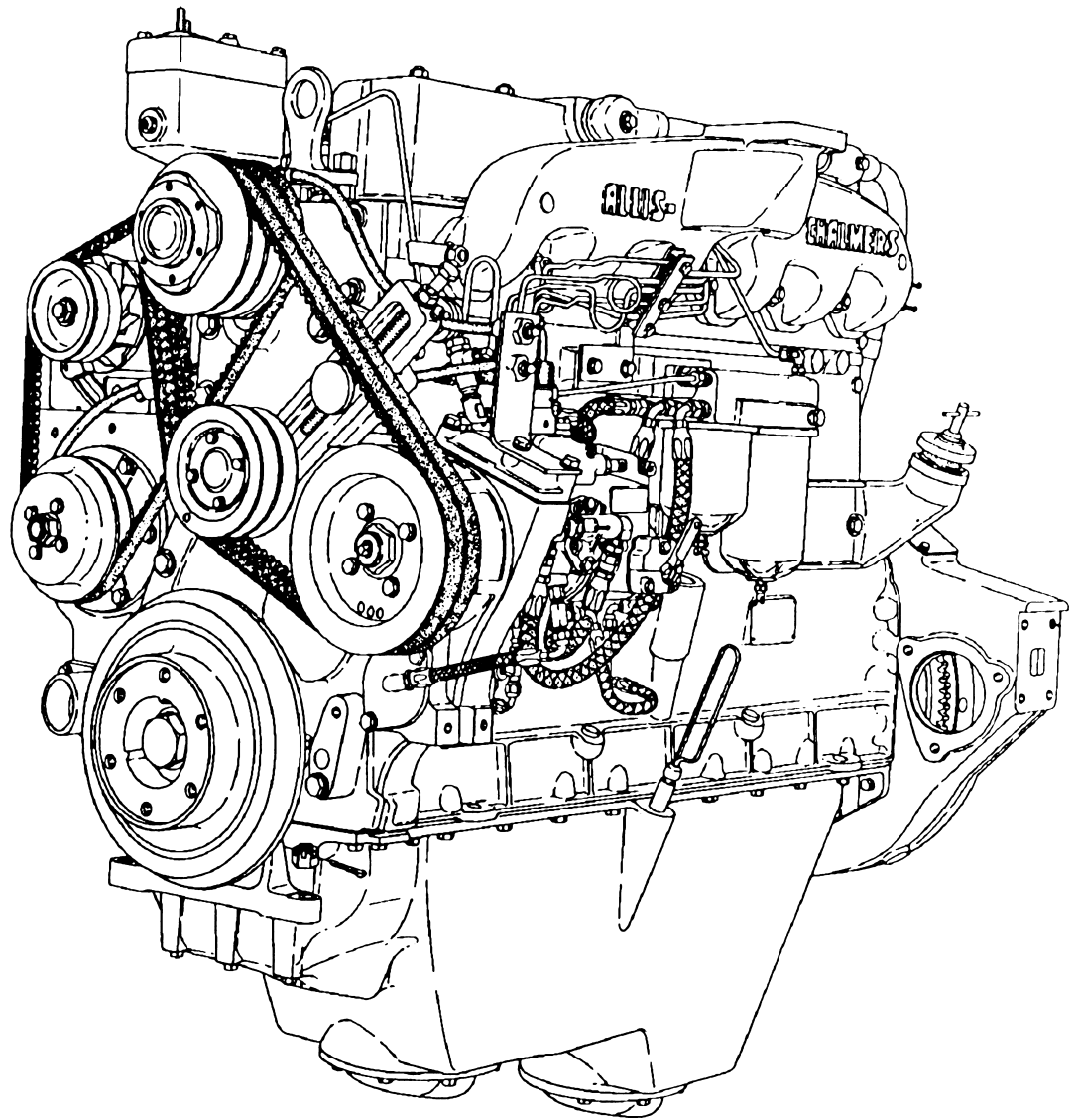


MINNPAR

OEM and Quality Replacement Parts -- Since 1982

MinnPar Replacement Engine and Fuel Injection Parts for Allis-Chalmers Engines

JUNE, 2013



5273 Program Ave, Mounds View, Minnesota 55112 USA
Telephone: (612) 379-0606 Fax: (612) 378-3741 email: info@minnpar.com

INDEX

TERMS AND CONDITIONS OF SALE.....	PAGE 4
GENERAL INFORMATION	PAGE 5
PRICE BOOK DIFINTIONS	PAGE 6
ENGINE KITS, INDEX BY MODELS	PAGE 7
REMANUFACTURED, ENGINE SHORT BLOCKS	PAGE 9
REMANUFACTURED, CYLINDER HEADS	PAGE 10
ENGINE KITS, INDEX BY PART NUMBERS	PAGE 11
G230/G262 SERIES ENGINES	PAGE 13
D175/D262 SERIES ENGINES	PAGE 14
344/516 SERIES ENGINES	PAGE 16
433/649/2800/2900 SERIES ENGINES	PAGE 17
3400/3500/3700/670 SERIES ENGINES	PAGE 20
6000/7000 SERIES ENGINES	PAGE 23
PISTON SYTLES, DRAWINGS	PAGE 25
685T/10000/11000 SERIES ENGINES	PAGE 26
BUDA 844 TWO VALVE SERIES ENGINES(BASIC PARTS)	PAGE 30
16000/21000 (THREE VALVE HEAD) SERIES ENGINES	PAGE 31
6000H/21000H/25000/6120/6138 (FOUR VALVE HEAD) SERIES ENGINES.....	PAGE 32
"OLD STYLE" AC HOLDER,220-3500/6000-11000 ENGINES	PAGE 36
"NEW STYLE" AC HOLDER, 2200-3500/2900MKII/6000-11000 ENGINES.....	PAGE 37
ALLIS-CHALMERS HOLDER, 16000-25000 ENGINES.....	PAGE 38
ALLIS-CHALMERS HOLDER, D175/D262 ENGINES.....	PAGE 39
AMBAC BAR STOCK STYLE HOLDER, 433/649/670 ENGINES.....	PAGE 40
APPLICATION GUIDE.....	PAGE 42

**VISIT OUR WEBSITE AT "www.minnpar.com".
FOR INFORMATION ON MINNPAR PRODUCT
LINES, PARTS SPECIAL, NEW OFFERINGS AND
GENERAL COMPANY INFORMATION.**

MINNPAR 2012 TERMS AND CONDITIONS OF SALE- Dealers US Based

Effectivity

This Parts Policy and Procedure Manual is by reference between MinnPar and the Dealer. MinnPar may make additions and/or changes to this policy upon thirty (30) days prior written notice, without incurring any liability. MinnPar has no Dealer contracts.

Applicability

This Parts Policy and Procedure Manual applies to products offered by MinnPar.

Administration of Policy

The administration and any interpretations of this Parts Policy and Procedure Manual will be the responsibility of MinnPar.

1. Order Acceptance

Each order shall be subject to these terms and conditions which supersede any and all terms and conditions appearing on Purchaser's order form. Acceptance of an order by MinnPar is expressly conditional on agreement to these terms and conditions, which shall be deemed given unless Purchaser shall notify MinnPar to the contrary in writing within ten (10) days after order acceptance by MinnPar. No order accepted by MinnPar may be altered or modified by the Purchaser unless agreed to in writing, by MinnPar.

2. Delivery and Transportation Costs

Delivery of goods to a carrier at MinnPar's factory or other shipping point shall constitute delivery to Purchaser. Unless otherwise specified, all goods are sold F.O.B. MinnPar's factory or warehouse shipping point. Method and route of shipment shall be at the discretion of MinnPar unless purchaser specifies otherwise. Any additional expense of the method or route of shipment specified by Purchaser shall be borne entirely by Purchaser.

3. Partial Shipments and Delays

MinnPar reserves the right to make partial shipments. Partial shipments shall be separately invoiced and paid for when due per invoice without regard to subsequent deliveries. Delay in delivery of any partial shipment shall not relieve Purchaser of its obligations to accept remaining deliveries. MinnPar shall not be liable for any damage including special or consequential damages as a result of any delay.

4. Payment Terms

With credit approval, the net amount of an invoice shall be due thirty (30) days after the invoice date unless otherwise stated in the invoice. Thereafter, any unpaid balance is subject to a service charge. MinnPar reserves the right to request credit information and establish credit limits. MinnPar may require full payment in advance of shipment of the order. MinnPar accepts ALL major credit cards for payment.

5. Warranty

MinnPar warrants that its new parts will conform to applicable specifications and be free of defects in material and workmanship under normal use and service. This warranty shall extend for 180 days from MinnPar invoice date, Rotating Electric Warranty is 18 months. MinnPar will replace free of charge F.O.B. MinnPar plant any parts to be defective in materials or workmanship provided the part or parts were properly installed, serviced, and used in normal operation. MinnPar may request the defective part be returned to our warehouse. UNDER NO CIRCUMSTANCES WILL MINNPAR RECOGNIZE CLAIMS FOR LABOR CHARGES OR CONSEQUENTIAL DAMAGES, OUR LIABILITY BEING LIMITED STRICTLY TO THE REPLACEMENT OF SUCH PARTS AS WE FIND DEFECTIVE.

6. Remanufactured Parts Policy

Remanufactured parts will be priced for the item ordered plus core charge if applicable. These charges will be separated on order and invoice.

7. Service Parts Order Classification

MinnPar will classify each order in one of the following categories:

1. Emergency/Machine Down (ship same day), 5% Handling Fee
2. Repair (ship within 2-3 days), normal Dealer Net
3. Stock (ship within 5 working days)
 - Orders \$0-\$400, 2% discount off Dealer Net, freight prepaid & charged
 - Order \$400-7500, 5% discount off Dealer Net, plus free freight.
 - Orders \$7500 and up, 7% discount off Dealer Net, plus free freight.MinnPar has the right to restrict certain large heavy items from the Stock Order program. Orders must be clearly marked 'Stock Order'. An order not marked as **stock** will be processed as a repair order.

Minimum Order

A \$4.00 handling charge will apply to all orders less than \$50.00 in value.

Emergency Charge

A 5% handling charge will be applied to all Emergency orders not to exceed the maximum of \$75.00 per any line item. These charges will appear on the invoice as handling charges.

Parts Pricing

All prices are F.O.B. point of origin and subject to change without notice. In addition to prices by part number, the Price List will include the descriptions, obsolescence and return codes.

All orders must be in writing and can be placed by MinnPar On-Line Parts Ordering System (www.minnpar.com) or faxed to 612 378-3741. Emergency orders receive maximum priority handling. All domestic emergency orders that are routed air or customer pick-up and are received before 4:00 PM Central Time will ship the same day provided the parts are in stock. Emergency orders by other methods of shipment will be given prompt handling, but MinnPar cannot assure same day shipment due to the pick-up schedules of carriers.

8. Service Parts Return Policy

Purchaser may return any returnable parts subject to the following terms and conditions. A non-returnable part is identified in the current parts price list.

A. Request for return authorization must be made within thirty (30) days of invoice date and the parts must be returned within thirty (30) days of the authorization for parts shipped/ordered in error.

B. Your purchase order number and the MinnPar order number must be submitted with the request. All goods returned must be accompanied by sales invoice supporting part purchase from MinnPar.

C. The authorized return amount will be credited to the Purchaser's account at invoice price less 20% handling and returning charges.

D. All parts authorized for return must have an RMA (Return Material Authorization) number and a copy of the RMA with the return parts.

E. Freight must be prepaid by the Purchaser.

F. All parts must be tagged with OEM/MinnPar part number.

G. Parts must be in a new and saleable condition as determined by MinnPar inspection.

H. Parts must have been originally purchased as an emergency or repair service parts order from MinnPar. Stock order returns will be allowed only on the annual return program.

I. Cores returned must have prior Return Material Authorization (RMA). Cores must be complete and assembled with core tag attached. Cores must be returned within 45 days of shipment of remanufactured part.

J. Parts returned without a return material authorization (RMA) will not be accepted and will be returned to the Purchaser, freight collect.

K. If Purchaser places an order and that part was placed in error by Purchaser, or a shipping error, the Purchaser can return the part subject to the above terms (items A-I).

L. Once per year, a Purchaser may return for credit up to 10% of the stock orders placed the previous calendar year subject to the above terms (items B-I). A Purchaser will be notified on an annual basis the total value of stock orders placed and will be given a specific return date.

M. Parts to be returned to MinnPar must be in the original package and have a minimum line value of \$8.00. Broken packs, kits, or components will not be accepted for return credit.

9. Claims for loss or damage to goods in transit are to be made promptly to the carrier, not to MinnPar. Claims for shortages or other errors, exclusive of transit shortages or damages, must be made in writing to MinnPar within ten (10) days after delivery; failure to give such notice shall constitute acceptance and waiver of all claims by Purchaser.

10. Any sales or use tax imposed by any government agency on any transaction between MinnPar and Purchaser shall be paid by Purchaser. In lieu of payment, Purchaser shall provide MinnPar at the time order is submitted with an acceptable tax exemption certification

Parts Technical Support Analyst

Technical Support Analysts assist Dealers in the identification or validation of the parts to be ordered. All inquires pertaining to technical assistance should be directed to 612 379-0606 or email: www.sales@minnpar.com.

Service Parts Work Hours

The Parts Department's standard working hours are 7:00 AM to 5:00 PM Central Time. Monday through Friday with the exception of observed holidays. The Parts Support hot line telephone number is 612 379-0606.

Backorders

Dealers are responsible for reviewing backorders with their customers to determine if the part is still required. Requests for cancellation of part(s) should be initiated through MinnPar Customer Service Expediting Department.

