	46
T2	Gasoline	120 Ford Combine	2
T2	Gasoline	172 Ford Combine	41

MODEL and ENGINE INDEX

WHEEL LOADERS

Model	Fuel		Line No.

CRAWLER TRACTORS

Model	Fuel		Line No.
HD11EP	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD11P	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59
HD12G	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD12GB	Diesel	516 685T/10000/11000 MKII Allis Chalmers	59,60
HD14	Diesel	426 6-41 Detroit Diesel	51
HD14C	Diesel	426 6-71 Detroit Diesel	51
HD14W	Diesel	426 4-71 Detroit Diesel	50
HD14W	Diesel	426 6-71 Detroit Diesel	51
HD15	Diesel	426 6-71 Detroit Diesel	51
HD16A	Diesel	844 16000/21000 Allis Chalmers	64
HD16AC	Diesel	844 16000/21000 Allis Chalmers	64
HD16B	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
HD16D	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
HD16DC	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
HD16DP	Diesel	844 16000H/21000H/25000 Allis Chalmers	65

Model	Fuel		Line No.
HD16FC	Diesel	844 16000/21000 Allis Chalmers	64
HD16GC	Diesel	844 16000/21000 Allis Chalmers	64
HD19	Diesel	426 6-71 Detroit Diesel	51
HD19H	Diesel	426 6-71 Detroit Diesel	51
HD21	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
HD21A	Diesel	844 16000/21000 Allis Chalmers	64
HD21F	Diesel	844 16000/21000 Allis Chalmers	64
HD21G	Diesel	844 16000/21000 Allis Chalmers	64
HD21P	Diesel	844 16000H/21000H/25000 Allis Chalmers	65
I-40	Gasoline	149 G149 Allis Chalmers	21
I-60	Diesel	175 4D175/4DA175 Buda	22
T16	Diesel	344 6000/7000 MKII Allis Chalmers	55
T16-4WD	Diesel	344 6000/7000 MKII Allis Chalmers	55,56

COMBINES-GRADERS-HARVESTERS-BACKHOES-SCRAPERS-PICKERS-BALERS

Model	Fuel		Line No.
T2	Diesel	172 Ford Combine	42
T2	Flex Fuel	172 Ford Combine	43
T3	Gasoline	120 Ford Combine	2
T3	Gasoline	172 Ford Combine	41
T3	Diesel	172 Ford Combine	42
T3	Flex Fuel	172 Ford Combine	43
TS260	Diesel	844 Allis Chalmers Scraper	64
W	Diesel	301 Allis Chalmers Grader	37
2A	Gasoline	230 Buda Harvester	16
2A	Gasoline	237 Hercules Combine	19
3A	Gasoline	230 Buda Harvester	16
3A	Gasoline	237 Hercules Combine	19
3E	Gasoline	230 Buda Harvester	16
3E	Gasoline	237 Hercules Combine	19
10	Gasoline	139 G138/4G139 Allis Chalmers Baler	8
10	Gasoline	149 Allis Chalmers Baler	21
10	Gasoline	149 Allis Chalmers Combine	21
45	Diesel	516 Buda Grader	57
45	Diesel	516 Allis Chalmers Grader	59,60
50	Gasoline	139 G138/4G139 Allis Chalmers Harvester	8
50	Gasoline	149 Allis Chalmers Harvester	21
60	Gasoline	116/125 Allis Chalmers Combine	5
60	Gasoline	125 Allis Chalmers Combine	7
60H	Gasoline	116/125 Allis Chalmers Harvester	5
60H	Gasoline	125 Allis Chalmers Combine	7
65	Diesel	262 Buda Grader	25
66	Gasoline	116/125 Allis Chalmers Combine	5
66	Gasoline	125 Allis Chalmers Combine	7
66 All Crop	Gasoline	125 Allis Chalmers Combine	7
66	Gasoline	149 Allis Chalmers Combine	21
72	Gasoline	139 G138/4G139 Allis Chalmers Harvester	8
72	Gasoline	149 Allis Chalmers Combine	21
90	Gasoline	149 Allis Chalmers Combine	21
100	Gasoline	201 Allis Chalmers Combine	45
100 All Crop	Gasoline	226 Allis Chalmers Combine	46
100C	Diesel	516 Allis Chalmes Grader	59
100C	Diesel	516 Allis Chalmers Grader	60
100SP	Gasoline	201 Allis Chalmers Combine	45
100SP	Gasoline	226 Allis Chalmers Combine	46
145	Diesel	344 Buda Grader	55
145	Diesel	344 Allis Chalmers Grader	56

Model	Fuel		Line No.
145	Diesel	516 Buda Grader	57
145	Diesel	516 Allis Chalmers Grader	59
145T	Diesel	344 Buda Grader	54
145T	Diesel	344 Allis Chalmers Grader	55
145T	Diesel	344 Buda Grader	56
150C	Diesel	516 Allis Chalmers Grader	59,60
200C	Diesel	516 Allis Chalmers	59,60
260A	Diesel	844 Chalmers Scraper	68
260A	Diesel	844 Allis Chalmers Scraper	64,69
260E	Diesel	844 Allis Chalmers Scraper	64,68,69
262B	Diesel	844 Allis Chalmers Scraper	65
263B	Diesel	844 Allis Chalmers Scraper	65
302	Gasoline	108 Wisconsin Baler	4
302	Gasoline	149 Allis Chalmers Baler	21
303	Gasoline	108 Wisconsin Baler	4
303	Gasoline	149 Allis Chalmers Baler	21
460B	Diesel	844 Allis Chalmers Scraper	65
460C	Diesel	844 Allis Chalmers Scraper	65
500	Gasoline	226 Allis Chalmers Picker	46
545	Diesel	301 (649) Allis Chalmers Grader	37
545	Diesel	301 (649T) Allis Chalmers Grader	38
545	Gasoline	301 Allis Chalmers Grader	39
616	Gasoline	262 Buda Picker	24
616	Gasoline	226 Allis Chalmers Picker	46
622	Gasoline	262 Buda Picker	24
622	Gasoline	226 Allis Chalmers Picker	46
715C	Diesel	200 (433T) Allis Chalmers Backhoe	33
801	Gasoline	262 Buda Picker	24
801	Gasoline	226 Allis Chalmers Picker	46
802	Gasoline	262 Buda Picker	24
802	Gasoline	226 Allis Chalmers Picker	46
840B	Gasoline	301 Allis Chalmers Backhoe	39
860	Diesel	301 (649) Allis Chalmers Harvester	37
860	Diesel	301 (649T) Allis Chalmers Harvester	38
860	Gasoline	301 Allis Chalmers Harvester	39
860	Diesel	301 (649) Allis Chalmers Picker	37
860	Diesel	301 (649T) Allis Chalmers Picker	38
940	Gasoline	301 Allis Chalmers Backhoe	40
1455T	Diesel	344 Buda Grader	54

MODEL and ENGINE INDEX

LIFT TRUCKS

Model	Fuel		Line No.
AT-40	Gasoline	153 G153 Buda	10
AT-60	Gasoline	262 6G262 Buda	24
AT-70	Gasoline	262 6G262 Buda	24
AT-80	Gasoline	262 6G262 Buda	24
AT-100	Gasoline	262 6G262 Buda	24
AT-120	Gasoline	262 6G262 Buda	24
ATM-60	Gasoline	262 6G262 Buda	24
ATM-70	Gasoline	262 6G262 Buda	24
AY-80	Gasoline	262 6G262 Buda	24
AY-80	Diesel	262 6D262/6DA262 Buda	25
AY-100	Gasoline	262 6G262 Buda	24
AY-100	Diesel	262 6D262/6DA262 Buda	25
AY-120	Gasoline	262 6G262 Buda	24
AY-120	Diesel	262 6D262/6DA262 Buda	25
F-30	Gasoline	153 G153 Buda	10
F-30	Diesel	175 4D175/4DA175 Buda	22
F-30	Gasoline	153 4G153 Buda	14
F-40	Gasoline	153 G153 Buda	10
F-40	Diesel	175 4D175/4da175 Buda	22
F-40	Gasoline	153 4G153 Buda	14
F-50	Gasoline	153 G153 Buda	10
F-50	Diesel	175 4D175/4DA175 Buda	22
F-50	Gasoline	153 4G153 Buda	14
F-60	Gasoline	230 6G230 Buda	18
F-60	Diesel	262 6D262/6DA260 Buda	25
F-70	Gasoline	230 6G230 Buda	18
F-70	Diesel	262 6D262/6DA262 Buda	25
F-80	Gasoline	230 6G230 Buda	18
F-80	Diesel	262 6D262/6DA262 Buda	25
F-100	Gasoline	230 6G230 Buda	18
F-100	Diesel	262 6D262/6DA262 Buda	25
F-120	Gasoline	230 6G230 Buda	18
F-120	Diesel	262 6D262/6DA262 Buda	25
FD-30	Gasoline	153 G153 Buda	10
FD-30	Diesel	175 4D175/4DA175 Buda	22
FD-30	Gasoline	153 4G153 Buda	14
FD-40	Gasoline	153 G153 Buda	10
FD-40	Diesel	175 4D175/4DA175 Buda	22
FD-40	Gasoline	153 G153 Buda	14
FD-50	Gasoline	153 G153 Buda	10
FD-50	Diesel	175 4D175/4DA175 Buda	22
FD-50	Gasoline	153 4G153 Buda	14
FD-60	Gasoline	230 6G230 Buda	18
FD-60	Diesel	262 6D262/6DA262 Buda	25
FD-70	Gasoline	230 6G230 Buda	18
FD-70	Diesel	262 6D262/6DA262 Buda	25
FD-80	Gasoline	230 6G230 Buda	18
FD-80	Diesel	262 6D262/6DA262 Buda	25
FD-100	Gasoline	230 6G230 Buda	18
FD-100	Diesel	262 6D262/6DA262 Buda	25
FD-120	Gasoline	230 G230 Buda	18
FD-120	Diesel	262 6D262/6DA262 Buda	25
FDX-30	Diesel	175 4D175/4DA175 Buda	22
FDX-40	Diesel	175 4D175/4DA175 Buda	22
FDX-50	Diesel	175 4D175/4DA175 Buda	22
FDX-60	Diesel	262 6D262/6DA262 Buda	25
FDX-60	Gasoline	230 6G230 Buda	18
FDX-70	Diesel	262 6D262/6DA262 Buda	25
FDX-70	Gasoline	262 6G262 Buda	24
FDX-80	Diesel	262 6D262/6DA262 Buda	25
FDX-100	Diesel	262 6D262/6DA262 Buda	25
FDX-120	Diesel	262 6D262/6DA262 Buda	25
FL-30	Gasoline	153 G153 Buda	10
FL-30	Gasoline	153 4G153 Buda	14
FL-40	Gasoline	153 G153 Buda	10
FL-40	Gasoline	153 4G153 Buda	14
FL-50	Gasoline	153 G153 Buda	10
FL-50	Gasoline	153 4G153 Buda	14
FL-60	Diesel	262 6D262/6DA262 Buda	25
FL-70	Diesel	262 6D262/6DA262 Buda	25
FL-80	Diesel	262 6D262/6DA262 Buda	25
FL-100	Diesel	262 6D262/6DA262 Buda	25
FL-120	Diesel	262 6D262/6DA262 Buda	25
FL-200	Diesel	262 6D262/6DA262 Buda	25
FLP-60	Gasoline	230 6B230 Buda	16
FLP-70	Gasoline	230 6B230 Buda	16
FLP-80	Gasoline	262 6B230 Buda	16
FP-30	Diesel	175 4D175/4DA175 Buda	22
FP-40	Gasoline	153 G153 Buda	10
FP-40	Diesel	175 4D175/4DA175 Buda	22
FP-40	Gasoline	153 4G153 Buda	14
FP-50	Gasoline	153 G153 Buda	10
FP-50	Diesel	175 4D175/4DA175 Buda	22
FP-50	Gasoline	153 4G153 Buda	14
FP-60	Gasoline	230 G230 Buda	18
FP-60	Diesel	262 6D262/6DA262 Buda	25
FP-70	Gasoline	230 6G230 Buda	18
FP-70	Diesel	262 6D262/6DA262 Buda	25
FP-80	Gasoline	230 6G230 Buda	18
FP-80	Diesel	262 6D262/6DA262 Buda	25
FPD-40	Diesel	175 4D175/4DA175 Buda	22
FPD-50	Diesel	175 4D175/4DA175 Buda	22
FPD-60	Diesel	2162 6D262/6DA262 Buda	25
FPD-70	Diesel	262 6D262/6DA262 Buda	25
FPD-80	Diesel	262 6D262/6DA262 Buda	25
FPDX-40	Diesel	175 4D175/4DA175 Buda	22
FPDX-50	Diesel	175 4D175/4DA175 Buda	22
FPDX-60	Gasoline	153 4G153 Buda	14
FPDX-70	Gasoline	153 4G153 Buda	14
FPL-40	Gasoline	153 G153 Buda	10
FPL-40	Gasoline	153 4G153 Buda	14
FPL-50	Gasoline	153 G153 Buda	10
FPL-50	Gasoline	153 4G153 Buda	14
FS-60	Diesel	262 4D262/4DA262 Buda	25
FS-70	Diesel	262 4D262/4DA262 Buda	25
FS-80	Diesel	262 4D262/4DA262 Buda	25
FSD-60	Diesel	262 4D262/4DA262 Buda	25
FSD-70	Diesel	262 4D262/4DA262 Buda	25
FSD-80	Diesel	262 4D262/4DA262 Buda	25
FSL-60	Diesel	262 4D262/4DA262 Buda	25
FSL-70	Diesel	262 4D262/4DA262 Buda	25
FSL-80	Diesel	262 4D262/4DA262 Buda	25
FST-60	Diesel	262 4D262/4DA262 Buda	25
FST-70	Diesel	262 4D262/4DA262 Buda	25
FST-80	Diesel	262 4D262/4DA262 Buda	25
FT-30	Gasoline	153 4B153 Buda	11
FT-30	Diesel	153 4BD153 Buda	12
FT-30	Diesel	153 4D153/4DA153 Buda	13
FT-30-15	Gasoline	153 4B153	11
FT-30-15	Diesel	153 4BD153 Buda	12
FT-30-15	Diesel	153 4D153/4DA153 Buda	13
FT-30-15	Gasoline	153 4G153 Buda	14
FT-30-24	Gasoline	153 4B153 Buda	11
FT-30-24	Diesel	153 4BD153 Buda	12
FT-30-24	Diesel	153 4D153/4DA153 Buda	13
FT-30-24	Gasoline	153 4G153 Buda	14
FT-40	Gasoline	153 4B153 Buda	11
FT-40	Diesel	153 4BD153 Buda	12
FT-40	Diesel	153 4D153 Buda	13
FT-40-18	Gasoline	153 4B153 Buda	11
FT-40-18	Diesel	153 4BD153 Buda	12
FT-40-18	Diesel	153 4D153/4DA153 Buda	13
FT-40-18	Gasoline	153 4G153 Buda	14
FT-40-24	Gasoline	153 4B153 Buda	11
FT-40-24	Diesel	153 4BD153 Buda	12
FT-40-24	Diesel	153 4D153/4DA153 Buda	13
FT-40-24	Gasoline	153 4G153 Buda	14
FT-50	Gasoline	182 4B182 Buda	28
FT-50-24	Gasoline	182 4B182 Buda	28
FT-60	Gasoline	230 6B230 Buda	16
FT-60-24	Gasoline	230 6B230 Buda	16
FT-70	Gasoline	230 6B230 Buda	16

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Model	Fuel		Line No.
FT-70-24	Gasoline	230 6B230 Buda	16
FT-75-24	Gasoline	230 6B230 Buda	16
FT-80	Gasoline	230 6B230 Buda	16
FT-80-24	Gasoline	230 6B230 Buda	16
FT-100	Gasoline	230 6B230 Buda	16
FT-100-24	Gasoline	230 6B230 Buda	16
FTB-50-24	Gasoline	153 4B153 Buda	11
FTB-50-24	Diesel	153 4BD153 Buda	12
FTB-50-24	Diesel	153 4D153/4DA153 Buda	13
FTB-50-24	Gasoline	153 4G153 Buda	14
FTBD-30	Diesel	153 D153/DA153 Buda	9
FTBD-50-24	Gasoline	153 4B153 Buda	11
FTBD-50-24	Diesel	153 4BD153 Buda	12
FTBD-50-24	Diesel	153 4D153/4DA153 Buda	13
FTBD-50-24	Gasoline	153 4G153 Buda	14
FTBL-50-24	Gasoline	153 4G153 Buda	14
FTD-100	Gasoline	230 6B230 Buda	16
FTD-100	Diesel	230 6BD230 Buda	17
FTD-30	Gasoline	153 4B153 Buda	11
FTD-30	Diesel	153 4BD153 Buda	12
FTD-30	Diesel	153 4D153/4DA153 Buda	13
FTD-30-15	Gasoline	153 4B153 Buda	11
FTD-30-15	Diesel	153 4BD153 Buda	12
FTD-30-15	Diesel	153 4D153/4DA153 Buda	13
FTD-30-24	Gasoline	153 4B153 Buda	11
FTD-30-24	Diesel	153 4BD153 Buda	12
FTD-30-24	Diesel	153 4D153/4DA153 Buda	13
FTD-30-24	Gasoline	153 4G153 Buda	14
FTD-40	Gasoline	153 4B153 Buda	11
FTD-40	Diesel	153 4BD153 Buda	12
FTD-40	Diesel	153 4D153/4DA153 Buda	13
FTD-40-18	Gasoline	153 4B153 Buda	11
FTD-40-18	Diesel	153 4BD153 Buda	12
FTD-40-18	Diesel	153 4D153/4DA153 Buda	13
FTD-40-18	Gasoline	153 4G153 Buda	14
FTD-40-24	Gasoline	153 4B153 Buda	11
FTD-40-24	Diesel	153 4BD153 Buda	12
FTD-40-24	Diesel	153 4D153/4DA153 Buda	13
FTD-40-24	Gasoline	153 4G153 Buda	14
FTD-50	Gasoline	153 4B153 Buda	11
FTD-50	Diesel	153 4BD153 Buda	12
FTD-50	Diesel	153 4D153/4DA153 Buda	13
FTD-50-24	Gasoline	153 4B153 Buda	11
FTD-50-24	Diesel	153 4BD153 Buda	12
FTD-50-24	Diesel	153 4D153/4DA153 Buda	13
FTD-60	Gasoline	230 6B230 Buda	16
FTD-60	Diesel	230 6BD230 Buda	17
FTD-60-24	Gasoline	230 6B230 Buda	16
FTD-60-24	Diesel	230 6BD230 Buda	17
FTD-70	Gasoline	230 6B230 Buda	16
FTD-70	Diesel	230 6BD230	17
FTD-75-24	Gasoline	230 6B230 Buda	16
FTD-75-24	Diesel	230 6BD230 Buda	17
FTD-80	Gasoline	230 6B230 Buda	16
FTD-80-24	Diesel	230 6D230/6DA230 Buda	15
FTD-100	Gasoline	230 6B230 Buda	16
FTD-100	Diesel	230 6BD230 Buda	17
FTDB-50	Diesel	153 D153/DA153 Buda	9
FTDB-50	Gasoline	153 4B153 Buda	11
FTDB-50	Diesel	153 4BD153 Buda	12
FTDB-50	Diesel	153 4D153/4DA153 Buda	13
FTDX-30	Diesel	153 D153/DA153 Buda	9
FTDX-30	Gasoline	153 4B153 Buda	11
FTDX-30	Diesel	153 4BD153 Buda	12
FTDX-30	Diesel	153 4D153/4DA153 Buda	13
FTDX-40	Gasoline	153 4B153 Buda	11
FTDX-40	Diesel	153 4BD153 Buda	12
FTDX-40	Diesel	153 4D153/4DA153 Buda	13
FTDX-60	Gasoline	230 6B230 Buda	16
FTDX-60	Diesel	230 6BD230 Buda	17
FTDX-70	Gasoline	230 6B230 Buda	16
FTDX-70	Diesel	230 6BD230 Buda	17
FTDX-75	Gasoline	230 6B230 Buda	16
FTDX-75	Diesel	230 6BD230 Buda	17
FTDX-80	Gasoline	230 6B230 Buda	16
FTDX-80	Diesel	230 6BD230 Buda	17
FTDXB-50	Diesel	153 D153/DA153 Buda	9
FTDXB-50	Gasoline	153 4B153 Buda	11
FTDXB-50	Diesel	153 4BD153 Buda	12
FTDXB-50	Diesel	153 4D153/4DA153 Buda	13
FTL-100	Gasoline	230 6B230 Buda	16
FTL-30	Gasoline	153 4B153 Buda	11
FTL-30	Diesel	153 4BD153 Buda	12
FTL-30	Diesel	153 4D153/4DA153 Buda	13
FTL-40	Diesel	153 4D153/4DA153 Buda	13
FTL-30-15	Gasoline	153 4B153 Buda	11
FTL-30-15	Diesel	153 4BD153 Buda	12
FTL-30-15	Diesel	153 4D153/4DA153 Buda	13
FTL-30-15	Gasoline	153 4G153 Buda	14
FTL-30-24	Gasoline	153 4B153 Buda	11
FTL-30-24	Diesel	153 4BD153 Buda	12
FTL-30-24	Diesel	153 4D153/4DA153 Buda	13
FTL-30-24	Gasoline	153 4G153 Buda	14
FTL-40	Gasoline	153 4B153 Buda	11
FTL-40	Diesel	153 4BD153 Buda	12
FTL-40	Gasoline	153 4G153 Buda	14
FTL-40-18	Gasoline	153 4B153 Buda	11
FTL-40-18	Diesel	153 4BD153 Buda	12
FTL-40-18	Diesel	153 4D153/4DA153 Buda	13
FTL-40-24	Gasoline	153 4B153 Buda	11
FTL-40-24	Diesel	153 4BD153 Buda	12
FTL-40-24	Diesel	153 4D153/4DA153 Buda	13
FTL-50	Gasoline	153 G153 Buda	10
FTL-50	Gasoline	153 4G153 Buda	14
FTL-50-24	Gasoline	153 4B153 Buda	11
FTL-50-24	Diesel	153 4BD153 Buda	12
FTL-50-24	Diesel	153 4D153/4DA153 Buda	13
FTL-50-24	Gasoline	153 4G153 Buda	14
FTL-60	Gasoline	230 6B230 Buda	16
FTL-60-24	Gasoline	230 6B230 Buda	16
FTL-70	Gasoline	230 6B230 Buda	16
FTL-70-24	Gasoline	230 6B230 Buda	16
FTL-75	Gasoline	230 6B230 Buda	16
FTL-80	Gasoline	230 6B230 Buda	16
FTL-80-24	Gasoline	230 6B230 Buda	16
FTL-100	Gasoline	230 6B230 Buda	16
FTLB-50	Gasoline	153 4B153 Buda	11
FTLB-50	Diesel	153 4BD153 Buda	12
FTLB-50	Diesel	153 4D153/4DA153 Buda	13
FTP-30	Gasoline	153 4B153 Buda	11
FTP-30	Diesel	153 4BD153 Buda	12
FTP-30	Diesel	153 4D153/4DA153 Buda	13
FTP-30-24	Gasoline	153 4B153 Buda	11
FTP-30-24	Diesel	153 4BD153 Buda	12
FTP-30-24	Diesel	153 4D153/4DA153 Buda	13
FTP-30-24	Gasoline	153 4G153 Buda	14
FTP-40	Gasoline	153 4B153 Buda	11
FTP-40	Diesel	153 4BD153 Buda	12
FTP-40	Diesel	153 4D153/4DA153 Buda	13
FTP-40-24	Diesel	153 4D153/4DA153 Buda	13
FTP-40-24	Gasoline	153 4B153 Buda	11
FTP-40-24	Diesel	153 4BD153 Buda	12
FTP-40-24	Diesel	153 4D153/4DA153 Buda	13
FTP-40-24	Gasoline	153 4G153 Buda	14
FTP-60	Gasoline	230 6B230 Buda	16
FTP-60-24	Gasoline	230 6B230 Buda	16
FTPD	Gasoline	230 6B230 Buda	16
FTPD	Diesel	230 6BD230 Buda	17
FTPD-30	Gasoline	153 4B153 Buda	11
FTPD-30	Diesel	153 4BD153 Buda	12
FTPD-30	Diesel	153 4D153/4DA153 Buda	13
FTPD-40	Diesel	153 D153/DA153 Buda	9

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Model	Fuel		Line No.
FTPD-40	Gasoline	153 4B153 Buda	11
FTPD-40	Diesel	153 4BD153 Buda	12
FTPD-40	Diesel	153 4D153/4DA153 Buda	13
FTPD-60	Diesel	230 6D230/6DA230 Buda	15
FTPD-60-24	Diesel	230 6D230/6DA230 Buda	15
FTPDX-60	Diesel	230 6D230/6DA230 Buda	15
FTPL-30	Gasoline	153 4B153 Buda	11
FTPL-30	Diesel	153 4BD153 Buda	12
FTPL-30	Diesel	153 4D153/4DA153 Buda	13
FTPL-30-24	Gasoline	153 4B153 Buda	11
FTPL-30-24	Diesel	153 4BD153 Buda	12
FTPL-30-24	Diesel	153 4D153/4DA153 Buda	13
FTPL-30-24	Gasoline	153 4G153 Buda	14
FTPL-40	Gasoline	153 4B153 Buda	11
FTPL-40	Diesel	153 4BD153 Buda	12
FTPL-40	Diesel	153 4D153/4DA153 Buda	13
FTPL-40	Gasoline	153 4G153 Buda	14
FTPL-60	Gasoline	230 6B230 Buda	16
FTPL-60-24	Gasoline	230 6B230 Buda	16
FYD-70-24	Diesel	230 6D230/6DA230 Buda	15
H-4	Gasoline	230 6B230 Buda	16
HA-75	Gasoline	230 6B230 Buda	16
HA-90	Gasoline	230 6B230 Buda	16
HA-120	Gasoline	230 6B230 Buda	16
HB-75	Gasoline	230 6B230 Buda	16
HB-90	Gasoline	230 6B230 Buda	16
HB-120	Gasoline	230 6B230 Buda	16
JD-230	Gasoline	230 6B230 Buda	16
JD-230	Diesel	230 6BD230 Buda	17
JD-230N	Gasoline	230 6B230 Buda	16
JD-230N	Diesel	230 6BD230 Buda	17
JD-230P	Gasoline	230 6B230 Buda	16
JD-230P	Diesel	230 6BD230 Buda	17
JD-230PLD	Gasoline	230 6B230 Buda	16
JD-230PLD	Diesel	230 6BD230 Buda	17
JD-230PLS	Gasoline	230 6B230 Buda	16

POWER UNITS

Model	Fuel		Line No.
B-15	Gasoline	125 B125/CE Allis Chalmers	7
B-15	Gasoline	116/125 Allis Chalmers	5
B-125	Gasoline	125 B125/CE Allis Chalmers	7
D-344	Diesel	344 6000/7000 MKII Allis Chalmers	55
G-149	Gasoline	160 G160 Alli Chalmers	27
G-160	Gasoline	160 G160 Allis Chalmers	27
W	Gasoline	201 G201 Allis Chalmers	45
W-25	Gasoline	G201 Allis Chalmers	45

ENGINES

Models		Line No.
A3	Wisconsin Gasoline	3
A4	Wisconsin Gasoline	20
A4.236	Perkins Diesel	36
A5	Wisconsin Gasoline	20
AD3.152	Perkins Diesel	26
ADS516	Buda Diesel	57
AF	Wisconsin Gasoline	3
AFH	Wisconsin Gasoline	3
AFM	Wisconsin Gasoline	3
AG	Wisconsin Gasoline	20
AGH	Wisconsin Gasoline	20
AGM	Wisconsin Gasoline	20
AGN	Wisconsin Gasoline	20
AGND	Wisconsin Gasoline	20
B125	Allis Chalmers Gasoline	7
CE	Allis Chalmers Gasoline	7
D3.152	Perkins Diesel	26
D153	Buda Diesel	9
D2200	Allis Chalmers Diesel	34
D2800	Allis Chalmers Diesel (649)	37
D2900	Allis Chalmers Diesel (649)	37
D2900	Allis Chalmers Diesel (649T)	38
D3400	Allis Chalmers Diesel	53
D3400 MKII	Allis Chalmers Diesel	53
D3500	Allis Chalmers Diesel	53
D3500 MKII	Allis Chalmers Diesel	53
D3700 MKII	Allis Chalmers Diesel	53
D3750 MKII	Allis Chalmers Diesel	53
DA153	Buda Diesel	9
FC	Waukesha Flex Fuel	6
G138	Allis Chalmers Gasoline	8
G149	Allis Chalmers Gasoline	21
G153	Buda Gasoline	10
G160	Allis Chalmers Gasoline	27
G201	Allis Chalmers Gasoline	45
G226	Allis Chalmers Gasoline	46
G262	Allis Chalmers Gasoline	23
G273	Allis Chalmers Gasoline	30
GO339	Hercules Gasoline	47
G2200	Allis Chalmers Gasoline	35
G2500	Allis Chalmers Gasoline	29
G2800	Allis Chalmers Gasoline	39
G2900	Allis Chalmers Gasoline (649)	40
HD344	Buda Diesel	54
HD516	Buda Diesel	57
N62	Continental Gasoline	1
QXLD	Hercules Gasoline	19
QXLD3	Hercules Gasoline	19
QXLD5	Hercules Gasoline	19
U	Allis Chalmers Gasoline	61
V555	Cummins Diesel	62
VF4	Wisconsin Gasoline	4
VF41	Wisconsin Gasoline	4
VF4D	Wisconsin Gasoline	4
VH4	Wisconsin Gasoline	4
VH4D	Wisconsin Gasoline	4
VH4DM	Wisconsin Gasoline	4
W226	Allis Chalmers Gasoline	46
4B153	Buda Gasoline	11
4B182	Buda Gasoline	28
4BD153	Buda Diesel	12
4D153	Buda Diesel	13

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Model	Fuel		Line No.
JD-230PLS	Diesel	230 6BD230 Buda	17
JD-230WL	Gasoline	230 6B230 Buda	16
JD-230WL	Diesel	230 6BD230 Buda	17
JD-230WN	Gasoline	230 6B230 Buda	16
JD-230WN	Diesel	230 6BD230 Buda	17
JG-230	Gasoline	230 6B230 Buda	16
JG-230N	Gasoline	230 6B230 Buda	16
JG-230P	Gasoline	230 6B230 Buda	16
JG-230PLD	Gasoline	230 6B230 Buda	16
JG-230PLS	Gasoline	230 6B230 Buda	16
JG-230WL	Gasoline	230 6B230 Buda	16
JG-230WN	Gasoline	230 6B230 Buda	16
RT-40	Gasoline	149 G149 Allis Chalmers	21
T-624	Gasoline	153 4B153 Buda	11
T-624	Diesel	153 4BD153 Buda	12
T-624	Diesel	153 4D153/4DA153 Buda	13
T-624	Gasoline	153 4G153 Buda	14
T-630	Gasoline	153 4B153 Buda	11
T-630	Diesel	153 4BD153 Buda	12
T-630	Diesel	153 4D153/4DA153 Buda	13
T-630	Gasoline	153 4G153 Buda	14
TD-24	Gasoline	153 4B153 Buda	11
TD-24	Diesel	153 4BD153 Buda	12
TD-24	Diesel	153 4D153/4DA153 Buda	13
TD-30	Gasoline	153 4B153 Buda	11
TD-30	Diesel	153 4BD153 Buda	12
TD-30	Diesel	153 4D153/4DA153 Buda	13
TG-24	Gasoline	153 4B153 Buda	11
TG-24	Diesel	153 4BD153 Buda	12
TG-24	Diesel	153 4D153/4DA153 Buda	13
TG-24	Gasoline	153 4G153 Buda	14
TG-30	Gasoline	153 4B153 Buda	11
TG-30	Diesel	153 4BD153 Buda	12
TG-30	Diesel	153 4D153/4DA153 Buda	13
TG-30	Gasoline	153 G153 Buda	14

POWER UNITS

Model	Fuel		Line No.
W-25	Gasoline	226 G226 Allis Chalmers	46
W-201	Gasoline	201 G201 Allis Chalmers	45
W-226	Gasoline	201 G201 Allis Chalmers	45
W-226	Gasoline	226 G226 Allis Chalmes	46
60H	Gasoline	125 B125/CE Allis Chalmers	7

ENGINES

Models		Line No.
4D175	Buda Diesel	22
4DA153	Buda Diesel	13
4DA175	Buda Diesel	22
4G139	Allis Chalmers Gasoline	8
4G153	Buda Gasoline	14
6B230	Buda Gasoline	16
6BD230	Buda Diesel	17
6D230	Buda Diesel	15
6D262	Buda Diesel	25
6D273	Buda Diesel	31
6DA230	Buda Diesel	15
6DA262	Buda Diesel	25
6G230	Buda Gasoline	18
6G262	Buda Gasoline	24
116	Allis Chalmers Gasoline	5
120	Ford Gasoline	2
125	Allis Chalmers Gasoline	5
172	Ford Gasoline	41
172	Ford Diesel	42
172	Ford Flex Fuel	43
2-71	Detroit Diesel	48
3-71	Detroit Diesel	49
4-71	Detroit Diesel	50
4.236	Perkins Diesel	36
4.248	Perkins Diesel	44
433	Allis Chalmers Diesel	32
433T	Allis Chalmers Diesel	33
6-71	Detroit Diesel	51
670 MKII	Allis Chalmers Diesel	52
670-I MKII	Allis Chalmers Diesel	52
670T MKII	Allis Chalmers Diesel	52
685-I	Allis Chalmers Diesel	58
685T	Allis Chalmers Diesel	59,60
2900	Allis Chalmers Gasoline	40
6000	Allis Chalmers Diesel	55
6000 MKII	Allis Chalmers Diesel	55
6000	Allis Chalmers Diesel	56
6000MKII	Allis Chalmers Diesel	56
6138-I	Allis Chalmers Diesel	69
6138LT	Allis Chalmers Diesel	69
6138T	Allis Chalmers Diesel	69
7000	Allis Chalmers Diesel	55
7000 MKII	Allis Chalmers Diesel	55
7000	Allis Chalmers Diesel	56
7000 MKII	Allis Chalmers Diesel	56
10000	Allis Chalmers Diesel	59,60
10000MKII	Allis Chalmers Diesel	59
10000 MKII	Allis Chalmers Diesel	60
11000	Allis Chalmers Diesel	59,60
11000MKII	Allis Chalmers Diesel	59,60
16000	Allis Chalmers Diesel	64
16000H	Allis Chalmers Diesel	65
17000MKII	Allis Chalmers Diesel	66
19000	Allis Chalmers Diesel	63
21000	Allis Chalmers Diesel	64
21000H	Allis Chalmers Diesel	65
21000 MKII	Allis Chalmers Diesel	67,69
25000	Allis Chalmers Diesel	65
25000MKII	Allis Chalmers Diesel	68

NOTES

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
1			62 CID (1.0L) N62 CONTINENTAL GASOLINE ENGINE; WHEEL TRACTOR-G, GA, N62								
	2.375"	4				**S4782** (N62T142)	2-3/32"	1-3/16"		**Full Set** **FS1850** **Head Set** **HS1850** **Head Gskt** **1850** **Pan Set** **OS20657** **Front Seal** **46423** **Rear Seal** **49910**	
						S5782 (N62T227)	2-3/32"	1-3/16"			

NOTES

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
1	Exh.		**217-3678** (N62I200)	**212-1034** (N62I201)	**216-5147** (Y400I310)	**R.B.**	**CB-345P**	10-20-30	1.4990/1.5000
						Note: Through Engine S/N 42049			
	Int.		**217-3678** (N62I200)	**212-1034** (N62I201)	**216-5147** (Y400I310)	**R.B.**	**CB-524P**	10-20-30	1.4990/1.5000
						Note: From Engine S/N 42050			
	Exh.	**218-7323**	Valve Seat						
	Int.	**218-7323**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
2			**120 CID (2.0L) 120 FORD GASOLINE ENGINE; COMBINE-J2, J3, T2, T3**							
	3.188"	4	Thru Engine S/N 433537							**Full Set FS1950** ●
			226-1212(1) (APN6055B)	**226-4212** (99A6055B)	**224-2748** (8BA6108A)	**S41815** (8N6149G)	2-3/32"	1-3/16"	**223-3451**(6) (21A6207A3)	**Head Set HS1950**
										Head Gskt 1950
										Pan Set OS20507A
			226-1900(2) (CONN6055B	**226-4511** (0530017	**224-2748** (8BA6108A)	**S41815** (8N6149A)	2-3/32"	1-3/16"	**223-3451**(6) (21A6207A3)	**Valve Cvr VS25809X**
										Manif. Set MS12155
										Rear Seal JV674
			226-1253(3) (APN6055E)	**226-4208** (8N6055B)	**224-2742** (8N6108B)	**S41816**	2-3/32"	2-3/16"	**223-3451**(6) (21A6207A3)	**Fuel Pump D36536** (Bowl Gasket)
										Fuel Pump D27094 (Gasket)
			From Engine S/N 433578 - Up							
			226-1208(4) (APN6055A)	**226-4208** (8N6055B)	**224-2748** (8BA6108A)	**S41815** (8N6149G)	2-3/32"	1-3/16"	**223-3451**(6) (21A6207A3)	
			226-1261(5) (APN6055A)	**226-4208** (8N6055B)	**224-2742** (8N6108B)	**S41816**	2-3/32"	2-3/16"	**223-3451**(6) (21A6207A3)	
	3.270"	4	Overbore Conversion							● Set includes front and rear crankshaft seals.
			226-1414 (8NG6149G)	**226-4188**	**224-2742.083**	**S41816.0825**	2-3/32"	2-3/16"	**223-3451**(6) (21A6207A3)	

Notes:
1. Tapered Flange, .040" Wall Sleeve, and 3 Ring Piston
2. Square Cut Flange, .040" Wall Sleeve, and 3 Ring Piston
3. .040" Wall Sleeve, and 4 Ring Piston
4. .090" Wall Sleeve, and 3 Ring Piston. Requires a Boring Block for .090" Wall Sleeve
5. .090" Wall Sleeve, and 4 Ring Piston. Requires a Boring Block for .090" Wall Sleeve
6. Requires Light Reaming

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
		VALVE TRAIN PARTS			
2	Exh.	**211-1305**● (8N6505C)	**217-3614** (8BA6510B)	**212-1026** (8N6513)	**216-5169** (EAM6518A)
	Exh.	**211-1161**◆ (8N6505A)		**212-1026** (8N6513)	**216-5169** (EAM6518A)
	Exh.			**212-1018** (2NC6513)	
	Exh.		**216-5085**■	**212-1063**◆	
	Exh.			**212-1037** † (1BA6513A)	
	Int.	**211-1076** ◆ (8BA6507A)	**217-3614** (8BA6510B)	**212-1026** (8N6513)	**216-5117** (7HA6518A)
	Int.				**216-5118**▲ (C9ZZ6518A)
	Int.		**216-5085**■	**212-1018** (2NC6513)	**216-5117** (7HA6518A)
	Int.				**216-5118**▲ (C9ZZ6518A)
	Exh.	**218-7405**	Valve Seat (Tapered I.D.)		
	Int.	**218-7535** ◗ (A0A6057AA)	Valve Seat		

● Solid Guide, (Roto Valve Only)
◆ Solid Guide, Roto Valve
■ Valve Guide Retainer
† Split Guide, Roto Valve
▲ Hardened Steel, Performer
◗ Available in .005" & .010" Oversize

CAMSHAFT/TIMING COMPONENTS

8-4706 (7RA-6256A) Cam Gear 9N Exc. 1939-41

8-4704 (486306A) Crank Gear

8-4707S Timing Gear (Matched Set)

OIL PUMP

From Engine S/N: 247571 - Up

601-1505 Oil Pump Gear and Shaft

601-1210 Oil Pump Repair Kit

To Engine S/N 247570

601-1506 Oil Pump Gear and Shaft

601-1228 Oil Pump Repair Kit

601-1503 Oil Pump Body Bushing

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
	BEARINGS		
R.B.	**CB-200P**	P-1-2-10-20-30-40,	2.0935/2.0945
M.S.	**MS-120P**	P-2-10-20-30-40	
1-3	MB-947P		2.2480/2.2490
2	MB-948P(F)		2.2480/2.2490

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
3			**33 CID (0.5L) A3, AF, AFH, AFM WISCONSIN GASOLINE ENGINE;**								
	3.250"	1								**Head Gskt 1313**	
4			**108 CID (1.9L) VF4, VF4D, VF41, VH4, VH4D, VH4DM WISCONSIN GASOLINE ENGINE; BALER-302, 303; COMBINE-P8, P80, S**								
	3.250"	4	Repair Sleeve, (.125" Wall - 9.250" Long, Universal)							**Full Set FS1785**	
			226-8004	**224-2827** (DB2011)		**S4601** (DR31C)	3-3/32"	1-3/16"	**223-3471**(1) (HG157A)	**Head Set HS1785**	
										Head Gskt 1785	
										Manif Set MS17577	
			Repair Sleeve, (.0938" Wall - 9.250" Long, Universal)							**Front Seal 47163**	
			226-8053			**S5601**	3-3/32"	1-3/16"			
						S51439	3-5/64"	1-3/16"			
			Note: 1. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix)								
5			**116 CID (1.9L) / 125 CID (2.0L) ALLIS CHALMERS GASOLINE ENGINE; COMBINES-60, 60H, 66; HARVESTER-A, C; WHEEL LOADER- TL6; POWER UNIT-B15; WHEEL TRACTORS-B, BE, B15, B125, C, CA, CB, CE, IB, RC;**								
	3.250"	4	B/BE Engines							**Full Set FS1606**	
						S41810 (208347)	2-1/8"	1-3/16"		**Head Set HS1606**	
										Head Gskt 1606	
										Pan Set OS30653	
						S5023	2-1/8"	1-3/16"		**Manif Set MS18715**	
	3.375"	4	Overbore Conversion for B15/B125 Engines							**Front Seal 47326**	
			226-1259 (281735)	**226-4138** (208743)	**224-3193** (225653)	**S4323** (212245)	3-1/8"	1-3/16"		**Front Seal 49353**	
				223-7103 (4500301) (O-ring Kit)		**S5323**	3-1/8"	1-3/16"			
6			**133 CID (2.2L) FC WAUKESHA FLEX ENGINE**								
	3.250"	4	Repair Sleeve, (.125" Wall - 9.250" Long, Universal)							**Head Set HS1342C**	
			226-8004			**S41810**	2-1/8"	1-3/16"		**Head Gskt 1342G**	
										Pan Set OS30427	
										Gvnr Seal 48816	
			Repair Sleeve, (.0938" Wall - 9.250" Long, Universal)							**Pump Seal 48635 ●**	
			226-8053			**S5023**	2-1/8"	1-3/16"		**Pump Seal 49609 ◆**	
										Notes: ● Gear Driven, Ball Type ◆ Gland Type	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
3									
4	Exh.	**211-1375** (AE75D)	**217-3907** (AD41)	**212-1032** (AF49A)	**216-5234** (AH9)	**R.B.**	**CB-979M**	10-20	1.8750/1.8760
	Int.	**211-1187** (AE75B)	**217-3907** (AD41)	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exh.	**218-7417** (HG201)	Valve Seat						
	Int.	**218-7417** (HG201)	Valve Seat						
5	Exh.	**211-1592** ● (206878)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**R.B.**	**CB-179P**	2-10-20-30	1.9365/1.9375
						M.S.	**MS-211P**	10-20-30	
	Exh.				**216-5118** ◆	**1**	MB-891P(F)		2.2490/2.2500
						2-3	MB-892P		2.2490/2.2500
	Int.	**211-1584** (206877)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**Note:** Contains Half Flanged Bearing; Use in Lower Number 1 Position			
						C.S.	**SH-384S**		
	Int.				**216-5118** ◆	**1-2-3**	SH-384		1.7490/1.7500
	Exh.	**218-7411** ■	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Except with Rotocap Assembly ◆ Hardened Steel, (Optional) ■ Available in .015" Oversize								
6	Exh.		**217-3458**		**216-5123** (B9792)				
	Int.		**217-3458**		**216-5123** (B9792)				
	Exh.	**218-7439**	Valve Seat						
	Int.	**218-7439**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
7			**125 CID (2.0L) B125, CE ALLIS CHALMERS GASOLINE ENGINE; BALER-B; COMBINE-60, 60H, 66, 66-ALLCROP; HARVESTER-AC, B; POWER UNIT-B15, B125, 60H; WHEEL TRACTOR-B, BE, C,CA, CB, CE**								
	3.375"	4	**226-1259** (281735)	**226-4138** (208743)	**224-3193** (225653)	**S4323** (212245)	3-1/8"	1-3/16"		**Full Set FS1606** **Head Set HS1606** **Head Gskt 1606** ● **Pan Gskt OS30653** **Manif Set MS18715** **Front Seal 47326** ◆ **Front Seal 49353** ■	
				223-7103 (4500301) (O-ring Kit)		**S5323**	3-1/8"	1-3/16"			
										● Low Grade Fuel Applications Require 2 ◆ Engine S/N CE161090 to CE177566; Engine S/N CR49829 thru CR54230 ■ Engine S/N CE177567; Engine S/N CR54231	
8			**138 CID (2.3L) G138, 4G139 ALLIS CHALMERS GASOLINE ENGINE; COMBINE-72; WHEEL TRACTORS-D10, D12, D14, D15; HARVESTER-50; BALER-10**								
	3.375"	4	Standard Bore			**S4323** (212245)	3-1/8"	1-3/16"		**Full Set FS3145** **Head Set HS3145** **Head Gskt 3145** **Pan Set OS30653** **Valve Cvr VS38286** **Manif Set MS15090** **Front Seal 46026** **Rear Seal 46081** ■	
						S5323	3-1/8"	1-3/16"			
	3.500"	4	Overbore Conversion **226-1359** (284393)							■ Seal For Bolt-on Housing Retainer	

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
7	Exh.	**211-1592** ● (206878)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**R.B.**	**CB-179P**	2-10-20-30	1.9365/1.9375
						M.S.	**MS-211P**	10-20-30	
	Exh.				**216-5118** ◆	**1**	MB-891P(F)		2.2490/2.2500
						2-3	MB-892P		2.2490/2.2500
						Note: Contains Half Flanged Bearing; Use in Lower Number 1 Position			
	Int.	**211-1584** (206877)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**C.S.**	**SH-384S**		
						1-2-3	SH-384		1.7490/1.7500
	Int.				**216-5118** ◆				
	Exh.	**218-7411**	(Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Except with Rotocap Assembly ◆ Hardened Steel, (Performer)								
8	Exh.	**211-1592** ● (206878)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**R.B.**	**CB-781AL**	10-20-30	1.9365/1.9375
						M.S.	**MS-902AL**	10-20	
	Exh.				**216-5118** ■	**1-2**	MB-2497AL		2.7480/2.7490
						3	MB-2498AL(F)		2.7480/2.7490
	Int.	**211-1584** (206877)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)				
	Int.				**216-5118** ■				
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Except with Rotocap Assembly ■ Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
9			**153 CID (2.5L) D153, DA153, BUDA DIESEL ENGINES; GRADER-D, LIFT TRUCK-FTDB50, FTDX30, FTDXB50, FTBD30, FTPD40**								
	3.438"	4				**S4827**	3-1/8"	1-3/16"	**223-3507**(1) (B145)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38246** **Front Seal 49638** **Rear Seal 49872 ■** **Real Seal SS48048 ▲** **Water Gskt G5260EK**	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● With Press-On Flyhweel Housing Oil Seal Retainer ◆ With Bolt-On Flywheel Housing Oil Seal Retainer ■ Seal For Bolt-On Flywheel Housing Retainer ▲ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer	
10			**153 CID (2.5L) G153 BUDA GASOLINE ENGINE; LIFT TRUCK-AT40, F30, F40, F50, FD30, FD40, FD50, FL30, FL40, FL50, FP40, FP50, FPL40, FPL50, FTL50; CRAWLER TRACTOR-HD3**								
	3.438"	4	From Chassis 397017 Thru G05763 **226-1484** (4516639)	**226-4417** (4512775) **223-7143** (O-ring Kit)	**224-1766** (4516721)	**S4827**	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3302VC ●** **Head Set HS3302VC** **Head Gskt 3302VC** **Head Gskt 3716G** **Pan Set OS20492** **Manif Set MS9848X** **Front Seal 49638** **Rear Seal 49872 ◆** **Rear Seal SS48048 ■**	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● With Press-On Flywheel Housing Retainer ◆ Seal for Bolt-On Flywheel Housing Retainer ■ Seal With Repair Sleeve For Press-on Retainer	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
9	Exh.		**217-3703** (B166A)	**212-1095** ● (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.		**217-3703** (B166A)	**212-1095** ● (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
	Int.	**218-7535** ◆	Valve Seat			**1**	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	● Except with Rotocap Assembly ◆ Available in .005" & .010" Oversizes								
10	From Chassis S/N 397107 to G05763					**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
	Exh.	**211-1993** (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5117** (206880)				
						M.S.	**MS-226P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
	Exh.				**216-5118** ●	**2**	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Int.		**217-3943** (4513115)	**212-1157** (4512172)	**216-5117** (206880)				
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.				**216-5118** ●	**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	Exh.	**218-7439** (4513864)	Valve Seat						
	Int.	**218-7493**	Valve Seat						
	Int.	**218-4006**	Valve Seat						
	● Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
11			**153 CID (2.5L) 4B153 BUDA GASOLINE ENGINE; LIFT TRUCK-FT30, FT30-15, FT30-24, FT40, FT40-18, FT40-24, FTB50-24, FTBD50-24, FTD30, FTD30-15, FTD30-24, FTD40, FTD40-18, FTD40-24, FTD50, FTD50-24, FTDB50, FTDX30, FTDX40, FTPD40, FTDXB50, FTL30, FTL30-15, FTL30-24, FTL40, FTL40-18, FTL40-24, FTL50-24, FTLB50, FTP30, FTP30-24, FTP40, FTP40-24, FTPD30, FTPD40, FTPL30, FTPL30-24, FTPL40, T624, T630, TD24, TD30, TG24, TG30,**							
	3.438"	4				**S4827**	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲** **Pump Seal 49293 †** **Water Gskt G5260EK**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							
	3.563"	4	Overbore Conversion			**S40417**	3-1/8"	1-1/4"		● With Press-On Flyhweel Housing Oil Seal Retainer ◆ With Bolt-On Flywheel Housing Oil Seal Retainer ■ Seal For Bolt-On Flywheel Housing Retainer ▲ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer † Before Serial Number 72417
						S41010	3-3/32"	1-1/4"		
12			**153 CID (2.5L) 4BD153 BUDA DIESEL ENGINE; LIFT TRUCK-FT30, FT30-15, FT30-24, FT40, FT40-18, FT40-24, FTB50-24, FTBD50-24, FTD30, FTD30-15, FTD30-24, FTD40, FTD40-18, FTD40-24, FTD50, FTD50-24, FTDB50, FTDX30, FTDX40, FTPD40, FTDXB50, FTL30, FTL30-15, FTL30-24, FTL40, FTL40-18, FTL40-24, FTL50-24, FTLB50, FTP30, FTP30-24, FTP40, FTP40-24, FTPD30, FTPD40, FTPL30, FTPL30-24, FTPL40, T624, T630, TD24, TD30, TG24, TG30,**							
	3.438"	4				**S4827**	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38146** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲** **Pump Seal 49293 †** **Water Gskt G5260EK**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							
	3.563"	4	Overbore Conversion			**S40417**	3-1/8"	1-1/4"		● With Press-On Flyhweel Housing Oil Seal Retainer ◆ With Bolt-On Flywheel Housing Oil Seal Retainer ■ Seal For Bolt-On Flywheel Housing Retainer ▲ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer † Before Serial Number 72417
						S41010	3-3/32"	1-1/4"		

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
11	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.	**211-1194** (B281)	**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7535** ●	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.9980/1.9990
	● Available in .005" & .010" Oversize								
12	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.	**211-1194** (B281)	**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7535** ●	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.9980/1.9990
	● Available in .005" & .010" Oversize								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
13			**153 CID (2.5L) 4D153, 4DA153 BUDA DIESEL ENGINE; LIFT TRUCK-FT30, FT30-15, FT30-24, FT40, FT40-18, FT40-24, FTB50-24, FTBD50-24, FTD30, FTD30-15, FTD30-24, FTD40, FTD40-18, FTD40-24, FTD50, FTD50-24, FTDB50, FTDX30, FTDX40, FTDXB50, FTL30, FTL30-15, FTL30-24, FTL40, FTL40-18, FTL40-24, FTL50-24, FTLB50, FTP30, FTP30-24, FTP40, FTP40-24, FTPD30, FTPD40, FTPL30, FTPL30-24, FTPL40, T624, T630, TD24, TD30, TG24, TG30,**								
	3.438"	4							**223-3507**(1)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38246** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲** **Water Gskt G5260EK** **Pump Seal 49293 †**	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● With Press-On Flyhweel Housing Oil Seal Retainer ◆ With Bolt-On Flywheel Housing Oil Seal Retainer ■ Seal For Bolt-On Flywheel Housing Retainer ▲ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer † Befor Serial Number 72417	
14			**153 CID (2.5L) 4G153 BUDA GASOLINE ENGINE; LIFT TRUCK-F30, F40, F50, FD30, FD40, FD50, FL30, FL40, FL50, FP40, FP50, FPDX60, FPDX70, FPL40, FPL50, FT30-15, FT30-24, FT40-18, FT40-24, FTB50-24, FTBD50-24, FTBL50-24, FTD30-24, FTD40-18, FTD40-24, FTL30-15, FTL30-24, FTL40, FTL50, FTL50-24, FTP30-24, FTP40-24, FTPL30-24, FTPL40-24, TG24, TG30, T624, T630**								
	3.438"	4	**226-1484**	**226-4417** **223-7143** (O-ring Kit)	**224-1766**	**S4827**	3-1/8"	1-3/16"	**223-3507**(1)	**Full Set FS3302VC ●** **Head Set HS3302VC** **Head Gskt 3302VC** **Pan Set OS20492** **Manif Set MS9848X** **Front Seal 49638** **Rear Seal 49872 ◆** **Rear Seal SS48048 ■**	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● Contains Rear Seal with Repair Sleeve for Press On Retainer ◆ Seal For Bolt-On Flywheel Housing Retainer ■ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
13	Exh.				**216-5234**	**R.B.**	**CB458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.				**216-5234**	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7819** ●	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7467**	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.9980/1.9990
	● High Chrome								
14	Exh.	**211-1993** (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5117** (206880)	**R.B.**	**CB458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Exh.				**216-5118** ●	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
	Int.		**217-3943** (4513115)	**212-1157** (4512172)	**216-5117** (206880)	**3**	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
	Int.				**212-5118** ●	**1**	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
	Exh.	**218-7439** ◆ (4513864)	Valve Seat			**4**	SH-388		1.9980/1.9990
	Int.	**218-4006** ■	Valve Seat						
	Int.	**218-7493** ▲	Valve Seat						
	● Hardened Steel, Performer, (Optional) ◆ High Chrome ■ Powdered Metal ▲ Available in .005" Oversize								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
15			**230 CID (3.8L) 6D230, 6DA230 BUDA DIESEL ENGINES; WHEEL LOADERS-TL-10, TL-11, TL-14; LIFT TRUCKS-FTD80-24, FTPD60, FTPD60-24, FTPDX60, FYD70-24**							
	3.438"	6				**S4701**	3-1/8"	1-3/16"	**223-3507**(1) (B145)	**Full Set FS3293VC ●** **Head Set HS3293VC** **Pan Set OS20910** **Manif Set MS15113** **Front Seal 49638** **Rear Seal 49872 ●** **Rear Seal SS48048 ◆**
	3.563"	6	Overbore Conversion, 262 Block; From Eng. S/N 385141 Thru 397016			**S40417**	3-1/8"	1-1/4"		
			Note: Requires Boring; Steel Backed Copper-Lead Matrix							● Seal For Press-On Flywheel Housing Retainer ◆ Seal With Repair Sleeve For Press-on Retainer
16			**230 CID (3.8L) 6B230 BUDA GASOLINE ENGINE; COMBINES-A, A11, AH, B, R; HARVESTERS-2A, 3A, 3E; LIFT TRUCKS-FLP60, FLP70, FLP80, FT60, FT60-24, FT70, FT70-24, FT75-24, FT80, FT80-24, FT100, FT100-24, FTD60, FTD60-24, FTD70, FTD75-24, FTD80, FTD100, FTDX60, FTDX70, FTDX75, FTDX80, FTL60, FTL60-24, FTL70, FTL70-24, FTL75, FTL80, FTL80-24, FTL100, FTP60, FTP60-24, FTPD, FTPL60, FTPL60-24, H4, HA75, HA90, HA120, HB75, HB90, HB120, JD230, JD230N, JD230P, JD230PLD, JD230PLS, JD230WL, JD230WN, JG230, JG230N, JG230P, JG230PLD, JG230PLS, JG230WL, JG230WN**							
	3.438"	6	**226-1484**(1) (4516639)	**226-4417**(1) (4512775)	**224-1766**(1) (4516721)	**S4827**	3-1/8"	1-3/16"	**223-3507**(2) (4507127)	**Full Set FS3295VC ●** **Full Set FS3295VW ◆** **Head Set HS3295VC** **Head Gskt 4892** **Pan Set OS20910** **Front Seal 49638** **Rear Seal 49872 ●** **Rear Seal SS48048 ◆** **Water Gskt G5260EK**
				223-7143 (O-ring Kit)						
	3.500"	6	Overbore Conversion			**S4806**(2)	3-1/8"	1-1/4"		
	3.563"	6	Overbore Conversion, From Eng. S/N 385141 Thru 397016			**S40417**	3-1/8"	1-1/4"		● Seal for Press-On Flywheel Housing Retainer ◆ Seal With Repair Sleeve For Bolt-On Flywheel Housing Retainer
				226-4156 (4510817)						
				223-7129 (450776) (O-ring Kit)						
			Notes: 1. Except A, B & R Combines 2. Requires Boring; Steel Backed Copper-Lead Matrix							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
15	Exh.		**217-3703** (B166A)	**212-1095** ● (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Int.		**217-3703** (B166A)	**212-1095** ● (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
	Exh.	**218-7411**	Valve Seat			**4**	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
	Int.	**218-7535**	Valve Seat			**C.S.**	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	● Except with Rotocap Assembly								
16	Exh.	**211-1993** ● (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5118** ◆	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Exh.			**212-1095** (4508944)	**216-5234** (4356080)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
	Int.		**217-3943** (2173943)	**212-1157** (4512172)	**216-5118** ◆	**4**	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
	Int.	**211-1194** (4500281)		**212-1095** (4508944)	**216-5234** (4356080)	**C.S.**	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
	Exh.	**218-7411**	Valve Seat			**4**	SH-388		1.2480/1.2490
	Exh.	**218-7439** (4513864)	Valve Seat						
	● Except A, B & R Combines ◆ Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
17			**230 CID (3.8L) 6BD230 BUDA DIESEL ENGINE; GRADER-D; WHEEL TRACTOR-WD45D, D17, D17G; LIFT TRUCK-FTD60, FTD60-24, FTD70, FTD75-24, FTD80, FTD100, FTDX60, FTDX70, FTDX75, FTDX80, FTPD, JD230, JD230N, JD230P, JD230PLD, JD230PLS, JD230WL, JD230WN**							
	3.438"	6				**S4701**	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3293VC ●** **Full Set FS3293VW ◆** **Head Set HS3293VC** **Head Gskt 4892** **Pan Set OS20910** **Manif Set MS15113** **Front Seal 49638** **Rear Seal 49872 ●** **Rear Seal SS48048 ◆** **Water Gskt G5260EK**
	3.563"	6	From Eng. S/N 385141 Thru 397016; Overbore Conversion			**S40417**	3-1/8"	1-1/4"		
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● With Press-On Flyhweel Housing Retainer ◆ Seal With Repair Sleeve For Bolt-On Flywheel Housing Retainer
18			**230 CID (3.8L) 6G230 BUDA GASOLINE ENGINE; LIFT TRUCKS-F-60, F-70, F-80, F-100, F-120, FD-60, FD-70, FD-80, FD-100, FD-120, FDX60, FP-60, FP-70, FP-80; GRADER-D**							
	3.438"	6	From Chassis S/N 397017 Thru G05763							**Full Set FS3300VC ●** **Head Set HS3300VC** **Head Gskt 3716G** **Pan Set OS20910** **Valve Cvr VS39691** **Manif Set MS9848X** **Front Seal 49638** **Rear Seal SS48048 ●**
			226-1484 (4516639)	**226-4417** (4512775)	**224-1766** (4516721)	**S4827**	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	
				223-7143 (O-ring Kit)		**S4701**	3-1/8"	1-3/16"		
	3.563"	6	Overbore Conversion, 262 Block			**S40417**	3-1/8"	1-1/4"		● Seal With Repair Sleeve For Press-on Retainer
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
17	Exh.		**217-3703** (4500166)	**212-1095** ● (4508944)	**216-5234** (4356080)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Int.		**217-3703** (4500166)	**212-1095** ● (4508944)	**216-5234** (4356080)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
	Exh.	**218-7411**	Valve Seat			**4**	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
	Int.	**218-7535** ◆	Valve Seat			**C.S.**	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.9980/1.9990
	● Except with Rotocap Assembly ◆ Available in .005" & .010" Oversizes								
18	From Chassis S/N 397017 to G05763					**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
	Exh.	**211-1993** (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5117** (206880)	**M.S.**	**MS-227P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
	Exh.				**216-5118** ●	**2-3**	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
	Int.		**217-3943** (4513115)	**212-1157** (4512172)	**216-5117** (206880)	**7**	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
	Int.				**216-5118** ●	**1**	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	Exh.	**218-7439** (4513864)	Valve Seat						
	Int.	**218-7493** ◆	Valve Seat						
	Int.	**218-4006**	Valve Seat						
	● Hardened Steel, (Optional) ◆ Available in .005" Oversize								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
19			**237 CID (3.9L) QXLD, QXLD3, QXLD5 HERCULES GASOLINE ENGINES; COMBINE: A, A11, AH, B, CORNHEAD, R, SP, SP-RICE SPECIAL, 2A, 3A, 3E**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long, Universal) **226-8006** Repair Sleeve, (.0938" Wall - 9.250" Long, Universal) **226-8056**							**Full Set FS1735 ●** **Full Set FS3159 ◆** **Head Set HS1735 ■** **Head Set HS3159 ▲** **Head Gskt 1735 ■** **Head Gskt 3159 ▲** **Pan Set OS20978** **Front Seal 49379** **Rear Seal 49822** **Water Gskt G5260EK** ● Low Compression, Timing Cover Seal Not Included ◆ High Compression, Timing Cover Seal Not Included ■ Low Compression ▲ High Compression
20			**39 CID (0.6L) AG, AGH, AGM, AGN, AGND, A4, A5 WISCONSIN ENGINES**							
	3.500"	1	Repair Sleeve, (.0938" Wall - 9.250" Long, Universal) **226-8057**			**S70185**	3-1/8"	1-3/16"		**Full Set FS3102** **Head Gskt 1313**
21			**149 CID (2.4L) G149 ALLIS CHALMERS GASOLINE ENGINE; BALER-10, 302, 303; COMBINES-10, 66, 72, 90; CRAWLER TRACTOR-H3, I40; LIFT TRUCK-RT40; HARVESTER-50; WHEEL TRACTOR-D10, D12, D14, D15, I40**							
	3.500"	4	**226-1359** (284393)			**S4548** (230092)	3-1/8"	1-3/16"		**Full Set FS3145** **Head Set HS3145** **Head Gskt 3145** **Pan Set OS30653** **Valve Cvr VS38286** **Manif Set MS15090** **Front Seal 46026** **Rear Seal 46081●** ● Seal For Bolt-on Housing Retainer

	VALVE TRAIN PARTS					BEARINGS			
Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
19	Exh.	**211-1281** (47017B)	**217-3697**		**216-5123** (46011A)	**R.B.**	**CB-341P**	10-20	1.9870/1.9880
						C.S.	**SH-322S**		
	Int.		**217-3697**		**216-5123** (46011A)	**1-4**	SH-322		1.7490/1.7500
						2-3	SH-323		1.7490/7.7500
	Exh.	**218-4010** ●	Valve Seat						
	Exh.	**218-7463**	Valve Seat						
	Int.	**218-7623**	Valve Seat						
	● Powdered Metal								
20	Exh.		**217-3458** ●		**216-5234** (AH9)				
	Exh.		**217-3908** ◆ (AD42)						
	Int.		**217-3458** ●		**216-5234** (AH9)				
	Int.		**217-3908** ◆ (AD42)						
	● Iron, .500" O.D.; 2.500" Long ◆ Iron, .4375" O. D.; 2.500" Long								
21	Exh.	**211-1592** ● (206878)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)	**R.B.**	**CB-781AL**	10-20-30	1.9365/1.9375
						M.S.	**MS-902AL**	10-20	
	Exh.				**216-5118** ◆	**1-2**	MB-2497AL		2.7480/2.7490
						3	MB-2498AL(F)		2.7480/2.7490
	Int.	**211-1584** ■ (206877)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)				
	Int.				**216-5118** ◆				
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Except with Rotocap Assembly ◆ Hardened Steel, (Optional) ■ Except D15, I40								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
22			**175 CID (2.9L) 4D175, 4DA175 BUDA NATURALLY ASPIRATED DIESEL ENGINES; WHEEL TRACTORS-D15D, I400; CRAWLER TRACTOR-HD3, I60; LIFT TRUCKS-F-30, F-40, F-50 FD30, FD40, FD50, FDX30, FDX40, FDX50, FP30, FP-40, FP-50, FPD40, FPD50, FPDX40, FPDX50**							
	3.563"	4	**226-1361** (4516646)	**226-4156** (4510817) **223-7129** (4514615) (O-ring Kit)	**224-1476** (4507704)	**S40508** (4513595)	3-3/32"	2-3/16"	**223-3507**(1) (4507127)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38246** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● With Press-On Flyhweel Housing Oil Seal Retainer ◆ With Bolt-On Flywheel Housing Oil Seal Retainer ■ Seal For Bolt-On Flywheel Housing Retainer ▲ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer
23			**262 CID (4.3L) G262 ALLIS CHALMERS GASOLINE ENGINE; COMBINES-A, C, CH, R**							
	3.563"	6	**226-1467** (4515174)	**226-4156** (4510817) **223-7129** (4514615) (O-ring Kit)	**224-1672** (4513862)	**S4254** (4514112)	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3300VC** **Head Set HS3300VC** **Head Gskt 3300VC** **Pan Set OS20910** **Front Seal 49638** **Rear Seal SS48048 ●**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● Seal With Repair Sleeve For Press-on Retainer
24			**262 CID (4.3L) 6G262 BUDA GASOLINE ENGINE; WHEEL TRACTOR-D19; WHEEL LOADER-TL-14; COMBINE-C, CH, CR, C11-4C, F; GRADER-D, DD; HARVESTER-CH; LIFT TRUCK-AT60, AT70, AT80, AT100, AT120, ATM60, ATM70, AY80, AY100, AY120, FDX70; PICKER-616, 622, 801, 802**							
	3.563"	6	**226-1467** (4515174)	**226-4156** (4510817) **223-7129** (4514615) (O-ring Kit)	**224-1672** (4513862)	**S4254** (4514112)	3-1/8"	1-3/16"	**223-3507**(1) (4507127)	**Full Set FS3295VC** **Full Set FS3300VC** **Head Set HS3295VC** **Head Set HS3300VC** **Pan Set OS20910** **Front Seal 49638** **Rear Seal SS48048 ●**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● Seal With Repair Sleeve For Press-on Retainer

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
22	Thru Eng. S/N D05003					**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
	Exh.	**211-2548** (4514299)		**212-1095** (4508944)	**216-5234** (4356080)	**M.S.**	**MS-399P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
						2-3-4	MB-1670P		2.4970/2.4980
	Thru Eng. S/N D03314					**3**	MB-1671P(F)		2.4970/2.4980
	Int.	**211-2547** (4514298)			**216-5234** (4356080)	**5**	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
							SH-388		1.2480/1.2490
23	Exh.	**211-1993** (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5117** (206880)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	2.4970/2.4980
	Int.	**211-2002** (4512121)	**217-3943** (4513115)	**212-1157** (4512172)	**216-5117** (206880)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
24	Exh.	**211-1993** (4512120)	**217-3944** (4513700)	**212-1157** (4512172)	**216-5117** (206880)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Int.	**211-2002** (4512121)	**217-3943** (4513115)	**212-1157** (4512172)	**216-5117** (206880)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
	Exh.	**218-7439** (4513864)	Valve Seat			**4**	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
	Int.	**218-7493**	Valve Seat			**C.S.**	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
25			**262 CID (4.3L) 6D262, 6DA262 BUDA DIESEL ENGINES; WHEEL TRACTORS-D17D, D19D, WD45; WHEEL LOADERS-TL10, TL11, TL12, TL14, TL14DA, TL14DS; LIFT TRUCKS-AY80, AY100, AY120, F60, F70, F80, F100, F120, FD60, FD70, FD80, FD100, FD120, FDX60, FDX70, FDX80, FDX100, FDX120, FL60, FL70, FL80, FL100, FL120, FL200, FP60, FP70, FP80, FPD60, FPD70, FPD80, FS60, FS70, FS80, FSD60, FSD70, FSD80, FSL60, FSL70, FSL80, FST60, FST70, FST80; GRADERS-65, DD, M65; COMBINE-A, C**								
	3.563"	6	**226-1361** (4516646)	**226-4156** (4510817)	**224-1476** (4507704)	**S40508** (4513595)	3-3/32"	2-3/16"	**223-3507**(1) (4507127)	**Full Set FS3293VC ●** **Full Set FS3293VW ◆** **Head Set HS3293VC** **Head Gskt 4892** **Pan Set OS20910** **Valve Cvr 2014A ■** **Manif Set MS15113** **Front Seal 49638** **Rear Seal 49872 ▲** **Real Seal SS48048 ◗** **Water Gskt G5260EK**	
				223-7129 (4514615) (O-ring Kit)							

Note:
1. Requires Boring; Steel Backed Copper-Lead Matrix

● With Press-On Flyhwheel Housing Seal Retainer
◆ With Bolt-On Flywheel Housing Seal Retainer
■ Valve Cover Washer
▲ Seal For Bolt-On Flywheel Housing Retainer
◗ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
25	From Eng. S/N D01681					**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
	Exh.	**211-2548** (4514299)		**212-1095** (4508944)	**216-5234** (4356080)	**M.S.**	**MS-227P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
	Int.	**211-2547** (4514298)		**212-1095** (4508944)	**216-5234** (4356080)	**2-3**	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
26			**152 CID (2.5L) D3.152 / AD3.152 PERKINS DIRECT INJECTION DIESEL ENGINE; WHEEL TRACTOR-160D, D272, 6040**							
	91.4mm 3.600"	3	**226-1515** (U5MK0034)	**226-4225**	**224-1897**(1) (3135412C)	**S40593**	2-3/32" 1-1/8"	2-1/4"	**223-3594**(2)	**Head Set HS85201●** **Lower Set CS85098 ◆** **Lower Set CS4805W ■** **Pan Set OS87033 ▲** **Valve Cvr VS86126 ▲** **Front Seal JV1210 ▲** **Rear Seal JV1641▲**
						S50593 (84957)	2-3/32" 1-1/8"	2-1/4"		
						S40367	3-3/32"	2-1/4"		
						S50367 (84957)	3-3/32"	2-1/4"		
			Notes: 1. Combustion Cup for Direct Inject Diesel 2. Requires Boring; Steel Backed Copper-Lead Matrix							● (D3-152) All; (AD3-152)-Argricultural, from 1964 thru 1981 ◆ (AD3-152)-Argricultural, from 1964 thru 1981; (Requires Head Set to make Full Set) ■ (D3-152); (Requires Head Set to make Full Set) ▲ Argricultural, From 1964 thru 1981
27			**160 CID (2.6L) G160 ALLIS CHALMERS GASOLINE ENGINE; POWER UNIT-G149, G160; WHEEL TRACTORS-D10, D12, D14, D15, I40, I60, I600G**							
	3.625"	4				**S40040** (248293)	3-3/32"	1-3/16"		**Full Set FS3332** **Head Set HS3332** **Head Gskt 3145** **Pan Set OS30653** **Valve Cvr VS38286** **Front Seal 46026** **Rear Seal 46081 ●** ● Seal For Bolt-on Housing Retainer

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
26	Exh.	**211-2185** (31431271)	**217-3976** (33261723)	**212-1216** (780007) (Inner)	
	Exh.			**212-1217** (780006) (Outer)	
	Int.	**211-2174** (31431281)	**217-3976** (33261723)	**212-1216** (780007) (Inner)	
	Int.			**212-1217** (780006) (Outer)	

CRANKSHAFT

247-5075 (31312436)	Crankshaft - Keyed Nose w/ Rope Seal
247-5076 (31312701)	Crankshaft - Keyed Nose w/ Lip Seal
247-5077 (31312702)	Crankshaft, Splined Nose w/ Lip Seal
247-5200 (31312437)	Crankshaft, Splined Nose w/ Rope Seal

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-560AL**	10-20-30-40	2.2485/2.2490
M.S.	**MS-772AL**	10-20-30	
1	MB-2186AL		2.7485/2.7490
2-3	MB-2187AL		2.7485/2.7490
4	MB-2302AL		2.7485/2.7490

Note: Thrust Washers not included; Use With Part No's. TW-119S & TW-130S

From Engine S/N 1412720

T.W. 4	**TW-130S**		
	MB-2292W(L)		3.0450/3.0550
	MB-2292W(U)		3.0450/3.0550

From Engine S/N 1400250 Thru 1412719

T.W. 4	**TW-119S**		
	MB2188W(L)		3.0450/3.0550
	MB-2188W(U)		3.0450/3.0550

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
27	From Chassis S/N 9001				
	Exh.	**211-1592** ● (206878)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)
	Exh.				**216-5118** ◆
	Int.	**211-1584** (206877)	**217-3854** (226000)	**212-1010** (206879)	**216-5117** (206880)
	Int.				**216-5118** ◆
	Int.	**218-7411** Valve Seat			
	Int.	**218-7463** Valve Seat			
	Int.	**218-4010** Valve Seat			

● Except with Rotocap Assembly
◆ Hardened Steel, (Optional)

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-781AL**	10-20-30	1.9365/1.9375
M.S.	**MS-902AL**	10-20	
1-2	MB-2497AL		2.7480/2.7490
3	MB-2498AL(F)		2.7480/2.7490

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
28			**182 CID (3.0L) 4B182 BUDA GASOLINE ENGINE; LIFT TRUCK-FT50, FT50-24**								
	3.750"	4	Repair Sleeve, (.125" Wall - 10.250" Long, Universal) **226-8010** Repair Sleeve, (.0938" Wall - 10.250" Long, Universal) **226-8061** **Note:** 1. Requires Boring; Steel Backed Copper-Lead Matrix						**223-3507**(1) (4507127)	**Rear Seal 49872** ● **Rear Seal SS480848** ◆ **Pump Seal 49293** ■ ● Seal For Bolt-On Flywheel Housing Retainer ◆ Seal With Repair Sleeve For Press-On Flywheel Housing Retainer ■ Before Serial Number 72417	
29			**265 CID (4.3L) G2500 ALLIS CHALMERS GASOLINE ENGINE; WHEEL TRACTOR-180, 185, 190, 190XT, 200**								
	3.750"	6				**S41081**	3-3/32"	1-3/16"	**223-3558**(1) (4020049)	**Head Set HS3803** **Head Gskt 3920** **Lower Set CS3803** ● **Pan Set OS20935A** **Valve Cvr VS38133** **Front Seal 47663** **Rear Seal SS64550** ◆ ● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix								
30			**273 CID (4.5L) G273 ALLIS CHALMERS GASONLINE ENGINE;**								
	3.750"	6							**223-3507**(1) (4507127)		
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
28	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (DE56080)	**R.B.**	**CB-458P**	10-20-30-40	1.9975/1.9985
						M.S	**MS-226P**	10-20-30	
	Int.	**211-1194** (B281)	**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (DE56080)	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7535** ●	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	● Available in .005" and .010" Oversize								
29	Exh.	**211-2512** (4023379)	**217-3273** (4022595)		**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						Note: Bearing Length is 1.118"			
	Exh.				**216-5145** ●	**M.S.**	**MS-1623P**	10	
						1-2-3 5-6	MB-2972P		2.7465/2.7480
	Int.	**211-2513** (4023378)	**217-3273** (4022595)		**216-5144** (5175310)	**4**	MB-2973P(F)		2.7465/2.7480
						7	MB-2971P		2.7465/2.7480
	Int.				**216-5145** ●	**C.S.**	**SH-629S**		
						1	SH-628		2.1300/2.1310
						2-3-4	SH-629		1.1300/1.1310
	Int.	**218-7537** ◆	Valve Seat						
	● Hardened, (Optional) ◆ Available in .010" Oversize								
30						**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets Head Sets Oil Pan Sets
31			**273 CID (4.5L) 6D273 BUDA DIESEL ENGINE; WHEEL TRACTOR-TL14DA**							
	3.750"	6							**223-3507**(1) (B145)	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							
32			**200 CID (3.3L) 433 ALLIS CHALMERS DIESEL ENGINE; COMBINE-F2**							
	3.875"	4	**226-1766**(1) (4021802)	**226-4434** (4061938) **223-7147** (4023827) (O-Ring Kit)	**224-2352**(1) (4062355)	**S40678** (402196)	3-3/32"	1-3/16"	**223-3558**(2) (4020049)	**Head Set HS3803W** **Lower Set CS3803 ●** **Pan Set OS20935A** **Front Seal 47663** **Rear Seal SS64550 ◆**
			Notes: 1. Replace in Sets 2. Requires Boring; Steel Backed Copper-Lead Matrix							● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer
33			**200 CID (3.3L) 433T ALLIS CHALMERS DIESEL ENGINE; COMBINE-K, K2; BACKHOE-715C; WHEEL TRACTOR-6070**							
	3.875"	4	**226-1777**	**226-4434** (4061938) **223-7147** (4023827) (O-ring Kit)	**224-2369** (4006958)	**S40678** (4021796)	3-3/32"	1-3/16"	**223-3558**(1) (4020049)	**Head Set HS3803W** **Lower Set CS3803 ●** **Pan Set OS20935A** **Front Seal 47663** **Rear Seal SS64550 ◆**
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
31						**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
						1	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
32	Exh.	**211-2512** (4023379)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						M.S.	**MS-1622P**	10	
	Exh.				**216-5145** ◆	**1-2-3**	MB-2972P		2.7465/2.7480
						4	MB-2973P(F)		2.7465/2.7480
	Int.	**211-2513** (4023378)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**5**	MB-2971P		2.7465/2.7480
						Note: Round Oil Hole; For Naturally Aspirated Engines			
	Int.				**216-5145** ◆	**C.S.**	**SH-719S**		
						1	SH-628		2.1300/2.1310
	Int.	**218-7537**	Valve Seat			**2-3**	SH-629		2.1300/2.1310
	● Spiral Grooved ◆ Hardened Steel (Optional)								
33	Exh.	**211-2512** (4023379)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						M.S.	**MS-1620P**	10-20	
	Exh.				**216-5145** ◆	**1-2-3**	MB-2969P		2.7465/2.7480
						4	MB-2970P(F)		2.7465/2.7480
	Int.	**211-2513** (4022379)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**5**	MB-2971P		2.7465/2.7480
						Note: Slotted Oil Hole; For Naturally Aspirated Engines			
	Int.				**216-5145** ◆	**C.S.**	**SH-719S**		
						1	SH-628		2.1300/2.1310
	Int.	**218-7537**	Valve Seat			**2-3**	SH-629		2.1300/2.1310
	● Spiral Grooved ◆ Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
34			**200 CID (3.3L) D2200 ALLIS CHALMERS DIESEL ENGINE; WHEEL TRACTORS-175, 2200, 6060, 6060FWD, 6080; CRAWLER TRACTOR- HD4; COMBINE-F3**							
	3.875"	4	**226-1766**(1) (4021802)	**226-4434** (4061938) **223-7147** (4023827) (O-ring Kit)	**224-2352**(1) (4062355)	**S40678** (4021796)	3-3/32"	1-3/16"	**223-3558**(2) (4020049)	**Head Set HS3803W** **Lower Set CS3803** ● **Pan Set OS20935A** **Front Seal 47663** **Rear Seal SS64550** ◆ ● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer
			Notes: 1. Replace in Sets 2. Requires Boring; Steel Backed Copper-Lead Matrix							
35			**200 CID (3.3L) G2200 ALLIS CHALMERS GASOLINE ENGINE; WHEEL TRACTORS-175, 2200, 6060, 6060FWD, 6080; CRAWLER TRACTOR-H4**							
	3.875"	4							**223-3558**(1) (4020049)	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							
36			**236 CID (3.9L) 4.236 / A4.236 PERKINS DIESEL ENGINE; WHEEL LOADERS-TL714B, TL715B; WHEEL TRACTOR-170, 175**							
	98.4mm 3.875"	4	**226-1516**	**226-4234**(1) (31358394)	**224-1904** (31354042)	**S42300** (83388)	3-3/32"	2-1/4"	**223-3640**	**Head Set HS85202** 1/2" Studs **Lower Set CS4808W** ● **Front Seal JV1214** **Rear Seal JV1640** (Rope) ● Requires Head Set to Make Full Set
			Note: 1. Determine Sleeve Type Required Before Ordering Parts							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
34	Exh.		**217-3273** ● (4022595)		**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						Note: Bearing Length is 1.118"			
	Exh.				**216-5145** ◆	**M.S.**	**MS-1622P**	10	
						1-2-3	MB-2972P		2.7465/2.7480
	Int.		**217-3273** ● (4022595)		**216-5144** (5175310)	**4**	MB-2973P(F)		2.7465/2.7480
						5	MB-2971P		2.7465/2.7480
	Int.				**216-5145** ◆	**C.S.**	**SH-719S**		
						1	SH-628		2.1300/2.1310
	Int.	**218-7537**	Valve Seat			**2-3**	SH-629		2.1300/2.1310
	● Spiral Grooved ◆ Hardened Steel, (Optional)								
35						**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						Note: Bearing Length is 1.118"			
						M.S.	**MS-1622P**	10	
						1-2-3	MB-2972P		2.7465/2.7480
						4	MB-2973P(F)		2.7465/2.7480
						5	MB-2971P		2.7465/2.7480
						C.S.	**SH-719S**		
						1	SH-628		2.1300/2.1310
						2-3	SH-629		2.1300/2.1310
36	Exh.	**211-2107** (31431104)	**217-3270** (33261752)		**216-5191** (33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-830AL**	10-20-30	
	Int.	**211-2106** (31431641)	**217-3271** (33261732)		**216-5191** (33173108)	**1-2**	MB-2221AL		2.9985/2.9990
						4-5			
						3	MB-2222AL		2.9985/2.9990
						Note: Requires Thrust Washer Set, Not Included			
						Thru Engine S/N 4203049			
						T.W. 3	**TW-121S**		
						3	MB-2222W(L)		3.4200/3.4300
						3	MB-2222W(U)		3.4200/3.4300
						T.W. 3	**TW-316S**		3.4200/3.4300
						3	MB-2636W(L)		3.4200/3.4300
						3	MB-2636(U)		3.4200/3.4300

