

**Parts**  
**Catalog**  
**for**  
**AD30**  
**AD40**  
**MOTOR**  
**GRADER**



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 of your Allis-Chalmers dealer, such reference is intended to identify FIAT-ALLIS Construction Machinery Inc. or your FIAT ALLIS dealer.

Milwaukee, Wisconsin, U.S.A.

Price \$1.50

Litho in U.S.A.

FORM 626020 (1-61)

## IMPORTANT

The extreme right hand column in the parts list entitled "KIT NO." indicates if an individual part is also available as a part of a KIT or SET. All numbers shown in this column are listed numerically in the last section of this catalog with the quantity and description of the various parts that make up the KIT or SET.

With the exception of the engine parts, the terms "right" and "left" used throughout this catalog, are determined by facing in the normal direction of forward travel of the machine.

The engine is mounted unconventionally, with the flywheel toward the front of the machine, and 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.

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

ALWAYS GIVE THE GRADER AND ENGINE SERIAL NUMBERS WHEN ORDERING PARTS.

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

Order parts from the dealer covering the local territory.

Repairs 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.

Always state 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.

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

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

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

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

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

## TELEGRAPHIC CODE

In sending wire orders, it is important that a one-word description of the part wanted be specified after each part number. In event the message is received with incorrect part number, it will help us to ascertain the part actually required. Confirm each telegraphic order by mail in order that it may be checked and if not correctly transmitted, the error detected.

Shipping or other instructions in the body of a telegram which normally consists of many words, can be condensed into one by the use of the proper code word as given below.

AIRYX - Ship by Air Express  
SONST - Ship to me (us) by Express  
SOOTY - Ship by Express to  
SOYON - Ship to me (us) by Mail  
SOBOS - Ship by Mail to  
SORAT - Ship to me (us) by freight  
SAPAT - Ship by Freight to  
SPLAT - When and how did you ship parts on my (our) order  
SPATS - When and how will you ship parts on my (our) order  
STAUB - Cancel my (our) parts order  
STUFE - Add to my (our) parts order  
SOMOR - Duplicate shipment of my (our) order

## LIST OF ABBREVIATIONS

assy. . . . . assembly  
cd-pltd. . . . . cadmium plated  
cm . . . . . centimeter  
cont'd. . . . . continued  
cop-asb. . . . . copper-asbestos  
c.p. . . . . candle-power  
ctsk-hd. . . . . countersunk head  
diam. . . . . diameter  
EF (threads) . . . . . Extra Fine  
fil-hd. . . . . filister head  
ft. . . . . foot or feet  
gal. . . . . gallon  
hex-hd. . . . . hexagonal head  
I.D. . . . . inside diameter  
in. . . . . inch

lb. . . . . pound  
mm . . . . . millimeter  
NC (threads) . . . . . National Coarse  
NF (threads) . . . . . National Fine  
No. . . . . number  
NPT . . . . . National Pipe Thread  
O.D. . . . . outside diameter  
oz. . . . . ounce  
rd-hd. . . . . round head  
rpm . . . . . revolutions per minute  
SAE . . . . . Society of Automotive Engineers  
sq-hd. . . . . square head  
std. . . . . standard  
T . . . . . teeth  
V . . . . . volt

## 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.**

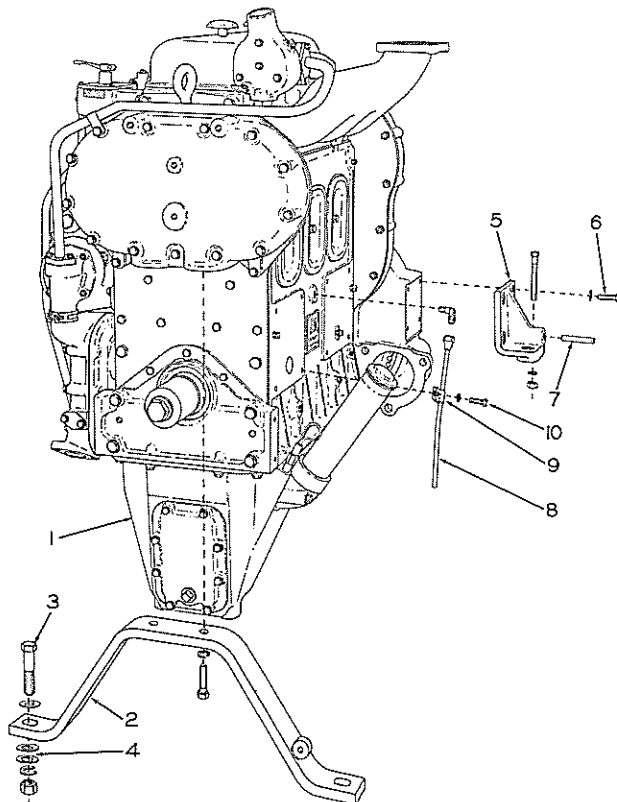
NATIONAL SAFETY COUNCIL

## 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.

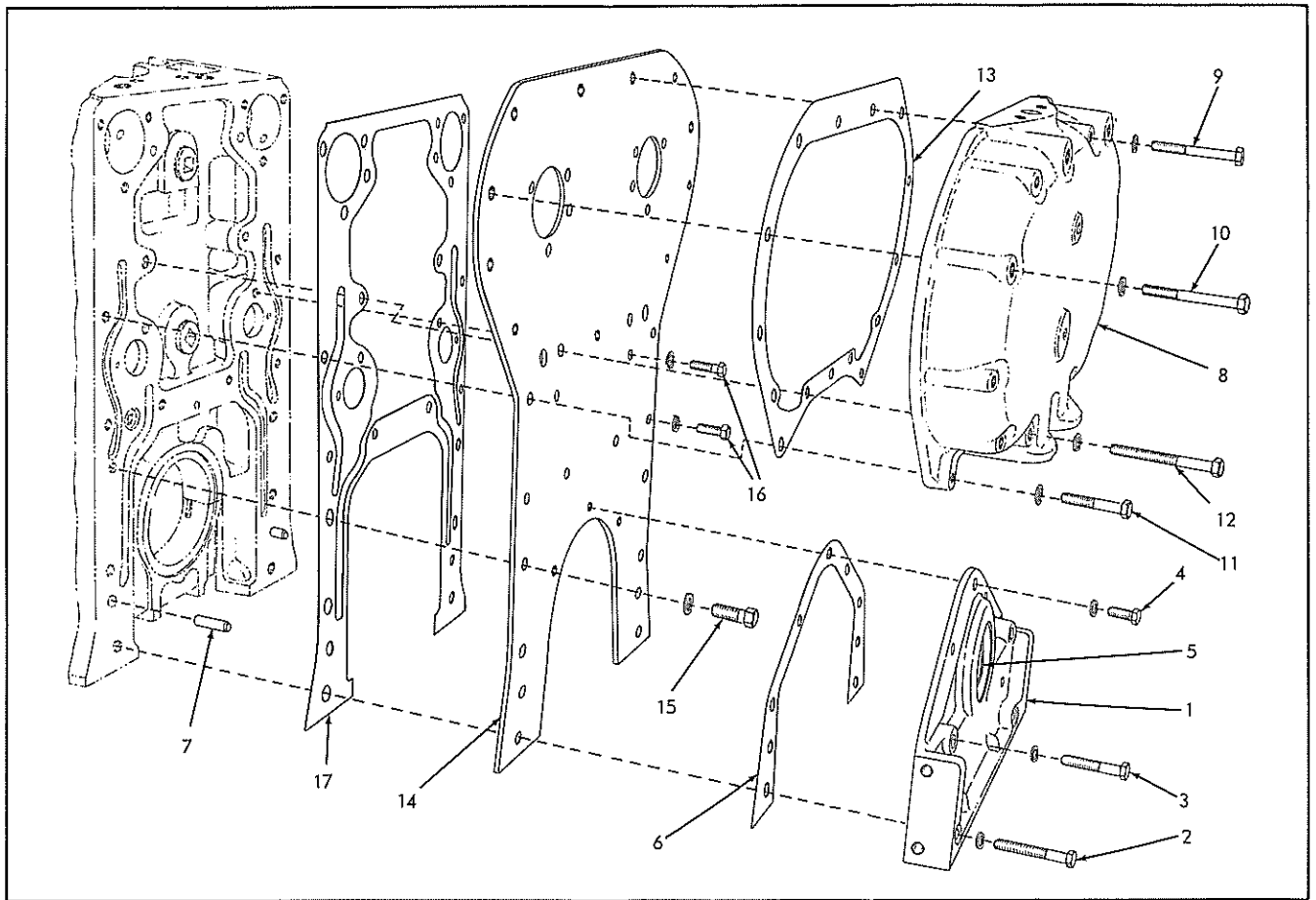
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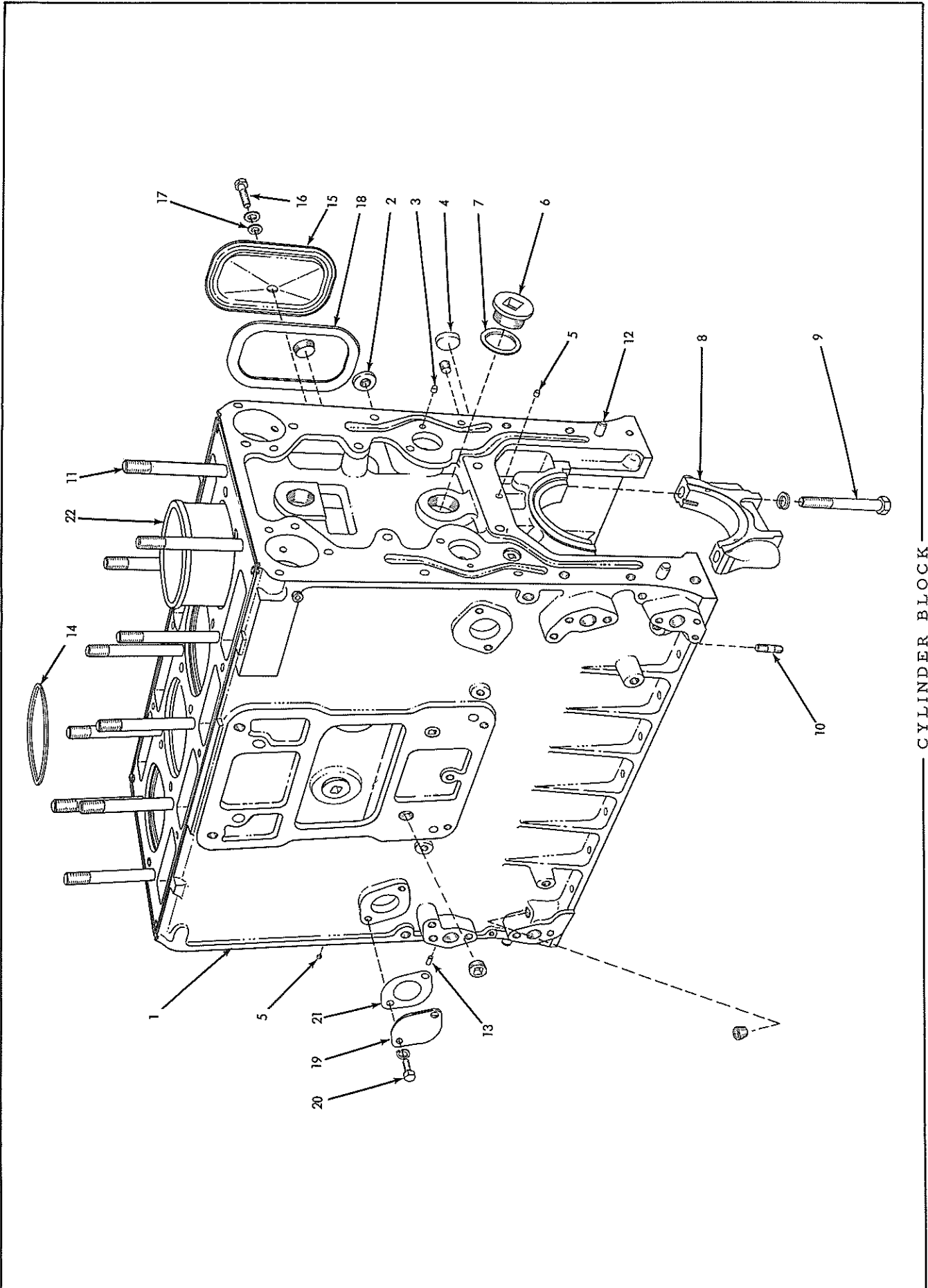
ENGINE AND MOUNTING

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	605942	1	-	ENGINE ASSEMBLY, 3-cylinder (Less FAN, but including BLOWER, GOVERNOR, water and fuel PUMPS, oil COOLER and MANIFOLDS)	
	075046	-	1	ENGINE ASSEMBLY, 4-cylinder (Less FAN, but including BLOWER, GOVERNOR, water and fuel PUMPS, and oil COOLER)	
2	078072	1	1	BRACKET, engine supporting, rear	
	910159	2	2	CAPSCREW, 9/16"NC x 2"	
3	910153	2	2	LOCKWASHER, 9/16"	
	013465	2	2	CAPSCREW, 3/4"NF x 2-1/2"	
	910255	2	2	WASHER, plain, SAE std., 3/4"	
	904369	2	2	LOCKWASHER, 3/4"	
	911045	4	4	NUT, 3/4"NF	
	915874	8	8	WASHER, shimming (.037" thick. Use as req'd)	
5	075048	1	1	BRACKET, engine supporting, left front	
	075049	1	1	BRACKET ASSEMBLY, engine supporting, right front (Includes item 7)	
6	914179	4	4	CAPSCREW, 1/2"NF x 3-3/4" (Not for graders after AD30-689 and AD40-719, also graders #716 and #717)	
	912193	4	4	CAPSCREW, 1/2"NF x 2-1/2" (Graders after AD30-689 and AD40-719, also graders #716 and #717)	
	035190	8	8	CAPSCREW, 1/2"NC x 1-1/2"	
7	904208	12	12	LOCKWASHER, 1/2"	
	911043	4	4	NUT, 1/2"NF	
7	-----	1	1	PIN, throttle bellcrank pivot (See ENGINE CONTROLS)	
8	048245	1	1	TUBE, air box drain	
	910978	1	1	ELBOW, male, flared, 90°, 3/8" tube, 1/4"NPT	
	911198	1	1	NUT, flared, short, 3/8" tube	
9	043030	1	1	CLIP, air box drain tube	
10	043886	1	1	CAPSCREW, 7/16"NC x 1-1/2"	
	904207	1	1	LOCKWASHER, 7/16"	



CYLINDER BLOCK FRONT COVERS

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5184577	1	1	COVER ASSEMBLY, crankshaft (Includes item 5)	
2	028979	2	2	CAPSCREW, 1/2"NC x 2-1/2"	
3	035712	2	2	CAPSCREW, 1/2"NC x 2-1/4"	
4	036032	3	3	CAPSCREW, 3/8"NF x 3/4"	
	904206	3	3	LOCKWASHER, 3/8"	
	904208	4	4	LOCKWASHER, 1/2"	
5	-----	1	1	SEAL, oil (See CRANKSHAFT AND FLYWHEEL)	
6	5150181	1	1	GASKET, crankshaft cover . . . . .	074688, 89
7	5151576	2	2	PIN, dowel	
8	5150410	1	1	COVER, balance weight	
9	041913	10	10	CAPSCREW, 3/8"NF x 2-7/8"	
	042265	1	-	CAPSCREW, 3/8"NF x 3-1/4" (Also attaches water by-pass tube clip)	
10	041913	-	1	CAPSCREW, 3/8"NF x 2-7/8"	
	041914	2	2	CAPSCREW, 3/8"NC x 1-7/8"	
11	041915	2	1	CAPSCREW, 3/8"NC x 3-1/2"	
	065369	-	1	CAPSCREW, 3/8"NC x 4-1/2" (Also attaches water by-pass tube clip)	
	904206	15	15	LOCKWASHER, 3/8"	
12	904206	15	15	LOCKWASHER, 3/8"	
13	5150071	1	1	GASKET, balance weight cover . . . . .	074688, 89
14	5152878	1	1	PLATE, end, cylinder block	
15	035220	2	2	CAPSCREW, 1/2"NC x 1-1/8"	
	904208	2	2	LOCKWASHER, 1/2"	
16	035439	6	6	CAPSCREW, 3/8"NC x 1"	
	904206	6	6	LOCKWASHER, 3/8"	
17	5177798	1	1	GASKET, end plate . . . . .	074688, 89



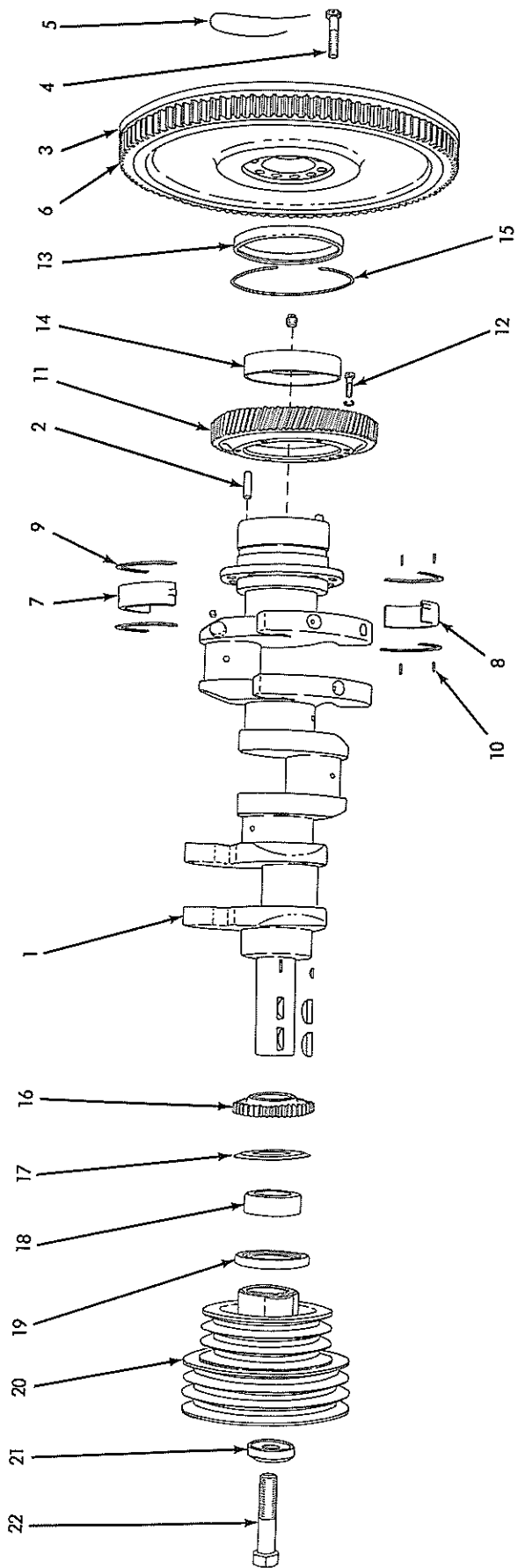
CYLINDER BLOCK



CYLINDER BLOCK

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5193107	1	-	BLOCK ASSEMBLY, cylinder (Includes items 2 thru 14, and all PLUGS indented below)	
	5193108	-	1	BLOCK ASSEMBLY, cylinder (Includes items 2 thru 14, and all PLUGS indented below)	
	910230	8	9	PLUG, pipe, slotted-hd., 1/8"NPT	
	911081	6	6	PLUG, pipe, slotted-hd., 1/4"NPT	
	904260	1	1	PLUG, pipe, ctsk-hd., 3/8"NPT	
	904223	1	1	PLUG, pipe, ctsk-hd., 1/2"NPT	
	904224	1	2	PLUG, pipe, ctsk-hd., 3/4"NPT	
	901666	4	6	PLUG, pipe, ctsk-hd., 1"NPT	
2	5154082	1	1	PLUG, plain, cylinder block (1-1/4" diam., 1/4"NPT hole)	
3	5154319	3	3	PLUG, plain, cylinder block (1/4" diam. x 5/16" long)	
4	5150014	1	1	PLUG, cup, cylinder block (1-1/4" diam.)	
5	5150130	2	2	PLUG, cup, cylinder block (5/16" diam.)	
6	5178998	4	4	PLUG, cylinder block	
7	5178997	4	4	GASKET, cylinder block plug	
8	5158674	4	5	CAP, main bearing	
9	5152149	8	10	BOLT (5/8"NC x 4-3/4")	
	904209	8	10	LOCKWASHER, 5/8"	
10	-----	2	2	STUD, oil pump attaching (See OIL PUMP)	
11	-----	8	10	STUD, cylinder head (See CYLINDER HEAD)	
12	-----	4	4	PIN, dowel (See FLYWHEEL HOUSING and CYLINDER BLOCK FRONT COVERS)	
13	-----	4	4	PIN, dowel, rear main bearing thrust washer (See CRANK-SHAFT AND FLYWHEEL)	
14	5184484	3	4	INSERT, cylinder liner supporting	
15	5153117	3	4	*COVER, handhole	
	5153139	2	3	*BOLT, front covers (3/8"NC x 2-1/4")	
	041251	1	-	STUD, rear cover (3/8"NC x 3/8"NF x 4-3/8")(Also attaches oil filter bracket. Not used on graders after #806 )	
16	065044	1	1	STUD, rear cover (3/8"NC x 3/8"NF x 3-7/8")(Also attaches oil filter bracket. Not used on AD30 graders prior to #807 )	
	911041	1	1	NUT, 3/8"NF (rear cover stud)	
	911115	3	4	*WASHER, plain, SAE std., 3/8"	
17	040400	3	4	*GASKET (copper) . . . . .	074688, 89
18	5150020	3	4	*GASKET, handhole cover . . . . .	074688, 89
19	5150023	1	1	COVER, water hole	
20	045312	2	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	2	LOCKWASHER, 5/16"	
21	5150024	1	1	GASKET, water hole cover . . . . .	074688, 89
22	-----	3	4	LINER, cylinder (See PISTON AND CONNECTING ROD)	

\*One less of each used on graders equipped with Air Heater System.

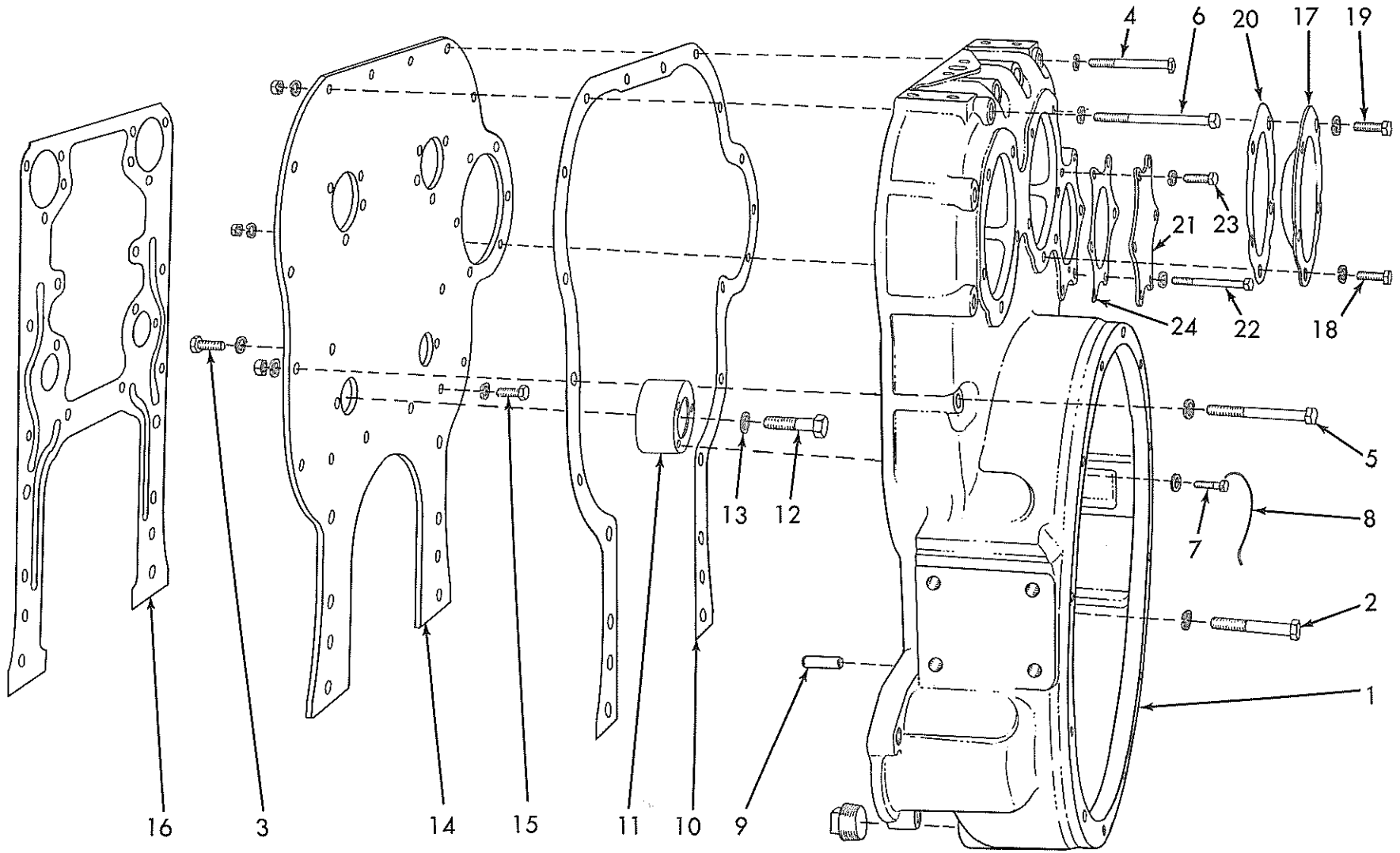


CRANKSHAFT AND FLYWHEEL

CRANKSHAFT AND FLYWHEEL

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5184215	1	-	CRANKSHAFT ASSEMBLY (Includes 3 PLUGS 910230 and item 2)	
	5182941	-	1	CRANKSHAFT ASSEMBLY (Includes 4 PLUGS 910230 and item 2)	
	910230	3	4	PLUG, pipe, slotted-hd., 1/8"NPT	
	901652	1	1	PLUG, pipe, sq-hd., 1/4"NPT	
2	5177528	2	2	PIN, dowel, flywheel to crankshaft	
3	5169343	1	1	FLYWHEEL ASSEMBLY (Includes item 6)	
4	5150458	6	6	BOLT (2-1/4" long)	
5	023633	3	3	WIRE, locking (1/16" x 12")	
6	5153779	1	1	GEAR, flywheel ring	
7	5179631	4	5	SHELL, main bearing - upper (standard size) . . . . .	052676
	5192880	4	5	SHELL, main bearing - upper (.002" undersize)	
	5192884	4	5	SHELL, main bearing - upper (.010" undersize) . . . . .	052677
	5192888	4	5	SHELL, main bearing - upper (.020" undersize) . . . . .	052678
	5192892	4	5	SHELL, main bearing - upper (.030" undersize) . . . . .	052679
8	5179630	4	5	SHELL, main bearing - lower (standard size) . . . . .	052676
	5192879	4	5	SHELL, main bearing - lower (.002" undersize)	
	5192883	4	5	SHELL, main bearing - lower (.010" undersize) . . . . .	052677
	5192887	4	5	SHELL, main bearing - lower (.020" undersize) . . . . .	052678
	5192891	4	5	SHELL, main bearing - lower (.030" undersize) . . . . .	052679
9	5159353	4	4	WASHER, thrust, rear main bearing (Half only. Standard size) . . . . .	052676, 77 052678, 79
	5160542	4	4	WASHER, thrust, rear main bearing (Half only - .005" oversize)	
10	040398	4	4	PIN, dowel, rear main bearing thrust washer (brass)	
11	5173330	1	1	GEAR, crankshaft (78 teeth)	
12	5150271	6	6	BOLT (3/8"NF x 1-3/16")	
	904206	6	6	LOCKWASHER, 3/8"	
13	5178989	1	1	SEAL, oil - rear (4-11/16" shaft diam. Original equipment)	
	5192776	1	1	SEAL, oil - rear (4-13/16" shaft diam. For use when crankshaft is too worn to permit use of standard SEAL 5178989. Also order SLEEVE 5193413 to make initial installation)	
14	5193413	1	1	SLEEVE, crankshaft (Provides new seal surface for worn crankshafts. Requires use of SEAL 5192776)	
15	5192496	-	-	SPACER, oil seal (Use as required behind SEAL 5178989 when crankshaft has groove worn too deep to allow seal to function in its normal position)	
16	-----	1	1	GEAR, oil pump drive (See OIL PUMP)	
	-----	1	1	KEY, #9 woodruff, 3/16" x 3/4"	
17	5150175	1	-	SLINGER, oil	
	5150174	-	1	SLINGER, oil	
18	5153713	1	-	SPACER, front oil seal	
	5151420	-	1	SPACER, front oil seal	

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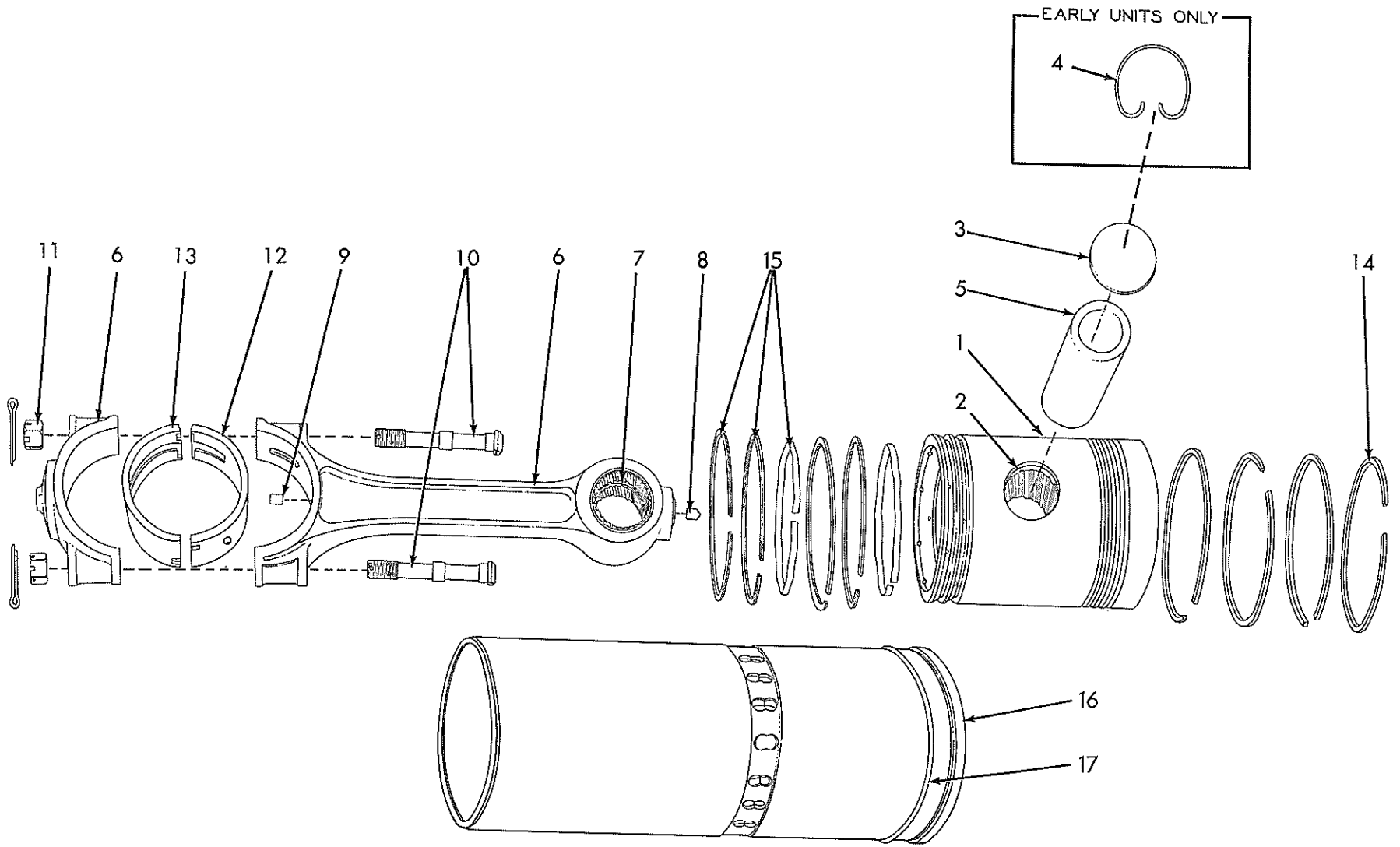
FLYWHEEL HOUSING

CRANKSHAFT AND FLYWHEEL (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
19	5151392	1	1	SEAL, oil - front	
20	604112	1	-	PULLEY, crankshaft	
	061203	-	1	PULLEY, crankshaft	
	911201	2	2	KEY, #E woodruff, 3/8" x 1-1/4"	
21	053669	1	1	WASHER, pulley retaining	
22	073424	1	-	CAPSCREW, 1"NF x 4"	
	5153623	-	1	BOLT, crankshaft (1"NF x 2-1/4")	

FLYWHEEL HOUSING

1	5184547	1	1	HOUSING ASSEMBLY, flywheel (includes PLUG 912726 and crankshaft SEAL 5178989)	
	912726	1	1	PLUG, pipe, 3/4"NPT	
2	041917	6	6	CAPSCREW, 1/2"NC x 3-1/4"	
	904208	6	6	LOCKWASHER, 1/2"	
3	035439	2	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	2	LOCKWASHER, 3/8"	
4	042265	3	3	CAPSCREW, 3/8"NF x 3-1/4"	
	904206	3	3	LOCKWASHER, 3/8"	
5	041911	2	2	CAPSCREW, 3/8"NF x 3-1/2"	
	911041	2	2	NUT, hex, 3/8"NF	
6	904206	2	2	LOCKWASHER, 3/8"	
	041959	3	3	CAPSCREW, 3/8"NF x 4-1/4"	
7	911041	3	3	NUT, hex, 3/8"NF	
	904206	3	3	LOCKWASHER, 3/8"	
8	5177709	6	6	CAPSCREW (drilled head, 3/8"NC x 1")	
	911115	6	6	WASHER, plain, SAE std., 3/8"	
8	5159493	2	2	WIRE, locking (8" long)	
9	5151576	2	2	PIN, dowel	
10	5150054	1	1	GASKET, flywheel housing. . . . .	074688, 89
11	5192568	1	1	SPACER ASSEMBLY, housing to end plate (Includes dowel PIN, 3 CAPSCREWS 5177709, 3 WASHERS 911115 and 1 WIRE 5159493)	
12	AM-8801	1	1	CAPSCREW, 1/2"NC x 2"	
13	5167714	1	1	WASHER, plain	
14	5150060	1	1	PLATE, end, cylinder block	
15	035439	6	6	CAPSCREW, 3/8"NC x 1"	
	904206	6	6	LOCKWASHER, 3/8"	
16	5177798	1	1	GASKET, cylinder block end plate . . . . .	074688, 89
17	5159469	2	2	COVER, flywheel housing	
18	043886	2	2	CAPSCREW, 7/16"NC x 1"	
	904207	2	2	LOCKWASHER, 7/16"	
19	035220	8	8	CAPSCREW, 1/2"NC x 1-1/8"	
	904208	8	8	LOCKWASHER, 1/2"	
20	5150059	2	2	GASKET, cover . . . . .	074688, 89
21	5154669	1	1	COVER, star	
22	040426	4	4	CAPSCREW, 3/8"NF x 5"	
	911041	4	4	NUT, 3/8"NF	
23	904206	4	4	LOCKWASHER 3/8"	
	035439	2	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	2	LOCKWASHER, 3/8"	
24	5150057	1	1	GASKET, star cover . . . . .	074688, 89



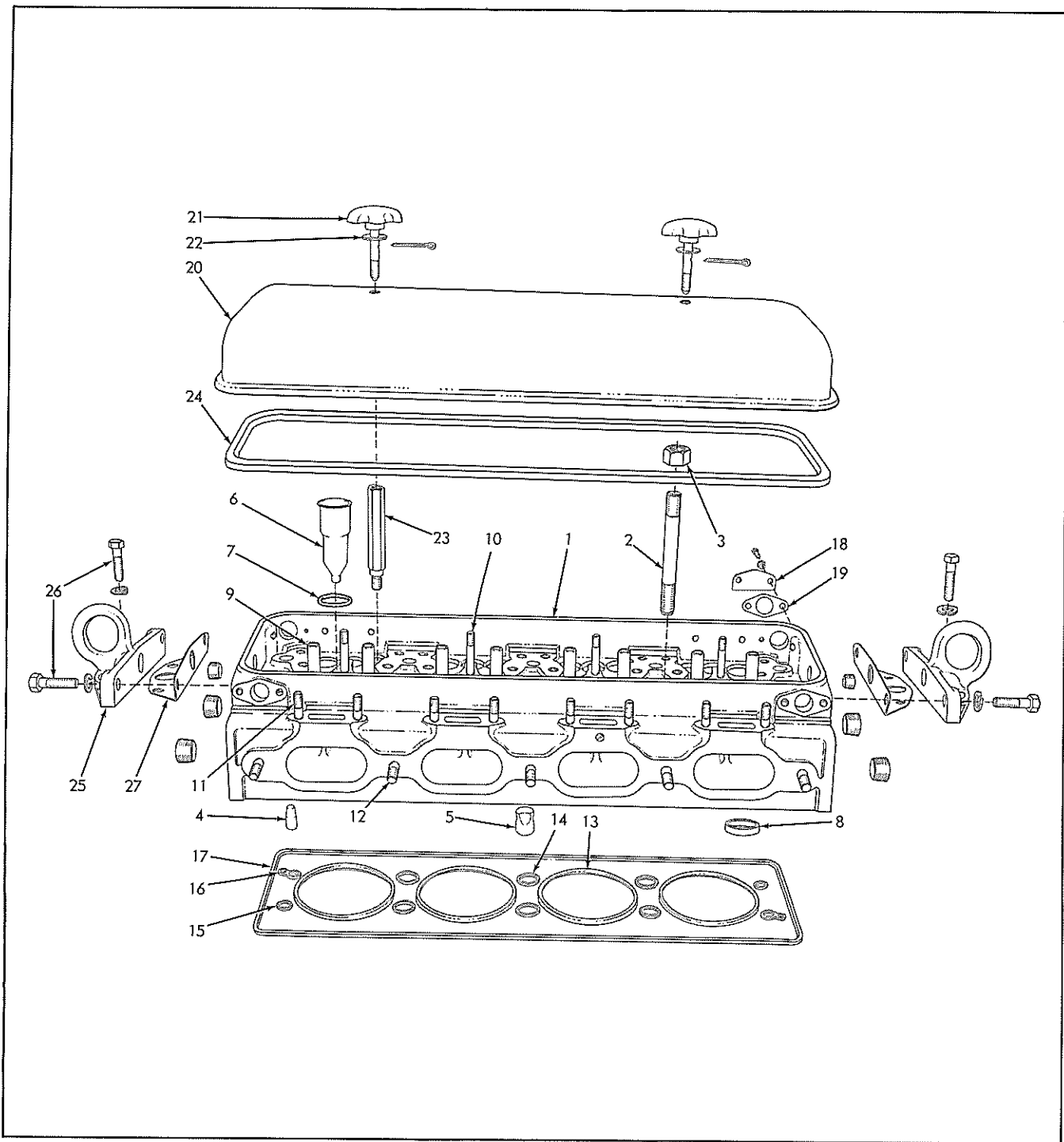
PISTON, CONNECTING ROD AND CYLINDER LINER

PISTON, CONNECTING ROD, AND CYLINDER LINER

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5189054	3	4	PISTON ASSEMBLY (Includes items 2 and 3) . . . . .	5194496
2	-----	6	8	BUSHING, piston (Not serviced separately)	
3	5153592	6	8	RETAINER, piston pin (Standard)	} Engines prior to #3A-19643 and #4A-44397 only
	5192497	6	8	RETAINER, piston pin (.010" oversize)	
	5188405	6	8	RETAINER, piston pin (expansion drive-in type)(Started with engines #3A-19643 and #4A-44397)	
4	5153562	6	8	RING, snap, piston pin retainer (Engines prior to #3A-19643 and #4A-44397)	
5	5188406	3	4	PIN, piston . . . . .	5194496
6	5154332	3	4	ROD ASSEMBLY, connecting (Includes items 7 thru 11)	
7	5151350	6	8	BUSHING, connecting rod	
8	5150140	3	4	NOZZLE, spray, connecting rod	
9	5154360	3	4	ORIFICE, connecting rod	
10	5150094	6	8	BOLT, connecting rod	
11	5150095	6	8	NUT	
--	900801	6	8	PIN, cotter, 3/32" x 3/4"	
12	5179632	3	4	SHELL, connecting rod bearing, upper (Standard size)	
	5192881	3	4	SHELL, connecting rod bearing, upper (.002" undersize)	
	5192885	3	4	SHELL, connecting rod bearing, upper (.010" undersize)	
	5192889	3	4	SHELL, connecting rod bearing, upper (.020" undersize)	
	5192893	3	4	SHELL, connecting rod bearing, upper (.030" undersize)	
13	5179633	3	4	SHELL, connecting rod bearing, lower (Standard size)	
	5192882	3	4	SHELL, connecting rod bearing, lower (.002" undersize)	
	5192886	3	4	SHELL, connecting rod bearing, lower (.010" undersize)	
	5192890	3	4	SHELL, connecting rod bearing, lower (.020" undersize)	
	5192894	3	4	SHELL, connecting rod bearing, lower (.030" undersize)	
14	5185325	12	16	RING, compression . . . . .	5193477
15	5179836	6	8	RING, oil control (3-piece type) . . . . .	5193477
16	5188868	3	4	LINER, cylinder. . . . .	5194496
17	2190595	-	-	SHIM, cylinder liner (.0015" thick. Use as req'd)	
	5192226	-	-	SHIM, cylinder liner (.003" thick. Use as req'd)	

NOTE: In view of the removable-sleeve construction of these engines, oversize pistons or rings are not supplied. When appreciable wear occurs new standard size parts should be installed.

Oversize piston pins are not available. New standard size pins and bushings should be installed when appreciable wear occurs.



CYLINDER HEAD AND ROCKER COVER

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5185342	1	-	HEAD ASSEMBLY, cylinder (Includes items 4 thru 12, and PLUGS indented below)	
	5185343	-	1	HEAD ASSEMBLY, cylinder (Includes items 4 thru 12, and PLUGS indented below)	
2	904260	2	2	PLUG, pipe, ctsk-hd., 3/8"NPT	
	904224	4	4	PLUG, pipe, ctsk-hd., 3/4"NPT	
3	5183329	8	10	STUD (5/8"NC x 5/8"NF x 6-3/8")	
3	5150013	8	10	NUT (5/8"NF)	
4	5172874	4	4	NOZZLE, water - single jet	

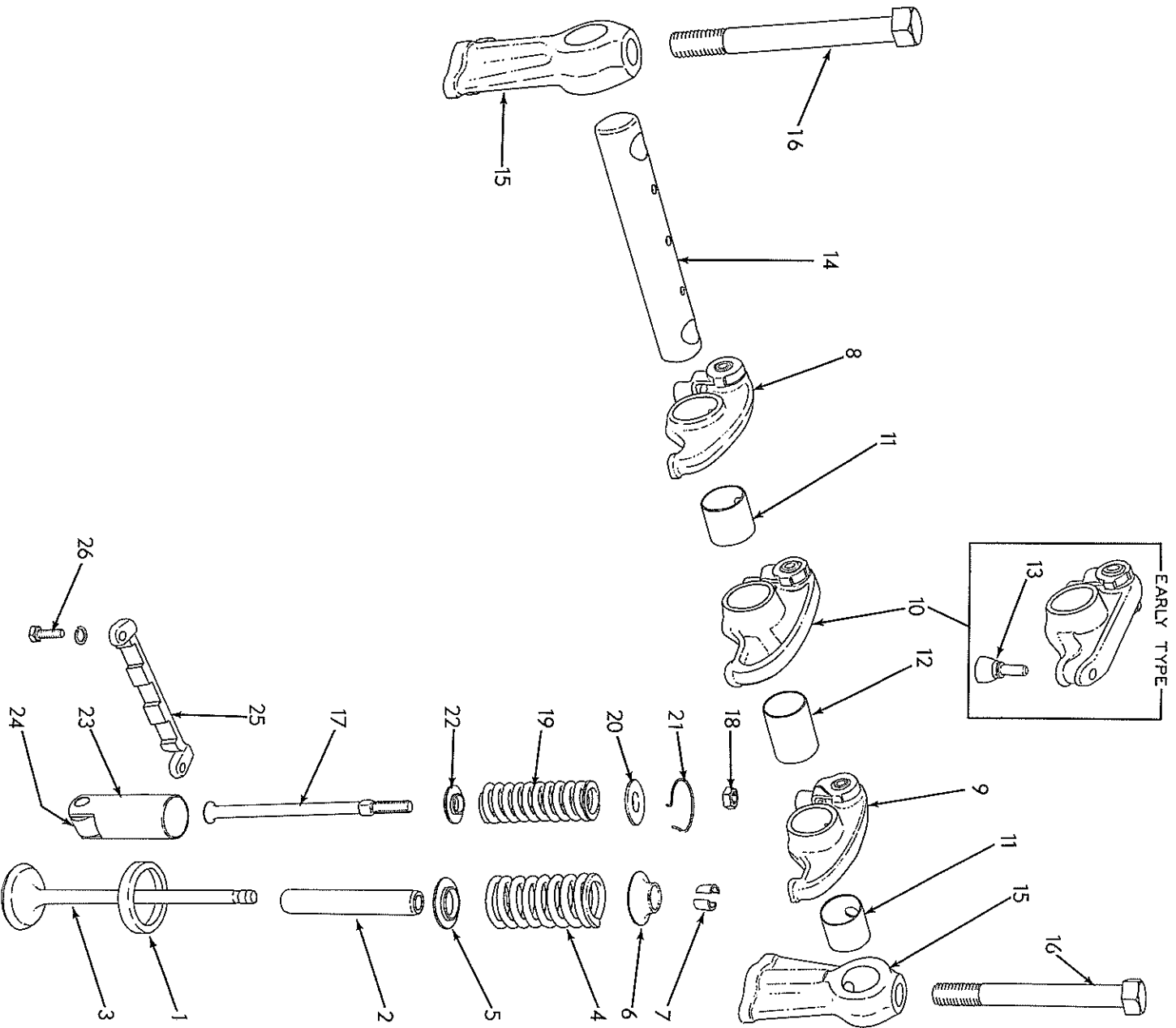
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CYLINDER HEAD AND ROCKER COVER (Continued)

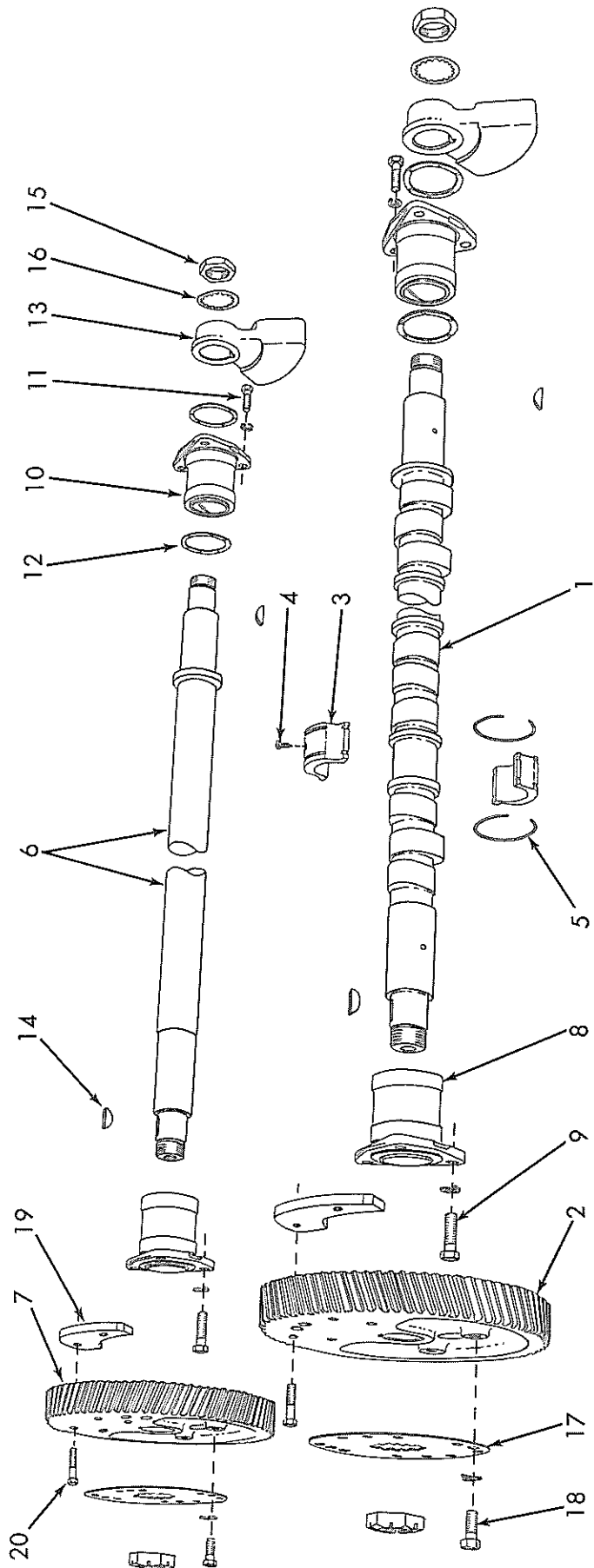
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
5	5172875	4	6	NOZZLE, water - double jet	
6	5150041	3	4	TUBE, injector hole	
7	5160037	3	4	PACKING, injector hole tube	
8	-----	6	8	INSERT, exhaust valve (See VALVE MECHANISM)	
9	-----	6	8	GUIDE, exhaust valve (See VALVE MECHANISM)	
10	-----	3	4	STUD, injector clamp (See FUEL INJECTOR)	
11	-----	6	8	STUD, water manifold (See WATER MANIFOLD)	
12	-----	4	5	STUD, exhaust manifold (See EXHAUST MANIFOLD AND MUFFLER)	
13	5183330	3	4	GASKET, cylinder compression (metal) . . . . .	074688, 89 5193116, 17
14	5184301	4	6	RING, water hole (rubber) . . . . .	074688, 89 5193116, 17
15	5186577	2	2	RING, end water hole (rubber) . . . . .	074688, 89 5193116, 17
16	5183305	2	2	GASKET, water and oil holes (rubber) . . . . .	074688, 89 5193116, 17
17	{ 5183948	1	-	RING, head oil seal (rubber) . . . . .	074688 5193116
	{ 5183476	-	1	RING, head oil seal (rubber) . . . . .	074689 5193117
18	{ 5150268	3	3	COVER, cylinder head hole	
	{ 905655	6	6	CAPSCREW, 1/4"NC x 1/2"	
	{ 904204	6	6	LOCKWASHER, 1/4"	
19	5150269	3	3	GASKET, hole cover . . . . .	074688, 89 5193116, 17
20	{ 5178405	1	-	COVER, rocker	
	{ 5178406	-	1	COVER, rocker	
21	{ 5157194	2	2	BOLT, retaining, rocker cover	
	{ 900806	2	2	PIN, cotter, 1/8" x 1"	
22	5150333	2	2	WASHER, rocker cover bolt	
23	5157192	2	2	STUD, rocker cover bolt	
24	{ 5150327	1	-	GASKET, rocker cover . . . . .	074688 5193116
	{ 5150328	-	1	GASKET, rocker cover . . . . .	074689 5193117
25	5150050	2	2	BRACKET, engine lifting	
26	{ 040011	8	8	CAPSCREW, 7/16"NC x 1-1/2"	
	{ 904207	8	8	LOCKWASHER, 7/16"	
27	5150052	2	2	GASKET, engine lifting bracket . . . . .	074688, 89 5193116, 17

VALVE MECHANISM



## VALVE MECHANISM

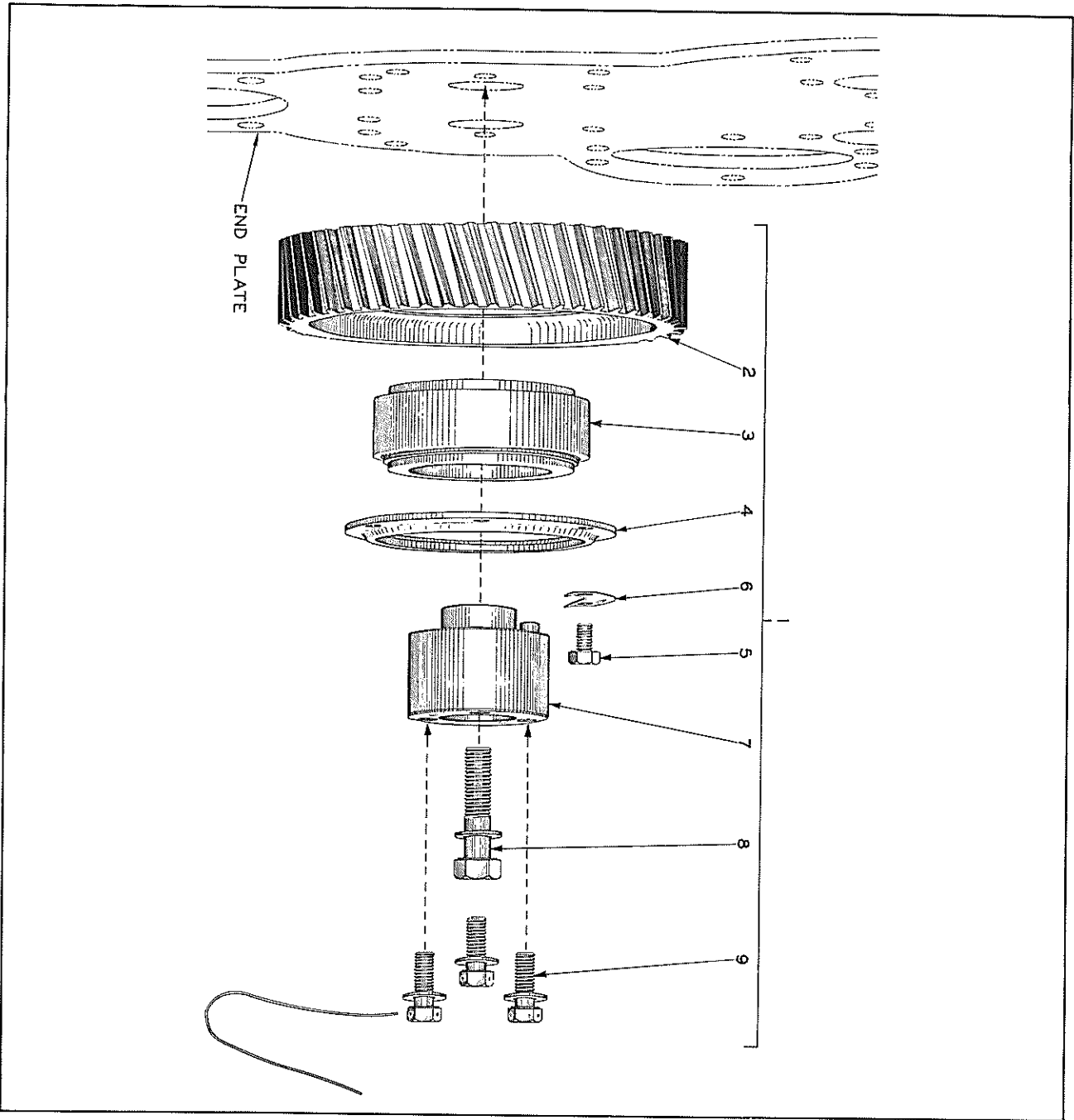
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5185326	6	8	INSERT, exhaust valve	
2	5178590	6	8	GUIDE, exhaust valve (Standard size)	
	5192717	6	8	GUIDE, exhaust valve (.016" oversize on O.D. Use for replacement of loose guides. Requires that cylinder head be reamed)	
3	5193197	6	8	VALVE KIT, exhaust (1 VALVE and 2 LOCKS 069171)	
4	5150289	6	8	SPRING, exhaust valve	
5	5150292	6	8	SEAT, valve spring	
6	5150291	6	8	CAP, valve spring	
7	069171	12	16	LOCK, valve spring seat	
8	5150304	3	4	ARM ASSEMBLY, valve rocker - left (Includes item 11. Clevis parts are not serviced separately)	
9	5150305	3	4	ARM ASSEMBLY, valve rocker - right (Includes item 11. Clevis parts are not serviced separately)	
10	5179954	3	4	ARM ASSEMBLY, injector rocker (Includes items 12) (Clevis parts are not serviced separately)	
11	5150310	6	8	BUSHING, valve rocker arm (large)	
12	5150318	3	4	BUSHING, injector rocker arm (large)	
13	5150319	3	4	BALL ASSEMBLY, injector rocker arm (1 BALL, 1 SEAT) (Used prior to engines #3A-12818 and #4A-29209)	
14	5150322	3	4	SHAFT, rocker	
15	5150324	6	8	BRACKET, rocker shaft	
16	5150325	6	8	BOLT (1/2"NC x 4-1/4", drilled for oil passage)	
17	5150299	9	12	ROD, push	
18	5151601	9	12	NUT, push rod locking (5/16"NF)	
19	5150301	9	12	SPRING, camshaft follower	
20	5150302	9	12	SEAT, camshaft follower spring - upper	
21	5150303	9	12	RETAINER, camshaft follower spring upper seat	
22	5150300	9	12	SEAT, camshaft follower spring - lower	
23	5159837	9	12	FOLLOWER ASSEMBLY, camshaft (Includes ROLLER and PIN. Also see item 24)	
24	5190348	9	12	ROLLER KIT, camshaft follower (Each consists of 1 ROLLER and 1 PIN Roller BUSHING is not serviced separately)	
25	5150298	3	4	GUIDE, camshaft follower roller	
26	034964	6	8	CAPSCREW, 1/4"NC x 3/4"	
	904204	6	8	LOCKWASHER, 1/4"	



CAMSHAFT AND BALANCE SHAFT

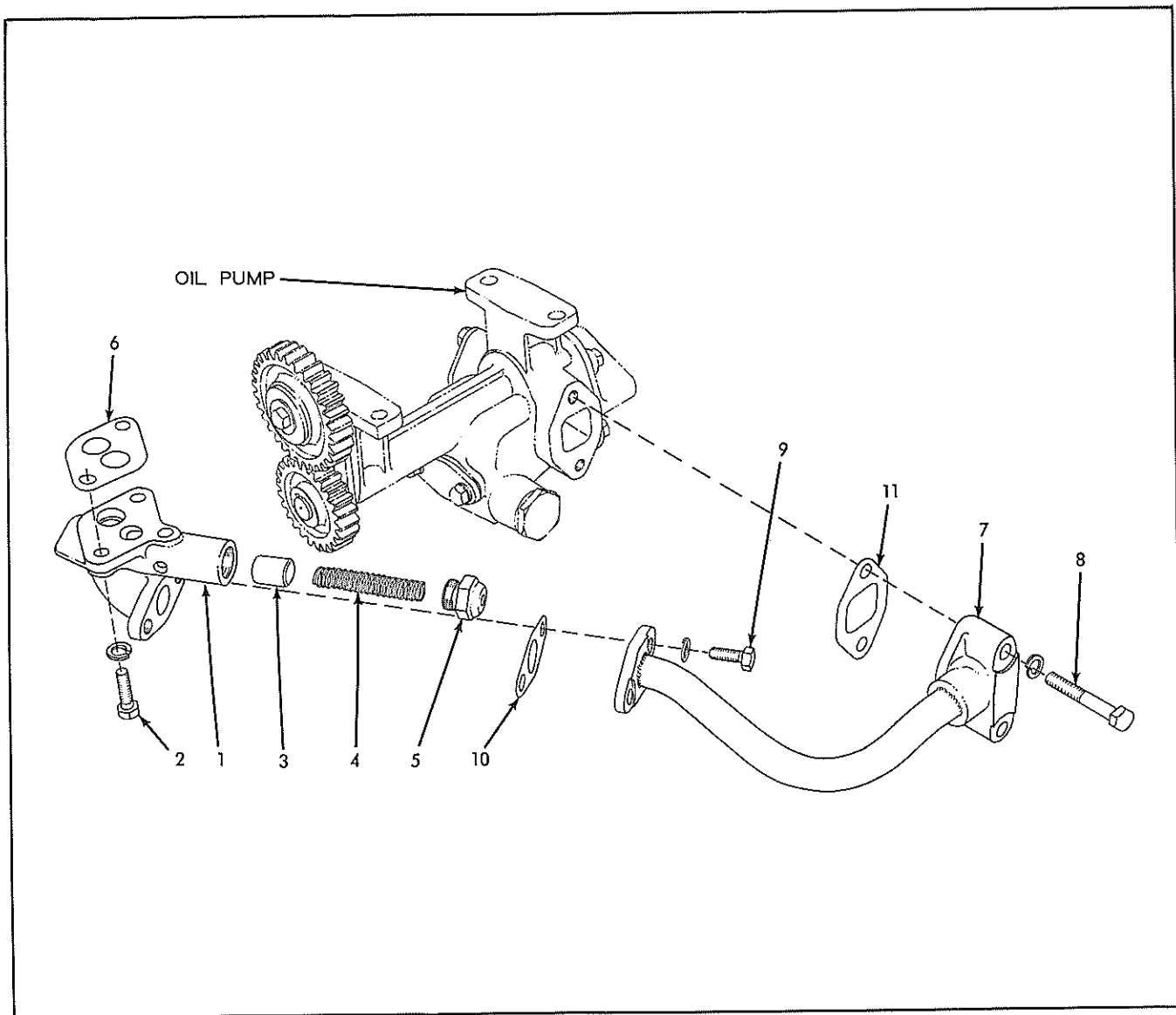
CAMSHAFT AND BALANCE SHAFT

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5151983	1	-	CAMSHAFT	
	5179951	-	1	CAMSHAFT	
2	5176457	1	1	GEAR, camshaft (78 teeth, left helix)	
3	5193125	2	3	BEARING SET, camshaft intermediate (Standard size)(Each consists of 2 half-bearings)	
	5184171	2	3	BEARING SET, camshaft intermediate (.010" undersize) (Each consists of 2 half-bearings)	
4	5183584	2	3	BOLT, locking, intermediate bearing	
5	5150026	4	6	RING, retaining, intermediate bearing	
6	5158671	1	-	SHAFT, balance	
	5158672	-	1	SHAFT, balance	
7	5176458	1	1	GEAR, balance shaft (78 teeth, right helix)	
NOTE: Each BEARING ASSEMBLY listed below includes bronze bushings which are not serviced separately.					
8	5158922	2	2	BEARING ASSEMBLY, rear end (Standard size)	
	5192589	2	2	BEARING ASSEMBLY, rear end (.010" undersize)	
	5192590	2	2	BEARING ASSEMBLY, rear end (.020" undersize)	
9	013058	6	6	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	6	6	LOCKWASHER, 3/8"	
10	5158922	2	2	BEARING ASSEMBLY, front end (Standard size)	
	5192589	2	2	BEARING ASSEMBLY, front end (.010" undersize)	
	5192590	2	2	BEARING ASSEMBLY, front end (.020" undersize)	
11	013058	6	6	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	6	6	LOCKWASHER, 3/8"	
12	5158917	4	4	WASHER, thrust (Standard size)	
	5192232	4	4	WASHER, thrust (.010" oversize)	
13	5153000	2	-	WEIGHT, balance, front	
	5153001	-	2	WEIGHT, balance, front	
14	5153914	4	4	KEY, woodruff	
15	5150087	4	4	NUT (1-1/8"NF)	
16	5177769	2	2	LOCKWASHER, internal teeth, 1-1/8" (front nut only)	
17	5172734	2	2	RETAINER, rear nut	
18	036034	8	8	CAPSCREW, 3/8"NF x 1"	
	904206	8	8	LOCKWASHER, 3/8"	
19	5172346	-	2	WEIGHT, balance, rear	
20	U-3188	-	4	CAPSCREW, 3/8"NF x 1-1/2"	



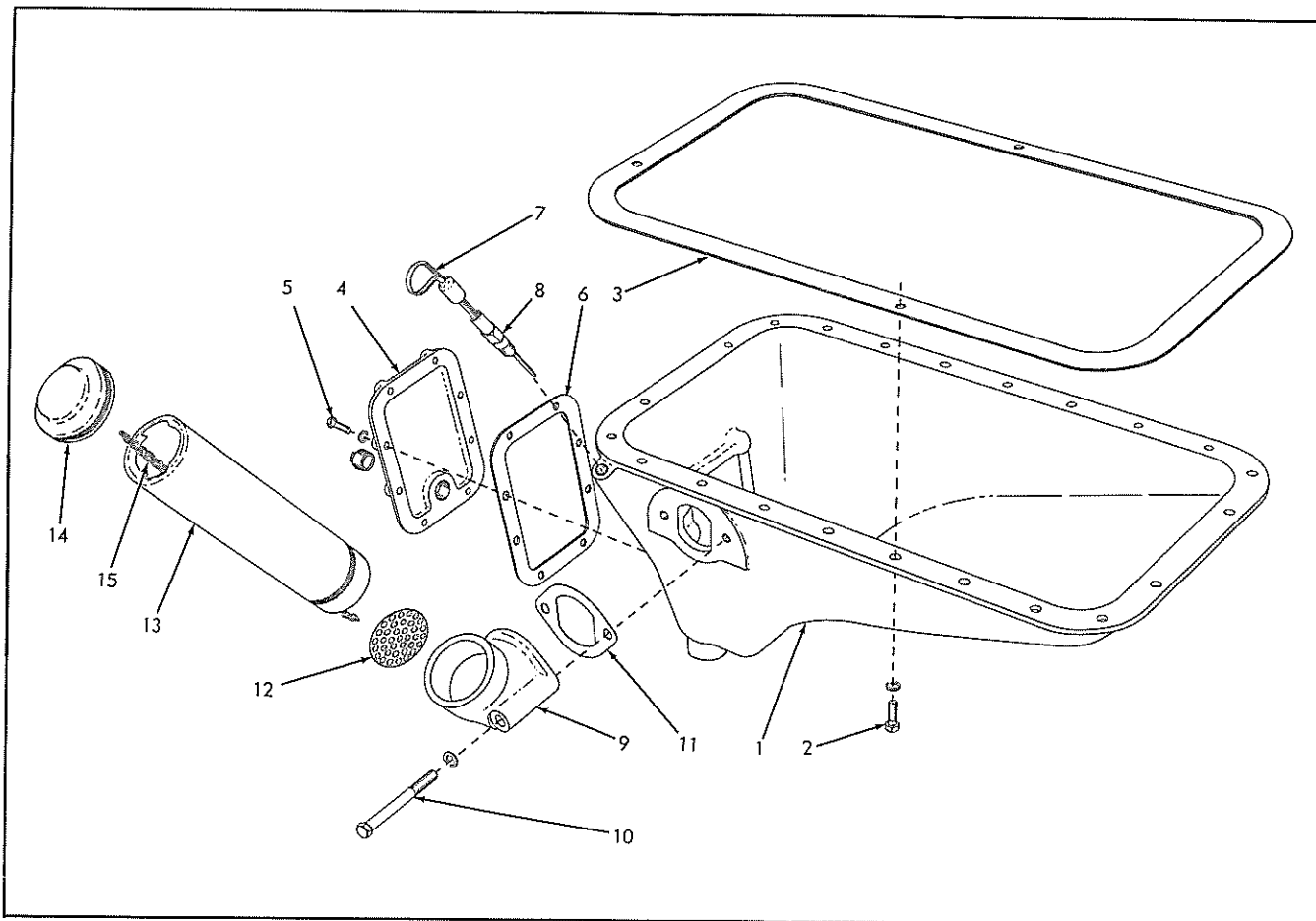
TIMING IDLER GEAR

PART ITEM NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	1	GEAR ASSEMBLY (Consists of items 2 thru 9)	
2	1	GEAR (68 teeth, left helix)	
3	1	BEARING, roller	
4	1	RETAINER, roller bearing	
5	6	CAPSCREW, 5/16"NF x 1/2"	
6	3	LOCK, capscREW	
7	1	HUB ASSEMBLY, idler gear (includes dowel PIN)	
8	1	CAPSCREW, 1/2"NC x 2"	
	1	WASHER, plain	
9	3	CAPSCREWS, attaching, flywheel housing	See FLYWHEEL HOUSING
	3	WASHERS, plain	
	1	WIRE, locking	



OIL PRESSURE REGULATOR

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5159384	1	REGULATOR ASSEMBLY, (Includes items 3 thru 5)	
2	045295	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	LOCKWASHER, 5/16"	
3	5156819	1	VALVE	
4	5156815	1	SPRING	
5	5156816	1	PLUG	
6	5154199	1	GASKET, regulator to cylinder block	074688, 89
7	5159388	1	PIPE, pump to regulator	
8	051473	2	CAPSCREW, 5/16"NC x 1-3/4"	
	904205	2	LOCKWASHER, 5/16"	
9	045312	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	LOCKWASHER, 5/16"	
10	5151370	1	GASKET, pipe to regulator	074688, 89
11	5153313	1	GASKET, pipe to pump	074688, 89

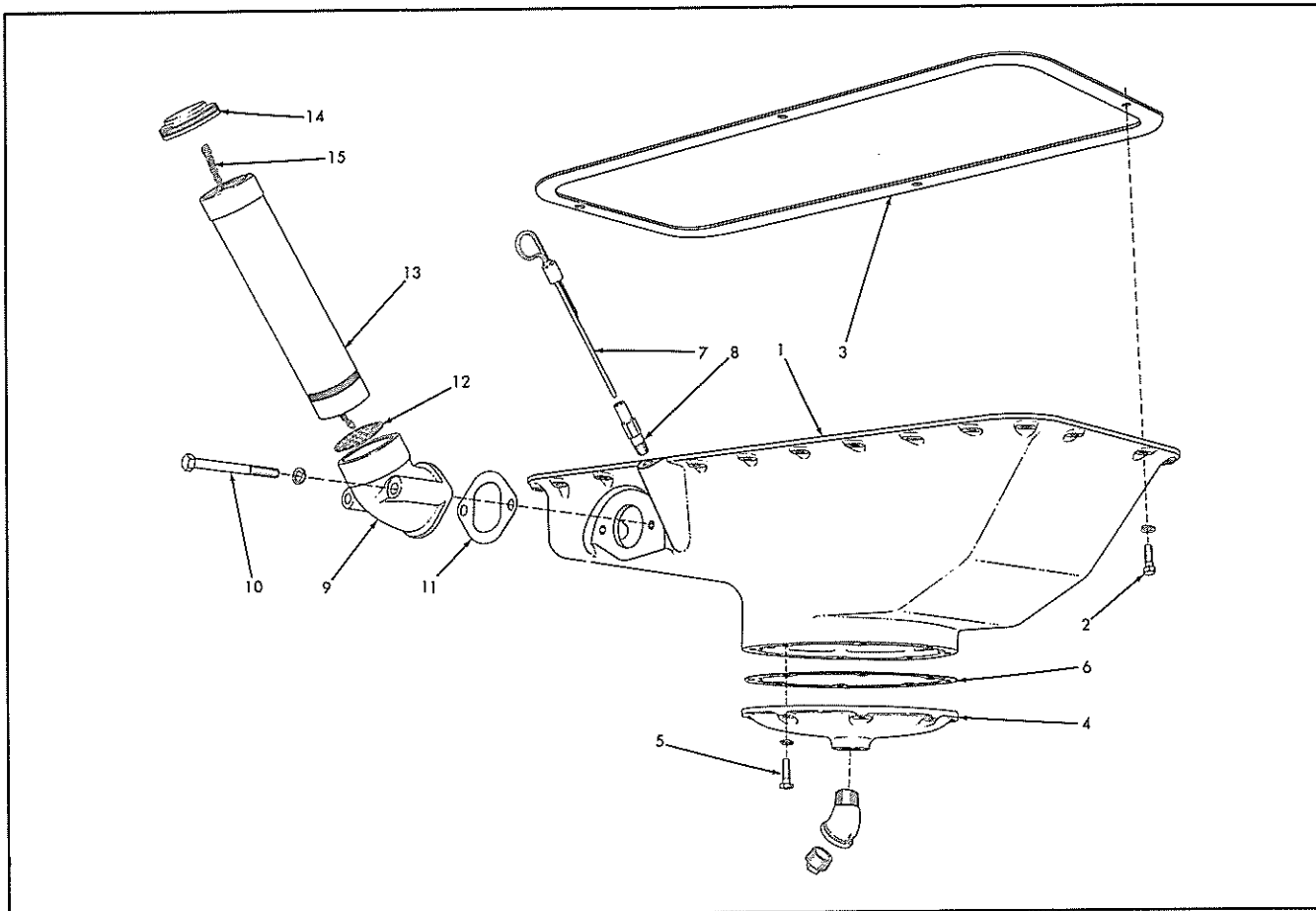


OIL PAN

USAGE: Model AD30 only

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5168178	1	PAN, oil	
2	045295	22	CAPSCREW, 5/16"NC x 1"	
	904205	22	LOCKWASHER 5/16"	
3	5150115	1	GASKET, oil pan . . . . .	074688
4	5154506	1	COVER, handhole	
	912726	1	PLUG, pipe, 3/4"NPT	
5	037450	8	CAPSCREW, 5/16"NC x 1-1/4"	
	904205	8	LOCKWASHER, 5/16"	
6	5154507	1	GASKET, handhole cover	
7	5174690	1	DIPSTICK, oil level	
8	5174687	1	GUIDE, oil level dipstick	
9	5168175	1	ADAPTER, oil filling tube	
	041915	2	CAPSCREW, 3/8"NC x 3-1/2"	
	904206	2	LOCKWASHER, 3/8"	
10	5168176	1	GASKET, oil filling tube adapter . . . . .	074688
11	5150147	1	STRAINER, oil filling tube	
12	5154542	1	TUBE, oil filling	
13	5156498	1	CAP, oil filling tube (Includes GASKET)	
14	5151374	1	CHAIN, oil filling tube cap	

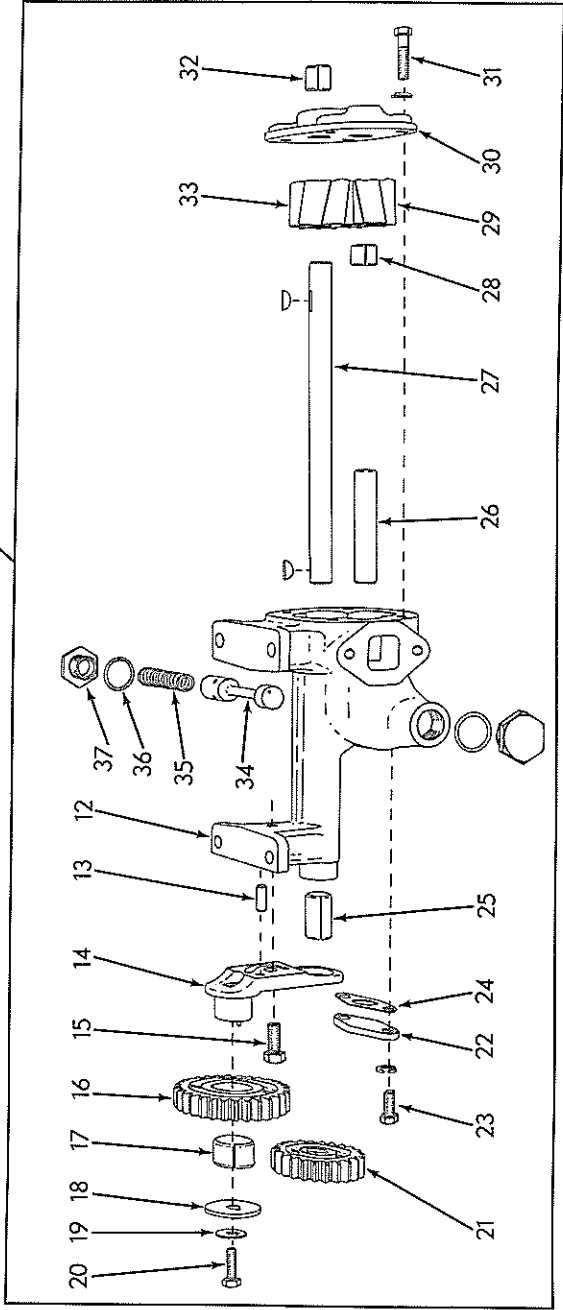
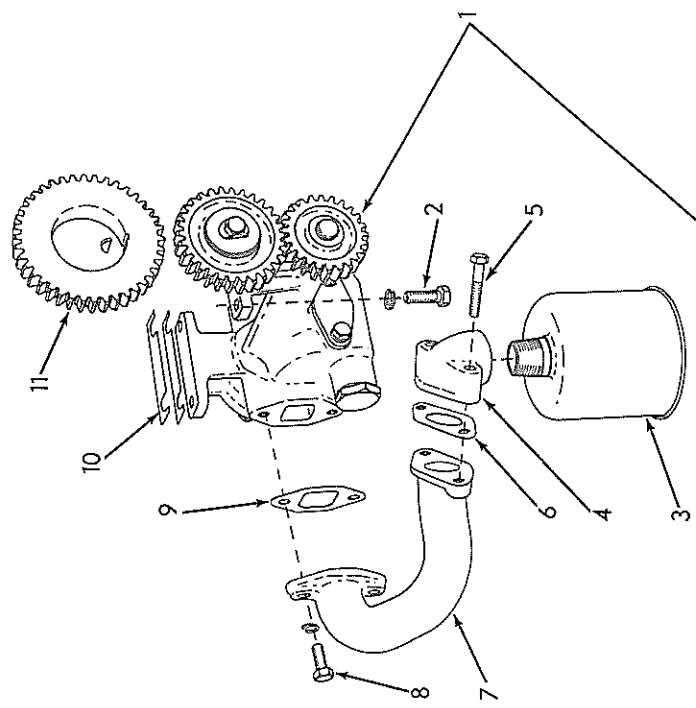




OIL PAN

USAGE: Model AD40 only

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5183847	1	PAN, oil	
2	045295	26	CAPSCREW, 5/16"NC x 1"	
	904205	26	LOCKWASHER, 5/16"	
3	5150116	1	GASKET, oil pan	074689
4	5153787	1	COVER, oil pan	
	910023	1	ELBOW, street, 45°, 3/4"NPT	
	912726	1	PLUG, pipe, 3/4"NPT	
5	045295	7	CAPSCREW, 5/16"NC x 1"	
	905661	1	CAPSCREW, 5/16"NC x 5/8	
	904205	8	LOCKWASHER, 5/16"	
6	5153788	1	GASKET, oil pan cover	
7	5174693	1	DIPSTICK, oil level	
8	5174687	1	GUIDE, oil level dipstick	
9	5168175	1	ADAPTER, oil filling tube	
10	041915	2	CAPSCREW, 3/8"NC x 3-1/2"	
	904206	2	LOCKWASHER, 3/8"	
11	5168176	1	GASKET, oil filling tube adapter	
12	5150147	1	STRAINER, oil filling tube	
13	5154542	1	TUBE, oil filling	
14	5156498	1	CAP, oil filling tube (Includes GASKET)	
15	5151374	1	CHAIN, oil filling tube cap	

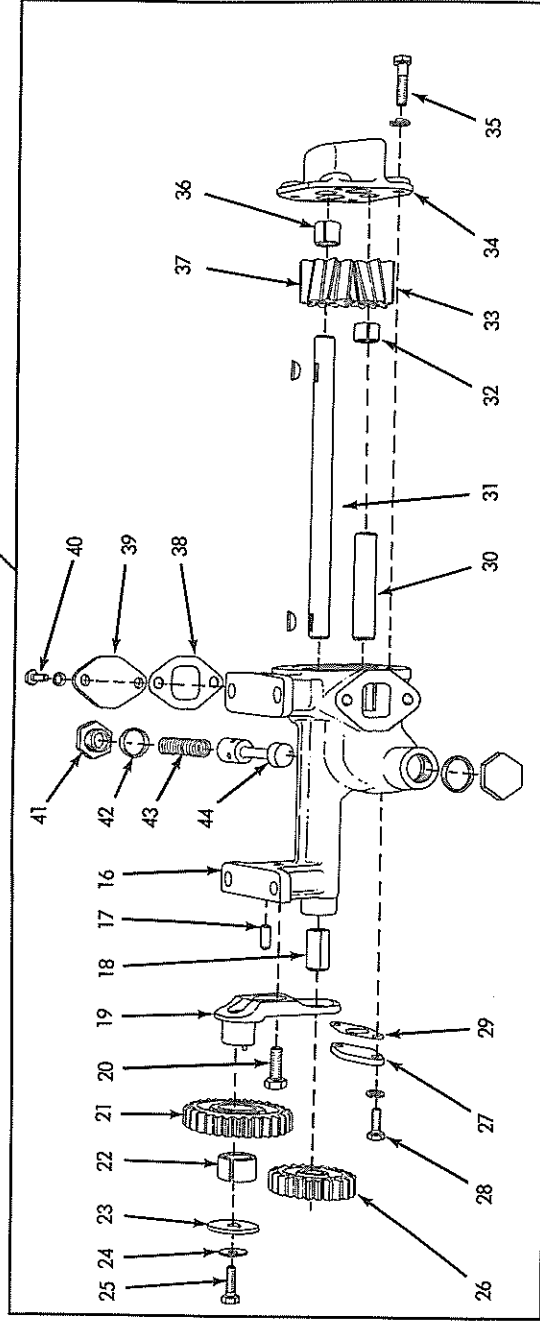
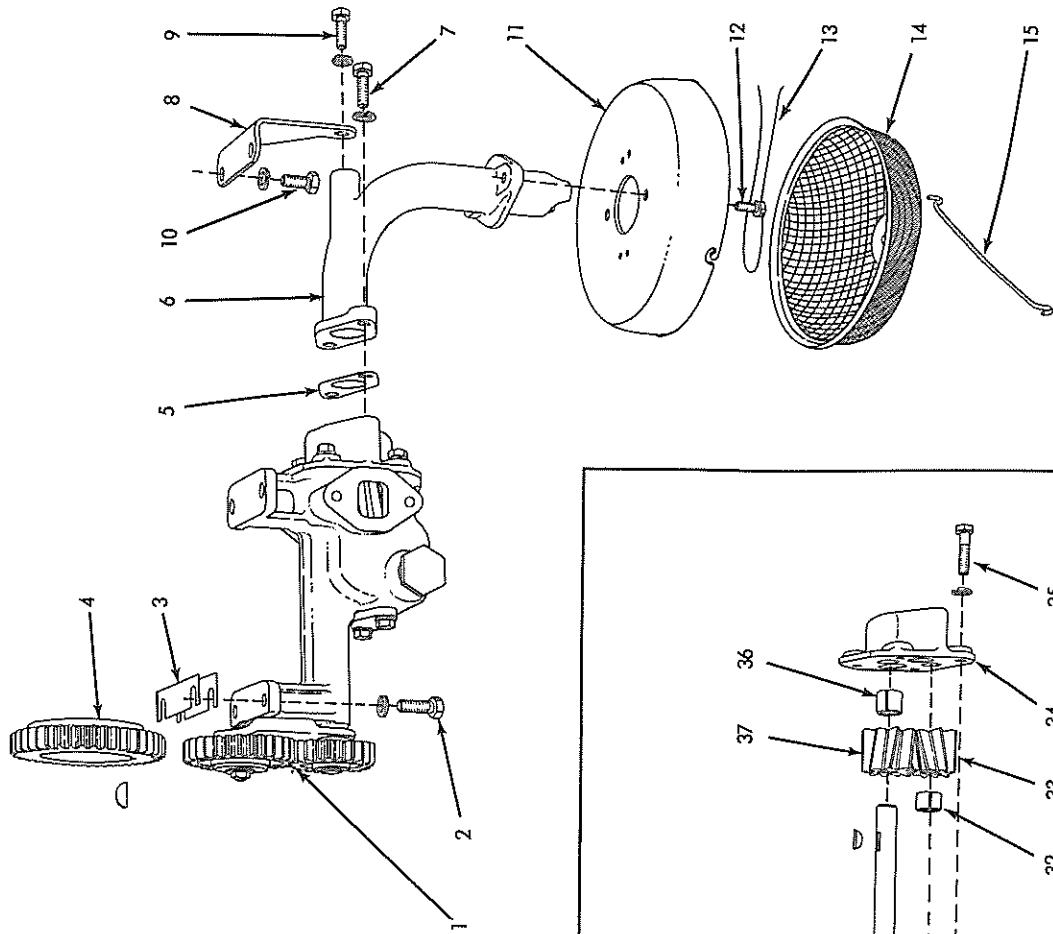


AD30 OIL PUMP

OIL PUMP

USAGE: Model AD30 Graders only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5175982	1	PUMP ASSEMBLY (Consists of items 12 thru 37)	
2	036034	4	CAPSCREW, 3/8"NF x 1"	
	904206	4	LOCKWASHER, 3/8"	
3	5154457	1	SCREEN, oil	
4	5154509	1	SUPPORT, oil screen	
5	046321	2	CAPSCREW, 5/16"NC x 1-1/2"	
	904205	2	LOCKWASHER, 5/16"	
6	5153627	1	GASKET, oil screen support . . . . .	074688
7	5167813	1	INLET, oil	
8	054130	2	CAPSCREW, 5/16"NC x 7/8"	
	904205	2	LOCKWASHER, 5/16"	
9	5153313	1	GASKET, oil inlet . . . . .	074688
10	5176119	-	SHIM, adjusting, driving gear mesh ( .005" thick. Use as req'd)	
11	5166821	1	GEAR, pump driving (40 teeth. On crankshaft)	
	905123	1	KEY, #9 woodruff, 3/16" x 3/4"	
12	5175680	1	BODY ASSEMBLY (Includes items 13, 25 and 26)	
13	5176035	1	PIN, dowel	
14	5169195	1	SUPPORT ASSEMBLY, driven gear (1 SUPPORT, 1 PIN)	
15	065265	1	CAPSCREW, 3/8"NC x 7/8"	
16	5156683	1	GEAR ASSEMBLY, intermediate (30 teeth. Includes item 17)	
17	5156521	1	BUSHING, intermediate gear	
18	5169197	1	WASHER, retaining, intermediate gear	
19	5175944	1	WASHER, capscREW locking	
20	054130	1	CAPSCREW, 5/16"NC x 7/8"	
21	5156528	1	GEAR, driven (24 teeth)	
22	5156955	1	COVER, body pad	
23	045312	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	LOCKWASHER, 5/16"	
24	5151370	1	GASKET, pad cover . . . . .	074688
25	5153147	2	BUSHING, body	
26	5153310	1	SHAFT, driven gear	
27	5153309	1	SHAFT, drive gear	
	905121	2	KEY, #5 woodruff, 1/8" x 5/8"	
28	5166840	2	BUSHING, driven gear	
29	5166649	1	GEAR ASSEMBLY, driven (Includes item 28)	
30	5153299	1	COVER ASSEMBLY (Includes item 32)	
31	037450	4	CAPSCREW, 5/16"NC x 1-1/4"	
	904205	4	LOCKWASHER, 5/16"	
32	5153154	1	BUSHING, cover	
33	5166650	1	GEAR, drive	
34	5153247	1	VALVE, pressure relief	
35	5155765	1	SPRING, pressure relief valve	
36	040399	2	GASKET, pressure relief valve plug . . . . .	074688
37	5152613	2	PLUG, pressure relief valve	

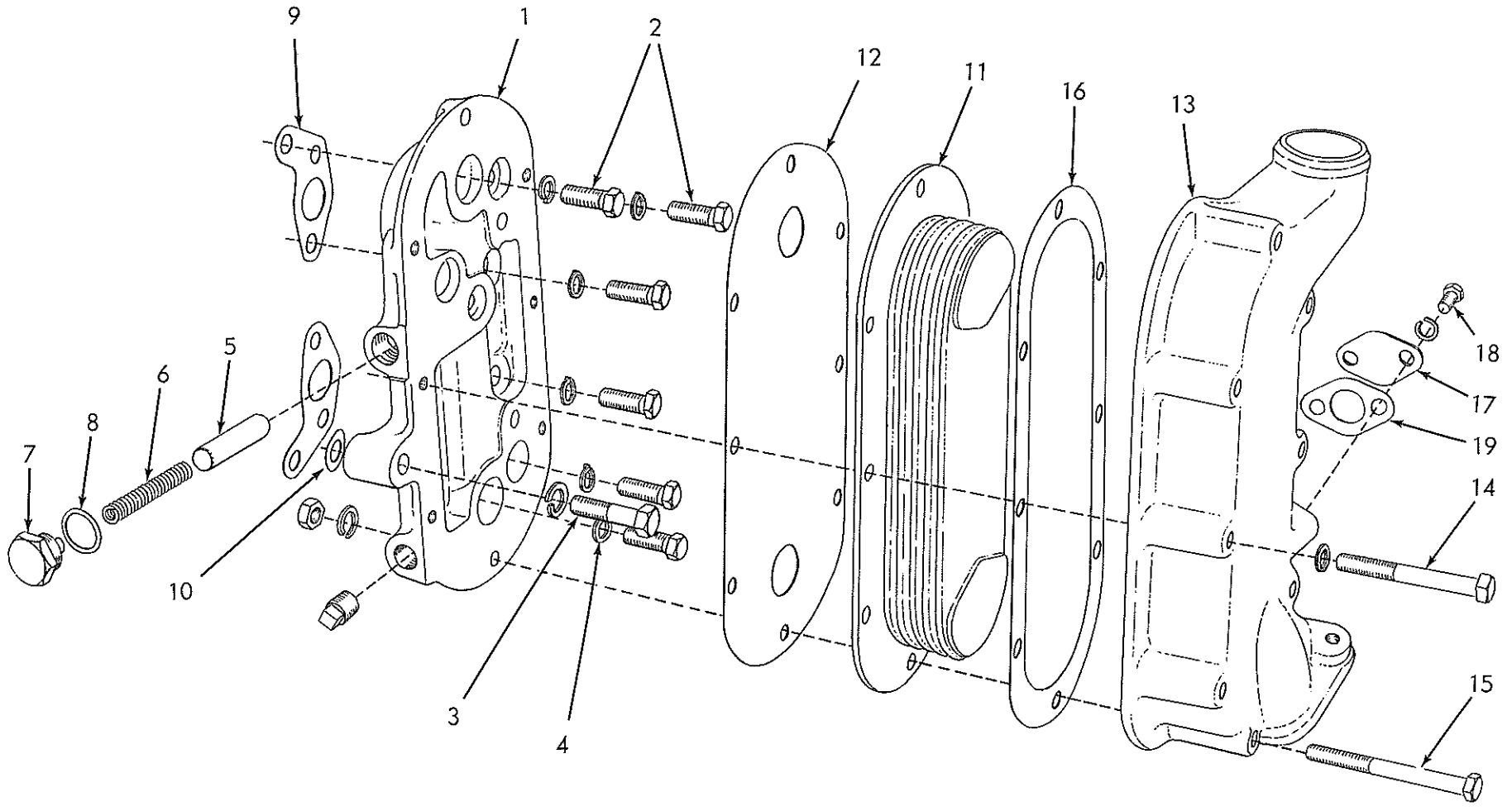


AD40 OIL PUMP

OIL PUMP

USAGE: Model AD40 Graders only.

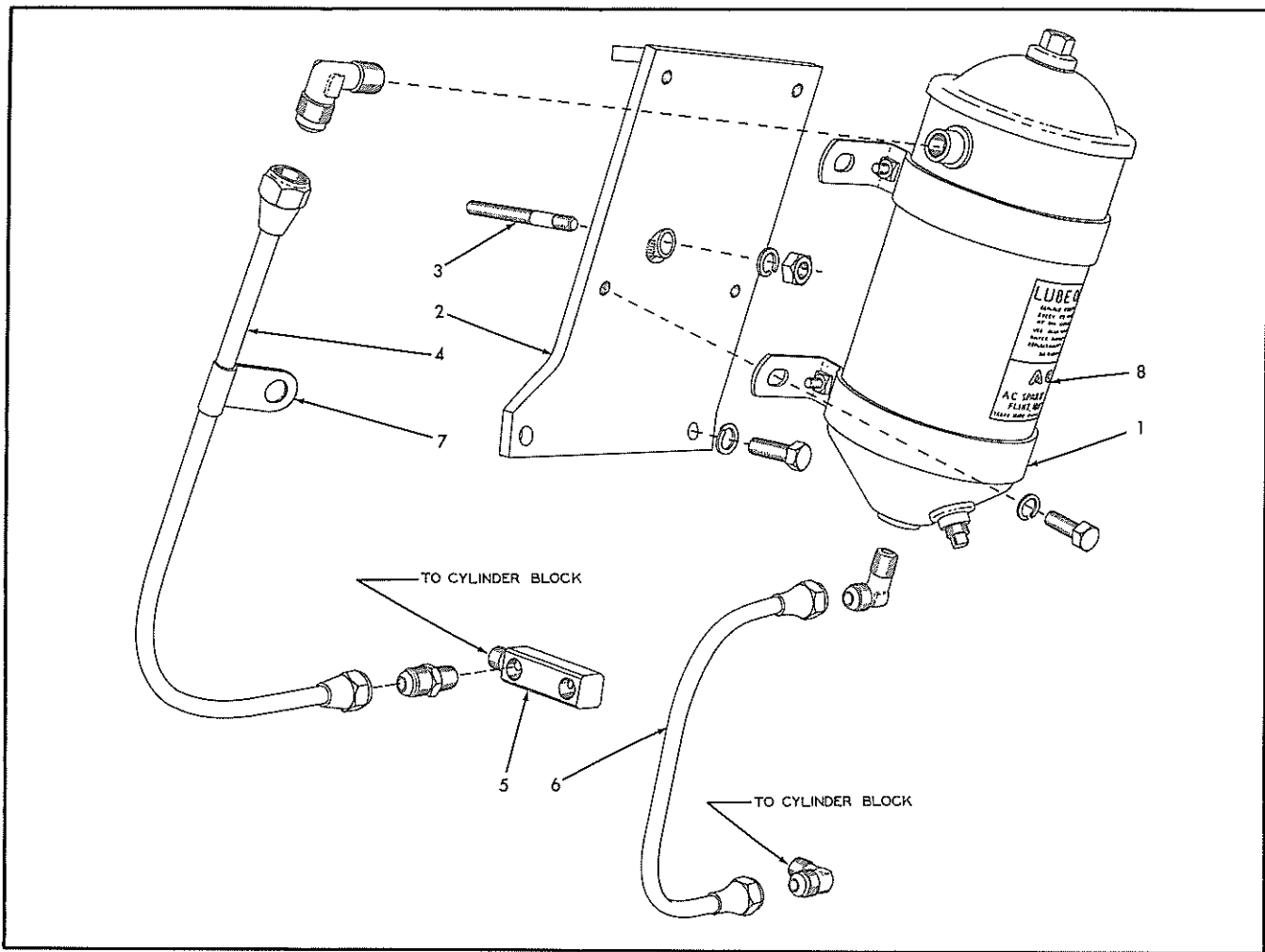
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5175986	1	PUMP ASSEMBLY (Consists of items 16 thru 44)	
2	036034	4	CAPSCREW, 3/8"NF x 1"	
	904206	4	LOCKWASHER, 3/8"	
3	5176119	-	SHIM, adjusting, driving gear mesh (.005" thick. Use as req'd)	
4	5156532	1	GEAR, pump driving (40 teeth. On crankshaft)	
	905123	1	KEY, #9 woodruff, 3/16" x 3/4"	
5	5153627	1	GASKET, oil inlet . . . . .	074689
6	5166847	1	INLET, oil	
7	045295	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	LOCKWASHER, 5/16"	
8	5166935	1	BRACKET, oil inlet supporting	
9	045312	1	CAPSCREW, 5/16"NC x 3/4"	
	904205	1	LOCKWASHER, 5/16"	
10	036032	2	CAPSCREW, 3/8"NF x 3/4"	
	904206	2	LOCKWASHER, 3/8"	
11	5153285	1	COVER, oil screen	
12	5155605	2	CAPSCREW (drilled head, 5/16"NC x 11/16")	
13	023633	1	WIRE, locking (1/16" x 12")	
14	5153286	1	SCREEN, oil	
15	5153284	1	RETAINER, oil screen	
16	5175680	1	BODY ASSEMBLY (Includes items 17, 18 and 30)	
17	5176035	1	PIN, dowel	
18	5153147	2	BUSHING, body	
19	5169195	1	SUPPORT ASSEMBLY, driven gear (1 SUPPORT, 1 PIN)	
20	065265	1	CAPSCREW, 3/8"NC x 7/8"	
21	5156683	1	GEAR ASSEMBLY, intermediate (30 teeth. Includes item 22)	
22	5156521	1	BUSHING, intermediate gear	
23	5169197	1	WASHER, retaining, intermediate gear	
24	5175944	1	WASHER, capscREW locking	
25	054130	1	CAPSCREW, 5/16"NC x 7/8"	
26	5156528	1	GEAR, driven (24 teeth)	
27	5156955	1	COVER, body pad, front	
28	045312	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	LOCKWASHER, 5/16"	
29	5151370	1	GASKET, front pad cover . . . . .	074689
30	5153310	1	SHAFT, driven gear	
31	5153309	1	SHAFT, drive gear	
	905121	2	KEY, #5 woodruff, 1/8" x 5/8"	
32	5166840	2	BUSHING, driven gear	
33	5166649	1	GEAR ASSEMBLY, driven (Includes item 32)	
34	5154252	1	COVER ASSEMBLY (Includes item 36)	
35	037450	4	CAPSCREW, 5/16"NC x 1-1/4"	
	904205	4	LOCKWASHER, 5/16"	
36	5153154	1	BUSHING, cover	
37	5166650	1	GEAR, drive	
38	5153313	1	GASKET, side pad cover	
39	5153311	1	COVER, body pad, side	
40	045312	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	LOCKWASHER, 5/16"	
41	5152613	2	PLUG, pressure relief valve	
42	040399	2	GASKET, pressure relief valve plug . . . . .	074689
43	5155765	1	SPRING, pressure relief valve	
44	5153247	1	VALVE, pressure relief	



OIL COOLER

OIL COOLER

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5178244	1	1	ADAPTER ASSEMBLY (Includes items 5 thru 8, and 1 PLUG 901652)	
2	901652	1	1	PLUG, pipe, 1/4"NPT	
3	044249	6	6	CAPSCREW, 3/8"NC x 1-1/8"	
4	041914	1	1	CAPSCREW, 3/8"NC x 1-7/8"	
-	5152148	1	1	WASHER, plain (copper)	
-	904206	6	6	LOCKWASHER, 3/8"	
5	5177777	1	1	VALVE, pressure relief	
6	5177778	1	1	SPRING, pressure relief valve	
7	5177772	1	1	PLUG, pressure relief valve	
8	5177773	1	1	GASKET, pressure relief valve . . . . .	074688, 89
9	5150154	2	2	GASKET, adapter to cylinder block . . . . .	074688, 89
10	5152904	1	1	GASKET, spacing . . . . .	074688, 89
11	8501327	1	-	CORE, oil cooling (5 plates)	
	8501328	-	1	CORE, oil cooling (6 plates)	
12	5154215	1	1	GASKET, oil cooling element . . . . .	074688, 89
13	5151456	1	-	HOUSING, oil cooler element	
	5150464	-	1	HOUSING, oil cooler element	
14	033751	6	-	CAPSCREW, 5/16"NC x 2-1/2"	
	913189	-	6	CAPSCREW, 5/16"NC x 2-7/8"	
	904205	6	6	LOCKWASHER, 5/16"	
15	043733	2	-	CAPSCREW, 5/16"NF x 3"	
	040378	-	2	CAPSCREW, 5/16"NC x 3-1/2"	
	913636	2	-	NUT, 5/16"NF	
	911025	-	2	NUT, 5/16"NC	
	904205	2	2	LOCKWASHER, 5/16"	
16	5150155	1	1	GASKET, oil cooler housing . . . . .	074688, 89
17	5151305	1	1	COVER, water hole	
18	045312	2	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	2	LOCKWASHER, 5/16"	
19	5151190	1	1	GASKET, water hole cover . . . . .	074688, 89

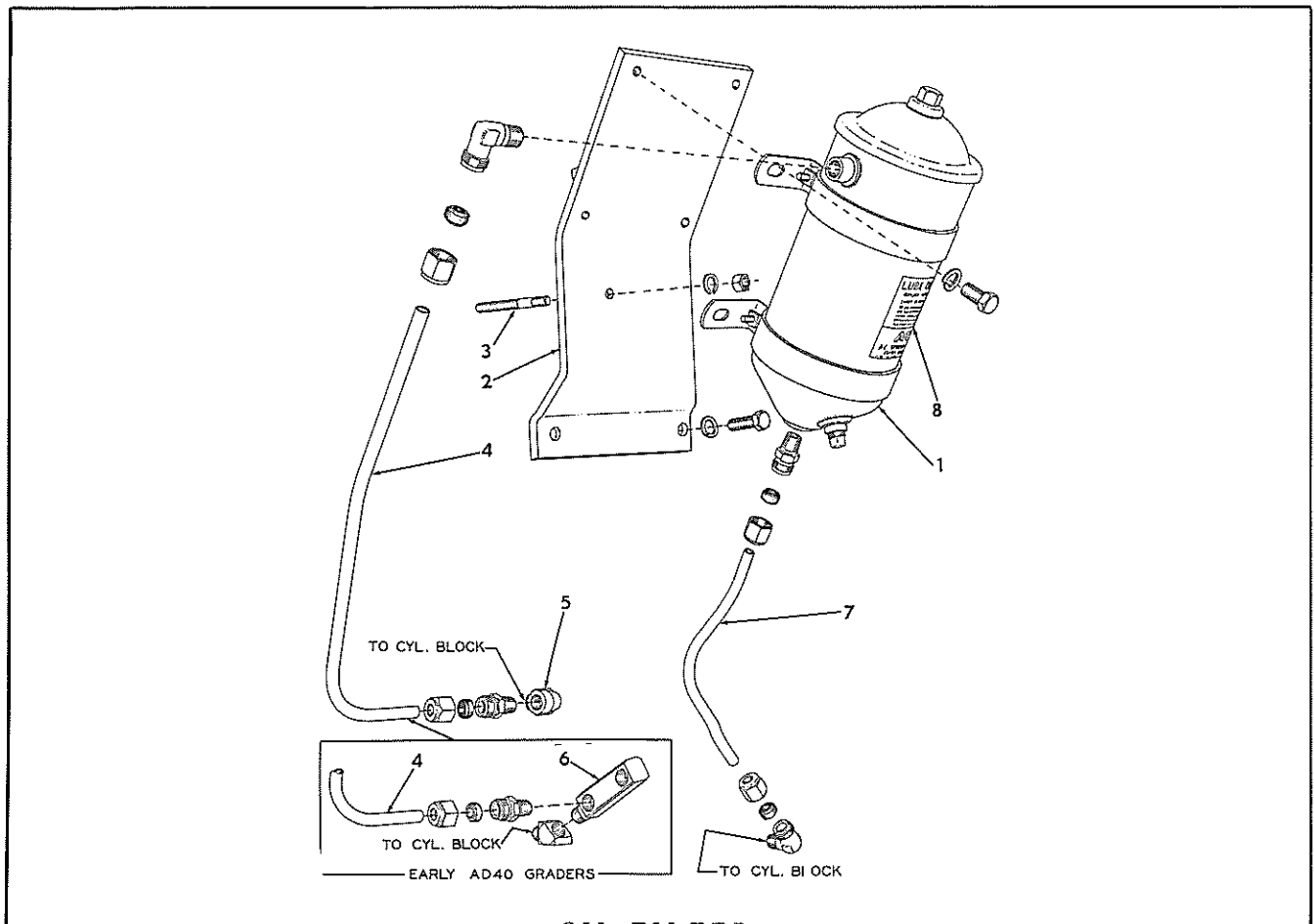


### OIL FILTER

USAGE: Model AD30 Graders prior to serial No. 807 except those equipped with the special HEAVY DUTY OIL FILTER listed on page 34.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	040290	1	FILTER ASSEMBLY, oil (See page 35 for repair parts)	
	910922	4	CAPSCREW, 3/8"NF x 3/4"	
	904206	4	LOCKWASHER, 3/8"	
2	041242	1	BRACKET, mounting	
	904706	2	CAPSCREW, 7/16"NC x 1-1/4"	
	904207	2	LOCKWASHER, 7/16"	
3	-----	1	STUD, hand-hole cover (See CYLINDER BLOCK)	
	911041	1	NUT, 3/8"NF	
	904206	1	LOCKWASHER, 3/8"	
	-----	1	-----	
4	051080	1	TUBE ASSEMBLY, oil inlet (Includes 2 NUTS 911208)	
	911208	2	NUT, flared, long, 3/8"	
	910978	1	ELBOW, male, flared, 3/8" tube, 1/4"NPT	
	912324	1	CONNECTOR, male, flared, 3/8" tube, 1/4"NPT	
5	605793	1	ELBOW, oil inlet tube (90°, 1/4"NPT male and female, long type)	
6	051153	1	TUBE ASSEMBLY, oil outlet (Includes 2 NUTS 911208)	
	911208	2	NUT, flared, long, 3/8"	
	910978	2	ELBOW, male, flared, 3/8" tube, 1/4"NPT	
7	041262	1	CLIP, oil inlet tube (closed type, 3/8" diam., 13/32" bolt-hole)	
8	-----	1	TRANSFER, instruction (See PAINTING AND MARKING)	

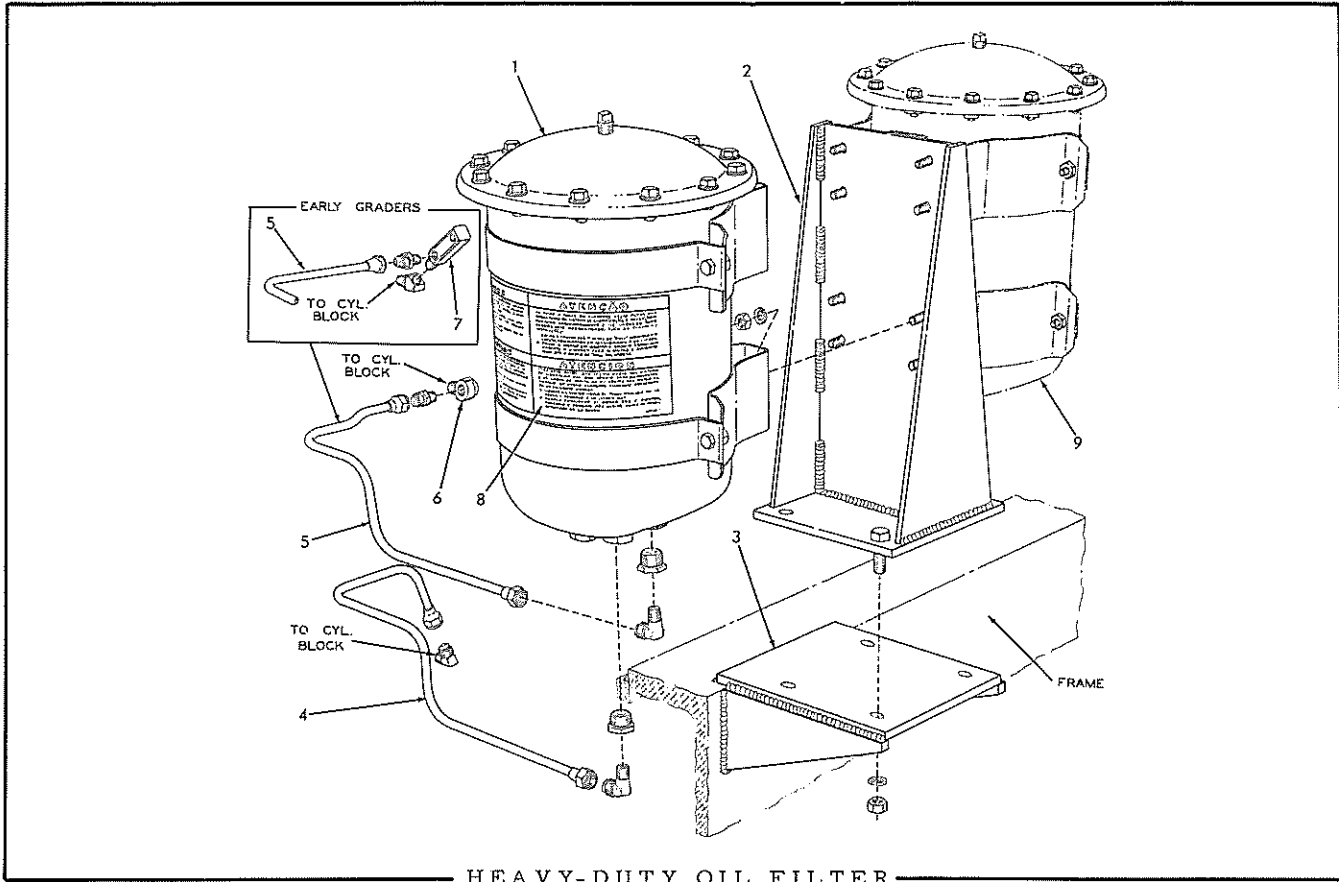




**OIL FILTER**

USAGE: Model AD30 Graders after serial No. 807 and all Model AD40 Graders, except those equipped with the special HEAVY-DUTY OIL FILTER listed on page 34

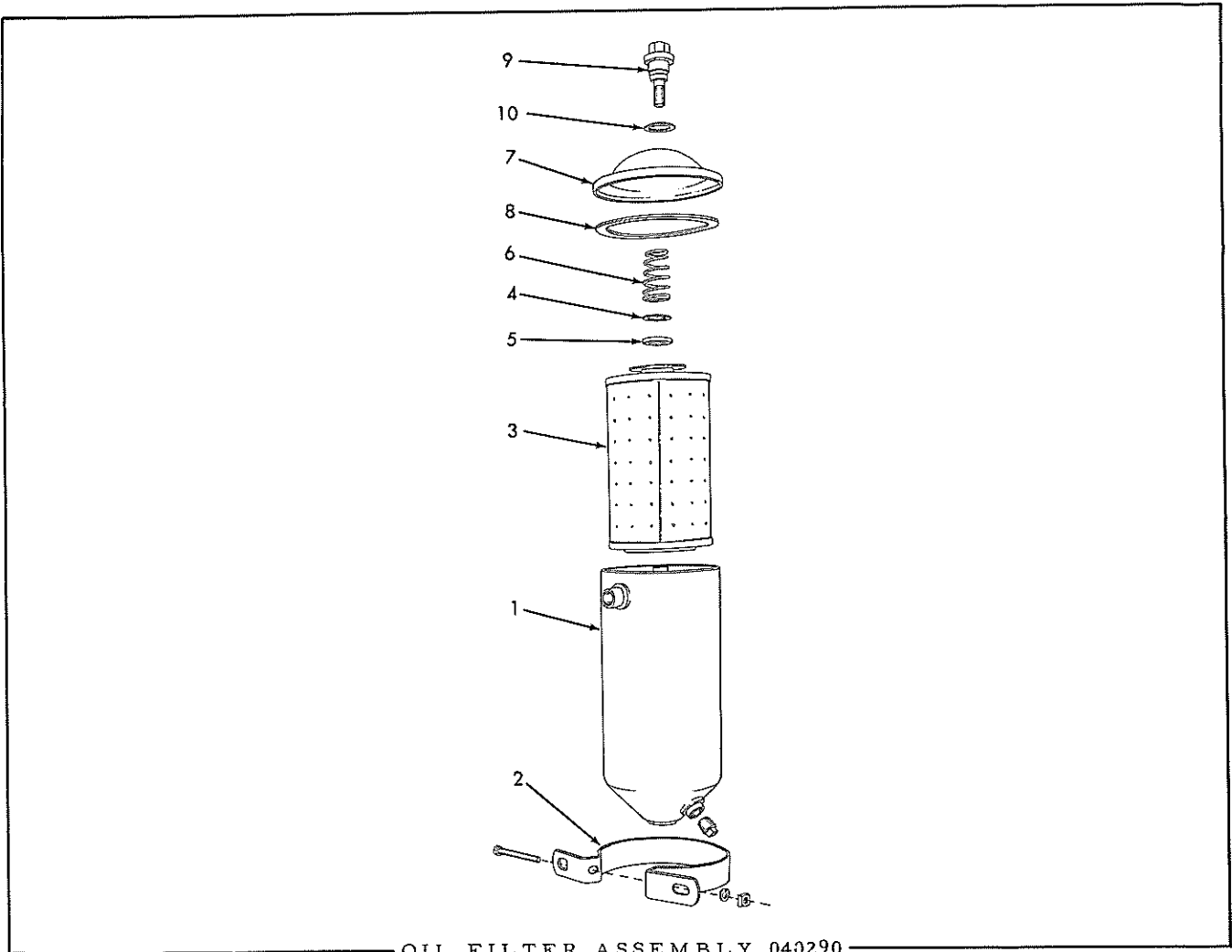
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	040290	1	1	FILTER ASSEMBLY, oil (See page 35 for repair parts)	
	912743	4	4	CAPSCREW, 3/8"NF x 5/8"	
	904206	4	4	LOCKWASHER, 3/8"	
2	078377	1	1	BRACKET, mounting	
	904706	2	2	CAPSCREW, 7/16"NC x 1-1/4"	
	904207	2	2	LOCKWASHER, 7/16"	
3	-----	1	1	STUD, handhole cover (See CYLINDER BLOCK)	
	904206	1	1	LOCKWASHER, 3/8"	
	911041	1	1	NUT, 3/8"NF	
4	076940	-	1	TUBE, oil inlet (Graders prior to #807)	
	069687	1	1	TUBE, oil inlet (Graders # 807 and up)	
	915368	1	1	CONNECTOR, Sealastic, 3/8" tube, 1/4"NPT male	
	915369	1	1	ELBOW, Sealastic, 90°, 3/8" tube, 1/4"NPT male	
	915366	2	2	NUT, Sealastic fitting, 3/8" tube	
5	915367	2	2	RING, Sealastic fitting, 3/8" tube (Includes FERRULE)	
	078926	1	1	ELBOW, oil inlet tube (90°, 1/4"NPT male and female, short type)(Graders # 807 and up)	
6	605793	-	1	ELBOW, inlet tube (90°, 1/4"NPT male and female, long type)(Graders prior to # 807)	
	913922	-	1	FITTING, elbow adapter, 45°, 1/4"NPT male and female	
7	069690	1	1	TUBE, oil outlet	
	915368	1	1	CONNECTOR, Sealastic, 3/8" tube, 1/4"NPT male	
	915369	1	1	ELBOW, Sealastic, 90°, 3/8" tube, 1/4"NPT male	
	915366	2	2	NUT, Sealastic fitting, 3/8" tube	
8	915367	2	2	RING, Sealastic fitting, 3/8" tube (Includes FERRULE)	
	-----	1	1	TRANSFER, instruction (See PAINTING AND MARKING)	



HEAVY-DUTY OIL FILTER

USAGE: Special Equipment. See pages 32 and 33 for standard filter.

