

150-C 200-C Motor Graders

PARTS CATALOG

AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, or home or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason **MOST ACCIDENTS CAN BE PREVENTED** by recognizing the real cause and doing something about it before the accident occurs.

Regardless of the care used in the design and construction of any type of equipment, there are many conditions that cannot be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A careful operator is the best insurance against an accident. The complete observance of each simple rule would prevent many deaths and serious injuries each year. When you see:

Never attempt to clean, oil, or adjust a machine while it is in motion.

NATIONAL SAFETY COUNCIL

WARNING

On machines having hydraulically, mechanically, and/or cable controlled equipment (such as shovels, loaders, dozers, scrapers, etc.) be certain the equipment is lowered to the ground before servicing, adjusting and/or repairing. If it is necessary to have the hydraulically, mechanically, and/or cable controlled equipment partially or fully raised to gain access to certain parts, be sure the equipment is suitably supported by means other than the hydraulic line cylinders, cable and/or mechanical devices used for controlling the equipment.

THIRD PRINTING (4-78)

Includes all information as released in Supplement No. 3 (4-76); also includes updating information which has not been previously published.

150-C

200-C

motor graders

parts catalog

S/N 99C01001-UP
S/N 90M01001-UP

S/N 58U01701-UP
S/N 59C01701-UP

Form 70689654 English



WARNING

STUDY THE OPERATION AND MAINTENANCE
INSTRUCTION MANUAL THROUGH BEFORE
STARTING, OPERATING, MAINTAINING,
FUELING OR SERVICING THIS MACHINE.



SUPPLEMENT NO. 3
(Includes Supplements No. 1 & 2)

PARTS CATALOG FORM 70689654
150C - 200C MOTOR GRADERS

(4-76)

ATTENTION: Insert this sheet in the front of publication as record of receipt.
Replace or add pages in the publication according to instructions below.

Additional copies of this supplement are available. Please direct your request to
Fiat-Allis Construction Machinery, Inc., Technical Publications Dept., 3000 South
6th Street, Springfield, Illinois, 62710 U.S.A.

7 (Revised)	*53 (Revised Feb. 1975)	135 (No change)	*269 (Revised May 1974)
8 (Revised)	53a (Revised)	136 (Revised)	*270 (Revised Feb. 1975)
9 (Revised)	*53b (Added Feb. 1975)	137 (Revised)	*270a (Added Feb. 1975)
10 (Revised)	*53c (Added Feb. 1975)	138 (Revised)	*270b (Added Feb. 1975)
11 (Revised)	*53d (Added Feb. 1975)	163 (Revised)	*271 (Revised Feb. 1975)
12 (Revised)	*53e (Added Feb. 1975)	164 (Revised)	272 (No change)
13 (Revised)	*53f (Added Feb. 1975)	165 (Revised)	281 (No change)
14 (Revised)	*54 (Revised Feb. 1975)	166 (No change)	*282 (Revised May 1974)
17 (Revised)	*55 (Revised Feb. 1975)	168a (Added)	283 (Revised)
18 (Revised)	*56 (Revised Feb. 1975)	168b (Added)	*284 (Revised May 1974)
19 (Revised)	*56a (Added Feb. 1975)	168c (Added)	*285 (Revised May 1974)
20 (Revised)	*56b (Added Feb. 1975)	Blank	285a (Revised)
21 (Revised)	65 (Revised Feb. 1975)	169 (Revised)	*285b (Added May 1974)
22 (No change)	66 (No change)	170 (Revised)	285c (Revised)
23 (Revised)	67 (Revised Feb. 1975)	194a (Added)	Blank
24 (No change)	68 (No change)	Blank	*286 (Revised Feb. 1975)
29 (Revised)	73 (Revised Feb. 1975)	199 (Revised)	293 (Revised)
30 (No change)	74 (Revised Feb. 1975)	199a (Added)	294 (Revised)
*32a (Added Feb. 1975)	81 (No change)	Blank	297 (Revised)
32b (Revised)	*82 (Revised Feb. 1975)	200 (Revised)	*297a (Added May 1974)
*32c (Added Feb. 1975)	91 (Revised)	*211 (Revised May 1974)	*297b (Added May 1974)
Blank	92 (Revised)	*212 (Revised May 1974)	298 (No change)
35 (No change)	93 (Revised)	*219 (Revised Feb. 1975)	
*36 (Revised May 1974)	94 (No change)	*220 (Revised Feb. 1975)	
*37 (Revised May 1974)	*101 (Revised May 1974)	*221 (Revised Feb. 1975)	
38 (Revised)	102 (No change)	*222 (No change)	
39 (No change)	*103 (Revised May 1974)	241 (No change)	
40 (Revised)	*104 (Revised May 1974)	*242 (Revised Feb. 1975)	
*42a (Added Feb. 1975)	111 (No change)	*243 (Revised)	
*42b (Added Feb. 1975)	112 (Revised)	244 (No change)	
*43 (Revised Feb. 1975)	113 (Revised)	*265 (Revised May 1974)	
44 (No change)	114 (Revised)	266 (Revised)	
*45 (Revised Feb. 1975)	*127 (Revised May 1974)	267 (Revised)	
*46 (Revised Feb. 1975)	128 (No change)	268 (Revised)	

NOTICE
These changes are
included in this copy

* *Previously issued page

Printed in U. S. A.

PUBLICATIONS AVAILABLE
FOR
150-C and 200-C MOTOR GRADERS

DESCRIPTION	ENGLISH	ESPAÑOL (Spanish)	FRANÇAIS (French)	PORTUGUÊS (Portuguese)	ITALIANO (Italian)	DEUTSCH (German)
<u>PARTS CATALOGS</u>						
Motor Grader	70689654					
Cab Glass	70698502					
Injection Pump						
Bosch (Germany)	70698576					
Roosa Master	70685399					
<u>OPERATOR AND MAINTENANCE INSTRUCTION MANUAL</u>						
150-C, 200-C	70689655	70693852	70693853			
<u>SERVICE MANUALS</u>						
Electrical System	70696657	*	*			
Engine	70645121	70650410	70650412	70650411		
Front Wheel, Axle & Wheel Lean	70693124	*	*			
Fuel Injection Nozzles	70682797					
Fuel Injection Pump						
Bosch (Germany)	70681649					
Roosa Master	70656820					
Hydraulic System	70690854	*	*			
Moldboard, Drawbar, Circle, Scarifier & Gear Cases	70693744	*	*			
Power Control Box, Vertical Drive & Power Take-off	70690857	*	*			
Rear Wheels & Brakes	70657712	*	*			
Tandems & Rear Axle	70641623	*	*			
Transmission & Engine						
Clutch	70690696	*	*			
Turbocharger (TO-4)	70687805	70679633	70679635	70679634		
Service Manual Set		70697456	70697457			

*Use Complete Service Manual Set

NOTICE

CONSULT FIAT-ALLIS CONSTRUCTION MACHINERY
DEALER FOR PUBLICATIONS.

