



100-C

motor grader

parts catalog

Form 70696879 English

AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, at 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 one simple rule would prevent many thousand serious injuries each year.

That rule is:

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 items, be sure the equipment is suitably supported by means other than the hydraulic lift cylinders, cable and/or mechanical devices used for controlling the equipment.

THIRD PRINTING (2-78)

Identical to First Printing (1-75) including all information
as released in Supplements No. 1 (3-75) and No. 2 (5-76)

100-C

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parts catalog

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S/N 57M09101-UP

Form 70696879 English



WARNING

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

SUPPLEMENT NO. 2

PARTS CATALOG FORM 70696879



100C MOTOR GRADER

(5-76)

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

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6th Street, Springfield, Illinois, 62710 U.S.A.*

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NOTICE
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SUPPLEMENT NO. 1



PARTS CATALOG FORM 70696879

100C MOTOR GRADER

(3-75)

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NOTICE: Allis-Chalmers Corporation and FIAT S.p.A. entered into a joint venture agreement to combine their manufacture, sale and service of construction machinery products throughout the world after January 1, 1974.

In view of the new enterprise, wherever in this publication reference is made to Allis-Chalmers or your Allis-Chalmers dealer, such reference is intended to identify FIAT-ALLIS Construction Machinery Inc. or your FIAT-ALLIS dealer

PUBLICATIONS AVAILABLE
FOR
MODEL 100-C MOTOR GRADER
(See NOTE below)

<u>DESCRIPTION</u>	<u>FORM NO.</u>					
	ENGLISH	ESPAÑOL (Spanish)	FRANÇAIS (French)	PORTUGUES (Portuguese)	ITALIANO (Italian)	DEUTSCH (German)
<u>PARTS CATALOGS</u>						
Injection Pump						
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Motor Grader	70696879					
<u>OPERATOR & MAINTENANCE INSTRUCTION MANUAL.....</u>	70689655	70693852	70693853			
<u>SERVICE MANUALS</u>						
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Front Wheel, Axle & Wheel Lean.	70693124					
Fuel Injection Nozzles. .	70682797					
Fuel Injection Pump						
Bosch (Germany). . . .	70681649					
Roosa Master	73111954					
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Shaft U-Joint.	70693862					
Turbocharger (TO-4) . .	70687805	70679633	70679635	70679634		

NOTICE

ORDER FROM LOCAL FIAT-ALLIS DEALER UNLESS
OTHERWISE NOTED.

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

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

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.

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.

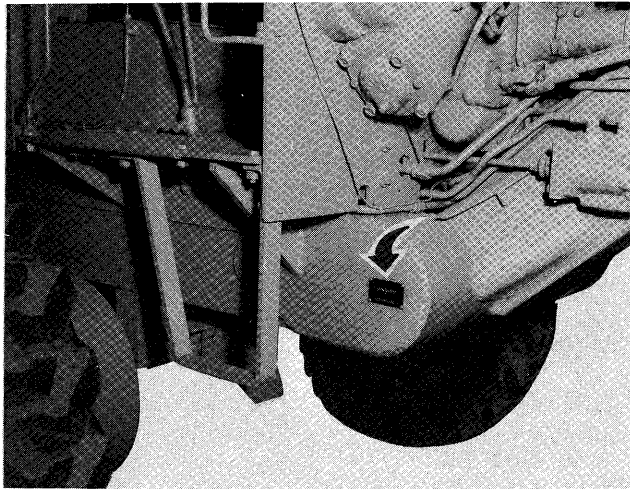
(Specifications and design subject to change without notice)

MODEL IDENTIFICATION

MODEL SYMBOL	ENGINE MODEL	DESCRIPTION
100-C	11000 (Engines prior to #11-25910)	Turbocharged diesel engine driven Motor Grader
	11000 MARK II (Engines #11-25910 and up)	Turbocharged diesel engine driven Motor Grader

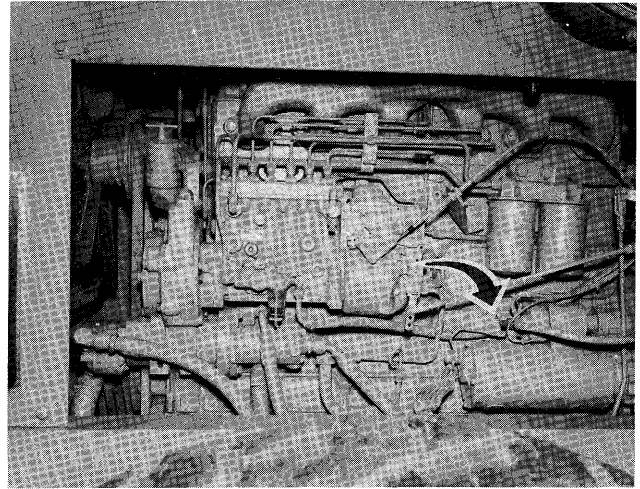
RECORD YOUR SERIAL NUMBERS BELOW

MODEL SERIAL NUMBER _____



T-77638

ENGINE SERIAL NUMBER _____



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.

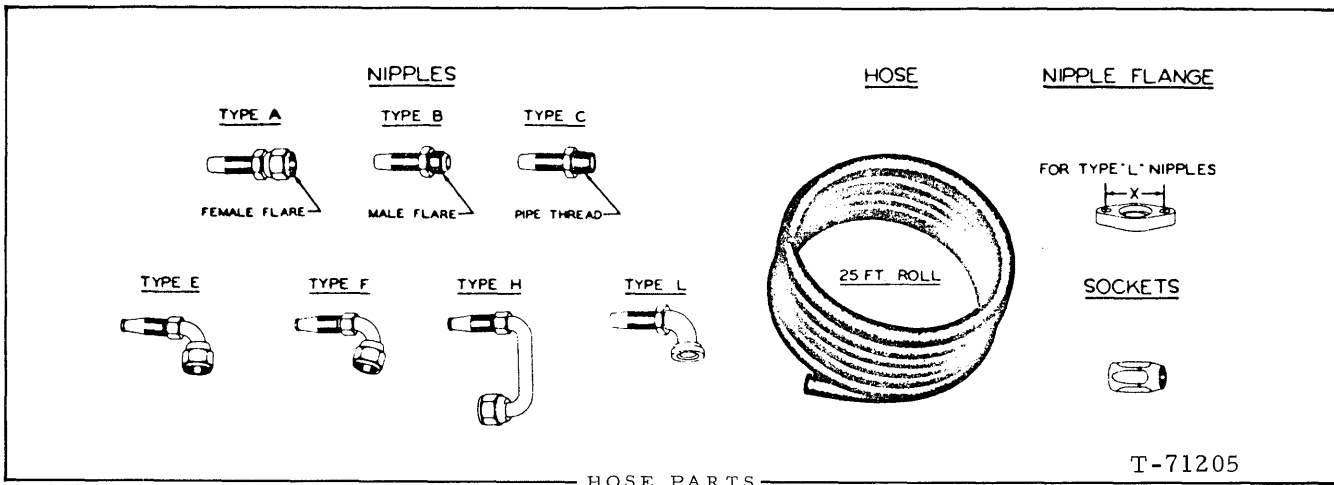
GRADER MODEL	*SERIAL NO.	
	PRODUCT CODE	UNIT NO.
100-C	2 7 Y	0 8 0 0 1
	5 7 M	0 9 1 0 1

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NOTE: Refer to right hand column for identity of interchangeable crimped-type hose (fittings not re-usable). Assembly number shown in left hand column indicates available replacement hose assembly with re-usable components; where no assembly number is listed, hose assembly is not available from factory but may be constructed in the field from data indicated.

HOSE ASSEMBLY NO. (See NOTE)	BULK HOSE (25' roll)	HOSE LENGTH (inches)	NIPPLE (#1 end)			NIPPLE (#2 end)			SOCKET (both ends)	NIPPLE FLANGE		CRIMPED- TYPE HOSE (See NOTE) Part No.
			Including SOCKET	NIPPLE only	Type	Including SOCKET	NIPPLE only	Type		Part No.	X Dim	
	70920221	31-1/2	70920582	70920344	A	70920860	70919279	B	70919281			70645246
	70919155	53-1/8	70920849	70920302	A	70920849	70920302	A	70919075			70650784
	70919155	57-1/8	70920849	70920302	A	70920849	70920302	A	70919075			70650785
	70919196	9-3/8	70920850	70919144	B	70920862	70919194	E	70919143			70650805
	70919156	40-1/4	70920850	70920303	A	70920865	70919081	E	70919076			70658599
	70920221	15-7/8	70920852	70920344	A	70920867	70919277	E	70919281			70661977
	70919156	27-5/8	70920859	70923867	B	70920859	70923867	B	70919469			70662639
	70919156	35-1/2	70920850	70920303	A	70920865	70919081	E	70919076			70667755
	70919196	16-1/8	70920847	70920301	A	70920862	70919194	E	70919143			70671042
	70919196	9-5/8	70920847	70920301	A	70920847	70920301	A	70919143			70679279
	70919155	33-1/4	70920849	70920302	A	70920302	70919157	E	70919075			70679715
	70919474	14-5/8	70920851	70921046	A	70920873	70922455	E	70919469			70679997
	70919474	16-1/8	70920851	70921046	A	70920866	70919473	E	70919469			70680067
	70919474	12-1/2	70920859	70923867	B	70920881	70925470	D	70919469			70680068
	70919474	12-1/4	70920851	70921046	A	70920881	70925470	D	70919469			70680112
	70919155	32-3/8	70920849	70920302	A	70920849	70920302	A	70919075			70685817
	70919155	27-3/8	70920849	70920302	A	70920871	70919157	E	70919075			70685818
	70919156	16-3/4	70920850	70920303	A	70920865	70919081	E	70919076			70685829
	70919156	13-3/4	70920850	70920303	A	70920865	70919081	E	70919076			70685830
	70919156	42	70920850	70920303	A	70920865	70920303	A	70919076			70686601
	70919156	26-3/4	70920850	70920303	A		70919175	F	70919076			70687712
	70919156	29-3/4	70920850	70920303	A		70919175	F	70919076			70687714
	70919156	8-7/8	70920850	70920303	A	70920865	70919081	E	70919076			70690770
	70919156	16-5/8	70920850	70920303	A	70920865	70919081	E	70919076			70690771
	70919156	6-3/4	70920850	70920303	A	70920865	70919081	E	70919076			70695739
74335566	70920222	5-7/16		70920173	L		70920195	L long	70919282	70919251	3"	
74335567	70920222	9-7/16		70920173	L		70920141	L long	70919282	70919274	2-1/4"	

PACKAGED PARTS

PACKAGE NUMBER

DESCRIPTION

74321189

ENGINE OIL PUMP KIT (Adapts integral scavenging and oil pressure pump to engines prior to serial No. 11-24110)

1	70035250	PLUG
1	70667252	GASKET
2	70904206	LOCKWASHER, 3/8"
2	70907863	LOCKWASHER, 7/16"
4	70910287	LOCKWASHER, 3/8"
5	70912369	WASHER
29	70913544	WASHER
22	70914847	CAPSCREW, 3/8"NC x 1-1/2"
4	70916271	CAPSCREW, 3/8"NC x 1"
4	70916279	CAPSCREW, 5/16"NC x 1-1/2"
8	70916543	LOCKWASHER, internal tooth, 3/8"
2	70916871	NUT, elastic stop, 5/8"NC
1	70919784	CAPSCREW, 5/16"NC x 4"
4	70921076	CAPSCREW, 3/8"NC x 1-1/4"
1	70921204	PLUG, 1-1/16" straight-thd. (Includes O-RING)
2	70921565	CAPSCREW, 3/8"NC x 1-1/2"
8	70923193	CAPSCREW, 3/8"NF x 1-1/4"
2	70928212	NUT, 7/16"NC
1	70930924	O-RING
5	74255916	CAPSCREW, Nylon strip, 3/8"NC x 1"
1	74320597	VALVE ASSY., pressure relief
1	74320838	ELBOW
1	74320839	TUBE
1	74320885	TUBE
1	74320887	TUBE
1	74320916	GASKET
1	74321052	ELBOW
1	74321053	U-BOLT
1	74321671	BRACKET
1	74321186	PAN, oil
1	74321399	OIL PUMP ASSY., w/gear
1	74337740	GASKET
1	74337741	PLATE
4	74393359	GASKET
2	74395024	DOWEL
1	74321893	GASKET
1	OA-8673	DRAWING

74321439

GASKET KIT, cylinder head (Engine #11-25910 and up)

4	70923574	O-RING, water by-pass tube (Discard)
4	70923813	O-RING, water manifold tube
1	74300145	GASKET, water outlet elbow
2	74336148	GASKET, rocker cover
4	74336182	GASKET, water manifold
1	74336263	GASKET, thermostat housing
1	74336266	GASKET, water elbow (Discard)

(Continued)

PACKAGED PARTS

74321439
(Continued)

GASKET KIT, cylinder head (Engine #11-25910 and up)

2	74337764	GASKET, valve lifter cover
2	74348133	GASKET, breather tube (Discard)
1	74321437	GASKET ASSY., front cylinder head
1	74321438	GASKET ASSY., rear cylinder head
6	74376749	WASHER, sealing, rocker cover nut
12	74359741	GASKET, intake and exhaust manifold
6	74378031	GASKET, injection nozzle

74321798

GASKET KIT, intermediate, engine cylinder block

2	70667252	GASKET, oil drain plug
2	70923376	O-RING, flywheel housing dowel
1	70923589	O-RING, fan drive (Discard)
1	70923718	O-RING, oil filter
1	70923814	O-RING, hydraulic pump drive
1	70923815	O-RING, camshaft hole plug
1	70923816	O-RING, flywheel to crankshaft (Discard)
1	70923820	O-RING, fan drive
1	70924139	O-RING, injection pump mounting cover
2	74113897	GASKET
1	74320916	GASKET
1	74335056	GASKET, water pump volute
3	74335577	GASKET, oil cooler
1	74335578	GASKET, filter head
1	74335668	GASKET, oil cooler (Discard)
1	74335712	GASKET, cover plate
1	74336345	GASKET, hydraulic pump mounting hole (Discard)
1	74336436	GASKET, oil drain flange
1	74336676	GASKET, timing hole cover
1	74336897	RING, sealing, flywheel housing to crankcase
1	74339150	GASKET, filter head to block (Discard)
1	74339151	GASKET, oil cooler to block (Discard)
1	74346169	GASKET, oil pipe
2	74346441	GASKET, oil pipe (Discard)
1	74346456	GASKET, water inlet pipe
1	74346744	GASKET, water pump
1	74347031	GASKET, water by-pass flange
1	74347120	GASKET, timing hole cover (Discard)
1	74348126	GASKET, timing gear cover (Discard)
1	74348136	GASKET, timing gear housing
1	74348184	GASKET, filter head to block
1	74348185	GASKET, oil cooler water inlet
2	74348215	GASKET, oil pipe
1	74348218	GASKET, oil pipe
1	74349011	GASKET
1	74354163	GASKET, timing gear cover
1	74354304	GASKET, fan hose bracket (Discard)
1	74354415	GASKET
1	74362458	GASKET, oil pump cover (Discard)
1	74371289	GASKET, clean-out cover
2	74373069	GASKET, oil pan cover (Discard)
1	74393349	GASKET
2	74393359	GASKET

PACKAGED PARTS

74359746

GASKET KIT, cylinder head (Engines prior to #11-25910)

4	70923574	O-RING, water by-pass tube (Discard)
4	70923813	O-RING, water manifold tube
1	74300145	GASKET, water outlet elbow
2	74336148	GASKET, rocker cover
4	74336182	GASKET, water manifold
1	74336263	GASKET, thermostat housing
1	74336266	GASKET, water elbow (Discard)
2	74337764	GASKET, valve lifter cover
2	74348133	GASKET, breather tube (Discard)
1	74359029	GASKET ASSY., front cylinder head
1	74359030	GASKET ASSY., rear cylinder head
12	74359741	GASKET, intake and exhaust manifold
6	74376749	WASHER, sealing, rocker cover nut
6	74378031	GASKET, injection nozzle

74359903

PISTON AND SLEEVE KIT

2	74255465	RETAINER, piston pin
2	74337972	O-RING, cylinder sleeve
1	74354778	PIN, piston
1	74359360	PISTON
1	74359365	SLEEVE, cylinder
1	74359757	RING SET, piston
1	74359869	O-RING, cylinder sleeve
1	74359870	O-RING, cylinder sleeve

REPAIR KIT, brake booster (See page 122)

REPAIR KIT, brake master cylinder (See page 117)

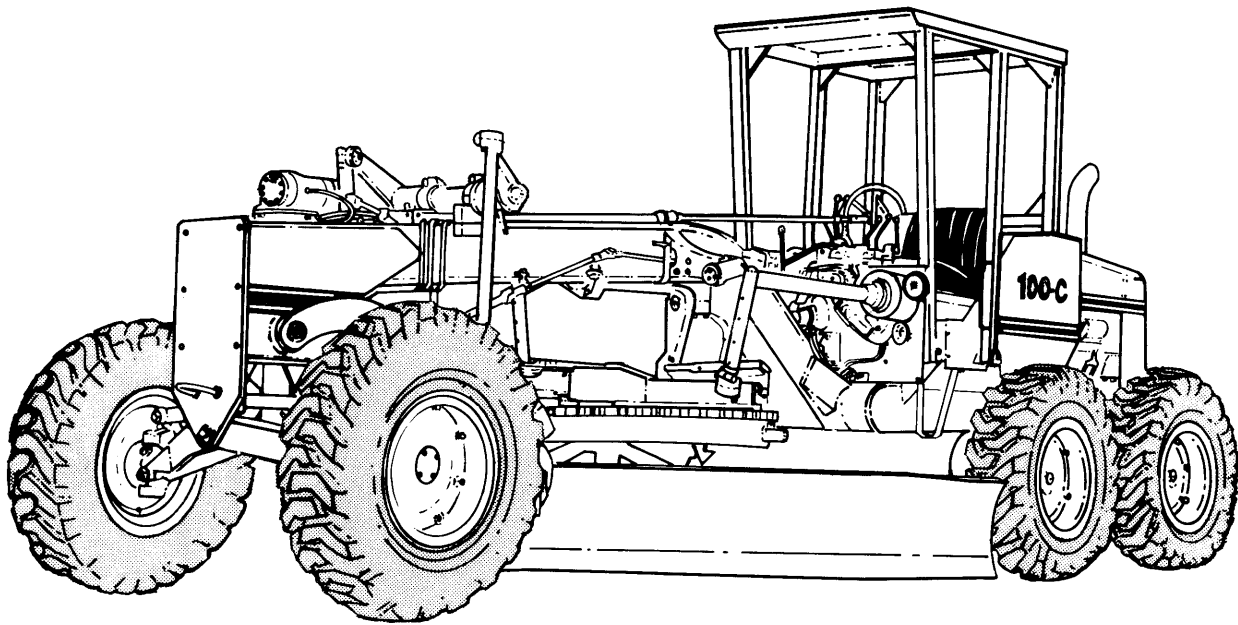
REPAIR KIT, clutch booster (See page 86)

RING SET, piston (See PISTON AND CONNECTING ROD)

TOOL SET (See TOOLS)

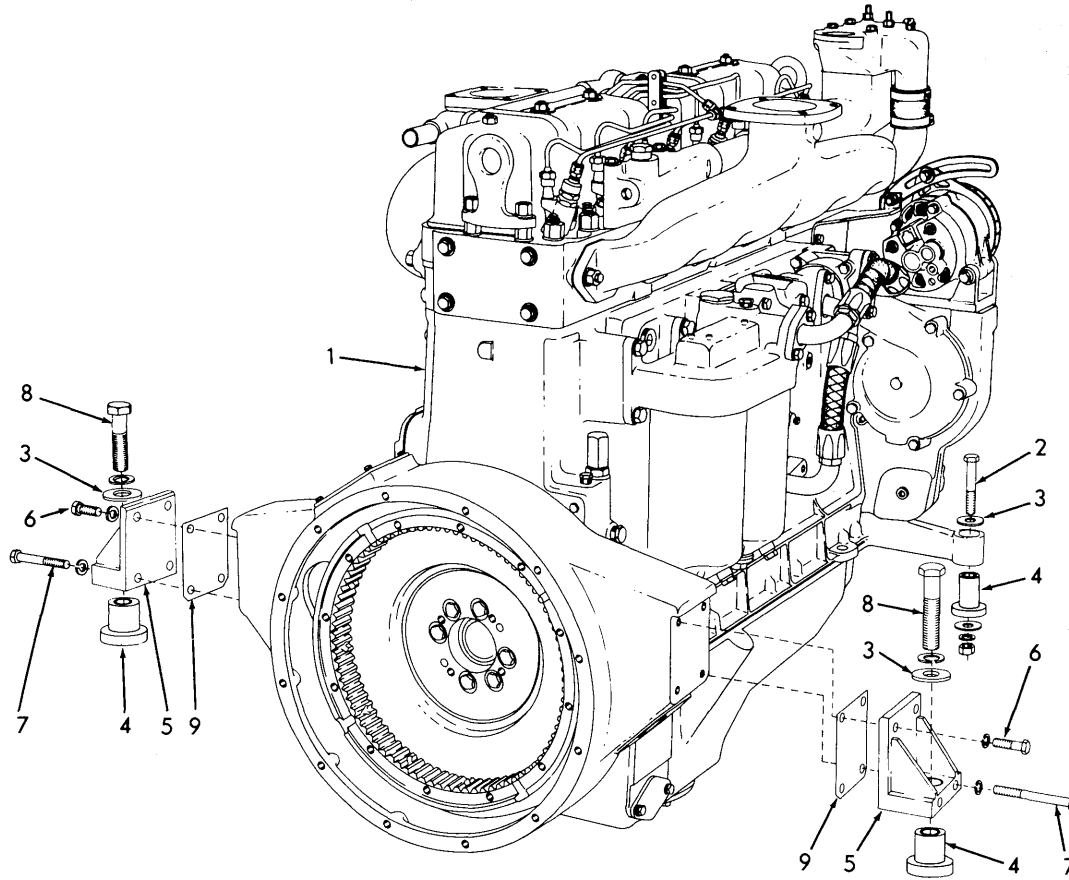
TRANSFER SET (See PAINTING AND MARKING)

MEMO



100-C MOTOR GRADER

T-77636



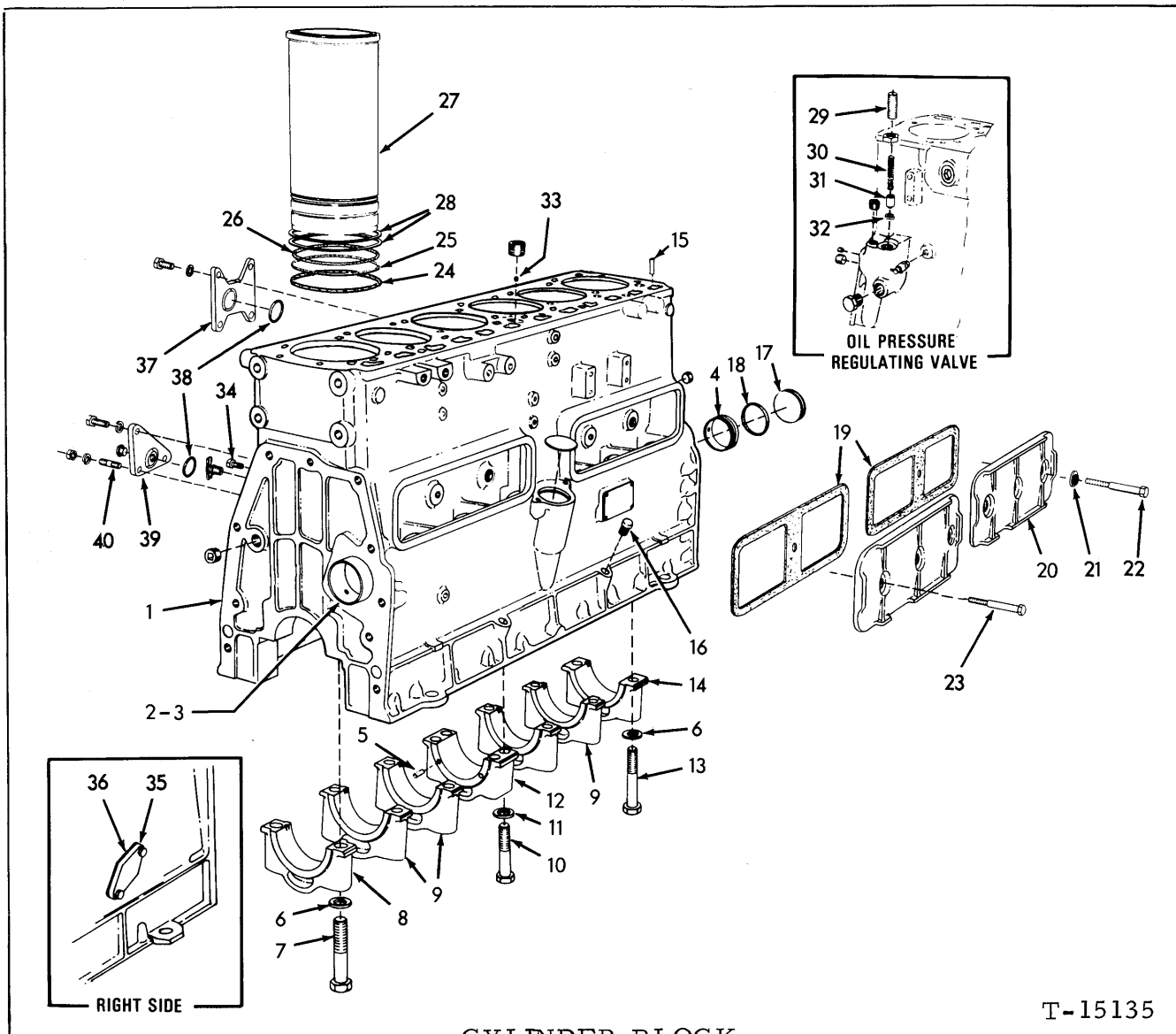
ENGINE AND MOUNTING

T-38205

ITEM	PART NO.	QTY.	DESCRIPTION
1	74359815	1	ENGINE ASSY. ("Bosch" Injection Pump)(Engines prior to #11-24110)
	74321183	1	ENGINE ASSY. (Roosa" Injection pump)(Engine #11-24110 thru #11-25909)
	74321428	1	ENGINE ASSY. "Mark II" (Engine #11-25910 thru #11-28233)
	74321722	1	ENGINE ASSY. "Mark II" (Engine #11-28234 and up)
2	70924136	2	CAPSCREW, 5/8"NC x 3-3/4"
	70928142	2	WASHER
	70912942	2	LOCKWASHER, 5/8"
	70911029	2	NUT, 5/8"NC

NOTE: Each Engine Assy. includes oil filter, oil cooler and fuel filter, but is less air cleaner, fan, starter and muffler.

3	70675245	4	WASHER
4	70192962	4	SNUBBER
5	70675248	2	BRACKET
6	70920583	4	CAPSCREW, 1/2"NC x 1-1/2"
7	70921122	4	CAPSCREW, 1/2"NC x 5"
	70912441	8	LOCKWASHER, 1/2"
8	70927659	2	CAPSCREW, 5/8"NF x 3-1/4"
	70912942	2	LOCKWASHER, 5/8"
9	70089617	2	SHIM (1/32" thick. Use as required)



T-15135

— CYLINDER BLOCK —

ITEM	PART NO.	QTY.	DESCRIPTION	
1	74321469	1	BLOCK ASSY. (Engines prior to #11-24134)	Includes items 2 thru 16 and 29 thru 33, 35, 36, 39 and hardware indented below
	74321386	1	BLOCK ASSY. (Engine #11-24134 and up)(Requires piston cooling type main bearings)	
	70910017	1	PLUG, expansion, 2-3/8" diam.	
	70919134	3	PLUG, pipe, hex-hd., 1/8" NPT	
	70917673	1	PLUG, pipe, hex-socket, 1/8" NPT	
	70919840	1	PLUG, pipe, hex-hd., 1/4" NPT	
	70920333	1	PLUG, pipe, hex-hd., 3/8" NPT	
	70918887	1	PLUG, pipe, hex-socket, 3/8" NPT	
	70920416	1	PLUG, pipe, hex-hd., 1/2" NPT	
	70904223	2	PLUG, pipe, hex-socket, 1/2" NPT	
	70918888	1	PLUG, pipe, hex-socket, 1" NPT	
	70918851	1	PLUG, pipe, hex-socket, 3/4" NPT	
	70912415	2	COCK, drain, 1/4" NPT	

(Continued)

CYLINDER BLOCK (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
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 CRANKSAHFT)
6	74354175	12	WASHER, main bearing capscrow (Engines prior to #11-25933)
7	74339037	2	CAPSCREW, front main bearing cap (3/4"NC x 3-13/16")
8	74349630	1	CAP, front main bearing (See NOTE below)
9	74349632	4	CAP, intermediate main bearing (See NOTE below)
10	74339038	4	CAPSCREW, center main bearing cap (5/8"NC x 3-13/16")
11	74391160	4	WASHER, center main bearing capscrow
12	74349629	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	74349631	1	CAP, rear main bearing (See NOTE below)
15	74336432	4	PIN, dowel, cylinder head
16	74255063	1	PLUG, crankcase
17	74335534	1	PLUG, camshaft hole (Engines prior to #11-27758)
	74255118	1	PLUG, camshaft hole (Engine #11-27758 and up)
18	70923815	1	□ O-RING, camshaft hole plug (Engines prior to #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
			<u>NOTE:</u> Replacement bearing caps are semi-finished and must be line-bored after installing
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)

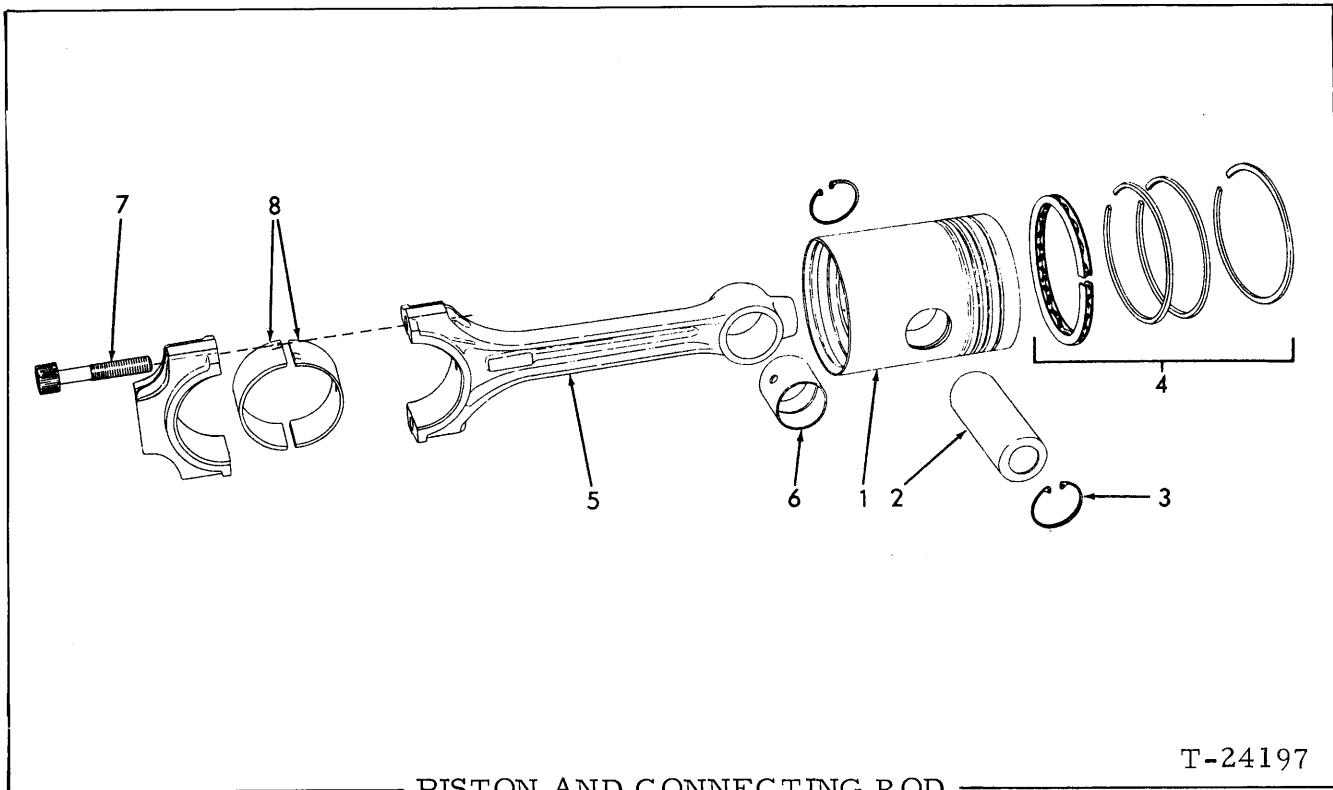
(Continued)

CYLINDER BLOCK (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
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 #11-25680)
	74500231	1	SPRING (Engine #11-25680 and up)
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 #11-25910)
34	70920473	2	CAPSCREW, Nylok, 3/8"NC x 3/4"

NOTE: Items 35, 36 and 39 listed below were furnished with some early service replacement cylinder blocks, and are not original equipment.

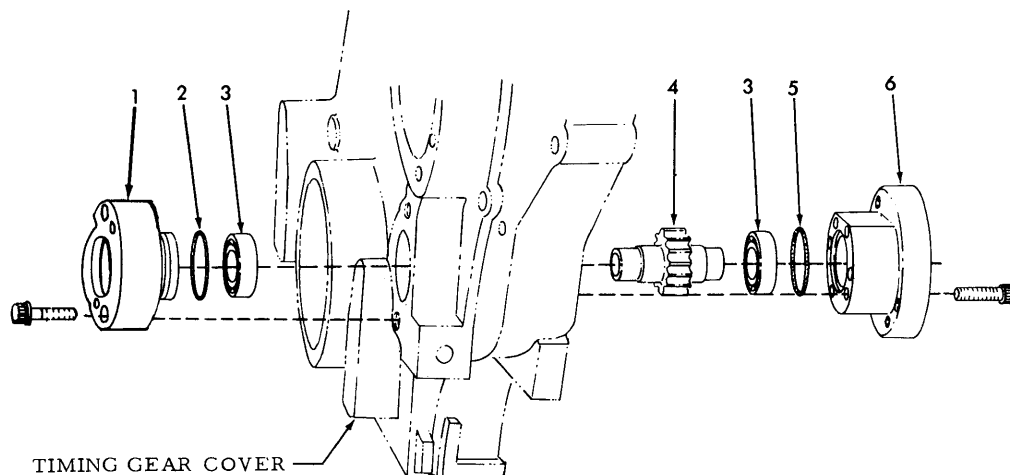
35	74339604	1	PLATE, cover, turbocharger oil drain hole
	70918683	2	CAPSCREW, 1/2"NC x 1-1/8"
	70904208	2	LOCKWASHER, 1/2"
36	74336436	1	□ GASKET, cover plate
37	74335369	1	PLATE, cover, oil gallery hole, upper
	70916311	4	CAPSCREW, 1/2" NC x 1-1/4"
	70904208	4	LOCKWASHER, 1/2"
38	70923718	2	O-RING, 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
	70904208	3	LOCKWASHER, 1/2"
	70910195	2	NUT, 1/2"NF



T-24197

PISTON AND CONNECTING ROD

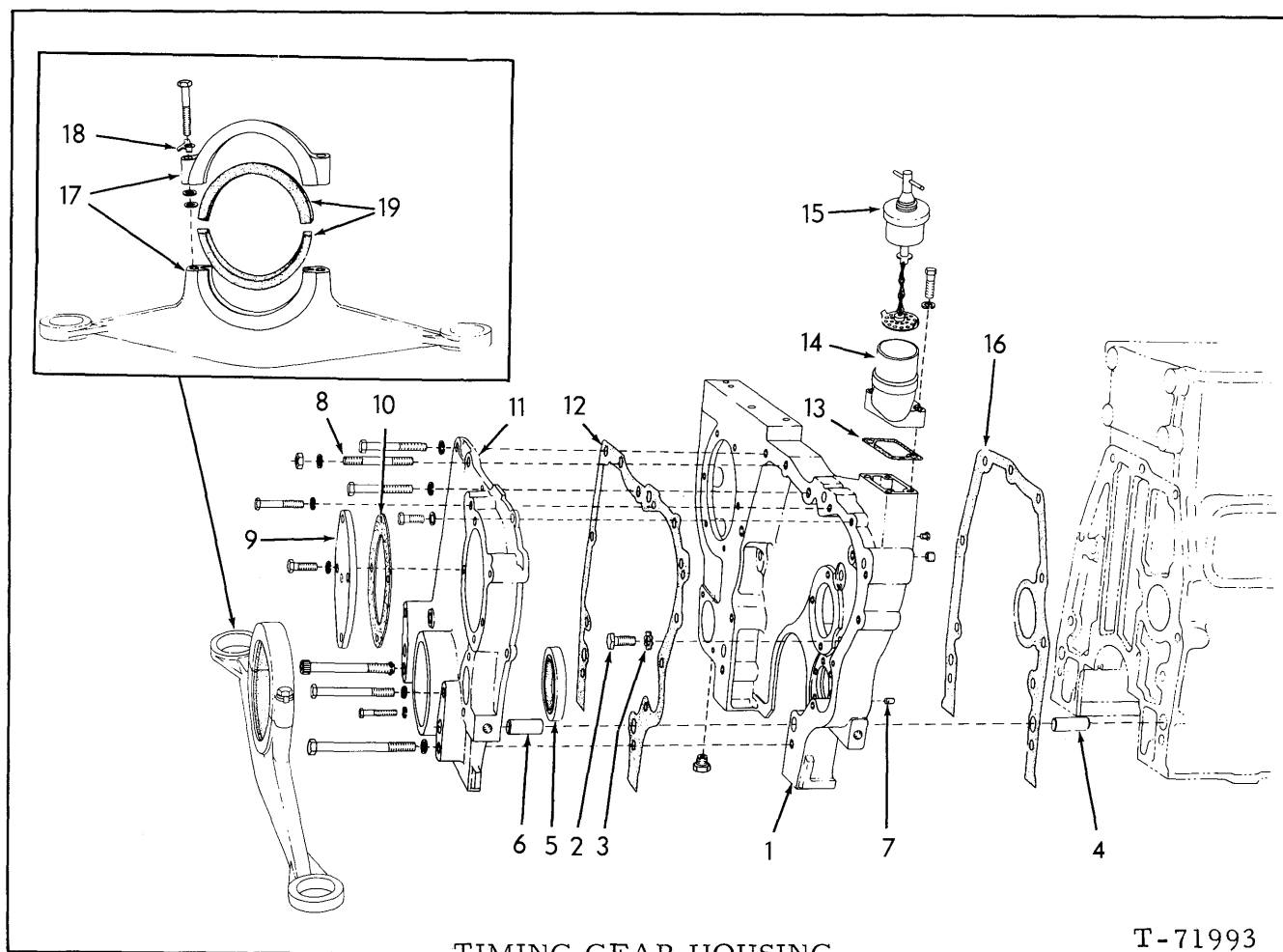
ITEM	PART NO.	QTY.	DESCRIPTION
1	74061743	6	PISTON ASSY. (Includes piston and items 2, 3 and 4)
2	74354778	6	PIN
3	74255465	12	RETAINER
4	74061742	6	RING SET
5	74359220	6	ROD ASSY. (Includes items 6 and 7)
6	74339017	6	BUSHING
7	74359222	12	CAPSCREW (Engine #11-19497 and up)
	74354787	12	BOLT
	74354748	12	NUT
			} Engines prior to #11-19497
8	74337701	12	BEARING (standard size)
	74337702	12	BEARING (.010" undersize)
	74337703	12	BEARING (.020" undersize)
	74337704	12	BEARING (.030" undersize)
	74337705	12	BEARING (.040" undersize)
	74321007	12	BEARING (standard size)
	74321033	12	BEARING (.010" undersize)
	74321034	12	BEARING (.020" undersize)
	74321035	12	BEARING (.030" undersize)
	74321036	12	BEARING (.040" undersize)
			} Engine #11-25910 and up
9	74061766	1	BEARING KIT (standard)
	74061767	1	BEARING KIT (.010" undersize)
	74061768	1	BEARING KIT (.020" undersize)
	74061769	1	BEARING KIT (.030" undersize)
	74061770	1	BEARING KIT (.040" undersize)
			} Each consists of 12 BEARINGS



HYDRAULIC PUMP DRIVE

T-72371

ITEM	PART NO.	QTY.	DESCRIPTION
1	74358750	1	ADAPTER, pump mounting
	70925223	2	CAPSCREW, 12-pt. Nylok, 3/8"NC x 3"
2	70923814	1	□ O-RING, front bearing retainer
3	74253862	2	BEARING, ball
4	74357412	1	GEAR
5	70923579	1	O-RING, pump adapter
6	74321257	1	ADAPTER, pump mounting (Engines prior to #11-28234)
	74321714	1	ADAPTER, pump mounting (Engine #11-28234 and up)
	70924781	6	SCREW, 12-pt. Nylok, 5/16"NC x 2-1/4"



TIMING GEAR HOUSING

T-71993

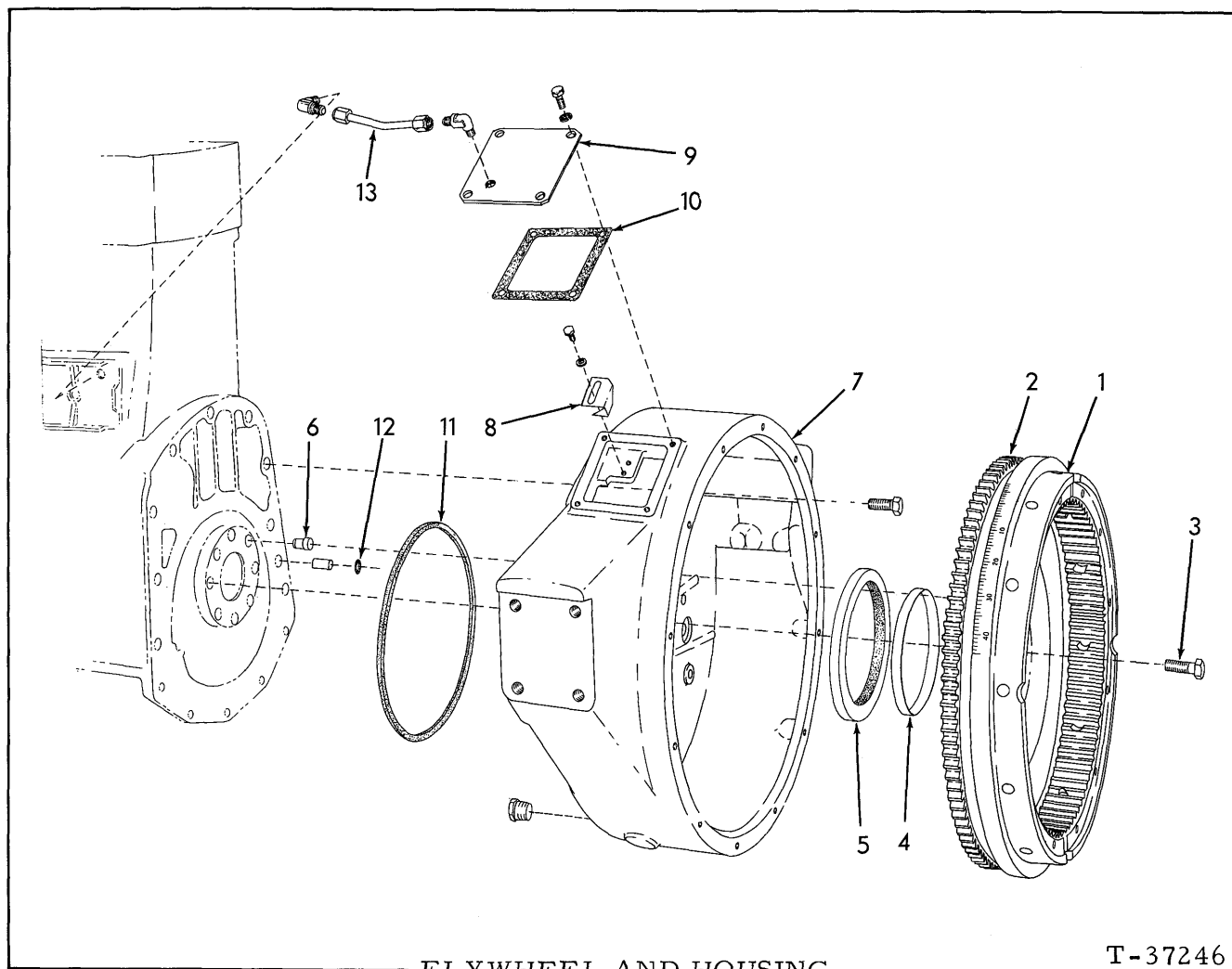
ITEM	PART NO.	QTY.	DESCRIPTION
1	74320742	1	HOUSING, timing gear
	70919134	1	PLUG, pipe, hex-hd., 1/8"NPT
	70920333	1	PLUG, pipe, hex-hd., 3/8"NPT
	70917970	2	PLUG, pipe, hex-socket, 1/2"NPT
2	74004054	3	CAPSCREW, 1/2"NC x 1-1/16"
3	74253490	3	LOCKWASHER
4	74346246	2	PIN, dowel, timing gear housing
5	74028922	1	SEAL, oil, crankshaft
6	74348107	2	PIN, dowel, timing gear cover
7	70621457	3	SETSCREW, hex-socket, Nylok, 5/16"NC x 3/8"
			(For plugging holes in pump mounting face of timing gear housing)
8	74320776	1	STUD, timing gear housing
	70904208	1	LOCKWASHER, 1/2"
	70910195	1	NUT, 1/2"NF
9	74354306	1	PLATE, cover, injection pump driving gear (Not used on units with air-conditioning)(Engines prior to #11-28234)
	74321627	1	PLATE, cover, injection pump driving gear (Engine #11-28234 and up)
	70916271	4	CAPSCREW, 3/8"NC x 1"
	70904206	4	LOCKWASHER, 3/8"

Engines prior to #11-27413

(Continued)

TIMING GEAR HOUSING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
10	70923820	1	□O-RING, cover plate (Engines prior to #11-28234)
	74321628	1	GASKET, cover plate (Engine #11-28234 and up)
11	74357409	1	COVER ASSY., timing gear housing (Includes item 6)(Engines prior to #11-27413)
	74321630	1	COVER, timing gear housing (Engine #11-27413 and up)
	70915969	3	CAPSCREW, 1/2"NC x 3"
	70916319	1	CAPSCREW, 1/2"NC x 3-1/2"
	70921299	1	CAPSCREW, hex-socket-hd., 1/2"NC x 4"
	70919232	1	CAPSCREW, 1/2"NC x 4-3/4"
	70919287	2	CAPSCREW, 3/8"NC x 1-7/8"
	70916274	2	CAPSCREW, 3/8"NC x 2-1/4"
	70912441	6	LOCKWASHER, 1/2"
	70904206	6	LOCKWASHER, 3/8"
	70916271	2	CAPSCREW, 3/8"NC x 1"
12	74354163	1	□GASKET, timing gear housing cover
13	74354304	1	GASKET, oil filler hole cover
14	74354289	1	PIPE, oil filler
	70919226	2	CAPSCREW, 3/8"NC x 1-5/8"
	70904206	2	LOCKWASHER, 3/8"
15	74354492	1	CLOSURE, oil filler
16	74348136	1	□GASKET, timing gear housing
17	70686468	1	BRACKET, engine mounting (Includes cap)
	74254891	2	CAPSCREW, 1/2"NC x 2-1/2"
	70916009	10	WASHER, plain (1/32" thick. Use as required)
18	74335550	2	LOCK
19	74336491	2	LINER, engine mounting bracket



FLYWHEEL AND HOUSING

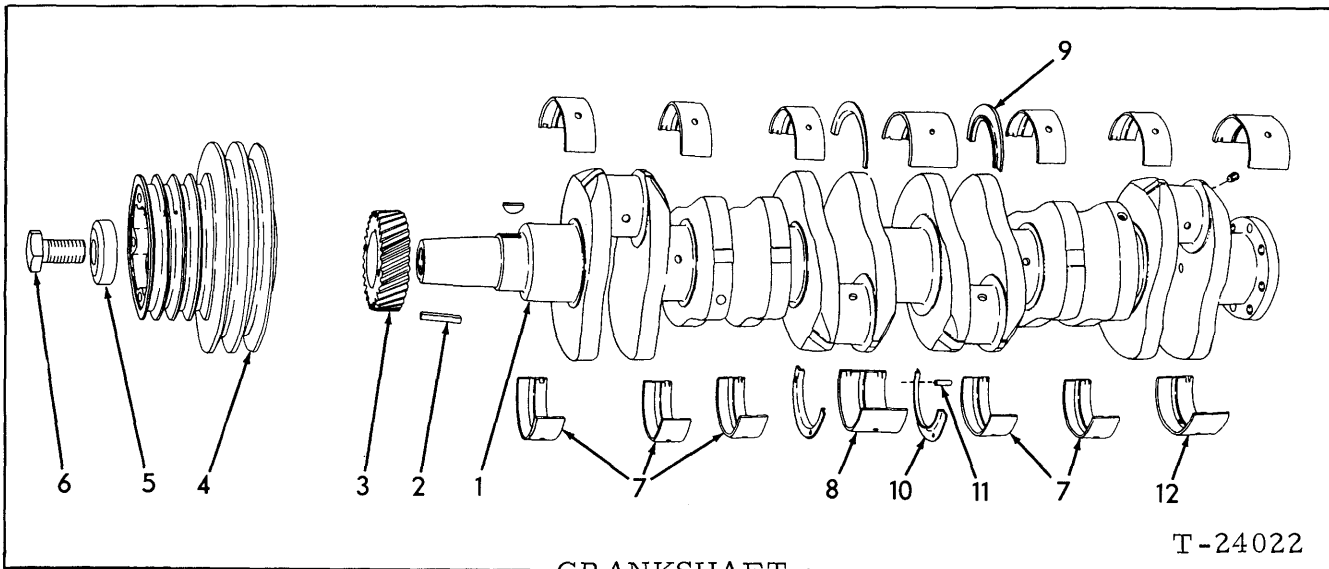
T-37246

ITEM	PART NO.	QTY.	DESCRIPTION
1	74338542	1	FLYWHEEL ASSY. (Includes item 2)
2	74304907	1	GEAR
3	74359805	6	CAPSCREW, flywheel (Original equipment)(For first order 6 CAPSCREW 74035530)
	74035530	6	CAPSCREW, 12-pt. (Service replacement)
4	74029556	1	SLEEVE
5	74029502	1	SEAL
6	74500300	2	DOWEL
7	74337661	1	HOUSING
	70918851	1	PLUG, pipe, hex-socket, 3/4"NPT
	70917021	2	PIN, dowel, 1/2" x 1"
	70916311	9	CAPSCREW, 1/2"NC x 1-1/4"
8	74338762	1	POINTER
	70916284	2	CAPSCREW, 1/4"NC x 1/2"
	70904204	2	LOCKWASHER, 1/4"
9	74354634	1	COVER
	70916282	4	CAPSCREW, 1/4"NC x 7/8"
	70904204	4	LOCKWASHER, 1/4"

(Continued)

FLYWHEEL AND HOUSING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
10	74336676	1	□GASKET
11	74336897	1	□RING
12	70923376	2	□O-RING
13	74354636	1	TUBE,. (Includes NUT and SLEEVES indented below)
	70919005	2	ELBOW, Imperial, 3/8"tube, 3/8"NPT
	70917810	2	NUT, Imperial, 3/8" tube
	70917807	2	SLEEVE, Imperial, 3/8" tube



CRANKSHAFT

ITEM PART NO. QTY. DESCRIPTION

1	74321965	1	CRANKSHAFT ASSY. (Includes PLUG indented below)
	70919840	1	PLUG, pipe, 1/4" NPT (Not used on units with wet clutch)
2	74003490	1	KEY, crankshaft pulley (Engines prior to #11-19417)
3	74359278	1	GEAR (Engines prior to #11-25910)
	74321381	1	GEAR (Engine #11-25910 and up)
	70905127	1	KEY, "B" woodruff, 5/16" x 1"
4	74359580	1	PULLEY, crankshaft
5	74371503	1	WASHER, crankshaft pulley bolt
6	74393587	1	CAPSCREW, crankshaft pulley
7	74337710	10	BEARING (standard size)
	74337711	10	BEARING (.010" undersize)
	74337712	10	BEARING (.020" undersize)
	74337713	10	BEARING (.030" undersize)
	74337714	10	BEARING (.040" undersize)
	74321348	10	BEARING (standard size)
	74321388	10	BEARING (.010" undersize)
	74321389	10	BEARING (.020" undersize)
	74321390	10	BEARING (.030" undersize)
	74321391	10	BEARING (.040" undersize)
8	74348991	2	BEARING, center (standard size)
	74348992	2	BEARING, center (.010" undersize)
	74348993	2	BEARING, center (.020" undersize)
	74348994	2	BEARING, center (.030" undersize)
	74348995	2	BEARING, center (.040" undersize)
	74321349	2	BEARING, center (standard size)
	74321392	2	BEARING, center (.010" undersize)
	74321393	2	BEARING, center (.020" undersize)
	74321394	2	BEARING, center (.030" undersize)
	74321395	2	BEARING, center (.040" undersize)

Front and intermediate main. Engines prior to #11-25910

Front and intermediate main. Engines #11-25910 and up with piston cooling.

Engines prior to #11-25910

Engines #11-25910 and up with piston cooling

(Continued)

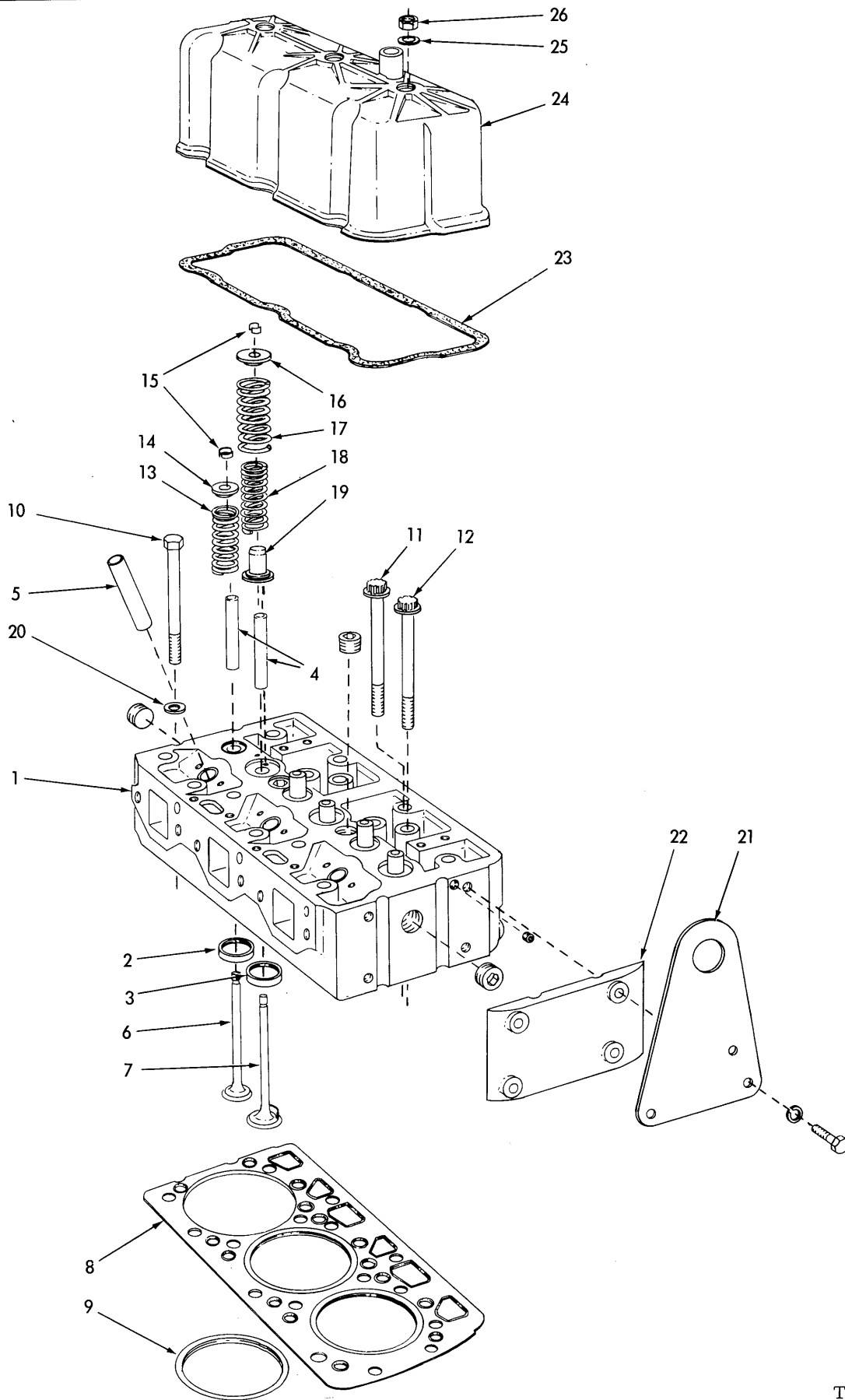
C R A N K S H A F T (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	74337683	2	FLANGE, center main, upper (standard size)
	74337684	2	FLANGE, center main, upper (.005" oversize)
	74337685	2	FLANGE, center main, upper (.010" oversize)
	74337686	2	FLANGE, center main, upper (.015" oversize)
10	74337687	2	FLANGE, center main, lower (standard size)
	74337688	2	FLANGE, center main, lower (.005" oversize)
	74337689	2	FLANGE, center main, lower (.010" oversize)
	74337690	2	FLANGE, center main, lower (.015" oversize)
11	70919347	4	PIN, dowel
12	74337698	2	BEARING, rear main (standard size)
	74337699	2	BEARING, rear main (.010" undersize)
	74337700	2	BEARING, rear main (.020" undersize)
	74337715	2	BEARING, rear main (.030" undersize)
	74337716	2	BEARING, rear main (.040" undersize)
13	74061755	1	KIT, bearing (standard)
	74061756	1	KIT, bearing (.010" undersize)
	74061757	1	KIT, bearing (.020" undersize)
	74061758	1	KIT, bearing (.030" undersize)
	74061759	1	KIT, bearing (.040" undersize)

Engines
#11-25910 and
up with piston
cooling.

NOTE: Each KIT listed above consists of MAIN BEARINGS for complete crankshaft overhaul.

(Revised May 1976)



CYLINDER HEAD

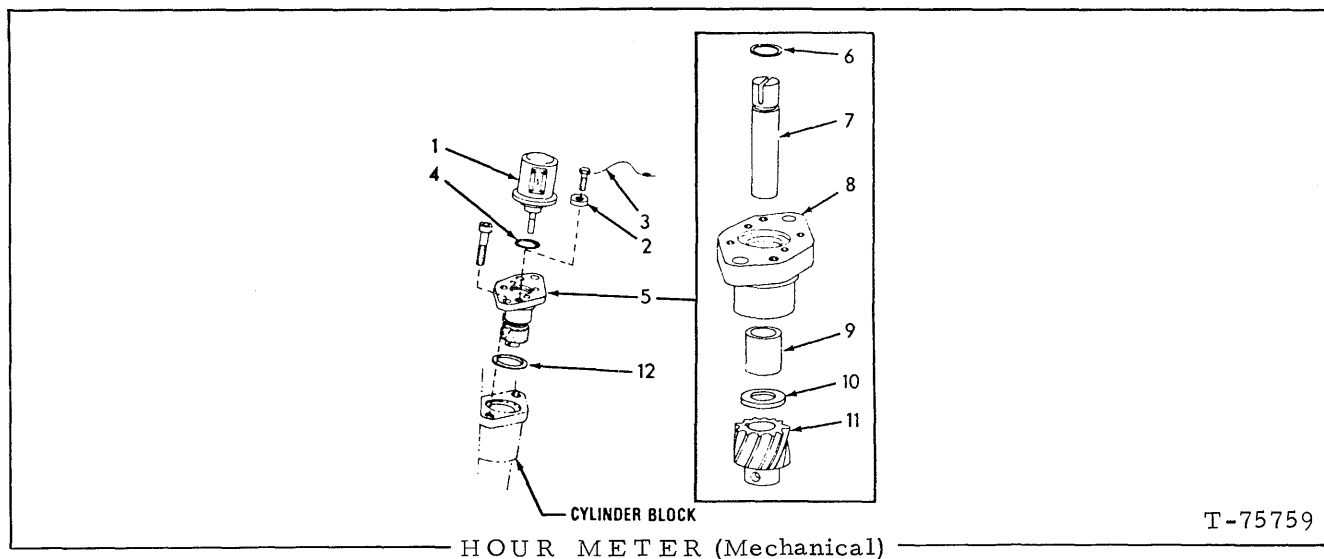
T-77627

CYLINDER HEAD

ITEM	PART NO.	QTY.	DESCRIPTION
1	74320689	2	HEAD ASSY. (Includes items 2 thru 5 and hardware indented below)(For first replacement prior to engine #11-19608 also order 6 CAPSCREW 70915987, 3 SEAT 74320654, 3 ROTATOR 74320655, 3 VALVE 74321157, 3 VALVE 74321372 and 12 WASHER 74371107)
	70917673	4	PLUG, pipe, hex-socket, 1/8" NPT
	70928879	4	PLUG, expansion, 1" diam.
2	74359646	6	INSERT, exhaust (30° - standard size)
	74359115	6	INSERT, exhaust (30° - .005" oversize)
3	74359112	6	INSERT, intake (30° - standard size)
	74359113	6	INSERT, intake (30° - .005" oversize)
4	74359192	12	GUIDE
5	74336157	6	SLEEVE
6	74321372	6	VALVE (30°)
7	74321157	6	VALVE (30°)
8	74359029	1	GASKET, ASSY., cylinder head, front (Includes item 9)
	74359030	1	GASKET ASSY., cylinder head, front (Includes item 9)
	74321369	1	GASKET, cylinder head, front
	74321370	1	GASKET, cylinder head, rear
9	74358984	6	GASKET, firing ring (cylinder sealing)(Engines prior to #11-25910)
10	74514400	1	CAPSCREW (1/2" x 5-3/8")
11	74320613	24	CAPSCREW (5/8" x 5-9/16")
12	74320614	9	CAPSCREW (1/2" x 5-5/16")
13	74336131	6	SPRING
14	74020408	6	RETAINER, exhaust valve spring
15	74376497	24	LOCK (half only)
16	74320655	6	ROTATOR
17	74336129	6	SPRING, outer
18	74336130	6	SPRING, inner
19	74320654	6	SEAT
20	74372864	1	WASHER
21	74320616	2	EYE
22	74336178	2	PLATE
	70916191	8	CAPSCREW, 7/16" NC x 1-1/2"
	70904207	8	LOCKWASHER, 7/16"
23	74336148	2	□GASKET
24	74321718	1	COVER, rear
	74359264	1	COVER, front
25	74376749	6	WASHER
26	74375937	6	NUT

Engines prior to #11-25910

Engine #11-25910 and up

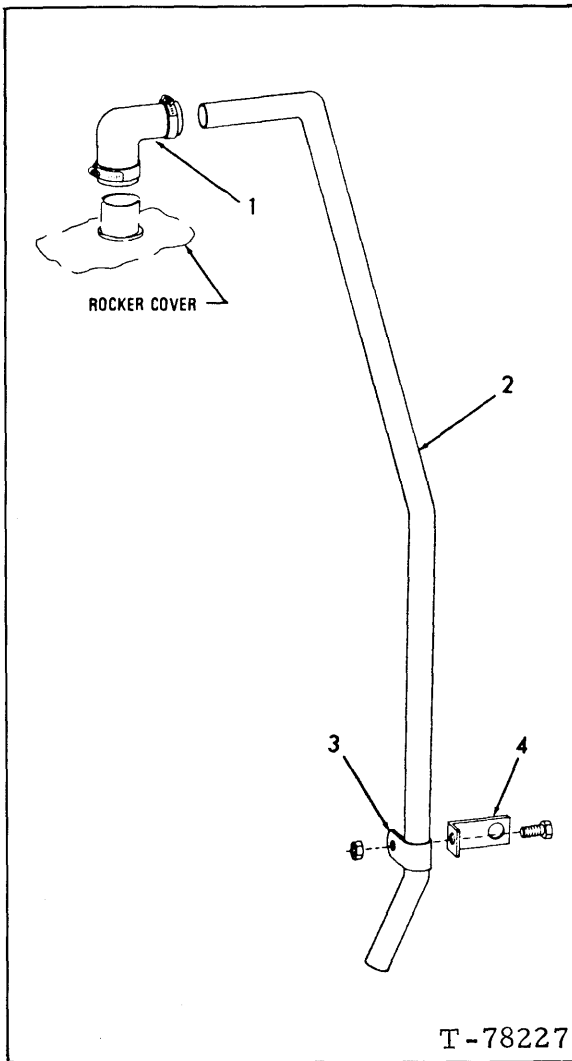


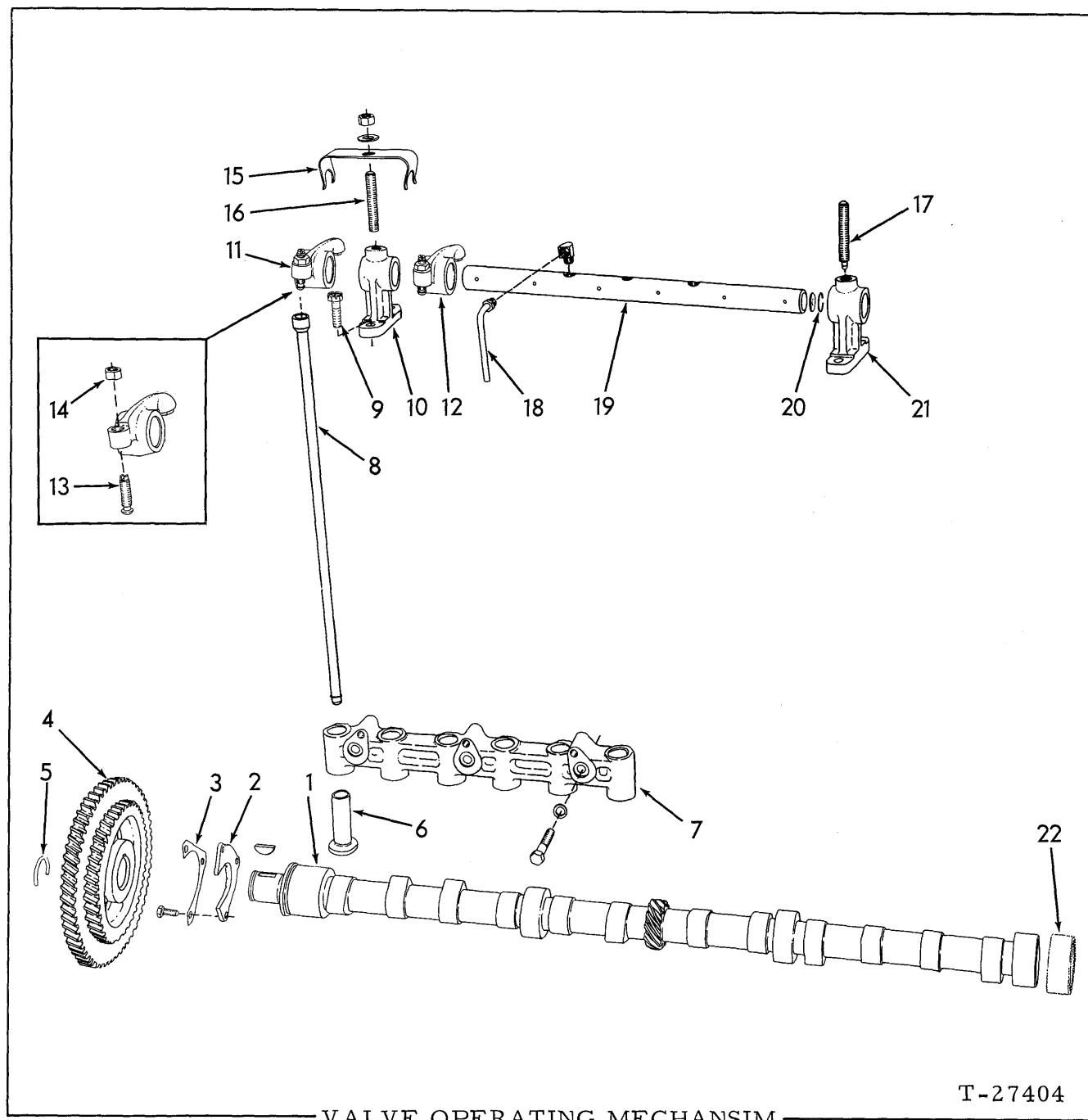
USAGE: Engines prior to serial No. 11-22358

ITEM	PART NO.	QTY.	DESCRIPTION
1	74359290	1	METER, hour (Serviced only as a unit)
2	74359293	2	CLAMP, meter retaining
	74027687	2	SCREW, hex-socket hd., 1/4"NF x 7/8"
	70904204	2	LOCKWASHER, 1/4"
3	74355843	1	SEAL, anti-tampering
4	70923934	1	O-RING, meter mounting
5	74321117	1	ADAPTER ASSY. (Consists of items 6 thru 11)
	74359231	2	SCREW, hex-socket hd., 3/8"NC x 2-1/4"
6	74255961	1	RING, shaft retaining (Engines prior to #11-23907)
	70927782	1	RING, shaft retaining (Engine #11-23907 and up)
7	74359271	1	SHAFT, drive
8	-----	1	HOUSING, adapter (Not serviced separately, order item 5)
9	74255962	1	BUSHING, adapter housing
10	74359308	1	BEARING, thrust (washer)
11	74660408	1	GEAR, drive shaft
12	74253773	1	GASKET, adapter

ENGINE BREATHER

ITEM	PART NO.	QTY.	DESCRIPTION
1	74357735	1	ELBOW, front cover (rubber)
	74253977	1	CLAMP, hose, 1-3/8" diam.
	74253978	1	CLAMP, hose, 1-5/8" diam.
2	70679914	1	TUBE
3	70929665	1	CLIP, tube supporting
	70922300	1	CAPSCREW, 3/8"NC x 3/4"
	70911026	1	NUT, 3/8"NC
4	70633497	1	ANGLE





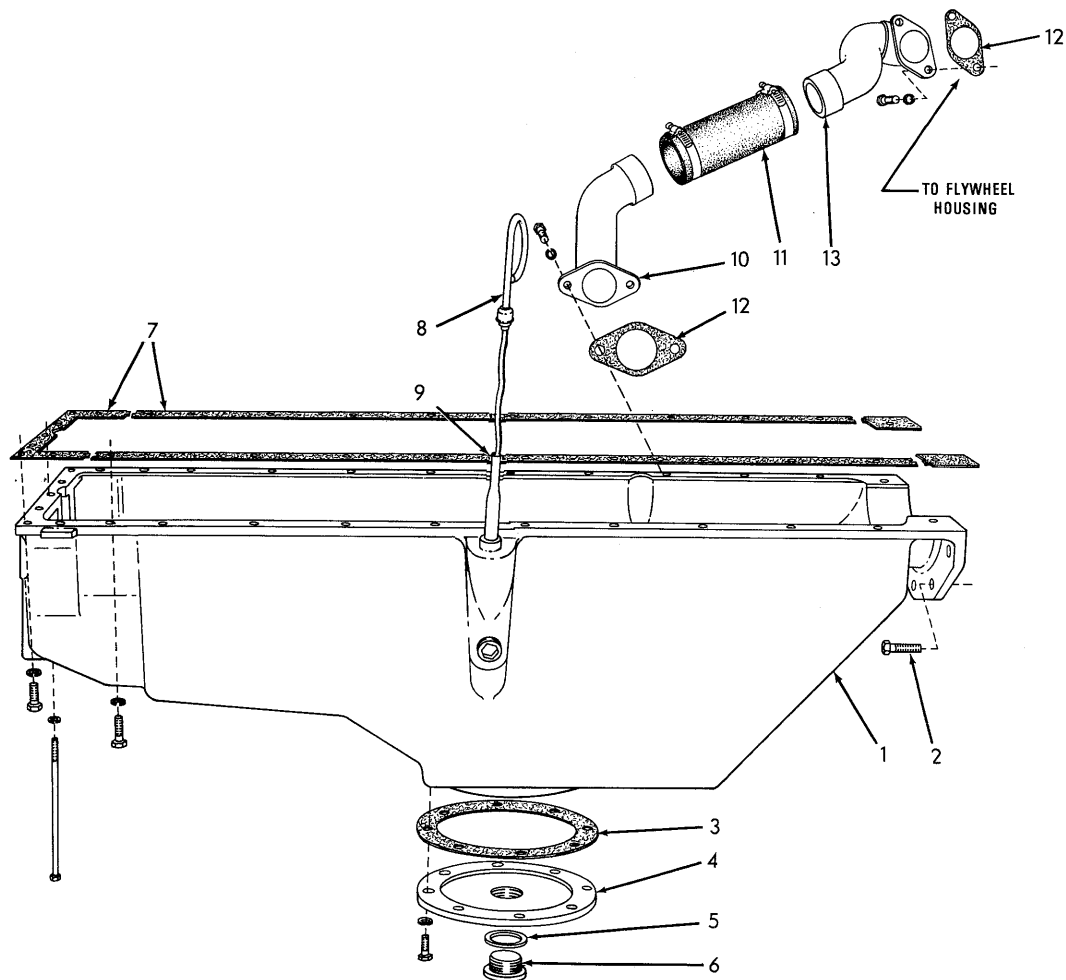
ITEM	PART NO.	QTY.	DESCRIPTION
1	74321678	1	CAMSHAFT (Engine prior to #11-28266)
	74321892	1	CAMSHAFT (Engine # 11-28266 and up)
	70905126	1	KEY, #5 woodruff, 1/4" x 1"
2	74349257	1	COLLAR, camshaft thrust
	70916277	3	CAPSCREW, 5/16"NC x 5/8"
3	74025391	1	PLATE, capscREW locking
4	74339659	1	GEAR, camshaft (Engines prior to #11-25910)
	74321380	1	GEAR, (Engine #11-25910 and up)
5	74346307	1	RING, snap, gear retaining (Engines prior to #11-28266)

(Continued)

(Revised February 1978)

VALVE OPERATING MECHANISM (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
6	74338299	12	LIFTER
7	74359701	2	BRACKET
	74255393	6	BOLT, 3/8"NC x 1-3/4"
8	74336234	12	ROD
9	74255723	12	BOLT (self-locking)
10	74359984	4	BRACKET, end
11	74358989	6	ARM ASSY., intake
12	74358988	6	ARM ASSY., exhaust
13	74336646	12	SCREW
14	74516821	12	NUT
15	74338143	6	CLIP
	70910919	6	WASHER, plain, SAE std., 7/16"
	70910986	6	NUT, 7/16"NF
16	74348129	4	STUD, (2-5/8" long)
17	74348130	2	SCREW (3" long, dog-pt.)
18	74349157	2	TUBE ASSY., (Includes nut)
	70913039	2	ELBOW, inverted flare, 90°, 1/4" tube, 1/8"NPT male
19	74359985	2	SHAFT ASSY., (Includes 70910002 PLUGS and item 20)
	70910002	4	PLUG, expansion, 3/4" diam.
20	74254363	4	RING
21	74336142	2	BRACKET, center
22	-----	-	BEARING (See CYLINDER BLOCK)



T-37287

OIL PAN

USAGE: Engines prior to serial No. 11-24110. See NOTE on page 29.

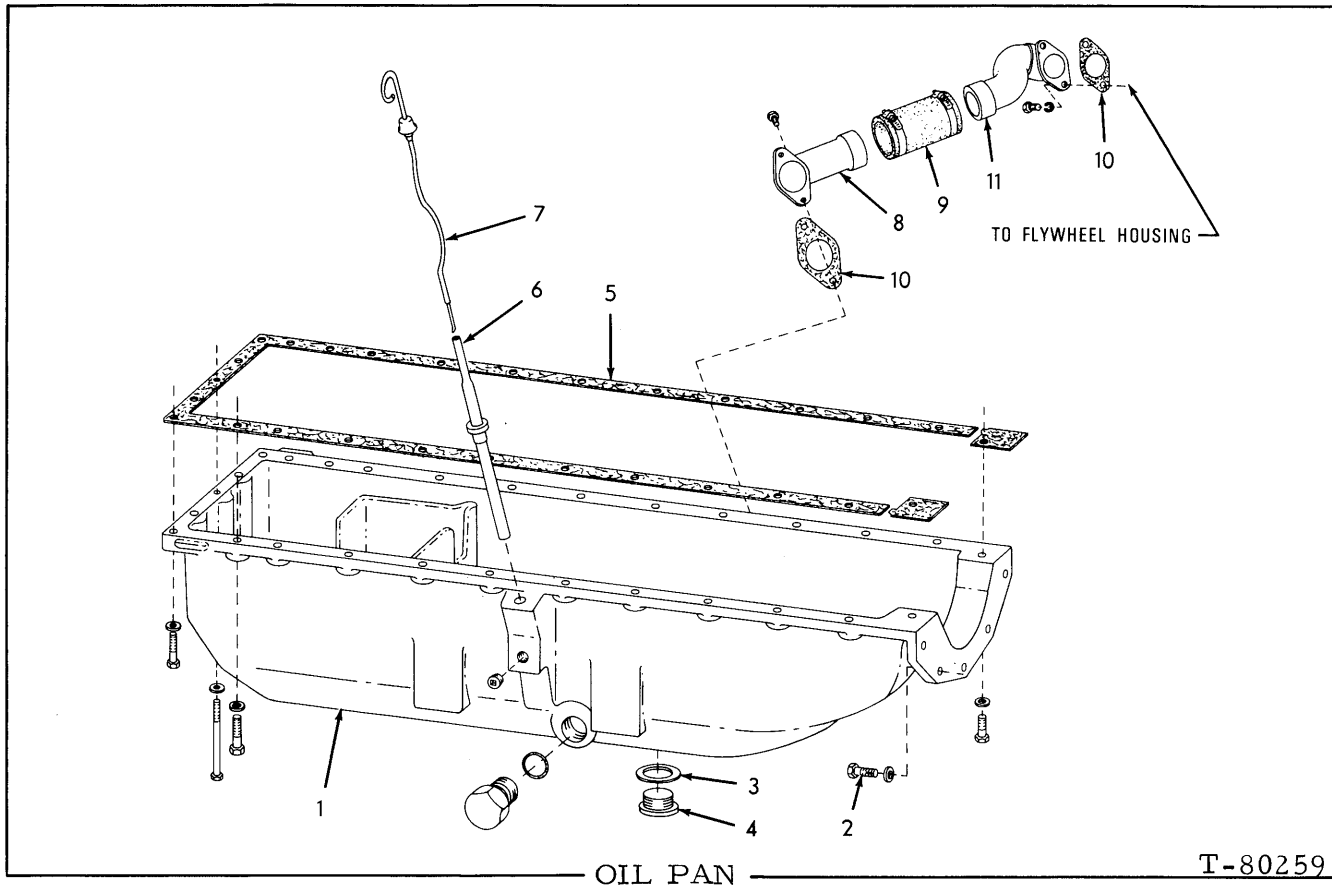
ITEM	PART NO.	QTY.	DESCRIPTION
1	74337733	1	PAN, oil
	70918851	1	PLUG, pipe, hex-socket, 3/4"NPT
	70919224	24	CAPSCREW, 3/8"NC x 1-1/8"
	70914392	2	CAPSCREW, , 5/16"NC x 1"
	70919292	3	CAPSCREW, 5/16"NC x 6-3/4"
	70913544	24	LOCKWASHER, 3/8"
	70912369	5	LOCKWASHER, 5/16"
2	74255916	5	CAPSCREW, Nylon strip, 3/8"NC x 1"
	70913544	5	LOCKWASHER, 3/8"
3	74371289	1	GASKET
4	74371255	1	PLATE
	70919224	8	CAPSCREW, 3/8"NC x 1-1/8"
	70904206	8	LOCKWASHER, 3/8"
5	70667252	1	GASKET

(Continued)

OIL PAN (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
6	70035250	1	PLUG
7	74321893	1	GASKET SET (4 pieces)
8	74354654	1	GAUGE
9	74354661	1	ADAPTER
10	70630889	1	ELBOW
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70910287	2	LOCKWASHER, 3/8"
11	70634378	1	HOSE
	70921914	2	CLAMP, hose, 2-5/16" to 3-1/4" diam.
12	70621516	2	GASKET
13	70631528	1	ELBOW
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70910287	2	LOCKWASHER, 3/8"

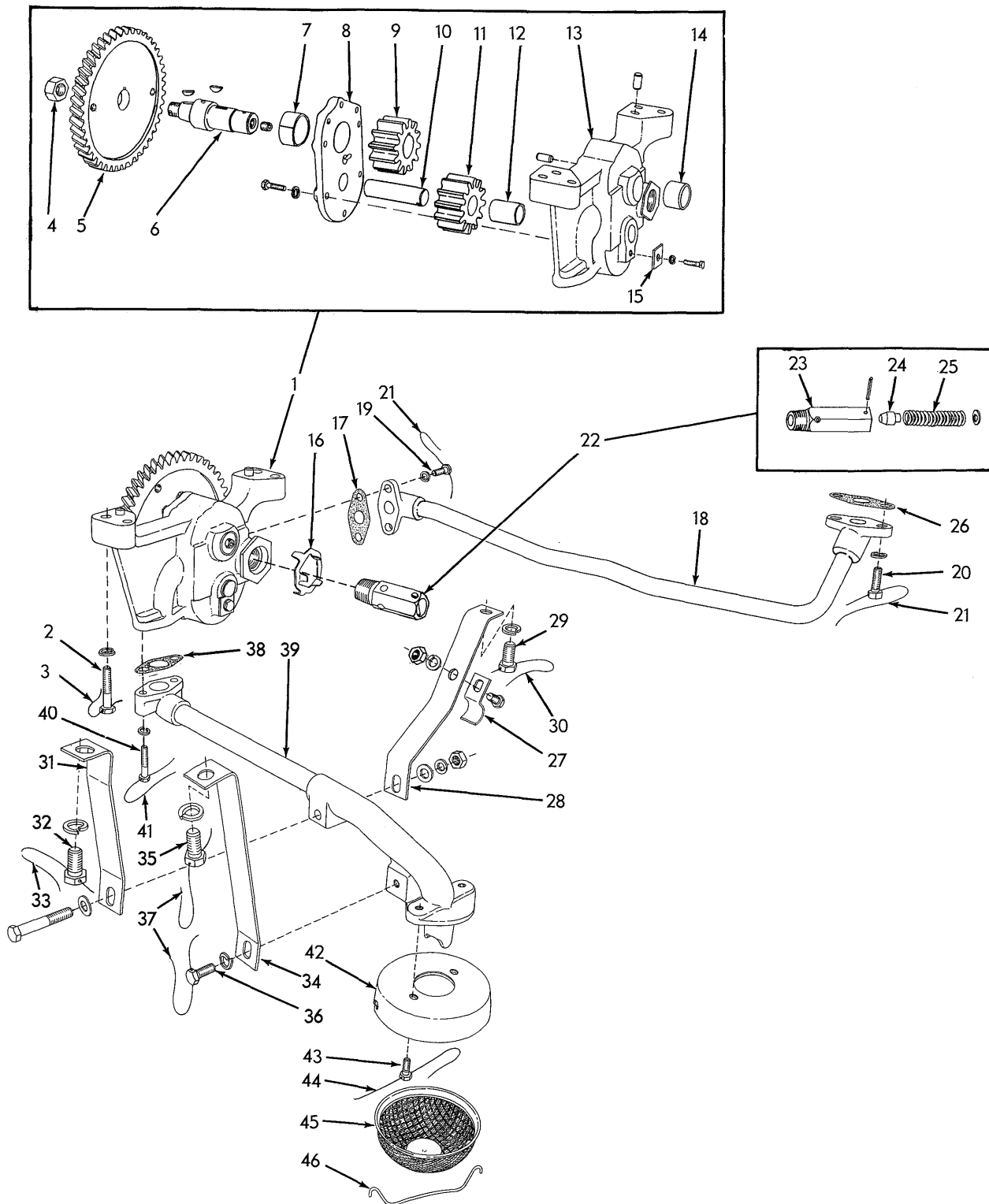
NOTE: If OIL PUMP 74321189 has been installed, the design on these pages become "VOID" and service thereafter is governed by the design on page 29A.



USAGE: Engine serial No. 11-24110 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	74321954	1	PAN, oil (Service replacement)
	70904223	2	PLUG, pipe, sq-socket, 1/2"NPT
	70921204	1	PLUG, 1-1/16" straight-thd. (Includes O-RING)
	70921206	1	O-RING
	70916279	4	CAPSCREW, 5/16"NC x 1-1/2"
	70919784	1	CAPSCREW, 5/16"NC x 4"
	70912369	5	WASHER
	70914847	22	CAPSCREW, 3/8"NC x 1-1/2"
	70916271	2	CAPSCREW, 3/8NC x 1"
	70913544	24	WASHER
2	74255916	5	CAPSCREW, nylon strip, 3/8"NC x 1"
	70913544	5	WASHER
3	70667252	1	GASKET
4	70035250	1	PLUG, drain
5	74321893	1	GASKET SET (4 pieces)
6	74354656	1	ADAPTER
7	74320898	1	GAUGE
8	70697843	1	ELBOW, oil drain, lower
	70927173	2	CAPSCREW, 3/8"NC x 1-1/8"
9	70626266	1	HOSE, oil drain elbow
	70921914	2	CLAMP, hose, 2-5/16" to 3-1/4" diam.
10	70621516	2	GASKET, oil drain elbow
11	70631528	1	ELBOW, oil drain, upper
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70910287	2	LOCKWASHER, 3/8"

MEMO



OIL PUMP

T-15138

OIL PUMP

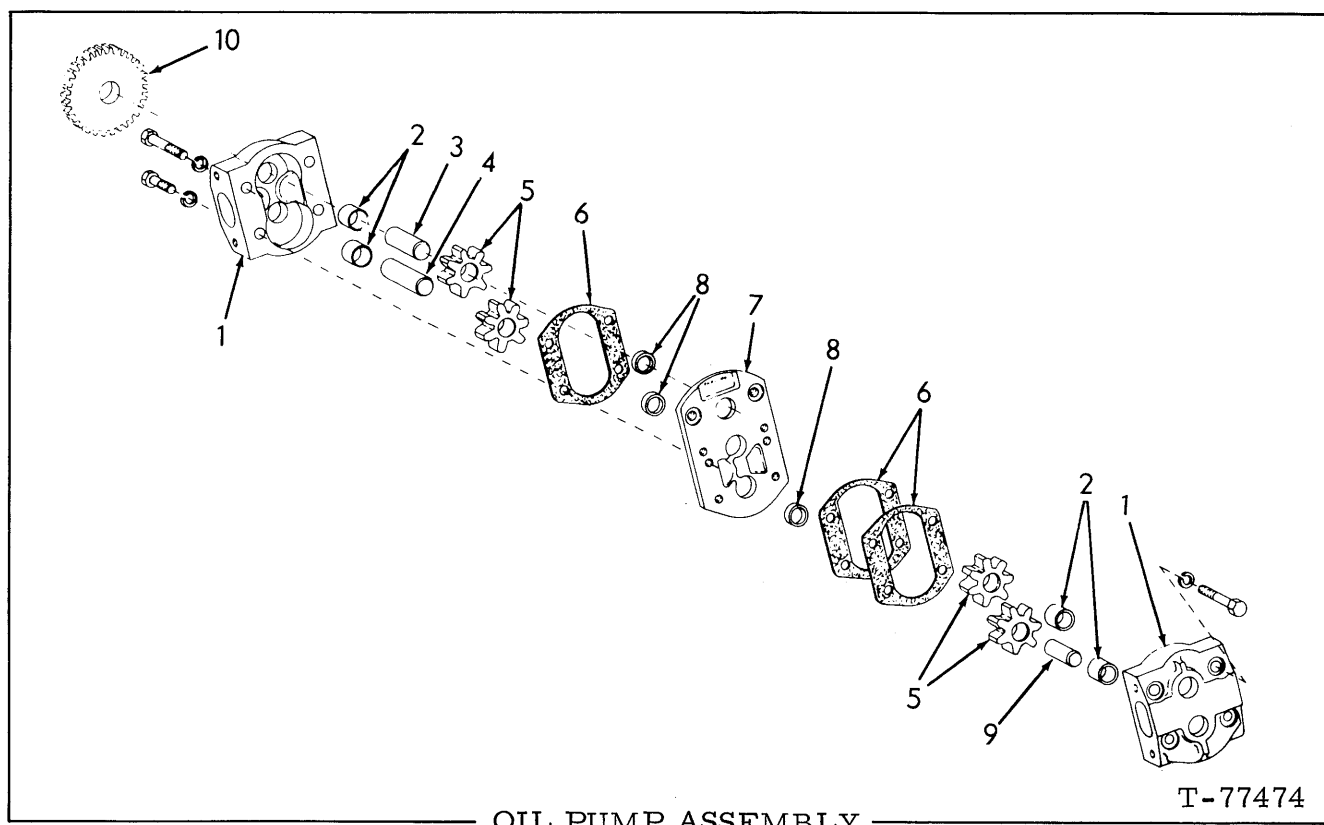
USAGE: Engines prior to serial No. 11-24110

ITEM	PART NO.	QTY.	DESCRIPTION
	-----	1	PUMP ASSY. (Consists of items 4 thru 15)(Order 1 OIL PUMP KIT 74321189, 1 GAUGE 74320898, 1 ADAPTER 74354656 and 1 ELBOW 70697843) (See PACKAGED PARTS)(Once the OIL PUMP KIT has been installed, the design on this page becomes void and service thereafter is governed by the design shown on page 32B)
2	74348692	4	CAPSCREW, drilled-hd., 3/8"NC x 1-3/4"
	70904206	4	LOCKWASHER, 3/8"
3	74509035	2	WIRE, locking, #18 x 10"
4	74254977	1	NUT
5	74337047	1	GEAR
6	74337576	1	SHAFT
	70910224	2	KEY #6 woodruff, 5/32" x 5/8"
	70917673	1	PLUG, pipe, hex-socket, 1/8"NPT
7	74337584	1	BUSHING
8	74337582	1	COVER ASSY. (Includes item 7)
	70916282	6	CAPSCREW, 1/4"NC x 7/8"
	70904204	6	LOCKWASHER, 1/4"
9	74337577	1	GEAR
10	74337581	1	SHAFT
11	74337578	1	GEAR ASSY (Includes item 12)
12	74337580	1	BUSHING
13	74337573	1	HOUSING ASSY. (Includes item 14 and dowel PINS indented below)
	70917554	1	PIN, dowel, 1/4" x 1/2"
	70917546	2	PIN, dowel, 3/8" x 5/8"
14	74337575	1	BUSHING
15	74348020	1	RETAINER
	74349378	1	CAPSCREW, 1/4"NC x 1/2"
	70904204	1	LOCKWASHER, 1/4"
16	74347938	1	LOCK
17	74348215	1	□GASKET
18	74335387	1	PIPE
19	74320227	2	CAPSCREW, drilled-hd, 5/16"NC x 7/8"
	70904205	2	LOCKWASHER, 5/16"
20	74346483	2	CAPSCREW, drilled-hd., 3/8"NC x 1-1/4"
	70904206	2	LOCKWASHER, 3/8"
21	74509035	2	WIRE, locking, #18 x 10"
22	74320597	1	VALVE ASSY., (Items 23 thru 25)
23	-----	1	BODY
24	-----	1	PISTON
25	74354568	1	SPRING
	74359310	1	WASHER, plain
	70916001	1	PIN, spring, 3/16" x 1"
26	74346169	1	□GASKET
27	74347572	1	CLAMP
	70915408	1	CAPSCREW, 3/8"NC x 3/4"
	70904206	1	LOCKWASHER, 3/8"
	70910324	1	NUT, 3/8"NC
28	74335144	1	BRACKET, right
29	74375812	1	CAPSCREW, drilled-hd., 1/2"NC x 1"
	70904208	1	LOCKWASHER, 1/2"
30	74348691	1	WIRE, locking, #18 x 6"

(Continued)

OIL PUMP (Continued)

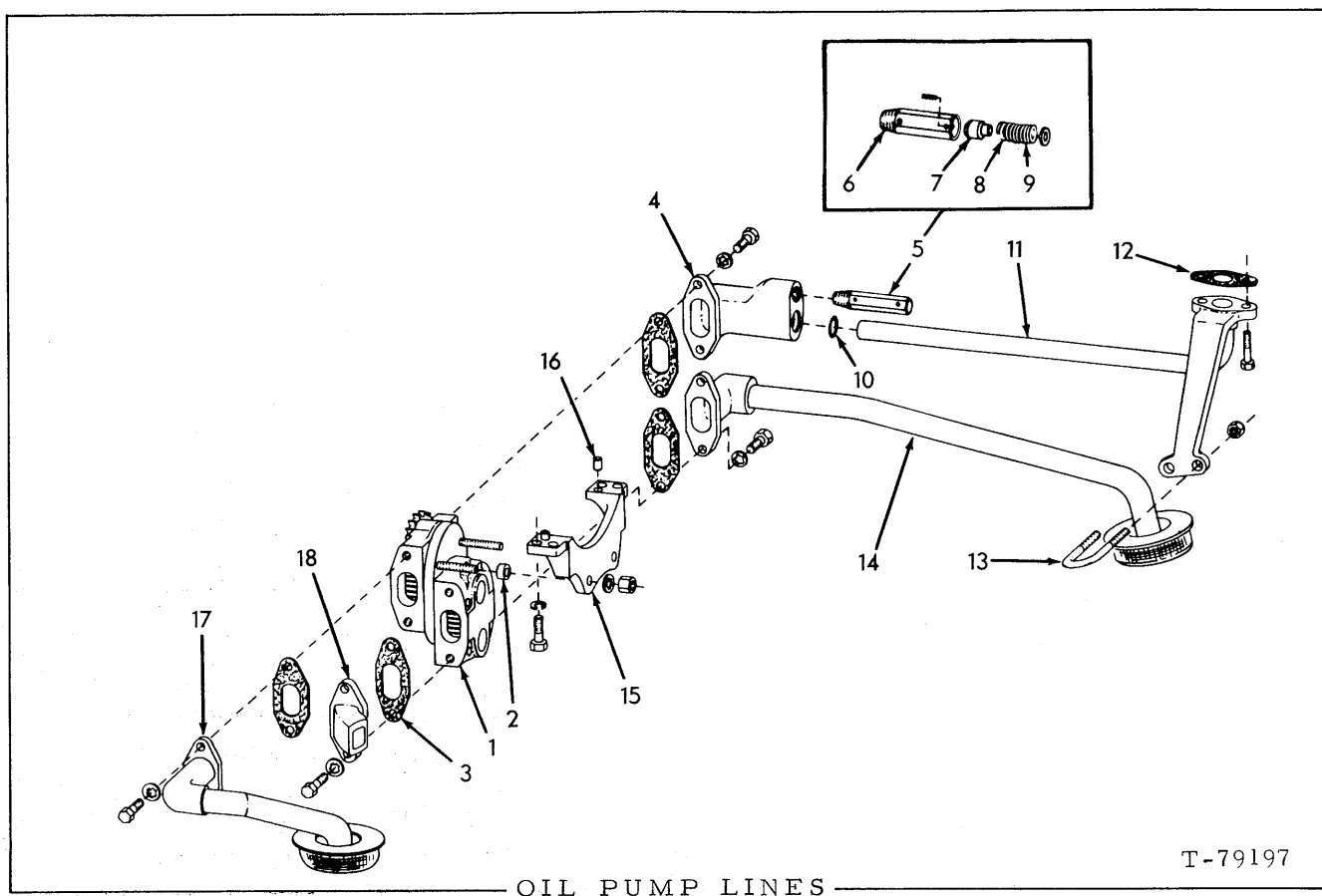
ITEM	PART NO.	QTY.	DESCRIPTION
31	74335145	1	BRACKET, left front
32	74375812	1	CAPSCREW, drilled-hd, 1/2"NC x 1"
	70904208	1	LOCKWASHER, 1/2"
33	74348691	1	WIRE, locking, #18 x 6"
34	74335143	1	BRACKET, left rear
35	74375812	1	CAPSCREW, upper
	70904208	1	LOCKWASHER, 1/2"
36	74369110	1	CAPSCREW, lower
	70904206	1	LOCKWASHER, 3/8"
37	74348691	2	WIRE, locking, #18 x 6"
38	74348218	1	□GASKET
39	74335390	1	PIPE
40	74349375	2	CAPSCREW, drilled-hd., 5/16"NC x 1-5/8"
	70904205	2	LOCKWASHER, 5/16"
41	74509035	1	WIRE, locking, #18 x 10"
	70916274	1	CAPSCREW, 3/8"NC x 2-1/4"
	70912597	2	WASHER, plain
	70904206	1	LOCKWASHER, 3/8"
	70910324	1	NUT, 3/8"NC
42	74320593	1	COVER
43	74374129	2	CAPSCREW
44	74509035	1	WIRE, locking, #18 x 10"
45	74348683	1	SCREEN
46	74348682	1	RETAINER



USAGE: See page 32B

ITEM	PART NO.	QTY.	DESCRIPTION
-	74321399	1	PUMP ASSY. (Includes items 1,3,4,5,6,7, 9 and 10)
1	74393344	2	BODY ASSY.
	70920594	6	CAPSCREW, 7/16"NF x 2"
	70930705	2	CAPSCREW, 7/16"NF x 3"
	70907863	8	LOCKWASHER, 7/16"
2	74393346	4	BUSHING (Engines prior to S/N 11-27037)
3	74393351	1	SHAFT
4	74026614	1	SHAFT
5	74028077	4	GEAR
6	74393349	3	GASKET
7	74395089	1	PLATE ASSY.
8	74393346	3	BUSHING (Engines prior to S/N 11-27037)
9	74393354	1	SHAFT
10	74320884	1	GEAR

(Revised May 1977)



T-79197

USAGE: Engine serial No. 11-24110 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	PUMP ASSY. (See page 32A)
	70907863	2	LOCKWASHER, int-tooth, 7/16"
	70928212	2	NUT, 7/16"NC
2	74395024	2	DOWEL
3	74393359	4	□GASKET
4	74321052	1	ELBOW
	70923193	2	CAPSCREW, 3/8"NF x 1-1/4"
	70916543	2	LOCKWASHER, internal teeth, 3/8"
5	74320597	1	VALVE ASSY. (Includes items 6 thru 9)
6	-----	1	BODY (Not serviced separately)
	70916001	1	PIN, spring, 3/16" x 1"
7	-----	1	PISTON (Not serviced separately)
8	74354568	1	SPRING
9	74359310	1	WASHER
10	70930924	1	O-RING

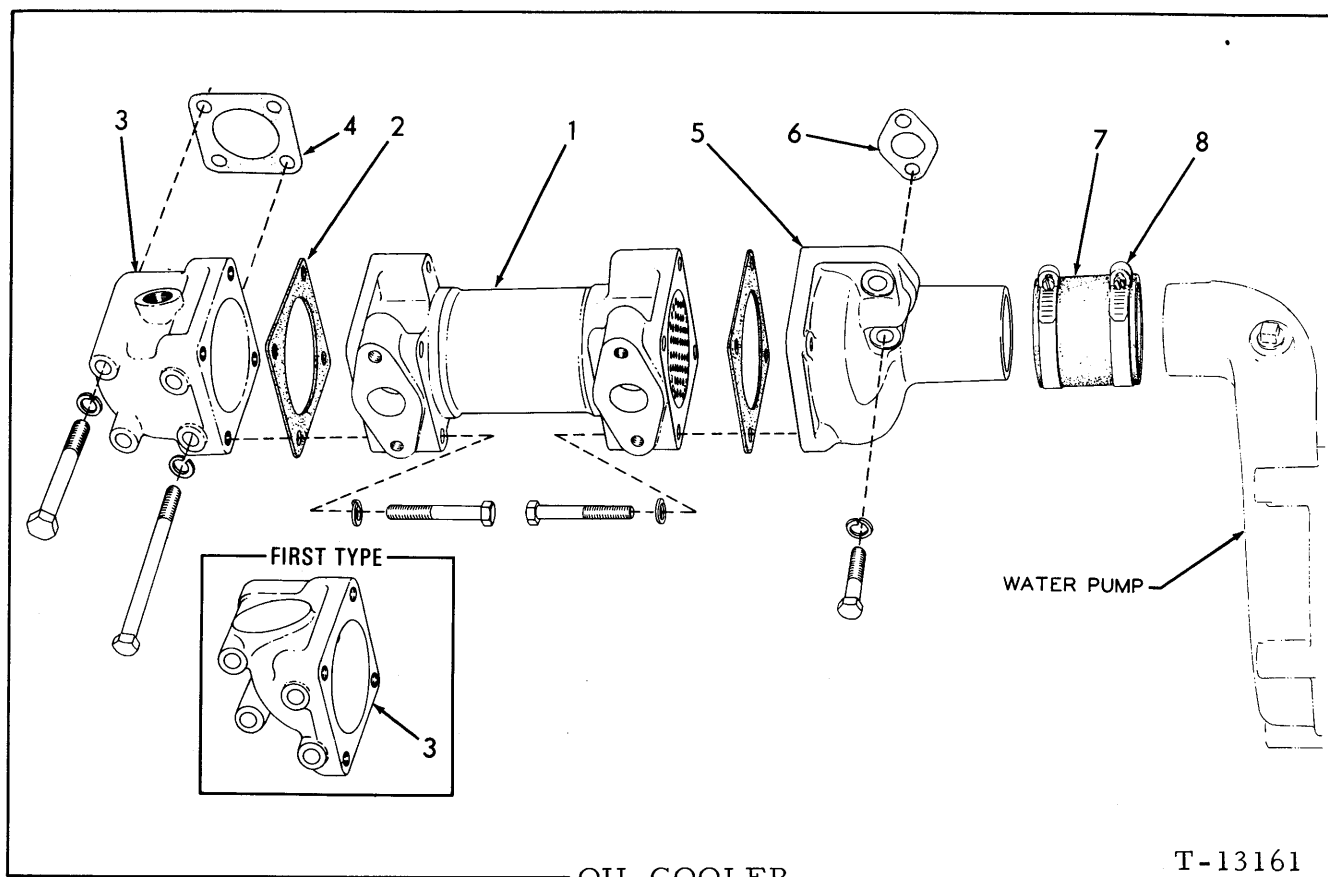
(Continued)

OIL PUMP LINES (Continued)

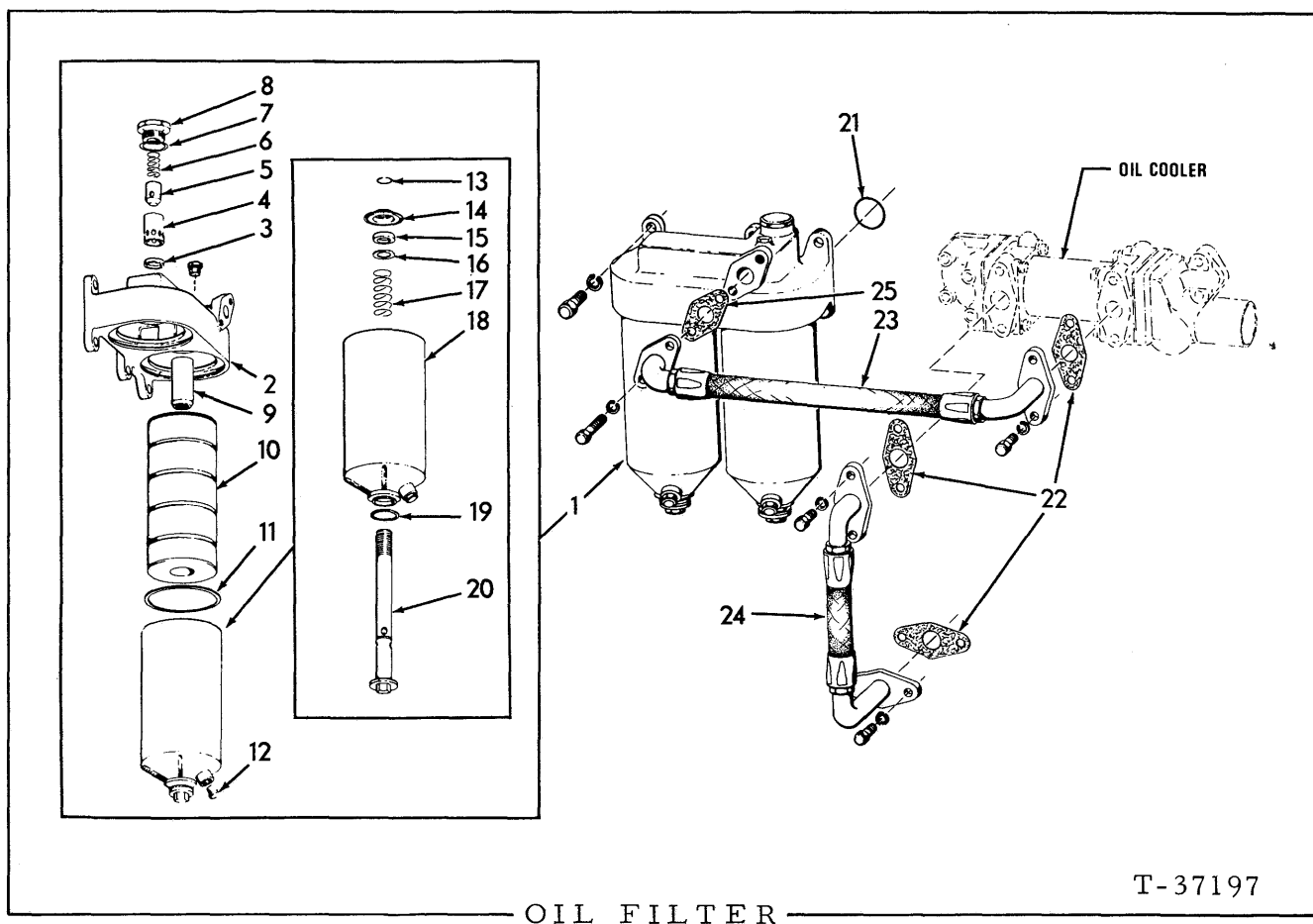
ITEM	PART NO.	QTY.	DESCRIPTION
11	74320885	1	TUBE
	70921565	2	CAPSCREW, 3/8" x 1-1/2"
12	74320916	1	□GASKET
13	74321053	1	U-BOLT
	70916871	2	NUT, elastic stop, 5/16"NC
14	74320887	1	TUBE
	70923193	2	CAPSCREW, 3/8"NF x 1-1/4"
	70916543	2	LOCKWASHER, internal teeth, 3/8"
15	74321671	1	BRACKET (Includes item 16)
	70921076	2	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	2	LOCKWASHER, 3/8"
16	70917546	2	DOWEL (Engines prior to #11-27594)
17	74320839	1	TUBE
	70923193	2	CAPSCREW, 3/8"NF x 1-1/4"
	70916543	2	LOCKWASHER, internal teeth, 3/8"
18	74320838	1	ELBOW
	70923193	2	CAPSCREW, 3/8"NF x 1-1/4"
	70916543	2	LOCKWASHER, internal teeth, 3/8"

□Also see PACKAGED PARTS

MEMO



ITEM	PART NO.	QTY.	DESCRIPTION
1	74336596	1	COOLER, lubricating oil
	70912069	8	CAPSCREW, 3/8"NC x 2-1/2"
	70904206	8	LOCKWASHER, 3/8"
2	74349984	2	GASKET, oil cooler
3	74359963	1	CONNECTION, water outlet (Engines prior to #11-22075)
	74321251	1	CONNECTION, water outlet (Engine #11-22075 and up)
	70920416	1	PLUG, pipe, hex-hd., 1/2"NPT
	70919227	2	CAPSCREW, 3/8"NC x 3-1/4"
	70918778	2	CAPSCREW, 3/8"NC x 4-3/4"
	70904206	4	LOCKWASHER, 3/8"
4	74348184	1	□GASKET, water outlet
5	74348100	1	CONNECTION, water inlet
	70916273	2	CAPSCREW, 3/8"NC x 1-3/4"
	70904206	2	LOCKWASHER, 3/8"
6	74348185	1	□GASKET, water inlet
7	74506737	1	HOSE, water pump to cooler
8	70925758	2	CALMP, hose

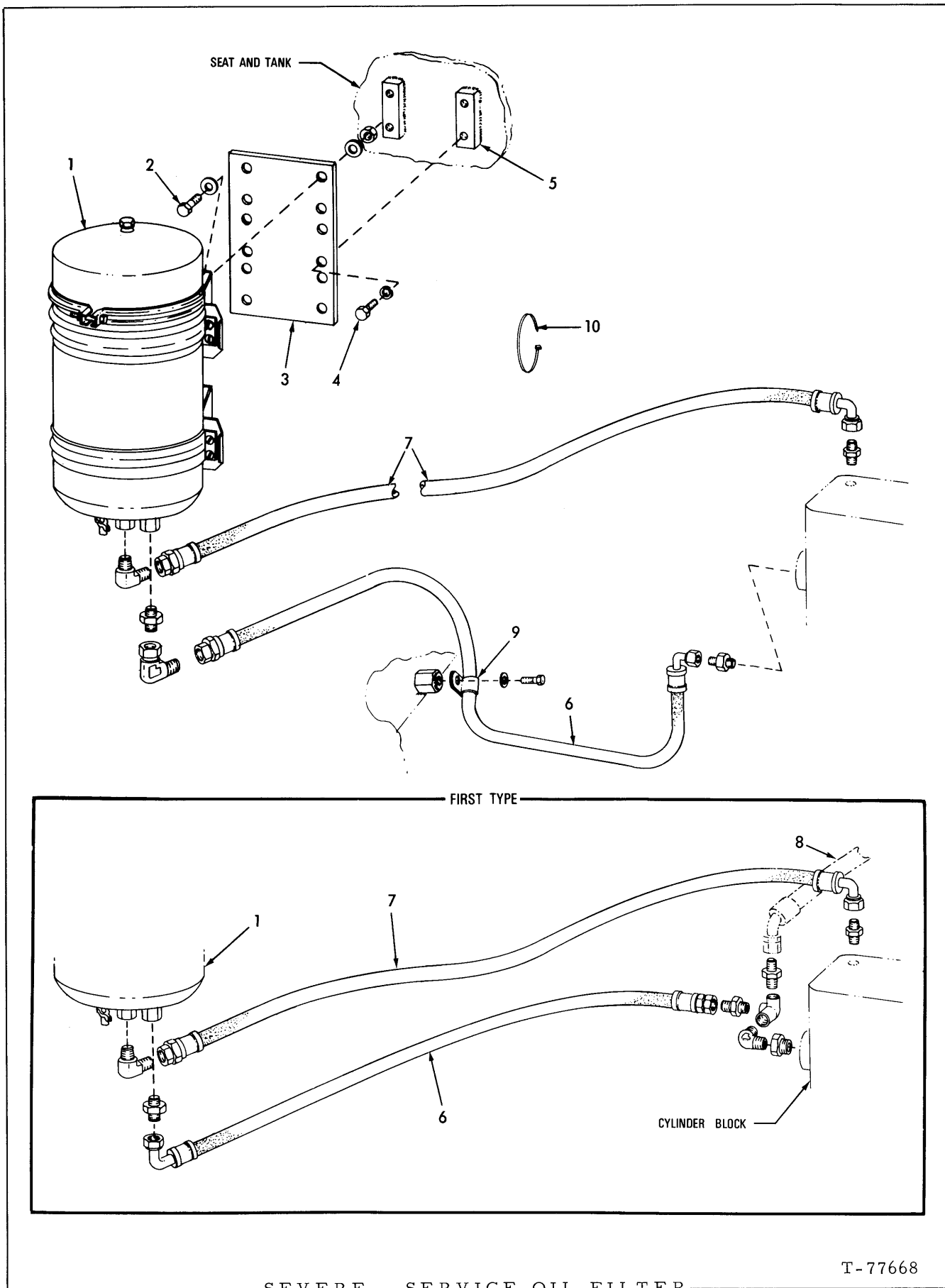


ITEM	PART NO.	QTY.	DESCRIPTION
1	74335335	1	FILTER ASSY (Includes items 2 thru 20)
	70919230	6	CAPSCREW, 1/2"NC x 1-3/8"
	70904208	6	LOCKWASHER, 1/2"
2	74335336	1	HEAD ASSY. (Includes items 3 thru 9)
	70920333	1	PLUG, pipe, hex-hd., 3/8"NPT
3	74373614	1	SEAT
4	74373612	1	SLEEVE
5	74373613	1	PISTON
6	74359656	1	SPRING
7	74253751	1	GASKET
8	74373610	1	CAP
9	74371443	2	ADAPTER
10	74395889	2	ELEMENT KIT (Includes item 11)
11	74372325	2	GASKET
12	70918951	2	PLUG (hex-hd., 3/8"NPT)
13	74253195	2	RING
14	74348269	2	ADAPTER
15	74348270	2	SEAL
16	74348268	2	WASHER
17	74371036	2	SPRING
18	74335352	2	BODY
19	74041103	2	GASKET

(Continued)

OIL FILTER (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
20	74374735	2	BOLT
21	70923718	1	O-RING
22	74335577	3	GASKET
23	74335567	1	HOSE ASSY (See HOSE PARTS)
	70919224	4	CAPSCREW, 3/8"NC x 1-1/8"
	70904206	4	LOCKWASHER, 3/8"
24	74335566	1	HOSE ASSY., (See HOSE PARTS)
	70919224	4	CAPSCREW, 3/8"NC x 1-1/8"
	70904206	4	LOCKWASHER, 3/8"
25	74335578	1	GASKET



SEVERE - SERVICE OIL FILTER

USAGE: Special equipment. Supplements standard oil filter listed on page 34.