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
37			**301 CID (4.9L) D2800, D2900 (649) ALLIS CHALMERS DIESEL ENGINE; WHEEL TRACTOR-180, 185D, 190, 190XT, 190XTIII, 200D, 7000, 649, 8010PD, 8010PS; PICKER - HARVESTER-860; COMBINES-F, L3, M3, MH3; GRADER-W, 545,**							
	3.875"	6	**226-1766** (4021802)	**226-4434** (4061938) **223-7147** (4023827) (O-ring Kit)	**224-2352**(1) (4062355)	**S40678** (4021796)	3-3/32"	1-3/16"	**223-3558**(2) (4020049)	**Head Set HS3803W** **Head Gskt 3920** **Lower Set CS3803 ●** **Pan Set OS20935A** **Valve Cvr VS38133** **Front Seal 47663** **Rear Seal SS64550 ◆** ● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer
			Note: 1. Replace in Sets 2. Requires Boring; Steel Backed Copper-Lead Matrix							
38			**301 CID (4.9L) D2900 (649T) ALLIS CHALMERS DIESEL ENGINE; WHEEL TRACTORS-180, 185D, 190, 190XT, 190XT III, 200, 200D, 649T, 7000, 7010, 7010PD, 7010PS, 8010PD, 8010PS; WHEEL LOADERS-TL345B, TL545; COMBINES-F, G, L3, M3, MH3; GRADER-545; PICKER - HARVESTER-860**							
	3.875"	6	**226-1777**	**226-4434** (4061938) **223-7147** (4023827) (O-ring Kit)	**224-2369** (4006958)	**S40678** (4021796)	3-3/32"	1-3/16"	**223-3558**(1) (4020049)	**Head Set HS3803W** **Head Gskt 3920** **Lower Set CS3803 ●** **Pan Set OS20935A** **Valve Cvr VS38133** **Front Seal 47663** **Rear Seal SS64550 ◆** ● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix							
39			**301 CID (4.9L) G2800 ALLIS CHALMERS GASOLINE ENGINE; BACKHOE-840B; GRADER-545; HARVESTER-860; WHEEL LOADERS-TL345B, TL545; WHEEL TRACTOR-180, 185, 190, 190XT, 200**							
	3.875"	6		**226-4434** (4061938) **223-7147** (4023827) (O-ring Kit)		**S40678** (4021796)	3-3/32"	1-3/16"	**223-3558**(1) (4020049)	**Head Set HS3803** **Head Gskt 3920** **Lower Set CS3803 ●** **Pan Set OS20935A** **Valve Cvr VS38133** **Front Seal 47663** **Rear Seal SS64550 ◆** ● Requires Head Set to Make Full Set ◆ Seal With Repair Sleeve For Press-on Retainer
			Notes: 1. Requires Boring; Steel Backed Copper-Lead Matrix							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
37	Exh.	**211-2512** (4023379)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						M.S.	**MS-1623P**	10	
	Exh.				**216-5145** ◆	**1-2-3**	MB-2972P		2.7465/2.7480
						5-6			
	Int.	**211-2513** (4023378)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**4**	MB-2973P(F)		2.7465/2.7480
						7	MB-2971P		2.7465/2.7480
						Note: Engines Requiring Bearings with Round Oil Hole			
	Int.				**216-5145** ◆				
						C.S.	**SH-629S**		
						1	SH-628		2.1300/2.1310
	Int.	**218-7537**	Valve Seat			**2-3-4**	SH-629		2.1300/2.1310
	● Spiral Grooved ◆ Hardened Steel, (Optional)								
38	Exh.	**211-2512** (4023379)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175310)	**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						M.S.	**MS-1621P**	10-20	
	Exh.				**216-5145** ◆	**1-2-3**	MB-2969P		2.7465/2.7480
						5-6			
	Int.	**211-2513** (4023378)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5155310)	**4**	MB-2970P(F)		2.7465/2.7480
						7	MB-2971		2.7465/2.7480
						Note: Engines Requiring Bearings with Oil Slot			
	Int.				**216-5145** ◆				
						C.S.	**SH-629S**		
						1	SH-628		2.1300/2.1310
	Int.	**218-7537**	Valve Seat			**2-3-4**	SH-629		2.1300/2.1310
	● Spiral Grooved ◆ Hardened Steel, (Optional)								
39						**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						Note: Bearing Length is 1.118"			
						M.S.	**MS-1623P**	10	
						1-2-3	MB-2972P		2.7465/2.7480
						5-6			
						4	MB-2973P(F)		2.7465/2.7480
						7	MB-2971P		2.7465/2.7480
						Note: Round Oil Hole; For Naturally Aspirated Engines			
						C.S.	**SH-629S**		
						1	SH-628		2.1300/2.1310
						2-3-4	SH-629		2.1300/2.1310

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
40			**301 CID (4.9L) 2900,G2900 ALLIS CHALMERS GASOLINE ENGINE; BACKHOE-940; COMBINES-G, L, L2, L3, M, M2, M3, MH3, WHEEL LOADER-TL545; WHEEL TRACTORS-180, 185, 190, 190XT, 190XT III, 200, 7000, 7010PD, 7010PS**								
	3.875"	6							**223-3558**(1) (4020049)		

Note:
1. Requires Boring; Steel Backed Copper-Lead Matrix

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
40						**R.B.**	**CB-1355P**	10-20-30-40	2.3725/2.3735
						Note: Bearing Length is 1.118"			
						M.S.	**MS-1623P**	10	
						1-2-3	MB-2972P		2.7465/2.7480
						5-6			
						4	MB-2973P(F)		2.7465/2.7480
						7	MB-2971P		2.7465/2.7480
						Note: Round Oil Hole; For Naturally Aspirated Engines			
						C.S.	**SH-629S**		
						1	SH-628		2.1300/2.1310
						2-3-4	SH-629		2.1300/2.1310

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
41			**172 CID (2.8L) 172 FORD TRACTOR GASOLINE ENGINE; COMBINE-T2, T3**							
	3.900"	4	Sleeved Engines; Through Engine S/N 151245:							**Head Set HS3152 (55-78)**
			226-1254 (APN6055A)	**226-4254** (B3NN6055B)	**224-1020**(1) (EAF6108F)	**S428** (FPN6149A)	2-3/32"	1-3/16"	**223-3546**(2) (EAA6207A)	**Head Set HS3477 (58-78)**
										Head Gskt 3152 (55-57)
										Head Gskt 5795 (58-81)
									223-3608(3)	**Lower Set CS3477 ●**
										Pan Set OS30761 ◆
										Valve Cvr VS38259
	3.900"	4	Non Sleeved Engines:							**Manif Set MS18260X**
			224-2993 (EAF6108F) (FPN6149A)		**224-1020**(1) (EAF6108F)	**S428** (FPN6149A)	2-3/32"	1-3/16"	**223-3546**(2) (EAA6207A)	**Timing Set JV843**
										Front Seal 46293
										Rear Seal JV718 ■
										Rear Seal JV745 ■
									223-3608(3)	**Valve Seal B45283**
										Repair Slv A226 ▲
										Fuel Gskt D36536
										Fuel Gskt D36537
										Fuel Gskt D27094
										P-Rod Cvr PS38298

Notes:
1. All 3.900" Bore - Gasoline & LP Engines
2. Gas Engines Only, No Oil Hole in Bushing, (Requires Boring)
3. Gas Engines Only, Oil Hole in Bushing, (Requires Light Reaming)

● Indcludes Front and Rear Crankshaft Seals
◆ Execept Engines with Offset Crankshaft
■ JV718 - (Rope Packing); JV745 - (Molded Rubber)
▲ Harmonic Balancer Repair Sleeve; Use with Installation Tool A502

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
41	Exh.	**211-1325** ● (EAF6505D)	**217-3726** (EAF6510B)	**212-1039** (EAA6513A)	**216-5169** ◆ (EAM6518A)	**R.B.**	**CB-535P**	1-2-10-20-30-40	2.2978/2.2986
						M.S.	**MS-466P**	1-10-20-30-40	
	Exh.	**211-1885** ◆ (C3AZ6505A)	**217-3726** (EAF6510B)	**212-1065** ◆	**216-5117** ◆ (EBU6514B)	**1-3**	MB-1501P		2.4980/2.4988
						2	MB-1540P(F)		2.4980/2.4988
	Exh.				**216-5118** ■ (C9ZZ6518A)				
	Int.	**211-1264** (B4A6507A)	**217-3726** (EAF6510B)	**212-1039** (EAA6513A)	**216-5117** (EBU6514B)				
	Int.				**216-5118** ■ (C9ZZ6518A)				
	Exh.	**218-7535** ▲ (AOA6057AA)	Valve Seat						
	Int.	**218-7535** ▲ (AOA6057AA)	Valve Seat						

● Use with Roto Valve Only
◆ Used with Rotocap Assembly
■ Hardened Steel, (Optional)
▲ Available .005" & .010" Oversize

CAMSHAFT/TIMING COMPONENTS

213-1629 (B6A6500A) Mechanical Valve Lifter

215-4047 (B4Q6565A) Push Rod

OIL PUMP

601-1084 (CONN6621A) Gear Type - Pump Assy. (1955 - '64)

601-1041 (C3NN6600A) Rotor Type - Pump Assy. (1955 - '64)

601-1216 Repair Kit - (Use w/ Gear Type Pump)

601-1405 (B9A6A618B) Intm. Shaft (Use w/ Gear Type Pump)

601-1411 Intm. Shaft (Use w/ Rotor Type Pump)

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
42			**172 CID (2.8L) 172 FORD TRACTOR DIESEL ENGINE; COMBINE-T2, T3**							
	3.900"	4	Sleeved Engines: **226-1334** (CPN6002L)	**226-4254** (B3NN6055B)	**224-1451** (313879)	**S40187**	3-3/32"	1-3/16"		**Head Set HS3178W** (58-65) **Head Gskt 3178** (58-65) **Lower Set CS3477** ● (58-65) **Pan Set OS30761** ◆ (58-65) **Valve Cvr VS38285** (58-65) **Timing Set JV843** (55-65) **Front Seal 46293** (55-65) **Rear Seal JV718** ■ **Rear Seal JV745** ■ (55-65) **Repair Slv A226** ▲ **P-Rod Cvr PS38298**
	3.900"	4	Non Sleeved Engines: **224-3048**		**224-1451** (313879)	**S41087**	3-3/32"	2-3/16"		

● Indcludes Front and Rear Crankshaft Seals

◆ Except Engines with Offset Crankshaft

■ JV718 - (Rope Packing); JV745 - (Molded Rubber)

▲ Harmonic Balancer Repair Sleeve; Use with Installation Tool A502

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
42	Exh.	**211-1775** ● (310651)	**217-3726** (EAF6510B)	**212-1039** (EAA6513A)	**216-5169** ◆ (EAM6518A)	**R.B.**	**CB-535P**	1-2-10-20-30-40	2.2978/2.2986
						M.S.	**MS-466P**	1-10-20-30-40	
	Int.			**212-1039** (EAA6513A)	**216-5117** (EBU6514B)	**1-3**	MB-1501P		2.4980/52.4988
						2	MB-1540P(F)		2.4980/2.4988
	Int.				**216-5118** ■ (C9ZZ6518A)				
	Exh.	**218-7535** ▲ (AOA6057AA) Valve Seat							
	Int.	**218-7623** (A220476) Valve Seat							
	Int.	**218-8012** * Valve Seat (Universal)							

● Use with Roto Valve Only
◆ Requires Rotocap Assembly
■ Hardened Steel, (Optional)
▲ Available .005" & .010" Oversize
* High Chrome, .218" Depth, 1.500" ID, 1.812" OD, 45 deg. Seat

CAMSHAFT/TIMING COMPONENTS

213-1629 (B6A6500A) Mechanical Valve Lifter

215-4047 (B4Q6565A) Push Rod

8-4710S ●

● Timing Gear Matched Set, (1958 - 1965)

OIL PUMP

601-1041 (C3NN6600A) Oil Pump Assy. (1961 - '64)

601-1040 Oil Pump Assy. (1958 - '60)

601-1011 Intm. Shaft (1958 - '64)

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
43			**172 CID (2.8L) 172 FORD TRACTOR FLEX FUEL ENGINE; COMBINE-T2, T3**							
	3.900"	4	Sleeved Engines; Through Engine S/N 151245:							**Head Set HS3152 (55-78)**
			226-1254 (APN6055A)	**226-4254** (B3NN6055B)	**224-1020**(1) (EAF6108F)	**S428** (FPN6149A)	2-3/32"	1-3/16"	**223-3546**(2) (EAA6207A)	**Head Set HS3477 (58-78)**
										Head Gskt 3152 (55-57)
										Head Gskt 5795 (58-81)
									223-3608(3)	**Lower Set CS3477 ●**
										Pan Set OS30761 ◆
										Valve Cvr VS38259
	3.900"	4	Non Sleeved Engines:							**Manif Set MS18260X**
			224-2993 (EAF6108F) (FPN6149A)		**224-1020**(1) (EAF6108F)	**S428** (FPN6149A)	2-3/32"	1-3/16"	**223-3546**(2) (EAA6207A)	**Timing Set JV843**
										Front Seal 46293
										Rear Seal JV718 ■
										Rear Seal JV745 ■
									223-3608(3)	**Valve Seal B45283**
										Repair Slv A226 ▲
										Fuel Gskt D36536
										Fuel Gskt D36537
										Fuel Gskt D27094
										P-Rod Cvr PS38298

Notes:
1. All 3.900" Bore - Gasoline & LP Engines
2. Gas Engines Only, No Oil Hole in Bushing, (Requires Boring)
3. Gas Engines Only, Oil Hole in Bushing, (Requires Light Reaming)

● Indcludes Front and Rear Crankshaft Seals

◆ Except Engines with Offset Crankshaft

■ JV718 - (Rope Packing); JV745 - (Molded Rubber)

▲ Harmonic Balancer Repair Sleeve; Use with Installation Tool A502

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
VALVE TRAIN PARTS					
43	Exh.	**211-1325** ● (EAF6505D)	**217-3726** (EAF6510B)	**212-1039** (EAA6513A)	**216-5169** ◆ (EAM6518A)
	Exh.	**211-1885** ◆ (C3AZ6505A)	**217-3726** (EAF6510B)	**212-1065** ◆	**216-5117** ◆ (EBU6514B)
	Exh.				**216-5118** ■ (C9ZZ6518A)
	Int.	**211-1264** (B4A6507A)	**217-3726** (EAF6510B)	**212-1039** (EAA6513A)	**216-5117** (EBU6514B)
	Int.				**216-5118** ■ (C9ZZ6518A)
	Exh.	**218-7535** ▲ (AOA6057AA)	Valve Seat		
	Int.	**218-7535** ▲ (AOA6057AA)	Valve Seat		

● Use with Roto Valve Only
◆ Used with Rotocap Assembly
■ Hardened Steel, (Optional)
▲ Available .005" & .010" Oversize

CAMSHAFT/TIMING COMPONENTS

213-1629 (B6A6500A)	Mechanical Valve Lifter
215-4047 (B4Q6565A)	Push Rod

OIL PUMP

601-1084 (CONN6621A)	Gear Type - Pump Assy. (1955 - '64)
601-1041 (C3NN6600A)	Rotor Type - Pump Assy. (1955 - '64)
601-1216	Repair Kit - (Use w/ Gear Type Pump)
601-1405 (B9A6A618B)	Intm. Shaft (Use w/ Gear Type Pump)
601-1411	Intm. Shaft (Use w/ Rotor Type Pump)

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-535P**	1-2-10-20-30-40	2.2978/2.2986
M.S.	**MS-466P**	1-10-20-30-40	
1-3	MB-1501P		2.4980/52.4988
2	MB-1540P(F)		2.4980/2.4988

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
44			**248 CID (4.1L) 4.248 PERKINS DIESEL ENGINE; WHEEL TRACTOR-170**								
	101mm 3.976"	4	**226-1670**(1)	**226-4509** (31358352)		**S41330** (86778)	3-3/32"	1-1/4"	**223-3640**	**Head Set HS85202** **Lower Set CS85202** ● **Timing Set JV1214** **Rear Seal JV1640**	
			Note: 1. Supplied with Rings Fitted to Piston							● Requires Head Set to Make Full Set	
45			**201 CID (3.3L) G201 ALLIS CHALMERS GASOLINE ENGINE; COMBINE-100, 100SP; GRADER-D (TO S/N 3370), POWER UNIT-W, W25, W201, W226; WHEEL TRACTOR-W, WC, WD, WD45, WF**								
	4.000"	4		**226-4125** (257450)		**S4330** (208354)	3-1/8"	1-3/16"		**Full Set FS3162** **Head Set HS3162** **Head Gskt 3162** **Pan Set OS30236** **Valve Cvr VS38416** **Manif Set MS9848X** **Front Seal 46026** **Rear Seal 48125** ■	
				223-7101 (O-ring Kit)		**S5330**	3-1/8"	1-3/16"		■ Seal For Bolt-on Housing Retainer	
			Power Booster Kit, (To 8,000 ft. Altitude), Thru Chassis S/N 146607:								
	4.125"	4	**226-1401**	**226-4514**	**224-1401**	**S40184**	1-3/32" 2-1/8"	1-3/16"			
				223-7101 (O-ring Kit)							

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
44	Exh.		**217-3270** (33261752)		**216-5191** (33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
	Int.		**217-4075**		**216-5191** (33173108)	**M.S.**	**MS-830AL**	10-20-30	
						1-2	MB-2221AL		2.9985/2.9990
						4-5			
						3	MB-2222AL		2.9985/2.9990
						Note: Requires Thrust Washer Set, Not Included, Use with Part No. TW121S, TW316S			
		CRANKSHAFT				To S/N 4203049			
						T.W.3	**TW-121S**		
		247-5086 (31315911) Crankshaft - Splined Nose (Rope Seal)				**3**	MB-2222W(L)		3.4200/3.4300
						3	MB-2222W(U)		3.4200/3.4300
		247-5087 (31315981) Crankshaft - Splined Nose (Lip Seal)				**Note:** Contains 4 Pieces, Position 3, Use with Item No. MS-830AL			
						From S/N 4203050			
						T.W.3	**TW-316S**		
						3	MB-2636W(L)		3.4200/3.4300
						3	MB-2636W(U)		3.4200/3.4300
						Note: Contains 4 Pieces, Position 3, Use with Item No. MS-830AL			
45		From Engine S/N W84247; Through Chassis S/N 146607				**R.B.**	**CB-526P**	2-10-20-30	2.3745/2.3750
	Exh.	**211-1045** (241527)	**217-3853** (229911)	**212-1010** (206879)	**216-5144** (5175310)	**M.S.**	**MS-878AL**	10-20	
	Exh.				**216-5145** ●	**1-3**	MB-2458AL		2.9990/3.0000
						2	MB-2459AL(F)		2.9990/3.0000
	Int.	**211-1048**	**217-3421** (241536)	**212-1010** (206879)	**216-5144** (5175310)	**Note:** A Shim Pack .008" Thick is Used on Both Sides of Con Rod & Main Bearings			
	Int.				**216-5145** ●	**C.S.**	**SH-385S**		
						1-2-3	SH-385		1.8740/1.8750
	Exh.	**218-7497** Valve Seat							
	Int.	**218-7623** (220476) Valve Seat							
		● Hardened Steel, (Optional)							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
46			**226 CID (3.7L) G226, W226 ALLIS CHALMERS GASOLINE ENGINE; COMBINE-100 ALL-CROP, 100SP, SUPER 100SP, E; GRADER-D (FROM S/N 3369), DG; WHEEL LOADER-TL6D, T10, T11, T12; PICKER-500, 616, 622, 801, 802; POWER UNIT-W25, W226; WHEEL TRACTOR-170, 170G, 175, D17, D17G, D17 SERIES IV, W, WC, WD, WD45, WF, WP, WSP, WT**							
	4.000"	4	From Chassis S/N 146607, (To 5,000 ft. Altitude) **226-1360**	**226-4125** (257450)	**224-1475**	**S4330**	3-1/8"	1-3/16"		**Full Set FS3162** **Head Set HS3162** **Head Gskt 3162** **Pan Set OS30236** **Valve Cvr. VS38416** **Manif Set MS9848X** **Front Seal 46026 ●** **Front Seal 47010 ◆** **Rear Seal 48125 ■** **Rear Seal 48162 ▲**
				223-7101 (O-Ring Kit)		**S5330**	3-1/8"	1-3/16"		
	4.125"	4	Power Booster Kit **226-1799**	**226-4514**		**S41020**	3-3/32"	1-1/4"		● All except: D17, 170, 175 ◆ D17, 170, 175 ■ All except: D17, 170, 175 ▲ D17, 170, 175
				223-7101 (O-ring Kit)						
47			**339 CID (5.6L) GO339 HERCULES GASOLINE ENGINE; COMBINE-SPH88; WHEEL LOADER-TL16; WHEEL TRACTOR-D16**							
	4.000"	6				**S41812**	1-3/32" 1-1/8"	2-3/16"		**Valve Cvr VS29688** **Front Seal 64063**

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
46	From Chassis S/N 146607					**R.B.**	**CB-526P**	10-20-30	2.3745/2.3750
	Exh.	**211-1045** (241527)	**217-3853** (229911)	**212-1010** (206879)	**216-5144** (5175130)	Connecting Rod Bearing Shim Set	**SM-118S**		
	Exh.				**216-5145** ●	**M.S.**	**MS-209P**	10-20-30	
	Int.	**211-1048**	**217-3421** (241536)	**212-1010** (206879)	**216-5144** (5175310)	**1**	MB-366P(F)		2.4355/2.4365
						2-3	MB-367P		2.4770/2.4780
	Int.				**216-5145** ●	Main Bearing Shim Set	**SM-119S**		
	Int.	**211-1754** (229405)				**C.S.**	**SH-385S**		
						1-2-3	SH-385		1.8740/1.8750
	Exh.	**218-7947**	Valve Seat						
	Int.	**218-7623** (220476)	Valve Seat						
	● Hardened Steel, (Optional)								
47	Exh.			**212-1103** (125011B) (Inner)	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Engines With 2.000" Crankpins and 2.500" Main Journals, Contain 2 Shims			
	Exh.			**212-1104** (125012B) (Outer)		**R.B.**	**CB-704P**	10-20-30	2.3730/2.3740
						Note: Engines With 2.375" Crankpins and 2.875" Main Journals			
	Exh.				**216-5145** ●	**M.S.**	**MS-650P**	10	
						1-2-3	MB-2185P		2.8734/2.8744
						5-6-7	MB-2185P		2.8734/2.8744
						4	MB-2092P(F)		2.8734/2.8744
	Int.			**212-1103** (125011B) (Inner)	**216-5144** (77019A)	**Note:** Engines with 2.875" Main Journals, Upper and Lower Bearing Halves, Locating Lug in Same Position			
						C.S.	**SH-562S**		
	Int.			**212-1104** (125012B) (Outer)		**1-4**	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
	Int.				**216-5145** ●				
	● Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
48			**142 CID (2.3L) 2-71 DETROIT SUPERCHARGED DIESEL ENGINE; CRAWLER TRACTORS-HD5, HD5B**								
	4.250"	2	**226-1220**(1) (23505309)	**226-4220**(1) (23504931)	**224-2469**(2) (5189054)	**SC80061** (5193477)	4-1/8"	2-3/16"	**223-3462**(3) (5157274)	**Head Set HS3130** **Lower Set CS3130** ● **Rear Seal 46843** ◆ **Fuel Gskt D24971** **Inj Tube 216-1136** ■	
			226-1633(4) (23505306)	**226-4466**(5) (23502020)	**224-2485**(6) (5149234)	**S40653** (23514970)	4-.084"	2-3/16"	**223-3462**(3) (5157274)		
			226-1946(8) (23522947)	**226-4466**(5) (23502020)	**224-2260**(7) (23522026)	**S41900** (23522955)	1-.113" 2-.084"	2-3/16"	**223-3548**(9) (23501687)	● Requires Head Set to Make Full Set ◆ Seal For Bolt-on Housing Retainer ■ Pre-reamed Injector Tube and Viton O-ring	
									223-8004(10) (5180250)		

Notes:
1. Except N65 Injectors, (Requires New Cylinder Sleeve Insert Rings)
2. Except N65 Injectors, (Recessed Head)
3. Trunk Style Piston, 2 per Rod; (Requires Boring)
4. N65 Injectors Special Order Engines, Trunk Style Piston; Replace in Completed Sets
5. N65 Injectors Special Order Engines, (Requires New Cylinder Sleeve Insert Rings)
6. N65 Injectors Special Order Engines, Trunk Style Piston, (Recessed Head)
7. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
8. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
9. Crosshead Piston, 1 per Rod
10. Crosshead Piston End Plate Retainer 2 per Piston

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
48	Exh.	**211-1283** (5193666)	**217-3680** (5120930)	**212-1019** (5120289)	**216-5117A** (206880)
	Exh.			**212-1121** ● (5117561)	**216-5118** ◆
	Exh.	**218-7521** ■ (8927920) Valve Seat			

● Crosshead Piston, (2 Piece)
◆ Hardened Steel, (Performer)
■ Tapered ID, 30 deg. Face Angle

CAMSHAFT/TIMING COMPONENTS

214-1107 ● (8923814) Cam Follower

● Roller with Bushing and Pin, (3 Sets Required per Cylinder)

CRANKSHAFT

247-5190 (5144188) Remanufactured .010 U.S.

247-5109 (5144188) Remanufactured .020 U.S.

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-1596P**	10-20-30-40	2.7490/2.7500
M.S. Order Separately			
1-2-3	**MB-1276P**	10-20-30-40	3.4990/3.5000
T.W.3	**TW-411S**		
3	MB2524W		3.8430/3.8435

Note: Contains 4 pieces, for position 3; Use with Item No. MB1276P

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
49			**213 CID (3.5L) 3-71 DETROIT SUPERCHARGED (2 VALVE) DIESEL ENGINE; GRADER-AD30, BD30; CRAWLER TRACTORS-HD7, HD7G, HD7W**							
	4.250"	3	**226-1220**(1) (23505309)	**226-4220**(1) (23504931)	**224-2469**(2) (5189054)	**SC80061** (5193477)	4-1/8"	2-3/16"	**223-3462**(3) (5157274)	**Full Set FS12197L** * ● **Head Set HS12197A** * **Head Gskt CH12197** **Lower Set CS12197Z** ● ◆ **Pan Set OS30831** **Valve Cvr VS38673** * * All, Except Aluminum Covers Premium Cork-rubber **Valve Cvr VS39858** * * All, Except Aluminum Cover Victo-Tech Rubber Type; Included in HS12197A **Valve Cvr VS39862** * * All, w/ Aluminum Covers; Victo-Tech **Front Seal 47095** **Rear Seal 46843** **Inj Tube 216-1136** ■ **Fuel Gskt D24971** **Water Gskt C25072**
			226-1633(4) (23505306)	**226-4466**(5) (23502020)	**224-2485**(6) (5149234)	**S40653** (23514970)	4-.084"	2-3/16"	**223-3462**(3) (5157274)	
			226-1946(8) (23522947)	**226-4466**(5) (23502020)	**224-2260**(7) (23522026)	**S41900** (23522955)	1-.113" 2-.084"	2-3/16"	**223-3548**(9) (23501687)	
									223-8004(10) (5180250)	

Notes:
1. Except N65 Injectors, (Requires New Cylinder Sleeve Insert Rings)
2. Except N65 Injectors, (Recessed Head)
3. Trunk Style Piston, 2 per Rod; (Requires Boring)
4. N65 Injectors Special Order Engines, Trunk Style Piston; Replace in Completed Sets
5. N65 Injectors Special Order Engines, (Requires New Cylinder Sleeve Insert Rings)
6. N65 Injectors Special Order Engines, Trunk Style Piston, (Recessed Head)
7. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
8. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
9. Crosshead Piston, 1 per Rod
10. Crosshead Piston End Plate Retainer 2 per Piston

* High Block
● Crankshat Seals Not Included
◆ Use w/ Head Set, Front & Rear Oil Seals to make Full Set.
* * Two Sets Required for Engines w/ Jacobs Engine Brake
■ Pre-reamed Injection Tube w/ Viton O-ring

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
49	Exh.	**211-1283** (5193666)	**217-3680** (5120930)	**212-1019** (5120289)	**216-5117A** (206880)	**R.B.**	**CB-1596P**	10-20-30-40	2.7490/2.7500
						M.S. Order Separately			
	Exh.			**212-1121** ● (5117561)	**216-5118** ◆	**1-2 3-4**	**MB-1276P**	10-20-30-40	3.4990/3.5000
	Exh.	**218-7521** ■ (8927920) Valve Seat				**T.W.4**	**TW-411S**		
						4	MB2524W		3.8430/3.8435
						Note: Contains 4 pieces, for positon 4; Use with Item No. MB1276P			
		● Crosshead Piston, (2 Piece)				**C.S.**	**SH-468**		
		◆ Hardened Steel, (Performer)				**Note:** Contains Steel Bushing in Center Hole			
		■ Tapered ID, 30 deg. Face Angle				**C.S.**	**SH-525**		
		CAMSHAFT/TIMING COMPONENTS				**Note:** Steel Bushing in Center Hole Not Included			
		214-1107 ● (8923814) Cam Follower				**C.S.**	**SH-477WS**		
							SH477W		1.6910
		● Roller with Bushing and Pin, (3 Sets Required per Cylinder)				**Note:** From Engine S/N 3A-27384; Contains 4 pieces			
		CRANKSHAFT							
		247-5046 (5184215) Crankshaft							
		247-5072 (5184215) Crankshaft .010 Undersized							
		247-5110 (5184215) Remanufactured .010 Undersized							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
50			**284 CID (4.7L) 4-71 DETROIT SUPERCHARGED (2-VALVE) DIESEL ENGINE; GRADER-AD40; CRAWLER TRACTORS-HD9, HD10, HD10W, HD14W**							
	4.250"	4	**226-1220**(1) (23505309)	**226-4220**(1) (23504931)	**224-2469**(2) (5189054)	**SC80061** (5193477)	4-1/8"	2-3/16"	**223-3462**(3) (5157274)	**Full Set FS12197G** * ● **Head Set HS12197B** * OE Rubber Valve Cover Gaskets Included **Head Set HS12197G** * OE Equivalent Head Set Valve Cover Gaskets Not Included **Head Set HS12197J** * **Head Gskt CH12197X** **Lower Set CS12197X** ● ◆ **Pan Set OS31771** **Valve Cvr VS39844** * * All, Except Aluminum Cover Premium Cork-Rubber **Valve Cvr VS39859** * * All, Except Aluminum Cover Victo-Tech Rubber Type; Included in HS12197B **Valve Cvr VS39863** * * All w/ Aluminum Covers; Victo-Tech **Manif Set MS18628S** **Front Seal 47095** **Rear Seal 46843** **Inj Tube 216-1136** ■ **Fuel Gskt D24971** **Water Gskt C25072**
			226-1633(4) (23505306)	**226-4466**(5) (23502020)	**224-2485**(6) (5149234)	**S40653** (23514970)	4-.084"	2-3/16"	**223-3462**(3) (5157274)	
			226-1946(8) (23522947)	**226-4466**(5) (23502020)	**224-2260**(7) (23522026)	**S41900** (23522955)	1-.113" 2-.084"	2-3/16"	**223-3548**(9) (23501687)	
									223-8004(10) (5180250)	

Notes:
1. Except N65 Injectors, (Requires New Cylinder Sleeve Insert Rings)
2. Except N65 Injectors, (Recessed Head)
3. Trunk Style Piston, 2 per Rod; (Requires Boring)
4. N65 Injectors Special Order Engines, Trunk Style Piston; Replace in Completed Sets
5. N65 Injectors Special Order Engines, (Requires New Cylinder Sleeve Insert Rings)
6. N65 Injectors Special Order Engines, Trunk Style Piston, (Recessed Head)
7. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
8. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
9. Crosshead Piston, 1 per Rod
10. Crosshead Piston End Plate Retainer 2 per Piston

* High Block
● Crankshat Seals Not Included
◆ Use w/ Head Set, Front & Rear Oil Seals to make Full Set.
* * Two Sets Required for Engines w/ Jacobs Engine Brake
■ Pre-reamed Injection Tube w/ Viton O-ring

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
50	Exh.	**211-2462** (23500501)	**217-3832** (5111327)	**212-1079** (5120289)	**216-5234** (5111337)	**R.B.**	**CB-1596P**	10-20-30-40	2.7490/2.7500
	Exh.	**211-1283** ● (5193666)	**217-3680** (5120930)	**212-1019** (5120289)	**216-5117A** (206880)	**M.S.** Order Separately **1-2-3 4-5**	**MB-1276P**	10-20-30-40	3.4990/3.5000
	Exh.	**218-7521** ◆ (8927920)	Valve Seat			**T.W.5** **5**	**TW-411S** MB2524W		3.3380/3.3480
						Note: Contains 4 pieces, for position 5; Use with Item No. MB1276P			
						C.S.	**SH-468**		
						Note: Contains Steel Bushing in Center Hole			
						C.S.	**SH-525**		
						Note: Steel Bushing in Center Hole not Included			
						C.B.	**SH-477WS** SH477W		1.6910
						Note: From Engine S/N 4A-59280, Contains 4 pieces			

● 30 deg. Valve Face
◆ Tapered I.D.

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
51			**426 CID (7.0L) 6-71 DETROIT SUPERCHARGED DIESEL ENGINE; CRAWLER TRACTORS-HD14, HD14C, HD14W, HD15, HD19, HD19H**							
	4.250"	6	**226-1220**(1) (23505309)	**226-4220**(1) (23504931)	**224-2469**(2) (5189054)	**SC80061** (5193477)	4-1/8"	2-3/16"	**223-3462**(3) (5157274)	**Full Set FS12197H** * ● **Head Set HS12197H** **Head Set HS12197Y** OE Rubber Valve Cover Gasket Included **Lower Set CS12197Y** **Pan Set OS20756** ◆ **Pan Set OS31977** Premium Cork-Rubber **Valve Cvr VS39845** * * All, Except Aluminum Cover Premium Cork-Rubber **Valve Cvr VS39864** * * All w/ Aluminum Covers; Victo-Tech **Valve Cvr VS39866** * * All, Except Aluminum Cover Victo-Tech Rubber Type **Manif Set MS18628SX** **Front Seal 47095** **Rear Seal 46843** **Inj Tube 216-1136** ■ **Fuel Gskt D24971** **Water Gskt C25072**
			226-1633(4) (23505306)	**226-4466**(5) (23502020)	**224-2485**(6) (5149234)	**S40653** (23514970)	4-.084"	2-3/16"	**223-3462**(3) (5157274)	
			226-1946(8) (23522947)	**226-4466**(5) (23502020)	**224-2260**(7) (23522026)	**S41900** (23522955)	1-.113" 2-.084"	2-3/16"	**223-3548**(9) (23501687)	
									223-8004(10) (5180250)	

Notes:
1. Except N65 Injectors, (Requires New Cylinder Sleeve Insert Rings)
2. Except N65 Injectors, (Recessed Head)
3. Trunk Style Piston, 2 per Rod; (Requires Boring)
4. N65 Injectors Special Order Engines, Trunk Style Piston; Replace in Completed Sets
5. N65 Injectors Special Order Engines, (Requires New Cylinder Sleeve Insert Rings)
6. N65 Injectors Special Order Engines, Trunk Style Piston, (Recessed Head)
7. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
8. Naturally Aspirated, (Original Equipment Design Crosshead Piston with Sealing Ring in Crown, Recessed Head)
9. Crosshead Piston, 1 per Rod
10. Crosshead Piston End Plate Retainer 2 per Piston

* High Block
● Crankshat Seals Not Included
◆ Use w/ Head Set, Front & Rear Oil Seals to make Full Set.
* * Two Sets Required for Engines w/ Jacobs Engine Brake
■ Pre-reamed Injection Tube w/ Viton O-ring

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
51	Exh.	**211-1283** ● (5193666)	**217-3680** (5120930)	**212-1019** (5120289)	**216-5117A** (206880)	**R.B.**	**CB-1596P**	10-20-30-40-50	2.7490/2.7500
	Exh.	**218-7521** ◆ (8927920)	Valve Seat			**M.S.**	**MS-271P**	10-20-30-40	
						1-2-3 4-5-6 7	MB-1276P		3.4990/3.5000
						7	MB-2524W		3.8430/3.8435
						Note: Contains 4 Piece Thrust Washer Set, Use in No. 7 Position			
						T.W.5	**TW-411S**		
						7	MB2524W		3.8430/3.8435
						Note: Contains 4 Pieces, Position 7, Use with No. MS-271P			
						C.S.	**SH-468**		
						Note: Contains Steel Bushing in Center Hole			
						C.S.	**SH-525**		
						Note: Steel Bushing in Center Hole Not Included			
						T.W.	**SH-477WS**		
							SH-477W		1.6910
						Note: From Engine S/N 6A-57745, Contains 4 Pieces			

● 30 deg. Valve Face
◆ Tapered I.D.

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
52			**426 CID (7.0L) 670, 670-I, 670T - MARK II ALLIS CHALMERS DIESEL ENGINES; COMBINE-L5, L6, N5, N6, N7, NF; CRAWLER TRACTOR-HD7; WHEEL LOADER-TL645; WHEEL TRACTOR-3400, 3500, 7030, 7040, 7040PS, 7045, 7045PS, 7050, 7060, 7060PS, 7080, 7085, 7580, 8030, 8030PD, 8030PS, 8050PD, 8050PS, 8070PD, 8070PS, AC210, AC220, D21**							
	4.250"	6	1.500" Pin Diameter **226-1470** (4025978)	**226-4410** (4062328) **223-7165** (4025015) (O-ring Kit)	**224-1676** (4062425)	**S40651** (4062401)	1-3/32" 2-1/8"	1-1/4"	**223-3559**(1) (4025031)	**Head Set HS4888** **Head Gskt 4888** **Lower Set CS4888 ●** **Pan Set OS32482** **Valve Cvr VS50068** **Front Seal 48160** **Rear Seal SS47882 ◆**
			1.750" Pin Diameter **226-1826** (4062633)	**226-4410** (4062328) **223-7165** (4025015) (O-ring Kit)	**224-2785** (4062632)	**S41545**	1-3/32" 1-1/8"	1-1/4"		● Use w/ Head Set, Front & Rear Oil Seals to make Full Set. ◆ Seal With Repair Sleeve
			Note: 1. Requires Boring, (Engines with 1.500" Pin Dia.)							
53			**426 CID (7.0L) D3400, D3500 (NON MARKII); D3400, D3500, D3700, D3750 - MARKII ALLIS CHALMERS DIESEL ENGINES; COMBINE-L5, L6, N5, N6, N7, NF; CRAWLER TRACTOR-HD7; WHEEL LOADER-TL645; WHEEL TRACTOR-3400, 3500, 7030, 7040, 7040PS, 7045, 7045PS, 7050, 7060, 7060PS, 7080, 7085, 7580, 8030, 8030PD, 8030PS, 8050PD, 8050PS, 8070PD, 8070PS, AC210, AC220, D21**							
	4.250"	6	1.500" Pin Diameter **226-1470** (4025978)	**226-4410** (4062328) **223-7165** (4025015) (O-ring Kit)	**224-1676** (4062425)	**S40651** (4062401)	1-3/32" 2-1/8"	1-1/4"	**223-3559**(1) (4025031)	**Head Set HS4888** **Head Gskt 4888** **Lower Set CS4888 ●** **Pan Set OS32482** **Valve Cvr VS50068** **Front Seal 48160** **Rear Seal SS47882 ◆**
			1.750" Pin Diameter **226-1826** (4062633)	**226-4410** (4062328) **223-7165** (4025015) (O-ring Kit)	**224-2785** (4062632)	**S41545**	1-3/32" 1-1/8"	1-1/4"		● Use w/ Head Set, Front & Rear Oil Seals to make Full Set. ◆ Seal With Repair Sleeve
			Note: 1. Requires Boring, (Engines with 1.500" Pin Dia.)							

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
52	Exh.	**211-2509** (4036609)	**217-3273** ● (4022595)	**212-1318** (402542)	**216-5144** (5175130)	**R.B.**	**CB-1354P**	10-20-30-40	2.7475/2.7485
						M.S.	**MS-2002P**	10-20-30	
	Exh.				**216-5145** ◆	**1-2-3 5-6**	MB-2688P		3.2465/3.2480
	Int.	**211-2508** (4029271)	**217-3273** ● (4022595)	**212-1318** (4025242)	**216-5144** (5175130)	**4**	MB-2689W		3.3120/3.3220
						4-7	MB-2689P		3.2465/3.2480
						Note: Contains 4 Piece Thrust Washer Set, Used in No. 4 Position			
	Int.				**216-5145** ◆				
						T.W.4	**TW-304S**		
						4	MB2689W		3.3120/3.3220
		● Spiral Grooved				**Note:** Contains 4 Pieces for Position No. 4; Included in M.S.			
		◆ Hardened Steel, (Optional)							
		CAMSHAFT/TIMING COMPONENTS				**C.S.**	**SH-628S**		
						1	SH-628		2.1300/2.1310
		229-1844 (4029000) Camshaft Counter Bored Gear Hub				**2-3-4 5-6**	SH-629		2.1300/2.1310
53	Exh.	**211-2509** (4036609)	**217-3273** ● (4022595)	**212-1318** (4025242)	**216-5144** (5175310)	**R.B.**	**CB-1354P**	10-20-30-40	2.7475/2.7485
						M.S.	**MS-2002P**	10-20-30	
	Exh.				**216-5145** ◆	**1-2-3 5-6**	MB-2688P		3.2465/3.2480
	Int.	**211-2508** (4029271)	**217-3273** ● (4022595)	**212-1318** (4025242)	**216-5144** (5175310)	**4**	MB-2689W		3.3120/3.3220
						4-7	MB-2689P		3.2465/3.2480
						Note: Contains 4 Piece Thrust Washer Set, Used in No. 4 Position			
	Int.				**216-5145** ◆				
						T.W.4	**TW-304S**		
						4	MB2689W		3.3120/3.3220
		● Spiral Grooved				**Note:** Contains 4 Pieces for Position No. 4; Included in M.S.			
		◆ Hardened Steel, (Optional)							
		CAMSHAFT/TIMING COMPONENTS				**C.S.**	**SH-628S**		
						1	SH-628		2.1300/2.1310
		229-1844 (4029000) Camshaft Counter Bored Gear Hub				**2-3-4 5-6**	SH-629		2.1300/2.1310

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
54			**344 CID (5.6L) HD344 BUDA DIESEL ENGINE; CRAWLER TRACTOR-HD6; GRADERS-145T, 1455T**								
	4.438"	4	Shallow Cup Applications - .735" Deep x 3.000" Dia. Cup, (Do Not Substitute) **226-1737** (4061746) **226-4437** (4359365) **224-3243** (4321347) **S41450** 3-1/8" 1-1/4" **223-7159** (4359870) (O-ring Kit)								
55			**344 CID (5.6L) 6000, 7000, MARKII ALLIS CHALMERS DIESEL ENGINES; WHEEL TRACTORS-6G, H7, 170 SERIES, 175 SERIES; CRAWLER TRACTORS-HD6A, HD6B, HD6E, HD6EP, HD6G, HD6LTS, HD7G, T16, T16-4WD; GRADERS-M7, 145, 145T, M60, M70; POWER UNIT-D344; WHEEL LOADERS-TL14D, TL16D**								
	4.438"	4	Shallow Cup Applications - .735" Deep x 3.000" Dia. Cup, (Do Not Substitute) **226-1737** (4061746) **226-4437** (4359365) **224-3243** (4321347) **S41450** 3-1/8" 1-1/4" **223-7159** (4359870) (O-ring Kit)								
56			**344 CID (5.6L) 6000, 7000 & Mark II ALLIS CHALMERS DIESEL ENGINES; CRAWLER TRACTORS-HD6A, HD6B, HD6E, HD6EP, HD6G, HD6LTS, HD7G, T16-4WD; GRADERS-145, 145T, M60, M70; WHEEL LOADERS-TL14D, TL16D**								
	4.438"	4	From Chassis S/N 1001 & 6427 Deep Cup Applications - 1.182" Deep x 2.260" Dia. Cup, (Do Not Substitute) **226-1711**(1) (4359909) **226-4437** (4359365) **224-3242**(1) (4358745) **S40430** (4336408) 1-3/32" 2-1/8" 1-1/4" **223-7159** (4359870) (O-ring Kit) **Note:** 1. Replace in Sets								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
54	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines requiring Bearings with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1632P**	10-20	
						1-2-4	MB-2967P		3.4980/3.4990
						3	MB-2968P		3.4980/3.4990
	Int.				**216-5145** ●	**3**	MB-2096W		3.5630/3.5730
						5	MB-2300P		3.4980/3.4990
						Note: Engines Requiring Bearings with Oil Slot; 4 piece Thrust Washer Set, for Position 3; Straight Shell Bearings			
	Exh.	**218-7545** (241535)	Valve Seat						
	● Hardened Steel, (Optional)								
55	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearigs with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1632P**	10-20	
						1-2-4	MB-2967P		3.4980/3.4990
	Int.				**216-5145** ●	**3**	MB-2968P		3.4980/3.4990
						3	MB-2096W		3.5630/3.5730
						5	MB-2300P		3.4980/3.4990
	Exh.	**218-7545** (241535)	Valve Seat			**Note:**Engines Requiring Bearings with Oil Slot, Contains 4 Piece Thrust Washer Set in Position 3, Contains Straight Shell Bearings			
	● Hardened Steel, (Optional)								
56	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearigs with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1632P**	10-20	
						1-2-4	MB-2967P		3.4980/3.4990
	Int.				**216-5145** ●	**3**	MB-2968P		3.4980/3.4990
						3	MB-2096W		3.5630/3.5730
						5	MB-2300P		3.4980/3.4990
	Exh.	**218-7545** (241535)	Valve Seat			**Note:** Engines Requiring Bearings with Oil Slot, Contains 4 Piece Thrust Washer Set in Position 3, Contains Straight Shell Bearings			
	● Hardened Steel, (Optional)								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
57			**516 CID (8.5L) ADS516, HD516, 6D1516 BUDA DIESEL ENGINE; CRAWLER TRACTOR-HD11; WHEEL LOADERS-T160, TR160, TL20; GRADERS-45, 145**								
	4.438"	6	**226-4437** (4359365)			**S40430**(1) (4336408)	1-3/32" 2-1/8"	1-1/4"			
			223-7159 (4359870) (O-ring Kit)								
			Shallow Cup Applications - .735" Deep x 3.000" Dia. Cup, (Do Not Substitute)								
			226-1737 (4061746)	**226-4437** (4359365)	**224-3243** (4321347)	**S41450**(2)	3-1/8"	1-1/4"			
			223-7159 (4359870) (O-ring Kit)								
			Notes: 1. Rings for Deep Cup Piston 2. Rings for Shallow Cup Piston								
58			**516 CID (8.5L) 685-I ALLIS CHALMERS DIESEL ENGINE; COMBINE-R7**								
	4.438"	6									
59			**516 CID (8.5L) 685T, 10000, 11000 & 10000, 11000 MARK II ALLIS CHALMERS DIESEL ENGINES; WHEEL TRACTOR-160; CRAWLER TRACTORS-HD11, HD11B, HD11E, HD11EC, HD11EP, HD11P, HD12G, HD12GB; GRADERS-45, 145, D30, M100, M100B, 100C, 150C, 200C; WHEEL LOADERS-TL745, TL745B, TL745C, TL745H, TL20, TL30, TR160**								
	4.438"	6	Shallow Cup Applications - .735" Deep x 3.000" Dia. Cup, (Do Not Substitute)								
			226-1737 (4061746)	**226-4437** (4359581)	**224-3243** (4321347)	**S41450**(1)	3-1/8"	1-1/4"			
			223-7159 (4359870) (O-ring Kit)								
			1. Rings for Shallow Cup Piston								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
57	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearings with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1619P**	10-20	
						1-2-3	MB-2967P		3.4980/3.4990
	Int.				**216-5145** ●	**5-6**			
						4	MB-2096W		3.5630/3.5730
	Exh.	**218-7545** (241535)	Valve Seat			**7**	MB-2300P		3.4980/3.4990
						Note: Engines Requiring Bearings with Oil Slot, Contains 4 Piece Thrust Washer Set for position 4; Contains Straight Shell Bearings			
	● Hardened Steel, (Optional)								
58	Exh.		**217-4057** (4336586)			**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearings with Round Oil Hole			
	Int.		**217-4057** (4336586)			**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
						M.S.	**MS-1619P**	10-20	
						1-2-3	MB-2967P		3.4980/3.4990
						5-6			
						4	MB-2096W		3.5630/3.5730
						7	MB-2300P		3.498/0/3.4990
						Note: Engines Requiring Bearings with Oil Slot; Contains 4 piece Thrust Washer Set for position 4; Contains Straight Shell Bearings			
59	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearings with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1619P**	10-20	
						1-2-3	MB-2967P		3.4980/3.4990
	Int.				**216-5145** ●	**5-6**			
						4	MB-2096W		3.5630/3.5730
	Exh.	**218-7545** (241535)	Valve Seat			**7**	MB-2300P		3.4980/3.4990
						Note: Engines Requiring Bearings with Oil Slot, Contains 4 Piece Thrust Washer Set for Position 4; Contains Straight Shell Bearings			
	● Hardened Steel, (Optional)								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
60			**516 CID (8.5L) 685T, 10000, 11000 & 10000, 11000 MARK II ALLIS CHALMERS DIESEL ENGINES; WHEEL TRACTOR-160; CRAWLER TRACTORS-HD11, HD11B, HD11E, HD11EC, HD11EP, HD12G, HD12GB; GRADERS-45, D30, M100, M100B, 100C, 150C, 200C; WHEEL LOADERS-TL745, TL745B, TL745C, TL745H, TL20, TL30, TR160**								
	4.438"	6	From Chassis S/N 1001 & 6427 Deep Cup Applications - 1.182" Deep x 2.260" Dia. Cup, (Do Not Substitute) **226-1711**(1) (4359909) **226-4437** (4359581) **224-3242**(1) (4358745) **S40430** (4336408) 1-3/32" 2-1/8" 1-1/4" **223-7159** (4359870) (O-ring Kit) **Note:** 1. Replace in Sets								
61			**318 CID (5.2L) U ALLIS CHALMERS GASOLINE ENGINE**								
	4.500"	4									
62			**555 CID (9.1L) V555 CUMMINS DIESEL ENGINE; WHEEL TRACTOR-440**								
	4.625"	8	**226-1557** (3277626) **226-4501** (3277608)			**S41082** (3278732)	1-1/8" 1-3/32"	1-7/64"	**223-3565**(1) (555420)	**Head Set HS3932X** **Lower Set CS3932W** **Pan Set OS21796** **Valve Cvr VS38789** **Front Seal 62631** **Rear Seal 67682**	
			Note: 1. Requires Boring; Steel Backed Copper-Lead Matrix								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
60	Exh.		**217-4057** (4336586)		**216-5144** (5175310)	**R.B.**	**CB-700P**	10-20-30-40	2.7715/2.7725
						Note: Engines Requiring Bearings with Round Oil Hole			
	Exh.				**216-5145** ●	**R.B.**	**CB-1369P**	10	2.7715/2.7725
						Note: Engines Requiring Bearings with Offset Oil Slot			
	Int.		**217-4057** (4336586)		**216-5144** (5175310)	**M.S.**	**MS-1619P**	10-20	
						1-2-3	MB-2967P		3.4980/3.4990
	Int.				**216-5145** ●	**5-6**			
						4	MB-2096W		3.5630/3.5730
	Exh.	**218-7545** (241535)	Valve Seat			**7**	MB-2300P		3.4980/3.4990
						Note: Engines Requiring Bearings with Oil Slot, Contains 4 Piece Thrust Washer Set & Straight Shell Bearings			
	● Hardened Steel, (Optional)								
61	Exh.		**217-3421** (241536)						
	Int.		**217-3421** (241536)						
	Exh.	**218-7361**	Valve Seat						
	Int.	**218-7751** (4004239)	Valve Seat						
	● Powdered Metal								
62	Exh.	**211-2450** (3275356)	**217-3289** (154946)	**212-1380** (163037)	**216-5215** (3275354)	**R.B.**	**CB-994P**	10-20-30	2.7490/2.7500
	Int.	**211-2325** (166774)	**217-3289** (154946)	**212-1380** (163037)	**216-5215** (3275354)	**M.S.**	**MS-1061P**	10-20-30	
						1-5	MB-2598P		3.4990/3.5000
	Exh.	**218-7999** (154390)	Valve Seat			**2-3-4**	MB-2599P		.49920/3.5000
						5	MB-2598W		3.8050/3.8150
						Note: Contains 4 piece Thrust Washer Set, for Position 5; Contains Dowl Pins			
	Int.	**218-7800** (195000)	Valve Seat			**T.W.5**	**TW-448S**		
						5	MB-2598W		3.8050/3.8150
						Note: Contains 4 pieces, for Position 5; Use with Item No. MS-1061P			
	CAMSHAFT/TIMING COMPONENTS					**C.S.**	**SH-1394S**		
						1-5	SH-1394		1.9975/1.9985
						2-3-4	SH-1395		1.9975/1.9985
	229-1951 (3277462)	Camshaft - Non Turbo Only				**Note:** Small Cam			
	CRANKSHAFT								
	247-5003 (201950)	Crankshaft							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
63			**779 CID (12.8L) 19000 ALLIS CHALMERS DIESEL ENGINE; INDUSTRIAL**								
	5.250"	6									
64			**844 CID (13.8L) 16000, 21000 ALLIS CHALMERS DIESEL ENGINES; CRAWLER-HD16A, HD16AC, HD16GC, HD16FC, HD21A, HD21F, HD21G; SCRAPER-TS260, 260A, 260E; WHEEL TRACTOR-260D, 260P**								
	5.250"	6	**226-4199** (4391473)			**S40773** (4379662)	3-1/8"	1-1/4"	**223-3587**(1) (4396367)		
			223-7128 (4385485) (O-ring Kit)								
			Note: 1. From Chassis S/N 1100 to 12500; Chassis S/N 4001 to 5901; Requires Boring, (Steel Backed Copper-Lead Matrix)								
65			**844 CID (13.8L) 16000H, 21000H, 25000 ALLIS CHALMERS DIESEL ENGINES; CRAWLER TRACTORS-HD16B, HD16D, HD16DC, HD16DP, HD21, HD21P; WHEEL LOADER-TL40, TL40D; SCRAPERS-262B, 263B, 460B, 460C; WHEEL TRACTOR-D40**								
	5.250"	6	2.000" Pin Diameter; Contains Late Style Piston With No Valve Relief							**Head Set** **HS54136**	
			226-1712(1,2) (4396135)	**226-4199** (4391473)		**S40773** (4388408)	3-1/8"	1-1/4"	**223-3587**(3) (74396367)	**Pan Set** **OS32187**	
			223-7128 (4385485) (O-ring Kit)								
			Notes: 1. Contains Late Style Piston with No Valve Reliefs; From Chassis S/N 5901; From Chassis S/N 12501 2. Replace Early Design in Complete Sets Only 3. From Chassis S/N 1100 to 12500; Chassis S/N 4001 to 5901; Requires Boring, (Steel Backed Copper-Lead Matrix)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
63						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set Not Included, Use Part No. TW134S			
						T.W. 4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces, Order Seperately, Use With Part No. MS-1530P			
64						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			
65						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
66			**844 CID (13.8L) 17000 MARK II, ALLIS CHALMERS DIESEL ENGINES; WHEEL TRACTOR-260, 261B**								
	5.250"	6	2.000" Pin Diameter, Thru Chassis S/N 17-03006; Contains Late Style Piston With No Valve Reliefs **226-1712**(1) (4396135)	**226-4199** (4391473)		**S40773** (4388408)	3-1/8"	1-1/4"	**223-3587**(2) (4396367)	**Head Set HS54136** **Pan Set OS32187**	
				223-7128 (4385485) (O-ring Kit)							
			2.250" Pin Diameter; From Chassis S/N 17-03007 **226-1648**	**226-4199** (4391473)	**224-3237** (4386638)	**S40773** (4388408)	3-1/8"	1-1/4"			
				223-7128 (4385485) (O-ring Kit)							
			Notes: 1. Replace Early Design in Complete Sets Only 2. Chassis S/N 4001 to 5901; Requires Boring, (Steel Backed copper-Lead Matrix)								
67			**844 CID (13.8L) 21000 MARK II ALLIS CHALMERS DIESEL ENGINE**								
	5.250"	6	2.000" Pin Diameter, Thru Chassis S/N 21-13092; Contains Late Style Piston With No Valve Reliefs **226-1712** (4396135)	**2264199** (4391473)		**S40773** (4388408)	3-1/8"	1-1/4"	**223-3587**(1) (4396367)	**Head Set HS54136** **Pan Set OS32187**	
				223-7128 (4855485) (O-ring Kit)							
			2.250" Pin Diameter, From Chassis S/N 17-03007; From Chassis S/N 25-04577 **226-1648**	**226-4199** (4391473)	**224-3237** (4396638)	**S40773** (4388408)	3-1/8"	1-1/4"			
				223-7128 (4385485) (O-Ring Kit)							
			1. Chassis S/N 4001 to 5901; Requires Boring, (Steel Backed copper-Lead Matrix)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
66						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						4	MB-2314W		4.1770/4.1820
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			
67						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						4	MB-2314W		4.1770/4.1820
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
68			**844 CID (13.8L) 25000 MARK II ALLIS CHALMERS DIESEL ENGINE; SCRAPER-260A, 260E; WHEEL TRACTOR-260D, 260P, D40; WHEEL LOADER-TL40**								
	5.250"	6	2.000" Pin Diameter, Thru Chassis S/N S5-04576; Contains Late Style Piston With No Valve Reliefs **226-1712**(1) (4396135)	**226-4199** (4391473) **223-7128** (4385485) (O-ring Kit)		**S40773** (4388408)	3-1/8"	1-1/4"	**223-3587**(2) (4396367)	**Head Set HS54136** **Pan Set OS32187**	
			2.250" Pin Diameter, From Chassis S/N 17-03007; From Chassis S/N 25-04577 **226-1648**	**226-4199** (4391473) **223-7128** (4385485) (O-ring Kit)		**S40773** (4388408)	3-1/8"	1-1/4"			
			Notes: 1. Replace Early Design in Complete Sets Only 2. Requires Boring, (Steel Backed Copper-Lead Matrix)								
69			**844 CID (13.8L) 6138-I, 6138LT, 6138T, 21000 MARK II ALLIS CHALMERS DIESEL ENGINE; SCRAPER-260A, 260E; WHEEL TRACTOR-260D, 260P, D40; WHEEL LOADER-TL40, TL945B;**								
	5.250"	6	2.000" Pin Diameter, Thru Chassis S/N 17-03006; Contains Late Style Piston With No Valve Reliefs **226-1712**(1) (4396135)	**226-4199** (4391473) **223-7128** (4385485) (O-Ring Kit)		**S40773** (4388408)	3-1/8"	1-1/4"	**223-3587**(2) (4396367)	**Head Set HS54136** **Pan Set OS32187**	
			Notes: 1. Replace Early Design in Complete Sets Only 2. Requires Boring, (Steel Backed Copper-Lead Matrix)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
68						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						4	MB-2314W		4.1770/4.1820
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			
69						**R.B.**	**CB-1632P**	10-20-30	3.3725/3.3735
						M.S.	**MS-1530P**	10	
						1-7	MB-2312P		3.9950/3.9960
						2-3	MB-2313P		3.9950/3.9960
						5-6			
						4	MB-2314P		3.9950/3.9960
						Note: Contains Stepped Down Dowel Pins, Requires Thrust Washer Set, Not Included, Use with No. TW-134S			
						T.W.4	**TW-134S**		
						4	MB-2314W		4.1770/4.1820
						Note: Contains 4 Pieces for Position 4, Use with No. MS-1530P			

MODEL and ENGINE INDEX

BALER

Model	Fuel	Line No.
101	Gasoline 157 VG4D Wisconsin Engine	28
102	Gasoline 157 VG4D Wisconsin Engine	28
103	Gasoline 157 VG4D Wisconsin Engine	28
620	Gasoline 54 THD Wisconsin Engine	8
620	Gasoline 108 VH4D Wisconsin Engine	10
62T	Gasoline 54 THD Wisconsin Engine	8

COMBINE - SELF - PROPELLED

Model	Fuel	Line No.
25	Flex Fuel F226 Continental Engine	15
25	Gasoline FA226 Continental Engine	16
427	Gasoline 230 Chrysler Engine	4,5
430	Gasoline 265 Ind. 16 Chrysler Engine	22
430	Gasoline 265 Ind. 16A Chrysler Engine	23
431	Gasoline 265 Ind. 16 Chrysler Engine	22
431	Gasoline 265 Ind. 16A Chrysler Engine	23
525	Gasoline 251 Ind. 8 Chrysler Engine	26
525	Gasoline 251 Ind.8A Chrysler Engine	27
535	Gasoline 265 Ind. 16 Chrysler Engine	22
535	Gasoline 265 Ind. 16A Chrysler Engine	23
542	Gasoline 265 Ind. 16 Chrysler Engine	22
542	Gasoline 265 Ind. 16A Chrysler Engine	23
545	Gasoline 265 Ind. 16 Chrysler Engine	22
545	Gasoline 265 Ind. 16A Chrysler Engine	23
SP110	Gasoline 218 Chrysler Engine	3
SP110	Gasoline 237 Ind. 7 Chrysler Engine	24
SP110	Gasoline 237 Ind. 7A Chrysler Engine	25
SP112	Gasoline 218 Chrysler Engine	3
SP112	Gasoline 237 Ind. 7 Chrysler Engine	24

COMBINE - TOWED

Model	Fuel	Line No.
7	Gasoline 133 IXB Hercules Engine	6
18	Gasoline 108 VH4D Wisconsin Engine	10
325	Gasoline 108 VF4 Wisconsin Engine	9
344	Gasoline 54 TF Wisconsin Engine	7

WHEEL TRACTORS

Model	Fuel	Line No.
20	Gasoline F124 Continental Engine	1
20	Gasoline F140 Continental Engine	2
30	Gasoline 4B153 Buda Engine	17
30D	Diesel 4BD153 Buda Engine	18
35	Gasoline 198 GO198 Hercules Engine (Golden Eagle)	35
40	Gasoline 6B230 Buda Engine	19
40	LPG 6B230 Buda Engine	19
40D	Diesel 6BD230 Buda Engine	20
411	Gasoline F140 Continental Engine	2
540	Gasoline F162 Continental Engine	21
550	Diesel 180DL Waukesha Engine	11
550	Diesel 180GA Waukesha Engine	12
550	Diesel 198 DD198 Hercules Engine	33
550	Gasoline 198 GO198 Hercules Engine	35
570	Diesel 298 DD298 Hercules Engine	34
570	Gasoline 298 GO298 Hercules Engine	36
660	Diesel 180DL Waukesha Engine	11
660	Diesel 180GA Waukesha Engine	12
770	Gasoline 185DAB Waukesha Engine	13
770	Diesel 185DAC Waukesha Engine	14
880	Diesel 265 190DLB Waukesha Engine	30
880	Flex Fuel 265 190GLB Waukesha Engine	32

ENGINE and POWER UNITS

Models		Line No.
180DL	129 cid (2.1L) 180DL Waukesha Diesel Engine	11
180GA	129 cid (2.1L) 180GA Waukesha V4 Diesel Engine	12
180DAB	194 cid (3.2L) 185DAB Waukesha Gasoline Engine	13
185DAC	194 cid (3.2L) 185DAC Waukesha Diesel Engine	14
190DKB	265 cid (4.3L) 190DKB Waukesha Diesel Engine	29
190DLB	265 cid (4.3L) 190DLB Waukesha Diesel Engine	30
190DSB	265 cid (4.3L) 190DSB Waukesha Diesel Engine	31
190GLB	265 cid (4.3L) 190GLB Waukesha Flex Engine	32
425C	425 cid (7.0L) 425C Minneapolis Moline Gasoline Engine	41
425C	425 cid (7.0L) 425C Minneapolis Moline LPG Engine	42
4-53	121 cid (3.5L) 4-53 Detroit Diesel Engine	37
6-354	354 cid (5.8L) 6-354 Perkins Diesel Engine	40
3150	573 cid (9.4L) 3150 Caterpillar V8 Diesel Engine	44
4B153	153 cid (2.5L) 4B153 Buda Gasoline Engine	17
4BD153	153 cid (2.5L) 4BD153 Buda Diesel Engine	18
6B230	230 cid (3.8L) 6B230 Buda Gasoline Engine	19
6B230	230 cid (3.8L) 6B230 Buda LPG Engine	19
6BD230	230 cid (3.8L) 6BD230 Buda Diesel Engine	20
D451	4514 cid (7.4L) D451 Minneapolis Moline Diesel Engine	43
DD198	198 cid (3.32L) DD198 Hercules Diesel Engine	33
DD298	298 cid (4.9L) DD298 Hercules Gasoline Engine	34
F124	124 cid (2.0L) F124 Continental Gasoline Engine	1
F140	140 cid (2.3L) F140 Continental Gasoline Engine	2
F162	162 cid (2.7L) F162 Continental Gasoline Engine	21

MODEL and ENGINE INDEX

BALER

Model	Fuel	Line No.
62T	Gasoline 108 VH4D Wisconsin Engine	10
62W	Gasoline 54 THD Wisconsin Engine	8
62W	Gasoline 108 VH4D Wisconsin Engine	10

COMBINE - SELF - PROPELLED

Model	Fuel	Line No.
SP112	Gasoline 237 Ind. 7A Chrysler Engine	25
SP115	Gasoline 218 Chrysler Engine	3
SP115	Gasoline 237 Ind. 7 Chrysler Engine	24
SP115	Gasoline 237 Ind. 7A Chrysler Engine	25
SP115	Gasoline 251 Ind. 8 Chrysler Engine	26
SP115	Gasoline 251 Ind. 8A Chrysler Engine	27
SP132	Gasoline 218 Chrysler Engine	3
SP132	Gasoline 230 Chrysler Engine	4,5
SP132	Gasoline 237 Ind. 7 Chrysler Engine	24
SP132	Gasoline 237 Ind. 7A Chrysler Engine	25
SP137	Gasoline 218 Chrysler Engine	3
SP137	Gasoline 237 Ind. 7 Chrysler Engine	24
SP137	Gasoline 237 Ind. 7A Chrysler Engine	25
SP137	Gasoline 251 Ind. 8 Chrysler Engine	26
SP137	Gasoline 251 Ind. 8A Chrysler Engine	27
SP428	Gasoline 251 Ind. 8 Chrysler Engine	26
SP428	Gasoline 251 Ind. 8A Chrysler Engine	27
SP429	Gasoline 251 Ind. 8 Chrysler Engine	26
SP429	Gasoline 251 Ind. 8A Chrysler Engine	27

COMBINE - TOWED

Model	Fuel	Line No.
422	Gasoline F140 Continental Engine	2
422	Gasoline 108 VF4 Wisconsin Engine	9

WHEEL TRACTORS

Model	Fuel	Line No.
1250	Diesel 180DL Waukesha Engine	11
1250	Diesel 180GA Waukesha Engine	12
1550	Diesel 180DL Waukesha Engine	11
1550	Diesel 180GA Waukesha Engine	12
1600	Diesel 265 190DLB Waukesha Engine	30
1600	Diesel 265 190DSB Waukesha Engine	31
1650	Diesel 265 190DKB Waukesha Engine	29
1750	Gasoline 283 F283G Waukesha Engine	38
1800-B	Gasoline 283 F283G Waukesha Engine	38
1800-C	Gasoline 283 F283G Waukesha Engine	38
1850	Gasoline 310 F310G Waukesha	39
1850	Diesel 654 6.354 Perkins Engine	40
1870	Gasoline 425C Minneapolis Moline	41
1870	LPG 425C Minneapolis Moline	42
1870	Diesel D451 Minnapolis Moline Diesel	43
1900	Diesel 212 4-53 Detroit Diesel Engine	37
1950	Diesel 212 4-53 Detroit Diesel Engine	37
1950	Diesel 354 6.354 Perkins Engine	40
2250	Diesel 3150 Caterpillar Engine	44
5542	Diesel 354 6.354 Perkins Engine	40
7300	Diesel 654 6.354 Perkins Engine	40
7600	Diesel 654 6.354 Perkins Engine	40

ENGINE and POWER UNITS

Models		Line No.
F226	226 cid (3.7L) F226 Continental Flex Engine	15
FA226	226 cid (3.7L) FA226 Continental Gasoline Engine	16
F283G	283 cid (4.6L) F283G Waukesha Gasoline Engine	38
F310G	310 cid (5.1L) F310G Waukesha Gasoline Engine	39
GO198	198 cid (3.2L) GO198 Hercules Gasoline Engine	35
GO298	298 cid (4.9L) GO298 Hercules Gasoline Engine	36
218	218 cid (3.6L) 5, 5A, 6, 6A, 30, 31 Chrysler Gasoline Engine	3
Ind.6	230 cid (3.8L) Ind. 6 Chrysler Gasoline Engine	4
Ind.6A	230 cid (3.8L) Ind. 6A Chrysler Gasoline Engine	5
Ind.7	237 cid (3.9L) Ind. 7 Chrysler Gasoline Engine	24
Ind.7A	237 cid (3.9L) Ind. 7A Chrysler Gasoline Engine	25
Ind.8	251 cid (4.1L) Ind. 8 Chrysler Gasoline Engine	26
Ind.8A	251 cid (4.1L) Ind. 8A Chrysler Gasoline Engine	27
Ind.16	265 cid (4.3L) Ind. 16 Chrysler Gasoline Engine	22
Ind.16A	265 cid (4.3L) Ind. 16A Chrysler Gasoline Engine	23
IXB	133 cid (2.2L) IXB Hercules Gasoline Engine	6
TF	54 cid (0.9L) TF Wisconsin Gasoline Engine	7
THD	54 cid (0.9L) THD Wisconsin Gasoline Engine	8
VF4	108 cid (1.8L) VF4 Wisconsin Gasoline Engine	9
VG4D	157 cid (2.6L) VG4D Wisconsin V4 Gasoline Engine	28
VH4D	108 cid (1.8L) VH4D Wisconsin V4 Gasoline Engine	10

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
1			**124 CID (2.0L) F124 CONTINENTAL GASOLINE ENGINE. WHEEL TRACTOR-20**							
	3.000"	4	Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8050**			**S4583** (F124T120)	3-1/8"	1-1/4"	**223-3349**(1) (R800G204) **223-3429**(2) (F400G211) **223-3605**(3)	**Full Set FS1634A** ● **Full Set FS1634GH**◆ **Head Set HS1634X** **Head Gskt 1634** **Pan Set OS20509** **Valve Cvr VS38032**■ **Valve Cvr VS38083**▲ **Manif Set MS15028** **Front Cvr JV895** * **Front Cvr JV1027** **Front Cvr JV1211** ★ **Front Cvr T28884** * * **Front Cvr T28928** * * * **Front Cvr JV5015** ◗ **Front Seal 47065** † **Front Seal 49024** † † **Shaft Seal 49293** (Rocker Shaft Seal) **Rear Seal JV663** **Acc Seal 49297** **Gvnr Seal 48816** **Magneto B25800** **Wtr Outlet C24109** **Wtr Outlet C24109VF** (Victo-Foam)

Notes:
1. Thin Wall Bronze Bushing - .919" O.D.
2. Steel Backed Copper-Lead Matrix - 1.066" O.D.
3. Bronze Bushing - Requires Boring

● Timing Cover Set Not Included
◆ Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines
■ For 2 Gear Camshaft Drive
▲ For 3 Gear Camshaft Drive
★ With 2-1/8" Shaft
◗ Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines
* Towmotor
* * Gear Cover
* * * Vickers Pump Drive
† Except Divco
† † Divco

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
1	Exh.	**211-1053** ● (F600I238)	**217-3620**■ (F400I213)	**212-1025** (Y400I215)	**216-5147**▲ (Y400I205)
	Exh.	**211-1589** ◆ (F400I228)	**217-3620** ■ (F400I213)	**212-1025** (Y400I215)	**216-5147** ▲ (Y400I205))
	Exh.			**212-1025** (Y400I215)	**216-5234** * (Z120I1235)
	Int.	**211-1588** † (F400I229)	**217-3620** ■ (F400I213)	**212-1025** (Y400I215)	**216-5147** ▲ (Y400I205)
	Exh.	**218-7439** ◗	Valve Seat		
	Exh.	**218-7405** ★ (F140A216)	Valve Seat		

● Head Dia. - 1.328" - Drilled Stem - Exhaust, (Except w/ Rotocap Assy.)
◆ Head Dia. - 1.203" - Drilled Stem - Exhaust, (Except w/ Rotocap Assy.)
■ Except with Roto Valve
▲ Except w/ Rotocap Assy., (Drilled Valve Stem)
* Engines with Rotocap Assembly
† Drilled Valve Stem
◗ All w/ 1.328" Dia. Valve
★ All w/ 1.203" Dia. Valve

OIL PUMP

601-1106 (F600L4135)	Bolt on Screen w/ Cast Iron Drive Gear (Long Shaft)
601-1108 (Y400L4132)	Bolt on Screen w/ Cast Iron Drive Gear (Short Shaft)
601-1906 (F400L4314)	All w/ Steel Drive Gear

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-78P**	10-20-30-40-C60	1.9365/1.9375
Note: For Position 2 and 4			
R.B.	**CB-79P**	10-20-30-40-C60	1.9365/1.9375
Note: For Position 1 and 3			
M.S.	**MS-176P-10**	20	
1	MB-1403P		2.2490/2.2500
1	MB-1403W		2.2812
2	MB-1406P		2.2490/2.2500
3	MB-1405P		2.2490/2.2500

Notes:
1. Contains Straight Shell Bearings.
2. Timing Gear must be removed when replacing Single Flange Front Bearings.
3. Contains 2 Piece Thrust Washer Set, used in Position No. 1.

T.W.	**TW-424S**	
T.W.-1	MB-1403W	2.2812
Note: Contains 1 Piece for Position No. 1.		
C.S.	**SH-56S**	
1	SH-1211	1.8715/1.8725
2	SH-56	1.7457/1.7465
3	SH-57	1.2465/1.2475

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
2			**140 CID (2.3L) F140 CONTINENTAL GASOLINE ENGINE. COMBINE (TOWED)-422; WHEEL TRACTOR-20, 411**							
	3.188"	4			**224-1611**	**S41735**	3-1/8"	1-1/4"	**223-3349**(1) (F400G211)	**Full Set FS1634A** ● **Full Set FS1634GH** ◆ **Head Set HS1634X** **Head Gskt 1634** **Pan Set OS20509** **Valve Cvr VS38032** ■ **Valve Cvr VS38083** ▲ **Manif Set MS15028** **Front Cvr JV5015** **Gear Cvr T28130** **Gear Cvr T28884** **Pmp Drive T28928** ★ **Tmg Cvr JV895** * **Tmg Cvr JV1027** * * **Tmg Cvr JV1211** ◗ **Front Seal 47065** **Dust Seal 49293** **Rear Seal JV663** **Acc Seal 49297** **Gvnr Seal 48816** **Mag Seal B25800** **Wtr Outlet C24109** **Wtr Outlet C24109VF** (Victo-Foam)
						S4799 (F140T136)	3-1/8"	1-3/16"	**223-3429**(2) (R800G204)	
						S51818 (ZA120T101)	3-1/8"	1-3/16"	**223-3605**(3)	
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8003**							
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8052**							
	3.250"	4	Overbore Conversion (3-1/4" Bore) Sleeved Engine			**S40075**	2-3/32"	2-5/32"		
	3.313"	4	Overbore Conversion (3-5/16" Bore) Sleeved Engine			**S40126**	2-3/32"	2-5/32"		● Timing Cover Set Not Included ◆ Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines ■ For 2 Gear Camshaft Drive ▲ For 3 Gear Camshaft Drive ◗ With 2-1/8" Shaft ★ Vickers Pump Drive * Towmotor * * Except Towmotor

Notes:
1. Thin Wall Bronze Bushing - .919" O.D.
2. Steel Backed Copper-Lead Matrix - 1.066" O.D.
3. Bronze Bushing - Requires Boring

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
2	Exh.	**211-1053** ● (F600I238)	**217-3620** (F400I213)	**212-1025** (Y400I215)	**216-5147** (Y400I205)	**R.B.**	**CB-78P**	10-20-30-40-C60	1.9365/1.9375
						Note: For Position 2 and 4			
	Int.	**211-1588** (F400I229)	**217-3620** (F400I213)	**212-1025** (Y400I215)	**216-5147** (Y400I205)	**R.B.**	**CB-79P**	10-20-30-40-C60	1.9365/1.9375
						Note: For Position 1 and 3			
	Exh.	**211-1589** ◆ (F400I228)	**217-3620** (F400I213)	**212-1025** (Y400I215)	**216-5147** (Y400I205)	**M.S.**	**MS-176P-10**	20	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
						2	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
					216-5234 ■ (Z120I1235)	**Notes:**			
						1. Contains Straight Shell Bearings.			
						2. Timing Gear must be removed when replacing Single Flange Front Bearings.			
						3. Contains 2 Piece Thrust Washer Set, used in Position No. 1.			
	Exh.	**218-7439** ▲ Valve Seat				**T.W.**	**TW-424S**		
	Exh.	**218-7405** * (F140A216) Valve Seat				**T.W.-1**	MB-1403W		2.2812
						Note: Contains 1 Piece for Position No. 1.			
		● Head Dia. - 1.328" - Drilled Stem - Exhaust, (Except w/ Rotocap Assy.)				**C.S.**	**SH-56S**		
		◆ Head Dia. - 1.203" - Drilled Stem - Exhaust, (Except w/ Rotocap Assy.)				**1**	SH-1211		1.8715/1.8725
		■ Valves w/ Roto Cap Assembly				**2**	SH-56		1.7457/1.7465
		▲ All w/ 1.328" Dia. Valve				**3**	SH-57		1.2465/1.2475
		* All w/ 1.203" Dia. Valve							
		OIL PUMP							
		601-1106 (F600L4135) Bolt On Screen w/ Cast Iron Drive Gear (Long Shaft)							
		601-1108 (F600L4132) Bolt On Screen w/ Cast Iron Drive Gear (Short Shaft)							
		601-1906 (F400L4314) All w/ Steel Drive Gear							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
3			**218 CID (3.6L) 5, 5A, 6, 6A, 30 AND 31 CHRYSLER (1942-1954) GASOLINE ENGINES. COMBINE (SELF PROPELLED)-SP110, SP112, SP115, SP132, SP137**							
	3.250"	6				**439** (1653372)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	Gaskets for 5 & 5A Engines **Full Set FS1059C** **Head Set HS1059C** **Head Gskt 1059C** **Pan Set OS30893** **P.Rod Cvr VS36054** **Manif Set B17186** ● **Manif Set MS18005** ◆ **Exh. Gskt F5438AK** **Tmg Cvr JV826** (1953-1954) **Tmg Cvr JV757** (1947-1952) **Tmg Cvr JV755** (1942) **Dust Seal 42379** (1953-1954) **Rear Seal JV134-9** **Water Pmp K25845** **Wtr Outlet C24109** **Wtr Outlet C24109VF** (Victo-Foam) **Air Clnr G26540** **Air Sleeve G25936** **Carb Mnt G5349AD** **Fuel Pmp D35288** (1948-1950)
						539 (986448)	12-3/32"	12-5/32"	**223-3429**(2)	

Notes:
1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.)
2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)

● Intake To Exhaust
◆ Intake & Exhaust Set

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
3						**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P-10**	20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
						4	MB-122P(F)		2.4995/2.5005
						C.S	**SH-23S**		
						1	SH-23		1.9980/1.9990
						2	SH-24		1.9665/1.9675
						3	SH-25		1.9350/1.9360

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
4			**230 CID (3.8L) IND. 6 CHRYSLER (1942 - 1960) GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP132, 427**							
	3.250"	6				**439** (1653372)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS1059C** ●
										Head Set HS1059C
										Head Gskt 1059C
						539 (986448)	12-3/32"	12-5/32"	**223-3429**(2)	**Pan Set OS30893**
										Valve Cvr VS36054
										Manif Set B17186 ■
										Manif Set MS18005 ▲
										Exh. Pipe F5349AD◆
										Tmg Cvr JV826 (1954-1960)
										Tmg Cvr JV757 (1947-1953)
										Tmg Cvr JV755 (1942)
										Front Seal 42379 (1953-1960)
										Rear Seal JV134-9 (1953-1960)
										Wtr Outlet C24109
										Wtr Outlet C24109VF (Victo-Foam)
										Water Gskt C26690
										Water Pmp K25845
										Air Clnr G26540
										Air Sleeve G25936
										Carb Mnt G5349AD ◆
										Pump Bowl D35288 (1948-1960)

Notes:
1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.)
2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)

● Timing Cover and Rear Main Seal Sets Not Included
◆ 1 Barrel Carburetor
■ Intake to Exhaust
▲ Intake & Exhaust Set

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
4						**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P-10**	20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
						4	MB-122P(F)		2.4995/2.5005
						C.S.	**SH-23S**		
						1	SH-23		1.9980/1.9990
						2	SH-24		1.9665/1.9675
						3	SH25		1.9350/1.9360

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
						Set No.	Comp.	Oil		
5			**230 CID (3.8L) IND. 6A CHRYSLER (1942 - 1960) GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP132, 427**							
	3.250"	6				**439** (1653372)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS1059C** ●
						539 (986448)	12-3/32"	12-5/32"	**223-3429**(2)	**Head Set HS1059C**
										Head Gskt 1059C
										Pan Set OS30893
										Valve Cvr VS36054
										Manif Set B17186 ■
										Manif Set MS18005 ▲
										Exh. Pipe F5438AK
										Tmg Cvr JV826 (1954-1960)
										Tmg Cvr JV757 (1947-1953)
										Tmg Cvr JV755 (1942)
										Front Seal 42379 (1953-1960)
										Rear Seal JV134-9 (1953-1960)
										Wtr Outlet C24109
										Wtr Outlet C24109VF (Victo-Foam)
										Water Gskt C26690
										Water Pmp K25845
										Air Clnr G26540
										Air Sleeve G25936
										Carb Mnt G5349AD◆
										Pump Bowl D35288
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ 1 Barrel Carburetor ■ Intake to Exhaust ▲ Intake & Exhaust Set
6			**133 CID (2.2L) IXB HERCULES GASOLINE ENGINE. COMBINE (TOWED)-7**							
	3.250"	4				**S41810**	2-1/8"	1-3/16"		
						S5023	2-1/8"	1-3/16"		
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053** Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004**							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
5						**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P-10**	20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
						4	MB-122P(F)		2.4995/2.5005
						C.S.	**SH-23S**		
						1	SH-23		1.9980/1.9990
						2	SH-24		1.9665/1.9675
						3	SH-25		1.9350/1.9360
6	Exh.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Exh.		**217-3697** ◆						
	Int.	**211-1568** (27140A)	**217-3568** ● (28214A)	**212-1124** (27008A)					
	Int.		**217-3697** ◆						
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	Int.	**218-4010** ■	Valve Seat - (Powdered Metal)						

● Iron .485" O.D.
◆ Iron .532" O.D.
■ Universal Seat, (Powdered Metal)

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
7			**54 CID (0.9L) TF WISCONSIN GASOLINE ENGINE. COMBINE (TOWED)-344**								
	3.250"	2			**224-2827** (DB2011)	**S4835** (DR20C)	3-3/32"	1-3/16"	**223-3471**(1) (HG157A)	**Full Set FS1785X** **Head Set HS1785X** **Head Gskt 1785●** **Manif Set MS6306▲** **Front Seal 47163** ● Nitroseal ▲ Exh. and Int. Manifold Set	
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053** Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004** **Note:** 1. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix)								
8			**54 CID (0.9L) THD WISCONSIN GASOLINE ENGINE. BALER-62T, 62W, 620**								
	3.250"	2				**S4835** (DR20C)	3-3/32"	1-3/16"	**223-3471**(1) (HG157A)	**Full Set FS1785X** **Head Set HS1785X** **Head Gskt 1785●** **Manif Set MS6306▲** **Front Seal 47163** ● Nitroseal ▲ Exh. and Int. Manifold Set	
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053** Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004** **Note:** 1. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix)								