SEE CONSTRUCTION MACHINERY TECHNICAL PUBLI-
CATIONS INDEX (FORM 70658800) FOR ALL AVAILABLE
PUBLICATIONS.

PUBLICATIONS INDEX (FORM 70658800) IS AVAILABLE
FREE FROM YOUR DEALER.

(Revised April 1978)

IMPORTANT

All parts listed herein, which have no specific usage indicated, are applicable to all models. Those parts which are used only on specific models are so indicated.

Attaching parts such as bolts, nuts, rivets, screws, washers, etc., are indented immediately following the parts which they attach.

Parts indicated with a square (□) are also available in packaged sets. Refer to section titled "PACKAGED PARTS".

The terms "right" and "left" used throughout this parts catalog are determined by facing the direction of forward travel.

The engine is mounted unconventionally with the flywheel toward the front of the machine, but all engine parts are designated in respect to the engine as it would be installed in a conventional machine with the flywheel to the rear.

INSTRUCTIONS FOR ORDERING PARTS

At the time this parts catalog was published the listed part numbers were current. It is our policy to constantly improve our machines and therefore, part numbers and design may change. When ordering parts, verify part numbers through your dealer's parts catalog which is up to date with all latest part numbers.

Order parts from the dealer covering the local territory.

ALWAYS GIVE THE MODEL AND SERIAL NUMBER OF MACHINE. IF PARTS ARE FOR AN ASSEMBLY WHICH HAS A MODEL AND/OR SERIAL NUMBER (SUCH AS ENGINE ASSEMBLY, PUMP ASSEMBLY), ALSO INCLUDE THIS INFORMATION.

To obtain parts promptly, give part name and part number.

Give post office address, town, county and state where parts are to be shipped. Also specify whether material is to be shipped by freight, express or parcel post.

Confirm all telephone or telegraph orders in writing.

Parts for standard motor accessories such as generators and starting motors should be ordered from authorized Service Stations maintained by manufacturers of these units throughout the country.

No credit will be allowed on parts unless they are returned to the dealer from whom they were purchased; from there they will be returned, at the customer's expense, to the factory for inspection.

Unless claims for shortages or errors are made immediately upon receipt of goods, they will not be considered.

When broken goods are received, a full description of the damage should be made by the carrier agent on the freight bill. If this description is insisted upon, full damage can always be collected from the transportation company.

No responsibility is assumed for delay or damage to merchandise while in transit. Our responsibility ceases upon delivery of shipment to the transportation company from whom a receipt is received showing that shipment was in good condition when delivered to them; therefore, claims (if any) should be filed with the transportation company and not with Allis-Chalmers.

The right is reserved to change the construction or material of any parts where it seems desirable to do so without incurring the obligation of installing such changes on units already delivered.

(Specifications and design subject to change without notice)

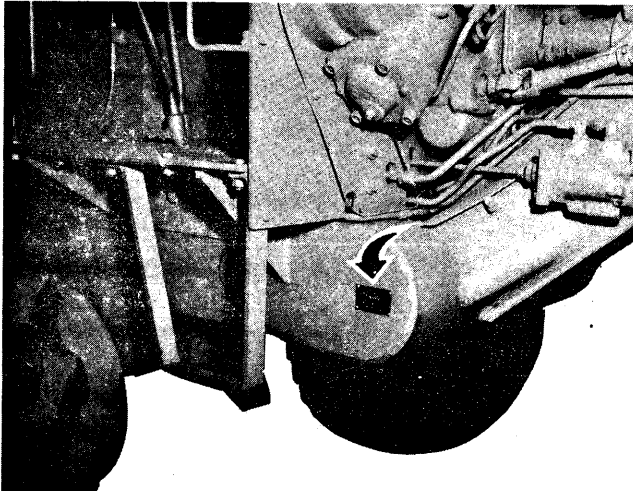
MODEL IDENTIFICATION

MODEL SYMBOL	ENGINE MODEL	DESCRIPTION
150-C	11000 (Engines prior to S/N 11-25933)	Turbocharged diesel engine driven Motor Grader
	11000 MKII (Engines S/N 11-25933 thru 30236)	
	685T (Engines S/N 85-001002 and up)	
200-C	11000 (Engines prior to S/N 11-25933)	Turbocharged diesel engine driven Motor Grader
	11000 MKII (Engines S/N 11-25933 thru 30027)	
	685T (Engine S/N 85-001006 and up)	

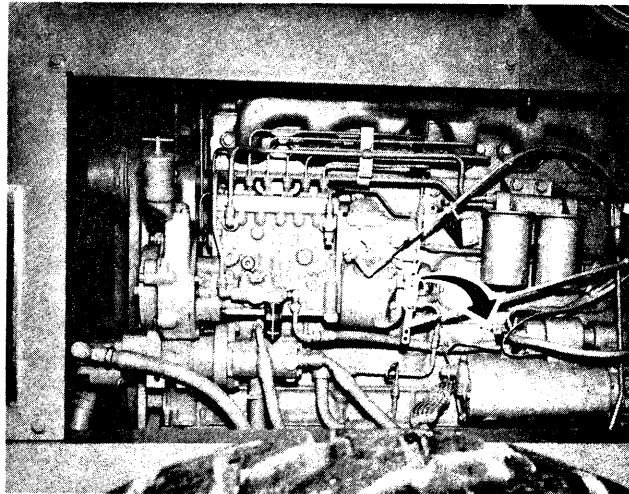
RECORD YOUR SERIAL NUMBERS BELOW

MODEL SERIAL NUMBER _____

ENGINE SERIAL NUMBER _____



T-77638



T-77637

MODEL SERIAL NUMBER

Models are identified by an 8-character combination of letters and numerals.