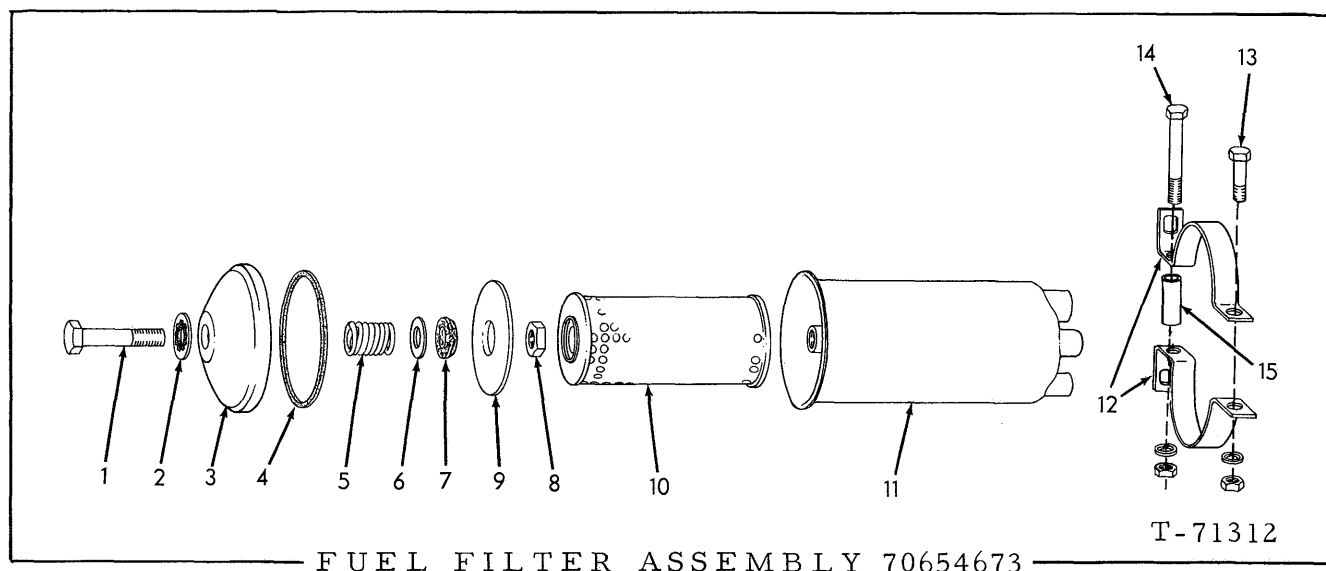
*First type. Used prior to approx. March 1974.

**Second type. Effective approx. March 1974.

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
1	74390593	1	1	FILTER ASSY., lubricating oil (By-pass type)(See page 38 for parts)
2	70921566	8	8	CAPSCREW, 5/16"NC x 1"
	70677005	8	8	WASHER, plain
	70910335	8	8	WASHER, plain, SAE std., 5/16"
	70911025	8	8	NUT, 5/16"NC
3	70685831	1	1	PLATE, filter mounting
4	70922763	4	4	CAPSCREW, 3/8"NC x 1"
	70677006	4	4	LOCKWASHER, 3/8"
5	70077362	2	2	BLOCK, tapped (Requires welding to seat and tank)
6 {	70685830	1	-	HOSE, oil supply (See HOSE PARTS)
	70667755	-	1	HOSE, oil supply (See HOSE PARTS)
	70919128	1	1	CONNECTOR, flare type, 1/2"tube, 1/2"NPT male (at filter)
	70919063	1	1	CONNECTOR, flare type, 1/2"tube, 3/8"NPT male (at engine block)
	70911310	1	-	ELBOW, pipe, side outlet, 3/8"NPT female
	70921595	1	-	ELBOW, automotive, 90°, 3/8"NPT male
	70904271	1	-	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT
	70925898	1	-	CONNECTOR, flare type, 1/4" tube, 3/8"NPT male (oil pressure gauge hose)
	70921279	-	1	ELBOW, flare type swivel nut, 1/2" tube
7	70685829	1	1	HOSE, oil return (See HOSE PARTS)
	70919195	1	1	ELBOW, flare type, 1/2" tube, 1/2"NPT male
	70919063	1	1	CONNECTOR, flare type, 1/2" tube, 3/8"NPT male
8	-----	1	-	HOSE (See ENGINE OIL PRESSURE GAUGE)
9	70622992	-	1	CLIP, hose supporting
	70922300	-	1	CAPSCREW, 3/8"NC x 5-3/4"
	70630753	-	1	WASHER, plain
	70646728	-	1	NUT, 3/8"NC (Requires welding to install)
10	70196765	-	2	STRAP, hose
11	70678019	3	3	TRIM, hose protecting (Required only on units equipped with Side Plates)(Not illustrated)

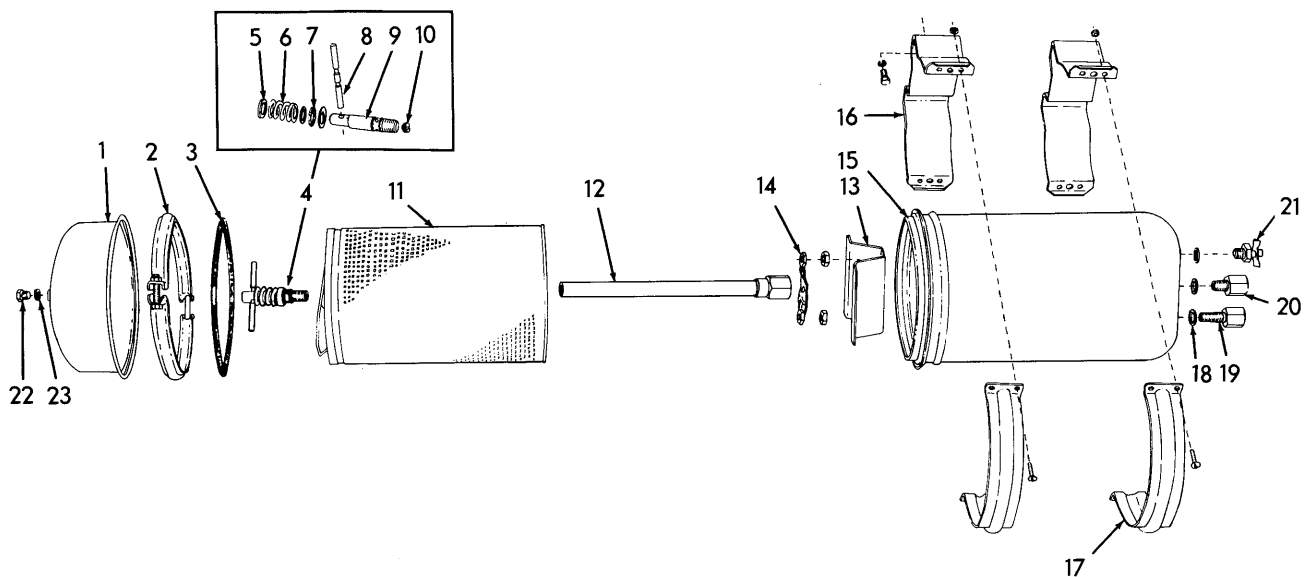
NOTE: See PAINTING AND MARKING for instruction transfers applied to filter.

MEMO



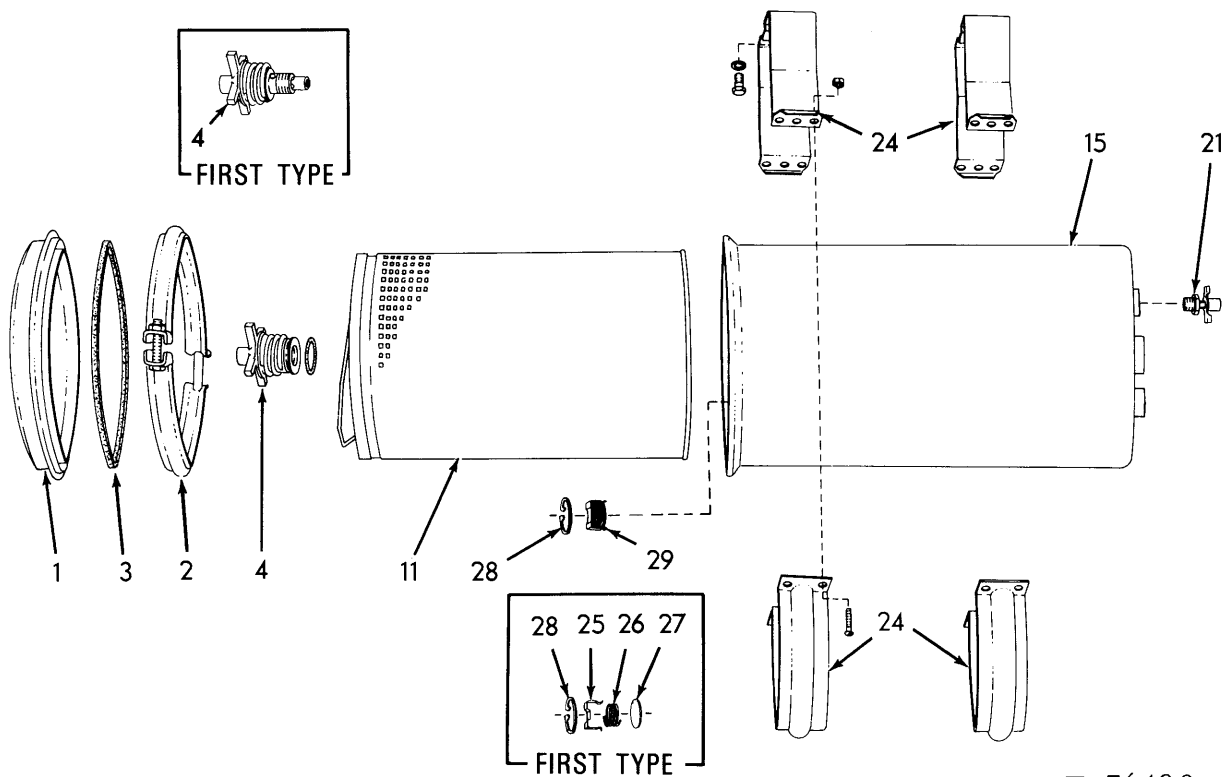
USAGE: Severe-Service (Special). See page 40

ITEM	PART NO.	QTY.	DESCRIPTION
1	70647432	1	CAPSCREW
2	70656431	1	WASHER
3	70647446	1	COVER
4	70647448	1	GASKET
5	70647439	1	SPRING
6	70647449	1	WASHER (steel)
7	70647450	1	WASHER (cork)
8	70647455	1	NUT
9	70647453	1	PLATE
10	70667422	1	ELEMENT KIT (Includes items 2 and 4)
11	70654719	1	TANK
12	70647554	4	STRAP
13	70013059	2	CAPSCREW, 3/8"NC x 2"
14	70041915	2	CAPSCREW, 3/8"NC x 3-1/2"
	70904206	4	LOCKWASHER, 3/8"
	70911026	4	NUT, 3/8"NC
15	70654717	2	PIPE



T-74660

LUBER-FINER DESIGN



T-76480

FLEETGUARD DESIGN

OIL FILTER (By-pass type)

OIL FILTER (By-pass type)

USAGE: See page 36

NOTE: This Filter Assembly is available in two designs, "Fleetguard" and "Luber-Finer". Check which is applicable to your unit and order service parts accordingly.

*Luber-Finer Design
**Fleetguard Design

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
-	74390593	1 -	FILTER ASSY. (Includes items 1 thru 23)
-	74390593	- 1	FILTER ASSY. (Includes items 1 thru 4, 11, 15, 21, 24 thru 29)
1	74059262	1 -	COVER
	74059813	- 1	COVER
2	70630540	1 -	RING ASSY. (Includes nut and bolt)
	74059814	- 1	COUPLING ASSY. (Includes hardware. Serviced only as a unit)
3	70082449	1 -	GASKET
	73115065	- 1	GASKET
4	74059266	1 -	HOLD-DOWN ASSY. (Includes items 5 thru 10)
	74060691	- 1	SUPPORT ASSY. (Male thread post) (First type)
	74061788	- 1	SUPPORT ASSY. (Female thread post) (Second Type)
5	70082489	3 -	WASHER
6	70082490	1 -	SPRING
7	70082487	1 -	SEAL
8	70082488	1 -	HANDLE
9	-----	1 -	STUD (Not serviced separately)
10	74059265	1 -	PLUG
11	74059343	1 1	ELEMENT
12	74059264	1 -	TUBE ASSY. (Includes nut)
13	70096816	1 -	SUPPORT
	70911049	2 -	NUT, jam, 5/8"NF
14	70096815	1 -	RETAINER
15	-----	1 -	HOUSING (Not serviced separately)
	-----	- 1	SHELL (Female thread post)(First type)(For initial replacement order SHELL 74061785 and SUPPORT ASSY. 74061788)
	74061785	- 1	SHELL (Male thread post)(Second type)
16	70082444	2 -	BRACKET
17	70082443	2 -	BAND
	70915406	8 -	CAPSCREW, 1/4"NC x 3/4"
	70911024	8 -	NUT, 1/4"NC
18	70063891	3 -	GASKET
19	70063890	1 -	VALVE ASSY. (Includes 1 spring, 1 ring, 1 cup. Serviced only as a unit)
20	70080758	1 -	VALVE ASSY. (Includes 1 spring, 1 ring, 1 cup. Serviced only as a unit)
21	74060755	1 -	COCK
	70229210	- 1	COCK
22	70084897	1 -	PLUG

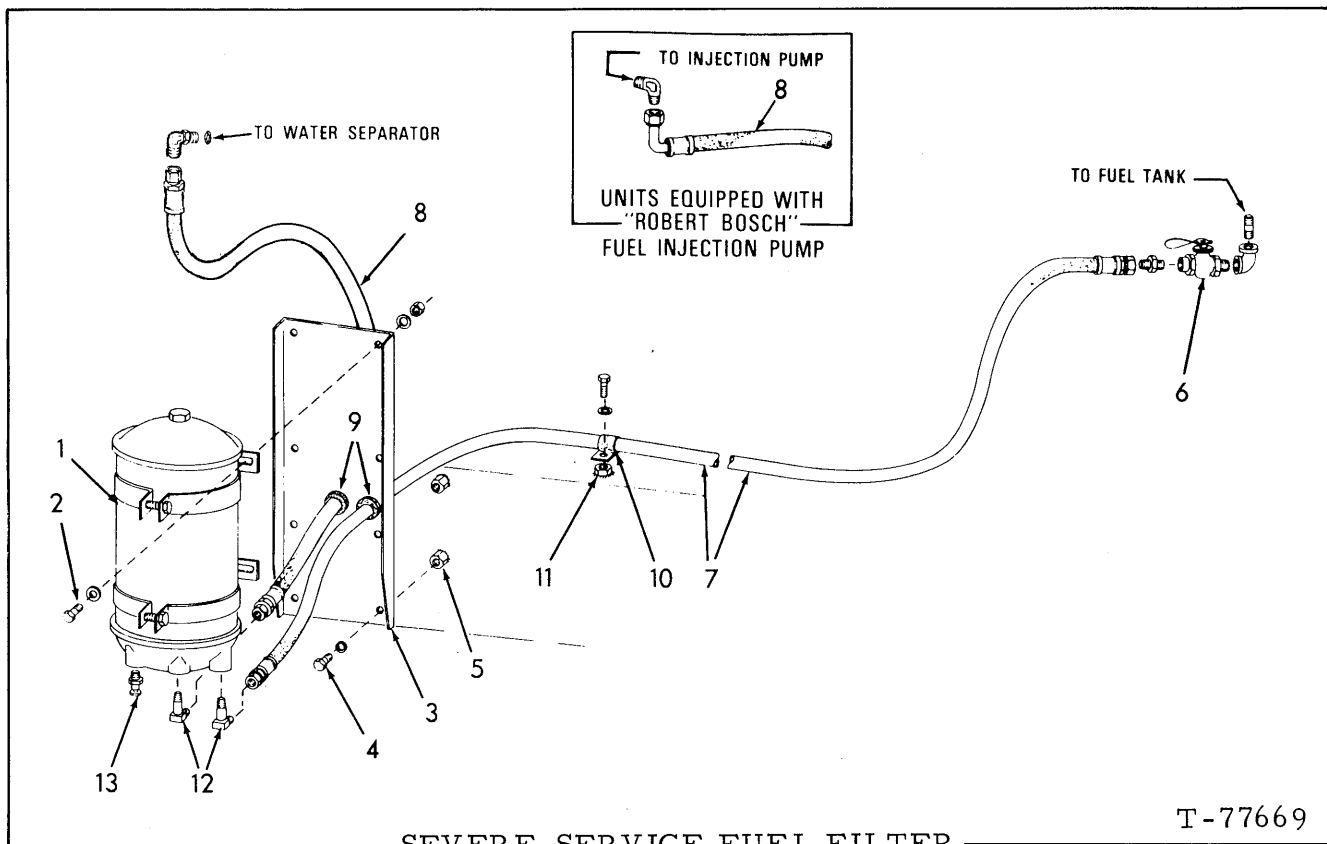
Each includes
O-RING.
Serviced only
as a unit

(Continued)

OIL FILTER (By-pass type)(Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
23	70084899	1 -	WASHER
24	74061786	- 1	BRACKET ASSY. (2-piece, includes hardware. Serviced only as a unit)
25	74059810	- 1	CAGE
26	74059811	- 1	SPRING
27	74059812	- 1	DISC
28	74253555	- 1	RING
29	74061789	- 1	VALVE, check

MEMO

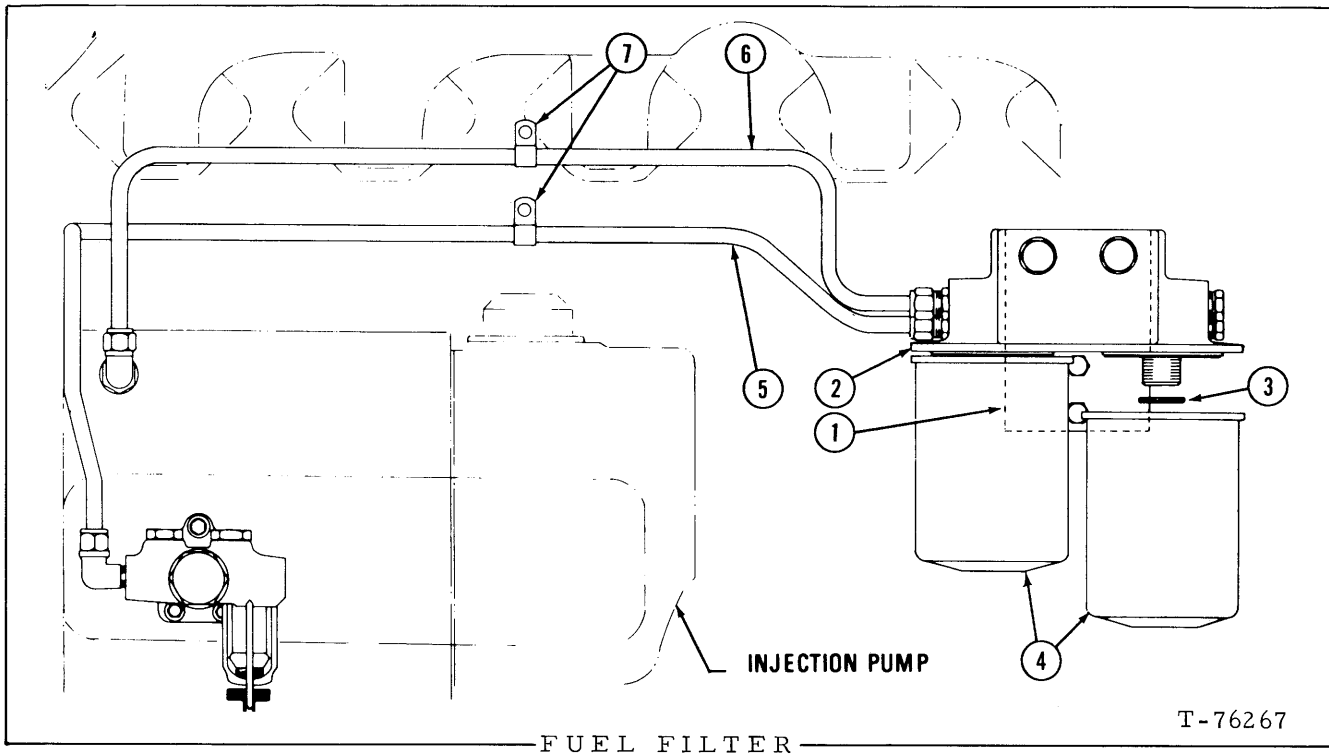


USAGE: Special equipment. Supplements standard fuel filter.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70654673	1	FILTER ASSY., fuel (See D-5)
2	70922763	4	CAPSCREW, 3/8"NC x 1"
	70929156	4	WASHER
	70928845	4	WASHER
	70911026	4	NUT, 3/8"NC
3	70638570	1	BRACKET, filter mounting
4	70922763	4	CAPSCREW, 3/8"NC x 1"
	70929156	4	WASHER
5	70646728	4	NUT (Requires welding to grader frame)
6	70099433	1	COCK, fuel shut-off (1/4" NPT male and female)
	70901677	1	ELBOW, pipe 90°, 1/4" NPT
	70904709	1	NIPPLE, pipe, 1/4" NPT x 1-3/4"
7	70685817	1	HOSE, fuel inlet (See HOSE PARTS)
	70919062	1	CONNECTOR, flare type, 3/8" tube, 1/4" NPT male
8	70685818	1	HOSE, fuel outlet (Units equipped with "Robert Bosch" fuel injection pump prior to engine serial No. 11-24110
	70650784	1	HOSE, fuel outlet (Units equipped with "Roosa Master" fuel injection pump engine serial No. 11-24110 and up
	70919135	1	ELBOW, flare type, 3/8" tube, 1/4" NPT male
9	70096034	2	GROMMET, hose protecting
10	70094467	1	CLIP, hose supporting
	70927484	1	CAPSCREW, 3/8"NC x 3/4"
	70929156	1	WASHER, plain
11	70647418	1	NUT (Requires welding to grader frame)
12	70685819	2	FITTING, hose to filter
13	70633519	1	COCK, filter drain

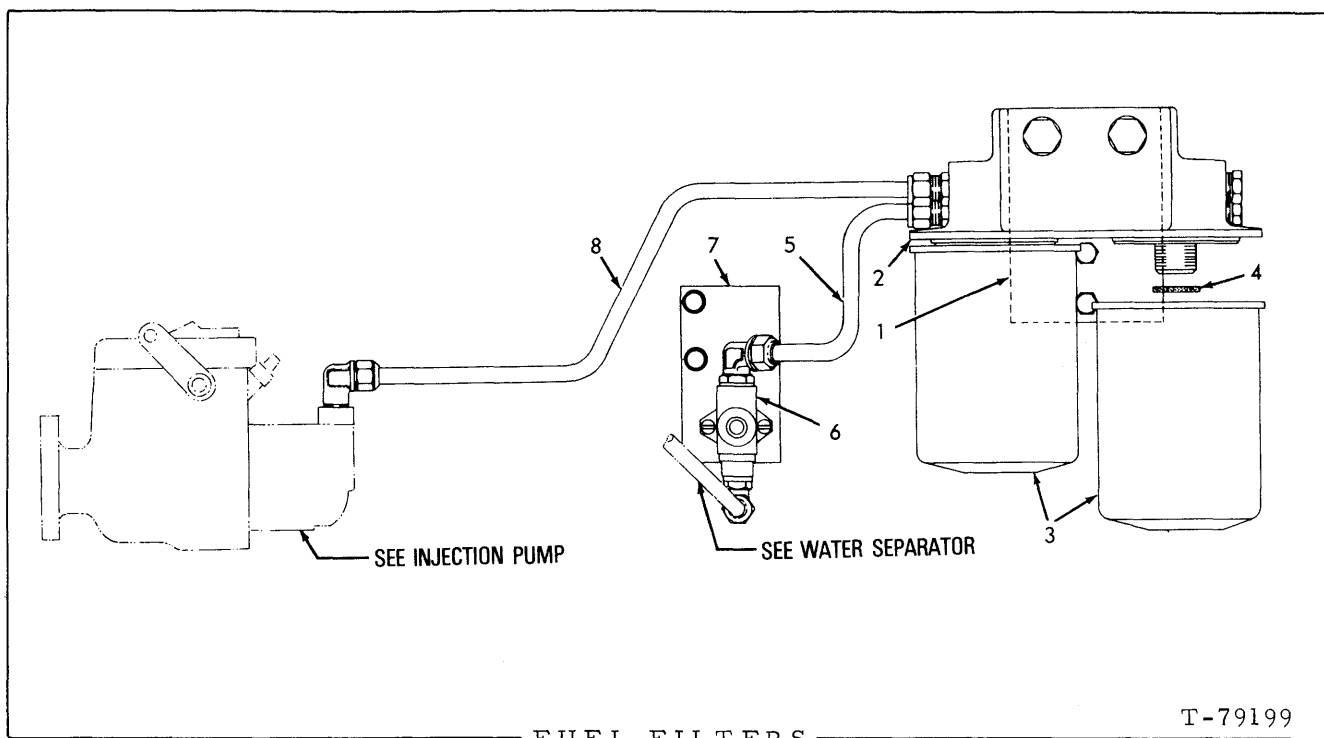
See
HOSE
PARTS

(Revised February 1976)



USAGE: Engines prior to serial No. 11-24110 with "Robert Bosch" injection pump.

ITEM	PART NO.	QTY.	DESCRIPTION
1	74359666	1	BRACKET, filter mounting
	70914670	2	CAPSCREW, 5/16"NC x 1-1/4"
	70904205	2	LOCKWASHER, 5/16"
2	74393077	1	HEAD ASSY., fuel filter (Includes insert which is not serviced separately)
	70922577	2	PLUG, pipe, hex-hd., 9/16" straight thd. (Includes O-RING)
	70921885	2	O-RING
	70918683	2	CAPSCREW, 1/2"NC x 1-1/4"
	70904208	2	LOCKWASHER, 1/2"
	70912333	2	WASHER, plain
3	70923934	2	O-RING, filter element
4	74028945	2	ELEMENT, fuel filter (Includes item 31)
5	74359689	1	TUBE, transfer pump to filter
	70917810	2	NUT, Imperial, 3/8" tube
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70920280	1	ELBOW, Imperial, 3/8" tube, 1/4"NPT male
	74359776	1	CONNECTOR (Includes O-RING)
	70921885	1	O-RING
6	74359688	1	TUBE, filter to pump
	70917810	2	NUT, Imperial, 3/8" tube
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70920280	1	ELBOW, Imperial, 3/8" tube, 1/4"NPT male
	74359776	1	CONNECTOR, (Includes O-RING)
	70921885	1	O-RING
7	74255740	2	CLAMP, tube supporting



USAGE: Engine serial No. 11-24110 thru 11-28233

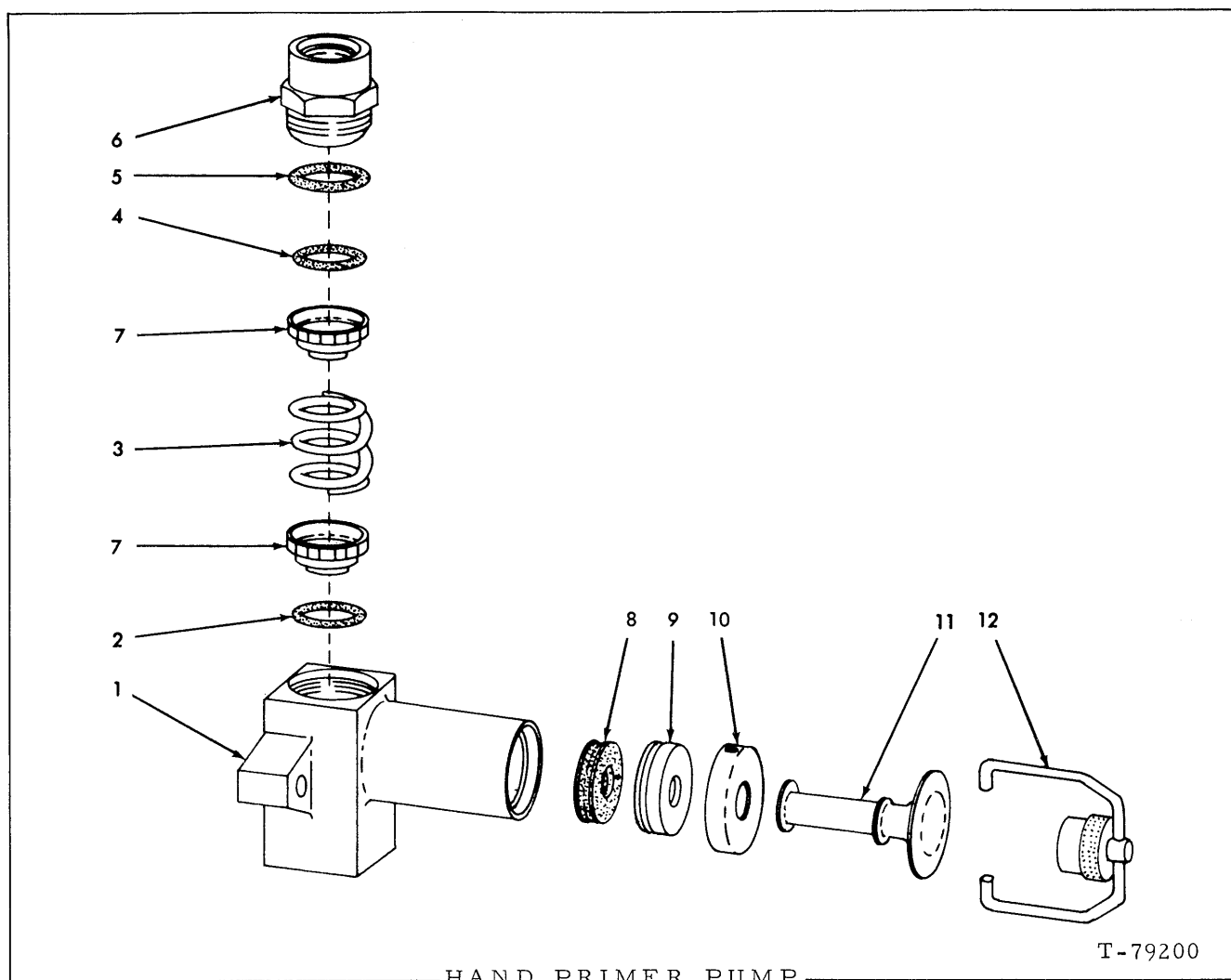
ITEM	PART NO.	QTY.	DESCRIPTION
1	74359666	1	BRACKET, filter mounting
	70914670	2	CAPSCREW, 5/16" NC x 1-1/4"
	70904205	2	LOCKWASHER, 5/16"
2	74393077	1	HEAD ASSY., fuel filter (Includes insert which is not serviced separately)
	70922577	2	PLUG, hex-hd., 9/16" straight thd. (Includes O-RING)
	70921885	2	O-RING
	70918683	2	CAPSCREW, 1/2" NC x 1-1/4"
	70904208	2	LOCKWASHER, 1/2"
	70912333	2	WASHER, plain
3	74028945	2	ELEMENT, fuel filter (Includes item 4)
4	70923934	2	O-RING
5	74321191	1	TUBE, hand pump to filter
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
	74359776	1	CONNECTOR (Includes O-RING)
	70921885	1	O-RING
	74023720	1	ELBOW (Includes O-RING)
	70921884	1	O-RING
6	-----	1	PUMP, hand primer (See page 41C)
	70902174	2	SCREW, machine, #10 NF x 7/8"
	70904203	2	LOCKWASHER, #10

(Continued)

FUEL FILTERS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	74321190	1	BRACKET, hand pump mounting
	70914392	2	CAPSCREW, 5/16"NC x 1"
	70904205	2	LOCKWASHER, 5/16"
	70929100	1	WASHER, plain
8	74321192	1	TUBE ASSY. (Includes NUTS and SLEEVES)
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
	74359776	1	CONNECTOR (Includes O-RING)
	70921885	1	O-RING
	70920280	1	ELBOW, Imperial, 90°, 3/8" tube, 1/4" NPT male

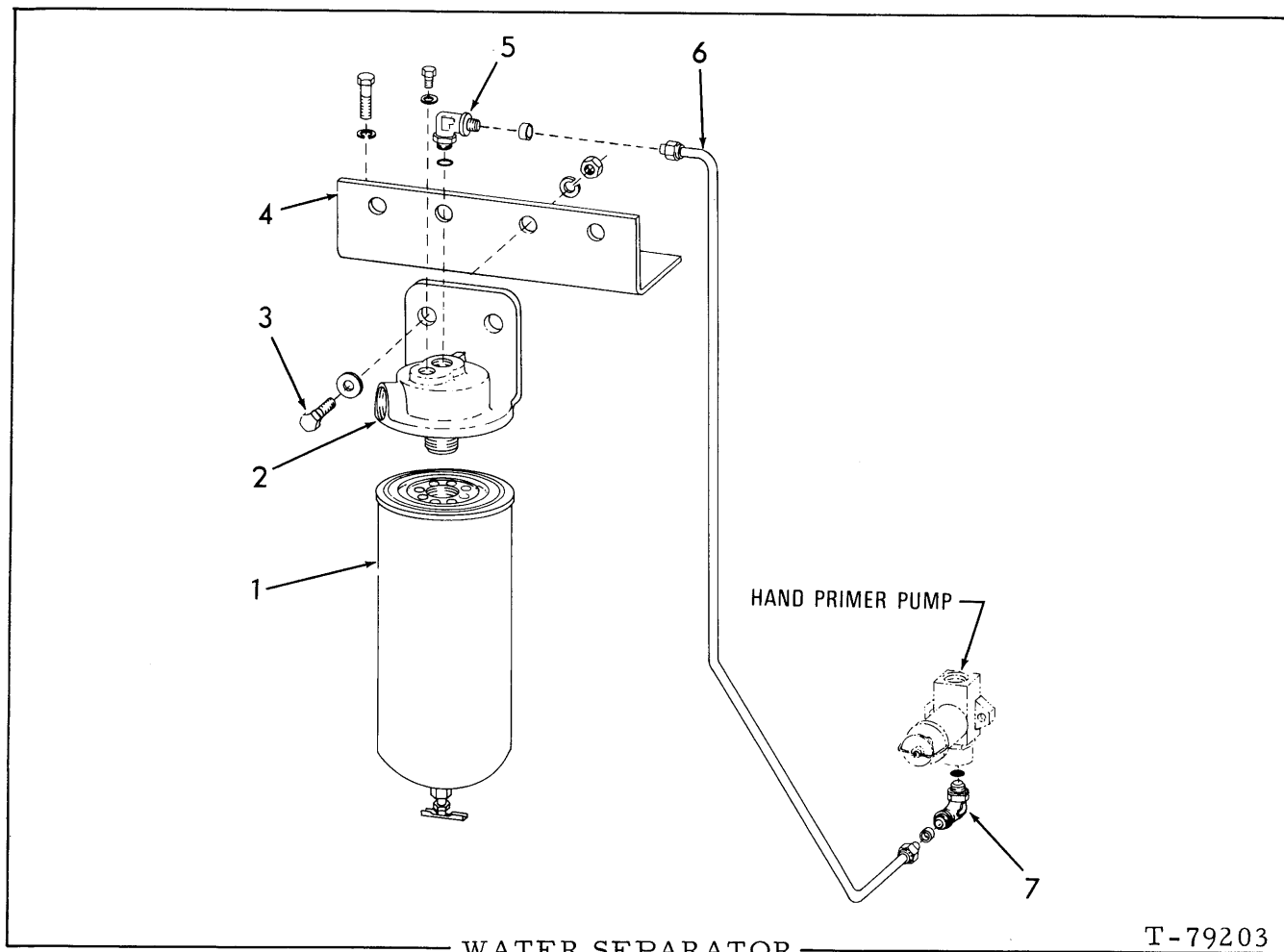
(Added March 1975)



USAGE: Engine serial No. 11-24110 and up. See page 48.

ITEM	PART NO.	QTY.	DESCRIPTION
-	74024229	1	PUMP ASSY., primer (Includes items 1 thru 12)
1	-----	1	BODY, pump (Not serviced separately)
2	74060695	1	O-RING
3	74050638	1	SPRING, valve retainer
4	74048649	1	SEAL, valve nut (inner)
5	74050645	1	RING, seal, valve nut
6	74060956	1	NUT, valve
7	74050637	2	VALVE, primer pump
8	74053035	1	SEAL, piston
9	74053037	1	GUIDE, plunger
10	74059620	1	CAP, guide retainer
11	74053036	1	PLUNGER, pump
12	74050646	1	CLAMP ASSY. (Includes screw and wire)

(Added March 1975)

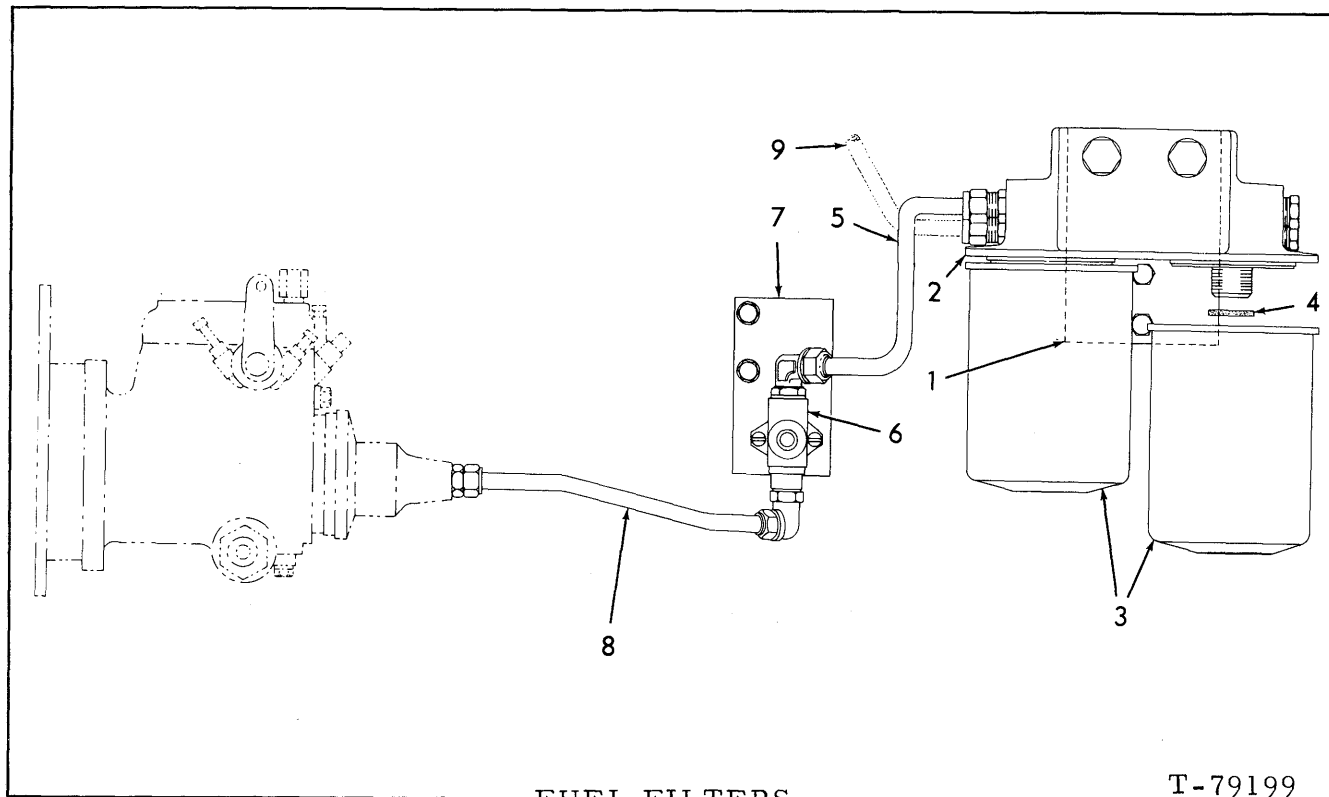


WATER SEPARATOR

T-79203

USAGE: Engine serial No. 11-24110 thru 11-28233.

ITEM	PART NO.	QTY.	DESCRIPTION
1	74394407	1	FILTER ELEMENT
2	74395419	1	BASE ASSY. (Includes insert)
	70920612	1	CAPSCREW, 3/8"NF x 1/2"
	74251367	1	WASHER
	74006998	1	SCREW, thumb
	74254873	1	WASHER
3	70920648	2	CAPSCREW, 7/16"NC x 2"
	70914678	2	LOCKWASHER, 7/16"
	70910919	2	WASHER, plain
	70912201	2	NUT, 7/16"NC
4	74321124	1	BRACKET
	70916311	4	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
5	74023721	1	ELBOW (Includes O-RING)
	70921885	1	O-RING
6	74321198	1	TUBE, filter to hand pump
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
7	74023720	1	ELBOW (Includes O-RING)
	70921884	1	O-RING



FUEL FILTERS

T-79199

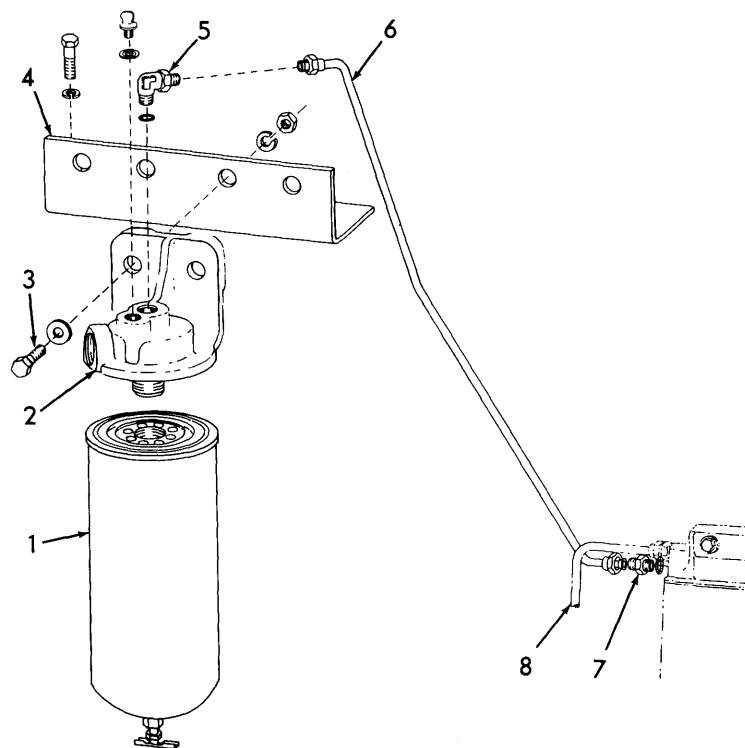
USAGE: Engine serial No. 11-28234 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	74359666	1	BRACKET, filter mounting
	70914670	2	CAPSCREW, 5/16"NC x 1-1/4"
	70904205	2	LOCKWASHER, 5/16"
2	74393077	1	HEAD ASSY., fuel filter (Includes insert which is not serviced separately)
	70922577	2	PLUG, hex-hd., 9/16" str. thd. (Includes O-RING)
	70921885	2	O-RING
	70918683	2	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	2	LOCKWASHER, 1/2"
	70912333	2	WASHER, plain
3	74028945	2	ELEMENT, fuel filter
4	-----	2	GASKET (Not serviced)
5	74321796	1	TUBE, hand pump to filter
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
	74359776	1	CONNECTOR (Includes O-RING)
	70921885	1	O-RING
	74023720	1	ELBOW (Includes O-RING)
	70921884	1	O-RING
6	-----	1	PUMP, hand primer (See page 41C)
	70902174	2	SCREW, machine, #10NF x 7/8"
	70904203	2	LOCKWASHER, #10

(Continued)

FUEL FILTERS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	74321190	1	BRACKET, hand pump mounting
	70914392	2	CAPSCREW, 5/16"NC x 1"
	70904205	2	LOCKWASHER, 5/16"
	70929100	1	WASHER, plain
8	74321797	1	TUBE ASSY. (Includes Nuts and Sleeves)
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
	74023556	1	CONNECTOR (Includes O-RING)
	74023720	1	ELBOW (Includes O-RING)
	70921884	2	O-RING
9	-----	-	TUBE ASSY. (See page 41)



WATER SEPARATOR (Fuel)

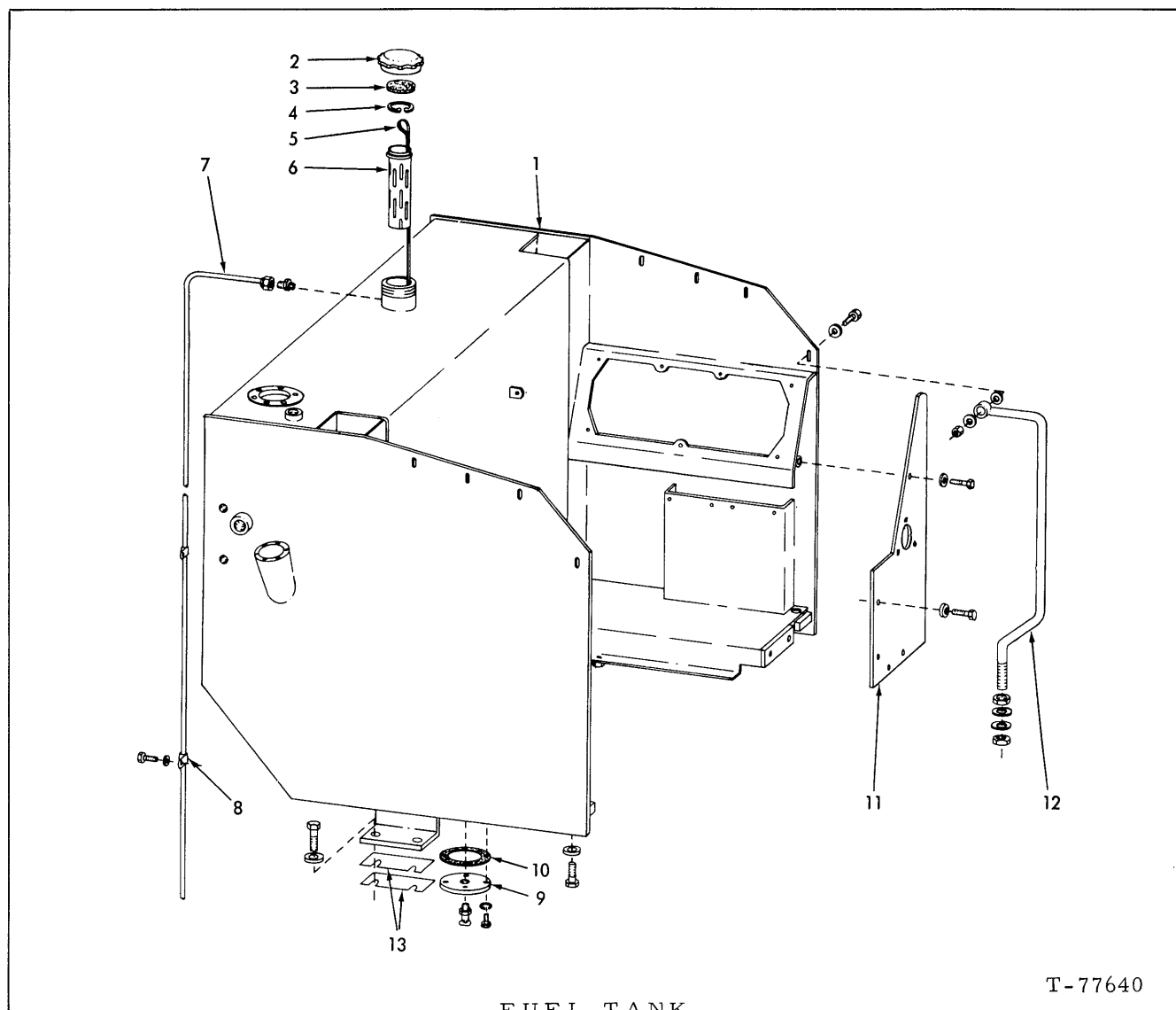
T-79203

USAGE: Engine serial No. 11-28234 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	74394407	1	FILTER ELEMENT
2	74395419	1	BASE ASSY. (Includes insert and hardware indented below)
	74006998	1	SCREW
	74254873	1	WASHER
3	70916191	2	CAPSCREW, 7/16"NC x 1-1/2"
	70910919	2	WASHER
	70914678	2	LOCKWASHER, 7/16"
	70912201	2	NUT, 7/16"NC
4	74321112	1	BRACKET
	70916311	3	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	3	LOCKWASHER, 1/2"
5	74023721	1	ELBOW ASSY. (Includes O-RING)
	70921885	1	O-RING
6	74321873	1	TUBE, separator to fuel filter
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
7	74359776	1	CONNECTOR (Includes O-RING)
	70921885	1	O-RING
8	-----	1	TUBE (See page 41E)

NOTE: See PAINTING AND MARKING for decal

MEMO



ITEM	PART NO.	QTY.	DESCRIPTION
1	70673446	1	SEAT AND TANK ASSY. (Includes items 2 and 3)
	70920583	4	CAPSCREW, 1/2"NC x 1-1/2"
	70921556	4	CAPSCREW, 1/2"NC x 2"
	70677008	8	WASHER, plain
2	70642774	1	CAP, fuel tank
3	70065613	1	GASKET, fuel tank cap
4	70621775	1	RING, snap, fuel strainer
5	70686898	1	GAUGE, fuel
6	70642749	1	STRAINER, fuel
7	70683278	1	TUBE, vent
	70919094	1	CONNECTOR, flare type, 1/8" tube, 1/8"NPT male
	70919100	1	NUT, flare type, 1/8" tube
	70919099	1	SLEEVE, flare type, 1/8" tube

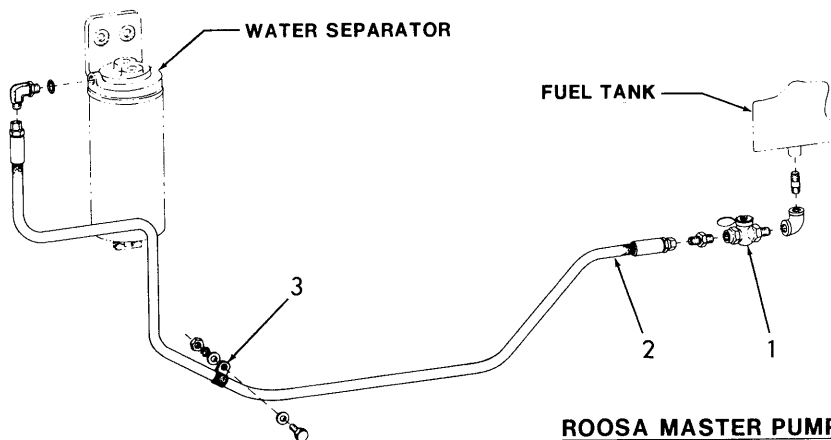
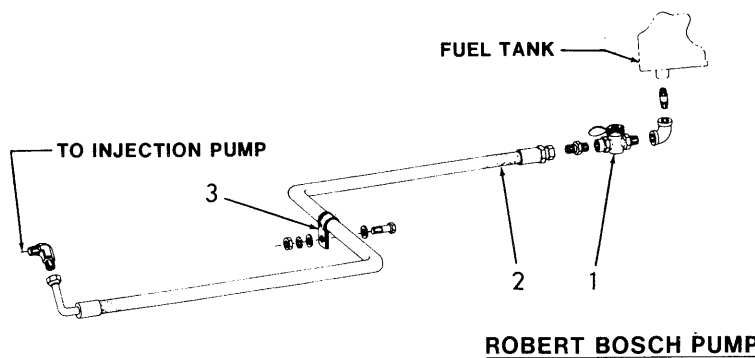
(Continued)

(Revised March 1975)

FUEL TANK (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
8	70066260	2	CLIP, vent tube
	70927400	1	CAPSCREW, 3/8"NC x 5/8"
	70929156	1	WASHER, plain
	70928182	1	CAPSCREW, 1/4"NC x 1/2"
	70677004	1	WASHER, plain
9	70683277	1	COVER
	70927354	4	CAPSCREW, 3/8"NF x 7/8"
	70910287	4	LOCKWASHER, 3/8"
	70912319	1	COCK, drain, 1/4"NPT
10	70042641	1	GASKET, sediment sump
11 {	70680964	1	PLATE, front closure (Graders prior to unit #08171)
	70691997	1	PLATE, front closure (Grader unit #08171 and up)
	70922300	2	CAPSCREW, 3/8"NC x 3/4"
	70630753	2	WASHER, plain
	70927219	3	CAPSCREW, 1/2"NC x 3/4"
	70928188	3	WASHER, plain
12	70686597	2	HANDLE
	70920995	2	CAPSCREW, 3/8"NC x 2" }
	70677006	6	WASHER, plain
	70911026	2	NUT, 3/8"NC
	70677010	4	WASHER, plain
	70911029	4	NUT, 5/8"NC
13	70689624	10	SHIM

Not used on units equipped
with Cab or Canopy



T-79204

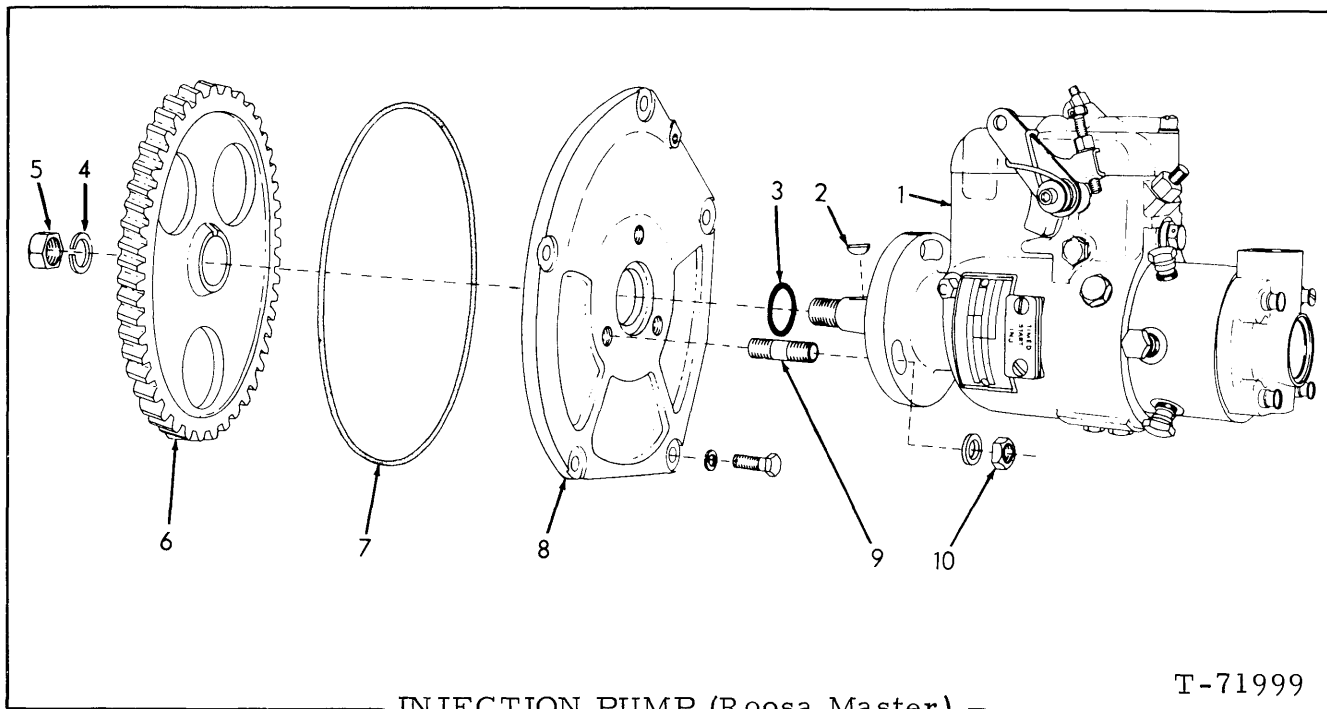
FUEL SUPPLY LINE

USAGE: Standard. See page 40 for units with Severe Service Fuel Filter.

*Engine prior to serial No. 11-24110 equipped with Robert Bosch Fuel Injection Pump.

**Engine serial No. 11-24110 and up equipped with Roosa Master Fuel Injection Pump.

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	70099433	1 1	COCK
	70901677	1 1	ELBOW, pipe, 90°, 1/4"NPT
	70904709	1 1	NIPPLE, pipe, 1/4"NPT x 1-3/4"
2	70679715	1 -	HOSE
	70650785	- 1	HOSE
	70919135	1 -	ELBOW, flare type, 3/8" tube, 1/4"NPT male
	70919062	1 1	CONNECTOR, flare type, 3/8" tube, 1/4"NPT male
	70922523	- 1	ELBOW, adjustable, 90°, flare type, 3/8" tube, 9/16"NF (Includes washer, nut and O-RING)
	70921885	- 1	O-RING
3	70094467	1 3	CLIP
	70922763	1 1	CAPSCREW, 3/8"NC x 1"
	70677006	2 -	WASHER, plain
	70929156	- 6	WASHER, plain
	70910287	1 1	LOCKWASHER, 3/8"
	70911026	1 1	NUT, 3/8"NC

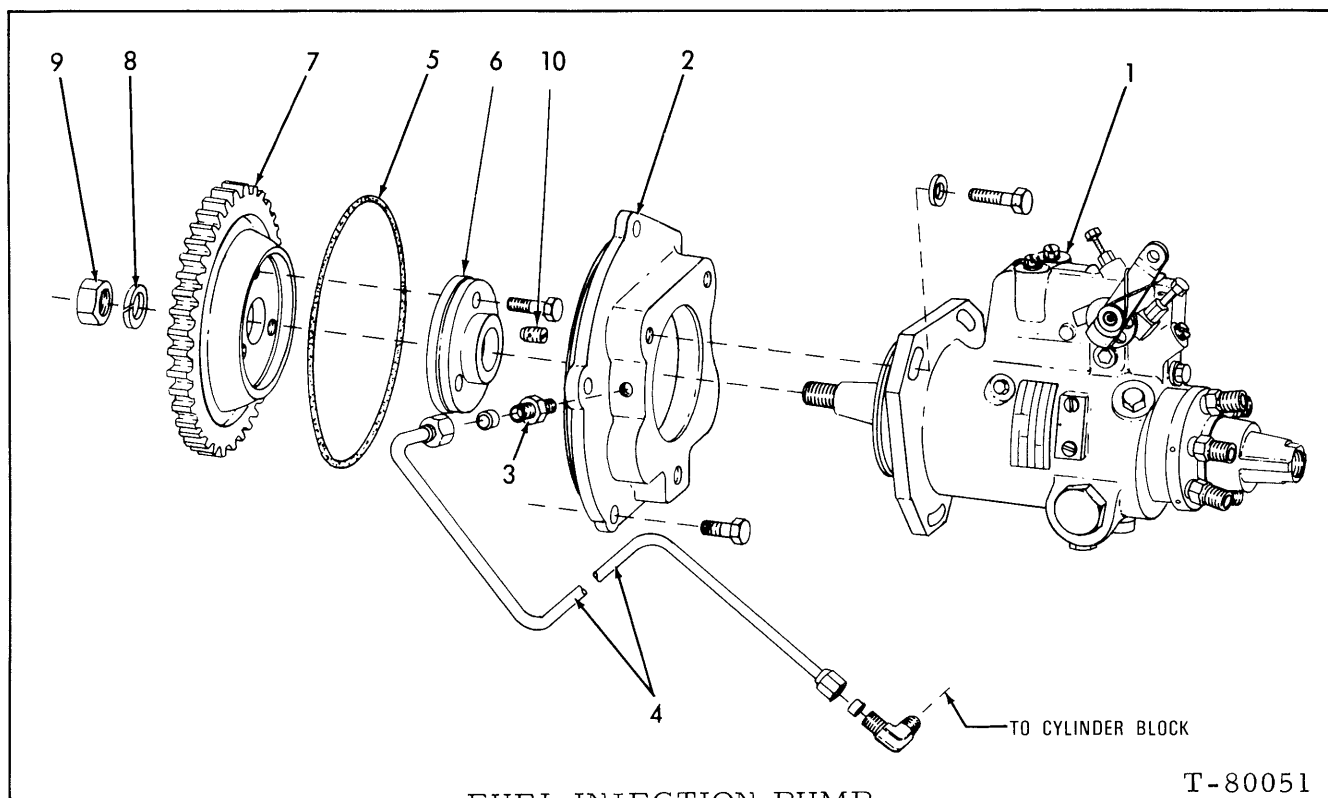


INJECTION PUMP (Roosa Master)

T-71999

USAGE: Engine serial No. 11-24110 thru 11-28233

ITEM	PART NO.	QTY.	DESCRIPTION
1	74321478	1	PUMP ASSY., injection (Includes items 2 thru 5. See your F-A dealer for pump service).
2	70910224	1	KEY, #6 woodruff, 5/32" x 5/8"
3	74048596	1	SEAL, pump mounting
4	74048598	1	LOCKWASHER, gear retaining
5	74048597	1	NUT, gear retaining
6	74354362	1	GEAR, pump drive
7	70924139	1	O-RING, pump mounting cover
8	74320703	1	COVER ASSY., pump mounting (Includes item 9)
	70920473	5	CAPSCREW, Nylok, 3/8"NC x 3/4"
	70910287	5	LOCKWASHER, 3/8"
9	74344938	3	STUD, pump attaching
10	70910123	3	NUT, 3/8"NF
	70910287	3	LOCKWASHER, 3/8"
	74371718	3	WASHER, serrated

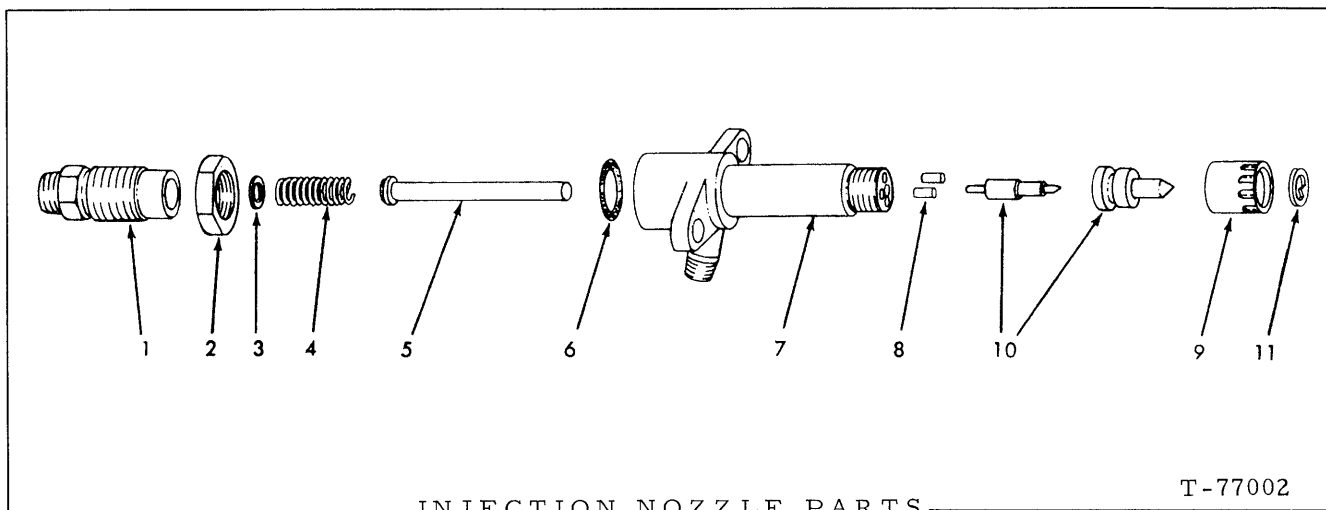


FUEL INJECTION PUMP

T-80051

USAGE: Engine serial No. 11-28234 and up

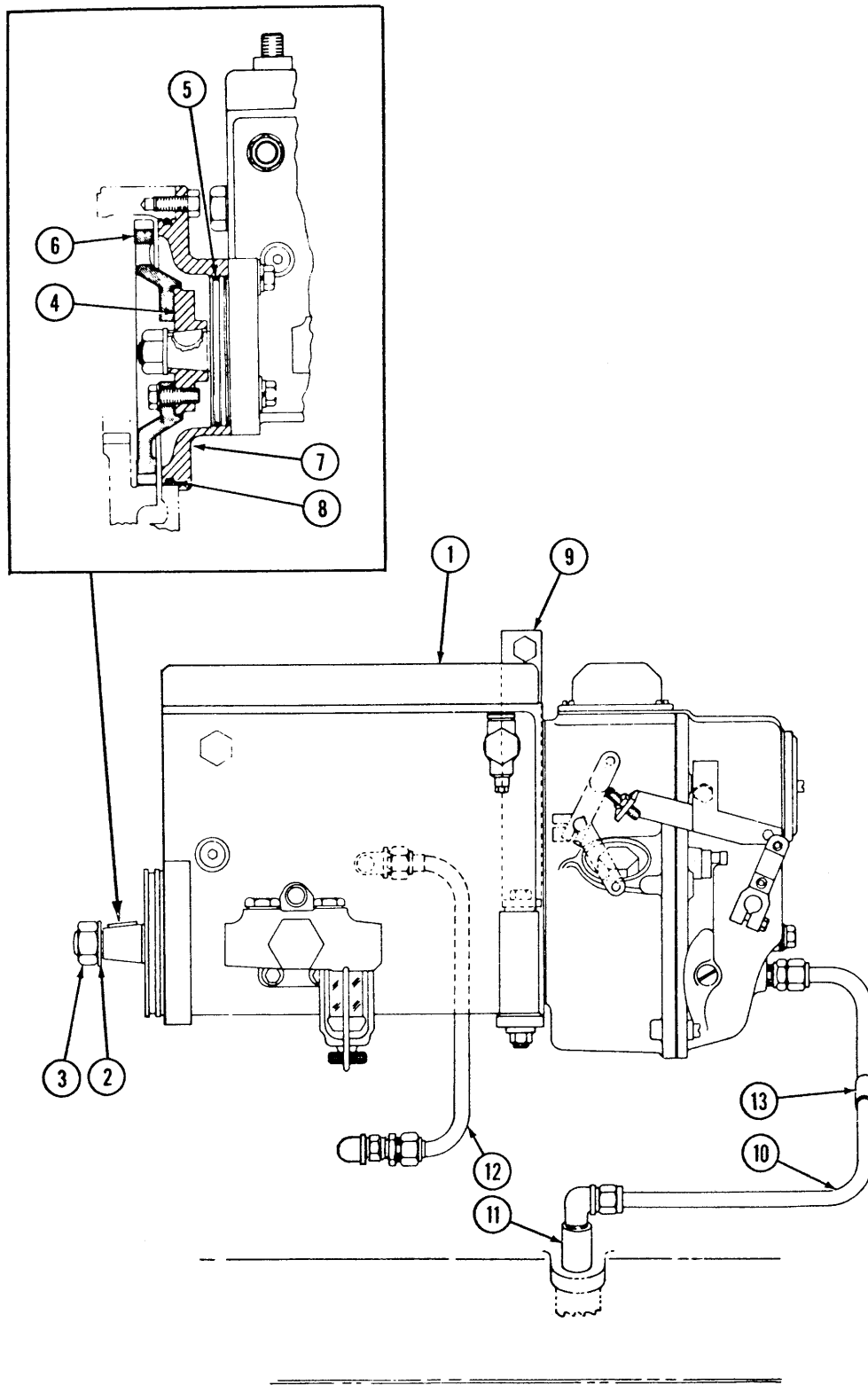
ITEM	PART NO.	QTY.	DESCRIPTION
1	74321756	1	PUMP ASSY. (Includes item 6)
	70922843	3	CAPSCREW, 5/16"NC x 1-1/4"
	70929292	3	WASHER
2	74321279	1	COVER, pump mounting
	70920473	4	CAPSCREW, nylok, 3/8NC x 3/4"
3	74321715	1	RESTRICTOR
4	74321328	1	TUBE (Includes NUTS and SLEEVES)
	70917809	2	NUT, Imperial, 1/4" tube
	70917806	2	SLEEVE, 1/4" tube
	70919040	1	ELBOW, Imperial, 1/4" tube, 1/8"NPT male
5	70924139	1	□O-RING, pump mounting cover
6	-----	1	ADAPTER, gear mounting (Not serviced separately)
	74255060	3	CAPSCREW, 3/8"NC x 1"
7	74359345	1	GEAR, pump driving
8	74061132	1	LOCKWASHER
9	70910345	1	NUT, jam, 5/8"NF
10	70922747	1	SETSCREW, nylok, 3/8"NC x 1/2"



USAGE: See page 48

ITEM	PART NO.	QTY.	DESCRIPTION
<u>NOTE:</u> Quantities indicated are for one (1) Holder Assy. only.			
-	74320642	1	HOLDER ASSY. (Not serviced Order HOLDER ASSY. 74060908 and item 10)
-	74060908	1	HOLDER ASSY. (Includes items 1 thru 9)
1	74023570	1	SCREW, adjusting
2	74511213	1	NUT, locking
3	74023571	1	WASHER, adjusting screw
4	74380652	1	SPRING
5	74380656	1	SPINDLE
6	70930506	1	O-RING
7	-----	1	BODY (Not serviced separately)
8	74025149	2	PIN, nozzle locating
9	74380662	1	NUT, nozzle retaining
10	74359395	1	NOZZLE ASSY. (Not a component of Holder Assy.)
11	74378031	1	□ GASKET, nozzle holder

(Revised May 1977)



INJECTION PUMP (Bosch-Germany)

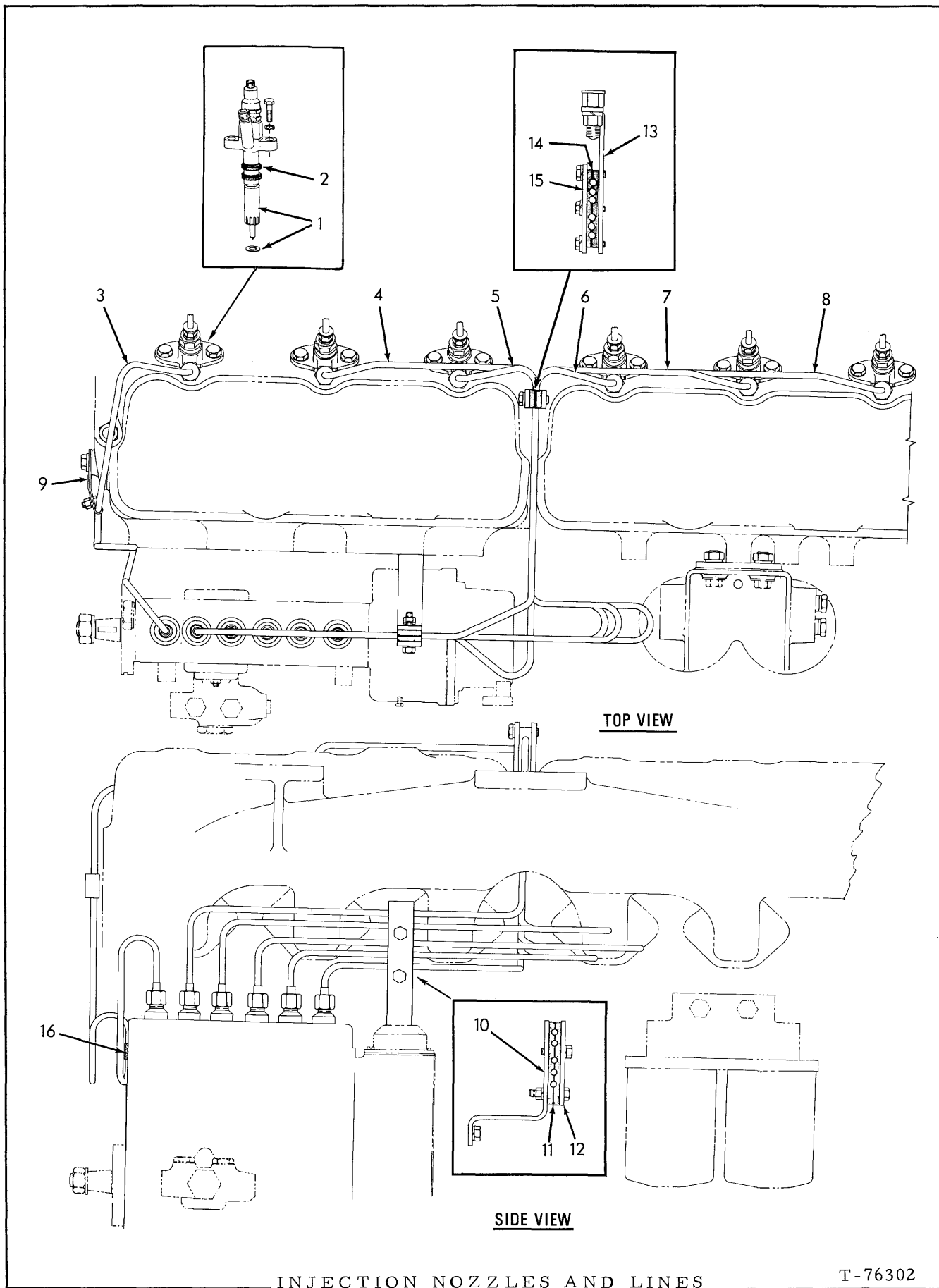
T-76304

INJECTION PUMP
(BOSCH-GERMANY)

USAGE: Engines prior to serial No. 11-24110.

ITEM	PART NO.	QTY.	DESCRIPTION
1	74061657	1	PUMP KIT, injection (Includes items 2 thru 5)(Service replacement for original factory adjusted Pump Assy. No.74359816 and 74320939 requires calibration)
	74060141	1	KEY
	70914847	4	CAPSCREW, 3/8"NC x 1-1/2"
	70916275	1	CAPSCREW, 3/8"NC x 3-3/4"
	74344674	2	WASHER, plain
	70904206	4	LOCKWASHER, 3/8"
	70914900	4	WASHER, plain
	70910324	1	NUT, 3/8"NC
2	74060140	1	LOCKWASHER, adaptor retaining
3	74060139	1	NUT, adaptor retaining
4	74359663	1	ADAPTOR, gear mounting
5	74060799	1	O-RING, pump mounting
6	74359345	1	GEAR, pump driving
	74255060	3	CAPSCREW, 3/8"NC x 1"
7	74359911	1	COVER, pump mounting
	70918887	2	PLUG, pipe
	70920473	4	CAPSCREW, Nylok, 3/8"NC x 3/4"
	70922747	1	SETSCREW, Nylok
8	70924139	1	□O-RING, pump mounting cover
9	74359348	1	BRACKET, pump mounting, rear
	70915408	1	CAPSCREW, 3/8"NC x 3/4"
	70904206	1	LOCKWASHER, 3/8"
10	74359661	1	TUBE ASSY. (Includes NUTS and SLEEVES)
	70917810	2	NUT, Imperial, 3/8" tube
	70917807	2	SLEEVE, Imperial, 3/8" tube (rubber)
	70920279	1	CONNECTOR, Imperial, 3/8" tube, 1/4"PT
	70920280	1	ELBOW, Imperial, 3/8" tube, 1/4"PT
11	74359667	1	PIPE
12	74359344	1	TUBE ASSY. (Includes NUT and SLEEVES)
	70917810	2	NUT, Imperial, 3/8" tube
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70920790	1	ELBOW, Imperial, 3/8" tube, 1/8"PT
	70921372	1	CONNECTOR, Imperial, 3/8" tube, 1/8"NPT male
13	70659422	1	CLIP

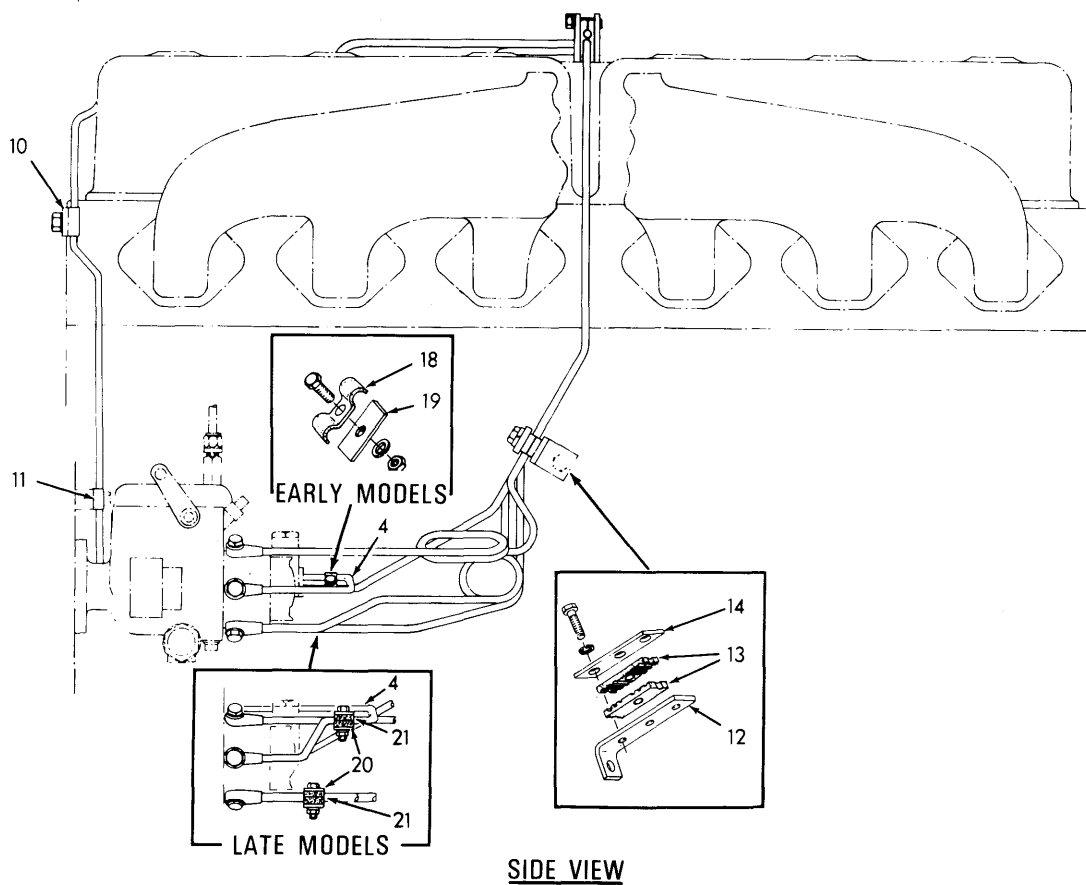
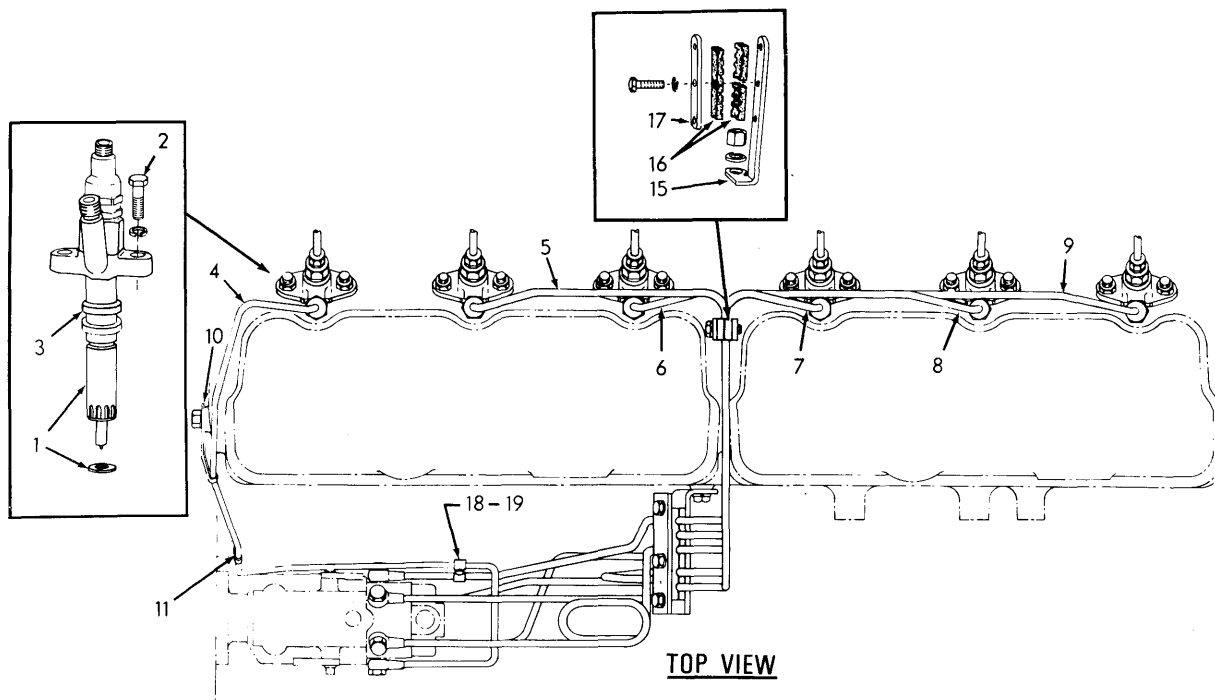
(Revised May 1977)



INJECTION NOZZLES AND LINES

USAGE: Engines prior to serial No. 11-24110 with "Robert Bosch" injection pump.

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	6	HOLDER ASSY., injection nozzles (See page 45)
	70914847	12	CAPSCREW, 3/8"NC x 1-1/2"
	70904206	12	LOCKWASHER, 3/8"
2	74025385	12	SHIELD, dirt
3	74359326	1	TUBE ASSY., fuel injection (#1 cylinder)
4	74359327	1	TUBE ASSY., fuel injection (#2 cylinder)
5	74359328	1	TUBE ASSY., fuel injection (#3 cylinder)
6	74359329	1	TUBE ASSY., fuel injection (#4 cylinder)
7	74359330	1	TUBE ASSY., fuel injection (#5 cylinder)
8	74359331	1	TUBE ASSY., fuel injection (#6 cylinder)
9	74256001	1	CLIP, injection tube (#1 cylinder)
	70916284	1	CAPSCREW, 1/4"NC x 1/2"
	70910285	1	LOCKWASHER, 1/4"
	70910880	1	NUT, 1/4"NC
10	74359333	1	BRACKET, tube supporting, lower
	70915408	1	CAPSCREW, 3/8"NC x 3/4"
	70904206	1	LOCKWASHER, 3/8"
11	74336532	2	SPACER, injection tubes, lower
12	74339334	1	PLATE, clamping, injection tubes, lower
	70914670	1	CAPSCREW, 5/16"NC x 1-1/8"
	70916279	1	CAPSCREW, 5/16"NC x 1-1/2"
	70904205	2	LOCKWASHER, 5/16"
	70910323	1	NUT, 5/16"NC
13	74336249	1	BRACKET, tube supporting, upper
	70910195	1	NUT, 1/2"NF
	70904208	1	LOCKWASHER, 1/2"
14	74507359	2	SPACER, injection tubes, upper
15	74336250	1	CLAMP, injection tubes, upper
	70914670	3	CAPSCREW, 5/16"NC x 1-1/8"
	70904205	3	LOCKWASHER, 5/16"
16	70930719	1	CLAMP
	70929911	1	CAPSCREW
	70910285	1	LOCKWASHER, 1/4"



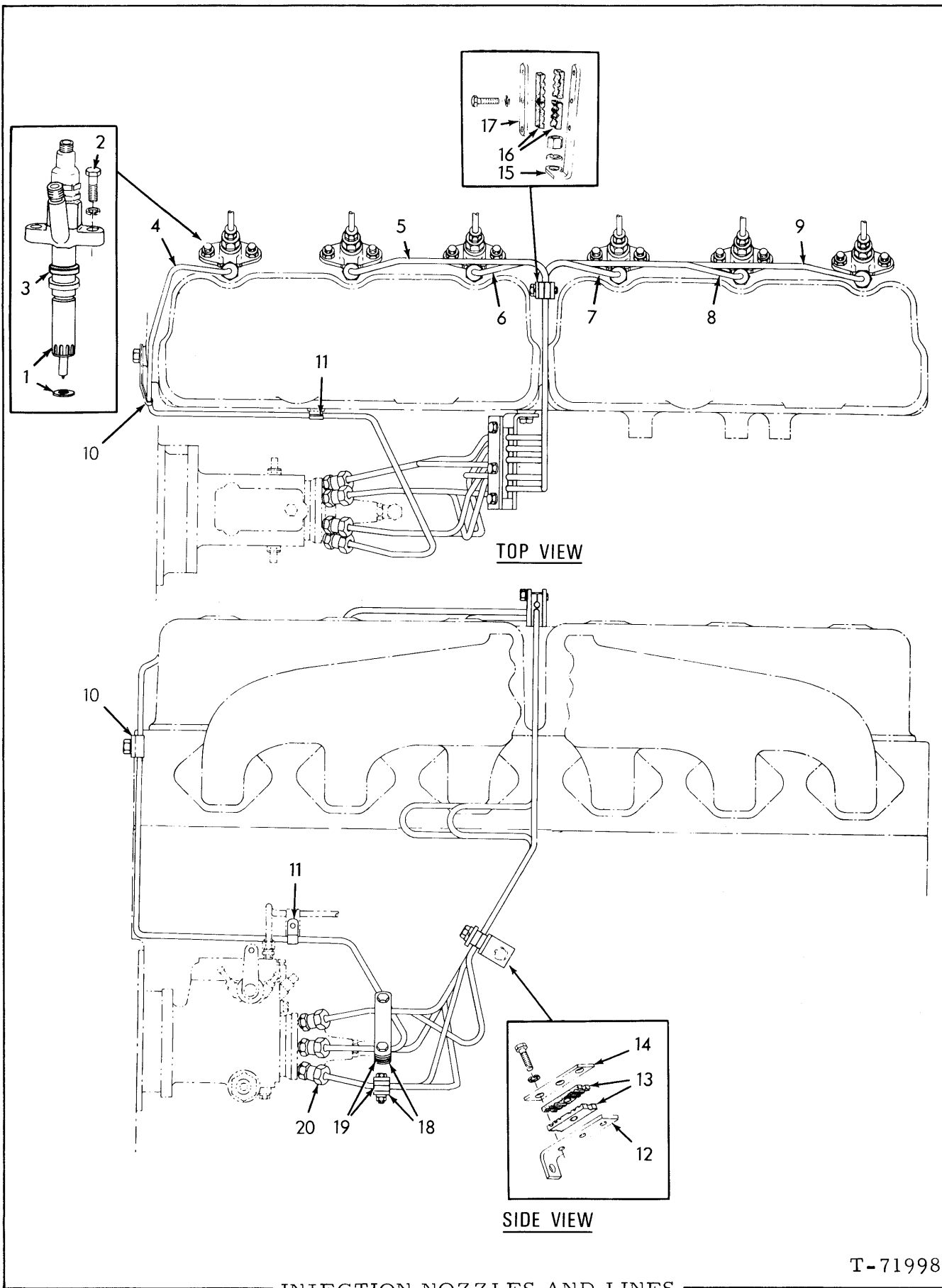
INJECTION NOZZLES AND LINES (Roosa Master) T-71998

INJECTION NOZZLES AND LINES (Roosa Master)

* Engines serial No. 11-24110 thru 11-26884

** Engine serial No. 11-26885 thru 11-28234

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	74320642	6 6	HOLDER ASSY., injection nozzles (See page 62)
2	70914847	12 12	CAPSCREW, 3/8" NC x 1-1/2"
	70904206	12 12	LOCKWASHER
3	74025385	12 12	SHIELD, dirt
4	74359567	1 -	TUBE, fuel injection (#1 cylinder)
	74321795	- 1	TUBE, fuel injection (#1 cylinder)
5	74339559	1 -	TUBE, fuel injection (#2 cylinder)
	74321706	- 1	TUBE, fuel injection (#2 cylinder)
6	74339560	1 -	TUBE, fuel injection (#3 cylinder)
	74321707	- 1	TUBE, fuel injection (#3 cylinder)
7	74339561	1 -	TUBE, fuel injection (#4 cylinder)
	74321708	- 1	TUBE, fuel injection (#4 cylinder)
8	74339562	1 -	TUBE, fuel injection (#5 cylinder)
	74321709	- 1	TUBE, fuel injection (#5 cylinder)
9	74339563	1 -	TUBE, fuel injection (#6 cylinder)
	74321710	- 1	TUBE, fuel injection (#6 cylinder)
10	74256009	1 1	CLIP, injection tube (#1 cylinder)
	70916284	1 1	CAPSCREW, 1/4" NC x 1/2"
	70904204	1 1	LOCKWASHER, 1/4"
	70910880	1 1	NUT, 1/4" NC
11	74354831	1 -	CLIP, injection tube (#1 cylinder)
	70916284	1 1	CAPSCREW, 1/4" NC x 1/2"
	70904204	1 1	LOCKWASHER, 1/4"
12	74339712	1 1	BRACKET, tube supporting, lower
13	74336532	2 2	SPACER, injection tubes, lower
14	74336531	1 1	PLATE, clamping, injection tubes, lower
	70914670	3 3	CAPSCREW, 5/16" NC x 1-1/8"
	70904205	3 3	LOCKWASHER, 5/16"
15	74336249	1 1	BRACKET, tube supporting, upper
	70910195	1 1	NUT, 1/2" NF
	70904208	1 1	LOCKWASHER, 1/2"
16	74507359	4 4	SPACER, injection tubes, upper
17	74336250	1 1	CLAMP, injection tubes, upper
	70914670	3 3	CAPSCREW, 5/16" NC x 1-1/8"
	70904205	3 3	LOCKWASHER, 5/16"
18	74513552	1 -	CLAMP, injection tubes
	70916278	1 -	CAPSCREW, 5/16" NC x 1/2"
	70904205	1 -	LOCKWASHER, 5/16"
	70910323	1 -	NUT, 5/16" NC
19	74359106	1 -	PLATE, injection tube clamp
20	74029255	- 4	PLATE, injection tube clamp
	70915807	- 4	CAPSCREW, 5/16" NC x 1-1/4"
	70904205	- 4	LOCKWASHER, 5/16"
	70910323	- 4	NUT, 5/16" NC
21	74029254	- 4	SPACER, rubber



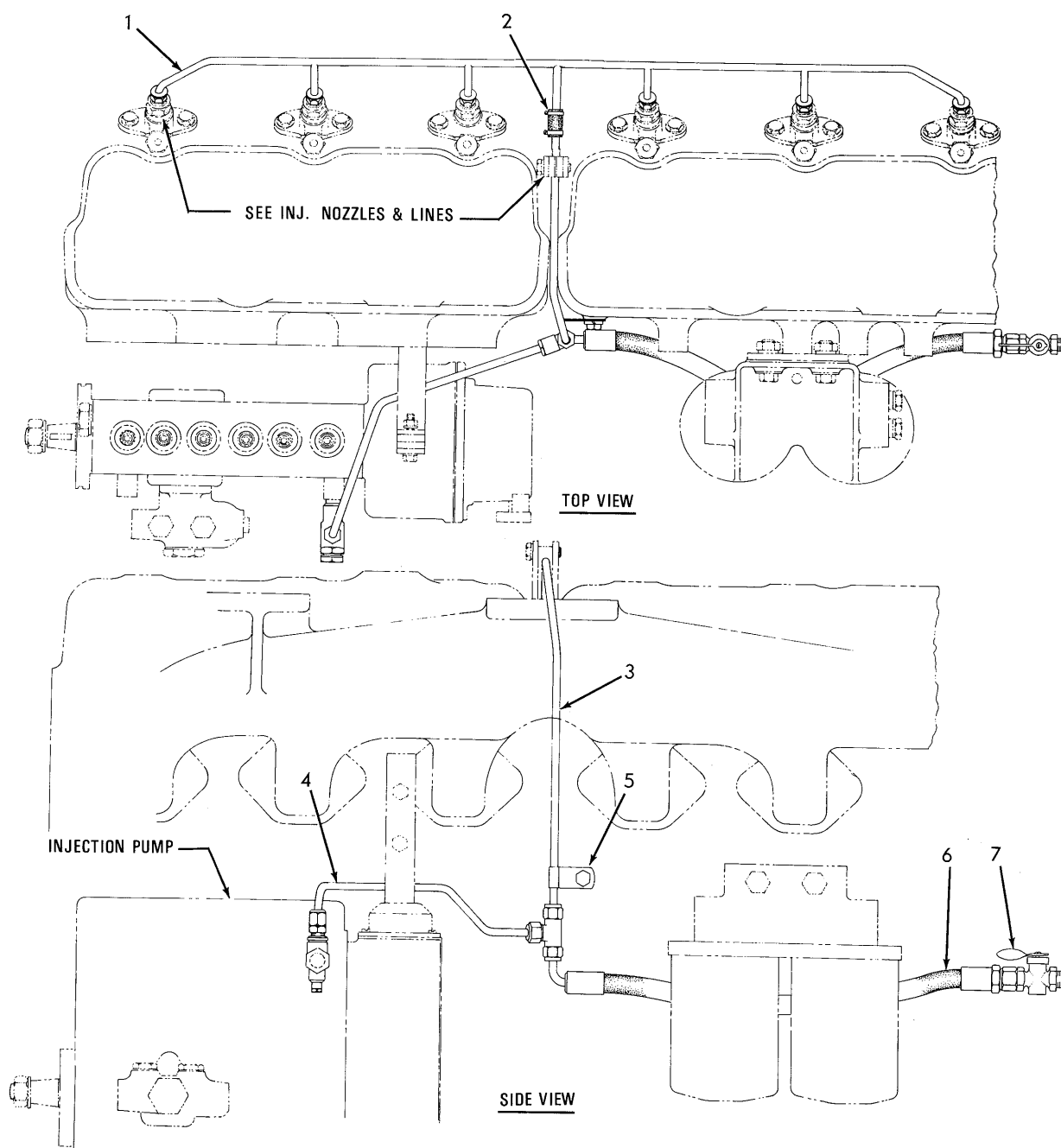
T-71998

INJECTION NOZZLES AND LINES

INJECTION NOZZLES AND LINES

USAGE: Engine No. 11-28234 and up with DM 4 fuel injection pump.

ITEM	PART NO.	QTY.	DESCRIPTION
1	74320642	6	HOLDER ASSY., injection nozzles (See page 49B)
2	70914847	12	CAPSCREW, 3/8"NC x 1-1/2"
	70910287	12	LOCKWASHER, 3/8"
3	74025385	12	SHIELD, dirt
4	74321221	1	TUBE, fuel injection (#1 cylinder)
5	74321222	1	TUBE, fuel injection (#2 cylinder)
6	74321223	1	TUBE, fuel injection (#3 cylinder)
7	74321224	1	TUBE, fuel injection (#4 cylinder)
8	74321225	1	TUBE, fuel injection (#5 cylinder)
9	74321226	1	TUBE, fuel injection (#6 cylinder)
10	74256009	1	CLIP, injection tube (#1 cylinder)
	70916284	1	CAPSCREW, 1/4"NC x 1/2"
	70904204	1	LOCKWASHER, 1/4"
	70910880	1	NUT, 1/4"NC
11	70926918	1	CLAMP, injection tube (#1 cylinder)(Engine prior to #11-28461)
	70933385	1	CLAMP, injector tube (#1 cylinder)(Engine #11-28461 and up)
12	74339712	1	BRACKET, tube supporting, lower
13	74336532	2	SPACER, injection tubes, lower
14	74336531	1	PLATE, clamping, injection tubes, lower
	70914670	1	CAPSCREW, 5/16"NC x 1-1/8"
	70919785	2	CAPSCREW, 5/16"NC x 1-3/4"
	70904205	3	LOCKWASHER, 5/16"
	70910323	2	NUT, 5/16"NC
15	74321702	1	BRACKET, tube supporting, upper
	70910195	1	NUT, 1/2"NF
	70912441	1	LOCKWASHER, 1/2"
16	74507359	4	SPACER, injection tubes, upper
17	74336250	1	CLAMP, injection tubes, upper
	70914670	3	CAPSCREW, 5/16"NC x 1-1/8"
	70904205	3	LOCKWASHER, 5/16"
18	74020725	4	PLATE
	70918237	4	CAPSCREW, 1/4"NC x 1-1/4"
	70904204	4	LOCKWASHER, 1/4"
	70910880	4	NUT, 1/4"NC
19	74020724	4	SPACER
20	74504409	6	NUT
	74501149	6	SLEEVE



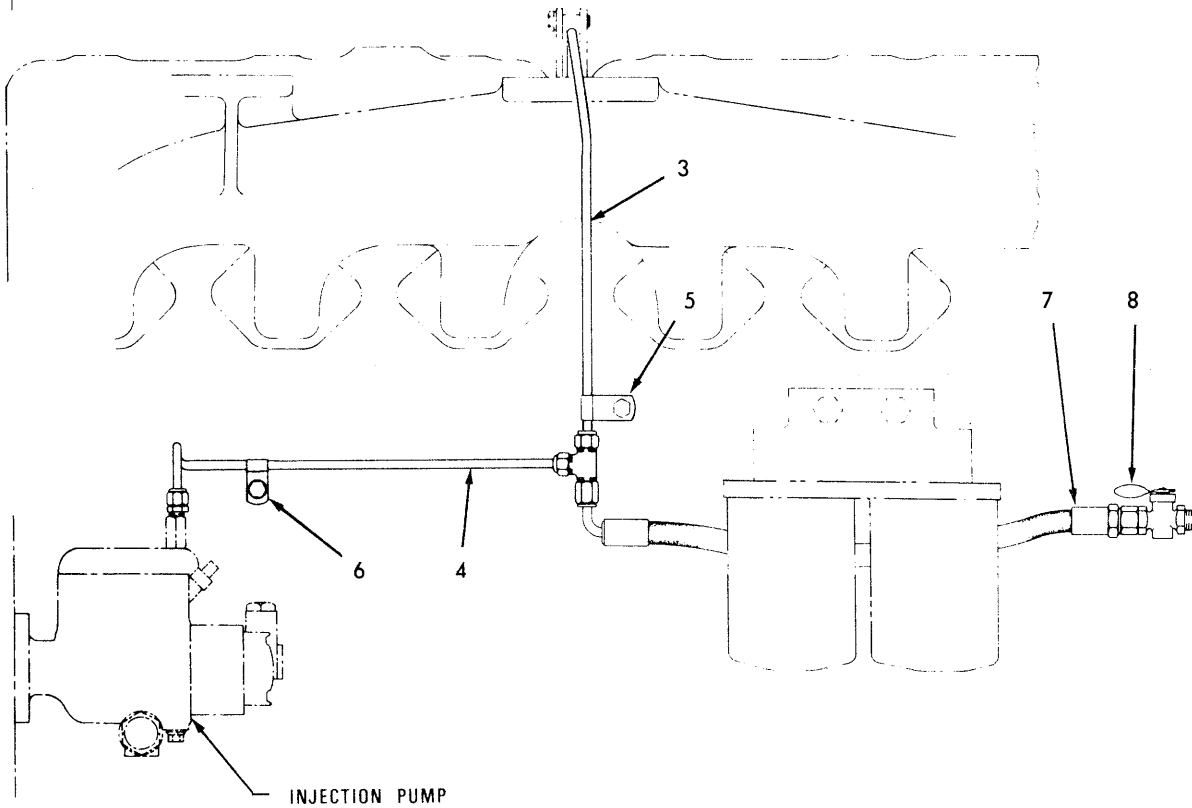
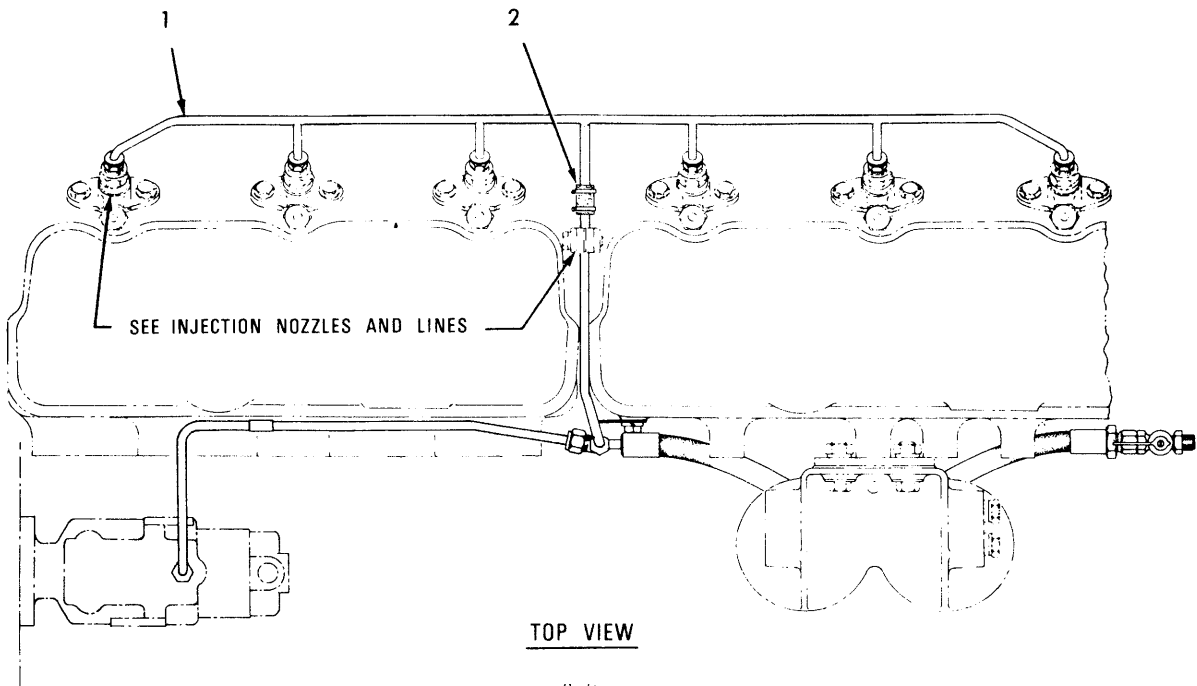
INJECTION FUEL RETURN LINES

T-76303

INJECTION FUEL RETURN LINES

USAGE: Engines prior to serial No. 11-24110.

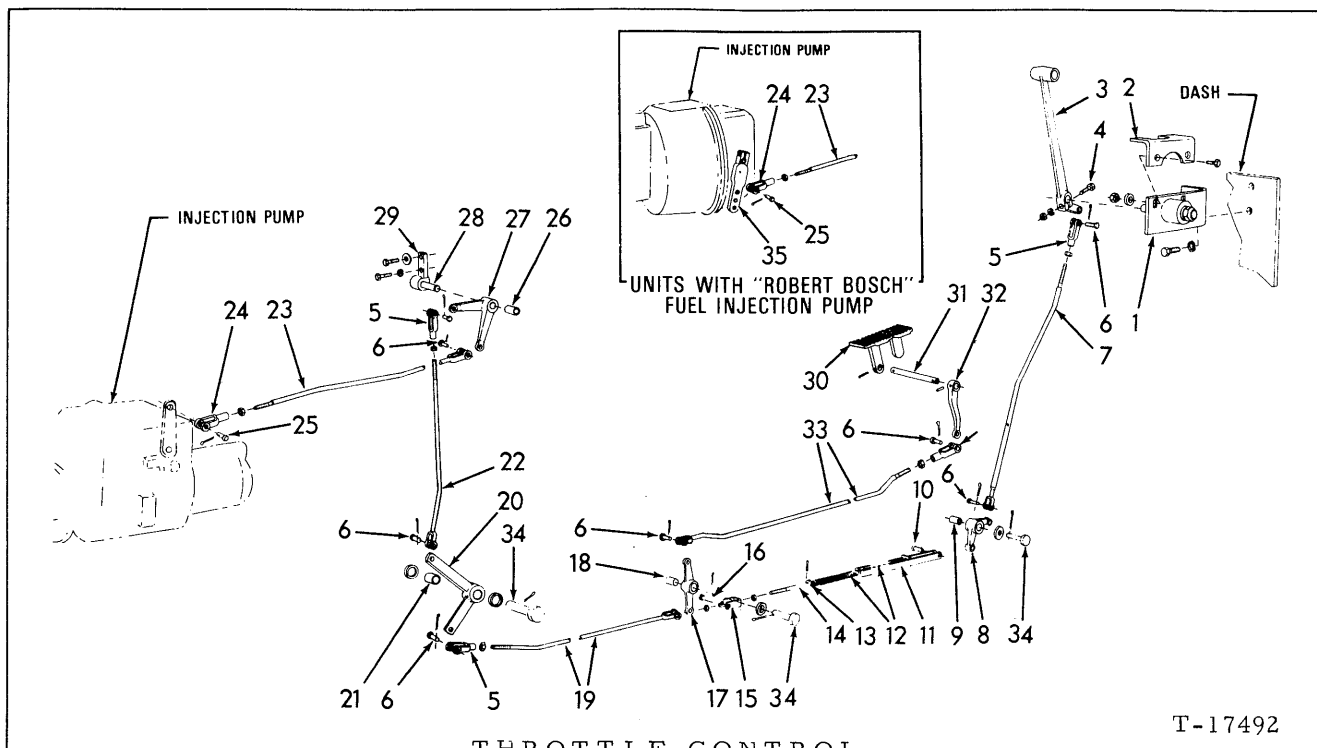
ITEM	PART NO.	QTY.	DESCRIPTION
1	74320638	1	MANIFOLD
	70917809	6	NUT, Imperial, 1/4" tube
	70917806	6	SLEEVE, Imperial, 1/4" tube
2	74514780	1	HOSE, tube to manifold
	70927450	2	CLAMP, hose
3	74320636	1	TUBE, manifold return
	70917809	1	NUT, Imperial, 1/4" tube
	70917806	1	SLEEVE, Imperial, 1/4" tube
	70920411	1	TEE, service, Imperial, 1/4" tube, 1/8"NPT male
4	74359337	1	TUBE, pump return
	70917809	2	NUT, Imperial, 1/4" tube
	70917806	2	SLEEVE, Imperial, 1/4" tube
	70919800	1	CONNECTOR, Imperial, 1/4" tube, 1/8"NPT male
5	74339949	1	CLAMP, manifold return tube
	70916277	1	CAPSCREW, 5/16"NC x 5/8"
	70904205	1	LOCKWASHER, 5/16"
6	70671042	1	HOSE, fuel return (See HOSE PARTS)
	70919174	1	CONNECTOR, flare type, 1/4" tube, 1/8"NPT female
	70919140	1	CONNECTOR, flare type, 1/4" tube, 1/4"NPT male
7	70099433	1	COCK, fuel shut-off (1/4"NPT male and female)



INJECTION FUEL RETURN LINES (Roosa Master)

USAGE: Engine serial No. 11-24110 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	74320638	1	MANIFOLD, front
	70917809	6	NUT, Imperial, 1/4" tube
	70917806	6	SLEEVE, Imperial, 1/4" tube
2	74514780	1	HOSE, tube to manifold
	70927450	2	CLAMP, hose
3	74320636	1	TUBE, manifold return
	70917809	1	NUT, Imperial, 1/4" tube
	70917806	1	SLEEVE, Imperial, 1/4" tube
	70920411	1	TEE, service, Imperial, 1/4" tube, 1/8"NPT male
4	74339690	1	TUBE, pump return (Engines prior to #11-28234 with DC type pump)
	74321227	1	TUBE, pump return (Engine #11-28234 and up with DM type pump)
	70917809	2	NUT, Imperial, 1/4" tube
	70917806	2	SLEEVE, Imperial, 1/4" tube
	70919800	1	CONNECTOR, Imperial, 1/4" tube, 1/8"NPT male
5	74339949	1	CLAMP, manifold return tube
	70916277	1	CAPSCREW, 5/16"NC x 5/8"
	70904205	1	LOCKWASHER, 5/16"
6	74253435	1	CLIP, pump return tube
	70916277	1	CAPSCREW, 5/16"NC x 5/8"
	70904205	1	LOCKWASHER, 5/16"
7	70671042	1	HOSE, fuel return (See HOSE PARTS)
	70919174	1	CONNECTOR, flare type, 1/4" tube, 1/8"NPT female
	70919140	1	CONNECTOR, flare type, 1/4" tube, 1/4"NPT male
8	70099433	1	COCK, fuel shut-off (1/4"NPT male and female)



THROTTLE CONTROL

T-17492

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	FRICION ASSY. (See page 55)
	70922262	2	CAPSCREW, 3/8"NC x 7/8"
	70910287	2	LOCKWASHER, 3/8"
2	70680018	1	BRACKET, operating lever stop
	70927338	2	CAPSCREW, 1/4"NC x 7/8"
	70677004	2	WASHER, plain
	70911024	2	NUT, 1/4"NC
3	70651959	1	LEVER, operating
	70905121	1	KEY, #5 woodruff, 1/8" x 5/8"
4	70922287	1	CAPSCREW, 3/8"NC x 1-3/4"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
5	70628736	4	YOKE, adjustable, control rods (3/8"NF)
6	70078810	8	PIN, control rod yokes
	70900942	8	PIN, cotter, 3/32" x 3/4"
7	70629441	1	ROD, throttle control, front (vertical)
	70911048	1	NUT, 3/8"NF
8	70640140	1	BELLCRANK ASSY., front (Includes item 9)
9	70097273	1	BUSHING, front bellcrank
10	70082875	1	PIN, yoke, control rod (3/8" x 1-5/16")
	70900942	1	PIN, cotter, 3/32" x 5/8"
11	70086643	1	YOKE, sliding, front control rod (13" long)
12	70086646	2	SPRING, front control rod
13	70044973	1	WASHER, bearing, control rod springs
14	70671440	1	ROD, throttle control, front (horizontal)
	70916202	1	PIN, spring, 1/8" x 7/8"
	70911048	2	NUT, 3/8"NF
15	70084732	1	YOKE, front control rod (2-1/4" long)

(Continued)

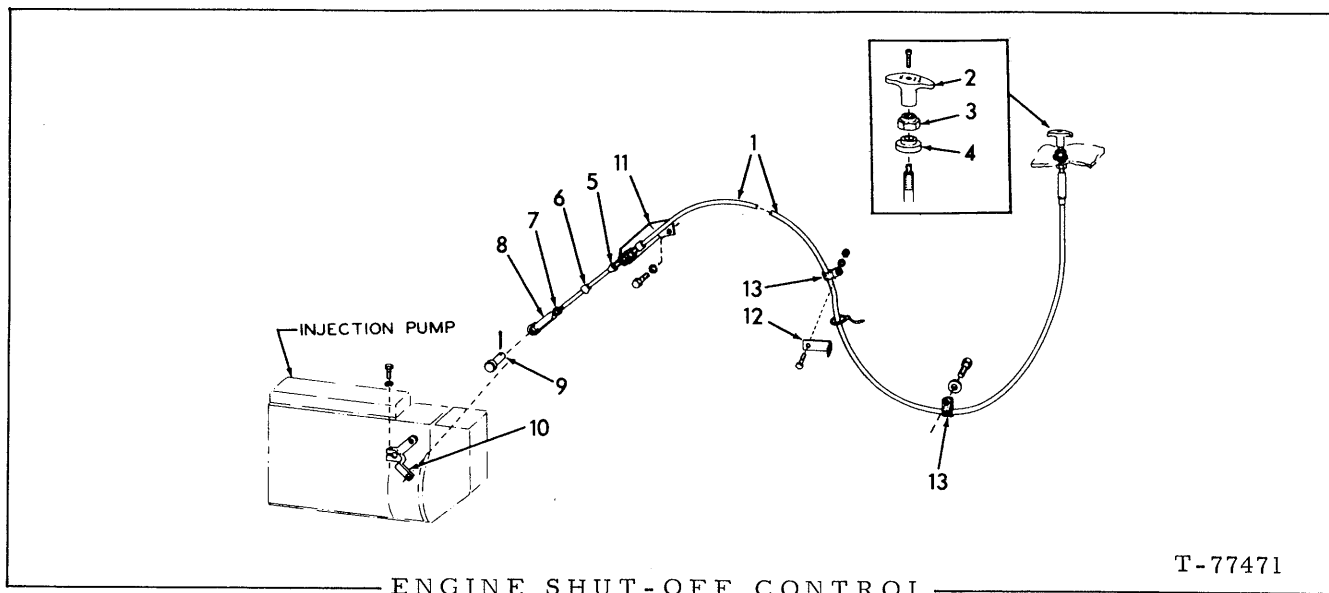
(Revised March 1975)

THROTTLE CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
16	70085038	1	PIN, control rod yokes
	70900942	1	PIN, cotter, 3/32" x 5/8"
17	70097275	1	BELLCRANK ASSY., intermediate (Includes item 18)
18	70097273	1	BUSHING, intermediate bellcrank
19	70671429	1	ROD, throttle control, intermediate (horizontal)
	70911048	1	NUT, 3/8"NF
20	70679890	1	*BELLCRANK ASSY., lower rear
	70696436	1	ΔBELLCRANK ASSY., lower rear
21	70650849	1	BUSHING, lower bellcrank
22	70680111	1	*ROD, throttle control, rear (vertical)
	70631474	1	ΔROD, throttle control, rear (vertical)
	70911048	1	NUT, 3/8"NF
23	70680103	1	*ROD, throttle control, rear (horizontal)
	70650445	1	ΔROD, throttle control, rear (horizontal)
	70911040	1	NUT, 1/4"NF
24	70628737	1	YOKE, rear throttle rod (1/4"NF)
25	70628738	1	PIN, rear throttle rod yoke
	70900970	1	PIN, cotter, 1/16" x 1/2"
26	70065169	1	BUSHING, bellcrank
27	70086576	1	BELLCRANK ASSY., upper rear (Includes item 26)
28	70086578	1	PIN, bellcrank supporting bracket
	70900806	1	PIN, cotter, 1/8" x 1"
29	70674467	1	BRACKET ASSY., bellcrank supporting (Includes item 28)
	70921173	1	CAPSCREW, 3/8"NC x 1-1/8"
	70921076	1	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	2	LOCKWASHER, 3/8"
30	70671368	1	PEDAL, foot, throttle control
	70915797	1	PIN, roll, 3/16" x 1-1/4"
31	70671388	1	SHAFT, cross
32	70086645	1	LEVER, throttle control, foot
	70915711	1	PIN, roll, 3/16" x 7/8"
33	70679933	1	ROD, foot throttle
	70911048	1	NUT, 3/8"NF
34	-----	3	PIN, bellcrank fulcrum (welded to frame)
	70900806	3	PIN, cotter, 1/8" x 1"
	70928142	4	WASHER, plain
35	74393286	1	*LEVER, throttle

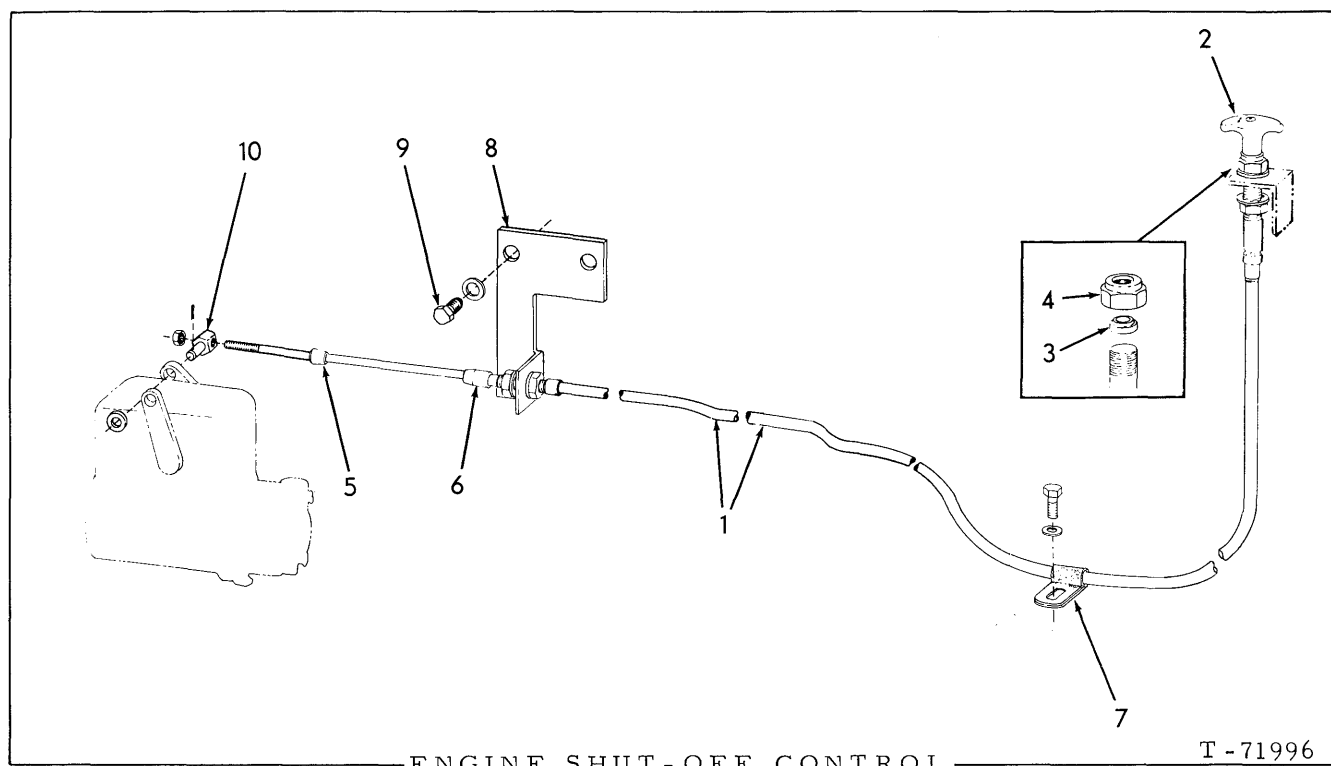
*Units equipped with "Bosch" Fuel Injection Pump. Engines prior to serial No. 11-24110

ΔUnits equipped with "Roosa Master" Fuel Injection Pump. Engines serial No. 11-24110 and up.