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
7	Exh.	**211-1187** (AE75B)	**217-3458** ◆	**212-1032** (AF49A)	**216-5234** (AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Exh.	**211-1375** ●	Stellite Face						
	Int.	**211-1187** (AE75B)	**217-3458** ◆	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exh.	**218-7417** ■	Valve Seat						
	Int.	**218-7417** ■	Valve Seat						
		● Std. on Suffix D Engines, Optional on others ◆ Iron, 1/2" O.D. 2-1/2" Long ■ (Exh.) Requires Stellite Face Valve							
8	Exh.	**211-1187** (AE75B)	**217-3458** ◆	**212-1032** (AF49A)	**216-5234** (AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Exh.	**211-1375** ● (AE75D)	Stellite Face						
	Int.	**211-1187** (AE75B)	**217-3458** ◆	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exh.	**218-7417** ■	Valve Seat						
	Int.	**218-7417** ■	Valve Seat						
		● Std. on Suffix D Engines, Optional on others ◆ Iron, 1/2" O.D. 2-1/2" Long ■ (Exh.) Requires Stellite Face Valve							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
9			**108 CID (1.8L) VF4 WISCONSIN (V4) GASOLINE ENGINE. COMBINE (TOWED)-325, 422**							
	3.250"	4			**224-2827** (DB2011)	**S4601** (DR31C)	3-3/32"	1-3/16"	**223-3471**(1) (IHG157A)	**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785●** **Manif Set MS17577▲** **Front Seal 47163**
						S5601	3-3/32"	1-3/16"		
						S51439	3-5/65"	1-3/16"		● Nitroseal ▲ Exh. and Int. Manifold Set
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053**							
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004**							
			Note: 1. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix)							
10			**108 CID (1.8L) VH4D WISCONSIN (V4) GASOLINE ENGINE. BALER-62T, 62W, 620; COMBINE (TOWED)-18**							
	3.250"	4			**224-2827** (DB2011)	**S4601** (DR31C)	3-3/32"	1-3/16"	**223-3471**(1) (IHG157A)	**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785●** **Manif Set MS17577▲** **Front Seal 47163**
						S5601	3-3/32"	1-3/16"		
						S51439	3-5/65"	1-3/16"		● Nitroseal ▲ Exh. and Int. Manifold Set
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053**							
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004**							
			Note: 1. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix)							
11			**129 CID (2.1L) 180DL WAUKESHA DIESEL ENGINE. WHEEL TRACTOR-550, 660, 1250, 1550**							
	3.313"	4							**223-3514**(1) (1K230)	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
9	Exh.	**211-1187** (AE75B)	**217-3458** ●	**212-1032** (AF49A)	**216-5234** (AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Int.	**211-1187** (AE75B)	**217-3458** ●	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exh.	**211-1375** ◆ (AE75D)							
	Exh.	**218-7417** (HG201)	Valve Seat						
	Int.	**218-7417** (HG201)	Valve Seat						
		Notes: ● Iron 1/2" O.D. 2-1/2" Long ◆ Stellite Face							
10	Exh.	**211-1375** ● (AE75D)	**217-3907** ◆ (AD41)	**212-1032** (AF49A)	**216-5234** (AH9)	**R.B.**	**CB-979M**	10	1.7500/1.7510
	Int.	**211-1187** (AE75B)	**217-3907** ◆ (AD41)	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exh.	**218-7417** (HG201)	Valve Seat						
	Int.	**218-7417** (HG201)	Valve Seat						
		● Stellite Face ◆ Iron 7/16" O.D. 1-3/16" Long							
11						**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
						R.B. **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
12			**129 CID (2.1L) 180GA WAUKESHA V4 DIESEL ENGINE. WHEEL TRACTOR-550, 660, 1250, 1550**								
	3.313"	4							**223-3514**(1) (1K230)	**Full Set FS1876** **Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								
13			**194 CID (3.2L) 185DAB WAUKESHA GASOLINE ENGINE. WHEEL TRACTOR-770**								
	3.313"	6							**223-3514**(1) (1K230)	**Pan Set OS31415** **Valve Cvr VS39684**	
			Note: 1. 2 - Bushings per Rod, Requires Boring ,(Steel Backed Copper-Lead Matrix)								
14			**194 CID (3.2L) 185DAC WAUKESHA DIESEL ENGINE. WHEEL TRACTOR-770**								
	3.313"	6							**223-3514**(1) (1K230)	**Pan Set OS31415** **Valve Cvr VS39697**	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
12						**R.B.** **CB-446P** 10-20 **Note:** Engines with 2.000" Crankpins			1.9990/2.0000
						R.B. **CB-451P** 10-20-30-40 **Note:** Engines with 2.250" Crankpins			2.2490/2.2500
						M.S. **MS-405P** 10-20-30			
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
						C.S. **SH-330S**			
						1	SH-330		1.7490/1.7500
13	Exh.				**216-5080** (B6466A)	**R.B.** **CB-446P** 10-20 **Note:** Engines with 2.000" Crankpins			1.9990/2.0000
	Int.				**216-5080** (B6466A)	**R.B.** **CB-451P** 10-20-30-40 **Note:** Engines with 2.250" Crankpins			2.2490/2.2500
						M.S. **MS-406P** 10-20-30			
						1-2-4	MB-1629P		2.24902.2500
						3	MB-1786P(F)		2.2490/2.2500
						C.S. **SH-330S**			
						1	SH-330		1.7490/1.7500
14	Exh.				**216-5080** (B6466A)	**R.B.** **CB-446P** 10-20 **Note:** Engines with 2.000" Crankpins			1.9990/2.0000
	Int.				**216-5080** (B6466A)	**R.B.** **CB-451P** 10-20-30-40 **Note:** Engines with 2.250" Crankpins			2.2490/2.2500
						M.S. **MS-406P** 10-20-30			
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
						C.S. **SH-330S**			
						1	SH-330		1.7490/1.7500

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
15			**226 CID (3.7L) F226 CONTINENTAL FLEX ENGINE. COMBINE (SELF PROPELLED)-25**							
	3.313"	6			**224-2831**(1) (F226A4011E)	**S4794** (F6226T134)	2-3/32"	2-5/32"	**223-3349**(2) (F400G211)	**Full Set FS986A** ● **Full Set FS986GK** ◆ **Head Set HS986K** **Head Gskt 986S** **Pan Set OS20928** **Valve Cvr VS38028** **Manif Set MS18651S**■ **Tmg Cvr JV895** ▲ **Tmg Cvr JV951** ★ **Tmg Cvr JV953** ☽ **Tmg Cvr JV1211*** **Front Cvr T28603** * * **Front Cvr JV5015** * * * **Front Seal 47065** **Rear Seal JV648** **Acc. Seal 49297** (Shaft) **Acc. Gskt B25800**† **Wtr Outlet C24109** **Wtr Outlet C24109VF** (Victo-Foam)
						S5794	3-1/8"	1-1/4"	**223-3429**(3) (R800G204)	
						S4662 (F226T188)	3-1/8"	1-1/4"	**223-3605**(4)	
						S5662 (F226T101)	3-1/8"	1-1/4"		
						S40949	1-5/64" 2-3/32"	1-1/4"		
						S50949	1-5/64" 2-3/32"	1-1/4"		
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8054**							● Timing Cover Set Not Included ◆ Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines ■ Int. & Exh. Manifold Set ▲ Towmotor LT46, 50, 53, 56, 60, 62, 72, 90, K5 ★ Except Towmotor 540, 600, 670, 680P, LT46, 50, 53, 56, 60, 62, 72, 90, K5 ☽ Towmotor 540, 600, 670, 680P * 2-1/8" Shaft * * Gear Cover * * * Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines † Govenor and Magneto Mounting Gasket
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8005**							

Notes:
1. 4 Ring Piston, (Replace In Complete Sets When Replacing 5 Ring Piston; Use with S4794, S5794
2. Light Reaming Reqd, (Thin Wall Bronze Bushing - .919" O.D.)
3. Light Reaming Reqd, (Steel Backed Copper-Lead Matrix - 1.066" O.D.)
4. Boring Reqd, (Bronze Bushing)

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
15	Exh.	**211-1053** ● (F600I238)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5159** ◆ (12S1207)
	Exh.	**211-1073** ■ (F900I248)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ▲ (CVT3234)
	Int.	**211-1058** * (F600I247)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ▲ (CVT3234)
	Int.	**211-1588** † (F400I221)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5159** ◆ (CVT3234)
					216-5118 ◗
	Exh.	**218-7439**	Valve Seat (High Chrome)		

● Except Engines With Rotocap Assy., (Drilled Valve Stem)
◆ Drilled Valve Stem
■ Engines With Rotocap Assy. (.406" End of Stem to Top of Lock Groove)
▲ Single Lock Groove Valve
* .406" End of Stem to Top of Lock Groove
† Drilled Valve Stem
◗ Hardened Single Lock Groove Valve, (Performer)

OIL PUMP

601-1108 (F600L4135) Bolt On Screen and Cast Iron Drive Gear (Short Shaft)

601-1906 (F400L4314) Bolt on Screen w/ Steel Drive Gear

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-465P**	10-20-30-C40-C60	2.0619/2.0627

Notes:
1. Use In All Positions With Connecting Rod Forging Number Ending in 402
2. Use in Position 1, 3, 5; Except Connecting Rod Forging Number Ending in 402

R.B.	**CB-466P**	10-20-30-C40-C60	2.0619/ 2.0627

Note:
1. Use in Position 2, 4, 6 Except Connecting Rod Forging Number Ending in 402

C.S.	**SH-190S**	
1	SH-1211	1.8715/1.8725
2	SH-191	1.8085/1.8095
3	SH-56	1.7457/1.7465
4	SH-57	1.2465/1.2475

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
16			**226 CID (3.7L) FA226 CONTINENTAL GASOLINE ENGINE. COMBINE (SELF-PROPELLED)-25**							
	3.313"	6			**224-2831**(1) (F226A4011E)	**S4794** (F6226T134)	2-3/32"	2-5/32"	**223-3349**(2) (F400G211)	**Full Set FS986A** ● **Full Set FS986GK** ◆ **Head Set HS986K** **Head Gskt 986S** **Pan Set OS20928** **Valve Cvr VS38063** **Front Seal JV951** **Rear Seal JV648**
						S5794	2-3/32"	2-5/32"	**223-3429**(3) (R800G204)	
						S4662 (F226T188)	3-1/8"	1-1/4"	**223-3605**(4)	
						S5662 (F226T101)	3-1/8"	1-1/4"		● Timing Cover Set Not Included ◆ Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines
						S40949	1-5/64" 2-3/32"	1-1/4"		
						S50949	1-5/64" 2-3/32"	1-1/4"		
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8054**							
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8005**							

Notes:
1. 4 Ring Piston, (Replace In Complete Sets When Replacing 5 Ring Piston; Use with S4794, S5794
2. Light Reaming Reqd, (Thin Wall Bronze Bushing - .919" O.D.)
3. Light Reaming Reqd, (Steel Backed Copper-Lead Matrix - 1.066" O.D.)
4. Boring Reqd, (Bronze Bushing)

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				BEARINGS			
16	Exh.	**211-1053** ● (F600I238)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5159** ◆ (12S1207)	**R.B.**	**CB-465P**	10-20-30-C40-C60	2.0619/2.0627
						Notes:			
						1. Use In All Positions With Connecting Rod Forging Number Ending in 402			
	Exh.	**211-1073** ■ (F900I248)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ▲ (CVT3234)	2. Use in Position 1, 3, 5; Except With Connecting Rod Forging Number Ending in 402			
	Int.	**211-1058** * (F600I247)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ▲ (12S1207)	**R.B.**	**CB-466P**	10-20-30-C40-C60	2.0619/ 2.0627
						Note:			
						1. Use in Position 2, 4, 6 Except Connecting Rod Forging Number Ending in 402			
	Int.	**211-1588** † (F400I229)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5159** ◆ (CVT3234)	**C.S.**	**SH-190S**		
						1	SH-1211		1.8715/1.8725
					216-5118 ◗	**2**	SH-191		1.8085/1.8095
						3	SH-56		1.7457/1.7465
	Exh.	**218-7439**	Valve Seat			**4**	SH-57		1.2465/1.2475

● Except Engines With Rotocap Assy., (Drilled Valve Stem)
◆ Drilled Valve Stem
■ Engines With Rotocap Assy. (.406" End of Stem to Top of Lock Groove)
▲ Single Lock Groove Valve
* .406" End of Stem to Top of Lock Groove
† Drilled Valve Stem
◗ Hardened Single Lock Groove Valve, (Performer)

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
17			**153 CID (2.5L) 4B153 BUDA GASOLINE ENGINE. WHEEL TRACTOR-30**								
	3.438"	4				**S4827**	3-1/8"	1-3/16"		**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38246** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲** **Water Gskt G5260EK**	
	3.653"	4	Overbore Conversion, (Sleeved Engine 4 Ring Piston)			**S40417**	3-1/8"	1-1/4"	**223-3507**(1) (B145)		
						S41010	3-3/32"	1-1/4"			
			Note: 1. Boring Reqd., (Steel Backed Copper-Lead Matrix)							● w/ Press-On Flywheel Housing Oil Seal Retainer ◆ w/ Bolt-On Flywheel Housing Oil Seal Retainer ■ All w/ Bolt-On Flywheel Housing Oil Seal Retainer ▲ All w/ Press-On Flywheel Housing Oil Seal Retainer. Set Includes Micro-Shield Repair Sleeve and Oil Seal	
18			**153 CID (2.5L) 4BD153 BUDA DIESEL ENGINE. WHEEL TRACTOR-30D**								
	3.438"	4							**223-3507**(1) (B145)	**Full Set FS3303VC ●** **Full Set FS3303VW ◆** **Head Set HS3303VC** **Pan Set OS20492** **Valve Cvr VS38246** **Front Seal 49638** **Rear Seal 49872 ■** **Rear Seal SS48048 ▲** **Water Gskt G5260EK**	
			Note: 1. Boring Reqd., (Steel Backed Copper-Lead Matrix)							● w/ Press-On Flywheel Housing Oil Seal Retainer ◆ w/ Bolt-On Flywheel Housing Oil Seal Retainer ■ All w/ Bolt-On Flywheel Housing Oil Seal Retainer ▲ All w/ Press-On Flywheel Housing Oil Seal Retainer. Set Includes Micro-Shield Repair Sleeve and Oil Seal	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
17	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.	**211-1194** (B281)	**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7535** ●	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	● Available in .005", .010" O.S.								
18	Exh.		**217-3703** (BA166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-226P**	10-20-30	
	Int.		**217-3703** (BA166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-16699P		2.4970/2.4980
						2	MB-1671P(F)		2.4970/2.4980
						3	MB-1681P		2.4970/2.4980
	Exh.	**218-7411**	Valve Seat						
						C.S.	**SH-386S**		
						1	SH-386		1.9980/1.9990
	Int.	**218-7535** ●	Valve Seat			**2-3**	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490
	● Available in .005", .010" O.S.								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
19			**230 CID (3.8L) 6B230 BUDA GASOLINE, LPG ENGINE. WHEEL TRACTOR-40**							
	3.438"	6				**S4701**	3-1/8"	1-3/16"		**Full Set FS3295VC** ● **Full Set FS3295VW** ◆ **Head Set HS3295VC** **Pan Set OS20910** **Front Seal 49638** **Rear Seal 49872** ■ **Rear Seal SS48048** ▲
	3.500"	6	Overbore Conversion (Sleeved Engine 4 Ring Piston)			**S4806**	3-1/8"	1-1/4"		
	3.563"	6	Overbore Conversion (Sleeved Engine 4 Ring Piston)			**S40417**	3-1/8"	1-1/4"	**223-3507**(1) (B145)	● Press On Flywheel Housing Oil Seal Retainer ◆ Bolt On Flywheel Housing Oil Seal Retainer ■ Bolt On Flywheel Housing Oil Seal Retainer ▲ Press On Flywheel Housing Oil Seal Retainer. Set Includes Micro-Shield Repair Sleeve and Oil Seal
			Note: 1. Boring Reqd., (Steel Backed Copper-Lead Matrix)							
20			**230 CID (3.8L) 6BD230 BUDA DIESEL ENGINE. WHEEL TRACTOR-40D**							
	3.438"	6	Repair Sleeve, (.125" Wall - 10.250" Long) **226-8010**						**223-3507**(1) (B145)	**Full Set FS3293VC** ● **Full Set FS3293VW** ◆ **Head Set HS3293VC** **Head Gskt 4892** **Pan Set OS20910** **Manif Set MS15113** **Front Seal 49638** **Rear Seal 49872** ■ **Rear Seal SS48048** ▲ **Washer 2014A** ◗ **Wtr Outlet G5260EK**
			Repair Sleeve, (.0938" Wall - 10.250" Long) **226-8061**							
			Note: 1. Boring Reqd., (Steel Backed Copper-Lead Matrix)							● Press On Flywheel Housing Oil Seal Retainer ◆ Bolt On Flywheel Housing Oil Seal Retainer ■ Bolt On Flywheel Housing Oil Seal Retainer ▲ Press On Flywheel Housing Oil Seal Retainer. Set Includes Micro-Shield Repair Sleeve and Oil Seal ◗ Valve Cover Washer

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
19	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Int.	**211-1194** (B281)	**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
	Exh.	**218-7411**	Valve Seat			**4**	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
	Int.	**218-7535** ●	Valve Seat			**C.B.**	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
		● Available in .005", .010" O.S.				**4**	SH-388		1.2480/1.2490
20	Exh.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**R.B.**	**CB-458P**	2-10-20-30-40	1.9975/1.9985
						M.S.	**MS-227P**	10-20-30	
	Int.		**217-3703** (B166A)	**212-1095** (B8393)	**216-5234** (5111337)	**1**	MB-1669P		2.4970/2.4980
						2-3	MB-1670P		2.4970/2.4980
						5-6			
						4	MB-1671P(F)		2.4970/2.4980
						7	MB-1681P		2.4970/2.4980
						C.B.	**SH-386S**		
						1	SH-386		1.9980/1.9990
						2-3	SH-387		1.9980/1.9990
						4	SH-388		1.2480/1.2490

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
21			**162 CID (2.7L) F162 CONTINENTAL GASOLINE ENGINE. WHEEL TRACTOR-540**							
	3.438"	4			**224-3287** (163A04081E)	**S40943**	1-5/64" 2-3/32"	1-1/4"	**223-3349**(1) (F400G211)	**Full Set FS1634A** **Full Set FS1634GH●** **Full Set FS1634GJ◆**
									223-3429(2) (R800G204)	**Head Gskt 1634** **Head Gskt 3716G**
										Pan Set OS20509
						S50943	1-5/64" 2-3/32"	1-1/4"	**223-3605**(3)	**Valve Cvr VS38032■** **Valve Cvr VS38083▲**
										Manif Set MS15028
			Repair Sleeve, (.0938" Wall - 7.500" Long) **226-8045**							**Tmg Cvr JV895 *** **Tmg Cvr JV899* *** **Tmg Cvr JV1027* * ***
										Tmg Cvr JV1211†
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**							**Front Cvr JV5015◗** **Front Cvr T28130★** **Front Cvr T28884★** **Front Cvr T28962★**
										Pump Drv T27728 † † **Pump Drv T28928 † †**
										Front Seal 47065
										Rear Seal JV663
										Acc Seal 49297
										Gvnr Seal 48816
										Magneto B25800
										Wtr Outlet C24109
										Wtr Outlet C24109VF (Victo-Foam)

Notes:
1. Light Reaming Reqd, (Thin Wall Bronze Bushing - .919" O.D.)
2. Light Reaming Reqd, (Steel Backed Copper-Lead Matrix - 1.066" O.D.)
3. Boring Reqd, (Bronze Bushing)

● Expt Clark & Ross Contains Extra Gaskets Universal Type
◆ Clark & Ross Contains Extra Gaskets Universal Type
■ 2 Gear Camshaft Drive
▲ 3 Gear Camshaft Drive
* Towmotor LT46, 50, 53, 56, 60, 62, 72, 90, K5
* * Clark Yardlift 40 & Ross Y60C
* * * Except Clark Yardlift40, Ross Y60C & Towmotor LT46, 50, 56, 60, 62, 72, 90, K5
† 2-1/8" Shaft
◗ Contains Extra Eng Plate & Gear Cover Gaskets for Multiple Engines
★ Gear Cover Gasket
† † Vickers Pump Drive

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
21	Exh.	**211-1053** ● (F600I238)	**217-3620** ▲ (F400I213)	**212-1025** (Y400I215)	**216-5147** * (Y400I205)
	Exh.	**211-1589** ■ (F400I228)			**216-5234** † (Z120I1235)
	Int.	**211-1588** ◆ (F400I229)	**217-3620** ▲ (F400I213)	**212-1025** (Y400I215)	**216-5147** * (Y400I205)
	Int.				**216-5234** † (Z120I1235)
	Exh.	**218-7405** ◗ (F140A216)	Valve Seat		
	Exh.	**218-7439** ★	Valve Seat		
	Int.	**218-7535** ★ ★	Valve Seat		

● Drilled Valve Stem 1.328" Head Dia. (Except with Rotocap Assembly)
◆ Dilled Valve Stem
■ Drilled Valve Stem 1.203" Head Dia. (Except with Rotocap Assembly)
▲ Except Roto Valve
* Drilled Valve Stem, (Execpt with Rotocap Assembly)
† Engines with Rotocap Assembly
◗ Valves with 1.203" Head Dia. (.010 O.S. Available)
★ Valves with 1.328" Head Dia. (Except with Rotocap Assembly)
★ ★ Available in .005", .010" O.S.

OIL PUMP

601-1106 (F600L4135)) Bolt On Screen w/ Cast Iron Drive Gear (Long Shaft)

601-1108 (F600L4132) Bolt on Screen w/ Cast Iron Drive Gear (Short Shaft)

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-78P**	10-20-30-40-C60	1.9365/1.9375
Note: Position 2 and 4			
R.B.	**CB-79P**	10-20-30-40-C60	1.9365/1.9375
Note: Position 1 and 3			
M.B.	**MS-176P-10**	20	
1	MB-1403P		2.2490/2.2500
1	MB-1403W		2.2812
2	MB-1406P		2.2490/ 2.2500
3	MB-1405P		2.2490/2.2500
Note: Timing Gear Must be Removed When Replacing Single Flanged Front Bearings, Contains 2 Piece Thrust Washer Set and Straight Flanged Bearings; Use in Position Number 1			
T.W.	**TW-424S**		
1	MB-1403W		2.2812
Note: Contains 1 Piece, Position Number 1			
C.B.	**SH-56S**		
1	SH-1211		1.8715/1.8725
2	SH-56		1.7457/1.7465
3	SH-57		1.2465/1.2475

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
22			**265 CID (4.3L) IND. 16 CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-430, 431, 535, 542, 545**								
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV757** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F7153◆** **Wtr Outlet C26690** **Water Pmp K25845**	
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)		
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)	
23			**265 CID (4.3L) IND. 16A CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-430, 431, 535, 542, 545**								
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV757** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F7153◆** **Wtr Outlet C26690** **Water Pmp K25845**	
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)		
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
22	Exh.	**211-1195** (1319089)	**217-3337** ● (1124959)	**212-1072** ◆ (869073)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ◆ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
	● Except Sodium Filled Valves ◆ From 1969, (Requires Rotocap Assembly)								
23	Exh.	**211-1195** (1319089)	**217-3337** ● (1124959)	**212-1072** ◆ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ◆ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
	● Except Sodium Filled Valves ◆ From 1969, (Requires Rotocap Assembly)								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
24			**237 CID (3.9L) IND. 7 CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP110, SP112, SP115, SP132, SP137**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV757** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F7153◆** **Wtr Outlet C26690** **Water Pmp K25845**
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)	
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)
25			**237 CID (3.9L) IND. 7A CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP110, SP112, SP115, SP132, SP137**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV757** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F7153◆** **Wtr Outlet C26690** **Water Pmp K25845**
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)	
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
24	Exh.	**211-1195** ● (1319089)	**217-3337** ◆ (1124959)	**212-1072** ■ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ■ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
		● From Eng. S/N 17460 ◆ Except Sodium Filled Valves ■ From 1969, (Requires Rotocap Assembly)							
		CAMSHAFT/TIMING COMPONENTS							
		9-401	Timing Chain						
25	Exh.	**211-1195** ● (1319089)	**217-3337** ◆ (1124959)	**212-1072** ■ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ■ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
		● From Eng. S/N 17460 ◆ Except Sodium Filled Valves ■ From 1969, (Requires Rotocap Assembly)							
		CAMSHAFT/TIMING COMPONENTS							
		9-401	Timing Chain						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
26			**251 CID (4.1L) IND. 8 CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP115, SP137, SP428, SP429, 525**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV826** **Dust Seal 42379** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F5438AK ◆** **Wtr Outlet C26690** **Water Pmp K25845**
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)	
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix - 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)
27			**251 CID (4.1L) IND. 8A CHRYSLER GASOLINE ENGINE. COMBINE (SELF PROPELLED)-SP115, SP137, SP428, SP429, 525**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	12-3/32"	12-5/32"	**223-3349**(1) (318893)	**Full Set FS4922 ●** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** **Front Seal JV826** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** **Exh. Pipe F5438AK ◆** **Wtr Outlet C26690** **Water Pmp K25845**
						533 (986454)	12-3/32"	12-5/32"	**223-3429**(2)	
						S5985 (4448146)	2-5/64"	1-3/16"		
			Notes: 1. Light Reaming Reqd., (Thin Wall Bronze Bushing - .919" O.D.) 2. Light Reaming Reqd., (Steel Backed Copper-Lead Matrix 1.066" O.D.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Pipe to Manifold, (Flange Type)
28			**157 CID (2.6L) VG4D WISCONSIN V4 GASOLINE ENGINE. BALER-101, 102, 103**							
	3.500"	4	Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8057**			**S4548** (DR15D)	3-1/8"	1-3/16"		**Full Set FS1816** **Head Set HS1816** (2 - Req'd) **Head Gskt 1816** (2 - Req'd) **Front Seal 47300** **Rear Seal 49740**
						S70185 (DR8)	3-1/8"	1-3/16"		

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
26	Exh.	**211-1195** ● (1319089)	**217-3337** ◆ (1124959)	**212-1072** ■ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ■ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
		● From Eng. S/N 5350 ◆ Except Sodium Filled Valves ■ From 1969, (Requires Rotocap Assembly)							
		CAMSHAFT/TIMING COMPONENTS							
		9-401	Timing Chain						
27	Exh.	**211-1195** ● (1319089)	**217-3337** ◆ (1124959)	**212-1072** ■ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40-C60	2.1240/2.1250
						M.S.	**MS-107P-10**	20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ■ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
		● From Eng. S/N 5350 ◆ Except Sodium Filled Valves ■ From 1969, (Requires Rotocap Assembly)							
		CAMSHAFT/TIMING COMPONENTS							
		9-401	Timing Chain						
28	Exh.	**211-1519** (AE76D)	**217-3458** ●		**216-5234** (AH9)	**R.B.**	**CB-995M**	10-20	2.1250/2.1260
	Int.	**211-1519** (AE76D)	**217-3458** ●		**216-5234** (AH9)				
	Exh.		**217-3908** ◆ (AD42)						
	Int.		**217-3908** ◆ (AD42)						
		● .500" O.D. X 2.500" Iron ◆ .4375" O.D. X 2.500" Iron							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
29			**265 CID (4.3L) 190DKB WAUKESHA DIESEL ENGINE. WHEEL TRACTOR-1650**								
	3.750"	6				**S40381** (106571AS)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	**Full Set FS1920●** **Head Set HS1920** **Pan Set OS31413** **Valve Cvr VS39675A** ● Timing Cover and Rear Main Seals Not Included	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								
30			**265 CID (4.3L) 190DLB WAUKESHA DIESEL ENGINE. WHEEL TRACTOR-880, 1600**								
	3.370"	6							**223-3514**(1) (1K230)	**Full Set FS1920 ●** **Head Set HS1920** **Pan Set OS31413** **Valve Cvr VS39675A** **Manif Set MS9943Y◆** ● Timing Cover and Rear Main Seals Not Included ◆ Exh. & Int. Manifold Set	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								
31			**265 CID (4.3L) 190DSB WAUKESHA DIESEL ENGINE. WHEEL TRACTOR-1600**								
	3.750"	6							**223-3514**(1) (1K230)	**Pan Set OS31413** **Valve Cvr VS39675A** **Front Seal 49395**	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								
32			**265 CID (4.3L) 190GLB WAUKESHA FLEX ENGINE. WHEEL TRACTOR-880**								
	3.750"	6	**226-1283** (930223)			**S40016** (905428)	3-1/8"	3-3/16"	**223-3514**(1) (1K230)	**Full Set FS1857** **Head Set HS1857** **Head Gskt 1857** **Pan Set OS31413** **Valve Cvr VS39675A** **Manif Set MS9943Y●** **Front Seal 49395** ● Int. & Exh. Manifold Set	
			Note: 1. 2 - Bushings per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
29						**R.B.**	**CB-450P**	10	2.6240/2.6250
						Note: Engine with 2.625" Crankpins, (Standard Engine).			
						R.B.	**CB-703P**	10-20-30-40	2.4365/2.4375
						Note: Engines with 2.437" Crankpins.			
						M.S.	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500
30						**R.B.**	**CB-450P**	10	2.6240/2.6250
						Note: Engine with 2.625" Crankpins, (Standard Engine).			
						R.B.	**CB-703P**	10-20-30-40	2.4365/2.4375
						Note: Engines with 2.437" Crankpins.			
						M.S.	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500
31						**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500
32						**R.B.**	**CB-450P**	10	2.6240/2.6250
						Note: Engines with 2.625" Crankpins, (Standard Engine).			
						R.B.	**CB-703P**	10-20-30-40	2.4365/2.4375
						Note: Engines with 2.437" Crankpins.			
						M.S.	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
						C.S.	**SH-330S**		
						1	SH330		1.7490/1.7500

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
33			**198 CID (3.2L) DD198 HERCULES DIESEL ENGINE. WHEEL TRACTOR-550**								
	3.750"	4				**SC3632**	1-1/8" 2-3/32"	2-3/16"		**Valve Cvr VS28268** **Front Seal 64063**	
34			**298 CID (4.9L) DD298 HERCULES GASOLINE ENGINE. WHEEL TRACTOR-570**								
	3.750"	6								**Valve Cvr VS29688** **Carb Mnt G5260EK**	
35			**198 CID (3.2L) GO198 HERCULES GASOLINE ENGINE. WHEEL TRACTOR-35 (GOLDEN EAGLE), 550**								
	3.750"	4				**S40528**	1-3/32" 1-1/8"	2-3/16"		**Valve Cvr VS28268** **Front Seal 64063**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
33	Exh.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Engines with 2.000" Crankpins and 2.500" Main Journals, (Contain 2 Shims)			
	Exh.			**212-1103** (125011B) Outer	**216-5145** ●	**R.B.**	**CB-704P**	10-20-30	2.3730/2.3740
						Note: Engines with 2.375" Crankpins and 2.875" Main Journals			
						M.S.	**MS-1681P**	10	
	Int.	**211-2062** (255010B)		**212-1104** (125012B) Inner	**216-5144** (77019A)	**1-2**	MB2185P		2.8734/2.8744
						4-5			
						3	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Main Journals, Lateral Rod Bushing			
	Int.			**212-1103** (125011B) Outer	**216-5145** ●	**C.S.**	**SH-562S**		
						1-4	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
	● Hardened Exh. & Int.								
34	Exh.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Engines with 2.000" Crankpins and 2.500" Main Journals, (Contain 2 Shims)			
	Exh.			**212-1103** (125011B) Outer	**216-5145** ●	**R.B.**	**CB-704P**	10-20-30	2.3730/2.3740
						Note: Engines with 2.375" Crankpins and 2.875" Main Journals			
						M.S.	**MS-650P**	10	
	Int.	**211-2062** (255010B)		**212-1104** (125021B) Inner	**216-5144** (77019A)	**1-2-3**	MB2185P		2.8734/2.8744
						5-6-7			
						4	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Main Journals, Upper & Lower Bearing Halves have Locating Lug in Same Position			
	Int.			**212-1103** (125011B) Outer	**216-5145** ●	**C.S.**	**SH-562S**		
						1-4	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
	● Hardened Exh. & Int.								
35	Exh.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Engines with 2.000" Crankpins and 2.500" Main Journals, (Contain 2 Shims)			
	Exh.			**212-1103** (125011B) Outer	**216-5145** ●	**R.B.**	**CB-704P**	10-20-30	2.3730/2.3740
						Note: Engines with 2.375" Crankpins and 2.875" Main Journals			
						M.S.	**MS-1681P**	10	
	Int.	**211-2062** (255010B)		**212-1104** (125012B) Inner	**216-5144** (77019A)	**1-2**	MB2185P		2.8734/2.8744
						4-5			
						3	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Main Journals, Lateral Rod Bushing			
	Int.			**212-1103** (125011B) Outer	**216-5145** ●	**C.S.**	**SH-562S**		
						1-4	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
	● Hardened Exh. & Int.								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
36			**298 CID (4.9L) GO298 HERCULES GASOLINE ENGINE. WHEEL TRACTOR-570**								
	3.750"	6				**S40528**	1-3/32" 1-1/8"	2-3/16"		**Head Set HS3143** **Valve Cvr VS29688**	
37			**212 CID (3.5L) 4-53 DETROIT DIESEL ENGINE. WHEEL TRACTOR-1900, 1950**								
	3.875"	4	**226-1478**(1) (5198903)	**226-4415** (5132803) **223-7140** (5121256) (O-ring Kit)		**S41154** (5198902)	1-.082" 3-3/32"	2-3/16"	**223-3622** (5116181) (2 Req'd)	**Full Set FS12232B ●** **Head Set HS12232** **Head Set HS12232B ◆** **Head Gskt CH12232** **Lower Set CS12232 ■** **Pan Set OS31584** **Valve Cvr VS39855** **Front Seal 46289** **Rear Seal 47905 ▲** **Rear Seal 48005 ★** **Rear Seal SS48005 ◗** **Tube Kit 216-1136*** **Fuel Pmp D24971** **Cooler Set GS33123†** **Cooler Set GS33127† †** **Cooler Set GS33131† † †**	

Note:
1. Early Design, (Contains Piston with .421" Deep Bowl)

● Original Equipment Type, (Crankshaft Seals Not Included.)
◆ Original Equipment Type
■ Use w/ Head Set, Front & Rear Oil Seals to make Full Set
▲ Seal Only, (All Except Oversize Crankshaft)
★ Seal Only, (For 4.125" Oversize Crankshaft)
◗ Set Includes Micro-Shield Repair Sleeve and Oil Seal, (For 4.125" O.S. Crankshaft
* 4 Valves Per Cylinder; Pre-reamed Inj. Tube w/ Viton O-ring
† All 6, 8, 13 Plate, (Single Stack Cooler)
† † All 18 Plate, (Single Stack Cooler)
† † † All, 4 Plate, (Single Stack Cooler)

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
36	Exh.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Engines with 2.000" Crankpins and 2.500" Main Journals, (Contain 2 Shims)			
	Exh.			**212-1103** (125011B) Outer	**216-5145** ●	**R.B.**	**CB-704P**	10-20-30	2.3730/2.3740
						Note: Engines with 2.375" Crankpins and 2.875" Journals			
	Int.	**211-2062** (255010B)		**212-1104** (125012B) Inner	**216-5144** (77019A)	**M.S.**	**MS-650P**	10	
						1-2-3	MB-2185P		2.8734/2.8744
						5-6-7			
						4	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Journals, Upper and Lower Bearing Halves Have Locating Lugs in same Position.			
	Int.			**212-1103** (125011B) Outer	**216-5145** ●	**C.S.**	**SH-562S**		
						1-4	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
	● Hardened Exh. & Int.								
37	Exh.	**211-1863** ● (5145172)	**217-4007** ● (5131961)	**212-1110** ◆ (5123329)	**216-5183** ● (5116341)	**R.B.**	**CB-1265P**	10-20-30-40	2.4990/2.5000
	Exh.	**211-2536** ■ (5197176)	**217-3832** ▲ (5111327)		**216-5234** ▲ (5111337)	**M.S.**	**MS-502P**	10-20-30‘	
						1-2-3	MB1897P		4.9200/4.9210
						4-5			
						5	MB-2522W		3.3380/3.3480
						Note: Contains 4 Piece Thrust Washer Set; Used in Position No. 5			
						T.W.	**TW-412S**		3.3380/3.3480
						T.W.-4	MB2522W		3.3380/3.3480
						Note: Contains 4 Pieces for Position No. 5; Use with MS-502P			
						C.S.	**SH700S**		
						1-5	SH-686		2.1820/2.1825
						2-4	SH-687		2.1820/2.1825
						3	SH-688		2.1820/2.1825
	218-7817 * (8921502) Valve Seat								
	● 4 Valves Per Cylinder ◆ 4 Valves Per Cylinder, (Uniform Pitch Spring .135" Wire Dia.) ■ 4 Valves Per Cylinder, (Optional Premium) ▲ 2 Valves Per Cylinder * 4 Valves Per Cylinder, (1.156" Counterbore)								
	CAMSHAFT/TIMING COMPONENTS								
	214-1107(1) (8923814) Cam Follower								
	Note: 1. Roller w/ Bushing & Pin Set, (3 Sets Per Cylinder)								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
38			**283 CID (4.6L) F283G WAUKESHA GASOLINE ENGINE. WHEEL TRACTOR-1750, 1800 (SERIES) B, C**							
	3.875"	6								**Full Set FS3235K** **Head Set HS3235K** **Pan Set OS31413** **Valve Cvr VS39697** **Valve Seal B45229** ● ● Intake, Valve Stem Seal
39			**310 CID (5.1l) F310G WAUKESHA GASOLINE ENGINE. WHEEL TRACTOR-1850**							
	3.875"	6				**S40533CP** (162813AS)	2-3/32"	1-3/16"		**Full Set FS3235K** **Head Set HS3235K** **Pan Set OS31413** **Valve Cvr VS39697**
						S50533CP	2-3/32"	1-3/16"		
40			**354 CID (5.8L) 6-354 PERKINS DIESEL ENGINE. WHEEL TRACTOR-1850, 1950, 5542, 7300, 7600**							
	98mm 3.858"	6	Repair Sleeve, (.09375" Wall - 10.250" Long) **226-1453**(1)	**226-4234** (31358394)	**224-1649** (31354335)	**S41092** (86773)	1-1/8" 2-3/32"	1-1/4"		**Head Set HS85182** ● **Head Gskt 3837** ● **Lower Set CS85182** ◆ **Pan Set OS87083** ■ **Valve Cvr VS86125** ■ **Front Seal JV1214** ■ **Rear Seal JV1640** ■
						S42300 (83388)	3-3/32"	2-1/4"	**223-3640**(2)	
			Notes: 1. Replaces or Converts to Flanged Type Sleeve, (Components not Sold Seperately) 2. Boring Reqd., (Steel Backed Copper-Lead Matrix)							● From Eng. S/N E8060154; From Eng. S/N 354U33965, (1/2" Studs) ◆ Requires Head Set to make Full Set, (From 1960 thru 1981) ■ Industrial and Vehicle, (From 1960 thru 1981)
41			**425 CID (7.0L) 425C MINNEAPOLIS MOLINE GASOLINE ENGINE. WHEEL TRACTOR-1870**							
	4.250"	6	Repair Sleeve, (.125" Wall - 12.250" Long) **226-8016** Repair Sleeve, (.0938" Wall - 12.250" Long) **226-8066**							**Lower Set OS21983**

Line No.	VALVE TRAIN PARTS: Exh. or Int.	Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
38	Ext.	**211-2053** (222253)			**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30	2.4365/2.4375
	Int.	**211-2050** (222436)			**216-5144** (163235)	**M.S.** **1-2-3** **4-6-7** **5**	**MS-676P** MB-2225P MB-2226P(F)	10-20-30	2.6240/2.6250 2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing.			
		● Hardened Exh. & Int.				**C.S.** **1-2** **3-4**	**SH-614S** SH-330		1.7490/1.7500
39	Exh.	**211-2053** (222253)			**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30	2.4365/2.4375
	Int.	**211-2050** (222436)			**216-5144** (163235)	**M.S.** **1-2-3** **4-6-7** **5**	**MS-676P** MB-2225P MB-2226P(F)	10-20-30	2.6240/2.6250 2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing.			
		● Hardened Exh. & Int.				**C.S.** **1-2** **3-4**	**SH-614S** SH-330		1.7490/1.7500
40	Exh.	**211-2107** ● (31431104)	**217-3270** (33261752)		**216-5191** (33173108)	**R.B.**	**CB-667AL**	10-20-30	2.49990/2.4995
	Int.		**217-3271** (33261732)		**216-5191** (33173108)	**M.S.** **1-2-3** **5-6-7**	**MS-757AL** MB-2221AL MB-2222AL	10-20-30	2.9985/2.9990 2.9985/2.9990
	Exh.	**218-7815** (33152139)	Valve Seat			**Note:** Requires Thrust Washer Set (Not Included) Use TW-121S, TW-316S			
	Int.	**218-7814** (33152512)	Valve Seat			**T.W.** **T.W.-4** **T.W.-4**	**TW-121S** MB-2222W(L) MB-2222W(U)		3.4200/3.4300 3.4200/3.4300
		● Valve Head 1.440" Diameter				**Note:** Contains 4 Pieces, Position No. 4 Use with No. MS-757AL, (Thru Eng. S/N 8504189).			
		CRANKSHAFT				**T.W.** **T.W.-4** **T.W.-4**	**TW-316S** MB-2636W(L) MB-2636W(U)		3.4200/3.4300 3.4200/3.4300
		247-5088 (31323285)	Crankshaft - Ring Feeder / Lip			**Note:** Contains 4 Pieces, Position No. 4 Use with No. MS-757AL, (From Eng. S/N 8504190).			
41	Exh.		**217-3914**		**216-5233** (GE34)	**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090**	**217-3914**		**216-5233** (GE34)				
	Int.	**218-7623**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets Head Sets Oil Pan Sets
42			**425 CID (7.0L) 425C MINNEAPOLIS MOLINE LPG ENGINE (S/N 44700001-Up). WHEEL TRACTOR-1870**							
	4.250"	6	Repair Sleeve, (.125" Wall - 12.250" Long) **226-8016** Repair Sleeve, (.0938" Wall - 12.250" Long) **226-8066**							**Lower Set OS21983**
43			**451 CID (7.4L) D451 MINNEAPOLIS MOLINE DIESEL ENGINE. WHEEL TRACTOR-1870**							
	4.375"	6								**Head Gskt CH3813** **Lower Set OS21983**
44			**573 CID (9.4L) 3150 CATERPILLAR V8 DIESEL ENGINE. WHEEL TRACTOR-2250**							
	4.500"	8				**S41883** (2W8265)	1-1/8"	1-7/64"	**223-1836** (7N9803) **223-3569** (8N0701) **223-5506** (8N7294)	**Head Set HS4929** **Head Gskt 54151** **Lower Set CS4929** **Pan Set OS32498●** **Pan Gskt OS32215◆** ● Pan Set with Oil Pump Gaskets ◆ Pan Gasket Only

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
42	Exh.		**217-3914**		**216-5233** (GE34)	**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090**	**217-3914**		**216-5233** (GE34)				
	Int.	**218-7623**	Valve Seat						
43						**R.B.**	**CB-591P**	10-20	2.9115/2.9120
44	Exh.	**211-2456** (9L7683)		**212-1289** (9L9172) Inner		**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						M.S.	**MS-1421P**	10-20-30	
						1-2	MB-2734P		3.4990/3.5000
						3-5			
						4	MB-2735P(F)		3.4990/3.5000
						Note: Upper Flange Length is 1.253"			
	Exh.			**212-1288** (9L9190) Outer					
	Int.	**211-2455** (9L7682)		**212-1289** (9L9172) Inner		**M.S.**	**MS-1592P**	20	
						1-2	MB-2929P		3.4990/3.5000
						3-5			
						4	MB-2930P		3.4990/3.5000
	Int.			**212-1288** (9L9190) Outer		**Notes:** 1. Upper Flange Length is 1.253" 2. Bearing O.D. .010" Oversize			
						C.S.	**SH-1245S**		
						1-2-3	SH-1245		2.4995/2.5005
						4-5			

MODEL AND ENGINE INDEX

WHEEL TRACTOR

Model	Fuel	Line No.
6240	Diesel (Allis Model) F3L912 Air Cooled Engine	**3**
6240	Diesel (Allis Model) F4L912 Air Cooled Engine	**5**
6250	Diesel (Allis Model) F3L912 Air Cooled Engine	**3**
6250	Diesel (Allis Model) F4L912 Air Cooled Engine	**5**
D2506	Diesel F2L912 Air Cooled Engine	**1**
D2506	Diesel F2L912D Air Cooled Engine	**2**
D3006	Diesel F2L912 Air Cooled Engine	**1**
D3006	Diesel F2L912D Air Cooled Engine	**2**
D4006	Diesel F3L912 Air Cooled Engine	**3**
D4006	Diesel F3L912D Air Cooled Engine	**4**
D4006A	Diesel F3L912 Air Cooled Engine	**3**
D4006A	Diesel F3L912D Air Cooled Engine	**4**
D4506	Diesel F3L912 Air Cooled Engine	**3**
D4506	Diesel F3L912D Air Cooled Engine	**4**
D4506A	Diesel F3L912 Air Cooled Engine	**3**
D4506A	Diesel F3L912D Air Cooled Engine	**4**
D4507	Diesel F3L912 Air Cooled Engine	**3**
D4507	Diesel F3L912D Air Cooled Engine	**4**
D4507A	Diesel F3L912 Air Cooled Engine	**3**
D4507A	Diesel F3L912D Air Cooled Engine	**4**
D5206	Diesel F3L912 Air Cooled Engine	**3**
D5206	Diesel F3L912D Air Cooled Engine	**4**
D5207	Diesel F3L912 Air Cooled Engine	**3**
D5207A	Diesel F3L912 Air Cooled Engine	**3**
D5207A	Diesel F3L912D Air Cooled Engine	**4**
D5506	Diesel F4L912 Air Cooled Engine	**5**
D6006	Diesel F4L912 Air Cooled Engine	**5**
D6006A	Diesel F4L912 Air Cooled Engine	**5**
D6206	Diesel F4L912 Air Cooled Engine	**5**
D6206A	Diesel F4L912 Air Cooled Engine	**5**

ENGINE INDEX

Models		Line No.
F2L912	Diesel 2 cyl 1884cc (1.9L)	**1**
F2L912D	Diesel 2 cyl 1884cc (1.9L)	**2**
F3L912	Diesel 3 cyl 2826cc (2.8L)	**3**
F3L912D	Diesel 3 cyl 2826cc (2.8L)	**4**
F4L912	Diesel 4 cyl 3768cc (3.8L)	**5**
F4L912W	Diesel 4 cyl 3768cc (3.8L)	**5**
F4L912D	Diesel 4 cyl 3768cc (3.8L)	**6**
BF4L913	Diesel 4 cyl 4089cc (4.09L) Turbocharged	**7**

NOTES

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
1			**1884CC 115 CID (1.9L) F2L912 AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - D2506, D3006**								
	100mm 3.937"	2	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 2 Sets Req'd **Head Gskt 3742 †** 2 Gskts Req'd.	
						S42707	3-2.5mm	1-5.0mm		▲ Head Gaskets not included † For Heads Milled 1mm or more	

Note: Sleeve Assembly Supplied With Rings Fitted to Piston

MODEL AND ENGINE INDEX

WHEEL TRACTOR

Model	Fuel	Line No.
D6207	Diesel F4L912 Air Cooled Engine	**5**
D6207A	Diesel F4L912 Air Cooled Engine	**5**
D6507	Diesel F4L912 Air Cooled Engine	**5**
D6806	Diesel F4L912 Air Cooled Engine	**5**
D6806A	Diesel F4L912 Air Cooled Engine	**5**
D6807	Diesel F4L912 Air Cooled Engine	**5**
D6807A	Diesel F4L912 Air Cooled Engine	**5**
D7007	Diesel F4L912 Air Cooled Engine	**5**
D7206	Diesel F4L912 Air Cooled Engine	**5**
D7807	Diesel BF4L913 Turbo Charged Air Cooled Engine	**7**
D7807A	Diesel BF4L913 Turbo Charged Air Cooled Engine	**7**
D8006	Diesel F6L912 Air Cooled Engine	**10**
D8006A	Diesel F6L912 Air Cooled Engine	**10**
D9006	Diesel F6L912 Air Cooled Engine	**10**
D10006	Diesel F6L912 Air Cooled Engine	**10**

Model	Fuel	Line No.
D10006A	Diesel F6L912 Air Cooled Engine	**10**
DX90	Diesel F5L912 Air Cooled Engine	**8**
DX90A	Diesel F5L912 Air Cooled Engine	**8**
DX110	Diesel F6L912 Air Cooled Engine	**10**
DX110A	Diesel F6L912 Air Cooled Engine	**10**
DX120A	Diesel F6L913 Turbo Charged Air Cooled Engine	**13**
DX130	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**
DX130A	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**
DX140	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**
DX140A	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**
DX160	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**
DX160A	Diesel BF6L913 Turbo Charged Air Cooled Engine	**12**

ENGINE INDEX

Models		Line No.
F5L912	Diesel 5 cyl 4710cc (4.7L)	**8**
F5L912W	Diesel 5 cyl 4710cc (3.8L)	**8**
F5L912D	Diesel 5 cyl 4710cc (4.87L)	**9**
F6L912	Diesel 6 cyl 5652cc (5.7L)	**10**

Models		Line No.
F6L912W	Diesel 6 cyl 5652cc (5.7L)	**10**
F6L912D	Diesel 6 cyl 5652cc (5.7L)	**11**
BF6L913	Diesel 6 cyl 6128cc (6.1L) Turbocharged	**12**
F6L913	Diesel 6 cyl 6128cc (6.1L)	**13**

NOTES

	VALVE TRAIN PARTS					BEARINGS			
Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
1	Exh.	**211-2530** (213-7300)	**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int.	**211-3355** (213-7301)	**217-3447** (223-2528)						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
2			**1884CC 115 CID (1.9L) F2L912D AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - D2506, D3006**								
	100mm 3.937"	2	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742** ▲ 2 Sets Req'd. **Head Gskt 3742** † 2 Gskts Req'd. ▲ Head Gaskets not included † For Heads Milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
3			**2826CC 172 CID (2.8L) F3L912 AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - D4006, D4006A, D4506, D4506A, D4507, D4507A, D5206, D5207, D5207A; ALLIS MODEL-6240, 6250**								
	100mm 3.937"	3	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742** ▲ 3 Sets Req'd. **Head Gskt 3742** † 3 Gskts Req'd. ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
4			**2826CC 172 CID (2.8L) F3L912D AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - D4006, D4006A, D4506, D4506A, D4507, D4507A, D5206, D5207A**								
	100mm 3.937"	3	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742** ▲ 3 Sets Req'd. **Head Gskt 3742** † 3 Gskts Req'd. ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
5			**3768CC 230 CID (3.8L) F4L912, F4L912W AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - D5506, D6006, D6006A, D6206, D6206A, D6207, D6207A, D6507, D6806, D6806A, D6807, D6807A, D7007, D7206; ALLIS MODEL-6240, 6250**								
	100mm 3.937"	4	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742** ▲ 4 Sets Req'd. **Head Gskt 3742** † 4 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
2	Exh. **211-2530** (213-7300) Int. **211-3355** (213-7301)		**217-3447** (223-2528) **217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
3	Exh. **211-2530** (213-7300) Int. **211-3355** (213-7301)		**217-3447** (223-2528) **217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
			CRANKSHAFT						
	247-5210 (210-0556)	Crankshaft							
4	Exh. **211-2530** (213-7300) Int. **211-3355** (213-7301)		**217-3447** (223-2528) **217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
			CRANKSHAFT						
	247-5210 (210-0556)	Crankshaft							
5	Exh. **211-2530** (213-7300) Int. **211-3355** (213-7301)		**217-3447** (223-2528) **217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
			CRANKSHAFT						
	247-5211 (213-7846)	Crankshaft							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
6			**3768CC 230 CID (3.8L) F4L912D AIR COOLED DIESEL ENGINE.**								
	100mm 3.937"	4	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 4 Sets Req'd. **Head Gskt 3742 †** 4 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
7			**4089CC 250 CID (4.09L) BF4L913 AIR COOLED TURBOCHARGED DIESEL ENGINE. WHEEL TRACTOR-D7807, D7807A**								
	102mm 4.016"	4				**S43046**	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 4 Sets Req'd. **Head Gskt 3742 †** 4 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
8			**4710CC 287 CID (4.7L) F5L912, F5L912W AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - DX90, DX90A; DEUTZ TRUCK**								
	100mm 3.937"	5	Includes Air Cooled Sleeve **226-1885** (292-8142)			**42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 5 Sets Req'd. **Head Gskt 3742 †** 5 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
9			**4710CC 287 CID (4.7L) F5L912D AIR COOLED DIESEL ENGINE.**								
	100mm 3.937"	5	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 5 Sets Req'd. **Head Gskt 3742 †** 5 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
6	Exh. **211-2530** (213-7300)		**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int. **211-3355** (213-7301)		**217-3447** (2232528)						
			CRANKSHAFT						
	247-5211 (213-7846)		Crankshaft						
7	Exh. **211-2530** 213-7300)		**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int. **211-3355** (213-7301)		**217-3447** (223-2528)						
8	Exh. **211-2530** (213-7300)		**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int. **211-3355** (213-7301)		**217-3447** (223-2528)						
9	Exh. **211-2530** (213-7300)		**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int. **211-3355** (213-7301)		**217-3447** (223-2528)						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
10			**5652CC 345 CID (5.7L F6L912, F6L912W AIR COOLED DIESEL ENGINE. WHEEL TRACTOR - DX110, DX110A, D8006, D8006A, D9006, D10006, D10006A; DEUTZ TRUCK**								
	100mm 3.937"	6	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 6 Sets Req'd. **Head Gskt 3742 †** 6 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
11			**5652CC 345 CID (5.7L) F6L912D AIR COOLED DIESEL ENGINE.**								
	100mm 3.937"	6	Includes Air Cooled Sleeve **226-1885** (292-8142)			**S42892** (213-3117)	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 6 Sets Req'd. **Head Gskt 3742 †** 6 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
						S42707	3-2.5mm	1-5.0mm			
			Note: Sleeve Assembly Supplied With Rings Fitted to Piston								
12			**6128CC 374 CID (6.1L) BF6L913 TURBOCHARGED AIR COOLED DIESEL ENGINE. WHEEL TRACTOR-DX130, DX130A, DX140, DX140A, DX160, DX160A**								
	102mm 4.016"	6				**S43046**	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 6 Sets Req'd. **Head Gskt 3742 †** 6 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	
13			**6128CC 374 CID (6.1L) F6L913 AIR COOLED DIESEL ENGINE. WHEEL TRACTOR-DX120A**								
	102mm 4.016"	6				**S43046**	1-3.0mm 2-2.5mm	1-5.0mm		**Head Set HS3742 ▲** 6 Sets Req'd **Head Gskt 3742 †** 6 Gskts Req'd ▲ Head Gaskets not included † For Heads milled 1mm or more	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
10	Exh.	**211-2530** 213-7300)	**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int.	**211-3355** (213-7301)	**217-3447** (223-2528)						
			CRANKSHAFT						
		247-5212 (213 6993)	Crankshaft						
11	Exh.	**211-2530** (213-7300)	**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int.	**211-3355** (213-7301)	**217-3447** (223-2528)						
			CRANKSHAFT						
		247-5212 (213-6993)	Crankshaft						
12	Exh.	**211-2530** (213-7300)	**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int.	**211-3355** (213-7301)	**217-3447** (223-2528)						
13	Exh.	**211-2530** (213-7300)	**217-3447** (223-2528)			**R.B.**	**CB-1053P**	.25mm	2.3599/2.3606
	Int.	**211-3355** (213-7301)	**217-3447** (223-2528)						

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Model	Fuel		Line No.
MF-11	Diesel	D3.152 Perkins (Direct Injection)	39
MF-11	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-14	Diesel	JXC Hercules	52
MF-20	Gasoline	F162 Continental	26
MF-20	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-20	Diesel	D3.152 Perkins (Direct Injection)	39
MF-20	Gasoline	AG3.152 Perkins	40
MF-20	Gasoline	G3.152 Perkins	40
MF-21	Gasoline	5 Chrysler	15
MF-21	Gasoline	5A Chrysler	15
MF-21	Gasoline	6 Chrysler	15
MF-21	Gasoline	6A Chrysler	15
MF-21	Gasoline	30 Chrysler	15
MF-21	Gasoline	31 Chrysler	15
MF-21	Gasoline	Industrial 30 Chrysler	16
MF-24	Diesel	6.354 Perkins	64
MF-24	Diesel	A6.354 Perkins	64
MF-25	Diesel	4.107 Perkins	5
MF-25	Diesel	6.354 Perkins	64
MF-25	Diesel	A6.354 Perkins	64
MF-26	Gasoline	5 Chrysler	15
MF-26	Gasoline	5A Chrysler	15
MF-26	Gasoline	6 Chrysler	15
MF-26	Gasoline	6A Chrysler	15
MF-26	Gasoline	30 Chrysler	15
MF-26	Gasoline	31 Chrysler	15
MF-26	Gasoline	Industrial 30 Chrysler	16
MF-30	Gasoline	F162 Continental	26
MF-30	Diesel	D3.152 Perkins (Direct Injection)	39
MF-30	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-30	Diesel	D4.203 Perkins (Direct Injection)	42
MF-30	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-30	Diesel	JXC Hercules	52
MF-30B	Gasoline	Z145 Continental	23
MF-31	Diesel	4.236 Perkins	59
MF-31	Diesel	A4.236 Perkins	59
MF-33	Gasoline	E201 Continental	45
MF-33	Gasoline	E208 Continental	48
MF-33	Diesel	ED208 Continental	49
MF-33	Gasoline	E400 Continental	50
MF-33	Gasoline/LPG	E223 Continental	55
MF-33	Gasoline/LPG	EB223 Continental	56
MF-33	Gasoline/LPG	E242 Continental	57
MF-33	Gasoline/LPG	EB242 Continental	58
MF-35	Gasoline	Z129 Continental	7
MF-35	Gasoline	Z134 Continental	8
MF-35	Gasoline	F227 Continental	22
MF-35	Diesel	3.152 Perkins	38
MF-35	Diesel	A3.152 Perkins	38
MF-35	Diesel	D3.152 Perkins (Direct Injection)	39
MF-35	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-38	Diesel	JXC Hercules	52
MF-40	Gasoline	F227 Continental	22
MF-40	Gasoline	F162 Continental	26
MF-40	Diesel	3.152 Perkins	38
MF-40	Diesel	A3.152 Perkins	38
MF-40	Diesel	D3.152 Perkins (Direct Injection)	39
MF-40	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-40	Gasoline	AG3.152 Perkins	40
MF-40	Gasoline	G3.152 Perkins	40
MF-40B	Diesel	D4.203 Perkins (Direct Injection)	42
MF-40B	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-44	Gasoline	F226 Continental	20
MF-44	Diesel	HD260 Continental	62
MF-44	Gasoline	H277 Continental	71
MF-44B	Diesel	6.354 Perkins	64
MF-44B	Diesel	A6.354 Perkins	64
MF-44G	Gasoline	H260 Continental	61
MF-50	Gasoline	Z134 Continental	8
MF-50	Gasoline	Z145 Continental	23
MF-50	Diesel	3.152 Perkins	38
MF-50	Diesel	A3.152 Perkins	38
MF-50	Diesel	D3.152 Perkins (Direct Injection)	39
MF-50	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-50	Gasoline	AG3.152 Perkins	40
MF-50	Gasoline	G3.152 Perkins	40
MF-50	Diesel	D4.203 Perkins (Direct Injection)	42
MF-50	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-50	Gasoline	G193 Continental	51
MF-50	Gasoline	GF193 Continental	51
MF-54	Diesel	VF4 Wisconsin	11
MF-54	Diesel	VH4D Wisconsin	12
MF-54	Diesel	TFD Wisconsin	18
MF-54	Diesel	THD Wisconsin	19
MF-54	Diesel	D4.203 Perkins (Direct Injection)	42
MF-54	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-55	Gasoline	Z134 Continental	8
MF-55	Diesel	V8.510 Perkins	78
MF-60	Gasoline	Z134 Continental	8
MF-60	Gasoline	5 Chrysler	15
MF-60	Gasoline	5A Chrysler	15
MF-60	Gasoline	6 Chrysler	15
MF-60	Gasoline	6A Chrysler	15
MF-60	Gasoline	30 Chrysler	15
MF-60	Gasoline	31 Chrysler	15
MF-60	Gasoline	Industrial 30 Chrysler	16
MF-60	Gasoline	Z145 Continental	23
MF-60	Diesel	A4.212 Perkins	46
MF-60	Gasoline	AG4.212 Perkins	47
MF-60	Diesel	4.248 Perkins	69
MF-60	Diesel	A4.248 Perkins	69
MF-62	Gasoline	N62 Continental	1
MF-65	Diesel	4.192 Perkins	33
MF-65	Gasoline	G176 Continental	36
MF-65	Diesel	4.203 Perkins	41
MF-65	Diesel	A4.203 Perkins	41
MF-65	Diesel	D4.203 Perkins (Direct Injection)	42
MF-65	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-66	Diesel	6V-53 Detroit Diesel	63
MF-70	Gasoline	5 Chrysler	15
MF-70	Gasoline	5A Chrysler	15
MF-70	Gasoline	6 Chrysler	15
MF-70	Gasoline	6A Chrysler	15
MF-70	Gasoline	30 Chrysler	15
MF-70	Gasoline	31 Chrysler	15
MF-70	Gasoline	Industrial 30 Chrysler	16
MF-70	Diesel	4.318 Perkins	82
MF-77C	Diesel	8V-71 Detroit Diesel	77
MF-80	Gasoline	5 Chrysler	15
MF-80	Gasoline	5A Chrysler	15
MF-80	Gasoline	6 Chrysler	15
MF-80	Gasoline	6A Chrysler	15
MF-80	Gasoline	30 Chrysler	15
MF-80	Gasoline	31 Chrysler	15
MF-80	Gasoline	Industrial 30 Chrysler	16
MF-80	Gasoline	F162 Continental	26
MF-80	Diesel	6.354 Perkins	64
MF-80	Diesel	A6.354 Perkins	64
MF-85	Gasoline	E201 Continental	45
MF-85	Gasoline/LPG	E223 Continental	55
MF-85	Gasoline/LPG	EB223 Continental	56
MF-85	Gasoline/LPG	E242 Continental	57
MF-85	Gasoline/LPG	EB242 Continental	58
MF-85	Diesel	HD277 Continental	72
MF-88	Gasoline	E201 Continental	45
MF-88	Gasoline	E400 Continental	50
MF-88	Diesel	JXC Hercules	52
MF-88	Gasoline/LPG	E223 Continental	55
MF-88	Gasoline/LPG	EB223 Continental	56
MF-88	Gasoline/LPG	E242 Continental	57
MF-88	Gasoline/LPG	EB242 Continental	58
MF-88	Diesel	HD277 Continental	72
MF-88	Diesel	8V-71 Detroit Diesel	77
MF-90	Gasoline/LPG	E223 Continental	55
MF-90	Gasoline/LPG	E242 Continental	57
MF-91	Gasoline	Y91 Continental	2

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Model	Fuel		Line No.
MF-92	Diesel	VE4 Wisconsin	**4**
MF-92	Diesel	VF4 Wisconsin	**11**
MF-92	Diesel	VH4D Wisconsin	**12**
MF-92	Diesel	6.305 Perkins	**43**
MF-92	Diesel	AD6.305 Perkins (Direct Injection)	**44**
MF-92 Super	Diesel	6.305 Perkins	**43**
MF-92 Super	Diesel	AD6.305 Perkins (Direct Injection)	**44**
MF-93	Diesel	3-71 Detroit Diesel	**76**
MF-95	Diesel	4.248 Perkins	**69**
MF-95	Diesel	A4.248 Perkins	**69**
MF-97	LPG	504 Minneapolis Moline	**88**
MF-97	Diesel	HD504A Minneapolis Moline	**89**
MF-100	Gasoline	F162 Continental	**26**
MF-101	Gasoline	5 Chrysler	**15**
MF-101	Gasoline	5A Chrysler	**15**
MF-101	Gasoline	6 Chrysler	**15**
MF-101	Gasoline	6A Chrysler	**15**
MF-101	Gasoline	30 Chrysler	**15**
MF-101	Gasoline	31 Chrysler	**15**
MF-101	Gasoline	Industrial 30 Chrysler	**16**
MF-101	Gasoline	F226 Continental	**20**
MF-108	Diesel	VE4 Wisconsin	**4**
MF-108	Diesel	4.108 Perkins	**6**
MF-108	Diesel	VF4 Wisconsin	**11**
MF-108	Diesel	VH4D Wisconsin	**12**
MF-120	Gasoline	Z129 Continental	**7**
MF-120	Gasoline	Z120 Continental	**9**
MF-124	Gasoline	F124 Continental	**3**
MF-124	Gasoline	F4124 Continental	**3**
MF-124	Gasoline	F140 Continental	**10**
MF-124	Gasoline	F4140 Continental	**10**
MF-124	Gasoline	F162 Continental	**26**
MF-125	Diesel	3.135 Perkins	**37**
MF-129	Gasoline	Z129 Continental	**7**
MF-129	Gasoline	Z120 Continental	**9**
MF-130	Diesel	4.107 Perkins	**5**
MF-133	Flex-Fuel	FC Waukesha	**13**
MF-133	Diesel	IXB Hercules	**14**
MF-135	Gasoline	Z134 Continental	**8**
MF-135	Gasoline	Z145 Continental	**23**
MF-135	Diesel	3.135 Perkins	**37**
MF-135	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-135	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-135	Gasoline	AG3.152 Perkins	**40**
MF-135	Gasoline	G3.152 Perkins	**40**
MF-140	Gasoline	F124 Continental	**3**
MF-140	Gasoline	F4124 Continental	**3**
MF-140	Gasoline	F140 Continental	**10**
MF-140	Gasoline	F4140 Continental	**10**
MF-140	Gasoline	F162 Continental	**26**
MF-144	Diesel	P3.144 Perkins	**32**
MF-144	Diesel	P4 Perkins	**34**
MF-144	Diesel	P6 Perkins	**35**
MF-150	Gasoline	Z134 Continental	**8**
MF-150	Gasoline	Z145 Continental	**23**
MF-150	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-150	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-150	Gasoline	AG3.152 Perkins	**40**
MF-150	Gasoline	G3.152 Perkins	**40**
MF-152	Diesel	P6 Perkins	**35**
MF-162	Gasoline	F124 Continental	**3**
MF-162	Gasoline	F4124 Continental	**3**
MF-162	Gasoline	F140 Continental	**10**
MF-162	Gasoline	F4140 Continental	**10**
MF-162	Gasoline	F162 Continental	**26**
MF-165	Gasoline	G176 Continental	**36**
MF-165	Diesel	D4.203 Perkins (Direct Injection)	**42**
MF-165	Diesel	AD4.203 Perkins (Direct Injection)	**42**
MF-174	Diesel	4.236 Perkins	**59**
MF-174	Diesel	A4.236 Perkins	**59**
MF-175	Diesel	4.236 Perkins	**59**
MF-175	Diesel	A4.236 Perkins	**59**
MF-175	Gasoline	G4.236 Perkins	**60**
MF-175	Gasoline	AG4.236 Perkins	**60**
MF-180	Diesel	4.236 Perkins	**59**
MF-180	Diesel	A4.236 Perkins	**59**
MF-180	Gasoline	G4.236 Perkins	**60**
MF-180	Gasoline	AG4.236 Perkins	**60**
MF-184	Diesel	4.236 Perkins	**59**
MF-184	Diesel	A4.236 Perkins	**59**
MF-185	Diesel	A4.212 Perkins	**46**
MF-185	Gasoline	AG4.212 Perkins	**47**
MF-185	Diesel	4.248 Perkins	**69**
MF-185	Diesel	A4.248 Perkins	**69**
MF-192	Diesel	P4 Perkins	**34**
MF-192	Diesel	P6 Perkins	**35**
MF-200	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-200	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-202	Gasoline	Z134 Continental	**8**
MF-202	Gasoline	Z145 Continental	**23**
MF-203	Diesel	P6 Perkins	**35**
MF-203	Diesel	3.152 Perkins	**38**
MF-203	Diesel	A3.152 Perkins	**38**
MF-204	Gasoline	Z134 Continental	**8**
MF-205	Gasoline	H170 Chrysler	**24**
MF-205	Gasoline	HB170 Chrysler	**24**
MF-205	Gasoline	HC170 Chrysler	**24**
MF-205	Gasoline	H225 Chrysler	**25**
MF-205	Diesel	3.152 Perkins	**38**
MF-205	Diesel	A3.152 Perkins	**38**
MF-206	Gasoline	G206 Continental	**54**
MF-218	Gasoline	L-Head Dodge	**17**
MF-218	Gasoline	Industrial 7 Chrysler	**27**
MF-218	Gasoline	Industrial 8 Chrysler	**29**
MF-218	Gasoline	Industrial 32 Chrysler	**30**
MF-218	Gasoline	Industrial 33 Chrysler	**31**
MF-223	Gasoline	G206 Continental	**54**
MF-226	Gasoline	F06226 Continental	**21**
MF-226	Gasoline	F6244 Continental	**28**
MF-226	Diesel	OOC Hercules	**70**
MF-227	Gasoline	F6244 Continental	**28**
MF-230	Gasoline	Z134 Continental	**8**
MF-230	Gasoline	Z145 Continental	**23**
MF-230	Gasoline	Industrial 7 Chrysler	**27**
MF-230	Gasoline	Industrial 8 Chrysler	**29**
MF-230	Gasoline	Industrial 32 Chrysler	**30**
MF-230	Gasoline	Industrial 33 Chrysler	**31**
MF-230	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-230	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-231	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-231	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-235	Gasoline	Z134 Continental	**8**
MF-235	Gasoline	Z145 Continental	**23**
MF-235	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-235	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-235 V.Yard	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-235 V.Yard	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-237	Gasoline	Industrial 7 Chrysler	**27**
MF-237	Gasoline	Industrial 8 Chrysler	**29**
MF-240	Diesel	3.152 Perkins	**38**
MF-240	Diesel	A3.152 Perkins	**38**
MF-241	Gasoline	Industrial 7 Chrysler	**27**
MF-241	Gasoline	Industrial 8 Chrysler	**29**
MF-243	Diesel	3.152 Perkins	**38**
MF-243	Diesel	A3.152 Perkins	**38**
MF-244	Gasoline	F6244 Continental	**28**
MF-245	Gasoline	Z134 Continental	**8**
MF-245	Gasoline	Z145 Continental	**23**
MF-245	Gasoline	Industrial 7 Chrysler	**27**
MF-245	Gasoline	Industrial 8 Chrysler	**29**
MF-245	Gasoline	Industrial 32 Chrysler	**30**
MF-245	Gasoline	Industrial 33 Chrysler	**31**
MF-245	Diesel	D3.152 Perkins (Direct Injection)	**39**
MF-245	Diesel	AD3.152 Perkins (Direct Injection)	**39**
MF-250	Diesel	3.152 Perkins	**38**
MF-250	Diesel	A3.152 Perkins	**38**

MODEL AND ENGINE INDEX

Model	Fuel		Line No.
MF-251	Gasoline	Industrial 7 Chrysler	27
MF-251	Gasoline	Industrial 8 Chrysler	29
MF-251	Gasoline	Industrial 32 Chrysler	30
MF-251	Gasoline	Industrial 33 Chrysler	31
MF-251	Diesel	3.152 Perkins	38
MF-251	Diesel	A3.152 Perkins	38
MF-255	Diesel	D4.203 Perkins (Direct Injection)	42
MF-255	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-255	Diesel	4.236 Perkins	59
MF-255	Diesel	A4.236 Perkins	59
MF-255	Gasoline	G4.236 Perkins	60
MF-255	Gasoline	AG4.236 Perkins	60
MF-260	Gasoline	J382 Continental	83
MF-260	Gasoline	J382A Continental	83
MF-260	Diesel	JD382 Continental	84
MF-265	Gasoline	Industrial 7 Chrysler	27
MF-265	Gasoline	Industrial 8 Chrysler	29
MF-265	Gasoline	Industrial 32 Chrysler	30
MF-265	Gasoline	Industrial 33 Chrysler	31
MF-265	Gasoline	G4.236 Perkins	60
MF-265	Gasoline	AG4.236 Perkins	60
MF-275	Diesel	4.248 Perkins	69
MF-275	Diesel	A4.248 Perkins	69
MF-277	Gasoline	J382 Continental	83
MF-277	Gasoline	J382A Continental	83
MF-277	Diesel	JD382 Continental	84
MF-282	Diesel	4.248 Perkins	69
MF-282	Diesel	A4.248 Perkins	69
MF-282	Diesel	OOC Hercules	70
MF-283	Diesel	4.248 Perkins	69
MF-283	Diesel	A4.248 Perkins	69
MF-285	Diesel	4.318 Perkins	81
MF-288	Diesel	P6 Perkins	35
MF-290	Gasoline	M290 Continental	53
MF-290	Diesel	4.248 Perkins	69
MF-290	Diesel	A4.248 Perkins	69
MF-290	Gasoline	M330 Continental	73
MF-290	Gasoline	M6330 Continental	74
MF-290	Gasoline	J382 Continental	83
MF-290	Gasoline	J382A Continental	83
MF-300	Gasoline	H170 Chrysler	24
MF-300	Gasoline	HB170 Chrysler	24
MF-300	Gasoline	HC170 Chrysler	24
MF-300	Gasoline	H225 Chrysler	25
MF-300	Diesel	4.192 Perkins	33
MF-300	Diesel	4.203 Perkins	41
MF-300	Diesel	A4.203 Perkins	41
MF-300	Diesel	D4.203 Perkins (Direct Injection)	42
MF-300	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-300	Diesel	4.248 Perkins	69
MF-300	Diesel	A4.248 Perkins	69
MF-301	Diesel	4.300 Perkins	80
MF-301	Diesel	4.318 Perkins	81
MF-301	Diesel	A4.318 Perkins	82
MF-302	Diesel	D4.203 Perkins (Direct Injection)	42
MF-302	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-302	Gasoline	G193 Continental	51
MF-302	Gasoline	GF193 Continental	51
MF-304	Diesel	D4.203 Perkins (Direct Injection)	42
MF-304	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-304	Gasoline	G193 Continental	51
MF-304	Gasoline	GF193 Continental	51
MF-305	Diesel	4.192 Perkins	33
MF-305	Diesel	P6 Perkins	35
MF-305	Diesel	4.203 Perkins	41
MF-305	Diesel	A4.203 Perkins	41
MF-318	Diesel	4.300 Perkins	80
MF-318	Diesel	4.318 Perkins	81
MF-318	Diesel	A4.318 Perkins	82
MF-328	Diesel	JD382 Continental	84
MF-330	Gasoline	M290 Continental	53
MF-330	Gasoline	M330 Continental	73
MF-330	Gasoline	M6330 Continental	74
MF-330	Gasoline	J382 Continental	83
MF-330	Gasoline	J382A Continental	83
MF-333	Gasoline	E201 Continental	45
MF-333	Gasoline	E208 Continental	48
MF-333	Gasoline	E400 Continental	50
MF-333	Diesel	ED208 Continental	49
MF-333	Gasoline/LPG	E223 Continental	55
MF-333	Gasoline/LPG	EB223 Continental	56
MF-333	Gasoline/LPG	E242 Continental	57
MF-333	Gasoline/LPG	EB242 Continental	58
MF-339	Diesel	JXLD Hercules	75
MF-356	Diesel	4.203 Perkins	41
MF-356	Diesel	A4.203 Perkins	41
MF-356	Diesel	D4.203 Perkins (Direct Injection)	42
MF-356	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-360	Diesel	3.152 Perkins	38
MF-360	Diesel	A3.152 Perkins	38
MF-382	Gasoline	M290 Continental	53
MF-382	Gasoline	J382 Continental	83
MF-382	Gasoline	J382A Continental	83
MF-383	Diesel	4.248 Perkins	69
MF-383	Diesel	A4.248 Perkins	69
MF-390	Diesel	4.248 Perkins	69
MF-390	Diesel	A4.248 Perkins	69
MF-399	Diesel	6.354 Perkins	64
MF-399	Diesel	A6.354 Perkins	64
MF-399	Diesel	T6.354.4 Perkins (Turbo)	68
MF-400	Diesel	6.354 Perkins	64
MF-400	Diesel	A6.354 Perkins	64
MF-444	Gasoline	H277 Continental	71
MF-444D	Diesel	HD277 Continental	72
MF-450S	Diesel	6.354 Perkins	64
MF-450S	Diesel	A6.354 Perkins	64
MF-470	Diesel	4.248 Perkins	69
MF-470	Diesel	A4.248 Perkins	69
MF-500	Diesel	6.354.2 Perkins	65
MF-500	Diesel	A6.354.2 Perkins	65

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Model	Line No.
3.135 Perkins Diesel	37
3.152 Perkins Diesel	38
30 Chrysler Gasoline	15
31 Chrysler Gasoline	15
3150 Caterpillar Diesel	85
3160 Caterpillar Diesel	86
3208 Caterpillar Diesel	87
3-71 Detroit Diesel	76
4.107 Perkins Diesel	5
4.108 Perkins Diesel	6
4.192 Perkins Diesel	33
4.203 Perkins Diesel	41
4.236 Perkins Diesel	59
4.248 Perkins Diesel	69
4.300 Perkins Diesel	80
4.318 Perkins Diesel	81
5 Chrysler Gasoline	15
504 Minneapolis Moline LPG	88
5A Chrysler Gasoline	15
6 Chrysler Gasoline	15
6.305 Perkins Diesel	43
6.354 Perkins Diesel	64
6.354.2 Perkins Diesel	65
6.354.4 Perkins Diesel	66
6A Chrysler Gasoline	15
6V-53 Detroit Diesel	63
8V-71 Detroit Diesel	77
A3.152 Perkins Diesel	38
A4.203 Perkins Diesel	41
A4.212 Perkins Diesel	46
A4.236 Perkins Diesel	59
A4.318 Perkins Diesel	82
A6.345 Perkins Diesel	64
A6.354.2 Perkins Diesel	65
AD3.152 Perkins Diesel	39
AD4.203 Perkins Diesel	42
AD6.305 Perkins Diesel	44
AG3.152 Perkins Gasoline	40
AG4.212 Perkins Gasoline	47
AG4.236 Perkins Gasoline	60
D3.152 Perkins Diesel	39
D4.203 Perkins Diesel	42
E201 Continental Gasoline	45
E208 Continental Gasoline	48
E223 Continental Gasoline/LPG	55
E242 Continental Gasoline/LPG	57
E400 Continental Gasoline	50
EB223 Continental Gasoline/LPG	55

MODEL AND ENGINE INDEX

Model	Fuel		Line No.
MF-510	Diesel	6.354 Perkins	64
MF-510	Diesel	A6.354 Perkins	64
MF-510	Diesel	T6.354 Perkins (Turbo)	67
MF-510 SP	Diesel	T6.354 Perkins (Turbo)	67
MF-520	Diesel	6.354.2 Perkins	65
MF-520	Diesel	A6.354.2 Perkins	65
MF-540	Diesel	V8.540 Perkins	79
MF-540	Diesel	4.318 Perkins	81
MF-550	Diesel	D3.152 Perkins (Direct Injection)	39
MF-550	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-550	Diesel	6.354 Perkins	64
MF-550	Diesel	A6.354 Perkins	64
MF-690	Diesel	4.248 Perkins	69
MF-690	Diesel	A4.248 Perkins	69
MF-699	Diesel	6.354 Perkins	64
MF-699	Diesel	A6.354 Perkins	64
MF-699	Diesel	T6.354.4 Perkins (Turbo)	68
MF-750	Diesel	T6.354 Perkins (Turbo)	67
MF-750	Diesel	T6.354.4 Perkins (Turbo)	68
MF-760	Diesel	T6.354 Perkins (Turbo)	67
MF-775	Gasoline	H170 Chrysler	24
MF-775	Gasoline	HB170 Chrysler	24
MF-775	Gasoline	HC170 Chrysler	24
MF-775	Gasoline	H225 Chrysler	25
MF-850	Diesel	6.354 Perkins	64
MF-850	Diesel	A6.354 Perkins	64
MF-850	Diesel	6.354.2 Perkins	65
MF-850	Diesel	A6.354.2 Perkis	65
MF-850	Diesel	T6.354.4 Perkins (Turbo)	68
MF-860	Diesel	A4.212 Perkins	46
MF-860	Gasoline	AG4.212 Perkins	47
MF-860	Diesel	4.248 Perkins	69
MF-860	Diesel	A4.248 Perkins	69
MF-1080	Diesel	4.318 Perkins	81
MF-1085	Diesel	4.318 Perkins	81
MF-1100	Diesel	6.354 Perkins	64
MF-1100	Diesel	A6.354 Perkins	64
MF-1105	Diesel	T6.354 Perkins (Turbo)	67
MF-1130	Diesel	3.152 Perkins	38
MF-1130	Diesel	A3.152 Perkins	38
MF-1130	Diesel	T6.354 Perkins (Turbo)	67
MF-1135	Diesel	T6.354 Perkins (Turbo)	67
MF-1150	Diesel	V8.510 Perkins	78
MF-1155	Diesel	V8.510 Perkins	78
MF-1250	Diesel	6.354.4 Perkins	66
MF-1500	Diesel	3150 Caterpillar	85
MF-1505	Diesel	3208 Caterpillar	87
MF-1800	Diesel	3160 Caterpillar	86
MF-1805	Diesel	3208 Caterpillar	87
MF-2135	Gasoline	Z134 Continental	8
MF-2135	Gasoline	Z145 Continental	23
MF-2135	Diesel	D3.152 Perkins (Direct Injection)	39
MF-2135	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-2200	Gasoline	Z134 Continental	8
MF-2200	Gasoline	Z145 Continental	23
MF-2244	Diesel	D3.152 Perkins (Direct Injection)	39
MF-2244	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-2500	Gasoline	Z145 Continental	23
MF-2500	Diesel	D3.152 Perkins (Direct Injection)	39
MF-2500	Diesel	AD3.152 Perkins (Direct Injection)	39
MF-2500	Gasoline	AG3.152 Perkins	40
MF-2500	Gasoline	G3.152 Perkins	40
MF-2640	Diesel	6.354 Perkins	64
MF-2640	Diesel	A6.354 Perkins	64
MF-2675	Diesel	6.354 Perkins	64
MF-2675	Diesel	A6.354 Perkins	64
MF-2675	Diesel	T6.354 Perkins (Turbo)	67
MF-2675	Diesel	T6.354.4 Perkins (Turbo)	68
MF-2705	Diesel	T6.354 Perkins (Turbo)	67
MF-2705	Diesel	T6.354.4 Perkins (Turbo)	68
MF-2810	Diesel	T6.354.4 Perkins (Turbo)	68
MF-3070	Diesel	T6.354 Perkins (Turbo)	67
MF-3090	Diesel	6.354.4 Perkins	66
MF-3090	Diesel	T6.354.4 Perkins (Turbo)	68
MF-3165	Gasoline	G176 Continental	36
MF-3165	Diesel	3.152 Perkins	38
MF-3165	Diesel	A3.152 Perkins	38
MF-3165	Diesel	4.203 Perkins	41
MF-3165	Diesel	A4.203 Perkins	41
MF-3165	Diesel	D4.203 Perkins (Direct Injection)	42
MF-3165	Diesel	AD4.203 Perkins (Direct Injection)	42
MF-3505	Diesel	T6.354.4 Perkins (Turbo)	68
MF-3525	Diesel	T6.354.4 Perkins (Turbo)	68
MF-3630	Diesel	T6.354 Perkins (Turbo)	67
MF-3630	Diesel	T6.354.4 Perkins (Turbo)	68
MF-3650	Diesel	T6.354.4 Perkins (Turbo)	68
MF-4225	Diesel	4.248 Perkins	69
MF-4225	Diesel	A4.248 Perkins	69
MF-4840	Diesel	V903 Cummins	90
MF-4840	Diesel	VT903 Cummins (Turbo)	90
MF-4880	Diesel	V903 Cummins	90
MF-4880	Diesel	VT903 Cummins (Turbo)	90
MF-4900	Diesel	V903 Cummins	90
MF-4900	Diesel	VT903 Cummins (Turbo)	90
MF-6500	Diesel	4.248 Perkins	69
MF-6500	Diesel	A4.248 Perkins	69
MF-TE20	Gasoline	Z120 Continental	9
MF-T020	Gasoline	Z120 Continental	9
MF-T030	Gasoline	Z129 Continental	7
MF-T030	Gasoline	Z120 Continental	9
MF-T035	Gasoline	Z134 Continental	8
MF-T040	Gasoline	Z134 Continental	8
MH-44D	Diesel	HD277 Continental	72
MH-44K	Gasoline	H260 Continental	61
MH-44LP	Gasoline	H260 Continental	61
MH-44RT	Gasoline	H260 Continental	61
MH-44 Spec.	Gasoline	H260 Continental	61
MH-44 Spec.	Gasoline	H277 Continental	71

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Model	Line No.
EB343 Continental Gasoline/LPG	58
ED208 Continental Diesel	49
F06226 Continental Gasoline	21
F124 Continental Gasoline	3
F140 Continental Gasoline	10
F162 Continental Gasoline	26
F226 Continental Gasoline	20
F227 Continental Gasoline	22
F4124 Continental Gasoline	3
F4140 Continental Gasoline	10
F6244 Continental Gasoline	28
FC Waukesha Diesel	13
G176 Continental Gasoline	36
G193 Continental Gasoline	51
G206 Continental Gasoline	54
G3.152 Perkins Gasoline	40
G4.236 Perkins Gasoline	60
GF193 Continental Gasoline	51
H170 Chrysler Gasoline	24
H225 Chrysler Gasoline	25
H260 Continental Gasoline	61
H277 Continental Gasoline	71
HB170 Chrysler Gasoline	24
HC170 Chrysler Gasoline	24
HD260 Continental Diesel	62
HD277 Continental Diesel	72
HD504A Minneapolis Moline Diesel	88
Industrial 30 Chrysler Gasoline	16
Industrial 32 Chrysler Gasoline	30
Industrial 33 Chrysler Gasoline	31
Industrial 7 Chrysler Gasoline	27
Industrial 8 Chrysler Gasoline	29
IXB Hercules Diesel	14
J382 Continental Gasoline	83
J382A Continental Gasoline	83
JD382 Continental Diesel	84
JXC Hercules Diesel	52
JXLD Hercules Diesel	75
L-Head Dodge Gasoline	17
M290 Continental Gasoline	53
M330 Continental Gasoline	73
M6330 Continental Gasoline	74
N62 Continental Gasoline	1
OOC Hercules Diesel	70

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Model	Line No.	Model	Line No.	Model	Line No.	Model	Line No.
P3.144 Perkins Diesel	32	T6.354 Perkins Diesel	67	THD Wisconsin Diesel	19	V903 Cummins Diesel	90
P4 Perkins Diesel	34	T6.354.4 Perkins Diesel	68	V8.510 Perkins Diesel	78	VE4 Wisconsin Diesel	4
P6 Perkins Diesel	35	TFD Wisconsin Diesel	18	V8.540 Perkins Diesel	79	VF4 Wisconsin Diesel	11