Contact Information

Web site: www.minnpar.com

On line ordering: www.minnpar.com

Phone Number: 612 379-0606

Fax Number: 612 378-3741

ALLIS CHALMERS/FIAT ALLIS ENGINE KITS

KIT PART NUMBERS

ENGINE MODEL

79016701	G149
79016066	G153
79016700	G160
79016431	WD45
79016625*	G226
79015760	226LP
79015761*	D2200NA
79015762*	433I/433T
79016065	G230
79016024*	262
79016025	262T No longer available
79016429*	g2600
79016418*	g2800
79015489*	2800
79015490*	2900
79015491*	2900 MK II / 649T
79015492*	3500-3700, 670T with 1 1/2" Pins
79015493*	670T/670HI with 1 3/4" PINS
79015851*	6000/7000 No longer available
79015764*	6000 NA/TURBO, 7000
79015852*	10,000/11,000 No longer available
79015766*	11,000 MK II, 685T Piston Cooled
79015767AG	685I
79015770	6120T No longer available
79015768*	17,000; 21,000; 25,000 2" Pin
79015769*	17,000; 21,000; 25,000 2.25" Pin
6850910*	6138
6850946*	D175

*Bearings must be ordered separately

G230/G262 SERIES ENGINES

PART	DESCRIPTION	230	262	PART	DESCRIPTION	230	262
<u>CYLINDER HEAD - CRANKCASE</u>							
4516251	GASKET SET - CYLINDER HEAD	1	1				
4512713	GASKET SET - INTERMEDIATE	1	-				
4513322	GASKET SET - INTERMEDIATE	-	1	4513621	FRONT CRANKSHAFT SEAL	1	1
4514396	CYLINDER HEAD GASKET	1	1	4500187	GEAR COVER GASKET	1	1
4516343	VALVE COVER GASKET	1	1	4500127	FRONT PLATE GASKET	1	1
4513832	VALVE COVER NUT PACKING	4	4	<u>FLYWHEEL</u>			
4501199	GASKET OIL PAN	2	2	4502930	OUTER REAR SEAL	1	1
4512120	EXHAUST VALVE	6	6	4516486	INNER REAR SEAL	1	1
4512459	INTAKE VALVE	6	-	4008103	WEAR SLEEVE	1	1
4512121	INTAKE VALVE	-	6	<u>CAMSHAFT</u>			
4513864	EXHAUST VALVE SEAT INSERT, STANDARD	6	6	4516088	CAMSHAFT GEAR	1	1
4513865	EXHAUST VALVE SEAT INSERT,.005"	6	6	4512982	VALVE LIFTER	12	12
4513700	EXHAUST VALVE GUIDE	6	6	4514025	FRONT CAMSHAFT BEARING	1	1
4513115	INTAKE VALVE GUIDE	6	6	4514024	INTERMEDIATE CAMSHAFT BEARING	2	2
4512172	VALVE SPRING	12	12	4514025	REAR CAMSHAFT BEARING	1	1
4356080	VALVE STEM LOCK	24	24	<u>THERMOSTAT-WATER MANIFOLD</u>			
4513421	INTAKE VALVE STEM SEAL KIT	1	1	4517321	THERMOSTAT	1	1
<u>PISTON - CONNECTING ROD</u>				4513527	THERMOSTAT HOUSING GASKET	-	1
74516640	PISTON AND SLEEVE KIT	6	-	4513722	THERMOSTAT HOUSING GASKET	1	1
4061558	PISTON KIT	6	-				
4061554	PISTON KIT	-	6				
	<i>Above kits include piston, piston pin, pin retainers and ring set.</i>						
4061529	SLEEVE KIT	6	-				
4061520	SLEEVE KIT	-	6				
	<i>Above kits include sleeve and sleeve o-rings.</i>						
4516606	SLEEVE SEALING O-RING	6	6				
	<i>Top groove - Black</i>						
4514615	SLEEVE SEALING O-RING	6	6				
	<i>Bottom groove - Red</i>						
4500137	PISTON PIN	6	-				
4507710	PISTON PIN	-	6				
4514586	PISTON PIN RETAINER	12	12				
4512439	RING SET	6	-				
4514112	RING SET	-	6				
4507127	CONNECTING ROD BUSHING	6	6				
4517331	ROD BEARING, STANDARD	12	12				
4517333	ROD BEARING, .010"	12	12				
4517334	ROD BEARING, .020"	12	12				
DPE51230	ROD BEARING, .030"	12	12				
4517335	ROD BEARING, .040"	12	12				
<u>CRANKSHAFT</u>							
4511258	GEAR CRANKSHAFT	1	1				
4061112	MAIN BEARING SET, STANDARD	1	1				
4061114	MAIN BEARING SET, .010	1	1				
4061115	MAIN BEARING SET, .020	1	1				
4061116	MAIN BEARING SET, .030	1	1				

D175/D262 SERIES ENGINES

PART	DESCRIPTION	4CL	6CL	PART	DESCRIPTION	4CL	6CL
	<u>CYLINDER - CRANKCASE</u>						
74514566	GASKET SET - CYLINDER HEAD <i>Pump mounted to cylinder head.</i>	-	1	4507710	PISTON PIN	4	6
4514580	GASKET SET - CYLINDER HEAD <i>Pump mounted to block.</i>	-	1	4514586	PISTON PIN RETAINER	8	12
4514581	GASKET SET - CYLINDER HEAD	1	-	4516738	RING SET <i>For 4513346 piston - 3/32" wide compression ring.</i>	4	6
4511664	GASKET SET - INTERMEDIATE	1	1	4515040	RING SET <i>For 4507704 piston - 1/8" wide compressing ring.</i>	4	6
4514398	CYLINDER HEAD GASKET	-	1	4507127	CONNECTING ROD BUSHING	4	6
4514395	CYLINDER HEAD GASKET	1	-	4517331	ROD BEARING, STANDARD	8	12
4501199	OIL PAN GASKET	-	2	4517333	ROD BEARING, .010"	8	12
4501057	OIL PAN GASKET	2	-	4517334	ROD BEARING, .020"	8	12
4513482	VALVE COVER GASKET	-	1	DPE51230	ROD BEARING, .030"	8	12
4513480	VALVE COVER GASKET	1	-	4517335	ROD BEARING, .040"	8	12
4105451	VALVE COVER STUD NUT GASKET	2	2		<u>CRANKSHAFT</u>		
4512120	EXHAUST VALVE	4	6	4511258	CRANKSHAFT GEAR	1	-
4506505	INTAKE VALVE <i>D262 head mounted with pump. D175 prior S/N 119995.</i>	4	6	4061107	MAIN BEARING SET, STANDARD	1	-
4514299	EXHAUST VALVE	4	6	4061109	MAIN BEARING SET, .010"	1	1
4512121	INTAKE VALVE	-	6	4061110	MAIN BEARING SET, .020"	1	1
4514298	INTAKE VALVE <i>D262 block mounted with pump. D175 effective S/N 119996.</i>	4	6	4061112	MAIN BEARING SET, STANDARD	-	1
4516730	EXHAUST VALVE SEAT INSERT, STANDARD	4	6	4061116	MAIN BEARING SET, .030"	-	1
4514297	EXHAUST VALVE SEAT INSERT, STANDARD	4	6		<u>TIMING GEAR HOUSING</u>		
4504475	EXHAUST VALVE GUIDE	4	6	4513621	FRONT CRANKSHAFT SEAL	1	1
4513354	INTAKE VALVE GUIDE	4	6	4507505	GEAR COVER GASKET	1	1
4513811	EXHAUST VALVE SPRING	4	6	4508186	FRONT PLATE GASKET	1	1
4513813	INTAKE VALVE SPRING	4	6		<u>FLYWHEEL</u>		
4353139	EXHAUST VALVE SPRING RETAINER	4	6	4502930	OUTER REAR SEAL	1	1
4505800	INTAKE VALVE SPRING RETAINER	4	6	4516486	INNER REAR SEAL	1	1
4356080	VALVE STEM LOCK	16	24	4008103	WEAR SLEEVE	1	1
4513420	INTAKE VALVE STEM SEAL KIT	1	-		<u>CAMSHAFT</u>		
4513421	INTAKE VALVE STEM SEAL KIT	-	1	4516084	CAMSHAFT	1	-
	<u>PISTON - CONNECTING ROD</u>			4516085	CAMSHAFT	-	1
4516867	PISTON AND SLEEVE KIT <i>Above kit includes sleeve, O- rings, piston, piston pin, retainer and ring set.</i>	4	6	4516088	CAMSHAFT GEAR	1	1
4061556	PISTON KIT <i>D19 only</i>	-	6	4512982	VALVE LIFTER	8	12
4061559	PISTON KIT <i>Above kit includes piston, piston pin, retainers and ring set.</i>	4	6	4504052	PUSH ROD	8	12
4061520	SLEEVE KIT <i>Above kit includes sleeve and O- rings.</i>	4	6	4514023	FRONT CAMSHAFT BEARING	1	1
4514615	SLEEVE SEALING O-RING <i>Bottom groove - Red</i>	4	6	4514024	INTERMEDIATE CAMSHAFT BEARING	2	2
4516606	SLEEVE SEALING O-RING <i>Top groove - Black</i>	4	6	4514025	REAR CAMSHAFT BEARING	1	1
					<u>THERMOSTAT - WATER MANIFOLD</u>		
				4517321	THERMOSTAT <i>Head mounted with pump.</i>	-	1
				4300145	THERMOSTAT COVER GASKET	-	1
				4513524	THERMOSTAT <i>Block mounted with pump.</i>	-	1
				4513527	THERMOSTAT COVER GASKET	-	1
				4500291	THERMOSTAT - WATER MANIFOLD	1	-
				4513722	THERMOSTAT COVER GASKET	1	2
					FRONT AND CENTER WATER MANIFOLD GASKET		
				4513723	REAR WATER MANIFOLD GASKET	-	1

D175/D262 SERIES ENGINES

PART	DESCRIPTION	4CL	6CL
FUEL INJECTION			
<i>See application guide for nozzle, holder and related parts.</i>			
4514526	FUEL LINE #1 CYLINDER <i>Block mounted with pump</i>	1	1
4515586	FUEL LINE #2 CYLINDER <i>Block mounted with pump</i>	1	1
4514528	FUEL LINE #3 CYLINDER <i>Block mounted with pump</i>	1	1
4514529	FUEL LINE #4 CYLINDER <i>Block mounted with pump</i>	1	1
4514530	FUEL LINE #5 CYLINDER <i>Block mounted with pump</i>	-	1
4514531	FUEL LINE #6 CYLINDER <i>Block mounted with pump</i>	-	1
4501149	FUEL LINE SLEEVE	4	6
4504409	FUEL LINE NUT	4	6

PART	DESCRIPTION	4CL	6CL
ENGINE SPECIFICATIONS			
BORE: 3-9/16" STROKE: 4-3/8" CON ROD JOURNAL DIAMETER: 1.9975"-1.9985" ROD BEARING CLEARANCE: .0011"-.0036" TORQUE FOR TIGHTENING CON ROD NUTS: 40-45 FT. LBS. I.D. OF ROD BUSHING INSTALLED: .9999"-1.0004" MAIN BEARING JOURNAL DIAMETER: 2.497"-2.498" MAIN BEARING CLEARANCE: .0013"-.0040" TORQUE FOR MAIN BEARING BOLTS: 110-120 FT. LBS. RING CAP BETWEEN ENDS (FITTED): TOP COMPRESSION RING: .022" MIN-.037" MAX 2ND AND 3RD COMPRESSION: .014" MIN-.029" MAX 4TH OIL CONTROL: .014" MIN-.059" MAX 5TH OIL CONTROL: .007" MIN-.020" MAX VALVE LASH - INTAKE: .012" COLD-.010" HOT VALVE LASH - EXHAUST: .021" COLD-.109" HOT VALVE GUIDE I.D. INSTALLED: .3125"-.3135" STEM-TO-GUIDE CLEARANCE: .0025"-.0045" TORQUE CYLINDER HEAD BOLTS: 110-120 FT. LBS. O.D. OF CAMSHAFT JOURNALS: FRONT AND INTERMEDIATE: 1.998"-1.999" REAR: 1.248"-1.249" I.D. OF CAMSHAFT BEARINGS INSTALLED: FRONT AND INTERMEDIATE: 2.0010"-2.0040" REAR: 1.2510"-1.2540" CAMSHAFT TO BEARING JOURNAL CLEARANCE: .002"-.006"			

344/516 SERIES ENGINES

PART	DESCRIPTION	344	516	PART	DESCRIPTION	344	516				
<u>CYLINDER - CRANKCASE</u>											
4359745	GASKET SET - CYLINDER HEAD	1	-	4061821	THRUST FLANGE KIT, STANDARD <i>Includes four thrust washers and dowel pins</i>	1	1				
4321441	GASKET SET - CYLINDER HEAD	-	1								
4349765	GASKET SET - INTERMEDIATE	1	-								
4335833	GASKET SET - INTERMEDIATE	-	1								
4321895	PAN GASKET SET	1	-								
4321893	PAN GASKET SET	-	1								
4348079	INTAKE VALVE	4	6								
4348090	EXHAUST VALVE	4	6								
4346146	EXHAUST VALVE SEAT INSERT	4	6								
4346092	INTAKE GUIDE	4	6								
4346093	EXHAUST GUIDE	4	6								
4345412	VALVE SPRING	8	12								
4343799	VALVE SPRING RETAINER	4	6								
4345658	ENERGY CELL	4	6								
<u>PISTON - CONNECTING ROD</u>											
4359904	PISTON AND SLEEVE KIT <i>Includes sleeve, rings, piston, pin, retainers and ring set.</i>	4	6					(*) = Note: All main bearing sets listed are for late engines with thrust flanges. Early engines with 1 piece center main bearing are NLA.			
4061541	PISTON AND RING KIT	4	6								
4061525	SLEEVE KIT <i>Sleeve w/ o-rings.</i>	4	6								
4359869	SLEEVE SEALING O-RING <i>Top</i>	4	6								
4359870	SLEEVE SEALING O-RING <i>Second</i>	4	6								
4337972	SLEEVE SEALING O-RING <i>Bottom</i>	4	6								
4336408	RING SET	4	6								
4340081	ROD BUSHING	4	6								
4322833	ROD BEARING, STANDARD	8	12								
4322834	ROD BEARING, .010"	8	12								
4322835	ROD BEARING, .020"	8	12								
4322836	ROD BEARING, .030"	8	12								
4322837	ROD BEARING, .040"	8	12								
<u>CRANKSHAFT</u>											
4036340	FRONT CRANKSHAFT SEAL	1	1	<u>CAMSHAFT</u> 4338299 VALVE LIFTER 8 12 4346100 FRONT CAMSHAFT BEARING 1 1 4320591 INTERMEDIATE CAMSHAFT BEARING 2 2 4320592 REAR CAMSHAFT BEARING 1 1 <u>FUEL INJECTION</u> <i>See application guide for nozzle, holder and related parts.</i> 4346227 NOZZLE AND HOLDER ASSEMBLY 4 6 4511204 NOZZLE HOLDER GASKET 4 6 4504409 FUEL INJECTION LINE NUT 8 12 4501149 FUEL INJECTION LINE SLEEVE 8 12							
4062088	REAR SEAL	1	1								
4029556	WEAR SLEEVE	1	1								
4322398	MAIN BEARING KIT, STANDARD*	1	-								
4322208	MAIN BEARING KIT, STANDARD*	-	1								
4322399	MAIN BEARING KIT, .010*	1	-								
4322209	MAIN BEARING KIT, .010*	-	1								
4322400	MAIN BEARING KIT, .020*	1	-								
4322210	MAIN BEARING KIT, .020*	-	1								
4322211	MAIN BEARING KIT, .030*	-	1								
4322402	MAIN BEARING KIT, .040*	1	-								
<i>Main bearing kits do not include thrust flanges, order separately.</i>											
4323007	UPPER AND LOWER CENTER MAIN THRUST FLANGE, STANDARD	2	2								
919347	THRUST FLANGE DOWEL PIN	4	4								
<u>ENGINE SPECIFICATIONS</u>											
								4 CYLINDER-344 CUBIC INCH: BORE 4-7/16" STROKE 5-9/16"			
				6 CYLINDER-516 CUBIC INCH: BORE 4-7/16" STROKE 5-9/16" CYLINDER HEAD TORQUE ½" STUD: 95-100 FT. LBS. CYLINDER HEAD TORQUE: 180-190 FT. LBS. INTAKE VALVE LASH: COLD: .018 HOT: .016 EXHAUST VALVE LASH: COLD: .022 HOT: .020 CRANKSHAFT ROD JOURNAL DIAMETER: 2.7715-2.7725" CRANKSHAFT MAIN JOURNAL DIAMETER: .3498-.3499" ROD NUT TORQUE: 120-130 FT. LBS. MAIN BEARING TORQUE 5/8" C/S: 160-170 FT. LBS. MAIN BEARING TORQUE ¾" C/S: 210-230 FT. LBS.							

