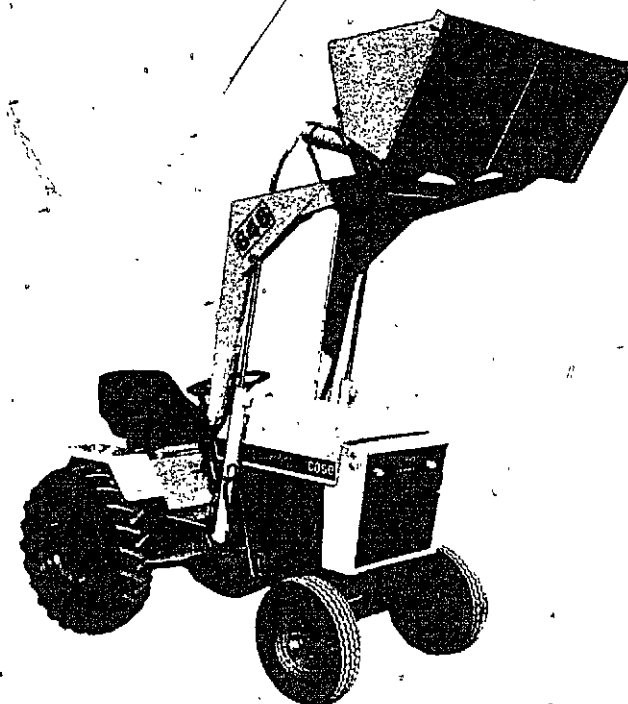
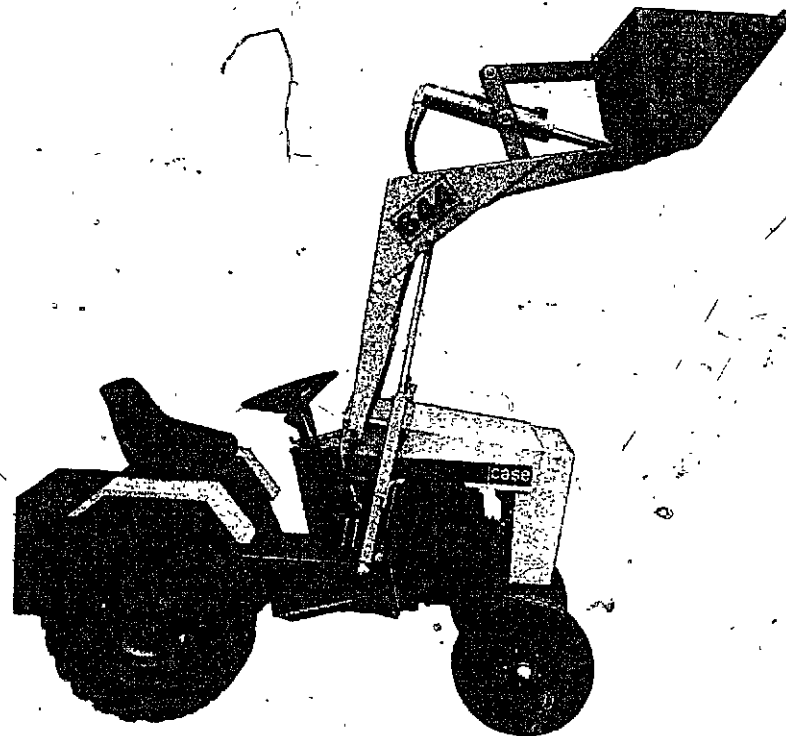


MODEL 644 S/N 9662906 THRU S/N 9698283
MODEL 646 S/N 9663323 THRU S/N 9698982
COMPACT WHEEL LOADERS

Parts Catalog No. A1281

Whitehall 2500 6-76

Note: This Parts Catalog replaces the previous issue - 1281 - which is obsolete and should be discarded.



ALPHABETICAL INDEX

KOHLER ENGINE SECTION

	PAGE	GRID		PAGE	GRID
Air Cleaner	39	C12	Filter, Breather	27	B14
Battery	89	G6	Flywheel	31	C4
Belt, Starter-Generator	35	C8	Fuel Pump	41-43	C14-D2
Breather, Crankcase	27	B14	Fuel Strainer	43	D2
Camshaft	27	B14	Fuel System	43	D2
Carburetor	41-43	C14-D2	Gasket Kits	33	C6
Connecting Rod	29	C2	Governor	37	C10
Crankshaft	29	C2	Muffler	25	B12
Cylinder Block	31	C4	Oil Pan	31	C4
Cylinder Head	31	C4	Piston	29	C2
Electrical System	89-91	G6-G8	PTO Clutch	43-45	D2-D4
Engine Block & Attaching Parts	31	C4	Spark Plug	89	G6
Exchanger, Heat	59	E4	Starter-Generator	85-87	G2-G4
Exhaust System	25	B12	Tank Fuel	43	D2
Fan	25	B12	Throttle Linkage	37	C10
			Valves	27	B14

ONAN ENGINE SECTION

	PAGE	GRID		PAGE	GRID
Air Cleaner	5	A6	Flywheel	11	A12
Blower Housing	19	B6	Fuel Pump	9	A10
Camshaft	11	A12	Governor	19	B6
Carburetor	5-7	A6-A8	Motor - Starter	23	B10
Crankshaft	11	A12	Oil Base	17	B4
Electrical - Engine	21	B8	Oil Pump	17	B4
Engine Block & Attaching Parts	13-15	A14-B2	Pistons & Rods	11	A12
Exhaust System	25	B12	Points - Breaker Contact	21	B8
Filter, Oil	17	B4	Valves	13-15	A14-B2

BASIC TRACTOR SECTION

	PAGE	GRID		PAGE	GRID
Axle - Front	51	D10	Hydraulics - Bucket	63	E8
Axle - Rear	57	E2	Cylinder - Arms	63-81	E8-F12
Baffles & Shrouds	35	C8	Cylinder - Bucket	63-81	E8-F12
Brakes	53	D12	Hoses, Lines & Fittings	63	E8
Bucket & Arms	55	D14	Valve - Bucket Control	63-73	E8-F4
Control-Speed, Hydraulic	65	E10	Valve Control Linkage, Bucket	67	E12
Decals	95	G12	Hydraulic Connections & Components for LT-26	105	A10*
Electrical System	89-91-93	G6-G8-G10	Three Point Hitch	99	A4*
Fenders	49	D8	Hydraulic PTO Kit LT-16 & LT-17	101	A6*
Frame	47	D6	Hydraulic PTO Valve LT-16 & LT-17	83	F14
Frame, Lift Rods and Arms for LT-26 Three Point Hitch	103	A8*	Implement Lift, Hydraulic	89	G6
F-27 Hitch Adapter	105	A10*	Instruments, Electrical	49	D8
Grille	47	D6	Lever - Range Selector	97	G14
Hitch	97	G14	Model D10 Wheel Weights	45	D4
Hood	47	D6	PTO Clutch	49	D8
Hydraulics - Tractor	59-61	E4-E6	Seat, Operator's	51	D10
Coupling, Pump Drive	75-77	F6-F8	Steering Wheel & Gear	89	G6
Hoses, Lines & Fittings	59-61	E4-E6	Tail Lamp	45	D4
Motor, Hydraulic Drive	79	F10	Transmission	57	E2
Pump	75-77	F6-F8	Weight Box	97	G14
Valve, Control, Tractor	69-71	E14-F2	Wheels, Front & Rear	53	D12
Valve Control Linkage	65	E10			

* contained on microfiche 35.

GENERAL INFORMATION

Indexes

This parts Catalog is arranged for easy identification of Genuine CASE Service Parts. An alphabetical index is provided at the front of this Catalog to locate the major groups or assemblies. A numerical index at the rear of the Catalog gives the part numbers and the pages on which they are described.

Illustrations

All parts are illustrated in "Exploded Views" which show the individual parts in their normal relationship to each other. Reference numbers are used in the illustrations. These numbers correspond to those in the "Reference Number" column and are followed by the part number, description and quantity required.

Orders

Orders should plainly specify correct part number, full description, quantity required, machine model and engine model, machine and engine serial numbers, method of shipment and shipping address.

Changes

When changes to the machine make it necessary, revised pages for this book will be issued. The revised pages will be issued with the same page number as those they replace and the "issue" number and date will be advanced.

It is imperative that revised Parts Book pages be inserted into their respective Parts Books as soon as received. Failure to do so will lead to confusion and defeat the purpose of the book.

Indented Description

Indented parts in the descriptive list are a part of the preceding assembly or sub-assembly. The quantity shown in the "Number Required" column is the number of parts used on a machine except where parts are indented in descriptive list. In this case the quantity shown is the number required for the preceding assembly or sub-assembly.

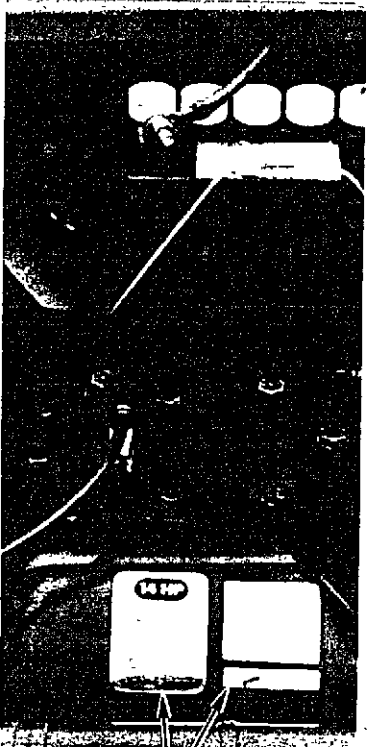
REF.	PART NO.	DESCRIPTION	REQ'D
	A 55159	CYLINDER ASSY - rear steering	1
28	A 56208	SOCKET ASSY - rear cylinder	1
29	A 55956	PLUG - adjusting, socket assy	1
30	A 55957	SEAT - socket ball	2
31	A 56210	SPRING - socket	1
32	A 56209	SEAT - socket spring	1
33	G 45175	CLAMP ASSY - socket assy	1
	16- 836	BOLT - 1/2" x 2-1/4" N.F. hex.	1
34	132- 104	PIN - cotter, 3/16" x 3"	1
35	A 55889	STUD - ball, socket & cylinder	2
36	13- 410	BOLT - 1/4" x 5/8" N.C., hex.	4
37	92- 4	LOCKWASHER - 1/4" SAE	4

Terms "Right Hand" and "Left Hand"

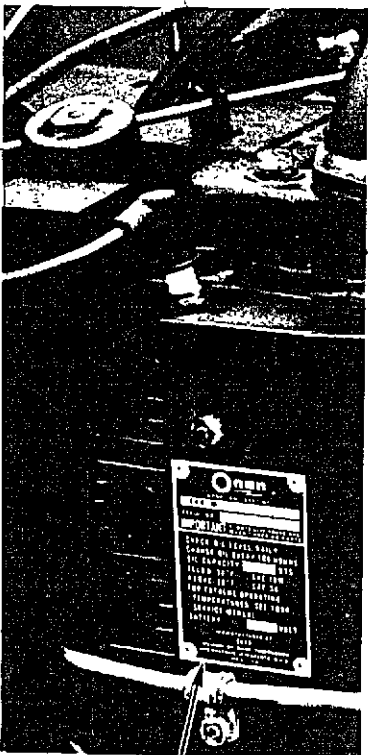
"Right Hand" and "Left Hand" sides of this machine are determined by standing at the rear of the unit and facing in the direction of forward travel.



TRACTOR MODEL AND
SERIAL NUMBER

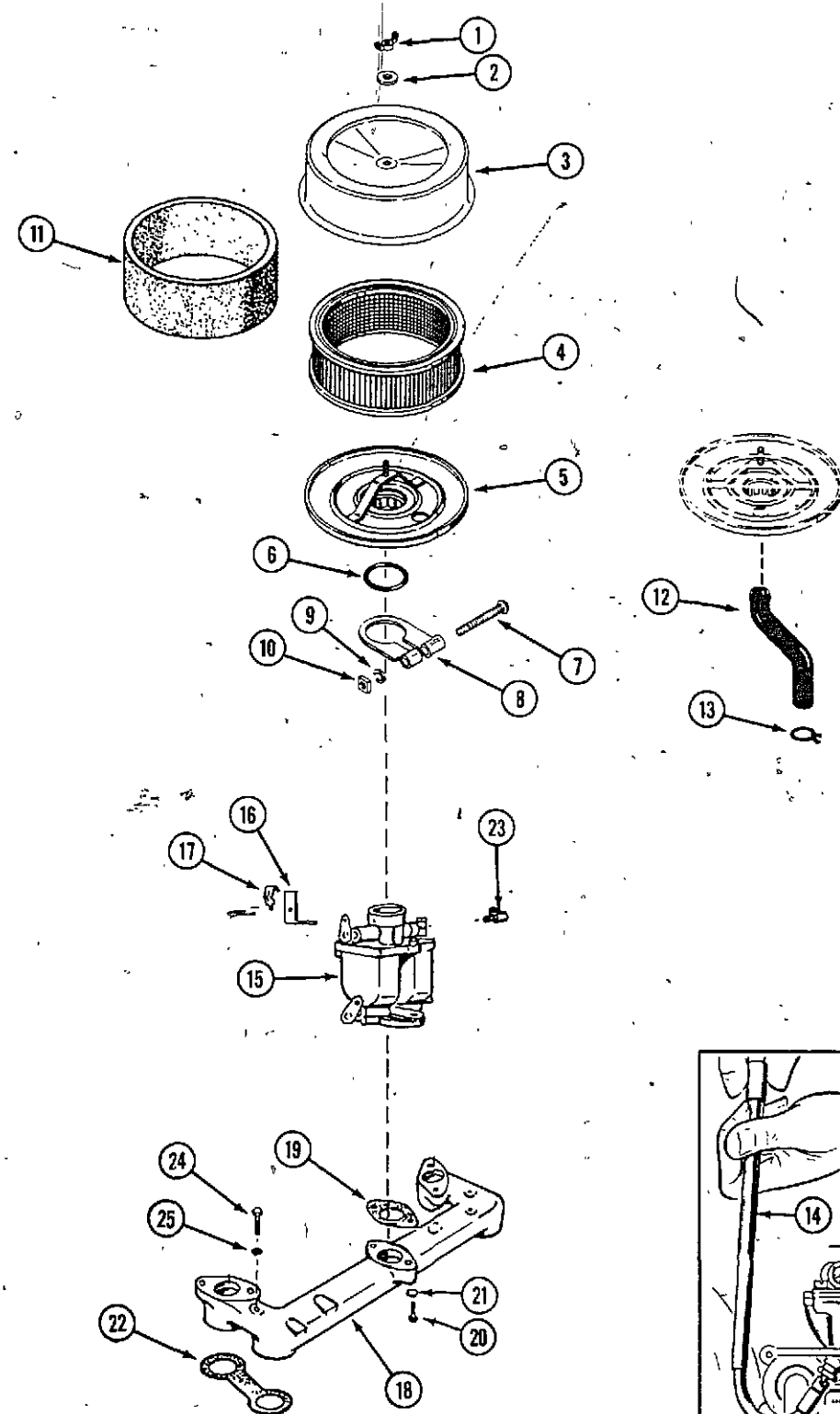


ENGINE MODEL, SERIAL
AND SPECIFICATION
NUMBER 644



ENGINE MODEL, SERIAL
AND SPECIFICATION
NUMBER 646

TRACTOR MODEL DESIGNATIONS	ENGINE MODEL DESIGNATIONS
644 WHEEL LOADER	K-321-A C19028 Engine Spec. No. 60209D
646 WHEEL LOADER	CCKA-MS C17626 Engine Spec. No. 2481G

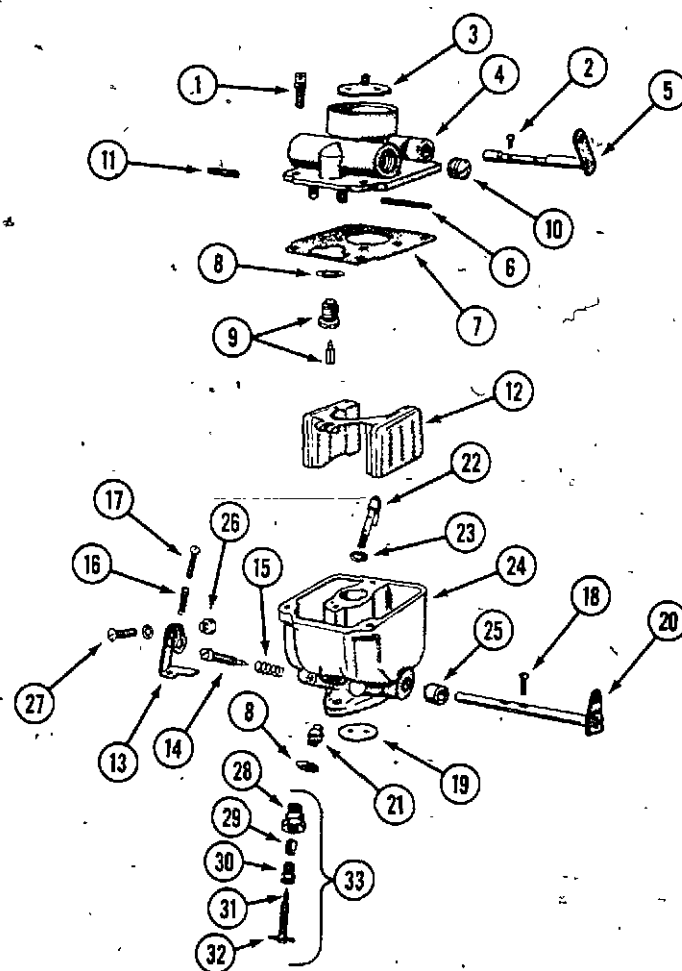


CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS

ONAN ENGINE

CARBURETOR, AIR FILTER AND MANIFOLD

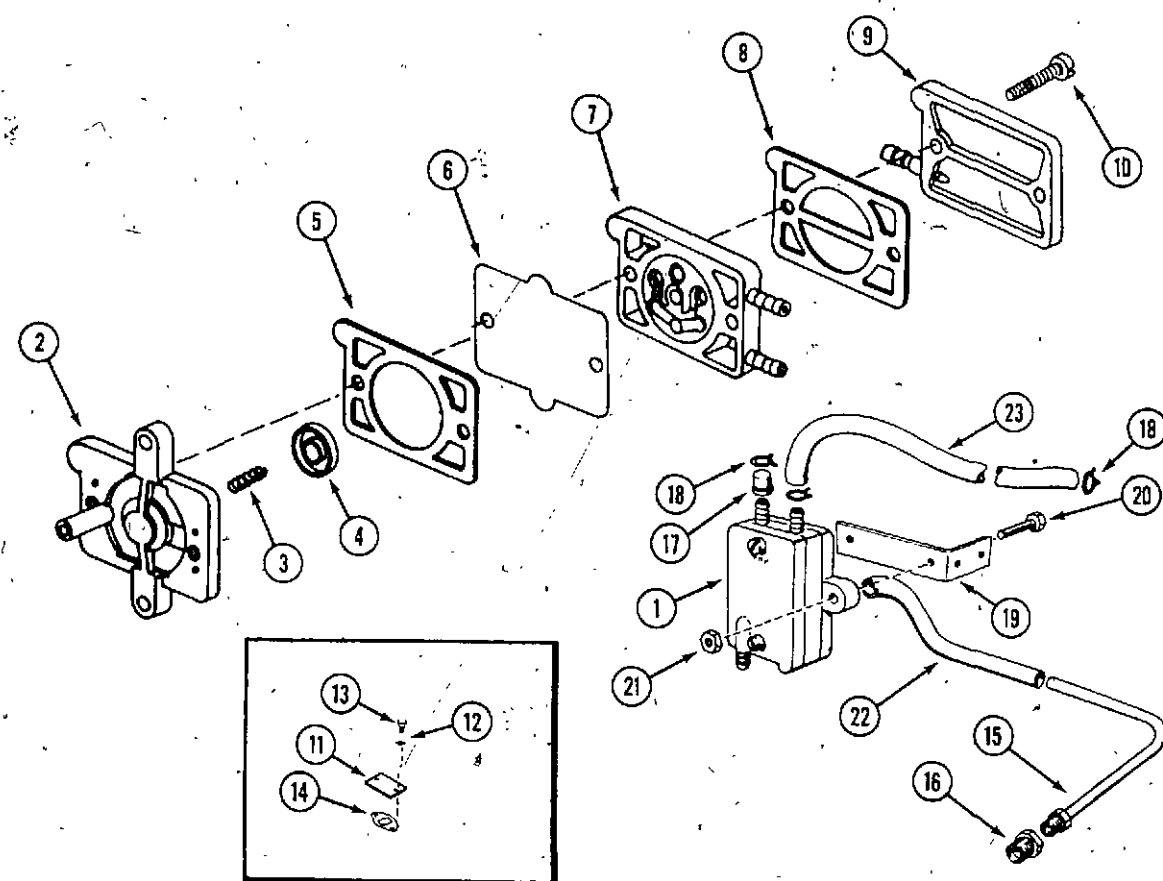
REF.	PART NO.	DESCRIPTION	REQ'D
	C 18627	AIR CLEANER ASSEMBLY	1
1	129- 900	NUT - wing #10 NF	1
2	195- 513	WASHER - #10	1
3	C 18629	COVER - air cleaner	1
4	A 70090	ELEMENT - air cleaner	1
5	C 18628	BASE - air cleaner	1
6	A 28077	"O" RING - 1-7/16" I.D.	1
7	174- 222	SCREW - #10 x 2-1/4" NF rd. hd. machine	1
8	C 19170	CLAMP ASSEMBLY - air cleaner (includes items 7, 9 and 10)	1
9	192- 17	LOCKWASHER - #10	1
10	129- 77	NUT - #10 NF square	1
11	KO 237421	PRE-CLEANER - air cleaner (optional)	1
12	C 19169	TUBE - breather	1
13	214- 251	CLAMP - hose	1
14	C 20634	WRENCH - carburetor adjusting	1
15	C 20660	CARBURETOR - engine (repairs, page 7)	1
16	C 20630	BRACKET - choke	1
17	C 20374	CLIP - throttle cable	1
18	C 20631	MANIFOLD - engine, intake	1
19	C 20564	GASKET - carburetor mtg.	1
20	13- 424	BOLT - carburetor mtg.	2
21	92- 4	LOCKWASHER - carburetor mtg.	2
22	C 20632	GASKET - manifold, intake	1
23	C 10678	ELBOW - carburetor inlet	1
24	13- 632	BOLT - manifold mtg.	2
25	92- 6	LOCKWASHER - manifold mtg.	2



CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS
ONAN ENGINE

C 20688 CARBURETOR

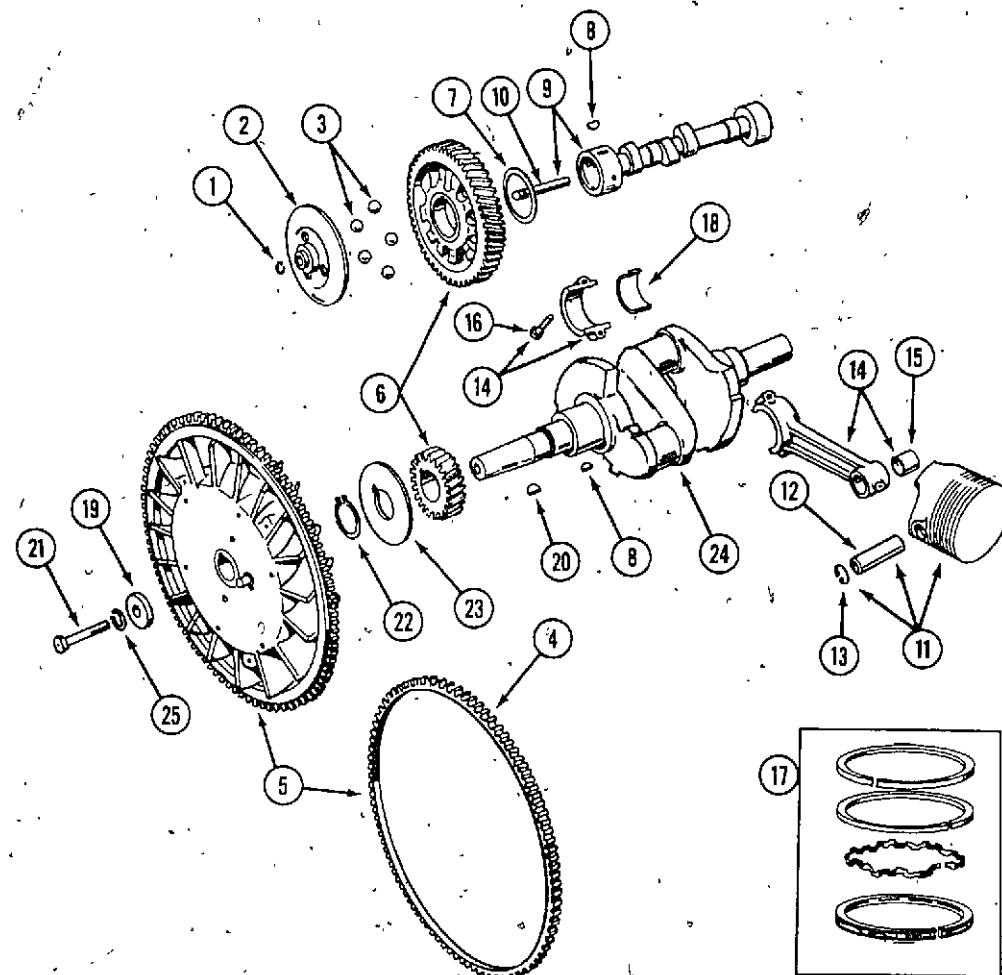
REF.	PART NO.	DESCRIPTION	REQ'D
1	169- 97	SCREW - bowl cover	3
2	NSS	SCREW - choke fly #4 x 3/16" (order C 20689 kit)	2
3	C 20691	FLY - choke	1
4	NSS	COVER ASSEMBLY - carburetor (order C 20688 carburetor)	1
5	C 20693	SHAFT ASSEMBLY - choke	1
6	C 20694	PIN - float	1
7	NSS	GASKET - body to bowl (order C20689 kit)	1
8	NSS	GASKET - float, valve seat (order C 20689 kit)	1
8	NSS	GASKET - needle, main adjusting (order C 20689 kit)	1
9	NSS	NEEDLE AND SEAT ASSEM. (order C 20689 kit)	1
10	C 20708	PLUG - gas inlet	1
11	C 20712	PIN - stop choke	1
12	C 20700	FLOAT ASSEMBLY - carburetor	1
13	C 20701	LEVER - idler stop	1
14	NSS	NEEDLE - idler adjust (order C 20689 kit)	1
15	C 20439	SPRING - idle adjust	1
16	C 20704	SPRING - throttle stop adj.	1
17	169- 61	SCREW - throttle stop #6 x 1/2"	1
18	NSS	SCREW - throttle fly #4 x 1/4" (order C 20689 kit)	2
19	C 20705	FLY - throttle	1
20	NSS	SHAFT ASSEMBLY - throttle (order C 20689 kit)	1
21	C 20707	NOZZLE - nut and jet	1
22	C 20699	NOZZLE ASSEMBLY	1
23	NSS	GASKET - nozzle (order C 20689 kit)	1
24	NSS	BODY ASSEMBLY - carburetor (order 20688 carburetor)	1
25	C 20709	BUSHING - throttle shaft	2
26	129- 665	NUT - throttle stop	1
27	C 20711	SCREW - throttle stop mtg. clamp	1
28	C 20713	NUT - main adjust needle retainer	1
29	NSS	PACKING - main adjust needle (order C 20689 kit)	1
30	C 20715	RETAINER - main adjust needle	1
31	C 20716	PIN - main adjust needle	1
32	NSS	NEEDLE - main adjust (order C 20689 kit)	1
33	C 20718	NEEDLE ASSEMBLY	1
	C 20689	KIT - repair, carburetor (includes items 2, 4, 7, 8, 9, 14, 18, 20, 23, 29, 30 & 32)	1



CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS
ONAN ENGINE

FUEL PUMP ASSEMBLY

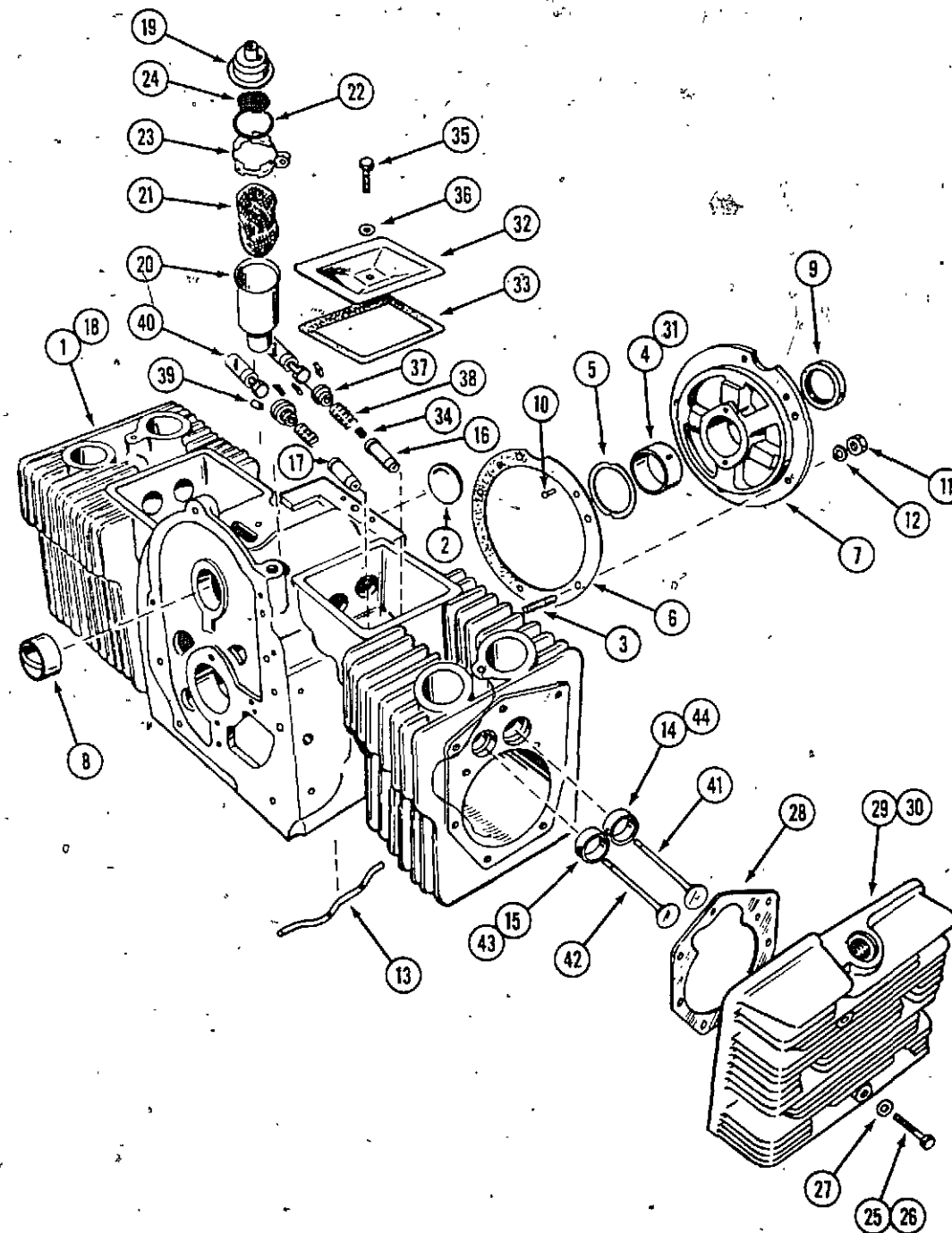
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 20653	PUMP - fuel, vacuum (used S/N 9663306 and after)	1
2	C 20740	BASE - fuel pump	1
3	C 20440	SPRING - diaphragm	1
4	C 20448	PLATE - spring	1
5	C 20434	GASKET - base fuel pump	1
6	C 20437	DIAPHRAGM - fuel pump	1
7	C 20428	VALVE PLATE ASSEMBLY	1
8	C 20738	GASKET - cover, fuel pump	1
9	C 20739	COVER - fuel pump	1
10	C 20433	SCREW - cover, fuel pump	2
11	C 20645	PLATE - mechanical fuel pump hole cover	1
12	192- 19	LOCKWASHER - 1/4"	2
13	13- 410	BOLT - 1/4" x 5/8" n.c. hex	2
14	C 20735	GASKET - plate, fuel pump hole cover	1
15	C 20647	TUBE - vacuum line	1
16	222- 1014	FITTING - inverted male	1
17	C 20411	CAP - fuel pump	1
18	214- 251	CLAMP - hose	3
19	C 20650	BRACKET - fuel pump mtg.	1
20	C 20651	SCREW - #10 x 5/8"	2
21	129- 27	NUT - #10 n.f. hex	2
22	C 16202	HOSE - vacuum, fuel pump	1
23	C 15526	HOSE - fuel pump to carburetor	1



ONAN ENGINE

PISTON, CRANKSHAFT, FLYWHEEL AND CAMSHAFT

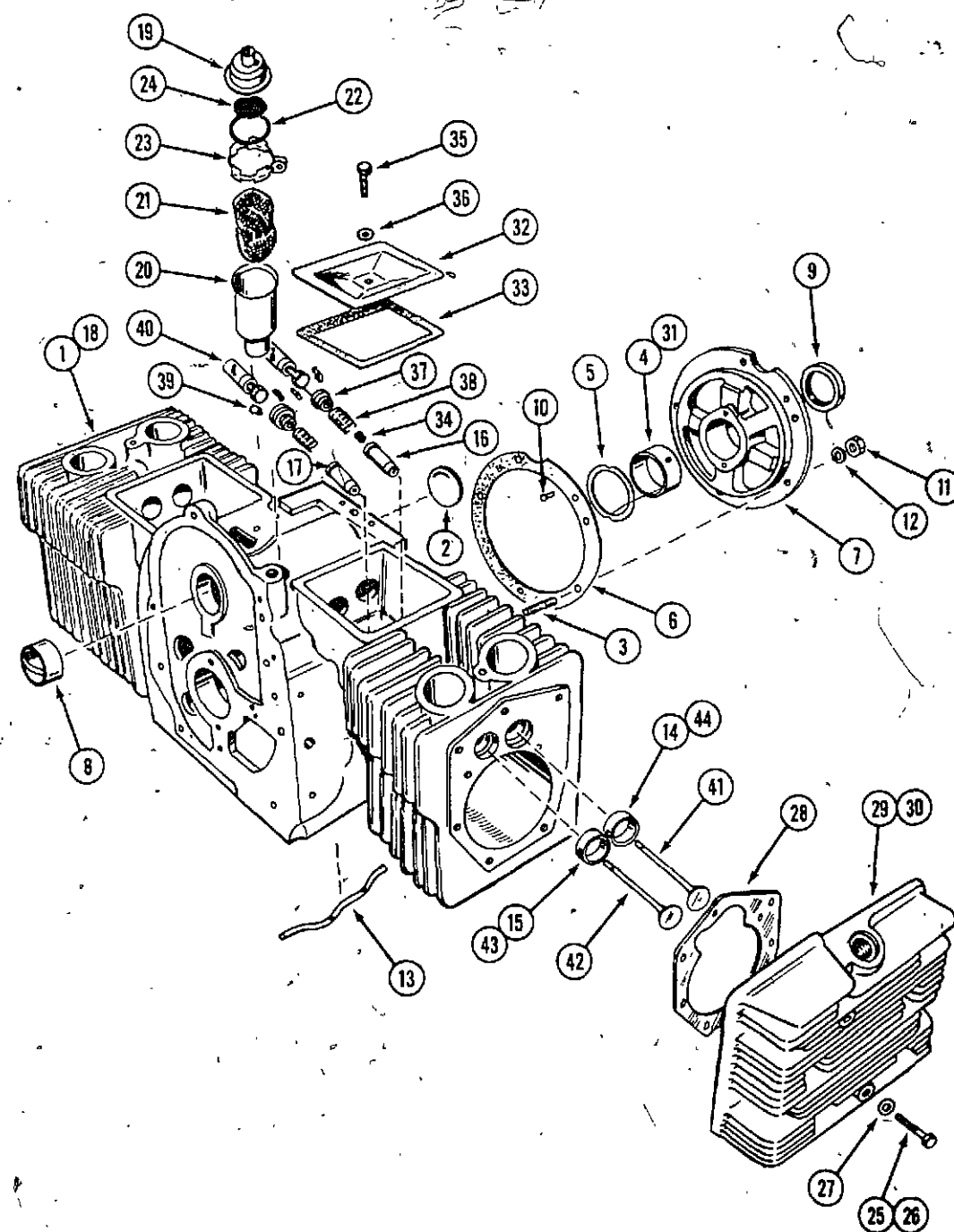
REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	C 20223	RING - center pin, camshaft	1
2	C 22260	CUP - governor	1
3	211- 14	BALL - fly governor	5
4	C 20308	GEAR - ring, flywheel	1
5	C 20317	FLYWHEEL - engine (includes ring gear)	1
6	C 20228	GEAR-SET - timing (includes cam and crankshaft gears)	1
7	C 20229	WASHER - thrust, cam gear	1
8	126- 9	KEY - woodruff, cam and crankshaft gear mtg.	2
9	C 20327	CAMSHAFT - engine (includes C 20233 Pin)	1
10	C 20233	PIN - camshaft center	1
11	C 20342	PISTON AND PIN ASSEMBLY - standard	2
11	C 20351	PISTON AND PIN ASSEMBLY - .005"	2
11	C 20352	PISTON AND PIN ASSEMBLY - .010"	2
11	C 20357	PISTON AND PIN ASSEMBLY - .020"	2
11	C 20358	PISTON AND PIN ASSEMBLY - .030"	2
11	C 20373	PISTON AND PIN ASSEMBLY - .040"	2
12	C 20379	PIN - piston	2
13	C 20380	RETAINER - piston pin	4
14	C 20381	CONNECTING ROD ASSEMBLY	2
15	C 20481	BUSHING - piston pin	2
16	C 20402	BOLT - connecting rod	4
17	C 20382	RING SET - piston (standard)	2
17	C 20383	RING SET - piston (.005" oversize)	2
17	C 20384	RING SET - piston (.010" oversize)	2
17	C 20386	RING SET - piston (.020" oversize)	2
17	C 20394	RING SET - piston (.030" oversize)	2
17	C 20400	RING SET - piston (.040" oversize)	2
18	C 20403	BEARING - connecting rod (standard)	4
18	C 20408	BEARING - connecting rod (.002" undersize)	4
18	C 20409	BEARING - connecting rod (.010" undersize)	4
18	C 20410	BEARING - connecting rod (.020" undersize)	4
18	C 20480	BEARING - connecting rod (.030" undersize)	4
19	C 20482	WASHER - flywheel mtg.	1
20	126- 16	KEY - flywheel mtg.	1
21	C 20483	BOLT - flywheel mtg. special	1
22	R 13338	RETAINER - crankshaft gear	1
23	C 20219	WASHER - retaining, crankshaft gear	1
24	C 20487	CRANKSHAFT - engine	1
25	92- 7	LOCKWASHER - 7/16" flywheel mtg.	1



ONAN ENGINE

ENGINE BLOCK AND ATTACHING PARTS

REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	C 20489	BLOCK ASSEM. - cylinder, standard bore	1
2	C 20252	PLUG - camshaft expansion	1
3	C 20497	STUD - bearing plate, rear	5
4	C 20262	BEARING - crankshaft, standard (undersize see below)	2
5	C 20267	WASHER - thrust, crankshaft bearing	2
6	C 20511	KIT - gasket, bearing plate	1
7	C 20512	PLATE - bearing (excludes bearing)	1
8	C 20513	BEARING - camshaft, front or rear	2
9	C 20271	SEAL - bearing plate	1
10	C 20272	PIN - main bearing stop	4
11	129- 513	NUT - stud, bearing plate	5
12	C 20519	LOCKWASHER - rear bearing plate	5
13	C 20520	TUBE - oil, crankcase	1
14	C 20528	INSERT - valve seat, intake (oversize see page 93)	2
15	C 20523	INSERT - valve seat, exhaust (oversize see page 93)	2
16	C 20534	GUIDE - valve, intake	2
17	C 20533	GUIDE - valve, exhaust	2
18	C 21569	BLOCK ASSEM. - short (includes: cylinder and crankcase, all bearings, crankshaft, camshaft, timing gear, governor gear case, rods, pistons, rings, valves, oil pump and breather tube)	1
19	C 20490	CAP - breather tube	1
20	C 20491	TUBE - breather	1
21	C 20492	BAFFLE - breather tube	1
22	C 20493	SEAL - "O"-ring, breather tube	1
23	C 20536	CLAMP - breather cap	1
24	C 20504	SCREEN - breather	1
25	C 20540	BOLT - 5/16 x 1-1/4" n.c. hex	8
26	C 20541	BOLT - 5/16 x 1-3/4" n.c. hex	10
27	C 20248	WASHER - 5/16"	18
28	C 20499	GASKET - cylinder head	2
29	C 20500	HEAD - cylinder R.H. (used prior to eng. no. 292517)	1
29	C 20501	HEAD - cylinder R.H. (used eng. no. 292517 and after)	1
30	C 20502	HEAD - cylinder L.H. (used prior to eng. no. 292517)	1
30	C 20503	HEAD - cylinder L.H. (used eng. no. 292517 and after)	1
31	C 20263	BEARING - crankshaft, rear (.002 undersize)	2
31	C 20264	BEARING - crankshaft, rear (.010 undersize)	2

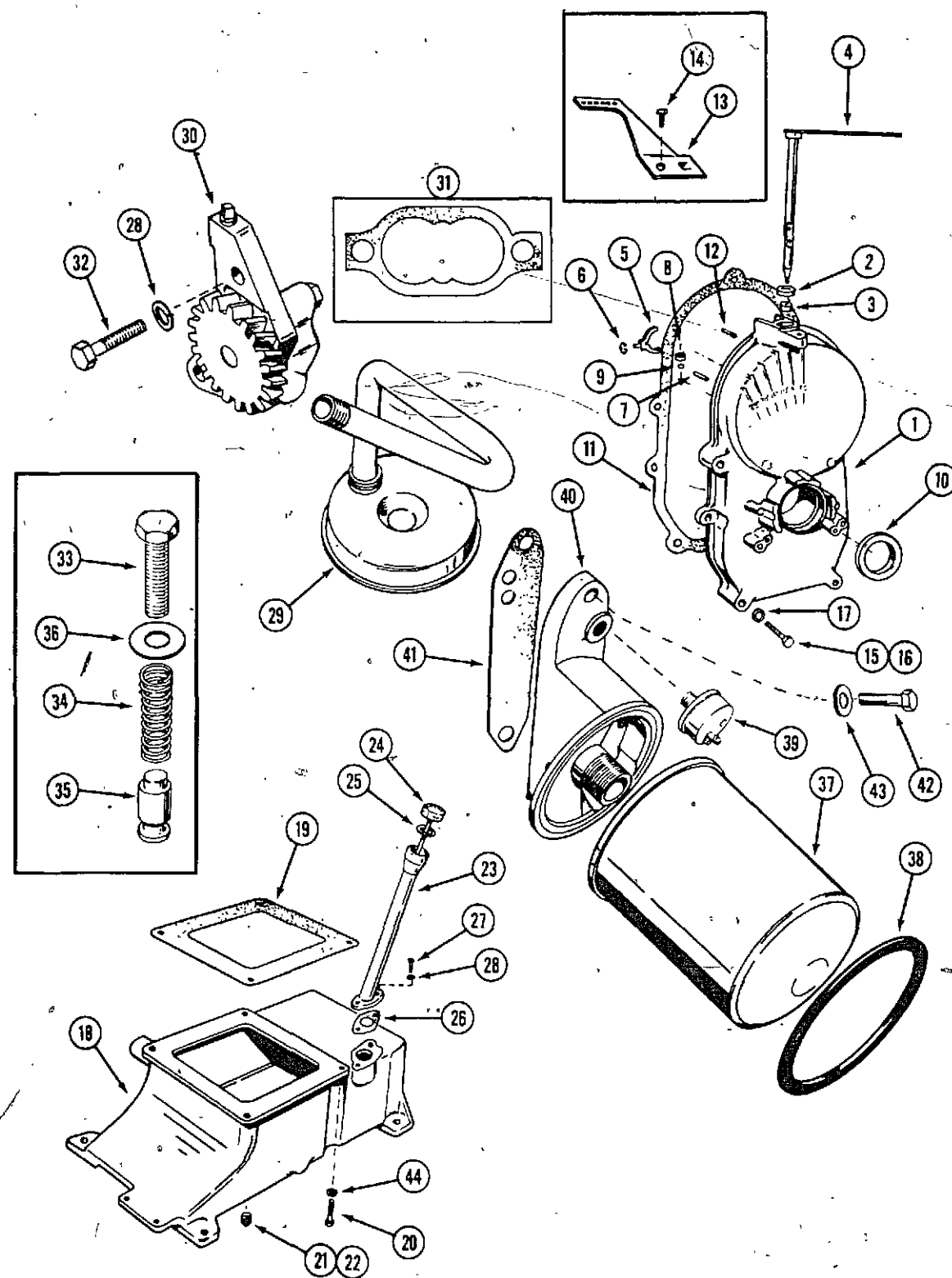


CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS

ONAN ENGINE

ENGINE BLOCK AND ATTACHING PARTS (continued)

REF. NO.	PART NO.	DESCRIPTION	REQ'D
31	C 20265	BEARING - crankshaft, rear (.020 undersize)	2
31	C 20266	BEARING - crankshaft, rear (.030 undersize)	2
32	C 20494	COVER - valve	2
33	C 20495	GASKET - cover, valve	2
34	C 20498	SEAL - valve, intake	2
35	13- 436	BOLT - valve cover	2
36	C 20247	WASHER - valve cover, copper	2
37	C 20517	ROTATOR - valve	4
38	C 20293	SPRING - valve	4
39	C 20294	LOCK - valve and spring	8
40	C 20276	TAPPET - valve, standard	4
40	C 20277	TAPPET - valve, .005" oversize	4
41	C 20521	VALVE - intake	2
42	C 20522	VALVE - exhaust	2
43	C 20524	INSERT - valve seat, exhaust (.002" oversize)	2
43	C 20525	INSERT - valve seat, exhaust (.005" oversize)	2
43	C 20526	INSERT - valve seat, exhaust (.010" oversize)	2
43	C 20527	INSERT - valve seat, exhaust (.025" oversize)	2
44	C 20529	INSERT - valve seat, intake (.002" oversize)	2
44	C 20530	INSERT - valve seat, intake (.005" oversize)	2
44	C 20531	INSERT - valve seat, intake (.010" oversize)	2
44	C 20532	INSERT - valve seat, intake (.025" oversize)	2
	C 20655	KIT - gasket, complete engine	1
	C 20754	KIT - gasket, carbon removal (includes: valve cover gaskets, cylinder head gaskets, intake manifold gaskets and exhaust gaskets)	1
	C 20755	KIT - overhaul, engine (standard) includes: valves, valve spring and retainers, ring set, oil filter, breather tube, points, plugs, condenser, crankshaft retainer ring and gasket kit	1

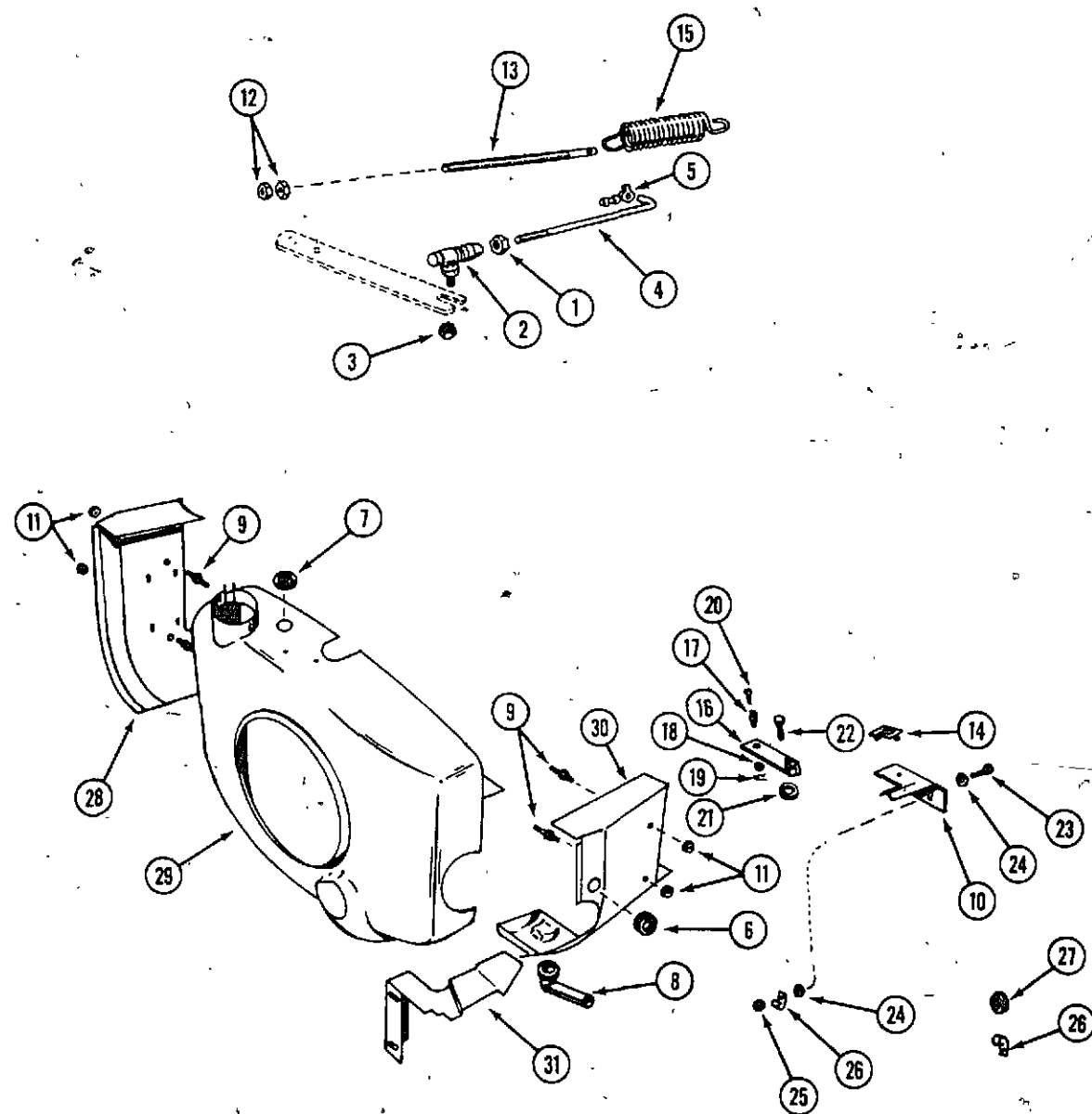


CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS

ONAN ENGINE

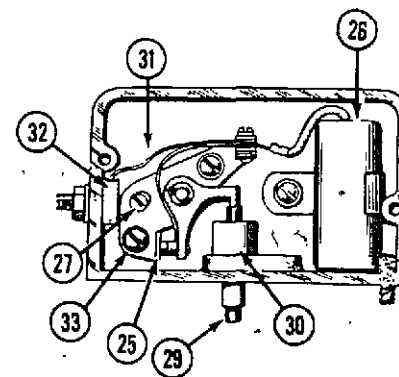
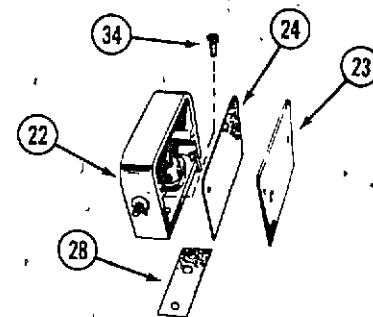
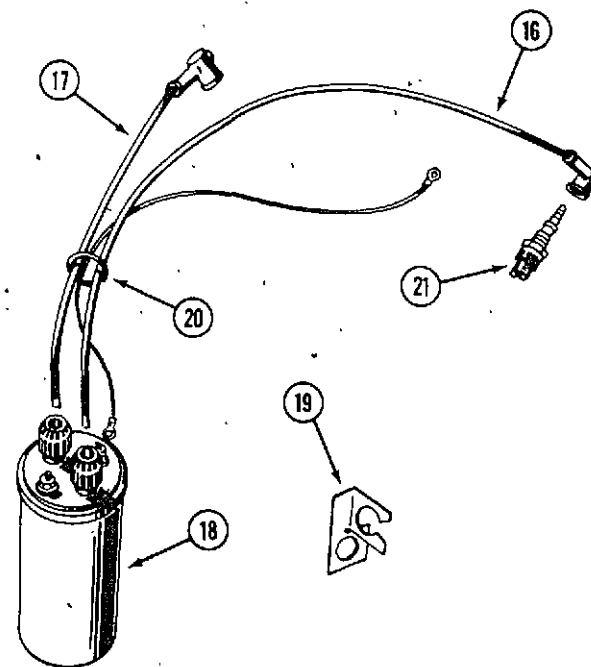
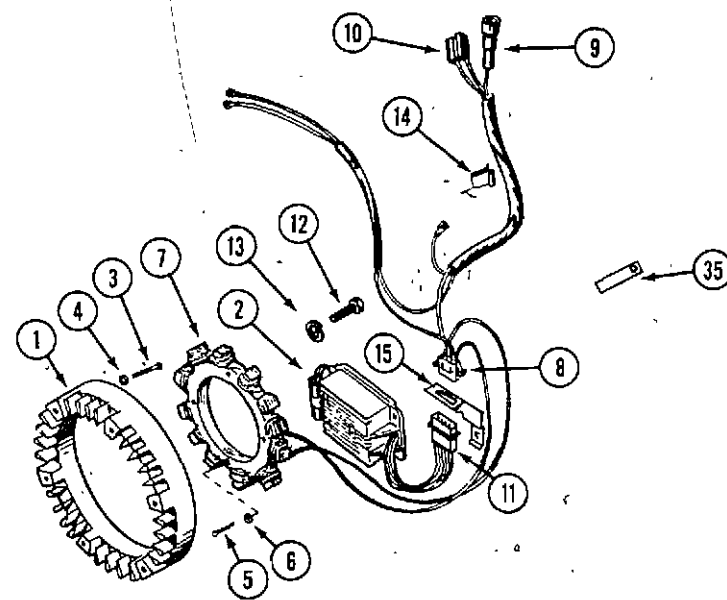
OIL BASE, OIL PUMP AND GEAR COVER

REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	C 20551	COVER ASSEMBLY - gear	1
2	C 20310	SEAL - oil, governor shaft	1
3	C 20544	BEARING - governor shaft, upper	1
4	C 20545	SHAFT AND ARM ASSEMBLY - governor	1
5	C 20546	YOKE - governor shaft	1
6	C 20547	RING - retainer, yoke	1
7	C 20309	PIN - stop, governor cup	1
8	C 20549	BEARING - governor shaft, lower	1
9	211- 5	BEARING - ball, governor shaft	1
10	C 20312	SEAL - gear cover	1
11	C 20552	GASKET - gear cover	1
12	C 20314	PIN - gear cover	1
13	C 20579	ARM - governor extension	2
14	177- 97	BOLT - governor arm extension	1
15	13- 528	BOLT - 5/16 x 1-3/4" n.c. hex	1
16	13- 536	BOLT - 5/16 x 2-1/4" n.c. hex	4
17	92- 5	LOCKWASHER - 5/16"	1
18	C 20556	BASE - oil	5
19	C 20555	GASKET - oil base	1
20	C 20557	BOLT - oil base to block	1
21	221- 13	PLUG - oil drain 3/8"	4
22	221- 14	PLUG - oil drain 1/2"	1
23	C 20563	TUBE - oil filler (used with vacuum fuel pump)	1
23	C 20562	TUBE - oil filler (used with mechanical fuel pump)	1
24	C 20553	CAP - oil filler	1
25	C 20554	GASKET - oil cap	1
26	C 20564	GASKET - tube, oil filler	1
27	13- 410	BOLT - oil filler tube mtg.	1
28	92- 4	LOCKWASHER - filler tube and oil pump mtg.	2
29	C 20570	INTAKE - oil pump (includes cup, screen and pipe)	4
30	C 20323	OIL PUMP ASSEMBLY (internal components NSS)	1
31	C 20325	KIT - gasket oil pump	1
32	13- 416	BOLT - oil pump mtg.	1
33	14- 612	BOLT - 3/8" n.c. hex, oil by-pass	2
34	C 20320	SPRING - oil by-pass	1
35	C 20322	VALVE - oil by-pass	1
36	C 20574	WASHER - oil by-pass	1
37	C 20566	FILTER - oil	1
38	C 20577	GASKET - oil filter	1
39	C 20568	SWITCH - oil indicator	1
40	C 20565	ADAPTER - oil filter (used on early models)	1
41	C 20330	GASKET - adapter oil	1
42	13- 516	BOLT - 5/16 x 1" n.c. hex	1
43	C 20331	WASHER - copper	2
44	92- 6	LOCKWASHER - oil base mtg.	4



GOVERNOR AND BLOWER HOUSING

REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	129- 665	NUT - lock, governor throttle	1
2	C 20569	BALLJOINT - governor throttle rod	1
3	C 20605	NUT - ball joint	1
4	C 20572	ROD - governor throttle	1
5	C 20573	CLIP - rod, governor throttle	1
6	C 20610	GROMMET - rubber	1
7	C 20616	PLUG - blower housing	1
8	C 20620	TUBE - drain, oil filter	1
9	C 20621	STUD - cylinder air baffle	4
10	C 20608	BRACKET - governor control	1
11	25- 118	NUT - baffle mtg.	4
12	129- 27	NUT - #10	2
13	C 20611	ROD - governor, high speed	1
14	C 20374	CLIP - cable, throttle	1
15	C 20613	SPRING - governor	1
16	C 20622	ARM - governor, rear	1
17	C 20372	SWIVEL - governor arm	1
18	195- 14	WASHER - #6	1
19	136- 2	PIN - cotter	1
20	169- 74	SCREW - #8 x 5/16"	1
21	C 20624	SPACER - governor arm	1
22	121- 3	BOLT - locking 1/4 x 1/2" n.c. hex	1
23	C 20627	SCREW - #10 x 1" n.f.	1
24	C 20628	WASHER - #10	2
25	129- 27	NUT - #10 N.F. hex	1
26	C 20626	CLIP - hose	2
27	C 20625	GROMMET - rubber	1
28	C 20580	BAFFLE - cylinder L.H.	1
29	C 20582	HOUSING - blower	1
30	C 20584	BAFFLE - cylinder R.H.	1
31	C 20614	BAFFLE - air	1

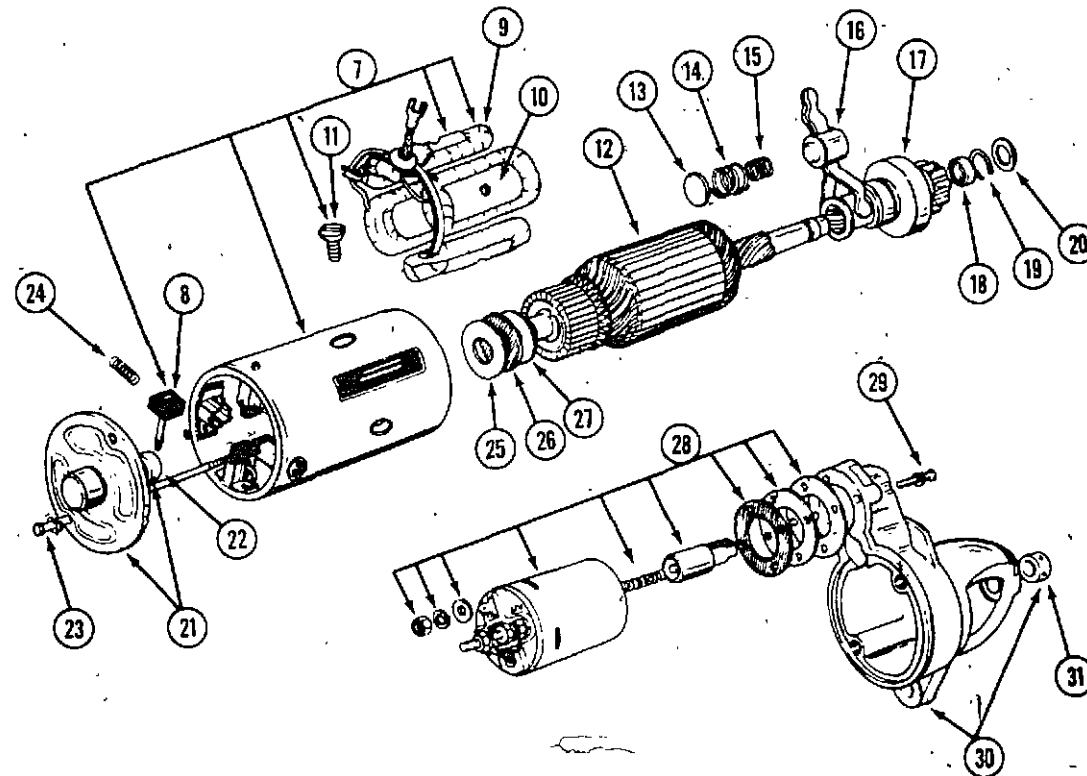
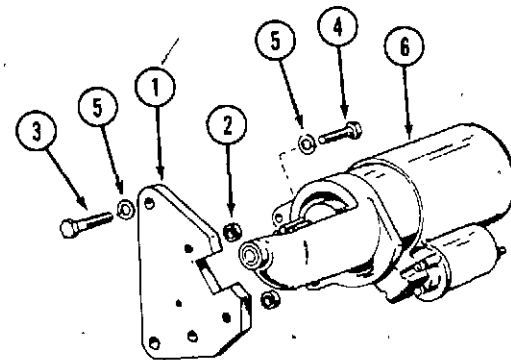


CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS

ONAN ENGINE

IGNITION AND CHARGING SYSTEM

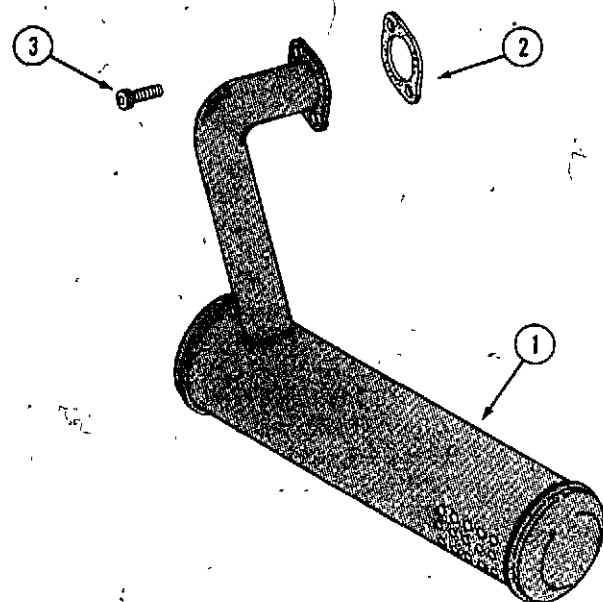
REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	C 20591	ROTOR - alternator	1
2	C 20592	REGULATOR, RECTIFIER ASSEMBLY	1
3	C 20593	SCREW - rotor mounting	6
4	92- 4	LOCKWASHER - rotor mtg.	6
5	C 20594	SCREW - stator mounting	3
6	92- 3	LOCKWASHER - stator mtg.	3
7	C 20590	STATOR ASSEMBLY (includes items 8, 9 & 10)	1
8	C 20596	CONNECTOR - socket	1
9	C 20597	HOLDER - fuse	1
10	C 20599	CONNECTOR - wire	1
11	C 20604	CONNECTOR - plug, regulator	1
12	13- 414	SCREW - 1/4 x 7/8" regulator, rectifier, mtg.	3
13	92- 4	LOCKWASHER - 1/4"	3
14	C 20585	CLIP - wire holder	1
15	C 20617	BRACKET - socket mtg. wire	1
16	C 20507	CABLE - spark plug 23-1/2"	1
17	C 20348	CABLE - spark plug 19"	1
18	C 20349	COIL - ignition	1
19	C 20344	BRACKET - cable, spark plug	1
20	16905	RETAINER - o-ring, spark plug cables	1
21	O 5999-AB	SPARK PLUG	2
22	C 20514	BOX ASSEMBLY - breaker contact (includes items 23, 24, 25 & 26)	1
23	C 20318	COVER - breaker box	1
24	C 20321	GASKET - breaker box	1
25	C 20484	POINT SET - breaker contacts (order kit below)	1
26	C 20343	CONDENSER - breaker contacts (order kit below)	1
27	C 20332	CAM - point gap adjust	1
28	C 20505	GASKET - breaker box mtg.	1
29	C 20506	PLUNGER ASSEMBLY (includes plunger, guide & diaphragm)	1
30	C 20509	DIAPHRAGM - breaker box	1
31	C 20515	STRAP - point set to terminal block	1
32	C 20516	BLOCK AND TERMINAL ASSEMBLY	1
33	C 20548	SCREW - #8 x 1/4"	3
34	C 20535	SCREW - breaker box mtg.	2
35	C 20588	CLIP - wire harness	1



ONAN ENGINE

STARTER MOTOR

REF. NO.	PART NO.	DESCRIPTION	REQ'D
1	C 20589	BRACKET - starter mtg.	1
2	C 20587	SPACER - starter mtg.	2
3	13- 620	BOLT - starter bracket mtg.	3
4	C 20615	BOLT - starter to bracket mtg.	2
5	92- 6	LOCKWASHER - starter-mtg.	5
6	C 20586	MOTOR - starting 12.volt.	1
7	C 20663	YOKE ASSEMBLY - frame (includes items 8, 9, 10, & 11).	1
8	C 20678	BRUSH - starter motor	4
9	C 20683	COIL ASSEMBLY - field	1
10	C 20686	POLE - shoe	4
11	C 20687	SCREW - coil mtg., field	4
12	C 20664	ARMATURE - starter motor.	1
13	C 20673	HOLDER - spring.	1
14	C 20672	SPRING - lever (B)	1
15	C 20671	SPRING - lever (A)	1
16	C 20670	LEVER - clutch fork.	1
17	C 20665	CLUTCH - engaging, starter	1
18	C 20666	STOP - pinion	1
19	C 20667	RING - retaining	1
20	C 20668	WASHER	1
21	C 20674	END CAP - starter, rear (includes bearing).	1
22	C 20685	BEARING - rear	1
23	C 20680	BOLT - through	2
24	C 20679	SPRING - brush	4
25	C 20676	WASHER - armature	1
26	C 20677	WASHER - insulating	1
27	C 20675	WASHER - armature	1
28	C 20682	SWITCH ASSEMBLY - solenoid	1
29	177- 133	SCREW - solenoid mtg.	3
30	C 20669	FRAME ASSEMBLY - drive end (includes bearing).	1
31	C 20684	BEARING - front.	1

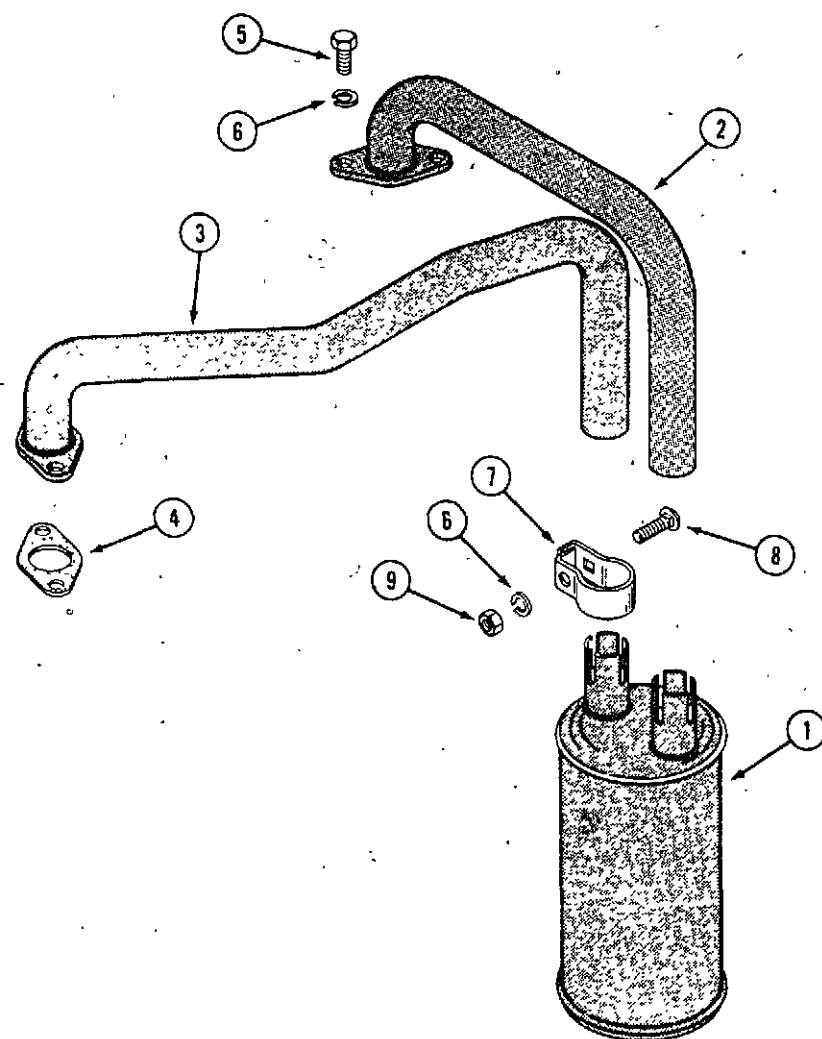


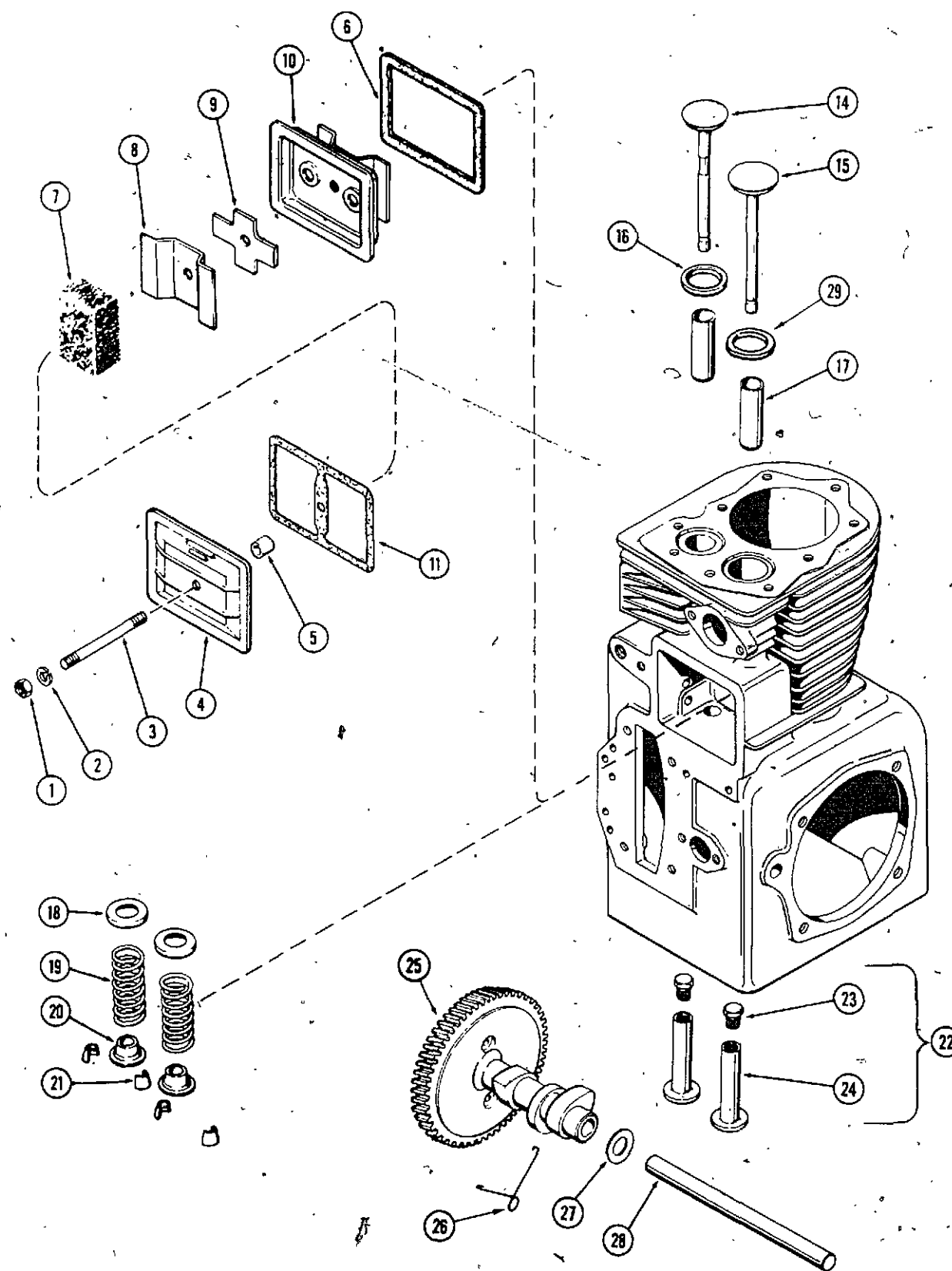
EXHAUST SYSTEM - 644

REF.	PART NO.		DESCRIPTION	REQ'D
1	C	18246	MUFFLER - exhaust	1
2	C	10372	GASKET - exhaust	1
3	61-	510	SCREW - 5/16" x 5/8" NC socket head	2

EXHAUST SYSTEM - 646

1	C	18121	MUFFLER - exhaust	1
2	C	18215	PIPE - exhaust, left	1
3	C	18214	PIPE - exhaust, right	1
4	C	18250	GASKET - exhaust	1
5	61-	512	BOLT - 5/16" x 3/4" NC hex	2
6	192-	45	LOCKWASHER - 5/16"	4
7	C	18216	CLAMP - muffler	6
8	111-	204	BOLT - 5/16" x 1-1/4" NC rd. hd. square neck	2
9	129-	518	NUT - 5/16" NC hex	2



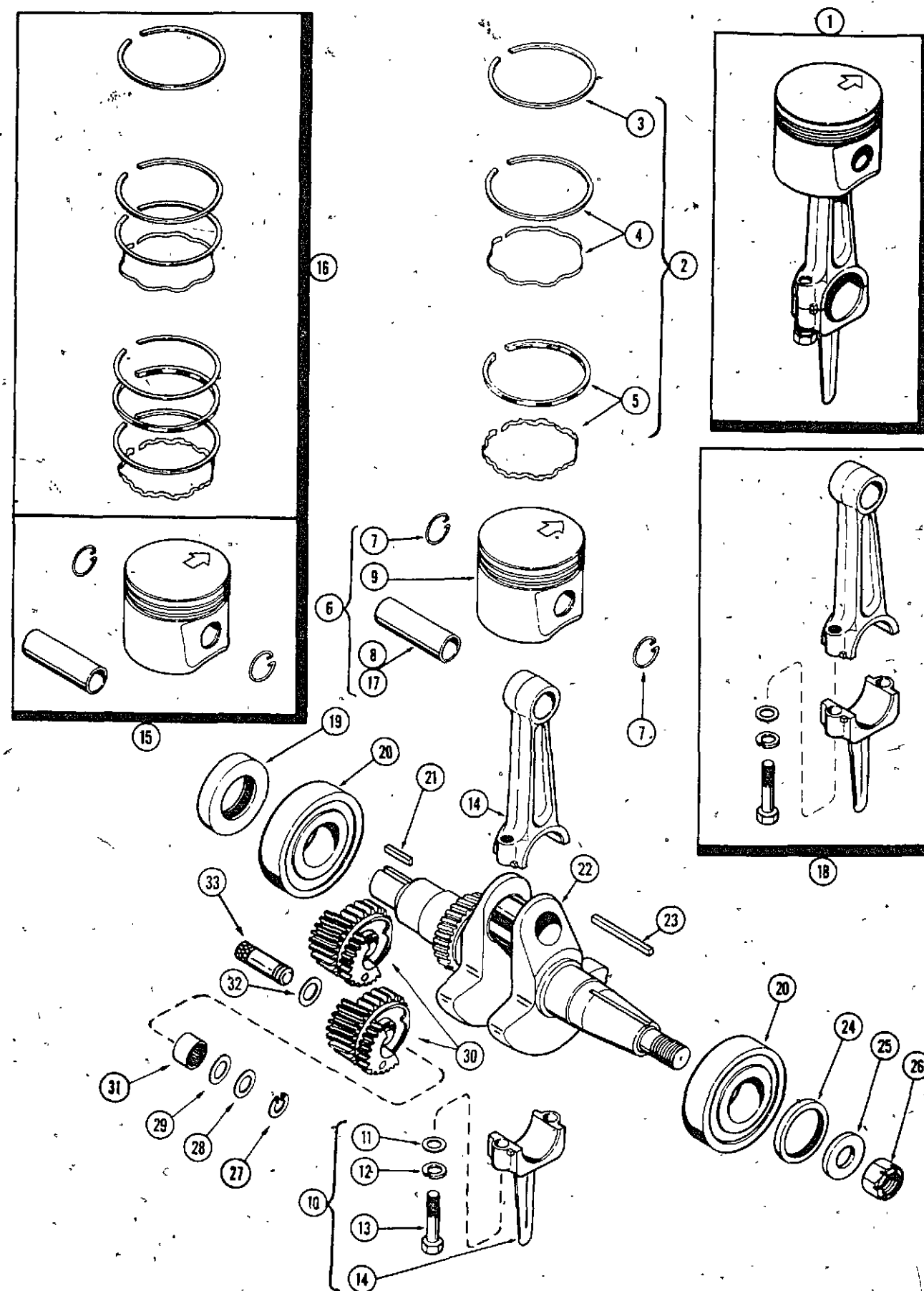


644 CRANKCASE BREATHER

REF.	PART NO.	DESCRIPTION	REQ'D
1	25- 104	NUT - 1/4" NC hex	1
2	92- 4	LOCKWASHER - 1/4"	1
3	KO 275220	STUD - valve cover	1
4	KO 275143	COVER - valve	1
5	KO 231032	SEAL - breather	1
6	KO 235048	GASKET - breather plate	1
7	KO 235118	FILTER - breather	1
8	KO 235117	BAFFLE - breather	1
9	KO 235047	REED - breather	1
10	KO 235631	PLATE - breather	1
11	KO 275144	GASKET - valve cover	1