USAGE: Engines prior to serial No. 11-24110 with "Robert Bosch" Injection Pump.

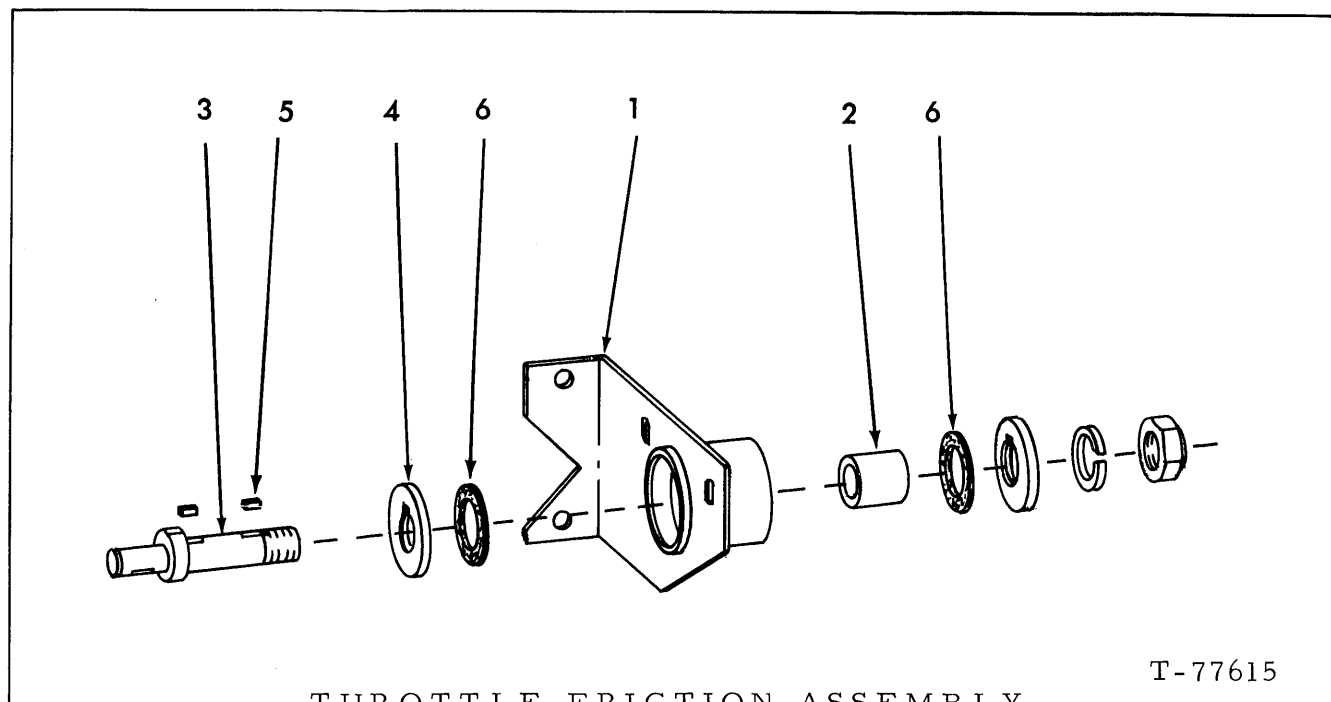
ITEM	PART NO.	QTY.	DESCRIPTION
1	70679958	1	CABLE ASSY. (Includes items 2 thru 7 and hardware indented below)
	70922014	1	NUT, jam, 5/8"NF
	70918906	1	LOCKWASHER, internal tooth, 5/8"
	70922471	2	NUT, jam, 7/16"NF
	70926190	2	WASHER, plain
	70926196	1	WASHER, plain (Not included in CABLE ASSY.)
2	70197211	1	HANDLE
	70901781	1	SCREW, mach., fil-hd., #10-32NF x 1/2"
3	73057777	1	NUT
4	73057778	1	SEAL
5	70680581	1	SEAL
6	70680580	1	SEAL
7	70917415	1	NUT (plated #10NF x 32)
8	70196606	1	CLEVIS ASSY. (Includes item 9)
9	70628738	1	PIN
	70900970	1	PIN, cotter, 1/16" x 1/2"
10	74393260	1	LEVER ASSY.
	70916277	1	CAPSCREW, 5/16"NC x 5/8"
	70904205	1	LOCKWASHER, 5/16"
11	73057137	1	BRACKET
	70922925	2	CAPSCREW, 5/16"NC x 3/4"
	70677005	2	LOCKWASHER, 5/16"
12	70679898	1	ANGLE
13	70639314	2	CLIP
	70922300	2	CAPSCREW, 3/8"NC x 3/4"
	70677006	1	WASHER, plain, SAE std., 3/8"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC



USAGE: Engines serial No. 11-24110 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	70696512	1	CABLE ASSY. (Includes items 2 thru 6 and hardware indented below)
	70922471	2	NUT, 7/16"NF
	70918906	1	LOCKWASHER, internal tooth, 7/16"
	70926190	2	WASHER, plain
	70917415	1	NUT, #10-32NF
	70922014	1	NUT, jam 5/8"NF
	70926196	1	WASHER, plain (Not included in CABLE ASSY.)
2	70197211	1	T-HANDLE, control cable
	70901781	1	SCREW, machine, fil-hd., #10-32NF x 1-1/2"
3	73057778	1	SEAL, control cable
4	73057777	1	NUT, seal retaining
5	70680580	1	SEAL
6	70680581	1	SEAL
7	70639314	1	CLIP, cable supporting
	70922300	1	CAPSCREW, 3/8"NC x 3/4"
	70677006	1	WASHER, plain
8	70650317	1	BRACKET, cable supporting
9	70922262	2	CAPSCREW, 3/8"NC x 7/8"
	70929156	2	WASHER, plain
10	70242038	1	PIN, shut-off cable
	70914686	1	WASHER, plain, 9/16" (copper)
	70900970	1	PIN, cotter, 1/16" x 1/2"

MEMO



USAGE: See page 52

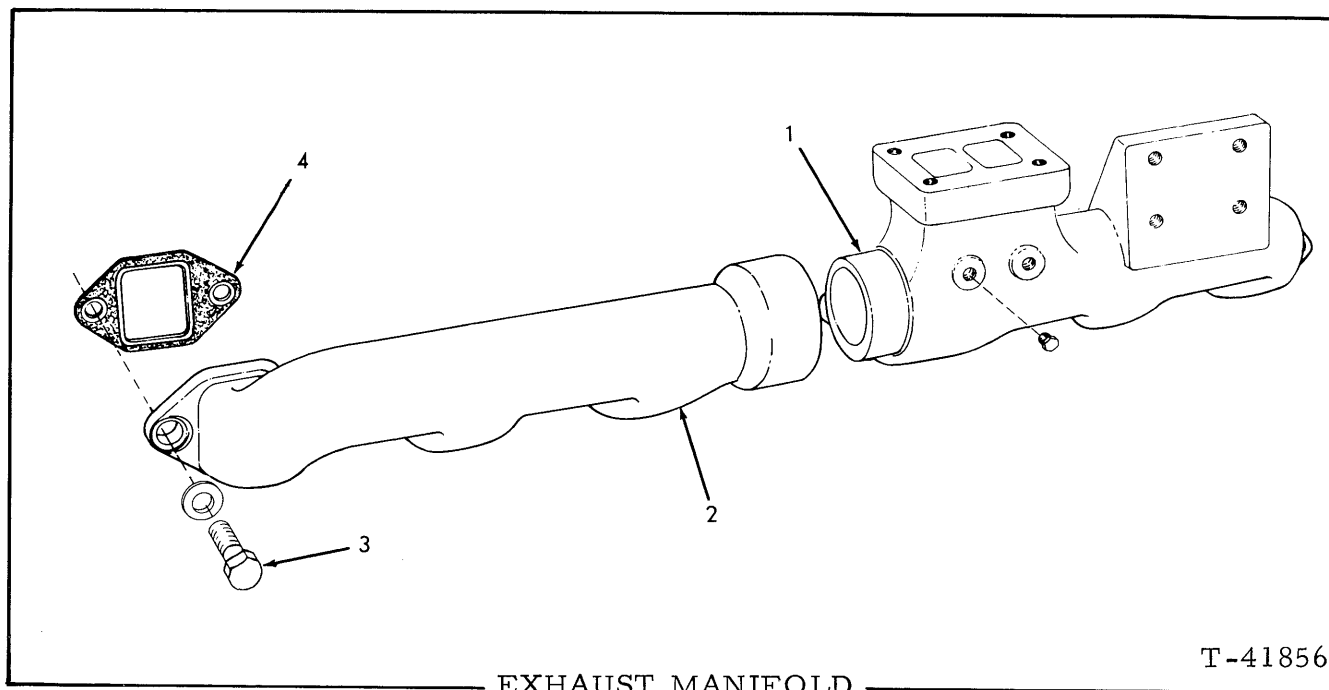
ITEM	PART NO.	QTY.	DESCRIPTION
-	70679991	1	FRICTION ASSY. (Includes items 1 thru 6)
1	70680049	1	HOUSING ASSY. (Includes item 2)
2	70632752	1	BUSHING
3	70679990	1	SHAFT
	70914452	1	NUT, thin, elastic stop, 3/4"NF
	70904369	1	LOCKWASHER, 3/4"
4	70632710	2	WASHER
5	70632716	2	KEY
6	70632747	2	DISC



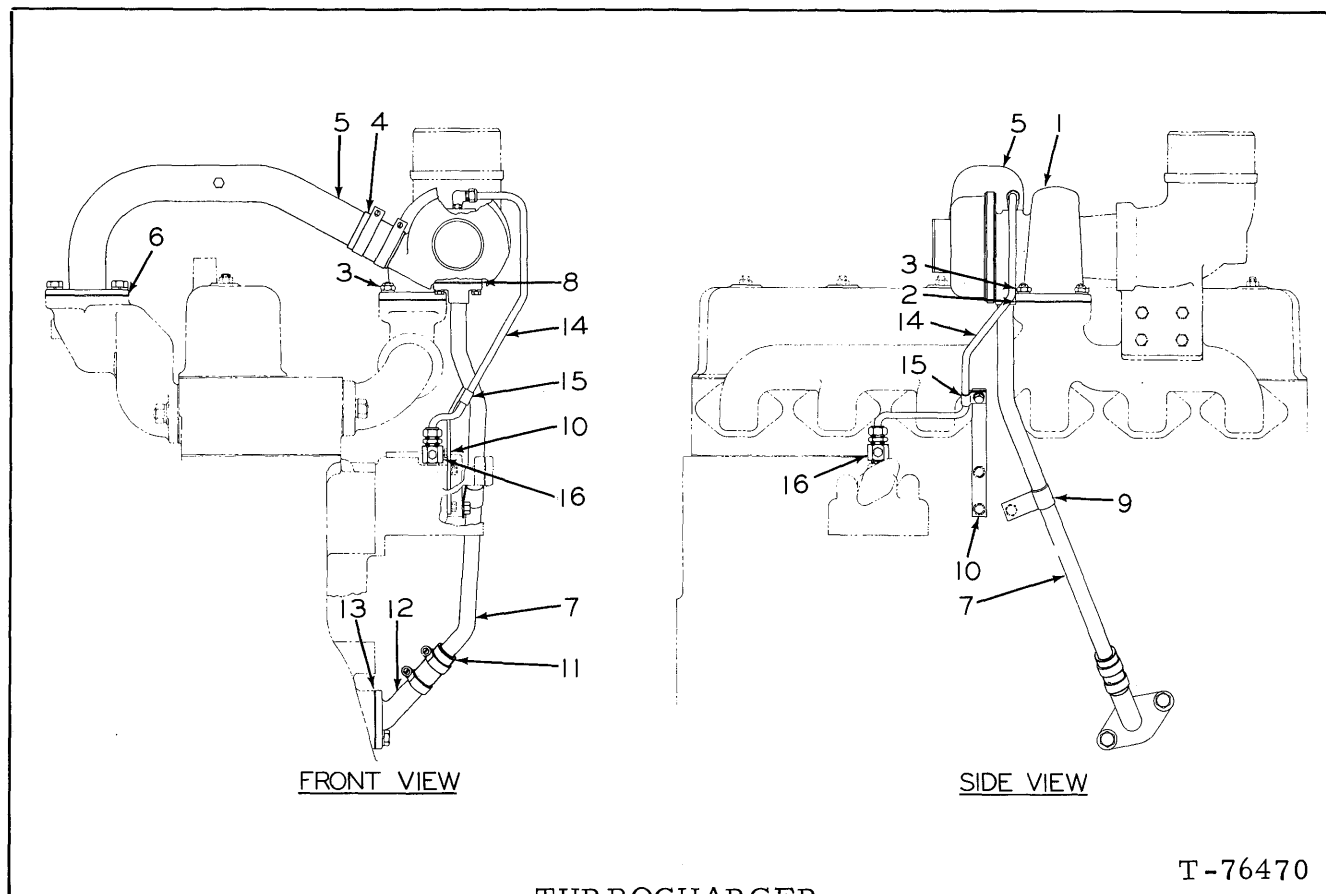
T-13157

— INTAKE MANIFOLD —

ITEM	PART NO.	QTY.	DESCRIPTION
1	74321246	1	MANIFOLD, intake
	70901652	1	PLUG, pipe, 1/4"NPT (Not used on units with engine primer)
2	74259914	12	CAPSCREW, intake manifold
	74371107	12	WASHER, plain
3	74359741	6	GASKET, intake manifold



ITEM	PART NO.	QTY.	DESCRIPTION
1	74359206	1	MANIFOLD, front
	70919840	2	PLUG, pipe, hex-hd., 1/4"NPT
2	74335623	1	MANIFOLD, rear
3	70915987	12	CAPSCREW, 1/2"NC x 1-1/2"
	74371107	12	WASHER, plain
4	74359741	6	GASKET



TURBOCHARGER
(Model T-04)

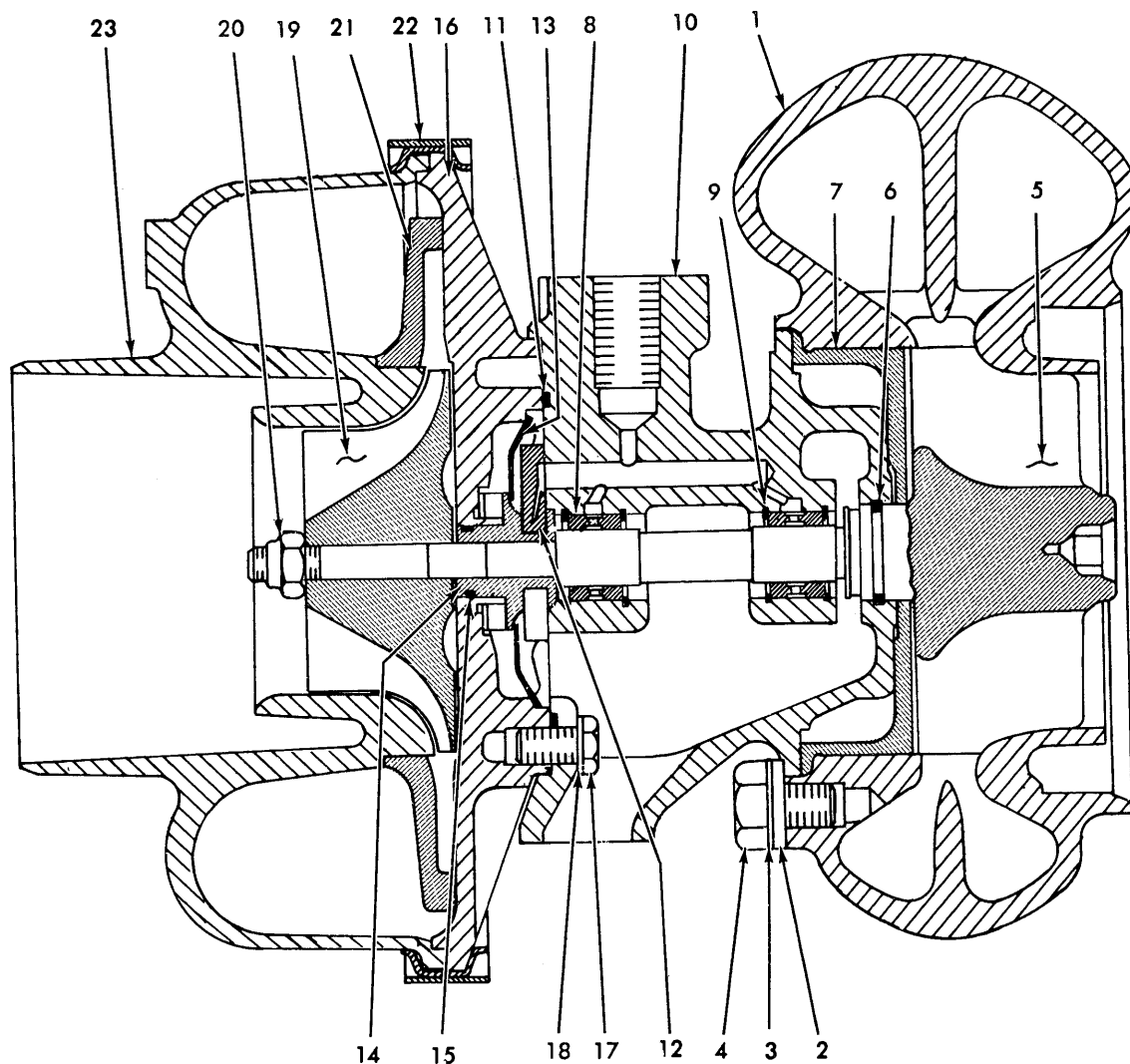
T-76470

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	TURBOCHARGER ASSY. (See page 60)
2	74359214	1	GASKET, turbocharger mounting
3	74513701	4	STUD, turbocharger mounting
	74255977	4	NUT, stainless, 3/8"NC
	70913544	4	WASHER, plain
4	74027975	1	HOSE, air discharge elbow
	70927140	2	CLAMP, hose
5	74359216	1	TUBE, air discharge
	70919840	1	PLUG, pipe, hex-hd., 1/4"NPT (Engines prior to #11-27574)(Not used when engine primer is installed)
	70916311	4	CAPSCREW, 1/2"NC x 1-1/4"
	70904208	4	LOCKWASHER, 1/2"
6	74349193	1	GASKET, air discharge elbow
7	74359226	1	TUBE, oil drain
	70916271	2	CAPSCREW, 3/8"NC x 1"
	70904206	2	LOCKWASHER, 3/8"
8	74339532	1	GASKET, oil drain line

(Continued)

TURBOCHARGER (Continued)
(Model T-04)

ITEM	PART NO.	QTY.	DESCRIPTION
9	74336620	1	CLAMP, supporting, oil drain line
10	74339722	1	BRACKET, supporting, oil drain line
11	74358728	1	HOSE, oil drain line
	70921912	2	CLAMP, hose, 1-7/16" diam.
12	74337114	1	FLANGE, oil drain line
	70916311	2	CAPSCREW, 1/2"NC x 1-1/4"
	70904208	2	LOCKWASHER, 1/2"
13	74336436	1	GASKET, oil drain line flange
14	74320728	1	TUBE ASSY., oil feed (Includes nuts and sleeves)
	74255983	2	SLEEVE, Sealastic
	70917810	2	NUT, Sealastic, 3/8" tube
	70920700	1	CONNECTOR, Sealastic, 3/8" tube, 3/8"NPT male
	70920280	1	ELBOW, Imperial, 90°, 3/8" tube, 1/4"NPT male
15	74337590	1	CLAMP, supporting, oil feed tube
	70911169	1	CAPSCREW, 5/16"NF x 5/8"
	70904205	1	LOCKWASHER, 5/16"
16	74339606	1	ADAPTOR, oil feed tube
	70919840	2	PLUG, pipe, hex-hd., 1/4"NPT



T-76151

TURBOCHARGER ASSEMBLY

USAGE: See page 58

ITEM	PART NO.	QTY.	DESCRIPTION
-	74320705	-	TURBOCHARGER ASSY. (Includes items 1 thru 23)
1	74060014	1	HOUSING
2	74059990	3	CLAMP
3	74059991	3	LOCKPLATE
4	74059998	6	BOLT
5	74060011	1	SHAFT AND TURBINE WHEEL
6	74060936	1	RING
7	74059997	1	SHROUD
8	74060935	2	BEARING
9	74060726	4	RING

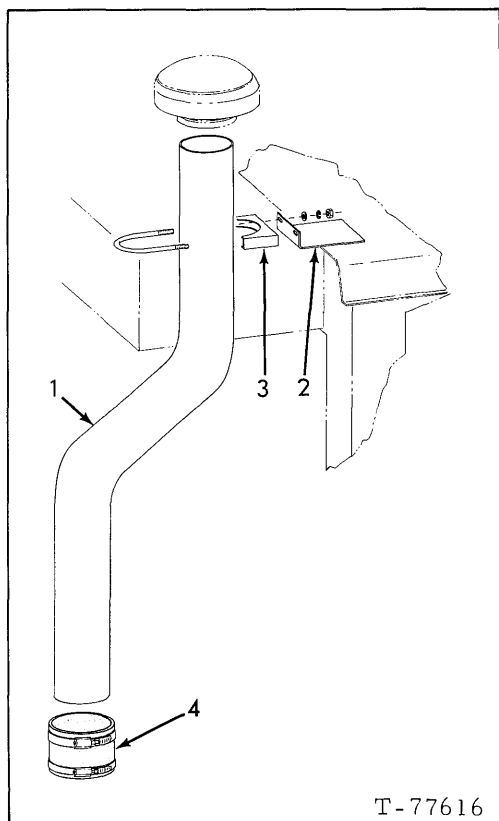
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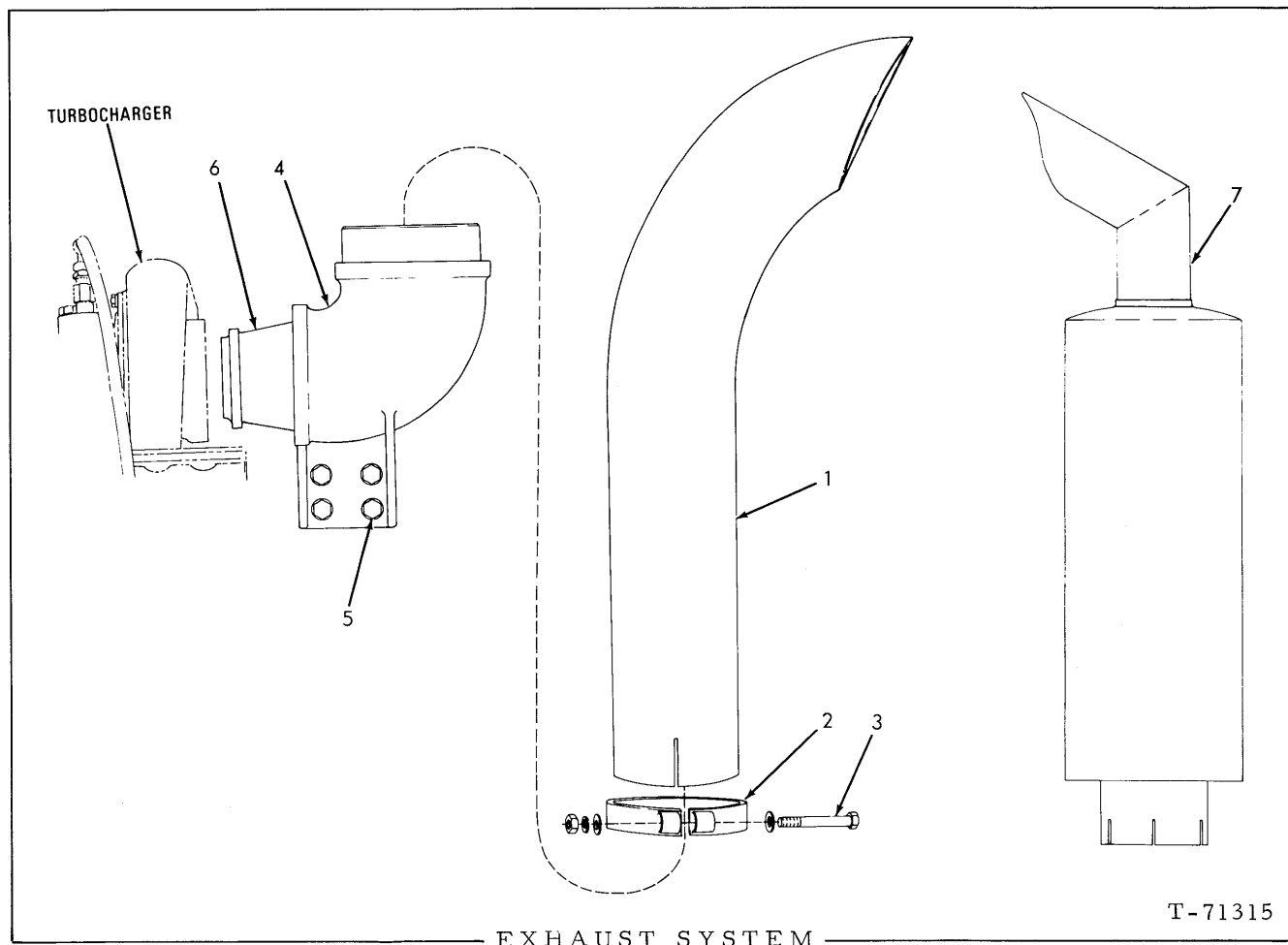
TURBOCHARGER ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
10	74060940	1	HOUSING ASSY. (Includes PIN indented below)
	74060000	2	PIN, spring, stainless, 3/32" x 1/4"
11	74056300	1	RING
12	74060939	1	BEARING
13	74059987	1	SPRING
14	74059988	1	COLLAR
15	74059984	1	RING
16	74060941	1	BACKPLATE ASSY. (Includes item 13)
17	70928202	4	BOLT, attaching
18	74059992	2	LOCKPLATE
19	74060006	1	WHEEL
20	74059993	1	NUT
21	74060684	1	DIFFUSER
22	74059995	1	COUPLING (Includes clamping screw)
23	74060009	1	HOUSING

AIR CLEANER EXTENSION

ITEM	PART NO.	QTY.	DESCRIPTION
1	70688316	1	TUBE, extension
2	70688317	1	ANGLE, tube supporting (Requires welding to install)
3	70929869	1	CLAMP ASSY. (Serviced only as a unit)
	70929156	2	WASHER, plain
4	70660592	1	HOSE, extension tube
	70925759	2	CLAMP, hose





ITEM	PART NO.	QTY.	DESCRIPTION
1	70656660	1	PIPE, exhaust (Standard on units prior to unit #08468, excluding Nos. 08457, 08460, 08461 and 08464 thru 08466)
2	70638922	1	CLAMP, exhaust pipe
3	70927446	1	CAPSCREW, 3/8"NC x 3"
	70929156	2	WASHER, plain
	70911026	1	NUT, 3/8"NC
4	74359207	1	ELBOW, exhaust
5	74255003	4	CAPSCREW, stainless steel, 3/8"NC x 1-1/4"
	70904206	4	LOCKWASHER, 3/8"
6	74359205	1	DIFFUSER, exhaust
7	70686382	1	MUFFLER (Standard on units #08468 and up including Nos. 08457, 08460, 08461 and 08464 thru 08466. Special on earlier units)



AIR CLEANER MOUNTING

T-77617

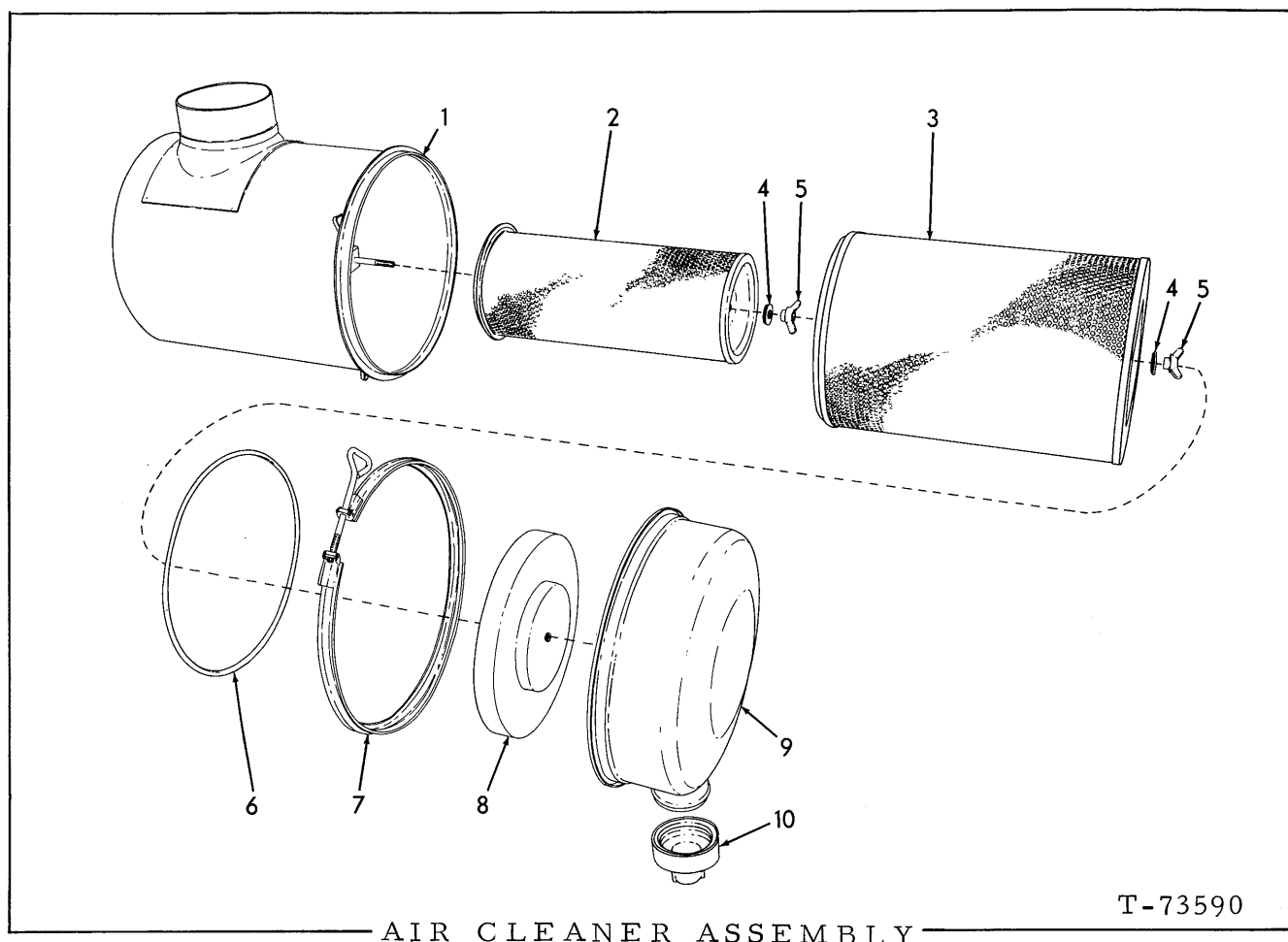
Clamping

(Continued)

AIR CLEANER MOUNTING (Continued)

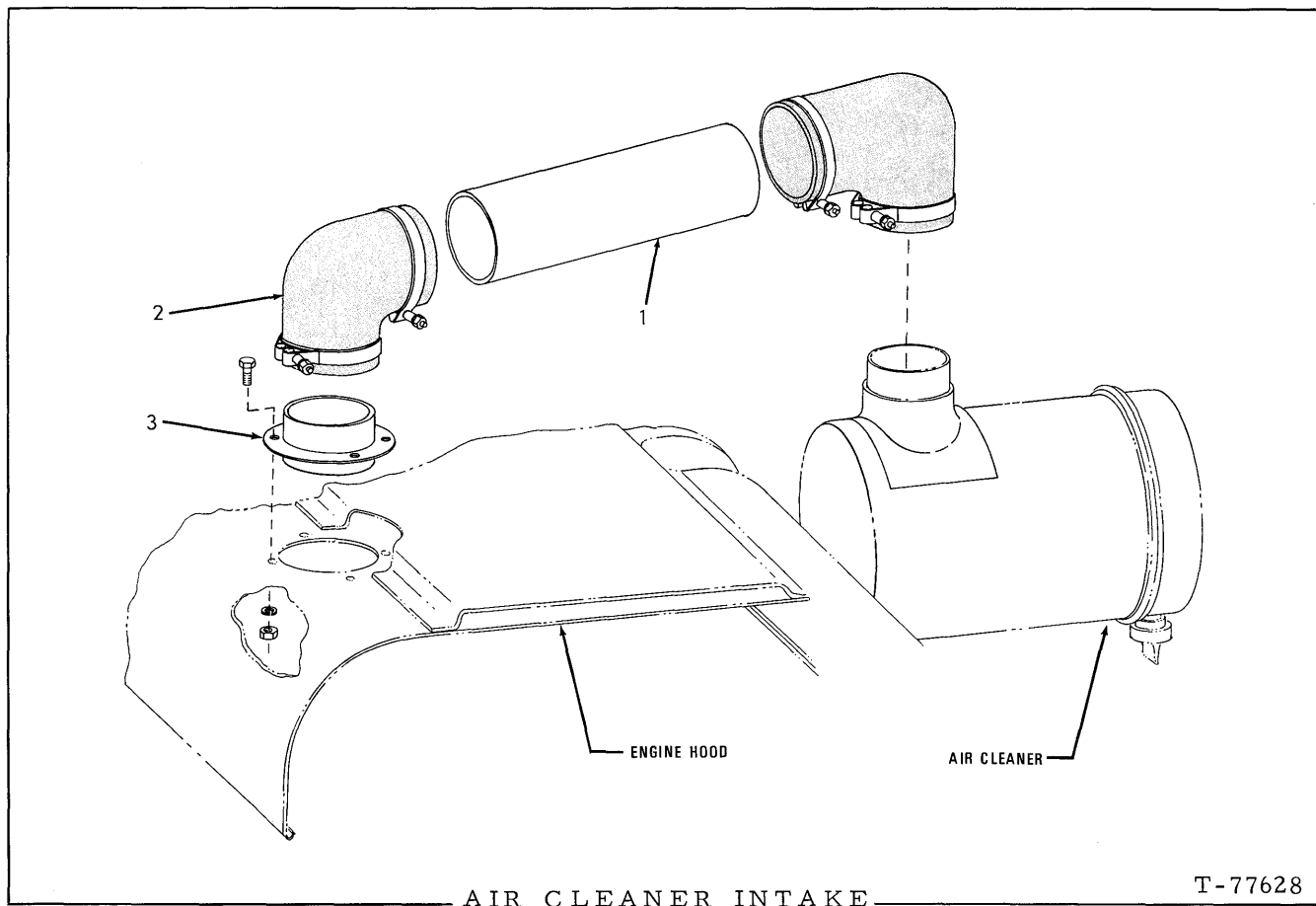
ITEM	PART NO.	QTY.	DESCRIPTION	
9	70669212	1	HOSE	
	70925262	2	CLAMP	
10	70622447	1	FITTING	
11	70097815	1	TUBE ASSY. (Includes nuts)	} Graders prior to unit #08512
	70922880	2	CONNECTOR, flare type, 1/8" tube 1/8"NPT female	
	-----	1	HOSE, 1/4"I.D. x 16" (Order item 15)	} Grader unit #08512 and up
	70920805	2	FITTING, socketless 1/4" hose, 7/16" straight thread	
	70919249	2	ELBOW, female, flare type, 1/4" hose, 7/16" straight thread	
	70904273	1	NIPPLE, pipe, 1/8"NPT x 1"	
12	70679910	1	BRACKET	
	70928138	2	CAPSCREW, 1/4"NC x 5/8"	
	70911114	2	WASHER	
	70910285	2	LOCKWASHER, 1/4"	
	70911024	2	NUT, 1/4"NC	
13	73045531	1	FLANGE	
	70928138	2	CAPSCREW, 1/4"NC x 5/8"	
	70910285	2	LOCKWASHER, 1/4"	
	70911024	2	NUT, 1/4"NC	
14	74021600	1	INDICATOR	
15	70920720	-	HOSE, 1/4"I.D. x 25 ft. (Use as required)	

(Revised May 1976)



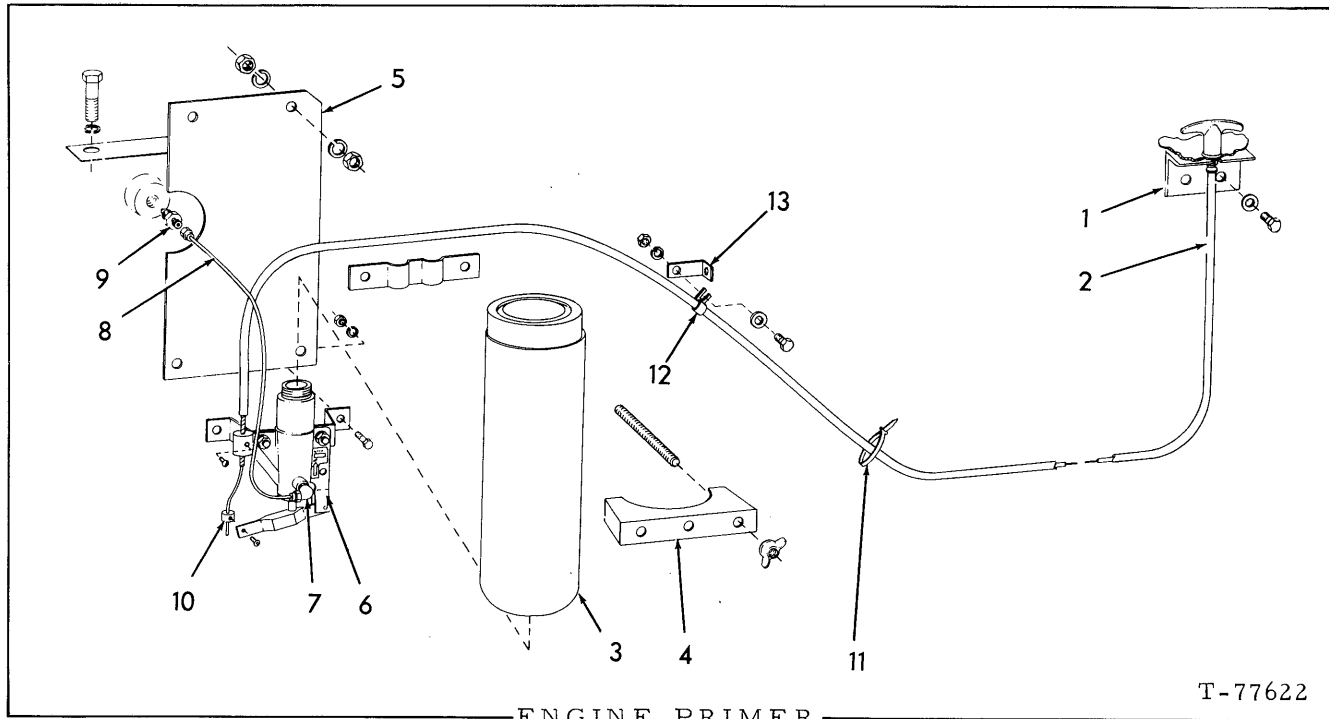
USAGE: See page 64

ITEM	PART NO.	QTY.	DESCRIPTION
-	70659095	1	CLEANER ASSY., air (Includes items 1 thru 10)
1	-----	1	BODY (Not serviced separately)
2	70662609	1	ELEMENT ASSY., safety (inner)
3	70660360	1	ELEMENT ASSY., filtering (outer)
4	-----	2	GASKET, element retaining nut
5	70664343	2	NUT ASSY., element retaining (Includes item 4)
6	70622895	1	O-RING, cup sealing
7	70622897	1	CLAMP ASSY. (Includes tightening screw)
8	70662257	1	BAFFLE ASSY. (Includes wing nut)
9	70662258	1	CUP, sediment
10	73042943	1	VALVE, unloading



USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70685859	1	TUBE, air intake
2	70685858	2	ELBOW, air intake tube
	70929386	4	CLAMP, hose
3	70685857	1	PLATE, tube adapting
	70922763	4	CAPSCREW, 3/8"NC x 1"
	70929156	4	LOCKWASHER, plain
	70911026	4	NUT, 3/8"NC



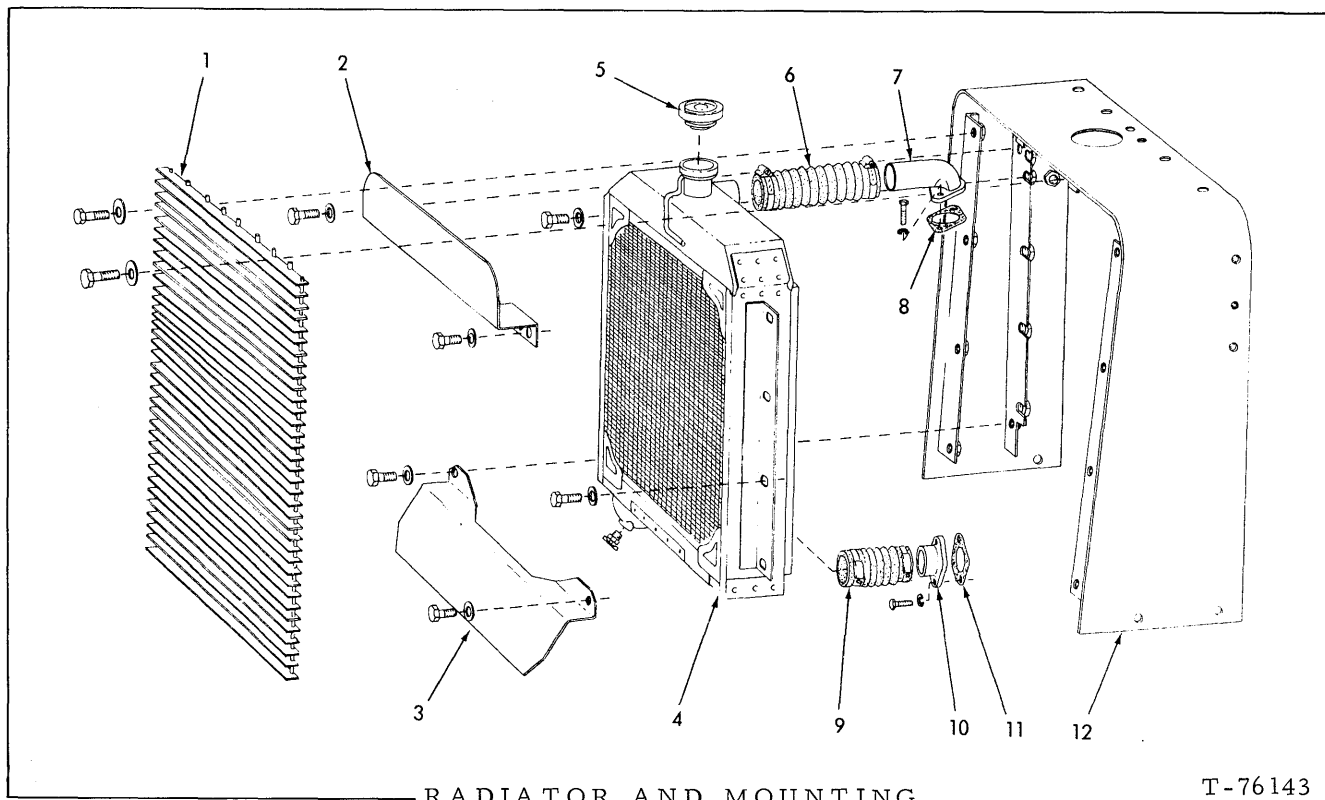
ENGINE PRIMER

T-77622

USAGE: Special equipment.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70687940	1	ANGLE
	70922262	2	CAPSCREW, 3/8"NC x 7/8"
	70928845	2	WASHER, plain
2	70688857	1	CABLE ASSY., control (Includes lockwasher and mounting nut)
	70928845	2	WASHER, plain
3	73100082	1	TANK
4	70669359	1	CLAMP ASSY., tank supporting
5	70687938	1	BRACKET, tank supporting
	70920583	2	CAPSCREW, 1/2"NC x 1-1/2"
	70912441	2	LOCKWASHER, 1/2"
6	70669526	1	BRACKET ASSY., valve
	70906820	1	SCREW, machine, #10-32 x 5/16" (cable attaching)
	70927541	2	CAPSCREW, 1/4"NC x 3/4"
	70910285	2	LOCKWASHER, 1/4"
	70911024	2	NUT, 1/4"NC
7	73052086	1	ELBOW, tube connecting
8	70669053	1	TUBE, valve to atomizer
9	74320811	1	JET
	70912589	1	NUT, compression
	70911841	1	SLEEVE, compression
10	70253308	1	STOP ASSY, cable
	70906820	1	SCREW, machine, #10-32 x 5/16"
11	70196765	-	STRAP, (Use as required)
12	70639313	1	CLIP, cable supporting
	70922300	1	CAPSCREW, 3/8"NC x 3/4"
	70929156	1	WASHER, plain
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
13	70679898	1	ANGLE, clip attaching

Effective with engine serial
No. 11-24110 equipped with
"Roosa Master" Fuel In-
jection Pump

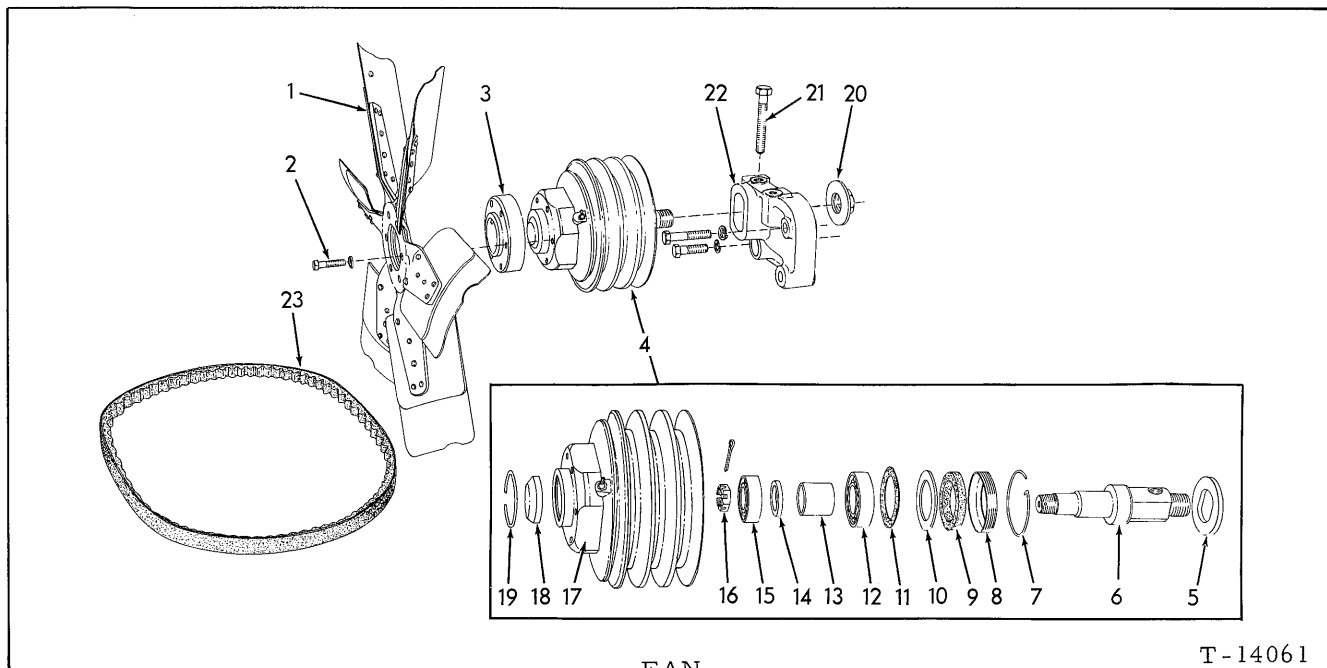


RADIATOR AND MOUNTING

T-76143

ITEM	PART NO.	QTY.	DESCRIPTION
1	70670841	1	GRILL
	70921556	8	CAPSCREW, 1/2"NC x 2"
	70926194	8	WASHER, plain
2	70670839	1	PLATE, upper
	70922763	4	CAPSCREW, 3/8"NC x 1"
	70677006	4	WASHER, plain
3	70670840	1	PLATE, lower
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70677006	2	WASHER, plain
4	70680960	1	RADIATOR ASSY. (Includes item #5)
	70922763	8	CAPSCREW, 3/8"NC x 1"
	70677006	8	WASHER, plain
	70912319	1	COCK, drain
5	70087528	1	CAP, radiator
6	70689373	1	HOSE, radiator inlet
	70921913	2	CLAMP, hose, 1-13/16" to 2-3/4" diam.
7	70664872	1	ELBOW, engine water outlet
	70921569	2	CAPSCREW, 7/16"NC x 1-1/4"
	70914678	2	LOCKWASHER, 7/16"
8	74300145	1	□ GASKET, elbow
9	70661094	1	HOSE, radiator outlet
	70921914	2	CLAMP, hose, 2-5/16" to 3-1/4" diam.
10	74347003	1	PIPE, engine water inlet (Engines prior to #11-25910)
	74321254	1	PIPE, engine water inlet (Engines #11-25910 and up)
	70916271	2	CAPSCREW, 3/8"NC x 1"
	70904206	2	LOCKWASHER, 3/8"
11	74346456	1	□ GASKET, pipe
12	70680922	1	SHELL, radiator protecting
	70920582	4	CAPSCREW, 1/2"NC x 1-1/4"
	70677008	4	WASHER, plain

(Revised February 1976)

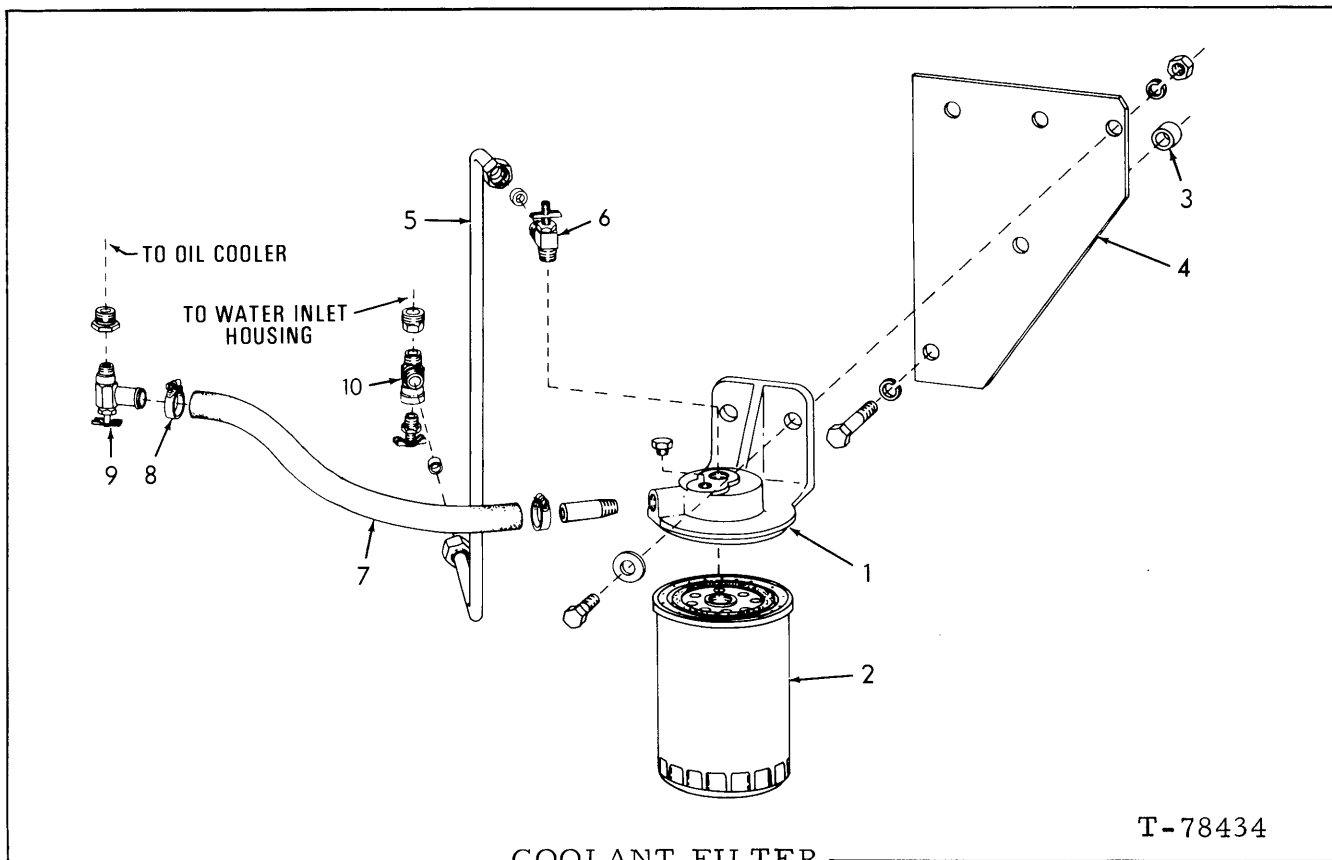


ITEM	PART NO.	QTY.	DESCRIPTION
1	70090155	1	FAN, cooling
2	70927174	6	CAPSCREW, 3/8"NC x 2-1/2"
	70910287	6	LOCKWASHER, 3/8"
3	70679150	1	SPACER, fan (1-5/16" wide)
4	74339455	1	HUB ASSY. (Consists of items 5 thru 19)
5	74056232	1	WASHER, plain, spindle clamping, front
6	74056068	1	SPINDLE
7	74371707	1	LOCKWIRE, fan hub
8	74040386	1	RETAINER, spindle sealing washer
9	74040385	1	WASHER, spindle sealing (cork)
10	74040384	1	WASHER, retaining, rear bearing
11	74640976	1	GASKET, bearing retaining washer
12	74253863	1	BEARING, ball, rear
13	74040383	1	SPACER, spindle bearings
14	74640978	1	WASHER, spacing, front bearing
15	74253862	1	BEARING, ball, front
16	74348502	1	NUT, spindle
	70911064	1	PIN, cotter, 1/8" x 1-3/8"

(Continued)

FAN (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
17	74054345	1	HUB, fan
	70915276	2	FITTING, lubricating, 90°, 1/8"NPT
18	70088561	1	CAP, hub
19	74042081	1	RING, snap, cap retaining
20	74339459	1	NUT, flanged
21	74003603	1	SCREW, fan belt adjustment
22	74338812	1	BRACKET, fan mounting
	70916316	2	CAPSCREW, 1/2"NC x 2-1/2"
	70916313	1	CAPSCREW, 1/2"NC x 1-3/4"
	70904208	3	LOCKWASHER, 1/2"
23	74320755	1	BELT SET, fan driving (Consists of 2 matched belts)



COOLANT FILTER

T-78434

USAGE: Engines serial No. 11-22075 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	74393427	1	BASE ASSY., filter (Includes plug indented below)
	70919134	1	PLUG, pipe, 1/8"NPT
	70916197	2	CAPSCREW, 7/16"NC x 1-1/4"
	70910919	2	WASHER, plain
	70914678	2	LOCKWASHER, 7/16"
	70912201	2	NUT, 7/16"NC
2	74393504	1	FILTER (Original equipment. All purpose, recommended for use with plain water as well as most types of permanent and non-permanent anti-freeze except "Dowtherm" 209)
	74393505	1	FILTER (Chromate type, for use with "Dowtherm" 209)
3	74016014	3	SPACER, mounting bracket (For early volute with 1-1/2" bracket bosses)
4	74320927	1	BRACKET, mounting
	70920275	3	CAPSCREW, 3/8"NC x 3"
	70910287	3	LOCKWASHER, 3/8"
5	74320930	1	TUBE, water outlet
	70917807	2	SLEEVE, Imperial, 3/8" tube
	70917810	2	NUT, Imperial, 3/8" tube
6	70928947	1	VALVE, shut-off

(Continued)

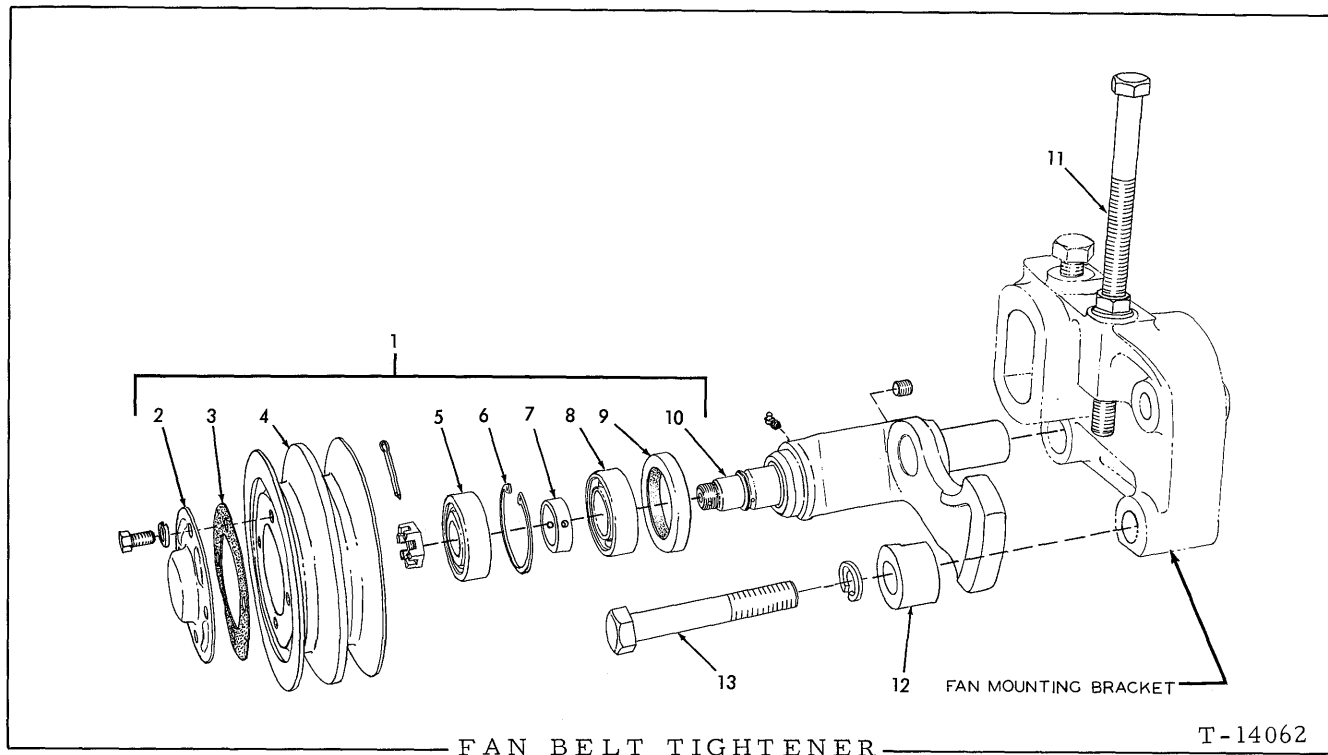
(Revised May 1977)

COOLANT FILTER (Continued)

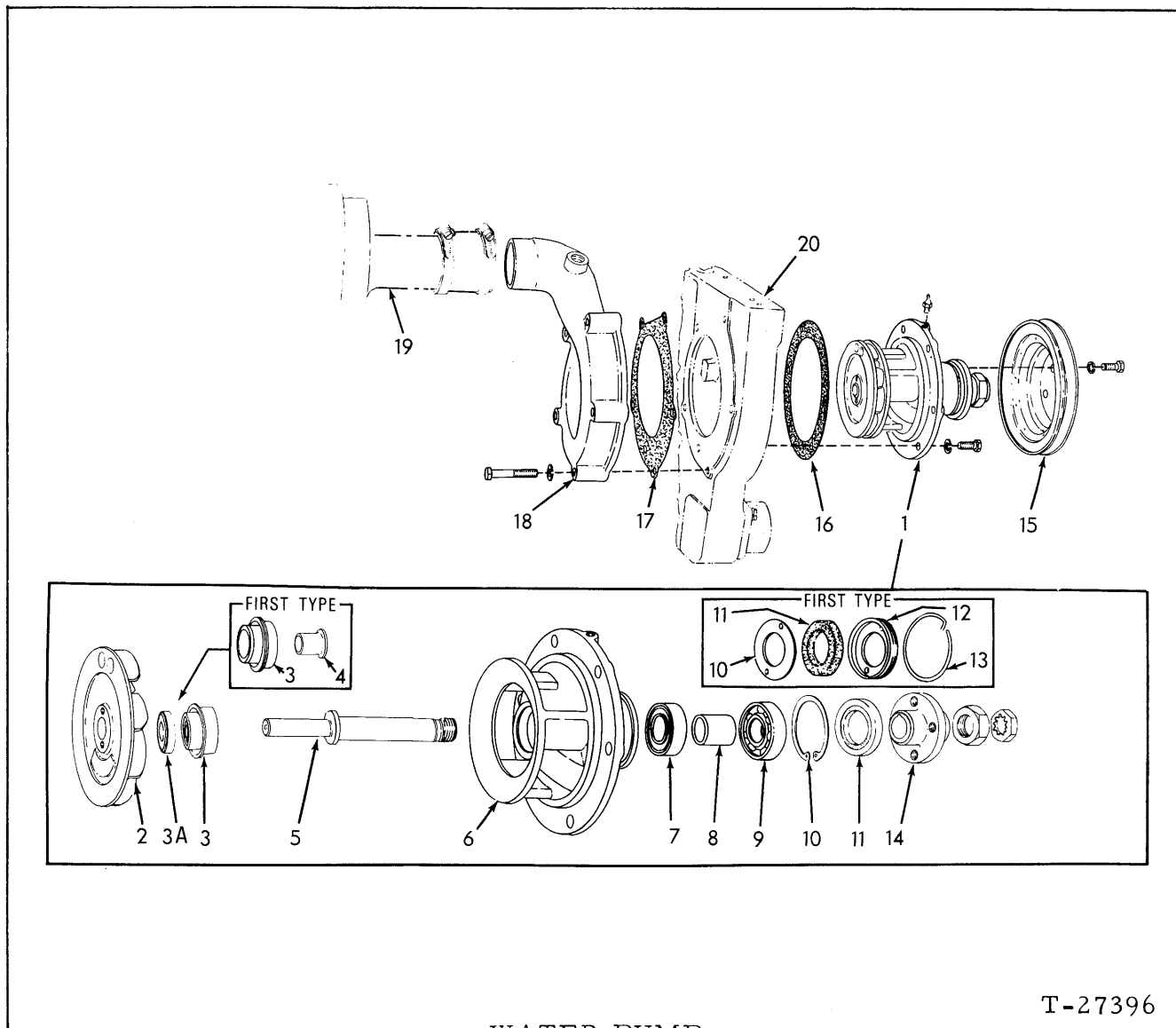
ITEM	PART NO.	QTY.	DESCRIPTION
7	74393681	1	HOSE, inlet (15-1/2" long)
	70917026	1	NIPPLE, pipe, 3/8"NPT x 1-1/2"
8	70921911	2	CLAMP, hose
9	70089894	1	COCK, shut-off
	70904271	1	BUSHING, pipe, 1/2"NPT to 3/8"NPT
10	70925227	1	TEE
	70901826	1	BUSHING, pipe, 3/8"NPT to 1/4"NPT
	70918849	1	COCK, diam., 1/4"NPT

(Added May 1977)

MEMO



ITEM	PART NO.	QTY.	DESCRIPTION
1	74348431	1	PULLEY ASSY. (Consists of items 2 thru 10)
2	74348118	1	COVER, pulley
	70915809	4	CAPSCREW, 5/16"NC x 3/4"
	70904205	4	LOCKWASHER, 5/16"
3	74348122	1	GASKET, pulley cover
4	74348421	1	PULLEY
5	70042979	1	BEARING, ball, front
6	74252137	1	RING, snap, pulley retaining
7	74348121	1	SPACER, bearing
8	74253862	1	BEARING, ball, rear
9	74253765	1	SEAL, oil
10	74348283	1	LEVER ASSY. (Includes PLUG and FITTING indented below)
	70910230	1	PLUG, pipe, slotted-hd., 1/8"NPT
	70915275	1	FITTING, lubricating, 65°, 1/8"NPT
	70913470	1	NUT, jam, slotted, 5/8"NF
	70900807	1	PIN, cotter, 1/8" x 1-1/4"
11	74348205	1	SCREW, belt adjustment (1/2"NC x 8")
	70904208	1	LOCKWASHER, 1/2"
	70910510	1	NUT, jam, 1/2"NC
12	74348442	1	CLAMP, locking
13	70921539	1	CAPSCREW, 1/2"NC x 3-1/2"
	70904208	1	LOCKWASHER, 1/2"



T-27396

WATER PUMP

USAGE: Model 11000 Mark II Engine

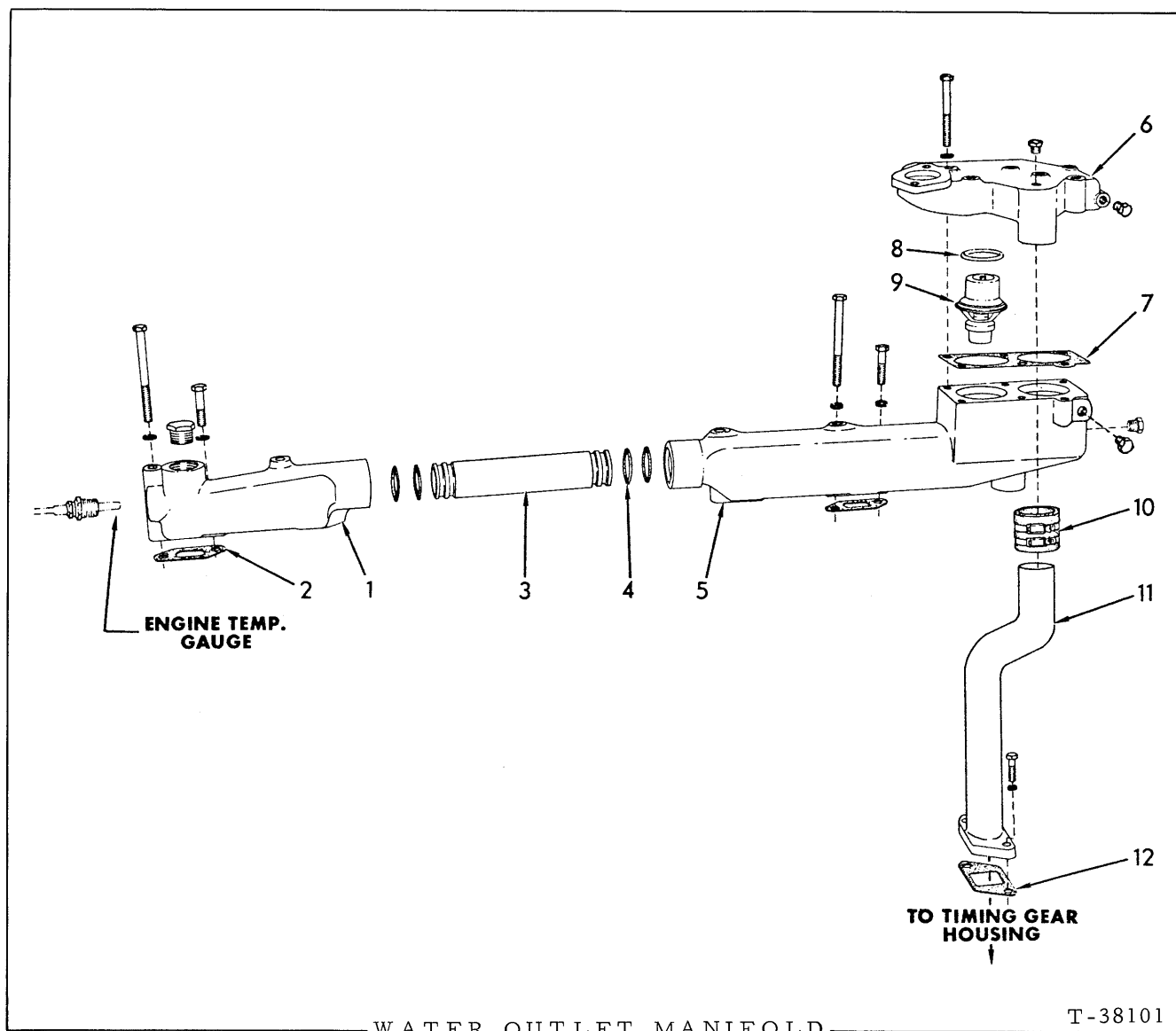
*Original equipment pump
**Service replacement pump

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	74320996	1 -	PUMP ASSY. (Includes items 2 thru 14 and 16)
	74321719	- 1	PUMP ASSY. (Includes items 2 thru 14 and 16)
	70914465	1 1	FITTING, lubricating, straight, 1/8"NPT
	70916271	6 6	CAPSCREW, 3/8"NC x 1"
	70910287	6 6	LOCKWASHER, 3/8"
2	-----	1 -	IMPELLER ASSY. (Includes ceramic insert)
			(Order item 21)
	-----	- 1	□IMPELLER ASSY. (Order item 21)

(Continued)

WATER PUMP (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
3	74507091	1 -	SEAL ASSY.
	-----	- 1	□SEAL ASSY.
3A	-----	- 1	□SEAL, ceramic
4	74507084	1 -	FLINGER, water
5	74358788	1 1	SHAFT
6	-----	1 1	BODY, water pump (Order item 1)
7	74044212	1 1	BEARING, ball, rear
8	74044211	1 1	SPACER, bearing
9	74044210	1 1	BEARING, ball, front
10	74044209	1 -	WASHER, retaining
	70927801	- 1	RING, retaining
11	74348825	1 -	WASHER, sealing
	74321697	- 1	SEAL
12	74335320	1 -	RETAINER, sealing washer
13	74053968	1 -	RING, snap, sealing washer retainer
14	74359280	1 1	FLANGE, driving pulley
	70910847	1 1	NUT, 3/4"NF
	70917680	1 1	NUT, pal locking
15	74335809	1 1	PULLEY
	70916206	4 4	CAPSCREW, 5/16"NF x 5/8"
	70904205	4 4	LOCKWASHER, 5/16"
16	74346744	1 1	□GASKET, water pump
17	74335056	1 1	□GASKET, water pump volute
18	74321713	1 1	VOLUTE (Includes 5 capscrews 70915990)
	70916274	5 5	CAPSCREW, 3/8"NC x 2-1/4" (Engine prior to #11-28447)
	70915990	- 5	CAPSCREW, 3/8"NC x 2-3/4" (Engine #11-28447 and up)
19	-----	- -	HEAT EXCHANGERS (See page 130)
20	-----	- -	TIMING GEAR HOUSING (See page 16)
21	74062124	1 1	IMPELLER AND SEAL KIT (Includes items 2, 3 and 3A)
22	74062126	- 1	SEAL KIT (Includes items 3 and 3A)
			□Components of item 21

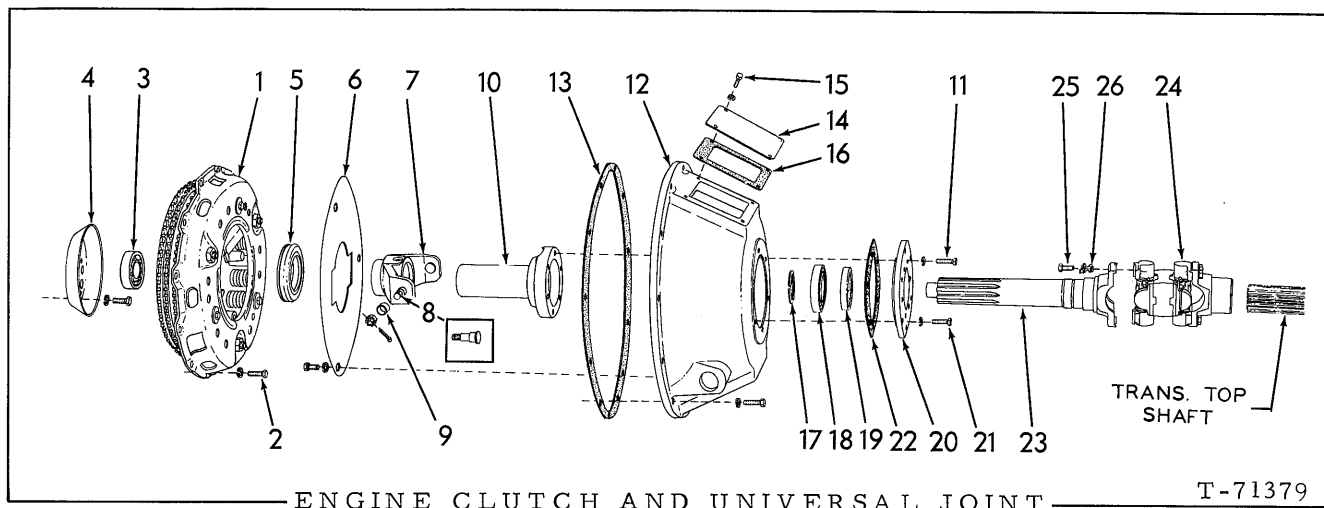


ITEM	PART NO.	QTY.	DESCRIPTION
1	74336506	1	MANIFOLD, water outlet, rear
	70920525	1	PLUG, pipe, hex-hd., 3/4"NPT (Not original equipment)
	70914847	2	CAPSCREW, 3/8"NC x 1-1/2"
	70916275	2	CAPSCREW, 3/8"NC x 3-3/4"
	70904206	4	LOCKWASHER, 3/8"
2	74336182	4	□ GASKET, water manifold
3	74336156	1	TUBE, water manifold connecting
4	70923813	4	□ O-RING, water manifold connecting tube
5	74359948	1	MANIFOLD, water outlet, front
	70920333	1	PLUG, hex-hd., 3/8"NPT
	70914847	2	CAPSCREW, 3/8"NC x 1-1/2"
	70916275	2	CAPSCREW, 3/8"NC x 3-3/4"
	70904206	4	LOCKWASHER, 3/8"
	70912415	1	COCK, T-handle, 1/4"NPT (air venting)

(Continued)

WATER OUTLET MANIFOLD (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
6	74358754	1	HOUSING ASSY, thermostat (Includes item 8)
	70919840	2	PLUG, pipe, 1/4"NPT
	70919227	6	CAPSCREW, 3/8"NC x 3-1/4"
	70904206	6	LOCKWASHER, 3/8"
7	74336263	1	□GASKET, thermostat housing
8	74317554	2	SEAL, thermostat
9	74354537	2	THERMOSTAT
10	74337602	1	HOSE, water by-pass pipe
	70922198	2	CLAMP, hose
11	74359947	1	PIPE, water by-pass
	70916272	2	CAPSCREW, 3/8"NC x 1-1/4"
	70904206	2	LOCKWASHER, 3/8"
12	74347031	1	□GASKET, water by-pass pipe

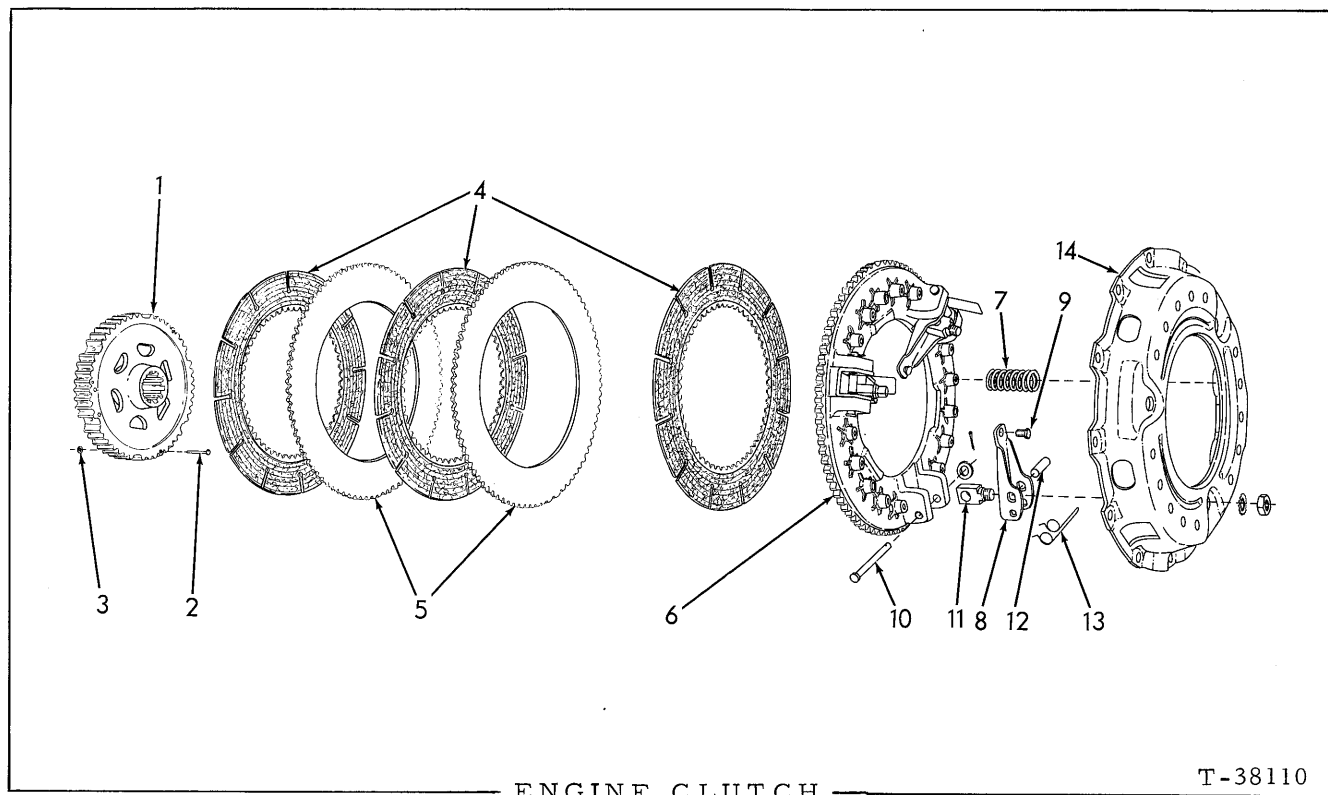


ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	CLUTCH ASSEMBLY (See page 80)
2	70922763	12	CAPSCREW, 3/8"NC x 1"
	70910287	12	LOCKWASHER, 3/8"
3	70042980	1	BEARING, ball, clutch shaft, rear (In flywheel)
4	70630621	1	SLINGER, oil
	70922763	4	CAPSCREW, 3/8"NC x 1"
	70910287	4	LOCKWASHER 3/8"
5	70085651	1	BEARING, ball, clutch release
6	70621574	1	DISC, oil baffle
	70927400	3	CAPSCREW, 3/8"NC x 5/8"
	70910287	3	LOCKWASHER, 3/8"
7	70620636	1	CARRIER ASSY., release bearing (Includes item 8)
8	70054119	2	PIN, release bearing carrier
	70910867	2	NUT, slotted, 1/2"NF
	70910967	2	PIN, cotter, 1/8" x 7/8"
9	70054118	2	BUSHING, carrier pin
10	70620624	1	SLEEVE, release bearing carrier
	70928243	5	CAPSCREW, 3/8"NC x 1-3/8"
11	70927471	1	CAPSCREW, Nylok, 3/8"NC x 1-3/4" (also attaches shifting lock lever bracket)
	70910287	6	LOCKWASHER, 3/8"
12	70623920	1	HOUSING, engine clutch
	70927157	12	CAPSCREW, 3/8"NC x 1-3/8"
	70910287	12	LOCKWASHER, 3/8"
13	70078966	1	GASKET, housing
14	70621191	1	PLATE, cover, clutch inspection
15	70928242	4	CAPSCREW, 1/4"NC x 1/2"
	70910285	4	LOCKWASHER, 1/4"

(Continued)

ENGINE CLUTCH AND UNIVERSAL JOINT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
16	70621192	1	GASKET, inspection plate
17	70050292	1	RING, snap, clutch shaft front bearing
18	74254151	1	BEARING, ball, clutch shaft, front
19	70074961	1	SEAL, oil, clutch shaft front bearing
20	70074957	1	ADAPTER, carrier sleeve
21	70928243	1	CAPSCREW, 3/8"NC x 1-3/8"
	70927471	5	CAPSCREW, Nylok, 3/8"NC x 1-3/4" {also attaches shifting lock lever bracket)
	70910287	6	LOCKWASHER, 3/8"
22	70621187	1	GASKET, adapter
23	70085643	1	SHAFT, clutch
24	-----	1	JOINT ASSY., universal (See page 81)
25	70926147	4	CAPSCREW, 5/16"NF x 7/8"
26	70059876	2	LOCK, capscrew (Graders prior to unit #08275)

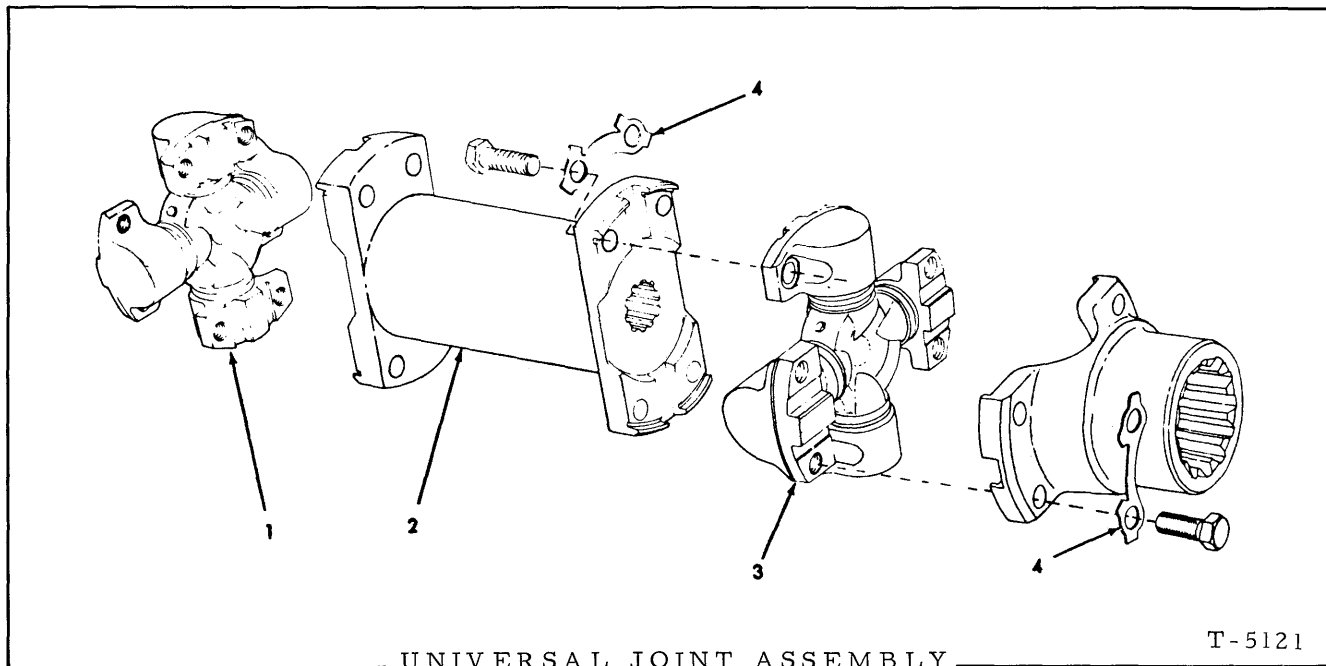


ENGINE CLUTCH

T-38110

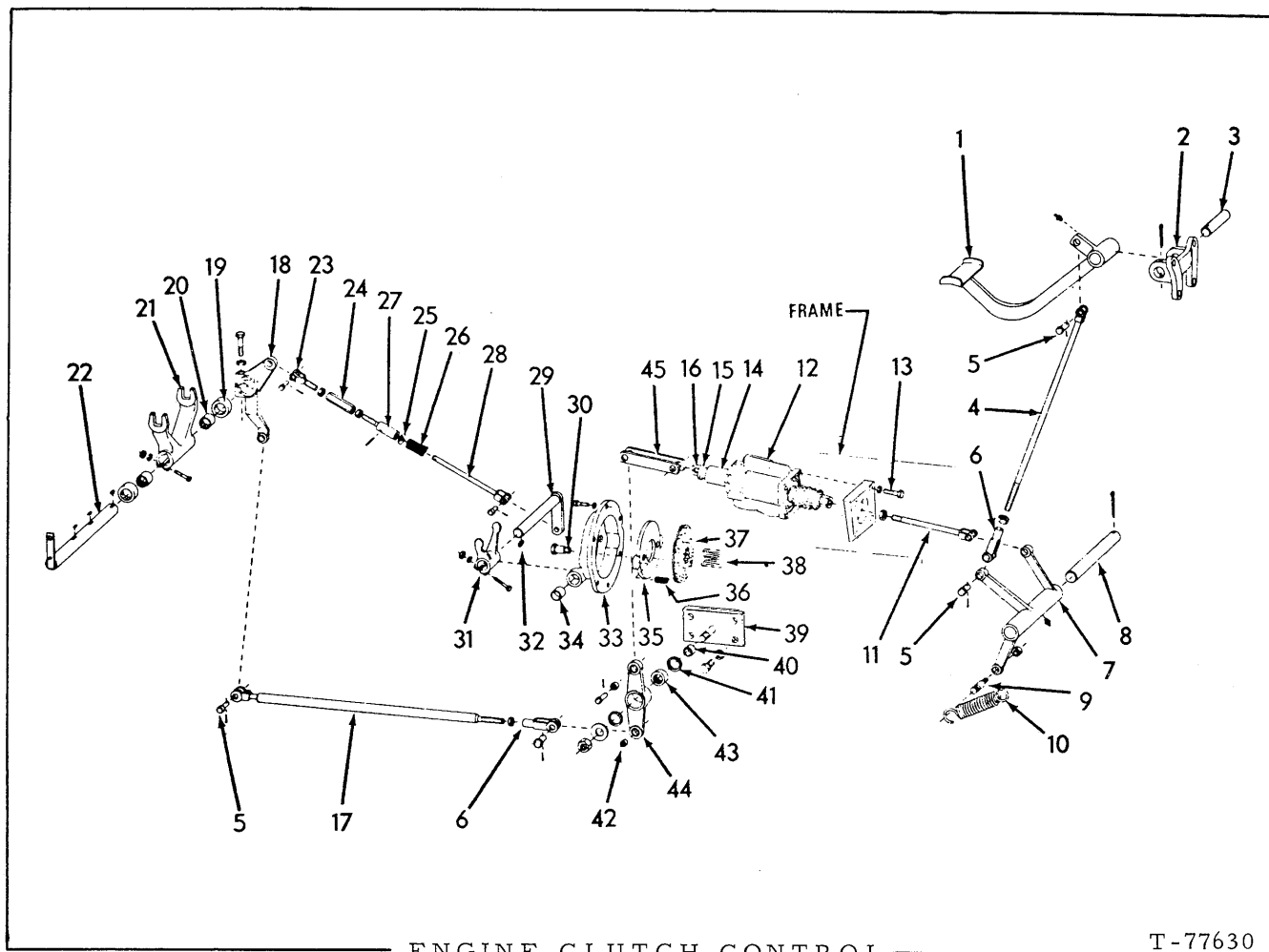
USAGE: See page 78

ITEM	PART NO.	QTY.	DESCRIPTION
-	70620504	1	CLUTCH ASSY. (Includes items 1 thru 14)
1	70637663	1	HUB, driving, clutch shaft
2	70663464	3	RIVET, disc retaining
3	70645706	3	WASHER, disc retaining rivet
4	70637664	3	DISC, friction, inner
5	70642453	2	DISC, friction, outer
6	70637665	1	PLATE, pressure
7	70633213	12	SPRING, pressure plate
8	70680422	3	LEVER AND SCREW ASSY. (Includes item 9)
9	70680421	3	SCREW, adjusting lever
10	70637672	3	PIN, release lever
	70911115	3	WASHER, plain, SAE std., 3/8"
	70900801	3	PIN, cotter, 3/32" x 3/4"
11	70637669	3	BLOCK, lever pivot
	70910543	3	LOCKWASHER, ext-tooth, 5/8"
	70911049	3	NUT, jam, 5/8"NF
12	70637670	3	PIN, lever pivot block
13	70637671	3	SPRING, release lever
14	70637673	1	PLATE, back



USAGE: See page 78

ITEM	PART NO.	QTY.	DESCRIPTION
-	70678136	1	JOINT ASSY., universal (Includes items 1 thru 4)
1	70681014	2	SPIDER ASSY.
2	70678135	1	TUBE ASSY.
3	70076437	1	YOKE
4	70059876	6	LOCK (Graders prior to unit #08275)
	70927354	12	CAPSCREW, 3/8"NF x 7/8"



ENGINE CLUTCH CONTROL

T-77630

ITEM	PART NO.	QTY.	DESCRIPTION
1	70643219	1	PEDAL, clutch operating
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
2	70679610	1	BRACKET, pedal supporting
	70920582	2	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
	70927491	2	CAPSCREW, Nylok, 1/2"NC x 1-1/4"
3	70643533	1	SHAFT, pedal
	70910024	1	PIN, cotter, 3/16" x 2-1/2"
4	70621006	1	ROD, operating (vertical)
	70913830	1	NUT, 1/2"NF
5	70049993	9	PIN, control rod yokes
	70900805	9	PIN, cotter, 1/8" x 3/4"
6	70068389	2	YOKE, control rods
7	70679569	1	BELLCRANK
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
8	70622872	1	SHAFT, bellcrank
	70910024	1	PIN, cotter, 3/16" x 2-1/2"

(Continued)

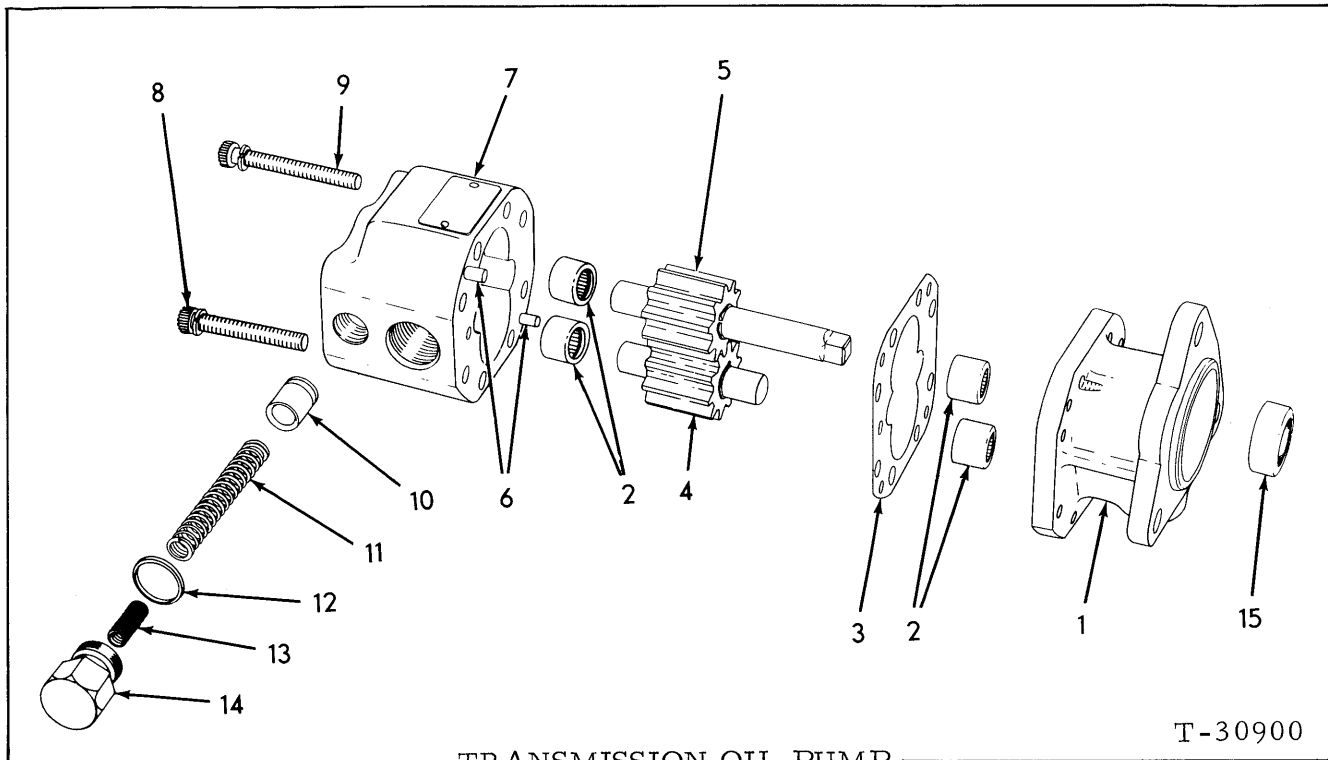
ENGINE CLUTCH CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	70648303	1	PIN, pedal retracting spring
	70911028	1	NUT, jam, 1/2"NC
10	70648304	1	SPRING, pedal retracting
11	70643226	1	ROD, actuating, power booster
	70913830	1	NUT, 1/2"NF
12	-----	1	BOOSTER ASSY., clutch operating (See page 86)
13	70927583	4	CAPSCREW, 7/16"NC x 1-3/4"
	70914678	4	LOCKWASHER, 7/16"
14	70622864	1	RETAINER, power booster shaft
	70927173	3	CAPSCREW, 3/8"NC x 1-1/8"
	70910287	3	LOCKWASHER, 3/8"
15	70052641	1	SEAL, retainer
16	70622865	1	SHAFT, power booster
17	70678100	1	ROD, operating (horizontal)
	70913830	1	NUT, 1/2"NF
18	70671321	1	LEVER, clutch operating
	70905126	1	KEY, #15 woodruff, 1/4" x 1"
	70920995	1	CAPSCREW, 3/8"NC x 2"
	70910287	1	LOCKWASHER, 3/8"
19	70603002	2	SEAL, oil, clutch fork shaft
20	70074975	2	BEARING, needle, clutch fork shaft
21	70630813	1	FORK, clutch release
	70905126	2	KEY, #15 woodruff, 1/4" x 1"
	70923192	2	CAPSCREW, 7/16"NC x 1-1/2"
	70914678	2	LOCKWASHER, 7/16"
22	70644138	1	SHAFT, clutch fork
23	70649409	1	YOKE, brake linkage, rear
24	70622104	1	NUT, adjusting, brake linkage
25	70622106	1	WASHER, brake linkage spring
26	70622102	1	SPRING, brake linkage
27	73115271	1	TUBE, brake linkage
	70913830	1	NUT, jam, 1/2"NF
28	70678098	1	YOKE, brake linkage, front
	70915797	1	PIN, spring, 3/16" x 1-1/4"
29	70637832	1	LEVER, clutch brake
30	70075681	2	STUD, pressure plate

(Continued)

ENGINE CLUTCH CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
31	70074978	1	YOKE, brake operating
	70920995	1	CAPSCREW, 3/8"NC x 2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
32	70075679	1	KEY, brake operating yoke
33	70075715	1	COVER ASSY., brake (Includes item 34)
	70922763	6	CAPSCREW, 3/8"NC x 1"
	70910287	6	LOCKWASHER, 3/8"
34	70034514	2	BUSHING, brake cover
35	70074956	1	PLATE, pressure, clutch brake
36	70040475	2	SPRING, brake pressure plate
37	70644073	1	HUB ASSY., clutch brake (Facings are cemented and are not serviced separately)
38	-----	-	See TRANSMISSION TOP SHAFT
39	70671167	1	PIN ASSY.
	70920574	4	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	4	LOCKWASHER, 1/2"
40	70671128	1	RACE, bearing
41	70053926	1	SEAL
42	70049988	2	BUSHING
43	70051513	1	BEARING
44	70671445	1	LEVER ASSY.
	70914501	1	NUT, elastic stop, 5/8"NC
	70929699	1	WASHER, plain
45	70679579	2	LINK



T-30900

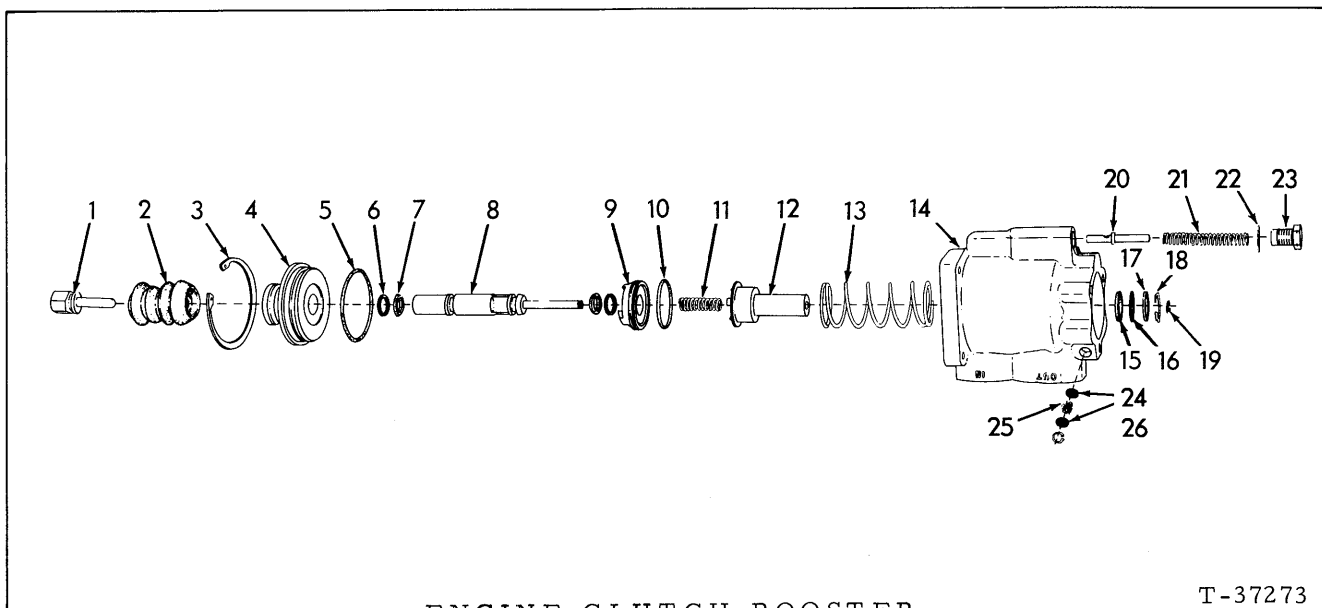
TRANSMISSION OIL PUMP

USAGE: See page 88

* Graders prior to serial No. 27Y08777

** Grader serial No. 27Y08777, 57M09101 and up

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
-	70676308	1 -	PUMP ASSY. (Includes items 1 thru 12, 14 and 15)
	70699399	- 1	PUMP ASSY. (Includes items 1 thru 15)
1	-----	1 1	STATOR (Not serviced separately)
2	70077241	4 4	BEARING
3	70621363	1 1	GASKET
4	70682503	1 1	SHAFT ASSY., idler (Includes gear. Serviced only as a unit)
5	70682504	1 1	SHAFT ASSY., driving (Includes gear. Serviced only as a unit)
6	74048000	2 -	PIN
	-----	- 2	PIN (Not serviced separately)
7	-----	1 1	HOUSING (Not serviced separately)
8	70923448	4 4	SCREW, 12 pt., 1/4" NC x 1-3/4"
9	70922424	4 4	SCREW, 12 pt., 1/4" NC x 2"
	70910285	8 8	LOCKWASHER, 1/4"
10	70623835	1 1	PLUNGER
11	70623838	1 -	SPRING
	73108209	- 1	SPRING
12	70623837	1 -	GASKET
	73108208	- 1	GASKET
13	73108210	- 1	SPRING
14	70623836	1 -	CAP
	73108207	- 1	CAP
15	74047783	1 1	SEAL



ENGINE CLUTCH BOOSTER

T-37273

USAGE: See page 82

ITEM	PART NO.	QTY.	DESCRIPTION
-	70644331	1	BOOSTER ASSY. (Includes items 1 thru 26)
1	70643215	1	ROD, push
2	70630661	1	□BOOT, push rod
3	70630666	1	RING, snap, end cover retaining
4	70630665	1	COVER, end
5	-----	1	□O-RING, end cover
6	-----	2	□WASHER, back-up, spool seal
7	-----	2	□SEAL, oil, operating spool
8	70643214	1	SPOOL, operating
9	70644383	1	PISTON, booster
10	-----	1	□O-RING, booster piston (Order item 27)
11	70638976	1	SPRING, spool return
12	70630673	1	SHAFT, actuating
13	70630671	1	SPRING, actuating shaft
14	-----	1	BODY (Not serviced separately)
15	-----	1	□SEAL, oil, actuating shaft
16	-----	1	□WASHER, back-up, actuating shaft oil seal
17	-----	1	□SPACER, shaft oil seal

Order item 27

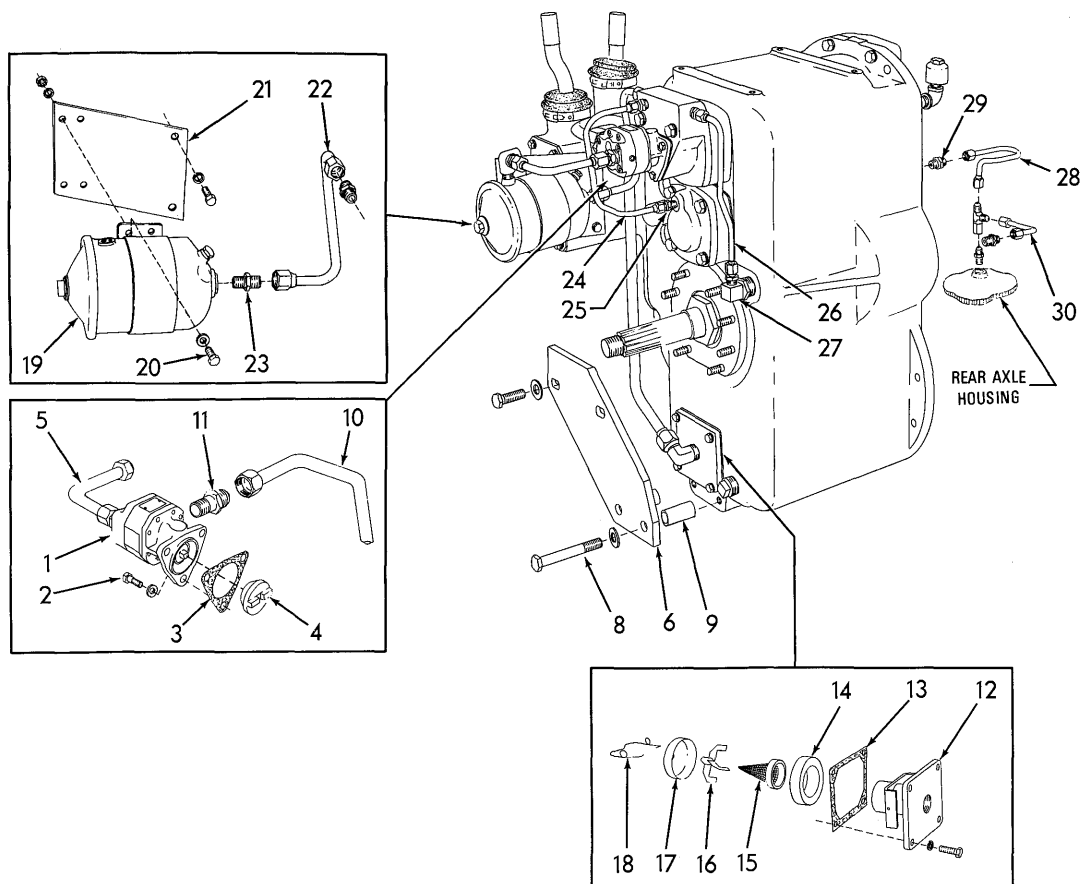
Order item 27

(Continued)

ENGINE CLUTCH BOOSTER (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION	
18	-----	1	☐ RING, snap, shaft seal retaining	} Order item 27
19	-----	1	☐ RING, snap, actuating shaft	
20	70630674	1	VALVE, relief	
21	70630675	1	SPRING, relief valve	
22	-----	1	☐ WASHER, relief valve retainer (Order item 27)	
23	70630677	1	RETAINER, relief valve	
24	-----	2	SCREEN, vent	} Not serviced separately
25	-----	1	☐ FILLER, vent	
26	-----	1	☐ RING, snap, retaining	
27	73114254	1	REPAIR KIT (Consists of items 2, 5 thru 7, 10, 15 thru 19, 22, 25 and 26)	

☐ Indicates components of item 27



T-37253

TRANSMISSION OILING SYSTEM

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	PUMP ASSY. (See page 85)
2	70927373	3	CAPSCREW, 5/16"NC x 7/8"
	70910286	3	LOCKWASHER, 5/16"
3	74376605	1	GASKET, oil pump
4	70099005	1	COUPLING, pump drive
5	70634328	1	TUBE ASSY., pump to filter (Includes nuts)
	70919128	1	CONNECTOR, flare type, 1/2" tube, 1/2"NPT male
	70919063	1	CONNECTOR, flare type, 1/2" tube, 3/8"NPT male
	70911310	1	ELBOW, side outlet, 3/8"NPT
	70901489	1	NIPPLE, pipe, 3/8"NPT x 1"
6	70633522	1	PLATE, guard, suction tube
7	70923881	2	CAPSCREW, 5/8"NC x 2"
8	70926165	2	CAPSCREW, 5/8"NC x 4-1/2"
	70911100	4	WASHER, plain, SAE std., 5/8"
9	70633523	2	SPACER, guard plate
10	70629619	1	TUBE ASSY., suction (Includes nuts)
	70919269	1	ELBOW, flare type, 3/4" tube, 3/4"NPT male

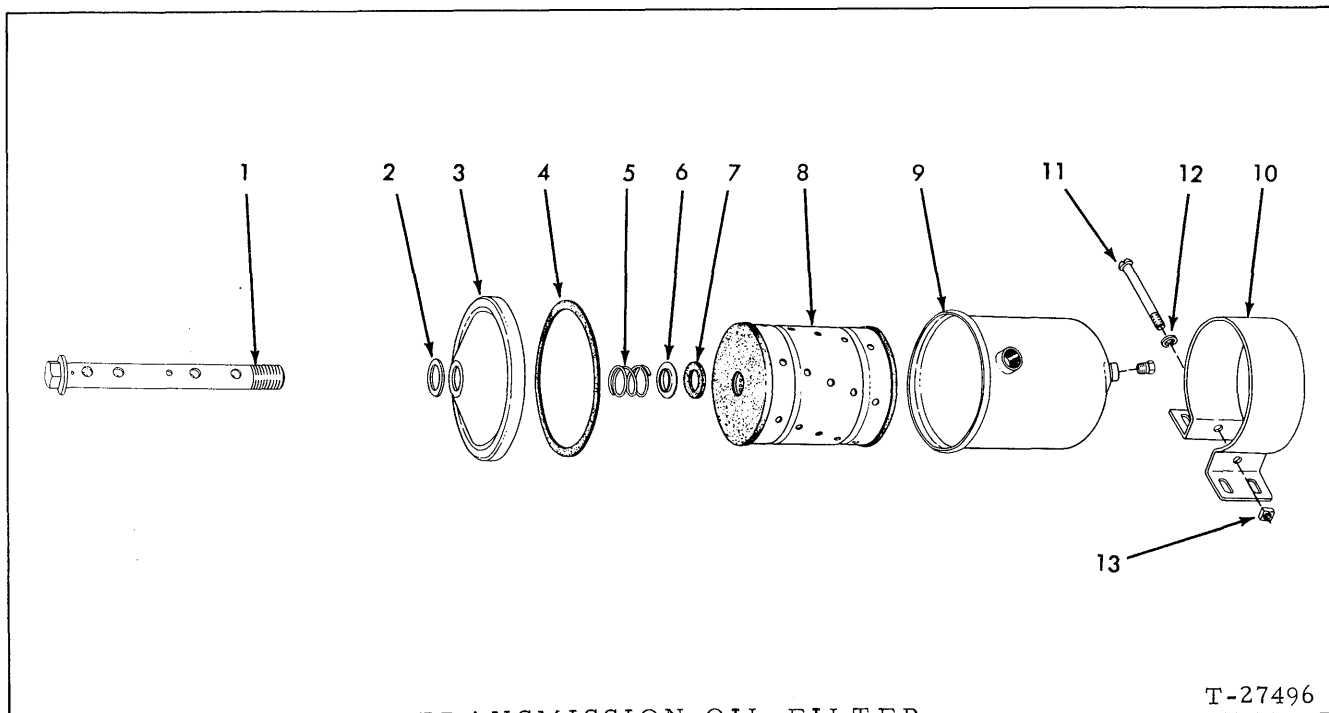
(Continued)

(Revised May 1977)

TRANSMISSION OILING SYSTEM (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
11	70623310	1	CONNECTOR, suction tube
12	70623722	1	COVER, oil strainer
	70921076	4	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	4	LOCKWASHER, 3/8"
13	70623718	1	GASKET, oil strainer cover
14	73013850	1	MAGNET, suction line
15	70623723	1	STRAINER, suction line
16	73013847	1	SUPPORT, baffle
17	73013852	1	BAFFLE, oil
18	73013848	1	BAIL, oil baffle
19	-----	1	FILTER ASSY., oil (See page 90)
	70912327	4	CAPSCREW, 1/4"NC x 7/8"
20	70677004	4	WASHER, plain
	70910285	4	LOCKWASHER, 1/4"
	70911024	4	NUT, 1/4"NC
21	70629679	1	PLATE, filter mounting
	70928798	2	CAPSCREW, Nylok, 3/8"NC x 3/4"
	70910287	2	LOCKWASHER, 3/8"
22	70629621	1	TUBE ASSY., filter to top shaft (Includes nuts)
	70919063	1	CONNECTOR, flare type, 1/2" tube, 3/8"NPT male
23	70624826	1	CONNECTOR, flare type, 1/2" tube, 3/8"NPT male (restricted)
24	70629622	1	TUBE ASSY., top shaft to intermediate shaft (Includes nuts)
	70919172	1	CONNECTOR, flare type, 3/8" tube, 3/8"NPT male
25	70629665	1	CONNECTOR, flare type, restricted, 3/8" tube, 1/4"NPT male
26	70629620	1	TUBE ASSY., top shaft to reverse shaft (Includes nuts)
	70919172	2	CONNECTOR, flare type, 3/8" tube, 3/8"NPT male
27	70629655	1	CONNECTOR, reverse shaft oil tube
28	70629656	1	TUBE ASSY., tee to intermediate shaft (Includes nuts)
29	70629665	1	CONNECTOR, flare type, restricted, 3/8" tube, 1/4"NPT male
30	70629618	1	TUBE ASSY., reverse shaft (rear)
	70921297	1	TEE, flare type, swivel nut, 3/8" tube
	70919062	2	CONNECTOR, flare type, 3/8" tube, 1/4"NPT male

(Revised May 1977)