433/649/2800/2900 SERIES ENGINES

PART	DESCRIPTION	4CL	6CL	PART	DESCRIPTION	4CL	6CL
	CYLINDER - CRANKCASE						
4009450	GASKET SET - CYLINDER HEAD	-	1	4023827	O-RING, SLEEVE SEALING <i>Top groove - Black</i>	4	6
4009457	GASKET SET - CYLINDER HEAD	1	-	4020032	O-RING, SLEEVE SEALING <i>Bottom groove - Red</i>	4	6
4009451	GASKET SET - INTERMEDIATE <i>2000/649T</i>	-	1	4062157	RING SET	4	6
4009456	GASKET SET - INTERMEDIATE <i>2800/649</i>	-	1	4023970	PISTON PIN	4	6
4009458	GASKET SET - INTERMEDIATE <i>2200/433</i>	1	-	927693	PISTON PIN RETAINER	8	12
4008985	GASKET SET - INTERMEDIATE <i>2200/433</i>	1	-	4020049	CONNECTING ROD BUSHING	4	6
4008992	GASKET SET - INTERMEDIATE <i>2800/2900/649 ALL</i>	-	1	4007700	CONNECTING ROD BUSHING <i>Standard</i>	8	12
4009449	GASKET SET - INTERMEDIATE <i>2900/649T</i>	-	1	4007740	CONNECTING ROD BEARING, .010"	8	12
4009455	GASKET SET - INTERMEDIATE <i>2800/649</i>	-	1	4007741	CONNECTING ROD BEARING, .020"	8	12
4009460	GASKET SET - INTERMEDIATE <i>2200/433</i>	1	-	4008168	CONNECTING ROD BEARING, .030"	8	12
	<i>Overhaul sets include head, intermediate, pan and pump sets, front and rear seals and wear sleeve.</i>			4061928	ROD BEARING KIT, STANDARD <i>2800/2900/649</i>	-	1
4006129	CYLINDER HEAD GASKET	1	-	4061929	ROD BEARING KIT, .010" <i>2800/2900/649</i>	-	1
4007790	KIT, CYLINDER HEAD GASKET	-	1	4061930	ROD BEARING KIT, .020" <i>2800/2900/649</i>	-	1
4008073	VALVE COVER GASKET	1	-	4062181	ROD BEARING KIT, .030" <i>2800/2900/649</i>	-	1
4008074	VALVE COVER GASKET	-	1		<i>Above kits include 12 halves of connecting rod bearings.</i>		
4009936	EXHAUST VALVE 30 DEGREE	4	6	4024583	CONNECTING ROD BOLT	8	12
4023378	INTAKE VALVE 30 DEGREE	4	6		CRANKSHAFT		
4023380	EXHAUST VALVE SEAT, STD	4	6	4024561	FRONT CRANKSHAFT SEAL	1	1
4023384	EXHAUST VALVE SEAT, .005"	4	6	4024562	REAR CRANKSHAFT SEAL	1	1
4023382	INTAKE VALVE SEAT, STANDARD	4	6	4023979	CRANKSHAFT GEAR	1	1
4020147	INTAKE VALVE SEAT, .005"	4	6	905845	CRANKSHAFT GEAR KEY	1	1
4022595	INTAKE/EXHAUST VALVE GUIDE	8	2	4006054	MAIN BEARING KIT, STD.	1	-
4035186	INTAKE/EXHAUST VALVE SPRING	8	12	4006055	MAIN BEARING KIT, .010"	1	-
4020408	VALVE SPRING RETAINER	8	12	4006056	MAIN BEARING KIT, .020"	1	-
4376497	VALVE SPRING RTNR LOCK, HALF	16	24	4006057	MAIN BEARING KIT, .030"	1	-
	PISTON - CONNECTING ROD			4006066	MAIN BEARING KIT, STD.	-	1
				4006067	MAIN BEARING KIT, .010"	-	1
4009126	PISTON AND SLEEVE KIT <i>2800/433/649</i>	-	6	4006068	MAIN BEARING KIT, .020"	-	1
4009253	PISTON AND SLEEVE KIT <i>2900MKII/433T/649T</i>	4	6	4006069	MAIN BEARING KIT, .030"	-	1
	<i>Above kits include sleeve, o-rings, piston, piston pin retainers and ring set.</i>				<i>(*) = NOTE: for 2900 and 649 engines only</i>		
4062355	PISTON AND RING SET <i>2800/2900 Prior MKII 16.25:1 C.R.</i>	4	6		2800 MAIN BEARING KITS		
4062359	PISTON AND RING SET <i>2800/2900/MKII/433/649TI 15.14:1 C.R.</i>	4	6	4006059	MAIN BEARING KIT, STD.	-	1
	<i>Above kits include piston, pin retainers and ring set.</i>			4006061	MAIN BEARING KIT, STD.	-	1
4061938	SLEEVE KIT <i>Kit includes sleeve and rings.</i>	4	6	4006063	MAIN BEARING KIT, STD.	-	1
				4006065	MAIN BEARING KIT, STD.	-	1
					FLYWHEEL		
				4008103	REAR WEAR SLEEVE SEAL	1	1
				4020016	FLYWHEEL HOUSING TO Block o-ring 8 - 1/2 I.D.	1	1
				4020879	FLYWHEEL HOUSING TO Block o-ring 2 - 1/4 I.D.	1	1
					CAMSHAFT		
				4021901	CAMSHAFT, PRESS ON GEAR	-	1
				4022519	CAMSHAFT, BOLT ON GEAR	-	1
				4022458	CAMSHAFT	1	-
				4022292	CAMSHAFT GEAR	1	1

3400/3500/3700/670 SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
	<u>WATER PUMP - THERMOSTAT</u>			<u>TURBOCHARGER</u>	
4008840	WATER PUMP <i>Hub included</i>	1	4028190	TURBOCHARGER MOUNT GASKET <i>Metal stamped</i>	1
4008789	WATER PUMP REPAIR KIT <i>Includes shaft and bearing assembly, impeller, seal assembly and mounting gaskets.</i>	1	4025376	CROSSOVER TO INTAKE MANIFOLD GASKET 3500/670T	1
4322303	WATER PUMP ASSEMBLY SEAL	1	4029746	TURBOCHARGER MOUNT MANIFOLD GASKET 3700/670I	1
4026887	WATER PUMP MOUNT GASKET	1	4007229	CROSSOVER TO TURBO AIR OUTLET HOSE 2-1/4" I.D. X 2-1/2"	1
4025106	WATER PUMP INLET PIPE GASKET	1	4035198	CROSSOVER TO TURBO AIR OUTLET HOSE 2" I.D. X 2-1/2"	1
923684	VOLUTE MOUNT O-RING	1	4027975	CROSSOVER TO TURBO AIR OUTLET HOSE 2" I.D. X 3-1/4"	1
4025103	THERMOSTAT	1	4339532	OIL DRAIN GASKET <i>Turbo end</i>	1
4025101	THERMOSTAT HOUSING MOUNT AND COVER GASKET <i>Used prior to S/N 3D39024</i>	1	4337504	OIL DRAIN HOSE 3/4" I.D. X 2"	1
4036573	WATER PUMP High output	1	4036545	OIL DRAIN HOSE 3/4" I.D. X 1-1/4"	1
4008788	REPAIR KIT <i>Above kit includes shaft and bearing assembly, impeller, seal assembly and mounting gaskets.</i>	1	4255983	SLEEVE, TURBO OIL SUPPLY LINE <i>Due to variety of turbochargers used, refer to specific A-C Engine catalog.</i>	1
4322303	WATER PUMP SEAL ASSEMBLY	1			
923971	WATER PUMP MOUNT O-RING	1			
4029327	WATER PUMP INLET PIPE GASKET	1			
923684	VOLUTE MOUNT O-RING	1			
4025103	THERMOSTAT	2			
4029324	THERMOSTAT COVER GASKET	1			
4025101	THERMOSTAT HOUSING TO BLOCK GASKET <i>Above used engine S/N 3D39024 UP.</i>	1			
	<u>CRANKSHAFT</u>			<u>FUEL INJECTION</u>	
4025041	CRANKSHAFT GEAR	1		<i>See application guide for nozzle, holder and related parts.</i>	
905845	CRANKSHAFT GEAR KEY	1	4504409	FUEL LINE PUMP AND HOLDER NUT	AR
4036340	FRONT CRANKSHAFT SEAL	1	4501149	FUEL LINE NUT SLEEVE	AR
4035330	TIMING GEAR COVER GASKET	1	4027748	FUEL LINE TO PUMP WASHER Banjo fitting	AR
4027752	FRONT PLATE TO BLOCK GASKET	1	4322189	FUEL LINE TO HOLDER GASKET <i>Bosch Holder</i>	AR
4029500	REAR CRANKSHAFT SEAL Double lip	1	4025385	NOZZLE HOLDER DUST SHIELD	AR
4062088	REAR CRANKSHAFT SEAL Single lip	1	4025150	NOZZLE HOLDER TO HEAD GASKET	AR
4029556	REAR SEAL WEAR SLEEVE	1	917806	FUEL RETURN SLEEVE 1/4"	AR
4025097	FLYWHEEL HOUSING TO BLOCK O-RING 8-1/2" I.D.	1	917807	FUEL RETURN SLEEVES 5/16"	AR
4020879	FLYWHEEL HOUSING TO BLOCK O-RING 2-1/4" I.D.	1			
4061642	MAIN BEARING SET, STANDARD	1			
4061649	MAIN BEARING SET, .010"	1			
4061650	MAIN BEARING SET, .020"	1			
	<u>OIL COOLER</u>				
923637	WATER SIDE O-RING, BLACK	1			
933325	OIL SIDE O-RING, BROWN	1			



3400/3500/3700/670 SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
<u>3500 W/ROOSA PUMP</u>			<u>ENGINE SPECIFICATIONS</u>		
4026372	FUEL LINE #1 CYLINDER	1	CYLINDER: 6		
4026373	FUEL LINE #2 CYLINDER	1	BORE: 4-1/4"		
4026374	FUEL LINE #3 CYLINDER	1	STROKE: 5"		
4026375	FUEL LINE #4 CYLINDER	1	CRANKSHAFT, ROD JOURNAL DIAMETER: 2.7470"-2.7485"		
4026376	FUEL LINE #5 CYLINDER	1	CRANKSHAFT, MAIN JOURNAL DIAMETER: 3.2465"-3.2480"		
4026377	FUEL LINE #6 CYLINDER	1	CON ROD CAPSCREW TORQUE:		
<u>3500 W/SIMMS PUMP</u>			SOCKET-HEAD 85 FT. LBS.		
4026533	FUEL LINE #1 CYLINDER	1	12 POINT-HEAD 67 FT. LBS.		
4026534	FUEL LINE #2 CYLINDER	1	MAIN BEARING CAP TORQUE: 170-190 FT. LBS.		
4026535	FUEL LINE #3 CYLINDER	1	CYLINDER HEAD CAPSCREW TORQUE: 165 FT. LBS.		
4026536	FUEL LINE #4 CYLINDER	1	INTAKE AND EXHAUST VALVE LASH:		
4026537	FUEL LINE #5 CYLINDER	1	COLD: .0195"		
4026538	FUEL LINE #6 CYLINDER	1	HOT: .015"		
<u>3500 MKII/3700 W/ROOSA PUMP</u>					
4029661	FUEL LINE #1 CYLINDER	1			
4029662	FUEL LINE #2 CYLINDER	1			
4029663	FUEL LINE #3 CYLINDER	1			
4029664	FUEL LINE #4 CYLINDER	1			
4035346	FUEL LINE #5 CYLINDER	1			
4029666	FUEL LINE #6 CYLINDER	1			
<u>3500MKII/3700 W/SIMMS PUMP</u>					
4028835	FUEL LINE #1 CYLINDER	1			
4028836	FUEL LINE #2 CYLINDER	1			
4028837	FUEL LINE #3 CYLINDER	1			
4028838	FUEL LINE #4 CYLINDER	1			
4028839	FUEL LINE #5 CYLINDER	1			
4028840	FUEL LINE #6 CYLINDER	1			
<u>670 W/MODEL 100 PUMP</u>					
4036720	FUEL LINE #1 CYLINDER	1			
4036721	FUEL LINE #2 CYLINDER	1			
4036723	FUEL LINE #4 CYLINDER	1			
4036724	FUEL LINE #5 CYLINDER	1			
<u>670 W/ROOSA PUMP</u>					
4036566	FUEL LINE #1 CYLINDER	1			
4036567	FUEL LINE #2 CYLINDER	1			
4036570	FUEL LINE #5 CYLINDER	1			
4036571	FUEL LINE #6 CYLINDER	1			