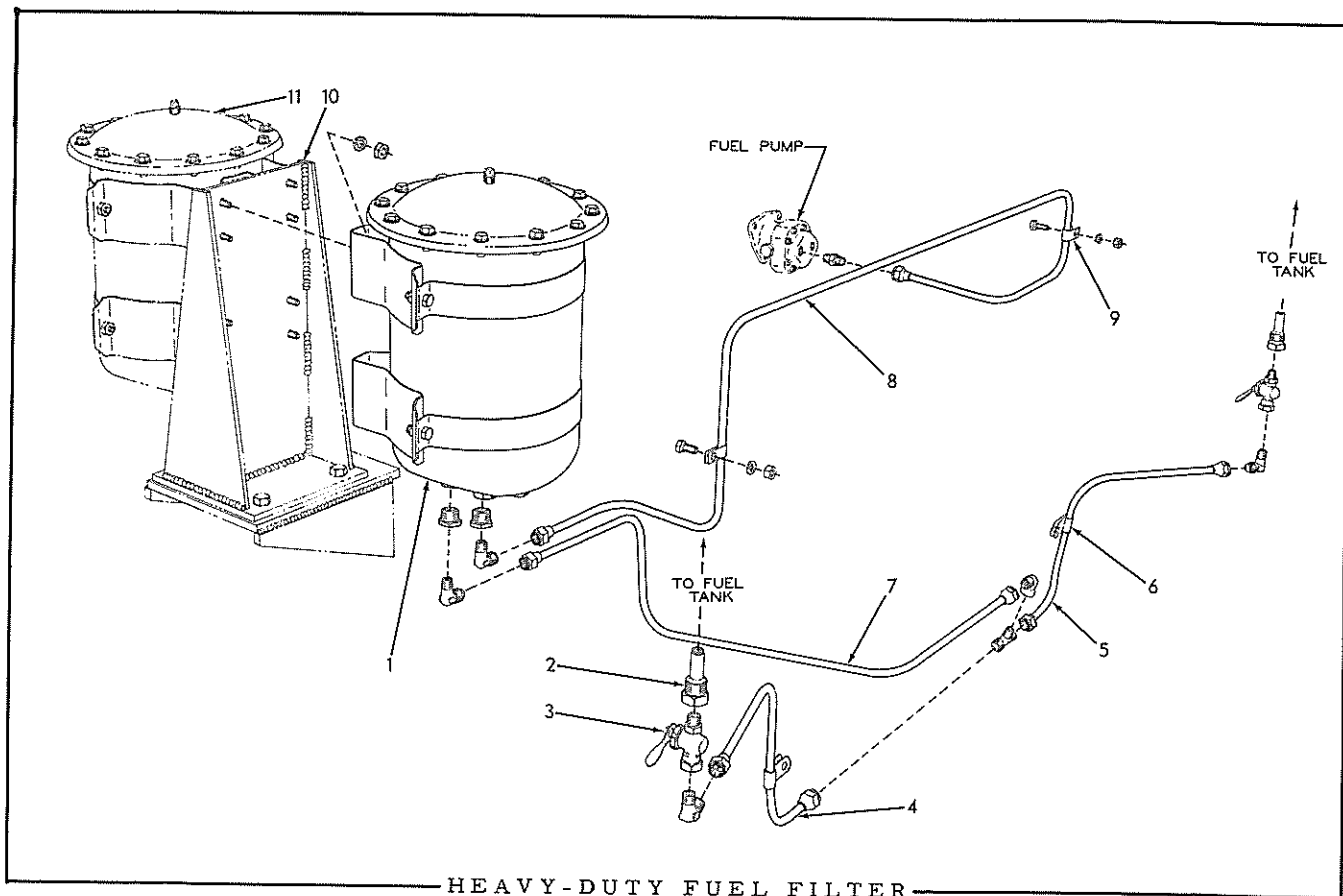
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER	
		AD30	AD40			
1	061817	1	1	FILTER ASSEMBLY (See page 37 for repair parts)	}	
	911168	8	8	CAPSCREW, 5/16"NF x 7/8"		Also attach
	904205	8	8	LOCKWASHER, 5/16"		HEAVY-DUTY
	913636	8	8	NUT, 5/16"NF		FUEL FILTER
2	076239	1	1	BRACKET, filter mounting		
	911978	4	4	CAPSCREW, 1/2"NF x 1-1/2"		
	904208	4	4	LOCKWASHER, 1/2"		
	911043	4	4	NUT, 1/2"NF		
3	-----	1	1	BRACKET, mounting (Requires welding to frame)		
4	076232	1	1	TUBE ASSEMBLY, oil return (Includes NUTS)		
	901839	1	1	BUSHING, pipe reducing, 1/2"NPT to 1/4"NPT		
	910978	2	2	ELBOW, flared, 3/8" tube, 1/4"NPT male		
5	076230	1	1	TUBE ASSEMBLY, oil supply (Includes NUTS)(Graders prior to #807)		
	077704	1	1	TUBE ASSEMBLY, oil supply (Includes NUTS)(Graders #807 and up)		
	901839	1	1	BUSHING, pipe reducing, 1/2"NPT to 1/4"NPT		
	910978	1	1	ELBOW, flared, 3/8" tube, 1/4"NPT male		
	912324	1	1	CONNECTOR, flared, 3/8" tube, 1/4"NPT male		
6	078926	1	1	ELBOW, oil supply tube (90°, 1/4"NPT male and female) (Graders #807 and up)		
7	605793	1	1	ELBOW, oil supply tube (90°, 1/4"NPT male and female) (Graders prior to #807)		
	913922	-	1	FITTING, elbow adapter, 45°, 1/4"NPT		
8	-----	1	1	TRANSFER, instruction (See PAINTING AND MARKING)		
9	-----	1	1	FILTER ASSEMBLY (See HEAVY-DUTY FUEL FILTER)		



OIL FILTER ASSEMBLY 040290

NOTE: See pages 32 and 33 for listing of complete Filter Assembly.

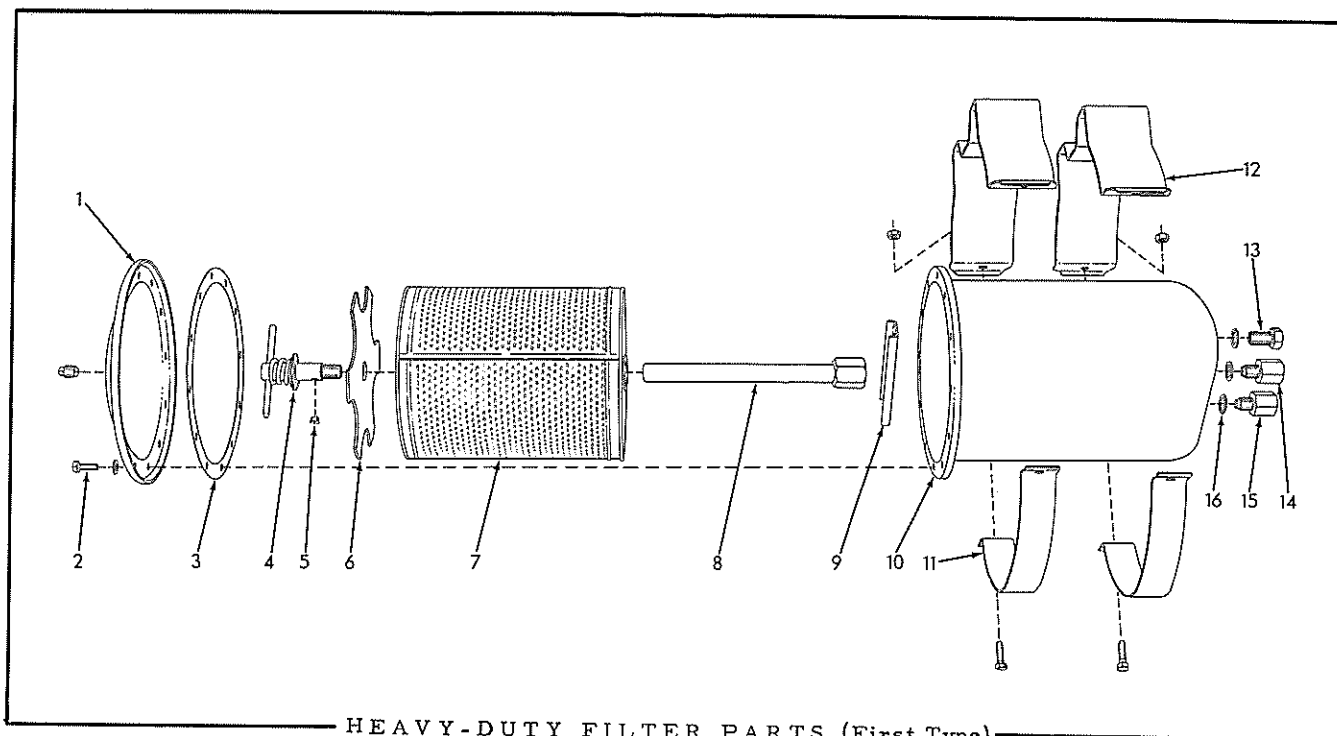
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	042426 901652	1 1	SHELL ASSEMBLY (Includes pipe PLUG 901652) PLUG, pipe, 1/4"NPT	
2	040805 903756 904204 911024	2 2 2 2	BRACKET, clamping SCREW, machine, 1/4"NC x 2-1/2" LOCKWASHER, 1/4" NUT, 1/4"NC	
3	079640	1	ELEMENT KIT (Includes items 4, 5 and 8)	
4	-----	2	WASHER, element retaining (Not serviced. Order item 3)	
5	-----	2	GASKET, retaining washer (Not serviced. Order item 3)	
6	040331	1	SPRING, element retaining	
7	040328	1	COVER, filter shell	
8	040327	1	GASKET, filter shell cover	
9	040788	1	SCREW, cover retaining	
10	040330	1	GASKET, cover retaining screw	



HEAVY-DUTY FUEL FILTER

USAGE: Special Equipment. Replaces standard first stage fuel filter.

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	061814	1	1	FILTER ASSEMBLY (See page 37 for repair parts)(Discontinued. Order FILTER ASSEMBLY 082441)	}
	911168	8	8	CAPSCREW, 5/16"NF x 7/8"	
	904205	8	8	LOCKWASHER, 5/16"	
	913636	8	8	NUT, 5/16"NF	
2	042639	2	2	BUSHING, fuel tank outlet	
3	040810	2	2	COCK, shut-off, lever-handle, 1/4"NPT male and female	
4	075066	1	1	TUBE ASSEMBLY, tank right outlet (Includes 2 NUTS)	
	910978	1	1	ELBOW, flared, male, 3/8" tube, 1/4"NPT	
5	075069	1	1	TUBE ASSEMBLY, tank left outlet (Includes 2 NUTS)	
	910978	1	1	ELBOW, flared, male, 3/8" tube, 1/4"NPT	
6	041262	2	2	CLIP, tank outlet tubes (closed type, 3/8" diam., 13/32" bolt-hole)	
7	076228	1	1	TUBE ASSEMBLY, tank to filter (Includes NUTS)	
	901839	1	1	BUSHING, pipe reducing, 1/2"NPT to 1/4"NPT	
	910978	1	1	ELBOW, flared, male, 3/8" tube, 1/4"NPT	
	915291	1	1	ELBOW, flared, female, 3/8" tube, 1/4"NPT	
	915916	1	1	TEE, flared, male, 3/8" tube, 1/4"NPT	
8	077703	1	-	TUBE ASSEMBLY, filter to pump (Includes NUTS)	
	076225	-	1	TUBE ASSEMBLY, filter to pump (Includes NUTS)	
	901839	1	1	BUSHING, pipe reducing, 1/2"NPT to 1/4"NPT	
	910978	1	1	ELBOW, flared, male, 3/8" tube, 1/4"NPT	
	912324	1	1	CONNECTOR, flared, male, 3/8" tube, 1/4"NPT	
9	040796	2	2	CLIP, tube supporting (closed type, 3/8" diam., 13/32" bolt-hole)	
	910922	2	2	CAPSCREW, 3/8"NF x 3/4"	
	904206	2	2	LOCKWASHER, 3/8"	
	911041	2	2	NUT, 3/8"NF	
10	-----	-	-	BRACKET, mounting (See HEAVY-DUTY OIL FILTER)	
11	-----	-	-	FILTER ASSEMBLY (See HEAVY-DUTY OIL FILTER)	

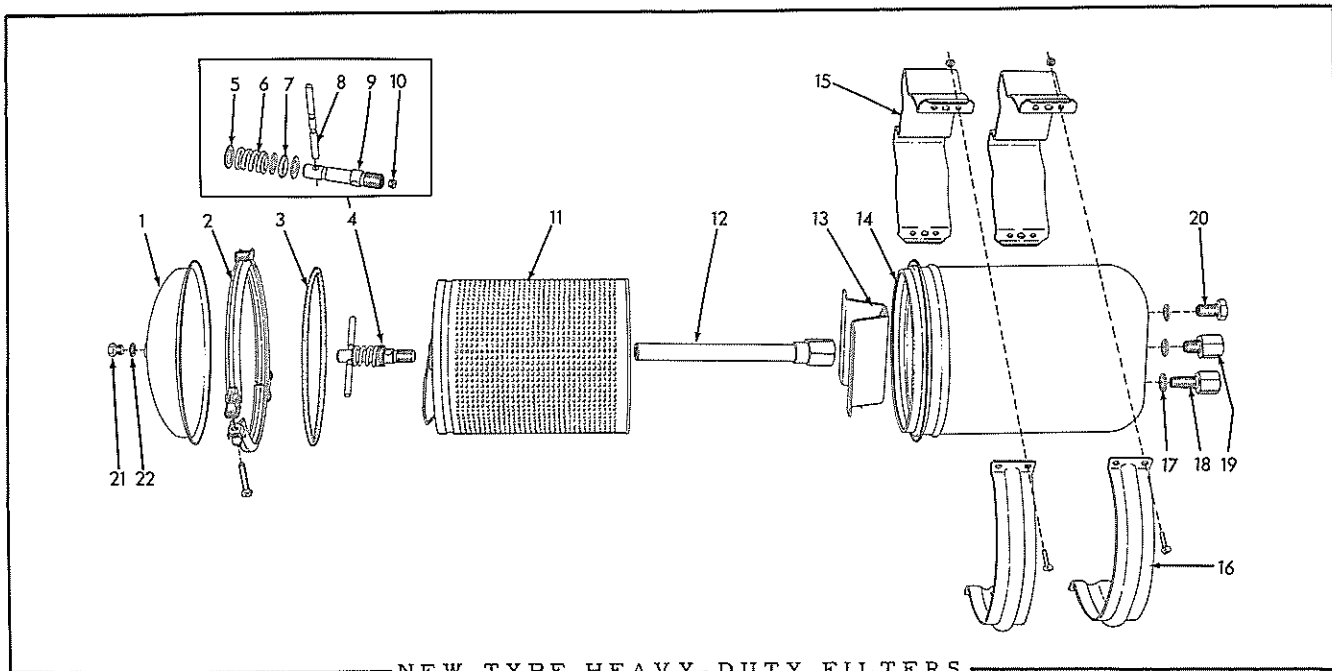


HEAVY-DUTY FILTER PARTS (First Type)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		061814	061817		
1	-----	1	1	COVER, housing (Not serviced)	
2	901652	1	1	PLUG, pipe, 1/4"NPT	
	045312	12	12	CAPSCREW, 5/16"NC x 3/4"	
	910335	12	12	WASHER, plain, SAE std., 5/16"	
3	063896	1	1	GASKET, housing cover	
4	063892	1	1	TAKE-UP ASSEMBLY, element (Serviced only as a unit)	
5	063893	-	1	PLUG, orifice	
6	063897	1	1	PLATE, element centering	
7	082508	1	1	ELEMENT KIT, filtering (Includes item 3)	
8	076668	1	1	TUBE ASSEMBLY, outlet (Includes NUT)	
9	063888	1	1	PLATE, reinforcing, housing bottom	
10	-----	1	1	HOUSING ASSEMBLY (Includes bolt RING)(Not serviced)	
11	063899	2	2	BAND, mounting bracket	
	903771	4	4	CAPSCREW, 5/16"NC x 7/8"	
	906652	4	4	NUT, jam, 5/16"NC	
12	082444	2	2	BRACKET, mounting	
13	070590	1	1	CAPSCREW, 5/8"NF x 1-1/8" (drain plug)	
14	063889	1	-	BOLT, hollow	
	080758	-	1	VALVE ASSEMBLY, outlet check (Includes 1 SPRING, 1 RING and 1 CUP. Serviced only as a unit)	
15	063889	1	-	BOLT, hollow	
	063890	-	1	VALVE ASSEMBLY, inlet check (Includes 1 SPRING, 1 RING and 1 CUP. Serviced only as a unit)	
16	063891	3	3	GASKET	

NOTE: Also see page 37B for later type Filter Parts.

MEMO

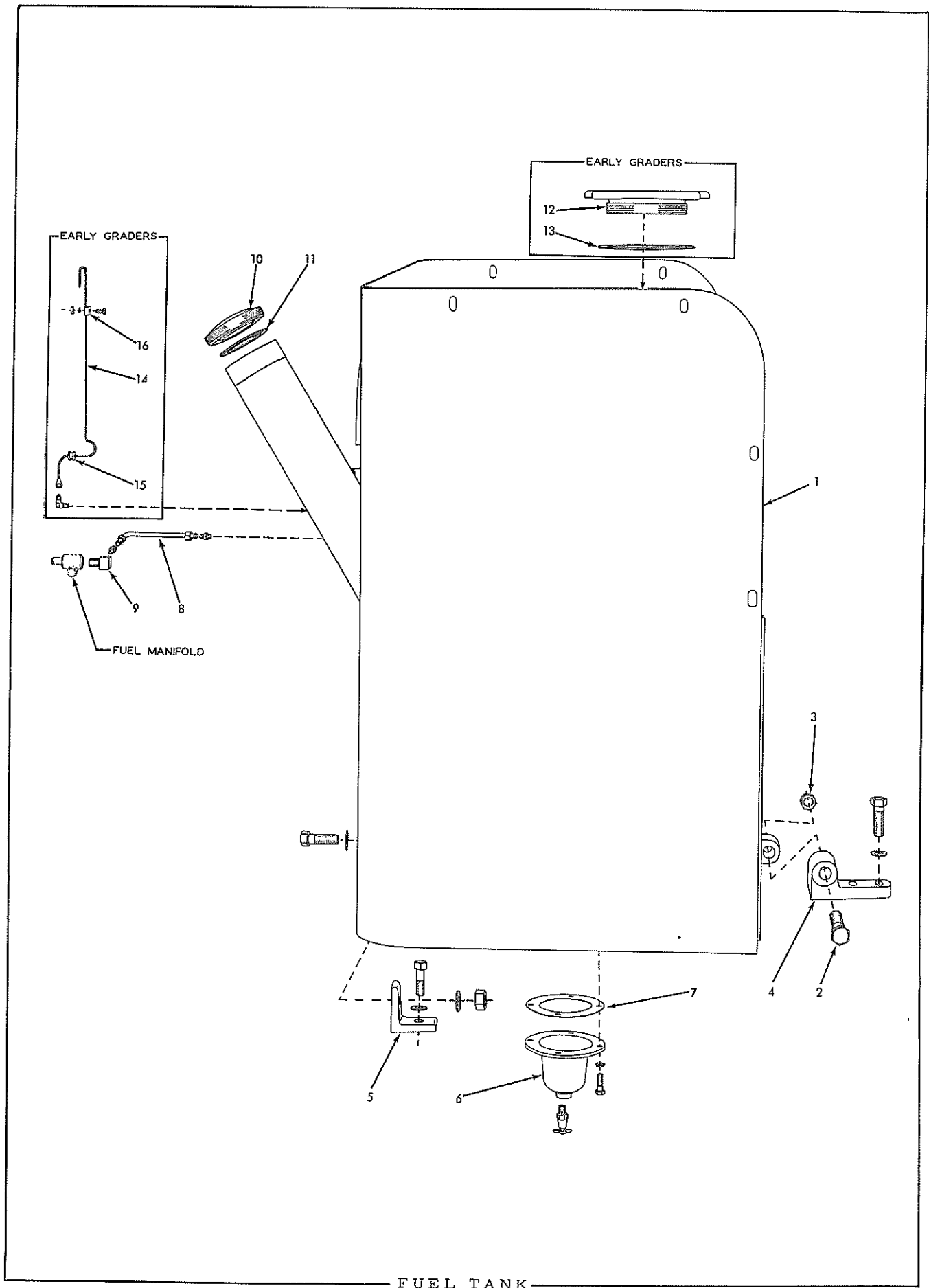


NEW TYPE HEAVY-DUTY FILTERS

082441 FILTER ASSEMBLY, fuel (Supersedes FILTER ASSY. 061814)  
 082442 FILTER ASSEMBLY, oil (Supersedes FILTER ASSY. 061817)

USAGE: Furnished on all Heavy-duty Special Filter Installations starting October, 1954.

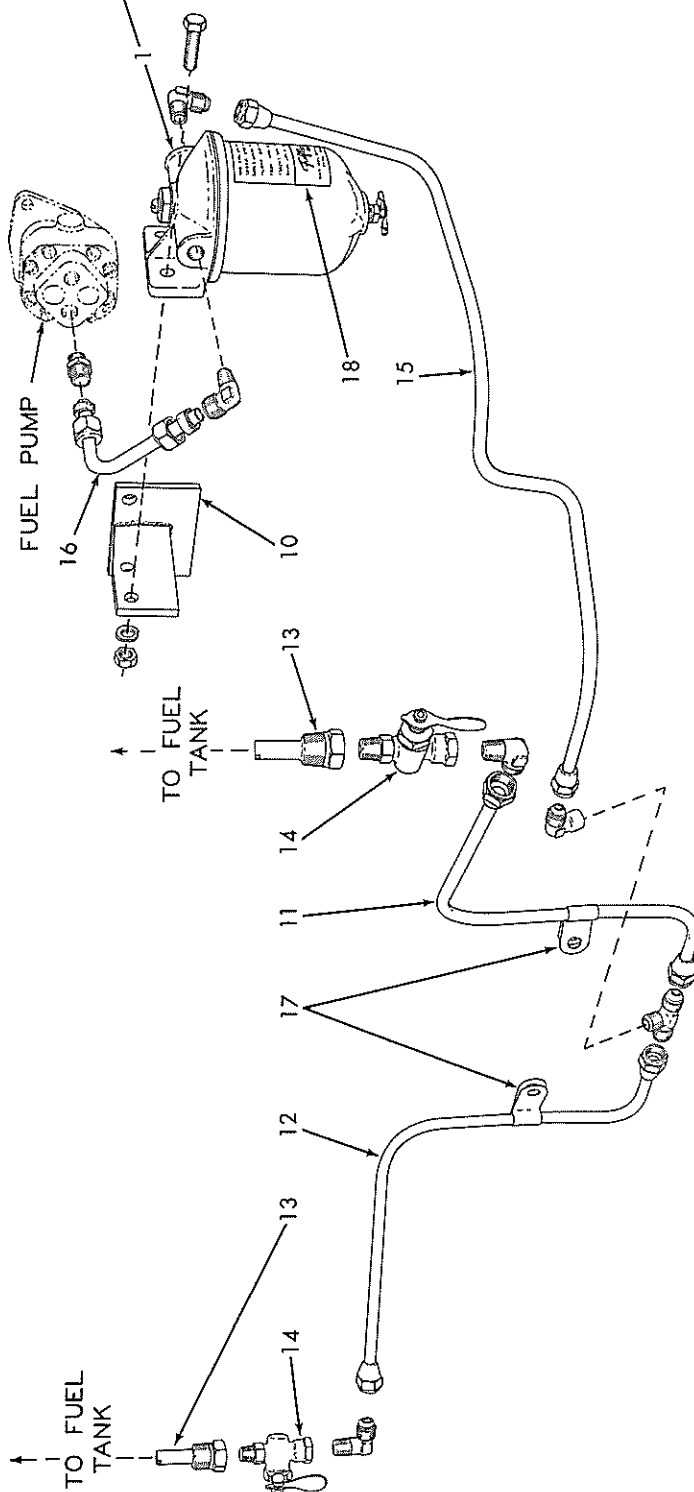
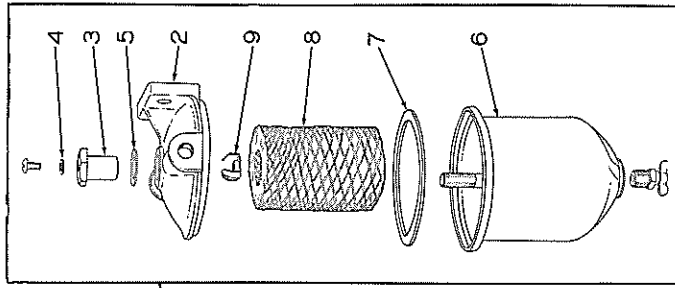
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		082441	082442		
1	082505	1	1	COVER	
2	082486	1	1	RING ASSEMBLY, cover retaining (Includes CAPSCREW 914173)	
	914173	1	1	CAPSCREW, 5/16"NF x 1-3/4"	
3	082449	1	1	GASKET, cover	
4	082492	1	-	HOLD-DOWN ASSEMBLY, filter element (Includes items 5 thru 9)	
	082493	-	1	HOLD-DOWN ASSEMBLY, filter element (Includes items 5 thru 10)	
5	082489	3	3	WASHER, element hold-down	
6	082490	1	1	SPRING, element hold-down	
7	082487	1	1	SEAL, element hold-down	
8	082488	1	1	HANDLE, element hold-down	
9	-----	1	1	STUD, element hold-down (Not serviced separately)	
10	082491	-	1	PLUG, orifice, element hold-down	
11	082508	1	1	ELEMENT KIT, filtering	
12	076668	1	1	TUBE ASSEMBLY, outlet (Includes NUT)	
13	082967	1	1	SUPPORT, filter element	
14	-----	1	1	HOUSING (Not serviced separately)	
15	082444	2	2	BRACKET, mounting	
16	082443	2	2	BAND, mounting bracket	
	900576	8	8	SCREW, machine, 1/4"NC x 3/4"	
	911024	8	8	NUT, 1/4"NC	
17	063891	3	3	GASKET	
18	063890	-	1	VALVE ASSEMBLY, inlet check (Includes 1 SPRING, 1 RING and 1 CUP. Serviced only as a unit)	
	063889	1	-	BOLT, hollow	
19	080758	-	1	VALVE ASSEMBLY, outlet check (Includes 1 SPRING, 1 RING and 1 CUP. Serviced only as a unit)	
	063889	1	-	BOLT, hollow	
20	070590	1	1	CAPSCREW, 5/8"NF x 1-1/8" (drain plug)	
21	084897	1	1	PLUG, venting	
22	084899	1	1	WASHER, venting plug	





FUEL TANK

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	079410	1	-	SEAT AND TANK (Graders prior to #807. When making first replacement also order 1 CAP 078922)	
	079439	1	-	SEAT AND TANK ASSEMBLY (Graders #807 and up)(Includes item 10)	
	079406	-	1	SEAT AND TANK (Graders prior to #807. When making first replacement also order 1 CAP 078922)	
	079438	-	1	SEAT AND TANK ASSEMBLY (Graders #807 and up)(Includes item 10)	
	903639	2	2	CAPSCREW, 1/2"NC x 1-1/2"	
	900818	4	4	WASHER, plain, U.S. std., 1/2"	
	911028	2	2	NUT, 1/2"NC	
2	070282	2	2	CAPSCREW, tank hinge (5/8"NF x 4-1/4")	
3	072366	2	2	NUT, high, 5/8"NF	
4	075364	2	2	BRACKET, hinge	
	903639	4	4	CAPSCREW, 1/2"NC x 1-1/2"	
	900818	4	4	WASHER, plain, U.S. std., 1/2"	
5	075365	2	2	ANGLE, tank attaching	
	903639	2	2	CAPSCREW, 1/2"NC x 1-1/2"	
	900818	2	2	WASHER, plain, U.S. std., 1/2"	
6	042645	1	1	SUMP, fuel tank sediment	
	912180	4	4	CAPSCREW, 3/8"NF x 7/8"	
	904206	4	4	LOCKWASHER, 3/8"	
	912319	1	1	COCK, drain, 1/4"NPT	
7	042641	1	1	GASKET, sediment sump	
8	075063	1	1	HOSE, fuel manifold to tank (Graders prior to #408)	
	078293	1	1	TUBE, fuel manifold to tank (Graders #408 and up)	
	915368	2	2	CONNECTOR, Sealastic, 3/8" tube, 1/4"NPT male	
	915367	2	2	RING, Sealastic fitting, 3/8" tube (Includes FERRULE)	
	915366	2	2	NUT, Sealastic fitting, 3/8" tube	
9	040742	1	1	ELBOW, fuel manifold (90°, 1/4"NPT male and female, restricted)	
10	078922	1	1	CAP, fuel tank (snap-on type. Includes item 11)(Used on graders #807 and up)	
11	U-2964	1	1	GASKET, fuel tank cap (Graders #807 and up)	
NOTE: Items listed below were used only on graders prior to serial No. 807.					
12	605054	1	1	CAP, fuel tank (screw type)	
13	605055	1	1	GASKET, fuel tank cap	
14	075061	1	1	TUBE, vent	
	910906	1	1	NUT, flared, short, 3/16" tube	
	910268	1	1	ELBOW, flared, 3/16" tube, 1/8"NPT male	
15	023176	1	1	GROMMET, tube protecting	
16	AM-8763	1	1	CLIP, vent tube (closed type, 3/16" diam., 9/32" bolt-hole)	
	905656	1	1	CAPSCREW, 1/4"NC x 5/8"	
	904204	1	1	LOCKWASHER, 1/4"	
	911024	1	1	NUT, 1/4"NC	

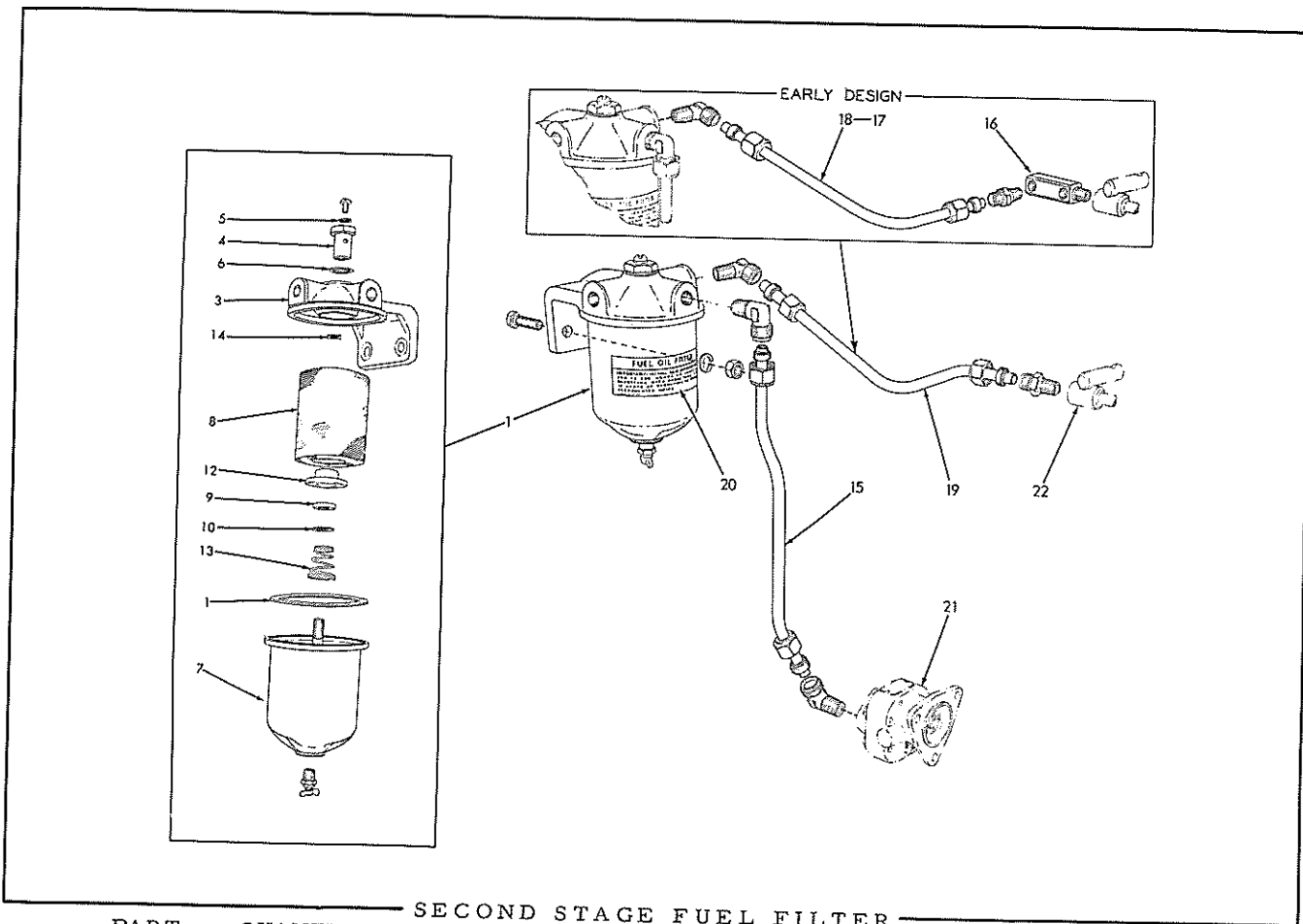


FIRST STAGE FUEL FILTER

FIRST STAGE FUEL FILTER

USAGE: All graders except those equipped with HEAVY-DUTY FUEL FILTER.

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER	
		AD30	AD40			
1	065596	1	1	FILTER ASSEMBLY, FIRST STAGE (Consists of items 2 thru 9)		
	903631	2	2	CAPSCREW, 3/8"NC x 1-1/4"		
	911026	2	2	NUT, 3/8"NC		
	904206	2	2	LOCKWASHER, 3/8"		
2	065593	1	1	HEAD		
3	065578	1	1	NUT, shell retaining		
	915432	1	1	SCREW, machine, 1/4"NC x 5/16"		
4	065577	1	1	GASKET, bleeding screw		
5	065579	1	1	GASKET, shell retaining nut		
6	065621	1	1	SHELL, filter		
	915433	1	1	COCK, drain		
7	043130	1	1	GASKET, shell		
8	048068	1	1	ELEMENT KIT (Includes item 7)		
9	065581	1	1	GUIDE, element centering		
10	076586	1	1	BRACKET, filter mounting		
11	075069	1	1	TUBE ASSEMBLY, tank left outlet (Includes 2 NUTS)		
	910978	1	1	ELBOW, male, flared, 3/8" tube, 1/4"NPT		
12	075066	1	1	TUBE ASSEMBLY, tank right outlet (Includes 2 NUTS)		
	910978	1	1	ELBOW, male, flared, 3/8" tube, 1/4"NPT		
13	042639	2	2	BUSHING, fuel tank outlet		
14	040810	2	2	COCK, shut-off, lever-handle, 1/4"NPT male and female		
15	{	077136	1	-	TUBE ASSEMBLY, tank to filter (Includes NUTS)	
		075064	-	1	TUBE ASSEMBLY, tank to filter (Includes NUTS)	
		910978	1	1	ELBOW, male, flared, 3/8" tube, 1/4"NPT	
		915291	1	1	ELBOW, female, flared, 3/8" tube, 1/4"NPT	
	915916	1	1	TEE, male, flared, 3/8" tube, 1/4"NPT		
16	078294	1	1	TUBE, fuel filter to pump (When replacing flexible HOSE used on graders prior to #408 also order fittings indented below)		
	915368	1	1	CONNECTOR, Sealastic, male, 3/8" tube, 1/4"NPT		
	915369	1	1	ELBOW, Sealastic, male, 90°, 3/8" tube, 1/4"NPT		
	915367	2	2	RING ASSEMBLY, Sealastic, 3/8" tube (Includes FERRULE)		
	915366	2	2	NUT, Sealastic fitting, 3/8" tube		
17	041262	2	2	CLIP, tank outlet tubes (closed type, 3/8" diam., 13/32" bolt-hole)		
18	-----	1	1	TRANSFER, fuel filter instruction (See PAINTING AND MARKING)		



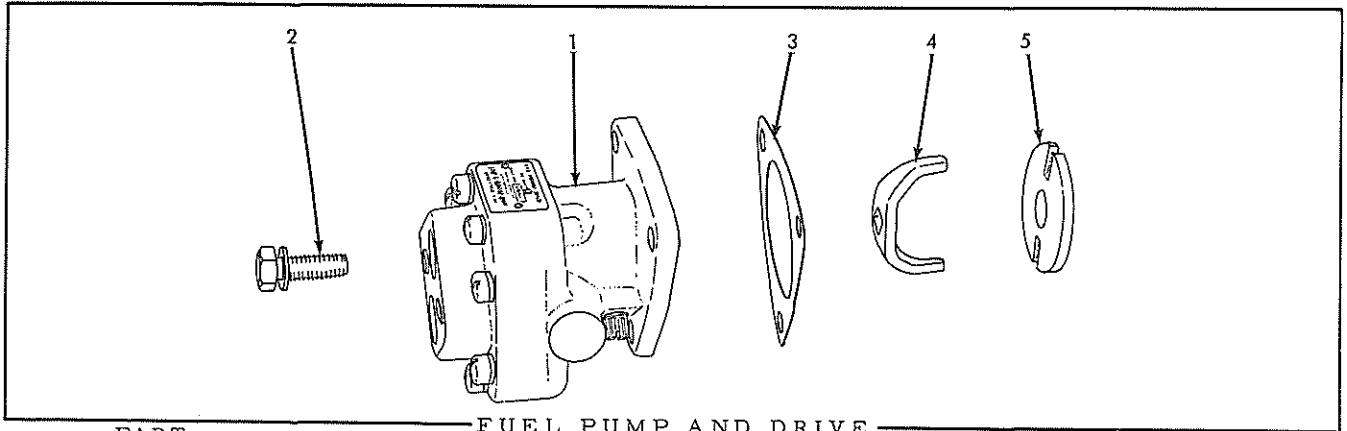
SECOND STAGE FUEL FILTER

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	065590	1	1	FILTER ASSEMBLY, fuel (Consists of items 3 thru 14)	
	903631	2	2	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	2	2	LOCKWASHER, 3/8"	
	911026	2	2	NUT, 3/8"NC	
3	065586	1	1	HEAD, fuel filter	
	907859	1	1	PLUG, pipe, hex-socket hd., 1/4"NPT	
4	065578	1	1	NUT, shell retaining	
	915432	1	1	SCREW, machine, rd-hd., 1/4"NC x 5/16"	
5	065577	1	1	GASKET, bleeding screw	
6	065579	1	1	GASKET, shell retaining nut	
7	065582	1	1	SHELL, filter	
	915433	1	1	COCK, drain, T-handle, 1/4"NPT	
8	065583	1	1	ELEMENT KIT (Includes items 9 thru 11)	
9	-----	1	1	GASKET, element seating plate (Not serviced. Order item 8)	
10	-----	1	1	WASHER, seating plate gasket (Not serviced. Order item 8)	
11	043130	1	1	GASKET, shell	
12	065584	1	1	PLATE, element seating	
13	065585	1	1	SPRING, element	
14	067481	1	1	GUIDE, element centering	
15	077457	1	-	TUBE, fuel pump to filter	
	077443	-	1	TUBE, fuel pump to filter (When replacing flexible HOSE used on graders prior to #153 also order fittings indented below)	
	915369	2	2	ELBOW, Sealastic, male, 90°, 3/8" tube, 1/4"NPT	
	915367	2	2	RING ASSEMBLY, Sealastic fitting, 3/8" tube	
	915366	2	2	NUT, Sealastic fitting, 3/8" tube	
16	605793	1	1	ELBOW, fuel manifold (Graders prior to # 807)	

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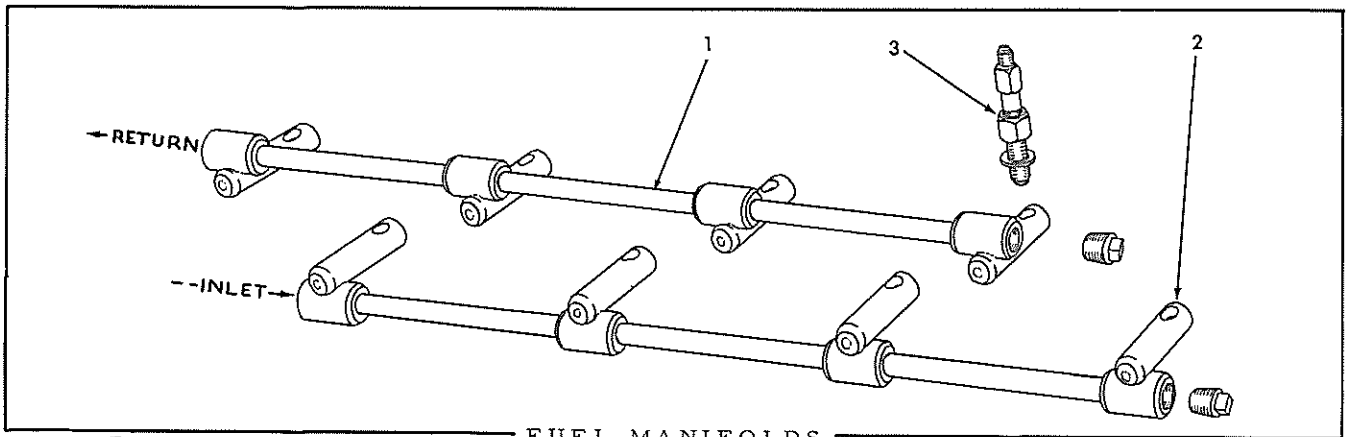
SECOND STAGE FUEL FILTER (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
17	075062	1	1	HOSE, filter to fuel manifold (Graders prior to #408)	
18	078295	1	1	TUBE, filter to fuel manifold (Graders #408 thru #806)	
19	078979	1	1	TUBE, filter to fuel manifold (Graders # 807 and up)	
	915368	1	1	CONNECTOR, Sealastic, 3/8" tube, 1/4"NPT male	
	915369	1	1	ELBOW, Sealastic, 90°, 3/8" tube, 1/4"NPT male	
	915367	2	2	RING, Sealastic fitting, 3/8" tube (Includes FERRULE)	
	915366	2	2	NUT, Sealastic fitting, 3/8" tube	
20	-----	1	1	TRANSFER, filter instruction (See PAINTING AND MARKING)	
21	-----	1	1	PUMP, fuel (See FUEL PUMP AND DRIVE)	
22	-----	1	1	MANIFOLD, fuel (See FUEL MANIFOLDS)	



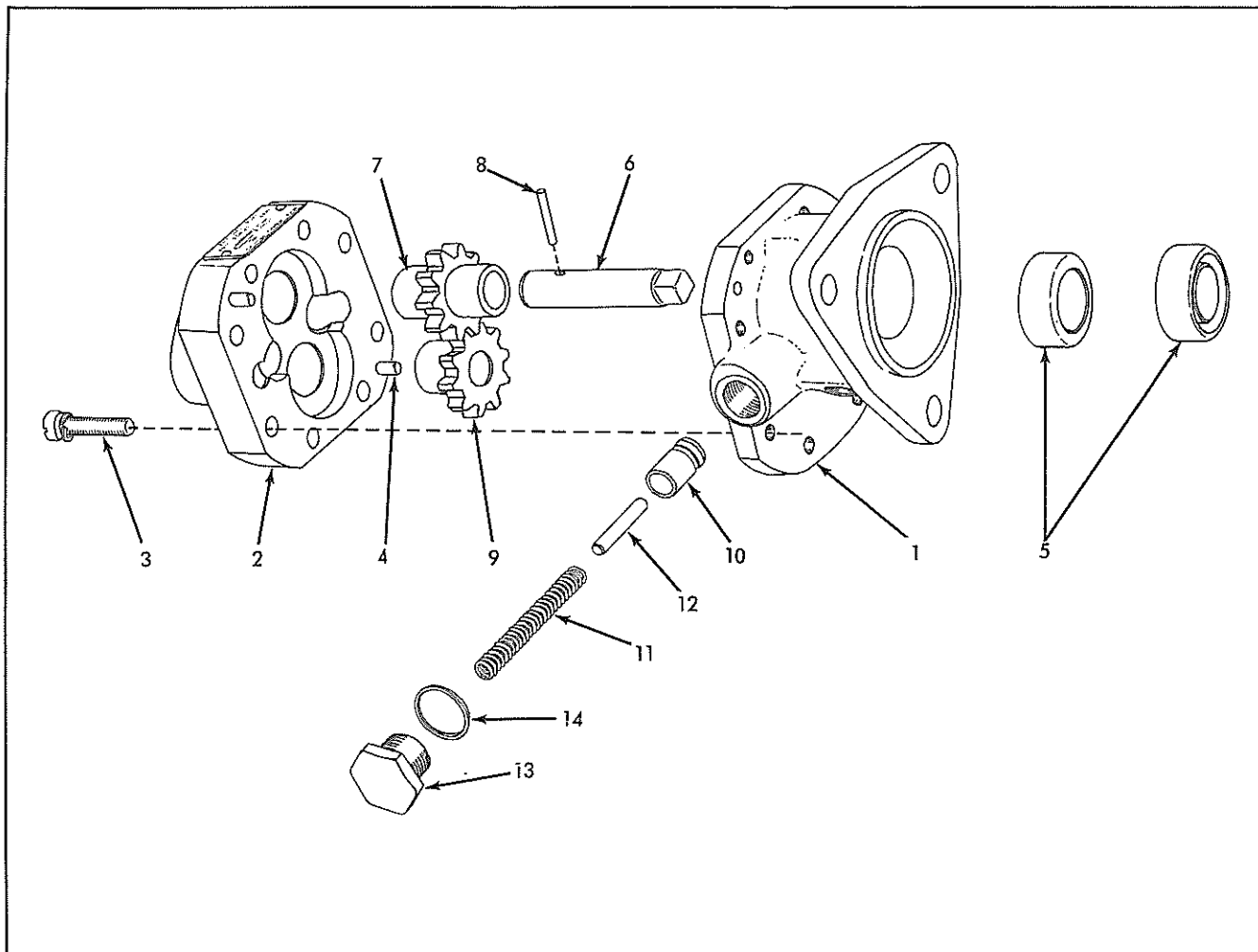
FUEL PUMP AND DRIVE

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
2	5171159	3	BOLT ASSEMBLY (Includes copper WASHER)	
3	5150193	1	GASKET, pump to blower . . . . .	078688, 89
4	5150199	1	FORK, coupling	
5	5154401	1	DISC, coupling	



FUEL MANIFOLDS

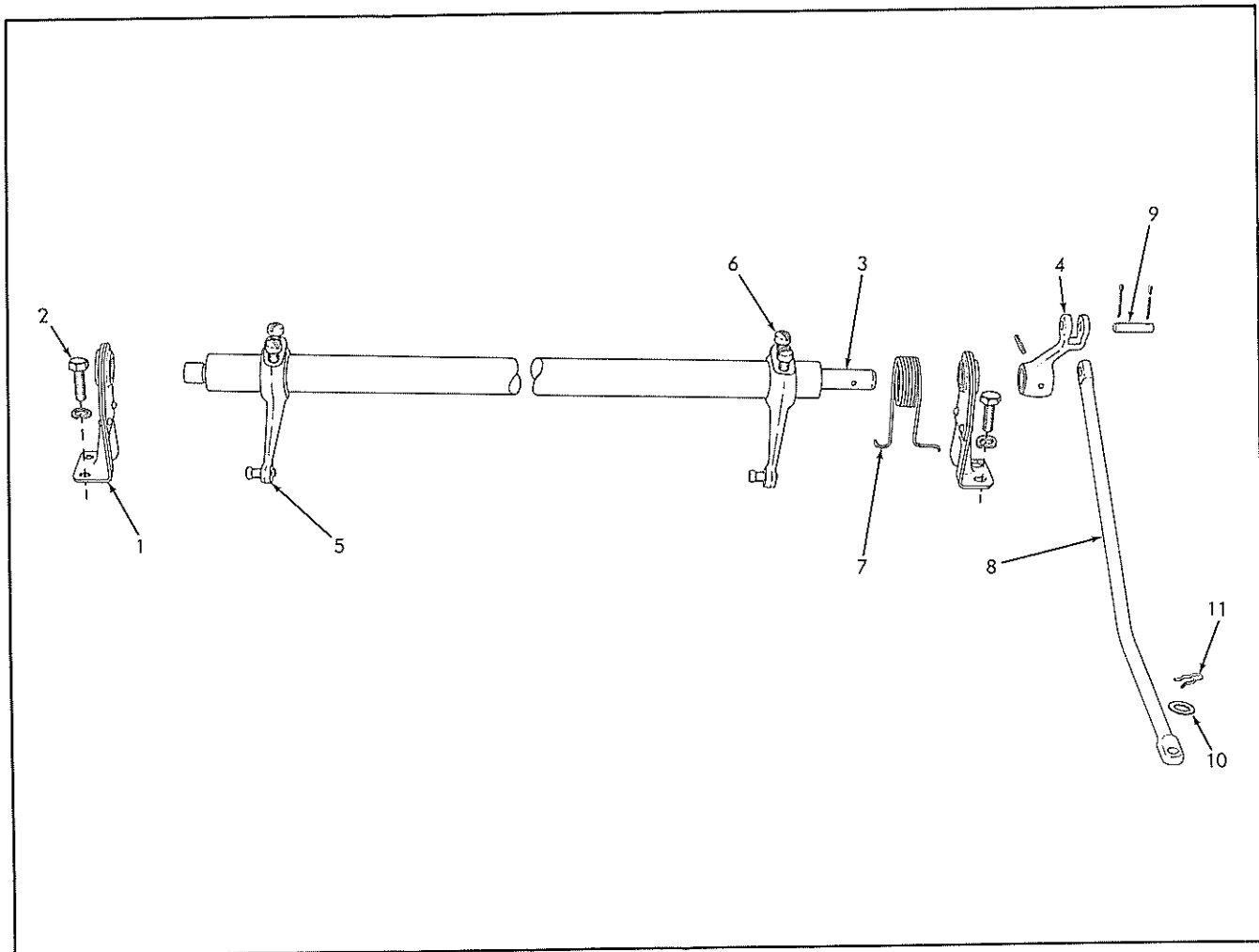
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5150558	1	-	MANIFOLD, upper	
	5150560	-	1	MANIFOLD, upper	
	901652	1	1	PLUG, pipe, 1/4"NPT	
2	5150557	1	-	MANIFOLD, lower	
	5150559	-	1	MANIFOLD, lower	
	901652	1	1	PLUG, pipe, 1/4"NPT	
3	-----	6	8	CONNECTOR ASSEMBLY (See INJECTOR)	



FUEL PUMP 5175667

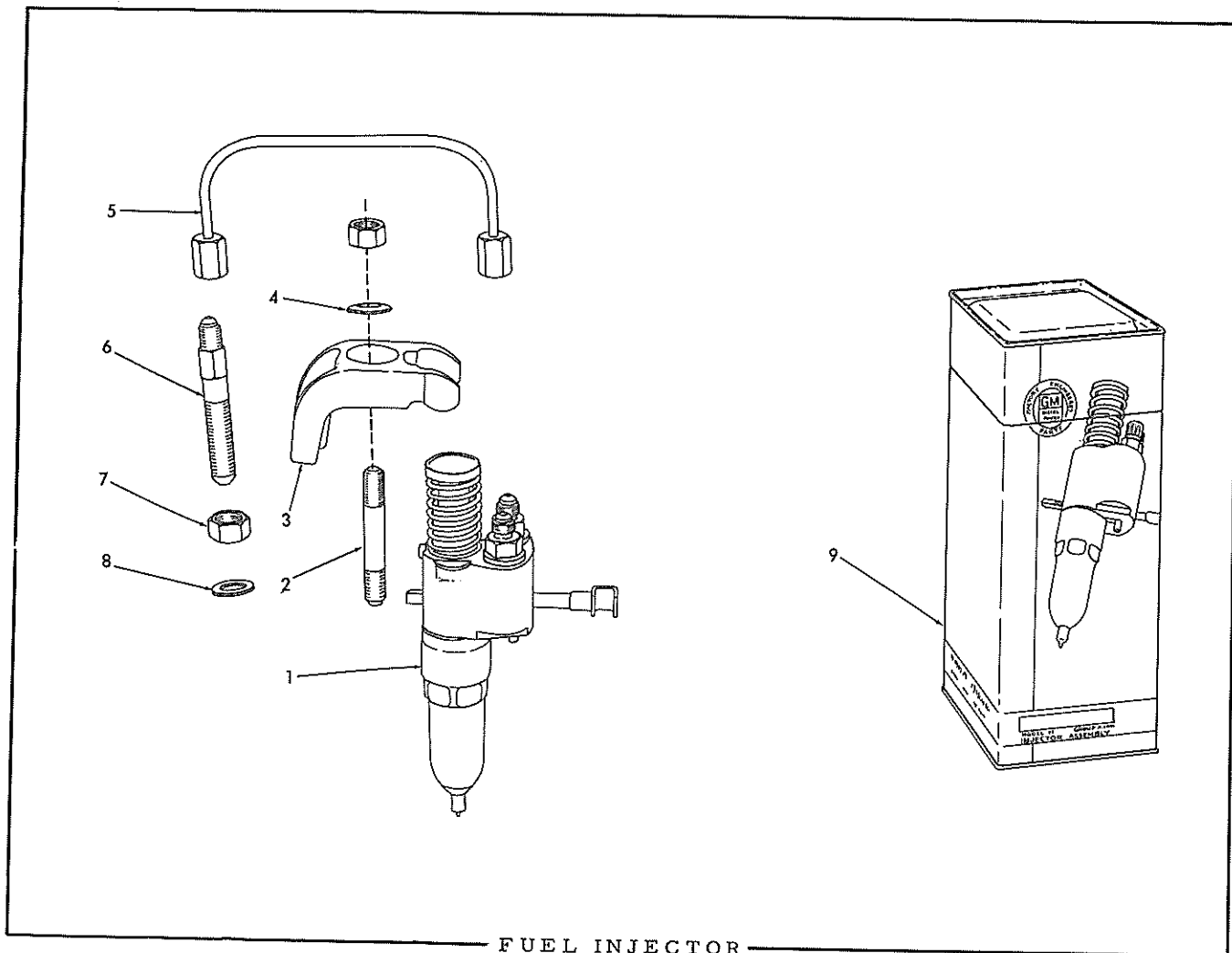
NOTE: See page 43 for listing of complete Pump Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	1	STATOR (Not serviced. Order complete PUMP ASSEMBLY)	
2	{ -----	1	HOUSING (Not serviced. Order complete PUMP ASSEMBLY)	
	914590	2	PLUG expansion, 11/16" diam.	
3	5192813	8	BOLT ASSEMBLY (Includes LOCKWASHER)	
4	2225347	2	PIN, dowel, stator to housing (3/16" x 1")	
5	5192505	2	SEAL, pump shaft	
6	5192504	1	SHAFT, driving gear	
7	5192506	1	GEAR, driving	
8	5192786	1	PIN, shear (1/8" x 13/16")	
9	5192508	1	GEAR, driven	
10	2225351	1	PLUNGER, pressure relief	
11	5192509	1	SPRING, pressure relief plunger	
12	2225353	1	PIN, guiding, pressure relief spring (5/32" x 1")	
13	2225354	1	PLUG, pressure relief spring	
14	2225355	1	GASKET, pressure relief spring plug	



INJECTOR CONTROL

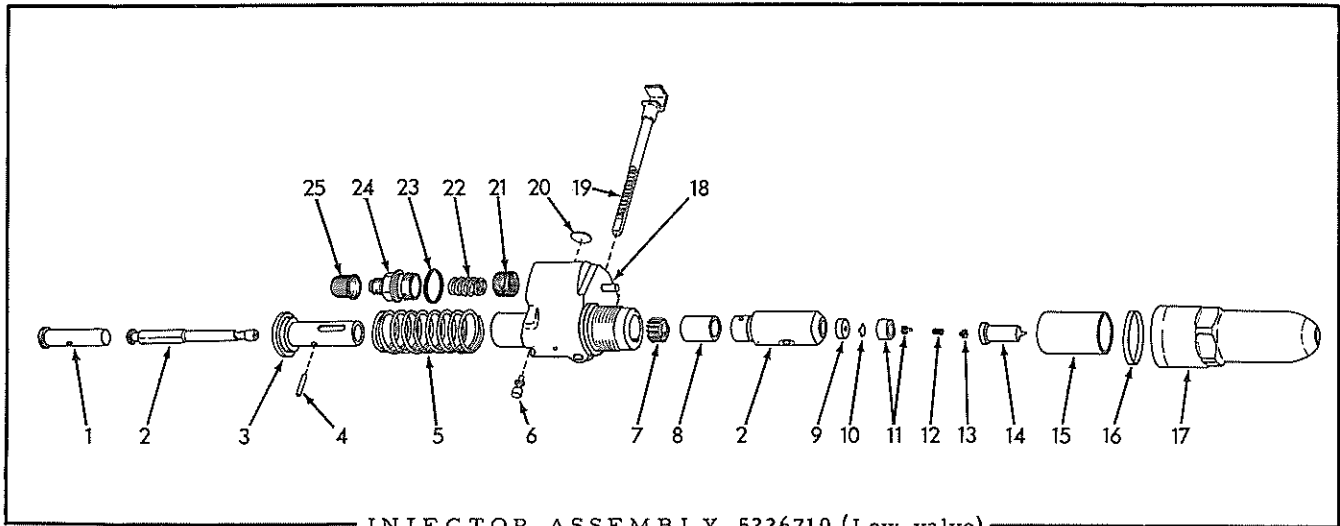
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5161677	2	2	BRACKET ASSEMBLY, control tube (Includes plain BEARING. Serviced only as a unit)	
2	947478	4	4	CAPSCREW, 1/4"NC x 5/8"	
	904204	4	4	LOCKWASHER, 1/4"	
3	5190542	1	-	TUBE ASSEMBLY, injector control (Includes item 4)	
	5190543	-	1	TUBE ASSEMBLY, injector control (Includes item 4)	
4	5150263	1	1	LEVER, injector control	
	910274	1	1	PIN, groove, 1/8" x 3/4"	
5	5150260	3	4	LEVER ASSEMBLY, injector control (Includes item 6)	
6	5153618	6	8	CAPSCREW, fil-hd., 1/4"NF x 3/4"	
7	5150994	1	1	SPRING, injector control tube	
8	5150990	1	1	LINK, governor to injector control lever	
9	5150265	1	1	PIN, control link	
	900970	2	2	PIN, cotter, 1/16" x 1/2"	
10	5150941	1	1	WASHER, control link retaining	
11	040403	1	1	CLIP, control link retaining	



FUEL INJECTOR

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5226710	3	4	INJECTOR ASSEMBLY (Low-valve type. Engines prior to #3A-17881 and #4A-39419. See page 47 for repair parts)	
	5228330	3	4	INJECTOR ASSEMBLY (Tandem-valve type. Engines #3A-17881 thru #3A-19501 and engines #4A-39419 thru #4A-45012. See page 47A for repair parts)	
	5228310	3	4	INJECTOR ASSEMBLY (High-valve type. Started with engines #3A-19502 and #4A-45013. See page 47B for repair parts)	
2	5150251	3	4	STUD, injector clamp (3/8"NC x 3/8"NF x 2-1/2") NUT, 3/8"NF	
	911041	3	4		
3	5150249	3	4	CLAMP, injector	
4	5150250	3	4	WASHER, injector clamp stud	
5	5151121	6	8	PIPE ASSEMBLY, fuel (Includes NUTS)	
6	5188227	6	8	CONNECTOR ASSEMBLY, fuel pipe (Includes nylon INSERT) NUT, elastic stop, 7/16"NF (Engines prior to Nos. 3A-19503 and 4A-44355)	
7	915633	6	8		
8	5150568	6	8	WASHER, fuel pipe connector (Used on engines prior to Nos. 3A-14926 and 4A-33163)	
9	5193171	-	-	CONTAINER (For shipping and storing injector)	



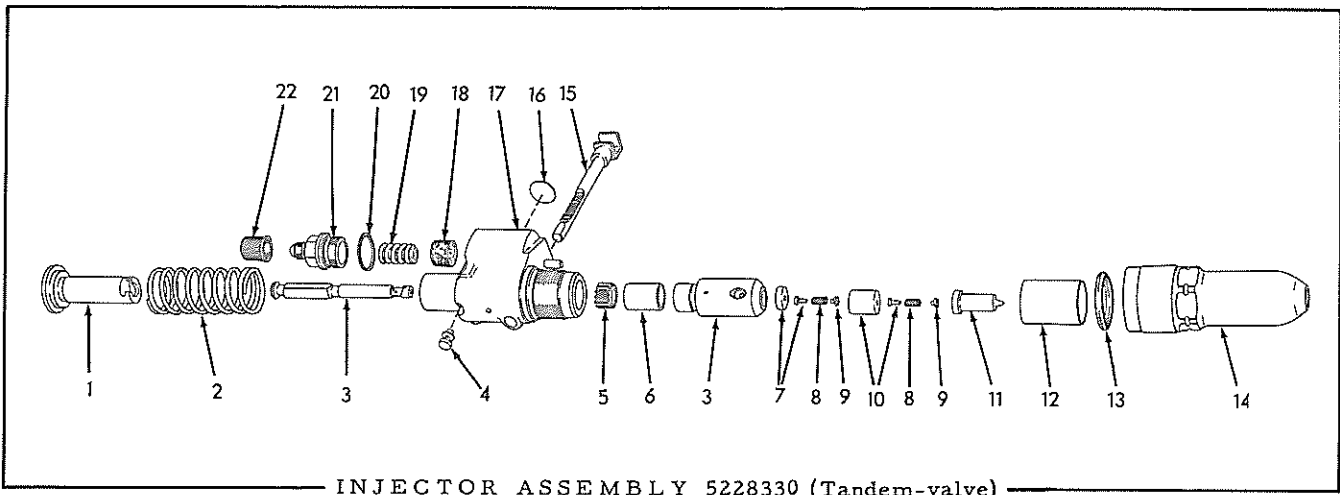


INJECTOR ASSEMBLY 5226710 (Low-valve)

USAGE: See page 46 for listing of complete Injector Assembly

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5226394	1	FOLLOWER, plunger	
2	-----	1	PLUNGER ASSEMBLY (1 PLUNGER and 1 BUSHING 1-15/16" long. Original equipment)(Order PLUNGER ASSEMBLY 5228306 and SPACER 5228319)	
	5228306	1	PLUNGER ASSEMBLY (1 PLUNGER and 1 BUSHING 1-11/16" long. Used for service replacement only. Also see item 9)	
3	5226723	1	GUIDE, plunger follower	
4	5226397	1	PIN, plunger follower guide	
5	5226396	1	SPRING, plunger follower	
6	5226717	1	PIN, plunger stop	
7	5226400	1	GEAR, plunger	
8	5226567	1	RETAINER, plunger gear	
9	5226570	1	SPACER, check valve (1/4" high. Original equipment)	
	5228319	1	SPACER, check valve (3/8" high. Used as service replacement only. See item 2)	
10	5226411	1	VALVE, check	
11	5227323	1	VALVE ASSEMBLY, fuel spray tip (1 VALVE and 1 SEAT. Serviced only as a unit)	5227324
12	5227210	1	SPRING, spray tip valve	5227324
13	5227318	1	STOP, spray tip valve	5227324
14	5227321	1	TIP, fuel spray	5227324
15	5226565	1	DEFLECTOR, fuel spill	
16	5226564	1	RING, nut sealing	5193221
17	5226563	1	NUT	
18	5227931	1	BODY ASSEMBLY (Consists of 1 BODY and 1 PIN. Serviced only as a unit)	
19	5226719	1	RACK, control	
20	5227276	1	TAG, identification (60mm., blue)	
21	5228013	2	ELEMENT, fuel filtering	5193221
22	5226415	2	SPRING, retaining, fuel filtering element	
23	5226186	2	GASKET, fuel filtering element cap	5193221
24	5226413	2	CAP, fuel filtering element	
25	5226414	2	CAP, shipping (Remove when installing INJECTOR)	5193221

NOTE: Quantities indicated are for one (1) Injector Assembly only.

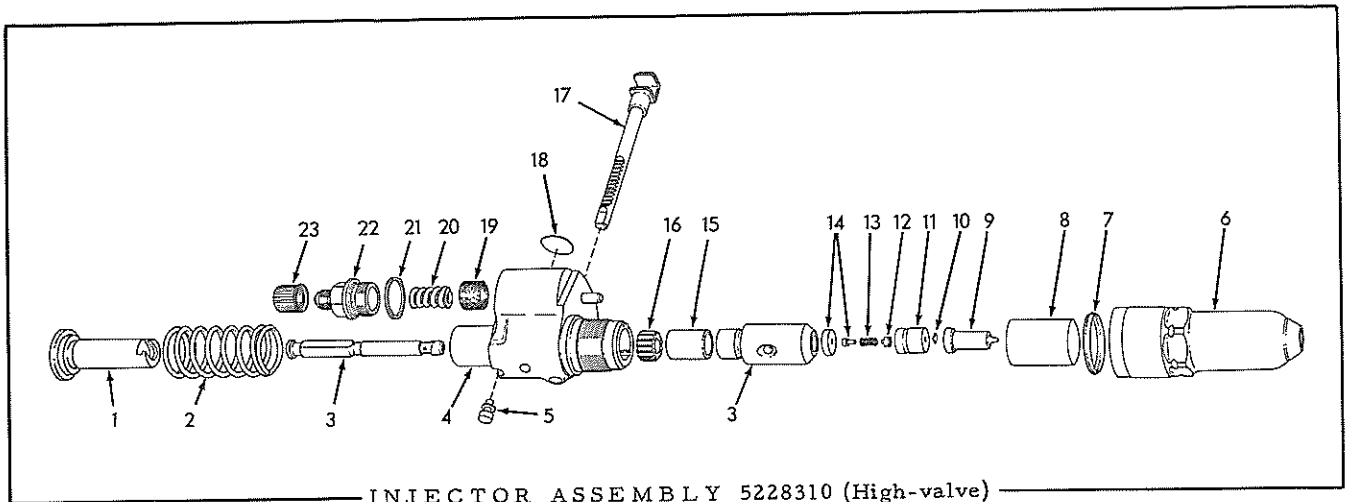


INJECTOR ASSEMBLY 5228330 (Tandem-valve)

USAGE: See page 46 for listing of complete Injector Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5228104	1	FOLLOWER, plunger	
2	5226396	1	SPRING, follower	
3	5228306	1	PLUNGER ASSEMBLY (Each consists of 1 PLUNGER, 1 BUSHING and 1 PIN. Serviced only as a unit)	
4	5226717	1	PIN, follower stop	
5	5226400	1	GEAR, plunger	
6	5226567	1	RETAINER, plunger gear	
7	5228107	1	VALVE ASSEMBLY, upper (1 VALVE and 1 SEAT. Serviced only as a unit)	5228183
8	5227210	2	SPRING, valve	5228183
9	5227318	2	STOP, valve	5228183
10	5228108	1	VALVE ASSEMBLY, lower (1 VALVE and 1 SEAT. Serviced only as a unit)	5228183
11	5227321	1	TIP, spray	5228183
12	5228109	1	DEFLECTOR, fuel spill	
13	5226564	1	RING, nut sealing	5193221
14	5228102	1	NUT, retaining	
15	5226719	1	RACK, control	
16	5228329	1	TAG, identification (TV6)	
17	5227931	1	BODY ASSEMBLY (Includes 1 PIN. Serviced only as a unit)	
18	5228013	2	ELEMENT, fuel filtering	5193221
19	5226415	2	SPRING, retaining, fuel filtering element	
20	5226186	2	GASKET, fuel filtering element cap	5193221
21	5226413	2	CAP, fuel filtering element	
22	5226414	2	CAP, shipping (Remove when installing injector)	5193221

NOTE: Quantities indicated are for one (1) Injector Assembly only.

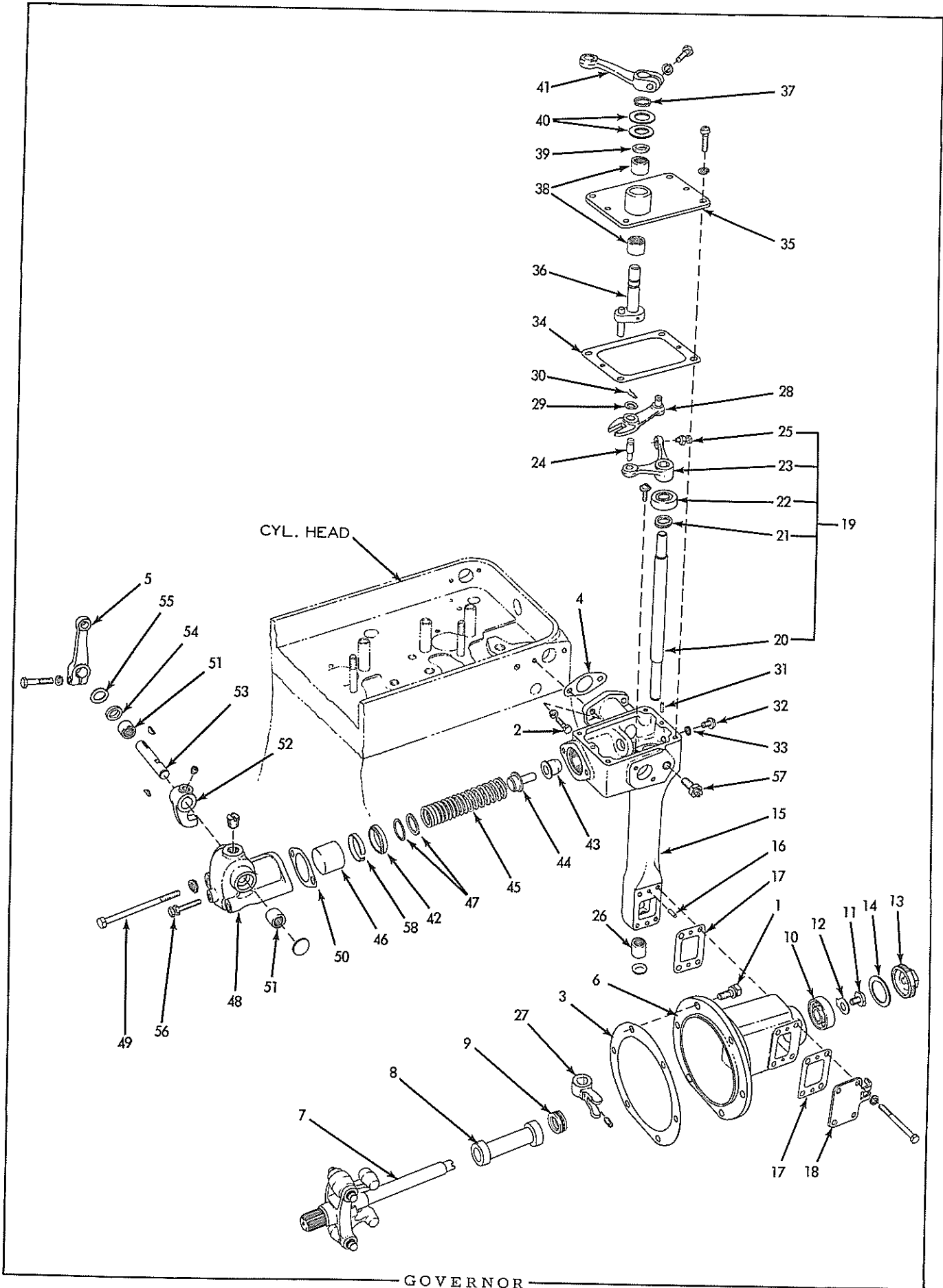


INJECTOR ASSEMBLY 5228310 (High-valve)

USAGE: See page 46 for listing of complete Injector Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5228104	1	FOLLOWER, plunger	
2	5228292	1	SPRING, follower	
3	5228306	1	PLUNGER ASSEMBLY (Each consists of 1 PLUNGER, 1 BUSHING and 1 PIN. Serviced only as a unit)	
4	5227931	1	BODY ASSEMBLY (Includes 1 PIN. Serviced only as a unit)	
5	5226717	1	PIN, follower stop	
6	5228102	1	NUT, retaining	
7	5226564	1	RING, nut sealing	5193221
8	5228109	1	DEFLECTOR, fuel spill	
9	5228296	1	TIP, spray	5228301
10	5226411	1	VALVE, check	
11	5228294	1	CAGE, valve	
12	5227318	1	STOP, valve	5228301
13	5227210	1	SPRING, valve	5228301
14	5228316	1	VALVE ASSEMBLY (1 VALVE and 1 SEAT. Serviced only as a unit)	5228301
15	5226567	1	RETAINER, plunger gear	
16	5226400	1	GEAR, plunger	
17	5226719	1	RACK, control	
18	5228298	1	TAG, identification (HV6)	
19	5228013	2	ELEMENT, fuel filtering	5193221
20	5226415	2	SPRING, retaining, fuel filtering element	
21	5226186	2	GASKET, fuel filtering element cap	5193221
22	5226413	2	CAP, fuel filtering element	
23	5226414	2	CAP, shipping (Remove when installing injector)	5193221

NOTE: Quantities indicated are for one (1) Injector Assembly only.



GOVERNOR

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
NOTE: Where parts are different on the Models AD30 and AD40, only the AD40 part is illustrated. The AD30 part is identical, however, except for difference in length.					
-	5174438	1	-	GOVERNOR ASSEMBLY (Consists of items 6 thru 58)	
-	5174440	-	1	GOVERNOR ASSEMBLY (Consists of items 6 thru 58)	
1	5171159	6	6	BOLT ASSEMBLY (Includes copper WASHER)	
2	034964	2	2	CAPSCREW, 1/4"NC x 3/4"	
	904204	2	2	LOCKWASHER, 1/4"	
3	5150246	1	1	GASKET, governor to blower . . . . .	074688, 89
4	5150269	1	1	GASKET, governor to cylinder head . . . . .	074688, 89 5193116, 17
5	5151519	1	1	LEVER, variable speed control	
	905657	1	1	CAPSCREW, 1/4"NC x 1"	
	904204	1	1	LOCKWASHER, 1/4"	
6	5165781	1	-	HOUSING, weight	
	5183285	-	1	HOUSING, weight	
7	5174447	1	-	WEIGHT AND CARRIER ASSEMBLY (Includes SHAFT. Serviced only as a unit)	
	5174448	-	1	WEIGHT AND CARRIER ASSEMBLY (Includes SHAFT. Serviced only as a unit)	
8	5154501	1	-	RISER (1-3/8" long)	
	5154502	-	1	RISER (3" long)	
9	074697	1	1	BEARING, riser thrust	
10	074698	1	1	BEARING, ball, weight shaft	
11	5150884	1	1	SCREW, retaining	
12	5150897	1	1	LOCKWASHER	
13	5183268	1	1	CAP, weight housing	
14	5165221	1	1	GASKET, weight housing cap	
15	5158904	1	1	HOUSING ASSEMBLY, control shaft (Includes items 19 thru 30 and PLUG indented below)	
	910002	1	1	PLUG, expansion, 3/4" diam.	
	913299	4	4	CAPSCREW, 1/4"NC x 2-1/4" (Also attaches weight housing cover)	
	904204	4	4	LOCKWASHER, 1/4"	
16	5150942	2	2	PIN, dowel, control housing to weight housing	
17	5150890	2	2	GASKET, weight housing (housing cover (1), control housing (1) . . . . .	074688, 89 5193116, 17
18	5163514	1	1	COVER, weight housing	
19	5154438	1	1	SHAFT ASSEMBLY, control (Consists of items 20 thru 25)	
20	5154435	1	1	SHAFT, control	
21	5159080	1	1	WASHER, control shaft	
22	042990	1	1	BEARING, ball, control shaft, upper	
--	913048	1	1	SCREW, machine, #10-24NC x 7/16"	
--	906957	1	1	LOCKWASHER, int-tooth, #10	
--	910243	1	1	WASHER, plain, SAE std., #10	
23	5154422	1	1	LEVER, control shaft	
24	5150943	1	1	PIN, control shaft lever	

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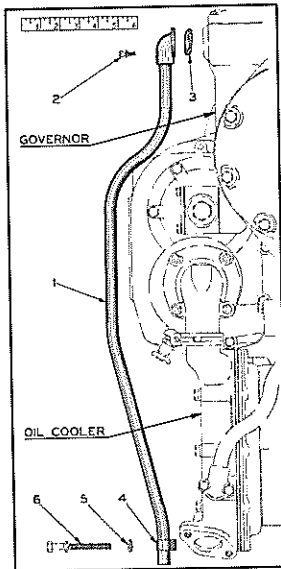
GOVERNOR (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
25	5150898	1	1	SCREW, adjusting (hex head, 1/4"NF x 5/8")	
	910267	1	1	NUT, jam, 1/4"NF	
26	074699	1	1	BEARING, needle, control shaft (Engines prior to #3A-18977 and #4A-42249)	
	5188611	1	1	BUSHING, control shaft (Started with engines #3A-18977 and #4A-42249)	
27	5185605	1	1	FORK, control shaft	
	913889	1	1	SETSCREW, socket head, cup point, 1/4"NF x 1/2"	
28	5150394	1	1	LEVER ASSEMBLY, differential (Includes PIN)	
29	5150941	1	1	WASHER, retaining, differential lever	
30	040403	1	1	CLIP, retaining, differential lever	
31	5150942	2	2	PIN, dowel, control housing cover	
32	048384	1	1	SCREW, machine, 5/16"NF x 3/8"	
33	040401	1	1	GASKET, control housing screw (copper)	
34	5150889	1	1	GASKET, control shaft housing cover	074688, 89 5193116, 17
35	5174412	1	1	COVER ASSEMBLY, control housing (Includes items 38 and 39)	
	901228	4	4	CAPSCREW, fil-hd., 1/4"NC x 3/4"	
	904204	4	4	LOCKWASHER, 1/4"	
36	5174425	1	1	SHAFT ASSEMBLY (Includes 1 LEVER and 2 PINS)	
37	5174429	1	1	RING, shaft retaining	
38	043021	2	2	BEARING, needle, fuel shut-off lever shaft	
39	5176557	1	1	SEAL, shut-off lever shaft	
40	5153060	2	2	RETAINER, shut-off lever shaft	
41	5151519	1	1	LEVER, shut-off	
	905657	1	1	CAPSCREW, 1/4"NC x 1"	
	904204	1	1	LOCKWASHER, 1/4"	
42	5171784	1	1	STOP, variable speed spring retainer (Used only when necessary to limit high speed)	
43	5152939	1	1	GUIDE, variable speed spring plunger	
44	5152938	1	1	PLUNGER, variable speed spring	
45	5152940	1	1	SPRING, variable speed	
46	5152941	1	1	RETAINER, variable speed spring	
47	5152962	1	1	SHIM, variable speed spring (.010" thick. Use as req'd)	
	5153904	1	1	SHIM, variable speed spring (.078" thick. Use as req'd)	
48	5172557	1	1	HOUSING, variable speed spring	
	910002	1	1	PLUG, expansion, 3/4" diam.	
	911081	1	1	PLUG, pipe, slotted head, 1/8"NPT	
49	040378	2	2	CAPSCREW, 5/16"NC x 3-1/2"	
	904205	2	2	LOCKWASHER, 5/16"	
50	5152944	1	1	GASKET, variable speed spring housing	074688, 89
51	043021	2	2	BEARING, needle, variable speed spring housing	
52	5176629	1	1	LEVER, variable speed spring	
	915476	1	1	SETSCREW, socket head, dog-pt., 5/16"NF x 1/4"	

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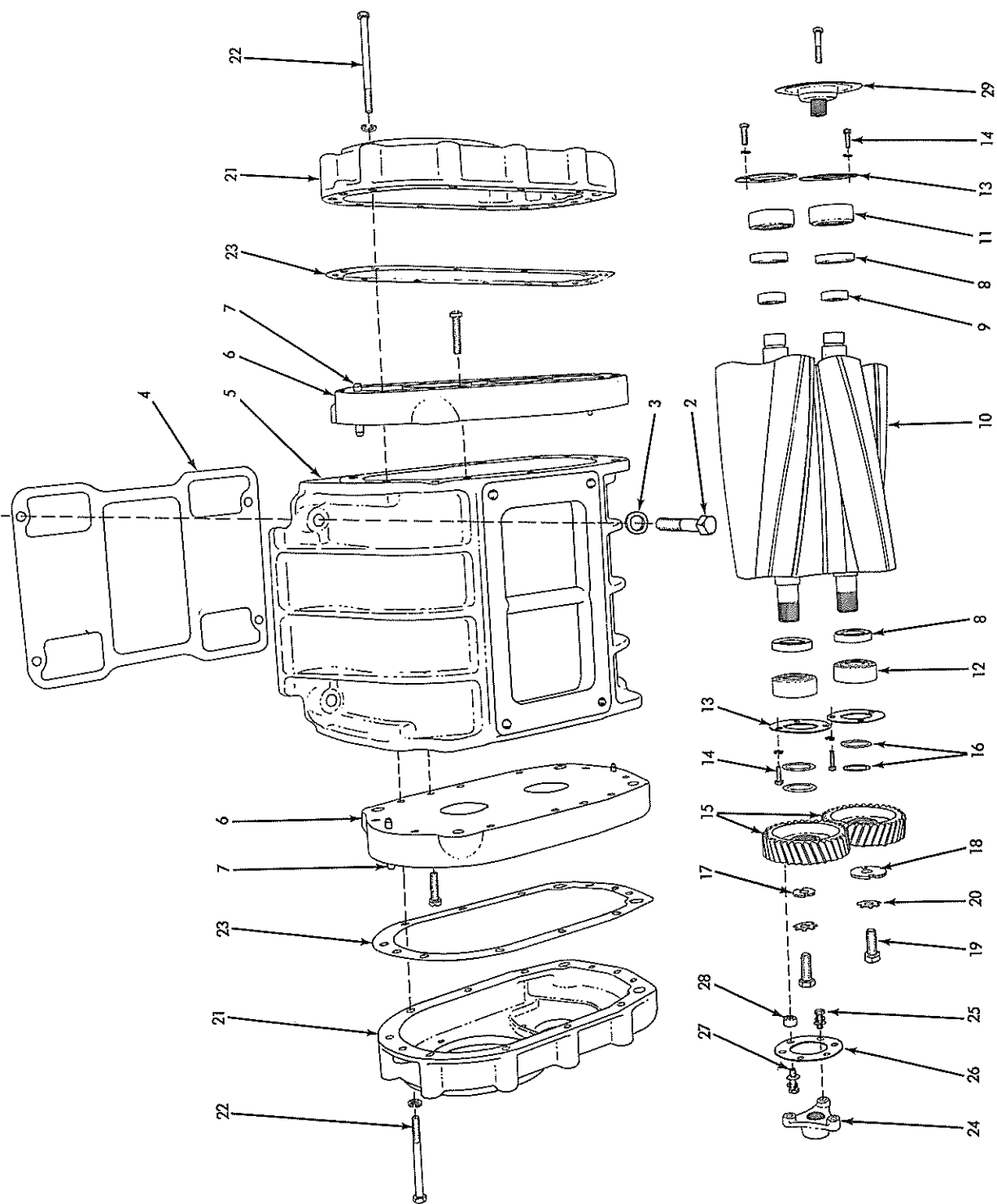
GOVERNOR (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
53	5173964	1	1	SHAFT, variable speed lever	
	910173	2	2	KEY, #2 woodruff, 3/32" x 1/2"	
54	5153007	1	1	PACKING, variable speed lever shaft	
55	5152932	1	1	WASHER, variable speed lever shaft packing	
56	5179613	1	1	BOLT, idling speed adjustment (1/4"NC x 1-1/4")	
	911325	1	1	NUT, jam, 1/4"NC	
57	5177083	1	1	SCREW ASSEMBLY, buffer (Consists of 1 SCREW, 1 SPRING and 1 NUT. Serviced only as a unit)	
58	-----	1	1	STOP, variable speed spring retainer (Not used on A-C graders. Remove and discard)	



ENGINE BREATHING PIPE

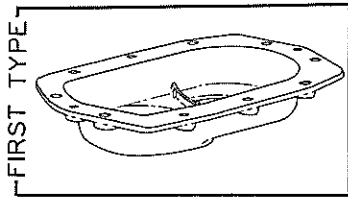
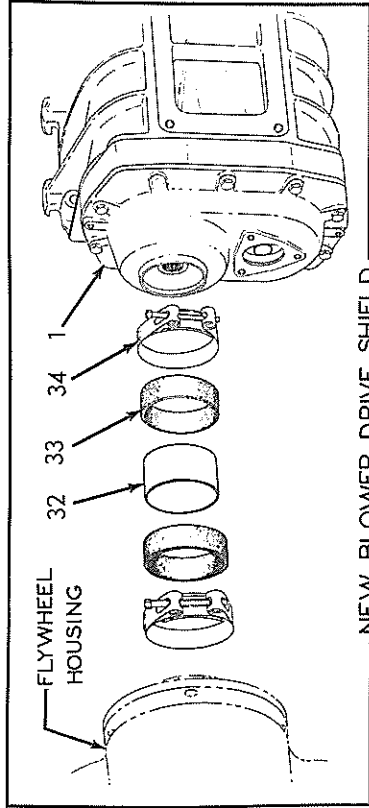
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5154104	1	PIPE, breathing	
2	901217	2	SCREW, machine, fil-hd., #10NC x 5/8"	
	904203	2	LOCKWASHER, #10	
3	5150900	1	GASKET, breathing pipe . . . . .	074688, 89 5193116, 17
4	040404	1	CLIP, breathing pipe	
5	910335	1	WASHER, plain, SAE std., 5/16"	
6	-----	1	CAPSCREW (See OIL COOLER)	



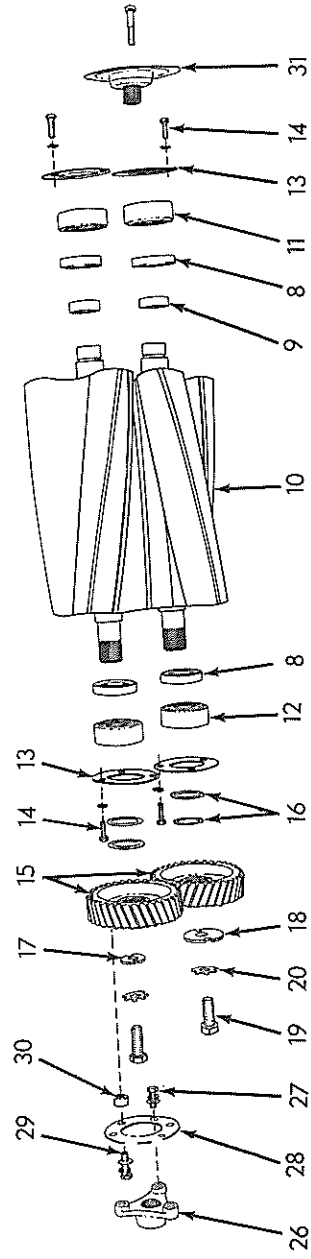
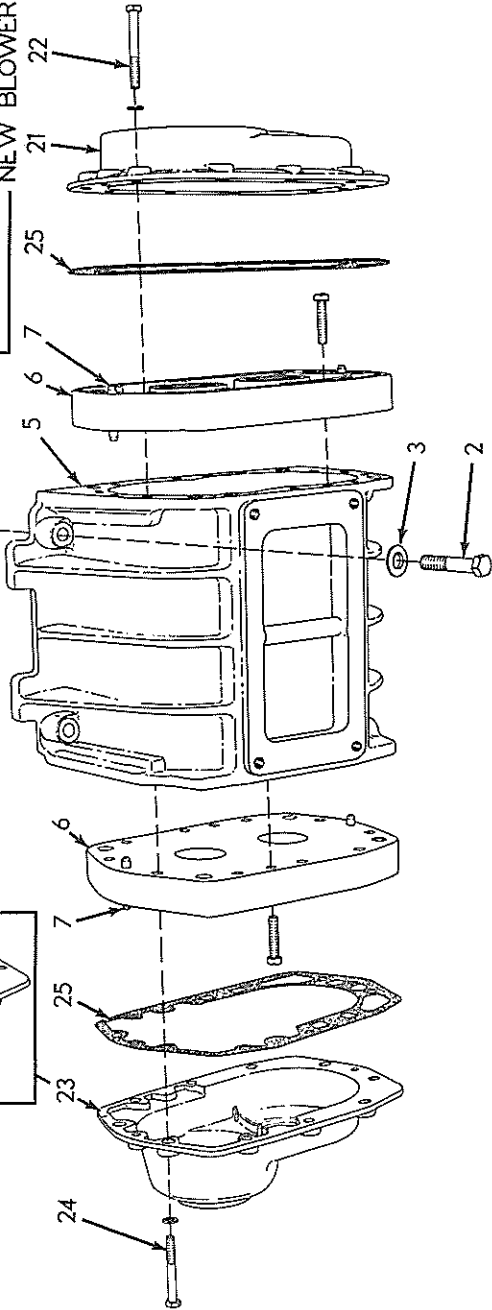
BLOWER



ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
B L O W E R					
NOTE: Where parts are different on the Models AD30 and AD40, only the AD40 part is illustrated. The AD30 part is identical, however, except for difference in length.					
1	{ 5158145	1	-	BLOWER ASSEMBLY (Consists of items 5 thru 29)	
	{ 5158146	-	1	BLOWER ASSEMBLY (Consists of items 5 thru 29)	
2	041916	4	4	CAPSCREW, 7/16"NC x 2"	
3	5150238	4	4	WASHER, plain	
4	{ 5150235	1	-	GASKET, blower to cylinder block . . . . .	074688
	{ 5150236	-	1	GASKET, blower to cylinder block . . . . .	074689
5	{ 5155865	1	-	HOUSING	
	{ 5157199	-	1	HOUSING	
6	{ 5150218	2	2	PLATE ASSEMBLY, end (Includes items 7 and 8)	
	{ 901240	4	4	CAPSCREW, fil-hd., 5/16"NC x 1-1/2"	
7	-----	4	4	PIN, dowel (Not serviced separately)	
8	{ 5150220	4	4	SEAL, oil (1-3/16" shaft diam. Original Equipment)	
	{ 5192438	4	4	SEAL, oil (1-3/8" shaft diam. For use when rotor shaft is too worn to permit use of standard SEAL 5150220. Also order SPACER 5192439 to make initial installation)	
9	5192439	4	4	SPACER (Provides new seal surface for worn rotor shafts. Requires use of oil SEAL 5192438)	
10	{ 5192793	1	-	ROTOR SET (Consists of 1 upper ROTOR and 1 lower ROTOR, matched for proper operating clearance)	
	{ 5192794	-	1	ROTOR SET (Consists of 1 upper ROTOR and 1 lower ROTOR, matched for proper operating clearance)	
11	7450168	2	2	BEARING, roller, front	
12	042991	2	2	BEARING, ball, rear	
13	5179017	4	4	RETAINER, bearing	
14	{ 034964	12	12	CAPSCREW, 1/4"NC x 3/4"	
	{ 904204	12	12	LOCKWASHER, 1/4"	
15	5192234	1	1	GEAR SET (Gears are matched and are not serviced separately)	
16	{ 5150372	-	-	SHIM, rotor gear (.002" thick. Use as req'd)	
	{ 5153938	-	-	SHIM, rotor gear (.003" thick. Use as req'd)	
	{ 5150855	-	-	SHIM, rotor gear (.005" thick. Use as req'd)	
	{ 5150856	-	-	SHIM, rotor gear (.010" thick. Use as req'd)	
17	5154400	1	1	WASHER, retaining, upper rotor gear	
18	-----	1	1	DISC, coupling (See FUEL PUMP AND DRIVE)	
19	5154399	2	2	CAPSCREW, hex-hd., 1/2"NF x 1-1/4"	
20	5154398	2	2	LOCKWASHER, special	
21	5150233	2	2	COVER, end plate	
22	{ 040378	20	20	CAPSCREW, 5/16"NC x 3-1/2"	
	{ 904205	20	20	LOCKWASHER, 5/16"	
23	5150234	2	2	GASKET, end plate cover . . . . .	074688, 89
24	5173366	1	1	HUB, driving	
25	{ 5173362	3	3	BOLT (hex-hd., 5/16"NF x 3/4")	
	{ 904205	3	3	LOCKWASHER, 5/16"	
	{ 910335	3	3	WASHER, plain, SAE std., 5/16"	
26	5173365	1	2	PLATE, driving hub	
27	{ 5173363	3	3	BOLT (hex-hd., 5/16"NF x 1")	
	{ 904205	3	3	LOCKWASHER, 5/16"	
	{ 910335	3	3	WASHER, plain, SAE std., 5/16"	
28	5173364	3	3	SPACER, driving hub plate	
29	-----	1	1	COUPLING (See WATER PUMP)	



NEW BLOWER DRIVE SHIELD



BLOWER (Service replacement only)

B L O W E R

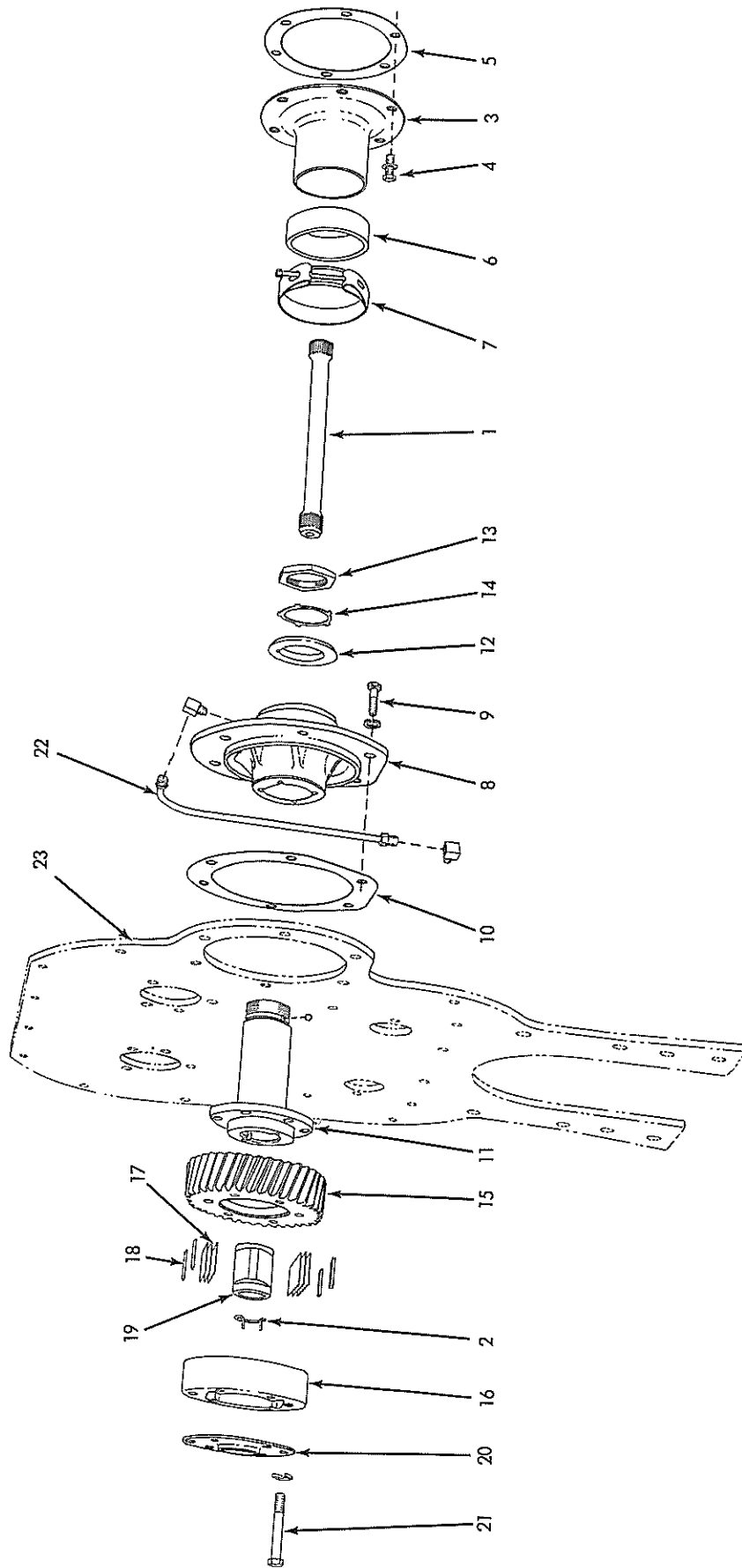
USAGE: Service replacement only. See previous pages for design used as original equipment.