TRANSMISSION OIL FILTER

T-27496

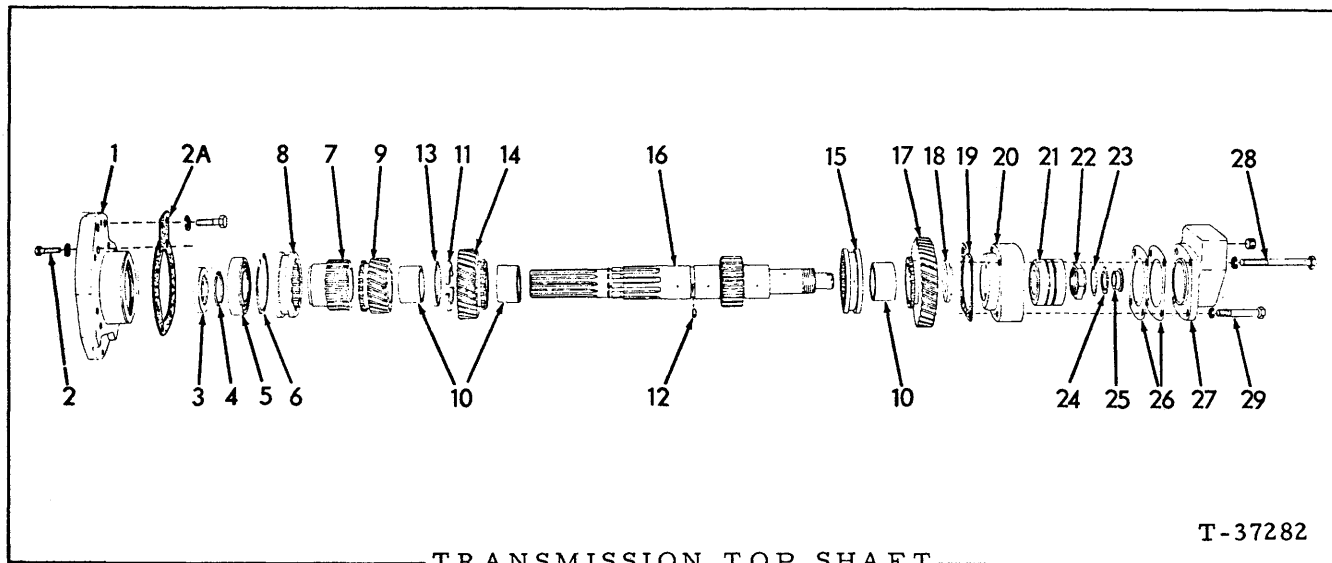
USAGE: See page 88

ITEM	PART NO.	QTY.	DESCRIPTION
-	70623609	1	FILTER ASSY., oil (Includes items 1 thru 13)
1	70623608	1	BOLT ASSY. (Includes check valve. Serviced only as a unit)
2	74049469	1	GASKET, cover bolt
3	74049471	1	COVER, filter body
4	74049470	1	GASKET, filter body cover
5	74048793	1	SPRING, cartridge retaining
6	74048794	1	WASHER, cartridge gasket
7	74041209	1	GASKET, cartridge
8	74372517	1	CARTRIDGE ASSY. (Includes items 2, 4 and 7)
9	74049472	1	BODY, oil filter
	70917426	1	PLUG, pipe, hex-hd., 1/8"NPT
10	74506165	1	CLAMP, mounting
11	74371974	1	BOLT, mounting clamp
12	74371973	1	LOCKWASHER
13	74371795	1	NUT

T-37279

ITEM	PART NO.	QTY.	DESCRIPTION
1	7 0669610	1	TRANSMISSION ASSY.
	7 0921556	12	CAPSCREW, 1/2"NC x 2"
	7 0904208	12	LOCKWASHER, 1/2"
			<u>NOTE:</u> Assembly listed above includes and SHIFTING FORKS
2	7 0669609	1	HOUSING ASSY., transmission (Includes
	7 0910014	3	PLUG, expansion, 1-1/2" diam.
2A	7 0065823	2	PIN, dowel, gear shift housing
3	7 0621787	1	GASKET, transmission to rear axle
4	7 0050748	1	BREATHER
	7 0901678	1	ELBOW, pipe, 90°, 3/8"NPT
	7 0901492	1	NIPPLE, pipe, 3/8"NPT x 2-1/2"
5	7 0634668	1	PLUG, oil drain (magnetic)
6	7 0070939	1	COVER, shifter shaft
7	-----	-	See BOTTOM SHAFT
8	-----	-	See REVERSE GEAR SHAFT
9	-----	-	See INTERMEDIATE SHAFT
10	-----	-	See TOP SHAFT
11	-----	-	See GEAR SHIFT FORKS AND LOCKS

NOTE: Assembly listed above includes GEARS, SHAFTS
and SHIFTING FORKS



T-37282

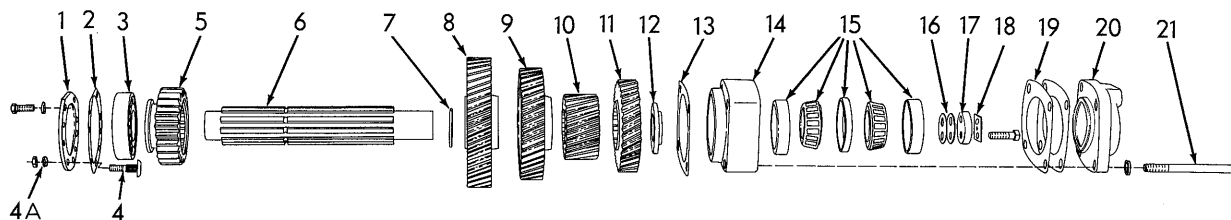
TRANSMISSION TOP SHAFT

ITEM	PART NO.	QTY.	DESCRIPTION
1	70099921	1	ADAPTER, transmission housing
	70920585	2	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	2	LOCKWASHER, 1/2"
2	70921076	4	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	4	LOCKWASHER, 3/8"
2A	70624785	1	GASKET, adapter to transmission housing
3	70633630	1	SEAL, oil, rear bearing
4	70050292	1	RING, snap, top shaft
5	70091375	1	BEARING, roller, rear
6	70099930	1	RING, snap, bearing retaining
7	70099948	1	HUB, driving, 1st and 4th gear shifting collar
8	70650054	1	COLLAR, shifting, 1st and 4th speeds
9	70650055	1	GEAR ASSY., 1st and 4th speeds (23 teeth)(Includes item 10)
10	70099946	3	BUSHING, gear
11	70099935	1	WASHER, thrust (2 halves)
12	70624027	1	PIN, thrust washer drive
13	70099929	1	RING, retaining, thrust washer
14	70649648	1	GEAR ASSY., 2nd and 5th speeds (29 teeth)(Includes item 10)
15	70649974	1	COLLAR, shifting, 2nd, 3rd, 5th and 6th speeds
16	70642340	1	SHAFT, top
17	70649973	1	GEAR ASSY., 3rd and 6th speeds (35 teeth)(Includes item 10)

(Continued)

TRANSMISSION TOP SHAFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
18	70629235	1	WASHER, thrust
19	70629227	1	GASKET, front bearing carrier
20	70649489	1	CARRIER, front bearing
21	70629236	1	BEARING, roller, front (Serviced only as a unit)
22	70629230	1	NUT, retaining
23	70621446	1	RING, snap
24	70621332	1	RING, oil sealing, outer
25	70621333	1	RING, oil sealing, inner
26	70629228	3	SHIM, front bearing retainer (.003" thick. Use as required)
	70629226	7	SHIM, front bearing retainer (.005" thick. Use as required)
27	70629234	1	RETAINER, front bearing
	70901666	1	PLUG, pipe, sq. -socket, 1"NPT
28	70639788	2	CAPSCREW, Nylok, 1/2"NC x 5"
29	70639789	2	CAPSCREW, Nylok, 1/2"NC x 3"
	70912441	4	LOCKWASHER, 1/2"



TRANSMISSION INTERMEDIATE SHAFT

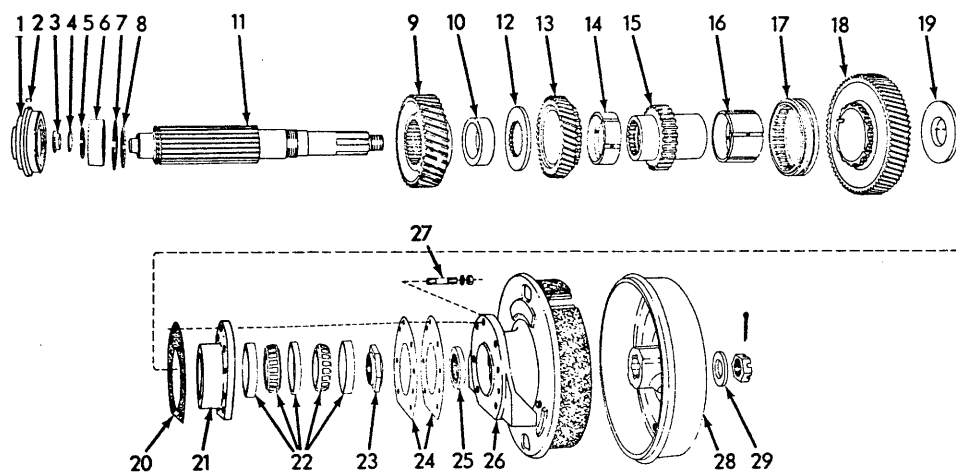
T-38103

ITEM	PART NO.	QTY.	DESCRIPTION
1	70629677	1	COVER, rear bearing
	70927212	2	CAPSCREW, Nylok, 3/8"NC x 1"
	70910287	2	LOCKWASHER, 3/8"
2	70604997	1	GASKET, rear bearing cover
3	70059095	1	BEARING, roller, rear
4	70059120	2	SCREW, retaining, rear bearing
4A	70625084	2	WASHER, sealing
	70911041	2	NUT, 3/8"NF
5	70050941	1	GEAR, shifting, reverse (25 teeth)
6	70629237	1	SHAFT, intermediate
7	70605003	1	RING, snap
8	70079718	1	GEAR (46 teeth)
9	70079719	1	GEAR (40 teeth)
10	70079720	1	GEAR (24 teeth)
11	70079721	1	GEAR (32 teeth)
12	70629235	1	WASHER, thrust
13	70629227	1	GASKET, front bearing carrier
14	70649490	1	CARRIER, front bearing
15	70629236	1	BEARING, roller, front (Serviced only as a unit)
16	70059788	6	SHIM, retaining washer (.005" thick. Use as required)
	70059789	4	SHIM, retaining washer (.028" thick. Use as required)

(Continued)

TRANSMISSION INTERMEDIATE SHAFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
17	70629229	1	WASHER, retaining, front bearing
	70923192	2	CAPSCREW, 7/16"NC x 1-1/2"
18	70099928	1	LOCK, capscrew
19	70629228	3	SHIM, front bearing retainer (.003" thick. Use as required)
	70629226	7	SHIM, front bearing retainer (.005" thick. Use as required)
20	70629233	1	RETAINER, front bearing
21	70639791	4	CAPSCREW, Nylok, 1/2"NC x 2-3/4"
	70912441	4	LOCKWASHER, 1/2"



TRANSMISSION BOTTOM SHAFT

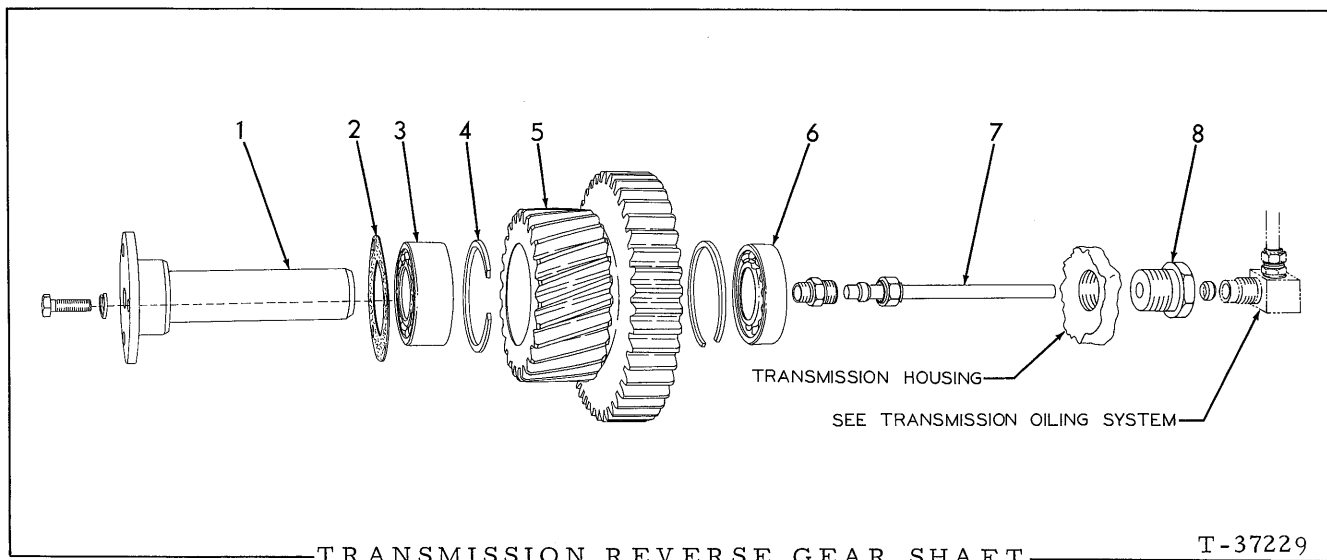
T-38102

ITEM	PART NO.	QTY.	DESCRIPTION
1	70657270	1	CARRIER, rear bearing
2	70098309	1	PIN, locating, bearing carrier
3	70621333	1	RING, oil sealing, inner
4	70621332	1	RING, oil sealing, outer
5	70621446	1	RING, snap, outer sealing ring
6	70098311	1	BEARING, roller, rear
7	70621776	1	RING, snap, bearing retaining
8	70088735	1	RING, snap, bottom shaft
9	70079723	1	GEAR, reverse (37 teeth)
10	70098865	1	SPACER, reverse gear
11	70647821	1	SHAFT, bottom
12	70679905	1	WASHER, gear retaining, rear
13	70649968	1	GEAR, high range speeds (41 teeth)
14	70623669	1	BUSHING, high range gear
15	70642342	1	HUB, range gears
16	70623882	1	BUSHING, low range gear
17	70649967	1	COLLAR, shifting
18	70649882	1	GEAR, low range speeds (66 teeth)
19	70098316	1	WASHER, gear retaining, front
20	70098321	1	GASKET, front bearing carrier

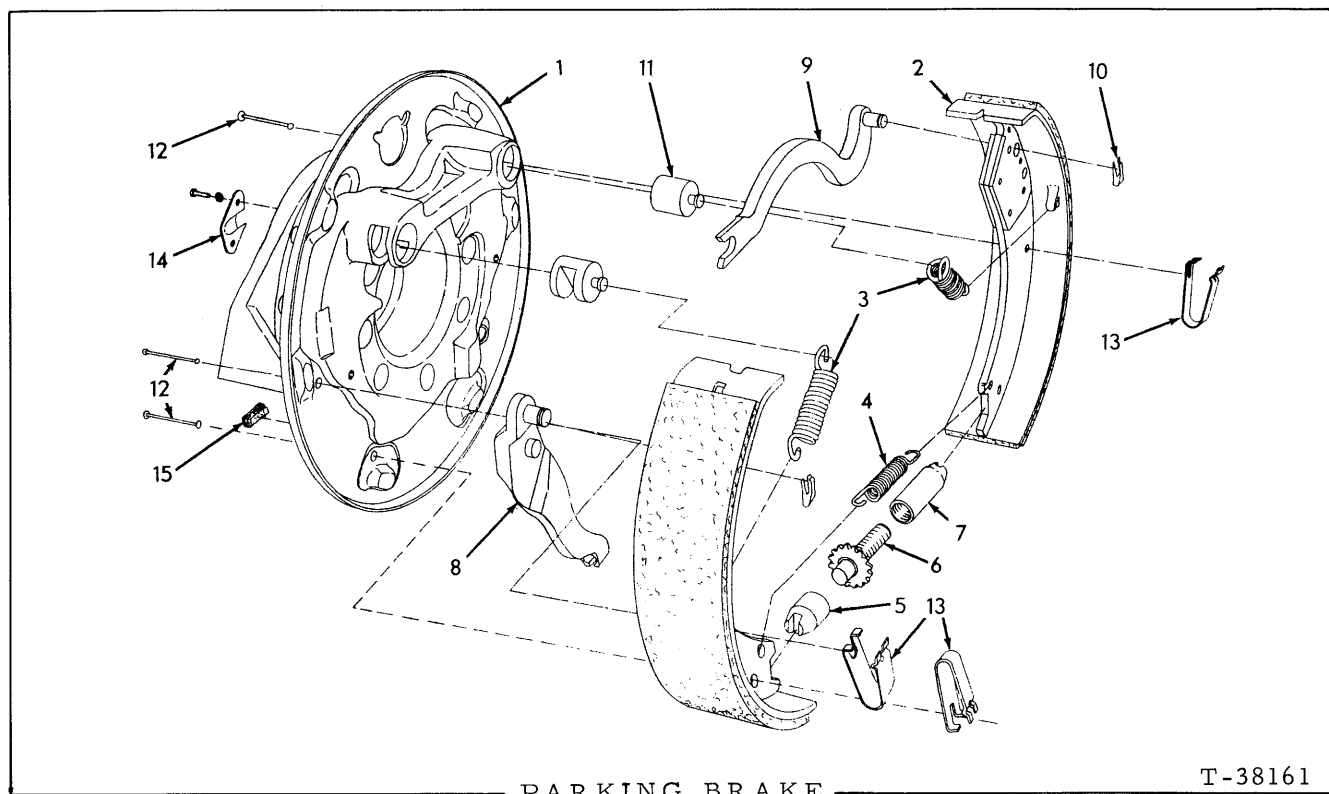
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TRANSMISSION BOTTOM SHAFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
21	70631128	1	CARRIER, front bearing
22	70098317	1	BEARING, roller, front (Serviced only as a unit)
23	70078864	1	NUT, retaining
24	70098319	3	SHIM, bearing adjustment (.003" thick)
	70098320	7	SHIM, bearing adjustment (.005" thick)
			} Use as required
25	70633630	1	SEAL, oil
26	-----	1	BRAKE ASSY., parking (See page 99)
27	70629334	8	STUD
	70904208	8	LOCKWASHER, 1/2"
	70911043	8	NUT, 1/2"NF
28	70647822	1	DRUM, parking brake (splined)
	70913798	1	NUT, jam, slotted, 1-1/4"NF
	70904381	1	PIN, cotter, 3/16" x 2-1/4"
29	70054889	1	WASHER, drum retaining



ITEM	PART NO.	QTY.	DESCRIPTION
1	70649552	1	SHAFT, reverse gear
	70927212	3	CAPSCREW, Nylok, 3/8"NC x 1"
	70910287	3	LOCKWASHER, 3/8"
2	70605905	1	GASKET, reverse gear shaft
3	70058967	1	BEARING, ball, reverse gear, rear
4	70605895	2	RING, snap, reverse gear
5	70079722	1	GEAR, reverse (25 and 40 teeth)
6	70058974	1	BEARING, ball, reverse gear, front
7	70647322	1	TUBE, oil
	70915368	1	CONNECTOR, Sealastic, 3/8" tube, 1/4"NPT male
	70915367	2	RING, Sealastic, 3/8" tube (Includes ferrule)
	70918325	1	NUT, Sealastic, 3/8" tube
8	70629654	1	PLUG, connecting, oil tube



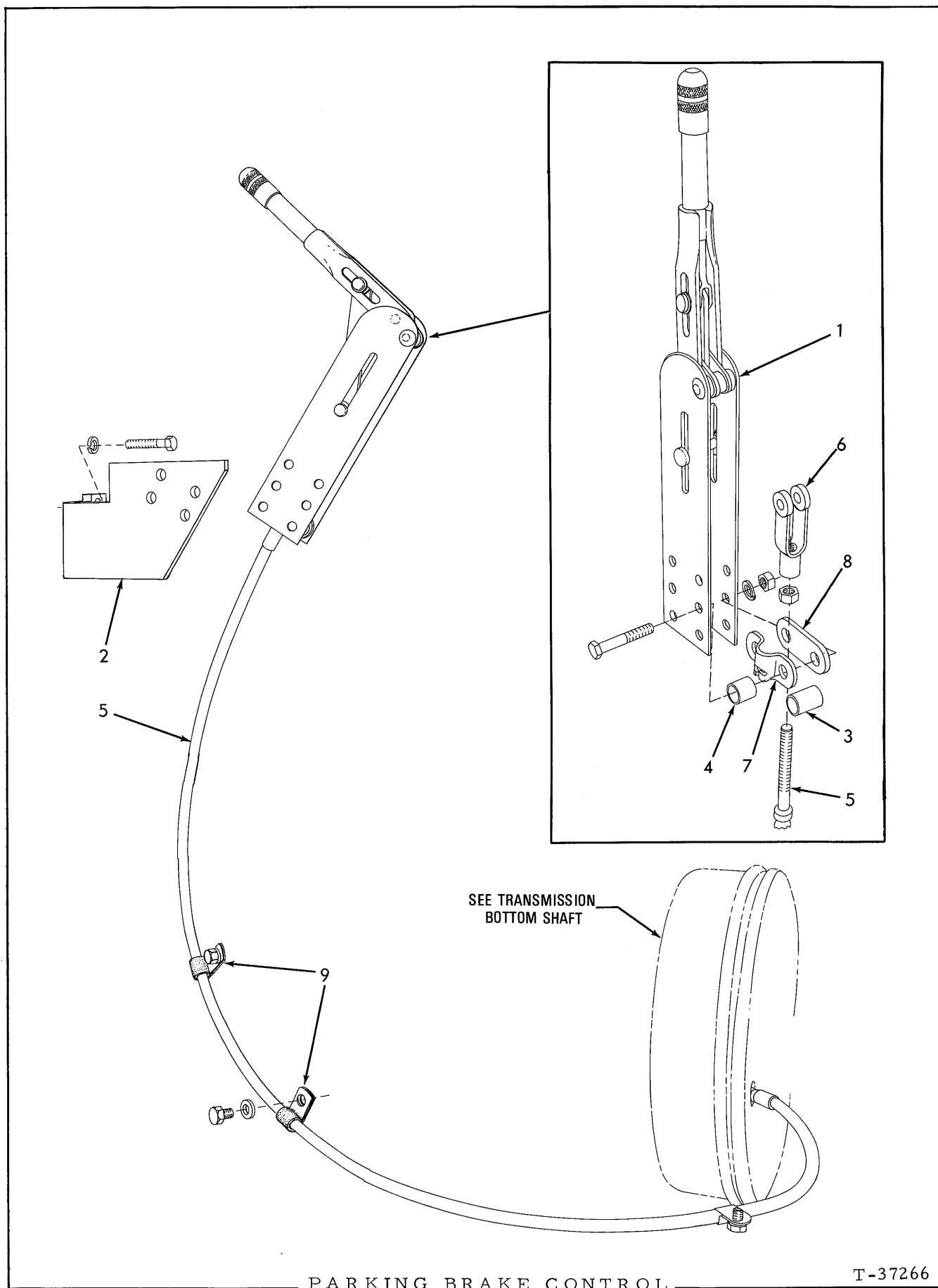
PARKING BRAKE

T-38161

USAGE: See page 96

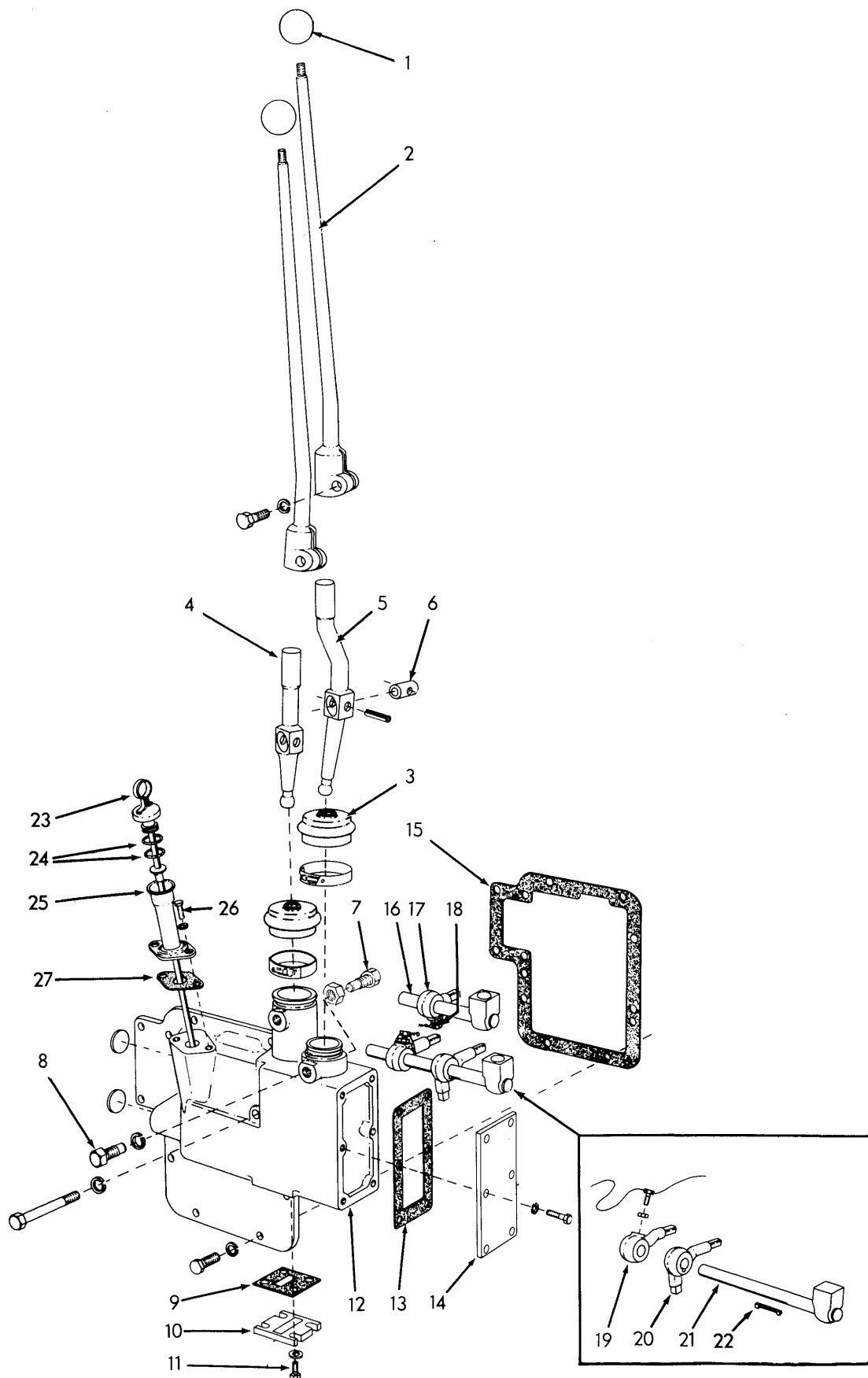
ITEM	PART NO.	QTY.	DESCRIPTION
-	70629335	1	BRAKE ASSY. (Includes items 1 thru 15)
1	-----	1	PLATE, back (Not serviced separately)
2	70639049	2	SHOE ASSY. (Includes bonded lining)
3	70639056	2	SPRING, shoe retracting, upper
4	70639057	1	SPRING, shoe retracting, lower
5	70639041	1	SOCKET, shoe adjustment screw
6	70639042	1	SCREW, shoe adjustment
7	70639043	1	NUT, shoe adjustment screw
8	70639047	1	LEVER ASSY., actuating (Includes pins)
9	70639045	1	LINK ASSY., shoe (Includes pins)
10	70639048	2	WASHER, spring
11	70639055	2	PIN, anchor
12	70639053	3	PIN, shoe retaining
13	70639052	3	CLIP spring, shoe retaining pin
14	70639051	1	BRACKET, cable retaining
	70914629	2	SCREW, thread-cutting, #14 x 1/2"
	70910285	2	LOCKWASHER, 1/4"
15	70639054	1	PLUG, adjustment screw hole

(Revised May 1977)



PARKING BRAKE CONTROL

ITEM	PART NO.	QTY.	DESCRIPTION
1	70083850	1	LEVER ASSY., operating
	70923124	4	CAPSCREW, 5/16"NC x 2"
	70910286	4	LOCKWASHER, 5/16"
	70911025	4	NUT, 5/16"NC
2	70679421	1	BRACKET, lever support
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70910287	2	LOCKWASHER, 3/8"
3	70083847	2	SPACER, operating lever (wide)
4	70083849	2	SPACER, operating lever (narrow)
5	70673412	1	CABLE ASSY., brake (Serviced only as a unit)
	70911048	1	NUT, jam, 3/8"NF
6	70621415	1	YOKE, adjusting
7	70083848	1	CLAMP, cable
8	70083851	1	SPACER, cable clamp
9	70094527	2	CLIP, cable supporting
	70922300	2	CAPSCREW, 3/8"NC x 3/4"
	70630753	2	WASHER, plain

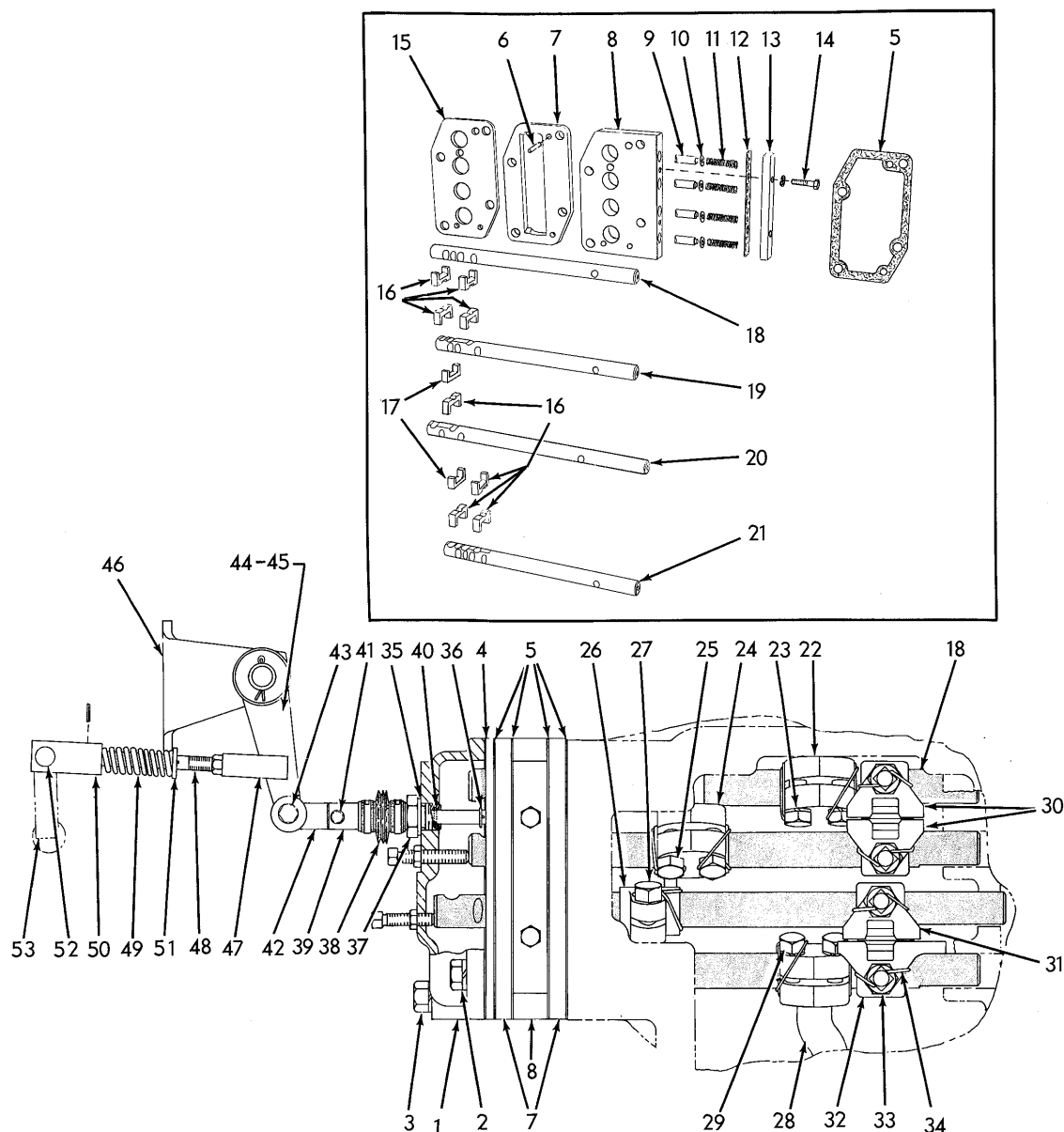


GEAR SHIFT CONTROLS

T-73601

GEAR SHIFT CONTROLS

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	2	KNOB, extension lever
2	70676164	1	LEVER, shift, high, low, reverse
	70676165	1	LEVER, shift, 1st, 2nd, 3rd
	70928342	2	CAPSCREW, 1/2"NC x 1-7/8"
	70912441	2	LOCKWASHER, 1/2"
3	70078742	2	BOOT, shift lever
	70916995	2	CLAMP, hose, 3" diam.
4	70629325	1	LEVER, speed selection shift
5	70629324	1	LEVER, high-low shift
6	70622080	2	SHAFT, shift lever pivot
	70915500	2	PIN, roll, 3/8" x 1-3/4"
7	70686329	2	SCREW, shift lever pivot
	70911036	2	NUT, jam, 5/8"NC
8	70621330	2	SCREW, shift lever pivot
	70912942	2	LOCKWASHER, 5/8"
9	70652901	1	GASKET, locating block
10	70652903	1	BLOCK, locating, locking arm
11	70927173	4	CAPSCREW, 3/8"NC x 1-1/8"
	70929156	4	WASHER, plain, SAE std., 3/8"
12	70661814	1	HOUSING, gear shift
	70910006	2	PLUG, expansion, 1-1/4" diam.
	70920574	10	CAPSCREW, 1/2"NC x 1-3/8"
	70928686	1	CAPSCREW, 1/2"NC x 4-1/4"
	70912441	11	LOCKWASHER, 1/2"
13	70629213	1	GASKET, cover
14	70629214	1	COVER, housing
	70927212	6	CAPSCREW, Nylok, 3/8"NC x 1"
	70910287	6	LOCKWASHER, 3/8"
15	70652896	1	GASKET, housing
16	70629210	1	SHAFT, operating, upper selector arm
17	70647716	1	ARM, selector, upper shaft
18	70605028	2	SETSCREW, selector arms
	70913830	2	NUT, jam, 1/2"NF
	70023633	2	WIRE, locking, 1/16" x 12"
19	70652898	1	ARM, selector, lower shaft
20	70652908	1	ARM, locking, lower selector shaft
21	70652949	1	SHAFT, operating, lower selector arm
22	70652902	1	KEY, locking arm
23	70661818	1	DIPSTICK ASSY., transmission oil level (Includes item 27)
24	70923574	2	O-RING, oil level dipstick
25	70661816	1	TUBE, oil level dipstick
26	70922262	2	CAPSCREW, 3/8"NC x 7/8"
	70910287	2	LOCKWASHER, 3/8"
27	70664946	1	GASKET, dipstick tube



GEAR SHIFT FORKS AND LOCKS

T-38112

ITEM	PART NO.	QTY.	DESCRIPTION
1	70622481	1	COVER, shifting shafts
	70902208	1	SETSCREW, sq-hd., oval point, 3/8"NC x 2"
	70902206	1	SETSCREW, sq-hd., oval point, 3/8"NC x 1-1/4"
	70911034	2	NUT, jam, 3/8"NC
2	70921359	2	CAPSCREW, 1/2"NC x 3-1/2"
3	70639792	2	CAPSCREW, Nylok, 1/2"NC x 4-1/2"
	70912441	4	LOCKWASHER, 1/2"
4	70622482	1	GASKET, cover
5	70622476	4	GASKET, shaft locking plates
6	70647703	2	PIN, dowel, shaft locking plates (2-3/4" long)

(Continued)

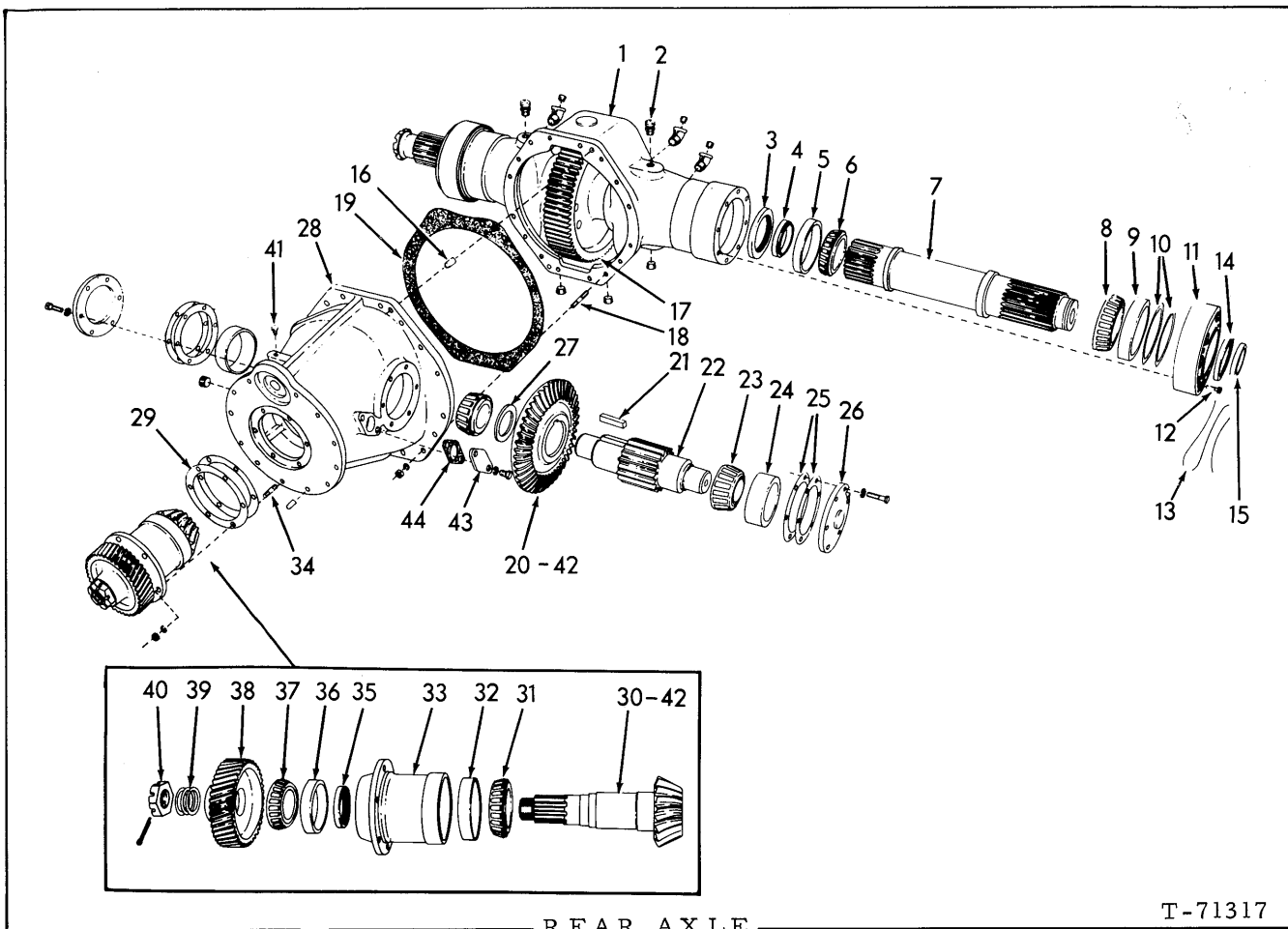
GEAR SHIFT FORKS AND LOCKS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	70642676	2	PLATE, shaft locking
8	70642677	1	PLATE, shifting shaft plunger
9	70641356	4	PLUNGER, shifting shaft
10	70650376	4	WASHER, shifting shaft plunger spring
11	70641837	4	SPRING, shifting shaft plunger
12	70622479	1	GASKET, plunger retaining bar
13	70622478	1	BAR, plunger retaining
14	70921076	2	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	2	LOCKWASHER, 3/8"
15	70642678	1	PLATE, shaft guiding
16	70638953	8	DETENT, shifting shaft interlock
17	70638954	2	SPACER, interlock detent
18	70642701	1	SHAFT, shifting fork, upper
19	70629282	1	SHAFT, shifting fork, intermediate upper
20	70652897	1	SHAFT, shifting fork, intermediate lower
21	70629284	1	SHAFT, shifting fork, lower
22	70621790	1	FORK, upper shifting shaft
23	70922726	2	CAPSCREW, drilled-hd., 1/2"NF x 1-1/2"
	70023633	2	WIRE, locking, 1/16" x 12"
24	70099918	1	FORK, intermediate upper shifting shaft
25	70922726	2	CAPSCREW, drilled-hd., 1/2"NF x 1-1/2"
	70023633	2	WIRE, locking, 1/16" x 12"
26	70621788	1	FORK, intermediate lower shifting shaft
27	70927353	1	CAPSCREW, drilled-hd., 1/2"NF x 1-1/4"
	70023633	1	WIRE, locking, 1/16" x 12"
28	70621789	1	FORK, lower shifting shaft
29	70922726	2	CAPSCREW, drilled-hd., 1/2"NF x 1-1/2"
	70023633	2	WIRE, locking, 1/16" x 12"
30	70629218	2	GUIDE, shifter, upper and intermediate upper shafts
31	70652899	1	GUIDE, shifter, intermediate lower shaft
32	70652907	1	GUIDE, shifter, lower shaft
33	70633372	4	SETSCREW, shifter guides
	70913830	4	NUT, jam, 1/2"NF
34	70023633	4	WIRE, locking, 1/16" x 12"
35	70050267	1	WASHER, plunger sleeve (copper)
36	70078402	1	WASHER, shifting lock plunger

(Continued)

GEAR SHIFT FORKS AND LOCKS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
37	70635081	1	SLEEVE, shifting lock plunger
38	70635082	1	BOOT, locking plunger
	70916897	2	CLAMP, hose, 1" diam.
39	70642478	1	PLUNGER, shifting lock
	70916146	1	PIN, spring, 3/32" x 1/2"
40	70923560	1	O-RING, shifting lock plunger
41	70627451	1	PIN, shifting lock plunger
	70900801	1	PIN, cotter, 3/32" x 3/4"
42	70678097	1	LINK, locking plunger
	70929247	1	WASHER, plain
	70900801	1	PIN, cotter, 3/32" x 3/4"
43	70650177	1	PIN, connecting, link to lever
	70927225	1	CAPSCREW, 3/8"NC x 1-5/8"
	70910287	1	LOCKWASHER, 3/8"
44	70644132	1	LEVER ASSY., plunger rod operating (Includes item 45)
	70929188	1	WASHER, plain
	70910302	1	PIN, cotter, 5/32" x 1-1/4"
45	70644131	1	BUSHING, plunger rod operating lever
46	70649857	1	BRACKET, rod operating lever
47	70641986	1	JOINT, ball and socket
	70910287	1	LOCKWASHER, 3/8"
	70911041	1	NUT, 3/8"NF
48	70650152	1	ROD, connecting
	70911041	1	NUT, 3/8"NF
	70916168	2	PIN, spring, 1/8" x 3/4"
49	70641989	1	SPRING, connecting rod
50	70641358	1	YOKE, connecting rod
51	70630753	1	WASHER, connecting rod
52	70078810	1	PIN, joint adjusting yoke
	70900801	1	PIN, cotter, 3/32" x 3/4"
53	-----	1	SHAFT, operating (See ENGINE CLUTCH CONTROL)



ITEM	PART NO.	QTY.	DESCRIPTION
1	70648708	1	HOUSING, rear axle
	70911076	3	ELBOW, street, 45°, 1"NPT
	70901666	6	PLUG, pipe, ctsk-hd., 1"NPT
2	70634161	2	VENT, air, rear axle housing
3	70634519	2	SEAL, oil inner
4	70634441	2	SLEEVE, wear, inner oil seal
5	70605336	2	CUP, inner bearing
6	70605337	2	CONE ASSY., inner bearing
7	70653847	2	AXLE, rear (grooved end)
8	70634527	2	CONE ASSY., outer bearing
9	70634513	2	CUP, outer bearing
10	70638693	8	SHIM, adjusting, outer bearing (.003" thick)
	70634507	4	SHIM, adjusting, outer bearing (.005" thick)
	70634508	10	SHIM, adjusting, outer bearing (.010" thick)

Use as required

(Continued)

REAR AXLE (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
11	70653825	2	CAP, outer bearing
12	70928684	16	CAPSCREW, bearing cover, drilled-hd., 1/2"NC x 1-3/8"
13	70052519	2	WIRE, locking, 1/16" x 39"
14	70634519	2	SEAL, oil, outer
15	70634440	2	SLEEVE, wear, outer oil seal
16	70910179	3	PIN, dowel, cross shaft housing (5/8" x 1-1/2")
17	70095581	1	GEAR (72 teeth)
18	70605416	16	STUD, cross shaft housing (5/8" diam.)
	70912942	16	LOCKWASHER, 5/8"
	70911029	16	NUT, 5/8"NC
19	{ 70605106	1	GASKET, cross shaft housing (.015" thick)
	{ 70643749	1	GASKET, cross shaft housing (.020" thick)
			} Use as required
20	-----	1	GEAR, bevel, cross shaft (45 teeth)(Order item 42)
21	70604982	1	KEY, cross shaft bevel gear (1/2" x 3/4" x 2-11/16")
22	70649010	1	SHAFT AND PINION, cross (17 teeth)
23	70605335	2	CONE ASSY., cross shaft bearing
24	70605334	2	CUP, cross shaft bearing
25	{ 70673189	3	SHIM, adjusting cross shaft bearing (.003" thick)
	{ 70605085	12	SHIM, adjusting, cross shaft bearing (.005" thick)
	{ 70065042	4	SHIM, adjusting, cross shaft bearing (.015" thick)
			} Use as required
26	70066751	2	COVER, cross shaft bearing
	70920585	12	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	12	LOCKWASHER, 1/2"
27	70066673	1	WASHER, cross shaft bevel gear
28	70666582	1	HOUSING, cross shaft (For first replacement on graders prior to unit #08078 also order items 43 and 44)
	70901666	1	PLUG, pipe, ctsk-hd., 1"NPT
29	{ 70673190	6	SHIM, adjusting, bevel pinion mesh (.003" thick)
	{ 70200078	4	SHIM, adjusting, bevel pinion mesh (.005" thick)
	{ 70200314	2	SHIM, adjusting, bevel pinion mesh (.015" thick)
			} Use as required
30	-----	1	PINION AND SHAFT (18 teeth)(Order item 42)
31	70648396	1	CONE ASSY., bevel pinion shaft rear bearing
32	70182440	1	CUP, bevel pinion shaft rear bearing

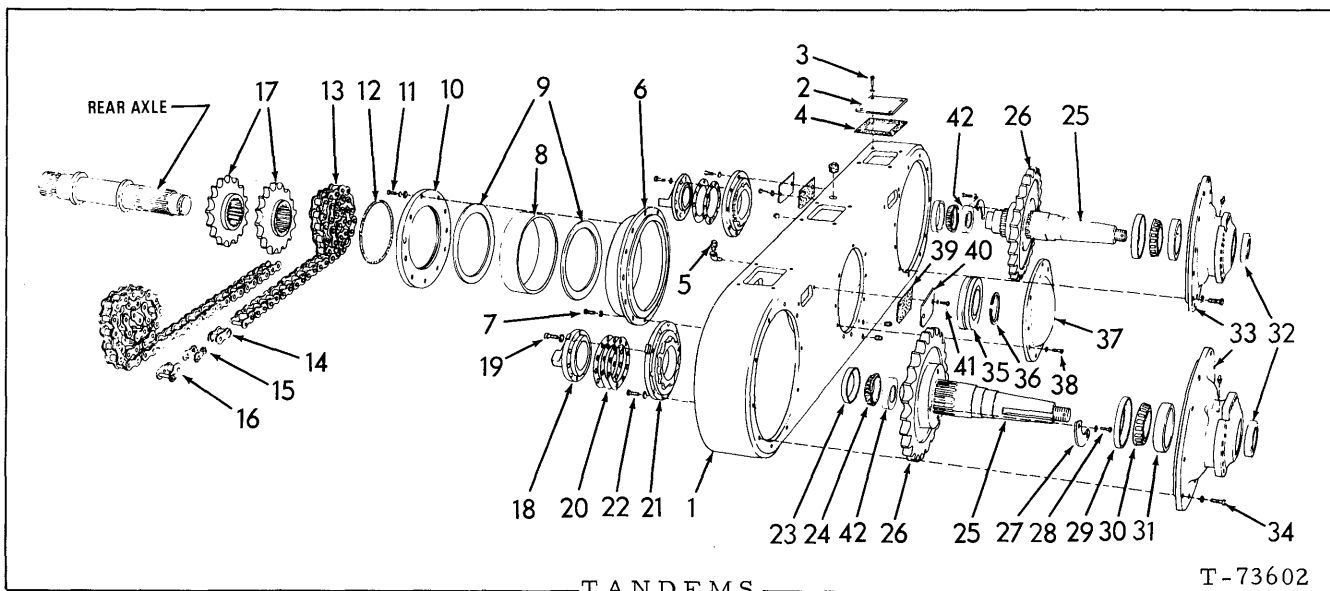
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(Revised March 1975)

R E A R A X L E (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION	
33	70648395	1	CARRIER ASSY., bevel pinion and shaft (Includes items 31, 32, 36 and 37)	
34	70061842	6	STUD	
	70904208	6	LOCKWASHER, 1/2"	
	70911043	6	NUT, 1/2"NF	
35	70638607	1	SEAL, oil, bevel pinion shaft	
36	70087026	1	CUP, bevel pinion shaft front bearing	
37	70087027	1	CONE ASSY., bevel pinion shaft front bearing	
38	70080500	1	GEAR, bevel pinion shaft (41 teeth)	
39	70605494	8	SHIM, adjusting, pinion shaft bearings (.002" thick)	} Use as required
	70605493	6	SHIM, adjusting, pinion shaft bearings (.005" thick)	
	70605492	5	SHIM, adjusting, pinion shaft bearings (.020" thick)	
40	70605477	1	NUT, bevel pinion shaft (hex, slotted)	
	70901345	1	PIN, cotter, 1/4" x 2-1/2"	
41	70605132	1	VENT, air, cross shaft housing	
42	70653982	1	GEAR SET, matched (Items 20 and 30)	
43	74337741	1	COVER PLATE	} Effective with Grader unit #08078
	70910287	2	LOCKWASHER, 3/8"	
	70922763	2	CAPSCREW, 3/8"NF x 1"	
44	70621516	1	GASKET, plate	

(Revised March 1975)



1	70673414	2	CASE, tandem (Graders prior to unit #09003)
	70699283	2	CASE, tandem (Grader unit #09003 and up)
	70912768	2	PLUG, pipe, 1"NPT (oil filling hole)
	70912725	4	PLUG, pipe, 1/2"NPT (oil drain and checking)
	70901651	2	PLUG, pipe, 1/8"NPT
2	70604481	6	COVER, case access holes (top)
3	70922763	24	CAPSCREW, 3/8"NC x 1"
	70910287	24	LOCKWASHER, 3/8"
4	70604482	6	GASKET, case cover
5	70634161	2	VENT, air tandem case
	70907059	2	ELBOW, street, 90°, 1/8"NPT
6	70689307	2	HUB, tandem case
7	70920574	24	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	24	LOCKWASHER, 1/2"
8	70620170	2	BUSHING, case hub
9	70653828	4	WASHER, thrust
10	70653837	2	RING, tandem retaining
11	70920574	16	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	16	LOCKWASHER, 1/2"
	70910244	4	WASHER, plain, SAE std., 1/2"
12	70653846	2	O-RING, tandem sealing
13	70620167	4	CHAIN, driving (51 links, 2" pitch)(Includes items 14 thru 16)
14	70605578	-	LINK, roller, driving chain
15	70605508	-	LINK, connecting, driving chain (Includes side bar and cotter pins)
16	70605507	4	LINK, offset, driving chain (Includes connecting pin and cotter pins)
17	70653827	4	SPROCKET, driving (16 teeth)

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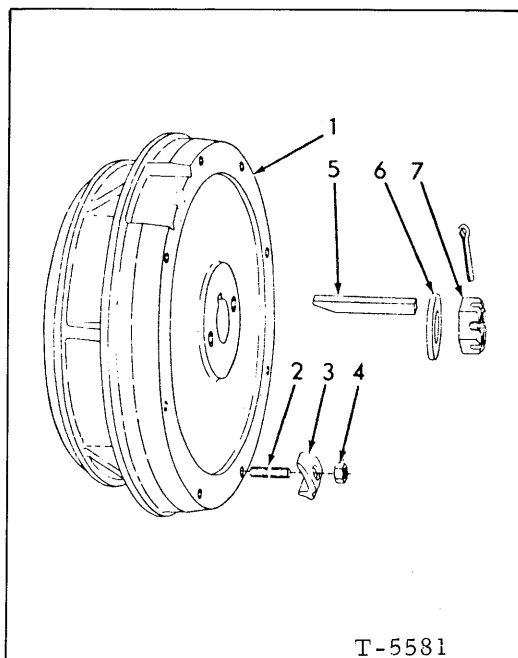
TANDEMS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
18	70684819	4	STOP, tandem
19	70920574	40	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	40	LOCKWASHER, 1/2"
20	70684815	8	SHIM, adjusting, wheel shaft bearings (.003" thick)
	70684814	4	SHIM, adjusting, wheel shaft bearings (.005" thick)
	70684813	76	SHIM, adjusting, wheel shaft bearings (.010" thick)
			} Use as required
21	70679719	4	ECCENTRIC, tandem wheel shaft, inner
22	70920574	40	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	40	LOCKWASHER, 1/2"
23	70680631	4	CUP
24	70684816	4	CONE ASSY.
25	70684820	4	SHAFT, wheel
26	70653822	4	SPROCKET, driving, wheel shaft
27	70653821	8	PLATE, sprocket retaining
28	70922763	16	CAPSCREW, 3/8"NC x 1"
	70910287	16	LOCKWASHER, 3/8"
29	70653820	4	SEAL, oil, wheel shaft, inner
30	70051997	4	CONE ASSY.
31	70042877	4	CUP
32	70631119	4	SEAL, oil, wheel shaft, outer
33	70684818	4	ECCENTRIC, tandem wheel shaft, outer
	70914465	4	FITTING, lubricating, straight, 1/8"NPT
34	70920574	40	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	40	LOCKWASHER, 1/2"
35	70634395	2	BEARING, roller, rear axle
36	70183067	2	RING, snap, rear axle
37	70654006	2	CARRIER, rear axle bearing
38	70920582	24	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	24	LOCKWASHER, 1/2"
39	70634875	8	GASKET, chain access hole cover
40	70634876	8	GASKET, chain access holes (side)
41	70922763	16	CAPSCREW, 3/8"NC x 1"
	70910287	16	LOCKWASHER, 3/8"
42	70680615	4	SEAL

REAR WHEELS

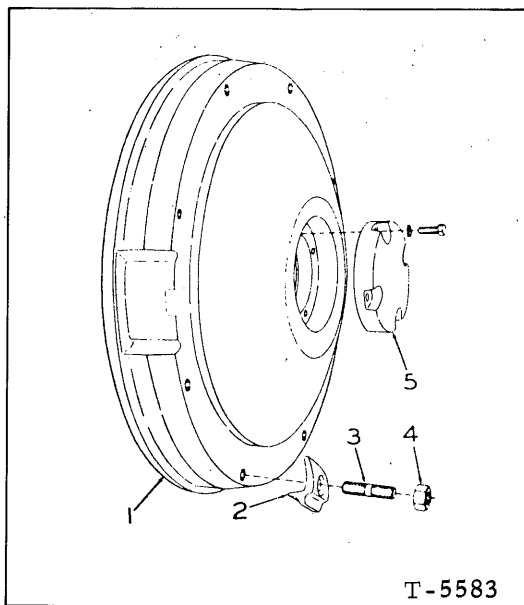
ITEM PART NO. QTY. DESCRIPTION

1	70676071	4	WHEEL, tandem
2	70603488	32	STUD, rim clamp (5/8" diam.)
3	70603489	32	CLAMP, wheel rim
4	70601405	32	NUT, rim clamp (5/8"NC)
5	70066986	4	KEY, tandem wheels
6	70605918	4	WASHER, wheel retaining
7	70060670	4	NUT, wheel retaining (1-3/4"NF)
	70901348	4	PIN, cotter, 3/8" x 2-1/2"



FRONT WHEELS

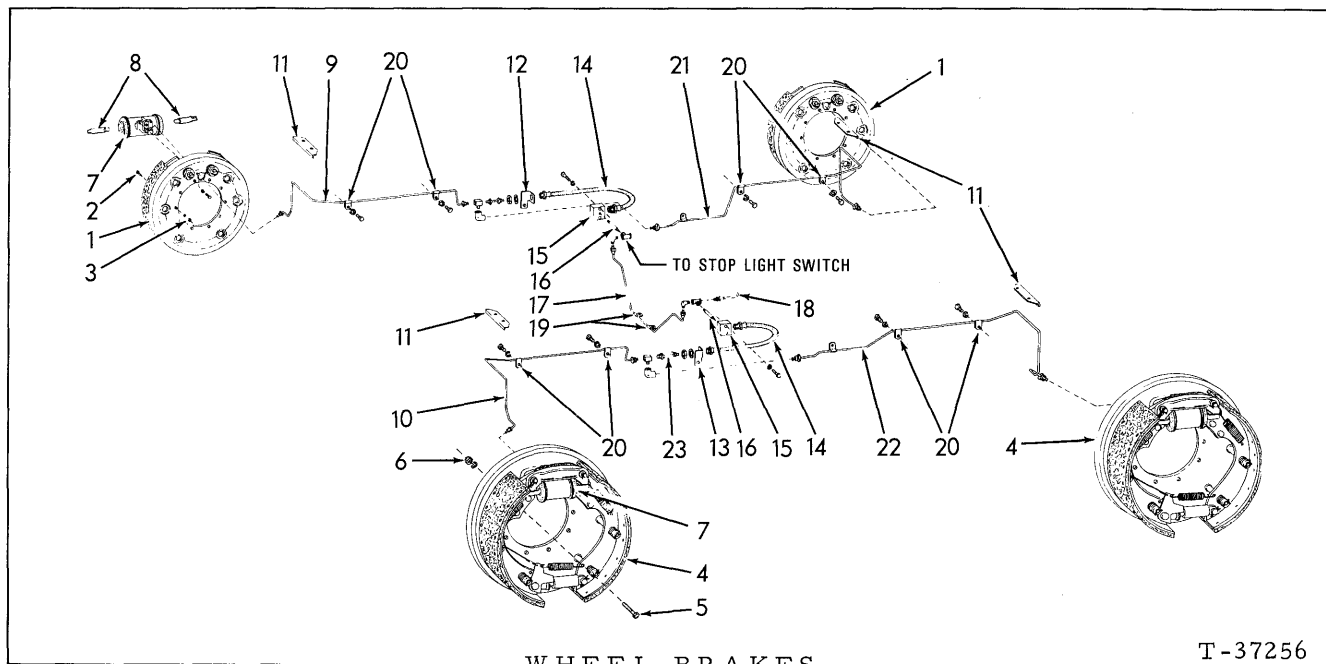
1	70634591	2	WHEEL, front
2	70603489	16	CLAMP, front wheel rim
3	70603488	16	STUD, rim clamp (5/8" diam.)
4	70601405	16	NUT, rim clamp (5/8"NC)
5	70634593	2	CAP, front wheel hub
	70921076	8	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	8	LOCKWASHER, 3/8"



(Revised May 1977)

TIRES, TUBES AND RIMS

ITEM	PART :NO.	QTY.	DESCRIPTION
1	-----	6	RIM, 8.00-24" (Goodyear No. 8024 TGD or Firestone No. 88T5 ^O -1 (Includes O-ring)
	-----	6	RIM, 10.00-24" (Goodyear No. 1024 TGD or Firestone No. 161T5 ^O -1)(Includes O-ring)
	70644375	6	Rim, 14.00-25" (Firestone No. 51-45143-00) (Includes O-ring)
2	-----	6	TIRE, 13.00-24" 10 plt rating, tube type
	-----	6	TIRE, 13.00-24" 12 ply rating, tube type
	-----	6	TIRE, 13.00-24", 8 to 12 ply rating, tubeless
	-----	6	TIRE, 14.00-24", 10 to 12 ply rating, tube type
	-----	6	TIRE, 14.00-24, 10 to 12 ply rating, tubeless
	-----	6	TIRE, 17.5-25", 12 ply rating, tubeless
3	-----	6	TUBE, 13.00/14.00-24" with TR-220A or TR-218A valve
4	-----	6	VALVE, rim, TR-618



ITEM PART NO. QTY. DESCRIPTION

NOTE: Each Brake Assy. listed below includes cylinder attaching capscrews

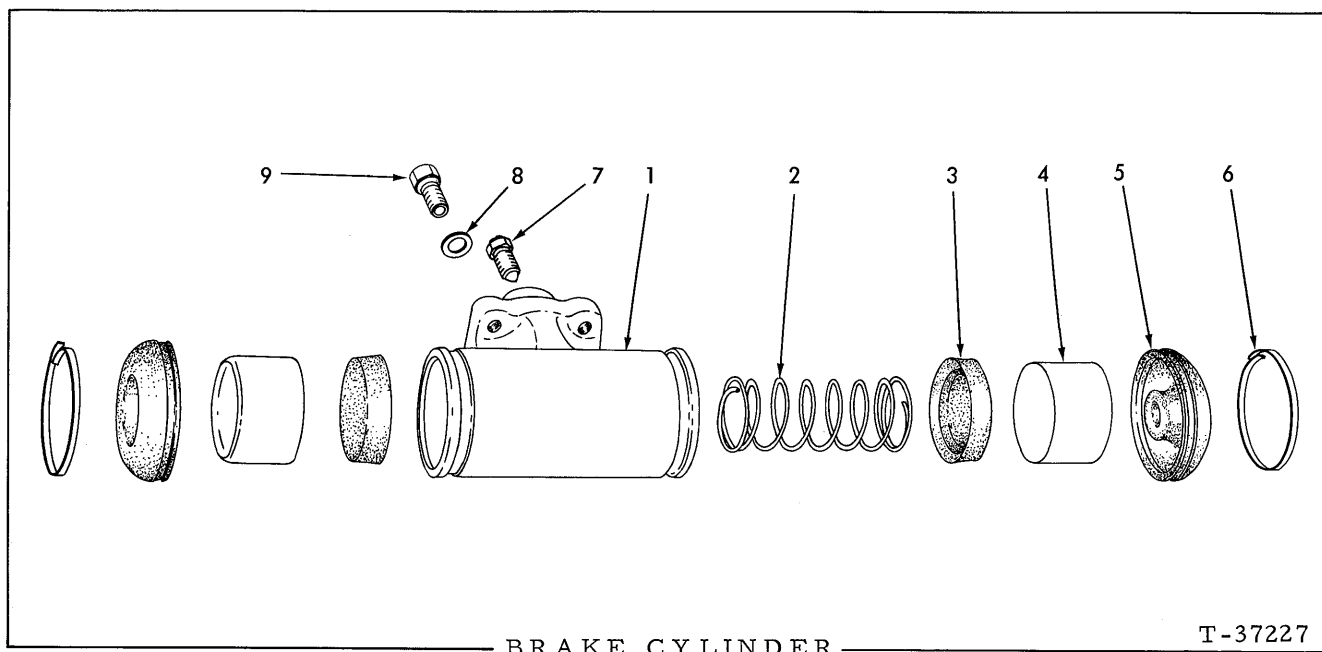
1	70665967	2	BRAKE ASSY., left wheel (See page 118 for parts)
	70929660	2	CAPSCREW, 7/16"NF x 3/4" } hole plugging
	70914678	2	LOCKWASHER, 7/16" }
2	70643523	34	STUD, 7/16"NF x 2-5/16"
3	70045010	34	NUT, high, 7/16"NF
4	70665968	2	BRAKE ASSY., right wheel (See page 118 for parts)
	70929660	2	CAPSCREW, 7/16"NF x 3/4" } hole plugging
	70914678	2	LOCKWASHER, 7/16" }
5	70643523	34	STUD, 7/16"NF x 2-5/16"
6	70045010	34	NUT, high, 7/16"NF
7	-----	4	CYLINDER ASSY. (See page 116)
	70922925	8	CAPSCREW, 5/16"NC x 3/4"
	70910286	8	LOCKWASHER, 5/16"
8	70668240	8	LINK, wheel cylinder
9	70670941	1	TUBE ASSY., left rear brake (Includes 2 nuts)
10	70670942	1	TUBE ASSY., right rear brake (Includes 2 nuts)
11	70604769	4	SHIELD, brake tubes
12	70639669	1	BRACKET, hose supporting, left
13	70639670	1	BRACKET, hose supporting, right
14	70600675	2	HOSE (17-1/4" long)
	70910543	2	LOCKWASHER, external teeth, 5/8"
	70911049	2	NUT, jam, 5/8"NF

(Continued)

WHEEL BRAKES (Continued)

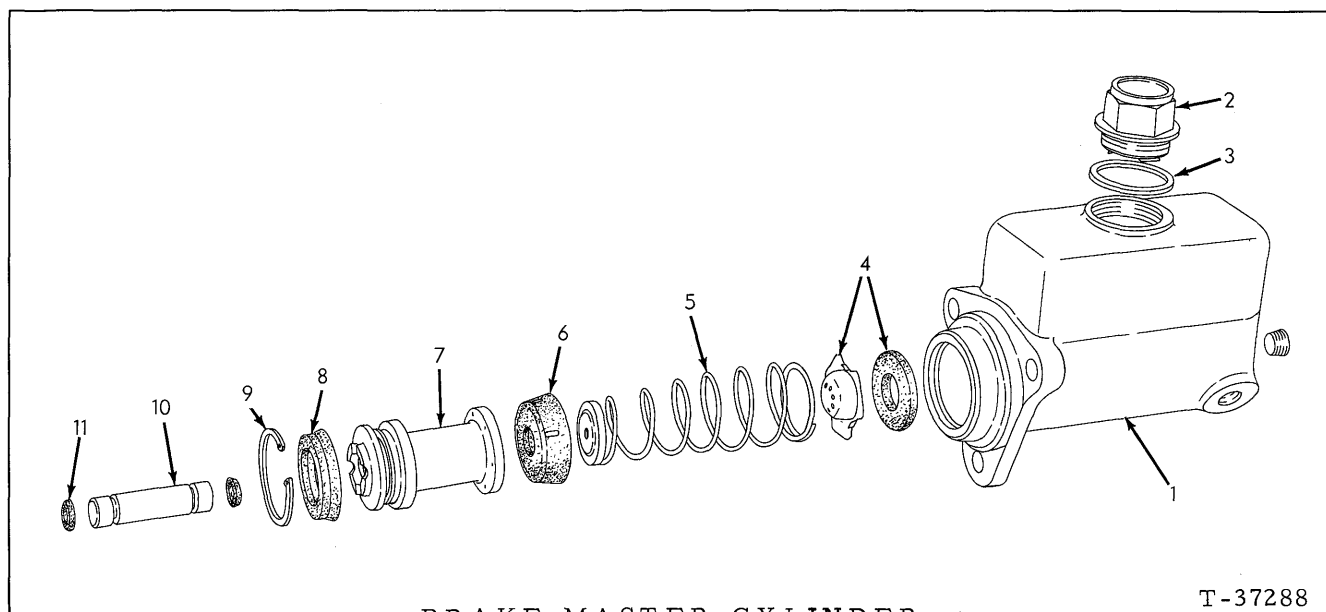
ITEM	PART NO.	QTY.	DESCRIPTION
15	70634515	2	BLOCK, hose connecting
	70922850	4	CAPSCREW, 12 pt. 3/8" NC x 2" } Graders prior to unit #09015
	70698415	2	BLOCK (Requires welding to install)(Grader unit #09015 and up)
16	70062035	2	NIPPLE, hose connecting (pipe, 1/4"NPT x 3-3/4")
17	70686799	1	TUBE ASSY., master cylinder tube to left brake (Includes 2 nuts)
	70910161	2	ELBOW, flare type, 1/4" tube, 1/8"NPT male
	70901702	2	TEE, pipe, 1/8"NPT
18	-----	-	TUBE ASSY. (See BRAKE CONTROL)
20	70640677	10	CLIP, brake tubes (13/32" bolt-hole)
	70922300	8	Capscrew, 3/8"NC x 3/4"
	70630753	8	WASHER, plain
21	70670939	1	TUBE ASSY., left front brake (Includes 2 nuts)
22	70670940	1	TUBE ASSY., right front brake (Includes 2 nuts)
23	70068479	2	TUBE ASSY., rear brake connecting (Each includes 2 NUTS 70913536)
	70913536	4	NUT, inverted flare, 1/4" tube
	70915841	2	TEE, inverted flare, 1/4" tube, 1/8"NPT male
	70915842	2	ELBOW, inverted flare, 1/4" tube, 1/8"NPT female

(Revised May 1977)



USAGE: See page 114

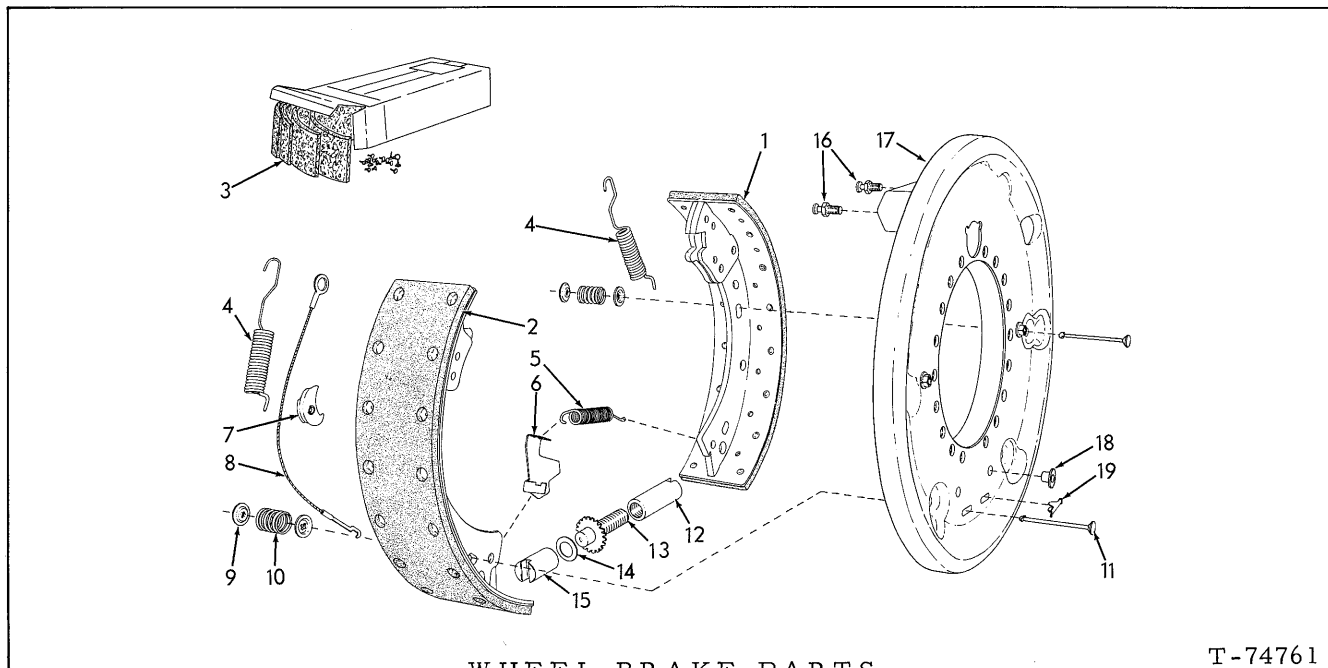
ITEM	PART NO.	QTY.	DESCRIPTION
-	70665970	4	CYLINDER ASSY., brake operating (Includes items 1 thru 9)
<u>NOTE:</u> Quantities indicated below are for one (1) assembly only			
1	-----	1	CASTING, cylinder (Not serviced separately)
2	70059226	1	SPRING, return
3	70059234	2	CUP, piston
4	70059213	2	PISTON
5	70067502	2	BOOT
6	70067501	2	STRAP, boot retaining
7	70638413	1	SCREW, bleeder
8	70605450	1	GASKET, connection fitting
9	70648091	1	FITTING, line connection



USAGE: See page 120

ITEM	PART NO.	QTY.	DESCRIPTION
-	70624203	1	MASTER CYLINDER ASSY. (Includes items 1 thru 11)
1	-----	1	TANK (Not serviced separately)
	70910231	1	PLUG, pipe, hex-socket, 1/8"NPT
2	70074349	1	CAP ASSY., filler (Serviced only as a unit)
3	70076486	1	☐ GASKET, filler cap
4	70076489	1	☐ VALVE KIT (Consists of 1 valve and 1 seat)
5	70638410	1	SPRING ASSY., piston return (Includes end washer)
6	70638411	1	☐ CUP, operating piston, inner
7	70638407	1	☐ PISTON ASSY., operating (Includes item 8)
8	70638441	1	CUP, operating piston, outer
9	70638405	1	RING, snap, piston retaining
10	70638404	1	☐ PLUNGER ASSY., pressure sensing (Includes item 11)
11	70638440	2	PACKING, pressure sensing plunger
12	70643020	1	REPAIR KIT (Consists of items marked ☐ above)(Not illustrated)

☐ Indicates components of item 12



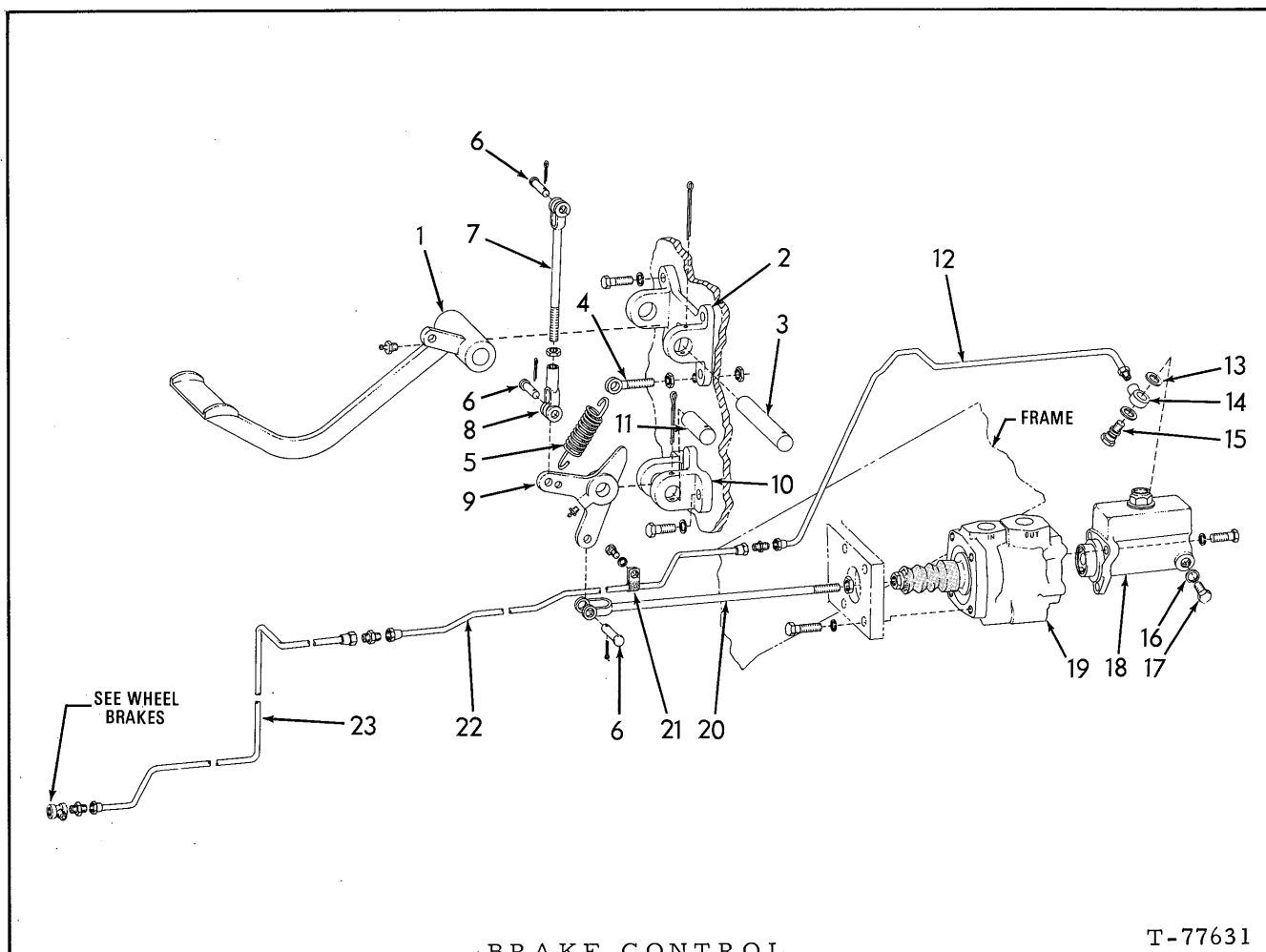
*70665967 BRAKE ASSEMBLY, left wheel } See page 114
 **70665968 BRAKE ASSEMBLY, right wheel }

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
1	70661363	1	1	SHOE ASSY., front (Includes LINING)
2	70661364	1	1	SHOE ASSY., rear (Includes LINING)
3	70666353	1	1	LINING KIT (Consists of 4 linings and 70 rivets. For two (2) wheels)
4	70661365	2	2	SPRING, shoe retracting, upper
5	70661362	1	1	SPRING, shoe retracting, lower
6	70661367	1	-	LEVER, shoe adjustment
	70661368	-	1	LEVER, shoe adjustment
7	70661366	1	1	GUIDE, shoe adjustment cable
8	70661357	1	1	CABLE ASSY., shoe adjustment (Includes terminals)
9	70661361	8	8	CUP, shoe retaining pin spring
10	70644849	4	4	SPRING, shoe retaining pin
11	70661360	4	4	PIN, shoe retaining
12	70666207	1	-	NUT, pivot, shoe adjustment (right hand thread)
	70666208	-	1	NUT, pivot, shoe adjustment (left hand thread)

(Continued)

WHEEL BRAKE PARTS (Continued)

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
13	70666205	1	-	SCREW, shoe adjustment (right hand thread)
	70666206	-	1	SCREW, shoe adjustment (left hand thread)
14	70661370	1	1	WASHER, socket adjustment screw
15	70666068	1	1	SOCKET, shoe adjustment screw
16	70661359	2	2	PIN, spring anchor
17	70661369	1	1	PLATE ASSY., back (Includes torque spider. Serviced only as a unit)
18	70644813	2	2	COVER, back plate (rubber plug)
19	70661358	2	2	COVER, shoe adjustment hole (steel)

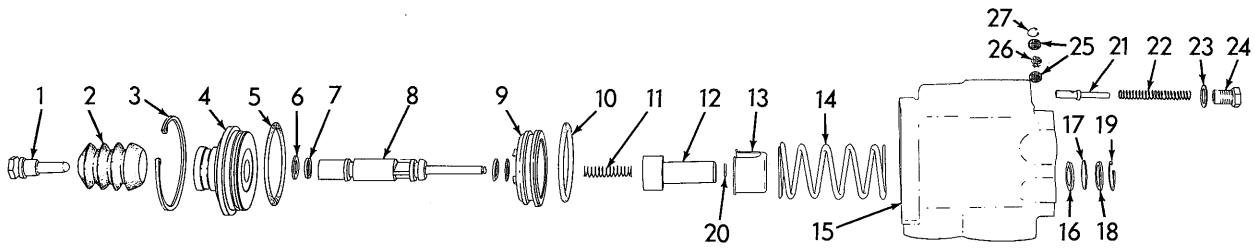


ITEM	PART NO.	QTY.	DESCRIPTION
1	70644522	1	PEDAL, brake
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
2	70643194	1	BRACKET
	70927491	2	CAPSCREW, Nylock, 1/2"NC x 1-1/4"
	70920582	2	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
3	70622868	1	SHAFT
	70910024	1	PIN, cotter, 3/16" x 2-1/2"
4	70067902	1	BOLT
	70913830	2	NUT, jam, 1/2"NF
5	70051193	1	SPRING
6	70049993	3	PIN
	70900805	3	PIN, cotter, 1/8" x 3/4"
7	70643216	1	ROD
	70913830	1	NUT, jam, 1/2"NF

(Continued)

BRAKE CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
8	70068389	1	YOKE
9	70643192	1	BELLCRANK
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
10	70643193	1	BRACKET
	70920582	2	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	2	LOCKWASHER, 1/2"
11	70643217	1	SHAFT
	70910024	1	PIN, cotter, 3/16" x 2-1/2"
12	70681159	1	TUBE ASSY., master cylinder, front (Includes nuts indented below)
	70910138	2	NUT, flared type, 1/4" tube
13	70059225	1	GASKET
14	70059229	1	CONNECTOR
15	70059224	1	SCREW
16	70059220	2	GASKET
17	70067508	1	PLUG
18	-----	1	CYLINDER ASSY., master (See page 117)
	70921076	3	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	3	LOCKWASHER, 3/8"
19	-----	1	BOOSTER ASSY., power brake (See page 122)
	70927583	4	CAPSCREW, 7/16"NC x 1-3/4"
	70914678	4	LOCKWASHER, 7/16"
20	70621709	1	ROD
	70913830	1	NUT, jam, 1/2"NF
21	70640677	4	CLIP
	70927400	4	CAPSCREW, 3/8"NC x 5/8"
	70630753	4	WASHER, plain
22	70681158	1	TUBE ASSY. (Includes nuts indented below)
	70910138	2	NUT, flare type, 1/4" tube
	70917322	2	UNION, flare type, 1/4" tube
23	70670948	1	TUBE ASSY., master cylinder, rear (Includes nuts indented below)
	70910138	2	NUT, flared type, 1/4" tube
	70910141	1	CONNECTOR, flare type, 1/4" tube, 1/8" male



POWER BRAKE BOOSTER

T-37276

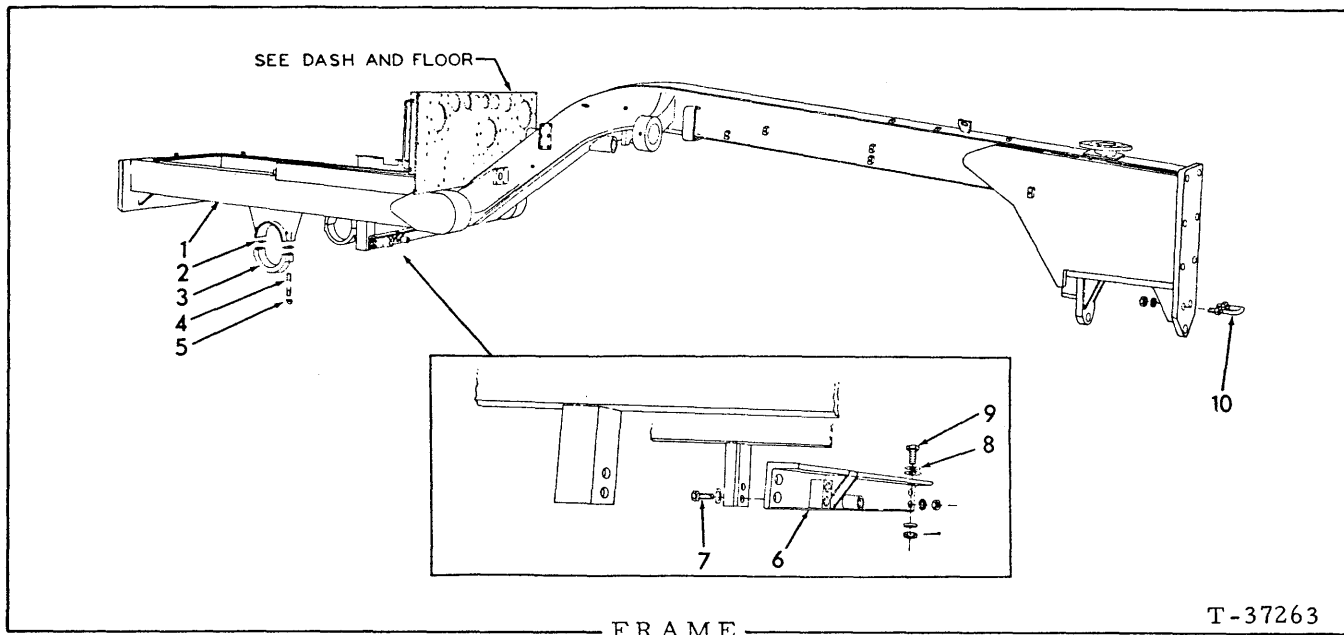
USAGE: See page 120

ITEM	PART NO.	QTY.	DESCRIPTION	
-	70622873	1	BOOSTER ASSY. (Includes items 1 thru 27)	
1	70630660	1	ROD, push	
2	70630661	1	□ BOOT, push rod	
3	70630666	1	RING, snap, end cover retaining	
4	70630665	1	COVER, end	
5	-----	1	□ O-RING, end cover	} Order item 28
6	-----	2	□ WASHER, back-up, spool seal	
7	-----	2	□ SEAL, oil, operating spool	
8	70630662	1	SPOOL, operating	
9	70638399	1	PISTON, booster	
10	-----	1	□ O-RING, booster piston (Order item 28)	
11	70630672	1	SPRING, spool return	
12	70638401	1	SHAFT, actuating	
13	70638402	1	RETAINER, booster piston spring	
14	70638403	1	SPRING, booster piston	
15	-----	1	BODY (Not serviced separately)	
16	-----	1	□ SEAL, oil, actuating shaft	} Order item 28
17	-----	1	□ WASHER, back-up, actuating shaft oil seal	
18	-----	1	□ SPACER, shaft oil seal	
19	-----	1	□ RING, snap, shaft seal retaining	
20	-----	1	□ RING, snap, actuating shaft	

(Continued)

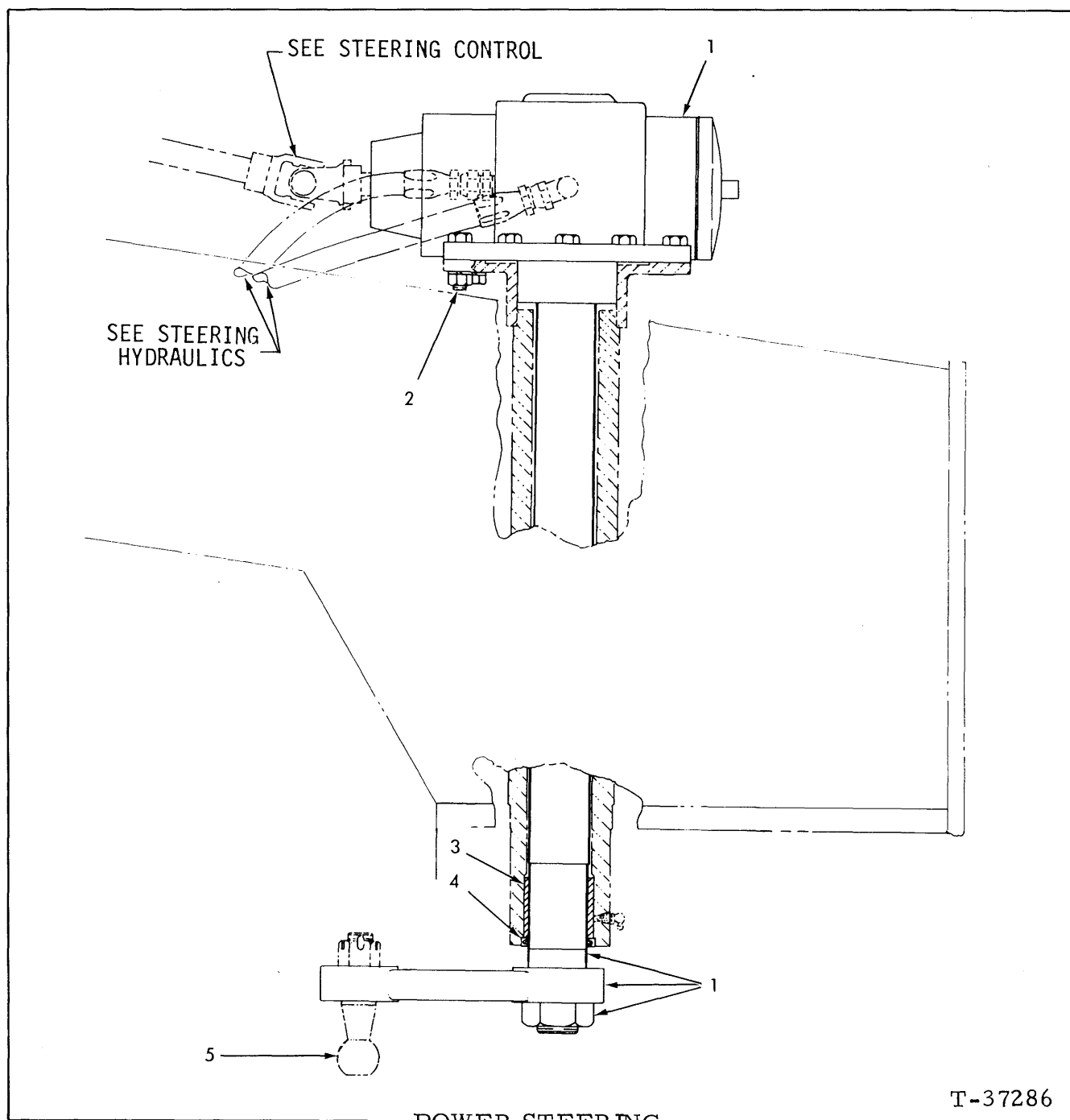
POWER BRAKE BOOSTER (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
21	70630674	1	VALVE, relief
22	70630675	1	SPRING, relief valve
23	-----	1	☐ WASHER, relief valve retainer (Order item 28)
24	70630677	1	RETAINER, relief valve
25	-----	2	SCREEN, vent
26	-----	1	☐ FILLER, vent
27	-----	1	☐ RING, snap
28	73114255	1	REPAIR KIT (Consists of items 2, 5 thru 7, 10, 16 thru 20, 23, 26 and 27)
			☐ Indicates components of items 28



ITEM	PART NO.	QTY.	DESCRIPTION
1	70674491	1	FRAME ASSY. (Includes items 2 thru 5)
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
	70915276	1	FITTING, lubricating, 90°, 1/8"NPT
2	70604493	24	SHIM, trunnion cap (Use as required)
3	70054853	2	CAP, trunnion
4	70602258	4	STUD (1" diam.)
5	70600236	4	NUT, high, 1"NF
6	70629662	1	ANGLE, transmission supporting
7	70921068	4	CAPSCREW, 3/4"NC x 2-1/4"
	70910255	4	WASHER, plain, SAE std., 3/4"
	70914726	4	LOCKWASHER, 3/4"
	70911030	4	NUT, 3/4"NC
8	70083710	4	SHIM, transmission supporting angle (.010" thick. Use as required)
9	70604637	2	CAPSCREW, transmission supporting angle (drilled end, 3/4"NF x 2")
	70926201	2	WASHER, plain
	70912331	2	NUT, slotted, 3/4"NF
	70900807	2	PIN, cotter, 1/8" x 1-1/4"
10	70604641	1	U-BOLT, towing (Special equipment)
	70904210	2	LOCKWASHER, 1-1/4"
	70912251	2	NUT, jam, 1-1/4"NF
	70913097	2	NUT, 1-1/4"NF

NOTE: See PAINTING AND MARKING for Transfers



T-37286

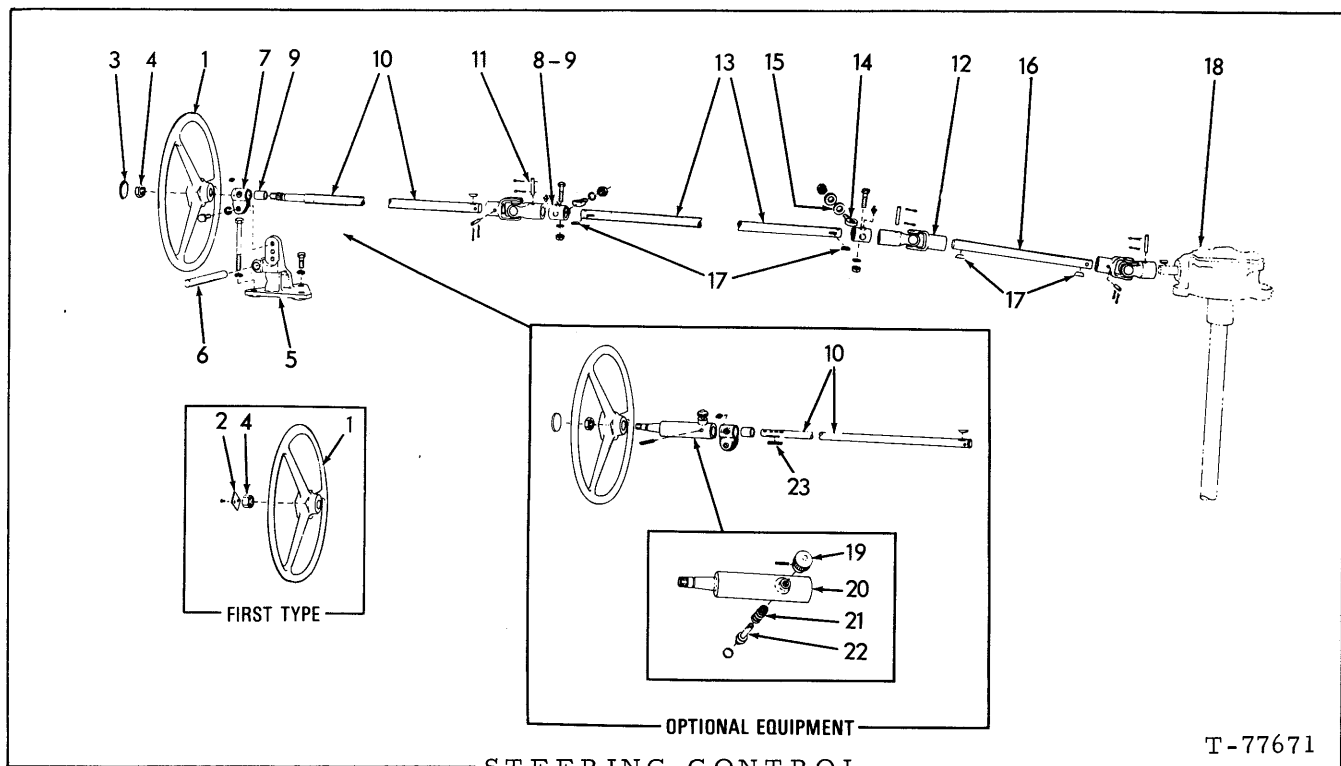
POWER STEERING

* Graders prior to serial No. 27Y09004

** Grader serial No. 27Y09004, 57M09101 and up

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	-----	1 1	STEERING ASSY., power (See pages 128 and 130B)
2	70921172	5 -	CAPSCREW, 5/8" NC x 2-1/4"
	70923884	- 8	CAPSCREW, 5/8" NF x 1-1/2"
	70912942	5 8	LOCKWASHER, 5/8"
	70911029	5 -	NUT, 5/8" NC
3	70095380	1 -	BUSHING, steering gear
	70697491	- 1	BUSHING, steering gear
4	70098263	1 -	SEAL
	70698209	- 1	SEAL
5	-----	1 1	See page 132.

(Revised May 1977)



*Standard. Units with hydraulically - actuated control box
 **Optional. Units with mechanically - actuated control box

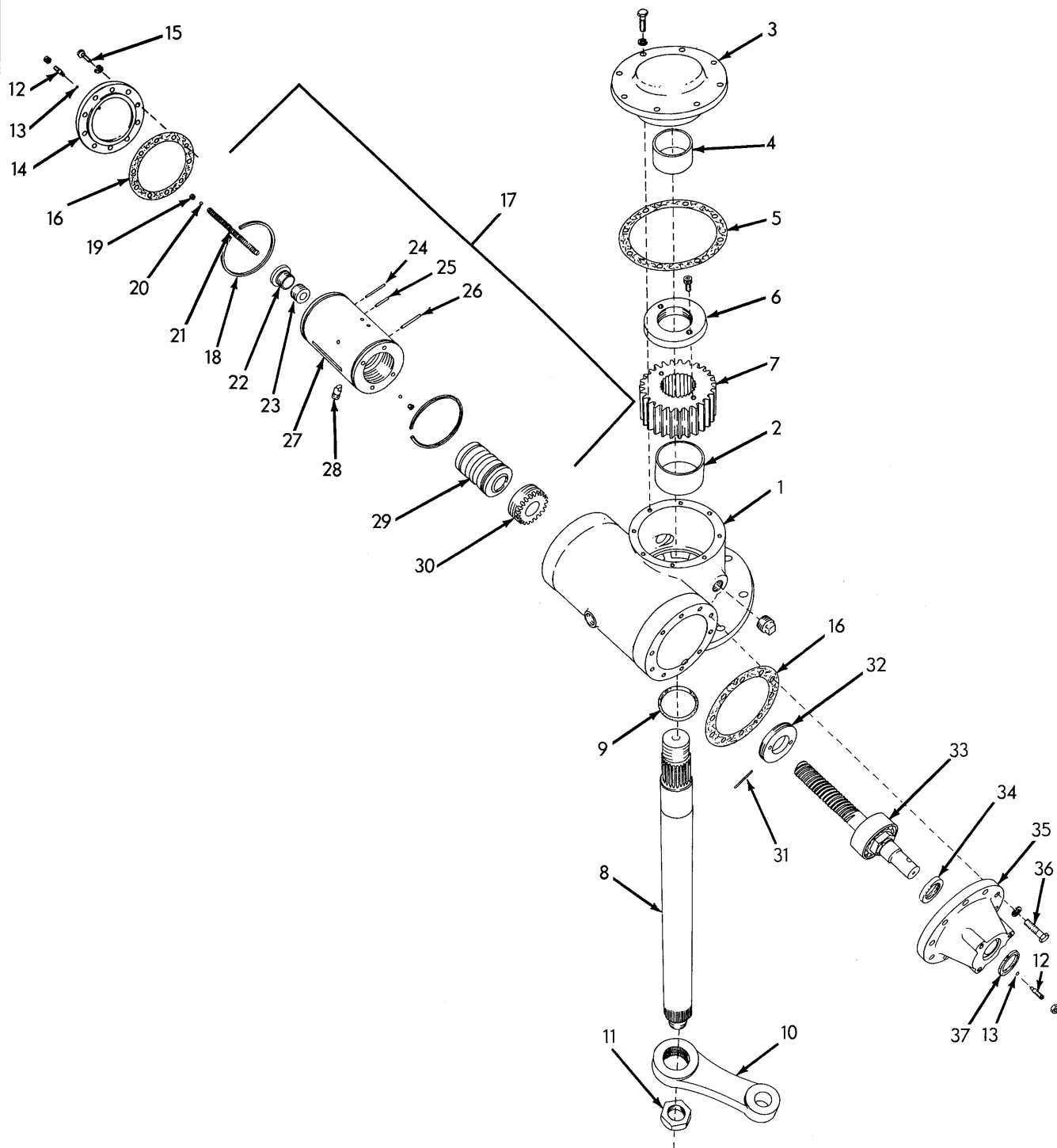
ITEM	PART NO.	QTY.	DESCRIPTION	
		* **		
1	70639984	1	WHEEL, steering (Graders prior to unit #08571)	
	70698431	1	WHEEL, steering (Grader unit #08571 and up)	
2	70694683	1	EMBLEM, trademark (Graders prior to unit #08571)	
	70918698	2	SCREW, thread-cutting, #8 x 1/2"	
3	70698432	1	CAP, (Grader unit #08571 and up)	
4	70208584	1	NUT, steering wheel shaft	
5	70682379	1	BRACKET ASSY., steering wheel support	Each includes item 6
	70683935	-	BRACKET ASSY., steering wheel support	
	70922763	1	CAPSCREW, 3/8"NC x 1"	
	70929793	2	CAPSCREW, 3/8"NC x 6-1/2" (Also attaches control valve)	
	70928243	-	CAPSCREW, Nylok, 3/8"NC x 1-3/8"	
	70920995	-	CAPSCREW, 3/8"NC x 2"	
	70910287	3	LOCKWASHER, 3/8"	
6	70682380	1	PIN	
7	70682283	1	BEARING ASSY., steering wheel shaft (Includes item 9)	Not used on units equipped with Turn Signals
	70920574	1	CAPSCREW, 1/2"NC x 1-3/8"	
	70912441	1	LOCKWASHER, 1/2"	
	70914465	1	FITTING, lubricating, straight, 1/8"NPT	

(Continued)

STEERING CONTROL (Continued)

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
8	70624761	2	3	BEARING ASSY., steering wheel shaft (Includes item 9)
	70914465	-	1	FITTING, lubrication, straight, 1/8"NPT
	70915276	2	2	FITTING, lubricating, 90°, 1/8"NPT
	70920585	2	3	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	2	3	LOCKWASHER, 1/2"
	70911028	2	3	NUT, 1/2"NC
9	70622062	3	3	BUSHING, steering wheel shaft bearing
10	70684205	1	1	SHAFT, steering wheel (Standard)
	70682659	1	1	SHAFT, steering wheel (Optional. For units with adjustable steering wheel)
11	70601935	5	5	PIN, universal joint (3/8" x 2")
	70900805	10	10	PIN, cotter, 1/8" x 3/4"
12	70684166	3	3	JOINT ASSY., universal (See page 207 for parts)
13	70684248	1	1	SHAFT, intermediate
14	70602328	2	2	BOLT, eye, steering control shaft bearing
	70912942	1	1	LOCKWASHER, 5/8"
	70911100	1	1	WASHER, plain, SAE std., 5/8"
	70911029	2	2	NUT, 5/8"NC
15	70928141	1	1	WASHER, spacing, steering shaft eye-bolt
16	70684249	1	1	SHAFT, front (Graders prior to unit #09004)
	70697492	1	1	SHAFT, front (Grader unit #09004 and up)
17	70921426	6	6	KEY, #127 woodruff, 1/4" x 2-1/8"
18	-----	1	1	STEERING ASSY. (See POWER STEERING)
19	70682893	-	1	KNOB
	70916014	-	1	PIN, spring, 3/32" x 3/4"
20	70682889	-	1	TUBE
	70929851	-	1	PLUG, expansion, 5/8"
	70915797	-	1	PIN, spring, 3/16" x 1-1/4"
21	70604835	-	1	SPRING
22	70682895	-	1	PIN
23	70905098	-	1	KEY, 1/4" x 1/4" x 1-5/8"

NOTE: See PAINTING AND MARKING for transfer



STEERING ASSEMBLY

T-37274

STEERING ASSEMBLY

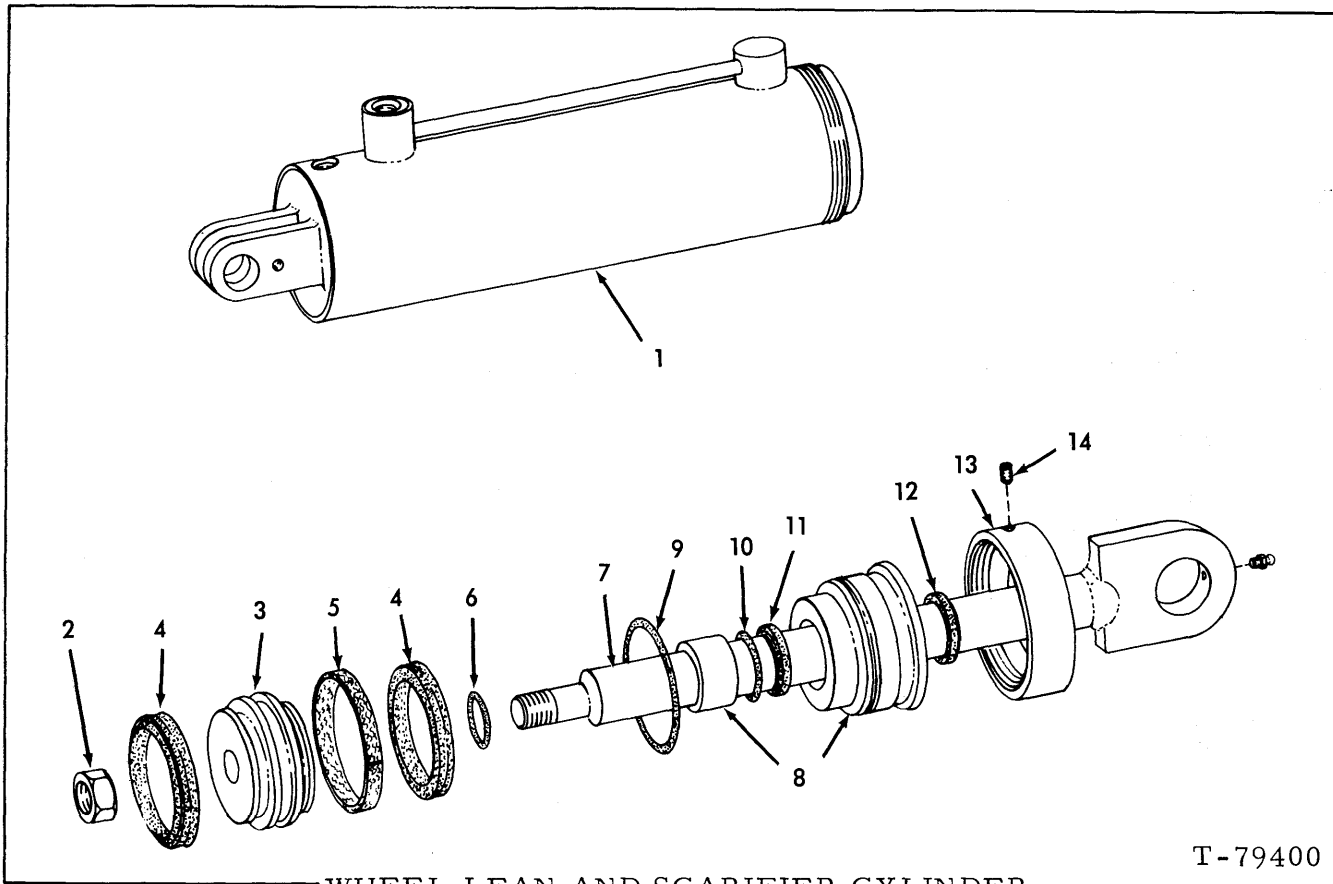
USAGE: See page 125. Graders prior to serial No. 27Y09004

ITEM	PART NO.	QTY.	DESCRIPTION
-	70673458	1	STEERING ASSY., power (Includes items 1 thru 37)
1	70656655	1	HOUSING ASSY. (Includes items 2 and 9)
	70912726	1	PLUG, pipe, 3/4"NPT
2	70637815	1	BUSHING, housing
3	70638392	1	COVER ASSY., top (Includes item 4)
	70927239	8	CAPSCREW, 5/16"NF x 1"
	70910286	8	LOCKWASHER, 5/16"
4	70637816	1	BUSHING, top cover
5	70098335	1	GASKET, top cover
6	70638394	1	NUT, gear retaining
	70912263	2	CAPSCREW, hex-socket-hd., 5/16"NF x 3/4"
7	70098337	1	GEAR, steering arm shaft
8	70673463	1	SHAFT, steering arm
9	70655237	1	RING, sealing, steering arm shaft
10	70651830	1	ARM, steering
11	70620677	1	NUT, steering arm retaining
12	70678352	2	PLUNGER, relief valve
	70911048	2	NUT, jam, 3/8"NF
13	70630132	2	O-RING, relief valve plunger
14	70638378	1	HEAD, housing
15	70036039	10	CAPSCREW, 3/8"NF x 1-3/8"
	70910287	10	LOCKWASHER, 3/8"
16	70638380	2	GASKET, housing
17	70661988	1	PISTON AND VALVE ASSY. (Consists of items 18 thru 30)
18	70098327	2	RING, piston sealing
19	70630100	2	SEAT, relief valve plunger
20	70916537	2	BALL, relief valve (steel, 9/32" diam.)
21	70638389	1	SPRING, relief valve
22	-----	1	PLUG, piston (Order item 17)
23	-----	1	NUT, piston (Order item 17)
24	70663275	1	PIN, locking, piston plug
25	70916168	1	PIN, locking, piston nut

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STEERING ASSEMBLY (Continued)

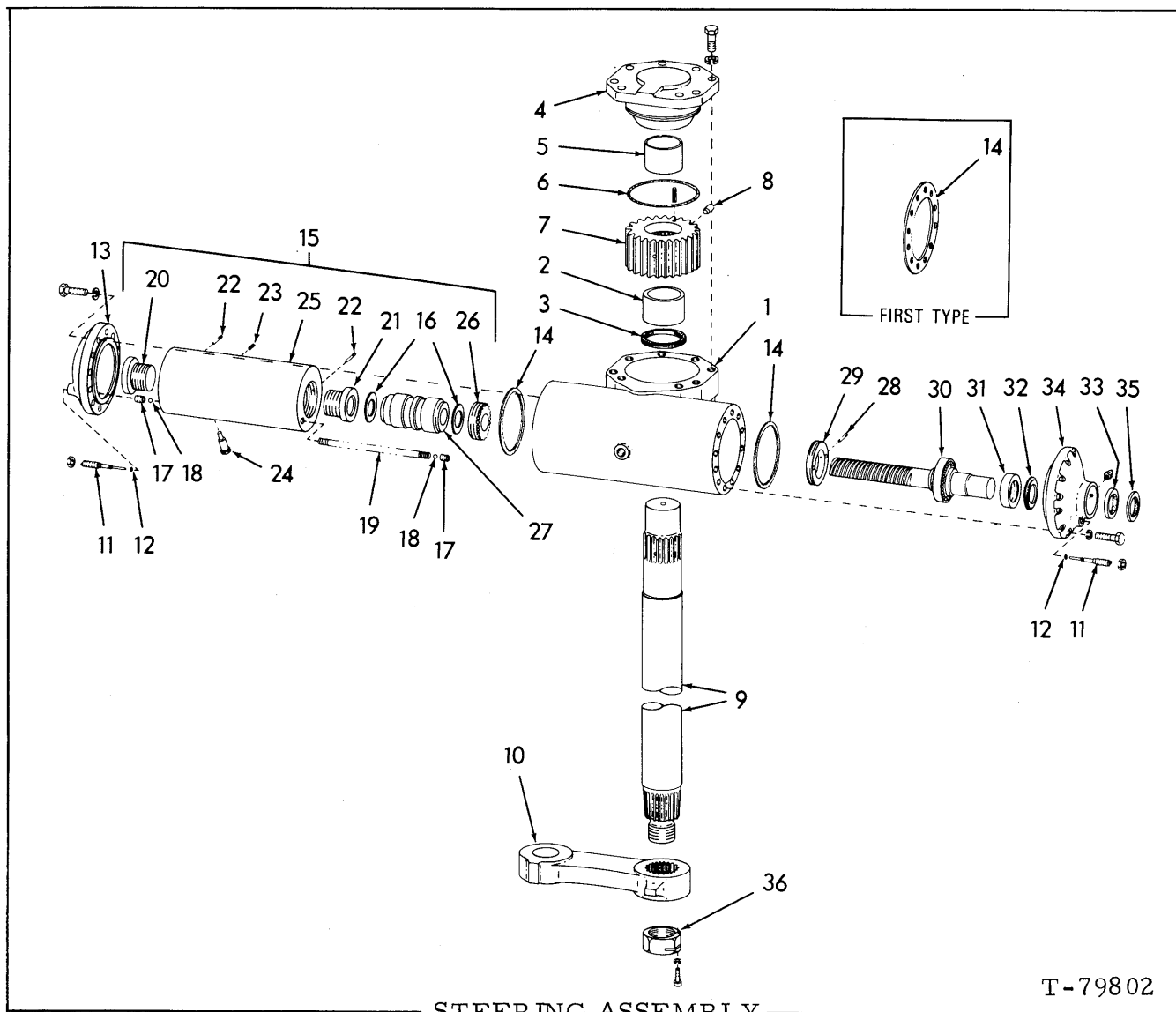
ITEM	PART NO.	QTY.	DESCRIPTION
26	70638691	1	PIN, locking, valve adjusting nut
27	-----	1	PISTON (Order item 17)
28	70098342	1	PIN, valve positioning
29	-----	1	VALVE, actuating (Order item 17)
30	-----	1	NUT, valve adjusting (Order item 17)
31	70638385	1	PIN, locking, retaining nut
32	70638384	1	NUT, retaining, actuating shaft
33	70684251	1	SHAFT ASSY., actuating (Includes bearing and nut which are not serviced separately)
34	70638386	1	SEAL, oil, actuating shaft
35	70638383	1	CAP, housing
36	70036039	10	CAPSCREW, 3/8"NF x 1-3/8"
	70910287	10	LOCKWASHER, 3/8"
37	70638387	1	SEAL, dust, actuating shaft



WHEEL LEAN AND SCARIFIER CYLINDER

USAGE: See pages 134, 136 and 142 (Second type)

ITEM	PART NO.	QTY.	DESCRIPTION
-	70693054	1	CYLINDER ASSY., wheel lean
-	70693053	1	CYLINDER ASSY., scarifier
1	70695738	1	TUBE, wheel lean (12-1/2" long)
	70695662	1	TUBE, scarifier (20-1/4" long)
2	70929603	1	NUT, 1-1/4"NF
3	70695731	1	PISTON
4	70695734	2	□PISTON
5	70695735	1	□RING
6	70925257	1	□O-RING
7	70695737	1	ROD, wheel lean cylinder (14" long)
	70912808	1	FITTING, lubricating, straight, 1/4"NF tapered-thread
	70695661	1	ROD, scarifier cylinder (22" long)
	70915019	1	FITTING, lubricating, 90°, 1/4"NF tapered-thd.
8	70695732	1	HEAD ASSY. (Includes bushing which is not serviced separately)
9	70925247	1	□O-RING
10	70923579	1	□O-RING
11	70695446	1	□WIPER
12	70695736	1	□WIPER
13	70695733	1	RETAINER
14	70903835	1	SETSCREW, cup-point, 1/4"NC x 3/8"
15	73112085	1	REPAIR KIT, cylinder (Includes items 4 thru 6 and 9 thru 12)
			□Components of item 15



STEERING ASSEMBLY

T-79802

USAGE: See page 125. Grader serial No. 27Y09004, 57M09101 and up.