***SERIAL NUMBER** consisting of all 8 characters must always be submitted for positive identification of your machine. This Point Cannot Be Over-emphasized.

GRADER MODEL	*SERIAL NO.	
	PRODUCT CODE	UNIT NO.
150-C	9 9 C	0 1 0 0 1
	5 8 U	0 1 7 0 1
200-C	9 0 M	0 1 0 0 1
	5 9 C	0 1 7 0 1

ALPHABETICAL INDEX

Air Cleaner.....	68	Filters (Continued)	
Air Cleaner Extension.....	64	Engine Oil.....	33,36,38
Air Cleaner Intake.....	69	Fuel	40,42,42B
Air Cleaner Mounting.....	66	Hydraulic System.....	214
Air Conditioning System.....	288	Transmission Oil.....	101
Alternator.....	268,270,270B	Water Separator.....	53B,53J
Aspirator.....	65A	Floor.....	256
Batteries and Cables.....	272	Flywheel and Housing.....	18
Belts, driving.....	72,244,268,270,270B,286	Frame.....	162
Belt, safety.....	253	Front Axle and Wheel Lean.....	172
Booster		Front Wheel.....	150
Brake.....	158	Front Wheel Spindles & Steering Linkage...	170
Engine Clutch.....	86	Fuel Filter.....	40,42,42B
Brake Booster.....	158	Fuel Supply Line.....	46
Brake Control.....	156	Fuel Tank.....	44
Brakes		Gauges	
Control Box.....	238	Air Restriction Indicator.....	66
Engine Clutch.....	84	Ammeter.....	264
Parking.....	127	Engine Oil Level.....	28,29
Wheel.....	152	Engine Oil Pressure.....	266
Cab.....	283,285A	Engine Temperature.....	264
Cab Heater.....	294,295A	Fuel Level.....	44
Camshaft.....	26	Hour Meter.....	275
Canopy.....	291	Hydraulic System Oil Level.....	215
Chain.....	148	Main Transmission Oil Level.....	135
Compressor(Air Conditioning).....	290	Transmission Oil Pressure.....	267
Connecting Rod.....	14	Gear Shift Tower.....	142
Control Box Assembly.....	238	Grill.....	70
Crankshaft.....	20	Hand Primer Pump.....	42A
Cylinder		Heater, Cab.....	294,295A
Brake Master.....	161	Heat Exchanger.....	80
Brake Wheel.....	160	Hood.....	251
Engine Clutch Release.....	88	Hood Side Plates.....	277
Main Transmission Shift.....	139	Horn.....	260
Moldboard Pitch.....	194A,195	Hose Parts.....	6
Moldboard Shift.....	199,199A	Hour Meter.....	275
Scarifier.....	168C,169	Hydraulic Pump Drive.....	15
Wheel Lean.....	168C,169	Hydraulic System.....	174 thru 236
Cylinder Block.....	11	Clutch/Brake Booster.....	220
Cylinder Head.....	22	Control Box Scavenging.....	236
Cylinder Sleeve.....	11	Control Valve.....	218
Dash and Floor.....	256	Moldboard Pitch.....	200
Defroster Fan.....	293	Moldboard Shift.....	196
Elements		Moldboard Shift/Pitch Control.....	202
Air Cleaner.....	68	Scarifier.....	177
Engine Coolant.....	74	Steering.....	216
Engine Oil Filter.....	34,38	Wheel Lean.....	174
Fuel Filter.....	41,42,43	Hydraulic System Breather.....	214
Hydraulic System Filter.....	214	Hydraulic Tank.....	214
Severe-Service Fuel Filter.....	41	Important.....	2
Severe-Service Oil Filter.....	36	Injection Fuel Return Lines.....	53,53E
Transmission Oil Filter.....	101	Injection Nozzles and Lines.....	51,53C,53G
Water Separator.....	53B,53J	Injection Pump.....	49,53A,53K
Engine and Mounting.....	10	Instruments.....	264
Engine Breather.....	25	Lights	
Engine Clutch.....	82	Beacon.....	298B,298D
Engine Clutch Booster.....	86	Flood.....	263,276
Engine Clutch Control.....	84	Head.....	263
Engine Clutch Oil Return.....	81	Instrument Panel.....	264
Engine Clutch Release Cylinder.....	88	Stop.....	263A
Engine Clutch Sequence Valve Lines.....	108	Tail.....	263A
Engine Primer.....	56B	Turn Signal.....	262A
Engine Shut-off Control.....	56,56A	Lights, Horn and Wiring.....	260
Exhaust Pipe.....	65	Main Bearings.....	20
Fan.....	72	Manifolds	
Fan Belt Tightener.....	75	Exhaust.....	59
Filters		Intake.....	58
Engine Coolant.....	74	Water Outlet.....	78
		Model Identification.....	3