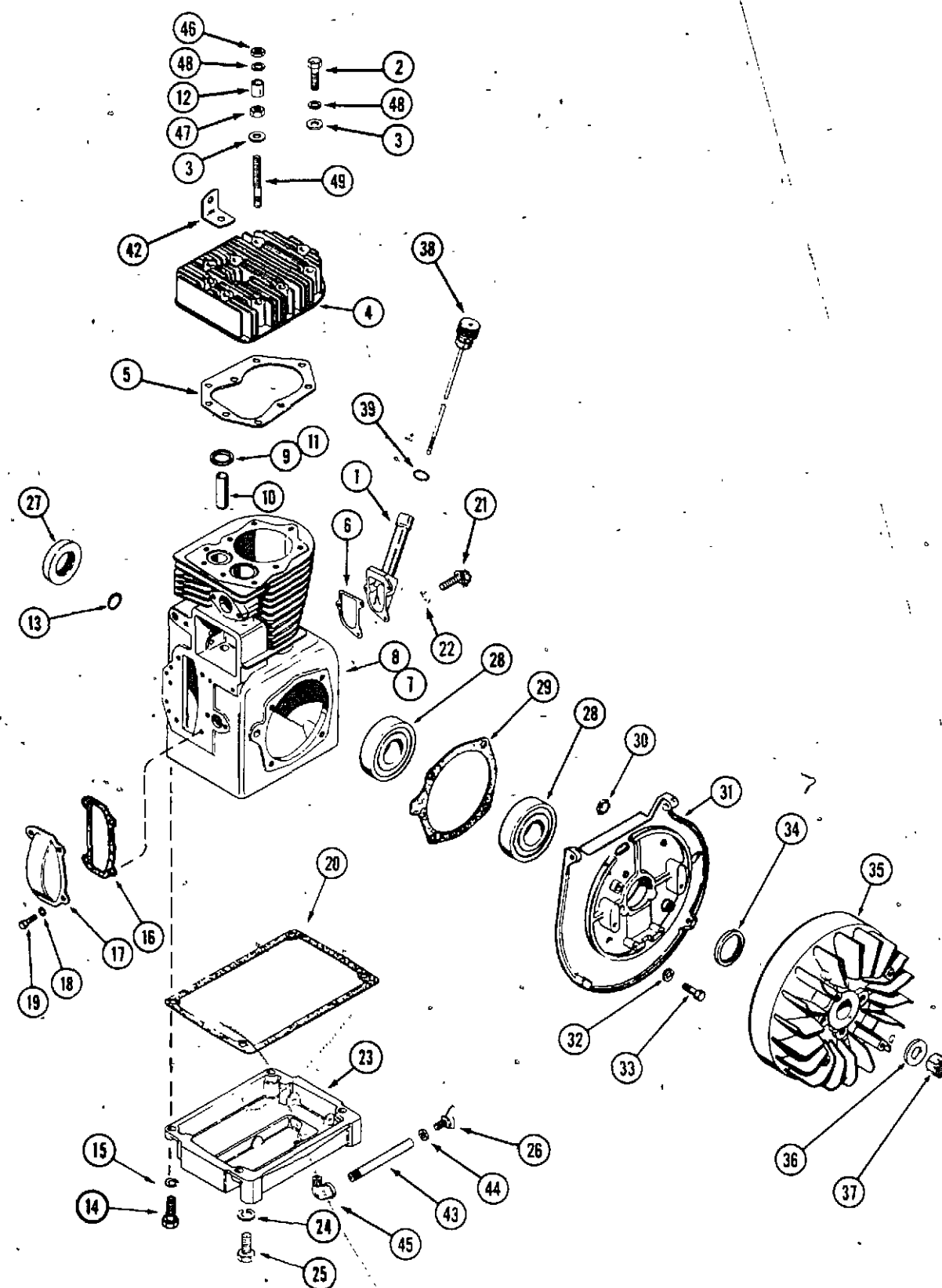
644 CAMSHAFT AND VALVES

14	KO 235838	VALVE - exhaust	1
15	KO 235582	VALVE - intake	1
16	KO 230170	INSERT - exhaust valve seat	1
17	KO 235007	GUIDE - valve	2
18	KO 235011	SEAT - valve spring	2
19	KO 235168	SPRING - valve	2
20	KO 230020	ROTATOR - valve (Furnished in pairs only)	2
21	KO 240013	LOCK - valve retainer	2
22	KOD 235327	LIFTER ASSEMBLY	2
23	NSS	SCREW - tappet adjusting	1
24	NSS	LIFTER - valve	1
25	KOE 235646	CAMSHAFT ASSEMBLY	1
26	V 34346	SPRING - actuating	1
27	KO 275066	SPACER - camshaft, .005"	UAR
27	KO 275067	SPACER - camshaft, .010"	UAR
28	KO 235053	PIN - camshaft	1
29	KO 230265	INSERT - intake valve seat	1



644 CRANKSHAFT, PISTON - CONNECTING ROD

REF.	PART NO.	DESCRIPTION	REQ'D
1	NSS	PISTON AND ROD ASSEMBLY (Std. size)	1
2	KO 236763	RING SET - piston (For oversize, see item 16)	1
3	NSS	RING - top compression	1
4	NSS	RING - 2nd compression (Includes expander)	1
5	NSS	RING - oil (Includes expander)	1
6	KOA 237401	PISTON ASSEMBLY (For oversize, see item 15)	1
7	KO 235811	RETAINER - piston pin	2
8	KO 235803	PIN - piston	1
9	NSS	PISTON	1
10	KOA 237344	CONNECTING ROD ASSEMBLY (For undersize, see item 18)	1
11	KO 235003	WASHER - special	2
12	92- 6	LOCKWASHER - 3/8"	2
13	KO 236611	SCREW - cap, connecting rod	2
14	NSS	ROD - connecting	1
15	KOA 237403	PISTON ASSEMBLY - .010" oversize	1
15	KOA 237404	PISTON ASSEMBLY - .020" oversize	1
15	KOA 237405	PISTON ASSEMBLY - .030" oversize	1
16	KO 236764	RING SET - piston .010" oversize	1
16	KO 236765	RING SET - piston .020" oversize	1
16	KO 236766	RING SET - piston .030" oversize	1
17	KO 235868	PIN - piston .005" oversize	1
18	C 18102	CONNECTING ROD ASSEMBLY - .010" undersize	1
19	R 16287	OIL SEAL - crankshaft rear	1
20	40035	BEARING - crankshaft ball	2
21	W 5063-S	KEY - 1/4" Sq. x 3/4" (Pump Coupling)	1
22	KOB 237034	CRANKSHAFT	1
23	A 27001	KEY - flat 3/16" x 3/16" x 1-3/8" (Flywheel)	1
24	C 18097	OIL SEAL - crankshaft front	1
25	C 18095	WASHER - 5/8"	1
26	131- 309	NUT - special Marsden 5/8" NF	1
27	C 15060	RETAINER - external 1/2" ID	2
28	KO 236504	SPACER .020"	2
29	KO 236509	SPACER - .005"	2
30	KOA 236507	GEAR ASSEMBLY - counter balance	2
31	KO 236506	BEARING - gear assembly	2
32	KO 236510	SPACER - .010"	2
33	KO 236559	SHAFT - counterbalance stub	2

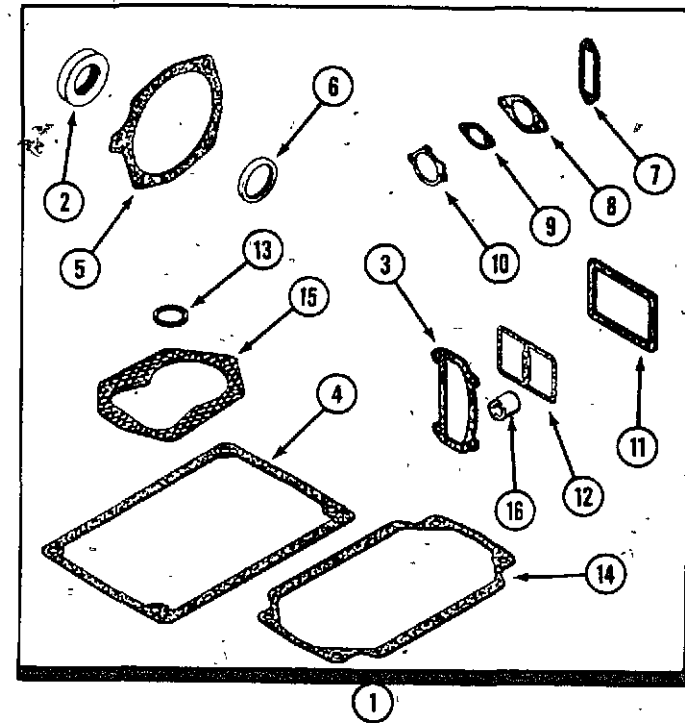


644 ENGINE BLOCK AND ATTACHING PARTS

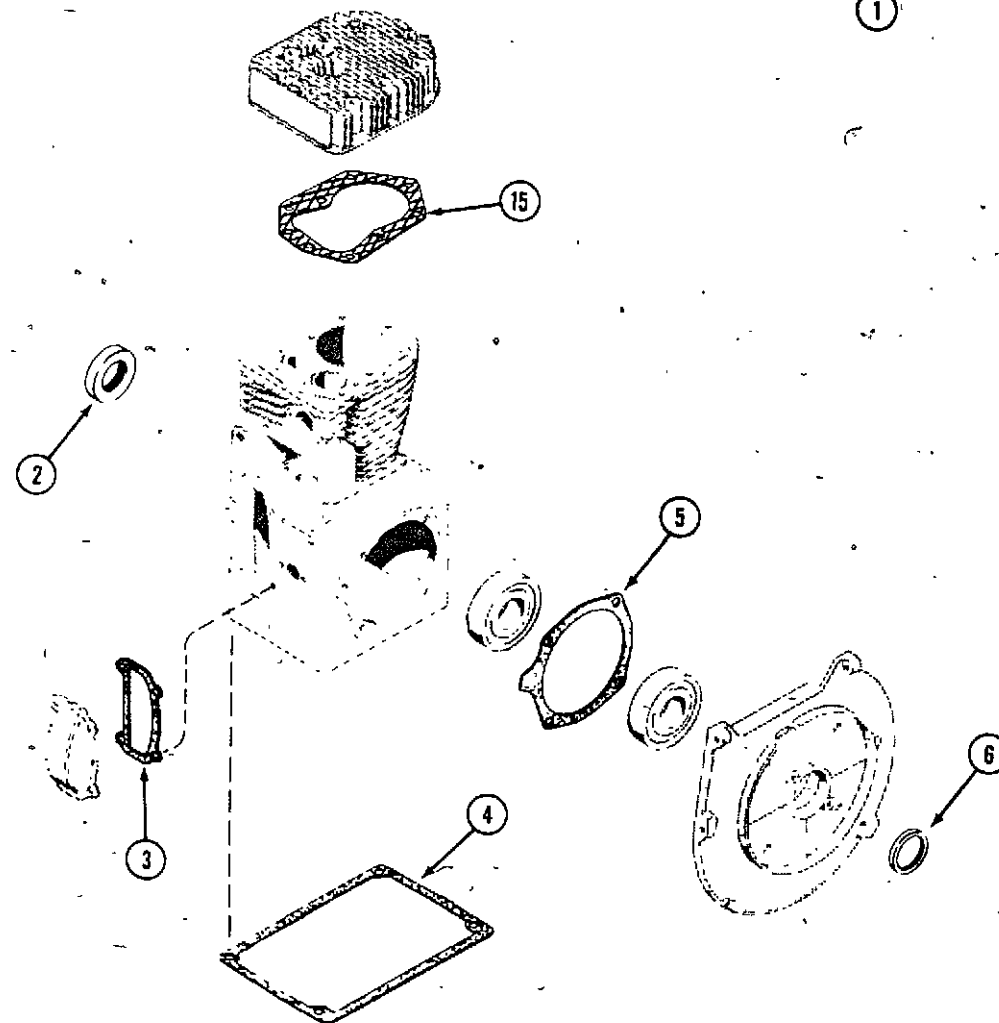
REF.	PART NO.	DESCRIPTION	REQ'D
1	KO 236886	FILLER TUBE	1
2	KO 270158	BOLT - cylinder head special 3/8" x 1-1/2" NC hex	3
3	KO 270889	WASHER - cylinder head bolt	9
4	KO 237670	HEAD - cylinder	1
5	KO 237658	GASKET - head	1
6	KO 237064	GASKET - filler tube	1
7	KOB 237182	BLOCK ASSEMBLY - cylinder, short (includes crankshaft, piston, rod assembly, camshaft, valves, bearings and plate)	1
8	KOA 237033	BLOCK ASSEMBLY - cylinder, standard bore	1
9	KO 230170	INSERT - exhaust valve	1
10	KO 235007	GUIDE - valve	2
11	KO 230265	INSERT - intake valve	1
12	C 21814	SPACER - cylinder head	1
13	41- 18	PLUG - expansion	1
14	113- 209	BOLT - 3/8" x 1-1/2" NC hex plated	4
15	192- 21	LOCKWASHER - 3/8" plated	4
16	KO 235025	GASKET - camshaft cover	1
17	KO 235026	COVER - camshaft gear	1
18	192- 19	LOCKWASHER - 1/4" plated	4
19	113- 6	BOLT - 1/4" x 1/2" NC plated	4
20	KO 235353	GASKET - oil pan	1
21	173- 221	SCREW - #10 x 7/16" round head machine	3
22	193- 26	LOCKWASHER - #10 internal tooth	3
23	KO 237808	BASE - oil pan	1
24	192- 21	LOCKWASHER - 3/8" plated	4
25	113- 207	BOLT - 3/8" x 1" NC socket head, engine mtg.	4
26	C 14399	PLUG - oil drain	1
27	R 16287	OIL SEAL - crankshaft rear	1
28	40035	BEARING - crankshaft ball	2
29	KO 235757	GASKET - shim, bearing plate .312"	1
29	KO 235070	GASKET - shim, .010"	1
31	C 21815	PLATE - bearing	1
32	192- 21	LOCKWASHER - 3/8" plated	4
33	113- 207	BOLT - 3/8" x 1" NC plated	4
34	C 18097	OIL SEAL - crankshaft front	1
35	KO 235818	FLYWHEEL	1
36	195- 545	WASHER - special, plated 21/32" ID x 1-3/8" OD x 1/4"	1
37	131- 309	NUT - special Marsden 5/8"	1
38	C 14954	DIPSTICK ASSEMBLY	1
39	A 27365	"O" RING - dipstick	1
42	KO 235748	STRAP - lifting	1
43	C 19473	NIPPLE - oil drain extension	1
44	C 14906	GASKET - plug, oil drain	1
45	221- 1412	ELBOW - street	1
46	129- 143	NUT - 3/8" NC hex, jam	6
47	129- 103	NUT - 3/8" NC hex	6
48	192- 21	LOCKWASHER - 3/8"	9
49	KO 237277	STUD - cylinder head	6

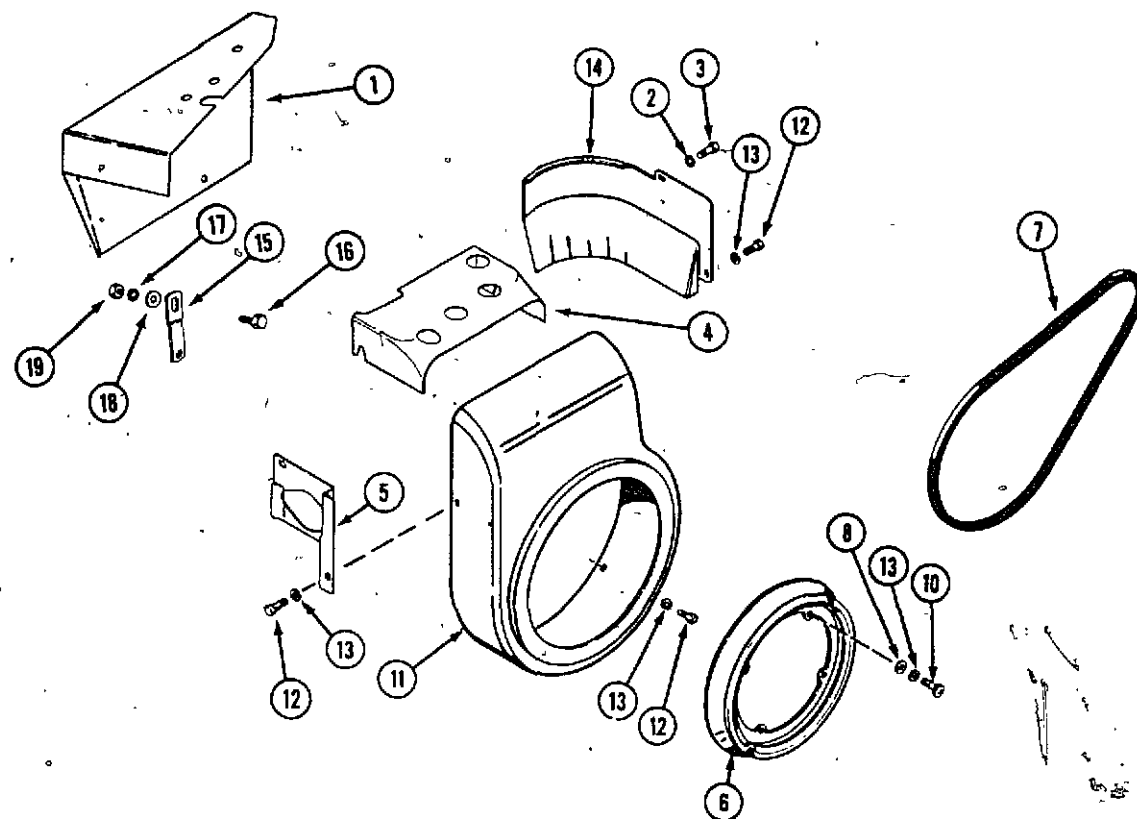
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ENGINE GASKET AND SEAL KIT



REF.	PART NO.	DESCRIPTION	REQ'D
1	KO 237727	KIT - engine gasket	1
2	R 16287	SEAL - crankshaft, rear	1
3	KO 235025	GASKET - camshaft cover	1
4	KO 235353	GASKET - oil pan	1
5	KO 235757	GASKET - shim, bearing plate (.010")	6
5	KO 235070	GASKET - shim (.010")	UAR
6	C 18097	SEAL - crankshaft, front	1
7	KO 220174	GASKET - breaker cover	1
8	A 72100	GASKET - carburetor flange	1
9	A 72108	GASKET - fuel pump flange	1
10	KO 275341	GASKET - carburetor air horn	1
11	KO 235048	GASKET - breather plate	1
12	KO 275144	GASKET - valve cover	1
13	B 53393	GASKET - fuel strainer bowl (not used)	1
14	KO 235057	GASKET - pan (not used)	1
15	KO 237658	GASKET - cylinder head	1
16	KO 231032	SEAL - breather	1



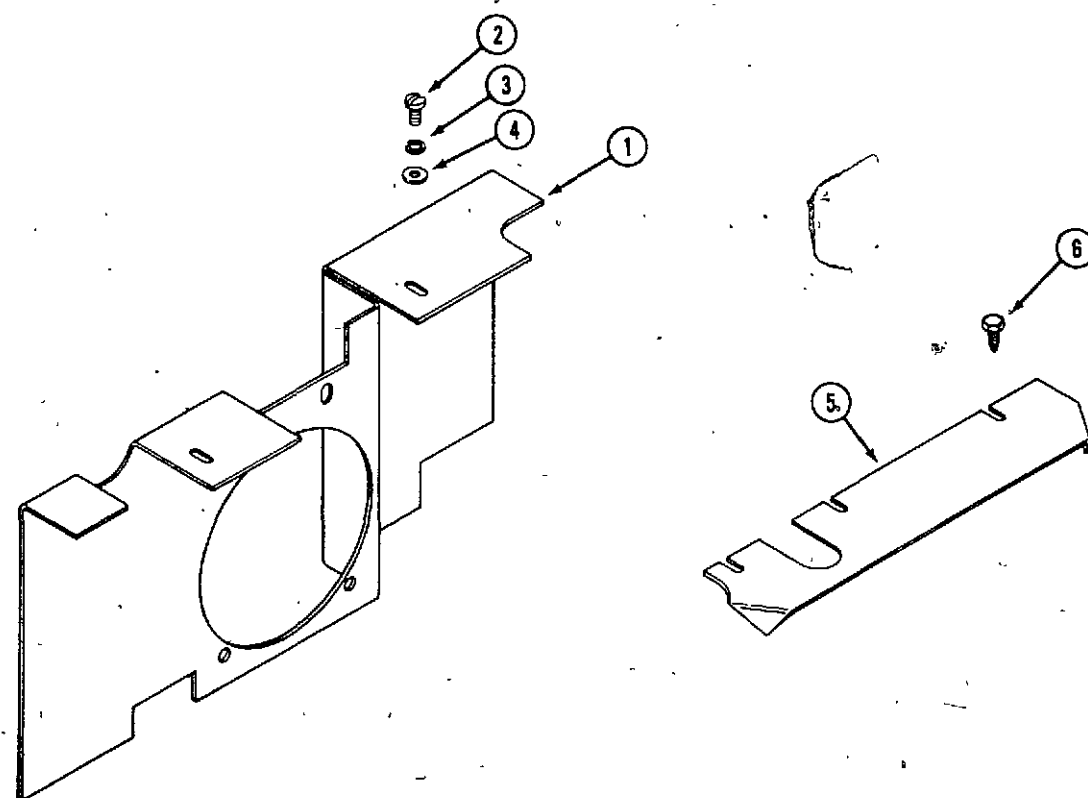


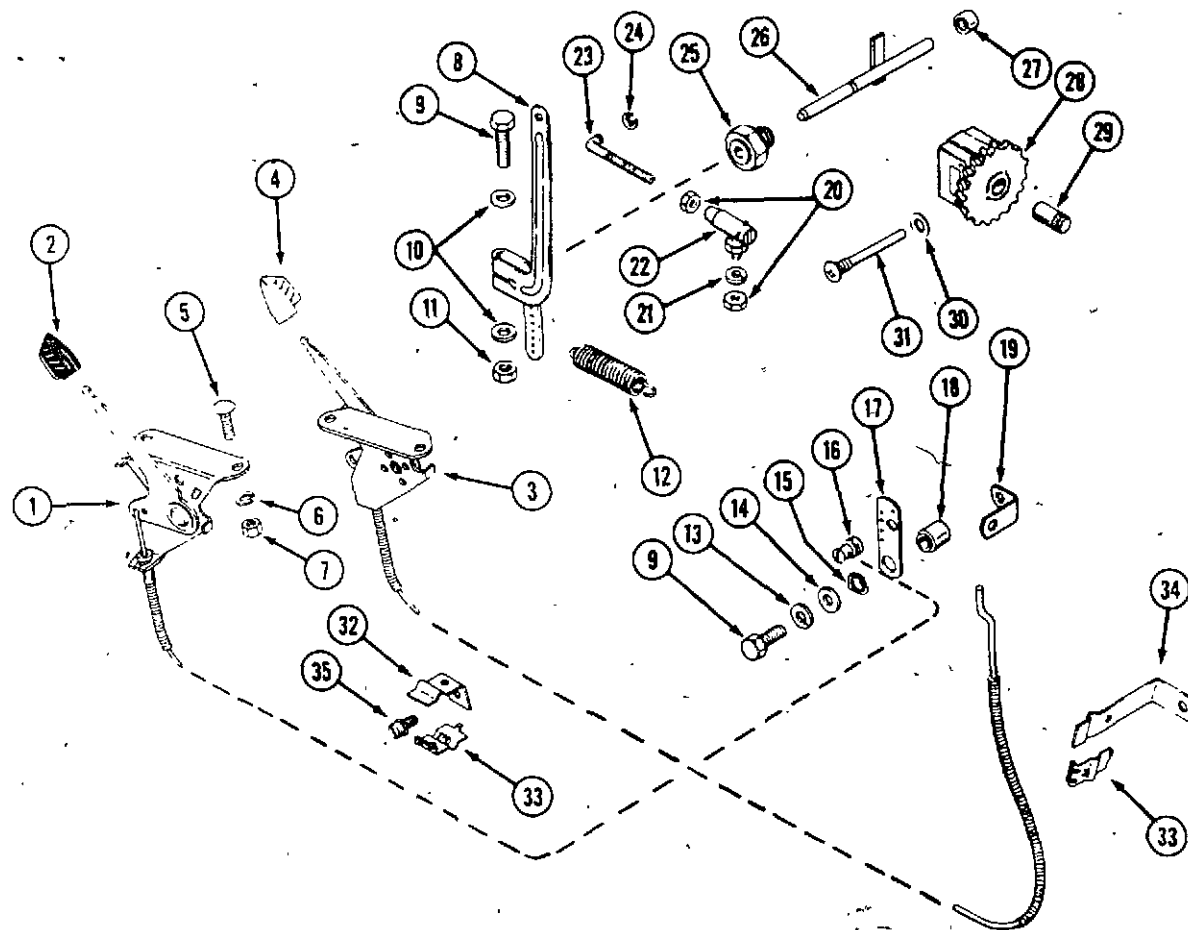
BAFFLES AND SHROUDS - 644

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18989	DEFLECTOR - engine air	1
2	192- 19	LOCKWASHER - 1/4" zinc plated	2
3	113- 6	BOLT - 1/4" x 1/2" NC hex, zinc plated	2
4	KO 237677	BAFFLE - cylinder head	1
5	KO 235652	BAFFLE - carburetor side air	1
6	KO 235207	PULLEY - starter	1
7	C 14345	BELT - drive, starter-generator	1
8	195- 515	WASHER - 1/4" zinc plated	4
9	192- 19	LOCKWASHER - 1/4" zinc plated	4
10	175- 436	SCREW - 1/4" x 5/8" NC truss head Phillips, zinc plated	4
11	KO 235901	HOUSING - blower	1
12	113- 2	BOLT - 1/4" x 3/4" NC hex, zinc plated	4
13	192- 19	LOCKWASHER - 1/4" zinc plated	4
14	KO 235054	BAFFLE - cylinder	1
15	C 19021	SUPPORT - engine air deflector	1
16	113- 118	BOLT - 5/16" x 5/8" NC hex	1
17	192- 20	LOCKWASHER - 5/16"	1
18	195- 521	WASHER - 5/16" plain	1
19	129- 102	NUT - 5/16" NC hex	1

