

**DEPARTMENT
OF THE ARMY TECHNICAL MANUAL**

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST**

FOR

**GRINDING KIT, VALVE SEAT
(K O LEE CO, INC)**

(4910-00-060-9983)

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

APRIL 1978

TECHNICAL MANUAL

No. 9-4910-600-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 21 April 1978

Operator, Organizational, Direct Support
and General Support Maintenance
Manual Including Repair Parts List
for
GRINDING KIT, VALVE SEAT
(KO LEE CO, INC)
(NSN 4910-00-060-9983)

REPORTING OF ERRORS

You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of the manual and mail the form to Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished direct to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom the grinding kit is issued.

Manufactured by: K.O. Lee Co., Inc.
200 S. Harrison
Aberdeen, SD 57401

Procured under Contract No: DAAA09-76-C-6346

DECIMAL CHART

	$\frac{1}{64}$.015625
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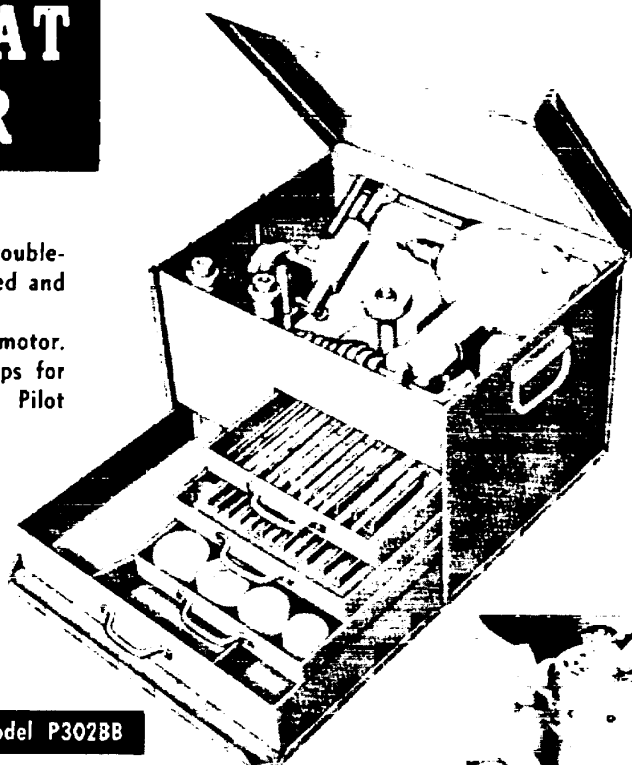
MILLIMETER CONVERSION CHART

mm.	in.	15	30	45	60	75	90	105	120
.25 = .0098	15.25 = .6004	30.25 = 1.1909	45.25 = 1.7815	60.25 = 2.3720	75.25 = 2.9626	90.25 = 3.5531	105.25 = 4.1437	120.25 = 4.7342	
.50 = .0197	15.50 = .6102	30.50 = 1.2008	45.50 = 1.7913	60.50 = 2.3819	75.50 = 2.9724	90.50 = 3.5630	105.50 = 4.1535	120.50 = 4.7441	
.75 = .0295	15.75 = .6201	30.75 = 1.2106	45.75 = 1.8012	60.75 = 2.3917	75.75 = 2.9823	90.75 = 3.5728	105.75 = 4.1634	120.75 = 4.7539	
1 = .0394	16 = .6299	31 = 1.2205	46 = 1.8110	61 = 2.4016	76 = 2.9921	91 = 3.5827	106 = 4.1732	121 = 4.7638	
1.25 = .0492	16.25 = .6398	31.25 = 1.2303	46.25 = 1.8209	61.25 = 2.4114	76.25 = 3.0020	91.25 = 3.5925	106.25 = 4.1831	121.25 = 4.7736	
1.50 = .0591	16.50 = .6496	31.50 = 1.2402	46.50 = 1.8307	61.50 = 2.4213	76.50 = 3.0118	91.50 = 3.6024	106.50 = 4.1929	121.50 = 4.7835	
1.75 = .0689	16.75 = .6594	31.75 = 1.2500	46.75 = 1.8405	61.75 = 2.4311	76.75 = 3.0216	91.75 = 3.6122	106.75 = 4.2027	121.75 = 4.7933	
2 = .0787	17 = .6693	32 = 1.2598	47 = 1.8504	62 = 2.4409	77 = 3.0315	92 = 3.6220	107 = 4.2126	122 = 4.8031	
2.25 = .0886	17.25 = .6791	32.25 = 1.2697	47.25 = 1.8602	62.25 = 2.4508	77.25 = 3.0413	92.25 = 3.6319	107.25 = 4.2224	122.25 = 4.8130	
2.50 = .0984	17.50 = .6890	32.50 = 1.2795	47.50 = 1.8701	62.50 = 2.4606	77.50 = 3.0512	92.50 = 3.6417	107.50 = 4.2323	122.50 = 4.8228	
2.75 = .1083	17.75 = .6988	32.75 = 1.2894	47.75 = 1.8799	62.75 = 2.4705	77.75 = 3.0610	92.75 = 3.6516	107.75 = 4.2421	122.75 = 4.8327	
3 = .1181	18 = .7087	33 = 1.2992	48 = 1.8898	63 = 2.4803	78 = 3.0709	93 = 3.6614	108 = 4.2520	123 = 4.8425	
3.25 = .1280	18.25 = .7185	33.25 = 1.3091	48.25 = 1.8996	63.25 = 2.4901	78.25 = 3.0807	93.25 = 3.6713	108.25 = 4.2618	123.25 = 4.8524	
3.50 = .1378	18.50 = .7283	33.50 = 1.3189	48.50 = 1.9094	63.50 = 2.5000	78.50 = 3.0905	93.50 = 3.6811	108.50 = 4.2716	123.50 = 4.8622	
3.75 = .1476	18.75 = .7382	33.75 = 1.3287	48.75 = 1.9193	63.75 = 2.5098	78.75 = 3.1004	93.75 = 3.6909	108.75 = 4.2815	123.75 = 4.8720	
4 = .1575	19 = .7480	34 = 1.3386	49 = 1.9291	64 = 2.5197	79 = 3.1102	94 = 3.7008	109 = 4.2913	124 = 4.8819	
4.25 = .1673	19.25 = .7579	34.25 = 1.3484	49.25 = 1.9390	64.25 = 2.5295	79.25 = 3.1201	94.25 = 3.7106	109.25 = 4.3012	124.25 = 4.8917	
4.50 = .1772	19.50 = .7677	34.50 = 1.3583	49.50 = 1.9488	64.50 = 2.5394	79.50 = 3.1299	94.50 = 3.7205	109.50 = 4.3110	124.50 = 4.9016	
4.75 = .1870	19.75 = .7776	34.75 = 1.3681	49.75 = 1.9587	64.75 = 2.5492	79.75 = 3.1398	94.75 = 3.7303	109.75 = 4.3209	124.75 = 4.9114	
5 = .1968	20 = .7874	35 = 1.3779	50 = 1.9685	65 = 2.5590	80 = 3.1496	95 = 3.7401	110 = 4.3307	125 = 4.9212	
5.25 = .2067	20.25 = .7972	35.25 = 1.3878	50.25 = 1.9783	65.25 = 2.5689	80.25 = 3.1594	95.25 = 3.7500	110.25 = 4.3405	125.25 = 4.9311	
5.50 = .2165	20.50 = .8071	35.50 = 1.3976	50.50 = 1.9882	65.50 = 2.5787	80.50 = 3.1693	95.50 = 3.7598	110.50 = 4.3504	125.50 = 4.9409	
5.75 = .2264	20.75 = .8169	35.75 = 1.4075	50.75 = 1.9980	65.75 = 2.5886	80.75 = 3.1791	95.75 = 3.7697	110.75 = 4.3602	125.75 = 4.9508	
6 = .2362	21 = .8268	36 = 1.4173	51 = 2.0079	66 = 2.5984	81 = 3.1890	96 = 3.7795	111 = 4.3701	126 = 4.9606	
6.25 = .2461	21.25 = .8366	36.25 = 1.4272	51.25 = 2.0177	66.25 = 2.6083	81.25 = 3.1988	96.25 = 3.7894	111.25 = 4.3799	126.25 = 4.9705	
6.50 = .2559	21.50 = .8465	36.50 = 1.4370	51.50 = 2.0276	66.50 = 2.6181	81.50 = 3.2087	96.50 = 3.7992	111.50 = 4.3898	126.50 = 4.9803	
6.75 = .2657	21.75 = .8563	36.75 = 1.4468	51.75 = 2.0374	66.75 = 2.6279	81.75 = 3.2185	96.75 = 3.8090	111.75 = 4.3996	126.75 = 4.9901	
7 = .2756	22 = .8661	37 = 1.4567	52 = 2.0472	67 = 2.6378	82 = 3.2283	97 = 3.8189	112 = 4.4094	127 = 5.0000	
7.25 = .2854	22.25 = .8760	37.25 = 1.4665	52.25 = 2.0571	67.25 = 2.6476	82.25 = 3.2382	97.25 = 3.8287	112.25 = 4.4193		
7.50 = .2953	22.50 = .8858	37.50 = 1.4764	52.50 = 2.0669	67.50 = 2.6575	82.50 = 3.2480	97.50 = 3.8386	112.50 = 4.4291		
7.75 = .3051	22.75 = .8957	37.75 = 1.4862	52.75 = 2.0768	67.75 = 2.6673	82.75 = 3.2579	97.75 = 3.8484	112.75 = 4.4390		
8 = .3150	23 = .9055	38 = 1.4961	53 = 2.0866	68 = 2.6772	83 = 3.2677	98 = 3.8583	113 = 4.4488		
8.25 = .3248	23.25 = .9153	38.25 = 1.5059	53.25 = 2.0965	68.25 = 2.6870	83.25 = 3.2776	98.25 = 3.8681	113.25 = 4.4587		
8.50 = .3346	23.50 = .9252	38.50 = 1.5157	53.50 = 2.1063	68.50 = 2.6968	83.50 = 3.2874	98.50 = 3.8779	113.50 = 4.4685		
8.75 = .3445	23.75 = .9350	38.75 = 1.5256	53.75 = 2.1161	68.75 = 2.7067	83.75 = 3.2972	98.75 = 3.8878	113.75 = 4.4783		
9 = .3543	24 = .9449	39 = 1.5354	54 = 2.1260	69 = 2.7165	84 = 3.3071	99 = 3.8976	114 = 4.4882		
9.25 = .3642	24.25 = .9547	39.25 = 1.5453	54.25 = 2.1358	69.25 = 2.7264	84.25 = 3.3169	99.25 = 3.9075	114.25 = 4.4980		
9.50 = .3740	24.50 = .9646	39.50 = 1.5551	54.50 = 2.1457	69.50 = 2.7362	84.50 = 3.3268	99.50 = 3.9173	114.50 = 4.5079		
9.75 = .3839	24.75 = .9744	39.75 = 1.5650	54.75 = 2.1555	69.75 = 2.7461	84.75 = 3.3366	99.75 = 3.9272	114.75 = 4.5177		
10 = .3937	25 = .9842	40 = 1.5748	55 = 2.1653	70 = 2.7559	85 = 3.3464	100 = 3.9370	115 = 4.5275		
10.25 = .4035	25.25 = .9941	40.25 = 1.5846	55.25 = 2.1752	70.25 = 2.7657	85.25 = 3.3563	100.25 = 3.9468	115.25 = 4.5374		
10.50 = .4134	25.50 = 1.0039	40.50 = 1.5945	55.50 = 2.1850	70.50 = 2.7756	85.50 = 3.3661	100.50 = 3.9567	115.50 = 4.5472		
10.75 = .4232	25.75 = 1.0138	40.75 = 1.6043	55.75 = 2.1949	70.75 = 2.7854	85.75 = 3.3760	100.75 = 3.9665	115.75 = 4.5571		
11 = .4331	26 = 1.0236	41 = 1.6142	56 = 2.2047	71 = 2.7953	86 = 3.3858	101 = 3.9764	116 = 4.5669		
11.25 = .4429	26.25 = 1.0335	41.25 = 1.6240	56.25 = 2.2146	71.25 = 2.8051	86.25 = 3.3957	101.25 = 3.9862	116.25 = 4.5768		
11.50 = .4528	26.50 = 1.0433	41.50 = 1.6339	56.50 = 2.2244	71.50 = 2.8150	86.50 = 3.4055	101.50 = 3.9961	116.50 = 4.5866		
11.75 = .4626	26.75 = 1.0531	41.75 = 1.6437	56.75 = 2.2342	71.75 = 2.8248	86.75 = 3.4153	101.75 = 4.0059	116.75 = 4.5964		
12 = .4724	27 = 1.0630	42 = 1.6535	57 = 2.2441	72 = 2.8346	87 = 3.4252	102 = 4.0157	117 = 4.6063		
12.25 = .4823	27.25 = 1.0728	42.25 = 1.6634	57.25 = 2.2539	72.25 = 2.8445	87.25 = 3.4350	102.25 = 4.0256	117.25 = 4.6161		
12.50 = .4921	27.50 = 1.0827	42.50 = 1.6732	57.50 = 2.2638	72.50 = 2.8543	87.50 = 3.4449	102.50 = 4.0354	117.50 = 4.6260		
12.75 = .5020	27.75 = 1.0925	42.75 = 1.6831	57.75 = 2.2736	72.75 = 2.8642	87.75 = 3.4547	102.75 = 4.0453	117.75 = 4.6358		
13 = .5118	28 = 1.1024	43 = 1.6929	58 = 2.2835	73 = 2.8740	88 = 3.4646	103 = 4.0551	118 = 4.6457		
13.25 = .5217	28.25 = 1.1122	43.25 = 1.7028	58.25 = 2.2933	73.25 = 2.8839	88.25 = 3.4744	103.25 = 4.0650	118.25 = 4.6555		
13.50 = .5315	28.50 = 1.1220	43.50 = 1.7126	58.50 = 2.3031	73.50 = 2.8937	88.50 = 3.4842	103.50 = 4.0748	118.50 = 4.6653		
13.75 = .5413	28.75 = 1.1319	43.75 = 1.7224	58.75 = 2.3130	73.75 = 2.9035	88.75 = 3.4941	103.75 = 4.0846	118.75 = 4.6752		
14 = .5512	29 = 1.1417	44 = 1.7323	59 = 2.3228	74 = 2.9134	89 = 3.5039	104 = 4.0945	119 = 4.6850		
14.25 = .5610	29.25 = 1.1516	44.25 = 1.7421	59.25 = 2.3327	74.25 = 2.9232	89.25 = 3.5138	104.25 = 4.1043	119.25 = 4.6949		
14.50 = .5709	29.50 = 1.1614	44.50 = 1.7520	59.50 = 2.3425	74.50 = 2.9331	89.50 = 3.5236	104.50 = 4.1142	119.50 = 4.7047		
14.75 = .5807	29.75 = 1.1713	44.75 = 1.7618	59.75 = 2.3524	74.75 = 2.9429	89.75 = 3.5335	104.75 = 4.1240	119.75 = 4.7146		

VALVE SEAT GRINDER

Designed to give years of trouble-free service. Pilots are hardened and ground. Driver incorporates a

ball bearing type universal motor. Wheel dresser has positive stops for accurate dressing of wheel. Pilot wrench is of patented construction enabling quick insertion and release of pilot in guide. Wheel holders have hardened and ground bushings, ball bearing type have dust sealed bearings.



Model P302BB

PILOTS

Each pilot ranges from $-.003$ to $+.007$ of basic range stamped on pilot.

The Model P302BB box is of heavy gauge steel construction and has individual storage for all pilots available. Space is provided for storage of additional attachments and angle drive.



MODEL P302BB UNIVERSAL BALL BEARING VALVE SEAT GRINDER

DESIGNED TO SERVICE MOST CARS, TRUCKS, AND TRACTORS

Consists of the following equipment:

One P61	Pilot Wrench	One P235	1-1/2"	General Purpose Grinding Wheel
One P83	5/16" Self Expanding Pilot	One P235F	1-1/2"	Finishing Grinding Wheel
One P84	11/32" Self Expanding Pilot	One P235R	1-1/2"	Roughing Grinding Wheel
One P84L	11/32" Self Expanding Pilot (6-1/2" Length)	One P237	1-5/8"	General Purpose Grinding Wheel
One P85	3/8" Self Expanding Pilot	One P237F	1-5/8"	Finishing Grinding Wheel
One P97R	.397" Self Expanding Pilot	One P237R	1-5/8"	Roughing Grinding Wheel
One P97	13/32" Self Expanding Pilot	One P239	1-3/4"	General Purpose Grinding Wheel
One P86	7/16" Self Expanding Pilot	One P239F	1-3/4"	Finishing Grinding Wheel
One P87	1/2" Self Expanding Pilot	One P239R	1-3/4"	Roughing Grinding Wheel
One P88	9/16" Self Expanding Pilot	One P241	1-7/8"	General Purpose Grinding Wheel
One P372	Wheel Dresser with No. P176D Diamond Screw	One P241F	1-7/8"	Finishing Grinding Wheel
One P189	Tube Brush for cleaning Holder	One P241R	1-7/8"	Roughing Grinding Wheel
One P196X	Ball Bearing Grinding Wheel Holder (11/16" Threaded End)	One P243	2"	General Purpose Grinding Wheel
One P198X	Ball Bearing Grinding Wheel Holder (9/16" Threaded End)	One P247	2-1/4"	General Purpose Grinding Wheel
One P190B	Adapter Bushing (9/16" to 11/16") No Charge	One P251	2-1/2"	General Purpose Grinding Wheel
One P522V	Utility Driver with Safety Button Switch and 10 ft. 3 conductor cable with plug (3rd wire for ground), 110 volt AC-DC	One P500B		Tool Chest (16" high x 14-3/16" wide x 10 3/4" deep — Weight 21 lbs.)
One P223	Hexagonal Ball Terminal for 15/32" shaft			Net Shipping Weight 45 lbs.

With the substitution of P190 for the P196X and the P191 for the P198X, the P302BB set becomes the P302 set

VALVE SEAT GRINDERS

Model P300 Basic Valve Seat Grinder

Designed to service cars, trucks, and tractors
In addition to the items listed below, the operator must select those stones, pilots, and other accessories necessary to service selected motors. Shipping Weight 39 lbs

- One P61 Pilot Wrench
- One P372 Wheel Dresser with No. P176D Diamond Screw
- One P189 Tube Brush for cleaning Holder
- One P190 Grinding Wheel Holder (11/16" Threaded End)
- One P522V Utility Driver with Safety Button Switch, 110V
- One P223 Hexagonal Ball Terminal for 15/32" Shaft
- One P500B Box 10" high x 14 3/16" wide x 10 3/4" deep

With substitution of P196X for P190, set becomes P300BB ball brg. set.

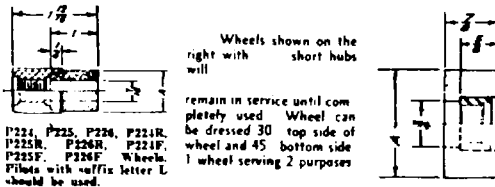
Model P301 Junior Valve Seat Grinder

Designed to service most makes of cars, small trucks, and tractors
Additional grinding wheels, pilots and other accessories may be purchased when needed. Shipping Weight 41 lbs

- One P61 Pilot Wrench
- One P83 5/16" Self Expanding Pilot
- One P84 11/32" Self Expanding Pilot
- One P85 3/8" Self Expanding Pilot
- One P97R Self Expanding Pilot Oldsmobile Rocket
- One P372 Wheel Dresser with No. P176D Diamond Screw
- One P189 Tube Brush for cleaning Holder
- One P190 Grinding Wheel Holder 11/16" Threaded End
- One P522V Utility Driver with Safety Button Switch, 110V
- One P223 Hexagonal Ball Terminal for 15/32" Shaft
- One each of the following Grinding Wheels:
- P235 1-1/2", P237 1-5/8", P239 1-3/4" General Purpose
- P235F 1-1/2", P237F 1-5/8", P239F 1-3/4" Finishing
- P235R 1-1/2", P237R 1-5/8", P239R 1-3/4" Roughing
- One P500B Box 10" high x 14 3/16" wide x 10 3/4" deep

With substitution of P196X for P190, set becomes P301BB ball brg. set.

VALVE SEAT GRINDING WHEELS

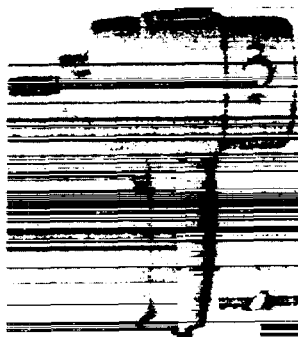


VALVE SEAT GRINDER ACCESSORIES

UTILITY DRIVER

P522V 1/3 H.P. UTILITY DRIVER with safety button switch and 10 ft. 3-conductor cable, 115V and 230V motors available — specify voltage.

P322 32V 1/4 H.P. UTILITY DRIVER available.



GROUNDING. These motors are equipped with a three conductor cord with the ground wire (green covered conductor) connected internally to the motor housing. To give maximum protection connect the plug-in of this green ground wire to a permanent ground or a suitable grounding device.

PILOT WRENCHES

P61 Standard Pilot Wrench.
P361 Special Pilot Wrench.



WHEEL DRESSER

P372 Wheel Dresser



Dressing Wheel to Desired Diam.

Base Dimensions 5 1/2" x 7 1/2" Net Weight.....10 1/4 lbs.

FEATURES:

- The Wheel Dresser is mounted on non-skid rubber pads which eliminate vibration and hold it firmly to the work bench while wheel is being dressed. It is quick and simple to operate as the plunger and diamond are held by constant friction and require no locks or adjustment for the life of the tool.
- The plunger is protected from abrasive dust by dust seals at both ends.
- The swivel is graduated with positive stops for 0, 15, 30, 45, 60, 75 and 90 degrees.
- Vertical screw adjustment for raising or lowering position of grinding stone, making possible diamond dressing of smallest diameter wheels and any angle requirements.

GRINDING WHEEL HOLDERS



1/2" HEX DRIVE

P190 4" long, 1/2" hex socket, 11/16" threaded end.
P5190 23 1/2" long, 1/2" hex socket, 11/16" threaded end.

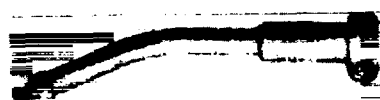
P191 4" long, 3/8" hex socket, 9/16" threaded end.
P196X Ball bearing, 4" long, 1/2" hex socket, 11/16" threaded end.

P198X Ball bearing, 4" long, 1/2" hex socket, 9/16" threaded end.
P398 4" long, 3/8" dia., 1/2" hex socket, 9/16" threaded end.

5/8" HEX DRIVE

P197X Ball bearing, 4" long, 5/8" hex socket, 11/16" threaded end.
P199X Ball bearing, 4" long, 5/8" hex socket, 9/16" threaded end.
P390 4" long, 5/8" hex socket, 11/16" threaded end.
P390 23 1/2" long, 5/8" hex socket, 11/16" threaded end.
P391 4" long, 5/8" hex socket, 9/16" threaded end.
P399 4" long, 5/8" diameter, 5/8" hex socket, 9/16" threaded end.

ANGLE DRIVE ATTACHMENT



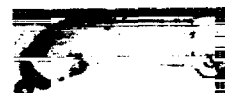
P360 1/2" Hex Angle Drive Attachment
P362 5/8" Hex Angle Drive Attachment

Over-all length 11"; net weight 14 oz.

P460 GEARED ANGLE DRIVE — 60°

Angle drive designed especially for close quarters

Available in two gear ratios, 1 to 1 for grinding wheels up to 2 1/2" diam., 1 1/2 to 1 for larger grinding wheels. Fits all drivers.



P460 Gearing Angle Drive (1 to 1, 1/2" hex drive)
P461 Gearing Angle Drive (1 1/2 to 1, 1/2" hex drive)
P462 Gearing Angle Drive (1 to 1, 5/8" hex drive)
P463 Gearing Angle Drive (1 1/2 to 1, 5/8" hex drive)

VALVE SEAT INDICATOR

P350 Indicator to Fit 3/8" Pilot



HEX BALL TERMINALS AND ADAPTER SLEEVES

P223 1/2" Hex Ball Terminal for 15/32" Motor Shaft
P220 5/8" Hex Ball Terminal for 15/32" Motor Shaft
P216S Split Adapter Sleeve (15/32" to 5/16")
P217S Split Adapter Sleeve (15/32" to 3/8")



CARBON REMOVING WIRE BRUSHES

Must Be Used With P217 Collet Chuck

WB210S Wire Brush (7/8" diameter)
WB220S Wire Brush (1 1/8" diameter)
WB210F Wire Brush (1 1/2" diameter—flared)

VALVE GUIDE REAMERS

Solid Type



Number	Size	Number	Size	Number	Size
H1236	6MM	H1334	8 1/2MM	H1393	10MM
H1250	1 1/4"	H1343	1 1/32"	H1397	3/8"
H1255	6 1/2MM	H1353	11/32" + .010	H1406	13/32"
H1275	7MM	H1363	11/32" - .020	H1437	7/16"
H1281	9/32"	H1354	9MM	H1472	12MM
H1295	7 1/2MM	H1373	3/4" - .002	H1500	1 1/4"
H1312	5/16"	H1374	9/16MM	H1625	1 1/2"
H1315	8MM	H1375	1 1/8"		

VALVE SEAT GRINDER ACCESSORIES

HAND GRINDING ATTACHMENTS

P280 Hand Grinding Attachment



- One P217 1 1/4" Collet Chuck for 15/32" Motor Shaft
 One P275C Guard for 2 1/2" Cup Wheel
 One P275E Guard for 4" Plain Wheel
 One P275B Motor Band for holding Guards
 One PR3BH60 3" x 1/2" x 3/4" hole, Plain Wheel
 One PR3DH60 3" x 1/2" x 3/4" hole, Plain Wheel
 One PR3FH60 3" x 1/2" x 3/4" hole, Plain Wheel
 One PR3GH60 3" x 1/2" x 3/4" hole, Plain Wheel
 One CR2 1/2" x 1 1/4" x 1/2" x 3/4" hole, Cup Wheel
 One P135L 1 1/2" x 1 1/4" x 1/2" Shank Mounted Wheel
 One P137D 1 1/2" x 1 1/4" x 1/2" Shank Mounted Wheel
 One P137G 1 1/2" x 1 1/4" x 1/2" Shank Mounted Wheel
 One P138L 2" x 1" x 1/2" Shank Mounted Wheel
 One E1 Abrasive Wheel Dresser

EXTRA WHEELS

- One P136L 1 1/2" x 1" x 1/2" Shank Mounted Wheel
 One P137L 1 1/2" x 1" x 1/2" Shank Mounted Wheel

P217 Collet Chuck



1/4" Collet Chuck for 15/32" Motor Shaft for holding mounted wheels, abrasive disk holders

ADAPTER SLEEVES

- For use with P217 Collet Chuck, P278 Flanged Wheel Holder, P220 and P223 Hex Ball Terminal and P281 Drum Arbor to old style driver having small shaft diameter.
 P216S Split Adapter Sleeve (15/32" to 5/16")
 P217S Split Adapter Sleeve (15/32" to 3/8")
 P218S Split Adapter Sleeve (1/4" to 1/8") for use on P217 Collet Chuck only

ABRASIVE DISC ATTACHMENT

P277 Abrasive Disc Attachment



- One 424 Abrasive Disc, 4" diameter, No. 10 grit, 1/4" hole
 One 424 Abrasive Disc, 4" diameter, No. 24 grit, 1/4" hole
 One 436 Abrasive Disc, 4" diameter, No. 36 grit, 1/4" hole
 One 460 Abrasive Disc, 4" diameter, No. 60 grit, 1/4" hole
 One 480 Abrasive Disc, 4" diameter, No. 80 grit, 1/4" hole
 One 4100 Abrasive Disc, 4" diameter, No. 100 grit, 1/4" hole
 One 516 Abrasive Disc, 5" diameter, No. 16 grit, 1/4" hole
 One 524 Abrasive Disc, 5" diameter, No. 24 grit, 1/4" hole
 One 536 Abrasive Disc, 5" diameter, No. 36 grit, 1/4" hole
 One 560 Abrasive Disc, 5" diameter, No. 60 grit, 1/4" hole
 One 580 Abrasive Disc, 5" diameter, No. 80 grit, 1/4" hole
 One 5100 Abrasive Disc, 5" diameter, No. 100 grit, 1/4" hole
 One P277C 3 1/4" Fibre Backing for Abrasive Disc
 One P277D 4 1/4" Fibre Backing for Abrasive Disc
 One P277E Abrasive Disc Holder only
 One P277F Flange Washer for 4" x 1 1/4" Grinding Wheel
 One PS4BH60 4" x 1 1/4" x 3/8" hole, plain Grinding Wheel

NOTE: Both the 3 1/4" and 4 1/4" Fibre Backings should be used to support 5" Discs, whereas only the 3 1/4" Backing is necessary for 4" Discs. When the outer edge of a Disc is worn, it can be trimmed by holding it edgewise against any sharp metal while the Driver is running.

TOOL POST HOLDER

- With the use of a tool post holder listed below, the Driver can be quickly mounted on a lathe for internal and cylindrical grinding.
 P270 Tool Post Holder, 3/4" x 3/4" Shank
 P273 Tool Post Holder, 1/2" x 1" Shank
 P274 Tool Post Holder, 5/8" x 1 1/4" Shank
 P274R Motor Switch Hold Down Ring

UTILITY HAND GRINDER SET



HAND GRINDING ATTACHMENT (P280)

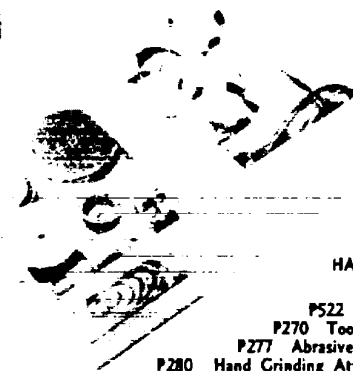
Used with mounted wheels for die and pattern makers straight and cup wheels up to 4"

TOOL POST HOLDER (P270)

Three shank sizes available. Doubles as auxiliary handle for sanding and off-hand grinding.

ABRASIVE DISC ATTACHMENT (P277)

Uses 4" and 5" abrasive discs. High speed cuts faster, prevents loading. Complete with 14 assorted abrasive discs.



P400 UTILITY HAND GRINDER SET includes

- P522 Utility Driver
 P270 Tool Post Holder
 P277 Abrasive Disc Attachment
 P280 Hand Grinding Attachment
 P500B Steel Box

features:

The Utility Motor is compact, light weight and easy to handle. Quickly and easily adapted for use with 4" and 5" abrasive discs, grinding wheels from small mounted ones to 3" diameter straight and cup wheels. Tool post holder converts it to a tool post grinder or doubles as an extra handle for off-hand work. Packed in sturdy steel box with room for extra sanding discs, grinding wheels and accessories.

SEAT GRINDER OPERATING INSTRUCTIONS

Clean Carbon

Remove all oil, grease and carbon from the top of block, combustion chamber and valve ports. The quickest way to remove carbon is to use the high speed driver with a special wire brush (No. WB-220S) held in a collet chuck. (Chuck No. P217 for 15/32" motor shaft or No. P218A for 3/8" motor shaft.)

Clean Valve Guides

Carbon should be cleaned from the guides to prevent the valve stems from sticking. This work should be done before starting to grind the valve seats. The use of a reamer is recommended as the most practical tool for this job because it does not increase the size of the hole.



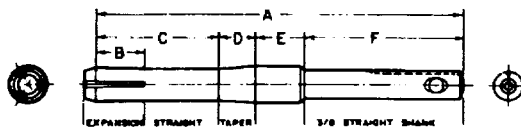
Number	Size	Number	Size	Number	Size
H1236	6MM	H1334	8 1/2 MM	H1398	10MM
H1250	1/4"	H1343	11/32"	H1397	3/8"
H1255	6 1/2 MM	H1353	11/32" + .010	H1406	13/32"
H1275	7MM	H1363	11/32" + .020	H1437	7/16"
H1281	9/32"	H1354	9MM	H1472	12MM
H1295	7 1/4 MM	H1373	1/4" - .002	H1500	1/2"
H1312	5/16"	H1374	9 1/2 MM	H1625	1/2"
H1315	8MM	H1375	1/2"		



Pilot

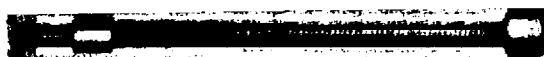
Select the proper size expanding pilot and insert in the valve guide, using the pilot wrench furnished. Push the pilot down as far as possible and tighten or lock it by turning slightly. Wipe the upper part of the pilot and put on a drop or two of light oil. To remove pilot, turn with

Pilot Wrench and lift out.



Grinding wheels must be kept free of oil. A greasy wheel will not cut. Only a thin film of oil should be put on the pilot because any surplus oil will be scraped down by the wheel holder and subsequently be thrown by centrifugal force onto the wheel. A greasy wheel can be washed in gasoline.

P215A Flexible Drive Shaft



Flexible shaft No. P215A can also be used with a 1/4" high speed electric drill to grind inconvenient valve seats located under the dash.
 P215A Flexible Drive Shaft (5 1/2" long) 1/2" Hex.
 P215B Flexible Drive Shaft (5 1/2" long) 3/8" Hex.
 P217 Collet Chuck Adapter Required.

Dial Indicator No. P350

The quality of workmanship on your valve seat grinding job, beyond visual inspection, can be checked with the use of the indicator. The indicator must be used only after grinding the valve seat and before removing the expanding pilot from the valve guide hole. Do not attempt to check the eccentricity of the valve seat angle if the pilot position has been altered in any way from its original position used when grinding the valve seat.



Place the column of the indicator assembly over the 1/4" end of the spring pilot, loosen the locking screw and arm on the side of the column, position the end of the swinging arm on, or near, the center of the finished angle on the valve seat and raise or lower column until indicator needle moves several thousandths of an inch from its free resting position. Tighten the locking screw and arm on the column.

Grasping the knurled thumb collar very lightly with the thumb and middle finger, rotate indicator slowly and observe the amount of eccentricity by the movement of the pointer on the dial of the indicator.

Naturally, the less the pointer on the dial indicator moves, the better your seat grinding job. While no set limit is adopted, we find it is not uncommon to attain reading of .0015 total indicator reading and with experience with the valve seat grinding tools this reading can be reduced to less than .0005.

Checking

After each valve seat has been ground, use the dial indicator again to be sure the job is accurate.

Angle Drive Attachment



The P360 or P362 Angle Drive Attachment can be used when grinding airplane cylinders and hard-to-get-at seats in automobile motors. Fits all drivers. Overall length 11"; net weight 14 oz.

P460 Geared Angle Drive-60°

An angle drive designed especially for close quarters.



Available in two gear ratios, 1 to 1 for grinding wheels up to 2 1/4 diam., 1 1/2 to 1 for larger grinding wheels. Fits all drivers.

P460 Geared Angle Drive (1 to 1, 1/4" hex drive)
 P461 Geared Angle Drive (1 1/2 to 1, 1/2" hex drive)
 P462 Geared Angle Drive (1 to 1, 3/8" hex drive)
 P463 Geared Angle Drive (1 1/2 to 1, 1/4" hex drive)

SEAT GRINDER OPERATING INSTRUCTIONS

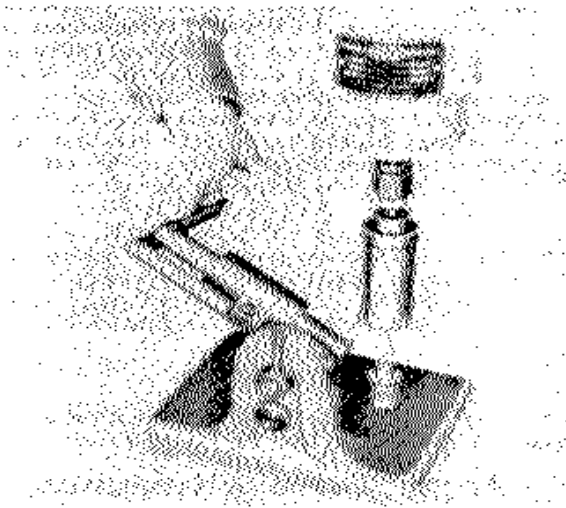
Wheel Holder

Before grinding any valve seats, it is important that the sleeve bearing of the wheel holder be thoroughly cleaned with gasoline, using the tube brush furnished for this purpose. This will prolong the life of both wheel holders and pilots.

After cleaning the holder, select a grinding wheel of proper size. Mount the wheel on the holder, screwing it firmly against the shoulder.

Wheel Dresser

A sharp and true wheel is essential for fast and accurate grinding of valve seats. A new wheel should always be dressed before using. Likewise, an old wheel should be redressed before starting each job.



The swivel on the wheel dresser base is indexed with 1° graduations from 0° to 90°. The swivel head assembly has locating holes for positive setting every 15°. Set the swivel head to the proper angle. Clean the dresser pilot and put on a couple drops of thin oil. Place the holder (with grinding wheel) on the dresser pilot, adjusting the wheel to the proper height by means of the threaded knurled sleeve at the bottom of the pilot. When dressing large wheels, also wheels of 15° angle, it is necessary to place ¼" spacer collar on the dresser pilot above the knurled sleeve. This is done to increase the range of adjustment. Adjust the diamond screw in the plunger so it just touches the face of the grinding wheel. Insert the hexagonal ball of the driver in the top of the wheel holder and start the motor. Holding the Driver in a vertical position proceed to dress the wheel. The Driver must be held down just firm enough on the wheel holder to over-

come the vertical vibrating action of the holder.

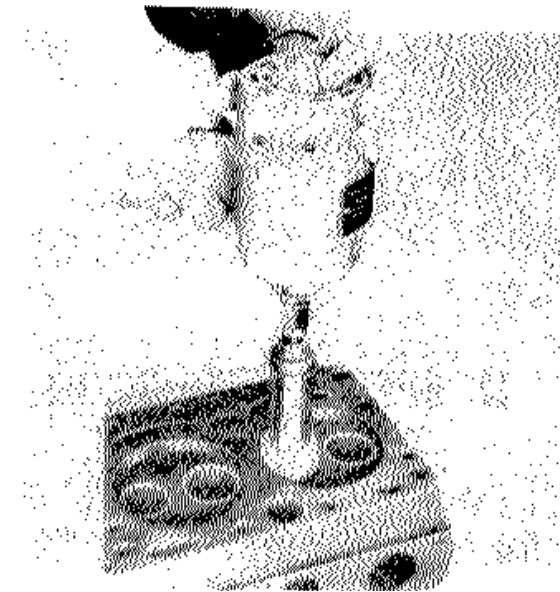
For roughing, pass the diamond across the face of the wheel in one direction only. For smoother finish of the seat, pass the diamond slowly across the face of the wheel in both directions. If the wheel does not clean up on the first setting of the diamond screw, it is necessary to adjust it again and repeat the dressing operation.

Valve Seat Grinding Wheels are furnished with 45° bevel. Other angles are obtained by cutting with the wheel dresser. Several passes across the wheel are necessary of course to change the angle on the wheel. Always keep a few wheels on hand dressed at 15° angle for narrowing seats.

Grinding the Seat

Never exert any downward pressure on the Driver when grinding valve seats, regardless of size. Even the weight of the driver is too much except in the case of large wide seats. On small narrow seats, hold most of the weight of the driver off the wheel holder. Inspect the seat frequently to prevent excessive grinding.

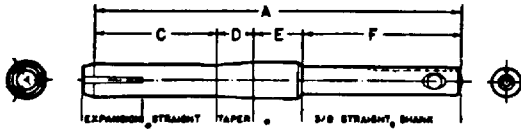
Never stop the motor while wheel is in contact with valve seat as this will produce a rough finish on the seat. Lift motor to raise wheel holder and wheel away from seat, but keep the wheel holder on the pilot until wheel rotation is stopped.



When a wheel is used at too slow a speed, it is sure to break down, and if too fast it will load. Oil and carbon will also cause loading. Dressing the wheel several times may be necessary if the valve seats have not been cleaned first with a wire brush. Time can be saved using two wheel holders, one with a wheel dressed for roughing, and one for finishing. It always pays to keep wheels sharp by frequent dressing.

VALVE SEAT GRINDER REPAIR PARTS LIST

SELF EXPANDING PILOTS



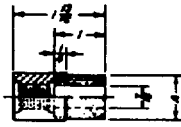
The true center of a worn guide is found and as a result the valve seat is reconditioned concentric with the actual operating line of movement of the valve stem.

The taper that contacts the upper part of the guide is slight. The pilot anchors deep down in the guide where proper bearing is obtained.

Pilot No.	Pilot Size	A	C	D	E	F
P235	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P236	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P237	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P238	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P239	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P240	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P241	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P242	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P243	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P244	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P245	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P246	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P247	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P248	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P249	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P250	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P251	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P252	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P253	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P254	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P255	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P256	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P257	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P258	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P259	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P260	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P261	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P262	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P263	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P264	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P265	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P266	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P267	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P268	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P269	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P270	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P271	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P272	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P273	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P274	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P275	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P276	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P277	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P278	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P279	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P280	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P281	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P282	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P283	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P284	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P285	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P286	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P287	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P288	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P289	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P290	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P291	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P292	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P293	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P294	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P295	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P296	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P297	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P298	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P299	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
P300	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"

P20 850" Special Pilot for V-8 Q2. P21 1-1/32" Special Pilot for V-8 for use when letters are removed from engine. Each pilot shows the work of several solid type pilots.

VALVE SEAT GRINDING WHEELS



Wheels shown on the right with their short hubs will

remain in service until completely used. Wheel can be dressed 30° top side of wheel and 45° bottom side. 1 wheel serving 2 purposes.



P221, P225, P226, P221R, P225R, P226R, P221F, P225F, P226F Wheels. Pilots with suffix letter L should be used.

GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A. DIAM.	GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A. DIAM.
P221	P224F	P224R	1 1/2"	P238	P238F	P238R	1 1/2"
P225	P225F	P225R	1 1/2"	P239	P239F	P239R	1 1/2"
P226	P226F	P226R	1 1/2"	P240	P240F	P240R	1 1/2"
P227	P227F	P227R	1 1/2"	P241	P241F	P241R	1 1/2"
P228	P228F	P228R	1 1/2"	P242	P242F	P242R	1 1/2"
P229	P229F	P229R	1 1/2"	P243	P243F	P243R	2 1/2"
P231	P231F	P231R	1 1/2"	P245	P245F	P245R	2 1/2"
P232	P232F	P232R	1 1/2"	P247	P247F	P247R	2 1/2"
P233	P233F	P233R	1 1/2"	P251	P251F	P251R	2 1/2"
P234	P234F	P234R	1 1/2"	P255	P255F	P255R	2 1/2"
P235	P235F	P235R	1 1/2"	P259	P259F	P259R	3 1/2"
P236	P236F	P236R	1 1/2"	P261	P261F	P261R	3 1/2"
P237	P237F	P237R	1 1/2"	P263	P263F	P263R	3 1/2"

GRINDING WHEELS FOR STELLITE

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P2315	1 1/2"	P2375	1 1/2"	P2435	2 1/2"	P2515	2 1/2"
P2335	1 1/2"	P2395	1 1/2"	P2455	2 1/2"	P2555	2 1/2"
P2355	1 1/2"	P2415	1 1/2"	P2475	2 1/2"	P2595	3 1/2"

Wheels have 1/4"-16thd. All other Wheels have 1/4"-16thd.

Wheels with 1/4" S.A.E. threads can be used on 1/4" threaded end holders made by other manufacturers by using a No. P190B Bushing 1/4" to 1/4".

Wheels P224, P225, P226, P227, P228, P229 are designed for small engine service.

GENERAL PURPOSE

Grinding Wheels

WHEELS HAVE 1/4"-16" THREAD

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P236K	1 1/2"	P241K	1 1/2"	P247K	2 1/2"	P259K	3 1/2"
P237K	1 1/2"	P243K	2 1/2"	P251K	2 1/2"	P261K	3 1/2"
P239K	1 1/2"	P245K	2 1/2"	P255K	2 1/2"	P263K	3 1/2"

GRINDING WHEEL HOLDERS



1/2" HEX DRIVE
P190 4" long, 1/2" hex socket, 11/16" threaded end
P190 2 3/4" long, 1/2" hex socket, 11/16" threaded end
P191 4" long, 1/2" hex socket, 9/16" threaded end
P196X Ball bearing, 4" long, 1/2" hex socket, 11/16" threaded end
P198X Ball bearing, 4" long, 1/2" hex socket, 9/16" threaded end
P398 4" long, 3/8" dia., 1/2" hex socket, 9/16" threaded end

3/4" HEX DRIVE
P197X Ball bearing, 4" long, 3/4" hex socket, 11/16" threaded end.
P199X Ball bearing, 4" long, 3/4" hex socket, 9/16" threaded end.
P390 4" long, 3/4" hex socket, 11/16" threaded end.
P390 2 3/4" long, 3/4" hex socket, 11/16" threaded end.
P391 4" long, 3/4" hex socket, 9/16" threaded end.
P399 4" long, 3/4" diameter, 3/4" hex socket, 9/16" threaded end

HEX BALL TERMINALS AND ADAPTER SLEEVES

P223 1/4" Hex Ball Terminal for 15/32" Motor Shaft
P220 3/8" Hex Ball Terminal for 15/32" Motor Shaft
P2165 Split Adapter Sleeve (15/32" to 5/16")
P2175 Split Adapter Sleeve (15/32" to 3/8")



CARBON REMOVING WIRE BRUSHES

Must Be Used With P217 Collet Chuck

WB2105 Wire Brush 1 1/4" diameter
WB2205 Wire Brush 1 1/2" diameter
WB210F Wire Brush 1 1/2" diameter—flared

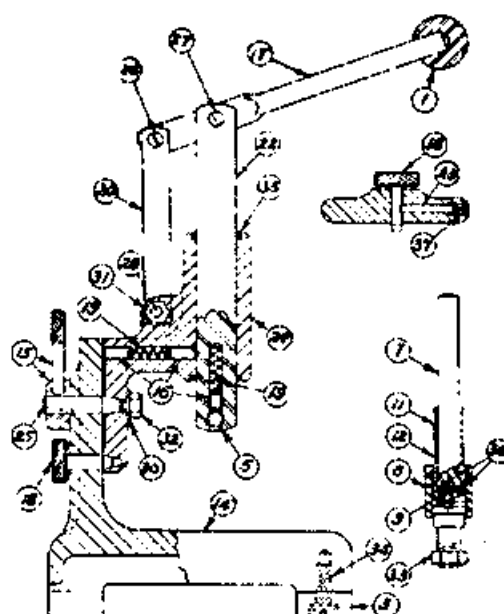


P372 DIAMOND WHEEL DRESSER

P372 Diamond Wheel Dresser, complete with Diamond Screw



Part No.	Index No.	Ques. No.	Description
K44E	1	1	Knob
P171P	3	4	Rubber Pads
P176D	5	1	Diamond Screw
P178	7	1	Pilot
P178N	8	1	Pilot Adjusting Sleeve
P178S	9	1	Compression Spring
P179L	11	1	Thrust Collar - long
P179S	12	1	Thrust Collar - short
P372B	14	1	Base
P372C	15	1	Clamp Nut
P372D	16	3	Plugs
P372H	17	1	Handle
P372I	18	1	Index Pin
P372J	19	2	Compression Spring
P372L	20	1	Link
P372P	22	1	Plunger
P372R	23	1	Keeper Rod
P372S	24	1	Swivel
P372T	25	1	Taper Stud
P372U	26	1	Screw
P372V	27	1	Screw
P372W	28	1	Screw



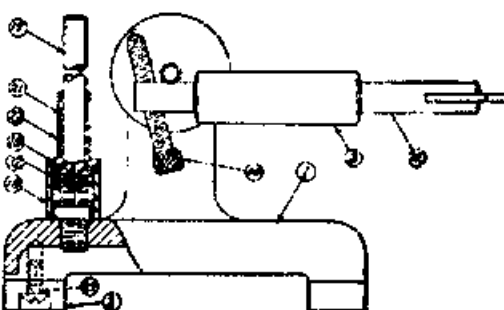
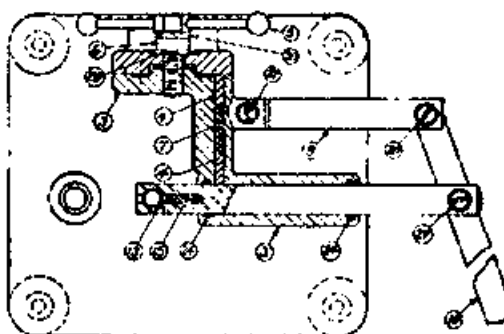
30	1	1/2 S.A.E. Washer
31	1	1/2 N.F. Hex Jam Nut
32	1	1/2 N.F. Hex Jam Nut
33	1	1/2 N.F. Hex Jam Nut
34	4	1/2 x 1/2 Open Hd. Stove Bolts
35	2	Carloc
36	2	1/2 Steel Balls
37	2	No. 10 - 24 x 1/2 Set Screw

P172 DIAMOND WHEEL DRESSER

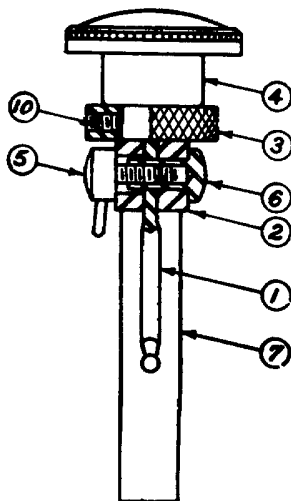
(Replaced January 1, 1948 by P372)

Note—P172 Diamond Wheel Dresser not available as complete unit. Only parts listed below are available.

Part No.	Index No.	Ques. No.	Description
P171	1	1	Dresser Bed
P171P	2	4	Rubber Pad
P173	3	1	Swivel Head
P173B	4	2	Brass Plug for Swivel Head
P173C	5	1	Lock Sc. for Swivel Head
P173CD	6	1	Collar for Lock Sc.
P173S	7	1	Compression Spring for Swivel Head
P174	9	1	Connecting Link
P175	10	1	Handle
P176	12	1	Plunger
P176B	13	1	Brass Plug for Plunger
P176D	14	1	Diamond Screw
P176S	15	1	Compression Spring for Plunger
P178	17	1	Pilot
P178N	18	1	Pilot Adjusting Sleeve
P178S	19	1	Compression Spring for Pilot
P179L	21	1	Pilot Thrust Collar (Long)
P179S	22	1	Pilot Thrust Collar (Short)
P378			Pilot Assembly



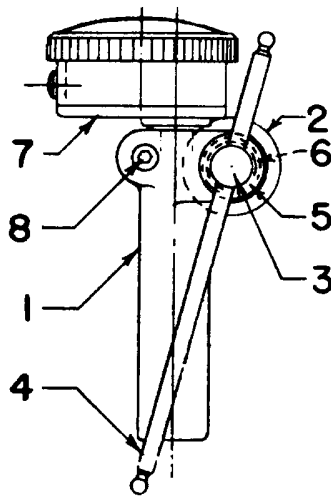
**P350
VALVE SEAT INDICATOR
Before 1962**



P350 Valve Seat Indicator

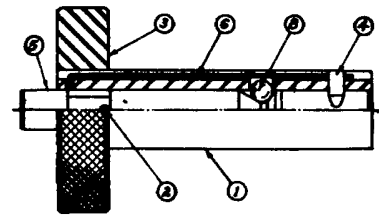
Part No.	Index No.	Description
P350A	1	Swinging Arm
P350C	2	Clamp
P350H	3	Knurled Thumb Collar
P350I	4	Indicator
P350M	5	Locking Screw and Arm
P350N	6	Locking Pin
P350S	7	Column for 3/4" pilots
	10	10 24x3/4" Hds. Set Sc.

**P350
VALVE SEAT INDICATOR
1962 and Later**



Part No.	Index No.	Description
P350B	1	Column
P350D	2	Thumb Nut
P350E	3	Locking Screw
P350F	4	Indicator Set. Arm
P350T	5	Thrust Washer
K510HS24	6	Spring
Dial Ind.	7	Tumico Model E1
5-40x3/4	8	Hex Socket Cap Sc.
6-40x3/4		Rd. Hd. Mach. Screw (H.B.)

P61 PILOT WRENCH



P361 Special Pilot Wrench

Part No.	Index No.	Quan. Req'd.	Description
P61B	1	1	Body
P61C	2	1	Stop Pin
P61D	3	1	Disc
P61L	4	2	Lock Pin
P61P	5	1	Plunger
P61S	6	2	Spring
	8	2	3/32" Steel Ball

SEAT GRINDER TOOL BOX

P500B Seat Grinder Box (10" high x 14" wide x 11" deep—wt. 21 lbs.)

P300BC Handle Clamps, only

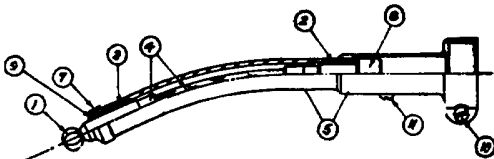
DRIVE ATTACHMENTS FOR

P215A FLEXIBLE DRIVE SHAFT



P215A Flexible Drive Shaft (5' 1/2" long) 1/2" Hex
P215B Flexible Drive Shaft (5' 1/2" long) 3/4" Hex
P217 Collet Chuck Adapter Required

P360 ANGLE DRIVE ATTACHMENT

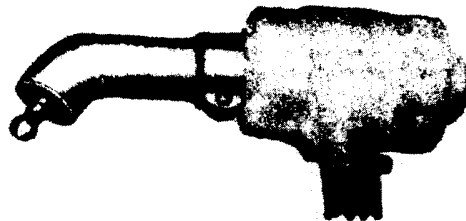


P360 Angle Drive Attach. (1/2" Hex Drive)
P362 Angle Drive Attach. (3/4" Hex Drive)

Part No.	Index No.	Description
P360B	1	Hex Ball Shaft (1/2" Hex)
P362B	1	Hex Ball Shaft (3/4" Hex)
P360C	2	Bushing (3/4" Diameter Shoulder)
P360D	3	Bushing (3/4" Diameter Shoulder)
P360F	4	Flexible Shaft Assembly
P360H	5	Housing Assembly
P360R	7	Felt Retainer
P360S	8	Hex Socket Shaft (for P360)
P362S	8	Hex Socket Shaft (for P362)
P360W	9	Felt Washer (3/4" x 3/4" x 1/4" T.)
	10	1/4" x 3/4" U.S.S. Fill. Hd. Cap Screw
	11	10-32 x 1/4" Rd. Hd. Machine Screw
P361		Pilot Wrench (4" long)

UTILITY DRIVER

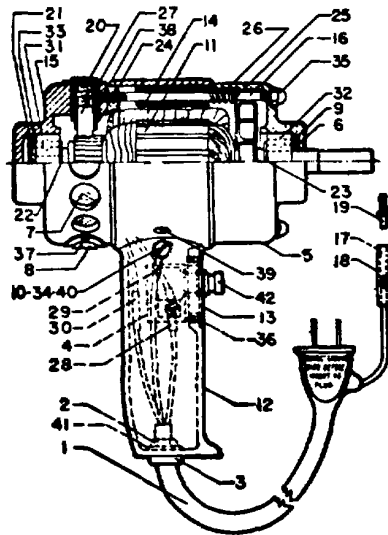
P160 GEARED ANGLE DRIVE



P160 Geared Angle Drive (1 to 1, 1/2" Hex Drive)
P161 Geared Angle Drive (1 1/2 to 1, 1/2" Hex Drive)
P162 Geared Angle Drive (1 to 1, 3/4" Hex Drive)
P163 Geared Angle Drive (1 1/2 to 1, 3/4" Hex Drive)

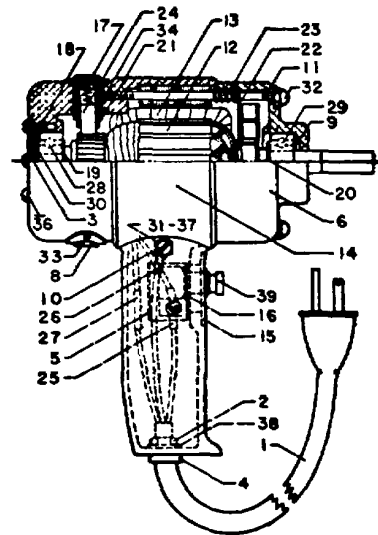
P160B	Hex Ball Shaft
P160C	Bearing Cage (2)
P160E	Hex Socket Shaft
P160G	Gear
P160H	Housing
P160P	Pinion
P160S	Oil Plug
38KD	Bearing (4)
10-24x3/4	Headless Cup Point Set Screw (4)
1/4x3/4 U.S.S.	Filled Head Machine Screw (HB)
10-32x3/4	Socket Set Screw Cup Point (2)

P322, P422 Utility Electric Driver

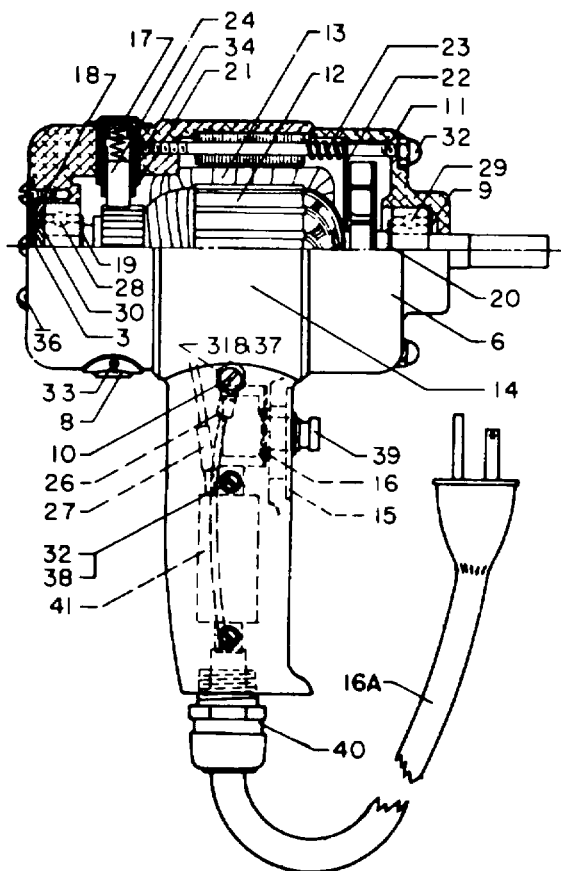


Part No.	Index No.	Quan. Req'd.	Description
A12	1	1	Ext'n. Cord
A612	2	1	Cord Retainer Wire
P211H	3	1	Grommet
P211L	1	1	Switch Insulation
P212D	5	1	Front End Shield
P212F	6	1	Felt Washer
P212G	7	2	Filter Screen Asbly.
P212H	8	2	Brush Holder Shield Asbly.
P212W	9	1	Washer
P321	10	1	Special Screw
P422A	11	1	Armature (115 volt only)
P322H	12	1	Handle and Housing
P522HP	13	1	Switch Plate
P522HW	1	1	Switch Washer
P322F	11	1	Field For P322 (Specify 115 V. or 230 V.)
P422F	14	1	Field (Specify 115 V. or 230 V.) (P422 only)
P322R	15	1	Rear End Shield (P322 only)
P422R	15	1	Rear End Shield (P422 only)
P322S	16	2	Stud (P322 only)
P422S	16	2	Stud (P422 only)
P522GC	17	1	Connector
P522GR	18	1	Rubber Sleeve
P522GS	19	1	Screw Jack
P3949	20	2	Brush Plug
P5620	21	1	Washer
P5665	22	1	Strip Washer
P5668	23	1	Strip Washer
P8545	24	2	Brush Holder
PKB47	25	1	Baffle Plate
R2944	26	2	Spring
R3838	27	2	Brush and Spring Asbly.
31881	28	2	Terminal
31891	29	1	Terminal
34070	30	1	Butt Connector
39KVT-D-FS50,000	31	1	Ball Brg.
201KTD-FS50,000	32	1	Ball Brg.
52	33	1	Adjusting Spring
10-32	34	1	Hex Nut
10-24	35	2	Acorn Nuts (N.P.)
8-32x $\frac{1}{2}$	37	4	Rd. Hd. Mach. Sc. (H.B.)
10-24x $\frac{1}{2}$	38	4	Hdln. Set Sc.
2x $\frac{1}{2}$	2	1	St. Rd. Hd. Sc. (N.P.)
6-32x $\frac{1}{2}$	39	1	St. Rd. Hd. Sc. (N.P.)
$\frac{1}{8}$ Std.	40	1	Lock Washer
$\frac{1}{4}$ S.A.E.	41	1	Washer
26591N	42	1	Momentary Contact Switch

P422, P522 Utility Electric Driver



Part No.	Index No.	Quan. Req'd.	Description
A127	1	1	Cord and Plug Set (Parallel Blade, 115 V.)
A128	1	1	Cord and Plug Set (Tandem Blade, 230 V.)
A612	2	1	Cord Retainer Wire
A631MB	3	1	Bearing Cover
P211H	1	1	Grommet
P211L	5	1	Switch Insulation
P212D	6	1	Front End Shield
P212H	8	2	Shield Asbly.
P212W	9	1	Washer
P321	10	1	Special Screw
P422S	11	2	Stud
P422A	12	1	Armature (115 volt only)
P422F	13	1	Field (115 V. or 230 V.) 1/5 H.P.
P522AB	12	1	Armature (115 V., 230 V.) 1/3 H.P.
P522FB	13	1	Field (115 V. or 230 V.) 1/3 H.P.
P522AV	12	1	Armature, 115V (P522V)
P522FV	13	1	Field, 115V (P522V)
P522H	14	1	Housing
P522HP	15	1	Switch Plate
P522HW	16	1	Switch Washer
P3949	17	2	Brush Plug
P5620	18	1	Washer
P5665	19	1	Strip Washer
P5668	20	1	Strip Washer
P8545	21	2	Brush Holder
PKB47	22	1	Baffle Plate
R2944	23	2	Spring
R3838	24	2	Brush & Spring Asbly.
31881	25	2	Terminal
31891	26	1	Terminal
34070	27	3	Connector
39KVT-D	28	1	Ball Brg.
201KTD	29	1	Ball Brg.
52	30	1	Adjusting Spring
10-32	31	1	Hex Nut
10-24	32	2	Acorn Nut (N.P.)
8-32x $\frac{1}{2}$	33	4	Rd. Hd. Mach. Sc. (H.B.)
10-24x $\frac{1}{2}$	34	2	Hdln. Set Sc.
6-32x $\frac{1}{2}$	36	4	St. Rd. Hd. Sc. (N.P.)
$\frac{1}{8}$ Std.	37	1	Lock Washer
$\frac{1}{4}$ S.A.E.	38	1	Washer
26591N	39	1	Push On - Push Off Switch



P522BMIL **UTILITY** **ELECTRIC** **DRIVER**

Part No.	Index No.	Quan. Req.	Description
A634MB	3	1	Brg. Cover
P211L	5	1	Switch Insulation
P212D	6	1	Front End Shield
P212H	8	2	Shield Assembly
P212W	9	1	Washer
P321	10	1	Special Screw
P422S	11	2	Stud
P522BM	12	1	Armature (115V)
P522FM	13	1	Field (115V)
P522M		1	Data Plate
P522HM	14	1	Housing and End Shield
P522HP	15	1	Switch Plate
P522HW	16	1	Switch Washer
P522W	16A	1	Power Cord
P3949	17	2	Brush Plugs
P5620	18	1	Washer
P5685	19	1	Strip Washer
P5688	20	1	Strip Washer
P8545	21	2	Brush Holder
PKB47	22	1	Baffle

Part No.	Index No.	Quan. Req.	Description
R2944	23	2	Spring
R3838	24	2	Brush and Spring Assembly
GE4260-1		1	Grounding Adapter
31891	26	1	Terminal
34070	27	2	Connector
39KVTD-FS,50,000		1	Ball Bearing
201KTD-FS,50,000		1	Ball Bearing
5Z	29	1	Adjusting Spring
10-32	30	1	Hex Nut, Brass
5-40x $\frac{1}{4}$	31	1	Round Head Machine Screw (N.P.)
8-32x $\frac{1}{2}$	32	2	Round Head Machine Screw (N.P.)
6-32x $\frac{3}{4}$	33	4	Round Head Machine Screw (N.P.)
No. 10	36	4	S.T. Round Head Screw (N.P.)
No. 6	37	2	Internal Lock Washer
26591N	38	2	Internal Lock Washer
6502	39	1	Switch
1640-300	40	1	Cord Grip Connector
	41	1	Filter Can—Elite

ABSTRACT

REFERENCE: MIL-G-45930(WC) 19 July 1974; PARA. 3,6.1.