ITEM	PART NO.	QTY.	DESCRIPTION	
-	70698160	1	STEERING ASSY. (Graders prior to unit #09037)	Each includes items 1 thru 36
-	73109403	1	STEERING ASSY. (Grader unit #09037 and up)	
1	70698139	1	HOUSING ASSY. (Includes items 2 and 3)	
2	70698140	1	BUSHING	
3	70638395	1	RING	
4	70698144	1	COVER ASSY. (Includes item 5)	
	70929138	8	CAPSCREW, 5/8" NF x 1-1/4"	
	70912942	8	LOCKWASHER, 5/8"	
5	70698145	1	BEARING	
6	70698155	1	O-RING	
7	70698147	1	GEAR	
8	70698156	1	PIN	
	70916202	1	PIN, spring, 1/8" x 7/8"	

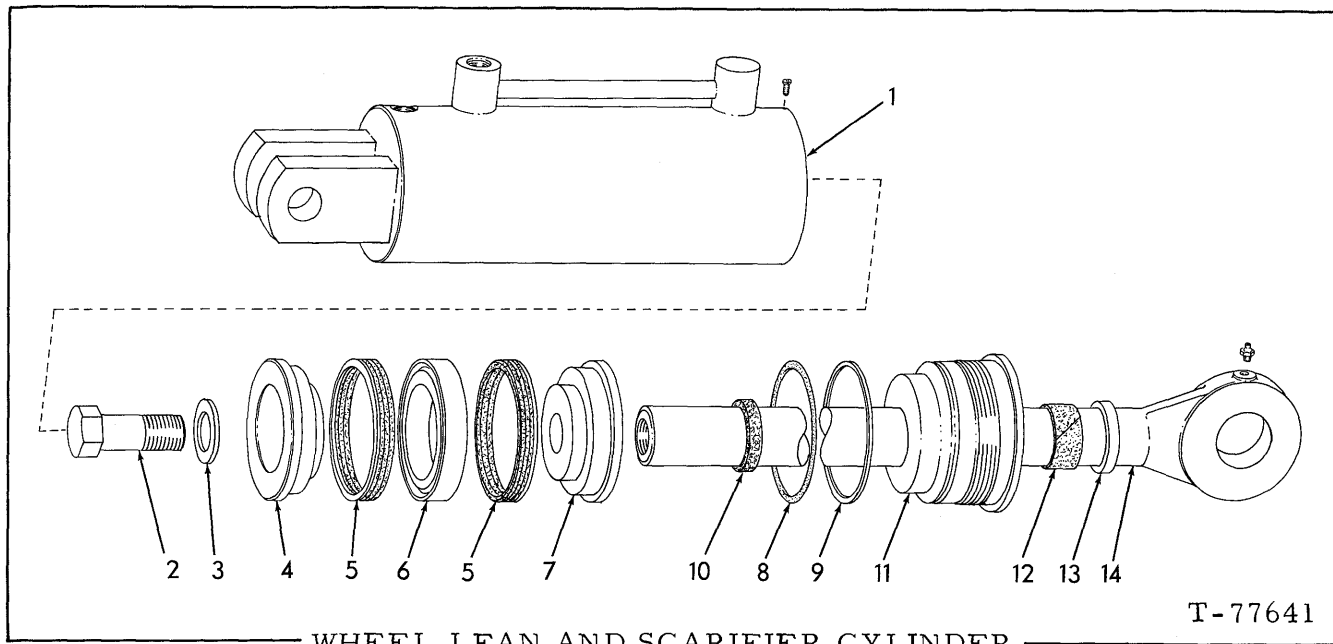
(Continued)

(Revised May 1977)

STEERING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	70698146	1	SHAFT
10	70651830	1	ARM
11	70678352	2	PLUNGER
	70911048	2	NUT, jam, 3/8"NF
12	70630132	2	O-RING
13	70698141	1	HEAD (Graders prior to unit #09037)
	73109551	1	HEAD (Grader unit #09037 and up)
	70924228	12	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	12	LOCKWASHER, 3/8"
14	70698142	2	GASKET (Graders prior to unit #09037)
	73109552	2	RING (Grader unit #09037 and up)
15	70698159	1	PISTON AND VALVE ASSY. (Includes items 16 thru 27)
16	70698152	2	WASHER
17	70630100	2	SEAT
18	70916537	2	BALL
19	70698150	1	SPRING
20	-----	1	PLUG
21	-----	1	NUT
22	70663275	2	PIN
23	70916168	1	PIN
24	70698149	1	PIN
25	-----	1	PISTON
26	-----	1	NUT
27	-----	1	VALVE
28	70698157	1	PIN
29	70698148	1	NUT
30	70698158	1	SHAFT ASSY. (Includes bearing and nut which are not serviced separately)
31	70638386	1	SEAL
32	70698151	1	WASHER
33	70698154	1	SEAL
34	70698143	1	CAP (Graders prior to unit #09037)
	73109553	1	CAP (Grader unit #09037 and up)
	70918185	1	FITTING, lubricating, 1/8"NPT
	70924228	12	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	12	LOCKWASHER, 3/8"
35	70698153	1	SEAL
36	70699260	1	NUT, lock
	70914864	1	CAPSCREW, hex-socket, 5/16"NC x 3/4"
	70904205	1	LOCKWASHER, 5/16"

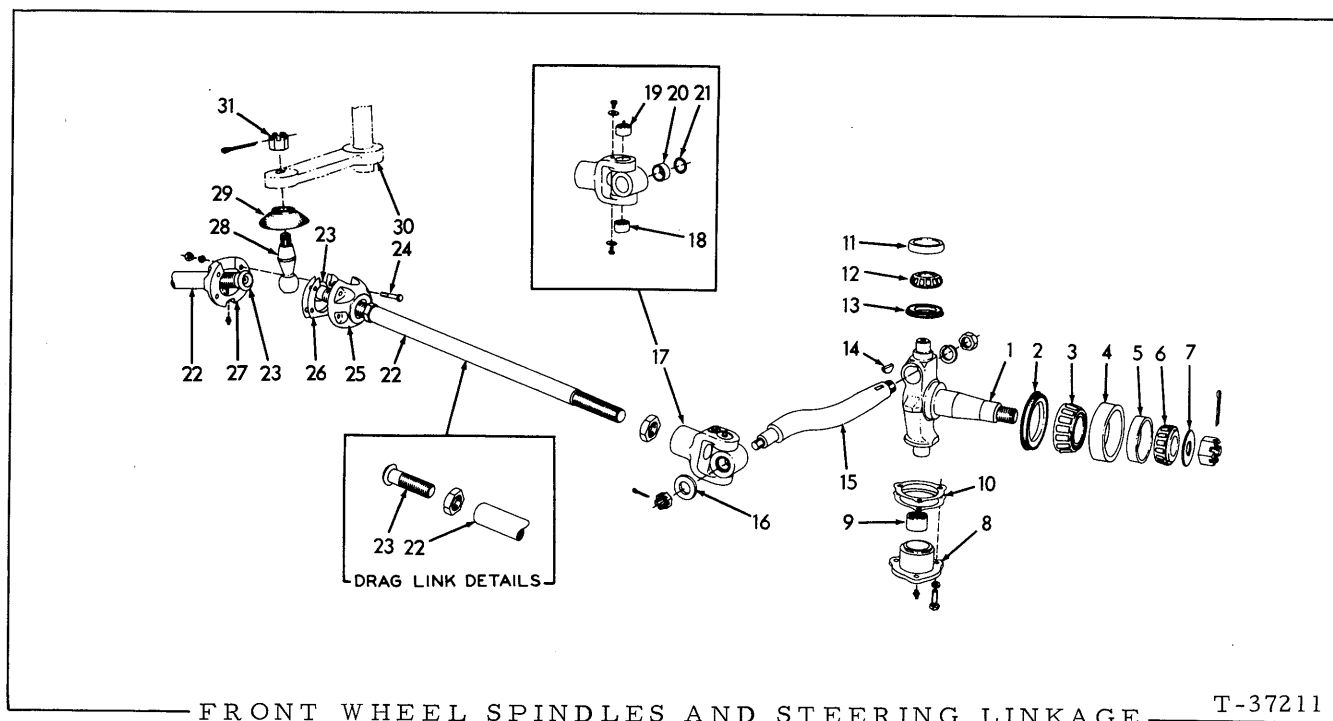
MEMO



USAGE: First type. See pages 134, 136 and 142

ITEM	PART NO.	QTY.	DESCRIPTION	
-	70673040	1	CYLINDER ASSY., wheel lean	} Each includes 1 thru 14 and screw indented below
-	70677395	1	CYLINDER ASSY., scarifier	
-	70929973	1	SCREW, thread cutting, #8NF x 1/4"	
1	-----	1	TUBE (Not serviced separately)	
2	70923201	1	CAPSCREW, 1-1/4"NC x 3"	
3	70689757	1	WASHER, plain	
4	70689119	1	PISTON	
5	70689131	2	□PACKING SET	
6	70689130	1	RING	
7	70689118	1	PISTON	
8	70923590	1	□O-RING	
9	73063367	1	□RING, back-up	
10	70689076	1	□SEAL	
11	70689141	1	GLAND ASSY. (Serviced only as a unit)	
12	70689072	1	□BEARING STRIP	
13	70684344	1	□WIPER	
14	70688533	1	ROD (For CYLINDER ASSY. 70673040)	
	70688534	1	ROD (For CYLINDER ASSY. 70677395)	
	70914465	1	FITTING, lubricating, straight, 1/8"NPT (Early units)	
	70915019	1	FITTING, lubricating, 90°, 1/4"NF, tapered thread (Late units)	
15	73112084	1	REPAIR KIT, cylinder (Includes items 5, 8 thru 10, 12 and 13)	

□Components of item 15



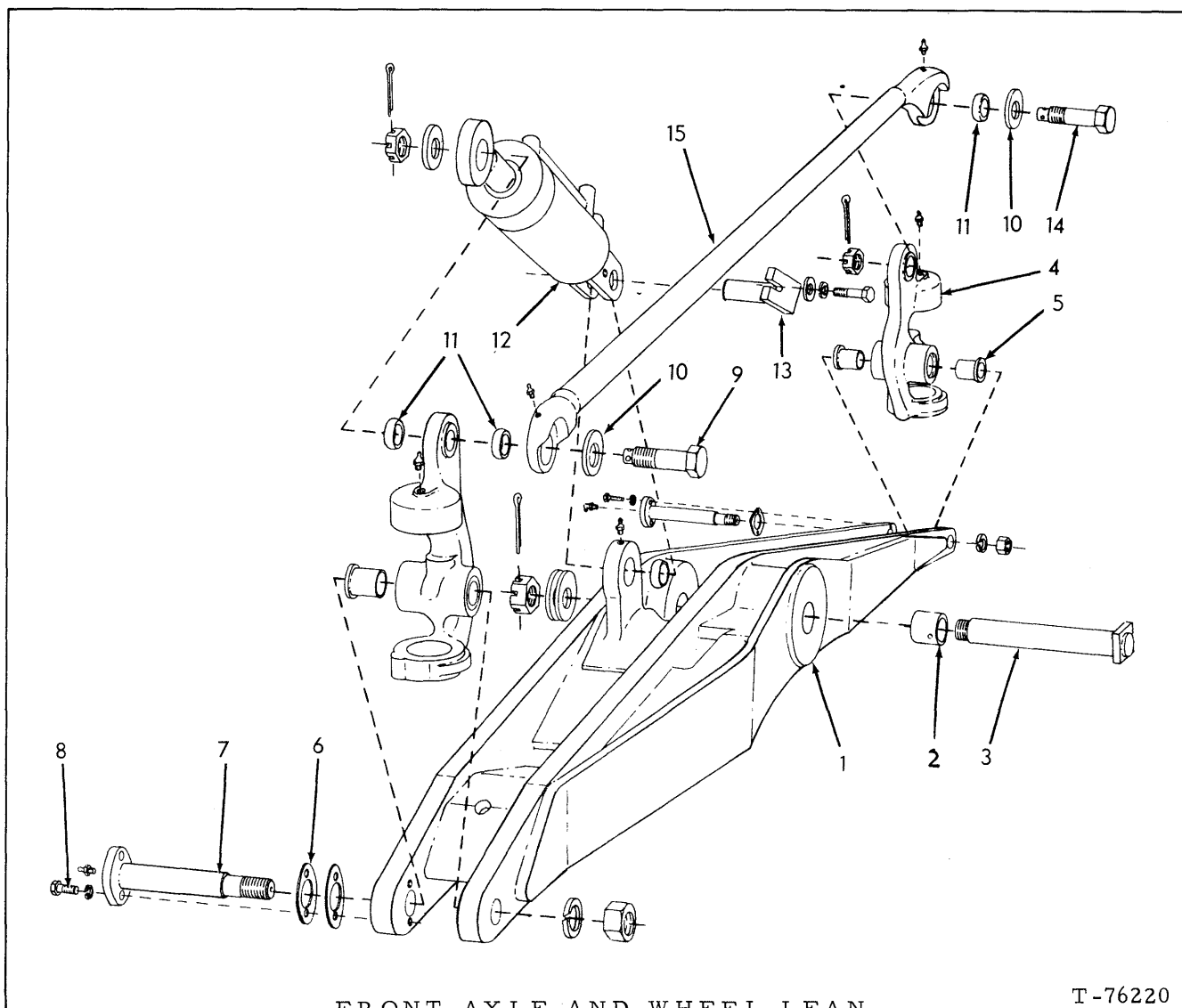
ITEM	PART NO.	QTY.	DESCRIPTION	
1	70634569	1	SPINDLE, left wheel	
	70634570	1	SPINDLE, right wheel	
	70911843	2	NUT, slotted, 1-1/4"NF	
	70910024	2	PIN, cotter, 3/16" x 2-1/2"	
2	70604345	2	SEAL, oil, front wheel (external type)	
3	70634568	2	CONE ASSY., front wheel inner bearing	
4	70634567	2	CUP, front wheel inner bearing	
5	70073111	2	CUP, front wheel outer bearing	
6	70634571	2	CONE ASSY., front wheel outer bearing	
7	70601949	2	WASHER, front wheel spindle	
8	70066365	2	RETAINER, spindle needle bearing	
	70914465	2	FITTING, lubricating, straight, 1/8"NPT	
	70920583	6	CAPSCREW, 1/2"NC x 1-1/2"	
	70912441	6	LOCKWASHER, 1/2"	
9	70066362	2	BEARING, needle, front wheel spindle	
10	70604292	18	SHIM, spindle lower bearing (0.010" thick)	Use as required
	70692054	6	SHIM, spindle lower bearing (.003" thick)	
11	70604387	2	CUP, spindle upper bearing	
12	70604388	2	CONE ASSY., spindle upper bearing	
13	70604343	2	SEAL, oil, front wheel spindle (external type)	
14	70092954	2	KEY, spindle steering arm	

(Continued)

FRONT WHEEL SPINDLES AND STEERING LINKAGE (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
15	70671876	2	ARM, steering, front wheel spindle
	70913097	2	NUT, 1-1/4"NF
	70904210	2	LOCKWASHER, 1-1/4"
	70912331	2	NUT, slotted, 3/4"NF
	70900807	2	PIN, cotter, 1/8" x 1-1/4"
16	70602068	2	WASHER, plain
17	70066627	2	SWIVEL ASSY., drag link (Each consists of 1 yoke, 1 swivel, 1 pin and items 18 thru 21)
18	70066632	2	BEARING, needle, drag link swivel yoke, lower
	70910196	2	CAPSCREW, 5/16"NC x 3/8"
	70901165	2	WASHER, plain, U.S. std., 5/16"
19	70066633	2	BEARING, needle, drag link swivel yoke, upper
	70910196	2	CAPSCREW, 5/16"NC x 3/8"
	70901165	2	WASHER, plain, U.S. std., 5/16"
20	70066631	4	BUSHING, drag link swivel
21	70053926	4	SEAL, oil, drag link swivel
22	70673074	2	LINK, drag
	70912251	2	NUT, jam, 1-1/4"NF
23	70653878	2	SOCKET, drag link
	70912251	2	NUT, jam, 1-1/4"NF
24	70920995	4	CAPSCREW, ball cap (3/8"NC x 2")
	70910287	4	LOCKWASHER, 3/8"
	70910324	4	NUT, 3/8" NC
25	70653879	1	CAP, steering arm ball
26	70604290	18	SHIM, ball cap (Use as required)
27	70653877	1	CAP, steering arm ball
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
28	70651831	1	BALL, steering arm
29	70604289	1	SHIELD, steering arm ball (neoprene)
30	-----	1	STEERING ASSY. (See POWER STEERING)
31	70924447	1	NUT, steering arm ball (1"NF, 1" high)
	70901344	1	PIN, cotter, 1/4" x 2"

(Revised February 1976)



FRONT AXLE AND WHEEL LEAN

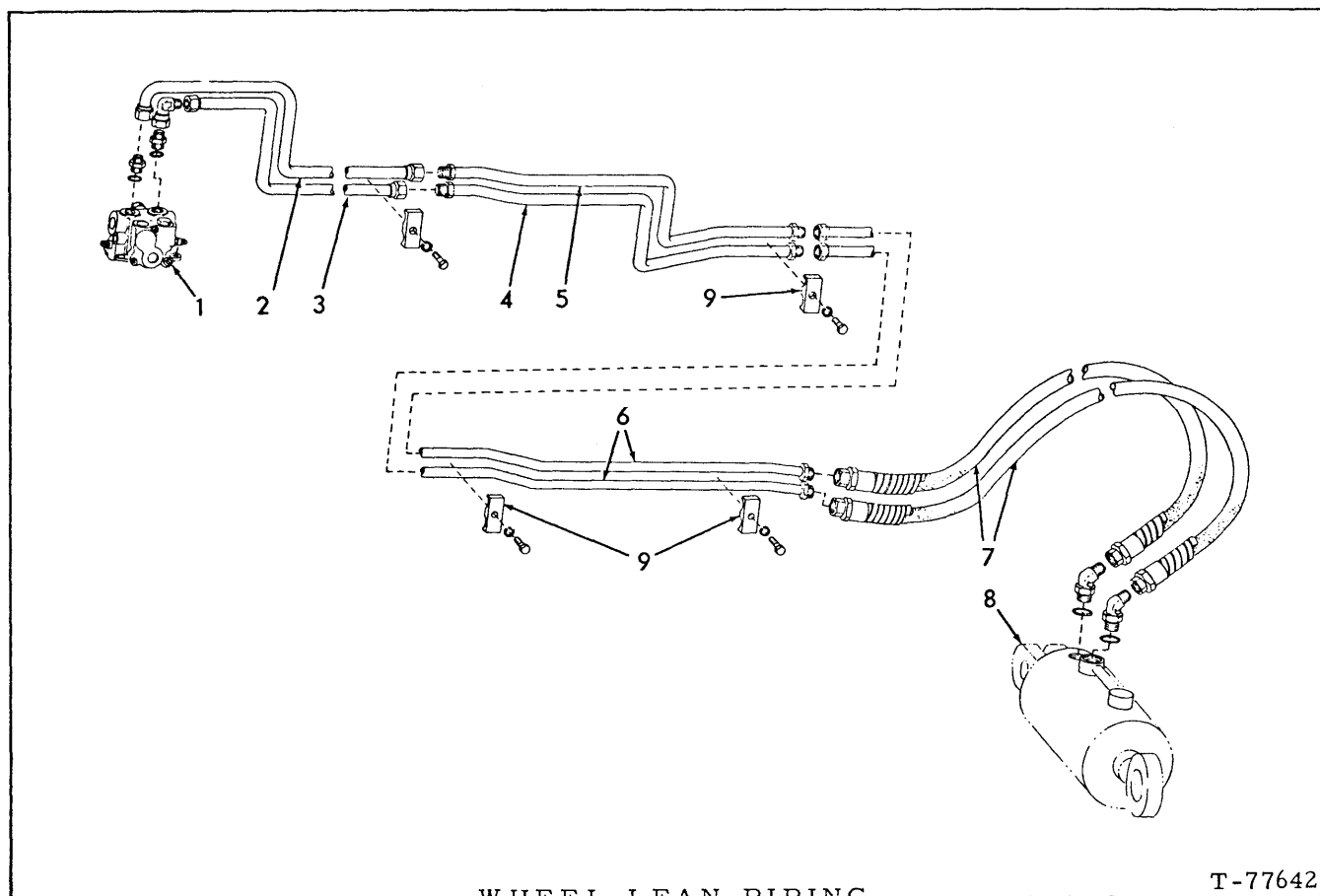
T-76220

ITEM	PART NO.	QTY.	DESCRIPTION
1	70672188	1	AXLE ASSY., front (Includes item 2)
	70914465	3	FITTING, lubricating, straight, 1/8"NPT (One less used on graders unit #08924 and up)
	70915274	1	FITTING, lubricating, 45°, 1/8"NPT (Grader unit #08924 and up)
2	70672197	2	BUSHING, front axle pivot
3	70638044	1	PIN, front axle pivot
	70929712	2	WASHER, plain (Use as required)
	70913527	1	NUT, jam, slotted, 1-1/2"NF
	70900813	1	PIN, cotter, 3/16" x 2"
4	70671852	2	KNUCKLE ASSY., front wheel lean (Includes item 5)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
5	70087932	4	BUSHING, front wheel lean knuckle
6	70098969	10	SHIM, knuckle pivot bolt (Use as required)

(Continued)

FRONT AXLE AND WHEEL LEAN (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	70672637	2	BOLT, pivot, front wheel lean knuckle
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
	70904210	2	LOCKWASHER, 1-1/4"
	70913097	2	NUT, 1-1/4"NF
8	70923193	4	CAPSCREW, pivot bolt retaining (3/8"NF x 1-1/4")
	70910287	4	LOCKWASHER, 3/8"
9	70683838	1	BOLT, wheel lean link (long)
	70911061	1	NUT, slotted, 1-1/4"NC
	70901344	1	PIN, cotter, 1/4" x 2"
10	70054889	3	WASHER, wheel lean link bolt
11	70668028	4	BEARING, spherical
12	-----	1	CYLINDER ASSY., wheel lean (See pages 130A and 131)
13	70673051	1	PIN, cylinder retaining
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70910287	1	LOCKWASHER, 3/8"
	70677006	1	WASHER, plain
14	70683837	1	BOLT, wheel lean link (short)
	70911061	1	NUT, slotted, 1-1/4"NC
	70901344	1	PIN, cotter, 1/4" x 2"
15	70672991	1	LINK, wheel lean
	70914465	2	FITTING, lubricating, straight, 1/8"NF

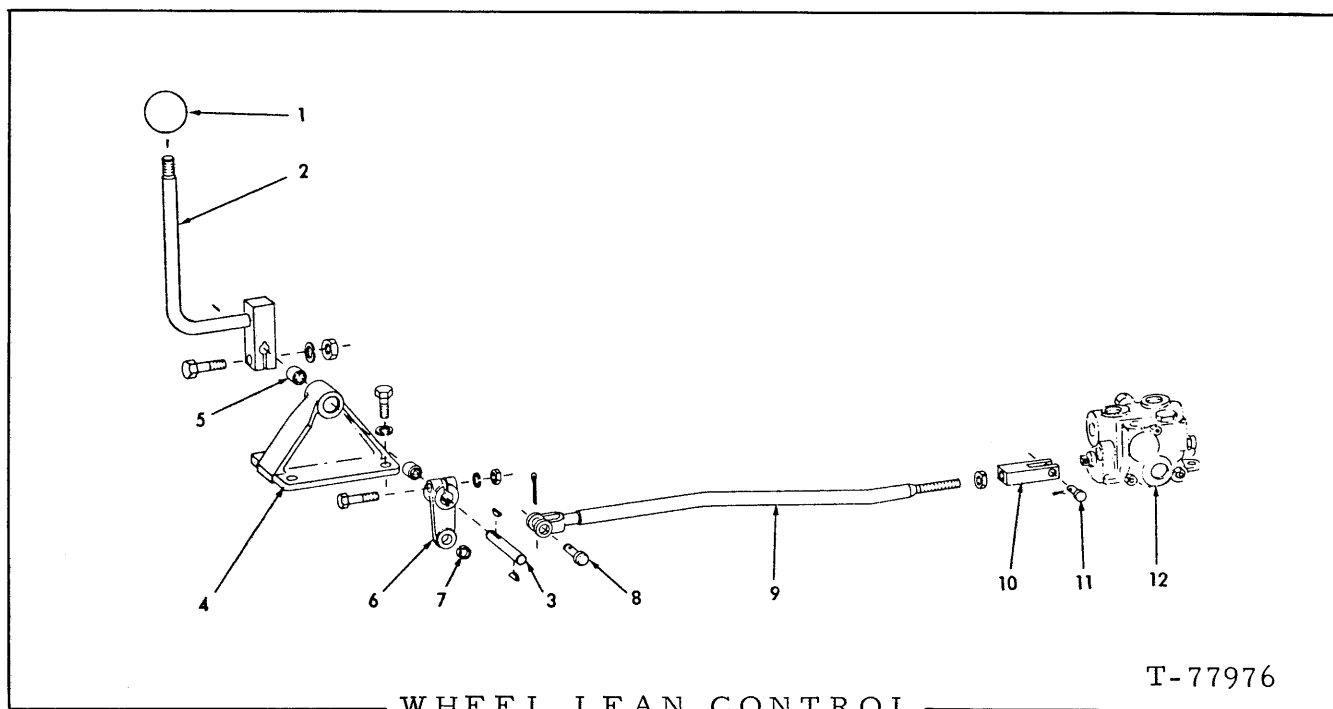


WHEEL LEAN PIPING

T-77642

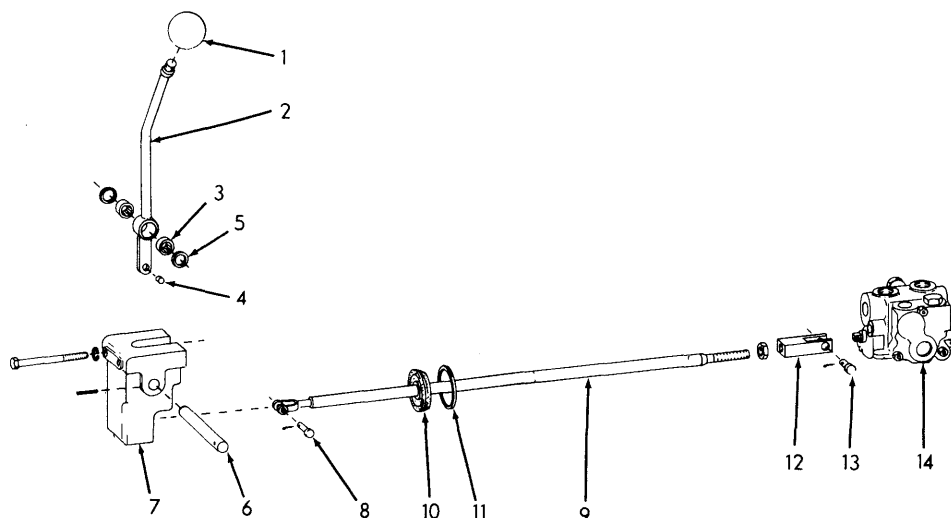
ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	VALVE ASSY., control (See page 190)
2	70680048	1	TUBE ASSY. (Includes nut)
	70923080	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF (Includes O-RING)
	70921349	1	O-RING, connector
3	70680047	1	TUBE ASSY. (Includes nut)
	70923080	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF (Includes O-RING)
	70921325	1	ELBOW, flare type, 90°, swivel nut, 5/8" tube
	70921349	1	O-RING, connector
4	70680033	1	TUBE ASSY. (Includes nut)
5	70680032	1	TUBE ASSY. (Includes nut)
6	70680026	2	TUBE ASSY. (Includes nuts)
7	70674143	2	HOSE ASSY., supply, cylinder (See HOSE PARTS)
	70921328	2	ELBOW, adjustable, 45°, flare type, 5/8" tube, 7/8"NF (Includes O-RING)
	70921205	2	O-RING, elbow
8	-----	1	CYLINDER ASSY. (See FRONT AXLE AND WHEEL LEAN)
9	70623355	4	CLAMP, tube
	70921076	4	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	4	LOCKWASHER, 3/8"

M E M O



USAGE: Optional. For units with mechanically - actuated control box

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	1	KNOB
2	70682098	1	LEVER
	70905119	1	KEY, #3 woodruff, 1/8" x 1/2"
	70921565	1	CAPSCREW, 3/8"NC x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
3	70682088	1	SHAFT
4	70682999	1	BRACKET ASSY., (Includes item 5)
	70922763	4	CAPSCREW, 3/8"NF x 1"
	70910287	4	LOCKWASHER, 3/8"
5	70655215	2	BEARING
6	70642271	1	LEVER ASSY. (Includes item 7)
	70905119	1	KEY, #3 woodruff, 1/8" x 1/2"
	70920660	1	CAPSCREW, 5/16"NC x 1-1/2"
	70910286	1	LOCKWASHER, 5/16"
	70911025	1	NUT, 5/16"NC
7	70624584	1	BUSHING
8	70078810	1	PIN, yoke
	70918448	1	PIN, cotter, 3/32" x 1"
9	70682147	1	ROD
	70911048	1	NUT, 3/8"NF
10	70687687	1	YOKE
11	70628738	1	PIN
	70904020	1	PIN, cotter, 1/16" x 1"
12	-----	1	VALVE ASSY., wheel lean (See page 190)

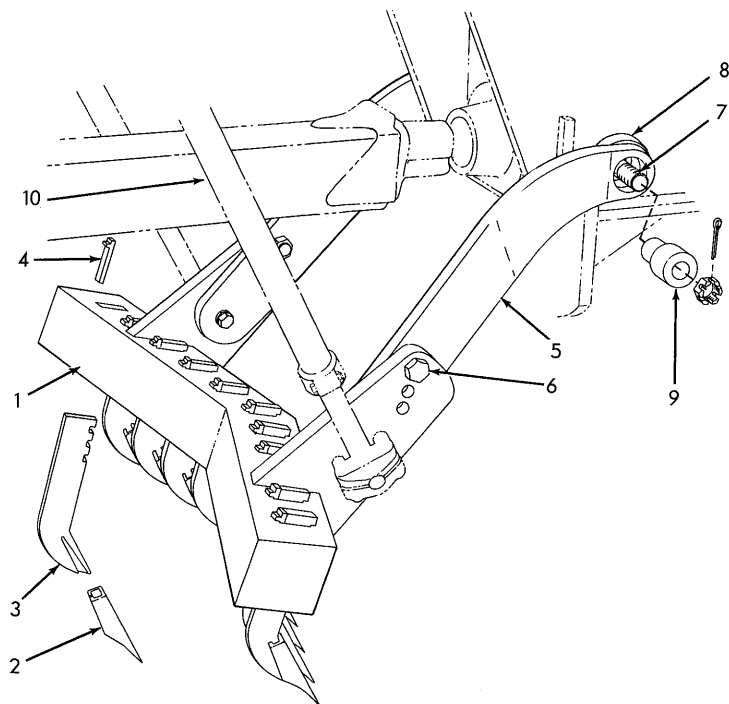


WHEEL LEAN CONTROL

T-77652

USAGE: Standard. Not for units with optional mechanically actuated control box.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	1	KNOB
2	70659577	1	LEVER ASSY. (Includes items 3 and 4)
3	70682435	2	BEARING
4	70624584	1	BUSHING
5	70604879	2	WASHER (Use as required)
6	70687760	1	SHAFT
	70915797	1	PIN, spring, 3/16" x 1-1/4"
7	70687744	1	HOUSING
	70927536	2	CAPSCREW, 3/8"NC x 3-3/4"
	70910287	2	LOCKWASHER, 3/8"
8	70078810	1	PIN
	70918448	1	PIN, cotter, 3/32" x 1"
9	70687872	1	ROD
	70911048	1	NUT, 3/8"NF
10	70067502	1	BOOT
11	70067501	1	STRAP
12	70687687	1	YOKE
13	70628738	1	PIN
	70904020	1	PIN, cotter, 1/16" x 1"
14	-----	1	VALVE ASSY., wheel lean (See K-9)

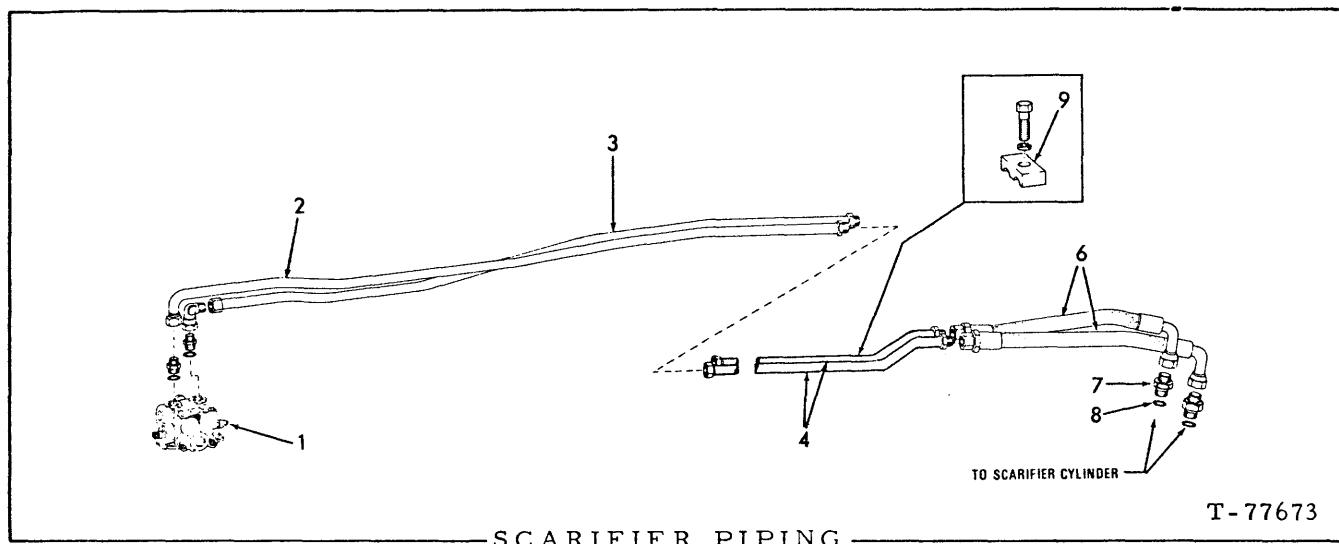


SCARIFIER

T-77678

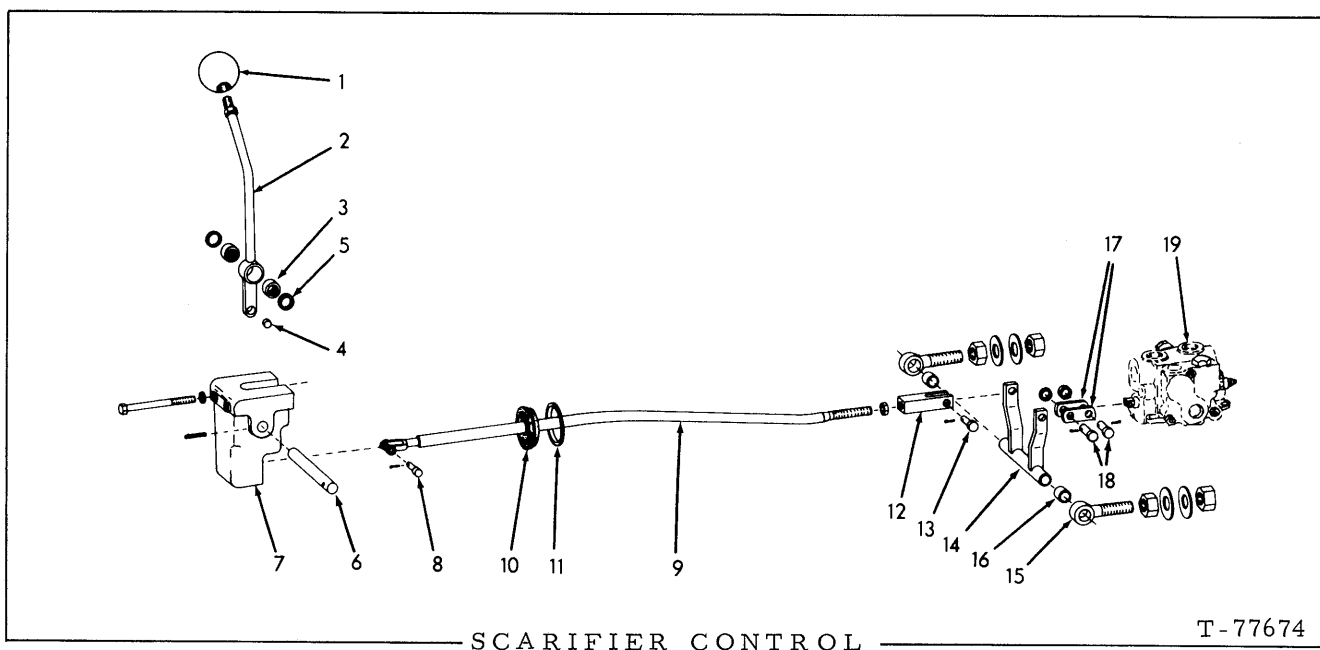
USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70677436	1	FRAME
2	70062160	11	TOOTH, scraifier
3	70677256	11	SHANK, scarifier tooth
4	70602522	11	KEY, shank retaining
5	70677485	1	ARM, frame adjustment (left)
	70677486	1	ARM, frame adjustment (right)
6	70926856	4	CAPSCREW, 1-1/4"NF x 4"
	70914730	4	LOCKWASHER, 1-1/4"
	70913097	2	NUT, 1-1/4"NF
7	70677497	1	SHAFT
	70911061	2	NUT, 1-1/4"NC
	70918392	2	PIN, cotter, 7/32" x 2-1/2"
8	70677498	2	BLOCK (Requires welding to grader frame)
9	70677496	2	BUSHING
10	-----	-	See SCARIFIER LIFT



USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	VALVE ASSY., control (See page 190)
2	70679602	1	TUBE ASSY. (Includes nut)
	70923080	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male end (Includes O-ring)
	70921349	1	O-RING, connector
3	70679604	1	TUBE ASSY. (Includes nut)
	70921325	1	ELBOW, flare type, swivel nut, 5/8" tube
	70923080	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male end (Includes O-ring)
	70921349	1	O-RING, connector
4	70683830	1	TUBE ASSY. (Includes nut)
5	70683829	1	TUBE ASSY. (Includes nut)
6	70679997	2	HOSE (See HOSE PARTS)
7	70689814	2	CONNECTOR, hose
8	70921205	2	O-RING, connector
9	70623355	3	CLAMP, tube
	70921076	3	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	3	LOCKWASHER, 3/8"



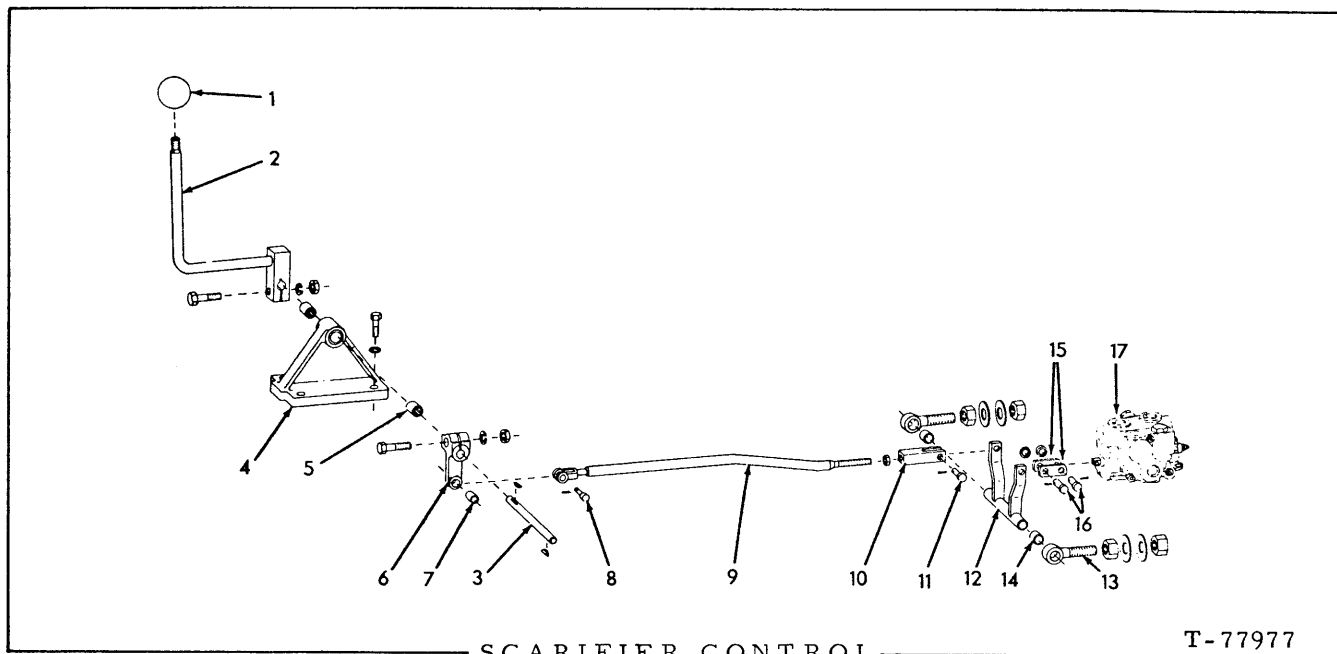
USAGE: Special equipment. Not for units with optional mechanically actuated control box.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	1	KNOB
2	70659577	1	LEVER ASSY. (Includes items 3 and 4)
3	70682435	2	BEARING
4	70624584	1	BUSHING
5	70604879	2	WASHER (Use as required)
6	70687760	1	SHAFT
	70915797	1	PIN, spring, 3/16" x 1-1/4"
7	70687744	1	HOUSING
	70927536	2	CAPSCREW, 3/8"NC x 3-3/4"
	70910287	2	LOCKWASHER, 3/8"
8	70078810	1	PIN
	70918448	1	PIN, cotter, 3/32" x 1"
9	70684197	1	ROD
	70911048	1	NUT, 3/8"NF
10	70067502	1	BOOT
11	70067501	1	STRAP
12	70687687	1	YOKE
13	70628738	1	PIN
	70904020	1	PIN, cotter, 1/16" x 1"
14	70687674	1	LEVER

(Continued)

SCARIFIER CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
15	70689523	2	END ASSY., rod (Includes item 16)
	70928188	4	WASHER, plain
	70911028	4	NUT, 1/2"NC
16	70239532	2	BUSHING
17	70675206	2	LINK
18	70628738	2	PIN
	70928190	2	WASHER, plain
	70904020	2	PIN, cotter, 1/16" x 1"
19	-----	1	VALVE ASSY., scarifier (See page 190)



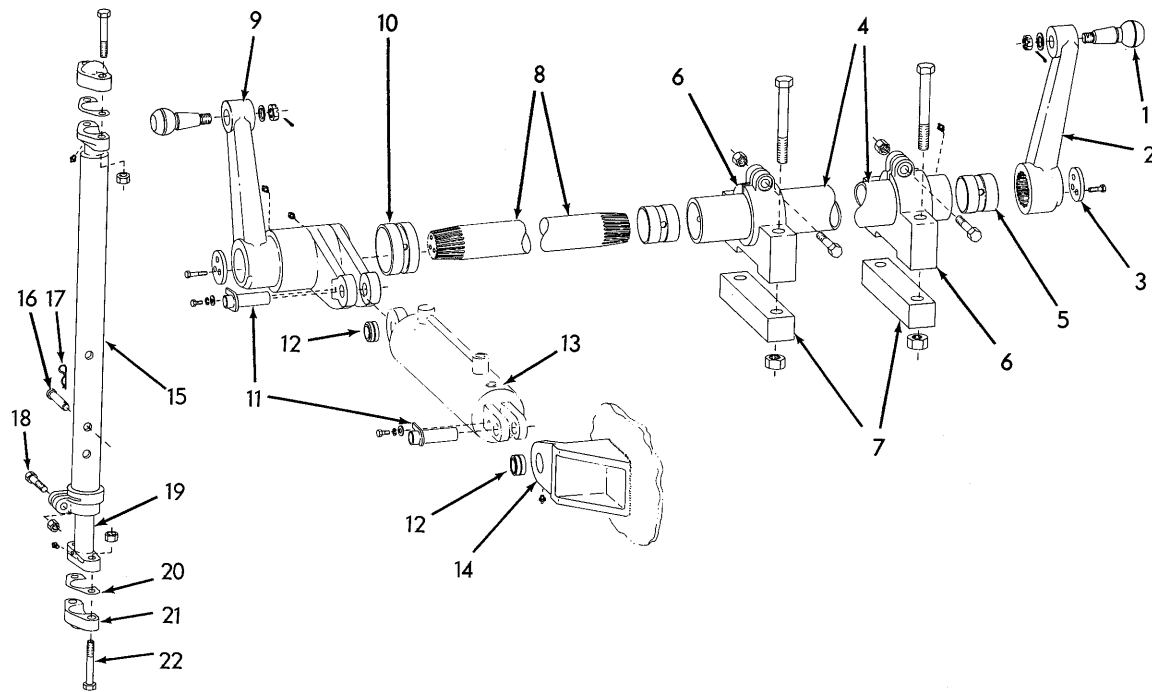
USAGE: Special equipment. For units with optional mechanically - actuated control box

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	1	KNOB
2	70682110	1	LEVER, control
	70921565	1	CAPSCREW, 3/8"NC x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
	70905119	1	KEY, #3 woodruff, 1/8" x 1/2"
3	70682088	1	SHAFT
4	70628999	1	BRACKET ASSY. (Includes item 5)
	70922763	4	CAPSCREW, 3/8"NF x 1"
	70910287	4	LOCKWASHER, 3/8"
5	70655215	2	BEARING
6	70642271	1	LEVER ASSY. (Includes item 7)
	70905119	1	KEY, #3 woodruff, 1/8" x 1/2"
	70920660	1	CAPSCREW, 5/16"NC x 1-1/2"
	70910286	1	LOCKWASHER, 5/16"
	70911025	1	NUT, 5/16"NC
7	70624584	1	BUSHING
8	70078810	1	PIN, yoke
	70918448	1	PIN, cotter, 3/32" x 1"
9	70682149	1	ROD
	70911048	1	NUT, 3/8"NF
10	70687687	1	YOKE
11	70628738	1	PIN
	70904020	1	PIN, cotter, 1/16" x 1"

(Continued)

SCARIFIER CONTROL (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
12	70687674	1	LEVER
13	70689523	2	END ASSY., rod (Includes item 14)
	70928188	4	WASHER, plain
	70911028	4	NUT, 1/2"NC
14	70239532	2	BUSHING
15	70675206	2	LINK
16	70628738	2	PIN
	70928190	2	WASHER, plain
	70904020	2	PIN, cotter, 1/16" x 1"
17	-----	1	VALVE ASSY., scarifier (See page 190)



T-77675

SCARIFIER LIFT

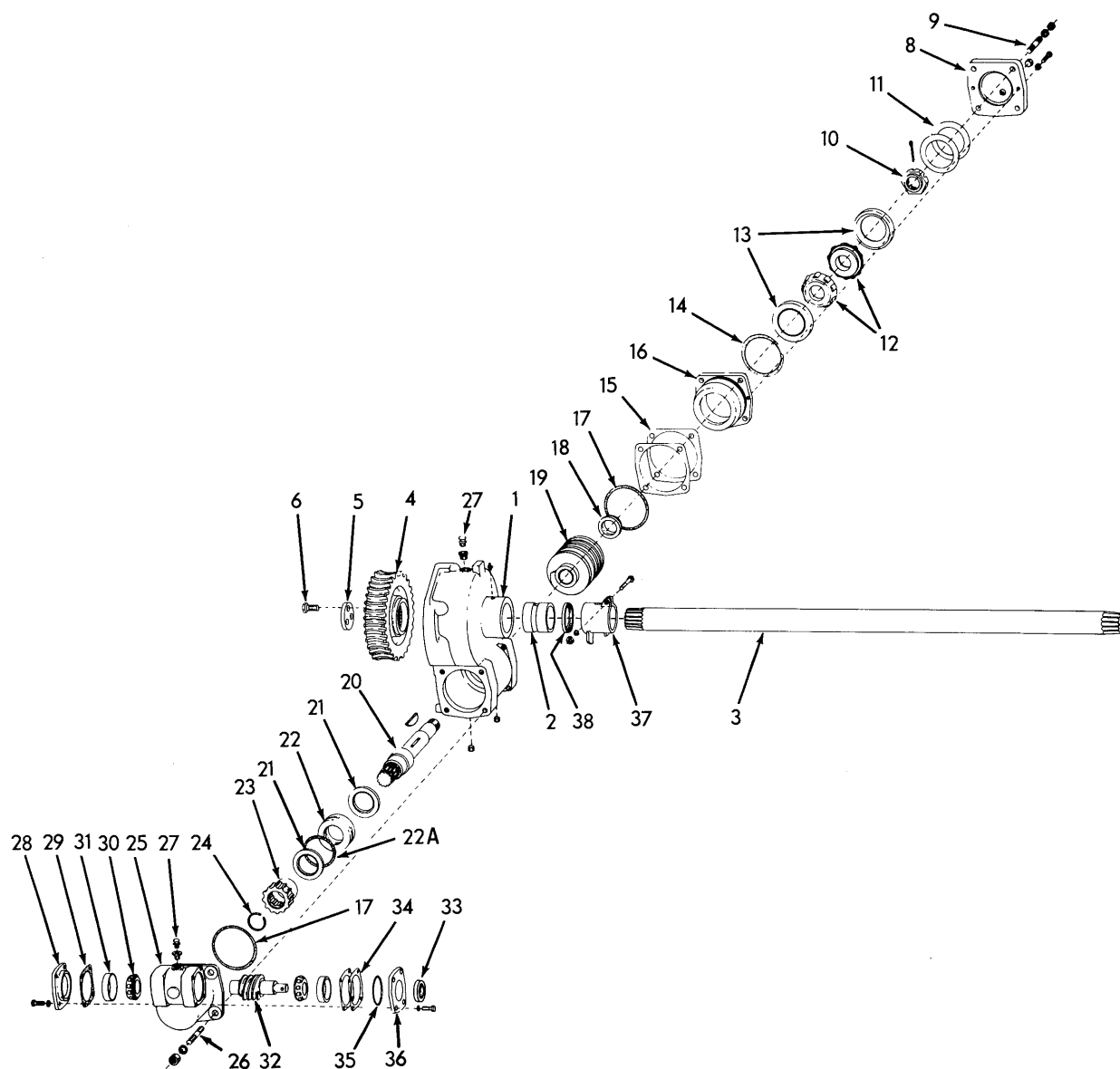
USAGE: Special Equipment

ITEM	PART NO.	QTY	DESCRIPTION
1	70620794	2	BALL
	70900822	2	WASHER, plain
	70911174	2	NUT, 1"NF
	70900808	2	PIN, cotter, 1/8" x 1-1/2"
2	70643090	1	CRANK
3	70099154	2	WASHER
	70927353	6	CAPSCREW, 1/2"NF x 1-1/4"
4	70677428	1	TUBE ASSY. (Includes item 5)
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
5	70622277	2	BUSHING
6	70677292	2	BRACKET
	70925954	2	CAPSCREW, 3/4"NF x 4-1/2"
	70012767	2	NUT, 3/4"NF
	70929039	4	CAPSCREW, 1"NF x 7-1/2"
	70600236	4	NUT, 1"NF
7	70677445	2	BAR (Requires welding to install)
8	70677446	1	SHAFT
9	70677444	1	LEVER ASSY. (Includes item 10)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
10	70677399	1	BUSHING

(Continued)

SCARIFIER LIFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
11	70673051	2	PIN, cylinder mounting
	70922763	2	CAPSCREW, 3/8"NF x 1"
	70929156	2	WASHER, plain
	70910287	2	LOCKWASHER, 3/8"
12	70668028	2	BEARING
13	-----	1	CYLINDER ASSY. (scarifier (See page 131)
14	70678582	1	BRACKET (Requires welding to install
	70912808	1	FITTING, lubricating, straight, 1/4"NPT (Early units)
	70914465	1	FITTING, lubricating, straight, 1/8"NPT (Late units)
15	70677479	2	LINK, scarifier lift
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
16	70620919	2	PIN, coupling, lift link and rod
17	70617855	2	CLIP, pin retaining
18	70923137	2	CAPSCREW, lift link clamping (3/4"NF x 3")
	70012767	2	NUT, high, 3/4"NF
19	70677283	2	ROD, lift link (Graders prior to unit #08335 excluding #08328)
	70099987	2	ROD, lift link (Graders unit #08335 and up including #08328)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
20	70620920	16	SHIM, lift link and rod cap (Use as required)
21	70620479	4	CAP, lift link and rod
22	70924815	8	CAPSCREW, 3/4"NF x 4"
	70012767	8	NUT, high, 3/4"NF



T-38119

SIDE SHIFT GEAR HOUSING ASSEMBLY

USAGE: See page 150. Graders prior to serial No. 27Y09100; also Graders serial No. 57M09101 thru 57M09263.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70651952	1	HOUSING ASSY. (Includes item 2)
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
	70908944	2	PLUG, pipe, hex-socket, 1/2"NPT
2	70684434	1	BUSHING, housing

(Continued)

SIDE SHIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
3	70678693	1	SHAFT, worm gear
4	70648488	1	GEAR, worm (Graders prior to unit #08029)
	70689351	1	GEAR, worm (Grader unit #08029 thru #08864)
	70695948	1	GEAR, worm (Grader unit #08865 and up)
5	70099154	1	WASHER, gear retaining
6	70927353	3	CAPSCREW, 1/2"NF x 1-1/4"
8	70621644	1	CAP, worm shaft
	70912725	1	PLUG, pipe, 1/2"NPT
	70921565	2	CAPSCREW, 3/8"NC x 1-1/2"
	70910287	2	LOCKWASHER, 3/8"
9	70621647	4	STUD (5/8" diam.)
	70912942	4	LOCKWASHER, 5/8"
	70911044	4	NUT, 5/8"NF
10	70649576	1	NUT, worm shaft
	70910024	1	PIN, cotter, 3/16"x 2-1/2"
11	70642837	2	SHIM (.003" thick)
	70629035	2	SHIM (.005" thick)
	70629034	4	SHIM (.010" thick)
			} Use as required
12	70075142	2	CONE ASSY., worm shaft, left
13	70075143	2	CUP, worm shaft bearing, left
14	70923590	1	O-RING, bearing retainer (5" O.D.)
15	70622290	2	SHIM (.005" thick)
	70620872	6	SHIM (.010" thick)
			} Use as required
16	70621643	1	RETAINER, left worm shaft bearing
17	70923823	2	O-RING, bearing retainer (5-3/8" O.D.)
18	70621660	1	SPACER, worm
19	70094917	1	WORM, gear driving
	70911238	1	KEY, #U woodruff, 7/16" x 2-3/4"
20	70621655	1	SHAFT, worm
21	70621659	2	SPACER, right worm shaft bearing
22	70621652	1	BEARING, worm shaft, right
22A	70923817	1	O-RING (Graders unit #08375 and up including #08373)
23	70630304	1	GEAR, worm (right hand)
24	70050293	1	RING, snap, gear retaining
25	70621642	1	HOUSING, input drive
	70901652	1	PLUG, pipe, 1/4"NPT
26	70621648	4	STUD (5/8" diam.)
	70912942	4	LOCKWASHER, 5/8"
	70911044	4	NUT, 5/8"NF

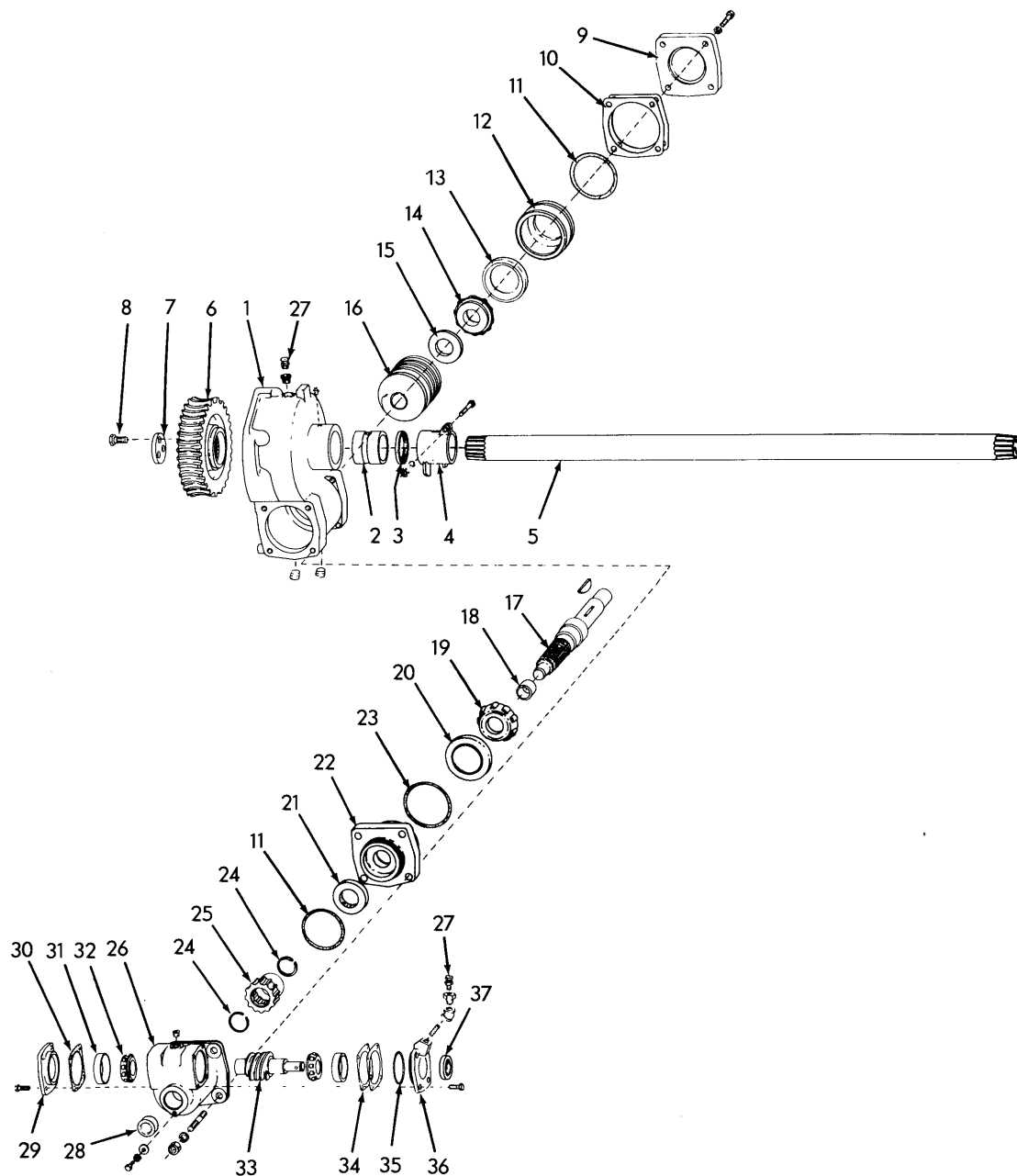
(Continued)

(Revised May 1977)

SIDE SHIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION	
27	70634161	2	PLUG, vent (1/8"NPT)	
	70904269	2	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT	
28	70658766	1	CAP, worm rear bearing	
	70927173	4	CAPSCREW, 3/8"NC x 1-1/8"	
	70910287	4	LOCKWASHER, 3/8"	
29	70620609	1	GASKET, worm rear bearing cap	
30	70611769	2	CONE ASSY., worm	
31	70202573	2	CUP, worm bearing	
32	70684271	1	WORM, input (right hand)	
33	70620871	1	SEAL, input worm	
34	70642836	2	SHIM, adjusting, worm front bearing (.003" thick)	} Use as required
	70642835	2	SHIM, adjusting, worm front bearing (.005" thick)	
	70620607	8	SHIM, adjusting, worm front bearing (.010" thick)	
35	70923816	1	O-RING, bearing cap	
36	70658698	1	CAP, worm front bearing	
	70927173	4	CAPSCREW, 3/8"NC x 1-1/8"	
	70910287	4	LOCKWASHER, 3/8"	
37	70678682	1	CAM	
	70927174	1	CAPSCREW, 3/8"NC x 2-1/2"	
	70910287	1	LOCKWASHER, 3/8"	
	70911026	1	NUT, 3/8"NC	
38	73011115	1	SEAL	

MEMO



SIDE SHIFT GEAR HOUSING ASSEMBLY

T-78222

USAGE: See page 150. Graders Serial No. 57 M09264 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	70651952	1	HOUSING ASSY. (Includes item 2)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
	70908944	2	PLUG, pipe, hex-socket, 1/2"NPT
2	70684434	1	BUSHING, housing
3	73011115	1	SEAL

(Continued)

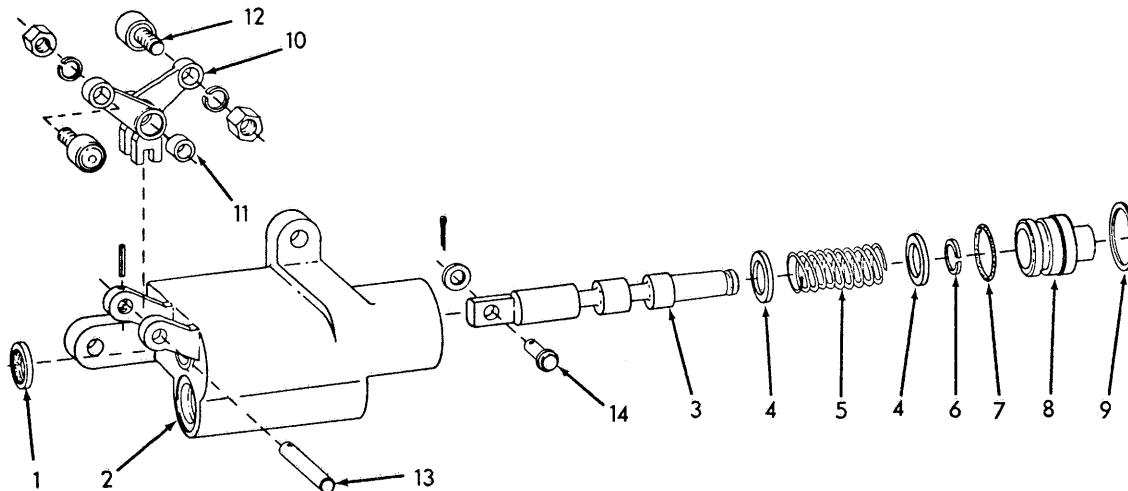
SIDE SHIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
4	70687682	1	CAM
	70927174	1	CAPSCREW, 3/8"NC x 2-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC
5	70678693	1	SHAFT, worm gear
6	70695948	1	GEAR, worm
7	70099154	1	WASHER, gear retaining
8	70927353	3	CAPSCREW, 1/2"NF x 1-1/4"
9	70677330	1	CAP, worm shaft
	70926774	4	CAPSCREW, Nylok, 5/8"NC x 1-3/4"
	70912942	4	LOCKWASHER, 5/8"
10	70677602	5	SHIM, adjusting, left worm shaft bearing (.002" thick)
	70677603	4	SHIM, adjusting, left worm shaft bearing (.003" thick)
	70677604	9	SHIM, adjusting, left worm shaft bearing (.010" thick)
11	70923823	2	O-RING, bearing retainer (5-3/8" O.D.)
12	70677324	1	RETAINER, left worm shaft bearing
13	70075143	1	CUP, worm shaft bearing, left
14	70075142	1	CONE ASSY., worm shaft, left
15	70649135	1	SPACER, worm
16	70634043	1	WORM, gear driving
	70911238	1	KEY, #U woodruff, 7/16" x 2-3/4"
17	70677595	1	SHAFT ASSY., worm (Includes item 18)
18	70677594	1	RACE, shaft
19	73022037	1	CONE ASSY.
20	70059934	1	CUP
21	70677791	1	SEAL
22	70677332	1	RETAINER, bearing
23	70923819	1	O-RING
24	70677792	2	RING, snap, gear retaining
25	70677618	1	GEAR, worm (right hand)
26	70677328	1	HOUSING
	70908944	1	PLUG, pipe, hex-socket, 1/2"NPT
	70901652	1	PLUG, pipe, 1/2"NPT
	70605416	4	STUD, (5/8" diam.)
	70912942	4	LOCKWASHER, 5/8"
	70911029	4	NUT, 5/8"NC
27	70634161	2	PLUG, vent
	70904269	2	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT
	70901693	1	ELBOW, pipe, 45°, 1/2"NPT
	70901501	1	NIPPLE, pipe, 1/2"NPT x 1-1/2"
28	70677593	1	BEARING, worm shaft, right
	70922924	1	CAPSCREW, 5/16"NC x 1/2"
	70910286	1	LOCKWASHER, 5/16"
	70901165	1	WASHER, plain

(Continued)

SIDE SHIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION	
29	70677326	1	CAP, worm rear bearing	
	70677816	4	CAPSCREW, 3/8"NC x 1-1/8"	
30	70620609	1	GASKET, worm rear bearing cap	
31	70202573	2	CUP, worm bearing	
32	70611769	2	CONE ASSY., worm	
33	70677582	1	WORM, input (right hand)	
34	70642836	2	SHIM, adjusting, worm front bearing (.0003" thick)	} Use as required
	70642835	2	SHIM, adjusting, worm front bearing (.005" thick)	
	70620607	8	SHIM, adjusting, worm front bearing (.010" thick)	
35	70923816	1	O-RING, bearing cap	
36	70677816	4	CAPSCREW, 3/8"NC x 1"	
37	70620871	1	SEAL, input worm	



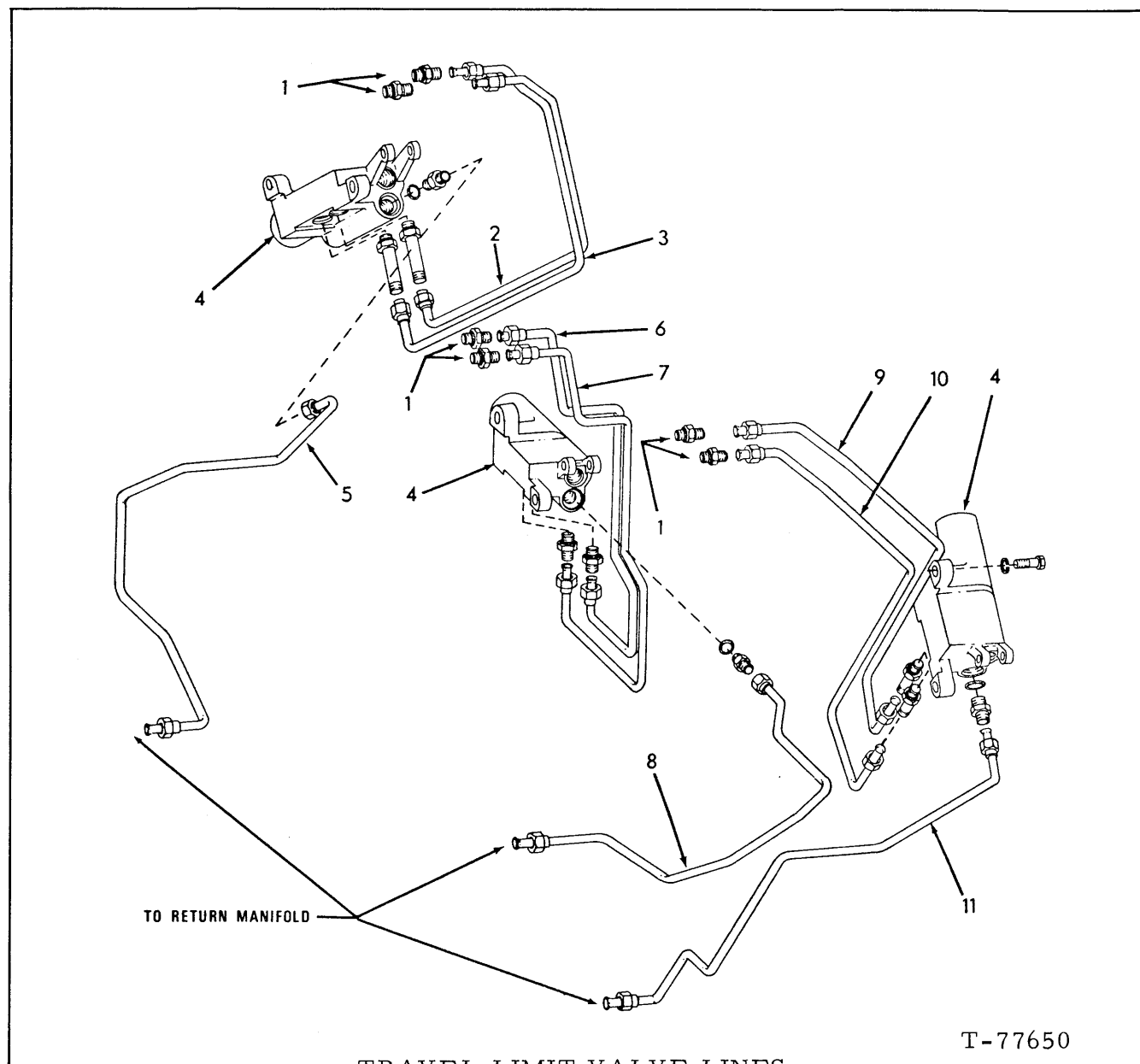
TRAVEL LIMIT VALVE

T-77651

USAGE: See page 148

ITEM	PART NO.	QTY.	DESCRIPTION
-	70678894	3	VALVE ASSY., travel limit (Includes items 1 thru 10)
1	70687476	3	SEAL
2	-----	3	HOUSING (Not serviced)
3	70678686	3	SPOOL
4	70680790	6	WASHER
5	70647108	3	SPRING
6	70929389	3	RING, snap
7	70923811	3	O-RING
8	70678695	3	CAP
9	70928826	3	RING, snap
10	70678931	3	LEVER ASSY. (Includes item 11)
11	70929691	6	BEARING
12	70656546	6	FOLLOWER, cam
	70910287	6	LOCKWASHER, 3/8"
	70911048	6	NUT, 3/8"NF
13	70678685	3	PIN, lever pivot
	70916014	3	PIN, spring, 3/32" x 3/4"
14	70640190	3	PIN, attaching, lever to plunger
	70910335	3	WASHER, plain
	70904001	3	PIN, cotter, 3/32" x 1/2"

Not included in
Valve Assembly



TRAVEL LIMIT VALVE LINES

USAGE: Standard. Not for units w/optional mechanically actuated control box.

*Graders prior to serial No. 27Y09100 also
Grader serial No. 57M09101 thru 57M09263.
**Grader serial No. 57M09264 and up.

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	
1	-----	2 2	See CONTROL BOX SHIFTING FORKS
2	70683537	1 -	TUBE ASSY. } Each includes nuts
	70681845	- 1	TUBE ASSY. }

(Continued)

TRAVEL LIMIT VALVE LINES (Continued)

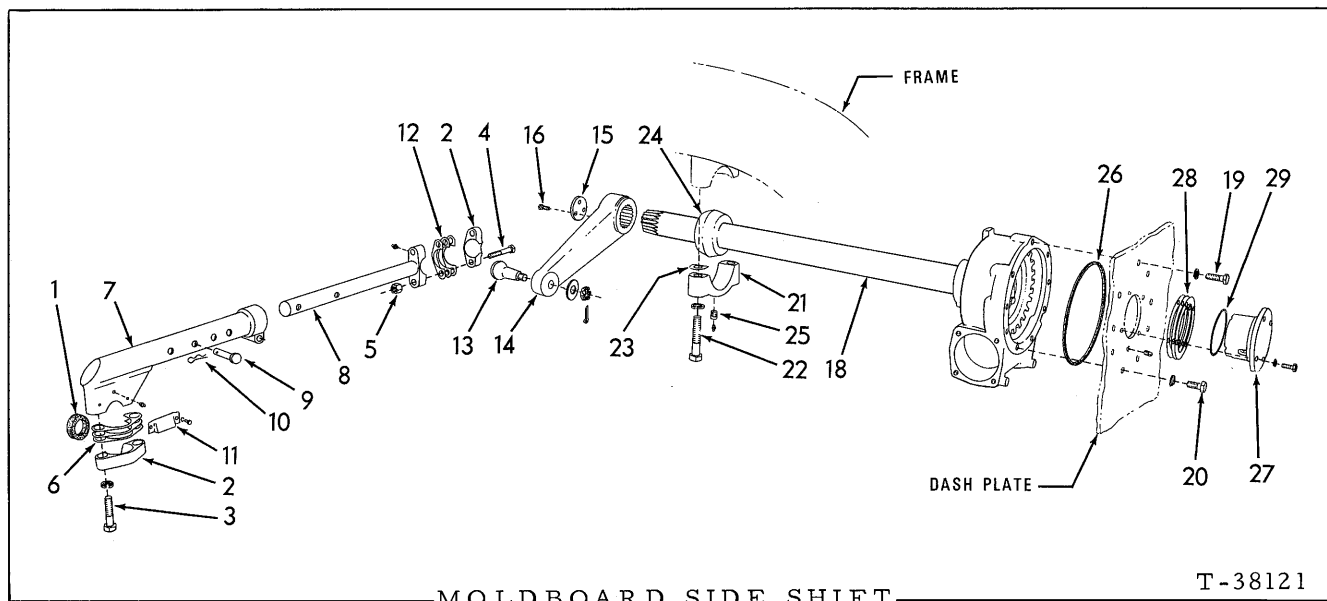
ITEM	PART NO.	QTY. * **	DESCRIPTION
3	70683536	1 -	TUBE ASSY. }
	70681866	- 1	TUBE ASSY. }
	70924403	1 1	CONNECTOR, flare type, 1/2" tube, 9/16"NF male end (Includes O-RING)
	70921885	1 1	O-RING, connector
	70927571	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
4	70921349	1 1	O-RING, connector
	-----	3 3	VALVE ASSY., (See page 147)
	70921076	6 6	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	6 6	LOCKWASHER, 3/8"
5	70683538	1 -	TUBE ASSY. }
	70681867	- 1	TUBE ASSY. }
	70921409	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector
6	70681871	1 1	TUBE ASSY. (Includes nuts)
	70924403	1 1	CONNECTOR, flare type, 1/2" tube, 9/16"NF male end (Includes O-RING)
	70921885	1 1	O-RING, connector
	70921409	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector
7	70681872	1 1	TUBE ASSY. (Includes nuts)
	70924403	1 1	CONNECTOR, flare type, 1/2" tube, 9/16"NF male end (Includes O-RING)
	70921885	1 1	O-RING, connector
	70921409	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector
8	70681873	1 1	TUBE ASSY. (Includes nuts)
	70921409	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector
	70683534	1 -	TUBE ASSY. }
9	70681869	- 1	TUBE ASSY. }
	70924403	1 1	CONNECTOR, flare type, 1/2" tube, 9/16"NF male end (Includes O-RING)
	70921885	1 1	O-RING, connector
	70927571	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector
10	70683533	1 -	TUBE ASSY. }
	70681868	- 1	TUBE ASSY. }
	70924403	1 1	CONNECTOR, flare type, 1/2" tube, 9/16"NF male end (Includes O-RING)
	70921885	1 1	O-RING, connector
	70927571	1 1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)
	70921349	1 1	O-RING, connector

(Continued)

TRAVEL LIMIT VALVE LINES (Continued)

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
11	70683535	1	-	TUBE ASSY. }
	70681870	-	1	TUBE ASSY. } Each includes nuts
	70921409	1	1	CONNECTOR, flare type, 1/2" tube, 3/4"NF
				male end (Includes O-RING)
	70921349	1	1	O-RING, connector

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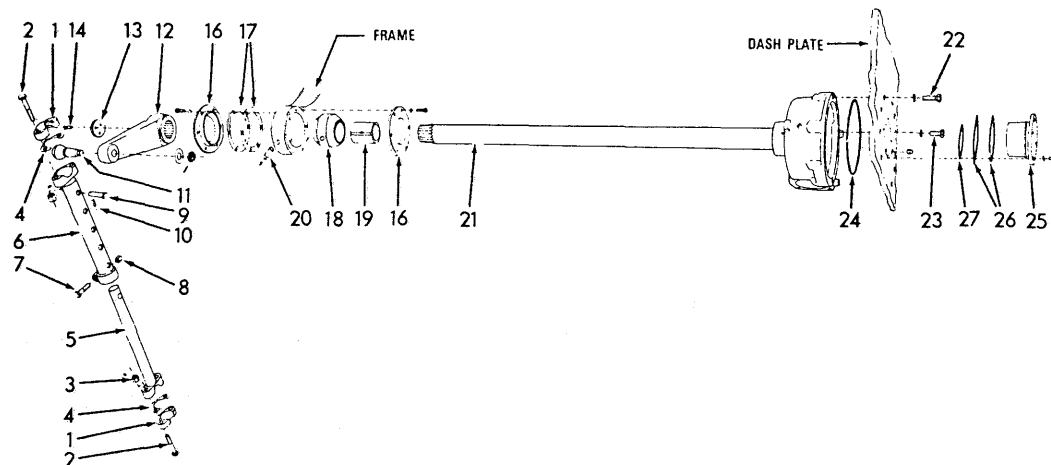


ITEM	PART NO.	QTY.	DESCRIPTION
1	70633456	1	RING, cushioning, link rod (rubber)
2	70620479	2	CAP, socket
3	70922544	2	CAPSCREW, 3/4"NC x 2-3/4"
4	70924815	2	CAPSCREW, 3/4"NF x 4"
	70914726	2	LOCKWASHER, 3/4"
5	70012767	2	NUT, high, 3/4"NF
6	70622291	16	SHIM, socket cap (Use as required)
7	70666279	1	LINK, rod adjusting
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
8	70630619	1	ROD, link
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
9	70620919	1	PIN, coupling, link rod and tube
10	70617855	1	CLIP, retaining, coupling pin
11	70629021	1	COVER, socket
	70929002	2	CAPSCREW, 1/4"NC x 3/4"
	70910285	2	LOCKWASHER, 1/4"
12	70620920	8	SHIM, socket cap (Use as required)
13	70620794	1	BALL, coupling, crank
	70900822	1	WASHER, plain, U.S. std., 1"
	70911174	1	NUT, jam, slotted, 1"NF
	70900808	1	PIN, cotter, 1/8" x 1-1/2"
14	70620853	1	CRANK
15	70099154	1	WASHER, crank retaining
16	70927353	3	CAPSCREW, 1/2"NF x 1-1/4"

(Continued)

MOLDBOARD SIDE SHIFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
18	-----	1	HOUSING ASSY. (See page 144)
19	70921068	6	CAPSCREW, 3/4"NC x 2-1/4"
20	70929023	2	CAPSCREW, Nylok, 3/4"NC x 1-3/4"
	70677012	8	WASHER, plain
21	70078275	1	CAP
22	70927637	2	CAPSCREW, 1"NF x 4-3/4"
	70914728	2	LOCKWASHER, 1"
23	70075150	6	SHIM (1/32" thick) } Use as required
	70075151	10	SHIM (.012" thick) }
24	70075234	1	BEARING
25	70605307	1	NIPPLE, anchor
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
26	70633336	1	SEAL (rubber)
27	70649547	1	CAP
	70901653	1	PLUG, pipe, hex-socket, 3/8"NPT
	70920582	4	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
28	70651468	5	SHIM (.002" thick) } Use as required
	70623343	2	SHIM (.005" thick) }
	70623342	9	SHIM (.010" thick) }
29	70923590	1	O-RING



MOLDBOARD LIFT

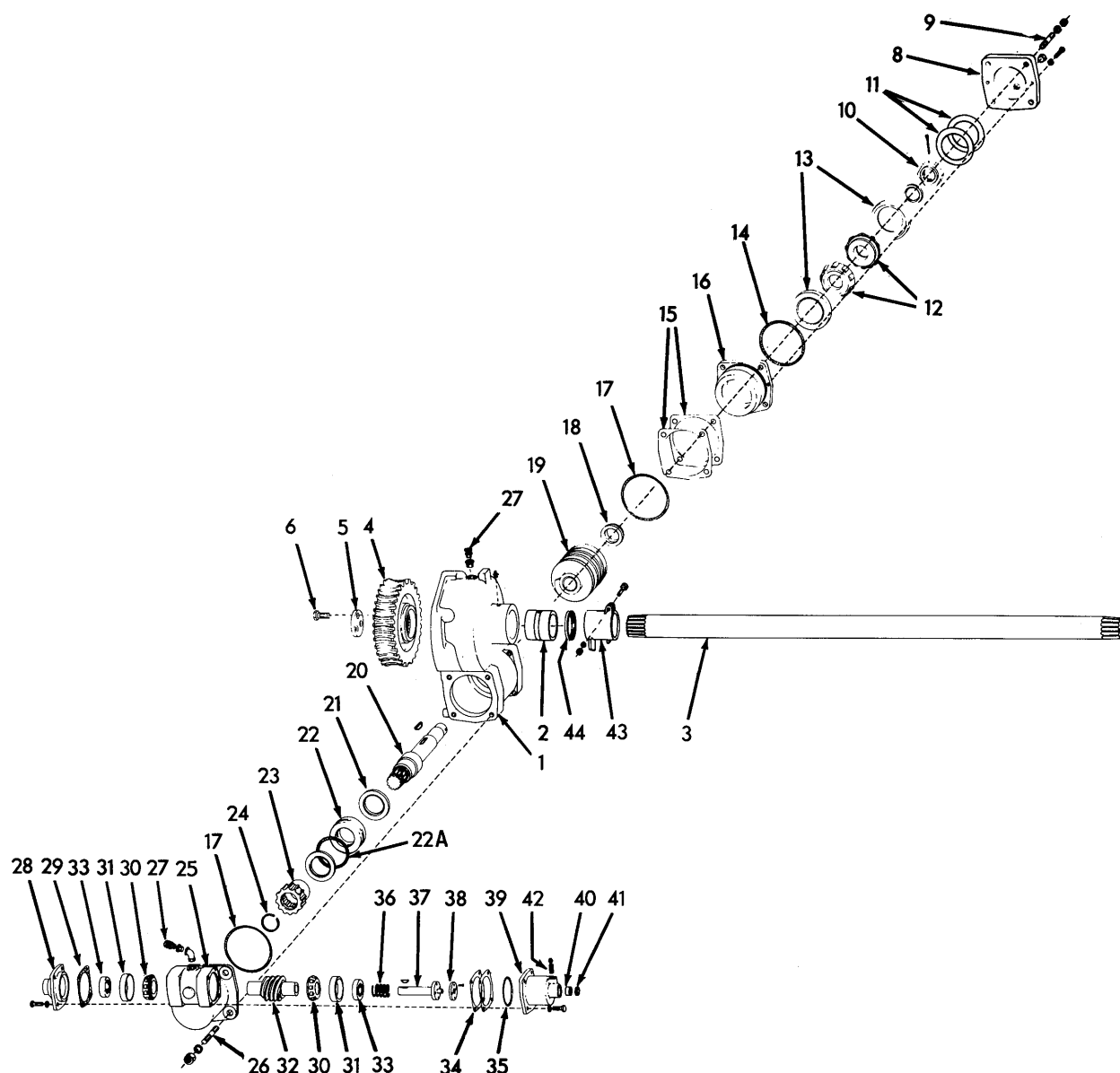
T-37259

ITEM	PART NO.	QTY.	DESCRIPTION
1	70620479	4	CAP, socket
2	70924815	8	CAPSCREW, 3/4"NF x 4"
3	70012767	8	NUT, high, 3/4"NF
4	70620920	32	SHIM, socket cap (Use as required)
5	70643325	2	ROD, link (23-3/4" long)
	70915276	2	FITTING, lubricating, 90°, 1/8"NPT
6	70664917	2	LINK, rod adjusting (24-7/8" long)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
7	70923137	2	CAPSCREW, 3/4"NF x 3"
8	70012767	2	NUT, high, 3/4"NF
9	70620919	2	PIN, coupling, adjusting link and rod
10	70617855	2	CLIP, retaining, coupling pin
11	70620794	2	BALL, lift crank
	70900822	2	WASHER, plain, U.S. std., 1"
	70911174	2	NUT, jam, slotted, 1"NF
	70900808	2	PIN, cotter, 1/8" x 1-1/2"
12	70643090	2	CRANK, lift (14" long)
13	70099154	2	WASHER, crank retaining
14	70927204	6	CAPSCREW, 1/2"NF x 1-1/4"
16	70648346	4	CAP, bearing
	70920574	24	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	24	LOCKWASHER, 1/2"
17	70620801	6	SHIM, bearing cap (.005" thick. Use as required)
	70620800	12	SHIM, bearing cap (.010" thick. Use as required)
18	70620798	2	BEARING ASSY., worm gear shaft (Includes item 19)
19	70620797	2	BUSHING, worm gear shaft bearing

(Continued)

MOLDBOARD LIFT (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
20	70650174	2	ADAPTER, lubricating fitting
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
21	-----	2	HOUSING ASSY. (See page 154)
22	70921068	14	CAPSCREW, 3/4"NC x 2-1/4"
23	70929023	4	CAPSCREW, Nylok, 3/4"NC x 1-3/4"
	70677012	18	WASHER, plain
24	70633336	2	SEAL, gear and housing assy. (rubber)
25	70649547	2	CAP, thrust, worm gear
	70901653	2	PLUG, pipe, 3/8"NPT
	70920582	8	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	8	LOCKWASHER, 1/2"
26	{ 70651468	10	SHIM, thrust cap (.002" thick)
	{ 70623343	4	SHIM, thrust cap (.005" thick)
	{ 70623342	18	SHIM, thrust cap (.010" thick)
			} Use as required
27	70923590	2	O-RING, worm gear thrust cap



MOLDBOARD LIFT GEAR HOUSING ASSEMBLY T-38120

USAGE: See page 152. Graders prior to serial NO. 27Y09100; also Graders serial No. 57M09101 thru 57M09263.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70651952	2	HOUSING ASSY. (Includes item 2)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
2	70684434	2	BUSHING, housing
3	70678694	2	SHAFT, worm gear

(Continued)

MOLDBOARD LIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
4	70648488	2	GEAR, worm (Graders prior to unit #08029)
	70689351	2	GEAR, worm (Graders unit #08029 thru #08864)
	70695948	2	GEAR, worm (Grader unit #08865 and up)
5	70099154	2	WASHER, gear retaining
6	70927204	6	CAPSCREW, 1/2"NF x 1-1/4"
8	70621644	2	CAP, worm shaft
	70912725	2	PLUG, pipe, 1/2"NPT
	70921076	4	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	4	LOCKWASHER, 3/8"
9	70621647	8	STUD (5/8" diam.)
	70912942	8	LOCKWASHER, 5/8"
	70911044	8	NUT, 5/8"NF
10	70649576	2	NUT, worm shaft
	70910024	2	PIN, cotter, 3/16" x 2-1/2"
11	70642837	4	SHIM (.003" thick)
	70629035	4	SHIM (.005" thick)
	70629034	8	SHIM, (.010" thick)
12	70075142	4	CONE ASSY., worm shaft, left
13	70075143	4	CUP, worm shaft bearing, left
14	70923590	2	O-RING, bearing retainer (5" O.D.)
15	70622290	4	SHIM (.005" thick)
	70620872	12	SHIM (.010" thick)
16	70621643	2	RETAINER, left worm shaft bearing
17	70923823	4	O-RING, bearing retainer (5-3/8" O.D.)
18	70621660	2	SPACER, worm
19	70094917	2	WORM, gear driving
	70911238	2	KEY, #U woodruff, 7/16" x 2-3/4"
20	70621655	2	SHAFT, worm
21	70621659	4	SPACER, right worm shaft bearing
22	70621652	2	BEARING, worm shaft, right
22A	70923817	1	O-RING (Graders unit #08375 and up including #08373)
23	70620727	2	GEAR, worm (left hand)
24	70050293	2	RING, snap, gear retaining
25	70621642	2	HOUSING, input drive
	70901652	2	PLUG, pipe, 1/4" NPT
26	70621648	8	STUD (5/8" diam.)
	70912942	8	LOCKWASHER, 5/8"
	70911044	8	NUT, 5/8"NF
27	70634161	4	PLUG, vent (1/8"NPT)
	70904269	4	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT
	70915493	2	ELBOW, street, 45°, 1/2"NPT

(Continued)

(Revised May 1977)

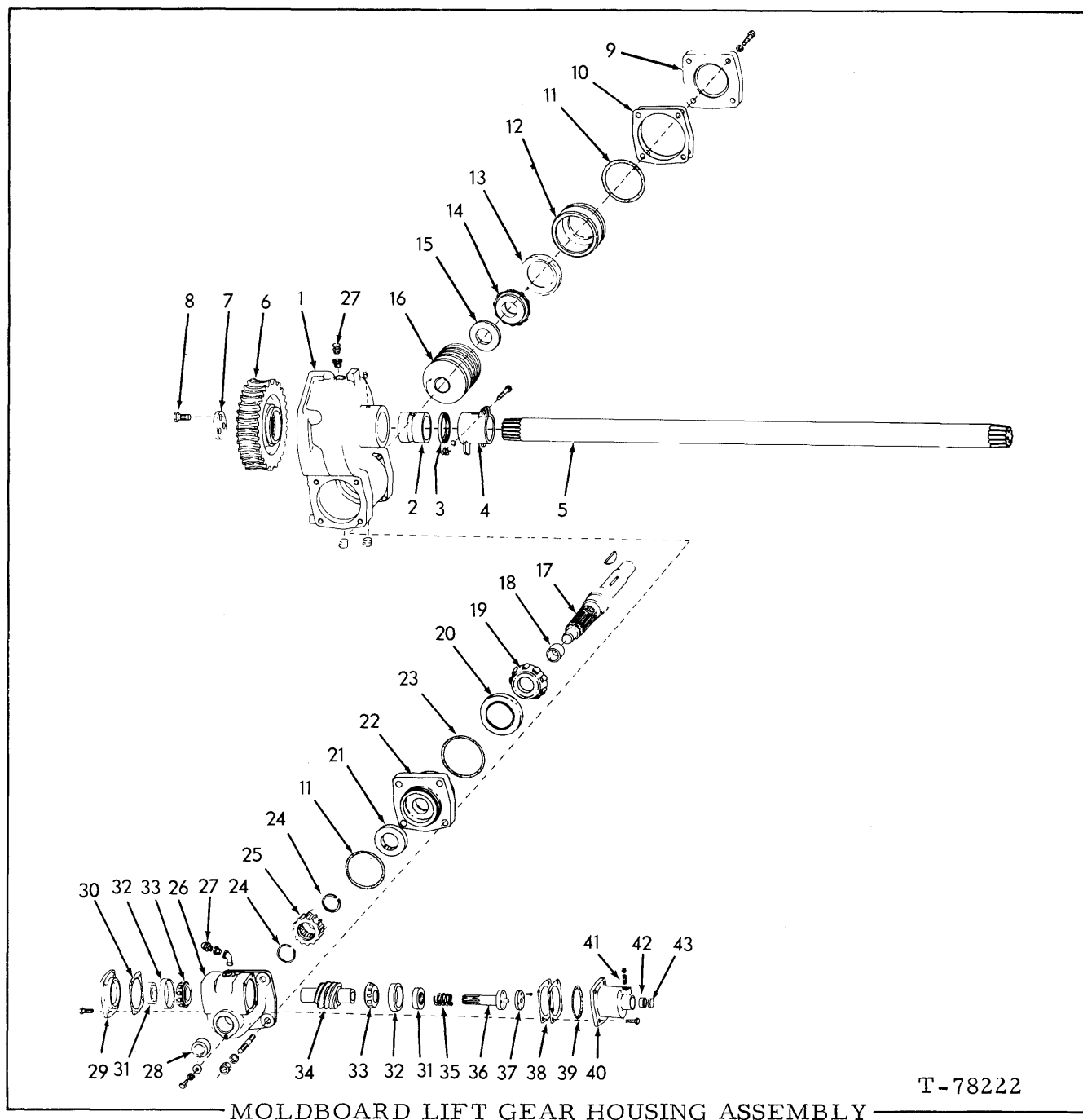
MOLDBOARD LIFT GEAR HOUSING ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
28	70649546	2	CAP, worm rear bearing
	70927173	8	CAPSCREW, 3/8"NC x 1-1/8"
	70910287	8	LOCKWASHER, 3/8"
29	70620609	2	GASKET, worm rear bearing cap
30	70611769	4	CONE ASSY., worm
31	70202573	4	CUP, worm bearing
32	70620726	2	WORM, input (left hand)
33	70620871	4	SEAL, input worm
34	70642836	4	SHIM, adjusting, worm front bearing (.002" thick)
	70642835	4	SHIM, adjusting, worm front bearing (.005" thick)
	70620607	16	SHIM, adjusting, worm front bearing (.010" thick)
35	70923816	2	O-RING, brake shaft housing
36	73110069	2	SPRING, worm brake shaft
37	70656184	2	SHAFT ASSY., worm brake (Includes item 39)
	70921426	2	KEY, #127 woodruff, 1/4" x 2-1/8"
38	70656186	2	LINING, worm brake shaft
	70921387	8	RIVET, tubular, brass, fl-hd., 9/64" x 5/8"
39	70656175	2	HOUSING ASSY., worm brake (Includes items 40 thru 42; also PLUG indented below)
	70901651	2	PLUG, pipe, 1/8"NPT
	70927173	8	CAPSCREW, 3/8"NC x 1-1/8"
	70910287	8	LOCKWASHER, 3/8"
40	70085203	2	BUSHING, worm brake housing
41	70656169	2	PLUG, cup, worm brake housing
42	70653782	2	WICK, oiling, worm brake shaft
43	70678649	2	CAM
	70927174	2	CAPSCREW, 3/8"NC x 2-1/2"
	70910287	2	LOCKWASHER, 3/8"
	70911026	2	NUT, 3/8"NC
44	73011115	2	SEAL

Use as
required

(Revised May 1977)

MEMO



USAGE: See page 152. Grader serial No. 57M09264 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	70651952	2	HOUSING ASSY. (Includes item 2)
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
	70908944	4	PLUG, pipe, hex-socket, 1/2"NPT
2	70684434	2	BUSHING, housing
3	73011115	2	SEAL

(Continued)

MOLDBOARD LIFT GEAR HOUSING ASSEMBLY (Continued)

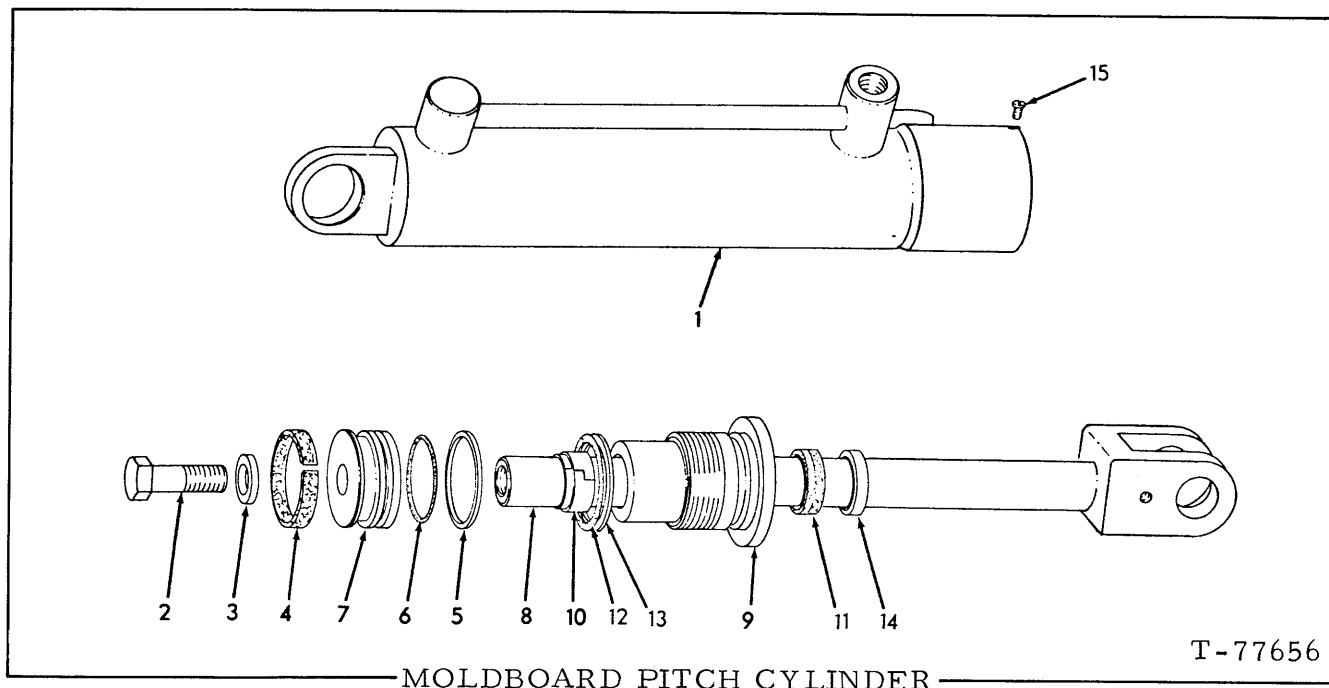
ITEM	PART NO.	QTY.	DESCRIPTION	
4	70678649	2	CAM	
	70927174	2	CAPSCREW, 3/8"NC x 2-1/2"	
	70910287	2	LOCKWASHER, 3/8"	
	70911026	2	NUT, 3/8"NC	
5	70678694	2	SHAFT, worm gear	
6	70695948	2	GEAR, worm	
7	70099154	2	WASHER, gear retaining	
8	70927204	6	CAPSCREW, 1/2"NF x 1-1/8"	
9	70677330	2	CAP, worm shaft	
	70926774	8	CAPSCREW, Nylok, 5/8"NC x 1-3/4"	
	70912942	8	LOCKWASHER, 5/8"	
10	70677602	10	SHIM, adjusting, left worm shaft bearing (.002" thick)	} Use as required
	70677603	8	SHIM, adjusting, left worm shaft bearing (.003" thick)	
	70677604	18	SHIM, adjusting, left worm shaft bearing (.010" thick)	
11	70923823	4	O-RING, bearing retainer (5-3/8" O. D.)	
12	70677324	2	RETAINER, left worm shaft bearing	
13	70075143	2	CUP, worm shaft bearing, left	
14	70075142	2	CONE ASSY., worm shaft, left	
15	70649135	2	SPACER, worm	
16	70634043	2	WORM, gear driving	
	70911238	2	KEY, #U woodruff, 7/16" x 2-3/4"	
17	70677595	2	SHAFT ASSY., worm (Includes item 18)	
18	70677594	2	RACE, shaft	
19	73022037	2	CONE ASSY.	
20	70059934	2	CUP	
21	70677791	2	SEAL	
22	70677332	2	RETAINER, bearing	
23	70923819	2	O-RING	
24	70677792	4	RING, snap, gear retaining	
25	70677617	2	GEAR, worm (left hand)	
26	70677328	2	HOUSING, input drive	
	70901652	2	PLUG, pipe, 1/4" NPT	
	70605416	8	STUD (5/8" diam.)	
	70912942	8	LOCKWASHER, 5/8"	
	70911029	8	NUT, 5/8"NC	
27	70634161	4	PLUG, vent (1/8" NPT)	
	70904269	4	BUSHING, pipe reducing, 1/2" NPT to 1/8" NPT	
	70915493	2	ELBOW, street, 45°, 1/2" NPT	
28	70677593	2	BEARING, worm shaft, right	
	70922924	2	CAPSCREW, 5/16"NC x 1/2"	
	70910286	2	LOCKWASHER, 5/16"	
	70901165	2	WASHER, plain	
29	70677322	2	CAP, worm rear bearing	
	70677816	8	CAPSCREW, 3/8"NC x 1-1/8"	
30	70620609	2	GASKET, worm rear bearing cap	

(Continued)

MOLDBOARD LIFT GEAR HOUSING ASSEMBLY (Continued)

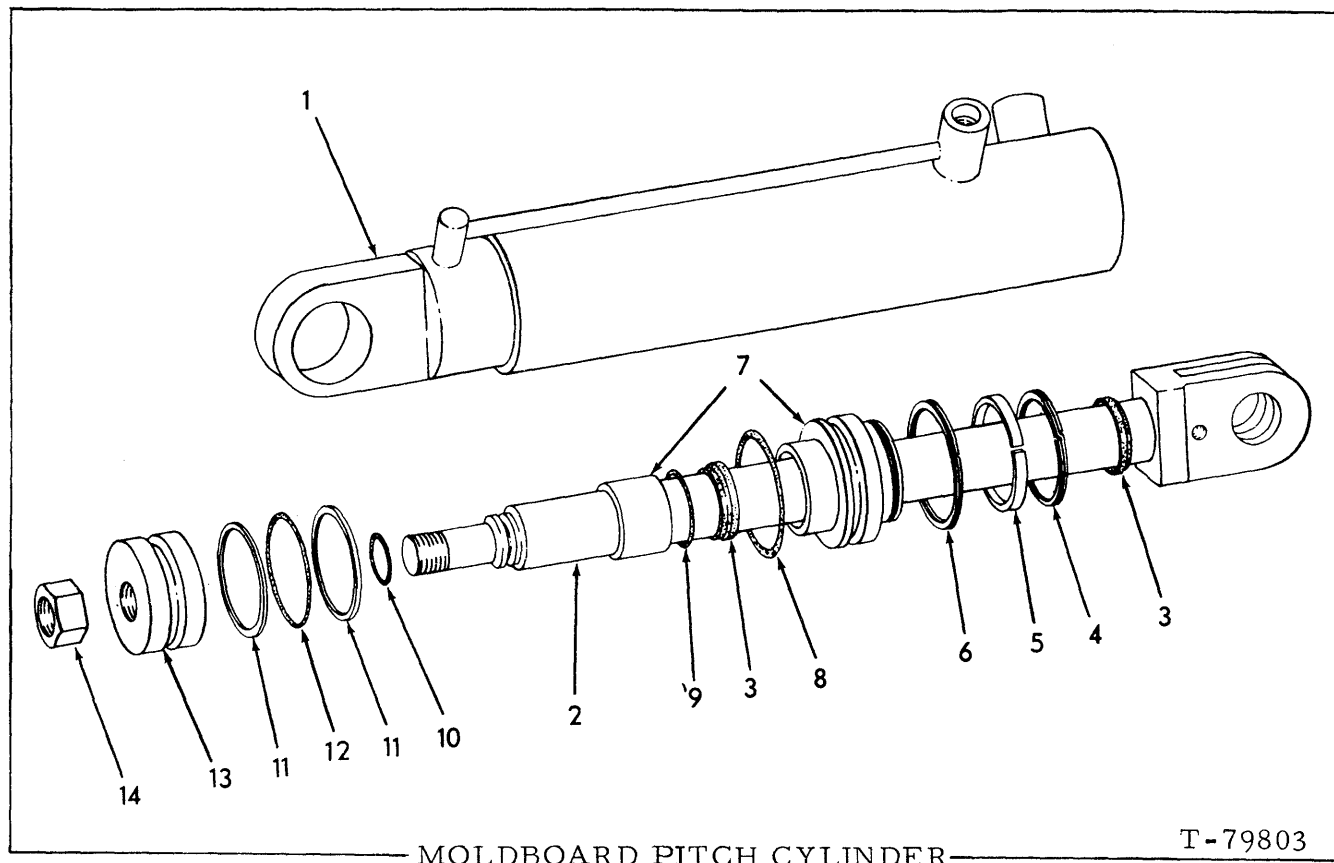
ITEM	PART NO.	QTY.	DESCRIPTION	
31	70620871	4	SEAL, input worm	
32	70202573	4	CUP, worm bearing	
33	70611769	4	CONE ASSY., worm	
34	70677614	2	WORM, input (left hand)	
35	73110069	2	SPRING, worm brake shaft	
36	70677770	2	SHAFT ASSY., worm brake (Includes item 37)	
37	70656186	2	LINING, worm brake shaft	
	70921387	8	RIVET, tubular, brass, fl-hd., 9/64" x 5/8"	
38	70642836	4	SHIM, adjusting, worm front bearing (.002" thick)	} Use as required
	70642835	4	SHIM, adjusting, worm front bearing (.005" thick)	
	70620607	16	SHIM, adjusting, worm front bearing (.010" thick)	
39	70923816	2	O-RING, brake shaft housing	
40	70656175	2	HOUSING ASSY., worm brake (Includes items 41 thru 43; also Plug indented below)	
	70901651	2	PLUG, pipe, 1/8" NPT	
	70677816	8	CAPSCREW, 3/8"NC x 1-1/8"	
41	70653782	2	WICK, oiling, worm brake shaft	
42	70085203	2	BUSHING, worm brake housing	
43	70656169	2	PLUG, cup worm brake housing	

MEMO



USAGE: First type. See page 162

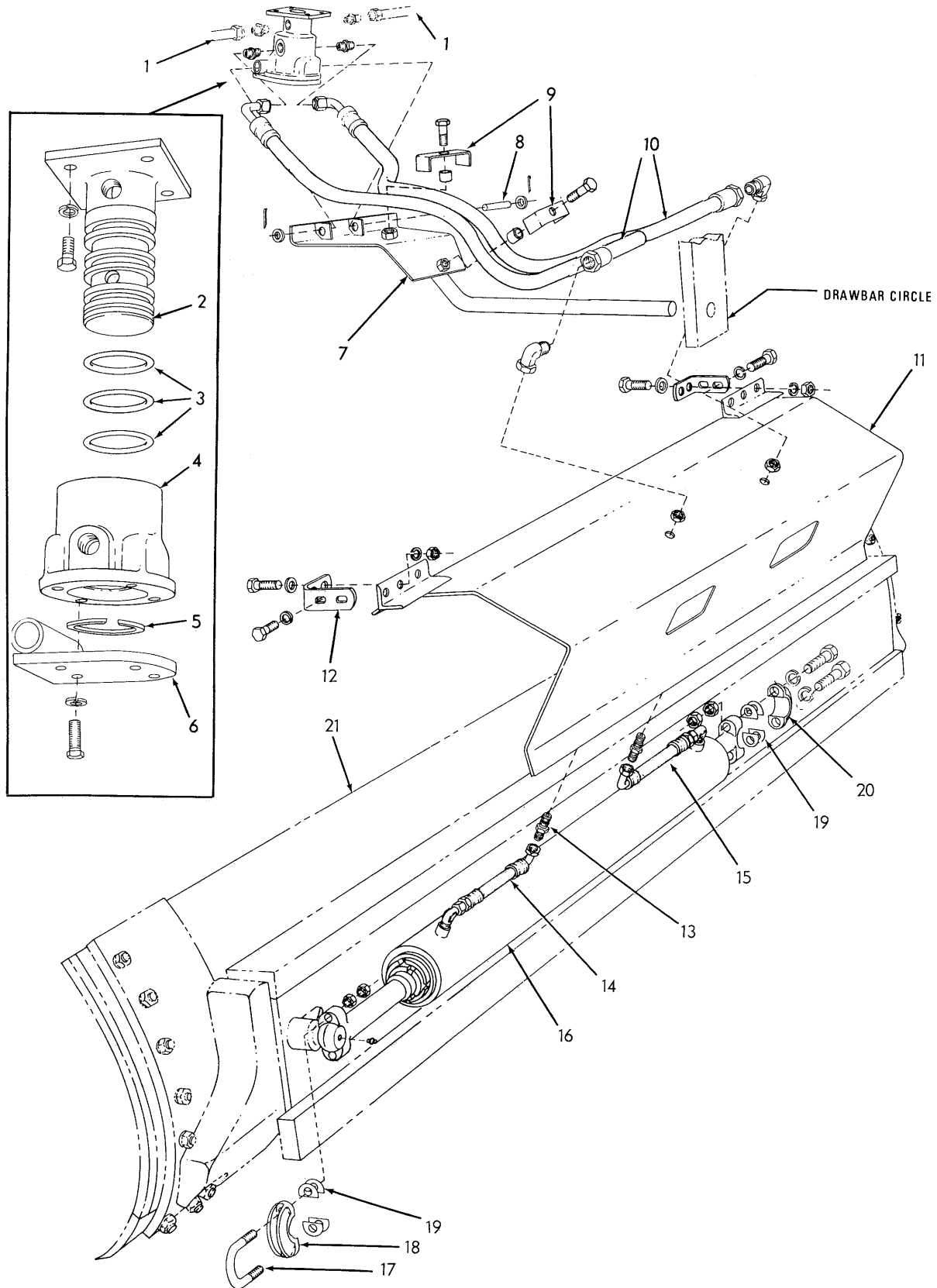
ITEM	PART NO.	QTY.	DESCRIPTION
-	70688075	2	CYLINDER ASSY. (Includes items 1 thru 15)
1	-----	2	TUBE (Not serviced separately)
2	70923453	2	CAPSCREW, 3/4"NC x 2"
3	70689758	2	WASHER, plain
4	70689309	2	□ RING
5	70689312	2	□ RING
6	70925257	2	□ O-RING
7	70689317	2	PISTON
8	70688553	2	ROD
9	70689323	2	GLAND
10	70689311	2	□ WIPER
11	73064516	2	□ SEAL
12	70923815	2	□ O-RING
13	70926624	2	□ RING
14	70689303	2	□ WIPER
15	70929973	2	SCREW, round-hd., slotted, thread-cutting, #8NF x 1/4"
16	73112083	2	REPAIR KIT, cylinder (Includes items 4 thru 6 and 10 thru 14)
			□ Component of item 16



USAGE: See page 162. Second type

ITEM	PART NO.	QTY.	DESCRIPTION
-	70693055	2	CYLINDER ASSY. (Includes items 1 thru 14)
1	70695671	2	TUBE
2	70695670	2	ROD
3	70695626	4	☐ WIPER
4	70930922	2	RING
5	70695428	2	☐ SPACER
6	70927819	2	RING
7	70695245	2	HEAD ASSY. (Includes bushing)
8	70924158	2	☐ O-RING
9	70923649	2	☐ O-RING
10	70923574	2	☐ O-RING
11	70695546	4	WASHER
12	70923651	2	☐ O-RING
13	70695543	2	PISTON
14	70695545	2	NUT, jam
15	73112082	2	REPAIR KIT , cylinder (Includes items 3, 5, 8 thru 10 and 12

☐ Components of item 15



MOLDBOARD LATERAL SHIFT HYDRAULICS

T-71270

MOLDBOARD LATERAL SHIFT HYDRAULICS

USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	2	TUBE ASSY., oil (See LATERAL SHIFT AND PITCH CONTROL PIPING)
2	70080002	1	SWIVEL
	70922763	4	CAPSCREW, 3/8" NC x 1"
	70910287	4	LOCKWASHER, 3/8"
3	70923702	3	O-RING
4	70079853	1	HOUSING
5	70050292	1	RING, snap
6	70658594	1	PLATE
	70922763	4	CAPSCREW, 3/8" NC x 1"
	70910287	4	LOCKWASHER, 3/8"
7	70658596	1	PLATE
8	70658592	1	PIN, swivel operating yoke, upper
	70911115	2	WASHER, plain
	70900942	2	PIN, cotter, 3/32" x 5/8"
9	70658601	2	STRAP, hose retaining
	70922262	2	CAPSCREW, 3/8" NC x 7/8"
	70910287	2	LOCKWASHER, 3/8"
10	70687714	2	HOSE (See HOSE PARTS)
	70919063	2	CONNECTOR, flare type, 1/2" tube, 3/8" NPT male (For units without hydraulic pitch)
	70923717	2	CONNECTOR, flare type, 1/2" tube, 7/8" NF male (Includes O-RING)(For units with hydraulic pitch)
	70921205	2	O-RING, connector
	70921279	2	ELBOW, flare type, swivel unit, 1/2" tube
11	70683865	1	GUARD
	70920583	4	CAPSCREW, 1/2" NC x 1-1/2"
	70928844	4	WASHER, plain
	70912441	4	LOCKWASHER, 1/2"
	70911028	4	NUT, 1/2" NC
12	70646763	2	ANGLE, guard attaching
	70920583	4	CAPSCREW, 1/2" NC x 1-1/2"
	70912441	4	LOCKWASHER, 1/2"
13	70622836	2	ADAPTER, bulkhead (Includes nut)
14	70690770	1	HOSE, lower left (First type CYLINDER)
	70695739	1	HOSE, lower left (Second type CYLINDER)
	70921402	1	ELBOW, adjustable, 90°, flare type, 1/2" tube, 3/4" NF (Includes washer, nut and O-RING)
	70921349	1	O-RING
15	70690771	1	HOSE, lower right (See HOSE PARTS)
	70921402	1	ELBOW, adjustable, 90°, flare type, 1/2" tube, 3/4" NF (Includes washer, nut and O-RING)
	70921349	1	O-RING

For units with hydraulic pitch see moldboard pitch hydraulics

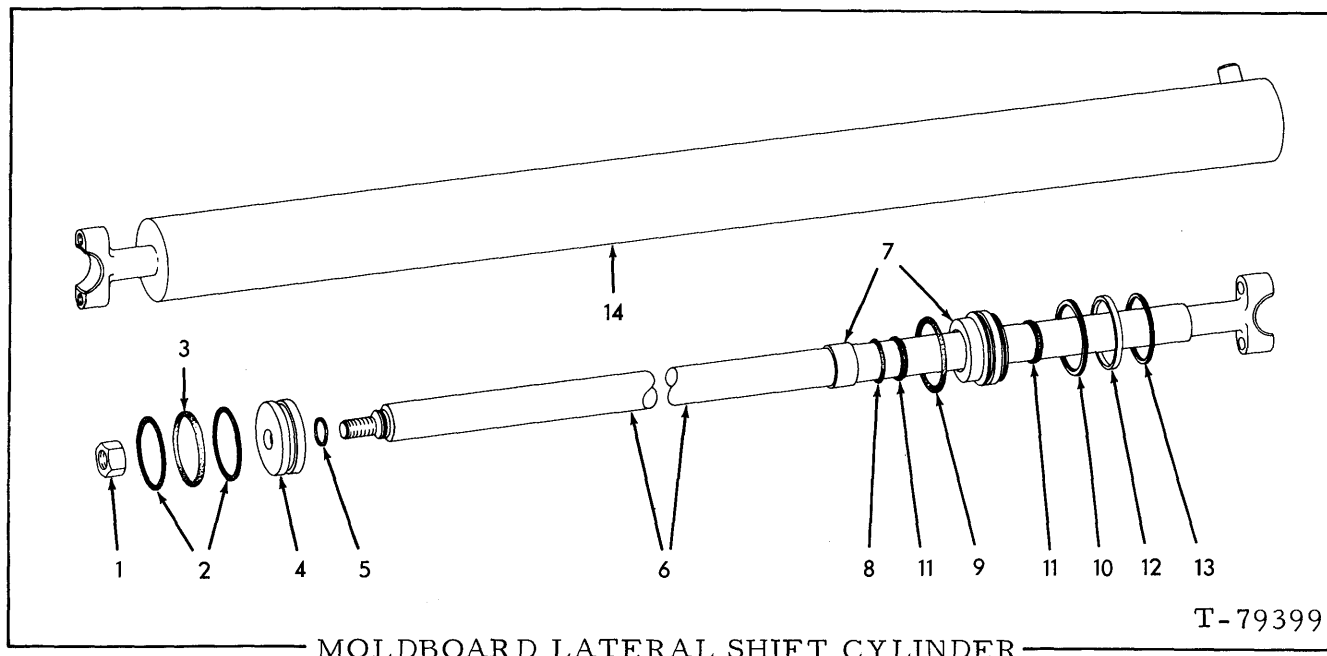
See HOSE PARTS

(Continued)