BAFFLES AND SHROUDS - 646

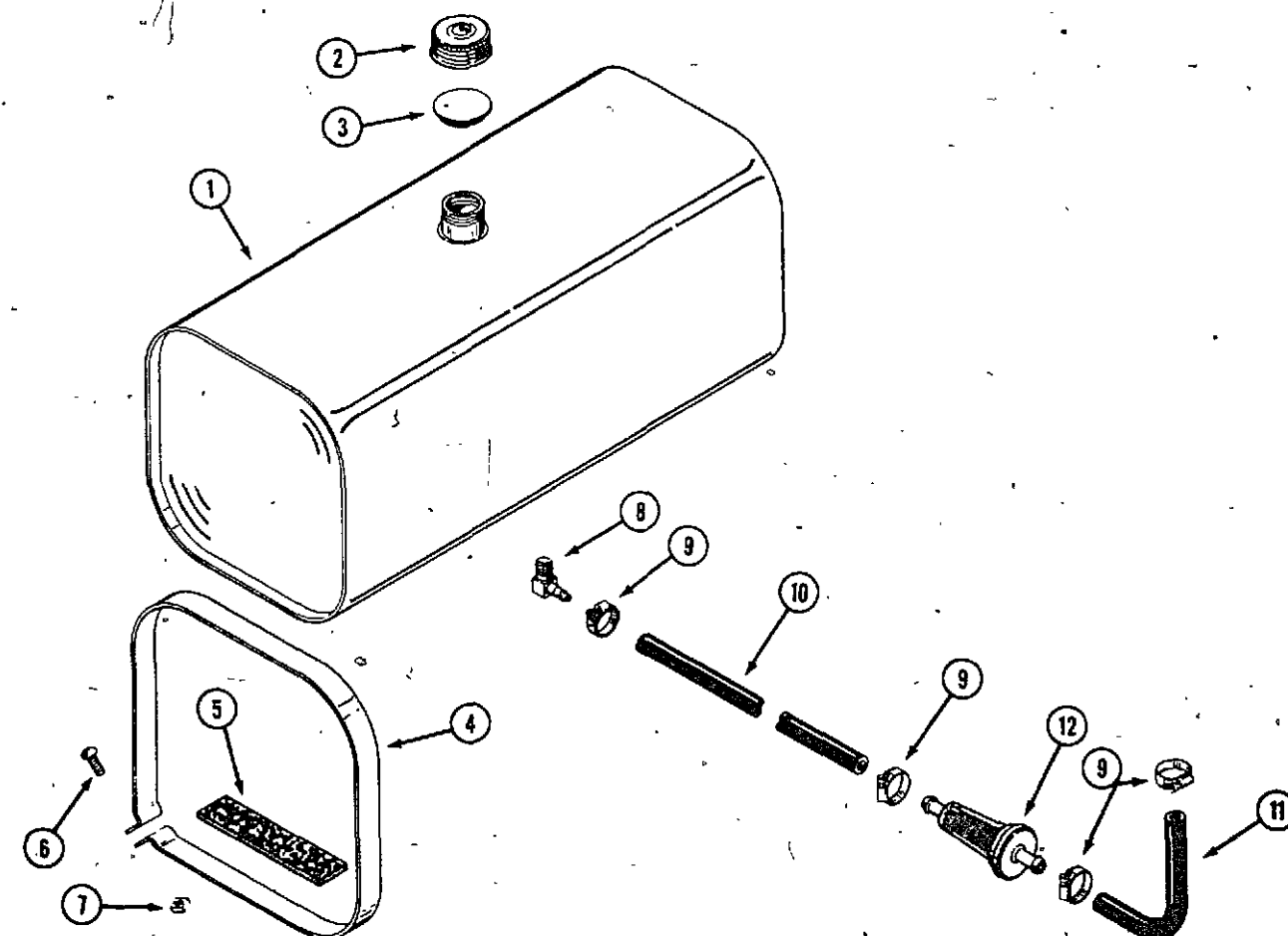
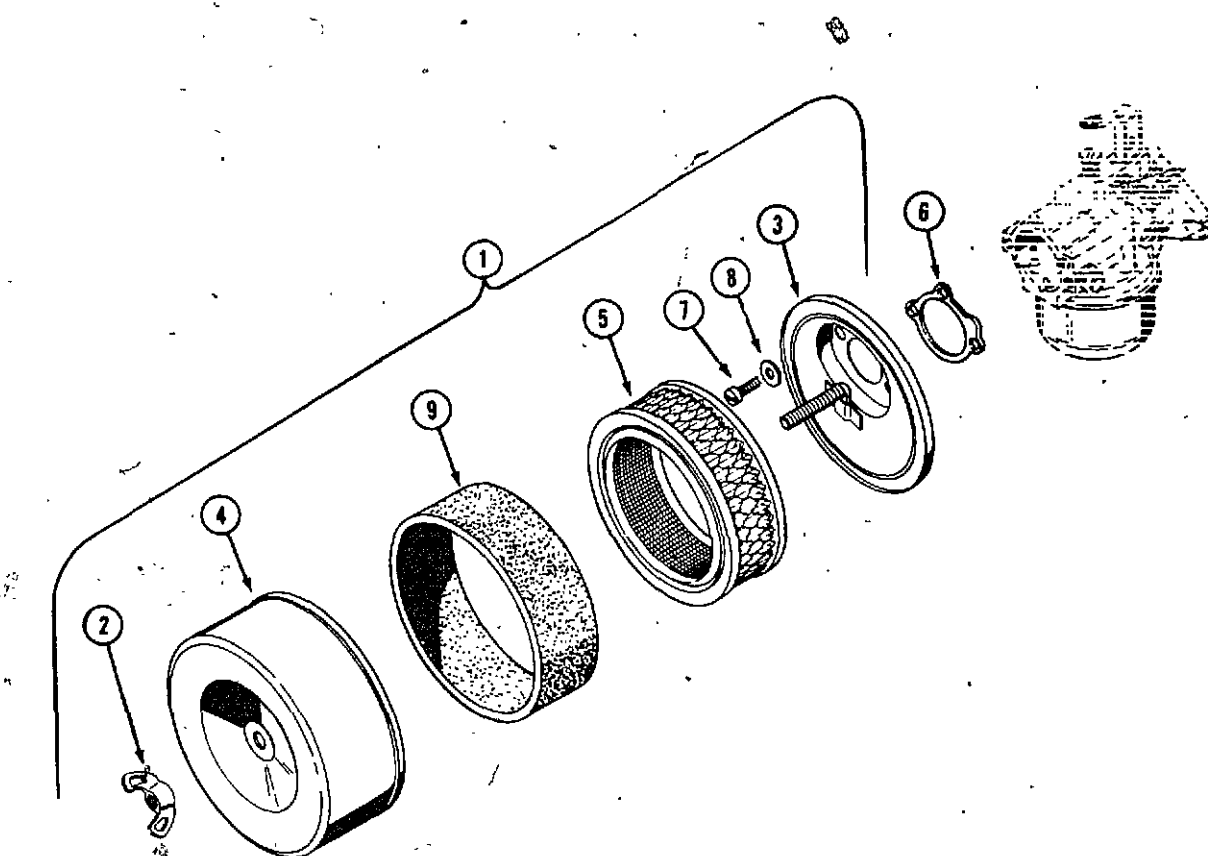
1	C 18129	SHIELD - engine heat	1
2	182- 525	SCREW - #10 x 3/8" NF pan hd.	2
3	192- 18	LOCKWASHER #10	2
4	195- 513	WASHER - #10	2
5	C 18385	SHIELD - heat, engine top	1
6	187- 484	SCREW - #10 x 1/2" hex. hd. self tap.	2





CHOKE THROTTLE AND GOVERNOR

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18311	CONTROL - throttle (644)	1
1	C 19465	CONTROL - throttle (646)	1
2	C 12224	HANDLE - throttle control, black	1
3	C 18312	CONTROL - choke (644)	1
3	C 18271	CONTROL - choke (646)	1
4	C 14506	HANDLE - choke control, white	1
5	111- 1	BOLT - 10-24 x 1/2" round head, square neck	2
6	192- 18	LOCKWASHER - #10 Std. plated	2
7	129- 17	NUT - #10-24 plated	2
8	KO 237653	LEVER - governor	1
9	15- 420	BOLT - 1/4" x 1-1/4" NC hex	2
10	195- 515	WASHER - 1/4" plated	2
11	25- 104	NUT - 1/4" hex	1
12	KO 235496	SPRING - governor	1
13	192- 19	LOCKWASHER - 1/4" plated	1
14	C 18098	WASHER - thrust	1
15	KO 275690	WASHER - wavy	1
16	KO 231052	CLAMP - swivel, wire	1
17	KO 235086	LEVER - speed control	1
18	KO 235085	SPACER - speed control bracket	1
19	KO 235084	BRACKET - high speed stop	1
20	129- 37	NUT - #10-32 hex	2
21	192- 18	LOCKWASHER - 3/16" plated	1
22	A 10326	JOINT - ball	1
23	KO 235277	ROD - throttle	1
24	KO 235278	RING - retaining, throttle rod	1
25	KO 235476	BUSHING - governor cross shaft	1
26	KOA 235256-S	SHAFT ASSEMBLY - governor cross	1
27	C 18103	BEARING - needle governor shaft	1
28	KOA 235743-S	GEAR ASSEMBLY - governor	1
29	KO 235125-S	SHAFT - governor stub	1
30	C 18099	WASHER - governor stop pin	1
31	KO 231355	PIN - governor stop	1
32	KO 235900	BRACKET - throttle cable	1
33	KO 235603	CLIP - bracket	2
34	KOA 236919	BRACKET - choke cable	1
35	169- 95	SCREW - #10 x 3/8" NC fillister head	1

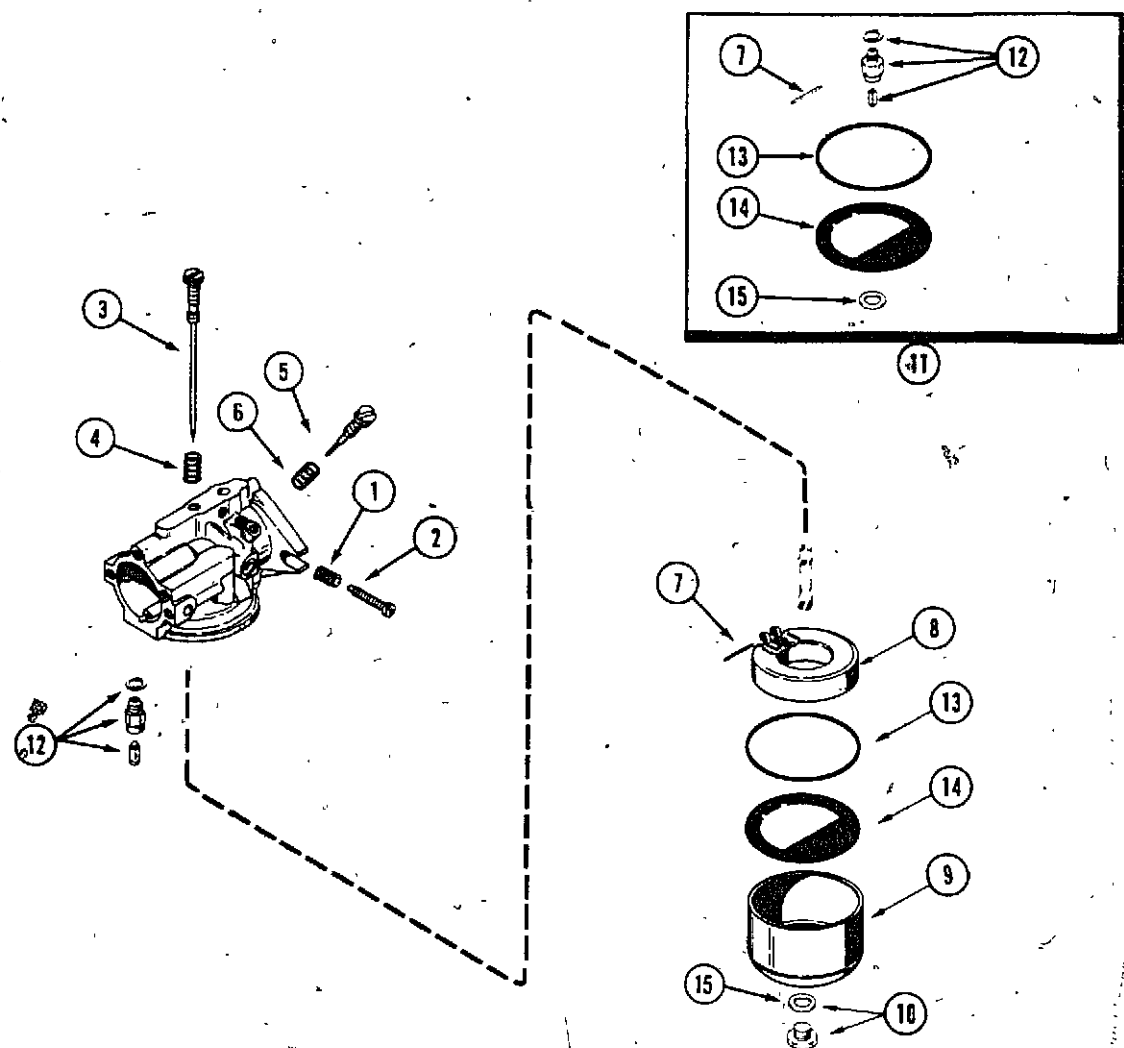


AIR CLEANER - 644

REF.	PART NO.	DESCRIPTION	REQ'D
1	KOA 235100	AIR CLEANER ASSEMBLY	1
2	129- 409	NUT - wing 3/8" NC	1
3	NSS	BASE - air cleaner (order KOA235100)	1
4	NSS	COVER - air cleaner (order KOA235100)	1
5	A 70090	ELEMENT - air cleaner	1
6	KO 275341	GASKET - air horn	1
7	177- 94	SCREW - #10 x 5/16" NF fillister hd.	3
8	195- 512	WASHER - 3/16"	3
9	KO 237421	PRE-CLEANER (Optional)	1

FUEL SYSTEM - 646

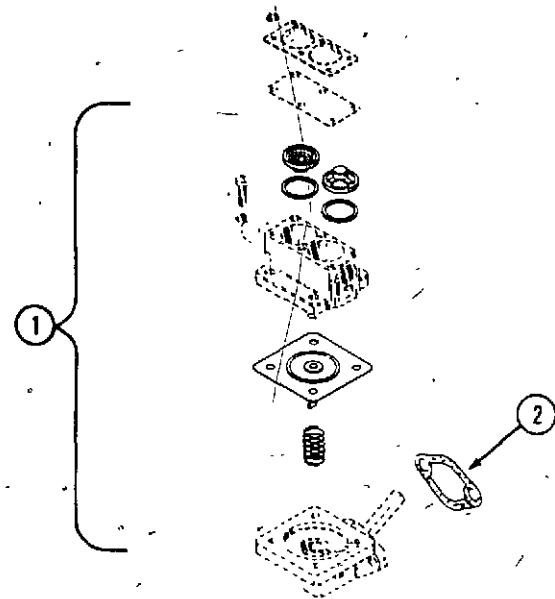
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18133	TANK - fuel	1
2	C 11529	CAP - fuel tank	1
3	C 11545	INSERT - fuel cap	1
4	C 18190	STRAP - tank mtg.	2
5	C 14690	CUSHION - fuel tank	2
6	173- 215	SCREW - 1/4 x 1-1/2" round hd. machine.	2
7	129- 504	NUT - 1/4" NC square	2
8	C 10678	ELBOW - fuel tank	1
9	214- 251	CLAMP - hose	4
10	C 18275	HOSE - fuel line 44"	1
11	C 15007	HOSE - fuel line 5-1/4"	1
12	D 59949	FILTER - fuel	1

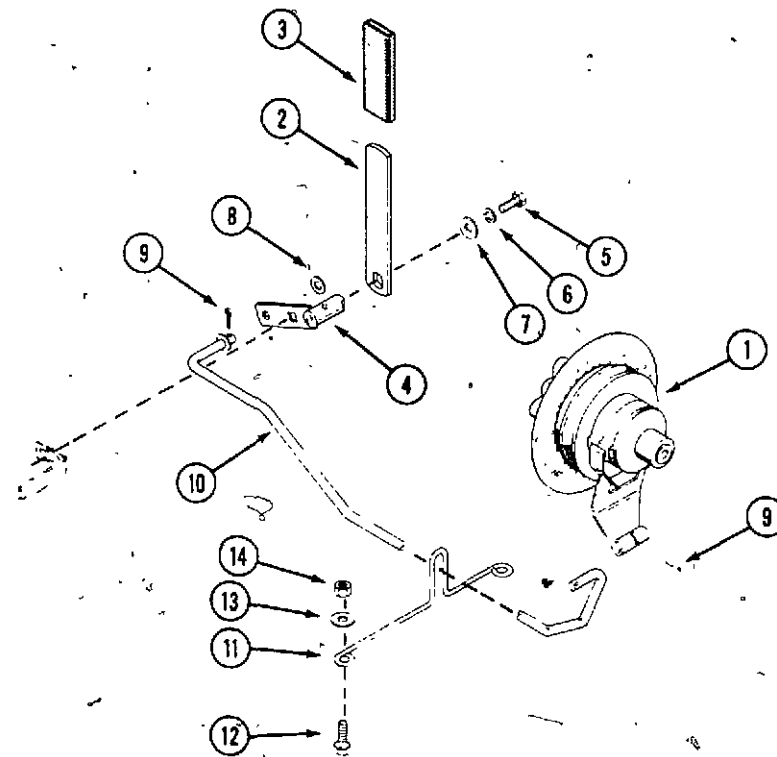
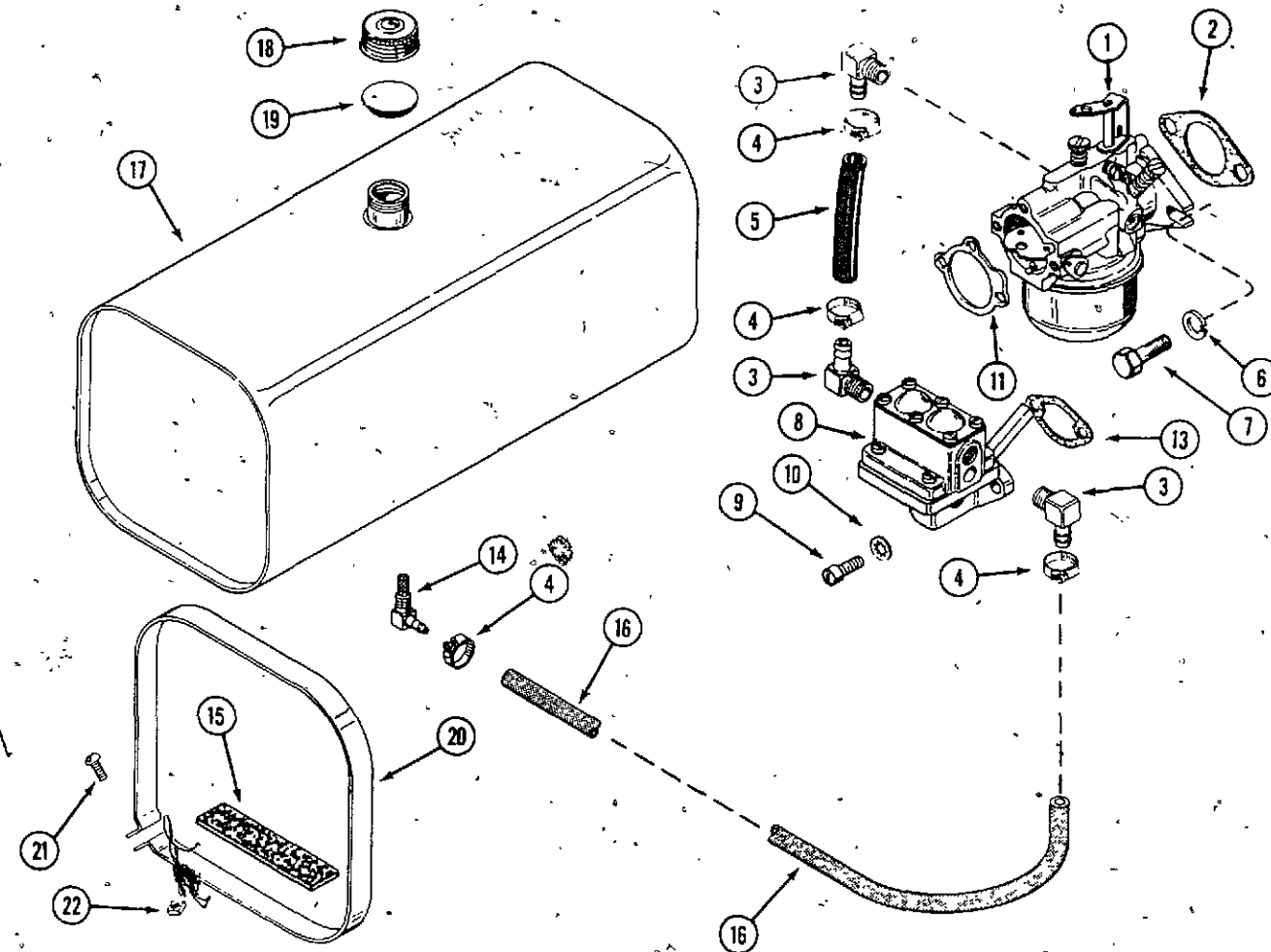


REF.	PART NO.	DESCRIPTION	REQ'D.
	C 21816	CARBURETOR ASSEMBLY - 644	1
1	KO 200380	SPRING - tension, idle adjust	1
2	A 72092	SCREW - idle adjust	1
3	C 22005	NEEDLE - Hi Speed adjust	1
4	KO 200383	SPRING - fuel adjust.	1
5	KO 275231	NEEDLE - idle adjust	1
6	KO 200380	SPRING - idle adjust	1
7	F 19892	PIN - float hinge	1
8	KO 200408	FLOAT - carburetor	1
9	KO 235448	BOWL - carburetor	1
10	KO 235447	NUT AND GASKET ASSEM. - carburetor bowl	1
11	KO 231555	KIT - carburetor repair	1
12	KO 200443	INLET NEEDLE AND SEAT ASSEMBLY	1
13	KO 200375	GASKET - bowl ring	1
14	KO 200439	GASKET - bowl baffle	1
15	KO 200372	GASKET - bowl screw	1
	F 19892	PIN - float hinge	1

FUEL PUMP - 644

1	KO 236387	KIT - fuel pump (for KOA236205)	1
	NSS	VALVE ASSEMBLY	2
	NSS	GASKET - valve	2
	NSS	DIAPHRAGM ASSEMBLY	1
	NSS	SPRING - diaphragm	1
	NSS	GASKET - valve	1
2	A 72108	GASKET - fuel pump mtg.	1



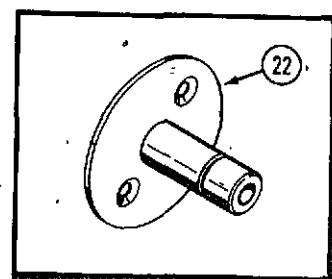
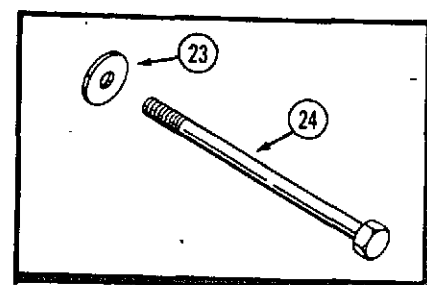
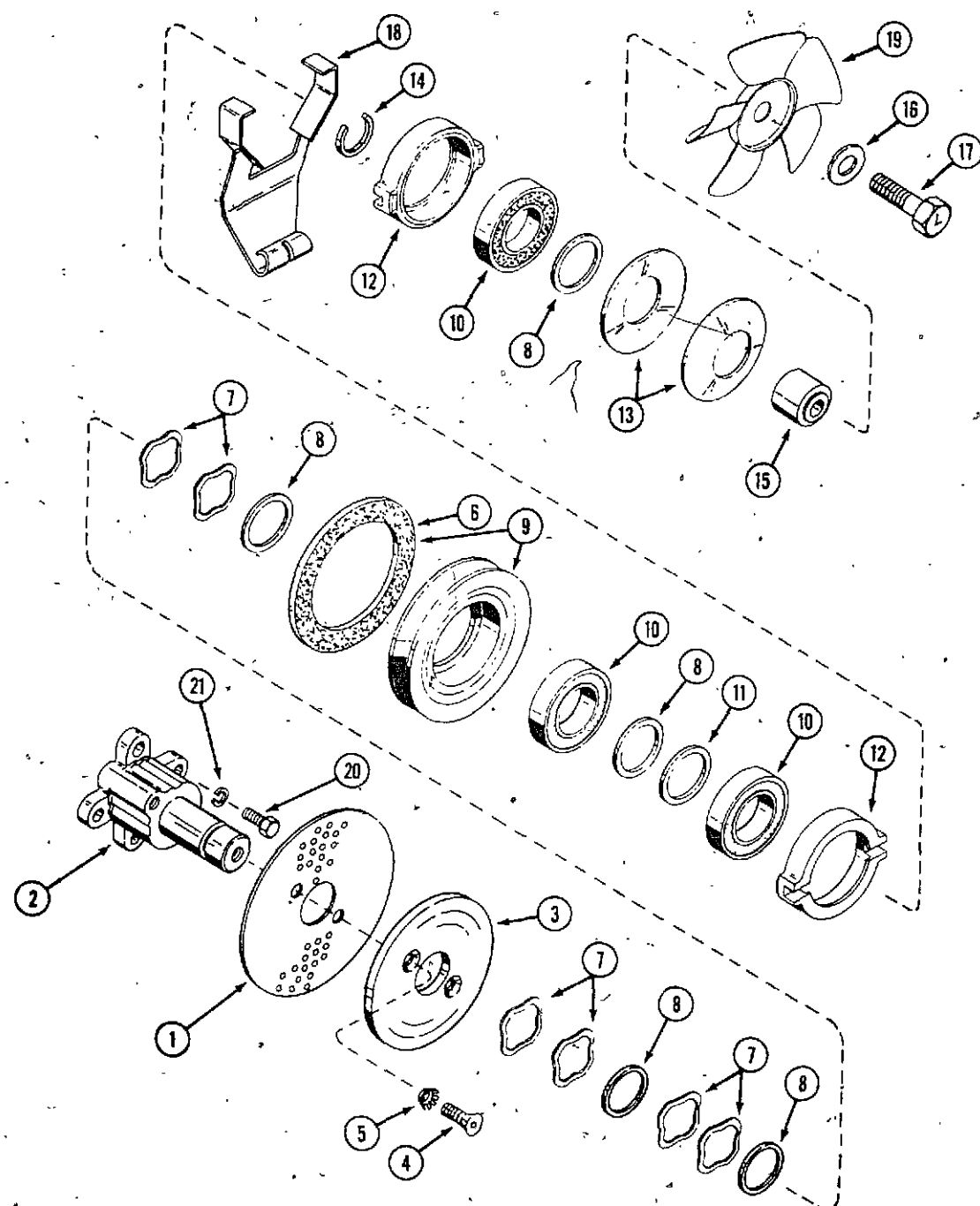