3.6.1. DRIVER. The driver shall be a hand-held electric - powered rotary tool for driving the grinding wheels.

3.6.1.1. SPINDLE DRIVE. The spindle drive shall transmit the power from the motor to the grinding wheels to perform the valve seat grinding requirements as specified below in Table I:

TABLE I.

Requirements for both Type I and Type II grinding kits: Valve seat outside diameter, range, in inches, 1-3; Spindle speed, RPM, minimum (no load) 8,000; Motor, Horsepower, minimum 1/3. Rated torque range foot pounds 0.3 - 0.5.

The drive end of the spindle drive shall incorporate provisions for connecting the grinding wheel holder specified in 3.6.3. The connection shall provide a positive drive fitting between the wheel holder and the spindle without slippage, looseness, and detrimental vibration during operation of the driver. The drive spindle for the type I grinding kit shall effect an included angle of 105 to 150 degrees with the center line of the drive spindle and the center line of the armature shaft. If a straight drive unit is furnished, an angle attachment shall be provided. The drive spindle for the type II grinding kit shall be at an angle to accommodate grinding seats as shown in Figure 1.

3.6.1.2 HANDLE. The driver shall be fitted with a pistol-grip, planer, D , or straight-type handle affording the operator a full hand grip. The handle shall permit the operator (one man) to position and control the driver during the grinding operation.

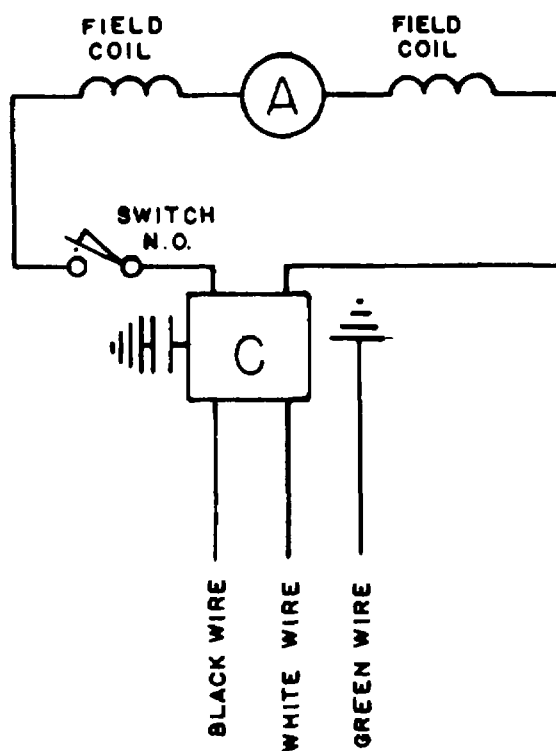
3.6.1.3 DRIVE MOTOR. The drive motor shall be of the universal type, intermittent duty, in conformance with CC-M-636. The horsepower and the torque produced by the driver spindle shall be as specified in Table 1. Unless otherwise specified (see 6.2.1), the motor shall operate from a nominal power source of 115 volts, 60 Hz, single phase, and 115 volts direct current (dc).

3.6.1.4 SWITCH. The motor shall be controlled by a trigger or button type switch of quick break design. Current rating of the switch shall be not less than the full load current rating of the motor. The switch shall not be equipped with a mechanism for locking in the on position. Switches shall conform to the requirements of UL No. 45.

3.6.1.5 POWER CORD. The motor shall be furnished with not less than 15 feet of flexible oil resistant, water resistant, three-conductor cord in accordance with UL NO. 73. The ground conductor shall be securely connected to provide a common ground with the exposed parts of the grinder frame. The ground connection or connections shall be made on the inside of the grinder frame. The size of the conductor shall be determined from the full load ampere rating of the motor and shall conform to NFPA Standard NO. 70. The three-wire grounding plug shall be of the cord grip design and be in accordance with style D of W-C-596. A mating three-to-two-wire adapter with a grounding wire shall be furnished for use with a two-wire outlet.

3.6.1.6 BEARINGS. Bearings shall be ball or roller type of suitable design, housed to prevent leakage of lubricant and entrance of dirt and dust. The bearings shall be lubricated sealed-for-life type or shall be provided with means for proper lubricant application.

WIRING SCHEMATIC P522BMIL DRIVER MOTOR
CONFORMANCE TO MIL. SPEC. MIL-I-43121A



DATA PLATE

MODEL		SERIAL NO.	
P522BMIL			
MADE		IN U.S.A.	
1/3	H.P.	PHASE	1
115	VOLTS	CYCLE	AC-DC
4.0	AMPS.	R.P.M.	14,000

KO-8

C
1640-300
SUPPRESSION SYSTEM

LIST OF REPLACEMENT PARTS RECOMMENDED

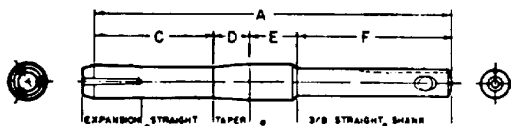
P300BB. GRINDING KIT, VALVE SEAT, ELECTRIC
WITH FUNGUS CONTROL AND RADIO SUPPRESSION
IN ACCORDANCE WITH MIL-G-45930(WC)
DATED 74 JULY 19, TYPE I

1	P223	Hex Ball Terminal
1	P196X	Ball Bearing Wheel Holder 11/16 " Threaded End
1	P198X	Ball Bearing Wheel Holder 9/16 " Threaded End
1	26591N	Switch for P522BMIL
2	P176D	Diamond Screw
1	P378	Pilot Assembly for P372 Wheel Dresser
1	R3838	Set of (2) Carbon Brush and Spring Assembly

NOTE

Grinding Wheels in sizes and grade as per use requirement. These are expendable items and order recommendations can only be based on amount of servicing done by your facility.

SELF EXPANDING PILOTS



All advantages of a solid one-piece taper pilot plus the accuracy and rigidity assured by the expansion of the lower end.

The true center of a worn guide is found and as a result the valve seat is reconditioned concentric with the actual operating line of movement of the valve stem.

The taper that contacts the upper part of the guide is slight. The pilot anchors deep down in the guide where proper bearing is obtained.

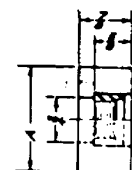
Part No.	Pilot Size	A	C	D	E	F
P95S	1/4	4 3/4	1 3/4	3/4		3 1/2
P95	1/4	5 1/4	1 3/4	3/4		4 1/2
P95L	1/4	6 1/4	1 3/4	3/4		4 1/2
P96S	3/8	4 3/4	1 3/4	3/4		3 1/2
P96	3/8	5 1/4	1 3/4	3/4		4 1/2
P96L	3/8	6 1/4	1 3/4	3/4		4 1/2
P98S	1/2	4 3/4	1 3/4	3/4		2 1/2
P98	1/2	5 1/4	1 3/4	3/4		2 1/2
P98R	1/2 + .015	5 1/4	1 3/4	3/4		2 1/2
P98RL	1/2 + .015	6 1/4	1 3/4	3/4	1/4	3 1/2
P98L	1/2	6 1/4	1 3/4	3/4	1/4	3 1/2
P94S	5/8	4 1/4	1 3/4	3/4		2 1/2
P94	5/8	5 1/4	1 3/4	3/4		2 1/2
P94M	5/8	4 1/4	1 1/4	3/4		1 1/4
P94L	5/8	6 1/4	1 3/4	3/4		3 1/2
P94R	5/8 + .015	5 1/4	1 3/4	3/4		2 1/2
P94RL	5/8 + .015	6 1/4	1 3/4	3/4		3 1/2
P85S	1	4 1/4	1 1/4	3/4		2 1/2
P85F	.370	5 1/4	2	3/4		3
P85	1	5 1/4	2	3/4		3
P85R	1 + .015	5 1/4	2	3/4		3
P85RL	1 + .015	7	2	3/4	1/4	3 1/2
P85L	1	7	2	3/4	1/4	3 1/2
P87R	.397	5 1/4	1 3/4	3/4		3 1/2
P87	1	6	2	3/4		3 1/2
P87M	1	7 1/4	2 1/4	3/4	1/4	3 1/2
P87L	1	8 1/4	2 1/4	3/4	1 1/4	3 1/2
P86S	1 1/8	5 1/4	1 3/4	3/4		3
P86	1 1/8	6 1/4	2 1/4	3/4		3
P86M	1 1/8	7 1/4	2 1/4	3/4	3/4	3 1/2
P86RM	1 1/8 + .015	7 1/4	2 1/4	3/4	3/4	3 1/2
P86L	1 1/8	8 1/4	2 1/4	3/4	1 1/4	3 1/2
P84M	3/4	7 1/4	2 1/4	3/4	3/4	3 1/2
P87S	1 1/4	6 1/4	2	3/4		3 1/2
P87	1 1/4	6 1/4	2 1/4	3/4		3 1/2
P87L	1 1/4	8 1/4	2 1/4	3/4	1 1/4	3 1/2
P87M	1 1/4	7 1/4	2 1/4	3/4	3/4	3 1/2
P93	1 1/2	6 1/4	2 1/4	3/4		3 1/2
P88	1 1/2	6 1/4	2 1/4	3/4		3
P88M	1 1/2	7 1/4	2 1/4	3/4	3/4	3 1/2
P88L	1 1/2	8	2 1/4	3/4	1	3 1/2
P92	1 3/4	5 1/4	1	3/4	1 1/4	3
P93	1 3/4	6 1/4	2 1/4	3/4		3
P98	1 3/4	6 1/4	2 1/4	3/4		3 1/2
P98L	1 3/4	8 1/4	2 1/4	3/4	1 1/4	3 1/2
P99	1 3/4	6 1/4	2 1/4	3/4	1	3 1/2
P91L	1 3/4	4 1/4	3/4	3/4		3 1/2
P8214S	5 1/2 MM	4 1/4	1 1/4	3/4		2 1/2
P8216	5 1/2 MM	4 1/4	1 1/4	3/4		3
P8234	6 MM	4 1/4	1 1/4	3/4		2 1/2
P8234S	6 MM	4 1/4	1 1/4	3/4		2 1/2
P8255	6 1/2 MM	4 1/4	1 1/4	3/4		2 1/2
P8275	7 MM	4 1/4	1 1/4	3/4		2 1/2
P8295	7 1/2 MM	5 1/4	1 1/4	3/4		3
P8315	8 MM	5 1/4	1 1/4	3/4		3
P8334	8 1/2 MM	5 1/4	1 1/4	3/4		3
P8354	9 MM	5 1/4	1 1/4	3/4		3
P8374	9 1/2 MM	5 1/4	2	3/4		3
P8393	10 MM	5 1/4	2	3/4		3
P8472	12 MM	6 1/4	2 1/4	3/4		3 1/2
P8620	.820	4 1/4	3/4	3/4		3 1/2

P90 .850" Special Pilot for V-8 60.

P91 1-1/32"x1" Special Pilot for V-8 for use when lifters are removed from engine.

Each pilot ranges from .003" to .007" of basic range stamped on pilot. One pilot does the work of several solid type pilots.

VALVE SEAT GRINDING WHEELS



Wheels shown on the right with their short hubs will

P224, P225, P226, P224R, P225R, P226R, P224F, P225F, P226F Wheels. Pilots with suffix letter L should be used.

remain in service until completely used. Wheel can be dressed 30° top side of wheel and 45° bottom side. 1 wheel serving 2 purposes.

GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A-DIAM.	GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A-DIAM.
P224	P224F	P224R	3/4"	P238	P238F	P238R	1 1/4"
P225	P225F	P225R	1 1/4"	P239	P239F	P239R	1 3/4"
P226	P226F	P226R	1 1/2"	P240	P240F	P240R	1 3/4"
P227	P227F	P227R	1 3/4"	P241	P241F	P241R	1 3/4"
P228	P228F	P228R	1 3/4"	P242	P242F	P242R	1 3/4"
P229	P229F	P229R	1 3/4"	P243	P243F	P243R	2 "
P231	P231F	P231R	1 3/4"	P245	P245F	P245R	2 1/2"
P232	P232F	P232R	1 3/4"	P247	P247F	P247R	2 1/2"
P233	P233F	P233R	1 3/4"	P251	P251F	P251R	2 1/2"
P234	P234F	P234R	1 3/4"	P255	P255F	P255R	2 1/2"
P235	P235F	P235R	1 3/4"	P259	P259F	P259R	3 "
P236	P236F	P236R	1 3/4"	P261	P261F	P261R	3 1/4"
P237	P237F	P237R	1 3/4"	P263	P263F	P263R	3 1/4"

GRINDING WHEELS FOR STELLITE

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P235S	1 1/4"	P241S	1 1/4"	P247S	2 1/2"	P259S	3 "
P237S	1 1/4"	P243S	2 "	P251S	2 1/2"		
P239S	1 1/4"	P245S	2 1/2"	P255S	2 1/2"		

Wheel shave 1/4"—16thd. All other Wheels have 1/4"—16thd.

Wheels with 1/4" S.A.E. threads can be used on 1/4" threaded end holders

by using a No. P190B Bushing (1/4" to 3/4").

Wheels P224, P225, P226, P227, P228, P229 are designed for small engine service.

GENERAL PURPOSE

Grinding Wheels

WHEELS HAVE 12/16"—13 THREAD

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P236K	1 1/4"	P241K	1 1/4"	P247K	2 1/2"	P259K	3 "
P237K	1 1/4"	P243K	2 "	P251K	2 1/2"	P261K	3 1/4"
P239K	1 1/4"	P245K	2 1/2"	P255K	2 1/2"	P263K	3 1/4"

GRINDING WHEEL HOLDERS



P190 4" long, 1/2" 1/2" HEX DRIVE

P190 2 3/4" long, 1/2" hex socket, 11/16" threaded end

P190X 4" long, 1/2" hex socket, 9/16" threaded end

P198X Ball bearing, 4" long, 1/2" hex socket, 9/16" threaded end

P398 4" long, 1/2" dia., 1/2" hex socket, 9/16" threaded end

3/4" HEX DRIVE

P197X Ball bearing, 4" long, 3/4" hex socket, 11/16" threaded end.

P199X Ball bearing, 4" long, 3/4" hex socket, 9/16" threaded end.

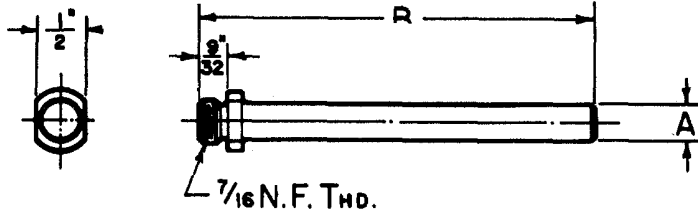
P390 4" long, 3/4" hex socket, 11/16" threaded end.

P390 2 3/4" long, 3/4" hex socket, 9/16" threaded end.

P391 4" long, 3/4" hex socket, 9/16" threaded end.

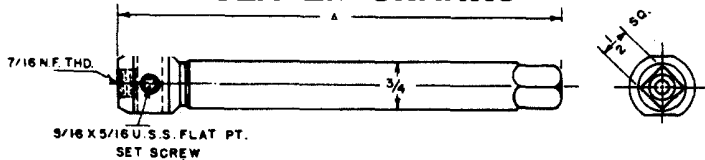
P399 4" long, 3/4" diameter, 3/4" hex socket, 9/16" threaded end

RESEATER PILOTS



	Size A	Decimal Equiv.	Length B		Size A	Decimal Equiv.	Length B
R208M14	6MM	.2362	4	R212P15	3/4+.015	.3900	4
R208	1/4	.250	4	R213M12	10MM	.3937	4
R208S	1/4	.250	2 3/4	R213M9	1 1/2-.009	.3975	4
R208P6	6.5MM	.2559	4	R213M2	1 1/2-.002	.40425	4
R209M5	7MM	.2756	4	R212P30	3/4+.030	.405	4
R209	1/2	.28125	4	R213	1 1/2	.40625	4
R209S	1/2	.28125	2 3/4	R214M2	3/4-.002	.4355	5
R209P15	7.5MM	.2953	4	R214M1	3/4-.001	.4365	5
R210M2	1/4-.002	.3105	4	R214	1/2	.4375	5
R210M1	1/4-.001	.3115	4	R214P1	1/4+.001	.4385	5
R210	1/4	.3125	4	R214P2	1/4+.002	.4395	5
R210P1	1/4+.001	.3135	4	R214P15	1/4+.015	.4525	6
R210P2	1/4+.002	.3145	4	R215	1 1/2	.46875	5
R210P3	8MM	.315	4	R215P3	12MM	.4724	5
R210P4	1/4+.004	.3165	4	R216M2	1/2-.002	.498	5
R210P15	1/4+.015	.3275	4	R216M1	1/2-.001	.499	5
R210P30	1/4+.030	.342	4	R216	1/2	.500	5
R211M9	8.5MM	.3347	4	R216P1	1/2+.001	.501	5
R211M3	1 1/2-.003	.34075	4	R216P2	1/2+.002	.502	5
R211M2	1 1/2-.002	.34175	4	R217M1	1 1/2-.001	.53025	5
R211M1	1 1/2-.001	.34275	4	R217	1 1/2	.53125	5
R211	1 1/2	.34375	4	R217P1	1 1/2+.001	.53225	5
R211P1	1 1/2+.001	.34475	4	R218	1 1/2	.5625	5
R211P2	1 1/2+.002	.34575	4	R218P1	1 1/2+.001	.5635	5
R211P3	1 1/2+.003	.347	4	R218P2	1 1/2+.002	.5645	5
R211P10	9MM	.3543	4	R219	1 1/2	.59375	5
R211P15	1 1/2+.015	.3577	4	R220	1 1/2	.6250	5
R211P30	1 1/2+.030	.372	4	R220P1	1 1/2+.001	.626	5
R212M2	1 1/2-.002	.373	4	R222	1 1/2	.6875	5
R212M1	9.5MM	.3740	4	R222P1	1 1/2+.001	.6885	5
R212	1 1/2	.3750	4	R222P2	1 1/2+.002	.6895	5
R212P1	1 1/2+.001	.376	4	R224	1 1/2	.7500	5
R212P2	1 1/2+.002	.377	4	R226	1 1/2	.8125	5
R212P5	1 1/2+.005	.380	4	R227P6	1 1/2+.006	.850	2 3/4
				R233	1 1/2	1.03125	2 3/4

RESEATER SHANKS



Reseater Shank Part No.	R1	R2	R3
Reseater Shank Size A	4 1/4	6 3/4	8 3/4

OVERSIZE RESEATER SHANKS

The standard R1, R2 and R3 reseater shanks are available in .005", .010", .015", .020", .030" and .045" oversizes. All Reseater Sets are furnished with R2 shank as standard. The R1 (short) shank and R3 (long) shank, designed for special motor applications are extra equipment items. See right hand column for information on the R712 special reseater shank.

Valve seat rings are now available in decimal oversizes in addition to the standard fractional sizes. To install decimal oversize rings, special reseater shanks are required, but not special cutters. When a .010" oversize Special Reseater Shank is used with any standard fractional size cutter, a .010" larger recess diameter will be cut. Each oversize shank is stamped indicating the decimal oversize recess it will cut.

All oversize rings are identified by their ring number. The amount of ring decimal oversize is indicated by suffix number added to standard part number. That is, the L9+10 or L9R10 ring numbers indicate .010" larger O.D. than L9 and L9R standard rings respectively.

All rings provide proper press fit, and where decimal figures are used for O.D. dimensions, decimal figure indicates press fit allowance. The Engine Specification Data Book provides complete information for specific valve seat service.

RESEATER CUTTERS

Recesses are accurately cut. There are no adjustments to be made; simply insert cutter in Reseater Shank, press firmly against shoulder of the cutter and lock with set screw. Each K-O cutter is made to accommodate two or more ring sizes.

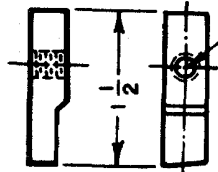
Cutter No.	Ring O Side	Ring K Side	Cutter No.	Ring O Side	Ring K Side
*R98	1 1/4"	1"	R110	2 1/4"	2 1/2"
*R99	1 1/4"	1 1/4"	R111	2 1/4"	2 3/4"
R100	1 1/4"	1 1/4"	R112	2 1/4"	2 3/4"
R101	1 1/4"	1 1/4"	R113	2 1/4"	2 3/4"
R102	1 1/4"	1 1/4"	R114	2 1/4"	3"
R103	1 1/4"	1 1/4"	R115	3 1/4"	3 1/4"
R104	1 1/4"	1 1/4"	R116	3 1/4"	3 1/4"
R105	1 1/4"	1 1/4"	R117	3 1/4"	3 1/4"
R106	1 1/4"	2"	R118	3 1/4"	3 1/4"
R107	2 1/4"	2 1/4"	R119	3 1/4"	3 1/4"
R108	2 1/4"	2 1/4"	R120	3 1/4"	3 1/4"
R109	2 1/4"	2 1/4"			

NOTICE: R1, R2 and R3 Reseater Shanks are available for cutting .005, .010, .015, .020, .030, .045 oversize recess, utilizing standard cutters.

*R98 and R99 cutters are now obsolete but are still available for those still using R0 shank and R67S feed screw. The R712 special reseater shank and special cutters R730, R732, R734, R736 are used to cut the recesses formerly cut with the R98 and R99 cutters.

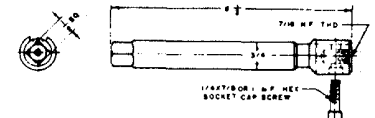
SPECIAL CUTTERS

1/4 N.F. THREAD



R730	1 1/4"
R731	1 1/4"
R732	1 1/4"
R734	1 1/4"
R736	1 1/4"
R738	1 1/4"
R740	1 1/4"
R742	1 1/4"
R743	1 1/4"
R744	1 1/4"
R746	1 1/4"

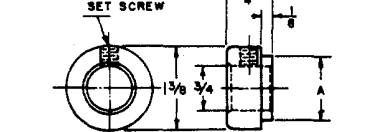
R712 SPECIAL RESEATER SHANK



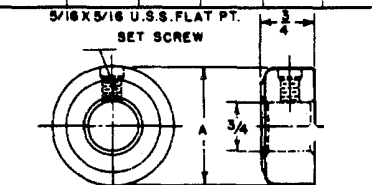
Special cutters and R712 Special Reseater Shank are designed to service engine where valve guide is too near top of seat and interferes with cutting recess with standard unit. This includes, in addition to foreign cars, small stationary engines and lawn mower engines.

DRIVER HEADS

5/16 X 5/16 U.S.S. FLAT PT.



Part No.	R15H	R16H	R17H	R18H	R19H
Size A	.885	.990	1.115	1.240	1.365



Part No.	Size A	Part No.	Size A
R20H	1.490	R26H	2.240
R21H	1.615	R27H	2.365
R22H	1.740	R28H	2.490
R23H	1.865	R29H	2.740
R24H	1.990	R30H	2.990
R25H	2.115	R31H	3.240
		R32H	3.490

INTRODUCTION

This Data Book, in addition to giving specifications on Valve Seat Insert Rings, is intended to supply helpful information for use with reseater, seat grinder and valve refacer tools.

Engine manufacturers are listed alphabetically and engines are identified by: Year of Manufacture; Model (chassis or engine) Number; Number of Cylinders and Bore and Stroke. Other engine identification, such as engine model number, make, type of fuel, or horsepower, frequently appears just to the left of the cylinder column.

Whenever recommendations are identical, models are grouped together to avoid duplication.

Engines for trucks not listed in the Data Book can be found under the engine manufacturer's name.

Truck manufacturers who make their own engines are listed under their own name.

Footnotes are listed at the bottom of each page. If an asterisk (*) follows a ring number, that ring is a replacement for factory installed insert. A ring number without the asterisk is an oversize ring for factory installed insert or the recommended ring if no insert has been installed at the factory. Special footnotes pertaining only to certain manufacturers are listed with the manufacturer's listing. If exhaust pilot size is different than the intake, the exhaust size will be listed after the model listing.

Special valve seat insert rings made to and Lee-Lite material. must use Chromalloy Rings.

specifications are available in Cast Iron, Lee-Alloy, Chromalloy Engines using propane, butane or natural gas

The Valve Guide Reaming Tools are designed to service late model engines which have valve guides cast as part of the cylinder head. These tools can be used to install oversize stem valves or replaceable valve guides. Guide application data is listed on pages 25 and 26. Send for Catalog Sheet VGR-2 for complete information.

Allis-Chalmers 2, 3	Edsel ----- 7	Lincoln ----- 12	Studebaker ----- 16
Auto Car ----- 3	Fairbanks-Morse - 7	Lycoming ----- 12	Volkswagen ----- 16
Buda ----- 3	Ferguson ----- 7	Mack ----- 12	Waukesha ----- 16
Bulck ----- 3	Ford ----- 8	Massey-Ferguson 13	White ----- 16
Cadillac ----- 3	GMC ----- 9	Mercury ----- 13	
Case ----- 4	Hall-Scott ----- 9	Mpls.-Moline ---- 13	SMALL ENGINES
Caterpillar ----- 4	Hercules ----- 9, 10	Nash ----- 14	Briggs & Stratton 17
Chevrolet ----- 4, 5	Hudson ----- 10	Oldsmobile ----- 14	Clinton ----- 17
Chrysler ----- 5	International - 10, 11	Oliver ----- 14, 15	Continental ----- 17
Cockshutt & Co-op 5	John Deere ----- 11	Packard ----- 15	Cushman ----- 17
Continental ----- 6	Kaiser-Frazer ----- 11	Plymouth ----- 15	Kehler ----- 17
Cummins ----- 6	Kaiser-Jeep ----- 12	Pontiac ----- 15	Lauson ----- 17
De Soto ----- 6	LeRoi ----- 12	Reo ----- 15	Wisconsin ----- 17
Dodge ----- 7			

ALLIS CHALMERS TRACTORS AND POWER UNITS

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Iron Int. Exh.	VALVE SEATS				SEAT GRINDER			
							Lee-Alloy Int. Exh.	Chromalloy Int. Exh.	Lee-Lite Int. Exh.	X.O. Cutter Int. Exh.	Seat Angle Int. Exh.	Grind. Wh. Int. Exh.	Ex. Pilot Int. No.	
1938-60	I, 1B, B15, B125, C, CA, BC, B Power Unit, TL-B	C.R.	4	3 1/2 x 3 1/2	% 88		L8B	L8BP		R103	R102	45 45	P236 P234 P84	
1930-42	25-40 (E), Monarch 35 (K), 54 Patrol, K, WK	E.K.	4	5 1/2 x 5 1/2	% 22	22	L22	L22		R109	R109	45 45	P251 P251 P87	
1921-54	E, E60, E563, L, L90, L844, Monarch 50, U	E.K.L.	4, 6	5 1/2 x 5 1/2	% 22	22	L22	L22		R109	R109	45 45	P251 P251 P87	
1936-54	IU, M, U, UC, WM, 42 Patrol, U40PU, U318	UM	4	4 1/2 x 5	% 18	138	L18	L138		R107	R105	30 30	P245 P241 P85	
1934-60	WC, WD, WF, W25, W201, WC Patrol, WD45	W	4	4 x 4	%	98R	L13CE	L9810	J9810	R105	R103	45 45	P240 P239 P85	
1946-50	HD5, HD5B, HD5C, Diesel Tractorlayers	GMC 2-71	2	4 1/2 x 5	%		L8ATH*	L8ATH	Z8ATH*	R103		45	P237 P84	
1946-50	BD3, HD7, HD7W, Diesel Tractorlayers	GMC 3-71	3	4 1/2 x 5	%		L8ATH*	L8ATH	Z8ATH	R103		45	P237 P84	
1951-55	HD5, HD7, HD10, HD19H, HD15, HD19-4	GMC71	6	4 1/2 x 5	%		L985H*	J985H	Z985H*		30		P239 P84	
1946-50	HD9, HD10, HD10W, Diesel Tractorlayers	GMC 4-71	4	4 1/2 x 5	%		L8ATH	L8ATH	Z8ATH	R103		45	P237 P84	
1946-50	HD14, HD15, HD19, HD19-4 Diesel Tractorlayers	GMC 6-71	6	4 1/2 x 5	%		L8ATH*	L8ATH	Z8ATH	R103		45	P237 P84	
1952-55	HD20	GMC6110	6	5 1/2 x 6	%		L16D15		Z16D15*		30		P245 P85	
1956-75	HD-6, HD-11 (6 cyl.) 11,000		4	6 1/2 x 5 1/2	% 18D	12E	L18D	L12E	Z12E	R107	R104	45 45	P245 P239 P85	
1956-71	HD-16A, HD-16AC, HD-21AC		6	5 1/2 x 6 1/2	% 22	20U	L22	L20U	Z20U	R108	R107	45 45	P247 P245 P86	
1959-73	D10, D12, D14 (3 1/2 x 3 1/2), D15, H3, G149, G138, 160 Ind.		4	3 1/2 x 3 1/2	% 8		L8B	L8BP		R102	R102	45 45	P235 P234 P84	
1957-75	D17, D17LPG, G226 Ind.		4	4 x 4	% 13C	98R	L13C	L9810	J9810	R104	R103	30 45	P240 P239 P85	
1957-64	D17D Diesel, DA262		6	3 1/2 x 4 1/2	% 8		L8		J78H93	R102	R102	45 45	P235 P233 P85	
1962-75	D19, G262		6	3 1/2 x 4 1/2	% 8A	78	L8A	L78		R103	R102	45 45	P237 P235 P84	
1958-69	HD6A, HD11B		4, 6	4 1/2 x 5 1/2	% 14C	11R	L14C	L11R	J11R	R105	R104	45 45	P240 P238 P85	
1958-69	HD16, HD21 (1% Exhaust, P86 Pilot)		6	5 1/2 x 6 1/2	% 16D	11R	L16D	L11R	J11R	R107	R104	45 45	P243 P238 P85	
1957-67	C139 (3 1/2 x 3 1/2), C149		4	3 1/2 x 3 1/2	% 8		L8	L8BP		R102	R102	45 45	P235 P234 P84	
1960-75	G153, G230 (6 cyl.)		4	3 1/2 x 4 1/2	% 78R	78R	L78R	L78R		R102	R102	45 45	P235 P235 P84	
1965-75	190C (G2500 3 1/2 x 4), 190D (D2800), 190XT Diesel (D2900)		6	3 1/2 x 4 1/2	373	Int. 1 1/2 x 1.611 x 1/2; Exh. 1 1/2 x 1.486 x 287						30 45	P237 P235 P85F	
1965-75	190XT Gas and LP	G2800	6	3 1/2 x 4 1/2	373	Int. 1 1/2 x 1.745 x 1/2; Exh. 1 1/2 x 1.617 x 1/2						30 45	P239 P237 P85F	
1965-75	D21 and D21 Series II	3400, 3500	6	4 1/2 x 5	373	Int. 1 1/2 x 1 1/2 x 1/2; Exh. 1 1/2 x 1.668 x 1/2				R105		30 45	P240 P238 P85F	
1967-75	180D Tractor 2800 Engine		6	3 1/2 x 4 1/2	% 10AR		L10AR	Exh. 1 1/2 x 1.486 x 290		R104		30 45	P239 P235 P87	
1967-75	170C Tractor 170 Engine		4	3 1/2 x 4 1/2	% 13		L13	Exh. 1 1/2 x 1.578 x 1/2		R105		30 45	P240 P236 P85	
1962-75	16,000H, 21,000H		6	5 1/2 x 6 1/2	373	Int. 1 1/2 x 1.646 x 1/2; Exh. 1 1/2 x 1.611 x 1/2						30 45	P237 P236 P85F	
1959-64	15,000; 16,000; 21,000 (1% Exhaust, P86 Pilot)		6	5 1/2 x 6 1/2	373	Int. 1 1/2 x 1.650 x 1/2; Exh. 1 1/2 x 2.050 x 323						45 45	P237 P243 P85F	
1965-75	Late 15,000; 16,000; 21,000 (1% Exhaust, P86 Pilot)		6	5 1/2 x 6 1/2	373	Int. 1 1/2 x 1.650 x 1/2; Exh. 1 1/2 x 1.990 x 448						45 45	P237 P242 P85F	
1960-66	Early 6000; 7000; 10,000; 11,000		4, 6	4 1/2 x 5 1/2	% 14T	11T	L14T	L11T	J11T	R105	R104	45 45	P241 P238 P85	
1966-75	Late 6000; 7000; 10,000; 11,000		4	4 1/2 x 5 1/2	373	Int. 1 1/2 x 1.866 x 400			J12JU15	R103	45 45	45	P240 P237 P85F	
1967-75	Mark II; 19,000; 21,000; 25,000		6	5 1/2 x 6 1/2	373	Int. 1 1/2 x 1.645 x 1/2			J12JU15	R103	30 30	P237	P237 P85F	

Special production oversize seats are available for all models shown.

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

ALLIS-CHALMERS (FORMERLY BUDA ENGINES)

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cust Int.	Iron Exh.	VALVE SEATS		Chromalloy Exh.	Lee-Lite Exh.	K-O Cutter		Seat Angle		SEAT GRINDER		
								Int.	Exh.			Int.	Exh.	Int.	Exh.	Int.	Exh.	Grind. Wh.
1930-31	H326, HM326, HM326R, HP326, HPC326	Owens	6	3 3/4x4 1/2	3/8	13	10A	L13	L10A			R105	R104	45	45	P241	P239	P85
1930-31	HP351	Owens	6	3 3/4x5 1/2	3/8	13	10A	L13	L10A			R105	R104	45	45	P241	P239	P85
1931-40	K325 (K369, KM369-4 1/2x4 1/2)	Owens	6	3 3/4x4 1/2	3/8	18	16	L18	L16	J16	Z16	R107	R106	45	45	P245	P243	P85
1931-32	K393, KM393 (K428, KC428-4 1/2x4 1/2)	Owens	6	4 1/2x4 1/2	3/8	18	16	L18	L16	J16	Z16	R107	R106	45	45	P245	P243	P85
1931-32	LS25, LMS25, LMS25A	Owens	6	4 1/2x5 1/2	3/8	18	16	L18	L16	J16	Z16	R107	R106	45	45	P245	P243	P85
1932-36	H217, HM217, HM217R, HP217	Owens	4	3 3/4x4 1/2	3/8	13	10A	L13	L10A			R105	R104	45	45	P241	P239	P85
1937-44	4DT196, 4DTM196, 6DT294	Owens	4 1/2	3 3/4x4 1/2	3/8	10	7	L10	L7	J7		R103	R102	45	45	P237	P235	P83
1937-48	JL-877 (JL1335, 6 Cyl. 6 1/2x7 1/2)	Owens	4	6 1/2x7 1/2	3/8	10	7	L10	L7	J7		R115	R115	45	45	P261	P261	P85
1938-56	4DT212, 4DTM212, 6DT317, 6DTM317, 6DTMR317	Owens	4 1/2	3 3/4x5 1/2	3/8	10	7	L10	L7	J7		R103	R102	45	45	P237	P235	P83
1939-44	6DT909, 6DTM909	Owens	6	5 1/2x7	3/8	20	18	L20	L18			R108	R107	45	45	P247	P245	P86
1939-44	6DT278	Owens	6	3 3/4x4 1/2	3/8	10	7	L10	L7	J7		R103	R102	45	45	P237	P235	P83
1939-56	6DT468, 6DTM468, 6DTMR468	Owens	6	4 1/2x5 1/2	3/8	15	11	L15	L11			R106	R104	45	45	P243	P239	P85
1939-48	6DT415, 6DTM415	Owens	6	4 1/2x5 1/2	3/8	12	11	L12	L11			R104	R104	45	45	P239	P239	P85
1939-50	6DC1611	Owens	6	6 1/2x8 1/2	3/8	27	22U	L27	L22U			R112	R109	45	45	P255	P251	P86
1939-58	P1879, PCC1879, PCS1879, PC2505, 8PC-2505, 8PCS-2505	Owens	6 1/2	6 1/2x8 1/2	3/8	31	28	L31B	L28			R115	R112	45	45	P259	P255	P88
1940-63	6DC1879, 6DC1879, 6DCMR1879, 6DCS1879, 6DCSG1879, 6DCSMR1879, 6DHR1879, 6DHRMR1879, 8DC2505, 8DCS2505	Owens	6 1/2	6 1/2x8 1/2	3/8	31	25	L31B	L25	J25	Z25*	R115	R111	45	45	P259	P255	P88
1944-50	6DC844, 6DC844, 6DCMR844, 6DCSMR844	Owens	6	5 1/2x6 1/2	3/8	22	20	L22	L20			R109	R108	45	45	P251	P247	P86
1944-50	8DC1125, 8DCM1125, 8DCMR1125, 8DCS1125, 8DCSMR1125	Owens	8	5 1/2x6 1/2	3/8	22	20	L22	L20			R109	R108	45	45	P251	P247	P86
1945-62	18D38, 28D77, 28DMC77, 48153, 48D153, 48DMC153, 48DMR153	Owens	1 1/2	3 3/4x4 1/2	3/8	10	6	L10	L6	J6		R103	R101	45	45	P237	P233	P83
1945-62	68D30, 68D230, 68DMR230, 68G230	Owens	6	3 3/4x4 1/2	3/8	10	6	L10	L6	J6		R103	R101	45	45	P237	P233	P83
1945-61	48182, 48D182, 48DMR182, 68273, 68D273, 68DMR273	Owens	4 1/2	3 3/4x4 1/2	3/8	10	6	L10	L6	J6		R103	R101	45	45	P237	P233	P83
1947-58	LO525	Owens	6	4 1/2x5 1/2	3/8	18	18BU	L18	L18BU		Z18BU*	R107	R105	45	45	P245	P241	P85
1947-58	6MO893	Owens	6	5 1/2x6 1/2	3/8	26	18U	L26	L18U	J18U	Z18U*	R111	R107	45	45	P255	P245	P86
1947-58	4MO645, 4MOG645, 6MO970, 6MOG970, 8MO1290	Owens	4 1/2	5 1/2x6 1/2	3/8	26	18U	L26	L18U	J18U	Z18U*	R111	R107	45	45	P255	P245	P86
1948-56	4DC645	Owens	4	5 1/2x6 1/2	3/8	22	18U	L22	L18U	J18U	Z18U*	R109	R107	45	45	P251	P245	P86
1953-58	8MO5-1290	Owens	8	5 1/2x6 1/2	3/8	26	18U	L26	L18U	J18U	Z18U*	R111	R107	45	45	P255	P245	P86
1954-56	6MO-672	Owens	6	5 1/2x6 1/2	3/8	26	18U	L26	L18U	J18U	Z18U*	R111	R107	30	30	P255	P245	P86
1951-58	6DA-779	Owens	6	5 1/2x6 1/2	3/8	22	18U	L22	L18U*	J18U	Z18U*	R109	R107	45	45	P251	P245	P86
1951-58	6DAS844, 6DAS844, 6DAM844, 6DASMB44	Owens	6	5 1/2x6 1/2	3/8	22	L22					R108	R108	45	45	P247	P247	P86
1951-58	8DA-1125, 8DAM-1125, 8DAS1125, 8DASMB1125	Owens	8	5 1/2x6 1/2	3/8	22	L22					R108	R108	45	45	P247	P247	P86
1953-60	6DA273, 6DAMR-273, D273	Owens	6	3 1/2x4 1/2	3/8	14C	BR	L14C	LBR	JBR	ZBR	R105	R102	45	45	P239	P235	P83
1953-56	6DA5-516	Owens	6	4 1/2x5 1/2	3/8	18D	12T	L18D	L12T			R107	R104	45	45	P245	P239	P85
1958-60	D944, D516 (6 cyl.)	Owens	4	4 1/2x5 1/2	3/8	17A	12C		L12C		Z12C	R108	R104	45	45	P247	P238	P85

*Requires ring 2 1/2x3 1/2, special production *Requires ring 1 1/2x2 1/2x3 1/2

*Requires ring 2 1/2x3 1/2, special production. †Requires ring 1 1/2x2 1/2x3 1/2.

AUTO CAR TRUCKS

ENGINE 315, 331, 358	3/8	17B	15A	L17B	L15A			R107	R107			P245	P243	P86
ENGINE 377 (AFTER SERIAL 25-5644 3/4" EXH.)	3/8	17B		L17B	L15T			R107	R106			P245	P242	P86
ENGINE 404, 408, 447, 453, 501 (1 1/2" EXH. For SODIUM COOLED VALVES)	3/8	20	18U	L20	L18U	J18U	Z18U	R108	R107			P247	P245	P86

Later Model Auto Car Use Cummins or GMC Engine, Refer to These Engine Listings

BUICK AUTOMOBILES

1935-53 Series 40 Special	Owens	8	3 1/2x4 1/2	3/8	10	7	L10	L7	J7			R103	R102	45	45	P237 P235 P85
1935-52 Series 50 Super	Owens	8	3 1/2x4 1/2	3/8	10	7	L10	L7	J7			R103	R102	45	45	P237 P235 P85
1936-52 Series 60, 70, 80, 90 ROADMASTER	Owens	8	3 1/2x4 1/2	3/8	16B	8	L16B	L8	J8	Z8		R105	R102	45	45	P241 P235 P85
1933-54 Series V8-50, V8-70, V8-80, 40 Special (3 1/2x3 1/2)	Owens	8	4x3 1/2	3/8	6		L14CE	L6	J6			R105	R101	45	45	P241 P233 P85
1955-56 All Cars	Owens	8	4x3 1/2	3/8	8		L16E	L8E	J8E			R105	R102	45	45	P241 P235 P85
1957-58 All Models	Owens	8	4x3 1/2	3/8	9		L18E	L9	J9	Z9		R106	R103	46	46	P242 P235 P85
1959-66 All Models (Invicta, Electra 4 1/2x3 1/2)		8	4 1/2x3 1/2	3/8	10		L18E	L10	J10	Z10		R106	R103	46	46	P243 P237 P85
1961-66 Special 4000, 4100, 4300 V8		8	3 1/2x2 1/2	3/8	7B		L9BH20	L7B				R103	R102	45	45	P237 P234 P84
1963-67 Special V6, Skylark V6, 225		6	3 1/2x3 1/2	3/8	10	7	L10	L7	J7			R103	R102	45	45	P237 P234 P84
1964-66 Engine 400, 401, 425		8	4x3 1/2	3/8	9		L18E	L9	J9	Z9		R106	R103	45	45	P243 P235 P85
1964-67 Engine 300, 340		8	3 1/2x3 1/2	3/8	7		L16BE	L7	J7	Z7		R105	R102	45	45	P241 P234 P85
1967-75 Engine 400 and 430 (4 1/2x3 1/2), 455 (4 1/2x3 1/2)		8	4 1/2x3 1/2	3/8	20B		L13CE	L13CE	J13CE			R107	R104	45	45	P245 P239 P85
1968-75 250 Engine (L6)		6	3 1/2x3 1/2	3/8	9		L14CE	L9ATH	J9ATH	Z9ATH		R105	R103	45	45	P240 P236 P84
1968-75 350 Engine		8	3 1/2x3 1/2	3/8	10		L18E	L10	J10	Z10		R106	R103	45	45	P243 P237 P85
1971-73 Stage 1 455, Riviera G.S. 455		8	4 1/2x3 1/2	3/8	22E		L22E	L16E	J16E			R108	R105	45	45	P247 P240 P85
1975 231 V-6		6	3 1/2x3 1/2	3/8	8		L13CE	L8	J8	Z8		R104	R102	45	45	P239 P235 P84
1975 260 V-8		8	3 1/2x3 1/2	3/8	12CE		L12CE	L6BP	J6BP			R104	R102	45	45	P238 P234 P84

Special production Lee-Lite rings 2 1/2 available for Buick Special aluminum heads.

CADILLAC AUTOMOBILES

1935-49 60, 60S, 61, 62, 63, 65, 67, 70, 72, 75		8	3 1/2x4 1/2	3/8	17D	12C	L17D	L12C				R106	R104	45	45	P243 P239 P84
1950-51 60S, 61, 62, 75		8	3 1/2x3 1/2	3/8	8		L14CE	L8	J8	Z8		R105	R102	45	45	P241 P235 P84
1952-55 60, 62, 75		8	3 1/2x3 1/2	3/8	10		L14CE	L10	J10	Z10		R105	R103	45	45	P241 P237 P84
1956 60, 62, 75		8	4x3 1/2	3/8			L16E	L12CE	J12CE	Z12CE		R105	R104	45	45	P240 P238 P84
1957 All Models		8	4x3 1/2	3/8	9		L18E	L9	J9	Z9		R106	R103	45	45	P243 P236 P84
1958-67 All Models (1958 B&S 4x3 1/2) (1964-66 B&S 4 1/2x4 1/2)		8	4x3 1/2	3/8	10		L18E	L10	J10	Z10		R106	R103	45	45	P243 P237 P84
1968-75 All Models		8	4 1/2x4 1/2	3/8	20B		L13CE	L13CE	J13CE			R107	R104	45	45	P245 P239 P84

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

CASE TRACTORS

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Iron Int.	Exh.	VALVE SEATS			Chromalloy Exh.	Lee-Lite Exh.	K-O Cutter Int.	Seat Angle Int.	Grind. Int.	SEAT GRINDER	
								Lee-Alloy Int.	Exh.	Exh.						Wh. Ex.	Ex. Pilot No.
1929-56	C, CC, CE, CI, CO, D, DC, DE, DH, DI, DO, DV, 17-27	Owens	4	3 1/2 x 5 1/2	1/2	13	13	L13	L13	J13		R105	R105	45	45	P241	P241
1929-56	L, LA, LAT, LAE, LE, LH, LI, LIM, 26-40	Owens	4	4 1/2 x 6	1/2	18	18	L18	L18			R107	R107	45	45	P245	P245
1935-47	R, RC, RD, PC16	Waukegan	4	3 1/2 x 4	1/2	7	7	L7	L7	J7		R102	R102	45	45	P235	P235
1940-41	V, VC, VD, VI	Owens	4	3 1/2 x 4	1/2	10	58	L10	L58			R103	R101	30	45	P237	P233
1940-56	S, SC, SD, SE, SO, SE	Owens	4	3 1/2 x 4	1/2	8	6P	L8	L6P			R102	R101	45	45	P235	P233
1941-59	VA, VAC, VAI, VAO, VAS, VAM, VAC-14	Owens	4	3 1/2 x 3 1/2	1/2	7		L7	LSCPH	JSCPH		R102	R101	30	45	P235	P233
1954-59	400, 500, 600, 900 Series Diesel	Owens	6	4 x 5	1/2	10	8R	L10	L8R	J8R	Z8R	R103	R102	45	45	P237	P235
1956-60	400 Series, Gas, Dist. LP: 301, 120 Combine	Owens	4	4 x 5	1/2		10R	L14CE	L10R	J10R*		R105	R103	45	45	P241	P237
1956-60	300 Series Gas	Owens	4	3 1/2 x 3 1/2	1/2	7		L7	LSCPH	JSCPH		R102	R101	30	45	P235	P233
1956-60	300 Series Diesel	Cont. GD157	4	3 1/2 x 4 1/2	1/2	7	5	L7	L5			R102	R101	30	45	P235	P233
1958-60	310 Crawler Tractor, 310, 410 Series	Owens C148	4	3 1/2 x 4 1/2	1/2	7		L7	LSCPH	JSCPH		R102	R101	30	45	P235	P233
1958-60	C610 Crawler Tractor	Cont. F209	6	3 1/2 x 4 1/2	1/2	10		L10	LSCPH	JSCPH		R103	R101	30	45	P237	P233
1958-60	C810 Crawler Tractor	Cont. H227	4	4 x 5 1/2	1/2	9		L13CE	L9	J9	Z9	R104	R103	30	45	P239	P236
1958-60	1010 Crawler Tractor	Cont. J382	4	4 1/2 x 6	1/2	14C	10	L14C	L10	J10	Z10	R105	R103	30	45	P241	P237
1958-60	2008, 2108, 2118	G126	4	3 1/2 x 4 1/2	1/2	7		L7	LSCPH	JSCPH		R102	R101	30	45	P234	P232
1959-60	5008, 5108, 5118, 6008, 6108, 6118	G164	4	3 1/2 x 4 1/2	1/2	88		L88	LSCPH	JSCPH		R103	R101	30	45	P236	P232
1958-71	Diesel 700, 800, 730, 730C, 770, 970, 930 Diesel 16 cyl.	A267D, A401D	4	4 x 5	1/2			L14CE	L98TH10*	J98TH10	Z98TH10	R105	R103	45	45	P240	P237
1960-71	830 Series Diesel	A301D	4	4 x 5	1/2	17E	12T	L12T		J12T		R105	R104	45	45	P241	P239
1960-69	840 Series Gas and LPG	A284S	4	4 x 5	1/2			L14	L13	J13	Z13	R105	R105	45	45	P241	P240
1960-71	430, 470, 530, 630, 431, 531, 570, 631, 640, 641 Diesel	C188D	4	3 1/2 x 4 1/2	1/2	12CE	8R	L12CE	L8R	J8R	Z8R8	R104	R102	45	45	P238	P235
1960-69	430, 440, 441 Gas: 530, 530C, 540, 541 LP	C159, C148	4	3 1/2 x 4 1/2	1/2	7		L7	LSCPH	JSCPH		R102	R101	30	45	P234	P232
1960-71	530, 530C, 540, 541, 570 Gas	C159	4	3 1/2 x 4 1/2	1/2	9	6P	L9	L6P			R103	R101	30	45	P236	P233
1960-71	630, 630C, 640, 641 Gas and LP, A201C	C188	4	3 1/2 x 4 1/2	1/2	10	8R	L10	L8R	J8R	Z8R8	R103	R102	30	45	P237	P235
1960-71	730, 730C, 740, 400, 600, 700, 800, 900 Series 930, 940 16 cyl., 970 Gas and LP	A251S, A377S	4	4 x 5	1/2			L12E	L10R	J10R	Z10R10	R104	R103	45	45	P239	P237
1966-71	1200 Traction King	Diesel A451	6	4 x 5	1/2	17C	10AT	L17C	L10AT	J10AT	Z10AT	R106	R104	45	45	P242	P239
1964-71	1000 Series	Cont. J382	4	4 x 6	1/2	14C	10	L14C	L10	J10	Z10	R105	R103	30	45	P241	P237
1970-75	2518C, 3778C Gas		4	4 x 5	1/2	10R		L14CE	L10R	J10R	Z10R10	R105	R103	45	45	P240	P237
1970-75	3018C Gas		4	4 x 5	1/2	17C	13	L17C	L13	J13	Z13	R106	R105	45	45	P242	P240
1970-75	4018D, 2678D Diesel		4	4 x 5	1/2	14		L14	Exh. 1 1/2 x 1.635 x 1/2			R105		45	45	P241	P237
1970-75	3368D, 3368DT, 5048D, 5048DT Diesel		4	4 x 5	1/2	Int. 1 1/2 x 2.099 x 1/2		Exh. 1 1/2 x 1.946 x 1/2					45	45	P245	P242	
1970-75	3018D, 4518D, 4518DT Diesel		6	4 x 5	1/2	12T		L12T	L12T	J12T		R106	R104	45	45	P242	P239
1971-75	148C, 159C 3 1/2 x 4 1/2		4	3 1/2 x 4 1/2	1/2	8		L8	Exh. 1 1/2 x 1 1/2			R102	R101	30	45	P235	P233
1971-75	188C, 201C 13 1/2 x 4 1/2		4	3 1/2 x 4 1/2	1/2	10	8R	L10	L8R	J8R	Z8R	R103	R102	30	45	P237	P235
1971-75	188D Diesel		4	3 1/2 x 4 1/2	1/2	12CE	8R	L12CE	L8R	J8R	Z8R	R104	R102	45	45	P238	P235

CATERPILLAR TRACTORS

1932-41	28, 10 Auto Patrol, 122.4 x 5 1/2	Gas 4200C	4	4 1/2 x 5 1/2	1/2	16	12	L16	L12			R106	R104	45	45	P243	P239	P86
1932-41	30, 35, PU, RS, 40, 6500C 5 1/2 x 6 1/2	Gas 6000C	4	4 1/2 x 6	1/2	18A*	18A	L18A	L18A			R108	R108	45	45	P245	P245	P87L
1932-41	50, RS, 11 Auto Patrol	Gas 7500C	4	5 1/2 x 6 1/2	1/2	26*	24A*	L26				R111	R111	45	45	P255	P251	P88
1932-41	65, 70, 9000C	Gas 9500C	4	7 x 8 1/2	1/2	300*	300*					R115	R115	45	45	P259	P259	P89
1934-41	82, 22, 212MC, 1 Grader 77-66 44, 800C 3 1/2 x 4 1/2	Gas 3400C	4	3 1/2 x 5	1/2	16	12A	L16	L12A			R106	R105	45	45	P243	P241	P85
1934-41	R4, RD4, 10 Patrol, 30, 42 14600C 6 cyl.	Gas 4400C	4	4 1/2 x 5	1/2	20	16	L20	L16	J16	Z16	R108	R106	45	45	P247	P243	P86
1933-50	D35, 50, D7700, 4 cyl.; 75, D11000-6 cyl.	Diesel 3,4,6	5	5 1/2 x 8	1/2	24B	24B	L24B	L24B			R110	R110	45	45	P251	P251	P87
1934-47	D2 Tractor, 212 Motor Grader	Diesel D3400	4	3 1/2 x 5	1/2	90	8A	L90	L8A			R103	R103	45	45	P237	P235	P85M
1947-58	D2 Tractor, 212 Motor Grader	Diesel D311	4	4 x 5	1/2	12	12	L12	L12			R104	R104	45	45	P239	P239	P86
1936-47	D4 Tractor, RD4, 42 Grader, 112MC, D321	Auto Eng. D4600	4	4 1/2 x 5 1/2	1/2	14A	13B	L14A	L13B	J16		R105	R105	45	45	P241	P241	P86M
1947-60	D4 Tractor, 112 Motor Grader	Diesel D315	4	4 1/2 x 5 1/2	1/2	19B	16	L19B	L16		Z16*	R108	R106	45	45	P247	P243	P86M
1933-47	D6 Tractor, DW10, 12 Motor Grader, 48 Grader, D468 Auto Eng. D4400	Diesel D4600	6	4 1/2 x 5 1/2	1/2	14A	13B	L14A	L13B*			R105	R105	45	45	P243	P241	P86M
1947-60	D6 Tractor, DW10, 12 Motor Grader	Diesel D318	6	4 1/2 x 5 1/2	1/2	19B	16	L19B	L16	J16	Z16	R108	R106	45	45	P247	P243	P86M
1933-60	D7 Tractor, D6 Tractor, D6600 (3 cyl.)	Diesel D8800	4	5 1/2 x 8	1/2	24B	24B	L24B	L24B			R110	R110	45	45	P251	P251	P87L
1933-60	D8 Tractor, D1700 (8 cyl. engine)	Diesel D13000	6	5 1/2 x 8	1/2	24B	24B	L24B	L24B			R110	R110	45	45	P251	P251	P87M
1947-75	D364, D375-8 Cyl., D8 Pusher, D386, D397, D339, D342	6, 8, 12	6	5 1/2 x 8	1/2			L24Y	L22AY	J22AY	Z22AY	R110	R110	45	45	P251	P251	P87M
1956-63	D326, D337 (Head 2H3349)		6	5 1/2 x 8	1/2			L20CX	L17BX			R109	R107	45	45	P247	P247	P87L
1956-63	D326, D337 (Head 5H8418, 5H8505, 5H4232)		6	5 1/2 x 8	1/2			L17BX				R107	30	30	P245	P245	P87L	
1951-60	D9 (Head 4H9950), 594	D353	6	6 1/2 x 8	1/2			L27EY6	L25EY37			Spec.	Spec.	30	30	P237	P235	P87L
1960-75	D4, D6	D330, D333	4	4 1/2 x 5 1/2	1/2			L18CX	L16BX			R106	R105	30	30	P243	P241	P85L
1961-75	D9, D9C, D353D, D379A, D396A, G353, G379, G398, D999		6	6 1/2 x 8	1/2	Int. 2 1/2 to 2 1/2 x 2.5905 x 1/2; Exh. 2 1/2 to 2 1/2 x 2 1/2 x 1/2						R110	30	30	P251	P251	P87L	
1960-71	D311H, D320 and 922		4	4 x 5	1/2	Int. 1 1/2 to 1 1/2 x 1.794 x 1/2; Exh. 1 1/2 to 1 1/2 x 1.669 x 1/2							30	30	P240	P238	P85L	
1960-69	D345		6	5 1/2 x 8	1/2	Int. 1 1/2 to 1 1/2 x 2.042 x 1/2; Exh. 1 1/2 to 1 1/2 x 1.8545 x 1/2							30	30	P243	P240	P85L	
1960-75	D343		6	5 1/2 x 8	1/2	Int. 1 1/2 to 1 1/2 x 1 1/2 x 1/2; Exh. 1 1/2 to 1 1/2 x 1 1/2 x 1/2						R105	R104	30	30	P240	P238	P85L
1957-63	D337F (Head 7H8150), D337 (Head 5H8511)		6	5 1/2 x 8	1/2	Int. 1 1/2 to 1 1/2 x 2.1675 x 1/2; Exh. 1 1/2 to 1 1/2 x 1.980 x 1/2							30	30	P245	P243	P87L	
1972-75	3406 Series		6	5 1/2 x 8	1/2	Int. 1 1/2 x 1 1/2 x 3.05; Exh. 1 1/2 x 1 1/2 x 3.05						R105	R104	30	45	P240	P238	P85L

*R216M2 Resealer Pilot must be used. Special production tapered rings available.

IR216M2 Reseater Pilot must be used. Special production tapered rings available.

CHEVROLET AUTOMOBILES, TRUCKS AND BUSES

1937-49	All Cars and 1-ton Trucks, Thrift Master	Owens	6	3 1/2 x 3 3/4	1/2	12C	8	L12CE	L8	J8	Z8	R104	R102	30	30	P239	P235	P84
1941-49	Thrift Master, 1 1/2-ton (optional engine)	92 H.P.	6	3 1/2 x 3 3/4	1/2	12C	9	L12CE	L9	J9	Z9	R104	R103	30	45	P239	P237	P84
1950-51	All Cars, Thrift Master Trucks	Owens	6	3 1/2 x 3 3/4	1/2	12C	8	L12CE	L8	J8	Z8	R104	R102	30	45	P239	P235	P84
1950-54	Power Glide Cars, Loadmaster Trucks, 235 Engs.	105 H.P.	6	3 1/2 x 3 3/4	1/2	14TH	9	L9		J9	Z9	R106	R103	30	45	P243	P237	P84
1950-52	Standard Model Passenger Cars	Owens	6	3 1/2 x 3 3/4	1/2	12C	9	L12CE	L9	J9	Z9	R104	R103	30	45	P239	P237	P84
1950-53	Thriftmaster Trucks, 216 Engine	Owens	6	3 1/2 x 3 3/4	1/2	12	9	L12CE	L9	J9	Z9	R104	R103	30	45	P239	P237	P84
1955-62	Cars, Trucks 235, 261 Engines	Owens	6	3 1/2 x 3 3/4	1/2	14TH		L9ATH	J9ATH			R106	R103	30	45	P243	P237	P84
1956-60	322 Engine	Owens	8	4 x 3 3/4	1/2		7	L16E	L7	J7		R105	R102	45	45	P240	P234	P85
1958-61	348 Engine (Without Factory Seat) Passenger	Owens	8	4 1/2 x 3 3/4	1/2	19C		L19C	L13CE	J13CE		R107	R107	45	45	P245	P239	P85
1958-61	348 Engine (Heavy Duty Trucks) 1st Exh. First Series		8	4 1/2 x 3 3/4	1/2			L18E	L12CH20			R107	R107	45	45	P245	P239	P85
1958-61	348 Engine (Heavy Duty) 1st Exh. Second Series		8	4 1/2 x 3 3/4	1/2	17C		L17C	L9ATH20			R107	R103	45	45	P245	P236	P85

DATA BOOK

CHEVROLET AUTOMOBILES, TRUCKS AND BUSES (Cont.)