ALPHABETICAL INDEX

Moldboard			
Assembly.....	210	Timing Gears.....	20,26,49
Circle Turn.....	209	Tires, Tubes and Rims.....	151
Drawbar and Circle.....	206	Tools.....	278
Extensions.....	212	Transmission and Rear Axle Supports.....	143
Hydraulic Pitch.....	200	Transmission(High-Low Range)	
Lift.....	190	Assembly.....	89
Power Shift.....	196	Breather.....	101
Pitch Controls.....	205	Case and Cover.....	90
Power Shift Control Valve.....	230	Clutch Shafts.....	91
Rock Bits.....	213	Filter.....	101
Side Shift.....	188	Output Shaft.....	96
Shift Controls.....	205	Pressure Test Lines.....	100A
Muffler.....	65	Pump Drive.....	97
Numerical Index.....	299	Shifter Valve Lines.....	99
Oil Cooler.....	33	Shifter Valves.....	94
Oil Filter.....	33,36,38	Transmission (Main)	
Oil Pan.....	28,29	Assembly.....	116
Oil Pump.....	30,32B	Case and Covers.....	116
Oil Return Line.....	226	Clutches.....	125
Packaged Parts.....	7	Dipstick.....	135
Painting and Marking.....	258	Filter.....	101
Parking Brake.....	127	Shafts and Gears.....	120
Parking Brake Control.....	128	Transmission Control Valve Lines.....	113
Piston.....	14	Transmission Forward and Reverse	
Pointer, timing.....	18	Controls (Main).....	140
Power Control Shafts.....	232	Transmission Oil Cooling Lines.....	133A
Power Steering.....	163	Transmission Oil Pump	
Power Take-off.....	244	Main.....	134
Power Take-off Vertical Drive.....	248	Range.....	106
Pumps		Transmission Pump and Filter Lines	
Brake Booster.....	224	Main.....	130
Control Box Scavenging.....	235	Range.....	102
Control Valve Supply.....	222	Transmission Speed Control Valve	
Engine Clutch Booster.....	224	Linkage(Main).....	137
Engine Oil.....	30,32B	Turbocharger.....	60
Fuel Injection.....	49,53A,53K	Turn Signal Wiring.....	262A
Hand Primer.....	42A	Universal Joint.....	115,247
Steering.....	224	Valves	
Tire.....	296	Control Box Pressure Regulating.....	227
Transmission Oil.....	106,134	Engine Oil Pressure Regulating.....	11
Water.....	76	Engine Oil Pressure Relief.....	30,32B
Radiator.....	70	Exhaust.....	23
Raincap.....	66	Intake.....	23
Rear Axle.....	144	Main Transmission Pressure	
Rear Axle Supports.....	143	Regulating.....	133
Rear Wheels.....	150	Moldboard Shift/Pitch Control.....	230
Reverse Alarm.....	263B	Range Transmission Pressure	
ROPS Mounting Brackets.....	292	Regulating.....	105
Rotating Warning Beacon.....	298B,298D	Scarifier Control.....	230
Scarifier.....	176	Selector(Transmission).....	126
Scarifier Control.....	178	Sequence(Engine Clutch).....	108
Scarifier Control Piping.....	177	Shifter(Range Transmission).....	94
Scarifier Lift.....	180	Shifting Fork Control.....	243
Seat.....	254	Transmission Control(Range and Main)....	110
Seat Mounting.....	253	Travel Limit(Moldboard Lift and Shift)..	185
Shifter Valve Lines(Range Trans.).....	99	Wheel Lean Control.....	230
Shifting Fork Control Levers.....	241	Valve Operating Mechanism.....	26
Shifting Forks.....	240	Vandalism Prevention Parts.....	280
Sound Insulation.....	281A	Water Filter.....	74
Starter.....	274	Water Outlet Manifold.....	78
Steering Control.....	164	Water Pump.....	76
Steering Linkage.....	170	Water Separator.....	52B,53J
Tandems.....	148	Wheel Lean.....	172
Thermostat.....	78	Wheel Lean Control.....	175
Throttle Control.....	54	Wheel Lean Piping.....	174
Timing Gear Housing.....	16	Wheels.....	150
		Windshield Wiper.....	297,297A,298

PACKAGE PARTS

PACKAGE
NUMBER

DESCRIPTION

74322380	GASKET KIT, cylinder head	
	1	70917806 SLEEVE
	8	70917807 SLEEVE
	4	70923574 O-RING
	8	70923813 O-RING
	2	70929823 O-RING
	1	74027975 HOSE
	1	74255983 SLEEVE
	1	74300145 GASKET
	1	74317554 GASKET
	1	74320845 GASKET
	1	74320846 GASKET
	1	74320854 GASKET
	1	74322267 GASKET
	1	74322295 GASKET
	1	74322296 GASKET
	1	74335649 GASKET
	4	74336182 GASKET
	1	74336263 GASKET
	1	74336558 GASKET
	1	74336775 GASKET
	2	74337764 GASKET
	1	74339532 GASKET
	1	74339533 GASKET
	2	74349193 GASKET
	1	74359214 GASKET
	12	74359741 GASKET
	6	74378031 GASKET
	1	74388349 HOSE
	1	74390773 HOSE
	1	74393466 GASKET
74322381	GASKET KIT, oil pump and pan	
	2	70921206 O-RING
	1	70930924 O-RING
	1	74320916 GASKET
	1	74321893 GASKET
	1	74632291 GASKET
	4	74393359 GASKET
74322382	GASKET KIT, engine overhaul	
	9	70917806 SLEEVE
	4	70917807 SLEEVE
	2	70921885 O-RING
	2	70923376 O-RING
	1	70923579 O-RING
	3	70923718 O-RING
	1	70923814 O-RING
	1	70923816 O-RING
	1	70923820 O-RING
	1	70924139 O-RING
	1	70927038 O-RING

(Continued)

PACKAGE PARTS

PACKAGE
NUMBER

DESCRIPTION

74322382 (cont'd)	GASKET KIT, engine overhaul	
6	70929849	SLEEVE
2	70934732	O-RING
12	74025385	SHIELD
1	74029556	SLEEVE
1	74036340	SEAL
1	74321628	GASKET
1	74322379	GASKET
1	74322380	GASKET
1	74322381	GASKET
1	74335056	GASKET
3	74335577	GASKET
1	74335578	GASKET
1	74335712	GASKET
1	74336676	GASKET
1	74336897	O-RING
1	74337740	GASKET
6	74337972	O-RING
1	74339118	GASKET
1	74339123	GASKET
1	74339127	GASKET
1	74339128	GASKET
1	74339150	GASKET
1	74339151	GASKET
1	74339697	GASKET
1	74339698	GASKET
1	74346456	GASKET
1	74346744	GASKET
1	74347031	GASKET
1	74348184	GASKET
1	74348185	GASKET
1	74348218	GASKET
1	74349011	GASKET
1	74349984	GASKET
1	74354163	GASKET
1	74354304	GASKET
1	74354415	GASKET
1	74354959	GASKET
1	74358766	GASKET
6	74359869	O-RING
6	74359870	O-RING
1	74376520	GASKET
1	74386137	GASKET
70692100	SEAL AND GASKET KIT, main transmission	
3	70673875	RING, piston
1	70673983	SEAL, input flange
3	70923560	O-RING
1	70923565	O-RING, bearing cap
2	70923663	O-RING
1	70923574	O-RING