FUEL SYSTEM - 644

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 21816	CARBURETOR - (Repairs page 41)	1
2	A 72100	GASKET - carburetor flange	1
3	C 10678	ELBOW - fuel pump and carburetor	4
4	214- 251	CLAMP - hose	4
5	C 15007	HOSE - carburetor 5-1/4"	1
6	192- 20	LOCKWASHER 5/16"	2
7	113- 103	BOLT - 5/16" x 1" NC hex	2
8	KOA 236205	PUMP - fuel, 644 (Repairs page 41)	1
9	71- 410	SCREW - 1/4" x 5/8" NC fillister head	2
10	193- 60	LOCKWASHER - 1/4"	2
11	KO 275341	GASKET - air horn	1
13	A 72108	GASKET - fuel pump mounting, all models	1
14	C 10657	ELBOW ASSEMBLY - fuel tank	1
15	C 14690	CUSHION - fuel tank	2
16	C 18275	HOSE - fuel line (44")	1
17	C 18133	TANK - fuel	1
18	C 11529	CAP - fuel tank (Includes insert)	1
19	C 11545	INSERT - fuel cap	1
20	C 18190	STRAP - fuel tank mounting	2
21	173- 215	SCREW - 1/4" x 1-1/2" NC round head, machine, zinc plated	2
22	129- 504	NUT - square 1/4" NC	2

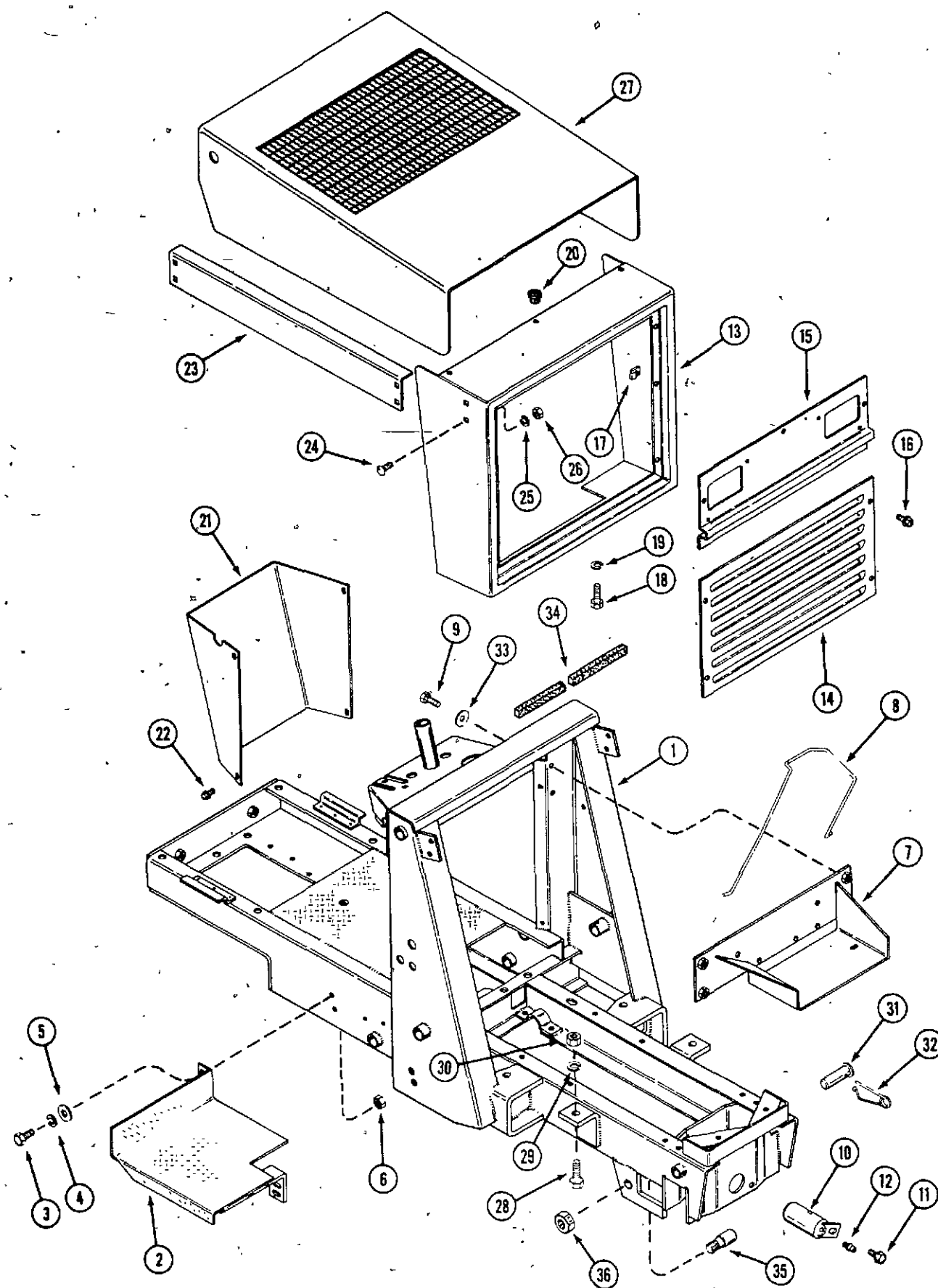
PTO CLUTCH AND LINKAGE

1	C 19276	CLUTCH ASSEMBLY - less screen, 644 (Repairs page 45)	1
1	C 19197	CLUTCH ASSEMBLY - 646 (Repairs page 45)	1
2	C 17679	HANDLE - clutch engaging	1
3	C 14728	GRIP - clutch handle	1
4	C 17681	ARM - clutch pivot	1
5	113- 113	BOLT - 5/16" x 7/8" NC hex	1
6	192- 20	LOCKWASHER - 5/16"	1
7	195- 521	WASHER - 5/16"	1
8	195- 525	WASHER - 3/8"	1
9	132- 48	PIN - cotter 1/8" x 1"	2
10	C 18279	ROD - clutch (644)	1
10	C 18280	ROD - clutch (646)	1
11	C 16682	GUIDE - clutch rod, 644	1
11	C 18825	GUIDE - clutch rod, 646	1
12	113- 207	BOLT - 3/8" x 1" NC hex	2
13	195- 525	WASHER - 3/8"	2
14	131- 178	NUT - lock 3/8" NC hex	2



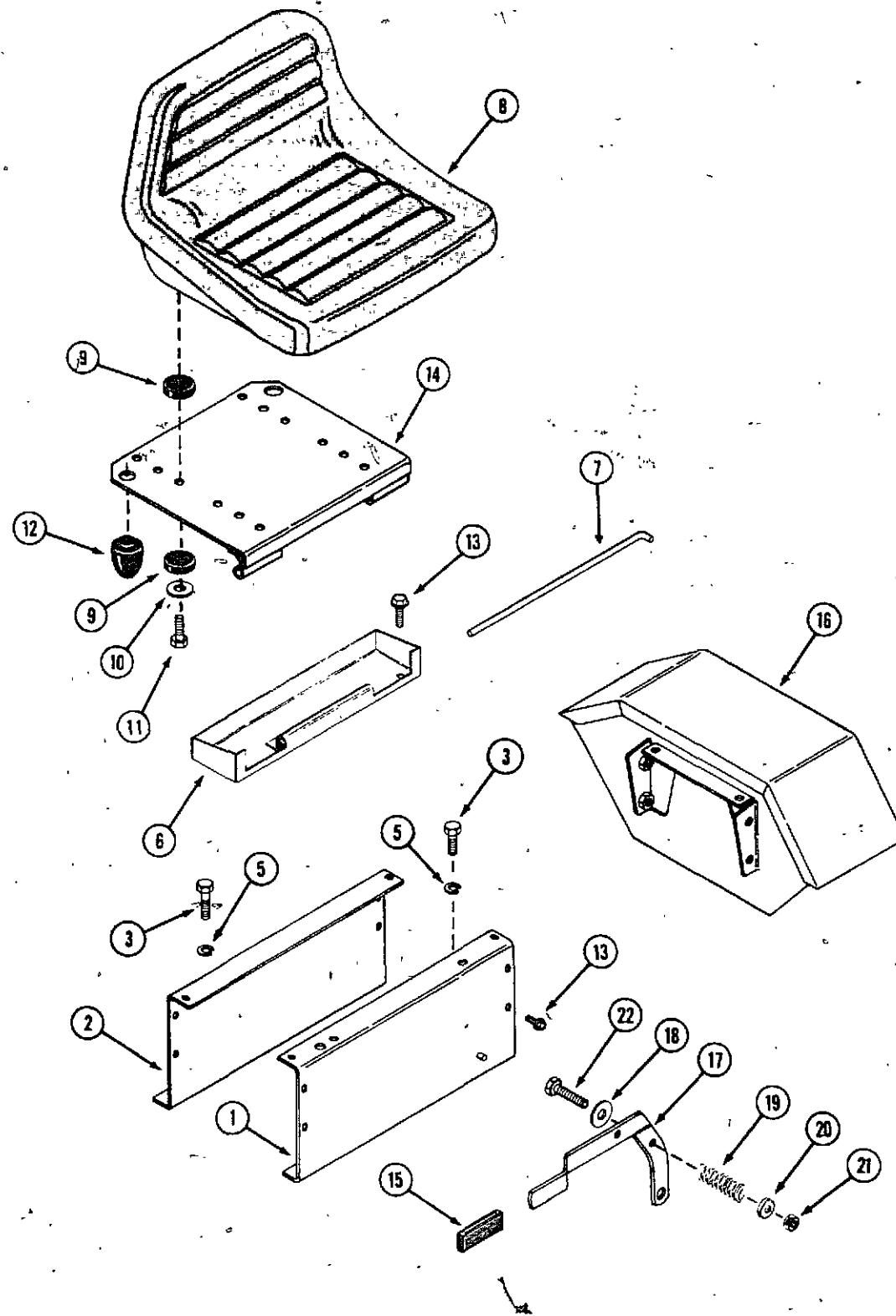
CLUTCH ASSEMBLY (PTO)

REF.	PART NO.	DESCRIPTION	REQ'D
	C 19276	CLUTCH ASSEMBLY - less screen (644)	1
	C 19197	CLUTCH ASSEMBLY - (646)	1
1	C 15721	SCREEN - grass (644)	1
2	C 18907	HUB - clutch (644)	1
3	C 15718	PLATE - clutch (644)	1
4	164- 40	SCREW - 5/16" x 3/4" NC flat head socket (644)	2
4	164- 50	SCREW - 3/8" x 3/4" NC flat head socket (646)	2
5	193- 76	LOCKWASHER - 5/16" counter sunk ext. tooth (644)	2
5	193- 56	LOCKWASHER - 3/8" counter sunk, ext. tooth (646)	2
6	C 23740	KIT - disc, friction	1
7	C 15515	WASHER - spring	6
8	C 15557	WASHER - spacer .050	UAR
9	C 22671	PULLEY AND DISC ASSEMBLY - clutch	1
10	C 23245	BEARING - cam and pulley	3
11	C 21596	WASHER - shim .005"	UAR
11	C 15556	WASHER - spacer .010	UAR
12	NSS	CAM - clutch (service with (2) C23033 cams and (1) C23512 arm)	2
13	C 16786	SPRING - clutch	2
14	F 59014	RING - retaining	1
15	C 18908	SPACER - hub (644)	1
16	O 2815N	WASHER - 17/32" (644)	1
17	C 18940	BOLT - 1/2" x 1-3/4" NC hex, L.H. thread (644)	1
18	C 23512	ARM - engaging	1
19	C 16616	FAN - cooling (644)	1
20	113- 207	BOLT - 3/8" x 1" NC hex (644)	4
21	192- 21	LOCKWASHER - 3/8" (644)	4
22	C 19196	PLATE - clutch (646)	1
23	C 18263	WASHER - spacer (646)	2
24	C 18291	BOLT - 7/16" x 7-1/4" NC hex (646)	1



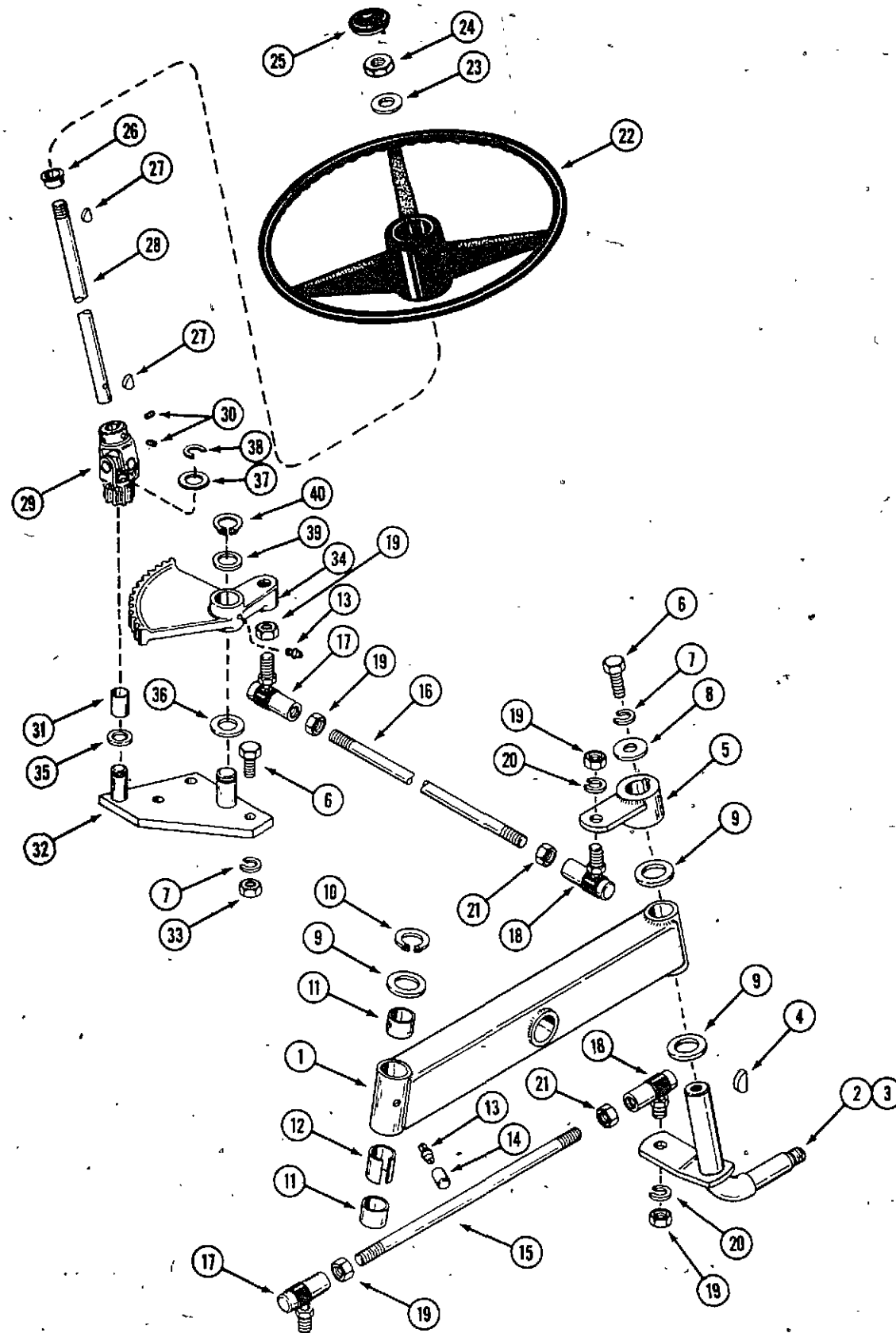
HOOD, FRAME AND GRILLE

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17534	FRAME - main (644)	1
1	C 17533	FRAME - main (646)	1
2	C 17563	PAD - foot, L.H.	1
2	C 18024	PAD - foot, R.H.	1
3	113- 207	BOLT - 3/8" x 1" NC hex	8
4	192- 21	LOCKWASHER - 3/8"	8
5	195- 104	WASHER - 3/8"	4
6	129- 103	NUT - 3/8" NC hex	4
7	C 17598	TRAY - battery	1
8	C 16239	STRAP - battery hold down	1
9	113- 102	BOLT - 5/16" x 3/4" NC hex	4
10	C 19018	PIN - axle pivot	1
11	187- 1046	BOLT - 3/8" NC indented hex head	1
12	219- 17	FITTING - lube	1
13	C 17657	GRILLE - frame	1
14	C 18201	GRILLE - insert (644)	1
14	C 19375	GRILLE - insert (646)	1
15	C 17656	PANEL - head light	1
16	187- 1080	BOLT - 1/4" x 1/2" NC hex slotted, black	7
17	C 17653	NUT - 1/4" tinnerman	7
18	113- 206	BOLT - 3/8" x 3/4" NC hex	2
19	192- 21	LOCKWASHER - 3/8"	2
20	C 18193	BUMPER - rubber, hood	3
21	C 17647	PANEL - dash	1
22	187- 1036	BOLT - 1/4" x 1/2" NC hex self tap	4
23	C 17662	SUPPORT - grille	2
24	111- 340	BOLT - 3/8" x 3/4" NC round head, square neck	8
25	192- 21	LOCKWASHER - 3/8"	8
26	129- 103	NUT - 3/8" NC hex	8
27	C 18003	HOOD - 644	1
27	C 18586	HOOD - (646)	1
28	113- 412	BOLT - 1/2" x 1-3/4" NC hex (engine mounting) 646	3
28	113- 410	BOLT - 1/2" x 1-1/2" NC hex (left front engine mounting) 646	1
28	113- 207	BOLT - 3/8" x 1" hex (engine mounting) 644	4
29	192- 23	LOCKWASHER - 1/2" (646)	3
29	192- 21	LOCKWASHER - 3/8" (engine mounting) 644	4
30	129- 105	NUT - 1/2" NC hex (646)	3
30	131- 165	NUT - lock 1/2" NC hex jam (left front engine mount) (646)	1
31	C 18055	PIN - latch	2
32	C 10898	PIN - safety	2
33	195- 521	WASHER - 5/16"	4
34	C 19411	STRIP - seal (646)	1
35	C 18733	PIN - attachment	2
36	131- 159	NUT - lock 1/2" NF jam	2



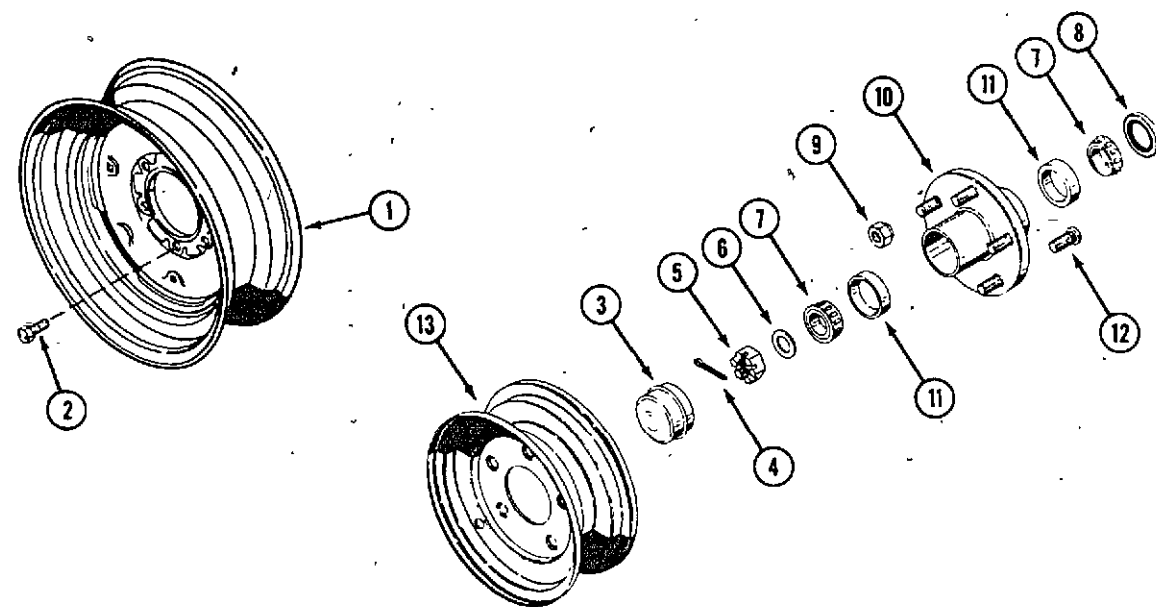
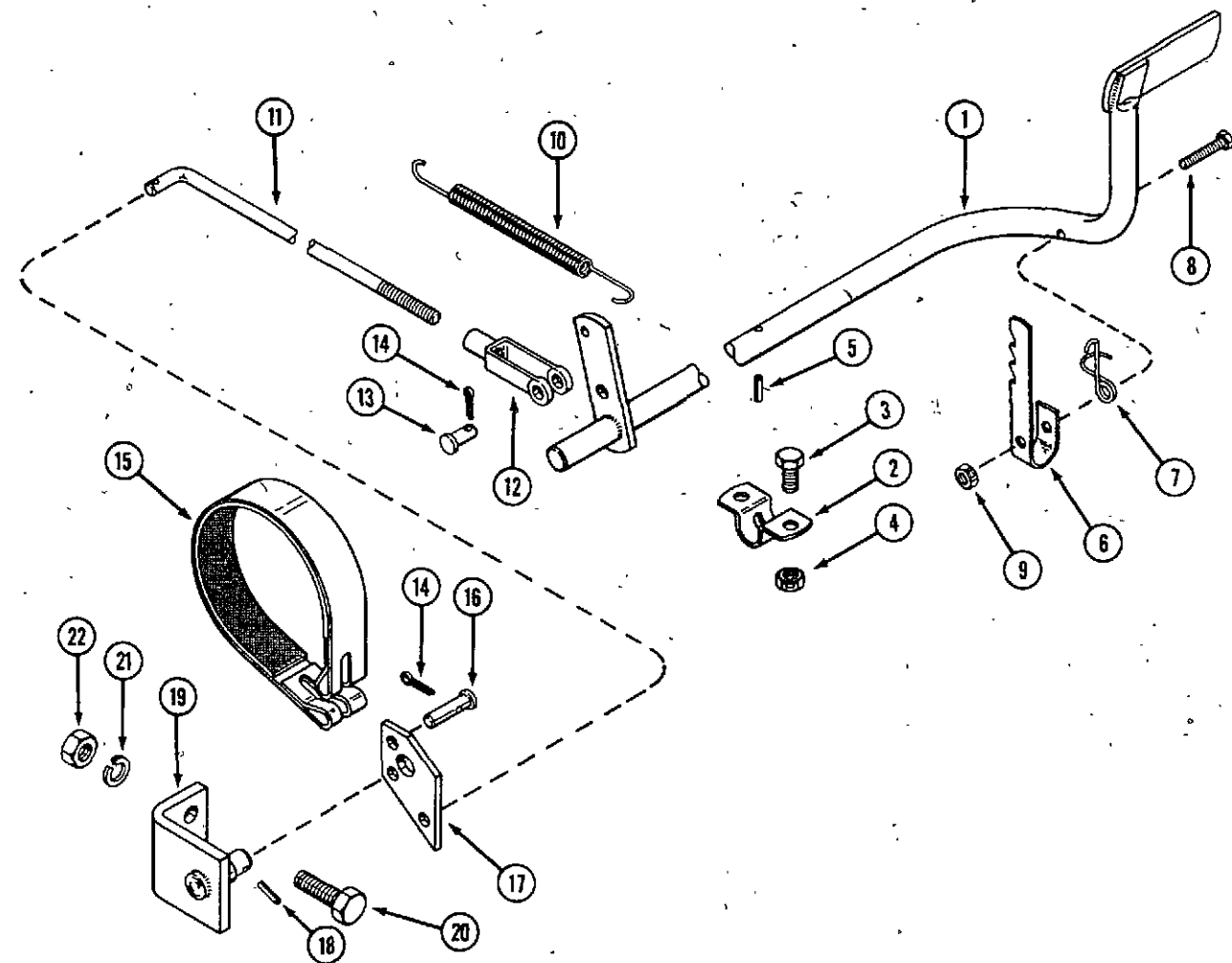
SEAT, FENDERS AND TOOL TRAY

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17488	SUPPORT - seat, front	1
2	C 17485	SUPPORT - seat, rear	1
3	113- 424	BOLT - 1/2" x 1" NC hex	4
5	192- 23	LOCKWASHER - 1/2"	4
6	C 19417	TRAY - tool	1
7	C 16429	PIN - seat hinge	1
8	C 18217	SEAT	1
9	C 15410	CUSHION - rubber	8
10	195- 2021	WASHER - 5/16" x 1-1/4" O.D.	4
11	26- 524	BOLT - 5/16" x 1-1/2" NC hex	4
12	C 14534	BUMPER - seat	2
13	121- 106	BOLT - 5/16" x 1/2" NC hex flange	14
14	C 17152	HINGE - seat	1
15	C 14728	GRIP - shift lever	1
16	C 17456	FENDER - L.H.	1
16	C 17457	FENDER - R.H.	1
17	C 17491	LEVER - shift	1
18	195- 2029	WASHER - 7/16" x 1-1/4"	1
19	C 17216	SPRING - shift lever	1
20	C 17066	WASHER - cupped	1
21	131- 178	NUT - lock 3/8" NC hex	1
22	113- 257	BOLT 3/8" x 2-1/2" NC hex	1