Year	Model	Make	Eng. Cyl.	B&S	Pilot Int.	Cast Int.	Iron Exh.	VALVE SEATS		Chromalloy Exh.	Lee-Lite Exh.	K-O Cutter Int.	Seat Angle	Grind. Wh.	Ex. Pilot
								Lee-Alloy Int.	Exh.						
1955-67	All Cars, Trucks, V-8 Engines 265, 283 (3 1/2 x 3 1/2)	Own	8	3 1/2 x 3 1/2	%			L16E	L9ATH	J9ATH		R105	R103	45	45
1962-67	High Torque H. D. Truck 348 (4 1/2 x 3 1/2), 409 (3 1/2 x 4 1/2)—1963		8	4 1/2 x 3 1/2	%	19C		L19C	L13E			R109	R105	45	45
1960-69	Corvair (R211M2 Reseater Pilot) 95HP, 110HP, 1969 180HP		6	3 1/2 x 2 1/2	%	Intake	L7RH50 ¹ or Z7RH50 ¹				Z5H30 ¹	R107	R100	45	45
1965-69	Corvair 140 H.P. Engine Int. 1 1/4 x 1 1/4		6	3 1/2 x 2 1/2	%		7H	L7R				R105	R102	45	45
1962-71	153, 194, 230, 250, 292 (292 takes L16E Intake)		4.6	3 1/2 x 3 1/2	%		9	L14CE	L9	J9	Z9	R105	R103	45	45
1962-71	283, 327 (300 H.P. requires 19E Intake)		8	4 x 3 1/2	%		9	L16E	L9	J9	Z9	R105	R103	45	45
1962-67	Turbo-Fire 409 Passenger		8	3 1/2 x 4 1/2	%	21		L21	L14E			R109	R105	45	45
1963-72	307, 327		8	3 1/2 x 3 1/2	%		9	L14CE	L9	J9	Z9	R105	R103	45	45
1973	307 Passenger & L.D. Truck (C, K, P Truck, J14H Int. Ring)		8	3 1/2 x 3 1/2	%	19E	98R		L98R	J98R	Z98R	R106	R103	45	45
1966-70	396, 402, 427, 454 (Passenger)		8	4 1/2 x 3 1/2	%	21DR			L14CE			R108	R105	45	45
1969-75	350 Engine 255 H.P. and 300 H.P.		8	4 x 3 1/2	%	19E	98		L98			R106	R103	45	45
1969-75	350 Engine 350 H.P.		8	4 x 3 1/2	%	208	12CE		L12CE	J12CE	Z12CE	R107	R104	45	45
1960-75	53 Series GMC (2 Valves)	2,3,4	6	3 1/2 x 4 1/2	%				L8E	J8E		R102	60	60	
1960-75	53 Series GMC (4 Valves)		6	3 1/2 x 4 1/2	%					J28TH30		Spec.	60		
1960-65	GMC 351, 401, 478, 637 (1/2 Exhaust)		6	4 1/2 x 3 1/2	%	21DR			L16H10			R108	R106	30	45
1966-75	GMC 351E, 351M, 401M, 478M (5 1/2 x 3 1/2)		6	4 1/2 x 3 1/2	%	22R			J17H ¹			R109	R106	30	45
1970-75	350 Engine, 350 L.P. Gas		8	4 1/2 x 3 1/2	%	14H	98R	L14H	L98R	J98R	Z98R	R105	R103	45	45
1970-75	400 Eng. 265 H.P., 1971-73 (Truck) 400 Eng. takes J98R Exh.		8	4 1/2 x 3 1/2	%	19E	12CE		L12CE	J12CE	Z12CE	R106	R104	45	45
1970-75	454 Engine, Gas and LP (Int. Seat Requires R2+30 Shank)		8	4 1/2 x 4	%	Intake	J22ETH			J168TH		R108	R106	45	45
1971-75	140 L4 Vega		4	3 1/2 x 3 1/2	%				L13CE	L8E	J8E	R104	R102	45	45
1971-75	250, 292 Engine (3 1/2 x 4 1/2)		6	3 1/2 x 3 1/2	%		98R	L14H	L98R	J98R	Z98R	R105	R103	45	45
1971-75	250 Engine (L56) Int. 1 1/2 x 1 1/2		8	3 1/2 x 3 1/2	%		98TH		L98TH	J98TH	Z98TH	R105	R103	45	45
1966-75	366, 427 Truck Gas (427 takes J19E Int.)		8	4 1/2 x 3 1/2	%				L18E	L13	J13	R109	R105	45	45
1971-75	366 L.P. Gas		8	4 x 3 1/2	%				Intake Z17C	J128HU12 ¹		R106	45	45	

Chevrolet model uses 194, 230, 283, 327 engines NOTE H. D. truck 348, 409 have factory hardened seats and require carbide tipped reseater cutter to cut recess for replacement ring

CHRYSLER AUTOMOBILES

1942-48	C34, C38	Own	6	3'x4'	%	14C		L14C	L10R10			Z10R10*	R105	R103	45	45	P240	P238	P84
1939-50	C23 4-6-7, C30 3-5-7-9, C40 6-7-9, C50	Own	8	3'x4'	%	10	78R	L10	L78R				R103	R102	45	45	P237	P235	P84
1949-54	C45, C48, C51, C60-1, C60-2	Own	6	3'x4'	%	12	11R	L12	L10R10			Z10R10*	R104	R103	45	45	P239	P238	P84
1951-53	C52, C53, C54, C55, C56-1, C56-2, C58, C59	Own V	8	3'x3 1/2'	%	14	11R	L14	L11R	J11R		Z11R*	R105	R104	45	45	P241	P238	P85
1954-56	C63, C64, C66, C68, C69, C70	Own V	8	3'x3 1/2'	%			L19D	L16CU				R107	R106	45	45	P245	P242	P85
1955-56	C67, C71, (3'x3 1/2')	Own V	8	3'x3 1/2'	%	16	10	L16	L10	J10	Z10		R106	R103	45	45	P243	P237	P85
1956-58	C72, C72-300	Own V	8	3'x3 3/4'	%			L19D	L16CU				R107	R106	45	45	P245	P242	P85
1957-58	C75, LC1, LC2		8	3'x3 1/2'	%		11R	L19D	L11R	J11R		Z11R	R107	R104	45	45	P245	P238	P85
1957-58	C76, C76-300, LC3, LY1 Imperial		8	4x3 3/4'	%			L19D	L16CU				R107	R106	45	45	P245	P242	P85
1959-60	MC1, MC2, PC1, PC2		8	4'x3 3/4'	%			L19D	L13CE	J13CE			R106	R104	45	45	P243	P239	P85
1959-60	MC3, MY1, PC3, PY1		8	4'x3 3/4'	%	21DR			L13CE	J13CE			R108	R104	45	45	P247	P239	P85
1961-67	All Models and Imperial 440 Power Pac (Exh 17E)		8	4'x3 3/4'	%	21DR			L13CE	J13CE			R108	R104	45	45	P247	P239	P85
1968-75	All Models 383 and 440 Engine		8	4'x3 3/4'	%	21DR			L16BE				R108	R105	45	45	P247	P241	P85
1971-75	360 Engine		8	4'x3 5/8"	%	16	12CE	L16	L12CE	J12CE	Z12CE		R106	R104	45	45	P243	P238	P85
1972-75	400 Engine		8	4'x4 3/8 3/4"	%	21DR	16R		L16R	J16R			R108	R105	45	45	P247	P241	P85

CHRYSLER INDUSTRIAL MOTORS

1950-56	14A, 22A (4 1/2x5 1/2)	Own	6	3 1/2x5	%			L14CY57	J14CY57	Z14CY57	Spec	45	45	P243	P241	P85		
1950-60	15A, M49, MAJESTIC	Own	6	4x5	%			L14CY57	J14CY57	Z14CY57	Spec	45	45	P243	P241	P85		
1950-60	18A	Own	6	3 1/2x3 1/2	%	14C		L14C	L8RH10	Z8RH10	R105	R102	45	45	P241	P235	P85	
1950-61	19A, 54 (3 1/2x3 1/2)	Own	6	3 1/2x3 1/2	%	16B		L19	L8RH10	Z8RH10	R105	R102	45	45	P241	P235	P85	
1954-61	24A, 56A	Own	6	3 1/2x3 1/2	%	19E		J19E	L16BY57	Z16BY57	R108	Spec	45	45	P247	P243	P85	
1955-56	34, 36 (4 1/2x5 1/2)	Own	6	3 1/2x3 1/2	%			L16B	L14CY57	J14CY57	Z14CY57	Spec	45	45	P243	P241	P85	
1950-75	5A, M46 ACE, M46 ACE Spec., 6A (3 1/2x4 1/2) Ind 30	Own	6	3 1/2x4 1/2	%	98R		L98R	L8RH10	Z8RH10	R103	R102	45	45	P237	P235	P84	
1950-75	8A, M47 Crown, M47 Crown Spec., 16A, 32	Own	6	3 1/2x4 1/2	%	14C		L14C	L10R10	J10R10	Z10R10	R105	R103	45	45	P241	P237	P84
1961-75	H170, H225 (3 1/2x4 1/2)		6	3 1/2x3 1/2	%	11	7	L11	L7	J7		R104	R102	45	45	P238	P234	P85
1961-75	H318, HT318		8	3 1/2x3 1/2	%	14A		L14A	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85
1961-75	H361, H383 (4 1/2x3 1/2), H413 (4 1/2x3 1/2)		8	4 1/2x3 1/2	%	19		L19	L13CE	J13CE		R107	R104	45	45	P245	P238	P85
1961-75	HT361, HT413 (4 1/2x3 1/2), HC426	% Exhaust	8	4 1/2x3 1/2	%			L18E			Z98U	R106	R103	45	45	P243	P237	P85
1968-75	H440 Engine		8	4 1/2x3 1/2	%	21DR		L16BE				R108	R105	45	45	P247	P241	P85
% Exhaust on Engines 14A, 15A, 22A, 34, 36																		

% Exhaust on Engines 14A, 15A, 22A, 34, 36

COCKSHUTT AND CO-OP TRACTORS

AFTER 1967 DETERMINE ENGINE MAKE, THEN REFER TO ENGINE MANUFACTURER'S LISTING.

1946-58	20	Cont. F140	4	3 1/2 x 4 1/2	%	10		L10	L5CPH	J5CPH		R103	R101	30	45
1946-58	30 (BU48153) 40 (BU68230) 50C (BU68273)		4	3 1/2 x 4 1/2	%	10	6	L10	L6	J6		R103	R101	45	45
1953-58	50B	BU 6DA273	6	3 1/2 x 4 1/2	%	14C	8R	L14C	L8R	J8R	Z8R	R105	R102	45	45
1956-61	35, 550, 570, 16 cyl. Gas and Diesel	Herc. G0198	4	3 1/2 x 4 1/2	%	12	8BR	L12	L8BR			R104	R103	45	45
1960	560 Diesel		4	4 1/2 x 4 1/2	%	17C	11	L17C	L11			R106	R104	44	44
1960-62	540 Gas	Cont. F162	4	3 1/2 x 4 1/2	%	10		L10	L5CPH	J5CPH		R103	R101	45	45
1960-67	550, 660 Gas		4	3 1/2 x 3 1/2	%	9	8R	L9	L8R	J8R		R103	R102	45	45
1961-67	550, 660 Diesel		4	3 1/2 x 3 1/2	%	9	6P	L9	L6P			R103	R101	45	45
1960-67	770, 1550 Gas and LP (LP must use J or Z rings)		6	3 1/2 x 3 1/2	%	8	6BR	L8	L6BR	J6BR	Z6BR	R102	R102	45	45
1961-67	770 Diesel		6	3 1/2 x 3 1/2	%	6P	4P	L6P	L4P			R101	R100	45	45
1960-63	880 Gas and LP (LP must use J or Z rings)		6	3 1/2 x 4	%	10	8R	L10	L8R	J8R	Z8R	R103	R102	45	45
1961-63	880 Diesel		6	3 1/2 x 4	%	10		L10			Z3AT	R103	R101	45	45
1962-67	1600, 1650 Gas and LP (LP must use J or Z rings)		6	3 1/2 x 4	%	10	8	L10	L8	J8	Z8	R103	R102	45	45
1962-67	1600 Diesel		6	3 1/2 x 4	%	10	4P	L10	L4P			R103	R100	45	45
1960-67	1800 Gas and LP (LP must use J or Z rings), 1850 (3 1/2 x 4 1/2)		6	3 1/2 x 4	%	10		L13CE	L10	J10	Z10	R104	R103	45	45
1961-67	1650, 1800 Diesel		6	3 1/2 x 4	%	7R		L13CE	L7R			R104	R102	45	45
1960-67	1900, 1950 Diesel (4 valves per cyl.)	GMC 4-53	4	3 1/2 x 4 1/2	%	7		L7		J7		R102	60		
1965-67	1850 Diesel		6	3 1/2 x 5	%	8B		L14E	L8B			R105	R103	45	45
1965	1550 Diesel		6	3 1/2 x 3 1/2	%	6P	4P	L6P	L4P			R101	R100	45	45
1966-67	1550 Diesel		6	3 1/2 x 3 1/2	%	4A		L6D	L4A			R103	R101	45	45

¹Replacement Ring for Factory Installed Insert

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

CONTINENTAL MOTORS

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Iron Int.	Exh.	VALVE SEATS			K-O Cutter Int.	Seat Angle Int.	Grind Int.	Wh. Ex. Pilot No.
								Lee-Alloy Int.	Chromalloy Exh.	Lee-Life Exh.				
1932-50	228, 338, 33R-PR501, 35R501	Own	6	4 1/2 x 5 1/2	3/4	19	16	L19	L16	J16	Z16	R108	R106	30 30 P247 P243 P86
1935-48	A244, A6244	Own	6	3 1/2 x 4 1/2	3/4	12	7	L12	L7	J7		R104	R102	30 45 P239 P235 P85
1940-64	B371, B6371	Own	6	4 1/2 x 4 1/2	3/4	18	13BU	L18	L13BU		Z13BU*	R107	R105	30 45 P245 P241 P86
1940-45	B405, B6405	Own	6	4 1/2 x 5	3/4	18	13BU	L18	L13BU*		Z13BU*	R107	R105	30 45 P245 P241 P86
1940-71	B427, B6427	Own	6	4 1/2 x 4 1/2	3/4	18	13BU	L18	L13BU*		Z13BU*	R107	R105	30 45 P245 P241 P86
1954-64	E201, E6201	Own	6	3 1/2 x 4 1/2	3/4	9	7R	L9	L7R			R103	R102	30 45 P237 P235 P84
1935-64	F124 (1 1/2" head valve)	Own	4	3 x 4 1/2	3/4	10	6CR	L10	L5CPH	J5CPH		R103	R101	30 45 P237 P233 P84
1938-64	F124, F106, F4124, F6106, PF124	Own	4, 6	3 x 4 1/2	3/4	10	7	L10	L7	J7		R103	R102	30 45 P237 P235 P84
1935-64	F140, F209, F4140, F6209 (1 1/2" head valve)	Own	4, 6	3 1/2 x 4 1/2	3/4	10	6CR	L10	L5CPH	J5CPH		R103	R101	30 45 P237 P233 P84
1935-66	F162, F4162, PF162, (1 1/2" head valve)	Own	4	3 1/2 x 4 1/2	3/4	10	6CR	L10	L5CPH	J5CPH		R103	R101	30 45 P237 P233 P84
1938-50	F218, F6218-2nd series	Own	6	3 1/2 x 4 1/2	3/4	10	7	L10	L7	J7		R103	R102	30 45 P237 P235 P84
1945-75	F226, F6226, F227, F6227	Own	6	3 1/2 x 4 1/2	3/4	10	7	L10	L7	J7		R103	R102	30 45 P237 P235 P84
1954-75	F244, F6244, F245, F6245, F135(4) 3 1/2 x 4 1/2	Own	6	3 1/2 x 4 1/2	3/4	10	6P	L10	L6P			R103	R101	30 45 P237 P233 P84
1959-75	FO-6226, FO6245 (3 1/2 x 4 1/2)	Own	6	3 1/2 x 4 1/2	3/4	9	L7MBE	L9		J9	Z9	R105	R103	30 45 P241 P236 P84
1940-66	G157, G6157, G134 (3 1/2 x 4 1/2)	Own	4	3 1/2 x 4 1/2	3/4	7	5	L7	L5			R102	R101	30 45 P235 P233 P84
1958-60	G176	Own	4	3 1/2 x 4 1/2	3/4			L7E	L5CPH*	J5CPH*		R102	R101	30 45 P234 P233 P84
1960-73	G193, G4193	Own	4	3 1/2 x 4 1/2	3/4	13	8	L13	L8	J8	Z8	R105	R102	30 45 P240 P235 P84
1945-64	H227, H243 (3 1/2 x 5 1/2) H260 (3 1/2 x 5 1/2) H277	Own	4	3 1/2 x 5 1/2	3/4	13	9BR	L13	L9BR	J9BR	Z9BR	R105	R103	30 45 P241 P237 P86
1945-64	HD243, HD260, (3 1/2 x 5 1/2) Diesel	Own	4	3 1/2 x 5 1/2	3/4	10	8BR	L10	L8BR			R103	R103	45 45 P237 P237 P86
1940-64	J382	Own	4	4 1/2 x 6	3/4	16C	13T	L16C	L13T	J13T	Z13T	R106	R105	30 45 P243 P240 P86
1954-64	JD382	Own	4	4 1/2 x 6	3/4	14C	10	L14C	L10	J10	Z10	R105	R103	45 45 P241 P237 P86
1940-64	K627 (K6290-3 1/2 x 4 1/2), (K6330-4 1/2 x 4 1/2)	Own	6	3 1/2 x 4 1/2	3/4	16	11T	L16	L11T	J11T		R106	R104	30 45 P243 P239 P97
1940-49	KD330	Own	4	4 x 4 1/2	3/4	14	9BR	L14	L9BR	J9BR	Z9BR	R105	R103	45 45 P241 P239 P97
1960-75	L6478	Own	6	4 1/2 x 4 1/2	3/4	21DR	17D	L17D				R108	R106	45 45 P247 P243 P86
1939-64	M253, M6253 (M271, M6271-3 1/2 x 4 1/2)	Own	6	3 1/2 x 4 1/2	3/4	16	11T	L16	L11T	J11T*		R106	R104	30 45 P243 P239 P97
1939-71	M290, M6290 (M330, M6330-4 1/2 x 4 1/2) M363, M6363	Own	6	3 1/2 x 4 1/2	3/4	16	11T	L16	L11T	J11T		R106	R104	30 45 P243 P239 P97
1948-66	N50, N62	Own	4	2 1/2 x 3 1/2	3/4	1	1	L1	L1			R732	R732	45 45 P227 P227 P83
1940-64	R513, R6513 (R572, R6572-4 1/2 x 5 1/2)	Own	6	4 1/2 x 5 1/2	3/4	22	18BX	L22	L18BX		Z18BX*	R109	R108	30 45 P251 P245 P87
1940-75	R602, R6602, (R584, R6586-4 1/2 x 5 1/2)	Own	6	4 1/2 x 5 1/2	3/4	22	18BX	L22	L18BX		Z18BX*	R109	R108	30 45 P251 P245 P87
1946-66	RD572, RD6572 Diesel	Own	6	4 1/2 x 5 1/2	3/4	20	16U	L20	L16U			R108	R106	45 45 P247 P243 P87
1945-75	S749, S6749 (S6820-5 1/2 x 5 1/2)	Own	6	5 1/2 x 5 1/2	3/4	27	22A	L27	L22A			R112	R110	30 45 P255 P251 P87
1954-67	SD802, SD6802 Diesel	Own	6	5 1/2 x 5 1/2	3/4	26	21D	L26				R111	R108	45 45 P251 P247 P87
1945-67	T371, T6371, (T6427-4 1/2 x 4 1/2), TD427, TD6427	Own	6	4 1/2 x 4 1/2	3/4	18	13BU	L18	L13BU		Z13BU	R107	R105	30 45 P245 P241 P86
1949-64	U6501, U501	Own	6	4 1/2 x 5 1/2	3/4	19	16	L19	L16	J16	Z16	R108	R106	30 45 P247 P243 P86
1955-64	V603, V6603	Own	8	4 1/2 x 4 1/2	3/4	27C	20	L20				R111	R108	30 45 P255 P247 P94M
1932-75	Y69, Y4069, Y91 (Y4091-2 1/2 x 3 1/2), (Y112, Y4112-3 1/2 x 3 1/2)	Own	4	2 1/2 x 3 1/2	3/4	5	2	L5	L2			R101	R99	30 45 P233 P229 P83
1948-56	Z120	Own	4	3 1/2 x 3 1/2	3/4	28P	28P	L28P	L28P			R736	R736	45 45 P228 P228 P83
1952-64	Z129	Own	4	3 1/2 x 3 1/2	3/4	28P	28P	L28P	L28P			R101	R100	30 45 P233 P231 P85
1953-60	Z134	Own	4	3 1/2 x 3 1/2	3/4	4P	4P	L4P	L4P			R101	R100	30 45 P241 P235 P85
1956-64	ZD129	Own	4	3 1/2 x 3 1/2	3/4	28H	28H	L28H	L28H			R101	R99	45 45 P233 P228 P8315
1966-75	L478, LD478 Diesel	Own	6	4 1/2 x 4 1/2	3/4	22	18BX	L22	L18BX*		Z18BX	R109	R108	30 45 P251 P245 P87

CUMMINS DIESEL ENGINES

1939-66	A Series: AA, AAT, AI, AIP, AM, J Series (2 Valve)	Own	6	4 x 5	3/4	11R	11R	L11R	L11R	J11R	Z11R	R104	R104	30 30 P239 P239 P84L
1932-66	H Series: HB, HBI, HBIS, HBS, HI, HIP, HIS, HM, HMS, HP, HPS, HR, HS Series	Own	4, 6	4 1/2 x 6	3/4	18	18	L18	L18		Z18R	R107	R107	30 30 P245 P245 P87M
1939-73	HR Series: HRB, HRBI, HRI, HRM, HPR, HRS	Own	6	5 1/2 x 6	3/4	18	18	L18	L18		Z18R	R107	R107	30 30 P245 P245 P87M
1939-73	NH Series: NHB, NHB1, NHBIS, NHB5, NHI, NHIS, NHM, NHMS, NHP, NHPS, NHRBIS, NHRBS, NHRIS, NHRPS, NHRS, NVH, NVHS, Ser. VT-12, NTO	Own	6, 12	5 1/2 x 6	3/4			L14(30)	L14(30)			R105	R105	30 30 P241 P241 P97L
Some models require our L14CT30, J14CT30, or Z14CT30 Rings which are the same as L14(30) except a depth of 3/4".														
1939-64	L Series: LT, LM, LP, K, KO, LR (7 1/2 x 10)	Own	6	7 x 10	3/4	31A	31A	L31B	L31B			R115	R115	30 30 P259 P259 P99
1939-73	JM and JT Series, C and J Series (4 Valve 3/4" Pilot)	Own	6	4 1/2 x 5	3/4			L7C	L7C			R102	R102	30 30 P235 P235 P97L
1961-73	NH, NT, V12 (5 1/2"), V6 (VIM), V8 (VINE) 1 1/2" Valve Engines Require R214P15 Pilot	Own	8	5 1/2 x 5	3/4	17D	17D	L17D	L17D			R106	R106	30 30 P243 P243 P86M
1962-73	V8 265 Engine	Own	8	5 1/2 x 6 1/2	3/4			L17D	L17D			R106	R106	30 30 P243 P243 P97L
1961-73	V6 (VALE), V8 (VALE) 5 1/2 x 4 1/2	Own	6, 8	5 1/2 x 5	3/4	12CE	12CE	L12CE	L12CE	J12CE	Z12CE	R104	R104	30 30 P238 P238 P85L
1975	KT, KTA	Own	6, 12	6 1/2 x 6 1/2	3/4			Intake and Exhaust 2 1/2" x 2 1/2" x 3 1/2"				R109	R109	30 30 P247 P247 P87

*Reactor Pilot R216M2 Required

DE SOTO AUTOMOBILES

1942-54	S15, S18, S20	Own	6	3 1/2 x 4 1/2	3/4			L14CE	L10R10	J10R10	Z10R10	R104	R103	45 45 P239 P237 P84
1952-54	S16, S17, S19, (3 1/2 x 3 1/2)	Own	8	3 1/2 x 3 1/2	3/4			L14CE	L8R10		Z8R10	R105	R102	45 45 P241 P235 P85
1955	S21, S22	Own	8	3 1/2 x 3 1/2	3/4	13A	10R	L13A	L10R	J10R		R106	R103	45 45 P243 P237 P85
1956-57	S23, S24, S25, S26 (3 1/2 x 3 1/2)	Own	8	3 1/2 x 3 1/2	3/4	18D		L18D	L16BE			R107	R105	45 45 P245 P241 P85
1957	S27	Own	8	3 1/2 x 3 1/2	3/4	17C		L17C	L10E			R106	R103	45 45 P245 P236 P85
1958-63	LS1 (4 1/2 x 3 1/2), LS2, LS3, LS35, MS1, PS1, PS3, 361	Own	8	4 1/2 x 3 1/2	3/4	208		L13CE	J13CE			R107	R104	45 45 P245 P239 P85
1959-61	MS2, MS3, 383 Eng.	Own	8	4 1/2 x 3 1/2	3/4	21DR		L13CE	J13CE			R108	R104	45 45 P247 P239 P85

*Replacement Ring for Factory Installed Insert

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Life Rings.

DATA BOOK

DODGE AUTOMOBILES

Year	Model	Make	Eng. Cyl	B&S	Pilot Size	Cast Iron Int.	Exh.	VALVE SEATS				SEAT GRINDER						
								Lee-Alloy Int.	Exh.	Chromalloy Int.	Lee-Lite Exh.	K-O Cutter Int.	Exh.	Seat Angle Int.	Grind. Exh.	Wh. Exh.	Ex. Pilot No.	
1942-59	D22-D34, D41-D47, D51-D56, D62, D72, LD1, MD1		6	3 3/4"x4"	%	10		L10E	LBRH10		ZBRH10	R103	R102	45	45	P237	P237	P84
1953-54	D44, D48, D50, D53		6	3 3/4"x3 3/4"	%			L13CE	LBRH10		ZBRH10	R104	R102	45	45	P239	P235	P85
1955-56	D55-1, D55-2, D53, D63-2, D63-3, D63-1 (3 1/2"x3 3/4")		8	3 1/2"x3 3/4"	%	9		L14CE	L9	J9	Z9	R105	R103	45	45	P241	P237	P85
1957-60	D66, D67, D70, D71, LD2, MD2		8	3 1/2"x3 3/4"	%	9		L18E	L9	J9	Z9	R106	R103	45	45	P243	P236	P85
1958-60	LD3, MD3, PD1 350 and 361		8	4 1/4"x3 3/4"	%	208			L13CE	J13CE		R107	R104	45	45	P245	P239	P85
1960-75	DART 6, and all models with 198, 225 engines		6	3 1/2"x4 1/4"	%			L13CE	L8E	J8E		R104	R102	45	45	P239	P234	P85
1961-69	LANCER, DART, 170 eng.		6	3 3/4"x3 3/4"	%			L13CE	L8E	J8E		R104	R102	45	45	P239	P234	P85
1960-69	All Models with 318 and 326 Engine		8	3 1/2"x3 3/4"	%	148TH			L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85
1968-75	All Models with 318 Engine		8	3 3/4"x3 3/4"	%	148TH10E			L10E			R106	R103	45	45	P243	P236	P85
1968-73	All Models 340 Engine		8	4 1/4"x3 3/4"	%	208			L13CE	J13CE		R107	R104	45	45	P245	P239	P85
1961-67	All Models with 361 Engine		8	4 1/2"x3 1/4"	%	21DR			L13CE	J13CE		R107	R104	45	45	P245	P239	P85
1959-67	Eng. 383, 413 (4 1/2"x3 3/4"), 426 thru 1965 (4 1/2"x3 1/4"), 440		8	4 1/2"x3 1/4"	%	21DR			L13CE	J13CE		R107	R104	45	45	P245	P239	P85
1964-67	DART 273 Engine, 1967 LA318-1		6	3 1/2"x3 3/4"	%		10E	L16BE	L10E			R105	R103	45	45	P241	P236	P85
1966-73	426 Engine		8	4 1/4"x3 3/4"	%	19E						R109	R106	45	45	P247	P243	P83
1966-67	440 Power Pac		8	4 1/4"x3 3/4"	%	21DR 17E						R108	R105	45	45	P247	P241	P85
1968-75	All Models 383 and 440 Engines (4 1/2"x3 3/4")		8	4 1/2"x3 1/4"	%	21DR		L16BE				R108	R105	45	45	P247	P241	P85
1971-75	360 Engine		8	4 1/2"x3 3/8"	%	16	12CE	L16	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85
1972-75	400 Engine		8	4 3/4"x3 3/8"	%	21DR 16E		L16E	J16E			R108	R105	45	45	P247	P241	P85

DODGE TRUCKS

1942-60	B1B, B1C, B2B, B2C, B3B, B3C, B4B, B4C, WC & WD15 after T112-42001	6	3 1/2"x4"	%			L10E	LBRH10	ZBRH10	R103	R102	45	45	P236	P235	P84	
1942-60	B1D, B1DU, B2D, B2PW, B3D, B4D, WD20 and WD21 after T116-42001, C1B6, C6, D6, F6, C3, B6 C6 D6 F6	6	3 1/2"x4"	%			L10E	LBRH10	ZBRH10	R103	R102	45	45	P236	P235	P84	
1942-60	B1F, B1H, B2F, B2C, B2H, B3F, B3C, B3H, B4F, B4C, B4H, WF after Eng. T118-42001, C1G6-H6, C3G6-H6	6	3 1/2"x4"	%	14C		L14C	L10R10	J10R10	Z10R10*	R105	R103	45	45	P241	P237	P84
1949-60	B1J, B1K, B2J, B2K, B3J, B4K, C1J6-K6, C3J6-K6 (% Exh. for Sodium Valves)	6	3 1/2"x4"	%	14C		L14C	L10R10	J10R10	Z10R10	R105	R103	45	45	P241	P237	P84
1946-51	B1T, B2T, B1V, B2V, B1R, B2R, B2Y (% Exh.)	6	3 1/2"x5	%	18D 14T		L18D	L14T			R107	R105	45	45	P245	P241	P85
1951-56	B3R, B3T, B3V, B3Y, B4R, B4T, B4V, B4Y, C1Y6-YA6, C3Y6 (4"x5 1/4") (% Exh.)	6	3 1/2"x4 1/4"	%			L14CY57	J14CY57	Z14CY57	R107			45	45	P245	P241	P85
1954-56	C1G8-H8	8	3 1/2"x3 3/4"	%	12C		L12C	LBRH10	ZBRH10	R104	R102	45	45	P239	P235	P85	
1954-56	C1J8-K8, C3J8-K8 (% Exh.)	8	3 1/2"x3 3/4"	%	14C		L14C	LBRH10	ZBRH10	R105	R102	45	45	P241	P235	P85	
1954-58	C188-T8-UB, C388-T8-UB, KB-D700, KB-D800, KB-C700, KB-S700 (331 Eng.) (% Exh.)	8	3 1/2"x3 3/4"	%	18E		L16BY57	J16BY57	Z16BY57	R106	R106	45	45	P243	P243	P85	
1954-56	C188-C8-D8, C388-C8-D8, F8-G8-H8 (3 1/2"x3 3/4")	8	3 1/2"x3 3/4"	%	13	8	L13E	L8	J8	Z8	R105	R102	45	45	P241	P235	P85
1957-58	K6-D100, D200, D300, P300, P400, (230 Eng.)	6	3 1/2"x4"	%			L10E	LBRH10	ZBRH10	R103	R102	45	45	P236	P235	P84	
1957-60	K8 and L8 D100, D200, D300, D400, D500, D600, C500, C600, P300, P400, S400, S500, S600 (315 Eng.)	8	3 1/2"x3 3/4"	%	16		L16	L9H28			R106	Spec	45	45	P243	P237	P84
1957-69	251 Eng., 265 Eng. (% Exh. 13"x4 1/4")	6	3 1/2"x4 1/4"	%	14C		L14C	L10R10	J10R10	Z10R10	R105	R103	45	45	P241	P237	P84
1957-67	354 Engine (% Exh.)	8	3 1/2"x3 3/4"	%			L19C	L16BY57	J16BY57	Z16BY57	R107	Spec	45	45	P245	P242	P84
1959-63	318 Engine, LA318-1, LA318-3	8	3 1/2"x3 3/4"	%			L18E	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85
1964-75	318, 318LA Premium Engine	8	3 1/2"x3 3/4"	%			L18E	L9HU57	Z9HU57	R106			45	45	P243	P237	P85
1960-75	360, 361, 400, 413 Engs. (% Exh.) 413 Engs. B&S 4 1/2"x4"	8	4 1/2"x3 3/4"	%			L18E	L9HU57	Z9HU57	R106			45	45	P243	P237	P85
1961-75	All Models with 170, 198 and 225 (3 1/2"x4 1/4") Engines	6	3 1/2"x3 3/4"	%			L13CE	L8E	J8E		R104	R102	45	45	P239	P234	P85
1966-75	383, 400, 440 (4 1/2"x3 1/4")	8	4 1/2"x3 1/4"	%	21DR		L16BE				R107	R105	45	45	P245	P241	P85
1972-75	360 Engine	8	4 1/2"x3 1/4"	%	16 12CE	L16	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85	
Dodge Diesel Trucks Use Cummins and Detroit Engines. 1HC 478 and 549 Gas Engines on 1969 H.D. Models. See These Engine Listings.																	

Dodge Diesel Trucks Use Cummins and Detroit Engines. 1 H.C. 478 and 549 Gas Engines on 1969 H.D. Models. See These Engine Listings.

EDSEL

1958-59	361 Engine (EDD), 1959 (4x3 3/4") 332 Engine	Own	8	3"x3 3/4"	%	208		L12CE	J12CE	Z12CE	R107	R104	30	45	P245 P238 P85F
1958-59	410 Engine (EDH)	Own	8	4"x3 3/4"	%	21D		L16BE			R107	R105	45	45	P245 P241 P85

R211P30 Resistor Pilot is used for 1/4 guide size.

FAIRBANKS-MORSE

Z (1 1/2 H.P. and 2 H.P.)		%											45	45	P231 P231 P83
Z (3 H.P.)		%											45	45	P235 P235 P85
Z (5 H.P.)		%	16	16	L16	L16	J16	Z16	R106	R106	45	45	45	45	P243 P243 P86
Z (7 1/2 H.P.)		%	22A	22A	L22A	L22A			R110	R110	45	45	45	45	P251 P251 P86
ZD14 (2 H.P.)		%	3	3	L3	L3			R100	R100	45	45	45	45	P229 P229 P83
ZC52 (3 H.P.)		%	7	6	L7	L6	J6		R102	R101	45	45	45	45	P234 P233 P85
ZC118 (7 H.P.)		%	16	16	L16	L16	J16	Z16	R106	R106	45	45	45	45	P243 P243 P86
ZC208 (9 H.P.)		%	22	22	L22	L22			R109	R109	45	45	45	45	P251 P251 P86
ZC346 (12 H.P.) % Exhaust, Late Heads with 2 intake valves require 22 intake ring		%	27C	27C	L27C	L27C			R111	R111	45	45	45	45	P255 P255 P88L
ZC503 (17 H.P.) % Exhaust, Late Heads with 2 intake valves require 22 intake ring		%							R115	R115	45	45	45	45	P261 P261 P88L
ZC739 (25 H.P.) % Exhaust		%	27C	36	L27C				R111	R120	45	45	45	45	P255 P263 P88L

Valve Seats can be made in our "Chromalloy" Material for engines using Propane, Butane or Natural Gas Fuel.

FERGUSON TRACTORS (See Massey-Ferguson)

1948-50	Ferguson TO-20, TE-20	Cont. Z120	4	3"x3 3/4"	%	28P	28P	L28P	L28P			R736	R736	45	45	P227 P227 P835
1951-54	Ferguson TO-30	Cont. Z129	4	3 1/2"x3 3/4"	%	6	4P	L6	L4P			R101	R100	30	45	P233 P231 P835
1955-58	Ferguson TO-35, TO-35 Deluxe, P40, AMO-60	Cont. Z134	4	3"x3 3/4"	%	6	4P	L6	L4P			R101	R100	30	45	P233 P231 P835
1958-60	TO35 Diesel (% Exhaust)		4	3"x4"	%	8A	6CR	L8A	L6CR			R103	R101	45	45	P237 P233 P835

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

FORD AUTOMOBILES

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS		Chromalloy Exh.	Lee-Lite Exh.	K-O Cutter Int.	Seat Angle Int.	Grind. Int.	Wh. Ex. Pilot No.
								Lee-Alloy Int.	Exh.						
1928-32	A, AA, B	Own	4	3 1/2 x 4 1/4	1 1/2	10	10	L10	L10	J10	Z10	R103	R103	45 45	P237 P237 P92
1933-42	01A, 11A, 21A, 14, 18, 40, 48, 68, 78, 81A, 91A 85 & 90 H.P.	Own	8	3 1/2 x 3 1/2	1 1/2	10	10+5	L10	L10+5			R103	R103	45 45	P237 P237 P91L
1937-40	022A, 74, 82A, 922A	60 H.P.	8	2 1/2 x 2 1/2	850	6	6	L6	L6	J6		R101	R101	45 45	P233 P233 P90
1941-48	1GA, 2GA, 3GA, 6GA, 7GA, HA, C, Y, T	95 H.P.	6	3 3/4 x 4	1 1/2	13	10+5	L13	L10+5			R105	R103	45 45	P241 P237 P91L
1946-48	59A, 69A, 79A, 89A, BA	100 H.P.	8	3 1/2 x 3 1/2	1 1/2	10	10+5	L10	L10+5			R103	R103	45 45	P237 P237 P91L
1949-51	OHA, HO, 1HA (226 Eng.)	Own	6	3 3/4 x 4	1 1/2	13	10+5	L13E	L10+5			R105	R103	45 45	P241 P237 P94
1952-53	1HA, AH 6 cyl. (overhead Valve) (215 Eng.)	Own	6	3 5/8 x 3 6	1 1/2	13	98TH	L13E	L98TH	J98TH	Z98TH	R105	R103	45 45	P241 P237 P94
1949-53	08A, 18A, AH V8's	Own	8	3 1/2 x 3 1/2	1 1/2	10	10+5	L10	L10+5			R103	R103	45 45	P237 P237 P94
1954	EBU, AH V8's (239 Eng.)	Own	8	3 1/2 x 1	1 1/2	13		L13E	L9ATH	J9ATH		R105	R103	45 45	P241 P237 P94
1958-60	332 and 352 (4x3 1/2) V-8 Engines	Own	8	4 1/2 x 1 1/2	1 1/2	208		L12CE	L12CE	Z12CE		R107	R104	30 45	P245 P238 P85F
1960-64	Falcon 144 Eng. (170, 200 (3 1/2 x 2 1/2) Int. 10C)	Own	6	3 1/2 x 2 1/2	1 1/2	9		L9	L5CH			R103	R101	45 45	P236 P232 P83S
1960-64	221 and 260 (3 1/2 x 2 1/2) Engines	Own	8	3 1/2 x 2 1/2	1 1/2		8	L12CE	L8	J8	Z8	R104	R102	45 45	P238 P235 P83
1954-58	EBP, (223 Eng.) AH 6 cyl. OHV	Own	6	3 6/8 x 3 6	1 1/2	17D		L17D	L9ATH	J9ATH	Z9ATH	R106	R103	45 45	P243 P237 P94
1959-67	223 Engine	Own	6	3 1/2 x 3 1/2	1 1/2		9	L168E	L9	J9	Z9	R105	R103	45 45	P240 P237 P94
1962-65	289 Engine	Own	8	4 1/2 x 2 1/2	1 1/2		9	L14CE	L9	J9	Z9	R105	R103	45 45	P240 P236 P94
1955-56	272, 292	Own	8	3 1/2 x 3 1/2	1 1/2			L16E	L9ATH	J9ATH	Z9ATH	R105	R103	45 45	P240 P236 P94
1957-59	AH V8's (272, 292, 312 Eng.)	Own	8	3 1/2 x 3 1/2	1 1/2	19E		L9ATH	L9ATH	J9ATH	Z9ATH	R106	R103	45 45	P241 P237 P94
1962-64	292 Engine with Seats	Own	8	3 1/2 x 3 1/2	1 1/2		98TH	L13CE	L98TH	J98TH	Z98TH	R104	R103	45 45	P239 P237 P94
1960-64	292 Engine without Seats	Own	8	3 1/2 x 3 1/2	1 1/2			L13CE	L9ATH	J9ATH	Z9ATH	R104	R103	45 45	P239 P236 P94
1958-60	430 Engine	Own	8	4 1/2 x 3 1/2	1 1/2	21DR		L168E				R108	R105	30 45	P247 P241 P85
1960-65	430 Engine Mfg. after November 24, 1959	Own	8	4 1/2 x 3 1/2	1 1/2	19C		L19C	L13CE	J13CE		R107	R104	45 45	P245 P239 P85F
1965-75	170, 200 (3 1/2 x 3 1/2), 250 Engines	Own	6	3 1/2 x 2 1/2	1 1/2		8	L13CE	L8	J8	Z8	R104	R102	45 45	P239 P235 P83S
1965-75	289, 302 (4x3) Engines	Own	8	4 1/2 x 2 1/2	1 1/2		9	L168E	L9	J9	Z9	R105	R103	45 45	P241 P236 P94
1961-71	352, 360, 390 (4 1/2 x 3 1/2) Eng. 406 (4 1/2 x 3 1/2), 410, 428	Own	8	4 1/2 x 3 1/2	373	208		L12CE	L12CE	Z12CE		R107	R104	45 45	P245 P238 P85F
1965-73	240, 300 Engines	Own	6	4 1/2 x 3 1/2	1 1/2		12CE	L168E	L12CE	J12CE	Z12CE	R105	R104	45 45	P241 P238 P94
1964-69	ECB-427 (1966-67 Take L16E Exhaust) 428 Cobra Jet	Own	8	4 1/2 x 3 1/2	373	21DR		L14CE				R108	R104	30 45	P247 P240 P85F
1966-69	EGC-462	Own	8	4 1/2 x 3 1/2	373	208		L13CE		J13CE		R107	R104	45 45	P245 P239 P85F
1971-75	98 CID (4 cyl.) 1.6 Litre-Kent	Own	4	3 1/2 x 3 1/2	1 1/2	9A	5P	L12E				R104	R101	45 45	P238 P233 P83
1971-75	122 CID (4 cyl.) 2.0 Litre (Int. 1 1/2 x 1 1/2)	Own	4	3 1/2 x 3 1/2	1 1/2		8		L8	J8	Z8	R104	R102	45 45	P239 P235 P83S
1970-75	351 CID 2V Windsor	Own	8	4 1/2 x 3 1/2	1 1/2	17E	10		L10	J10	Z10	R105	R103	45 45	P242 P237 P94
1970-75	351 CID 2V Cleveland, 400 CID 2V, 429-460 CID 4V	Own	8	4 1/2 x 3 1/2	1 1/2	21DR		L13CE	J13CE			R108	R104	45 45	P247 P239 P94
1970-75	351 CID 4V, 429 CID 4V Cobra Super Cobra	Own	8	4 1/2 x 3 1/2	1 1/2	238		L14CE				R109	R104	45 45	P247 P240 P94
1970-75	429 CID 4V Boss	Own	8	4 1/2 x 3 1/2	1 1/2					J18CT		R110	R106	45 45	P251 P243 P85F

R211P30 or R212M2 Reseater Pilot is used for 373 Guide Size.

FORD TRUCKS, BUSES AND INDUSTRIAL ENGINES

1939-53	All Trucks and Buses 100 H.P. (1949-53, 239 Eng.)	Own	8	3 1/2 x 3 1/2	1 1/2	10	10+5	L10	L10+5			R103	R103	45 45	P237 P237 P91L
1941-48	All Trucks and Buses 90 H.P.	Own	6	3 3/4 x 4	1 1/2	13	10+5	L13	L10+5			R105	R103	45 45	P241 P237 P91L
1949-53	All Trucks and Buses 254 (3 1/2 x 4)	226	6	3 3/4 x 4	1 1/2		10+5	L13E	L10+5			R105	R103	45 45	P241 P237 P94
1948-51	F7, F8 145 H.P., (Exh. oversize ring 11R or 11T)	337	8	3 1/2 x 4 1/2	1 1/2	17D		L17D	L10+5			R106		45 45	P243 P239 P94
1952	F7, F8 145 H.P., (Overhead valve)	279	8	3 1/2 x 4 1/2	1 1/2	17D	98TH	L17D	L98TH	J98TH	Z98TH	R106	R103	45 45	P243 P237 P94
1953	All Trucks 6 Cyl. OHV 215 Eng.	Own	6	3 1/2 x 6	1 1/2		98TH	L13E	L98TH	J98TH	Z98TH	R105	R103	45 45	P241 P237 P94
1953	F570, C750, B750 145 H.P., EAM, J8317	Own	8	3 5/8 x 3 1/2	1 1/2	14	98TH	L14	L98TH	J98TH	Z98TH	R105	R103	45 45	P241 P237 P94
1953	F800, F900, C800 155 H.P., EAM, J8317	Own	8	3 1/2 x 3 1/2	1 1/2	17D	98TH	L17D	L98TH	J98TH	Z98TH	R106	R103	45 45	P243 P237 P94
1954-58	Courier, F100-F500, ERB, S, T, JF (223 Eng.)	Own	6	3 6/8 x 3 1/2	1 1/2	17D		L17D	L9ATH	J9ATH		R106	R103	45 45	P243 P237 P94
1954-56	F100-F600, EBV, EBW, JG (239 Eng.)	Own	8	3 1/2 x 3 1/2	1 1/2			L13E	L9ATH	J9ATH		R105	R103	45 45	P239 P237 P94
1954-56	F600, F700, ERZ, JH (256 Eng.)	Own	8	3 6/8 x 3 1/2	1 1/2		98TH	L168E	L98TH	J98TH	Z98TH	R105	R103	45 45	P241 P237 P94
1954-56	F750, T700, CAB C750, B750, EAL, JG-N (279, 302)	Own	8	3 5/8 x 3 1/2	1 1/2	208	98TH	L98TH	L98TH	J98TH	Z98TH	R107	R103	45 45	P241 P237 P94
1954-56	F800, F900, T800, C800, C900, EAM, JH-N (317, 332)	Own	8	3 5/8 x 3 1/2	1 1/2	208	98TH	L98TH	L98TH	J98TH	Z98TH	R107	R103	45 45	P245 P237 P94
1956 F700, F750, F800, F900, T700, T750, T800, C700, C750, C800, C900, B700, B750 Have 1/2 Exhaust															
1957-59	EDB, EEH, EEJ (292 Eng.) EEK has 1/2 Exh.	Own	8	3 1/2 x 3 1/2	1 1/2	19C	98TH	L19C	L98TH	J98TH	Z98TH	R107	R103	45 45	P245 P237 P94
1959-71	223 Engine	Own	6	3 1/2 x 3 1/2	1 1/2		10	L168E	L10	J10	Z10	R105	R103	45 45	P240 P236 P94
1957-64	ECS (302 Eng.), ECT (332 Eng.), (3 1/2 x 3 1/2) 1/2 Exh.	Own	8	3 1/2 x 3 1/2	1 1/2	19C	98TH	L19C	L98TH	J98TH	Z98TH	R107	R103	45 45	P245 P237 P85F
1958-73	EDL (401 Eng.), EDM (477 Eng.), EDN (534 Eng.), (4 1/2 x 4 1/2)	Own	8	4 1/2 x 3 1/2	1 1/2		12T	J19T28	L12T	J12T		R104		45 45	P247 P239 P85S
1960-64	292 EEK Engine with Seats	Own	8	3 1/2 x 3 1/2	1 1/2		98TH	L13CE	L98TH	J98TH	Z98TH	R104	R103	45 45	P239 P237 P94
1960-64	292 EEH and EEJ Engines without Seats	Own	8	3 1/2 x 3 1/2	1 1/2			L13CE	L9ATH	J9ATH	Z9ATH	R104	R103	45 45	P239 P236 P94
1962-64	262 EER Engine	Own	6	3 1/2 x 2 1/2	1 1/2		98TH	L168E	L98TH	J98TH	Z98TH	R106	R103	45 45	P242 P237 P85F
1960-64	144 EEN, EEV (170 EET, 200 EFZ, Int. 10C)	Own	6	3 1/2 x 2 1/2	1 1/2	9		L9	L5CH			R103	R101	45 45	P236 P232 P83S
1965-75	170, 200 (3 1/2 x 3 1/2), 250 Engines	Own	6	3 1/2 x 2 1/2	1 1/2		8	L13CE	L8	J8	Z8	R104	R102	45 45	P239 P235 P83S
1962-65	289 Engines	Own	8	4 1/2 x 2 1/2	1 1/2		9	L14CE	L9	J9	Z9	R105	R103	45 45	P240 P236 P94
1965-75	289, 302 (4x3) Engines	Own	8	4 1/2 x 2 1/2	1 1/2		9	L16E	L9	J9	Z9	R105	R103	45 45	P240 P236 P94
1964-75	330 EFU, (330 EFV, 361 EFV, 391 EFY (4 1/2 x 3 1/2) 1/2 Exh.)	Own	8	3 1/2 x 3 1/2	1 1/2		98TH	L14C	L98TH	J98TH	Z98TH	R105	R103	45 45	P240 P237 P85F
1965-75	240, 300 Engines	Own	6	4 1/2 x 3 1/2	1 1/2		12CE	L168E	L12CE	J12CE	Z12CE	R105	R104	45 45	P241 P238 P94
1961-75	352, 390 Engines	Own	8	4 1/2 x 3 1/2	373	208		L10AR	L10AR	J10AR	Z10AR	R107	R104	45 45	P245 P238 P85F
1964-75	EGC-462 Engine	Own	8	4 1/2 x 3 1/2	373	208		L13CE		J13CE		R107	R104	30 45	P247 P239 P85F
1966-75	427 Engine (1966-67 Take L16E Exhaust) 429, 460	Own	8	4 1/2 x 3 1/2	373	21DR		L14CE				R108	R104	30 45	P247 P240 P85F
1960-75	HDT850, HD950, HDT950, MD10004 CUM-NH180, NH220	Own	6	4 1/2 x 6	1 1/2			L14J30	L14J30			R105	R105	30 30	P241 P241 P97L
1968-75	360 CID, 390 CID, 428 CID	Own	8	4 1/2 x 3 1/2	373	208		L12CE		J12CE	Z12CE	R107	R104	45 45	P245 P238 P85F

R211P30 Reseater Pilot is used for 1/2 Guide Size. Special production oversize seats are available.

FORD TRACTORS

1939-48	Ford-Ferguson 2N, 8N, 9N	Own	4	3 1/2x3 1/2	1 1/2	10	6	L10	LSCPH	JSCPH		R103	R101	45	45	P237	P233	P91L
1949-52	Ford 8N, 8NAN	Own	4	3 1/2x3 1/2	1 1/2	10	6	L10	LSCPH	JSCPH		R103	R101	45	45	P237	P233	P94
1953-60	Ford NAA, NAB, NCA, NDA (Eng. EAE, EAF)	Own	4	3 1/2x3 1/2	1 1/2		11	L13E	L11			R105	R104	45	45	P239	P238	P94
1957-64	134 Eng., 172 Eng. 3 1/2x3 1/2, 172 Diesel		4	3 1/2x3 1/2	1 1/2			L13CE	L98H5			R105	R103	45	45	P240	P237	P94
1961-66	144, 144D		4	3 1/2x3 1/2	1 1/2		4P	L98H	L4P			R103	R100	45	45	P237	P231	P94
1961-71	223 Gas		6	3 1/2x3 1/2	1 1/2			L13CE	L98TH	J98TH	Z98TH	R105	R103	45	45	P240	P237	P94
1961-71	242 Diesel		6	3 1/2x3 1/2	1 1/2			L12E	L68P			R104	R102	45	45	P239	P234	P94
1963-66	220 Diesel (L14E10 or J14E10 Special Production)		4	3 1/2x4 1/2	1 1/2	10A		L14E10-L10A				R105	R104	30	30	P241	P239	P85F
1963-66	1527 Diesel		3		1 1/2	12CE	7	L12CE	L7A	J7		R104	R102	45	45	P238	P234	P83
1966-75	158, 175, 233 4 Cyl. (4.2x4.2), 192, 201, 256		3	4.2x3.8	373	17C		L17C		J98TH		R106	R103	45	45	P243	P238	P85F
1971-73	8000, 9000 Diesel, 4010,		6	4.4x4.4	379			Intake 1 1/2 x 1 1/2	1900 x 1 1/2	J98TH	Z98TH	R106	R103	45	45	P243	P238	P85F

DATA BOOK

GMC TRUCKS AND INDUSTRIAL ENGINES

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS				SEAT GRINDER						
								Lee Alloy Int.	Chromalloy Exh.	Lee-Lite Int.	K-O Cutter Exh.	Seat Angle Int.	Grind. Wh. Exh.	Ex. Pilot No.				
1939-48	278, 308 (3"x4")	Own	6	3 1/2"x4"	1/2	16C	10AU	L16C	L10AU	J10AU*	Z10AU*	R106	R104	45	45	P243	P239	P85
1939-48	426, 451 (4"x5), 477 (4"x5)	Own	6	4"x5"	1/2	17	13BX	L17	L13BX			R107	R105	45	45	P245	P241	P85
1939-62	228, 236 (3"x3"), 248 (3"x3"), 256, 270 (3"x3") Specify 45° Ring for 270° Engine and 1950 Model 248	Own	6	3"x3"	1/2	12C		L12C	L7ATH		Z7ATH	R104	R103	30	30	P239	P237	P84
1949-60	303 (361-4"x4"), 426 (4"x5)	Own	6	4"x5"	1/2	17	13BX	L17	L13BX			R107	R105	45	45	P245	P241	P85
1950-56	318, 360 (4"x4")	Own	6	3 1/2"x4"	1/2	16	10AU	L16	L10AU	J10AU	Z10AU	R106	R104	30	30	P243	P243	P85
1951-58	302	Own	6	4x4	1/2	13A	10AU	L13A	L10AU	J10AU	Z10AU*	R105	R103	30	30	P241	P236	P86
1955-58	288, 316 (3"x3")	Own	8	3 1/2"x3"	1/2	13B	8B	L13B	L8B			R105	R103	30	30	P241	P236	P84
1957-60	347, 336 (3"x3")	Own	8	3 3/4"x3"	1/2	17C		L17C	L9BSH10		Z9BSH10	R106	R103	30	30	P242	P238	P84
1957-60	370 (4"x5 EXH.)	Own	8	4x3 1/2"	1/2			L16RE	L12J5			R105	R103	45	45	P240	P237	P84
1940-50	2-71, 3-71, 4-71, 6-71	Diesel	2,3,4,6	4"x5"	1/2				L8ATH	J8ATH*	Z8ATH	R103					P237	P84
1951-62	2-71, 3-71, 4-71, 6-71 (2 valves per cyl.)	Diesel	2,3,4,6	4"x5"	1/2				L9BSH*	Z9BSH*		R103					P237	P84L
1958-73	71 Series (4 valves per cyl.)		4,6	4"x5"	1/2				L4TH8*								P232	P83L
1951-68	6-110 Series (2 valves)	Own	6	5x5.6	1/2				L16D)15		Z16D)15*	R107					P245	P85
1958-68	6-110 Series (4 valves per cyl.)		6	5x5.6	1/2				L8BTH			R103					P236	P83
1960-75	53 Series Diesel (2 valves)		2,3,4	3"x4"	1/2				L8E	J8E		R102	60	60			P234	P83
1960-75	53 Series Diesel (4 valves)		6	3"x4"	1/2					J2BTH30		Spec.					P229	P95
1963-75	153, 194, 230, 250, 292		4,6	3"x3"	1/2	9	L14CE	L9		J9	Z9	R105	R103	45	45	P240	P236	P84
1960-75	305A, 305B, 305C, 305D, 305E		V6	4"x3"	1/2	18	10R	L18	L10R	J10R		R107	R103	30	30	P245	P237	P84
1960-72	351, 351C, 401, 478, 702 (1/2 Exhaust) 401, 4"x3"		V6	4"x3"	1/2	21DR			L16H10*		Z16H10*	R108	R106	30	30	P247	P243	P85
1966-73	351E, 351M, 401M, 478M		V6							J17H		R109	R106	30	30	P247	P243	P85
1966-73	D351					198			L12E		Z12E	R108	R104	45	45	P247	P239	P84
1964-73	D478, DH478, 637 Gas, D & DH637 (3/4 Exhaust)					25C		L25C		J17K16		R110		45	45	P251	P243	P85
1968-73	307, 350 Engines (4x3")		8	3 1/2"x3"	1/2	16C	9	L16C	L9	J9	Z9	R106	R103	45	45	P242	P236	P84
1973-74	379 (Int. Ring 21DR), 432 (4"x3"), 478M (5"x3") All 1/2 Exh.		6	4"x3"	1/2	22R				J17H		R109	R106	30	30	P247	P243	P85
1972-75	954 Engine		8	4"x4"	1/2	21DR	13	L13		J13	Z13	R108	R105	45	45	P247	P240	P85
* Exhaust on Engines 360, 426, 503. Special production oversize rings are available																		

* Exhaust on Engines 360, 426, 503. Special production oversize rings are available

HALL-SCOTT ENGINES (HERCULES)

1934-50	130, (135-4"x5)	Own	6	4"x5"	1/2	23B	22U		L22U			R109	R109	30	30	P251	P247	P86
1939-54	131, (136-4"x5)	Own	6	4"x5"	1/2	21		L21				R109	R108	30	30	P247	P247	P86
1940-54	168, 169, 193, 184, 186-1, 187-1 (1/2 Exh.)	Own	6	5"x7"	1/2	32	32					R115	R115	30	30	P261	P261	P87
1930-54	175, 175-1, (176-5"x6), (177-5"x6)	Own	6	5x6	1/2	27C	27B	L27C				R112	R112	30	30	P255	P255	P86
1934-54	180-1-3-5 (1/2 Exh.)	Own	6	5x6	1/2	32		L32	L27E*			R115	R112	30	30	P261	P255	P87
1939-57	190-1-2-3-5 (1/2 Exh.)	Own	6	5"x6	1/2	30		L30			Z22AZH*	R113	R110	30	30	P259	P251	P87
1940-67	400, 440, 401, (1/2 Exh.)	Own	6	5"x7"	1/2	30		L30			Z22AZH*	R113	R110	30	30	P259	P251	P87
1940-58	450, 470, 471 (5"x6), 480, 481 (5"x6) (1/2 Exh.)	Own	6	5x6	1/2	30		L30			Z22AZH*	R113	R110	30	30	P259	P251	P87
1950-58	504	Own	6	4"x5"	1/2	21		L21				R109	R108	30	30	P247	P247	P86
1945-67	226B-9, 228B-7 B 9, 336B-9, 338B-7 (1/2 Exh.)	Own	12	5"x7"	1/2	32						R115	R114	30	30	P261	P259	P87
1953-58	855, 935 (5"x6), 1091 (5"x7) (1/2 Exh.)	Own	6	5"x6"	1/2	30		L30			Z22AZH	R112	R110	45	45	P255	P251	P87
1954-67	590	Own	6	5x5	1/2			L26CU	L26CU			R110	R110	45	45	P251	P251	P87
1956-67	6156, 6182 (5"x7)	Own	6	5"x6"	1/2	30		L30			Z22AZH*	R112	R110	30	30	P255	P251	P87

* Exhaust pilot (P93). Requires Ring 2 1/2 x 2 1/2 x 1/2. Special Production.