(Continued)

PACKAGED PARTS

PACKAGE
NUMBER

DESCRIPTION

70692100 (cont'd)	SEAL AND GASKET KIT, main transmission
1	70923813 O-RING, flange
1	70923818 O-RING, disc housing
2	70923851 O-RING
1	71004791 GASKET, control valve
1	71004837 GASKET, front cover
1	71004842 GASKET, rear cover
2	71004848 GASKET, screen
1	71004854 O-RING, suction line
6	71004872 RING, clutch piston
6	71004873 RING, clutch piston
6	71004926 RING, shaft piston
2	71004978 RING, shaft piston
1	71004979 GASKET, bearing cap
1	71004987 GASKET, bearing cap
1	71004989 SEAL
1	71005117 SEAL
1	71008507 SEAL, control valve
1	70923819 O-RING
70692098	SEAL KIT, range transmission
1	70603002 SEAL, clutch fork shaft
2	70621516 GASKET, return elbow
2	70665478 RING, piston
1	70670221 GASKET, outlet housing
1	70673544 RING, packing, adapter
1	70673545 RING, packing, housing
1	70669846 SEAL, outer shaft
1	70689293 GASKET, cover
3	70923586 O-RING, valve mounting
2	70923816 O-RING, bearing cap
2	74054656 RING, sealing, shaft
73110017	SEAL AND GASKET KIT, main transmission (Effective grader No. 01715)
1	70673983 SEAL, input flange
1	71004842 GASKET, rear cover
1	71004837 GASKET, front cover
2	71004848 GASKET, screen
6	71004872 RING, clutch piston
6	71004873 RING, clutch piston
6	71004926 RING, shaft piston
1	73109875 RING, shaft piston
1	71004979 GASKET, bearing cap
3	70673875 RING, piston
1	71004987 GASKET, bearing cap
1	71004989 SEAL
1	71005117 SEAL
1	71004791 GASKET, control valve
2	73066793 SEAL, control valve
1	70923813 O-RING, flange
2	70923663 O-RING
1	71004854 O-RING, suction line

(Continued)

PACKAGED PARTS

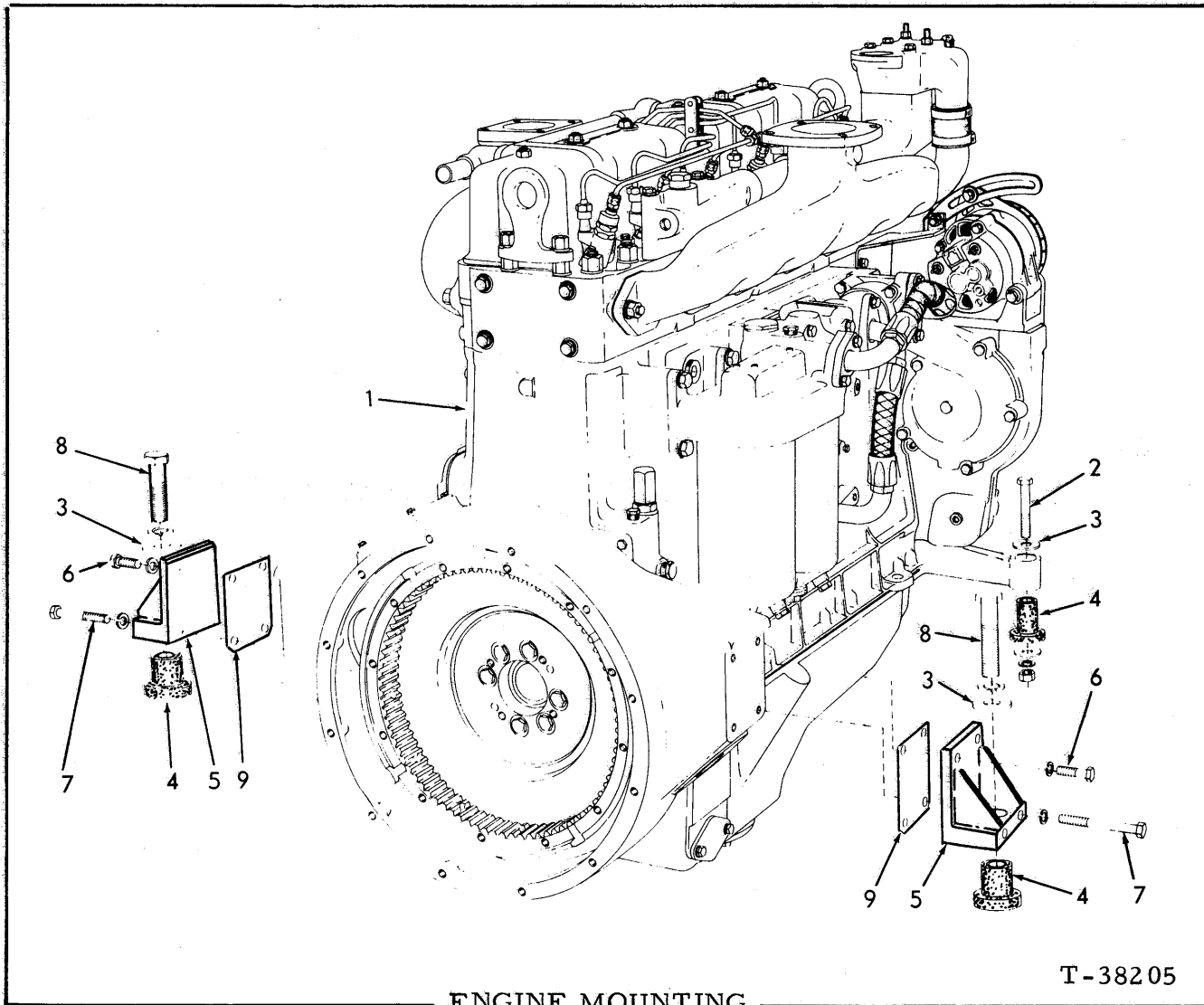
PACKAGE NO. DESCRIPTION

73110017(cont'd) SEAL AND GASKET KIT, main transmission (Effective grader
No. 01715)