(Revised June 1976)

MOLDBOARD LATERAL SHIFT HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
16	-----	1	CYLINDER ASSY., moldboard shifting (See page 160a and 161)
17	70605665	1	U-BOLT
	70911049	4	NUT, jam, 5/8"NF
18	70053986	1	CAP, left
19	70053992	16	SHIM, end cap (Used as required)
20	70683870	1	CAP, right
	70921597	2	CAPSCREW, 5/8"NC x 3"
	70912942	2	LOCKWASHER, 5/8"
21	-----	1	MOLDBOARD ASSY. (See page 172)



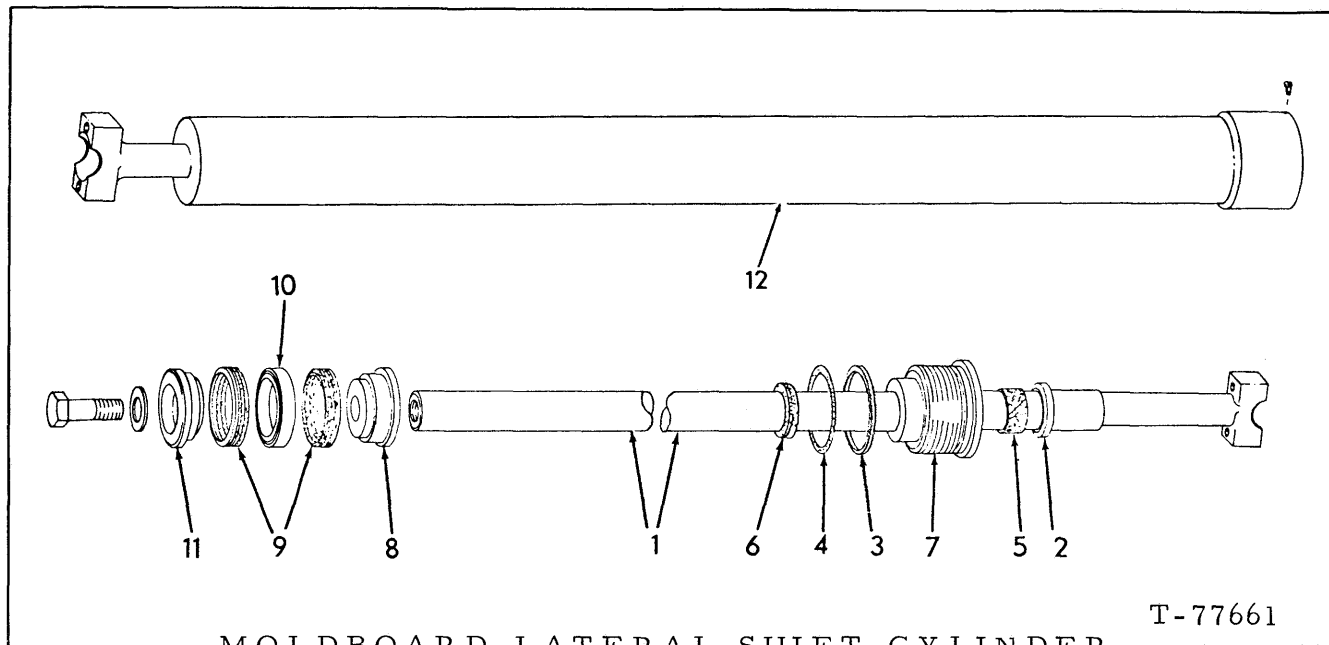
MOLDBOARD LATERAL SHIFT CYLINDER

USAGE: See page 158. Second type

ITEM	PART NO.	QTY.	DESCRIPTION
-	70693056	1	CYLINDER ASSY. (Includes item 1 thru 14)
1	70695513	1	NUT
2	70695676	2	WASHER
3	70923831	1	□ O-RING
4	70695673	1	PISTON
5	70923649	1	□ O-RING
6	70695677	1	ROD
7	70695674	1	HEAD ASSY. (Includes Bushing which is not serviced separately)
8	70923579	1	□ O-RING
9	70927242	1	□ O-RING
10	70930955	1	RING, snap
11	70695446	2	□ WIPER
12	70695675	1	SPACER
13	70930954	1	RING, snap
14	70695678	1	TUBE
15	73112086	1	REPAIR KIT, cylinder (Includes items 3, 5, 8, 9 and 11)

□ Components of item 15

MEMO

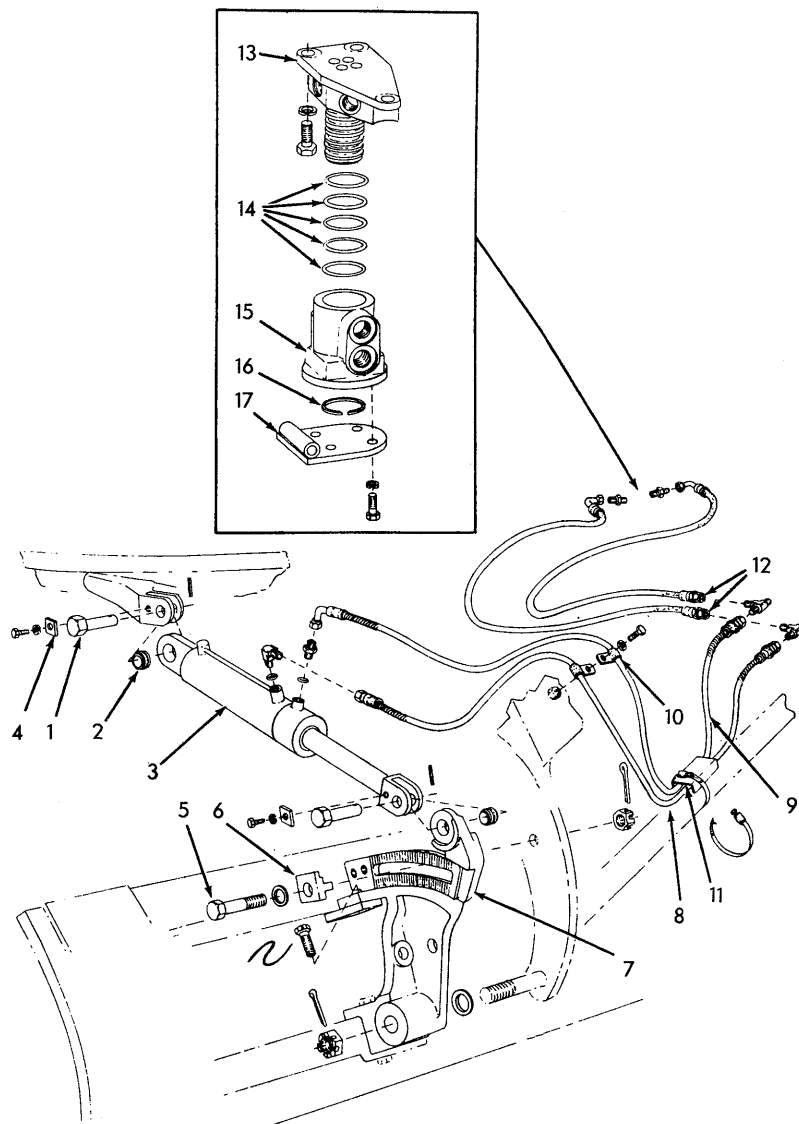


MOLDBOARD LATERAL SHIFT CYLINDER

USAGE: See page 158 (First type)

ITEM	PART NO.	QTY.	DESCRIPTION
-	70683867	1	CYLINDER ASSY. (Includes items 1 thru 11 and screw indented below)
	70929973	1	SCREW, round-hd., slotted, thread-cutting #8NF x 1/4"
1	70688285	1	ROD
	70923201	1	CAPSCREW, 1-1/4"NC x 3"
	70689757	1	WASHER, plain
2	70684344	1	□ WIPER
3	70926632	1	□ RING
4	70923820	1	□ O-RING
5	70689072	1	□ BEARING STRIP
6	70689076	1	□ SEAL
7	70689188	1	GLAND ASSY. (Includes ring. Serviced only as a unit)
8	70689267	1	PISTON
9	70689193	2	□ PACKING ASSY.
10	70689260	1	RING
11	70689266	1	PISTON
12	-----	1	TUBE (Not serviced separately)
13	73112081	1	REPAIR KIT, cylinder (Includes items 2 thru 6 and 9)

□ Components of item 13



MOLDBOARD PITCH HYDRAULICS

T-77657

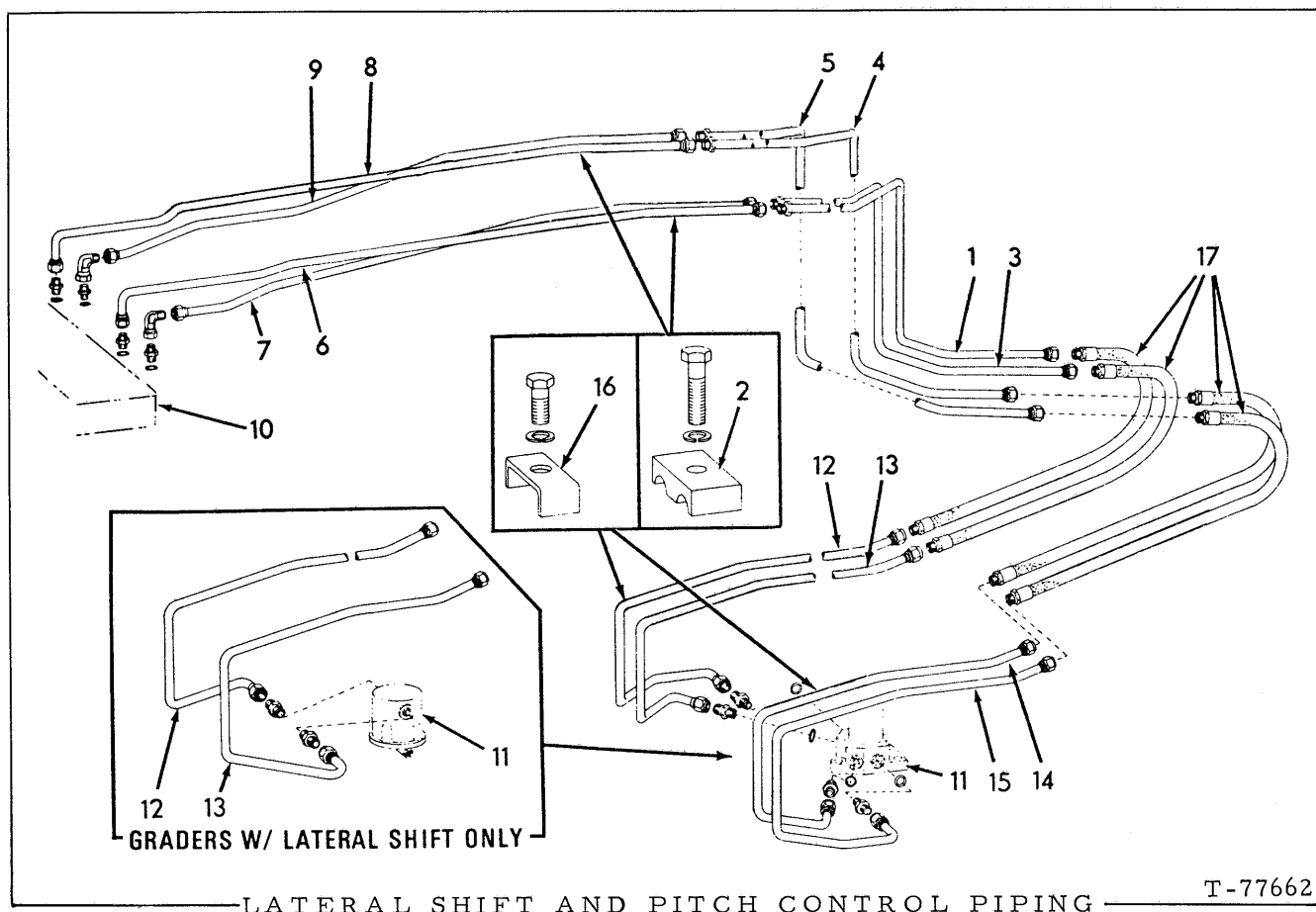
USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70684051	4	PIN
	70916171	4	PIN, spring, 1/4" x 1-1/2"
2	70654453	4	BEARING
3	-----	2	CYLINDER ASSY., (See pages 156F and 157)
4	70658598	4	PLATE
	70922262	4	CAPSCREW, 3/8"NC x 7/8"
	70910287	4	LOCKWASHER, 3/8"

(Continued)

MOLDBOARD PITCH HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
5	70662676	2	CAPSCREW, drilled, 1-1/8"NC x 5-1/2"
	70602663	2	WASHER, plain
	70918853	2	NUT, 1-1/8"NC
	70900813	2	PIN, cotter, 3/16" x 2"
6	70687675	1	INDEX, washer, left
	70687676	1	INDEX, washer, right
7	70662605	1	PITCH BRACKET, left
	70662606	1	PITCH BRACKET, right
8	70686601	2	HOSE ASSY., (See HOSE PARTS)
	70921402	2	ELBOW, adj. flare, 1/2" tube, 3/4"NF male (Includes O-ring)
	70921349	2	O-RING
9	70658599	2	HOSE ASSY., (See HOSE PARTS)
	70921409	2	CONNECTOR, flare type, 1/2" tube, 3/4"NF, male end (Includes O-ring)
	70921349	2	O-RING
10	70929665	4	CLIP
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70677006	2	WASHER, plain
11	70687657	2	CHANNEL
	70922200	4	CLAMP
12	70687712	2	HOSE ASSY. (See HOSE PARTS)
	70921472	2	TEE, union, flare type, 1/2" tube, 7/8"NF male
	70923717	2	CONNECTOR, flare type, 1/2" tube, 7/8"NF male (Includes O-ring)
13	70921279	2	O-RING
	70660369	1	SWIVEL
	70927172	3	CAPSCREW, 1/2"NC x 1-1/8"
	70912441	3	LOCKWASHER, 1/2"
14	70923702	5	O-RING
15	70658265	1	SWIVEL HOUSING
16	70050292	1	RING, snap
17	70658594	1	PLATE
	70922763	4	CAPSCREW, 3/8"NC x 1"
	70910287	4	LOCKWASHER, 3/8"



USAGE: Special equipment

- * Graders equipped with hydraulic lateral shift moldboard
- ** Graders equipped with hydraulic pitch and lateral shift moldboard

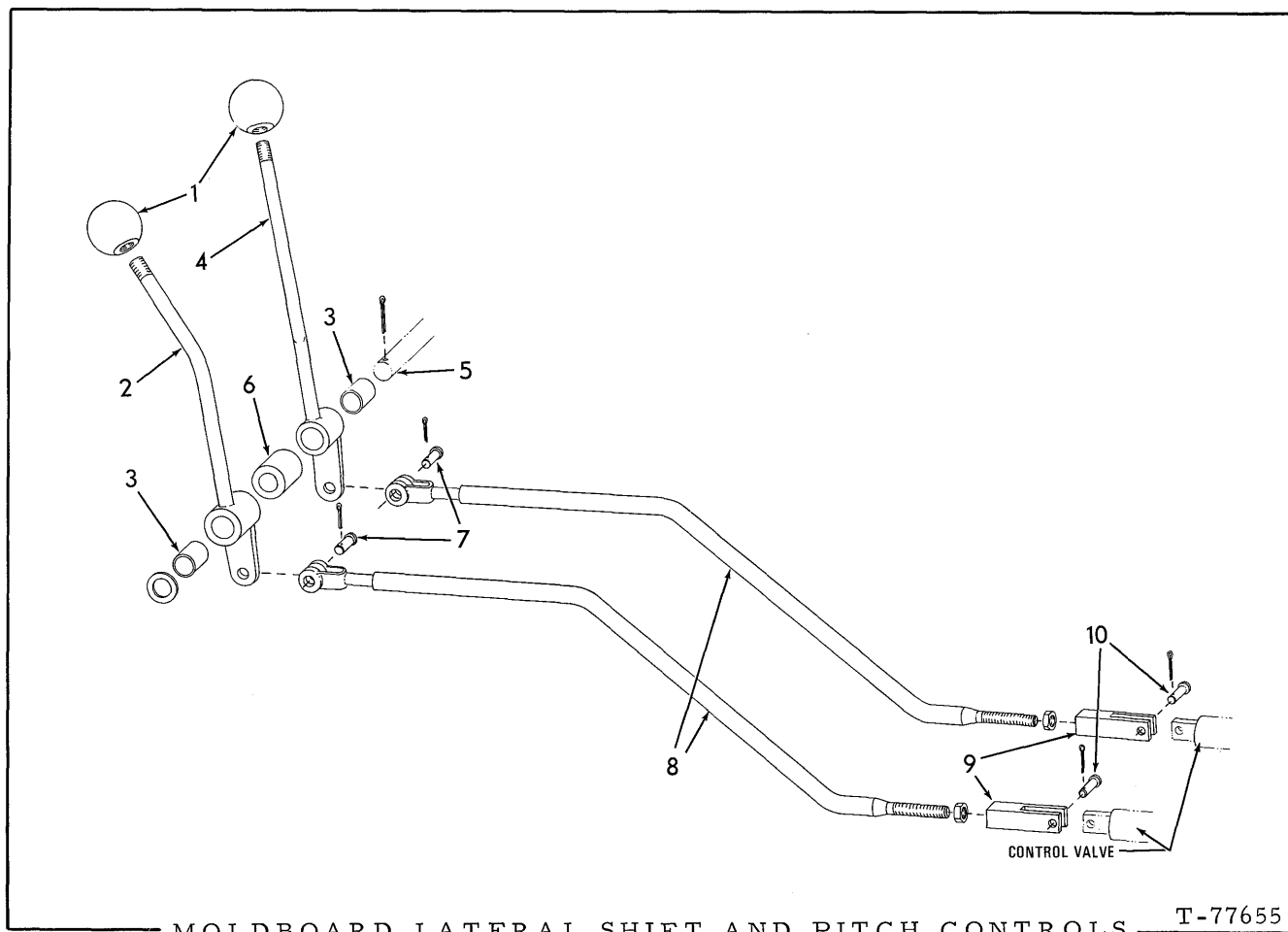
ITEM	PART NO.	QTY. * **	DESCRIPTION
1	70680030	1 1	TUBE ASSY. (Includes nuts)
2	70623355	3 6	CLAMP
	70921076	3 6	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	3 6	LOCKWASHER, 3/8"
3	70680015	1 1	TUBE ASSY.
4	70680011	- 1	TUBE ASSY.
5	70680010	- 1	TUBE ASSY.
} Each includes nuts			
6	70679608	1 1	TUBE ASSY. (Includes nuts)
	70923080	1 1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male (Includes O-RING)
	70921349	1 1	O-RING
7	70679605	1 1	TUBE ASSY. (Includes nuts)
	70921325	1 1	ELBOW, flare type, swivel nut, 5/8" tube
	70923080	1 1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male (Includes O-RING)
	70921349	1 1	O-RING

(Continued)

LATERAL SHIFT AND PITCH CONTROL PIPING (Continued)

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
8	70679606	-	1	TUBE ASSY. (Includes nuts)
	70923080	-	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male (Includes O-ring)
	70921349	-	1	O-RING
9	70679607	-	1	TUBE ASSY. (Includes nuts)
	70921325	-	1	ELBOW, flare type, swivel nut, 5/8" tube
	70923080	-	1	CONNECTOR, flare type, 5/8" tube, 3/4"NF male (Includes O-ring)
	70921349	-	1	O-RING
10	-----	1	2	VALVE ASSY, control (See page 190)
11	-----	1	-	SWIVEL ASSY. (See MOLDBOARD LATERAL SHIFT HYDRAULICS)
	-----	-	1	SWIVEL ASSY. (See MOLDBOARD PITCH HYDRAULICS)
12	70662641	1	-	TUBE ASSY. (Includes nuts)
	70921395	1	-	CONNECTOR, flare type, 5/8" tube, 3/8"NPT male
	70660031	-	1	TUBE ASSY. (Includes nuts)
	70921326	-	1	CONNECTOR, flare type, 5/8" tube, 7/8"NC male (Includes O-ring)
	70921205	-	1	O-RING
13	70662642	1	-	TUBE ASSY. (Includes nuts)
	70921395	1	-	CONNECTOR, flare type, 5/8" tube, 3/8"NPT male
	70660059	-	1	TUBE ASSY. (Includes nuts)
	70921326	-	1	CONNECTOR, flare type, 5/8" tube, 7/8"NC male (Includes O-ring)
	70921205	-	1	O-RING
14	70660078	-	1	TUBE ASSY. (Includes nuts)
	70921326	-	1	CONNECTOR, flare type, 5/8" tube, 7/8"NC male (Includes O-ring)
	70921205	-	1	O-RING
15	70660060	-	1	TUBE ASSY. (Includes nuts)
	70921326	-	1	CONNECTOR, flare type, 5/8" tube 7/8"NC male (Includes O-ring)
	70921205	-	1	O-RING
16	70637696	3	6	CLAMP
	70927400	3	6	CAPSCREW, 3/8"NC x 5/8"
	70910287	3	6	LOCKWASHER, 3/8"
17	70662639	2	4	HOSE ASSY.

(Revised February 1976)

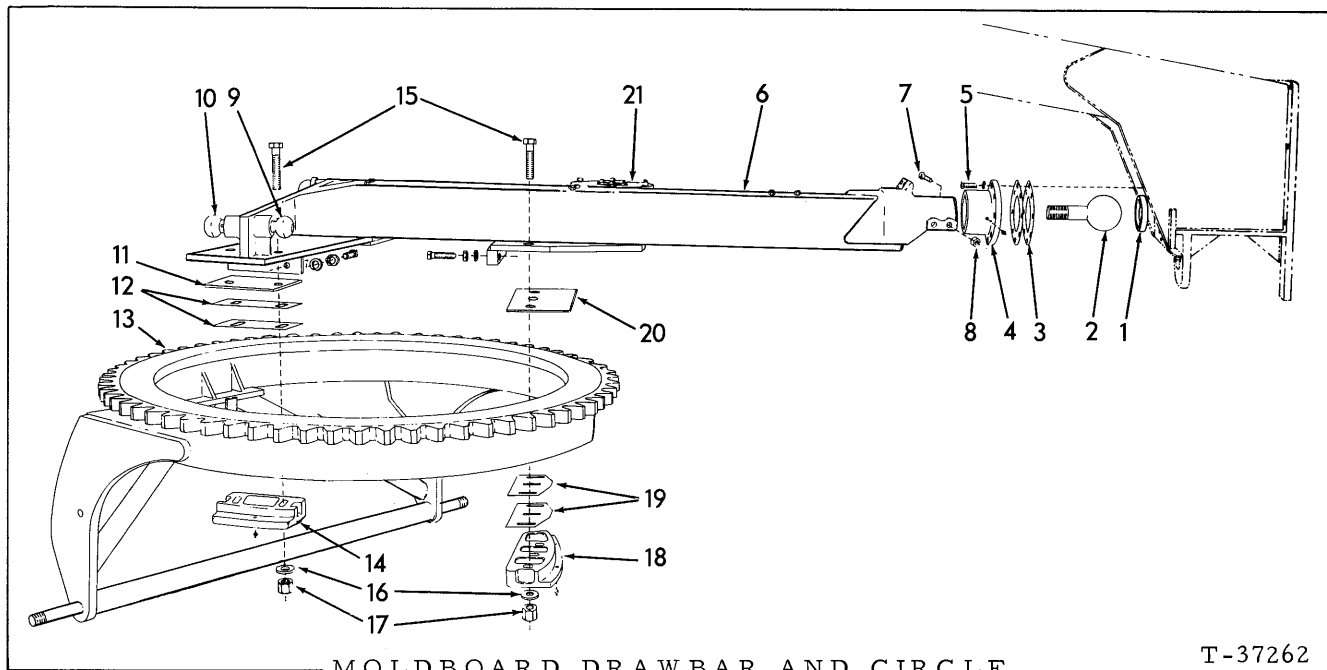


USAGE: Special equipment

* Graders equipped with hydraulic lateral shift moldboard
 ** Graders equipped with hydraulic pitch and lateral shift moldboard

ITEM	PART NO.	QTY.		DESCRIPTION
		*	**	
1	70091862	1	2	KNOB
2	70682241	1	1	LEVER, lateral shift (Includes item 3)
	70928142	1	1	WASHER, plain
	70918448	1	1	PIN, cotter, 3/32" x 1"
3	70097273	1	2	BUSHING
4	70682267	-	1	LEVER, pitch (Includes item 3)
5	-----	1	1	BRACKET ASSY. (See STEERING CONTROL)
6	70662189	1	-	SPACER
7	70078810	1	2	PIN
	70918448	1	2	PIN, cotter, 3/32" x 1"
8	70682151	1	2	ROD
	70911048	1	2	NUT, jam, 3/8"NF
9	70687687	1	2	YOKE
10	70628738	1	2	PIN
	70904020	1	2	PIN, cotter, 1/16" x 1/2"

M E M O

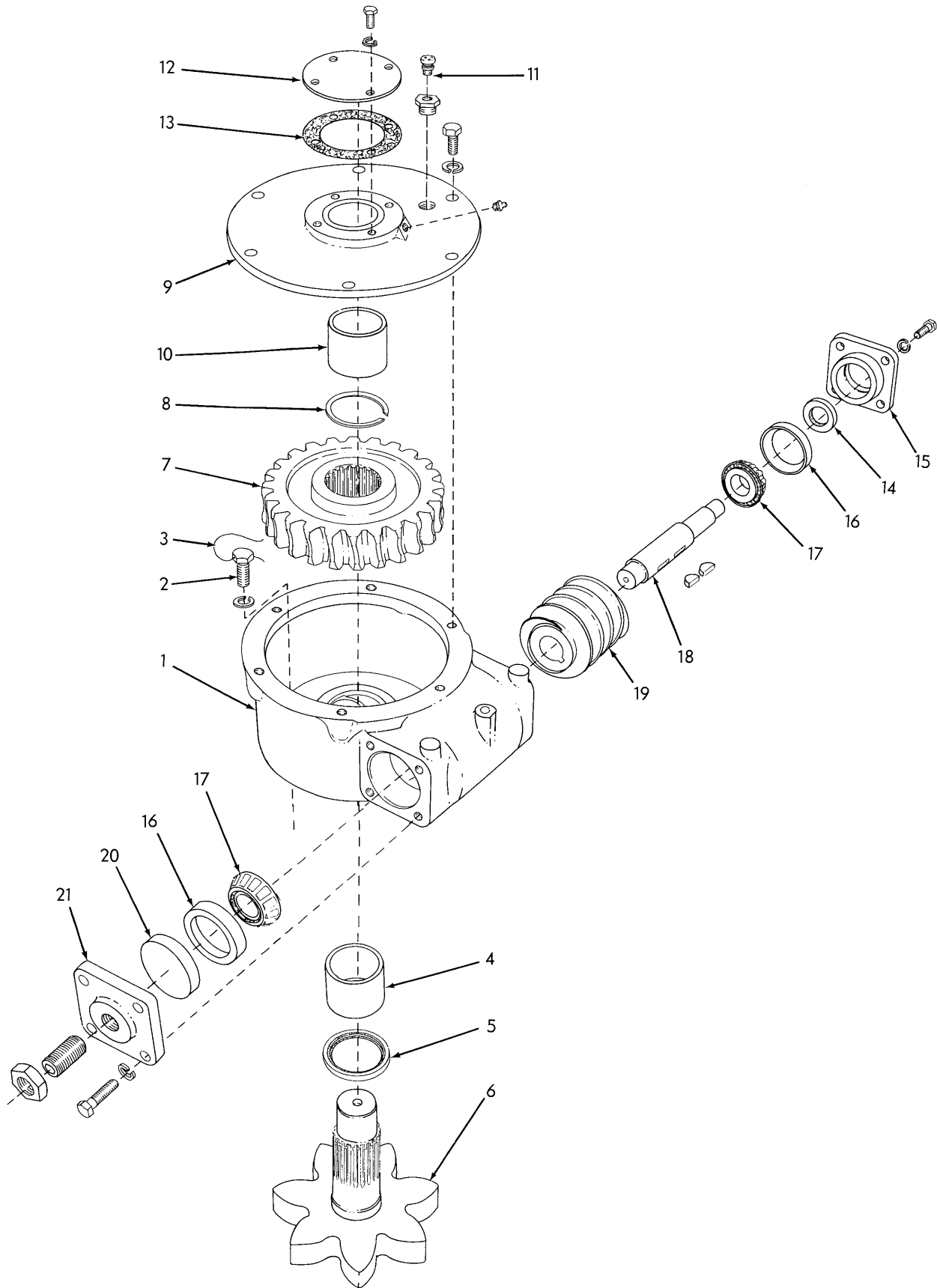


ITEM	PART NO.	QTY.	DESCRIPTION
1	70633703	1	SEAT, drawbar ball
2	70633701	1	BALL, drawbar
3	70673457	10	SHIM, drawbar ball socket (Use as required)
4	70673462	1	SOCKET, drawbar ball
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
5	70921535	8	CAPSCREW, 5/8"NC x 1-3/4"
	70912942	8	LOCKWASHER, 5/8"
6	70660079	1	DRAWBAR, moldboard (Includes items 9 and 10)
	70931720	2	CAPSCREW, 7/8"NC x 3-1/2"
	70925671	4	CAPSCREW, 7/8"NC x 2-1/2"
	70901421	6	NUT, jam, 7/8"NC
7	70924815	2	CAPSCREW, 3/4"NF x 4"
8	70012767	2	NUT, high, 3/4"NF
9	70620464	4	BALL, circle lift (Requires welding to install)
10	70630209	2	BALL, circle side shift (Requires welding to install)
11	70623240	2	PLATE, wear, moldboard circle, rear
12	70602688	26	SHIM, rear guide (Use as required)
13	70680509	1	CIRCLE, moldboard (Standard)
	70662604	1	CIRCLE, moldboard (Special. Used with hydraulic pitch)
14	70660055	2	GUIDE, rear
	70914465	2	FITTING, lubricating, straight, 1/8"NPT

(Continued)

MOLDBOARD DRAWBAR AND CIRCLE (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
15	70929092	6	CAPSCREW, guide attaching (1-1/8"NF x 5-1/2")
16	70929704	6	WASHER, plain
17	70053994	6	NUT, high, 1-1/8"NF
18	70660379	1	GUIDE, front
	70914465	2	FITTING, lubricating, straight, 1/8"NPT
19	70604270	12	SHIM, front guide
20	70639683	1	PLATE, wear, moldboard circle, front
21	-----	-	HOUSING (See CIRCLE TURN)

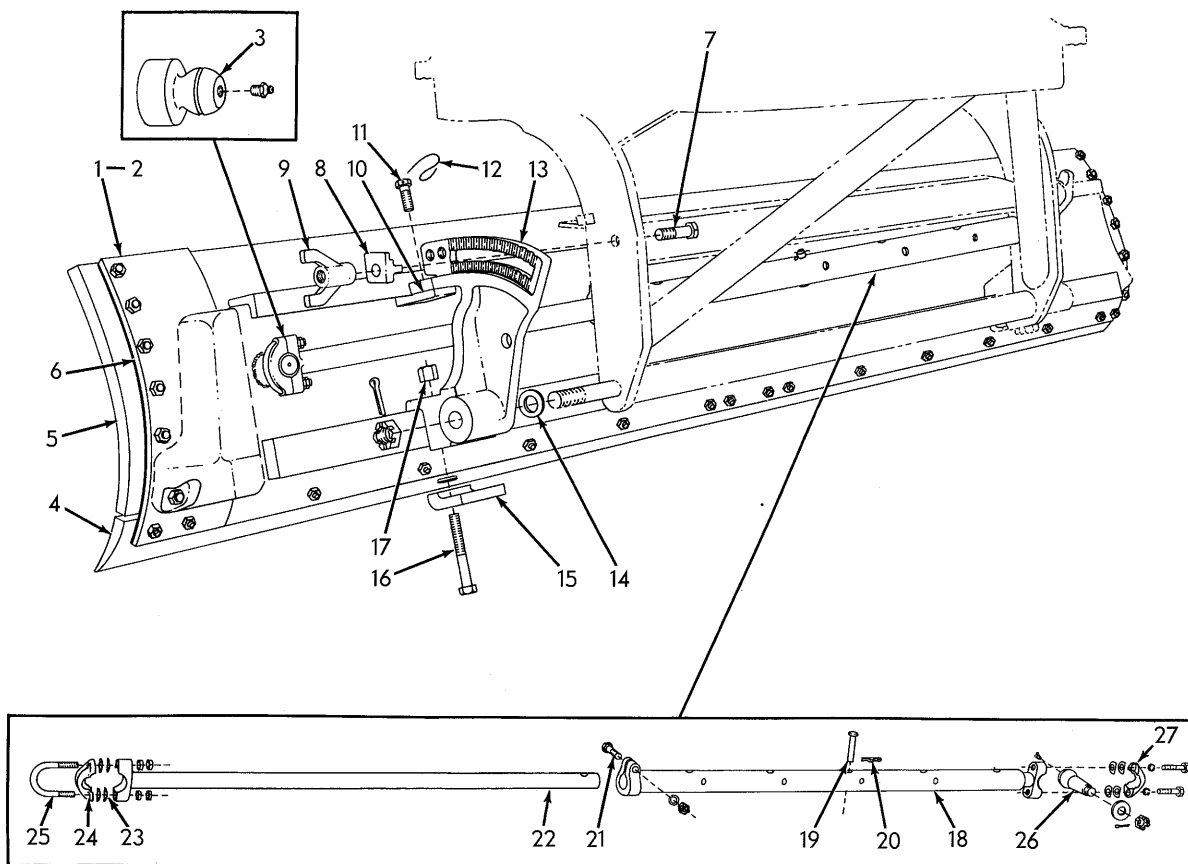


CIRCLE TURN

T-37271

CIRCLE TURN

ITEM	PART NO.	QTY.	DESCRIPTION
1	70647720	1	HOUSING ASSY. (Includes item 4)
2	70622214	12	CAPSCREW, 5/8"NF x 1-1/2"
	70912942	12	LOCKWASHER, 5/8"
3	70023633	6	WIRE, locking, 1/16" x 12"
4	70622210	1	BUSHING, housing
5	70634037	1	SEAL, oil, housing
6	70622153	1	SHAFT AND PINION
7	70630424	1	GEAR, worm (Graders prior to unit #09066)
	70699833	1	GEAR, worm (Grader unit #09066 and up)
8	70622212	1	RING, snap, worm gear retaining
9	70622167	1	COVER ASSY., housing (Includes item 10)
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
	70921175	6	CAPSCREW, 1/2"NC x 1"
	70912441	6	LOCKWASHER, 1/2"
10	70622211	1	BUSHING, housing cover
11	70634161	1	VENT, housing cover
	70904269	1	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT
12	70633698	1	PLATE, cover
	70922300	4	CAPSCREW, 3/8"NC x 3/4"
	70910287	4	LOCKWASHER, 3/8"
13	70633699	1	GASKET, cover plate
14	70603007	1	SEAL, oil, worm shaft
15	70649839	1	CAP, worm shaft front bearing
	70920585	4	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	4	LOCKWASHER, 1/2"
16	70604387	2	CUP, worm shaft bearing
17	70604388	2	CONE ASSY., worm shaft bearing
18	70684258	1	SHAFT, worm
	70911201	2	KEY, #E woodruff, 3/8" x 1-1/4"
19	70630292	1	WORM (left hand)(Also order GEAR 70699833)
20	70602272	1	PLUG, worm shaft bearing adjustment
21	70649278	1	CAP, worm shaft rear bearing
	70911227	1	SETSCREW, socket-hd., oval pt., 1"NC x 2"
	70911038	1	NUT, jam, 1"NC
	70921556	4	CAPSCREW, 1/2"NC x 2"
	70912441	4	LOCKWASHER, 1/2"



T-71261

MOLDBOARD

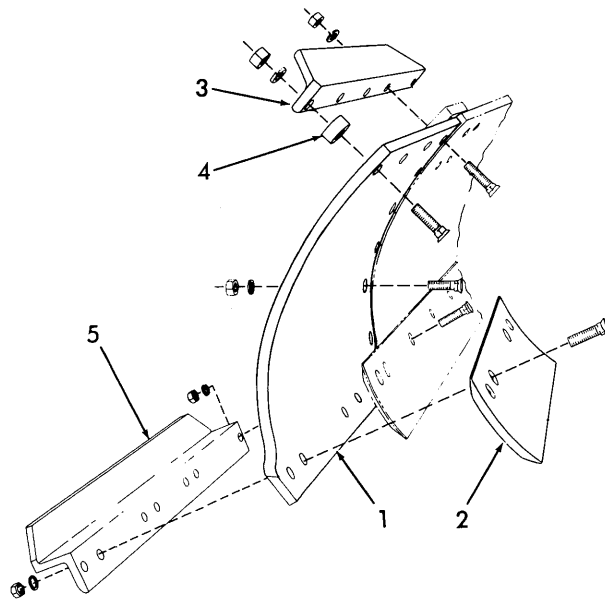
- * 12 ft. Standard equipment
- ** 13 ft. Optional equipment
- *** 14 ft. Optional equipment

ITEM	PART NO.	QUANTITY	DESCRIPTION
1	70692319	1 - -	MOLDBOARD ASSY. }
	70673126	- 1 -	MOLDBOARD ASSY. }
	70686832	- - 1	MOLDBOARD ASSY. }
2	70692308	1 - -	MOLDBOARD, only }
	70673127	- 1 -	MOLDBOARD, only }
	70686831	- - 1	MOLDBOARD, only }
3	70645590	1 1 1	BALL,(Requires welding to moldboard)
	70914465	1 1 1	FITTING, lubricating, straight, 1/8"NPT
4	70099352	1 1 -	EDGE, cutting, right hand (6 ft.)
	70099351	1 - -	EDGE, cutting, left hand (6 ft.)
	70099354	- - 1	EDGE, cutting, right hand (7 ft.)
	70099353	- 1 1	EDGE, cutting, left hand (7 ft.)
	70911633	16 17 18	BOLT, plow, 5/8"NC x 2-1/4"
	70911029	16 17 18	NUT, 5/8"NC

(Continued)

MOLDBOARD (Continued)

ITEM	PART NO.	QUANTITY			DESCRIPTION
		*	**	***	
5	70643293	2	2	2	BIT, end
	70911634	10	10	10	BOLT, plow, 5/8"NC x 2-1/2"
	70916437	2	2	2	BOLT, plow, 5/8"NC x 3-1/4"
	70912942	12	12	12	LOCKWASHER, 5/8"
	70911029	12	12	12	NUT, 5/8"NC
6	70644917	12	12	12	SHIM, (Used as required)
7	70929092	2	2	2	BOLT (1-1/8"NF x 5-3/4")
8	70646738	2	2	2	WASHER
9	70638903	2	2	2	NUT
10	70646739	2	2	2	GUIDE
11	70929083	4	4	4	CAPSCREW, drilled-hd, 3/4"NF x 2-1/2"
12	70023633	2	2	2	WIRE, locking, 1/16" x 12"
13	70683872	1	1	1	BRACKET, left side
	70646736	1	1	1	BRACKET, right side
	70922271	2	2	2	NUT, slotted, 2"NF
	70911069	2	2	2	PIN, cotter, 5/16" x 3"
14	70634237	6	6	6	WASHER (Use as required)
15	70079507	2	2	2	BRACKET
	70915978	20	20	20	WASHER, spacing (Use as required)
16	70928410	4	4	4	CAPSCREW, 1"NF x 6-1/2"
17	70600236	4	4	4	NUT, high, 1"NF
18	70683869	1	1	1	LINK
19	70602224	1	1	1	PIN
20	70617855	1	1	1	CLIP
21	70921173	1	1	1	CAPSCREW (5/8"NC x 2-3/4")
	70912942	1	1	1	LOCKWASHER, 5/8"
	70911029	1	1	1	NUT, 5/8"NC
22	70645755	1	1	1	ROD
23	70053992	16	16	16	SHIM (Use as required)
24	70053986	1	1	1	CAP
25	70605665	1	1	1	U-BOLT
	70911049	4	4	4	NUT, jam, 5/8"NF
26	70081334	1	1	1	BALL, right side
	70915276	1	1	1	FITTING, lubricating, 90°, 1/8NPT
	70911174	1	1	1	NUT, jam, slotted, 1"NF
	70900808	1	1	1	PIN, cotter, 1/8" x 1-1/2"
	70900822	1	1	1	WASHER, plain, U.S. std., 1"
27	70683870	1	1	1	CAP
	70921597	2	2	2	CAPSCREW, 5/8"NC x 3"
	70912942	2	2	2	LOCKWASHER, 5/8"



T-5910

MOLDBOARD EXTENSIONS

USAGE: Special equipment.

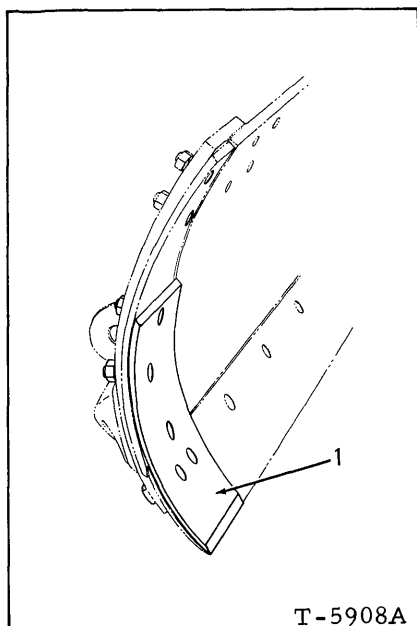
*Graders prior to unit #08217 including #08233.
 **Graders unit #08217 and up excluding #08233

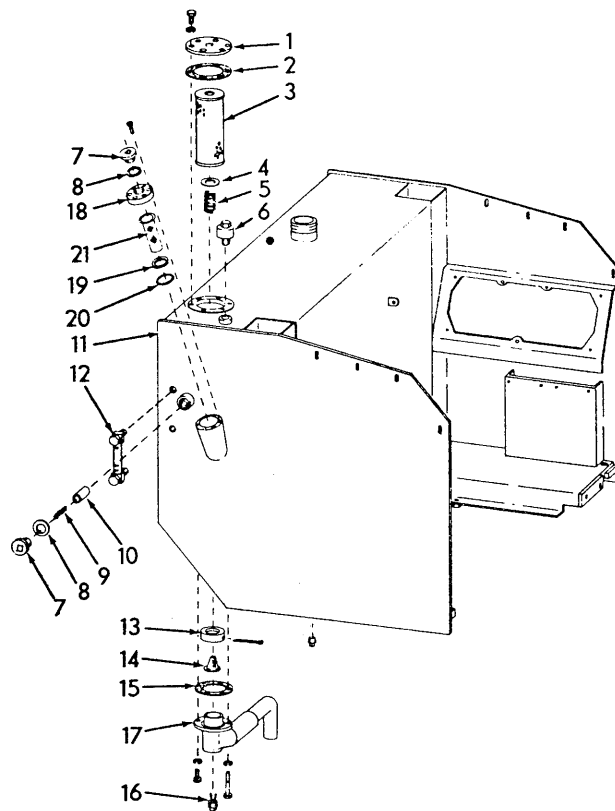
ITEM	PART NO.	QTY. * **	DESCRIPTION
1	70646397	1 -	EXTENSION, left hand
	70692935	- 1	EXTENSION, left hand
	70646350	1 -	EXTENSION, right hand
	70692936	- 1	EXTENSION, right hand
	70911633	8 -	BOLT, plow, 5/8"NC x 2-1/4"
	70911634	- 8	BOLT, plow, 5/8"NC x 2-1/2"
	70915693	2 -	BOLT, plow, 5/8"NC x 3"
	70916437	- 2	BOLT, plow, 5/8"NC x 3-1/4"
	70912942	10 10	LOCKWASHER, 5/8"
	70911029	10 10	NUT, 5/8"NC
2	70099350	2 2	EDGE, cutting
	70915693	8 -	BOLT, plow, 5/8"NC x 3"
	70916437	- 8	BOLT, plow, 5/8"NC x 3-1/4"
	70912942	8 8	LOCKWASHER, 5/8"
	70911029	8 8	NUT, 5/8"NC
3	70603156	1 1	ANGLE, top reinforcing, right hand
	70603157	1 1	ANGLE, top reinforcing, left hand
	70913648	10 -	BOLT, plow, 5/8"NC x 2-3/4"
	70915693	- 8	BOLT, plow, 5/8"NC x 3"
	70921592	- 2	CAPSCREW, 5/8"NC x 3"
	70912942	10 10	LOCKWASHER, 5/8"
4	70911029	10 10	NUT, 5/8"NC
	70602449	8 8	SPACER, moldboard extension
5	70633981	1 1	BAR, bottom reinforcing, left hand
	70633982	1 1	BAR, bottom reinforcing, right hand
	70915693	6 -	BOLT, plow, 5/8"NC x 3"
	70916437	- 6	BOLT, plow, 5/8"NC x 3-1/4"
	70912942	6 6	LOCKWASHER, 5/8"
	70911029	6 6	NUT, 5/8"NC

MOLDBOARD ROCK BITS

USAGE: Special equipment. For use under conditions of extreme abrasion.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70646379	1	BIT, rock, left hand
	70646380	1	BIT, rock, right hand
	70913648	4	BOLT, plow, 5/8"NC x 2-3/4"
	70911029	4	NUT, 5/8" NC
	70915693	4	BOLT, plow, 5/8" NC x 3"
	70918532	2	BOLT, plow, 5/8" NC x 4"
	70912942	6	LOCKWASHER, 5/8"
	70911029	6	NUT, 5/8" NC





HYDRAULIC TANK

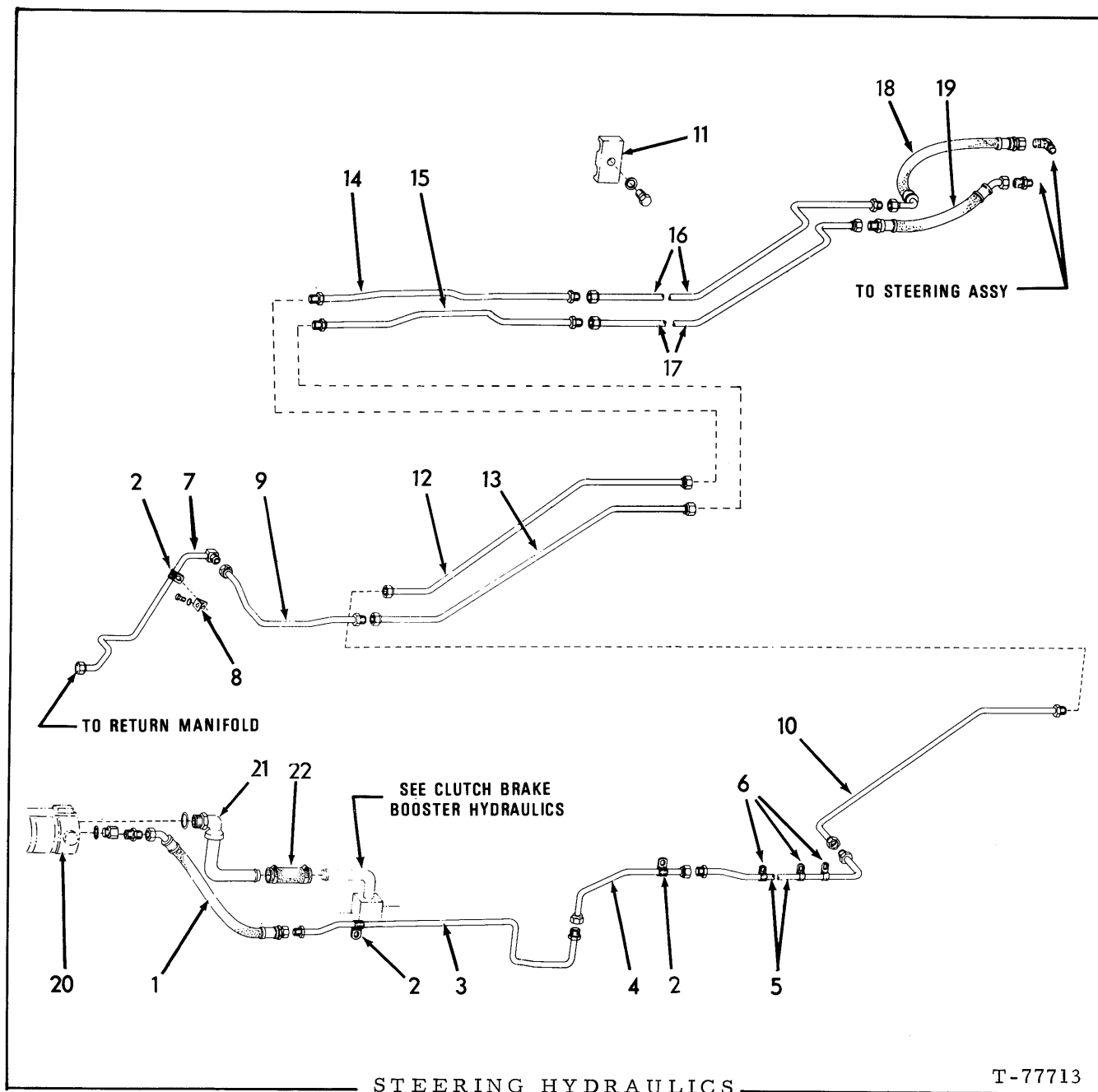
T-77714

ITEM	PART NO.	QTY.	DESCRIPTION
1	70634785	1	COVER
	70922763	6	CAPSCREW, 3/8"NC x 1"
	70910287	6	LOCKWASHER, 3/8"
2	70634783	1	GASKET, cover
3	73031996	1	ELEMENT
4	73016403	1	WASHER
5	73016399	1	SPRING
6	70050748	1	BREATHER
7	70035250	2	PLUG
8	70667252	2	GASKET, plug
9	73020394	1	SPRING
10	73016398	1	PLUNGER
11	70673446	1	TANK ASSY., hydraulic (Includes item 1)(Also see FUEL TANK)
	70901653	1	PLUG, pipe, 3/8"NPT (Units with special mechanically-actuated control box only)

(Continued)

HYDRAULIC TANK (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
12	70678984	1	GAUGE
13	70683502	1	RING
	70916242	1	PIN, cotter, 1/8" x 3"
14	70656819	1	SCREEN
15	70042641	1	GASKET
16	70634668	1	PLUG
17	70683500	1	CAP ASSY.
	70925783	2	CAPSCREW, 3/8"NF x 3"
	70923276	2	CAPSCREW, 3/8"NF x 1"
	70910287	4	LOCKWASHER, 3/8"
18	70683505	1	RING
	70921182	6	CAPSCREW, socket-hd., 1/4"NC x 7/8"
19	70683504	1	RING
20	70927026	1	O-RING
21	70651081	1	STRAINER



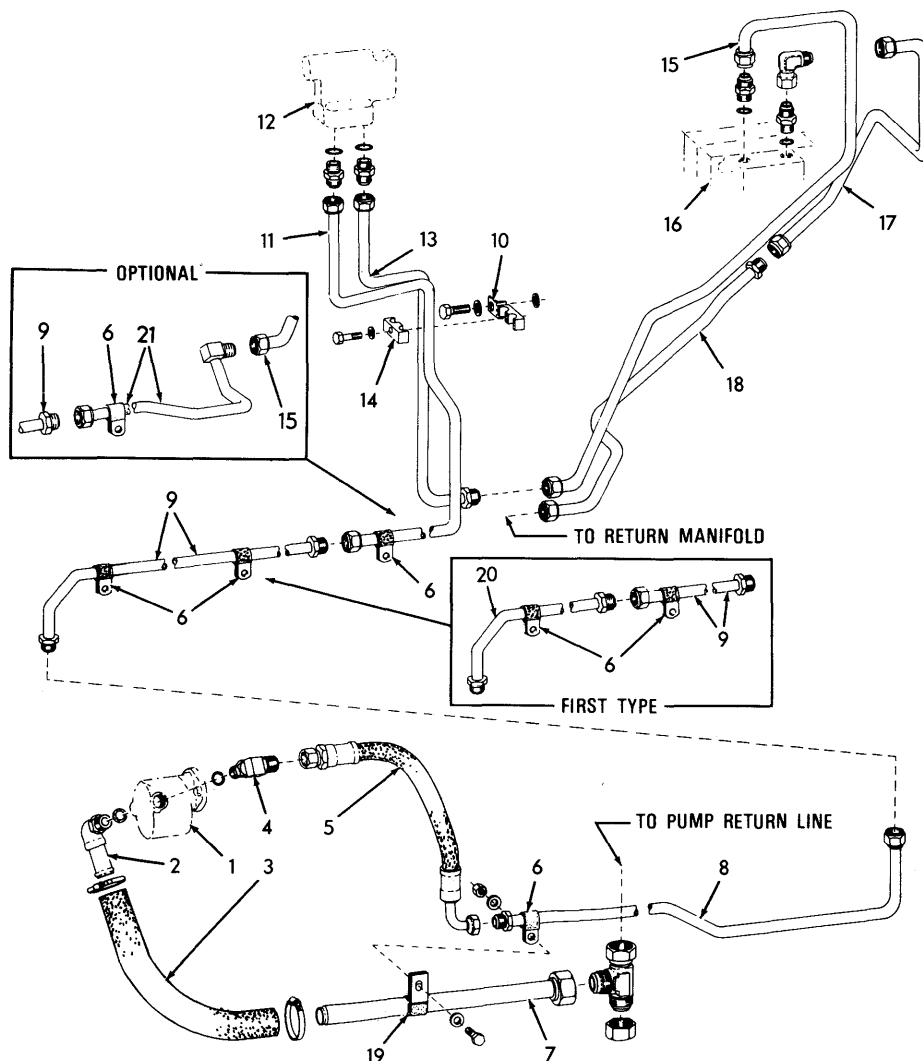
ITEM	PART NO.	QTY.	DESCRIPTION
1	70680112	1	HOSE (See HOSE PARTS)
	70921395	1	CONNECTOR, flare type, 5/8" tube, 3/8"NF male
	70922775	1	ADAPTER, female, 3/4" str. thd. (Includes O-RING)
	70921349	1	O-RING
2	70927217	3	CLAMP, 5/8" I.D., 17/32" bolt hole
	70922763	2	CAPSCREW, 3/8"NC x 1"
	70630753	4	WASHER, plain
	70911026	2	NUT, 3/8"NC
3	70680238	1	TUBE

(Continued)

(Revised February 1976)

STEERING HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
4	70679831	1	TUBE ASSY. (Includes nuts)
5	70681877	1	TUBE
6	70929719	3	CLAMP, 5/8" I.D., 17/32" bolt hole
7	70681882	1	TUBE ASSY. (Includes nuts)
8	70689363	1	ANGLE
	70922300	1	CAPSCREW, 3/8"NC x 3/4"
	70630753	1	WASHER, plain
9	70681879	1	TUBE ASSY. (Includes nuts)
10	70681876	1	TUBE ASSY. (Includes nut)
11	70623355	5	CLAMP
	70921076	5	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	5	LOCKWASHER, 3/8"
12	70681875	1	TUBE ASSY. (Includes nuts)
13	70681878	1	TUBE ASSY. (Includes nuts)
14	70680034	1	TUBE
15	70680035	1	TUBE
16	70680025	1	TUBE ASSY. (Includes nut)
17	70680024	1	TUBE ASSY. (Includes nuts)
18	70680067	1	HOSE (See HOSE PARTS)
	70920662	1	ELBOW, flare type, 5/8" tube, 1/2"NPT male (Graders prior to unit #09004)
	70921511	1	ELBOW, flare type, 5/8" tube, 7/8"NPT male (Grader unit #09004 and up)
19	70680068	1	HOSE (See HOSE PARTS)
	70921030	1	CONNECTOR, flare type, 5/8" tube, 3/4"NPT male (Graders prior to unit #09004)
	70919472	1	CONNECTOR, flare type, 5/8" tube, 1/2"NPT male (Grader unit #09004 and up)
20	-----	1	PUMP ASSY., steering (See page 185)
21	70680261	1	ELBOW ASSY. (Includes O-RING)
	70921205	1	O-RING
22	70656261	1	HOSE
	70921912	2	CLAMP, hose, 1-1/16" to 2" diam.



T-77724

CONTROL VALVE HYDRAULICS

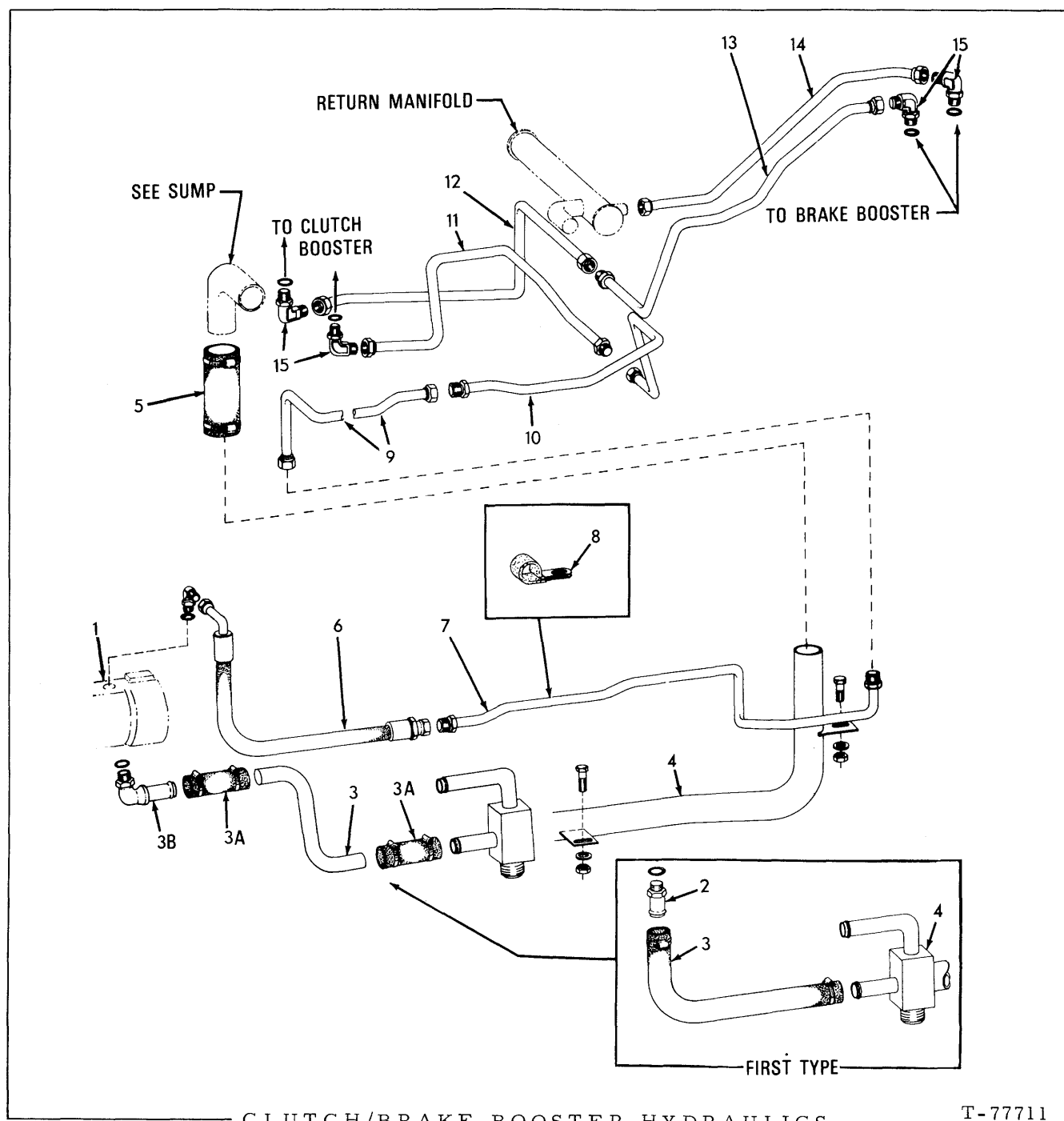
ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	PUMP ASSY., control valve supply (See page 184)
2	70661943	1	ELBOW ASSY. (Includes O-RING)
	70921205	1	O-RING
3	70662115	1	HOSE
	70921912	2	CLAMP, hose, 1-1/16" to 2" diam.
4	70662114	1	ELBOW (Includes O-RING)
	70921205	1	O-RING
5	70661977	1	HOSE (See HOSE PARTS)
6	70929703	7	CLAMP, 3/4" I. D., 15/32" bolt hole
	70927173	1	CAPSCREW, 3/8"NC x 1-1/8"
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70922300	4	CAPSCREW, 3/8"NC x 3/4"
	70630753	8	WASHER, plain
	70911026	2	NUT, 3/8"NC

(Continued)

CONTROL VALVE HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	70662047	1	TUBE (Includes nut)
	70925339	1	TEE, swivel nut, flare type, 1-1/4" tube, 1-5/8"NC
	70922266	1	CAP, flare type, 1-1/4" tube
8	70670992	1	TUBE ASSY. (Includes nut)
9	70686261	1	TUBE ASSY. (Includes nut)(Graders prior to unit #08380)
	70693146	1	TUBE (Graders unit #08380 and up)
			<u>NOTE:</u> Items 10 thru 14, not used on units with optional mechanically actuated control box.
10	70686260	1	BRACKET
	70920583	1	CAPSCREW, 1/2"NC x 1-1/2"
	70928188	1	WASHER, plain
	70058614	1	WASHER, plain
11	70681862	1	TUBE ASSY. (Includes nuts)
	70921217	1	CONNECTOR, flare type, 3/4" tube, 1-1/16" male (Includes O-RING)
	70921206	1	O-RING
12	-----	1	VALVE, pressure regulating (See page 187)
13	70681861	1	TUBE ASSY. (Includes nut)
	70921217	1	CONNECTOR, flare type, 3/4" tube, 1-1/16" male (Includes O-RING)
	70921206	1	O-RING
14	70080116	1	BLOCK (Graders prior to unit # 09032)
	70698388	1	BLOCK (Graders unit #09032 and up)
	70921565	1	CAPSCREW, 3/8"NC x 1-1/2"
	70929156	1	WASHER, plain
15	70681859	1	TUBE ASSY. (Includes nuts)
	70922981	1	CONNECTOR, flare type, 3/4" tube, 7/8"NF male (Includes O-RING)
	70921205	1	O-RING
16	-----	1	VALVE ASSY., control (See page 190)
17	70681883	1	TUBE ASSY. (Includes nuts)
	70919624	1	ELBOW, flare type, swivel nut, 3/4" tube
	70922981	1	CONNECTOR, flare type, 3/4" tube, 7/8"NF male (Includes O-RING)
	70921205	1	O-RING
18	70681884	1	TUBE ASSY. (Includes nut)
19	70095869	1	CLIP, 1-1/4" I.D., 15/32" bolt hole
20	70674808	1	TUBE (Graders prior to unit # 08380)
21	70681860	1	TUBE ASSY. (Includes nut)(For units with optional mechanically-actuated control box only)

} See
NOTE
Above



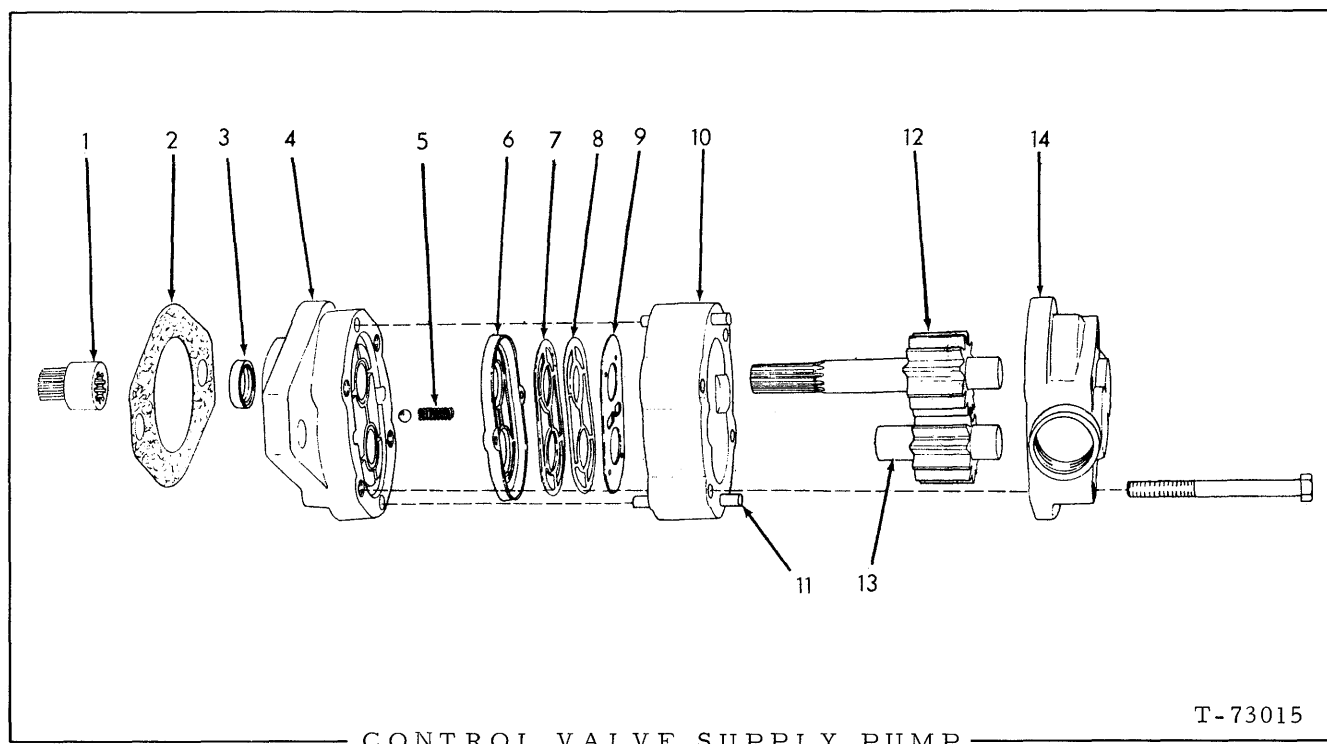
ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	PUMP ASSY., booster (See page 185)
2	70680267	1	HOSE STEM (Includes O-RING)(Engines prior to serial No. 11-24131, equipped with "Robert Bosch" injection pump)
	70921205	1	O-RING
3	70680603	1	HOSE
	70921912	2	CLAMP, hose, 1-1/16" to 2" diam. }
	70696417	1	TUBE (Engines serial No. 11-24110 and up) }
			Engines prior to # 11-24110 with "Robert Bosch" injection pump

(Continued)

CLUTCH/BRAKE BOOSTER HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION	
3A	70656261	2	HOSE	} Effective with engine #11-24110 and up
	70921912	4	CLAMP, hose, 1-1/16" to 2" diam.	
3B	70661944	1	ELBOW ASSY. (Includes O-RING)	
	70921205	1	O-RING	
4	70680256	1	TUBE	
	70921076	2	CAPSCREW, 3/8"NC x 1-1/4"	
	70677006	4	WASHER, plain	
	70911026	2	NUT, 3/8"NC	
5	70662035	1	HOSE	
	70922198	4	CLAMP, hose, 1-9/16" to 2-1/2" diam.	
6	70680094	1	HOSE	
	70921402	1	ELBOW, adjustable, flare type, 1/2" tube, 3/4"NF male (Includes washer, nut and O-RING)	
	70921349	1	O-RING	
7	70670993	1	TUBE	
8	70927217	6	CLAMP, 5/8" I.D., 17/32" bolt hole	
	70922300	4	CAPSCREW, 3/8"NC x 3/4"	
	70630753	4	WASHER, plain	
9	70679832	1	TUBE ASSY. (Includes nut)	
10	70671356	1	TUBE ASSY. (Includes nut)	
11	70671360	1	TUBE ASSY. (Includes nut)	
12	70671357	1	TUBE ASSY. (Includes nut)	
13	70662496	1	TUBE ASSY. (Includes nut)	
14	70681874	1	TUBE ASSY. (Includes nut)	
15	70921327	4	ELBOW, adjustable, flare type, 5/8" tube, 7/8"NF male (Includes O-RING)	
	70921205	4	O-RING	

(Revised March 1975)



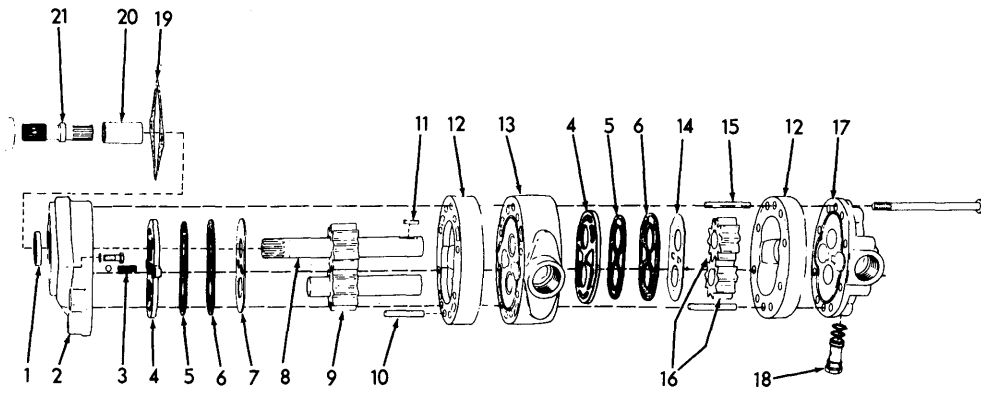
T-73015

CONTROL VALVE SUPPLY PUMP

USAGE: See page 180

ITEM	PART NO.	QTY.	DESCRIPTION
-	70662538	1	PUMP ASSY., control valve supply (Includes items 3 thru 14)
	70921076	2	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	2	LOCKWASHER, 3/8"
1	70662541	1	ADAPTOR (Not included in pump)
2	70662547	1	GASKET (Not included in pump)
3	71131019	1	SEAL, shaft
4	70689417	1	PLATE, front
5	70650679	1	SPRING
	70915903	1	BALL, steel, 7/32" diam.
6	70677066	1	SEAL, diaphragm
7	71163000	1	GASKET, diaphragm
8	71163001	1	GASKET, backup
9	70661603	1	DIAPHRAGM
10	70677876	1	BODY
11	70650180	2	PIN, dowel
12	70689419	1	GEAR ASSY., drive (Includes shaft)
13	70689418	1	GEAR ASSY., idler (Includes shaft)
14	70689416	1	PLATE, back
	70928389	4	CAPSCREW, 5/16"NC x 2-1/2"

(Revised May 1977)



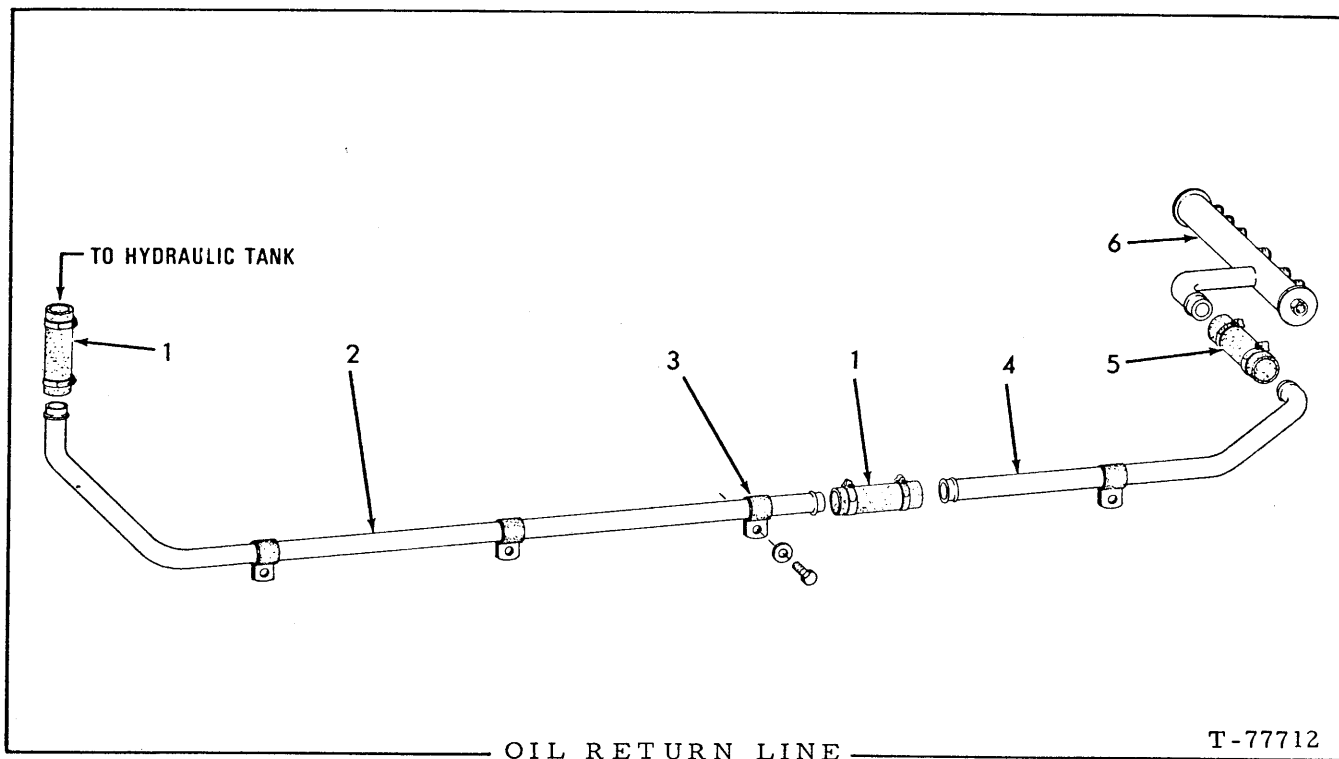
CLUTCH/BRAKE AND STEERING PUMP

T-71382

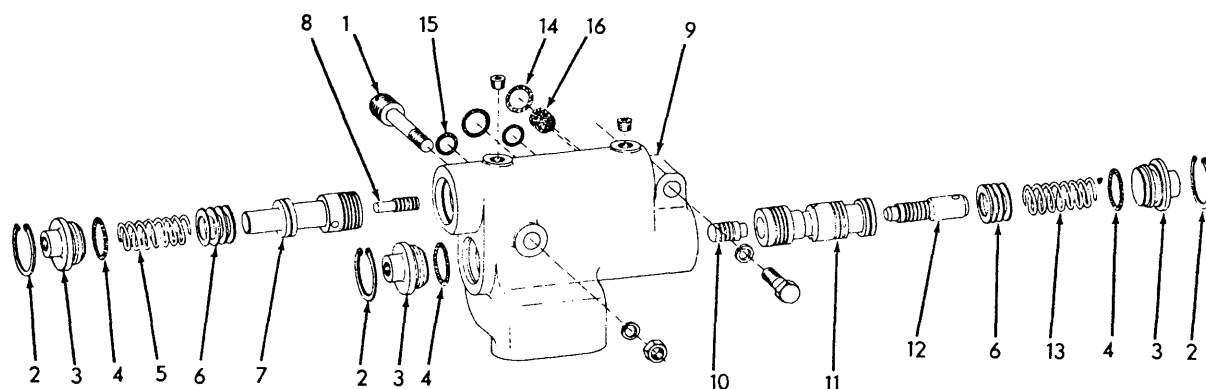
USAGE: See pages 178 and 182

ITEM	PART NO.	QTY.	DESCRIPTION
-	70662499	1	PUMP ASSY. (Includes items 1 thru 18)
	70921076	2	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	2	LOCKWASHER, 3/8"
1	71131019	1	SEAL, shaft
2	70688225	1	PLATE, front
3	70650679	1	SPRING
	70915903	1	BALL, steel, 7/32" diam.
4	70677066	2	SEAL, diaphragm
5	71163000	2	GASKET, diaphragm
6	71163001	2	GASKET, back-up
7	70661603	1	DIAPHRAGM
8	70688220	1	GEAR ASSY., drive (Includes shaft)
9	70688221	1	GEAR ASSY., idler (Includes shaft)
10	70650180	2	PIN, dowel
11	70688216	1	KEY
12	70664953	2	BODY
13	70688218	1	PLATE, adapter
14	70688404	1	DIAPHRAGM
15	-----	2	PIN, dowel (Not serviced separately)
16	70688219	2	GEAR
17	70688217	1	PLATE, back
	70928309	4	CAPSCREW, 5/16"NC x 5"
	71126503	1	PLUG, pipe, hex-socket, 1/16"NPT
18	70664948	1	VALVE ASSY., relief (Includes O-RING)
	70923842	1	O-RING
	70923719	1	O-RING
19	70651322	1	GASKET
20	70656754	1	COUPLING, female
21	70658125	1	COUPLING, male

Not included in Pump Assy.



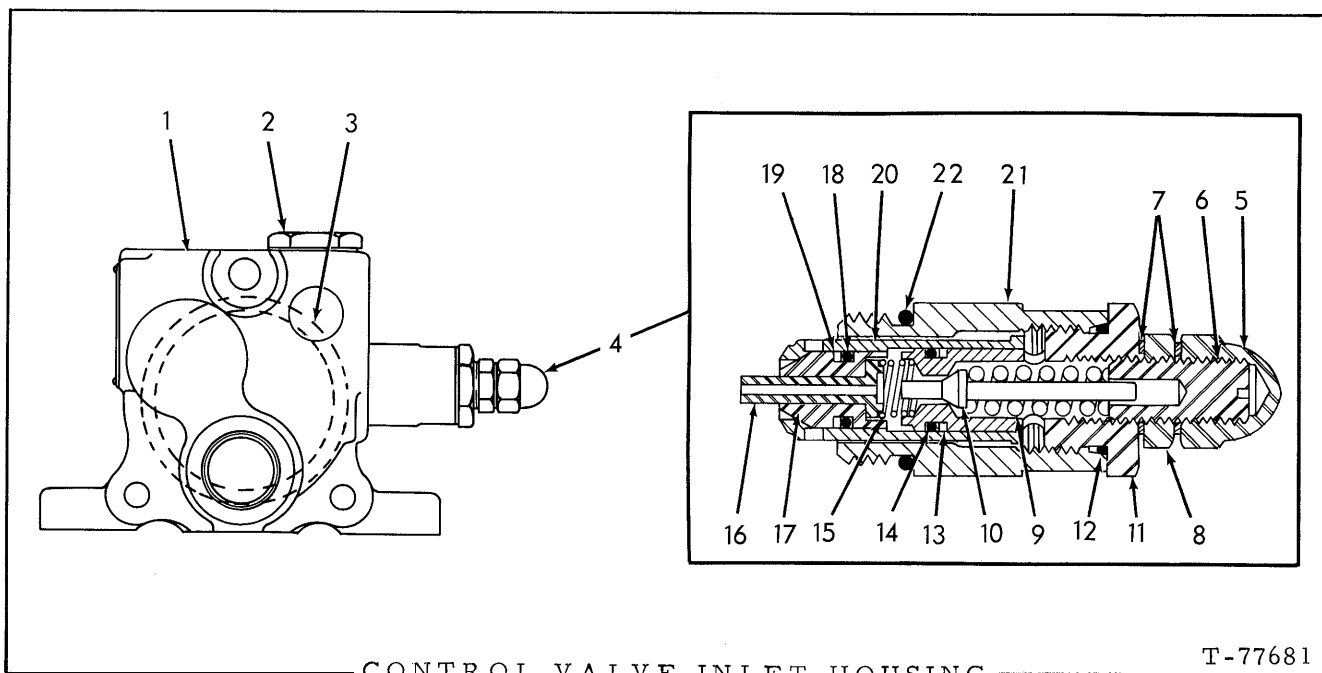
ITEM	PART NO.	QTY.	DESCRIPTION
1	70656261	2	HOSE
	70921912	4	CLAMP, hose, 1-1/16" to 2" diam.
2	70684978	1	TUBE
3	70638780	4	CLIP
	70922300	4	CAPSCREW, 3/8"NC x 3/4"
	70630753	4	WASHER, plain
4	70681858	1	TUBE
5	70087534	1	HOSE
	70921912	2	CLAMP, hose, 1-1/16" to 2" diam.
6	70671394	1	TUBE, return manifold



CONTROL BOX PRESSURE REGULATING VALVE T-77683

USAGE: See page 180

ITEM	PART NO.	QTY.	DESCRIPTION
-	70651259	1	VALVE ASSY. (Includes items 2 thru 13)
	70920995	1	CAPSCREW, 3/8" NC x 2"
1	70689765	1	STUD
	70910287	2	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8" NC
2	70928826	3	RING, snap
3	70651250	3	CAP
4	70923567	3	O-RING
5	70698720	1	SPRING
6	{ 70658758	8	SHIM (.030" thick) } Use as required
	{ 70695753	-	SHIM (.010" thick) }
7	70651251	1	PLUNGER
8	70651252	1	PISTON
9	-----	1	BODY (Not serviced separately)
	70910231	3	PLUG, pipe, hex-socket, 1/8" NPT
10	70688616	1	PISTON
11	70688615	1	PLUNGER
12	70658440	1	PISTON
13	70079203	1	SPRING
14	70923548	2	O-RING
15	70923376	2	O-RING
16	70662469	1	FILTER



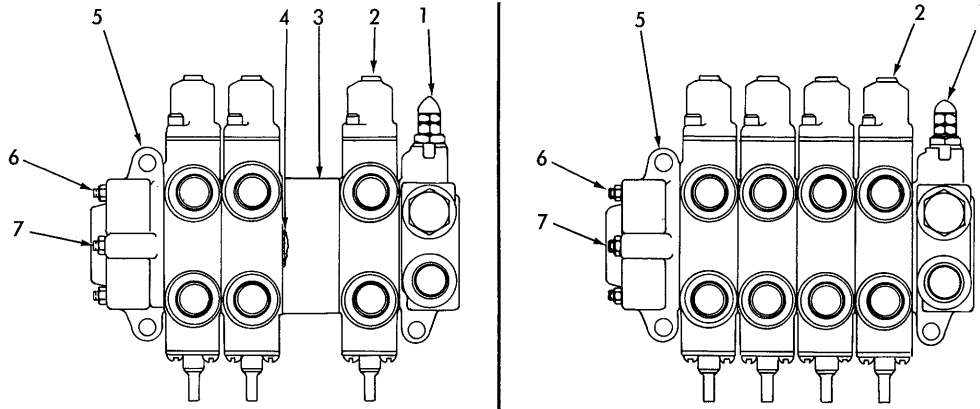
USAGE: See page 190

ITEM	PART NO.	QTY.	DESCRIPTION
-	70677894	1	HOUSING ASSY. (Includes items 1 thru 22)
1	-----	1	HOUSING (Not serviced separately)
2	70920107	1	PLUG, 7/8"NF (Includes O-RING)
	70921205	1	O-RING
3	70923814	1	O-RING, mounting
4	74995186	1	VALVE ASSY., relief (Includes items 5 thru 22)
5	74131659	1	NUT, acorn
6	74995197	1	SCREW, pressure adjusting
7	74995189	2	WASHER
8	74995188	1	NUT, jam, 3/8"NF
9	74995195	1	SPRING, pressure regulating
10	74995193	1	POPPET, valve
11	74995191	1	PLUG, poppet valve
12	74988677	1	O-RING
13	74995198	1	RING, back-up
14	74253928	1	O-RING
15	74995196	1	SPRING

(Continued)

CONTROL VALVE INLET HOUSING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
16	74995194	1	PISTON
17	74995320	1	POPPET
18	74251986	1	O-RING
19	74995199	1	RING
20	74995192	1	POPPET
21	74995190	1	CAP
22	74988668	1	O-RING



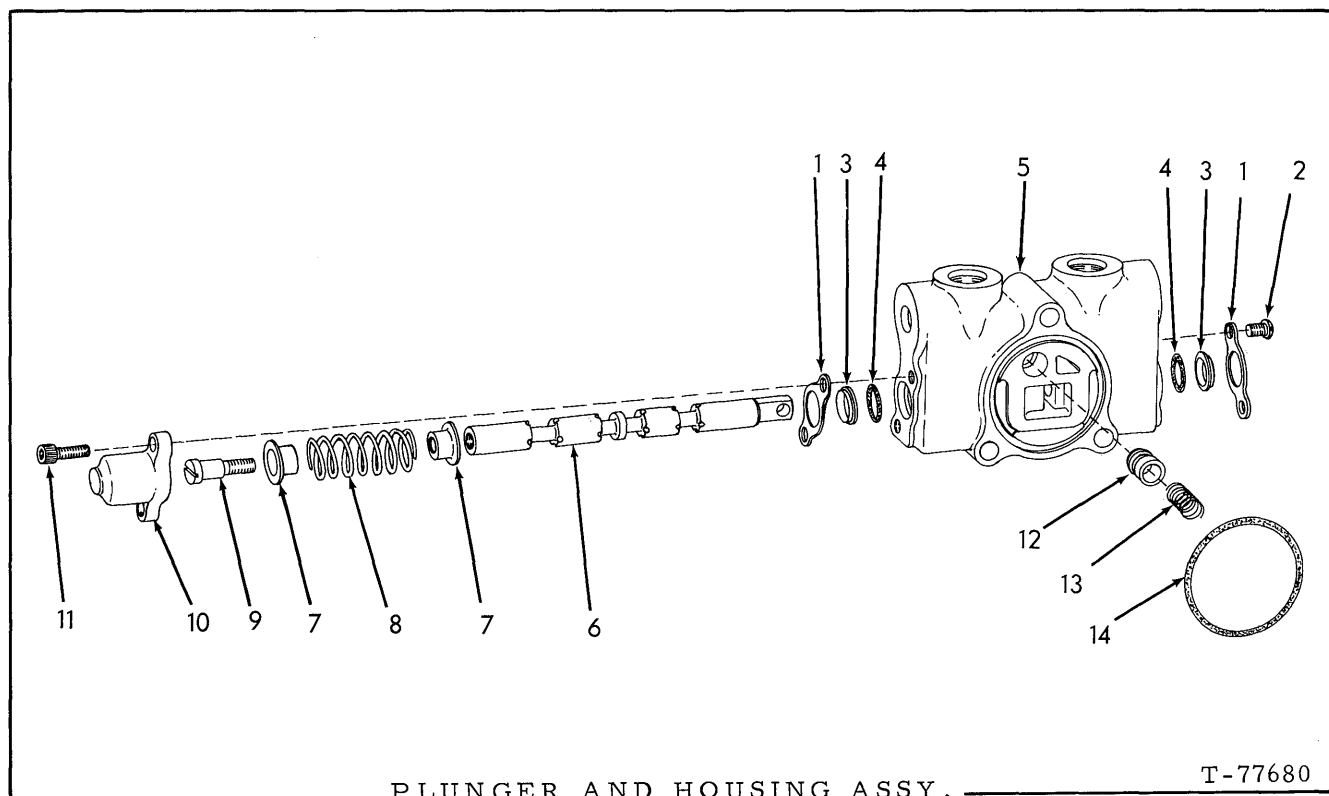
CONTROL VALVES

T-77682

(Wheel Lean, Scarifier, Moldboard Shift and Pitch)

- 70673823 VALVE ASSY. (1 section)(See pages 136, 137)
 70683913 VALVE ASSY. (2 section)(See pages 136, 137, 139, 140)
 70683914 VALVE ASSY. (3 section)(See pages 136, 137, 139, 140, 164)
 70683915 VALVE ASSY. (4 section)(See pages 136, 137, 139, 140, 164)
 70683916 VALVE ASSY. (2 section w/spacer)(See pages 136, 137, 164)
 70683917 VALVE ASSY. (3 section w/spacer)(See pages 136, 137, 164)

ITEM	PART NO.	QUANTITY						DESCRIPTION
		70673823	70683913	70683914	70683915	70683916	70683917	
1	-----	1	1	1	1	1	1	HOUSING ASSY., inlet (See page 188)
2	-----	1	2	3	4	2	3	PLUNGER AND HOUSING ASSY.(See page 191)
3	70686326	-	-	-	-	1	1	SPACER ASSY. (Includes item 4)
4	70923814	-	-	-	-	1	1	O-RING
5	74995181	1	1	1	1	1	1	HOUSING, outlet
6	70665753	2	-	-	-	-	-	ROD, tie
	70242553	-	2	-	-	-	-	ROD, tie
	70242554	-	-	2	-	2	-	ROD, tie
	70242555	-	-	-	2	-	2	ROD, tie
	70910323	4	4	4	4	4	4	NUT, 5/16"NC
7	70665751	1	-	-	-	-	-	ROD, tie
	70242556	-	1	-	-	-	-	ROD, tie
	70242557	-	-	1	-	1	-	ROD, tie
	70242558	-	-	-	1	-	1	ROD, tie
	70910123	2	2	2	2	2	2	NUT, 3/8"NF

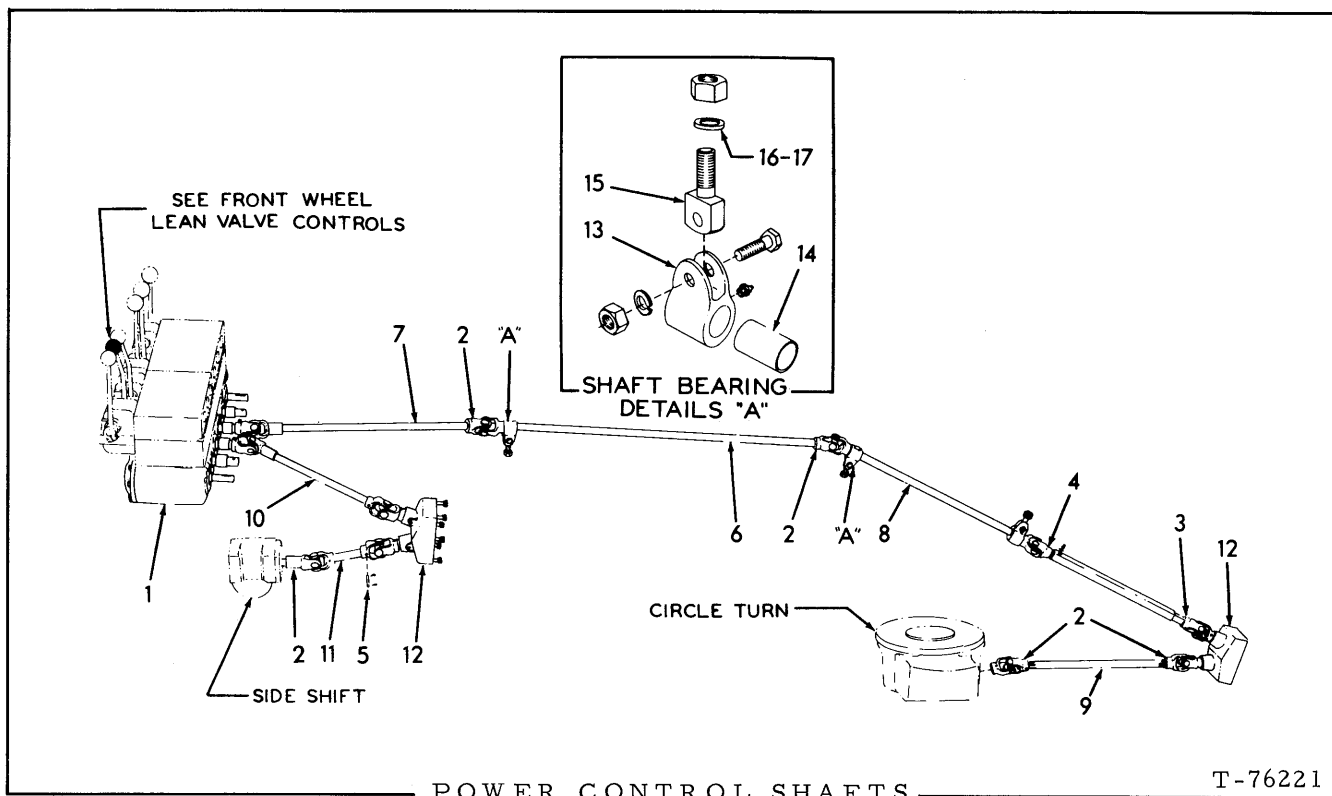


PLUNGER AND HOUSING ASSY.

T-77680

USAGE: See page 190

ITEM	PART NO.	QTY.	DESCRIPTION
-	70678796	-	PLUNGER AND HOUSING ASSY. (Includes items 1 thru 14)
NOTE: Quantities below are for one PLUNGER AND HOUSING ASSY. only.			
1	70242517	2	PLATE, seal retaining
2	70901164	2	SCREW, machine, 1/4"NC x 3/8"
3	70243652	2	WIPER
4	70923376	2	O-RING
5	-----	1	HOUSING (Not serviced separately)
6	-----	1	PLUNGER (Not serviced separately)
7	70243682	2	SEAT, spring
8	70243651	1	SPRING
9	70250876	1	CAPSCREW, seat retaining
10	70243683	1	CAP
11	70912261	2	CAPSCREW, socket-hd., 1/4"NC x 3/4"
12	70243650	1	POPPET
13	70243654	1	SPRING
14	70923814	1	O-RING

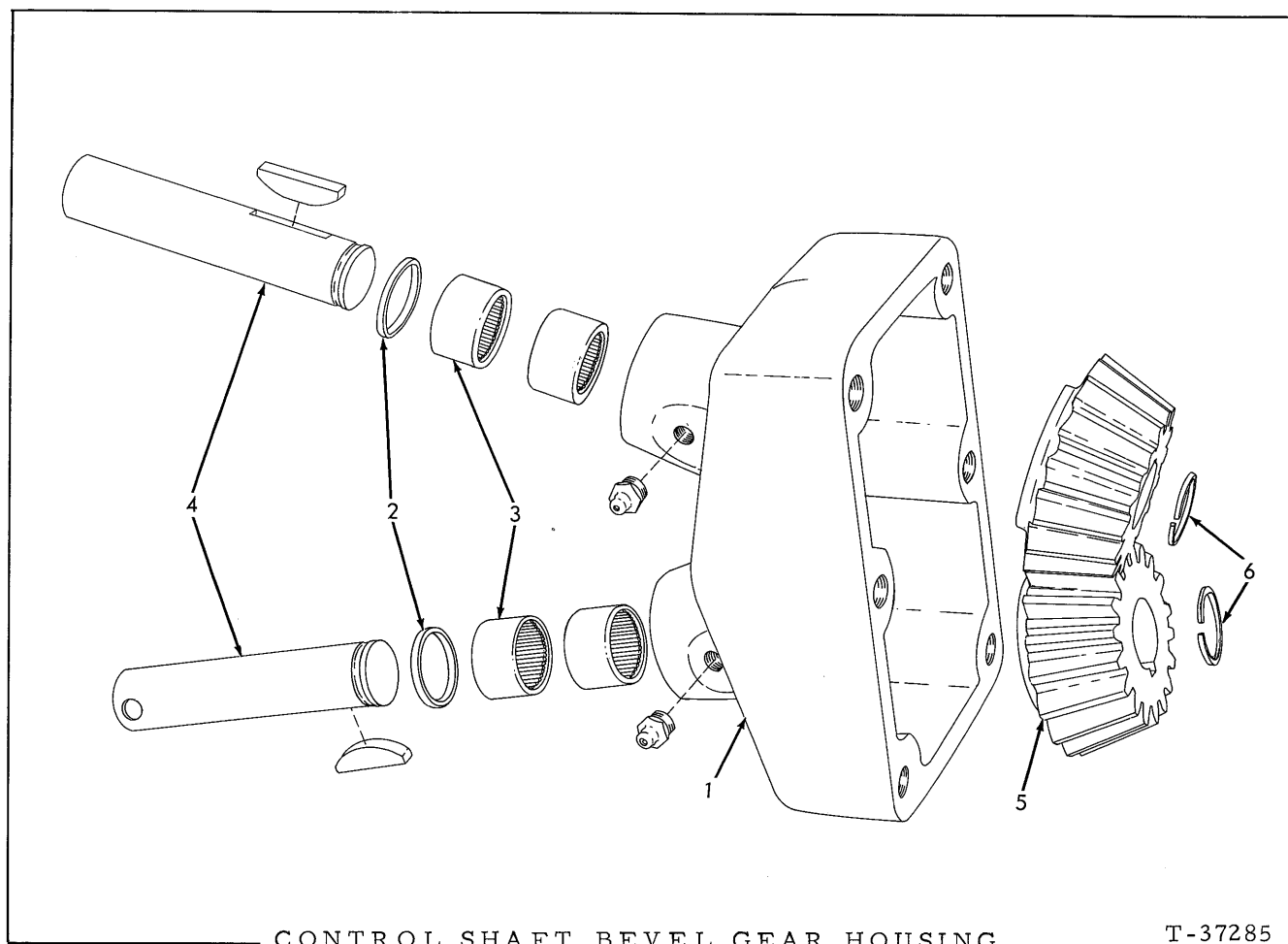


ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	BOX ASSY., power control (See page 198)
2	70684166	9	JOINT ASSY., universal (See page 207 for parts)
	70921426	18	KEY, #127 woodruff, 1/4" x 2-1/8"
3	70684261	1	JOINT ASSY., universal, circle turn control (See page 207 for parts)
	70921426	1	KEY, #127 woodruff, 1/4" x 2-1/8"
4	70684262	1	JOINT ASSY., universal, circle turn control (See page 207 for parts)
	70921426	1	KEY, #127 woodruff, 1/4" x 2-1/8"
	70912808	1	FITTING, lubricating, 1/4" NPT
	70928190	1	WASHER, plain
5	70601935	16	PIN, universal joint (3/8" x 2")
	70900805	32	PIN, cotter, 1/8" x 3/4"
6	70684257	1	SHAFT, circle turn control (47" long)
7	70684256	1	SHAFT, circle turn control (28-1/4" long)
8	70684215	1	SHAFT, circle turn control (30" long)
9	70684194	1	SHAFT, circle turn control (21-3/4" long)
10	70684269	1	SHAFT, side shift control (15-1/4" long)
11	70684209	1	SHAFT, side shift control (7-1/2" long)
12	-----	2	HOUSING ASSY., bevel gear (See page 194)
	70920585	12	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	12	LOCKWASHER, 1/2"

(Continued)

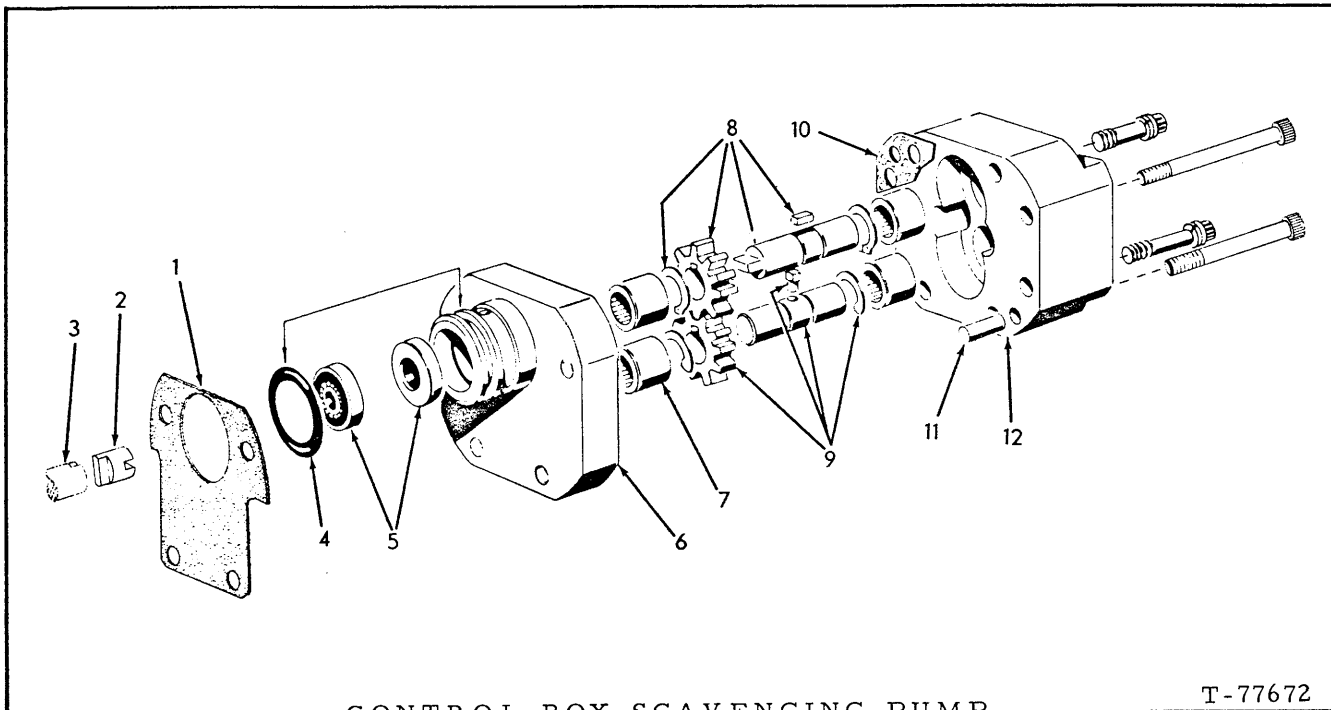
POWER CONTROL SHAFTS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
13	70624761	3	BEARING ASSY., circle turn control shafts (Includes item 14)
	70914465	3	FITTING, lubricating, straight, 1/8"NPT
	70920585	3	CAPSCREW, 1/2"NC x 1-3/4"
	70912441	3	LOCKWASHER, 1/2"
	70911028	3	NUT, 1/2"NC
14	70622062	3	BUSHING, control shaft bearing (oilite bronze)
15	70602328	3	BOLT, eye, control shaft bearing (1-5/8"long)
	70928142	3	WASHER, plain
	70911029	3	NUT, 5/8"NC
16	70928141	2	WASHER, plain
17	70916195	8	WASHER, plain, 1/32" thick (Use as required)



USAGE: See page 192

ITEM	PART NO.	QTY.	DESCRIPTION
-	70684259	2	HOUSING ASSY., bevel gear (Includes items 1 thru 6)
1	70621048	2	HOUSING, gear
	70914465	4	FITTING, lubricating, straight, 1/8"NPT
2	70053926	4	SEAL, dust
3	70051513	8	BEARING, needle, gear shaft
4	70684260	4	SHAFT, bevel gear
	70921426	4	KEY, #127 woodruff, 1/4" x 2-1/8"
5	70621045	4	GEAR, bevel
6	70054182	4	RING, snap, gear retaining

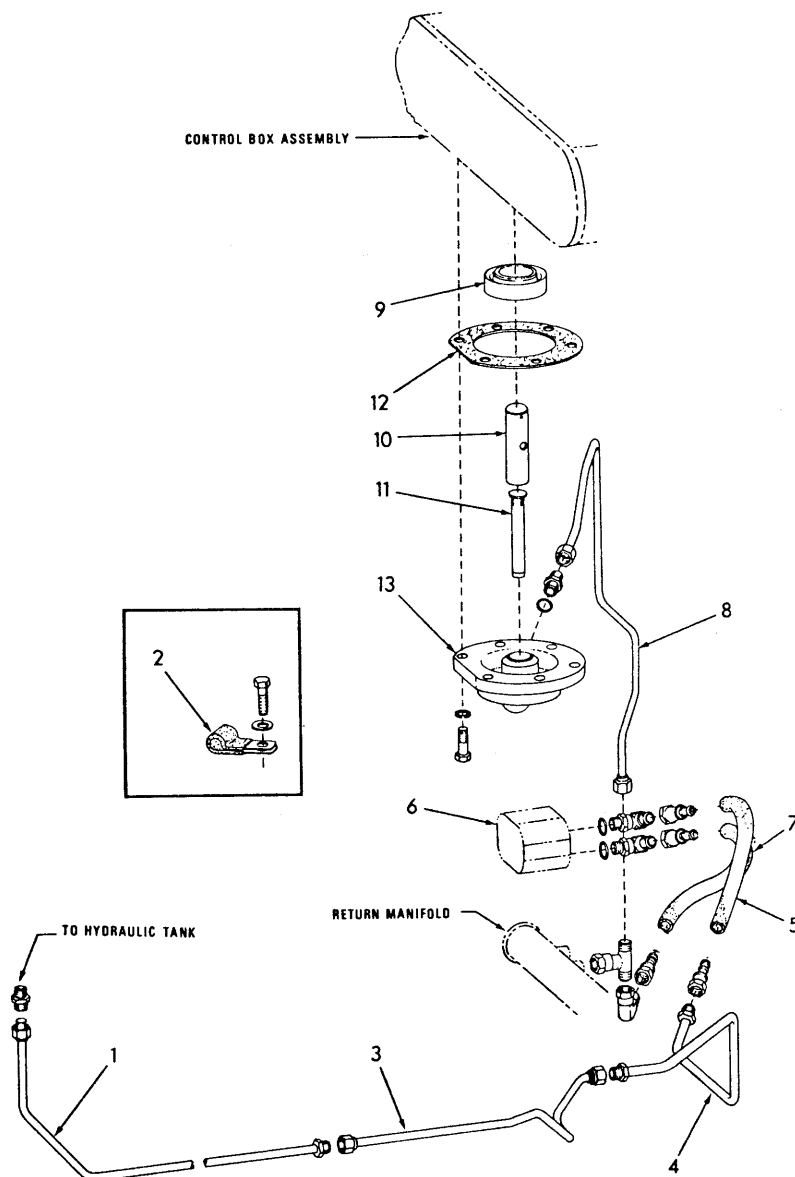


CONTROL BOX SCAVENGING PUMP

T-77672

USAGE: See page 196

ITEM	PART NO.	QTY.	DESCRIPTION
-	70682528	1	PUMP ASSY., scavenging (Includes items 4 thru 12)
	70917905	2	CAPSCREW, ctsk-socket, 1/4"NC x 2"
	70921754	2	CAPSCREW, ctsk-socket, 1/4"NC x 2-1/4"
1	70681838	1	GASKET, pump mounting
2	70649402	1	COUPLING, pump
3	-----	-	WORM (See POWER TAKE-OFF VERTICAL DRIVE)
4	70923649	1	O-RING
5	74047783	2	SEAL, pump shafts
6	-----	1	STATOR (Not serviced separately)
7	70077241	4	BEARING, needle
8	70689609	1	SHAFT ASSY., drive (Includes gear, snap ring, and key. Serviced only as a unit)
9	70689610	1	SHAFT ASSY., idler (Includes gear, snap ring, and pin. Serviced only as a unit)
10	70621363	1	GASKET, pump housing
11	70689607	2	PIN, dowel, pump housing
12	-----	1	HOUSING, gear (Not serviced separately)
	70923448	2	SCREW, 12 pt., 1/4"NC x 1-3/4"
	70919310	2	LOCKWASHER, 1/4"
	74999593	2	SCREW ASSY. (Includes lockwasher)



CONTROL BOX SCAVENGING HYDRAULICS

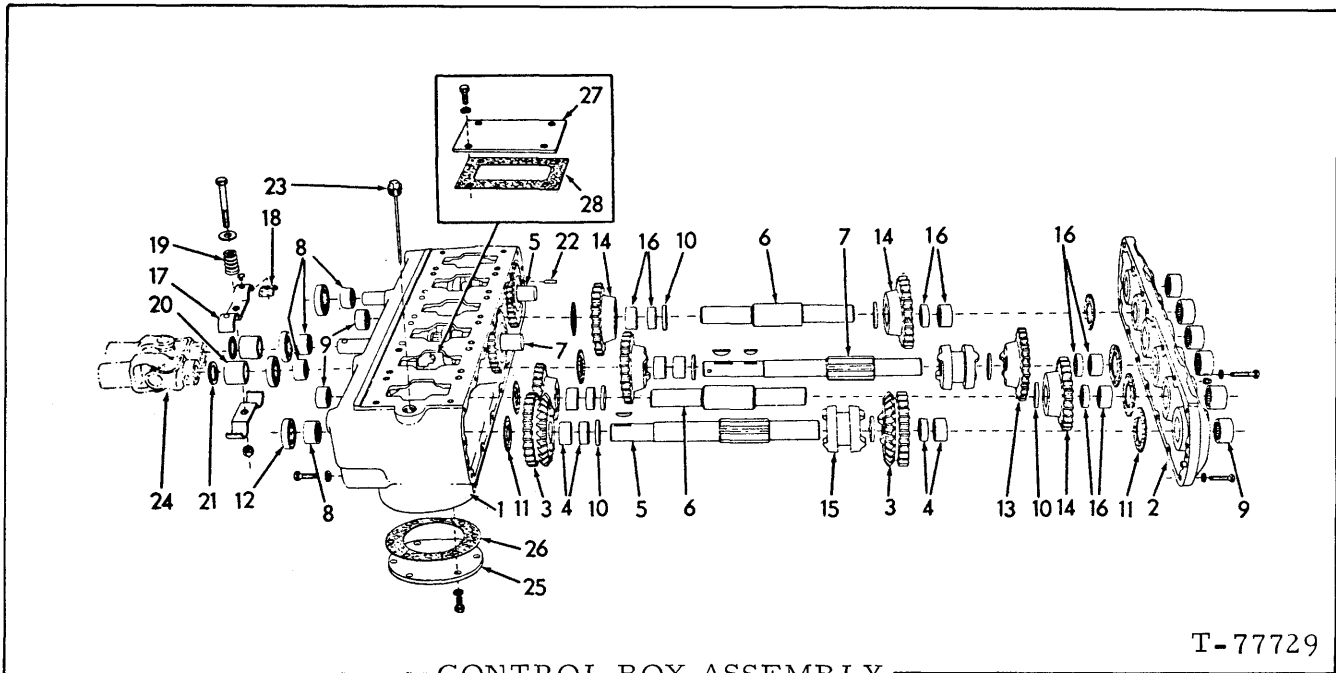
T-77647

ITEM	PART NO.	QTY.	DESCRIPTION
1	70681865	1	TUBE ASSY. (Includes nut)
	70919172	1	CONNECTOR, flare type, 3/8" tube, 3/8"NPT male
2	70925616	6	CLAMP, tube, 5/16" I.D., 15/32" bolt hole
	70922300	5	CAPSCREW, 3/8"NC x 3/4"
	70927400	1	CAPSCREW, 3/8"NC x 5/8"
	70630753	6	WASHER, plain
3	70681864	1	TUBE ASSY. (Includes nut)
4	70681863	1	TUBE

(Continued)

CONTROL BOX SCAVENGING HYDRAULICS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
5	-----	1	HOSE, 3/8" I.D. x 13" (Order item 14)
	70920806	2	FITTING, socketless, 3/8" hose, 9/16"NF
	70922523	1	ELBOW, adjustable, flare type, 3/8" tube, 9/16"NF (Includes washer, nut and O-ring)
	70921885	1	O-RING, elbow
6	-----	1	PUMP ASSY. (See page 195)
7	-----	1	HOSE, 3/8" I.D. x 7-1/2" (Order item 14)
	70920806	2	FITTING, socketless, 3/8" hose, 9/16"NF
	70922523	1	ELBOW, adjustable, flare type, 3/8" tube, 9/16"NF (Includes washer, nut and O-ring)
	70921885	1	O-RING
	70921013	1	ELBOW, swivel nut, flare type, 3/8" tube, 9/16" NF male
8	70671355	1	TUBE ASSY. (Includes nuts)
	70921014	1	TEE, swivel nut, flare type, 3/8" tube, 9/16"NF male
	70922457	1	CONNECTOR, flare type, 3/8" tube, 3/4" male (Includes O-ring)
	70921349	1	O-RING, connector
9	73013850	1	MAGNET
10	70664902	1	TUBE
11	70664901	1	TUBE
12	70664894	1	GASKET
13	70664903	1	COVER ASSY. (Includes items 10 and 11)
	70927212	6	CAPSCREW, Nylok, 3/8"NC x 1"
	70910287	6	LOCKWASHER, 3/8"
14	70920388	-	HOSE, 3/8" I.D. x 25 ft. (Use as required)



T-77729

CONTROL BOX ASSEMBLY

USAGE: See page 192

ITEM	PART NO.	QTY.	DESCRIPTION
-	70683539	1	BOX ASSY. (Graders prior to unit #09264)
-	70684351	1	BOX ASSY. (Graders unit #09264 and up)
	70923166	1	PLUG, closure (Includes O-RING)
	70921883	1	O-RING
1	70651955	1	<u>NOTE:</u> All of the above includes items 1 thru 22. BOX ASSY. (Consists of 1 Box, 1 Cover, 2 Dowel Pins 70053990, 7 Capscrews 70927157, 7 lock, washers 70910287, 4 BEARINGS 70074975 and 8 BEARINGS 70074976)
	70901651	1	PLUG, pipe, 1/8"NPT (oil level)
	70907859	1	PLUG, pipe, 1/4"NPT
	70920583	6	CAPSCREW, 1/2"NC x 1-1/2"
	70912441	6	LOCKWASHER, 1/2"
	70923166	1	PLUG, closure (Includes O-RING)
	70921883	1	O-RING, plug
2	-----	1	COVER, control box (Not serviced separately. Order item 1)
	70927157	16	CAPSCREW, 3/8"NC x 1-3/8"
	70928798	2	CAPSCREW, Nylok, 3/8"NC x 3/4"
	70910287	18	LOCKWASHER, 3/8"
3	70696119	2	GEAR ASSY., power input (Includes item 4)
4	70080325	2	BEARING, needle, power input gear (3/4" long)
	70240980	2	BEARING, needle, power input gear (1/2" long)
5	70642608	2	SHAFT, power input gear and side shift drive
	70921426	2	KEY, #127 woodruff, 1/4" x 2-1/8"
	70677647	2	SHAFT (Grader unit #09264 and up)
			} Graders prior to unit #09264

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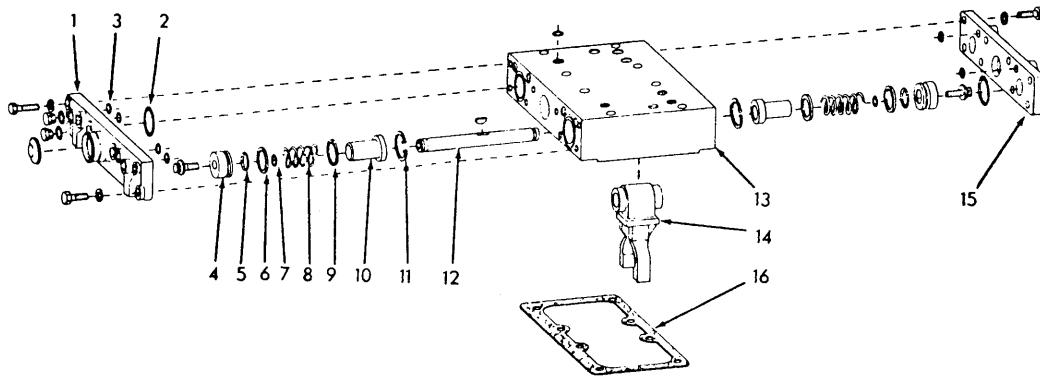
CONTROL BOX ASSEMBLY (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
6	70679329	2	SHAFT
7	70684301	2	SHAFT
8	70074975	4	BEARING, needle, driving shaft (1" long)
9	70074976	8	BEARING, needle, driving shaft
10	70662524	12	WASHER, thrust, driving and input shafts (steel)
11	70645526	12	WASHER, thrust, driving and input shafts (fiber)
12	70044741	4	SEAL, oil driving and input shafts
13	70662525	6	GEAR ASSY. (Graders prior to unit #08774)
	70696118	6	GEAR ASSY. (Grader unit #08774 and up)
14	70679333	4	GEAR ASSY.
15	70641965	4	CLUTCH, sliding
16	70080325	10	BEARING, needle, clutch gear (3/4" long)
	70240980	10	BEARING, needle, clutch gear (1/2" long)
17	70679067	1	SHOE ASSY., driving shaft brake (lower)
	70604954	1	SHOE ASSY., driving shaft brake (upper)
	70920996	1	CAPSCREW, 3/8"NC x 2-1/4"
	70928845	1	WASHER, plain
18	70053991	4	LINING, brake shoe
	70912312	4	RIVIT, split, ctsk-hd., 5/32" x 1/2"
19	70050972	1	SPRING, brake shoe
20	70097524	2	COLLAR, driving shaft brake
	70911233	2	KEY, #11 woodruff, 3/16" x 7/8"
21	70911159	2	WASHER, plain, SAE std., 1"
22	70053990	2	PIN, dowel, control box
23	70651948	1	DIPSTICK (Units with hydraulically - actuated control box)
	70912725	1	PLUG (1/2"NPT)(Units with mechanically - actuated control box)
24	-----	-	UNIVERSAL JOINT (See POWER CONTROL SHAFTS)
25	70664893	1	PLATE, bottom
	70927212	6	CAPSCREW, Nylok, 3/8"NC x 1"
	70910287	6	LOCKWASHER, 3/8"
26	70664894	1	GASKET, bottom plate
27	70096654	1	COVER, control opening (Removed when Scarifier is installed)
	70922763	4	CAPSCREW, 3/8"NC x 1"
	70910287	4	LOCKWASHER, 3/8"
28	70096658	1	GASKET, cover

Each includes item 16

Includes item 18

NOTE: Items 25 thru 28 are units with optional mechanically - actuated control box only.