HERCULES ENGINES

1940-50	WXLC2 (WXLC 4x4")	Own	6	4"x4"	1/2	19	16	L19	L16	J16	Z16	R108	R106	45	45	P247	P243	P85
1946-50	D1X4B Diesel	Own	4	3"x4"	1/2	10	6	L10	L6	J6		R103	R101			P237	P233	P85
1930-60	HXA, HXB (5x6), HXC (5"x6), HXD (5"x6), HXE (early engine-22C exh.)	Own	6	4"x6"	1/2	25	22	L25	L22			R111	R109	30	30	P251	P251	P87
1935-58	HX (HXB-2"x3")	Own	4	2"x3"	1/2	6	2B	L6	L2B			R101	R736	30	30	P233	P231	P95
1933-58	DFX, (DFXB, DHX, DHXB-5x6), DFXC-5"x6)	Own	6	4"x6"	1/2	30	16	L30	L16	J16	Z16	R113	R106	45	45	P259	P243	P87
1939-58	DFXD, DHXC, (DFXH, DFXHF-5"x6)	Own	6	5"x6"	1/2	30	16	L30	L16	J16	Z16	R113	R106	45	45	P259	P243	P87
1946-58	D1X4D, D1XC Diesel, D1X-83 (2"), D1X6-272-3"x4"	Own	4,6	3"x4"	1/2	14	6R	L14	L6R	J6R		R105	R101			P241	P233	P85
1946-58	D1XB, (D1XC-4x4"), D1XD-4"x4"	Own	2	3"x4"	1/2	16	6R	L16	L6R	J6R		R106	R101			P243	P233	P85
1936-60	D1X, D1XB, (D1XC-3"x4")	Own	6	3"x4"	1/2	16	6R	L16	L6R	J6R		R106	R101	45	45	P243	P233	P85
1938-60	D1XH, D1XHF	Own	6	3"x4"	1/2	18	9	L18	L9	J9	Z9	R107	R103	45	45	P245	P237	P85
1945-58	DNX V8B, DNX V8C 6x6	Own	8	5"x6"	1/2	31	20		L20			R114	R108	45	45	P259	P247	P88
1945-58	DNX V8D, DNX V8S, DNX V8D, DNX V8DTS	Own	8	6"x6"	1/2	34	25		L25	J25	Z25	R117	R111	45	45	P263	P255	P88
1939-60	DOOB, (DOOC-4"x4"), (DOOD-4"x4")	Own	4	3"x4"	1/2	16	5	L16	L6	J6		R106	R101	45	45	P243	P233	P85
1936-60	DRXB, DRXC-4"x5", (DRX 501-4"x5")	Own	6	4"x5"	1/2	22D	10	L22D	L10	J10	Z10	R109	R103	45	45	P251	P239	P86
1946-60	DWXC, (DWXD-4"x4"), (DWXLD, DWXLDL, DWXLD, DWXLDL-4"x5")	Own	6	4x4	1/2	17	8	L17	L8	J8	Z8	R107	R102			P245	P235	P85
1930-60	IX, (IXC, IXA, IXA3, IXA5, IXAC-3x4)	Own	4	2"x4"	1/2	8A		L8A	L6D			R103	R102	30	30	P237	P235	P83
1931-68	IXK3, (IXB, IXB3, IXB5, IXBC 3"x4", (IXLB-3"x4")	Own	4	3"x4"	1/2	8A		L8A	L6D			R103	R102	30	30	P237	P235	P83
1931-58	JXA, JXAM, (JXB, JXBM 3"x4") (early engines-10A exh.)	Own	6	3"x4"	1/2	13C	10	L13C	L10	J10	Z10	R104	R103	45	45	P239	P237	P85
1931-58	JXC, JXCM, JXCT, JX4C, JXE, (X4E-3"x4")	Own	4,6	3"x4"	1/2	13C	10	L13C	L10	J10	Z10	R104	R103	45	45	P239	P237	P85
1935-71	JXD, JXDM, JXDT, JXDTB, JX4D (early eng. 10A exh.)	Own	4,6	4x4	1/2	13C	10	L13C	L10	J10	Z10	R104	R103	45	45	P239	P237	P85
1946-69	JXLD	Own	6	4x4	1/2	16C	13T	L16C	L13T	J13T	Z13T	R106	R105	45	45	P243	P241	P85
1939-60	NXA, NXB-3"x4"	Own	2	3x4	1/2	6	6	L6	L6	J6		R102	R101	30	30	P235	P233	P83
1936-60	QXA, QXA3, QXA5, QXB, QXB3, QXB5-3"x4"	Own	6	3"x4"	1/2	9	6	L9	L6	J6		R103	R101	30	30	P237	P233	P83
1939-60	QXC, QXC3, QXC5	Own	6	3"x4"	1/2	12	8	L12	L8	J8	Z8	R104	R102	30	30	P239	P235	P83
1939-67	QXD, QXD3, QXD5, (QXL, QXLD 3"x4")	Own	6	3"x4"	1/2	13	8	L13	L8	J8	Z8	R105	R102	30	30	P241	P235	P83
1931-60	RXB, (RXC-4"x5")	Own	6	4"x5"	1/2	18	18	L18	L18			R107	R107	45	45	P245	P245	P85
1931-60	RXLC, (RXD, RXLD-4"x5")	Own	6	4"x5"	1/2	19	18	L19	L18			R108	R107	30	30	P247	P245	P85
1947-60	RXLDH, RXLDT, TDXB 4"x5", (TDXC-4"x5")	Own	6	4"x5"	1/2	20	18	L20	L18			R108	R107	30	30	P247	P245	P86
1927-58	WXB, WXB3, WXE, WXC, WXC3, WXC5, WXC-4x4"	Own	6	3"x4"	1/2	16C	13B	L16C	L13B			R106	R105	45	45	P243	P241	P85
1930-58	WXC3, WXC3C, WXLD	Own	6	4"x4"	1/2	16C	13B	L16C	L13B			R106	R105	45	45	P243	P241	P85

Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

HERCULES ENGINES (Cont.)

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS				SEAT GRINDER							
								Leo-Alloy Int. Exh.	Chromalloy Int. Exh.	Leo-Lite Int. Exh.	K-O Cutter Int. Exh.	Seat Angle Int. Exh.	Grind. Wh. Int. Exh.	Ex. Pilot No.					
1934-68	ZXA (ZX8-24x3)	Own	4	2 1/2x3	3/8	6	2BP	L6	L2BP				R101	R736	30	30	P233	P231	P95
1939-58	DFXE, DFKETS	Own	6	5 1/2x6	3/8	30	16	L30	L16			Z16	R113	R106	45	45	P259	P243	P87
1956-60	GO-173, GO-260, DD173, DD260	Own	4	3 1/2x4	3/8	12	8A	L12E	L8A				R104	R103	45	45	P239	P237	P85
1956-63	GO-149, DD-149, GO-149H, DD149H	Own	3	3 3/4x4	3/8	12B	8A	L12B	L8A				R105	R103	45	45	P240	P237	P85
1956-63	GO-169, DD-169, GO-169H, DD169H	Own	3	4x4	3/8	12B	8A	L12B	L8A				R105	R109	45	45	P240	P237	P85
1956-63	GO-198, DD-198, GO-198A, GO-198AH, DD-198H	Own	4	4x4	3/8	12B	8A	L12B	L8A				R105	R109	45	45	P240	P237	P85
1963-75	C2000, D2000	Own	4	3 3/4x4	3/8	12B	8A	L12B	L8A				R105	R109	45	45	P240	P237	P85
1956-63	GO-226, DD-226, GO-226A, GO-226AH, DD-226H	Own	4	3 3/4x4	3/8	12B	8A	L12B	L8A				R105	R103	45	45	P240	P237	P85
1963-75	C2300, D2300	Own	4	4x4	3/8	12B	8A	L12B	L8A				R105	R109	45	45	P240	P237	P85
1956-63	GO-298, DD-298, D298, G-298H, DD298H, D298H	Own	6	3 3/4x4	3/8	12B	8A	L12B	L8A				R105	R103	45	45	P240	P237	P85
1963-75	D3000, D3000T, G3000, G3400, D3400	Own	6	3 3/4x4	3/8	12B	8A	L12B	L8A				R105	R103	45	45	P240	P237	P85
1956-63	GO-339, DD-339, DD-339H, G339, D339, G&D339H	Own	6	3 3/4x4	3/8	12B	8A	L12B	L8A				R107	R103	45	45	P245	P237	P85
1960-62	D426	Own	6	4 1/2x5	3/8	17B	8A	L17B	L8A				R107	R103	45	45	P245	P237	P85
1963-75	G1500, D1500, G1700, D1700 4x4	Own	3	3 1/2x4	3/8	12B	8A	L12B	L8A				R105	R103	45	45	P240	P237	P85
1970-75	D4800, D4800T	Own	6	4 1/2x4	3/8	Intake 1 1/2 x 2 1/2 x 3/8; Exhaust 1 1/2 x 1 1/2 x 3/8							R107	R105	45	45	P243	P240	P86
1970-75	G1400, G1600	Own	4	4x3 1/2	3/8	Intake 1 1/2 x 1 1/2 x 3/8; Exhaust 1 1/2 x 1 1/2 x 3/8							R105	R104	45	45	P241	P238	P83

Rings are available for C2-90 2 cylinder and CV4 180 4 cylinder Lycoming engines now manufactured by Hercules.

HUDSON AUTOMOBILES

1948-52	14, 15, 17, 24, 25, 27, 44, 45, 47, 53, 54, 84, 85, 87, 95, 97, 173, 174, 483, 484, 503, 504, 8A, 88	Own	8	3x4½	%	10	8	L10	L8	J8	Z8	R103	R102	45	45	P237	P235	P84
1948-54	All Six Cylinder Models	Own	6	3½x3½	%	17D	10	L17D	L10	J10	Z10	R106	R103	45	45	P243	P237	P84
1953-54	JET TC, 2C, 1D, 2D, 3D	Own	6	3x4¼	%	9	7	L9	L7	J7		R103	R102	45	45	P237	P235	P84
1955-56	WASP	Own	6	3x4¼	%	12C	9	L12C	L9	J9	Z9	R104	R103	45	45	P239	P237	P84
1955-56	HORNET 35580 (1956 4x3½)	Own	8	3½x4¾	%	16A	12B	L16A	L12B			R107	R105	45	45	P245	P241	P85
1955-58	RAMBLER	Own	6	3½x4¼	%	10	10	L10	L7E			R103	R102	45	45	P237	P234	P84
1957	Hornet 35780		8	4x3¼	%	16B	8	L14H	L8	J8	Z8	R105	R102	30	45	P241	P235	P84

INTERNATIONAL TRACTORS AND POWER UNITS

1939-45	T14, U14, U14A		4	3 1/2x6 1/2	%	21	18	L21	L18				R109	R108	45	45	P251	P245	P86
1939-48	A, AV, B, BN, U2		4	4x6	%	7	5	L7	L5				R102	R101	45	45	P235	P233	P84
1939-52	K, IUG, M, MV, O-6 OS6, T6, U6, W6		4	3 1/2x5 1/2	%	15	12B	L15	L12B				R106	R105	45	45	P243	P241	P85
1939-57	ID6, IUD6, MD, MDV, OD6, OD56, TD6, UD6 WD6 Diesel		4	3 1/2x5 1/2	%	13	9	L13CE	L9	J9	Z9		R105	R108	45	45	P241	P237	P85
1939-53	H, HV, I4, IU4, O4, O54, T4, U4, W4,		4	3 1/2x4 1/2	%	9	8R	L9	L8R	JBR	ZBR		R103	R102	45	45	P237	P235	P84
1939-56	I9, IU9, T9, U9, W9, WR9, C335		4	4x4x5	%	20D	17		L17	J17			R108	R107	45	45	P247	P245	P97L
1939-57	ID9, TD9, UD9, UD9A, WD9, WDR9 (UD16-6 cyl.) Diesel		4	4x4x5	%	17C		L17C	L13CE	J13CE			R106	R104	45	45	P243	P239	P97L
1949-54	Super A, Super AV, C, U2A		4	3x4	%	7	3	L7	L3				R102	R100	45	45	P235	P231	P84
1939-47	TD14, UD14A, TD14A, UD14, TD18, UD18	D461	4	4 1/2x6 1/2	%		13T	L19D	L13T	J13T	Z13T		R107	R105	45	45	P245	P241	P86
1947-63	TD18A, UD18A	D691	4	4 1/2x6 1/2	%		13T	L19D	L13T	J13T			R107	R105	45	45	P245	P241	P86
1947-61	TD24, UD24, UD1091	U1091	6	5 1/2x7	%	27C		L27C	L20U		Z20U		R111	R108	45	45	P251	P247	P87
1953-59	SUPER M, SUPER MV, SUPER W6, C264, 400, C248, T6		4	4x5 1/2	%	15	12B	L15	L12B				R106	R105	45	45	P241	P241	P85
1953-58	SUPER MD, MDV, WD6, D264, 400D, TD6	D281	4	4x5 1/2	%			L13CE	L9	J9	Z9		R104	R103	45	45	P239	P237	P85
1953-56	SUPER H, SUPER HV, SUPER W4	C164	4	3 1/2x4 1/2	%	10	8R	L10	L8R	JBR	ZBR		R103	R102	45	45	P237	P235	P84
1954-73	100, 200 *Eng. C113; 130, 130HC, 140, 140HC, 230, 240																		
1954-56	300, 300HC	C123	4	3 1/2x4	%	7	3	L7	L3				R102	R100	45	45	P235	P235	P84
1948-75	FARMALL CUB	C169	4	3 1/2x4 1/2	%	10	8	L10	L8	J8			R103	R102	45	45	P237	P235	P84
1954-58	FARMALL 350, 350 UTILITY	C60	4	2 1/2x2 1/2	%	2BH	1H						R736	R732	45	45	P229	P227	P85S
1954-58	FARMALL 350 DIESEL, UTILITY DIESEL	C175	4	3 1/2x4 1/2	%	9	8R	L9B	L8R	JBR	ZBR		R103	R102	45	45	P237	P235	P84
1954-58	FARMALL 450	D193	4	3 1/2x4 1/2	%	9		L9B	LSCPH	JSCPH			R103	R101	45	45	P236	P233	P84L
1954-58	FARMALL 450	C281	4	4 1/2x5 1/2	%		12B	L14H	L12B				R105	R105	45	45	P241	P240	P85
1954-58	FARMALL 450 DIESEL	D281	4	4 1/2x5 1/2	%	13B	9AR	L13B	L9AR				R105	R104	45	45	P241	P238	P85
	Starting Valve for Above Diesel					2		L2					R734		45		P227	P85S	
1956-58	HARVESTER 650	C350	4	4 1/2x5 1/2	%	20	17	L20	L17	J17			R108	R107	45	45	P247	P245	P97
1956-58	SUPER WD9, 600 DIESEL, 650 DIESEL, TD9	D350	4	4 1/2x5 1/2	%	17C		L17C	L13CE	J13CE			R106	R105	45	45	P243	P240	P97
	Starting Valve for Above					3		L3					R100		45		P229	P85S	
1958-75	330, 340, 340U, 404, 430A CRAWLER	C135	4	3 1/2x4	%	10	7	L10	L7	J7			R103	R102	45	45	P237	P234	P84
1959-75	460, 460HC, 460U, T640A, 606	C221	6	3 1/2x3 1/2	%	11	9R	L11	L9R				R104	R103	30	30	P238	P236	P85
1959-75	560, 560HC, 660, TD6, 706, 806	C291, C263	6	3 1/2x4	%		9	L13CE	L9	J9	Z9		R104	R101	30	30	P239	P232	P85
1959-62	460D, 460DU, 460DHU, 460DHC, 606D	D236	6	3 1/2x3 1/2	%	9A	3A	L9A	L3A				R104	R101	45	45	P238	P232	P85
1959-62	560D, 560DHC, 560HD, 660D, TD6 CRAWLER 706	D282	6	3 1/2x4	%		6P	L12E	L6P				R104	R101	45	45	P239	P233	P85
1963-75	D26, D282 (3 1/2x4 1/2)		6	3 1/2x3 1/2	%		6P	L13CE	L6P				R104	R101	45	45	P239	P233	P85
1963-75	504, 504HC, 2504, 424	C146, C153	4	3 1/2x4	%	10	7	L10	L7	J7			R103	R102	45	45	P237	P234	P84
1963-71	504D, 2504D	D188	4	3 1/2x4	%		4A	L9D	L4A				R104	R101	45	45	P239	P233	P85
1962-75	4300 (1964 Requires Ring 1 1/2x1 1/2x 1/2)	DT817	6	5 1/2x6	%			L13E	L13E				R105	R105	45	45	P240	P240	P86
1960-71	TD340 CRAWLER	D166	4	3 1/2x3 1/2	%		4A	L9D	L4A				R104	R101	45	45	P239	P233	P85
1960-73	TD98	DT282	6	3 1/2x4	%	9A	3A	L9A	L3A				R104	R101	45	45	P238	P232	P85
1960-71	TD15	D554	6	4 1/2x5 1/2	%	17D		L17D	L12E		Z12E		R106	R104	45	45	P243	P239	P87
1960-71	TD20	DT-691	6	4 1/2x6 1/2	%	19C	14	19C	L14		Z14		R107	R105	45	45	P245	P241	P86
1960-71	TD25, TD25TC, TD30	TD25TC	6	5 1/2x6	%			L13E	L13E				R105	R105			P240	P240	P86
1963-68	806, 1206 DIESEL	DT361, D361	6	4x4x4 1/2	%			Int. J17DTH	J9HTU27				R107		45	45	P243	P239	P86
1964-75	429, 573 (8 cyl.) DIESEL, 4100, D407, DT407	DT429	6	4 1/2x4 1/2	%			Int. J17DTH	J11KHU33				R107		45	45	P243	P239	P86
1968-71	361 DIESEL, 407, DT407 DIESEL (4 1/2x4 1/2)		6	4 1/2x4 1/2	%			Int. J18HT53	J8T, J9ATH33						45	45	P243	P238	P86
1966-71	DT179, D310, D358 Engines		6			390	12CE		L12CE	J9HTU27			R104		45	45	P238	P237	P85S
1968-75	544 GAS and LPG	C175, C200	4	3 1/2x4 1/2	%		9	L14H	L9	J9	Z9		R105	R103	30	30	P241	P236	P85
1968-73	544 DIESEL	D239	4	3 1/2x4 1/2	%	390		L14H		J9HTU27			R105		45	45	P241	P239	P85S
1972-75	666, 766 Tractor (3 1/2x5 1/2), D312, D360		6	3 1/2x4 1/2	%	13		Exh. 1 1/2 to 1 1/2 x 1 1/2	x 1.535 x 358				R105		30	45	P240	P236	P85
1972-75	766 Tractor, D414, DT 414, DT 466		6	4x35 35	%		Int. 1 1/2 to 1 1/2 x 1 1/2	Exh. 1 1/2 to 1 1/2 x 1 1/2 x 1 1/2	x 365				R106	R103	30	45	P243	P237	P85
1972-75	V800 Diesel		6	5 1/2x4 1/2	%		13BT &AT	L13BT LBAT	JBAT	ZBAT			R105	R103	30	45	P241	P237	P85
	TD14, UD14, TD18, UD18 Require PBGM Pilot and R214M3 Reseater Pilot.					12R12P30		405 Reseater Pilot Must Be Used.											

*Replacement Ring for Factory Installed Insert

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

INTERNATIONAL TRUCK ENGINES

Year	Model	Make	Eng. Cyl	BGS	Pilot Size	Cast Int	Iron Exh	VALVE SEATS				SEAT GRINDER						
								Lee Alloy Int.	Chromalloy Exh.	Lee-Life Exh.	K-O Cutter Int.	Seat Angle Int.	Grind. Wh. Exh.	Ex. Pilot No.				
1941-49	GRD214, GRD214A, GRD233 and GRD233A (3 1/2"x4 1/2")		6	3 1/2"x4 1/2"	1/2	13	88	L13	L8B			R105	R103	45	45	P241	P237	P85
1943-49	Red 318, Red 318A, Red 361 and Red 361A (4 1/2"x4 1/2")		6	3 1/2"x4 1/2"	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
1943-49	Red 401, Red 401A and B, Red 450 and Red 450A (4 1/2"x5)		6	4 1/2"x5	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
1942-50	BLD250, BLD269 (3 1/2"x4 1/2")		6	3 1/2"x4 1/2"	1/2	13C	9	L13C	L9	J9	Z9	R104	R103	45	45	P239	P237	P84
1950-54	RD372, RD406 (4 1/2"x4 1/2"), RD450 (4 1/2"x5)		6	4 1/2"x4 1/2"	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
L14H Ring can be used to convert RED 450 Cyl Head to use RED 501 Valves																		
1954-63	RD372 Eng. No. 24669 up, RD406 Eng. No. 42781 up, RD450 Eng. No. 36607 and up, RD501		6	4 1/2"x4 1/2"	1/2	22R	10AR	L14H	J14H	Z14H	R109	R105	15	45	P251	P241	P85	
1950-63	SD220, BD220, SD240 (3 1/2"x4 1/2")		6	3 1/2"x4 1/2"	1/2	12C	9	L12C	L9	J9	Z9	R104	R103	30	30	P238	P236	P85
1950-54	L170 to LC182 (1953-54—R170 to R175)	BD269	6	3 1/2"x4 1/2"	1/2	13C	9	L13C	L9	J9	Z9	R104	R103	45	45	P239	P237	P84
1950-54	L185, L190, L195 (1953-54—R185 to R195)	RD372	6	4 1/2"x4 1/2"	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
1950-54	L200, L202, L204, LF190 192 (1953-54—RF190 to RF195, R200 to R205)	RD406	6	4 1/2"x4 1/2"	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
1950-54	L210, L211, LF210, LF212 (1953-54—R200 to R212)	RD450	6	4 1/2"x4 1/2"	1/2	22R	10AR	L10AR	J10AR	Z10AR	R109	R104	15	45	P251	P239	P86	
1950-54	L220, L225	Cont. R6602	6	4 1/2"x5 1/2"	1/2	22R	18BX	L18BX	J18BX	Z18BX	R109	R108	30	45	P251	P245	P87	
1953-54	RF170-1, 2, 3, 4, R180 1, 2, 3, 4	BD282	6	3 1/2"x4 1/2"	1/2	14	9	L14	L9	J9	Z9	R105	R103	15	45	P241	P237	P85
1954-60	RF170-1, 2, 3, 4, R180 1, 2, 3, 4	BD282, BD308	6	3 1/2"x4 1/2"	1/2			L14H	L12E	J12E	Z12E	R105	R104	15	45	P241	P240	P85
1954-68	BC241, BC265	BD240, BD264	6	3 1/2"x4 1/2"	1/2	16B	9	L16B	L9	J9	Z9	R105	R103	15	45	P241	P237	P85
1956-75	V5401, V461 (4 1/2"x4 1/2"), V5549 (4 1/2"x4 1/2"), V547B V537, V605		8	4 1/2"x4 1/2"	1/2	21DR			L16J	J16J	Z16J	R108	R106	45	45	P247	P243	P86
1958-68	V266		V8	3 1/2"x3 1/2"	1/2	17E			L8T45			R105	R102	45	45	P241	P234	P85
1958-73	V304E, V345E (3 1/2"x3 1/2") 4-152 (1961-73 SCOUT	Perkins	V8	3 1/2"x5 1/2"	1/2	19E			L12CT45			R106	R103	45	45	P243	P238	P85
1962-73	D354 Diesel		6	3 1/2"x5 1/2"	1/2		8B	L14H	L8B			R105	R103	45	45	P241	P236	P85
1963-68	BC220		6	3 1/2"x3 1/2"	1/2	12C	9	L12C	L9	J9	Z9	R104	R103	30	30	P239	P237	P85
1966-71	DV-4628		8	4 1/2"x5 1/2"	1/2	374		Int.	J18CR19	J13CR7				45	45	P243	P239	P85
1966-75	DV-5508, D150, D170, D190		8	4 1/2"x5 1/2"	1/2	374		Int.	J21E14	J17CR9				45	45	P245	P242	P85
1966-71	DVT-573		8	4 1/2"x5 1/2"	1/2			Int.	J17DTH	J11HTU33		Spec.	Spec.	45	45	P243	P238	P86
1966-75	Engine 4-196E V392E 418 Exh. P97RM, R213P10		8	4 1/2"x3 1/2"	1/2	Int.	1 1/2" x 2 1/2"	Exh. 1 1/2" x 1 1/2"	J1802 x 1 1/2"			R108		45	45	P245	P240	P85
1969-73	6-232 Gas Engine		6	3 1/2"x3 1/2"	1/2	374	8	L16BE	L8	J8	Z8	R105	R102	30	45	P241	P235	P85
1974-75	MV409, MV446		8					J19R	L11T	J11T		R108	R104	45	45	P245	P238	P85
1974-75	DT466		6	4 3/8"x5 3/8"	1/2		9BTH	J17H	L9BTH	J9BTH	Z9BTH	R106	R103	60	45	P243	P237	P85
1974-75	V800		8	5 1/2"x4 1/2"	1/2		9BTH	L9BTH	J9BTH	J9BTH	Z9BTH	R105	R103	30	30	P241	P237	P85
Oversize Rings Available for L9 and L10AR Rings																		

Oversize Rings Available for L9 and L10AR Rings.

JOHN DEERE TRACTORS

1938-46	B Series, BR, BO	2	4 1/2"x5 1/2"	1/2	13	10	L13	L10			J10	Z10	R105	R103	30	45	P241	P237	P86	
1941-46	L, LA, LI, LUC power unit, 12A Combine	2	3 1/2"x4 1/2"	1/2	8	6	L8	L6			J6		R102	R101	30	30	P235	P233	P83	
1938-47	H Series	2	3 1/2"x5 1/2"	1/2	13	9	L13	L9			J9	Z9	R105	R103	30	45	P241	P237	P85	
1947-52	B Series	2	4 1/2"x5 1/2"	1/2	14	10	L14	L10			J10	Z10	R105	R103	30	45	P241	P237	P86	
1933-38	A Series, AR, AO	2	5 1/2"x6 1/2"	1/2	20	16	L20	L16			J16	Z16	R108	R106	30	45	P247	P243	P86	
1939-53	A Series, AR, AO	2	5 1/2"x6 1/2"	1/2	21	18	L21	L18					R109	R107	30	45	P251	P245	P87	
1927-53	D Series, W, WSP, Eng. 15-27	2	6 1/2"x7 1/2"	1/2	28	28	L28	L28					R112	R112	30	30	P255	P255	P89	
1937-53	G Series, GM	2	6 1/2"x7 1/2"	1/2	27	25	L27	L25			J25	Z25	R112	R111	30	45	P255	P255	P88	
1947-53	M	2	4x4	1/2	13	9	L13	L9			J9	Z9	R105	R103	30	45	P247	P237	P85	
1948-54	R Diesel	2	5 1/2"x8	1/2	16	16	L23	L16			J16	Z16	R110	R106	45	45	P251	P243	P87M	
1952-56	50 Series	2	4 1/2"x5 1/2"	1/2	15	11	L15	L11			J11		R106	R104	30	45	P243	P239	P86	
1952-56	60, 70, Series (Except 70 AH Fuel)	2	5 1/2"x6 1/2"	1/2	21	18U	L21	L18U			J18U	Z18U	R109	R107	30	45	P251	P245	P87	
1954-56	70 Series (All fuel)	2	5 1/2"x6 1/2"	1/2	27C	25C	L27C	L25C					R111	R110	30	45	P255	P251	P87	
1952-58	145, 217 Series (6 Cyl.) EA92 and HA92	4	3 1/2"x3 1/2"	1/2	13C	7	L13C	L7			J7		R104	R102	30	45	P239	P234	P84	
		4	3 1/2"x3 1/2"	1/2	5	3	L5	L3					R101	R100	30	45	P233	P229	P84	
1952-56	40 Series	2	4x4	1/2	10	9	L10	L9			J9	Z9	R103	R103	30	45	P237	P237	P85	
1954-56	70 Diesel	2	6 1/2"x6 1/2"	1/2	23	17D	L23	L17D					R110	R106	45	45	P251	P243	P87	
1955-56	80 Diesel	2	6 1/2"x8	1/2	28	19	L28	L19					R112	R108	45	45	P255	P247	P87	
1956-60	420, 430, 440 Series, (320, 330 4x4)	2	4 1/2"x4	1/2	15	11	L15	L11					R106	R104	30	45	P243	P237	P85	
1957-60	520, 530 Gas, LP Gas, 520 All Fuel Intake Uses No. 14 Ring	2	4 1/2"x5 1/2"	1/2	13B		L13B	L8RH10					Z8RH10	R105	R102	45	45	P241	P236	P85
1957-60	620, 630 Gas, LP Gas, 620, 630 All Fuel	2	5 1/2"x6 1/2"	1/2	19C		L19C	L13T10			J13T10	Z13T10	R108	R105	45	45	P247	P241	P87	
1957-60	720, 730 Gas, LP Gas, 720 All Fuel Intake Uses No. 24 Ring	2	6 1/2"x6 1/2"	1/2	22	17T8	L22	L17T8			J17T8	Z17T8	R109	R106	45	45	P251	P243	P87	
1957-60	720, 730D Diesel	2	6 1/2"x6 1/2"	1/2		17C		L17C					Z17C	R111	R106	45	45	P255	P242	P87
1957-60	820, 830, 840 Diesel	2	6 1/2"x8	1/2	28		L28	L19C			J19C		R112	R107	45	45	P255	P245	P87	
1961-71	1010 Gas 115, 217 Power Units	4	3 1/2"x3 1/2"	1/2	7		L12E	L7			J7		R104	R102	30	45	P239	P234	P84	
1961-71	1010, 2010 Diesel (3 1/2"x3 1/2") 165, 248 Power Units	4	3 1/2"x3 1/2"	1/2	7		L12E	L7			J7		R104	R102	45	45	P239	P234	P84	
1961-67	2010 Gas, 2010 LP, 145, 248 Power Units	4	3 1/2"x3 1/2"	1/2	7		L12E	L7			J7		R104	R102	30	45	P239	P234	P84	
1961-71	3010, 3020, 4010, 4020 Gas, LP (3010-20 4 Cyl.) JD500	6	4x4	1/2			L13CE	L9R			J9R10	Z9R10	R105	R103	45	45	P240	P236	P85	
1961-63	3010, 4010 Diesel (3010 4 Cyl.)	6	4 1/2"x4 1/2"	1/2	10		L14CE	L10			J10	Z10	R104	R103	45	45	P240	P237	P85	
1962-75	5010 Diesel, JD700, JD760 (5020 JD700A JD760A	6	4 1/2"x5 1/2"	1/2	22E	17C	L22E	L17C					Z17C	R108			30	P231	P231	P83
1961-63	8010 (GMC 6-71E, 4 Valve per cyl.)	6	4 1/2"x5 1/2"	1/2				L4TH8									30	P231	P231	P83
1965-71	JD350, 450, 440, JD300	3,4		1/2	11		L16BE	L11					R105	R104	45	45	P241	P238	P85	
1965-71	JD300, 350, 400, 450, 440	3,4		1/2	9		L14CE	L9			J9	Z9	R105	R103	45	45	P240	P236	P85	
1966-75	1020, 1520, 2020, 2510, 2520, 4030 Gas, 329 Power Unit	4	3 8/6"x3 8/6"	1/2		9R	L14CE	L9R			J9R10	Z9R10	R105	R103	45	45	P241	P236	P85	
1966-75	1020, 1520, 2020, 2510, 2520, 4030 Diesel, 329 Power Unit	4	3 8/6"x4 3/8"	1/2		12CE	L16BE	L12CE			J12CE	Z12CE	R105	R103	45	45	P241	P238	P85	
1964-71	3020, 4020, 4000, JD500, JD600 Diesel, 4520	4,6	4 1/2"x4 1/2"	1/2	17D	13C	L17D	L13C					R106	R104	45	45	P243	P239	P85	
1969-75	JD644 Diesel Loader (Early Models L17C Intake), JD690, 4320, 4620, 7020 Diesel	6		1/2	13	13C	L13	L13C					R105	R104	30	45	P240	P239	P85	
1971-75	4230 Gas	6	4 0/2"x4 3/8"	1/2	13	9BR	L13	L9BR			J9BR	Z9BR	R105	R103	45	45	P240	P237	P85	
1971-75	4230 Diesel	6	4 0/2"x4 3/8"	1/2	17D	13	L17D	L13			J13	Z13	R106	R105	45	45	P243	P240	P85	
1971-75	4430, 4630, 7020 (No. E335846 and above) 8430	6	4 1/2"x4 1/2"	1/2			L13CE	L13CE			J13CE		R104	R104	30	30	P239	P239	P85	
1971-75	6030, 7520, 8630	6	4 1/2"x5 1/2"	1/2							J18CT			R106	30	45	P245	P243	P86	

DATA BOOK

KAISER-JEEP - Includes Jeep and Willys

Year	Model	Make	Eng. Cyl	B&S	Pilot Size	Cast Int	Iron Exh.	VALVE SEATS				SEAT GRINDER				
								Lee-Alloy Int.	Lee-Alloy Exh.	Chromalloy Int.	Lee-Lite Exh.	K-O Cutter Int.	Exh.	Seat Angle Int.	Grind Exh.	Wh. Ex. Pilot No.
1930-50	37, 38, 39, 48, 77, 96A, 440, 441, 442, all Jeep cars and trucks	Own	4	3 1/2 x 4 1/2	1/2	10	9	L10	L9	J9	Z9	R103	R103	45	45	P237 P237 P85
1950	Jeepster, Standard F Head Motor	Own	4	3 1/2 x 4 1/2	1/2	19	9	L19	L9	J9	Z9	R108	R103	45	45	P247 P237 P85
1948-50	All 6 cylinder models (1950-3 1/2 x 3 1/2)	Own	6	3 x 3 1/2	1/2	7	6	L7	L6	J6		R102	R101	45	45	P235 P233 P84
1951-55	673-SW, 675, 675A, 16L	Own	6	3 1/2 x 3 1/2	1/2	8	6	L8	L6	J6		R102	R101	45	45	P235 P233 P84S
1951-55	685, 685A, LARK 1/2 exhaust, P84S exh.	Own	6	3 1/2 x 3 1/2	1/2	14C	6	L14C	L6	J6		R105	R101	45	45	P241 P233 P85S
1950-73	473-SD (4F) 475, F4-134 13 1/2 x 4 1/2	Own	4	3 1/2 x 4 1/2	1/2	19C	9R	L19C	L9R	J9R10	Z9R10	R107	R103	45	45	P245 P237 P85
1950-64	4L, L4-134, C1-3A	Own	4	3 1/2 x 4 1/2	1/2	9R	L9RH	L9R	L9R	J9R10	Z9R10	R103	R103	45	45	P237 P237 P85
1954-64	226L, L6-226	Own	6	3 1/2 x 4 1/2	1/2	10	7R	L10	L7R			R103	R102	30	45	P237 P235 P84S
1962-71	162, 164, 262, 264, 362, 364, 6-230		6	3 1/2 x 4 1/2	1/2			L18E	L12CE	J12CE	Z12CE	R106	R104	45	45	P243 P238 P84S
1964-68	C1-5, C1-5A, C1-6, C1-6A	F4134	4	3 1/2 x 4 1/2	1/2	20B	9R	L9R				R107	R103	45	45	P245 P237 P85
1965-71	J Series Models 232 Engine		6	3 1/2 x 3 1/2	1/2	8		L16BE	L8	J8	Z8	R105	R102	30	45	P241 P235 P85
1965-71	Universal Series 225 Engine		6	3 1/2 x 3 1/2	1/2	10	7	L10	L7	J7	Z7	R103	R102	45	45	P237 P234 P85
1965-68	327 Engine		8	4 x 3 1/2	1/2	8		L16BE	L8	J8	Z8	R105	R102	30	45	P241 P235 P85
1968-71	V8 350		8	3 8/32 x 8 5/8	1/2	10		L18E	L10	J10	Z10	R106	R103	46	46	P243 P237 P85
1971-75	232, 258		6	3 1/2 x 3 1/2	1/2	8		L14E	L8	J8	Z8	R105	R102	30	45	P241 P235 P85
1971-75	304		8	3 1/2 x 3 1/2	1/2	8		L13BE	L8	J8	Z8	R105	R102	30	45	P241 P235 P85
1971-75	360, 401		8	4 08 x 3 3/4	1/2	19C		L19C	L13CE	J13CE		R107	R104	30	45	P245 P239 P85

LEROI ENGINES

1930-45	V, X, W and Y-2 1/2 x 4 1/2	2,4	2 1/2 x 3 1/2	1/2	8	8	L8	L8	J8	Z8		R102	R102	45	45	P235 P235 P83
1947-52	B45, D91	2,4	2 1/2 x 3 1/2	1/2	8	8	L8	L8	J8	Z8		R102	R102	45	45	P235 P235 P83
1943-54	D140	4	3 1/2 x 3 1/2	1/2	7	7	L7	L7	J7			R102	R102	45	45	P235 P235 P84
1936-60	D176 (D201-4 cyl. 4x4), (D226-4 cyl. 4x4)	4	3 1/2 x 4 1/2	1/2	13		L13	L9R10	J9R10	Z9R10		R105		45	45	P241 P237 P85
1936-54	D318, 382-4 cyl. 4 1/2 x 6 1/2, (D471-4 cyl. 5x6)	4	4 1/2 x 5 1/2	1/2	17C	17C	L17C	L17C				R106	R106	45	45	P243 P243 P86
1946-59	D1000, F1500, H2000, L3000	4,6,8,12	6 1/2 x 7 1/2	1/2	31A	31A	L31A	L31A			Z31A	R115	R115	45	45	P261 P261 P89
1948-58	H540, TH540	8	4 1/2 x 4 1/2	1/2	14	10A	L14	L10A				R105	R104	45	45	P241 P239 P85
1948-59	A288, L3460	1,12	7 1/2 x 7 1/2	1/2	33			L32CZ				R116	R116	45	45	P261 P261 P89
1953-58	H844	8	5 1/2 x 4 1/2	1/2	25C		L25C	L16CX				R110	R106	45	45	P251 P243 P86
1954-56	A114	1	5 1/2 x 5 1/2	1/2			L19C	L19C	J19C			R107	R107	45	45	P245 P245 P86
1954-58	L4000	12	7 1/2 x 7 1/2	1/2				L32CZ				R116	R116	45	45	P263 P261 P89
1953-58	H884, TH884	8	5 1/2 x 4 1/2	1/2	20B							R110	R107	45	45	P251 P245 P86

Late Models H844 and H884 require 2 1/2 x 2 1/2 x 1/2, or 2 1/2 x 2 1/2 x 1/2, for Intake and H844 1 1/2 x 2 1/2 x 1/2, for Exhaust. Engines used in irrigation service require an Exhaust Ring 1 1/2 x 2.197 x 1/2 or oversize on special production.

LINCOLN AUTOMOBILES

1942-48	All Models	12	2 1/2 x 2 1/2	1 1/2	10	10	L10	L10	J10	Z10		R103	R103	45	45	P239 P239 P91L
1949-52	All Models	8	3 1/2 x 4 1/2	1 1/2	14A	11R	L14A	L11R	J11R	Z11R		R106	R104	30	45	P243 P239 P91
1953-55	All Models (1955-3 1/2 x 3 1/2)	8	3 8/32 x 5 1/2	1 1/2	18	9BTH	L18	L9BTH	J9BTH	Z9BTH		R107	R103	45	45	P245 P237 P84
1956-57	All Models and Continental 368 Eng.	8	4 x 3 1/2	1 1/2	15A	12	L15A	L12				R107	R104	45	45	P245 P239 P84
1958-60	EDJ 430 Engine	8	4 1/2 x 3 1/2	1 1/2	21DR		L16BE					R108	R105	30	45	P247 P241 P85F
1960-65	EDJ430 Engine after November, 1959	8	4 1/2 x 3 1/2	1 1/2	19C		L19C	L13CE	J13CE			R107	R104	45	45	P245 P239 P85F
1966-75	EGC-462, 460, Continental, Mark III, Mark IV	8	4 1/2 x 3 3/8	1 1/2	21DR			L13CE	J13CE			R108	R104	45	45	P247 P239 P85F

R211P30 Reseater Pilot is used for 1/2 Guide Size.

LYCOMING ENGINES

1950-54	D290C	4	4 1/2 x 3 1/2	1 1/2	17	14	L17	L14		Z14		R107	R105	30	45	P245 P241 P97
1941-53	R-680 All Models	9	4 1/2 x 4 1/2	1 1/2	19B	17R	L19B	L17R				R108	R107	45	45	P247 P245 P88
1941-54	O-145, GO145 All Models	4	3 1/2 x 3 1/2	1 1/2	8A	8A	L8A	L8A				R103	R103	30	45	P237 P237 P84
1941-75	O-235 All Models, O-290-G1, G2, G4, (4 1/2 x 3 1/2)	4	4 1/2 x 3 1/2	1 1/2	18U	16U	L18U	L16U				R107	R106	30	45	P245 P243 P97
1941-75	GO290, O-435, GS0580 All Models	4,6,8	4 1/2 x 3 1/2	1 1/2								R107	R106	30	45	P245 P243 P97
1941-75	VO-435 A1D	6	4 1/2 x 3 1/2	1 1/2								R109	R106	30	45	P247 P243 P97

Rings are available for O-435 and other series including C2 90 and CV4180 Air Cooled Engines on special order.

MACK TRUCK AND BUS ENGINES

1939-48	EN11 (EN12-3 1/2 x 4 1/2)	6	3 1/2 x 4 1/2	1 1/2	10	7	L10	L7	J7			R103	R102	30	45	P237 P235 P84
1938-50	EN253 (EN271-3 1/2 x 4 1/2)	6	3 1/2 x 4 1/2	1 1/2	15	10AT	L15	L10AT	J10AT			R106	R104	30	45	P243 P239 P97
1938-50	EN290 (EN330-4x4)	6	3 1/2 x 4 1/2	1 1/2	15	10AT	L15	L10AT	J10AT			R106	R104	30	45	P243 P239 P97
1942-50	EN354A (EN354 requires 1/2 pilot)	6	3 1/2 x 5 1/2	1 1/2	18		Z18R				Z12X33	R107		30	45	P245 P241 P86
1940-50	EN457, EN471 and EN471A-4 1/2 x 5 1/2	6	4 1/2 x 5 1/2	1 1/2	19		L19				Z14X34	R107		30	45	P247 P243 P86
1949-50	END457, Diesel	6	4 1/2 x 5 1/2	1 1/2	14		L14				Z13BX34	R105		30	45	P241 P239 P86
1940-54	EN405 (EN431 and EN431A-4 1/2 x 5 1/2)	6	4 x 5 1/2	1 1/2	19		L19				Z14X34	R108		30	45	P247 P243 P86
1940-54	EN510, EN510A	6	4 1/2 x 5 1/2	1 1/2	19		L19				Z14X34	R108		30	45	P247 P243 P86
1953-63	EN510B and C, EN438, EN-540	6	4 1/2 x 5 1/2	1 1/2			Z20U				Z11X30	R108		30	45	P245 P239 P86
1949-54	END510 Diesel	6	4 1/2 x 5 1/2	1 1/2	18		L18				Z11DTH34	R107				P245 P241 P86M
1940-60	EN611 (EN672-4 1/2 x 6 1/2) (EN707 and EN707A-5x6)	6	4 1/2 x 5 1/2	1 1/2	23		L23				Z18X33	R110		30	45	P251 P247 P87M
1949-54	END672 Diesel	6	4 1/2 x 6 1/2	1 1/2	20		L20				Z17BX33	R108				P247 P245 P87M
1951-63	EN291	6	3 1/2 x 4 1/2	1 1/2	18		Z18R				Z11X30	R107		30	45	P245 P239 P86
1951-64	EN331	6	4 x 4 1/2	1 1/2	18		Z18R				Z11X30	R107		30	45	P245 P239 P86
1951-64	EN377	6	4 x 5 1/2	1 1/2	18		Z18R				Z11X30	R107		30	45	P245 P239 P86
1954-64	EN401	6	4 1/2 x 5 1/2	1 1/2	18		Z18R				Z12X33	R107		30	45	P245 P239 P86
1954-64	EN464, EN464A, EN464B	6	4 1/2 x 5 1/2	1 1/2	18		L20				Z11X30	R107		30	45	P245 P239 P86
1953-75	Series: END673 (1963 END-711, END-864), END-675	6	4 1/2 x 6 1/2	1 1/2	23		L23				Z17+16	R110		30	30	P251 P245 P87M
1955-69	Series: EN707B, EN707C, EN707D, EN707E	6	5 x 6 1/2	1 1/2	23		L23				Z18X33	R110		30	45	P251 P251 P87M
1960-69	Series: EN-438, EN-540	6	4 1/2 x 5 1/2	1 1/2	19		L19				Z14X34	R108		30	45	P247 P243 P86
1964-69	END465 Series	8	5 x 5 1/2	1 1/2								R107	R105	30	30	P245 P240 P86
1967-75	ENDT675, ENDB64B, ENDT664	6	4 1/2 x 6 1/2	1 1/2	23		L23				Z17+16	R110		30	30	P251 P245 P87M
1970-75	END865, ENDB66	8	5 1/2 x 5 1/2	1 1/2	23		L23									P251 P245 P87M

Notice: All Z Rings shown are available in "J" Chromalloy metal, special production.

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Life Rings.

DATA BOOK

MASSEY-FERGUSON TRACTORS

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS				SEAT GRINDER						
								Lee-Alloy Int.	Lee-Alloy Exh.	Chromalloy Int.	Lee-Lite Exh.	K-O Cutter Int.	Cutter Exh.	Seat Angle Int.	Grind. Wh. Exh.	Ex. Pilot No.		
1941-42	202	Cont. M290	6	3 1/2 x 4 1/4	%	16	11T	L16	L11T	J11T		R106	R104	30	45	P243	P239	P97
1940-46	102 Senior	Cont. A244	6	3 1/2 x 4 1/4	%	12	BAT	L12	LBAT	JBAT	ZBAT	R104	R103	30	45	P239	P237	P85
1942-50	201, 203, 209C	Cont. M390	6	4 x 4 1/4	%	16	11T	L16	L11T	J11T		R106	R104	30	45	P243	P239	P97
1939-54	22, 82, 101, 23	Cont. F140	4	3 1/2 x 4 1/4	%	10	6P	L10	L6P			R103	R101	30	45	P237	P233	P84
1941-54	101, 102, 30	Cont. F162	6	3 1/2 x 4 1/4	%	10	6P	L10	L6P			R103	R101	30	45	P237	P233	P84
1942-54	101 Senior, 44-6	Cont. F226	6	3 1/2 x 4 1/4	%	10	6P	L10	L6P			R103	R101	30	45	P237	P233	P84
1939-54	20, 81, 21	Cont. F124	4	3 x 4 1/4	%	10	6P	L10	L6P			R103	R101	30	45	P237	P233	P84
1949-54	44 Diesel	Own HD260	4	3 1/2 x 5 1/4	%	10R	88R	L10R	L88R			R103	R103	30	45	P237	P237	P86
1946-54	44, 44-O, 44V, 44K	Own H260	4	3 1/2 x 5 1/4	%	13	98R	L13	L98R	J98R	Z98R	R105	R103	30	45	P241	P237	P86
1947-58	55, 55K, 55SC, 55SK, 55SLP	J382	4	4 1/2 x 6	%			J168E		J13T	Z13T	R106	R105	30	45	P243	P241	P86
1950-58	55D Diesel, 55S Diesel	JD382	4	4 1/2 x 6	%	14C	11T	L14C	L11T	J11T		R105	R104	45	45	P241	P239	P86
1953-54	33	E201	4	3 1/2 x 4 1/4	%	13	7R	L13	L7R			R105	R102	30	45	P241	P235	P84
1956-60	333C, 333K, 333LP, 333D (45° Int.), MF303	E208	4	3 1/2 x 4 1/4	%	9	7R	L9	L7R			R103	R102	30	45	P237	P235	P84
1956-60	444C, 444K, 444LP	H277	4	4 1/2 x 5 1/2	%	12	98R	L12	L98R	J98R	Z98R	R104	R103	30	45	P239	P237	P86
1956-60	444 Diesel, MF85 and 88 Diesel	HD277	4	4 1/2 x 5 1/2	%	10	88R	L10	L88R			R103	R103	45	45	P237	P237	P86
1958-66	50 Series, Massey Ferguson, MF35	Cont. Z134	4	3 1/2 x 3 1/2	%	6	4P	L6	L4P			R101	R100	30	45	P241	P235	P83
1956-68	MF65 Series, MF165C	Cont. C176	4	3 1/2 x 4 1/4	%			L7E	LSCPH*	JSCPH		R102	R101	30	45	P234	P233	P84
1959-68	MF85, MF1001 Gas and LP	Cont. E223	4	3 1/2 x 4 1/4	%	9A	7R	L9A	L7R			R104	R102	30	45	P238	P234	P84
1959-68	MF85 and 88 LPG, MF Super 90	Cont. E242	4	3 1/2 x 5 1/4	%	9A	7R	L9A	L7R			R104	R102	30	45	P238	P234	P84
1963-68	MF175G, MF180C	Cont. C206	4	3 1/2 x 4 1/4	%	9		L9	L7R10			R103	R102	45	45	P236	P234	P84
:Special Production																		

*Special Production

MERCURY AUTOMOBILES

1939-48	All Cars 100 H.P.	8	3 1/2 x 4	1 1/2	10	10	L10	L10	J10	Z10	R103	R103	45	45	P237	P237	P91L
1949-51	All Cars 110 H.P.	8	3 1/2 x 4	1 1/2	10	10	L10	L10	J10	Z10	R103	R103	45	45	P237	P237	P84
1952-53	All Cars 125 H.P.	8	3 1/2 x 4	1 1/2	11	11	L11	L11			R104	R104	45	45	P239	P239	P84
1954-56	All Cars (1955-3 1/2 x 3 1/2, (1956-3 1/2 x 3 1/2)	8	3 6/8 x 3 1/2	1 1/2	13B	98TH	L13B	L98TH	J98TH	Z98TH	R105	R103	45	45	P241	P237	P84
1957	ECU 368 Engine	8	4 x 3 1/2	1 1/2	15A	12	L15A	L12			R107	R104	45	45	P245	P239	P84
1957-58	ECF 312 Engine	8	3 1/2 x 3 1/2	1 1/2			L18E	L9ATH	J9ATH		R106	R103	45	45	P243	P236	P84
1960-64	COMET EEN-144 Eng. (170, 200 3 1/2 x 2 1/2 Int. 10C)	6	3 1/2 x 2 1/2	1 1/2	9		L9	L5CH			R103	R101	45	45	P236	P232	P85S
1965-75	170, 200 (3 1/2 x 3 1/2) 250 Engines	6	3 1/2 x 2 1/2	1 1/2		8	L13CE	L8	J8	Z8	R104	R102	45	45	P239	P235	P83S
1961-64	METEOR 223 Engine	6	3 1/2 x 3 1/2	1 1/2		10	L16BE	L10	J10	Z10	R105	R103	45	45	P240	P237	P84
1960-64	292 Engine with Seats	8	3 1/2 x 3 1/2	1 1/2		98TH	L13CE	L98TH	J98TH	Z98TH	R104	R103	45	45	P239	P237	P84
1960-67	292, 312 Engines without Seats	8	3 1/2 x 3 1/2	1 1/2			L13CE	L9ATH	J9ATH	Z9ATH	R104	R103	45	45	P239	P237	P84
1961-71	352, 390 (4 1/2 x 3 1/2), 406, 410, 428 Engines	8	4 x 3 1/2	1 1/2	208		L12CE	L12CE	J12CE	Z12CE	R107	R104	45	45	P245	P238	P84
1962-64	221, 260 (3 1/2 x 2 1/2) Engines	8	3 1/2 x 2 1/2	1 1/2		8	L12CE	L8	J8	Z8	R104	R102	45	45	P238	P235	P83
1958-60	EDC 383 Engine, EDJ 430 Engine (4 1/2 x 3 1/2)	8	4 1/2 x 3 1/2	1 1/2			L15A	L13CE	J13CE		R108	R105	45	45	P247	P241	P85F
1960-64	430 Engine after November 24, 1959	8	4 1/2 x 3 1/2	1 1/2	19C		L19C	L13CE	J13CE		R107	R104	45	45	P245	P239	P85F
1965-68	240, 300 Engines	6	4 x 3 1/2	1 1/2		12CE	L16BE	L12CE	J12CE	Z12CE	R105	R104	45	45	P241	P238	P84
1964-68	ECB 427 (1966-67 rake L16E Exhaust)	8	4 1/2 x 3 1/2	373	21DR			L14CE	J13CE		R108	R105	30	45	P247	P240	P85F
1966-68	ECG 462	8	4 1/2 x 83	373	208			L13CE	J13CE		R107	R104	45	45	P245	P239	P85F
1964-75	289, 302 (4x3) Engines	8	4 x 2 1/2	1 1/2		9	L16E	L9	J9	Z9	R105	R103	45	45	P240	P236	P84
1970-75	351 CID 2V Windsor	8	4 x 3 1/2	1 1/2	17E	10		L10	J10	Z10	R105	R103	45	45	P242	P237	P84
1970-75	351 CID 2V Cleveland	8	4 x 3 1/2	1 1/2	21DR			L13CE	J13CE		R108	R104	45	45	P247	P239	P84
1970-75	351 CID 4V 429 CID 4V, Cobra, Super Cobra	8	4 1/2 x 3 1/2	1 1/2	23B			L14CE			R109	R104	45	45	P247	P240	P84
1970-75	400 CID 2V, 429-460 CID 4V	8	4 x 4	1 1/2	21DR			L13CE	J13CE		R108	R104	45	45	P247	P239	P84
1970-75	429 CID 4V (Boss)	8	4 1/2 x 3 1/2	1 1/2					J18CT		R110	R106	45	45	P251	P243	P85F

R211M1 Reseater Pilot is used for 1/2 Guide Size. R211P30 for 1/4 Guide Size.

MINNEAPOLIS-MOLINE TRACTORS AND INDUSTRIAL ENGINES

1931-46	MEU, NEU, SE, SEU, TA, TAU, TE, TEU	ME, NE	4, 6	8x9	%	35A	35A											R119	R119	45	45	P263	P263	P84
1937-56	R Series and Z Series	RE	4	3 1/2 x 4 1/4	%			L8BE	L8BE									R103	R103	45	45	P237	P237	P84
1940-56	CU, 425-6A, (Std. Comp.) 10AT Exhaust Seat for Nat. and LP Gas		6	4 x 5	%	13	10	L13	L10			J10	Z10					R105	R103	45	45	P241	P237	P86
1936-56	C, CEU, CT, CTA, CTB, CTI, GU, LU, (after Ser. 902209)		4	4 x 6	%	16	13B	L16	L13BE			J10AT	Z10AT10					R106	R105	45	45	P243	P241	P86
1948-56	HU, (Nat. and LP Gas)		4	4 x 6	%	13	10AT	L13	L10AT									R105	R104	45	45	P241	P239	P86
1940-56	HU, HUA, (Low and Reg. Comp.)		4, 6	4 x 6	%	16	13B	L16	L13BE									R106	R105	45	54	P243	P241	P86
1933-56	KEU, KTA, KU, MYA, U, UDLX, UT, UTI, UTS, UTU		4	4 x 5	%	13	10	L13	L10			J10	Z10					R105	R103	45	45	P241	P237	P86
1942-56	283-4A, KU, UT, UTC, UTI, UTS, LP gas		4	4 x 5	%	13	10AT	L13	L10AT			J10AT	Z10AT10					R105	R104	45	45	P241	P239	P86
1948-56	605A-6, 800-6A (5Kx6) 10A4216 Head		6	4 x 6	%	16C	13B	L16C	L13BE									R106	R105	45	45	P243	P241	P86
1957-68	800-6A with 10A4210, 10A4217 Head		6		%		10	L13E	L10			J10	Z10					R105	R103	45	45	P240	P237	P86
1948-56	1210-12A, 1600-12A (5Kx6)		6	4 x 6	%	13	10	L13	L10			J10	Z10					R105	R103	45	45	P241	P237	P86
1956-63	445 Series, 335 (3 1/2 x 4 1/2) 2 Star Crawler		206H		%	88		L8B	L7C									R103	R102	45	45	P237	P235	P84
1956-75	445 Diesel		D206-4		%	8		L8	L7C									R103	R102	45	45	P237	P235	P84
1957-60	5 Star, Power Unit 168-2A		283E		%	10	L13E	L10+2	J10+2			Z10+2						R105	R103	45	45	P240	P237	P86
1957-61	5 Star Diesel, M5, M602, M604, M670		D336-4		%	10	L13CE	L10+2	J10+2			Z10+2						R104	R103	45	45	P239	P237	P86
1959-71	Jet Star, 4-Star, 4-Star Super, HD220, Z20A		206L		%	88		L8B	L7C									R103	R102	45	45	P237	P235	P84
1959-75	G VI		425B-6		%	10	L13E	L10+2	J10+2			Z10+2						R105	R103	45	45	P240	P237	P86
1959-75	G VI Diesel, C900, G1000		D504A-6, D425A-6		%	10	L13CE	L10+2	J10+2			Z10+2						R104	R103	45	45	P239	P237	P86
1962-75	C705, C706 LP and Gas, 336A, 425A, 605A, C900		504-6		%	13	11R	L13	L11R			J11R	Z11R					R105	R104	30	45	P240	P238	P86
1964-75	HD8006A Ind. Engine		6	5 x 6	%							J19R						R111	R108	45	45	P251	P245	P87

NOTE: The 10+2, L10+2, J10+2, Z10+2 are Special Production.

NOTE: The 10+2, L10+2, J10+2, Z10+2 are Special Production.

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

NASH AND RAMBLER AUTOMOBILES

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cost Int.	Iron Exh.	VALVE SEATS			K-O Cutter Int.	Seat Angle Int.	Grind Wh. Exh.	SEAT GRINDER
								Lee-Alloy Int.	Chromalloy Exh.	Lee-Lite Exh.				
1946-49	4640, 4740, 4840, 4940, Nash 600	Own	6	3 1/2 x 3 3/4	9	6	L9	L6	J6		R103	R101	45 45	P237 P233 P84
1946-50	4660, 4760, 4860, 4960, 5060, 5063, 5068, 5069	Own	6	3 1/2 x 4	14	9	L14	L9	J9	Z9	R105	R103	45 45	P241 P237 P85
1950-52	RAMBLER, STATESMAN	Own	6	3 1/2 x 4	9	6	L9	L6	J6		R103	R101	45 45	P237 P233 P84
1953-60	RAMBLER, STATESMAN, 6-5810, 6010	Own	6	3 1/2 x 4	10C			L7E			R103	R102	45 45	P237 P235 P84
1950-56	AMBASSADOR, AMBASSADOR D.J.	Own	6	3 1/2 x 4	16A	9	L16A	L9	J9	Z9	R105	R103	30 45	P241 P237 P85
1955-56	AMBASSADOR V8	Own	8	3 1/2 x 3 3/4	16A	12B	L16A	L12B			R107	R105	45 45	P245 P241 P85
1955-60	METROPOLITAN (56, 2 1/2 x 3 1/2)	Own	4	2 1/2 x 3 1/2	5		L8E	L5			R102	R101	45 45	P235 P233 P84
1958-67	AMERICAN 196L Head		6	3 1/2 x 4	10	5	L10	L5			R103	R101	45 45	P237 P232 P84
1960-67	ALL MODELS 196 OHV Engine		6	3 1/2 x 4	10		L10	L7E			R103	R102	45 45	P237 P235 P84
1959-67	ALL MODELS 196 OHV Aluminum Engine		6	3 1/2 x 4	6		L12CE	L6	J6		R104	R101		P238 P233 P84
1957-75	ALL MODELS 199, 232, 258, V8-304 Engines		6	3 1/2 x 3	8		L13BE	L8	J8	Z8	R105	R102	30 45	P241 P235 P85
1960-69	ALL MODELS 287 Engine, 290 Engine, 327 Engine 4x3 1/2		8	3 1/2 x 3 1/2	8		L12E	L8	J8	Z8	R104	R102	30 45	P239 P235 P85
1966-69	ALL MODELS, 343 Engine, 390 Engine		8		12CE		L18E	L12CE	J12CE	Z12CE	R106	R104	30 45	P243 P238 P85
1970-75	360, 401 (4.17x3.68) Engines			4.08x3.44	19C		L19C	L19CE	J19CE		R107	R104	30 45	P245 P239 P85

*Dual Jet and Nash Healey

OLDSMOBILE AUTOMOBILES

1937-48	L37 to L42, E41-2, J41-2, 68, 78, 98		8	3 1/2 x 3 3/4	10	8	L10	L8	J8	Z8	R103	R102	30 45	P237 P235 P84
1941-50	F41, G41, H41, F42, G42, 66, 76 (3 1/2 x 4 1/2)		6	3 1/2 x 4	10	8	L10	L8	J8	Z8	R103	R102	30 45	P237 P235 P84
1949-55	All Models (396 exhaust) (1954-55: 3 1/2 x 3 1/2)		8	3 1/2 x 3 1/2	14	8	L14	L8	J8	Z8	R105	R102	45 45	P241 P235 P87R
1956-58	All Models (396 exhaust) 57-58 4x3 1/2		8	3 1/2 x 3 1/2			L16BE	L12CE	J12CE	Z12CE	R105	R104	45 45	P237 P239 P87R
1959-60	All Models (396 exhaust)		8	4x3 1/2	17E		L12CE	L12CE	J12CE	Z12CE	R105	R104	45 45	P241 P238 P87R
1961-64	F85, F85 Surfless, F85 Jet Fire	215	8	3 1/2 x 2 1/2			L12J15	L8E			R103	R102	45 45	P237 P234 P84
1964-65	F85	225	V6	3 1/2 x 3 1/2	11	5B	L11	L5B			R104	R101	45 45	P238 P233 P84
1966-71	F85, 250 Engine		6	3 1/2 x 3 1/2			L11A				R105	R103	45 45	P240 P236 P84
1961-75	330, 394 Engines (4 1/2 x 3 1/2), 350 (4 1/2 x 3 1/2)		8	3 1/2 x 3 1/2			L18E	L12CE	J12CE	Z12CE	R106	R104	45 45	P243 P238 P84
1965-75	425 Super Rocket Engines, 350 OPT, 455	427 Ind.	8	4 1/2 x 3 1/2	20B		L13CE	L13CE	J13CE		R107	R104	30 45	P245 P239 P84
1965-75	Toronado 425, 455, SMT, W30 & A Car and 400 Engines		8	4 1/2 x 3 1/2	21DR		L13CE	L13CE	J13CE		R108	R104	30 45	P247 P239 P84
1971-75	250, L-6 Engine		6	3 1/2 x 3 1/2	98R		L14H	L98R	J98R	Z98R	R105	R103	45 45	P241 P237 P84
1974-75	260 Engine		8	3.5 x 3.39	12CE		L12CE	L68P	J68P		R104	R102	45 30	P238 P234 P84

Special production Lee-Lite rings are available for F85 aluminum engines.