\* Used prior to (Model AD30)  
 \*\* Used prior to August 1959 (Model AD40)  
 \*\*\* Effective (Model AD30)  
 \*\*\*\* Effective August 1959 (Model AD40)

ITEM	PART NUMBER	QTY.				DESCRIPTION	PACKAGE NUMBER	
		*	**	***	****			
-	5114467	1	-	-	-	BLOWER ASSEMBLY (Consists of items 5 thru 31)		
-	5114468	-	1	-	-	BLOWER ASSEMBLY (Consists of items 5 thru 31)		
1	{	5120991	-	-	1	-	BLOWER ASSEMBLY (Consists of items 5 thru 31)	
		5120992	-	-	-	1	BLOWER ASSEMBLY (Consists of items 5 thru 31)	
2	041916	4	4	4	4	CAPSCREW, 7/16"NC x 2"		
3	5150238	4	4	4	4	WASHER, plain		
4	{	5150235	1	-	1	-	GASKET, blower to cylinder block . . . . . 058034 074688	
		5115657	-	1	-	1	GASKET, blower to cylinder block . . . . . 058037 074689	
5	{	5155865	1	-	1	-	HOUSING	
		5114200	-	1	-	1	HOUSING	
6		5193719	2	2	2	2	PLATE ASSEMBLY, end (Includes item 7)	
		901240	4	4	4	4	CAPSCREW, fil-hd., 5/16"NC x 1-1/2"	
7	-----	4	4	4	4	PIN, dowel (Not serviced separately)		
8	{	5150220	4	4	4	4	SEAL, oil (1-3/16" shaft diam. Original equipment)	
		5192438	4	4	4	4	SEAL, oil (1-3/8" shaft diam. For use when rotor shaft is too worn to permit use of standard SEAL 5150220. Also order SPACER 5192439 to make initial installation)	
9	5192439	4	4	4	4	SPACER (Provides new seal surface for worn rotor shafts. Requires use of oil SEAL 5192438)		
10	{	5192793	1	-	1	-	ROTOR SET (Consists of 1 upper rotor and 1 lower rotor, matched for operating clearance)	
		5192794	-	1	-	1	ROTOR SET (Consists of 1 upper rotor and 1 lower rotor, matched for operating clearance)	
11	7451054	2	2	2	2	BEARING, roller, front		
12	042991	2	2	2	2	BEARING, ball, rear		
13	5199017	4	4	4	4	RETAINER, bearing		
14		034964	12	12	12	12	CAPSCREW, 1/4"NC x 3/4"	
		904204	12	12	12	12	LOCKWASHER, 1/4"	

						BLOWER (Continued)			
ITEM	PART NUMBER	* QTY.	**	***	****	DESCRIPTION	PACKAGE NUMBER		
15	5192234	1	1	1	1	GEAR SET (Gears are matched and are not serviced separately)			
16	5150372	-	-	-	-	SHIM, rotor gear (.002" thick. Use as req'd)			
	5153938	-	-	-	-	SHIM, rotor gear (.003" thick. Use as req'd)			
	5150855	-	-	-	-	SHIM, rotor gear (.005" thick. Use as req'd)			
	5150856	-	-	-	-	SHIM, rotor gear (.010" thick. Use as req'd)			
17	5154400	1	1	1	1	WASHER, retaining, upper rotor gear			
18	-----	1	1	1	1	DISC, coupling (See FUEL PUMP AND DRIVE)			
19	070469	2	2	2	2	CAPSCREW, gear retaining (1/2"NF x 1-1/4")			
20	5154398	2	2	2	2	LOCKWASHER, gear retaining capscrew			
21	5114442	1	1	1	1	COVER, end plate, front			
22	5115190	10	10	10	10	BOLT ASSEMBLY, 5/16"NC x 2-1/2" (Includes lockwasher)			
23	5114442	1	1	-	-	COVER, end plate, rear			
	5120726	-	-	1	1	COVER, end plate, rear			
24	5115190	10	10	10	10	BOLT ASSEMBLY, 5/16"NC x 2-1/2" (Includes lockwasher)			
25	5114726	2	2	2	2	GASKET, end plate cover			
26	5173366	1	1	1	1	HUB, driving			
27	5173362	3	3	3	3	BOLT (5/16"NF x 3/4")			
	904205	3	3	3	3	LOCKWASHER, 5/16"			
	910335	3	3	3	3	WASHER, plain, SAE std., 5/16"			
28	5173365	1	2	1	2	PLATE, driving hub			
29	5173363	3	3	3	3	BOLT (5/16"NF x 1")			
	904205	3	3	3	3	LOCKWASHER, 5/16"			
	910335	3	3	3	3	WASHER, plain, SAE std., 5/16"			
30	5173364	3	3	3	3	SPACER, driving hub plate			
31	-----	1	1	1	1	COUPLING (See WATER PUMP )			
32	5118354	-	-	-	1	TUBE, blower drive shaft			
33	5172865	-	-	1	2	SEAL, blower drive shaft tube			
34	5173695	-	-	1	2	CLAMP, tube seal			

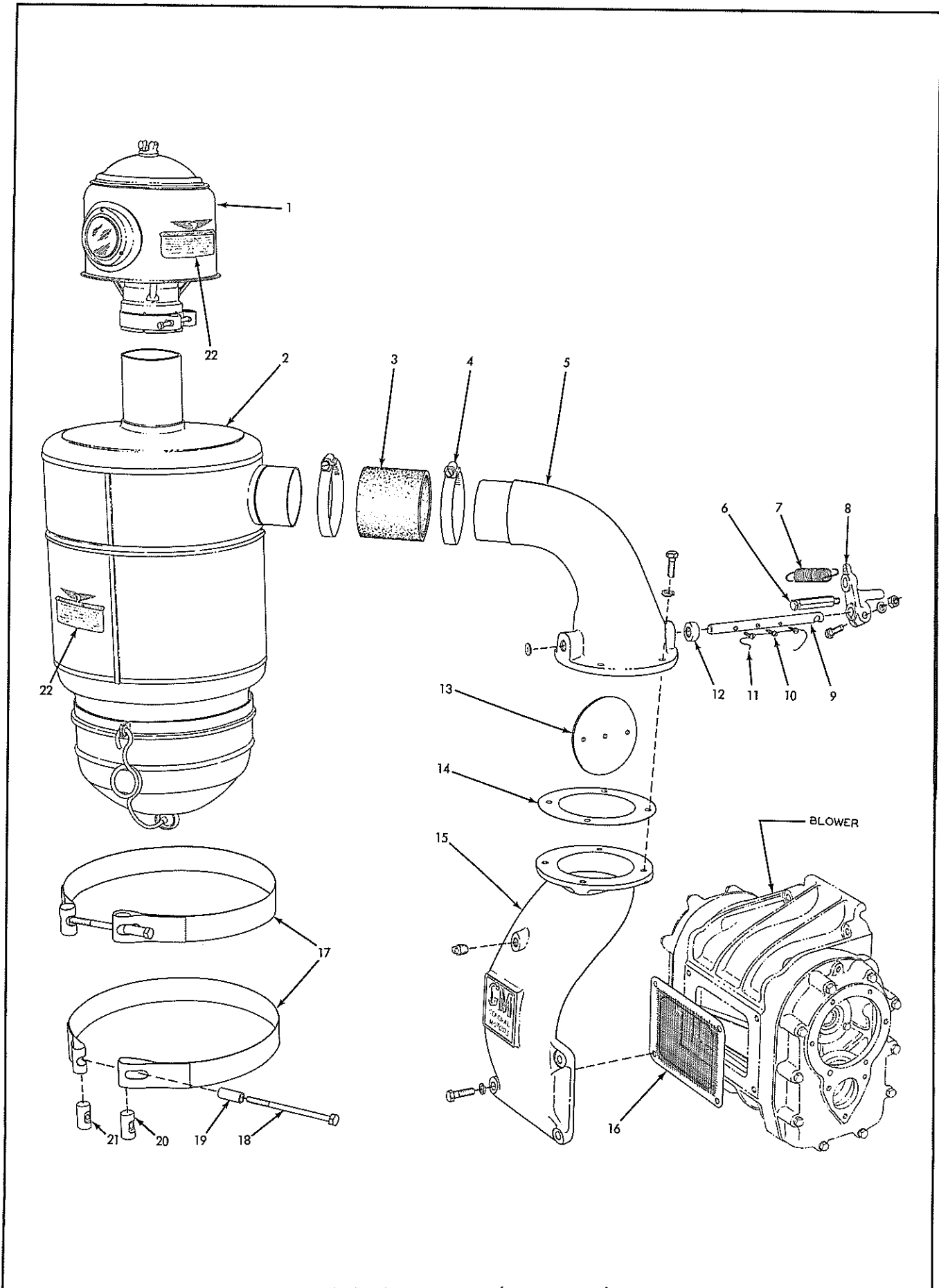
MEMO



BLOWER DRIVE

BLOWER DRIVE

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5154638	1	-	SHAFT (6-3/16" long)	
	5154639	-	1	SHAFT (7-13/16" long)	
2	5167727	1	1	RING, snap, drive shaft	
3	5172867	1	-	COVER, drive shaft (1-5/16" long)	
	5172868	-	1	COVER, drive shaft (2-15/16" long)	
4	5171159	6	6	BOLT ASSEMBLY (Includes copper WASHER)	
5	5150246	1	1	GASKET, drive shaft cover . . . . .	074688, 89
6	5172865	1	1	SEAL, drive shaft cover . . . . .	074688, 89
7	5173695	1	1	CLAMP, cover seal	
8	5172870	1	1	SUPPORT ASSEMBLY (Bushing is not serviced separately)	
9	5153347	2	2	CAPSCREW, 3/8"NF x 13/16"	
	904206	2	2	LOCKWASHER, 3/8"	
10	5150286	1	1	GASKET, support. . . . .	074688, 89
11	5150279	1	1	HUB, gear	
12	5158901	1	1	WASHER, thrust	
	912738	1	1	BALL, steel, 7/32" diam.	
13	5152804	1	1	NUT, gear hub locking	
14	5150281	1	1	LOCKWASHER, gear hub nut	
15	5173320	1	1	GEAR (40 teeth)	
16	5150345	1	1	SUPPORT, coupling	
17	5150347	42	42	SPRING, coupling	
18	5150346	4	4	SEAT, coupling spring	
19	5150348	1	1	CAM, coupling	
20	5150349	1	1	RETAINER, coupling	
21	5150350	6	6	BOLT, coupling (5/16"NF x 2")	
	904205	6	6	LOCKWASHER, 5/16"	
22	5150433	1	1	PIPE ASSEMBLY, oil (Includes NUTS)	
	913039	1	1	ELBOW, inverted flare, male, 90°, 1/4" tube, 1/8" NPT	
22	913040	1	1	ELBOW, inverted flare, male, 90°, 1/4" tube, 1/4" NPT	
				NPT	
23	-----	1	1	PLATE, end, cylinder block (See FLYWHEEL HOUSING)	



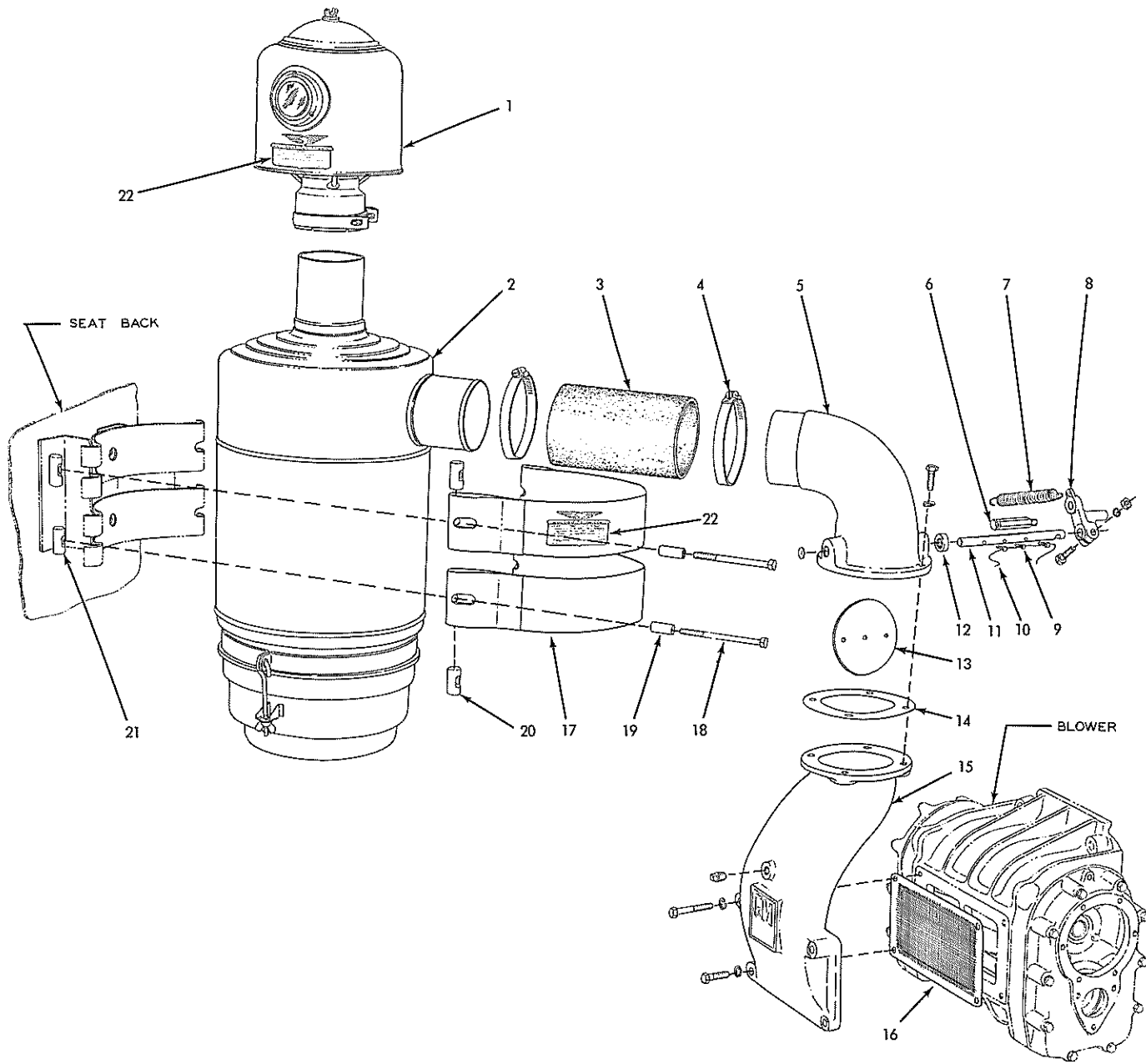
AIR CLEANER (Model AD30)



AIR CLEANER

USAGE: Model AD30 Graders only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	044988	1	PRE-CLEANER ASSEMBLY, air (See page 60 for repair parts)	
2	047883	1	CLEANER ASSEMBLY, air (See page 61 for repair parts)	
3	041557	1	HOSE, connecting (3" I. D. x 3-1/4" long)	
4	605828	2	CLAMP, hose (3-3/8" diam.)	
5	605732	1	ELBOW, air intake	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
	910001	1	PLUG, expansion, 5/8" diam.	
6	605977	1	ANCHOR, lever retracting spring	
7	049108	1	SPRING, retracting, air shut-off valve lever	
8	604243	1	LEVER, air shut-off	
	910862	1	CAPSCREW, 3/8"NF x 1-1/2"	
	904206	1	LOCKWASHER, 3/8"	
	911041	1	NUT, 3/8"NF	
9	040161	1	SHAFT, air shut-off valve	
10	040162	3	SCREW, air shut-off valve (#10-24NC x 1/2")	
11	040163	1	WIRE, locking (1/32" x 7")	
12	040302	1	SEAL, dust, air shut-off valve shaft	
13	040164	1	VALVE, air shut-off	
14	040118	1	GASKET, air intake elbow . . . . .	074688
15	065975	1	HOUSING, air inlet	
	901652	1	PLUG, pipe, 1/4"NPT (Primer connection hole)	
	903631	4	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	4	LOCKWASHER, 3/8"	
16	5150779	1	SCREEN, blower (Also serves as air inlet housing GASKET) . . . . .	074688
17	052090	2	BAND, air cleaner mounting	
18	053668	2	CAPSCREW, 3/8"NC x 5"	
19	053667	2	SPACER, mounting band screw	
20	050735	2	PIN, mounting band (plain hole)	
21	050734	2	PIN, mounting band (threaded hole)	
22	-----	-	TRANSFERS, instruction (See PAINTING AND MARKING)	

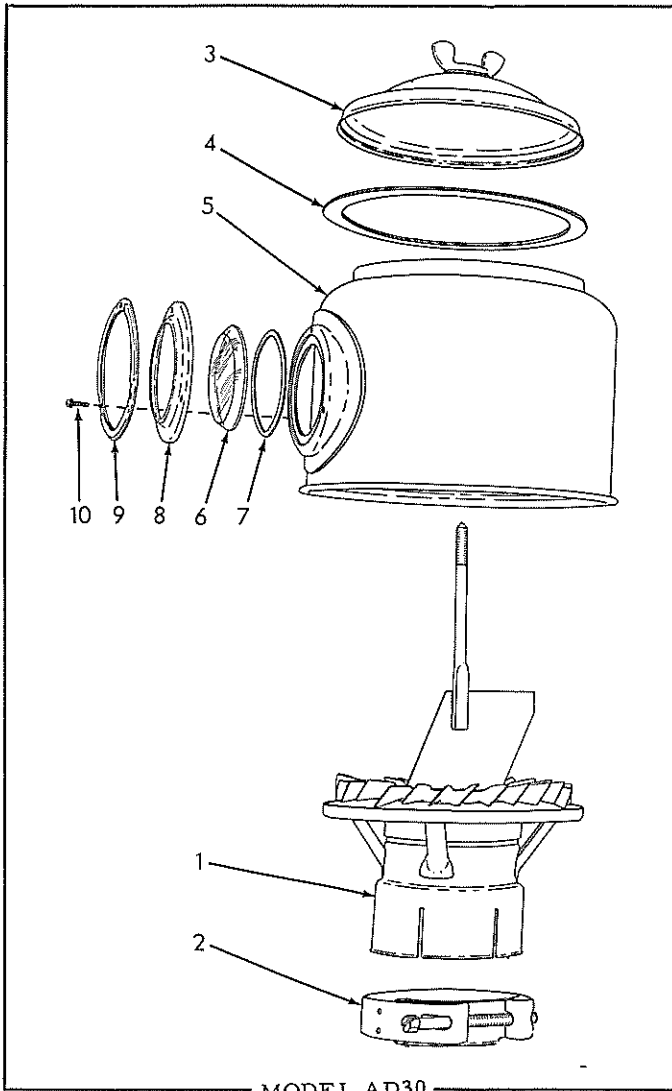


AIR CLEANER (Model AD40)

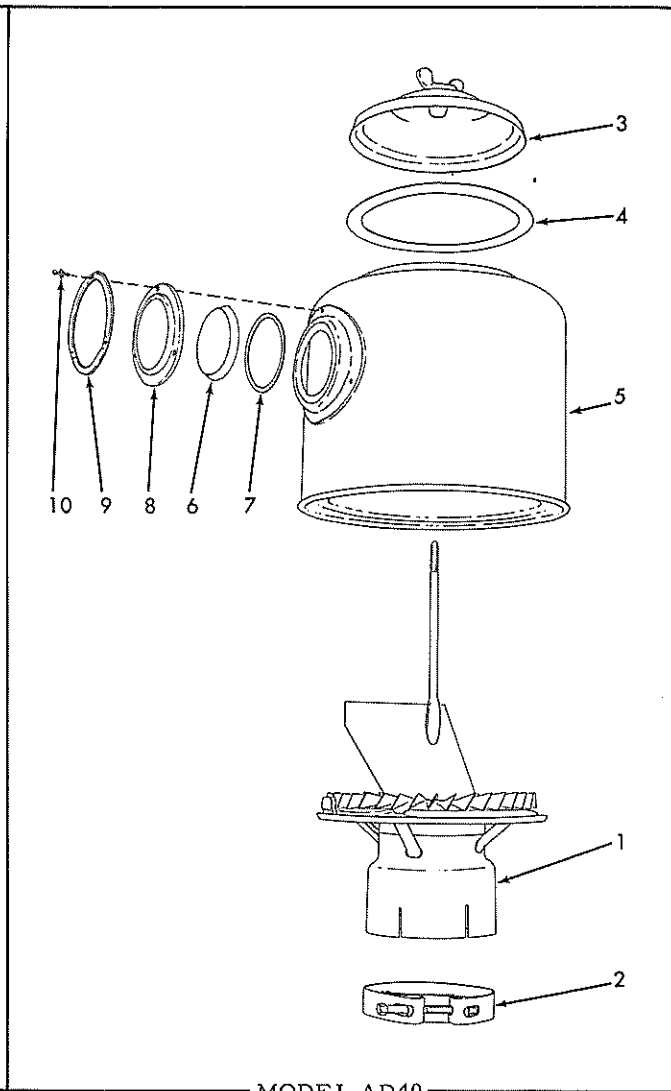
AIR CLEANER

USAGE: Model AD40 Graders only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074099	1	PRE-CLEANER ASSEMBLY, air (See page 60 for repair parts)	
2	067876	1	CLEANER ASSEMBLY, air (See page 61 for repair parts)	
3	074937	1	HOSE, air cleaner (4" I. D. x 7-1/4" long)	
4	061952	2	CLAMP, hose, adjustable, 3-7/8" to 4-3/4" diam.	
5	051518	1	ELBOW, air intake	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
	910001	1	PLUG, expansion, 5/8" diam.	
6	605977	1	ANCHOR, lever retracting spring	
7	061099	1	SPRING, retracting, air shut-off valve lever	
8	604243	1	LEVER, air shut-off	
	910862	1	CAPSCREW, 3/8"NF x 1-1/2"	
	904206	1	LOCKWASHER, 3/8"	
	911041	1	NUT, 3/8"NF	
9	040162	3	SCREW, air shut-off valve (#10-24NC x 1/2")	
10	040163	1	WIRE, locking (1/32" x 7")	
11	040161	1	SHAFT, air shut-off valve	
12	040302	1	SEAL, dust, air shut-off valve shaft	
13	040164	1	VALVE, air shut-off	
14	040118	1	GASKET, air intake elbow . . . . .	074689
15	065976	1	HOUSING, air inlet	
	904281	2	CAPSCREW, 3/8"NC x 2-1/4"	
	910245	2	CAPSCREW, 3/8"NC x 1-3/8"	
	904206	4	LOCKWASHER, 3/8"	
	901652	1	PLUG, pipe, 1/4"NPT (primer connection hole)	
16	5150780	1	SCREEN, blower (Also serves as air inlet housing gasket) . . . . .	074689
17	059259	2	BAND, air cleaner mounting	
18	040570	4	CAPSCREW, 3/8"NC x 4-1/4" (Not for graders with hood side plates)	
	903634	2	CAPSCREW, 3/8"NC x 2" } For graders with	
	903777	2	CAPSCREW, 3/8"NC x 4" } hood side plates only.	
19	053667	4	SPACER, mounting band screw (Not for graders with hood side plates)	
20	050735	4	PIN, mounting band (plain hole)	
21	050734	4	PIN, mounting band (threaded hole)	
22	-----	-	TRANSFERS, instruction (See PAINTING AND MARKING)	



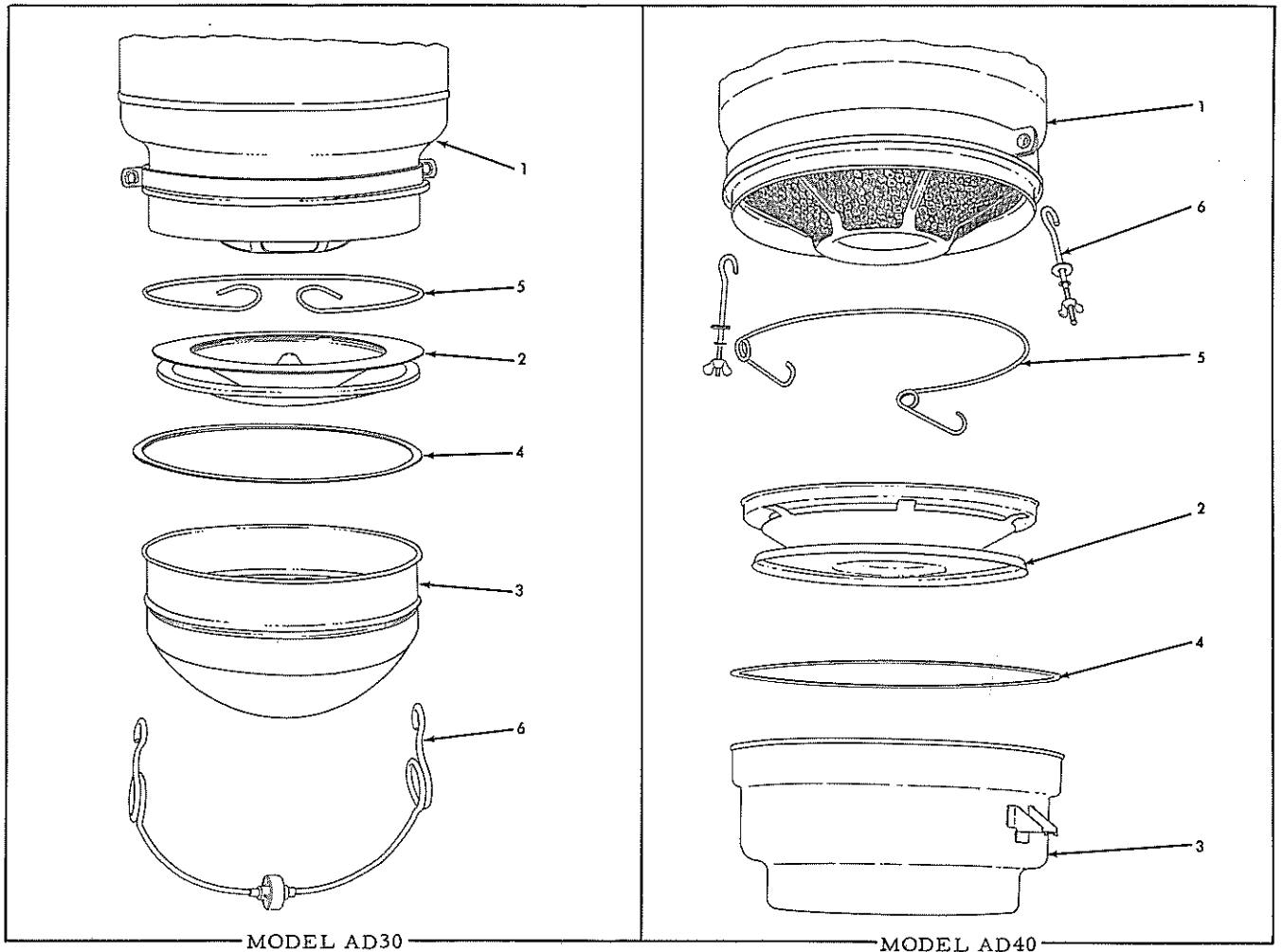
MODEL AD30



MODEL AD40

AIR PRE-CLEANER PARTS

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		044988	074099		
1	044257	1	-	BODY	
	074100	-	1	BODY	
2	5173695	1	-	CLAMP ASSEMBLY (Includes SCREW)	
	065413	-	1	CLAMP ASSEMBLY (Includes SCREW)	
3	044255	1	1	CAP ASSEMBLY (Includes wing NUT)	
4	044256	1	1	GASKET, cap	
5	044918	1	-	SHELL ASSEMBLY (Includes items 6 thru 10)	
	058723	-	1	SHELL ASSEMBLY (Includes items 6 thru 10)	
6	043860	1	1	GLASS, shell window	
7	043852	1	1	GASKET, shell window glass	
8	043853	1	1	RETAINER, shell window glass	
9	043991	1	1	RING, shell window glass retainer	
10	043856	3	3	SCREW ASSEMBLY (Includes LOCKWASHER)	

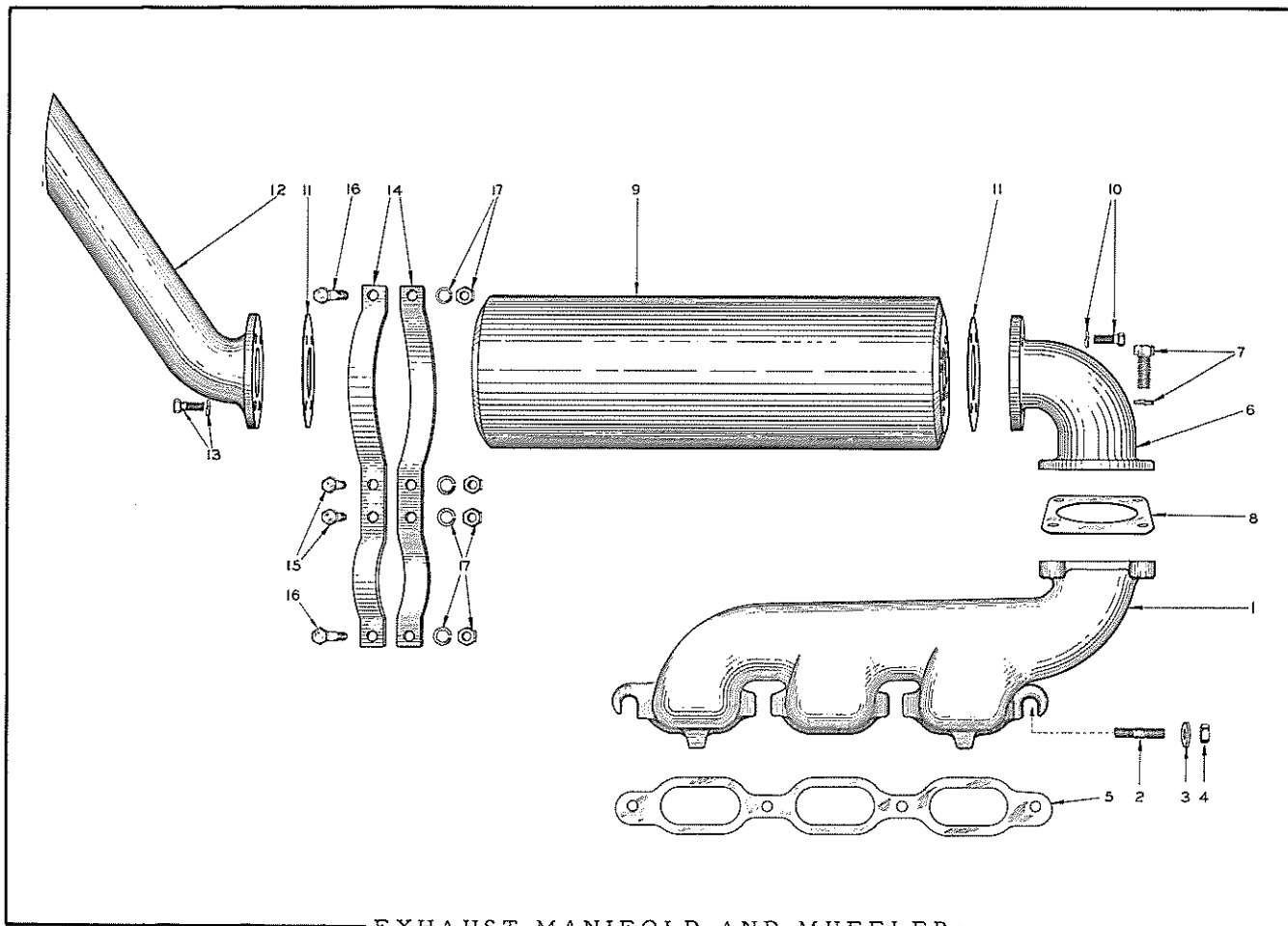


MODEL AD30

MODEL AD40

AIR CLEANER PARTS

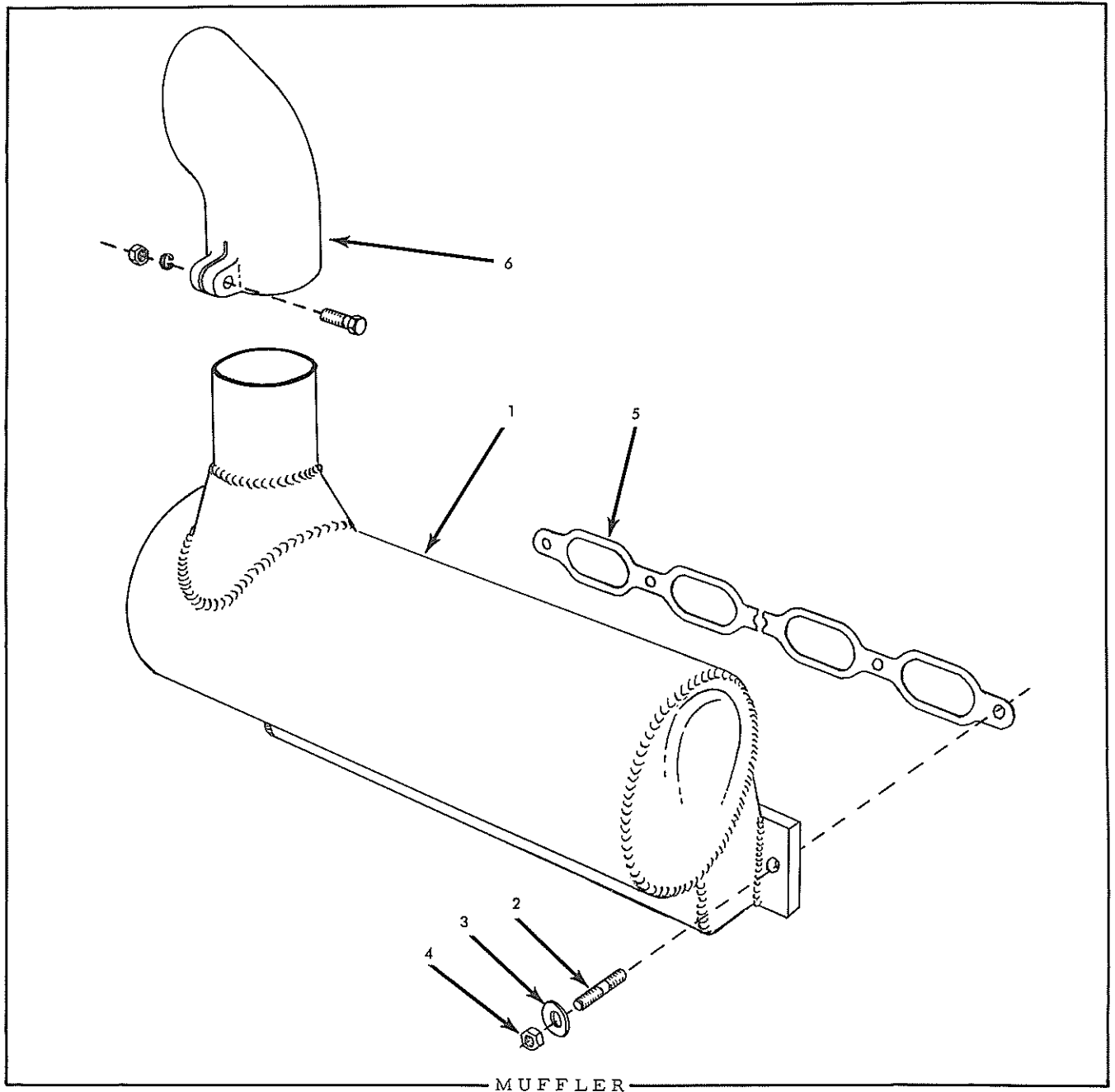
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		047883	067876		
1	-----	1	1	BODY (Not serviced. Order complete CLEANER ASSEMBLY)	
2	040359	1	-	BAFFLE, air	
	059297	-	1	BAFFLE, air	
3	040352	1	-	CUP, oil	
	067642	-	1	CUP, oil	
4	040354	1	-	GASKET, oil cup (cork)	
	059292	-	1	GASKET, oil cup (cork)	
5	040360	1	-	RING, baffle retaining	
	059291	-	1	RING, baffle retaining	
6	040353	1	-	BAIL ASSEMBLY, oil cup (Includes ROLLER)	
	059294	-	2	BOLT ASSEMBLY, oil cup (Includes WASHERS and NUT)	



EXHAUST MANIFOLD AND MUFFLER

USAGE: Model AD30 only

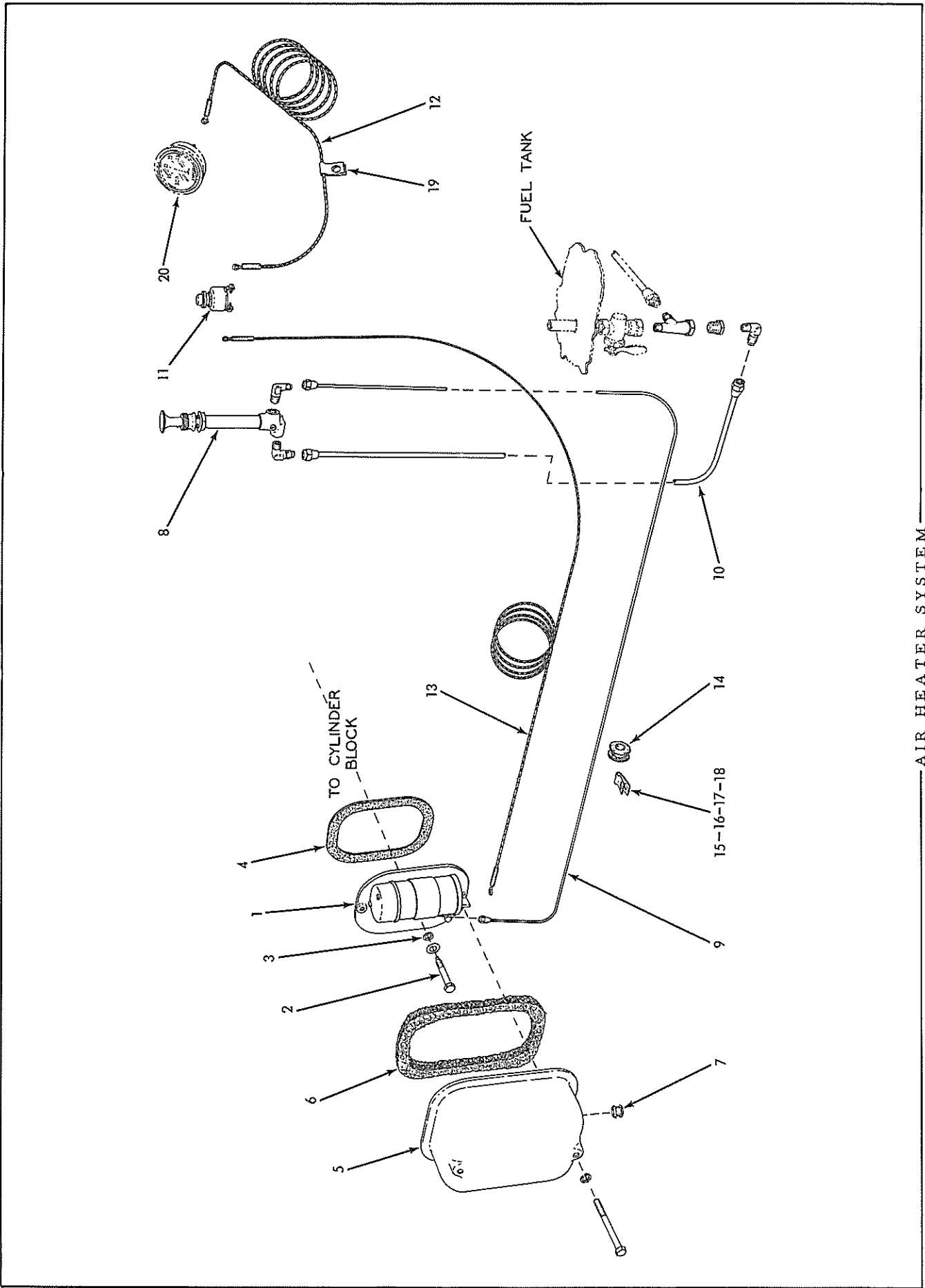
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5154077	1	MANIFOLD, exhaust	
2	5150197	4	STUD (7/16"NC x 7/16"NF x 2-1/8")	
3	5150198	4	WASHER, plain	
4	917253	4	NUT, 7/16"NF, brass	
5	5150194	1	GASKET, exhaust manifold	074688 5193116
6	041614	1	ELBOW, manifold to muffler	
7	035733	4	CAPSCREW, 1/2"NC x 1-3/8"	
	904208	4	LOCKWASHER, 1/2"	
8	041234	1	GASKET, manifold to elbow	
9	041616	1	MUFFLER, exhaust	
10	035439	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
11	041615	2	GASKET, exhaust muffler	
12	604271	1	ELBOW, exhaust	
13	035439	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
14	041617	2	STRAP, muffler supporting	
15	012992	2	CAPSCREW, 3/8"NF x 1-1/4"	
16	035336	2	CAPSCREW, 3/8"NF x 1-3/4"	
17	911041	4	NUT, 3/8"NF	
	904206	4	LOCKWASHER, 3/8"	



MUFFLER

USAGE: Model AD40 only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	058433	1	MUFFLER, exhaust	
2	3222533	5	STUD (7/16"NC x 7/16"NF x 2-1/2")	
3	5188273	5	WASHER, plain	
4	040383	5	NUT (7/16"NF, plated)	
5	5150195	2	GASKET, exhaust . . . . .	074689 5193117
6	075982	1	ELBOW, exhaust	
	903633	2	CAPSCREW, 3/8"NC x 1-3/4"	
	904206	2	LOCKWASHER, 3/8"	
	911026	2	NUT, 3/8"NC	



AIR HEATER SYSTEM

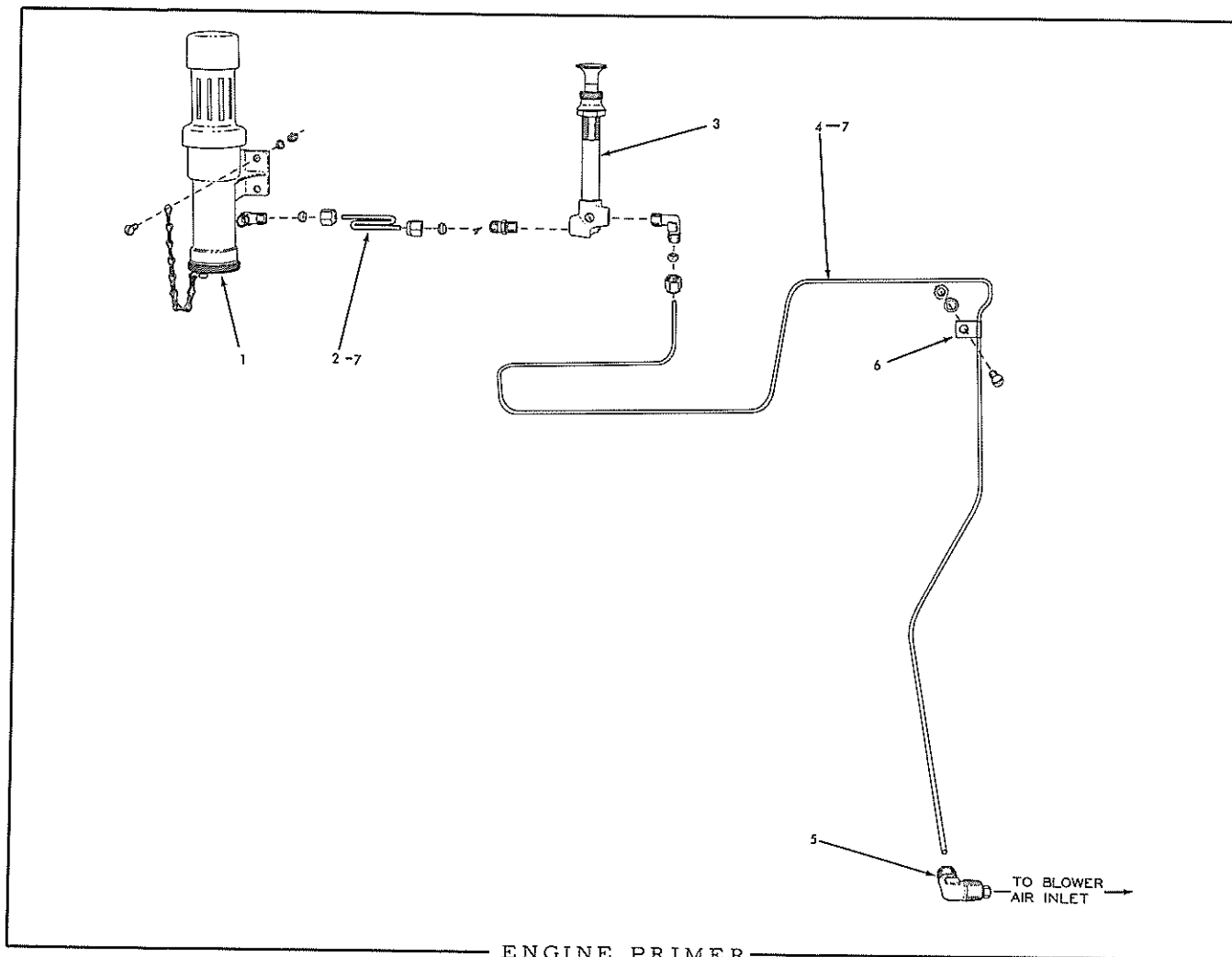


AIR HEATER SYSTEM

USAGE: Optional equipment in place of standard Engine Primer System.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5153383	1	HEATER ASSEMBLY, engine air (See page 71 for repair parts)	
2	5153139	1	BOLT	
	911115	1	WASHER, plain, SAE std., 3/8"	
3	040400	1	GASKET (cop-asb.) . . . . .	074688, 89
4	5150020	1	GASKET, air heater to cylinder block . . . . .	074688, 89
5	5158071	1	COVER, air heater	
	913189	2	CAPSCREW, 5/16"NC x 2-7/8"	
	904205	2	LOCKWASHER, 5/16"	
6	5154066	1	GASKET, air heater cover (felt)	
7	023176	1	GROMMET, air heater cable (rubber)	
8	066782	1	PUMP ASSEMBLY, fuel (See page 67 for repair parts)	
9	077097	1	TUBE ASSEMBLY, pump to air heater (76" long. Includes NUTS)	
	910268	1	ELBOW, male, flared, 3/16" tube, 1/8"NPT	
10	077098	1	TUBE ASSEMBLY, pump to fuel tank (67" long. Includes NUTS)	
	910161	2	ELBOW, male, flared, 1/4" tube, 1/8"NPT	
	901825	1	BUSHING, pipe reducing, 1/4"NPT to 1/8"NPT	
	915951	1	TEE, extension, flared, 3/8" tube, 1/4"NPT	
11	031337	1	SWITCH, push button	
12	077100	1	CABLE, ammeter to switch (110" long)	
13	077099	1	CABLE, air heater to switch (82" long)	
14	064589	1	GROMMET, tube and cable protecting (rubber)	
15	040887	1	CLIP, tube and cable supporting (closed type, 5/16" diam., 15/32" bolt-hole)	
16	034632	1	CLIP, tube and cable supporting (closed type, 5/16" diam., 13/32" bolt-hole)	
17	AM-8691	1	CLIP, tank tube supporting (closed type, 1/4" diam., 13/32" bolt-hole)	
18	033043	2	CLIP, tube and cable supporting (closed type, 7/16" diam., 13/32" bolt-hole)	
	912742	2	CAPSCREW, 3/8"NF x 1/2"	
	904206	2	LOCKWASHER, 3/8"	
19	U-479	3	CLIP, switch cable supporting (closed type, 3/16" diam., 13/32" bolt-hole)	
20	-----	1	AMMETER (See INSTRUMENTS)	

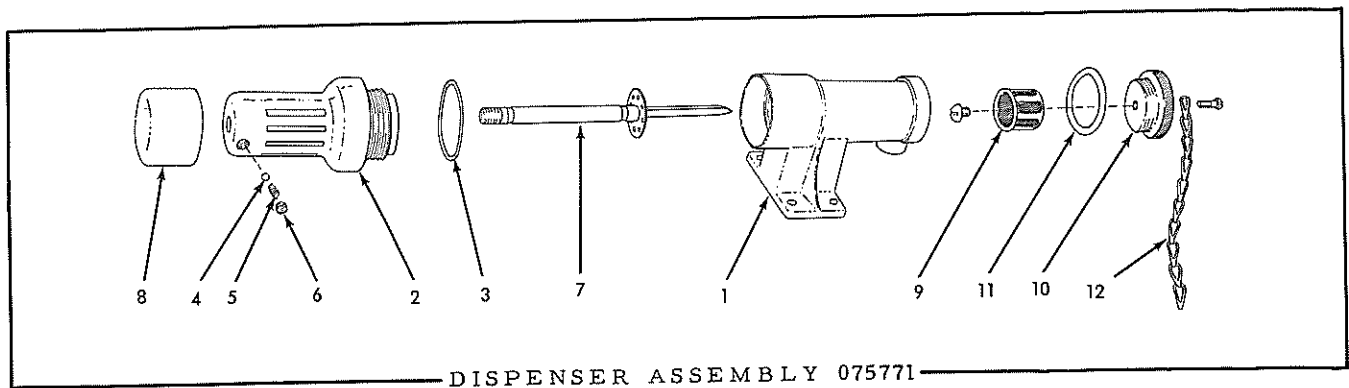
NOTE: See PAINTING AND MARKING for Air Heater Instruction Transfer.



USAGE: Standard Equipment except on units ordered with AIR HEATER as a substitute.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	075771	1	DISPENSER ASSEMBLY, priming fuel (See page 67 for repair parts)	
	901174	4	SCREW, machine, fil.-hd., #10-24NC x 3/4"	
	904203	4	LOCKWASHER, #10	
	901310	4	NUT, #10-24NC	
2	-----	1	TUBE, copper, 1/8" O.D. x 4-1/2" long (Order item 7)	
	915556	1	CONNECTOR, Sealastic, male, 1/8" tube, 1/8"NPT	
	915486	2	RING ASSEMBLY, Sealastic, 1/8" tube (Includes FERRULE)	
	915488	2	NUT, Sealastic fitting, 1/8" tube	
	915557	1	ELBOW, Sealastic, male, 1/8" tube, 1/8"NPT	
3	066782	1	PUMP ASSEMBLY (See page 67 for repair parts)	
4	-----	1	TUBE, copper, 1/8" O.D. x 57" long (Order item 7)	
	915557	1	ELBOW, Sealastic, male, 1/8" tube, 1/8"NPT	
	915486	1	RING ASSEMBLY, Sealastic, 1/8" tube (Includes FERRULE)	
	915488	1	NUT, Sealastic fitting, 1/8" tube	
5	066517	1	ELBOW ASSEMBLY, fuel spray (Includes check VALVE, NUT and SLEEVE. Serviced only as a unit)	
6	065868	1	CLIP, tube supporting (closed type, 1/8" diam., 9/32" bolt-hole)	
	905656	1	CAPSCREW, 1/4"NC x 5/8"	
	904204	1	LOCKWASHER, 1/4"	
	911024	1	NUT, 1/4"NC	
7	066253	1	TUBING, copper, 1/8" O.D., 10 ft. roll (Use as req'd)	

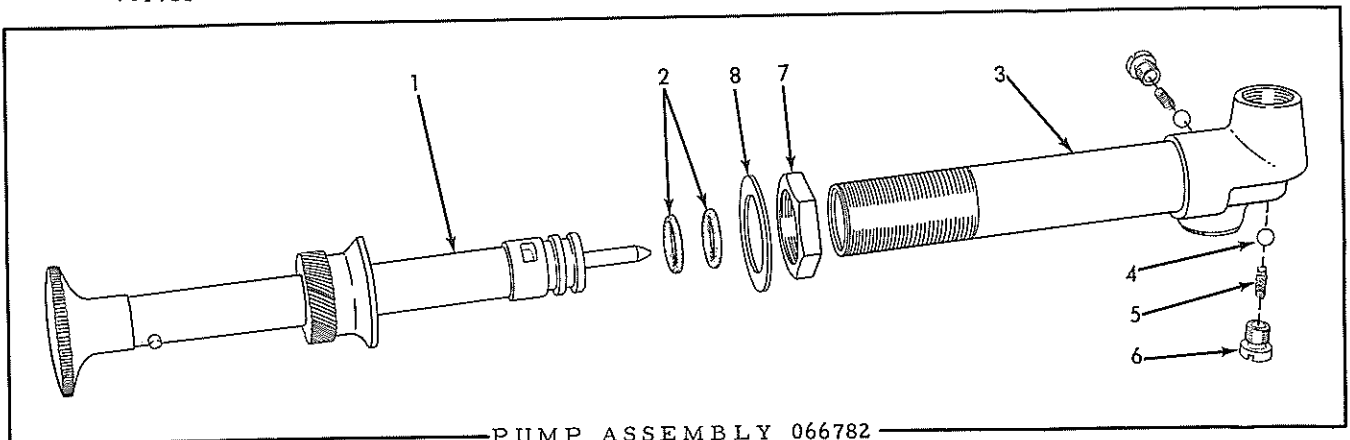
NOTE: See PAINTING AND MARKING for instruction transfer.



DISPENSER ASSEMBLY 075771

USAGE: See page 66 for listing of complete Dispenser Assembly.

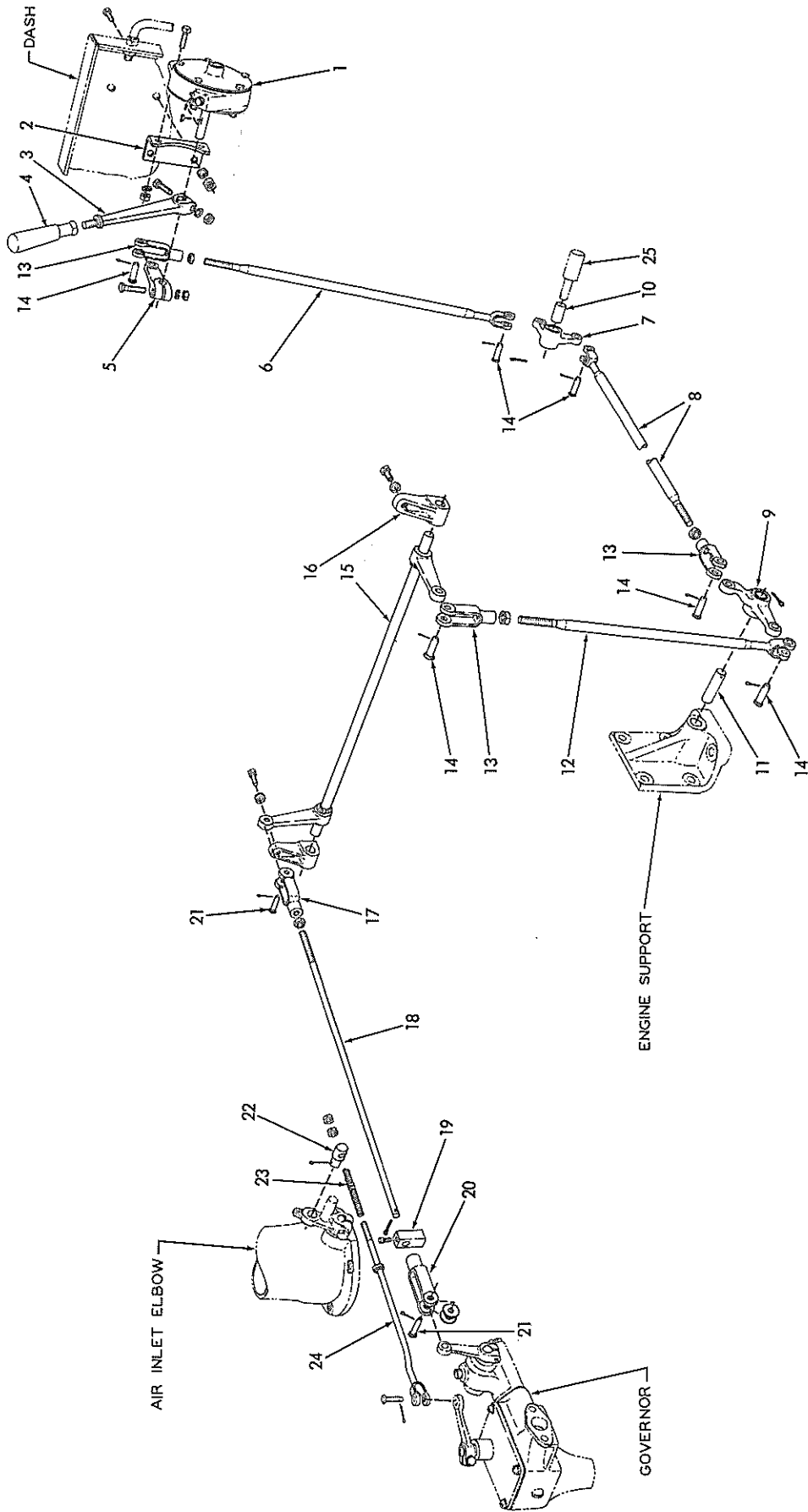
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	068878	1	BODY, fuel dispenser	
2	068879	1	CHAMBER, fuel dispenser	
3	069164	1	GASKET, fuel dispenser chamber	
4	905357	1	BALL, steel, 3/16" diam.	
5	066251	1	SPRING, plunger locking ball	
6	066252	1	PLUG, retaining, locking ball spring	
7	066255	1	PLUNGER, fuel dispenser	
8	068881	1	KNOB, fuel dispenser plunger	
9	068875	1	STRAINER, fuel dispenser	
	915432	1	SCREW, machine, rd-hd., 1/4"NC x 5/16"	
10	075770	1	PLUG, fuel dispenser strainer	
11	068876	1	GASKET, fuel dispenser strainer plug	
12	075769	1	CHAIN, strainer plug retaining	
	901781	1	SCREW, machine, fil-hd., #10-32 x 1/2"	



PUMP ASSEMBLY 066782

USAGE: See pages 65 and 66 for listing of complete Pump Assembly.

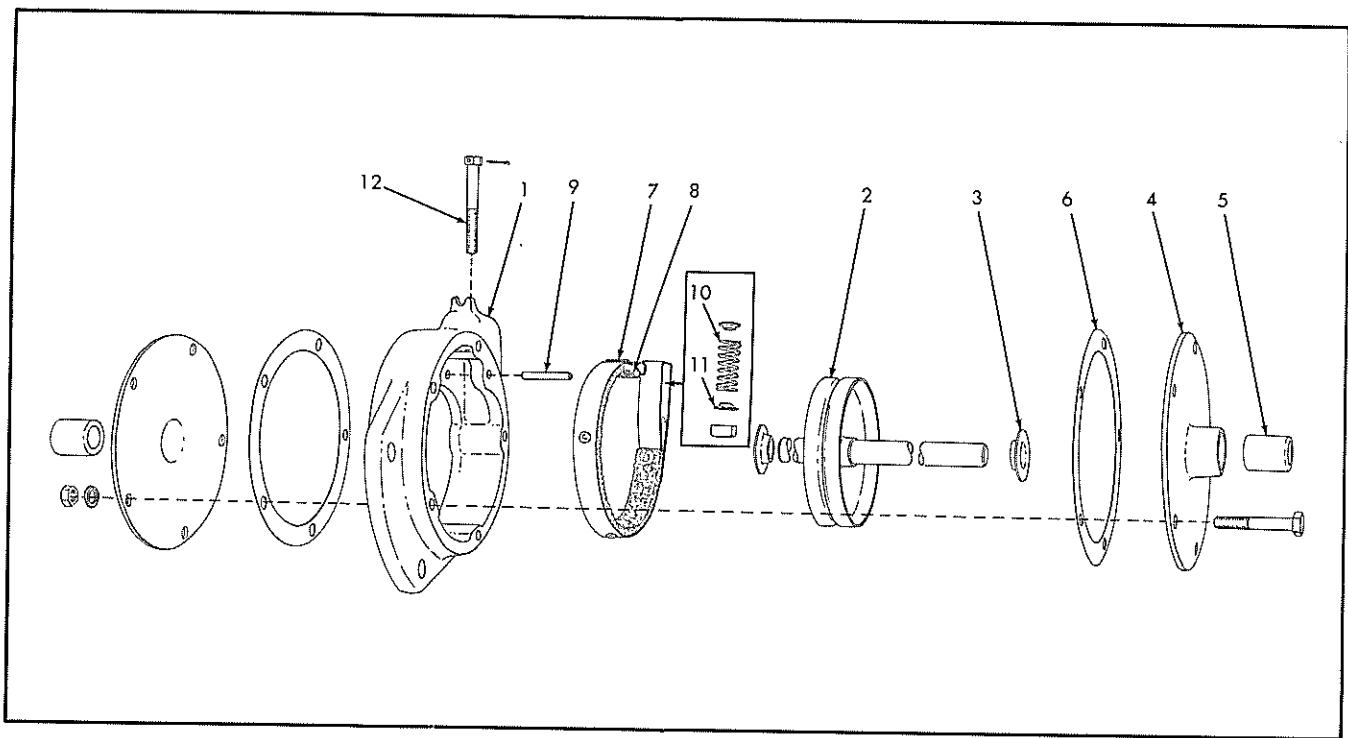
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	1	PISTON ASSEMBLY (Not serviced. Order complete pump)	
2	066878	2	RING, plunger packing (rubber)	
3	-----	1	BARREL ASSEMBLY (Not serviced. Order complete pump)	
4	066876	2	BALL, check valve (5/32" diam.)	
5	066875	2	SPRING, check valve	
6	066874	2	RETAINER, check valve	
7	066872	1	NUT, mounting	
8	066873	1	WASHER, mounting	



ENGINE CONTROLS

ENGINE CONTROLS

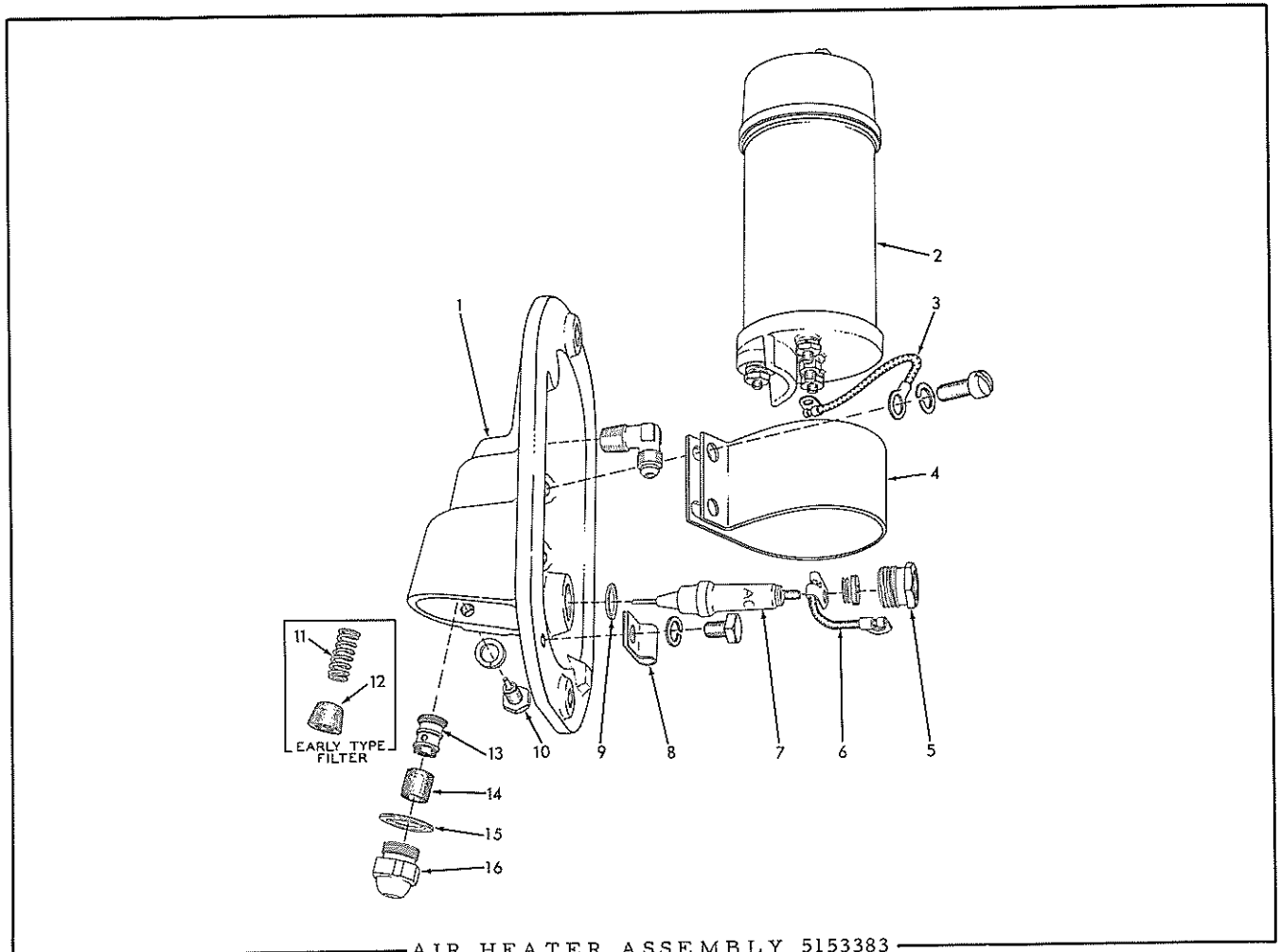
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER	
		AD30	AD40			
1	074940	1	1	THROTTLE ASSEMBLY (See page 70 for repair parts)		
	913017	2	2	CAPSCREW, 3/8"NF x 1"		
	904206	2	2	LOCKWASHER, 3/8"		
	911041	2	2	NUT, 3/8"NF		
2	074951	1	1	BRACKET, throttle attaching		
	912185	2	2	CAPSCREW, 3/8"NF x 1-1/4"		
	904206	2	2	LOCKWASHER, 3/8"		
	911041	2	2	NUT, 3/8"NF		
3	074952	1	1	LEVER, throttle operating		
	905121	1	1	KEY, #5 woodruff, 1/8" x 5/8"		
	910862	1	1	CAPSCREW, 3/8"NF x 1-1/2"		
	904206	1	1	LOCKWASHER, 3/8"		
4	074952	1	1	NUT, 3/8"NF		
	078620	1	1	GRIP, throttle operating lever		
	074953	1	1	LEVER, throttle control		
	905121	1	1	KEY, #5 woodruff, 1/8" x 5/8"		
5	910862	1	1	CAPSCREW, 3/8"NF x 1-1/2"		
	904206	1	1	LOCKWASHER, 3/8"		
	911041	1	1	NUT, 3/8"NF		
	074949	1	1	ROD, throttle control (vertical)		
6	911042	1	1	NUT, 7/16"NF		
	074948	1	1	BELLCRANK ASSEMBLY (Includes 1 BUSHING 065172)		
7	900806	1	1	PIN, cotter, 1/8" x 1"		
	074919	1	1	ROD, throttle control (horizontal)		
8	911042	1	1	NUT, 7/16"NF		
	074945	1	1	BELLCRANK ASSEMBLY (Includes 1 BUSHING 065172)		
9	065172	2	2	BUSHING, bellcrank		
	075050	1	1	PIN, throttle bellcrank pivot		
10	900806	1	1	PIN, cotter, 1/8" x 1"		
	074950	1	1	ROD, throttle control (vertical)		
11	911042	1	1	NUT, 7/16"NF		
	605973	3	3	YOKE, throttle control rods		
12	051049	6	6	PIN, throttle control linkage (7/16" x 1-1/4")		
	900801	6	6	PIN, cotter, 3/32" x 3/4"		
13	074943	1	1	SHAFT, throttle control		
	605745	2	2	BEARING, throttle control shaft		
	903775	4	4	CAPSCREW, 3/8"NC x 7/8"		
	904206	4	4	LOCKWASHER, 3/8"		
14	604718	1	1	YOKE, adjustable, governor control rod		
	18 {	077107	1	-	ROD, governor control (17-1/2" long)	
		075729	-	1	ROD, governor control (22-3/8" long)	
	911041	1	1	NUT, 3/8"NF		
15	900805	1	1	PIN, cotter, 1/8" x 3/4"		
	065175	1	1	BAR, adjustable, governor control rod		
16	900685	1	1	SETSCREW, sq-hd., cup-point, 1/4"NC x 1/2"		
	604717	1	1	YOKE, sliding, governor control rod		
17	604719	2	2	PIN, governor control rod yokes		
	900801	2	2	PIN, cotter, 3/32" x 3/4"		
	910335	2	2	WASHER, plain, SAE std., 5/16"		
18	604709	1	1	SWIVEL, fuel shut-off control rod		
	900806	1	1	PIN, cotter, 1/8" x 1"		
19	070385	1	1	SPRING, fuel shut-off control rod		
	24 {	604710	1	-	ROD, fuel shut-off control (6-1/2" long)	
061207		-	1	ROD, fuel shut-off control (9-3/8" long)		
20	913636	2	2	NUT, 5/16"NF		
	917645	1	1	PIN, yoke, 5/16" diam.		
	904001	1	1	PIN, cotter, 3/32" x 1/2"		
21	-----	1	1	PIN, bellcrank pivot (Welded to FRAME)		



THROTTLE ASSEMBLY 074940

NOTE: See page 69 for listing of complete Throttle Assembly.

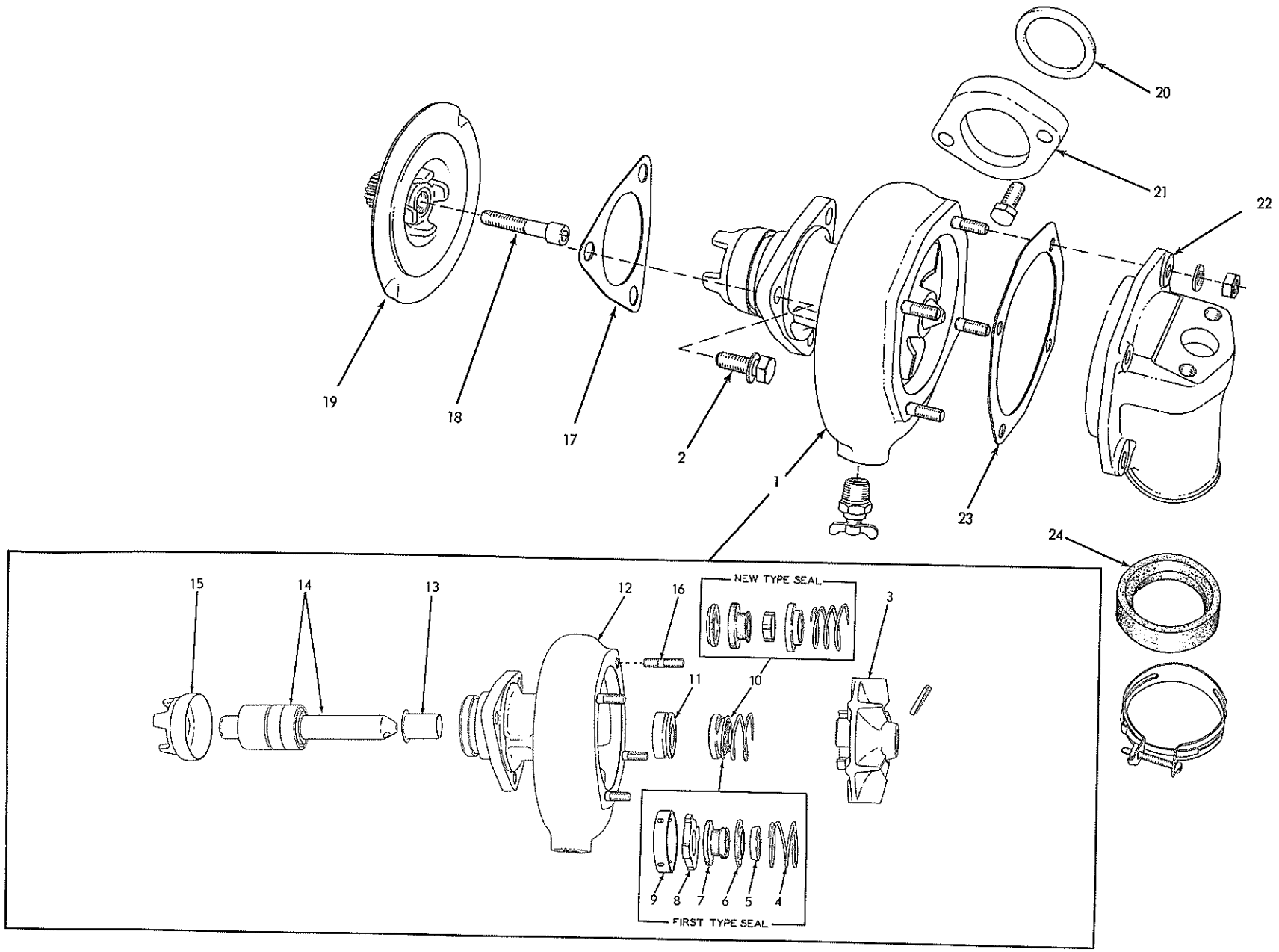
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	068859	1	HOUSING	
2	074941	1	DRUM AND SHAFT	
3	069996	2	WASHER, thrust	
4	068866	2	PLATE ASSEMBLY, housing cover (Includes item 5) CAPSCREW, 1/4"NF x 1-3/4" LOCKWASHER, 1/4" NUT, 1/4"NF	
	914892	5		
	904204	5		
	911040	5		
5	071800	2	BUSHING, throttle shaft	
6	068865	2	GASKET, housing cover plate	
7	068861	1	BAND ASSEMBLY, friction (Includes item 8)	
8	068864	1	LINING, friction band RIVET, tubular, brass, 3/16" x 9/64"	
	915707	4		
9	068869	1	PIN, friction band	
10	068911	1	SPRING, friction band	
11	069349	2	COLLAR, friction band spring	
12	068862	1	CAPSCREW, friction band adjustment PIN, cotter, 1/16" x 1" NUT, square, 1/4"NC	
	904020	1		
	901150	1		



AIR HEATER ASSEMBLY 5153383

USAGE: See page 65 for listing of complete Heater Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5153385	1	BODY, air heater	
	910268	1	ELBOW, male, flared, 3/16" tube, 1/8"NPT	
2	1115485	1	COIL, ignition (Serviced only as a unit)	
3	5152779	1	LEAD, ignition coil ground	
4	1879753	1	BRACKET, ignition coil mounting	
	912226	2	SCREW, machine, fil-hd., 1/4"NC x 5/8"	
	904204	2	LOCKWASHER, 1/4"	
5	5153395	1	NUT, insulator retaining	
6	5154125	1	LEAD, coil to insulator (high tension)	
7	1556410	1	INSULATOR PACKAGE (Includes terminal NUT and item 9)	
8	AM-8763	1	CLIP, fuel tube (single, 3/16" diam., 9/32" bolt-hole)	
	913032	1	CAPSCREW, 1/4"NC x 5/16"	
	904204	1	LOCKWASHER, 1/4"	
9	5158594	1	GASKET, insulator	
10	5153390	1	SCREW ASSEMBLY, electrode (1 SCREW, 1 ELECTRODE)	
	904204	1	LOCKWASHER, 1/4"	
11	5153389	1	SPRING, filter (Used on early units only)	
12	5153388	1	FILTER, fuel (Used on early units only)	
13	5077487	1	BODY, fuel filtering screen (Used on late units)	
14	5077489	1	SCREEN, fuel filtering (Used on late units)	
15	5151921	1	WASHER, spray nozzle	
16	5076204	1	NOZZLE, spray	

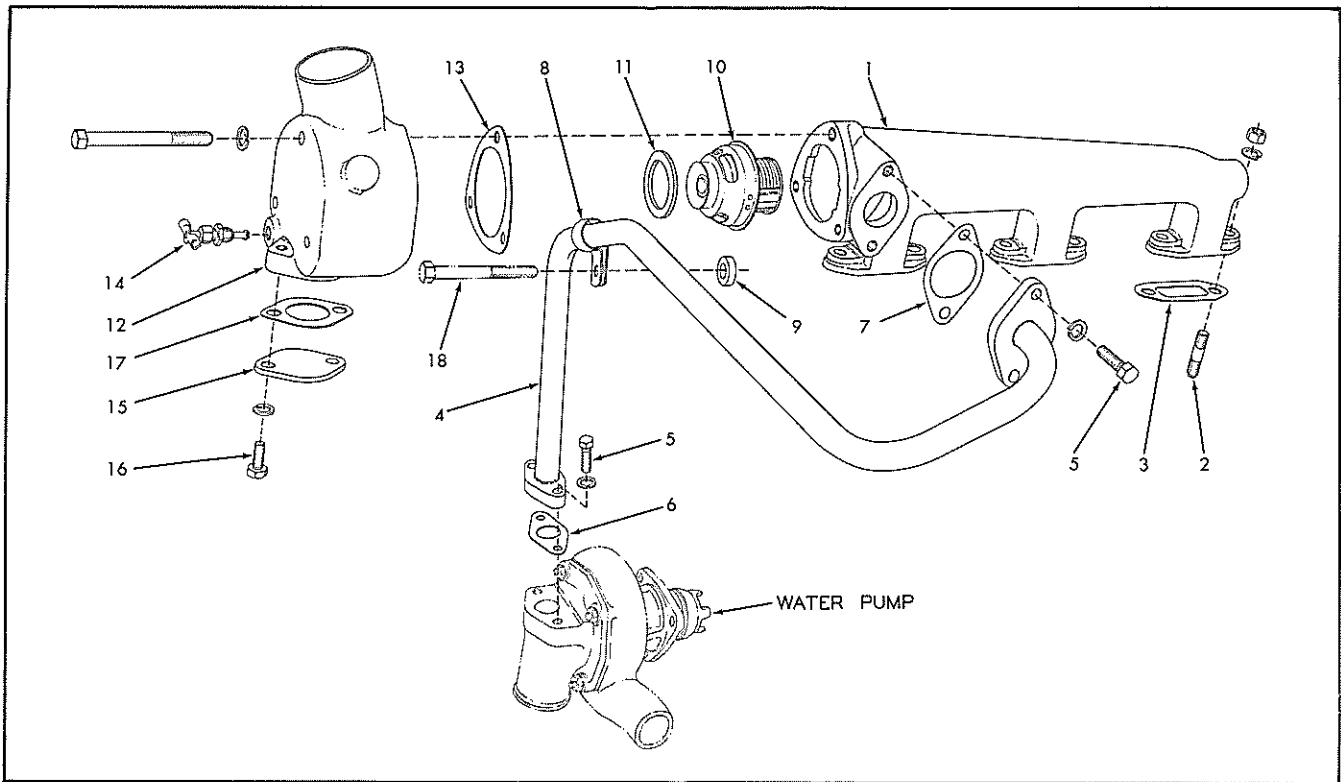


WATER PUMP



WATER PUMP

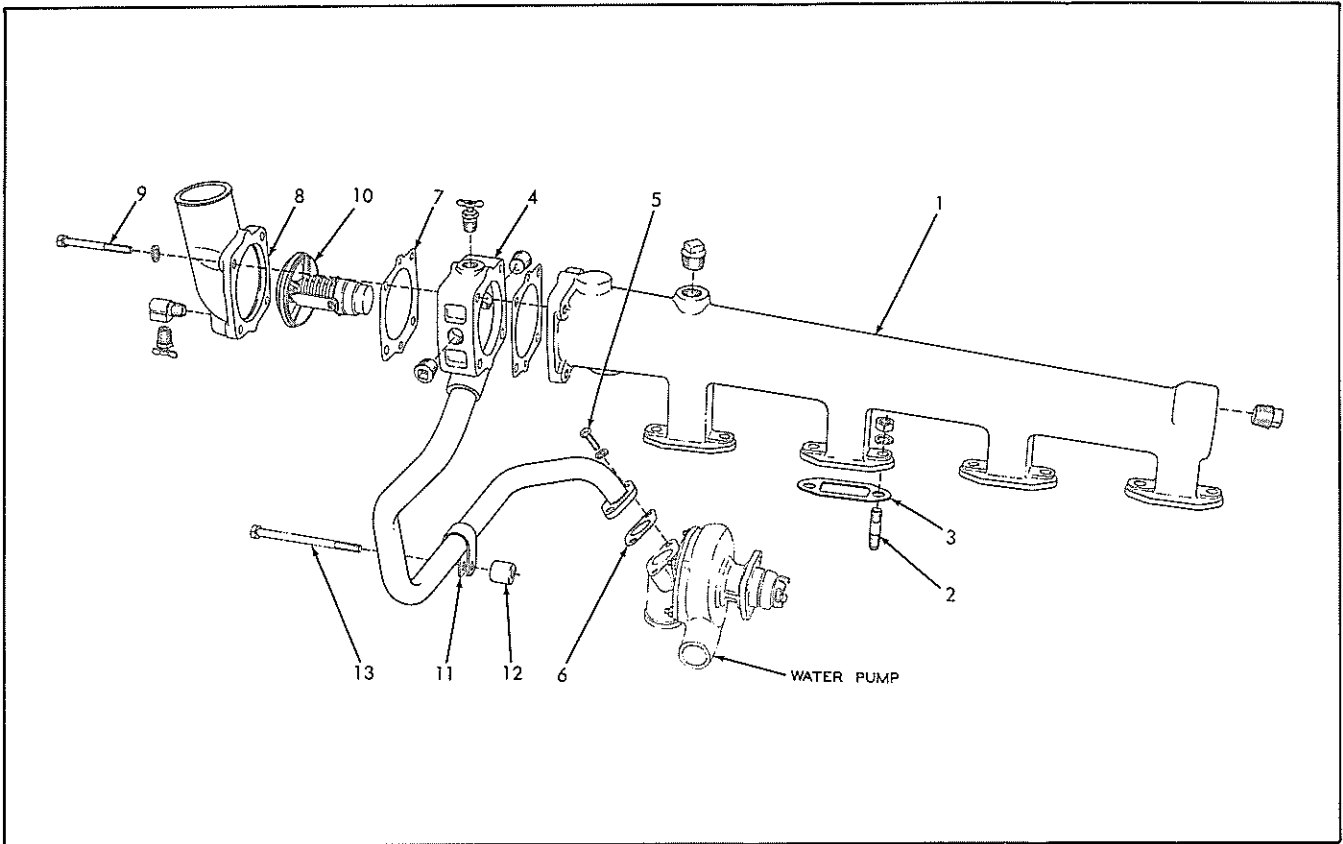
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	5186576	1	1	PUMP ASSEMBLY, water (Consists of items 3 thru 16) (Order PUMP KIT 065650) . . . . .	065650
	915433	1	1	COCK, drain, T-handle, 1/4"NPT (Engines prior to #3A-30894 and #4A-47654)	
	916873	1	1	COCK, drain, T-handle, 3/8"NPT (Started with engines #3A-30894 and #4A-47654)	
2	5171159	3	3	BOLT ASSEMBLY (Includes copper WASHER)	
3	5186569	1	1	IMPELLER only	
	914836	1	1	PIN, groove, 3/16" x 7/8" . . . . .	5193239
<p>NOTE: Items 4 thru 9 comprise the FIRST TYPE SEAL as used on all engines prior to serial Nos. 3A-14206 and 4A-31983. Used optionally on later units. Discontinued entirely starting with engines serial Nos. 3A-19600 and 4A-44547. For service replacement order items 10 and 11.</p>					
4	-----	1	1	SPRING	
5	-----	1	1	RING, seal clamping	
6	-----	1	1	GUIDE, seal spring	
7	-----	1	1	SEAL, impeller (neoprene)	
8	-----	1	1	WASHER, friction (carbon)	
9	-----	1	1	CUP, seal retaining	
10	5186571	1	1	SEAL ASSEMBLY (Serviced only as a unit)(Used as optional equipment starting with engines serial No. 3A-14206 and 4A-31983. Used on all engines starting with serial Nos. 3A-19600 and 4A-44547)	
11	5186572	1	1	INSERT, pump body	
12	5186574	1	1	BODY ASSEMBLY (Includes items 11 and 16)	
13	5189041	1	1	SLINGER, pump shaft	
14	5186493	1	1	BEARING ASSEMBLY (Includes item 13)	
15	5153682	1	1	COUPLING, pump shaft	
16	5150182	4	4	STUD, pump body cover (1/4"NC x 1/4"NF x 1-1/16")	
	904204	4	4	LOCKWASHER, 1/4"	
	911040	4	4	NUT, 1/4"NC	
17	5150193	1	1	GASKET, pump to blower . . . . .	065650 074688, 89 5193239
18	069004	1	1	CAPSCREW, socket-hd., 5/16"NF x 1-1/2"	
19	5179605	1	1	COUPLING, pump drive	
20	5150191	1	1	PACKING, pump outlet . . . . .	065650 074688, 89 5193239
21	5173730	1	1	FLANGE, pump outlet packing	
	905662	2	2	CAPSCREW, 5/16"NC x 1-1/8"	
22	5174857 5185009	1	-	COVER, pump body	
		-	1	COVER, pump body	
23	5150188	1	1	GASKET, body cover . . . . .	065650 074688, 89 5193239
24	5153560 915000	1	1	SEAL, pump to oil cooler . . . . .	065650 074688, 89
		1	1	CLAMP, hose, 2-1/8" diam.	



WATER MANIFOLD

USAGE: Model AD30 Graders only

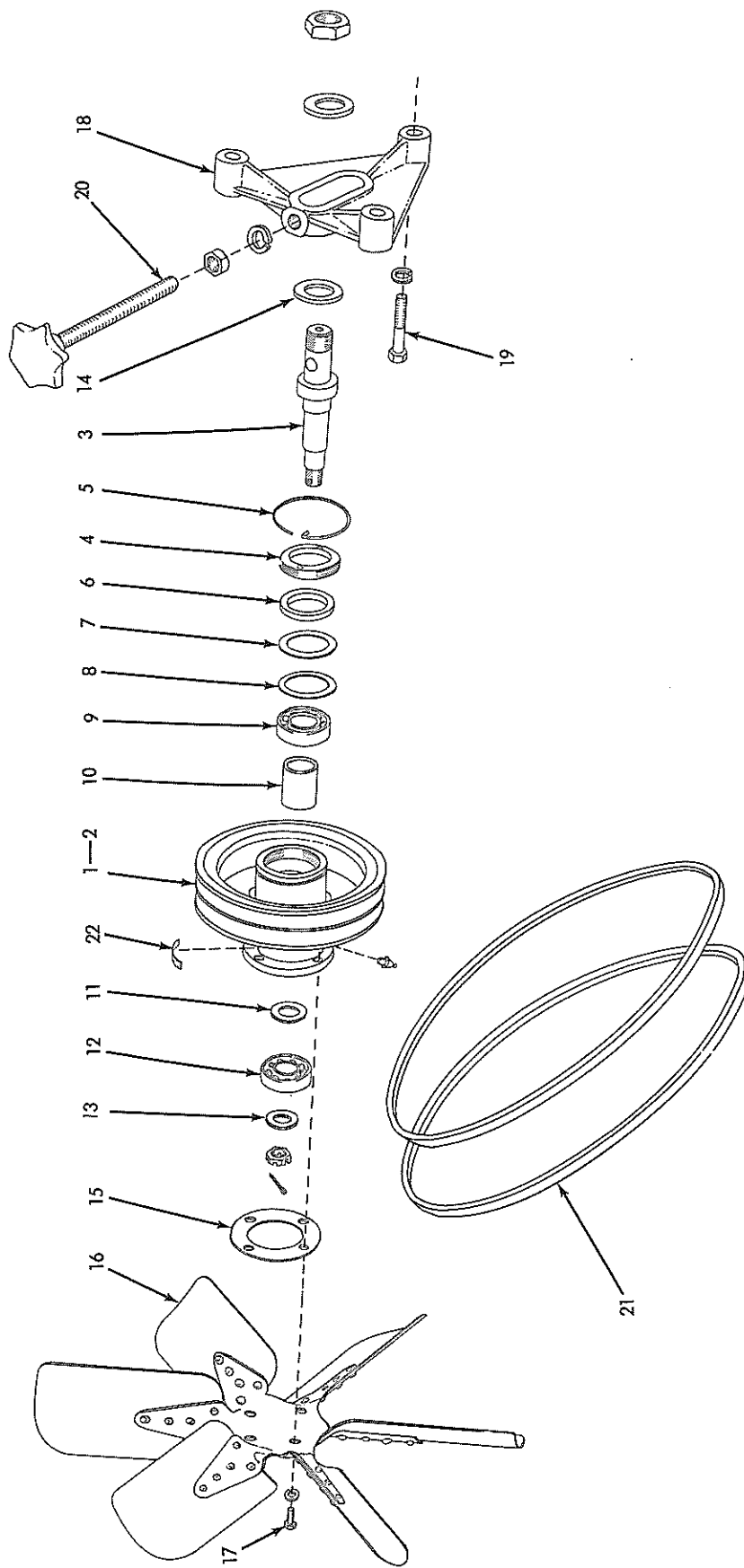
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	3222767	1	MANIFOLD, water outlet	
2	5150362	6	STUD (3/8"NC x 3/8"NF x 1-11/16")	
	904206	6	LOCKWASHER, 3/8"	
	911041	6	NUT, 3/8"NF	
3	5150361	3	GASKET, water outlet manifold . . . . .	074688 5193116
4	5174820	1	TUBE, water by-pass	
5	045295	4	CAPSCREW, 5/16"NC x 1"	
	904205	4	LOCKWASHER, 5/16"	
6	5150144	1	GASKET, water by-pass tube, lower . . . . .	074688
7	3222555	1	GASKET, water by-pass tube, upper . . . . .	074688
8	5151189	1	CLIP, supporting, water by-pass tube	
9	5157412	1	SPACER, water by-pass tube clip	
10	044873	1	THERMOSTAT	
11	044872	1	GASKET, thermostat . . . . .	074688
12	5157160	1	HOUSING, thermostat	
	913025	3	CAPSCREW, 5/16"NC x 3-1/4"	
	904205	3	LOCKWASHER, 5/16"	
13	3222489	1	GASKET, thermostat housing . . . . .	074688
14	223255	1	VALVE ASSEMBLY, drain, thermostat housing (Serviced only as a unit)	
15	5155815	1	COVER, thermostat housing	
	045312	2	CAPSCREW, 5/16"NC x 3/4"	
	904205	2	LOCKWASHER, 5/16"	
17	5155816	1	GASKET, thermostat housing cover . . . . .	074688
18	-----	1	CAPSCREW (See CYLINDER BLOCK FRONT COVERS)	



WATER MANIFOLD

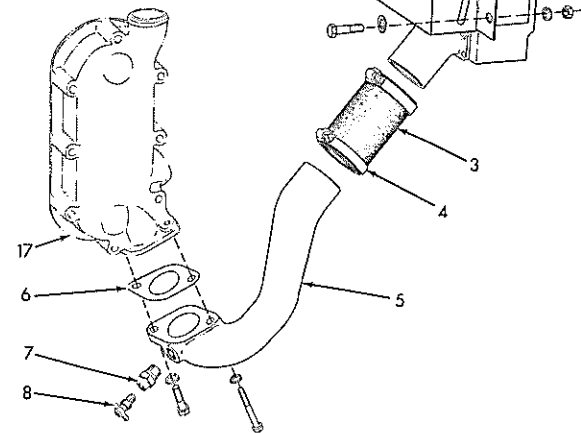
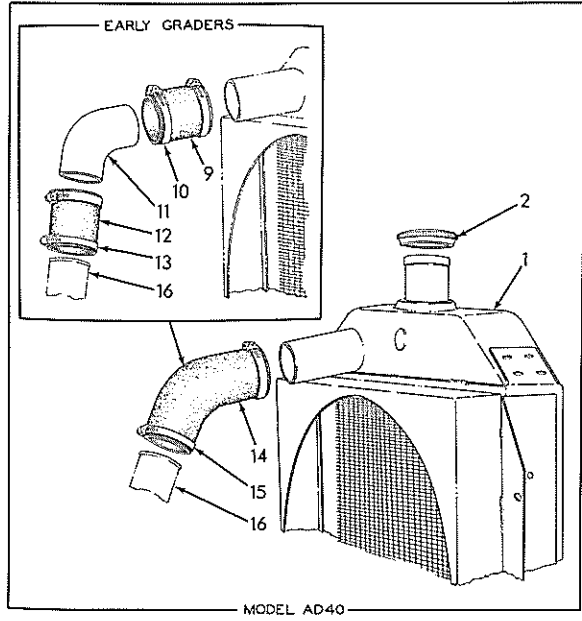
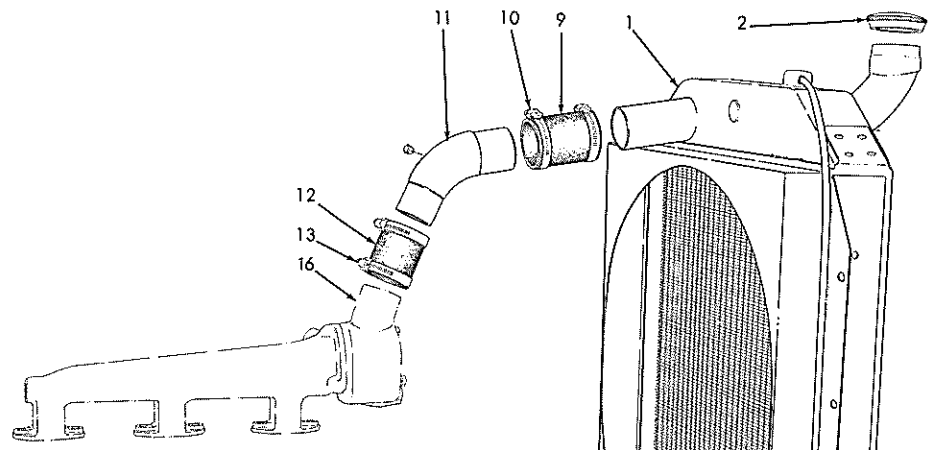
USAGE: Model AD40 Graders only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	5169555	1	MANIFOLD, water outlet	
	912725	2	PLUG, pipe, 1/2"NPT	
2	5150362	8	STUD (3/8"NC x 3/8"NF x 1-11/16")	
	904206	8	LOCKWASHER, 3/8"	
	911041	8	NUT, 3/8"NF	
3	5150361	4	GASKET, water outlet manifold . . . . .	074689 5193117
4	5177279	1	TUBE, water by-pass	
	915433	1	COCK, drain, T-handle, 1/4"NPT	
	904260	2	PLUG, pipe, ctsk-hd., 3/8"NPT	
5	054130	2	CAPSCREW, 5/16"NC x 7/8"	
	904205	2	LOCKWASHER, 5/16"	
6	5153902	1	GASKET, water by-pass tube, lower . . . . .	074689
7	5169478	2	GASKET, water by-pass tube, upper . . . . .	074689 5193117
8	5177193	1	ELBOW, water outlet	
	914588	1	ELBOW, street, brass, 90°, 1/4"NPT	
	915433	1	COCK, drain, T-handle, 1/4"NPT	
9	033751	4	CAPSCREW, 5/16"NC x 2-1/2"	
	904205	4	LOCKWASHER, 5/16"	
10	5172141	1	THERMOSTAT	
11	5157702	1	CLIP, water by-pass tube	
12	5160425	1	SPACER, water by-pass tube clip	
13	-----	1	CAPSCREW (See CYLINDER BLOCK FRONT COVER)	



FAN

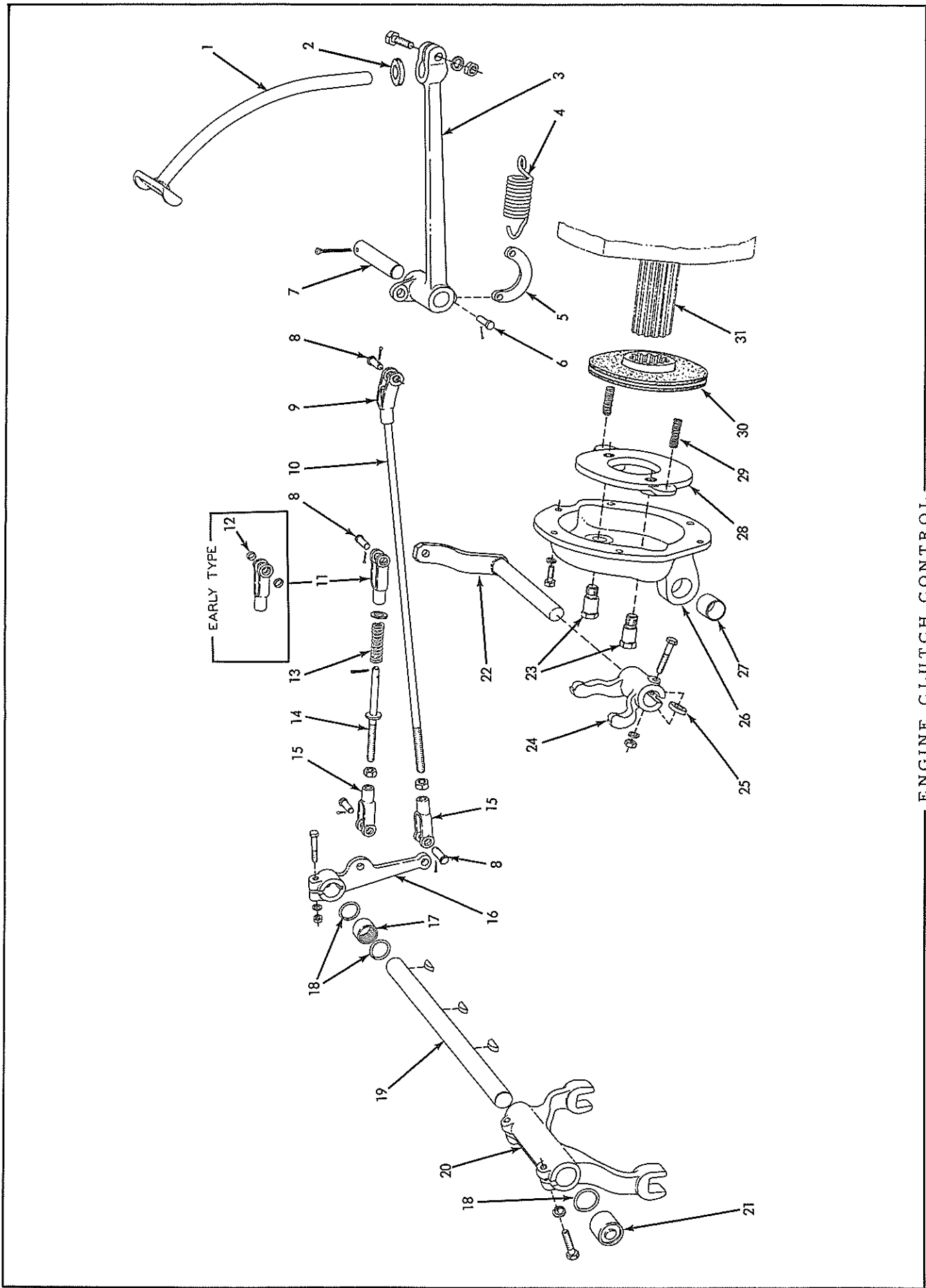
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	044467	1	1	HUB ASSEMBLY (Consists of items 2 thru 14, and 17)	
2	040086	1	1	PULLEY	
	915273	1	1	FITTING, lubricating, 30°, 1/8"NPT	
3	040087	1	1	SPINDLE	
	911051	1	1	NUT, jam, 1"NF	
	912840	1	1	NUT, slotted, 5/8"NF	
	900802	1	1	PIN, cotter, 3/32" x 1"	
4	040093	1	1	RETAINER, spindle sealing washer	
5	040094	1	1	RING, locking, sealing washer retainer	
6	040095	1	1	WASHER, sealing (cork) . . . . .	074688
7	040096	1	1	WASHER, spindle seal (steel)	
8	040097	1	1	GASKET, spindle washer . . . . .	074688
9	042986	1	1	BEARING, ball, fan spindle, rear	
10	040098	1	1	SPACER, spindle bearings	
11	040099	1	1	WASHER, spindle front bearing	
12	042979	1	1	BEARING, ball, fan spindle, front	
13	040089	1	1	WASHER, end, fan spindle	
14	040088	2	2	WASHER, spindle mounting	
	040100	1	1	GASKET, fan . . . . .	074688
16	041441	1	-	FAN (2" deep)	
	054342	-	1	FAN (3" deep)	
17	045312	4	4	CAPSCREW, 5/16"NC x 3/4"	
	904205	4	4	LOCKWASHER, 5/16"	
18	040085	1	1	BRACKET, spindle mounting	
19	035712	3	3	CAPSCREW, 1/2"NC x 2-1/4"	
	904208	3	3	LOCKWASHER, 1/2"	
20	040090	1	1	SCREW ASSEMBLY, fan belt adjusting (Includes KNOB)	
	911043	1	1	NUT, 1/2"NF	
	904208	1	1	LOCKWASHER, 1/2"	
21	602944	2	2	BELT, fan	
22	-----	1	1	TRANSFER, lubrication (See PAINTING AND MARKING)	



RADIATOR

RADIATOR

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER	
		AD30	AD40			
1	{ 604525	1	-	RADIATOR ASSEMBLY, engine cooling (Includes item 2)		
		075933	-	1	RADIATOR ASSEMBLY, engine cooling (Includes item 2)	
	903632	8	8	CAPSCREW, 3/8"NC x 1-1/2"		
	911115	8	8	WASHER, plain, SAE std., 3/8"		
	904206	8	8	LOCKWASHER, 3/8"		
	911026	8	8	NUT, 3/8"NC		
2	074263	1	1	CAP, radiator (Includes GASKET which is not serviced separately)		
3	605396	1	1	HOSE, radiator outlet (2-1/4" I. D. x 4-1/2")		
4	051819	2	2	CLAMP, hose, adjustable, 1-7/8" to 2-3/4" diam.		
5	{ 604221	1	1	CONNECTION, oil cooler water		
		905666	1	1	CAPSCREW, 5/16"NC x 2-1/2"	
		903772	1	1	CAPSCREW, 5/16"NC x 1"	
		904205	2	2	LOCKWASHER, 5/16"	
6	040149	1	1	GASKET, oil cooler water connection . . . . .	074688, 89	
7	U-1671	1	1	COCK, drain, 3/8"NPT (Includes item 8)		
8	209359	1	1	STEM, drain cock		
NOTE: Items 9 thru 13 were not used on Model AD40 graders after serial No. 649						
9	{ 040144	1	-	HOSE, radiator inlet (2-1/4" I. D. x 3-1/2" long)		
		041641	-	1	HOSE, radiator inlet (2" I. D. x 2-3/4" long)	
10	051819	2	2	CLAMP, hose, adjustable, 1-7/8" to 2-3/4" diam.		
11	{ 040145	1	-	ELBOW, radiator inlet		
		901652	1	-	PLUG, pipe, 1/8"NPT	
		075952	-	1	ELBOW, radiator inlet	
12	041641	1	1	HOSE, thermostat housing to elbow (2" I. D. x 2-3/4" long)		
13	051819	2	2	CLAMP, hose, adjustable, 1-7/8" to 2-3/4" diam.		
14	078986	-	1	HOSE, radiator inlet (Started with grader #649)		
15	051819	-	2	CLAMP, hose, adjustable, 1-7/8" to 2-3/4" diam.		
16	-----	1	1	HOUSING, thermostat (See WATER MANIFOLD)		
17	-----	1	1	HOUSING, oil cooler (See OIL COOLER)		

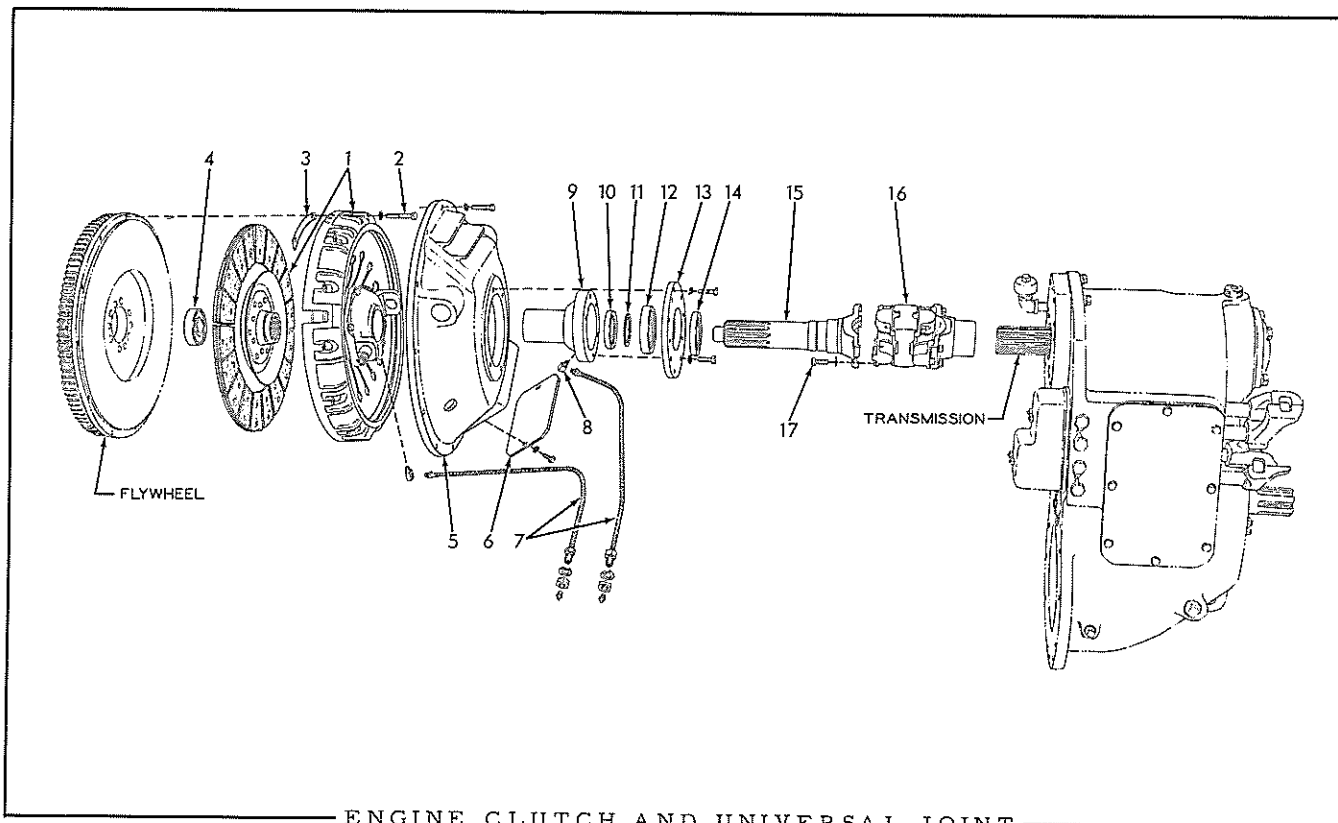


ENGINE CLUTCH CONTROL



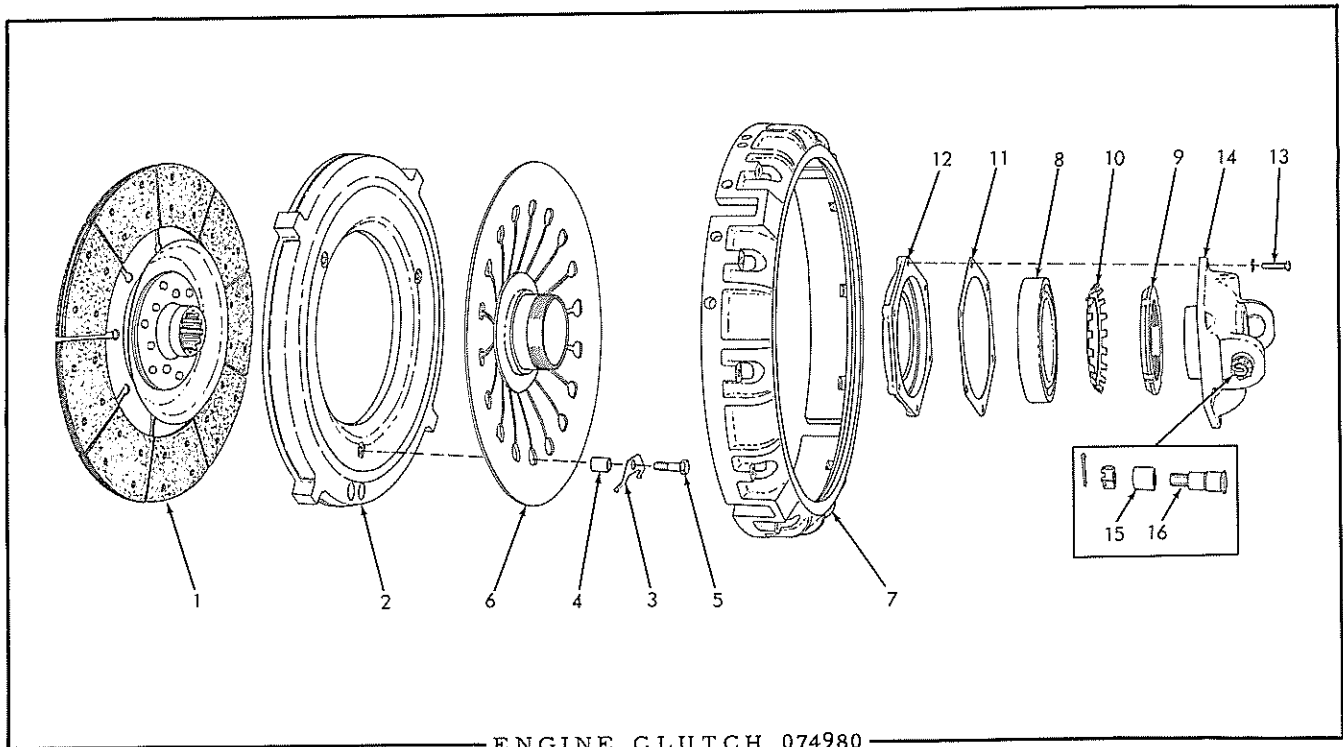
## ENGINE CLUTCH CONTROL

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074930	1	PEDAL, clutch operating	
2	605785	1	BUMPER, clutch pedal arm (rubber)	
3	074977	1	ARM, clutch pedal	
	915659	1	CAPSCREW, 1/2"NF x 2-1/4"	
	904208	1	LOCKWASHER, 1/2"	
	911043	1	NUT, 1/2"NF	
4	052357	1	SPRING, pedal retracting	
5	052358	1	LINK, pedal retracting spring	
6	604899	1	PIN, retracting spring link	
	900942	1	PIN, cotter, 3/32" x 5/8"	
7	074974	1	SHAFT, clutch pedal arm	
	904381	1	PIN, cotter, 3/16" x 2-1/4"	
8	049993	4	PIN, control rod yokes	
	900805	4	PIN, cotter, 1/8" x 3/4"	
9	074973	1	YOKE, sliding, control rod	
10	074970	1	ROD, clutch control	
	911043	1	NUT, 1/2"NF	
11	076780	1	YOKE, sliding	
12	049991	2	BUSHING, sliding yoke (Graders prior to #539)	
13	074960	1	SPRING, brake operating rod	
14	074963	1	ROD, brake operating	
	911043	1	NUT, 1/2"NF	
	912317	1	PIN, cotter, 5/32" x 1"	
	910244	1	WASHER, plain, SAE std., 1/2"	
15	068389	2	YOKE, adjusting	
16	074969	1	LEVER, clutch operating	
	911848	1	CAPSCREW, 3/8"NF x 2"	
	904206	1	LOCKWASHER, 3/8"	
	911041	1	NUT, 3/8"NF	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	
17	074975	1	BEARING, needle, clutch fork shaft, left	
18	074959	3	SEAL, dust, clutch fork shaft bearings	
19	074966	1	SHAFT, clutch fork	
20	5157551	1	FORK, clutch shifting	
	904744	2	CAPSCREW, 7/16"NC x 1-1/2"	
	904207	2	LOCKWASHER, 7/16"	
	905126	2	KEY, #15 woodruff, 1/4" x 1"	
21	074976	1	BEARING, needle, clutch fork shaft, right	
22	075680	1	LEVER, clutch brake	
23	075681	2	STUD, pressure plate	
24	074978	1	YOKE, brake operating	
	911848	1	CAPSCREW, 3/8"NF x 2"	
	904206	1	LOCKWASHER, 3/8"	
	911041	1	NUT, 3/8"NF	
25	075679	1	KEY, brake operating yoke	
26	075715	1	COVER ASSEMBLY, brake (Includes item 27)	
	903630	6	CAPSCREW, 3/8"NC x 1"	
	904206	6	LOCKWASHER, 3/8"	
27	034514	2	BUSHING, brake cover	
28	074956	1	PLATE, pressure	
29	040475	2	SPRING, pressure plate	
30	068908	1	HUB ASSEMBLY, brake (Facings are cemented and are not serviced separately)	
31	-----	-	See TRANSMISSION TOP SHAFT	