6000/7000 SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
<u>CYLINDER - CRANKCASE</u>			4337972	SLEEVE SEALING O-RING Bottom groove - Red	4
4359742	GASKET SET - CYLINDER HEAD	1	4062312	RING SET Deep top piston	4
4349937	GASKET SET - INTERMEDIATE	1	4062311	RING SET Shallow top piston	4
4321895	GASKET SET - PAN	1	4354778	PISTON PIN	4
4322378	INTAKE AND EXHAUST VALVE GUIDE	8	927696	PISTON PIN RETAINER	8
4336129	INTAKE VALVE, OUTER SPRING	4	4354788	CONNECTING ROD (4320801)	4
4336130	INTAKE VALVE, INNER SPRING	4	4339017	ROD BUSHING	4
4336131	EXHAUST VALVE SPRING	4	4322833	ROD BEARING, STANDARD	8
4343799	EXHAUST VALVE SPRING RETAINER	4	4322834	ROD BEARING, .010"	8
4376497	VALVE SPRING RETAINER LOCK	16	4322835	ROD BEARING, .020"	8
4354113	ROCKER COVER GASKET	1	4322836	ROD BEARING, .030"	8
4376749	ROCKER COVER NUT SEALING WASHER	4	4322837	ROD BEARING, .040"	8
4359116	INTAKE VALVE 30 DEGREE <i>Late head</i>	4	4322853	CONNECTING ROD BEARING KIT, STANDARD	1
4336127	INTAKE VALVE 45 DEGREE <i>Early head</i>	4	4322854	CONNECTING ROD BEARING KIT, .010"	1
4359112	INTAKE VALVE SEAT 30 DEGREE, STD.	4	4322855	CONNECTING ROD BEARING KIT, .020"	1
4359113	INTAKE VALVE SEAT 30 DEGREE, .005"	4	4322856	CONNECTING ROD BEARING KIT, .030"	1
4339546	INTAKE VALVE SEAT 45 DEGREE, STD.	4	4322857	CONNECTING ROD BEARING KIT, .040"	1
4339624	INTAKE VALVE SEAT 45 DEGREE, .005"	4	<i>Above kits include eight halves each of specific size rod bearing.</i>		
4359117	EXHAUST VALVE 30 DEGREE <i>Late head</i>	4	<u>CRANKSHAFT</u>		
4359277	EXHAUST VALVE 45 DEGREE <i>Early head</i>	4	4336897	FLYWHEEL HOUSING O RING	1
4359114	EXHAUST VALVE SEAT 30 DEGREE, STD.	4	4036340	CRANKSHAFT FRONT SEAL	1
4359115	EXHAUST VALVE SEAT 30 DEGREE, .005"	4	4062088	CRANKSHAFT REAR SEAL Single lip	1
4339547	EXHAUST VALVE SEAT 45 DEGREE, STD.	4	4029500	CRANKSHAFT REAR SEAL Double lip	1
<u>PISTON - CONNECTING ROD</u>			4029556	REAR SEAL WEAR SLEEVE	1
4359909	PISTON AND SLEEVE KIT <i>Deep top piston</i> <i>Above kit requires use of nozzle</i> <i>P/N 4380685 or 4321933.</i>	4	4322398	MAIN BEARING KIT, STANDARD	1
4062316	PISTON AND SLEEVE KIT <i>Shallow top piston</i> <i>Above kit requires use of nozzle</i> <i>P/N 4321935.</i> <i>All piston and sleeve kits include sleeve, o- rings, piston, pin, retainers and ring set.</i>	4	4322399	MAIN BEARING KIT, .010"	1
4062315	PISTON AND RING KIT <i>Deep top piston</i> <i>Above kit requires use of nozzle</i> <i>P/N 4380685 or 4321933.</i>	4	4322400	MAIN BEARING KIT, .020"	1
4062313	PISTON AND RING KIT <i>Shallow top piston</i> <i>Above kit requires use of nozzle</i> <i>P/N 4321935.</i> <i>All piston and ring kits include piston, pin, pin retainers and ring set.</i>	4	4322402	MAIN BEARING KIT, .040"	1
4061525	SLEEVE KIT <i>Includes sleeve rings</i>	4	4323007	CENTER MAIN THRUST FLANGE, STANDARD	4
4359869	SLEEVE SEALING O-RING <i>Top groove</i>	4	919347	LOWER THRUST FLANGE DOWEL PIN	4
4359870	SLEEVE SEALING O-RING <i>Second groove</i>	4	4061821	THRUST FLANGE KIT, STANDARD <i>Above kit includes four thrust flanges and dowel pins.</i>	1
			<u>CAMSHAFT</u>		
			4337731	CAMSHAFT	1
			4338299	VALVE LIFTER	8
			4336234	PUSH ROD	8
			4337769	VALVE LIFTER COVER GASKET	2
			4346100	FRONT CAMSHAFT BEARING	1
			4320591	INTERMEDIATE CAMSHAFT BEARING	2
			4320592	REAR CAMSHAFT BEARING	1

5273 Program Ave, Mounds View, Minnesota 55112 USA

Telephone: (612) 379-0606 Fax: (612) 378-3741 email:info@minnpar.com



6000/7000 SERIES ENGINES

PART	DESCRIPTION	
<u>WATER PUMP - THERMOSTAT</u>		
4322280	WATER PUMP <i>Includes mounting gasket</i>	1
4346744	WATER PUMP MOUNTING GASKET	1
4335056	WATER PUMP VOLUTE GASKET	1
4322283	IMPELLER AND SEAL KIT <i>Includes 4322303 seal</i>	1
4358788	WATER PUMP SHAFT <i>Straight nose</i>	1
4044212	WATER PUMP SHAFT REAR BEARING	1
4044210	WATER PUMP SHAFT FRONT BEARING	1
4321697	DRIVE PULLEY FLANGE SEAL	1
4359280	DRIVE PULLEY FLANGE <i>No keyway</i>	1
917680	LOCKING NUT <i>Following items used on original water pumps</i>	1
4339103	IMPELLER ASSEMBLY <i>Tapered bore</i>	1
4375686	IMPELLER RETAINING NUT	1
4507091	WATER PUMP SEAL ASSEMBLY IMPELLER	1
4348757	WATER PUMP SHAFT <i>Tapered nose</i>	1
4044212	WATER PUMP SHAFT REAR BEARING	1
4044210	WATER PUMP SHAFT FRONT BEARING	1
4335808	DRIVE PULLEY FLANGE <i>Keyway in bore</i>	1
905121	FLANGE KEY	1
4348825	FLANGE SEALING WASHER	1
4379916	THERMOSTAT <i>Early engines - no seal used</i>	1
4354537	THERMOSTAT <i>Late engines - no seal used</i>	1
4317554	THERMOSTAT SEAL <i>Used with 4354537</i>	1
4349809	THERMOSTAT HOUSING GASKET	1
4349808	WATER MANIFOLD GASKET	2
<u>FUEL INJECTION</u>		
<i>See application guide for nozzle, holder and related parts.</i>		
4378031	NOZZLE HOLDER TO HEAD GASKET	4
4025385	NOZZLE HOLDER DUST SHIELD	8
4501149	FUEL LINE SLEEVE <i>Lower end</i>	4
4504409	FUEL LINE NUT <i>Lower end</i>	4
917806	FUEL RETURN SLEEVE 1/4"	AR
917807	FUEL RETURN SLEEVE 3/8"	AR

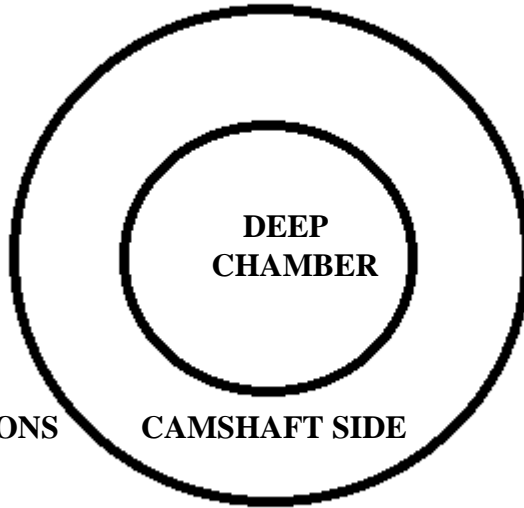
PART	DESCRIPTION	
<u>ENGINE SPECIFICATIONS</u>		
	4 CYLINDER	
	BORE: 4-7/16"	
	STROKE: 5-9/16"	
	PISTON DISPLACEMENT 344 CUBIC INCHES	
	CRANKSHAFT, ROD JOURNAL DIAMETER: 2.7715"-2.7725"	
	CRANKSHAFT, MAIN JOURNAL DIAMETER: 3.498"-3.499"	
	MAIN BEARING TORQUE 5/8" CENTER: 160-170 FT. LBS.	
	MAIN BEARING TORQUE 3/4" FRONT, INTERMEDIATE, REAR: 210-230 FT. LBS.	
	CONNECTING ROD: 120-130 FT. LBS.	
	CONNECTING ROD BUSHING: 1.6277"-1.6282" (Pressed in rod and finished)	
	CYLINDER HEAD TORQUE:	
	1/2" BOLT: 95-105 FT. LBS.	
	5/8" BOLT: 180-190 FT. LBS.	
	INTAKE VALVE LASH:	
	COLD: .020"	
	HOT: .108"	
	EXHAUST VALVE LASH:	
	COLD: .020"	
	HOT: .018"	

6000, 7000, 10000, 11000 MK I & MK II

PISTON STYLES

**MUST BE MATCHED TO
EXISTING PISTONS
DURING OVERHAUL**

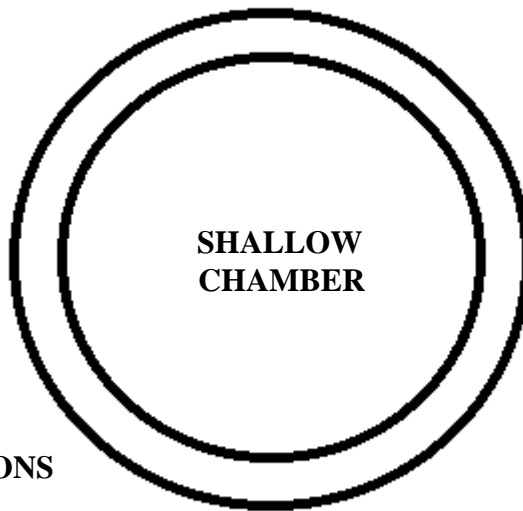
TYPE I



**CHAMBER DEMENSIONS
2 1/2" DIAMETER
1 3/16" DEEP**

CAMSHAFT SIDE

TYPE II



**CHAMBER DIMENSIONS
3" DIAMETER
3/4" DEEP**

TOP OF PISTON



685T/10000/11000 SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
<u>CYLINDER HEAD - CRANKCASE</u>					
4322772	GASKET SET - CYLINDER HEAD	1	4062315	PISTON AND RING KIT, Deep top piston.	6
4321798	GASKET SET - INTERMEDIATE <i>10000/11000</i>	1		<i>Above kit requires use of nozzle P/N 4321932 or 4321933.</i>	
4322888	GASKET SET - INTERMEDIATE <i>685T</i>	1	4062314	PISTON AND RING KIT, Shallow top piston - 10000 engine.	6
4358696	GASKET SET - INTERMEDIATE <i>12G Only</i>	1	4062313	PISTON AND RING KIT, Shallow top piston - 685T and 11000 engine.	6
4322199	GASKET SET - PAN AND OIL PUMP MOUNTING	1		<i>Above kits require use of nozzle P/N 4321935.</i>	
4322774	GASKET SET - PAN AND OIL PUMP REPAIR AND MOUNTING	1		<i>All piston and ring kits include piston, pin, retainers and ring set.</i>	
4321893	PAN GASKET	1	4061746	SLEEVE KIT, Includes sleeve, o-rings	6
4336127	INTAKE VALVE 45 DEGREE <i>Used prior to S/N 11-14193.</i>	6	4359869	SLEEVE SEALING O-RING, Top - Thick	6
4359116	INTAKE VALVE 30 DEGREE <i>Effective S/N 11-14193/11-19607.</i>	6	4359870	SLEEVE SEALING O-RING, Second - Thin	6
4321157	INTAKE VALVE 30 DEGREE <i>Effective S/N 11-19608 and 685T.</i>	6	4337972	SLEEVE SEALING O-RING, Bottom - Red	6
4359277	EXHAUST VALVE 45 DEGREE <i>Used prior to S/N 11-14193.</i>	6	4062312	RING SET, Deep top piston.	6
4359117	EXHAUST VALVE 30 DEGREE <i>Effective S/N 11-14193/11-9607.</i>	6	4062311	RING SET, Shallow top piston.	6
4322271	EXHAUST VALVE 30 DEGREE <i>Effective S/N 11-19608 and 685T)</i>	6	4354778	PISTON PIN	6
4339546	INTAKE VALVE SEAT 45 DEGREE, STD.	6	927696	PISTON PIN RETAINER	12
4359112	INTAKE VALVE SEAT 30 DEGREE, STD.	6	4354788	CONNECTING ROD (4320801)	6
4339624	INTAKE VALVE SEAT 45 DEGREE, .005"	6	4339017	ROD BUSHING	6
4359113	INTAKE VALVE SEAT 30 DEGREE, .005"	6	4322833	ROD BEARING, STANDARD	12
4339547	EXHAUST VALVE SEAT 45 DEGREE, STD.	6	4322834	ROD BEARING, .010"	12
4359114	EXHAUST VALVE SEAT 30 DEGREE, STD.	6	4322835	ROD BEARING, .020"	12
4359115	EXHAUST VALVE SEAT 30 DEGREE, .005"	6	4322836	ROD BEARING, .030"	12
4322378	INTAKE AND EXHAUST VALVE GUIDE	12	4322837	ROD BEARING, .040"	12
4336129	INTAKE VALVE OUTER SPRING	6	4322848	CONNECTING ROD BEARING KIT, STANDARD	1
4336130	INTAKE VALVE INNER SPRING	6	4322849	CONNECTING ROD BEARING KIT, .010"	1
4336131	EXHAUST VALVE SPRING	6	4322850	CONNECTING ROD BEARING KIT, .020"	1
4376497	VALVE SPRING RETAINER LOCK	24	4322851	CONNECTING ROD BEARING KIT, .030"	1
4322814	CYLINDER HEAD FRONT GASKET	1		<i>Above kits include 12 halves each of specific size rod bearings. Above bearings are non- piston cooling.</i>	
4322815	CYLINDER HEAD REAR GASKET	1	4322838	ROD BEARING, STANDARD	12
4321981	ROCKER COVER GASKET	2	4322839	ROD BEARING, .010"	12
4335456	ROCKER COVER NUT WASHER	6	4322840	ROD BEARING, .020"	12
<u>PISTON - CONNECTING ROD</u>					
4359908	PISTON AND SLEEVE KIT, Deep top piston. <i>Above kit requires use of nozzle P/N 4321932 or 4321933.</i>	6		<i>Above bearings used on late 685I engines with piston cooling.</i>	
4062316	PISTON AND SLEEVE KIT, Shallow top piston. <i>Above kits require use of nozzle P/N 4321935.</i> <i>All piston and sleeve kits include sleeve, sleeve rings, piston, pin, retainers and ring set.</i>	6			
<u>CRANKSHAFT</u>					
			4036340	CRANKSHAFT FRONT SEAL	1
			4062088	REAR SEAL Single lip	1
			4029500	REAR SEAL Double lip	1
			4029556	REAR SEAL WEAR SLEEVE	1