NOTES

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
1			**62 CID (1.0L) N62 CONTINENTAL GASOLINE ENGINE; MF-62**								
	2.375"	4				**S4782**(1) (1500720M91) (Cont. N62T142)	2-3/32"	1-3/16"	**223-3505** (1500022M1) (Cont. N62G201)	**Full Set FS1850 ▲** **Head Set HS1850** **Head Gskt 1850** **Pan Set OS20657** **Front Seal 47065** **Rear Seal 49910** ▲ Set Does Not Include Front and Rear Seals.	
						S5782(2) (840386M92) (Cont. N62T227)	2-3/32"	1-3/16"			

Notes:
1. Chrome Cast Iron Compression Ring
2. Cast Iron Compression Rings

ENGINE INDEX

Model	Line No.	Model	Line No.	Model	Line No.	Model	Line No.
VH4D Wisconsin Diesel	12	Z120 Continental Gasoline	9	Z145 Continental Gasoline	23		
VT903 Cummins Diesel	90	Z129 Continental Gasoline	7				
Y91 Continental Gasoline	2	Z134 Continental Gasoline	8				

NOTES

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
1	Exh.		**217-3678** (761648M1) (Cont. N62I200)	**212-1034** (1500064M1) (Cont. N62I201)	**216-5147** (840753M91) (Cont. Y400I205)	To Engine S/N 42049			
						R.B.	**CB-345P**	10-20-30	1.4990/1.5000
						From Engine S/N 42050			
						R.B.	**CB-524P**	10-20-30	1.4990/1.5000
	Exh.	**211-1095*** (Cont. Y400I322)							
	Int.		**217-3678** (761648M1) (Cont. N62I200)	**212-1034** (1500064M1) (Cont. N62I201)	**216-5147** (840753M91) (Cont. Y400I205)				
	Exh.	**218-7323**	Valve Seat						
	Int.	**218-7323**	Valve Seat						

* Roto Valve Only

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
2			**91 CID (1.5L) Y91 CONTINENTAL GASOLINE ENGINE: MF-91**								
	2.875"	4							**223-3503** (Cont. Y400G234)	**Head Set HS1596** **Head Gskt 1596** **Pan Set OS20496X** **Valve Cvr VS38005** **Manif Set MS18610** **Front Cvr T28602** **Front Seal 46423** (2.000" Shaft) **Front Seal 48756** (1.781" Shaft) **Rear Seal JV663** (All Except Clark Mule) **Rear Seal 49293** (Clark Mule) **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Drive Seal 49113** **Dist Wash 2014A**	

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
2	Exh.	**211-1095*** (Cont. Y400I1210)	**217-3619** (Cont. Y400I209)	**212-1025*** (840754M91) (Cont. Y400I1215)	**216-5147*** (840753M91) (Cont. Y400I205)		For Use on Positions 1-3		
						R.B	**CB-278P**	10-20-30	1.4990/1.5000
							For Use on Positions 2-4		
	Exh.	**211-2075 ▲** (Cont. Z120I236)		**212-1034** (1500064M1) (Cont. N62I201)	**216-5234** (841376M91) (Cont. Z120I1235)	**R.B.**	**CB-279P**	10-20-30	1.4990/1.5000
						M.S.	**MS-806P**	10	
						1	MB-2366P		1.7475/1.7485
						2	MB-1651P		1.7475/1.7485
						3	MB-1652P		1.7475/1.7485
						Note: Includes Straight Shell Front Bearing. Use TW-143S Thrust Washer Set.			
	Int.	**211-1072*** (Cont. Y400I301)	**217-3619** (Cont. Y400I209)	**212-1025*** (840754M91) (Cont. Y400I215)		**T.W.1**	**TW-143S**		1.7812
						Note: 1 Set Required - Order Separately. For Use with MS-806P			
	Int.			**212-1034** (1500064M1) (Cont. N62I201)	**216-5234** (841376M91) (Cont. Z120I1235)	**C.S.**	**SH-191S**		
	Exh.	**218-7349**	Valve Seat						
	Int.	**218-7389**	Valve Seat						

* Drilled Stem
▲ Late Style Valve Locks with Roto Cap

OIL PUMP

601-1107 Oil Pump

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
3			**124 CID (2.0L) F124, F4124 CONTINENTAL GASOLINE ENGINES; MF-124, MF-140, MF-162**							
	3.000"	4	**226-8050**(1,2)			**S4583**(2,3) (Cont. F124T120)	3-1/8"	1-1/4"	**223-3429**(4) (Cont. R800G204) **223-3349**(5) (840708M91) (Cont. F400G211)	**Full Set FS1634GH** ▲ **Full Set FS1634A** ■ **Head Set HS1634X** **Head Gskt 1634** **Oil Pan OS20509** **Valve Cvr VS38032** Use with 2 Gear Cams (Not in Head or Full Sets) **Valve Cvr VS38083** With 3 Gear Cams (In Head and Full Sets) **Mani Gskt MS15028** **Front Cvr JV1027** ▲ **Front Cvr JV889** ■ **Rear Seal JV663** (Rope) **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Drive Seal 49297** **Fan Pulley 48756** ▲ Not For Use With F4124 Continental Engines ■ Not For Use With F124 Continental Engines
			Notes: 1. .094" Thickness Cylinder Sleeve Wall 2. Not To Be Used on F4124 Engines. 3. Chrome Cast Iron Compression Ring 4. 1.066" Pin Outside Diameter, Requires Boring 5. .919" Pin Outside Diameter, Requires Light Reaming							
4			**92 CID (1.5L) VE4 WISCONSIN DIESEL ENGINE; MF-92, MF-108**							
	3.000"	4								**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785** **Manif Set MS17577** **Front Seal 47163**
5			**107 CID (1.8L) 4.107 PERKINS DIESEL ENGINE; MF-25, MF-130**							
	79mm 3.125"	4				**S41121**(1) (Perk. 82154)	1-5/64" 2-1/16"	2-3/16"		**Head Set HS4806** **Lower Set CS4806** ■ **Pan Set OS21587** ■ Does Not Include Front and Rear Seals.
			Notes: 1. Chrome Cast Iron Compression Ring							

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				BEARINGS			
3	Exh.	**211-1589**◗ (Cont. F400I238)	**217-3620** (840211M91) (Cont. F400I230)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147**● (830753M91) (Cont. Y400I205)		For Use on Positions 1-3		
						R.B.	**CB-79P**	10-20-30-40-60	1.9365/1.9375
							For Use on Positions 2-4		
	Exh.	**211-1053**▲ (Cont. F600I238)			**216-5234** (841370M91) (Cont. Z120I1235)	**R.B.**	**CB-78P**	10-20-30-40-60	1.9365/1.9375
						M.S.	**MS-176P**	10-20	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
	Int.	**211-1588** (Cont. F400I229)	**217-3620** (840211M91) (Cont. F400I230)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147**● (830853M91) (Cont. Y400I205)	**2**	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
						Note: Includes Straight Shell Front Bearings and Two Thrust Washers.			
	Int.				**216-5234** (841370M91) (Cont. Z120I1235)	**T.W.1**	**TW-424S**		2.2812
						Note: Set Includes One Piece, Two Sets Required			
						C.S.	**SH-56S**		
	Exh.	**218-7439**	Valve Seat (Use 1.328 Diameter Valve)						
	Exh.	**218-7405** (Cont. F140A216)	Valve Seat						
	Int.	**218-7545**	Valve Seat						
	◗ Stellite Face ● F4124 Continental Engines Only ▲ F124 Continental Engines Only								
4									
5						**R.B.**	**CB-652AL**	10-20-30	1.9995/2.0000
						M.S.	**MS-1037AL**	10-20	
						1-2-3	MB-2573AL		2.2480/2.2485
						T.W.3	**TW-115S**		2.5900/2.6000
						Note: 1 Set Required, Order Separately			

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets Head Sets Oil Pan Sets
6			**108 CID (1.8L) 4.108 PERKINS DIESEL ENGINE; MF-108**							
	79mm 3.125"	4								**Head Set HS4806W** **Lower Set CS4806** ■ **Pan Set OS21587** ■ Does Not Include Front and Rear Seals.
7			**129 CID (2.1L) Z129 CONTINENTAL GASOLINE ENGINE; MF-T030, MF-35, MF-120, MF-129**							
	3.125"	4	Standard 3.125" Bore			**S40970**(1)	3-1/8"	1-3/16"	**223-3429**(4) (Cont. R800G204) **223-3349**(5) (840708M91) (Cont. F400G211)	**Head Set HS1865** **Head Gskt 1865** **Pan Set OS20659** **Valve Cvr VS38090** **Manif Set MS18645** **Front Cvr T28714** (Gear Cover) **Front Cvr JV895** (Towmotor)
	3.375"	4	Power-Booster Kit-3.375" Bore **226-1313 226-4313 224-3194** (1752401M91)			**S4323**(1)	3-1/8"	1-3/16"		**Front Seal 47065** **Rear Seal 49910**
						S5323(2)	3-1/8"	1-3/16"		
						S80196(3)	3-3/32"	1-3/16"	**223-3621**	
						S40074(3)	1-3/32" 2-1/8"	1-1/4"		
						S40127(1)	3-3/32"	1-3/16"		

Notes:
1. Cast Iron Compression Rings, Stainless Steel Oil Rings
2. Cast Iron Compression Rings, Carbon Steel Oil Rings
3. Cast Iron Compression Rings
4. 1.066" Outside Diameter, Requires Boring
5. .919" Outside Diameter, Requires Light Reaming

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
6	Exh.	**211-3041** (Perk. 0910061)				**R.B.**	**CB-652AL**	10-20-30	1.9995/2.0000
						M.S.	**MS-1037AL**	10-20	
						1-2-3	MB-2573AL		2.2480/2.2485
	Int.	**211-3040** (Perk. 0910060)	**217-3449** (Perk. 3313E001)			**T.W.3**	**TW-115S**		2.5900/2.6000
						Note: 1 Set Required, Order Separately			
		CRANKSHAFT							
		247-5122 (Perk. ZZ90160(R))	Crankshaft - Keyed Nose (Rope Seal)						
7	Exh.	**211-1313** ▲ (Cont. Z129T108)	**217-3717** (1750056M1) (Cont. Z129I204)	**212-1025** ▲ (841374M91) (Cont. Y400I215)	**216-5234** (841370M91) (Cont. Z120I1235)	**R.B.**	**CB-362P**	2-10-20-30-40-60	1.9365/1.9375
						M.S.	**MS-260P**	10-20-30	
						1	MB-1403W		2.2812
						1	MB-1636P		2.2490/2.2500
						2	MB-1637P		2.2490/2.2500
						3	MB-1370P		2.2490/2.2500
	Exh.	**211-2199** ● (1027653M1) (Cont. Z145I301)				**T.W.1**	**TW-424S**		2.2812
						Note: Set Includes One Piece, Two Sets Required			
	Exh.	**211-1441** * (Cont. Z129I208)				**C.S.**	**SH-683S**		
	Int.	**211-1206** ▲ (Cont. Z129I205)	**217-3717** (1750056M1) (Cont. Z129I204)	**212-1025** ▲ (840754M91) (Cont. Y400I215)	**216-5147** (840753M91) (Cont. Y400I205)				
	Exh.	**218-7369**	Valve Seat						
	Int.	**218-7411**	Valve Seat						

▲ Without Roto Valve
● Stellite
* With Roto Valve

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
8			**134 CID (2.2L) Z134 CONTINENTAL GASOLINE ENGINE; MF-T035, MF-T040, MF-35, MF-50, MF-55, MF-60, MF-135, MF-150, MF-202, MF-204, MF-230, MF-235, MF-245, MF-2135, MF-2200**							
	3.125"	4	Standard 3.125" Bore			**S4230**(1) (836097M91)	3-1/8"	1-3/16"	**223-3429**(4) (Cont. R800G204) **223-3349**(5) (840708M91) (Cont. F400G211)	**Full Set FS3097** **Head Set HS3097** **Head Gskt 3097** **Oil Pan OS20659** **Valve Cvr VS38090** **Manif Set MS18645** **Front Cvr T28984** **Front Seal 47065** **Rear Seal 49910** **Fan Seal 48779** **Valve Wash 2014A**
	3.375"	4	Power-Booster Kit-3.375" Bore **226-1313 226-4313 224-3194** (1752401M91)			**S4323**(1)	3-1/8"	1-3/16"		
						S5323(2)	3-1/8"	1-3/16"		
						S80196(3)	3-3/32"	1-3/16"	**223-3621**	
						S40074(3)	1-3/32" 2-1/8"	1-1/4"		
						S40127(1)	3-3/32"	1-3/16"		

Notes:
1. Cast Iron Compression Rings, Stainless Steel Oil Rings
2. Cast Iron Compression Rings, Carbon Steel Oil Rings
3. Cast Iron Compression Rings
4. 1.066" Outside Diameter, Requires Boring
5. .919" Outside Diameter, Requires Light Reaming

	VALVE TRAIN PARTS					BEARINGS			
Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
8	Exh.	**211-1313** ▲ (Cont. Z129T108)	**217-3717** (1750056M1) (Cont. Z129I204)	**212-1025** ▲ (840754M91) (Cont. Y400I215)	**216-5234** ▲ (841370M91) (Cont. Z120I1235)	**R.B.**	**CB-362P**	2-10-20-30-40-60	1.9365/1.9375
	Exh.	**211-2199** ● (1027653M1) (Cont. Z145I301)				**M.S.**	**MS-202P**	10-20-30	
	Exh.	**211-1441** * (Cont. Z129T108)				**1**	MB-1636P		2.2490/2.2500
						2	MB-1768P (F)		2.2490/2.2500
	Int.	**211-1206** ▲ (Cont. Z129I205)	**217-3717** (1750056M1) (Cont. Z129I204)	**212-1025** ▲ (840754M91) (Cont. Y400I215)	**216-5147** ▲ (840874M91) (Cont. Y400I205)	**3**	MB-1370P		2.2490/2.2500
	Exh.	**218-7639**	Valve Seat			**C.S.**	**SH-683S**		
	Int.	**218-7411**	Valve Seat						

▲ Except Roto Valve
● Stellite
* With Roto Valve

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
9			**120 CID (2.0L) Z120 CONTINENTAL GASOLINE ENGINE; MF-120, MF-129, MF-TE20, MF-T020, MF-T030**								
	3.188"	4	Standard 3.188" Bore							**Head Set HS1865** **Head Gskt 1865** **Oil Pan OS20659** **Valve Cvr VS38090** **Manif Set MS18645** **Front Cvr T28714** **Front Seal 47065** **Rear Seal 49910**	
				224-1611	**S41735**(1)	3-1/8"	1-1/4"				
					S51818(2) (840493M91) (Cont. Z120T103)	3-1/8"	1-3/16"				
					S4799(1) (840488M91) (Cont. Z120T147)	3-1/8"	1-3/16"				
	3.250"	4	Power-Booster Kit 3.250" Bore								
				224-2751(3)	**S40075**(1)	2-3/32"	2-5/32"		**223-3429**(4) (Cont. R800G204) **223-3349**(5) (840708M91) (Cont. F400G211) **223-3621**		

Notes:
1. Chrome Cast Iron Compression Rings
2. Cast Iron Compression Rings
3. Also Available in .030" and .040" Oversize
4. 1.066" Outside Diameter, Requires Boring
5. .919" Outside Diameter, Requires Light Reaming

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
9	Exh.	**211-1141***	**217-3717** (830490M91)	**212-1025 *** (840754M91)	**216-5147 ***	**R.B.**	**CB-362P**	10-20-30-40-60	1.9365/1.9375
		(Cont. Z120I203)	(Cont. Z129I204)	(Cont. Y400I215)		**M.S.**	**MS-260P**	10-20-30	
	Exh.	**211-2075 ▲**				**1**	MB-1403W		2.2812
						1	MB-1636P		2.2490/2.2500
	Int.	**211-1141 ***	**217-3717** (830490M91)	**212-1025 *** (840754M91)	**216-5147 ***	**2**	MB-1637P		2.2490/2.2500
						3	MB-1370P		2.2490/2.2500
		(Cont. Z120I203)	(Cont. Z129I204)	(Cont. Y400I205)		**Note:** Includes Straight Shell Front Bearings and Two Thrust Washers.			
						T.W.1	**TW-424S**		2.2812
	Exh.	**218-7349**	Valve Seat			**Note:** Set includes One Piece, Two Sets Required.			
						C.S.	**SH-683S**		
	Int.	**218-7349**	Valve Seat						

* Engines without Rotocap Assembly
▲ Engines with Rotocap Assembly

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
10			**140 CID (2.3L) F140, F4140 CONTINENTAL GASOLINE ENGINES; MF-124, MF-140, MF-162**							
	3.188"	4	**226-8003**(1)	**224-1611**		**S41735**(3)	3-1/8"	1-1/4"	**223-3349**(7) (840708M91) (Cont. Z400G211)	**Full Set FS1634A** ■ **Full Set FS1634GH** ▲ **Head Set HS1634X** **Head Gskt 1634** **Pan Set OS20509** **Valve Cvr VS38032** With 2 Gear Cams (Not in Head and Full Sets) **Valve Cvr VS38083** With 3 Gear Cams (In Head and Full Sets) **Manif Set MS15028** **Front Cvr JV1027** **Front Seal JV895** **Rear Seal JV663** (Rope) **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Drive Seal 49297** **Fan Seal 48756** ■ Front Cover Set Not Included ▲ Gear Cover Gaskets Included for Multiple Engines
			226-8052(2)			**S51818**(4) (840493M91) (Cont. Z120T103)	3-1/8"	1-3/16"		
						S4799(3) (Cont. Z140T136)	3-1/8"	1-3/16"	**223-3429**(8) (Cont. R800G204)	
						S40075(5)	2-3/32"	2-5/32"		
						S40126(6)	2-3/32"	2-5/32"		
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Rings 4. Cast Iron Compression Rings 5. Chrome Cast Iron Compression Rings, Carbon Steel Oil Ring 6. Chrome Cast Iron Compression Rings, Stainless Steel Oil Ring 7. .919" Outside Diameter, Requires Light Reaming 8. 1.066" Outside Diameter, Requires Boring							
11			**108 CID (1.8L) VF4 WISCONSIN DIESEL ENGINE; MF-54, MF-92, MF-108**							
	3.250"	4	**226-8004**(1)	**224-2827**(5) (Wisc. DB2011)		**S4601**(3) (Wisc. DR31C)	3-3/32"	1-3/16"	**223-3471** (Wisc. HG157A)	**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785** **Manif Set MS17577** **Front Seal 47163**
			226-8053(2)			**S5601**(4)	3-3/32"	1-3/16"		
						S51439(4)	3-5/64"	1-3/16"		
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Rings 4. Cast Iron Compression Rings 5. Also Available in .020", .030", .040" and .060" Oversize.							

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				BEARINGS			
10	Exh.	**211-1589** ◗ ■ (Cont. F400I228)	**217-3620*** (840211M91) (Cont. F400I1213)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147** ● (830753M91) (Cont. Y400I205)		For Use on Positions 1-3		
						R.B.	**CB-79P**	10-20-30-40-60	1.9365/1.9375
	Exh.	**211-1053** ▲ (Cont. F600I352)			**216-5234** (841370M91) (Cont. Z120I1235)		For Use on Positions 2-4		
						R.B.	**CB-78P**	10-20-30-40-60	1.9365/1.9375
						M.S.	**MS-176P**	10-20	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
	Int.	**211-1588** (Cont. F400I229)	**217-3620*** (840211M91) (Cont. F400I1213)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147** ● (830753M91) (Cont. Y400I205)	**2**	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
						Note: Includes Straight Sheel Front Bearings and Two Thrust Washers.			
	Int.				**216-5234** (841370M91) (Cont. Z120I1235)	**T.W.1**	**TW-424S**		2.2812
						Note: Set Includes One Piece, Two Sets Required			
						C.S.	**SH-56S**		
	Exh.	**218-7439**	Valve Seat						
	Exh.	**218-7405** ◗ (Cont. F601A323)	Valve Seat						
	Int.	**218-7545**	Valve Seat						
		◗ Drilled Stem - 1.203" HD Diameter ▲ Stellite * Except Roto Valve ● Without Roto Caps With Drilled Stem ▲ Drilled Stem - 1.328" HD Diameter							
11	Exh.	**211-1187** (1001525M1) (Wisc. AE75B)	**217-3907** (Wisc. AD41)	**212-1032** (1001526M1) (Wisc. AF49A)	**216-5234** (1001528M1) (Wisc. AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Exh.	**211-1375** ■ (Wisc. AE75D)	**217-3458** ■						
	Int.	**211-1187** (1001525M1) (Wisc. AE75B)	**217-3907** (Wisc. AD41)	**212-1032** (1001526M1) (Wisc. AF49A)	**216-5234** (1001528M1) (Wisc. AH9)				
	Int.		**217-3458** ■						
	Exh.	**218-7417** (Wisc. HG201)	Valve Seat						
	Int.	**218-7417** (Wisc. HG201)	Valve Seat						
		■ .500" Outside Diameter							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
12			**108 CID (1.8L) VH4D WISCONSIN DIESEL ENGINE; MF-54, MF-92, MF-108**								
	3.250"	4		**226-8004**(1)	**224-2827**(5) (Wisc. DB2011)	**S4601**(3) (Wisc. DR31C)	3-3/32"	1-3/16"	**223-3471** (Wisc. HG157A)	**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785** **Manif Set MS17577** **Front Seal 47163**	
				226-8053(2)		**S5601**(4)	3-3/32"	1-3/16"			
						S51439(4)	3-5/64"	1-3/16"			
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Rings 4. Cast Iron Compression Rings 5. Also Available in .020", .030", .040" and .060" Oversize.								
13			**133 CID (2.2L) FC WAUKESHA FLEX FUEL ENGINE; MF-133**								
	3.250"	4		**226-8004**(1)		**S5023**(3)	2-1/8"	1-3/16"		**Head Gskt 1342G** **Pan Set OS30427**	
				226-8053(2)		**S41810**(4)	2-1/8"	1-3/16"			
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Cast Iron Compression Ring 4. Chrome Cast Iron Compression Ring								
14			**133 CID (2.2L) IXB HERCULES DIESEL ENGINE; MF-133**								
	3.250"	4		**226-8004**(1)							
				226-8053(2)							
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
12	Exh.	**211-1187** (1001525M1) (Wisc. AE75B)	**217-3907** (Wisc. AD41)	**212-1032** (1001526M1) (Wisc. AF49A)	**216-5234** (1001528M1) (Wisc. AH9)	**R.B.**	**CB-979M**	10-20	1.8750/1.8760
	Exh.	**211-1375** ■ (Wisc. AE75D)	**217-3458** ■						
	Int.	**211-1187** (1001525M1) (Wisc. AE75B)	**217-3907** (Wisc. AD41)	**212-1032** (1001526M1) (Wisc. AF49A)	**216-5234** (1001528M1) (Wisc. AH9)				
	Int.		**217-3458** ■						
	Exh.	**218-7417** (Wisc. HG201)	Valve Seat						
	Int.	**218-7417** (Wisc. HG201)	Valve Seat						
	■ .500" Outside Diameter								
13	Exh.		**217-3458**		**216-5123** (Wauk. B9792)				
	Int.		**217-3458**						
	Exh.	**218-7439**	Valve Seat						
	Int.	**218-7439**	Valve Seat						
14	Exh.		**217-3568** (Herc. 28214A)	**212-1124** (Herc. 27008A)					
	Exh.		**217-3697** ■						
	Int.		**217-3568** (Herc. 28214A)	**212-1124** (Herc. 27008A)					
	Exh.	**218-7411** ▲	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	■ .532" Outside Diameter ▲ Powdered Metal								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
15			**218 CID (3.6L) 5, 5A, 6, 6A, 30, 31 CHRYSLER GASOLINE ENGINES; MF-21, MF-26, MF-60, MF-70, MF-80, MF-101**							
	3.250"	6							**223-3349**(1) (840708M91) (Chry. 318893) **223-3429**(2)	**Full Set FS1059C** **Head Set HS1059C** **Head Gskt 1059C** **Pan Set OS30893** **P.Rod Cvr VS36054** **Manif Set MS18005** **Front Cvr JV826** (1954-1953) **Front Cvr JV757** (1952-1947) **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam)
			Notes: 1. .919" Outside Diameter, Requires Light Reaming 2. 1.066" Outside Diameter, Requires Boring							
16			**230 CID (3.8L) IND 30 CHRYSLER GASOLINE ENGINE; MF-21, MF-26, MF-60, MF-70, MF-80, MF-101**							
	3.250"	6	**226-8004**(1)			**439**(3) (Chry. 1653372)	12-3/32"	12-5/32"	**223-3349**(5) (840708M91) (Chry. 318893)	**Full Set FS1059C** **Head Set HS1059C** **Head Gskt 1059C** **Pan Set OS30893** **P.Rod Cvr VS36054** **Manif Set MS18005** **Front Cvr JV826** (1960-1954) **Front Cvr JV757** (1953-1947) **Front Cvr JV755** (1946-1942) **Rear Seal JV134-9** **Water Gskt C26690** **Water Pump K25845** **Exh. Pipe F5438AK**
			226-8062(2)			**539**(4) (Chry. 1241540)	12-3/32"	12-5/32"	**223-3429**(6)	
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Ring 4. Cast Iron Compression Rings 5. .919" Outside Diameter, Requires Light Reaming 6. 1.066" Outside Diameter, Requires Boring							
17			**230 CID (3.8L) L-HEAD DODGE GASOLINE ENGINE; MF-218, MF-230**							
	3.250"	6							**223-3349**(1) (840708M91) (Chry. 318893) **223-3429**(2)	
			Notes: 1. .919" Outside Diameter, Requires Light Reaming 2. 1.066" Outside Diameter, Requires Boring							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
15						**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P**	10-20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
						4	MB-122P (F)		2.4995/2.5005
						C.S	**SH-23S**		
16	Exh.	**211-1591** ▲ (1504541M1) (Chry. 954302)	**217-3337** (Chry. 1124959)	**212-1072** (Chry. 1679135)		**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P**	10-20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
	Int.	**211-1226** ▲ (1504541M1) (Chry. 1109911)	**217-3338**	**212-1072** (Chry. 1679135)	**216-5081** ▲ (Chry. 395931)	**4**	MB-122P (F)		2.4995/2.5005
						C.S.	**SH-23S**		
	▲ 2 Grooves								
	CAMSHAFT/TIMING COMPONENTS								
	9-401 Timing Chain (Thru Engine Serial No. 7259)								
	9-504 Timing Chain (From Engine Serial No. 200-001)								
17						**R.B.**	**CB-60G**	10-20-30-40-50-60	2.0615/2.0625
						M.S.	**MS-523P**	10-20-30	
						1	MB-2011P		2.4995/2.5005
						2-3	MB-2012P		2.4995/2.5005
						4	MB-122P (F)		2.4995/2.5005
						C.S.	**SH-23S**		

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
18			**54 CID (0.9L) TFD WISCONSIN DIESEL ENGINE; MF-54**								
	3.250"	2		**226-8004**(1)	**224-2827**(5) (Wisc. DB2011)	**S8932**(3)	3-3/32"	1-3/16"	**223-3471**	**Head Set HS1785X** **Head Gskt 1785** **Manif Set MS6306**	
				226-8053(2)		**S4835** (4)	3-3/32"	1-3/16"			
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Cast Iron Compression Rings 4. Chrome Cast Iron Compression Rings 5. Available in .020", .030", .040" and .060" Oversize.								
19			**54 CID (0.9L) THD WISCONSIN DIESEL ENGINE; MF-54**								
	3.250"	2		**226-8004**(1)		**S8932**(3)	3-3/32"	1-3/16"	**223-3471**	**Head Set HS1785X** **Head Gskt 1785** **Manif Set MS6306**	
				226-8053(2)		**S4835**(4)	3-3/32"	1-3/16"			
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Cast Iron Compression Rings 4. Chrome Cast Iron Compression Rings								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
18	Exh.	**211-1375**	**217-3458**	**212-1032** (1001526M1)	**216-5234** (841370M91)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Int.	**211-1187** (1001525M1)	**217-3458**	**212-1032** (1001526M1)	**216-5234** (841370M91)				
	Exh.	**218-7417**	Valve Seat						
	Int.	**218-7417**	Valve Seat						
19	Exh.	**211-1375**	**217-3458**	**212-1032** (1001526M1)	**216-5234** (841370M91)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Int.	**211-1187** (1001525M1)	**217-3458**	**212-1032** (1001526M1)	**216-5234** (841370M91)				
	Exh.	**218-7417**	Valve Seat						
	Int.	**218-7417**	Valve Seat						

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
20			**226 CID (3.7L) F226 CONTINENTAL GASOLINE ENGINE; MF-44, MF-101**								
	3.313"	6		**226-8005**(1)	**224-2831**(3) (Cont. F226A406)	**S4794**(4) (Cont. F6226T134)	2-3/32"	2-5/32"		**Full Set FS986A** ■ **Full Set FS986GK** **Head Set HS986K** **Head Gskt 986S** **Pan Set OS20928** **Manif Set MS18651S** **Front Cvr JV951** **Rear Seal JV648** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Water Pump 47065** **Drive Seal 49297**	
				226-8054(2)		**S5794**(5)	2-3/32"	2-5/32"	**223-3429**(6) (Cont. R800G204) **223-3349**(7) (840708M91) (Cont. F400G211)	■ Timing Cover Set Not Included	
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Replace in Sets When Replacing 5 Ring Pistons, Also Available in .030", .040" and .060" Oversize 4. Chrome Cast Iron Compression Ring 5. Cast Iron Compression Rings 6. 1.066" Outside Diameter, Requires Boring 7. .919" Outside Diameter, Requires Light Reaming								
21			**226 CID (3.7L) FO6226 CONTINENTAL GASOLINE ENGINE; MF-226**								
	3.313"	6				**S4794**(1) (Cont. F6226T134)	2-3/32"	2-5/32"			
						S5794(2)	2-3/32"	2-5/32"			
			Notes: 1. Chrome Cast Iron Compression Ring 2. Cast Iron Compression Rings								

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
20	Exh.	**211-1073** ▲ (Cont. F900I248)	**217-3515** (Cont. F600I265)	**212-1021** (841162M91) (Cont. F600I232)	**216-5159*** (211180A) (Cont. 12S1207)		For Use on Positions 1-3-5		
						R.B.	**CB-465P**	10-20-30-40-60	2.6019/2.6027
						Note: Use CB-465P on All Six Positions if Rod Forging Ends in 402.			
	Exh.	**211-1053*** ◗ (Cont. G600I238)			**216-5118**●		For Use on Positions 2-4-6		
						R.B.	**CB-466P**	10-20-30-40-60	2.6019/2.6027
	Exh.				**216-5117** (840915M1) (Cont. G193I205)	**C.S.**	**SH-190S**		
	Int.	**211-1588*** (Cont. F400I228)	**217-3515** (Cont. F600I265)	**212-1021** (841162M91) (Cont. F600I232)	**216-5159*** (211180A) (Cont. 12S1207)				
	Int.	**211-1058** ▲ (Cont. F600I247)			**216-5118** ●				
	Int.				**216-5117** (840915M1) (Cont. G193I205)				
	Exh.	**218-7439**	Valve Seat						
	Int.	**218-7545**	Valve Seat						
		▲ Lock Groove .406" From End to Top of Lock Groove * Drilled Stem ◗ Without Rotocap Assembly ● Hardened							
		CAMSHAFT/TIMING COMPONENTS							
		9-489 (Cont. F600H316)	Timing Chain						
21									

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
22			**227 CID (3.7L) F227 CONTINENTAL GASOLINE ENGINE; MF-35, MF-40**								
	3.313"	6		**226-8005**(1)	**224-2831**(3) (Cont. F226A406)	**S4794**(4) (Cont. F6226T134)	2-3/32"	2-5/32"		**Head Set HS3193S** **Head Gskt 3193S** **Pan Set OS20928**	
				226-8052(2)		**S5794**(5)	2-3/32"	2-5/32"	**223-3429**(6) (Cont. R800G204)		
									223-3349(7) (840708M91) (Cont. F400G211)		
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Replace in Sets When Replacing 5 Ring Pistons, Also Available in .030", .040" and .060" Oversize 4. Chrome Cast Iron Compression Ring 5. Cast Iron Compression Rings 6. 1.066" Outside Diameter, Requires Boring 7. .919" Outside Diameter, Requires Light Reaming								
23			**145 CID (2.4L) Z145 CONTINENTAL GASOLINE ENGINE; MF-30B, MF-50, MF-60, MF-135, MF-150, MF-202, MF-204, MF-230, MF-235, MF-245, MF-2135, MF-2200, MF-2500**								
	3.375"	4	**226-1508** (835858M91)		**224-1838** (Cont. Z145A401)	**S4323**(1) (835844M91)	3-1/8"	1-3/16"		**Full Set FS3097** **Head Set HS3097** **Head Gskt 3097** **Pan Set OS20659** **Valve Cvr VS38090** **Manif Set MS18645** **Front Cvr T28884** (Timing Gear to Front End Plate) **Front Cvr T28928** (Pump Drive) **Front Cvr T28984** (Timing Cover) **Front Seal 47065** **Rear Seal 49910**	
									223-3621 (Cont. F400G211)		
			Notes: 1. Chrome Cast Iron Compression Rings								

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				BEARINGS			
22	Exh.	**211-2035** (Cont. F601I303)	**217-3620** (840211M91) (Cont. F400I230)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5118**●		For Use on Positions 1-3-5		
						R.B.	**CB-465P**	10-20-30-40-60	2.6019/2.6027
						Note: Use CB-465P on All Six Positions if Rod Forging Ends in 402.			
	Exh.				**216-5117** (840915M1) (Cont. G193I205)		For Use on Positions 2-4-6		
						R.B.	**CB-466P**	10-20-30-40-60	2.6019/2.6027
						M.S.	**MS-889P**	10-20-30	
						1	MB-1682P		2.3744/2.3752
	Int.	**211-2034** (Cont. F601I302)	**217-3620** (840211M91) (Cont. F400I230)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5118**●	**2-3**	MB-1225P		2.3744/2.3752
						4	MB-1686P (F)		2.3744/2.3752
						C.S.	**SH-190S**		
	Int.				**216-5117** (840915M1) (Cont. G193I205)				
	Exh.	**218-7405** (Cont. F601A323)	Valve Seat						
	Int.	**218-7535**	Valve Seat						
		● Hardened							
23	Exh.	**211-2199** (1027653M1) (Cont. Z145I301) (Stellite)	**217-3717** (830490M91) (Cont. Z129I204)	**212-1011** (21176A)	**216-5234** (841370M91) (Cont. Z120I1235)	**R.B.**	**CB-362P**	2-10-20-30-40-60	1.9365/1.9375
						M.S.	**MS-202P**	10-20-30	
						1	MB-1636P		2.2490/2.2500
						2	MB-1225P		2.2490/2.2500
						3	MB-1370P		2.2490/2.2500
	Int.	**211-1206** (Cont. Z129I205)	**217-3717** (830490M91) (Cont. Z129I204)	**212-1011** (21176A)	**216-5147** (840874M91) (Cont. Y400I205)	**C.S.**	**SH-683S**		
	Exh.	**218-7369**	Valve Seat						
	Int.	**218-7411**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
24			**170 CID (2.8L) H170, HB170, HC170 CHRYSLER GASOLINE ENGINES; MF-205, MF-300, MF-775**								
	3.400"	6		**226-8006**(1)	**224-1397**(3) (Chry. 2084388)				**223-3484**(4) (Chry. 1618701)	**Full Set FS1162VE** **Head Set HS1162VE** **Head Gskt 1162VC** **Pan Set OS30920X**	
				226-8056(2)					**223-3607**(5)	**Manif Set MS16030** **Front Cvr JV814** **Rear Seal JV607** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Water Pump K27564** **Fuel Pump D27094**	

Notes:
1. .125" Thickness Cylinder Sleeve Wall
2. .094" Thickness Cylinder Sleeve Wall
3. Also Available in .020", .040" and .060" Oversize
4. Bronze Piston Pin Bushing, Requires Light Reaming
5. Bronze Piston Pin Bushing, Requires Boring

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
24	Exh.	**211-1701** (Chry. 1947624)	**217-3182**	**212-1071** (Chry. 1557137)	**216-5177** (Chry. 1614666)	**R.B.**	**CB-606G**	1-10-20-30-40-60	2.1865/2.1875
						M.S.	**MS-517P**	10-20-30-40	
						1	MB-1999P		2.7495/2.7505
						2-4	MB-2001P		2.7495/2.7505
						3	MB-2000P (F)		2.7495/2.7505
	Int.	**211-1700** (Chry. 1947623)	**217-3182**	**212-1071** (Chry. 1557137)	**216-5080** (18687A) (Chry. 381875)	**C.S.**	**SH-874S**		1.9980/1.9990
	Exh.	**218-4010**	Valve Seat (Powdered Metal)						
	Exh.	**218-7463**	Valve Seat						
		215-4037 (Chry. 1947704)	Push Rod						
		213-1675 (Chry. 2203250)	Mechanical Lifter						
		CAMSHAFT/TIMING COMPONENTS							
		229-1380 (Chry. 2128644)	Camshaft						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
25			**225 CID (3.7L) H225 CHRYSLER GASOLINE ENGINE; MF-205, MF-300, MF-775**								
	3.400"	6	**226-8006**(1) **224-1397**(3) (Chry. 2084388) **226-8056**(2)						**223-3484**(4) (Chry. 1618701) **223-3607**(5)	**Full Set FS1162VE** **Head Set HS1162VE** **Head Gskt 1162VC** **Pan Set OS30920X** **Manif Set MS16030** **Front Cvr JV814** (Set, Without Sleeve) **Front Cvr T28762** (Gasket Only) **Front Seal 64572** **Rear Seal JV607** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Rpr. Slve 66593RS** (Ground Steel) **Rpr. Slve A223-1** (Formed Steel) **Water Pump K27564** **Carb Gskt G7173** **Exh. Pipe F5495C** **Fuel Pmp D27094**	

Notes:
1. .125" Thickness Cylinder Sleeve Wall
2. .094" Thickness Cylinder Sleeve Wall
3. Also Available in .020", .040" and .060" Oversize
4. Bronze Piston Pin Bushing, Requires Light Reaming
5. Bronze Piston Pin Bushing, Requires Boring

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers
25	Exh.	**211-1701** (Chry. 1947624)	**217-3182**		
	Int.	**211-1700** (Chry. 1947623)	**217-3182**	**212-1071** (Chry. 3751741)	**216-5080** (18687A) (Chry. 381875)
	Exh.	**218-4010**	Valve Seat (Powdered Metal)		
	Exh.	**218-7463**	Valve Seat		
	Int.	**218-7619**	Valve Seat		
		215-4038 (Chry. 2120514)	Push Rod		
		213-1675 (Chry. 2203250)	Mechanical Lifter		

CAMSHAFT/TIMING COMPONENTS

229-1380 (Chry. 2264105)	Camshaft (From 1969)
9-3022	Timing Assembly (3 piece)
9-495	Timing Chain
S-314N (Chry. 2806945)	Timing Cam Sprocket (Nylon)

BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-606G**	1-10-20-30-40-60	2.1865/2.1875
M.S.	**MS-517P**	10-20-30-40	
1	MB-1999P		2.7495/2.7505
2-4	MB-2001P		2.7495/2.7505
3	MB-2000P (F)		2.7495/2.7505
C.S.	**SH-874S**		

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
26			**162 CID (2.7L) F162 CONTINENTAL GASOLINE ENGINE; MF-20, MF-30, MF-40, MF-80, MF-100, MF-124, MF-140, MF-162**							
	3.438"	4	**226-8006**(1)	**224-3287**(8) (Cont. F162A1404E)		**S40943**(5)	1-5/64" 2-3/32"	1-1/4"	**223-3349**(6) (840708M91) (Cont. F400G211)	**Full Set FS1634A** (Timing Set Not Included) **Full Set FS1634GH** (Not for Use on Clark & Ross) (Contains Multiple Timing Sets) **Full Set FS1634GJ** (For Use on Clark & Ross) (Contains Multiple Timing Sets) **Head Set HS1634X** **Head Gskt 1634** **Pan Set OS20509** **Valve Cvr VS38032** With 2 Gear Cam (Not in Head and Full Sets) **Valve Cvr VS38083** With 3 Gear Cam (Included in Head and Full Sets) **Manif Set MS15028** **Front Cvr JV1027** **Front Seal JV895** (Towmotor) **Front Seal 47065** (Except Divco) **Rear Seal JV663** (Rope) **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Drive Seal 49297** **Fan Seal 48756**
						S5588(3) (836101M91) (Cont. F162T101)	3-1/8"	1-1/4"		
			226-8045(2)			**S4588**(4) (840430M91) (Cont. F162T152)	3-1/8"	1-1/4"	**223-3429**(7) (Cont. R800G204)	
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Cast Iron Compression Rings 4. Chrome Cast Iron Compression Rings 5. Moly Cast Iron Compression Ring 6. .919" Outside Diameter, Requires Light Reaming 7. 1.066" Outside Diameter, Requires Boring 8. Also Available in .020", .030", .040" and .060" Oversize							
27			**237 CID (3.9L) IND 7 CHRYSLER GASOLINE ENGINE; MF-218, MF-230, MF-237, MF-241, MF-245, MF-251, MF-265**							
	3.438"	6							**223-3349**(1) (840708M91) (Chry. 318893)	**Full Set FS4922** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219**
									223-3429(2)	**Front Cvr JV826** **Rear Seal JV134-9**
			Notes: 1. .919" Outside Diameter, Requires Light Reaming 2. 1.066" Outside Diameter, Requires Boring							

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
26	Exh.	**211-1589** ◗ (Cont. F400I228)	**217-3620*** (840211M91) (Cont. F400I1213)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147** ● (830753M91) (Cont. Y400I205)		For Use on Positions 1-3		
						R.B.	**CB-79P**	10-20-30-40-60	1.9365/1.9375
	Exh.	**211-1053** ▲ (Cont. (F600I238)			**216-5234** (841370M91) (Cont. Z120I1235)		For Use on Positions 2-4		
						R.B.	**CB-78P**	10-20-30-40-60	1.9365/1.9375
						M.S.	**MS-176P**	10-20	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
	Int.	**211-1588** (Cont. F400I229)	**217-3620*** (840211M91) (Cont. F400I1213)	**212-1025** (840754M91) (Cont. Y400I215)	**216-5147**● (830753M91) (Cont. Y400I205)	**2**	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
						Note: Includes Straight Sheel Front Bearing and Two Thrust Washers.			
	Int.				**216-5234** (841370M91) (Cont. Z120I1235)	**T.W.1**	**TW-424S**		2.2812
						Note: Set Includes One Piece, Two Sets Required.			
						C.S.	**SH-56S**		
	Exh.	**218-7439**	Valve Seat						
	Exh.	**218-7405** ◗ (Cont. F601A323)	Valve Seat						
	Int.	**218-7535**	Valve Seat Also Available in .005" and .010"						
		◗ Drilled Stem - 1.203" HD Diameter * Except Roto Valve ● Without Rotocap Assembly With Drilled Stem ▲ Drilled Stem - 1.328" HD Diameter							
27						**R.B.**	**CB-90P**	1-10-20-30-40-60	2.1240/2.1250
						C.S.	**SH-37S**		

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
28			**244 CID (4.0L) F6244 CONTINENTAL GASOLINE ENGINE; MF-226, MF-227, MF-244**							
	3.438"	6			**224-3287** (Cont. F163A408)	**S40943**(1)	1-5/64" 2-3/32"	1-1/4"	**223-3429**(3) (Cont. R800G204)	
						S4544(2) (Cont. A244T116)	3-1/8"	1-1/4"	**223-3349**(4) (840708M91) (Cont. F400G211)	
			Notes: 1. Moly Cast Iron Compression Ring 2. Chrome Cast Iron Compression Ring 3. 1.066" Outside Diameter, Requires Boring 4. .919" Outside Diameter, Requires Light Reaming							
29			**251 CID (4.1L) IND 8 CHRYSLER GASOLINE ENGINE; MF-218, MF-230, MF-237, MF-241, MF-245, MF-251, MF-265**							
	3.438"	6	**226-8006**(1)			**433**(2) (Chry. 1653379)	12-3/32"	12-5/32"	**223-3349**(4) (840708M91) (Chry. 318893)	**Full Set FS4922** **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Manif Set MS15029** **Front Cvr JV826** **Rear Seal JV134-9** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam)
						533(3) (Chry. 1653379)	12-3/32"	12-5/32"	**223-3429**(5)	
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. Chrome Cast Iron Compression Rings 3. Cast Iron Compression Rings 4. .919" Outside Diameter, Requires Light Reaming 5. 1.066" Outside Diameter, Requires Boring							
30			**265 CID (4.3L) IND 32 CHRYSLER GASOLINE ENGINE; MF-218, MF-230, MF-230, MF-245, MF-251, MF-265**							
	3.438"	6							**223-3349**(1) (840708M91) (Chry. 318893)	**Full Set FS3029X** **Head Set HS3029** **Head Gskt 3029** **Pan Set OS30899** **Manif Set MS15029** **Front Cvr JV826** **Rear Seal JV134-9** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Exh. Pipe F5438AK**
									223-3429(2)	
			Notes: 1. .919" Outside Diameter, Requires Light Reaming 2. 1.066" Outside Diameter, Requires Boring							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
28							For Use on Positions 1-3-5		
						R.B.	**CB-465P**	10-20-30-40-60	2.6019/2.6027
						Note: Use CB-465P on All Six Positions if Rod Forging Ends in 402.			
							For Use on Positions 2-4-6		
						R.B.	**CB-466P**	10-20-30-40-60	2.6019/2.6027
						M.S.	**MS-889P**	10-20-30	
						1	MB-1682P		2.3744/2.3752
						2-3	MB-1225P		2.3744/2.3752
						4	MB-1686P (F)		2.3744/2.3752
						C.S.	**SH-190S**		
29	Exh.	**211-1195** (Chry. 1319089)	**217-3337** (Chry. 1124959)	**212-1011** (21176A) (Chry. 869073)	**216-5081** (Chry. 395931)	**R.B.**	**CB-90P**	1-10-20-30-40-60	2.1240/2.1250
	Exh.			**212-1072** ■ (Chry. 1679135)		**C.S.**	**SH-37S**		
	Int.	**211-1094** (1501846M2) (Chry. 1109912)	**217-3338**	**212-1011** (21176A) (Chry. 869073)	**216-5081** (Chry. 395931)				
	Exh.	**218-7651**	Valve Seat						
	Int.	**218-7537**	Valve Seat						
	■ Engines With Rotocap Assembly								
	CAMSHAFT/TIMING COMPONENTS								
	9-401	Timing Chain							
30						**R.B.**	**CB-90P**	1-10-20-30-40-60	2.1240/2.1250
						C.S.	**SH-37S**		

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets Head Sets Oil Pan Sets
31			**265 CID (4.3L) IND 33 CHRYSLER GASOLINE ENGINE; MF-218, MF-230, MF-230, MF-245, MF-251, MF-265**							
	3.438"	6				**433**(1) (Chry. 1653379)	12-5/32"	12-5/32"	**223-3349**(3) (840708M91) (Chry. 318893)	**Full Set FS3029X** **Head Set HS3029** **Head Gskt 3029** **Pan Set OS30899** **Manif Set MS15029** **Front Cvr JV826** **Rear Seal JV134-9** **Water Gskt C24109** **Water Gskt C24109VF** (Victo-Foam) **Exh. Pipe F5438AK**
						533(2) (Chry. 1241564)	12-3/32"	12-5/32"	**223-3429**(4)	
			Notes: 1. Chrome Cast Iron Compression Rings 2. Cast Iron Compression Rings 3. .919" Outside Diameter, Requires Light Reaming 4. 1.066" Outside Diameter, Requires Boring							
32			**144 CID (2.4L) P3.144 PERKINS DIESEL ENGINE; MF-144**							
	89mm 3.504"	3				**S40648**(1)	2-3/32" 1-1/8"	2-1/4"	**223-3594**	**Head Set HS4805** **Pan Set OS87033** **Valve Cvr VS39867**
			Notes: 1. Chrome Cast Iron Compression Rings							
33			**192 CID (3.1L) 4.192 PERKINS DIESEL ENGINE; MF-65, MF-300, MF-305**							
	89mm 3.504"	4							**223-3594**	**Lower Set CS85100** **Valve Cvr VS39870**

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
31						**R.B.**	**CB-90P**	1-10-20-30-40-60	2.1240/2.1250
						C.S.	**SH-37S**		
32	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007) **212-1217**- Outer (731154M1) (Perk. 780006)		**R.B.**	**CB-560AL**	10-20-30-40	2.2485/2.2490
						M.S.	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.	**TW-119S**		3.0450/3.0550
						From Engine S/N 1412750			
						T.W.	**TW-130S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007) **212-1217**- Outer (731154M1) (Perk. 78006)					
33						**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
						M.S.	**MS-773AL**	10-20	
						1	MB-2186AL		2.7485/2.7490
						2-4	MB-2187AL		2.7485/2.7490
						3-5	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
						From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
34			**192 CID (3.1L) P4 PERKINS DIESEL ENGINE; MF-144, MF-192**								
	89mm 3.504"	4				**S40648**(1)	2-3/32" 1-1/8"	2-1/4"	**223-3594**		
			Notes: 1. Chrome Cast Iron Compression Rings								
35			**288 CID (4.7L) P6 PERKINS DIESEL ENGINE; MF-144, MF-152, MF-192, MF-203, MF-288, MF-305**								
	89mm 3.504"	6							**223-3594**		

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
34	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**M.S.**	**MS-773AL**	10-20	
						1	MB-2186AL		2.7485/2.7490
						2-4	MB-2187AL		2.7485/2.7490
						3-5	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 314312361)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)					
35	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)					
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)					

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
36			**176 CID (2.9L) G176 CONTINENTAL GASOLINE ENGINE; MF-65, MF-165, MF-3165**							
	3.578"	4	Standard 3.578" Bore			**S40186**(1) (835861M91)	3-1/8"	1-1/4"		**Head Set HS3171** **Pan Set OS20837** **Valve Cvr VS38105** **Front Seal 49276**
	3.655"	4	Overbore Conversion 3.655" Bore **226-1493**			**S40933**(1)	3-3/32"	1-3/16"		
			223-7112 (O-Ring Kit)							
			Notes: 1. Chrome Cast Iron Compression Rings							
37			**135 CID (2.2L) 3.135 PERKINS DIESEL ENGINE; MF-152, MF-135**							
	91mm 3.600"	3							**223-3594**	**Head Set HS85201** **Lower Set CS85098**
38			**152 CID (2.5L) 3.152, A3.152 PERKINS DIESEL ENGINE; MF-35, MF-40, MF-50, MF-203, MF-205, MF-240, MF-243, MF-250, MF-251, MF-360, MF-1130, MF-3165**							
	91mm 3.600"	3	To Engine S/N 1935854 **226-1454** (733148M91) (Perk. 59636)	**224-1643** (734459M91) (Perk. 31354321)	**S50593**(1) (836103M91) (Perk. 84957)		2-3/32"	2-1/4" 1-1/8"	**223-3594**	**Head Set HS85098** **Lower Set CS85098** ■ **Lower Set CS4805W** ▲ **Pan Set OS87033** **Front Seal JV1210** **Rear Seal JV1641**
			From Engine S/N 1935854 **226-1447**	Flat Head Piston For Regular Diesel						■ Flameproof from 1959 thru 1964 ▲ Except Flameproof from 1959 thru 1964
			Notes: 1. Cast Iron Compression Rings							

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
36	Exh.	**211-1777** ▲ (830760M91) (Cont. G176I303)	**217-3833** (830762M91)	**212-1098** (841374M91)	**216-5118** ●	**R.B.**	**CB-616P**	10-20-30	2.0615/2.0625
						M.S.	**MS-566P**	10	
						1	MB-2083P		2.3740/2.3750
	Exh.				**216-5117** (841375M91) (Cont. G193I205)	**2**	MB-2087P (F)		2.3740/2.3750
						3	MB-2085P		2.3740/2.3750
	Int.	**211-1776** (830761M91) (Cont. G176I304)	**217-3833** (830762M91)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841374M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Int.	**218-7439**	Valve Seat						
		▲ Stellite ● Hardened							
37						**R.B.**	**CB-560AL**	10-20-30-40	2.2480/2.2490
						M.S.	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
						T.W.	**TW-119S**		3.0450/3.0550
38	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
						M.S.	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**4**	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 78007)		From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)					

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
39			**152 CID (2.5L) D3.152, AD3.152 PERKINS DIRECT INJECTION DIESEL ENGINES; MF-11, MF-20, MF-30, MF-35, MF-40, MF-50, MF-135, MF-150, MF-200, MF-230, MF-231, MF-235, MF-235 Vineyard, MF-245, MF-550, MF-2135, MF-2244, MF-2500**							
	91mm 3.600"	3	**226-1515** (Perk. U5MK0034)	**226-4225**(1) (732638M1)	**224-1897** (734467M91) (Perk. 3135412C)	**S40367**(2)	3-3/32"	2-1/4"	**223-3594**	**Head Set HS85201** **Lower Set CS85098 ▲** **Lower Set CS4805W ■** **Pan Set OS87033** **Front Seal JV1210** **Rear Seal JV1641** ▲ AD3.152 Engines Only ■ D3.152 Engines Only
						S50367(3) (733146M91)	2-3/32"	2-1/4"		
						S40593(2)	2-3/32" 1-1/8"	2-1/4"		
						S50593(3) (836103M91) (Perk. 84957)	2-3/32" 1-1/8"	2-1/4"		
			Notes: 1. Not a Chrome Liner 2. Chrome Cast Iron Compression Ring 3. Cast Iron Compression Rings							
40			**152 CID (2.5L) AG3.152, G3.152 PERKINS GASOLINE ENGINES; MF-20, MF-40, MF-50, MF-135, MF-150, MF-2500**							
	91mm 3.600"	3				**S41100**(1)	2-3/32"	1-1/4"	**223-3594**	**Head Set HS85201** **Lower Set CS85098** **Pan Set OS87033**
			Notes: 1. Chrome Cast Iron Compression Ring							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
39	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**M.S.**	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 78007)		From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)					
	CRANKSHAFT								
	247-5075 (Perk. 31312436) Crankshaft - Keyed Nosed (Rope Seal)								
	247-5076 (Perk. 31312701) Crankshaft - Keyed Nose (Lip Seal)								
40						**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
						M.S.	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
						From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
41			**203 CID (3.3L) 4.203, A4.203 PERKINS DIESEL ENGINES; MF-65, MF-300, MF-305, MF-356, MF-3165**								
	91mm 3.600"	4			**224-1643** (734459M91) (Perk. 31354321)	**S40593**(1)	(841521M92)	1-1/8"	**223-3594**	**Head Set HS85100** **Lower Set CS85100** **Valve Cvr VS39870** **Front Seal JV1210** **Rear Seal JV1641**	
						S50593(2) (836103M91) (Perk. 84957)	2-3/32"	1-1/8" 2-1/4"			

Notes:
1. Chrome Cast Iron Compression Ring
2. Cast Iron Compression Rings

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
41	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**M.S.**	**MS-773AL**	10-20	
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**1**	MB-2186AL		2.7485/2.7490
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)		**2-4**	MB-2187AL		2.7485/2.7490
						3-5	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
						From Engine S/N 1412720			
						T.W.4	**TW-130S**		3.0450/3.0550

CRANKSHAFT

247-5078 (Perk. 31315145)	Crankshaft - Keyed Nose (Rope Seal)
247-5201 (Perk. ZZ90119)	Crankshaft - Splined Nose (Rope Seal)
247-5080 (Perk. 31315181)	Crankshaft - Splined Nose (Lip Seal)
247-5081 (Perk. 31315184)	Crankshaft - Keyed Nose (Lip Seal)

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
42			**203 CID (3.3L) D4.203, AD4.203 PERKINS DIRECT INJECTION DIESEL ENGINES; MF-30, MF-40B, MF-50, MF-54, MF-65, MF-165, MF-255, MF-300, MF-302, MF-304, MF-356, MF-3165**								
	91mm 3.600"	4	**226-1515** (Perk. U5MK0034)		**224-1897** (734467M91) (Perk. 313582111)	**S40367**(1)	3-3/32"	2-1/4" 1-1/8"	**223-3594**	**Head Set HS85124** **Lower Set CS85100** **Lower Set CS85124X** (MF Version) **Valve Cvr VS86092** **Front Seal JV1210** **Rear Seal JV1641**	
						S50367(2) (733146M91)	3-3/32"	2-1/4"			
						S40593(1) (841521M92)	2-3/32"	2-1/4" 1-1/8"			
						S50593(2) (836103M91) (Perk. 84957)	2-3/32"	2-1/4" 1-1/8"			

Notes:
1. Chrome Cast Iron Compression Rings
2. Cast Iron Compression Rings

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
42	Exh.	**211-2185** (732812M1) (Perk. 31431271)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**M.S.**	**MS-773AL**	10-20	
						1	MB-2186AL		2.7485/2.7490
						2-4	MB-2187AL		2.7485/2.7490
						3-5	MB-2302AL		2.7485/2.7490
						From Engine S/N 1400250 Thru Engine S/N 1412719			
						T.W.4	**TW-119S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31431261)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)		From Engine S/N 1412720			
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)		**T.W.4**	**TW-130S**		3.0450/3.0550

CRANKSHAFT

247-5078 (Perk. 31315145)	Crankshaft - Keyed Nose (Rope Seal)
247-5201 (Perk. ZZ90119)	Crankshaft - Splined Nose (Rope Seal)
247-5080 (Perk. 31315181)	Crankshaft-Splined Nose (Lip Seal)
247-5081 (Perk. 31315184)	Crankshaft - Keyed Nose (Lip Seal)

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
43			**305 CID (5.0L) 6.305 PERKINS DIESEL ENGINE; MF-92, Super MF-92**								
	91mm 3.600"	6	**226-1447**(1)		**224-1643** (734459M91) (Perk. 31354321)	**S40593**(4) (841521M92)	2-3/32" 1-1/8"	2-1/4"	**223-3594**		
						S50593(5) (836103M91) (Perk. 84957)	2-3/32" 1-1/8"	2-1/4"			
			226-1454(2) (733148M91) (Perk. 59636)	**226-4225**(3) (732638M1)		**S40367**(4)	3-3/32"	2-1/4"			
						S50367(5) (733146M91)	3-3/32"	2-1/4"			
			Notes: 1. .150" Flange Height and 3.806" Flange Outside Diameter 2. .040" Flange Height and 3.810" Flange Outside Diameter 3. Not a Chrome Liner 4. Chrome Cast Iron Compression Ring 5. Cast Iron Compression Rings								
44			**305 CID (5.0L) AD6.305 PERKINS DIRECT INJECTION DIESEL ENGINE; MF-92, Super MF-92**								
	91mm 3.600"	6				**S40593**(1) (841521M92)	2-3/32" 1-1/8"	2-1/4"	**223-3594**		
						S50593(2) (836103M91) (Perk. 84957)	2-3/32" 1-1/8"	2-1/4"			
						S40367(1)	3-3/32"	2-1/4"			
						S50367(2) (733146M91)	3-3/32"	2-1/4"			
			Notes: 1. Chrome Cast Iron Compression Ring 2. Cast Iron Compression Rings								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
43	Exh.	**211-2185** (732812M1) (Perk. 31431822)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 78007)		**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
	Exh.			**212-1217** - Outer (731154M1) (Perk. 780006)		**T.W.7**	**TW-130S**		3.0450/3.0550
	Int.	**211-2174** (732811M1) (Perk. 31432161)	**217-3976** (732445M1) (Perk. 33261723)	**212-1216** - Inner (731153M1) (Perk. 780007)					
	Int.			**212-1217** - Outer (731154M1) (Perk. 780006)					
			CRANKSHAFT						
	247-5082 (Perk. 31323146)	Crankshaft - Big Radius Keyed Nose (Rope Seal)							
	247-5083 (Perk. 31323145)	Crankshaft - Big Radius Spline Nose (Rope Seal)							
44						**R.B.**	**CB-560AL**	10-20-30	2.2485/2.2490
			CRANKSHAFT			**T.W.7**	**TW-130S**		3.0450/3.0550
	247-5082 (Perk. (31323146)	Crankshaft - Big Radius Keyed Nose (Rope Seal)							
	247-5083 (Perk. (31323145)	Crankshaft - Big Radius Spline Nose (Rope Seal)							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
45			**201 CID (3.3L) E201 CONTINENTAL GASOLINE ENGINE; MF-33, MF-85, MF-88, MF-333**								
	3.625"	4							**223-3516** (841021M91) (Cont. E400G200)		
46			**212 CID (3.5L) A4.212 PERKINS DIESEL ENGINE; MF-60, MF-185, MF-860**								
	93mm 3.661"	4								**Head Set HS85202** **Lower Set CS85202** **Valve Cvr VS86127** **Front Seal JV1214** **Rear Seal JV1640**	
47			**212 CID (3.5L) AG4.212 PERKINS GASOLINE ENGINE; MF-60, MF-185, MF-860**								
	93mm 3.661"	4									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
45	Exh.		**217-3673** (841036M91) (Cont. E223I200)	**212-1021** (841162M91) (Cont. F600I232)	**216-5118** ●	**R.B.**	**CB-596P**	10	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. G193I205)				
	Int.		**217-3673** (841036M91) (Cont. (E223I200)	**212-1021** (841162M91) (Cont. F600I232)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**218-7439**	Valve Seat (High Chrome)						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
	Int.	**218-7493**	Valve Seat (Available in .005", .010", .015", .030" Oversize						
	● Hardened								
46						**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-830AL**	10-20-30	
						1-2-4	MB-2221AL		2.9985/2.9990
						5			
						3	MB-2222AL		2.9985/2.9990
						To Engine S/N 4203049			
						T.W.3	**TW-121S**		3.4200/3.4300
						From Engine S/N 4203050			
						T.W.3	**TW-316S**		3.4200/3.4300
47						**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-830AL**	10-20-30	
						1-2-4	MB-2221AL		2.9985/2.9990
						5			
						3	MB-2222AL		2.9985/2.9990
						To Engine S/N 4203049			
						T.W.3	**TW-121S**		3.4200/3.4300
						From Engine S/N 4203050			
						T.W.3	**TW-316S**		3.4200/3.4300

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
48			**208 CID (3.4L) E208 CONTINENTAL FLEX FUEL ENGINE; MF-33, MF-333**								
	3.687"	4							**223-3516** (841021M91) (Cont. E400G200)	**Head Set HS3216** **Front Seal 49276**	
49			**208 CID (3.4L) ED208 CONTINENTAL DIESEL ENGINE; MF-33, MF-333**								
	3.687"	4							**223-3516** (841021M91) (Cont. E400G200)	**Head Set HS3216** **Front Seal 49276**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
48	Exh.		**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●	**R.B.**	**CB-596P**	10	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. G193I205)				
	Int.		**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Exh.	**218-7439**	Valve Seat						
	Int.	**218-7493**	Valve Seat						
		● Hardened							
49	Exh.		**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●	**R.B.**	**CB-596P**	10	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. G193I205)				
	Int.		**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Exh.	**218-7439**	Valve Seat						
	Int.	**218-7493**	Valve Seat						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
		● Hardened							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
50			**208 CID (3.4L) E400 CONTINENTAL GASOLINE ENGINE; MF-33, MF-85, MF-88, MF-333**								
	3.687"	4							**223-3516** (841021M91) (Cont. E400G200)		
51			**193 CID (3.2L) G193, GF193 CONTINENTAL GASOLINE ENGINES; MF-50, MF-302, MF-304**								
	3.750"	4				**S40342**(1)	1-3/32" 2-1/8"	1-1/4"		**Head Set HS3154*** **Pan Set OS20837** **Valve Cvr VS38287** **Front Seal 47065**	
			Notes: 1. Chrome Cast Iron Compression Ring							* Applies to G193 Only.	
52			**282 CID (4.6L) JXC HERCULES DIESEL ENGINE; MF-14, MF-30, MF-38, MF-88**								
	3.750"	6		**226-8010**(1)						**Manif Set MS18809** **Front Seal 49379** **Rear Seal 49822**	
				226-8061(2)							
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall								
53			**290 CID (4.8L) M290 CONTINENTAL GASOLINE ENGINE; MF-290, MF-330, MF-382**								
	3.750"	6		**226-8010**(1)						**Front Seal 49276**	
				226-8061(2)							
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
50						**R.B.**	**CB-596P**	10	2.2480/2.2490
51	Exh.	**211-1777** ◗ (830760M91) (Cont. (G176I303)	**217-3833** ◗ (830762M91)	**212-1098** ◗ (841374M91)	**216-5117** (841375M91) (Cont. G193I205)	**R.B.**	**CB-618P**	10-20-30	2.2490/2.2500
	Exh.		**217-3379** ▲ (Cont. G1931210)		**216-5118** ●				
	Int.	**211-1776** ◗ (830761M91) (Cont. G176I304)	**217-3833** ◗ (830762M91)	**212-1098** ◗ (841374M91)	**216-5117** (841375M91) (Cont. G193I205)				
	Int.		**217-3379** ▲ (Cont. G1931210)		**216-5118** ●				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	▲ Applies to G193 ◗ Applies to GF193 ● Hardened								
52	Exh.			**212-1057** (Herc. 44021A)		**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
	Int.		**217-3230**	**212-1057** (Herc. 44021A)		From Engine S/N 501088 **C.S.**	**SH-198S**		
	Int.	**218-7587**	Valve Seat (1.693" Head Diam.)						
	Int.	**218-7619**	Valve Seat (1.750" Head Diam.)						
53	Exh.			**212-1023** (33855A) (Cont. Z660I338)		**R.B.**	**CB-510P**	10-30	2.2480/2.2490
	Int.			**212-1023** (33855A) (Cont. Z660I338)					
	Exh.	**218-7545**	Valve Seat						
	Int.	**218-7703**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
54			**206 CID (3.4L) G206 CONTINENTAL GASOLINE ENGINE; MF-206, MF-223**								
	3.813"	4				**S40274**(1) (836128M91)	2-1/8" 1-3/32"	1-1/4"			
			Notes: 1. Chrome Cast Iron Compression Ring								
55			**223 (3.7L) E223 CONTINENTAL GASOLINE/LPG ENGINE; MF-33, MF-85, MF-88, MF-90, MF-333**								
	3.813"	4				**S40274**(1) (836128M91)	2-1/8" 1-3/32"	1-1/4"	**223-3516** (841021M91) (Cont. E400G200)	**Head Set HS3192** **Front Seal 49276**	
			Notes: 1. Chrome Cast Iron Compression Ring								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
54									
55	Exh.		**217-3673** (830935M91) (Cont. E223I200)	**212-1098** (841374M1)	**216-5118** ●	**R.B.**	**CB-596P**	10-20-30	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. (G193I205)				
	Int.	**211-1778** (830934M91) (Cont. E223I302)	**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
	Int.	**218-7493**	Valve Seat						
		● Hardened							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
56			**223 CID (3.7L) EB223 CONTINENTAL GASOLINE/LPG ENGINES; MF-33, MF-85, MF-88, MF-333**								
	3.813"	4							**223-3516** (841021M91) (Cont. E400G200)		
57			**242 CID (3.7L) E242 CONTINENTAL GASOLINE/LPG ENGINE; MF-33, MF-85, MF-88, MF-90, MF-333**								
	3.813"	4				**S40274**(1) (836128M91)	2-1/8" 1-3/32"	1-1/4"	**223-3516** (841021M91) (Cont. E400G200)	**Head Set HS3192** **Front Seal 49276**	

Notes:
1. Chrome Cast Iron Compression Ring

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
56	Exh.		**217-3673** (830935M91) (Cont. E223I200)	**212-1098** (841374M1)	**216-5118** ●	**R.B.**	**CB-596P**	10-20-30	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. (G193I205)				
	Int.	**211-1778** (830934M91) (Cont. E223I302)	**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
	Int.	**218-7493**	Valve Seat						
		● Hardened							
57	Exh.		**217-3673** (830935M91) (Cont. E223I200)	**212-1098** (841374M1)	**216-5118** ●	**R.B.**	**CB-596P**	10-20-30	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. (G193I205)				
	Int.	**211-1778** (830934M91) (Cont. E223I302)	**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
	Int.	**218-7493**	Valve Seat						
		● Hardened							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
58			**242 CID (4.0L) EB242 CONTINENTAL GASOLINE/LPG ENGINES; MF-33, MF-85, MF-88, MF-333**								
	3.813"	4							**223-3516** (841021M91) (Cont. E400G200)		
59			**236 CID (3.9L) 4.236, A4.236 PERKINS DIESEL ENGINES; MF-31, MF-174, MF-175, MF-180, MF-184, MF-255, MF-261, MF-265, MF-271, MF-281, MF-362, MF-375, MF-384, MF-393, MF-398, MF-470, MF-860, MF-7500**								
	98mm 3.877"	4	**226-1516**(1)	**226-4234** (744948M1) (Perk. 31358328) Flanged Sleeve	**224-1904**(1) (735187M91) (Perk. 31354042)	**S42300**(2) (735648M91) (Perk. 83388)	3-3/32"	2-1/4"	**223-3640**	**Head Set HS85202** **Lower Set CS4808W** (4.236) **Lower Set CS85202** (A4.236) **Valve Cvr VS86127** **Front Seal JV1214** ◆ **Rear Seal 67625**●	

Notes:
1. Supplied with Rings Fitted to Piston.
2. Chrome Ductile Compression Ring

◆ Seal only
● Lip Type Seal

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
58	Exh.		**217-3673** (830935M91) (Cont. E223I200)	**212-1098** (841374M1)	**216-5118** ●	**R.B.**	**CB-596P**	10-20-30	2.2480/2.2490
	Exh.				**216-5117** (841375M91) (Cont. G193I205)				
	Int.	**211-1778** (830934M91) (Cont. E223I302)	**217-3673** (841036M91) (Cont. E223I200)	**212-1098** (841374M91)	**216-5118** ●				
	Int.				**216-5117** (841375M91) (Cont. G193I205)				
	Exh.	**216-3122** (1005502M91)	Rotocap Assembly						
	Int.	**218-4006**	Valve Seat (Powdered Metal)						
	Int.	**218-7493**	Valve Seat						
		● Hardened							
59	Exh.	**211-2107** (Perk. 31431104)	**217-3270** (Perk. 32361752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-830AL**	10-20-30	
						1-2-4	MB-2221AL		2.9985/2.9990
						5			
	Int.	**211-2106** (Perk. 31431641)	**217-3271** (Perk. 33261732)		**216-5191** (736453M1) (Perk. 33173108)	**3**	MB-2222AL		2.9985/2.9990
						To Engine S/N 4203049			
						T.W.3	**TW-121S**		3.4200/3.4300
						From Engine S/N 4203050			
						T.W.3	**TW-316S**		3.4200/3.4300

CRANKSHAFT

247-5084 (Perk. 31315884) Crankshaft - Spline Nose (Rope Seal)

247-5085 (Perk. 31315631) Crankshaft - Spline Nose (Lip Seal)

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
60			**236 CID (3.9L) G4.236, AG4.236 PERKINS GASOLINE ENGINES; MF-175, MF-180, MF-255, MF-265**								
	98mm 3.875"	4									
61			**260 CID (4.3L) H260 CONTINENTAL GASOLINE ENGINE; MF-44G, MH-44K, MH-44LP, MH-44RT, MH-44 Spec.**								
	3.875"	4	Standard 3.875" Bore			**S4560**(1) (840928M91) (Cont. H260T205)	3-1/8"	1-1/4"	**223-3517** (840710M91) (Cont. H260G203)	**Full Set FS1847** **Head Set HS1847** **Pan Set OS21567** **Manif Set MS12172** **Front Seal 49276** **R.Arm Plug 2085** **V.Cvr Wash 2014A**	
	4.000"	4	Overbore Conversion 4.000" Bore **226-1237** (841102M91)			**S4764**(1)	3-3/32"	1-1/4"			
						S4764A(1)	3-3/32"	2-1/4"			
						S40095(1)	2-3/32" 1-1/8"	1-1/4"			
			Notes: 1. Chrome Cast Iron Compression Rings								
62			**260 CID (4.3L) HD260 CONTINENTAL DIESEL ENGINE; MF-44**								
	3.875"	4							**223-3517** (840710M91) (Cont. H260G203)	**Full Set FS1847** **Head Set HS1847** **Pan Set OS21567** **Manif Set MS12172** **Front Seal 49276** **R.Arm Plug 2085** **V.Cvr Wash 2014A**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
60						**M.S.** **1-2-4** **5** **3**	**MS-830AL** MB-2221AL MB-2222AL	10-20-30	2.9985/2.9990
						To Engine S/N 4203049 **T.W.3**	**TW-121S**		3.4200/3.4300
						From Engine S/N 4203050 **T.W.3**	**TW-316S**		3.4200/3.4300
61	Exh.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)	**R.B.**	**CB-405P**	10-20-30	2.4980/2.4990
	Int.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)					
	Exh.	**218-7501**	Valve Seat						
	Int.	**218-7623**	Valve Seat						
62	Exh.			**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)	**R.B.**	**CB-459P**		2.4980/2.4990
	Int.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)				
	Exh.	**218-7411**	Valve Seat						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
63			**318 CID (5.2L) 6V-53 DETROIT DIESEL ENGINE; MF-66**								
	3.875"	6	**226-1478** (D.D. 5198903) High Brinell Sleeve **223-7140** (O-Ring Kit) (D.D. 5121256)	**226-4415** (D.D. 5132803)		**S41154**(1) (D.D. 5198902)	1-.082" 3-3/32"	2-3/16"	**223-3622**(2) (D.D. 5116181)	**Full Set FS12232C ▲** **Head Set HS12232X** (2 Sets Required) **Head Gskt CH12232X** **Lower Set CS12232W ◆** **Pan Set OS30753 ■** **Valve Cvr VS38767 (2)** **Manif Set MS15118** **Front Seal 46289** **Rear Seal 47905** **Cooler Set GS33123**	

Notes:
1. Chrome Steel Compression Rings
2. 2 Required

▲ Order Front and Rear Seals Separately.
◆ All Excluding Turbo, Order Front and Rear Seals Separately
■ Cork-Rubber

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
63		4 Valve Cylinder Head				**R.B.**	**CB-674P**	10-20-30	2.7490/2.7500
	Exh.	**211-1863** ● (D.D. 5199323)	**217-4007** (D.D. 5131961)	**212-1110** (D.D. 5144019)	**216-5183**	To Engine S/N 6D-17960 (Upper Half has 1 Oil Hole)			
	Exh.	**211-2536** ◆ (D.D. 5109925)	**217-4007** (D.D. 5131961)			**M.S.** **1-2-3** **4**	**MS-506P** MB-1931P	10-20	3.4990/3.5000
		2 Valve Cylinder Head				**4**	MB-2524W		3.8430/3.8435
	Exh.	**211-1863** ● (D.D. 5195948)	**217-3832** (D.D. 5111327)		**216-5234** (D.D. 5149771)	From Engine S/N 6D-17961 (Upper Half has 7 Oil Holes)			
	Exh.	**218-7817** ■ (D.D. 8921502)	Valve Seat (4 Valve Cylinder Head)			**M.S.** **1-2-3** **4**	**MS-885P** MB-2474P	10-20-30	3.4990/3.5000
	Exh.	**218-7521**	Valve Seat (2 Valve Cylinder Head)			**4**	MB-2524W		3.8430/3.8435
		● Excluding 6V-53T ◆ Optional Premium ■ 1.156" C.Bore, Available .010", and .030"Oversize				**T.W.4**	**TW-411S**	+5	3.8380/3.8480
		CAMSHAFT/TIMING COMPONENTS				**Notes:** Components Included in MS-506P and MS-885P, 4 Pieces Required, If Ordering Separately			
		214-1107 ● (D.D. 8923814)	Cam Follower			Camshaft and Balance Shaft Bushing Set	**SH-701S**		
		216-1136 ◆ (D.D. 8925981A)	Injector Tube Kit.			Color Coded Cam Bearings			
		● Roller With Bushing and Pin Set-3 Per Cylinder ◆ Pre-Reamed Injector Tube And Viton O-Ring				**END**	**SH-686**	Brown	
		CRANKSHAFT				**INTER.**	**SH-687**	Orange	
		247-5124 (D.D. 23504732)	Crankshaft- (O.E. Type) (.010" Under)						
		247-5125 (D.D. 23504732)	Crankshaft - (Remanufactured) (Specify .010", or .020" Under)						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
64			**354 CID (5.8L) 6.354, A6.354 PERKINS DIESEL ENGINES; MF-24, MF-25, MF-44B, MF-80, MF-399, MF-400, MF-450S, MF-510, MF-550, MF-699, MF-850, MF-1100, MF-2640, MF-2675**								
	98mm 3.877"	6	To Replace or Convert to Flange Type Sleeves: **226-1453**(1,2) **226-4234** (744948M1) (Perk. 31358328) **224-1649**(2) (738241M91) (Perk. 31354335) **S42300**(3) 3-3/32" (735648M91) (Perk. 83388) 2-1/4" **223-3640** (Perk. 31134123) **S41092**(3) 2-3/32" (740495M91) 1-1/8" (Perk. 86773) 1-1/4" **Notes:** 1. Installation Instructions Included 2. Supplied with Rings Fitted to Piston 3. Chrome Ductile Compression Ring							**Head Set HS85182** (1/2" Studs) **Head Gskt 3837** **Lower Set CS85182** **Pan Set OS87083** **Valve Cvr VS86125** **Front Seal JV1214** **Rear Seal JV1640** Use Gaskets on Models Built From 1964-1981	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
64	Exh.	**211-2107** ● (Perk. 31431104)	**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-757AL**	10-20-30	
						1-2-3	MB-2221AL		2.9985/2.9990
	Exh.			**212-1396** - Inner		**5-6-7 4**	MB-2222AL		2.9985/2.9990
	Exh.			**212-1397** - Outer (Perk. 31745121)		To Engine S/N 8504189			
						T.W.4	**TW-121S**		3.4200/3.4300
	Int.	**211-2106** (Perk. 31431103)	**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	From Engine S/N 8504190			
						T.W.4	**TW-316S**		3.4200/3.4300
	Int.			**212-1396** - Inner					
	Int.			**212-1397** - Outer (Perk. 31745121)					
	Exh.	**218-7815** (Perk. 33152139)	Valve Seat						
	Int.	**218-7814** (Perk. 33152512)	Valve Seat						
	● 1.440" Head Dia.								
	CRANKSHAFT								
	247-5088 (Perk. 31323285)	Crankshaft - Ring Feeder							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
65			**354 CID (5.8L) 6.354.2, A6.354.2 PERKINS DIESEL ENGINES; MF-500, MF-520, MF-850**								
	98mm 3.877"	6	To Replace or Convert to Flange Type Sleeves: **226-1453**(1,2) **226-4234** (744948M1) (Perk. 31358328) **224-1649**(2) (738241M91) (Perk. 31354335) **223-3640** Perk. 31134123) **Notes:** 1. Installation Instructions Included 2. Supplied with Rings Fitted to Piston							**Head Set HS4811** **Pan Set OS87083** **Front Seal JV1214** Use Gaskets on Model Year 1964-1981 Only.	
66			**354 CID (5.8L) 6.354.4 PERKINS DIESEL ENGINE; MF-1250, MF-3090**								
	98mm 3.877"	6								**Head Set HS4811W**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
65	Exh.	**211-2107** ● (Perk. 31431104)	**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S. **1-2-3 5-6-7**	**MS-757AL** MB-2221AL	10-20-30	2.9985/2.9990
	Int.		**217-3271** (Perk. 33261732)		**216-5191** (736453M1) (Perk. 33173108)	**4**	MB-2222AL		2.9985/2.9990
						To Engine S/N 8504189			
						T.W.4	**TW-121S**		3.4200/3.4300
	Exh.	**218-7815** (Perk. 33152139)	Valve Seat			From Engine S/N 8504190			
						T.W.4	**TW-316S**		3.4200/3.4300
	Int.	**218-7814** (Perk. 33152512)	Valve Seat						
	● 1.440" Head Diameter								
	CRANKSHAFT								
	247-5088 (Perk. 31323285)	Crankshaft - Ring Feeder							
	247-5090 (742160M1) (Perk. 31323261)	Crankshaft-Splined Nose (Lip Seal)							
	247-5091 (736902M1) (Perk. 31322316)	Crankshaft-Splined Nose (Rope Seal)							
66						**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
	CRANKSHAFT					**M.S.** **1-2-3 5-6-7**	**MS-1548AL** MB-2789AL	10	2.9985/2.9990
	247-5092 (Perk. 3131H021)	Crankshaft - Keyed Nose				**4**	MB-2790AL		2.9985/2.9990
						Note: Thrust Washer Set Not Included in M.S.			
						T.W.4	**TW-316S**		3.4200/3.4300

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
67			**354 CID (5.8L) T6.354 PERKINS DIESEL ENGINE; MF-510, MF-510SP, MF-750, MF-760, MF-1105, MF-1130, MF-1135, MF-2675, MF-2705, MF-3070, MF-3630**								
	98mm 3.877"	6	**226-1546**(1)	**226-4234** (744948M1) (Perk. 31358328) Flanged Sleeve		**S41092**(2) (740495M91) (Perk. 86773)	1-1/8" 2-3/32"	1-1/4"		**Head Set HS4811Y** **Pan Set OS87083** **Valve Cvr VS39875** **Front Cvr JV1214**	
						S42300(2) (735648M91) (Perk. 83388)	3-3/32"	2-1/4"			

Notes:
1. Supplied With Rings Fitted to Piston.
2. Chrome Ductile Compression Ring

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
67	Exh.		**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-1209AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-757AL**	10-20-30	
						1-2-3	MB-2221AL		2.9985/2.9990
	Exh.			**212-1396** - Inner		**5-6-7 4**	MB-2222AL		2.9985/2.9990
	Exh.			**212-1397** - Outer (Perk. 31745121)		To Engine S/N 8504189			
						T.W.4	**TW-121S**		3.4200/3.4300
	Int.	**211-2510** (Perk. 31431311)	**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	From Engine S/N 8504190			
						T.W.4	**TW-316S**		3.4200/3.4300
	Int.			**212-1396** - Inner					
	Int.			**212-1397** - Outer (Perk. 31745121)					
	Exh.	**218-7815** (Perk. 33152139)	Valve Seat						
	Int.	**218-7814** (Perk. 33152512)	Valve Seat						
	CRANKSHAFT								
	247-5089 (Perk. 31323283)		Crankshaft - Ring Feeder						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
68			**354 CID (5.8L) T6.354.4 PERKINS DIESEL ENGINE; MF-399, MF-699, MF-750, MF-850, MF-2675, MF-2705, MF-2810, MF-3090, MF-3505, MF-3525, MF-3630, MF-3650**								
	98mm 3.877"	6	**226-1823** **226-4234** (744948M1) (Perk. 31358328) Flanged Sleeve							**Head Set HS4942** ■ **Head Set HS4942A** ▲ **Head Set HS4942B** ◆ **Lower Set CS4942** ● **Lower Set CS4942A** ★ ■ Model MF-399, MF-699, MF-750, MF-2675, MF-2705, MF-2810, MF-3090, MF-3505, MF-3525, MF-3630, and MF-3650 From Engine S/N U743807 ▲ Model MF-750, MF-3090, and MF-3650 ◆ Model MF-2675 and MF-699. Thru Engine S/N U743807 ● Model MF-399, MF-699, MF-750, MF-3090, and MF-3505 ★ Model MF-2675, MF-2705, MF-2810, MF-3525, MF-3630, and MF-3650	
69			**248 CID (4.1L) 4.248, A4.248 PERKINS DIESEL ENGINES; MF-60, MF-95, MF-185, MF-275, MF-282, MF-283, MF-290, MF-300, MF-383, MF-390, MF-470, MF-690, MF-860, MF-4225, MF-6500**								
	101mm 3.976"	4	**226-1670**(1) Flanged Sleeve 16:1 C.R.						**223-3640** (Perk. 31134123)	**Head Set HS85202** **Lower Set CS85202** (A4.248) **Valve Cvr VS86127** **Front Cvr JV1214** **Rear Seal JV1640**	