OLIVER CLETRAC TRACTORS

1941-45	FDLC	Cummins HB15D	6	4 1/2 x 6	18	18	L18	L18			R107	R107	30 30	P245 P245 P87
1932-45	B0C, FG	Herc. HXE	6	5 1/2 x 6	25	22C	L25				R111	R111	30 30	P251 P251 P87
1938-52	GG, HG (Herc. IXA2 4 cyl. 3x4)	Herc. IXK3	4	3 1/2 x 4	8	6	L8	L6	J6		R102	R101	30 30	P235 P233 P83
1937-58	AD, ED38, ED42 (Herc. DOOC 4 cyl. Diesel)	Herc. DOOD	4	4 1/2 x 4	16	6	L16	L6	J6		R106	R101	45 45	P243 P233 P85
1944-58	AC6, AD6	Cont. F226	6	3 1/2 x 4	10	7	L10	L7	J7		R103	R102	30 45	P237 P235 P84
1936-60	BD Diesel, OC-12D	Herc. DJXC	6	3 1/2 x 4	16	6	L16	L6	J6		R106	R101	45 45	P243 P233 P85
1939-56	BC, BC5, BC55	Herc. JXD	6	4x4 1/2	13C	10	L13C	L10	J10	Z10	R104	R103	45 45	P239 P237 P85
1936-56	DD Diesel	Herc. DRXB	6	4 1/2 x 5 1/2	22D	10	L22D	L10	J10	Z10	R109	R103	45 45	P251 P237 P86
1936-58	DC Diesel	Herc. RXC	6	4 1/2 x 5 1/2	18	18	L18	L18			R107	R107	45 45	P245 P245 P85
1945-60	FDE Diesel, OC-18	Herc. DFPE	6	5 1/2 x 6	30	16	L30	L16	J16	Z16	R113	R106	45 45	P259 P243 P87
1955-62	OC12G	Herc. JXLD	6	4x4 1/2	16C	13T	L16C	L13T	J13T	Z13T	R106	R105	45 45	P243 P241 P85
1955-62	OC15, Super 225 Ind.	Herc. DRXL	6	4 1/2 x 5 1/2	22D	10	L22D	L10	J10	Z10	R109	R103	45 45	P251 P239 P86
1958-66	OC 43G, OC43D (Herc. DD130)	Herc. GO130	3	3 1/2 x 4 1/2	12B	8A	L12B	L8A			R105	R103	45 45	P240 P237 P85
1963-66	OC-9	Herc. DD2120	3	3 1/2 x 4 1/2	12A	8B	L12A	L8B			R105	R103	30 45	P241 P236 P85

OLIVER WHEEL TYPE TRACTORS

1935-46	70HC, 70KD	Cont. DS6202	6	3 1/2 x 4 1/2	10	5B	L10	L5B			R103	R101	30 45	P237 P233 P85
1941-46	60HC, 60KD	Wauk 4-160	4	3 1/2 x 3 1/2	5	3	L5				R101	R100	45 45	P233 P231 P85
1937-46	80HC, (80KD-4 1/2 x 5 Motor)	Wauk V, VK	4	4 1/2 x 5 1/2	18D	13BT	L18D	L13BT			R107	R103	45 45	P245 P237 P85
1950-54	77HC, 77KD, 66HC, 66KD, 88D	Own	4	3 1/2 x 3 1/2	7B	3P	L7B	L3P			R102	R100	45 45	P235 P231 P85
1930-53	28-44, 90	Own	4	4 1/2 x 6 1/2	22	22A	L22	L22A			R109	R110	45 45	P251 P255 P86
1947-54	88KD, (88-3 1/2 x 4) (88HC-3 1/2 x 4)	Own	6	3 1/2 x 4	8	6BR	L8	L6BR	J6BR	Z6BR	R102	R102	45 45	P235 P233 P85
1953-60	Supper 99D, 99D, 950D (4x4)	Own	6	3 1/2 x 4	10	7R	L10	L7R			R103	R102	45 45	P237 P235 P85
1953-60	99HC, Super 99HC, 950HC	Own	6	4x4	17C		L17C	L12CE	J12CE	Z12CE	R106	R104	45 45	P243 P239 P85
1937-54	99, 90D	Own	4	4 1/2 x 6 1/2	22	18A	L22	L18			R109	R108	45 45	P251 P245 P86
1954-60	Super 55HC, 66HC, 77HC (61, 550, 770	Own	4	3 1/2 x 3 1/2	8	6BR	L8	L6BR	J6BR	Z6BR	R102	R102	45 45	P235 P234 P85
1954-60	Super 88HC, 88D	Own	6	3 1/2 x 4	10	LBR	L10	LBR	JBR	ZBR	R102	R103	45 45	P237 P235 P85
1954-60	Super 55D, 66D, 77D (61, 550D5L, 770D5L	Own	4	3 1/2 x 3 1/2	6	3	L6	L3			R101	R100	45 45	P233 P229 P85
1956-60	Super 99CM, 990D, 990CM, 995	GM3-71	3	4 1/2 x 5			L9BSH	L9BSH	J9BSH	Z9BSH		R103	30	P237 P84
1958-60	Super 44, 44D	Cont. F140	4	3 1/2 x 4 1/2	10		L10	L5CPH	J5CPH		R103	R101	30 45	P237 P233 P84
1958-60	Super 166, 177 Industrial (6 Cyl.)		4	3 1/2 x 3 1/2	6P	3P	L6P	L3P			R101	R100	45 45	P233 P229 P85
1958-60	Super 188 Industrial, 88D Diesel		6	3 1/2 x 4	10	4P	L10	L4P			R103	R100	45 45	P237 P231 P85
1958-60	Super 199 Industrial		6	4x4	10	7R	L10	L7R			R103	R102	45 45	P237 P234 P85
1958-60	Super 225 Industrial		6	4 1/2 x 5 1/2	22D	10	L22D	L10	J10	Z10	R109	R103	45 45	P251 P239 P86
1959-60	550, 660		4	3 1/2 x 3 1/2	9	8R	L9	L8R	J8R	Z8R	R103	R102	45 45	P236 P235 P85
1959-60	550, 660 Diesel		4	3 1/2 x 3 1/2	9	6BR	L9	L6BR	J6BR	Z6BR	R103	R102	45 45	P236 P234 P85
1960-62	540 Gas	Cont. F162	4	3 1/2 x 4 1/2	10		L10	L5CPH	J5CPH		R103	R101	45 45	P237 P232 P84
1960-73	550, 660 Gas	Own	4	3 1/2 x 3 1/2	9	8R	L9	L8R	J8R	Z8R	R103	R102	45 45	P236 P235 P85
1961-75	550, 660 Diesel	Own	4	3 1/2 x 3 1/2	9	6P	L9	L6P			R103	R101	45 45	P236 P233 P85
1960-75	770, 1550, 1555 Gas and LP	Own	6	3 1/2 x 3 1/2	8	6BR	L8	L6BR	J6BR	Z6BR	R102	R102	45 45	P235 P234 P85
1961-68	770 Diesel	Own	6	3 1/2 x 3 1/2	6P	4P	L6P	L4P			R101	R100	45 45	P233 P231 P85
1960-64	880 Gas and LP	Own	6	3 1/2 x 4	10	8R	L10	L8R	J8R	Z8R	R103	R102	45 45	P237 P235 P85
1961-64	880 Diesel, Super 88D	Own	6	3 1/2 x 4	10		L10	L1 1/2 x 1.287 1/2			R103	45	45	P237 P232 P85
1960-75	1800, 1850, 1855, 1950, 1750, 1755 Gas and LP	Own	6	3 1/2 x 4	10		L13CE	L10	J10	Z10	R104	R103	45 45	P239 P237 P85
1961-75	1650, 1655, 1800 Diesel	Own	6	3 1/2 x 4	7R		L13CE	L7R			R104	R102	45 45	P239 P234 P85
1960-67	1900 Diesel (4 Valve per Cyl.)	CMC4-53	4	3 1/2 x 4 1/2					J28TH30				60	P228 P95
1962-75	1600, 1650, 1655 Gas and LP (LP must use J or Z Rings)		6	3 1/2 x 4	10	8	L10	L8	J8	Z8	R103	R102	45 45	P237 P235 P85
1962-67	1600 Diesel		6	3 1/2 x 4	10	4P	L10	L4P			R103	R100	45 45	P237 P231 P85
1965-75	1850, 1855 Diesel		6	3 1/2 x 5	8		L14E	L8R			R105	R103	45 45	P241 P236 P85

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

OLIVER WHEEL TYPE TRACTORS (Cont.)

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS		Chromalloy Exh.	Lee-Lite Exh.	K-O Cutter Int.	Seat Angle Int.	Grind. Exh.	SEAT GRINDER	
								Lee-Alloy Int.	Lee-Alloy Exh.						Int. Exh.	Pilot No.
1945	1550 Diesel		6	3 1/2x3 1/2	%	6P	4P	L6P	L4P			R101	R100	45	45	P233 P231 P85
1946-75	1550, 1555 Diesel		6	3 1/2x3 1/2	%	9	4A	L9	L4A			R103	R101	45	45	P236 P233 P85
1947-75	1650 Diesel 187586 Up, 1750, 1755, 1950 Diesel		6		%			L16E	L98H			R105	R103	30	45	P240 P237 P85
1948-75	2050 and 2150 Diesel				%	Int. 1 1/2x2 1/2	%	Exh. 1 1/2x1 1/2				R107	R105	45	45	P243 P240 P86
1949-75	1250 Gas		4	3 1/2x3 1/2	9mm		7R	L9ATH	L7R			R103	R102	45	45	P236 P234 P8354
1949-75	1250, 1255 Diesel		4	3 1/2x3 1/2	9mm	12CE		L12CE	L8E	J8E		R104	R102	45	45	P238 P234 P8354
1949-75	1450 Diesel		4	4 1/2x4 1/2	8mm		9	L12E	L9	J9	Z9	R104	R103	45	45	P239 P236 P8315

PACKARD AUTOMOBILES

1929-47	All 6 and 8 Cylinder Engines	6.8	3 1/2x4 1/2	%	10	8	L10	L8	J8	Z8	R103	R102	30	45	P237	P235	P84
1947-53	All 6 and 8 Cylinder Engines	6.8	3 1/2x4 1/2	%	14	9	L14	L9	J9	Z9	R105	R103	30	45	P241	P237	P84
1954	5400-01-02-11	8	3 1/2x4 1/2	%	14C	9	L14C	L9	J9	Z9	R105	R103	30	45	P241	P237	P84
1954	5406-26-31	8	3 1/2x4 1/2	%	16B	9	L16B	L9	J9	Z9	R105	R103	30	45	P241	P237	P84
1955-56	5540 (3 1/2x3 1/2), 5560, 5580, 5640, 5660	8	4x3 1/2	%	18	13B	L18	L13B			R107	R105	30	45	P245	P241	P85
1956	5680, 5688	8	4 1/2x3 1/2	%	18	13B	L18	L13B			R107	R105	30	45	P245	P241	P85
1957-58	Clipper 57L, Hawk	8	3 1/2x3 1/2	%		10	L13CE	L10	J10	Z10	R104	R103	45	45	P239	P237	P84

PLYMOUTH AUTOMOBILES

1933-41	PC, PD, PE, PF, PG, PH, PI to P12, PT57-81-105-125	6	3 1/2x4 1/2	%	9	9BR	L9	L9R10	J9R10	Z9R10	R103	R103	45	45	P237	P237	P84	
1942-59	P14 to P23, P24-1, P24-2, P25, P26, P30, LP1, LP2 (Z30)	6	3 1/2x4 1/2	%			L10E	LBRH10			ZBRH10	R103	R102	45	45	P237	P235	P84
1955	P27 (241 Eng.), 200 Eng. 3 1/2x3 1/2, P29 (270 Eng. 3 1/2x3 1/2)	8	3 1/2x3 1/2	%		9	L14CE	L9	J9	Z9	R105	R103	45	45	P241	P237	P85	
1956-57	P29 (277 Eng.), P29-3 (303 Eng. 3 1/2x3 1/2), P31	8	3 1/2x3 1/2	%	14BTH		L12CE	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P239	P85	
1957-60	301 Eng. (318 Eng. 3 1/2x3 1/2), LP2 1959 FURY	8	3 1/2x3 1/2	%	14BTH		L12CE	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P239	P85	
1959-60	GOLDEN COMMANDO, 361, PP2	8	4 1/2x3 3/4	%	19E		L13CE	L13CE	J13CE		R106	R104	45	45	P243	P239	P85	
1960-75	VALIANT 170 and PLYMOUTH 198, 225 3 1/2x4 1/2	6	3 1/2x3 3/4	%			L13CE	L8E	J8E		R104	R102	45	45	P239	P234	P85	
1960-69	ALL MODELS WITH 318 ENGINE	8	3 1/2x3 3/4	%	14BTH		L12CE	L12CE	J12CE		R106	R104	45	45	P243	P238	P85	
1969-75	ALL MODELS WITH 318 ENGINE	8	3 1/2x3 3/4	%	14BTH10E		L10E	L10E	J10E		R106	R103	45	45	P243	P236	P85	
1961-67	Engines 361, 383 4 1/2x3 1/2, 426 Thru 1965 4 1/2x3 1/2, 440	8	4 1/2x3 1/2	%	21DR		L13CE	L13CE	J13CE		R108	R104	45	45	P247	P239	P85	
1964-68	ALL MODELS WITH 273 ENGINE	6	3 1/2x3 3/4	%		10E	L16BE	L10E			R105	R103	45	45	P241	P236	P85	
1968-73	ALL MODELS 340 ENGINE	8	4 1/2x3 3/4	%	20B		L13CE	L13CE	J13CE		R107	R104	45	45	P245	P239	P85	
1966-71	426 Engine	8	4 1/2x3 1/2	%		19E					R109	R106	45	45	P247	P243	P83	
1966-67	440 POWER PAC	8	4 1/2x3 1/2	%	21DR 17E						R108	R105	45	45	P247	P241	P85	
1968-75	ALL MODELS 383, 400 and 440 ENGINE 4 1/2x3 1/2	8	4 1/2x3 1/2	%	21DR		L16BE				R108	R105	45	45	P247	P241	P85	
1971-75	360 ENGINE	8	4x3 5/8	%	16	12CE	L16	L12CE	J12CE	Z12CE	R106	R104	45	45	P243	P238	P85	

PONTIAC AUTOMOBILES

1937-54	24, 25, 26, All Models (1937-40 6 cyl. 3 1/2x4 1/2)	6	3 1/2x4 1/2	%	10	9	L10	L9	J9	Z9	R103	R103	30	45	P237 P237 P83
1936-54	27, 28, 29, All Models (1950-54 3 1/2x3 1/2)	6	3 1/2x3 1/2	%	8	7	L8	L7	J7		R102	R102	30	45	P237 P237 P83
1955-56	All Models 1956 (3 1/2x3 1/2)	V8	3 1/2x3 1/2	%		10	L14H	L10E			R105	R103	30	45	P241 P236 P84
1957-60	All Models (1958 4 1/2x3 1/2) (1959-60 4 1/2x3 1/2)	V8	3 1/2x3 1/2	%	17E		L98SH	J98SH	Z98SH		R105	R103	30	45	P241 P237 P84
1961-63	Pontiac and 4 Cyl. Tempest	4.8	4 1/2x3 1/2	%	17E		L98SH	J98SH	Z98SH		R105	R103	30	45	P241 P237 P84
1961-63	Tempest, also Optional 326 Engine (3 1/2x3 1/2)	8	3 1/2x3 1/2	%			L98H	L6BP			R103	R102	45	45	P237 P234 P84
1963-67	326, 389, 421 Standard	8	4 1/2x3 1/2	%			L18E	L12CE	J12CE	Z12CE	R106	R104	30	45	P243 P238 P84
1964-65	Tempest, 6 Cyl., 215 Engine	6	3 1/2x3 1/2	%		9	L16E	L9	J9	Z9	R105	R103	45	45	P240 P236 P84
1963-67	389, 421 (10 75), 389GTO	8	4 1/2x4 1/2	%	19E		L13CE	L13CE	J13CE		R106	R104	30	45	P243 P239 P84
1966-67	230, 250, Engine	6	3 1/2x3 1/2	%	19E		L13CE	L13CE	J13CE		R106	R104	30	45	P243 P239 P84
1967-71	428 Engine, Tempest and GTO 400	8	4 1/2x4 1/2	%	22E		L22E	L16BE			R108	R105	45	45	P247 P241 P84
1968-75	350 Engine, 400 Engine (4 1/2x3 1/2)	8	3 1/2x3 1/2	%	19E		L13CE	L13CE	J13CE		R106	R104	45	45	P243 P237 P85
1968-75	250 Engine (L6)	6	3 1/2x3 1/2	%		9	L14CE	L9ATH	J9ATH	Z9ATH	R105	R103	45	45	P240 P236 P84
1970-75	455 Bonneville	8	4 1/2x3 1/2	%	20B		L13CE	L13CE	J13CE		R107	R104	45	45	P245 P239 P84
1971-75	455 Grand Ville	8	4 1/2x3 1/2	%	21DR		L16E	L16E	J16E		R108	R105	45	45	P247 P241 P84
1975	140 L4 Engine	4	3 1/2x3 1/2	%			L13CE	L8E	J8E		R104	R102	45	45	P239 P234 P84
1975	260 V8	8	3 5/8x3 3/8	%	12CE		L12CE	L6BP	J6BP		R104	R102	45	45	P238 P234 P84

Special production Lee-Lite rings are available for Pontiac Tempest aluminum engine.

REO TRUCKS AND AUTOMOBILES

1935-39	1A4-1DA4H, 1B4-1D4, 2B-2L, 2B4-2L4, 6A, 6D Cars	228	6 3 1/2x4 1/2	%	15	15	L15	L15			R106	R106	45	45	P243	P243	P84
1939-45	19	228	6 3 1/2x4 1/2	%	15	15	L15	L15			R106	R106	45	45	P243	P243	P85
1944-45	27	Cont. 22R501	6 4 1/2x5 1/2	%	19	16	L19	L16	J16	Z16	R108	R106	30	30	P247	P243	P86
1942-46	25, 381, 404 (23H-Wauk. MKR-4 1/2x4 1/2)	Wauk. MKR	6 4 1/2x4 1/2	%	18	8BT	L18	L8BT			R107	R103	45	45	P245	P237	P85
1942-46	27, 517	Wauk. SRKR	6 4 1/2x5 1/2	%	20	12T	L20	L12T	J12T		R108	R104	30	30	P247	P239	P85
1939-50	Series 16, 20, D21, 21H, 22, 121	GC288	6 3 1/2x5 1/2	%	14		L14	L12BU			R105	R104	45	45	P241	P239	P85
1939-50	Series 12, 14, 19, 119, 20, 21, E19	GC245	6 3 1/2x4 1/2	%	14		L14	L12BU			R105	R104	45	45	P241	P239	P85
1939-50	Series 18, 21R, D22, 22H, 23, 122, 226	GC310	6 3 1/2x5 1/2	%	14		L14	L12BU			R105	R104	45	45	P241	P239	P85
1944-50	23B, 23H, 23L, 23T, D235, E235 series, D235	T6371	6 4 1/2x4 1/2	%	18	13BU	L18	L13BU		Z13BU	R107	R105	30	45	P245	P241	P86
1944-50	D23, Series 23, 25, 236, 377B, 37CB	T6427	6 4 1/2x4 1/2	%	18	13BU	L18	L13BU		Z13BU	R107	R105	30	45	P245	P241	P86
1944-50	30A, 30B, 30C (31, 316 Cont. R6602-4 1/2x5 1/2)	Cont. R6513	6 4 1/2x5 1/2	%	22	18BX	L22	L18BX		Z18BX	R109	R108	30	45	P251	P247	P87
1950-58	Series E21, E216, F122 Series Bus	OA292	6 3 1/2x4 1/2	%	19C		L19C		J16K	Z16K	R108	R106	30	30	P247	P243	P86
1950-58	Series E22, E226, A375, A475 Bus	OA-331	6 4 1/2x4 1/2	%	19C		L19C		J16K	Z16K	R108	R106	30	30	P247	P243	P86
1951	377B, 37CB	Wauk. 140GRB	6 4 1/2x5 1/2	%	20D	10AU	L10AU	L10AU	J10AU	Z10AU	R109	R104	30	45	P251	P239	P86
1950-58	Series F20, F21, F23DT, F120C, F120H	OA255	6 3 1/2x4 1/2	%		16U	L19C	L16U			R107	R106	30	30	P245	P243	P86
1950-58	Series F22R and F225, F226, F226M, 331LPC	Own	6 4 1/2x4 1/2	%			L19C	L16U			R107	R106	30	30	P245	P243	P86
1950-56	Series E21, E216, F22A, F22T, F22B, F22C, F22L, F122H, F122J, F22-1, F22-2, F22-3, F22-T	Own 292	6 3 1/2x4 1/2	%	19C		L19C		J16K	Z16K	R108	R106			P247	P243	P86
1944-56	Series F23, D23, 23R, 25, 236	T6427 Cont.	6 4 1/2x4 1/2	%	18	13BU	L18	L13BU		Z13BU	R107	R105	30	45	P245	P241	P86
1953-56	F23D, F236D	Cam. J85600	6 4 1/2x5 1/2	%													
1954-56	F14-1, F14-2, F14R, F14RT	Int. 240	6 3 1/2x4 1/2	%	12C	9	L12C		J9	Z9	R104	R103	30	30	P235	P233	P85
1954-75	OA142, OA145, OA160, OA170 (OA100, OA110 3 1/2x4 1/2)		6 4 1/2x4 1/2	%	Intake Z18D115		Exhaust J16K or Z16K*				R107	R106	30	30	P245	P243	P86
1955-75	OV207, OA130 6 cyl., (OV220, OV235 4 1/2x4 1/2)		8 3 1/2x4 1/2	%	Intake Z18D115		Exhaust J16K or Z16K*				R107	R106	30	30	P245	P243	P86
1962-75	OH-186, OH-200		6 4 1/2x4 1/2	%	Intake Z18D115		Exhaust J16K or Z16K*				R107	R106	30	30	P245	P243	P86

*Replacement Ring for Factory Installed Insert.

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

STUDEBAKER AUTOMOBILES AND TRUCKS

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int.	Iron Exh.	VALVE SEATS				K-O Cutter Int. Exh.	Seat Angle Int. Exh.	SEAT GRINDER				
								Int.-Alloy Int. Exh.	Chromalloy Int. Exh.	Lee-Lite Int. Exh.	Grind. Wh. Int. Exh.			En. Pilot Int. Exh.				
1932-42	President 82, 1B, C, 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C	Own	8	3 1/2x4 1/2	3/8	8	6	L8	L6	J6		R102	R101	45	45	P235	P233	P84
1938-50	Commander 7A to 17A	Own	6	3 1/2x4 1/2	3/8	9	6	L9	L6	J6		R103	R101	45	45	P237	P233	P84
1950-60	Trucks 245 cu. in.	Own	6	3 1/2x4 1/2	3/8	9	6	L9	L6	J6		R103	R101	45	45	P237	P233	P84
1941-56	Trucks M5, M15, MA15, R5, 2R5, R10, 2R10, R15, 2R15	Own	6	3x4	3/8	7	6	L7	L6	J6		R102	R101	45	45	P235	P233	P83
1939-56	Champion G, 2G to 14G, 15G, 2G, 16G, 56G (3x4 1/2)	Own	6	3x4	3/8	7	6	L7	L6	J6		R102	R101	45	45	P235	P233	P83
1951-54	Commanders H, 3H, 4H, 5H, 5HY	Own	8	3 1/2x3 1/2	3/8	8	6	L8	L6	J6		R102	R101	45	45	P235	P233	P84
1955-56	56H, 56H (3 1/2x3 1/2) 16G Early 3 1/2x2 1/2	Own	8	3 1/2x3 1/2	3/8	10		L13CE	L10	J10	Z10	R104	R103	45	45	P239	P237	P84
1956	Golden Hawk	Packard	8	4x3 1/2	3/8	18	13B	L18	L13B			R107	R105	30	45	P245	P241	P85
1955-64	AN V-8 Trucks, 259 Eng., Lark 8	Own	8	3 1/2x3 1/2	3/8	10		L13CE	L10	J10	Z10	R104	R103	45	45	P239	P237	P84
1958-60	Scotsman, Lark (3x4) 169, 186 Eng.	Own	6	3x4 1/2	3/8	7	6	L7	L6	J6		R102	R101	45	45	P235	P233	P83
1957-66	AN V-8 Cars and Trucks, Hawk and Asanti	Own	8	3 1/2x3 1/2	3/8	10		L13CE	L10	J10	Z10	R104	R103	45	45	P239	P237	P84
1961-66	Lark 6 Cyl., OHV Engines		6	3x4	3/8	8		L12CE	L8	J8		R104	R102	45	45	P238	P235	P84

VOLKSWAGEN

1953-60	All Models and Karmann-Ghia	36 HP	4	3.03 x 2.52	7MM		Z3AT			Z3AT	R742	R742	45	45	P231	P231	P8275	
1960-73	Trucks, Camper, Pgr., Karmann-Ghia, 1300	40 HP	4	3.03 x 2.52	8MM		Z6T45			Z6T45	R743	R743	45	45	P231	P231	P8315	
1964-73	1500, 1600 Engines	50 HP	4	3.27 x 2.72	8MM		Intake J8K			Z6T45	R748	R743	45	45	P231	P233	P8315	
1971-73	411 Series (Exhaust 9MM) (P8354)		4	3.54 x 2.60	8MM	Int. 1% x 1% x %; Exh. 1% x 1% x %				Z6T45		R743	45	45	P237	P233	P8315	
1974-75	Dasher		4	3.01 x 3.15	8MM								45	45	P237	P233	P8315	
1975	Scirocco, Rabbit		4	3.00 x 3.15	8MM								45	45	P237	P233	P8315	

NOTE Z3AT, Z5T45 and Z6T45 are oversize rings as it is usually necessary to clean up recess by cutting slightly larger hole after removing factory installed valve seat. Replaceable Valve Guide GL1276 Available from stock for 36 H.P. engine. Replaceable Valve Guide GL1315 available from stock for 40 H.P. Engine.

WAUKESHA ENGINES

1933-41	6BM, CD80, 278 (6BK, 6BKH-3 1/2x4 1/2), 68A	Own	6	3 1/2x4 1/2	% 13	8	L13	L8	J8	Z8	R105	R102	45	45	P241	P235	P85	
1940-44	140CS, 140HS, 150CK, 140HK (4 1/2x5 1/2)	Own	6	4 1/2x5 1/2	% 18	13	L18	L13	J13	Z13	R107	R105	30	45	P245	P241	P86	
1925-46	V, VIS, VIM, VIL, VIK	Own	1	4 1/2x4 1/2	% 18	18	L18	L18			R107	R107	45	45	P245	P245	P85	
1930-48	VK, VBKH (4 1/2x5 1/2) VBZH, VRZG, VRZH (4 1/2x5 1/2)	Own	4	4 1/2x5 1/2	% 18	13	L18	L13	J13	Z13	R107	R105	45	45	P245	P241	P85	
1940-48	130CS, 130HS, 130CL and 130HL (4x5)	Own	4	3 1/2x5	% 16C	8BT	L16C	L8BT			R106	R103	30	45	P243	P237	P86	
1940-50	145GS, 145HS	Own	6	4 1/2x6	% 25	19B	L25				R111	R106	30	45	P255	P243	P87	
1939-52	6NK, 6NKH	Own	6	7x8 1/2	% 31			L27BY	J27BY	Z27BY	R114	R112	30	45	P259	P255	P87	
1939-52	6SRKR, 6SLRL (4 1/2x5 1/2)	Own	6	4 1/2x5 1/2	% 20	12T	L20	L12T	J12T		R108	R104	30	30	P247	P239	P85	
1939-52	6BZ	Own	6	4x4 1/2	% 13	8	L13	L8	J8	Z8	R105	R102	45	45	P241	P235	P85	
1948-58	180DAC, 180DLC (3 1/2x3 1/2)	Own	4	3 1/2x3 1/2	% 8	4	L8	L4			R102	R100			P235	P231	P85	
1948-58	190DLB, 190DLCA	Own	6	3 1/2x4	% 10	6	L10	L6	J6		R103	R102			P237	P235	P85	
1948-58	145CK, 145HK, 145GZ (5 1/2 in. cyl.)	Own	6	5 1/2x6	% 25		L25	L17BX			R111	R107	30	45	P255	P245	P87	
1948-60	190CL	Own	6	3 1/2x4	% 8	6BR	L8	L6BR	J6BR	Z6BR	R102	R101	45	45	P235	P233	P85	
1931-58	6MZA, 6MZR (6MKR-4 1/2x4 1/2), late models require 13BU exh. ring	Own	6	4 1/2x4 1/2	% 18D	8BT	L18D	L8BT			R107	R103	45	45	P245	P237	P85	
1923-58	X, XA, XAH (3 1/2x4 1/2) XAK (3 1/2x4 1/2)	Own	4	3 1/2x4 1/2	% 10	10	L10		J10	Z10	R103	R103	45	45	P237	P237	P85	
1940-60	6WAKD, 6WAKDS	Own	6	6 1/2x6 1/2	% 30		L30	L22AY	J22AY	Z22AY	R113	R109	30	45	P255	P251	P87	
1953-58	18SDAC	Own	6	3 1/2x3 1/2	% 8	4	L8	L4			R102	R100	45	45	P235	P231	P85	
1941-71	ICK	Own	4	2 1/2x3 1/2	% 3	18H	L3				R100	R99	45	45	P229	P229	P83	
1931-71	FC	Own	4	3 1/2x4	% 10		L7E	L7E			R102	R102	45	45	P234	P234	P83	
1948-68	180-CL Series, 185-CL (1953-54)	Own	4	3 1/2x3 1/2	% 6BR	6BR	L6BR	L6BR	J6BR	Z6BR	R102	R102	45	45	P234	P234	P85	
1948-75	180-GK Series	Own	4	3 1/2x3 1/2	% 9	8R	L9	L8R	J8R	Z8R	R103	R102	45	45	P236	P235	P85	
1950-75	180-D Series	Own	4	3 1/2x3 1/2	% 8	4P	L8	L4P			R102	R100	45	45	P235	P231	P85	
1950-75	190-C Series	Own	6	3 1/2x4	% 8	6	L8	L6	J6		R102	R101	45	45	P235	P233	P85	
1948-67	190-G Series, 190CLB	Own	6	3 1/2x4	% 10	6P	L10	L6P			R103	R101	45	45	P237	P233	P85	
	F-283-G Series	Own			% 10		L10		J10	Z10		R103	45	45	P239	P237	P85	
1948-71	195-G Series, 195CK	Own	6	4 1/2x4	% 17C		L17C	L12CE	J12CE	Z12CE	R106	R104	45	45	P242	P239	P85	
1948-67	195-D and 197-D Series	Own	6	4x4	% 10		L14CE	L10	J10	Z10	R105	R103	45	45	P241	P237	P85	
1951-71	135CZ Series	Own	6	4 1/2x5	% 20B		L16BE				R107	R105	45	45	P245	P241	P86	
1951-68	135-D Series	Own	6	4 1/2x5	% 20D	10AU	L18E	L13CE	J13CE		R106	R104	45	45	P243	P239	P86	
1948-68	140-C Series, F554G Series	Own	6	4 1/2x5	% 20D	10AU	L10AU	L10AU	J10AU	Z10AU	R109	R104	30	45	P251	P239	P86	
1948-68	145-G Series	Own	6	5 1/2x6	% 28		L28		J19BX	Z19BX	R112	R108	30	45	P255	P247	P87	
1948-68	148-D Series Requires 2 1/2x2 1/2 Int. Ring	Own	6	5 1/2x6	% 30		L30				R110	R107	45	45	P251	P245	P87	
1940-75	WAK Series, F-1197-G Series 2x2 1/2x2 1/2 Exh.	Own	6	5 1/2x6 1/2	% 30		L30				R113	R110	30	45	P259	P251	P87	
1940-75	WAKD Ser., F-1197-D Ser. Reqs. 2 1/2x2 1/2 Int. Ring	Own	6	6 1/2x6 1/2	% 31C		L22D				R112	R109	30	45	P255	P247	P87	
1952-71	NK (F1905G), NKD (F1905D) Ser. Reqs. 2 1/2x3 1/2 Int. Ring	Own	6	7x8 1/2	% 36			L33BX		Z33BX	R116	R113	30	45	P261	P259	P89	
1931-68	LRO (F2894-G) Series Requires 3 1/2x3 1/2 Int. Ring	Own	6	8 1/2x8 1/2	% 36						R117	R10	30	30	P263	P261	P88L	
1950-68	LRZ (F-3520-G) Series Requires 3 1/2x4 1/2 Int. Ring	Own	6	9 1/2x8 1/2	% 36						R120	R10	30	45	P263	P263	P88L	
1958-68	VLRO (L-5788C) VLRO (L-5788D) L7040G (9 1/2x8 1/2)	Own	6	8 1/2x8 1/2	% 36						R115	R10	30	45	P263	P261	P88L	
1965-75	F817C Gas	Own	6	5 1/2x6	% 28		L28		J19BX	Z19BX	R112	R108	30	45	P255	P247	P87	
1970-75	H1077G, H1616-G Series, H1077D and L1616D Series	Own	8	5 1/2x5 1/2	% 18U	18U	L18U	L18U	J18U	Z18U	R117	R107	45	45	P245	P245	P85	
1970-75	F1905GR Series	Own	6		% 34	31C					R117	R113	30	45	P261	P255	P89	
1970-75	F2895C, F3521G, L5108G, L7042G	Own	6		% 36						R115	R115	45	45	P261	P261	P88L	

WHITE ENGINES FOR TRUCKS AND BUSES

1938-50	20A, 30A (100A-3½x4½) (110A-3½x4½)	Own	6	3½x4½	% 12	13T	L12	L13T	J13T	Z13T	R104	R105	45	45	P239	P241	P85
1938-54	24A	Own	12	4½x4½	% 16	16U	L16	L16U			R106	R106	30	45	P243	P243	P97
1941-54	120A (130A-4x4½) (140A-3½x5½) (150A, 250A-4x5½) (1% exhaust) 450A, 460A, 462AA	Own	6	3½x4½	% 18	13T	L18	L13T	J13T	Z13T	R107	R105	45	45	P243	P241	P85
1946-52	260A, 1280A, 290A-4½x5½ 370A 4½x4½, 380A 4½x5, 390A, 490A 4½x5, 470A 4½x5	Own	6	4½x5	% 22	18U	L22	L18U	J18U		R109	R107	45	45	P251	P245	P86
1949-54	116A	Own	6	3½x4½	% 18	13T	L18	L13T	J13T	Z13T	R107	R105	45	45	P243	P241	P85
1948-58	Freightliner	CUMMINS	6	5½x6	% 14	14	L14CT30	L14CT30	J14CT30	Z14CT30	R105	R105	30	30	P241	P241	P97L
1954-71	142, 145, 6-162, 6-190, 220, 235, 160, 170, 100, 110 3½x4½, 130 (3½x4½) (185, 186 4½x4½) 200 (4½x4½)	Own	6	4½x4½	% Intake Z18D)15 Exhaust Z16K						R107	R106	30	30	P245	P245	P86
1954-71	8-235 (4½x4½), 8-207, 8-220 LPC, 8-250	Own	8	3½x4½	% Intake Z18D)15 Exhaust Z16K						R107	R106	30	30	P245	P245	P86
1971-75	G1400, G1600 Gas	Own	4	4x3½	% Intake J14T Exhaust 1% x 1% x %						R105	R104	45	45	P241	P238	P83
1971-75	D4800, D4800T	Own	6	4½x4½	% Intake 1% x 2% x %; Exhaust 1% x 1% x %						R107	R105	45	45	P243	P240	P83

SMALL ENGINE VALVE SEAT TOOL SPECIFICATIONS

BRIGGS AND STRATTON ENGINES

Year	Model	Make	Eng. Cyl.	B&S	Pilot Size	Cast Int	Iron Exh.	VALVE SEATS				SEAT GRINDER			
								Lee-Alloy Int	Chromalloy Exh	Lee-Lite Exh	K-O Cutter Int	Seat Angle Int	Grind Int	Wk. Exh	Ex. Pilot No.
1948-73	14, 19, 24, 191, 193, 200, 231, 233, 243 Series	Owens	1		1/8	6CR	6CR	L6CR	L6CR	R101	R101	45	45	P233	P83
1949-73	5, 6 (2x2)	Owens	1	2x1 1/2	1/8	1C	1C	L1C	L1C	R731	R731	45	45	P225	P85
1949-73	8	Owens	1	2x1 1/2	1/8	2	1C	L2	L1C	R734	R731	45	45	P225	P85
1949-73	68, 88, 65, 60000, 80,000 with Int. and Exh. Same Size	Owens	1	2x1 1/2	1/8	1CP	1CP	L1CP	L1CP	R731	R731	45	45	P225	P85
1949-73	9, 1974-75 110,000 Series	Owens	1	2x1 1/2	1/8	3P	3P	L3P	L3P	R738	R738	45	45	P229	P83
1956-73	88, 88-FB, 88-R6, 88-H, 88-HA, 8000 Series	Owens	1	2x1 1/2	1/8	1CP	1CP	L1CP	L1CP	R731	R731	45	45	P225	P85
1959-73	60000, 80000 Series (2x1 1/2), 68, 88	Owens	1	2x1 1/2	1/8	2	1CP	L2	L1CP	R734	R731	45	45	P225	P85
1959-73	130,000, 140,000, 170,000, 171,000, 190,000 Series	Owens	1	2x1 1/2	1/8	6CR	6CR	L6CR	L6CR	R101	R101	30	45	P233	P83
1962-73	100200, 100900	Owens	1	2x1 1/2	1/8	3P	2	L3P	L2	R738	R734	30	45	P229	P85
1967-73	300 Series, 1974-75 302, 326	Owens	1	3x1 3/4	1/8	6CR	L13CE	L6CR		R104	R101	45	45	P239	P83

CLINTON

1948-67	500, 600, 700 Series	4 cycles	1	2x1 1/2	1/8	1AH	1AH			R736	44	44	P228	P228	P85
1950-67	800, 1100 Series (1956-58 1100 Series 2x1 1/2)	4 cycles	1	2x1 1/2	1/8	1AH	1AH			R736	44	44	P228	P228	P85
1955-67	700, 800 Series 900, 494	4 cycles	1	2x1 1/2	1/8	1AH	1AH			R736	44	44	P228	P228	P85
1954-75	V1200 Series 497, V1200 (499), B1290 (498)	4 cycles	1	2x1 1/2	1/8	1AH	1AH			R736	44	44	P228	P228	P85
1954-75	100 (400), VS100 (401), 2.5 H.P., 2100 (402), VS2100 (403)	4 cycles	1	2x1 1/2	1/8	1C	1C	L1C	L1C	R731	44	44	P225	P225	P85
1956-75	3100 (404), 3.25 H.P., VS3100 (405), 3.25 H.P., H3100 (406), VS3100 (407), 3100 (408), 3 H.P., VS3100 (409), 3 H.P., VS3100 (411), 3 H.P., VS3100 (415), 3.5 H.P., VS3100 (417), 3.25 H.P., 3100 (426), 3.5 H.P.	4 cycles	1	2x1 1/2	1/8	1C	1C	L1C	L1C	R731	44	44	P225	P225	P85
1954-75	412, 413, 1600 (414), 1600 (416), 1800 (418)	4 cycles	1	2x1 1/2	1/8	6P	6P	L6P	L6P	R744	44	44	P233	P233	P83
1970-75	2500 (420), 2790 (422)	4 cycles	1	2x1 1/2	1/8	28P	Exh. 1/8 x 1.0125 x 1/8			R736	45	45	P228	P226	P85
1970-75	410, 419 Series (4 H.P.)		1	2x1 1/2	1/8										

*R712 Reseater Shank may be used. New Models built since 1962 are shown in parenthesis following old model number.

CONTINENTAL MOTORS

1947-50	AA7, AA7B, AU7, AU7S	Owens	1	2'x2	%	1	1	1	L	R732	45	45	P226	P226	P965	
1950-75	AA7, AA7B, AU7, AU7S, AU7B, AU7R, AD7, AD7B, AW7, AW7B, AC5, AC6, AU8, AU8B, AU8R, AD8, AW8, AA8, AU8S, AU8R, AD8S, AW8S	Owens	1	2'x3	%	1C	1C	1C	L1C	R731	45	45	P225	P225	P965	
1957-75	AU10, AU10R, AD10, AW10	Owens	1	2'x2	%	2AH	2AH			R738	45	45	P229	P229	P965	
1960-75	AU7S, AU7SR	Owens	1		%	6	2AH	L6	J6	R744	R738	30	45	P229	P233	P965

CUSHMAN ENGINES

1942-63	M6, M7 (2x1 1/2), M8 (2x1 1/2), M9 (3x1 1/2)	Owens	1	2x1 1/2	1/8	6P	6P	L6P	L6P	R101	R101	45	45	P233	P233	P83
1961-75	218 and 109		1	2x1 1/2	1/8	Intake and Exhaust 1 1/2 x 1 1/2				R102	R102	45	45	P235	P235	P83

KOHLER ENGINES

1952-75	K90, K91		1	2x1 1/2	1/8	2	1C	L2	L1C	R734	R731	45	45	P228	P225	P85
1968-71	K121, KV121		1	2x1 1/2	1/8	2AH	2BC			R738	R736	45	45	P229	P228	P85
1953-70	K141, K160, K161, KV161, L161, K141, K161 1970-73		1	2x1 1/2	1/8	4P	L8E	L4P		R102	R100	45	45	P235	P231	P83
1953-75	K181, KV181, L181, K241, K301, K482 1963-73 2 cy		1	2x1 1/2	1/8	4P	L8E	L4P		R102	R100	45	45	P235	P231	P83
1968-75	K321, 1971-73 K341, 3x1 1/2, K532 1972-73 3x1 1/2, 2 cy		1	3x1 1/2	1/8	8	L8	L8	J8	R102	R102	45	45	P235	P235	P83
1953-67	K331, K660, K662 1953-73		1	3x1 1/2	1/8	10C		L7C		R103	R102	45	45	P237	P235	P84
1957-70	L600, L654, 1969-1973		4	2x1 1/2	1/8	2AH	2A			R100	R100	45	45	P228	P231	P83

LAUSON - TECUMSEH

1948-54	LMC, LMH		1	1x1 1/2	1/8					R732		45	45	P224	P224	P85
1948-58	RSC, RSH, RSV, SSA, SSAB All 55 Series		1	2x1 1/2	1/8	1BH	1BH			R734	R734	45	45	P227	P227	P85
1950-54	PAH, PAC, PAX		1	2x1 1/2	1/8	5P	5P			R742	R742	45	45	P232	P232	P85
1954-58	P25, P27		1	2x1 1/2	1/8	5P	5P			R742	R742	45	45	P232	P232	P85
1948-58	TLC, TLH, TLV		1	2x1 1/2	1/8	2BC	2BC			R736	R736	45	45	P228	P228	P85
1955-57	SLV, VA		1	2x1 1/2	1/8	1BH	1BH			R734	R734	45	45	P227	P227	P85
1957-58	H25 and V25		1	2x1 1/2	1/8	1BH	1BH			R734	R734	45	45	P227	P227	P85
1957-58	H40, 50, 60 and V40, 50, 60		1	2x1 1/2	1/8	4P	4P	L4P	L4P	R740	R740	45	45	P231	P231	P85
1958-60	H, HR, HB 35 and 40, 45, 55		1	2x1 1/2	1/8	4P	4P	L4P	L4P	R740	R740	45	45	P231	P231	P85
1958-60	V, VX, VC, VCK, 35 and 40		1	2x1 1/2	1/8	4P	4P	L4P	L4P	R740	R740	45	45	P231	P231	P85
1958-60	H, HR, HB 17 through 25		1	2x1 1/2	1/8	1BH	1BH			R734	R734	45	45	P227	P227	P85
1958-60	H, HR, HB 27 through 30		1	2x1 1/2	1/8	2C	2C			R734	R734	45	45	P227	P227	P85
1957-60	V17 through 25 (V22 and V25 2x1 1/2)		1	2x1 1/2	1/8	1BH	1BH			R734	R734	45	45	P227	P227	P85
1957-60	V27 through 30		1	2x1 1/2	1/8	7C	7C			R734	R734	45	45	P227	P227	P85
1958-75	LV, LAV and H 22 25 30 25 (Long Life)		1	2x1 1/2	1/8	2C	2C			R734	R734	45	45	P227	P227	P85
1958-75	V & H and HH 40, 50, 60, H70, V70, VH70 Series		1	2x1 1/2	1/8	4P	4P	L4P	L4P	R740	R740	45	45	P231	P231	P85
1964-75	HH80, HH100, HH120, VH80 100-120		1	2x1 1/2	1/8	6A	6A	L6A	L6BP	R109	R102	45	45	P236	P234	P83
1969-75	HH140		1	2x1 1/2	1/8	6B	6B	L6B		R103	R102	45	45	P237	P234	P83
1970-75	LAV and HS40		1	2x1 1/2	1/8	2BH	2C			R736	R734	45	45	P228	P227	P85
1970-75	V and HB		1	3x1 1/2	1/8	6	4	L6	L4	R744	R740	45	45	P233	P231	P83

WISCONSIN AIR COOLED ENGINES

1949-56	ABN, ABM		1	2x1 1/2	1/8	3	3	L3	L3	R100	R100	45	45	P229	P229	P83
1949-56	AKN, AKM		1	2x1 1/2	1/8	6	6	L6	L6	R101	R101	45	45	P233	P233	P83
1949-67	AEN, AENS, AEN, HAENL, TE (2 cyl), VE4 (4 cyl)		1	3x1 1/2	1/8	6R	6R	L6R	L6R	R101	R101	45	45	P233	P233	P83
1975	AENL		1	3x1 1/2	1/8	6R	6R	L6R	L6R	R101	R101	45	45	P233	P233	P83
1947-56	AFH, ACH, (3x1 1/2)		1	3x1 1/2	1/8	10R	10R	L10R	L10R	R103	R103	45	45	P237	P237	P83
1949-67	TF, TH, TFM, VF4, VE4, VE4D, VH4 4 cyl		2	3x1 1/2	1/8	6R	6R	L6R	L6R	R101	R101	45	45	P233	P233	P83
1975	THD, TJD, (VF4D, VH4D 4 cyl)		2	3x1 1/2	1/8	6R	6R	L6R	L6R	R101	R101	45	45	P233	P233	P83
1948-56	VR4, VM4, VCD (1975) VP4D		1	3x1 1/2	1/8	10R	10R	L10R	L10R	R103	R103	45	45	P237	P237	P83
1956-73	ACN, BKN 1975 2x1 1/2, HACN, HBKN		1	2x1 1/2	1/8	6R	6R	L6R	L6R	R101	R101	45	45	P233	P233	P83
1958-73	ACN, AGND (1975)		1	3x1 1/2	1/8	10R	10R	L10R	L10R	R103	R103	45	45	P237	P237	P83
1958-73	VR4D		4	4x1 1/2	1/8	19Y				R108	R108	45	45	P245	P245	P85
1962-73	V-460D, V-461D, 1967-68 V-465D (1975) 4 cyl 3x1 1/2		4	3x1 1/2	1/8	10R	6R	L10R	L6A	R103	R101	45	45	P237	P233	P83
1962-73	S-7D, S-8D (3x1 1/2)		1	3x1 1/2	1/8	7	6R	L7	L6R	R102	R101	45	45	P234	P233	P83
1964-73	TR-100, (1975) TRA-100, TRA-120 3x1 1/2 (1975)		1	3x1 1/2	1/8	6A	6A	L6A	L6R	R101	R101	45	45	P233	P233	P83
1969-75	S100 (3x1 1/2), S120 (3x1 1/2), S140		1	3x1 1/2	1/8	Intake and Exhaust 1 1/2 x 1 1/2				R103	R103	45	45	P237	P237	P83

*P398 1/2 Hex Socket, 1/2 threaded end or P399 1/2 Hex Socket, 1/2 threaded end wheel holders should be used. R700 special reseater set and P202 special valve seat grinder set are designed to service foreign cars, small stationary engines, power mowers and motorcycles. Send for Catalog Form R700.

Replacement Ring for Factory Installed Insert

Engines using Propane, Butane or Natural Gas must use Chromalloy or Lee-Lite Rings.

DATA BOOK

VALVE SEAT INSERT RINGS

Rings are made from the highest quality material. All rings are individually cast to insure close grain and uniform material throughout. A complete chemical analysis is made for each heat of castings produced. A random sample of each size casting is taken for x-ray evaluation. Any heat not to specifications is scrapped. Final inspection after machining gives complete quality control. Ring O.D. fractional sizes shown indicate recess diameter ring is designed for. Press fit is on O.D. of ring. Ring O.D. decimal sizes are exact size shown. Press fit must be allowed by cutting recess under this size.

CAST IRON

Individually cast gray iron. These rings have a closer grain structure than the original block. Recommended for most intake applications and engines not originally equipped with inserts. These rings are not recommended for engines using propane, butane or natural gas. Chromalloy or Lee-Lite Alloy rings must be used.

PACKAGED IN A BLACK BOX
12 RINGS TO A BOX

SOLD IN BOX QUANTITIES ONLY

CHROMALLOY

This individually cast ring is an iron base casting containing Molybdenum, Tungsten and Chrome. Heat treated for toughness and resistance to wear. Recommended for all applications.

PACKAGED IN A YELLOW BOX
6 RINGS TO A BOX

SOLD IN ANY QUANTITY

LEE-ALLOY

This individually cast Lee-Alloy ring is an iron base casting, containing Nickel, Chrome and Molybdenum. Heat treated for toughness and resistance to wear. Recommended for light and medium duty. These rings are not recommended for engines using propane, butane or natural gas. Chromalloy or Lee-Lite Alloy rings must be used.

PACKAGED IN A RED BOX
6 RINGS TO A BOX

SOLD IN BOX QUANTITIES ONLY

LEE-LITE

This individually cast ring is a Nickel base casting containing Nickel, Chrome and Cobalt. This material does not respond to hardening by normal heat treating methods. Parts are stress relieved. Lee-Lite rings are made for the job application where all other rings fail. They may be used on any type engine, but they are designed for extra heavy duty engines. Must be used when these engines use propane, butane or natural gas. They retain their hardness under red heat. Lee-Lite rings are particularly adaptable to aluminum engines.

PACKAGED IN A BLUE BOX
6 RINGS TO A BOX

SOLD IN ANY QUANTITY

Special Inserts Made To Customer's Specifications

Sizes or Oversizes Not Shown in Regular Listings

SIZE RANGE	Cast Iron	Lee-Alloy	Chromalloy	Lee-Lite
Up to 1 $\frac{1}{4}$ O.D. x $\frac{3}{8}$ thick				
1 $\frac{1}{2}$ to 2 O.D. x $\frac{3}{8}$ thick				
2 to 2 $\frac{1}{4}$ O.D. x $\frac{1}{2}$ thick				
2 $\frac{1}{4}$ to 2 $\frac{1}{2}$ O.D. x $\frac{1}{2}$ thick				
2 $\frac{1}{2}$ to 2 $\frac{3}{4}$ O.D. x $\frac{1}{2}$ thick				
2 $\frac{3}{4}$ to 2 $\frac{1}{2}$ O.D. x $\frac{1}{2}$ thick				
2 $\frac{1}{2}$ to 2 $\frac{1}{2}$ O.D. x $\frac{1}{2}$ thick				
2 $\frac{1}{2}$ to 3 $\frac{1}{4}$ O.D. x $\frac{3}{8}$ thick				

Above seats furnished with 45° angle unless otherwise specified.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite				
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Insert Ring Dimensions	Cutter No.	Shank Side
1C 1CP 1		L1C L1CP L1						$\frac{1}{4} \times \frac{1}{2} \times \frac{1}{4}$ $\frac{1}{4} \times \frac{1}{2} \times \frac{1}{4}$ $\frac{1}{4} \times 1 \times \frac{1}{4}$	R731 R731 R732	
SPECIAL RESEATER SHANK NO. R712 MUST BE USED WITH R731, R732, R734 AND R736 CUTTERS.										
1H 1BH 1AH		L1DR				Z1DR		$\frac{1}{4} \times 1 \times \frac{1}{4}$ $\frac{1}{4} \times 1 \frac{1}{2} \times \frac{1}{4}$ $\frac{1}{4} \times 1 \frac{1}{2} \times \frac{1}{4}$ $\frac{1}{4} \times 1 \frac{1}{2} \times \frac{1}{4}$	R732 R734 R736 R100	K-Side
2C 2 2BC 2B 2BP 2A		L2 L2B L2BP						$\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$	R734 R734 R736 R736 R736 R100	K-Side
				J2BTH30				$\frac{1}{4}$ to $\frac{1}{2}$ taper x 1.160 x $\frac{1}{2}$	Spec.	
2BH 2AH		L2BRH						$\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$ $\frac{1}{4} \times 1 \frac{1}{4} \times \frac{1}{2}$	R736 R736 R100	O-Side
3 3P 4 4P		L3 L3P L4 L4P L4P5 L4TH6 L4TH20				Z4		1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1.260x $\frac{1}{2}$ 1 to 1 $\frac{1}{4}$ taper x 1.263 x $\frac{1}{4}$ 1 to 1 $\frac{1}{4}$ taper x 1.275 x $\frac{1}{4}$	R100 R100 R100 R100 R100 Spec. R100†	O-Side O-Side K-Side K-Side K-Side Spec. K-Side
4R 3A 4A 4DX		L3A L4A L4DU		J4DU		Z3AT Z4DU		1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1x1 $\frac{1}{4}$ x $\frac{1}{2}$	R100† R100 R101 R101 R101 R103 R104	K-Side K-Side O-Side O-Side O-Side O-Side O-Side
5 5P 5B 5A		L5 L5B L5A		J5T45		Z5 Z5T45		1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1.362x $\frac{1}{4}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$	R101 R101 Spec. R101 R102	O-Side O-Side Spec. K-Side O-Side
		L5CH L5CPH L5CPH10		J5CPH J5CPH10		Z5H30 Z6H45		1 $\frac{1}{2}$ x1.2875x $\frac{1}{4}$ 1 $\frac{1}{2}$ x1.300x $\frac{1}{4}$ 1 $\frac{1}{2}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{2}$ x1.3487x $\frac{1}{4}$ 1 $\frac{1}{2}$ x1.3587x $\frac{1}{4}$	R100† R100† R101 R101† Spec.	K-Side K-Side O-Side O-Side Spec.
6CR 6 6P 6R 6B 6BR 6A		L6CR L6 L6P L6R L6R5 L6B L6BP L6BR L6A L6D		J6T45 J6 J6P J6R J6BP J6BR		Z6T45 Z6BR Z6D		1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1.362x $\frac{1}{4}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1.385x $\frac{1}{4}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$	R101† Spec. R101 R101 R101 R101* R102 R102 R102 R102 R103	O-Side Spec. K-Side K-Side K-Side K-Side O-Side O-Side O-Side O-Side O-Side
7 7R 7B 7BR 7A		L7C L7E L7 L7R L7R5 L7B L7BR L7A L7ATH L7ATH10		J7C J7 J7B		Z7ATH Z7ATH10		1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1.4475x $\frac{1}{4}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{2}$ 1 $\frac{1}{4}$ to 1 $\frac{1}{4}$ taper x 1 $\frac{1}{4}$ x $\frac{1}{4}$ 1 $\frac{1}{4}$ to 1 $\frac{1}{4}$ taper x 1.5775 x $\frac{1}{4}$	R102 R102 R102 R102 R102* R102 R102 R103 R103 R103 R103†	O-Side O-Side O-Side O-Side O-Side K-Side K-Side O-Side O-Side O-Side O-Side

Oversize Reseater Shank must be used. (*) .005 oversize shank. (†) .010 oversize shank. (‡) .015 oversize shank. (‡) .020 oversize shank. (‡) .030 oversize shank. (‡) .045 oversize shank. Shanks are available for cutting .005, .010, .015, .020, .030, .045 oversize recess using standard cutters.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite		Insert Ring Dimensions	Cutter No.	Shank Side
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each			
		L7ATH30 L7D L7DU		J7DU				1 3/4 to 1 1/2 taper x 1.5975 x 3/4 1 3/4 x 1 1/2 x 3/4 1 3/4 x 1 1/2 x 3/4	R103† R103 R104	O-Side K-Side O-Side
		L7RH50 L7RH60	2.20 2.20	J7RH93		Z7RH50 Z7RH60		1 3/4 x 1.429 x 3/4 1 3/4 x 1.442 x 3/4 1 3/4 x 1.473 x 3/4	Spec. R102† R102†	O-Side O-Side O-Side
8 8R		L8E L8T45 L8 L8R		J8E J8ER8 J8 J8R J8R10 J8K		Z8ER8 Z8 Z8R		1 1/4 x 1 1/4 x 3/4 1 1/4 x 1.450 x 3/4 1 1/4 x 1.4895 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 x 1.515 x 3/4 1 1/4 x 1 1/4 x 3/4	R102 Spec. R102† R102 R102 R102† R102	O-Side O-Side K-Side K-Side K-Side K-Side K-Side
8B 1BR		L8BE L8B L8BR L8BTH L8BTH10 L8BTH20		J8BR				1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 to 1 1/4 taper x 1 1/4 x 3/4 1 1/4 to 1 1/4 taper x 1.5775 x 3/4 1 1/4 to 1 1/4 taper x 1.5875 x 3/4	R103 R103 R103 R103 R103† R103†	O-Side O-Side O-Side O-Side O-Side O-Side
8BT 8A 8AR 8AT		L8BT L8A L8AR L8AT		J8AT		Z8AT		1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4 1 1/4 x 1 1/4 x 3/4	R103† R103 R103 R103	O-Side O-Side K-Side K-Side
		L8RH10 L8RH15 L8RH30 L8ATH L8ATH10 L8ATH30		J8RH5 J8ATH		Z8RH10 Z8RH15 Z8ATH Z8ATH10		1 1/2 x 1.510 x 3/4 1 1/2 x 1.515 x 3/4 1 1/2 x 1.520 x 3/4 1 1/2 x 1.535 x 3/4 1 1/2 to 1 1/4 taper x 1 1/2 x 3/4 1 1/2 to 1 1/4 taper x 1.640 x 3/4 1 1/2 to 1 1/4 taper x 1.660 x 3/4	R102* R102† R102§ R102† R103 R103† R103†	K-Side K-Side K-Side K-Side K-Side K-Side K-Side
9 9+5		L9 L9+5 L9+10 L9+30 L9ATH L9ATH10 L9ATH30		J9 J9+10 J9ATH		Z9 Z9+10 Z9ATH Z9ATH10 Z9ATH30		1 1/2 x 1 1/2 x 3/4 1 1/2 x 1.5725 x 3/4 1 1/2 x 1.5755 x 3/4 1 1/2 x 1.5775 x 3/4 1 1/2 x 1.5975 x 3/4 1 1/2 to 1 1/4 taper x 1 1/2 x 3/4 1 1/2 to 1 1/4 taper x 1.5775 x 3/4 1 1/2 to 1 1/4 taper x 1.5975 x 3/4	R103 R103† R103† R103† R103† R103 R103† R103†	O-Side O-Side O-Side O-Side O-Side O-Side O-Side O-Side
9R 9B 9BR		L9R L9R10 L9B L9BR		J9R10 J9BR J9BTU27		Z9R10 Z9BR Z9BU		1 1/2 x 1 1/2 x 3/4 1 1/2 x 1.578 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 to 1 1/4 taper x 1.657 x 3/4	R103 R103 R103† R103 R103 Spec. R104	O-Side O-Side O-Side K-Side K-Side O-Side O-Side
9A 9AR		L9A L9AR L9D L9DT		J9ATH33 J9DU30				1 1/2 to 1 1/4 taper x 1.725 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 to 1 1/4 taper x 1.785 x 3/4	Spec. R104 R104 R104†	O-Side O-Side K-Side K-Side K-Side
		L9HU57				Z9HU57 Z9HU62		1 1/2 x 1.625 x 3/4 1 1/2 x 1.630 x 3/4	Spec. R103	K-Side
		L9HT20 L9H23 L9H28 L9BH L9BH5 L9BH20 L9BSH L9BSH5		J9BH J9BSH		Z9BSH		1 1/2 x 1.588 x 3/4 1 1/2 x 1.590 x 3/4 1 1/2 x 1.595 x 3/4 1 1/2 x 1 1/2 x 3/4 1 1/2 x 1.635 x 3/4 1 1/2 x 1.650 x 3/4 1 1/2 to 1 1/4 taper x 1 1/2 x 3/4 1 1/2 to 1 1/4 taper x 1.635 x 3/4	R103† Spec. Spec. R103 R103† R103† R103 R103† R103*	O-Side O-Side O-Side K-Side K-Side K-Side K-Side K-Side K-Side

Over-size Reseater Shank must be used. (*) .005 over-size shank. (†) .010 over-size shank. (§) .015 over-size shank. (‡) .020 over-size shank. (†) .030 over-size shank. (†) .045 over-size shank. Shanks are available for cutting .005, .010, .015, .020, .030, .045 over-size recess using standard cutters.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite				
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Insert Ring Dimensions	Cutter No.	Shank Side
9BTH 9BTH5		L9BSH10		J9BTH J9BTH10		Z9BSH10		1 1/4 to 1 1/2 taper x1.640x3/4	R103†	K-Side
		L9BSH30				Z9BTH Z9BTH10		1 1/4 to 1 1/2 taper x1.660x3/4	R103†	K-Side
		L9BTH						1 1/2 x 1 1/2 x 3/4	R103	K-Side
		L9BTH5						1 1/2 x 1.635x3/4	R103*	K-Side
		L9BTH10						1 1/2 x 1.638x3/4	R103*	K-Side
		L9BTH30						1 1/2 x 1.640x3/4	R103†	K-Side
								1 1/2 x 1.660x3/4	R103†	K-Side
10E		L10E		J10E		Z10 Z10+10		1 3/4 x 1 1/4 x 1/2	R103	O-Side
10C		L10 L10+5		J10E10				1 3/4 x 1.5775x1/2	R103†	O-Side
10				J10				1 3/4 x 1 1/4 x 1/2	R103	K-Side
10+5		L10+10		J10+10				1 3/4 x 1 1/2 x 1/2	R103	K-Side
10+10								1 3/4 x 1.635x1/2	R103*	K-Side
10+20		L10+20				Z10R10		1 3/4 x 1.638x1/2	R103*	K-Side
10R		L10R L10R10 L10R15 L10R20		J10R				1 3/4 x 1.640x1/2	R103†	K-Side
				J10R10		Z10R20		1 3/4 x 1.643x1/2	R103†	K-Side
								1 3/4 x 1.650x1/2	R103†	K-Side
								1 3/4 x 1.653x1/2	R103†	K-Side
10R20		L10R45						1 3/4 x 1 1/2 x 1/4	R103	K-Side
11		L11		J11R		Z11R		1 3/4 x 1.640x1/4	R103†	K-Side
11R		L11R				Z11R10		1 3/4 x 1.645x1/4	R103†	K-Side
		L11R5						1 3/4 x 1.650x1/4	R103†	K-Side
						Z11X30		1 3/4 x 1.653x1/4	R103†	K-Side
								1 3/4 x 1.675x1/4	R103†	K-Side
11T		L11T		J11T				1 3/4 x 1 1/4 x 1/2	R104	O-Side
10A		L10A		J10AR		Z10AR		1 3/4 x 1 1/4 x 1/2	R104	O-Side
10AR		L10AR				Z10AR10		1 3/4 x 1 1/2 x 1/2	R104	O-Side
		L10AR5						1 3/4 x 1.760x1/4	R104*	K-Side
								1 3/4 x 1.765x1/4	R104†	K-Side
								1 3/4 x 1.785x1/4	R104†	K-Side
10AT		L10AR30		J10AT		Z10AT		1 3/4 x 1 1/2 x 3/4	R104	K-Side
		L10AT		J10AT10		Z10AT10		1 3/4 x 1.765x3/4	R104†	K-Side
10AU		L10AU		J10AU		Z10AU		1 3/4 x 1 1/2 x 1/2	R104	K-Side
		L10AU10				Z10AU10		1 3/4 x 1.765x1/2	R104†	K-Side
11A		L11A		J10AX				1 3/4 x 1 1/2 x 1/4	R104	K-Side
11AR		L11AR						1 3/4 x 1 1/4 x 1/2	R105	O-Side
11AT		L11AT						1 3/4 x 1 1/4 x 1/2	R105	O-Side
11AU		L11AU						1 3/4 x 1 1/4 x 1/2	R105	O-Side
11D		L11D		J11DX				1 3/4 x 1 1/2 x 1/2	R105	K-Side
				J11XY				1 3/4 x 1 1/4 x 1/2	R105	K-Side
								1 3/4 x 2x1/2	R106	K-Side
				J11HTU33				1 1/2 to 1 1/4 taper x1.725x.382	Spec.	
						Z11DTH34		1 1/2 x 1.914x3/4	Spec.	
12CE		L12J5		J12JU15		Z12CE		1 3/4 x 1.635x1/4	R103*	K-Side
		L12J15						1 3/4 x 1.645x1/4	R103†	K-Side
		L12CT45						1 3/4 x 1.645x.397	R103†	K-Side
		L12CE						1 3/4 x 1.6785x1/4	R103†	K-Side
								1 3/4 x 1 1/4 x 1/2	R104	O-Side
12C		L12C		J12CE		Z12C		1 3/4 x 1.7025x1/2	R104†	O-Side
		L12E		J12C				1 3/4 x 1 1/4 x 1/4	R104	O-Side
				J12E		Z12E		1 3/4 x 1 1/2 x 1/2	R104	K-Side
12		L12		J12E10		Z12E10		1 3/4 x 1.765x1/2	R104†	K-Side
12T		L12T						1 3/4 x 1 1/2 x 1/4	R104	K-Side
12U				J12T		Z12T		1 3/4 x 1 1/4 x 1/4	R104	K-Side
						Z12U		1 3/4 x 1 1/2 x 1/2	R104	K-Side
						Z12X33		1 3/4 x 1.788x3/4	Spec.	
12B		L12B		J12B				1 3/4 x 1 1/4 x 1/4	R105	O-Side
12BT		L12BT						1 3/4 x 1 1/4 x 1/4	R105	O-Side
		L12BU						1 3/4 x 1 1/4 x 1/4	R105	O-Side
12A		L12A		J12A				1 3/4 x 1 1/4 x 1/4	R105	K-Side
		L12AY						1 3/4 x 1 1/4 x 1/2	R105	K-Side
12D		L12D						1 3/4 x 2x1/4	R106	K-Side
		L12DU		J12DU		Z12DU		1 3/4 x 2x3/4	R107	O-Side
		L12CH20						1 1/2 x 1.7125x3/4	R104†	O-Side
		L12CH30						1 1/2 x 1.7225x3/4	R104†	O-Side
				J12BHU12				1 1/2 x 1.829x1/4	Spec.	