685T/10000/11000 SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
4322887	GASKET SET - OVERHAUL <i>Above kit includes gaskets, front and rear seal and wear sleeve for crankshaft.</i>	1	4317554	THERMOSTAT SEAL	2
4322208	MAIN BEARING SET, STANDARD	1	4336263	THERMOSTAT HOUSING GASKET	1
4322209	MAIN BEARING SET, .010"	1	4300145	WATER OUTLET GASKET	1
4322210	MAIN BEARING SET, .020"	1	4336182	WATER MANIFOLD GASKET	4
4322211	MAIN BEARING SET, .030"	1	923813	WATER MANIFOLD O-RING	4
4322212	MAIN BEARING SET, .040" <i>Main bearing sets do not include thrust washers, order separately.</i>	1			
4337687	CENTER MAIN THRUST FLANGE, STANDARD	4		FUEL INJECTION GROUP <i>See application guide for nozzle, holder and related parts.</i>	
919347	LOWER THRUST FLANGE DOWEL PIN	4	4336157	INJECTION NOZZLE SLEEVE	6
4061821	THRUST FLANGE KIT, STANDARD <i>Above kit includes four thrust washers and dowel pins.</i>	1	4378031	NOZZLE GASKET	6
	CAMSHAFT		4025385	HOLDER ASSEMBLY DUST SHIELD	12
4346100	FRONT CAMSHAFT BEARING	1	4501149	FUEL LINE SLEEVE, 10000 Engine	6
4320591	INTERMEDIATE CAMSHAFT BEARING	2	4504409	FUEL LINE NUT, 10000 Engine	6
4320592	REAR CAMSHAFT BEARING	1	917806	FUEL RETURN SLEEVE 1/4"	AR
4338299	VALVE LIFTER	12	917807	FUEL RETURN SLEEVE 3/8"	AR
4336234	PUSH ROD	12	4359326	FUEL LINE #1 CYLINDER	1
4337764	VALVE LIFTER COVER GASKET	2	4359327	FUEL LINE #2 CYLINDER	1
	WATER PUMP - THERMOSTAT		4359328	FUEL LINE #3 CYLINDER	1
4322280	WATER PUMP <i>Includes mounting gaskets</i>	1	4359329	FUEL LINE #4 CYLINDER	1
4346744	PUMP MOUNTING GASKET	1	4359330	FUEL LINE #5 CYLINDER	1
4335056	WATER PUMP VOLUTE GASKET	1	4359331	FUEL LINE #6 CYLINDER <i>Above lines for use only on engines with American Bosch fuel pump.</i>	1
4322283	IMPELLER AND SEAL KIT <i>Includes 4322303 seal</i>	1	4321795	FUEL LINE #1 CYLINDER	1
4322303	WATER PUMP IMPELLER SEAL ASSY	1	4321706	FUEL LINE #2 CYLINDER	1
4358788	WATER PUMP SHAFT, Straight nose	1	4321707	FUEL LINE #3 CYLINDER	1
4044212	WATER PUMP SHAFT REAR BEARING	1	4321708	FUEL LINE #4 CYLINDER	1
4044210	WATER PUMP SHAFT FRONT BEARING	1	4321709	FUEL LINE #5 CYLINDER	1
927801	FRONT BEARING RETAINING RING <i>Effective S/N 11-27556 up</i>	1	4321710	FUEL LINE #6 CYLINDER <i>Above lines on 685T and 11000 S/N 11-26885 and up with Roosa Master pump.</i>	1
4321697	DRIVE PULLEY FLANGE SEAL <i>Effective S/N 11-27556 up</i>	1	4359567	FUEL LINE #1 CYLINDER	1
4359280	DRIVE PULLEY FLANGE, No keyway <i>Effective S/N 11-14220 up</i>	1	4339559	FUEL LINE #2 CYLINDER	1
910847	FLANGE RETAINING NUT 3/4" N.F.	1	4339560	FUEL LINE #3 CYLINDER	1
917680	LOCKING NUT <i>Following items used prior to S/N 11-14220:</i>	1	4339561	FUEL LINE #4 CYLINDER	1
4339103	IMPELLER ASSEMBLY, Tapered bore	1	4339562	FUEL LINE #5 CYLINDER	1
4375686	NUT, IMPELLER RETAINING NUT	1	4339563	FUEL LINE #6 CYLINDER <i>Above lines on earlier 11000 engines using Roosa Master pump.</i>	1
4507091	WATER PUMP IMPELLER SEAL ASSY	1			
4348757	WATER PUMP SHAFT, Tapered nose	1			
905121	FLANGE KEY	1			
4348825	SEALING FLANGE WASHER	1			
4354537	THERMOSTAT 180 DEGREE	2			



685T/10000/11000 SERIES ENGINES

PART	DESCRIPTION
<p style="text-align: center;"><u>ENGINE SPECIFICATIONS</u></p> <p>6 CYLINDER BORE: 4-7/16" (113MM) STROKE: 5-9/16" (141MM) PISTON DISPLACEMENT 516 CUBIC INCHES (8.5 LITERS) CRANKSHAFT, ROD JOURNAL DIAMETER: 2.7715"-2.7725" CRANKSHAFT, MAIN JOURNAL DIAMETER: 3.498-3.499" MAIN BEARING TORQUE 5/8" CENTER: 160-170 FT. LBS. MAIN BEARING TORQUE 3/4" FRONT, INTERMEDIATE, REAR: 210-230 FT. LBS. CONNECTING ROD: 120-130 FT. LBS. CONNECTING ROD BUSHING: 1.6277"-1.6282" (Pressed in rod and finished) CYLINDER HEAD TORQUE: 1/2" BOLT: 95-105 FT. LBS. 5/8" BOLT: 180-190 FT. LBS. INTAKE VALVE LASH: COLD: .020" HOT: .018" EXHAUST VALVE LASH: COLD: .020" HOT: .018"</p> <p>NOTE: Physical difference between shallow and deep top pistons: Cone on deep top piston is 2-1/4" wide, 1-1/4" deep. Shallow top is 3" wide, 3/4" deep.</p>	

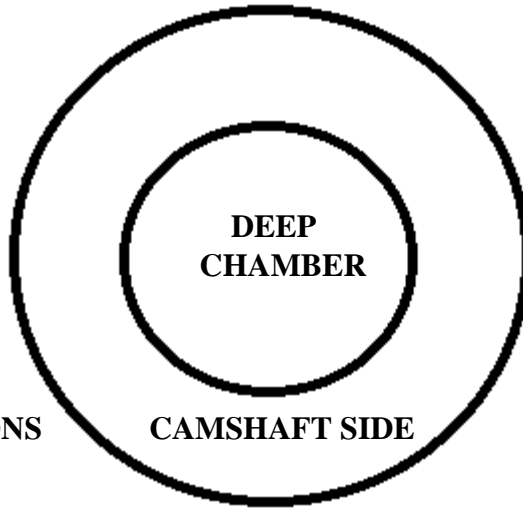
PART	DESCRIPTION

6000, 7000, 10000, 11000 MK I & MK II

PISTON STYLE

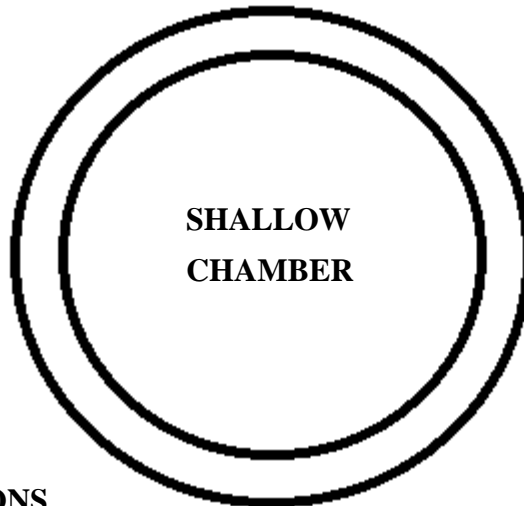
**MUST BE MATCHED TO
EXISTING PISTONS
DURING OVERHAUL**

TYPE I



**CHAMBER DIMENSIONS
2 1/2" DIAMETER
1 3/16" DEEP**

TYPE II



**CHAMBER DIMENSIONS
3" DIAMETER
3/4" DEEP**

TOP OF PISTON



BUDA 844 TWO VALVE SERIES ENGINES (BASIC PARTS)

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
	<u>CYLINDER HEAR - CRANKCASE</u>				
4377389	CYLINDER HEAD GASKET KIT	1			
4377387	INTERMEDIATE GASKET KIT	1			
4395803	PAN GASKET KIT	1			
	<u>PISTON - CONNECTING ROD</u>				
4061527	SLEEVE	6			
4378357	ROD BEARING, STANDARD	12			
4396584	RING SET	1			
	<u>CRANKSHAFT</u>				
4253838	FRONT CRANKSHAFT SEAL	1			



16000/21000 (THREE VALVE HEAD) SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
<u>CYLINDER - CRANKCASE</u>			<u>FUEL INJECTION</u>		
4396817	GASKET SET - CYLINDER HEAD	1	<i>See application guide for nozzle, holder and related parts.</i>		
4396997	GASKET SET - INTERMEDIATE	1	4376484	NOZZLE HOLDER SLEEVE	6
4395803	GASKET SET - PAN	1	917806	RETURN LINES SLEEVE	AR
4378897	INTAKE VALVE	12	4377012	FUEL LINE #1 CYLINDER	1
4376486	EXHAUST VALVE	6	4377014	FUEL LINE #3 CYLINDER	1
4390547	INTAKE VALVE GUIDE	12	4377015	FUEL LINE #4 CYLINDER	1
4391776	EXHAUST VALVE GUIDE	6	4377017	FUEL LINE #6 CYLINDER	1
4376545	INNER INTAKE VALVE SPRING	12			
4376546	OUTER INTAKE VALVE SPRING	12			
4387586	INTAKE VALVE SEAT INSERT	12			
4387584	EXHAUST VALVE SEAT INSERT	6			
4376497	VALVE SPRING RETAINER LOCK	24			
4376508	EXHAUST VALVE STEM LOCK	12			
<u>PISTON - CONNECTING ROD</u>			<u>ENGINE SPECIFICATIONS</u>		
4061527	SLEEVE KIT	6	6 CYLINDER		
	<i>Include sleeve and o-rings</i>		BORE: 5-1/4"		
4385485	SLEEVE SEALING O-RING, Red	6	STROKE: 6-1/2"		
4393426	SLEEVE SEALING O-RING, Black	12	PISTON DISPLACEMENT 844 CUBIC INCHES		
4385424	PISTON PIN 1-3/4"	6	CRANKSHAFT, ROD JOURNAL DIAMETER: 3.2475-3.2485"		
4062217	RING SET	6	CRANKSHAFT, MAIN JOURNAL DIAMETER: 3.745-3.746"		
925993	PISTON PIN RETAINER	12	MAIN BEARING TORQUE 5/8" CENTER: 160-170 FT. LBS.		
4377673	ROD BUSHING	6	MAIN BEARING TORQUE 7/8" FRONT, INTERMEDIATE, REAR: 280-290 FT. LBS.		
4378357	ROD BEARING, STANDARD	12	CON ROD NUT (CASTELLATED TYPE): 160-170 FT. LBS.		
4378358	ROD BEARING, .010"	12	CON ROD NUT (NON-CASTELLATED TYPE): 175-185 FT. LBS.		
4378359	ROD BEARING, .020"	12	CYLINDER HEAD TORQUE:		
4378360	ROD BEARING, .030"	12	1/2" BOLT: 95-105 FT. LBS.		
4378361	ROD BEARING, .040"	12	5/8" BOLT: 180-185 FT. LBS.		
<u>CRANKSHAFT</u>			INTAKE VALVE LASH:		
4396172	CRANKSHAFT GEAR	1	COLD: .018"		
4036340	CRANKSHAFT FRONT SEAL	1	HOT: .015"		
4396633	CRANKSHAFT REAR SEAL, Single lip	1	EXHAUST VALVE LASH:		
4395770	CRANKSHAFT REAR SEAL, Double lip	1	COLD: .018"		
	<i>Both above seals must use sleeve.</i>		HOT: .015"		
4394036	REAR CRANKSHAFT SLEEVE	1			
4366182	THRUST FLANGE, STANDARD	4			
919347	THRUST FLANGE PIN	4			
<u>CAMSHAFT</u>					
4392183	CAMSHAFT GEAR	1			
4665306	FRONT & REAR CAMSHAFT BEARING	2			
4660440	INTERMEDIATE CAMSHAFT BEARING	2			
4360955	VALVE LIFTER	12			
4665306	FRONT AND REAR CAMSHAFT BEARING	2			
4660440	INTERMEDIATE CAMSHAFT BEARING	2			



16000H/21000H/25000/6120/6138 (FOUR VALVE HEAD) SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
<u>CYLINDER HEAD - CRANKCASE</u>					
4397321	GASKET SET - OVERHAUL <i>6120/6138</i>	1	4062451	PISTON KIT, 2" pin hole	6
4397322	GASKET SET - OVERHAUL <i>16000H/21000H/25000</i>	1	4396638	PISTON KIT, 2-1/4" pin hole	6
4397320	GASKET SET - CYLINDER HEAD	1	4396648	PISTON KIT, <i>6120 only - 2-1/4" pin hole</i>	6
4397319	GASKET - CYLINDER HEAD One head only.	2		<i>Above kits include piston, pin, retainers and rings.</i>	
4396997	GASKET SET - INTERMEDIATE <i>16000H/21000H/25000</i>	1	4061528	SLEEVE KIT	6
4396998	GASKET SET - INTERMEDIATE <i>6120/6138</i>	1		<i>Includes sleeve and o-rings.</i>	
4396996	GASKET SET - OIL PUMP AND PAN	1	4393426	SLEEVE O RING Top and second groove(Black)	12
4395803	GASKET - OIL PAN	1	4385485	SLEEVE O RING Bottom groove(Red)	6
4385781	GASKET - LOWER OIL PAN	1	4062447	RING SET	6
4393989	LOWER ROCKER COVER GASKET	2	4390175	PISTON PIN 2" O.D.	6
4396792	UPPER ROCKER COVER GASKET	2	4394212	PISTON PIN 2-1/4" O.D.	6
4254873	SEALING ROCKER COVER CAPSCREW WASHER	8	927700	PISTON PIN RETAINER 2"	12
4396887	INTAKE VALVE 300	12	4255943	PISTON PIN RETAINER 2-1/4"	12
4390677	EXHAUST VALVE 300 <i>Early - 1-5/8" head</i>	12	4376986	ROD BUSHING 2" I.D.	6
4396888	EXHAUST VALVE 300 <i>Late - 1-7/16" head</i>	12	4396367	ROD BUSHING KIT 2-1/4" I.D.	6
4376497	LOCK, VALVE STEM LOCK	48		<i>Above bushing kit uses two bushings and can be used in place of 4394213.</i>	
4389294	INTAKE AND EXHAUST VALVE SPRING ASSEMBLY	24	4394172	ROD BEARING, STANDARD	12
4389397	INTAKE AND EXHAUST VALVE ROTO COIL ASSEMBLY	24	4394221	ROD BEARING, .010"	12
4390547	INTAKE VALVE GUIDE	12	4394222	ROD BEARING, .020"	12
4396560	EXHAUST VALVE GUIDE	12	4394223	ROD BEARING, .030"	12
4386628	INTAKE VALVE SEAT INSERT 300, STANDARD	12	4394224	ROD BEARING, .040"	12
4386653	INTAKE VALVE SEAT INSERT 300, .005"	12		<i>Above bearings have oil holes.</i>	
4386625	EXHAUST VALVE SEAT INSERT 300, STANDARD	12	4396968	ROD BEARING, STANDARD	12
	<i>45 O exhaust seat replaced by 30 deg. seat and valve on later engines</i>		4396969	ROD BEARING, .010"	12
4391713	EXHAUST VALVE SEAT INSERT 30 DEGREE, STANDARD	12	4396970	ROD BEARING, .020"	12
	<i>Used with 4390677 valve.</i>		4396971	ROD BEARING, .030"	12
4391714	EXHAUST VALVE SEAT INSERT 30DEG.,.005"	12	4396972	ROD BEARING, .040"	12
	<i>Used with 4390677 valve.</i>			<i>Above bearings have slot for piston cooling. All 6120, 6138.</i>	
4392053	EXHAUST VALVE SEAT INSERT 30 DEGREE, STANDARD	12	<u>CRANKSHAFT</u>		
	<i>Used with 4396888 valve.</i>		4062039	MAIN BEARING SET, STANDARD	1
4392068	EXHAUST VALVE SEAT INSERT 30DEG.,.005"	12	4062040	MAIN BEARING SET, .010"	1
	<i>Used with 4396888 valve.</i>		4062041	MAIN BEARING SET, .020"	1
<u>PISTON-CONNECTING ROD</u>					
4394054	PISTON AND SLEEVE KIT 2" Piston pin	6		<i>Above sets have 3/8" dowel holes and do not include thrust washers. If old bearings had 1/4" dowel hole, order 7-4395109 dowels.</i>	
4396647	PISTON AND SLEEVE KIT 2-1/4" Piston pin <i>Above kits include sleeve, sleeve o-rings, piston, pin, retainers and ring set.</i>	6			