Notes:
1. Supplied with Rings Fitted to Piston

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
68	Exh.		**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-1209AL**	10-20-30	2.4990/2.4995
						M.S. **1-2-3 5-6-7 4**	**MS-1548AL** MB-2789AL MB-2790AL	10	2.9985/2.9990 2.9985/2.9990
		To Engine S/N 354UA3356T				**Note:** Thrust Washer Set Not Included in M.S.			
	Int.	**211-2510** (Perk. 31431311)	**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	Thru Engine S/N 8504189 **T.W.4**	**TW-121S**		3.4200/3.4300
	Exh.	**218-7815** (Perk. 33152139)	Valve Seat			From Engine S/N 8504190 **T.W.4**	**TW-316S**		3.4200/3.4300
	Int.	**218-7814** (Perk. 33152512)	Valve Seat						
			CRANKSHAFT						
	247-5092 (Perk. 3131H021)	Crankshaft - Keyed Nose (Lip Seal)							
69	Exh.		**217-3270** (736296M91) (Perk. 33261752)		**216-5191** (736453M1) (Perk. 33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
						M.S. **1-2-4 5 3**	**MS-830AL** MB-2221AL MB-2222AL	10-20-30	2.9985/2.9990 2.9985/2.9990
	Int.				**216-5191** (736453M1) (Perk. 33173108)	To Engine S/N 4203049 **T.W.3**	**TW-121S**		3.4200/3.4300
			CRANKSHAFT			From Engine S/N 4203050 **T.W.3**	**TW-316S**		3.4200/3.4300
	247-5086 (Perk. 31315911)	Crankshaft - Spline Nose (Rope Seal)							
	247-5087 (Perk. 31315981)	Crankshaft - Spline Nose (Lip Seal)							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
70			**226 CID (3.7L) OOC HERCULES DIESEL ENGINE; MF-226, MF-282**								
	4.000"	4	**226-8014**(1)			**S4330**(3)	3-1/8"	1-3/16"			
			226-8056(2)			**S5330**(4)	3-1/8"	1-3/16"			
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Ring 4. Cast Iron Compression Rings								
71			**277 CID (4.5L) H277 CONTINENTAL GASOLINE ENGINE; MF-44, MF-444, MH-44 Spec.**								
	4.000"	4				**S4764**(1)	3-3/32"	1-1/4"	**223-3517** (840710M91)	**Full Set FS1847** **Head Set HS1847** **Pan Set OS21567**	
						S4674A(1)	3-3/32"	2-1/4"	(Cont. H260G203)	**Manif Set MS12172** **Front Seal 49276**	
			Notes: 1. Chrome Cast Iron Compression Ring								
72			**277 CID (4.5L) HD277 CONTINENTAL GASOLINE ENGINE; MF-85, MF-88, MF-444D, MH-44D**								
	4.000"	4							**223-3517** (840710M91) (Cont. H260G203)	**Head Set HS3227** **Front Seal 49276**	
73			**330 CID (5.4L) M330 CONTINENTAL GASOLINE ENGINE; MF-290, MF-330**								
	4.000"	6	**226-8014**(1)							**Front Seal 49276**	
			226-8064(2)								
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall								
74			**330 CID (5.4L) M6330 CONTINENTAL GASOLINE ENGINE; MF-290, MF-330**								
	4.000"	6									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
70	Exh.			**212-1057** (Herc. 44021A)					
	Int.			**212-1057** (Herc. 44021A)					
	Exh.	**218-7553**	Valve Seat						
	Int.	**218-7619**	Valve Seat						
71	Exh.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)	**R.B.**	**CB-405P**	10-20-30	2.4980/2.4990
	Int.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)				
	Exh.	**218-7501**	Valve Seat						
	Int.	**218-7623**	Valve Seat						
72	Exh.			**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)	**R.B.**	**CB-459P**		2.4980/2.4990
	Int.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)				
	Exh.	**218-7471**	Valve Seat						
73	Exh.			**212-1023** (33855A) (Cont. Z660I338)		**R.B.**	**CB-510P**	10-30	2.2480/2.2490
	Int.			**212-1023** (33855A) (Cont. Z660I338)					
	Exh.	**218-7545**	Valve Seat (Available .005" Oversize)						
	Int.	**218-7703**	Valve Seat						
74						**R.B.**	**CB-510P**	10-30	2.2480/2.2490

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
75			**350 CID (5.6L) JXLD HERCULES DIESEL ENGINE; MF-339**							
	4.000"	6	**226-8014**(1) **226-8064**(2)			**S41812**(3)	1-3/32" 1-1/8"	2-3/16"		**Front Seal 49379** **Rear Seal 49822**
			Notes: 1. .125" Thickness Cylinder Sleeve Wall 2. .094" Thickness Cylinder Sleeve Wall 3. Chrome Cast Iron Compression Ring							
76			**213 CID (3.5L) 3-71 DETROIT DIESEL ENGINE; MF-93**							
	4.250"	3	Except N65 Injectors **226-1220**(1) (D.D. 23505309) High Brinell Sleeve	**226-4220** (D.D. 23504931)	**224-2469** (D.D. 5189054) 17 : 1 C.R.	**SC80061**(2) (D.D. 5193477)	4-1/8"	2-3/16"	**223-3462**(3)	**Full Set FS12197G*** ▲ **Head Set HS12197A*** (Rubber Valve Cover Gasket) **Head Gskt CH12197X*** **Lower Set CS12197X*** ▲ **Pan Set OS30831** **Valve Cvr VS38673* *** **Valve Cvr VS39858* *** (Victo-Tech, OEM Rubber Type) **Valve Cvr VS39862* *** Aluminum Cover (Victo-Tech) **Manif Gskt MS18628S** **Front Seal 47095** **Rear Seal 46843** **Cooler Set SS47870** * High Block * * Two Sets Required for Engines with Jacobs Engine Brake. ▲ Order Front and Rear Seals Separately
			N65 Injectors **226-1633**(1) (D.D. 23505306)	**226-4466**(1) (D.D. 23502020)	**224-2485** (D.D. 5149234) 18.7 : 1 C.R.	**S40653**(2) (D.D. 23514970)	4-.084"	2-3/16"	**223-3462**(3)	
			Crosshead Piston **226-1723**(1) (D.D. 23522947)	**226-4466**(1) (D.D. 23502020)	**224-2260** (D.D. 23522026)	**S41407**(2) (D.D. 23522955)	2-.084" 1-.111"	2-3/16"		
			Notes: 1. Also Available in .001", .010" and .020" Oversize. 2. Chrome Steel Compression Ring 3. 2 Required							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
75	Exh.			**212-1057** (Herc. 44021A)		**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						C.S.	**SH-198S**		2.0530/2.0540
	Int.			**212-1057** (Herc. 44021A)	**216-5080** (18687A) (Herc. 15011A)				
76	2 Exhaust Valves Required Per Cylinder					**R.B.**	**CB-1596P**	10-20-30-40-50	2.7490/2.7500
	Exh.	**211-1283** ● (D.D. 5193666)	**217-3680** (D.D. 5120930)	**212-1019** (D.D. 5150239)	**216-5117** (D.D. 23507238)	**T.W.5**	**TW-411S**	+5	3.8430/3.8435
	Exh.	**218-7521** (D.D. 8927920)	Valve Seat (Tapered I.D.)			**Note:** 1 Set Required			
							SH-468	(4 Bearings Required	
						Note: Camshaft Bearings-Includes Steel Bushing in Center Hole			
							SH-525	(4 Bearings Required	
						Note: Camshaft Bearings-Without Steel Bushing in Center Hole			
	● 30° Valve Face					Camshaft and Balance Shaft Thrust Washer Set From Engine Serial No. 4A-59281			
	CAMSHAFT/TIMING COMPONENTS						**SH-477WS**	(4 Washers Per Set)	
	214-1107 (D.D. 8923814) Pin and Roller Kit								
	216-1136 (D.D. 5199527-A) Injector Tube Kit								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
77			**568 CID (9.3L) 8V-71 DETROIT DIESEL ENGINE; MF-77C, MF-88**								
	4.250"	8	**226-1633**(1) (D.D. 23505306) High Brinell Sleeve	**226-4466**(1) (D.D. 23502020)	**224-2485** (D.D. 5149234) 18.7 : 1 C.R.	**S40653**(2) (D.D. 23514970)	4-.084"	2-3/16"	**223-3462**(3) **223-3548**(4) (D.D. 23501687)	**Head Set HS12197B** **Head Gskt CH12197X** (2 Sets Required) **Lower Set CS12197H** ● **Pan Set OS31790** ■ (Steel) **Pan Set OS32034** (Aluminum) **Valve Cvr VS39859 (2)** * * Excluding Aluminum Covers (Victo-Tech, OEM Rubber Type) **Valve Cvr VS39844 (2)** * * Excluding Aluminum Cover (Premium Cork-Rubber) **Valve Cvr VS39863 (2)** * * With Aluminum Cover (Victo-Tech) **Manif Set MS18628S (2)** **Front Seal 47095** **Rear Seal 46843** **Rear Seal SS47870** (Oversize Seal & Sleeve) **Cooler Set GS28056** (Single Core) **Cooler Set GS33125** (Gasket) **Water Pump D24971** ● Use with Head Set and Rear Seal for Full Set. ■ Cork-Rubber Gasket * * 2 Sets Required, 4 Sets for Engines with Jacobs Engine Brake

Notes:
1. Also Available with .001", .010" and .020" Oversize O.D. Sleeves
2. Chrome Steel Compression Ring
3. Do Not Use on Turbo and Crosshead Pistons (2 Required)
4. Use with Turbo and Crosshead Pistons (1 Per Piston)

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
		VALVE TRAIN PARTS			
77		4 Exhaust Valves Per Cylinder			
	Exh.	**211-2462** (D.D. 23500501)	**217-3832** ■ (D.D. 5111327)		**216-5234** (841370M91) (D.D. 5111337)
	Exh.		**217-3946** ▲		
		To Engine S/N 8V-1691			
	Exh.			**212-1079** (D.D. 5111339)	
		From Engine S/N 8V-1692			
	Exh.			**212-1121** (D.D. 5147347)	
	Exh.	**218-7373** (D.D. 5101102)	Valve Seat (Tapered I.D)		
		■ 2.500" Long ▲ Machined for Seal, 2.375" Long			

CAMSHAFT/TIMING COMPONENTS

229-1742 (D.D. 5717853)	Camshaft (For Right Bank, R.H. Engine)
214-1107 (D.D. 8923814)	Pin and Roller Kit
216-1136 ◆ (D.D. 5199527-A)	Injector Tube Kit

● Roller with Bushing and Pin Set- 3 Per Cylinder
◆ Pre-Reamed Injector Tube with Viton O-Ring

CRANKSHAFT

247-5024 (D.D. 5103264)	Crankshaft - (O.E. Type) (Std)
247-5005 (D.D. 5103264)	Crankshaft - (O.E. Type) (.010" Under)
247-5114 (D.D. 5103264)	Crankshaft - (Remanufactured) (Specify .010" or .020" Under)

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-555P**	2-10-20-30-40	2.9990/3.0000
M.S. 1-2-3 4-5	**MS-1386P** MB-2687P	10-20-30	4.4990/4.5000
5	MB-2523W		4.7500/4.7600
T.W.5	**TW-402S**		4.7500/4.7600

SH-468 (6 Bearings Required
Note: Camshaft Bearings-Includes Steel Bushing in Center Hole

SH-525 (6 Bearings Required
Note: Camshaft Bearings-Without Steel Bushing in Center Hole

SH-477WS (4 Washers Per Set)
Note: Camshaft and Balancer Shaft Thrust Washer Set

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
78			**510 CID (8.4L) V8.510 PERKINS DIESEL ENGINE; MF-55, MF-1150, MF-1155**								
	108mm 4.252"	8								**Head Set HS4813** **Valve Cvr VS39876**	
79			**540 CID (8.8L) V8.540 PERKINS DIESEL ENGINE; MF-540**								
	108mm 4.252"	8	**226-1715**(1) (Perk. 31358905) 16.5 to 1 C.R. **Notes:** 1. Pre-Topped Piston May Require Machining, Supplied with Rings Fitted to Piston							**Head Set HS4813** **Valve Cvr VS39876**	
80			**301 CID (4.9L) 4.300 PERKINS DIESEL ENGINE; MF-301, MF-318**								
	114mm 4.488"	4									
81			**318 CID (5.2L) 4.318 PERKINS DIESEL ENGINE; MF-70, MF-285, MF-301, MF-318, MF-540, MF-1080, MF-1085**								
	114mm 4.500"	4									
82			**318 CID (5.2L) A4.318 PERKINS DIESEL ENGINE; MF-301, MF-318**								
	114mm 4.500"	4				**S41124**(1)	3-3/32"	1-1/4"			
			Notes: 1. Chrome Ductile Compression Ring								
83			**382 CID (6.3L) J382, J382A CONTINENTAL GASOLINE ENGINES; MF-260, MF-277, MF-290, MF-330, MF-382**								
	4.500"	4									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
78									
79	Exh. **211-3038** (Perk. 31421385) Int. **211-3037** (Perk. 31431822)		**217-3437** (Perk. 33431503) **217-3437** (Perk. 33431503)						
	CRANKSHAFT								
	247-5093 (Perk. 41111664) Crankshaft - Keyed Nose								
80						**R.B.** **T.W.**	**CB-751P** **TW-121S**	10	2.7482/2.7490 3.4200/3.4300
81						**R.B.** **M.S.** **1-2-4** **5** **3** **T.W.3**	**CB-751P** **MS-830AL** MB-2221AL MB-2222AL **TW-316S**	10 10-20-30	2.7482/2.7490 2.9985/2.9990 2.9985/2.9990 3.4200/3.4300
82	Exh. Int.				**216-5191** (736453M1) (Perk. 33173108) **216-5191** (736453M1) (Perk. 33173108)	**R.B.** **M.S.** **1-2-4** **5** **3** **T.W.3**	**CB-751P** **MS-830AL** MB-2221AL MB-2222AL **TW-316S**	10 10-20-30	2.7482/2.7490 2.9985/2.9990 2.9985/2.9990 3.4200/3.4300
83	Exh. Int. Int. **218-7703** Valve Seat			**212-1023** (33855A) (Cont. Z660I338) **212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202) **216-5146** (840759M91) (Cont. E604I202)				

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
84			**382 CID (6.3L) JD382 CONTINENTAL DIESEL ENGINE; MF-260, MF-277, MF-382**								
	4.500"	4								**Front Seal 49276**	
85			**573 CID (9.4L) 3150 CATERPILLAR DIESEL ENGINE; MF-1500**								
	4.500"	8									
86			**636 CID (10.4L) 3160 CATERPILLAR DIESEL ENGINE; MF-1800**								
	4.500"	8							**223-3569**(1) (Cat. 9L8382)		

Notes:
1. For Non-Tapered Rods

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
84	Exh.			**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)				
	Int.		**217-3701** (840522M91) (Cont. H260I200)	**212-1023** (33855A) (Cont. Z660I338)	**216-5146** (840759M91) (Cont. E604I202)				
	Exh.	**218-7545**	Valve Seat						
	Int.	**218-7687**	Valve Seat						
	Int.	**218-7703**	Valve Seat						
85						**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						M.S.	**MS-1421P**	10-20-30	
						1-2-3	MB-2734P		3.4990/3.5000
						5			
						4	MB-2735P (F)		3.4990/3.5000
						Note: Contains The Upper Half Flanged Bearing			
						M.S.	**MS-1592P**	20	
						1-2-3	MB-2929P		3.4990/3.5000
						5			
						4	MB-2930P (F)		3.4990/3.5000
						Note: .010" Oversize on Outside Diameter			
						C.S.	**SH-1245S**		2.4995/2.5005
86						**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						M.S.	**MS-1421P**	10-20-30	
						1-2-3	MB-2734P		3.4990/3.5000
						5			
						4	MB-2735P (F)		3.4990/3.5000
						Note: Contains The Upper Half Flanged Bearing			
						M.S.	**MS-1592P**	20	
						1-2-3	MB-2929P		3.4990/3.5000
						5			
						4	MB-2930P (F)		3.4990/3.5000
						Note: .010" Oversize on Outside Diameter			
						C.S.	**SH-1245S**		2.4995/2.5005

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
87			**636 CID (10.4L) 3208 CATERPILLAR DIESEL ENGINE; MF-1505, MF-1805**								
	4.500"	8		**226-4487** (Cat. 9N6275)	**224-1927**(1)	**S41883**(5) (Cat. 2W8265	1-1/8"	1-7/64"		**Head Set HS54151-8** (From Engine Serial No. 2Z1) **Head Set HS4929B** (From Engine Seral No. 32Y1)	
			224-2512(2,9) (Rebore Kit)		**224-1927X**(9) (Bare Piston) (Cat. 9L7737)				**223-3569**(6) (Cat. 9L8382)	**Head Set HS4929D** (From Engine Serial No. 51Z1) **Head Set HS4929E** (From Engine Serial No. 79V) **Head Set HS4929F** (From Engine Serial No. 90N1) **Head Set HS54151-9** (From Engine Serial No. 40S1) **Lower Set CS4929A** (From Engine Serial No. 2Z1)	
					224-2786(4)	**S41685**(5,8)	2-3/32"	1-3/16"			
					224-2786X (Bare Piston)						
			224-2738(3,9) (Rebore Kit)	**226-4487** (Cat. 9N6275)		**S41542**(5)	2-1/8"	1-7/64"	**223-3628**(7) (Cat. 9N5082)	**Lower Set CS4929B** (From Engine Serial No. 32Y1) **Lower Set CS4929C** (From Engine Serial No. 40S1) **Lower Set CS4929D** (From Engine Serial No. 51Z1) **Lower Set CS4929E** (From Engine Serial No. 79V) **Lower Set CS4929F** (From Engine Serial No. 90N1) **Pan Set OS32498A** (From Engine Serial No. 2Z1 and 79V) **Pan Set OS32498B** (From Engine Serial No. 32Y1) **Pan Set OS32498C** (From Engine Serial No. 40S1) **Pan Set OS32498D** (From Engine Serial No. 51Z1) **Pan Set OS32498E** (From Engine Serial No. 90N1)	
			Notes: 1. Mexican Hat Recessed Head, Straight Connecting Rod 2. Offset Mexican Hat Recessed Head, Straight Connecting Rod 3. Offset Mexican Hat Recessed Head, Tapered Connecting Rod 4. Mexican Hat Recessed Head, Straight Connecting Rod 5. Plasma Moly Compression Ring 6. For Non-Tapered Rods 7. For Tapered Rods 8. Rectangle Top Ring 9. Also Available in .020" and .040" Oversize								
88			**504 CID (8.3L) 504 MINNEAPOLIS MOLINE LPG ENGINE; MF-97**								
	4.625"	6									

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
87	Exh.	**211-2456** (Cat. 9L7683)	**217-3306**		**216-5080** (Cat. 2A4429)	**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						Note: Early Engines, .955" Bearing Length			
	Exh.			**212-1289** - Inner (Cat. 9L9172)		**R.B.**	**CB-1215P**	10-20-30-40	2.7490/2.7502
						Note: Late Engines, 1.010" Bearing Length			
	Exh.			**212-1288** - Outer (Cat. 9N3617)		**M.S.**	**MS-1420P**	10-20-30	
						1	MB-2733P		3.4990/3.5000
						2-3-5	MB-2734P		3.4990/3.5000
						4	MB-2735P (F)		3.4990/3.5000
	Int.	**211-2455** (Cat. 9L9851)	**217-3307** (Cat. 6I2864)		**216-5080** (Cat. 2A4429)	**Note:** Late Engines, Non-Grooved Front Bearing			
						M.S.	**MS-1421P**	10-20-30	
	Int.			**212-1289** - Inner (Cat. 9L9172)		**1-2-3 5**	MB-2734P		3.4990/3.5000
						4	MB-2735P (F)		3.4990/3.5000
	Int.			**212-1288** - Outer (Cat. 9N3617)		**Note:** Early Engines, Contains the Upper Half Flanged Bearing			
						M.S.	**MS-1422P**	10-20-30	
						1	MB-2736P		3.4990/3.5000
						2-3-5	MB-2734P		3.4990/3.5000
						4	MB-2735P (F)		3.4990/3.5000
	Exh.	**218-7807** (Cat. 9N2837)	Valve Seat			**Note:** Late Engines, Grooved Front Bearing			
	Int.	**218-7808** (Cat. 2N8943)	Valve Seat			**M.S.**	**MS-1592P**	20	
						1-2-3 5	MB-2929P		3.4990/3.5000
						4	MB-2930P (F)		3.4990/3.5000
		CAMSHAFT/TIMING COMPONENTS				**Note:** Early Engines, .010" Oversize on Outside Diameter			
						M.S.	**MS-1593P**	20	
		229-1783 (Cat. 9Y3354) Camshaft				**1**	MB-2927P		3.4990/3.5000
						2-3-5	MB-2929P		3.4990/3.5000
						4	MB-2930P (F)		3.4990/3.5000
						Note: Late Engines, Non-Grooved Front Bearing .010" Oversize on Outside Diameter			
		CRANKSHAFT				**M.S.**	**MS-1594P**	20	
						1	MB-2928P		3.4990/3.5000
		247-5007 (Cat. 9N6221) Crankshaft				**2-3-5**	MB-2929P		3.4990/3.5000
						4	MB-2930P (F)		3.4990/3.5000
						Note: Late Engines, Grooved Front Bearing .010" Oversize on Outside Diameter			
						C.S.	**SH-1245S**		2.4995/2.5005
88	Exh.	**211-2007** (M.M. 10A17914)	**217-3914** (M.M. 10A6912)			**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090** (M.M 10A17913)	**217-3914** (M.M. 10A6912)						

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
89			**504 CID (8.3L) HD504A MINNEAPOLIS MOLINE DIESEL ENGINE; MF-97**								
	4.625"	6									
90			**903 CID (14.8L) V903, VT903 CUMMINS DIESEL ENGINES; MF-4840, MF-4880, MF-4900**								
	5.500"	8	Piston with "GW" skirt, Tapered Pin Bosses. Beaded, Press-Fit Sleeve with Crevice Seal **226-1571**(1) (Cum. AR11909) **226-4456** (Cum. 203170) **224-2091**(1) (Cum. 3037413) 15.5 to 1 C.R. **S41885**(2) (Cum. 4087993) Keystone Comp. Rings 1-5/32" 1-1/8" 1-3/16" **223-3563** (Cum. 189763) **Notes:** 1. Use .700" I.D. Piston Pin Not 1.000" I.D. Pins 2. Chrome Ductile Compression Rings							**Head Set HS3934** **Head Gskt 3934** **Lower Set CS3377▲** **Pan Set OS21794** **Valve Cvr VS38787** (Cover to Housing) **Valve Cvr VS27888** (Housing to Head) **Front Seal 47968** **Rear Seal 47969** **Cooler Set GS27277** ▲ Does Not Contain Front and Rear Seals	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
89	Exh.				**216-5146** (840759M91)	**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.				**216-5146** (840759M91)				
90	Exh.	**211-2155** (Cum. 3803520)	**217-3210** (Cum. 138937)		**216-5233** (Cum. 127554)	**R.B.**	**CB-1073P**	10-20	3.1240/3.1250
	Exh.			**212-1200** - Inner (Cum. 146732)		**M.S.**	**MS-1265P**	10-20	
	Exh.			**212-1201** - Outer (Cum. 146731)		**1-2-3 4-5**	MB-2621P		3.7490/3.7500
	Int.	**211-2155** (Cum. 3803520)	**217-3210** (Cum. 138937)		**216-5233** (Cum. 127554)	**5**	MB-2621W		4.1200/4.1400
	Int.			**212-1200** - Inner (Cum. 146732)		**T.W.4**	**TW-449S**		4.1200/4.1400
				212-1201 - Outer (Cum. 146731)		**C.S.**	**SH-1382S**		2.4960/2.4970
	Exh.	**218-3732** (Cum. 127930)	Valve Seat (Available in .003", .010" Oversize)						
	Int.	**218-3732** (Cum. 127930)	Valve Seat (Available in .003", .010", Oversize)						
	CAMSHAFT/TIMING COMPONENTS								
	229-2308 (Cum. 215580)	Camshaft							

MODEL and ENGINE INDEX

WHEEL TRACTORS

Model	Fuel		Line No.
66	Diesel	180DAB, 180DAC, 180DL, 180DLB Waukesha	17
66	Diesel	180DLC, 180DSB, 180GA, 180KL Waukesha	17
66	Gasoline	180GB, 180GK, 180GS, 180SB Waukesha	18
70	Gasoline	D202 Continental	6
70	Kerosene	D202 Continental	6
70 Series	Gasoline	F209 Continental	10
217	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
217	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
217	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
770	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
770	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
770	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
1550	Diesel	VRD232 Waukesha	43
1550	Gasoline	VRG232 Waukesha	44
1555	Diesel	VRD232 Waukesha	43
1555	Gasoline	VRG232 Waukesha	44
1650	Diesel	VRD283 Waukesha	52
1655	Diesel	VRD283 Waukesha	52
166HC	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
166HC	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
166LP	LPG	185DAB, 185DLB, 185GA, 185GB	8
166HC	Gasoline	185GA (To S/N 6503) Waukesha	20
166LP	LPG	185GA (To S/N 6503) Waukesha	20
1750	Diesel	VRD310 Waukesha	57
1755	Diesel	VRD310 Waukesha	57
1770	Diesel	VRD310 Waukesha	57
1770	Gasoline	VRG310 Waukesha	58
1770	LPG	VRG310 Waukesha	58
177HC	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
177HC	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
177HC	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
1800	Diesel	VRD310 Waukesha	57
1800B	Diesel	VRD283 Waukesha (S/N 124396-134683)	54
1800C	Diesel	VRD283 Waukesha (S/N 134684-Up)	54
1850	Diesel	6-354 Perkins	59
1850	Diesel	A6-354 Perkins	59
1850	Gasoline	VRG283 Waukesha (S/N 147254-Up)	55
1850	Gasoline	VRG310 Waukesha	58
1850	LPG	VRG310 Waukesha	58
1850-4WD	Diesel	6-354 Perkins	59
1850-4WD	Diesel	A6-354 Perkins	59
1855	Gasoline	VRG283 Waukesha (S/N 220001-Up)	55
1855	Diesel	VRD310 Waukesha	57
1855	Gasoline	VRG310 Waukesha	58
1855	LPG	VRG310 Waukesha	58
1855T	Diesel	VRD310/S Waukesha	56
1900	Diesel	4-53 Detroit Diesel	53
1950	Diesel	4-53 Detroit Diesel	53
1950	Diesel	6-354 Perkins	59
1950	Diesel	A6-354 Perkins	59
1950T	Diesel	VRD310/S Waukesha	56
1950T	Diesel	VRD310 Waukesha	57
1955	Diesel	VRD310 Waukesha	57
1955T	Diesel	VRD310/S Waukesha	56
2-105	Diesel	4-53 Detroit Diesel	53
2-105	Diesel	6-354 Perkins	59
2-105	Diesel	A6-354 Perkins	59
2-105	Diesel	T6-354 Perkins	60
2-115	Diesel	4-53 Detroit Diesel	53
2-150	Diesel	D585-6 Minneapolis Moline	80
2155	Diesel	D585-6 Minneapolis Moline	80
2255	Diesel	3150 Caterpillar	72
2655	Diesel	D585-6 Minneapolis Moline	80
2-70	Diesel	VRD283 Waukesha	52
2-78	Diesel	VRD283 Waukesha	52
2-85	Diesel	6-654 Perkins	59
2-85	Diesel	A6-354 Perkins	59
4-115	Diesel	4-53 Detroit Diesel	53
4-150	Diesel	3208 Caterpillar	71
4-180	Diesel	3208 Caterpillar	71
440HC	Gasoline	F140 Continental	9
44HC	Gasoline	F140 Continental	9
4-78	Diesel	VRD283 Waukesha	52
550D	Diesel	D155 Waukesha	42
550D	Gasoline	G155 Waukesha	42
550D	Diesel	166D Super Waukesha	32
550HC	Diesel	D155 Waukesha	42
550HC	Gasoline	G155 Waukesha	42
5-Star	Gasoline	340-4 Minneapolis Moline	66
5-Star	LPG	340-4 Minneapolis Moline	66
5-Star	Gasoline	340A-4 Minneapolis Moline	66
5-Star	LPG	340A-4 Minneapolis Moline	66
60HC	Gasoline	160 Waukesha	16
60KD	Gasoline	160 Waukesha	16
660D	Diesel	180DAB, 180DAC, 180DL, 180DLB Waukesha	17
660D	Diesel	180DLC, 180DSB, 180GA, 180KL Waukesha	17
660D	Diesel	D155 Waukesha	42
660D	Gasoline	G155 Waukesha	42
660D	Diesel	166D Super Waukesha	32
660HC	Diesel	D155 Waukesha	42
660HC	Gasoline	G155 Waukesha	42
66D	Diesel	180DAB, 180DAC, 180DL, 180DLB Waukesha	17
66D	Diesel	180DLC, 180DSB, 180GA 180KL Waukesha	17
66D	Diesel	166D Super Waukesha	32
66D	Diesel	D155 Waukesha	42
66D	Gasoline	G155 Waukesha	42
66D	Diesel	180DAB, 180DAC, 180DL, Waukesha	21
66D	Diesel	180DLB, 180DSB Waukesha	21
66D	Diesel	180GA, 180KL Waukesha	22
66HC	Gasoline	180GB, 180GK, 180GS, 180SB Waukesha	18
66HC	Diesel	180DAB, 180DAC, 180DL, 180DLB Waukesha	17
66HC	Diesel	180DLC 180DSB, 180GA, 180KL Waukesha	17
66KD	Distillates	166HC Waukesha	36
66KD	Gasoline	166HC Waukesha	36
66	Gasoline	180GLB, 180GLC Waukesha	31
66LP	LPG	180GLB, 180GLC Waukesha	31
70HC	Gasoline	D202 Continental	6
70HC	Kerosene	D202 Continental	6
70KD	Gasoline	D202 Continental	6
70KD	Kerosene	D202 Continental	6
770D	Diesel	185DLC Waukesha	33
770HC	Diesel	180DAC, 180DLC, 180DLCU Waukesha	7
770HC	Diesel	180DSB, 180DY Waukesha	7
770HC	Gasoline	185GL, 185GLB, 185GM Waukesha	34
770HC	Gasoline	185GS, 185KL Waukesha	34
77D	Diesel	180DAC, 180DLC, 180DLCU Waukesha	7
77D	Diesel	180DSB, 180DY Waukesha	7
77D	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77D	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77D	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77D	Diesel	185DLC Waukesha	33
77D	Diesel	180DAC, 180DSB, 180DY, Waukesha	23
77HC	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77HC	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77LP	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77HC	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	24
77LP	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	24
77HC	Gasoline	185GL, 185GLB, 185GM Waukesha	34
77HC	Gasoline	185GS, 185KL Waukesha	34
77KD	Diesel	180DAC, 180DLC, 180DLCU Waukesha	7
77KD	Diesel	180DSB, 180DY Waukesha	7
77KD	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77KD	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77LP	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77KD	Distillates	177HC Waukesha	37
77KD	Gasoline	177HC Waukesha	37
77LP	Gasoline	185DAB, 185DLB, 185GA, 185DB Waukesha	8
77LP	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77LP	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	8
77LP	Gasoline	185GA, 185GB, 185DAB, 185DLB Waukesha	24
77LP	LPG	185GA, 185GB, 185DAB, 185DLB Waukesha	24
880D	Diesel	188D Super (S/N K11001 - Up) Waukesha	51

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88HC	Gasoline	188HC Waukesha	38
88LP	LPG	188LP Waukesha	38
950D	Diesel	3-71 Detroit Diesel	63
990D	Diesel	3-71 Detroit Diesel	63
995D	Diesel	3-71 Detroit Diesel	63
99D	Diesel	3-71 Detroit Diesel	63
A4T-1600	Diesel	D585-6 Minneapolis Moline	80
BIG MO 400	Diesel	D206, D206-4, D206-4A, D206A Mnpls Moline	46
BIG MO 400	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
BIG MO 400	Diesel	D206L, D206L4 Minneapolis Moline	46
BIG MO 500	Diesel	D206, D206-4, D206-4A, D206A Mnpls Moline	46
BIG MO 500	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
BIG MO 500	Diesel	D206L, D206L4 Minneapolis Moline	46
BIG MO 600	Diesel	D206, D206-4, D206-4A, D206A Mnpls Moline	46
BIG MO 600	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
BIG MO 600	Diesel	D206L, D203L4 Minneapolis Moline	46
DS6202	Gasoline	D202 Continental	6
DS6202	Kerosene	D202 Continental	6
G1000	Gasoline	504-6 Minneapolis Moline	75
G1000	Diesel	D506-4 Minneapolis Moline	76
G1050	Diesel	6-354 Perkins	59
G1050	Diesel	A6-354 Perkins	59
G1050	Gasoline	504-6 Minneapolis Moline	75
G1050	Diesel	D504-6 Minneapolis Moline	76
G1350	Gasoline	504-6 Minneapolis Moline	75
G1350	Diesel	D585-6 Minneapolis Moline	80
G1355	Diesel	D585-6 Minnepolis Moline	80
G705	Gasoline	504-6 Minneapolis Moline	75
G705	Diesel	D506-4 Minneapolis Moline	76
G706	Gasoline	504-6 Minneapolis Moline	75
G706	Diesel	D506-4 Minneapolis Moline	76
G707	Gasoline	504-6 Minneapolis Moline	75
G707	Diesel	D504-6 Minneapolis Moline	76
G708	Gasoline	504-6 Minneapolis Moline	75
G708	Diesel	D504-6 Minneapolis Moline	76
G750	Diesel	VRD283 Waukesha	52
G900	Gasoline	425C Minneapolis Moline	68
G900	LPG	425C Minneapolis Moline	68
GB	Gasoline	403-4 Minneapolis Moline	77
GE	Gasoline	340-4 Minneapolis Moline	67
GE	Gasoline	340A-4 Minneapolis Moline	67
GE	LPG	340-4 Minneapolis Moline	67
GE	LPG	340A-4 Minneapolis Moline	67
GE	Gasoline	403-4 Minneapolis Moline	77
GT	Gasoline	403-4 Minneapolis Moline	77
GTB	Gasoline	403-4 Minneapolis Moline	77
GTC	Gasoline	403-4 Minneapolis Moline	77
GTI	Gasoline	403-4 Minneapolis Moline	77
GTX	Gasoline	605-6 Minneapolis Moline	78
GVI	Gasoline	425C Minneapolis Moline	68
GVI	LPG	425C Minneapolis Moline	68
IND. 400	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
IND. 400	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
IND. 400	Diesel	D206L, D206L-4 Minnapolis Moline	46
IND. 500	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
IND. 500	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
IND. 500	Diesel	D206L, D206L-4 Minneapolis Moline	46
Jet Star	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
Jet Star	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
Jet Star	Diesel	D206L, D206L-4 Minnapolis Moline	46
Jet Star 3	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
Jet Star 3	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
Jet Star 3	Diesel	D206L, D206L-4 Minnapolis Moline	46
Jet Star 4	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
Jet Star 4	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
Jet Star 4	Diesel	D206L, D206L-4 Minneapolis Moline	46
Jet Star Spr 3	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
Jet Star Spr 3	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
Jet Star Spr 3	Diesel	D206L, D206L-4 Minnapolis Moline	46
Jet Star Spr 4	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	46
Jet Star Spr 4	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	46
Jet Star Spr 4	Diesel	D206L, D206L-4 Minnapolis Moline	46
KEA	Gasoline	340-4 Minneapolis Moline	67
KEA	Gasoline	340A-4 Minneapolis Moline	67
KEA	LPG	340-4 Minneapolis Moline	67
KEA	LPG	340A-4 Minneapolis Moline	67
KEA	Gasoline	340-4 Minneapolis Moline	66
KEA	LPG	340-4 Minneapolis Moline	66
KEA	Gasoline	340A-4 Minneapolis Moline	66
KEA	LPG	340A-4 Minneapolis Moline	66
KEC	Gasoline	340-4 Minneapolis Moline	66
KEC	LPG	340-4 Minneapolis Moline	66
KEC	Gasoline	340A-4 Minneapolis Moline	66
KEC	LPG	340A-4 Minneapolis Moline	66
Kombination	Gasoline	340-4 Minneapolis Moline	66
Kombination	LPG	340-4 Minneapolis Moline	66
Kombination	Gasoline	340A-4 Minneapolis Moline	66
Kombination	LPG	340A-4 Minneapolis Moline	66
KTA	Gasoline	340-4 Minneapolis Moline	66
KTA	LPG	340-4 Minneapolis Moline	66
KTA	Gasoline	340A-4 Minneapolis Moline	66
KTA	LPG	340A-4 Minneapolis Moline	66
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M5	LPG	336 Minneapolis Moline	73
M5	Gasoline	336-4 Minneapolis Moline	73
M5	LPG	336-4 Minneapolis Moline	73
M5	Gasoline	336A Minneapolis Moline	73
M5	LPG	336A Minneapolis Moline	73
M5	Gasoline	336A-4 Minneapolis Moline	73
M5	LPG	336A-4 Minneapolis Moline	73
M5	Diesel	D336 Minneapolis Moline	74
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M5	Diesel	D336A Minneapolis Moline	74
M5	Diesel	D336A-4 Minneapolis Moline	74
M504	Gasoline	336 Minneapolis Moline	73
M504	LPG	336 Minneapolis Moline	73
M504	Gasoline	336-4 Minneapolis Moline	73
M504	LPG	336-4 Minneapolis Moline	73
M504	Gasoline	336A Minneapolis Moline	73
M504	LPG	336A Minneapolis Moline	73
M504	Gasoline	336A-4 Minneapolis Moline	73
M504	LPG	336A-4 Minneapolis Moline	73
M504	Diesel	D336 Minneapolis Moline	74
M504	Diesel	D336-4 Minneapolis Moline	74
M504	Diesel	D336A Minneapolis Moline	74
M504	Diesel	D336A-4 Minneapolis Moline	74
M602	Gasoline	336 Minneapolis Moline	73
M602	LPG	336 Minneapolis Moline	73
M602	Gasoline	336-4 Minneapolis Moline	73
M602	LPG	336-4 Minneapolis Moline	73
M602	Gasoline	336A Minneapolis Moline	73
M602	LPG	336A Minneapolis Moline	73
M602	Gasoline	336A-4 Minneapolis Moline	73
M602	LPG	336A-4 Minneapolis Moline	73
M602	Diesel	D336 Minneapolis Moline	74
M602	Diesel	D336-4 Minneapolis Moline	74
M602	Diesel	D336A Minneapolis Moline	74
M602	Diesel	D336A-4 Minneapolis Moline	74
M604	Gasoline	336 Minneapolis Moline	73
M604	LPG	336 Minneapolis Moline	73
M604	Gasoline	336-4 Minneapolis Moline	73
M604	LPG	336-4 Minneapolis Moline	73
M604	Gasoline	336A Minneapolis Moline	73
M604	LPG	336A Minneapolis Moline	73
M604	Gasoline	336A-4 Minneapolis Moline	73
M604	LPG	336A-4 Minneapolis Moline	73
M604	Diesel	D336 Minneapolis Moline	74
M604	Diesel	D336-4 Minneapolis Moline	74
M604	Diesel	D336A Minneapolis Moline	74
M604	Diesel	D336A-4 Minneapolis Moline	74
M670/Spr	Gasoline	336 Minneapolis Moline	73

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M670/Spr	Gasoline	336-4 Minneapolis Moline	**73**
M670/Spr	LPG	336-4 Minneapolis Moline	**73**
M670/Spr	Gasoline	336A Minneapolis Moline	**73**
M670/Spr	LPG	336A Minneapolis Moline	**73**
M670/Spr	Gasoline	336A-4 Minneapolis Moline	**73**
M670/Spr	LPG	336A-4 Minneapolis Moline	**73**
M670/Spr	Diesel	D336 Minneapolis Moline	**74**
M670/Spr	Diesel	D336-4 Minneapolis Moline	**74**
M670/Spr	Diesel	D336A Minneapolis Moline	**74**
M670/Spr	Diesel	D336A-4 Minneapolis Moline	**74**
MD400	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	**46**
MD400	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	**46**
MD400	Diesel	D206L, D206L-4 Minnapolis Moline	**46**
MD500	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	**46**
MD500	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	**46**
MD500	Diesel	D206L, D206L-4 Minnapolis Moline	**46**
Montiac	Diesel	D206, D260-4, D206-4A, D206A Mnpls Moline	**46**
Montiac	Diesel	D206A-4, D206B, D206B-4 Minneapolis Moline	**46**
Montiac	Diesel	D206L, D206L-4 Minnapolis Moline	**46**
R	Gasoline	206 Minneapolis Moline	**45**
R	LPG	206 Minneapolis Moline	**45**
Standard-U	Gasoline	340-4 Minneapolis Moline	**66**
Standard-U	LPG	340-4 Minneapolis Moline	**66**
Standard-U	Gasoline	340A-4 Minneapolis Moline	**66**
Standard-U	LPG	340A-4 Minneapolis Moline	**66**
Standard-UTS	Gasoline	340-4 Minneapolis Moline	**66**
Standard-UTS	LPG	340-4 Minneapolis Moline	**66**
Standard-UTS	Gasoline	340A-4 Minneapolis Moline	**66**
Standard-UTS	LPG	340A-4 Minneapolis Moline	**66**
Super 166D	Gasoline	185DAB, 185DLB, 185GA, 185GB Waukesha	**8**
Super 166D	Distillates	185DAB, 185DLB, 185GA, 185GB Waukesha	**8**
Super 166D	LPG	185DAB, 185DLB, 185GA, 185GB Waukesha	**8**
Super 177HC	Gasoline	216 Waukesha	**35**
Super 177LP	LPG	216 Waukesha	**35**
Super 440	Gasoline	F140 Continental	**9**
Super 55D	Diesel	166D Super Waukesha	**32**
Super 55HC	Gasoline	180GLB, 180GLC Waukesha	**31**
Super 66	Diesel	180DAB, 180DAC, 180DL, 180DLB Waukesha	**17**
Super 66	Diesel	180DLC, 180DSB, 180GA, 180KL Waukesha	**17**
Super 66	Gasoline	180GB, 180GK, 180GS, 180SB Waukesha	**18**
Super 66D	Diesel	166D SUPER Waukesha	**32**
Super 66HC	Gasoline	180GLB, 180GLC Waukesha	**31**
Super 66LP	LPG	180GLB, 180GLC Waukesha	**31**
Super 66HC	Diesel	D155 Waukesha	**42**
Super 66HC	Gasoline	G155 Waukesha	**42**
Super 670	Gasoline	336-4 Minneapolis Moline	**73**
Super 670	Diesel	D336-4 Minneapolis Moline	**74**

BALERS

Model	Fuel		Line No.
Auto Baler 8	Gasoline	VE4 Wisconsin	**3**
100	Gasoline	VE4 Wisconsin	**3**

COMBINES

Model	Fuel		Line No.
6	Gasoline	Y91 Continental	**1**
6 Grainmstr	Gasoline	Y91 Continental	**1**
8	Gasoline	Y91 Continental	**1**
8 Grainmstr	Gasoline	Y91 Continental	**1**
15	Gasoline	Y91 Continental	**1**
6	Gasoline	Y4091 Continental	**2**
8	Gasoline	Y4091 Continental	**2**
10 Grainmstr	Gasoline	F209 Continental	**10**
30 Grainmstr	Gasoline	F209 Continental	**10**
15 Grainmstr	Gasoline	Y112 Continental	**11**
18 Grainmstr	Gasoline	Y112 Continental	**11**
20 Grainmstr	Gasoline	Y112 Continental	**11**
22 Grainmstr	Gasoline	Y112 Continental	**11**
30	Gasoline	F206 Continental	**12**
33	Gasoline	F206 Continental	**12**
18	Gasoline	VF4 Wisconsin	**13**
22	Gasoline	VF4 Wisconsin	**13**
30 Grainmstr	Gasoline	QXB Hercules	**15**
25	Flex Fuel	F226 Continental	**19**
30	Flex Fuel	F226 Continental	**19**
33	Flex Fuel	F226 Continental	**19**
35	Flex Fuel	F226 Continental	**19**
40	Flex Fuel	F226 Continental	**19**
570	Flex Fuel	F226 Continental	**19**
S	Flex Fuel	F226 Continental	**19**
SP168	Flex Fuel	F226 Continental	**19**
SP168S	Flex Fuel	F226 Continental	**19**
SP40	Flex Fuel	F226 Continental	**19**
SR	Flex Fuel	F226 Continental	**19**
35	Gasoline	F244 Continental	**25**
40	Gasoline	F244 Continental	**25**
S	Gasoline	F244 Continental	**25**
SP168	Gasoline	F244 Continental	**25**
SP168S	Gasoline	F244 Continental	**25**
SR	Gasoline	F244 Continental	**25**
10	Gasoline	F4162 Continental	**26**
10 Grainmstr	Gasoline	F4162 Continental	**26**
12	Gasoline	F4162 Continental	**26**
12 Grainmstr	Gasoline	F4162 Continental	**26**
525 Base	Gasoline	Ind. 8A Chrysler	**27**
525 Edbl Bean	Gasoline	Ind. 8A Chrysler	**27**
2890	Gasoline	Ind. 8A Chrysler	**27**
430 Base	Gasoline	Ind. 16, 16A Chrysler	**28,28**
525 Rice Mdl	Gasoline	Ind. 16, 16A Chrysler	**28**
535 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
535 Rice Mdl	Gasoline	Ind. 16, 16A Chrysler	**28**

CRAWLER TRACTORS

Model	Fuel		Line No.
A	Gasoline	IXB3 Hercules	**14**
A21	Gasoline	IXB3 Hercules	**14**
AG	Gasoline	F226 Continental	**19**
AG6	Flex Fuel	F226 Continental	**19**
AG15	Flex Fuel	F226 Continental	**19**
AG20	Flex Fuel	F226 Continental	**19**
BF	Gasoline	IXB3 Hercules	**14**
BFH	Gasoline	IXB3 Hercules	**14**
GG	Gasoline	IXA Hercules	**4**
HG	Gasoline	IXA Hercules	**4**
GG	Gasoline	IXK3 Hercules	**5**
HG	Gasoline	IXK3 Hercules	**5**

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WHEEL TRACTORS

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Super 77D	Diesel	Super 177D Waukesha	**33**
Super 77HC	Gasoline	185GL, 185GLB, 185GM Waukesha	**34**
Super 77HC	Gasoline	185GS, 185KL Waukesha	**34**
Super 88D	Diesel	188D Super (To S/N K11000) Waukesha	**50**
Super 88D	Diesel	188D Super (S/N K11001-Up) Waukesha	**51**
Super 88HC	Gasoline	188HC Super (To S/N K11000) Waukesha	**48**
Super 88LP	LPG	188LP Super (To S/N K11000) Waukesha	**48**
Super 88HC	Gasoline	188HC Super (S/N K11001-Up) Waukesha	**49**
Super 88LP	LPG	188LP Super (S/N K11001-Up) Waukesha	**49**
Super 99	Diesel	3-71 Detroit Diesel	**63**
Super HC	Gasoline	F140 Continental	**9**
TWIN CITY	Gasoline	340-4 Minneapolis Moline	**65**
TWIN CITY	LPG	340-4 Minneapolis Moline	**65**
TWIN CITY	Gasoline	340A-4 Minneapolis Moline	**65**
TWIN CITY	LPG	340A-4 Minneapolis Moline	**65**
U	Diesel	D283-4A Minneapolis Moline	**70**
U	Gasoline	283-4 Minneapolis Moline	**62**
U302	Gasoline	220A Minneapolis Moline	**64**
U302	LPG	220A Minneapolis Moline	**64**
UB	Diesel	D283-4A Minneapolis Moline	**70**
UB	Gasoline	283-4A Minneapolis Moline	**62**
UB Special	Gasoline	283-4A Minneapolis Moline	**62**
UBD	Gasoline	283-4A Minneapolis Moline	**62**
UBE	Gasoline	283-4A Minneapolis Moline	**62**
UBN	Gasoline	283-4A Minneapolis Moline	**62**
UBU	Gasoline	283-4A Minneapolis Moline	**62**
Universal-M	Gasoline	340-4 Minneapolis Moline	**65**
Universal-M	Gasoline	340A-4 Minneapolis Moline	**65**
Universal-M	LPG	340-4 Minneapolis Moline	**65**
Universal-M	LPG	340A-4 Minneapolis Moline	**65**
Universal-MTA	Gasoline	340-4 Minneapolis Moline	**65**
Universal-MTA	Gasoline	340A-4 Minneapolis Moline	**65**
Universal-MTA	LPG	340-4 Minneapolis Moline	**65**
Universal-MTA	LPG	340A-4 Minneapolis Moline	**65**
Universal-UTU	Gasoline	340-4 Minneapolis Moline	**65**
Universal-UTU	Gasoline	340A-4 Minneapolis Moline	**65**
Universal-UTU	LPG	340-4 Minneapolis Moline	**65**
Universal-UTU	LPG	340A-4 Minneapolis Moline	**65**
UTI	Diesel	D283-4A Minneapolis Moline	**70**
UTI	Gasoline	283-4A Minneapolis Moline	**62**
UTS	Diesel	D283-4A Minneapolis Moline	**70**
UTS	Gasoline	283-4A Minneapolis Moline	**62**
UTSD	Gasoline	283-4A Minneapolis Moline	**62**
Z	Gasoline	206 Minneapolis Moline	**45**
Z	LPG	206 Minneapolis Moline	**45**

BALERS

Model	Fuel		Line No.
Bale-O-Matic	Gasoline	VF4 Wisconsin	**13**

COMBINES

Model	Fuel		Line No.
542 Base	Gasoline	In. 16, 16A Chrysler	**28**
545 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
3490 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
3496 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
3496 Rice Mdl	Gasoline	Ind. 16, 16A Chrysler	**28**
3497 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
4290 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
4290 Rice Mdl	Gasoline	Ind. 16, 16A Chrysler	**28**
4293 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
4296 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
4296 Rice Mdl	Gasoline	Ind. 16, 16A Chrysler	**28**
4597 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
5542 Base	Gasoline	Ind. 16, 16A Chrysler	**28**
430 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
431 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
525 Rice Mdl	Gasoline	Ind. 32, 33 Chrysler	**29**
535 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
535 Rice Mdl	Gasoline	Ind. 32, 33 Chrysler	**29**
542 Base	Gasoline	In. 32, 33 Chrysler	**29**
545 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
3490 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
3496 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
3496 Rice Mdl	Gasoline	Ind. 32, 33 Chrysler	**29**
3497 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
4290 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
4290 Rice Mdl	Gasoline	Ind. 32, 33 Chrysler	**29**
4293 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
4296 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
4296 Rice Mdl	Gasoline	Ind. 32, 33 Chrysler	**29**
4597 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
5542 Base	Gasoline	Ind. 32, 33 Chrysler	**29**
535	Diesel	3-152 (S/N 1829891 - 1935854) Ind. Inj. Perkins	**40**
545	Diesel	3-152 (S/N 1829891 - 1935854) Ind. Inj. Perkins	**40**
535	Diesel	3-152 (S/N 1935855-Up) Ind. Inj. Perkins	**41**
545	Diesel	3-152 (S/N 1935855-Up) Ind. Inj. Perkins	**41**
5542	Diesel	6-354 Perkins	**59**
5542	Diesel	A6-354 Perkins	**59**
7300	Diesel	6-354 Perkins	**59**
7300	Diesel	A6-354 Perkins	**59**
7600	Diesel	6-354 Perkins	**59**
7600	Diesel	A6-354 Perkins	**59**
7800	Diesel	6-354 Perkins	**59**
7800	Diesel	A6-354 Perkins	**59**
7800	Diesel	T6-354 Perkins	**60**

CRAWLER TRACTORS

Model	Fuel		Line No.
HG31	Gasoline	IXK3 Hercules	**5**
OC3	Gasoline	IXB3 Hercules	**14**
OC4	Gasoline	IXB3 Hercules	**14**
OC4-3D	Diesel	DD130 Hercules	**30**
OC4-3G	Diesel	DD130 Hercules	**30**
OC46	Diesel	DD130 Hercules	**30**
OC9	Diesel	DD198 Hercules	**47**
OC96	Diesel	DD198 Hercules	**47**
OC9D	Diesel	DD198 Hercules	**47**
OC12	Diesel	JXD Hercules	**61**
OC126	Diesel	JXD Hercules	**61**

MODEL and ENGINE INDEX

ENGINES-POWER UNITS

Model	Fuel		Line No.
160	Gasoline	121 cid (2.0L) Waukesha	**16**
206	Gasoline	206 cid (3.4L) Minneapolis Moline	**45**
1210-12A	Gasoline	1210 cid (19.8L) Minneapolis Moline	**79**
16 Ind.	Gasoline	265 cid (4.3L) Chrysler Ind.	**28**
16A Ind.	Gasoline	265 cid (4.3L) Chrysler Ind.	**28**
177HC	Diesel	216 cid (3.5L) Waukesha	**37**
180DAB	Diesel	129 cid (2.1L) Waukesha	**17,21**
180DAC	Diesel	219 cid (2.1L) Waukesha	**17**
180DAC	Diesel	129 cid (2.1L) Waukesha	**21**
180DL	Diesel	129 cid (2.1L) Waukesha	**17,21**
180DLB	Diesel	129 cid (2.1L) Waukesha	**17,21**
180DLC	Diesel	129 cid (2.1L) Waukesha	**17**
180DLC	Diesel	144 cid (2.4L) Waukesha	**32**
180DLCU	Diesel	144 cid (2.4L) Waukesha	**32**
180DSB	Diesel	129 cid (2.1L) Waukesha	**17,21**
180GA	Diesel	129 cid (2.1L) Waukesha	**17,22**
180GB	Gasoline	129 cid (2.1L) Waukesha	**18**
180GK	Gasoline	129 cid (2.1L) Waukesha	**18**
180GLB	Gasoline	144 cid (2.4L) Waukesha	**31**
180GLB	Flex Fuel	144 cid (2.4L) Waukesha	**36**
180GLC	Gasoline	144 cid (2.4L) Waukesha	**31**
180GS	Gasoline	129 cid (2.1L) Waukesha	**18**
180KL	Diesel	129 cid (2.1L) Waukesha	**17,22**
180SB	Gasoline	129 cid (2.1L) Waukesha	**18**
185DAB	Gasoline	194 cid (3.2L) Waukesha	**8,24**
185DAC	Diesel	194 cid (3.2L) Waukesha	**7,23**
185DLB	Gasoline	194 cid (3.2L) Waukesha	**8,24**
185DLC	Diesel	194 cid (3.2L) Waukesha	**7**
185DLC	Diesel	216 cid (3.5L) Waukesha	**33**
185DLCU	Diesel	194 cid (3.2L) Waukesha	**7**
185DSB	Diesel	194 cid (3.2L) Waukesha	**7,23**
185DY	Diesel	194 cid (3.2L) Waukesha	**7,23**
185GA	Gasoline	194 cid (3.2L) Waukesha	**8,20,24**
185GB	Gasoline	194 cid (3.2L) Waukesha	**8,24**
185GL	Gasoline	216 cid (3.5L) Waukesha	**34**
185GL	LPG	216 cid (3.5L) Waukesha	**35**
185GLB	Gasoline	216 cid (3.5L) Waukesha	**34**
185GLB	LPG	216 cid (3.2L) Waukesha	**35**
185GM	Gasoline	216 cid (3.5L) Waukesha	**34**
185GS	Gasoline	216 cid (3.5L) Waukesha	**34**
185GS	LPG	216 cid (3.2L) Waukesha	**35**
185KL	Gasoline	216 cid (3.5L) Waukesha	**34**
185KL	LPG	216 cid (3.2L) Waukesha	**35**
188D	Diesel	231 cid (3.8L) Waukesha	**39**
188D Super	Diesel	265 cid (4.3L) Waukesha	**50,51**
188HC	Gasoline	231 cid (3.8L) Waukesha	**38**
188HC Super	Gasoline	265 cid (4.3L) Waukesha	**48**
188HC	Gasoline	265cid (4.3L) Waukesha	**49**
188LP	LPG	231 cid (3.8L) Waukesha	**38**
188LP Super	LPG	265 cid (4.3L) Waukesha	**48**
188LP	LPG	265 cid (4.3L) Waukesha	**49**
220A	Gasoline	220 cid (3.6L) Minneapolis Moline	**64**
283-4A	Gasoline	283 cid (4.6L) Minneapolis Moline	**62**
3150	Diesel	573 cid (9.4L) Caterpillar	**72**
3-152	Diesel	152 cid (2.5L) Perkins	**40,41**
32 Ind.	Gasoline	265 cid (4.3L) Chrysler Ind.	**29**
3208	Diesel	636 cid (10.4L) Caterpillar	**71**
33 Ind.	Gasoline	265 cid (4.3L) Chrysler Ind.	**29**
336	Gasoline	336 cid (5.5L) Minneapolis Moline	**73**
336	LPG	336 cid (5.5L) Minneapolis Moline	**73**
336-4	Gasoline	336 cid (5.5L) Minneapolis Moline	**73**
336-4	LPG	336 cid (5.5L) Minneapolis Moline	**73**
336A	Gasoline	336 cid (5.5L) Minneapolis Moline	**73**
336A	LPG	336 cid (5.5L) Minneaoplis Moline	**73**

NOTES

MODEL and ENGINE INDEX

ENGINES-POWER UNITS

Model	Fuel		Line No.
336A-4	Gasoline	336 cid (5.5L) Minneapolis Moline	**73**
336A-4	LPG	336 cid (5.5L) Minneapolis Moline	**73**
340-4	Gasoline	283 cid (4.6L) Minneapolis Moline	**65,66,67**
340-4	LPG	283 cid (4.6L) Minneapolis Moline	**65,66,67**
340A-4	Gasoline	283 cid (4.6L) Minneapolis Moline	**65,66,67**
340A-4	LPG	283 cid (4.6L) Minneapolis Moline	**65,66,67**
3-71	Diesel	213 cid (3.5L) Detroit Diesel	**63**
403	Gasoline	403 cid (6.6L) Minneapolis Moline	**77**
425C	Gasoline	425 cid (7.0L) Minneapolis Moline	**68**
425C	LPG	425 cid (7.0L) Minneapolis Moline	**68**
4-53	Diesel	212 cid (3.5L) Detroit Diesel	**53**
504-6	Gasoline	504 cid (8.3L) Minneapolis Moline	**75**
605-6	Gasoline	605 cid (9.9L) Minneapolis Moline	**78**
6-354	Diesel	354 cid (5.0L) Perkins	**59**
800-6A	Gasoline	800 cid (13.1L) Minneapolis Moline	**82**
800-6A	CNG	800 cid (13.1L) Minneapolis Moline	**82**
800-6A	LPG	800 cid (13.1L) Minneapolis Moline	**82**
8A Ind.	Gasoline	251 cid (4.1L) Chrysler Ind.	**27**
A6-354	Diesel	354 cid (5.0L) Perkins	**59**
D155	Diesel	155 cid (2.5L) Waukesha	**42**
D202	Gasoline	202 cid (3.3L) Continental	**6**
D206	Diesel	206 cid (3.4L) Minneapolis Moline	**46**
D283-4A	Diesel	283 cid (4.6L) Minneapolis Moline	**70**
D336	Diesel	336 cid (5.5L) Minneapolis Moline	**74**
D336-4	Diesel	336 cid (5.5L) Minneapolis Moline	**74**
D336A	Diesel	336 cid (5.5L) Minneapolis Moline	**74**
D336A-4	Diesel	336 cid (5.5L) Minneapolis Moline	**74**
D425-6	Diesel	425 cid (7.0L) Minneapolis Moline	**69**
D425A-6	Diesel	425 cid (7.0L) Minneapolis Moline	**69**
D425B-6	Diesel	425 cid (7.0L) Minneapolis Moline	**69**
D504-6	Diesel	504 cid (8.3L) Minneapolis Moline	**76**
D585-6	Diesel	585 cid (9.6L) Minneapolis Moline	**80**
DD130	Diesel	130 cid (2.1L) Hercules	**30**
DD198	Diesel	198 cid (3.2L) Hercules	**47**
F140	Gasoline	140 cid (2.3L) Continental	**9**
F206	Gasoline	206 cid (3.4L) Continental	**12**
F209	Gasoline	209 cid (3.4L) Continental	**10**
F226	Flex Fuel	226 cid (3.7L) Continental	**19**
F244	Gasoline	244 cid (4.0L) Continental	**25**
F4162	Gasoline	162 cid (2.7L) Continental	**26**
G155	Gasoline	155 cid (2.5L) Waukesha	**42**
GMC V-6	Gasoline	478 cid (7.8L) GMC	**81**
HD425-6	Diesel	425 cid (7.0L) Minneapolis Moline	**69**
HD800-6A	CNG	800 cid (13.1L) Minneapolis Moline	**83**
HD800-6A	Gasoline	800 cid (13.1L) Minneapolis Moline	**83**
HD800-6A	LPG	800 cid (13.1L) Minneapolis Moline	**83**
IXA	Gasoline	113 cid (1.9L) Hercules	**4**
IXB3	Gasoline	133 cid (2.2L) Hercules	**14**
IXK3	Gasoline	123 cid (2.0L) Hercules	**5**
JXD	Gasoline	123 cid (2.0L) Hercules	**61**
QXB	Gasoline	205 cid (5.2L) Hercules	**15**
T6-354	Diesel	354 cid (5.0L) Perkins	**60**
VE4	Gasoline	92 cid (1.5L) Wisconsin	**3**
VF4	Gasoline	108 cid (1.5L) Wisconsin	**13**
VRD232	Diesel	232 cid (3.8L) Waukesha	**43**
VRD283	Diesel	283 cid (4.6L) Waukesha	**52,54**
VRD310	Diesel	310 cid (5.1L) Waukesha	**57**
VRD310/S	Diesel	310 cid (5.1L) Waukesha	**56**
VRG232	Gasoline	323 cid (3.8L) Waukesha	**44**
VRG283	Gasoline	283 cid (4.6L) Waukesha	**55**
VRG310	Gasoline	310 cid (5.1L) Waukesha	**58**
Y112	Gasoline	112 cid (1.8L) Continental	**11**
Y4091	Gasoline	91 cid (1.5L) Continental	**2**
Y91	Gasoline	91 cid (1.5L) Continental	**1**

NOTES

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
1			**91 CID (1.5L) Y91 CONTINENTAL GASOLINE ENGINE; COMBINE-6, 8, 15, GRAINMASTER 6, 8**								
	2.875"	4							**223-3503**(1) (Y400G234)	**Full Set FS1596 ●** **Head Set HS1596 ◆** **Head Gskt 1596** **Pan Set OS20496X** **Valve Cvr VS38005** **Manif Set MS18610 ■** **Front Cvr T28602** **Front Seal 46423 *** **Front Seal 48756 * *** **Rear Seal 49293 †** **Rear Seal JV663 ◗** **Rckr Seal 49293** **Dist Wshr 2014A** **Water Gskt C24109** **Water Gskt C24109VF ★**	

Note:
1. Requires Light Reaming, (Bronze .765" O.D.)

● Except Clark Mule (Includes 1.781" Timing Cover Seal)
◆ Includes 1.781" Timing Cover Seal
■ Intake and Exhaust Manifold Set
* Engine with 2.000" Shaft
* * Engine with 1.781" Shaft
† Rear Seal for Clark Mule Application
◗ Rear Seal Except Clark Mule Application
★ Victo-Foam Gasket

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers
1	Exh.	**211-1095** ● (Y400I1210)	**217-3619** (Y400I209)	**212-1025** ◆ (Y400I215)	**216-5147** ◆ (Y400I205)
	Exh.	**211-2075** ■ (Z120I236)			**216-5234** ▲ (Z120I1235)
	Int.	**211-1072** ◆ (Y400I301)	**217-3619** (Y400I209)	**212-1025** ◆ (Y400I215)	**216-5147** ◆ (Y400I205)
	Int.				**216-5234** ▲ (Z120I1235)
	Exh.	**218-7349**	Valve Seat		

● Except with Rotocap Assembly, (Drilled Valve Stem)
◆ With Drilled Valve Stem
■ Late Design, with Rotocap Assembly (1 Groove)
▲ Late Design, (1 Lock Groove Valve)

CAMSHAFT/TIMING COMPONENTS

213-1676.005 Mechanical Lifter .005" O.S.

OIL PUMP

601-1107 Bolt On Screen w/ Cast Iron Drive Gear

BEARINGS

Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
R.B.	**CB-278P**	10-20-30	1.4999/1.5000
Note: Positon 1 and 3			
R.B.	**CB-279P**	10-20-30	1.4999/1.5000
Note: Positon 2 and 4			
M.S.	**MS-806P**	10-30	
1	MB-2366P		1.7475/1.7485
2	MB-1651P		1.7475/1.7485
3	MB-1652P		1.7475/1.7485
Note: Timing Gear Must be Removed to Replace Single Flange Front Bearings; Contains Straight Shell Bearings; Use with Item Number TW-134S			
M.S.	**MS-1627P**	10-30	
1	MB-2982P(F)		1.7475/1.7485
2	MB-1651P		1.7475/1.7485
3	MB-1652P		1.7475/1.7485
Note: Contains Flanged Bearings			
T.W.	**TW-143S**		
1	MB-1653W		1.7812
Note: Contains 2 pieces for Position 1; Use with Item Number MS-806P			
C.S.	**SH-191S**		
1	SH-191		1.8085/1.8095
2	SH-56		1.7457/1.7465
3	SH-57		1.2465/1.2475

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
2			**91 CID (1.5L) Y4091 CONTINENTAL GASOLINE ENGINE; COMBINE-6, 8**								
	2.875"	4							**223-3503**(1) (Y400G234)	**Full Set FS1596** ● **Head Set HS1596** ◆ **Head Gskt 1596** **Pan Set OS20496X** **Valve Cvr VS38005** **Manif Set MS18610** ■ **Front Seal 46423** * **Front Seal 48756** * * **Rear Seal 49293** † **Rear Seal JV663** ❩ **Rckr Seal 49293** **Dist Wshr 2014A** **Water Gskt C24109** **Water Gskt C24109VF** ★	
			Note: 1. Requires Light Reaming, (Bronze .765" O.D.)							● Except Clark Mule (Includes 1.781" Timing Cover Seal) ◆ Includes 1.781" Timing Cover Seal ■ Intake and Exhaust Manifold Set * Engine with 2.000" Shaft * * Engine with 1.781" Shaft † Rear Seal for Clark Mule Application ❩ Rear Seal Except Clark Mule Application ★ Victo-Foam Gasket	
3			**92 CID (1.5L) VE4 WISCONSIN V-4 GASOLINE ENGINE; AUTO BALER-8, BALER-100**								
	3.000"	4	Repair Sleeve, (.0938" Wall - 9.250" Length) **226-8050**		**S5578**	3-3/32"	1-1/4"		**223-3471**(1) (HG157A)	**Full Set FS1785** **Head Set HS1785** **Head Gskt 1785** **Manif Set MS17577**	
			Note: 1. Requires Light Reaming, (Steel Backed Copper-Lead Matrix)								

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
2	Exp.	**211-1095** ● (Y400I1210)	**217-3619** (Y400I209)	**212-1025** ◆ (Y400I215)	**216-5147** ◆ (Y400I205)	**R.B.**	**CB-278P**	10-20-30	1.4999/1.5000
						Note: Positon 1 and 3			
	Exp.	**211-2075**■ (Z120I236)			**216-5234** ▲ (Z120I235)	**R.B.**	**CB-279P**	10-20-30	1.4999/1.5000
						Note: Positon 2 and 4			
	Int.	**211-1072** ◆ (Y400I302)	**217-3619** (Y400I209)	**212-1025** ◆ (Y400I215)	**216-5147** ◆ (Y400I205)	**M.S.**	**MS-806P**	10-30	
						1	MB-2366P		1.7475/1.7485
						2	MB-1651P		1.7475/1.7485
	Int.				**216-5234** ▲ (Z120I1235)	**3**	MB-1652P		1.7475/1.7485
						Note: Timing Gear Must be Removed to Replace Single Flange Front Bearings; Contains Straight Shell Bearings; Use with Item Number TW-134S			
	Exh.	**218-7349** Valve Seat				**M.S.**	**MS-1627P**	10-30	
						1	MB-2982P(F)		1.7475/1.7485
						2	MB-1651P		1.7475/1.7485
						3	MB-1652P		1.7475/1.7485
						Note: Contains Flanged Bearings			
		● Except with Rotocap Assembly, (Drilled Valve Stem)				**T.W.**	**TW-143S**		
		◆ Drilled Valve Stem				**1**	MB-1653W		1.7812
		■ Late Design, With Rotocap Assembly (1 Groove)				**Note:** Contains 2 pieces for Position 1; Use with Item Number MS-806P			
		▲ Late Design, (1 Lock Groove Valve)				**C.S.**	**SH-191S**		
		CAMSHAFT/TIMING COMPONENTS				**1**	SH-191		1.8085/1.8095
						2	SH-56		1.7457/1.7465
		213-1676.005 Mechanical Lifter .005" O.S.				**3**	SH-57		1.2465/1.2475
		OIL PUMP							
		601-1107 Bolt On Screen w/ Cast Iron Drive Gear							
3	Exp.	**211-1187** (AE75B)	**217-3907** ● (AD41)		**216-5234** (AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Exp.	**211-1375** ◆ (AE75D)							
	Int.	**211-1187** (AE75B)	**217-3907** ● (AD41)	**212-1032** (AF49A)	**216-5234** (AH9)				
	Exp.	**218-7417** ■ (HG201) Valve Seat							
	Int.	**218-7417** ■ (HG201) Valve Seat							
		● Iron, (1.188" Length, .438" Outside Dia.)							
		◆ Stellite Face, (Standard on Suffix "D" Engines, Optional on Other Engines)							
		■ Requires Stellite Face Valve							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
4			**113 CID (1.9L) IXA HERCULES GASOLINE ENGINE; CRAWLER TRACTOR-GG, HG**								
	3.000"	4	Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8050**							**Manif Set MS12011** ● ● Intake and Exhaust Manifold Set	
5			**123 CID (2.0L) IXK3 HERCULES GASOLINE ENGINE; CRAWLER TRACTOR-GG, HG, HG31**								
	3.125"	4	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8002**							**Pan Set OS30490** **Manif Set MS12011** ● **Rear Seal 49841** ● Intake and Exhaust Manifold Set	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
4	Exh.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Exh.		**217-3697** ◆						
	Int.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Int.		**217-3697** ◆						
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-4010** ■	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Iron, (.485" Outside Dia.) ◆ Iron, (.532" Outside Dia.) ■ Powdered Metal								
5	Exh.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Exh.		**217-3697** ◆						
	Int.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Int.		**217-3697** ◆						
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-4010** ■	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Iron, (.485" Outside Dia.) ◆ Iron, (.532" Outside Dia.) ■ Powdered Metal								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
6			**202 CID (3.3L) D202 CONTINENTAL GASOLINE, KEROSENE ENGINE; WHEEL TRACTOR-70, 70HC, 70KD, DS6202**								
	3.125"	6	Overbore Conversion to 3.250" Bore		**224-2751**	**439**	2-3/32"	2-5/32"	**223-3349**(1) (F400G211)		
						539	2-3/32"	2-5/32"	**223-3429**(2) (F800G204)		
									223-3605(3)		
			Notes: 1. Requires Light Reaming, Thick Wall, (Bronze .919" Outside Dia.) 2. Requires Light Reaming, (Steel Backed Copper-Lead Matrix 1.066" Outside Dia.) 3. Requires Boring								
7			**194 CID (3.2L) 185DAC, 185DLC, 185DLCU, 185DSB, 185DY WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-77D, 77KD, 770HC**								
	3.125"	6							**223-3514**(1) (1K230)	**Lower Set OS31415** **Valve Cvr VS39684**	
			Note: 1. Requires Boring, (2 per Rod)								
8			**194 CID (3.2L) 185DAB, 185DLB, 185GA, 185GB WAUKESHA DISTILLATES, GASOLIINE, LPG ENGINE; WHEEL TRACTOR-77D, 77HC, 77KD, 77LP, SUPER 166D, 166HC. 177HC, 217, 770 SERIES**								
	3.125"	6							**223-3514**(1) (1K230)	**Full Set FS1919** ● **Head Set HS1919** **Head Gskt 1919** **Pan Set OS31415** **Valve Cvr VS39684** **Front Seal 49395** ● Crankshaft Seals Not Included	
			Note: 1. Requires Boring, (2 per Rod)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
6	Exh.				**216-5080** (B200A)	**R.B.** **Note:** For Position 2, 4 and 6	**CB-78P**	10-20-30-40, C60	1.9365/1.9375
	Int.				**216-5080** (B200A)	**R.B.** **Note:** For Position 1, 3 and 5	**CB-79P**	10-20-30-40, C60	1.9365/1.9375
	Int.	**218-7535** ● Valve Seat (158605A)				**M.S.**	**MS-194P-10**	10-30	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
						2-3	MB-1404P		2.2490/2.2500
						4	MB-1405P		2.2490/2.2500
						Note: Timing Gear must be Removed when replacing Single Flanged Front Bearings; Contains 2 piece Thrust Washer Set used in position 1; Contains Straight Shell Bearings			
		● Available in .005", .010" O.S.				**T.W.**	**TW-424S**		
						1	MB-1403W		2.2812
						Note: Contains 1 piece, for position 1			
						C.S.	**SH-190S**		
						1	SH-1211		1.8715/1.8725
						2	SH-191		1.8085/1.8095
						3	SH-56		1.7457/1.7465
						4	SH-57		1.2465/1.2475
7						**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
						R.B. **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500
8						**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
						R.B. **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
9			**140 CID (2.3L) F140 CONTINENTAL GASOLINE ENGINE; WHEEL TRACTOR-SUPER HC, 44HC, 440HC, SUPER 440**							
	3.188"	4	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8003** **224-1611**			**S4799** (F140T136)	3-1/8"	3/16"	**223-3349**(1) (F400G211)	**Full Set FS1634A** ● **Full Set FS1634GH** ◆ **Head Set HS1634X** **Head Gskt 1634** **Pan Set OS20509** **Valve Cvr VS38032** ▲ **Valve Cvr VS38083** ★ **Manif Set MS15028** ■ **Front Cvr T28130** ❩ **Front Cvr T28884** ❩ **Front Cvr T28928** † **Front Cvr JV5015** † † **Front Seal 47065** † † † **Front Seal JV895** * **Front Seal JV1027** * * **Rear Seal JV663** **Acc. Seal 49297** **Gvnr Seal 48816** **Mgnto Mnt B25800** **Rckr Seal 49293** **Water Gskt C24109** **Water Gskt C24109VF** * * *
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8052**			**S51818** (ZA120T101)	3-1/8"	1-3/16"	**223-3429**(2) (R800G204)	
	3.250"	4	Overbore Conversion			**S40075**	2-3/32"	2-5/32"	**223-3605**(3)	
	3.313"	4	Overbore Conversion			**S40126**	2-3/32"	2-5/32"		

Notes:
1. Thin Wall, (Bronze .919" Outside Dia.)
2. Requires Light Reaming, (Steel Backed Copper-Lead Matrix 1.066" Outside Dia.)
3. Requires Boring, (Bronze)

● Timing Cover Set not Included
◆ Contains Extra End Plate and Gear Cover Gaskets For Multiple Engines
■ Intake and Exhaust Manifold Set
▲ 2 Gear Camshaft Drive
★ 3 Gear Camshaft Drive
❩ Gear Cover Gasket
† Vickers Pump Drive
† † Contains Extra End Plate and Gear Cover Gaskets for Multiple Engines
† † † Except Divco
* Towmotor
* * Except Towmotor
* * * Victo-Foam

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
9	Exh.	**211-1053** ● (F600I238)	**217-3620** ◆ (F400I213)	**212-1025** (Y400I215)	**216-5147** ■ (Y400I205)	**R.B.**	**CB-78P**	10-20-30-40, C60	1.9365/1.9375
						Note: Position 2 and 4			
	Exh.	**211-1589** ▲ (F400I228)			**216-5234** ◗ (Z120I235)	**R.B.**	**CB-79P**	10-20-30-40, C60	1.9365/1.9375
						Note: Position 1 and 3			
	Int.	**211-1588** ★ (F400I229)	**217-3620** ◆ (F400I213)	**212-1025** (Y400I215)	**216-5147** ■ (Y400I205)	**M.S.**	**MS-176P-10**	10-20	
						1	MB1403P		2.2490/2.2500
						1	MB-1403W		2.2812
	Int.				**216-5234** ◗ (Z120I235)	**2**	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
						Note: Timing Gear must be Removed when replacing Single Flanged Front Bearings; Contains 2 piece Thrust Washer Set used in position 1; Contains Straight Shell Bearings			
	Exh.	**218-7405** † (F140A216)	Valve Seat			**T.W.**	**TW-424S**		
						1	MB-1403W		2.2812
	Exh.	**218-7439** † †	Valve Seat			**Note:** Contains 1 Piece for Position 1			
						C.S.	**SH-56S**		
						1	SH-1211		1.8715/1.8725
						2	SH-56		1.7457/1.7465
						3	SH-57		1.2465/1.2475

● Except with Rotocap Assembly, (Drilled Valve Stem, 1.328" Head Dia.)
◆ Except Rotovalve
■ Except with Rotocap Assembly, (Drilled Valve Stem)
▲ Except with Rotocap Assembly, (Drilled Valve Stem, 1.203" Head Dia.)
◗ With Roto Cap Assembly

★ Drilled Valve Stem
† Valves with 1.203 Head Dia.
† † Valves with 1.328" Head Dia.

CAMSHAFT/TIMING COMPONENTS

601-1108 Bolt On Screen w/ Cast Iron Drive Gear
(F600L4132)

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
10			**209 CID (3.4L) F209 CONTINENTAL GASOLINE ENGINE; COMBINE GRAINMASTER-10, 30; WHEEL TRACTOR-70 SERIES MODELS**							
	3.188"	6	**224-1611**			**S41735**	3-1/8"	1-1/4"	**223-3349**(1) (F400G211)	**Full Set FS986A** ● **Full Set FS986GK** ◆ **Head Set HS986K** **Head Gskt 986S** **Pan Set OS20928** **Valve Cvr VS38028** **Manif Set MS18651S** ■ **Front Cvr JV895** ▲ **Front Cvr JV951** ◗ **Front Cvr JV953** ★ **Front Cvr JV1211** † **Front Cvr JV5015** * **Front Seal 47065** **Rear Seal JV648** **Acc. Seal 49297** * * **Gvnr Mnt B25800** **WaterGskt C24109** **Water Gskt C24109VF** * * *
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8003**						**223-3429**(2) (R800G204)	
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8052**						**223-3605**(3)	

Notes:
1. Bronze, Requires Light Reaming
2. Steel Backed Copper-Lead Matrix (1.066" O.D.) Requires Light Reaming
3. Bronze, Requires Boring

● Timing Cover Set Not Included
◆ Includes Extra End Plate & Gear Cover Gaskets, Universal
■ Intake and Exhaust Manifold Set
▲ Towmotor- LT46, 50, 53, 56, 60, 62, 72, 90 and K5
◗ Except Towmotor 540, 600, 670, 680P, LT46, 50, 53, 56, 60, 62, 72, 90, and K5
★ Towmotor 540, 600, 670, 680P
† Engine with 2.125" Shaft
* Includes Extra End Plate & Gear Cover Gaskets for Multiple Engines
* * Acc Drive Shaft Seal
* * * Victo-Foam

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
10	Exh.	**211-1053** ● (F600I238)	**217-3515** ◆ (F600I265)	**212-1021** (F600I232)	**216-5159** ■ (12S1207)	**R.B.**	**CB-78P**	10-20-30-40, C60	1.9365/1.9375
						Note: Positions 2, 4, 6			
	Exh.	**211-1589** ▲ (F400I238)	**217-3620** ◗ (F400I213)	**212-1021** (F600I232)	**216-5159** ■ (12S1207)	**R.B.**	**CB-79P**	10-20-30-40, C60	1.9365/1.9375
						Note: Positions 1, 3, 5			
	Exh.	**211-1073** ★ (F900I248)		**212-1021** (F600I232)	**216-5117** ★ (CVT3234)	**MS.**	**MS-194P-10**	10-20-30	
						1	MB-1403P		2.2490/2.2500
						1	MB-1403W		2.2812
	Exh.				**216-5118** *	**2-3**	MB-1404P		2.2490/2.2500
						4	MB-1405P		2.2490/2.2500
	Int.	**211-1588** * * (F400I229)	**217-3515** ◆ (F600I265)	**212-1021** (F600I232)	**216-5159** ■ (12S1207)	**Note:** Timing Gear must be Removed when replacing Single Flanged Front Bearings; Contains 2 piece Thrust Washer Set used in position 1; Contains Straight Shell Bearings			
	Int.		**217-3620** ◗ (F400I213)	**212-1021** (G600I232)	**216-5159** ■ (12S1207)	**T.W.**	**TW-424S**		
						1	MB-1403W		2.2812
						Note: Contains 1 Piece, Position No. 1 (2 Required)			
	Exh.	**218-7405** † (F140A216)	Valve Seat			**C.S.**	**SH-190S**		
						1	SH-1211		1.8715/1.8725
						2	SH-191		1.8085/1.8095
						3	SH-56		1.7457/1.7465
						4	SH-57		1.2465/1.2475
	Exh.	**218-7439** † †	Valve Seat						

● Except w/ Rotocap Assembly, (Drilled Valve Stem 1.203" Head Dia.
◆ Valves with 1.328" Head Dia.
■ Except with Rotocap Assembly, (Drilled Valve Stem)
▲ Execpt with Rotocap Assembly, (Drilled Valve Stem 1.203" Head Dia.
◗ Valves with 1.203" Head Dia.
★ With Rotocap Assembly
* Engines with Rotorcap Assembly (Performer) Hardened Steel
* * Drilled Valve Stem
† Valves with 1.203" Head Dia.
† † Valves with 1.328" Head Dia.

OIL PUMP

601-1108 (F600L4132) Bolt on Screen w/ Cast Iron Drive Gear

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
11			**112 CID (1.8L) Y112 CONTINENTAL GASOLINE ENGINE; COMBINE, GRAINMASTER 15, 18, 20, 22**							
	3.188"	4	Cast Iron Piston						**223-3503**(1) (Y400G234)	**Full Set FS1709** ● **Full Set FS1709W** ◆ **Full Set FS1709X** ■ **Full Set FS1709Y** ▲ **Head Set HS1709** **Head Gskt 1709** **Pan Set OS20496X** **Valve Cvr VS38005** **Manif Set MS18610** ★ **Front Cvr T27386** † **Front Cvr T27694** † † **Front Cvr T27719** † † † **Front Seal 46423** * **Front Seal 48756** * * **Rear Seal JV663** **Dist. Wshr 2014A** **Rckr Seal 49293** **Water Gskt C24109** **Water Gskt C24109VF** * * *
			Zollner Piston			**S40246**	2-3/32"	1-1/4"		
						S50246(2)	2-3/32"	1-1/4"		
			Y440A-465 Piston			**S41813** (Y112T101)	2-3/32"	1-5.0mm		
			Repair Sleeve, (.125" Wall - 9.250" Long) **226-8003**							
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8052**							
			Notes: 1. Bronze, Requires Light Reaming 2. Cast Iron Top Ring							● Includes 1.781" Front Seal ◆ Towmotor, (Includes 1.781" Timing Cover Seal) ■ Clark C, (Includes Both Timing Cover Seals) ▲ Universal Type ★ Intake and Exhaust Manifold Set † Crankcase Cover, Front End Plate † † Gear cover Gasket † † † Front Eng Plate Gasket * Engine with 2.000" Shaft * * Engine with 1.781" Shaft * * * Victo-Foam Gasket

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
11	Exh.	**211-1095** ● (Y400I1210)	**217-3619** (Y400I209)	**212-1025** (Y400I215)	**216-5147** ◆ (Y400I205)	**R.B.**	**CB-278P**	10-20-30	1.4999/1.5000
						Note: Position 1, 3			
	Exh.	**211-2075** ■ (Z120I236)			**216-5234** ▲ (Z120I1235)	**R.B.**	**CB-279P**	10-20-30	1.4999/1.5000
						Note: Position 2, 4			
	Int.	**211-1072** ◆ (Y400I301)	**217-3619** (Y400I209)	**212-1025** (Y400I215)	**216-5147** ◆ (Y400I205)	**T.W.**	**TW-143S**		
						1	MB-1653W		1.7812
	Int.				**216-5234** ▲ (120I1235)	**C.S.**	**SH-191S**		
						1	SH-191		1.8085/1.8095
						2	SH-56		1.7457/1.7465
	Exh.	**218-7349**	Valve Seat			**3**	SH-57		1.2465/1.2475

● Except With Rotocap Assembly (Drilled Valve Stem)
◆ Drilled Valve Stem
■ Late Design, With Rotocap Assembly (1 Groove)
▲ Late Design, (1 Lock Groove Valve)

CAMSHAFT/TIMING COMPONENTS

213-1676.005 Mechanical Lifter .005" O.S.