Oversize Resenter Shank must be used. (*) .005 oversize shank. (†) .010 oversize shank. (§) .015 oversize shank.
 (‡) .020 oversize shank. (†) .030 oversize shank. (†) .045 oversize shank. Shanks are available for cutting .005,
 .010, .015, .020, .030, .045 oversize recess using standard cutters.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite				
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Insert Ring Dimensions	Cutter No.	Shank Side
13C		L13CE		J13CE				1 1/2 x 1 1/2 x 3/4	R104	K-Side
				J13CE10				1 1/2 x 1.765 x 3/4	R104†	K-Side
				J13CR7				1 1/2 x 1.762 x 3/4	Spec.	
		L13C		J13C				1 1/2 x 1 1/2 x 1/2	R104	K-Side
13		L13E		J13E		Z13		1 1/2 x 1 1/4 x 1/2	R105	O-Side
		L13		J13		Z13 + 10		1 1/2 x 1 1/4 x 1/2	R105	O-Side
13T		L13T		J13 + 10		Z13T		1 1/2 x 1.8275 x 1/2	R105†	O-Side
		L13T5		J13T				1 1/2 x 1 1/4 x 1/2	R105	O-Side
		L13T10				Z13T10		1 1/2 x 1.8225 x 1/2	R105*	O-Side
		L13T20		J13T10				1 1/2 x 1.8275 x 1/2	R105†	O-Side
13B		L13BE						1 1/2 x 1.8375 x 1/2	R105†	O-Side
		L13B						1 1/2 x 1 1/2 x 1/2	R105	K-Side
		L13BT		J13BT				1 1/2 x 1 1/2 x 1/2	R105	K-Side
		L13BU				Z13BU		1 1/2 x 1 1/2 x 1/2	R105	K-Side
13BU		L13BU10				Z13BU10		1 1/2 x 1.890 x 1/2	R105†	K-Side
		L13BU20						1 1/2 x 1.900 x 1/2	R105†	K-Side
13BX		L13BX				Z13BX34		1 1/2 x 1 1/2 x 1/2	R105	K-Side
								1 1/2 x 1.914 x 1/2	Spec.	
13A		L13A						1 1/2 x 1 1/4 x 1/2	R106	O-Side
13AT		L13AT						1 1/2 x 1 1/4 x 1/2	R106	O-Side
13AU		L13AU		J13AU				1 1/2 x 1 1/4 x 1/2	R106	O-Side
14C		L14CE		J14C				1 1/2 x 1 1/4 x 1/2	R105	O-Side
		L14C				Z14J45		1 1/2 x 1 1/4 x 1/2	R105	O-Side
		L14J30				Z14CT30		1 1/2 x 1.847 x 1/2	R105†	O-Side
		L14CT30		J14CT30				1 1/2 x 1.861 x 1/2	R105†	O-Side
14				J14CT40		Z14CY57		1 1/2 x 1.847 x 1/2	R105†	O-Side
				J14CY57		Z14CY62		1 1/2 x 1.857 x 1/2	R105	Spec.
		L14E						1 1/2 x 1.875 x 1/2	Spec.	
		L14						1 1/2 x 1.880 x 1/2	R105	K-Side
14T		L14T		J14T		Z14		1 1/2 x 1 1/4 x 1/2	R105	K-Side
						Z14X34		1 1/2 x 1 1/4 x 1/2	R105	K-Side
15		L15						1 1/2 x 1.911 x 1/2	Spec.	
		L15T						1 1/2 x 1 1/4 x 1/2	R106	O-Side
14A		L14A						1 1/2 x 1 1/4 x 1/2	R106	O-Side
15A		L15A						1 1/2 x 2 1/4 x 1/2	R106	K-Side
14BTH		L14H		J14H		Z14H		1 1/2 x 1 1/4 x 1/2	R105	K-Side
		L14H5				Z14H10		1 1/2 x 1.885 x 1/2	R105*	K-Side
		L14H10		J14H10				1 1/2 x 1.890 x 1/2	R105†	K-Side
		L14H20						1 1/2 x 1.900 x 1/2	R105†	K-Side
16B		L16E		J16E				1 1/2 to 1 1/4 taper x 2 x 1/2	R106	K-Side
		L16BE		J16B				1 1/2 to 1 1/4 taper x 2.035 x 1/2	R106†	K-Side
		L16B				Z16BU57		1 1/2 x 1 1/4 x 1/2	R105	O-Side
		L16BX				Z16BU62		1 1/2 x 1 1/4 x 1/2	R105	K-Side
16CE		L16BY57		J16BY57		Z16BY57		1 1/2 x 1.937 x 1/2	R105	K-Side
				J16CE		Z16BY62		1 1/2 x 1.9425 x 1/2	R105	K-Side
				J16BTH				1 1/2 x 1.937 x 1/2	Spec.	
				J16BTH10				1 1/2 x 1.9425 x 1/2	R106	O-Side
16C		L16C						1 1/2 to 1 1/4 taper x 1 1/2 x 1/2	R106	O-Side
		L16CU						1 1/2 to 1 1/4 taper x 1.9525 x 1/2	R106	O-Side
		L16CX						1 1/2 x 1 1/4 x 1/2	R106	O-Side
		L16		J16				1 1/2 x 1 1/4 x 1/2	R106	O-Side
16		L16J		J16J		Z16		1 1/2 x 2 x 1/2	R106	K-Side
				J16J10		Z16 + 10		1 1/2 x 2.015 x 1/2	R106†	K-Side
				J16K		Z16J		1 1/2 x 2 x 1/2	R106	K-Side
				J16K20		Z16K		1 1/2 x 2.015 x 1/2	R106†	K-Side
16U		L16U				Z16K10		1 1/2 x 2.015 x 1/2	R106	K-Side
		L16X						1 1/2 x 2.025 x 1/2	R106†	K-Side
16D		L16D						1 1/2 x 2 x 1/2	R106	K-Side
		L16A				Z16X10		1 1/2 x 2.016 x 1/2	R106†	K-Side
16A		L16AY		J16AY		Z16AY		1 1/2 x 2 1/4 x 1/2	R107	O-Side
								1 1/2 x 2 1/4 x 1/2	R107	K-Side
		L16H10		J16H20		Z16H10		1 1/2 x 1.953 x 1/2	R106†	O-Side
								1 1/2 x 1.963 x 1/2	R106†	O-Side
		L16DJ15		J16DJ20		Z16DJ15		1 1/2 x 2.083 x 1/2	R107§	O-Side
						Z16DJ20		1 1/2 x 2.088 x 1/2	R107‡	O-Side

Oversize Resenter Shank must be used. (*) .005 oversize shank. (†) .010 oversize shank. (§) .015 oversize shank.
 (‡) .020 oversize shank. (†) .030 oversize shank. (†) .045 oversize shank. Shanks are available for cutting .005,
 .010, .015, .020, .030, .045 oversize recess using standard cutters.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite		Insert Ring Dimensions	Cutter No.	Shank Side
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each			
17E		L17C		J17CR9		Z17C		1 $\frac{1}{4}$ "x1 $\frac{1}{2}$ "x $\frac{3}{4}$ "	R105	K-Side
17C								1 $\frac{1}{4}$ "x1 $\frac{1}{2}$ "x $\frac{3}{4}$ "	R106	O-Side
17D		L17D		J17T8		Z17T8		1 $\frac{1}{4}$ "x1.952x $\frac{3}{4}$ "	Spec.	
17TS		L17T8		J17T8				1 $\frac{1}{4}$ "x2x $\frac{3}{4}$ "	R106	K-Side
				J17T20				1 $\frac{1}{4}$ "x2.013x $\frac{3}{4}$ "	R106*	K-Side
				J17K16				1 $\frac{1}{4}$ "x2.025x $\frac{3}{4}$ "	R106†	K-Side
17		L17		J17		Z17+16		1 $\frac{1}{4}$ "x2.021x.345	Spec.	
				J17+16				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	O-Side
				J17+30				1 $\frac{1}{4}$ "x2.085x $\frac{3}{4}$ "	Spec.	
				J17DTH				1 $\frac{1}{4}$ "x2.099x $\frac{3}{4}$ "	R107†	O-Side
17B		L17B						1 $\frac{1}{4}$ "x1 $\frac{1}{2}$ "x taper		
		L17BX				Z17BX33		2 $\frac{1}{4}$ "x.300	R107	O-Side
17A								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	K-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	Spec.	
								1 $\frac{1}{4}$ "x2.164x $\frac{3}{4}$ "	R108	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "		
				J17H				1 $\frac{1}{4}$ "x2x.345	R106	K-Side
18C		L18E		J18E				1 $\frac{1}{4}$ "x2x $\frac{3}{4}$ "	R106	K-Side
		L18C		J18CT				1 $\frac{1}{4}$ "x2x $\frac{3}{4}$ "	R106	K-Side
				J18CT10				1 $\frac{1}{4}$ "x2x $\frac{3}{4}$ "	R106	K-Side
		L18CX		J18CR19				1 $\frac{1}{4}$ "x2.015x $\frac{3}{4}$ "	R106	K-Side
18D		L18D				Z18R		1 $\frac{1}{4}$ "x2x $\frac{3}{4}$ "	R106	K-Side
						Z18R10		1 $\frac{1}{4}$ "x2.024x $\frac{3}{4}$ "	Spec.	
18		L18						1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	O-Side
18U		L18+10		J18U		Z18U		1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	K-Side
		L18U				Z18U10		1 $\frac{1}{4}$ "x2.110x $\frac{3}{4}$ "	R107†	K-Side
18B		L18B				Z18BX		1 $\frac{1}{4}$ "x2.110x $\frac{3}{4}$ "	R107	K-Side
18BX		L18BX				Z18BX10		1 $\frac{1}{4}$ "x2.110x $\frac{3}{4}$ "	R107†	K-Side
18A		L18A						1 $\frac{1}{4}$ "x2.140x $\frac{3}{4}$ "	R107†	K-Side
								1 $\frac{1}{4}$ "x2.164x $\frac{3}{4}$ "	Spec.	
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	O-Side
								1 $\frac{1}{4}$ "x2.2025x $\frac{3}{4}$ "	R108†	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
						Z18DJ15		1 $\frac{1}{4}$ "x2.084x $\frac{3}{4}$ "	R107§	O-Side
				J18HT53				1 $\frac{1}{4}$ "x1.995x.300	Spec.	
19E		L19D		J19E				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R106	K-Side
19C		L19C		J19C				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	O-Side
		L19C+10		J19R				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	K-Side
19		L19				Z19Y		1 $\frac{1}{4}$ "x2.110x $\frac{3}{4}$ "	R107†	K-Side
19Y						Z19Y10		1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	O-Side
19B				J19BX		Z19BX		1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	O-Side
19A								1 $\frac{1}{4}$ "x2.2025x $\frac{3}{4}$ "	R108†	O-Side
19F								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
				J19T28				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
								1 $\frac{1}{4}$ "x2.220x $\frac{3}{4}$ "	Spec.	
20B		L20		J20B				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R107	K-Side
20D		L20U				Z20U		1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	O-Side
20						Z20U10		1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
20C		L20CX						1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
				J20FY10		Z20FY10		1 $\frac{1}{4}$ "x2.265x $\frac{3}{4}$ "	R108†	K-Side
20A								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	O-Side
20E								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	K-Side
								1 $\frac{1}{4}$ "x2.5785x $\frac{3}{4}$ "	R111†	O-Side
21DR		L21		J21E14				1 $\frac{1}{4}$ "x2.206x $\frac{3}{4}$ "	Spec.	
21D		L21B		J21DR				1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
21								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
21B								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	O-Side
21A								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
21C								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	O-Side
								1 $\frac{1}{4}$ "x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	K-Side
22E		L22E		J22ETH				2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R108	K-Side
				J22ETH15				2 to 2 $\frac{1}{4}$ " taper		
								x 2 $\frac{1}{4}$ " x $\frac{1}{4}$ "	R108	K-Side
								2 to 2 $\frac{1}{4}$ " taper		
								x 2.301 x $\frac{1}{4}$ "	R108	K-Side
22D		L22D						2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	O-Side
22R								2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
22		L22						2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
22U		L22U						2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R109	K-Side
22B		L22B						2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	O-Side
22A		L22A		J22AY		Z22AY		2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	K-Side
		L22AY				Z22AY10		2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R110	K-Side
		L22AY10						2x2.515x $\frac{3}{4}$ "	R110†	K-Side
22C								2x2 $\frac{1}{4}$ "x $\frac{3}{4}$ "	R111	O-Side

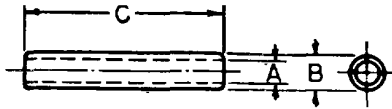
Oversize Resenter Shank must be used. (*) .005 oversize shank. (†) .010 oversize shank. (§) .015 oversize shank. (‡) .020 oversize shank. (¶) .030 oversize shank. (¶) .045 oversize shank. Shanks are available for cutting .005, .010, .015, .020, .030, .045 oversize recess using standard cutters.

DATA BOOK

Cast Iron		Lee-Alloy		Chromalloy		Lee-Lite		Insert Ring Dimensions	Cutter No.	Shank Side
Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each	Ring No.	Price Each			
						Z22AZH Z22AZH30		2 1/2 x 2 1/2 x 3/4 2 1/2 x 2.535 x 3/4	R110 R110†	K-Side K-Side
23B		L23 L24R L24 L24Y		J23				2 1/4 x 2 1/4 x 3/4	R109	K-Side
23								2 1/4 x 2 1/4 x 3/4	R110	O-Side
24R								2 1/4 x 2 1/2 x 1/2	R110	K-Side
24								2 1/4 x 2 1/2 x 3/4	R110	K-Side
23A		L24AU		J24XY				2 1/4 x 2 1/2 x 1/2	R110	K-Side
24A								2 1/4 x 2 3/4 x 3/4	R111	O-Side
								2 1/4 x 2 3/4 x 3/4	R111	K-Side
								2 1/4 x 2 3/4 x 1/2	R113 R113	O-Side O-Side
25C		L25EY37 L25C		J25CK J25		Z25		2 1/4 to 2 1/4 taper x 2.4185 x 3/4	Spec. R110	K-Side
25		L25						2 1/4 x 2 1/2 x 3/4	R110	K-Side
25B		L25B						2 1/4 x 2 1/2 x 1/2	R111	O-Side
25A								2 1/4 x 2 1/2 x 3/4	R111 R112	K-Side O-Side
26		L26CU		J26E2				2 1/4 x 2 1/2 x 3/4	R110	K-Side
26B		L26						2 1/4 x 2.569 x 1/4	Spec. R111	K-Side
26A								2 1/4 x 2 3/4 x 3/4	R112	K-Side
								2 1/4 x 2 3/4 x 3/4	R112	K-Side
27C		L27C		J27BY		Z27BY Z27BY10		2 1/4 x 2 3/4 x 3/4	R111	K-Side
27		L27						2 1/4 x 2 3/4 x 3/4	R112	O-Side
27B		L27BY						2 1/4 x 2 3/4 x 3/4	R112	K-Side
27A		L27E						2 1/4 x 2 3/4 x 1/2	R112†	K-Side
27D						Z27E10		2 1/4 x 2.765 x 1/2	R113	O-Side
								2 1/4 x 2 3/4 x 3/4	R113	K-Side
								2 1/4 x 2 3/4 x 3/4	R114	K-Side
								2 1/4 x 3 x 3/4	R114†	K-Side
		L27EY6						2 1/4 to 2 1/4 taper x 2.5745 x 3/4	Spec.	
28		L28						2 1/4 x 2 3/4 x 3/4	R112	K-Side
28A		L28A						2 1/4 x 2 3/4 x 3/4	R113	O-Side
29A								2 1/4 x 2 3/4 x 3/4	R113	K-Side
								2 1/4 x 2 3/4 x 3/4	R114	O-Side
30		L30						2 1/4 x 2 3/4 x 1/2	R113	K-Side
30A		L30A						2 1/4 x 3 x 1/4	R114	K-Side
30D								2 1/4 x 3 x 1/2	R115	K-Side
31C		L31B L31A		J31AU J31AY		Z31A Z31A10		2 1/4 x 2 3/4 x 3/4	R113	K-Side
31								2 1/4 x 3 x 3/4	R114	K-Side
31A								2 1/4 x 3 1/4 x 3/4	R115	O-Side
								2 1/4 x 3 1/4 x 3/4	R115	K-Side
31AY								2 1/4 x 3.140 x 3/4	R115†	K-Side
								2 1/4 x 3 1/4 x 1/2	R115	K-Side
								2 1/4 x 3 1/2 x 3/4	R118	K-Side
32		L32CZ L32CZ10 L32CZ20						2 1/4 x 3 1/2 x 3/4	R115	K-Side
32C								2 1/4 x 3 3/4 x 3/4	R116	O-Side
								2 1/4 x 3 3/4 x 3/4	R116	O-Side
								2 1/4 x 3.1025 x 3/4	R116†	O-Side
32A								2 1/4 x 3.2125 x 3/4	R116†	O-Side
								2 1/4 x 3 1/2 x 3/4	R116	K-Side
33		L33BX				Z33BX Z33BX10		2 1/4 x 3 1/2 x 3/4	R116	K-Side
33A								2 1/4 x 3 3/4 x 3/4	R117	O-Side
								2 1/4 x 3.3275 x 3/4	R117†	O-Side
								2 1/4 x 3 3/4 x 3/4	R117	K-Side
34								2 1/4 x 3 3/4 x 3/4	R117	K-Side
34A								2 1/4 x 3 1/2 x 3/4	R118	K-Side
35				J35AY				3 x 3 1/2 x 3/4	R118	K-Side
35A								3 x 3 3/4 x 3/4	R119	K-Side
								3 x 3 3/4 x 1/2	R120	K-Side
36								3 1/4 x 3 3/4 x 1/2	R120	K-Side

Overize Reamer Shank must be used. (*) .005 overize shank. (†) .010 overize shank. (‡) .015 overize shank. (§) .020 overize shank. (¶) .030 overize shank. (||) .045 overize shank. Shanks are available for cutting .003, .010, .015, .020, .030, .045 overize recess using standard cutters.

DATA BOOK



REPLACEABLE VALVE GUIDES

Popularity Rating	Part No.	I.D.	O.D.	C Lgth.	Price	Popularity Rating	Part No.	I.D.	O.D.	C Lgth.	Price	Popularity Rating	Part No.	I.D.	O.D.	C Lgth.	Price
26	GL1240	.250	.439	2 1/4	—	1	GL1345	.3435	.502	2 1/4	—	6	GL1375	.3735	.502	2 1/4	—
32	GL1240	.250	.439	2 1/4	—	1	GL1345	.3435	.502	2 1/4	—	5	GL1375	.3735	.502	2 1/4	—
36	GL1275	.275	.498	2 1/4	—	3	GL1340	.3435	.502	2 1/4	—	16	GL1370	.3745	.502	2 1/4	—
25	GL1276	.2756	.397	1 1/4	—	2	GL1340	.3435	.502	2 1/4	—	26	GL1370	.3745	.502	2 1/4	—
9	GL1310	.3115	.439	1 1/4	—	7	GL1342	.3435	.502	2 1/4	—	14	GL1376	.3745	.502	2 1/4	—
9	GL1310	.3115	.439	1 1/4	—	6	GL1342	.3435	.502	2 1/4	—	12	GL1376	.3745	.502	2 1/4	—
23	GL1313	.3115	.439	2 1/4	—	4	GL1343	.3435	.502	2 1/4	—	21	GL1381	.3745	.502	2 1/4	—
13	GL1311	.3115	.439	2 1/4	—	8	GL1343	.3435	.502	2 1/4	—	17	GL1371	.3745	.502	2 1/4	—
13	GL1311	.3115	.439	2 1/4	—	2	GL1344	.3435	.502	2 1/4	—	17	GL1371	.3745	.502	2 1/4	—
22	GL1309	.3115	.439	2 1/4	—	3	GL1344	.3435	.502	2 1/4	—	12	GL1377	.3745	.502	2 1/4	—
33	GL1312	.315	.439	2 1/4	—	27	GL1346	.3435	.518	2 1/4	—	14	GL1377	.3745	.502	2 1/4	—
10	GL1315	.315	.476	2 1/4	—	20	GL1348	.345	.502	2 1/4	—	24	GL1372	.3745	.6263	2 1/4	—
28	GL1318	.315	.477	2 1/4	—	27	GL1341	.3436	.6578	2 1/4	—	30	GL1372	.3745	.6263	2 1/4	—
28	GL1318	.315	.477	2 1/4	—	10	GL1369	.372	.502	2 1/4	—	29	GL1390	.3973	.6578	2 1/4	—
35	GL1319	.315	.486	2 1/4	—	15	GL1378	.373	.625	2 1/4	—	34	GL1390	.3973	.6578	2 1/4	—
25	GL1316	.3115	.502	1 1/4	—	16	GL1379	.373	.620	2 1/4	—	20	GL1431	.437	.6265	2 1/4	—
23	GL1317	.3125	.502	1 1/4	—	8	GL1373	.3735	.502	2 1/4	—	22	GL1431	.437	.6265	2 1/4	—
18	GL1347	.3427	.502	3 1/4	—	7	GL1373	.3735	.502	2 1/4	—	19	GL1430	.437	.6265	2 1/4	—
11	GL1339	.343	.502	2 1/4	—	5	GL1374	.3735	.502	2 1/4	—	11	GL1432	.437	.6265	3 1/4	—
24	GL1349	.343	.565	2 1/4	—	4	GL1374	.3735	.502	2 1/4	—	18	GL1433	.437	.6265	3	—
31	GL1350	.343	.565	3 1/4	—	15	GL1380	.3735	.502	2 1/4	—	21	GL1435	.4385	.6895	3 1/4	—

VALVE GUIDE APPLICATION DATA

THE VALVE GUIDES LISTED ARE GL LEE-ALLOY SERIES MADE OF A DENSE LONGER WEARING ALLOY METAL. MOST OF THESE SIZES ARE ALSO AVAILABLE IN CAST IRON G SERIES.

Year	Model	Intake	Exhaust	Roughing Reamer	Finishing Reamer	Pilot Size	Pilot No.	Valve Guide Driver	Valve Guide Reamer
BUICK									
1954-66	All Models Except Special and 300 Engine	GL1372	GL1372	Not Req.	Not Req.	%	Not Req.	G2376	H1375
1965-67	300, 340 Engines	GL1345	GL1342	H8494%	H7500	%	P84L	G2343	H1343
1968-75	250 Engine	GL1339	GL1345	H8494%	H7500	%	P84L	G2343	H1343
1971-75	350 Engine	GL1376	GL1376	H8494%	H7500	%	P85L	G2375	H1375
1971-75	455 Engine	GL1376	GL1371	H8494%	H7500	%	P85L	G2375	H1375
1974-75	231 Engine	GL1342	GL1342	H8494%	H7500	%	P84L	G2343	H1343
1975	260 V-8 Engine	GL1348	GL1348	H8494%	H7500	%	P84L	G2343	H1343
BRIGGS AND STRATTON AND CLINTON									
1954-62	All Models 1/2" Stem No Factory Guide	GL1240	GL1240	H8432%	H7437	%	P95L	G2250	H1250
CHEVROLET									
1941-63	216, 235 Six-Cylinder	GL1350	GL1349	Not Req.	Not Req.	%	Not Req.	G2343	H1343
1955-70	153, 194, 230, 250, 265, 283, 307, 327 Engines	GL1345	GL1340	H8494%	H7500	%	P84L	G2343	H1343
1958-62	All 348, 409 Engines	GL1376	GL1380	H8494%	H7500	%	P85L	G2375	H1375
1960-63	Corvair (Replaceable Guides)	GL1346	GL1346	Not Req.	Not Req.	%	Not Req.	G2343	H1343
1962-75	Chevy II, 230, 250, 292, 307, 350, 400	GL1339	GL1345	H8494%	H7500	%	P84L	G2343	H1343
1971-75	307, 350	GL1345	GL1345	H8494%	H7500	%	P84L	G2343	H1343
1965-71	396, 427 with Replaceable Guides	GL1378	GL1379	Not Req.	Not Req.	%	Not Req.	G2375	H1375
1966-75	366, 427 without Guides	GL1374	GL1375	H8494%	H7500	%	P85L	G2375	H1375
1965-71	396, 427 with Aluminum Head	GL1378	GL1378	Not Req.	Not Req.	%	Not Req.	G2375	H1375
1971-75	350 with 1/2" Exhaust	GL1345	GL1370	H8494%	H7500	%	P85L	G2375	H1375
1970-75	454 Engine	GL1374	GL1380	H8494%	H7500	%	P85L	G2375	H1375
CHRYSLER CORPORATION ENGINES									
1954-56	260, 270, 315, 325 Engines	GL1370	GL1370	H8494%	H7500	%	P85L	G2375	H1375
1956-67	277, 301, 318, 326 Engines	GL1371	GL1376	H8494%	H7500	%	P85L	G2375	H1375
1958-73	331, 350, 354, 361, 383, 413 Engines (D500-354 Takes GL1377), 440	GL1376	GL1376	H8494%	H7500	%	P85L	G2375	H1375
1956-58	325 Engine (D500)	GL1371	GL1371	H8494%	H7500	%	P85L	G2375	H1375
1960-75	Valiant and Lancer, 170, 225	GL1381	GL1381	H8494%	H7500	%	P85L	G2375	H1375
1964-69	426 Engine	GL1309	GL1313	H8432%	H7437	%	P83L	G2312	H1312
1961-75	HT413 Industrial with Replaceable Guides	GL1435	Not Req.	Not Req.	Not Req.	%	Not Req.	G2437	—

NOTE: H310C% Round Drive and H310B% Reaming Bushing are used with Roughing and Finishing Reamers. We recommend a 1/4" drill for power, as a power unit with about 400 R.P.M. is required. Roughing Reamer operation is followed with a Finishing Reamer. After Guide has been installed, our H1000 Series Solid Reamers as listed in extreme right column above, may be used to ream I.D. of Guide.

DATA BOOK

VALVE GUIDE APPLICATION DATA (Cont.)

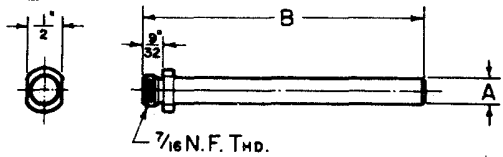
THE VALVE GUIDES LISTED ARE GL LEE-ALLOY SERIES MADE OF A DENSE LONGER WEARING ALLOY METAL. MOST OF THESE SIZES ARE ALSO AVAILABLE IN CAST IRON G SERIES.

Year	Model	Valve Intake	Guides Exhaust	Roughing Reamer	Finishing Reamer	Pilot Size	Pilot No.	Valve Guide Driver	Valve Guide Reamer
FORD COMPANY ENGINES									
1954-62	6 Cyl. Pass. and Trucks; 223 Eng.; and 279 V8 Truck	GL1342	GL1342	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1954-55	V8 Passenger and Trucks; 239, 256 Engines	GL1340	GL1343	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1955-59	V8 Passenger and Trucks; 272, 292, 312 Engines	GL1340	GL1342	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1960-62	V8 Passenger and Trucks; 272, 292, 312 Engines	GL1342	GL1343	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1957-73	332, 352, 360, 390, 406, 410, 427, 428 Engines	G1369	GL1374	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1373
1958-67	383, 430, 462 Engines	GL1375	GL1373	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1373
1960-75	All Models; 144, 170, 200, 250 Engines	GL1310	GL1310	H8432 $\frac{1}{2}$ "	H7437	$\frac{1}{2}$ "	P83L	G2312	H1312
1965-67	330EFU, 330CID M.D., 330CID H.D.	GL1374	GL1374	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P85L	G2375	H1373
1956-57	H. D. Truck with Sodium Valves; 272, 292 Engines	GL1345	GL1431	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
	EXHAUST			H8619 $\frac{1}{8}$ "	H7625	$\frac{3}{8}$ "	P86	G2437	H1437
1956-57	H. D. Truck; 302, 332 Engines	GL1340	GL1431	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1958-67	H. D. Truck; 302, EFV330, 332, 361, 391 Engines	GL1374	GL1431	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1373
	EXHAUST			H8619 $\frac{1}{8}$ "	H7625	$\frac{3}{8}$ "	P86	G2437	H1437
1958-67	H. D. Truck; 401, 477, 534 Engines	GL1430	GL1433	H8619 $\frac{1}{8}$ "	H7625	$\frac{3}{8}$ "	P86	G2437	H1437
1964-75	Passenger & Truck; 240, 300, 302, 289, 351 Engs.	G1339	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1962-64	221, 260	GL1313	GL1313	H8432 $\frac{1}{2}$ "	H7437	$\frac{1}{2}$ "	P83L	G2312	H1312
1969-75	400, 429, 460 CID	GL1340	GL1340	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1970-75	351 Windsor 2V	GL1345	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1970-75	351 Cleveland	GL1340	GL1340	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1970-75	351 CID 4V	GL1340	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1970-73	429 Boss	GL1374	GL1374	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1373
GMC TRUCKS									
1955-59	324, 370 Engines	GL1341	GL1390	Not Req.	Not Req.	Int. $\frac{1}{8}$ " Exh. .397	Not Req.	G2344	H1343
1955-60	All V8 with 288, 316, 347 Engines	GL1344	GL1342	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2397	H1397
1957-59	All V8 with 336 Engine	GL1340	GL1375	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1960-71	All V6 with 305 Engine	GL1344	GL1347	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1960-71	All V6 with 351, 401, 702 Engines	GL1377	GL1432	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1375
	EXHAUST			H8619 $\frac{1}{8}$ "	H7625	$\frac{3}{8}$ "	P86	G2437	H1437
1963-71	153, 194, 230, 250, 292	GL1345	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1973-74	379, 432 and 478M	GL1371	GL1432	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1375
	EXHAUST			H8619 $\frac{1}{8}$ "	H7625	$\frac{3}{8}$ "	P86	G2437	H1437
OLDSMOBILE									
1954-63	All Models (with Replaceable Guides)	GL1341	GL1390	Not Req.	Not Req.	Int. $\frac{1}{8}$ " Exh. .397	Not Req.	G2344	H1343
1964-67	225 Engine	GL1340	GL1340	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2397	H1397
1968-71	250 Engine	G1339	G1339	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1965-75	260, 330, 350, 440, 425, 455, 455 Irrig.	GL1348	GL1348	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	
PONTIAC									
1955-60	All V8's	GL1342	GL1344	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1961-63	All V8's and 4 Cylinder Tempest	GL1345	GL1340	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1963-66	421 H. O. Engine, 389	GL1345	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1966-67	230 Engine	GL1345	GL1340	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1966-75	326, 400 Engines	GL1345	GL1344	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
1970-75	455 Engine	GL1348	GL1348	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
RAMBLER									
1959-75	Aluminum OHV, 6 Cylinder	GL1345	GL1345	H8494 $\frac{1}{8}$ "	H7500	$\frac{1}{8}$ "	P84L	G2343	H1343
VOLKSWAGEN									
1953-60	AH Models, 36 H.P. (Replaceable Guides)	GL1276	GL1276	Not Req.	Not Req.	7MM	Not Req.	G2275	H1275
1960-73	All Models, 40 H.P. (Replaceable Guides)	GL1315	GL1315	Not Req.	Not Req.	8MM	Not Req.	G2312	H1315
Oversize Guides GL1318, GL1318 and GL1319 are available. See sizes in chart on reverse side of this sheet.									
WAUKESHA									
ICK Model		G1317	G1316	H8432 $\frac{1}{2}$ "	H7437	$\frac{1}{2}$ "	P83L	G2312	H1312
WISCONSIN									
ACN, BKN, VH4, VE4, VF4, TE, TF		GL1310	GL1310	H8432 $\frac{1}{2}$ "	H7437	$\frac{1}{2}$ "	P83L	G2312	H1312
ACN, AHM, VC4D		GL1311	GL1311	H8432 $\frac{1}{2}$ "	H7437	$\frac{1}{2}$ "	P83L	G2312	H1312
VR4D, VQ4, VR4		GL1377	GL1377	H8494 $\frac{1}{8}$ "	H7500	$\frac{3}{8}$ "	P85L	G2375	H1375

NOTE: H310G $\frac{1}{8}$ Round Drive and H310B $\frac{1}{8}$ Reaming Bushing are used with Roughing and Finishing Reamers. We recommend a $\frac{1}{8}$ " drill for power, as a power unit with about 400 R.P.M. is required. Roughing Reamer operation is followed with a Finishing Reamer. After Guide has been installed, our H1000 Series Solid Reamers as listed in extreme right column above, may be used to ream I.D. of Guide.

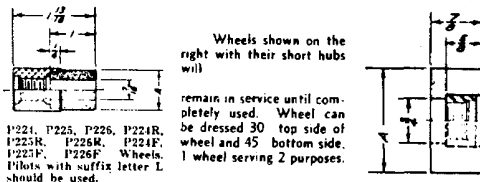
DATA BOOK

RESEATER PILOTS



	Size "A"	Decimal Equiv.	Length "B"		Size "A"	Decimal Equiv.	Length "B"
R208M34	5.5MM	.2165	4	R213M12	10MM	.3937	4
R208M14	6MM	.2362	4	R213M9	10.5	.3975	4
R208	1/4	.250	4	R213M2	11.5	.40425	4
R208S	1/4	.250	2 3/4	R212P30	12MM	.405	4
P208P6	6.5MM	.2559	4	R213	11.5	.40625	5
R209M5	7MM	.2756	4	R213P10	12.5	.41625	5
R209	7/8	.28125	4	R214M5	11MM	.4325	5
R209S	7/8	.28125	2 3/4	R214M2	11.5	.4355	5
R209P15	7.5MM	.2953	4	R214M1	12MM	.4365	5
R210M2	8MM	.3105	4	R214	12.5	.4375	5
R210M1	8.5MM	.3115	4	R214P1	12.5	.4385	5
R210	8.5	.3125	4	R214P2	12.5	.4395	5
R210P1	8.5MM	.3135	4	R214P15	12.5	.4525	6
R210P2	8.5	.3145	4	R215	12.5	.4675	5
R210P3	8.5MM	.315	4	R215P3	12MM	.4724	5
R210P4	8.5MM	.3165	4	R216M2	13MM	.498	5
R210P15	8.5	.3275	4	R216M1	13.5	.499	5
R210P30	8.5	.342	4	R216	13.5	.500	5
R211M9	8.5MM	.347	4	R216P1	13.5	.501	5
R211M3	9MM	.3475	4	R216P2	13.5	.502	5
R211M2	9MM	.3475	4	R217M1	14MM	.53025	5
R211M1	9MM	.3475	4	R217	14MM	.53125	5
R211	9	.3475	4	R217P1	14MM	.53225	5
R211P1	9MM	.3475	4	R218	14.5	.5625	5
R211P2	9MM	.3475	4	R218P1	14.5	.5635	5
R211P3	9MM	.3475	4	R218P2	14.5	.5645	5
R211P10	9MM	.3543	4	R219	15MM	.59375	5
R211P15	9MM	.3577	4	R220	15.5	.6250	5
R211P30	9.5	.372	4	R220P1	15.5	.626	5
R212M2	9.5	.373	4	R222	16MM	.6475	5
R212M1	9.5MM	.3740	4	R222P1	16MM	.6485	5
R212	9.5	.3750	4	R222P2	16MM	.6495	5
R212P1	9.5	.376	4	R224	16.5	.7500	5
R212P2	9.5	.377	4	R226	17MM	.8125	5
R212P5	9.5	.380	4	R227P6	17.5	.850	2 3/4
R212P15	9.5	.3900	4	R233	18MM	1.03125	2 3/4

VALVE SEAT GRINDING WHEELS



P224, P225, P226, P224R, P225R, P226R, P224F, P225F, P226F. Wheels with suffix letter L should be used.

GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A-DIAM.	GENERAL PURPOSE	FINISHING WHEELS	ROUGHING WHEELS	A-DIAM.
P224	P224F	P224R	1 1/2"	P238	P238F	P238R	1 1/2"
P225	P225F	P225R	1 1/2"	P239	P239F	P239R	1 1/2"
P226	P226F	P226R	1 1/2"	P240	P240F	P240R	1 1/2"
P227	P227F	P227R	1 1/2"	P241	P241F	P241R	1 1/2"
P228	P228F	P228R	1 1/2"	P242	P242F	P242R	1 1/2"
P229	P229F	P229R	1 1/2"	P243	P243F	P243R	2"
P231	P231F	P231R	1 1/2"	P245	P245F	P245R	2 1/2"
P232	P232F	P232R	1 1/2"	P247	P247F	P247R	2 1/2"
P233	P233F	P233R	1 1/2"	P251	P251F	P251R	2 1/2"
P234	P234F	P234R	1 1/2"	P255	P255F	P255R	2 1/2"
P235	P235F	P235R	1 1/2"	P259	P259F	P259R	3"
P236	P236F	P236R	1 1/2"	P261	P261F	P261R	3 1/2"
P237	P237F	P237R	1 1/2"	P263	P263F	P263R	3 1/2"

GRINDING WHEELS FOR STELLITE

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P231S	1 1/2"	P237S	1 1/2"	P243S	2"	P251S	2 1/2"
P233S	1 1/2"	P239S	1 1/2"	P245S	2 1/2"	P255S	2 1/2"
P235S	1 1/2"	P241S	1 1/2"	P247S	2 1/2"	P259S	3"

Wheel shave "u"—16thd. All other Wheels have "u"—16thd.

Wheels with "u" S.A.E. threads can be used on "u" threaded end by using a No. P1908 Bushing ("u" to "u"). This bushing is furnished no charge to purchasers of Wheels. Wheels P224, P225, P226, P227, P228, P229 are designed for small engine service.

GENERAL PURPOSE

Grinding Wheels

No.	A-Diam.	No.	A-Diam.	No.	A-Diam.	No.	A-Diam.
P236K	1 1/2"	P241K	1 1/2"	P247K	2 1/2"	P259K	3"
P237K	1 1/2"	P243K	2"	P251K	2 1/2"	P261K	3 1/2"
P239K	1 1/2"	P245K	2 1/2"	P255K	2 1/2"	P263K	3 1/2"

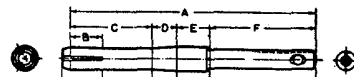
RESEATER CUTTERS

Recesses are accurately cut with cutters. There are no adjustments to be made: simply insert cutter in Reseater Shank, press firmly against shoulder of the cutter and lock with set screw. Each cutter is made to accommodate two or more ring sizes.

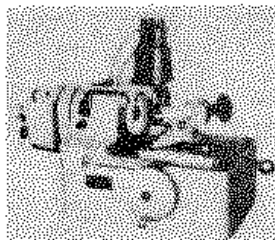
Cutter No.	Ring Diameters O-side K-side	Cutter No.	Ring Diameters O-side K-side	Cutter No.	Ring Diameters O-side K-side
*R98	1 1/4" 1"	R106	1 1/4" 2"	R114	2 1/4" 3"
*R99	1 1/4" 1 1/4"	R107	2 1/4" 2 1/4"	R115	3 1/4" 3 1/4"
R100	1 1/4" 1 1/4"	R108	2 1/4" 2 1/4"	R116	3 1/4" 3 1/4"
R101	1 1/4" 1 1/4"	R109	2 1/4" 2 1/4"	R117	3 1/4" 3 1/4"
R102	1 1/4" 1 1/4"	R110	2 1/4" 2 1/4"	R118	3 1/4" 3 1/4"
R103	1 1/4" 1 1/4"	R111	2 1/4" 2 1/4"	R119	3 1/4" 3 1/4"
R104	1 1/4" 1 1/4"	R112	2 1/4" 2 1/4"	R120	3 1/4" 3 1/4"
R105	1 1/4" 1 1/4"	R113	2 1/4" 2 1/4"		

*R98 and R99 cutters are now obsolete. The R712 special reseater shank and special cutters R730, R732, R734, R736 are used to cut the recesses formerly cut with the R98 and R99 cutters.

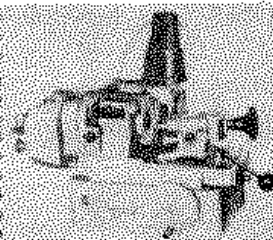
SELF EXPANDING PILOTS



Part No.	Pilot Size	A	C	D	E	F
P86S	1/4	4 1/2	1 1/2	1/2		3
P86	1/4	5 1/2	1 1/2	1/2		3 1/2
P86L	1/4	6 1/2	1 1/2	1/2		4 1/2
P86S	1/4	4 1/2	1 1/2	1/2		3
P86	1/4	5 1/2	1 1/2	1/2		3 1/2
P86L	1/4	6 1/2	1 1/2	1/2		4 1/2
P86S	1/4	4 1/2	1 1/2	1/2		3
P86	1/4	5 1/2	1 1/2	1/2		3 1/2
P86RL	1/4 + .015	6 1/2	1 1/2	1/2	1/2	3 1/2
P86L	1/4	6 1/2	1 1/2	1/2		3 1/2
P86S	1/4	4 1/2	1 1/2	1/2		3
P86	1/4	5 1/2	1 1/2	1/2		3 1/2
P86RL	1/4 + .015	6 1/2	1 1/2	1/2	1/2	3 1/2
P86L	1/4	6 1/2	1 1/2	1/2		3 1/2
P86S	1/4	4 1/2	1 1/2	1/2		3
P86F	1/4	5 1/2	2	1/2		3 1/2
P86	1/4	5 1/2	2	1/2		3
P86RL	1/4 + .015	5 1/2	2	1/2		3 1/2
P86RL	1/4 + .015	7	2	1/2	1/2	3 1/2
P87E	.397	5 1/2	1 1/2	1/2		3 1/2
P87	1/2	6	2	1/2		3 1/2
P87M	1/2	7 1/2	2 1/2	1/2	1/2	3 1/2
P87RM	1/2 + .010	7 1/2	2 1/2	1/2	1/2	3 1/2
P87L	1/2	8 1/2	2 1/2	1/2	1 1/2	3 1/2
P86S	1/4	5	1 1/2	1/2		3
P86	1/4	6	2 1/2	1/2		3 1/2
P86M	1/4	7 1/2	2 1/2	1/2	1/2	3 1/2
P86RM	1/4 + .015	7 1/2	2 1/2	1/2	1/2	3 1/2
P86L	1/4	8	2 1/2	1/2	1 1/2	3 1/2
P84M	1/4	7 1/2	2 1/2	1/2	1/2	3 1/2
P87S	1/4	6 1/2	2	1/2		3 1/2
P87	1/4	8	2 1/2	1/2		3 1/2
P87L	1/4	9 1/2	2 1/2	1/2	1 1/2	3 1/2
P87M	1/4	7 1/2	2 1/2	1/2	1/2	3 1/2
P88	1/2	8 1/2	3 1/2	1/2		3
P88	1/4	6 1/2	2 1/2	1/2		3 1/2
P88M	1/4	7 1/2	2 1/2	1/2	1/2	3 1/2
P88L	1/4	8	2 1/2	1/2	1	3 1/2
P82	1/2	5	1	1/2	1/2	3
P89	1/4	6 1/2	2 1/2	1/2		3
P89	1/4	6 1/2	2 1/2	1/2		3
P88L	1/4	8 1/2	2 1/2	1/2	1 1/2	3 1/2
P89	1/4	6 1/2	2 1/2	1		3 1/2
P81L	1 1/4	4 1/2	3/4	1/2		3 1/2
P8216S	5 1/2 MM	4 1/2	1/2			3 1/2
P8216	5 1/2 MM	4 1/2	1 1/2	1/2		3
P8236	6 MM	4 1/2	1 1/2	1/2		3
P8236S	6 MM	4 1/2	1/2			3 1/2
P8255	6 1/2 MM	4 1/2	1 1/2	1/2		3 1/2
P8275	7 MM	4 1/2	1 1/2	1/2		3
P8295	7 1/2 MM	5 1/2	1 1/2	1/2		3
P8315	8 MM	5 1/2	1 1/2	1/2		3
P8334	8 1/2 MM	5 1/2	1 1/2	1/2		3
P8354	9 MM	5 1/2	1 1/2	1/2		3
P8374	9 1/2 MM	5 1/2	2	1/2		3
P8393	10 MM	5 1/2	2			3
P8433	11 MM	5 1/2	1 1/2			3
P8472	12 MM	6 1/2	2 1/2	1/2		3 1/2
P8820	.820	4 1/2	3/4	1/2		3 1/2



K300CM REFACER



K403CM REFACER

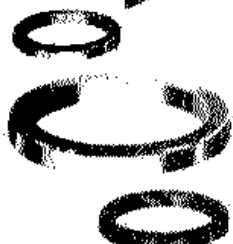


SEAT GRINDER



RESEATER

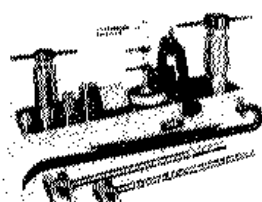
AUTOMOTIVE MAINTENANCE EQUIPMENT



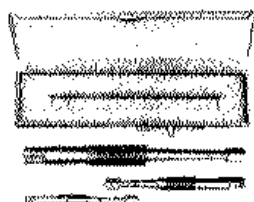
INSERT
RINGS



R55 RESEATER
POWER DRIVE



HORIZONTAL
ROD ALIGNER



EXPANDING
MANDRELS



REAMERS



WHEEL
DRESSERS



VALVE
GUIDES



VALVE GUIDE
REAMING TOOLS

ALPHABETICAL AND NUMERICAL PRICE LIST

INCLUDES

Grinder, Industrial, Automotive Products and their parts

PRICES QUOTED ARE LIST PRICES

PRICES EFFECTIVE OCTOBER 1, 1974

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

TYPOGRAPHICAL ERRORS SUBJECT TO PRICE CORRECTION

COMMERCIAL PARTS WITHOUT

PART NUMBERS ARE LISTED ON PAGES 10 AND 11

ON PART NUMBERS WITHOUT PRICES, CONTACT FACTORY FOR QUOTATION

MOTORS AND ELECTRICAL PARTS ARE LISTED ON PAGE 12

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A14 Switch Replaced by B295K7 Switch	3.30	A453S Arbor	8.00	A400K Ring	.60	A496S Arbor	14.65	B240DT Blade	2.30
A624F Washer	4.45	A453T Adapter	3.25	A400L Spring	.60	A497S Arbor	20.00	B240E Nut	4.05
A127 Cord, 115V	8.20	A454S Arbor	8.00	A400M Spring	.60	A498F Arbor	20.00	B240K Br. & Key	6.55
A128 Cord, 230V	8.20	A455S Arbor	8.00	A400N Spring	.60	A498G Arbor	23.45	B240S Assembly	3.25
A238 Gear	6.20	A456G Body	12.00	A400O Steel Balls	1.75	A498H Arbor	32.00	B268A Swing Arm	27.70
A239P Cent. Point	1.25	A458B Arbor	10.80	A400S Screw	21.45	A503-1 Oilite Brg.	2.40	B269B Base	20.50
A239T Screw	.70	A458D Arbor	10.80	A401 Arbor	10.80	A601G Grommet	.85	B300XCP Grdr. 2880.00	
A240BR Bracket	8.60	A459G Assembly	12.80	A402 Arbor	10.80	A612 Wire	.70	B305E Wh. & Shl. 29.30	
A260HS Spring	.50	A459S Assembly	12.80	A402B Adapter	4.45	A618 Rais. Blocks	46.20	B305P Plate	1.90
A261F Coil Spring	1.25	A460A Assembly	8.70	A402P Adapter	8.60	A618C Rais. Block	22.00	B310R Rack	26.35
† A261GC Center	16.85	A460C Cone	11.85	A402S Arbor	8.60	A619D Plug	.55	B310S Collar	20.00
† A261GH Housing	25.55	A460G Assembly	15.00	A402T Adapter	5.60	A622S Spring	.60	B310T Plate	8.45
† A261KG Knob	2.65	A460K Ring	.60	A403 Arbor	10.80	† A623 Block Replaced by B942T Block	2.15	B310W Hold Down	4.75
† A261GS Spring	1.65	A460L Spring	.60	A403B Adapter	7.30	A624F Washer	4.25	B312H Handle	3.20
† A261L Assembly	2.15	A460M Spring	.60	A403S Arbor	5.60	A624S Washer	5.90	B315P Lock Pin	1.90
A261W Washer	1.85	A460N Spring	.60	A404 Arbor	12.80	A624W Flange	5.15	B329A Cr. Arm	12.50
A261Y Felt	.65	A460O Set of Balls	1.55	A404B Adapter	8.60	† A629 Gr. & Shaft	20.95	B329C Tran. Cov.	19.45
A267LT Tube	1.85	A460P Spring	.60	A404T Adapter	5.60	† A629B Sleeve	1.75	B329CA Gear	11.60
A268D Dia. Sc. 10-32 Thread	8.70	A460S Screw	17.15	A405 Arbor	9.75	† A629C Pinion Stud	2.15	B329CB Gear	11.60
A269E Nut	1.05	A461 Arbor	7.85	A405B Adapter	6.95	† A629D Shaft	5.15	B329D Gear	7.35
A269H Handle	3.50	A461T Adapter	5.00	A405S Arbor	9.75	† A629G Gear	5.15	B329E Hd. Shaft	11.60
A269N Nut	2.40	A462 Arbor	8.20	A406T Adapter	5.60	A629J Pin	.70	B329F Gasket	.70
A269G S. Bar	3.00	A462B Adapter	5.60	A406B Adapter	6.95	A629BC Screw	.85	B329H Handwheel	15.95
A269T Table	52.00	A462S Arbor	7.75	A406S Arbor	9.90	A629BP Plug	.60	B329S Shaft	9.10
A290AP Br. Plug	.45	A462T Adapter	5.00	A407B Adapter	6.95	A629BS Spring	.60	B329X Plug	.80
A290AS Screw	1.00	A463 Arbor	7.75	A407S Arbor	9.90	A630H Spacer	.85	B329Y Shaft	1.50
A290S Switch Replaced by B590S Switch	33.40	A463B Adapter	5.60	A408D Arbor	14.65	† A630S Assembly	62.85	B330BP Ft. Br.	1.90
A401J O.D. Jaws	35.50	A463S Arbor	8.20	A408F Arbor	19.30	A634MB Cover	.60	B330HE Dust Sh.	1.05
A450A Assembly	6.45	A463T Adapter	5.60	A408G Arbor	23.45	A636P Pin	.50	B320SF Feed Sc.	53.70
A450C Cone	8.60	A464S Arbor	8.20	A408H Arbor	22.00	A638 Switch	10.15	B330SFM Cr. Sc.	98.00
A450G Assembly	10.45	A464T Adapter	5.00	A409A Assembly	8.60	A638B Wire	3.40	B330W Sad. H. D.	6.50
A450L Spring	.60	A465S Arbor	10.25	A409C Cone	20.95	A638D Wire	4.75	B393 M. Kit	200.00
A450M Spring	.60	A467B Adapter	5.60	A409G Assembly	26.80	A643A Ad. Race	18.65	† B410B Sleeve	.65
A450N Spring	.60	A468B Arbor	10.80	A409L Spring	.60	A643D Assembly	5.55	† B410E Table Extn.	8.45
A450O Steel Balls	1.00	A468D Arbor	10.80	A409M Spring	.60	A643DP Pad	1.90	B410K Rack	22.00
A450P Spring	.60	A468S Arbor	9.90	A409N Spring	.60	A643M Front Race	20.95	B410KG Gear	6.95
A451 Arbor	6.25	A470A Assembly	8.60	A409O Set of Balls	2.15	A645 Tilt. Table	188.50	B410P Hold Down	8.45
A451B Adapter	4.35	A470C Cone	12.80	A409S Screw	32.00	A645T Assembly	58.00	B410PR Roller	1.75
A451P Adapter	6.10	A470G Assembly	17.10	A409T Retainer	.60	A646A Bushing	.85	B410PS Spring	.80
A451T Adapter	3.20	A470K Ring	.60	A409Z Arbor	14.65	A646B Slide Bar	6.40	B410PT Nut	2.35
A452 Arbor	8.60	A470L Spring	.60	A409B Arbor	14.65	A646C Casting	21.45	B410PW Pin	1.35
A452B Adapter	5.20	A470M Spring	.60	A409T Adapter	7.30	A646N Nut	2.15	† B410RB Sleeve	.80
A452S Arbor	8.60	A470N Spring	.60	A409B Adapter	7.30	A646S Stud	1.75	B410S Shim	.80
A452T Adapter	4.35	A470O Set of Balls	1.65	A409B Adapter	7.30	A736 Sh. Ex.	65.00	B410T Hold Down	2.15
A452B Adapter	5.20	A470P Spring	.60	A409B Adapter	7.30	A3475Y Shaft	17.00	B410TS Shim	.65
A452S Arbor	8.60	A470S Screw	31.40	A409B Adapter	7.30	B236 Gear	8.45	B410W Stop	3.25
A452T Adapter	4.35	A480A Assembly	8.60	A409B Adapter	7.30	B240C Base	5.95	B411E Table Ext.	22.00
A452B Adapter	5.20	A480C Cone	15.90	A409B Adapter	7.30	B240D Blade	2.15	B411C Table Ext.	22.00
A452B Adapter	5.20	A480G Assembly	17.95	A409B Adapter	7.30	B240S Blade	1.75	B412C Handwheel	11.60
								B412N Handwheel	11.60
								B420D Plate	4.75
								B420G Stud, Long	4.75

Form MPL-100

▲ New Item † Price Increase ‡ Price Decrease † Items discontinued — may not be in stock