1	70923560	O-RING, pressure tube
2	70923851	O-RING
1	70923574	O-RING
1	70923565	O-RING, bearing cap
1	70923819	O-RING
1	70928818	O-RING, disc housing
2	70923650	O-RING, flange
1	70923849	O-RING

-----	REPAIR KIT, brake booster (See page 158)
-----	REPAIR KIT, brake master cylinder (See page 161)
-----	REPAIR KIT, clutch booster (See page 86)
-----	REPAIR KIT, engine clutch control cylinder (See page 88)
-----	REPAIR KIT, range and main transmission control valve (See page 110)
-----	REPAIR KIT, range transmission pressure regulating valve (See page 105)
-----	REPAIR KIT, shift cylinder (See page 139)
-----	RING SET, piston (See PISTON AND CONNECTING ROD)
-----	TOOL SET (See TOOLS)
-----	TRANSFER SET (See PAINTING AND MARKING)
74062316	PISTON AND SLEEVE KIT
	1 74061746 SLEEVE
	1 74062313 PISTON

(Revised April 1981)



ENGINE MOUNTING

T-38205

*Model 150-C

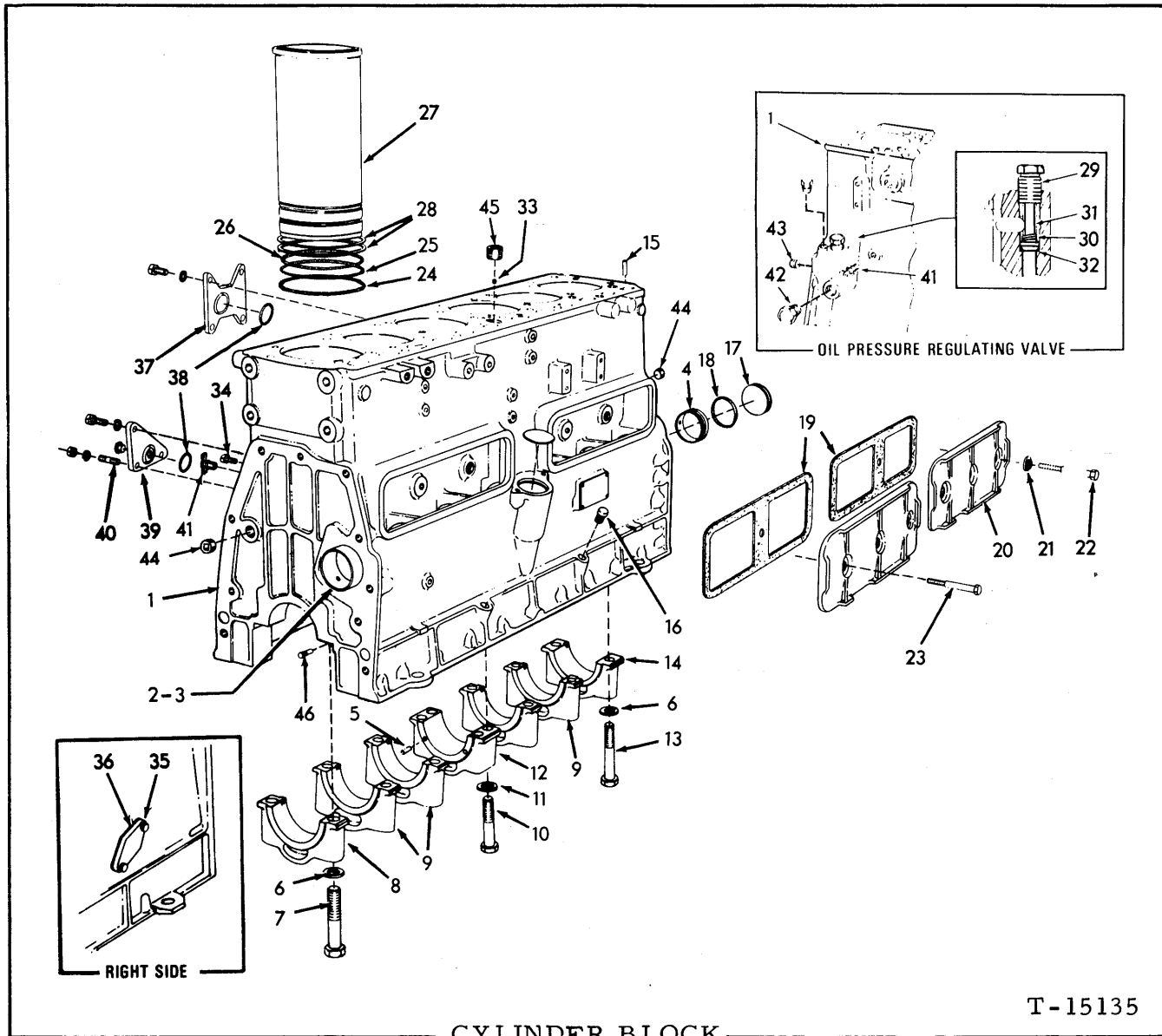
**Model 200-C

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	74359839	1 -	ENGINE ASSY. ("Bosch" injection pump)(Effective Grader S/N 99C01001)(Engines #11-21692 thru 11-24130)
	74359837	- 1	ENGINE ASSY. ("Bosch" injection pump)(Effective Grader S/N 90M01001)(Engines #11-21692 thru 11-24130)
	74321184	1 -	ENGINE ASSY. ("Roosa Master" DC type injection pump)(Effective Grader S/N 99C01183 thru 99C01426, excluding 01420 and 01423)(Engines #11-24131 thru 11-25932)
	74321185	- 1	ENGINE ASSY. ("Roosa Master" DC type injection pump)(Effective Grader S/N 90M01183 thru 90M01570)(Engines #11-24131 thru 11-25932)

(Continued)