ENGINE CLUTCH AND UNIVERSAL JOINT

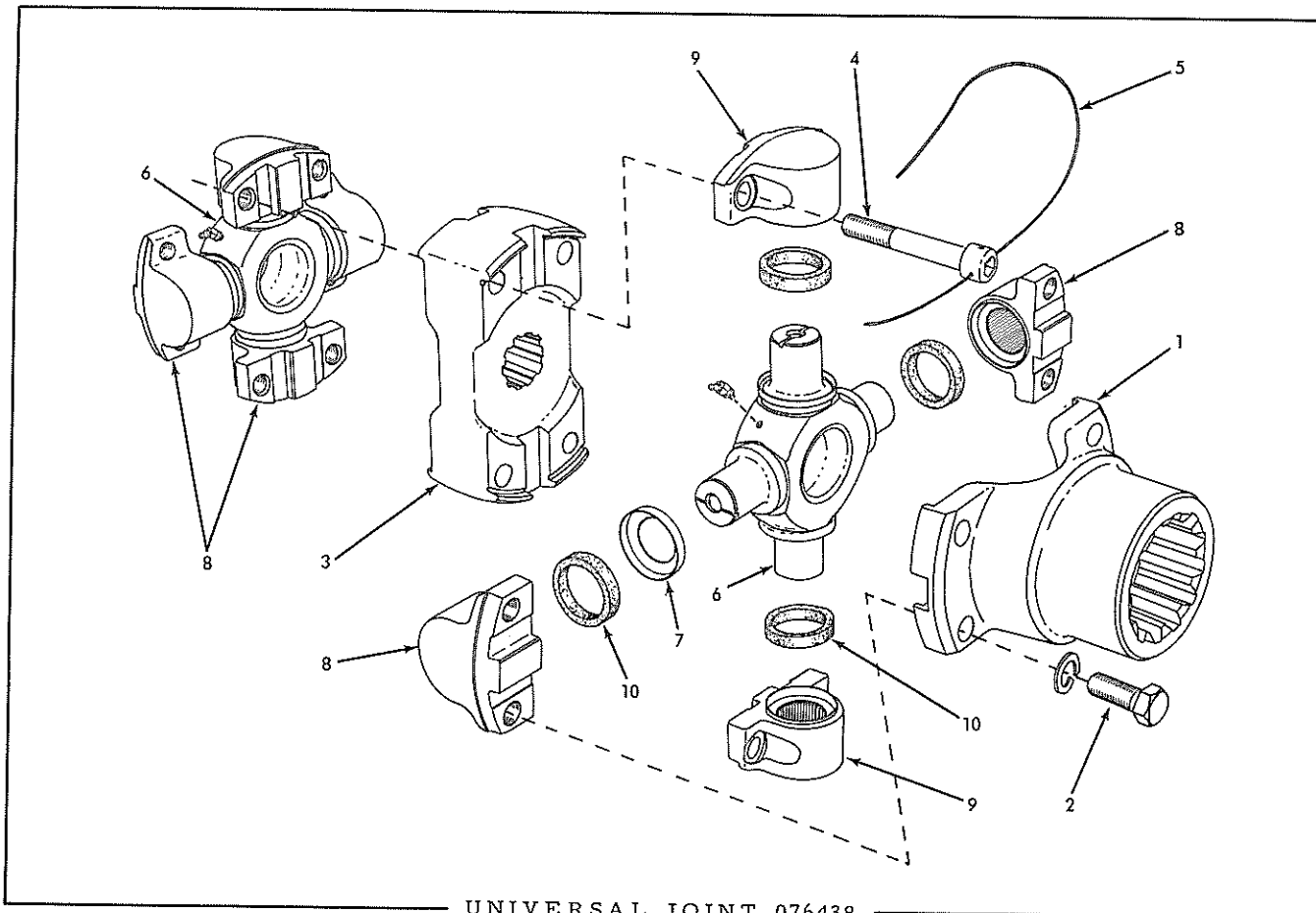
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074980	1	CLUTCH ASSEMBLY, engine (See page 83 for repair parts)	
2	068320	12	CAPSCREW, 5/16"NC x 2"	
	904205	12	LOCKWASHER, 5/16"	
3	054649	6	SHIM, clutch (1/32" thick)(To be removed when refacing of flywheel or clutch pressure plate requires machining off an amount equal to the thickness of shim)	
4	211013	1	BEARING, ball, clutch shaft, rear (In flywheel)	
5	074979	1	HOUSING, clutch	
	910245	12	CAPSCREW, 3/8"NC x 1-3/8"	
	904206	12	LOCKWASHER, 3/8"	
6	075885	1	COVER, clutch inspection	
	903629	2	CAPSCREW, 3/8"NC x 3/4"	
	904206	2	LOCKWASHER, 3/8"	
7	045496	2	HOSE, lubricating, clutch shaft and release bearings	
	904209	2	LOCKWASHER, 5/8"	
	911049	2	NUT, jam, 5/8"NF	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
8	605794	2	ELBOW, clutch lubricating hose (90°, 1/8"NPT male and female)	
9	074955	1	SLEEVE, release bearing	
	910245	6	CAPSCREW, 3/8"NC x 1-3/8"	
	904206	6	LOCKWASHER, 3/8"	
10	074962	1	SEAL, oil, clutch front bearing, rear	
11	050292	1	RING, snap, clutch front bearing	
12	510313	1	BEARING, ball, clutch, front	
13	074957	1	ADAPTER, front bearing oil seal	
	910211	6	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	6	LOCKWASHER, 3/8"	
14	074961	1	SEAL, oil, clutch front bearing, front	
15	076436	1	SHAFT, clutch	
16	076438	1	JOINT ASSEMBLY, universal (See page 84 for repair parts)	
17	035167	4	CAPSCREW, 3/8"NF x 7/8"	
	904206	4	LOCKWASHER, 3/8"	



ENGINE CLUTCH 074980

NOTE: See page 82 for listing of complete Clutch Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074981	1	PLATE ASSEMBLY, drive (Standard on graders prior to #1384. Has semi-metallic cemented facings which are not serviced separately)	
	054126	1	PLATE ASSEMBLY, drive (Standard on graders #1384 and up. Has metallic-asbestos cemented facings which are not serviced separately)	
	085499	1	PLATE ASSEMBLY, drive (Special. For heavy-duty applications. Has integral ceramic friction discs)	
2	054127	1	PLATE, pressure	
3	054132	3	SPRING, pressure plate retracting	
4	054131	3	SPACER	
5	056168	3	CAPSCREW, 3/8"NC x 1-1/4"	
6	054129	1	SPRING AND HUB ASSEMBLY (Serviced only as a unit)	
7	054128	1	COVER	
8	054122	1	BEARING, ball, clutch release	
9	054120	1	NUT, retaining, release bearing	
10	054121	1	WASHER, locking, release bearing nut	
11	054123	1	GASKET, release bearing cover	
12	054124	1	COVER, release bearing	
13	054130	6	CAPSCREW, 5/16"NC x 7/8"	
	904205	6	LOCKWASHER, 5/16"	
14	054125	1	SLEEVE ASSEMBLY, release bearing (Includes items 15 and 16)	
15	054118	2	BUSHING, release bearing sleeve pin	
16	054119	2	PIN, release bearing sleeve	
	910867	2	NUT, hex-slotted, 1/2"NF	
	910967	2	PIN, cotter, 1/8" x 7/8"	

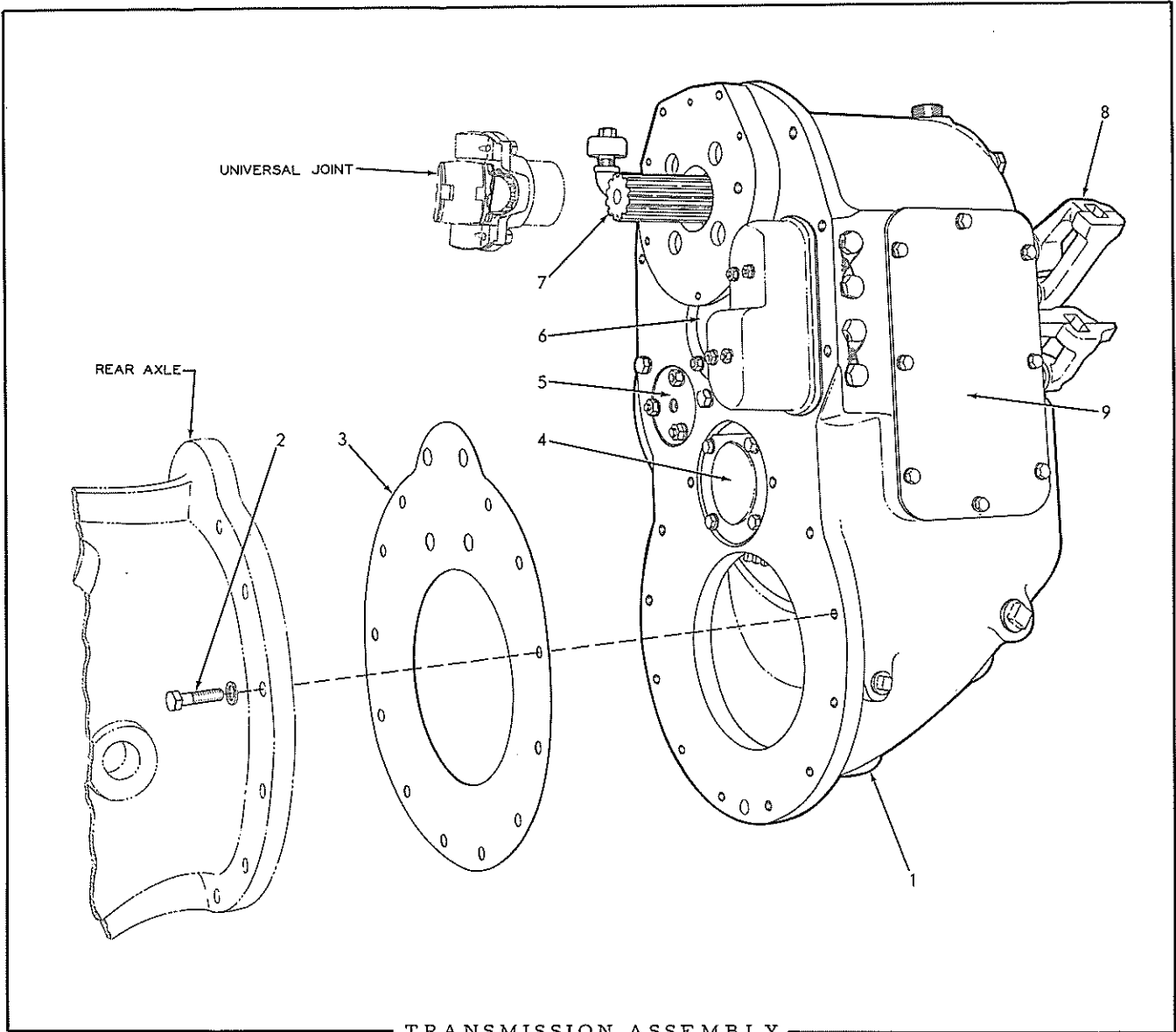


UNIVERSAL JOINT 076438

NOTE: See page 82 for listing of complete Universal Joint Assembly

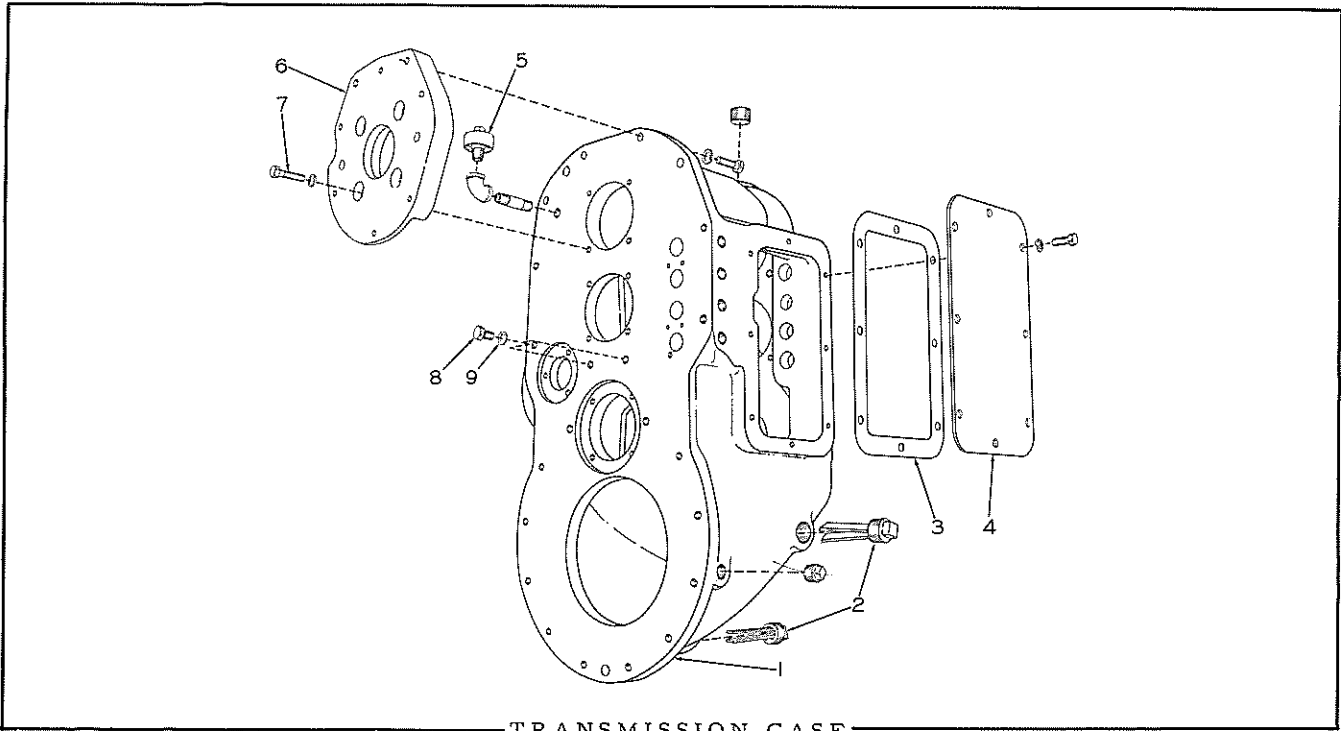
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	076437	1	YOKE, coupling	
2	035167	4	CAPSCREW, 3/8"NF x 7/8"	
	904206	4	LOCKWASHER, 3/8"	
3	076459	1	PLATE, coupling	
4	076460	4	CAPSCREW, coupling	
5	023633	2	WIRE, locking (1/16" x 12")	
6	076456	2	SPIDER ASSEMBLY (Includes item 7 and FITTING indented below) (Order 086747 or 086752)	
	915274	2	FITTING, lubricating, 45°, 1/8"NPT (Early units. Used with SPIDER ASSEMBLY 076456 only)	
6	086747	1	SPIDER ASSEMBLY, front	Each consists of 1 SPIDER, 1 FITTING 918186, 4 WASHERS 076461, 4 SHIELDS 059873 and 4 BEARINGS
	086752	1	SPIDER ASSEMBLY, rear	
	918186	2	FITTING, lubricating, 45°, 1/4"NF (Late units. Used with SPIDER ASSEMBLIES 086747 and 086752 only)	
7	059873	8	SHIELD, dust	
8	076455	6	BEARING ASSEMBLY (Each consists of 1 RACE, 31 ROLLERS, 1 RETAINER)	Not serviced separately. Order 086747 or 086752
9	076457	2	BEARING ASSEMBLY (Each consists of 1 RACE, 31 ROLLERS, 1 RETAINER)	
10	076461	8	WASHER, sealing (cork)	

NOTE: Late type universal joints are being furnished with heavier spiders to improve the service life. Only the new type spider assemblies will be available on service orders.



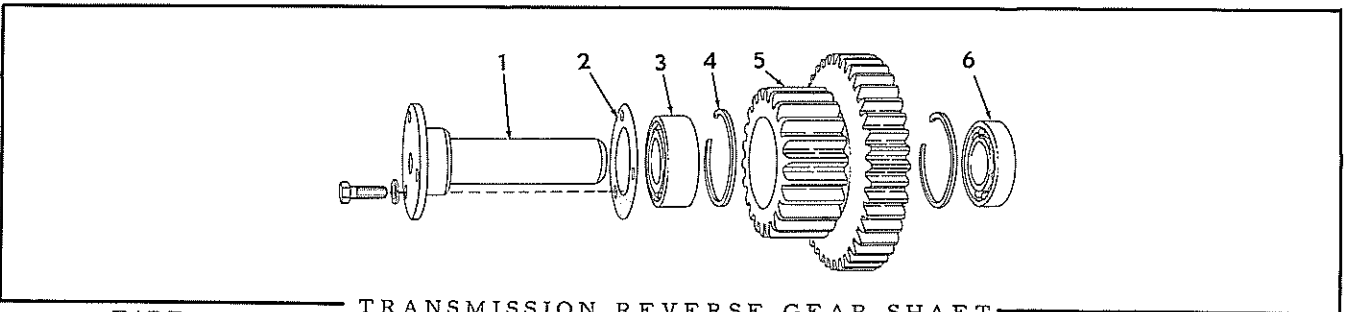
TRANSMISSION ASSEMBLY

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	075028	1	TRANSMISSION ASSEMBLY (Includes GEARS, SHAFTS and shifting FORKS)	
2	AM-8801	12	CAPSCREW, 1/2"NC x 2"	
	904208	12	LOCKWASHER, 1/2"	
3	604978	1	GASKET, transmission to rear axle	
4	-----	-	See BOTTOM SHAFT	
5	-----	-	See REVERSE GEAR SHAFT	
6	-----	-	See INTERMEDIATE SHAFT	
7	-----	-	See TOP SHAFT	
8	-----	-	See GEAR SHIFTING FORKS	
9	-----	-	See TRANSMISSION CASE	



TRANSMISSION CASE

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605637	1	CASE, transmission	
	904541	2	CAPSCREW, 1/2"NC x 1-3/4"	
	904208	2	LOCKWASHER, 1/2"	
	901666	1	PLUG, pipe, ctsk-hd., 1"NPT	
	912725	1	PLUG, pipe, sq-hd., 1/2"NPT (oil level)	
2	077707	2	PLUG, oil drain (sq-hd., 1"NPT, magnetic)	
3	605911	1	GASKET, case cover	
4	605896	1	COVER, case	
	903629	8	CAPSCREW, 3/8"NC x 3/4"	
	904206	8	LOCKWASHER, 3/8"	
5	050748	1	BREATHER	
	901678	1	ELBOW, pipe, 90°, 3/8"NPT	
	901492	1	NIPPLE, pipe, 3/8"NPT x 2-1/2"	
6	075274	1	ADAPTER, transmission case (Graders prior to #1114)	
	079371	1	ADAPTER, transmission case (Graders #1114 and up)	
7	013058	4	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	4	LOCKWASHER, 3/8"	
8	911980	3	CAPSCREW, 1/2"NC x 7/8" (hole plugging)	
9	603585	3	WASHER	



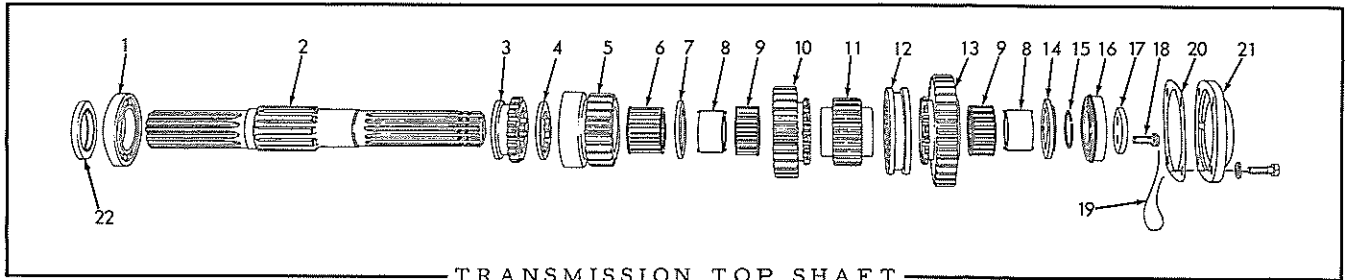
TRANSMISSION REVERSE GEAR SHAFT

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605915	1	SHAFT, reverse gear	
	903630	3	CAPSCREW, 3/8"NC x 1"	
	904206	3	LOCKWASHER, 3/8"	
2	605905	1	GASKET, reverse gear shaft	
3	058967	1	BEARING, ball, reverse gear, rear	

(Continued)

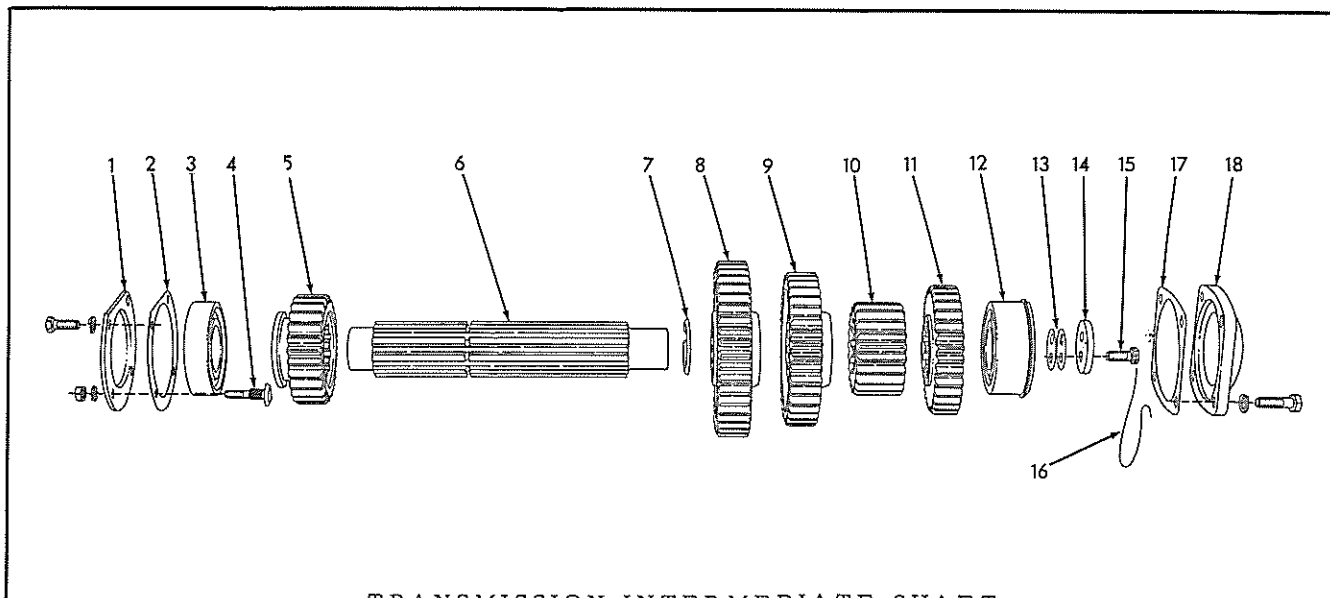
TRANSMISSION REVERSE GEAR SHAFT (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
4	605895	2	RING, snap, reverse gear	
5	605914	1	GEAR, reverse (22 teeth and 40 teeth)	
6	058974	1	BEARING, ball, reverse gear, front	



TRANSMISSION TOP SHAFT

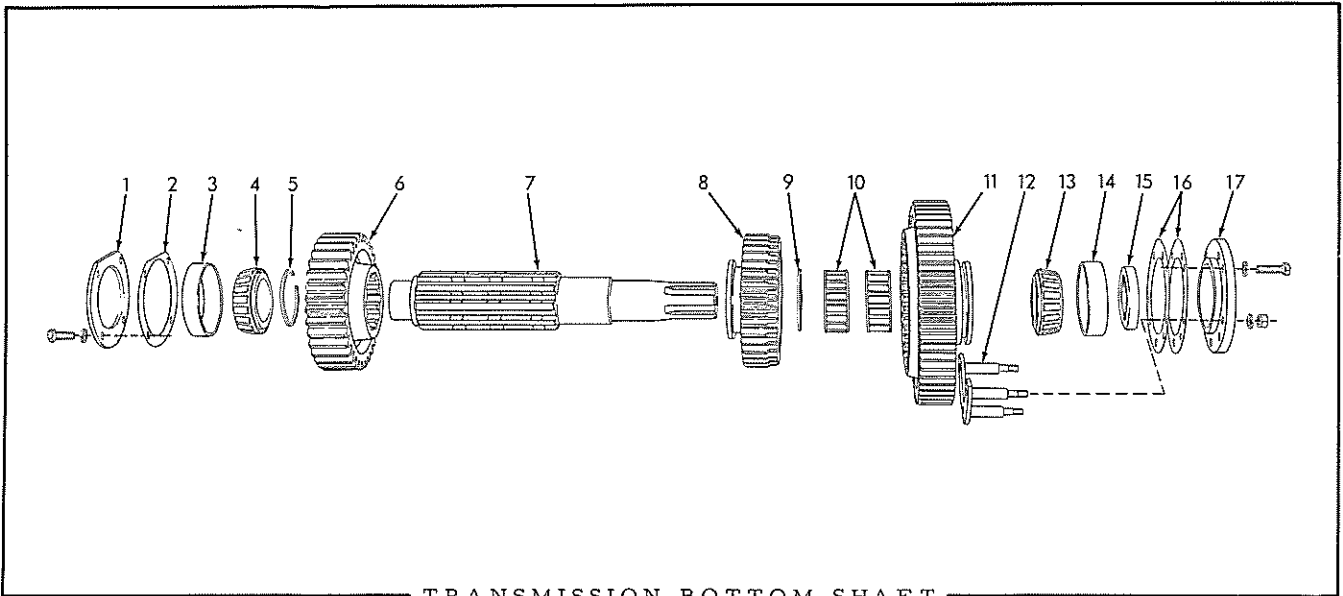
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	079015	1	BEARING, ball, rear (1" wide, sealed on one side)(Graders prior to #1114)	
	067566	1	BEARING, ball, rear (13/16" wide; not sealed. See item 23) (Graders #1114 and up)	
2	079382.	1	SHAFT, top (Has 5/64" wide snap ring groove in end)(Used on graders prior to #1279. When for graders prior to #158 also order 1 WASHER 078137 and 1 RING 078135)	
	082180	1	SHAFT, top (Has 7/64" wide snap ring groove in end)(Used on graders #1280 and up)	
3	075275	1	GEAR, shifting, 1st and 4th speeds (18 teeth)	
4	075276	1	WASHER, spacing, 1st and 4th speed gear	
5	075278	1	GEAR, 1st and 4th speeds (18 and 21 teeth)	
6	075277	1	BEARING, roller, 1st and 4th speed gear	
7	075279	1	WASHER, spacing, 2nd and 5th speed gear	
8	075282	2	SLEEVE, roller bearing	
9	075281	2	BEARING, roller, 2nd and 5th speed gear	
10	075280	1	GEAR, 2nd and 5th speeds (18 and 27 teeth)	
11	075283	1	HUB, shifting collar	
12	075284	1	COLLAR, shifting, 2nd, 3rd, 5th and 6th speeds	
13	075285	1	GEAR, 3rd and 6th speeds (33 teeth)	
14	075286	1	WASHER, thrust (15/32" thick)(Graders prior to #158)	
	078137	1	WASHER, thrust (13/32" thick)(Graders #158 thru #1279)	
	082163	1	WASHER, thrust (3/8" thick)(Graders #1280 and up)	
15	078135	1	RING, snap (coil type, 3/64" thick)(Graders #158 thru #1279)	
	050293	1	RING, snap (split type, 3/32" thick)(Graders #1280 and up)	
16	059093	1	BEARING, ball, front	
17	059022	1	WASHER, retaining, front bearing	
18	059023	2	CAPSCREW (drilled hex-hd., 7/16"NC x 1")	
19	023633	1	WIRE, locking (1/16" x 12")	
20	059103	1	GASKET, front bearing cover	
21	075287	1	COVER, front bearing	
	903639	4	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	4	LOCKWASHER, 1/2"	
22	064302	1	SEAL, oil, rear bearing (Graders #1114 and up)	



TRANSMISSION INTERMEDIATE SHAFT

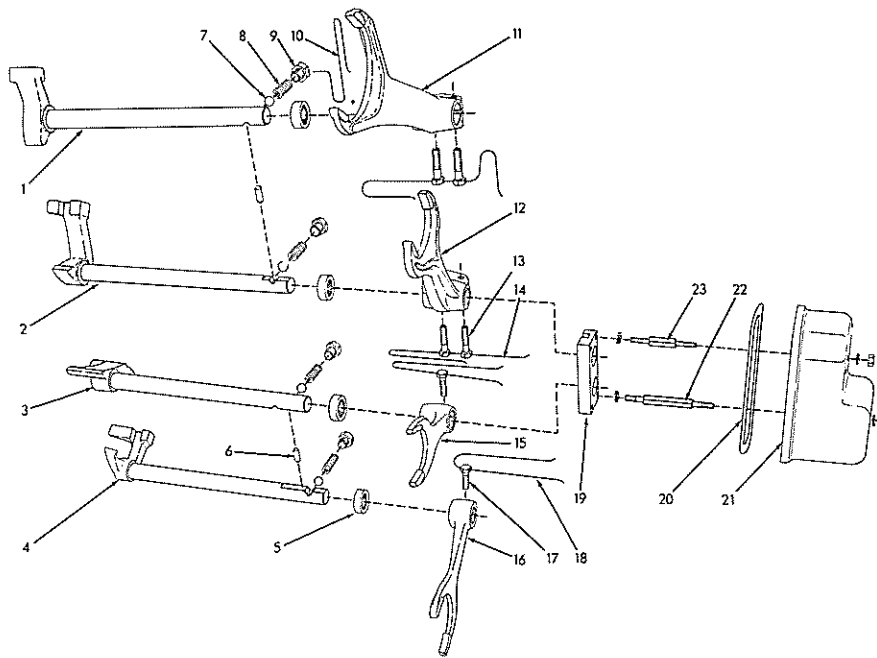
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605008	1	COVER, rear bearing	
	903630	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
2	604997	1	GASKET, rear bearing cover	
3	059095	1	BEARING, roller, rear	
4	059120	2	SCREW, retaining, rear bearing	
	911041	2	NUT, 3/8"NF	
	912301	2	LOCKWASHER, external teeth, 3/8"	
5	050941	1	GEAR, shifting, reverse (25 teeth)	
6	075290	1	SHAFT, intermediate	
7	605003	1	RING, snap	
8	605004	1	GEAR, hi-range speeds (43 teeth)	
9	605005	1	GEAR, 2nd and 5th speeds (37 teeth)	
10	605006	1	GEAR, 3rd and 6th speeds (21 teeth)	
11	075288	1	GEAR, 3rd and 6th speeds (31 teeth)	
12	075289	1	BEARING, ball, front (snap-ring type)	
13	059788	6	SHIM, retaining washer (.005" thick. Use as req'd)	
	059789	5	SHIM, retaining washer (.028" thick. Use as req'd)	
14	059022	1	WASHER, retaining, front bearing	
15	059023	2	CAPSCREW (drilled hex-hd., 7/16"NC x 1")	
16	023633	1	WIRE, locking (1/16" x 12")	
17	059103	1	GASKET, front bearing cover	
18	059102	1	COVER, front bearing	
	903639	4	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	4	LOCKWASHER, 1/2"	





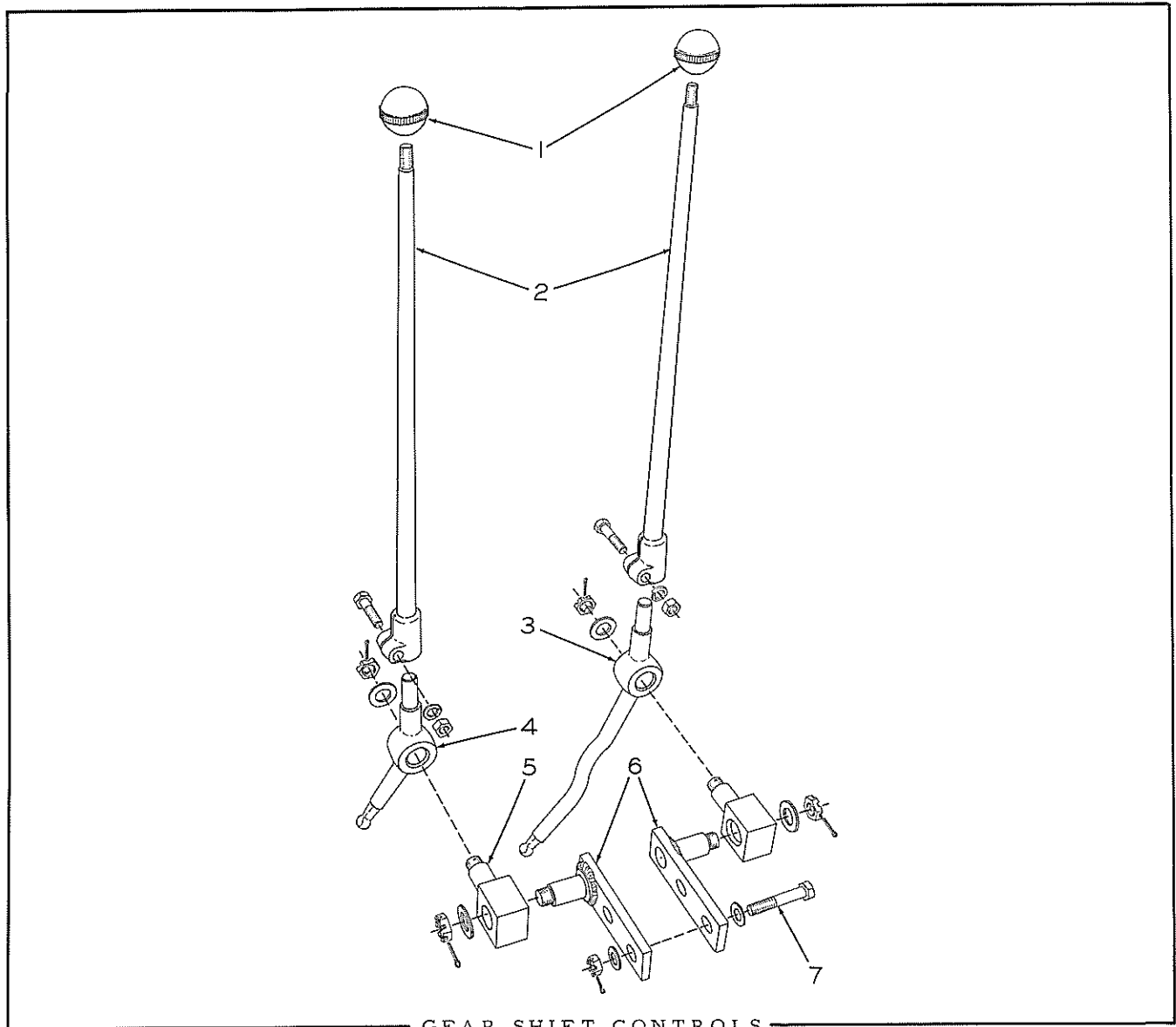
TRANSMISSION BOTTOM SHAFT

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	068197	1	COVER, rear bearing	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
2	604997	1	GASKET, rear bearing cover	
3	061088	1	CUP, rear bearing	
4	061087	1	CONE ASSEMBLY, rear bearing	
5	605080	1	RING, snap	
6	605012	1	GEAR, reverse (33 teeth)	
7	050936	1	SHAFT, bottom	
8	050938	1	GEAR, shifting, hi-lo range (38 teeth)	
9	605081	1	WASHER, thrust	
10	061085	2	ROLLER ASSEMBLY	
11	605015	1	GEAR, low range speeds (60 teeth)	
12	605090	1	SEGMENT ASSEMBLY, gear retaining (Serviced only as a unit)	
	911041	3	NUT, 3/8"NF	
	904206	3	LOCKWASHER, 3/8"	
13	605175	1	CONE ASSEMBLY, front bearing	
14	210740	1	CUP, front bearing	
15	605093	1	SEAL, oil, front bearing	
16	605082	12	SHIM, bearing adjusting (.005" thick. Use as req'd)	
	056586	2	SHIM, bearing adjusting (.003" thick. Use as req'd)	
17	605010	1	COVER, front bearing	
	903631	4	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	4	LOCKWASHER, 3/8"	



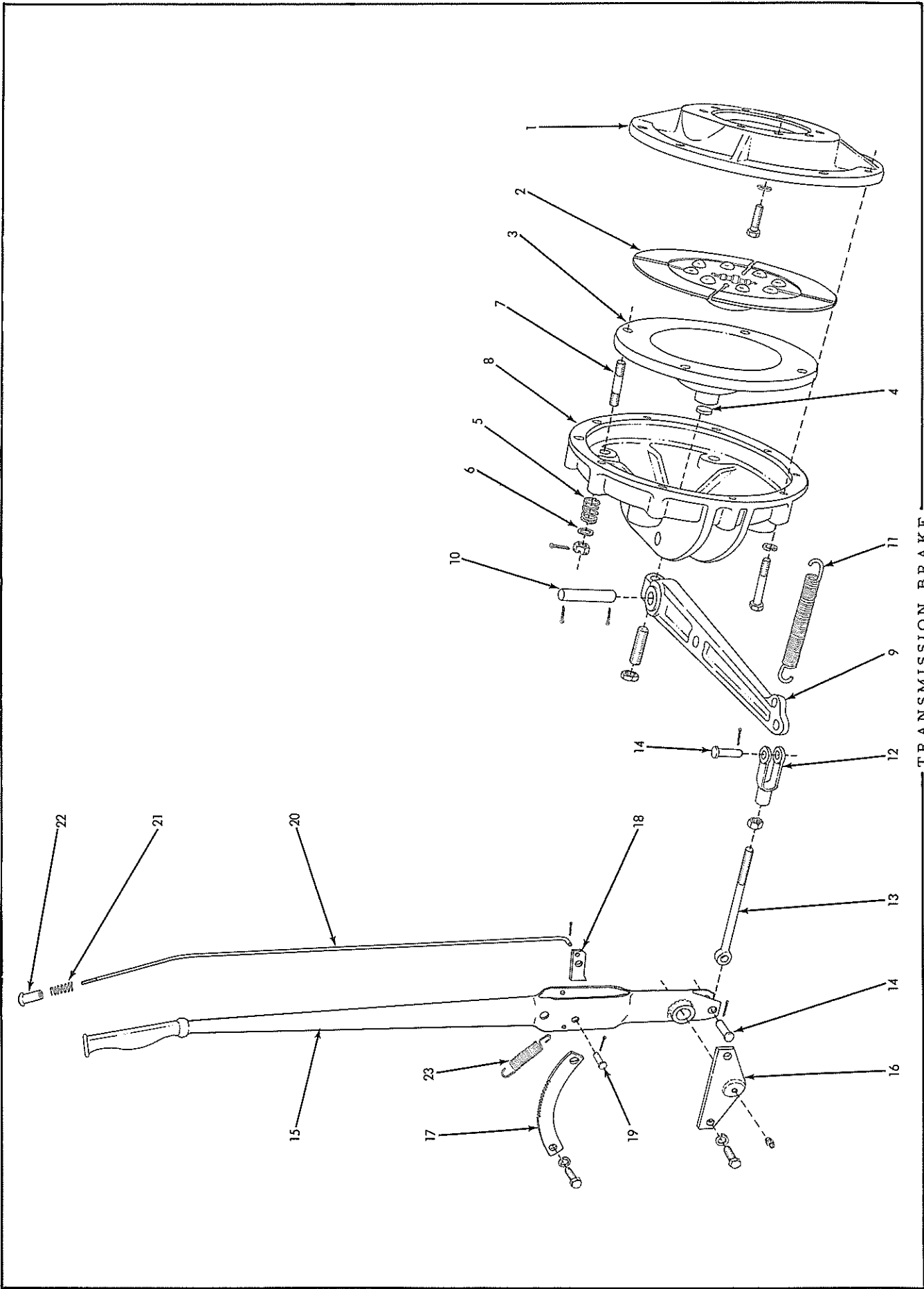
GEAR SHIFTING FORKS

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	076275	1	SHAFT, 2nd and 3rd shifting fork	
2	076276	1	SHAFT, low shifting fork	
3	076274	1	SHAFT, reverse shifting fork	
4	076273	1	SHAFT, high-low shifting fork	
5	605898	4	SEAL, oil, shifting fork shaft	
6	605900	2	PLUNGER, interlocking, shifting fork shafts	
7	910181	4	BALL, steel, 9/16" diam.	
8	605909	4	SPRING, shifting shaft locking ball	
9	605910	4	PLUG, shifting shaft locking ball	
10	023633	1	WIRE, locking (1/16" x 12")	
11	076660	1	FORK, 2nd and 3rd	
12	076659	1	FORK, low	
13	076942	4	CAPSCREW, upper forks (drilled-hd., 3/8"NF x 1-1/2")	
14	023633	4	WIRE, locking (1/16" x 12")	
15	605632	1	FORK, reverse	
16	605633	1	FORK, high-low	
17	045617	2	CAPSCREW, lower forks (drilled-hd., 3/8"NC x 1-1/4")	
18	023633	2	WIRE, locking (1/16" x 12")	
19	605899	1	GUIDE, interlocking plunger	
20	075292	1	GASKET, shifting fork cover	
21	075293	1	COVER, shifting fork	
22	075299	2	STUD, hex (long)	} Also attach interlock guide
23	075298	2	STUD, hex (short)	
	904204	8	LOCKWASHER, 1/4"	
	911024	4	NUT, 1/4"NC	



GEAR SHIFT CONTROLS

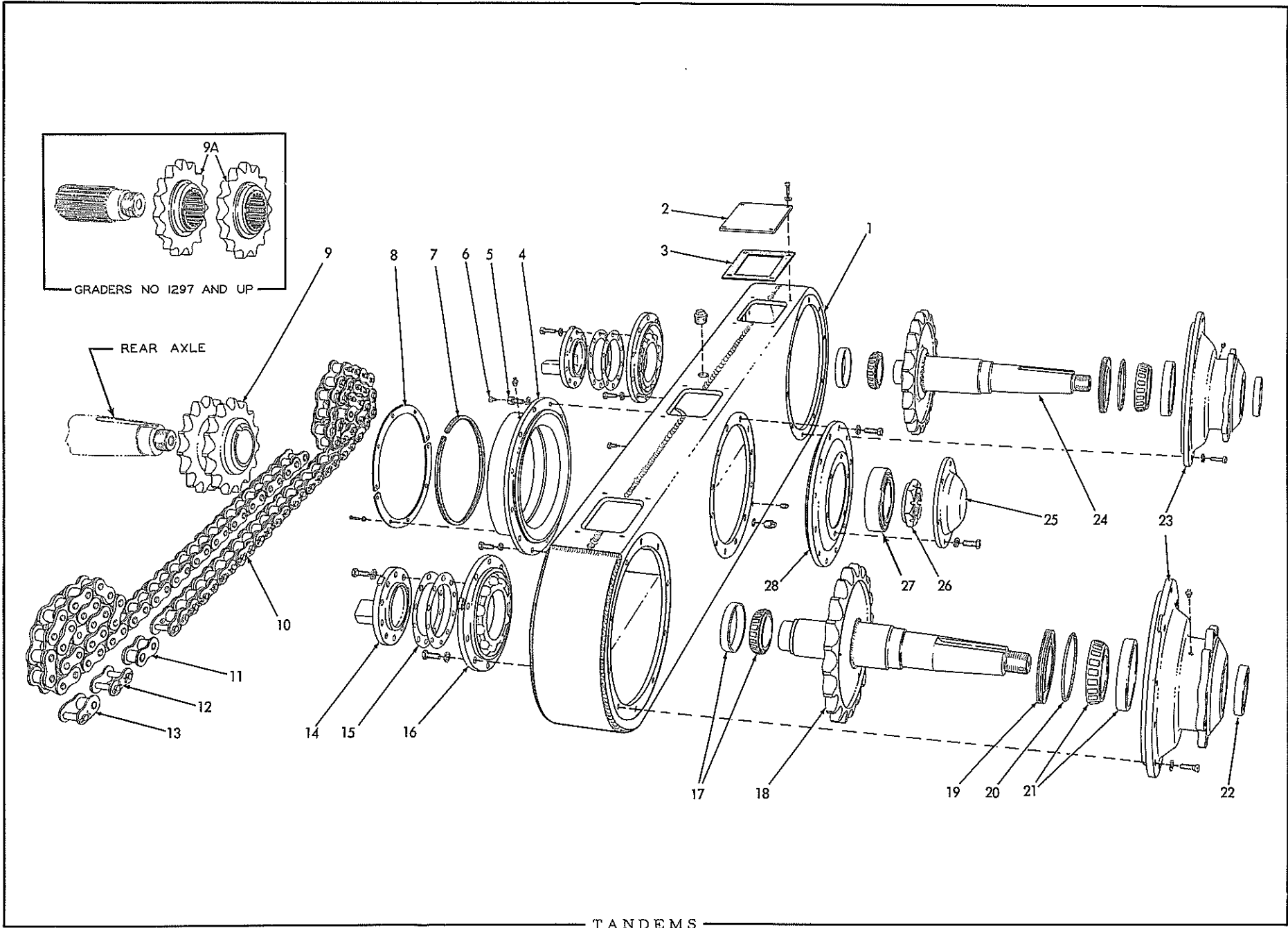
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	U-171	2	KNOB, gear shift lever	
2	074982	2	LEVER, extension, gear shift	
	911849	2	CAPSCREW, 1/2"NF x 2"	
	904208	2	LOCKWASHER, 1/2"	
	911043	2	NUT, 1/2"NF	
3	074983	1	LEVER, hi-lo and reverse speeds	
4	075116	1	LEVER, 1st, 2nd and 3rd speeds	
5	075117	2	PIN, lever pivot	
	910255	2	WASHER, plain, SAE std., 3/4"	
	913472	2	NUT, jam, slotted, 3/4"NF	
	900807	2	PIN, cotter, 1/8" x 1-1/4"	
6	075123	2	PLATE, lever mounting	
	913472	2	NUT, jam, slotted, 3/4"NF	
	910255	2	WASHER, plain, SAE std., 3/4"	
	900807	2	PIN, cotter, 1/8" x 1-1/4"	
7	075122	2	CAPSCREW, mounting plate (1/2"NF x 2-3/4")	
	910867	2	NUT, slotted, 1/2"NF	
	910244	4	WASHER, plain, SAE std., 1/2"	
	900805	2	PIN, cotter, 1/8" x 3/4"	



TRANSMISSION BRAKE

TRANSMISSION BRAKE

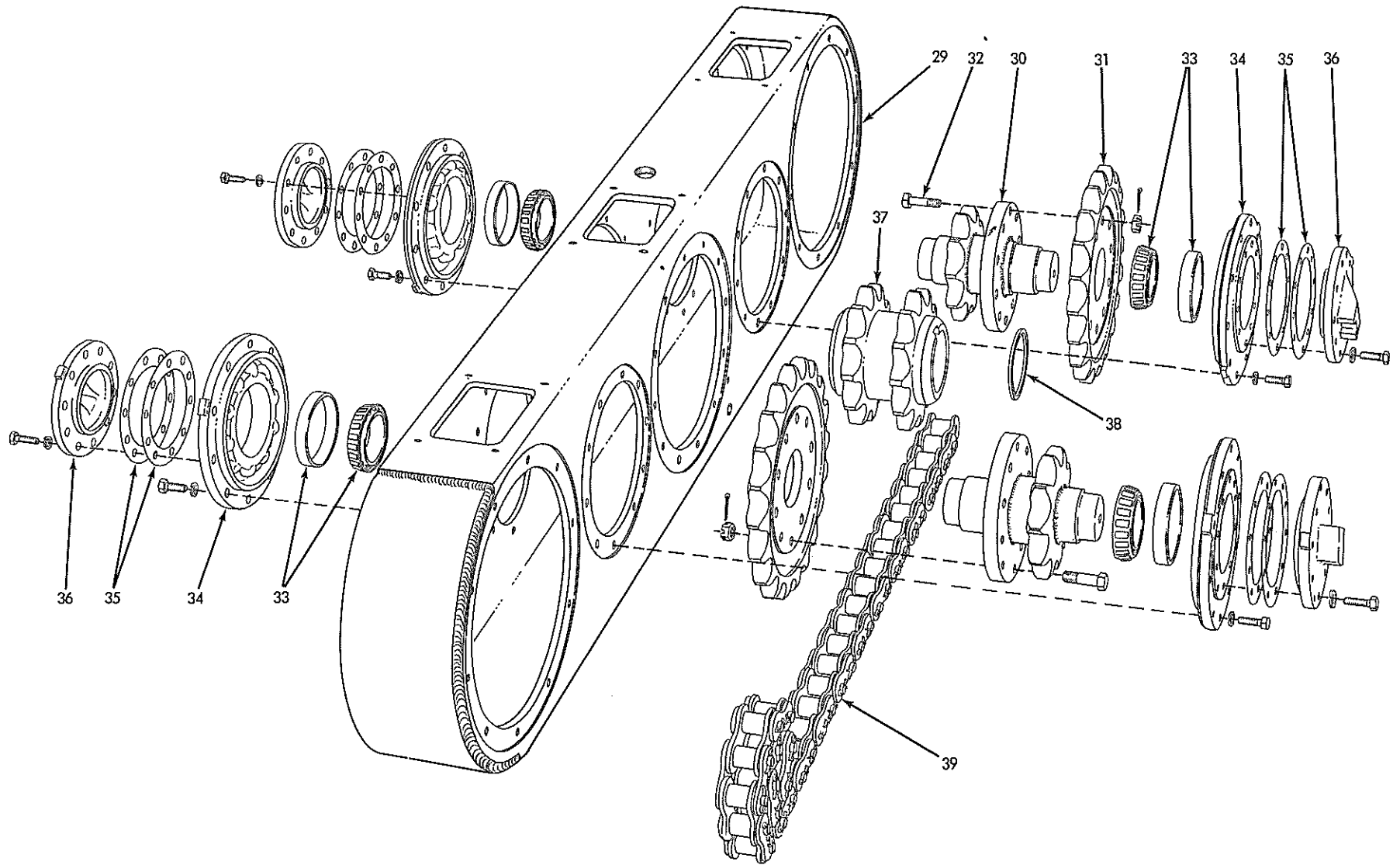
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074918	1	PLATE, pressure, inner	
	903638	8	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	8	LOCKWASHER, 1/2"	
2	604881	1	DISC ASSEMBLY, brake (1 HUB, 1 DISC, 8 RIVETS. Separate parts not serviced)	
3	604215	1	PLATE, pressure, outer	
4	604880	1	INSERT, wear, outer pressure plate	
5	604878	4	SPRING, retracting, outer pressure plate	
6	604879	4	WASHER, retracting spring	
7	604877	4	STUD, retracting, outer pressure plate (5/8"NC x 5/8"NF x 2-7/8")	
	912840	4	NUT, slotted, 5/8"NF	
	900806	4	PIN, cotter, 1/8" x 1"	
8	053698	1	COVER	
	903642	10	CAPSCREW, 1/2"NC x 2-1/2"	
	904208	10	LOCKWASHER, 1/2"	
9	604885	1	LEVER, actuating	
	913468	1	SETSCREW, slotted-hd., oval-pt., 3/4"NF x 2-1/2"	
	910847	1	NUT, jam, 3/4"NF	
10	604887	1	PIN, actuating lever	
	911440	2	PIN, cotter, 3/16" x 1-1/8"	
11	604757	1	SPRING, retracting, brake lever	
12	068389	1	YOKE, brake rod	
13	605801	1	ROD, brake	
	911043	1	NUT, 1/2"NF	
14	917648	2	PIN, yoke, 1/2" diam.	
	910967	2	PIN, cotter, 1/8" x 7/8"	
15	604889	1	LEVER, operating	
16	057742	1	PIVOT, operating lever	
	903630	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
17	604904	1	RATCHET, operating lever	
	903630	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
18	604895	1	PAWL, operating lever	
19	604899	1	PIN, pawl	
	900942	1	PIN, cotter, 3/32" x 5/8"	
20	604896	1	ROD, lever pawl	
	900970	1	PIN, cotter, 1/16" x 1/2"	
21	604835	1	SPRING, pawl rod	
22	604898	1	BUTTON, pawl rod	
23	605603	1	SPRING, retracting, operating lever	



TANDEM S

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	604470	2	CASE, tandem (Not for graders with low-speed tandems. See item 29)	
	903627	4	CAPSCREW, 3/8"NC x 1/2" (for plugging holes)	
	912768	2	PLUG, pipe, 1"NPT (oil filling hole)	
	901652	2	PLUG, pipe, 1/4"NPT (oil level checking)	
	912725	2	PLUG, pipe, 1/2"NPT (oil drain)	
2	604481	6	COVER, case access holes	
	903630	24	CAPSCREW, 3/8"NC x 1"	
	904206	24	LOCKWASHER, 3/8"	
3	604482	6	GASKET, case cover	
4	604489	2	HUB, tandem case	
	903638	22	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	22	LOCKWASHER, 1/2"	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
5	064129	2	ADAPTER, air vent	
	904208	2	LOCKWASHER, 1/2"	
6	605132	2	VENT, air, tandem case	
7	604487	2	SEAL, case hub	
8	604488	4	RING, retaining, case hub seal	
	903626	20	CAPSCREW, 5/16"NC x 3/4"	
	904205	20	LOCKWASHER, 5/16"	
9	051150	2	SPROCKET, driving (15 teeth)(Used on graders prior to #1297. Not for graders with low-speed tandems. See item 37)	
9A	083566	4	SPROCKET, driving (15 teeth)(Used on graders #1297 and up) . . . . .	083717
10	604483	4	CHAIN, driving (45 links, 2" pitch)(Includes items 11 thru 13)(Not for graders with low-speed tandems. See item 39)	
11	605578	-	LINK, roller, driving chain	
12	605508	-	LINK, connecting, driving chain (Includes side BAR and cotter PINS)	
13	605507	4	LINK, offset, driving chain (Includes connecting PIN and cotter PIN)	
14	604486	4	STOP, tandem	
	903639	40	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	40	LOCKWASHER, 1/2"	
15	{ 064763	4	SHIM, adjusting, wheel shaft bearings (.005" thick. Use as req'd)	
	{ 604477	36	SHIM, adjusting, wheel shaft bearings (.010" thick. Use as req'd)	
16	604480	4	ECCENTRIC, tandem wheel shaft, inner	
	903638	40	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	40	LOCKWASHER, 1/2"	
17	604928	4	BEARING, roller, tandem wheel shafts, inner (Each consists of 1 CUP and 1 ROLLER ASSEMBLY. Serviced only as a unit)	
18	066990	2	SPROCKET AND SHAFT, rear wheel	
19	051141	4	RETAINER, bearing compartment sealing ring	
20	AM-8578	4	RING, sealing, bearing compartment	
21	604927	4	BEARING, roller, tandem wheel shafts, outer (Each consists of 1 CUP and 1 ROLLER ASSEMBLY. Serviced only as a unit)	
22	066860	4	SEAL, oil, wheel shaft	
23	066991	4	ECCENTRIC, tandem wheel shaft, outer	
	903638	40	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	40	LOCKWASHER, 1/2"	
	914465	4	FITTING, lubricating, straight, 1/8"NPT	

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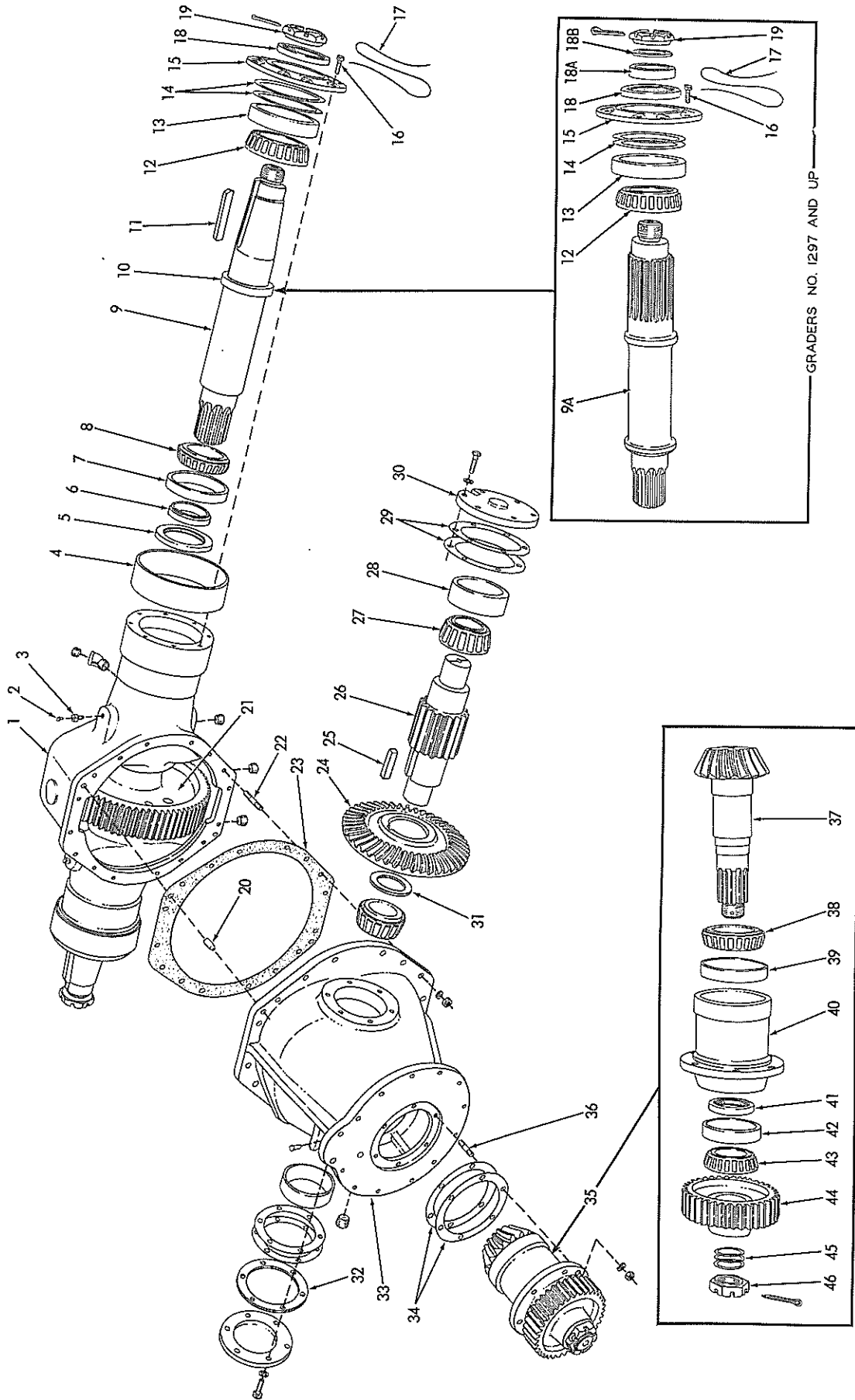


SPECIAL LOW-SPEED TANDEM PARTS



TANDEM (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
24	066988	2	SPROCKET AND SHAFT, front wheel	
25	051148	2	CAP, rear axle bearing (Graders prior to #1297)	
	081638	2	CAP, rear axle bearing (Graders #1297 and up)	083717
	914465	2	FITTING, lubricating, straight, 1/8"NPT	083717
	903638	12	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	12	LOCKWASHER, 1/2"	
26	-----	2	NUT (See REAR AXLE)	
27	051152	2	BEARING, roller, rear axle (6.299"O.D.)(Graders prior to #1297)	
	081188	2	BEARING, roller, rear axle (6.692"O.D.)(Graders #1297 and up)	083717
28	051149	2	CASE, rear axle bearing (Graders prior to #1297)	
	081187	2	CASE, rear axle bearing (Graders #1297 and up)	083717
	903638	24	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	24	LOCKWASHER, 1/2"	
NOTE: Parts listed below are applicable only to special graders equipped with low-speed tandems. Not for graders after serial No. 1297.				
29	064016	2	CASE, tandem	
30	064006	4	SPROCKET AND SHAFT, intermediate (10 teeth)	
31	064013	4	SPROCKET, driven (20 teeth)	
32	063996	40	CAPSCREW (drilled-end, 5/8"NF x 2")	
	912840	40	NUT, slotted, 5/8"NF	
	900806	40	PIN, cotter, 1/8" x 1"	
33	604928	8	BEARING, roller, intermediate shaft (Each consists of 1 CUP and 1 ROLLER ASSEMBLY. Serviced only as a unit)	
34	604480	8	ECCENTRIC, intermediate shaft	
	903628	80	CAPSCREW, 1/2"NC x 1-1/4"	
	904208	80	LOCKWASHER, 1/2"	
35	604477	72	SHIM, bearing cover (.010" thick. Use as req'd)	
36	064010	8	COVER, intermediate shaft bearing	
	903639	40	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	40	LOCKWASHER, 1/2"	
37	062107	2	SPROCKET, driving (12 teeth)	
38	063999	2	RING, spacing, rear axle tandem bearing	
39	064005	8	CHAIN, driving (30 links, 2" pitch. See items 11 and 12 for repair parts)	



REAR AXLE

REAR AXLE

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605083	1	HOUSING ASSEMBLY, rear axle (Includes item 4)	
	911076	3	ELBOW, street, 45°, 1"NPT	
	901666	6	PLUG, pipe, ctsk-hd., 1"NPT	
2	605132	3	VENT, air, rear axle and cross shaft housings	
3	605917	2	ADAPTER, rear axle housing air vent	
4	605053	2	BUSHING, housing	
5	604974	2	SEAL, oil, rear axle, inner	
6	604972	2	SPACER, rear axle inner bearing	
7	605338	2	CUP, rear axle inner bearing	
8	605339	2	CONE ASSEMBLY, rear axle inner bearing	
9	051198	2	AXLE ASSEMBLY (Includes item 10)(Graders prior to #1297)	
9A	083241	2	AXLE (Used on graders #1297 and up) . . . . .	083717
10	604971	2	COLLAR, rear axle (Graders prior to #1297)	
11	051151	2	KEY, rear axle (Graders prior to #1297)	
12	605337	2	CONE ASSEMBLY, rear axle outer bearing	
13	605336	2	CUP, rear axle outer bearing	
14	604969	2	SHIM, adjusting, rear axle bearings (.005" thick)(Use as req'd)	
	077337	10	SHIM, adjusting, rear axle bearings (.010" thick)(Use as req'd)	
15	604962	2	COVER, rear axle outer bearing (Graders prior to #1297)	
	078785	2	COVER, rear axle outer bearing (Graders #1297 and up) . . . . .	083717
16	604963	16	CAPSCREW, rear axle bearing cover (1/2"NC x 1-3/8", drilled-hd.)	
17	052519	2	WIRE, locking (1/16" x 39")	
18	604973	2	SEAL, oil, rear axle outer (5-1/2"O.D.)(Graders prior to #1297)	
	078593	2	SEAL, oil, rear axle outer (6"O.D.)(Graders #1297 and up) . . . . .	083717
18A	078884	2	SPACER, rear axle outer bearing (Graders #1297 and up) . . . . .	083717
18B	078895	2	WASHER, rear axle nut (Graders #1297 and up) . . . . .	083717
19	604968	2	NUT, rear axle (hex, slotted, 2-1/2"NF)	
	911690	2	PIN, cotter, 1/4" x 3-1/4"	
20	910179	2	PIN, dowel, cross shaft housing (5/8" x 1-1/2")	
21	060994	1	GEAR, rear axle (72 teeth)	
22	605416	16	STUD, cross shaft housing (5/8"NC x 3")	
	904209	16	LOCKWASHER, 5/8"	
	911029	16	NUT, 5/8"NC	
23	605106	2	GASKET, cross shaft housing	
24	057809	1	GEAR, bevel, cross shaft (45 spiral teeth)	
25	604982	1	KEY, cross shaft bevel gear (1/2" x 3/4" x 2-11/16")	
26	057956	1	SHAFT AND PINION, cross (17 teeth)	
27	605335	2	CONE ASSEMBLY, cross shaft bearing	
28	605334	2	CUP, cross shaft bearing	
29	605085	16	SHIM, adjusting, cross shaft bearings (.005" thick. Use as req'd)	
	065042	4	SHIM, adjusting, cross shaft bearings (.015" thick. Use as req'd)	
30	066751	2	COVER, cross shaft bearing	
	904541	6	CAPSCREW, 1/2"NC x 1-3/4" (left side)	
	903640	6	CAPSCREW, 1/2"NC x 2" (right side)	
	904208	12	LOCKWASHER, 1/2"	
31	066673	1	WASHER, cross shaft bevel gear	
32	066674	1	WASHER, spacing, cross shaft bearing cover	
33	604977	1	HOUSING, cross shaft	
	901666	1	PLUG, pipe, ctsk-hd., 1"NPT	
34	U-78	4	SHIM, adjusting, bevel pinion mesh (.005" thick. Use as req'd)	
	U-314	3	SHIM, adjusting, bevel pinion mesh (.015" thick. Use as req'd)	
35	057812	1	PINION AND SHAFT ASSEMBLY (Consists of items 37 thru 46)	
36	061842	6	STUD (1/2"NC x 1/2"NF x 2")	
	904208	6	LOCKWASHER, 1/2"	
	911043	6	NUT, 1/2"NF	

(Continued)

REAR AXLE (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
37	057810	1	PINION AND SHAFT (18 teeth)	
38	065870	1	CONE ASSEMBLY, bevel pinion shaft rear bearing	
39	061086	1	CUP, bevel pinion shaft rear bearing	
40	065540	1	CARRIER ASSEMBLY, bevel pinion and shaft (Includes items 39 and 42)	
41	604986	1	SEAL, oil, bevel pinion shaft	
42	061090	1	CUP, bevel pinion shaft front bearing	
43	061089	1	CONE ASSEMBLY, bevel pinion shaft front bearing	
44	064405	1	GEAR, bevel pinion shaft (36 teeth)	
45	605494	8	SHIM, adjusting, pinion shaft bearings (.002" thick. Use as req'd)	
	605493	6	SHIM, adjusting, pinion shaft bearings (.005" thick. Use as req'd)	
	605492	5	SHIM, adjusting, pinion shaft bearings (.020" thick. Use as req'd)	
46	605477	1	NUT, bevel pinion shaft (hex, slotted)	
	901345	1	PIN, cotter, 1/4" x 2-1/2"	

TIRES, TUBES AND RIMS  
(Not Illustrated)

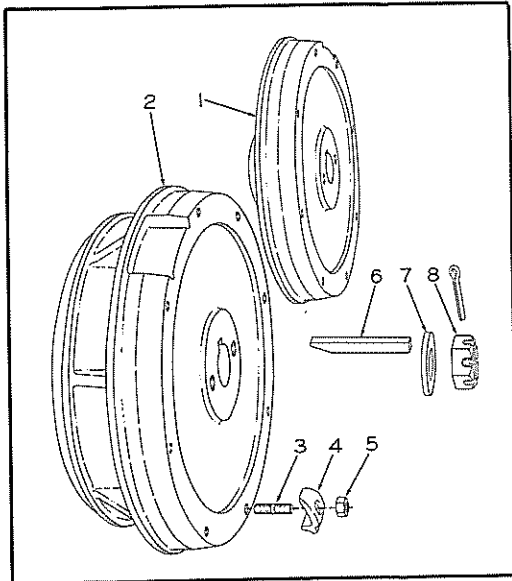
NOTE: Order from local Tire Dealer. Tire equipment listed below is optional.

For Rear Wheels

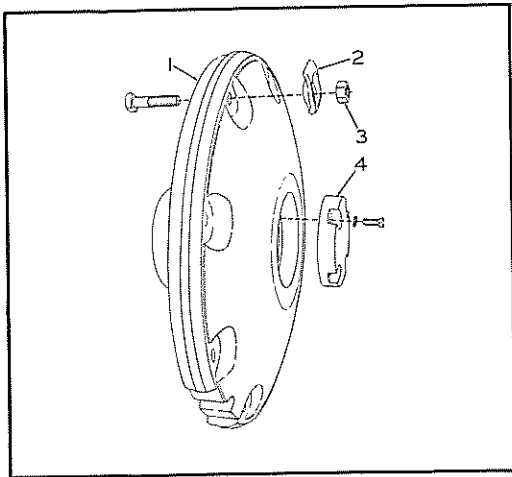
1	-----	4	RIM, pneumatic tire, semi-drop center, 24 x 8 (Goodyear No. 154D or Firestone No. 88RTH-5 <sup>o</sup> -1)
2	{ -----	4	TIRE, pneumatic road grader, 13.00-24", 8 to 12 ply rating
		4	TIRE, pneumatic road grader, 14.00-24", 8 to 12 ply rating
3	{ -----	4	TUBE, pneumatic tire, 13.00-24" with TR-220 or TR-218 valve
		4	TUBE, pneumatic tire, 14.00-24" with TR-220 or TR-218 valve

For Front Wheels

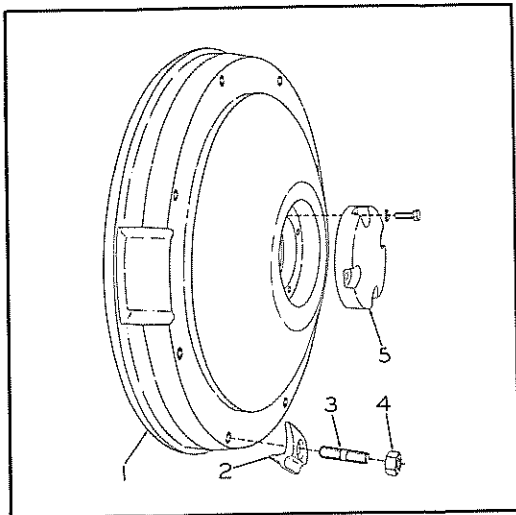
4	{ -----	2	RIM, pneumatic tire, 24 x 6.50 (Goodyear No. 829 or Firestone No. 223R-50-1)(Used with 9.00 tire)
		2	RIM, pneumatic tire, semi-drop center, 24 x 8 (Goodyear No. 154D or Firestone No. 88RTH-5 <sup>o</sup> -1)(Used with 11.00, 13.00 and 14.00 tires)
5	{ -----	2	TIRE, pneumatic road grader, ribbed tread, 9.00-24", 10 ply rating
		2	TIRE, pneumatic road grader, ribbed tread, 11.00-24", 10 ply rating
		2	TIRE, pneumatic road grader, 13.00-24", 8 to 12 ply rating
		2	TIRE, pneumatic road grader, 14.00-24", 8 to 12 ply rating
6	{ -----	2	TUBE, pneumatic tire, 9.00-24", with TR-75A or TR-76A valve
		2	TUBE, pneumatic tire, 11.00-24", with TR-220 or TR-218 valve
		2	TUBE, pneumatic tire, 13.00-24", with TR-220 or TR-218 valve
		2	TUBE, pneumatic tire, 14.00-24", with TR-220 or TR-218 valve



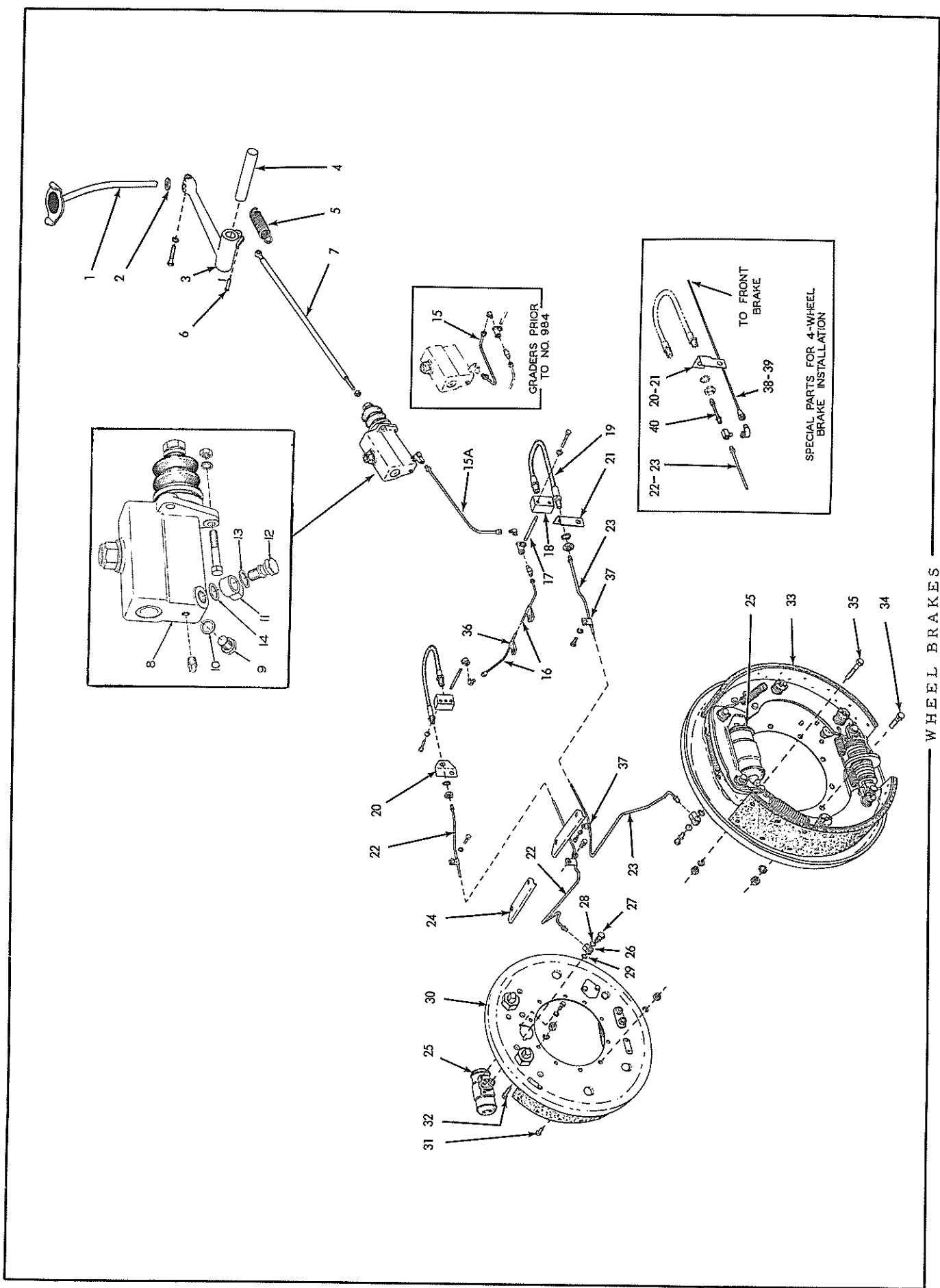
REAR WHEELS			
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	066984	2	WHEEL, tandem, front
2	066985	2	WHEEL, tandem, rear (4 used on graders equipped with 4-wheel brakes)
3	603488	32	STUD, rim clamp (5/8"NC x 2-5/8")
4	603489	32	CLAMP, wheel rim
5	601405	32	NUT, rim clamp (5/8"NC)
6	066986	4	KEY, tandem wheels
7	605918	4	WASHER, wheel retaining
8	060670 911446	4	NUT, wheel retaining (1-3/4"NF) PIN, cotter, 3/8" x 2-3/4"



FRONT WHEELS			
USAGE: Standard Equipment. For 9.00 tires.			
1	065414	2	WHEEL, front
2	604361	16	CLAMP, front wheel rim
	912181	16	BOLT, machine, 5/8"NC x 2-3/4"
3	601405	16	NUT, rim clamp (5/8"NC)
4	604226	2	CAP, front wheel hub
	903630	8	CAPSCREW, 3/8"NC x 1"
	904204	8	LOCKWASHER, 3/8"



FRONT WHEELS			
USAGE: Special Equipment. For 11.00, 13.00 or 14.00 Tires.			
1	056069	2	WHEEL, front
2	603489	16	CLAMP, front wheel rim
3	603488	16	STUD, rim clamp (5/8"NC x 2-5/8")
4	601405	16	NUT, rim clamp (5/8"NC)
5	604226	2	CAP, front wheel hub
	903630	8	CAPSCREW, 3/8"NC x 1"
	904204	8	LOCKWASHER, 3/8"



WHEEL BRAKES

WHEEL BRAKES

\* Graders with standard 2-wheel brakes.  
 \*\* Graders with special 4-wheel brakes.

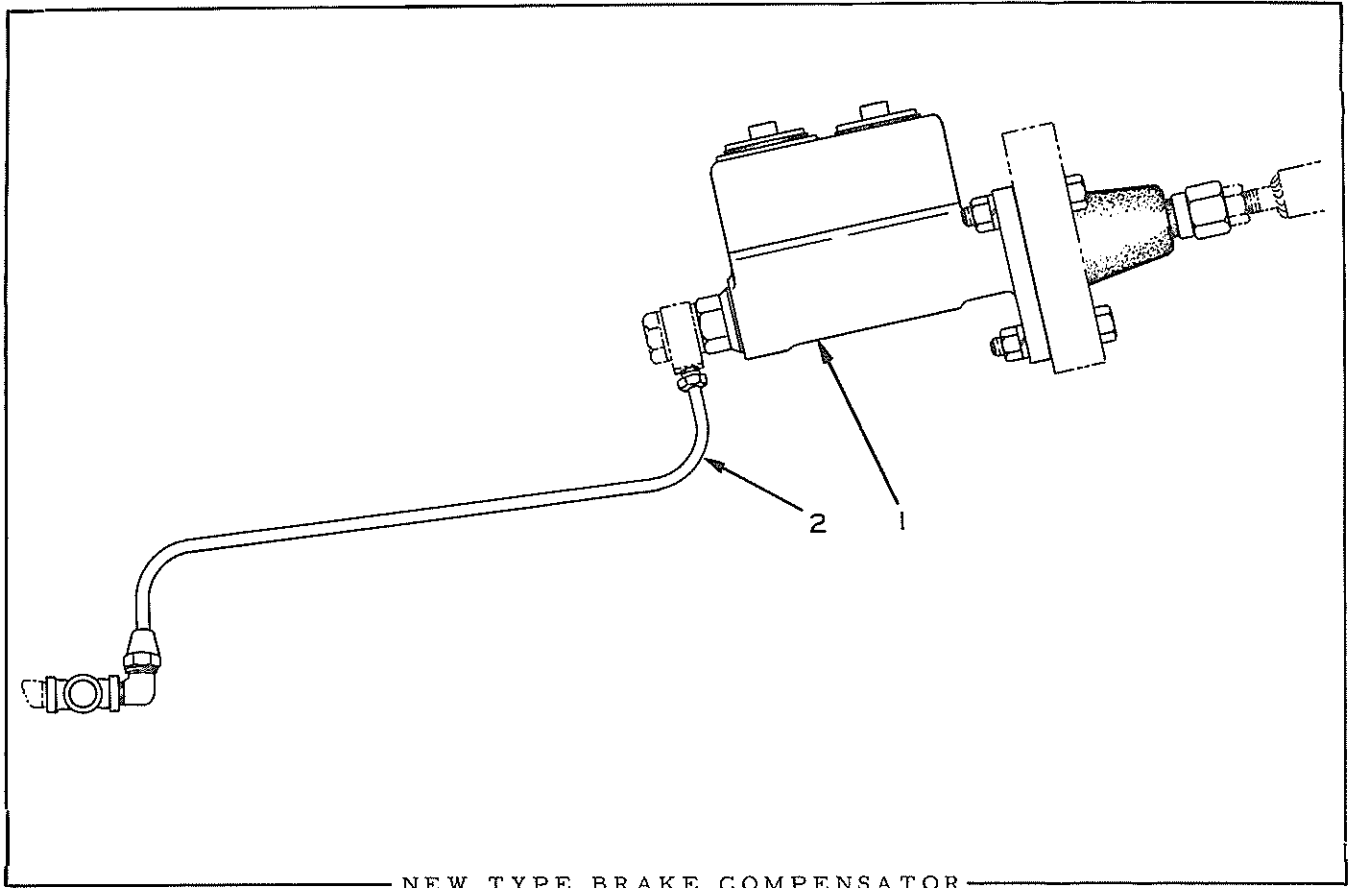
ITEM	PART NUMBER	QUANTITY	DESCRIPTION	KIT NUMBER
1	074930	1 1	PEDAL	
2	605785	1 1	BUMPER, pedal arm (rubber)	
3	074933	1 1	ARM, pedal	
	915659	1 1	CAPSCREW, 1/2"NF x 2-1/4"	
	904208	1 1	LOCKWASHER, 1/2"	
	911043	1 1	NUT, 1/2"NF	
4	074934	1 1	SHAFT, pedal	
	904007	1 1	PIN, cotter, 3/16" x 3"	
5	051193	1 1	SPRING, pedal return	
6	074935	1 1	PIN, brake rod yoke	
	900801	1 1	PIN, cotter, 3/32" x 3/4"	
7	074928	1 -	ROD, control (38-3/4" long)(Graders prior to #984)	
	079464	1 -	ROD, control (20-3/4" long)(Graders #984 and up)	
	911042	1 -	NUT, 7/16"NF	
	068446	- 1	ROD, control (38-3/4" long)(Graders prior to #984)	
	080187	- 1	ROD, control (20-3/4" long)(Graders #984 and up)	
	911331	- 1	NUT, 9/16"NF	
8	067005	1 -	COMPENSATOR ASSEMBLY (1-1/2" bore. See page 105 for repair parts)	
	911848	3 -	CAPSCREW, 3/8"NF x 2"	
	904206	3 -	LOCKWASHER, 3/8"	
	911041	3 -	NUT, 3/8"NF	
	068447	- 1	COMPENSATOR ASSEMBLY (1-3/4" bore. See page 105 for repair parts. Includes items 9 thru 14)	
	903632	- 4	CAPSCREW, 3/8"NC x 1-1/2"	
904206	- 4	LOCKWASHER, 3/8"		
9	067508	1 1	PLUG, compensator outlet	
10	067507	1 1	GASKET, compensator outlet plug	
11	059229	1 1	CONNECTOR, compensator	
	059224	1 1	SCREW (Solid. Used with 067005 and 068447 COMPENSATOR ASSEMBLIES only)	
12	085232	1 1	SCREW (Hollow. Used with 085076 COMPENSATOR ASSEMBLY only)	
13	059225	1 1	GASKET, attaching screw	
14	059220	1 1	GASKET, compensator connector	
15	074926	1 1	TUBE ASSEMBLY, compensator (Includes NUTS)(Graders prior to #984)	
	901702	1 1	TEE, pipe, 1/8"NPT	
	910161	1 1	ELBOW, male, flared, 1/4" tube, 1/8"NPT	
15A	079465	1 -	TUBE ASSEMBLY, compensator (Includes NUTS)(Graders #984 and up)	
	080223	- 1	TUBE ASSEMBLY, compensator (Includes NUTS)(Graders #984 and up)	
	901702	1 1	TEE, pipe, 1/8"NPT	
	910161	1 1	ELBOW, male, flared, 1/4" tube, 1/8"NPT	
16	066970	1 1	TUBE ASSEMBLY, compensator to left brake. (Includes 2 NUTS)	
	910161	2 2	ELBOW, male, flared, 1/4" tube, 1/8"NPT	
	901676	1 1	ELBOW, pipe, 90°, 1/8"NPT	
17	062035	2 2	NIPPLE, hose connecting (pipe, 1/8"NPT x 3-3/4")	

(Continued)

WHEEL BRAKES (Continued)

ITEM	PART NUMBER	QUANTITY	* **	DESCRIPTION	KIT NUMBER
18	604765	2	2	BLOCK, hose connecting	
	903633	4	4	CAPSCREW, 3/8"NC x 1-3/4"	
	904206	4	4	LOCKWASHER, 3/8"	
19	600675	2	2	HOSE (17-1/4" long)	
	911049	2	2	NUT, jam, 5/8"NF	
	910543	2	2	LOCKWASHER, external teeth, 5/8"	
20	066979	1	-	BRACKET, hose supporting, left	
	068485	-	1	BRACKET, hose supporting, left	
21	066980	1	-	BRACKET, hose supporting, right	
	068486	-	1	BRACKET, hose supporting, right	
22	066965	1	-	TUBE ASSEMBLY, left rear brake (Includes 2 NUTS)	
	077883	-	1	TUBE ASSEMBLY, left rear brake (Includes 2 NUTS)	
23	066966	1	-	TUBE ASSEMBLY, right rear brake (Includes 2 NUTS)	
	077884	-	1	TUBE ASSEMBLY, right rear brake (Includes 2 NUTS)	
24	604769	2	4	SHIELD, brake tubes	
25	067499	2	4	CYLINDER ASSEMBLY, brake operating (See page 108 for repair parts)	
	903626	4	8	CAPSCREW, 5/16"NC x 3/4"	
	904205	4	8	LOCKWASHER, 5/16"	
26	605453	2	4	FITTING, brake cylinder connection	
27	605452	2	4	BOLT	
28	605451	2	4	GASKET, attaching bolt	
29	605450	2	4	GASKET, brake cylinder fitting	
30	066961	1	2	BRAKE ASSEMBLY, left wheel (Includes cylinder attaching cap-	
31	040013	6	12	screws. See page 107 for repair parts)	
	904207	6	12	CAPSCREW, 7/16"NC x 1-3/4"	
	911027	6	12	LOCKWASHER, 7/16"	
32	047558	4	8	NUT, 7/16"NC	
	904207	4	8	CAPSCREW, 7/16"NC x 2-1/4"	
	911027	4	8	LOCKWASHER, 7/16"	
33	066962	1	2	NUT, 7/16"NC	
	040013	6	12	BRAKE ASSEMBLY, right wheel (Includes cylinder attaching cap-	
	904207	6	12	screws. See page 107 for repair parts)	
34	911027	6	12	CAPSCREW, 7/16"NC x 1-3/4"	
	047558	4	8	LOCKWASHER, 7/16"	
	904207	4	8	NUT, 7/16"NC	
35	911027	4	8	CAPSCREW, 7/16"NC x 2-1/4"	
	044044	2	4	LOCKWASHER, 7/16"	
	911027	4	8	NUT, 7/16"NC	
36	044044	2	4	CLIP, brake tubes (single, closed type, 1/4" diam., 17/32" bolt-hole)	
37	AM-8691	4	8	CLIP, brake tubes (single, closed type, 1/4" diam., 13/32" bolt-hole)	
	903628	4	8	CAPSCREW, 3/8"NC x 5/8"	
	904206	4	8	LOCKWASHER, 3/8"	
38	068483	-	1	TUBE ASSEMBLY, left front brake (Includes 2 NUTS)	
39	068484	-	1	TUBE ASSEMBLY, right front brake (Includes 2 NUTS)	
40	068479	-	2	TUBE ASSEMBLY, front brake connecting (Each includes 2 NUTS 913536)	
	913536	-	4	NUT, inverted flare, 1/4" tube	
	915841	-	2	TEE, inverted flare, male, 1/4" tube, 1/8"NPT	
	915842	-	2	ELBOW, inverted flare, female, 1/4" tube, 1/8"NPT	





NEW TYPE BRAKE COMPENSATOR

USAGE: Graders serial No. 1298 and up.

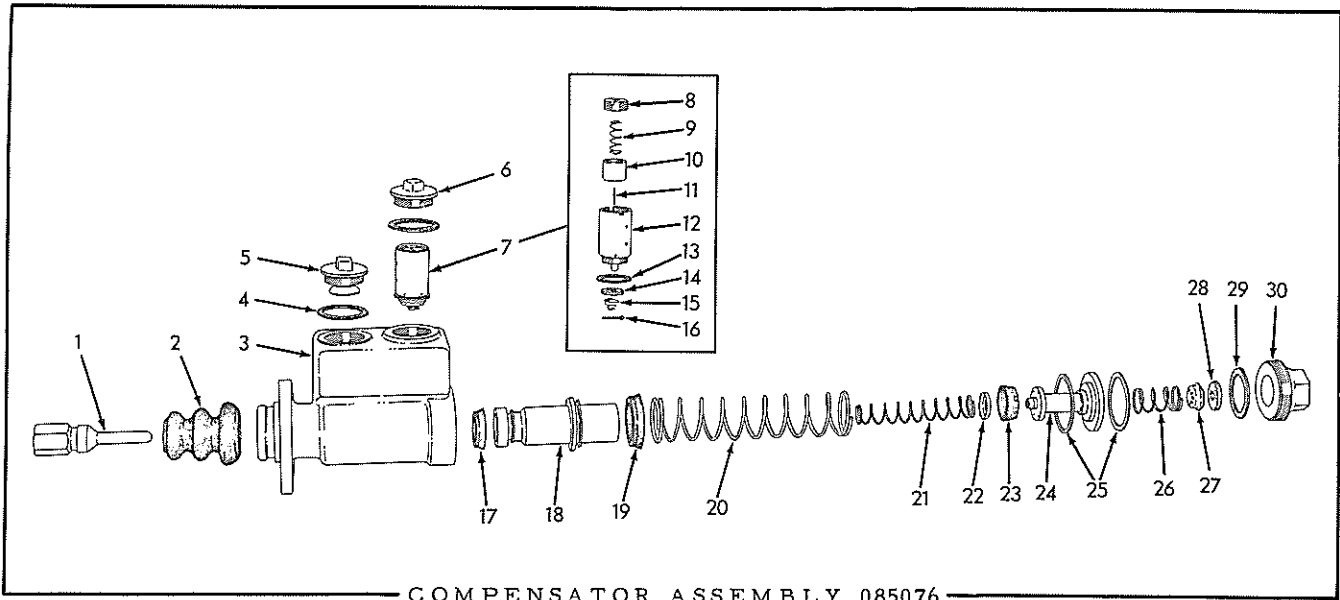
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	085076	1	COMPENSATOR ASSEMBLY (See page 104B for repair parts)	
	911848	3	CAPSCREW, 3/8"NF x 2"	
	904206	3	LOCKWASHER, 3/8"	
	911041	3	NUT, 3/8"NF	

NOTE: This compensator has adequate capacity for use with 4-wheel brakes and eliminates need for the special compensator used previously.

2	085242	1	TUBE ASSEMBLY, compensator (Includes NUTS)	
	901702	1	TEE, pipe, 1/8"NPT	
	910161	1	ELBOW, male, flared, 1/4" tube, 1/8"NPT	

Listed below are the items on page 103 that have been superseded by this change:

7	080187	1	ROD, control	
	911331	1	NUT	
8	067005	1	COMPENSATOR ASSEMBLY	
	911848	3	CAPSCREW, 3/8"NF x 2"	
	904206	3	LOCKWASHER, 3/8"	
	911041	3	NUT, 3/8"NF	
9	068447	1	COMPENSATOR ASSEMBLY	
	903632	4	CAPSCREW, 3/8"NC x 1-1/2"	
	904206	4	LOCKWASHER, 3/8"	
10	067508	2	PLUG	
10A	067507	2	GASKET	
	079465	1	TUBE ASSEMBLY	
15A	080223	1	TUBE ASSEMBLY	

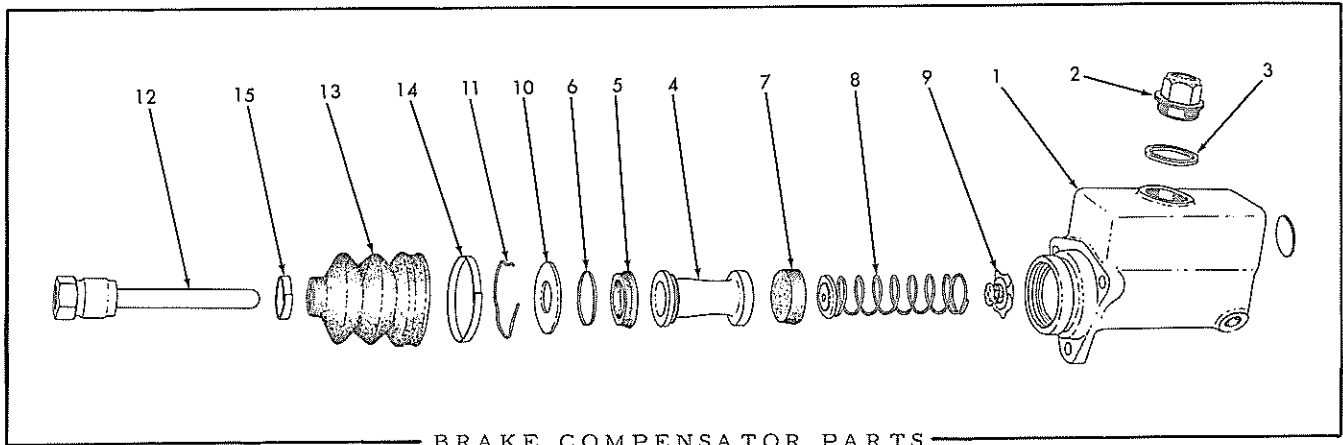


COMPENSATOR ASSEMBLY 085076

USAGE: Graders serial No. 1298 and up.

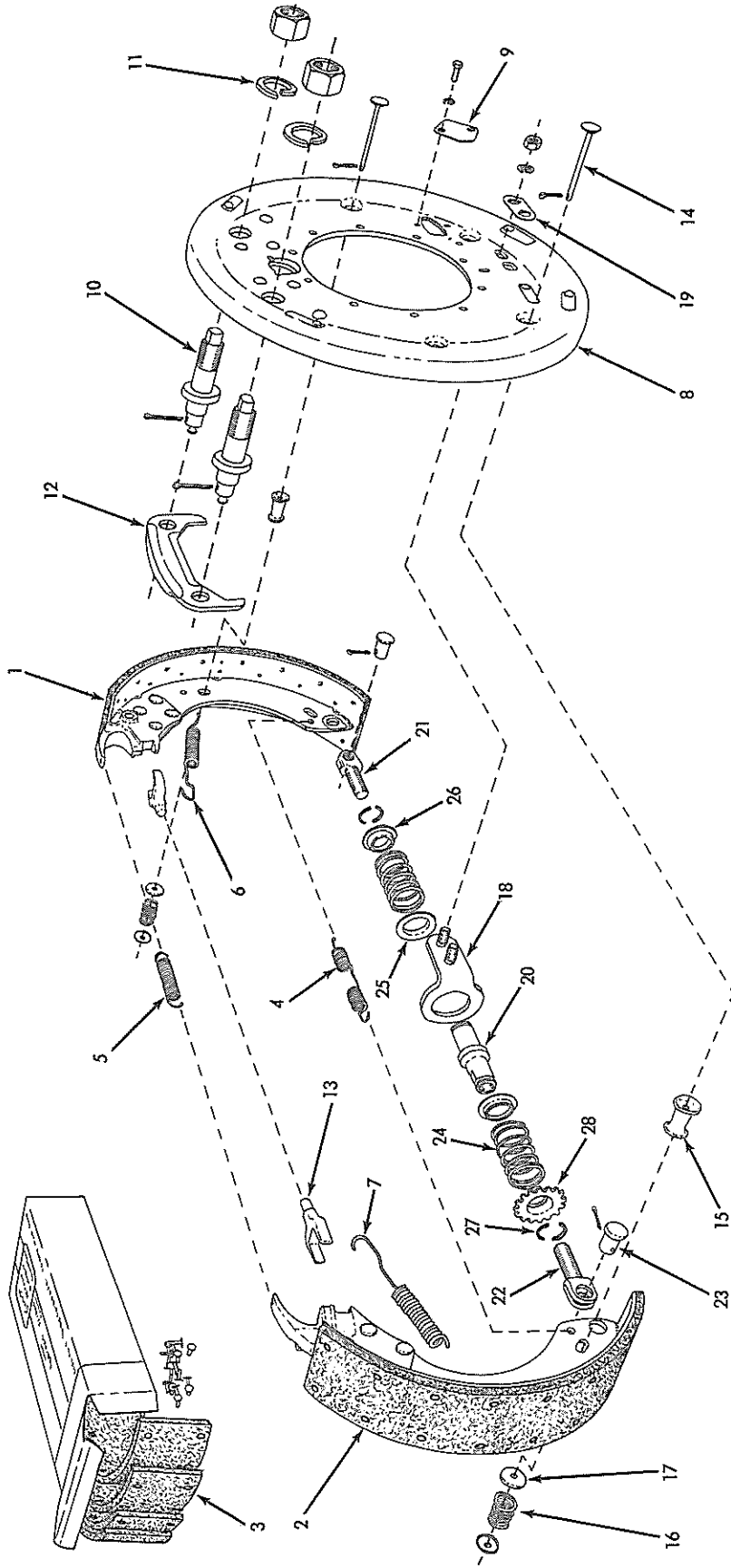
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	085095	1	ROD, push	
2	-----	1	BOOT, push rod (N. S. S. Order Kit)	085078
3	-----	1	HOUSING (N. S. S. Order complete Assembly)	
4	-----	2	GASKET, filler plug (N. S. S. Order Kit)	085078
5	085094	1	PLUG, filler, front	
6	085093	1	PLUG, filler, rear	
7	085079	1	VALVE ASSEMBLY, relief (Consists of items 8 thru 16)	
8	-----	1	SCREW, relief valve (N. S. S. Order Valve Assembly)	
9	-----	1	SPRING, relief valve (N. S. S. Order Valve Assembly)	
10	-----	1	PISTON, relief valve (N. S. S. Order Valve Assembly)	
11	-----	1	NEEDLE, relief valve (N. S. S. Order Valve Assembly)	
12	-----	1	BODY, relief valve (N. S. S. Order Valve Assembly)	
13	-----	1	GASKET, relief valve body (N. S. S. Order Kit)	085078
14	-----	1	DISC, check, relief valve (N. S. S. Order Kit)	085078
15	-----	1	SPRING, relief valve check disc (N. S. S. Order Kit)	085078
16	-----	1	PIN, cotter, relief valve (N. S. S. Order Kit)	085078
17	-----	1	CUP, low pressure piston, small (N. S. S. Order Kit)	085078
18	085097	1	PISTON, low pressure	
19	-----	1	CUP, low pressure piston, large (N. S. S. Order Kit)	085078
20	085096	1	SPRING, piston return, outer	
21	085098	1	SPRING, piston return, inner	
22	-----	1	WASHER, high pressure piston cup	
23	-----	1	CUP, high pressure piston (N. S. S. Order Kit)	085078
24	085099	1	PISTON, high pressure	
25	-----	2	GASKET, high pressure piston (N. S. S. Order Kit)	085078
26	-----	1	SPRING, check valve (N. S. S. Order Kit)	085078
27	-----	1	VALVE, check (N. S. S. Order Kit)	085078
28	-----	1	SEAT, check valve (N. S. S. Order Kit)	085078
29	-----	1	SEAL, end plug (N. S. S. Order Kit)	085078
30	085100	1	PLUG, end	
--	085078		REPAIR KIT, brake compensator (Consists of items 2, 4, 13, 14, 15, 16, 17, 19, 22, 23, 25, 26, 27, 28 and 29 as listed above)	

N. S. S. indicates Not Serviced Separately.



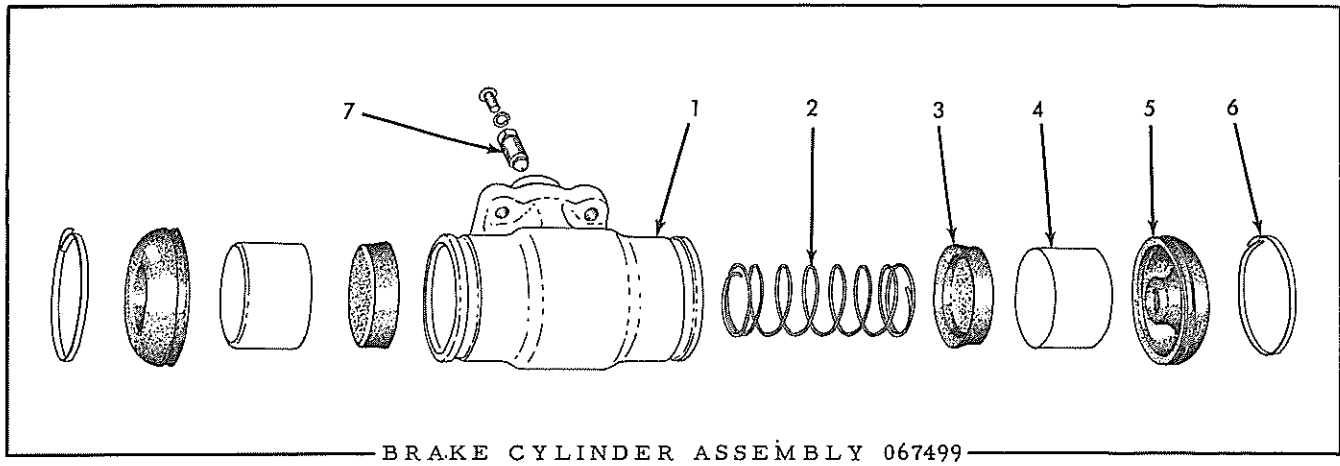
BRAKE COMPENSATOR PARTS

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		067005	068447		
				067005 COMPENSATOR ASSEMBLY (1-1/2" bore. Standard)	} See page 103
				068447 COMPENSATOR ASSEMBLY (1-3/4" bore. Special)	
1	067495	1	-	TANK ASSEMBLY, supply (Includes expansion PLUG)	
	076476	-	1	TANK ASSEMBLY, supply (Includes expansion PLUG. Has 4-hole mounting flange. Not illustrated)	
	910006	1	1	PLUG, expansion, 1-1/4" diam.	
2	074349	1	1	CAP ASSEMBLY, filler (Serviced only as a unit)	
3	076486	1	1	GASKET, filler cap	
4	-----	1	-	PISTON (Not serviced separately. Order KIT 067498)	067498
	076477	-	1	PISTON ASSEMBLY (Includes items 5 and 6)	
5	067608	1	-	CUP, secondary	067498
	076478	-	1	CUP, secondary	
6	067609	1	-	RING, secondary cup retaining	067498
	076479	-	1	RING, secondary cup retaining	
7	067492	1	-	CUP, primary	067498
	076487	-	1	CUP, primary	
8	067493	1	-	SPRING ASSEMBLY, piston return (Includes end WASHER. Serviced only as a unit)	
	076481	-	1	SPRING ASSEMBLY, piston return (Includes end WASHER. Serviced only as a unit)	
9	067494	1	-	VALVE AND SEAT ASSEMBLY, check (Serviced only as a unit)	067498
	076489	-	1	VALVE AND SEAT ASSEMBLY, check (Serviced only as a unit)	
10	067490	1	-	PLATE, piston stop	
	076482	-	1	PLATE, piston stop	
11	067488	1	-	WIRE, piston stop plate retaining	067498
	076485	-	1	WIRE, piston stop plate retaining	
12	067486	1	-	ROD, push	
	076480	-	1	ROD, push	
13	067487	1	-	BOOT, push rod	067498
	076488	-	1	BOOT, push rod	
14	067489	1	-	STRAP, boot retaining (large)	
	076483	-	1	STRAP, boot retaining (large)	
15	059222	1	-	STRAP, boot retaining (small)	
	076484	-	1	STRAP, boot retaining (small)	



WHEEL BRAKE PARTS

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		066961	066962		
				066961 BRAKE ASSEMBLY, left wheel 066962 BRAKE ASSEMBLY, right wheel	} See page 104
				DESCRIPTION	
1	{ 067397	1	-	SHOE ASSEMBLY, front (Includes LINING)	
	{ 067398	-	1	SHOE ASSEMBLY, front (Includes LINING)	
2	{ 067418	1	-	SHOE ASSEMBLY, rear (Includes LINING)	
	{ 067417	-	1	SHOE ASSEMBLY, rear (Includes LINING)	
3	067429	1	1	LINING KIT (Consists of 4 LININGS and 75 RIVETS. Complete set for two wheels)	
4	067419	1	1	SPRING, shoe retracting, lower	
5	067404	1	1	SPRING, shoe retracting, upper	
6	067396	1	1	SPRING, retracting, front shoe	
7	067416	1	1	SPRING, retracting, rear shoe	
8	{ 067399	1	-	PLATE ASSEMBLY, back, left brake (Includes riveted BRACKET and inspection COVERS. Serviced only as a unit)	
	{ 067400	-	1	PLATE ASSEMBLY, back, right brake (Includes riveted BRACKET and inspection COVERS. Serviced only as a unit)	
9	{ 067394	1	1	PLATE, inspection	
	{ 910167	2	2	CAPSCREW, 5/16"NF x 3/4"	
	{ 904205	2	2	LOCKWASHER, 5/16"	
10	{ 067401	2	2	PIN, upper shoe adjustment	
	{ 913469	2	2	NUT, 1-1/8"NF	
11	{ 031558	2	2	LOCKWASHER	
12	{ 067403	1	1	PLATE, guide	
	{ 900811	2	2	PIN, cotter, 3/16" x 1-1/2"	
13	067405	2	2	LINK, wheel cylinder	
14	{ 067421	4	4	PIN, shoe retaining	
	{ 913115	4	4	PIN, cotter, 5/32" x 3/4"	
15	067420	4	4	SPACER, shoe retaining pin	
16	067422	4	4	SPRING, shoe retaining pin	
17	067395	8	8	CUP, shoe retaining pin spring	
18	{ 067406	1	1	BRACKET, centralizing	
	{ 911043	2	2	NUT, 1/2"NF	
	{ 904208	2	2	LOCKWASHER, 1/2"	
19	{ 059019	1	1	PLATE, washer	
20	067413	1	1	NUT, shoe adjustment	
21	067409	1	1	SCREW, front shoe adjustment (left hand thread)	
22	067410	1	1	SCREW, rear shoe adjustment (right hand thread)	
23	{ 067408	2	2	PIN, shoe pivot	
	{ 910302	2	2	PIN, cotter, 5/32" x 1-1/4"	
24	067411	2	2	SPRING, shoe adjustment	
25	067412	2	2	RETAINER, shoe adjustment spring, inner	
26	067414	1	1	RETAINER, shoe adjustment spring, outer	
27	067407	4	4	LOCK, shoe adjustment nut (half only)	
28	067415	1	1	WHEEL, shoe adjustment	



BRAKE CYLINDER ASSEMBLY 067499

NOTE: See page 104 for listing of complete Cylinder Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	1	CASTING, cylinder (Not serviced. Order complete CYLINDER ASSEMBLY 067499)	
2	067505	1	SPRING, return	
3	067504	2	CUP, piston	
4	067503	2	PISTON	
5	067502	2	BOOT	
6	067501	2	STRAP, boot retaining	
7	059232	1	SCREW, bleeder	
	903753	1	SCREW, machine, rd-hd., #10-24NC x 1/4"	
	904203	1	LOCKWASHER, #10	

NOTE: Quantities indicated are for one unit only.