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
B420P Pin	.60	B447L Belt	2.70	B729R Plunger	2.15	B810P Plate	1.05	B830K Roller	3.25
B420R Stud, Short	4.75	B447M Tube	4.25	B729S Shaft	16.85	B810R Rack	18.75	B830L Saddle Way	29.30
B421 Assembly	58.70	B447R Lock Ring	.60	B729T Drive Pin	1.05	B810S Screw	1.40	B830LP S. W. Pin	.70
B421C Assembly	27.70	B447S Spindle	42.85	B743B Bearing	23.95	B810T Plate	3.00	B830P Collar	1.50
B421D Cap	3.40	B447T Collar	.85	B743E Bearing	23.95	B810W Stop	3.90	B830R Saddle Way	29.30
B421E Cap	2.15	B447W Wheel	10.45	B743GS Assembly	88.00	B810WL L.H. Stop	5.00	B830RP S. W. Pin	1.05
B421L Lever	4.95	B447WH Hub	30.50	B743H Spr. Cap	2.40	B810WR R.H. Stop	5.00	B830RS Spring	.80
B421S Spring	1.05	B447WS Spoke	.60	B743L Lock Ring	5.55	B812C Handwheel	22.00	B830RT Pin	.60
+ B422J Block	2.35	B447Y Retain. Pin	.60	B743M Collar	4.35	B812K Handwheel	22.00	B830S Assembly	43.00
+ B423K Block	2.35	B449C Sleeve	2.15	B743P Plate	6.40	B812KM Hd. Wh.	32.00	B830ST Th. Col.	6.00
+ B423L Block	3.35	B449N Nut	2.15	B743R Ring	13.45	B813A Screw	3.95	B830T Plate	2.15
+ B423M Block	2.60	+ B449S Sleeve	2.15	B743RP Pin	.40	B813B Bushing	1.90	B830W Wp'r Strip	.70
+ B423N Block	2.65	+ B449W Washer	2.35	B743S Spindle	68.00	B813C Lock Cage	8.45	B830Y Felt Wick	.65
B424H Link	5.75	+ B450C Washer	2.15	B742W Washer	3.35	B812M Nut	9.30	B831-1 Pump and Tank Assembly	619.00
B424N Nut	8.45	+ B450N Nut	5.35	B755 Gr. Head Replaced with B955 Gr. Head	880.00	B813N Nut	1.55	B831-2 Hyd. Pump and Tank Assembly	619.00
B424P Pin	.60	+ B450S Sleeve	2.35	+ B755K Sad. & Lock Assembly	45.00	B813S Shaft	11.30	B831-3 Hyd. Pump and Tank Assembly	620.00
B424S Nut	3.95	+ B450W Washer	2.35	Adapts B955 to A600		B815A Pad	2.00	B831A Mtr. Cover Assembly	37.70
B425K Assembly	6.30	+ B451C Sleeve	4.25	B780CA Arbor	22.55	B815B Pointer	3.15	B831AR Ring	11.05
B425P Pin	.60	+ B451N Nut	3.25	B780CC Cap	2.80	B815C Block	16.05	B831C Cov. & Mt.	77.00
B426 Sc. & Gear	41.95	+ B451S Sleeve	3.25	B780CF 3/32 Bah.	5.35	B820C Barrel	19.90	B831E Male Elbow	11.05
B426B Pinion	10.40	B453N Nut	9.00	B780FA Arbor	12.25	B820S Swivel	30.00	B831F Filt. Asbly.	27.30
B426G Gear	25.15	B453S Sleeve	9.30	B780FL Flange	5.35	B820SD Swivel	40.00	B831FW Filt. Ben.	2.35
B427B Blade	.65	B453SB Sleeve Bl.	9.30	B780FS Flange	2.90	B821B Body	32.15	B831J Pulley 1-1/8	9.10
B429CA Assembly	6.50	B455A Arm	8.45	B780FW Washer	2.15	B821B Assembly	2.15	B831JV Pulley	11.00
B429G Gasket	.60	+ B455B Guide Block	1.05	B780FX Washer	1.55	B822BA Bar	1.35	B831L Tube	2.15
B429H Housing	15.40	B670 Fixture	90.00	B780H1 Pulley	12.00	B822AB Stud	.80	B831P Hose	3.00
B429L Gear	8.45	B670A Arm	2.85	B780E Washer	1.75	B822AC Clamp	1.05	B831PL V. Return	1.90
B429M Bushing	2.70	B670R Assembly	45.00	B780S Swivel	16.85	B822AM Field	108.95	B831PS Pipe	2.15
B429P Plug	.60	B670RB W. Blade	9.00	B780V Swivel	37.20	B822AN Plate	NC	B831R Bushing	1.75
B429Y Assembly	37.70	+ B670T T-Slot Blk.	45.00	B780XB Block	20.60	B822AR Assembly	81.70	B831T Tak. Asbly.	37.75
B430B Assembly	10.40	B475 Screw	2.90	B780YB Block	20.60	B822AS Shaft	27.30	B831W Valve	12.10
B430F Sad. Guide	23.00	B475H Handle	.65	B782B Assembly	18.85	B822AW Wire	.70	B832 Assembly	207.70
B430G Guide	33.90	B484N Nut	2.35	B782BC Collar	3.20	B822EB Stud	.80	B832D Dir. Valve	10.40
B430K Saddle Stop	1.85	B484S Screw	15.50	B782BD Dr. Belt	9.45	B822EE Shield	20.60	B832EH Head	7.35
B430R Wire	.70	+ B485A Arbor	38.75	B782E Lock Ring	8.80	B822EH Assembly	118.00	B832F Adv. Stop	13.90
B430SF Screw	24.25	B485B1 1/4" Bush.	11.60	B782H Housing	60.70	B822ER Assembly	77.55	B832H Dw. Valve	16.85
B430SG Sleeve	2.15	B485B2 1" Bush.	14.75	B782L Ring	10.15	B822ES Shaft	28.35	B832P Plate	18.85
B430W Collar	3.25	B485B3 1 1/2" Bah.	16.85	B782M Front Race	35.45	B822W Washer	.85	B832RC Step Blk.	6.50
+ B431 Assembly Replaced by B955AX	333.45	B485B4 1 1/4" Bah.	18.85	B782R Ad. Race	29.30	B824NM Fd. Nut	18.50	B832RR Rev. Stop	8.20
B437W Ring	1.10	B485B5 1 1/2" Bah.	20.95	+ B782S Spindle	94.25	B824S Tube	7.35	B832W Washer	.60
B440K Column	5.40	B485B6 2" Bush.	24.85	B782W Ft. Wiper	.75	B825 Column	83.80	B833 Valve	15.40
B441AA Adapter w/o Key	34.00	B485D Bushing	2.60	B782Y Rear Wiper	.75	B825K Key	10.10	B834 Cylinder	169.60
B441AK Key	.85	+ B485E Stud	8.50	B800A Assembly		B825KB Key Body	6.85	B834GB Gl. Body	4.90
B441H Hand Wh.	12.00	B485F Block	5.35	B800T Assembly		B825KF Key Flat	1.75	B834CF Sup. Ring	1.35
B441HH Hand Nut w/Ham.	19.40	B485G Spring	.70	B805B Bracket	.80	B826G Gear	18.85	B834GM M. Sup. Ring	1.05
B441S Sleeve	24.25	B485J Gauge	41.75	B805E Shaft	6.50	B826P Gear	13.65	B834GN Gl. Nut	3.40
B441W Assembly	36.65	B485K Stud	2.90	B805K Plate	4.45	B827N Nut	1.85	B834GR Gl. Bush.	2.15
B443A Ad. Race	10.60	B485L Screw	2.35	B805M Nut	2.15	B827S Screw	1.90	B834M Conn.	2.80
B443DP Pad	1.35	B485M Nut	3.20	B805N Lock Nut	1.75	B828 Hex Wrench	1.75	B834N Lock Nut	3.90
B443GS Assembly	125.65	B485N Nut	3.90	B805P Plate	.65	B829 Transmission	152.30	B834P Piston	2.70
B443M Front Race	19.00	+ B485R R. Block	41.95	B805S Screw	2.15	B829A Assembly	11.05	B834RF Cyl. Rod	10.15
B443TR Assembly	3.85	B485P Handle	4.25	B805SH Handle	2.15	B829AC Crk. Arm	8.05	B834RM Cyl. Rod	10.15
B447CA Cam	12.90	B485W Assembly	10.35	B805SS Screw	2.15	B829B Assembly	5.60	B834S Rack Gear	8.45
B447CAL Cam	12.90	B485WG GB	2.80	B805W Washer	.60	B829C Assembly	25.15	B840P Block	3.90
B447CB Cam	12.90	B485WF GB Pin	.70	B808 Assembly	52.40	B829CB Cover	18.85	B840S Shaft	2.35
B447CBL Cam	12.90	B485WS Screw	3.25	B808B Bracket	5.80	B829CJ Jaw	5.20	B840T Block	3.90
B447CC Cam	12.90	B485X Assembly	10.45	B808L Saddle	34.60	B829CS Shaft	3.25	B843A Arm. 115V	34.45
B447CCL Cam	12.90	B485XG GB	2.95	B808S Saddle	38.00	B829H Housing	25.15	B843B Base	25.15
B447CS Cam	15.75	B485Y Crank	7.35	B810B Assembly	5.35	B829K Knob	3.80	B843F Field. 115V	11.90
B447CBL Cam	15.75	B485ZH Handle	1.35	B810BA Arm	3.25	B829L Saddle	34.60	B843W Washer	.60
B447CT Cam	15.75	B485Z Collar	0.30	B810BR Roller	4.25	B829P Assembly	36.45	B845S Slide	24.85
B447CTL Cam	15.75	B493G Gear	16.85	B810BS Stud	1.05	B829R Shaft	415.30	B846J Guard	12.50
B447D Spec. Disc	38.00	B493GS Assembly	117.35	B810C Cage	4.25	B829S Shaft	14.75	B846K Guard	12.50
B447D2 Index Disc	10.15	B693L Insulation	.65	B810CW Washer	.60	B829T Pin	2.15	B846L Cap	6.50
B447D3 Index Disc	10.15	B694 Pulley	11.00	B810F Washer	.60	B829W Plug	.50	B852A Arbor	32.00
B447D4 Index Disc	10.15	B697 Pulley	11.20	B810H Stud	3.65	B829Y Assembly	36.45	B852C Cap	4.75
B447D5 Index Disc	13.65	B698 Pulley	12.05	B810HW Washer	.60	B830 Saddle	415.30	B855A Assembly	264.25
B447D6 Index Disc	13.65	B712H Handle	5.60	B810J Pin	.70	B830BA Sp. BL	12.90	B855B Body	121.55
B447K Assembly	44.85	B724H Link	5.75	B810K Knob	3.00	B830D Shield	.60		
B447KS Key	1.75	+ B729 Assembly	146.60	B810L Nut	2.15	B830E Shield	.60		
B447KT Key	1.75	+ B729C Assembly	9.75	B810M Plunger	.80	B830G Pir. Shield	4.25		
		B729E Collar	1.90	B810N Nut	1.05				
		B729P Shaft	.85						

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
B444CL Cap. long	11.35	B923EY Washer	1.90	B933N Nut, 160°	5.15	B942H Housing	38.60	B943MMP Plate	.70
B444CS Cap. short	9.75	B923GR Rtr. Ass.	8.20	B933NK Nut	11.05	B942HS Housing	58.65	B943YC Seal	2.50
B445D Spindle	52.40	B923LS Lp. Stud	1.05	B933P Plate	39.00	B942R Ring	11.30	B943YD Cap	1.75
B445E Flange	3.90	B923T Slide Assem.	22.90	B933R Ring	3.95	B942S Spindle	66.30	B945CC Adp. Cst.	21.65
B445F for 1/2"	92.00	B923TS Slide	14.75	B933RL Bracket	9.10	B942SXB Spindle	153.40	B945CS Stud	2.15
B445J Nut	1.75	B923TT Thd. Std.	1.90	B933RR Bracket	9.10	B942SXM Spindle	153.40	B945GB Guard	52.00
B445K Assembly	40.30	B924NK Collar	.70	B933S Spool	19.05	B942T T-Slot Blk.	2.15	B947A Col. Adap.	111.70
B445L Plug	.80	B925 Column	99.00	B933T Spool Stop	3.40	B942XC Collar	15.90	B947F Felt	.65
B445M Saddle	29.30	B925B Sp. Bush.	5.35	B933Y Vel. Wash.	.80	B942XH Housing	73.30	B947H Housing	52.00
B445N Lock Nut	5.35	B925M Assembly	17.90	B934 Hyd. Cyl.	195.00	B942W Washer	1.90	B947K Cap	1.35
B445P Plate	47.00	B925MD Disc	13.90	B934B Bracket	11.60	B943 and B1043 MOTORS LISTED ON BACK PAGE			
B445R Ring	.70	B929 Assembly	128.45	B934C Hyd. Cyl.	40.85	B943AC Cap	22.50	B947R Ring	.60
B445S Saddle	35.65	B929C Cover	22.79	B934GB Gl. Body	13.90	B943ACA Aux. Cap	40.40	B947S Spindle	55.00
B445T Stud	1.75	B929CA Gear	8.45	B934H Male Con.	4.45	B943AJ Wire	.80	B947T Collar	11.60
B445X Stud	3.65	B929CB Bushing	2.35	B934N Lock Nut	4.25	B943AP Field Pos.	.65	B947W Draw Tube	28.75
B446C Cover	1.50	B929CG Gasket	.45	B934P Piston	9.45	B943AT Washer	.65	B947Y Coil Spring	1.05
B446G Tank	16.00	B929CS Shaft	1.65	B934R Rod. Wash.	.85	B943BL Sw. Box	17.90	B948C Cone Stv.	10.00
B446P Plate	1.50	B929H Housing	14.75	B934RF Cyl. Rod	10.35	B943BU Sw. Box	12.50	B948N Nut	1.95
B446GL Spacer	1.90	B929L Drive Gear	6.30	B935DT Dr. Trgh.	14.75	B943CB Assembly	400.00	B948W Cn. Wash.	2.35
B446GN Nut	.90	B929LL Spacer	1.75	B935G Dt. W. Gd.	39.25	B943CB Assembly	600.00	B949A Arbor	45.00
B446GS Spacer	1.50	B929LS Spacer	1.75	B935GA Sp. Gd.	7.90	B943CM Assembly	600.00	B950A Arbor	49.75
B446R Washer	.60	B929S Drive Shaft	14.30	B935GB Sp. Gd.	6.30	B943DP Pulley	10.40	B951A Arbor	54.40
B478 Motor Head	131.50	B929W Collar	2.35	B935GD Sp. Gd.	8.95	B943DS Screw	2.15	B952A Arbor	58.70
B485TS Th. & Sdl.	77.60	B929Y Sta. Shaft	24.00	B935GL L. S. Gd.	27.30	B943EP Field Pos.	.65	B953A Arbor	72.70
B490S Switch	23.40	B930BY Rtr. Axle	242.00	B935GR R. S. Gd.	27.30	B943FB Seal	4.90	B954A Arbor	102.70
B493BS Bushing	1.50	B930E Shield	.70	B935GS W. W. Gd.	21.85	B943FA Br. Seal	10.75	B955 With Std. Mtr.	less all other std. Equipment
B495 Fixture	115.15	B930HE Shield	.85	B935N Nozzle Ass.	23.95	B943FR Seal	4.75	B955AC Sp. Cap	24.30
B495B Bracket	40.30	B930HG Feed Bar	12.60	B935NA Bdy. The.	15.75	B943G Seal	5.80	B955AH Housing	54.30
B495S Shaft	29.30	B930HG Gasket	2.60	B935NB Bracket	8.45	B943H Housing	121.55	B955AP Pul. Cap	32.00
B495DP Dr. Plate	23.00	B930HT Tube	3.80	B935NN Nozzle	3.60	B943HB Bushing	1.90	B955AS Spindle	65.00
B495BP Bracket	2.65	B930P Plate	.70	B935NP Pvt. Stud	5.80	B943HP Pulley	13.10	B955AT Wh. Wash.	3.35
B495C Spacer	2.65	B930RP Plate	.85	B935NS Gd. Stud	5.80	B943L Assembly	4.25	B955AW Sp. Wash.	.90
B495E Shaft	12.60	B930RR Oil Roller	1.90	B935NT T-Slot Pl.	1.05	B943LS Sew. only	3.25	B955AX Quill As.	322.20
B495K Back Plate	4.25	B930SS Spacer	1.75	B936BA Arbor	20.00	B943MA Shaft and	22.90	B955B Quill Br.	88.00
B910R Rack	27.70	B930SW Washer	.80	B936BB Dr. Belt	3.95	B943MB Sad. Plt.	5.35	B955C Quill Br.	88.00
B910S Swivel for		B931 Assembly	571.00	B936BLH Thread	82.90	B943MC Spring	.60	B955CC Thd. Cap	13.85
Sub Table	25.15	B931C Tank Cover		B936CB Body	18.00	B943MD Stud	1.05	B955CN Spec. Nut	3.85
B910T Index Plate	8.45	& Motor Mount	113.00	B936CBL Body	18.00	B943MDL Stud	1.05	B955CP Th. Pulley	28.15
B912C Hand Whl.	20.00	B931H Hose Coupl.	5.20	B936CN Nut	3.65	B943ME Housing	24.25	and Cap	
B912CM Hd. Wh.	32.00	B931J Pulley	8.30	B936CNL Col. Nut	5.15	B943MF Bushing	8.20	B955CPP Pul. and	
B915 Top Table	221.50	B931JV Pulley	11.85	B936CS Spacer	3.40	B943MG Gasket	.60	Cap Pl.	25.15
B918C Block	40.95	B931T Fluid Tank	67.00	B936CW Washer	2.70	B943MH Housing	28.50	B955CS Spindle	96.40
B921LH Housing	32.00	B931TB Bracket	3.20	B936EX Body only	50.00	B943MM Mtr. Mt.	2.35	B955CW Sleeve	15.40
B921RB Bushing	2.35	B931TE End	7.60	B936N Spndl. Nut	4.30	B943MMP Plate	.70	B955DA Arm	2.85
B921RC Center	41.50	B931TP Partition	4.25	B936NL Nut	4.90	B943MP Pulley	13.00	B955DB Bracket	4.75
B921RCP Car. Cn.	70.90	B931W Valve	18.90	B936PB Dr. Belt	2.35	B943MPL Sp. Pul.	46.25	B955FB Draw Bolt	2.35
Female Center for		B931W27 Washer	.60	B936PS Screw	2.85	B943MR Screw	2.15	B955FN Nut	1.55
B922R W.S.S.	62.95	B931W36 Washer	.30	B936RB Assembly	21.85	B943MT Shaft	1.90	B955G Lk. Sc. As.	3.05
Female Center for		B931W56 Washer	.60	B936SB Base	11.30	B943MW Assembly	9.70	B955HB Handwhl.	6.95
B922R Carbide	91.25	B931WB Body	8.45	B936S Shaft	5.20	B943MX Washer	.60	B955HC Collar	3.35
B921RG Gear	5.75	B931WN Ndl. Val.	8.45	B936SC Collar	.90	B943PG Guard	7.00	B955HD Un. Hd.	1020.00
B921RH Housing	34.00	B931WS Spring	.85	B940A Cross Arm	15.20	B943PT Guard Sp.	1.90	B955HD with Std.	
B921RL Arm	4.45	B931X Hose	.80	B940C Base	7.35	B943RM Cyl. Rod	11.60	Mtr. less all other	
B921RP Plunger	6.20	B931Y Hose	.80	B940F Feed Screw	1.90	B943S Spindle	136.90	Std. Equip.	780.00
B921RS Shaft	2.65	B933 Valve Assem.	276.85	B940GB Body	7.60	B943SB Assembly	214.50	B955HN Feed Nut	10.00
B922H8 Th. Pl.	11.30	B933B Body Assem.	89.00	B940GC Collar	3.05	B943SBS Spindle	207.70	B955HP Spg. Plg.	1.05
B923 Motor Assemblies		B933BB Body only	71.30	B940GN Nut	6.20	B943SC Collar	3.00	B955HS Screw	4.45
Shown on Back Page		B933BC Bar	6.40	B940GS Swivel	3.90	B943SM Assembly	215.75	B955P Slide	88.00
B923AR Rtr. Ass.	81.85	B933BG Gasket	2.35	B940GW Washer	4.45	B943SS Spindle	207.70	B955PC Clamp	12.00
B923DC Cover	11.60	B933BL Gasket	2.35	B940H T. Rest	10.25	B943TA Test Arb.	18.90	B955PL Lock Sc.	
B923DG Gasket	3.40	B933BR Ring	17.90	B940HBB Barrel	2.00	B943VB V-Belt	6.30	Assembly	12.60
B923DS Spec. Sc.	3.40	B933C Plate	23.00	B940HDI Blade	1.50	B943VBL V-Belt	7.20	B955X Swiv. Stud	2.60
B923EC Clamp	.70	B933D Valve	37.75	B940HD2 Blade	1.50	B943VBS Belt	6.30	B960G Belt Gd.	35.50
B923EE End Bell	18.20	B933EH Con. Arm	10.00	B940HD3 Blade	1.50	B943W Washer	1.75	B960P Lev. Pad	.90
B923EF W. Flng.	3.25	B933F Swng. Stop	23.00	B940HF Blade	1.65	B943YA Seal	2.30	B960R Rubber Pad	1.75
B923EH Housing	70.20	B933FA Pin	1.55	B940R Rock. Ass.	30.90	B943YB Cap	1.75	B961S Swivel	29.30
B923EJ Spacer	.80	B933FB Body	10.35	B940RB Rec. Blk.	6.40			B965BG Grd. Wire	1.35
B923EK Spacer	.80	B933FP Plate	6.85	B940RS Rec. Shft.	12.10			B965BW Pw. Wire	1.35
B923EL Bracket	14.95	B933FS Spring	2.15	B940S Sw. Block	4.75			B965DC Dr. Catch	3.15
B923EM Spacer	.80	B933H Con. Valve	26.25	B940T Swiv. Block	4.75			B965DCA Bracket	1.30
B923EN Spec. Nut	1.65	B933J Con. Valve	24.20	B940W Ten. Wash.	.60			B965DCB Body	.85
B923EP Plug	.60	B933K Sht.-off Sc.	9.10	B941S Draw Tube	26.45			B965DS Spacer	2.10
B923ES Shaft	36.40	B933LA Lvr. Arm	11.05	B941Y Assembly	38.75				
B923ET Stud	.80	B933M Pointed	2.60	B942B Base	33.80				
B923EW W. Flng.	3.25			B942DC Collar	5.75				

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
B966BW Pw. Wire	1.75	B985D Gd. Bash.	1.90	B2023H Housing	101.00	B6013P Lock Pin	.90	B6055AS1 Spindle	125.85
B966DS Spacer	7.35	B985E Stud	16.85	B2030DB Hold		B6013S Adj. Sc.	3.45	B6055AT Spacer	25.15
B966G Panel	15.40	B985EA Arb. Stud	16.85	Down Bar	12.50	B6014B Bracket	31.45	B6055FA Arbor	31.45
B966GC Elec. Con.	6.40	B985G Spring	.85	B2030DBL Hold		B6014E Ex. Crafd.	14.20	B6055FB Dr. Bolt	2.55
B966H Hinge	6.40	B985H Housing	260.00	Dr. Bar (Long)	15.20	B6014EC Sleeve	3.95	B6055FD Arbor	56.65
B966HS Strip	4.75	B985K Turn Table	88.00	B2030HE Dust Sh.	1.05	B6014S Sad. Fd. Sc.		B6055H Housing	119.55
B966P Plate	4.75	B985J Cen. Gauge	54.40	B2031B Lock Ring	1.35	B6017 Fine Feed	410.00	B6055HC Collar	3.55
B966T Plate	9.70	B985JG Cn. Gauge	54.40	B2031F Oil Gauge	5.20	B6023EN Spr. Nut	4.10	B6055HL Stud	5.00
B966WL Pw. Wire	1.90	B985JP Cap	1.90	B2031C Cover	80.60	B6023TB Bushing	4.75	B6055HN Fd. Nut	12.60
B966WS Switch	1.90	B985L Lock Sc.	3.40	B2031F Stick	.85	B6023TBL Bushing	2.55	B6055HS Belt Sc.	4.25
B968 Cot. Fix.	752.00	B985LN Lock Nut	3.90	B2031FC Ga. Cap	3.40	B6024NS S. F. Bar	7.10	B6055HW Washer	.80
B968B Base	72.30	B985LP Pivot Pin	.70	B2031K Cover	80.60	B6025 Column	314.60	B6055K Dvtd. Sad.	62.95
B968C Center	4.75	B985M Feed Nut	4.75	B2031R Lock Ring	2.15	B6025C Index Co.	42.50	B6055M Slide	75.55
B968D Ind. Disc	44.85	B985PC Pivot Cap	17.50	B2031S Spacer	2.50	B6025KB Body	11.95	B6055S Swivel	91.25
B968E Stop	9.10	B985PN Lock Nut	5.75	B2034 H. Cy. As.		B6025KF Flat	.90	B6055SB Sw. Bar	2.35
B968H Handle	6.20	B985PP Pin	.85	Replaced by		B6026AC Aux. Sh.	18.90	B6055SS Sw. Stud	10.75
B968HE Han. Ex.	4.75	B985PS Pivot Stud	58.10	B4043	188.50	B6026AS Spacer	.80	B6055T Thr. Stud	2.55
B968K Collet	30.00	B985PT Plug	.60	B2034B Comp. Bk.	19.00	B6026B Bracket	44.00	B6060G Belt Guard	23.60
B968KD Collet	30.00	B985S Saddle	37.75	B2034C Cylinder	39.00	B6026CB Block	14.20	B6060CA Arm	5.00
B968KP Pin	3.00	B985SA L.v.r. Arm	3.90	B2034PR Piston & Rod Assembly	32.00	B6026CH Housing	53.50	B6060GS Spacer	1.55
B968L Link	11.60	B985T Table	46.20	B2034R Cyl. Rod	12.30	B6026CS Cr. Shaft	75.00	B6060GT Stud for Belt Guard	3.00
B968N Nut	15.75	B985W Fd. Sc. As.	11.60	B2034RBB Cl. Rod	12.30	B6026D Guard	11.30	B6060GW Washer with shoulder	.80
B968P Plunger	17.90	B985WB Brg. Blk.	6.40	B2035DC Dr. Cap	7.60	B6026G G. Driven	24.40	B6062AC Cap	12.60
B968PR Pl. Rod	3.65	B985WS Feed Sc.	7.20	B2035DH Hose	6.95	B6026GD G. Drive	16.40	B6062AN Lock Nut	6.30
B968PS Pl. Stop	3.45	B985X Fd. Sc. As.	11.60	B2035DT Trough	19.90	B6026N Feed Nut	22.00	B6062AR Ret. Nut	5.45
B968R Dr. Tube	55.80	B985XS Feed Sc.	7.20	B2035GA Sp. Gd.	8.20	S6026NM Fd. Nut	44.00	B6062AS Spindle	107.00
B968S Swivel	31.45	B985YA Handwhl.	7.20	B2035GB Sp. Gd.	9.00	B6026P Gear	19.70	B6062AS Ret. Nut	5.45
B968T Tooth Stop	6.85	B985YH Handle	2.15	B2035GC Sp. Gd.	9.45	B6026SA Shield	3.20	B6062AS Spindle	107.00
B979C Bracket	49.75	B985Z Index Co.	7.00	B2035GD Sp. Gd.	9.45	B6026SB Shield	.80	B6062AT Spacer	31.45
B981A Lever Arm	7.20	B986A Swg. Arm	125.60	B2035GR Col. Ret.	7.65	B6026SF Elev. Sc.	88.00	B6062AW Spacer	14.20
B981B Bracket	19.45	B987A Arbor	58.70	B2035GW Washer	.90	B6026SFM El. Sc.	120.00	B6062AWX Spacer	21.15
B981BS Bracket	19.45	B987AB 12 B&S Arbor	69.15	B2034B Bracket	17.90	B6026SS Spacer	6.75	B6062G Guard	38.00
B981L Link	2.35	B987AM Arbor No. 5 Morse	69.15	B2043MB Sad. Plt.	4.70	B6026SW Washer	2.55	B6062AY5 Shim	.65
B981P Link Pin	1.90	B987F Plate	94.25	B2098 M. Kit	276.40	B6027B Base	18.90	B6062AY15 Shim	.65
B981S Draw Tube	72.35	B990B Switch Box	3.90	B3023E End Bell	44.50	B6027M Mic. Nut	10.10	B6062MR Sp. Sc.	2.85
B981T Thrust Pin	3.40	B990W Jpr. Wire	.85	B3023ES Spacer	4.25	B6027S Screw	5.65	B6067C1 Cover 1 opening	29.90
B981W Washer	1.90	B990X Jpr. Wire	.85	B3023ET Stud	2.80	B6028 Wrench	4.00	B6067C2 Cover 2 openings	31.45
B981Y Yoke	24.65	B990Y Jpr. Wire	.85	B3034 Cyl. Assm.	182.00	B6029 Trans.	180.00	B6067C3 Cover 3 openings	33.00
B982B Base	36.40	B992A Brg. Shld.	18.90	B3034E End Cap	8.35	B6029AA Ex. Arm	5.40	B6068 M. Kit	360.55
B982CC Collar	31.20	B992H Housing	81.85	B3034P Piston	9.25	B6029AB Handle	7.85	B6223GN Data Plt.	1.55
B982CS Set Screw	1.30	B992R Ring	12.60	B3034PC Cap	6.65	B6029AS Spec. Sc.	1.55	B6034 Cyl. Assm.	205.40
B982H Housing	52.00	B992S Spindle	198.00	B4034 Cyl. Assm.	188.50	B6029C Handwheel	48.75	B7034B Comp. Blk.	11.30
B982T Table	33.80	B994A Stop	25.50	B4034PR P. & Rod	36.00	B6029S Dr. Shaft	16.50	B7034C Cylinder	28.35
B982-6 Pivot (M)	3.90	B994B Body	39.85	B4034RK R. Kit	13.20	B4029Y Sta. Shaft	22.80	B7034G Gl. Body	19.75
B982-7 Pivot (F)	1.30	B994C Cover	29.00	B5034 Cylinder	182.00	B6030SF Cr. Sc.	188.75	B7034P Piston 2"	6.30
B982-11 Holder	13.80	B994G Gasket	.50	B5034BB Cyl. As.	166.75	B6030ST Spacer	12.60	B7034PR Piston and Rod Assembly	43.55
B982-12 Arm	44.20	B994N N. Plate	.85	B5034BL Br. Low.	9.10	B6030WC Shroud	188.75	B7034RK Rep. Kit	14.55
B982-13 Washer	1.55	B994V Val. Bd.	51.55	B5034BU Br. Up.	9.10	B6030WD Sh. Hy.	188.75	B8034 Cyl. Assm.	226.00
B982-14 Washer	1.80	B1031P Pin. As.	147.90	B5034C Cylinder	17.15	B6030WB Bracket	4.45	B8034B Comp. Blk.	15.60
B982-15 Feed Sc.	4.95	B1031C Cover	90.00	B5034E End Cap	4.25	B6030WBA Ac. Slv.	75.50	B8034C Cylinder	29.35
B982-16 Lock Nut	4.70	B1031D Ell	9.10	B5034GB Gl. Body	11.00	B6035BP Plate	9.45	B8034K Gasket	.25
B982-17 Ad. Nut	2.60	B1031E Elbow	12.20	B5034P Piston	5.75	B6035BA Arm	18.90	B8034PR Piston and Rod Assembly	58.70
B982-18 Spacer	1.30	B1031F Sh. Tee	6.85	B5034PC Cap	3.00	B6035DA Arm	6.50	B9043PM1	33.95
B982-21 Arm	2.60	B1031H Long Tee	8.45	B5034PN Nut	2.15	B6035DB Bracket	6.50	B9043PM2	39.00
B982-22 Head	10.40	B1031K Cover	75.40	B5034PR P. & Rod	36.00	B6035DT Trough	30.45	B9043PM3	39.00
B982-23 Stop	7.80	B1031P Pulley	12.60	B5034RB P. & Rod	36.00	B6035G Gd. As.	128.70	B9043PSI Pulley	5.00
B982-24 Pin	.90	B1033 Hyd. Valve	364.00	B5034RK Rep. Kit	14.55	B6035GG G. B. 8"	69.25	B9060G Belt Gd.	35.75
B982-30 Air Br.	218.00	B1033D Pil. Valve	20.95	B5034RT Thimble	NC	B6035GR Cool. Rt.	11.85	B9922BD Dr. Bolt	14.95
B982-33 Spindle	156.00	B1055A Quill A.	240.00	B5034Y Yoke	8.45	B6035N Noz. Ass.	21.70	B9922BC Collar	8.15
B982-34 Sp. 5C	208.00	B2005W Way-Vee	76.20	B5055 Oil Win.	2.80	B6035NA Body & Tube Ass.	14.30	BA805B Bracket	2.70
B982-35 In. Col.	15.60	B2005WF Way-FH.	71.25	B6000RC Clamp	1.55	B6035TA Drain Tube Assembly	31.20	BA805C Spacer	.90
B982-36 St. Col.	9.75	B2010R Rack	39.00	B6005BA Ac. Slv.	75.50	B6035TL Tube	3.15	BA805E Shaft	8.45
B982-37 Nut	10.15	B2010RB Rack for Back Operation	65.00	B6005BL Cl. Band	3.15	B6036 Steady Rest	187.00	BA805N Lock Nut	3.25
B982-38 Elbow	3.65	B2010T Ind. Plate	6.30	B6005BS Cl. Band	3.15	B6038R Rals. Blk.	47.00	BA805P Ind. Plate	1.05
B982-39 Dr. Tube	54.60	B2017B Brg. Blk.	7.80	B6005CP End Plt.	18.85	B6038RB R. Blk.	47.00	BA805R Lk. Ring	3.90
B985A Swng. Arm	23.00	B2017BL Brg. Blk.	11.25	B6005DB End Plt.	18.85	B6042B Base	48.00	BA805Y Washer	.90
B985AA Sw. Arm	29.00	B2017S Feed Sc.	197.35	B6005ECS		B6055AH Housing	66.00	BA825 Column	83.80
B985AB Index Bar	6.40	B2019D Lock Screw Assembly	11.45	B6005ECS		B6055AN Lk. Nut	7.85	BA905BB Plate	10.40
B985ABS Holder	37.00	B2019DS Lock Sc.	9.10	B6005ECS		B6055AR1 R. Nut	4.45	BA905BP Pir. Bk.	2.95
B985AD Arbor	30.70	B2023E End Bell	30.00	B6005ECS		B6055AR2 R. Nut	5.00	BA905C Housing	101.60
B985AE Dia. Hold.	8.20			B6005ECS		B6055AS Spindle	84.95	BA905D Spacer	6.85
B985AM Holder	37.75			B6005ECS				BA905DP Dw. Pin	.80
B985B Base	37.75			B6005ECS				BA905DPL D. Pin	.65
B985BS Base Stud	1.85			B6005ECS					
B985BP Pin	1.75			B6005ECS					
B985C Slide	48.25			B6005ECS					

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
BA905DP8 D. Pin	1.05	BA930DH Head	5.55	BA933J Valve	18.60	BH805W Hose	2.10	D323JR Jaw	11.45
BA905E Shaft	26.35	BA930DN Nut	2.60	BA933L Valve	23.00	BH805Y Hose	2.10	D323S Screw	7.10
BA905P Bk. Plate	1.90	BA930DR Stud	1.05	BA933LA Arm	6.95	BZ-2RN702 Switch	38.75	D323T Sleeve	3.90
BA905RA Axle	7.30	BA930DS T. Slve.	5.95	BA933N Plate	.75	BZE4-2RN2 Micro Switch	40.75	D323W Wrench	1.90
BA905RR Roller	15.60	BA930DT Tn. Rod	2.60	BA933P Plate	54.40	C21A Arbor	12.80	D325 Rm. Housing	54.20
BA905S Base Stud	2.70	BA930P Ind. Plate	.80	BA933PG Gasket	.80	C21B Cone	6.70	D325P Pipe Plug	.75
BA905W Vee	58.70	BA930R Res. Tube	1.25	BA934 Assembly	182.00	C21S Spacer	3.00	D325PF Felt	.60
BA905WS B. Way	52.00	BA930SF Fd. Sc.	66.00	Replaced by B3034		C30C Cap	8.60	D327 Cover	18.65
BA905WR Roller	49.75	BA930SFM F. Sc.	110.00	BA934B Block	7.60	C31 Center	23.10	D327G Gasket	.90
BA910B Sleeve	.75	BA930SS Spacer	7.80	BA934C Cylinder	20.90	C32 Center	23.10	D331 Bushing	14.20
BA910R Rack	28.60	BA930T H. D. Pht.	6.40	BA934GB Body	15.75	C33 Center	23.10	D333 Washer	1.30
BA912C Ansem.	54.00	BA930TS Bar-Sht.	3.40	BA934N Nut	5.35	C37 Center	23.10	D333G Gasket	.60
BA912D40 In. Disc	15.60	BA930W Washer	.60	BA934P Piston	7.05	C39A Sleeve	6.25	D334 Gasket	.85
BA912D50 In. Disc	29.35	BA930WB Bracket	1.85	BA934PR P & R Assembly	24.85	C39B Sleeve	8.10	D335 Collar	4.35
BA912D100 I. Disc	15.60	BA930WC Shroud	102.30	BA934R Rod	7.80	C39C Sleeve	10.15	D335W Sleeve	1.75
BA912D250 I. Disc	26.65	BA930WD Shroud	102.30	BA934RBB C. Rod	9.70	C39D Sleeve	7.15	D336 Sleeve	1.30
BA912H Handwhl.	12.60	BA930WH Shroud	102.30	BA934RK Kit	8.40	C39E Sleeve	10.15	D336L Sleeve	2.10
BA912K Handwhl.	53.45	BA930WL Shroud	76.50	BA934T Tube	2.15	C39F Sleeve	10.15	D337B Wm. Shaft	6.95
BA912L Lk. Ring	5.15	BA930WS Shroud	133.00	BA934Y Yoke	5.55	C40 Center Set	76.00	D337S Extension	6.45
BA912P Lk. Plate	7.15	BA930WR Shroud	55.25	BA934YS Spacer	2.15	C40B Metal Box	9.95	D337R Ring	.60
BA912S Stud	1.05	BA930WT Shroud	55.25	BA937 In. Bk. As.	58.50	C114 Bushing	4.80	D337W Washer	1.35
BA912T Th. Nut	2.35	BA930Y Plug	.90	BA937LB Body	3.40	C116 Bushing	4.80	D340A Gear	28.30
BA912W Spring	.80	BA931A Assembly	744.00	BA937 In. Bk. As.	58.50	C117 Bushing	4.80	D340B Gear	28.30
BA913-1 Lk. Plate	2.60	BA931C Cover	88.00	BA939B Base	13.90	C118 Bushing	4.80	D344 Gear	14.20
BA913-2 Knd. Pin	2.60	BA931E Elbow	13.90	BA939S Shaft	11.30	C119 Bushing	4.80	D345A Worm	30.10
BA913-4 Knd. Pin	1.05	BA931F Gauge	9.30	BA946A Tank Rail	5.35	C120 Bushing	4.80	D345B Worm	30.10
BA913-5 Stop Bk.	16.25	BA931FC Cap	5.35	BA946CB Cover	2.70	C124 Bushing	4.80	D348 Sp. Washer	.65
BA913-6 Mic. Sc.	13.45	BA931FS Stick	3.00	BA946WA Wire	.80	C125P3 10MM Bu.	4.80	D468A Sp. Washer	.55
BA913-7 Sw. Stop	6.30	BA931G Guard	18.00	BA947B Sw. Box	37.70	C126 Bushing	4.80	D468Y Washer	.60
BA913-8 Th. Sc.	3.90	BA931GA Ansem.	744.00	BA947C Cover	12.50	C130 Bushing	4.80	SEE APL-100 FOR WHEEL DRESSER PRICES	
BA913-9 Lock Nut	3.40	BA931GW Hyd. Pump & Tank Ansem.	744.00	BA947CP Plug	1.05	C130P4 Bushing	4.80	EC8 Wire Cl.	.25
BA913-10 R. Wah.	6.30	BA931H7 Hose	1.60	BA947G Gasket	2.35	C132 Bushing	4.80	NECO Comstar	208.00
BA914B Bracket	69.15	BA931H8 Hose	2.55	BA947M19 Conduit	1.95	C134 Bushing	4.80	FA043-4-1 Connt.	208.00
BA914E Shaft	30.60	BA931H15 Hose	2.35	BA947H23 Conduit	3.35	C136 Bushing	4.80	G78L8 50 Micron Filter	5.20
BA914P Ind. Plate	2.10	BA931H30 Hose	5.15	BA947H24 Conduit	3.90	C138 Bushing	4.80	GC5074 Pump	98.00
BA914S Saddle Feed Screw	97.00	BA931H36 Hose	5.40	BA947H34 Conduit	4.25	C138M3 Bushing	4.80	GC523A1GB Pump	
BA914WT Shroud	80.75	BA931H67 Hose	4.00	BA947J32 Conduit	6.85	C140 Bushing	4.80	Replaced by GC5235A12RD with B1031AB Brkt.	260.00
BA914C Collar	4.45	BA931H76 Hose	4.25	BA947KB Box	30.00	C141 Bushing	4.80	GP-100 Speed Control For D.C. Drive	
BA916SS Dr. Shaft with Stud	11.30	BA931H84 Hose	4.50	BA947KC Sc. Cl.	1.40	C142 Bushing	4.80	1 H.P.	1790.00
BA916ST Dr. Shaft with thd. hole	10.40	BA931H100 Hose	5.40	BA947W40 Wire	1.05	C143 Bushing	4.80	2 H.P.	2070.00
BA916Y Str. Shaft	36.20	BA931K Filter	17.70	BA947Y46 Wire	1.40	C143M3 Bushing	4.80	3 H.P.	2540.00
BA917B Brg. Bk.	11.60	BA931KB Body	7.00	BA947Y52 Wire	2.15	C144 Bushing	4.80	VALVE GUIDES	
BA917C Handwhl.	25.15	BA931KC Cap	6.85	BA947Y67 Wire	2.15	C146 Bushing	4.80	See Guide Price List	
BA917D Jaw Cage	37.80	BA931KS Screen	1.05	BA947Y78 Wire	3.00	C148 Bushing	4.80	VALVE GUIDE DRIVERS	
BA917E Jaw Cam	16.25	BA931KW Washer	.80	BA947Y84 Wire	3.00	C150P6 Bushing	4.80	See APL-100	
BA917F Cap	40.55	BA931NA Plate	6.40	BA947Y88 Wire	3.00	C451 Br. Cap	1.30		
BA917G Handle	7.40	BA931NG Plate	5.35	BA947Y94 Wire	3.00	CR106A1 Relay	95.95		
BA917H Housing	40.85	BA931P Pulley	15.75	BA947Y98 Wire	3.00	GENERAL ELECTRIC ALL SIZES			
BA917J Jaw Set Assembly	13.00	BA931PK Key	.75	BA947Y99 Wire	3.00	CR123-C Heaters 2 required, pair	8.35		
BA917S Fd. Sc.	160.50	BA931W Valve	18.00	BA947Y99 Wire	3.00	CT101BR&B2 1/2" Filt. A.	90.00		
BA917W Bear. Sh.	1.05	BA931WB Body	7.80	BA947Y99 Wire	3.00	2278-L1 Filter	6.00		
BA919A Axle	1.75	BA931W6 Hose	1.50	BA947Y99 Wire	3.00	D311 Assembly	19.20		
BA919D L. S. As.	5.75	BA931WT Tube	2.35	BA947Y99 Wire	3.00	D311A Switch	2.35		
BA919DS Lock Sc.	4.25	BA931W34 Hose	5.15	BA947Y99 Wire	3.00	D311B Assembly	17.95		
BA919H Holder	3.90	BA933 Assembly	354.00	BA947Y99 Wire	3.00	D311C Cord	4.35		
BA919L Lock	11.85	BA933BB Body	58.70	BA947Y99 Wire	3.00	D311BC F. Switch	15.05		
BA919P Plunger	1.05	BA933BC Clp. B.	4.90	BA947Y99 Wire	3.00	D311C Cord	4.35		
BA919S Spacer	2.15	BA933BG Gasket	.80	BA947Y99 Wire	3.00	D311W Cord	3.05		
BA924 Nut As.	24.00	BA933BR Ring	16.85	BA947Y99 Wire	3.00	D312 Assembly	34.25		
BA924M Nut. As.	24.00	BA933C Plate	32.30	BA947Y99 Wire	3.00	D315VB Bushing	1.30		
BA924N Fd. Bar	7.80	BA933D Valve	18.60	BA947Y99 Wire	3.00	D315V Pulley	4.35		
BA924W Washer	.35	BA933EH Arm	5.35	BA947Y99 Wire	3.00	D316V Pulley	7.10		
BA929 Trans.	122.75	BA933G Elbow	7.80	BA947Y99 Wire	3.00	D321C Collar	.85		
BA929A Cr. Arm	17.50	BA933H Valve	18.60	BA947Y99 Wire	3.00	D321N Screw	1.90		
BA929C Cover	32.30	BA933HB Body	3.00	BA947Y99 Wire	3.00	D321T Assembly	1.55		
BA929CS Br. Shl.	3.40	BA933H12 Conduit	4.80	BA947Y99 Wire	3.00	D321W Washer	.60		
BA929S Shaft	11.60	BA933H16 Hose	5.75	BA947Y99 Wire	3.00	D322 Base	27.25		
BA929Y Shaft	32.90	BA933H18 Hose	6.85	BA947Y99 Wire	3.00	D322S Motor Sad.	2.95		
BA930DA Bar As.	10.40	BA933H19 Hose	6.85	BA947Y99 Wire	3.00	D323 Chuck	102.40		
BA930DB Bar	11.85	BA933H20 Hose	6.85	BA947Y99 Wire	3.00	D323E Assembly	46.95		
BA930DBL L. Bar	12.60	BA933H21 Hose	6.85	BA947Y99 Wire	3.00	D323JL Jaw	11.65		
		BA933H22 Hose	6.85	BA947Y99 Wire	3.00				
		BA933H23 P. Hose	9.00	BA947Y99 Wire	3.00				
		BA933H25 P. Hose	9.30	BA947Y99 Wire	3.00				
		BA933H30 Ha. ea.	10.35	BA947Y99 Wire	3.00				
		BA933S2 Hose	14.30	BA947Y99 Wire	3.00				

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
K13Y Washer	.70	+ K109 Assembly	5.35	K304T Tank Asm.	4.10	K411L Link	1.10	K505GN Guard	8.20
+ K14G Grd. Wire	.65	+ K111 Assembly	4.00	K308 Guard	13.55	K411P Pin	.90	K506 Tank	31.50
+ K14H Hanger	1.25	K112A Arm	5.15	K210S Slide	15.70	K412C Handwheel	5.70	K506H Hose	.90
+ K14R Switch Wire	2.95	K112C Cap	1.50	K215T Stud	2.10	K412C100 Hndwhl.	19.20	K506S Slides	2.30
+ K14W Motor Wire	2.35	K112H Head	5.20	K217 Assembly	2.80	K413 Spindle	24.00	K508 Wh. Guard	13.40
+ K15 Top Table	25.00	K112R Washer	.65	K218 Assembly	1.30	K413F Flange	5.20	K508G Gd. Splash	3.40
K15B Bushing	3.25	K112W Wrench	.65	K219 Guard	11.85	K413P Pulley	9.90	K510 Table	61.00
K15P Plug	.65	+ K113M Motor	5.40	K231 Assembly	37.65	K413T Pulley	9.90	K510H Hold Down	13.60
K15S Slide	15.70	K113MF Flange	.85	K231B Block	5.40	K413W Washer	2.50	K510HS24 Spring	.40
K15T Stud	1.90	K113P Pulley	5.40	K231K Knob	1.50	K414A Adap. Bars	3.40	K510HS31 Spring	.40
K16 Tube	1.90	K113S Screw	1.75	K321N Nut	1.30	K414B Bracket	7.10	K510P Assembly	3.20
K17 Assembly	1.30	+ K114M Assembly	92.75	K231P Pipe	.80	K414P Pulley	5.40	K510PP Pin	.60
K17W Rbbr. Hose	.75	+ K114MB Assembly	92.75	K231S Shaft	.90	K414R Wire	4.20	K511K Bushing	1.00
K18 Nozzle Asbly.	2.10	+ K114MD Assembly	92.75	K231T Spacer	.65	K414T Mtr. Pul.	6.50	K512A Arm	6.20
K18B Nozzle	2.15	+ K114ME Assembly	92.75	K231V Body	2.20	K415B Bushing	1.75	K513 Spindle	30.00
K18C Block	7.35	+ K114MJ Assembly	92.75	K231W Washer	.60	K415H Hold Down	6.25	K514R Wire	4.20
K21 Screw	.60	+ K114MK Assembly	92.75	K232 Pump Replaced		K418 Nozzle	4.95	K514T Pulley	8.15
K30 Assembly	26.45	K114P Pulley	5.40	by K432		K418W Hose	.75	K515 Top Table	64.00
K30D Nut	2.35	K114R Pad	.80	+ K232B Housing	4.80	K419 Guard	30.65	K515H Hold Down	4.60
K30F Screw	3.25	K114S Stud	2.20	K232C Cover	.80	K419C Cap	2.80	K518B Body	4.60
K30G Sleeve	1.30	K114T Pulley	5.40	K232D Cone	2.35	K425MR Wire	4.00	K518C Collar	2.40
K30N Nut	7.50	+ K115 Table	38.75	K232E Bushing	1.25	K430 Fd. Sc. Arm	20.00	K518K Knob	2.60
K30T Nut	1.50	K115B Bushing	3.25	K232F Stud	1.80	K430D Fork	4.50	K518KL Knob	4.45
K30U Nut	.85	K115K Plug	.65	K232H Housing	18.95	K430G Feed Screw	32.00	K518N Nozzle	3.40
NOTE: All "K" Part Nos. for Motors, Fields and Rotors are listed on back page.		K115N Nut Replaced by K350N Nut	3.00	K232J Retainer	.80	K430S Screw	6.45	K518S Shaft	1.60
K32C Cover	.65	K115P Assembly	2.10	K232L Disc	2.80	K430W Washer	1.50	K518T Tube	4.70
K32D Pipe	.90	K115S Slide	15.70	K232P Pulley	5.40	K431 Assembly	37.65	K519 Guard	40.30
K32F Stud	1.30	K115T Stud	1.90	K232R Impeller	6.45	K432 Pump	68.00	K519U Guard	45.00
K32H Housing	2.35	K115W Stud	1.90	K232S Shaft	1.90	K432B Hose	.75	K530A Nut	2.10
K32P Plate	3.25	K115M Pulley	9.90	K232T Shaft	3.60	K432C Cover	5.40	K530B Bushing	16.90
K32R Impeller	6.45	K115P Pulley	23.35	K232U Plug	.65	K432G Gear	7.80	K530C Wheel	15.60
K32W Hose	.65	+ K132 Replaced by K132X		K232V Tube	.65	K432N Pulley	6.50	K530FB Feed Bar	3.80
K33 Assembly	29.90	K132SX Shaft	6.05	K232W Hose	.65	K432P Pulley	6.20	K530FS Feed Strip	1.90
K34 Dia. Holder	3.60	K132X Fluid Pump Assembly	88.00	K232X Plug	.65	K432PX Pulley	17.10	K530L Lock Nut	3.20
K35 Dia. Holder	3.25	Replaces K32 & K132		K236 Assembly	77.55	K432R Blade	.65	K530N Feed Nut	14.60
K35D Nib	12.90	K136B Assembly	29.90	K236N Nut	10.00	K432S Shaft	1.90	K530S Assembly	26.00
+ K36 Butt Grinder	89.95	K136BS Shaft	1.40	K236S Slide	2.20	K432T Shaft	3.60	K532C Cover	3.40
+ K36C V Blk. Clp.	5.40	K136C Assembly	6.90	K305T Screw	.75	K432W Hose	.70	K532D Ring Cage	.80
K36D Depth Ga.	18.00	K136CB Body	4.00	K307 Cover	5.80	K432X Washer	.60	K532E Bushing	1.10
+ K36DR Spring	.75	K136N Nut	6.70	K307P Pad	.65	K432Y Washer	.60	K532G Gasket	.80
K36F Assembly	6.20	K136P Stop	.75	K308 Guard	13.55	K433S Spring	.65	K532H Housing	40.00
K36K Tube	3.90	K143A Armature 115V and 230V	34.65	K309 Assembly	6.45	K433T Spring	.65	K532P Cap	1.90
K36N Nut	8.60	K143B Bushing	5.40	K313 Spindle	21.40	K434P Plug	.60	K532R Impeller	6.05
K36S Shaft	5.60	K143E Assembly	5.40	K314M Wire	4.00	K436G Guard	22.45	K532S Shaft	3.00
K36W Washer	1.30	K143EB Bushing	1.50	K314P Pulley	9.90	K436GB Block	2.35	K532T Shaft	6.20
K36Y Spring	.90	K143EF Washer	.65	K314R Wire	4.00	K436GH Hose	.70	K532W Washer	.25
K38 Dia. Dresser	36.20	K143EP Pin	.60	K314T Pulley	9.90	K436GP Pipe	.65	K536A Hub	4.05
+ K43 Workhead	219.60	K143ER Plunger	.65	K317W Hose	.65	K436GT Tube	.80	K536B Block	32.40
K43AC Collar	1.50	K143ES Screw	1.25	K317WL Rb. Hose	.90	K436N Nut	1.70	K536BS Stud	1.40
K43AW Washer	.60	K143F Field 115V and 230V	14.20	K318W Hose	.65	K436T Tube	2.30	K536FS Mc. Shaft	7.25
K43B Bearing	10.40	K143G Assembly	17.75	K330 Assembly	21.40	K437 Lt. Fix.	17.00	K536G Guard	24.00
3/4 Collet	82.10	K143GS Assembly	75.00	K330C Handwheel	5.65	K437N Spec. Nut	.80	K536N Mic. Nut	10.20
K43F Wick	.60	K143H Housing	72.55	K332C Cover	.80	K443 Assembly	318.00	K536S Mic. Shaft	6.30
K43G Wheel	9.10	K143HE Ext.	10.50	K332W Hose	.65	K443B Bearing	11.00	K536T Tube	2.40
K43GS Assembly	38.75	K143HF Plate	.80	K350 Attachment	25.70	K443F Wick	1.90	K536Y Spring	.80
K43H Housing	72.55	K143HL Gauge	.80	K350A Assembly	12.90	K443G Work Wh.	17.75	K537LA Arm 13"	16.25
K43J Assembly	1.75	K143HP Plug	.80	K350N Nut	2.90	K443HB Housing	86.40	K541C Cover	21.40
K43K Washer	1.30	K143HR Ring	.80	K350NL Nut	4.80	K443HLB Housing	128.00	K541D Air Switch	60.85
K43L Collar	2.10	K143K Oil Seal	3.05	K405G Grate	.80	3/4 Collet	72.00	K541DB Body	18.20
K43M Spring	.60	K143KC Collar	1.75	K406 Tank	15.00	K443J Plate	4.10	K541DC Connector	13.40
K43N Nut	20.75	K143NT Spring	.65	K407 Fluid Tank	28.00	K443K Bushing	2.35	K541DD Stop Col.	.85
K43P Sleeve	4.00	K143S Spindle	53.30	K407H Hose	.90	K443L Collar	6.50	K541DK Knu. Cap	6.25
K43PL Spacer	4.35	K143W Wire	2.15	K408 Guard	12.80	K443P Sleeve	2.10	K541DP Piston	13.55
K43R Washer	.60	K143WC Clamp	.70	K408G Guard	4.20	K443RL Bushing	1.60	K541DR Spg. Seat	1.40
K43S Spindle	29.90	K150A Assembly	19.20	K409G Guard	5.00	K443RS Bushing	1.60	K541DS Spring	.35
K43T Sleeve	14.30	K205BB Bushing	.75	K410C Cap	.75	K443S Shaft	6.85	K541G Gasket	.45
K43W Washer	4.35	K205C Cover	.80	K410H Hold Down	4.95	K443T Sleeve	1.90	K541GP Plug	.35
K43X Washer	.60	K206 Tank	40.00	K410K Cap Screw	.75	K443W Worm	6.95	K541GS Spring	.45
K43Y Gasket	.80			K410S Spring	.60	K443WS Worm, Shaft	11.00	K541MB Bracket	12.80
K43Z Mil. Oil Cup	1.55			K410W Washer	.60	K450A Assembly	14.30	K541MS Spacer	1.20
+ K50 Gr. Attach.	25.70			K411 Assembly	8.20	K450CL Cone L.	3.40	K541P Piston As.	73.80
+ K50A Assembly	13.55			K411K Collar	.90	K450CT Cone U.	3.70	K541PP Piston	12.80
+ K105C Cover	1.90					K450S Stud	1.10	K541PS Shaft	44.85
								K541R Plunger	2.80

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
K541SN Nut	2.20	† P171 Dresser Ced.	17.10	P278 Holder	6.50	P460C Cage	3.80	R66M Ball Race	4.75
K541SS Spool	12.80	† P171P Bumper	.60	P280 Attachment	59.50	P460E Shaft	8.60	R68R Ball Race	4.75
K541V V. & Spool	36.10	† P173 Swivel Head	7.10	P281 Drum Arbor	17.95	P460G Gear	5.20	R70M2 Adapter	54.30
K541VY Body	14.75	P173B Plug	.60	P286B Blade Set	1.10	P460H Housing	12.50	R70M3 Adapter	54.30
K541W Spring	.45	P173C Assembly	3.00	P287 Cleaner	4.05	P460P Pinion	5.20	R70M4 Adapter	54.30
K607 Bushing	2.15	P173CB Ball	.60	P287B Blade Set	1.50	P460S Oil Plug	1.00	R510C Guide Only	51.70
B623 Bushing	2.15	P173CD Collar	.55	P288 Cleaner	5.55	P462B Shaft	8.45	R510CB Base	17.00
K717 Bushing	2.20	P173S Spring	.60	P289B Blade Set	1.70	P462E Shaft	8.60	R510CH Sw. Head	15.00
K725 Bushing	2.20	† P174 Con. Link	.85	P290 Cleaner	5.55	P462G Gear	5.20	R510CS U. Swivel	22.00
K729 Bushing	2.20	† P175 Handle	.85	P290B Blade Set	1.80	P462P Pinion	5.20	R510CW S. Wash.	2.10
K743 Bushing	2.20	† P176 Plunger	9.00	P291 Cleaner	5.55	P522A Armature	61.35	R710CA Arm.	5.60
K748 Bushing	2.20	P176B Plug	.60	P300BC Clamp	2.35	P522AS Shaft	29.00	R710CB Column	17.00
K792 Bushing	2.20	P176S Spring	.60	P300BP1 Pin	.85	P522E Assembly	2.80	R2944 Spring	.45
K810 Bushing	2.20	P178N Sleeve	1.55	P300BP2 Pin	.85	P522F Field, 115V	20.00	R3838 Brush, ea.	1.20
K832 Pump	68.00	P178S Spring	.60	P321 Screw	.45	P522G Field, 230V	22.90	S1B Body	10.75
K832G M. Gear	.60	P179L Collar	1.25	P322E Assembly	2.35	P522GC Connector	.55	S1S Screw	1.30
K832H Housing	21.60	P179S Collar	1.50	† P322H Hdl., Hous.	9.40	P522GR Sleeve	.55	S1W Wedge	6.45
K832S Shaft	5.00	P190A Body	6.45	P322HP Plate	1.25	P522GS Sc. Jack	.55	S2B Body	15.00
K832T Imp. Shaft	7.50	P190N Hex Nut	7.10	P322R Shield	7.90	P522H Housing	33.75	S2S Screw	1.30
B811 Bushing	2.20	P190S Bushing	2.35	P322S Stud	.85	P522HB Bracket	1.55	S2W Wedge	6.45
K859 Bushing	2.20	P191S Bushing	2.35	P322W Spacer	.85	P522HM Housing	42.70	S234 Cylinder	147.90
K866 Bushing	2.20	P192 Nut	5.80	P350A Arm	3.80	and End Shield		S234B Bracket	20.95
K872 Bushing	2.20	P193 Spring	.65	P350C Clamp	4.05	P522HP Plate	.65	S234C Cylinder	15.15
K937 Bushing	2.20	P193HD Spring	.65	P350H Collar	2.35	P522HW Washer	.75	S234E End Cap	11.00
K960 Bushing	2.20	P194 Plunger	.75	P350M Screw	1.65	P3949 Plug	.60	S234GB Gl. Body	12.60
K967 Bushing	2.20	P194S Stop	.60	P350N Nut	.90	P3949L Br. Plug	.65	S234GE Cyl. End	10.15
K975 Bushing	2.20	P195 Cover Tube	3.05	P350S Column	4.10	P5620 Washer	.75	S234P Piston	5.55
K985 Bushing	2.20	P196N Nut	5.80	P350W Washer	.65	P5685 Washer	.65	S234PC Cap	6.30
K1000 Bushing	2.20	P197A Assembly	13.65	P350Y Washer	.65	P5688 Washer	.75	S234PR Piston and	
K1120 Bushing	2.20	P197E Sleeve	11.65	P351S Column	4.10	P5689 Washer	.85	Rod Assembly	44.75
K1129 Bushing	4.10	P197M Drive End	5.40	P360 Angle Drive	80.00	P8545 Holder	1.30	S234R Cyl. Rod	7.30
K1155 Bushing	4.10	P197N Nut Body	5.80	P360B Shaft	15.00	PA9015 Gr. Pump		S234T Cover Tube	10.40
K1169 Bushing	4.10	P197P Plate	.60	P360C Bearing	1.95	Replaced by		S234TF Flange	2.70
K1224 Bushing	4.10	P197R Collar	.70	P360D Bearing	1.95	GC5074 Pump	38.00	S234TT Tube	1.90
K1218 Bushing	4.10	P197T Spring	.60	P360F Assembly	7.80	PKB47 Plate	.60	S234TP End Plug	1.45
K1316 Bushing	4.10	P197TS Spring	.60	P360FC Connector	1.55	PKB47X Baf. Plt.	.75	S334 Crasfd. Cyl.	148.00
NOTE: All "K" Part Nos.		P197W Washer	.60	P360FS Shaft	5.20	PS192L Nut	5.80	S334GB Gl. Body	12.60
for Motors, Fields, Rotors		P197XY Ring	.65	P360H Assembly	46.80	PS192S Nut	5.80	S434 Crasfd. Cyl.	148.00
are listed on back page.		P197Y Ring	.65	P360HC Clamp	15.60	PS193 Spring	.60	S434PR P. & Rod	42.90
KO-11 Name Plate NC		P197Z Spring	.65	P360HL Lug	.90	PS194 Plunger	.75	S600RC E. Clamp	.85
KO-12 Name Plate NC		P211G Grommet	.65	P360HT Tube	11.70	PS195 Tube	3.00	S600RL R. Clamp	.85
KO-15 Plate	1.15	P211H Grommet	.85	P360R Retainer	.90	R5C Cover	7.90	S605BP Bracket	2.80
KO-16 Chart	.85	P211L Insulation	.60	P360S Shaft	9.75	R5C Gasket	.65	S609F Cover	20.75
KO-18 Plate	1.55	P211N Assembly	4.80	P360W Washer	.65	R5D Bushing	.85	S609G Wh. Guard	34.90
KO-19 Off-On Plt.	.60	P212B Housing	7.10	P361B Body	4.35	R5E Shield	23.40	S609S Splash Gd.	7.35
KO-20 Plate	.75	P212C Shield	8.10	P361P Plunger	1.30	R5EP Plate	1.30	S609T Thumb Sc.	1.55
KO-22 Plate	7.60	P212D Shield	8.10	P361S Spring	.65	R5F Plug	.60	S609W Thumb Sc.	1.85
KO-25 Plate	1.55	P212F Washer	.65	P362 Ang. Drive	80.00	† R5H Housing	32.00	S610G Dust. Gd.	25.15
KO-29 Plate	2.30	P212G Assembly	1.90	P362B Hex Shaft	23.50	R5J Homag. & Cap	38.75	S610P Plug	.85
KO-30 Plate	2.30	P212H Cover	.70	P362S Ball Shaft	16.00	R5L Assembly	46.80	S610R Rack	29.40
KO-32 Plate	7.60	P212W Washer	.60	P372B Base	32.50	R5M Gear	11.70	S610RC Gear	8.00
KO-41 Plate	2.35	P213A Adapter	4.40	P372C Handle	2.35	R5P Pin	.60	S610RH Rack-Hel.	29.40
KO-45 Plate	2.35	P213D Adapter	23.60	P372D Plug	.60	R5T Washer	.60	S610RHF H. Rack	37.70
L2BZE6-2RN2 Sw.	32.00	P214 Switch Replaced by		P372H Handle	3.15	R5W Wheel	10.15	S610W Washer	.40
L113 Switch Replaced by		26591N Switch	4.00	P372I Pin	1.95	R5WX Wheel	10.15	S612-1 Bracket	9.00
B590S Switch	23.40	P215BH Hex Dr.	.90	P372J Spring	.55	R5X Plug	.55	S612-4 Bracket	51.95
Allen-Bradley Heaters		P216S Sleeve	3.00	P372K Spring	.35	R10CS Stop	1.25	S612-5 Bracket	20.75
Two Required		P217N Nut	2.35	P372L Link	4.20	POWER DRIVE		S612-6 Bk. Arm	22.00
N3 thru N33, ea.	4.15	P217S Sleeve	3.00	P372P Plunger	8.60	ELECTRICAL PARTS		S612-7 Bracket	9.45
NN1 thr. NN4, ea.	4.15	P218S Sleeve	2.80	P372R Rod	.60	ON BACK PAGE		S612-7A Bracket	5.60
† N-138 Shd. & Bah.	10.00	P270 Holder	10.60	P372S Head	20.80	R55D Nut	.65	S612-8 Bracket	6.30
N-138S Shaft only	8.60	P271 Pin	.60	P372T Stud	1.95	R55FP Positioner	.60	S612-9 Bracket	6.60
N805 Br. Hold	2.80	P272 Hinge Leaf	.60	P372U Screw	.60	R55FS Stud	.90	S612-10 Switch	10.15
N-1541 Spring, ea.	.75	P272A Latch Eye	.60	P372V Screw	1.05	R55H Housing	32.00	S612-12 Blade Fan	60.60
O619PA Arm	9.50	P273 Holder	10.60	P372W Screw	1.05	R55J Hous. & Cap	38.50	S612-13 Coupling	15.60
O619PG Grommet	2.50	P274 Holder	10.60	P378 Pilot Assem.	18.00	R55W Wheel	11.70	S612-14 Rly. Asm.	48.50
O619PK Socket	5.00	P274R Hold Down	NC	P398N Nut	.75	R55WX Wm. Wh.	14.20	S612-15 Relay and	
O619PS Shade	8.00	P275B Band	6.50	P398W Washer	.60	R55Y Yoke	4.80	Box Assembly	100.50
O619PR Reflector	5.00	P275C Guard	5.00	P399N Nut	.75	R59C Canting	5.40	S612-17 Leg. Plate	5.00
P61 Pilot Wrench	8.00	P275E Guard	5.00	P399P Plunger	1.30	R59P Pin	.60	S612-19 Switch	93.35
P61B Body	3.00	P277 Attachment	15.90	26593C Switch	4.35	R59R Roller	1.25	Used with all Hecon	
P61C Stop Pin	.60	P277C Backing	.75	For P322, P422, P522		R62 Drive Pin	.85	and Sudeco counters	
P61D Disc	2.30	P277D Backing	.80	P422E Fan	2.80	R63 Socket	7.95	S612-19S Spacer	6.00
P61L Lock Pin	.65	P277F Washer	1.25	P422R Shield	13.75	R63L Socket	7.95	S612-20 Bracket	9.35
P61P Plunger	1.30	P277H Holder	4.80	P422S Stud	.90	R66 Assembly	20.00	S612-21 M. T. Plt.	23.40
P61S Spring	.60			P460B Shaft	8.35	R66D Body	9.45	S612-22 M. T. Plt.	10.20