OIL PUMP

601-1107 Bolt On Screen w/ Cast Iron Drive Gear

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
12			**206 CID (3.4L) F206 CONTINENTAL GASOLINE ENGINE; COMBINE-30, 33**							
	3.250"	6							**223-3349**(1) (F400G211) **223-3429**(2) (F800G204) **223-3605**(3)	**Full Set FS986A** ● **Full Set FS986GK** ◆ **Head Gskt 986S** **Pan Set OS20928** **Valve Cvr VS38063** **Manif Set MS18651S** **Front Cvr JV895** ■ **Front Cvr JV951** ▲ **Front Cvr JV953** ◗ **Front Cvr JV1211** ★ **Front Cvt JV5015** ◆ **Front Seal 47065** **Rear Seal JV648** **Acc. Seal 49297** † **Gvnr Mnt B25800** **Water Gskt C24109** **Water Gskt C24109VF** *
			Notes: 1. Requires Light Reaming, (Bronze) 2. Requires Light Reaming, (Steel Backed Copper-Lead Matrix, 1.066" Outside Dia.) 3. Requires Boring, (Bronze)							● Timing Cover Set not Included ◆ Contains extra End Plate and Gear Cover Gaskets for Multiple Engines ■ Towmotor LT46, 50, 53, 56, 60, 62, 72, 90 and K5 ▲ Except Towmotor 540, 600, 670, 680P, LT46, 50, 53, 56, 60, 62, 72, 90 and K5 ◗ Towmotor 540, 600, 670, 680P ★ With 2.125" Shaft † Accessory Drive Shaft Seal * Victo Foam
13			**108 CID (1.8L) VF4 WISCONSIN V4 GASOLINE ENGINE; BALER-BALE-O-MATIC, COMBINE-18, 22**							
	3.250"	4	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004** **224-2827** (DB2011)			**S4601**(1) (DR31C)	3-3/32"	1-3/16"	**223-3471**(2) (HG157A)	**Head Set HS1785** **Head Gskt 1785** **Manif Set MS17577** ●
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053**			**S5601**	3-3/32"	1-3/16"		● Intake and Exhaust Manifold Set
						S51439	3-5/64"	1-3/16"		
			Notes: 1. Premium Ring Set 2. Requires Light Reaming, (Steel Backed Copper-Lead Martrix, Full Set FS1785							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
12						**R.B.** **CB-78P** 10-20-30-40, C60 1.9365/1.9375 **Note:** Positions 2, 4, 6 **R.B.** **CB-79P** 10-20-30-40, C60 1.9365/1.9375 **Note:** Positions 1, 3, 5 **MS.** **MS-194P-10** 10-20-30 **1** MB-1403P 2.2490/2.2500 **1** MB-1403W 2.2812 **2-3** MB-1404P 2.2490/2.2500 **4** MB-1405P 2.2490/2.2500 **Note:** Timing Gear must be Removed when replacing Single Flanged Front Bearings; Contains 2 piece Thrust Washer Set used in position 1; Contains Straight Shell Bearings **T.W.** **TW-424S** **1** MB-1403W 2.2812 **Note:** Contains 1 Piece, Position No. 1 (2 Required) **C.S.** **SH-190S** **1** SH-1211 1.8715/1.8725 **2** SH-191 1.8085/1.8095 **3** SH-56 1.7457/1.7465 **4** SH-57 1.2465/1.2475			
13	Exh.	**211-1187** (AE75B)	**217-3458**	**212-1032** (AF49A)	**216-5234** ● (AH9)	**R.B.**	**CB-983M**	10	1.7500/1.7510
	Exh.	**211-1375** ◆ (AE75D)							
	Int.	**211-1187** (AF75B)	**217-3458**	**212-1032** (AF49A)	**216-5234** ● (AH9)				
	Exh.	**218-7417** (HG201)	Valve Seat						
	Int.	**218-7417** (HG201)	Valve Seat						
	● Iron, (.500" Outside Dia., 2.500" Long) ◆ Stellite Face, (Optional)								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
14			**133 CID (2.2L) IXB3 HERCULES GASONLINE ENGINE; TRACTOR CRAWLER-A, A21, BF, BFH, OC3, OC4**								
	3.250"	4	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004**			**S41810**	2-1/8"	1-3/16"		**Pan Set OS30490** **Manif Set MS12011** **Rear Seal 49841**	
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053**			**S5023**	2-1/8"	1-3/16"			
15			**205 CID (3.4L) QXB HERCULES GASOLINE ENGINE; COMBINE-GRAINMASTER 30**								
	3.250"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8004**								
			Repair Sleeve, (.0938" Wall - 9.250" Long) **226-8053**								
16			**121 CID (2.0L) 160 WAUKESHA GASOLINE, KEROSENE ENGINE; WHEEL TRACTOR-60HC, 60KD**								
	3.313"	4									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
14	Exh.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Exh.		**217-3697** ◆						
	Int.		**217-3568** ● (28214A)	**212-1124** (27008A)					
	Int.		**217-3697** ◆						
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-4010** ■	Valve Seat						
	Int.	**218-7463**	Valve Seat						
	● Iron, (.485" Outside Dia.) ◆ Iron, (.532" Outside Dia.) ■ Powered Metal								
15	Exh.	**211-1281** (47017B)	**217-3697**		**216-5123** (46011A)	**R.B.**	**CB-341P**	10-20	1.9870/1.9880
						C.S.	**SH-322S**		
	Int.	**211-1281** (47017B)	**217-3697**		**216-5123** (46011A)	**1-4**	SH-322		1.7490/1.7500
						2-3	SH-323		1.7490/1.7500
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7411**	Valve Seat						
16						**R.B.**	**CB-446P**	10-20	1.9990/2.0000
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
17			**129 CID (2.1L) 180DAB, 180DAC, 180DL, 180DLB, 180DLC, 180DSB, 180GA, 180KL WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-66, SUPER 66, 66D, 66HC, 660D**							
	3.313"	4	Standard Bore							**Full Set FS1876** **Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
	3.625"	4	Overbore Conversion **226-1611** (103383A)	**226-4525** (220230)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							
18			**129 CID (2.1L) 180GB, 180GK, 180GS, 180SB WAUKESHA GASOLINE ENGINE; WHEEL TRACTOR-66, SUPER 66, 66HC**							
	3.313"	4							**223-3514**(1) (1K230)	**Full Set FS1876** **Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
17	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-446P**	10-20	1.9990/2.0000
						Note: Engines with 2.000" Crankpins			
	Int.	**211-1130** (180036A)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Exh.	**218-7361**	Valve Seat			**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Int.	**218-7411**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
18	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-446P**	10-20	1.9990/2.0000
						Note: Engines with 2.000" Crankpins			
	Exh.			**212-1067** ●		**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Int.			**212-1067** ●		**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Exh.	**218-7361**	Valve Seat						
	Int.	**218-7411**	Valve Seat						

● Rotocap Equipped Engines

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
19			**226 CID (3.7L) F226 CONTINENTAL FLEX FUEL ENGINE; COMBINE S, SP40, SP168, SP168S, SR, 25, 30, 33, 35, 40, 570, CRAWLER TRACTOR-AG, AG6, AG15, AG20**							
	3.313"	6	Repair Sleeve, (.125" Wall - 9.250" Length) **226-8005**	**224-2831** (F226A4011E)		**S4794**	2-3/32"	2-5/32"	**223-3349**(1) (F400G211)	**Full Set FS986A** ●
										Full Set FS986GK ◆
										Head Set HS986K
			Repair Sleeve, (.0938" Wall - 9.250" Length) **226-8054**			**S5794**	2-3/32"	2-5/32"	**223-3429**(2) (R800G204)	**Head Gskt 986S**
										Pan Set OS20928
										Valve Cvr VS38028
										Manif Set MS18651S ■
						S4662 (F226T188)	3-1/8"	1-1/4"	**223-3605**(3)	**Front Cvr JV895** ▲
										Front Cvr JV951 ☽
										Front Cvr JV953 ★
						S5662 (F226T101)	3-1/8"	1-1/4"		**Front Cvr JV1211** †
										Front Cvr T28603 † †
										Front Cvr JV5015 *
						S40949	1-5/64" 2-3/32"	2-3/32"		**Front Seal 47065**
										Rear Seal JV648
										Acc. Seal 49297 * *
						S50949	1-5/64" 2-3/32"	1-1/4"		**Gvnr Mnt B25800**
										Mgnto Mnt B25800
										Water Gskt C24109
										Water Gskt C24109VF * * *

Notes:
1. Requires Light Reaming, Thin Wall (Bronze, .919" O.D.)
2. Requires Light Reaming, Steel Backed Copper-Lead Matrix, (1.066" O.D.)
3. Requires Boring, (Bronze)

● Timing Cover Set Not Included
◆ Includes Extra End Plate & Gear Cover Gaskets, Universal
■ Intake and Exhaust Manifold Set
▲ Towmotor- LT46, 50, 53, 56, 60, 62, 72, 90 and K5
☽ Except Towmotor 540, 600, 670, 680P, LT46, 50, 53, 56, 60, 62, 72, 90, and K5
★ Towmotor 540, 600, 670, 680P
† Engine with 2.125" Shaft
† † Gear Cover
* Includes Extra End Plate & Gear Cover Gaskets for Multiple Engines
* * Acc Drive Shaft Seal
* * * Victo-Foam

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
19	Exh.	**211-1053** ● (F600I238)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ◆ (CVT3234)	**R.B.**	**CB-465P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Use in All Postions for Connecting Rod Forging Number Ending with 402, Use in Position 1, 3 and 5 Except Connecting Rod Forging Number Ending in 402			
	Exh.	**211-1073** ■ (F900I248)			**216-5159** ▲ (12S1207)	**R.B.**	**CB-466P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Use in Position 2, 4, and 6 Except with Connecting Rod Forging Number Ending in 402			
	Exh.				**216-5118** ★				
						C.S.	**SH-190S**		
	Int.	**211-1058** ◗ (F600I247)	**217-3515** (F600I265)	**212-1021** (F600I232)	**216-5117** ◆ (CVT3234)	**1**	SH-1211		1.8715/1.8725
						2	SH-191		1.8085/1.8095
						3	SH-56		1.7457/1.7465
	Int.	**211-1588** ★ (F400I247)			**216-5159** ▲ (12S1207	**4**	SH-57		1.2465/1.2475
	Int.				**216-5118** ★				
	Exh.	**218-7439**	Valve Seat						
		● Except with Rotocap Assembly, (Drilled Valve Stem) ◆ Single Lock Groove Valve ■ With Rotocap Assembly, (.406" From End of Stem to Top of Lock Groove) ▲ Drilled Valve Stem ◗ .406" From End of Stem to Top of Lock Groove ★ Hardend Steel. (Single Lock Groove Valve, Performer)							
		OIL PUMP							
		601-1108 (600L4132)	Bolt On Screen w/ Cast Iron Drive Gear						

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
						Set No.	Comp.	Oil		
20			**194CID (3.2L) 185GA WAUKESHA GASOLINE, LP GAS ENGINES; WHEEL TRACTOR-166HC (TO S/N 6503), 166LP (TO S/N 6503)**							
	3.313"	6	Standard Bore							**Full Set FS1919** **Head Set HS1919** **Head Gskt 1919** **Pan Set OS31415** **Valve Cvr VS39684** **Front Seal 49395**
	3.625"	6	Power Booster Kit **226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)		
			223-7137 (O-ring Kit)							
			Note: 1. Requires Boring, (2 per Rod)							
21			**129 CID (2.1L) 180DAB, 180DAC, 180DL, 180DLB, 180DSB WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-66D (TO S/N 6503)**							
	3.313"	4	Standard Bore							
	3.625"	4	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514(1)** (1K230)	
			223-7137 (O-ring Kit)							
			Note: 1. Requires Boring, (2 per Rod)							
22			**129 CID (2.1L) 180GA, 180KL, WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-66D (TO S/N 6503)**							
	3.313"	4	Standard Bore							**Full Set FS1876** **Head Set HS1876** **HD Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
	3.625"	4	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
			223-7137 (O-ring Kit)							
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
20	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.000" Crankpin	**CB-446P**	10-20	1.9990/2.0000
	Int.	**211-1130** (180036A)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.250" Crankpin	**CB451P**	10-20-30-40	2.2490/2.2500
				212-1067 ● (KA198A)		**M.S.**	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
	Int.	**218-7411**	Valve Seat			**1**	SH-330		1.7490/1.7500
	● Use with Rotocap Assembly								
21	Exh.	**211-1201** (180136)	**217-3693** (1890009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.000" Crankpin	**CB-446P**	10-20	1.9990/2.0000
	Int.	**211-1130** (180036A)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.250" Crankpin	**CB451P**	10-20-30-40	2.2490/2.2500
				212-1067 ● (KA198A)		**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
	Int.	**218-7411**	Valve Seat			**1**	SH-330		1.7490/1.7500
	● Used w/ Rotocap Assembly								
22	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.000" Crankpin	**CB-446P**	10-20	1.9990/2.0000
	Int.	**211-1130** (180036A)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.250" Crankpin	**CB451P**	10-20-30-40	2.2490/2.2500
				212-1067 ● (KA198A)		**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
	Int.	**218-7411**	Valve Seat			**1**	SH-330		1.7490/1.7500
	● Used w/ Rotocap Assembly								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
23			**194 CID (3.2L) WAUKESHA 185DAC, 185DSB, 185DY WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-77D, (TO S/N 6503)**							
	3.313"	6	Standard Bore							**Pan Set OS31415** **Valve Cvr VS39684**
	3.625"	6	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							
24			**194 CID (3.2L) 185DAB, 185DLB, 185GA, 185GB, WAUKESHA GASOLINE, LPG ENGINES; WHEEL TRACTOR-77HC, 77LP**							
	3.313"	6	Standard Bore			**S4662**	3-1/8"	1-1/4"	**223-3514**(1) (1K230)	**Full Set FS1919** ● **Head Set HS1919** **HD Gasket 1919** **Pan Set OS31415** **Valve Cvr VS39684**
						S5662	3-1/8"	1-1/4"		● Crankshaft Seals Not Included
	3.625"	6	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
23	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.000" Crankpin	**CB-446P**	10-20	1.9990/2.0000
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.250" Crankpin	**CB451P**	10-20-30-40	2.2490/2.2500
				212-1067 ● (KA198A)		**M.S.**	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7411**	Valve Seat						
	● Used w/ Rotocap Assembly								
24	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.000" Crankpin	**CB-446P**	10-20	1.9990/2.0000
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** All with 2.250" Crankpin	**CB451P**	10-20-30-40	2.2490/2.2500
				212-1067 ● (KA198A)		**M.S.**	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7411**	Valve Seat						
	● Used w/ Rotocap Assembly								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
25			**244 CID (4.0L) F244 CONTINENTAL GASOLINE ENGINE; COMBINE-35, 40, S, SR, SP168, SP168S**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006** **224-3287** (F163A04081E)			**S40943**	1-5/64" 2-3/32"	1-1/4"	**223-3349**(1) (F400G211)	**Full Set FS3193S** **Head Set HS3193S** **Head Gskt 3193S** **Head Gskt 3716G** ● **Pan Set OS20928** **Valve Cvr VS38028** **Front Cvr JV1211** ◆ **Front Cvr T27581** ■ **Front Cvr T28603** ▲ **Front Cvr JV5015** ★ **Front Seal 47065** **Gvnr Mnt B25800** **Mgnto Mnt B25800**
			Repair Sleeve, (.0938" Wall - 7.500" Long) **226-8045**			**S50943**	1-5/64" 2-3/32"	1-1/4"	**223-3429**(2) (R800G204)	
						S40761 (F245T106)	1-3/32" 2-1/8"	1-1/4"		
						S4544 (A244T115)	3-1/8"	1-1/4"		

Notes:
1. Requires Light Reaming, Thin Wall (Bronze, .919" O.D.)
2. Requires Light Reaming, Steel Backed Copper-Lead Matrix, (1.066" O.D.)

● Nitroseal Gasket
◆ Engine with 2.125" Shaft
■ Front End Plate Gasket
▲ Gear Cover Gasket
★ Includes Extra End Plate & Gear Cover Gaskets for Multiple Engines

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
25	Exh.		**217-3620** (F400I213)	**212-1025** (Y400I215)	**216-5234** ● (Z120I1235)	**R.B.**	**CB-465P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Use in All Postions for Connecting Rod Forging Number Ending with 402, Use in Position 1, 3 and 5 Except Connecting Rod Forging Number Ending in 402			
	Int.	**211-1588** ◆ (F400I229)	**217-3620** (F400I213)	**212-1025** (Y400I215)	**216-5147** (Y400I205)	**R.B.**	**CB-466P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Use in Position 2, 4 and 6 Except with Connecting Rod Forging Number Ending in 402			
	Exh.	**218-7405** (F140A216)	Valve Seat			**C.S.**	**SH-190S**		
						1	SH-1211		1.8715/1.8725
	Int.	**218-7535** ■	Valve Seat			**2**	SH-191		1.8085/1.8095
						3	SH-56		1.7457/1.7465
						4	SH-57		1.2465/1.2475

● With Rotocap Assembly
◆ Drilled Valve Stem
■ .005" and .010" O.S. Available

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
26			**162 CID (2.7L) F4162 CONTINENTAL GASOLINE ENGINE; COMBINE-10, 12, GRAINMASTER 10, 12**							
	3.438"	4	Repair Sleeve, (.125" Wall - 9.250" Long)							
			226-8006	**224-3287** (F163A04081E)		**S40943**	1-5/64" 2-3/32"	1-1/4"	**223-3349**(1) (F400G211)	
			Repair Sleeve, (.0938" Wall - 7.500" Long)							
			226-8045			**S4588** (F162T152)	3-1/8"	1-1/4"	**223-3429**(2) (R800G204)	
						S5588 (F162T101)	3-1/8"	1-1/4"	**223-3605**(3)	

Full Set FS1634A
Full Set FS1634GH ●
Full Set FS1634GJ ●
Head Set HS1634X
Head Gskt 1634
Head Gskt 3716G
Pan Set OS20509
Valve Cvr VS38032 ◆
Valve Cvr VS38083 ■
Manif Set MS15028
Front Cvr JV1211 ▲
Front Cvr JV5015
Front Cvr T28129 †
Front Cvr T28721 †
Front Cvr T28884 †
Front Cvr T28962 †
Front Seal 47065
Rear Seal JV663
Acc. Seal 49297 ◗
Gvnr Seal 48816
Mgnto Mnt B25800
Rckr Seal 49293
Water Gskt C24109
Water Gskt C24109VF
Victo-Foam

Notes:
1. Requires Light Reaming, Thin Wall (Bronze, .919" O.D.)
2. Requires Light Reaming, Steel Backed Copper-Lead Matrix, (1.066" O.D.)
3. Requires Boring, (Bronze)

● Contains Extra End Plate and Gear Cover Gaskets For Multiple Engines, (Universal Type)
◆ 2 Gear Camshaft Drive
■ 3 Gear Camshaft Drive
▲ Engine with 2.125" Shaft
† Gear Cover Gasket
◗ Accessory Drive Shaft Seal

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Line No.	Exh. or Int.	VALVE TRAIN PARTS: Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
26	Exh.	**211-1053** ● (F600I238)	**217-3620** ◆ (F400I213)	**212-1025** (Y400I215)	**216-5147** ■ (Y400I205)	**R.B.**	**CB-78P**	10-20-30-40, C60	1.9365/1.9375
						Note: Engines with 1.937" Crank Journals, Position 2 and 4			
	Exh.	**211-1589** ▲ (F400I228)			**216-5234** ◗ (Z120I1235)	**R.B.**	**CB-79P**	0-20-30-40, C60	1.9365/1.9375
						Note: Engines with 1.937" Crank Journals, Position 1 and 3			
	Int.	**211-1588** ★ (F400I229)	**217-3620** ◆ (F400I213)	**212-1025** (Y400I215)	**216-5147** ■ (Y400I205)	**R.B.**	**CB-465P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Engines with 2.062" Rod Journals Use in All Positions with Connectiong Rod Forging No. Ending in 402, Use in Position 1 and 3 Except Connecting Rod Forging No. Ending in 402			
	Int.				**216-5234** ◗ (Z120I1235)				
						R.B.	**CB-466P**	10-20-30, C40, C60	2.0619/2.0627
						Note: Engines with 2.062" Journals, Use in Position 2 and 4 Except with Connecting Rod Forging No. Ending in 402			
	Exh.	**218-7405** † (F140A216)	Valve Seat						
	Exh.	**218-7439** † †	Valve Seat			**M.S.**	**MS-176P-10**	10-20	
						1	MB-1403P		2.2490/2.2500
						1	MB1403W		2.2812
	Int.	**218-7535** *	Valve Seat			**2**	MB-1406P		2.2490/2.2500
						3	MB-1405P		2.2490/2.2500
						Note: Engines with 2.250" Main Bearing Journals; Timing Gear must be Removed when replacing Single Flanged Front Bearings; Contains 2 piece Thrust Washer Set, used in position 1; Contains Straight Shell Bearings			
						T.W.	**TW-424S**		
						1	MB-1403W		2.2812
						Note: Engines with 2.250" Main Bearing Journals; Contains 1 piece, for position 1			
						C.S.	**SH-56S**		
						1	SH-1211		1.8715/1.8725
						2	SH-56		1.7457/1.7465
						3	SH-57		1.2465/1.2475

● Except with Rotocap Assembly, (Drilled Valve Stem, 1.328" Head Dia.)
◆ Except Roto Valve
■ Except with Rotocap Assembly, (Drilled Valve Stem)
▲ Except with Rotocap Assembly, (Drilled Valve Stem 1.203" Head Dia.)
◗ With Roto Cap Assembly
★ Drilled Valve Stem
† Valves with 1.203" Head Dia.
† † Except with Rotocap Assembly, (Valves with 1.328" Head Dia.)
* .005" and .010" O.S. Available

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
27			**251 CID (4.1L) IND. 8A CHRYSLER INDUSTRIAL GASOLINE ENGINE; COMBINE-525 BASE, 525 EDIBLE BEAN, 2890**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	2-3/32"	2-5/32"	**223-3349**(1) (318893)	**Full Set FS4922** ● **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** ◆ **Exh. Gskt F5438AK** ■ **Front Cvr JV826** **Front Seal 42379** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** ▲ **Water Gskt C26690** **Water Gskt K25845**
						533 (1241564)	2-3/32"	2-5/32"	**223-3429**(2)	
						5985 (4448146)	2-5/64"	1-3/16"		
			Notes: 1. Requires Light Reaming, Thin Wall, (Bronze .919" Outside Dia.) 2. Requires Light Reaming, (Steel Backed Copper-Lead Matrix 1.066" Outside Dia.)							● Timing Cover and Rear Main Seal Not Included ◆ Intake and Exhaust Manifold Set ■ Flange Type, Pipe to Manifold ▲ Mounting Gasket, 1 Barrel Carburetor
28			**265 CID (4.3L IND 16, IND 16A CHRYSLER INDUSTRIAL GASOLINE ENGINE;COMBINE BASE MODEL-430, 431, 535, 542, 545, 3490, 3496, 3497, 4290, 4293, 4296, 4597, 5542; COMBINE RICE MODEL-525, 535, 3496, 4290, 4296**							
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	2-3/32"	2-5/32"	**223-3349**(1) (318893)	**Full Set FS4922** ● **Head Set HS4922** **Head Gskt 4922** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029** ◆ **Exh. Gskt F7153** ■ **Front Cvr JV757** ▲ **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD** ★ **Water Gskt C26690** **Water Pmp K25845**
						533 (1241564)	2-3/32"	2-5/32"	**223-3429**(2)	
			Notes: 1. Requires Light Reaming, Thin Wall, (Bronze .919" Outside Dia.) 2. Requires Light Reaming, (Steel Backed Copper-Lead Matrix 1.066" Outside Dia.)							● Timing Cover and Rear Main Seal Sets Not Inclulded ◆ Intake and Exhaust Manifold Set ■ Flange Type, Pipe to Manifold ▲ Includes Front Seal ★ 1 Barrel Carburetor Mount Gasket

Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
		VALVE TRAIN PARTS				**BEARINGS**			
27	From Engine S/N 5350					**R.B.**	**CB-90P**	1-10-20-30-40, C60	2.1240/2.1250
	Exh.	**211-1195** (1319089)	**217-3337** ● (1124959)	**212-1072** ◆ (1679135)	**216-5081** (395931)	**M.S.**	**MS-107P-10**	10-20	
						1-2-3	MB-327P		2.4995/2.5005
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ◆ (869073)	**216-5081** (395931)	**4**	MB-328P(F)		2.4995/2.5005
						C.S.	**SH-37S**		
	Exh.	**218-7537**	Valve Seat			**1**	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
	● Except Sodium Filled Valve ◆ From 1969, (Requires Rotocap Assembly)								
		CAMSHAFT/TIMING COMPONENTS							
	9-401	Timing Chain							
28	Exh.	**211-1195** (1319089)	**217-3337** ● (1124959)	**212-1072** ◆ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40, C60	2.1240/2.1250
						M.S.	**MS-107P-10**	10-20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ◆ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
	● Except Sodium Filled Valves ◆ From 1969, Requires Rotocap Assembly								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
29			**265 CID (4.3L) IND 32, IND 33 CHRYSLER INDUSTRIAL GASOLINE ENGINE; COMBINE BASE MODEL-430, 431, 535, 542, 545, 3490, 3496, 3497, 4290, 4293, 4296, 4597, 5542; COMBINE RICE MODEL-525, 535, 3496, 4290, 4296**								
	3.438"	6	Repair Sleeve, (.125" Wall - 9.250" Long) **226-8006**			**433** (1653379)	2-3/32"	2-5/32"	**223-3349**(1) (318893)	**Full Set FS3029X ●** **Head Set HS3029** **Head Gskt 3029** **Pan Set OS30899** **Valve Cvr VS38219** **Manif Set MS15029 ◆** **Exh. Gskt F7153 ■** **Front Cvr JV826 ▲** **Rear Seal JV134-9** **Air Clnr G26540** **Carb Mnt G5349AD ★** **Water Gskt C26690** **Pump Mnt K25845**	
						533 (12415645)	2-3/32"	2-5/32"	**223-3429**(2)		
			Notes: 1. Requires Light Reaming, Thin Wall, (Bronze .919" Outside Dia.) 2. Requires LIght Reaming, (Steel Backed Copper-Lead Matrix 1.066" Outside Dia.)							● Timing Cover and Rear Main Seal Sets Not Included ◆ Intake and Exhaust Manifold Set ■ Flange Type, Pipe to Manifold ▲ Includes Front Seal ★ 1 Barrel Carburetor Mount Gasket	
30			**130 CID (2.1L) DD130 HERCULES DIESEL ENGINE; CRAWLER TRACTOR-OC4-3D, OC4-3G, OC46**								
	3.500"	3									

Line No.	VALVE TRAIN PARTS: Exh. or Int.	Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
29	Exh.	**211-1195** (1319089)	**217-3337** ● (1124959)	**212-1072** ◆ (1679135)	**216-5081** (395931)	**R.B.**	**CB-90P**	1-10-20-30-40, C60	2.1240/2.1250
						M.S.	**MS-107P-10**	10-20	
	Int.	**211-1094** (1109912)	**217-3338**	**212-1011** ◆ (869073)	**216-5081** (395931)	**1-2-3**	MB-327P		2.4995/2.5005
						4	MB-328P(F)		2.4995/2.5005
	Exh.	**218-7537**	Valve Seat			**C.S.**	**SH-37S**		
						1	SH-23		1.9980/1.9990
						2	SH-37		1.9665/1.9675
	Int.	**218-7651**	Valve Seat			**3**	SH-38		1.9350/1.9360
	● Except Sodium Filled Valve ◆ From 1969, (Requires Rotocap Assembly)								
	CAMSHAFT/TIMING COMPONENTS								
		9-401	Timing Chain, (Through S/N 7259)						
30	Exh.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: With 2.000" Crankpins and 2.500" Main Journals, (Contains 2 Shims)			
						R.B.	**CB-704P**	10-20-30	2.3730/2.3740
	Exh.			**212-1103** (125011B) Outer		**Note:** With 2.375" Crankpins and 2.875" Main Journals			
						M.S.	**MS-1680P**	10	
	Int.			**212-1104** (125012B) Inner	**216-5144** (77019A)	**1-2-4**	MB-2185P		2.8734/2.8744
						3	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Main Journals, Upper and Lower Bearing Halves have Locating Lug in same position			
	Int.			**212-1103** (125011B) Outer		**C.S.**	**SH-561S**		
						1-3	SH-561		2.0530/2.0540
						2	SH-198		2.0530/2.0540
					216-5145 ●				
	Exh.	**218-7493**	Valve Seat						
	Exh.	**218-4006** ◆	Valve Seat						
	Int.	**218-7619**	Valve Seat						
	● Intake & Exhaust, Hardened (Optional) ◆ Powdered Metal								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
31			**144 CID (2.4L) 180GLB, 180GLC WAUKESHA GASOLINE, LPG ENGINES; WHEEL TRACTOR-SUPER 55HC, SUPER 66HC (S/N 6504 TO 73132), 66LP (S/N 6504 TO 73132)**							
	3.500"	4	Standard Bore							**Full Set FS1876** **Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
	3.625"	4	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							
32			**144 CID (2.4L) 180DLC, 180DLCU WAUKESHA DIESEL ENGINE; SUPER 166D WHEEL TRACTOR-SUPER 55D, 66D (S/N 6504 TO 73132), SUPER 66D (S/N 6504 TO 73132), 550D (TO S/N 72831), 660D (TO S/N 73132)**							
	3.500"	4	Standard Bore							**Full Set FS1876** **Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
	3.625"	4	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
31	Exh.	**211-1199** (190136C)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
	Int.	**211-1128** (190036)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engines with 2.250" Crankpins	**CB451P**	10-20-30-40	2.2490/2.2500
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Int.			**212-1067** ● (KA198A)					
						C.S.	**SH-330S**		
	Exh.	**218-7411**	Valve Seat			**1**	SH-330		1.7490/1.7500
	Int.	**218-4010** ◆	Valve Seat						
	Int.	**218-7463**							
	● Used with Roto Cap Assembly ◆ Powdered Metal								
32	Exh.		**217-3268** (106609A)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
	Int.		**217-3266** (106612A)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7379**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7419**	Valve Seat						
	● Used with Rotocap Assembly								

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
33			**216 CID (3.5L) 185DLC WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-77D (S/N 6504 TO 73132), SUPER 77D, 770D**							
	3.500"	6	Standard Bore							**Pan Set OS31415** **Valve Cvr VS39684**
	3.625"	6	Power Booster Kit **226-1611** (103383A) **226-4525** (220030) **224-3218** (183004) **S4535** (905435) 3-3/32" 1-3/16" **223-3514**(1) (1K230) **223-7137** (O-ring Kit) **Note:** 1. Requires Boring, (2 per Rod)							
34			**216 (3.5l) 185GL, 185GLB, 185GM, 185GS, 185KL WAUKESHAW GASOLINE ENGINE; WHEEL TRACTOR-SUPER 77HC, 77HC, 770HC**							
	3.500"	6	Standard Bore							**Full Set FS1919** ● **Head Set HS1919** **Head Gskt 1919** **Pan Set OS31415** **Valve Cvr VS39684** ● Crankshaft Seals Not Included
	3.625"	6	Power Booster Kit **226-1611** (103383A) **226-4525** (220030) **224-3218** (183004) **S4535** (905435) 3-3/32" 1-3/16" **223-3514**(1) (1K230) **223-7137** (O-ring Kit) **Note:** 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
33	Exh.		**217-3268** (106609A)	**212-1027** (190035)	**216-5080** (136466A)	To S/N 6502			
						R.B.	**CB-446P**	10-20	1.9990/2.0000
						Note: Engines with 2.000" Crankpins			
	Int.		**217-3266** (106612A)	**212-1027** (190035)	**216-5080** (136466A)	S/N 6503-UP			
						R.B.	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Exh.			**212-1067** ● (KA198A)					
						M.S.	**MS-406P**	10-20-30	
	Exh.	**218-7379**	Valve Seat			**1-2-4**	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Int.	**218-7419**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	● Used with Rotocap Assembly								
34	Exh.		**217-3268** (106609A)	**212-1027** (190035)	**216-5080** (136466A)	TO S/N 6502:			
						R.B.	**CB-446P**	10-20	1.9990/2.0000
						Note: Engines with 2.000' Crankpins			
	Int.		**217-3266** (106612A)	**212-1027** (190035)	**216-5080** (136466A)	S/N 6503-UP:			
						R.B.	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Exh.			**212-1067** ● (KA198A)					
						M.S.	**MS-406P**	10-20-30	
	Exh.	**218-7379**	Valve Seat			**1-2-4**	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Int.	**218-7419**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	● Used with Rotocap Assembly								

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
35			**216 CID (3.5L) 185GL, 185GLB, 185GM, 185GS, 185KL WAUKESHAW LPG ENGINE; WHEEL TRACTOR-SUPER 177HC, SUPER 177LP**							
	3.500"	6	Standard Bore							**Full Set FS1919 ●** **Head set HS1919** **Head Gskt 1919** **Pan Set OS31415** **Valve Cvr VS39684** ● Crankshaft Seals Not Included
	3.625"	6	Power Booster Kit **226-1611** (103383A)	**226-4525** (220030) **223-7137** (O-ring Kit)	**224-3218** (182004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	
			Note: 1. Requires Boring, (2 per Rod)							
36			**144 CID (2.4L) 180GLB, 166HC WAUKESHAW GASOLINE, DISTILLATE ENGINES; WHEEL TRACTOR-66KD**							
	3.500"	4	Standard Bore							**Head Set HS1876** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
	3.750"	4	Power Booster Kit **226-1283** (930223)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)	
			Note: 1. Requires Boring, (2 per Rod)							
37			**216 CID (3.5L) 177HC WAUKESHAW GASOLINE, DISTILLATE ENGINES; WHEEL TRACTOR-77KD**							
	3.500"	6	Standard Bore							**Full Set FS1919 ●** **Head Set HS1919** **Head Gskt 1919** **Pan Set OS31415** **Valve Cvr VS39684** ● Crankshaft Seals Not Included
	3.750"	6	Power Booster Kit **226-1283** (930223)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)	
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
35	Exh.		**217-3268** (106609A)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engine with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.000
	Int.		**217-3266** (106612A)	**212-1027** (190035)	**216-5080** (136466A)	**R.B.** **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-406P**	P-10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7379**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7419**	Valve Seat						
		● Use with Rotocap Assembly							
36	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-405P**	10-20-30	
						1-3	MB-1629P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7411**	Valve Seat						
		● Use with Rotocap Assembly							
37	Exh.	**211-1201** (180136)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** Engines with 2.000" Crankpins	**CB-446P**	10-20	1.9990/2.0000
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.** **Note:** Engines with 2.250" Crankpins	**CB-451P**	10-20-30-40	2.2490/2.2500
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-406P**	10-20-30	
						1-2-4	MB-1629P		2.2490/2.2500
						3	MB-1786P(F)		2.2490/2.2500
	Exh.	**218-7361**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7411**	Valve Seat						
		● Use with Rotocap Assembly							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
38			**231 CID (3.8L) 188HC, 188LP WAUKESHAW GASOLINE, LPG ENGINES; WHEEL TRACTOR-88HC, 88LP**								
	3.500"	6	Standard Bore							**Full Set FS1857** **Head Set HS1857** **Head Gskt 1857** **Pan Set OS31413** **Valve Cvr VS39675A** **Manif Set MS9943Y**	
	3.750"	6	Power Booster Kit **226-1283** (930223) **Note:** 1. Requires Boring, (2 per Rod)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)		
39			**231 CID (3.8) 188D WAUKESHAW DIESEL ENGINE; WHEEL TRACTOR-88D**								
	3.500"	6	Standard Bore							**Full Set FS1857** **Head Set HS1857** **Head Gskt 1857** **Pan Set OS31413** **Valve Cvr VS39675A** **Manif Set MS9943Y**	
	3.750"	6	Power Booster Kit **226-1283** (930223) **Note:** 1. Requires Boring, (2 per Rod)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)		

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
38	Exh.	**211-1199** (190136C)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Int.	**211-1128** (190036)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**M.S.**	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
	Exh.			**212-1067** ● (KA198A)		**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7463**	Valve Seat						
		● Use with Rotocap Assembly							
39	Exh.			**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
	Int.			**212-1027** (190035)	**216-5080** (B6466A)	**M.S.**	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
	Exh.			**212-1067** ● (KA1978A)		**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
		● Use with Roto Cap Assembly							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
40			**152 CID (2.5L) 3-152 PERKINS REGULAR DIESEL ENGINE; COMBINE 535, 545**								
	91.4mm	3	From Serial No. 1829891 - 1935854 (Indir. Inj.)							**Head Set HS85098 ●** **Lower Set CS4805W ◆** **Lower Set CS85098 ■** **Pan Set OS87033 ●** **Valve Cvr VS39867 ●** **Front Seal JV1210●** **Rear Seal JV1641 ●**	
	3.600"	3	**226-1454** (930496)	**224-1643**(1)	**S40593**(2,3)	2-3/32"	2-1/4"	1-1/8"	**223-3594**(4)	● Agricultural and Industrial 1959 - 1964 ◆ Except Flameproof, (Agricutural and Industrial 1959 - 1964 ■ Flameproof, (Agricultural and Industrial 1959 - 1964	
					S50593(2,3)	2-3/32"	2-1/4"	1-1/8"			
					S40367(6)	3-3/32"	2-1/4"				
					S50367(2,3)	3-3/32"	2-1/4"				

Notes:
1. Flat Head, 17.4: 1 C.R.
2. All with Chrome Plated Liners
3. All with Cast Iron Liners
4. Steel Backed Copper-Lead Matrix, (Requires Boring)
5. Cast Iron Liner, Non Chrome
6. Premium Ring Set, Cast Iron Liners

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
40	Exh.	**211-2185** (31431271)	**217-3976** (33261723)	**212-1216** (780007) (Inner)		**R.B.**	**CB-560AL**	10-20-30-40	2.2485/2.2490
	Exh.			**212-1217** (780006) (Outer)		**M.S.**	**MS-772AL**	10-20-30	
	Int.	**211-2174** (31431261)	**217-3976** (33261723)	**212-1216** (780007) (Inner)		**1**	MB-2186AL		2.7485/2.7490
	Int.			**212-1217** (780006) (Outer)		**2-3**	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
						T.W.	**TW-119S**		
						4	MB-2188W(L)		3.0450/3.0550
						4	MB-2188W(U)		
						Note: Contains 4 pieces. for position 4 (Eng S/N 1400250 thru 1412719)			
						T.W.	**TW-130S**		
						4	MB-2292W(L)		3.0450/3.0550
						4	MB-2292W(U)		3.0450/3.0550
						Note: Contains 4 pieces. for position 4 (From Eng S/N 1412720)			

CRANKSHAFT

247-5075 ● Keyed Nose / Rope Seal

247-5076 ◆ Keyed Nose / Lip Seal

247-5077 ■ Spline Nose / Lip Seal

247-5200 ▲ Splined Nose / Rope Seal

● O.E. P/N: 31312436; 84402; 736485MI; 026005MI; ZZ90116; ZZ90084; ZZ90148; 31312419; 31312441
◆ O.E. P/N: 31312701; 31312707; 94458; 94464; 74154MI; 026053MI; ZZ90078; ZZ90150
■ O.E. P/N: 31312702; 31312704; 94463; 94459
▲ O.E. P/N: 84399; 31312437

OIL PUMP

601-8062
(41314078)

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
41			**152 CID (2.5L) 3-152 PERKINS REGULAR DIESEL ENGINE; COMBINE 535, 545**							
	91.4mm	3	From Serial No. 1935855 - Up, (Indir. Inj.)							**Head Set HS85098** ● **Lower Set CS4805W** ◆ **Lower Set CS85098** ■ **Pan Set OS87033** ● **Valve Cvr VS39867** ● **Front Seal JV1210** ● **Rear Seal JV1641** ●
	3.600"	3	**226-1447**(1)		**224-1643**(2)				**223-3594**(3)	● Agricultural and Industrial 1959 - 1964 ◆ Except Flameproof, (Agricutural and Industrial 1959 - 1964 ■ Flameproof, (Agricultural and Industrial 1959 - 1964
			Notes: 1. All Except Direct Inject 2. All (Except Direct Inject, (Flat Head Piston) 3. Steel Backed Cooper-Lead Matrix (Requires Boring)							
42			**155 CID (2.5L) D155, G155 WAUKESHAW DIESEL GASOLINE ENGINES; WHEEL TRACTOR-66D (S/N 73133-UP), SUPER 66HC (S/N 73133-UP), 550D (S/N 72832-UP), 550HC (S/N 72832-UP), 660D (S/N 73133-UP), 660HC (S/N 73133-UP)**							
	3.625"	4	**226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)	**Head Set HS4962** **Head Gskt 1876** **Pan Set OS30662** **Valve Cvr VS38269A**
				223-7137 (O-ring Kit)						
			Note: 1. Requires Boring, (2 per Rod)							

Line No.	Exh. or Int.	VALVE TRAIN PARTS Valves	Guides	Springs	Keepers	BEARINGS Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
41	Exh.	**211-2185** (31431271)	**217-3976** (33261723)	**212-1216** (780007) (Inner)		**R.B.**	**CB-560AL**	10-20-30-40	2.2485/2.2490
						M.S.	**MS-772AL**	10-20-30	
						1	MB-2186AL		2.7485/2.7490
						2-3	MB-2187AL		2.7485/2.7490
						4	MB-2302AL		2.7485/2.7490
	Exh.			**212-1217** (780006) (Outer)					
						T.W.	**TW-119S**		
						4	MB-2188W(L)		3.0450/3.0550
						4	MB-2188W(U)		3.0450/3.0550
	Int.	**211-2174** (31431261)	**217-3976** (33261723)	**212-1216** (780006) (Inner)		**Note:** Contains 4 pieces. for position 4 (Eng S/N 1400250 thru 1412719)			
	Int.			**212-1217** (780006) (Outer)		**T.W.**	**TW-130S**		
						4	MB-2292W(L)		3.0450/3.0550
						4	MB-2292W(U)		3.0450/3.0550
						Note: Contains 4 pieces. for position 4 (From Eng S/N 1412720)			
		CRANKSHAFT							
		247-5075 ● Keyed Nose / Rope Seal							
		247-5076 ◆ Keyed Nose / Lip Seal							
		247-5077 ■ Spline Nose / Lip Seal							
		247-5200 ▲ Splined Nose / Rope Seal							
		● O.E. P/N: 31312436; 84402; 736485MI; 026005MI; ZZ90116; ZZ90084; ZZ90148; 31312419; 31312441 ◆ O.E. P/N: 31312701; 31312707; 94458; 94464; 74154MI; 026053MI; ZZ90078; ZZ90150 ■ O.E. P/N: 31312702; 31312704; 94463; 94459 ▲ O.E. P/N: 84399; 31312437							
		OIL PUMP							
		601-8062 (41314078)							
42	Exh.		**217-3268** (106609A)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-446P**	10-20	1.9990/2.0000
						Note: Engines with 2.000" Crankpins			
	Int.		**217-3266** (106612A)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						Note: Engines with 2.250" Crankpins			
				212-1067 ● (KA198A)		**R.B.**	**CB-1239P**	10-20-30-40	1.7490/1.7500
						Note: Engines with 1.750" Crankpins			
	Exh.	**218-7379** Valve Seat				**M.S.**	**MS-1423P**	10-20-30	
						1-3	MB-2610P		2.2490/2.2500
						2	MB-1786P(F)		2.2490/2.2500
	Int.	**218-7419** Valve Seat				**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
		● Use with Rotocap Assembly							

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
43			**232 CID (3.8L) VRD232 WAUKESHA DIESEL ENGINES; WHEEL TRACTOR-1550, 1555**								
	3.625"	6	**226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)		
				223-7137 (O-ring Kit)							
			Note: 1. Requires Boring, (2 per Rod)								
44			**232 CID (3.8L) VRG232 WAUKESHA GASOLINE ENGINE; WHEEL TRACTOR-1550, 1555**								
	3.625"	6	**226-1611** (103383A)	**226-4525** (220030)	**224-3218** (183004)	**S4535** (905435)	3-3/32"	1-3/16"	**223-3514**(1) (1K230)		
				223-7137 (O-ring Kit)							
			Note: 1. Requires Boring, (2 per Rod)								
45			**206 CID (3.4L) 206 MINNEAPOLIS MOLINE GASOLINE, LPG ENGINES; WHEEL TRACTOR-R, Z**								
	3.625"	4	Except R and Z Series Wheel Tractors							**Full Set FS3114●** **Head Set HS3114●** **Head Set HS18329◆** **Front Seal 63157●** ● All Except. R & Z Series Wheel Tractors ◆ R & Z Series Wheel Tractor	
			Repair Sleeve, (.0938" Wall - 10.250" Long)	**226-8059**		**S4535** (10R793)	3-3/32"	1-3/16"			
			R and Z Series Wheel Tractor			**S4324**	3-1/8"	1-3/16"			
46			**206 CID (3.4L) D206, D206-4, D206-4A, D206A, D206A-4, D206B, D206B-4, D206L, D206L-4 MINNEAPOLIS DIESEL ENGINE; WHEEL TRACTOR-BIG MO 400, BIG MO 500, BIG MO 600, IND. 400, IND. 500, JET STAR, JET STAR 3, JET STAR SUPER 3, JET STAR 4, JET STAR SUPER 4, MD400, MD500, MONTIAC**								
	3.625"	4	Repair Sleeve, (.0938" Wall - 10.250" Long)	**226-8059**						D206 **Head Set HS3114** D206L4 **Full Set FS3114** **Front Seal 63157**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
43						**R.B.** **CB-446P** 10-20 1.9990/2.0000 **Note:** Engines with 2.000" Crankpins **R.B.** **CB-451P** 10-20-30-40 2.2490/2.2500 **Note:** Engines with 2.250" Crankpins **M.S.** **MS-406P** 10-20-30 **1-2-4** MB-1629P 2.2490/2.2500 **3** MB-1786P(F) 2.2490/2.2500 **C.S.** **SH-330S** **1** SH-330 1.7490/1.7500		
44						**R.B.** **CB-446P** 10-20 1.9990/2.0000 **Note:** Engines with 2.000" Crankpins **R.B.** **CB-451P** 10-20-30-40 2.2490/2.2500 **Note:** Engines with 2.250" Crankpins **M.S.** **MS-406P** 10-20-30 **1-2-4** MB-1629P 2.2490/2.2500 **3** MB-1786P(F) 2.2490/2.2500 **C.S.** **SH-330S** **1** SH-330 1.7490/1.7500		
45	Exh. Exh. Int. Int. Exh. Int.	**211-1279** ● ◗ (R103B) **211-1871** (10A6397) **211-1279**● ◗ (RE103B) **218-7471** ● ◗ Valve Seat **218-7471** ● ◗ Valve Seat ● All Except Diesel ◗ R and Z Series Wheel Tractor	**217-3891** ● (10A5983) **217-3900** ● ◗ **217-3891** ● (10A5983) **217-3900** ● ◗		**216-5117** ● (10A6440) **216-5118**● ◗ **216-5117** ● (10A6440) **216-5118**● ◗	**R.B.** **CB-594P** 10-20 2.6245/2.6250			
46	Exh.	**211-1871** ● ● Except Liquid Propane Gas ◆ Plain, (Iron)	**217-3891** ◆			**R.B.** **CB-594P** 10-20 2.6245/2.6250 **M.S.** **MS-900P** **1-2** MB-2496P 2.7495/2.7500 **3** MB-2032P(F) 2.9995/3.0000			

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
47			**198 CID (3.2L) DD198 HERCULES DIESEL ENGINE; CRAWLER TRACTOR-OC9, OC9D, OC96**								
	3.750"	4				**SC3632**	1-1/8" 2-3/32"	2-3/16"		**Valve Cvr VS28268** **Front Seal 64063**	
48			**265 CID (4.3L) WAUKESHAW SUPER 188HC GASOLINE (TO S/N K11000), SUPER 188LP LP GAS (TO S/N K11000) ENGINES; WHEEL TRACTOR-SUPER 88HC (TO S/N 6503), SUPER 88LP (TO S/N 6503)**								
	3.750"	6	**226-1283** (930223) **Note:** 1. Requires Boring, (2 per Rod)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)	**Full Set FS1857** **Head Set HS1857** **Head Gskt 1857** **Pan Set OS31413** **Valve Cvr VS39675A**	
49			**265 CID (4.3L) WAUKESHAW SUPER 188HC GASOLINE (S/N K11001-UP), SUPER 188LP LP GAS (S/N K11001-UP) ENGINES; WHEEL TRACTOR-SUPER 88HC (S/N 6504-UP), SUPER 88LP (S/N 6504-UP)**								
	3.750"	6	**226-1283** (930223) **Note:** 1. Requires Boring, (2 per Rod)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)	**Full Set FS1857** **Head Set HS1857** **Head Gskt 1857** **Pan Set OS31413** **Valve Cvr VS39675A** **Man Set MS9943Y**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
47	Exh.			**212-1104** (125012B) (Inner)	**216-5144** (77019A)	**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: With 2.000" Crankpins and 2.500" Main Journals, (Contains 2 Shims)			
						R.B.	**CB-704P**	10-20-30	2.3730/2.3740
	Exh.			**212-1103** (125011B) (Outer)	**216-5145** ●	**Note:** With 2.375" Crankpins and 2.875" Main Journals			
						M.S.	**MS1681P**	10	
						1-2-4	MB2185P		2.8734/2.8744
	Int.	**211-2062** (255010B)		**212-1104** (125012B) (Inner)	**216-5144** (77019A)	**5**			
						3	MB-2092P(F)		2.8734/2.8744
						Note: Engines with 2.875" Main Journals, Lateral Rod Bushing			
	Int.			**212-1103** (125011B) (Outer)	**216-5145** ●	**C.S.**	**SH562S**		
						1-4	SH-561		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
		● Hardened Exh. & Int.							
48	Exh.	**211-1199** (190136C)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-349P**	10-20	
	Int.	**211-1128** (190036)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**1-2-4**	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
	Exh.			**212-1067** ● (KA198A)		**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Exh.	**218-7411**	Valve Seat						
	Int.	**218-7464**	Valve Seat						
		● Use with Rotocap Assembly							
49	Exh.	**211-1521** (190336C)	**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-450P**	10	2.6240/2.6250
						Note: Engines with 2.625" Crankpins, (Standard Engine)			
	Int.		**217-3693** (180009E)	**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-703P**	10-20-30-40	2.4365/2.4375
						Note: Engines with 2.4375" Crankpins			
	Exh.			**212-1067** ● (KA198A)		**M.S.**	**MS-349P**	10-20	
						1-2-4	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
	Exh.	**218-7463**	Valve Seat			**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	Int.	**218-7535** ◆	Valve Seat						
		● Use with Rotocap Assembly ◆ Available in .005", .010", .015" O.S.							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
50			**265 CID (4.3L) WAUKESHAW SUPER 188D DIESEL ENGINE (TO S/N K11000); WHEEL TRACTOR-SUPER 88D (TO S/N 6503)**								
	3.750"	6	**226-1283** (930223)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)		
			Note: 1. Requires Boring, (2 per Rod)								
51			**265 CID (4.3L) WAUKESHAW SUPER 188D DIESEL ENGINE (S/N K11001-UP); WHEEL TRACTOR-SUPER 88D (S/N 6504-UP), 880D**								
	3.750"	6	**226-1283** (930223)			**S40016** (905428)	3-1/8"	1-3/16"	**223-3514**(1) (1K230)		
			Note: 1. Requires Boring, (2 per Rod)								
52			**283 CID (4.6L) VRD283 WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-2-70, 2-78, 4-78, 1650, 1655, G750**								
	3.875"	6	Engine S/N 187586 - Up								
			226-1549 (164908AS)	**226-4499** (221230P)		**S40381**(1) (106571AS)	3-3/32"	1-3/16"			
				223-7162 (208464) (O-ring Kit)		**S41128**(2)	2-3/32"	1-3/16"			
			Notes: 1. 4 Ring Piston, (1 Cylinder Set) 2. 3 Ring Piston, (1 Cylinder Set)								

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
50	Exh.			**212-1027** (190035)	**216-5080** (B6466A)	**R.B.**	**CB-451P**	10-20-30-40	2.2490/2.2500
						M.S.	**MS-349P**	P-10-20	2.6240/2.6250
	Int.			**212-1027** (190035)	**216-5080** (B6466A)	**1-2-4**	MB-1643P		2.6240/2.6250
						3	MB-1644P(F)		2.6240/2.6250
	Exh.			**212-1067** ● (KA198A)		**C.S.**	**SH-330S**		
						1	SH-330		1.7490/1.7500
	● Use with Rotocap Assembly								
51	Exh.		**217-3268** (106609A)	**212-1027** (190035)		**R.B.**	**CB-450P**	10	2.6240/2.6250
						Note: Engines with 2.625" Crankpins, (Standard Engine)			
	Int.		**217-3266** (106612A)	**212-1027** (190035)		**R.B.**	**CB-703P**	10-20-30-40	2.4365/2.4375
						Note: Engines with 2.4375" Crankpins			
	Exh.	**218-7439**	Valve Seat			**M.S.**	**MS-349P**	P-10-20	
						1-2-4	MB-1643P		2.6240/2.6250
	Int.	**218-7535** ●	Valve Seat			**3**	MB-1644P(F)		2.6240/2.6250
						C.S.	**SH-330S**		
						1	SH-330		1.7490/1.7500
	● Available in .005", .010", .015" O.S.								
52	Exh.	**211-2053** (222253)	**217-3269** (106620A)		**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30-40	2.4365/2.4375
						M.S.	**MS-676P**	10-20-30	
	Int.	**211-2050** (222436)	**217-3693** (180009E)		**216-5144** (163235)	**1-2-3**	MB-2225P		2.6240/2.6250
						4-6-7			
					216-5145 ●	**5**	MB-2226P(F)		2.6240/2.6250
						Note: Flanged Bearing, (.030" U.S. Set Contains .017 O.S. Length)			
	● Hardened Steel, (Optional)					**C.S.**	**SH-614S**		
						1-2	SH-330		1.7490/1.7500
						3-4			

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
53			**212 CID (3.5L) 4-53 DETROIT DIESEL ENGINE; WHEEL TRACTOR-2-105, 2-115, 4-115, 1900, 1950**							
	3.875"	4	**226-1478**(1) (5198903)	**226-4415** (5132803)	**224-3282**(2) (5195931) 17.0: 1 C.R.	**S41154** (5198902)	1-.082" 3-3/32"	2-3/16"	**223-3622**(3) (5116181)	**Full Set FS12232B** ● **Head Set HS12232** **Head Gskt CH12232** **Lower Set CS12232** ◆ **Pan Set OS31584** **Valve Cvr VS39855** **Front Seal 46289** **Rear Seal 47905** ■ **Rear Seal 48005** ▲ **Rear Seal SS48005** ★ **Fuel Gskt D24971** **Inj Kit 216-1136** ◗ **Cooler Set GS33123** * **Cooler set GS33127** * * **Cooler Set GS33131** * * *
				223-7140 (5121256) (O-ring Kit)						
			226-1477(1) (5198899)	**226-4415**(1) (5132803)	**224-2486**(4) (5198877) (21.0: 1 C.R.	**S41154** (5198902)	1-.082" 3-3/32"	2-3/16"	**223-3622**(3) (5116181)	
				223-7140 (5121256) O-ring Kit)						
			Notes: 1. High Brinell Sleeve 2. Early Design Piston, (.421" Shallow Bowl, 17.0:1 C.R.) 3. Requires Boring, (Steel Backed Copper-Lead Matrix) 4. Late Design Piston, (.468" Deep Bowl, 21.0:1 C.R.)							● Crankshaft Seals not Included, (O.E. Type) ◆ Requires Head Set and Rear Main Seal to make Full Set ■ Standard Seal ▲ 4.125" Shaft, (Oversize) ★ Set Includes Micro-Shield Repair Sleeve and Oil Seal. ◗ Contains Pre-reamed Injector Tube and Viton O-rings, (4 Valves per Cylinder) * Gasket for 6, 8, 13 Plate Single Stack Cooler * * Gasket for 18 Plate Single Stack Cooler * * * Gasket for 4 Plate Single Stack Cooler
54			**283 CID (4.6L) VRD283 WAUKESHAW DIESEL ENGINE; WHEEL TRACTOR-1800B (S/N 124396 TO 134683), 1800C (S/N 134684-UP)**							
	3.875"	6	**226-1549** (164908AS)	**226-4499** (221230P)		**S40381**	3-3/32"	1-3/16"		**Head Set HS3809W** **Head Gskt CH3809** **Lower Set CS3809** **Pan Set OS31413** **Valve Cvr VS39697**
				223-7162 (208464) (O-ring Kit)		**S41128**	2-3/32"	1-3/16"		

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
53	Exh.	**211-1863** ● (5145172)	**217-4007** ● (5131961)	**212-1110** ◆ (5123329)	**216-5183** ● (5116341)	**R.B.**	**CB-1265P**	10-20-30-40	2.4990/2.5000
						M.S.	**MS-502P**	10-20	
	Exh.	**211-2536** ■ (5197176)	**217-3832** ▲ (5111327)		**216-5234** ▲ (5111337)	**1-2** **3-4-5**	MB-1897P		2.9990/3.0000
						5	MB-2522W		3.3380/3.3480
	Exh.	**218-7817** ★ (8921502)	Valve Seat			**Note:** Contains 4 piece Thrust Washer Set, Use in Position 5			
						T.W.	**TW-412S**		
						5	MB2522W		3.3380/3.3480
						Note: Contains 4 piece Thrust Washer Set, Use in Position 5; Use with Item No. MS-502P			
						C.S.	**SH-700S**		
						1-5	SH-686		2.1820/2.1825
						2-4	SH-687		2.1820/2.1825
						3	SH-688		2.1820/2.1825
						Note: Contains Camshaft and Balance Shaft Bearings			
	● 4 Valves per Cylinder ◆ 4 Valves per Cylinder, (Uniform Pitch Spring .135" Wire Dia.) ■ 4 Valves per Cylinder, (Optional Premium) ▲ 2 Valves per Cylinder ★ 4 Valves per Cylinder, (1.156" Counterbore)								
	CAMSHAFT/TIMING COMPONENTS								
		214-1107 ● (8923814)	**Cam Follower**						
	● Roller w/ Bushing & Pin Set, 3 per Cylinder								
54	Exh.	**211-2053** (222253)	**217-3269** (106620A)		**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30	2.4365/2.4375
						M.S.	**MS-676P**	P-10-20-30	
	Int.	**211-2050** (222436)	**217-3693** (180009E)		**216-5144** (163235)	**1-2-3** **4-6-7**	MB-2225P		2.6240/2.6250
						5	MB-2226P(F)		2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing			
	● Hardened Steel, (Optional)					**C.S.**	**SH-614S**		
						1-2 **3-4**	SH-330		1.7490/1.7500

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets / Head Sets Oil Pan Sets
55			**283 CID (4.6L) VRG283 WAUKESHAW GASOLINE ENGINE; WHEEL TRACTOR-1850 (S/N 147254-UP), 1855 (S/N 220001-UP)**							
	3.875"	6			**224-3229** (222404)	**S40533CP**	2-3/32"	1-3/16"		**Head Set HS3809W** **Head Gskt CH3809** **Lower Set CS3809** **Pan Set OS31413** **Valve Cvr VS39697**
56			**310 CID (5.1L) VRD310/S WAUKESHAW DIESEL ENGINE; WHEEL TRACTOR-1855T, 1950T, 1955T**							
	3.875"	6	**226-1636** (303108627)	**223-7169** (O-ring Kit)		**S41842** KEYSTONE TOP RING	1-1/8" 1-3/32"	1-3/16"		
57			**310 CID (5.1L) VRD310 WAUKESHA DIESEL ENGINE; WHEEL TRACTOR-1750, 1755, 1770, 1800, 1855, 1950T, 1955**							
	3.875"	6	**226-1521** (163706AS)	**226-4499** (2212309) **223-7162** (208464) (O-ring Kit)	**224-3219** (223604W)	**S41128**	2-3/32"	1-3/16"		**Pan Set OS31413** **Valve Cvr VS39675A**
58			**310 CID (5.1L) VRG310 WAUKESHA GASOLINE, LPG ENGINE; WHEEL TRACTOR-1770, 1850, 1855**							
	3.875"	6	**226-1787** (932186)	**226-4499** (221230P) **223-7162** (208464) (O-ring Kit)	**224-3229** (222404)	**S41840**	2-3/32"	1-3/16"		**Pan Set OS31413** **Valve Cvr VS39675A**

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
55	Exh				**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30	2.4360/2.4370
						M.S.	**MS-676P**	P-10-20-30	
	Int.	**211-2176** (223236)			**216-5144** (163235)	**1-2-3** **4-6-7**	MB-2226P		2.6240/2.6250
						5	MB-2226P(F)		2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing			
						C.S.	**SH-614S**		
	● Int. & Exh., Hardened Steel, (Optional)					**1-2** **3-4**	SH-330		1.7490/1.7500
56	Exh.				**216-5144** (163235)	**R.B.**	**CB-703P**	P-10-20-30	2.4360/2.4370
						M.S.	**MS-676P**	P-10-20-30	
	Int.	**211-2176** (223236)			**216-5144** (163235)	**1-2-3** **4-6-7**	MB-2225P		2.6240/2.6250
						5	MB-2226P(F)		2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing			
						C.S.	**SH-614S**		
	● Hardened Steel, (Optional)					**1-2** **3-4**	SH-330		1.7490/1.7500
57	Exh.	**211-2187** (223336)			**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30-40	2.4365/2.4375
						M.S.	**MS-676P**	10-20-30	
	Int.	**211-2176** (223236			**216-5144** (163235)	**1-2-3** **4-6-7**	MB-2225P		2.6240/2.6250
						5	MB-2226P(F)		2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing			
						C.S.	**SH-614S**		
	● Exh. & Int. Hardened Steel, (Optional)					**1-2** **3-4**	SH-330		1.7490/1.7500
58	Exh.	**211-2053** (222253)			**216-5144** (163235)	**R.B.**	**CB-703P**	10-20-30-40	2.4365/2.4375
						M.S.	**MS-676P**	10-20-30	
	Int.	**211-2050** (222436)			**216-5144** (163235)	**1-2-3** **4-6-7**	MB-2225P		2.6240/2.6250
						5	MB-2226P(F)		2.6240/2.6250
					216-5145 ●	**Note:** .030" Undersize Set Contains .017" Oversize Length Flanged Bearing			
						C.S.	**SH-614S**		
	● Exh. & Int. Hardened Steel, (Optional)					**1-2** **3-4**	SH-330		1.7490/1.7500

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
59			**354 CID (5.0L) 6-354, A6-354 PERKINS DIESEL ENGINE; COMBINE-5542, 7300, 7600, 7800 WHEEL TRACTOR-2-85, 2-105, G1050, 1850, 1850-4WD, 1950**								
	98.5mm	6	To Replace or Convert to Flange Type Sleeve							**Head Set HS85182 ●** **Head Gskt 3837 ●** **Lower Set CS85182 ◆** **Pan Set OS87083 ▲** **Valve Cvr VS86125 ▲** **Front Seal JV1214 ▲** **Rear Seal JV1640 ▲**	
	3.877"	6	**226-1453**(1) (159491AS)	**226-4234**(2) (31358394)	**224-1649**(3) (86720)	**S41092**(4) (86773)	1-1/8" 2-3/32"	1-1/4"	**223-3640**(5)	● 1/2" Studs, From Eng. S/N E8060154 and From Eng. S/N 354U33965 ◆ Industrial and Vehicle, Thru 1981, From 1960, (Requires Head Set To Make Full Set) ▲ Industrial and Vehicle, Thru 1981, From 1960	
						S42300(6) (83388)	3-3/32"	2-1/4"			
			Repair Sleeve Regular Eng., (.0938" Wall - 10.250" Long Universal) **226-8063** **Notes:** 1. Replaces or Converts to Flange Type Sleeve 2. To Replace or Convert to Flange Type Sleeve 3. All (Except Turbo), 1" Recessed Head 4. Cast Iron Liners, 4 Ring Piston, (1 Cylinder Set) 5. Steel Backed Copper-Lead Matrix 6. Cast Iron Liners, 5 Ring Piston, (1 Cylinder Set)								

	VALVE TRAIN PARTS					BEARINGS			
Line No.	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
59	Exh.	**211-2107** ● (31431104)	**217-3270** (33261752)	**212-1396** (Inner)	**216-5191** (33173108)	**R.B.**	**CB-667AL**	10-20-30	2.4990/2.4995
	Exh.			**212-1397** (31745121) (Outer)		**M.S. 1-2-3 5-6-7**	**MS-757AL**	10-20-30	
						4	MB-2221AL		2.9985/2.9990
						4	MB-2222AL		2.9985/ 2.9990
						Note: Requires Thrust Washer Set (Not Inlcuded) Use with Numbers TW-121S, TW-316S			
	Int.	**211-2106** (31431103)	**217-3271** (33261732)	**212-1396** (Inner)	**216-5191** (33173108)	**T.W.**	**TW-121S**		
						4	MB-2222W(L)		3.4200/3.4300
						4	MB-2222W(U)		3.4200/3.4300
	Int.			**212-1397** (31745121) (Outer)		**Note:** Contains 4 Pieces used at position 4 (Thru S/N 8504189) Use with MS757AL			
	Int.	**211-2510** ◆ (31431311)				**T.W.**	**TW-316S**		
						4	MB-2636W(L)		3.4200/3.4300
						4	MB-2636W(U)		3.4200/3.4300
						Note: Contains 4 Pieces used at position 4 (From S/N 8504190) Use with MS757AL			
	Exh.	**218-7815** (33152139)	Valve Seat						
	Int.,	**218-7814** (33152512)	Valve Seat						
	● 1.440" Head Dia.								
	◆ AT & ATC Engs. To S/N 354UA3356T								
		CRANKSHAFT							
		247-5088 (31323285)	Crankshaft - Ring Feeder Keyed / Lip						
		247-5089 (31323283)	Crankshaft - Turbo Ring Feeder						

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
60			**354 CID (5.8L) T6-354 PERKINS DIESEL ENGINE; WHEEL TRACTOR-2-105, COMBINE-7800**							
	98.5mm	6	Sleeve Assembly and Component Piston cannot be used for Marine Applications. Marine Application Piston has a differentCompression Ratio and Combustion Cup Depth							**Head Set HS4811Y** **Pan Set OS87083** **Valve Cvr VS39875**
	3.877"	6	**226-1546**	**226-4234** (31358394)		**S41092**(1) (86773)	1-1/8" 2-3/32"	1-1/4"	**223-3640**(2)	
						S42300(3) (83388)	3-3/32"	2-1/4"		
61			**320 CID (5.2L) JXD HERCULES GASOLINE ENGINE; CRAWLER TRACTOR-OC12, OC126**							
	4.000"	6	Repair Sleeve, (.125" Wall - 11.250" Long) **226-8014** Repair Sleeve, (.0938" Wall - 11.250" Long) **226-8064**			**S41812**	1-3/32" 1-1/8"	2-3/16"		**Full Set FS3014 ●** **Head Set HS3014** **Head Gskt 3014** **Pan Set OS20456** **Valve Cvr VS37970** **Manif Set MS18809** **Front Seal 49379 ◆** **Rear Seal 49822** **Fuel Gskt G5260EK** **Water Gskt G5260EK** ● Contains Flexible Timing Cover Seal ◆ Flexible Seal
62			**283 CID (4.6L) 283-4A MINNEAPOLIS MOLINE GASOLINE ENGINE; WHEEL TRACTOR-U, UB, UB SPECIAL, UBD, UBE, UBN, UTI, UTS, UTSD, UBU (TO S/N 04800049)**							
	4.250"	4				**S4333** (14R70)	3-5/32"	1-1/4"		**Valve Cvr VS38399**

Line No.	VALVE TRAIN PARTS: Exh. or Int.	Valves	Guides	Springs	Keepers	BEARINGS: Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
60	Exh.	**211-2107** ● (31431104)	**217-3270** (33261752)	**212-1396** (Inner)	**216-5191** (33173108)	**R.B.**	**CB-1209AL**	10-20-30	2.4990/2.4995
						M.S.	**MS-757AL**	10-20-30	
						1-2-3	MB-2221AL		2.9985/2.9990
	Exh.			**212-1397** (31745121) (Outer)		**5-6-7**			
						4	MB-2222AL		2.9985/2.9990
						Note: Requires Thrust Washer Set, Not Inlcuded, Use with TW121S, TW316S			
	Int.		**217-3271** (33261732)	**212-1396** (Inner)	**216-5191** (33173108)	**T.W.**	**TW-121S**		
						4	MB-2222W(L)		3.4200/3.4300
						4	MB-2222W(U)		3.4200/3.4300
						Note: Thru Engine S/N 8504189, Contains 4 pieces, Position 4			
	Int.			**212-1397** (31745121) (Outer)		**T.W.**	**TW-316S**		
						4	MB-2636W(L)		3.4200/3.4300
						4	MB-2636W(U)		3.4200/3.4300
						Note: From Engine S/N 8504190, Contains 4 pieces, Position 4			
	Exh.	**218-7815** (33152139)	Valve Seat						
	Int.	**218-7814** (33152512)	Valve Seat						
		● 1.440" Head Dia.							
		CRANKSHAFT							
		247-5088 (31323285)	Crankshaft, Ring Feeder Keyed / Lip						
61	Exh.			**212-1057** (44021A)		**R.B.**	**CB-340P**	10-20-30-40	1.9870/1.9880
						Note: Contains 2 Shims			
						C.S.	**SH-198S**		
	Int.	**218-7587** ●	Valve Seat	**212-1057** (44021A)		**1-4**	SH-197		2.0530/2.0540
						2-3	SH-198		2.0530/2.0540
						Note: From Engine S/N 501088			
	Int.	**218-7619** ◆	Valve Seat						
		● 1.693" Head Diameter ◆ 1.750" Head Diameter							
62						**R.B.**	**CB-592P**	20-30	2.5770/2.5775

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS: Cylinder Kits	Liners	Pistons	PISTON RINGS: Set No.	Comp.	Oil	Pins 223-1 Bushing 223-3	GASKET SETS: Full Sets Lower Sets / Head Sets Oil Pan Sets
63			**213 CID (3.5L) 3-71 DETROIT DIESEL ENGINE; WHEEL TRACTOR-SUPER-99, 99D, 950D, 990D, 995D**							
	4.250"	3	**Note:** Except N65 Injectors, (Requires New Cylinder Sleeve Insert Rings) **226-1220**(1) (23505309)	**226-4220**(1) (23504931)	**224-2469**(2) (5189054) (17.0: 1 C.R.	**SC80061** (5193477)	4-1/8"	2-3/16"	**223-3462**(3) (5157274)	**Full Set FS12197L** ●
										Head Set HS12197A ◆
										Head Gskt CH12197
										Lower Set CS12197Z ▲
										Valve Cvr VS38673 †
										Valve Cvr VS39858 † †
										Valve Cvr VS39862 † † †
										Front Cvr 47095
										Rear Seal 46843 ◗
										Rear Seal SS47870 ◗ ◗
										Inj Kit 216-1136 ★
										Water Gskt D24971 ★ ★
										Water Gskt C25072
										Acc. Seal 63550 ★ ★ ★
										Hand Cvr H36960
										Stud Gskt 2014A
										Pump Gskt D24971
										Cooler Set GS33124 *
										Cooler Set GS33126 * *
										Cooler Set GS33127 * * *
										Cooler Set GS33131* * * *
			Note: N65 Injectors Special Order Engines, Trunk Style Pistons, (Flange Annealed to 20-35 Rockwell "C"), Replace in Complete Sets, Requires New Cylinder Sleeve Insert Rings, (Sleeve Hardened to 40-45 Rockwell "C") **226-1633** (23505306)	**226-4466**(4) (23502022)	**224-2485**(5) (5149234)	**S40653** (23514970)	4-.084"	2-3/16"	**223-3462**(3) (5157274)	
			Note: Contains Original Equipment Design Crosshead Piston with (Sealing Ring in Crown Hardened) **226-1946** (23522947)	**226-4466**(4) (23502022)	**224-2260**(6) (23522026)	**S41900** (23522955)	1-.113" 2-.084"	2-3/16"	**223-3548**(7) (23501467)	
									223-8004(8) (5180250)	

Notes:
1. High Brinell Sleeve
2. Except N65 Injectors, (Recessed Head)
3. Trunk Style Piston, 2 per Rod, Requires Boring, (Steel Backed Copper-Lead Matrix)
4. N65 Injectors Special Order Engines, (Flanged Annealed to 20-35 Rockwell "C"), Hardened, Requires New Cylinder Sleeve Insert Rings, (1.050" Port Height)
5. N65 Injectors Special Order Engines, Trunk Style Piston, (Recessed Head)
6. Naturally Asperated, O.E. Design Crosshead (2 Piece, Recessed Head) Piston with the Sealing Ring in the Crown
7. Crossed Head Piston Pin Bushing, (1 per Rod)
8. Cross Head Piston Pin Retainer Plate, (2 per Piston)

● High Block, Crankshaft Seals, O.E. type Valve Cover Gasket Not Included
◆ High Block, (Contains O.E. Rubber Type Valver Cover Gaskets)
▲ Use w/ Head Set, Front & Rear Oil Seals to make Full Set.
† Except Aluminum Valve Cover, Jacobs Engine Brake, (Requires 2 Sets Premium)
† † Except Aluminum Valve Cover, Jacobs Engine Brake, (Requires 2 Sets, O.E. Type)
† † † Aluminum Valve Cover , Jacobs Engine Brake, (Requires 2 Sets)
◗ Standard Main Seal
◗ ◗ Set Includes Micro-Shield Repair Sleeve and Oil Seal.
★ Contains Pre-reamed Injector Tube and Viton O-rings
★ ★ Pump to Blower Gasket
★ ★ ★ Acc. Drive Seal 2.254" Outside Dia. Shaft
* Gasket for 6, 8, 13 Plate Single Stack Cooler
* * 24 Plate Single Stack Cooler
* * * Gasket for 18 Plate Single Stack Cooler
* * * * Gasket for 4 Plate Single Stack Cooler

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
63	Exh.	**211-1283** ● (5193666)	**217-3680** (5120930)	**212-1019** (5150289)	**216-5117** (23503856)	**R.B.**	**CB-1596P**	10-20-30-40	2.7490/2.7500
						M.B.	**MB-1276P**	10-20-30-40	3.4990/3.5000
	Exh.			**212-1121** ◆ (5117561)	**216-5118** ■ (3947770)	**T.W. 4**	**TW-411S** MB2524W		3.8430/3.8435
						Note: Contains 4 Pieces, Position 4, Use with MB-1276P (4)			
	Exh.	**218-7521** ● (8927920)	Valve Seat			**C.B.**	**SH-468**		
						Note: Contains Steel Bushing in Center Hole			
	● (2 Valves per Cylinder), Seat Tapered, Inside Dia., 30 deg. Face Angle ◆ Cross Head Piston, (2 Piece) ■ Hardened Steel, (Performer)					**C.B.**	**SH-525**		
						Note: Steel Bushing in Center Hole Not Included			
	CAMSHAFT/TIMING COMPONENTS					**T.W.**	**SH-477WS** SH477W		1.6910
						Note: From Engine S/N 3A-27384, Contains 4 Pieces			
	214-1107 (8923814)	Cam Follower							
	CRANKSHAFT								
	247-5046 (5184215)	Crankshaft, Standard							
	247-5072 (5184215)	Crankshaft, .010" Undersized							
	247-5110 (5184215)	Crankshaft, Remanufactured .010" U.S.							
	216-7507 (5117629)	Connecting Rod Nut							

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
64			**220 CID (3.6L) 220A MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-U302**								
	4.250"	4				**S41081**(1)	3-3/32"	1-3/16"			
			Note: 1. 4 Ring Piston, (1 Cylinder Set)								
65			**283 CID (4.6L) 340-4, 340A-4 MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-TWIN CITY, UNIVERSAL-M, UNIVERSAL-MTA, UNIVERSAL-UTU**								
	4.250"	4				**S4333** (14R70)	3-5/32"	1-1/4"			
66			**283 CID (4.6L) 340-4, 340A-4 MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-5-STAR, KEA-(FROM S/N 525401 TO 526803), KEC, KOMBINATION, KTA, STANDARD U, STANDARD UTS**								
	4.250"	4				**S4333** (14R70)	3-5/32"	1-1/4"			
67			**283 CID (4.6L) 340-4, 340A-4 (FROM S/N 04000000) MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-GE, KEA**								
	4.250"	4				**S4333** (14R70)	3-5/32"	1-1/4"			
68			**425 CID (7.0L) 425C MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-G900, GVI**								
	4.250"	6	Repair Sleeve, (.125" Wall - 12.250" Long) **226-8016** Repair Sleeve, (.0938" Wall - 12.250" Long) **226-8066**								
69			**425 CID (7.0L) D425-6, D425A-6, D425B-6, HD425-6 MINNEAPOLIS DIESEL ENGINES**								
	4.250"	6									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
64	Exh.	**211-1871** ● (10A6397)	**217-3891** ◆ (10A5983)		**216-5117** (10A6440)	**R.B.**	**CB-594P**	10-20	2.6245/2.6250
						M.S.	**MS-900P**		
	Int.		**217-3891** ◆ (10A5983)		**216-5117** (10A6440)	**1-2**	MB-2496P		2.7495/2.7500
						3	MB-2032P(F)		2.9995/3.0000
					216-5118 ■				
	● Except Liquid Propane Gas ◆ Thru Serial Number 27900300 ■ Int. & Exh., Hardened Steel, (Performer)								
65	Exh.				**216-5233** (GE34)	**R.B.**	**CB-448P**	10	2.7495/2.7500
	Int.	**211-1090** ● (10A9108)			**216-5233** (GE34)				
	● 1.720" Head, 6.670" O A L								
66	Exh.				**216-5233** (GE34)	**R.B.**	**CB-448P**	10	2.7495/2.7500
	Int.	**211-1090** ● (10A9108)			**216-5233** (GE34)				
	● 1.720" Head, 6.670" O A L								
67	Exh.				**216-5233** (GE34)	**R.B.**	**CB-448P**	10	2.7495/2.7500
	Int.	**211-1090** ● (10A9108)			**216-5233** (GE34)				
	● 1.720" Head, 6.670" O A L								
68	Exh.	**211-1129** (10A9107)	**217-3914** (10A6912)		**216-5233** (GE34)	**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090** (10A9108	**217-3914** (10A6912)		**216-5233** (GE34)				
	Int.	**218-7623**	Valve Seat						
69						D425-6 TO S/N 06700858:			
						R.B.	**CB-592P**	20-30	2.5770/2.5775
						D425-6 S/N 06700859-UP:			
						R.B.	**CB-591P**	10-20	2.9115/2.9120
						D425A-6, D425B-6, HD425-6:			
						R.B.	**CB-591P**	10-20	2.9115/2.9120

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets Head Sets Oil Pan Sets
70			**283 CID (4.6L) D283-4A MINNEAPOLIS MOLINE DIESEL ENGINE; WHEEL TRACTOR-U, UB, UTI, UTS**							
	4.250"	4				**S4333** (14R70)	3-5/32"	1-1/4"		**Rock Cvr. VS38399** **Manif Set MS12156**
71			**636 CID (10.4L) 3208 CATERPILLAR V-8 DIESEL ENGINE; WHEEL TRACTOR-4-150, 4-180**							
	4.500"	8	Engines with Straight Connecting Rod Two Ring Piston **224-2512** (9L8556)		**224-1927X**(1) (9L7737) **224-1927**	**S41883** (2W8265)	1-1/8"	1-7/64"	**223-1836**(2) (7N9803) **223-3569**(3) (8N0701) **223-5506**(4) (8N7294)	**Head Set HS54151-9** **Lower Set CS4929C** **Lower Set CS4929F** **Pan Set OS32178** ● **Pan Gskt OS32498** ● Includes Gasket and O-rings
			Three Ring Piston **224-3281**	**226-4487**(5) (9N6275) **226-4510**(6) (7W2293)	**224-2786X**(1) **224-2786**	**S41685**	2-3/32"	1-3/16"	**223-1836**(2) (7N9803) **223-3569**(3) (8N0701) **223-5506**(4) (8N7294)	

Notes:
1. Piston Body, (Without Piston Pin or Retainers)
2. Pin
3. Requires Boring
4. Lock Rings
5. Semi-Finished, Install and Hone Sleeve; (Sleeve has .0265"-.0295" extra stock on ID for boring)
6. Semi-Finished, Install and Hone Sleeve; (Sleeve ID is 4.4945/4965, that allows for honing to size)

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
70						**R.B.**	**CB-591P**	10-20	2.9115/2.9120
71	Exh.	**211-2456** (9L8377)	**217-3306**	**212-1289** (9L9172) (Inner)	**216-5080** (2A4429)	**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						Note Bearing Length .955", Early Engine			
	Exh.			**212-1288** (9N3617) (Outer)		**R.B.**	**CB-1215P**	10-20-30-40	2.7490/2.7502
						Note: Bearing Length 1.010", Late Engine			
						M.S.	**MS-1420P**	10-20-30	
						1	MB-2733P		3.4990/3.5000
	Int.	**211-2455** (9L9851)	**217-3307** (6I2864)	**212-1289** (9L9172) (Inner)	**216-5080** (2A4429)	**2-3-5**	MB-2734P		3.4990/3.5000
						4	MB-2735P(F)		3.4990/3.5000
						Note: Late Engine, Non-Grooved Front Bearing			
				212-1288 (9N3617) (Outer)		**M.S.**	**MS-1421P**	10-20-30	
						1-2	MB-2734P		3.4990/3.5000
						3-5			
						4	MB-2735P(F)		3.4990/3.5000
	Exh.	**218-7807** (9N2837)	Valve Seat			**Note:** Early Engine Contains Upper Half Flanged Bearing, 1.253" Long			
						M.S.	**MS-1422P**	10-20-30	
	Int.	**218-7808** (2N8943)	Valve Seat			**1**	MB-2736P		3.4990/3.5000
						2-3-5	MB-2734P		3.4990/3.5000
						4	MB-2735P(F)		3.4990/3.5000
						Note: Late Engines, Grooved Front Bearing			
		CAMSHAFT/TIMING COMPONENTS				**M.S.**	**MS-1592P**	20	
						1-2	MB-2929P		3.4990/3.5000
						3-5			
		229-1783 (9Y3354)	Camshaft - Naturally Asperated			**4**	MB-2930P(F)		3.4990/3.5000
						Note: Early Engine, Optional .010" O.S., O.D., 1.253" Length Upper Half Flanged			
		229-2188 (2W4238)	Camshaft - Turbo Flat Tappet			**M.S.**	**MS-1593P**	20	
						1	MB-2927P		3.4990/3.5000
						2-3-5	MB-2929P		3.4990/3.5000
		CRANKSHAFT				**4**	MB-2930P(F)		3.4990/3.5000
						Note: Late Engine, Non-Grooved Front Bearing, Optional, .010" O.S., O.D.			
		247-5007 (9N6221)	Crankshaft, Includes Turbo Application			**M.S.**	**MS-1594P**	20	
						1	MB-2928P		3.4990/3.5000
						2-3-5	MB-2929P		3.4990/3.5000
						4	MB-2930P(F)		3.4990/3.5000
						Note Late Engine, Grooved Front Bearing, Optional, .010" O.S., O.D.			
						C.S.	**SH-1245S**		
						1-2-3	SH-1245		2.4995/2.5005
						4-5			

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
72			**573 CID (9.4L) 3150 CATERPILLAR DIESEL ENGINE; WHEEL TRACTOR-2255**								
	4.500"	8				**S41883**	1-1/8"	1-7/64"	**223-1836**(1) (7N9803) **223-3569**(2) (8N0701) **223-5506**(3) (8N7294)	**Head Set HS54151-4** **Head Gskt 54151** **Lower Set CS4929** ● **Pan Set OS32498** ◆ **Pan Gskt OS32215** ● Use w/ Head Set, Front & Rear Oil Seals to make Full Set. ◆ Pan Set and Pump Gaskets	
			Notes: 1. Pin 2. Pin Bushing, (Requires Boring) 3. Lock Rings								
73			**336 CID (5.5L) 336, 336-4, 336A, 336A-4 MINNEAPOLIS MOLINE GASOLINE, LPG ENGINE; WHEEL TRACTOR-M5, M504, M602, M604, M670, M670 SUPER**								
	4.625"	4				**S40240** (10B1447)	3-3/32"	1-3/16"		**Manif Set MS12156**	
74			**336 CID (5.5L) D336, D336-4, D336A, D336A-4 MINNEAPOLIS MOLINE DIESEL ENGINE; WHEEL TRACTOR-M5, M504, M602, M604, M670, SUPER M670**								
	4.625"	4				**S40240** (10B1447)	3-3/32"	1-3/16"		**Manif Set MS12156**	
75			**504 CID (8.3L) 504-6 MINNEAPOLIS MOLINE GASOLINE ENGINE; WHEEL TRACTOR-G705, G706, G707, G708, G1000, G1050, G1350**								
	4.625"	6									
76			**504 CID (8.3L) D504-6 MINNEAPOLIS MOLINE DIESEL ENGINE; WHEEL TRACTOR-G705, G706, G707, G708, G1000, G1050**								
	4.625"	6									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
72	Exh.	**211-2456** (9L8377)		**212-1289** (9L9172) (Inner)		**R.B.**	**CB-972P**	10-20-30-40	2.7496/2.7504
						M.S.	**MS-1421P**	10-20-30	
						1-2	MB2734P		3.4990/3.5000
	Exh.			**212-1288** (9N3617) (Outer)		**3-5**			
						4	MB-2735P(F)		3.4990/3.5000
						Note: Contains Upper Half Flanged Bearing, 1.253" Length			
	Int.	**211-2455** (9N2837)		**212-1289** (9L9172) (Inner)		**M.S.**	**MS-1592P**	20	
						1-2	MB-2929P		3.4990/3.5000
						3-5			
	Int.			**212-1288** (9N3617) (Outer)		**4**	MB-2930P(F)		3.4990/3.5000
						Note: Contains Upper Half Flanged Bearing, .010" O.S. O.D., 1.253" Long			
						C.S.	**SH-1245S**		
						1-2-3	SH-1245		2.4995/2.5005
						4-5			
73	Exh.	**211-2007** ● (10A17914)	**217-3914** (10A6912)			**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090** ◆ (10A17913)	**217-3914** (10A6912)						
	Int.	**218-7623**	Valve Seat						
	● Stellite Face ◆ 6.6875" O A L								
74	Exh.				**216-5146** (1600207)	**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.				**216-5146** (1600207)				
	Int.	**218-7623**	Valve Seat						
75	Exh.	**211-2007**● (10A17914)	**217-3914** (10A6912)			**R.B.**	**CB-591P**	10-20	2.9115/2.9120
	Int.	**211-1090**◆ (10A17913)	**217-3914** (10A6912)						
	● Stellite Face ◆ 6.6875" O A L								
76	Exh.				**216-5146** (1600207	**R.B.**	**CB-591P**	10-20-30	2.9115/2.9120
	Int.				**216-5146** (1600207)				