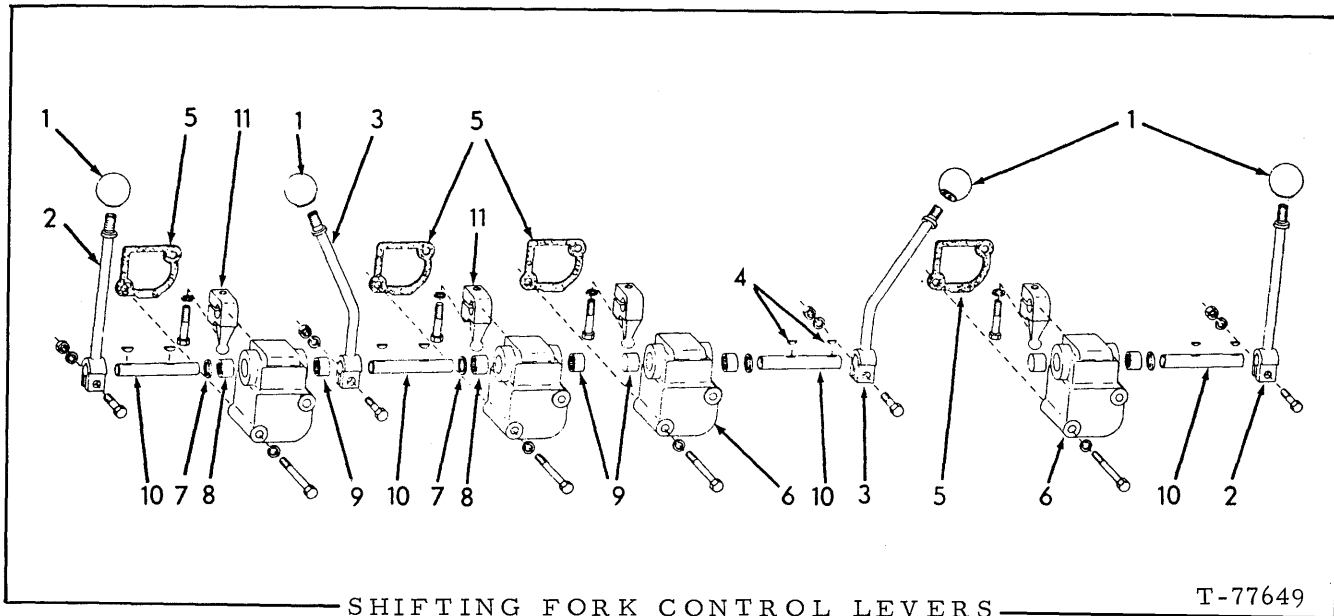


T-77646

CONTROL BOX SHIFTING FORKS

USAGE: Standard. Not for units with optional mechanically - actuated control box

ITEM	PART NO.	QTY.	DESCRIPTION	
-	70662475	2	FORK AND HOUSING (Graders prior to unit #08326)	Includes items 1 thru 15
	70696201	2	FORK AND HOUSING (Grader unit #08326 and up)	
1	70651230	2	COVER	
	70927173	8	CAPSCREW, 3/8" NC x 1-1/8"	
	70921565	8	CAPSCREW, 3/8" NC x 1-1/2"	
	70910287	16	LOCKWASHER, 3/8"	
	70910106	2	PLUG, expansion, 1-5/8" diam.	Not used on units with Scarifier
	70922577	2	PLUG, hex-hd., 9/16" straight thd. (Includes O-RING)	
	70921885	2	O-RING	
2	70924038	8	O-RING (2-1/8" O.D.)	
3	70923548	28	O-RING (5/8" O.D.)	
4	70671064	8	PISTON	
	70922051	8	CAPSCREW, 12 pt., 3/8" NC x 1"	
5	70923895	8	O-RING (1-1/2" O.D.)	
6	70662597	8	RING, seal	
7	70923376	8	O-RING (3/4" O.D.)	
8	70662474	8	SPRING	
9	70651217	8	WASHER	
10	70651247	8	SPACER	
11	70929701	8	RING, snap	
12	70651235	4	SHAFT	
	70905126	4	KEY, #15 woodruff, 1/4" x 1"	
13	70651227	2	HOUSING	
14	70651228	4	FORK (Graders prior to unit #08326)	
	70696202	4	FORK (Grader unit #08326 and up)	
15	70651229	2	COVER	
	70927173	16	CAPSCREW, 3/8" NC x 1-1/8"	
	70910287	16	LOCKWASHER, 3/8"	
16	70651231	2	GASKET	

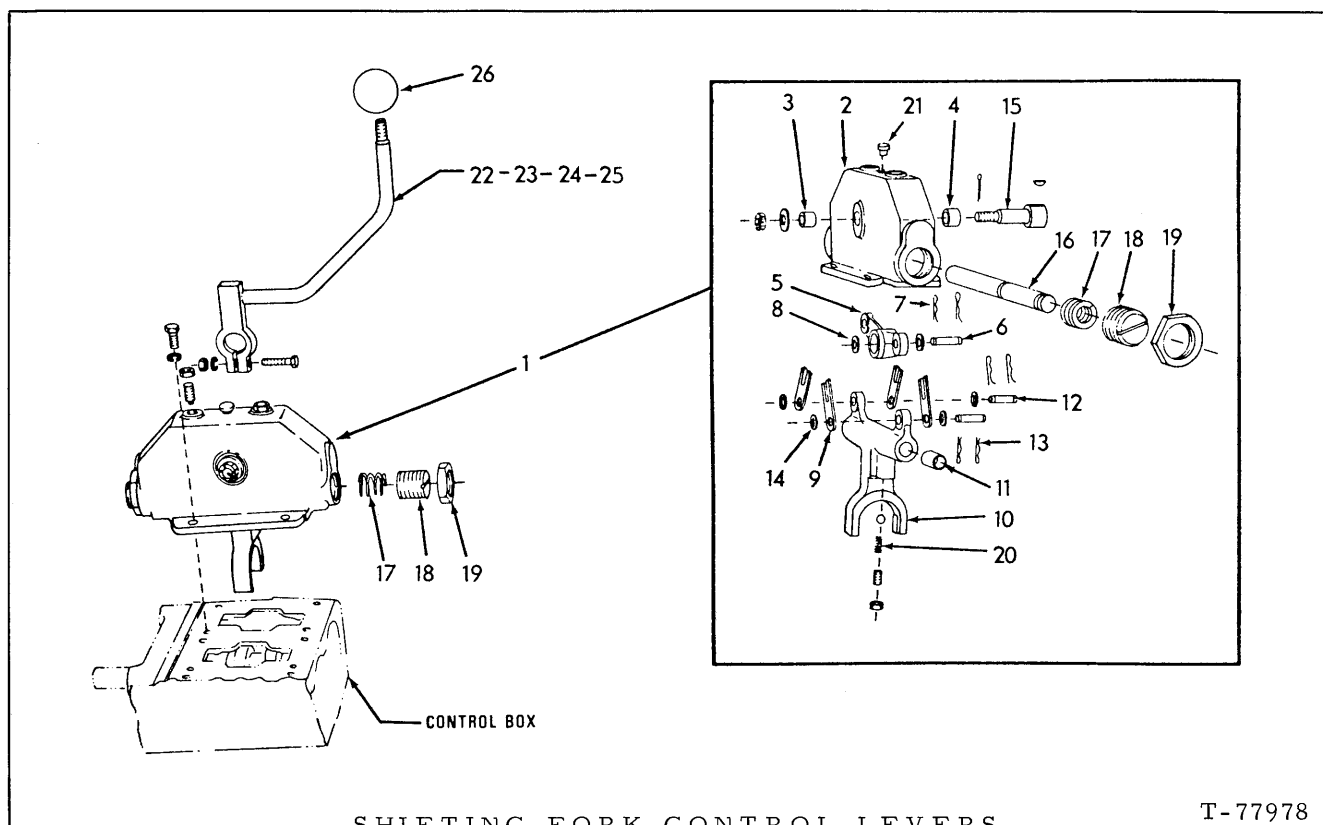


SHIFTING FORK CONTROL LEVERS

T-77649

USAGE: Standard. Not for units with optional mechanically-actuated control box.

ITEM	PART NO.	QTY.	DESCRIPTION
1	70091862	4	KNOB, lever
2	70659576	2	LEVER, moldboard lift
	70927225	2	CAPSCREW, 3/8"NC x 1-5/8"
	70910287	2	LOCKWASHER, 3/8"
	70911026	2	NUT, 3/8"NC
3	70659578	2	LEVER, circle turn and side shift
	70927225	2	CAPSCREW, 3/8"NC x 1-5/8"
	70910287	2	LOCKWASHER, 3/8"
	70911026	2	NUT, 3/8"NC
4	70905121	8	KEY, #5 woodruff, 1/8" x 5/8"
5	70651211	4	GASKET
6	70651210	4	HOUSING
	70927536	8	CAPSCREW, 3/8"NC x 3-1/4"
	70910287	8	LOCKWASHER, 3/8"
7	70624443	4	SEAL
8	70800781	4	BEARING
9	70800780	4	BEARING
10	70651212	4	SHAFT
11	70651215	4	LEVER
	70927225	4	CAPSCREW, 3/8"NC x 1-5/8"
	70910287	4	LOCKWASHER, 3/8"



SHIFTING FORK CONTROL LEVERS

T-77978

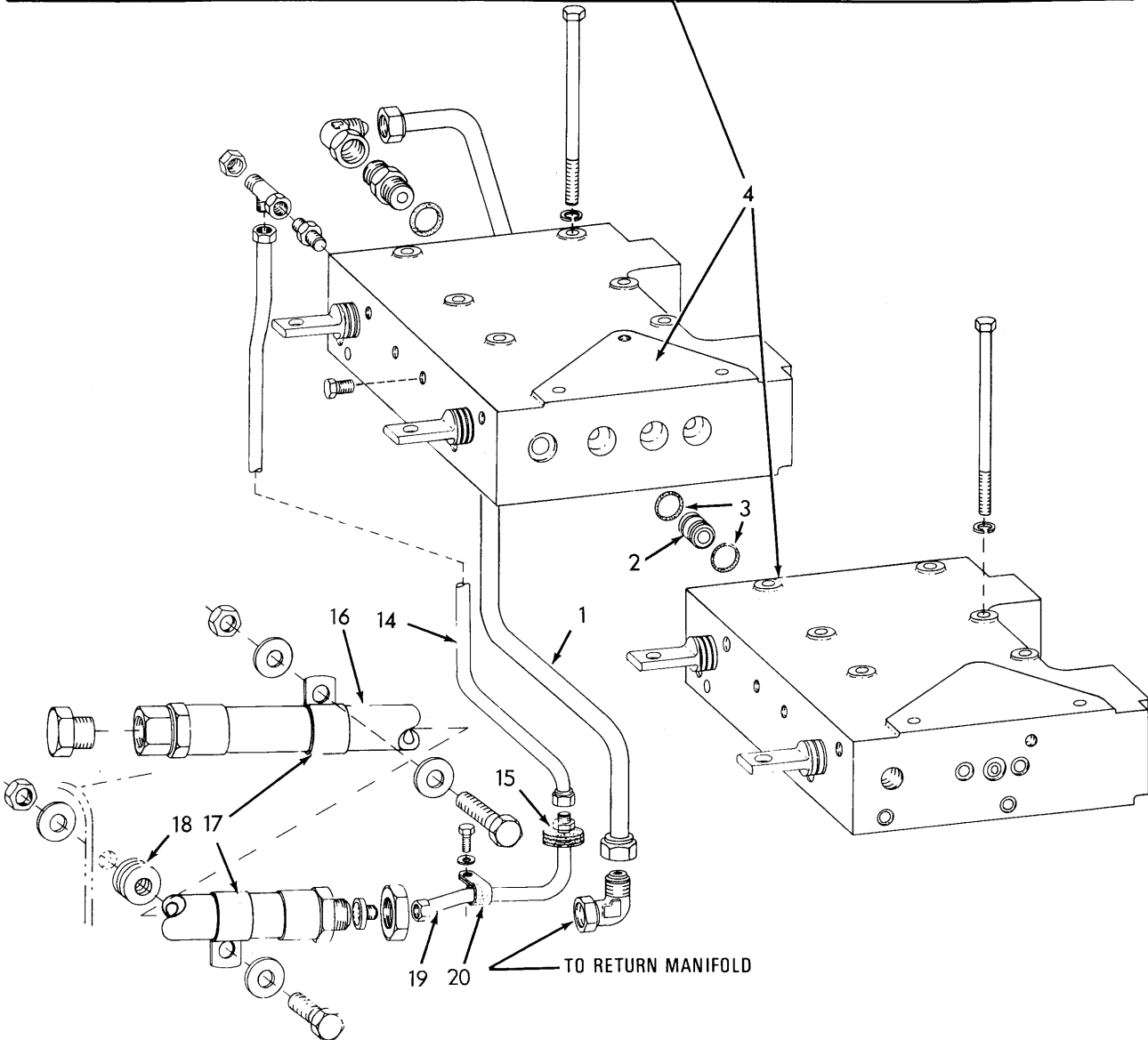
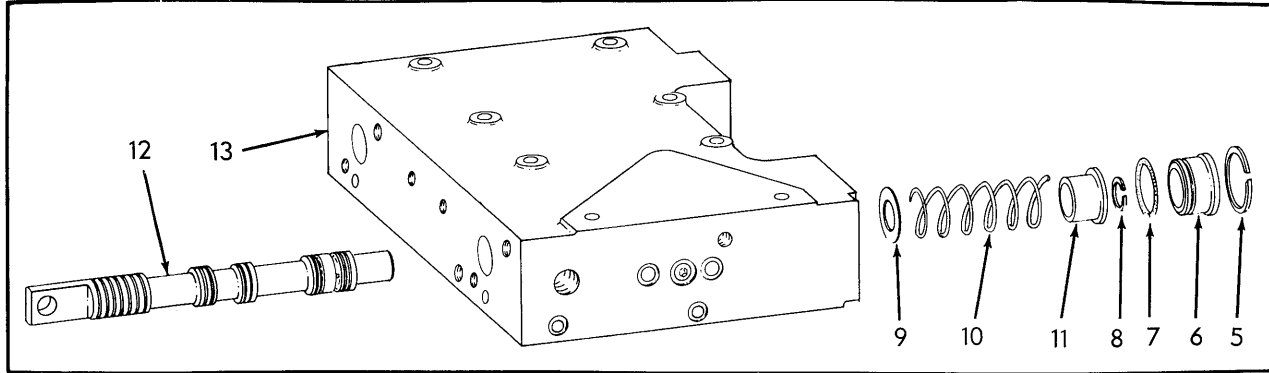
USAGE: Optional. For units equipped with mechanically - actuated control box

ITEM	PART NO.	QTY.	DESCRIPTION
1	70645310	4	FORK AND HOUSING ASSY. (Consists of items 2 thru 21)
	70922763	16	CAPSCREW, 3/8"NF x 1"
	70910287	16	LOCKWASHER, 3/8"
	70917088	8	SETSCREW, slotted-hd., dog-pt., 3/8"NC x 1-1/4"
	70911034	8	NUT, jam, 3/8"NC
2	70631121	4	HOUSING ASSY., shifter (Includes items 3 and 4)
3	70063222	4	BUSHING, shifting lever shaft (1/2" I. D.)
4	70085203	4	BUSHING, shifting lever shaft (3/4" I. D.)
5	70645313	4	LEVER ASSY., shifting (Includes item 6)
6	70099042	8	PIN, shifting lever
7	70098817	16	CLIP, shifting lever pin
8	70099043	16	WASHER, shifting lever pin
9	70645312	16	LINK, shifting lever
10	70624616	4	FORK ASSY., shifting (Includes items 11 and 12)
11	70087751	8	BUSHING, shifting fork
12	70099042	8	PIN, shifting fork
13	70098817	16	CLIP, shifting fork pin

(Continued)

SHIFTING FORK CONTROL LEVERS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
14	70099043	16	WASHER, shifting fork pin
15	70094885	4	SHAFT, shifting lever
	70910244	4	WASHER, plain, SAE std., 1/2"
	70913471	4	NUT, jam, slotted, 1/2"NF
	70900806	4	PIN, cotter, 1/8" x 1"
16	70630878	4	SHAFT, shifting fork
17	70648364	8	SPRING, lever centering
18	70645311	8	PLUG, lever centering spring
19	70630880	8	NUT, centering spring plug
20	70651552	4	SPRING, detent
	70905360	4	BALL, steel, 3/8" diam.
	70914480	4	SETSCREW, slotted-hd., oval-pt., 7/16"NF x 3/4"
	70910876	4	NUT, jam, 7/16"NF
21	70605132	4	VENT, air
22	70087809	1	LEVER, operating, circle turn
	70921565	1	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NF
	70905123	1	KEY, #9 woodruff, 3/16" x 3/4"
23	70087810	1	LEVER, operating, side shift
	70921565	1	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NF
	70905123	1	KEY, #9 woodruff, 3/16" x 3/4"
24	70630219	1	LEVER, operating, moldboard lift, left
	70921565	1	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NF
	70905123	1	KEY, #9 woodruff, 3/16" x 3/4"
25	70630220	1	LEVER, operating, moldboard lift, right
	70921565	1	CAPSCREW, 3/8"NF x 1-1/2"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NF
	70905123	1	KEY, #9 woodruff, 3/16" x 3/4"
26	70091862	4	KNOB, operating lever



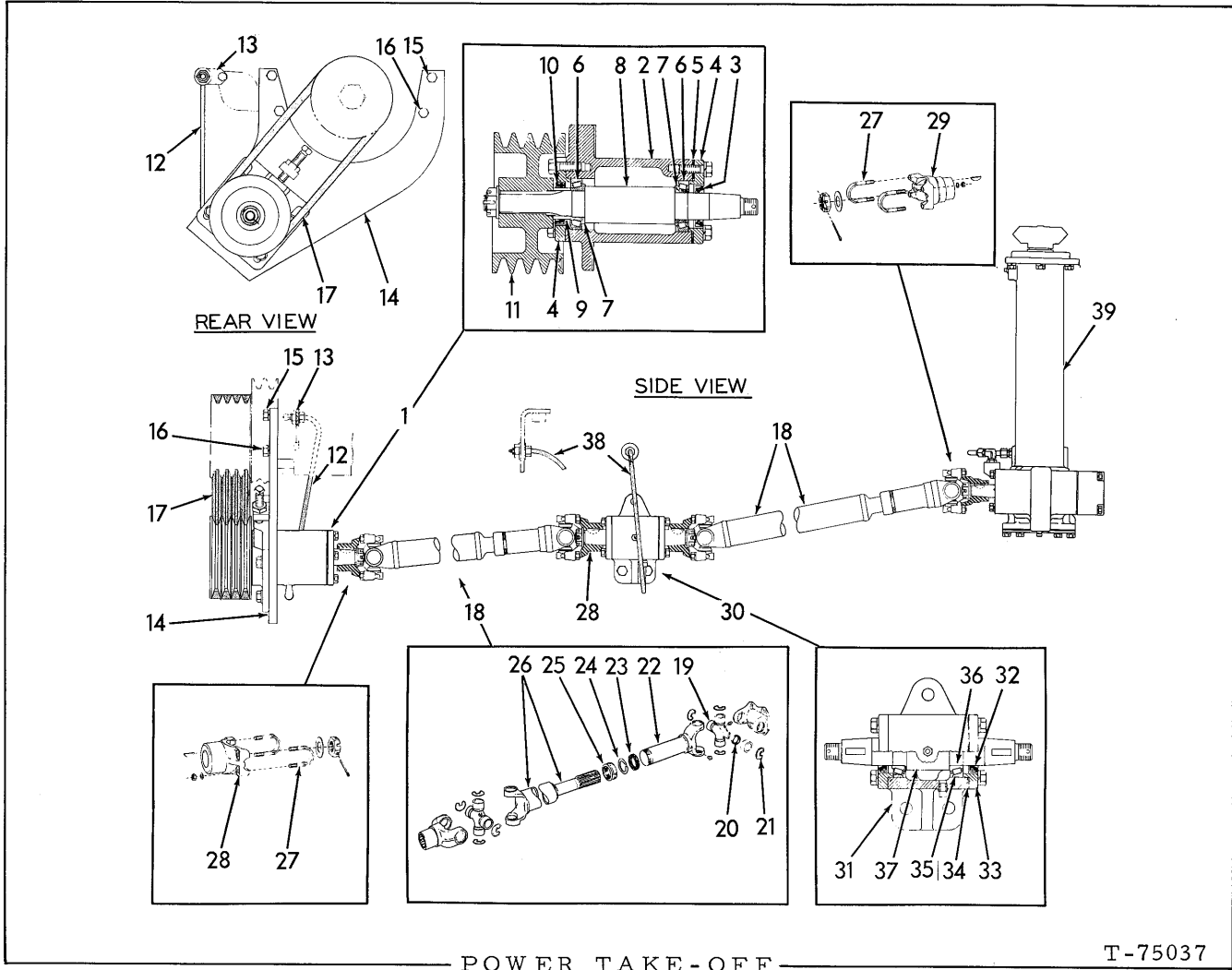
T-77648

SHIFTING FORK CONTROL VALVES

SHIFTING FORK CONTROL VALVES

USAGE: Standard. Not for units with optional mechanically-actuated control box.

ITEM	PART NO.	QTY.	DESCRIPTION	
1	70671359	1	TUBE ASSY. (Includes nuts)	
	70921279	2	ELBOW, flare type, swivel nut, 1/2" tube	
	70921409	1	CONNECTOR, flare type, 1/2" tube, 3/4"NF male end (Includes O-RING)	
	70921349	1	O-RING, connector	
2	70651221	3	SLEEVE	
3	70923379	6	O-RING	
4	70662483	1	VALVE ASSY., left (Includes items 5 thru 13)	
	70927484	2	CAPSCREW, 3/8"NC x 1/2" (Not used on units with Scarifier)	
	70929708	6	CAPSCREW, 3/8"NC x 6"	
	70910287	6	LOCKWASHER, 3/8"	
	70662484	1	VALVE ASSY., right (Includes items 5 thru 13)	
	70929708	8	CAPSCREW, 3/8"NC x 6"	
	70910287	8	LOCKWASHER, 3/8"	
5	70927696	4	RING, snap	
6	70651242	4	CAP	
7	70923948	4	O-RING	
8	70929390	4	RING, snap	
9	70651243	4	WASHER	
10	70651245	4	SPRING	
11	70651226	4	SPACER	
12	-----	4	SPOOL (Not serviced separately)	
13	-----	2	HOUSING (Not serviced separately)	
14	70691360	1	TUBE ASSY. (Graders prior to unit #09264)	} Each includes nut
	70693102	1	TUBE ASSY. (Grader unit #09264 and up)	
	70919172	1	CONNECTOR, flare type, 3/8" tube, 3/8"NPT male	
	70921297	1	TEE, swivel, flare type, 3/8" tube	
	70919552	1	CAP, flare fitting, 3/8" tube	
15	70926779	1	GROMMET	
16	70645246	1	HOSE ASSY. (See HOSE PARTS)	
	70925852	1	REDUCER, flare type, 3/4" tube, to 3/8" tube	
	70919197	1	NUT, flare type, 3/4" tube	
	70925477	1	PLUG, flare type, 3/4" tube	
17	70927388	3	CLAMP (1 less used in Graders prior to unit #09264)	
	70920574	1	CAPSCREW, 1/2"NC x 1-3/8"	
	70924864	1	CAPSCREW, 1/2"NC x 2-1/4"	
	70928188	4	WASHER, plain	
	70911028	2	NUT, 1/2"NC	
	70922262	2	CAPSCREW, 3/8"NC x 7/8"	} Graders unit # 09264 and up
	70928845	2	WASHER	
18	70677008	3	WASHER, clip spacing	
19	70693101	1	TUBE ASSY. (Includes nuts)	} Graders unit # 09264 and up
20	70639314	1	CLIP	
	70927400	1	CAPSCREW, 3/8"NC x 5/8"	
	70928845	1	WASHER	



ITEM	PART NO.	QTY.	DESCRIPTION	
1	70664966	1	DRIVE ASSY. (Consists of items 2 thru 11)	
	70920582	4	CAPSCREW, 1/2"NC x 1-1/4"	
	70910244	4	WASHER, plain	
2	70633883	1	HOUSING, drive	
	70916619	1	FITTING, relief, 1/8"NPT	
	70901651	1	PLUG, pipe, 1/8"NPT	
3	70236065	1	SEAL, drive shaft, front	
4	70633944	2	CAP, drive housing	
	70916272	8	CAPSCREW, 3/8"NC x 1-1/4"	
	70904206	8	LOCKWASHER, 3/8"	
5	{ 70634010	6	SHIM, bearing adjustment (.005" thick)	} Use as Required
	{ 70634007	8	SHIM, bearing adjustment (.010" thick)	
6	74254704	2	CUP, drive shaft bearing	
7	74254703	2	CONE ASSY., drive shaft bearing	

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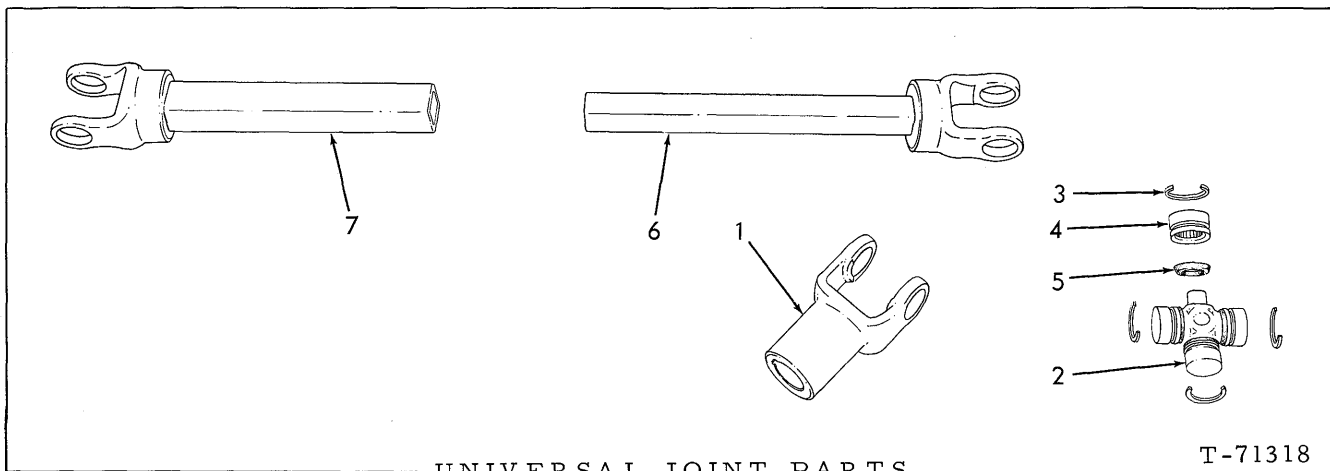
POWER TAKE - OFF (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
8	70664964	1	SHAFT, drive
	70910255	1	WASHER, plain, SAE std., 3/4"
	70913472	1	NUT, jam, slotted, 3/4"NC
	70900807	1	PIN, cotter, 1/8" x 1-1/4"
9	70634008	1	SPACER, drive shaft pulley
10	70634006	1	SEAL, drive shaft, rear
11	70655220	1	PULLEY
12	70045496	1	HOSE, lubricating, drive assembly
	70907059	1	ELBOW, street, 90°, 1/8"NPT
	70911100	2	WASHER, plain, SAE std., 5/8"
	70911049	1	NUT, jam, 5/8"NF
	70915276	1	FITTING, lubricating, 90°, 1/8"NPT
13	70634291	1	CLIP, supporting, lubricating hose
14	70670684	1	BRACKET, drive mounting
	70900668	1	SETSCREW, sq-hd., oval-pt., 5/8"NC x 3"
	70911036	1	NUT, jam, 5/8"NC
15	70920583	2	CAPSCREW, 1/2"NC x 1-1/2"
16	70927180	2	CAPSCREW, 1/2"NC x 5-1/4"
	70912441	4	LOCKWASHER, 1/2"
17	70675084	1	BELT SET, drive (Consists of 4 matched belts)
18	70670349	2	JOINT ASSY., universal (Consists of items 19 thru 26 and FITTING indented below)
	70914687	2	FITTING, lubricating, 1/4"NF
19	70617512	4	SPIDER ASSY. (Includes bearings, items 20, 21 and FITTING indented below)
	70914687	4	FITTING, lubricating, 1/4"NF
20	70617892	16	SEAL, spider bearing
21	70617518	16	RING, snap
22	-----	2	YOKE, universal joint (female spline)(Order item 18)
23	70666361	2	WASHER, sealing, universal joint yoke (cork)
24	70666360	2	WASHER, split, universal joint yoke (steel)
25	70666362	2	CAP, universal joint yoke
26	-----	2	YOKE, universal joint (male spline)(Order item 18)
27	70665792	8	U-BOLT, universal joint
	70913636	16	NUT, 5/16"NF
	70910286	16	LOCKWASHER, 5/16"
28	70665766	3	YOKE, universal joint, rear
	70910156	3	KEY, #C, 5/16" x 1-1/8"
	70913472	3	NUT, jam, slotted, 3/4"NF
	70900807	3	PIN, cotter, 1/8" x 1-1/4"
	70910255	3	WASHER, plain
29	70665765	1	YOKE, universal joint, front
	70905845	1	KEY, #A, 1/8" x 7/8"
	70913472	1	NUT, jam, slotted, 3/4"NF
	70900807	1	PIN, cotter, 1/8" x 1-1/4"
	70910255	1	WASHER, plain

(Continued)

POWER TAKE - OFF (Continued)

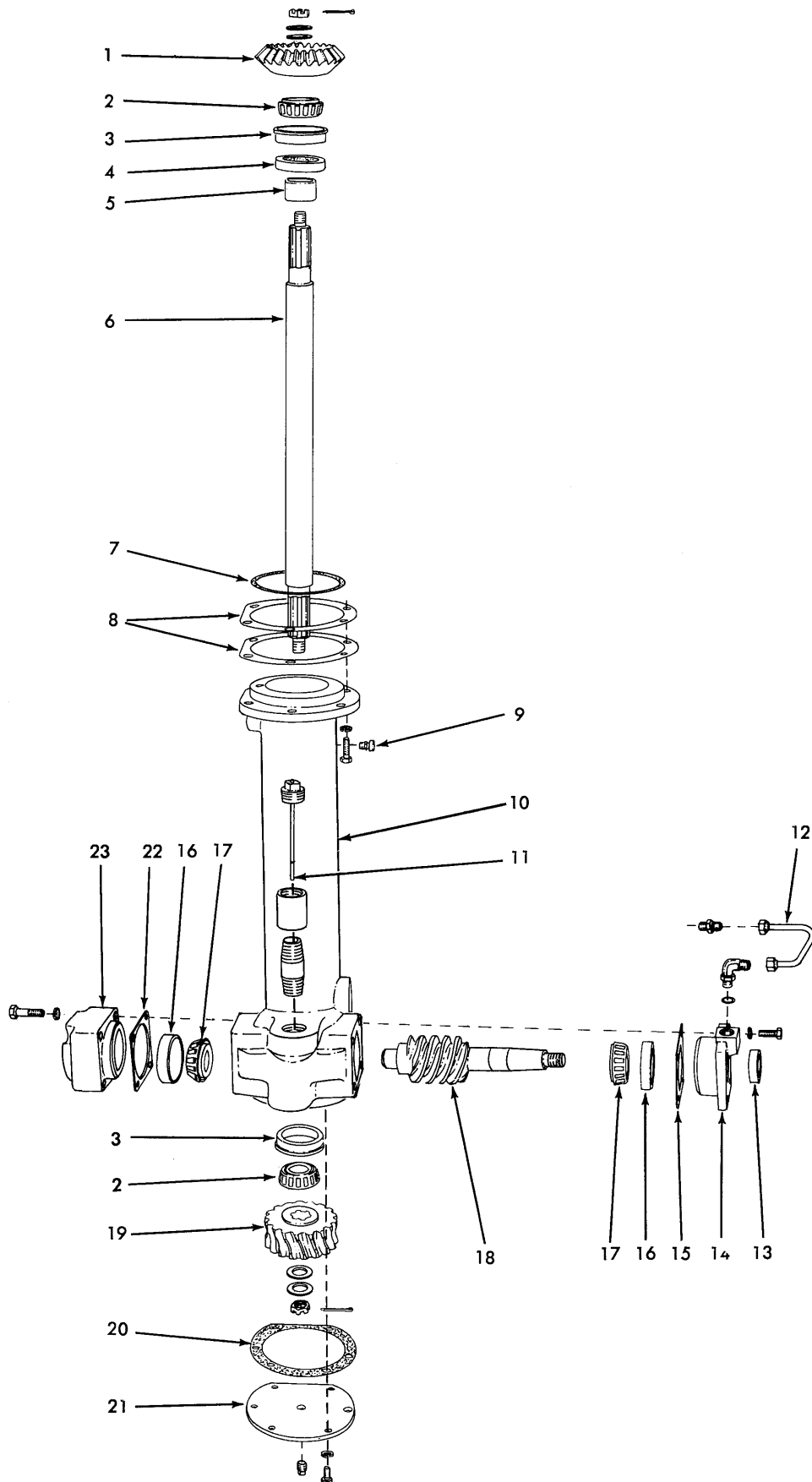
ITEM	PART NO.	QTY.	DESCRIPTION
30	70683415	1	HOUSING ASSY., drive supporting (Consists of items 31 thru 37)
	70920582	3	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	3	LOCKWASHER, 1/2"
31	70670441	1	HOUSING, drive supporting
	70916619	1	FITTING, relief, 1/8"NPT
	70901651	1	PLUG, pipe, 1/8"NPT
32	70236065	2	SEAL, drive coupling shaft
33	70633944	2	CAP, drive support housing
	70921076	8	CAPSCREW, 3/8"NC x 1-1/4"
	70910287	8	LOCKWASHER, 3/8"
34	70634010	6	SHIM, bearing adjustment (.005" thick)
	70634007	8	SHIM, bearing adjustment (.010" thick)
35	74254704	2	CUP, coupling shaft bearing
36	74254703	2	CONE ASSY., coupling shaft bearing
37	70664965	1	SHAFT, drive coupling
38	70045496	1	HOSE, lubricating, drive support assembly
	70911100	2	WASHER, plain
	70911049	1	NUT, jam, 5/8"NF
	70914465	1	FITTING, lubricating, straight, 1/8"NPT
	70916195	1	WASHER, plain
39	-----	1	See POWER TAKE-OFF VERTICAL DRIVE



USAGE: See pages 126 and 192

*70684166 JOINT ASSEMBLY
 **70684261 JOINT ASSEMBLY
 ***70684262 JOINT ASSEMBLY

ITEM	PART NO.	QUANTITY			DESCRIPTION
		*	**	***	
1	70684165	2	1	1	YOKE
2	70645110	1	1	1	SPIDER KIT (Includes items 3 thru 5 and fitting indented below)
	70915538	1	1	1	FITTING, lubricating, 65°, 1/4"NPT
3	70645097	4	4	4	RING, snap
4	-----	4	4	4	BEARING
5	70645096	4	4	4	SEAL, rubber
6	-----	-	1	-	SHAFT (Not serviced separately)
7	-----	-	-	1	TUBE (Not serviced separately)



POWER TAKE-OFF VERTICAL DRIVE

T-77635

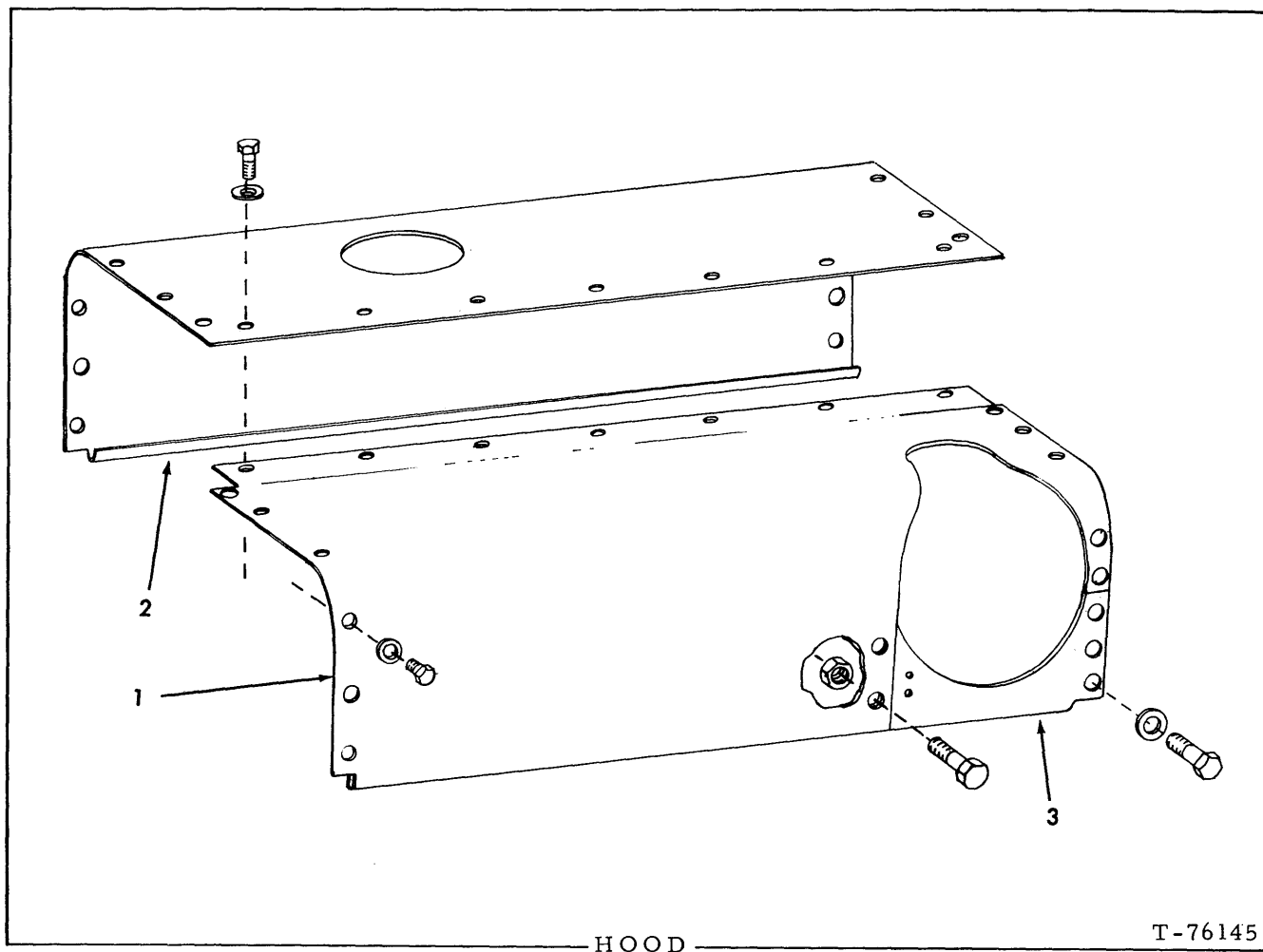
POWER TAKE-OFF VERTICAL DRIVE

ITEM	PART NO.	QTY.	DESCRIPTION
1	70683012	1	PINION
2	70211999	2	CONE ASSY.
3	70683035	2	CUP
4	70683036	1	SEAL
5	70682914	1	SPACER
6	70683032	1	SHAFT ASSY. (Includes item 5)
	70913472	2	NUT, jam, slotted, 3/4" NC
	70915874	6	WASHER, plain (Use as required)
	70918454	2	PIN, cotter, 1/8" x 1-1/2"
	70651865	2	WASHER, plain
7	70923819	1	O-RING
8	70620803	2	SHIM (.002" thick)
	70620802	10	SHIM (.010" thick) } Use as required
9	70634161	1	VENT
10	70682026	1	HOUSING
	70921076	6	CAPSCREW, 3/8" NC x 1-1/4"
	70910287	6	LOCKWASHER, 3/8"
	70912725	1	PLUG, pipe, 1/2" NPT
	70901652	1	PLUG, pipe, 1/4" NPT
11	70651862	1	DIPSTICK ASSY.
	70901767	1	COUPLING, pipe, 3/4" NPT
	70902170	1	NIPPLE, pipe, 3/4" NPT x 2"
12	70673620	1	TUBE ASSY. (Includes nuts)
	70919127	1	CONNECTOR, flare type, 3/8" tube, 1/2" NPT male
	70922523	1	ELBOW, adjustable, 90°, flare type, 3/8" tube, 9/16" NF (Includes washer, nut and O-RING)
	70921885	1	O-RING
13	70620785	1	SEAL
14	70670677	1	RETAINER
	70921076	4	CAPSCREW, 3/8" NC x 1-1/4"
	70910287	4	LOCKWASHER, 3/8"
15	70620806	4	SHIM (.010" thick)
	70620807	10	SHIM (.002" thick) } Use as required
16	70241380	2	CUP
17	70620787	2	CONE
18	70670688	1	WORM, gear
19	70683296	1	GEAR, worm
20	70620810	1	GASKET
21	70620812	1	COVER
	70901652	1	PLUG, 1/4" NPT (oil drain)
	70922300	6	CAPSCREW, 3/8" NC x 3/4"
	70906960	6	LOCKWASHER, 3/8" int. -tooth
22	70620808	1	GASKET
23	70670070	1	ADAPTER
	70922287	4	CAPSCREW, 3/8" NC x 1-3/4"
	70910287	4	LOCKWASHER, 3/8"
	70901651	1	PLUG, pipe, 1/8" NPT
24	70683919	1	PLATE, cover, pump drive
	70927541	4	CAPSCREW, 1/4" NC x 3/4"
	70928190	4	WASHER, plain
25	70681838	1	GASKET, plate

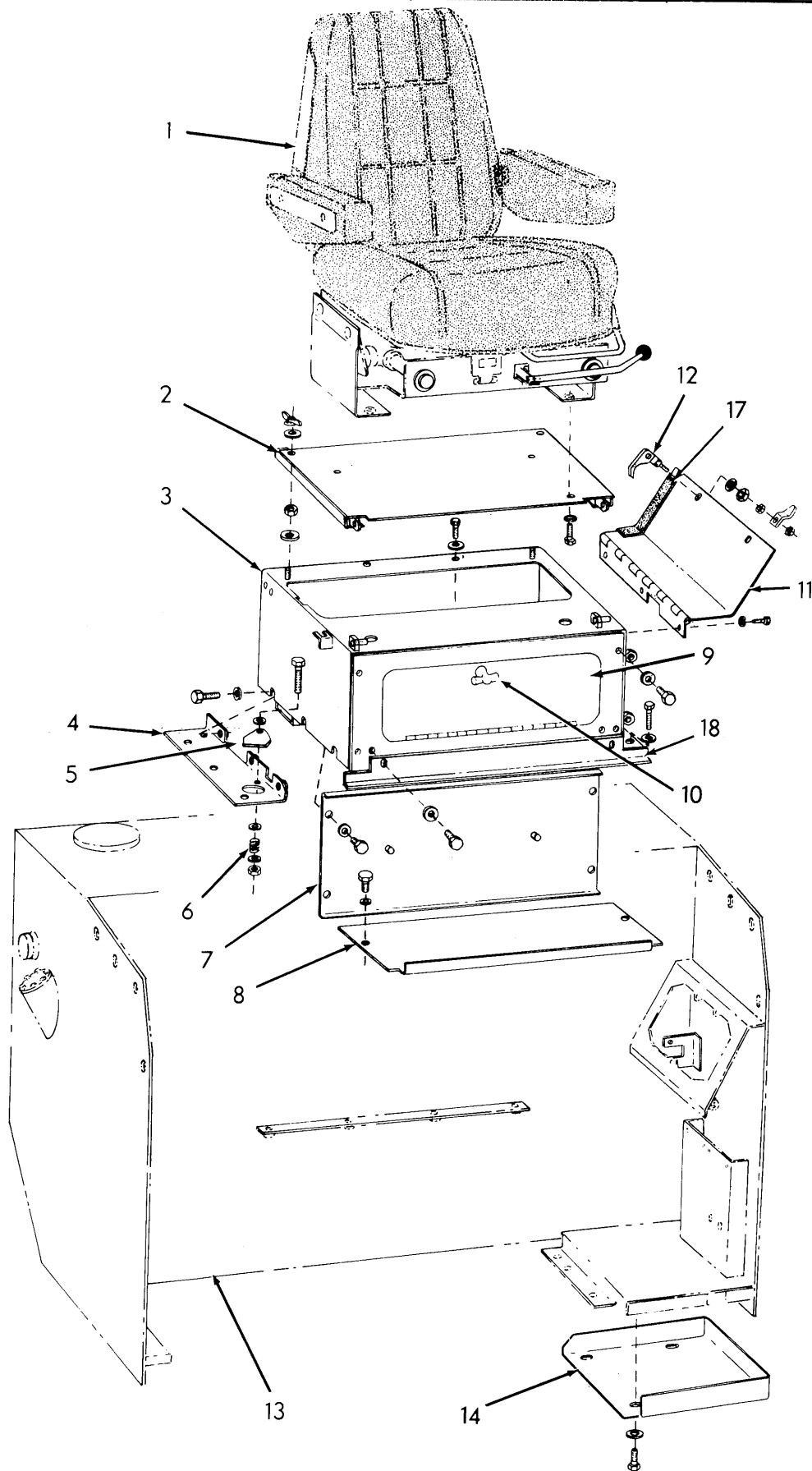
For units with mechanically-actuated control box only

(Revised February 1976)

MEMO



ITEM	PART NO.	QTY.	DESCRIPTION
1	70670838	1	PLATE
	70922763	12	CAPSCREW, 3/8"NC x 1"
	70677006	14	WASHER, plain
	70911026	2	NUT, 3/8"NC
2	70670836	1	PLATE
	70922763	20	CAPSCREW, 3/8"NC x 1"
	70677006	20	WASHER, plain
3	70686328	1	PLATE
	70922763	3	CAPSCREW, 3/8"NC x 1"
	70677006	3	WASHER, plain



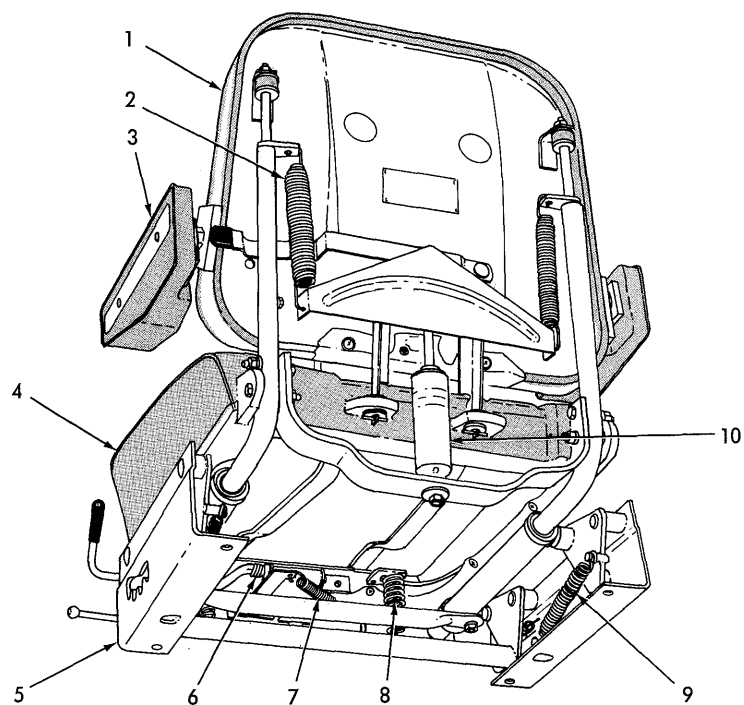
SEAT SUPPORTS

T-77643

(Revised May 1977)

SEAT SUPPORTS

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	SEAT ASSY. (See page 214)
	70922300	4	CAPSCREW, 3/8" NC x 3/4"
	70630753	4	WASHER
2	73108509	1	COVER, right battery (Units equipped with sound insulation)
	70670034	1	COVER, right battery (Units not equipped with sound insulation)
	70928844	2	WASHER
	70915018	2	NUT, wing, 1/2" NC
	70929155	2	CAPSCREW, 3/8" NC x 2-1/2" } Units equipped
	70677008	2	WASHER } with sound
	70900369	2	NUT, 3/8" NC } insulation
3	70673445	1	SUPPORT, seat
	70920582	10	CAPSCREW, 1/2" NC x 1-1/4"
	70928844	10	WASHER
4	70680332	1	ANGLE
	70920582	3	CAPSCREW, 1/2" NC x 1-1/4"
	70928844	3	WASHER
5	73108610	1	COVER (Units equipped with sound insulation)
	70686565	1	COVER (Units not equipped with sound insulation)
	70920996	1	CAPSCREW, 3/8" NC x 2-1/4"
	70929156	4	WASHER
	70918308	1	NUT, 3/8" NC
6	70619261	1	SPRING
7	73108794	1	PLATE, tool compartment (Units equipped with sound insulation)
	70681370	1	PLATE, tool compartment (Units not equipped with sound insulation)
	70927219	4	CAPSCREW, 1/2" NC x 3/4"
	70928188	4	WASHER
8	70681677	1	PLATE
	70927219	2	CAPSCREW, 1/2" NC x 3/4"
	70928188	2	WASHER
9	70670037	1	DOOR, tool compartment
	70927219	4	CAPSCREW, 1/2" NC x 3/4"
	70928188	4	WASHER
10	70653814	1	LOCK ASSY. (Serviced only as a unit)
11	70670048	1	COVER, left battery
	70922763	3	CAPSCREW, 3/8" NC x 1"
	70630753	3	WASHER
12	70670057	2	HANDLE ASSY., left battery cover (Includes nuts and latch)
	70910543	2	LOCKWASHER, external tooth, 5/8"
13	-----	1	See FUEL TANK
14	70679221	1	COVER
	70922763	4	CAPSCREW, 3/8" NC x 1"
	70677006	4	WASHER
15	70683939	2	ANGLE, safety belt attaching
	70920583	2	CAPSCREW, 1/2" NC x 1-1/2" } Special equipment
16	70687663	1	SAFETY BELT } Not illustrated
17	73108502	1	TRIM (Units equipped with sound insulation)
18	73108617	1	ANGLE
	70927541	2	CAPSCREW, 1/4" NC x 3/4" } Units equipped
	70911114	2	WASHER } with sound
	70900365	2	NUT, 1/4" NC } insulations



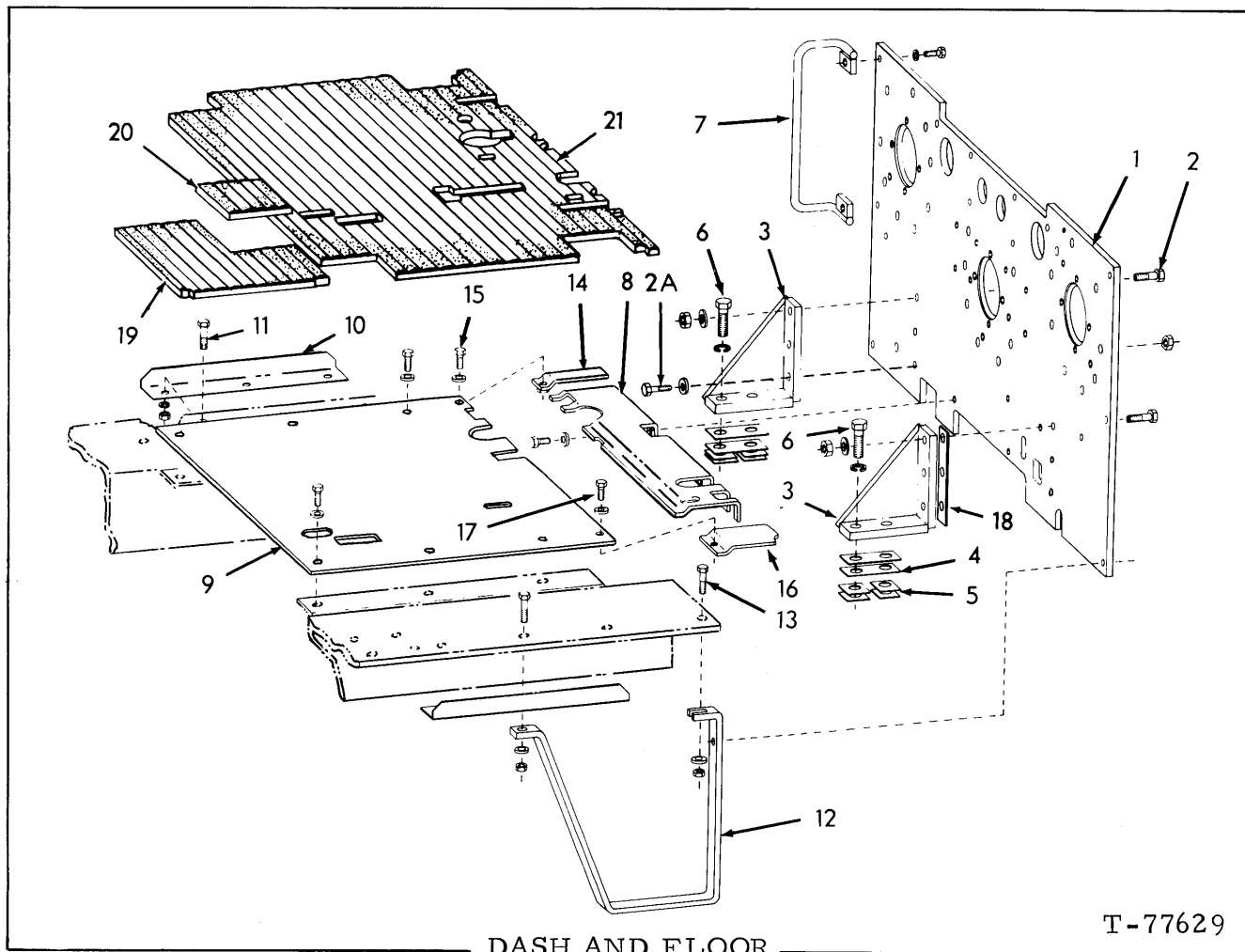
T-77679

SEAT ASSEMBLY

USAGE: See page 213

ITEM	PART NO.	QTY.	DESCRIPTION
-	70686942	1	SEAT ASSY. (Includes items 1 thru 10)
1	70689903	1	CUSHION ASSY., back (Serviced only as a unit)
2	70689906	2	SPRING
3	70689907	1	CUSHION ASSY., arm, left
	70689908	1	CUSHION ASSY., arm, right
			} Serviced only as a unit
4	70689902	1	CUSHION ASSY., seat (Serviced only as a unit)
5	-----	1	FRAME ASSY., seat (Not serviced separately)
6	70689900	1	SPRING
7	70689901	1	SPRING
8	70689905	2	SPRING
9	70689909	2	SPRING
10	70689904	1	ABSORBER, shock

M E M O



T-77629

DASH AND FLOOR

ITEM	PART NO.	QTY.	DESCRIPTION
1	70681681	1	PLATE, dash
2	70921174	5	CAPSCREW, 5/8"NC x 2-1/2"
	70677010	10	WASHER
	70911029	5	NUT, 5/8"NC
2A	70921403	1	CAPSCREW, 5/8"NC x 2"
	70928141	1	WASHER
	70911029	1	NUT, 5/8"NC
3	70622844	2	BRACKET, dash supporting
4	70622839	8	SHIM, dash supporting bracket (1/16")
5	70643643	4	SHIM, dash supporting bracket (.010")
6	70929717	4	CAPSCREW, dash supporting bracket
7	70684795	2	HANDLE, grab
	70920582	4	CAPSCREW, 1/2"NC x 1-1/4"
	70912441	4	LOCKWASHER, 1/2"
8	70681971	1	PLATE, floor, front center (Units with hydraulically-actuated control box)
	70680257	1	ANGLE, floor, front center (Units with Mechanically - actuated control box)
	70927172	2	CAPSCREW, 1/2"NC x 1-1/8"
	70677008	2	WASHER

Use as required

Not for units with Cab

DASH AND FLOOR (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	70677600	1	PLATE, floor, rear center (Units not equipped with sound insulation)
	73108798	1	PLATE, floor, rear center (Units equipped with sound insulation)
	70920582	6	CAPSCREW, 1/2" NC x 1-1/4"
	70928844	6	WASHER
10	70684779	2	ANGLE, floor plate (Not for units with cab)
11	70921556	4	CAPSCREW, 1/2" NC x 2"
	70912441	4	LOCKWASHER, 1/2"
	70911028	4	NUT, 1/2" NC
12	70684811	2	STEP
13	70921556	6	CAPSCREW, 1/2" NC x 2"
	70677008	6	WASHER
	70911028	6	NUT, 1/2" NC
14	70684904	1	PLATE, floor closure, left
15	70920582	1	CAPSCREW, 1/2" NC x 1-1/4"
	70928844	1	WASHER
16	70684902	1	PLATE, floor closure, right
17	70920582	1	CAPSCREW, 1/2" NC x 1-1/4"
	70928844	1	WASHER
18	70691692	2	SHIM (.060" thick) (Use as required)
19	73108666	1	MAT, floor
20	73108658	1	MAT, floor
21	73108671	1	MAT, floor

PAINTING AND MARKING
(Not Illustrated)

ITEM PART NO. QTY. DESCRIPTION

NOTE: Approximately 4-1/2 gallons required
for spraying one coat.

1	70925109	-	ENAMEL, yellow, quart can
2	70925110	-	ENAMEL, yellow, gallon can
	70698038	-	ENAMEL, yellow orange, gallon can
3	70925108	-	ENAMEL, yellow, 12 oz. pressurized spray-type can
	70698037	-	ENAMEL, yellow orange, 12 oz. pressurized spray-type can

NOTE: All plates and transfers listed below are English language printings unless otherwise indicated.

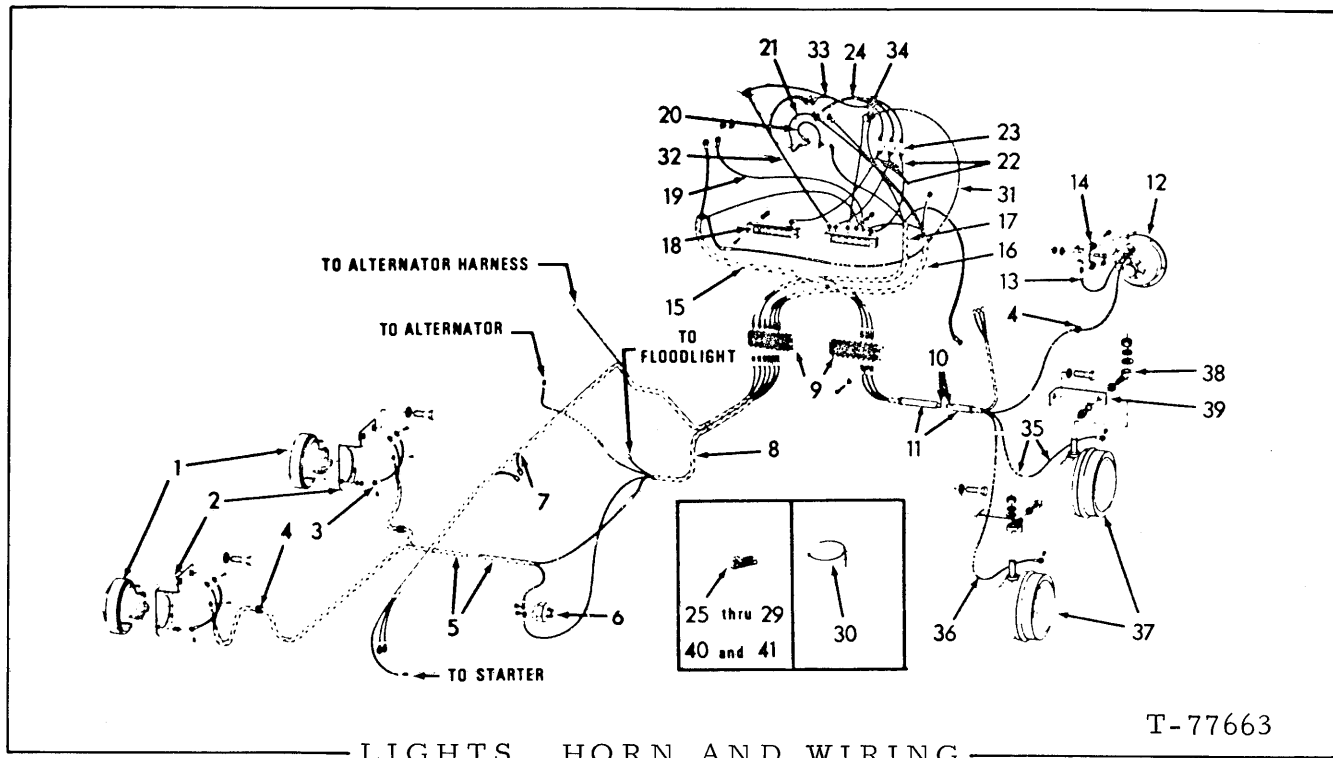
4	70692034	1	□TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(Used prior to approximately June 1975)	} Applied to right side of Radiator Shell
	70697897	1	Δ□TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(Effective approximately June 1975)	
	70698763	1	TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(Spanish translation)	
	70698764	1	TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(Portuguese translation)	
	70698765	1	TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(French translation)	
	70698951	1	TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(Italian translation)	
	70698990	1	TRANSFER, lubrication and service guide (6-3/4" x 14-1/4")(German translation)	
5	70688188	1	Δ□TRANSFER, instruction engine operation (3-7/8" x 6") (Applied to right side of operator's compartment) (For Graders with engine serial No.11-21218 and up)	
	70666497	1	□TRANSFER, instruction engine operation (2-1/4" x 4-1/2")(Applied to right side of operator's compartment)(For Graders with engines prior to serial No.11-21218)	
6	70659430	1	Δ□TRANSFER, instruction, dry-type air cleaner (2-1/2" x 5")(Applied to air cleaner 70659095)	
7	70621343	2	Δ□TRANSFER, instruction, oil filter (2-5/16" x 3-1/4") (Applied to engine filter)	
8	70629215	1	Δ□TRANSFER, shifter positions (3" x 4")(Applied to dash)	
9	70621393	1	Δ□TRANSFER, identification, circle turn operating lever (1-1/8" x 1-3/4")(Applied to shifter housing)	
10	70621395	2	Δ□TRANSFER, identification, circle lift operating lever (1-1/8" x 1-3/4")(Applied to shifter housing)	
11	70621396	1	Δ□TRANSFER, identification, side shift operating lever (1-1/8" x 1-3/4")(Applied to shifter housing)	
12	70621394	1	Δ□TRANSFER, identification, wheel lean operating lever (1-1/8" x 1-3/4")(Applied to shifter housing)	
13	70621397	1	Δ□TRANSFER, identification, scarifier operating lever 1-1/8" x 1-3/4")(Applied to shifter housing)	

(Continued)

PAINTING AND MARKING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
14	70650587	1	△□TRANSFER, altitude warning (1-3/4" x 3-1/2") (Applied to right side of operator's compartment)
15	70682968	1	△□TRANSFER, seat belt warning (2" x 3")(Applied to right side of operator's compartment)
16	70659539	1	TRANSFER, warning, by-pass oil filter (Includes Portuguese translation)(2" x 10")(Applied to filters)
	70659538	1	TRANSFER, warning, by-pass oil filter (French and Spanish translations, 2" x 10")(Applied to filters)
17	-----	1	TRANSFER, warning, "ROPS" (2-1/2" x 6")(Applied to inside left front of Cab)(Order from local F-A dealer)
18	70692030	2	△□TRANSFER, "100-C" (6" x 25")(Applied to sides of tank)
19	70924457	3	□TRANSFER, trademark "A-C" (10-11/16")(Applied to rear of frame and sides of radiator shell)
20	70930463	1	□TRANSFER, trademark "A-C" (13-1/4")(Applied to front of frame)
21	70694424	2	△TRANSFER, trademark "F-A" (8" x 9")(Applied to sides of radiator shell)
22	70694425	1	△TRANSFER, trademark "F-A" (9-1/2" x 10-3/4") (Applied to front of frame)
23	70694440	1	△TRANSFER, trademark, "F-A" (1-5/8" x 1-5/8")(Applied to steering wheel)(Grader unit #08571 and up)
24	70924553	2	□TRANSFER, "Allis-Chalmers" (2-3/4" x 45")(Applied to sides of frame)
25	70694438	2	△TRANSFER, "Fiat-Allis" (4-1/2" x 29")(Applied to sides of frame)
26	70694437	1	△TRANSFER, "Fiat-Allis" (3-1/2" x 22-1/2")(Applied to rear of frame)
27	70930453	-	△□TRANSFER, Multiple strip (4"x 50 yds.)(Applied to sides of frame, hood, tank and radiator shell)(Use as required)
28	70697648	1	PLATE, operator warning (English, 2-1/4" x 2-1/4")
	70697963	1	PLATE, operator warning (Spanish, 2-1/4" x 2-1/4")
	70697964	1	PLATE, operator warning (Portuguese, 2-1/4" x 2-1/4")
	70697965	1	PLATE, operator warning (French, 2-1/4" x 2-1/4")
	70698053	1	PLATE, operator warning (Italian, 2-1/4" x 2-1/4")
	70698054	1	PLATE, operator warning (German, 2-1/4" x 2-1/4")
	70034076	4	SCREW, thread cutting, #8 x 1/2"
29	74394600	1	DECAL, water separator (2-3/4" x 3") Applied to water separator
30	70687713	1	TRANSFER KIT (Includes items 4 thru 15, 18, 20 and 24)
31	70695345	1	TRANSFER KIT (Includes items 4 thru 15, 18, 21 thru 23, 25 thru 27)
			□Components of item 30
			△Components of item 31

Attaches
to
Battery
Box
Cover



LIGHTS, HORN AND WIRING

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	2	LIGHT ASSY., tail and stop (See page 223A)
	70910284	6	LOCKWASHER, #10
	70901310	6	NUT, #10-24NC
2	70686042	2	BRACKET
	70923470	4	CAPSCREW, 3/8"NC x 1-1/2"
	70653741	4	WASHER, plain
3	70686040	2	CABLE, light grounding
4	70632988	3	GROMMET
5	70671742	1	HARNESS, tail light
6	70094334	1	SWITCH, pressure, stop light
7	70679213	1	HARNESS, starter (Graders prior to unit #08281)
	70692368	1	HARNESS, starter (Grader unit #08281 and up)
8	70679217	1	HARNESS, stop and tail light (Graders prior to unit #08281)
	70692369	1	HARNESS, stop and tail light (Graders unit #08281 and up)
9	70188806	2	STRIP, terminal
	70925086	4	CAPSCREW, thread-cutting, #10 x 3/4"
	70910284	4	LOCKWASHER, #10
10	70679219	1	HARNESS, lever and headlights
11	70686273	1	TUBE
12	70642336	1	HORN
	70034076	2	SCREW, terminal
	70912739	2	LOCKWASHER, int-tooth, #8
13	70671763	1	CABLE, horn ground
14	70642337	1	BRACKET
	70921565	1	CAPSCREW, 3/8"NC x 1-1/2"
	70630753	2	WASHER, plain
	70911026	1	NUT, 3/8"NC

Graders prior to unit #08532

(Continued)

(Revised May 1977)

LIGHTS, HORN AND WIRING (Continued)

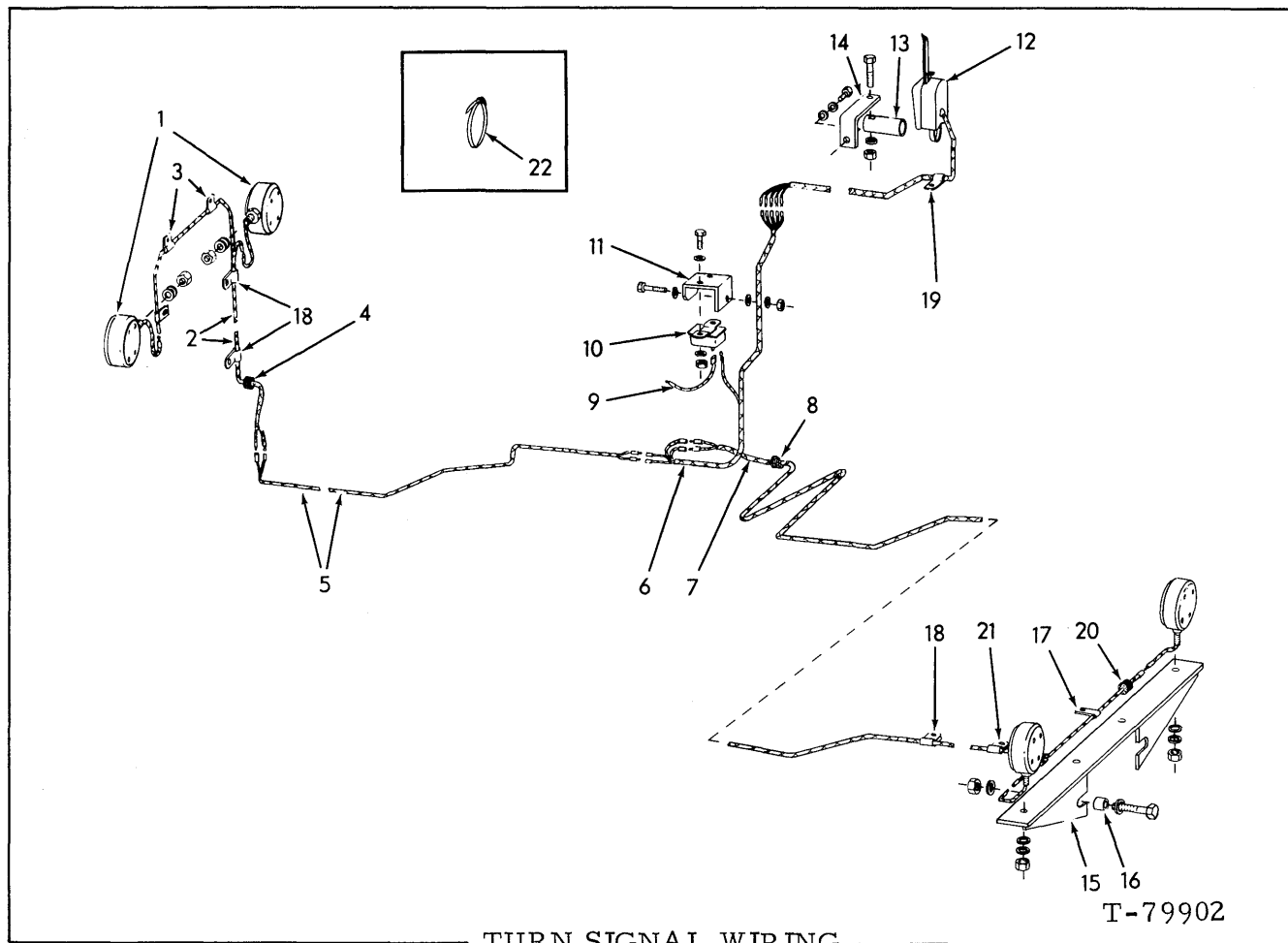
ITEM	PART NO.	QTY.	DESCRIPTION
15	70671777	1	HARNESS, horn and headlight
16	70671761	1	HARNESS, ammeter and light switch
17	70679212	1	HARNESS, ammeter and starter button (Graders prior to #08281)
	70692367	1	HARNESS, ammeter and starter button (Graders unit #08281 and up)
18	70659390	2	BLOCK, terminal
	70925002	4	SCREW, round-head, #8-32 x 3/4"
	70910283	4	LOCKWASHER, #8
	70907154	4	NUT, #8-32
19	70671689	1	CABLE, terminal strip to horn button
20	70671708	1	CABLE, ignition switch to starter button
21	70671694	1	CABLE, ignition switch to ammeter
22	70671690	3	CABLE, terminal strip to circuit breaker
23	70671696	3	CIRCUIT BREAKER
	70917436	6	SCREW, round-head, #6-32 x 3/8"
24	70671738	1	CABLE ASSY., ammeter to circuit breaker (3-wire)
25	70639314	1	CLIP, 3/8" diam. 13/32" bolt hole (Graders prior to unit #08281)
26	70639388	3	CLIP, 1/8" diam., 13/32" bolt hole
	70921076	1	CAPSCREW, 3/8"NC x 1-1/4"
	70630753	2	WASHER, plain
	70911026	1	NUT, 3/8"NC
27	70640677	8	CLIP, 1/4" diam., 13/32" bolt hole
	70922300	8	CAPSCREW, 3/8"NC x 3/4"
	70630753	8	WASHER, plain
28	70925616	6	CLAMP, 5/16" diam., 15/32" bolt hole (One less used on Grader unit #08281 and up)
	70922300	5	CAPSCREW, 3/8"NC x 3/4"
	70677006	1	WASHER, plain
	70630753	4	WASHER, plain
	70927157	1	CAPSCREW, 3/8"NCx1-3/8"
	70677006	2	WASHER, plain
	70911026	1	NUT, 3/8"NC
29	70928656	2	CLAMP, 5/8"diam., 13/32" bolt hole
	70922300	2	CAPSCREW, 3/8"NC x 3/4"
	70677006	2	WASHER, plain
30	70196765	-	STRAP, tie (Use as required)
			NOTE: The following parts are Special equipment.
31	70679208	1	CABLE, harness to light switch
32	70671736	1	CABLE, dash lights to ground
33	70671737	1	CABLE, light switch to dash lights

} Graders prior to unit #08281

(Continued)

LIGHTS, HORN AND WIRING (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
34	70671692	1	CABLE, light switch to terminal block
35	70671765	1	CABLE, headlight (left)
36	70671764	1	CABLE, headlight (right)
37	-----	2	LIGHT ASSY., head (See page 223)
	70677008	2	WASHER, plain
	70912441	2	LOCKWASHER, 1/2"
	70911043	2	NUT, 1/2"NF
38	70628061	2	EYE BOLT, headlight mounting
	70677006	2	WASHER, plain
	70910287	2	LOCKWASHER, 3/8"
	70911026	2	NUT, 3/8"NC
39	70628418	2	BRACKET
	70920583	2	CAPSCREW, 1/2"NC x 1-1/2"
	70912441	2	LOCKWASHER, 1/2"
40	70639388	2	CLIP, 1/8" diam., 13/32" bolt hole
	70927173	1	CAPSCREW, 3/8"NC x 1-1/8"
	70929156	2	WASHER, plain
41	70640704	2	CLIP, 1/8" diam., 17/32" bolt hole
	70929156	2	WASHER, plain



USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70695367	4	LAMP ASSY. (Includes TERMINAL indented below)
	73052008	4	TERMINAL, snap
2	70695365	1	HARNESS, rear turn signal
3	70639388	3	CLIP
	70927484	2	CAPSCREW, 3/8"NC x 1/2"
	70929156	2	WASHER
4	70083683	1	GROMMET
5	70695364	1	HARNESS, signal assy. to front and rear turn signals
6	70695363	1	HARNESS, signal assy.
7	70695362	1	HARNESS, front turn signal
8	70632988	1	GROMMET
9	70695366	1	CABLE, headlight harness to flasher
10	70663928	1	FLASHER ASSY.
	70927541	2	CAPSCREW, 1/4"NC x 3/4"
	70928190	4	WASHER
	70900365	2	NUT, 1/4"NC
11	70695359	1	BRACKET
	70922287	1	CAPSCREW, 3/8"NC x 1-3/4"
	70929156	3	WASHER
	70900367	1	NUT, 3/8"NC

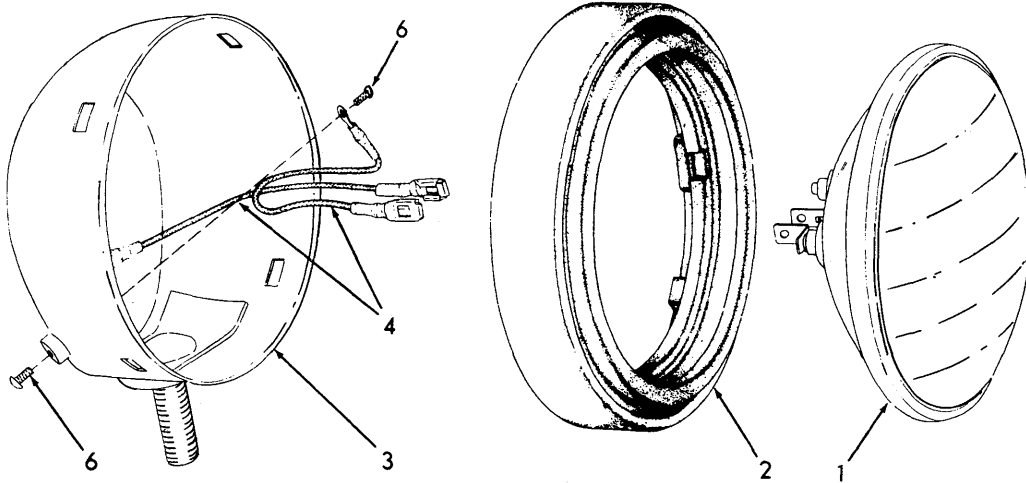
(Continued)

(Added June 1976)

TURN SIGNAL WIRING (Continued)

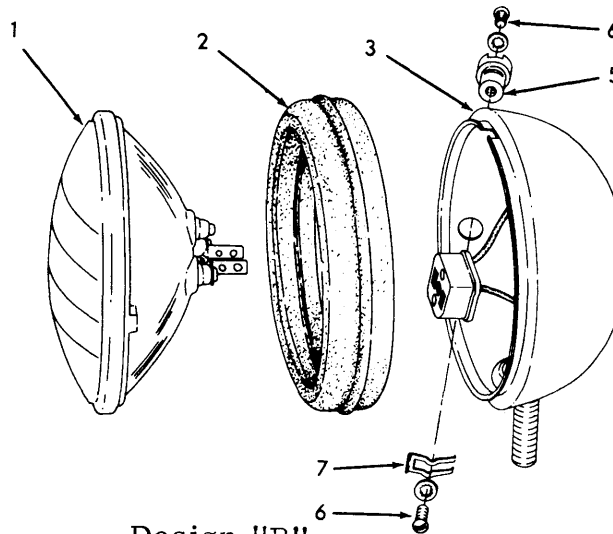
ITEM	PART NO.	QTY.	DESCRIPTION
12	70695369	1	SIGNAL ASSY. (Includes TERMINAL indented below)
	73052008	5	TERMINAL, snap
	70922510	1	CAPSCREW, 1/2"NC x 2-3/4"
	70928188	1	WASHER
	70900369	1	NUT, 1/2"NC
13	70695361	1	TUBE
14	70695360	1	ANGLE
	70920582	1	CAPSCREW, 1/2"NC x 1-1/4"
	70928188	1	WASHER
	70906950	1	WASHER, bevel
15	70695358	1	SUPPORT
	70921598	2	CAPSCREW, 1/2"NC x 3"
	70929379	4	WASHER
	70900369	2	NUT, 1/2"NC
16	70613652	2	BLOCK
17	70639388	1	CLIP
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70929156	2	WASHER
	70900367	1	NUT, 3/8"NC
18	70640677	3	CLIP
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70929156	2	WASHER
	70900367	1	NUT, 3/8"
19	70639314	1	CLIP
	70929156	1	WASHER
20	70023176	2	GROMMET
21	70640677	1	CLIP
	70927484	1	CAPSCREW, 3/8"NC x 1/2"
	70929156	1	WASHER
22	70196765	44	TIE

(Added June 1976)



Design "A"

T-27390



Design "B"

T-38214

LIGHT ASSEMBLY

USAGE: See pages 220 and 235.

*Design "A"

**Design "B"

ITEM	PART NO.	QTY.	DESCRIPTION
		* **	NOTE: This Light Assembly is available in two designs. Check illustration to determine which is applicable to your unit and order service parts accordingly.
-	70621429	2 2	LIGHT ASSY. (Includes items 1 thru 7)
1	70182763	1 1	SEALED BEAM (24 volt)
2	70621428	1 -	RETAINER
	70638282	- 1	RETAINER
3	-----	1 -	BODY
	-----	- 1	BODY (Includes receptacle)
4	70621724	2 -	CABLE
5	70695694	- 1	INSULATOR PACKAGE
6	70912731	2 2	SCREW, machine, rd-hd., #8NC x 5/16"
	70912739	- 2	LOCKWASHER, #8
7	70048922	- 1	SPRING

} Not serviced
separately

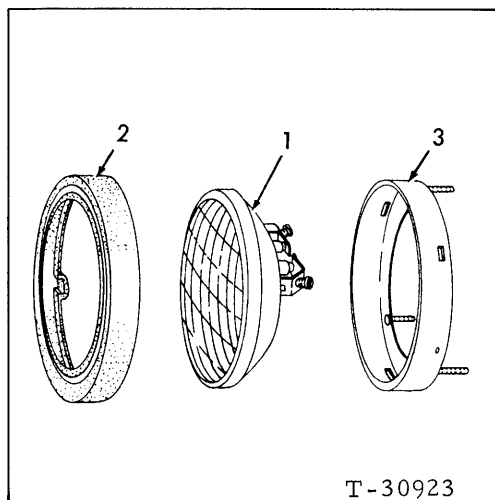
TAIL LIGHT ASSEMBLY

USAGE: See page 220

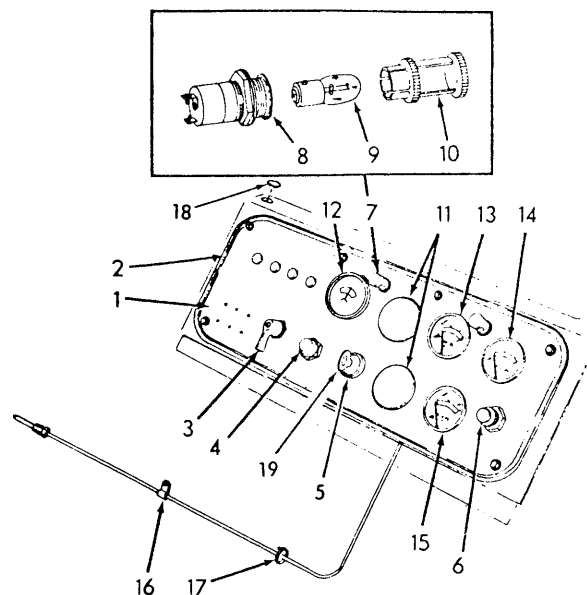
ITEM	PART NO.	QTY.	DESCRIPTION
-	70621818	2	LIGHT ASSY. (Includes items 1 thru 3)

NOTE: Quantities indicated are for (1) light only

1	70644109	1	LAMP, sealed beam (Red, dual filament, 24 volt)
2	70621821	1	RETAINER, lamp
3	70621819	1	FRAME



MEMO



INSTRUMENTS

T-76232

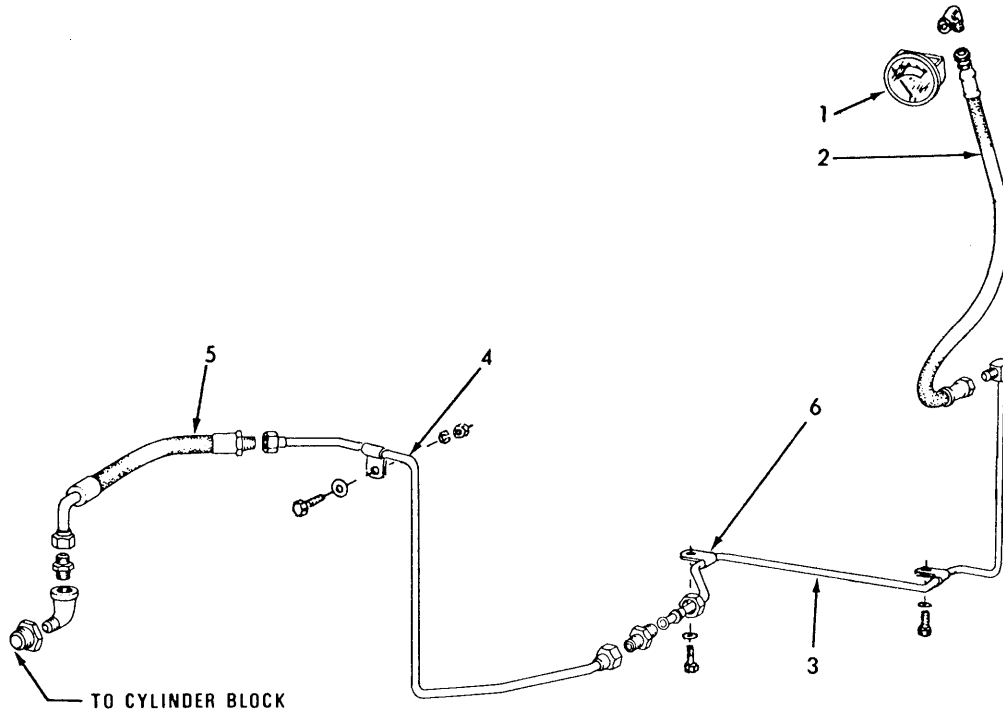
ITEM	PART NO.	QTY.	DESCRIPTION
1	70670055	1	PANEL, instrument
	70925085	7	SCREW, thread-cutting, hex-hd., cd. -pltd., #10 x 1/2"
	70917380	7	WASHER, plain
	70924817	7	WASHER, plain
	70922803	4	PLUG, button, 1/2"
	70921191	2	PLUG, button, 11/16"
2	70670056	1	SEAL, weather, instrument panel
3	70639726	1	SWITCH, light
4	70240962	1	SWITCH ASSY., starter (Includes mounting nut)
5	70641683	1	SWITCH, starting (Includes keys)
6	70031337	1	SWITCH, horn
7	73021334	2	LIGHT ASSY., instrument panel (Includes items 8 thru 10)
8	-----	2	BASE ASSY. (Not serviced separately)
9	73040937	1	BULB, single contact, 3.5 C.P., 24V
10	73037183	1	SHIELD
11	70921193	2	PLUG, button, 2-3/32"
12	70695983	1	AMMETER (50 amp. Includes mounting clamp)
13	70658368	1	GAUGE, engine temperature (Includes mounting clamp) (Graders prior to unit #08866)
	70697261	1	GAUGE, engine temperature (Includes mounting clamp) (Grader unit #08866 and up)

(Continued)

(Revised February 1976)

INSTRUMENTS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
14	-----	1	GAUGE, engine oil pressure (See page 226)
15	-----	2	GAUGE, transmission oil pressure (See page 227)
16	70644883	2	CLIP, temperature gauge tube
17	70196765	1	TIE, temperature gauge tube
18	70926265	1	PLUG, button (Not for units with Rear Windshield Wiper)
19	70693857	1	KEY, ignition switch



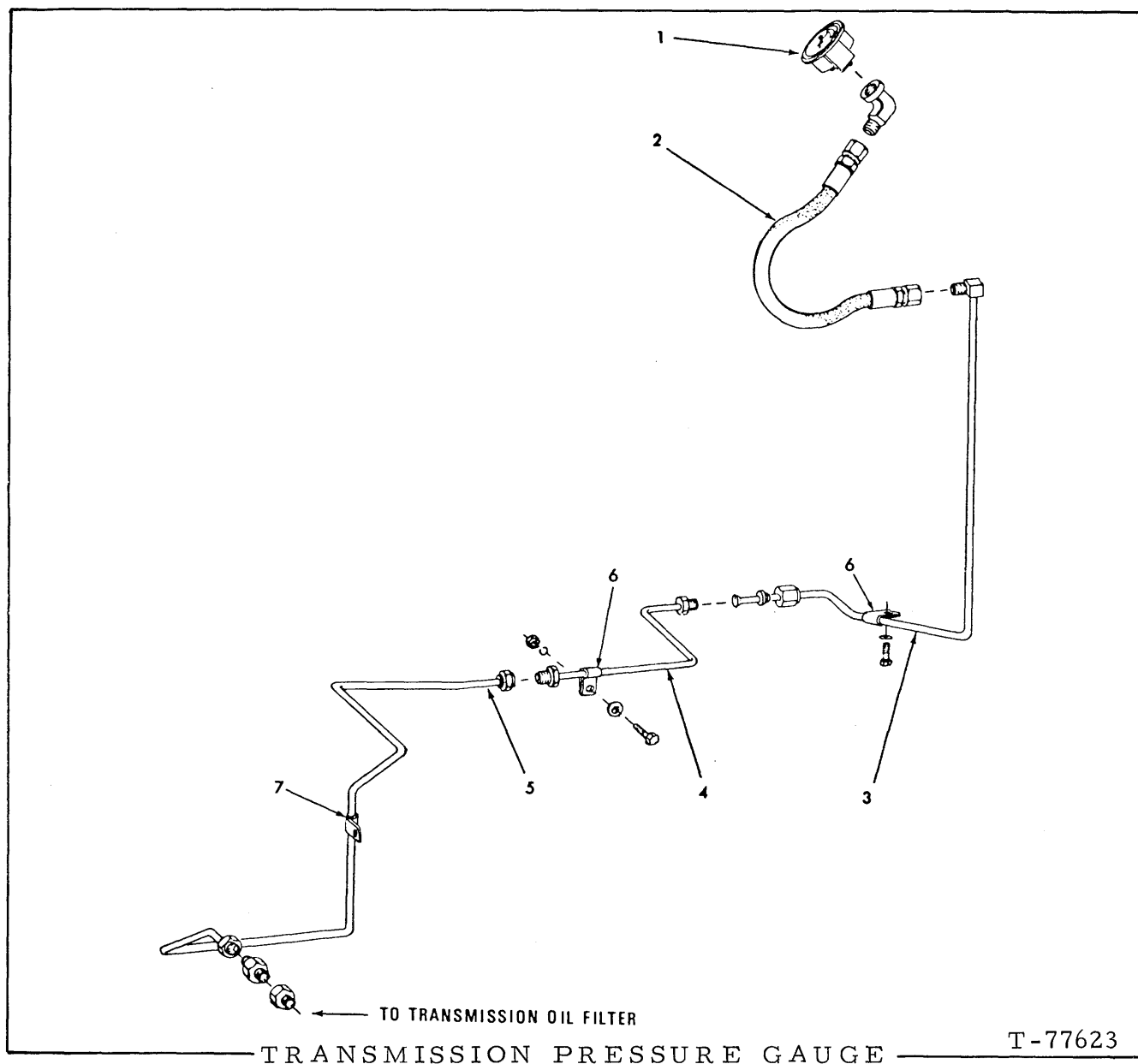
ENGINE OIL PRESSURE GAUGE

T-76233

ITEM	PART NO.	QTY.	DESCRIPTION
1	70658293	1	GAUGE (Includes mounting clamp) (graders prior to unit #08866)
	70691745	1	GAUGE (Includes mounting clamp) (graders unit #08866 and up)
2	70679279	1	HOSE (See HOSE PARTS)
	70919249	1	ELBOW, flare type, 90°, 1/4" tube, 1/8"NPT female
3	70679277	1	TUBE ASSY. (Includes nuts)
4	70679297	1	TUBE ASSY. (Includes nuts)
5	70650805	1	HOSE (See HOSE PARTS)
	70919140	1	CONNECTOR, flare type, 1/4" tube, 1/4"NPT
	70901722	1	ELBOW, street, 90°, 1/4"NPT
	70901839	1	BUSHING, pipe, 1/4"NPT x 1/2"NPT
6	70640677	3	CLIP, tube supporting (1/4" diam. 13/32" bolt hole)
	70927400	2	CAPSCREW, 3/8"NC x 5/8"
	70630753	2	WASHER, plain
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8"NC

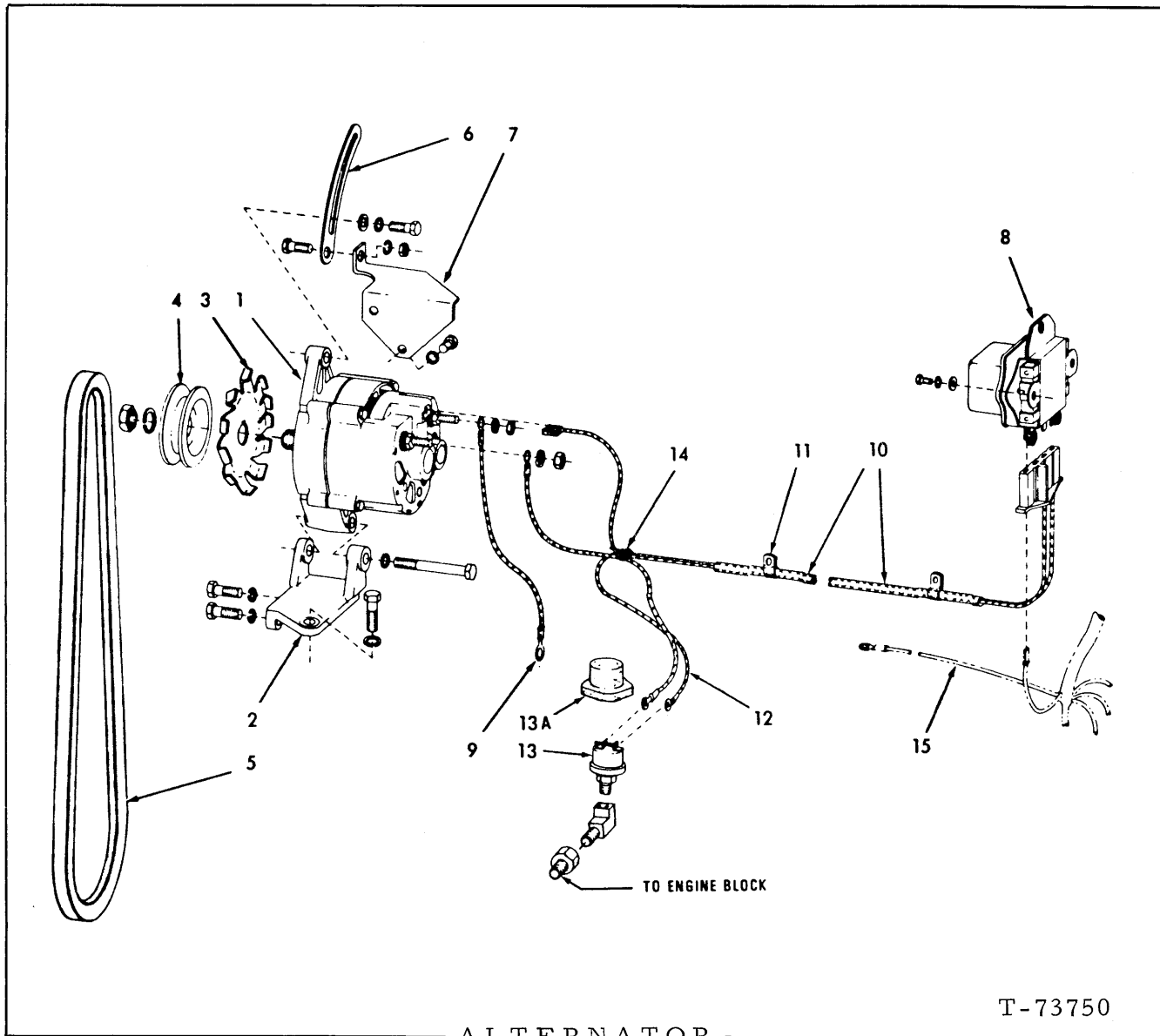
Not for units with Severe-Service oil filter

(Revised February 1976)



ITEM	PART NO.	QTY.	DESCRIPTION
1	70658151	1	GAUGE (Includes mounting clamp)(Units prior to #08866)
	70697260	1	GAUGE (Includes mounting clamp)(Unit #08866 and up)
2	70679279	1	HOSE (See HOSE PARTS)
	70919249	1	ELBOW, flare type, 90°, 1/4" tube, 1/8" female)
3	70679236	1	TUBE ASSY. (Includes nuts)
4	70679281	1	TUBE
5	70656437	1	TUBE ASSY. (Includes nuts)
	70919140	1	CONNECTOR, flare type, 1/4" tube, 1/4" NPT
	70901826	1	BUSHING, pipe, 1/4" NPT x 3/8" NPT
6	70640677	2	CLIP, tube supporting (13/32" bolt hole)
	70927400	1	CAPSCREW, 3/8" NC x 5/8"
	70922763	1	CAPSCREW, 3/8" NC x 1"
	70630753	2	WASHER, plain
	70910287	1	LOCKWASHER, 3/8"
	70911026	1	NUT, 3/8" NC
7	70044044	1	CLIP

(Revised February 1976)



ALTERNATOR
(Medium Output)

USAGE: Standard equipment. Graders prior to serial No. 27Y08281

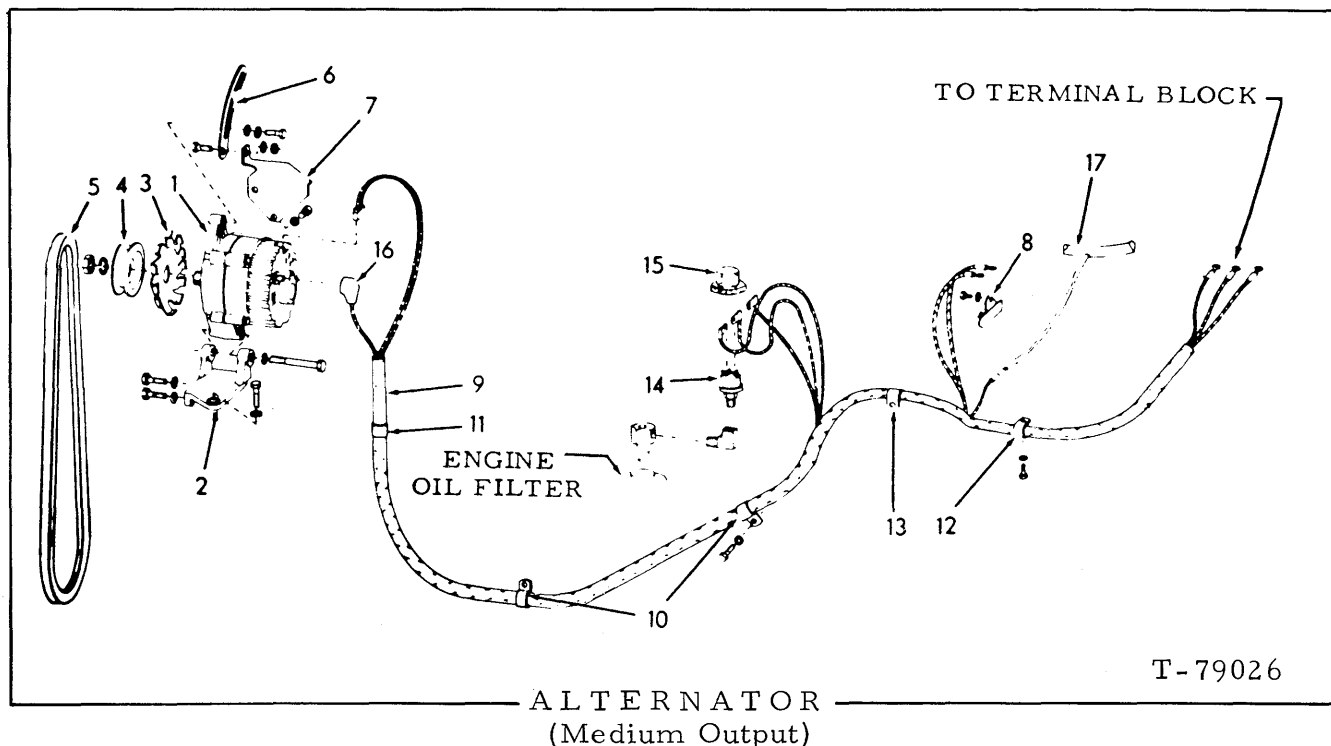
ITEM	PART NO.	QTY.	DESCRIPTION
1	70650943	1	ALTERNATOR ASSY. (Includes Nut and Washer for pulley)(Delco-Remy #1100748. Order service parts from local United Motors Service agency)
	70922848	1	CAPSCREW, 3/8"NC x 3-1/4"
	70910287	1	LOCKWASHER, 3/8"
	70910251	1	NUT, #10-32NF
	70910284	1	LOCKWASHER, #10
	70917376	1	NUT, #12-24NC
	70915365	1	LOCKWASHER, #12
2	70650966	1	BRACKET
	70927172	1	CAPSCREW, 1/2"NC x 1-1/8"
	70920574	2	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	3	LOCKWASHER, 1/2"

} For cable terminals

(Continued)

ALTERNATOR (Continued)
(Medium Output)

ITEM	PART NO.	QTY.	DESCRIPTION
3	73057632	1	FAN
4	70654397	1	PULLEY
5	74349778	1	BELT
6	70650964	1	BRACE
	70921566	1	CAPSCREW, 5/16"NC x 1"
	70910286	1	LOCKWASHER, 5/16"
	70929662	1	WASHER, plain
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70910287	1	LOCKWASHER, 3/8"
	70910324	1	NUT, 3/8"NC
7	74321107	1	BRACKET
	70916271	2	CAPSCREW, 3/8"NC x 1"
	70904206	2	LOCKWASHER, 3/8"
8	70650944	1	REGULATOR (Delco-Remy #1119518. Order parts from local United Motors Service Agency)
	70928182	2	CAPSCREW, 1/4"NC x 1/2"
	70910285	2	LOCKWASHER, 1/4"
	70928190	2	WASHER, plain
9	70671693	1	CABLE (10" long)
10	70671762	1	HARNESS
11	70640677	2	CLIP, 1/4" diam., 13/32" bolt-hole (Graders prior to unit #08203 excluding #08199)
	70639314	2	CLIP, 3/8" diam., 13/32" bolt-hole (Graders unit #08203 and up including #08199)
12	70671712	1	CABLE (14" long)
13	70660694	1	SWITCH
	70910856	1	ADAPTER, reducing, 1/4"NPT female to 1/8"NPT male
	70925863	1	ELBOW, 1/4"NPT
13A	70632706	1	BOOT
14	70196765	1	TIE, (plastic)
15	-----	1	HARNESS (See Lights, Horn and Wiring)



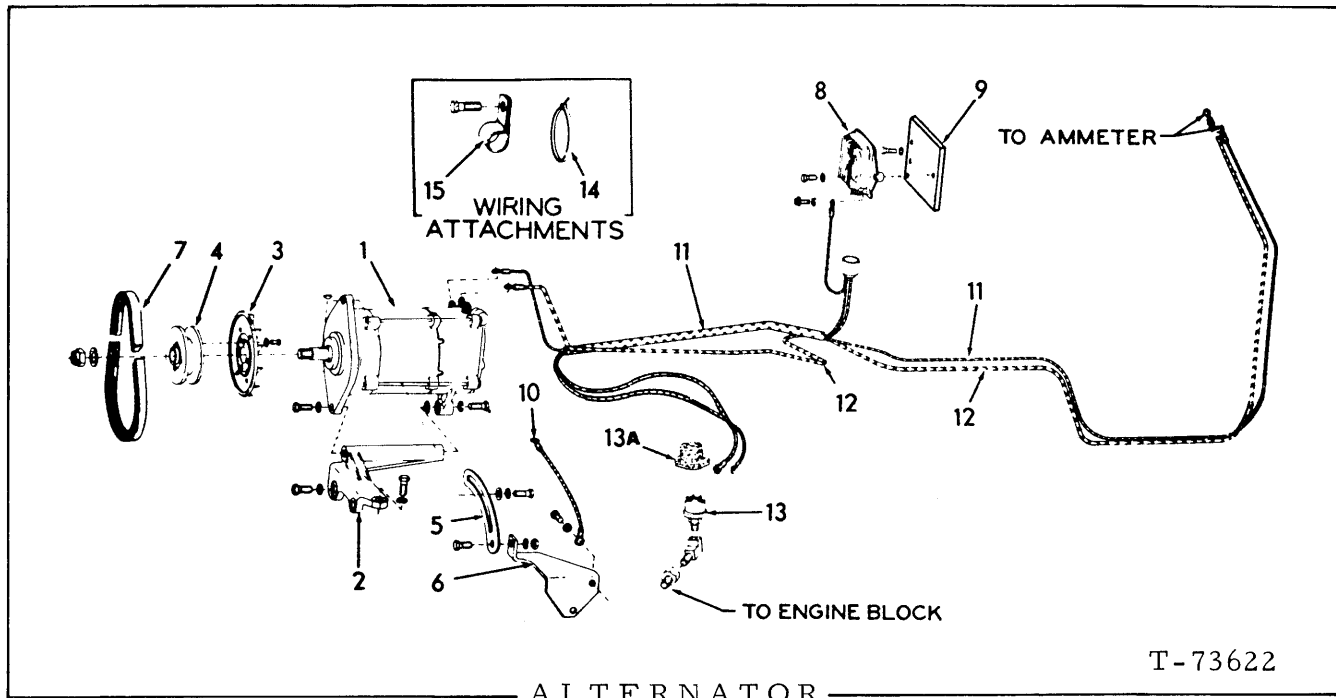
USAGE: Standard equipment. Graders serial No. 27Y08281, 57M09101 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	70692604	1	ALTERNATOR ASSY. (20 amp.)(Includes Nut and Washer for pulley)(Delco-Remy #1102348. Order service parts from local United Motors Service Agency)
	70922848	1	CAPSCREW, 3/8"NC x 3-1/4"
	70910287	1	LOCKWASHER, 3/8"
	70917376	1	NUT, #12-24NC
	70915365	1	LOCKWASHER, #12
2	70650966	1	BRACKET
	70927172	1	CAPSCREW, 1/2"NC x 1-1/8"
	70920574	2	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	3	LOCKWASHER, 1/2"
3	73057632	1	FAN
4	70654397	1	PULLEY
5	74349778	1	BELT
6	70650964	1	BRACE
	70921566	1	CAPSCREW, 5/16"NC x 1"
	70910286	1	LOCKWASHER, 5/16"
	70929662	1	WASHER, plain
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70910287	1	LOCKWASHER, 3/8"
	70910324	1	NUT, 3/8"NC
7	74321107	1	BRACKET
	70916271	2	CAPSCREW, 3/8"NC x 1"
	70904206	2	LOCKWASHER, 3/8"
8	73057441	1	RESISTOR
	70928182	1	CAPSCREW, 1/4"NC x 1/2"
	70677004	1	WASHER, plain

(Continued)

A L T E R N A T O R (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	70692366	1	HARNESS, wiring
10	70927177	2	CLIP
	70927219	1	CAPSCREW, 1/2"NC x 3-3/4"
	70928188	1	WASHER, plain
11	70925617	1	CLIP
12	70925097	1	CLIP
	70922300	1	CAPSCREW, 3/8"NC x 3/4"
	70630753	1	WASHER, plain
13	70925618	1	CLIP
14	70660694	1	SWITCH
	70925863	1	ELBOW, 1/4"NPT
15	70632706	1	BOOT
16	70667579	1	BOOT
17	-----	1	HARNESS (See Lights, Horn and Wiring)



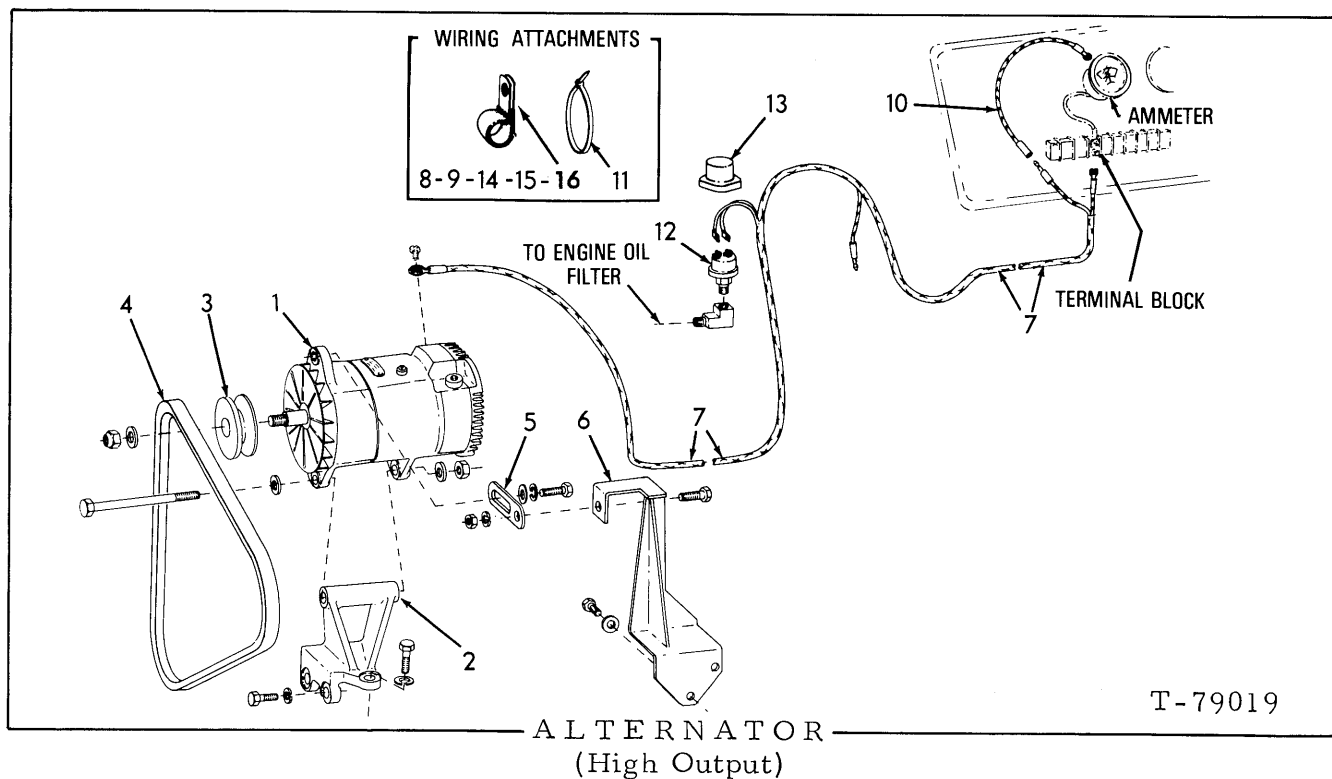
USAGE: Optional equipment. Replaces standard alternator on graders prior to serial No. 27Y08281

ITEM	PART NO.	QTY.	DESCRIPTION
1	70188993	1	ALTERNATOR ASSY. (60 amp. Includes Key, Nut and Washer for pulley)("Delco-Remy" #1117096. Order parts from local United Motors Service Agency)
	70919228	1	CAPSCREW, 7/16"NC x 1-1/8"
	70920684	1	CAPSCREW, 7/16"NC x 2"
	70904207	2	LOCKWASHER, 7/16"
	70074790	1	WASHER, plain
2	70648755	1	BRACKET
	70927172	1	CAPSCREW, 1/2"NC x 1-1/8"
	70920574	2	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	3	LOCKWASHER, 1/2"
3	70188996	1	FAN
	70901396	4	SCREW, machine, #12-24NC x 1/2"
	70906965	4	LOCKWASHER, #12
4	70650079	1	PULLEY
5	74338269	1	BRACE
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70900817	1	WASHER, plain, U.S. std., 3/8"
	70910287	2	LOCKWASHER, 3/8"
	70910324	1	NUT, 3/8"NC
	70916269	1	CAPSCREW, 3/8"NC x 7/8"
6	70650320	1	BRACKET
	70916271	2	CAPSCREW, 3/8"NC x 1"
	70904206	2	LOCKWASHER, 3/8"

(Continued)