FRONT AXLE AND STEERING GEAR

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17296	AXLE - front	1
2	C 17399	SPINDLE - L.H.	1
3	C 17398	SPINDLE - R.H.	1
4	126- 32	KEY - 1/4" x 1-1/4" woodruff	1
5	C 17407	ARM - upper spindle	1
6	113- 417	BOLT - 1/2" x 1-3/4" NC hex.	4
7	192- 23	LOCKWASHER - 1/2"	4
8	195- 536	WASHER - 9/16"	1
9	C 17684	WASHER - thrust	4
10	A 59939	RING - retaining	1
11	C 12888	BUSHING - spindle	4
12	C 18248	SPACER - bearing	2
13	219- 17	FITTING - lube	4
14	C 13106	COVER - lube fitting	4
15	C 17401	TIE ROD	1
16	C 17402	ROD - drag link	1
17	C 17404	BALL JOINT - R.H. thread	2
18	C 11501	BALL JOINT - L.H. thread	2
19	129- 127	NUT - 5/8" NF hex	6
20	192- 25	LOCKWASHER - 5/8"	4
21	129- 327	NUT - 5/8" NF hex L.H. thread	2
22	C 18014	WHEEL - steering	1
23	C 12975	WASHER - 5/8"	1
24	131- 356	NUT - lock 5/8" NC hex	1
25	C 18016	CAP - steering wheel	1
26	C 15096	BUSHING - flanged nylon	1
27	126- 16	KEY - woodruff #9	2
28	C 17572	SHAFT - steering	1
29	C 17703	JOINT - universal	1
30	178- 860	SETSCREW - 1/4" x 3/8"	2
31	C 17255	BEARING - oilite	1
32	C 17570	PLATE - steering	1
33	129- 105	NUT - 1/2" NC hex	3
34	C 17252	GEAR - steering	1
35	C 17256	BEARING - thrust, universal	1
36	C 17257	BEARING - thrust	1
37	C 17550	WASHER - 3/4", universal	1
38	O 5904-AB	RING - retaining, universal	1
39	195- 2115	WASHER - 1/2"	1
40	A 34428	RING - retaining	1



BRAKE ASSEMBLY

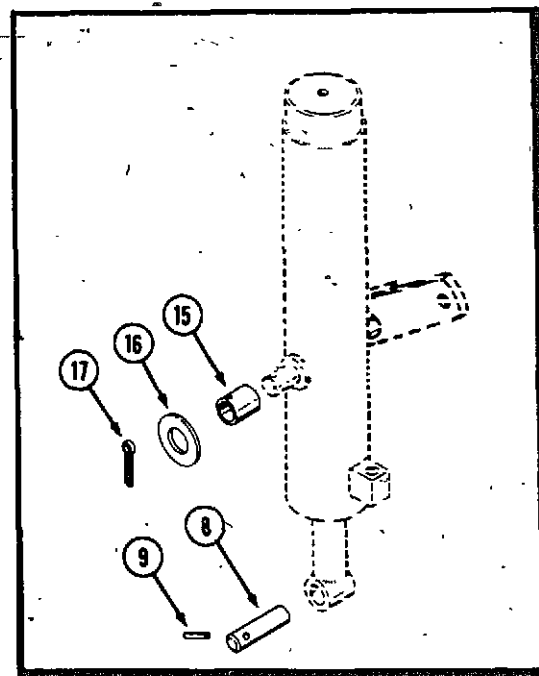
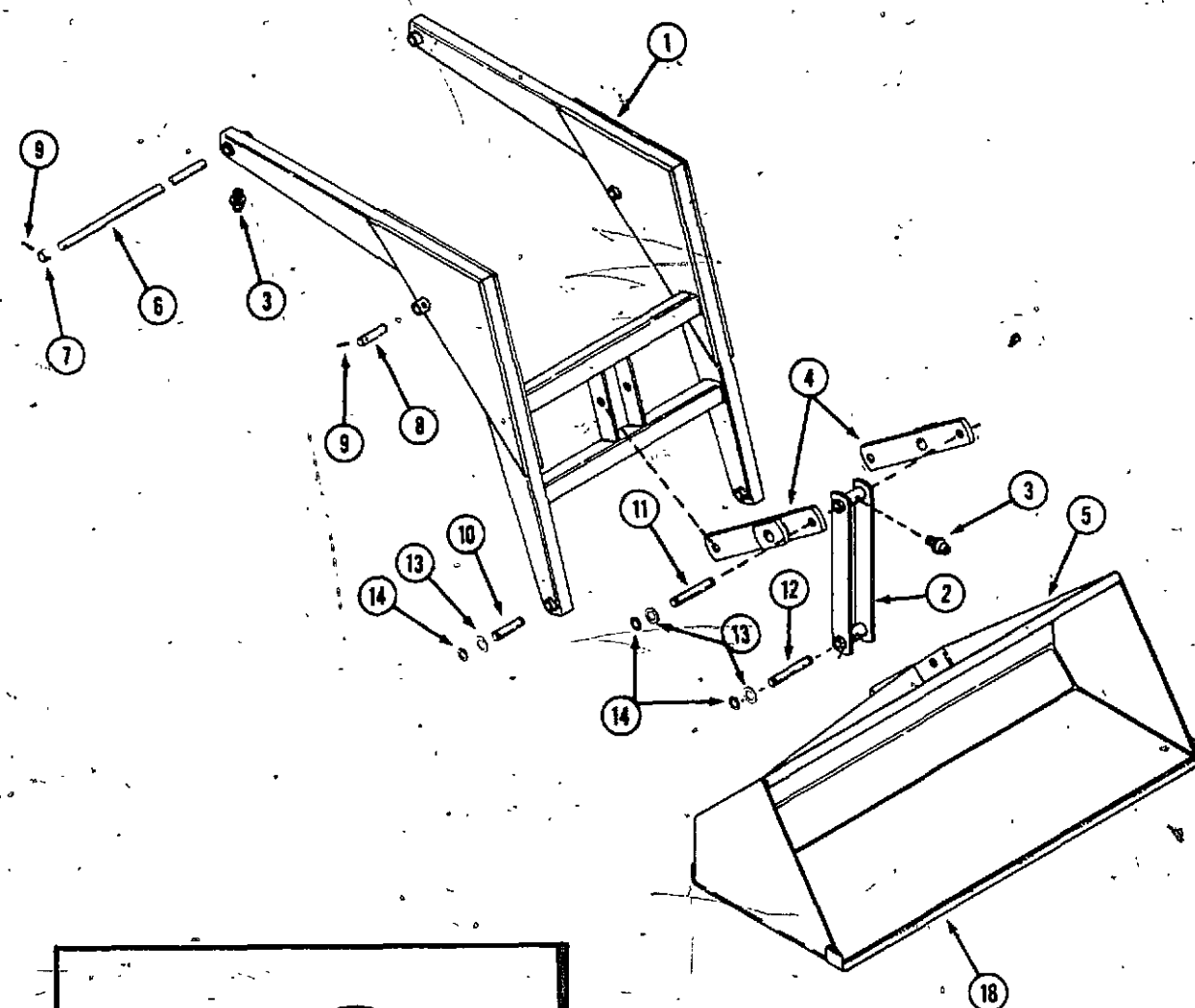
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18026	PEDAL - brake	1
2	C 18029	BRACKET - saddle	2
3	113- 206	BOLT - 3/8" x 3/4" NC hex	4
4	131- 178	NUT - lock 3/8" NC hex	4
5	138- 92	PIN - roll 3/16" x 3/4"	1
6	C 18105	LOCK - brake	1
7	C 17541	SPRING - brake lock	1
8	113- 5	BOLT - 1/4" x 1-1/2" NC hex	1
9	131- 1102	NUT - 1/4" NC hex	1
10	C 18278	SPRING - brake return	1
11	C 14946	ROD - brake	1
12	213- 4	CLEVIS	1
13	141- 4	PIN - clevis	1
14	132- 310	PIN - cotter 1/8" x 1"	3
15	C 14187	BAND - brake	1
16	C 13526	PIN - clevis	2
17	C 18305	ARM - actuator	1
18	138- 77	PIN - roll 5/32" x 1"	1
19	C 18306	BRACKET - pivot	1
20	113- 412	BOLT - 1/2" x 1-3/4" NC hex	2
21	192- 23	LOCKWASHER - 1/2"	2
22	129- 105	NUT - 1/2" NC hex	2

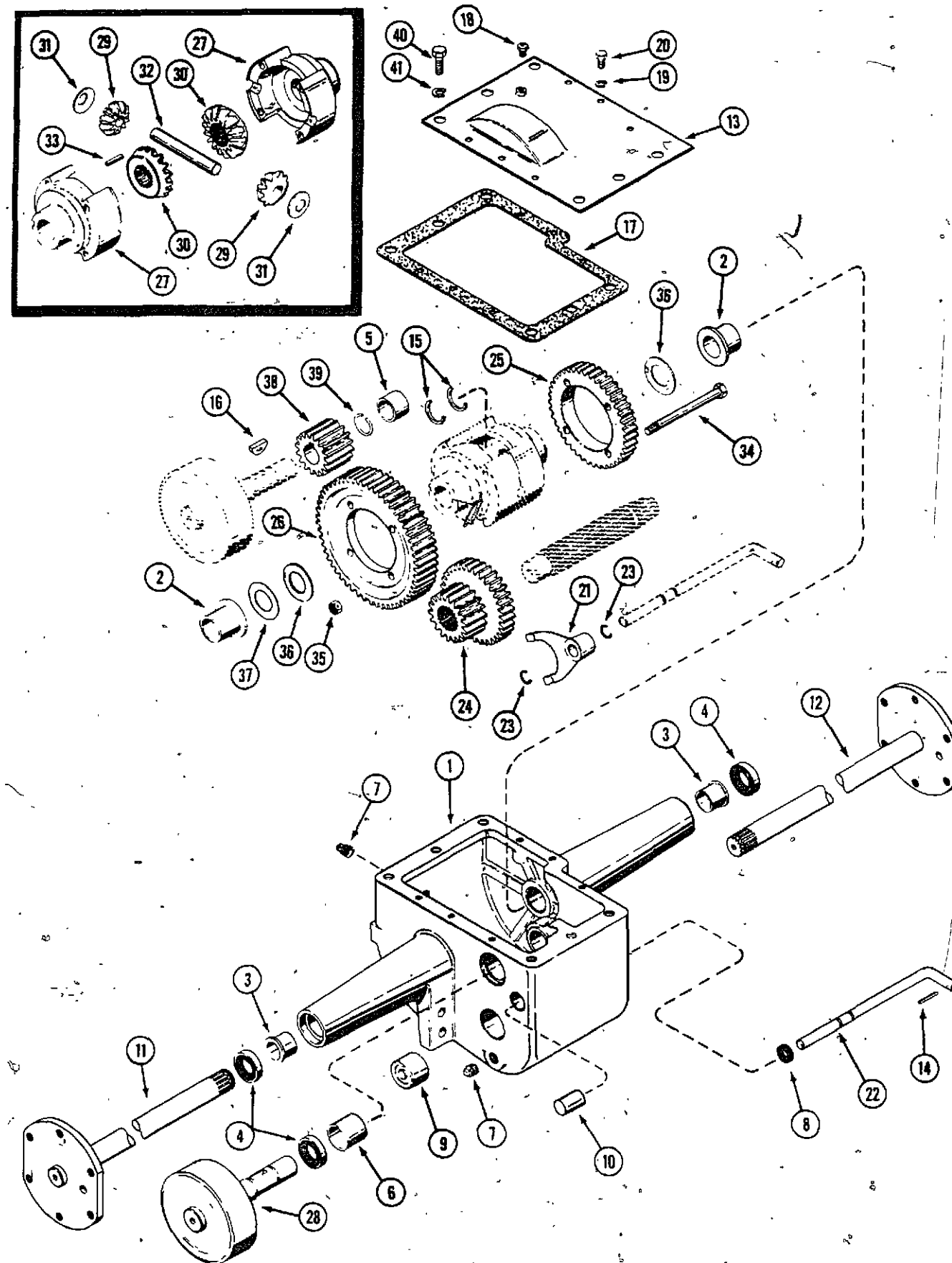
FRONT AND REAR WHEELS

1	C 10316	WHEEL - rim, rear	2
2	A 30064	BOLT - rear wheel lug	12
3	C 18299	CAP - dust	2
4	132- 49	PIN - cotter 1/8" x 1-1/8"	2
5	25- 1312	NUT - castle 3/4" NC hex	2
6	C 10822	WASHER - retaining	2
7	D 29266	BEARING - cone	4
8	T 27809	SEAL - bearing	2
9	C 18301	NUT - wheel	10
10	C 19193	HUB ASSEMBLY - front wheel	2
11	D 29267	RACE - bearing	4
12	C 18300	STUD - wheel	10
13	NSS	HUB - front wheel	2
	C 13168	WHEEL - rim, front	2

BUCKET AND ARM ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17311	ARM ASSEMBLY - bucket lift	1
2	C 17322	ARM - bucket	1
3	219- 20	FITTING - tube	4
4	C 18249	LINK - bucket cylinder	2
5	C 17328	BUCKET ASSEMBLY - loader	1
6	C 17337	ROD - arm assembly mounting	1
7	C 17987	COLLAR	2
8	C 17338	PIN - cylinder mounting	2
9	138- 2005	PIN - spiral 1/4" x 1"	5
10	C 17334	PIN - bucket mounting, 3-5/16" L	2
11	C 17335	PIN - 4-15/16"	2
12	C 17336	PIN - 4-3/4"	1
13	195- 545	WASHER - 13/32"	10
14	A 33531	RING - retaining	10
15	C 18145	BUSHING - oilite	2
16	195- 533	WASHER - 1-1/16"	2
17	132- 71	PIN - cotter 5/32" x 1-3/8"	2
18	C 12824	EDGE - cutting	1

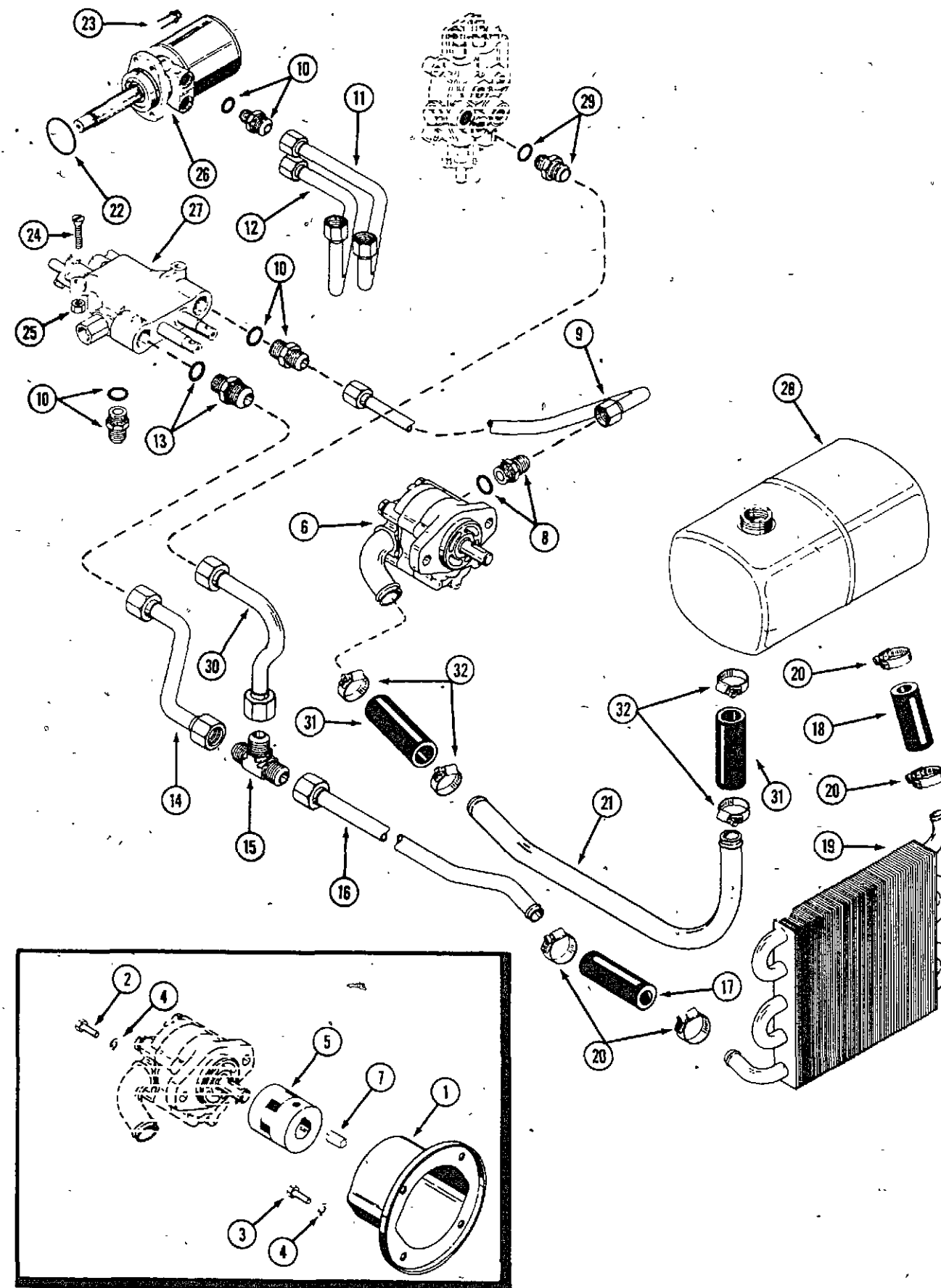




TRANSMISSION AND FINAL DRIVE

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 13770	CASE - transmission	1
2	C 12713	BEARING - flanged	2
3	C 16744	BEARING - flanged	2
4	D 31945	SEAL - axle	3
5	C 13241	BEARING - sleeve	1
6	C 13385	BEARING - sleeve	1
7	221- 4	PLUG - filler and drain 1/2"	2
8	C 13266	SEAL - shift rod	1
9	C 13211	BEARING - roller	1
10	C 12723	CAP - shift rod	1
11	C 12722	SHAFT - axle, short R.H.	1
12	C 12721	SHAFT - axle, long L.H.	1
13	C 13197	COVER - transmission	1
14	138- 319	PIN - roll 3/16" x 1-1/2"	1
15	B 52144	RING - retainer, axle	2
16	126- 128	KEY - woodruff, brake idler	1
17	C 13196	GASKET - transmission cover	1
18	A 50096	BREATHER - transmission	1
19	192- 19	LOCKWASHER - 1/4"	6
20	113- 3	BOLT - 1/4" x 3/4" NC hex	6
21	C 12725	FORK - shift	1
22	C 16339	ROD - gear shift	1
23	C 14168	RING - retaining	2
24	C 14644	GEAR - cluster input	1
25	C 12551	GEAR - high 41 tooth	1
26	C 12552	GEAR - low 55 tooth	1
27	C 16295	KIT - diff. case (Includes Ref. 34 & 35)	1
28	C 13261	BRAKE DRUM	1
29*		GEAR - differential pinion (order two of each, items 29 and 30)	2
30*		GEAR - differential (order two of each, items 29 and 30)	2
31	C 12559	WASHER - pinion thrust	2
32	C 12560	PIN - differential cross	1
33	R 17820	PIN - differential cross lock	1
34	C 12561	SCREW - 3/8" x 4-3/4" NC hex cap.	4
35	131- 366	NUT - lock 3/8" NC hex	4
36	C 12718	WASHER - differential	2
37	C 14223	WASHER - spacer	1
38	C 12965	GEAR - brake idler	1
39	C 14222	RING - retainer, brake idler	1
40	113- 424	BOLT - 1/2" x 1" NC hex (transaxle mounting)	6
41	192- 23	LOCKWASHER - 1/2"	6

* Must be serviced in sets of four using two C12558 Pinion Gears and two C12557 Differential Gears.

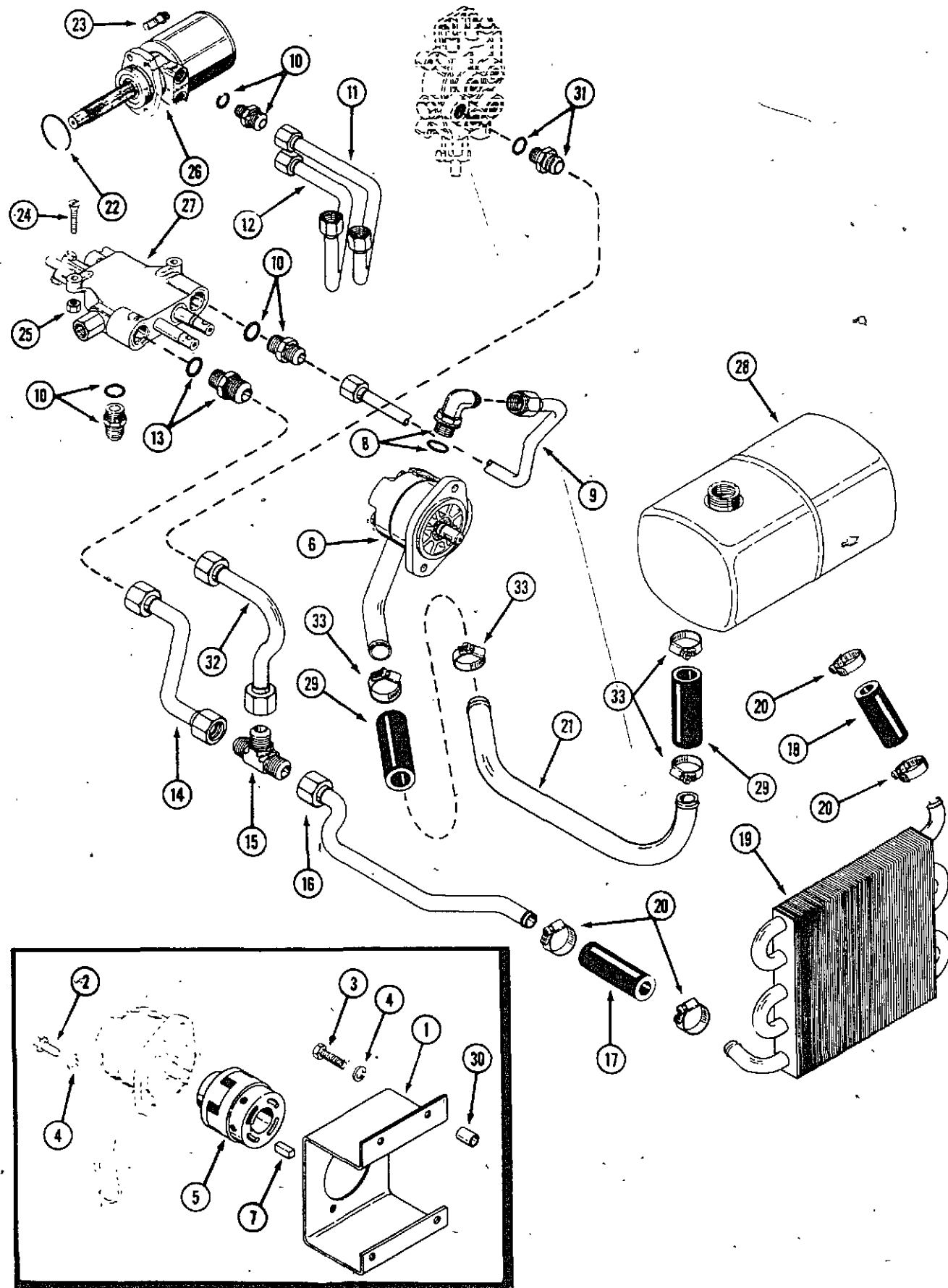


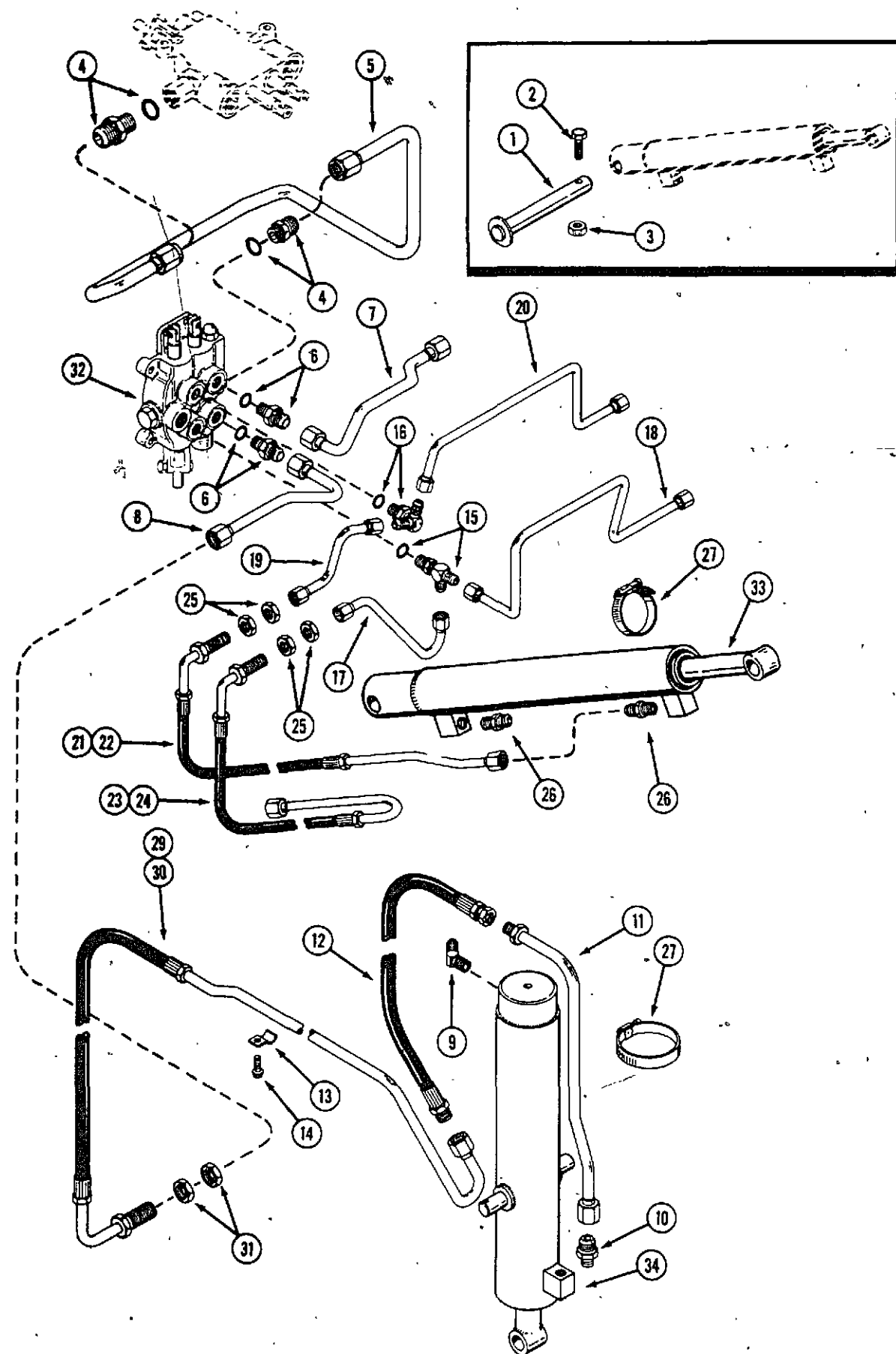
HYDRAULIC SYSTEM 644

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 15335	SUPPORT - pump	1
2	114- 200	BOLT - 3/8" x 1" NF hex	2
3	113- 207	BOLT - 3/8" x 1" NC hex	4
4	192- 21	LOCKWASHER - 3/8"	6
5	C 17298	COUPLING - pump (repairs page 75)	1
6	C 19045	PUMP - hydraulic (repairs page 75)	1
7	C 17354	KEY - square	1
8	218- 5066	FITTING - pump out (includes 218-5006 "O" - ring)	1
9	C 18167	TUBE - pump to valve	1
10	C 18321	FITTING - hydraulic (includes 218-5007 "O" - ring)	5
11	C 18159	TUBE - valve to motor, upper	1
12	C 18160	TUBE - valve to motor, lower	1
13	218- 5065	FITTING - hydraulic (includes 218-5007 "O" - ring)	1
14	C 18162	TUBE - valve to tee	1
15	218- 596	TEE - 1-1/16"	1
16	C 18163	TUBE - heat exchanger to tee	1
17	C 14619	HOSE - 4"	1
18	C 14245	HOSE - 3"	1
19	C 14195	EXCHANGER - heat	1
20	214- 9	CLAMP - hose	4
21	C 19437	TUBE - pump suction	1
22	A 30095	SEAL - hydraulic motor to case	1
23	166- 86	SCREW - 1/2" x 1-1/4" NC flanged 12 pt.	4
24	171- 247	SCREW - 5/16" x 1-1/4" NC, flat head machine.	2
25	131- 351	NUT - lock 5/16" NC hex	2
26	C 14655	MOTOR - hydraulic drive (repairs page 79)	1
27	NSS	VALVE - hydraulic control (repairs page 69) order C 21497 valve	1
27	C 21497	VALVE - hydraulic control (repairs page 71)	1
28	C 19439	RESERVOIR - oil	1
29	218- 5353	FITTING - valve, bucket (includes 218-5006 "O" - rings)	1
30	C 18161	TUBE - bucket to tee	1
31	C 19438	HOSE - rubber	2
32	214- 14	CLAMP - hose	4