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
77			**403 CID (6.6L) 403 MINNEAPOLIS MOLINE GASOLINE ENGINE; WHEEL TRACTOR-GB, GE, GT,GTB, GTC, GTI**								
	4.625"	4	Ring set is for Engine S/N 02009309 and Up			**S40240** (10B1447)	3-3/32"	1-3/16"		**Valve Cvr VS38399** **Man Set MS12156**	
78			**605 CID (9.9L) 605-6 MINNEAPOLIS MOLINE GASOLINE ENGINE; WHEEL TRACTOR-GTX**								
	4.625"	6									
79			**1210 CID (19.8L) 1210-12A MINNEAPOLIS MOLINE GASOLINE ENGINE;**								
	4.625"	12				**S40280.030** (10R998)	3-3/32"	1-3/16"			
80			**585 CID (9.6L) D585-6 MINNEAPOLIS MOLINE DIESEL ENGINE; WHEEL TRACTOR-A4T1600, G1350, G1355, 2155, 2655, 2-150**								
	4.750"	6									

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	 Valves	 Guides	 Springs	 Keepers	 Pos.	 Standard Part No.	Undersizes	 Std. Shaft Diameter
77						**R.B.**	**CB-448P**	10	2.7495/2.7500
78						**R.B.**	**CB-448P**	10	2.7495/2.7500
79						**R.B.**	**CB-448P**	10	2.7495/2.7500
80						**R.B.**	**CB-1241P-10**	10	3.4980/3.4990
						Note: Rod Bearings .010" O.S. only			

Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS Set No.	Comp.	Oil	 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
81			**478 CID (7.8L) GMC V-6 GASOLINE ENGINE;**								
	5.125"	6				**S40837** (674202)	1-1/8" 1-3/32"	1-3/16"	**223-3512** (2375511)	**Head Set HS3328X** **Pan Set OS31577** **Valve Cvr VS38290** ● **Manif Set MS10009** **Manif Set MS10019BS** **Rear Seal JV716** ● Single Valve Cover Gasket	
82			**800 CID (13.1l) 800-6A MINNEAPOLIS MOLINE GASOLINE, NATURAL GAS, LP GAS ENGINES TO S/N 27000000**								
	5.313"	6								**Front Seal 48779**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
81	Exh.		**217-3183** ●	**212-1101** (2379691)	**216-5117** (3947770)	**R.B.**	**CB-586P**	10-20-30-40, C60	2.8112/2.8122
	Exh.		**217-3239** ◆						
	Int.	**211-1740** (2322504)	**217-3152**	**212-1011** (2379691)	**216-5117** (3947770)				
	Int.		**217-3180** ■						
	Int.		**217-3228** ▲						
	Int.		**217-4096** ◗						
					216-5118 ★				
	● Iron, (.4375" I.D., .627" O.D., 3.125" Long) ◆ Iron, Spiral Grooved, (.4375" I.D., .627" O.D., 3.125" Long) ■ Iron, (.374" I.D., .502" O.D., 2.875" Long) ▲ Iron, Spiral Grooved, (.374" I.D., .502" O.D., 2.875" Long) ◗ Iron, Spiral Grooved, (.375" I.D., .502" O.D., 2.750" Long) ★ Int. & Exh. Hardened, (Optional)								
	CAMSHAFT/TIMING COMPONENTS								
		229-1480 (2372707)	Camshaft, (Mechanical)						
		215-4052 (2366779)	Push Rod						
	OIL PUMP								
		601-1099 (2452707)	Oil Pump with 3 Mounting Holes						
82	Exh.		**217-3914** (10A6912)			**R.B.**	**CB-701P**	10-20	3.2480/3.2490
	Int.	**211-1090** (10A17913)	**217-3914** (10A6912)		**216-5233** (GE34)				

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Line No.	Cyl. Dia.	No. Cyl.	ASSEMBLIES AND COMPONENT PARTS							GASKET SETS	
			 Cylinder Kits	 Liners	 Pistons	 PISTON RINGS			 Pins 223-1 Bushing 223-3	 Full Sets Lower Sets	Head Sets Oil Pan Sets
						Set No.	Comp.	Oil			
83			**800 CID (13.1l) HD800-6A NATURAL GAS, LP GAS ENGINES S/N 27000001-UP, HD800A-6A NATURAL GAS, LP GAS ENGINES S/N 34900001-UP**								
	5.313"	6								**Front Seal 48779**	

Line No.	VALVE TRAIN PARTS					BEARINGS			
	Exh. or Int.	Valves	Guides	Springs	Keepers	Pos.	Standard Part No.	Undersizes	Std. Shaft Diameter
83	Exh.	**211-2111** ● (10A19206)	**217-3973** ◆ (10A6912)			**R.B.**	**CB-701P**	-10-20	3.2480/3.2490
	Int.	**211-2112** (10A20408)	**217-3973**◆ (10A6912)		**216-5233** (GE34)				
	Exh.	**218-3786**	Valve Seat						

● 45 Degree Valve Face
◆ From S/N 27000000

SLEEVE ASSEMBLIES

Part No.	Bore	Piston	Sleeve	Rings	O-Ring Kit	No. Cyl.
226-1208	3.1880	224-2748	226-4208	S41815	-	4
226-1212	3.1880	224-2748	226-4212	S41815	-	4
226-1220	4.2500	224-2469	226-4220	SC80061	-	2-3-4-6
226-1253	3.1880	224-2742	226-4208	S41816	-	4
226-1254	3.9000	224-1020	226-4254	S428	-	4
226-1259	3.3750	224-3193	226-4138	S4323	223-7103	4
226-1261	3.1880	224-2742	226-4208	S41816	-	4
226-1283	3.7500	224-3206	226-4513	S40016	223-7112	4-6
226-1312	3.2500	224-2751	226-4312	S40075	223-7112	4
226-1313	3.3750	224-3194	226-4313	S4323	223-7112	4
226-1334	3.9000	224-1451	226-4254	S40187	-	4
226-1359	3.5000	-	-	-	-	4
226-1360	4.0000	224-1475	226-4125	S4330	223-7101	4
226-1361	3.5630	224-1476	226-4156	S40508	223-7129	4-6
226-1401	4.1250	224-1401	226-4514	S40184	223-7101	4
226-1414	3.2700	224-2742.083	226-4188	S41816.083	-	4
226-1447	91.0000	224-1643	-	S50367	-	3-4
226-1453	98.0000	224-1649	226-4234	S41092	-	6
226-1454	91.0000	224-1643	-	S40593	-	3-6
226-1467	3.5630	224-1672	226-4156	S4254	223-7129	6
226-1470	4.2500	224-1676	226-4410	S40651	223-7165	6
226-1478	3.8750	224-3282	226-4415	S41154	223-7140	2-3-4-6
226-1484	3.4380	224-1766	226-4417	S4827	223-7143	4-6
226-1493	3.5781	224-1777	-	S40933	223-7112	4
226-1508	3.3750	224-1838	226-4523	S4323	223-7112	4
226-1515	91.0000	224-1897	226-4225	S40593	-	3
226-1516	98.0000	224-1904	226-4234	S42300	-	4
226-1521	3.8750	224-3219	226-4499	S41128	223-7162	6
226-1546	98.0000	224-1932	226-4234	S41092	-	6
226-1549	3.8750	224-3221	226-4499	S40381	223-7162	6
226-1557	4.6250	-	226-4501	S41082	223-7155	8
226-1571	5.5000	224-2091	226-4456	S41885	223-7158	6-8
226-1611	3.6250	224-3218	226-4525	S4535	223-7137	4-6
226-1633	4.2500	224-2485	226-4466	S40653	-	4-6-8-12-16
226-1636	3.8750	A1552NP	226-4531	S41842	223-7169	6
226-1648	5.2500	224-3237	226-4199	S40773	223-7128	6
226-1670	101.0000	n/a	226-4509	S41330	-	4
226-1711	4.4380	224-3242	226-4437	S40430	223-7159	4-6
226-1712	5.2500	224-3018	226-4199	S40773	223-7128	6
226-1715	108.0000	-	-	-	-	8
226-1723	4.2500	224-2260	226-4466	S41407	-	2-3-4-6
226-1737	4.4380	224-3243	226-4437	S41450	223-7159	4-6

SLEEVE ASSEMBLIES CONTINUED

Part No.	Bore	Piston	Sleeve	Rings	O-Ring Kit	No. Cyl.
226-1766	3.8750	224-2352	226-4434	S40678	223-7147	4-6
226-1777	3.8750	224-2369	226-4434	S40678	223-7147	4-6
226-1787	3.8750	224-3229	226-4499	S41840	223-7162	6
226-1799	4.1250	224-3195	226-4514	S40184	223-7101	4
226-1823	98.0000	-	-	-	-	6
226-1826	4.2500	224-2785	226-4410	S41545	223-7165	6
226-1885	100.0000	-	-	S42892	-	2-3-4-5-6
226-1900	3.1880	224-2748	226-4511	S41815	-	4
226-1946	4.2500	224-2260	226-4466	S41900	-	2-3-4-6-8-12-16

SLEEVES

Part No.	Bore	O.D.	Width	Pilot	Barrel	Seal	Length	Firewall	O-Rings	No. Cyl.
226-4125	4.0000	4.7450	0.2470	4.5280	4.3750	4.4620	8.7500	No	223-7107	4
226-4138	3.3750	3.7785	0.2470	3.7760	3.7030	3.7160	6.5625	No	223-7103	4
226-4156	3.5630	3.9800	0.2500	3.9120	3.8730	3.8400	8.0625	No	223-7129	4-6
226-4188	3.2700	3.4080	0.0610	0.0000	3.3680	3.3680	6.5000	No	N/A	4
226-4199	5.2500	6.2190	0.4650	5.8720	5.8000	5.7790	12.7500	0.0360	223-7128	6
226-4208	3.1880	3.4075	0.0610	-	3.3685	-	6.5000	No	-	4
226-4212	3.1880	3.3625	0.0400	-	3.2690	-	6.5000	No	-	4
226-4220	4.2500	4.7710	0.2510	4.6260	4.6260	-	11.1250	No	-	2-3-4-6
226-4225	91.0000	3.8070	0.0440	-	3.6880	3.6880	8.5000	No	-	3-4-6
226-4234	98.0000	4.1870	0.1450	4.0630	4.0630	-	8.9070	0.0380	-	4-6
226-4254	3.9000	4.2420	0.1810	0.0000	4.1015	0.0000	6.9275	No	N/A	4
226-4313	3.3750	3.8200	0.2460	3.7000	3.6710	3.6820	6.9375	No	223-7112	4
226-4410	4.2500	5.0000	0.3190	4.8120	4.6850	4.7500	9.5000	0.0480	223-7165	6
226-4415	3.8750	4.7820	0.2530	4.5180	4.4680	4.4855	9.9100	0.0480	223-7140	2-3-4-6
226-4417	3.4380	3.9800	0.2498	3.9120	3.8390	3.8390	8.0625	No	223-7143	4
226-4434	3.8750	4.6270	0.3190	4.4370	4.3100	4.3750	8.1250	0.0450	223-7147	4-6
226-4437	4.4380	5.2510	0.3163	5.0310	4.9370	4.9680	10.8125	0.0440	223-7159	4-6
226-4456	5.5000	6.5025	0.3560	6.2300	6.1780	6.1020	8.6200	0.0700	223-7158	8
226-4466	4.2500	4.7710	0.2510	0.0000	4.6255	0.0000	11.1250	No	N/A	2-3-4-6-8
226-4487	4.5000	-	-	4.6900	4.6900	4.6900	7.7500	-	-	8
226-4499	3.8750	4.5590	0.2510	4.3450	4.2550	4.2790	7.4400	0.0320	223-7162	6
226-4501	4.6250	5.4030	0.3050	5.1870	5.1700	5.0900	7.5500	0.0470	223-7155	8
226-4509	101.0000	4.2300	0.0000	0.0000	0.0000	4.1030	8.9480	0.0200	N/A	4
226-4510	4.5000	-	-	4.6900	4.6900	4.6900	7.7500	No	-	8
226-4511	3.1880	3.3670	0.0450	-	3.2694	3.2694	6.5000	No	-	4
226-4514	4.1250	4.7450	0.2490	4.5280	4.5000	4.4660	8.7500	No	223-7101	4
226-4525	3.6250	4.3090	0.2510	4.0920	4.0000	4.0280	7.0625	No	223-7137	4-6

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REBORE KITS

Part No.	Bore	Piston	Rings	No. Cyl.
224-2512	4.5000	224-1927X	S41883	8
224-2738	4.5000	224-2568	S41542	8
224-2993	3.9000	224-1020	S428	4
224-3048	3.9000	224-1451	S40187	4
224-3281	4.5000	224-2786X	S41685	8

PISTONS

Part No.	Bore	Length	Comp. Dist.	Comp. Ring	Comp. Ring 2	Oil Ring	Pin	Pin O.D.	No. Cyl.
224-1020	3.9000	4.1200	2.0600	2-3/32	-	1-3/16	223-1854	0.9120	4
224-1397	3.4000	3.4900	1.7400	2-5/64	-	1-3/16	-	0.9010	6
224-1401	4.1250	4.3125	2.3750	1-3/32	2-1/8	1-3/16	223-1931	0.9894	4
224-1451	3.9000	4.1875	2.1250	3-3/32	-	2-3/16	223-1872	1.2492	4
224-1475	4.0000	4.5000	2.5270	3-1/8	-	1-3/16	-	0.9890	4
224-1476	3.5630	4.1406	2.2710	3-3/32	-	2-3/16	223-1869	0.9997	4-6
224-1611	3.1880	3.5620	2.0000	3-1/8	-	1-3/16	-	0.8500	4-6
224-1643	3.8583	4.2340	2.2360	2-3/32	1-1/8	2-1/4	-	1.2500	3-4-6
224-1649	3.6000	4.2340	2.2360	3-1/16	-	2-1/4	W1373	1.3750	3-4-6
224-1672	3.5630	3.9380	1.9310	3-1/8	-	1-3/16	-	1.0000	6
224-1676	4.2500	5.8125	3.1440	1-3/32	2-1/8	1-1/4	223-1889	1.5012	6
224-1766	3.4380	3.9375	2.0720	3-1/8	-	1-3/16	223-1884	0.9996	4
224-1897	3.6000	4.3100	2.4310	2-3/32	-	2-1/4	-	1.2500	3-4
224-1904	3.8750	4.7500	2.7490	3-3/32	-	2-1/4	-	1.3750	4
224-1927	4.5000	3.6700	2.3180	1-1/8	-	1-7/64	223-1836	1.5000	8
224-1927X	4.5000	3.6700	2.3180	1-1/8	-	1-7/64	223-1836	1.5000	8
224-2091	5.5000	3.9000	2.5700	1-5/32	-	1-3/16	223-1823	1.7489	8
224-2260	4.2500	5.9900	3.5465	1-.113	2-.084	2-3/16	223-1938	1.5000	2-3-4-6-8-12-16
224-2352	3.8750	4.5800	2.5150	3-3/32	-	1-3/16	223-1919	1.2516	4-6
224-2369	3.8750	4.5800	2.5150	3-3/32	-	1-3/16	223-1919	1.2516	4-6
224-2469	4.2500	6.0000	3.5150	4-1/8	-	2-3/16	223-1934	1.4990	2-3-4-6
224-2485	4.2500	6.0300	3.5460	4-.084	-	2-3/16	223-1934	1.4990	2-3-4-6-8-12-16
224-2486	3.8750	5.4400	3.1710	1-.082	-	2-3/16	223-1937	1.3750	2-3-4-6-8
224-2742	3.1880	3.2000	1.7820	2-3/32	-	2-3/16	-	0.7500	4
224-2742.083	3.2700	3.2000	1.7820	2-3/32	-	2-3/16	-	0.7500	4
224-2748	3.1880	3.2100	1.7750	2-3/32	-	1-3/16	223-1932	0.7499	4
224-2751	3.1250	3.6600	1.9780	2 3/32	-	1 3/16	223-1932	0.7500	6
224-2785	4.2500	5.8100	3.1435	1-3/32	1-1/8	1-1/4	223-1925	1.7512	6
224-2786	4.5000	3.6700	2.3180	2-3/32	-	1-3/16	223-1836	1.5000	8
224-2786X	4.5000	3.6700	2.3180	2-3/32	-	1-3/16	223-1836	1.5000	8
224-2827	3.2500	3.3750	1.5000	3-3/32	-	1-3/16	-	0.7500	2-4-5
224-2831	3.3130	3.4380	2.0000	2-3/32	1-8/32	1-5/32	-	0.8600	6
224-3193	3.3750	3.7031	1.8900	3-1/8	-	1-3/16	223-1933	0.8126	4

PISTONS CONTINUED

Part No.	Bore	Length	Comp. Dist.	Comp. Ring	Comp. Ring 2	Oil Ring	Pin	Pin O.D.	No. Cyl.
224-3194	3.3750	3.5625	1.9370	3-1/8	-	1-3/16	223-1845	0.8600	4
224-3218	3.6250	3.7500	2.3125	3-3/32	-	1-3/16	223-1848	1.2497	4-6
224-3219	3.8750	4.2343	2.3755	2-3/32	-	1-3/16	223-1837	1.2495	6
224-3229	3.8750	4.2200	2.3630	2-3/32	-	1-3/16	223-1837	1.2495	6
224-3237	5.2500	6.9800	4.2350	3-1/8	-	1-1/4	223-1911	2.2516	6
224-3242	4.4380	5.9850	3.6090	1-3/32	2-1/8	1-1/4	223-1913	1.6260	4-6
224-3243	4.4380	5.9950	3.6110	3-1/8	-	1-1/4	223-1913	1.6260	4-6
224-3282	3.8750	-	-	1-.082	-	2-3/16	223-1937	-	2-3-4-6-8
224-3287	3.4380	3.5600	1.9840	1-5/64	2-3/32	1-1/4	-	0.8600	4-6

PISTON PINS

Part No.	Pin O.D.	Length	No. Cyl.
223-1836	1.4999	3.2070	8

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PISTON SKIRT CLEARANCE

Part No.	Bore	Min. Skirt Clearance	Head Type	Valve Reliefs	Material
224-1020	3.9000	0.0015	Flat	No	Aluminum
224-1397	3.4000	0.0020	Flat	No	Aluminum
224-1401	4.1250	0.0035	Flat	No	Aluminum
224-1451	3.9000	0.0056	Cup	Yes	Aluminum
224-1475	4.0000	-	-	-	Aluminum
224-1476	3.5630	0.0040	-	-	Aluminum
224-1611	3.1880	0.0015	Flat	No	Aluminum
224-1643	3.8583	-	Flat	No	Aluminum
224-1649	3.6000	0.0070	Cup 1.00 X 2.125	No	Aluminum
224-1672	3.5630	-	Resessed	No	Aluminum
224-1676	4.2500	0.0025	Cup	No	Aluminum
224-1766	3.4380	0.0030	Cup	No	Aluminum
224-1897	3.6000	-	Cup .580 X 2.205	No	Aluminum
224-1904	3.8750	-	Cup 2.402	No	Aluminum
224-1927	4.5000	0.0068	Cup .830 X 2.500	No	Aluminum
224-1927X	4.5000	0.0068	Cup .830 X 2.500	No	Aluminum
224-2091	5.5000	0.0110	Cup .402 X 3.937	No	Aluminum
224-2260	4.2500	0.0050	Cup	No	Cast Iron
224-2352	3.8750	0.0032	Cup	No	Aluminum
224-2369	3.8750	0.0032	Cup	No	Aluminum
224-2469	4.2500	0.0070	Cup	No	Cast Iron
224-2485	4.2500	0.0050	Cup .442 X 3.500	No	Cast Iron
224-2486	3.8750	0.0047	Cup .484 X 5.710	No	Cast Iron
224-2742	3.1880	-	Dome	No	Aluminum
224-2742.083	3.2700	-	Dome	No	Aluminum
224-2748	3.1880	0.0010	Dome	No	Aluminum
224-2751	3.1250	0.0020	Flat	No	Aluminum
224-2785	4.2500	0.0034	Cup	2	Aluminum
224-2786	4.5000	0.0070	Cup .828 X 2.498	4	Aluminum
224-2786X	4.5000	0.0070	Cup .828 X 2.498	4	Aluminum
224-2827	3.2500	0.0045	Flat	No	Aluminum
224-2831	3.3130	0.0020	Flat	No	Aluminum
224-3193	3.3750	0.0030	Flat	No	Aluminum
224-3194	3.3750	-	-	No	Aluminum
224-3218	3.6250	0.0015	Flat	No	Aluminum
224-3219	3.8750	0.0036	Cup	2	Aluminum
224-3229	3.8750	0.0020	Cup	No	Aluminum
224-3237	5.2500	0.0066	Cup	No	Aluminum
224-3242	4.4380	0.0065	Cup	No	Aluminum
224-3243	4.4380	0.0055	Cup	No	Aluminum
224-3282	3.8750	0.0047	Cup .421 X 3.0875	No	Cast Iron
224-3287	3.4380	0.0020	Flat	No	Aluminum

ROD BUSHINGS

Part No.	I.D.	Min. O.D.	Max. O.D.	Length	Wall Thickness	No. Cyl.
223-3349	0.8592	0.9140	1.9130	1.1250	0.0325	4-6
223-3429	0.0000	1.0625	1.0635	1.1250	0.2230	4-6
223-3432	0.0000	0.9265	0.9285	1.1975	0.0330	4
223-3451	-	0.8115	0.8125	1.3220	0.0360	4
223-3462	1.5020	1.7595	1.7560	0.8175	0.1330	2-3-4-6-8
223-3471	0.7505	0.8700	0.8735	1.0100	0.0710	2-4
223-3484	0.0000	1.0370	1.0390	1.1400	0.0320	4-6
223-3503	0.7084	0.7622	0.7632	1.0630	0.0320	4
223-3505	0.0000	0.6019	0.6039	0.8230	0.0365	4
223-3507	0.0000	1.1270	1.1275	1.2560	0.0730	4-6
223-3512	-	-	-	-	-	6
223-3514	-	1.3125	1.3130	0.5570	0.0450	4-6
223-3516	0.0000	1.1810	1.1845	1.2500	0.0450	4
223-3517	1.2502	1.3698	1.3723	1.2600	0.0680	4
223-3546	-	0.9730	0.9750	1.2500	0.0411	4-6
223-3548	0.0000	-	-	3.2350	0.0880	2-3-4-6-8
223-3558	0.0000	1.3750	1.3755	1.4110	0.0750	4-6
223-3559	0.0000	1.6250	1.6255	1.1500	0.0750	6
223-3563	0.0000	2.0015	2.0021	1.7600	0.1420	8
223-3565	0.0000	1.7500	1.7505	1.5700	0.1450	8
223-3569	1.5015	1.6295	1.6300	1.3100	0.0770	8
223-3587	0.0000	2.4365	2.4375	0.8550	0.2040	6
223-3594	1.2515	1.3757	1.3762	1.0630	0.8500	3
223-3605	-	0.9130	0.9140	1.1250	0.0425	4-6
223-3607	0.0000	1.0370	1.0390	1.1400	0.0430	4-6
223-3608	-	0.9730	0.9750	1.2500	0.0365	4
223-3621	0.8597	0.9134	0.9140	1.1250	0.0365	4
223-3622	1.3770	1.6005	1.6010	0.7550	0.1225	2-3-4-6
223-3628	1.6150	1.6290	1.6295	1.3020	0.0775	8
223-3639	0.0000	1.2187	1.2204	0.9551	0.0820	4
223-3640	1.3765	1.5318	1.5323	1.3360	0.0870	4-6
223-3641	0.0000	1.6562	1.6568	1.3360	0.0830	4

RING SETS

Part No.	Bore	Comp. Ring	Comp. Ring 2	Oil Ring	No. Cyl.
433	3.4380	12-3/32	-	12-5/32	6
439	3.2500	12-3/32	-	12-5/32	6
533	3.4380	12-3/32	-	12-5/32	6
539	3.2500	2-3/32	2-5/32	-	6
5985	3.4380	2-5/64	-	1-3/16	6
S40016 Std., .030, .060	3.7500	3-1/8	-	1-3/16	4-6
S40040	3.6250	3-3/32	-	1-3/16	4
S40074	3.3750	1-3/32	2-1/8	1-1/4	4
S40075	3.2500	2-3/32	-	2-5/32	4
S40095	4.0000	2-3/32	1-1/8	1-1/4	4
S40126	3.3130	2-3/32	-	2-5/32	4
S40127	3.3130	2-3/32	-	2-5/32	4
S40184	4.1250	1-3/32	2-1/8	1-3/16	4
S40186	3.5780	3-1/8	-	1-1/4	4
S40187 Std., .020, .030, .040	3.9000	3-3/32	-	2-3/16	4
S40240 Std., .030	4.6250	3-3/32	-	1-3/16	4
S40246	3.1880	2-3/32	-	1-1/4	4
S40274	3.8130	1-3/32	2-1/8	1-1/4	4
S40280.030 .030	4.6250	3-3/32	-	1-3/16	12
S40342	3.7500	1-3/32	2-1/8	1-1/4	3
S40367	91.0000	3-3/32	-	2-1/4	3-4-6
S40381	3.7500	3-3/32	-	1-3/16	6
S40417	3.5630	3-1/8	-	1-1/4	4-6
S40430	4.4380	1-3/32	2-1/8	1-1/4	4-6
S40508	3.5630	3-3/32	-	2-3/16	4-6
S40528 Std., .040	3.7500	1-3/32	1-1/8	2-3/16	4
S40533CP Std., .020, .030, .040, .060	3.8750	2-3/32	-	1-3/16	6
S40593	91.0000	2-3/32	1-1/8	2-1/4	3-4-6
S40648	3.5000	2-3/32	1-1/8	2-1/4	3-4
S40651	4.2500	1-3/32	2-1/8	1-1/4	6
S40653	4.2500	4-.084	-	2-3/16	2-3-4-6-8-12-16
S40678	3.8750	3-3/32	-	1-3/16	4-6
S40761	3.4380	1-3/32	2-1/8	1-1/4	
S40773	5.2500	3-1/8	-	1-1/4	6
S40837	5.1250	1-1/8	1-3/32	1-3/16	6
S40933	3.6560	3-3/32	-	1-3/16	4
S40943 Std., .020, .030, .040, .060	3.4380	1-5/64	2-3/32	1-1/4	4-6
S40949	3.3130	1-5/64	2-3/32	1-1/4	6
S40970	3.2500	3-1/8	-	1-3/16	4
S41010	3.5630	3-3/32	-	1-1/4	4
S41081 Std., .030	3.7500	3-3/32	-	1-3/16	4-6

RING SETS CONTINUED

Part No.	Bore	Comp. Ring	Comp. Ring 2	Oil Ring	No. Cyl.
S41082	4.6250	1-1/8	1-3/32	1-7/64	8
S41092	3.8750	1-1/8	2-3/32	1-1/4	6
S41100	3.6000	2-3/32	-	1-1/4	3
S41121	3.1250	1-5/64	2-1/16	2-3/16	4
S41128	3.8750	2-3/32	-	1-3/16	6
S41154	3.8750	1-.082	3-3/32	2-3/16	2-3-4-6-8
S41330	101.0000	3-3/32	-	1-1/4	4
S41407	4.2500	1-.111	2-.084	2-3/16	4-6-8-12-16
S41450	4.4380	3-1/8	-	1-1/4	4-6
S41542 Std., .020, .040	4.5000	2-1/8	-	1-7/64	8
S41545	4.2500	1-3/32	1-1/8	1-1/4	6
S41685 Std., .020, .030, .040	4.5000	2-3/32	-	1-3/16	8
S41735	3.1880	3-1/8	-	1-1/4	4-6
S41810 Std., .030	3.2500	2-1/8	-	1-3/16	4
S41812 Std., .030, .060	4.0000	1-3/32	1-1/8	2-3/16	6
S41813	3.1870	2-3/32	-	1-5.0mm	4
S41815 Std., .030, .0825	3.1880	2-3/32	-	1-3/16	4
S41816 Std., .030, .0825	3.1870	2-3/32	-	2-3/16	4
S41840	3.8750	2-3/32	-	1-3/16	6
S41842	3.8750	1-1/8	1-3/32	1-3/16	6
S41883 Std., .020, .040	4.5000	1-1/8	-	1-7/64	8
S41885	5.5000	1-5/32	1-1/8	1-3/16	8
S41900	4.2500	1-.113	2-.084	2-3/16	2-3-6-8-12-16
S4230	3.3130	3-1/8	-	1-3/16	4
S42300	98.0000	3-3/32	-	2-1/4	4-6
S4254	3.5630	3-1/8	-	1-3/16	6
S42707	100.0000	3-2.5mm	-	1-5.0mm	2-3-4-5-6
S428 Std., .020, .030, .040	3.9000	2-3/32	-	1-3/16	4
S42892	100.0000	1-3.0mm	2-2.5mm	1-5.0mm	2-3-4-5-6
S43046	102.0000	1-3.0mm	2-2.5mm	1-5.0mm	4-6
S4323	3.3750	3-1/8	-	1-3/16	4
S4324	3.6250	3-1/8	-	1-3/16	4
S4330 Std., .030, .060	4.0000	3-1/8	-	1-3/16	4
S4333	4.2500	3-5/32	-	1-1/4	4
S439 Std., .030, .040, .060	3.2500	2-3/32	-	2-5/32	6
S4535 Std., .040	3.6250	3-3/32	-	1-3/16	4-6
S4544 Std., .020, .030, .040, .060	3.4380	3-1/8	-	1-1/4	6
S4548 Std., .020, .030, .040	3.5000	3-1/8	-	1-3/16	4
S4560	3.8750	3-1/8	-	1-1/4	4
S4583	3.0000	3-1/8	-	1-1/4	4
S4588 Std., .020, .030, .040, .060	3.4380	3-1/8	-	1-1/4	4

RING SETS CONTINUED

Part No.	Bore	Comp. Ring	Comp. Ring 2	Oil Ring	No. Cyl.
S4601 Std., .020, .030, .040, .060	3.2500	3-3/32	-	1-3/16	4
S4662	3.3130	3-1/8	-	1-1/4	6
S4701 Std., .030, .060	3.4380	3-1/8	-	1-3/16	6
S4764	4.0000	3-3/32	-	1-1/4	4
S4764A	4.0000	3-3/32	2-1/4	-	4
S4782 Std., .030, .040	2.3750	2-3/32	-	1-3/16	4
S4794 Std., .030, .040, .060	3.3130	2-3/32	-	2-5/32	6
S4799 Std., .030, .040, .060	3.1880	3-1/8	-	1-3/16	4
S4806	3.5000	3-1/8	-	1-1/4	6
S4827	3.4380	3-1/8	-	1-3/16	4-6
S4835 Std., .020, .030, .040, .060	3.2500	3-3/32	-	1-3/16	2
S4999 Std., .030, .040, .060	3.1880	2-3/32	-	1-1/4	4
S5023 Std., .030	3.2500	2-1/8	-	1-3/16	4
S50246 Std., .030, .040, .060	3.1880	2-3/32	-	1-1/4	4
S50367	91.0000	3-3/32	-	2-1/4	3-4-6
S50533CP Std., .020, .030, .040, .060	3.8750	2-3/32	-	1-3/16	6
S50593	91.0000	2-3/32	1-1/8	2-1/4	3-4-6
S50943 Std., .030, .040	3.4380	1-5/64	2-3/32	1-1/4	4
S50949	3.3130	1-5/64	2-3/32	1-1/4	6
S51439 Std., .020	3.2500	3-5/64	-	1-3/16	4
S51818	3.1880	3-1/8	-	1-3/16	4
S5323	3.3750	3-1/8	-	1-3/16	4
S5330 Std., .030, .060	4.0000	3-1/8	-	1-3/16	4
S5578	3.0000	3-3/32	-	1-1/4	4
S5588 Std., .020, .030, .040, .060	3.4380	3-1/8	-	1-1/4	4
S5601 Std., .020, .030, .040	3.2500	3-3/32	-	1-3/16	4
S5662	3.3130	3-1/8	-	1-1/4	6
S5782	2.3750	2-3/32	-	1-3/16	4
S5794 Std., .020, .030, .040, .060	3.3130	2-3/32	-	2-5/32	6
S5985	3.4380	2-5/64	-	1-3/16	6
S70185 Std., .020, .030, .040	3.5000	3-1/8	-	1-3/16	4-1
S80196	3.3750	3-3/32	-	1-3/16	4
S8932	3.2500	3-3/32	-	1-316	2
SC3632	3.7500	1-1/8	2-3/32	2-3/16	4
SC80061	4.2500	4-1/8	-	2-3/16	2-3-4-6

VALVES - EXHAUST

Part No.	Head Dia.	Length	Stem Dia.	Seat Angle	Stem Type	O-ring groove	Exhaust/Intake	No. Cyl.
211-1045	1.5000	5.1550	0.3720	45	1 Groove	No	Exhaust	4
211-1053	1.3280	5.1950	0.3390	45	Drilled	No	Exhaust	4-6
211-1073	1.3280	5.1800	0.3390	45	1 Groove	Yes	Exhaust	6
211-1095	1.0150	4.0400	0.3130	45	Drilled	No	Exhaust	4
211-1129	1.5940	6.7000	0.4340	45	2 Grooves	No	Exhaust	6
211-1141	1.0150	3.9380	0.3130	45	Drilled	No	Exhaust	4
211-1161	1.2810	4.8150	0.3410	45	1 Groove	No	Exhaust	4
211-1187	1.3130	4.7710	0.3090	45	1 Groove	Yes	Both	2-4
211-1195	1.5010	4.8450	0.3400	45	2 Grooves	Yes	Exhaust	6
211-1199	1.2550	5.0550	0.3720	45	2 Grooves	No	Exhaust	4-6
211-1201	1.1250	5.1550	0.3720	45	2 Grooves	No	Exhaust	4-6
211-1279	1.4680	4.9350	0.3410	45	1 Groove	No	Exhaust	4
211-1281	1.4150	4.3300	0.3100	30	2 Grooves	No	Exhaust	6
211-1283	1.5880	6.4400	0.3420	30	1 Groove	Yes	Exhaust	2-3-4-6
211-1305	1.2810	4.7000	0.3410	45	Tapered	No	Exhaust	4
211-1313	1.1400	4.0840	0.3130	45	1 Groove	Yes	Exhaust	4
211-1325	1.5100	4.9800	0.3410	45	Tapered	No	Exhaust	4
211-1375	1.2500	4.7700	0.3090	45	1 Groove	Yes	Exhaust	2-4
211-1441	1.1400	3.9900	0.3130	45	Tapered	Yes	Exhaust	4
211-1519	1.5620	6.3300	0.3090	45	1 Groove	No	Both	4
211-1521	1.3950	4.9840	0.3715	45	2 Grooves	No	Exhaust	6
211-1589	1.2030	5.1750	0.3380	45	Drilled	No	Exhaust	4-6
211-1591	1.4070	4.8400	0.4050	45	2 Grooves	Yes	Exhaust	6
211-1701	1.3600	4.8000	0.3720	45	4 Grooves	Yes	Exhaust	6
211-1775	1.5100	5.8200	0.3410	45	Tapered	No	Exhaust	4
211-1777	1.2030	4.3500	0.3390	45	1 Groove	Yes	Exhaust	4
211-1863	1.0900	5.5520	0.2480	30	1 Groove	Yes	Exhaust	4-6
211-1871	1.3750	4.9400	0.3410	45	1 Groove	No	Exhaust	4
211-1885	1.5100	5.0950	0.3410	45	1 Groove	No	Exhaust	4
211-1993	1.3750	4.9400	0.3410	45	1 Groove	No	Exhaust	4-6
211-2007	1.5940	6.7000	0.4340	45	2 Grooves	Yes	Exhaust	4-6
211-2035	1.2030	5.1900	0.3380	45	1 Groove	Yes	Exhaust	6
211-2053	1.5130	5.4060	0.3720	45	1 Groove	No	Exhaust	6
211-2075	1.0150	4.0750	0.3130	45	1 Groove	Yes	Exhaust	4
211-2107	1.4400	4.8550	0.3730	45	1 Groove	Yes	Exhaust	4-6
211-2111	2.0000	7.8670	0.4970	44	1 Groove	No	Exhaust	6
211-2185	1.3150	4.5000	0.3120	45	1 Groove	Yes	Exhaust	3
211-2187	1.5000	6.8100	0.3720	45	1 Groove	Yes	Exhaust	6
211-2199	1.1400	3.9840	0.3130	45	1 Groove	Yes	Exhaust	4
211-2456	1.8040	5.6830	0.3700	45	2 Grooves	Y3w	Exhaust	8
211-2462	1.1850	5.5380	0.3100	30	1 Groove	Yes	Exhaust	4-8
211-2509	1.6500	6.0170	0.3710	30	1 Groove	No	Exhaust	6

VALVES - EXHAUST

Part No.	Head Dia.	Length	Stem Dia.	Seat Angle	Stem Type	O-ring groove	Exhaust/Intake	No. Cyl.
211-2512	1.4440	5.9980	0.3710	30	1 Groove	No	Exhaust	4-6
211-2530	1.4560	5.2440	0.3120	45	1 Groove	No	Exhaust	2-3-4-5-6
211-2536	1.0950	5.5500	0.2480	30	1 Groove	Yes	Exhaust	4-6
211-2548	1.2500	4.4380	0.3090	45	1 Groove	No	Exhaust	4-6
211-3038	1.5350	5.5120	0.3730	45	1 Groove	Yes	Exhaust	8

VALVES - INTAKE

Part No.	Head Dia.	Length	Stem Dia.	Seat Angle	Stem Type	O-ring groove	Exhaust/Intake	No. Cyl.
211-1048	1.6870	5.1610	0.3720	45	2 Grooves	No	Intake	4
211-1058	1.5160	5.1550	0.3410	30	1 Groove	Yes	Intake	6
211-1072	1.2030	4.0150	0.3140	30	Drilled	No	Intake	4-6
211-1076	1.5100	4.8190	0.3410	45	1 Groove	No	Intake	4
211-1090	1.7180	6.6700	0.4340	45	2 Grooves	Yes	Intake	4-6
211-1094	1.7180	4.8450	0.3410	45	2 Grooves	Yes	Intake	6
211-1187	1.3130	4.7710	0.3090	45	1 Groove	Yes	Both	2-4
211-1128	1.3950	5.0450	0.3730	45	2 Grooves	No	Intake	4
211-1130	1.3130	5.1600	0.3730	45	2 Grooves	No	Intake	4-6
211-1194	1.5110	4.4980	0.3100	45	1 Groove	No	Intake	4-6
211-1206	1.2780	3.9770	0.3140	30	Drilled	No	Intake	4
211-1226	1.5300	4.8450	0.3410	45	2 Grooves	Yes	Intake	6
211-1264	1.6470	5.0900	0.3420	45	1 Groove	No	Intake	4
211-1519	1.5620	6.3300	0.3090	45	1 Groove	No	Both	4
211-1568	1.4840	3.9200	0.3100	30	Drilled	No	Intake	4
211-1584	1.4380	4.9060	0.3410	45	1 Groove	No	Intake	4
211-1588	1.5160	5.1600	0.3410	30	Drilled	No	Intake	4-6
211-1592	1.3130	4.9060	0.3410	45	1 Groove	No	Intake	4
211-1700	1.6200	4.7750	0.3730	45	2 Grooves	Yes	Intake	6
211-1740	2.1600	5.9100	0.3730	30	1 Groove	Yes	Intake	6
211-1754	1.6880	5.1550	0.3720	30	1 Groove	No	Intake	4
211-1776	1.3280	4.3300	0.3410	30	1 Groove	Yes	Intake	4
211-1778	1.5780	5.0300	0.3410	30	1 Groove	Yes	Intake	4
211-2002	1.5000	4.9400	0.3430	45	1 Groove	No	Intake	4-6
211-2034	1.5160	5.1670	0.3410	30	1 Groove	Yes	Intake	6
211-2050	1.6250	5.4050	0.3730	45	1 Groove	Yes	Intake	6
211-2062	1.6870	5.3650	0.3730	45	1 Groove	No	Intake	4-6
211-2106	1.7440	4.8290	0.3730	45	1 Groove	Yes	Intake	4-6
211-2112	2.3750	7.8670	0.4970	30	1 Groove	No	Intake	6
211-2174	1.5340	4.5000	0.3120	45	1 Groove	Yes	Intake	3-4-6
211-2176	1.7190	6.8190	0.3720	30	1 Groove	Yes	Intake	6
211-2455	2.0940	5.6980	0.3720	60	2 Grooves	Y	Intake	8
211-2508	1.8390	6.0160	0.3720	30	1 Groove	No	Intake	6
211-2510	1.7470	4.8400	0.3740	45	1 Groove	Yes	Intake	6

VALVES - INTAKE CONTINUED

Part No.	Head Dia.	Length	Stem Dia.	Seat Angle	Stem Type	O-ring groove	Exhaust/Intake	No. Cyl.
211-2513	1.6200	5.9960	0.3720	30	1 Groove	No	Intake	4-6
211-2547	1.4800	5.3560	0.3090	30	1 Groove	No	Intake	4-6
211-3040	1.4170	4.6070	0.3130	45	1 Groove	Yes	Intake	4
211-3041	1.1980	4.6160	0.3120	45	1 Groove	Yes	Intake	4
211-3355	1.7010	5.2390	0.3136	45	1 Groove	No	Intake	2-3-4-5-6

VALVE KEEPERS

Part No.	Type	Quantity	No. Cyl.
216-5080	-	8	4-6-8
216-5081	-	12	4-6
216-5117	-	-	2-3-4-6
216-5117A	-	-	2-3-4-6
216-5118	-	-	2-3-4-6
216-5123	-	-	4-6
216-5144	-	16	3-4-6
216-5145	-	16	3-4-6-8
216-5146	-	2	4-8
216-5147	-	-	4-6
216-5150	-	-	4
216-5159	-	-	6
216-5169	-	-	4-6
216-5177	-	-	6
216-5180	-	-	6
216-5183	-	-	4-6
216-5191	-	-	4-6
216-5215	-	-	8
216-5233	-	2	4-6-8
216-5234	-	-	2-4-6-8-1

VALVE GUIDES

Part No.	I.D.	O.D.	Length	Stem Type	Intake / Exhaust	No. Cyl.
217-3152	0.3730	0.5020	2.8750	Plain	Intake	6
217-3180	0.3740	0.5020	2.8750	Plain	Intake	6
217-3182	0.3750	0.5020	2.5000	Plain	Both	6
217-3183	0.4370	0.6270	3.1250	Plain	Exhaust	6
217-3210	0.4530	0.7520	3.0000	Flanged	Both	8
217-3228	0.3740	0.5020	2.8750	Plain	Intake	6
217-3230	0.3440	0.5020	2.2500	Plain	Intake	6
217-3239	0.4370	0.6270	3.1250	Plain	Exhaust	6
217-3266	0.3740	0.6260	3.1870	SR	Intake	4-6
217-3268	0.3740	0.6260	2.3120	Plain	Exhaust	4-6
217-3269	0.3740	0.6260	2.6250	Plain	Exhaust	6
217-3270	0.3750	0.6260	2.4060	Stepped	Exhaust	4-6
217-3271	0.3750	0.6260	2.2810	Stepped	Intake	4-6
217-3273	0.3730	0.6260	2.7850	-	Both	4-6
217-3289	0.3810	0.6260	2.5000	Grooved	Both	8
217-3306	0.3750	0.5640	3.0000	Plain	Exhaust	8
217-3337	0.3450	0.6570	2.8130	Stepped	Exhaust	6
217-3338	0.3430	0.6570	2.8130	Stepped	Intake	6
217-3379	0.3440	0.6570	2.7190	Stepped	Both	4
217-3421	0.3750	0.6890	2.7500	-	Both	4
217-3437	0.3744	0.6260	2.5950	Plain	Both	8
217-3447	0.3157	0.5930	2.2600	Grooved	Both	2-3-4-5-6
217-3449	0.3161	0.5030	2.1260	Plain	Intake	4
217-3458	0.3140	0.5020	2.5000	Plain	Both	2-4-1
217-3515	0.3430	0.6580	2.5630	Stepped	Both	6
217-3568	0.3120	0.4860	2.0940	Stepped	Both	4
217-3614	0.3440	1.0300	2.2190	Flanged	Exhaust	4
217-3619	0.3160	0.5640	2.2810	Stepped	Both	4
217-3620	0.3430	0.6570	2.1880	Stepped	Both	4-6
217-3673	0.3430	0.6570	2.6880	Stepped	Both	4
217-3678	0.3160	0.5640	1.6560	Stepped	Both	4
217-3680	0.3450	0.5640	3.2500	Plain	Exhaust	2-3-4-6
217-3693	0.3750	0.6260	2.5000	-	Both	4-6
217-3697	0.3120	0.5320	2.0940	Stepped	Both	4-6
217-3701	0.4370	0.7250	2.8750	Stepped	Intake	4
217-3703	0.3130	0.5640	2.5630	Stepped	Both	4-6
217-3717	0.3170	0.5640	1.8130	Plain	Both	4
217-3726	0.3440	0.7510	2.5470	Undercut	Both	4
217-3832	0.3130	0.5000	2.5000	Plain	Exhaust	4-6-8
217-3833	0.3440	0.6570	1.8130	Plain	Both	4
217-3853	0.3750	0.6890	2.3440	-	Exhaust	4
217-3854	0.3450	0.5670	2.2500	Plain	Both	4

VALVE GUIDES CONTINUED

Part No.	I.D.	O.D.	Length	Stem Type	Intake / Exhaust	No. Cyl.
217-3891	0.3440	0.6260	2.3120	Flanged	Both	4
217-3900	0.3430	0.6270	2.1880	Stepped	Both	4
217-3907	0.3140	0.4390	1.8130	Plain	Both	4
217-3908	0.3130	0.4390	2.5000	Plain	Both	4-1
217-3914	0.4370	0.7510	3.1250	Flanged	Both	4-6
217-3943	0.3450	0.5640	2.2500	Stepped	Intake	4-6
217-3944	0.3450	0.5640	2.1250	Stepped	Exhaust	4-6
217-3946	0.3130	0.5000	2.3750	Stepped	Exhaust	6-8-12-16
217-3973	0.5000	0.8130	3.5000	Flanged	Exhaust	6
217-3976	0.3150	0.5020	2.4380	Plain	Both	3
217-4007	0.2510	0.5000	2.3600	Stepped	Exhaust	4-6
217-4057	0.3730	0.6270	3.5000	Stepped	Both	4-6
217-4075	0.3763	0.6280	2.2850	-	Intake	4
217-4096	0.3750	0.5020	2.7500	Grooved	Intake	6

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VALVE SEATS

Part No.	O.D.	I.D.	Depth	Tapered	Seat Angle	Intake / Exhaust	No. Cyl.
218-3732	2.0000	1.6870	0.2810	-	30	Both	8
218-3786	2.1930	1.8130	0.2500	-	45	Exhaust	6
218-7323	1.0040	0.7500	0.1870	-	45	Both	4
218-7349	1.1290	0.8750	0.2190	-	45	Exhaust	4
218-7361	1.1910	1.0000	0.1870	-	45	Exhaust	4-6
218-7369	1.2500	1.0000	0.2180	-	30	Exhaust	4
218-7373	1.2580	0.9750	0.2500	Yes	30	Exhaust	6-8-12-16
218-7379	1.3790	1.0000	0.1870	-	45	Exhaust	4-6
218-7389	1.3120	1.0620	0.1870	-	30	Both	4
218-7405	1.3490	1.0870	0.2000	-	45	Exhaust	4-6
218-7411	1.3790	1.1250	0.1870	-	45	Exhaust	4-6
218-7417	1.3790	1.1250	0.2660	-	45	Both	2-4
218-7419	1.4410	1.1250	0.1870	-	45	Intake	4-6
218-7439	1.4410	1.1870	0.2180	-	45	Both	4-6
218-7463	1.5040	1.2500	0.2180	-	45	Exhaust	4-6
218-7464	1.5050	1.2500	0.3750	-	45	Intake	6
218-7467	1.5080	1.2500	0.2500	-	45	Intake	4
218-7471	1.5660	1.2500	0.2180	-	45	Both	4-6
218-7493	1.5660	1.3120	0.0218	-	45	Intake	3-4-6
218-7497	1.5660	1.5620	0.2500	-	45	Exhaust	3
218-7501	1.6250	1.3120	0.2500	-	30	Exhaust	4
218-7521	1.6290	1.3440	0.2500	Yes	30	Exhaust	3-4-6
218-7535	1.6290	1.3750	0.2160	-	45	Intake	4-6
218-7537	1.6290	1.3750	0.2500	-	45	Exhaust	4-6
218-7545	1.6910	1.3750	0.2500	-	45	Exhaust	4-6
218-7553	1.7500	1.3750	0.2500	-	45	Exhaust	4-6
218-7587	1.7540	1.4370	0.2500	-	45	Intake	4-6
218-7619	1.7540	1.5000	0.2500	-	45	Intake	3-4-6
218-7623	1.8160	1.5000	0.2500	-	45	Intake	4-6
218-7651	1.6290	1.3750	0.2500	-	45	Intake	6
218-7703	2.0000	1.6250	0.2810	-	30	Intake	6
218-7751	2.0040	2.0000	0.2180	-	45	Intake	4
218-7800	1.6910	1.4370	0.1810	-	30	Intake	8
218-7807	1.9120	1.6250	0.2810	-	45	Exhaust	8
218-7808	2.1500	1.8590	0.2920	-	30	Intake	8
218-7814	2.0180	1.5900	0.2810	-	45	Intake	6
218-7815	1.6900	1.2500	0.3750	-	45	Exhaust	6
218-7817	1.1610	0.9100	0.2220	-	30	Exhaust	4-6
218-7819	1.4420	1.2190	2.1900	-	45	Exhaust	4
218-7947	1.8170	1.8120	0.2190	-	45	Exhaust	4
218-7999	1.6900	1.4370	0.2000	-	30	Exhaust	8
218-8012	1.8170	1.5000	0.2190	-	45	Intake	4

VALVE SPRINGS

Part No.	Free Length	Max. O.D.	Closed Pressure Comp. To	Closed Pressure Min.	Closed Pressure Max.	Open Pressure Comp. To	Open Pressure Min.	Open Pressure Max.	No. Cyl.
212-1010	2.3130	1.2960	1.8120	37	43	1.4370	65	75	4
212-1011	2.0160	1.1440	1.7500	40	45	1.3750	110	120	6
212-1018	2.5000	0.8730	2.1300	32	36	1.8230	62	66	4
212-1019	2.3750	1.1400	2.1560	45	55	1.7660	141	151	2-3-4-6
212-1021	1.9690	1.1300	1.6560	47	53	1.3750	103	110	6
212-1023	2.3750	1.2920	1.8750	58	64	1.5210	115	123	6
212-1025	2.0630	0.9690	1.7030	47	53	1.4220	96	104	4-6
212-1026	2.3120	0.9680	1.9370	30	33	1.6250	63	69	4
212-1027	2.8130	1.0310	2.0000	42	46	1.7500	58	64	4-6
212-1032	2.3130	1.0670	1.5460	32	37	1.2710	46	50	2-4
212-1034	1.7500	1.7500	1.3750	18	22	1.1250	32	-	4
212-1037	2.2000	0.9510	1.8900	40	43	1.6000	81	85	4
212-1039	2.1200	1.3320	1.8210	54	62	1.5050	124	140	4-6
212-1057	2.6250	1.0970	1.9200	48	52	1.5200	79	88	6
212-1063	1.4530	0.9650	1.6110	36	42	1.3210	73	83	4
212-1065	2.1080	1.2740	1.6970	64	70	1.3810	124	140	4
212-1067	2.3130	1.0400	1.7310	43	47	1.3870	78	86	4-6
212-1071	2.0000	1.4040	1.6870	78	88	1.3120	170	184	6
212-1072	2.0160	1.1440	1.7500	40	45	1.3750	110	120	6
212-1079	1.9500	0.8510	1.8000	22	26	1.4160	85	89	4-8
212-1095	2.0940	1.1560	1.4060	86	92	-	-	-	4-6
212-1098	1.9680	1.1250	1.6560	41	47	1.2180	103	110	4
212-1101	2.2700	1.3540	1.9200	76	84	1.4950	196	212	6
212-1103	2.1090	1.2200	1.5620	24	28	49.0000	46	52	3-4-6
212-1104	1.8750	0.8820	1.4370	14	17	1.0870	32	36	3-4-6
212-1110	2.0900	0.7960	1.9300	30	34	1.5270	100	110	4-6
212-1121	1.9700	0.9410	1.8000	30	38	1.3970	110	120	2-3-8
212-1124	1.7660	0.8470	1.4370	21	25	1.1250	51	59	4
212-1157	2.3130	1.1400	1.8120	52	58	1.4370	94	104	4-6
212-1200	2.0900	1.1070	1.7020	36	42	1.2370	80	90	8
212-1201	2.3500	1.5470	1.7520	68	77	1.2870	123	136	8
212-1216	1.3750	0.8430	1.1870	7	9	0.8440	21	25	3
212-1217	1.7820	1.8400	1.5000	21	25	1.1560	48	52	3
212-1288	1.8550	1.4300	1.7150	30	40	1.2150	152	168	8
212-1289	1.8550	0.9880	1.7150	12	20	1.2150	69	81	8
212-1318	2.9000	1.1900	2.3000	52	57	1.7000	132	162	4-6
212-1380	1.9850	1.2600	1.7500	73	81	212.0000	202	222	8
212-1396	2.0000	1.0160	1.4880	16	20	1.1060	35	44	6
212-1397	2.5780	1.4250	1.6560	46	51	1.2560	80	86	6

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CONNECTING ROD BEARINGS

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
CB-1053P Std., .25mm	2.3599 / 2.3606	0.0019 / 0.0039	0.0783	2.5197 / 2.5204	0.9840	2-3-4-5-6
CB-1073P Std., .010, .020	3.1240 / 3.1250	0.0020 / 0.0045	0.0948	3.3160 / 3.3165	1.3660	8
CB-1209AL Std., .010, .020, .030	2.4990 / 2.4995	0.0020 / 0.0040	0.0725	2.6460 / 2.6465	1.2550	6
CB-1215P Std., .010, .020, .030, .040	2.7490 / 2.7502	0.0020 / 0.0054	0.0948	2.9413 / 2.9423	1.0100	8
CB-1239P Std., .010, .020, .030, .040	1.7490 / 1.7500	0.0010 / 0.0035	0.0525	1.8555 / 1.8560	1.0200	4
CB-1241P-10 .010	3.4980 / 3.4990	0.0028 / 0.0058	0.0951	3.6915 / 3.6925	1.6600	6
CB-1265P Std., .010, .020, .030, .040	2.4990 / 2.5000	0.0020 / 0.0050	0.1250	2.7515 / 2.7525	1.3200	2-3-4
CB-1354P Std., .010, .020, .030, .040	2.7475 / 2.7485	0.0015 / 0.0040	0.1103	2.9700 / 2.9705	1.2050	6
CB-1355P Std., .010, .020, .030, .040	2.3725 / 2.3735	0.0014 / 0.0039	0.0938	2.5620 / 2.5625	1.1230	4-6
CB-1369P Std., .010	2.7715 / 2.7725	0.0020 / 0.0050	0.1253	3.0250 / 3.0255	1.3700	4-6
CB-1596P Std., .010, .020, .030, .040	2.7490 / 2.7500	0.0019 / 0.0049	0.1553	3.0620 / 3.0630	1.8800	2-3-4-6
CB-1629P Std., .25mm	2.2490 / 2.2500	0.0002 / 0.0032	0.0854	2.4210 / 2.4220	1.3800	4
CB-1632P Std., .010, .020, .030	3.3725 / 3.3735	0.0026 / 0.0051	0.1245	3.6245 / 3.6250	1.5950	6
CB-179P Std., .002, .010, .020, .030	1.9365 / 1.9375	0.0008 / 0.0028	0.0618	2.0615 / 2.0620	1.2290	4
CB-200P Std., .001, .002, .010, .020, .030, .040	2.0935 / 2.0945	0.0009 / 0.0030	0.0623	2.2195 / 2.2200	1.1300	4
CB-278P Std., .010, .020, .030	1.4990 / 1.5000	0.0007 / 0.0032	0.0619	1.6240 / 1.6245	1.0050	4
CB-279P Std., .010, .020, .030	1.4990 / 1.5000	0.0007 / 0.0032	0.0619	1.6240 / 1.6245	1.0050	4
CB-340P Std., .010, .020, .030, .040	1.9870 / 1.9880	0.0010 / 0.0035	0.0730	2.1345 / 2.1350	1.1640	3-4-6
CB-341P Std., .010, .020	1.9870 / 1.9880	0.0010 / 0.0035	0.0730	2.1345 / 2.1350	1.0280	4-6
CB-345P Std., .010, .020, .030	1.4990 / 1.5000	0.0007 / 0.0032	0.0619	1.6240 / 1.6245	0.7600	4
CB-362P Std., .002, .010, .020, .030, .040	1.9365 / 1.9375	0.0007 / 0.0028	0.0619	2.0615 / 2.0625	1.0720	4
CB-405P Std., .010, .020, .030	2.4980 / 2.4990	0.0009 / 0.0030	0.0623	2.6240 / 2.6245	1.4780	4
CB-446P Std., .010, .020	1.9990 / 2.0000	0.0005 / 0.0030	0.0617	2.1235 / 2.1240	1.1190	4-6
CB-448P Std., .010	2.7495 / 2.7500	0.0012 / 0.0037	0.0854	2.9215 / 2.9225	2.1000	4-6-12

CONNECTING ROD BEARINGS CONTINUED

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
CB-450P Std., .010	2.6240 / 2.6250	0.0009 / 0.0034	0.0952	2.8160 / 2.8165	1.1550	6
CB-451P Std., .010, .020, .030, .040	2.2490 / 2.2500	0.0005 / 0.0030	0.0850	2.4200 / 2.4205	1.1560	4-6
CB-458P Std., .002, .010, .020, .030, .040	1.9975 / 1.9985	0.0016 / 0.0041	0.0802	2.1600 / 2.1605	1.2500	4-6
CB-459P	2.4980 / 2.4990	0.0017 / 0.0042	0.0619	2.6240 / 2.6245	1.4780	4
CB-465P Std., .010, .020, .030	2.0627 / 2.0619	0.0028 / 0.0005	0.0619	2.1865 / 2.1870	1.1300	4-6
CB-466P Std., .010, .020, .030	2.0619 / 2.0627	0.0005 / 0.0028	0.0619	2.1865 / 2.1870	1.1300	4-6
CB-510P Std., .010, .030	2.2480 / 2.2490	0.0013 / 0.0038	0.0621	2.3740 / 2.3745	1.3850	6
CB-524P Std., .010, .020, .030	1.4990 / 1.5000	0.0007 / 0.0032	0.0619	1.6240 / 1.6245	0.7550	4
CB-526P Std., .002, .010, .020, .030	2.3745 / 2.3750	0.0014 / 0.0035	0.0618	2.4995 / 2.5005	1.4350	4
CB-535P Std., .001, .002, .010, .020, .030, .040	2.2978 / 2.2986	0.0005 / 0.0031	0.0622	2.4230 / 2.4238	1.0390	4-6
CB-555P Std., .002, .010, .020, .030, .040	2.9990 / 3.0000	0.0019 / 0.0049	0.1243	3.2500 / 3.2510	1.2100	6-8
CB-560AL Std., .010, .020, .030, .040	2.2485 / 2.2490	0.0025 / 0.0045	0.0720	2.3950 / 2.3955	1.1900	3-4-6
CB-586P Std., .002, .010, .020, .030, .040	2.8112 / 2.8122	0.0015 / 0.0040	0.1014	3.0160 / 3.0165	0.9400	6
CB-591P Std., .010, .020	2.9115 / 2.9120	0.0019 / 0.0044	0.1053	3.1240 / 3.1250	2.0780	4-6
CB-592P Std., .020, .030	2.5770 / 2.5775	0.0014 / 0.0039	0.0853	2.7490 / 2.7500	2.2220	4-6
CB-594P Std., .010, .020	2.6245 / 2.6250	0.0016 / 0.0036	0.0727	2.7715 / 2.7720	1.2300	4
CB-596P Std., .010	2.2480 / 2.2490	0.0013 / 0.0034	0.0621	2.3740 / 2.3745	1.3220	4
CB-606G Std., .001, .010, .020, .030, .040, .060	2.1865 / 2.1875	0.0007 / 0.0028	0.0624	2.3125 / 2.3130	0.9900	6
CB-60G Std., .010, .020, .030, .040, .050, .060	2.0615 / 2.0625	0.0006 / 0.0027	0.0525	2.1675 / 2.1680	1.0050	6
CB-616P Std., .010, .020, .030	2.0615 / 2.0625	0.0011 / 0.0036	0.0617	2.1865 / 2.1870	1.1300	4
CB-618P Std., .010, .020, .030	2.2490 / 2.2500	0.0011 / 0.0036	0.0617	2.3740 / 2.3745	1.0800	4
CB-652AL Std., .010, .020, .030	1.9995 / 2.0000	0.0017 / 0.0037	0.0724	2.1460 / 2.1465	0.8800	4
CB-667AL Std., .010, .020, .030	2.4990 / 2.4995	0.0020 / 0.0040	0.0725	2.6460 / 2.6564	1.2550	4-6
CB-674P Std., .010, .020, .030	2.7490 / 2.7500	0.0016 / 0.0046	0.1252	3.0015 / 3.0025	1.1100	6-8

CONNECTING ROD BEARINGS CONTINUED

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
CB-700P Std., .010, .020, .030, .040	2.7715 / 2.7725	0.0025 / 0.0050	0.1253	3.0250 / 3.0255	1.3700	4-6
CB-701P Std., .010, .020	3.2480 / 3.2490	0.0021 / 0.0051	0.1247	3.5000 / 3.5010	1.9220	6
CB-703P Std., .010, .020, .030, .040	2.4365 / 2.4375	0.0005 / 0.0030	0.0755	2.5885 / 2.5890	1.1250	6
CB-704P Std., .010, .020, .030	2.3730 / 2.3740	0.0013 / 0.0043	0.0756	2.5260 / 2.5270	1.1640	3-4-6
CB-751P Std., .010	2.7482 / 2.7490	0.0025 / 0.0053	0.0825	2.9160 / 2.9170	1.3780	4
CB-781AL Std., .010, .020, .030	1.9365 / 1.9375	0.0010 / 0.0035	0.0617	2.0615 / 2.0620	1.2290	4
CB-78P Std., .010, .020, .030, .040	1.9365 / 1.9375	0.0007 / 0.0032	0.0619	2.0615 / 2.0620	1.1300	4-6
CB-79P Std., .010, .020, .030, .040	1.9365 / 1.9375	0.0007 / 0.0032	0.0619	2.0615 / 2.0620	1.1300	4-6
CB-90P Std., .001, .010, .020, .030, .040	2.1240 / 2.1250	0.0007 / 0.0032	0.0624	2.2500 / 2.2505	1.0850	6
CB-972P Std., .010, .020, .030, .040	2.7496 / 2.7504	0.0018 / 0.0046	0.0948	2.9413 / 2.9423	0.9550	8
CB-979M Std., .010, .020	1.8750 / 1.8760	0.0014 / 0.0035	0.0613	1.9995 / 2.0000	0.8640	2-3-4
CB-983M Std., .010	1.7500 / 1.7510	0.0014 / 0.0035	0.0613	1.8745 / 1.8750	0.8640	2-4
CB-994P Std., .010, .020, .030	2.7490 / 2.7500	0.0020 / 0.0050	0.0948	2.9410 / 2.9420	1.1750	8
CB-995M Std., .010, .020	2.1250 / 2.1260	0.0016 / 0.0037	0.0612	2.2495 / 2.2500	1.0520	4

MAIN BEARING SETS

Part No.	Contents	Position
MS1061P	2 - MB2598P 3 - MB2599P 1 - MB2598W	1-5 2-3-4 5
MS107P10	3 - MB327P 1 - MB328P(F)	1-2-3 4
MS120P	2 - MB947P 1 - MB948P	1-3 2
MS1265P	5 - MB2621P 1 - MB2621W	1-2-3-4-5 5
MS1386P	5 - MB2687P 1 - MB2523W	1-2-3-4-5 5
MS1420P	1 - MB2733P 3 - MB2734P 1 - MB2735P(F)	1 2-3-5 4
MS1421P	4 - MB2734P 1 - MB2735P(F)	1-2-3-5 4
MS1422P	1 - MB2736P 3 - MB2734P 1 - MB2735P(F)	1 2-3-5 4
MS1423P	2 - MB2610P 1 - MB3096P(F)	1-3 2
MS1530P	2 - MB2312P 4 - MB2313P 1 - MB2314P	1-7 2-3-5-6 4
MS1592P	4 - MB2929P 1 - MB2930P(F)	1-2-3-5 4
MS1593P	1 - MB2927P 3 - MB2929P 1 - MB2930P(F)	1 2-3-5 4
MS1594P	1 - MB2928P 3 - MB2929P 1 - MB2930P(F)	1 2-3-5 4
MS1619P	5 - MB2967P 1 - MB2096W 1 - MB2300P	1-2-3-5-6 4 7
MS1621P	5 - MB2969P 1 - MB2970P(F) 1 - MB2971	1-2-3-5-6 4 7
MS1622P	3 - MB2972P 1 - MB2973P(F) 1 - MB2971P	1-2-3 4 5
MS1623P	5 - MB2972P 1 - MB2973P(F) 1 - MB2971P	1-2-3-5-6 4 7
MS1627P	1 - MB2982P(F) 1 - MB1651P 1 - MB1652P	1 2 3
MS1632P	3 - MB2967P 1 - MB2968P 1 - MB2096W 1 - MB2300P	1-2-4 3 3 5
MS1680P	3 - MB2185P 1 - MB2092P(F)	1-2-3 3
MS1681P	4 - MB2185P 3 - MB2092P(F)	1-2-4-5 3
MS176P10	1 - MB1403P 1 - MB1403W 1 - MB1406P 1 - MB1405P	1 1 2 3
MS194P10	1 - MB1403P 1 - MB1403W 2 - MB1404P 1 - MB1405P	1 1 2-3 4
MS2002P	5 - MB2688P 1 - MB2689W 2 - MB2689P	1-2-3-5-6 4 4-7
MS202P	1 - MB1636P 1 - MB1768P(F) 1 - MB1370P	1 2 3
MS209P	1 - MB366P(F) 2 - MB367P	1 2-3
MS211P	1 - MB891P(F) 2 - MB892P	1 2-3
MS226P	1 - MB1669P 1 - MB1671P 1 - MB1681P	1 2 3
MS227P	1 - MB1669P 4 - MB1670P 1 - MB1671P(F) 1 - MB1681P	1 2-3-5-6 4 7
MS256C10	1 - MB1309W 2 - MB1309C	1 1-2
MS260P	1 - MB1403W 1 - MB1636P 1 - MB1637P 1 - MB1370P	1 1 2 3
MS271P	7 - MB1276P 1 - MB2524W	1-2-3-4-5-6-7 7
MS349P	3 - MB1643P 1 - MB1644P(F)	1-2-4 3
MS399P	1 - MB1669P 3 - MB1670P 1 - MB1671P(F) 1 - MB1681P	1 2-3-4 3 5
MS405P	2 - MB1629P 1 - MB1786P(F)	1-3 2
MS406P	3 - MB1629P 1 - MB1786P(F)	1-2-4 3
MS440P20	1 - MB1682P 2 - MB1225P 3 - MB1226P	1 2-3 4

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MAIN BEARING SETS CONTINUED

Part No.	Contents	Position
MS466P	1 - MB1501P 1 - MB1540P(F)	1-3 2
MS502P	5 - MB1897P 1 - MB2522W	1-2-3-4-5 5
MS506P	4 - MB1931P 1 - MB2524W	1-2-3-4 4
MS517P	1 - MB1999P 2 - MB2001P 3 - MB2000P(F)	1 2-4 3
MS523P10	1 - MB2011P 2 - MB2012P 1 - MB122P(F)	1 2-3 4
MS566P10	1 - MB2083P 1 - MB2087P(F) 1 - MB2085P	1 2 3
MS650P	6 - MB2185P 3 - MB2092P(F)	1-2-3-5-6-7 4
MS676P	6 - MB2225P 1 - MB2226P(F)	1-2-3-4-6-7 5
MS757AL	6 - MB2221AL 1 - MB2222AL	1-2-3-5-6-7 4
MS772AL	1 - MB2186AL 2 - MB2187AL 1 - MB2302AL	1 2-3 4
MS773AL	1 - MB2186AL 2 - MB2187AL	1 2-4
MS806P	1 - MB2366P 1 - MB1651P 1 - MB1652P	1 2 3
MS830AL	4 - MB2221AL 1 - MB2222AL	1-2-4-5 3
MS878AL	2 - MB2458AL 1 - MB2459AL(F)	1-3 2
MS885P	4 - MB2474P 1 - MB2524W	1-2-3-4 4
MS889P	1 - MB1682P 2 - MB1225P 1 - MB1686P(F)	1 2-3 4
MS900P	2 - MB2496P 1 - MB2032P(F)	1-2 3
MS902AL	2 - MB2497AL 1 - MB2498AL(F)	1-2 3

MAIN BEARINGS

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
MB-1224RW	2.4030 / 0.0000	-	-	3.3750 / 0.0000	0.0950	6
MB-1225P	2.3744 / 2.3752	0.0010 / 0.0031	0.0928	2.5615 / 2.5622	1.3170	6
MB-1276P Std., .010, .020, .030, .040	3.4990 / 3.5000	0.0017 / 0.0047	0.1553	3.8120 / 3.8130	1.9300	2-3-4-6
MB-1370P	2.2490 / 2.5000	0.0008 / 0.0031	0.0930	2.4365 / 2.4372	1.5560	4
MB-1403P-10	2.2500 / 2.2490	0.0005 / 0.0027	0.0942	2.4365 / 2.4372	1.1300	4-6
MB-1403W	2.2812 / 0.0000	-	-	3.0625 / 0.0000	0.0960	4-6
MB-1404P-10	2.2480 / 2.2490	0.0005 / 0.0027	0.0942	2.4365 / 2.4272	1.3170	6
MB-1405P-10	2.2480 / 2.2490	0.0005 / 0.0027	0.0942	2.4365 / 2.4375	1.6300	4-6
MB-1406P-10	2.2480 / 2.2490	0.0005 / 0.0027	0.0932	2.4365 / 2.4372	1.6300	4
MB-1629P	2.2490 / 2.2500	0.0002 / 0.0032	0.0854	2.4210 / 2.4220	1.3800	4-6
MB-1636P	2.2490 / 2.2500	0.0008 / 0.0031	0.0930	2.4365 / 2.4372	1.2700	4
MB-1637P	2.2490 / 2.5000	0.0008 / 0.0031	0.0930	2.4365 / 2.4372	1.2910	4
MB-1643P	2.6240 / 2.6250	0.0008 / 0.0038	0.0955	2.8165 / 2.8175	1.5050	6
MB-1644P	2.6240 / 2.6250	0.0008 / 0.0038	0.0955	2.8165 / 2.8175	1.7480	6
MB-1652P	1.7475 / 1.7485	0.0008 / 0.0031	0.0625	1.8740 / 1.8747	1.4470	4
MB-1653W	1.7812 / 0.0000	-	-	2.6250 / 0.0000	0.0950	4
MB-1670P	2.4970 / 2.4980	0.0016 / 0.0043	0.1000	2.6993 / 2.7000	1.1300	4-6
MB-1671P	2.4970 / 2.4980	0.0016 / 0.0043	0.1000	2.6993 / 2.7000	1.8720	4-6
MB-1681P	2.4970 / 2.4980	0.0016 / 0.0043	0.1000	2.6993 / 2.7000	1.8720	4-6
MB-1682P	2.3744 / 2.3752	0.0010 / 0.0031	0.0928	2.5616 / 2.5622	1.0670	4-6
MB-1686P	2.7344 / 2.3752	0.0005 / 0.0023	0.0932	2.5616 / 2.5622	1.6320	4-6
MB-1768P	2.2490 / 2.5000	0.0008 / 0.0031	0.0930	2.4365 / 2.4372	1.4970	4
MB-1786P	2.2490 / 2.2500	0.0002 / 0.0032	0.0854	2.4210 / 2.4220	1.6230	4-6

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MAIN BEARINGS CONTINUED

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
MB-1897P Std., .010, .020, .030	2.9990 / 3.0000	0.0013 / 0.0043	0.1250	3.2510 / 3.2520	1.1850	2-3-4
MB-1999P	2.7495 / 2.7505	0.0005 / 0.0026	0.0959	2.9425 / 2.9430	1.0390	6
MB-2000P	2.7495 / 2.7505	0.0005 / 0.0026	0.0959	2.9425 / 2.9430	1.2550	6
MB-2001P	2.7495 / 2.7505	0.0005 / 0.0026	0.0959	2.9425 / 2.9430	1.0390	6
MB-2009P-10	3.1227 / 3.1237	0.0016 / 0.0046	0.0995	3.3250 / 3.3260	1.1600	6
MB-2010P-10	3.1227 / 3.1237	0.0016 / 0.0046	0.0995	3.3250 / 3.3260	1.5290	6
MB-2032P	2.9995 / 3.0000	0.0017 / 0.0042	0.1053	3.2120 / 3.2130	2.1850	4
MB-2092P	2.8734 / 2.8744	0.0018 / 0.0043	0.0953	3.0665 / 3.0670	2.1190	3-4-6
MB-2096W	3.5630 / 3.5730	-	-	4.6875 / 0.0000	0.2020	4-6
MB-2185P	2.8734 / 2.8744	0.0012 / 0.0037	0.0956	3.0665 / 3.0670	1.0360	3-4-6
MB-2186AL	2.7485 / 2.7490	0.0018 / 0.0043	0.0830	2.9165 / 2.9170	1.3050	3-4
MB-2187AL	2.7485 / 2.7490	0.0018 / 0.0043	0.0830	2.9165 / 2.9170	1.0000	3-4
MB-2221AL	2.9985 / 2.9990	0.0027 / 0.0052	0.0823	3.1660 / 3.1670	1.2550	4-6
MB-2222AL	2.9985 / 2.9990	0.0027 / 0.0052	0.0823	3.1660 / 3.1670	1.4450	4-6
MB-2225P	2.6240 / 2.6250	0.0018 / 0.0480	0.0950	2.8165 / 2.8175	1.2550	6
MB-2300P	3.4980 / 3.4990	0.0023 / 0.0050	0.1554	3.8118 / 3.8125	2.0000	4-6
MB-2302AL	2.7485 / 2.7490	0.0043 / 0.0018	0.0830	2.9165 / 2.9170	1.6050	3-4
MB-2312P	3.9950 / 3.9960	0.0024 / 0.0051	0.1881	4.3743 / 4.3750	2.0050	6
MB-2313P	3.9950 / 3.9960	0.0024 / 0.0051	0.1881	4.3743 / 4.3750	1.5050	6
MB-2314P	3.9950 / 3.9960	0.0024 / 0.0051	0.1181	4.3743 / 4.3750	2.7560	6
MB-2366P	1.7475 / 1.7485	0.0008 / 0.0031	0.0625	1.8740 / 1.8747	1.2230	4
MB-2458AL	2.9990 / 3.0000	0.0013 / 0.0043	0.0950	3.1910 / 3.1920	1.2550	4
MB-2459AL	2.9990 / 3.0000	0.0013 / 0.0043	0.0950	3.1910 / 3.1920	1.4960	4
MB-2496P	2.7595 / 2.7500	0.0018 / 0.0043	0.0850	2.9215 / 2.9225	1.6250	4

MAIN BEARINGS CONTINUED

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
MB-2497AL	2.7480 / 2.7490	0.0013 / 0.0043	0.0955	2.9410 / 2.9420	1.2550	4
MB-2498AL	2.7480 / 2.7490	0.0013 / 0.0043	0.0955	2.9410 / 2.9420	1.5000	4
MB-2522W	3.3380 / 3.3480	-	-	4.2700 / 4.2800	0.1220	2-3-4
MB-2523W	4.7500 / 4.7600	-	-	5.7300 / 5.7400	0.1220	6-8-12-16
MB-2524W	3.8430 / 3.8435	-	-	4.6250 / 4.6350	0.1220	2-4-6
MB-2598P	3.4990 / 3.5000	0.0018 / 0.0048	0.1253	3.7520 / 3.7530	1.0520	6-8
MB-2610P	2.2490 / 2.2500	0.0005 / 0.0035	0.0854	2.4210 / 2.4220	1.3800	4
MB-2610P-20	2.2470 / 2.2480	0.0005 / 0.0035	0.0874	2.4210 / 2.4220	1.3800	4
MB-2621W	4.1200 / 4.1400	-	-	5.2300 / 5.2400	0.1510	8
MB-2687P Std., .010, .020, .030	4.4990 / 4.5000	0.0019 / 0.0049	0.1552	4.8120 / 4.8130	1.2450	6-8-12-16
MB-2688P	3.2465 / 3.2480	0.0022 / 0.0054	0.1554	3.5607 / 3.5614	1.2520	6
MB-2689P Std., .020	3.2465 / 3.2480	0.0022 / 0.0054	0.1554	3.5607 / 3.5614	1.5020	6
MB-2689W	3.3120 / 3.3220	-	-	4.2500 / 0.0000	0.1710	6
MB-2733P Std., .010, .020, .030	3.4990 / 3.5000	0.0023 / 0.0053	0.1025	3.7070 / 3.7080	1.0000	4-8
MB-2734P Std., .010, .020, .030	3.4990 / 3.5000	0.0018 / 0.0048	0.1025	3.7070 / 3.7080	1.0000	4-8
MB-2735P Std., .010, .020, .030	3.4990 / 3.5000	0.0013 / 0.0043	0.1028	3.7070 / 3.7080	1.2530	8
MB-2736P	3.4990 / 3.5000	0.0023 / 0.0053	0.1025	3.7070 / 3.7080	1.0000	8
MB-2928P	3.4990 / 3.5000	0.0023 / 0.0053	0.1075	3.7170 / 3.7180	1.0000	8
MB-2930P Std., .020	3.4990 / 3.5000	0.0023 / 0.0053	0.1075	3.7170 / 3.7180	1.2530	8
MB-2967P	3.4980 / 3.4990	0.0023 / 0.0050	0.1544	3.8118 / 3.8125	1.3570	4-6
MB-2968P	3.4980 / 3.4990	0.0023 / 0.0050	0.1554	3.8118 / 3.8125	2.2540	4
MB-2969P	2.7465 / 2.7480	0.0016 / 0.0048	0.0936	2.9368 / 2.9375	1.2440	4-6
MB-2971P	2.7465 / 2.7480	0.0016 / 0.0048	0.0936	2.9368 / 2.9375	1.4800	4-6
MB-2972P	2.7465 / 2.7480	0.0016 / 0.0048	0.0936	2.9368 / 2.9375	1.1230	4-6

MAIN BEARINGS CONTINUED

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
MB-2973P	2.7465 / 2.7480	0.0016 / 0.0048	0.0936	2.9368 / 2.9375	2.0570	4-6
MB-2982P	1.7475 / 1.7485	0.0005 / 0.0023	0.0623	1.8740 / 1.8747	1.3930	4
MB-3096P-20	2.2490 / 2.2500	0.0005 / 0.0035	0.0854	2.4210 / 2.4220	1.6430	4
MB-327P	2.1995 / 2.5005	0.0011 / 0.0036	0.0776	2.6565 / 2.6570	1.1810	6
MB-328P	2.4995 / 2.5005	0.0011 / 0.0036	0.0776	2.6565 / 2.6570	1.8710	6
MB-366P	2.4355 / 2.4365	0.0014 / 0.0040	0.0932	2.6240 / 2.6250	1.6250	4
MB-367P	2.4770 / 2.4780	0.0018 / 0.0043	0.0723	2.6240 / 2.6250	1.7550	4
MB-891P	2.2490 / 2.2500	0.0013 / 0.0038	0.0850	2.4210 / 2.4220	1.6250	4
MB-892P	2.2490 / 2.2500	0.0013 / 0.0038	0.0850	2.4210 / 2.4220	1.5050	4

THRUST WASHER SETS

Part No.	Contents
TW119S	1 - MB2188W(L) 1 - MB2188W(U)
TW121S	1 - MB2222W(L) 1 - MB2222W(U)
TW128S	1 - MB2188W(U)
TW130S	1 - MB2292W(L) 1 - MB2292W(U)
TW134S	1 - MB2314W
TW143S	1 - MB1653W
TW304S	1 - MB2689W
TW316S	1 - MB2636W(L) 1 - MB2636W(U)
TW402S	1 - MB2523W
TW411S	1 - MB2524W
TW412S	1 - MB2522W
TW424S	1 - MB1403W
TW448S	1 - MB2598W
TW449S	1 - MB2621W

CAMSHAFT BEARINGS

Part No.	Dia. of Shaft	Vert. Oil Clearance	Max. Wall Thickness at Crown	Brg. O.D. or Housing Bore	Max. Length	No. Cyl.
SH-1245	2.4995 / 2.5005	0.0004 / 0.0010	0.0750	2.6520 / 2.6530	0.7600	4-8
SH-1382	2.4960 / 2.4970	0.0020 / 0.0060	0.0937	2.6865 / 2.6875	1.8100	8
SH-1383	2.4960 / 2.4970	0.0020 / 0.0060	0.0937	2.6865 / 2.6875	1.0700	8
SH-1394	1.9975 / 1.9985	0.0010 / 0.0045	0.0963	2.1865 / 2.1875	1.9000	6-8
SH-1395	1.9975 / 1.9985	0.0010 / 0.0045	0.0963	2.1865 / 2.1875	0.9000	6-8
SH-191	1.8085 / 1.8095	0.0020 / 0.0050	0.0630	1.9370 / 1.9380	0.9480	4-6
SH-197	2.0530 / 2.0540	0.0005 / 0.0040	0.0668	2.1870 / 2.1880	1.1350	4-6
SH-23	1.9980 / 1.9990	0.0005 / 0.0040	0.0650	2.1290 / 2.1300	1.1010	6
SH-24	1.9665 / 1.9675	0.0010 / 0.0050	0.0650	2.0985 / 2.0995	0.8820	6
SH-25	1.9350 / 1.9360	0.0010 / 0.0050	0.0650	2.0670 / 2.0680	0.8820	6
SH-317	1.6830 / 1.6840	0.0005 / 0.0055	0.0645	1.8155 / 1.8175	0.7600	4
SH-386	1.9980 / 1.9990	0.0020 / 0.0050	0.0615	2.1240 / 2.1250	1.1300	4-6
SH-387	1.9980 / 1.9990	0.0020 / 0.0050	0.0615	2.1240 / 2.1250	0.8800	4-6
SH-388	1.2480 / 1.2490	0.0020 / 0.0050	0.0615	1.3740 / 1.3750	1.0100	4-6
SH-403	1.9820 / 1.9830	0.0005 / 0.0045	0.0645	2.1135 / 2.1145	0.7600	6
SH-424	1.9670 / 1.9680	0.0005 / 0.0045	0.0645	2.0985 / 2.0995	0.7600	6
SH-56 Std., .010	1.7457 / 1.7465	0.0024 / 0.0057	0.0628	1.8745 / 1.8750	1.6350	4-6
SH-57	1.2465 / 1.2475	0.0010 / 0.0050	0.0628	1.3745 / 1.3750	1.1660	4-6
SH-628	2.1300 / 2.1310	0.0020 / 0.0060	0.0630	2.2590 / 2.2600	1.3850	4-6
SH-629	2.1300 / 2.1310	0.0020 / 0.0060	0.0630	2.2590 / 2.2600	1.0000	4-6
SH-687	2.1820 / 2.1825	0.0040 / 0.0065	0.0893	2.3650 / 2.3660	1.5100	2-3-4-6
SH-688	2.1820 / 2.1825	0.0039 / 0.0065	0.0843	2.3550 / 2.3560	1.5100	4
SH-874	1.9980 / 1.9990	0.0025 / 0.0065	0.0640	2.1295 / 2.1305	0.9300	6