PAINTING AND MARKING  
(Not Illustrated)

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

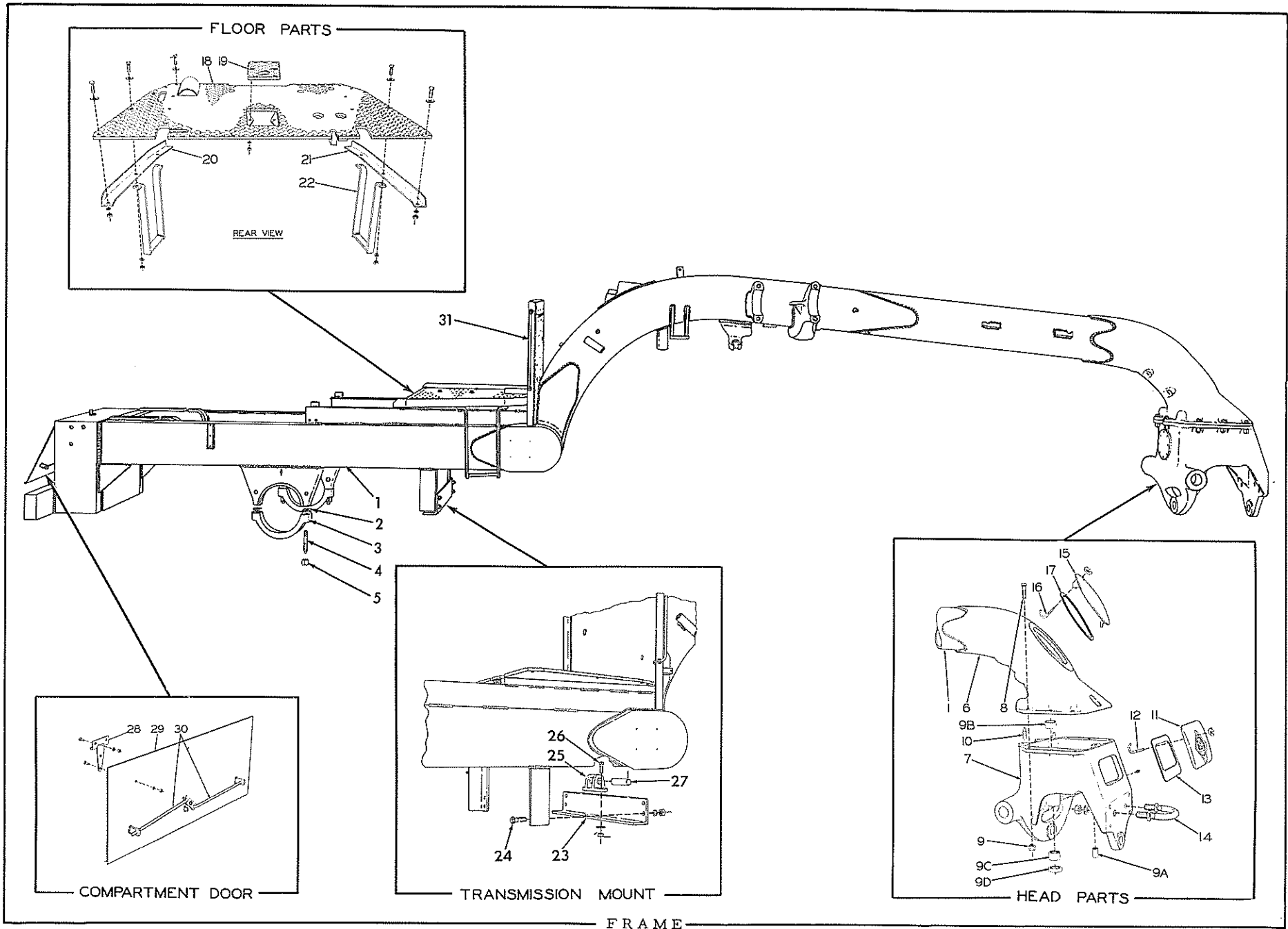
ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	077671	1	-	*TRANSFER, grader check and lubrication guide (10-1/4" square)(Applied to seat front)	
	076077	-	1	*TRANSFER, grader check and lubrication guide (10-1/4" square)(Applied to seat front) . . . . . 086795	
1A	078780	1	-	PLATE, grader check and lubrication guide (Spanish translation of 077671, 10-1/4" x 12")(Applied to right side of seat)	
	078776	1	-	PLATE, grader check and lubrication guide (Portuguese translation of 077671, 10-1/4" x 12")(Applied to right side of seat)	
	078782	-	1	PLATE, grader check and lubrication guide (Spanish translation of 076077, 10-1/4" x 12")(Applied to right side of seat)	
	078778	-	1	PLATE, grader check and lubrication guide (Portuguese translation of 076077, 10-1/4" x 12")(Applied to right side of seat)	
	904516	4	4	SCREW, drive, #6 x 1/4"	

(Continued)

PAINTING AND MARKING (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
2	060594	1	1	TRANSFER, scarifier check and lubrication guide (3" x 6-1/2" (applied to scarifier lift support)	
3	069314	1	1	*TRANSFER, caution, fan lubrication (1" x 1-3/4")(applied to fan pulley)	086795
4	077115	2	-	*TRANSFER, identification, "MODEL AD30" (6" x 8-3/4") (applied to sides of seat)	
	075966	-	2	*TRANSFER, identification, "MODEL AD40" (6" x 8-3/4") (applied to sides of seat)	086795
5	050842	1	1	TRANSFER, instruction, air cleaner (1-1/2" x 3-3/4")(applied to air cleaner)	086795
	074578	1	1	*TRANSFER, instruction, air cleaner (Spanish translation, 1-5/8" x 4")(applied to air cleaner)	
6	050838	1	1	TRANSFER, instruction, air pre-cleaner (applied to air pre-cleaner)	086795
	074577	1	1	*TRANSFER, instruction, air pre-cleaner (Spanish translation, 1-5/8" x 4")(applied to air pre-cleaner)	
7	053624	1	1	TRANSFER, instruction, air heater operation (2" x 6")(Applied to right side of seat)	086795
	074579	1	1	*TRANSFER, instruction, air heater operation (Spanish translation, 2" x 6")(applied to right side of seat)	
8	069407	1	1	*TRANSFER, instruction, primer operation (1-3/4" x 6")(applied to left inside of seat back)	086795
9	079135	1	1	*TRANSFER, instruction, power steering oil filter (1-3/8" x 3-3/4")(applied to filter)	086795
10	074738	1	1	*TRANSFER, instruction, primary fuel filter (2-1/4" x 3") (applied to primary fuel filter)	086795
11	074735	1	1	*TRANSFER, instruction, secondary fuel filter (2-1/4" x 3") (applied to secondary fuel filter)	086795
12	074729	1	1	*TRANSFER, instruction, oil filter (2-1/4" x 1-1/2")(applied to oil filter)	086795
13	077289	1	1	TRANSFER, multi-language warning, special heavy-duty oil filter (4-1/8" x 10")(applied to oil filter)	
14	040851	2	2	*TRANSFER, name, "ALLIS-CHALMERS" (2-1/2" x 19-1/4") (applied to sides of frame)	086795
15	068831	3	3	*TRANSFER, name, "ALLIS-CHALMERS" (3" x 23")(applied to sides of hood and to battery compartment door)	086795
16	073357	2	2	*TRANSFER, marking "ROLL-AWAY MOLDBOARD" (5-1/2" diam.)(applied to moldboard)	086795
17	077203	1	1	*TRANSFER, shifter positions (3" x 4")(applied to top of control box)	086795
18	083355	1	1	*TRANSFER, identification, control box levers, left side (1-1/4" x 9-3/4")(applied to top of control box)	086795
19	083354	1	1	*TRANSFER, identification, control box levers, right side (1-1/4" x 9-3/4")(Applied to top of control box)	086795
20	914932	-	-	ENAMEL, persian orange, quart can (for spraying)	
	914966	-	-	ENAMEL, persian orange, gallon can (for spraying)	
NOTE: Approximately 4 gallons of apraying enamel and 1/3 gallon of thinner are required to paint grader one coat.					
21	914933	-	-	ENAMEL, persian orange, quart can (for brushing)	
	914967	-	-	ENAMEL, persian orange, gallon can (for brushing)	
22	915884	-	-	ENAMEL, persian orange, 12 oz. pressurized spray-type can (for touch-up)	
23	067937	-	-	CEMENT, transfer application, 1/2 pint jar (Makes solution by adding 4 parts water. Required to apply transfers indicated by asterisk (*) above)	
24	-----	-	-	MONOGRAM, "A-C" (See RADIATOR SHELL AND HOOD)	

\*Indicates permanent type transfer. See item 23.



FLOOR PARTS

REAR VIEW

COMPARTMENT DOOR

TRANSMISSION MOUNT

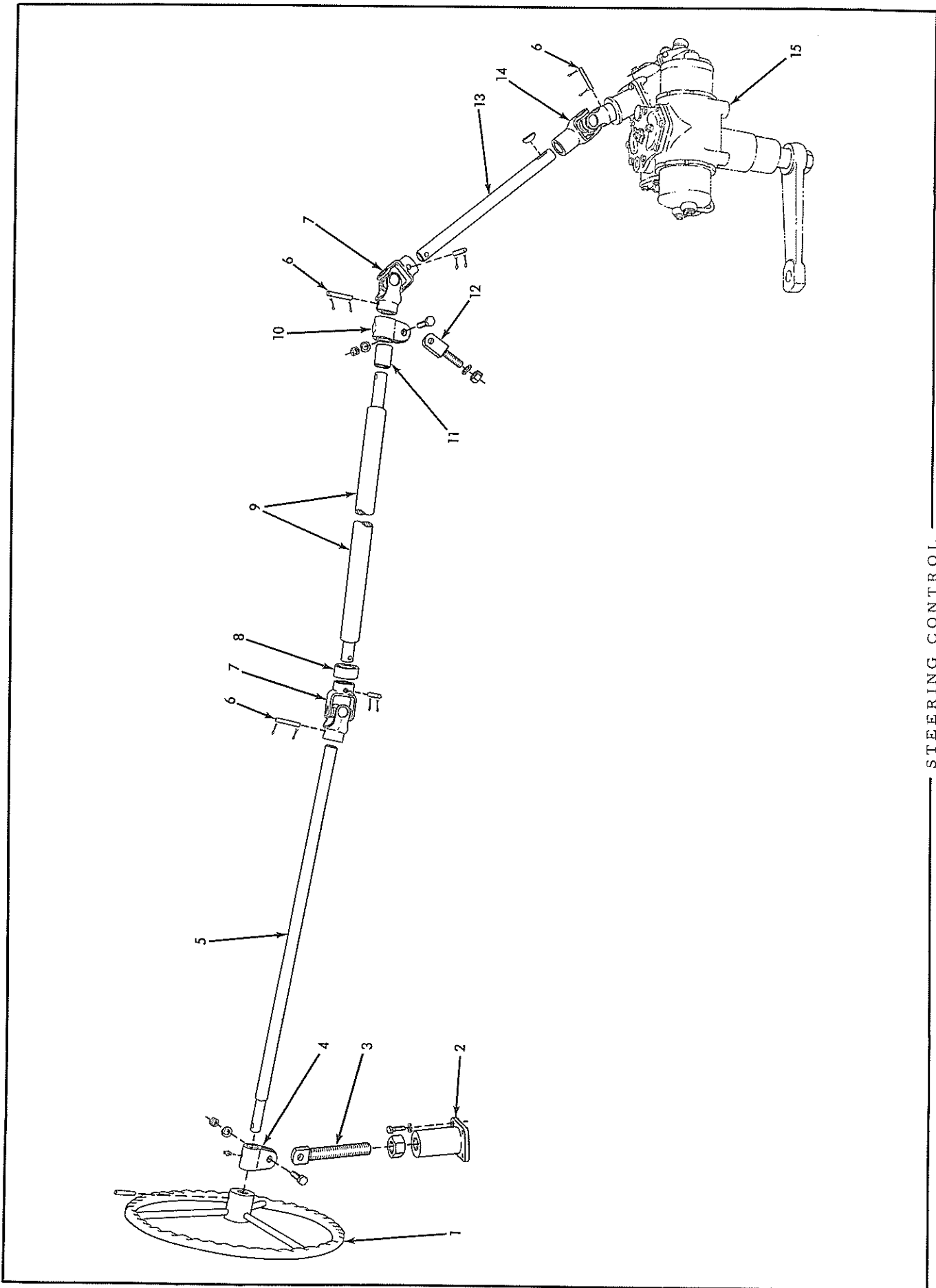
HEAD PARTS

FRAME



ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	077800	1	-	FRAME ASSEMBLY (Includes items 2 thru 6)(When required for graders prior to #459 also order 4 CAPS 078275)	
	077799	-	1	FRAME ASSEMBLY (Includes items 2 thru 6)(When required for graders prior to #459 also order 4 CAPS 078275)	
2	604493	24	24	SHIM, trunnion cap (Use as req'd)	
3	054853	2	2	CAP, trunnion	
4	602258	4	4	STUD (1"NF x 4-3/4")	
5	600236	4	4	NUT, high, 1"NF	
6	075387	1	1	HEAD CASTING, upper section (Welded in FRAME ASSEMBLY)	
7	075385	1	1	HEAD CASTING ASSEMBLY, lower section (Includes item 10) (Used with First Type Power Steering on graders prior to August 1954)	
	082028	1	1	HEAD CASTING ASSEMBLY, lower section (Includes items 9A, 9B and 10)(Used with Second Type Power Steering on graders starting August 1954)	
	912808	1	1	FITTING, lubricating, straight, 1/4"NF	
8	012984	9	9	CAPSCREW, 3/4"NF x 2-3/4"	
9	012767	9	9	NUT, high, 3/4"NF	
9A	081662	1	1	BUSHING, pivot, power steering cylinder (steel)(Used with Second Type Power Steering on graders starting August 1954)	
9B	081677	1	1	BUSHING, steering shaft (bronze)(Used with Second Type Power Steering on graders starting August 1954)	
9C	081707	1	1	BEARING, needle, steering shaft (Used with Second Type Power Steering on graders starting August 1954)	
9D	074962	1	1	SEAL, dust, steering shaft needle bearing (Used with Second Type Power Steering on graders starting August 1954)	
10	075543	2	2	PIN, dowel, head casting	
11	075544	1	1	COVER, steering inspection, lower	
12	602765	1	1	J-BOLT	
	915018	1	1	NUT, wing, 1/2"NC	
13	075556	1	1	GASKET, lower steering inspection cover	
14	604641	1	1	U-BOLT, towing	
	912251	2	2	NUT, jam, 1-1/4"NF	
	913097	2	2	NUT, 1-1/4"NF	
	904210	2	2	LOCKWASHER, 1-1/4"	
15	601692	1	1	COVER, steering inspection, upper	
16	602765	1	1	J-BOLT	
	915018	1	1	NUT, wing, 1/2"NC	
17	602827	1	1	GASKET, upper steering inspection cover	
18	075087	1	1	PLATE ASSEMBLY, floor (Includes item 19)	
	903639	8	8	CAPSCREW, 1/2"NC x 1-1/2"	
	900818	8	8	WASHER, plain, U.S. Std., 1/2"	
19	076782	1	1	PLATE, cover	
	904206	2	2	LOCKWASHER, 3/8"	
	911026	2	2	NUT, 3/8"NC	
20	075095	1	1	ANGLE, floor plate, left (Not used with enclosed CAB)	
	903639	1	1	CAPSCREW 1/2"NC x 1-1/2"	
	900818	1	1	WASHER, plain, U.S. std., 1/2"	
	904208	1	1	LOCKWASHER, 1/2"	
	911028	1	1	NUT, 1/2"NC	
21	075096	1	1	ANGLE, floor plate, right (Not used with enclosed CAB)	
	903639	1	1	CAPSCREW, 1/2"NC x 1-1/2"	
	911028	1	1	NUT, 1/2"NC	
	900818	1	1	WASHER, plain, U.S. std., 1/2"	
	904208	1	1	LOCKWASHER, 1/2"	
22	075090	2	2	STEP, mounting	
	903640	4	4	CAPSCREW, 1/2"NC x 2"	
	911028	4	4	NUT, 1/2"NC	
	900818	4	4	WASHER, plain, U.S. std., 1/2"	
	904208	4	4	LOCKWASHER, 1/2"	

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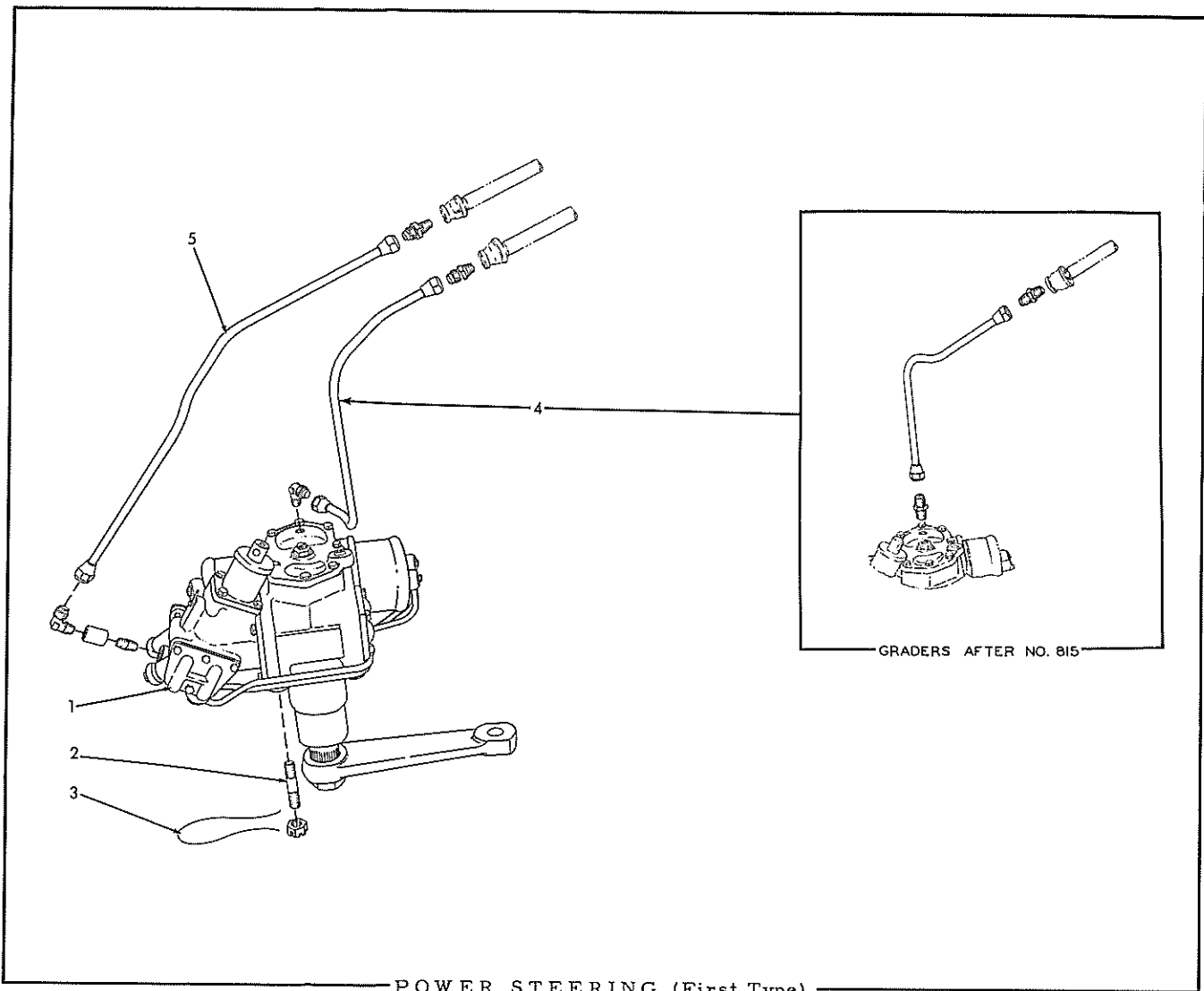
STEERING CONTROL

FRAME (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
23	604635	1	1	ANGLE, transmission supporting	
24	013238	4	4	CAPSCREW, 3/4"NC x 2"	
	911030	4	4	NUT, 3/4"NC	
	904369	4	4	LOCKWASHER, 3/4"	
25	604181	1	1	BRACKET, transmission supporting	
26	604637	2	2	CAPSCREW (hex-hd., drilled end, 3/4"NF x 2")	
	912331	2	2	NUT, slotted, 3/4"NF	
	900807	2	2	PIN, cotter, 1/8" x 1-1/4"	
	900820	2	2	WASHER, plain, U.S. std., 3/4"	
27	604636	1	1	PIN, transmission supporting bracket	
	901344	2	2	PIN, cotter, 1/4" x 2"	
28	075060	3	3	HINGE, battery compartment door	
	910388	12	12	BOLT, carriage, 1/4"NC x 3/4" (Includes square NUT)	
	904204	12	12	LOCKWASHER, 1/4"	
29	075098	1	1	DOOR, battery compartment	
30	075958	2	2	ROD, locking, battery compartment door	
	900942	2	2	PIN, cotter, 3/32" x 5/8"	
31	075191	2	2	HANDLE, grab (Not used with enclosed CAB)	
	911028	8	8	NUT, 1/2"NC	
	904208	4	4	LOCKWASHER, 1/2"	

STEERING CONTROL

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
	912343	1	PIN, groove, 3/8" x 2"	
2	074986	1	SUPPORT, steering wheel shaft	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
3	074985	1	BOLT, eye, steering wheel shaft bearing	
	911032	1	NUT, 1"NC	
4	600970	1	BEARING, steering wheel shaft	
	904541	1	CAPSCREW, 1/2"NC x 1-3/4"	
	904208	1	LOCKWASHER, 1/2"	
	911028	1	NUT, 1/2"NC	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
5	074987	1	SHAFT, steering wheel	
6	601935	5	PIN, universal joint (3/8" x 2")	
	900805	10	PIN, cotter, 1/8" x 3/4"	
7	053121	2	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
8	604549	1	BEARING, plain (oilite bronze. Pressed in frame)	
9	074988	1	SHAFT (138" long)	
10	602172	1	BEARING ASSEMBLY, control shaft (Includes item 11)	
	904541	1	CAPSCREW, 1/2"NC x 1-3/4"	
	904208	1	LOCKWASHER, 1/2"	
	911028	1	NUT, 1/2"NC	
11	602170	1	BUSHING, control shaft bearing (oilite bronze)	
12	076014	1	BOLT, eye, steering control shaft bearing	
	911029	1	NUT, 5/8"NC	
	904209	1	LOCKWASHER, 5/8"	
13	075043	1	SHAFT, steering control (15" long)(Used with First Type Power Steering on graders prior to August 1954)	
	081982	1	SHAFT, steering control (10" long)(Used with Second Type Power Steering on graders starting August 1954)	
	911273	1	KEY, #127 woodruff, 1/4" x 2-1/8"	
14	053123	1	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
15	-----	1	STEERING ASSEMBLY (See POWER STEERING)	



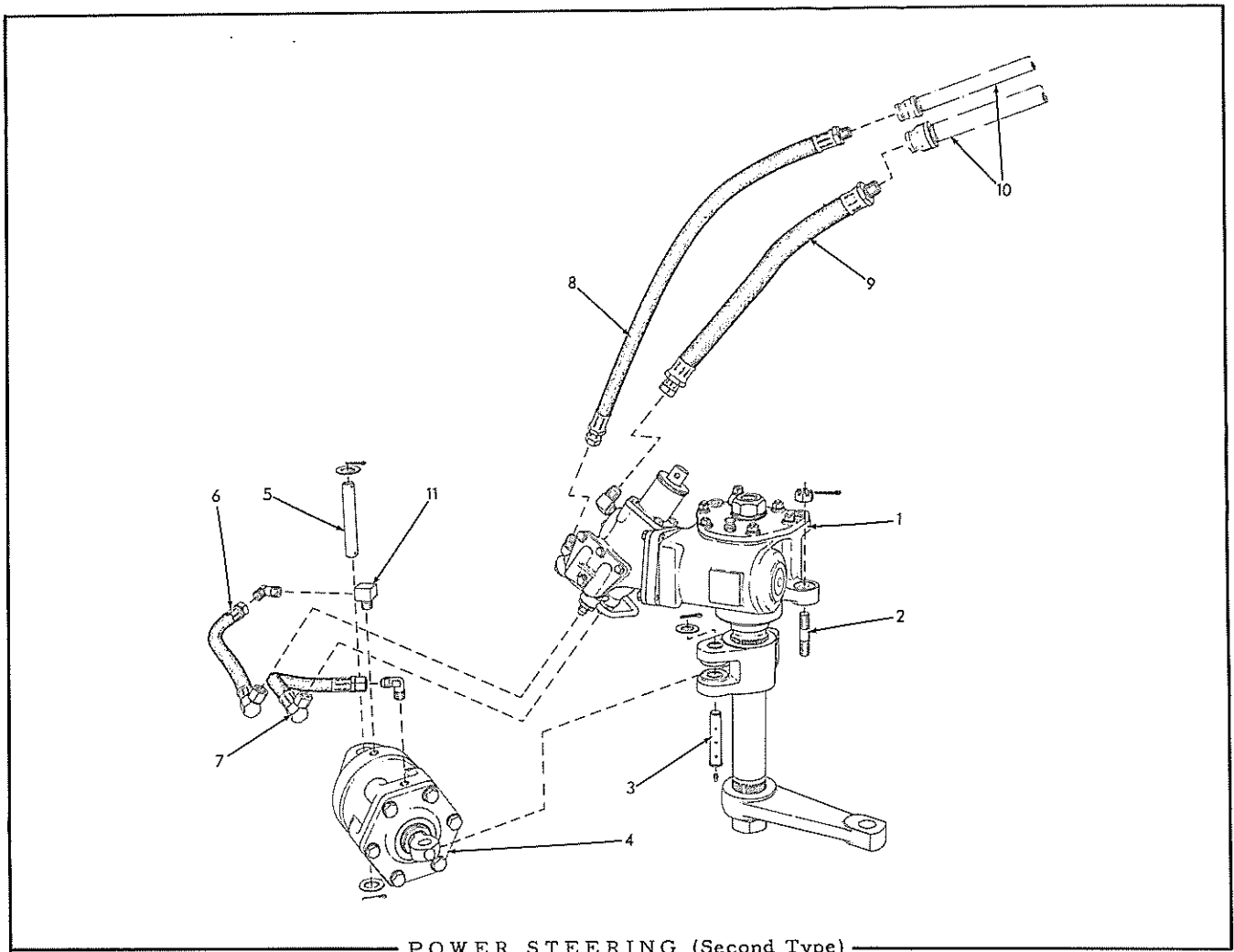
POWER STEERING (First Type)

USAGE: Graders built prior to August 1954.

\* Graders prior to serial No. 816

\*\* Graders serial No. 816 thru August 1954.

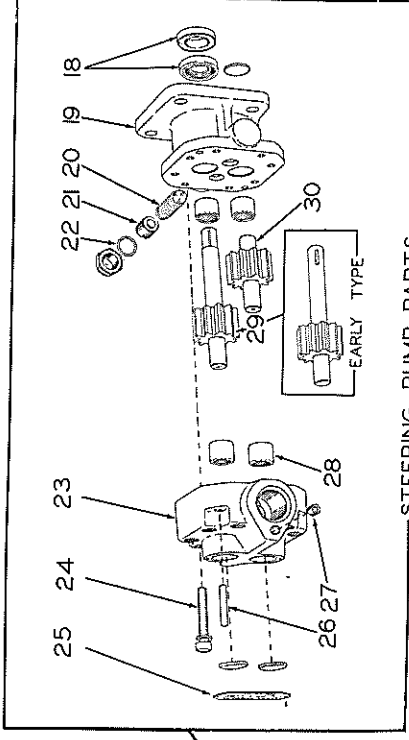
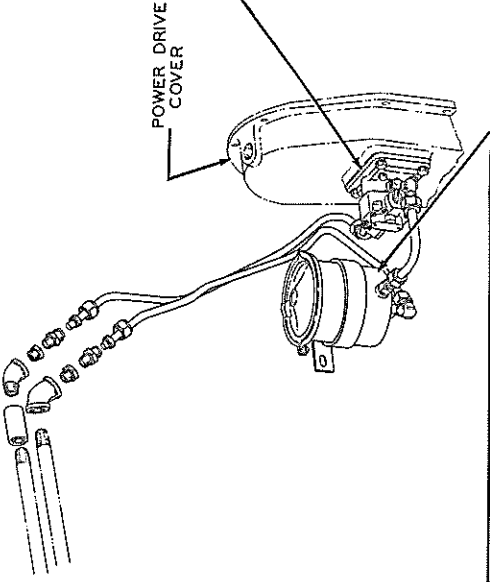
ITEM	PART QUANTITY		DESCRIPTION	KIT NUMBER
	NUMBER	* **		
1	079740	1 1	STEERING ASSEMBLY, power (See page 125 for repair parts)	
2	076010	4 4	STUD (5/8"NC x 3-1/16")	
	911059	4 4	NUT, slotted, 5/8"NC	
3	023633	2 2	WIRE, locking (1/16" x 12")	
4	076013	1 -	TUBE ASSEMBLY, oil return, front section (Includes 2 NUTS)	
	911309	1 -	ELBOW, flared, male, 1/2" tube, 3/8"NPT	
	910947	1 -	CONNECTOR, flared, male, 1/2" tube, 3/8"NPT	
5	079427	- 1	TUBE ASSEMBLY, oil return, front section (Includes 2 NUTS)	
	910237	- 2	CONNECTOR, flared, 5/8" tube, 1/2"NPT male	
5	076007	1 1	TUBE ASSEMBLY, oil supply, front section (Includes 2 NUTS)	
	911309	1 1	ELBOW, flared, male, 1/2" tube, 3/8"NPT	
	910947	1 1	CONNECTOR, flared, male, 1/2" tube, 3/8"NPT	
	901489	1 -	NIPPLE, pipe, 3/8"NPT x 1"	} Graders prior to #601 only.
	901765	1 -	COUPLING, pipe, 3/8"NPT	



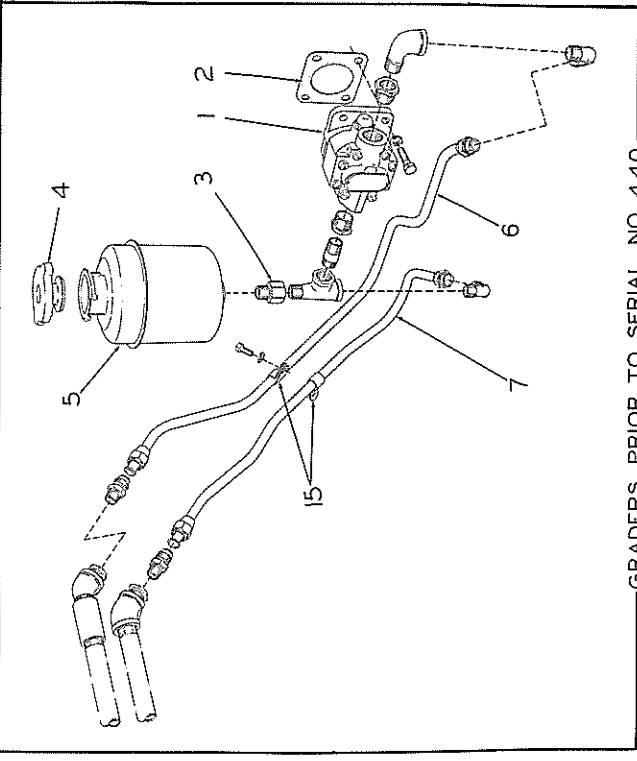
POWER STEERING (Second Type)

USAGE: Started August 1954.

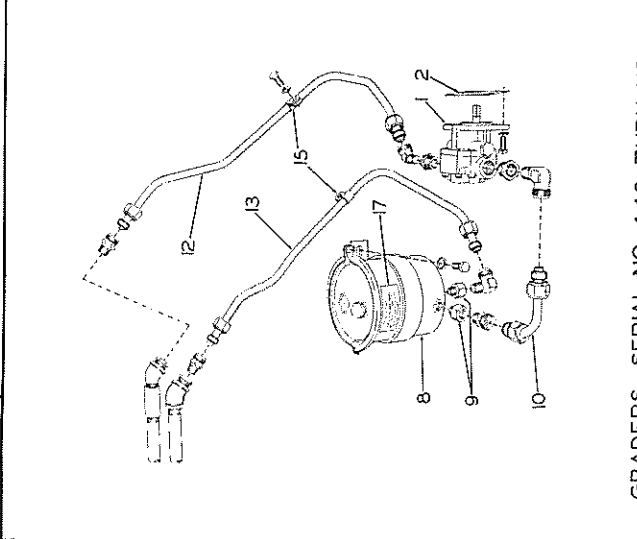
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	081625	1	STEERING ASSEMBLY, power (See page 127 for repair parts)	
2	081594	2	STUD (5/8"NC x 2-3/4")	
	911059	2	NUT, slotted, 5/8"NC	
	900807	2	PIN, cotter, 1/8" x 1-1/4"	
3	081679	1	PIN, power steering lever	
	910255	1	WASHER, plain, SAE std., 3/4"	
	900807	1	PIN, cotter, 1/8" x 1-1/4"	
	912808	1	FITTING, lubricating, straight, 1/4"NF	
4	082657	1	CYLINDER ASSEMBLY, power steering (See page 130 for repair parts)	
5	081687	1	PIN, pivot, power steering cylinder	
	910255	2	WASHER, plain, SAE std., 3/4"	
	900807	2	PIN, cotter, 1/8" x 1-1/4"	
6	081373	1	HOSE, valve to cylinder (12-3/4" long)	
	917750	1	ELBOW, flared, 3/8" tube, 3/8"NPT male	
7	082184	1	HOSE, cylinder to valve (11-1/4" long)	
	917750	1	ELBOW, flared, 3/8" tube, 3/8"NPT male	
8	082214	1	HOSE, oil supply (26-3/4" long)	
9	082215	1	HOSE, oil return (23-1/2" long)	
10	-----	-	PIPES (See POWER STEERING PIPING)	
11	055245	1	ELBOW, oil hose (90°, 3/8"NPT male and female)	



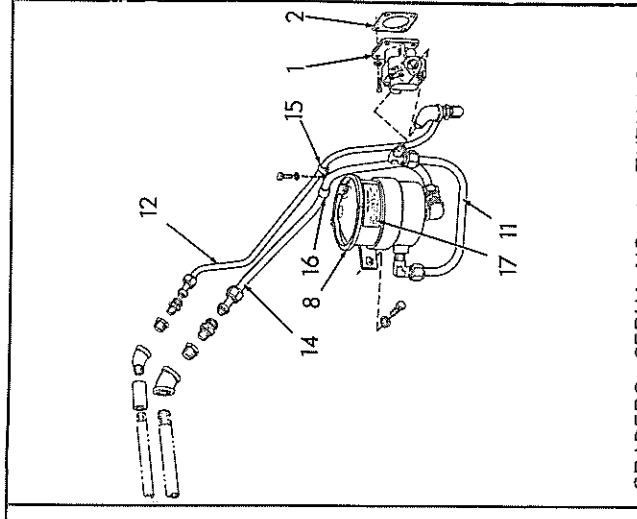
STEERING PUMP PARTS



GRADERS PRIOR TO SERIAL NO. 440



GRADERS SERIAL NO. 440 THRU NO.815



GRADERS SERIAL NO. 816 THRU NO. 919J

STEERING PUMP AND FILTER (Graders prior to serial No. 920)

STEERING PUMP AND FILTER

USAGE: Graders prior to serial No. 920.

\* Graders prior to serial No. 440.  
 \*\* Graders serial No. 440 thru 815.  
 \*\*\* Graders serial No. 816 thru 919.

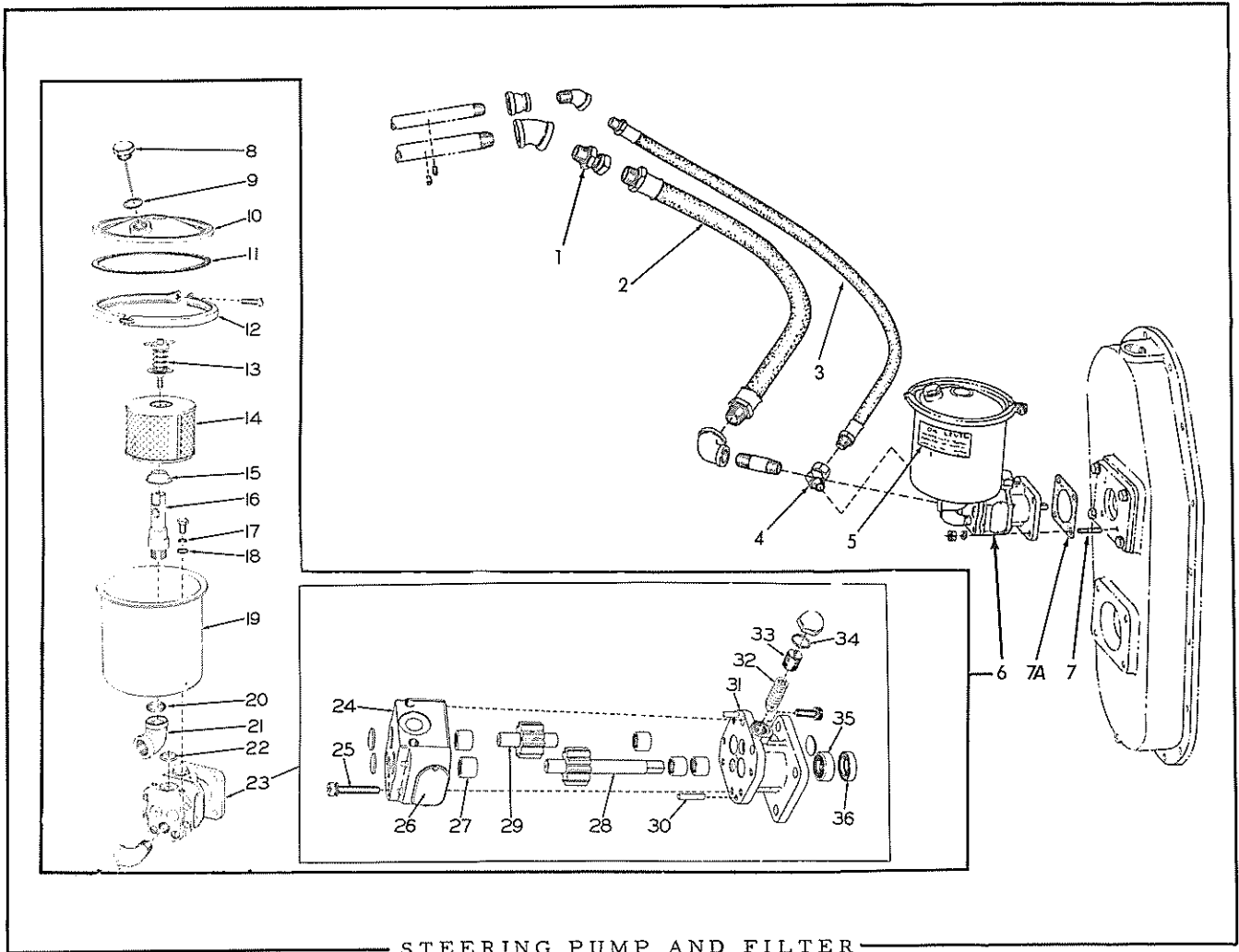
ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER	
		*	**	***			
1	078045	1	1	1	PUMP ASSEMBLY, steering (Consists of items 19 thru 30) (When required for graders prior to #482 also order ADAPTER 077735)		
	910167	4	4	4	CAPSCREW, 5/16"NC x 3/4"		
	904205	4	4	4	LOCKWASHER, 5/16"		
	904271	2	2	-	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT		
2	075029	1	1	1	GASKET, steering pump		
3	077488	1	-	-	SCREEN, oil supply tank		
4	076491	1	-	-	CAP ASSEMBLY, oil supply tank (Serviced only as a unit)		
5	076128	1	-	-	TANK ASSEMBLY, oil supply (Includes items 3 and 4)		
	913257	1	-	-	TEE, service, 3/8"NPT		
	901490	1	-	-	NIPPLE, pipe, 3/8"NPT x 1-1/2"		
6	076004	1	-	-	TUBE ASSEMBLY, oil supply, rear section (Includes NUTS)		
	910947	1	-	-	CONNECTOR, flared, 1/2" tube, 3/8"NPT male		
	911309	1	-	-	ELBOW, flared, 1/2" tube, 3/8"NPT male		
	901723	1	-	-	ELBOW, street, 90°, 3/8"NPT		
	915757	1	-	-	COUPLING, pipe, 1/2"NPT		
	915493	1	-	-	ELBOW, pipe, 45°, 1/2"NPT		
	904271	1	-	-	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT		
7	076009	1	-	-	TUBE ASSEMBLY, oil return, rear section (Includes NUTS)		
	910947	1	-	-	CONNECTOR, flared, 1/2" tube, 3/8"NPT male		
	911309	1	-	-	ELBOW, flared, 1/2" tube, 3/8"NPT male		
	901693	1	-	-	ELBOW, pipe, 45°, 1/2"NPT		
	904271	1	-	-	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT		
8	079519	-	1	1	FILTER ASSEMBLY, oil (See page 131 for repair parts)		
	903629	-	2	2	CAPSCREW, 3/8"NC x 3/4"		
	904206	-	2	2	LOCKWASHER, 3/8"		
	901839	-	1	1	BUSHING, pipe reducing, 1/2"NPT to 1/4"NPT (Required when installing new filter on graders prior to #816)		
9	059784	-	2	-	ADAPTER, oil filter (3/8"NPT female, 1/4"NPT male)		
10	078957	-	1	-	TUBE, filter to pump		
	915378	-	1	-	CONNECTOR, Sealastic, 1/2" tube, 3/8"NPT male		
	915380	-	1	-	ELBOW, Sealastic, 90°, 1/2" tube, 3/8"NPT male		
	915377	-	2	-	RING, Sealastic fitting, 1/2" tube (Includes FERRULE)		
	915376	-	2	-	NUT, Sealastic fitting, 1/2" tube		
11	079426	-	-	1	TUBE, filter to pump		
	916232	-	-	2	ELBOW, Sealastic, 90°, 5/8" tube, 1/2"NPT male		
	916229	-	-	2	RING, Sealastic fitting, 5/8" tube, Includes FERRULE)		
	916230	-	-	2	NUT, Sealastic fitting, 5/8" tube		
12	{	078960	-	1	-	TUBE, oil supply, rear section	
		079424	-	-	1	TUBE, oil supply, rear section	
		915378	-	1	1	CONNECTOR, Sealastic, 1/2" tube, 3/8"NPT male	
		916203	-	1	-	ELBOW, Sealastic, 45°, 1/2" tube, 3/8"NPT male	
		915380	-	-	1	ELBOW, Sealastic, 90°, 1/2" tube, 3/8"NPT male	
		915377	-	2	2	RING, Sealastic fitting, 1/2" tube (Includes FERRULE)	
		915376	-	2	2	NUT, Sealastic fitting, 1/2" tube	
		904271	-	1	2	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
		901724	-	-	1	ELBOW, street, 90°, 1/2"NPT	
		915757	-	1	1	COUPLING, pipe, 1/2"NPT	
		915493	-	1	1	ELBOW, pipe, 45°, 1/2"NPT	

(Continued)

STEERING PUMP AND FILTER (Continued)

ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		*	**	***		
13	078959	-	1	-	TUBE, oil return, rear section	
	915378	-	1	-	CONNECTOR, Sealastic, 1/2" tube, 3/8"NPT male	
	915380	-	1	-	ELBOW, Sealastic, 90°, 1/2" tube, 3/8"NPT male	
	915377	-	2	-	RING, Sealastic fitting, 1/2" tube (Includes FERRULE)	
	915376	-	2	-	NUT, Sealastic fitting, 1/2" tube	
	901693	-	1	-	ELBOW, pipe, 45°, 1/2"NPT	
	904271	-	1	-	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
14	079425	-	-	1	TUBE, oil return, rear section	
	916231	-	-	2	CONNECTOR, Sealastic, 5/8" tube, 1/2"NPT male	
	916229	-	-	2	RING, Sealastic fitting, 5/8" tube (Includes FERRULE)	
	916230	-	-	2	NUT, Sealastic fitting, 5/8" tube	
	912097	-	-	1	ELBOW, pipe reducing, 90°, 1/2"NPT to 1/4"NPT	
	901478	-	-	1	NIPPLE, close, 1/4"NPT	
	901694	-	-	1	ELBOW, pipe, 45°, 3/4"NPT	
	901828	-	-	1	BUSHING, pipe reducing, 3/4"NPT to 1/2"NPT	
15	207091	2	2	1	CLIP, rear oil tubes (closed type, 1/2" diam., 13/32" bolt-hole)	
	903629	1	1	1	CAPSCREW, 3/8"NC x 3/4"	
	904206	1	1	1	LOCKWASHER, 3/8"	
16	050686	-	-	1	CLIP, rear oil return tube (closed type, .5/8" diam., 7/16" bolt-hole)	
17	-----	1	1	1	TRANSFER, instruction (See PAINTING AND MARKING)	
18	079351	2	2	2	SEAL, pump shaft	
19	-----	1	1	1	STATOR (Not serviced. Order complete PUMP ASSEMBLY)	
	914590	1	1	1	PLUG, expansion, 11/16" diam.	
20	077240	1	1	1	SPRING ASSEMBLY, pressure relief (Includes BALL)	
21	077245	1	1	1	SCREW, pressure relief adjustment	
	913463	1	1	1	NUT, cap, 1/2"NF	
22	2225355	1	1	1	GASKET, cap nut	
23	-----	1	1	1	HOUSING (Not serviced. Order complete PUMP ASSEMBLY)	
	914590	2	2	2	PLUG, expansion, 11/16" diam.	
24	077239	8	8	8	SCREW ASSEMBLY (Includes LOCKWASHER)	
25	-----	1	1	1	PLATE, identification (Not serviced)	
26	2225347	2	2	2	PIN, dowel, stator to housing (3/16" x 1")	
27	077423	1	1	1	PLUG, pump housing (hex-socket-hd., 1/16"NPT)	
28	077241	4	4	4	BEARING, needle	
29	080630	1	1	-	SHAFT ASSEMBLY, driving (Includes GEAR. Serviced only as a unit)(Graders prior to #482)	
	082590	-	1	1	SHAFT ASSEMBLY, driving (Includes GEAR. Serviced only as a unit)(Graders #482 and up)	
30	082591	1	1	1	SHAFT ASSEMBLY, idler (Includes GEAR. Serviced only as a unit)	





STEERING PUMP AND FILTER

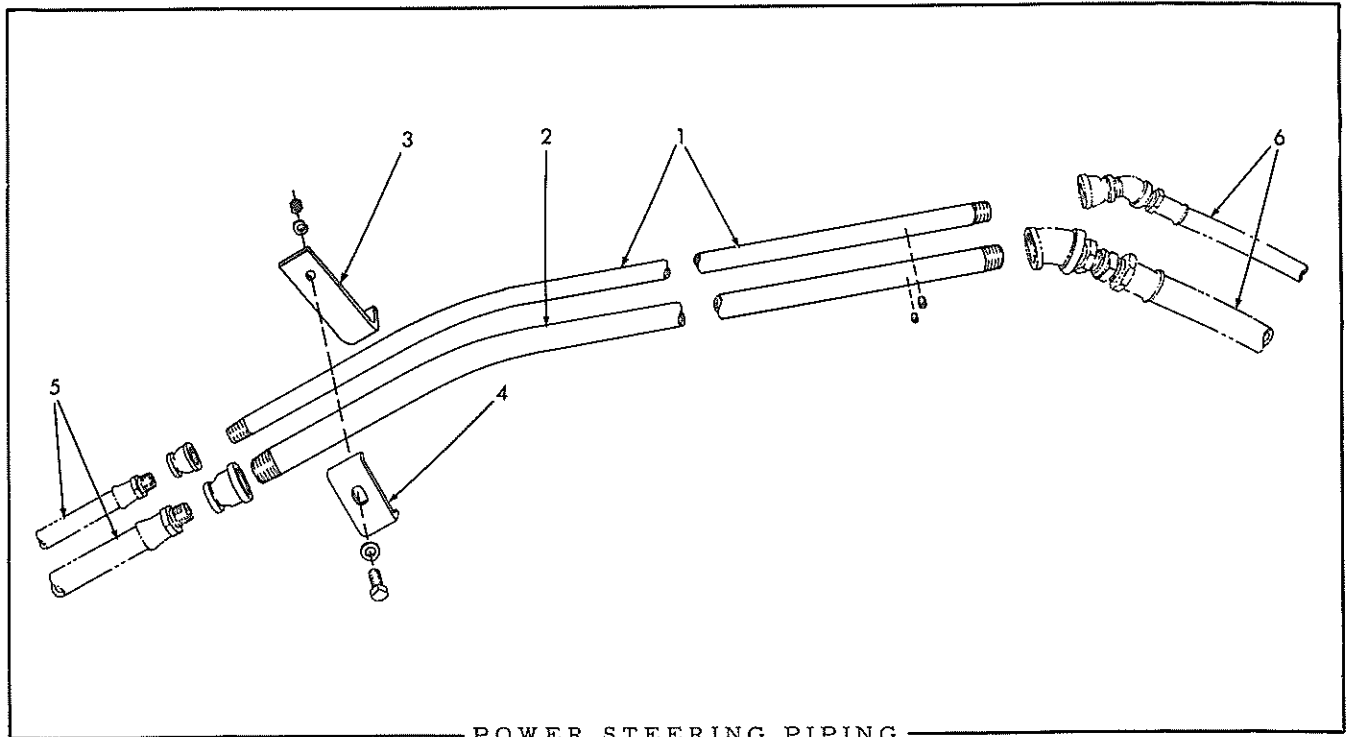
USAGE: Graders serial No. 920 and up.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	032032 901694	1 1	ADAPTER, swivel, return line hose (3/4"NPT male and female) ELBOW, pipe, 45°, 3/4"NPT	
2	081220 916149 901503	1 1 1	HOSE, return line ELBOW, pipe reducing, 90°, 3/4"NPT to 1/2"NPT NIPPLE, pipe, 1/2"NPT x 2-1/2"	
3	081218 904227 910149	1 1 1	HOSE, oil supply line COUPLING, pipe reducing, 1/2"NPT to 3/8"NPT ELBOW, street, 45°, 3/8"NPT	
4	081219	1	UNION, adapting, supply line hose (45°, 3/8"NPT male and female)	
5	-----	1	TRANSFER, instruction (See PAINTING AND MARKING)	
6	081221	1	PUMP AND FILTER ASSEMBLY, oil (Consists of items 8 thru 23)	
7	082025 904205 913636	4 4 4	STUD (5/16"NC x 5/16"NF x 1-1/16" ..... LOCKWASHER, 5/16" ..... NUT, 5/16"NF .....	081971 081971 081971
7A	075029	1	GASKET, steering pump .....	081971
8	079177	1	PLUG ASSEMBLY, filler hole (Includes DIPSTICK)	
9	079169	1	GASKET, filler hole plug	
10	079173	1	COVER ASSEMBLY (Includes item 11)	
11	079260	1	GASKET, cover	

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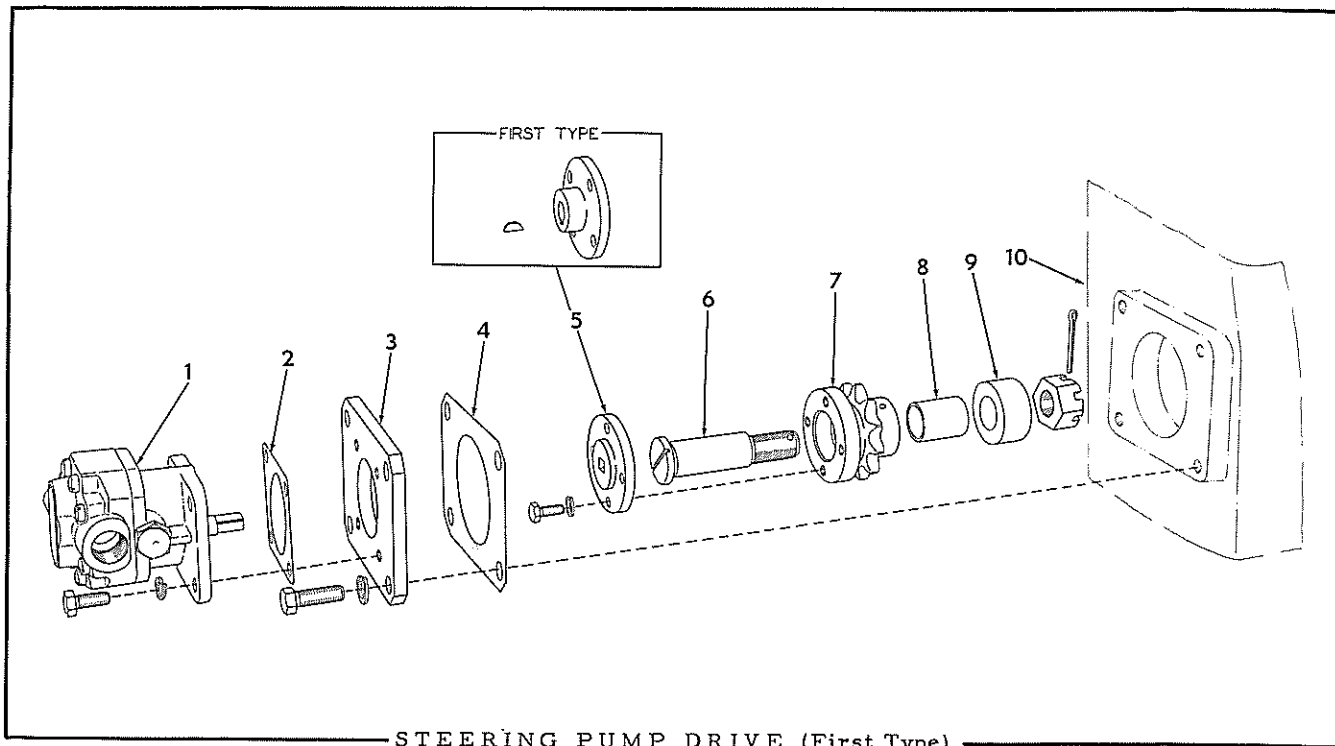
STEERING PUMP AND FILTER (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
12	079175	1	RING ASSEMBLY, cover clamping (Serviced only as a unit)	
	901230	1	SCREW, machine, fil-hd., 1/4"NC x 1"	
13	079174	1	VALVE ASSEMBLY, pressure relief (Serviced only as a unit)	
14	079170	1	ELEMENT, filtering	
15	079176	1	CUP, element sealing	
16	081757	1	STUD, element centering	
17	081549	2	RING, sealing (rubber, 7/16"O.D.)	
18	081550	2	WASHER, plain (steel)	
19	081758	1	CASE	
	905660	2	CAPSCREW, 5/16"NC x 1/2"	
20	081548	1	RING, sealing, filter inlet elbow (1"O.D.)	
21	081547	1	ELBOW, filter inlet	
22	081553	1	RING, sealing, pump to filter (15/16"O.D.)	
23	081829	1	PUMP ASSEMBLY, hydraulic (Consists of items 24 thru 36)	
	901723	1	ELBOW, street, 90°, 3/8"NPT	
24	-----	1	HOUSING (Not serviced. Order complete Pump Assembly)	
	092107	2	PLUG, expansion, 11/16" diam.	
	912261	2	CAPSCREW, hex-socket hd., 1/4"NC x 3/4"	
25	077239	6	SCREW ASSEMBLY (Includes LOCKWASHER)	
26	-----	1	PLATE, identification (Not serviced)	
27	077241	5	BEARING, needle	
28	082590	1	SHAFT ASSEMBLY, driving (Includes GEAR. Serviced only as a unit)	
29	082591	1	SHAFT ASSEMBLY, idler (Includes GEAR. Serviced only as a unit)	
30	2225347	2	PIN, dowel, stator to housing (3/16" x 1")	
31	-----	1	STATOR (Not serviced. Order complete Pump Assembly)	
	092107	1	PLUG, expansion, 11/16" diam.	
32	077240	1	SPRING ASSEMBLY, pressure relief (Includes BALL)	
33	077245	1	SCREW, pressure relief adjustment	
	913463	1	NUT, cap, 1/2"NF	
34	2225355	1	GASKET, cap nut	
35	5192505	1	SEAL, pump shaft, inner	
36	079351	1	SEAL, pump shaft, outer	



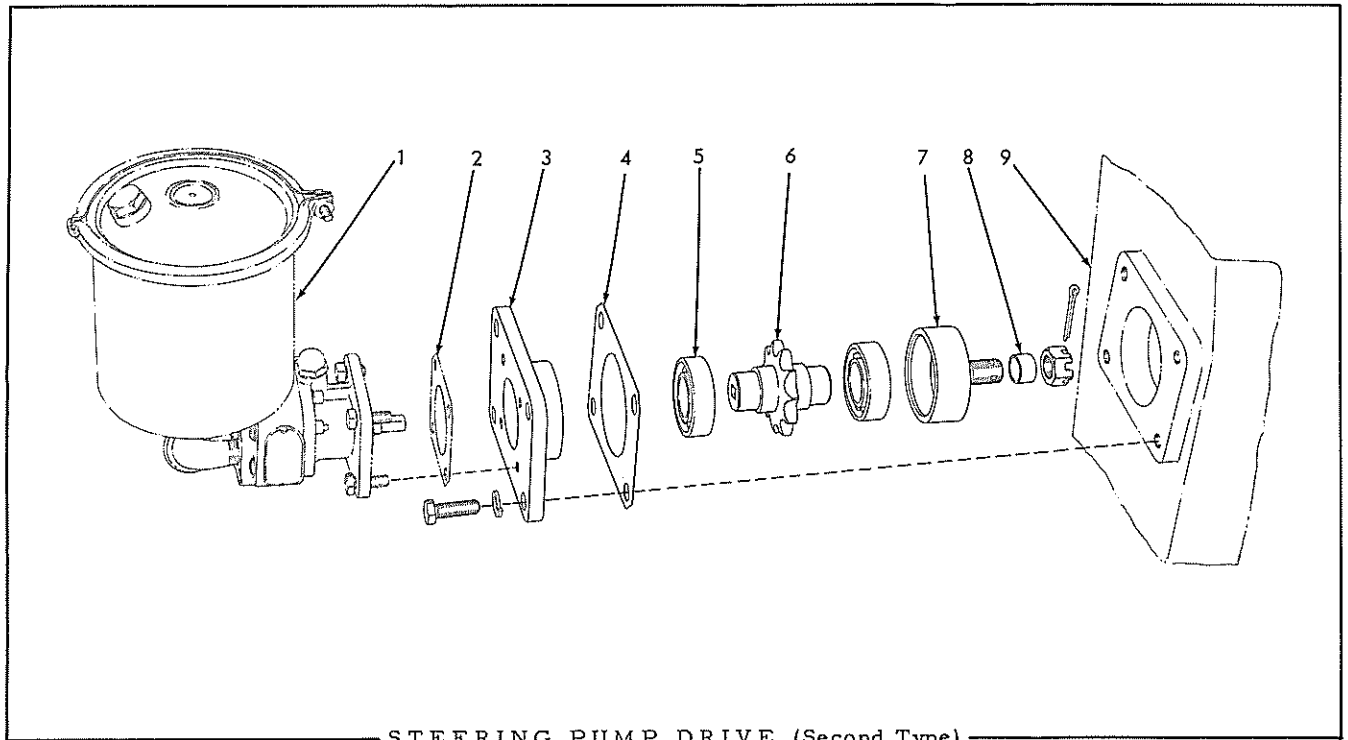
\* Graders prior to serial No. 816  
 \*\* Graders serial No. 816 and up.

ITEM	PART NUMBER	QUANTITY	DESCRIPTION	KIT NUMBER
1	076016	1	PIPE, oil supply (1/2"NPT)	
	912235	1	SETSCREW, hex-socket, cup-pt., 1/4"NC x 1/2" (Graders prior to #293)	
	902871	1	SETSCREW, hex-socket, cup-pt., 3/8"NC x 1/2" (Graders #293 and up)	
	904227	1	COUPLING, pipe reducing, 1/2"NPT to 3/8"NPT	
2	076016	1	PIPE, oil return (1/2"NPT)	
	912235	1	SETSCREW, hex-socket, cup-pt., 1/4"NC x 1/2" (Graders prior to #293)	
	902871	1	SETSCREW, hex-socket, cup-pt., 3/8"NC x 1/2" (Graders #293 and up)	
	904227	1	COUPLING, pipe reducing, 1/2"NPT to 3/8"NPT	
3	079428	-	1 PIPE, oil return (3/4"NPT)	
	902871	-	1 SETSCREW, hex-socket, cup-pt., 3/8"NC x 1/2"	
	915478	-	1 COUPLING, pipe reducing, 3/4"NPT to 1/2"NPT	
3	076005	1	1 SUPPORT, oil pipes (4-1/2" high)(Graders prior to August, 1954)	
	082216	-	1 SUPPORT, oil pipes (6-1/2" high)(Started August, 1954)	
4	079479	1	1 CLAMP, oil pipes	
	911848	1	1 CAPSCREW, 3/8"NF x 2"	
	911115	1	1 WASHER, plain, SAE std., 3/8"	
	904206	1	1 LOCKWASHER, 3/8"	
	911041	1	1 NUT, 3/8"NF	
5	-----	-	- HOSE (See POWER STEERING)	
6	-----	-	- HOSE (See STEERING PUMP AND FILTER)	



**STEERING PUMP DRIVE (First Type)**  
 USAGE: Graders prior to serial No. 1043 with exception of units shipped after August 6, 1954.

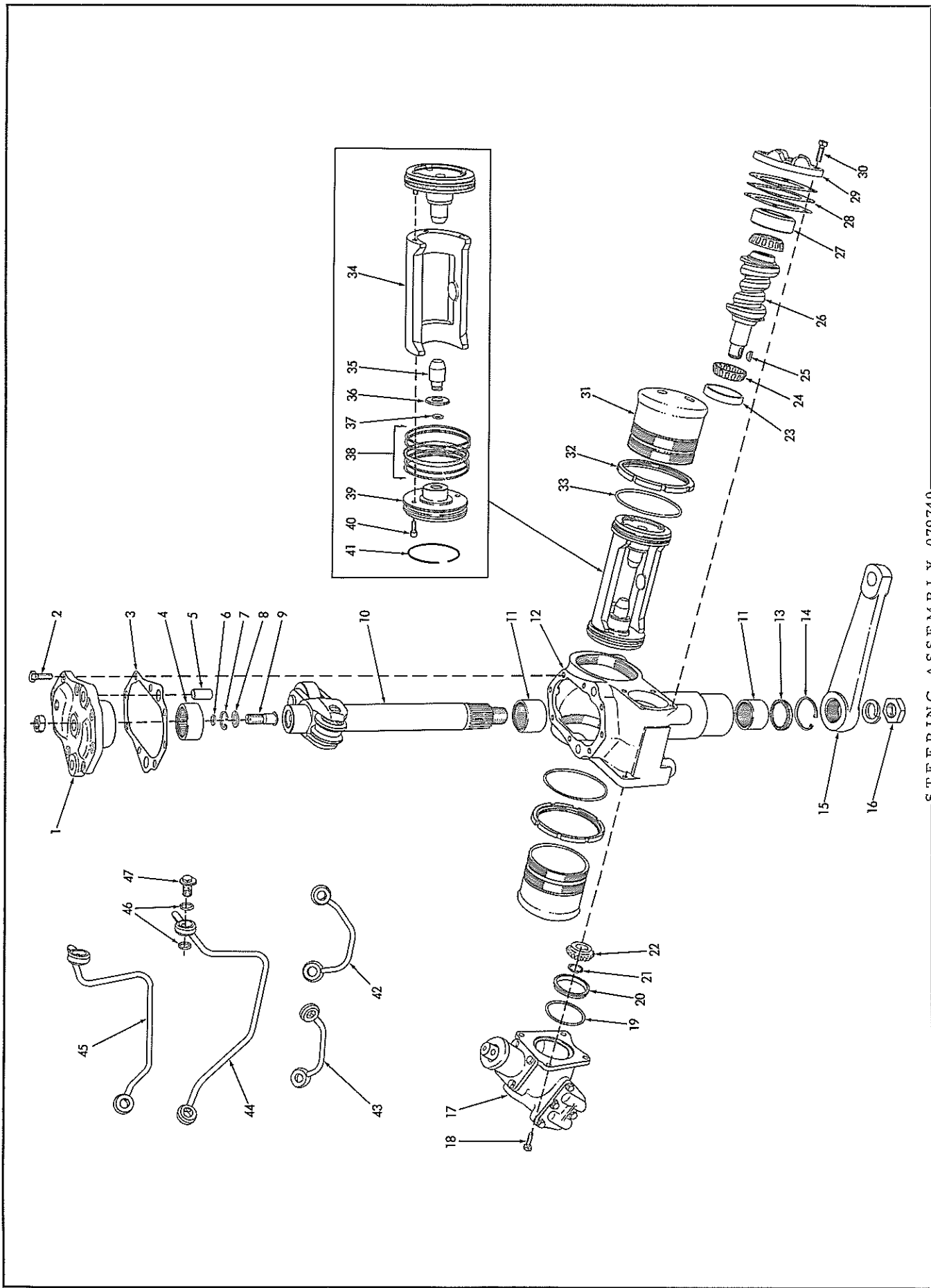
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	1	PUMP ASSEMBLY, steering (See POWER STEERING)	
2	-----	1	GASKET, steering pump (See POWER STEERING)	
3	075222	1	PLATE, hydraulic pump mounting	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
4	075224	1	GASKET, pump mounting plate	
5	075225	1	ADAPTER, hydraulic pump (key-wayed bore)(Graders prior to #482)	
	905119	1	KEY, #3 woodruff, 1/8" x 1/2"	
	905656	4	CAPSCREW, 1/4"NC x 5/8"	
	904204	4	LOCKWASHER, 1/4"	
6	077735	1	ADAPTER, hydraulic pump (square bore)(Graders #482 and up)	
	905656	4	CAPSCREW, 1/4"NC x 5/8"	
	904204	4	LOCKWASHER, 1/4"	
6	075230	1	SHAFT, pump driving sprocket (Graders prior to #520)	
	902275	1	NUT, slotted, 3/4"NC	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
6	079124	1	SHAFT, pump driving sprocket (Graders #520 and up)	
	912840	1	NUT, slotted, 5/8"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
7	075226	1	SPROCKET ASSEMBLY, pump driving (Includes item 8)	
8	075228	1	BEARING, plain, driving sprocket	
9	075229	1	RING, sprocket spacing	
10	-----	-	COVER, drive chain (See POWER TAKE-OFF)	



STEERING PUMP DRIVE (Second Type)

USAGE: Graders serial No. 1043 and up, including prior units shipped after August 6, 1954.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	-	See STEERING PUMP AND FILTER	
2	-----	-	GASKET, steering pump (See STEERING PUMP AND FILTER)	081971
3	081501	1	RETAINER, front bearing	081971
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	081971
	904206	4	LOCKWASHER, 3/8"	081971
4	075224	1	GASKET, front bearing retainer	081971
5	042986	2	BEARING, ball	081971
6	081704	1	SPROCKET, drive chain	081971
7	081622	1	RETAINER, rear bearing	081971
	912840	1	NUT, slotted, 5/8"NF	081971
	900808	1	PIN, cotter, 1/8" x 1-1/2"	081971
8	082142	1	BUSHING, adapting (For graders prior to #520 only)	081971
9	-----	1	COVER, drive chain (See POWER TAKE-OFF)	

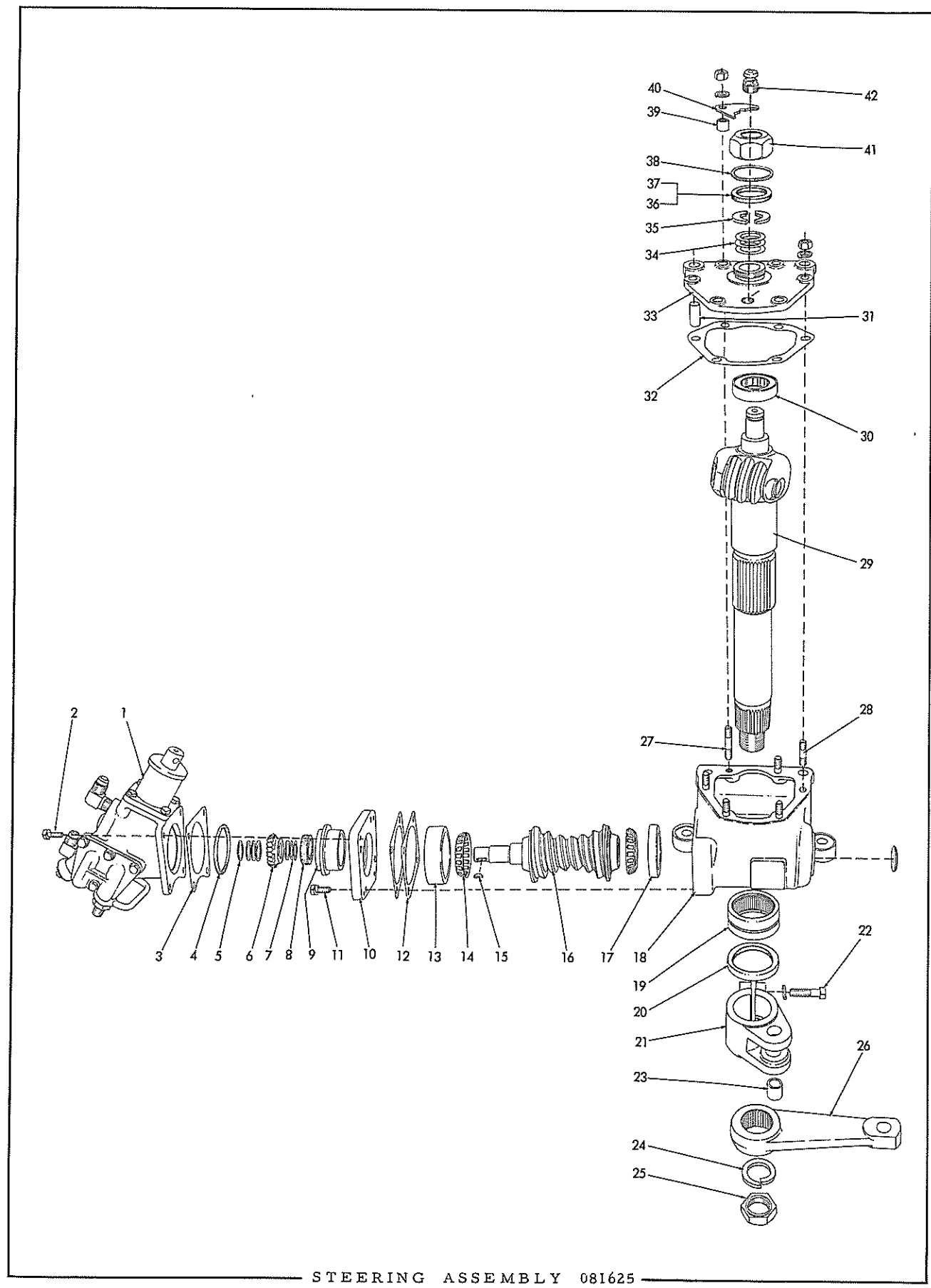


STEERING ASSEMBLY 079740

STEERING ASSEMBLY 079740

USAGE: Graders built prior to August 1954. See page 114 for listing of complete unit.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	079741	1	COVER KIT (Includes items 4 and 5)	
2	078383	8	CAPSCREW (3/8"NC x 1")	
3	076956	1	GASKET, steering shaft cover	
4	053907	1	BEARING, needle, steering shaft (1" long)	
5	605262	2	PIN, dowel, steering shaft cover	
6	076968	1	RING, sealing, adjusting screw	
7	076962	1	RING, snap, adjusting screw washer	
8	076974	1	WASHER, adjusting screw	
9	076975	1	SCREW, adjusting	
	911049	1	NUT, jam, 5/8"NF	
10	076989	1	SHAFT ASSEMBLY (Includes items 6 thru 9; also ROLLER and PIN which are not serviced separately)	
11	076959	2	BEARING, needle, steering shaft (1-1/2" long)	
12	078384	1	HOUSING ASSEMBLY (Includes items 1, 2, 11 and 23)	
13	079276	1	SEAL, oil, steering shaft bearing	
14	076963	1	RING, snap, steering shaft bearing oil seal	
15	077428	1	ARM, steering (Used on graders #1, 2, 3, 4, 6 and 11)	
	078193	1	ARM, steering (Used on graders #5, 7, 8, 9, 10, 12 and up)	
16	605266	1	NUT	
	914724	1	LOCKWASHER, 1-1/8"	
17	076988	1	VALVE ASSEMBLY, hydraulic (See page 129 for repair parts)	
18	076976	4	CAPSCREW	
19	076964	1	RING, valve sealing	
20	078575	1	RING, pilot	
21	076961	1	RING, snap, worm driving gear	
22	076978	1	GEAR, worm driving	
23	057747	1	CUP, worm bearing	
24	057768	2	CONE ASSEMBLY, worm bearing	
25	076979	1	KEY	
26	076977	1	WORM AND SHAFT ASSEMBLY (Serviced only as a unit)	
27	076972	1	RING, adjusting, worm bearing	
28	057763	1	SHIM, worm cover (paper, .010" thick. Use as req'd)	
	057764	1	SHIM, worm cover (paper, .005" thick. Use as req'd)	
	057765	1	SHIM, worm cover (paper, .002" thick. Use as req'd)	
29	057766	1	COVER, worm	
30	078383	4	CAPSCREW (3/8"NC x 1")	
31	076955	2	CYLINDER, hydraulic	
32	076983	2	RING, cylinder locking	
33	076965	2	RING, cylinder sealing	
34	076954	1	CONNECTOR, piston	
35	076980	2	PLUG, piston	
36	076973	2	SHIM, piston plug	
37	076967	2	RING, piston plug sealing	
38	076971	2	RING KIT, piston (Each consists of 4 phenolic RINGS and 1 rubber RING)	
39	076957	2	END, piston	
40	076970	6	SETSCREW, piston end	
41	076969	2	WIRE, setscrew retaining	
42	076985	1	TUBE, front cylinder connection, inner	
43	076984	1	TUBE, front cylinder connection, outer	
44	076987	1	TUBE, rear cylinder connection, outer	
45	076986	1	TUBE, rear cylinder connection, inner	
46	076966	16	RING, tube sealing	
47	076958	8	BOLT, tube attaching	



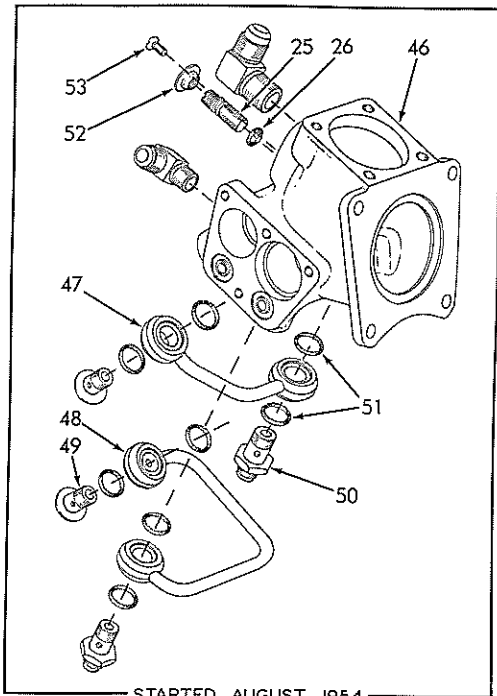
STEERING ASSEMBLY 081625



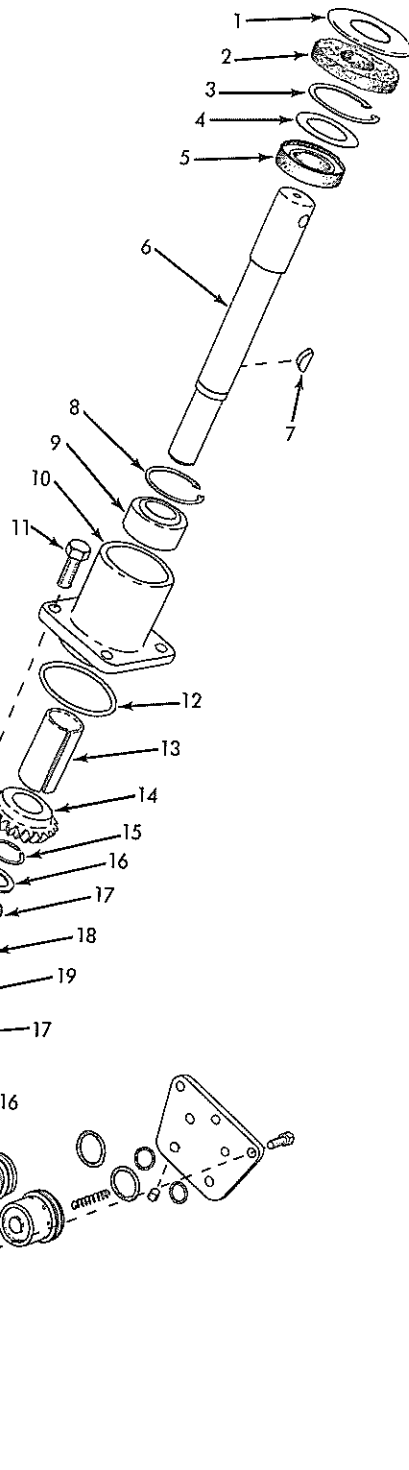
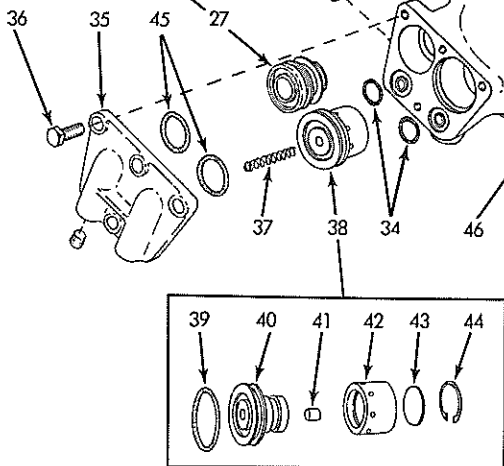
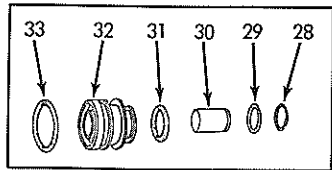
STEERING ASSEMBLY 081625

USAGE: Started August 1954. See page 115 for listing of complete unit.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	080300	1	VALVE ASSEMBLY, control (See page 129 for repair parts)	
2	076976	4	CAPSCREW	
3	080294	1	GASKET, control valve	
4	080293	1	RING, valve sealing	
5	076961	1	RING, snap, worm driving gear	
6	076978	1	GEAR, bevel, worm driving	
7	080292	4	SHIM, worm driving gear (Use as req'd)	
8	078329	1	SEAL, oil, worm shaft	
9	080296	1	PILOT, valve body	
10	080295	1	PLATE, valve adapting	
11	080315	4	SCREW (hex-socket-hd., 7/16"NC x 3/4")	
12	054784	1	SHIM, worm adjustment (.002" thick. Use as req'd)	
	605255	1	SHIM, worm adjustment (.005" thick. Use as req'd)	
	605256	5	SHIM, worm adjustment (.010" thick. Use as req'd)	
13	067426	1	CUP, worm front bearing	
14	605258	2	BEARING, steering worm	
15	076979	1	KEY, worm shaft bevel gear	
16	080317	1	WORM AND SHAFT ASSEMBLY (Serviced only as a unit)	
17	605259	1	CUP, worm rear bearing	
18	082059	1	HOUSING ASSEMBLY (Includes items 17, 19, 20, 27, 28 and 33)	
	910106	1	PLUG, expansion, 1-5/8" diam.	
19	080298	1	BEARING, needle, steering arm shaft	
20	080297	1	SEAL, oil, steering arm shaft	
21	080290	1	ARM ASSEMBLY, power (Includes item 23)	
22	035067	2	CAPSCREW, 1/2"NF x 2"	
	904208	2	LOCKWASHER, 1/2"	
23	082098	2	BUSHING, power arm	
24	080299	1	LOCKWASHER, steering arm shaft	
25	080304	1	NUT, steering arm shaft	
26	080311	1	ARM, steering	
27	605246	1	STUD, cover (7/16"NC x 7/16"NF x 2-5/16")	
	911042	1	NUT, 7/16"NF	
	904207	1	LOCKWASHER, 7/16"	
28	605239	5	STUD, cover (7/16"NC x 7/16"NF x 1-11/16")	
	911042	5	NUT, 7/16"NF	
	904207	5	LOCKWASHER, 7/16"	
29	080318	1	SHAFT AND GEAR ASSEMBLY (Serviced only as a unit)	
30	605236	1	BEARING, roller, steering arm shaft	
31	605262	2	PIN, dowel, top cover	
32	605235	1	GASKET, top cover	
33	605234	1	COVER KIT, top (Includes items 30, 31, 41 and 42)	
34	605244	2	SHIM, shaft end play (.010" thick. Use as req'd)	
	605245	8	SHIM, shaft end play (.020" thick. Use as req'd)	
35	605243	2	WASHER, half, shaft thrust	
36	605240	1	WASHER, sealing, thrust nut (rubber, 1/8" thick)	
37	605241	1	WASHER, sealing, thrust nut (rubber, 1/4" thick)	
38	605242	1	RETAINER, thrust nut sealing washer	
39	605247	1	SPACER, thrust nut locking plate	
40	605248	1	PLATE, thrust nut locking	
41	605237	1	NUT, shaft thrust	
42	605238	1	PLUG, vent, top cover	



STARTED AUGUST 1954



STEERING VALVE PARTS

STEERING VALVE PARTS

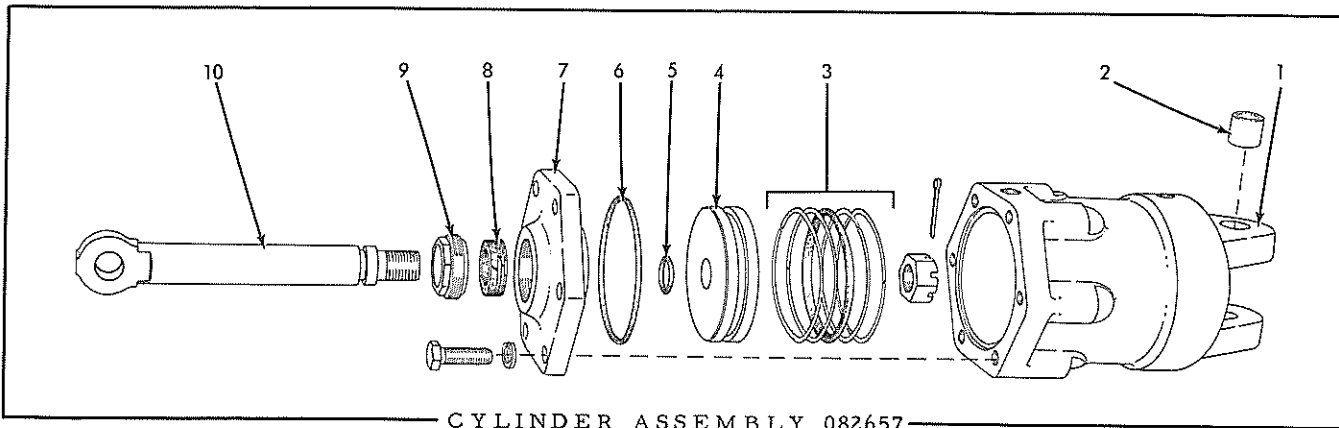
\* 076988 VALVE ASSEMBLY (Prior to August 1954. See page 125)  
 \*\* 080300 VALVE ASSEMBLY (Started August 1954. See page 127)

ITEM	PART QUANTITY		DESCRIPTION	KIT NUMBER
	NUMBER	* **		
1	078332	1 1	RETAINER, drive shaft washer	
2	078333	1 1	WASHER, drive shaft (felt)	
3	078360	1 1	RING, snap, retaining washer	
4	078334	1 1	WASHER, retaining, shaft oil seal	
5	078329	1 1	SEAL, oil, drive shaft	
6	078302	1 1	SHAFT, drive	
7	076979	1 1	KEY	
8	078358	1 1	RING, snap, drive shaft bearing	
9	078309	1 1	BEARING, swivel, drive shaft (Serviced only as a unit)	
10	078313	1 1	CAP, valve body	
11	076976	4 4	CAPSCREW	
12	078350	1 1	RING, sealing, valve body cap	
13	078331	1 1	SPACER, drive shaft gear	
14	076978	1 1	GEAR, bevel, drive shaft	
15	076961	1 1	RING, snap, drive shaft gear	
16	078326	2 2	WASHER, bearing retaining	
17	078356	2 2	BEARING KIT (Each consists of 34 ROLLERS)	
18	078330	1 1	ROLLER, adjusting, shaft gear	
19	078325	1 1	SPACER, roller	
20	078365	1 1	BLOCK, valve operating	
21	078361	1 1	RING, snap	
22	078308	1 -	PLATE, locking, adjusting screw	
23	064427	1 -	CAPSCREW, 5/16"NC x 5/8"	
24	078310	1 -	WASHER, plain	
25	078363	1 1	SCREW, gear adjusting	
26	078351	1 1	RING, sealing, adjusting screw	
27	078372	2 2	VALVE ASSEMBLY, distributing (Consists of items 28 thru 33)	
28	078362	2 2	RING, snap, piston retaining washer	
29	078311	2 2	WASHER, piston retaining	
30	-----	2 2	PISTON (Not serviced. Order item 27)	
31	078349	2 2	RING, sealing (1"O.D.)	
32	-----	2 2	BODY (Not serviced. Order item 27)	
33	078352	2 2	RING, sealing (1-3/8"O.D.)	
34	078347	4 4	RING, cover sealing	
35	078364	2 2	COVER, valve	
	910231	4 4	PLUG, pipe, socket-hd., 1/8"NPT	
36	064427	8 8	CAPSCREW, 5/16"NC x 5/8"	
37	078312	2 2	SPRING, reaction valve	

(Continued)

STEERING VALVE PARTS (Continued)

ITEM	PART NUMBER	QUANTITY	DESCRIPTION	KIT NUMBER
38	078371	2	2 VALVE ASSEMBLY, reaction (Consists of items 39 thru 44)	
39	078348	2	2 RING, sealing, valve body	
40	-----	2	2 BODY (Not serviced. Order item 38)	
41	-----	2	2 PISTON (Not serviced. Order item 38)	
42	-----	2	2 SLEEVE (Not serviced. Order item 38)	
43	078324	2	2 PLUG, valve body piston	
44	078359	2	2 RING, snap, piston plug	
45	078357	4	4 RING, valve sealing	
46	078353	1	- BODY, valve	
	901653	1	- PLUG, pipe, 3/8"NPT	
	080319	-	1 BODY, valve	
	911309	-	1 ELBOW, flared, 90°, 3/4"SAE, 3/8"NPT male	
	917164	-	1 ELBOW, flared, 90°, 7/8"SAE, 1/2"NPT male	
47	080328	-	1 TUBE, jumper	
48	080324	-	1 TUBE, jumper	
49	076958	-	2 BOLT, tube attaching	
50	080323	-	2 ADAPTER, tube attaching	
51	076966	-	8 RING, tube sealing	
52	080320	-	1 PLATE, locking, adjusting screw	
53	080322	-	1 SCREW, locking	



CYLINDER ASSEMBLY 082657

USAGE: See page 115 for listing of complete Cylinder Assembly.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	082065	1	CYLINDER ASSEMBLY, power steering (Includes item 2)	
2	081661	2	BUSHING, cylinder pivot	
3	076971	1	RING KIT, cylinder piston (Each consists of 4 phenolic RINGS and 1 rubber RING)	
4	082646	1	PISTON, power steering cylinder	
5	081693	1	RING, piston rod sealing	
6	080289	1	RING, sealing, cylinder cover	

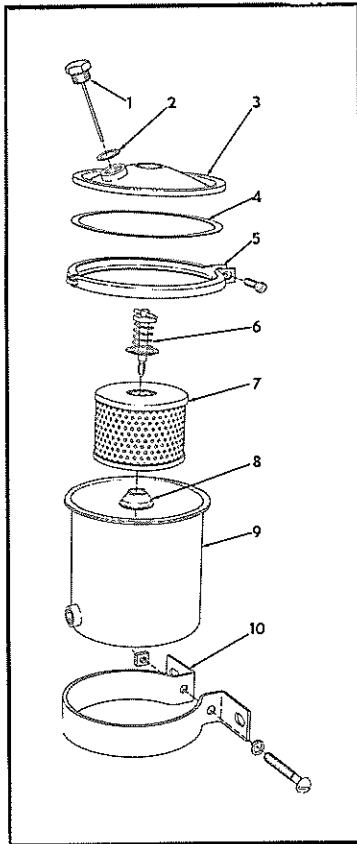
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CYLINDER ASSEMBLY 082657 (Continued)

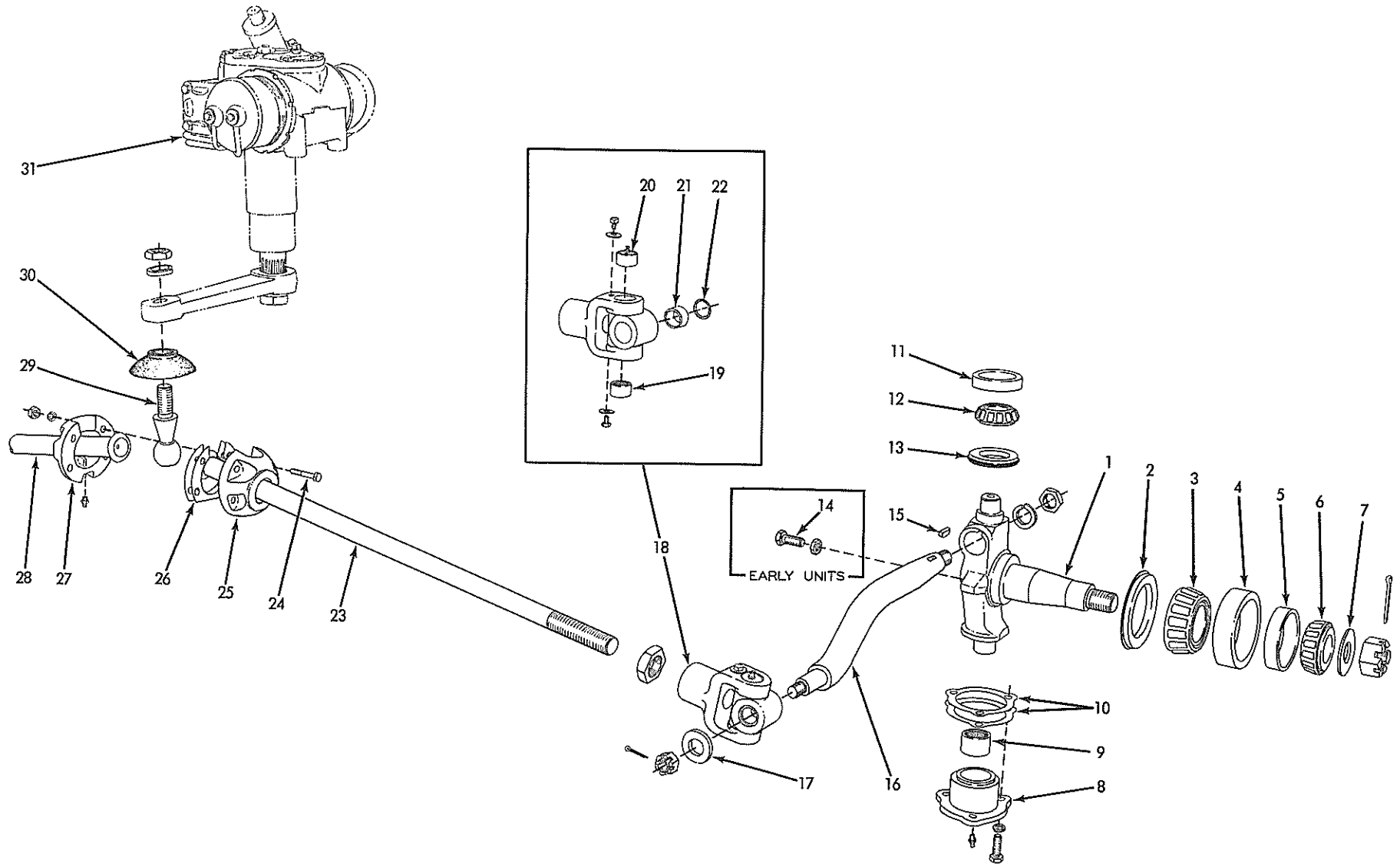
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
7	082060	1	COVER, power steering cylinder (Graders prior to #1298)	
	083181	1	COVER, power steering cylinder (Graders #1298 and up)	
	903639	6	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	6	LOCKWASHER, 1/2"	
8	081709	1	PACKING ASSEMBLY, piston rod (1/2" thick)(Graders prior to #1298)	
	083186	1	PACKING ASSEMBLY, piston rod (5/8" thick)(Graders #1298 and up)	
9	081690	1	NUT, piston rod packing	
10	082647	1	ROD, power steering cylinder piston	
	916896	1	NUT, slotted, 7/8"NF	
	910320	1	PIN, cotter, 5/32" x 1-1/2"	

FILTER ASSEMBLY 079519

USAGE: Graders prior to serial No. 920. See page 117 for listing of complete Filter Assembly.



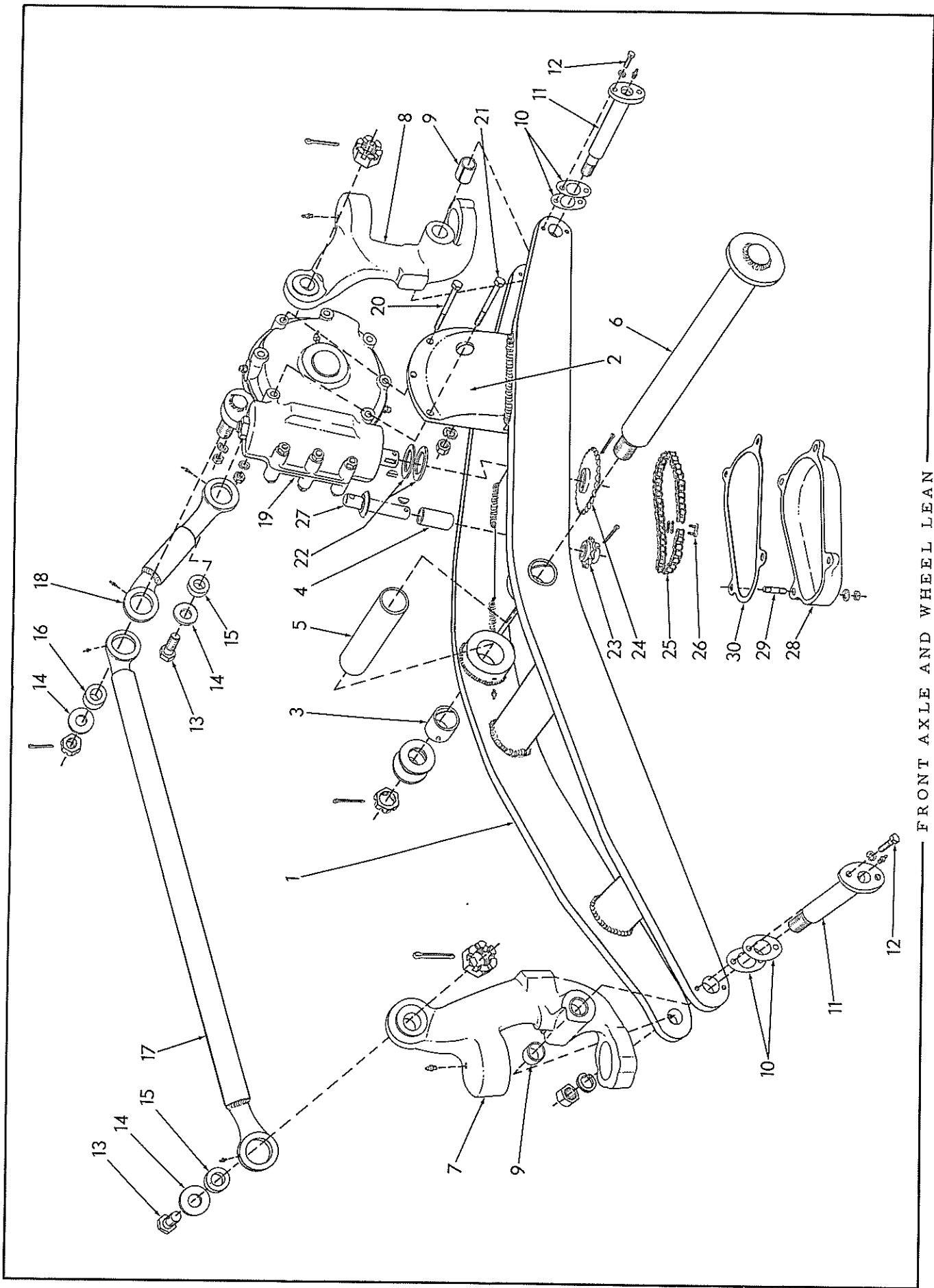
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	079177	1	PLUG ASSEMBLY, filler hole (Includes DIPSTICK)
2	079169	1	GASKET, filler hole plug
3	079173	1	COVER ASSEMBLY (Includes item 4)
4	079260	1	GASKET, cover
5	079175	1	RING ASSEMBLY, cover clamping (Serviced only as a unit)
	901230	1	SCREW, machine, fil-hd., 1/4"NC x 1"
6	079174	1	VALVE ASSEMBLY, pressure relief (Serviced only as a unit)
7	079170	1	ELEMENT, filtering
8	079176	1	CUP, element sealing
9	079171	1	CASE (Graders prior to #816. Has 1/4"NPT outlet)
	079498	1	CASE (Graders #816 and up. Has 1/2"NPT outlet)
10	079172	1	BRACKET ASSEMBLY, mounting (Includes items indented below)
	-----	1	BOLT, stove, 5/16"NC x 2-1/2"
	-----	1	LOCKWASHER, 5/16"
	-----	1	NUT, square, 5/16"NC



FRONT WHEEL SPINDLES AND STEERING LINKAGE

FRONT WHEEL SPINDLES AND STEERING LINKAGE

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	082131	1	SPINDLE, left wheel (Also order item 3 when required for graders prior to #1187)	
	082132	1	SPINDLE, right wheel (Also order item 3 when required for graders prior to #1187)	
	911843	2	NUT, slotted, 1-1/4"NF	
	910024	2	PIN, cotter, 3/16" x 2-1/2"	
2	604345	2	SEAL, oil, front wheel (external type)	
3	082021	2	CONE ASSEMBLY, front wheel inner bearing	
4	211581	2	CUP, front wheel inner bearing	
5	211567	2	CUP, front wheel outer bearing	
6	604922	2	CONE ASSEMBLY, front wheel outer bearing	
7	601949	2	WASHER, front wheel spindle	
8	066365	2	RETAINER, spindle needle bearing	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
	903639	6	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	6	LOCKWASHER, 1/2"	
9	066362	2	BEARING, needle, front wheel spindle	
10	604292	18	SHIM, spindle lower bearing (Use as req'd)	
11	604387	2	CUP, spindle upper bearing	
12	604388	2	CONE ASSEMBLY, spindle upper bearing	
13	604343	2	SEAL, oil, front wheel spindle (external type)	
14	604349	4	BOLT, spindle stop (5/8"NF x 1-1/2")(Early units only)	
	911049	4	NUT, jam, 5/8"NF	
15	049149	2	KEY, spindle steering arm	
16	604104	2	ARM, steering, front wheel spindle	
	911051	2	NUT, jam, 1"NF	
	910916	2	LOCKWASHER, 1"	
	912331	2	NUT, slotted, 3/4"NF	
	900807	2	PIN, cotter, 1/8" x 1-1/4"	
17	602068	2	WASHER, plain	
18	066627	2	SWIVEL ASSEMBLY, drag link (Each consists of 1 YOKE, 1 SWIVEL, 1 PIN, and items 19 thru 22)	
19	066632	2	BEARING, needle drag link swivel yoke, lower	
	910196	2	CAPSCREW, 5/16"NC x 3/8"	
	901165	2	WASHER, plain, U.S. std., 5/16"	
20	066633	2	BEARING, needle, drag link swivel yoke, upper	
	910196	2	CAPSCREW, 5/16"NC x 3/8"	
	901165	2	WASHER, plain, U.S. std., 5/16"	
21	066631	4	BUSHING, drag link swivel	
22	053926	4	SEAL, oil, drag link swivel	
23	077406	1	LINK, drag, right (33-7/8" long)(Used prior to August 1954)	
	604350	1	LINK, drag, right (32-7/8" long)(Used August 1954 and after)	
	912251	1	NUT, jam, 1-1/4"NF	
24	046419	4	CAPSCREW, ball pin cap (3/8"NF x 2")	
	911041	4	NUT, 3/8"NF	
	904206	4	LOCKWASHER, 3/8"	
25	604109	1	CAP, steering arm ball pin	
26	604290	18	SHIM, ball pin cap (Use as req'd)	
27	604110	1	CAP, steering arm ball pin	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
28	077405	1	LINK, drag, left (31-7/8" long)(Used prior to August 1954)	
	604350	1	LINK, drag, left (32-7/8" long)(Used August 1954 and after)	
	912251	1	NUT, jam, 1-1/4"NF	
29	604279	1	PIN, ball, steering arm	
	911051	1	NUT, jam, 1"NF	
	910916	1	LOCKWASHER, 1"	
30	604289	1	SHIELD, steering arm ball pin (neoprene)	
31	-----	1	STEERING ASSEMBLY (See POWER STEERING)	





FRONT AXLE AND WHEEL LEAN

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074925	1	AXLE ASSEMBLY, front (Includes items 2 thru 4)	
	915275	2	FITTING, lubricating, 67-1/2 <sup>o</sup> , 1/8"NPT	
2	050959	1	BRACKET, supporting, worm gear housing (Requires welding to axle)	
3	604949	2	BUSHING, front axle pivot (2"I. D.)	
4	604338	1	BUSHING, front wheel lean sprocket shaft (1"I. D.)	
5	605438	1	SPACER, front axle pivot bushings	
6	075573	1	PIN, front axle pivot	
	900825	2	WASHER, plain, U.S. std., 1-1/2" (Use as req'd)	
	913527	1	NUT, jam, slotted, 1-1/2"NF	
	900813	1	PIN, cotter, 3/16" x 2"	
7	079133	1	KNUCKLE ASSEMBLY, front wheel lean, left (Includes item 9)	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
8	079134	1	KNUCKLE ASSEMBLY, front wheel lean, right (Includes item 9)	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
9	051043	4	BUSHING, front wheel lean knuckle (1-3/8"O. D.)(Graders prior to #747)	
	079123	4	BUSHING, front wheel lean knuckle (plain, 1-1/2"O. D.)(Graders #747 thru #1398)	
	084629	4	BUSHING, front wheel lean knuckle (shouldered end)(Graders #1399 and up)	
10	052960	10	SHIM, knuckle pivot bolt (Use as req'd)	
11	051078	2	BOLT, pivot, front wheel lean knuckle	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
	911047	2	NUT, 1"NF	
	910916	2	LOCKWASHER, 1"	
12	036034	4	CAPSCREW, 3/8"NF x 1"	
	904206	4	LOCKWASHER, 3/8"	
13	601968	2	BOLT, wheel lean link	
	911061	2	NUT, slotted, 1-1/4"NC	
	901344	2	PIN, cotter, 1/4" x 2"	
14	601967	3	WASHER, wheel lean link bolt	
15	601966	2	SPACER, wheel lean link outer bolt	
16	604293	1	SPACER, wheel lean link inner bolt	
17	604284	1	LINK, wheel lean, long (Standard)	
	074700	1	LINK, wheel lean, long (Heavy type. For graders with front-mounted equipment)	
	912808	2	FITTING, lubricating, straight, 1/4"NF	
18	604283	1	LINK, wheel lean, short	
	912808	2	FITTING, lubricating, straight, 1/4"NF	
19	075421	1	WORM AND GEAR ASSEMBLY, front wheel lean (See page 137 for repair parts)	
	911061	2	NUT, slotted, 1-1/4"NC	
	901344	2	PIN, cotter, 1/4" x 2"	
20	053038	4	CAPSCREW, 1/2"NF x 6"	
21	053037	2	CAPSCREW, 1/2"NF x 5-1/2"	
	911043	6	NUT, 1/2"NF	
	904208	6	LOCKWASHER, 1/2"	
22	601941	2	SEAL, worm and gear assembly (cork)	
23	601936	1	SPROCKET, driving, front wheel lean (12 teeth)	
	900813	1	PIN, cotter, 3/16" x 2"	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	

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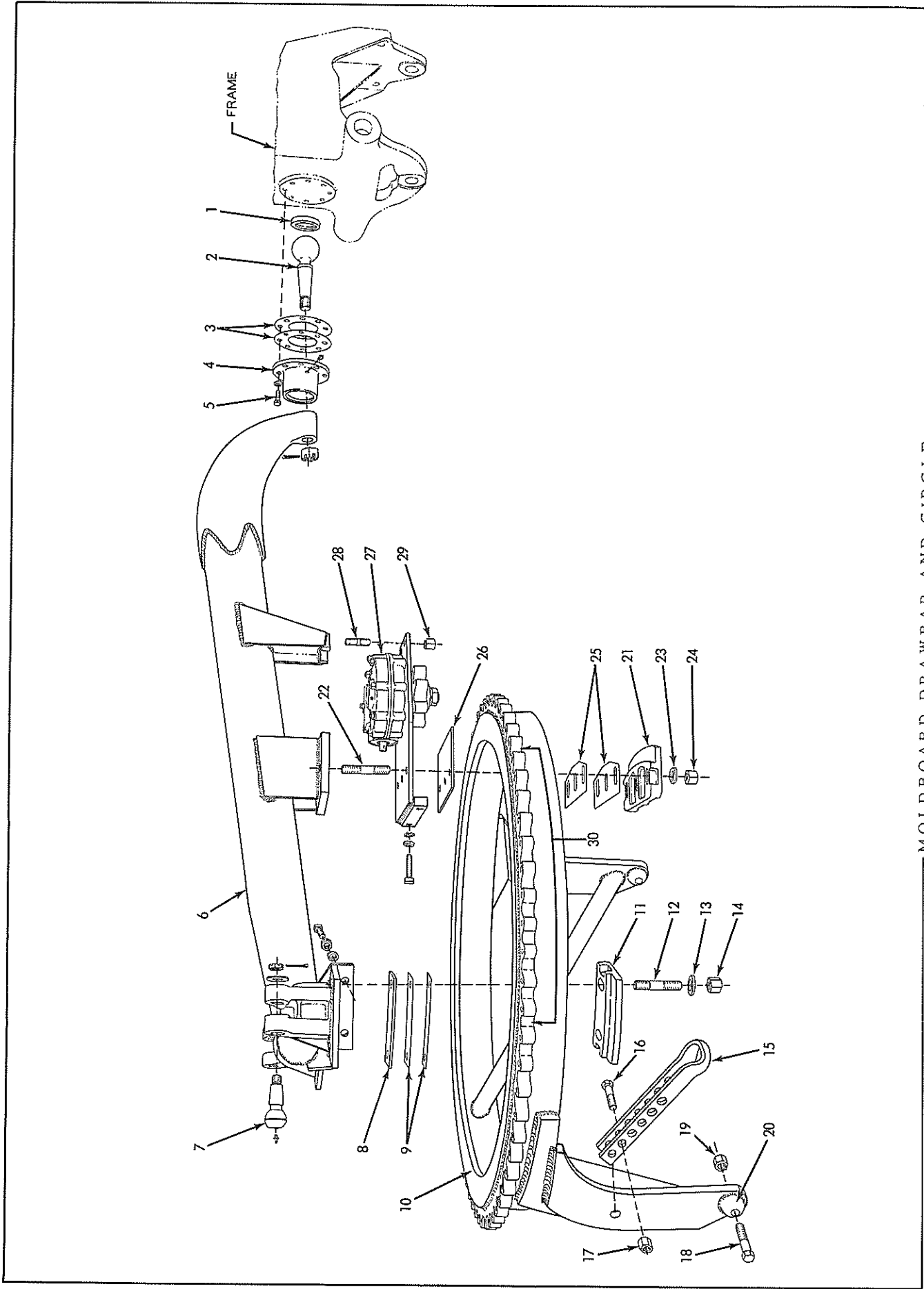
## FRONT AXLE AND WHEEL LEAN (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
24	604286	1	SPROCKET, driven, front wheel lean (27 teeth)	
	900813	1	PIN, cotter, 3/16" x 2"	
	910156	1	KEY, #C woodruff, 5/16" x 1-1/8"	
25	074924	1	CHAIN, wheel lean drive (42 links, 5/8" pitch)(Includes item 26)	
26	605509	1	LINK, connecting, wheel lean drive chain	
27	604334	1	SHAFT, wheel lean driving sprocket	
28	604089	1	COVER, wheel lean driving sprockets	
29	601940	4	STUD (1/2"NC x 2")	
	904208	4	LOCKWASHER, 1/2"	
	911028	4	NUT, 1/2"NC	
30	604285	1	GASKET, wheel lean driving sprocket cover	

## FRONT WHEEL LEAN WORM AND GEAR PARTS

NOTE: See page 135 for listing of complete WORM AND GEAR ASSEMBLY.