ALTERNATOR (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
7	74336629	1	BELT
8	74388630	1	REGULATOR (Order parts from local United Motors Service Agency)
	70916282	3	CAPSCREW, 1/4"NC x 7/8"
	70914194	3	LOCKWASHER, int-ext-tooth, 1/4"
9	70667728	1	PLATE
	70915406	2	CAPSCREW, 1/4"NC x 3/4"
	70914194	2	LOCKWASHER, int-ext-tooth, 1/4"
10	70650653	1	CABLE
11	70648786	1	HARNESS
	70919288	1	CAPSCREW, 1/4"NC x 3/8"
	70914194	1	LOCKWASHER, 1/4"
12	70648784	1	CABLE
13	70660694	1	SWITCH, pressure, alternator cut-out
	70910856	1	ADAPTER, reducing, 1/4"NPT female to 1/8"NPT male
	70925863	1	ELBOW, street, 1/4"NPT
13A	70632706	1	BOOT
14	70239726	3	TIE
15	70640677	7	CLIP
	70915408	3	CAPSCREW, 3/8"NC x 3/4"



USAGE: Optional equipment. Replaces standard alternator on Graders serial No. 27Y08281, 57M09101 and up

ITEM	PART NO.	QTY.	DESCRIPTION
1	70662020	1	ALTERNATOR ASSY. (50 amp.) ("Delco-Remy" #1117236. Order parts from local United Service Agency)
	70927324	1	CAPSCREW, 1/2"NC x 6-1/2"
	70928178	2	WASHER, plain
	70918309	1	NUT, elastic stop, 1/2"NC
	70920574	1	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	1	LOCKWASHER, 1/2"
	70928844	1	WASHER, plain
2	70692819	1	BRACKET
	70927172	1	CAPSCREW, 1/2"NC x 1-1/8"
	70920574	2	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	3	LOCKWASHER, 1/2"
3	70692840	1	PULLEY
4	74339458	1	BELT
5	70692839	1	BRACE
	70920574	1	CAPSCREW, 1/2"NC x 1-3/8"
	70912441	1	LOCKWASHER, 1/2"
	70911028	1	NUT, 1/2"NC
6	70692838	1	BRACKET
	70927173	2	CAPSCREW, 3/8"NC x 1-1/8"
	70630753	2	WASHER, plain
7	70692624	1	HARNESS
8	70640677	1	CLIP

(Continued)

(Revised May 1977)

ALTERNATOR (Continued)
(High Output)

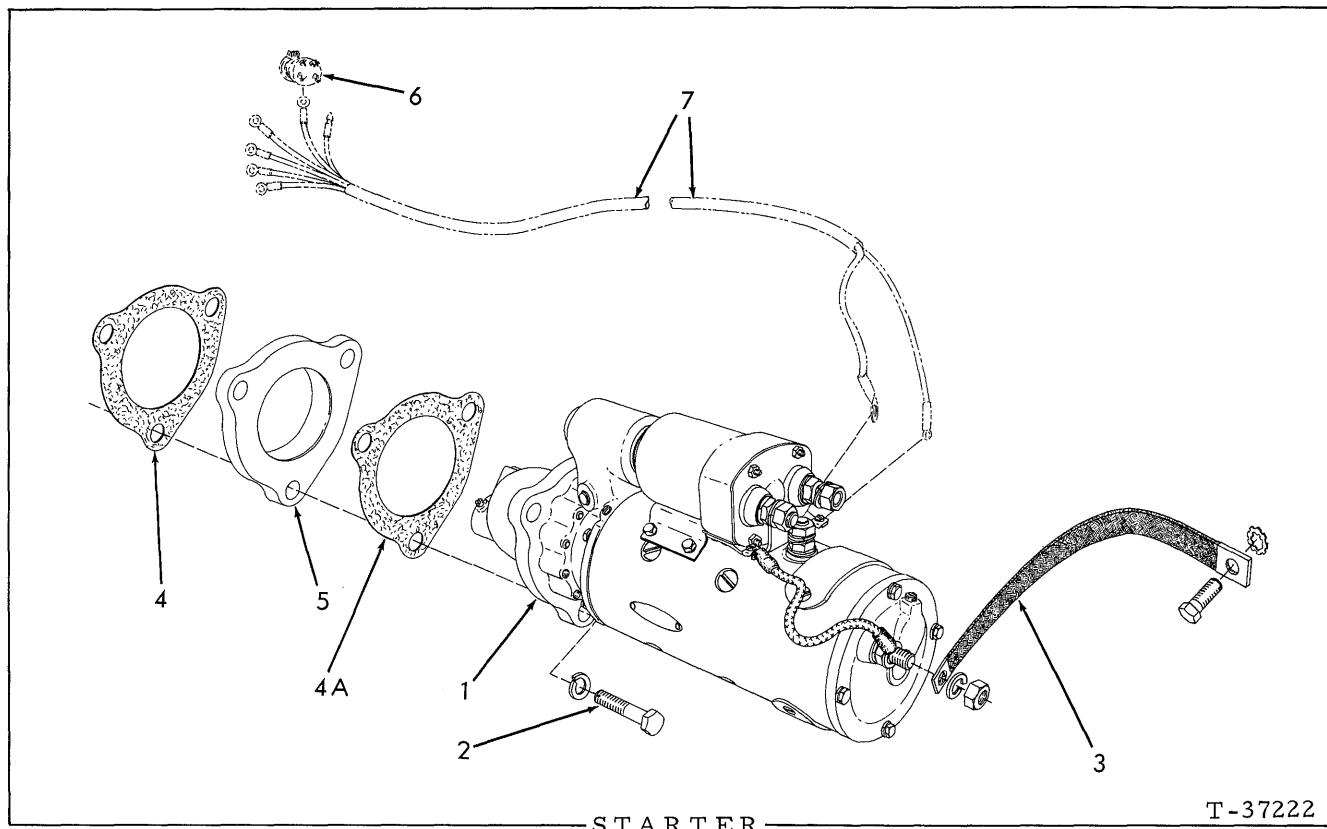
ITEM	PART NO.	QTY.	DESCRIPTION
9	70654655	2	CLIP
	70927219	1	CAPSCREW, 1/2"NC x 4-3/4"
	70928188	1	WASHER, plain
10	70692625	1	CABLE
11	70196765	5	TIE (plastic)
12	70660694	1	SWITCH
	70925863	1	ELBOW, 1/4"NPT
13	70632706	1	BOOT
14	70925618	1	CLIP
15	70925097	1	CLIP
	70922300	1	CAPSCREW, 3/8"NC x 5-3/4"
	70630753	1	WASHER, plain
16	70927177	1	CLIP

T-77664

BATTERIES AND CABLES

ITEM	PART NO.	QTY.	DESCRIPTION
1	70062168	1	STRAP, ground
	70927400	1	CAPSCREW, 3/8"NC x 5/8"
	70916803	1	LOCKWASHER, int-ext-tooth, 3/8"
2	70096908	1	SWITCH, master
	70927401	2	CAPSCREW, 1/4"NC x 1"
	70910285	2	LOCKWASHER, 1/4"
3	70671632	1	CABLE
4	70663804	1	ROD
	70928844	2	WASHER, plain
	70911028	2	NUT, 1/2"NC
5	70670053	1	HOLD-DOWN, battery
6	70671631	1	CABLE
7	70093752	1	BOOT
	70921912	1	CLAMP, hose, 1-1/16" to 2" diam.
8	70929731	1	CLAMP, cable supporting
	70928844	1	WASHER, plain
9	70695471	2	BATTERY, storage, 12 volt, dry-charged (Each requires 14 qts. electrolyte)
9A	70243526	1	ELECTROLYTE ("Z" pack - 6.1 qts.)
	70243527	1	ELECTROLYTE ("F" pack - 5 gal.)
9B	70243528	1	HOSE, electrolyte dispensing (For use with 5 - gal. pack)
10	70662760	1	HOLD-DOWN, battery
11	70670054	3	ROD
	70928844	6	WASHER, plain
	70911028	6	NUT, 1/2"NC
12	70679227	1	SUPPORT
13	70671630	1	CABLE
14	70644006	2	CLIP, cable supporting
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70630753	1	WASHER, plain
	70911026	1	NUT, 3/8"NC
	70928844	1	WASHER, plain

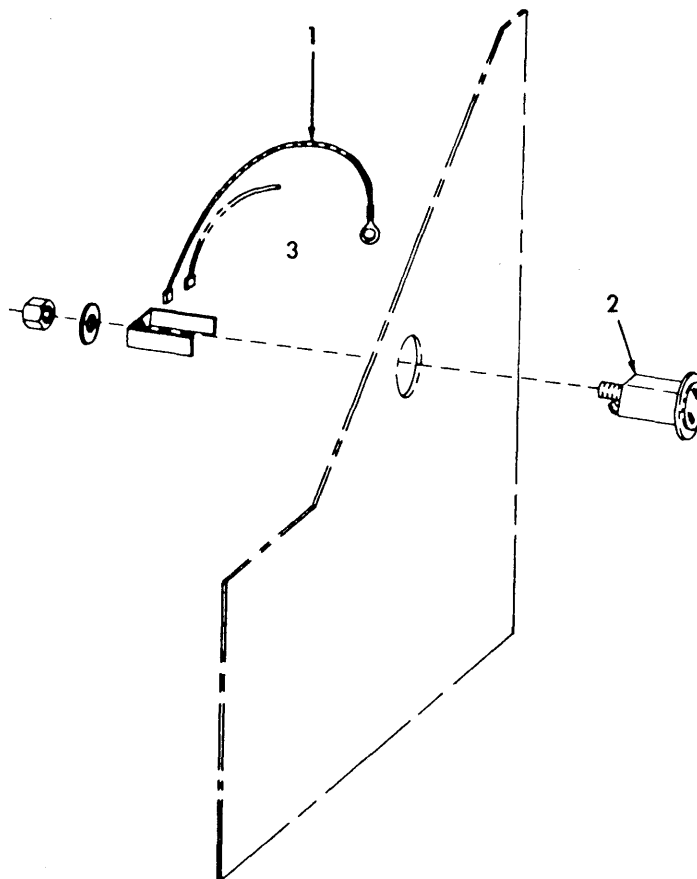
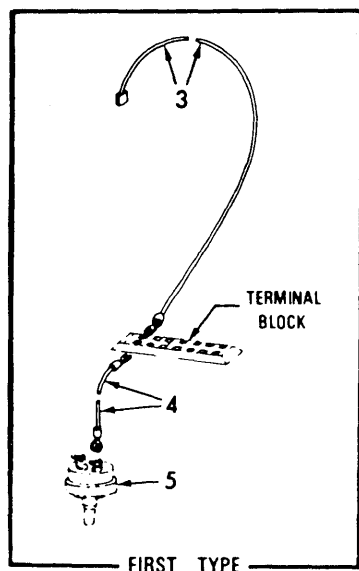
(Revised May 1977)



ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	MOTOR, starting (Delco-Remy No. 1113900)(Original equipment. Order MOTOR 74387529)
	74387529	1	MOTOR, starting (Delco-Remy No. 1113898)(Service replacement unit)
2	70926775	3	CAPSCREW, Nylok, 5/8"NC x 2-1/2"
	70912942	3	LOCKWASHER, 5/8"

NOTE: Order starter parts from local United Motors Service Agency

3	70073480	1	STRAP, starter to ground	} Units with optional alternator. Not illustrated
	70927400	1	CAPSCREW, 3/8"NC x 5/8"	
	70916803	1	LOCKWASHER, int-ext-tooth, 3/8"	
4	70620420	1	GASKET, starting motor adapter (4" diam.)	
4A	70620366	1	GASKET, starting motor (3-11/16" diam.)	
5	70621278	1	ADAPTER, starting motor	
6	-----	1	SWITCH (See INSTRUMENTS)	
7	-----	1	WIRING HARNESS (See LIGHTS, HORN AND WIRING)	
8	70648783	1	CABLE, starter to ammeter (103" long)	} Units with optional alternator. Not illustrated
9	70926920	1	CLIP, ammeter cable (9/32" bolt-hole)	
10	70640677	3	CLIP, ammeter cable	



T-78220

HOUR METER

USAGE: Use with Graders serial No. 27Y08203, 57M09010 and up including No. 27Y08199

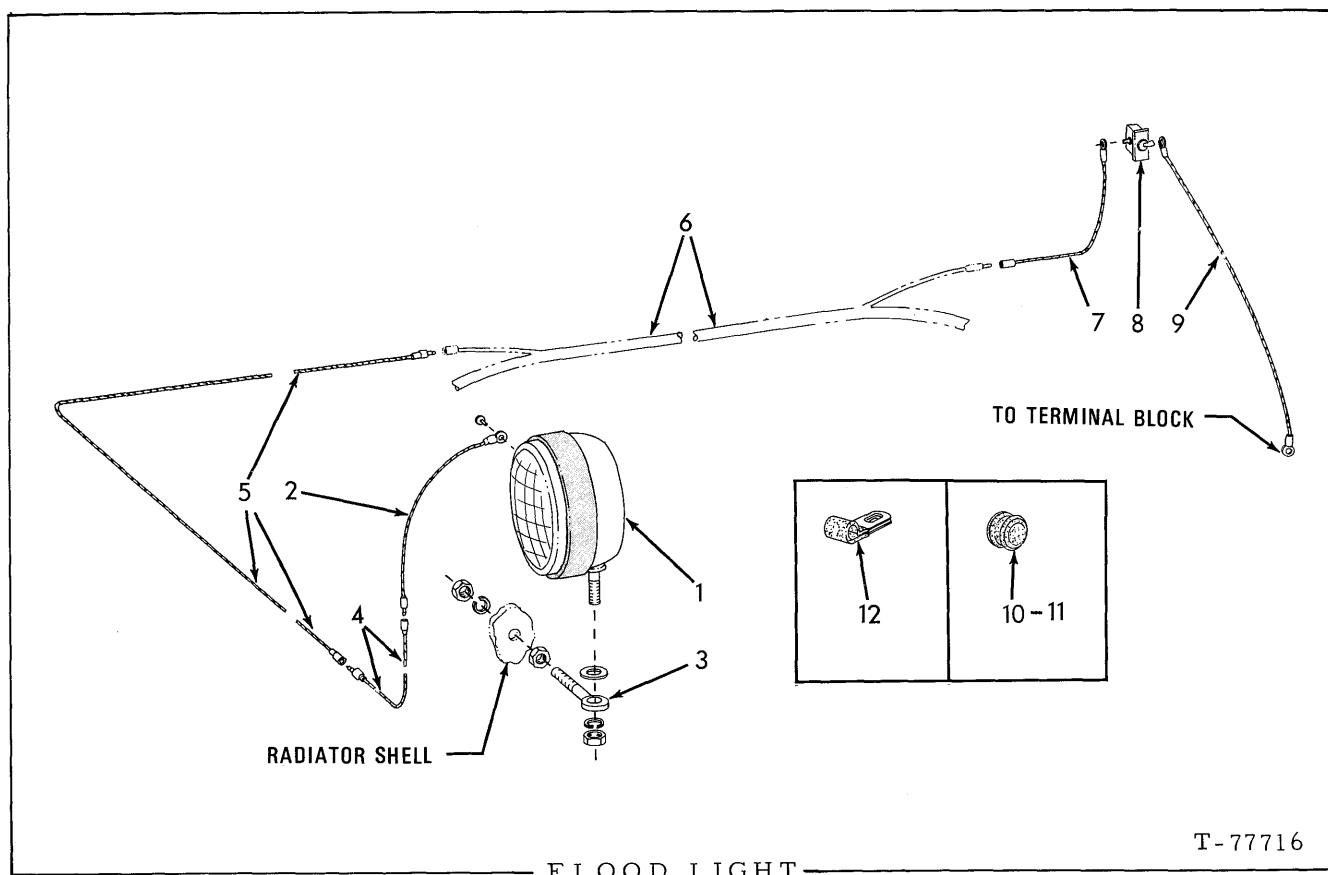
ITEM	PART NO.	QTY.	DESCRIPTION
------	----------	------	-------------

1	70691988	1	CABLE
2	70688997	1	METER, hour (Graders prior to unit #08869)
	70699126	1	METER, hour (Graders unit #08869 and up)
3	70692602	1	CABLE (Graders prior to unit #08281)
	-----	1	HARNES (See Lights, Horn and Wiring)(Graders unit #08281 and up)
4	70692603	1	CABLE (Graders prior to unit #08281)
5	-----	1	SWITCH (See ALTERNATOR)

Each includes mounting clamp

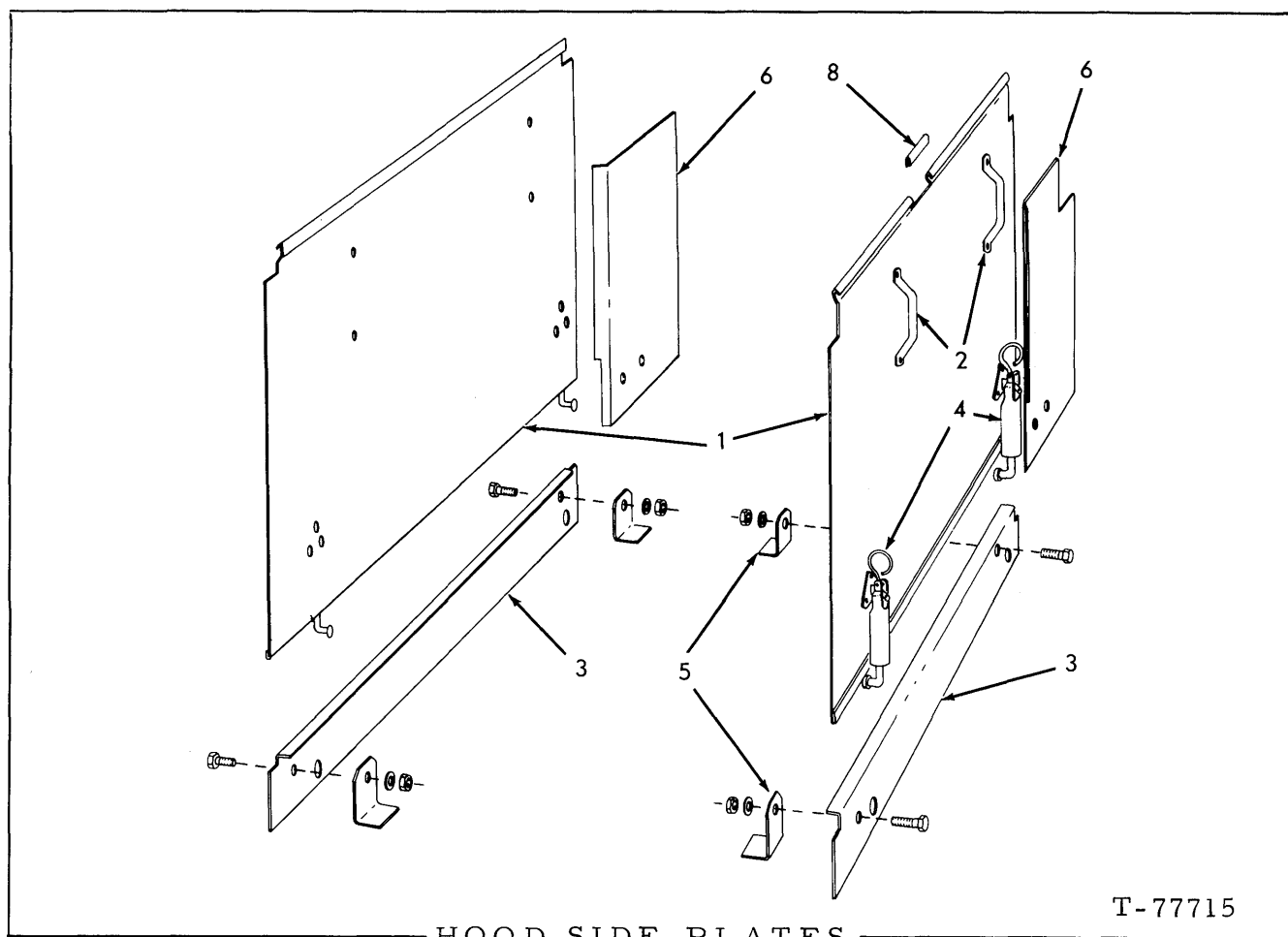
NOTE: Meter carries manufacturer's warranty and in case of failure should not be returned to Fiat-Allis. Return to nearest "Stewart-Warner" Agency.

M E M O



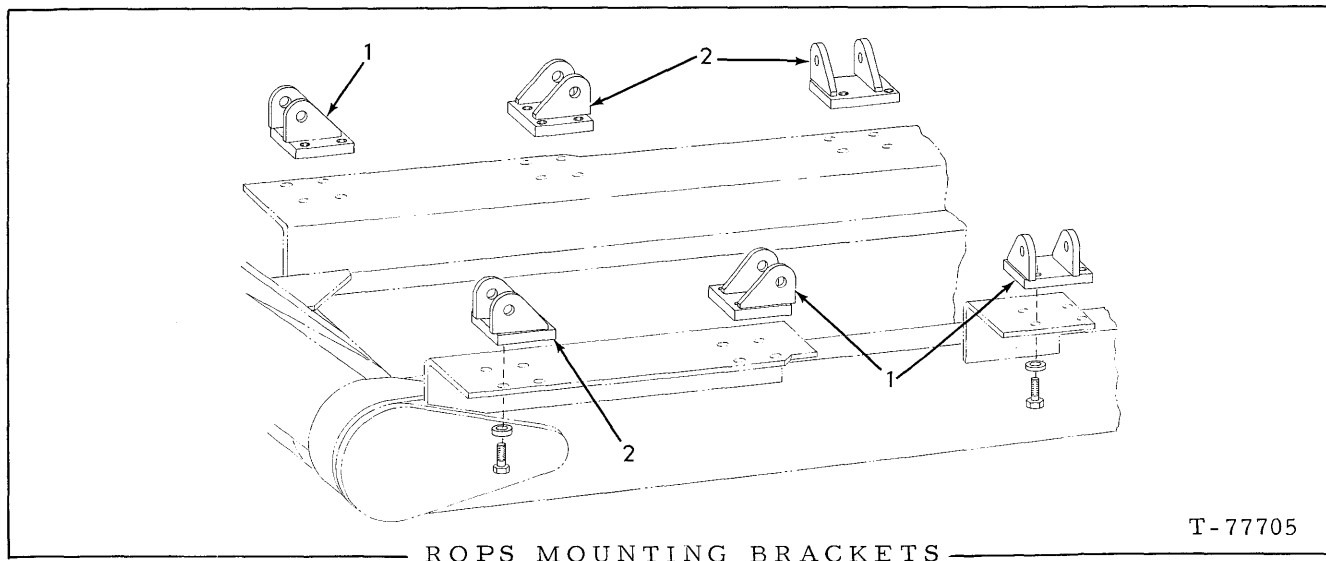
USAGE: Special equipment.

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	LIGHT ASSY., flood (See page 223)
	70677008	1	WASHER, plain
	70912441	1	LOCKWASHER, 1/2"
	70911043	1	NUT, 1/2"NF
2	70671711	1	CABLE
3	70065935	1	EYE
	70912441	1	LOCKWASHER, 1/2"
	70911035	2	NUT, 1/2"NC
4	70671709	1	CABLE
5	70686877	1	CABLE
6	-----	1	HARNESS, (See LIGHTS, HORN AND WIRING)
7	70671710	1	CABLE
8	70621735	1	SWITCH
9	70671691	1	CABLE
10	70023176	1	GROMMET (For 15/32" hole)
11	70083987	1	GROMMET (For 13/32" hole)
12	70639313	10	CLIP



USAGE: Special equipment

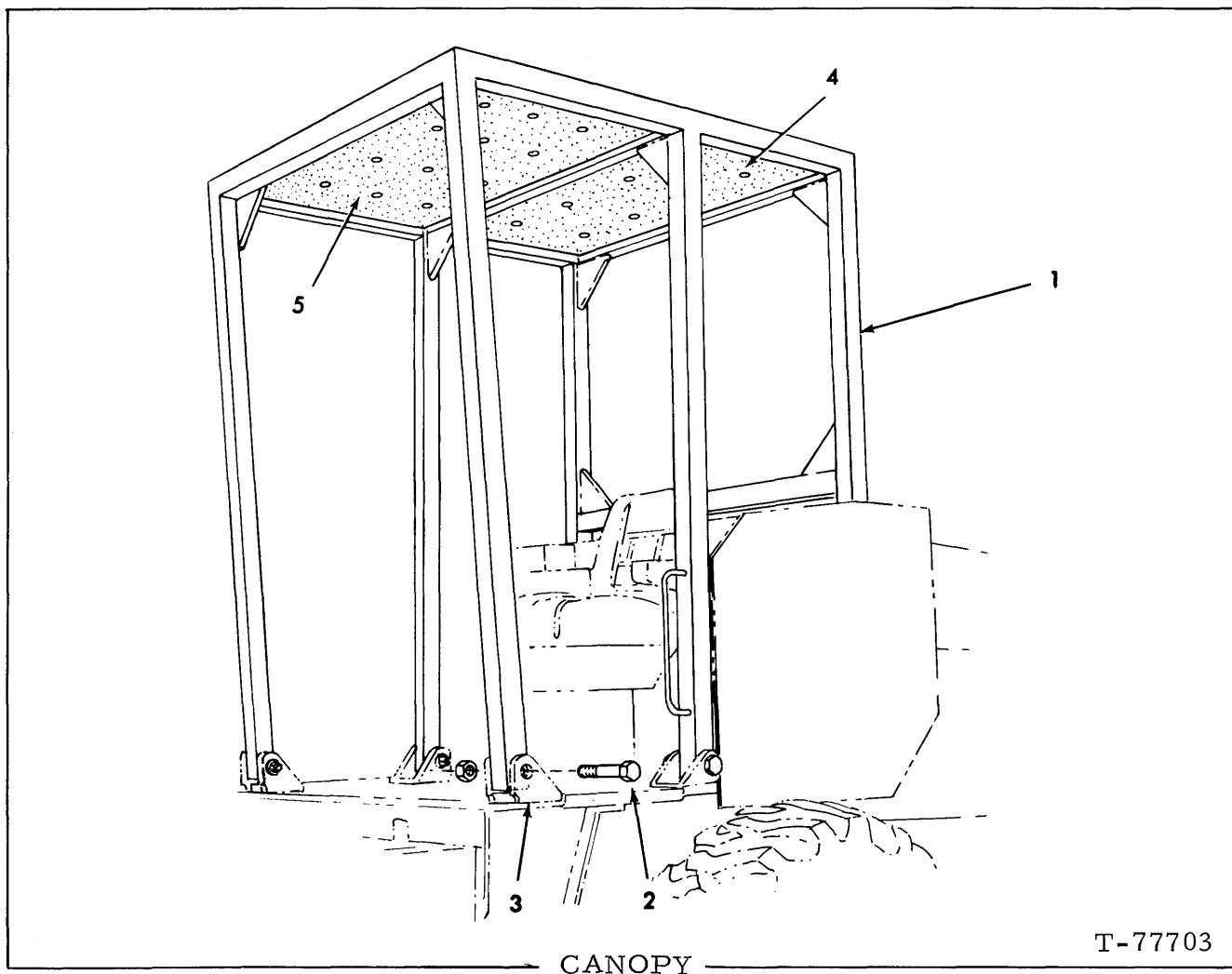
ITEM	PART NO.	QTY.	DESCRIPTION
1	70685815	1	PLATE ASSY., left side (Includes items 2 and 4)
	70685816	1	PLATE ASSY., right side (Includes items 2 and 4)
2	70032834	4	HANDLE, lifting
	70900764	8	RIVET, fl-hd., 3/16" x 1/2"
3	70685813	1	PLATE, fastening, left
	70685814	1	PLATE, fastening, right
	70922262	4	CAPSCREW, 3/8"NC x 7/8"
	70929156	4	WASHER, plain
	70911026	4	NUT, 3/8"NC
4	70033060	4	FASTENER, hold-down
	70900764	12	RIVET, fl. hd., 3/16" x 1/2"
5	70628063	4	ANGLE, fastening plate attaching (Requires welding to grader frame)
6	70685873	1	PLATE, left side
	70685874	1	PLATE, right side
7	74806640	-	TRIM, hose protecting (120" long. Use as required) (For use with Air Conditioning and Heater hoses)
8	70678019	1	TRIM, left side plate (Graders unit #08289 and up)



ROPS MOUNTING BRACKETS

USAGE: Special equipment. For mounting ROPS canopy or cab.

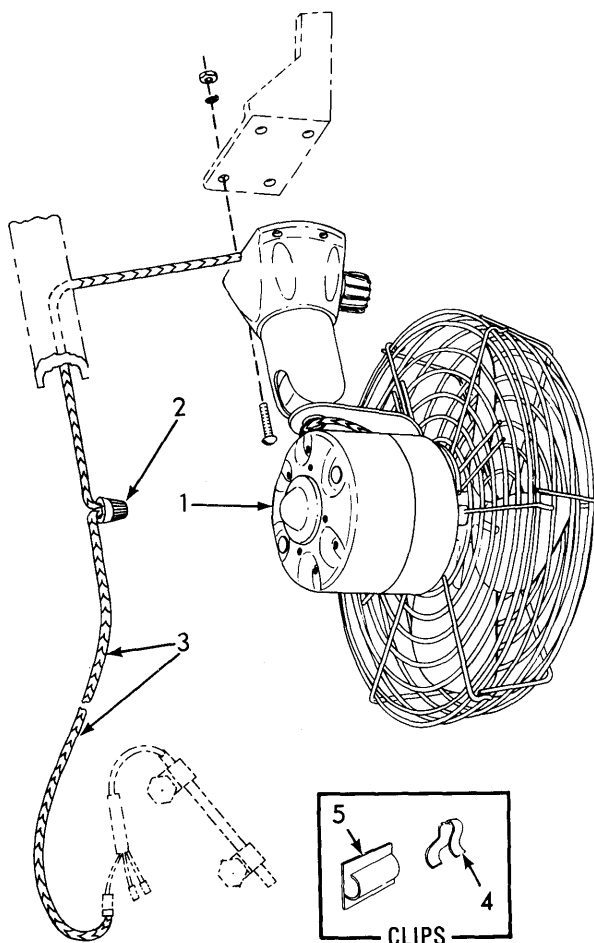
ITEM	PART NO.	QTY.	DESCRIPTION
1	70686769	3	BRACKET, (right front, left center, and left rear)
	70922743	12	CAPSCREW, 3/4"NC x 2"
	70677012	12	WASHER, plain
2	70686768	3	BRACKET, (left front, right center, and right rear)
	70927743	12	CAPSCREW, 3/4"NC x 2"
	70677012	12	WASHER, plain



Special Equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	73110152	1	CANOPY
2	70927151	6	CAPSCREW, 1"NC x 7"
	70912845	6	NUT, elastic stop, 1"NC x 7"
3	-----	-	BRACKET (See page 237)
4	70699326	1	PANEL, acoustic
	73063489	8	FASTENER
5	73108394	1	PANEL, acoustic
	73063488	12	FASTENER

NOTE: See PAINTING AND MARKING for transfer



DEFROSTER FAN

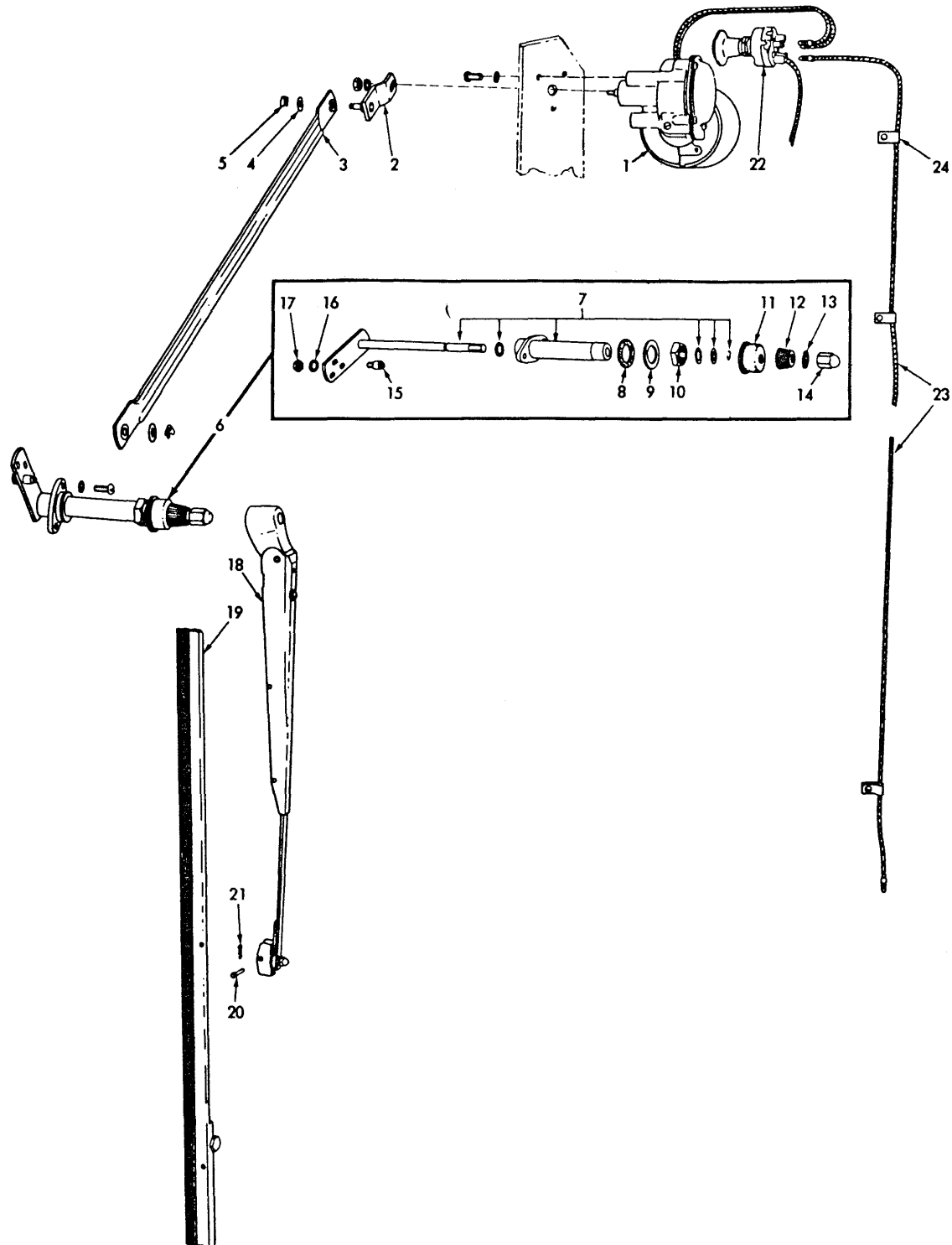
T-78224

USAGE: Special equipment. For use with Cab installation.

ITEM PART NO. QTY. DESCRIPTION

1	70184145	1	FAN ASSY. (Includes motor, guard, pedestal, switch and wiring)(Model No. 96-24V. Order service parts from MOBILE PRODUCTS division of Hupp Corp., 1135 Ivanhoe Road, Cleveland, Ohio 44110)
	70900555	4	SCREW, machine, rd-hd., #8-32NC x 3/4"
	70910283	4	LOCKWASHER, #8
	70907154	4	NUT, #8-32NC
2	70679148	1	NUT, wire
3	70688439	1	CABLE
4	70638986	3	CLIP, spring, fan cable (For Non-ROPS CAB only)
5	73059884	7	CLIP (Adhesive backing) (Late units)

(Revised April 1976)



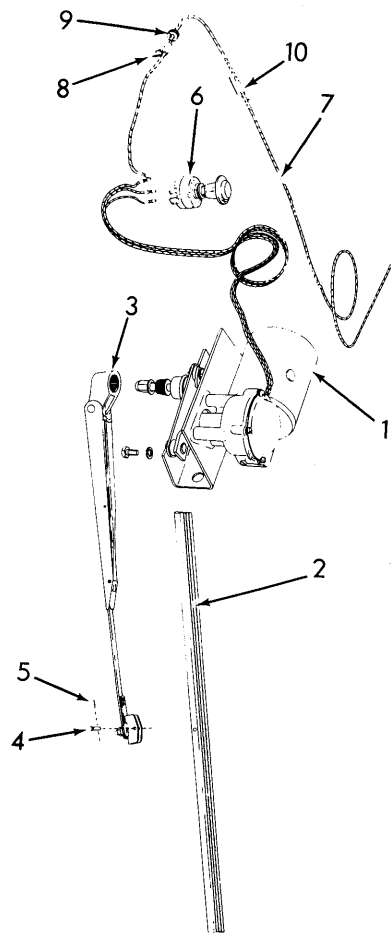
FRONT WINDSHIELD WIPER

T-39338

FRONT WINDSHIELD WIPER

USAGE: Special equipment. Units with Non-ROPS Cab

ITEM	PART NO.	QTY.	DESCRIPTION
1	70659478	1	MOTOR, windshield wiper ("American Bosch" Model WWC-24-K-668. Order service parts from nearest authorized service agency)
	70914108	3	SCREW, machine, rd-hd., 1/4"NF x 5/8"
	70914105	3	LOCKWASHER, ext-tooth, 1/4"
2	70639071	1	ARM ASSY., drive (Includes stud)
3	70639072	1	LINK, drive connecting
4	70639073	2	WASHER
5	70639074	2	CLIP, spring, link retaining
6	70639075	1	SHAFT AND PIVOT ASSY. (Consists of items 7 thru 17)
	70901172	2	SCREW, machine, rd-hd., #10-24NC x 1/2"
	70909055	2	LOCKWASHER, internal-teeth, #10
			NOTE: Service replacements of items indicated by asterisk (*) must be procured thru local "American Bosch" Service stations. Vendor's part numbers are indicated.
7	SH721048A -4	1	*SHAFT AND SPACER ASSY.
8	WA721017-2	1	*WASHER, sealing (leather)
9	WA721017-1	1	*WASHER (steel)
10	NT721010	1	*NUT, retaining, shaft and spacer assy.
11	CP721003	1	*CAP, protecting (rubber)
12	NT721003	1	*NUT, arm adapting
13	WA22-10CA	1	*LOCKWASHER, arm retaining nut
14	NT721001	1	*NUT, arm retaining
15	PN721004	1	*PIN, drive connecting link
16	WA22-8CA	1	*LOCKWASHER, pin retaining nut
17	NT721009	1	*NUT, pin retaining
18	70628522	1	ARM ASSY., wiping blade (Includes items 20 and 21)
19	70628523	1	BLADE, wiping (20" long)
20	62582	1	PIN, clevis, blade attaching (Procure from local ANCO dealer. Vendor's number is listed)
21	61910	1	PIN, cotter (Procure from local ANCO dealer. Vendor's number is listed).
22	70628508	1	SWITCH ASSY. (Includes mounting nuts)
23	70639067	1	CABLE (60" long)
24	70638986	3	CLIP, cable supporting



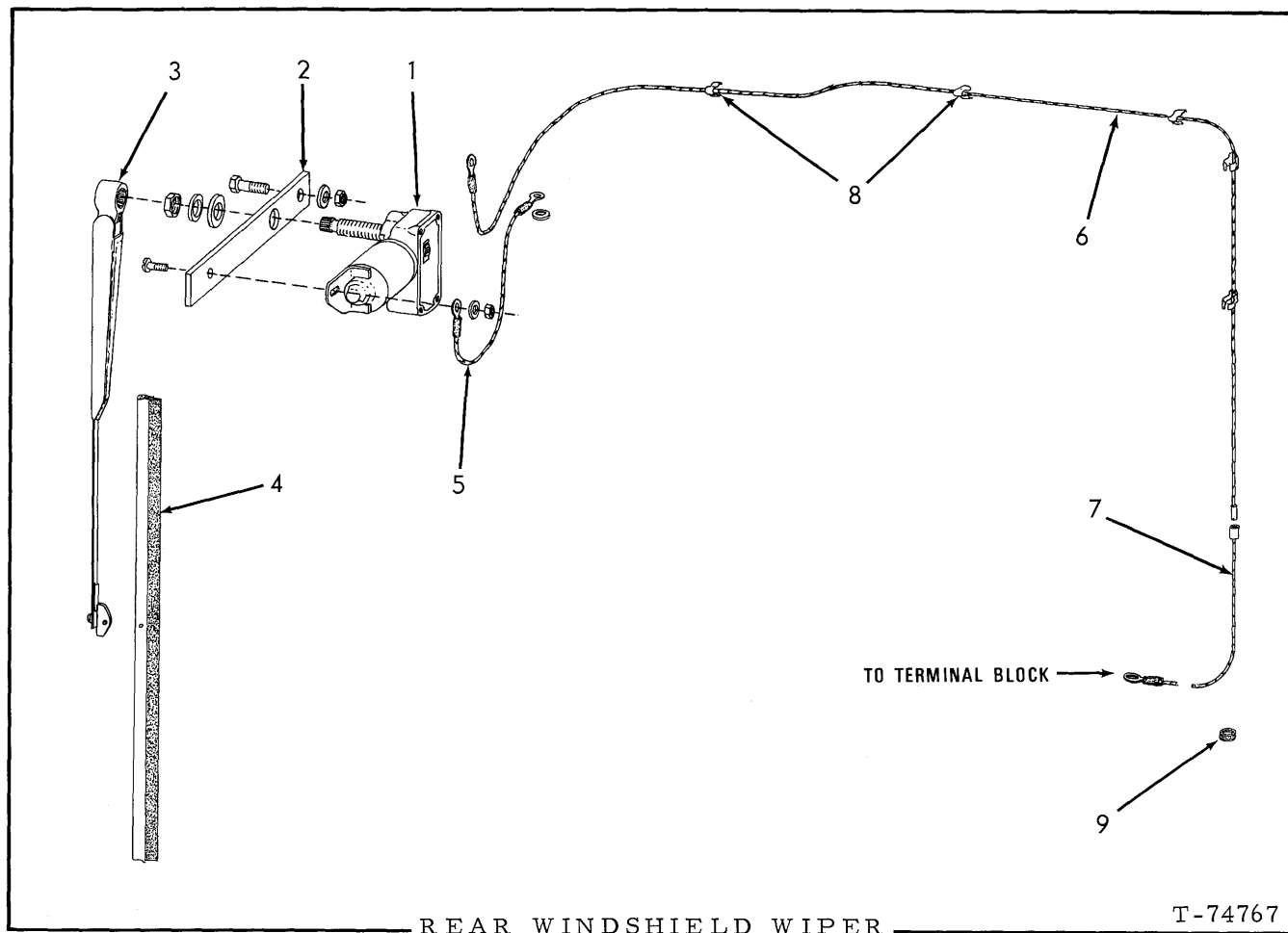
T-33481

FRONT WINDSHIELD WIPER

USAGE: Special equipment. Units with ROPS Cab

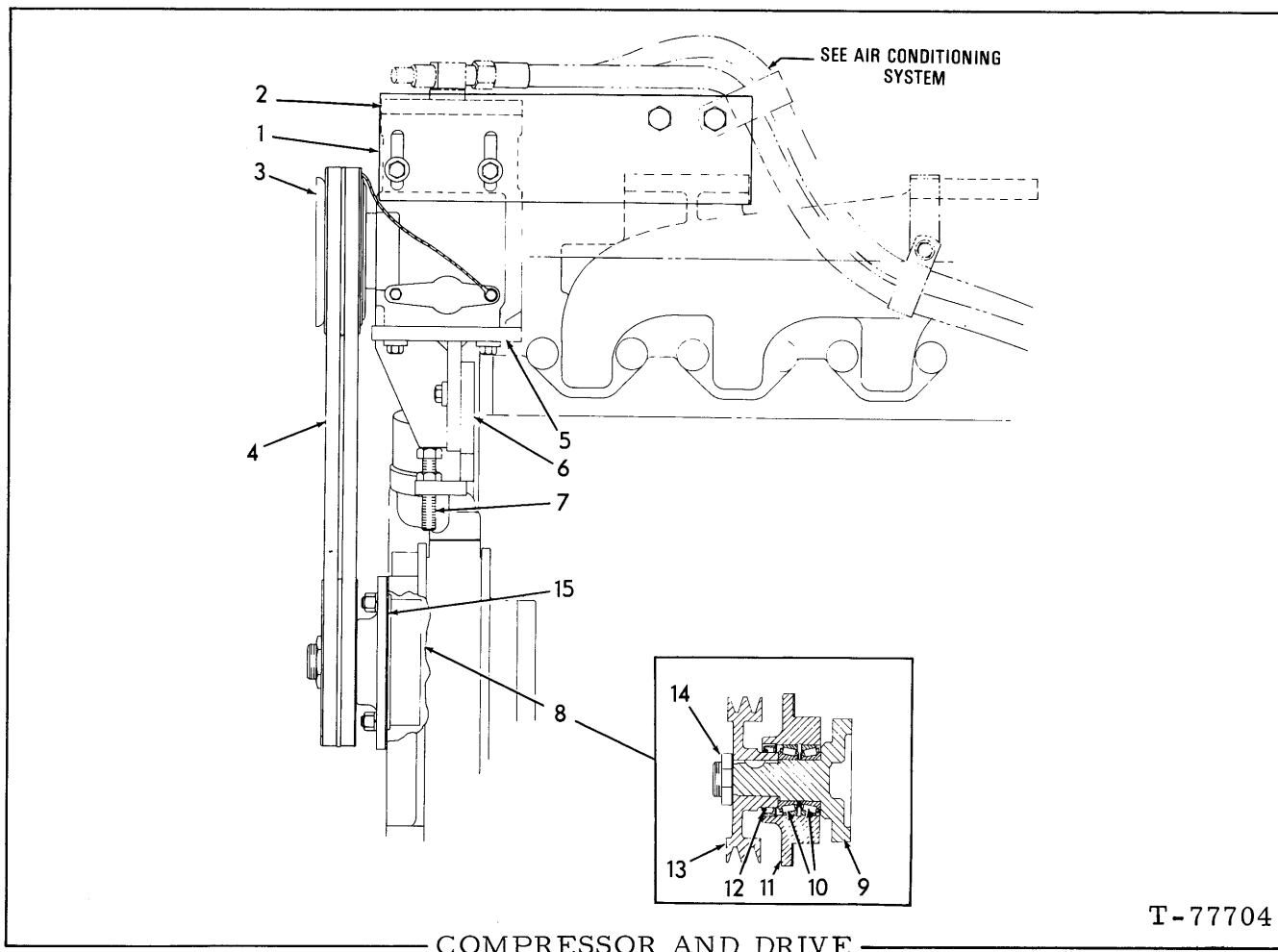
ITEM	PART NO.	QTY.	DESCRIPTION
1	70688314	1	MOTOR, windshield wiper (American Bosch Model WWC-24L-2624-136. Includes Adapter, Washer and Nut. Order service parts from nearest authorized service agency)
	70928575	2	CAPSCREW, 1/4"NF x 1/2"
	70910285	2	LOCKWASHER, 1/4"
2	70628523	1	BLADE, wiping (20" long)
3	70628522	1	ARM ASSY., wiping blade (Includes items 4 and 5)
4	62582	1	PIN, clevis, blade attaching
5	61910	1	PIN, cotter
6	70688313	1	SWITCH ASSY., motor (Includes mounting nuts)
7	70688312	1	CABLE (68" long)
8	70638986	3	CLIP, cable supporting
9	70023176	1	GROMMET (Early units)
10	73059884	7	CLIP (Adhesive backing) (Late units)

(Revised April 1976)



USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70665629	1	MOTOR, windshield wiper ("American Bosch" Model WWF-24C19-220. Order service parts from nearest authorized service agency)
	70901174	1	SCREW, machine, #10-24NC x 3/4"
	70910243	1	WASHER, plain, SAE std., 3/16"
	70901310	1	NUT, #10-24NC
	70922763	1	CAPSCREW, 3/8"NC x 1"
	70929156	1	WASHER, plain
	70911026	1	NUT, 3/8"NC
2	70662195	1	PLATE, spacing, wiper motor
3	70665630	1	ARM ASSY. (Includes attaching hardware for wiping blade)
4	70628523	1	BLADE, wiping (20" long)
5	70671693	1	CABLE, motor grounding (10" long)
	70928190	1	WASHER, plain, SAE std., 1/4"
6	70688283	1	CABLE (63" long)
7	70688282	1	CABLE (36" long)
8	70638986	5	CLIP, supporting, switch cable (spring-type)
9	70083987	1	GROMMET



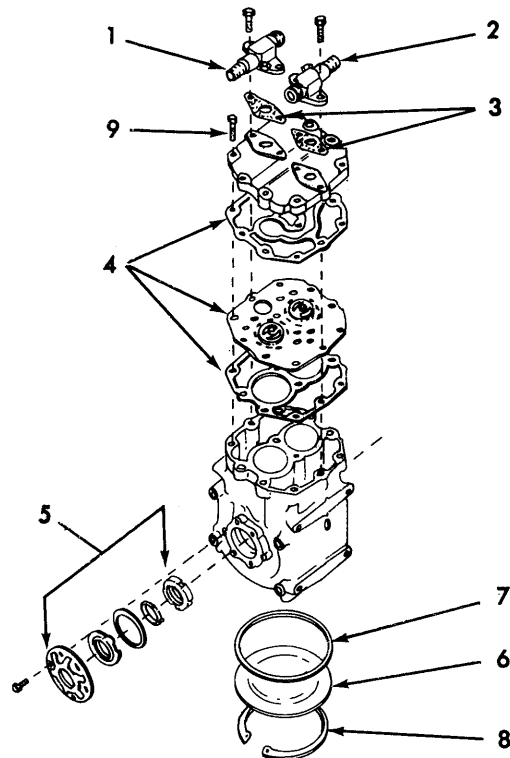
USAGE: Special equipment. For units with air-conditioned cab.

ITEM	PART NO.	QTY.	DESCRIPTION	
1	70687144	1	PLATE	} Engines prior to S/N 11-24110. Units with "Bosch" Injection Pump
	70920582	2	CAPSCREW, 1/2"NC x 1-1/4"	
	70912441	2	LOCKWASHER, 1/2"	
	70696613	1	PLATE (Engine serial No. 11-24110 and up)(Units with Roosa Master Injection Pump)	} Effective with Grader unit # 09222 and up
	70920583	2	CAPSCREW, 1/2"NC x 1-1/2"	
2	70912441	2	LOCKWASHER, 1/2"	
	70910244	2	WASHER	
	70911028	2	NUT, 1/2"NC	
	-----	1	COMPRESSOR ASSY. (See page 244)	
	70927173	2	CAPSCREW, 3/8"NC x 1-1/8"	
	70677006	2	WASHER, plain	
	70927225	4	CAPSCREW, 3/8"NC x 1-5/8"	
	70677006	4	WASHER, plain	

(Continued)

COMPRESSOR AND DRIVE (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
3	70688398	1	CLUTCH ASSY. (Serviced only as a unit)
	70927239	1	CAPSCREW, 5/16"NF x 1"
	70677008	1	WASHER
4	70687126	1	BELT SET (Consists of 2 matched belts)
5	70687138	1	BRACKET
	70923470	2	CAPSCREW, 3/8"NC x 1-1/2"
	70677006	2	WASHER, plain
6	70687141	1	PLATE
	70927531	2	CAPSCREW, 7/16"NC x 2"
7	70929771	1	CAPSCREW, 1/2"NC x 2-3/4"
	70911035	1	NUT, 1/2"NC
8	70687146	1	DRIVE ASSY., compressor (Includes items 9 thru 14)
	70687145	4	STUD, 3/8"NC x 1-1/2"
	70910287	4	LOCKWASHER, 3/8"
	70911026	4	NUT, 3/8"NC
9	74359962	1	GEAR
	70917755	1	KEY, woodruff, #91, 1/4" x 3/4"
10	74357289	1	BEARING
11	74359223	1	FLANGE
12	74255587	1	SEAL
13	70687148	1	PULLEY
14	74335476	1	NUT
15	74321628	1	GASKET (Effective with Grader unit #09222 and up)



COMPRESSOR

T-77954

USAGE: Special equipment. For units with Air-Conditioned Cab. See page 242

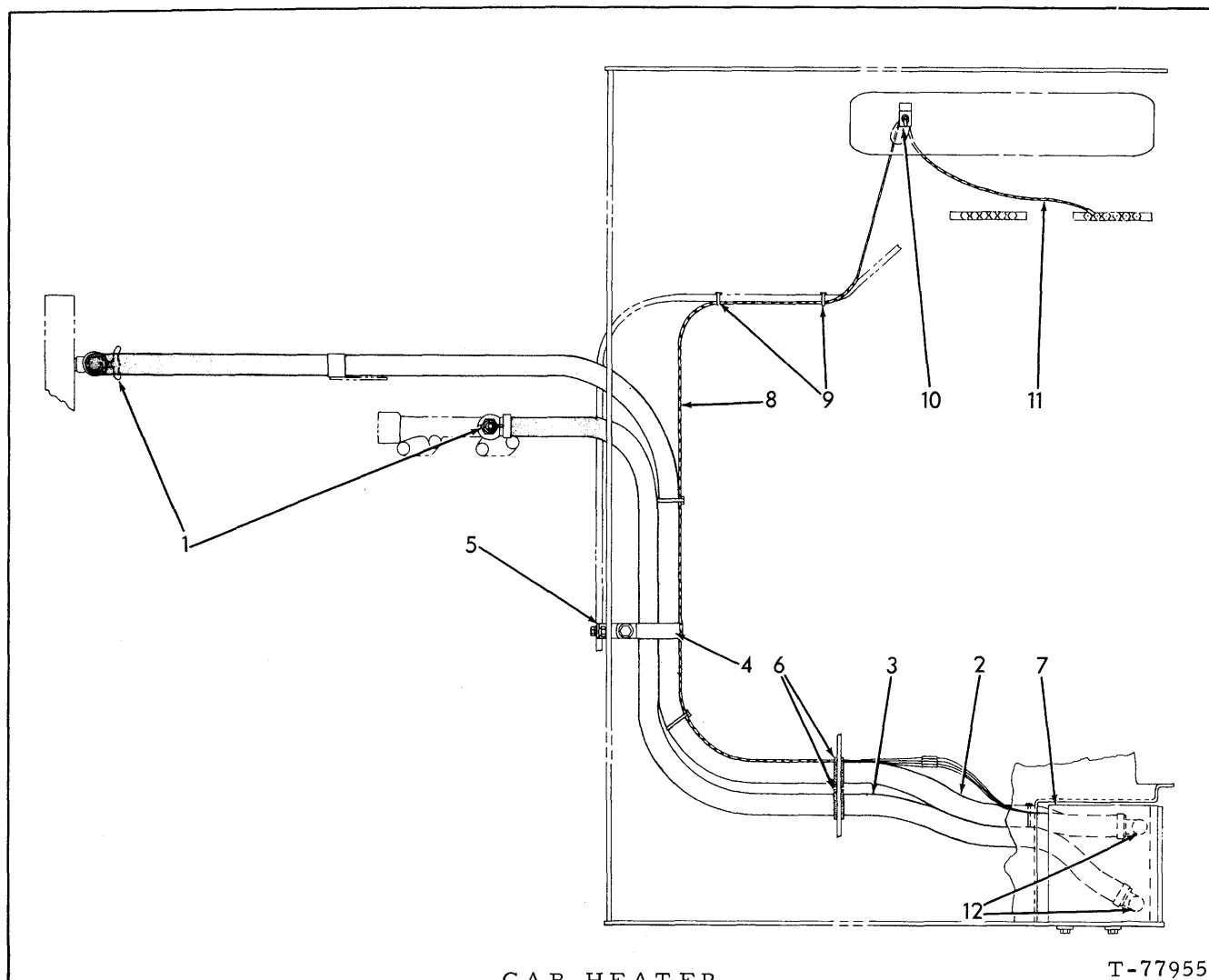
ITEM PART NO. QTY. DESCRIPTION

- 71144556 1 COMPRESSOR ASSY. (Includes items 1 thru 9)

NOTE: Any items not illustrated or listed below, such as crankshaft, piston, etc., are not serviced separately. Service on these items can only be accomplished by replacement of complete Compressor Assembly.

1	71164255	1	VALVE, suction (5/8" thread)
	71164264	2	CAPSCREW, 5/16" NF x 1-3/4"
2	71164256	1	VALVE, discharge (1/2" thread)
	71164264	2	CAPSCREW, 5/16" NF x 1-3/4"
3	71164257	2	GASKET, valve
4	71164258	1	VALVE PLATE KIT (Serviced only as a unit)
5	71164259	1	SHAFT SEAL KIT (Serviced only as a unit)
6	71164260	1	PLATE, bottom
7	71164261	1	O-RING, bottom plate
8	71164262	1	RING, snap, plate retaining
9	71164265	8	CAPSCREW, top cover (5/16" NF x 1-3/8")

M E M O



CAB HEATER

T-77955

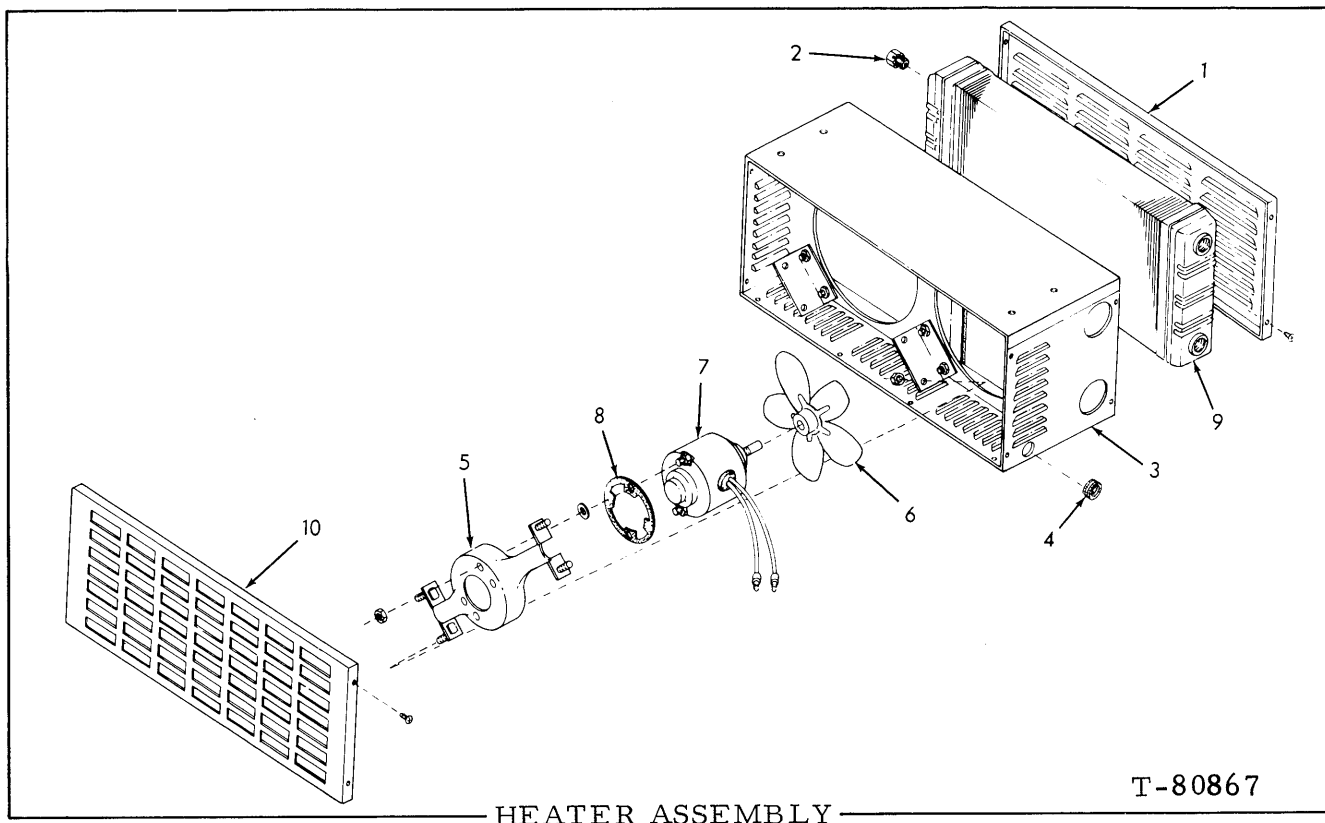
USAGE: Special Equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70621736	2	VALVE, shut-off
	70901500	2	NIPPLE, pipe, 1/2" NPT x 1-1/8"
	70901828	1	BUSHING, pipe, 3/4" NPT to 1/2" NPT
2	70652676	1	HOSE, heater to timing gear housing (100" long)
	70922660	2	CLAMP, hose, 13/16" to 1-1/2"
	70929794	2	CLAMP, 1-5/16" diam., 17/32" bolt-hole
3	70687478	1	HOSE, heater to water manifold (81" long)
	70922660	2	CLAMP, hose, 13/16" to 1-1/2"
4	70621728	1	CLIP, hose supporting
	70922763	1	CAPSCREW, 3/8" NC x 1"
	70928845	2	WASHER, plain
	70911026	1	NUT, 3/8" NC
5	70687477	1	ANGLE

(Continued)

CAB HEATER (Continued)

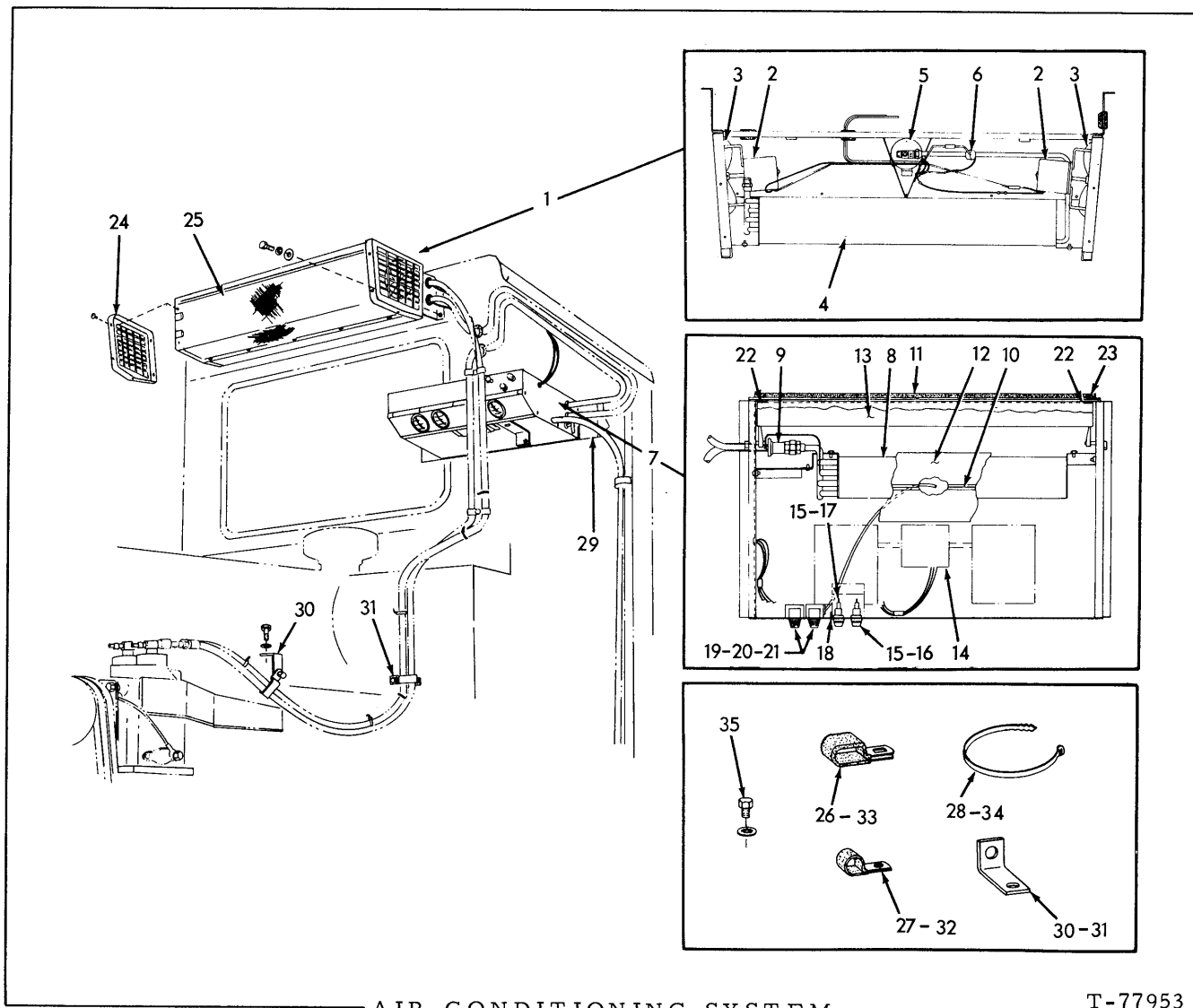
ITEM	PART NO.	QTY.	DESCRIPTION
6	70929795	2	GROMMET
7	-----	1	HEATER ASSY. (Includes item 12)(See page 247A)
	70922763	3	CAPSCREW, 3/8"NC x 1"
	70677006	3	WASHER, plain
8	70687474	1	HARNESS, wiring
9	70239726	5	TIE, heater cable
10	70655467	1	SWITCH, toggle
11	70687475	1	CABLE, switch to terminal block
12	70687472	2	ELBOW (brass)



USAGE: See page 247

ITEM	PART NO.	QTY.	DESCRIPTION
-	70687841	1	HEATER (Includes items 1 thru 10)
1	73069018	1	COVER, front
	70047513	4	SCREW
2	73058348	1	VALVE, bleeder
3	73069019	1	CASE
4	73114074	1	GROMMET
5	73069012	2	BRACKET
	70928919	16	NUT, KEPS, #10
6	73058344	2	FAN
7	73069010	2	MOTOR, 24V (Serviced only as a unit)
	70924353	4	WASHER
	70928919	4	NUT, KEPS, #10
8	73058342	2	WASHER, rubber
9	73058346	1	CORE
10	73114069	1	COVER, front
	70047513	8	SCREW

MEMO



AIR CONDITIONING SYSTEM

T-77953

USAGE: For units with Air Conditioned Cab

ITEM PART NO. QTY. DESCRIPTION

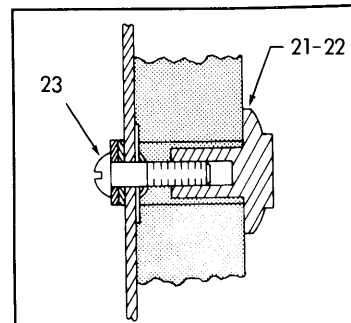
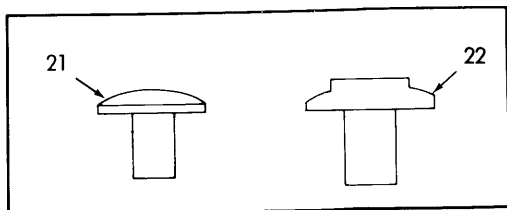
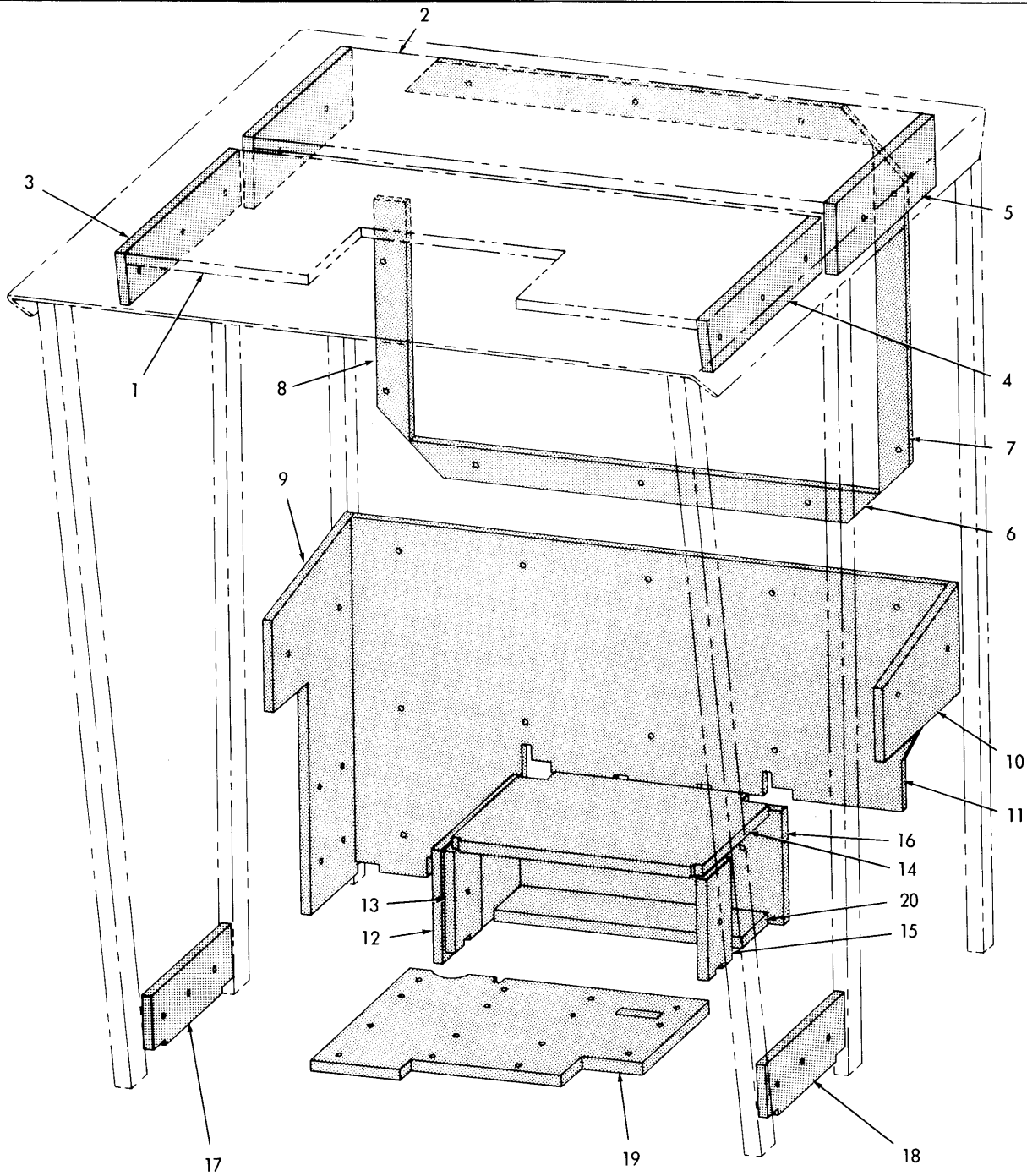
NOTE: Refrigerant and drain hoses for this system are components of the Cab Assembly. For service or replacement consult your local hose distributor.

1	70690530	1	CONDENSER ASSY. (Includes items 2 thru 6)
	70927576	4	CAPSCREW, machine, 3/8" NC x 3/4"
	70904206	4	LOCKWASHER, 3/8"
	70900817	4	WASHER, plain
2	70690531	1	MOTOR, right side
	70690532	1	MOTOR, left side
3	70690534	2	FAN, motor
4	70690535	1	COIL, condenser
5	71160968	1	RECEIVER

(Continued)

AIR CONDITIONING SYSTEM (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
6	70690533	1	THERMOSTAT
7	70690540	1	PRESSURIZER ASSY. (Includes items 8 thru 23)
8	70690539	1	COIL, evaporator
9	71160956	1	VALVE, expansion
10	70690949	4	SEAL, air (1/2" x 1/2" x 28-1/2")
11	70690946	2	WEATHERSTRIP (1/2" x 1/2" x 29")
12	70690542	1	PAN, drain
13	70690543	1	FILTER
14	70690544	1	BLOWER (24 volt)
15	71143343	2	KNOB, control switch
16	70690545	1	SWITCH, blower
17	70690546	1	THERMOSTAT, temperature control
18	70690879	1	INSULATION, fuse
19	70690547	2	FUSE (20 amp.)
20	70690548	2	HOLDER, fuse
21	70690880	1	TERMINAL
22	70690948	4	SEAL (1/2" x 1/2" x 11-1/2")
23	70690945	2	WEATHERSTRIP (1/2" x 1/2" x 6-1/2")
24	70690537	1	END, condenser shielding, left
	70690538	1	END, condenser shielding, right
	70918156	10	SCREW, truss-hd., 1/4" NC x 5/8"
25	70690536	1	COVER, condenser
	70920213	1	PLUG, button, 1-1/4" diam.
26	70690938	3	CLAMP, refrigerant hose
	70918155	3	SCREW, truss-hd., 1/4" NC x 1/2"
	70904204	3	LOCKWASHER, 1/4"
27	70930353	6	CLAMP, drain hose
	70909008	6	SCREW, self-tapping, #10 x 3/8"
	70910243	6	WASHER, plain
28	70196765	5	STRAP, hose
29	70690550	1	AIR DUCT, pressurizer
<u>NOTE:</u> The following parts are attaching hardware for Air Conditioner hoses and cables and are not components of Cab Assembly.			
30	70688303	1	ANGLE (Attached to turbo flange)
31	70688392	1	ANGLE (Attached to hood)
32	70928176	1	CLIP, 1/8" diam., 13/32" bolt hole (Attached to compressor)
	70927400	1	CAPSCREW, 3/8" NC x 5/8"
	70929156	1	WASHER, plain
33	70642536	3	CLIP, double, 1" hose, 17/32" bolt hole (Attached to angles)
	70922300	2	CAPSCREW, 3/8" NC x 3/4"
	70929156	2	WASHER, plain
	70911026	2	NUT, 3/8" NC
34	70239726	9	TIE (Use as required)
35	70927484	1	CAPSCREW, grounding cable (3/8" NC x 1/2")
	70906960	1	LOCKWASHER, int-tooth, 3/8"



SOUND INSULATION

T-80258

249A

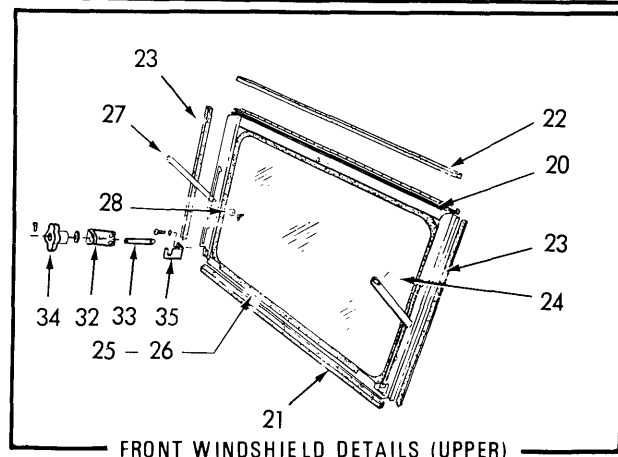
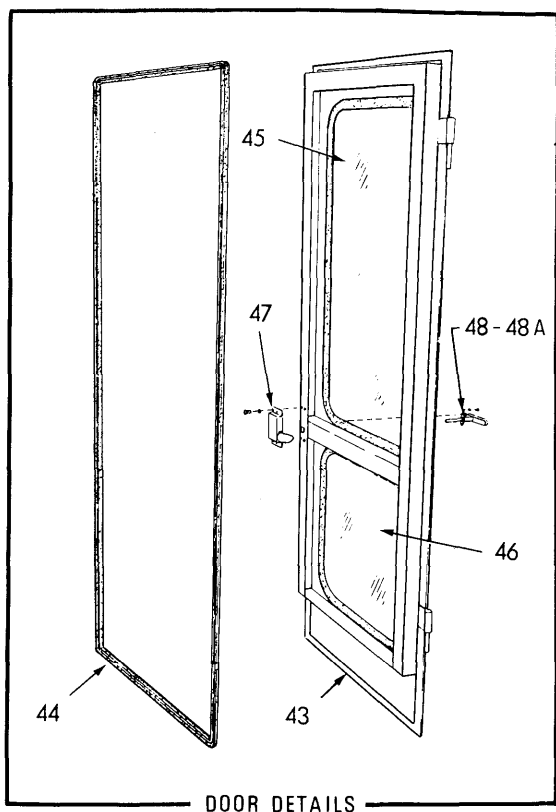
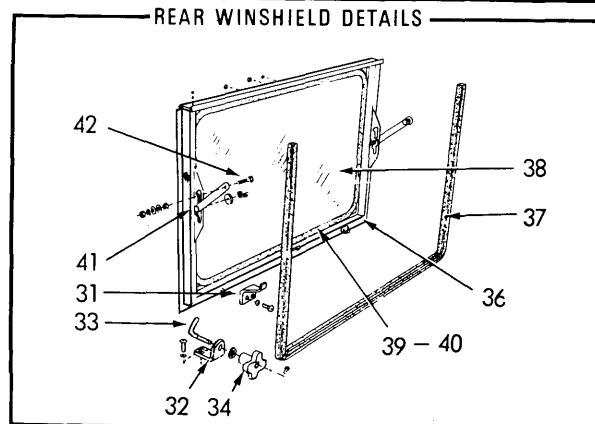
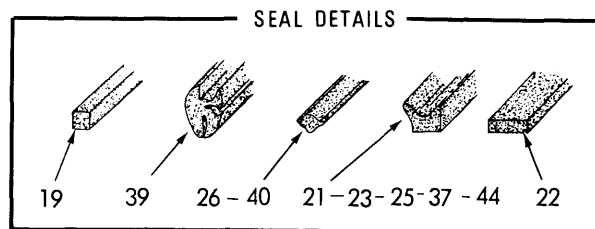
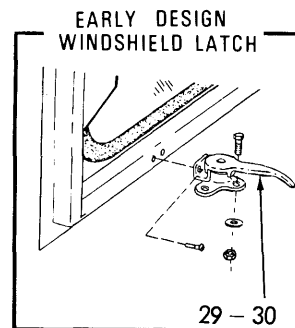
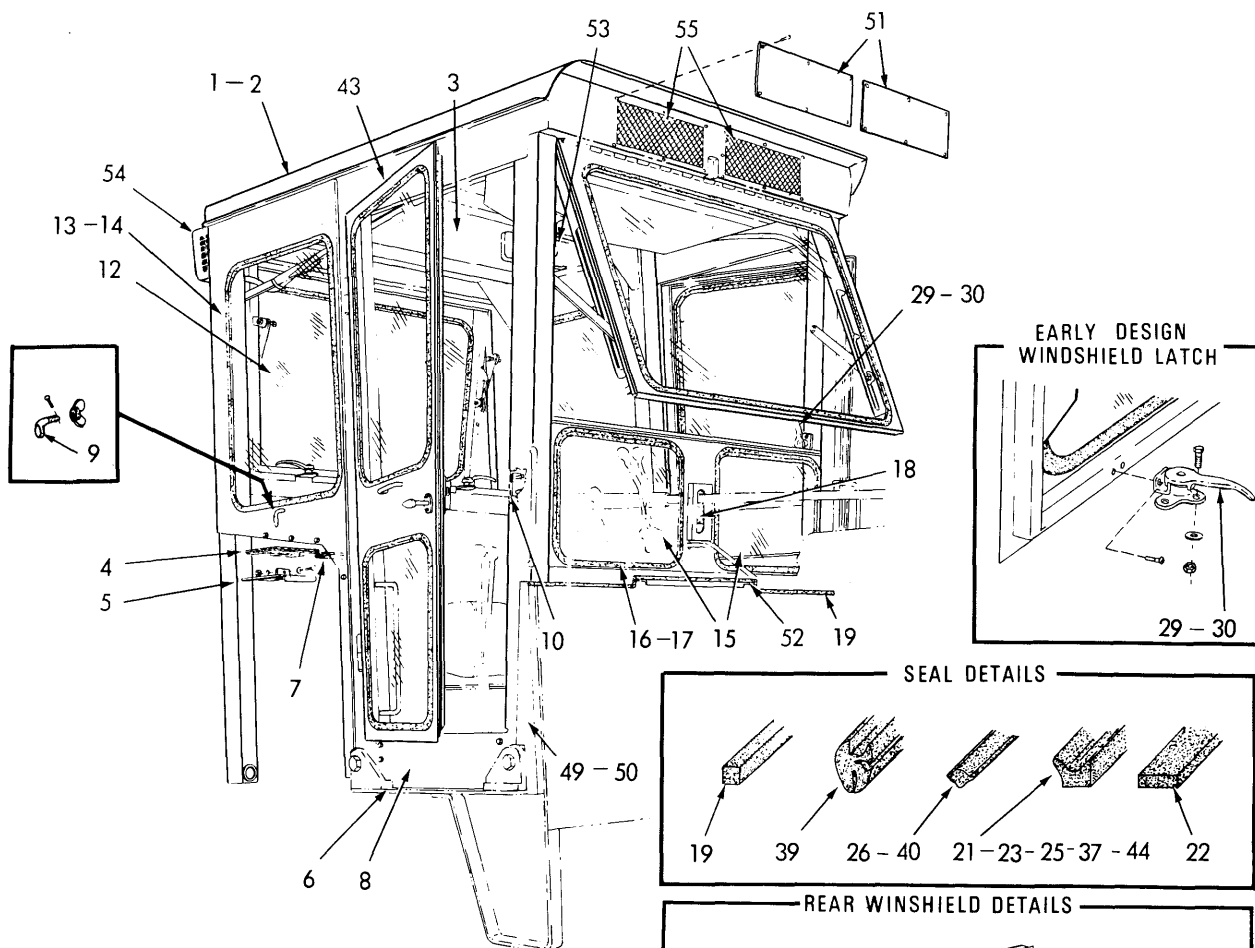
(Added May 1977)

SOUND INSULATION

USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	PANEL, acoustic
2	-----	1	PANEL, acoustic
3	70699806	1	PANEL, acoustic, right
4	70699805	1	PANEL, acoustic, left
5	70699317	2	PANEL, acoustic
6	70699319	2	PANEL, acoustic
7	70699318	2	PANEL, acoustic (One less used on units with AC)
8	70699315	1	PANEL, acoustic (Units equipped with AC, only)
9	73108622	1	PANEL, acoustic
10	70699314	1	PANEL, acoustic
11	73108623	1	PANEL, acoustic
12	73108621	1	PANEL, acoustic
13	73108797	1	PANEL, acoustic
14	73108060	1	PANEL, acoustic
15	73108056	1	PANEL, acoustic
16	73108795	1	PANEL, acoustic
17	70699804	1	PANEL, acoustic
18	70699803	1	PANEL, acoustic
19	73108676	1	PANEL, acoustic, floor
20	73108796	1	PANEL, acoustic
21	70687557	22	FASTENER
22	73063488	46	FASTENER
23	70917451	30	SCREW, rd.-hd., 1/4"NC x 1"
	73063605	30	WASHER
	70911114	30	WASHER
	73063513	30	NUT

} Components of CAB ASSY.
See page 253



C A B

T-77957

(Revised May 1977)

C A B

*Units without Air Conditioning

**Units with Air Conditioning

ITEM	PART NO.	QTY. * **	DESCRIPTION
1	73110293	1 -	CAB ASSY. (Includes items 2 thru 52, 56 and 57)
	73110292	- 1	CAB ASSY. (Includes items 2 thru 50 and 52 thru 57)
	70927173	8 8	CAPSCREW, 3/8"NC x 1-1/8" }
	70928845	8 8	WASHER, plain }
	70911026	8 8	NUT, 3/8"NC }
	70928484	6 6	CAPSCREW, 1"NC x 6-1/2" }
	70678072	6 6	WASHER, plain }
	70911032	6 6	NUT, 1"NC }
2	70690501	1 1	CAB, only (Stripped of all removable parts)
	70926266	2 -	PLUG, button
	70928245	2 2	PLUG, button
3	70690515	1 1	INSULATION, ceiling (polyester foam, 1" x 24" x 51")
	70690512	1 -	INSULATION, ceiling (polyester foam, 1" x 29-1/2" x 51")
	70690516	- 1	INSULATION, ceiling (polyester foam, 1" x 9-1/2" x 51")
	70690518	- 1	INSULATION, ceiling (polyester foam, 1/2" x 14-1/2" x 30-7/16") (Under Pressurizer Assy.)
	70690517	- 2	INSULATION, ceiling (polyester foam, 1" x 10-1/2" x 20")
4	70690529	2 2	PAD, sealing, cab to fuel tank (corner piece)
5	70690528	1 1	RETAINER, pad, right corner
	70690527	1 1	RETAINER, pad, left corner
	70918156	2 2	SCREW, truss-hd., 1/4"NC x 5/8"
	70911114	2 2	WASHER, plain, SAE std., 1/4"
	70904204	2 2	LOCKWASHER, 1/4"
	70911024	2 2	NUT, 1/4"NC
6	70690981	1 1	WEATHERSTRIP, cab to floor (Requires cutting to proper lengths)
7	70692341	1 1	SEAL, cab to fuel tank
8	70690514	1 1	PANEL, right door sill (Prior to Cab #A-261301)
	70698740	1 1	PANEL, right door sill (Cab #A-261301 and up)
	70690513	1 1	PANEL, left door sill (Prior to Cab #A-261301)
	70698739	1 1	PANEL, left door sill (Cab #A-261301 and up)
	70918249	8 8	SCREW, truss-hd., 5/16"NC x 3/4"
	70901165	8 8	WASHER, plain, U.S. Std., 5/16"
	70904205	8 8	LOCKWASHER, 5/16"
	70910323	8 8	NUT, 5/16"NC
9	73109787	2 2	HOOK, door hold-back
	70906760	2 2	SCREW, drive, #6 x 3/8"
	70681569	2 2	NUT, wing, 5/8"NC
10	70633545	2 2	PLATE, striker, door latch

(Continued)

(Revised May 1977)

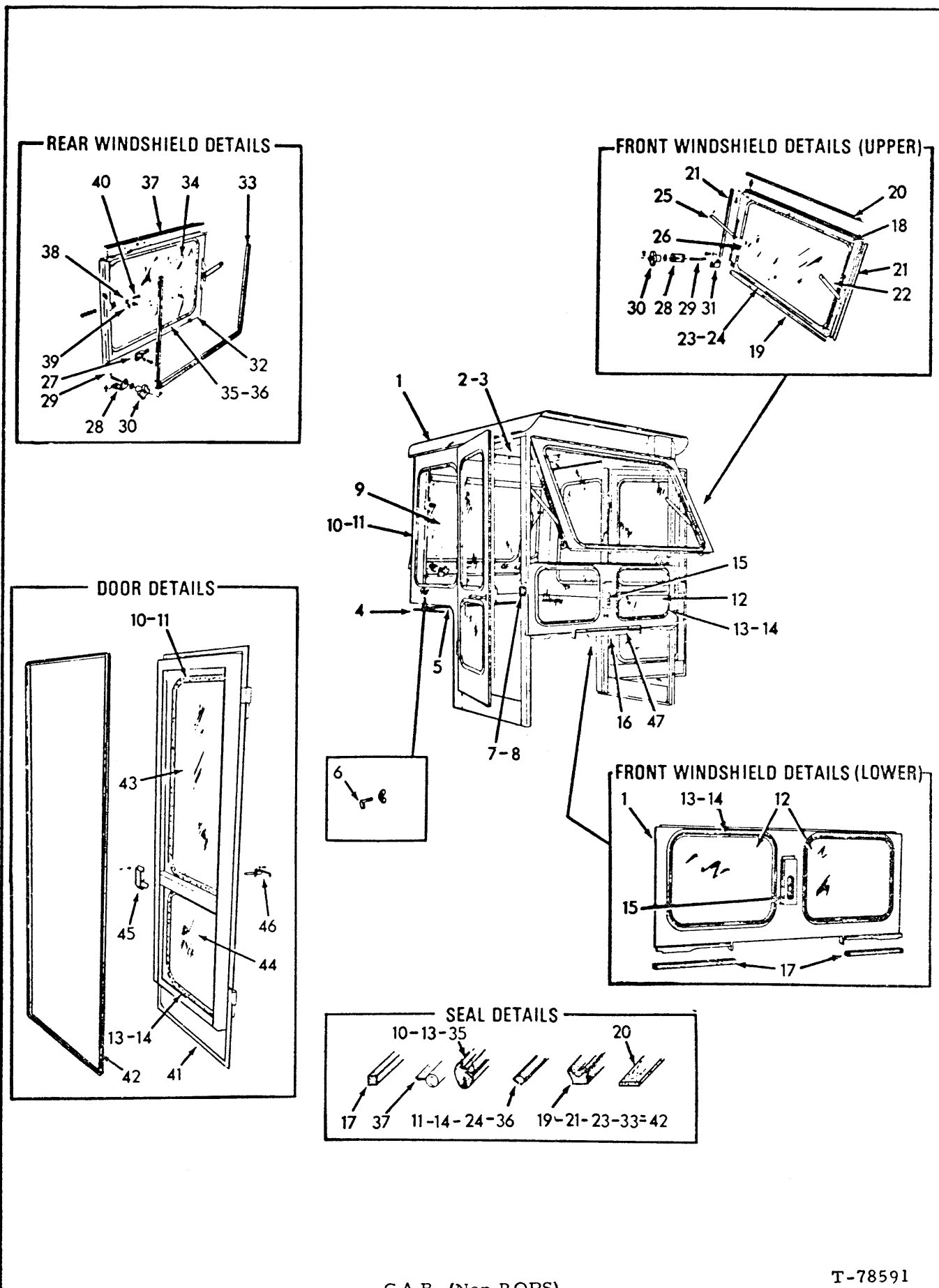
C A B (Continued)

ITEM	PART NO.	QTY. * **	DESCRIPTION	
12	70690519	2 2	GLASS, side panel	
13	70079919	4 4	SEAL, side panel and upper door glass	
14	70079921	4 4	STRIP, expanding, side panel and upper door glass seal	
15	70690520	2 2	GLASS, front panel	
16	70077783	4 4	SEAL, front panel and lower door glass	
17	70077765	4 4	STRIP, expanding, front panel and lower door glass seal	
18	70642434	1 1	SEAL, steering wheel shaft opening	
19	70690980	1 1	SEAL, front panel (Requires cutting to proper lengths)	
20	70690502	1 1	WINDSHIELD, front, upper (Stripped of all removable parts)	
	70918157	7 7	SCREW, truss-hd., 1/4"NC	
21	70633493	1 1	SEAL, front windshield, bottom	
22	70690934	1 1	SEAL, front windshield frame hinge	
23	70642526	2 2	SEAL, front windshield, side	
24	70690507	1 1	GLASS, front windshield	
25	70642462	1 1	SEAL, upper front windshield glass	
26	70642492	1 1	STRIP, expanding, front windshield glass seal	
27	70690506	2 2	ARM, front windshield adjustment	
	70900806	2 2	PIN, cotter, 1/8" x 1"	
	70915018	2 2	NUT, wing, 1/2"NC	
	70906759	2 2	SCREW, drive, #4 x 1/4"	
28	70641961	2 2	SPACER, front windshield adjustment arm	
29	{ 70621441	2 2	HANDLE, windshield latching, left	} Each includes item 30
	70621442	2 2	HANDLE, windshield latching, right	
30	-----	4 4	PLATE, latch, windshield (Not serviced separately)	} Early design wind- shield latch
	70918157	8 8	SCREW, truss-hd., 1/4"NC x 3/4"	
	70911114	4 4	WASHER, plain, SAE std., 1/4"	
	70911024	4 4	NUT, 1/4"NC	
31	70693143	2 2	BRACKET, latching, rear windshield	} Late design windshield latch
	70918157	4 4	SCREW, truss-hd., 1/4"NC x 3/4"	
	70921880	4 4	LOCKWASHER, ext-tooth, 1/4"	
32	70693140	4 4	BRACKET, mounting, hook bolt	
	70918155	8 8	SCREW, truss-hd., 1/4"NC x 1/2"	
	70921880	8 8	LOCKWASHER, ext.-tooth, 1/4"	
33	70693144	4 4	BOLT, hook	
	70906759	4 4	SCREW, drive, #4 x 1/4"	
34	70693145	4 4	KNOB	
	70900817	4 4	WASHER, plain	
35	{ 70693141	1 1	BRACKET, latching, front windshield(left)	}
	70693142	1 1	BRACKET, latching, front windshield(right)	
	70918157	4 4	SCREW, truss-hd., 1/4"NC x 3/4"	
	70921880	4 4	LOCKWASHER, ext.-tooth, 1/4"	

(Continued)

				CAB (Continued)
ITEM	PART NO.	QTY.		DESCRIPTION
36	70690505	1	1	WINDSHIELD, rear (Stripped of all removable parts)
	70917628	1	1	PLUG, button, 7/32" hole-diam.
	70923392	1	1	PLUG, button, 13/32" hole-diam.
	70921191	1	1	PLUG, button, 11/16" hole-diam.
	70918157	9	9	SCREW, truss-hd., 1/4" NC x 3/4"
37	70090617	1	1	SEAL, rear windshield
38	70690509	1	1	GLASS, rear windshield
39	70663246	1	1	SEAL, rear windshield glass
40	70663233	1	1	STRIP, expanding, rear windshield glass seal
41	70682622	2	2	ARM, rear windshield adjustment
	70915018	2	2	NUT, wing, 1/2" NC
	70906759	2	2	SCREW, drive #4 x 1/4"
	70900818	2	2	WASHER, plain, U.S. std., 1/2" (spacing)
42	70922526	2	2	CAPSCREW, rear windshield adjustment arm
	70911028	4	4	NUT, 1/2" NC
	70900818	4	4	WASHER, plain, U.S. std., 1/2"
	70904208	2	2	LOCKWASHER, 1/2"
43	70690503	1	1	DOOR, left } Stripped of all
	70690504	1	1	DOOR, right } removable parts
44	70642528	2	2	SEAL, door
45	70690511	2	2	GLASS, door, upper
46	70690510	2	2	GLASS, door, lower
47	70669590	1	1	LATCH, right door
	70669589	1	1	LATCH, left door
	70918147	8	8	SCREW, machine, #10-32 NF x 1/2"
	70914193	8	8	LOCKWASHER, int-ext.tooth, #10
48	70690876	2	2	HANDLE, door, outside (Includes item 48A)
	70918149	4	4	SCREW, truss-hd., #10-32 NF x 3/4"
	70910243	4	4	WASHER, plain, SAE std., #10
	70917415	4	4	NUT, #10-32 NF (plated)
48A	73108930	2	2	KEY
49	70690523	1	1	PANEL ASSY., left } Each includes item 50
	70690524	1	1	PANEL ASSY., right }
	70921175	4	4	CAPSCREW, 1/2" NC x 1"
	70928188	4	4	WASHER
	70911035	4	4	NUT, jam, 1/2" NC
50	70690991	2	2	SEAL, panel
51	70690994	2	-	COVER
	70918147	12	-	SCREW, machine, #10-32 NF x 1/2"
52	70690525	1	1	PANEL, retaining, front center seal
53	70690549	-	1	MIRROR, rear view
54	-----	-	1	CONDENSER, air conditioning } See AIR CONDI-
55	-----	-	1	PRESSURIZER, air conditioning } TIONING SYSTEM
56	70699326	1	1	PANEL, acoustic
	73063489	8	8	FASTENER, 2"
57	70699324	1	-	PANEL, acoustic
	70699325	-	1	PANEL, acoustic
	73063488	12	8	FASTENER, 1"
58	73108515	1	-	STRIP
	70927401	2	-	CAPSCREW, 1/4" NC x 1"
	70911114	2	-	WASHER

See page 249A,
items 1 and 2
for location.



C A B (Non ROPS)

USAGE: Special equipment

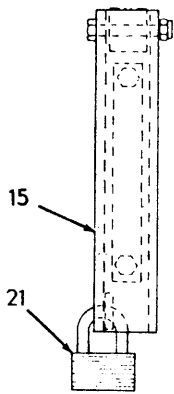
ITEM	PART NO.	QTY.	DESCRIPTION
1	70691035	1	CAB ASSY. (Includes items 2 thru 47)
	70927173	8	CAPSCREW, 3/8"NC x 1-1/8" } Attaches Cab
	70929156	16	WASHER, plain } to Seat
	70911026	8	NUT, 3/8"NC
	70920582	4	CAPSCREW, 1/2"NC x 1-1/4" } Attaches Cab
	70928188	4	WASHER, plain } to Dash
	70911028	4	NUT, 1/2"NC
2	70693659	1	HEADLINER, rear (polyester foam, 1/2" x 23-1/4" x 63-1/4")
3	70677016	1	HEADLINER, front (polyester foam, 1/2" x 32-1/4" x 63-1/4")
4	70693663	2	SEAL, cab to fuel tank (corner piece)
5	70691994	1	SEAL, cab to fuel tank
6	70681455	2	HOOK, door hold-back
	70681569	2	NUT, wing, 5/8"NC
7	70633545	2	PLATE, striker, door latch
	70914793	4	CAPSCREW, flat-hd., 1/4"NC x 3/4"
	70914194	4	LOCKWASHER, int-ext-tooth, 1/4"
8	70669585	2	NUT, striker plate screw (twin pilot)
9	70642353	2	GLASS, side panel
10	70079919	4	SEAL, side panel and upper door glass
11	70079921	4	STRIP, expanding, side panel and upper door glass seal
12	70642439	2	GLASS, front panel
13	70077783	4	SEAL, front panel and lower door glass
14	70077765	4	STRIP, expanding, front panel and lower door glass seal
15	70690526	1	SEAL, steering wheel shaft opening
16	70693665	1	COVER ASSY., front (Includes seal)
17	70690980	1	SEAL, front panel (Requires cutting to proper lengths)
18	70693661	1	WINDSHIELD, front, upper (Stripped of all removable parts)
	70918157	9	SCREW, truss-hd., 1/4"NC x 3/4"
	70904204	9	LOCKWASHER, 1/4"
	70911024	9	NUT, 1/4"NC
19	70633493	1	SEAL, front windshield, bottom
20	70078251	1	SEAL, front windshield, frame hinge
21	70633493	2	SEAL, front windshield, side
22	70642436	1	GLASS, front windshield
23	70642462	1	SEAL, upper front windshield glass
24	70642492	1	STRIP, expanding, front windshield glass seal
25	70641974	2	ARM, front windshield adjustment
	70900805	2	PIN, cotter, 1/8" x 3/4"
	70915018	2	NUT, wing, 1/2"NC
26	70641961	2	SPACER, front windshield adjustment
27	70693143	2	BRACKET, latching, rear windshield
	70918157	4	SCREW, truss-hd., 1/4"NC x 3/4"
	70914105	4	LOCKWASHER, ext-tooth, 1/4"

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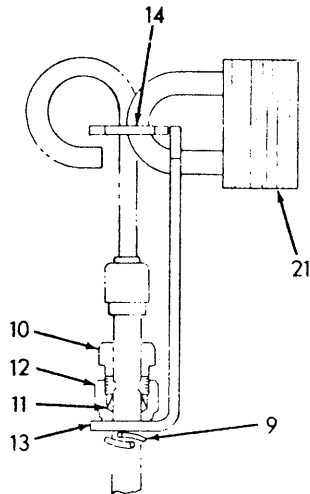
CAN (Non ROPS)(Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
28	70693140	4	BRACKET, mounting, hook bolt
	70918157	12	SCREW, truss-hd., 1/4"NC x 3/4"
	70914105	12	LOCKWASHER, ext-tooth, 1/4"
	70911024	12	NUT, 1/4"NC
29	70693144	4	BOLT, hook
30	70693145	4	KNOB
	70900817	4	WASHER, plain
31	70693141	1	BRACKET, latching, front windshield (left)
	70693142	1	BRACKET, latching, front windshield (right)
	70918157	4	SCREW, truss-hd., 1/4"NC x 3/4"
	70914105	4	LOCKWASHER, ext-tooth, 1/4"
	70911024	4	NUT, 1/4"NC
32	70693662	1	WINDSHIELD, rear (Stripped of all removable parts)
	70917628	1	PLUG, button, 7/32" hold-diam.
	70923392	1	PLUG, button, 13/32" hole-diam.
	70921191	1	PLUG, button, 11/16" hole-diam.
	70918157	9	SCREW, truss-hd., 1/4"NC x 3/4"
	70904204	9	LOCKWASHER, 1/4"
	70911024	9	NUT, 1/4"NC
33	70090617	1	SEAL, rear windshield
34	70663247	1	GLASS, rear windshield
35	70663246	1	SEAL, rear windshield glass
36	70663233	1	STRIP, expanding, rear windshield glass seal
37	70638327	1	WEATHERSTRIP, rear windshield frame hinge
38	70682622	2	ARM, rear windshield adjustment
	70915018	2	NUT, wing, 1/2"NC
39	70091406	2	SPACER
40	70922526	2	CAPSCREW, rear windshield adjustment arm
	70911028	4	NUT, 1/2"NC
	70900818	4	WASHER, plain, U.S. std., 1/2"
	70904208	2	LOCKWASHER, 1/2"
41	70693637	1	DOOR, left
	70693638	1	DOOR, right
			} Stripped of all removable parts
42	70642528	2	SEAL, door
43	70642081	2	GLASS, door, upper
44	70644979	2	GLASS, door, lower
45	70682616	1	LATCH, right door
	70682615	1	LATCH, left door
	70900574	8	SCREW, rd. hd., 1/4"NC x 1/2"
	70904204	8	LOCKWASHER, 1/4"
46	70693639	2	HANDLE, door, outside (Includes keys, item 46A)
	70918149	4	SCREW, truss-hd., #10-32NF x 3/4"
	70910243	4	WASHER, plain, SAE std., #10
	70917415	4	NUT, #10-32NF (plated)
46A	-----	-	KEY (Not serviced. Procure locally)
47	70690525	1	PANEL, retaining, front center seal

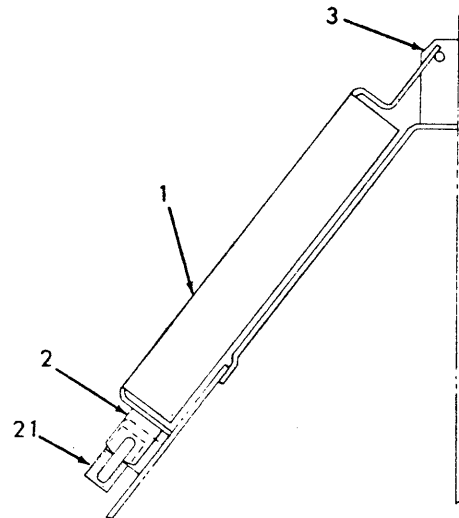
M E M O



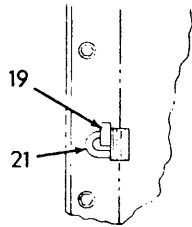
HYD. TANK SIGHT GAUGE



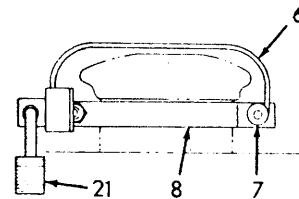
ENGINE OIL LEVEL GAUGE



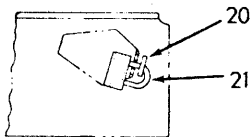
INSTRUMENT PANEL & LEFT BATTERY



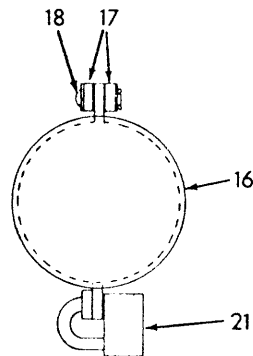
RIGHT BATTERY



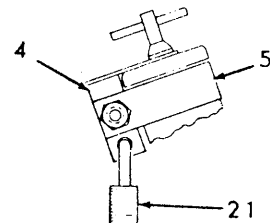
FUEL TANK



TRANS. OIL DIPSTICK COVER



RADIATOR CAP



ENGINE OIL FILLER CLOSURE

VANDALISM PREVENTION PARTS

T-77956

USAGE: Special equipment

ITEM	PART NO.	QTY.	DESCRIPTION	
1	70688288	1	COVER, main instrument panel	} Not used on units equipped with a Cab
2	70688286	1	LUG, cover locking	
3	70688292	2	PLATE, cover mounting	

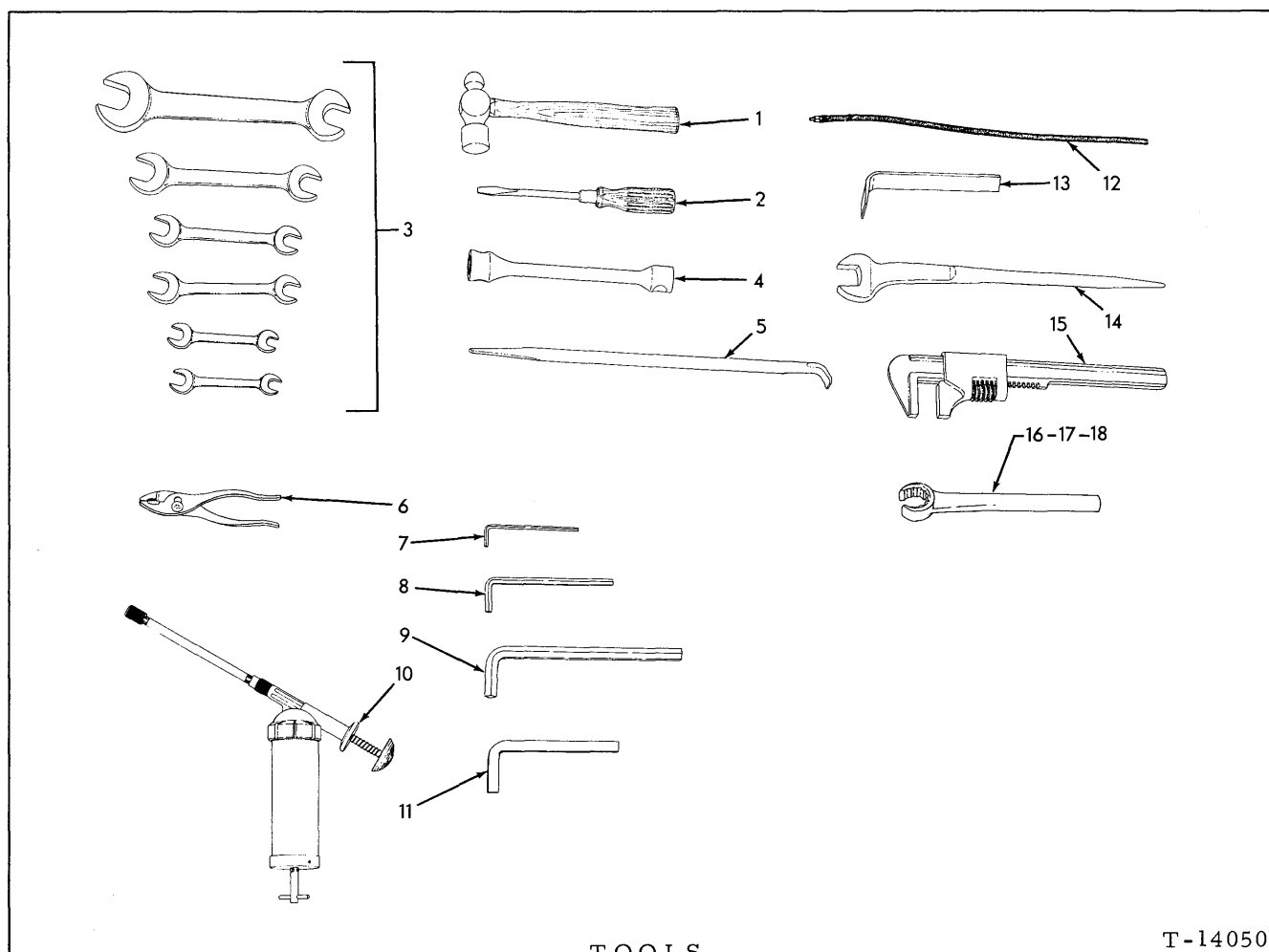
(Continued)

(Revised May 1977)

VANDALISM PREVENTION PARTS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
4	70660074	1	COLLAR, engine oil filler pipe
	70922287	1	CAPSCREW, 3/8"NC x 1-3/4"
	70910287	1	LOCKWASHER, 3/8"
	70677006	3	WASHER, plain
5	70659721	1	BRACKET, engine oil filler closure
6	70657358	1	COVER, fuel tank cap
7	70924838	1	RIVET, fuel tank cap cover
8	70659259	1	CLAMP, fuel tank filler neck
	70927401	1	CAPSCREW, 1/4"NC x 1"
	70910285	1	LOCKWASHER, 1/4"
	70911024	1	NUT, 1/4"NC
9	74254980	1	CLAMP, supporting, locking angle
10	70650178	1	NUT, locking, engine oil level gauge (upper)
11	70925164	1	FERRULE, locking nut
12	70925162	1	NUT, locking, engine oil level gauge (lower)
13	70659175	1	ANGLE, locking, engine oil level gauge
14	70657555	1	LUG, dipstick locking
15	70677711	1	CHANNEL, guard, sight gauge (Not used on units equipped with a
	70920996	1	CAPSCREW, 3/8"NC x 2-1/4" Cab)
	70915891	1	NUT, elastic stop, 3/8"NC
16	70677899	1	COVER, radiator cap
17	70656763	3	LUG, cover locking and mounting
18	70924838	1	RIVET, radiator cap cover
	70910335	2	WASHER, plain
19	70663618	1	LUG, battery cover locking
20	70688300	1	LUG, dipstick cover locking
21	70928052	8	PADLOCK (4 less used on units equipped with a Cab)

(Revised May 1977)



T-14050

USAGE: Special equipment

ITEM PART NO. QTY. DESCRIPTION

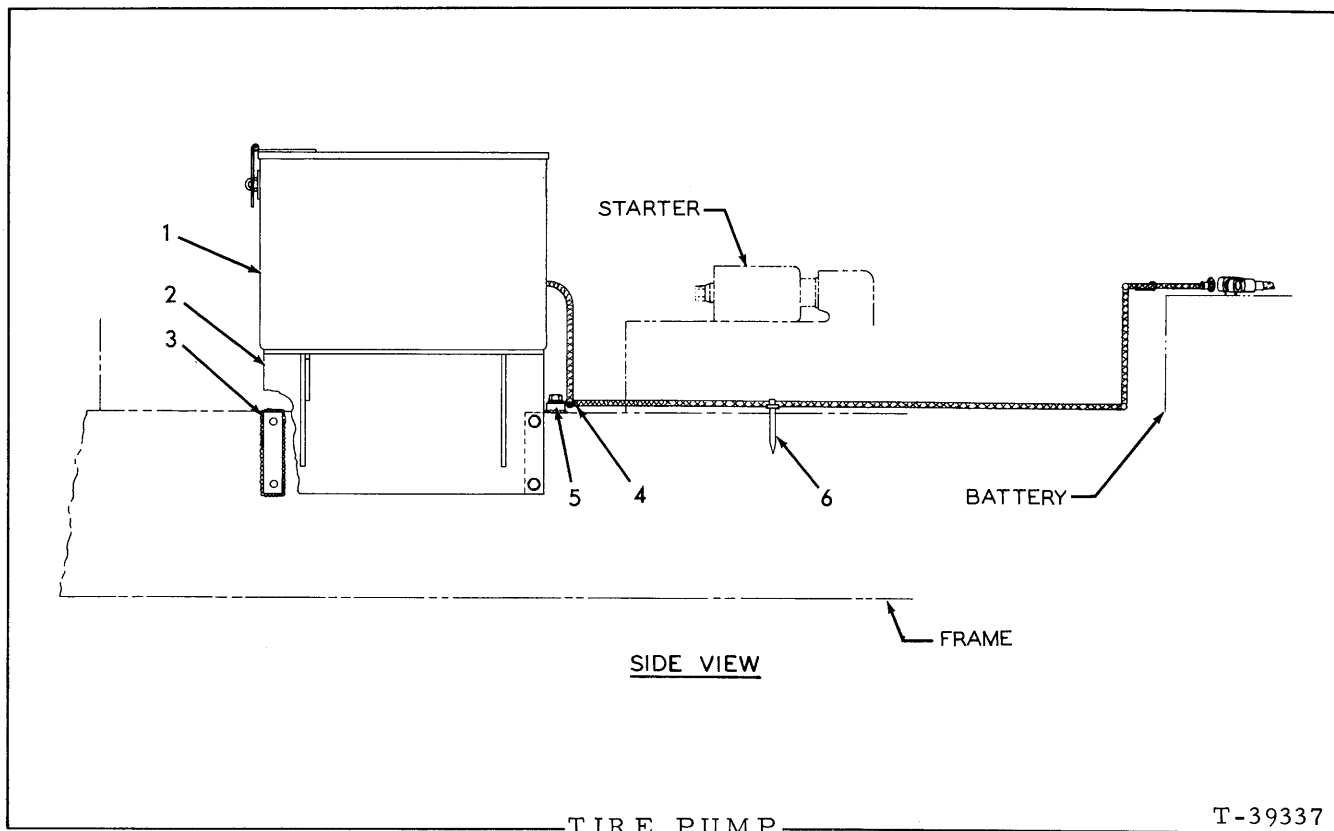
NOTE: For other recommended service tools, see Service Tool Manual Form 0650850-1.

-	70633817	1	TOOL SET (Consists of items 1 thru 15)
1	70012387	1	HAMMER, ball peen, 1 lb.
2	70036268	1	SCREWDRIVER, 9-3/4" long
3	70012377	1	WRENCH KIT (6 WRENCHES 7/16" to 1-1/4" in a cloth case)
4	70603723	1	WRENCH, socket, tire rim nut
5	70605206	1	TOOL, tire
6	70012389	1	PLIERS, slip joint, 6"
7	70912785	1	KEY, socket screw, hexagonal, long, 3/16"
8	70912787	1	KEY, socket screw, hexagonal, long, 5/16"

(Continued)

TOOLS (Continued)

ITEM	PART NO.	QTY.	DESCRIPTION
9	70912485	1	KEY, socket screw, hexagonal, long, 9/16" (Circle turn adjustment)
10	70073735	1	GUN, grease (Serviced only as a unit)
11	70043769	1	WRENCH, drain and filling plugs (90°, 1/2" square)
12	70678107	1	HOSE, bleeding, hydraulic brakes
13	70633813	1	TOOL, adjusting, parking brake
14	70912554	1	WRENCH, structural, offset, 1-7/64" opening
15	70912486	1	WRENCH, automotive, adjustable, 15"
16	70686837	1	WRENCH, flare nut, 7/18"
17	70686838	1	WRENCH, flare nut, 1"
18	70686839	1	WRENCH, flare nut, 1-1/4"
19	70928052	1	PADLOCK, tool compartment (Not Illustrated)



USAGE: Special Equipment

ITEM	PART NO.	QTY.	DESCRIPTION
1	70076599	1	PUMP ASSY., tire (Model 127-12 volt. Order service parts from Johnson Service Co., 507 East Michigan, Milwaukee, Wisconsin)
2	70685806	1	BRACKET, pump supporting
	70922262	4	CAPSCREW, 3/8" NC x 7/8"
	70929156	4	WASHER, plain
3	70077362	2	BLOCK, tapped (Requires welding to frame)
4	70640676	1	CLIP, cable supporting
	70927484	1	CAPSCREW, 3/8" NC x 1/2"
	70929156	1	WASHER, plain
5	70647418	1	NUT, cable supporting clip (Requires welding to frame)
6	70196765	4	TIE, cable supporting

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