16000H/21000H/25000/6120/6138 (FOUR VALVE HEAD) SERIES ENGINES

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
4256022	FRONT OIL SEAL <i>All pumps use the above parts except pump 4387607. All pumps can be upgraded by using 4393325 shaft, 4397220 impeller and seal kit, and 918182 nut.</i> PARTS FOR 4387607 WATER PUMP:	1		<u>ENGINE SPECIFICATIONS</u> 6 CYLINDER BORE: 5-1/4" STROKE: 6-1/2" PISTON DISPLACEMENT 844 CUBIC INCHES CRANKSHAFT, ROD JOURNAL DIAMETER: 3.3725-3.37" CRANKSHAFT, MAIN JOURNAL DIAMETER: 3.995-3.996" MAIN BEARING CAPSCREW TORQUE 5/8" CENTER: 160-170 FT. LBS. MAIN BEARING CAPSCREW TORQUE 7/8" FRONT, INTERMEDIATE, REAR: 370-380 FT. LBS. CONNECTING ROD CAP TORQUE: 190-200 FT. LBS. CYLINDER HEAD CAPSCREW TORQUE: 5/8" BOLT: 180-185 FT. LBS. 3/4" W/STRAIGHT SHANK 260-275 FT. LBS. 3/4" W/REDUCED SHANK 385-400 FT. LBS. INTAKE VALVE LASH: COLD: .018" HOT: .015" EXHAUST VALVE LASH: COLD: .023" HOT: .020"	
4389359	IMPELLER	1			
4375686	IMPELLER RETAINING NUT	1			
4375694	IMPELLER RETAINING PIN	1			
4386862	SEAL ASSEMBLY	1			
4354537	THERMOSTAT	2			
4317554	THERMOSTAT SEAL	2			
4376520	THERMOSTAT COVER GASKET	1			
4386137	BY-PASS TUBE TO COVER GASKET	1			
4310257	OUTLET ELBOW TO COVER GASKET1	1			
4395709	WATER OUTLET MANIFOLD TO HEAD	1			
925615	WATER INLET MANIFOLD O-RING	12			
	<u>FUEL INJECTION</u> <i>See application guide for nozzle, holder and related parts.</i>				
4390085	FUEL LINE #1 CYLINDER <i>MKII Only - American Bosch fuel pump</i>	1			
4390086	FUEL LINE #2 CYLINDER <i>MKII Only - American Bosch fuel pump</i>	1			
4392384	FUEL LINE #1 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
4392385	FUEL LINE #2 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
4392386	FUEL LINE #3 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
4392387	FUEL LINE #4 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
4392388	FUEL LINE #5 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
4392389	FUEL LINE #6 CYLINDER <i>MKII Only - Robert Bosch fuel pump</i>	1			
	<i>note: external lines listed only.</i>				

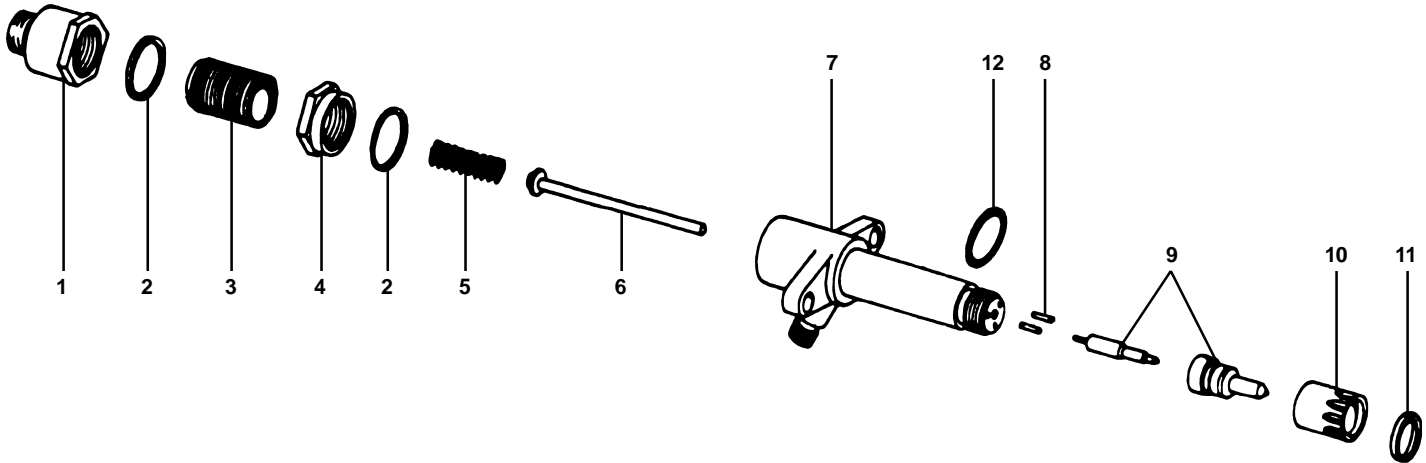


PART	DESCRIPTION	QTY

PART	DESCRIPTION	QTY



**"OLD STYLE" ALLIS-CHALMERS HOLDER
2200-3500/6000-11000 ENGINES**

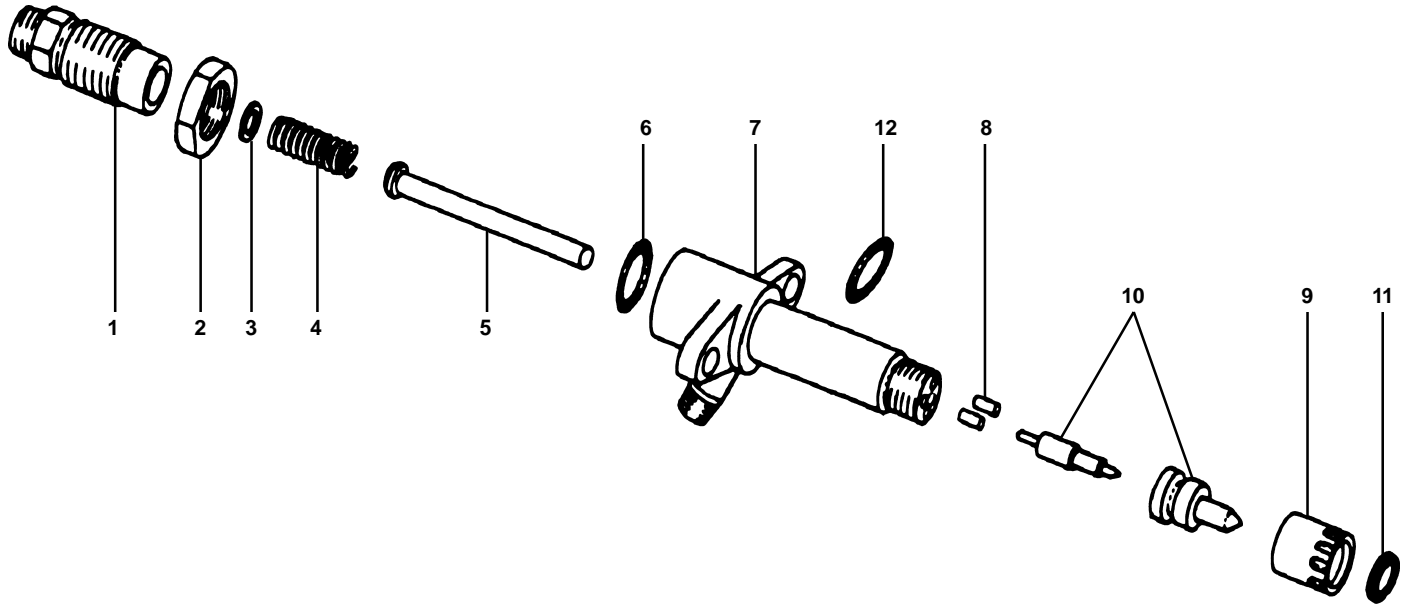


REF	PART	DESCRIPTION	QTY
1	4396054	CAP NUT	1
2	4511243	CAP NUT GASKET	2
3	74378033	ADJUSTING SCREW	1
4	74517266	LOCKING NUT	1
5	4380652	SPRING	1
6	74025148	SPINDLE ROD	1
6	74380656	SPINDLE ROD 2200-3500 Engines	1
7		SPINDLE ROD 6000-11000 Engines	1
7		NOZZLE HOLDER BODY Not serviced separately	1
8	74359368	DOWEL PIN	2
9	See Application Guide	NOZZLE ASSEMBLY	1
10	4025146	NOZZLE RETAINING NUT 2200-3500 Engines	1
10	74380662	NOZZLE RETAINING NUT 6000-1100 Engines	1
11	4025150	NOZZLE GASKET 2200-3500 Engines	1
11	4378031	NOZZLE GASKET 6000-11000 Engines	1

REF	PART	DESCRIPTION	QTY
12	4025385	DUST SHIELD	2



**"NEW STYLE" ALLIS-CHALMERS HOLDER
2200-3500/2900MKII/6000-11000 ENGINES**

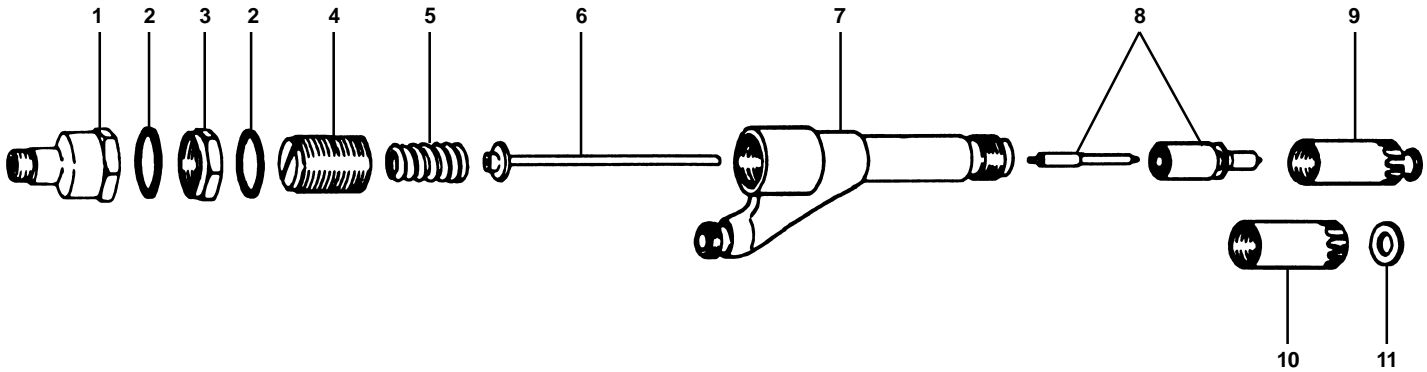


REF	PART	DESCRIPTION	QTY
1	4023570	PRESSURE ADJUSTING SCREW	1
2	74517266	LOCK NUT	1
3	4023571	PRESSURE ADJ. SPRING WASHER	1
4	4380652	PRESSURE ADJUSTING SPRING	1
5	74025148	SPINDLE ROD 2200-3500/2900 MKII Engines	1
5	74380656	SPINDLE ROD 6000-11000 Engines	1
6	930506	O RING	1
7		NOZZLE HOLDER BODY Not serviced separately	1
8	74359368	DOWEL PIN	2
9	4025146	NOZZLE RETAINING NUT 2200-3500 Engines	1
9	4024011	NOZZLE RETAINING NUT 2900 MKII Engines	1
9	74380662	NOZZLE RETAINING NUT 6000-11000 Engines	1
10	See Application Guide	NOZZLE ASSEMBLY	1
11	4025150	NOZZLE GASKET 2200-3500 Engines	1

REF	PART	DESCRIPTION	QTY
11	4378031	NOZZLE GASKET 6000-11000 Engines The 2900 MKII eng and 5455B/605 tractors do not use a nozzle gasket.	1
12	4025385	DUST SHIELD 2200-3500/6000-11000 Engines	2
12	4024010	DUST SHIELD 2900 MKII Engines	1
-	4060859	HOLDER ASSEMBLY - LESS NOZZLE 2200-3500 Engines	1
-	4007968	HOLDER ASSEMBLY - LESS NOZZLE 2900 MKII Engines	1