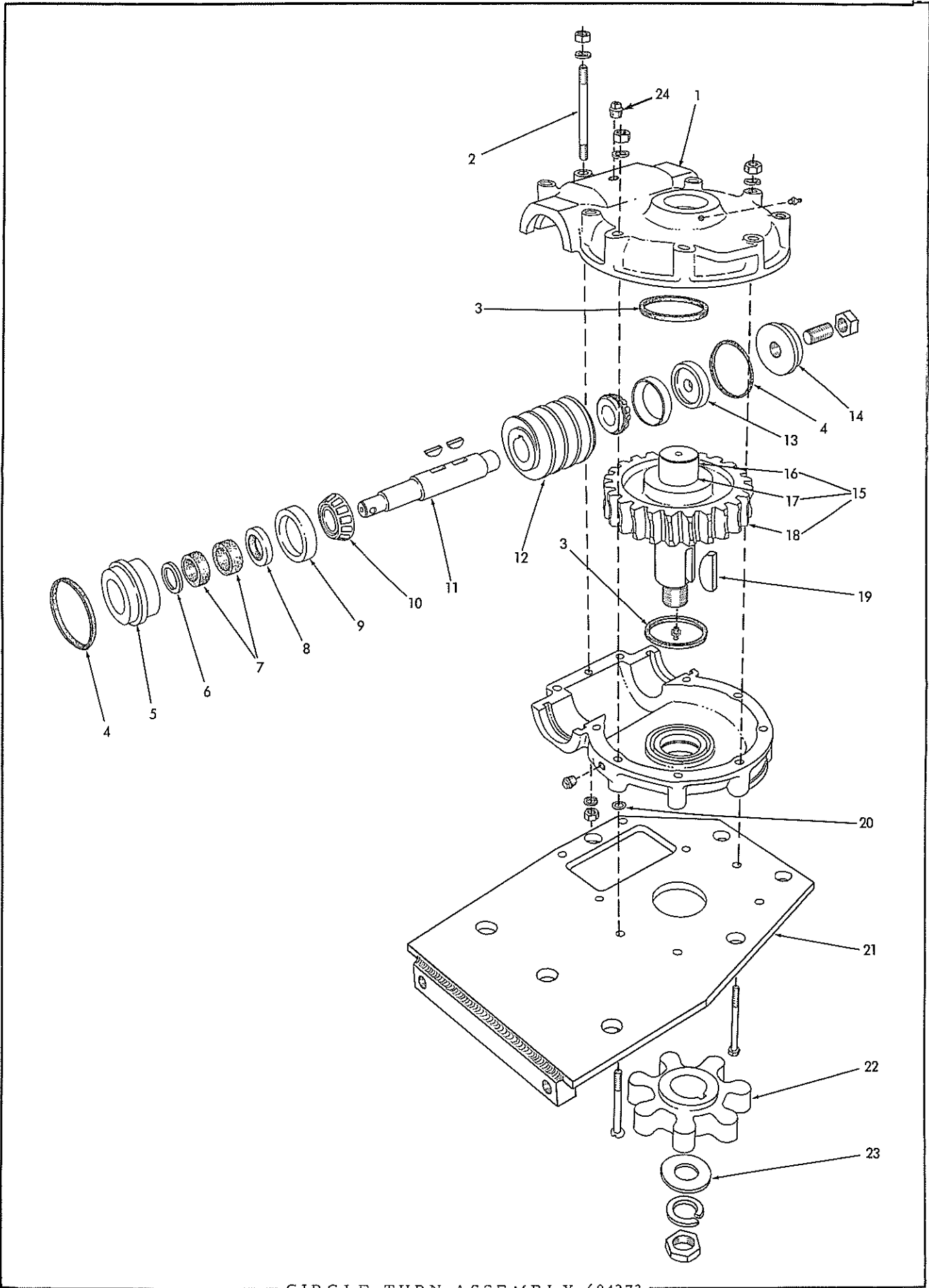
1	602234	1	HOUSING ASSEMBLY (Consists of 2 HOUSINGS, 4 STUDS 602264 8 NUTS 911028 and 8 LOCKWASHERS 904208)	
	910257	2	CAPSCREW, 1/2"NC x 4-3/4"	
	911028	2	NUT, 1/2"NC	
	904208	2	LOCKWASHER, 1/2"	
	901653	2	PLUG, pipe, 3/8"NPT	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
	915273	1	FITTING, lubricating, 30°, 1/8"NPT	
2	602264	1	STUD (1/2"NC x 5-1/2")	
	911028	2	NUT, 1/2"NC	
	904208	2	LOCKWASHER, 1/2"	
3	053038	1	CAPSCREW, 1/2"NF x 6"	
	911043	1	NUT, 1/2"NF	
	904208	1	LOCKWASHER, 1/2"	
4	075420	1	WASHER, crank retaining	
	912841	1	NUT, slotted, 1-1/4"NF	
	901345	1	PIN, cotter, 1/4" x 2-1/2"	
5	050940	1	CRANK	
6	053036	1	PLATE, crank stop	
7	602265	2	SEAL, housing	
8	075419	1	GEAR AND SHAFT ASSEMBLY (Consists of items 9 thru 11)	
9	075418	1	SHAFT only	
10	602268	1	GEAR only	
11	602270	1	KEY (woodruff, 5/8" x 2-7/16")	
12	601448	1	WORM (right hand)	
	911201	2	KEY, #E woodruff, 3/8" x 1-1/4"	
13	602280	1	SHAFT, worm	
14	604388	2	CONE ASSEMBLY, worm shaft bearing	
15	604387	2	CUP, worm shaft bearing	
16	603007	1	SEAL, oil, worm shaft	
17	602274	1	CAP, worm shaft lower bearing	
18	602462	2	SEAL, worm shaft bearing cap	
19	602272	1	PLUG, worm shaft bearing adjustment	
20	602273	1	CAP, worm shaft upper bearing	
	911227	1	SETSCREW, socket-hd., 1"NC x 2"	
	911038	1	NUT, jam, 1"NC	
21	605207	1	PLUG, vent, gear housing	



MOLDBOARD DRAWBAR AND CIRCLE

MOLDBOARD DRAWBAR AND CIRCLE

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER	
1	602198	1	SEAT, drawbar ball		
2	602201	1	BALL, drawbar (straight shank)(Graders prior to #707)		
	078056	1	BALL, drawbar (tapered shank)(Graders #707 and up)		
	902279	1	NUT, slotted, 1-1/2"NC		
	911279	1	PIN, cotter, 5/16" x 2-1/4"		
3	602199	10	SHIM, drawbar ball socket (Use as req'd)		
4	075386	1	SOCKET, drawbar ball		
	914465	1	FITTING, lubricating, straight, 1/8"NPT		
5	602200	8	} Graders prior to #326		
	911029	8		STUD, 5/8"NC x 2-1/2"	
	071113	8		NUT, 5/8"NC	
	904209	8		CAPSCREW, 5/8"NC x 2" (Graders #326 and up)	
		8		LOCKWASHER, 5/8"	
6	078516	1	DRAWBAR, moldboard (When required for graders prior to #707 also order BALL 078056)		
	901267	4	SETSCREW, sq-hd., oval point, 7/8"NC x 2-1/2"		
	901421	4	NUT, jam, 7/8"NC		
	905347	4	LOCKWASHER, 7/8"		
7	601972	3	PIN, ball, circle lift and side shift		
	900822	3	WASHER, plain, U.S. std., 1"		
	911174	3	NUT, jam, slotted, 1"NF		
	900808	3	PIN, cotter, 1/8" x 1-1/2"		
	914465	3	FITTING, lubricating, straight, 1/8"NPT		
8	602667	2	PLATE, wear, moldboard circle, rear		
9	602688	32	SHIM, circle rear guide (Use as req'd)		
10	604249	1	CIRCLE, moldboard (Includes item 30)(See page 147 for special Circle used with SHIFTABLE MOLDBOARD)		
11	601771	2	GUIDE, circle, rear (1-5/8" thick)(Graders prior to #1476)		
	081028	2	GUIDE, circle, rear (1-3/4" thick)(Graders #1476 and up)		
12	602664	4	STUD (1-1/8"NF x 5-1/2")		
13	602663	4	WASHER, plain		
14	053994	4	NUT, high, 1-1/8"NF		
15	602937	2	LINK, adjusting, moldboard pitch	} Not used with SHIFTABLE MOLDBOARD. See Page 147.	
16	031055	2			CAPSCREW, 1"NF x 3-3/4"
17	600236	2			NUT, high, 1"NF
18	036546	2	CAPSCREW, 1"NF x 4-1/4"		
19	600236	2	NUT, high, 1"NF		
20	601133	2	BALL, moldboard connection (Available only for graders prior to #263 since is welded to the circle on later units)		
21	604153	1	GUIDE, circle, front (1-5/8" thick)(Graders prior to #1476)		
	081027	1	GUIDE, circle, front (1-3/4" thick)(Graders #1476 and up)		
22	602721	3	STUD (1-1/8"NF x 6-1/4")		
23	602663	3	WASHER, plain		
24	053994	3	NUT, high, 1-1/8"NF		
25	604270	16	SHIM, circle front guide (Use as req'd)		
26	604272	1	PLATE, wear, moldboard circle, front		
27	604273	1	CIRCLE TURN ASSEMBLY (See page 141 for repair parts)		
	912606	2	SETSCREW, sq-hd., oval point, 7/8"NC x 3-1/2"		
	901421	2	NUT, jam, 7/8"NC		
	905347	2	LOCKWASHER, 7/8"		
28	602248	2	STUD (1"NF x 3-1/8")		
29	600236	2	NUT, high, 1"NF		
30	604150	6	SEGMENT, circle gear (11-tooth section. Requires welding in place)		



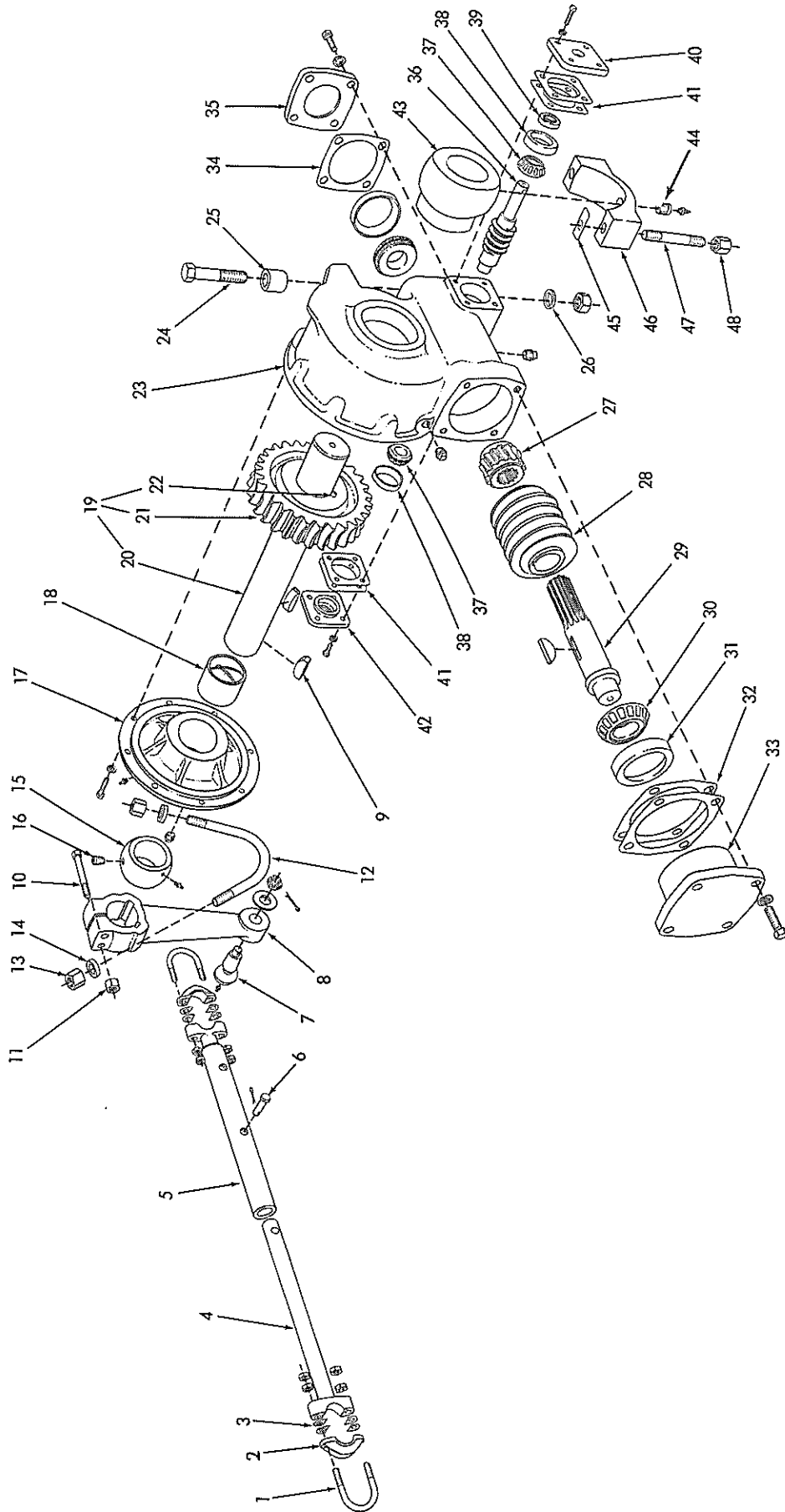
CIRCLE TURN ASSEMBLY 604273

## CIRCLE TURN ASSEMBLY 604273

NOTE: For listing of complete Circle Turn Assembly see page 139

KIT NUMBER

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	602237	1	HOUSING ASSEMBLY, worm gear (Consists of 2 HOUSINGS, 4 STUDS 602264, 8 NUTS 911028 and 8 LOCKWASHERS 904208)
	901653	1	PLUG, pipe, 3/8"NPT
	914465	1	FITTING, lubricating, straight, 1/8"NPT
	911258	1	CAPSCREW, fl-hd., 1/2"NC x 5-1/2"
	911259	7	CAPSCREW, hex-hd., 1/2"NC x 5-1/2"
2	602264	2	STUD (1/2"NC x 5-1/2")
	911028	12	NUT, 1/2"NC
	904208	12	LOCKWASHER, 1/2"
3	602265	2	SEAL, oil, worm gear housing (cork, 3-3/4"O.D.)
4	602462	2	SEAL, oil, worm shaft bearing cap (cork, 3-7/8"O.D.)
5	602274	1	CAP, retaining, worm shaft rear bearing
6	603232	1	WASHER, retaining, worm shaft
7	603408	2	PACKING, worm shaft (felt)
8	603007	1	SEAL, oil, worm shaft
9	604387	2	CUP, worm shaft bearing
10	604388	2	CONE ASSEMBLY, worm shaft bearing
11	602271	1	SHAFT, worm
	911201	2	KEY, #E woodruff, 3/8" x 1-1/4"
12	601449	1	WORM (left hand)
13	602272	1	PLUG, worm shaft bearing adjustment
14	602273	1	CAP, worm shaft front bearing
	911227	1	SETSCREW, socket-hd., oval-pt., 1"NC x 2"
	911038	1	NUT, jam, 1"NC
15	604258	1	GEAR AND SHAFT ASSEMBLY (Consists of items 16 thru 18)
16	604257	1	SHAFT only
	914465	1	FITTING, lubricating, straight, 1/8"NPT
	911207	1	NUT, jam, 1-1/2"NF
	913077	1	LOCKWASHER, 1-1/2"
17	602270	1	KEY, worm gear (woodruff, 5/8" x 2-7/16")
18	602269	1	GEAR only (left helix)
19	602270	1	KEY, pinion (woodruff, 5/8" x 2-7/16")
20	603585	8	WASHER, plain (copper)
21	604252	1	PLATE, supporting
22	604154	1	PINION (7 teeth)
23	602560	1	WASHER, plain
24	605207	1	PLUG, vent, worm gear housing



MOLDBOARD SIDE SHIFT



MOLDBOARD SIDE SHIFT

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605665	2	U-BOLT, socket cap	
	911049	8	NUT, jam, 5/8"NF	
2	053986	2	CAP, socket	
3	053992	16	SHIM, socket cap (Use as req'd)	
4	604366	1	ROD, link	
5	604364	1	TUBE, link	
6	602224	1	PIN, coupling, link rod and tube	
	911179	1	PIN, cotter, 1/4" x 1-1/4"	
7	601972	1	PIN, ball	
	900822	1	WASHER, plain, U.S. std., 1"	
	911174	1	NUT, jam, slotted, 1"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
8	063989	1	CRANK	
9	601833	2	KEY (woodruff, 3/4" x 2-7/16")	
10	051655	2	CAPSCREW, 3/4"NF x 5-1/4"	
11	012767	2	NUT, high, 3/4"	
12	602763	1	U-BOLT, worm gear shaft front bearing	
13	600236	2	NUT, high, 1"NF	
14	602214	2	WASHER, plain	
15	605324	1	BEARING, worm gear shaft, front	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
16	605307	1	NIPPLE, anchor, worm gear shaft bearing	
17	075152	1	COVER ASSEMBLY, housing (Includes item 18)	
	915275	1	FITTING, lubricating, 67-1/2°, 1/8"NPT	
	912725	1	PLUG, pipe, 1/2"NPT (Graders prior to #806)	
	903639	8	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	8	LOCKWASHER, 1/2"	
	900805	1	PIN, cotter, 1/8" x 3/4" (For breather hole restriction)	
18	075155	1	BUSHING, housing cover	
19	075236	1	GEAR AND SHAFT ASSEMBLY, worm (Consists of items 20 thru 22)	
20	075235	1	SHAFT only	
21	075157	1	GEAR only	
22	601833	2	KEY (woodruff, 3/4" x 2-7/16")	
23	075154	1	HOUSING	
	912725	2	PLUG, pipe, 1/2"NPT (1 less used on graders prior to #806)	
24	{	038203	1	CAPSCREW, housing anchor (1"NF x 4-1/2")(Graders prior to #1323)
		012561	1	CAPSCREW, housing anchor (1"NF x 5-1/4")(Graders #1323 and up)
		911047	1	NUT, 1"NF
25	075238	1	SPACER, housing anchor screw	
26	083318	1	WASHER, plain, housing anchor screw	
27	078033	1	GEAR, worm	
28	075145	1	WORM, gear driving	
	911238	1	KEY, #U woodruff, 7/16" x 2-3/4"	
29	075146	1	SHAFT, worm	
30	075142	2	CONE ASSEMBLY, worm shaft bearing	
31	075143	2	CUP, worm shaft bearing	
32	{	075603	4	SHIM, adjusting, worm shaft left bearing (.002" thick. Use as req'd)
		075602	9	SHIM, adjusting, wormshaft left bearing (.010" thick. Use as req'd)

(Continued)

MOLDBOARD SIDE SHIFT (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
33	075147	1	CAP, worm shaft left bearing	
	903793	4	CAPSCREW, 5/8"NC x 2"	
	904209	4	LOCKWASHER, 5/8"	
34	076920	1	GASKET, worm shaft right bearing cap	
35	075139	1	CAP, worm shaft right bearing	
	903793	4	CAPSCREW, 5/8"NC x 2"	
	904209	4	LOCKWASHER, 5/8"	
36	075239	1	WORM, input	
37	604382	2	CONE ASSEMBLY, input worm bearing	
38	604383	2	CUP, input worm bearing	
39	603010	1	SEAL, oil, input worm bearing	
40	075136	1	CAP, input worm rear bearing	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
41	075134	4	SHIM, adjusting, input bearing (.002" thick. Use as req'd)	
	075135	8	SHIM, adjusting, input bearing (.010" thick. Use as req'd)	
42	075133	1	CAP, input worm front bearing	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
43	075138	1	BEARING, worm gear shaft, rear	
44	605307	1	NIPPLE, worm gear shaft lubricating	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
45	061181	6	SHIM, ball cap (1/32" thick. Use as req'd)	
	061182	10	SHIM, ball cap (.013" thick. Use as req'd)	
46	601288	1	CAP, ball	
47	050913	2	STUD (3/4"NF x 5-3/16")	
48	012767	2	NUT, high, 3/4"NF	

MOLDBOARD

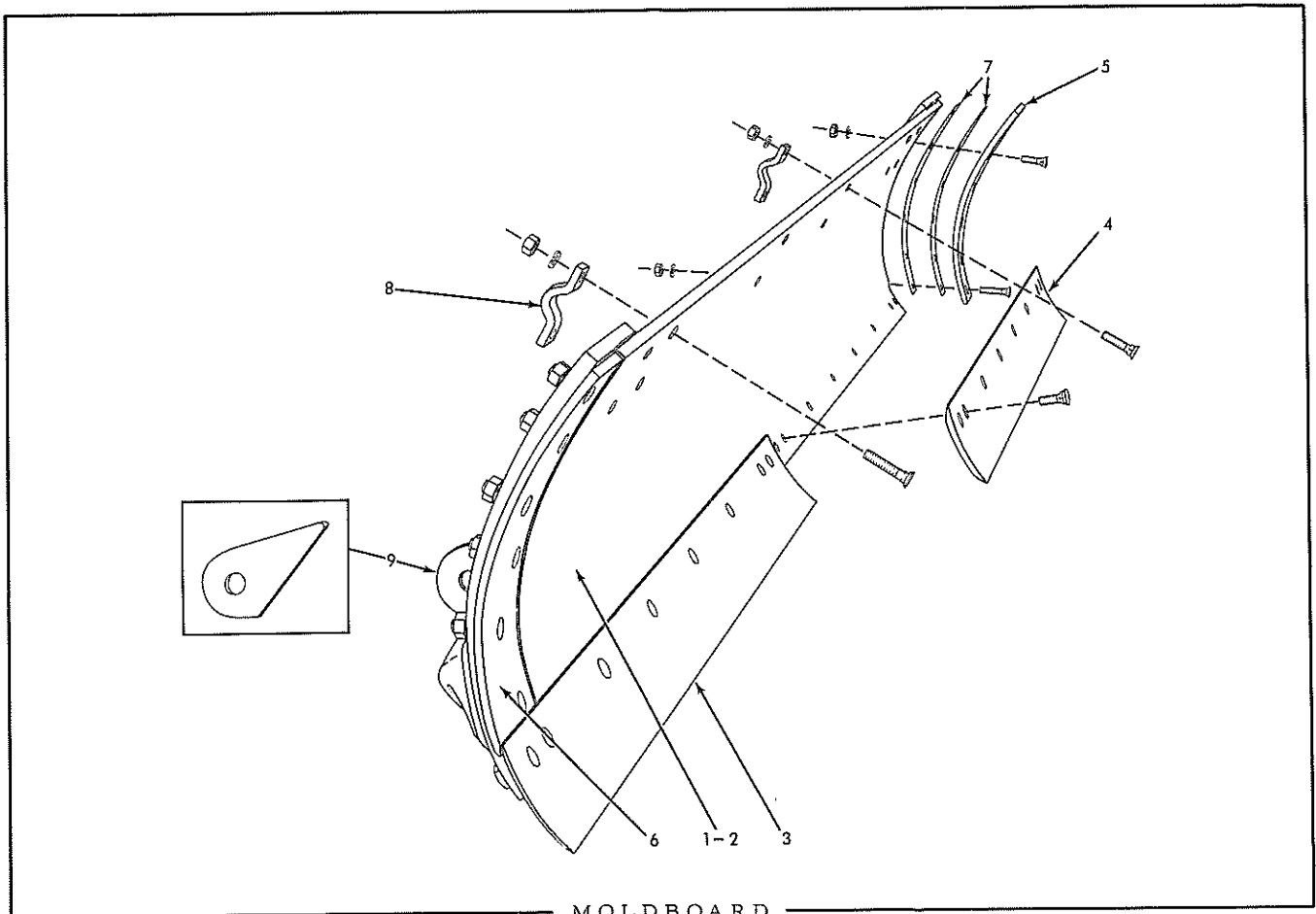
USAGE: 10 foot - Special Equipment  
 12 foot - Standard Equipment  
 14 foot - Special Equipment

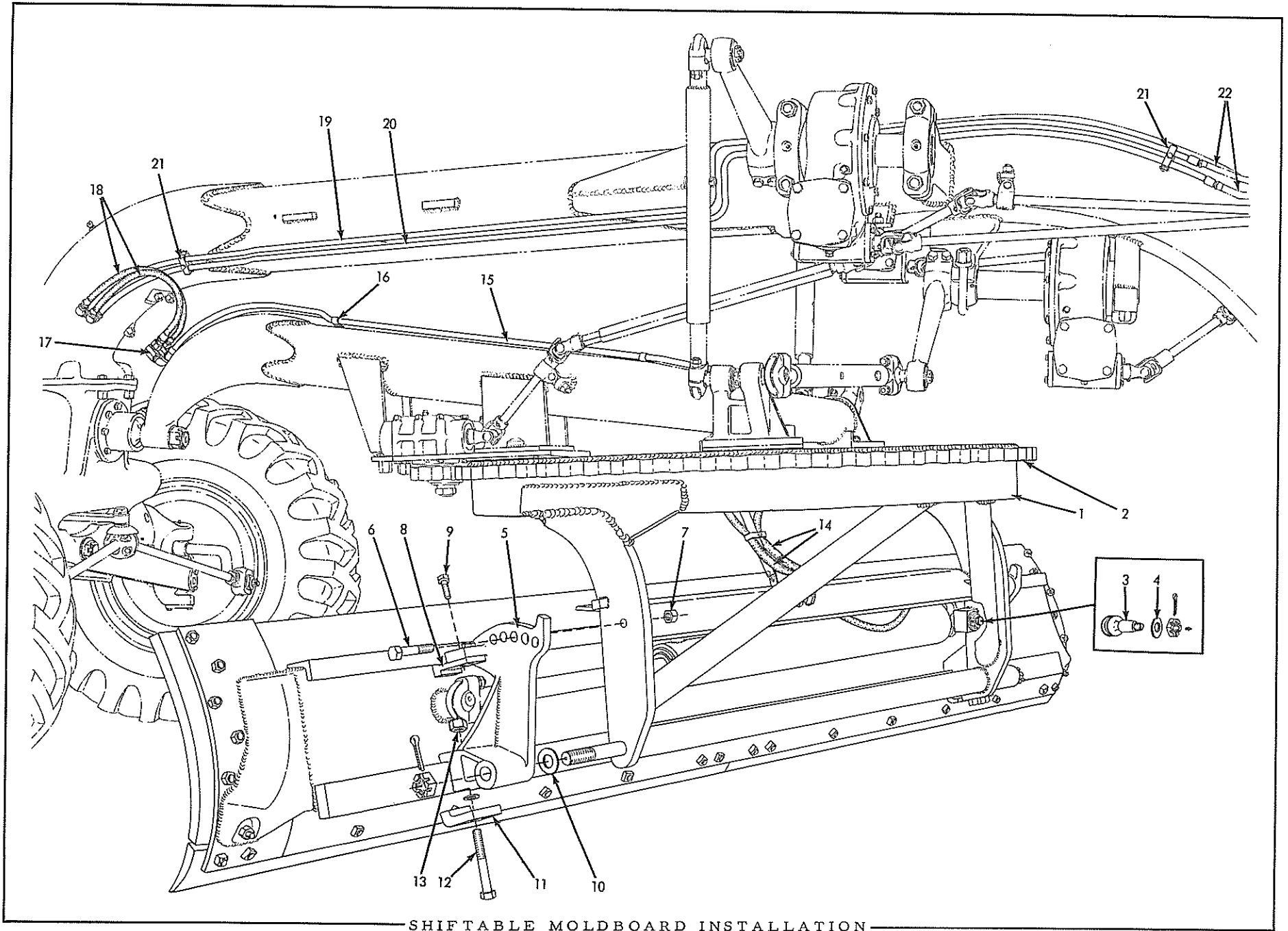
ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		10 ft.	12 ft.	14 ft.		
1	605065	1	-	-	MOLDBOARD ASSEMBLY (10 ft.)	
	068305	-	1	-	MOLDBOARD ASSEMBLY (12 ft.)	
	605067	-	-	1	MOLDBOARD ASSEMBLY (14 ft.)	
NOTE: Each MOLDBOARD ASSEMBLY listed above consists of items 2 thru 9. Also see page 149 for special SHIFTABLE MOLDBOARD.						
2	054841	1	-	-	MOLDBOARD only (10 ft. Includes item 9)	
	068302	-	1	-	MOLDBOARD only (12 ft. Includes item 9)	
	054842	-	-	1	MOLDBOARD only (14 ft. Includes item 9)	
3	601500	1	-	-	EDGE, cutting, right hand (5 ft. section)	
	601502	-	1	-	EDGE, cutting, right hand (6 ft. section)	
	601504	-	-	1	EDGE, cutting, right hand (7 ft. section)	
	914484	7	8	9	BOLT, plow, 5/8"NC x 2"	
	900407	7	8	9	NUT, square, heavy, 5/8"NC	

(Continued)

MOLDBOARD (Continued)

ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		10 ft.	12 ft.	14 ft.		
4	601501	1	-	-	EDGE, cutting, left hand (5 ft. section)	
	601503	-	1	-	EDGE, cutting, left hand (6 ft. section)	
	601505	-	-	1	EDGE, cutting, left hand (7 ft. section)	
	914484	7	8	9	BOLT, plow, 5/8"NC x 2"	
	900407	7	8	9	NUT, square, heavy, 5/8"NC	
5	054847	1	-	-	BIT, end, left hand (1/2" thick)	
	054831	-	1	1	BIT, end, left hand (5/8" thick)	
	911633	5	5	5	BOLT, plow, 5/8"NC x 2-1/4"	
	915693	1	1	1	BOLT, plow, 5/8"NC x 3"	
	911029	6	6	6	NUT, 5/8"NC	
	904209	6	6	6	LOCKWASHER, 5/8"	
6	054848	1	-	-	BIT, end, right hand (1/2" thick)	
	054832	-	1	1	BIT, end, right hand (5/8" thick)	
	911633	5	5	5	BOLT, plow, 5/8"NC x 2-1/4"	
	915693	1	1	1	BOLT, plow, 5/8"NC x 3"	
	911029	6	6	6	NUT, 5/8"NC	
	904209	6	6	6	LOCKWASHER, 5/8"	
7	061479	-	6	6	SHIM, end bit (Use as req'd. For 3/4" thick moldboards only)	
8	601181	2	2	2	BRACKET, moldboard pitch	
	911633	4	4	4	BOLT, plow, 5/8"NC x 2-1/4"	
	911029	4	4	4	NUT, 5/8"NC	
	904209	4	4	4	LOCKWASHER, 5/8"	
9	604134	6	6	6	BRACKET, mounting (Requires welding to moldboard)	



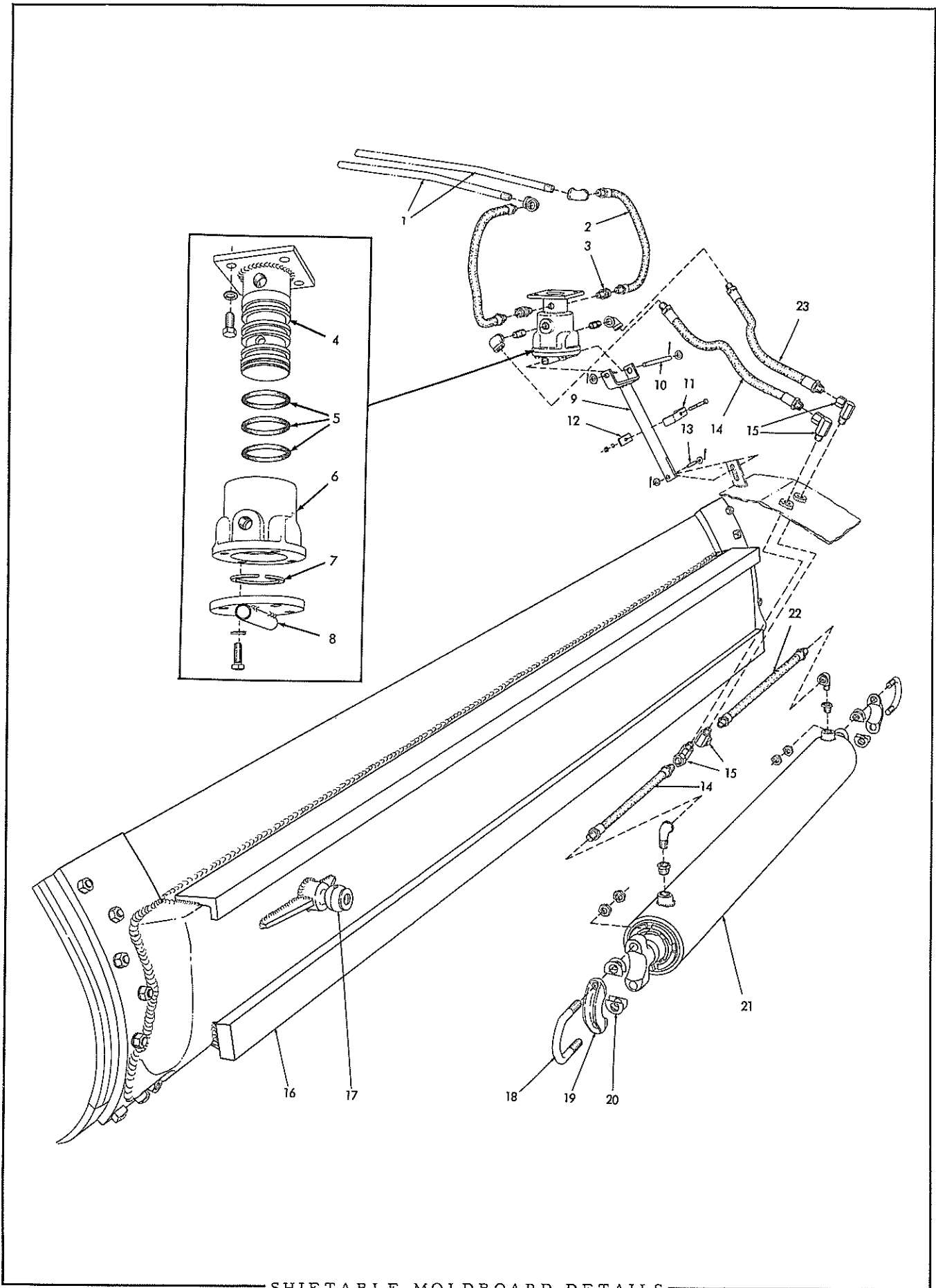


— SHIFTABLE MOLDBOARD INSTALLATION —

SHIFTABLE MOLDBOARD INSTALLATION

USAGE: Special Equipment.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	079514	1	CIRCLE, moldboard (Includes item 2)	
	912842	2	NUT, slotted, 1-1/2"NF	
	911279	2	PIN, cotter, 5/16" x 2-1/4"	
2	604150	6	SEGMENT, circle gear (11-tooth section. Requires welding in place)	
3	081322	1	BALL, moldboard shifting cylinder	
	915276	1	FITTING, lubricating, 90°, 1/8"NPT	
	911174	1	NUT, jam, slotted, 1"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
4	081246	1	WASHER, cylinder ball	
	081263	1	SUPPORT, moldboard, left side	
5	081264	1	SUPPORT, moldboard, right side	
6	031055	2	CAPSCREW, 1"NF x 3-3/4"	
7	600236	2	NUT, high, 1"NF	
8	081317	2	GUIDE, moldboard slide	
9	033291	4	CAPSCREW, 3/4"NC x 1-3/4"	
10	081324	6	WASHER, moldboard support spacing	
11	079507	2	BRACKET, moldboard slide	
	915978	20	WASHER, spacing	
12	048075	4	CAPSCREW, 1"NF x 6-1/2"	
13	600236	4	NUT, high, 1"NF	
14	-----	-	HOSE (See SHIFTABLE MOLDBOARD DETAILS)	
15	080112	2	PIPE, oil	
	901678	2	ELBOW, pipe, 90°, 3/8"NPT	
16	076498	6	CLIP, pipe supporting	
	903629	3	CAPSCREW, 3/8"NC x 3/4"	
	904206	3	LOCKWASHER, 3/8"	
17	081230	2	ADAPTER, union, 90°	
18	081218	2	HOSE, pipe connecting (32" long)	
	901723	2	ELBOW, street, 90°, 3/8"NPT	
19	080114	1	PIPE, oil, upper	
	901678	1	ELBOW, pipe, 90°, 3/8"NPT	
	901765	1	COUPLING, pipe, 3/8"NPT	
20	080113	1	PIPE, oil, lower	
	901678	1	ELBOW, pipe, 90°, 3/8"NPT	
	901765	1	COUPLING, pipe, 3/8"NPT	
21	080116	3	BLOCK, pipe clamping	
	903632	3	CAPSCREW, 3/8"NC x 1-1/2"	
	904206	3	LOCKWASHER, 3/8"	
22	-----	-	HOSE, connecting (See HYDRAULIC CONTROL VALVE)	



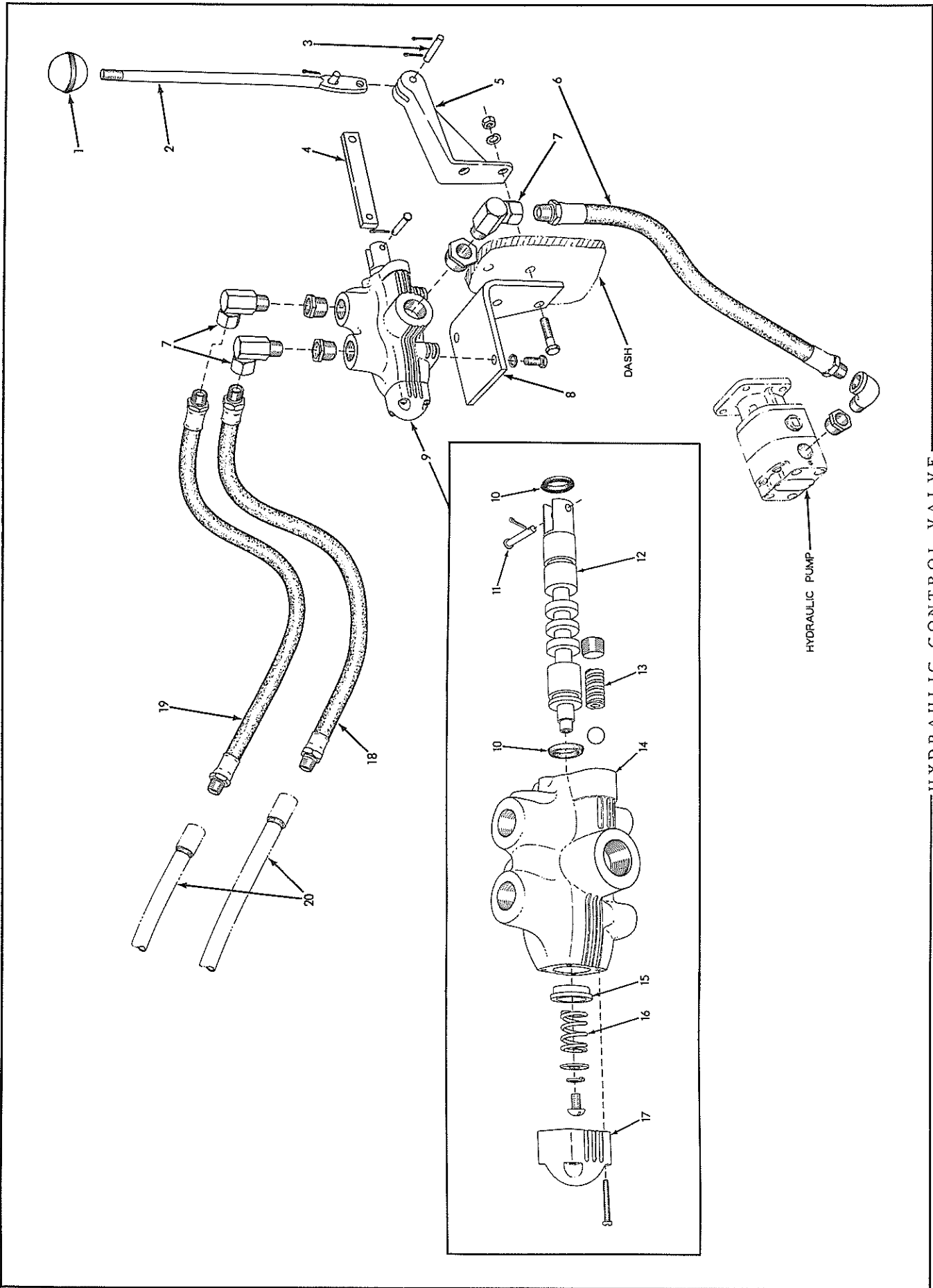
SHIFTABLE MOLDBOARD DETAILS

SHIFTABLE MOLDBOARD DETAILS

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	2	PIPE, oil (See SHIFTABLE MOLDBOARD INSTALLATION)	
2	080422	2	HOSE, pipe to swivel (18" long)	
	901678	2	ELBOW, pipe, 90°, 3/8"NPT	
3	069710	2	UNION, swivel	
4	080002	1	SWIVEL, oil line	
	903629	4	CAPSCREW, 3/8"NC x 3/4"	
	904206	4	LOCKWASHER, 3/8"	
4A	080259	1	PLATE, swivel attaching (Requires welding to moldboard drawbar)	
5	079855	3	RING, swivel sealing	
6	079853	1	HOUSING, swivel	
7	050292	1	RING, snap, oil line swivel	
8	080241	1	PLATE, swivel housing	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
9	081323	1	YOKE, swivel operating	
10	080472	1	PIN, swivel operating yoke, upper	
	900817	2	WASHER, plain, U.S. std., 3/8"	
	900942	2	PIN, cotter, 3/32" x 5/8"	
11	081309	1	STRAP, hose retaining	
	914892	1	CAPSCREW, 1/4"NF x 1-3/4"	
	904204	1	LOCKWASHER, 1/4"	
	911040	1	NUT, 1/4" NF	
12	081312	1	BLOCK, hose retaining strap	
13	081314	1	PIN, swivel operating yoke, lower	
	900816	2	WASHER, plain, U.S. std., 1/4"	
	900942	2	PIN, cotter, 3/32" x 5/8"	
14	081228	2	HOSE, swivel to cylinder (17" long)	
	901490	1	NIPPLE, pipe, 3/8"NPT x 1-1/2"	
	901678	1	ELBOW, pipe, 90°, 3/8"NPT	
	901723	1	ELBOW, street, 90°, 3/8"NPT	
	904271	1	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
15	081230	4	UNION, adapter, 90°	
16	079521	1	MOLDBOARD ASSEMBLY (12 ft. Includes cutting EDGES and end BITS. See NOTE below)	
	084024	1	MOLDBOARD ASSEMBLY (14 ft. Includes cutting EDGES and end BITS. See NOTE below)	
	081065	1	MOLDBOARD only (12 ft.) (Includes item 17)	
	084044	1	MOLDBOARD only (14 ft.) (Includes item 17)	
17	081321	1	BALL, shifting cylinder (Requires welding to moldboard)	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
18	605665	2	U-BOLT, cylinder end cap	
	911049	8	NUT, jam, 5/8"NF	
19	053986	2	CAP, cylinder end	
20	053992	16	SHIM, cylinder end cap (Use as req'd)	
21	081325	1	CYLINDER ASSEMBLY, moldboard shifting (See page 156 for re-pair parts)	
22	069739	1	HOSE, swivel to cylinder (24" long)	
	901723	1	ELBOW, street, 90°, 3/8"NPT	
	904271	1	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
23	069716	1	HOSE, swivel to cylinder (16-1/4" long)	
	901490	1	NIPPLE, pipe, 3/8"NPT x 1-1/2"	
	901678	1	ELBOW, pipe, 90°, 3/8"NPT	

NOTE: See page 144 for end bits and cutting edges used with moldboards.



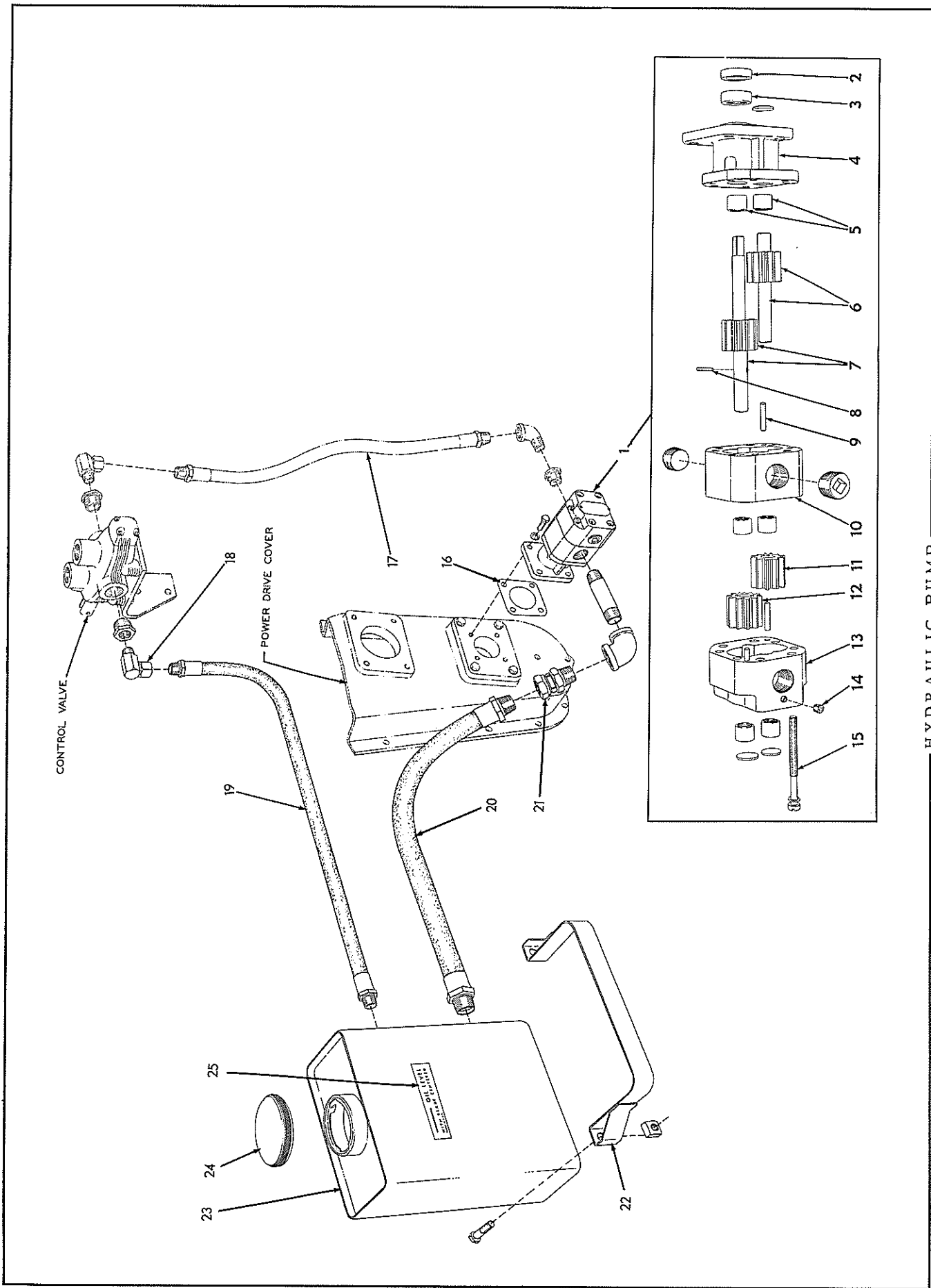
HYDRAULIC CONTROL VALVE



HYDRAULIC CONTROL VALVE

USAGE: Special Equipment. Used with Shiftable Moldboard only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	U-171	1	KNOB, operating lever	
2	081278	1	LEVER, valve operating	
	900942	1	PIN, cotter, 3/32" x 5/8"	
3	605983	1	PIN, pivot, operating lever	
	900942	2	PIN, cotter, 3/32" x 5/8"	
4	081282	1	BAR, connecting, operating lever	
5	081280	1	BRACKET, operating lever	
6	081227	1	HOSE, valve to pump (19" long)	
	901723	1	ELBOW, street, 90°, 3/8"NPT	
	904271	1	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
7	081230	3	ADAPTER, union, 90°	
8	081279	1	BRACKET, valve mounting	
	901862	2	CAPSCREW, 3/8"NF x 1-1/2"	
	904206	2	LOCKWASHER, 3/8"	
	911041	2	NUT, 3/8"NF	
9	080067	1	VALVE ASSEMBLY (Consists of items 10 thru 17)	
	904271	2	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
	904239	1	BUSHING, pipe reducing, 3/4"NPT to 3/8"NPT	
	903629	2	CAPSCREW, 3/8"NC x 3/4"	
	904206	2	LOCKWASHER, 3/8"	
10	081634	2	SEAL, valve spool	
11	081633	1	PIN, operating handle	
	900970	1	PIN, cotter, 1/16" x 1/2"	
12	-----	1	SPOOL, valve (Not serviced separately)	
13	081635	1	SPRING, pressure relief valve	
	907856	1	PLUG, pipe, socket-hd., 3/8"NPT	
	905362	1	BALL, steel, 1/2" diam.	
14	-----	1	HOUSING, valve (Not serviced separately)	
15	081632	1	COLLAR, spool centering	
16	081631	1	SPRING, spool centering	
	901164	1	SCREW, machine, rd-hd., 1/4"NC	
	911423	1	WASHER, plain, 3/8"	
	904204	1	LOCKWASHER, 1/4"	
17	081630	1	BONNET, centering spring	
	901214	4	SCREW, machine, fil-hd., #8-32 x 1"	
18	079055	1	HOSE, valve to pipe (21" long)	
19	069739	1	HOSE, valve to pipe (24" long)	
20	-----	-	PIPES (See SHIFTABLE MOLDBOARD INSTALLATION)	

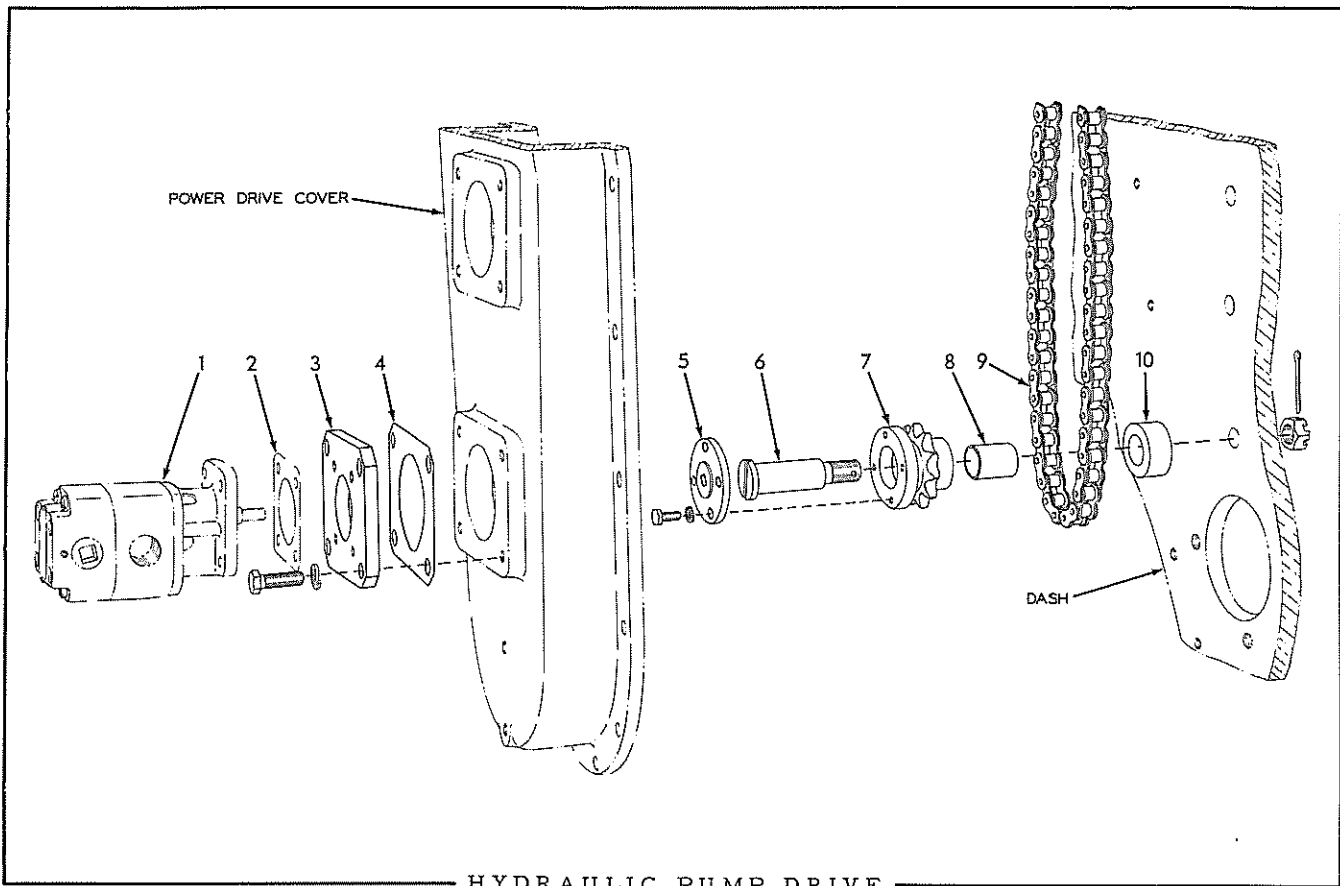


HYDRAULIC PUMP

HYDRAULIC PUMP

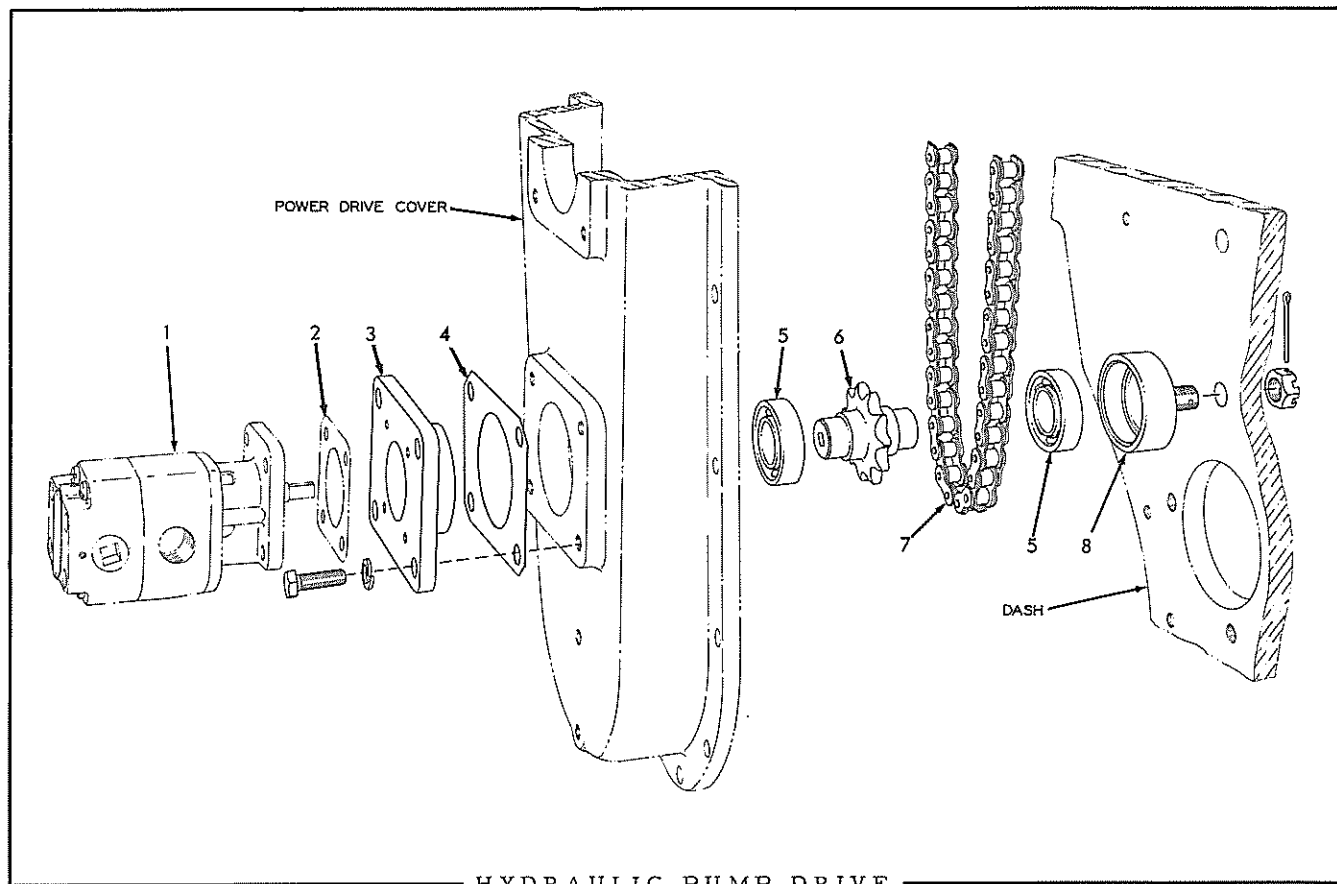
USAGE: Special Equipment. Used with Shiftable Moldboard only.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	079527	1	PUMP ASSEMBLY, hydraulic (Consists of items 2 thru 15)	
	916149	1	ELBOW, pipe reducing	
	901505	1	NIPPLE, pipe, 1/2"NPT x 3-1/2"	
	910167	4	CAPSCREW, 5/16"NF x 3/4"	
	904205	4	LOCKWASHER, 5/16"	
2	079351	1	SEAL, pump shaft, outer	
3	5192505	1	SEAL, pump shaft, inner	
4	-----	1	STATOR (Not serviced. Order complete PUMP ASSEMBLY)	
	914590	1	PLUG, expansion, 11/16" diam.	
5	077241	6	BEARING, needle	
6	082348	1	SHAFT ASSEMBLY, idler (Includes GEAR. Serviced only as a unit)	
7	082347	1	SHAFT ASSEMBLY, driving (Includes GEAR. Serviced only as a unit)	
8	081798	1	PIN, driving gear (1/8" x 5/8")	
9	2225347	4	PIN, dowel, housing to housing	
10	-----	1	HOUSING, rear (Not serviced. Order complete PUMP ASSEMBLY)	
	904223	2	PLUG, pipe, ctsk-hd., 1/2"NPT	
11	082346	1	GEAR, idling	
12	081797	1	GEAR, driving	
13	-----	1	HOUSING, front (Not serviced. Order complete PUMP ASSEMBLY)	
	914590	2	PLUG, expansion, 11/16" diam.	
14	077423	1	PLUG, pump housing (hex-socket-hd., 1/16"NPT)	
15	081802	8	SCREW ASSEMBLY (Includes LOCKWASHER)	
16	075029	1	GASKET, hydraulic pump	
17	-----	1	HOSE, pump to valve (See HYDRAULIC CONTROL VALVE)	
18	081230	1	ADAPTER, union, 90°	
	904239	1	BUSHING, pipe reducing, 3/4"NPT to 3/8"NPT	
19	081229	1	HOSE, return, valve to tank (27-1/2" long)	
20	067794	1	HOSE, supply, tank to pump (23" long)	
21	032032	1	ADAPTER, swivel, supply hose	
22	081281	2	STRAP, tank mounting	
	903632	2	CAPSCREW, 3/8"NC x 1-1/2"	
	903633	2	CAPSCREW, 3/8"NC x 1-3/4"	
	900405	4	NUT, square, 3/8"NC	
23	081286	1	TANK, oil supply (Includes item 24)	
24	078922	1	CAP, oil supply tank	
25	081502	1	TRANSFER, instruction (7/8" x 4")	



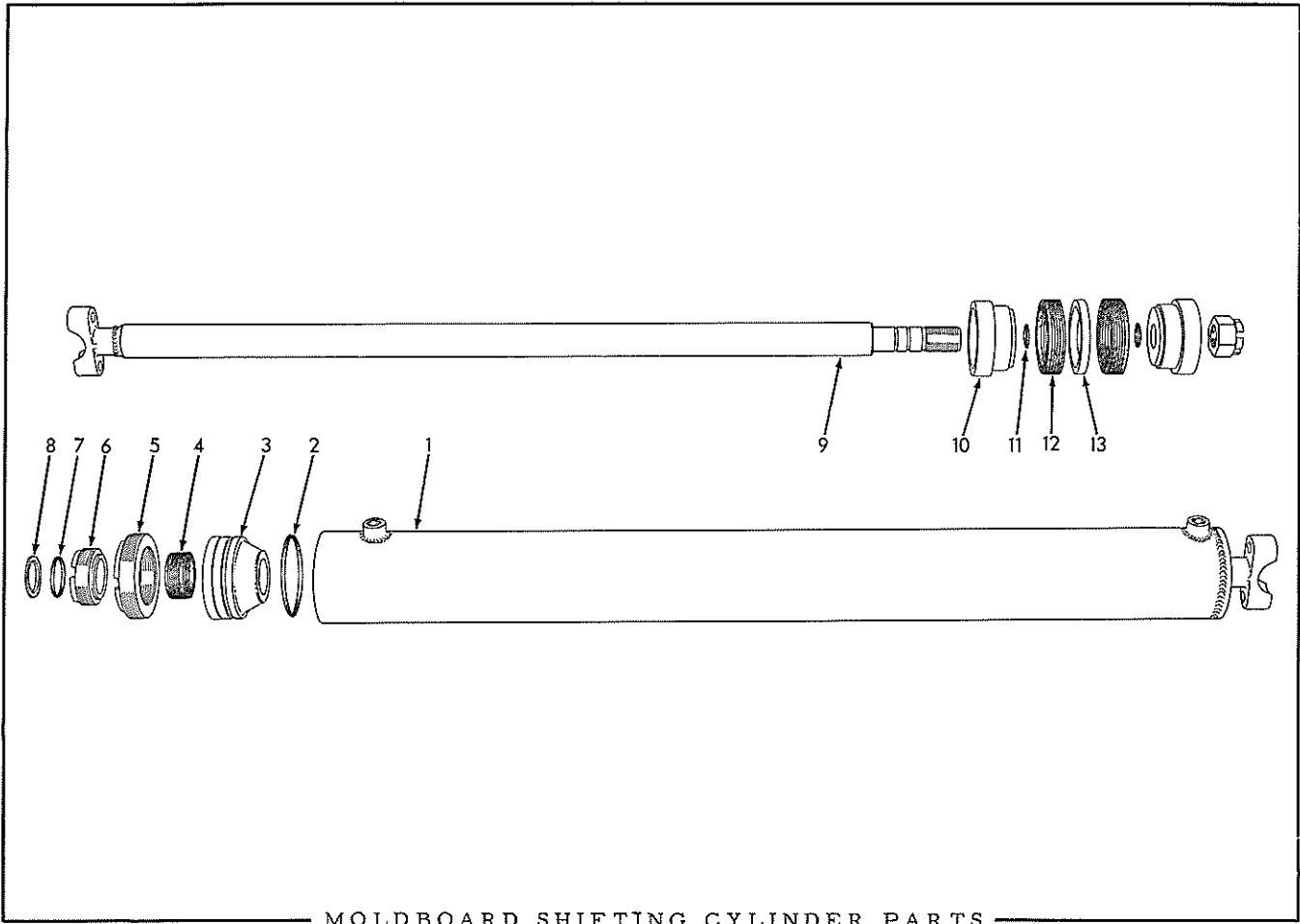
USAGE: For Shiftable Moldboard on Graders prior to #1043.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	-	PUMP ASSEMBLY, hydraulic (See HYDRAULIC PUMP)	
2	-----	-	GASKET, hydraulic pump (See HYDRAULIC PUMP)	
3	075222	1	PLATE, hydraulic pump mounting	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
4	075224	1	GASKET, pump mounting plate	
5	077735	1	ADAPTER, hydraulic pump	
	905656	4	CAPSCREW, 1/4"NC x 5/8"	
	904204	4	LOCKWASHER, 1/4"	
6	079124	1	SHAFT, pump driving sprocket	
	912840	1	NUT, slotted, 5/8"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
7	075226	1	SPROCKET ASSEMBLY, pump driving (Includes item 8)	
8	075228	1	BEARING, plain, pump driving sprocket	
9	080090	1	CHAIN, driving (77 links, 5/8" pitch)(Replaces standard CHAIN 075303)	
10	075229	1	RING, sprocket spacing	



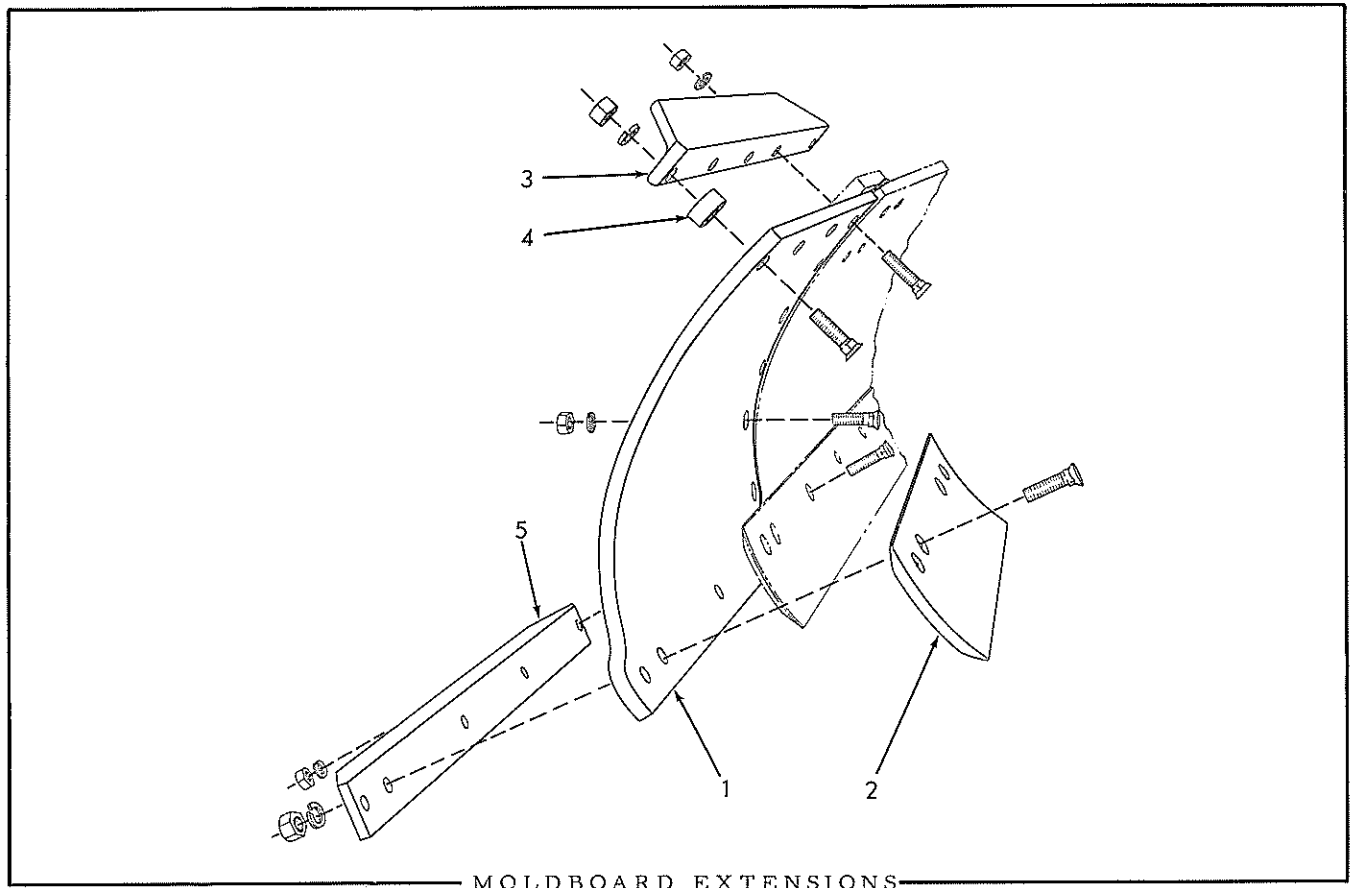
USAGE: For Shiftable Moldboard on graders #1043 and up.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	-	PUMP ASSEMBLY, hydraulic (See HYDRAULIC PUMP)	
2	-----	-	GASKET, hydraulic pump (See HYDRAULIC PUMP)	
3	081501	1	RETAINER, pump driving sprocket, front	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
4	075224	1	GASKET, pump driving sprocket, front retainer	
5	042986	2	BEARING, pump driving sprocket	
6	081704	1	SPROCKET, pump driving	
7	080090	1	CHAIN, driving (77 links, 5/8" pitch)(Replaces standard CHAIN 075303)	
8	081622	1	RETAINER, pump driving sprocket, rear	
	912840	1	NUT, slotted, 5/8"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	



NOTE: See page 149 for listing of complete Cylinder Assembly.

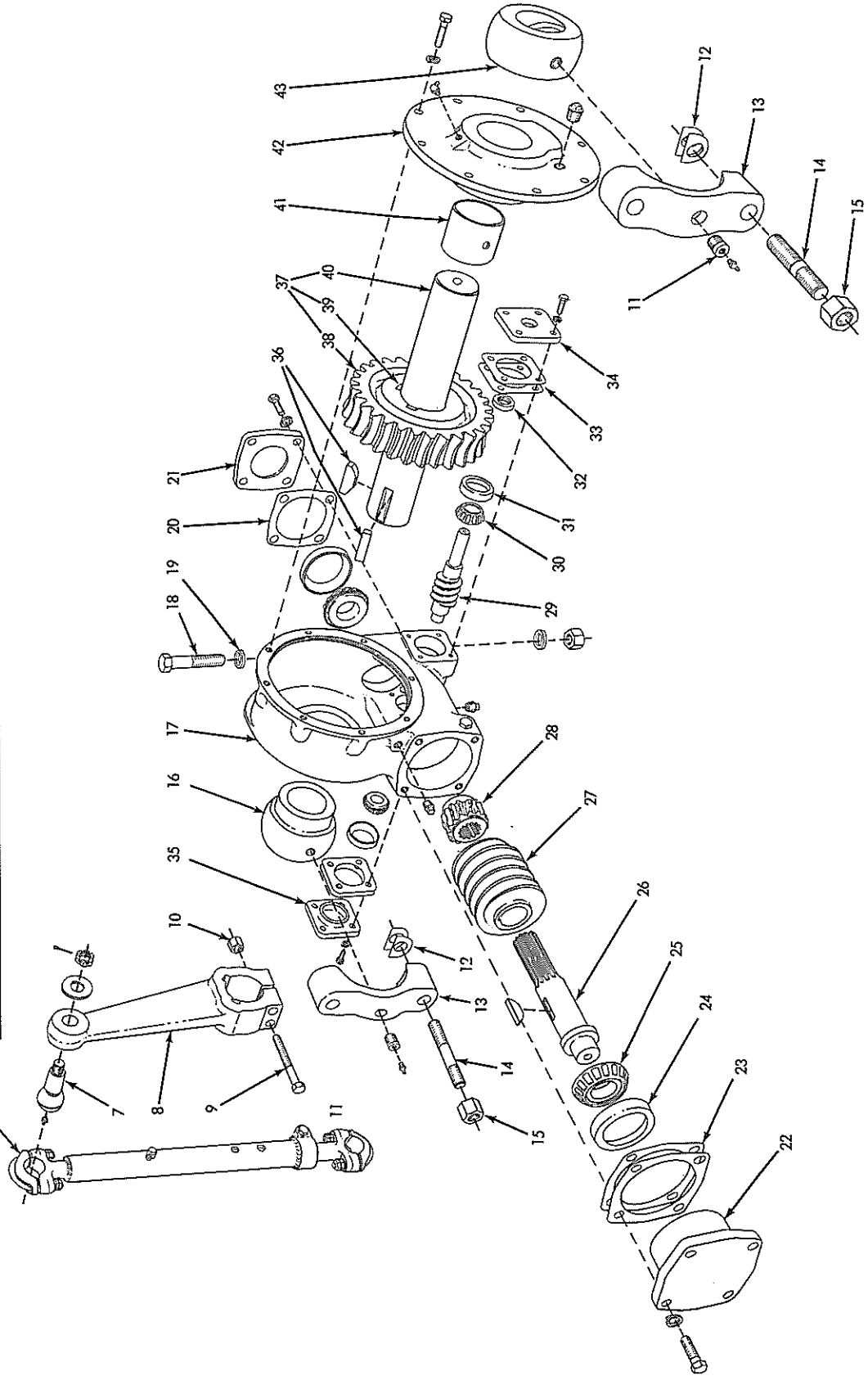
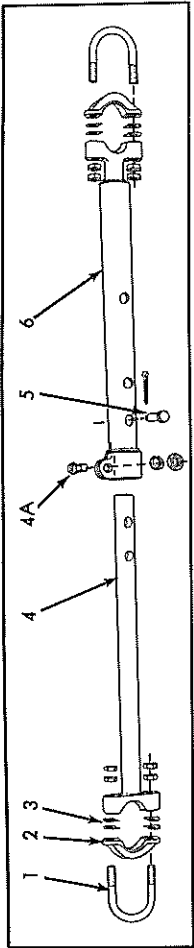
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	080309	1	TUBE, cylinder	
2	080301	1	RING, sealing	
3	080306	1	BOX, stuffing	
4	080285	1	PACKING ASSEMBLY, stuffing box (7 rings)	
5	080305	1	NUT, stuffing box retaining	
6	080282	1	NUT, packing adjustment	
7	080303	1	RING, piston rod sealing	
8	080283	1	RING, piston rod wiping	
9	080308	1	ROD, piston	
	905344	1	NUT, castle, 1-1/2"NF	
10	080279	2	PISTON	
11	080302	2	RING, piston sealing	
12	080277	2	PACKING ASSEMBLY, piston (6 rings)	
13	080278	1	WASHER, piston	



MOLDBOARD EXTENSIONS

USAGE: Special Equipment. Applicable to all Moldboards.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	{ 054845	1	EXTENSION, moldboard, left hand	
	{ 054846	1	EXTENSION, moldboard, right hand	
	911633	8	BOLT, plow, 5/8"NC x 2-1/4"	
	913648	2	BOLT, plow, 5/8"NC x 2-3/4"	
	911029	10	NUT, 5/8"NC	
	904209	10	LOCKWASHER, 5/8"	
2	601438	2	EDGE, cutting (2 ft.)	
	913648	6	BOLT, plow, 5/8"NC x 2-3/4"	
	911029	6	NUT, 5/8"NC	
	904209	6	LOCKWASHER, 5/8"	
3	{ 603156	1	ANGLE, top reinforcing, right hand	
	{ 603157	1	ANGLE, top reinforcing, left hand	
	913648	10	BOLT, plow, 5/8"NC x 2-3/4"	
	911029	10	NUT, 5/8"NC	
	904209	10	LOCKWASHER, 5/8"	
4	602449	8	SPACER, moldboard extension	
5	{ 602457	1	ANGLE, bottom reinforcing, right hand	
	{ 602451	1	ANGLE, bottom reinforcing, left hand	
	913648	4	BOLT, plow, 5/8"NC x 2-3/4"	
	911029	4	NUT, 5/8"NC	
	904209	4	LOCKWASHER, 5/8"	



MOLDBOARD LIFT



MOLDBOARD LIFT

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	605665	4	U-BOLT, socket cap	
	911049	16	NUT, jam, 5/8"NF	
2	053986	4	CAP, socket	
3	053992	32	SHIM, socket cap (Use as req'd)	
4	603419	2	ROD, lift link	
4A	037573	2	CAPSCREW, lift link clamping (5/8"NC x 2-3/4")(Used on graders #1298 and up)	
	904209	2	LOCKWASHER, 5/8"	
	911029	2	NUT, 5/8"NC	
5	602224	2	PIN, coupling, lift link and rod	
	911179	2	PIN, cotter, 1/4" x 1-1/4"	
6	083127	2	LINK, lift (When required for graders prior to #1298 also order item 4A)	
7	601972	2	PIN, ball, lifting crank	
	900822	2	WASHER, plain, U.S. std., 1"	
	911174	2	NUT, jam, slotted, 1"NF	
	900808	2	PIN, cotter, 1/8" x 1-1/2"	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
8	063988	2	CRANK, lifting	
9	051655	4	CAPSCREW, 3/4"NF x 5-1/4"	
10	012767	4	NUT, high, 3/4"NF	
11	605307	4	NIPPLE, worm gear shaft lubricating	
	914465	4	FITTING, lubricating, straight, 1/8"NPT	
12	075150	24	SHIM, bearing cap (1/32" thick. Use as req'd)	
	075151	40	SHIM, bearing cap (.012" thick. Use as req'd)	
13	075148	4	CAP, bearing (7-1/4" bolt-hole spacing)(Graders prior to #459)	
	078275	4	CAP, bearing (7-5/8" bolt-hole spacing)(Graders #459 and up)	
14	075149	8	STUD (1"NF x 5-7/8")	
15	600236	8	NUT, high, 1"NF	
16	075138	2	BEARING, worm gear shaft, front	
17	075153	1	HOUSING, left side	
	075154	1	HOUSING, right side	
	912725	4	PLUG, pipe, 1/2"NPT (2 less used on graders prior to #806)	
18	036546	2	CAPSCREW, housing anchor (1"NF x 4-1/4")	
	911047	2	NUT, 1"NF	
19	083318	4	WASHER, plain, housing anchor screw	
20	076920	2	GASKET, worm shaft inner bearing cap	
21	075139	2	CAP, worm shaft inner bearing	
	903793	8	CAPSCREW, 5/8"NC x 2"	
	904209	8	LOCKWASHER, 5/8"	
22	075147	2	CAP, worm shaft outer bearing	
	903793	8	CAPSCREW, 5/8"NC x 2"	
	904209	8	LOCKWASHER, 5/8"	
23	075603	8	SHIM, bearing adjusting (.002" thick. Use as req'd)	
	075602	18	SHIM, bearing adjusting (.010" thick. Use as req'd)	
24	075143	4	CUP, worm shaft bearing	

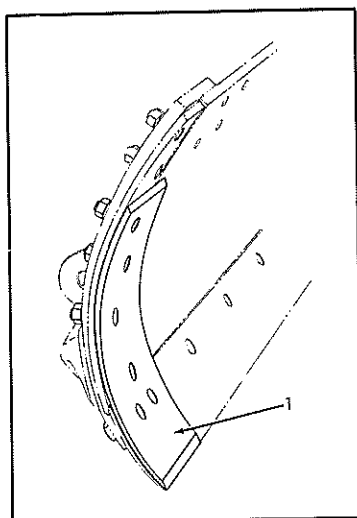
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MOLDBOARD LIFT (Continued)

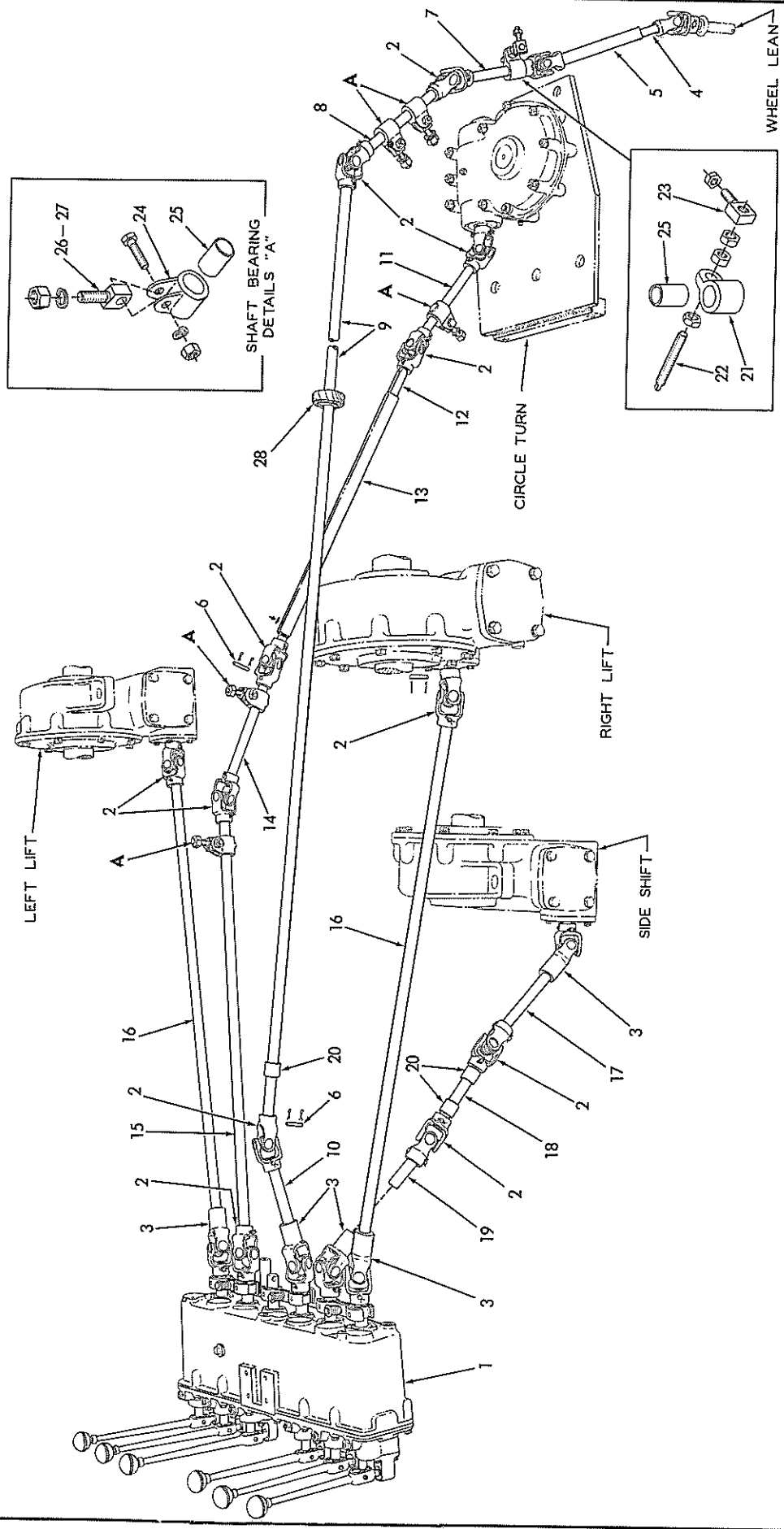
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
25	075142	4	CONE ASSEMBLY, worm shaft bearing	
26	075146	2	SHAFT, worm	
27	075145	2	WORM	
	911238	2	KEY, #U woodruff, 7/16" x 2-3/4"	
28	078034	2	GEAR, worm	
29	075137	2	WORM, input	
30	604382	4	CONE ASSEMBLY, input worm bearing	
31	604383	4	CUP, input worm bearing	
32	603010	2	SEAL, oil, input worm	
33	075134	8	SHIM, bearing adjusting (.002" thick. Use as req'd)	
	075135	16	SHIM, bearing adjusting (.010" thick. Use as req'd)	
34	075136	2	CAP, input worm rear bearing	
	910211	8	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	8	LOCKWASHER, 3/8"	
35	075133	2	CAP, input worm front bearing	
	910211	8	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	8	LOCKWASHER, 3/8"	
36	601833	4	KEY, lifting crank (woodruff, 3/4" x 2-7/16")	
37	075233	2	GEAR AND SHAFT ASSEMBLY (Consists of items 38 thru 40)	
38	075157	2	GEAR only	
39	601833	4	KEY (woodruff, 3/4" x 2-7/16")	
40	078412	2	SHAFT only	
41	075155	2	BUSHING, housing cover	
42	075152	2	COVER ASSEMBLY, housing (Includes item 41)	
	903639	16	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	16	LOCKWASHER, 1/2"	
	915275	2	FITTING, lubricating, 67-1/2°, 1/8"NPT	
	912725	2	PLUG, pipe, 1/2"NPT (Used prior to grader #806)	
	900805	1	PIN, cotter, 1/8" x 3/4"	
43	075234	2	BEARING, worm gear shaft, rear	

# MOLDBOARD ROCK BITS

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



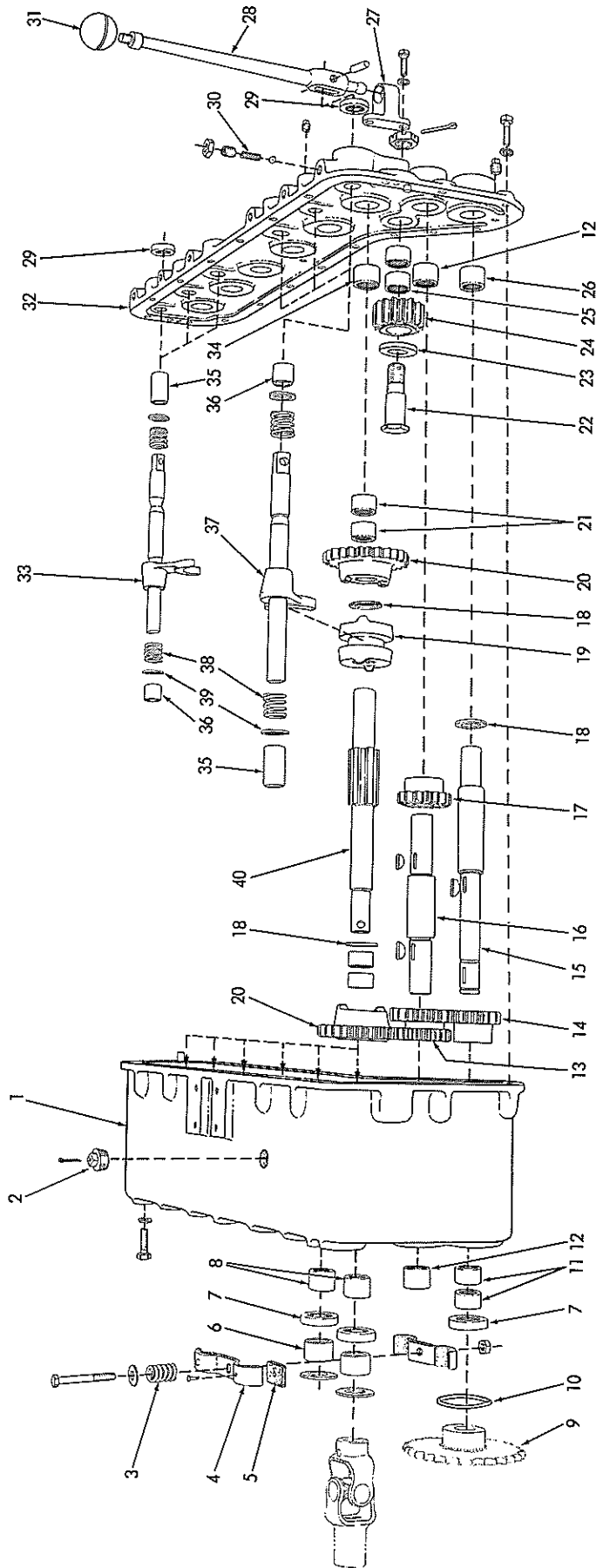
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	073017	1	BIT, rock, left hand
	073018	1	BIT, rock, right hand
	913648	2	BOLT, plow, 5/8"NC x 2-3/4"
	900407	2	NUT, square, heavy, 5/8"NC
	915693	6	BOLT, plow, 5/8"NC x 3"
	911635	2	BOLT, plow, 5/8"NC x 3-1/2"
	904209	8	LOCKWASHER, 5/8"
	911029	8	NUT, hex, 5/8"NC



POWER CONTROL

## POWER CONTROL

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	075013	1	BOX ASSEMBLY, power control (See page 165 for repair parts)	
2	053121	12	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
3	053123	5	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
	911273	5	KEY, #127 woodruff, 1/4" x 2-1/8"	
4	074990	1	JOINT ASSEMBLY, universal, front wheel lean control (See page 167 for repair parts)	
5	074991	1	JOINT ASSEMBLY, universal, front wheel lean control (See page 167 for repair parts)	
6	601935	31	PIN, universal joint (3/8" x 2")	
	900805	62	PIN, cotter, 1/8" x 3/4"	
7	075044	1	SHAFT, front wheel lean control (8" long)	
8	604540	1	SHAFT, front wheel lean control (11-1/4" long)	
9	074989	1	SHAFT, front wheel lean control (135" long)	
10	074998	1	SHAFT, front wheel lean control (7-1/4" long)	
11	064085	1	SHAFT, circle turn control (10-3/4" long)	
12	064086	1	SHAFT, sliding, circle turn control, male (27-3/4" long)	
13	064088	1	SHAFT, sliding, circle turn control, female (29-1/2" long)	
	911114	1	WASHER, plain, SAE std., 1/4"	
	912808	1	FITTING, lubricating, straight, 1/4"NF	
14	074992	1	SHAFT, circle turn control (11-5/8" long)	
15	074993	1	SHAFT, circle turn control (40-1/2" long)	
16	074994	2	SHAFT, moldboard lift control (48-3/8" long)	
17	074995	1	SHAFT, moldboard side shift control (10-1/4" long)	
18	074996	1	SHAFT, moldboard side shift control (7-3/8" long)	
19	074997	1	SHAFT, moldboard side shift control (3-3/4" long)	
20	604553	3	BEARING, plain, control rod (oilite bronze)	
21	076080	1	BEARING ASSEMBLY, supporting, front lean wheel control shaft (Includes item 25)	
22	076081	1	SCREW, bearing	
	911049	3	NUT, jam, 5/8"NF	
23	076078	1	BOLT, eye, shaft supporting bearing	
	911043	1	NUT, 1/2"NF	
24	602172	5	BEARING ASSEMBLY, front wheel lean and circle turn control shafts (Includes item 25)	
	904541	5	CAPSCREW, 1/2"NC x 1-3/4"	
	911028	5	NUT, 1/2"NC	
	904208	5	LOCKWASHER, 1/2"	
25	602170	6	BUSHING, control shaft bearing (oilite bronze)	
26	064469	2	BOLT, eye, front wheel lean control shaft bearing (1-7/8" long)	
	911029	2	NUT, 5/8"NC	
	904209	2	Lockwasher, 5/8"	
27	602328	3	BOLT, eye, circle turn control shaft bearing (1-5/8" long)	
	911029	3	NUT, 5/8"NC	
	904209	3	LOCKWASHER, 5/8"	
28	077510	1	WASHER, bearing, wheel lean control shaft (wood)	
	911159	2	WASHER, plain, SAE std., 1"	
	900808	2	PIN, cotter, 1/8" x 1-1/2"	



CONTROL BOX ASSEMBLY 075013

CONTROL BOX ASSEMBLY 075013

NOTE: See page 163 for listing of complete Box Assembly.

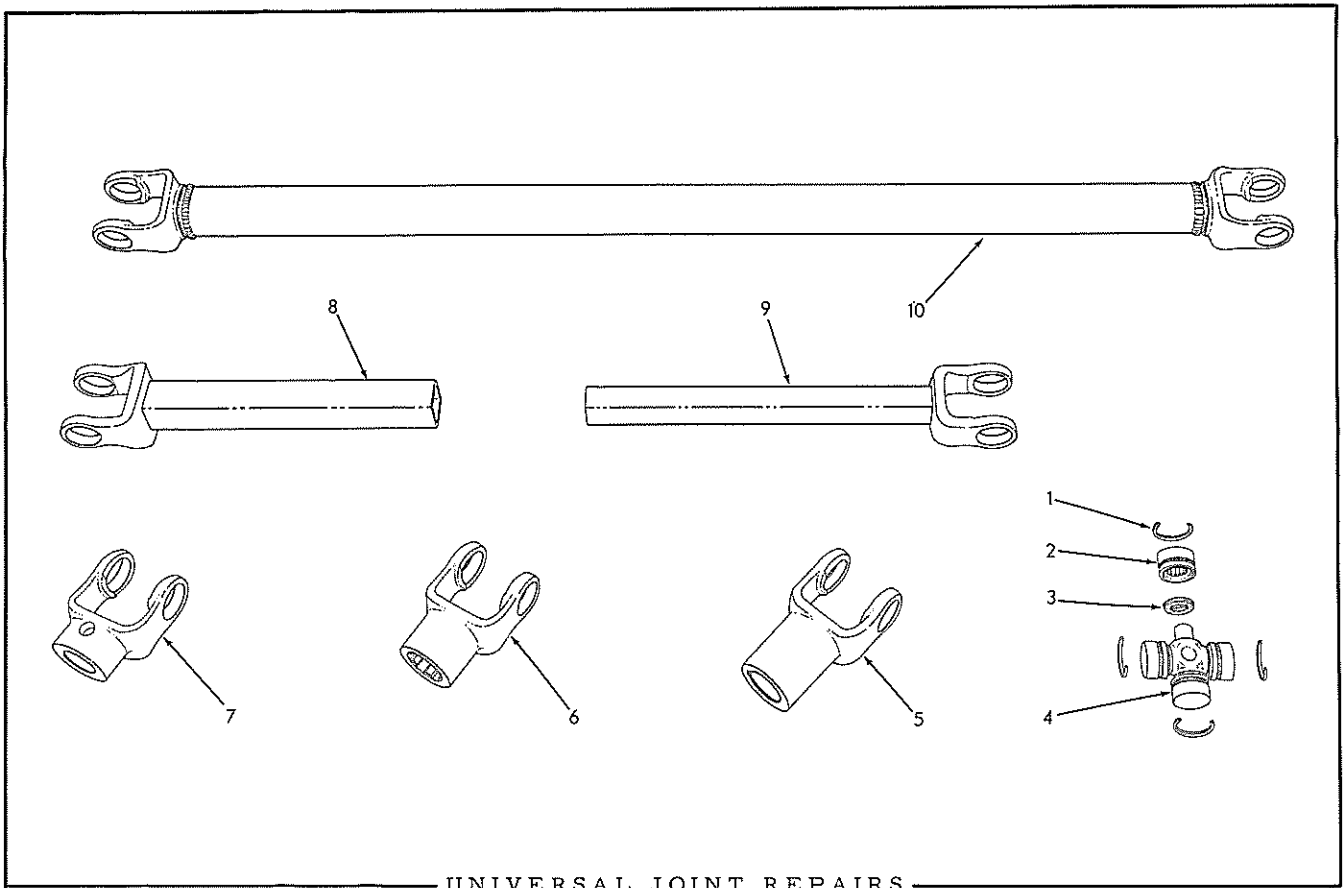
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	081882	1	BOX AND COVER ASSEMBLY (Consists of 1 BOX, 1 COVER, 2 dowel PINS, 4 CAPSCREWS 910245, 4 LOCKWASHERS 904206, 2 BEARINGS 080325, 6 BEARINGS 074975, and 9 BEARINGS 074976)(When required for graders prior to #1122 also furnish 12 GEAR ASSEMBLIES 081855 and 1 PINION ASSEMBLY 081871. If for graders prior to #1029 also include 6 SHAFTS 079748 and 1 STUD 080739. If for graders prior to #954 add 1 SHAFT 080740. If for graders prior to #920 also add 1 SHAFT 080741)	
	903639	6	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	6	LOCKWASHER, 1/2"	
	901651	1	PLUG, pipe, 1/8"NPT (oil check)	
	901653	1	PLUG, pipe, 3/8"NPT (oil drain)	
	910014	6	PLUG, expansion, 1-1/2" diam. (Additional 3 used on early units. None used on graders after #1121)	
2	051094	1	PLUG, vent (3/4"NPT)	
	904020	1	PIN, cotter, 1/16" x 1"	
3	050972	3	SPRING, brake shoe	
4	604954	6	SHOE ASSEMBLY, driving shaft brake (Includes item 5)	
	905667	3	CAPSCREW, 3/8"NC x 3"	
	911026	3	NUT, 3/8"NC	
	900817	3	WASHER, plain, U. S. std., 3/8"	
	911159	5	WASHER, plain, SAE std., 1"	
5	053991	12	LINING, brake shoe	
	912312	12	RIVET, split, ctsk-hd., steel, brass plated, 5/32" x 1/2"	
6	602189	6	COLLAR, driving shaft brake	
	911233	6	KEY, #11 woodruff, 3/16" x 7/8"	
7	044741	7	SEAL, oil, driving and input shafts	
8	600793	6	BUSHING, driving shaft, front (Graders prior to #1122)	
	074975	6	BEARING, needle, driving shaft, front (Graders #1122 and up)	
9	-----	1	SPROCKET, driving (See POWER TAKE-OFF)	
10	075102	1	RING, sealing	
11	600793	1	BUSHING, power input shaft, front (Graders prior to #920)	
	080325	2	BEARING, needle, power input shaft, front (Graders #920 and up)	
12	600793	2	BUSHING, intermediate shaft (Graders prior to #954)	
	074976	2	BEARING, needle, intermediate shaft (Graders #954 and up)	
13	075100	1	GEAR, driving (20 teeth and 15 teeth)	
14	075101	1	GEAR, power input shaft (15 teeth)	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	
15	080741	1	SHAFT, power input	
16	080740	1	SHAFT, intermediate	
	905126	2	KEY, #15 woodruff, 1/4" x 1"	
17	604455	1	PINION, intermediate shaft (15 teeth)	
18	600909	13	WASHER, thrust, driving and input shafts	
19	079858	6	CLUTCH, sliding	
20	079955	12	GEAR ASSEMBLY, clutch (Each includes 1 BUSHING 600793) (Graders prior to #1122)	
	081855	12	GEAR ASSEMBLY, clutch (Each includes 2 BEARINGS 080325) (Graders #1122 and up)	

(Continued)

## CONTROL BOX ASSEMBLY 075013 (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
21	600793	12	BUSHING, clutch gear (Graders prior to #1122)	
	080325	24	BEARING, needle, clutch gears (Graders #1122 and up)	
22	080739	1	STUD, reverse pinion	
	911174	1	NUT, jam, slotted, 1"NF	
	900812	1	PIN, cotter, 3/16" x 1-3/4"	
23	600899	1	WASHER, plain, reverse pinion stud	
24	605128	1	PINION ASSEMBLY, reverse (Includes 1 BUSHING 600793)(Graders prior to #1122)	
	081871	1	PINION ASSEMBLY, reverse (Includes 2 BEARINGS 080325)(Graders #1122 and up)	
25	600793	1	BUSHING, reverse pinion (Graders prior to #1122)	
	080325	2	BEARING, needle, reverse pinion (Graders #1122 and up)	
26	600793	1	BUSHING, power input shaft, rear (Graders prior to #920)	
	074976	1	BEARING, needle, power input shaft, rear (Graders #920 and up)	
27	075113	6	BRACKET, operating lever	
	903630	12	CAPSCREW, 3/8"NC x 1"	
	904206	12	LOCKWASHER, 3/8"	
28	075126	6	LEVER, operating	
	915917	6	PIN, roll, 3/8" x 1-3/8"	
29	603009	6	SEAL, oil, shifting shaft	
30	075112	6	SPRING, shifting shaft	
	905360	6	BALL, steel, 3/8" diam.	
	915918	6	SETSCREW, hex socket-hd., oval-pt., 1/2"NC x 5/8"	
	911035	6	NUT, jam, 1/2"NC	
31	084450	6	KNOB, operating lever	
32	-----	1	COVER, control box (Not serviced separately. Order item 1)	
	910245	17	CAPSCREW, 3/8"NC x 1-3/8"	
	904206	17	LOCKWASHER, 3/8"	
33	075110	3	SHAFT ASSEMBLY, shifting, right (1 SHAFT, 1 YOKE, 1 PIN)	
34	600793	6	BUSHING, driving shaft, rear (Graders prior to #1122)	
	074976	6	BEARING, needle, driving shaft, rear (Graders #1122 and up)	
35	076807	6	SPACER, shifting shaft, long (Graders #399 and up)	
36	076808	6	SPACER, shifting shaft, short (Graders #399 and up)	
37	075109	3	SHAFT ASSEMBLY, shifting, left (1 SHAFT, 1 YOKE, 1 PIN)	
38	077309	12	SPRING, clutch disengagement (Graders #399 and up)	
39	077215	12	WASHER, clutch disengagement spring (Graders #399 and up)	
40	075104	6	SHAFT, driving (Graders prior to #1122)	
	079748	6	SHAFT, driving (Graders #1122 and up)	



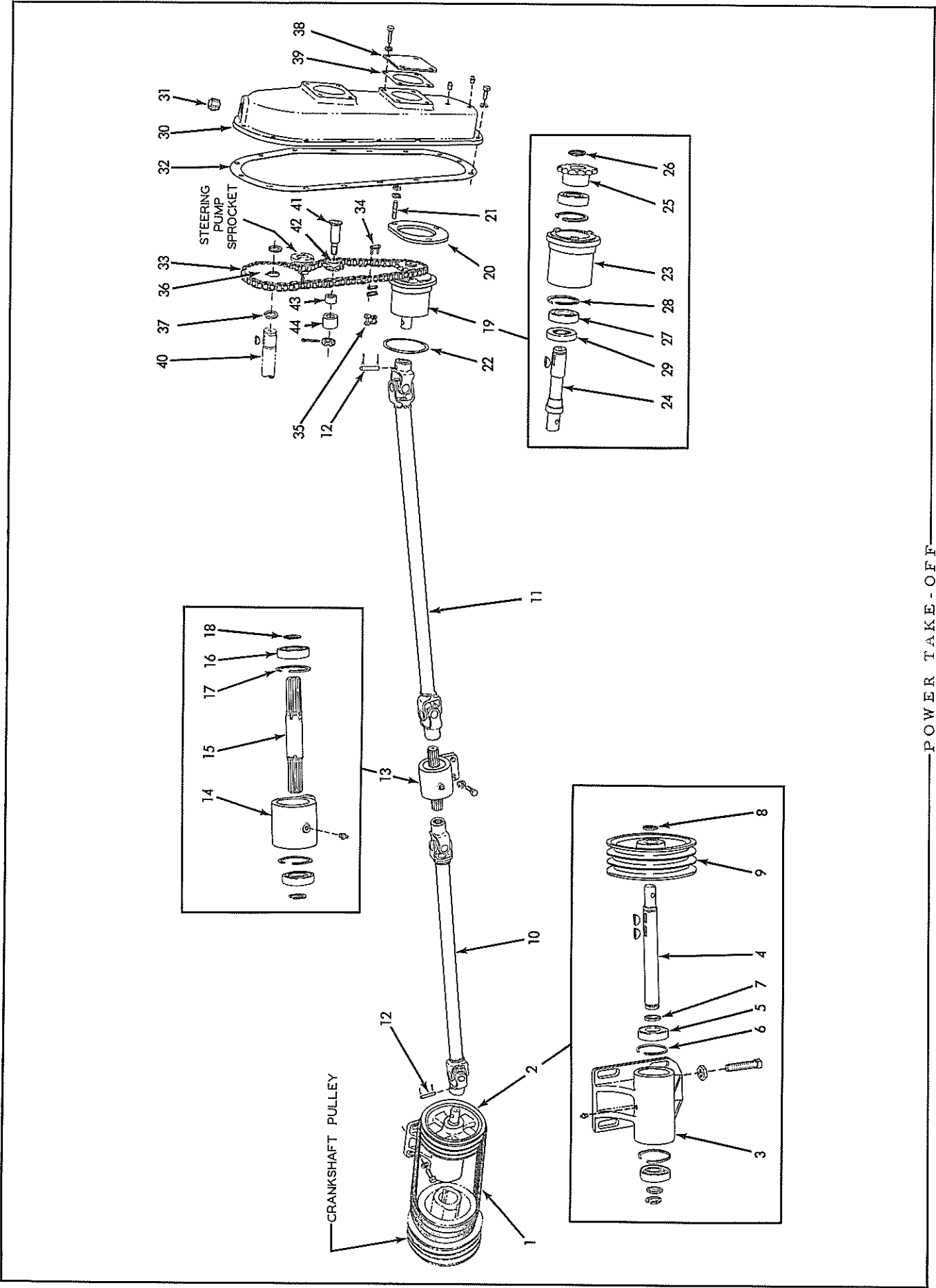


UNIVERSAL JOINT REPAIRS

053121 JOINT ASSEMBLY (See pages 113, 163 and 197)  
 053123 JOINT ASSEMBLY (See pages 113, 163 and 197)  
 074990 JOINT ASSEMBLY (See page 163)  
 074991 JOINT ASSEMBLY (See page 163)  
 082602 JOINT ASSEMBLY (See page 169)  
 082603 JOINT ASSEMBLY (See page 169)

ITEM	PART NUMBER	QUANTITY						DESCRIPTION	KIT NUMBER
		053121	053123	074990	074991	082602	082603		
1	053240	4	4	4	4	8	8	RING, snap	
2	-----	4	4	4	4	8	8	BEARING (Not serviced separately. Order item 4)	
3	055733	4	4	4	4	8	8	WASHER, sealing (cork)	
4	053120	1	1	1	1	-	-	SPIDER KIT (Includes items 1, 2 and 3)	
	081058	-	-	-	-	2	2	SPIDER KIT (Includes items 1, 2 and 3; also hardware items indented below)	
	915275	-	-	-	-	2	2	FITTING, lubricating, 67-1/2°, 1/8"NPT	
	910231	-	-	-	-	2	2	PLUG, pipe, hex-socket-hd., 1/8"NPT	
5	053122	-	1	-	-	-	-	YOKE (keywayed bore)	
6	053124	-	-	-	-	1	1	YOKE (splined bore)	
7	053119	2	1	1	1	1	1	YOKE (plain bore)	
8	075306	-	-	-	1	-	-	TUBE (Includes welded YOKE)	
9	075305	-	-	1	-	-	-	SHAFT (Includes welded YOKE)	
10	075209	-	-	-	-	-	1	TUBE, center (34-3/4" long. Includes welded YOKES)	
	077128	-	-	-	-	-	1	TUBE, center (29-1/4" long. Includes welded YOKES)	

NOTE: Repairs for main drive shaft universal joint are listed on page 84.