CAMSHAFT BEARING SETS

Part No.	Contents	Position
SH1245S	5 - SH1245	1-2-3-4-5
SH1382S	2 - SH1382 3 - SH1383	1-5 2-3-4
SH1394S	2 - SH1394 3 - SH1395	1-5 2-3-4
SH190S	1 - SH1211 1 - SH191 1 - SH56 1 - SH57	1 2 3 4
SH191S	1 - SH191 1 - SH56 1 - SH57	1 2 3
SH198S	2 - SH197 2 - SH198	1-4 2-3
SH23S	1 - SH23 1 - SH24 1 - SH25	1 2 3
SH322S	2 - SH322 2 - SH323	1-4 2-3
SH330S	1 - SH330	1
SH37S	1 - SH23 1 - SH37 1 - SH38	1 2 3
SH384S	3 - SH384	1-2-3
SH385S	1 - SH385	1-2-3
SH386S	1 - SH386 2 - SH387 1 - SH388	1 2-3 4
SH468	2 - SH468	1
SH476RS	1 - SH476R	1
SH477WS	1 - SH477W	1
SH525	2 - SH525	1
SH561S	2 - SH561 1 - SH198	1-3 2
SH562S	2 - SH561 2 - SH198	1-4 2-3
SH56S	1 - SH1211 1 - SH56 1 - SH57	1 2 3
SH614S	4 - SH330	1-2-3-4
SH628S	1 - SH628 5 - SH629	1 2-3-4-5-6
SH629S	1 - SH628 3 - SH629	1 2-3-4
SH683S	1 - SH191 1 - SH362-10 1 - SH317	1 2 3
SH686	2 - SH686	1-4
SH700S	2 - SH686 2 - SH687 1 - SH688	1-5 2-4 3
SH701S	2 - SH-686 2 - SH-687	1-4 2-3
SH719S	1 - SH628 2 - SH629	1 2-3
SH874S	1 - SH874 1 - SH403 1 - SH424 1 - SH425	1 2 3 4

Allis-Chalmers Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
800208	CB-345P
800499	CB-345P
N62G302	CB-345P
HEAD GASKETS	
223096	1850
800258	1850
MAIN BEARINGS	
5150017	MB-1276P
5151918	MB-1276P
5152917	MB-1276P
5152918	MB-1276P
5152979	MB-1276P
5192874	MB-1276P
PISTONS	
5171524	224-2469
5189054	224-2469
RING SETS	
208347	S41810
208354	S4330
212245	S4323
227168	S4330
229863	S4330
230091	S4330
230093	S4323
233760	S4323
283914	S4323
ROD BUSHINGS	
N62G201	223-3505
SLEEVES	
5171520	226-4220
5188863	226-4220
5188868	226-4220
SLEEVE ASSEMBLIES	
5194496	226-1220
THRUST WASHER SETS	
5159353	TW-411S
5190853	TW-411S

Allis-Chalmers Part No.	MAHLE Clevite No.
VALVES - EXHAUST	
5185327	211-1283
5186381	211-1283
VALVE GUIDES	
800324	217-3678
VALVE KEEPERS	
206880	216-5117
209103	216-5144
4347270	216-5144
4356080	216-5234
4376497	216-5146
4376508	216-5146
5175310	216-5144
800496	216-5147
VALVE SEATS	
220476	218-7623
229903	218-7501
4513864	218-7439
VALVE SPRINGS	
5120289	212-1019
800251	212-1034

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Buda Part No.	MAHLE Clevite No.
VALVE KEEPERS	
206880	216-5117
209103	216-5144
4347270	216-5144
4356080	216-5234
4376497	216-5146
4376508	216-5146
5175310	216-5144
800496	216-5147

Continental Part No.	MAHLE Clevite No.
CAMSHAFT BEARING SET	
F400T181	SH-56S
F600T250	SH-190S
Y400T139	SH-191S
CONNECTING ROD BEARINGS	
367352R91	CB-618P
5789	CB-465P
5800	CB-466P
800208	CB-345P
83414	CB-78P
853414	CB-78P
853422	CB-79P
856786	CB-465P
856787	CB-466P
912797	CB-465P
912798	CB-466P
E400G300	CB-596P
E400G3001	CB-596P
ED400G312	CB-596P
ED400G3121	CB-596P
F400G340	CB-79P
F400G3401	CB-79P
F400G341	CB-78P
F400G3411	CB-78P
F400T155	CB-79P
F400T159	CB-78P
F600G226	CB-78P
F600G312	CB-79P
F600G319	CB-466P
F600G320	CB-465P
F600G341	CB-79P
F600G3411	CB-79P
F600G3412	CB-79P
F600G342	CB-78P
F600G3421	CB-78P
F600G354	CB-466P
F600G3541	CB-466P
F600G355	CB-465P
F600G3551	CB-465P
F600G387	CB-466P
F600G388	CB-465P
F600G389	CB-465P

Continental Part No.	MAHLE Clevite No.
F600G390	CB-466P
F600G398	CB-466P
F600T251	CB-466P
F600T255	CB-465P
F601G300	CB-465P
G176G305	CB-616P
G176T101	CB-616P
G176T115	CB-616P
G193G300	CB-618P
GD181G302	CB-618P
H260G306	CB-405P
H260G315	CB-405P
H260G322	CB-405P
H260G330	CB-405P
H260T107	CB-405P
H260T180	CB-405P
H260T223	CB-405P
H260T235	CB-405P
HD260G307	CB-459P
HD260G3071	CB-459P
HD260T101	CB-459P
HD260T106	CB-459P
M600G331	CB-510P
N62G302	CB-345P
N62G3021	CB-345P
N62G310	CB-345P
N62G315	CB-345P
N62G3151	CB-345P
N62T114	CB-345P
N62T184	CB-345P
N62T196	CB-345P
N62T225	CB-345P
N62T231	CB-345P
Y112G307	CB-278P
Y112G308	CB-279P
Y400G307	CB-278P
Y400G316	CB-279P
Y400G317	CB-278P
Y400G348	CB-279P
Y400G349	CB-278P
Y400G350	CB-278P
Y400G351	CB-279P
Y400G3511	CB-279P

Continental Part No.	MAHLE Clevite No.
Y400T131	CB-278P
Y400T136	CB-278P
Y400T258	CB-279P
Y400T263	CB-279P
Z120G306	CB-362P
Z120T104	CB-362P
Z120T107	CB-362P
Z120T138	CB-362P
Z120T153	CB-362P
Z129T107	CB-362P
Z145G404	CB-362P
FULL SETS	
F6U2002	JV951
F124U108	FS1634A
F1400U101	FS1634A
F140U102	FS1634A
F140U110	FS1634A
F1620U104	FS1634A
F162U102	FS1634A
F162U103	FS1634A
F162U104	FS1634A
F162U107	FS1634A
F162U110	FS1634A
F162U111	FS1634A
F162U113	FS1634A
F162U501	FS1634A
F209U101	FS986A
F209U102	FS986A
F209U104	FS986A
F209U105	FS986A
F209U109	FS986A
F209U110	FS986A
F209U115	FS986A
F209U116	FS986A
F209U118	FS986A
F209U122	FS986A
F209U127	FS986A
F209U131	FS986A
F209U132	FS986A
F209U134	FS986A
F209U135	FS986A
F209U137	FS986A

Continental Part No.	MAHLE Clevite No.
F209U138	FS986A
F209U141	FS986A
F218U100	FS986A
F218U102	FS986A
F218U103	FS986A
F226U103	FS986A
F226U105	FS986A
F226U107	FS986A
F226U109	FS986A
F226U111	FS986A
F226U115	FS986A
F226U116	FS986A
F226U121	FS986A
F226U125	FS986A
F226U127	FS986A
F226U131	FS986A
F226U133	FS986A
F226U138	FS986A
F226U141	FS986A
F226U144	FS986A
F226U158	FS986A
F226U176	FS986A
F226U178	FS986A
F226U501	FS986A
F227U102	FS986A
F227U104	FS986A
F227U110	FS986A
F227U111	FS986A
F227U113	FS986A
F227U118	FS986A
F227U132	FS986A
F244U101	FS3193S
F244U103	FS3193S
F400A305	FS1634A
F4124U101	FS1634A
F4124U102	FS1634A
F4124U103	FS1634A
F4124U104	FS1634A
F4124U106	FS1634A
F4124U108	FS1634A
F4140U101	FS1634A
F4162U101	FS1634A
F4162U102	FS1634A

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Continental Part No.	MAHLE Clevite No.
F4162U104	FS1634A
F4162U107	FS1634A
F4U2004	FS1634A
F4U3001	FS1634A
F6209U101	FS986A
F6209U102	FS986A
F6209U103	FS986A
F6209U104	FS986A
F6209U105	FS986A
F6209U107	FS986A
F6209U108	FS986A
F6209U109	FS986A
F6209U110	FS986A
F6209U112	FS986A
F6209U118	FS986A
F6209U128	FS986A
F6209U137	FS986A
F6209U138	FS986A
F6209U140	FS986A
F6218U101	FS986A
F6218U102	FS986A
F6226U101	FS986A
F6226U102	FS986A
F6226U103	FS986A
F6226U104	FS986A
F6226U109	FS986A
F6226U115	FS986A
F6226U120	FS986A
F6226U134	FS986A
F6226U135	FS986A
F6227U101	FS986A
FS218U101	FS986A
FS218U103	FS986A
FS6218U101	FS986A
FS6218U103	FS986A
G176U101	FS3171
H260U102	FS1847
H260U106	FS1847
N62U101	FS1850
N62U103	FS1850
S925-193	FS1634A
Y112U101	FS1709
Y112U102	FS1709W
Y112U106	FS1709X
Y112U124	FS1709X
Y91U101	FS1596
Z120U101	FS1865
Z120U103	FS1865
Z129U102	FS1865
Z134U103	FS3097
HEAD GASKETS	
2134D401	3097
F101A403	1634
F244A430	3193S
F244A500	3193S
F400A1554	1634
F400A1674	1634
F400A307	1634
F400A325	1634
F400A335	1634
F400A336	1634
F401A403	1634
F401A404	1634
F600A226	986S
F600A266	986S
F600A297	986S
F600A328	986S
F600A471	986S
F600A536	986S
N56A306	1850
N62A304	1850
Y400A402	1596
Y400A404	1596
Y400A412	1596
Y400A416	1709
Z120A400	1865
Z129A405	1865
Z129A408	1865
Z134A401	3097
HEAD SETS	
E223U104	HS3192
E400T117	HS3216
F124U106	HS1634X
F162U109	HS1634X
F163U109	HS1634X

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Continental Part No.	MAHLE Clevite No.
F226U101	HS986K
F244U102	HS3193S
F4U1001	HS1634X
F4U1002	HS1634X
F6U1002	HS3193S
G176U102	HS3171
H260T192	HS1847
N62T140	HS1850
N62T193	HS1850
Y112U109	HS1709
Y4U1002	HS1596
Y4U1003	HS1709
Y91U107	HS1596
Z120T109	HS1865
Z134U104	HS3097
Z4U1002	HS3097
MAIN BEARINGS	
F400G3271	MB-1686P
F400G328	MB-1686P
F400G3281	MB-1686P
F600G300	MB-1686P
FO600G3001	MB-1686P
Y112G321	MB-2982P
Y112G3211	MB-2982P
Z120T150	MB-1637P
Z129G300	MB-1637P
Z129G3001	MB-1637P
MAIN BEARING SETS	
898536	MS-889P
F6227T101	MS-889P
FO600T105	MS-889P
Z129T105	MS-260P
Z129T106	MS-260P
Z134T110	MS-202P
MANIFOLD GASKET SETS	
F400E303	MS15028
F600E300	MS18651S
F600E306	MS18651S
F600E310	MS18651S
H260E309	MS12172
Y400E302	MS18610
Z120B400	MS18645

Continental Part No.	MAHLE Clevite No.
Z120E400	MS18645
OIL PAN GASKETS	
F600B241	OS20496X
OIL PAN SETS	
D600B402	OS20928
F124U107	OS20509
F226U102	OS20928
F226U113	OS20928
F400B267	OS20509
F600B241	OS20496X
F6218U106	OS20928
F6U3001	OS20928
G157B304	OS20837
G157T111	OS20837
G176B130	OS20837
G176B300	OS20837
GD193B301	OS20837
H260B304	OS21567
H260T101	OS21567
H26OB320	OS21567
N62B303	OS20657
Y400B320	OS20496X
Y400B343	OS20496X
Y4U3001	OS20496X
Z120B401	OS20659
Z134B401	OS20659
Z134T130	OS20659
PISTONS	
F163A04081E	224-3287
F163A408	224-3287
F226A4011E	224-2831
F226A406	224-2831
F226A407	224-2831
F227A4061E	224-2831
F600A4671E	224-2831
RING SETS	
A244T115	S4544
A244T-116	S4544
F124T120	S4583
F124T121	S4583
F124T123	S4583
F140T113	S51818

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Continental Part No.	MAHLE Clevite No.
F140T136	S4799
F140T137	S4799
F162T101	S5588
F162T120	S5588
F162T125	S5588
F162T152	S4588
F162T153	S5588
F162T154	S4588
F162T160	S5588
F226T101	S5662
F226T188	S4662
F226T195	S4662
F227T106	S5662
F245T-106	S40761
F6226T125	S4662
H260T-205	S4560
H260T-210	S4560
N62T142	S4782
N62T199	S4782
N62T227	S5782
Y112T-101	S41813
Y112T-115	S41813
Z120T103	S51818
Z120T147	S4799
Z120T148	S4799
ZA120T101	S51818
ROD BUSHINGS	
E400G200	223-3516
F400G211	223-3349
F400G211	223-3621
H260G203	223-3517
N62G201	223-3505
R800G204	223-3429
Y400G234	223-3503
Y400G235	223-3503
THRUST WASHER SETS	
850805	TW-424S
D600C204	TW-424S
F400T230	TW-424S

Continental Part No.	MAHLE Clevite No.
TIMING COVER SETS	
F4U2001	JV951
VALVES - EXHAUST	
F400I228	211-1589
F600I228	211-1589
F600I238	211-1053
F600I351	211-1589
F600I352	211-1053
F601I303	211-2035
F900I248	211-1073
G176I303	211-1777
Y400I1210	211-1095
Y400I322	211-1095
Z120I203	211-1141
Z120I222	211-1141
Z120I236	211-2075
Z120T123	211-1141
Z129I208	211-1441
Z129T108	211-1313
Z145I301	211-2199
Z200I131	211-1053
VALVES - INTAKE	
E223I302	211-1778
E223I303	211-1778
F400I229	211-1588
F600I229	211-1588
F600I247	211-1058
F600I347	211-1058
F600I354	211-1058
F601I302	211-2034
G176I304	211-1776
Y400I301	211-1072
Y400T198	211-1072
Z129I205	211-1206
Z200I130	211-1588

Continental Part No.	MAHLE Clevite No.
VALVE COVER GASKETS	
C400A217	VS38032
C600A302	VS38063
F124A201	VS38083
F400A238	VS38032
F400B201	VS38083
F600A369	VS38028
G176A305	VS38105
G193A313	VS38287
PYA305	VS38005
Z120A301	VS38090
VALVE GUIDES	
E223I200	217-3673
F400I213	217-3620
F400I230	217-3620
F400I233	217-3620
F600I213	217-3620
F600I265	217-3515
G1931210	217-3379
H260I200	217-3701
N62I200	217-3678
Y400I209	217-3619
Z120T125	217-3717
Z129I204	217-3717
VALVE KEEPERS	
12S1207	216-5159
22R1210	216-5233
A600I221	216-5144
CVT3234	216-5117
E604I202	216-5146
G193I205	216-5117
Y400I205	216-5147
Y400I310	216-5147
Z120I1235	216-5234
VALVE SEATS	
F140A216	218-7405
F601A323	218-7405
VALVE SPRINGS	
F600I232	212-1021
N62I201	212-1034
Y400I215	212-1025
Z660I338	212-1023

Detroit Diesel Part No.	MAHLE Clevite No.
CAMSHAFT BEARING SET	
5111423	SH-476R
5111424	SH-477W
5193125	SH-468
5195413	SH-468
5196011	SH-698S
5196012	SH-699S
5196013	SH-700S
5196022	SH-468
5196094	SH-701S
5197930	SH-686S
5197944	SH-701S
5198209	SH-699S
5198431	SH-698S
5198984	SH-700S
8929690	SH-1986
CONNECTING ROD BEARINGS	
23511129	CB-1596P
23515581	CB-1792P
23526142	CB-1836P
5103763	CB-1265P
5107200	CB-555P
5116048	CB-674P
5116187	CB-1265P
5150106	CB-1596P
5150128	CB-1596P
5151318	CB-1596P
5151528	CB-1596P
5192895	CB-1596P
8920081	CB-1288P
8921714	CB-1288P
8929710	CB-1662P
FULL SETS	
23512674	FS12197L
23512675	FS12197G
23512676	FS12197H
23512677	FS12197IT
23512679	FS12197JC
23512680	FS12197JT
23512681	FS12197K
23512683	FS12272AC
23512684	FS12272AT

Detroit Diesel Part No.	MAHLE Clevite No.
23512685	FS12272B
23512688	FS12232A
23512689	FS12232B
23512690	FS12232C
23517624	FS12232B
5199792	FS12232B
HEAD GASKETS	
23522588	54157
8921438	3983
8922022	3983
8923215	3983
8923493	3983
8923800	3983
8923848	3983
HEAD SETS	
23501572	HS54157
23526052	HS54157
23526852	HS54157
23532333	HS54157
5149744	HS12197A
5149745	HS12197B
5192433	HS3130
5192434	HS3130
5192924	HS12197A
5193113	HS12197A
5193114	HS12197B
5193116	HS12197A
5193117	HS12197B
5193118	HS12197Y
5195738	HS12197B
5195739	HS12197Y
5195741	HS12197B
5195742	HS12197H
5195742	HS12197Y
5196373	HS12197A
5196374	HS12197B
5196375	HS12197C
5196380	HS12197A
5196380	HS12197I
5196381	HS12197B
5196381	HS12197J
5196382	HS12197C

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Detroit Diesel Part No.	MAHLE Clevite No.
5196382	HS12197K
5196575	HS12232X
5196576	HS12232X
5196577	HS12232
5196578	HS12232X
5196579	HS12232
5196708	HS12197A
5196709	HS12197A
5196710	HS12197B
5196711	HS12197B
5196785	HS12232X
5197858	HS12197B
5198286	HS12197B
5198622	HS12197B
5198676	HS12197B
5198676	HS12197G
5198944	HS12197A
5198946	HS12197B
5199616	HS12272
5199617	HS12272W
5199673	HS12272
5199673	HS12272X
5199674	HS12272B
5199674	HS12272W
5199674	HS12272Y
5199675	HS12272
5199790	HS12232X
5199791	HS12232X
5199793	HS12232X
5199811	HS12232A
5199811	HS12232X
5199812	HS12232
5199812	HS12232B
5199814	HS12232X
8921655	HS3983
8924127	HS3983
LOWER SETS	
5149744	CS12197
5149745	CS12197K
5191931	CS12197X
5191932	CS12197Y
5192434	CS3130

Detroit Diesel Part No.	MAHLE Clevite No.
5192921	CS12197Z
5193113	CS12197Z
5193114	CS12197X
5193115	CS12197Y
5195738	CS12197X
5195739	CS12197Y
5196373	CS12197
5196373	CS12197C
5196374	CS12197H
5196374	CS12197K
5196575	CS12232X
5196576	CS12232X
5196708	CS12197
5196709	CS12197
5196710	CS12197K
5196711	CS12197
5196711	CS12197F
5196785	CS12232W
5197858	CS12197K
5198286	CS12197X
5198287	CS12197Y
5198622	CS12197X
5198944	CS12197
5198944	CS12197A
5198945	CS12197Y
5198946	CS12197K
5199616	CS12272
5199666	CS12272
5199790	CS12232X
5199791	CS12232X
5199793	CS12232W
5199814	CS12232W
8924126	CS3983
MAIN BEARINGS	
5116197	MB-2522W
5117005	MB-2523W
5117011	MB-2687P
5149447	MB-2857P
5154069	MB-2524W
5159353	MB-2524W
MAIN BEARING SETS	
5149565/5117005	MS-1386P

Detroit Diesel Part No.	MAHLE Clevite No.
MANIFOLD GASKET SETS	
5120224	MS18628S
OIL PAN SETS	
5117230	OS31753
5117231	OS31790
5119266	OS30753
5125635	OS32164
5125642	OS31790
5149728	OS30938
5150115	OS30831
5150116	OS31771
5150117	OS31977
5151115	OS30831
5153256	OS20756
5196061	OS30753
5196532	OS31753
5196533	OS31790
5196533	OS32034
8922786	OS32035
8929102	OS32204
O-RINGS	
5121256	223-7140
PISTONS	
2147950	224-2260
23505427	224-2360
2350900	224-2260
23509378	224-2260
23512413	224-2260
23513069	224-2360
23516309	224-2360
23516310	224-2360
23516311	224-2260
23516861	224-2360
23516862	224-2360
23516863	224-2260
23521992	224-2360
23522026	224-2260
23522070	224-2360
23522475	224-2360
23522495	224-2360
23522497	224-2260
23522535	224-2260

Detroit Diesel Part No.	MAHLE Clevite No.
28653230	224-2272
5102045	224-2469
5102779	224-2485
5102780	224-2485
5108623	224-2272
5108623	224-2485
5115191	224-2485
5116028	224-3282
5116189	224-2486
5138000	224-2486
5138682	224-2485
5144836	224-2260
5144836	224-2360
5144839	224-2360
5144872	224-2272
5147651	224-2360
5149048	224-2272
5149234	224-2485
5149235	224-2485
5149240	224-2272
5149248	224-2272
5149963	224-2272
5149982	224-2260
5149983	224-2360
5171524	224-2469
5189054	224-2469
5194656	224-2469
5195931	224-3282
5196487	224-2485
5197866	224-2486
5197920	224-2485
5198467	224-2485
5198839	224-2485
5198877	224-2486
5199350	224-2260
5199573	224-2360
8921605	224-2252
8921606	224-2251
8925815	224-2251
8925816	224-2251
8925817	224-2251
8925818	224-2251

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Detroit Diesel Part No.	MAHLE Clevite No.
REBORE KITS	
8921605	224-2997
8921721	224-2997
8921722	224-2998
8925818	224-2998
RING SETS	
23503747	S41891
23504728	S41410
23505729	S41892
23514965	S103A
23514970	S40653
23514971	S41659
23522954	S41407
23522954	S41899
23522955	S41407
23522955	S41408
23522955	S41900
23524349	S41410
5102648	S103A
5132606	S103A
5149047	S41409
5149224	S40653
5149225	S40653
5149225	SC80061
5149226	S41659
5149230	S40653
5149232	S103A
5149233	S41659
5149241	S41410
5149248	S41408
5149255	S40653
5149257	S40653
5149314	S41449
5149359	S41449
5149604	S41408
5149824	S41408
5149942	S41154
5193477	SC80061
5194960	SC80061
5196366	S103A
5196833	S40232
5197037	S103A

Detroit Diesel Part No.	MAHLE Clevite No.
5197177	S40653
5197177	S41659
5197576	S103A
5197933	S40653
5198274	S41659
5198440	S40653
5198822	S40232
5198838	S103A
5198901	S41449
5198902	S41154
5199226	S41659
5199227	S41659
5199228	S41659
5199329	S40653
5199343	S41659
5199806	S40653
5199824	S41408
5199825	S41407
5199880	S40653
8921106	S41410
8921721	S41294
8921722	S41895
8923343	S41410
8923347	S41409
8924106	S41410
8927774	S41408
8927780	S41408
ROD BUSHINGS	
23501687	223-3548
5116181	223-3622
5144843	223-3548
8920078	223-3579
SLEEVES	
23502020	226-4466
23502021	226-4466
23502022	226-4466
23502023	226-4464
23502024	226-4464
23502025	226-4464
23504931#1	226-4220
23504932	226-4220
23505278	226-4558

Detroit Diesel Part No.	MAHLE Clevite No.
2350932#2	226-4220
23514285	226-4556
23531249	226-4556
23532468	226-4558
5102795	226-4464
5107176	226-4470
5107449	226-4464.010
5113953	226-4466
5132803	226-4415
5148505	226-4467
5149211	226-4220
514924	226-4220
5171520	226-4220
5188868	226-4220
5193733	226-4466.010
5193734	226-4466.020
SLEEVE ASSEMBLIES	
23500881	226-1739
23503938	226-1738
23505303#2	226-1633
23505304	226-1633
23505306	226-1633
23505306#2	226-1633
23505306#3	226-1633
23505307#3	226-1633
23505308#2	226-1220
23505308#3	226-1220
23505309	226-1220
23505313	226-1946
23505423#2	226-1945
23505423#3	226-1945
23505424	226-1945
23505424#3	226-1945
23511625	226-1946
23511965#2	226-1945
235119966#3	226-1945
23514261	226-1739
23514979#3	226-1945
23514987#2	226-1945
23516300	226-1946
23518731#2	226-1945
23518731#3	226-1945

Detroit Diesel Part No.	MAHLE Clevite No.
23518986	226-1946
23522519	226-1946
23522947	226-1946
23522953	226-1945
23524339	226-1739
23524341	226-1738
5102315	226-1220
5102317	226-1220.010
5102318	226-1220.020
5149239	226-1739
5149249	226-1945
5149256	226-1633
5149262	226-1633
5149315	226-1751
5149598	226-1738
5149721	226-1477
5149734	226-1751
5194496	226-1220
5196834	226-1478
5197025	226-1633
5197497	226-1633
5198139	226-1477
5198188	226-1477
5198899	226-1477
5198903	226-1478
5198904	226-1477
5199116	226-1477
5199504	226-1633
5199821	226-1945
5199822	226-1946
5199874	226-1633
8923342	226-1739
8923348	226-1738
8923804	226-1738
8924108	226-1738
R23519625	226-1938
R23519637	226-1941
R23523951	226-1937
R23523952	226-1940
R23532555	226-1937
R23532556	226-1940
R23532590	226-1938
R23532591	226-1941

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Detroit Diesel Part No.	MAHLE Clevite No.
THRUST WASHER SETS	
5116197	TW-412S
5154069	TW-411S
5159353	TW-411S
8929085	TW-600S
VALVES - EXHAUST	
23500501	211-2462
23501577	211-3313
23502067	211-2551
23506350	211-3313
5100437	211-2439
5106136	211-2439
5109925	211-2536
5111336	211-2462
5114288	211-2462
5148489	211-2439
5149042	211-2439
5149771	211-2439
5185327	211-1283
5186381	211-1283
5193197	211-1283
5193666	211-1283
5194968	211-2462
5195167	211-2462
5197176	211-2536
8921347	211-2551
8922516	211-2462
8929590	211-3313
VALVES - INTAKE	
23501576	211-3345
23502068	211-2552
8920119	211-2552
8929589	211-3345
VALVE COVER GASKETS	
23516322	VS50278
5104018	VS39862
5104019	VS39864
5104081	VS39863
5119457	VS38767
5119458	VS39855
5143405	VS39858
5143406	VS39859
5143407	VS39845
5143407	VS39866
5143496	VS39859
5147506	VS39855
5147994	VS38767
5150327	VS38673
5150328	VS39844
5150329	VS39845
8920271	VS39363
VALVE GUIDES	
23518571	217-4076
5111327	217-3832
5116120	217-4007
5119992	217-3832
5120930	217-3680
5131961	217-4007
5178590	217-3680
VALVE KEEPERS	
5111337	216-5234
5149771	216-5234
8929573	216-5001
VALVE SEATS	
5101101	218-7373
5101102	218-7373
5116361	218-7817
5119898	218-7373
5131096	218-7521
5148490	218-7813
8921502	218-7817
8927920	218-7521
8929126	218-8002
VALVE SPRINGS	
5111339	212-1079
5117561	212-1121
5123329	212-1110
5144019	212-1110
5147347	212-1121
5744019	212-1110
8921111	212-1311
8927857	212-1311
8929415	212-1462

CLEVITE® PERFECT CIRCLE® VICTOR REINZ® GASKETS

Detroit Diesel Part No.	MAHLE Clevite No.
WATER OUTLET GASKETS	
5150361	C25072
8338	C25072

Deutz Tractor Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
213-7750	CB-1053P
CO155060317	CB-1053P
CO156060316	CB-1053P
CRANKSHAFTS	
0292 9338	247-5210
0292 9340	247-5211
0292 9342	247-5212
0415 1011	247-5212
0415 2646	247-5210
0415 2903	247-5211
210 0556	247-5210
213 6993	247-5212
213 8819	247-5211
HEAD GASKETS	
04157654	3742
223-0216	3742
HEAD SETS	
02910048	HS3742
02928994	HS3742
RING SETS	
213-3117	S42892
SLEEVE ASSEMBLIES	
292-8142	226-1885
VALVES-EXHAUST	
213-7300	211-2530
D0155085005	211-2530
D0155085055	211-2530
DO155085005	211-2530
VALVES-INTAKE	
213-3731	211-3355
213-7301	211-3355
VALVE GUIDES	
223-2528	217-3447

FP Diesel Part No.	MAHLE Clevite No.
CAMSHAFT BEARINGS	
FP200780	SH-1382
FP200790	SH-1383
CAMSHAFT BEARING SETS	
FP5111423	SH-476R
CONNECTING ROD BEARINGS	
FP23511129	CB-1596P
FULL SETS	
FP23512689	FS12232B
FP23517624	FS12232B
FP5199792	FS12232B
HEAD GASKETS	
FP212224	3934
HEAD SETS	
FP3013497	HS3934
FP6V6439	HS54151-9
LOWER SETS	
FP-3014458	CS3377
MAIN BEARINGS	
FP4W8091	MB-2735P
FP5192874	MB-1276P
FP8N9023	MB-2734P
OIL PAN SETS	
FP196949	OS21794
O-RINGS	
FP5121256	223-7140
PISTONS	
FP23522026	224-2260
FP3037413	224-2091
FP5149234	224-2485
FP5189054	224-2469
FP-5195931	224-3282
FP5198877	224-2486
FP9L6979	224-1927
FP9L6979	224-1927X
FP9L7737	224-1927
FP9L7737	224-1927X
FP9L77373R	224-2786X
FP9L77373RWP	224-2786
FP9L7737WP	224-1927
FP9L9319	224-1927

FP Diesel Part No.	MAHLE Clevite No.
FP9L9319	224-1927X
REBORE KITS	
FP9L6979	224-2512
FP9L7737	224-2512
FP9L9319	224-2512
RING SETS	
FP23514970	S40653
FP23522955	S41900
FP2W82653R	S41685
FP5149942	S41154
FP5193477	SC80061
FP5198902	S41154
FP7E4729RS	S41542
FP907185	S41840
FPAR11930	S41885
ROD BUSHINGS	
FP25998H	223-3621
FPR800G204	223-3429
SLEEVES	
9N6275	226-4487
FP203170	226-4456
FP23502020	226-4466
FP23502021	226-4466
FP23502022	226-4466
FP23504931	226-4220
FP5113953	226-4466
FP5132803	226-4415
SLEEVE ASSEMBLIES	
FP23505306	226-1633
FP23505309	226-1220
FP23505313	226-1946
FP23511625	226-1946
FP23516300	226-1946
FP23518986	226-1946
FP23522519	226-1946
FP23522947	226-1946
FP5198903	226-1478
FP5199822	226-1946
FPAR11909	226-1571

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FP Diesel Part No.	MAHLE Clevite No.
VALVES - EXHAUST	
FP-23500501	211-2462
FP-5193666	211-1283
FP-5197176	211-2536
FP8922516	211-2462
FP-9L7683	211-2456
VALVES - INTAKE	
FP-9L7682	211-2455
VALVE KEEPERS	
FP-127554	216-5233
VALVE SPRINGS	
FP-146731	212-1201
FP-146732	212-1200
FP-9L9172	212-1289
FP-9N3617	212-1288

Fel-Pro Part No.	MAHLE Clevite No.
FULL SETS	
CS7547	FS1059C
CS7918	FS1162VE
CS7918-1	FS1162VE
CS7918-2	FS1162VE
CS7918-3	FS1162VE
CS7972	FS3114
FS7009S	FS3193S
FS7075C	FS1059C
FS7183PT	FS1634A
FS7183PT	FS1634GH
FS7183S7	FS1634A
FS7183S8	FS1634A
FS7183S9	FS1634A
FS7191S1	FS986A
FS7191S7	FS986A
FS7256C	FS4922
FS7343S2	FS3014
FS7411B	FS1919
FS7411B1	FS1919
FS7458S1	FS12232B
FS7458S2	FS12232C
FS7491S	FS3171
FS7558B	FS1865
FS7559B	FS1850
FS7559B1	FS1850
FS7564C	FS1059C
FS7564C1	FS1059C
FS7564C2	FS1059C
FS7601S	FS1596
FS7602S	FS1709
FS7602S	FS1709Y
FS7602S1	FS1709W
FS7602S2	FS1709X
FS7623S	FS1785
FS7623S1	FS1785X
FS7624B	FS1847
FS7631S	FS1919
FS7641B	FS1857
FS7688C2	FS3029X
FS7752SB	FS3097
FS7850B	FS1876

Fel-Pro Part No.	MAHLE Clevite No.
FS7850B2	FS1876
FS7850B3	FS1876
FS7886B	FS1876
FS7887B	FS1919
FS7888B	FS1857
FS7918PT2	FS1162VE
FS7918PT4	FS1162VE
FS7918SH2	FS1162VE
KS2103	FS1162VE
HEAD GASKETS	
21101B	3837
7009S	3193S
7075C	1059C
7183PT	1634
7183S	1634
7191S	986S
7256C	4922
7256S	4922
7343S	3014
7411B	1919
7439C	986S
7558B	1865
7559B	1850
7564C	1059C
7601S	1596
7602S	1709
7602S1	1709
7623S	1785
7631	1919
7631S	1919
7641B	1857
7641S	1857
7688C	3029
7715CS	3014
7752SB	3097
7850B	1876
7887B	1919
7918PT	1162VC
7918PT1	1162VC
7918SH1	1162VC
8621PT1	3716G
9011B	3742

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Fel-Pro Part No.	MAHLE Clevite No.
HEAD SETS	
8014B	HS4811
8015B	HS4811W
8017B	HS4813
FS8206C	HS85124
HS21079C	HS4805
HS21101B	HS85182
HS21110C	HS85098
HS21111C	HS85100
HS21118C	HS85201
HS21120B1	HS85202
HS4603S	HS12197A
HS7009S	HS3193S
HS7075C	HS1059C
HS7183PT	HS1634X
HS7183S2	HS1634X
HS7191S1	HS986K
HS7256C	HS4922
HS7256S	HS4922
HS7343S2	HS3014
HS7411B	HS1919
HS7458S	HS12232X
HS7458S1	HS12232
HS7474B	HS3934
HS7474SH2	HS3934
HS7491S	HS3171
HS7498B	HS3154
HS7558B	HS1865
HS7559B	HS1850
HS7564C	HS1059C
HS7601S	HS1596
HS7602S	HS1709
HS7603S	HS12197A
HS7603S	HS12197L
HS7603S1	HS12197B
HS7603S3	HS12197A
HS7623S	HS1785
HS7623S1	HS1785X
HS7624B	HS1847
HS7625B	HS18329
HS7631S	HS1919
HS7641B	HS1857

Fel-Pro Part No.	MAHLE Clevite No.
HS7688C	HS3029
HS7752SB	HS3097
HS7850B	HS1876
HS7887B	HS1919
HS7888B	HS1857
HS7912B	HS3216
HS7918PT2	HS1162VE
HS7918PT4	HS1162VE
HS7918SH2	HS1162VE
HS7918SH3	HS1162VE
HS7972S	HS3114
HS8014B	HS4811
HS8015B	HS4811W
HS8017B	HS4813
HS8051B	HS3192
HS8206C	HS85124
HS8327SB	HS3809W
HS8330SB1	HS3809W
HS8493PT1	HS4929F
HS8493PT-1	HS54151-9
HS8722CS	HS3114
HS9011B	HS3742
HS9026B	HS4806
HS9029B	HS4806W
KS2525	HS1634X
SHS7918SH	HS1162VE

Fel-Pro Part No.	MAHLE Clevite No.
LOWER SETS	
CS21100	CS85182
CS21110-1	CS85098
CS21111	CS85100
CS21118-1	CS4805W
CS21118-1	CS85098
CS21120	CS85202
CS21120-1	CS4808W
CS7474	CS3377
CS7582	CS12197Z
CS7583	CS12197X
CS7603-6	CS12197H
CS8330	CS3809
CS8330-1	CS3809
CS8493-1	CS4929C
CS8493-1	CS4929F
CS9026	CS4806
CS9029	CS4806
FS7458S1	CS12232
FS7458S2	CS12232W
FS8206C1	CS85124X
MANIFOLD GASKET SETS	
MS8009B	MS18005
MS8295S	MS18809
MS8583B	MS15029
MS8676B	MS15028
MS8713	MS15118
MS8886B	MS18651S
MS8886B1	MS18651S
MS8941B	MS18628S
MS8952	MS18809
MS8952S	MS18809
MS9023B	MS18645
MS9024B	MS18645
MS9140S	MS12156
MS9140S1	MS12156
MS9175B	MS18610
MS9177S	MS12172
MS9209S	MS17577
MS9209S1	MS6306
MS9209SI	MS6306
MS9559S	MS18628S

Fel-Pro Part No.	MAHLE Clevite No.
MS9610B1	MS16030
MS9864	MS12172
OIL PAN SETS	
KS2575	OS31790
OS10126D	OS20496X
OS10200	OS20456
OS10200D	OS20456
OS10222K	OS30490
OS10323C	OS31790
OS10323D	OS31790
OS12328C1	OS30662
OS12328D	OS30662
OS12705C1	OS30920X
OS12705D1	OS30920X
OS1279AC	OS20928
OS1279AD	OS20928
OS1279C	OS20928
OS1279D	OS20928
OS13705C	OS31584
OS13705D	OS31584
OS13716C	OS30753
OS13716D	OS30753
OS20001	OS87083
OS20021	OS87033
OS20032	OS87033
OS2185K	OS20456
OS30053D	OS20837
OS30236	OS20509
OS30371A	OS21794
OS30376A	OS32498C
OS30376A	OS32498E
OS30447C	OS30920X
OS34004	OS20659
OS34005	OS20659
OS4250C	OS30893
OS4250D	OS30893
OS4941C	OS30427
OS4941D	OS30427
OS5344	OS20837
OS5449C	OS20928
OS5449D	OS20928
OS5456C	OS20657

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Fel-Pro Part No.	MAHLE Clevite No.
OS5456D	OS20657
OS5458	OS20659
OS5458-1	OS20659
OS5655R	OS31415
OS5741D	OS21567
OS5747D	OS20509
OS6286	OS20837
OS6723D	OS31413
OS6766	OS20837
OS915C	OS30899
OS915D	OS30899
TIMING COVER SET	
TCS12769-1	JV814
TCS13891	JV953
TCS4155-1	JV757
TCS41552	JV755
TCS4155-2	JV757
TCS4155-2	JV826
TCS4383	JV826
TCS45112	JV895
TCS5415	JV951
TCS5418	JV1027
TCS5446-1	JV895
TCS6729	JV1027
VALVE COVER GASKETS	
CT6722	VS39675A
VS10127C	VS38005
VS10127D	VS38005
VS10865	VS39855
VS11352R	VS39844
VS11352R	VS39859
VS11358R	VS38673
VS11358R	VS39858
VS12327	VS38269A
VS12327R	VS38269A
VS12829R	VS38287
VS2195C	VS37970
VS2195D	VS37970
VS26004C	VS86125
VS26015	VS39867
VS26031	VS86092
VS26032C	VS86127

Fel-Pro Part No.	MAHLE Clevite No.
VS26032R	VS86127
VS3370	VS28268
VS4253R	VS36054
VS4857C	VS38032
VS4857D	VS38032
VS50019C	VS39697
VS50209R	VS39862
VS50211R	VS39863
VS5420R	VS38083
VS5457R	VS38090
VS5654	VS39684
VS5654R	VS39684
VS5748R	VS38028
VS5748R	VS38063
VS6285R	VS38105
VS6722	VS39675A
VS6956	VS38005
VS917R	VS38219
WATER OUTLET GASKETS	
1273	C24109VF
17625	C24109VF
35041	C24109VF
35062	C24109VF
35213	C24109VF
35218	C24109VF
35299	C24109VF
5980	C25072

Hercules Engine Part No.	MAHLE Clevite No.
CAMSHAFT BEARINGS	
40063A	SH-197
CONNECTING ROD BEARINGS	
288092B	CB-704P
288095AS	CB-704P
43081B	CB-340P
46192B	CB-341P
46193B	CB-341P
47092B	CB-341P
47104B	CB-341P
613561A	CB-340P
HEAD GASKETS	
40226C	3014
40237C	3014
42236C	3014
44227C	3014
61005C	3014
MAIN BEARINGS	
175639A	MB-2185P
285111B	MB-2092P
285125B	MB-2185P
285129B	MB-2185P
288104B	MB-2185P
288132AS	MB-2092P
288136AS	MB-2185P
612799A	MB-2092P
612955A	MB-2185P
MANIFOLD GASKET SETS	
40723B	MS18809
43814B	MS18809
45805B	MS18809
VALVES-EXHAUST	
47017B	211-1281
47028B	211-1281
47031B	211-1281
VALVES-INTAKE	
255010B	211-2062
27140A	211-1568
VALVE COVER GASKETS	
41005B	VS37970
VALVE GUIDES	
28214A	217-3568
29288A	217-3568
VALVE KEEPERS	
15011A	216-5080
46011A	216-5123
76011A	216-5080
77019A	216-5144
VALVE SPRINGS	
125011B	212-1103
125012B	212-1104
27008A	212-1124
38032A	212-1124
44021A	212-1057

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Massey-Ferguson Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
1000707M91	CB-459P
1001189M92	CB-405P
1005864M91	CB-596P
1017753M91	CB-362P
1754705M91	CB-596P
830486M91	CB-362P
830922M91	CB-596P
840540M91	CB-459P
841024M91	CB-596P
FULL SETS	
830689M91	FS3097
830766M91	FS3171
830766M92	FS3171
840174M91	FS1847
840205M91	FS1634A
840414M91	FS1850
HEAD GASKETS	
1501437M2	1059C
1750018M1	3097
35222A	1634
761719M1	986S
HEAD SETS	
830690M91	HS3097
830767M91	HS3171
830767M92	HS3171
830913M91	HS3192
840023M1	HS986K
840024M91	HS1634X
840677M91	HS1847
841292M91	HS3193S
841344M91	HS3216
LOWER SETS	
4223940V91	CS85124X

Massey-Ferguson Part No.	MAHLE Clevite No.
MAIN BEARINGS	
1750331M1	MB-1637P
1751604M91	MB-1637P
731012M1	MB-2302AL
731013M1	MB-2186AL
731014M1	MB-2186AL
731015M1	MB-2187AL
732430M1	MB-2187AL
732431M1	MB-2186AL
732432M1	MB-2186AL
733040M1	MB-2302AL
73304M1	MB-2302AL
735103M1	MB-2221AL
735104M1	MB-2221AL
735105M1	MB-2222AL
735106M1	MB-2222AL
MAIN BEARING SETS	
731686M91	MS-773AL
732630M1	MS-772AL
733578M91	MS-773AL
735168M91	MS-830AL
736930M1	MS-757AL
830485M91	MS-202P
830516M91	MS-202P
830633M91	MS-260P
MANIFOLD GASKET SETS	
1009568M1	MS15028
1501854M91	MS15029
1750045M1	MS18645
32673A	MS15028
35642A	MS18651S
760693M1	MS18651S
761705M1	MS12172
OIL PAN SETS	
1500077M1	OS20657
1750024M1	OS20659
830688M91	OS20659
840026M91	OS20509
840225M91	OS21567

Massey-Ferguson Part No.	MAHLE Clevite No.
PISTONS	
734459M91	224-1643
734467M91	224-1897
735187M91	224-1904
738241M91	224-1649
738871M91	224-1649
RING SETS	
1500720M91	S4782
1750318M91	S51818
731703M91	S50367
733145M91	S50367
733146M91	S50367
734463M91	S50593
734470M91	S50593
735335M91	S50593
735648M91	S42300
740495M91	S41092
830492M91	S4230
830653M91	S4799
830772M91	S40593
830840M91	S4230
830930M92	S40274
830931M92	S40274
835844M91	S4323
835861 M91	S40186
8360927M91	S4799
836097M91	S4230
836101M91	S4588
836101M91	S5588
836103M91	S40593
836103M91	S50593
836128M91	S40274
840055M91	S5588
840386M92	S5782
840430M91	S4588
840488 M91	S4799
840493M91	S51818
840928M91	S4560
841521M92	S40593

Massey-Ferguson Part No.	MAHLE Clevite No.
ROD BUSHINGS	
1500022M1	223-3505
760196M1	223-3517
760916M91	223-3349
840021M91	223-3516
840708M91	223-3349
840710M91	223-3517
841021M91	223-3516
SLEEVES	
732638M1	226-4225
SLEEVE ASSEMBLIES	
1752401M91	226-1313
733148M91	226-1454
835858M91	226-1508
THRUST WASHER SETS	
1750341M1	TW-424S
733714M1	TW-121S
734616M91	TW-130S
735114M1	TW-121S
735115M1	TW-121S
VALVES-EXHAUST	
1001525M1	211-1187
1027653M1	211-2199
1501541M1	211-1591
732812M1	211-2185
830760M91	211-1777
VALVES-INTAKE	
1501540M2	211-1226
1501846M2	211-1094
1754826M1	211-1778
1754900M1	211-1778
732811MI	211-2174
830761M91	211-1776
830934M91	211-1778
VALVE COVER GASKETS	
15338A	VS38083
1750002M1	VS38090
35214A	VS38063
737561M1	VS39876

Massey-Ferguson Part No.	MAHLE Clevite No.
VALVE GUIDES	
10A26467	217-3973
17239A	217-3620
1750056M1	217-3717
1750069M1	217-3717
732445M1	217-3976
736296M91	217-3270
760181M1	217-3701
761648M1	217-3678
830390M1	217-3717
830490M91	217-3717
830762M91	217-3833
830935M91	217-3673
840211M91	217-3620
840522M91	217-3701
841036M91	217-3673
VALVE KEEPERS	
1001528M1	216-5234
1005452M1	216-5117
1500122M1	216-5147
18291A	216-5147
18687A	216-5080
211180A	216-5159
736453M1	216-5191
760039M1	216-5146
840753M91	216-5147
840759M91	216-5146
840874M91	216-5147
840915M1	216-5117
841370M91	216-5234
841375M91	216-5117

Massey-Ferguson Part No.	MAHLE Clevite No.
VALVE SPRINGS	
1001526M1	212-1032
1010268M1	212-1098
1500064M1	212-1034
15500	212-1025
211166A	212-1021
21166A	212-1021
21176A	212-1011
33855A	212-1023
731153M1	212-1216
731154M1	212-1217
840754M91	212-1025
840755M91	212-1021
841162M91	212-1021
841374M91	212-1098
A600I338	212-1023

Onan Part No.	MAHLE Clevite No.
VALVE KEEPERS	
110A639	216-5117

Perkins Engine Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
35000A	CB-79P
35005A	CB-78P
85042	CB-667AL
HEAD GASKETS	
36812532	3837
36812542	3837
3681542	3837
HEAD SETS	
36812126	HS85124
53847	HS4805
53851	HS4805
55288	HS4806
57931	HS85100
58012	HS85098
68242	HS4811W
68246	HS4942A
68248	HS85202
68249	HS85202
68250	HS85202
68251	HS85202
69005	HS4811Y
69042	HS4813
82886	HS85201
82889	HS85182
83381	HS4806
83385	HS4805
83416	HS4806W
85790	HS4812
85790	HS4813
85838	HS4805
86971	HS4811
88974	HS4811
88988	HS4812
88988	HS4813
92425	HS4806W
92446	HS4813
94429	HS85202
U5LT0007	HS85202
U5LT0008	HS85202
U5LT0015	HS85202
U5LT0017	HS4942B

Perkins Engine Part No.	MAHLE Clevite No.
U5LT0018	HS4942
U5LT0033	HS4942
U5LT0034	HS4942A
U5LT0052	HS85202
U5LT0059	HS85202
U5LT0065	HS85202
U5LT1004	HS85202
LOWER SETS	
68011	CS85202
68013	CS85202
68032	CS85202
68218	CS4942
68219	CS4942
81879	CS85182
82887	CS85098
82911	CS4805W
83382	CS4806
83400	CS85098
83412	CS4806
83423	CS4806
85001	CS4806
85002	CS4806
85004	CS4806
85044	CS4808W
86874	CS4806
86875	CS4806
92455	CS4806
94477	CS4808W
94481	CS4808W
94482	CS4808W
U5LB0016	CS85202
U5LB0022	CS4942A
U5LB0023	CS4942
U5LB0113	CS4806
U5LB1115	CS85100
U5LT0004	CS85202
U5LT0005	CS85202
U5LT0016	CS85202
MAIN BEARINGS	
0050181	MB-2302AL
0050196	MB-2186AL
0050233	MB-2186AL

Perkins Engine Part No.	MAHLE Clevite No.
0050234	MB-2187AL
0050340	MB-2186AL
0050341	MB-2186AL
0050342	MB-2302AL
0050343	MB-2187AL
159614A	MB-2221AL
159617A	MB-2222AL
31116361	MB-2222AL
31116371	MB-2222AL
31121221	MB-2187AL
31121231	MB-2187AL
31122311	MB-2186AL
31122321	MB-2186AL
31122331	MB-2186AL
31122341	MB-2186AL
31123251	MB-2302AL
31123261	MB-2302AL
31123271	MB-2302AL
31125181	MB-2302AL
31126271	MB-2221AL
31126281	MB-2221AL
31126291	MB-2222AL
31126301	MB-2222AL
31126361	MB-2222AL
31126371	MB-2222AL
31126381	MB-2221AL
31126391	MB-2221AL
31126541	MB-2186AL
31126551	MB-2186AL
31127291	MB-2187AL
MAIN BEARING SETS	
56225	MS-773AL
58703	MS-772AL
59617	MS-773AL
81558	MS-830AL
82168	MS-757AL
85010	MS-757AL
OIL PAN SETS	
36816702	OS87083
53587	OS87033

Perkins Engine Part No.	MAHLE Clevite No.
PISTONS	
31354042	224-1904
3135404C	224-1904
3135412C	224-1897
31354321	224-1643
31354335	224-1649
313582111	224-1897
313582112	224-1897
81874	224-1643
82878	224-1904
86720	224-1649
86740	224-1649
RING SETS	
82154	S41121
83388	S42300
84957	S50593
86773	S41092
SLEEVE ASSEMBLIES	
31358905	226-1715
59636	226-1454
92508	226-1715
U5MK0034	226-1515

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Perkins Engine Part No.	MAHLE Clevite No.
THRUST WASHER SETS	
0920849	TW-119S
0920940	TW-119S
0921118	TW-115S
0921120	TW-115S
15285A	TW-424S
159322A	TW-121S
159323A	TW-121S
160126A	TW-121S
160127A	TW-121S
31137175	TW-121S
31137181	TW-121S
31137191	TW-130S
31137201	TW-130S
31137211	TW-119S
31137221	TW-119S
31137231	TW-121S
31137241	TW-121S
31137311	TW-316S
31137321	TW-316S
31137551	TW-121S
31137561	TW-121S
TIMING COVER SETS	
2414324	JV1214
VALVES-EXHAUST	
0910061	211-3041
31421385	211-3038
31431104	211-2107
31431271	211-2185
31431382	211-3038
910002	211-2185
VALVES-INTAKE	
0910060	211-3040
31431103	211-2106
31431261	211-2174
31431281	211-2174
31431311	211-2510
31431315	211-2510
31431641	211-2106
31431871	211-2510

Perkins Engine Part No.	MAHLE Clevite No.
VALVE COVER GASKETS	
0490491	VS39867
0490704	VS39870
36811114	VS86127
36811117	VS39876
36811122	VS86127
36811123	VS86127
36811132	VS86127
36811133	VS86127
36811426	VS39875
VALVE GUIDES	
3313E001	217-3449
33261723	217-3976
33261732	217-3271
33261741	217-3449
33261752	217-3270
33431503	217-3437
3343J002	217-3271
796122R1	217-3270
VALVE KEEPERS	
33173108	216-5191
VALVE SEATS	
33152139	218-7815
33152512	218-7814
VALVE SPRINGS	
31745121	212-1397
780006	212-1217
780007	212-1216

Sealed Power Part No.	MAHLE Clevite No.
CAMSHAFT BEARING SETS	
1010M	SH-23S
1011M	SH-37S
1086DRI	SH-476R
1086WA	SH-477W
1087DR	SH-468
1088DR	SH-525
1088M	SH-190S
1090M	SH-198S
1093M	SH-191S
1137M	SH-330S
1142M	SH-322S
1158M	SH-56S
1212M	SH-700S
1213M	SH-701S
1226M	SH-562S
1275M	SH-614S
1438M	SH-1245S
1449m	SH-1382S
1454M	SH-874S
CONNECTING ROD BEARINGS	
1085CPA	CB-1596P
1205SI	CB-465P
1420CP	CB-340P
1435SB	CB-446P
1480CP	CB-1053P
1545AP	CB-592P
1660CP	CB-345P
1665SB	CB-405P
1670SB	CB-362P
1780AP	CB-448P
1865CP	CB-446P
1880CP	CB-451P
1995CP	CB-466P
1995CPA	CB-465P
2015CPA	CB-560AL
2185CP	CB-594P
2215CPA	CB-703P
2375CP	CB-606G
2400P	CB-586P
2405CP	CB-555P
2550P	CB-701P

Sealed Power Part No.	MAHLE Clevite No.
2590CP	CB-596P
2610CPA	CB-1265P
2615CPA	CB-674P
2750AP	CB-591P
2920CP	CB-618P
2925CP	CB-616P
3160CP	CB-704P
3520CP	CB-983M
3535P	CB-972P
3590CPA	CB-1073P
3645CP	CB-979M
3675AP	CB-1215P
3705CP10	CB-1241P-10
3715CP	CB-703P
3880CP	CB-1239P
4-3135CP	CB-667AL
4-4805P	CB-1629P
6-3135CP	CB-667AL
6-3135CPA	CB-1209AL
6-9185CP	CB-60G
6-9185SB	CB-60G
9185CP	CB-60G
9185SB	CB-60G
9320CP	CB-78P
9320CPA	CB-79P
9560CPA	CB-90P
9620CPA	CB-341P
9885CP	CB-278P
9885CPA	CB-279P
FULL SETS	
260-1004	FS1162VE
260-1255	FS12232B
HEAD GASKETS	
FHG60089	3716G

VICTOR REINZ GASKETS PERFECT CIRCLE® CLEVITE®

Sealed Power Part No.	MAHLE Clevite No.
MAIN BEARINGS	
1086CP	MB-1276P
2406CPA	MB-2687P
2611CPA	MB-1897P
3536AP	MB-2734P
3536P	MB-2734P
3537APA	MB-2735P
3538AP	MB-2733P
3538P	MB-2733P
MAIN BEARING SETS	
4004M10	MS-176P-10
4005M10	MS-176P-10
4015M	MS-202P
4092M	MS-517P
415M10	MS-523P-10
4176M	MS-900P
4247M	MS-889P
4352M	MS-757AL
4353M	MS-830AL
4395M	MS-1681P
4415M	MS-772AL
4416M	MS-773AL
4671M	MS-676P
485M	MS-107P
485M10	MS-107P-10
5030M	MS-1265P
5034M	MS-1421P
5063M10	MS-566P-10
5066M	MS-506P
5079M	MS-885P
5089M	MS-1420P
5101M	MS-1422P
5102M	MS-1423P
5142M	MS-1627P
6632M10	MS-176P-10
6633M10	MS-194P-10
6634M	MS-260P
7053M	MS-1548AL
900M	MS-406P
901M	MS-405P
902M	MS-406P
903M	MS-405P

Sealed Power Part No.	MAHLE Clevite No.
905M	MS-349P
PISTONS	
1000P	224-2751
1080P	224-3287
1631PX	224-2751
1658PX	224-2831
1717P	224-2827
1941PX	224-1397
1982PX	224-3218
200NP	224-2831
2175P	224-2827
2186P	224-1643
2193PX	224-1649
2201P	224-1611
2201PA	224-1611
2302P	224-2831
2306P	224-2827
2314P	224-3194
2401PN	224-1927
2401PN	224-1927X
2422N	224-2091
2439P	224-1897
244NP	224-1397
2487P	224-1904
2523P	224-3219
2541P	224-3229
37P	224-2751
704P	224-2831
8250P	224-1397
C1452P	224-2469
C1608P	224-2469
C2025P	224-3282
C2089P	224-2485
C2191P	224-2486
C2552PA	224-2260
C2656P	224-2260
L2101F	224-2751
L2125F	224-1397
L2318F	224-2831
LC244P	224-1397

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Sealed Power Part No.	MAHLE Clevite No.
RING SETS	
10222KX	S40367
10304KX	S40240
10304KX030	S40280.030
10366X	S51439
10449KX	S41685
19113KC	S40246
19113KC	S4999
19113X	S50246
19123KC	S4588
19123X	S5588
19161KC	S4544
19203X	5985
19323KC	S40943
19323X	S50943
19324KC	S40943
19324X	S50943
19328KC	S40653
19335KC	S40949
19342KC	S42300
19375KC	S41407
223-539	S-539
5002KX	S41812
5032KX	S4324
5036KX	S4799
5037KX	S4782
5037X	S5782
5051KX	S4601
5051X	S5601
5136KX	S40970
5138KX	S40095
5194KX	S4764
5194KX	S4764A
5194X	S4764
5226KX	S4544
5251C	SC80061
5336C	SC80061
5444KX	S4535
5446KX	S4230
5451KX	S4764
5504KX	S4535
5521KX	S40074

Sealed Power Part No.	MAHLE Clevite No.
5597KX	S40186
5597KX	S40933
5600KX	S40075
5600KX	S40126
5677KX	S40342
5679KX	S41810
5691X	5985
5704KX	S40274
5715KX	SC3632
5716KX	SC3632
5734KX	S40246
5809KX	S4835
5824KX	S40240
5858KX	S40381
5911KX	S41813
5944KX	S40593
5944X	S50593
5953KX	S41885
617KX	S41810
617X	S41810
617X	S4330
617X	S5023
619KX	S41810
645KX	S40016
670KX	S40246
670KX	S4999
670X	S50246
7079X	S8932
9130KX	S40648
9132KX	S40367
9132X	S50367
914KX	S4324
918KX	S4583
9194KX	S42300
919KX	S4560
920KX	S4330
920X	S5330
9239KX	S40653
9240C	S41154
926KX	S4588
926KX	S50943
926X	S5588
9308KX	S40943

Sealed Power Part No.	MAHLE Clevite No.
9309KX	S40943
9323KX	S40949
9323X	S40949
9323X	S50949
9325KX	S4799
9325X	S51818
948X	S41735
948X	S51818
9518KX	S41407
9544KX	S41121
9601KX	S40933
9603KX	S41092
9608KX	S41081
9646KX	S42300
964KX	S4323
964X	S5323
965KX	S4662
965X	S5662
968X	S5578
9739KX	S41128
974KX	S40127
974KX	S80196
9796KX	S42707
9823KX	S41885
9826KX	S42892
9884KX	SC3632
9986KX	S4764A
E107KC	433
E107X	533
E108KC	439
E108X	539
E-113KC	S40246
E-113KC	S4999
E113X	S50246
E-123KC	S4588
E-123X	S5588
E-161KC	S4544
E203X	5985
E-323KC	S40943
E-324KC	S40943
E-328KC	S40653
E-335KC	S40949
E-341KC	S40342

Sealed Power Part No.	MAHLE Clevite No.
E-342KC	S42300
E-375KC	S41407
E-479K	S41883
E-830KC	S42300
N/A	S41100
W10304KX	S40240
W5002KX	S41812
W5032KX	S4324
W5036KX	S4799
W5037KX	S4782
W5037X	S5782
W5051KX	S4601
W5051X	S5601
W5136KX	S40970
W5138KX	S40095
W5141KX	S4794
W5141X	S5794
W5194KX	S4764
W5226KX	S4544
W5444KX	S4535
W5446KX	S4230
W5504KX	S4535
W5521KX	S40074
W5597KX	S40186
W5600KX	S40126
W5677KX	S40342
W5704KX	S40274
W5809KX	S4835
W5819KX	S40533CP
W5819KX	S41840
W5858KX	S40381
W589KX	S439
W589X	S-539
W5911KX	S41813
W617KX	S41810
W617X	S4330
W617X	S5023
W619KX	S41810
W645KX	S40016
W670KX	S4999
W7079	S8932
W914KX	S4324
W918KX	S4583

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Sealed Power Part No.	MAHLE Clevite No.
W9194KX	S42300
W919KX	S4560
W920KX	S4330
W920X	S5330
W926KX	S4588
W926X	S5588
W9308KX	S40943
W9309KX	S40943
W9323KX	S40949
W9323X	S50949
W9325KX	S4799
W9544KX	S41121
W9601KX	S40933
W9603KX	S41092
W9608KX	S41081
W9646KX	S42300
W9648KC	S42300
W964KX	S4323
W964X	S5323
W965KX	S4662
W965X	S5662
W968X	S5578
W9739KX	S41128
W974KX	S40127
WE-108KC	S439
WE-108X	S-539
WE-113KC	S40246
WE-113KC	S4999
WE-113X	S50246
WE-123KC	S4588
WE-123X	S5588
WE-154KC	S4794
WE-154X	S5794
WE-161KC	S4544
WE-217K	S40533CP
WE-217K	S41840
WE-217KC	S40533CP
WE-217KC	S41840
WE-323KC	S40943
WE-323X	S50943
WE-324KC	S40943
WE-335KC	S40949
WE-342KC	S42300

Sealed Power Part No.	MAHLE Clevite No.
WE-479K	S41883
ROD BUSHINGS	
1214VA	223-3503
1394	223-3471
1664V	223-3505
1669Y20	223-3517
1884Y20	223-3514
2019Y20	223-3594
2134Y	223-3484
2409Y	223-3462
2619Y20	223-3622
3139Y15	223-3640
3539Y20	223-3569
8649V	223-3349
8649V20	223-3605
9324X	223-3429
SLEEVES	
SL157MH	226-4220
SL181MH	226-4466
SO1762	226-4313
SO1982	226-4525
SO2191H	226-4415
SO2422G	226-4456
SO2523	226-4499

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Sealed Power Part No.	MAHLE Clevite No.
SLEEVE ASSEMBLIES	
SL1608H	226-1220
SL1762	226-1313
SL1881	226-1312
SL1968H	226-1220
SL1982	226-1611
SL2038	226-1283
SL2089H	226-1633
SL2151H	226-1220
SL2154H	226-1633
SL2186	226-1447
SL2192H	226-1478
SL2193	226-1453
SL2314	226-1313
SL2419	226-1493
SL2422G	226-1571
SL2439	226-1515
SL2457	226-1546
SL2487	226-1516
SL2488	226-1508
SL2523	226-1521
SL2527	226-1549
SL2552HA	226-1946
SL2656H	226-1946
SL2691	226-1636
THRUST WASHER SETS	
1086AF	TW-411S
1211BFA	TW-143S
1671FFA	TW-424S
2406AF	TW-402S
2581BFA	TW-115S
2783BF	TW-119S
2783BFA	TW-119S
3137BF	TW-121S
3137BFA	TW-316S
9811BF	TW-424S
9811BFA	TW-424S

Sealed Power Part No.	MAHLE Clevite No.
VALVES - EXHAUST	
V-1004	211-1195
V1017	211-1141
V1018	211-1095
V1054	211-1199
V1056	211-1201
V1101	211-1441
V1101A	211-1441
V1262	211-1283
V1326X	211-1375
V-1351	211-1591
V1372	211-2462
V1401	211-2462
V1421	211-2075
V1422	211-1313
V1471	211-1521
V1507X	211-1777
V1553	211-1863
V1570	211-1283
V1592X	211-1073
V1638X	211-1095
V1688	211-2053
V1700	211-2107
V1813	211-2462
V1854	211-2035
V1947X	211-2111
V2092	211-2456
V2149	211-2185
V2236	211-2536
V2274	211-1701
V3930	211-2536
V3931	211-1701
V4088X	211-2199
V-4093	211-1701
V4096	211-1871
V4108	211-2053
V748	211-1281
V800	211-1589
V816	211-1187
V954	211-1053
V959	211-1073
X1025	211-1187

Sealed Power Part No.	MAHLE Clevite No.
X1067	211-1195
X1157	211-1313
X1168	211-1053
X1169	211-1281
X1228S	211-1375
X1628	211-1283
X264	211-1279
X3216	211-2462
X3239	211-1701
X3276	211-1863
X3372	211-2107
X4046	211-2185
X4101	211-1871
X4105	211-1199
X4107	211-2187
X4116	211-2035
X4167S	211-1777
X559	211-1589
X567	211-1095
X681	211-1591
X851S	211-1073
X876	211-1281
X965	211-1141

Sealed Power Part No.	MAHLE Clevite No.
VALVES - INTAKE	
V-1005	211-1094
V1019	211-1072
V1051	211-1090
V1055	211-1128
V1057	211-1130
V-1086	211-1226
V1102	211-1206
V1158	211-1206
V1203	211-1058
V1310X	211-1094
V1355	211-1226
V137	211-1568
V-1434	211-1700
V1461	211-2062
V1508	211-1776
V1555	211-1778
V1639	211-1072
V1687	211-2050
V1689	211-2050
V1701	211-2106
V1825X	211-1226
V1855	211-2034
V1948	211-2112
V2093	211-2455
V2150	211-2174
V3238AL	211-1700
V3371	211-2106
V3993	211-2510
V4047	211-2174
V4106	211-1128
V4117	211-2034
V4148	211-2062
V4216	211-2050
V429	211-1568
V571	211-1588
V801	211-1588
V919	211-1072

Sealed Power Part No.	MAHLE Clevite No.
VALVE GUIDES	
51023T	217-3680
51025	217-3338
51025X	217-3337
51568	217-3568
51678	217-3678
51832T	217-3832
51882	217-4007
51900	217-3900
55018T	217-3907
55021	217-3182
5835T	217-3717
5875	217-3914
5913	217-3678
5914	217-3515
5915	217-3458
5916	217-3619
5918	217-3620
5940	217-3673
5944	217-3701
VG296	217-3458
VG327	217-3515
VG336	217-3515
VG376	217-3568
VG418	217-3620
VG-419	217-3337
VG-420	217-3338
VG437	217-3619
VG453	217-3891
VG456	217-3697
VG457	217-3673
VG461	217-3678
VG463	217-3680
VG474	217-3717
VG483	217-3701
VG-5005T	217-3230
VG-5035	217-3182
VG543	217-3832
VG569	217-3833
VG588	217-3673
VG612	217-3900
VG615	217-3693

Sealed Power Part No.	MAHLE Clevite No.
VG-619	217-3270
VG620	217-3271
VG626	217-3914
VG638	217-3620
VG647	217-3946
VG-650	217-4007
VG664	217-3973
VG666	217-3210
VG681	217-3907
VG696	217-3379
VG784	217-3306
VG858	217-3268
VG860	217-3976
VG930	217-3568
VALVE KEEPERS	
MV53	216-5147
RU117	216-5117
RU117H	216-5117
RU123	216-5123
RU142	216-5233
RU144	216-5144
RU144H	216-5117
RU146	216-5146
RU147	216-5147
RU149	216-5234
RU159	216-5159
RU165	216-5117
RU177	216-5177
RU180	216-5180
RU183	216-5183
RU191	216-5191
RU80	216-5080
RU81	216-5081
V1746K	216-5180
V1981K	216-5177
VK-115	216-5117
VK115R	216-5118
VK123	216-5123
VK136	216-5233
VK138	216-5144
VK138R	216-5145
VK140	216-5146

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Sealed Power Part No.	MAHLE Clevite No.
VK142	216-5147
VK144	216-5234
VK-144R	216-5150
VK172	216-5146
VK-174	216-5177
VK195	216-5183
VK196	216-5180
VK223	216-5191
VK27	216-5159
VK-63	216-5081
VK-66	216-5080
VALVE SEATS	
24510001	218-7323
2451103	218-7817
24511251	218-7349
2451160	218-7521
24511871	218-7361
24512501	218-7369
2451312	218-7389
24513121	218-7389
245-1348E-1N	218-7405
245-13754	218-7411
24513755	218-7417
245-1375-8	218-7379
245-1437-10	218-7419
245-14373	218-7439
245-1500-0	218-7464
245-15001	218-7463
245-15621	218-7493
24515626	218-7471
245-16251	218-7535
245-16252	218-7537
24516253	218-7501
245-1648	218-7807
24516877	218-7545
245-169	218-7815
245-1690-E1	218-7815
245-17501	218-7619
24517504	218-7587
245-18121	218-7651
24518125	218-7623
24518500	218-7651

Sealed Power Part No.	MAHLE Clevite No.
245-2000-6	218-7703
245-2018-E1	218-7814
24521871	218-3786
24521871C	218-3786
2457000	218-7373
2458943	218-7808
A7105G	218-7537
A7106B	218-7471
A7108G	218-7587
A7118S	218-7703
A7136	218-7623
A7138G	218-7545
C6101B	218-7419
C6101C	218-7439
C6105	218-7535
C6105G	218-7537
C6105R	218-7535
C6106	218-7493
C6108G	218-7545
C6109G	218-7553
C6111A	218-7411
C6112G	218-7619
C6113	218-7463
C6118S	218-7703
C6136A	218-7623
C6137G	218-7651
C6138G	218-7545
C6139	218-7651
C682	218-7323
C694X	218-7417
C695	218-7349
C696	218-7361
C698	218-7389
C699	218-7379
CA104G	218-7501
CA105	218-7535
CA106	218-7493
CA111A	218-7411
CA113	218-7463

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Sealed Power Part No.	MAHLE Clevite No.
VALVE SPRINGS	
VS1429	212-1121
VS-1431	212-1396
VS-1432	212-1397
VS1437	212-1200
VS-304	212-1011
VS310	212-1021
VS328	212-1019
VS356	212-1025
VS358	212-1023
VS400	212-1027
VS402	212-1034
VS465	212-1057
VS468	212-1032
VS-506	212-1072
VS-510	212-1071
VS525	212-1079
VS556	212-1067
VS565	212-1104
VS566	212-1103
VS583	212-1098
VS590	212-1110
VS615	212-1079
VS622	212-1124
VS731	212-1289
VS732	212-1288
VS740	212-1121
VS782	212-1216
VS783	212-1217
VS817	212-1201

Waukesha Part No.	MAHLE Clevite No.
CAMSHAFT BEARINGS	
92744	SH-614S
CONNECTING ROD BEARINGS	
102700A	CB-703P
160110	CB-446P
181010	CB-446P
1810102	CB-446P
187010	CB-597P
190110	CB-451P
1901102	CB-451P
190110A	CB-451P
191010A	CB-451P
191010A2	CB-451P
191020A	CB-703P
19120A	CB-703P
191210	CB-450P
191210A	CB-703P
191210J	CB-703P
192010	CB-450P
1920102	CB-450P
1MS217	CB-446P
200010	CB-597P
200010A	CB-597P
200010B	CB-597P
220010	CB-1239P
7AS217	CB-450P
910101	CB-451P
910102	CB-451P
910103	CB-446P
910104	CB-446P
910105	CB-446P
910145	CB-451P
910151	CB-703P
910156	CB-597P
910158	CB-597P
910159	CB-597P
910176	CB-703P
910190	CB-597P
910214	CB-597P
91080	CB-446P
91097	CB-450P
IKS217A	CB-451P

Waukesha Part No.	MAHLE Clevite No.
FULL SETS	
106116AS	FS1857
1KS499	FS1857
1KS499C	FS1857
1LS499	FS1876
1LS499C	FS1876
900-204	FS1876
900-248	FS1857
HEAD GASKETS	
180000A-B	1876
180000D	1876
180100	1876
180100B	1876
181300B	1876
181700	1876
185000D	1919
186400	1919
186500H	1919
190000F	1857
1K181A	1857
1K181D	1857
1L181A	1876
1L181B	1876
68000F	1342G
HEAD SETS	
158850A	CH3809
1ES181	HS1876
1KSA181A	HS1857
1KSB181A	HS1857
1LSA181	HS1876
1LSB181	HS1876
979-102	HS1876
979-128	HS1857
979-81	HS1876

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Waukesha Part No.	MAHLE Clevite No.
MAIN BEARINGS	
103653A	MB-2610P
1036571A	MB-2610P-20
156406A	MB-2225P
180122	MB-1629P
180122	MB-2610P
181025	MB-1786P
181122	MB-1629P
181122A	MB-2610P
181218A	MB-1786P
181218A2	MB-1786P
191118A	MB-1644P
191118B	MB-1644P
191122	MB-1643P
1911222	MB-1643P
221022D	MB-2225P
221022E	MB-2225P
MAIN BEARING SETS	
915157	MS-405P
918114	MS-405P
918119	MS-406P
918157	MS-405P
918158	MS-349P
918159	MS-349P
918161	MS-406P
918206	MS-406P
918256	MS-676P
918302	MS-676P
OIL PAN GASKETS	
185178	OS31415
1K166	OS31413

Waukesha Part No.	MAHLE Clevite No.
OIL PAN SETS	
185178	OS31415
190078D	OS31413
190078E	OS31413
1K166	OS31413
1L166	OS30662
1M166	OS31415
9783	OS30427
B166	OS20928
B177A	OS20928
BD191	OS30427
BD192	OS30427
O-RINGS	
208464	223-7162
PISTONS	
183004	224-3218
223604N	224-3219
RING SETS	
905428	S40016
905435	S4535
ROD BUSHINGS	
1K230	223-3514
SLEEVES	
220030	226-4525
220230	226-4525
221230P	226-4499
SLEEVE ASSEMBLIES	
103383A	226-1611
104384A	226-1611
163706AS	226-1521
164908AS	226-1549
165527AS	226-1521
165528AS	226-1549
303038300	226-1549
303043932	226-1521
303340600	226-1549
930223	226-1283
930226	226-1283
930241	226-1283
930246	226-1283
930277	226-1283

Waukesha Part No.	MAHLE Clevite No.
930496	226-1454
93218	226-1283
932186	226-1787
932188	226-1549
932189	226-1521
932192	226-1611
93232	226-1611
93276	226-1283
93278	226-1454
VALVES-EXHAUST	
180136	211-1201
190136C	211-1199
190336C	211-1521
222253	211-2053
223336	211-2187
936023	211-1201
936191	211-1201
936193	211-1199
VALVES-INTAKE	
180036A	211-1130
190036	211-1128
190036A	211-1128
222436	211-2050
223236	211-2176
936022	211-1130
936122	211-1128
936205	211-1130
936218	211-1128
VALVE COVER GASKETS	
101761AA	VS38269A
101775AA	VS39684
101775AM	VS39684
164053	VS39684
180040	VS38269A
185040A	VS39684
190040	VS39675A
1K192	VS39675A
1M192	VS39684

Waukesha Part No.	MAHLE Clevite No.
VALVE GUIDES	
180009E	217-3693
VALVE KEEPERS	
163235	216-5144
6466A	216-5080
B6466A	216-5080
B9792	216-5123
VALVE SPRINGS	
190035	212-1027

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White Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
102700A	CB-703P
10A11339	CB-448P
10A20690	CB-701P
10B11339	CB-448P
10B420	CB-594P
10R1038	CB-701P
10R203	CB-592P
10R293	CB-701P
10R406	CB-591P
11A8820	CB-594P
11A8828	CB-592P
11A9210	CB-592P
11A9250	CB-448P
168916A	CB-703P
181010	CB-446P
191010A	CB-451P
191020A	CB-703P
192010	CB-450P
192010J	CB-703P
1MS217	CB-446P
207100278	CB-1241P-10
303134857	CB-703P
303134875	CB-703P
613561A	CB-340P
7AS217	CB-450P
CE5379	CB-592P
CE5379	CB-592P
HAS217	CB-446P
IKAS217	CB-451P
IKS217A	CB-451P
IMS217	CB-446P
KS217P	CB-451P
MS217	CB-446P
FULL SETS	
10R884	FS3114
1ES499	FS1876
ES499	FS1876
IES499	FS1876
IKS499C	FS1857
IMS499C	FS1919

White Part No.	MAHLE Clevite No.
HEAD GASKETS	
1K181D	1857
1L181	1876
1L181B	1876
1M181C	1919
2BN007	3014
326035	3014
61005C	3014
81105C	3014
K181D	1857
L181	1876
L181B	1876
HEAD SETS	
102131ASA	HS1919
102133ASA	HS1919
103454AS	HS1876
103455AS	HS1876
10R823	HS3114
10R823A	HS3114
161131AS	HS1919
161237AS	HS1919
1OR25	HS18329
31-277 2267	HS4942
31-277-0677	HS4942
LOWER SETS	
30-336 6669	CS4942
31-277 2277	CS4942A
MAIN BEARINGS	
103653A	MB-1629P
103654A	MB-1643P
10A23148	MB-2496P
10B11775	MB-2032P
10R1182	MB-2496P
11A5980	MB-2496P
11A6870	MB-2032P
156406A	MB-2225P
157941A	MB-1644P
159614A	MB-2221AL
159617A	MB-2222AL
175639A	MB-2185P
1KS101A	MB-1643P
1KSA105A	MB-1644P

CLEVITE® PC PERFECT CIRCLE® VICTOR REINZ® GASKETS

White Part No.	MAHLE Clevite No.
1MASA105A	MB-1786P
1MS101A	MB-2610P
612799A	MB-2092P
612955A	MB-2185P
IKAS105A	MB-1644P
IMASA105A	MB-1786P
MAS101	MB-1629P
MASA105A	MB-1786P
MBSA105	MB-1786P
MS101A	MB-1629P
MANIFOLD GASKET SETS	
140159	MS18651S
1829	MS18651S
24496	MS15028
2BLO633	MS18809
2UG0633	MS18809
353078	MS18809
71021C	MS18809
OIL PAN GASKETS	
185178	OS31415
1K166	OS31413
OIL PAN SETS	
30-3038823	OS31415
30-3038831	OS31413
30-3071782	OS31413
B166	OS20928
K166	OS31413
L166	OS30662
PISTONS	
222404	224-3229
223604N	224-3219

White Part No.	MAHLE Clevite No.
RING SETS	
106564AS	S4662
106565AS	S4662
106568AS	S40016
106569AS	S4535
106571AS	S40381
10B1447	S40240
10R1017	S40240
10R793	S4535
10R917	S40240
10R962	S4535
10R968	S4535
10R998	S40280.030
14R70	S4333
159481AS	S40381
161133AS	S4535
161825AS	S40016
2710287	433
456408AS	S40381
ROD BUSHINGS	
1K230	223-3514
5151350	223-3462
B230	223-3429
SLEEVE ASSEMBLIES	
100955AS	226-1283
159491AS	226-1453
160450AS	226-1453
161345AS	226-1611
162111AS	226-1283
163114AS	226-1611
16311AS	226-1283
163706AS	226-1521
164434AS	226-1453
165527AS	226-1521
303108627	226-1636
303108627	226-1636

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White Part No.	MAHLE Clevite No.
THRUST WASHER SETS	
159322A	TW-121S
159323A	TW-121S
160126A	TW-121S
160127A	TW-121S
452277A	TW-424S
VALVES-EXHAUST	
10A17914	211-2007
10A19206	211-2111
10A19206	211-2111
10A6397	211-1871
10R33	211-1279
10R34	211-1279
155731A	211-2053
159187A	211-2107
164498A	211-2187
1703620	211-1281
1K197	211-1199
1K197B	211-1521
1M197	211-1201
K197	211-1199
M197	211-1201
RE103B	211-1279
VALVES-INTAKE	
10A17913	211-1090
10A20408	211-2112
10A20408	211-2112
10A9108	211-1090
10R35	211-1090
155730A	211-2050
159188A	211-2106
163648A	211-2176
1K196	211-1128
1M196	211-1130
K196	211-1128
KE283B	211-1090
M196	211-1130
VALVE COVER GASKETS	
101796A	VS39675A
164043A	VS39684
167696A	VS39697
1826	VS38063

White Part No.	MAHLE Clevite No.
21012W	VS37970
24488	VS38032
2BL072	VS37970
31-2751307	VS39875
353067	VS37970
41464	VS37970
VALVE GUIDES	
106609A	217-3268
106612A	217-3266
106620A	217-3269
10A5983	217-3891
10A6912	217-3914
736296M91	217-3270
K195A	217-3693
KE285C	217-3914
VALVE KEEPERS	
107159A	216-5144
10A6440	216-5117
10R11	216-5117
1600207	216-5146
1B200	216-5123
1BA200	216-5080
3110098	216-5117
374027	216-5117
470027	216-5144
813261	216-5117
838029	216-5117
A30696X	216-5080
A30969	216-5080
B200A	216-5080
GE34	216-5233
RE106A	216-5117
VALVE SEATS	
158605A	218-7535
VALVE SPRINGS	
1K198	212-1027
1KA198A	212-1067
K198	212-1027
KA198A	212-1067

Wisconsin Engine Part No.	MAHLE Clevite No.
CONNECTING ROD BEARINGS	
HA133	CB-983M
HA134	CB-979M
FULL SETS	
Q21	FS1785
Q21	FS1785X
HEAD GASKETS	
QD613	1785
QD613A	1785
QD613B	1785
QD613C	1785
HEAD SETS	
Q28	HS1785
Q29	HS1785
Q30	HS1785X
MANIFOLD GASKET SETS	
QB79	MS17577
PISTONS	
DB2011	224-2827
RING SETS	
DR20C	S4835
DR20C	S8932
DR-31-C	S4601
ROD BUSHINGS	
HG157A	223-3471
VALVES-EXHAUST	
AE75B	211-1187
AE75D	211-1375
VALVE COVER GASKETS	
41005B	VS37970
VALVE GUIDES	
AD41	217-3907
VALVE KEEPERS	
AH19	216-5177
AH9	216-5234
VALVE SEATS	
HG201	218-7417
HG214	218-7417
VALVE SPRINGS	
AF49A	212-1032

FRACTION	DECIMAL	MILLIMETERS
1/64	.01563	.3969
1/32	.03125	.7938
	.03937	1.0000
3/64	.04688	1.1906
1/16	.06250	1.5875
5/64	.07813	1.9844
	.07874	2.0000
3/32	.09375	2.3813
7/64	.10938	2.7781
	.11811	3.0000
1/8	.12500	3.1750
9/64	.14063	3.5719
5/32	.15625	3.9688
	.15748	4.0000
11/64	.17188	4.3656
3/16	.18750	4.7625
	.19685	5.0000
13/64	.20313	5.1594
7/32	.21875	5.5563
15/64	.23438	5.9531
	.23622	6.0000
1/4	.25000	6.3500
17/64	.26563	6.7469
	.27559	7.0000
9/32	.28125	7.1438
19/64	.29688	7.5406
5/16	.31250	7.9375
	.31496	8.0000
21/64	.32813	8.3344
11/32	.34375	8.7313
	.35433	9.0000
23/64	.35938	9.1281
3/8	.37500	9.5250
25/64	.39063	9.9219
	.39370	10.0000
13/32	.40625	10.3188
27/64	.42188	10.7156
	.43307	11.0000
7/16	.43750	11.1125
29/64	.45313	11.5094
15/32	.46875	11.9063
	.47244	12.0000
31/64	.48438	12.3031
1/2	.50000	12.7000

FRACTION	DECIMAL	MILLIMETERS
	.51181	13.0000
33/64	.51563	13.0969
17/32	.53125	13.4938
35/64	.54688	13.8906
	.55118	14.0000
9/16	.56250	14.2875
37/64	.57813	14.6844
	.59055	15.0000
19/32	.59375	15.0813
39/64	.60938	15.4781
5/8	.62500	15.8750
	.62992	16.0000
41/64	.64063	16.2719
21/32	.65625	16.6688
	.66929	17.0000
43/64	.67188	17.0656
11/16	.68750	17.4625
45/64	.70313	17.8594
	.70866	18.0000
23/32	.71875	18.2563
47/64	.73438	18.6531
	.74803	19.0000
3/4	.75000	19.0500
49/64	.76563	19.4469
25/32	.78125	19.8438
	.78740	20.0000
51/64	.79688	20.2406
13/16	.81250	20.6375
	.82677	21.0000
53/64	.82813	21.0344
27/32	.84375	21.4313
55/64	.85938	21.8281
	.86614	22.0000
7/8	.87500	22.2250
57/64	.89063	22.6219
	.90551	23.0000
29/32	.90625	23.0188
59/64	.92188	23.4156
15/16	.93750	23.8125
	.94488	24.0000
61/64	.95313	24.2094
31/32	.96875	24.6063
	.98425	25.0000
63/64	.98438	25.0031
1	1.00000	25.4000