**ALLIS-CHALMERS HOLDER
16000-25000 ENGINES**

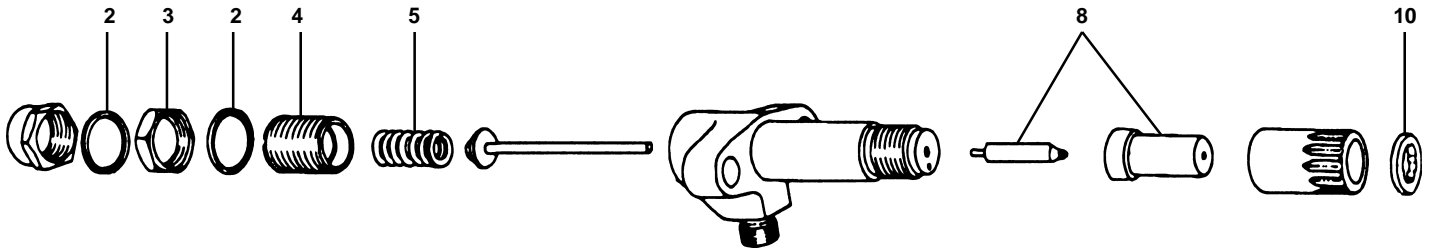


REF	PART	DESCRIPTION	QTY
1	4396054	CAP NUT	1
2	4511243	CAP NUT GASKET	2
3	74517266	LOCKING NUT	1
4	74378033	ADJUSTING SCREW	1
5	4380652	SPRING	1
6	74391240	SPINDLE ROD	1
7		NOZZLE BODY HOLDER	1
		Not serviced separately	
8	74396702	NOZZLE ASSEMBLY	1
9	74392057	NOZZLE RETAINING NUT WITH HEAT SHIELD	1
10	74390619	NOZZLE RETAINING NUT	1
11	4378031	NOZZLE GASKET	1
-	74062106	HOLDER ASSEMBLY - LESS NOZZLE 16000 Engine	1
-	74396705	HOLDER ASSEMBLY - LESS NOZZLE 25000 Engine	1

REF	PART	DESCRIPTION	QTY



**ALLIS-CHALMERS HOLDER
D175/D262 ENGINES**

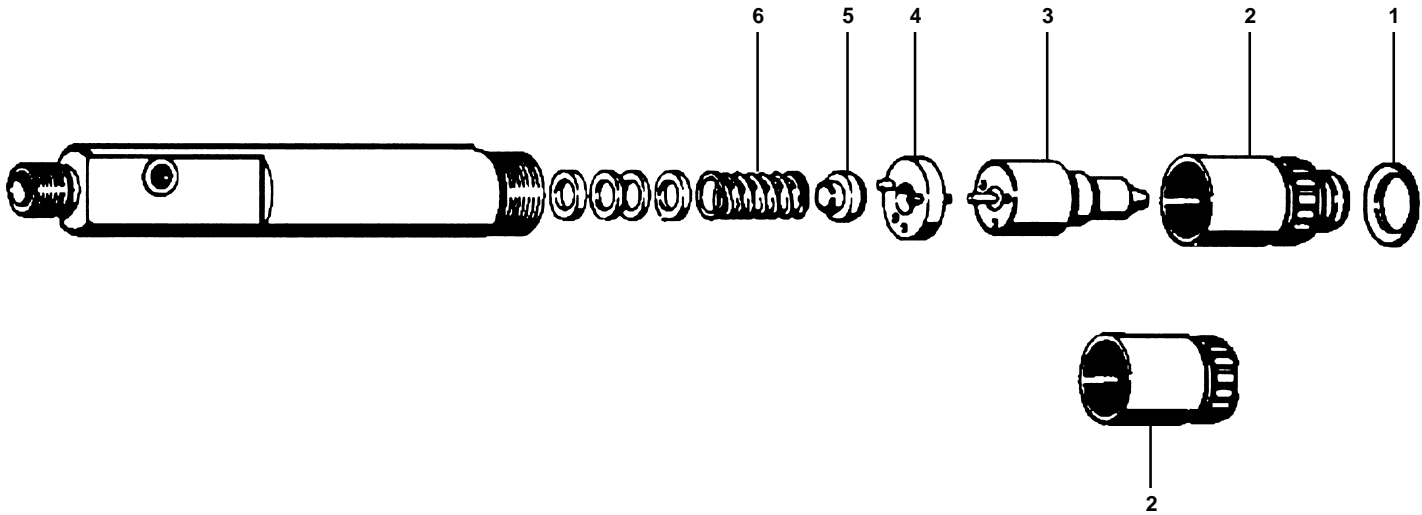


REF	PART	DESCRIPTION	QTY
		NOZZLE HOLDER ASSY 4511200	
2	4511243	CAP NUT GASKET	2
3,4	74517266	ADJUSTING SCREW	1
5	4380652	SPINDLE ROD SPRING	1
8	4050032	NOZZLE ASSEMBLY	1
10	4511204	NOZZLE GASKET	1
		NOZZLE HOLDER ASSY 4516394	
2	4511243	CAP NUT GASKET	2
3,4	74517266	ADJUSTING SCREW	1
5	4380652	SPINDLE ROD SPRING	1
8	4516393	NOZZLE ASSEMBLY	1
10	4511204	NOZZLE GASKET	1

REF	PART	DESCRIPTION	QTY



**AMBAC BAR STOCK STYLE HOLDER
433/649/670 ENGINES**



REF	PART	DESCRIPTION	QTY
1	4025150	GASKET	1
2	74062808	RETAINING NUT, HEAT SHIELD	1
2	74063244	RETAINING NUT, TAPERED	1
3	See Application Guide	NOZZLE ASSEMBLY	1
4	74062807	SPACER ASSEMBLY	1
5	74062806	SPRING SEAT	1
6	74062805	SPRING	1

REF	PART	DESCRIPTION	QTY



This Page Left Blank

REF	PART	DESCRIPTION	QTY

REF	PART	DESCRIPTION	QTY



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
D15 TRACTOR D175 ENGINE PRIOR TO ENG S/N D05033 EFF ENG S/N D05033 UP	- -	4050032 4516393	- -	4511204 4511204	- -	2175±25 2175±25	70 70	70 70
D17 WHEEL TRACTOR D262 ENGINE PRIOR S/N D01680 S/N D01680 UP	- -	4050032 4516393	- -	4511204 4511204	- -	2175±25 2175±25	70 70	70 70
D19 WHEEL TRACTOR D262 ENGINE PRIOR S/N D01499 EFF S/N D01499 UP	- -	4050032 4516393	- -	4511204 4511204	- -	2175±25 2175±25	70 70	70 70
D21 TRACTOR 3400 ENGINE 3400 MKII ENGINE 3500 ENGINE	- - 74022904	74035507 74035507 4036044	4060859 (A) 4060859 (A) 4060859 (A)	4025150 4025150 4025150	4025385 4025385 4025385	2825±25 2825±25 3125±25	50 50 50	70 70 70
160, 170, 175 TRACTOR	CAV FUEL SYSTEM							
180, 185 TRACTOR 2800 ENGINE PRIOR S/N 15561 S/N 15561 UP	6850120	4007218	4060859 (A)	4025150	4025385	2825±25	50	70
	USE AMBAC STYLE HOLDER AND NOZZLE ASSEMBLY							
190, 190XT, 190XT III TRACTOR 2800 ENGINE 2800 MKII ENGINE 2900 ENGINE	6850120 74022904	4007218 4036044	4060859 (A) 4007968 4060859 (A)	4025150 - 4025150	4025385 4024010 4025385	2825±25 3475±25 3125±25	50 50 50	70 50 70
200 TRACTOR 2900 ENGINE	74022904	4036044	4060859 (A)	4025150	4025385	3125±25	50	70
210, 220 TRACTOR 3500 ENGINE	74027883	4035508	4060859 (A)	4025150	4025385	3125±25	50	70
440 TRACTOR	CUMMINS ENGINE							
5040, 5045 TRACTOR	CAV FUEL SYSTEM							
5050, 6040 TRACTOR	FIAT ENGINE							
6060, 6070, 6080 TRACTOR 433/2200 ENGINE	4063575 4063266	4063245 4063329	(B) (B)	4009035 4009035	4009040 4009040	3975±75 3950±60	30-35 30-35	- -
7000 TRACTOR 649I ENGINE PRIOR S/N 2556 S/N 2556 UP	-	4007224	4007968 (B)	-	4024010	3675±25	50	50



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
7010 TRACTOR 649T ENGINE PRIOR S/N 2556 S/N 2556 UP	-	4007225	4007968	-	4024010	4025±25	50	50
	4063575	4063245	(B)	4009035	4009040	3975±75	30-35	-
	4063266	4063329	(B)	4009035	4009040	3950±60	30-35	-
7020 WHEEL TRACTOR 649I ENGINE PRIOR S/N 4392 S/N 4392 UP	-	4007225	4007968	-	4024010	4025±25	50	50
	4063575	4063245	(B)	4009035	4009040	3975±75	30-35	-
	4063266	4063329	(B)	4009035	4009040	3950±60	30-35	-
7030, 7040, 7050 TRACTOR 3500/3700 ENGINES	74022904	4036044	4060859 (A)	4025150	4025385	3125±25	50	70
7045 TRACTOR 670T ENGINE PRIOR S/N 3732 S/N 3732 UP	74022904	4036044	4060859 (A)	4025150	4025385	3125±25	50	70
	74037148	74036653	(B)	4025150	4009040	3950±50	30-35	-
7050 TRACTOR 3700 ENGINE PRIOR S/N 3D-53558 S/N 3D-53558 UP	74027883	4035508	4060859 (A)	4025150	4025385	3125±25	50	70
	74037148	74036653	(B)	4025150	4009040	3950±50	30-35	-
7060 TRACTOR 3700 ENGINE	-	4036044	4060859 (A)	4025150	4025385	3825±25	60	60
7080 TRACTOR 3750 ENGINE PRIOR S/N 3718 S/N 3718 UP	-	74035509	4060859 (A)	4025150	4025385	3825±25	50	50
	-	74036651	(B)	4025150	4009040	4275±75	30-35	-
8010 WHEEL TRACTOR 649T ENGINE	4063575	4063245	(B)	4009035	4009040	3975±75	30-35	-
	4063266	4063329	(B)	4009035	4009040	3950±60	30-35	-
8030, 8050, 8070, 4W220 WHEEL TRACTOR 670I/670T ENGINES	-	74036651	(B)	4025150	4009040	4275±75	30-35	-
4W305 WHEEL TRACTOR 6120 ENGINE	74391957	74396702	(B)	4378031	-	4125±25	75	50
A, R COMBINE D262 ENGINE PRIOR S/N 122396	-	4050032	-	4511204	-	2175±25	70	70
A COMBINE D262 ENGINE S/N D01681 UP	-	4516393	-	4511204	-	2175±25	70	70
C, CII COMBINE D262 ENGINE PRIOR ENG S/N D01499 EFF ENG S/N D01499 UP	-	4050032	-	4511204	-	2175±25	70	70
	-	4516393	-	4511204	-	2175±25	70	70



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
E COMBINE	GASOLINE MODEL							
EIII COMBINE	GASOLINE MODEL							
F COMBINE 2800 ENGINE	-	4007218	4060859	4025150	4025385	3475±25	50	50
FII COMBINE 2800 ENGINE PRIOR S/N 48201 S/N 48201 UP		4007218	4060859	4025150	4025385	3475±25	50	50
	4063575	4063245	(B)	4009035	4009040	3975±25	30-35	-
	4063266	4063329	(B)	4009035	4009040	3950±25	30-35	-
FIII COMBINE 2800 ENGINE S/N 49601 UP		4063245	(B)	4009035	4009040	3975±25	30-35	-
	4063575	4063329	(B)	4009035	4009040	3950±25	30-35	-
	4063266							
G COMBINE 2900 ENGINE PRIOR S/N 17001 S/N 17001 UP	74022904	4036044	4060859 (A)	4025150	4025385	3125±25	50	70
	-	4036044	4060859 (A)	4025150	4025385	3425±25	60	60
KII COMBINE 2200 ENGINE PRIOR S/N 25201 S/N 25201 UP	GASOLINE MODEL							
	4007968	4007224	4007968	-	4024010	3425±25	50	50
	4063575	4063245	(B)	4009035	4009040	3975±25	30-35	-
	4063266	4063329	(B)	4009035	4009040	3950±25	30-35	-
L COMBINE 2900 ENGINE PRIOR ENG S/N 13000 W/D2900 W/158 H.P. D3500 "ROOSA"		4007224	4007968	-	4024010	3425±25	50	50
	74022904	4036044	4060859 (A)	4025150	4025385	3125±25	50	70
LII COMBINE TRACTOR S/N 13001-15500 670T ENGINE PRIOR S/N 70-11322 (C) 670T ENGINE S/N 70-11322 UP (C)	-	4007225	4007968	-	4024010	3425±25	50	50
		4036044	4060859 (A)	4025150	4025385	3850±25	50	50
	74037148	74036653	(B)	4025150	4009040	3950±25	30-35	-
LIII COMBINE TRACTOR S/N 28001 649I/T ENGINE TYPE "E" 649I/T ENGINE TYPE "K" 670T ENGINE	-	74063350	(B)	-	4009040	3950±25	30-35	-
	-	74063350	(B)	-	4009040	3950±25	30-35	-
	-	74036651	(B)	4025150	4009040	4275±25	30-35	-
M COMBINE 2900MKII ENGINE PRIOR TRACTOR S/N 15400 MKI 120 H.P. W/ROOSA M II 130 H.P.	74022904	4036044	4060859 (A)	4025150	4024010	3125±25	50	70
	-	4007224	4007968	-	4024010	3425±25	50	50



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
MII COMBINE 2900 ENGINE TRACTOR S/N 15401-18400 TRACTOR S/N 22101-23801	- - 4063266 4063575	4007225 74035509 4063329 4063245	4007968 4060859 (A) (B) (B)	- 4025150 4009035 4009035	4024010 4024010 4009040 4009040	3425±25 3825±25 3950±60 3975±75	50 50 30-35 30-35	50 50 - -
N V COMBINE 670 ENGINE PRIOR S/N 70-11332 S/N 70-11332 UP COMBINE S/N 6101 UP	74022904 74037148 -	4036044 74036653 74036651	4060859 (A) (B) (B)	4025150 4025150 4025150	4025385 4009040 4009040	3125±25 3950±25 4275±75	50 30-35 30-35	70 - -
N VI COMBINE 670 ENGINE	-	74036651	(B)	4025150	4009040	4275±75	30-35	-
N VII COMBINE 685I ENGINE PRIOR TRACTOR S/N 4500 TRACTOR S/N 4501 UP PRIOR S/N 85-02441	74322412 74322412 74322412	74322227 74322227 74322227	(B) (B) (B)	4378031 4378031 4378031	74322607 74322607 4025385	3850±25 3850±25 3850±25	30-35 30-35 30-35	- - -
HD3 CRAWLER D175 ENGINE PRIOR S/N D05033 S/N D05034 UP	- -	4050032 4516393	- -	4511204 4511204	- -	2175±25 2175±25	70 70	70 70
HD4 CRAWLER 433/2200 ENGINE	-	4007218	4060859 (A)	4025150	4025385	2825±25	50	70
HD6 CRAWLER 344/516 ENGINE PRIOR S/N 13322	74346227	74050594	-	4511204	4025385	2825±25	50	60
HD6G CRAWLER 344/516 ENGINE PRIOR S/N 13322 6000/7000 ENGINE S/N 6-15383 UP	74346227 -	4050594 74321933	- -	4511204 4378031	4025385 4025385	2825±25 3825±25	50 50	60 70
HD6A, AG, B, E, EP CRAWLER 6000 ENGINE PRIOR S/N 6-15383	-	74321933	-	4378031	4025385	3825±25	50	70
HD7G CRAWLER 6000/7000 ENGINE PRIOR S/N 7-15384 S/N 7-15384 UP	- -	74321933 74321933	- -	4378031 4378031	4025385 4025385	3825±25 3825±25	50 50	70 70
HD7G-B CRAWLER 3500 ENGINE PRIOR S/N 3D-15949 S/N 3D-15949-3D-18869 S/N 3D-18870 UP	74027883 - 74027883	4035508 4035508 4035508	4060859 (A) 4060859 (A) 4060859 (A)	4025150 4025150 4025150	4025385 4025385 4025385	3125±25 3125±25 3125±25	50 50 50	70 50 70