POWER TAKE-OFF

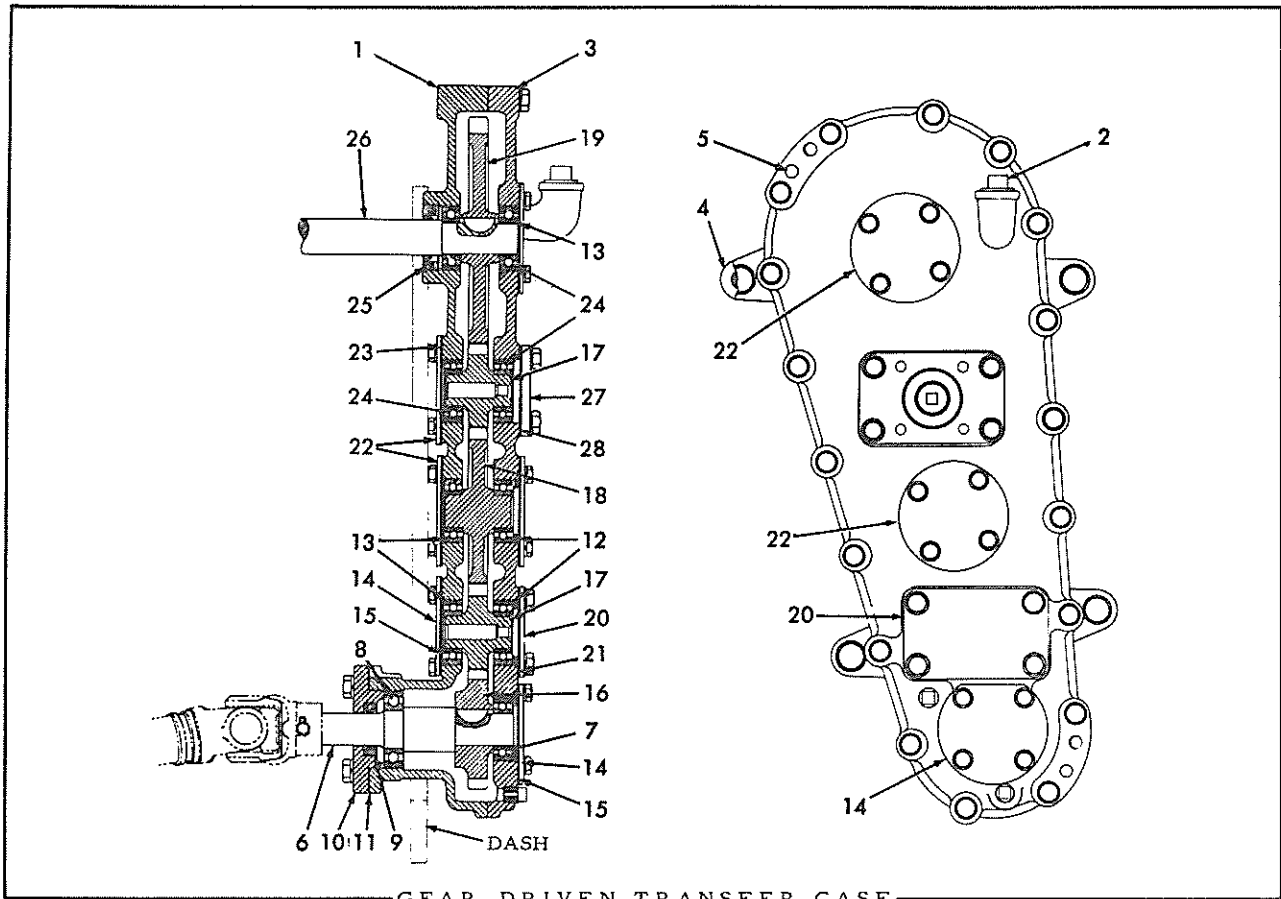
POWER TAKE-OFF

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER	
1	604929	3	BELT, drive (V-type, 21/32" wide x 47" long)		
2	075201	1	DRIVE ASSEMBLY (Consists of items 3 thru 9)		
	903638	4	CAPSCREW, 1/2"NC x 1-1/4"		
	910244	4	WASHER, plain, SAE std., 1/2"		
3	075204	1	HOUSING, drive		
	914482	1	FITTING, lubricating, straight, 1/8"NPT (vent type)		
	900668	1	SETSCREW, sq.-hd., oval-pt., 5/8"NC x 3"		
	911036	1	NUT, jam, 5/8"NC		
4	079062	1	SHAFT, drive		
5	075203	2	BEARING, ball		
6	050291	2	RING, bearing retaining		
7	075202	2	SPACER, bearing		
8	052224	2	RING, shaft retaining		
9	065498	1	PULLEY		
	905126	2	KEY, #15 woodruff, 1/4" x 1"		
10	{	082603	1	JOINT ASSEMBLY, universal (40-3/16" long. See page 167 for repair parts)(For Model AD40 only)	
		082602	1	JOINT ASSEMBLY, universal (34-5/8" long. See page 167 for repair parts)(For Model AD30 only)	
11	082603	1	JOINT ASSEMBLY, universal (40-3/16" long. See page 167 for repair parts)		
12	601935	2	PIN, coupling		
	900805	4	PIN, cotter, 1/8" x 3/4"		
13	075205	1	HOUSING ASSEMBLY, drive supporting (Consists of items 14 thru 18)		
	903638	2	CAPSCREW, 1/2"NC x 1-1/4"		
	904208	2	LOCKWASHER, 1/2"		
14	075207	1	HOUSING, drive supporting		
	914482	1	FITTING, lubricating, straight, 1/8"NPT (vent type)		
15	079064	1	SHAFT, drive coupling		
16	075203	2	BEARING, ball, drive coupling shaft		
17	050291	2	RING, bearing retaining		
18	052224	2	RING, shaft retaining		
19	075210	1	SPROCKET DRIVE ASSEMBLY (Consists of items 23 thru 29)		
20	{	081703.	1	RING, sprocket drive retaining (3/4" thick)(Graders prior to #1200)	
		082061	1	RING, sprocket drive retaining (1/4" thick)(Graders #1200 and up)	
21	{	075216	3	STUD (1/2"NF x 1-7/8")(Graders prior to #1200)	
		082066	3	STUD (1/2"NF x 1-5/8")(Graders #1200 and up)	
		904208	3	LOCKWASHER, 1/2"	
		911043	3	NUT, full, 1/2"NF (Graders prior to #1200)	
		913830	3	NUT, jam, 1/2"NF (Graders #1200 and up)	
22	075218	1	GASKET, sprocket drive		
23	075213	1	HOUSING, sprocket drive		
24	079063	1	SHAFT, sprocket drive		
	905126	1	KEY, #15 woodruff, 1/4" x 1"		
25	075211	1	SPROCKET, driving (15 teeth)		
26	052224	1	RING, sprocket retaining		

(Continued)

POWER TAKE-OFF (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
27	075212	2	BEARING, ball, sprocket drive shaft	
28	050291	2	RING, bearing retaining	
29	075978	1	SEAL, oil, sprocket drive bearing	
30	075220	1	COVER, power drive	
	903775	16	CAPSCREW, 3/8"NC x 7/8"	
	904206	16	LOCKWASHER, 3/8"	
	901651	2	PLUG, pipe, 1/8"NPT	
31	051094	1	PLUG, vent (3/4"NPT)	
32	075221	1	GASKET, power drive cover	
33	075303	1	CHAIN, driving (74 links, 5/8" pitch){Includes item 34}{See pages 154 and 155 for special chain used with Shiftable Moldboard installation)	
34	605509	1	LINK, connecting, driving chain	
35	076705	1	LINK, offset, driving chain (Use to shorten chain 1 pitch. Requires removal of 1 roller link and 1 connecting link)	
36	075219	1	SPROCKET, driven	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	
37	075330	2	RING, sprocket retaining	
38	075223	1	PLATE, cover (Remove when installing auxiliary hydraulic pump)	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
39	075224	1	GASKET, cover plate	
40	-----	-	SHAFT (See POWER CONTROL BOX)	
			NOTE: Item 41 thru 44 started with grader serial No. 980 but can be installed on prior units if desired.	
41	081510	1	SHAFT, chain idler sprocket	
	912840	1	NUT, slotted, 5/8"NF	
	900808	1	PIN, cotter, 1/8" x 1-1/2"	
42	081511	1	SPROCKET, chain idler	
43	081531	1	BEARING, needle, chain idler sprocket	
44	081509	1	SPACER, chain idler sprocket	



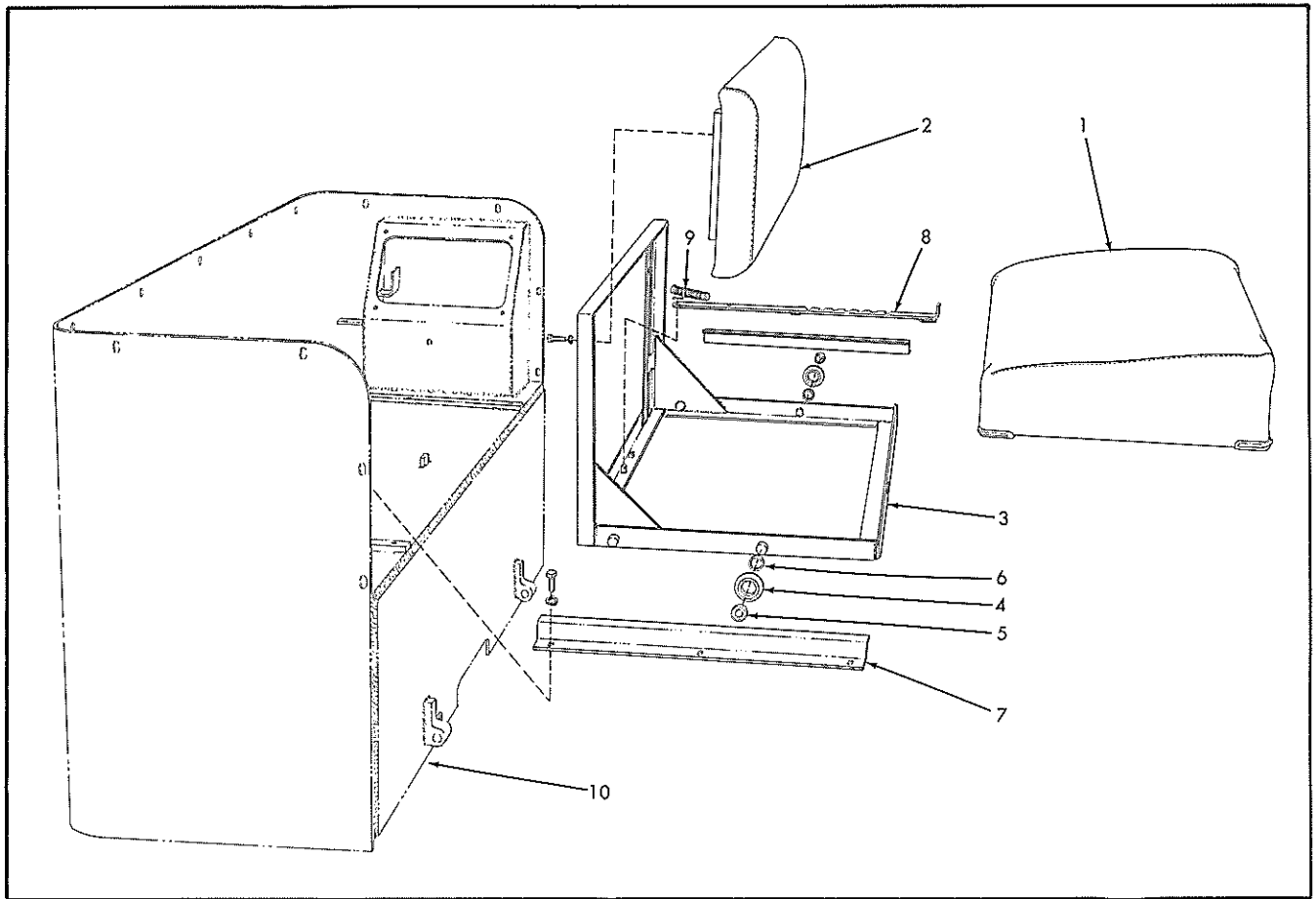
USAGE: Can be installed on all units to replace chain-driven transfer case furnished as original equipment.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	087242	1	HOUSING ASSEMBLY (Consists of 1 housing, 1 cover, 2 dowel PINS 053990, 4 CAPSCREWS 903632 and 4 LOCKWASHERS 904206)	
	903640	4	CAPSCREW, 1/2"NC x 2"	
	904208	4	LOCKWASHER, 1/2"	
	911028	4	NUT, 1/2"NC	
	901652	2	PLUG, pipe, 1/4"NPT	
2	051094	1	PLUG, vent (3/4"NPT)	
	901725	1	ELBOW, street, 3/4"NPT	
3	-----	1	COVER, housing (Not serviced separately. Order item 1)	
	903632	18	CAPSCREW, 3/8"NC x 1-1/2"	
	904206	18	LOCKWASHER, 3/8"	
4	087426	24	SHIM, spacing (.020" thick. Use as req'd)	
5	053990	2	PIN, dowel, housing cover	
6	087247	1	SHAFT, gear drive	
7	042986	1	BEARING, ball, gear drive shaft, front	
8	075212	1	BEARING, ball, gear drive shaft, rear	
9	603010	1	SEAL, oil, gear drive shaft	
10	087422	1	CAP, housing	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	

GEAR - DRIVEN TRANSFER CASE (Continued)

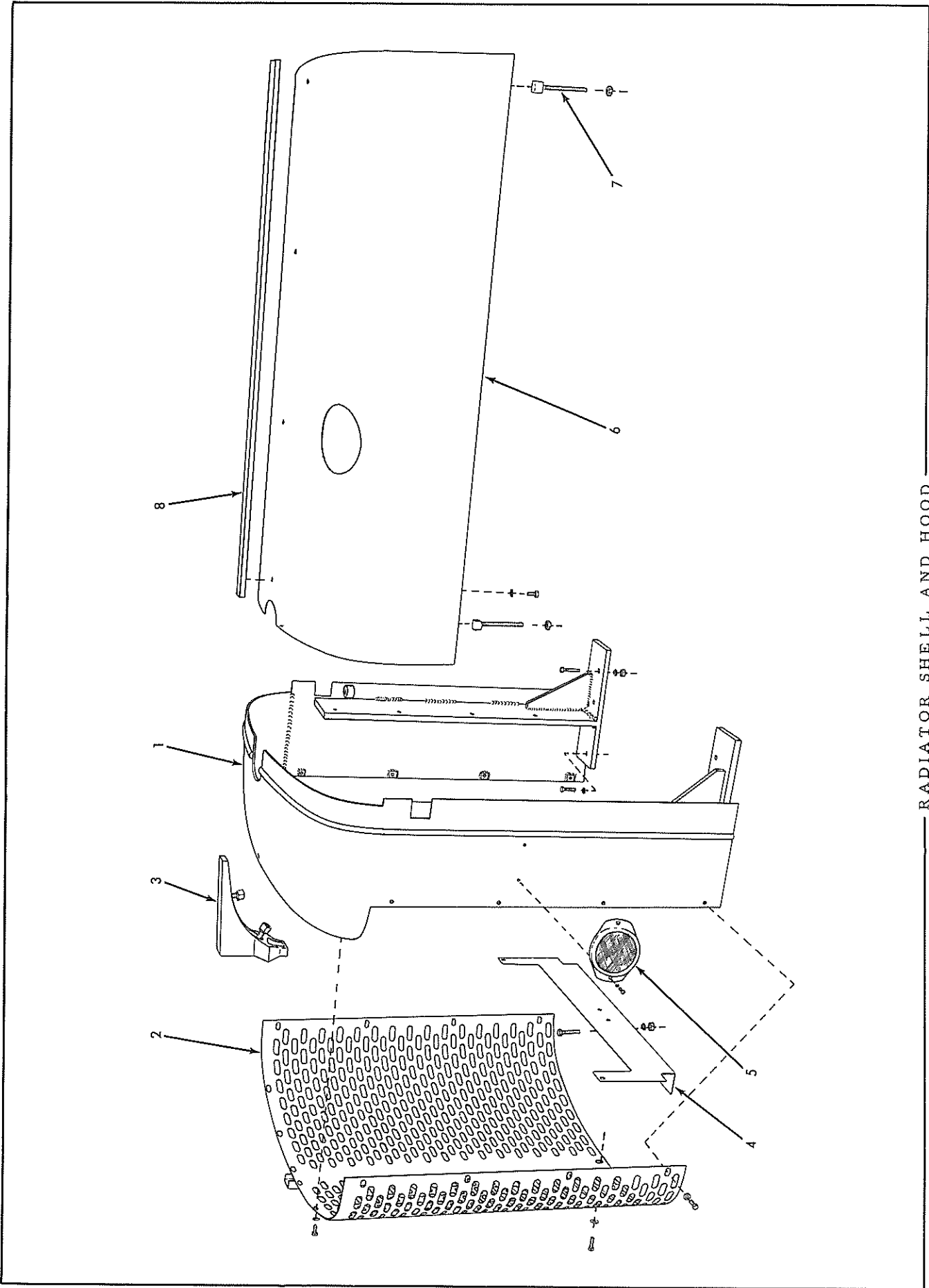
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
11	087421	1	GASKET, housing cap	
12	038226	3	SPACER, bearing (1/8" thick)(1 less used on graders equipped with Shiftable Moldboard)	
13	087417	4	SPACER, bearing (1/32" thick)	
14	087418	2	COVER, housing (3 quarter round)	
	905661	8	CAPSCREW, 5/16"NC x 5/8"	
	904205	8	LOCKWASHER, 5/16"	
15	087416	2	GASKET, housing cover (3 quarter round)	
16	087203	1	GEAR, drive, lower (21 teeth)	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	
17	087204	2	GEAR, hydraulic pump driving (16 teeth)	
18	087205	1	GEAR, drive, intermediate (30 teeth)	
19	087206	1	GEAR, drive, upper (42 teeth)	
	905126	1	KEY, #15 woodruff, 1/4" x 1"	
20	087419	1	COVER, housing (rectangular)(Remove when installing auxiliary hydraulic pump)	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
21	087427	1	GASKET, housing cover (rectangular)	
22	087208	4	COVER, housing (round)	
	905661	16	CAPSCREW, 5/16"NC x 5/8"	
	904205	16	LOCKWASHER, 5/16"	
23	087415	4	GASKET, housing cover (round)	
24	042986	8	BEARING, ball, drive gears	
25	048720	1	SEAL, oil, control box shaft	
26	087352	1	SHAFT, input, power control box	
27	087207	1	ADAPTER, steering pump mounting	
	910211	4	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	4	LOCKWASHER, 3/8"	
28	087427	1	GASKET, steering pump adapter	
29	-----	1	COVER, floor plate	} Requires welding to floor plate. Not illustrated
30	-----	1	PLATE, floor plate cover	
31	089342	1	CONVERSION KIT, gear driven transfer case (Consists of items 1 thru 30)	

NOTE: Items 19 thru 44 as listed on pages 169 and 170 are replaced when this kit is installed.



SEAT

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	075381	1	CUSHION, seat	
2	075382	1	CUSHION, back	
	903630	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
3	075360	1	FRAME	
4	075379	4	ROLLER, seat frame	
5	075378	4	BEARING, needle, seat frame roller	
6	052662	4	SEAL, dust, seat frame roller bearing	
7	075380	2	GUARD, seat frame roller	
	903629	6	CAPSCREW, 3/8"NC x 3/4"	
	904206	6	LOCKWASHER, 3/8"	
8	076250	1	LATCH, seat adjusting	
	904746	1	PIN, cotter, 1/16" x 5/8"	
9	072438	1	SPRING, latch tension	
10	-----	1	SEAT AND TANK (See FUEL TANK)	



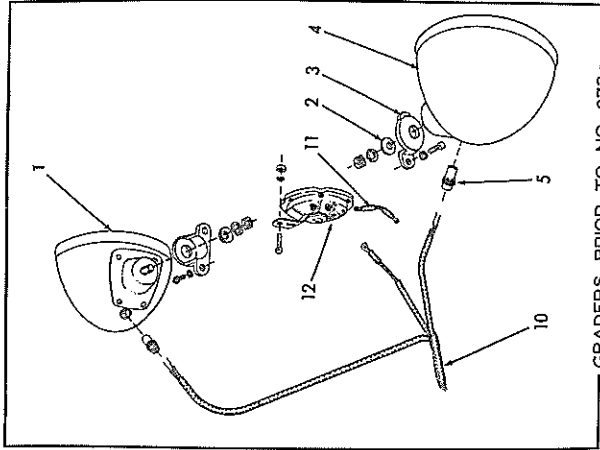
RADIATOR SHELL AND HOOD



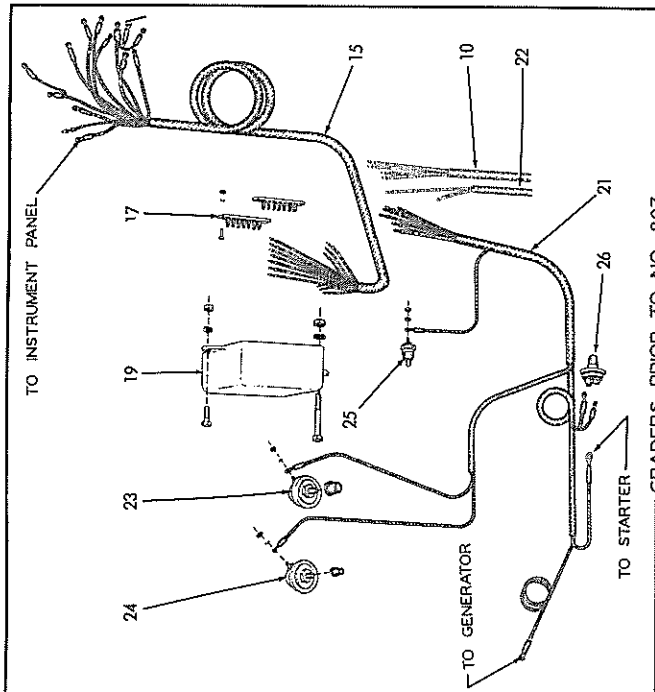
RADIATOR SHELL AND HOOD

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	077118	1	-	SHELL, radiator	
	903633	6	-	CAPSCREW, 3/8"NC x 1-3/4"	
	904206	6	-	LOCKWASHER, 3/8"	
	911026	6	-	NUT, 3/8"NC	
	075248	-	1	SHELL, radiator	
	903633	-	4	CAPSCREW, 3/8"NC x 1-3/4"	
	904206	-	4	LOCKWASHER, 3/8"	
	911026	-	4	NUT, 3/8"NC	
	903631	-	2	CAPSCREW, 3/8"NC x 1-1/4"	
	904206	-	2	LOCKWASHER, 3/8"	
2	075250	1	1	GRILLE, radiator protecting	
	903626	14	14	CAPSCREW, 5/16"NC x 3/4"	
	910335	14	14	WASHER, plain, SAE std., 5/16"	
	905663	1	1	CAPSCREW, 5/16"NC x 1-1/2"	
	910335	1	1	WASHER, plain, SAE std., 5/16"	
3	041639	1	1	MONOGRAM, "A-C", radiator shell	
	912112	2	2	BOLT, machine, 1/2"NC x 1-1/2"	
	904208	2	2	LOCKWASHER, 1/2"	
	911028	2	2	NUT, 1/2"NC	
4	077123	1	-	SHIELD, radiator	
	075253	-	1	SHIELD, radiator	
	903633	3	3	CAPSCREW, 3/8"NC x 1-3/4"	
	911115	3	3	WASHER, plain, SAE std., 3/8"	
	904206	3	3	LOCKWASHER, 3/8"	
	911026	3	3	NUT, 3/8"NC	
5	053830	2	2	MARKER, ruby	
	901171	4	4	SCREW, machine, #10-24NC x 3/8"	
	904203	4	4	LOCKWASHER, #10	
6	077119	1	-	HOOD, engine	
	075244	-	1	HOOD, engine	
7	605956	4	4	BOLT, hook	
	911026	6	6	NUT, 3/8"NC	
8	077122	1	-	BAR, stiffening, engine hood	
	075242	-	1	BAR, stiffening, engine hood	
	903627	3	4	CAPSCREW, 3/8"NC x 1/2"	
	911115	3	4	WASHER, plain, SAE std., 3/8"	

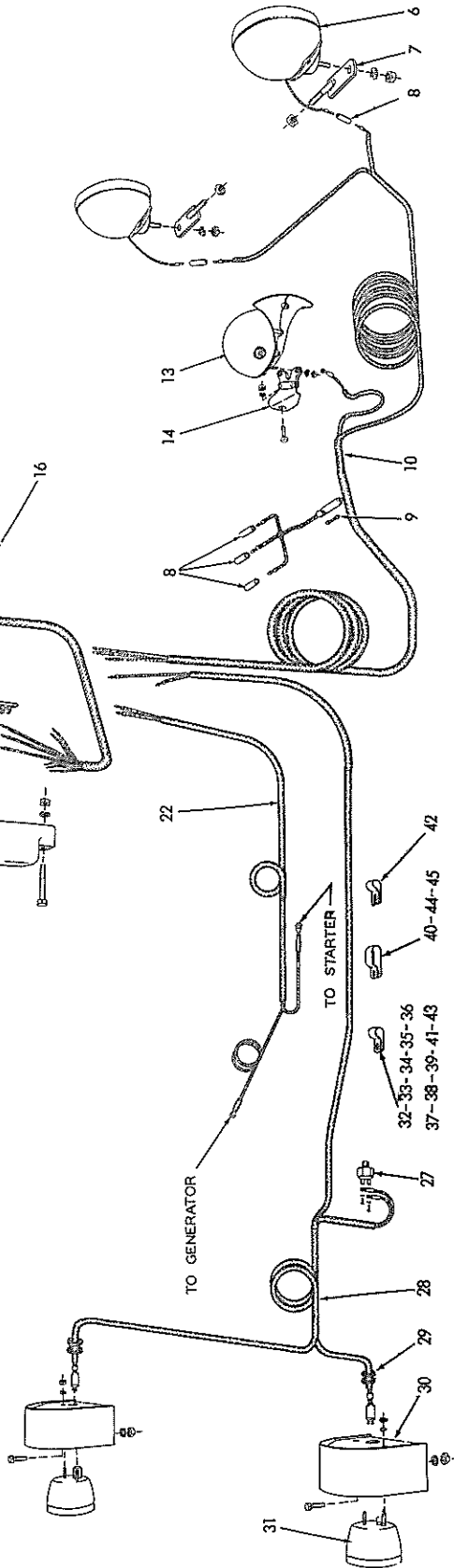
NOTE: See PAINTING AND MARKING for name transfer which is applied to sides of hood.



GRADERS PRIOR TO NO. 973



GRADERS PRIOR TO NO. 807



LIGHTS, HORN AND WIRING

LIGHTS, HORN AND WIRING

\* Graders prior to No. 807. Pressure gauges are electrically actuated.  
 \*\* Graders No. 807 thru 973. Pressure gauges are hydraulically actuated.  
 \*\*\* Graders No. 973 and up.

ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		*	**	***		
1	603774	1	1	-	LIGHT ASSEMBLY, head, left side (See page 182 for repair parts)	
	911043	1	1	-	NUT, 1/2"NF	
	904208	1	1	-	LOCKWASHER, 1/2"	
2	053635	2	2	-	WASHER, ball, head light mounting	
3	601376	2	2	-	BRACKET, head light mounting	
	912180	4	4	-	CAPSCREW, 3/8"NF x 7/8"	
	904206	4	4	-	LOCKWASHER, 3/8"	
4	603775	1	1	-	LIGHT ASSEMBLY, head, right side (See page 182 for repair parts)	
	911043	1	1	-	NUT, 1/2"NF	
	904208	1	1	-	LOCKWASHER, 1/2"	
5	603684	2	2	-	PLUG ASSEMBLY, head light (Serviced only as a unit)	
6	080468	-	-	2	LIGHT ASSEMBLY, head (See page 183 for repair parts)	
	911026	-	-	2	NUT, 3/8"NC	
	904206	-	-	2	LOCKWASHER, 3/8"	
7	080353	-	-	2	BRACKET, head light mounting	
	911035	-	-	2	NUT, jam, 1/2"NC	
8	048142	3	3	5	CONNECTOR, front wiring harness	
9	076197	1	-	-	FUSE, 30 ampere, 1/4" x 1-7/16" (Graders prior to #704)	
	208960	-	1	1	FUSE, 20 ampere, 1/4" x 1-1/4" (Graders #704 and up)	
10	074888	1	1	-	HARNESS, front wiring	
	080450	-	-	1	HARNESS, front wiring	
11	051005	1	1	1	CABLE, horn ground (Graders prior to #1125)	
12	604873	1	1	1	HORN ASSEMBLY, warning (Graders prior to #1125)	
	905662	1	1	1	CAPSCREW, 5/16"NC x 1-1/8"	
	904205	1	1	1	LOCKWASHER, 5/16"	
	911025	1	1	1	NUT, 5/16"NC	
13	081174	-	-	1	HORN, warning (12-volt. DELCO-REMY #1999591. Order repair parts from local United Motors Service dealer) (Started with grader #1125)	
	911040	-	-	2	NUT, 1/4"NF	
	904204	-	-	2	LOCKWASHER, 1/4"	
14	081173	-	-	1	BRACKET, horn mounting (Started with grader #1125)	
	905662	-	-	1	CAPSCREW, 5/16"NC x 1-1/8"	
	904205	-	-	1	LOCKWASHER, 5/16"	
	911025	-	-	1	NUT, 5/16"NC	
15	074896	1	-	-	HARNESS, instrument panel wiring	
16	078771	-	1	-	HARNESS, instrument panel wiring	
	080469	-	-	1	HARNESS, instrument panel wiring	
17	064978	2	-	-	BLOCK, junction, electric wiring (7 terminals)	
	901174	4	-	-	SCREW, machine, rd-hd., #10-24NC x 3/4"	
	904203	4	-	-	LOCKWASHER, #10	
	901310	4	-	-	NUT, #10-24NC	
18	079444	-	1	1	BLOCK, junction, electric wiring (10 terminals)	
	901174	-	2	2	SCREW, machine, #10-24NC x 3/4"	
	904203	-	2	2	LOCKWASHER, #10	
	901310	-	2	2	NUT, #10-24NC	

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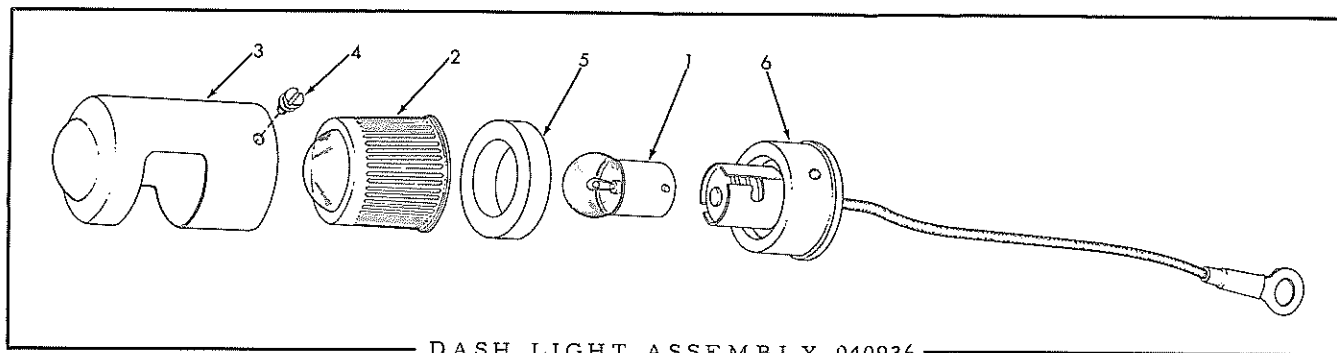
LIGHTS, HORN AND WIRING (Continued)

ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		*	**	***		
19	074889	1	-	-	COVER, wiring junction block	
	903630	1	-	-	CAPSCREW, 3/8"NC x 1"	
	903635	1	-	-	CAPSCREW, 3/8"NC x 2-1/2"	
	904206	1	-	-	LOCKWASHER, 3/8"	
	911026	1	-	-	NUT, 3/8"NC	
20	078911	-	1	1	COVER, wiring junction block	
	903630	-	2	2	CAPSCREW, 3/8"NC x 1"	
	903635	-	2	2	CAPSCREW, 3/8"NC x 2-1/2"	
	904206	-	2	2	LOCKWASHER, 3/8"	
	911026	-	2	2	NUT, 3/8"NC	
21	074895	1	-	-	HARNESS, engine wiring	
22	078885	-	1	1	HARNESS, engine wiring	
23	051262	1	-	-	GAUGE UNIT, sending, engine oil pressure	
	910251	1	-	-	NUT, #10-32NF	
	904203	1	-	-	LOCKWASHER, #10	
	904269	1	-	-	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT	
24	057182	1	-	-	GAUGE-UNIT, sending, fuel pressure	
	910251	1	-	-	NUT, #10-32NF	
	904203	1	-	-	LOCKWASHER, #10	
	901825	1	-	-	BUSHING, pipe reducing, 1/4"NPT to 1/8"NPT	
25	065838	1	-	-	GAUGE-UNIT, sending, engine temperature	
	910251	1	-	-	NUT, #10-32NF	
	904203	1	-	-	LOCKWASHER, #10	
26	050288	1	-	-	SWITCH, pressure, sending gauge-units	
27	605052	1	1	1	SWITCH, pressure, stop light operating	
	900546	2	2	2	SCREW, machine, #6-32NC x 1/4"	
	906963	2	2	2	LOCKWASHER, #6	
28	074894	1	1	1	HARNESS, rear wiring (Graders prior to #985 only)	
	080519	-	-	1	HARNESS, rear wiring (Graders #985 and up)	
29	040981	2	2	2	GROMMET, tail light wiring harness (rubber)	
30	075084	2	2	2	BRACKET, tail light mounting	
	903630	4	4	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	4	4	LOCKWASHER, 3/8"	
	911026	4	4	4	NUT, 3/8"NC	
31	074893	2	2	2	LIGHT ASSEMBLY, combination tail and stop (See page 156 for repair parts)	
	904204	4	4	4	LOCKWASHER, 1/4"	
	911024	4	4	4	NUT, 1/4"NC	
32	U-479	4	1	1	CLIP, wiring harness (closed type, 3/16" diam., 13/32" bolt-hole)	
	910211	1	1	1	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	1	1	1	LOCKWASHER, 3/8"	
	911026	1	1	1	NUT, 3/8"NC	
33	605822	1	1	1	CLIP, engine wiring harness (closed type, 3/16" diam., 15/32" bolt-hole)	
34	051348	5	5	9	CLIP, wiring harness (closed type, 5/16" diam., 9/32" bolt-hole)	
	905655	5	5	9	CAPSCREW, 1/4"NC x 1/2"	
	904204	5	5	9	LOCKWASHER, 1/4"	
35	034632	2	5	4	CLIP, wiring harness (closed type, 5/16" diam., 13/32" bolt-hole)	
	910211	2	2	1	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	2	2	1	LOCKWASHER, 3/8"	
	911026	2	2	1	NUT, 3/8"NC	

(Continued)

LIGHTS, HORN AND WIRING (Continued)

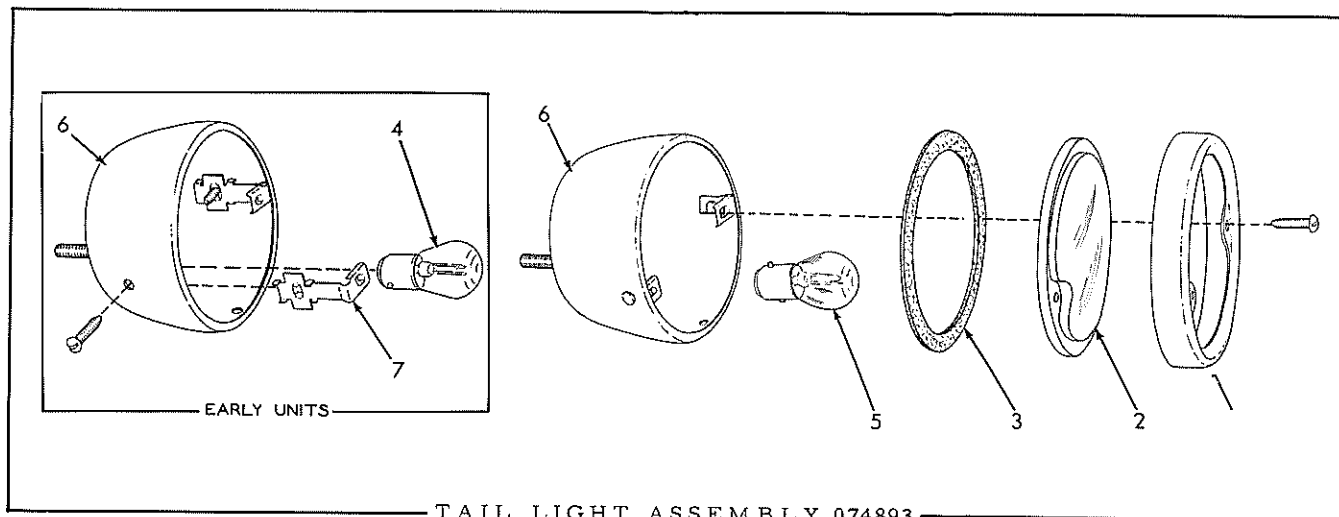
ITEM	PART NUMBER	QUANTITY			DESCRIPTION	KIT NUMBER
		*	**	***		
36	040887	3	1	1	CLIP, engine wiring harness (closed type, 5/16" diam., 15/32" bolt-hole)	
37	040338	5	5	5	CLIP, front wiring harness (closed type, 3/8" diam., 9/32" bolt-hole)	
	905655	5	5	5	CAPSCREW, 1/4"NC x 1/2"	
	904204	5	5	5	LOCKWASHER, 1/4"	
38	040796	2	2	2	CLIP, front wiring harness (closed type, 3/8" diam., 13/32" bolt-hole)	
	910211	1	1	1	CAPSCREW, 3/8"NC x 1-1/8"	
	904206	1	1	1	LOCKWASHER, 3/8"	
	911026	1	1	1	NUT, 3/8"NC	
39	043030	1	-	-	CLIP, engine wiring harness (closed type, 3/8" diam., 9/16" bolt-hole)	
40	042672	3	3	3	CLIP, front and rear wiring harness (closed type, for two 3/8" diam. lines, 7/16" bolt-hole)	
41	033043	1	-	-	CLIP, engine wiring harness (closed type, 7/16" diam., 13/32" bolt-hole)	
42	041225	1	-	-	CLIP, engine wiring harness (closed type, 1/2" diam., 13/32" bolt-slot)	
43	047381	5	2	2	CLIP, wiring harness (closed type, 5/8" diam., 13/32" bolt-hole)	
	903775	5	2	2	CAPSCREW, 3/8"NC x 7/8"	
	904206	5	2	2	LOCKWASHER, 3/8"	
	911026	5	2	2	NUT, 3/8"NC	
44	078912	-	2	2	CLIP, instrument panel wiring harness (closed type, for one 5/8" diam. line and one 3/8" diam. line, 13/32" bolt-hole)	
	900593	-	1	1	SCREW, machine, 3/8"NC x 3/4"	
	903775	-	1	1	CAPSCREW, 3/8"NC x 7/8"	
	904206	-	2	2	LOCKWASHER, 3/8"	
	911026	-	2	2	NUT, 3/8"NC	
45	605160	3	3	3	CLIP, battery cable and rear wiring harness (closed type, for one 5/8" diam. line and one 11/16" diam. line, 5/16" bolt-hole)	
	905655	3	3	3	CAPSCREW, 1/4"NC x 1/2"	
	904204	3	3	3	LOCKWASHER, 1/4"	



DASH LIGHT ASSEMBLY 040936

NOTE: See page 183 for listing of complete LIGHT ASSEMBLY.

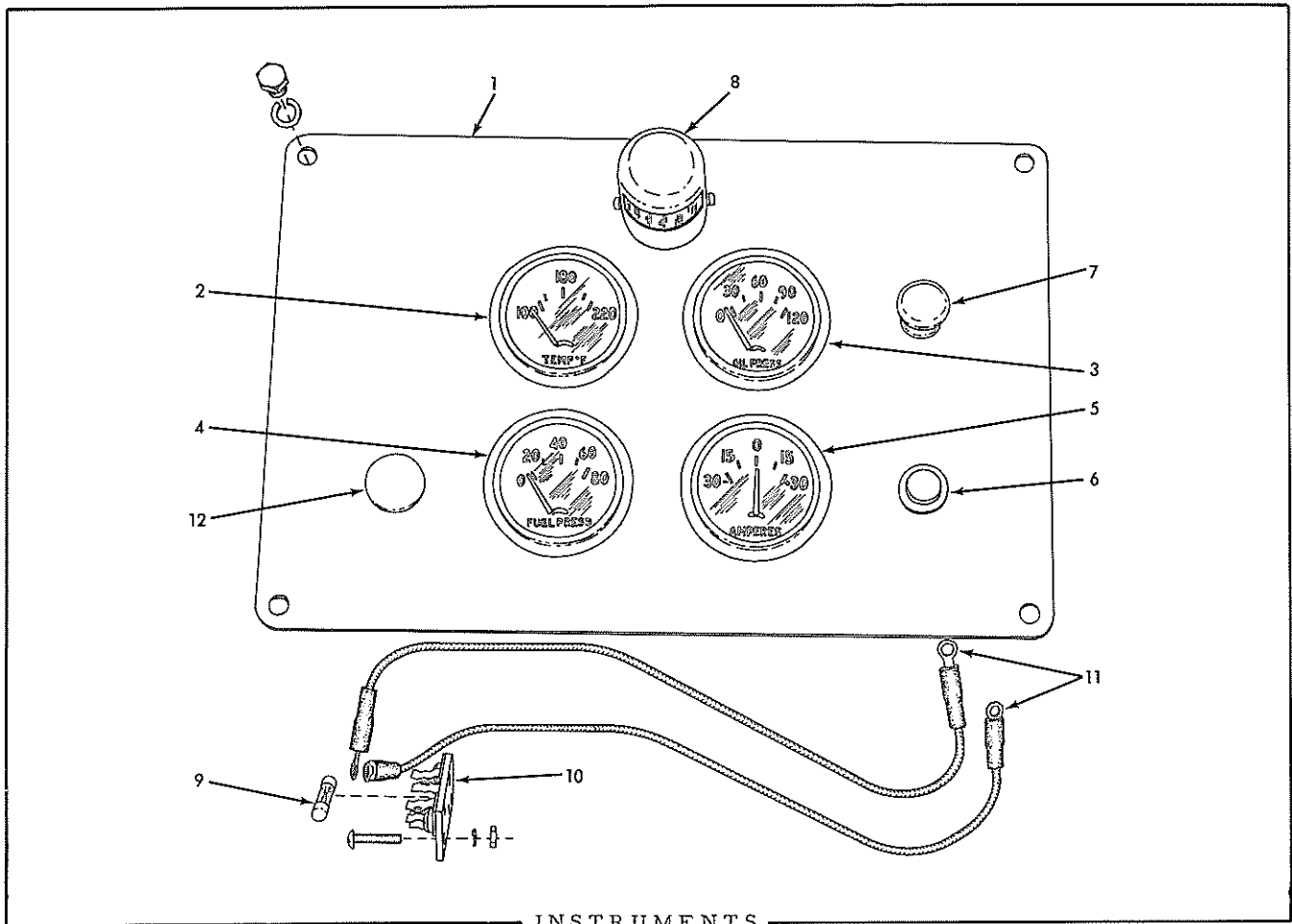
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	048799	1	BULB (single contact, 3 c. p., 12 volts)	
2	040974	1	GLASS	
3	040973	1	COVER, bulb	
4	044211	2	SCREW	
5	040969	1	GASKET, bulb cover	
6	-----	1	BASE ASSEMBLY (Not serviced. Order complete LIGHT ASSEMBLY)	



TAIL LIGHT ASSEMBLY 074893

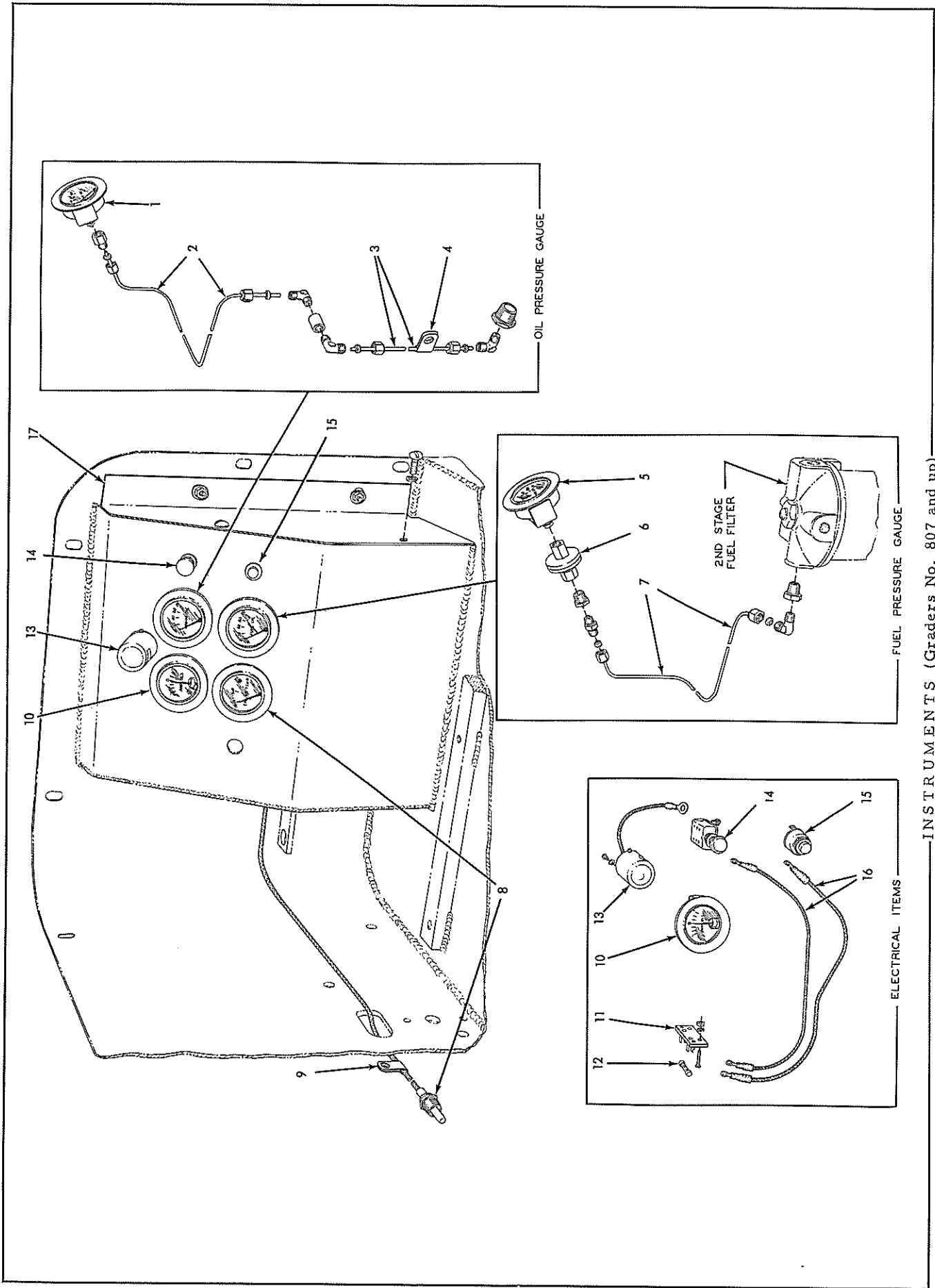
NOTE: See page 176 for listing of complete LIGHT ASSEMBLY.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	068404	1	DOOR, lens retaining	
	917883	2	SCREW, thread-cutting, rd-hd., #8 x 5/8"	
2	068405	1	LENS (red)	
3	068399	1	GASKET	
4	077372	1	BULB, incandescent, 21 c. p. and 6 c. p., 12 volt (Graders prior to #1057)	
5	081753	1	BULB, incandescent, 21 c. p. and 6 c. p., 12 volt (Graders #1057 and up. Has offset locating prongs)	
6	-----	1	BODY (Not serviced. Order complete Light Assembly)	
7	068427	2	SPEEDNUT (Graders prior to #1057)	
	917883	2	SCREW, thread-cutting, rd-hd., #8 x 5/8"	



USAGE: Graders prior to serial No. 807 Pressure gauges are remote electrical type.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	075035	1	PANEL, instrument	
	905655	4	CAPSCREW, 1/4"NC x 1/2"	
	904204	4	LOCKWASHER, 1/4"	
2	065839	1	GAUGE, engine temperature (Includes mounting CLAMP)	
3	051220	1	GAUGE, engine oil pressure (Includes mounting CLAMP)	
4	057218	1	GAUGE, fuel pressure (80 lb. capacity. Includes mounting CLAMP)	
5	051218	1	AMMETER (Includes mounting CLAMP)	
6	031337	1	SWITCH, push button, horn	
7	051195	1	SWITCH, lights (Includes operating KNOB)	
8	040936	1	LIGHT ASSEMBLY, instrument panel (See page 178 for repair parts)	
	900553	3	SCREW, machine, #8-32NC x 1/2"	
	906964	3	LOCKWASHER, #8	
9	208960	1	FUSE, 20 ampere (1/4" x 1-1/4")	
10	605842	1	BLOCK, fuse mounting	
	900555	2	SCREW, machine, #8NC x 3/4"	
	907154	2	NUT, #8NC	
	906964	2	LOCKWASHER, #8	
11	074887	2	CABLE, panel switches (14" long)	
12	076323	1	PLUG, hole	



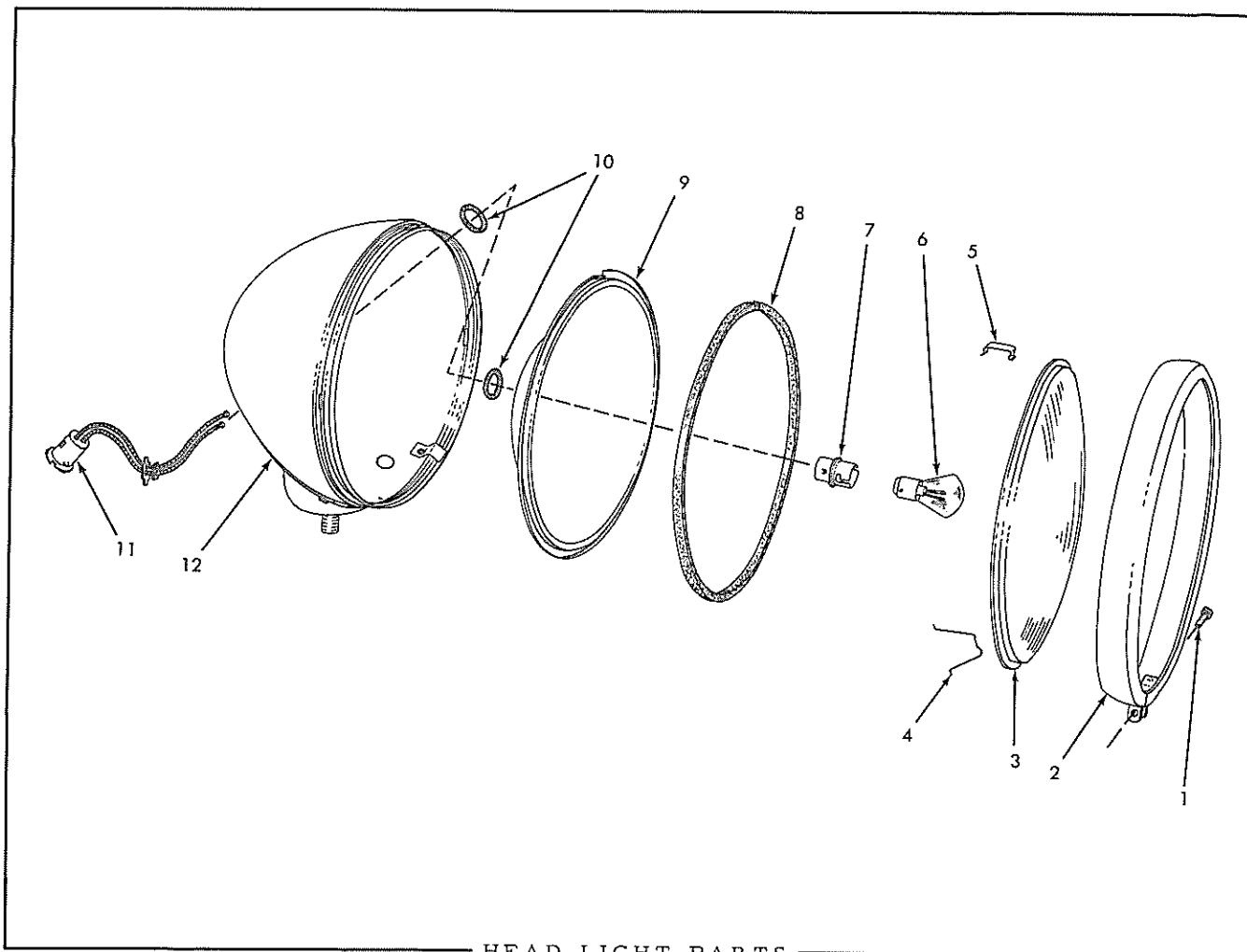
INSTRUMENTS (Graders No. 807 and up)



INSTRUMENTS

USAGE: Graders serial No. 807 and up. Pressure gauges are hydraulically actuated.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	065659	1	GAUGE, engine oil pressure (Includes mounting CLAMP)	
2	078899	1	TUBE, oil pressure gauge, upper section (1/8" O. D. x 35")	
	915490	1	CONNECTOR, Sealastic, 1/8" tube, 1/8"NPT female	
	915557	1	ELBOW, Sealastic, 90°, 1/8" tube, 1/8"NPT male	
	915486	2	RING, Sealastic fitting, 1/8" tube (Includes FERRULE)	
	915488	2	NUT, Sealastic fitting, 1/8" tube	
3	078894	1	TUBE, oil pressure gauge, lower section (1/8" O. D. x 26")	
	915557	2	ELBOW, Sealastic, 90°, 1/8" tube, 1/8"NPT male	
	915486	2	RING, Sealastic fitting, 1/8" tube (Includes FERRULE)	
	915488	2	NUT, Sealastic fitting, 1/8" tube	
	904269	1	BUSHING, pipe reducing, 1/2"NPT to 1/8"NPT	
4	066260	1	CLIP, oil pressure gauge tube (closed type, 1/8" diam., 13/32" bolt-hole)	
5	078890	1	GAUGE, fuel pressure (Includes mounting CLAMP)	
6	069674	1	RESTRICTOR, fuel pressure gauge	
7	078899	1	TUBE, fuel pressure gauge	
	915556	1	CONNECTOR, Sealastic, 1/8" tube, 1/8"NPT male	
	915557	1	ELBOW, Sealastic, 90°, 1/8" tube, 1/8"NPT male	
	915486	2	RING, Sealastic fitting, 1/8" tube (Includes FERRULE)	
	915488	2	NUT, Sealastic fitting, 1/8" tube	
	901825	2	BUSHING, pipe reducing, 1/4"NPT to 1/8"NPT	
8	078893	1	GAUGE, engine temperature (Includes mounting CLAMP)	
9	U-479	2	CLIP, temperature gauge line (closed type, 3/16" diam., 13/32" bolt-hole)	
10	065677	1	AMMETER (Includes mounting CLAMP)	
11	605842	1	BLOCK, fuse mounting	
	900555	2	SCREW, machine, #8NC x 3/4"	
	906964	2	LOCKWASHER, #8	
	907154	2	NUT, #8NC	
12	208960	1	FUSE, 20 ampere (1/4" x 1-1/4")	
13	040936	1	LIGHT ASSEMBLY, instrument panel (See page 178 for repair parts)	
	900553	3	SCREW, machine, #8-32NC x 1/2"	
	906964	3	LOCKWASHER, #8	
14	051195	1	SWITCH, push-pull, lights (Includes operating KNOB)	
15	031337	1	SWITCH, push-button, horn	
16	074887	2	CABLE, switches to fuse block (14" long)	
17	078913	1	PANEL, instrument access	
	900593	4	SCREW, machine, 3/8"NC x 3/4"	
	904206	2	LOCKWASHER, 3/8"	
	911115	4	WASHER, plain, SAE std., 3/8"	
	911034	2	NUT, jam, 3/8"NC	

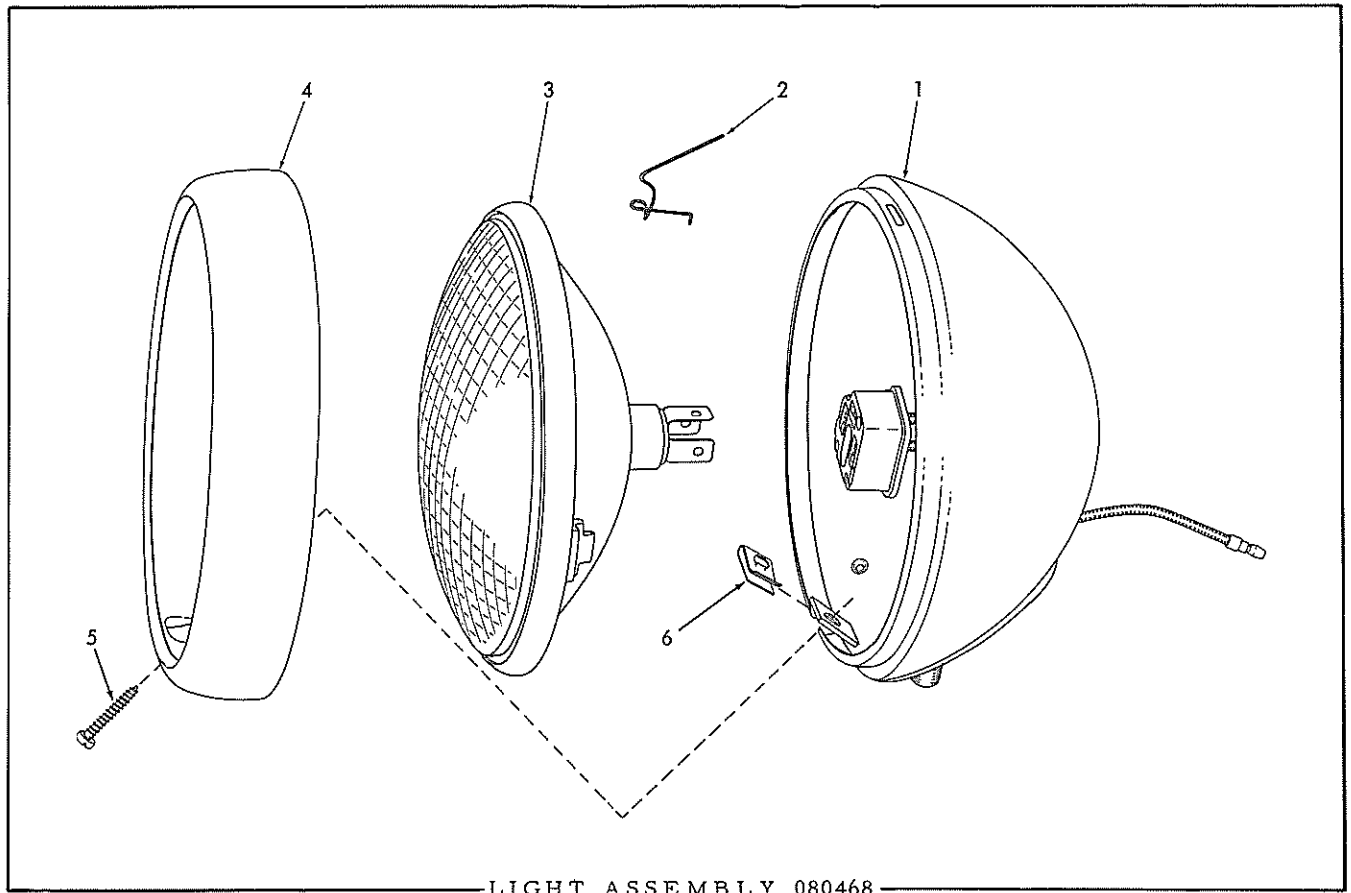


HEAD LIGHT PARTS

603774 LIGHT ASSEMBLY - LEFT (See pages 175 and 188) } Graders prior  
 603775 LIGHT ASSEMBLY - RIGHT (See page 175) } to #973

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	042600	1	SCREW, molding	
2	605614	1	MOLDING	
3	605596	1	LENS (glass)	
4	050889	2	SPRING, lens retaining	
5	033231	1	CLIP, lens retaining	
6	054325	1	BULB (double filament, 21 c. p. , 12 volt)	
7	605621	1	SLEEVE, reflector socket	
8	605619	1	GASKET, lens	
9	605618	1	REFLECTOR ASSEMBLY (Includes item 8)	
10	605622	2	SPRING, socket retaining	
11	605620	1	WIRING ASSEMBLY (Serviced only as a unit)	
12	-----	1	BODY (Not serviced. Order complete LIGHT ASSEMBLY)	

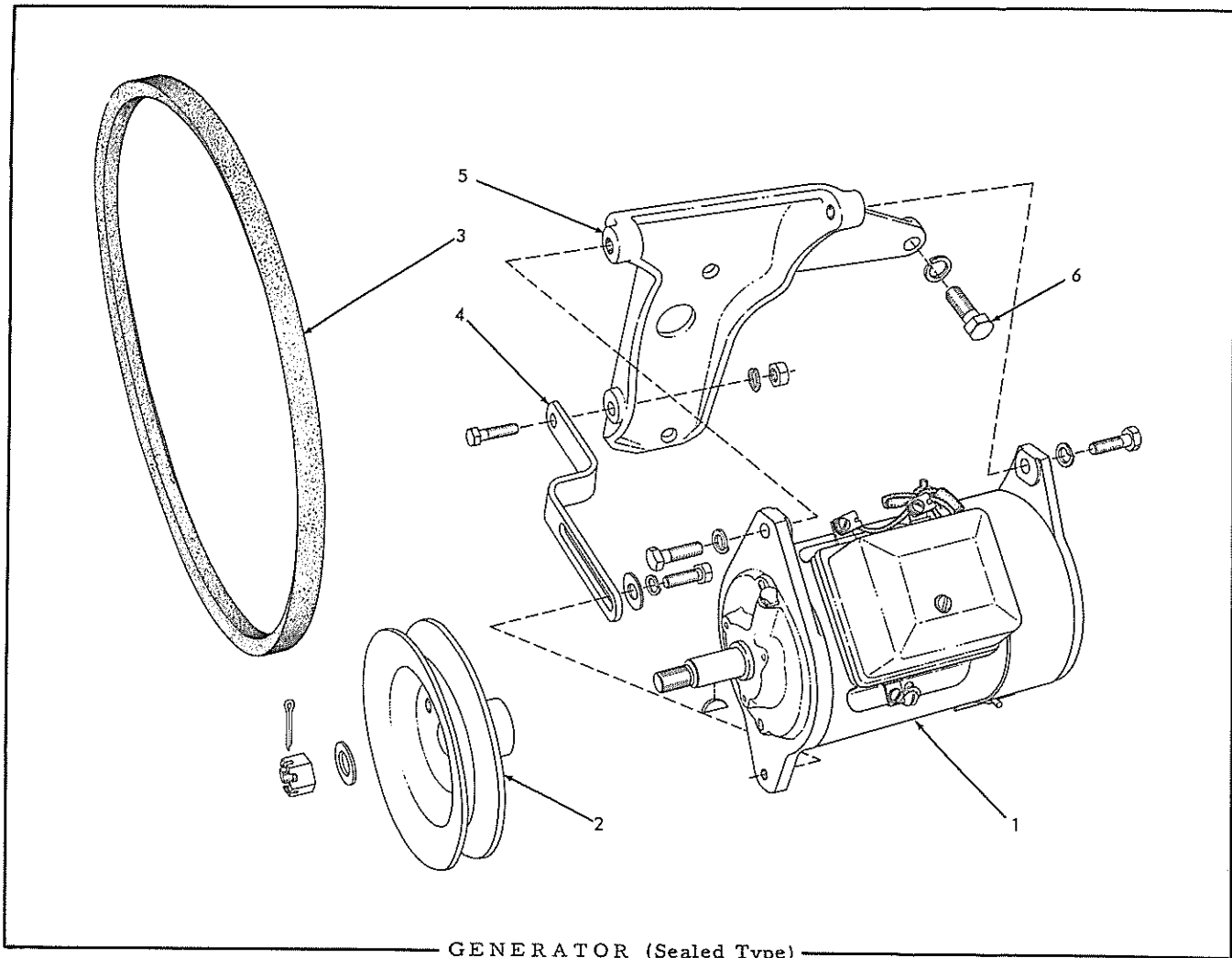
NOTE: Quantities indicated are for one (1) light only



USAGE: Graders serial No. 973 and up. See page 175 for listing of complete Light Assembly.

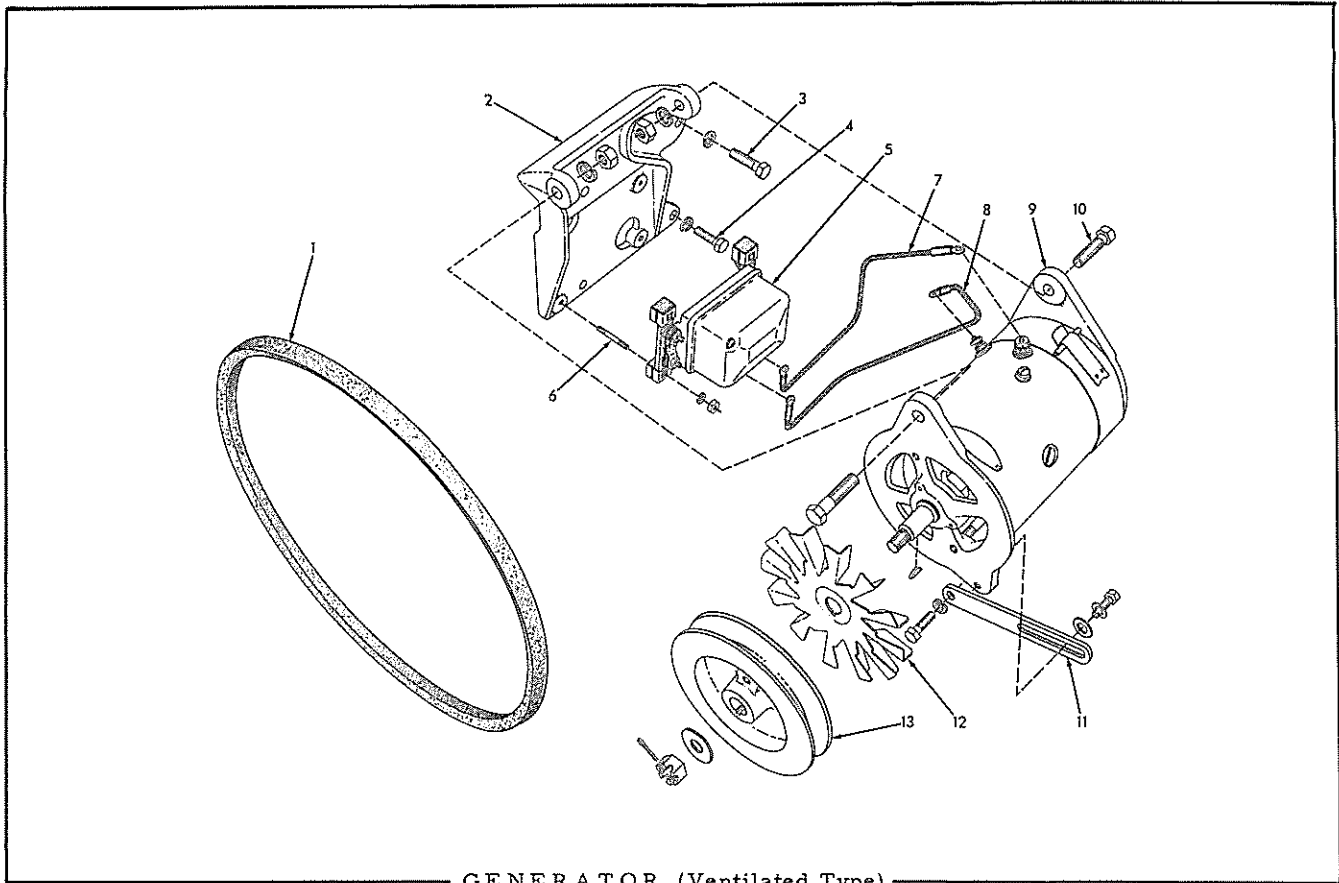
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	1	BODY (Includes WIRING. Not serviced. Order complete LIGHT ASSEMBLY)	
2	081161	4	SPRING, unit retaining	
3	081160	1	SEALED UNIT (12 volt)	
4	081159	1	DOOR	
5	081162	1	SCREW, door retaining	
6	081190	1	NUT, speed	

NOTE: Quantities indicated are for one (1) light only.



USAGE: Graders prior to serial No. 517.

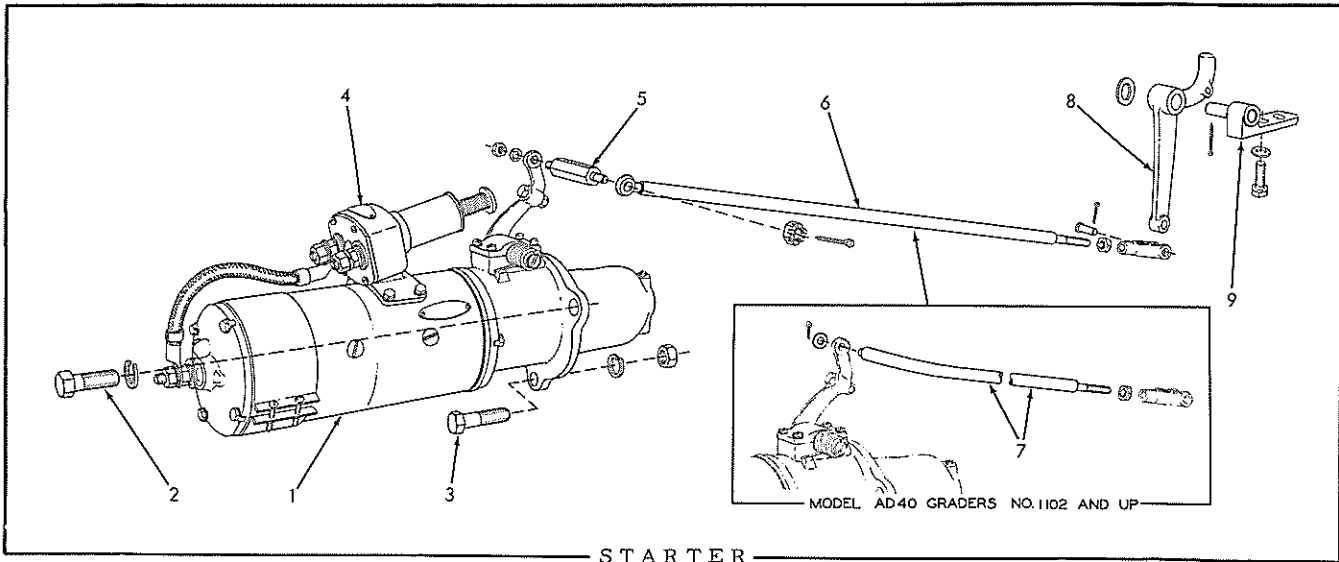
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	074654	1	GENERATOR ASSEMBLY, electric (Includes Key, Nut and Washer for pulley; also voltage and current regulator)(DELCO-REMY #1100962. Order parts from local United Motors Service dealer)	
	903772	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	LOCKWASHER, 5/16"	
	900801	1	PIN, cotter, 3/32" x 3/4" (for pulley nut)	
2	040128	1	PULLEY, driving	
3	040549	1	BELT, driving (42" long)	
4	075042	1	STRAP, belt adjusting	
	903772	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	LOCKWASHER, 5/16"	
	901165	1	WASHER, plain, U.S. std., 5/16"	
	911025	1	NUT, 5/16"NC	
5	075041	1	BRACKET, mounting	
6	041250	3	CAPSCREW, 7/16"NC x 1-1/4"	
	904207	3	LOCKWASHER, 7/16"	



GENERATOR (Ventilated Type)

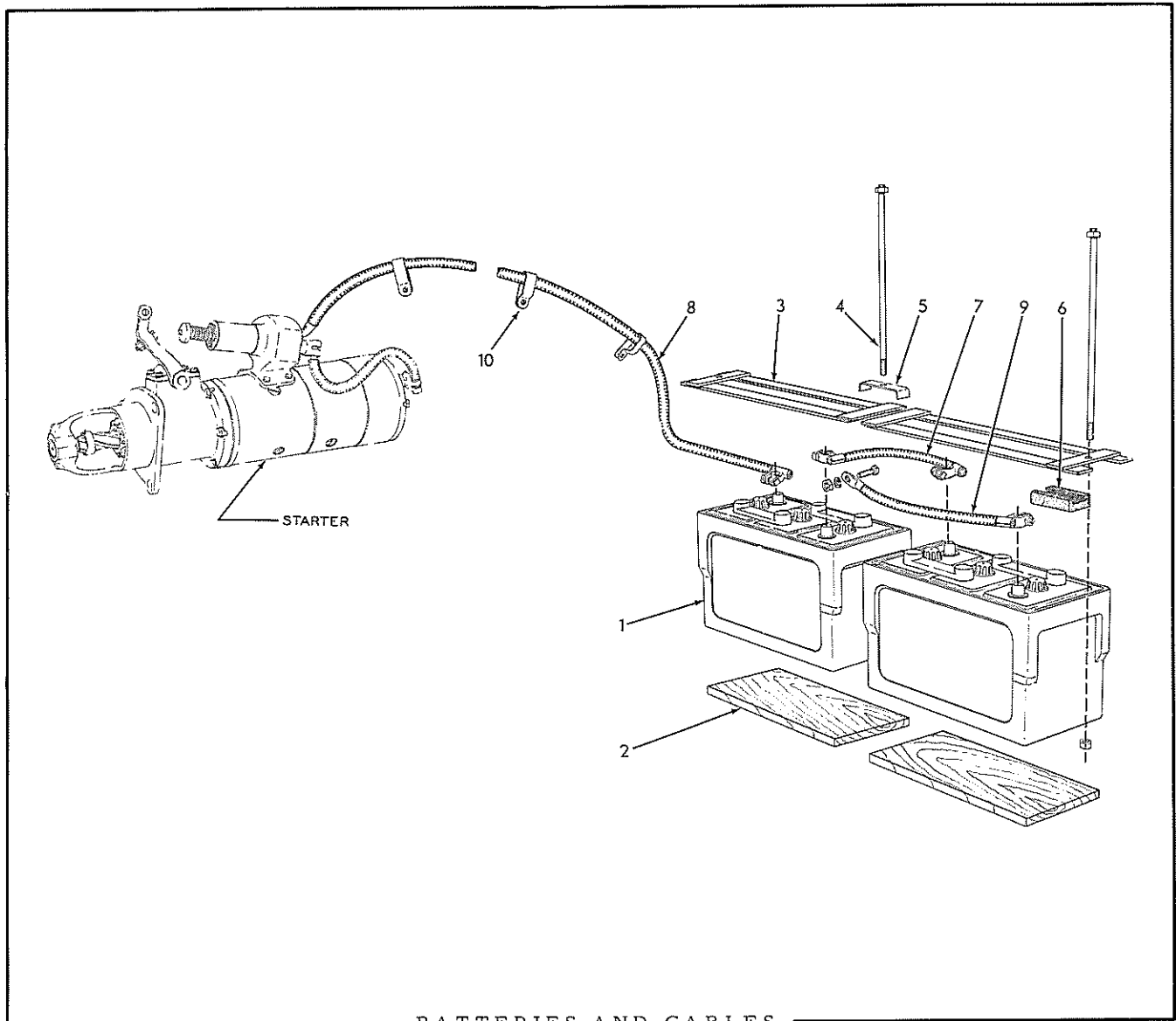
USAGE: Used on graders No. 517 and up.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	604929	1	BELT, driving (47" long)	
2	078073	1	BRACKET, mounting	
3	040011	2	CAPSCREW, 7/16"NC x 1-1/2"	
4	041250	2	CAPSCREW, 7/16"NC x 1-1/4"	
	904207	4	LOCKWASHER, 7/16"	
5	080985	1	REGULATOR, voltage (DELCO-REMY #1118893. Was formerly #1118761. Order repair parts from local United Motors Service dealer)	
6	078068	4	STUD (1/4"NC x 1-5/8")	
	904204	4	LOCKWASHER, 1/4"	
	911024	4	NUT, 1/4"NC	
7	078067	1	CABLE, regulator to generator field terminal (18" long)	
8	078064	1	CABLE, regulator to generator armature terminal (18" long)	
9	078075	1	GENERATOR (Includes Key, Nut and Washer for pulley)(DELCO-REMY #1105939. Order repair parts from local United Motors Service dealer)	
10	040013	2	CAPSCREW, 7/16"NC x 1-3/4"	
	904207	2	LOCKWASHER, 7/16"	
	911027	2	NUT, 7/16"NC	
	900801	1	PIN, cotter, 3/32" x 3/4" (for pulley nut)	
11	078069	1	STRAP, belt adjusting	
	903630	1	CAPSCREW, 3/8"NC x 1"	
	903772	1	CAPSCREW, 5/16"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
	901165	1	WASHER, plain, U.S. std., 5/16"	
12	078070	1	FAN, cooling	
13	078071	1	PULLEY, driving	



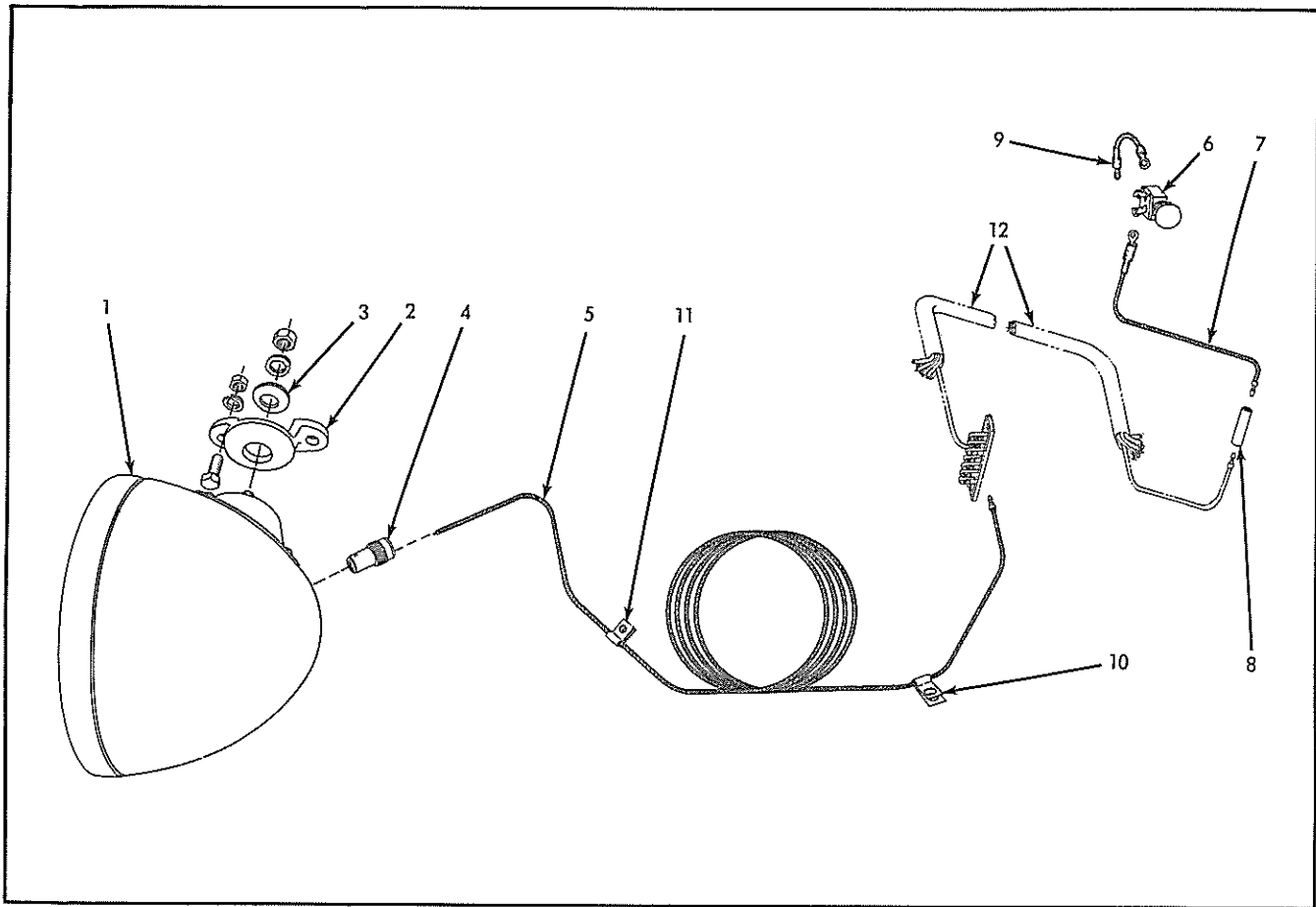
STARTER

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	605200	1	-	MOTOR, starting (DELCO-REMY #1109114. Order parts from local United Motors Service dealer)(Includes item 4)	
	034917	-	1	MOTOR, starting (DELCO-REMY #1108811. Order parts from local United Motors Service dealer)(Includes item 4)	
2	035440	2	2	CAPSCREW, 5/8"NC x 1-1/2"	
3	035248	1	1	CAPSCREW, 5/8"NF x 2-1/4"	
	904209	3	3	LOCKWASHER, 5/8"	
	911044	1	1	NUT, 5/8"NF	
4	078040	1	-	SWITCH, starting motor (DELCO-REMY #1857519. Order parts from local United Motors Service dealer)	
	034924	-	1	SWITCH, starting motor (DELCO-REMY #407C. Order parts from local United Motors Service dealer)	
5	077126	1	-	EXTENSION, starting motor lever (2-9/16" long)	
	075036	-	1	EXTENSION, starting motor lever (4-5/8" long)(Graders prior to #1102)	
6	904205	1	1	LOCKWASHER, 5/16" } Not used on Model AD40 NUT, 5/16"NC } graders after #1101	
	911025	1	1		
6	077125	1	-	ROD, operating (27-3/4" long)	
	075038	-	1	ROD, operating (26-1/2" long)(Graders prior to #1102)	
7	903416	1	1	NUT, slotted, 3/8"NC } Not used on Model AD40 PIN, cotter, 3/32" x 1" } graders after #1101	
	900802	1	1		
	911048	1	1	NUT, jam, 3/8"NF	
	917664	1	1	YOKE, rod end, adjustable, 3/8"NF	
	917646	1	1	PIN, yoke, 3/8" diam.	
	900942	1	1	PIN, cotter, 3/32" x 5/8"	
		900942	1	1	ROD, operating (Graders #1102 and up)
8	911048	-	1	NUT, jam, 3/8"NF	
	910335	-	1	WASHER, plain, SAE std., 5/16"	
	904001	-	1	PIN, cotter, 3/32" x 1/2"	
	917664	-	1	YOKE, rod end, adjustable, 3/8"NF	
	917646	-	1	PIN, yoke, 3/8" diam.	
	900942	-	1	PIN, cotter, 3/32" x 5/8"	
		900942	-	1	ROD, operating (Graders #1102 and up)
8	075040	1	1	PEDAL, operating	
	075039	1	-	PIN, operating pedal (Graders prior to #11)	
9	900806	1	-	PIN, cotter, 1/8" x 1"	
	077361	1	1	BRACKET, operating pedal (Grader #11 and up)	
9	910319	2	2	CAPSCREW, 1/2"NF x 1"	
	910244	2	2	WASHER, plain, SAE std., 1/2"	
	911100	1	1	WASHER, plain, SAE std., 5/8"	
	900806	1	1	PIN, cotter, 1/8" x 1"	



BATTERIES AND CABLES

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	-----	2	BATTERY, storage, 6 volts, 21 plates (Autolite #5H-170R. Order from local battery dealer)	
2	604857	2	BOARD, bottom (1/2" x 6-3/4" x 13-3/8")	
3	074891	2	HOLD-DOWN, battery	
4	055044	3	STUD ASSEMBLY (Includes riveted NUT)	
	911026	3	NUT, 3/8"NC	
5	066175	1	CLAMP, battery hold-down	
6	042534	12	BLOCK, battery hold-down (rubber, 3" long)	
7	605159	1	CABLE, battery connecting (10" long)	
8	604856	1	CABLE, battery to starting motor (60-1/2" long)	
9	605158	1	CABLE, battery to ground (11" long)	
	903631	1	CAPSCREW, 3/8"NC x 1-1/4"	
	911026	1	NUT, 3/8"NC	
	904206	1	LOCKWASHER, 3/8"	
10	-----	3	CLIP, cable supporting (See LIGHTS AND WIRING)	

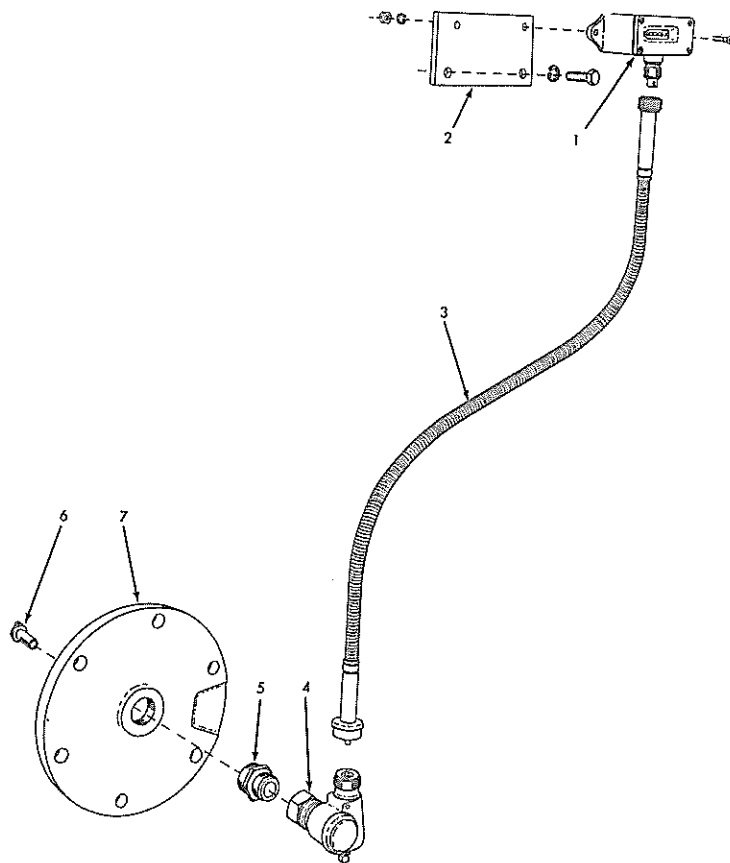


### REAR FLOOD LIGHT

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	603774	1	LIGHT ASSEMBLY, rear flood (See page 182 for repair parts)	
	904208	1		
	911043	1		
2	601376	1	BRACKET, flood light mounting	
	903630	2		
	904206	2		
	911026	2		
3	053635	1	WASHER, ball, light mounting	
4	603684	1	PLUG ASSEMBLY (Serviced only as a unit)	
5	076667	1	CABLE, flood light to junction block (118" long)	
6	605411	1	SWITCH, push-pull	
7	068367	1	CABLE, switch to connector (9" long)	
8	048142	1	CONNECTOR, switch cable to wiring harness	
9	051006	1	CABLE, switch to fuse block (4-1/2" long)	
10	U-479	3	CLIP, flood light cable (closed type, 3/16" diam., 13/32" bolt hole)	
11	AM-8763	4	CLIP, flood light cable (closed type, 3/16" diam., 9/32" bolt hole)	
12	-----	1	HARNESS, main wiring (See LIGHTS, HORN AND WIRING)	

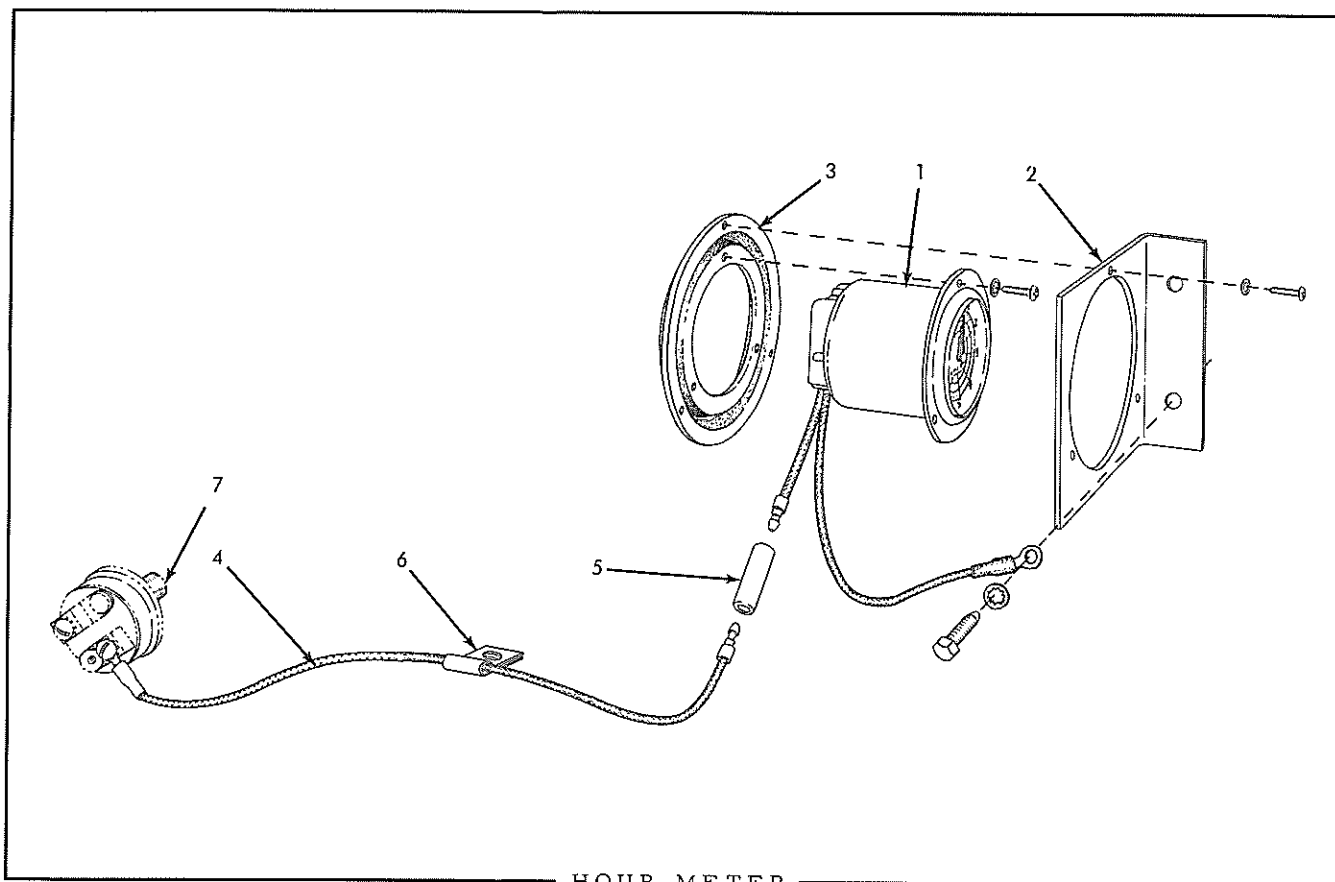




ODOMETER

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	031491	1	ODOMETER (registers miles)	
	031492	1	ODOMETER (registers kilometers)	
	905657	2	CAPSCREW, 1/4"NC x 1"	
	904204	2	LOCKWASHER, 1/4"	
	911024	2	NUT, 1/4"NC	
2	076587	1	PLATE, mounting	
	903775	2	CAPSCREW, 3/8"NC x 7/8"	
	904206	2	LOCKWASHER, 3/8"	
3	605220	1	SHAFT ASSEMBLY, flexible (27" long)(Consists of 1 HOUSING and 1 CABLE. Serviced only as a unit)	
4	605217	1	ANGLE JOINT ASSEMBLY (Serviced only as a unit)	
5	605221	1	SLEEVE, angle joint adapting	
6	605222	1	TIP, angle joint driving	
7	605056	1	COVER, rear axle cross shaft bearing (Used in place of standard COVER 066751)	

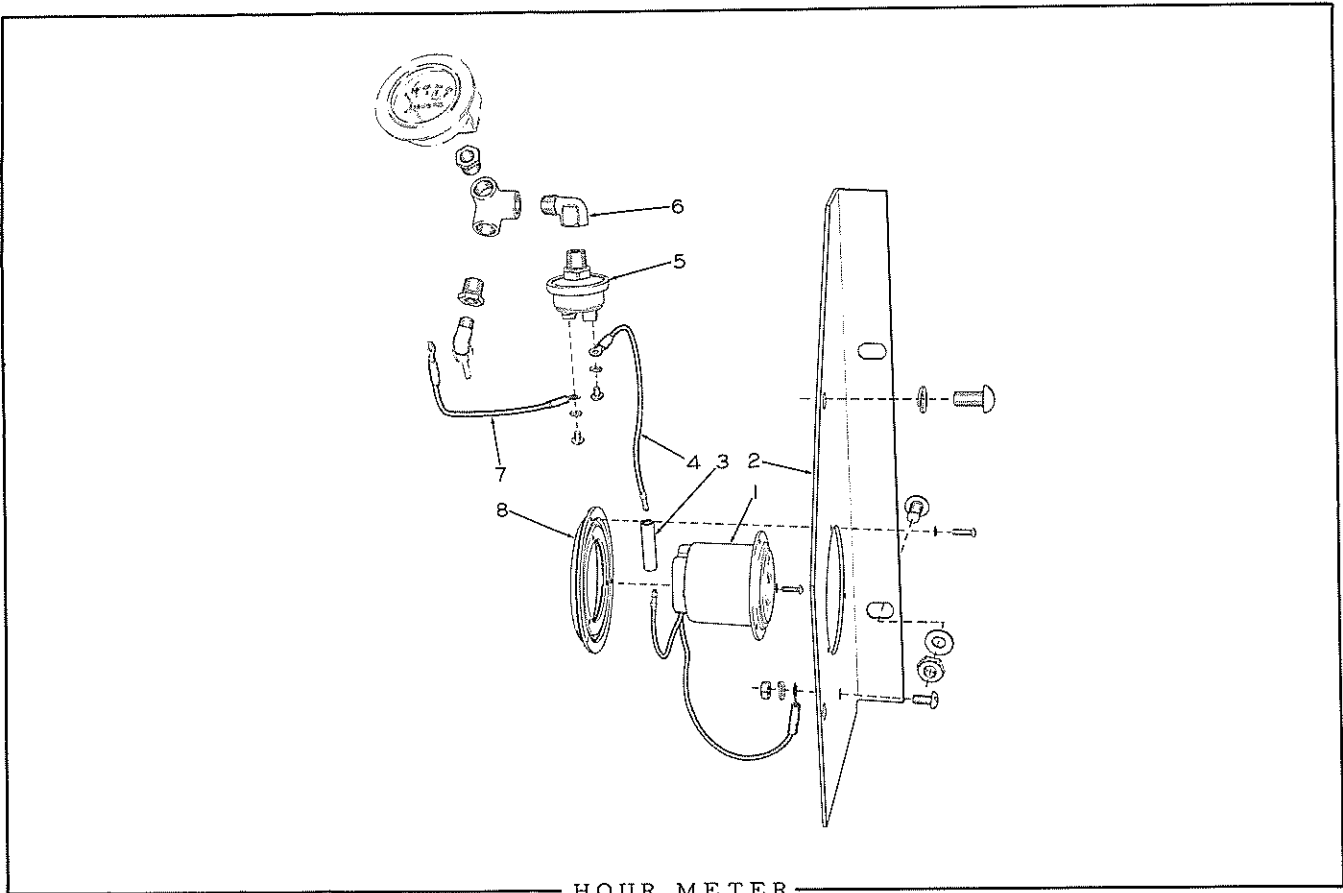


HOUR METER

USAGE: Special Equipment. For graders prior to serial No. 806.

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	051320	1	1	METER, hour (See note below)	
	903752	3	3	SCREW, machine, #6-32NC x 1/2"	
	912729	3	3	LOCKWASHER, internal teeth, #6	
	914089	1	-	SCREW, machine, 1/4"NF x 1/2"	} Ground cable terminal
	904204	1	-	LOCKWASHER, 1/4"	
	911040	1	-	NUT, 1/4"NF	
2	078378	1	-	BRACKET, mounting	
	041911	2	-	CAPSCREW, 3/8"NF x 3-1/2"	} Also attach balance weight cover
	904206	2	-	LOCKWASHER, 3/8"	
	911041	2	-	NUT, 3/8"NF	
	069317	-	1	BRACKET, mounting	
912327	-	2	CAPSCREW, 1/4"NC x 7/8"		
911114	-	2	WASHER, plain, SAE std., 1/4"		
904204	-	2	LOCKWASHER, 1/4"		
911024	-	2	NUT, 1/4"NC		
3	066467	1	1	DAMPER, vibration	
	903752	3	3	SCREW, machine, #6-32NC x 1/2"	
	912729	3	3	LOCKWASHER, internal teeth, #6	
4	076226	1	1	CABLE, hour meter to pressure switch	
5	048142	1	1	CONNECTOR, cable	
6	AM-9622	1	1	CLIP, cable (closed type, 3/16" diam., 17/32" bolt-hole)	
7	-----	1	1	SWITCH, pressure (See LIGHTS AND WIRING)	

NOTE: Meter carries manufacturer's warranty and in case of failure should be returned to John W. Hobbs Corporation, Springfield, Illinois for repairs.