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
S612-23 Spacer	3.45	S612-105 Th. Was.	1.55	S625C Box Col.	412.00	S635EHR Rotor		S725CB Bar	2.40
S612-24 Spacer	3.20	S612-106 Th. Was.	1.50	S625CP Col. Cap	31.30	S635EHR Rotor and Shaft	31.45	S725CP Col. Col.	22.70
S612-25 Spacer	3.20	S612-111 Dr. Shaft	24.90	S625P Brass Plug	.75	S635EN Data Pit.	1.50	S726A Bushing	3.15
S612-27 Man. Val.	28.35	S612-112 Spacer	12.50	S625R Guide Rail	42.00	S635GAH Pm. A. 198.00		S726GB Bracket	21.00
S612-27L Cyl. Bl. and Piping	57.20	S612-113 Th. Bea.	10.20	S625S Col. Slide	253.50	S635GAH Pm. A. 198.00		S726C Th. Collar	7.70
S612-27R Cyl. Bl. and Piping	57.20	S612-114 Ex. Shaft	22.00	S625TA Tol. Gd.	4.05	S635GAF Field	65.35	S726E Shaft	10.75
S612-29HS Housing	38.00	S612-115B Body	11.70	S625TE T. Tol. G.	3.00	S635GAN D. Plate	1.50	S726N Spec. Nut	1.05
S612-30 Stop	3.45	S612-115C Cap	11.20	S625TC Tol. Gd.	2.50	S635CAHR Rotor and Shaft	31.45	S726SF Elev. Sc.	160.00
S612-31 Stop	4.10	S612-119G Gasket	.40	S625TD Tol. Gd.	1.45	S635SH Housing	49.75	S726SPM Elev. Sc.	150.00
S612-32 Shaft	18.95	S612-119P Piston	2.90	S625TE Tol. Gd.	3.45	S635KH Pump. Aa.	198.00	S726T Spacer	4.95
S612-32L Shaft	20.00	S612-119PR P. Rd.	1.90	S625W Felt Wick	.75	S635KH Pump. Aa. 220V, 1 ph., 60 cy.		S729 Trans.	176.00
S612-33 Extension	28.55	S612-119T Tube	3.90	S626B Feed Nut	31.45	S635KHF Field	65.35	S729-2 9in. Shaft	10.15
S612-34 Spacer	7.70	S612-119V V. Asm.	10.15	S626BC Fr. Cap	1.05	S635KN Data Pit.	2.70	S729-3 Bell End	2.50
S612-35 Nut Elev.	7.90	S612-119VB V. Bd.	11.45	S626BM Feed Nut	43.85	S635KN Rotor and Shaft	31.45	S729-4 Shaft Asm.	22.85
S612-36 Comp. Ele.	18.00	S612-119VS Spool	3.25	S626BP Plug	1.30	S635KHF Rotor and Shaft	31.45	S729-5 Drive Shaft	13.00
S612-40 Spacer	5.10	S612-120N N. Pl.	.80	S626FC Fric. Cap	3.25	S635KHF Rotor and Shaft	31.45	S729-6 Spacer	10.35
S612-41 Bracket	28.35	S612-120 Vellum Washer	.25	S626G Gear	17.30	S635KHF Rotor and Shaft	31.45	S729-7 Jaw-Male	13.55
S612-42 Adj. Arm	12.30	S612-121 Id. Shaft	36.20	S626P Pinion	11.70	S635KHF Rotor and Shaft	31.45	S729-8 Jaw-Female	16.30
S612-43 Comp. Blk.	11.85	S612-122 O. Shaft	42.45	S626SF Elev. Sc.	150.00	S635KHF Rotor and Shaft	31.45	S729-9 Handwheel	27.30
S612-43D Nozzle	89.20	S612-123 Piston	17.35	S626SFM Elev. Sc.	190.00	S635KHF Rotor and Shaft	31.45	S729-10 Spring	.40
S612-44 Coupling	6.90	S612-124 Adj. Race	10.95	S626W Sp. Washer	1.75	S635KHF Rotor and Shaft	31.45	S729-11 Gear-Hel	10.00
S612-45 Coupling	7.25	S612-125 B. Clutch	30.70	S629 H. & Dh. Sh.	100.00	S635KHF Rotor and Shaft	31.45	S729-12 H. Gear	15.00
S612-46 Lock Ring	1.35	S612-126 Br. Pl.	3.90	S629A Crank Arm	12.10	S635KHF Rotor and Shaft	31.45	S730WF Shroud	133.00
S612-47 Spec. Nut	3.05	S612-127 St. Shaft	10.20	S629AB Handle	11.20	S635KHF Rotor and Shaft	31.45	S730WE Shroud	133.00
S612-48 Field Stop	9.20	S612-128 Key	.80	S629AT Arm	10.20	S635KHF Rotor and Shaft	31.45	S731-1 Pump & Tank	613.00
S612-49 Bar	1.75	S612-129 Flange	12.75	S629AW Th. Wah.	.85	S635KHF Rotor and Shaft	31.45	S731-2 Pump and Tank	613.00
S612-50 Win. Stop	25.35	S612-130 Valve	70.55	S629C Handwheel	22.90	S635KHF Rotor and Shaft	31.45	S731-3 Pump and Tank	613.00
S612-51 Bracket	11.80	S612-131 N. Pl.	.65	S629L Lock Screw	2.35	S635KHF Rotor and Shaft	31.45	S731DU-1 Pump & Tank	690.00
S612-51B Bracket	3.40	S612-131 B. Plate	6.85	S629S Drive Shaft	12.00	S635KHF Rotor and Shaft	31.45	S731DU-2 Hy. Dup. Pump Slicer	690.00
S612-51H Housing	2.10	S612-132 Body	16.50	S629Y St. Shaft	25.20	S635KHF Rotor and Shaft	31.45	S731DU-3	690.00
S612-52 Plate	15.00	S612-133 Cap	4.90	S631T Tank	72.70	S635KHF Rotor and Shaft	31.45	S731DU-4	690.00
S612-53 Plate	3.35	S612-134 Valve	18.20	S631TE End	3.45	S635KHF Rotor and Shaft	31.45	S731DU-5	690.00
S612-54 Kn. Nob	3.40	S612-135 Gasket	.35	S631TP Partition	6.95	S635KHF Rotor and Shaft	31.45	S731DU-6	690.00
S612-55 Plunger	3.80	S612-136 St. Key	1.90	S631TS Bottom and Sides	10.10	S635KHF Rotor and Shaft	31.45	S731DU-7	690.00
S612-60 Arm As.	18.00	S612-140 Th. St.	1.40	S632B Bracket	6.40	S635KHF Rotor and Shaft	31.45	S731W Pump, Tank Assembly, 550V	613.00
S612-61 Arm	10.00	S612-141 Th. St.	1.55	S632DC Dr. Cap	7.00	S635KHF Rotor and Shaft	31.45	S732GA Sp. Guard	5.75
S612-61L Arm	12.60	S612-142 Bracket	3.35	S632E Ell	3.25	S635KHF Rotor and Shaft	31.45	S732GB Sp. Guard	6.00
S612-62 Brg. Shaft	1.40	S612-143 Spacer	4.90	S632G 90° Elbow	9.00	S635KHF Rotor and Shaft	31.45	S732GC Sp. Guard	7.00
S612-62A Ex. Shf.	2.85	S612-150N N. Pl.	.90	S632GA Sp. Guard	5.75	S635KHF Rotor and Shaft	31.45	S732GL Sp. Guard	27.30
S612-62B Br. Hd.	1.45	S612-151 Flange	14.85	S632GB Sp. Guard	6.40	S635KHF Rotor and Shaft	31.45	S733 Valve As.	356.00
S612-65 Stop Up.	30.65	S612-152 Gasket	.35	S632GC Sp. Guard	7.80	S635KHF Rotor and Shaft	31.45	S733A Dwell Cap	1.95
S612-66 Body	15.20	S612-153 Ex. Shaft	11.00	S632GL Sp. Guard	27.30	S635KHF Rotor and Shaft	31.45	S736-5 Body, Piston & Valve Asm.	222.75
S612-67 Bar	3.45	S612-154 Flange	74.30	S632GR Sp. Guard	27.30	S635KHF Rotor and Shaft	31.45	S736-10 Swinging Arm Asm.	24.35
S612-68 Screw	3.20	S612-155 Flange	7.40	S632GT Tube	3.00	S635KHF Rotor and Shaft	31.45	S736-11 Sw. Arm	12.10
S612-70 Stop Low.	28.00	S612-156 Worm	188.45	S632H Hanger	5.15	S635KHF Rotor and Shaft	31.45	S736-12 Pick Pig.	3.65
S612-70M Brkt. A.	44.85	S612-157 W. Gear	100.30	S632N Noz. Asmb.		S635KHF Rotor and Shaft	31.45	S736-13 Spring	.55
S612-70P Micro Hd.	35.00	S612-158 Housing	50.85	Replaced by S632N Noz. As.	29.50	S635KHF Rotor and Shaft	31.45	S736-14 Stop	4.00
S612-71 Body	16.25	S612-159 Sleeve	7.25	S632NB Val. Body	8.45	S635KHF Rotor and Shaft	31.45	S736AB Slide Bar	14.75
S612-72 Adj. Stop	35.95	S612-165N N. Pl.	1.30	S632NN Nozzle	3.65	S635KHF Rotor and Shaft	31.45	S736AL Slide Bar	31.45
S612-73 Bracket	12.95	S612-170 Cent. Valve Assem. 2 Spd.	335.00	S632NT Tube	1.90	S635KHF Rotor and Shaft	31.45	S736AS Screw	.90
S612-74 Adj. Stop	39.25	S612-210 Cy. Count & Shut Off	536.40	S632NV Valve	3.25	S635KHF Rotor and Shaft	31.45	S736AT Adj. Trip	8.90
S612-75 Bracket	20.95	S612-214 Cy. Count & Total Count with Shut-Off	546.00	S632TA Tank	52.00	S635KHF Rotor and Shaft	31.45	S736B Body	199.45
S612-76 Re. Screw	4.00	S612-216 Bracket	12.90	S632TC Cover	16.80	S635KHF Rotor and Shaft	31.45	S736CC Pln., Rod	23.95
S612-77 Adj. Stop	13.60	S612-217 Bar	24.50	S632TE End	5.75	S635KHF Rotor and Shaft	31.45	S736CD G. & Bsh.	13.00
S612-78 Stop Spc.	2.55	S612-218 Bar	24.50	S632TP Partition	2.70	S635KHF Rotor and Shaft	31.45	S736CG Gland	11.05
S612-78L Sp. Lg.	1.75	S612-219 Cam	9.95	S632TR Partition	2.15	S635KHF Rotor and Shaft	31.45	S736CP Piston	4.25
S612-79 Stp. Body	8.80	S612-224B Bracket	19.40	S632TS Btm. Sides	17.15	S635KHF Rotor and Shaft	31.45	S736CW Co. Tube	7.05
S612-80 Tank As.	54.55	S612D Hd. W. As.	53.45	S632W Thumb Sc.	1.25	S635KHF Rotor and Shaft	31.45	S736D Bracket	4.35
S612-81 Tank	35.00	S612D100 Ind. Dia.	20.95	S633 Hyd. Valve Replaced by S733 Valve	356.00	S635KHF Rotor and Shaft	31.45	S736E Fr. Lock	3.20
S612-82 Bracket	8.35	S612D400 In. Disc	28.95	S633J Com. Valve	20.95	S635KHF Rotor and Shaft	31.45	S736EB Lock Body	2.15
S612-83 Thd. Tube	3.00	S612D500 In. Disc	20.95	S635AH Pump A. 198.00		S635KHF Rotor and Shaft	31.45	S736F Block Asm.	10.50
S612-84 Cap	2.35	S623 Conv. Kit	69.30	115V, 1 ph., 60 cy.		S635KHF Rotor and Shaft	31.45	S736FB C. Block	10.50
S612-85 Plas. Hose	2.35	S623B Mtr. Brket.	33.00	S635AHF Field	65.35	S635KHF Rotor and Shaft	31.45	S736FB1 C. Block	11.05
S612-95N N. Plate	.65	S623BA Axle	1.75	S635AN Data Pit.	1.50	S635KHF Rotor and Shaft	31.45	S736GB Bracket	5.35
S612-96 Flange and Brk. Assembly	26.60	S623BP Pin	.80	S635AHR Rotor and Shaft	31.45	S635KHF Rotor and Shaft	31.45	S736GC Guard	11.05
S612-97 Bracket	10.15	S623BL Bk. Lower	22.00	S635B Switch Box	6.30	S635KHF Rotor and Shaft	31.45	S736H Spec. Tee	8.00
S612-100 Dr. Colr.	32.85	S623BU Bk. Upper	22.00	S635C Cover	4.90	S635KHF Rotor and Shaft	31.45	S736K Spacer	11.60
S612-101 Handle	1.75	S623BS Spring	.40	S635EH Pump. Aa. 198.00		S635KHF Rotor and Shaft	31.45	S736L Link	9.36
S612-102 Fork	19.40	S623S Mtr. Brket.	58.70	220V, 3 ph., 60 cy.		S635KHF Rotor and Shaft	31.45	S736M Bracket	7.60
S612-102 Fork As.	24.90	S623W Washer	.65	S635EHF Field	65.35	S635KHF Rotor and Shaft	31.45		
S612-104 Axle	.75	S625A Guard Stop	14.30						
		S625B Lamp Brct.	5.95						

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
S736N Washer	.60	S880D Dr. Collar	20.95	S833BN Nut	4.75	S849BG Gasket	.48	S855H7 Pulley	27.70
S736PB Pawl Br.	4.75	S820E Flange	9.30	S833BS Stop So.	2.35	S849C Spring Cap	2.35	S855H8 Pulley	64.00
S736PP Pawl	2.35	S820EF Gasket	.60	S833D Pilot Valve	22.70	S849EG Gasket	.40	S1029 Tran. As.	176.00
S736PS Pawl Sc.	1.25	S820F Flange	8.45	S833EH Con. Arm	4.25	S849M Manifold	19.85	S1029F Tran. As.	176.00
S736PT Pawl Stop	3.20	S820FG Gasket	.60	S833F C. Bl. As.	11.80	S849P Piston	1.55	S1055CL Ql. As.	358.00
S736PW Pal. Wa.	.65	S820G Flange	6.30	S833FB Cap. Bk.	10.50	S849R S. Pipe Pl.	1.55	S1055CP Pulley	
S736RK Repr. Kit	33.95	S820GG Gasket	.60	S833J Con. Valve	13.90	S849S Shaft	9.30	and Cap	31.20
S736RT Thimble	NC	S820H Housing	42.80	S833N Pl.	.55	S849T Tank	27.70		
S736SC Sp. H. W.	2.35	S820K Key	.65	S833P P. & R. As.	58.70	2900 R.P.M.		S1055CR Ql. As.	449.00
S736SL Spacer	3.45	S820L Dr. Pin	.60	S833P Plate	54.20	S855H1 Quill Pul.	13.40	S1055CS Ql. As.	449.00
S736T Thumb Sc.	3.90	S820P Spacer	3.00	S833PR Ins. Ring	22.30	S855H2 Mtr. Pul.	15.20	S1055S1 Spindle	122.30
S736VB V. Body	267.40	S820RL Bearing	1.55	S833PL Oil Plate	27.30	3500 R.P.M.		S1055S2 Spindle	124.55
S736VC Body Cap	3.90	S820RS Bearing	3.00	S833PU Oil Plate	23.73	S855H3 Quill Pul.	15.20	S1055S3 Spindle	128.00
S736VG Gasket	.60	S820S Input Shaft	14.30	S833R Rev. Sc.	4.00	S855H4 Mtr. Pul.	17.15	S1055T1 Spacer	29.80
S736VS Spool	16.25	S820T Washer	3.40	S833RT Rev. Sc.	2.15	4000 R.P.M.		S1425 Switch	12.50
S736VT Cp. Tube	1.75	S820W Wm. Gear	58.70	S835 Spacer	1.30	S855H5 Quill Pul.	17.15	S2030C Cover	17.00
S736W Rath. Wh.	22.55	S823S Bracket	62.30	S835W Washer	.90	S855H6 Mtr. Pul.	19.00	S2030WE Shroud	210.00
S736X Alm. Wah.	.65	S824 Fd. Nut As.	83.20	S837 Valve	204.50	4500 R.P.M.		S2035DT Dr. Trh.	36.40
S755CL L. H. Sp.	358.00	S824B Body	19.90	S837B Valve Body	28.35	S855H7 Quill Pul.	17.15	S2035T Dr. Trgh.	54.00
Replaced by		S824BT Body	27.20	S837D Cr. Fr. Sp.	18.60	S855H8 Mtr. Pul.	20.95	S2612-19 Switch	88.00
S855CL Cp. A.	358.00	S824C Tube	9.35	S837G Gasket	.55	5000 R.P.M.		S2637B Boot	42.00
S755CC Cap	9.00	S824G Gasket	.45	S837K Con. Knob	8.60	S855H9 Quill Pul.	17.15	S2637W Window	60.00
S755CN Sp. Nut	2.80	S824CH Hex. Clin.	3.40	S837L Con. Valve	18.60	S855H10 Mtr. Pul.	20.95	S6055CL Quill A.	358.00
8 GROOVE PULLEYS		S824M Fd. Nut	34.00	S837N N. Pl.	.80	5500 R.P.M.		S6055S1 Spindle	117.70
FOR		S824N Feed Nut	26.00	S837P Val. Plate	65.45	S855H11 Ql. Pul.	17.15	L. H. — Slicer	
SURFACE GRINDERS		S824P Piston	5.15	S837S Spool	12.90	S855H12 Mtr. Pul.	22.90	S6055S2 Spindle	121.00
3450 R.P.M.		S824R Rail	12.10	S838 Valve	50.20	6000 R.P.M.		L. H. — Surf. Grinder	
S755H1 Quill Pul.	49.30	S824RT Rail	9.70	S838B Body	36.80	S855H13 Ql. Pul.	17.15	S6055S3 Spindle	126.00
S755H2 Drive Pul.	45.00	S824S Spacer	2.95	S838CP Cap	4.05	S855H14 Mtr. Pul.	32.40	R. H. — Tool Grinder	
2900 R.P.M.		S824T Spec. Screw	.75	S838CT Thr. Cap	4.05	S855K Key	.90	S8102H Ct. Box	1790.00
S755H3 Quill Pul.	49.30	S824W Washer	.75	S838D Tube	2.15	S881BL Base 8"	22.00	S8250-1027 Motor	312.00
S755H4 Mtr. Pul.	45.00	S824TG Cd. Bar	8.05	S838G Gasket	.45	S881BS Base 7"	28.35	VJ-1 Relief Valve	42.35
4000 R.P.M.		S824TL Guard	6.90	S839 Plug	22.70	S881C Slide	22.00	W13 Holder	11.85
S755H5 Quill Pul.	49.30	S824TR Guard	2.70	S839 Pilot Val.	110.00	S881D Mlc. Hd.	64.35	W13A Body	4.35
S755H6 Mtr. Pul.	45.00	S824TU Guard	4.80	S839A Slide Bar	15.60	S881DC Cap	10.10	W13C Guard	1.40
4500 R.P.M.		S829 Trans. As.	98.80	S839B Bracket	11.20	S881DD Dial	14.20	W13D Jaw	2.70
S755H7 Quill Pul.	49.30	S829S Drive Shaft	9.00	S839C Cover	8.05	S881DFN Fd. Nut	17.30	W13E Handle	.80
S755H8 Mtr. Pul.	45.00	S829T Sta. Shaft	18.60	S839D Cap	5.95	S881DFS Feed Sc.	7.25	W13F Spring	.65
6000 R.P.M.		S830SF C. F. Sc.	87.00	S839E Handle	1.75	S881DH Housing	25.15	W13G Washer	.55
S755H9 Quill Pul.	49.30	S830SFM C. F. Sc.	110.00	S839F Shft. Fork.	4.75	S881DN Dia. Nib	12.60	W13M Pin	.55
S755H10 Mtr. Pul.	45.00	S830SS Spacer	31.45	S839G Gasket	.45	S881F Cr. Screw	12.60	W13L Handle	4.15
No. 46 O-Ring Belt		S831CP Plug	.75	S839H Housing	11.30	S881FC Collar	3.20	W150B9 Cover	.80
for above, 8 belts		S831JV Pulley	11.85	S839P Plug	.60	S881FD Collar	2.70	W150C6 Bar	.65
required ea.	2.70	S831PV Pulley	13.65	S839R Insert Ring	15.20	S881FS Fd. Screw	5.00	W150E Cover	14.20
S790-1 Bracket	14.90	S832E El	22.05	S839S Block As.	12.60	S881H Head	25.15	W150N2 Name Pl.	NC
S790-2L Cam	15.50	S832EE Elbow	14.20	S839SA Sw. Arm	2.60	S881HB Hd. Wheel	9.45	W150R1 Knob	1.55
S790-2R Cam	17.10	S832ET Tube	1.90	S839SB Rev. Bk.	5.65	S881P Plate	4.45	W150R2 Indicator	4.35
S790-6 Stud	3.20	S832G Dr. Tube As.		S839SC Rev. Bk.	12.90	S881RB Rub. Boot	3.20	W150V1 Nut	.80
S790-7 Fric. Whl.	11.95	S832GR Red. Col.	8.55	S839SF Rev. Bk.	23.35	S881S Saddle	25.15	W150V2 Bushing	.85
S790-8 Spr. Hous.	4.10	S832GT Tube	3.20	S839T Rev. Block	12.50	S881WG Gib	3.20	W150V3 Bushing	.85
S790-9 Man. Asy.	24.25	S832N Nox. As.	29.50	S839TB Rev. Bk.	9.00	S881WP Pin	2.20	W150V4 Nut	.80
S490-9B Manifold	15.05	S832NA Bd. & Th.	14.20	S839TC Rev. Bk.	12.25	S890B W. Rack	4.25	W180F2 Panel	4.80
S790-10 Cap	7.60	S832NB Body	8.15	S839TR Rev. Bk.	26.15	S890C Bracket	4.30	W180N5 Name Pl.	NC
S790-13 Bracket	5.55	S832T Th. & Cov.	253.50	S839V Rot. Valve	25.15	S891K Knob	2.15	W200B Assembly	34.65
S790-13A Bracket		S833 Valve As.	356.00	S839W Spacer	1.40	S891S Shaft	2.55	W200F Pan. Frm.	10.75
S790-14 Spacer	25.50	S833-20 R. H. Rev.		S840 Valve Assem.	110.00	S894B Blade	2.85	W200F2 Out. Pan.	6.45
S790-15 Spacer	2.70	S833-21 R. H. Rev.		S840B Body	33.80	S894S Shaft	2.60	W200N5 Name Pl.	NC
S790-16L Hw. Sh.	35.00	& Stop Asm.	17.10	S840C End Cap	5.75	S894T Handle	3.00	W215 Wheel	3.35
S790-16S Hw. Sh.	23.55	S833-30 L. H. Rev.		S840G Gasket	.45	S895S Shaft	2.60	W250J Jack	1.65
S790-17 Gasket	.35	& Stop Asm.	17.10	S840V N. Pl.	.55	S912D Hd. Wh.	75.00	W250K Plug	2.60
S790-21 Cover	3.65	S833-31 L. H. Rev.		S840P Pin	.60	S931JV Dup. Pul.	10.20	W250R Assembly	6.00
S790-24 Elev. Shaft	40.90	& Stop Asm.	17.10	S840V Rot. Valve	29.20	S936CS Spacer	8.65	W275N Name Pl.	1.25
S790-26 Lock Nut	47.20	S833B Bd. & Ring	94.25	S840W Washer	2.55	S936CW Washer	1.45	VALVE SEAT INSERT	
S798 M. Kit	437.90	S833BB Body	62.85	S849A Bracket	6.95	S936CBL Body	36.35	RINGS	
S798HG M. Kit	447.90			S849B Body	39.65	S936CNL Nut	6.95	See Ring Table Sheet	
S812D Hd. Wh.	70.00							For Prices	
S820A Axle	32.70								
S820B Bushing	18.60								

ALPHABETICAL AND NUMERICAL PRICE LIST

NUMERICAL PARTS PRICE LIST

Part No.	Price	Part No.	Price	Part No.	Price
137 Tru Arc Ring	.40	31-022 Socket & Shell	7.30	5M775 V-Belt 30"	4.40
187 Tru Arc Ring—Integral	.85	32059 Terminal	.40	5M800 V-Belt 31"	4.90
141 (3/4 x 1.375 x 5-16) Seal	3.10	34-007 Shade (Refacer)	5.45	69A11 Coil	17.50
284 Rubber Bumper	.60	3400X2 Street Elbow	1.75	69A83 Coil	16.00
285L 100 Timing Belt	13.80	34BR8-4FJ Solenoid	41.00	69A268 Coil	16.00
240L 100 Timing Belt	13.80	3755 Oil Seal 1 1/4 x 2-7/16 x 3/4	3.30	6135 Oil Seal 2 1/4 x 2 1/4 x 3/4	4.90
952 Tachometer	338.00	31881 Terminal	.40	6845 Shut-Off Cock	3.00
981W Wind. As.	25.95	35F108AA1 Capacitor	3.95	72 Adj. Spring	.50
1032 Proximit Switch	81.85	31891 Terminal	.40	71A2 3/4 x 1 x 3/4 Seal	.90
1321 (3/4 x 2 1/4 x 3/4) Klosure	4.45	34070 Connector	.40	7200K4 Switch (P322) (24591N)	4.35
1403-1 Cover	.60	3ARR3-CAN3 Relay	15.00	7321K3 Switch (Replaces 31766)	4.50
1610 Alemite Fitting	.60	44E Ball for Handle on Refacer	1.40	3436G Outlet (replaces 7410G)	18.35
131-40037 Shut-Off Cock	3.20	4411-6S Swivel Coupling	3.30	7572 replaced by 7554	
2077-2 Brush, each	.80	4412-4-6S Male Pipe	3.30	7554 Bakelite Cap	6.90
2278 Grommet	.55	4810 Oil Seal 1/2 x 1 x 5/16	2.10	7557 Female Flush Base	6.90
G78LB 50 Micron Filter	5.30	4840 Filter	10.00	7610K2 Switch (C.H.) Ser. Gr.	6.40
2305A Thrust Bearing	6.90	49X4 Weatherhead Fit.	.90	7612K2 Switch Tool Grinder	6.40
21705 Toggle Switch, replaced by 7321K3 Switch	4.70	5KC48BB270 Cont. Release	13.40	77010 Brg. replaced by 302KLL3	4.90
2639 Worm Gear Lubricant, Qt.	2.65	5Z Adj. Spring	.45	7808 Flush Base	7.60
2645 Sp. Cam—Gray Ham. Enamel	2.50	55-153472G4 Coil	23.35	800T-H2 Selector Switch	11.90
2670 Spindle Oil. Pt.	3.25	591 Gits Oiler	.70	800TDX1 Contact Bl.	4.30
2679 1 Pint Lee Concentrate	1.40	591 Gits Oiler	.70	898 (1 1/4 x 2-7/16 x 3/4) Klosure	3.30
26591N Switch (P322, P422)	4.35	523-60PSC Lamp	23.35	8290K7 Switch	4.10
26593C Safety Push Button Switch Replaced by 26591N	4.35	599-297 Micro Head	35.10	81450-22 Hose	3.90
26BR8FJ Solenoid	35.95	5266N Plug	5.85	8205x4 Ermote St. Conn.	3.90
26P295 or 47018 Capacitor	58.00	5814x4 Steel Male Connector	1.60	8320K1 Switch (For Surface Grinders over 1 H.P.)	12.50
2689 Way Lube, Quart	2.10	5822X6 Steel Male Elbow	4.10	8355x4 Ermote 45° Elbow	4.50
2690 Way Lube, Gallon	7.00	5828843KK6 Capacitor	11.70	8405x4 Ermote 90° Elbow	4.50
2699 Honing & Grinding Oil, Gal	3.90	GE No. 58264947AK3C St. Switch	10.75	8719370AA Start Switch	8.40
235437 Capacitor, replaced by Mallory 8753704BJ13	10.75	585911AB1 Fiber Washer	.45	8Z Wavy Spring Washer	.55
21-S-094-0625 Self Lock. Spring	.60	58930991 Brush Cap	.45	9Z Adj. Spring	.45
3Z Norma-Hoffman Spring	.45	5M462 V-Belt (Gates)	2.80	9007-AW18 Limit Switch	53.00
310 Belt	3.35	5M500 V-Belt 22"	3.10	9007-AW38 Limit Switch	56.00
3431 Plug	14.15	5M615 V-Belt 24"	3.10	9052 Filter	23.40
3006B Knob	.85	5M670 V-Belt 26"	3.60	9052-6 Fil. Element only, 25 Micron	5.55
3015-A Plastic Knob	1.60	5M710 V-Belt 28"	3.60	9409 Body	6.30
		5M750 V-Belt 29"	3.75	9967 Plug	11.45
				91252-45 Starting Switch	8.35
				91252-250 Starting Switch	8.25
				96183 Light Fixture	18.00

COMMERCIAL PARTS PRICE LIST

Mod. No.	Old No.	Size	Price	Part No.	Price	Part No.	Price
O-RING SEAL—366Y MATERIAL				KEX — CAP SEAL — EXTERNAL			
0006	1	1/16 x 1/8 x 1/4	.70	KEX6214 1-1/4 O.D.		203-KD	3.15
0011	6	1/16 x 5/16 x 7/16	.70	use with O-Ring No. 8214	4.80	203-KDD	2.30
0012	7	1/16 x 3/8 x 1/2	.70	KEX6218 1-1/2 O.D.		M203PP	3.30
0013	201	1/16 x 7/16 x 9/16	1.00	use with O-Ring No. 8218	4.80	203PP	2.60
0014		1/16 x 1/2 x 5/8	.70	KEX6224 2 O.D.		204KD	3.30
0015	202	1/16 x 9/16 x 11/16	.70	use with O-Ring No. 8224	4.80	204KDD	2.90
0043	2501	1/16 x 3-1/2 x 3-5/8	1.00			M204PPC5	5.40
0110	8	3/32 x 5/8 x 9/16	.70			MM304WICR	3.10
0111	9	3/32 x 7/16 x 5/8	.70	SPIROLOX RING		7204W	6.30
0116	14	3/32 x 3/4 x 15/16	.70	RR-81 Internal .031W x .853 O.D.	.40	9101K	3.60
0210	15	1/8 x 3/4 x 1	.70	RR-100 Internal .037W x 1.054 O.D.	.45	101KS	2.60
0213	16	1/8 x 15/16 x 1-3/16	.70	RR-262 Internal .049W x 2.736 O.D.	.80	9103PP	3.60
0214	19	1/8 x 1 x 1-1/4	1.00	RR-275 Internal .049W x 2.865 O.D.	.80	9106PP	5.70
0215	20	1/8 x 1-1/16 x 1-5/16	1.00	RR-315 Internal .061W x 3.286 O.D.	1.00	2MM9104WICRDUM (pair)*	56.00
0216	21	1/8 x 1-1/8 x 1-3/8	1.45	RR-375 Internal .061W x 3.894 O.D.	1.10	2MM9105WICRDUM (pair)*	56.75
0218	23	1/8 x 1-1/4 x 1-1/2	1.45	RR-511 Internal .072W x 5.304 O.D.	2.50	105PT5DMRC (pair)* Barden	79.50
0220	25	1/8 x 1-3/8 x 1-5/8	1.45	RS-75 External .031W x .710 I.D.	.45	XX35-7Q (pair)*	60.00
0224	102	1/8 x 1-3/4 x 2	1.45	RS-100 External .033W x .944 I.D.	.60	RMM9110PDUE6151 (pair)*	90.00
0329		3-3/8 x 2-5/8 x 1/8	1.50	RS-125 External .043W x 1.188 I.D.	.60	2MM9112WICRDULFS115C (pair)*	118.00
0336	39	3/16 x 2-7/8 x 3-1/4	1.45			OL12DT-L7A New Departure	118.00
2581-043		3-1/3 x 3-5/8 x 1/16	1.00			2MM9117WICDUM (pair)*	224.00
O-RING BELT				BEARINGS		2MM9117CR	96.00
No. 46		3/16 x 3-3/4 x 4-1/8	2.70	AA710-14 Oilite Bearing	.60	2MM9305WODUM (pair)*	64.00
QUAD RING SEAL				AA832-4 Oilite Bearing	1.35	2MM9306WODUM (pair)*	64.00
Q4012	Q7	1/16 x 3/8 x 1/2	.70	AA832-12 Oilite Bearing	1.35	LS-8	3.95
Q4210	Q15	1/8 x 3/4 x 1	.90	A2305 Thrust Bearing	1.35	SSKDD	2.60
Q4213	Q18	1/4 x 15/16 x 1-3/16	.65	B85 Needle	.95	S7K	3.40
Q4214	Q19	1/8 x 1 x 1-1/4	1.00	B1012 Needle	1.05	R10	3.40
HYDRAULIC VEE PACKING				P5DD	5.00	S7K2	3.45
S3-4	10V90	3/16 x 7/16 x 13/16	.45	33KDD5	2.30	LL510710 Cup	6.70
				38KD	2.30	LL510749 Cone	12.45
				39KVTD	2.90	13836 Cup	1.95
				39KVTD	2.90	13889 Cone	4.30
				201KTD	5.15	B88 Needle	.60
				201PP-FS 59982	4.30	B2420	1.25
				202KLLD3	3.75	BH1010 Needle	1.10
				202KLL3	3.80	IR041012 Inner Race	2.45
				302NPP11	2.50	M10121 Needle	1.10
				WC88016 New Departure	2.50	AVW549KCRDB40FS399 (B9002)	139.00
				RMM203KPS135DB (pair)*	40.00	V8W549TAXID B9002	139.00
				203K5DB-30R3C (pair)*	40.00	Ply Seal F/9110PP (per set)	2.45
						Ply Seal F/9111PP (per set)	2.45
						201PPF559952 Teflon Seal (per set)	4.90

*DU or DB Indicates 3 Bearings

COMMERCIAL PARTS PRICE LIST

MANY OF THESE PARTS ARE STANDARD HARDWARE ITEMS AND MANY BE PURCHASED LOCALLY

Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
FLAT HEAD MACH. SCREWS		HEX CAP SCREW		HEX JAM NUTS		SEALS	
5-40 x 1/4	.15	1/4 x 1/2 USS	.35	1/4 USS	.35	63x40—(1/2x15/16)	1.60
10-32 x 3/8	.15	1/4 x 3/4 USS	.35	5/16 USS	.35	63-37—5/8x1-1/8x5/16	1.60
10-32 x 1/2	.15	1/4 x 1-1/4 USS	.35	3/8 USS	.35	2x1.500x5/16 W. Seal	2.15
10-32 x 5/8	.15	1/4 x 1-3/4 USS	.35	1/2 USS	.35	63x5—(5/16x3/4x1/4)	
10-32 x 1	.15	5/16 x 1/2 USS	.35	1/4 SAE	.35	(Garlock Seal)	1.70
1/4 x 5/8 SAE	.15	5/16 x 5/8 USS	.35	5/16 SAE	.35	71-A-2 Seal 3/4x1x1/8	1.00
1/4 x 1/2 USS	.15	5/16 x 3/4 USS	.35	3/8 SAE	.35	B34-40-2 5/8x7/8x1/8	.95
1/4 x 5/8 USS	.15	5/16 x 7/8 USS	.35	7/16 SAE	.35	61W100-25-4 Trestle Seal	1.30
1/4 x 7/8 USS	.15	5/16 x 1 USS	.35	1/2 SAE	.35		
1/4 x 1 USS	.15	5/16 x 1-1/4 USS	.35	3/4 SAE	.35		
5/16 x 5/8 USS	.15	5/16 x 1-3/4 USS	.35	5/8 SAE	.75		
5/16 x 1-1/4 USS	.15	5/16 x 2-1/4 USS	.35				
		3/8 x 7/8 USS	.35				
		3/8 x 1 USS	.35				
FILL. HD. MACHINE SCREWS		3/8 x 1-1/4 USS	.35	HEX NUTS — HEAVY		PIPE FITTINGS	
6-32 x 1-1/8	.15	3/8 x 1-3/4 USS	.35	1/4 USS (H.B.)	.35	1/8 Straight Pipe Plug	.35
10-32 x 1/4	.15	3/8 x 1-5/8 USS	.35	1/4 USS	.35	1/8 Pipe—90° Elbow	.55
10-32 x 3/8	.15	3/8 x 2-1/2 USS	.35	5/16 USS	.35	1/8 Close Nipple	.35
10-32 x 1/2	.15	3/8 x 3-1/4 USS	.35	3/8 USS	.35	1/2x2-1/4 Pipe Nipple	.45
10-32 x 5/8	.15	7/16 x 1-1/2 USS	.35	7/16 USS	.35	1/2x2 Pipe Nipple	.60
10-32 x 3/4	.15	1/2 x 1-1/2 USS	.35	1/2 USS	.35	1/8 Socket Pipe Plug	.50
10-32 x 1	.15	1/4 x 1/2 SAE	.35	5/8 USS	.35	1/4 Straight Pipe Plug	.50
10-32 x 1-1/2	.15	1/4 x 5/8 SAE	.35	7/8 USS	.35	1/4 Pipe 90° Elbow	.50
10-32 x 2	.15	1/4 x 3/4 SAE	.35	1/2 SAE	.35	1/4x2 Pipe Nipple	1.50
12-24 x 1/2	.15	1/4 x 7/8 SAE	.35	5/8 SAE	.35	AS448 Shut-Off Cock	1.90
12-24 x 3/4	.15	5/16 x 1 SAE	.35	7/8 SAE	1.50	1/2 Pipe Cap No. 1	.90
5/16 x 1/2 USS	.15	5/16 x 1-1/2 SAE	.35	5/8 SAE	.35	3/8 Pipe Plug	.55
5/16 x 1-1/4 USS	.40	5/16 x 5/8 SAE	.35	7/8 SAE	.35		
7/16 x 1-1/2 USS	.40	5/16 x 7/8 SAE	.35	5-40	.25		
1/4 x 5/8 USS	.15	5/16 x 1 SAE	.35	6-32	.25	STREET ELL	
1/4 x 3/4 USS	.15	3/8 x 3/4 SAE	.35	10-32	.25	1/8" — 90 Degree	1.00
1/4 x 7/8 USS	.15	3/8 x 1-1/4 SAE	.35	1-1/4 NC	2.60	1/4" — 90 Degree	1.05
1/4 x 1/2 SAE	.15	7/16 x 1-1/4 SAE	.35				
1/4 x 7/8 SAE	.15	7/16 x 1-3/8 SAE	.35				
1/4 x 1-1/8 SAE	.15	7/16 x 1 SAE	.35	ACORN NUTS		OILERS	
1/4 x 1-1/4 SAE	.15	7/16 x 2-1/4 SAE	.35	6-32 (N.P.)	.30	403 Oiler 3/8"	.50
				10-32 (N.P.)	.35	501 Gite Oiler 1/4"	.50
						521 Gite Oiler 1/4"	.50
						1616 Alomite Fittings	.35
RD. HEAD MACHINE SCREWS		HEX SOCKET SET SCREWS		CASTLE NUT		LIQUID TIGHT	
5-40 x 1/4	.25	1/4 x 1/4 USS (Cap Pt.)	.60	1/2 SAE	.15	3/4 Conn. 90°	4.35
6-32 x 3/8 N.P.	.25	5/16 x 5/16 USS (Fit Pt.)	.60			3/4 Conn. St.	2.55
6-32 x 1/2	.25	5/16 x 5/8 USS (Cap Pt.)	.60	SQUARE NUTS		1/2 Conn. 90°	2.50
6-32 x 5/8	.25	3/8 x 3/8 USS (Flat Pt.)	.60	1/4 USS (N.P.)	.10	1/2 Conn. St.	2.30
6-32 x 1	.25	7/16 x 3/8 USS (Fit Pt.)	.60	5/16 USS	.10		
6-32 x 3/4	.25	7/16 x 7/16 USS (Fit Pt.)	.60	7/16 USS	.10		
6-32 x 1	.25	7/16 x 3/4 USS	.60			FELT	
6-32 x 1-1/4	.25	1/4 x 1/4 SAE (Cap Pt.)	.60	WASHERS		1/16 Flat White Felt	1.40
10-32 x 3/16	.25	1/4 x 3/4 SAE	.60	1" O.D. x 3/8"	.05	3/16 Flat Grey Felt	1.50
10-32 x 1/4	.25	3/8 x 3/8 SAE (Cone Pt.)	.60	1/4 USS	.05	3/16 Round Grey Felt	.50
10-32 x 5/16 (Brass)	.25	3/8 x 1/2 SAE	.60	5/16 USS	.05	1/4 Round Grey Felt	.35
10-32 x 5/16 (Steel)	.25	5-40 x 3/16 (Cap Point)	.60	7/16 USS	.05		
10-32 x 3/8	.25	10-24 x 3/16	.60			FLAT BELTS	
10-32 x 1/2	.25	10-32 x 3/16 (Cap Point)	.60	1" O.D. x 3/8"	.05	7/8" x 22"	4.20
10-32 x 3/4	.25	10-32 x 1/2	.60	1/4 USS	.05	7/8" x 26"	4.95
10-32 x 1	.25	10-32 x 7/8	.60	5/16 SAE	.05	1-1/4" x 22"	4.30
10-32 x 1-1/2	.25	10-32 x 1	.60	5/16 SAE (H.B.)	.10	1-1/4" x 24"	4.45
10-32 x 5-1/4	.25			3/8 SAE (H.B.)	.10	1-1/4" x 26"	5.00
12-24 x 1/4	.25	HEADLESS SET SCREWS		7/16 SAE	.05	1-1/4" x 28"	5.50
1/4 x 3/8 USS	.25	10-24 3/16 (Cap Point)	.60	9/16 USS	.05		
1/4 x 1/2 USS	.25	5/16 x 5/16 USS	.60	1-1/4 USS	.25	V-BELTS	
1/4 x 5/8 USS	.25	5/16 x 1/2 USS (Dog Pt.)	.60	3/16 SAE	.05	3L130 (1130)	2.20
1/4 x 1 USS	.25	3/8 x 5/16 USS (Cap Pt.)	.60	1/4 SAE	.05	3L130 (1130)	2.20
		7/16 x 1/2 USS (Fit Pt.)	.60	5/16 SAE	.05	3L230 (1230)	2.20
OVAL HEAD SCREWS				5/16 SAE (H.B.)	.10	3L240 (1240)	2.20
10-32 x 3/4	.25	BRISTO SET SCREWS		3/8 SAE	.05	3L250 (1250)	2.25
10-32 x 5/8	.25	5/16 x 5/16 USS (Fit Pt.)	.30	7/16 SAE	.05	3L260 (1260)	2.30
10-32 x 3/16	.25	5/16 x 5/16 USS (Cn Pt.)	.15	1/2 SAE	.05	3L270 (1270)	2.35
10-32 x 7/16	.25	5/16 x 1/4 SAE (Fit Pt.)	.15	5/16 SAE	.05	3L280 (1280)	2.35
10-32 x 5/8	.25	3/8 x 3/8 SAE (Cap Pt.)	.15	7/16 SAE	.05	3L290 (1290)	2.35
				9/16 SAE	.05	3L300 (1300)	2.35
SOCKET HEAD CAP SCREWS		SQUARE HEAD SET SCREW		5/8 SAE	.05	3L310 (1310)	2.35
1/4 x 7/8 USS	.50	5/16 x 2 USS (c.p.)	.75	3/4 SAE	.05	3L320 (1320)	2.35
1/4 x 1 USS	.50			No. 12 SAE	.05	3L330 (1330)	2.35
1/4 x 1-1/4 USS	.50	SHEET METAL SCREWS		3/8 L.W.	.10	4L370 (3270)	2.65
1/4 x 1-1/2 USS	.50	6 x 3/8 Round Head	.10	LOCK WASHERS		4L380 (3280)	2.65
1/4 x 3/4 SAE	.50	8 x 3/4 Round Head	.10	3/16	.10	SM425 V-Belt	2.50
1/4 x 7/8 SAE	.50	10 x 3/4 Round Head	.10	1/4	.10	SM432 V-Belt	2.50
5/16 x 1 USS	.50			5/16	.10	SM437 V-Belt	2.50
5/16 x 1-1/4 USS	.50	SELF TAP RD. HEAD SCREWS		3/8	.10	SM440 V-Belt 22"	3.10
5/16 x 1-3/4 USS	.50	2 x 1/8 Cnd. Plated	.10	7/16	.10	SM455 V-Belt 24"	3.10
5/16 x 3-1/2 USS	.70	6-32 x 1/4 Cnd. Plated	.10	1/2	.10	SM470 V-Belt 26"	3.60
10-32 x 3/4	.50	6-32 x 5/16 Cnd. Plated	.10	5/8 (Shakeproof)	.10	SM710 V-Belt 26"	3.60
1/4 x 1/2 SAE	.50	6-32 x 3/8 Cnd. Plated	.10			SM750 V-Belt 28"	3.75
1/4 x 3/4 SAE	.50	6-32 x 1/4 Cnd. Plated	.10	ROUND HEAD STOVE BOLTS		SM775 V-Belt 30"	4.40
5/16 x 3/4 SAE	.50	10-32 x 5/16 Cnd. Plated	.10	1/4 x 1-1/2 USS (N.P.)	.30	SM800 V-Belt 31"	4.90
5/16 x 1 SAE	.50	10-32 x 3/8 Cnd. Plated	.10			5/16 V-Link	each .10
5/16 x 1-1/4 SAE	.50	10-32 x 1/2 Cnd. Plated	.10	SO. HEAD MACHINE BOLTS			
5/16 x 2 SAE	.50	10-32 x 3/4 Cnd. Plated	.10	5/16 x 1/4 USS	.25	STEEL BALLS	
3/8 x 1-1/2 SAE	.50			5/16 x 2-1/2 USS	.35	3/32	.05
7/16 x 3 SAE	.70					1/8	.05
						5/32	.05
						7/32	.05
						9/32	.05
						3/8	.05
						50 3/32 Steel Balls	1.10
						25 5/32 Steel Balls	.50
						75 7/32 Steel Balls	1.50
						Set 52 7/32 Balls	1.10
						Set 30 9/32 Balls	1.00
						MISCELLANEOUS	
						16-1 Fix. Wire (per ft.)	.10
						16-3 Rubber Covered	.35
						Wire (per ft.)	.10
						No. 2 Woodruff Key	.10
						No. 9 Woodruff Key	.10
						No. 15 Woodruff Key	.10
						CR123C Htr. (2 req.) ea.	2.30

MOTORS AND ELECTRICAL PARTS

Part No.	Price
TOOL GRINDER MOTORS	
B923A 1/2 HP, 115/230V, 1 Ph., 60 Cy.	210.00
KC30LG101 Field	52.00
KC30LG101 Rotor	24.00
B923B 1/2 HP, 200/208V, 3 Ph., 60 Cy.	210.00
B923G 1/2 HP, 220/440V, 1 Ph., 60 Cy.	210.00
K30JG122 Field	52.00
K30JG122 Rotor	24.00
B923J 1/2 HP, 380V, 3 Ph., 50 Cy.	210.00
B923W 1/2 HP, 550V, 3 Ph., 60 Cy.	240.00
5K37JG394 Field	62.00
5K37JG394 Rotor	26.00
B2023A 1 HP, 115/230V, 1 Ph., 60 Cy.	292.00
KC45NG1000 Field	94.00
KC45NG1000 Rotor	44.00
B2023B 1 HP, 200/208V, 3 Ph., 60 Cy.	292.00
B2023G 1 HP, 208/220/440V, 3 Ph., 50/60 Cy.	292.00
Field	94.00
Rotor	44.00
B3023G 2 HP, 220/440V, 3 Ph., 60 Cy.	359.00
K48NG648 Field	146.00
K48NG648 Rotor	64.00
B4023G 3 HP, 220/440V, 3 Ph., 60 Cy.	404.00
K49TG707 Field	156.00
K49TG707 Rotor	72.00
7612K2 Switch For Above Motors	6.40
Motors With Epoxy Resin	\$45.00 Extra
FOR B6000 AND B6062 SERIES GRINDERS (LIGHT FIXTURE NOT INCLUDED)	
B6223A 1 HP, 115/230V, 1 Ph., 60 Cy.	330.00
B6223B 1 HP, 208V, 3 Ph., 60/50 Cy.	330.00
B6223G 1 HP, 220/440V, 3 Ph., 60/50 Cy.	330.00
B6223W 1 HP, 550V, 3 Ph., 60 Cy.	330.00
B6323G 2 HP, 230/460V, 3 Ph., 60 Cy.	380.00
B6423G 3 HP, 230/460V, 3 Ph., 60 Cy.	420.00
SURFACE GRINDER MOTORS	
KC45NG1000 1 HP, 3450, 115/230V, 1 Ph., 60 Cy.	160.00
69922 1 HP, 3450, 208-220/440V, 3 Ph., 60 Cy.	160.00
K43JG3537 1 HP, 3450, 230/460V, 3 Ph., 60 Cy.	160.00
69923 1 HP, 3450, 575V, 3 Ph., 60 Cy.	160.00
M600564 1 HP, 3450, 208/220/440V, 3 Ph., 60/50 Cy.	160.00
*K48SG761 2 HP, 3450, 230/460V, 3 Ph., 60 Cy.	192.00
*K49TG707 3 HP, 3450, 230/460V, 3 Ph., 60 Cy.	224.00
7610K2 Sw. (C.H.) For 1 H.P. Motors	6.40
8320K1 Switch For Motors over 1 H.P.	12.50
HYDRAULIC PUMP MOTORS	
SINGLE PUMP	
K33GG541 1/3 HP, 1725, 230/460V, 3 Ph., 60 Cy.	90.00
KC43KG1749 1/2 HP, 1725, 115/230V, 1 Ph., 60 Cy.	102.00
*K35KG378 1/2 HP, 1725, 200V, 3 Ph., 60 Cy.	102.00
69929 1/2 HP, 1725, 208/220/440V, 3 Ph., 60 Cy.	102.00
DUPLEX PUMP	
*KC45NG1005 3/4 HP, 1725, 115/230V, 1 Ph., 60 Cy.	125.00
*K43KG3967 3/4 HP, 1725, 200V, 3 Ph., 60 Cy.	125.00
K43KG2925 3/4 HP, 1725, 230/460V, 3 Ph., 60 Cy.	125.00
SLICING MACHINE HYDRAULIC MOTOR	
*K42HG2835 1/2 HP, 1725, Totally Enclosed 230/460V, 3 Ph., 60 Cy.	136.00
*K42HG3870 1/2 HP, 1725, 200/208V, 3 Ph., 60 Cy.	125.00

Part No.	Price
COOLANT PUMP ASSEMBLIES	
B935, B2035, B6035 FOR TOOL GRINDER S632 AND S732 FOR SURFACE GRINDER	
S635AH 115V, 1 Phase, 60 Cycle	198.00
S635AHF Field	65.35
S635AHR Rotor & Shaft Assem.	31.45
S635EH 220V, 3 Phase, 60 Cycle	198.00
S635EHF Field	65.35
S635EHR Rotor & Shaft Assem.	31.45
S635GAH 440V, 3 Phase, 60 Cycle	198.00
S635GAHF Field	65.35
S635GAHR Rotor & Shaft Assem.	31.45
S635KH 220V, 1 Phase, 60 Cycle	198.00
S635KHF Field	65.35
S635KHR Rotor & Shaft Assem.	31.45
S1635A 115V, 1 Phase, 60 Cycle	198.00
S1635AF Field	65.35
S1635AAR Rotor & Shaft Assem.	31.45
S1635E 220V, 3 Phase, 60 Cycle	198.00
S1635EF Field	65.35
S1635ER Rotor & Shaft Assem.	31.45
S1635GA 440V, 3 Phase, 60 Cycle	198.00
S1635GAF Field	65.35
S1635GAR Rotor & Shaft Assem.	31.45
S1635K 220V, 1 Phase, 60 Cycle	198.00
S1635KF Field	65.35
S1635KR Rotor & Shaft Assem.	31.45
91252-45 Start. Switch (115V, 1 Ph.)	8.25
91252-250 Start. Switch (220V, 1 Ph.)	8.25
MOTOR DRIVEN WORKHEAD	
B943 MODELS — AVAILABLE MOTORS	
1/20 H.P. MOTORS	
B943A 115V, 1 Phase, 60 Cycle	238.00
B943AF Field 115V, 1 Ph.	53.00
B943AR Rtr., Shaft 115V, 1 Ph.	31.00
B943J 380V, 3 Phase, 50 Cycle	238.00
B943JF Field, 380V, 3 Phase	53.00
B943JR Rtr., Shaft 380V, 3 Ph.	31.00
B943K 230V, 1 Phase, 60 Cycle	238.00
B943KF Field 230V, 1 Ph.	53.00
B943KR Rtr., Shaft 230V, 1 Ph.	31.00
B943E 230V, 3 Phase, 60 Cycle	238.00
B943EF Field 230V, 3 Ph.	53.00
B943ER Rtr., Shaft 230V, 3 Ph.	31.00
B943GA 440V, 3 Phase, 60 Cycle	238.00
B943GAF Field 440V, 3 Ph.	53.00
B943GAR Rtr., Shaft 440V, 3 Ph.	31.00
1/12 H.P. MOTORS	
B1043A 115V, 1 Phase, 60 Cycle	238.00
B1043AF Field 115V, 1 Ph.	53.00
B1043AR Rtr., Shaft 115V, 1 Ph.	31.00
B1043K 230V, 1 Phase, 60 Cycle	238.00
B1043KF Field 230V, 1 Ph.	53.00
B1043KR Rtr., Shaft 230V, 1 Ph.	31.00
B1043E 230V, 3 Phase, 60 Cycle	238.00
B1043EF Field 230V, 3 Ph.	53.00
B1043ER Rtr., Shaft 230V, 3 Ph.	31.00
B1043GA 440V, 3 Phase, 60 Cycle	238.00
B1043GAF Field 440V, 3 Ph.	53.00
B1043GAR Rtr., Shf. 440V, 3 Ph.	31.00
B2043M 115V, 1 Phase, 60 Cycle	276.00
B2043MA Armature	76.00
B2043MF Field	68.00
B6043A 115V, 1 Phase, 60 Cycle	238.00
B6043AF Field, 115V, 1 Ph.	53.00
B6043AR Rtr., Shaft 115V, 1 Ph.	31.00
B6043J 380V, 3 Phase, 50 Cycle	238.00
B6043JF Field 380V, 3 Ph.	53.00
B6043JR Rtr., Shaft 380V, 3 Ph.	31.00
B6043K 230V, 1 Phase, 60 Cycle	238.00
B6043KF Field 230V, 1 Ph.	53.00
B6043KR Rtr., Shaft 230V, 1 Ph.	31.00
B6043E 208/230V, 3 Phase, 50/60 Cy.	238.00
B6043EF Field 230V, 3 Ph.	53.00
B6043ER Rtr., Shaft 230V, 3 Ph.	31.00
B6043GA 440V, 3 Phase, 60 Cycle	238.00
B6043GAF Field 440V, 3 Ph.	53.00
B6043GAR Rtr., Sh. 440V, 3 Ph.	31.00
1/8 H.P. MOTOR	
B9043E 230V, 3 Ph., 60/50 Cycle	268.00
B890S Main Switch For Above	23.40
91252-45 Starting Switch (115V)	8.25
91252-250 Starting Switch (230V)	8.25
B643 MOTOR WORKHEAD	
408-0368-270 (SP5300) Arm. 115V	33.00
408-0368-278 (SP5300) Arm. 230V	34.70
B843 MOTOR WORKHEAD	
B843A Armature 115V	34.45
B843F Field 115V, 230V	11.90
May Also Be Used On B743	
B893 MOTOR WORKHEAD	
B893A Armature 115V	33.00
B893F Field 115V	14.55

Part No.	Price
VALVE REFACTOR MOTORS	
K403, K403A, K403C, K500, K500C SERIES	
*KC35KG101 1725, 1/3 HP, 115V, 1 Ph., 60 Cy.	72.00
*BHOOR 1725, 1/3 HP, 230V, 1 Ph., 60 Cy.	72.00
*KC38NG400 1725, 1/2 HP, 115/230V, 1 Ph., 60 Cy.	94.00
*5XBLOOJ 1425, 1/3 HP, 115V, 1 Ph., 50 Cy.	70.00
*5XBLOOK 1425, 1/3 HP, 230V, 1 Ph., 50 Cy.	70.00
GOVERNMENT REFACTOR	
KC37PG446 1/3 HP, 115/230V, 1 Ph., 60 Cy., 1725, Fungus Treated	120.00
REFACTOR SWITCH FOR ABOVE MODELS	
21705 Switch Replaced by 7321K3	4.70
K103A & K303 SERIES REFACTORS	
K143 WORKHEAD	
K143A Armature, 115V or 230V	34.45
K143F Field, 115V or 230V	14.20
LARGE REFACTOR WORKHEAD	
408-0424-240 Armature 115V	34.65
SINGLE DIRECTION ROTATION	
A14 Switch Replaced by 8295K7	3.80
K3, K3A VALVE REFACTORS	
K43 WORKHEAD	
408-0041-248 (SP3667) 230V Armature Single Thread	34.65
548-0143-270 (SP3667) 115V Field	11.00
548-0143-278 (SP3667) 230V Field	12.60
REFACTOR FLUID PUMPS	
K132X For K3, K3A, K103	68.00
K432 For K103A, K303, K403	68.00
K832 For K403A, K403C, K500, K500C Series	68.00
RESEATER POWER DRIVE	
R5 MODEL	
408-0405-210 Armature 115V, Replaced by 408-0424-240 Armature 115V	34.65
518-0102-278 Field 230V	12.00
R55 MODEL	
408-0411-210 Armature 115V	34.65
518-0102-278 Field 230V	12.60
R55B MODEL	
SPECIFY VOLTAGE	
R55A Armature 115V	37.75
R55A Armature 230V	37.75
R55F Field 115V	18.50
R55F Field 220V	18.45
A14 Switch Replaced by 8295K7 Switch	3.80
SEAT GRINDER DRIVER	
P222 MODEL	
408-0102-210 115V Armature	28.35
548-0102-278 230V Field	12.60
P322 MODEL (specify voltage)	
P422F Field 115V	17.30
P422 MODEL (specify voltage)	
P422F Field 115V	17.30
SWITCH FOR ABOVE MODELS	
26593C Push Button Switch Replaced by 26591N	4.35
P522 MODEL (specify voltage)	
P522A Armature 115V or 230V	26.00
P522F Field 115V	20.00
P522F Field 230V	22.50
26591N Switch For P522	4.35

By Order of the Secretary of the Army:

Official:

J. C. PENNINGTON
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The Adjutant General

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