ENGINE MOUNTING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
	70699829	1 -	ENGINE ASSY. Mark II ("Roosa Master" type DC injection pump)(Effective Grader S/N 99C01426 including 01420, 01423 and 58U01701 thru 58U01804 excluding 01799 and 01803)(Engines #11-25933 thru 11-28233)(Order Engine Assy. 73110827, 1 Cable Assy. 73110613, 1 Bracket 73109064, 1 Rod 73109089 and 1 Washer 70912298)
	73110827	1 -	ENGINE ASSY. ("Roosa Master" DM type injection pump)(Effective Grader S/N 58U01805 and up, including #01799 and 01803)(11000 MK II engines S/N 11-28234 thru 30236)(685T engine S/N 85-001002 and up)(See NOTE below)
2	70924136	2 2	CAPSCREW, 5/8"NC x 3-3/4"
	70928142	2 2	WASHER
	70912942	2 2	LOCKWASHER, 5/8"
	70911029	2 2	NUT, 5/8"NC
			NOTE: Each engine listed above includes oil filter, oil cooler and fuel filter but is less air cleaner, fan and starter.
3	70675245	4 4	WASHER
4	70192962	4 4	SNUBBER
5	70675248	2 2	BRACKET
6	70920583	4 4	CAPSCREW, 1/2"NC x 1-1/2"
7	70921122	4 4	CAPSCREW, 1/2"NC x 5"
	70912441	8 8	LOCKWASHER, 1/2"
8	70927659	2 2	CAPSCREW, 5/8"NF x 3-1/4"
	70912942	2 2	LOCKWASHER, 5/8"
9	70089617	2 2	SHIM (1/32" thick. Use as required)



CYLINDER BLOCK

T-15135

USAGE: 11000 MKII and 685T Engines

ITEM	PART NO.	QTY.	DESCRIPTION
1	74322358	1	BLOCK ASSY. (Service replacement for engines prior to S/N 11-24134 without piston cooling and later engines with piston - cooling)(Includes installed items 2, 3, 4, 7 thru 10, 12, 13, 14, 24 thru 27, 32, 33, and 47)(See item 47 for loose parts)
2	74346100	1	BEARING, camshaft, front (standard size)
	74347416	1	BEARING, camshaft, front (.010" undersize)
3	74320591	2	BEARING, camshaft, intermediate (standard size)
	74347419	2	BEARING, camshaft, intermediate (.010" undersize)
4	74320592	1	BEARING, camshaft, rear (standard size)
	74347413	1	BEARING, camshaft, rear (.010" undersize)
5	-----	4	PIN, center main bearing cap (See Crankshaft)

(Continued)

CYLINDER BLOCK (Continued)

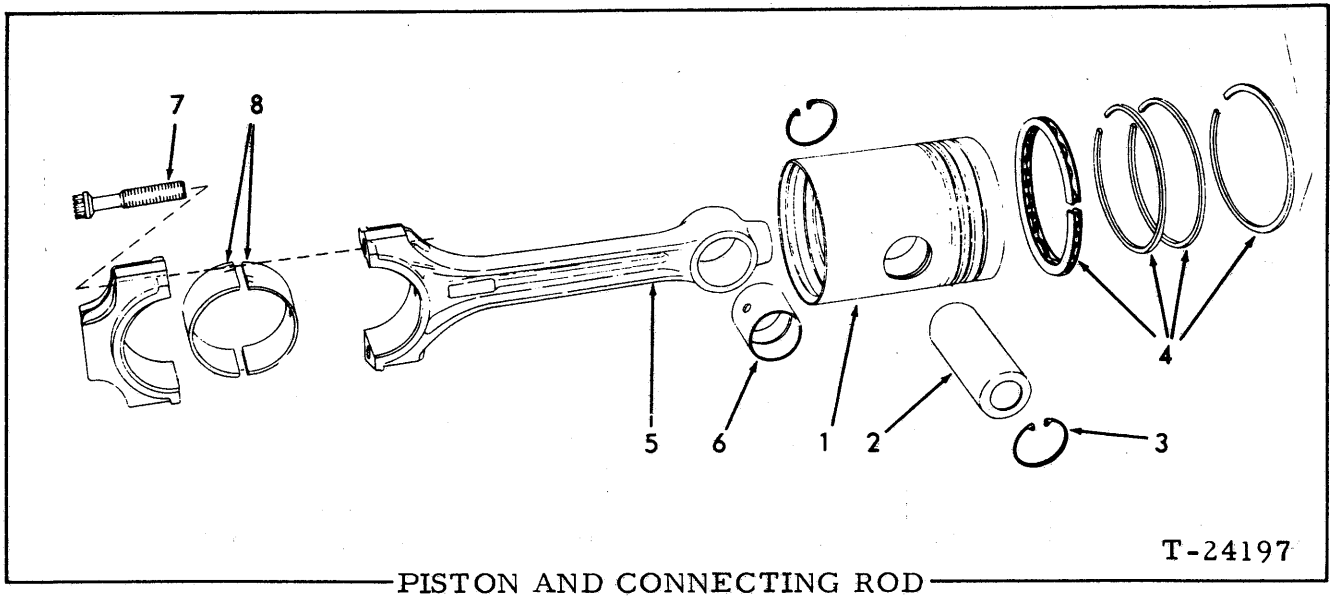
ITEM	PART NO.	QTY.	DESCRIPTION
6	74354175	12	WASHER, main bearing capscrew (Engines prior to #11-25967)
7	74339037	2	CAPSCREW, front main bearing cap (3/4"NC x 3-13/16")
8	74348056	1	CAP, front main bearing (See NOTE below)
9	74348244	4	CAP, intermediate main bearing (See NOTE below)
10	74035387	4	CAPSCREW, center main bearing cap (5/8"NC x 3-13/16")
11	74391160	4	WASHER, center main bearing capscrew (Engines prior to #11-25967)
12	74359964	1	CAP, center main bearing (See NOTE below)
13	74339036	10	CAPSCREW, rear and intermediate main bearing cap 3/4"NC x 4-5/16")
14	74348246	1	CAP, rear main bearing (See NOTE below) NOTE: Stems 8, 9, 12 and 14 are semi-finished and must be line-bored after installing.
15	74336432	4	PIN, dowel, cylinder head
16	74362338	2	PLUG, crankcase
17	74335534	1	PLUG, camshaft hole (Engines prior to S/N 11-27758)
	74255118	1	PLUG, camshaft hole (Engine S/N 11-27758 and up)
18	70923815	1	□ O-RING, camshaft hole plug (Engines prior to S/N 11-27758)
19	74337764	2	□ GASKET, valve lifter cover
20	74359668	1	COVER (cast) valve lifter, front
	74320985	1	COVER (stamped) valve lifter, front
	74354638	1	COVER (cast) valve lifter, rear
	74320986	1	COVER (stamped) valve lifter, rear
21	74335456	3	WASHER, valve lifter cover bolt (Used with cast cover)
	74256008	6	WASHER, valve lifter cover bolt (Used with stamped cover)
22	74335455	3	BOLT, valve lifter cover (rear)(Used with cast cover)
	70921160	6	CAPSCREW, 5/16"NC x 2-1/4" (rear)(Used with stamped cover)
23	74359683	3	BOLT, valve lifter cover (front)
24	74337972	6	O-RING, cylinder sleeve (bottom groove)(red)
25	74359870	6	O-RING, cylinder sleeve (center groove)(black with blue markings)
26	74359869	6	O-RING, cylinder sleeve (top groove)(black with white markings)
27	74061746	6	□ SLEEVE ASSY. (Includes items 24, 25 and 26)
28	74348857	-	SHIM, cylinder sleeve (.005" thick)
	74348856	-	SHIM, cylinder sleeve (.008" thick)
	74348859	-	SHIM, cylinder sleeve (.010" thick)
	74348858	-	SHIM, cylinder sleeve (.015" thick)
	74348900	-	SHIM, cylinder sleeve (.020" thick)
29	74389058	1	SCREW (Engines prior to #11-25680)
	74022129	1	SCREW (Engine #11-25680 and up)
	70910847	1	NUT, jam, 3/4"NF
30	74660358	1	SPRING (Engines prior to #11-29109)
	74322289	1	SPRING (Engine #11-29109 and up)