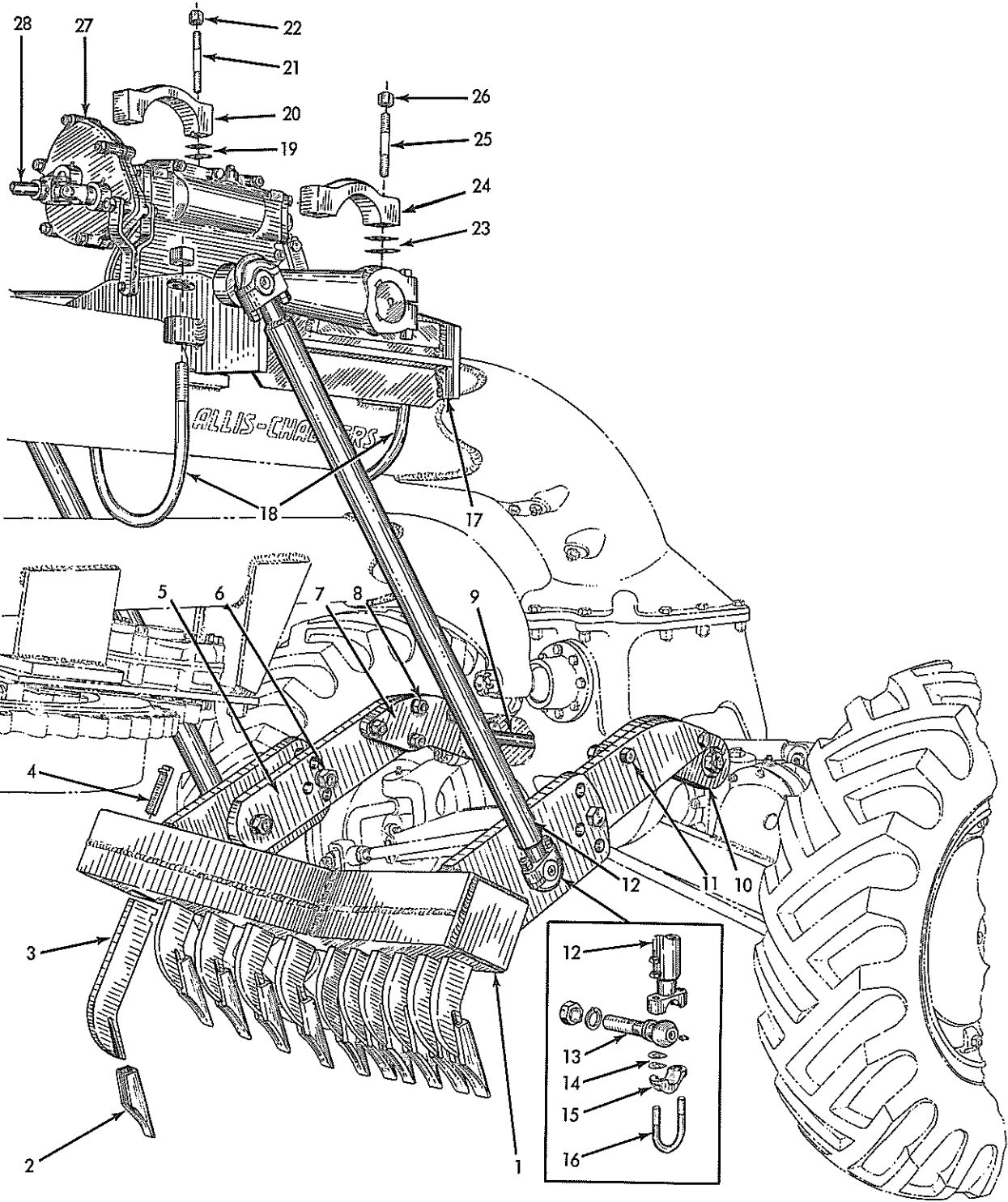


— HOUR METER —

USAGE: Special Equipment. For Model AD30 and AD40 graders serial No. 806 and up.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER	
1	051320	1	METER, hour (See note below)		
	903752	3	SCREW, machine, #6-32NC x 1/2"		
	912729	3	LOCKWASHER, internal teeth, #6		
	914089	1	SCREW, machine, 1/4"NF x 1/2"	} Ground cable terminal	
	904204	1	LOCKWASHER, 1/4"		
	911040	1	NUT, 1/4"NF		
2	079415	1	PANEL, mounting (Replaces standard PANEL 078913)		
	900593	4	SCREW, machine, 3/8"NC x 3/4"		
	904206	2	LOCKWASHER, 3/8"		
	911115	2	WASHER, plain, SAE std., 3/8"		
	911034	2	NUT, jam, 3/8"NC		
3	048142	1	CONNECTOR, cable		
4	068367	1	CABLE, hour meter to pressure switch		
5	050288	1	SWITCH, pressure		
6	078926	1	ELBOW, 90°, 1/4"NPT male and female, short type)		
	913498	1	ELBOW, pipe, side outlet, 1/4"NPT		
	901825	2	BUSHING, pipe reducing, 1/4"NPT to 1/8"NPT		
	915557	1	ELBOW, Sealastic, 90°, 1/8" tube, 1/8"NPT		
7	076319	1	CABLE, pressure switch to ammeter		
8	066467	1	DAMPER, vibration		
	903752	3	SCREW, machine, #6-32NC x 1/2"		
	912729	3	LOCKWASHER, internal teeth, #6		

NOTE: Meter carries manufacturer's warranty and in case of failure should be returned to John W. Hobbs Corporation, Springfield, Illinois for repairs.



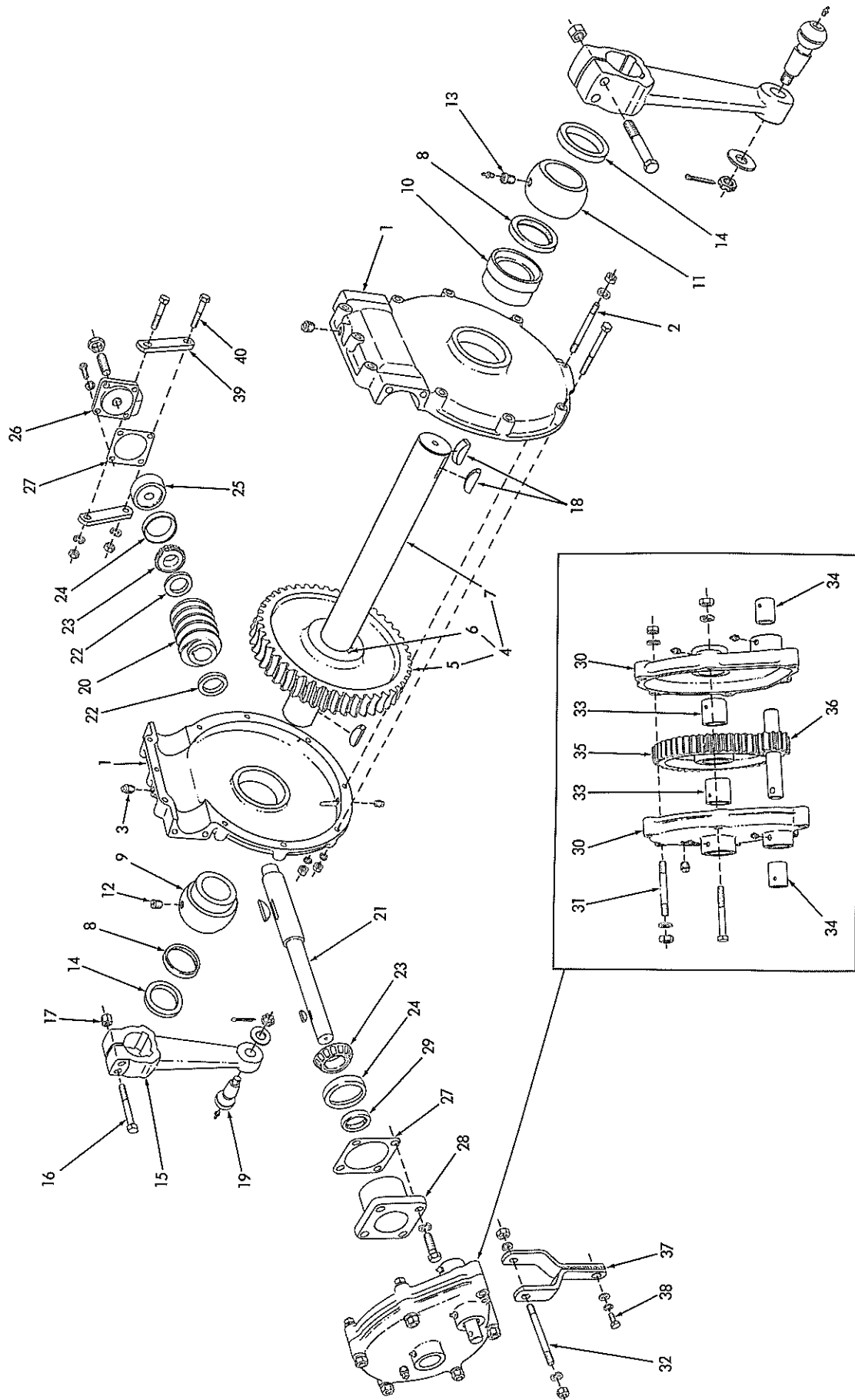
SCARIFIER

SCARIFIER

USAGE: Special Equipment.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	058753	1	FRAME (Includes item 13)	
2	062160	11	TOOTH, scarifier	
3	062159	11	SHANK, scarifier tooth	
4	602522	11	KEY, shank retaining	
5	058751	2	ARM, frame adjustment	
6	053251	2	CAPSCREW, 1-1/4"NF x 4-1/2"	
	904210	2	LOCKWASHER, 1-1/4"	
	913097	2	NUT, 1-1/4"NF	
7	056927	1	HUB, frame, left	
8	036546	4	CAPSCREW, 1"NF x 4-1/4"	
	910916	4	LOCKWASHER, 1"	
	911047	4	NUT, 1-1/4"NF	
9	056919	1	SHAFT, frame hub pivot	
	912841	2	NUT, slotted, 1-1/4"NF	
	904381	2	PIN, cotter, 3/16" x 2-1/4"	
10	056928	1	HUB, frame, right	
11	036546	4	CAPSCREW, 1"NF x 4-1/4"	
	910916	4	LOCKWASHER, 1"	
	911047	4	NUT, 1-1/4"NF	
12	056922	2	LINK, scarifier lift (54-9/16" long)	
13	058752	2	PIN, ball, scarifier lift	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
	904210	2	LOCKWASHER, 1-1/4"	
	913097	2	NUT, 1-1/4"NF	
14	053992	32	SHIM, left link cap (Use as req'd)	
15	053986	4	CAP, lift link	
16	605665	4	U-BOLT	
	911049	16	NUT, jam, 5/8"NF	
17	605296	1	SUPPORT, scarifier lift	
18	603107	2	U-BOLT	
	910916	4	LOCKWASHER, 1"	
	911032	4	NUT, 1"NC	
19	061181	6	SHIM, left bearing cap (1/32" thick. Use as req'd)	
	061182	10	SHIM, left bearing cap (.013" thick. Use as req'd)	
20	601288	1	CAP, worm gear shaft left bearing	
21	050913	2	STUD (3/4"NF x 5-3/16")	
22	012767	2	NUT, high, 3/4"NF	
23	061179	10	SHIM, right bearing cap (.013" thick. Use as req'd)	
	061180	6	SHIM, right bearing cap (1/32" thick. Use as req'd)	
24	601717	1	CAP, worm gear shaft right bearing	
25	050905	2	STUD (3/4"NF x 4-11/16")	
26	012767	2	NUT, high, 3/4"NF	
27	-----	1	LIFT ASSEMBLY (See page 195 for repair parts)	
28	-----	-	CONTROL SHAFTS (See page 197 for repair parts)	

NOTE: See PAINTING AND MARKING for Check and Lubricating Guide Transfer which is applied to front of the Scarifier Lift Support.



SCARIFIER LIFT

SCARIFIER LIFT

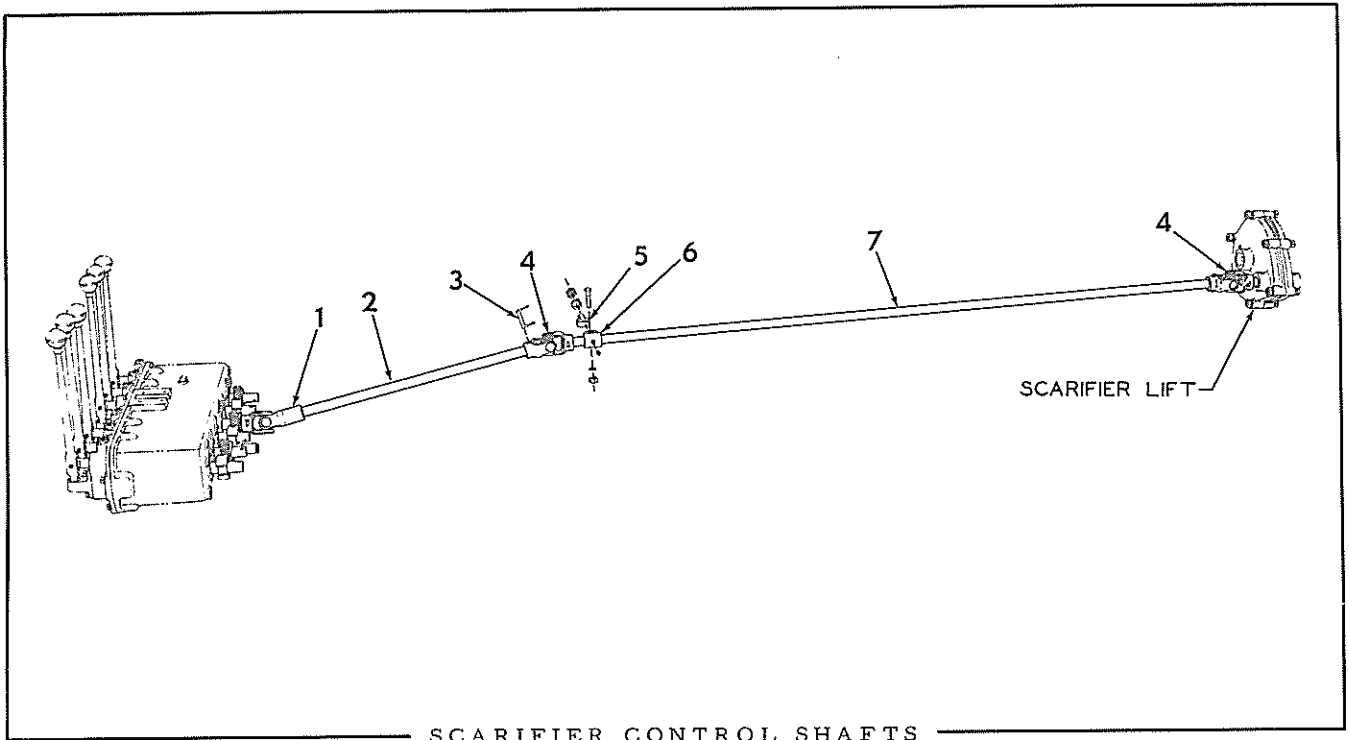
			USAGE: Special Equipment	
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	603015	1	HOUSING ASSEMBLY, worm gear (Consists of 2 HOUSINGS, 5 STUDS 601825, 10 NUTS 911028 and 10 LOCKWASHERS 904208)	
2	601825	5	STUD	
	910257	5	CAPSCREW, 1/2"NC x 4-3/4"	
	904208	15	LOCKWASHER, 1/2"	
	911028	15	NUT, 1/2"NC	
	912725	2	PLUG, pipe, 1/2"NPT	
3	050839	1	PLUG, vent, worm gear housing	
4	053191	1	GEAR AND SHAFT ASSEMBLY (Consists of items 5 thru 7)	
5	602653	1	GEAR only (left helix)	
6	601833	2	KEY	
7	603106	1	SHAFT only	
8	066309	2	SEAL, oil, worm gear shaft	
9	050904	1	BEARING, worm gear shaft, left	
10	050912	1	BEARING, worm gear shaft, intermediate	
11	605328	1	BEARING, worm gear shaft, right	
12	605308	1	PIN, anchor, worm gear shaft left bearing	
13	605307	1	NIPPLE, lubricating (Also serves as bearing anchor)	
	914465	1	FITTING, lubricating straight, 1/8"NPT	
14	605139	2	SPACER, lift crank	
15	063989	2	CRANK, scarifier lift	
16	051655	4	CAPSCREW, 3/4"NF x 5-1/4"	
17	012767	4	NUT, high, 3/4"NF	
18	601833	4	KEY, lift crank (woodruff, 3/4" x 2-7/16")	
19	601972	2	PIN, ball, lift crank	
	900822	2	WASHER, plain, U. S. std., 1"	
	911174	2	NUT, jam, slotted, 1"NF	
	900808	2	PIN, cotter, 1/8" x 1-1/2"	
	914465	2	FITTING, lubricating, straight, 1/8"NPT	
20	601456	1	WORM(left hand)	
21	603014	1	SHAFT, worm	
	911238	1	KEY, #U woodruff, 7/16" x 2-3/4"	
	911201	1	KEY, #E woodruff, 3/8" x 1-1/4"	
22	602641	2	SPACER, worm	
23	604389	2	CONE ASSEMBLY, worm shaft bearing	
24	U-2573	2	CUP, worm shaft bearing	
25	601838	1	PLUG, worm shaft bearing adjustment	
26	601663	1	CAP, worm shaft front bearing	
	903792	4	CAPSCREW, 5/8"NC x 1-3/4"	
	904209	4	LOCKWASHER, 5/8"	
	911229	1	SETSCREW, socket-head, oval point, 1"NC x 3"	
	911038	1	NUT, jam, 1"NC	
27	601839	2	GASKET, worm shaft bearing caps	
28	602989	1	CAP, worm shaft rear bearing	
	903792	4	CAPSCREW, 5/8"NC x 1-3/4"	
	904209	4	LOCKWASHER, 5/8"	
29	603462	1	SEAL, oil, worm shaft	

(Continued)

SCARIFIER LIFT (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
30	602531	1	HOUSING ASSEMBLY, reduction gear (Consists of 2 HOUSINGS, 2 BUSHINGS 053258, 2 BUSHINGS 053259, 2 STUDS 602028, 4 NUTS 911028 and 4 LOCKWASHERS 904208)	
31	602028	1	STUD (1/2"NC x 4")	
32	605303	1	STUD (1/2"NC x 4-3/4")	
	905668	4	CAPSCREW, 1/2"NC x 3-1/4"	
	904208	8	LOCKWASHER, 1/2"	
	911028	8	NUT, 1/2"NC	
	901653	1	PLUG, pipe, 3/8"NPT	
	914465	4	FITTING, lubricating, straight, 1/8"NPT	
33	053258	2	BUSHING, reduction gear housing	
34	053259	2	BUSHING, reduction gear housing	
35	601684	1	GEAR, reduction, worm shaft (48 teeth)	
36	602510	1	GEAR AND SHAFT ASSEMBLY, reduction (Serviced only as a unit)	
37	603102	1	STRAP, torque, reduction gear housing	
38	035244	1	CAPSCREW, 3/8"NC x 3/4"	
	900817	1	WASHER, plain, U.S. std., 3/8"	
	904206	1	LOCKWASHER, 3/8"	
39	605800	2	STRAP, torque, worm gear housing	
40	012526	2	CAPSCREW, 3/4"NF x 3-1/4"	
	904369	2	LOCKWASHER, 3/4"	
	911045	2	NUT, 3/4"NF	

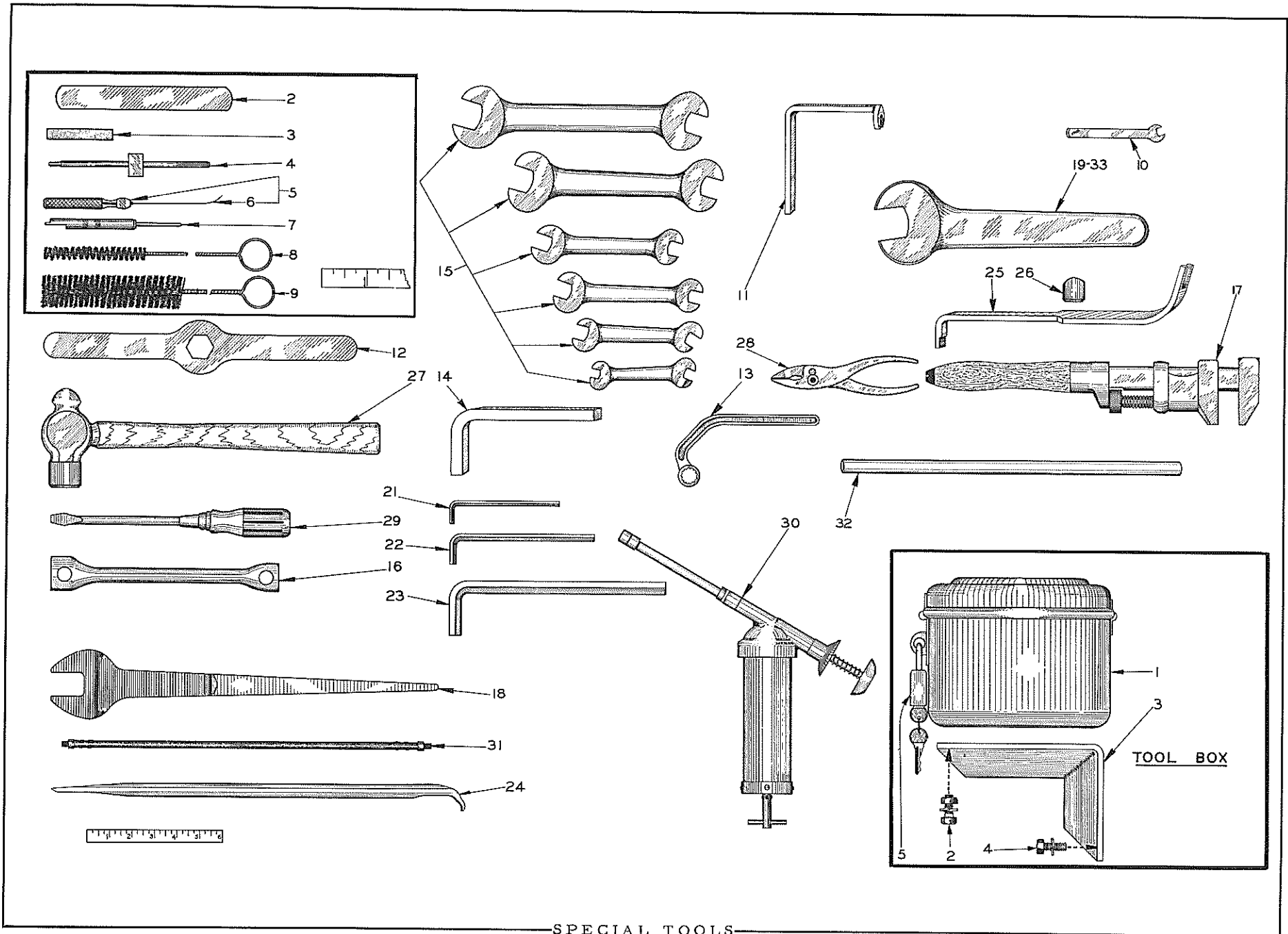




SCARIFIER CONTROL SHAFTS

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	053123	1	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
	911273	1	KEY, #127 woodruff, 1/4" x 2-1/8"	
	911159	1	WASHER, plain, SAE std., 1"	
2	076193	1	SHAFT, scarifier control, rear (26-5/8" long)	
3	601935	5	PIN, control shaft universal joint (3/8" x 2")	
	900805	10	PIN, cotter, 1/8" x 3/4"	
4	053121	2	JOINT ASSEMBLY, universal (See page 167 for repair parts)	
5	602328	1	BOLT, eye, control shaft bearing	
	904209	1	LOCKWASHER, 5/8"	
	911029	1	NUT, 5/8"NC	
6	600970	1	BEARING, control shaft	
	904541	1	CAPSCREW, 1/2"NC x 1-3/4"	
	904208	1	LOCKWASHER, 1/2"	
	911028	1	NUT, 1/2"NC	
	914465	1	FITTING, lubricating, straight, 1/8"NPT	
7	076194	1	SHAFT, scarifier control, front (70-7/8" long)	



SPECIAL TOOLS

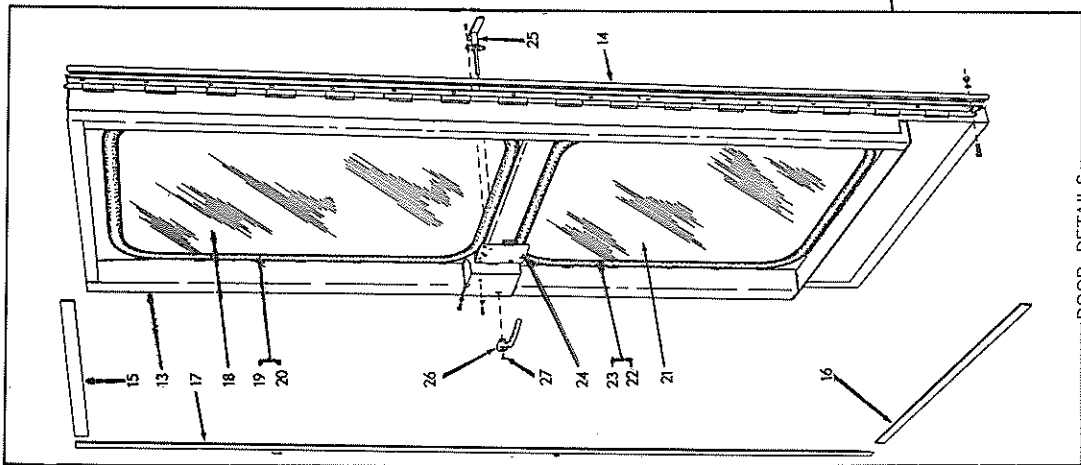
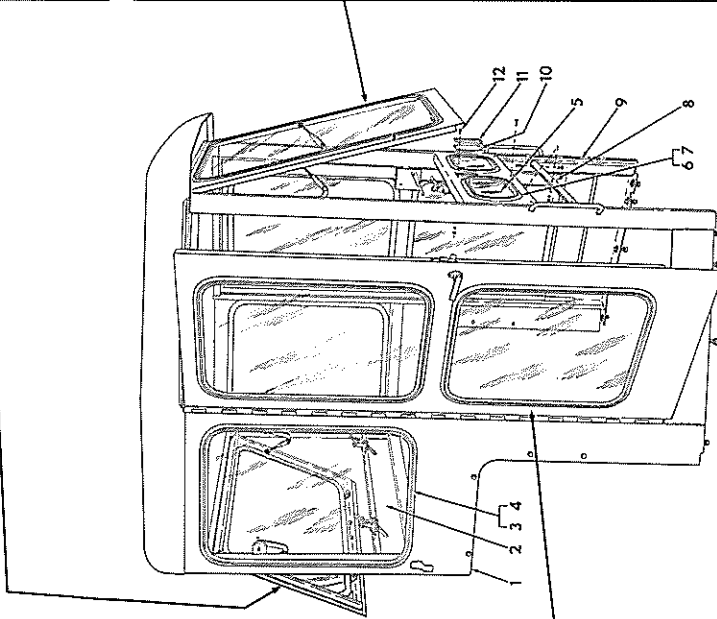
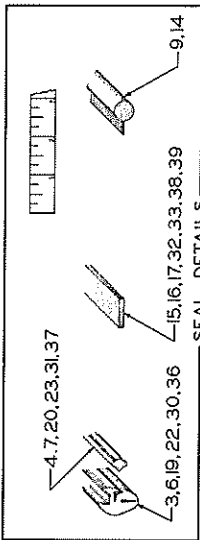
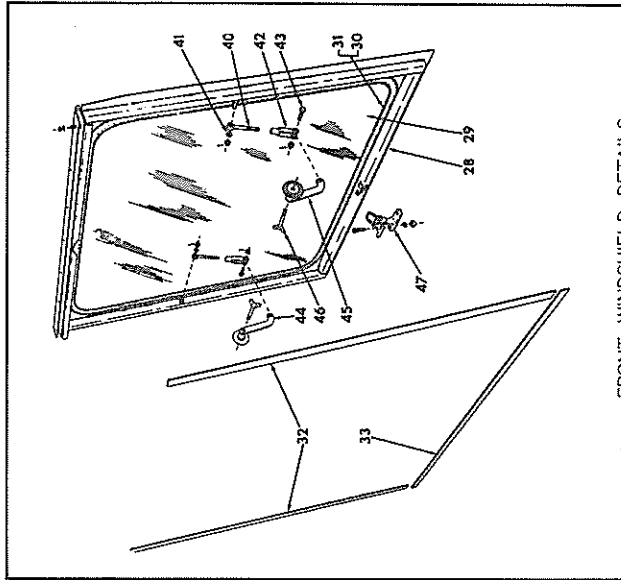
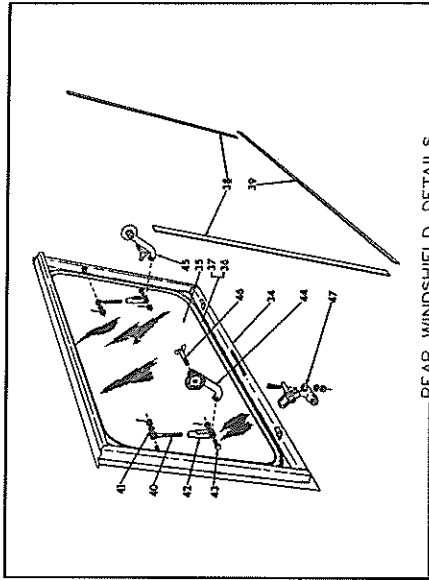
SPECIAL TOOLS

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
2	074549	1	GAUGE, feeler, rocker clearance . . . . .	060593 083895
3	044814	1	STONE, sharpening . . . . .	060593 083895
4	074741	1	GAUGE, injector timing . . . . .	060593 083895
5	044822	1	WISE, pin, injector probing wire (Includes item 6) . . . . .	060593 083895
6	044818	1	WIRE, probing, injector spray tip	
7	044819	1	REAMER, injector spray tip . . . . .	060593 083895
8	044812	1	BRUSH, cleaning, injector rack hole . . . . .	060593 083895
9	044811	1	BRUSH, cleaning, injector fuel hole . . . . .	060593 083895
10	048193	1	WRENCH, push rod holding (5/16" open end)	
11	048163	1	WRENCH, push rod locking nut (1/2" open end)	
12	040284	1	WRENCH, injector nut . . . . .	083895
13	040286	1	WRENCH, fuel pump removal . . . . .	083895
14	043769	1	WRENCH, drain and filling plugs (90°, 1/2" square) . . . . .	083895
15	012377	1	WRENCH KIT (6 WRENCHES 7/16" to 1-1/4" in a cloth case) . . . . .	083895
16	603723	1	WRENCH, socket, tire rim nut . . . . .	083895
17	912486	1	WRENCH, automotive, adjustable, 15" . . . . .	083895
18	912554	1	WRENCH, structural, offset, 1-7/64" opening . . . . .	083895
19	043421	1	WRENCH, fan belt adjustment (1-7/16" opening)	
21	912785	1	KEY, socket screw, hexagonal, long, 3/16" . . . . .	083895
22	912787	1	KEY, socket screw, hexagonal, long, 5/16" . . . . .	083895
23	912485	1	KEY, socket screw, hexagonal, long, 9/16" . . . . .	083895
24	605206	1	TOOL, tire . . . . .	083895
25	074762	1	TOOL, valve lifting and injector removing . . . . .	083895
26	044825	1	FULCRUM, valve lifting and injector removing tool . . . . .	083895
27	012387	1	HAMMER, ball pein, 1 lb. . . . .	083895
28	012389	1	PLIERS . . . . .	083895
29	036268	1	SCREWDRIVER . . . . .	083895
30	034239	1	GUN, grease (high pressure, push type, 9 oz. capacity. LINCOLN No. 1020)(Order repair parts from local Dealer) . . . . .	083895
31	605230	1	HOSE, bleeding, hydraulic brakes . . . . .	083895
32	083319	1	TUBE, oil filler, power steering housing . . . . .	083895
33	083346	1	WRENCH, power steering cylinder packing nut (1-5/8" opening). . . . .	083895

NOTE: For complete line of service tools for General Motors Diesel Engines, consult Kent-Moore Organization, General Motors Research Building, Detroit 2, Michigan.

TOOL BOX

1	604943	1	BOX, tool	
2	903630	4	CAPSCREW, 3/8"NC x 1"	
	904206	4	LOCKWASHER, 3/8"	
	911026	4	NUT, 3/8"NC	
3	051196	2	BRACKET, supporting	
4	903629	4	CAPSCREW, 3/8"NC x 3/4"	
	904206	4	LOCKWASHER, 3/8"	
5	912484	1	PADLOCK with KEYS . . . . .	083895

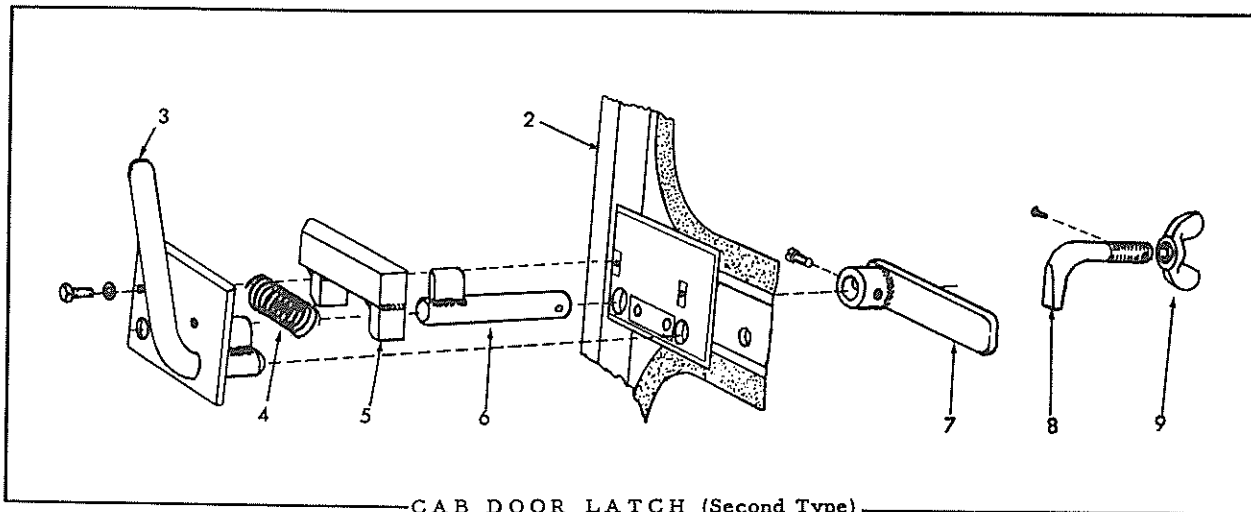


C.A.B

C A B

			USAGE: Special Equipment		
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER	
1	078100	1	BODY (Stripped of all removable parts) (Used prior to Cab Serial No. 6890. See page 201A)		
	915636	4	CAPSCREW, 1/2"NC x 1-5/8"		
	903640	4	CAPSCREW, 1/2"NC x 2"		
	900818	8	WASHER, plain, U.S. std., 1/2"		
	904208	8	LOCKWASHER, 1/2"		
	911028	8	NUT, 1/2"NC		
	903630	13	CAPSCREW, 3/8"NC x 1"		
	911115	26	WASHER, plain, SAE std., 3/8"		
	904206	13	LOCKWASHER, 3/8"		
	911026	13	NUT, 3/8"NC		
2	078268	2	GLASS, body side panel		
3	078257	2	SEAL, body side panel glass		
4	078254	2	STRIP, expanding, side panel glass seal		
5	078271	2	GLASS, body front panel		
6	078256	2	SEAL, body front panel glass		
7	078253	2	STRIP, expanding, front panel glass seal		
8	078099	1	ANGLE, front panel attachment		
	903772	5	CAPSCREW, 5/16"NC x 1"		
	904205	5	LOCKWASHER, 5/16"		
	911025	5	NUT, 5/16"NC		
9	078250	2	SEAL, front panel, side		
	904516	12	SCREW, drive, #6 x 1/4"		
10	078272	1	SEAL, steering wheel shaft opening		
11	078098	1	PLATE, seal retaining		
12	077508	4	SCREW, truss-hd., 1/4"NC x 5/8"		
	904204	4	LOCKWASHER, 1/4"		
	911024	4	NUT, 1/4"NC		
13	078095	1	DOOR, left (Stripped of all removable parts)	} Used prior to Cab Serial No. 6890. See page 201A	
		1	DOOR, right (Stripped of all removable parts)		
	905656	32	CAPSCREW, 1/4"NC x 5/8"		
	904204	32	LOCKWASHER, 1/4"		
	911024	32	NUT, 1/4"NC		
14	078251	2	SEAL, door back		
15	078266	2	SEAL, door top		
16	077995	2	SEAL, door bottom		
17	078265	2	SEAL, door front		
18	078268	2	GLASS, door, upper		
19	078257	2	SEAL, door upper glass		
20	078254	2	STRIP, expanding, door upper glass seal		
21	078269	2	GLASS, door, lower		
22	077783	2	SEAL, door lower glass		
23	077765	2	STRIP, expanding, door lower glass seal		

(Continued)



CAB DOOR LATCH (Second Type)

USAGE: Special Equipment. Used on Cab Serial No. 6890 and up.

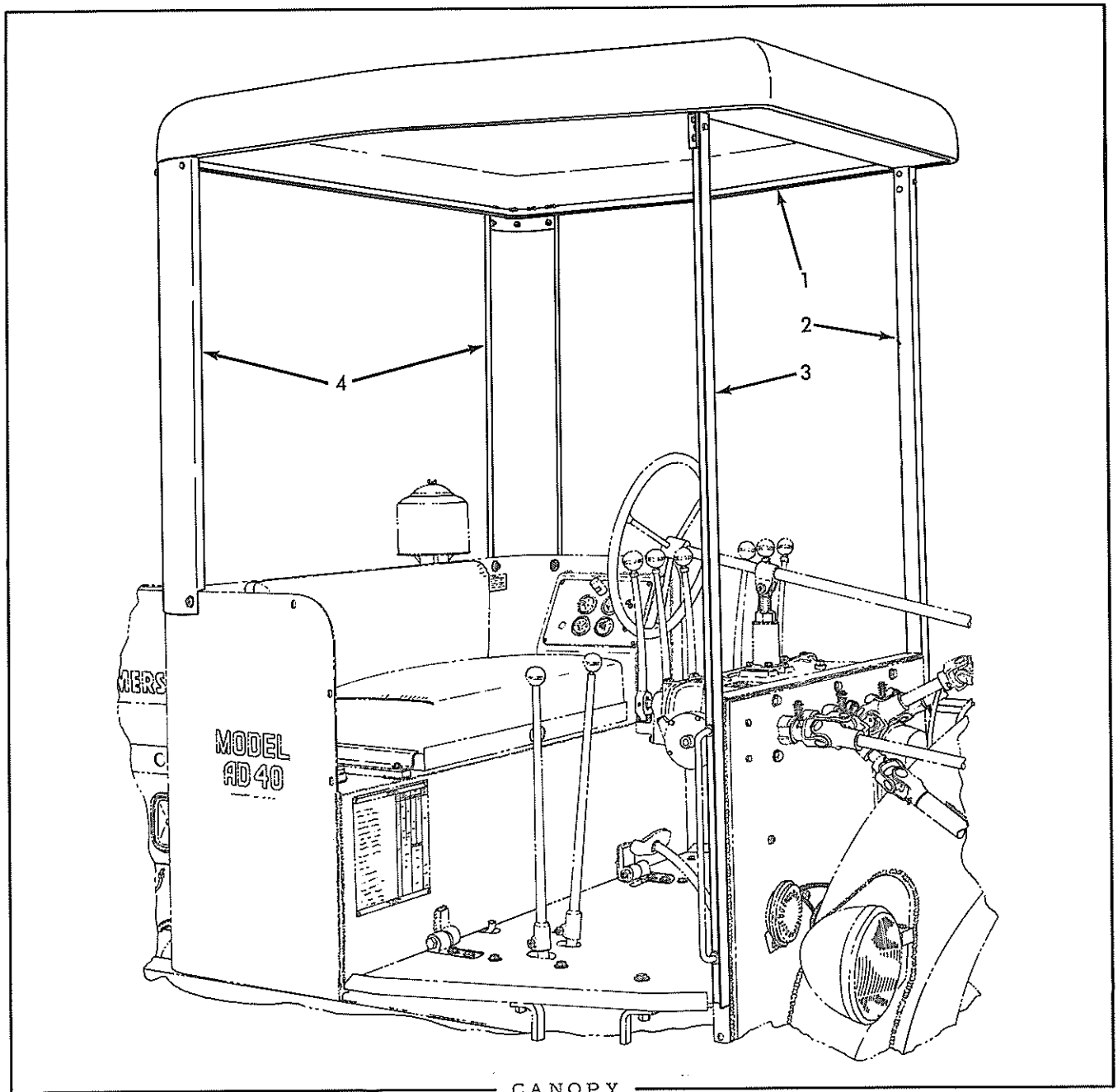
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	084977	1	BODY (Stripped of all removable parts)	
2	084869	1	DOOR, left (Stripped of all removable parts)	
	084870	1	DOOR, right (Stripped of all removable parts)	
3	084875	1	HANDLE ASSEMBLY, inside, right door	
	084876	1	HANDLE ASSEMBLY, inside, left door	
	911168	4	CAPSCREW, 5/16"NF x 7/8"	
	904205	4	LOCKWASHER, 5/16"	
4	085016	2	SPRING, door latching bolt	
5	084879	1	BOLT, door latching, right	
	084880	1	BOLT, door latching, left	
6	084877	1	SHAFT, right outside door handle	
	084878	1	SHAFT, left outside door handle	
7	084874	2	HANDLE, outside	
	907610	2	SCREW, machine, fil-hd., 5/16"NC x 1"	
8	085558	2	HOOK, door hold-back	
	906759	2	SCREW, drive, #4 x 1/4"	
9	085559	2	NUT, wing, 5/8"NC	

MEMO

CAB (Continued)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
24	077641	1	LOCK ASSEMBLY, left door (Serviced only as a unit)	Used prior to Cab Serial No. 6890. See page 201A.
	077642	1	LOCK ASSEMBLY, right door (Serviced only as a unit)	
	903755	6	SCREW, machine, rd-hd., #12-24NC x 3/4"	
	916158	6	LOCKWASHER, ex-teeth, #12	
25	078276	2	HANDLE, door, outside	
	900575	4	SCREW, machine; 1/4"NC x 5/8"	
26	077546	2	HANDLE, door, inside	
27	077719	2	SCREW, machine, oval head, #10-32NC x 1/2"	
28	078094	1	FRAME, front windshield (Stripped of all removable parts)	
	905656	7	CAPSCREW, 1/4"NC x 5/8"	
	904204	7	LOCKWASHER, 1/4"	
	911024	7	NUT, 1/4"NC	
29	078270	1	GLASS, front windshield	
30	078259	1	SEAL, front windshield glass	
31	078255	1	STRIP, expanding, front windshield glass seal	
32	078261	2	SEAL, front windshield, sides	
33	078260	1	SEAL, front windshield, bottom	
34	078097	1	FRAME, rear windshield (Stripped of all removable parts)	
35	078267	1	GLASS, rear windshield	
36	078258	1	SEAL, rear windshield glass	
37	078252	1	STRIP, expanding, rear windshield glass seal	
38	078263	2	SEAL, rear windshield, sides	
	078262	1	SEAL, rear windshield, bottom	
40	057148	4	BOLT, eye, windshield adjustment	
	911053	4	NUT, castle, 3/8"NF	
	900801	4	PIN, cotter, 3/32" x 3/4"	
41	078264	4	WASHER, windshield eye bolt	
42	917664	4	YOKE, rod end, adjustable, 3/8"NF	
43	011258	4	CAPSCREW, windshield adjustment yoke	
	911053	4	NUT, castle, 3/8"NF	
	900801	4	PIN, cotter, 3/32" x 3/4"	
44	057149	2	ARM, windshield adjustment, left	
45	057150	2	ARM, windshield adjustment, right	
46	058263	4	WINGSCREW, windshield adjustment arm	
47	057138	3	LATCH ASSEMBLY, windshield (Serviced only as a unit)	
	903630	6	CAPSCREW, 3/8"NC x 1"	
	904206	6	LOCKWASHER, 3/8"	
	911026	6	NUT, 3/8"NC	

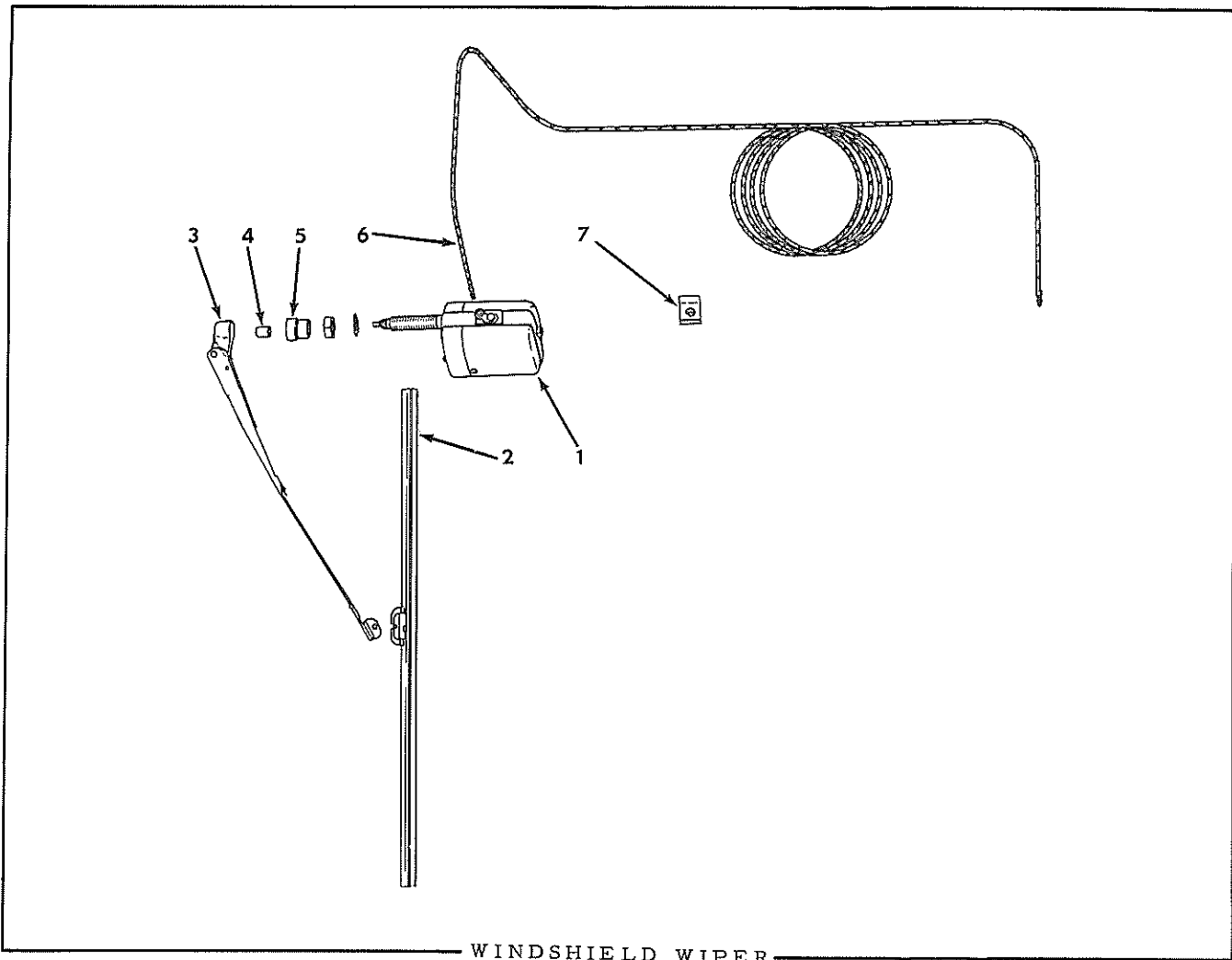




CANOPY

USAGE: Special Equipment.

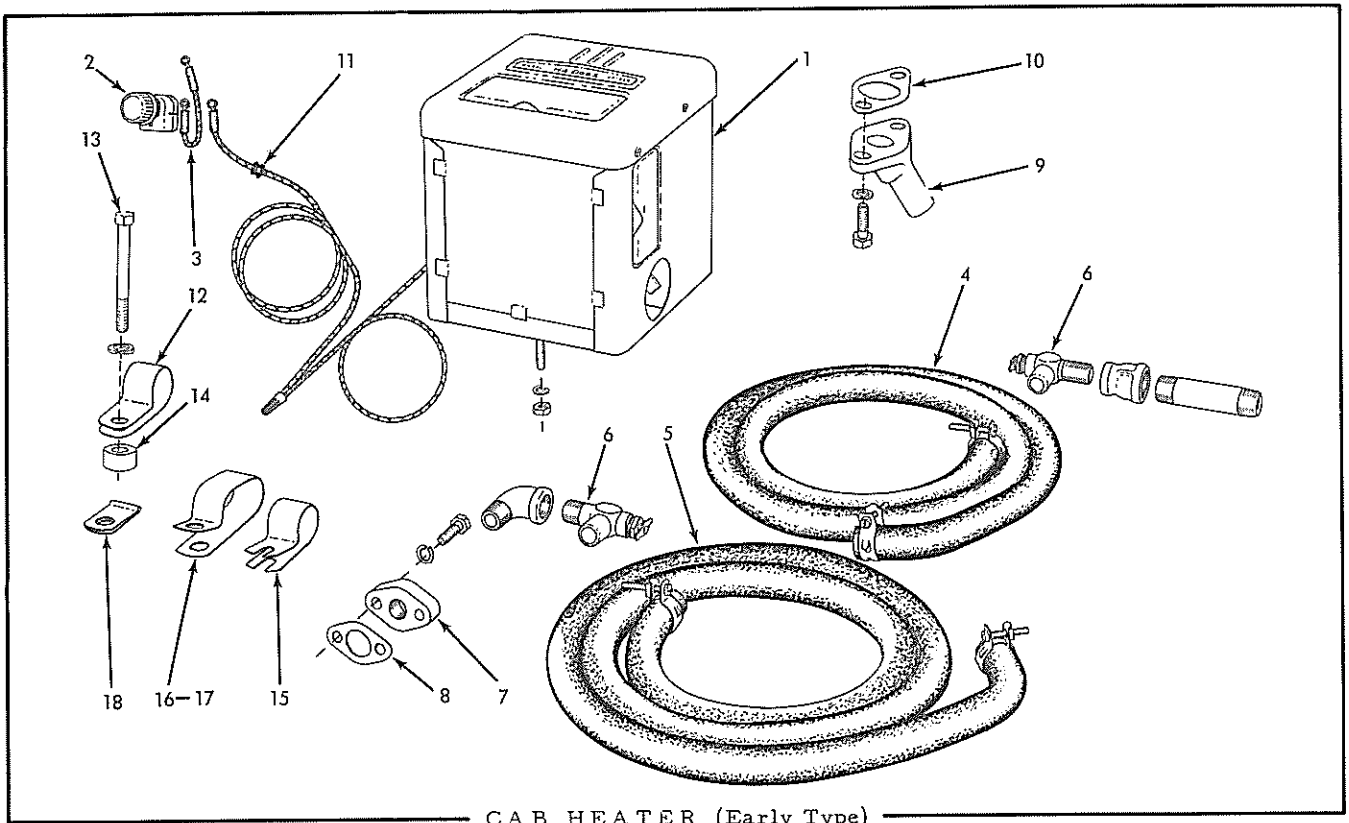
ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	079222	1	TOP, canopy	
	903630	12	CAPSCREW, 3/8"NC x 1"	
	904206	12	LOCKWASHER, 1"	
	911026	12	NUT, 3/8"NC	
2	079219	1	POST, front, left	
3	079220	1	POST, front, right	
4	079218	2	POST, rear	
	903630	4	CAPSCREW, 3/8"NC x 1"	
	911115	8	WASHER, plain, SAE std., 3/8"	
	904206	4	LOCKWASHER, 3/8"	
	911026	4	NUT, 3/8"NC	



WINDSHIELD WIPER

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	077444	1	MOTOR, windshield wiper (American Bosch Model WWA-12C-347. Has built in switch. Order repair parts from nearest authorized service station)	
	910876	1	NUT, jam, 7/16"NF	
	914666	1	LOCKWASHER, external teeth, 7/16"	
2	605409	1	BLADE, wiping	
3	077446	1	ARM, adjustable, wiping blade	
4	056125	1	NUT, retaining, wiping blade arm	
5	056126	1	ADAPTER, wiping blade arm	
6	077445	1	CABLE (86" long)	
7	AM-8763	2	CLIP, cable supporting (single, 3/16" diam., 9/32" bolt-hole)	

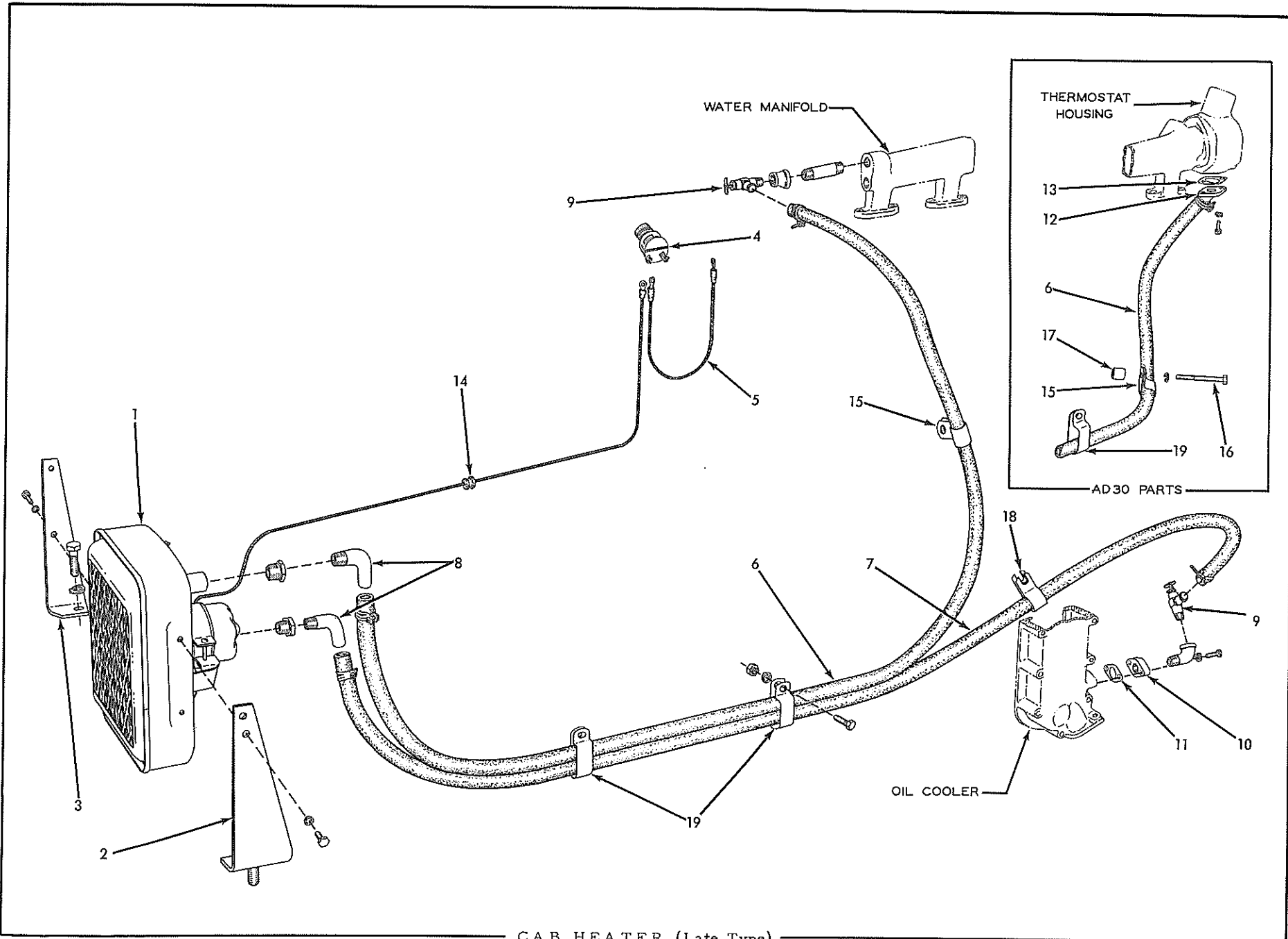


CAB HEATER (Early Type)

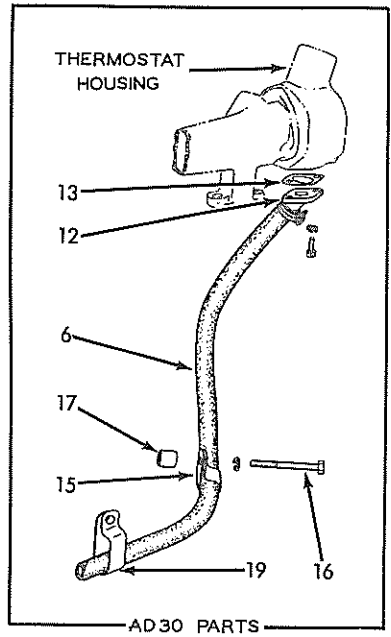
USAGE: Special Equipment on early units. See page 207 for late type.

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	076739	1	1	HEATER ASSEMBLY (Ha Dees Model 350, 12 volt. Order repair parts from Burd Piston Ring Company. Rockford, Illinois)	
	904205	3	3	LOCKWASHER, 5/16"	
	911025	3	3	NUT, 5/16"NC	
2	605521	1	1	SWITCH, rheostat type (2 speed. Includes FUSE)	
3	074887	1	1	CABLE, switch to fuse block (14" long)	
4	078367	1	-	HOSE, heater to thermostat housing (92" long)	
	076776	-	1	HOSE, heater to water manifold (59" long)	
	911300	2	2	CLAMP, hose, 15/16" diam.	
5	076775	1	1	HOSE, heater to oil cooler (69" long)	
	911300	2	2	CLAMP, hose, 15/16" diam.	
6	605525	1	2	VALVE, water shut-off (angle type, 3/8"NPT)	
	901723	1	1	ELBOW, pipe, street, 90°, 3/8"NPT	
	904227	-	1	COUPLING, pipe reducing, 1/2"NPT to 3/8"NPT	
	901504	-	1	NIPPLE, pipe, 1/2"NPT x 3"	
7	064439	1	1	PLATE, hose connection (Replaces standard COVER 5151305 on oil cooler housing)	
	903772	2	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	2	LOCKWASHER, 5/16"	
8	5151190	1	1	GASKET, hose connection plate	
9	064526	1	-	ELBOW, hose connection (Replaces standard COVER 5155815 on thermostat housing)	
	903772	2	-	CAPSCREW, 5/16"NC x 1"	
	904205	2	-	LOCKWASHER, 5/16"	
10	064477	1	-	GASKET, hose connection elbow	
11	023176	1	1	GROMMET, heater cable (rubber)	
12	041303	1	1	CLIP, hose supporting (closed type, 1" diam., 13/32" bolt-hole)	
13	041915	1	-	CAPSCREW, 3/8"NC x 3-1/2" (Also attaches balance weight cover)	
	904206	1	-	LOCKWASHER, 3/8"	

(Continued)



CAB HEATER (Late Type)



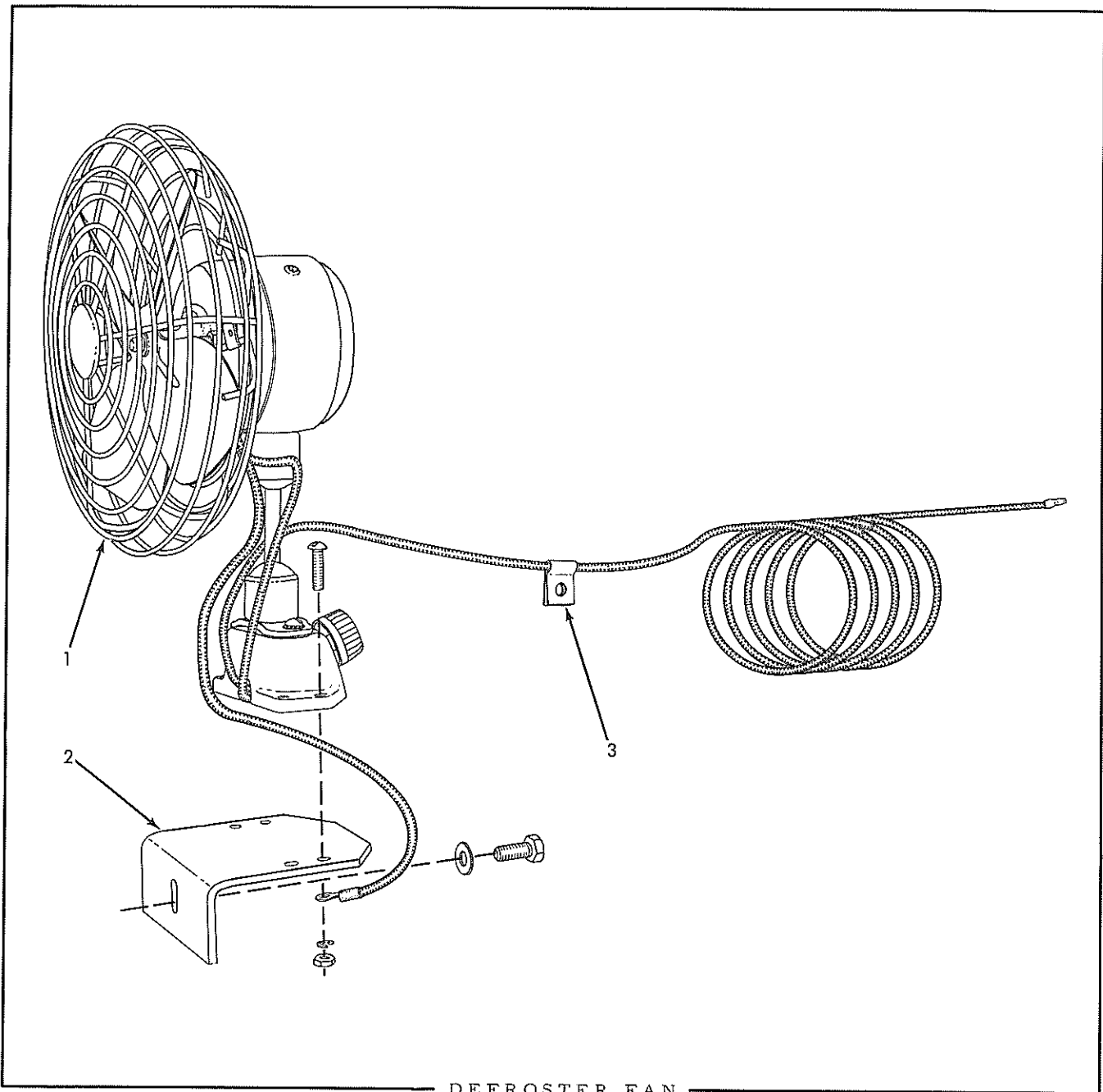
CAB HEATER (Continued)

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
14	076211	1	-	BLOCK, clip spacing	
15	077724	-	1	CLIP, hose supporting (closed type, 1" diam., 7/32" bolt-slot)	
16	055991	1	1	CLIP, hose supporting (closed type, for two 1" diam., lines, 17/32" bolt-hole)	
17	060525	1	-	CLIP, hose supporting (closed type, for two 1" diam., lines, 13/32" bolt-hole)	
18	065953	2	2	CLIP, cable supporting (closed type, 1/8" diam., 17/32" bolt-hole)	

CAB HEATER (Late Type)

USAGE: Special Equipment. See page 205 for early type.

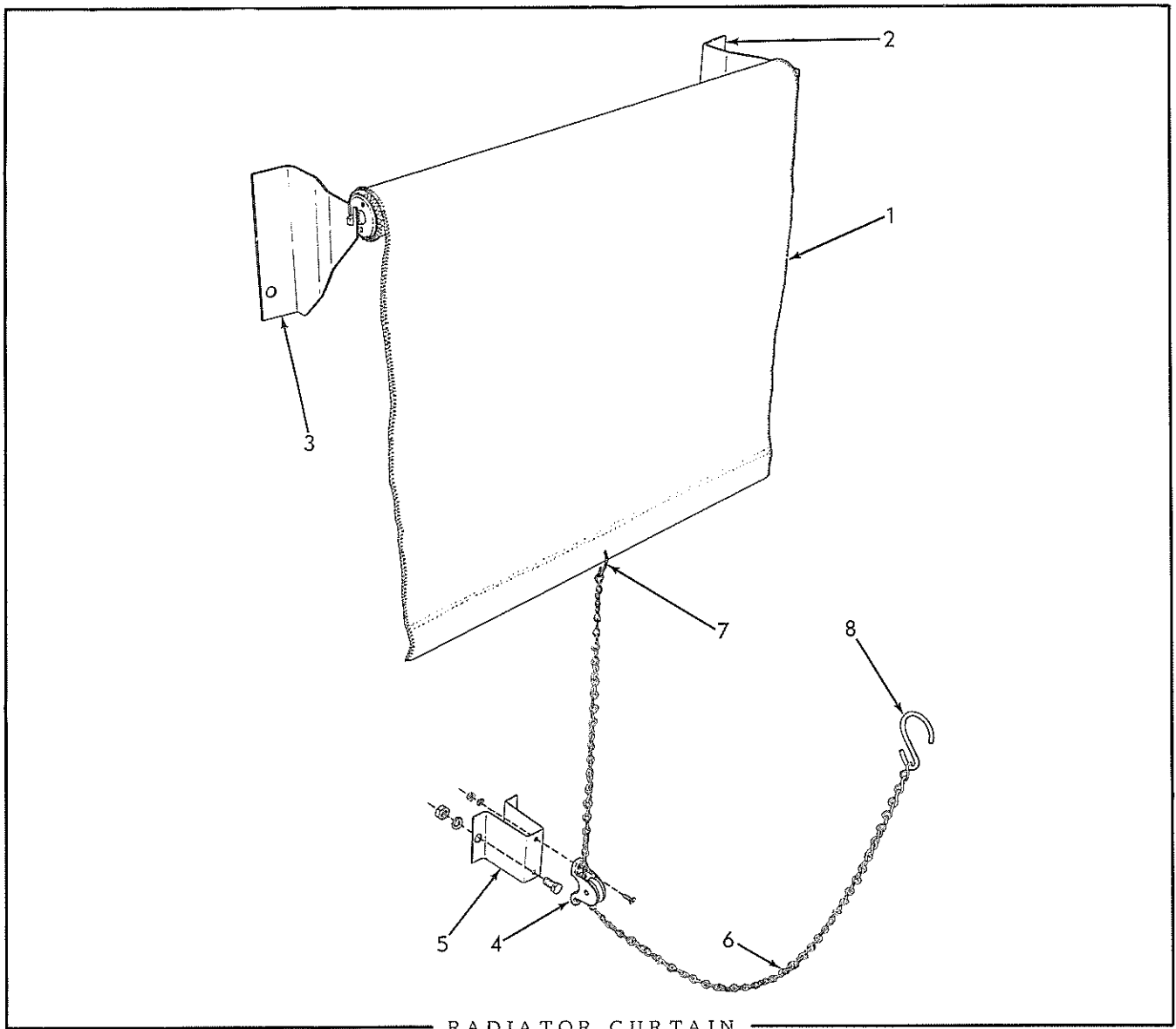
1	078546	1	1	HEATER ASSEMBLY (Vendor's Model US2, 12 volt. Order repair parts from Burd Piston Ring Company, Rockford, Illinois)	
	905656	4	4	CAPSCREW, 1/4"NC x 1/2"	
	904204	4	4	LOCKWASHER, 1/4"	
2	078550	1	1	BRACKET, mounting, left	
	903639	1	1	CAPSCREW, 1/2"NC x 1-1/2"	
	904208	1	1	LOCKWASHER, 1/2"	
	911028	1	1	NUT, 1/2"NC	
3	078551	1	1	BRACKET, mounting, right	
	904541	1	1	CAPSCREW, 1/2"NC x 1-3/4"	
	904208	1	1	LOCKWASHER, 1/2"	
4	605521	1	1	SWITCH, rheostat type (2 speed. Includes FUSE)	
5	074887	1	1	CABLE, switch to fuse block (14" long)	
6	078833	1	-	HOSE, heater to thermostat housing (105" long)	
	078547	-	1	HOSE, heater to water manifold (83" long)	
	911300	2	2	CLAMP, hose, 15/16" diam.	
7	078548	1	1	HOSE, heater to oil cooler (75" long)	
	911300	2	2	CLAMP, hose, 15/16" diam.	
8	078549	2	2	ELBOW, hose connection	
	904271	2	2	BUSHING, pipe reducing, 1/2"NPT to 3/8"NPT	
9	605525	1	2	VALVE, water shut-off (angle type, 3/8"NPT)	
	901723	1	1	ELBOW, pipe, street, 90°, 3/8"NPT	
	904227	-	1	COUPLING, pipe reducing, 1/2"NPT to 3/8"NPT	
	901504	-	1	NIPPLE, pipe, 1/2"NPT x 3"	
10	064439	1	1	PLATE, hose connection (Replaces standard COVER 5151305 on oil cooler housing)	
	903772	2	2	CAPSCREW, 5/16"NC x 1"	
	904205	2	2	LOCKWASHER, 5/16"	
11	5151190	1	1	GASKET, hose connection plate	
12	064526	1	-	ELBOW, hose connection (Replaces standard COVER 5155815 on thermostat housing)	
	903772	2	-	CAPSCREW, 5/16"NC x 1"	
	904205	2	-	LOCKWASHER, 5/16"	
13	064477	1	-	GASKET, hose connection elbow	
14	023176	1	1	GROMMET, heater cable (rubber)	
15	041303	1	1	CLIP, hose supporting (closed type, 1" diam., 13/32" bolt-hole)	
16	052016	1	-	CAPSCREW, 3/8"NF x 4" (Also attaches balance weight covers)	
	904206	1	-	LOCKWASHER, 3/8"	
17	076211	1	-	BLOCK, clip spacing	
18	077724	-	1	CLIP, hose supporting (closed type, 1" diam., 7/32" bolt-slot)	
19	060525	3	2	CLIP, hose supporting (closed type, for two 1" diam. lines, 13/32" bolt-hole)	
	903630	2	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	2	LOCKWASHER, 3/8"	
	911026	2	2	NUT, 3/8"NC	



DEFROSTER FAN

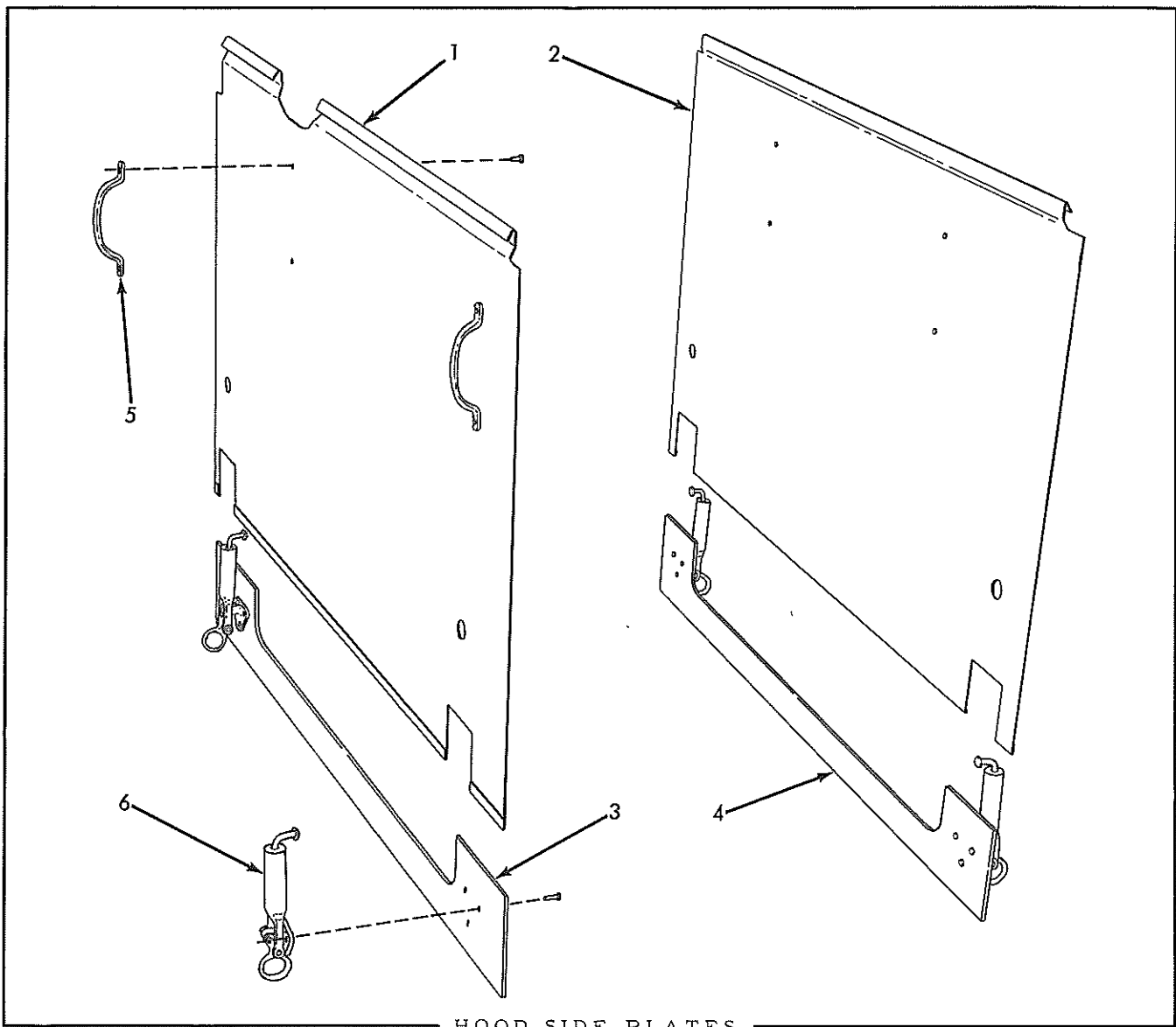
USAGE: Special Equipment.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	077539	1	FAN ASSEMBLY (Includes MOTOR, FAN, GUARD, PEDESTAL, SWITCH and WIRING)(Ha Dees No. 91-14-J. Order repair parts from Burd Piston Ring Co., Rockford, Illinois)	
	901174	4	SCREW, machine, rd-hd., #10-24NC x 3/4"	
	904203	4	LOCKWASHER, #10	
	901310	4	NUT, #10-24NC	
2	077540	1	BRACKET, fan mounting	
	-----	1	CAPSCREW, 1/4"NC x 5/8" (See CAB)	
	911114	1	WASHER, plain, SAE std., 1/4"	
3	AM-8763	1	CLIP, fan cable (closed type, 3/16" diam., 9/32" bolt-hole)	



RADIATOR CURTAIN

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
USAGE: Special Equipment.					
1	060653	1	1	CURTAIN ASSEMBLY (Includes ROLLER)	
2	060652	1	1	BRACKET, curtain mounting, right	
3	060651	1	1	BRACKET, curtain mounting, left	
4	057634	1	1	PULLEY, curtain adjusting chain	
	901287	2	2	SCREW, machine, fl-hd., #10-24NC x 5/8"	
	904203	2	2	LOCKWASHER, #10	
	901310	2	2	NUT, #10-24NC	
5	064840	-	1	BRACKET, mounting, curtain pulley	
	903628	-	2	CAPSCREW, 3/8"NC x 5/8"	
	904206	-	2	LOCKWASHER, 3/8"	
	911026	-	2	NUT, 3/8"NC	
6	057636	1	1	CHAIN, curtain adjusting	
7	057638	1	1	HOOK, curtain adjusting chain (inside)	
8	057637	1	1	HOOK, curtain adjusting chain (outside)	



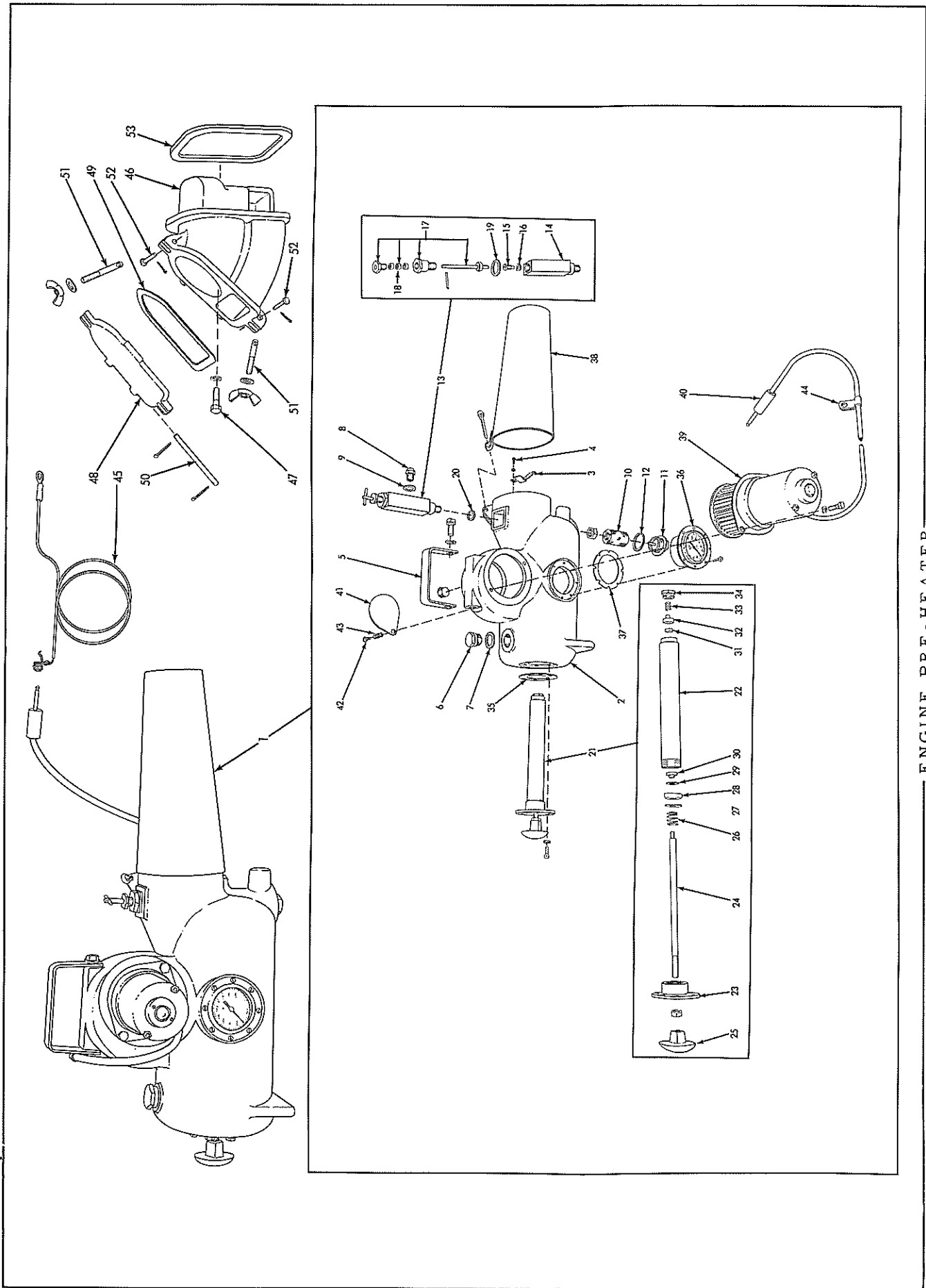
HOOD SIDE PLATES

USAGE: Special Equipment.

ITEM	PART NUMBER	QUANTITY		DESCRIPTION	KIT NUMBER
		AD30	AD40		
1	077984	1	-	PLATE ASSEMBLY, hood side, left (Includes item 5)	
	076407	-	1	PLATE ASSEMBLY, hood side, left (Includes item 5)	
2	077988	1	-	PLATE ASSEMBLY, hood side, right (Includes item 5)	
	076405	-	1	PLATE ASSEMBLY, hood side, right (Includes item 5)	
3	-----	1	1	PLATE, fastening, left (Not serviced. Welded to FRAME)	
4	-----	1	1	PLATE, fastening, right (Not serviced. Welded to FRAME)	
5	032834	4	4	HANDLE, lifting	
	900764	8	8	RIVET, fl-hd., 3/16" x 1/2"	
6	033060	4	4	FASTENER, hold-down	
	914007	12	12	RIVET, fl-hd., 3/16" x 5/8"	



MEMO



ENGINE PRE-HEATER

ENGINE PRE-HEATER

USAGE: Special Equipment

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	047747	1	PRE-HEATER ASSEMBLY (Consists of items 2 thru 44)	
2	{ 042713	1	CASE, main PLUG, pipe, ctsk-hd., 1/2"NPT	
	904223	1		
3	042715	1	BLADE, air deflecting	
4	{ 034076	2	SCREW, thread-cutting, cross-recessed-hd., #8 x 1/2" LOCKWASHER, #8	
	906964	2		
5	{ 042730	1	HANDLE, carrying CAPSCREW, 3/8"NC x 5/8" LOCKWASHER, 3/8"	
	903628	2		
	904206	2		
6	042752	1	PLUG, filling hole	
7	042751	1	GASKET, filling hole plug	
8	042738	1	NOZZLE, spray	
9	5151921	1	WASHER, spray nozzle	
10	042743	1	FILTER, fuel	
11	042739	1	PLUG, filter access hole	
12	042744	1	GASKET, filter access hole plug	
13	{ 047734	1	VALVE ASSEMBLY, fuel shut-off (Includes items 14 thru 19) NUT, jam, 1/2"NF	
	913830	1		
14	047735	1	BODY, fuel shut-off valve	
15	223914	1	VALVE ASSEMBLY, fuel (Consists of 1 NEEDLE, 1 SEAT and 1 GASKET 224151)	
16	224151	1	GASKET, fuel valve	
17	047738	1	STEM ASSEMBLY, fuel shut-off valve (Serviced only as a unit. Includes item 18)	
18	048734	3	RING, packing, fuel shut-off valve	
19	047744	1	GASKET, fuel shut-off valve	
20	5151921	1	WASHER, fuel shut-off valve body	
21	{ 042716	1	PUMP ASSEMBLY, air (Consists of items 22 thru 34) CAPSCREW, 1/4"NC x 5/8" LOCKWASHER, 1/4"	
	905656	6		
	904204	6		
22	042718	1	TUBE, air pump	
23	042717	1	NUT, air pump tube	
24	{ 042721	1	SHAFT, air pump NUT, 3/8"NF	
	911041	1		
25	049659	1	KNOB, air pump	
26	016702	1	SPRING, air pump shaft	
27	042722	1	WASHER, outer, air pump leather	
28	042723	1	LEATHER, air pump	
29	042724	1	WASHER, inner, air pump leather	
30	042725	1	NUT, air pump shaft	
31	042726	1	GASKET, air pump valve	

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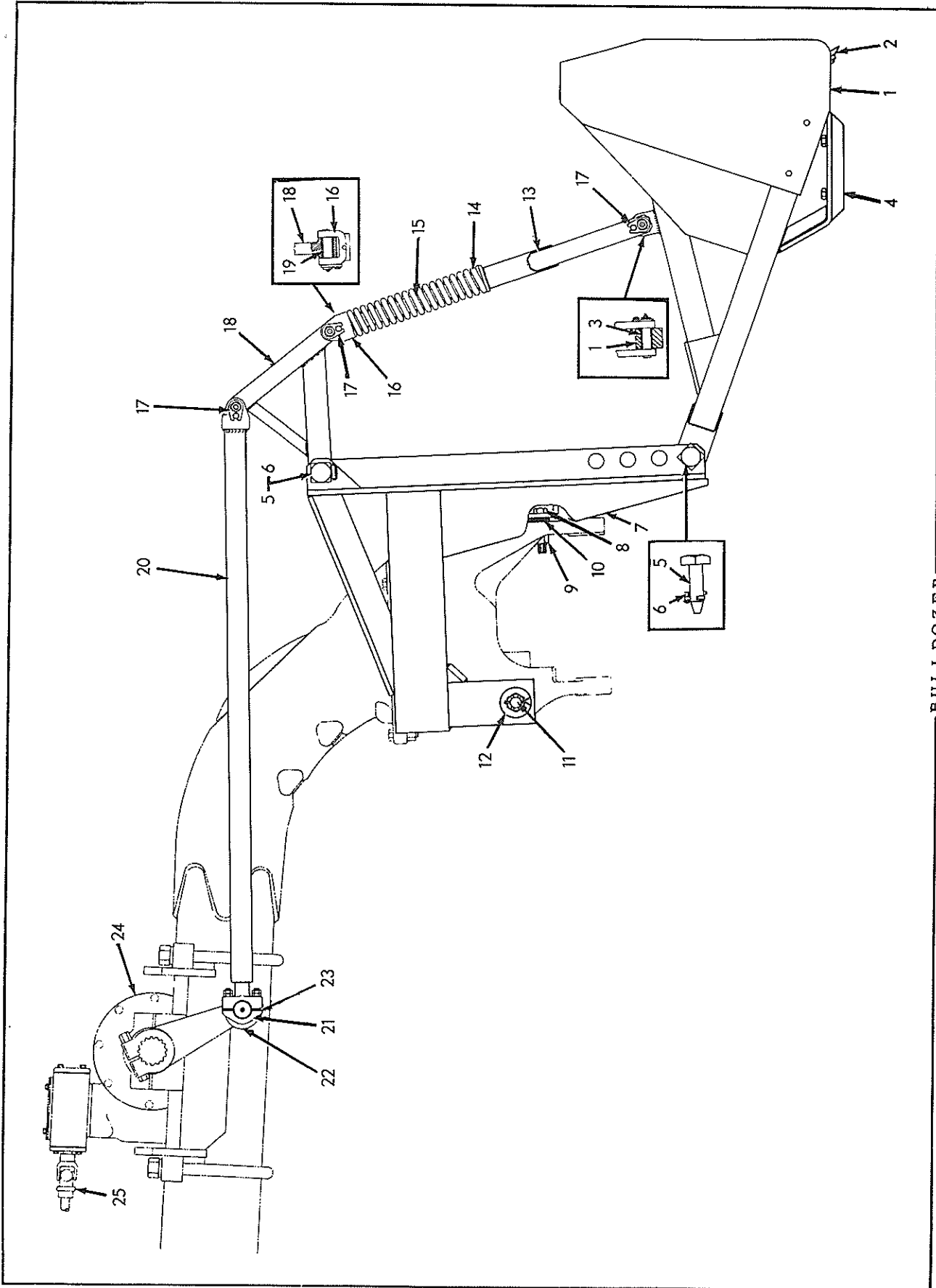
## ENGINE PRE-HEATER (Cont'd)

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
32	042727	1	VALVE, air pump	
33	031580	1	SPRING, air pump valve	
34	042728	1	NUT, air pump valve	
35	042729	1	GASKET, air pump to case	
36	042745	1	GUAGE, air pressure	
	903748	8	SCREW, machine, fil-hd., #6NC x 3/8"	
37	042753	1	GASKET, air pressure gauge	
38	042747	1	TUBE, extension	
	901344	1	PIN, cotter, 1/4" x 2"	
39	047733	1	MOTOR AND FAN, blower (Serviced only as a unit)	
	906692	2	CAPSCREW, 1/4"NC x 3/8"	
	904204	2	LOCKWASHER, 1/4"	
40	047732	1	PLUG, motor connection	
41	042750	1	PLATE, air regulating	
42	033200	1	SCREW, thread-cutting, cross-recessed-hd., 1/4"NF x 3/4"	
43	031580	1	SPRING, air regulating plate	
44	AM-8691	1	CLIP, motor cable (single, closed type, 1/4" diam., 13/32" bolt hole)	
NOTE: Items listed below comprise the PRE-HEATER ADAPTING PARTS which are mounted permanently on the engine.				
45	047730	1	JACK, motor connection (Includes CABLE and mounting NUT)	
46	048728	1	ELBOW, inlet	
47	035439	1	CAPSCREW, 3/8"NC x 1"	
	904206	1	LOCKWASHER, 3/8"	
48	042694	1	COVER, inlet elbow	
49	042692	1	GASKET, inlet elbow cover	
50	042693	1	PIN, hinge, inlet elbow cover	
	904001	2	PIN, cotter, 3/32" x 1/2"	
51	042691	2	STUD, fastening, inlet elbow cover	
	915017	2	NUT, wing, 3/8"NC	
	911115	2	WASHER, plain, SAE std., 3/8"	
52	U-2787	2	PIN, hinge, inlet elbow cover stud	
	900970	2	PIN, cotter, 1/16" x 1/2"	
53	049205	1	GASKET, inlet elbow to cylinder block (heat resistant)	

ELECTRIC TIRE PUMP  
(Not Illustrated)

USAGE: Special Equipment. Mounts behind tool box.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	076599	1	PUMP ASSEMBLY, tire (Model #127-12 volt. Order repair parts from Johnson Service Co. 507 E. Michigan, Milwaukee 2, Wisconsin)	
2	076601	1	BRACKET, pump mounting	
3	070792	2	CAPSCREW, 3/4"NC x 2-1/2"	
	910255	2	WASHER, plain, SAE std., 3/4"	
	904369	2	LOCKWASHER, 3/4"	
	911030	2	NUT, 3/4"NC	
	903630	2	CAPSCREW, 3/8"NC x 1"	
	904206	2	LOCKWASHER, 3/8"	
4	051348	3	CLIP, pump cable (closed type, 5/16" diam., 9/32" bolt-hole)	
5	034632	4	CLIP, pump cable (closed type, 5/16" diam., 13/32" bolt-hole)	



BULLDOZER

BULLDOZER

USAGE: Special Equipment. For graders equipped with scarifier control.

ITEM	PART NUMBER	QTY.	DESCRIPTION	KIT NUMBER
1	090327	1	MOLDBOARD ASSEMBLY (Includes items 2 and 3)	
2	611561	1	EDGE, cutting	
	915206	13	BOLT, plow, 1/2"NC x 1-3/4"	
	904208	13	LOCKWASHER, 1/2"	
	911028	13	NUT, 1/2"NC	
3	606811	2	BUSHING, moldboard	
4	611554	2	SHOE, wear	
	906709	4	CAPSCREW, 3/4"NC x 1-3/4"	
	904369	4	LOCKWASHER, 3/4"	
5	611250	4	PIN, pivot	
6	611235	4	LOCK, pivot pin	
7	611256	1	FRAME, push	
8	085026	4	CAPSCREW, 7/8"NF x 4-1/2"	
9	070400	4	NUT, high, 7/8"NF	
10	611261	16	SHIM, spacing (1/16" thick. Use as req'd)	
11	611288	1	SHAFT, push frame	
	911061	2	NUT, slotted, 1-1/4"NC	
	918392	2	PIN, cotter, 7/32" x 2-1/2"	
12	611289	2	BUSHING, push frame shaft	
13	611569	2	TUBE, moldboard lift	
14	611580	2	SPRING, bumper	
15	611570	2	SHAFT, moldboard lift	
16	612044	2	CLEVIS, moldboard lift shaft	
17	609898	6	PIN, moldboard lift	
	903629	6	CAPSCREW, 3/8"NC x 1-3/4"	
	904206	6	LOCKWASHER, 3/8"	
	914465	6	FITTING, lubricating, straight, 1/8"NPT	
18	611566	2	BELLCRANK ASSEMBLY (Includes item 19) -	
19	606811	4	BUSHING, bellcrank	
20	611567	2	LINK, moldboard lift	
21	053986	2	CAP, moldboard lift rod	
22	605665	2	U-BOLT	
	911049	8	NUT, jam, 5/8"NF	
23	053992	16	SHIM, moldboard lift rod cap (Use as req'd)	
24	-----	-	LIFT ASSEMBLY (See SCARIFIER LIFT)	
25	-----	-	CONTROL SHAFTS (See SCARIFIER CONTROL SHAFTS)	

SERVICE KITS

KIT NUMBER	DESCRIPTION
052676	BEARING KIT, crankshaft rear main (standard size) 1 5179630 SHELL, lower 1 5179631 SHELL, upper 4 5159353 WASHER, thrust 4 040398 PIN, dowel
052677	BEARING KIT, crankshaft rear main (.010" undersize) 1 5192883 SHELL, lower 1 5192884 SHELL, upper 4 5159353 WASHER, thrust 4 040398 PIN, dowel
052678	BEARING KIT, crankshaft rear main (.020" undersize) 1 5192887 SHELL, lower 1 5192888 SHELL, upper 4 5159353 WASHER, thrust 4 040398 PIN, dowel
052679	BEARING KIT, crankshaft rear main (.030" undersize) 1 5192891 SHELL, lower 1 5192892 SHELL, upper 4 5159353 WASHER, thrust 4 040398 PIN, dowel
060593	TOOL KIT, injector 1 044811 BRUSH, cleaning, fuel hole 1 044812 BRUSH, cleaning, rack hole 1 044814 STONE, sharpening 1 044819 REAMER, spray tip 1 044822 VISE, pin, probing wire 1 074741 GAUGE, timing 1 074549 GAUGE, feeler, rocker clearance 1 ----- CASE, cloth
065650	PUMP KIT, water 1 5186576 PUMP ASSEMBLY 1 5150188 GASKET, pump body cover 1 5150191 PACKING, pump outlet 1 5150193 GASKET, pump to blower 1 5153560 SEAL, pump to oil cooler 1 5156770 SEAL, pump to oil cooler (Not AD. Discard) 1 5159457 SEAL, pump to oil cooler (Not AD. Discard)
067498	REPAIR KIT, hydraulic brake compensator 1 ----- PISTON 1 067487 BOOT, push rod 1 067488 WIRE, retaining 1 067492 CUP, primary 1 067494 VALVE ASSEMBLY, check 1 067608 CUP, secondary 1 067609 RING, retaining
074688	GASKET SET, engine major overhaul (Model AD30) 1 040095 WASHER, fan spindle (cork) 1 040097 GASKET, fan spindle washer 1 040100 GASKET, fan 1 040118 GASKET, air intake 1 040149 GASKET, water connection 1 040395 GASKET, oil filter case retainer (Not AD30. Discard) 2 040399 GASKET, relief valve plug 3 040400 GASKET, hand hole cover bolt 2 040942 GASKET, by-pass valve plug (Not AD30. Discard) 1 044872 GASKET, thermostat 1 207046 GASKET, oil filter case (Not AD30. Discard) 1 3222489 GASKET, thermostat housing 1 3222555 GASKET, water by-pass tube 2 3249110 GASKET (Not A-C. Discard) 1 3290577 GASKET (Not A-C. Discard) 3 5150020 GASKET, hand hole cover 1 5150024 GASKET, water hole cover 2 5150052 GASKET, engine lifter bracket 1 5150054 GASKET, flywheel housing 1 5150057 GASKET, star cover 2 5150059 GASKET, flywheel housing cover 1 5150071 GASKET, balance weight cover

(Continued)



SERVICE KITS

KIT NUMBER DESCRIPTION

074688	GASKET SET, engine major overhaul (Continued)	
	1	5150115 GASKET, oil pan
	1	5150144 GASKET, water by-pass tube
	2	5150154 GASKET, oil cooler adapter
	1	5150155 GASKET, oil cooler housing
	1	5150181 GASKET, crankshaft front cover
	1	5150188 GASKET, water pump body
	1	5150191 PACKING, water pump outlet
	2	5150193 GASKET, pump to blower
	1	5150194 GASKET, exhaust manifold
	2	5150234 GASKET, blower end cover
	1	5150235 GASKET, blower to block
	2	5150246 GASKET, blower drive
	4	5150269 GASKET, cylinder head hole cover
	1	5150286 GASKET, blower drive support
	1	5150327 GASKET, rocker cover
	3	5150361 GASKET, water manifold
	1	5150779 SCREEN, blower inlet
	1	5150889 GASKET, governor cover
	2	5150890 GASKET, governor weight housing
	1	5150900 GASKET, breather pipe
	1	5151190 GASKET, water hole cover
	3	5151370 GASKET, oil pipe
	1	5152904 GASKET, spacing
	1	5152944 GASKET, governor spring housing
	2	5153313 GASKET, oil pipe
	1	5153560 SEAL, pump to cooler
	1	5153627 GASKET, oil pump inlet
	2	5153902 GASKET (Not AD30. Discard)
	1	5154199 GASKET, oil by-pass valve
	1	5154215 GASKET, oil cooler element
	1	5155816 GASKET, thermostat housing cover
	1	5156768 GASKET, relief valve plug (Not AD30. Discard)
	1	5159457 SEAL (Not A-C. Discard)
	1	5161003 GASKET (Not A-C. Discard)
	1	5168176 GASKET, oil filling tube adapter
	2	5169478 GASKET (Not AD30. Discard)
	2	5186577 RING, cylinder head end water hole
	1	5172865 SEAL, blower drive shaft cover
	1	5177773 GASKET, relief valve plug
	2	5177798 GASKET, end plate
	2	5183305 GASKET, cylinder head water and oil holes
	3	5183330 GASKET, cylinder compression
	1	5183948 RING, head oil seal
	4	5184301 RING, cylinder head water hole

074689	GASKET SET, engine major overhaul (Model AD40)	
	1	040118 GASKET, air intake
	1	040149 GASKET, water connection
	1	040395 GASKET, oil filter case retainer (Not AD40. Discard)
	2	040399 GASKET, relief valve plug
	4	040400 GASKET, hand hole cover bolt
	2	040492 GASKET, by-pass valve plug (Not AD40. Discard)
	1	044872 GASKET, thermostat (Not AD40. Discard)
	1	057916 GASKET, water connection (Not AD40. Discard)
	1	207046 GASKET, oil filter case (Not AD40. Discard)
	1	3222489 GASKET, thermostat housing (Not AD40. Discard)
	1	3222555 GASKET, water manifold cover (Not AD40. Discard)
	2	3249110 GASKET (Not A-C. Discard)
	1	3290612 GASKET (Not A-C. Discard)
	4	5150020 GASKET, hand hole cover
	1	5150024 GASKET, water hole cover
	2	5150052 GASKET, engine lifter bracket
	1	5150054 GASKET, flywheel housing
	1	5150057 GASKET, star cover
	2	5150059 GASKET, flywheel housing cover
	1	5150071 GASKET, balance weight cover
	1	5150116 GASKET, oil pan
	1	5150144 GASKET, water by-pass tube (Not AD40. Discard)
	2	5150154 GASKET, oil cooler adapter
	1	5150155 GASKET, oil cooler housing
	1	5150181 GASKET, crankshaft front cover
	1	5150188 GASKET, water pump body

(Continued)

SERVICE KITS

KIT NUMBER	DESCRIPTION
074689	GASKET SET, engine major overhaul (Model AD40)(Continued)
1	5150191 PACKING, water pump outlet
2	5150193 GASKET, pump to blower
2	5150195 GASKET, exhaust manifold
2	5150234 GASKET, blower end cover
1	5150236 GASKET, blower to block
2	5150246 GASKET, blower drive
4	5150269 GASKET, cylinder head hole cover
1	5150286 GASKET, blower drive support
1	5150328 GASKET, rocker cover
4	5150361 GASKET, water manifold
1	5150780 SCREEN, blower inlet
1	5150889 GASKET, governor cover
2	5150890 GASKET, governor weight housing
1	5150900 GASKET, breather pipe
1	5151190 GASKET, water hole cover
3	5151370 GASKET, oil pipe
1	5152904 GASKET, spacing
1	5152944 GASKET, governor spring housing
2	5153313 GASKET, oil pipe
1	5153560 SEAL, pump to cooler
1	5153627 GASKET, oil pump inlet
2	5153902 GASKET, water by-pass tube, lower
1	5154199 GASKET, oil by-pass valve
1	5154215 GASKET, oil cooler element
2	5155816 GASKET, water by-pass tube (Not AD40. Discard)
1	5156768 GASKET, relief valve plug (Not AD40. Discard)
1	5159457 SEAL (Not AD40. Discard)
1	5161003 GASKET (Not A-C. Discard)
2	5169478 GASKET, water by-pass tube
2	5170881 RING, cylinder head end water hole
1	5172865 SEAL, blower drive shaft cover
1	5177773 GASKET, relief valve plug
2	5177798 GASKET, end plate
2	5183305 GASKET, cylinder head water and oil holes
4	5183330 GASKET, cylinder compression
1	5183476 RING, cylinder head oil seal
6	5184301 RING, cylinder head water hole
081971	CONVERSION KIT, steering pump drive (For graders prior to #1043)
2	042986 BEARING, ball
1	075029 GASKET, steering pump
1	075224 GASKET, front bearing retainer
1	081501 RETAINER, front bearing
1	081622 RETAINER, rear bearing
1	081704 SPROCKET, drive chain
4	082025 STUD, pump attaching
1	082142 BUSHING, adapting
1	900808 PIN, cotter, 1/8" x 1-1/2"
4	904205 LOCKWASHER, 5/16"
4	904206 LOCKWASHER, 3/8"
4	910211 CAPSCREW, 3/8"NC x 1-1/8"
1	912840 NUT, slotted, 5/8"NF
4	913636 NUT, 5/16"NF
1	INSTRUCTION SHEET
083717	CONVERSION KIT, rear axle (For graders prior to #
1	078593 SEAL, oil
1	078785 COVER
1	078884 SPACER
1	078895 WASHER
1	081187 CASE
1	081188 BEARING, roller
1	081638 CAP
1	083241 AXLE
2	083566 SPROCKET
1	914465 FITTING, lubricating
1	----- INSTRUCTION SHEET
083895	TOOL KIT
1	012377 WRENCH KIT
1	012387 HAMMER, ball pein, 1 lb.
1	012389 PLIERS

(Continued)

SERVICE KITS

KIT NUMBER	DESCRIPTION
083895	TOOL KIT (Continued)
	1 034239 GUN, grease
	1 036268 SCREWDRIVER
	1 040284 WRENCH, injector nut
	1 040286 WRENCH, fuel pump removal
	1 043769 WRENCH, drain and filling plugs
	1 044825 FULCRUM, valve and injector tool
	1 060593 TOOL KIT, injector
	1 074762 TOOL, valve and injector
	1 083319 TUBE, oil filler, power steering housing
	1 083346 WRENCH, power steering cylinder packing nut
	1 603723 WRENCH, socket, tire rim nut
	1 605206 TOOL, tire
	1 605230 HOSE
	2 912484 PADLOCK with KEYS
	1 912485 KEY, socket screw, hexagonal, 9/16"
	1 912486 WRENCH, automotive, adjustable, 15"
	1 912554 WRENCH, structural, offset, 1-7/64" opening
	1 912785 KEY, socket screw, hexagonal, 3/16"
	1 912787 KEY, socket screw, hexagonal, 5/16"
	1 ----- PARTS CATALOG
	1 ----- OPERATOR'S MANUAL
5193116	GASKET SET, cylinder head (Model AD30)
	2 3249110 GASKET (Not A-C. Discard)
	2 5150052 GASKET, lifter bracket
	1 5150194 GASKET, exhaust manifold
	4 5150269 GASKET, head hole covers
	1 5150327 GASKET, rocker cover
	3 5150361 GASKET, water manifold
	1 5150889 GASKET, governor cover
	1 5150890 GASKET, governor weight housing
	1 5150900 GASKET, breather pipe
	2 5169478 GASKET (Not AD30. Discard)
	2 5170881 RING, cylinder head end water hole
	2 5183305 GASKET, cylinder head water and oil holes
	3 5183330 GASKET, cylinder compression
	1 5183948 RING, cylinder head oil seal
	4 5184301 RING, cylinder head water hole
5193117	GASKET SET, cylinder head (Model AD40)
	2 3249110 GASKET (Not A-C. Discard)
	2 5150052 GASKET, lifter bracket
	2 5150195 GASKET, exhaust manifold
	4 5150269 GASKET, head hole covers
	1 5150328 GASKET, rocker cover
	4 5150361 GASKET, water manifold
	1 5150889 GASKET, governor cover
	2 5150890 GASKET, governor weight housing
	1 5150900 GASKET, breather pipe
	2 5169478 GASKET, water by-pass tube, upper
	2 5170881 RING, cylinder head end water hole
	2 5183305 GASKET, cylinder head water and oil holes
	4 5183330 GASKET, cylinder compression
	1 5183476 RING, cylinder head oil seal
	6 5184301 RING, cylinder head water hole
5193221	ELEMENT KIT, injector fuel filter
	2 5226186 GASKET, filter element cap
	1 5226564 RING, nut sealing
	2 5228013 ELEMENT, fuel filtering
	2 5226414 CAP, shipping
5193477	RING KIT, piston
	2 5179836 RING, oil control
	4 5185325 RING, compression
5194496	CYLINDER KIT, engine
	1 5188406 PIN, piston
	1 5188868 LINER, cylinder
	1 5189054 PISTON ASSEMBLY
	1 5193477 RING KIT

SERVICE KITS

KIT NUMBER	DESCRIPTION
5227324	TIP KIT, injector (For Injector 5226710 only)
	1 5227210 SPRING, valve
	1 5227318 STOP, valve
	1 5227321 TIP, spray
	1 5227323 VALVE ASSEMBLY
5228183	TIP KIT, injector (For Injector 5228330 only)
	2 5227210 SPRING, valve
	2 5227318 STOP, valve
	1 5227321 TIP, spray
	1 5228107 VALVE ASSEMBLY, upper
	1 5228108 VALVE ASSEMBLY, lower
5228301	TIP KIT, injector (For Injector 5228310 only)
	1 5227210 SPRING, valve
	1 5227318 STOP, valve
	1 5228296 TIP, spray
	1 5228316 VALVE ASSEMBLY

SERVICE KITS

KIT NUMBER      DESCRIPTION

086795	TRANSFER SET (Model AD40 only)	
	2	040851      TRANSFER, name, "ALLIS-CHALMERS"
	1	050838      TRANSFER, instruction, air pre-cleaner
	1	050842      TRANSFER, instruction, air cleaner
	1	053624      TRANSFER, instruction, air heater operation
	3	068831      TRANSFER, name, "ALLIS-CHALMERS"
	1	069314      TRANSFER, caution, fan lubrication
	1	069407      TRANSFER, instructions, primer operation
	2	073357      TRANSFER, marking, "ROLL-AWAY MOLDBOARD"
	1	074729      TRANSFER, instruction, oil filter
	1	074735      TRANSFER, instruction, secondary fuel filter
	1	074738      TRANSFER, instruction, primary fuel filter
	2	075966      TRANSFER, identification, "MODEL AD40"
	1	076077      TRANSFER, grader check and lubrication guide
	1	077203      TRANSFER, shifter positions
	1	079135      TRANSFER, instruction, power steering oil filter
	1	083354      TRANSFER, identification, control box levers, right side
	1	083355      TRANSFER, identification, control box levers, left side

SERVICE KITS

KIT NUMBER DESCRIPTION

082097 CONVERSION KIT, power steering (For converting graders built prior to August, 1954 to Second Type Power Steering)

1	055245	ELBOW, oil hose
1	074962	SEAL, dust, steering shaft needle bearing
1	074995	SHAFT, steering control
1	081373	HOSE, valve to cylinder
2	081594	STUD (5/8"NC x 2-3/4")
1	081625	STEERING ASSEMBLY, power
1	081679	PIN, power steering lever
1	081687	PIN, pivot, power steering cylinder
1	081707	BEARING, needle, steering shaft
1	082028	HEAD CASTING ASSEMBLY, lower section
1	082184	HOSE, cylinder to valve
1	082214	HOSE, oil supply
1	082215	HOSE, oil return
1	082216	SUPPORT, oil pipes
1	082657	CYLINDER ASSEMBLY, power steering
1	083319	TUBE, oil filler, power steering housing
2	604350	LINK, drag
5	900807	PIN, cotter, 1/8" x 1/4"
3	910255	WASHER, plain, SAE std., 3/4"
2	911059	NUT, slotted, 5/8"NC
2	912808	FITTING, lubricating, straight, 1/4"NF
1	915757	COUPLING, pipe, 1/2"NPT (For use on graders prior to #816 to connect return hose to pipe)
2	917750	ELBOW, flared, 3/8" tube, 3/8"NPT male

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