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
HD11B, E, EC, ES, S, F, FC, CRAWLER 344/516 ENGINE S/N 101-6427 10000/11000 ENGINE S/N 6428-12201	74346227 -	4050594 74321933	-	4511204 4378031	4025385 4025385	2850±50 2825±25	50 50	60 70
D11G. GC CRAWLER 10000 ENGINE S/N 10-7107 UP	-	74321933	-	4378031	4025385	3825±25	50	70
HD11EP CRAWLER 685T/10000/11000 PRIOR S/N 12201 S/N 12201 UP	- -	74321933 74321932	- -	4378031 4378031	4025385 4025385	2825±25 2825±25	50 50	70 70
HD11E, ES, AG CRAWLER 10000/11000 ENGINES S/N 12201 UP	-	74321932	-	4378031	4025385	2825±25	50	70
HD11B CRAWLER 11000 ENGINE PRIOR S/N 11-18999 S/N 11-18882-18934 S/N 11-18999-20378 S/N 11-20378 UP	- - - -	74321932 74321933 74321933 74321935	- - - -	4378031 4378031 4378031 4378031	4025385 4025385 4025385 4025385	3825±25 3825±25 3825±25 3825±25	50 50 50 50	70 70 70 70
HD 12G CRAWLER 685T/10000/11000 ENGINE S/N 43C1001 and up	-	74321932	-	4378031	4025385	3825±25	50	70
HD12GB CRAWLER 685T/10000/11000 ENGINE	-	74321933	-	4378031	4025385	3825±25	50	70
HD16 CRAWLER 844 ENGINE PRIOR TRACTOR S/N 4001	-	74321935	-	4378031	-	3825±25	50	70
HD16GC CRAWLER 16000 ENGINE	-	74378021	-	4378031	-	2825±25	70	70
HD16D, DC, DP CRAWLER 16000/21000/25000/6120/6138 ENGINE PRIOR S/N 16-05069 S/N 16-05069-08963 S/N 16-08964-19862 S/N 16-09863 UP (D)	- 74390625 74391957 74392121	- 74396702 74396702 74396702	- - - 74396705	4378031 4378031 4378031 4378031	- - - -	2825±25 3825±25 4125±25 4125±25	70 70 75 75	70 70 75 75
HD16B CRAWLER 16000/21000/25000/6120/6138 ENGINE (D)	74392121	74396702	74396705	4378031	-	4125±25	75	75
HD21A, F CRAWLER 16000/21000/25000 ENGINES PRIOR TRACTOR S/N 11001	-	4050594	-	4511204	-	2150±50	50	60



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
HD21G CRAWLER 16000/21000/25000 ENGINES TRACTOR S/N 11001-12801 PRIOR S/N 21-3380 S/N 21-3814-3833	- - -	- - -	- - -	4378031 4378031 4378031	- - -	2825±25 2825±25 2825±25	70 70 70	70 70 70
HD21A CRAWLER 16000/21000/25000 ENGINES S/N 12801 UP (D)	74390625	74396702	-	4378031	-	3825±25	70	70
HD21P CRAWLER 16000/21000/25000/6120/6138 S/N 12904-14605 S/N 14606-16000 (D)	74390625 74391957	74396702 74396702	- -	4378031 4378031	- -	3825±25 4125±25	70 75	70 75
HD21B CRAWLER 16000/21000/25000/6120/6138 S/N 16005 UP (D)	74392121	74396702	74396705	4378031	-	4125±25	75	75
HD21C CRAWLER 25000 ENGINE S/N 71A21001 UP	74392121	74396702	74396705	4378031	-	4125±25	75	75
TL12D LOADER D262 ENGINE LOADER S/N 2003 UP PRIOR S/N 122405 S/N 122405 UP	- - -	4050032 4050032 4516393	- - -	4511204 4511204 4511204	- - -	2175±25 2175±25 2175±25	70 70 70	70 70 70
TL14D LOADER D262 ENGINE LOADER S/N 1525 UP	-	74321933	-	4378031	4025385	3825±25	50	70
TL16D LOADER 6000/7000 ENGINE LOADER S/N 1801 UP	-	74321933	-	4378031	4025385	3825±25	50	70
TL20D LOADER 516 ENGINE LOADER S/N 536 UP PRIOR S/N 108983 S/N 108983-116788 S/N 116789-118346 S/N 118347 UP	74346227 74346227 - - -	74050594 74050594 74050594 74321933 74321933	- - - - -	4511204 4511204 4511204 4378031 4378031	4025385 4025385 4025385 4025385 4025385	2150±50 2150±50 2150±50 3825±25 3825±25	50 50 50 50 50	60 60 60 70 70
TL30D LOADER 685T/10000/11000 ENGINE PRIOR S/N 118347 S/N 118347 UP	- -	74321933 74321933	- -	4378031 4378031	4025385 4025385	3825±25 3825±25	50 50	70 70
TL40D LOADER 16000/21000/25000/6120/6138 ENGINE	74390625	74396702	-	4378031	-	3825±25	70	70
345 LOADER 2800 ENGINE PRIOR S/N 3D-99234 S/N 3D-99234 UP	- -	4007218 4007218	4060859 4060859	4025150 4025150	4025385 4025385	3475±25 3475±25	50 50	50 50



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
545, 545H LOADER 2900 ENGINE PRIOR TO SERIES B PRIOR S/N 2D-53675 S/N 2D-53675 UP	74022904 74022904 -	4036044 4036044 4036044	4060859 (A) 4060859 (A) 4060859 (A)	4025150 4025150 4025150	4025385 4025385 4025385	3125±25 3125±25 3125±25	50 50 60	70 70 60
545B, 605B LOADER 2900 MKII ENGINE PRIOR S/N 2D-83104 2900 MKII ENGINE S/N 2D-83104 UP 649T ENGINE	- - -	4007224 4007224 4007225	4007968 4007968 4007968	- - -	4024010 4024010 4024010	3475±25 3475±25 3475±25	50 50 50	50 50 50
645 WHEEL LOADER 3400/3500/3500MKII/3700/670 ENGINE PRIOR S/N 3D-10184 S/N 3D-10184 UP	- 74027883	4036044 4035508	4060859 4060859 (A)	4025150 4025150	4025385 4025385	3125±25 3125±25	60 50	60 70
645B WHEEL LOADER 3400/3500/3500MKII/3700/670 ENGINE S/N 11Y03501 UP S/N 16L03501 UP	- -	74035509 74035509	4060859 4060859	4025150 4025150	4025385 4025385	3825±25 3825±25	50 50	50 50
745, 745H LOADER 685T/10000/11000 ENGINE PRIOR S/N 11-12871 S/N 11-12871-18335 S/N 11-18336-18779 S/N 11-18780-20377 S/N 11-20378 UP	- - - - -	74321932 74321932 74321933 74321932 74321935	- - - - -	4378031 4378031 4378031 4378031 4378031	4025385 4025385 4025385 4025385 4025385	2850±50 3825±25 3825±25 3825±25 3825±25	50 50 50 50 50	70 70 70 70 70
745B, 745HB LOADER 685T/10000/11000 ENGINE S/N 72C02901 UP S/N 62Y02901 UP S/N 94A02901 UP	- - -	74321935 74321935 74321935	- - -	4378031 4378031 4378031	4025385 4025385 4025385	3825±25 3825±25 3825±25	50 50 50	70 70 70
745C LOADER 685T/10000/11000 ENGINE S/N 64M03651 UP S/N 22Y03651 UP	- -	74321935 74321935	- -	4378031 4378031	4025385 4025385	3825±25 3825±25	50 50	70 70
945, 945B LOADER 16000/21000/25000/6120/6138 ENGINE PRIOR S/N 25-06564 S/N 25-06565 UP	74392121 74392121	74396702 74396702	74396705 74396705	4378031 4378031	- -	4125±25 4125±25	75 75	75 75
ACC 60, 70 FORKLIFT D262 ENGINE	-	4516393	-	4511204	-	2175±25	70	70
ACC 80, 100CD FORKLIFT D262 ENGINE	-	4516393	-	4511204	-	2175±25	70	70



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
DD GRADER								
D262 ENGINE								
PRIOR S/N 98590	-	4050032	-	4511204	-	2150±25	70	70
EFF ENG S/N 98590 UP	-	4050032	-	4511204	-	2175±25	70	70
EFF ENG S/N 2573 UP	-	4516393	-	4511204	-	2175±25	70	70
65 GRADER								
D262 ENGINE								
S/N 24A00201 UP	-	4516393	-	4511204	-	2175±25	70	70
S/N 56Y02201 UP	-	4516393	-	4511204	-	2175±25	70	70
M100, M100B GRADER								
685T/10000/11000 ENGINE								
PRIOR GRADER S/N 1209	-	74321933	-	4378031	4025385	2825±25	50	70
GRADER S/N 1209 UP	-	74321932	-	4378031	4025385	2825±25	50	70
S/N 67S05001-06588	-	74321932	-	4378031	4025385	2825±25	50	70
S/N 67S06589 UP	-	74321933	-	4378031	4025385	2825±25	50	70
MD100C GRADER								
685T/10000/11000 ENGINE	-	74321935	-	4378031	4025385	3825±25	50	70
ENGINE S/N 27Y08001 UP								
M150C, 200C GRADER								
685T/10000/11000 ENGINE								
S/N 99C01001 UP	-	74321935	-	4378031	4025385	3825±25	50	70
S/N 90M01001 UP	-	74321935	-	4378031	4025385	3825±25	50	70
260 SCRAPER								
16000 ENGINE	-	74378021	-	4378031	-	2825±25	70	70
15000 ENGINE	-	-	-	4378031	-	2825±25	70	70
260A, AE SCRAPER								
19000/25000 ENGINES								
SCRAPER S/N 8001-9000	74391957	74396702	-	4378031	-	4125±25	75	75
S/N 59L06001 UP	74391957	74396702	-	4378031	-	4125±25	75	75
PRIOR S/N 21-10115	74391957	74396702	-	4378031	-	4125±25	75	75
S/N 21-10115 UP (D)	74392121	74396702	74396705	4378031	-	4125±25	75	75
260B SCRAPER								
6138I/25000 MKII ENGINES								
S/N 29M00101 UP	74392121	74396702	74396705	4378031	-	4125±25	75	75
260E SCRAPER								
19000 ENGINES								
PRIOR S/N 19-01765	-	74396702	-	4378031	-	3825±25	70	70
S/N 19-01765-01868	-	74396702	-	4378031	-	3825±25	70	70
S/N 19-01869 UP (D)	74391957	74396702	-	4378031	-	4125±25	75	75



APPLICATION GUIDE

See Page 51 For Application Guide Notes

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE	
							RET NUT	CAP NUT
261B SCRAPER 6138I/25000 MKII ENGINES	74392121	74396702	74396701	4378031	-	4125±25	75	75
262B SCRAPER 685T/11000 MKII ENGINES	74392121	74396702	74396701	4378031	-	4125±25	75	75
263B SCRAPER 685T/11000 MKII ENGINES REAR ENGINE - ALL	74392121	74396702	74396701	4378031	-	4125±25	75	75
	-	74321935		4378031	-	3825±25	50	70
TS300 SCRAPER 844 BUDA ENGINE PRIOR S/N 39965 S/N 39965 UP	-	74050594	-	4511204	4025385	2150±25	50	60
	-	74050594	-	4511204	4025385	2150±25	50	60
TS360 SCRAPER 844 BUDA ENGINE PRIOR SCRAPER S/N 2001 SCRAPER S/N 2001 UP	-	74050594	-	4511204	4025385	2150±25	50	60
	-	-	-	4378031	4025385	2825±25	70	70
460 SCRAPER 25000 ENGINE PRIOR SCRAPER S/N 4300	74390625	74396702	-	4378031	-	3825±25	70	70
460B SCRAPER 25000 ENGINE PRIOR SCRAPER S/N 4300-5000 PRIOR S/N 25-01978 S/N 25-01979 UP (D)	74390625	74396702	-	4378031	-	3825±25	70	70
	74390625	74396702	-	4378031	-	3825±25	70	70
	74391957	74396702	-	4378031	-	4125±25	75	75
840B LOADER 2800 ENGINE	-	4007218	4060859	4025150	4025385	2825±25	50	70
940 LOADER 2900 ENGINE	-	4007224	4007968	4025150	4024010	3825±25	50	50



NOTES TO APPLICATION GUIDE

APPLICATION AND ENGINE	HOLDER ASSY	NOZZLE	HOLDER	NOZZLE GASKET	DUST SHIELD	OPENING PRESSURE	TORQUE RET NUT	CAP NUT
<p>(a) This is a late style holder with a one piece top nut and o-ring seal. This requires an adapter, part number 4023572, and a gasket, part number 4023573, to bring its height even with the return line.</p> <p>(B) Robert Bosch and AMBAC bar stock style holder assembly.</p> <p>(C) Below 200 B.H.P.</p> <p>(D) Long-sac versus short-sac as used in 16000H, 17000, 21000 MKII and 25000 MKII engines. Some engines originally used holder assembly 74392304, which was a "long-sac type" and is discontinued. Remove the 74392576 insert from the head and use the 74396702 nozzle. The above change was effective with the following engine serial numbers: 16-10155 plus 16-09919 through 16-09943 17-01009 19-02158 21-10854 plus 21-10581 through 21-10585 25-02871</p> <p>Use 74062106 holder for short-sac applications. Use 74396705 for long-sac applications.</p>								

**CONTACT
MINNPAR FOR YOUR
ENGINE PARTS
NEEDS
612-379-0606**

Printed hard copy book version = part no. 6813511

CD-ROM pdf file book version = part no. 6813513

Use Acrobat Reader to view & / or printed this file.

**Acrobat Reader can be download free from the internet, or
can be purchased from most computer/software stores.**

**900 6TH Avenue Southeast, Minneapolis, Minnesota 55414 USA
Telephone: (612) 379-0606 Fax: (612) 378-3741 email:info@minnpar.com**