(Continued)

CYLINDER BLOCK (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
31	74500230	1	PISTON (Engines prior to #11-25680)
	74507374	1	PISTON (Engine #11-25680 and up)
32	74347465	1	INSERT, oil pressure regulating valve seat (Engines prior to #11-24251)
	74507673	1	INSERT, oil pressure regulating valve seat (Engine #11-24251 and up)
33	74347061	1	RESTRICTOR, oil passage (Engines prior to #11-25933)
34	70920473	2	CAPSCREW, Nylok, 3/8"NC x 3/4" NOTE: Items 37, 38 and 40 are furnished with service replacement cylinder block and are not original equipment.
35	74339604	1	PLATE, cover, turbocharger oil drain hole
	70918683	2	CAPSCREW, 1/2"NC x 1-1/8"
	70904208	2	LOCKWASHER, 1/2"
36	74336436	1	□GASKET, cover plate
37	74335369	1	PLATE, cover, oil gallery hole, upper
	70916311	4	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
38	70923718	2	O-RING, oil gallery hole cover plates
39	74359104	1	PLATE, cover, oil gallery hole, lower
	70920333	1	PLUG, pipe, hex-hd., 3/8"NPT
	70919230	1	CAPSCREW, 1/2"NC x 1-3/8"
40	74305073	2	STUD
41	70912415	2	COCK, drain, 1/4"NPT
42	70920416	1	PLUG, pipe, hex-hd., 1/2"NPT
43	70918850	1	PLUG, pipe, 1/4"NPT
44	74255492	2	PLUG, pipe, hex-socket, 1/2"NPT
45	74255577	1	PLUG, pipe, hex-socket, 3/4"NPT
46	70922846	6	PIN, grooved, 1/4" O.D. (Cooling jet plugs)(For service replacement block installed in engines prior to S/N 11-24134 without piston cooling)
47	-----	1	LOOSE HARDWARE KIT (Includes items 5, 15, 16, 29, 30, 31, 41 thru 46 and hardware below)(Not all hardware items are required. See instruction sheet 74322357)
	70904516	10	SCREW, drive, #6 x 1/4"
	73131677	1	PLUG, pipe, hex-socket, 1-1/8"NPT
	70917724	1	PLUG, expansion, concave, 2-3/4"
	70917960	1	PLUG, plastic, 3/4"
	70918851	1	PLUG, pipe, hex-socket, 3/4"NPT
	70918888	1	PLUG, pipe, hex-socket, 1"NPT
	70919134	2	PLUG, pipe, hex-hd., 1/8"NPT
	70919840	1	PLUG, pipe, hex-hd., 1/4"NPT
	70920473	2	CAPSCREW, nylok, 3/8"NC x 3/4"
	70922805	2	CAPSCREW, 1/2"NC x 3/4"
	74007953	1	NAME PLATE, engine
	74007954	1	INSTRUCTION SHEET, name plate
	74322357	1	INSTRUCTION SHEET, service block
	74346246	2	PIN (See page 16, item 4)
	74347061	2	RESTRICTOR (Engines prior to S/N 90846)

(Revised July 1984)



ITEM	PART NO.	QTY.	DESCRIPTION
1	74062313	6	PISTON ASSY. (Includes piston and items 2, 3, and 4)
2	74354778	6	PIN, piston
3	74255465	12	RETAINER, piston pin
4	74062311	6	RING SET
5	74320801	6	ROD ASSY., connecting (Includes items 6 and 7)
6	74339017	6	BUSHING, connecting rod
7	74359222	12	CAPSCREW, connecting rod
8	74321007	12	BEARING, connecting rod (standard size)
	74321033	12	BEARING, connecting rod (.010" undersize)
	74321034	12	BEARING, connecting rod (.020" undersize)
	74321035	12	BEARING, connecting rod (.030" undersize)
	74321036	12	BEARING, connecting rod (.040" undersize)
			<u>NOTE:</u> Item 9, each kit contains 12 bearing halves.
9	74061766	1	BEARING KIT, connecting rod, (standard)
	74061767	1	BEARING KIT, connecting rod (.010" undersize)
	74061768	1	BEARING KIT, connecting rod (.020" undersize)
	74061769	1	BEARING KIT, connecting rod (.030" undersize)
	74061770	1	BEARING KIT, connecting rod (.040" undersize)

(Revised April 1981)