HYDRAULIC SYSTEM 646

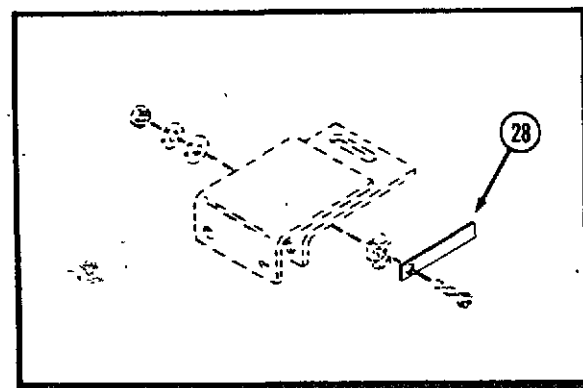
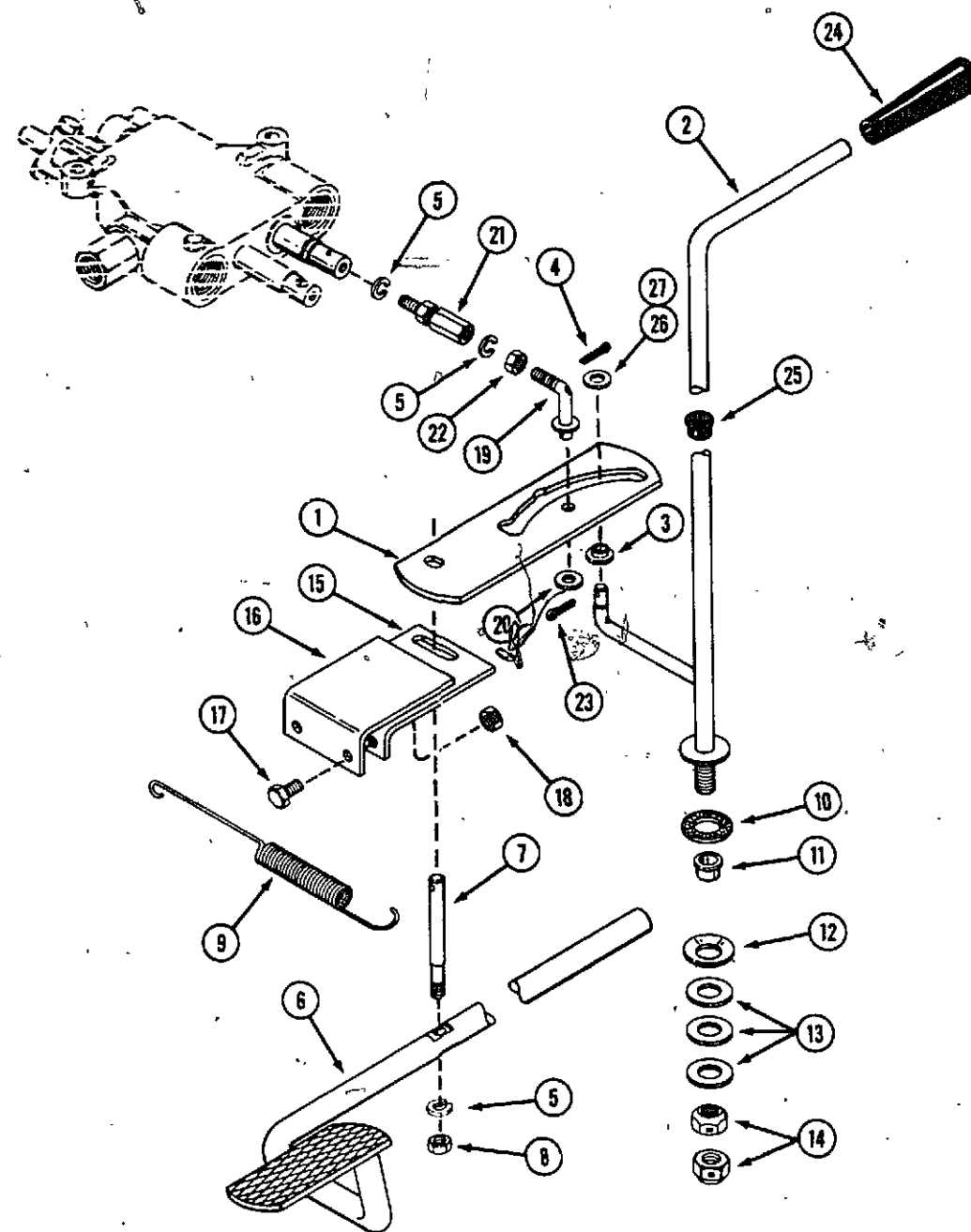
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18064	SUPPORT - pump	1
2	114- 200	BOLT - 3/8" x 1" NF hex	2
3	113- 209	BOLT - 3/8" x 1-1/2" NC hex	4
4	192- 21	LOCKWASHER - 3/8"	6
5	C 18235	COUPLING - pump (repairs page 75)	1
6	C 20122	PUMP - hydraulic (repairs page 75), used S/N 9680417 and after	1
6	NSS	PUMP - hydraulic (repairs page 77), used prior to S/N 9680417	1
7	T 27067	KEY - square	1
8	218- 5107	FITTING - 90° pump out (includes 218-5007 "O" - ring)	1
9	C 18284	TUBE - pump to valve	1
10	C 18321	FITTING - hydraulic (includes 218-5007 "O" - ring)	5
11	C 18159	TUBE - valve to motor, upper	1
12	C 18160	TUBE - valve to motor, lower	1
13	218- 5065	FITTING - hydraulic (includes 218-5007 "O" - ring)	1
14	C 18162	TUBE - valve to tee	1
15	218- 596	TEE - 1-1/16"	1
16	C 18177	TUBE - heat exchanger to tee	1
17	C 14619	HOSE - 4"	1
18	C 14245	HOSE - 3"	1
19	C 14195	EXCHANGER - heat	1
20	214- 9	CLAMP - hose	6
21	C 19447	TUBE - pump suction	1
22	A 30095	SEAL - hydraulic motor to case	1
23	166- 86	SCREW - 1/2" x 1-1/4" NC flanged 12 pt.	4
24	171- 247	SCREW - 5/16" x 1-1/4" NC, flat head machine	2
25	131- 351	NUT - lock 5/16" NC hex	2
26	C 14655	MOTOR - hydraulic drive (repairs page 79)	1
27	NSS	VALVE - hydraulic control (repairs page 69) order C21497 valve	1
27	C 21497	VALVE - hydraulic control (repairs page 71)	1
28	C 19439	RESERVOIR - oil	1
29	C 19438	HOSE - rubber	2
30	C 17622	SPACER - pump support	4
31	218- 5353	FITTING - valve, bucket (includes 218-5006 "O" - ring)	1
32	C 18161	TUBE - bucket valve to tee	1
33	214- 14	CLAMP - hose	4



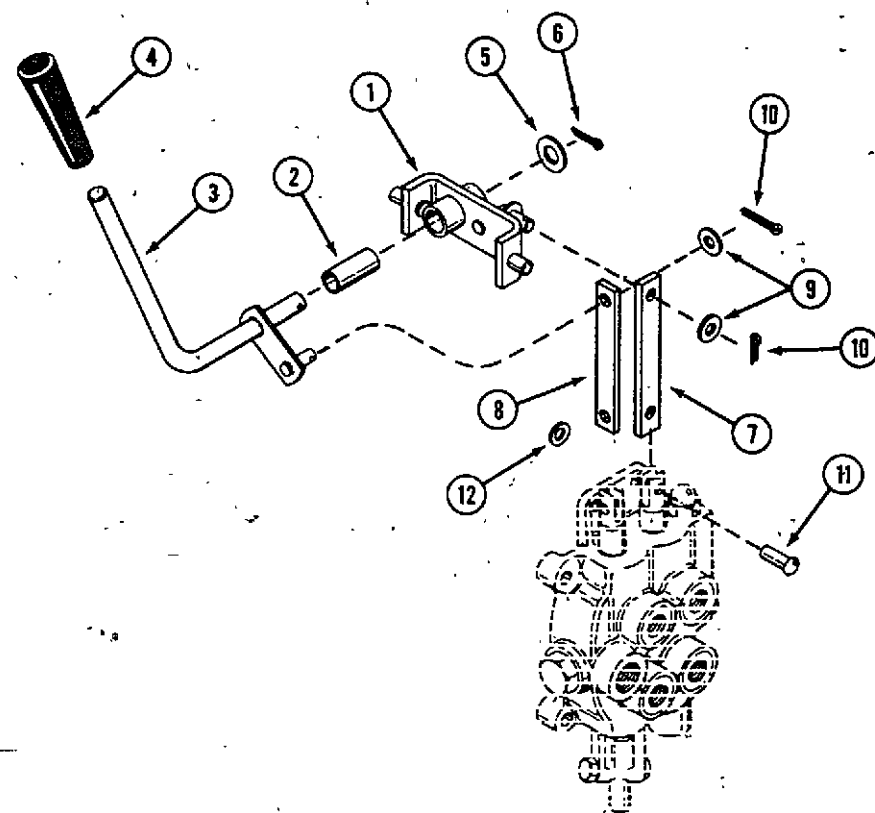


HYDRAULIC SYSTEM — BUCKET CONTROL

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17714	PIN - cylinder mounting	2
2	113- 122	BOLT - 5/16" x 1-1/2" NC hex	2
3	131- 173	NUT - lock 5/16"	2
4	218- 5066	FITTING - hydraulic (includes 218-5006 "O" - ring)	2
5	C 18175	TUBE - valve to bucket valve	1
6	218- 5351	FITTING - hydraulic, bucket valve (includes 218-5005 "O" - ring)	2
7	C 18170	TUBE - bucket valve to left bulkhead	1
8	C 18171	TUBE - bucket valve to right bulkhead	1
9	218- 533	FITTING - 45°, bucket cylinder	1
10	218- 455	FITTING - straight, bucket cylinder	1
11	C 18164	TUBE - bucket cylinder	1
12	C 18156	HOSE - bucket, cylinder	2
13	C 18304	CLIP - hose tube mounting	4
14	187- 1036	SCREW - clip mounting	4
15	218- 5243	TEE - bucket valve, (includes 218-5005 "O" - ring)	1
16	C 18295	FITTING - special 45° (includes 218-5005 "O" - ring)	1
17	C 18169	TUBE - bucket valve to right front bulkhead	1
18	C 18176	TUBE - bucket valve to left front bulkhead	1
19	C 18168	TUBE - bucket valve to right rear bulkhead	1
20	C 18174	TUBE - bucket to valve to left front bulkhead	1
21	C 18166	HOSE TUBE - left rear to lift arm cylinder, rod end	1
22	C 18157	HOSE TUBE - right rear to lift arm cylinder, rod end	1
23	C 18165	HOSE TUBE - right front to lift arm cylinder, foot end	1
24	C 18158	HOSE TUBE - left front to lift arm cylinder, foot end	1
25	218- 1254	NUT - jam 9/16"	8
26	218- 443	FITTING - lift arm cylinder	4
27	214- 262	CLAMP - hose, large	3
29	C 18172	HOSE TUBE - bucket cylinder, top left	1
30	C 18173	HOSE TUBE - bucket cylinder, top right	1
31	218- 1255	NUT - jam 3/4"	4
32	C 18179	VALVE - bucket control (repairs page 73)	1
33	C 11527	CYLINDER - lift arm (repairs page 81)	2
34	C 11528	CYLINDER - bucket (repairs page 81)	1



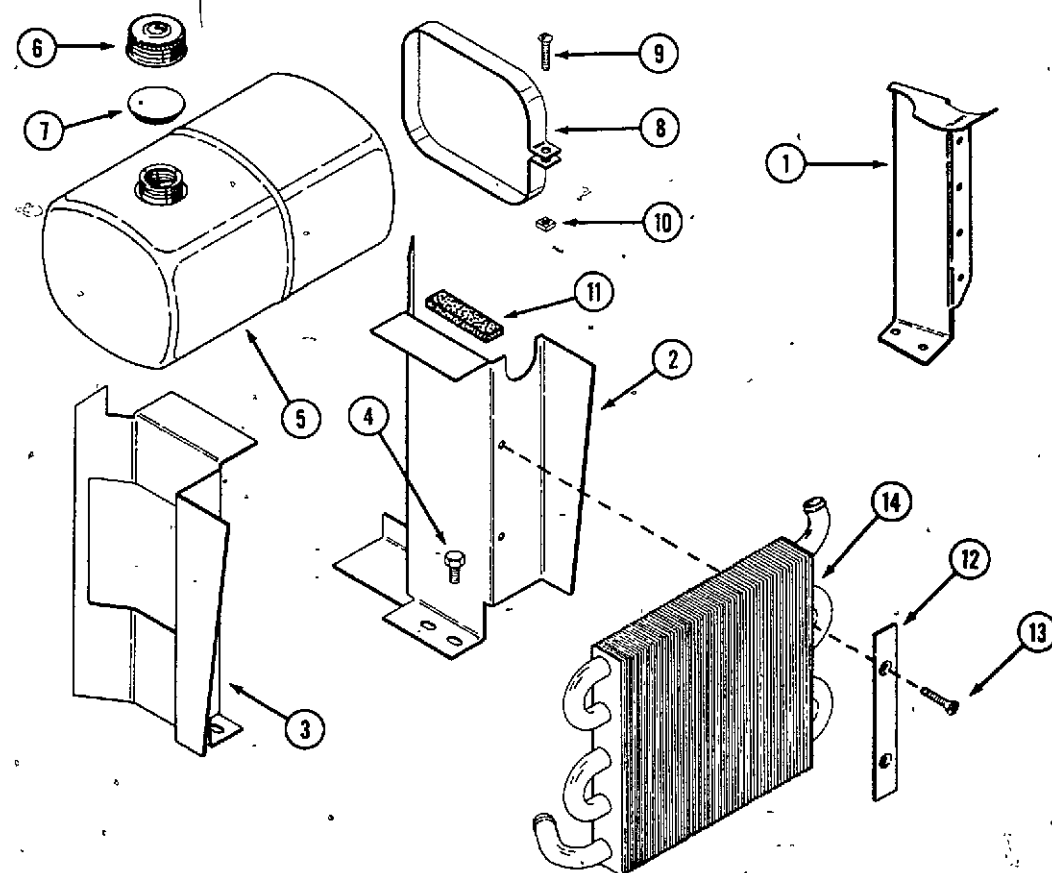
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 21512	ARM - control	1
2	C 17569	LEVER - direction control	1
3	C 23514	FOLLOWER - cam	1
4	132- 46	PIN - cotter 1/8" x 3/4"	1
5	192- 20	LOCKWASHER - 5/16"	3
6	C 19900	PEDAL - motion control	1
7	C 17553	ROD - pedal control	1
8	129- 102	NUT - lock 5/16" NC hex	1
9	C 18277	SPRING - pedal return	1
10	C 17551	DISC - friction	1
11	C 12127	BUSHING - nylon	1
12	C 18391	WASHER - spring	1
13	195- 541	WASHER - 5/8"	3
14	131- 165	NUT - 1/2" NC hex	2
15	C 19902	BRACKET - valve control	1
16	C 18012	BRACKET - guide	1
17	113- 103	BOLT - 5/16" x 1" NC hex	2
18	131- 176	NUT - lock 5/16" NC hex	2
19	C 19220	ROD - valve control	1
20	195- 102	WASHER - 1/4"	2
21	C 19025	BALL JOINT	1
22	129- 122	NUT - 5/16" NF hex	1
23	132- 320	PIN - cotter 3/32" x 3/4"	2
24	A 37247	KNOB - control lever	1
25	C 12093	BUSHING - flip lok	1
26	C 19376	WASHER - spacer, 3/32"	UAR
27	C 19377	WASHER - spacer, 1/32"	UAR
28	C 19258	SWITCH - safety (see electrical pages 65 and 67)	1



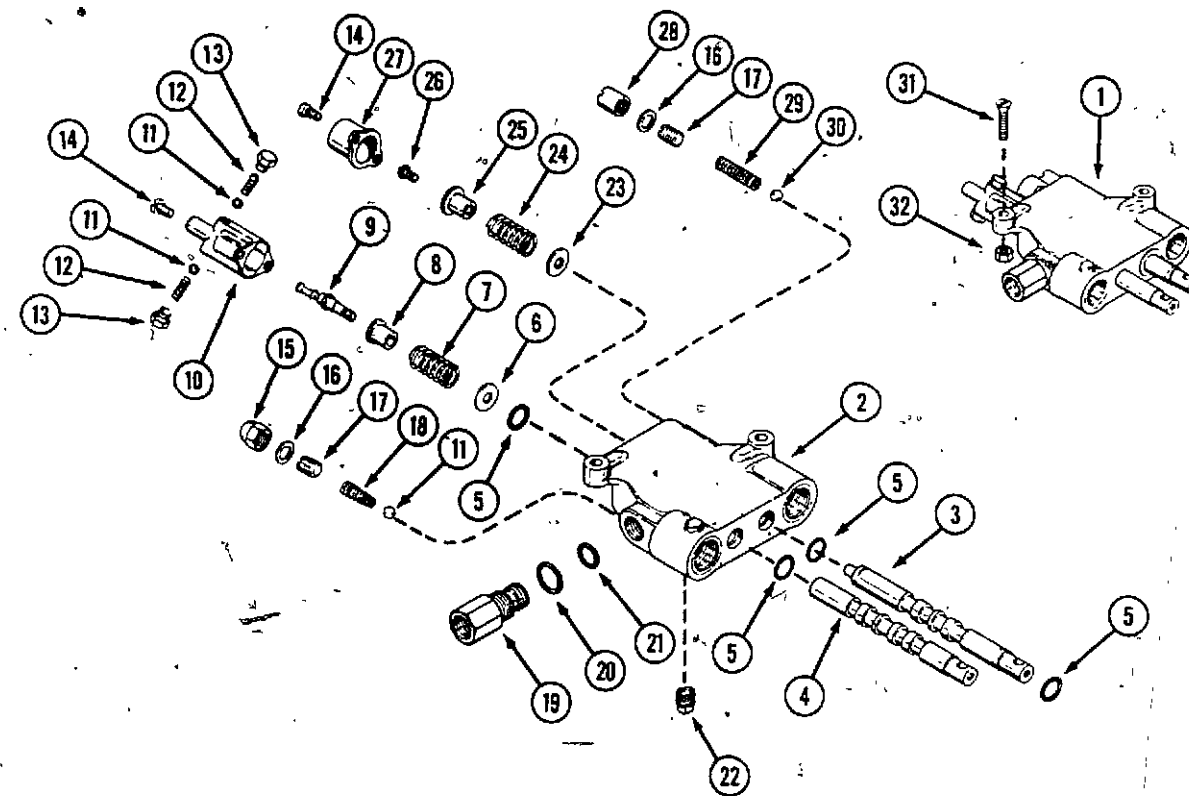
REF.	PART NO.	DESCRIPTION	REQ'D
1	C 17594	BRACKET - pivot	1
2	C 16714	BUSHING - pivot bracket	1
3	C 17596	LEVER - bucket control	1
4	A 37247	KNOB - lever, bucket control	1
5	195- 533	WASHER - 1/2"	1
6	132- 321	PIN - cotter 1/8" x 1"	1
7	C 17587	LINK - valve 4"	1
8	C 17588	LINK - valve 3-3/4"	1
9	195- 521	WASHER - 5/16"	2
10	132- 320	PIN - cotter 3/32" x 3/4"	2
11	C 12932	PIN	2
12	C 18845	RETAINER	2

HYDRAULIC RESERVOIR MOUNTING

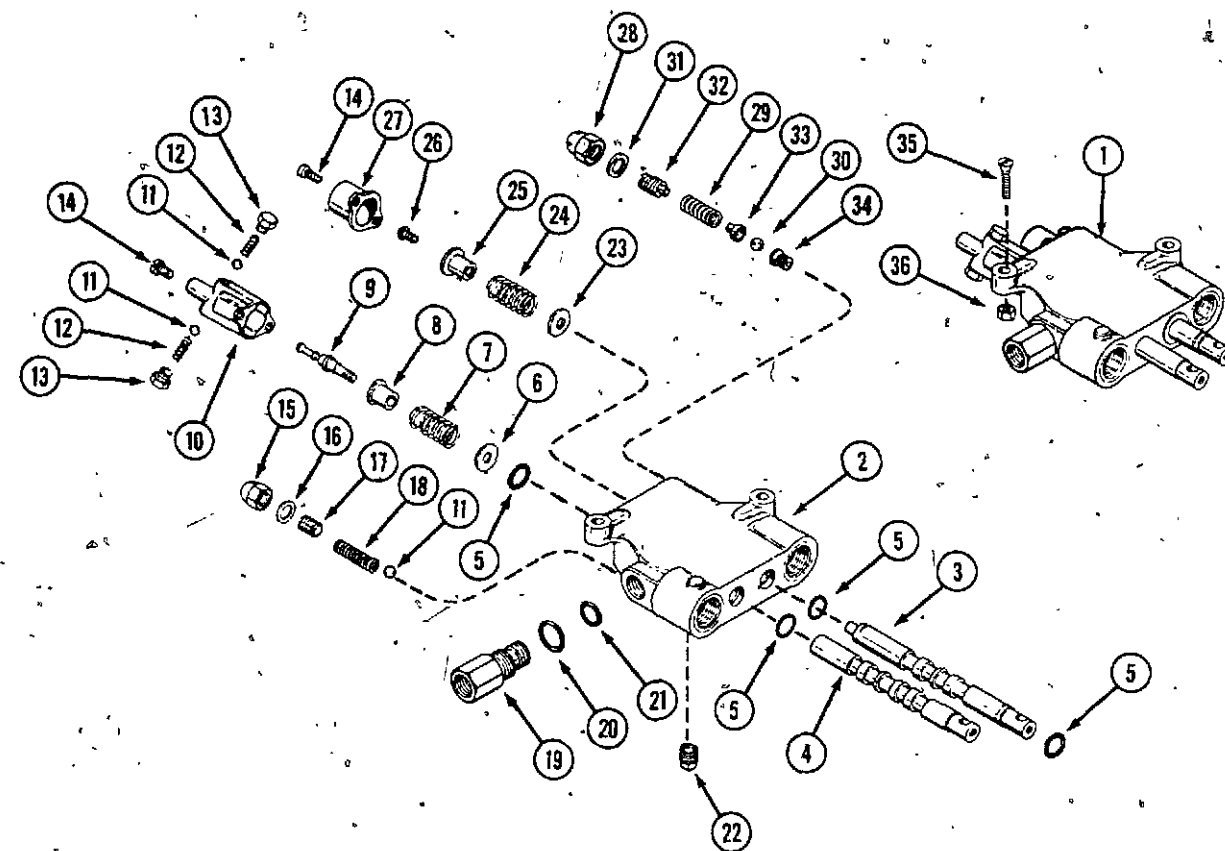
1	C 18000	SUPPORT - reservoir R.H. (644)	1
1	C 18001	SUPPORT - reservoir L.H. (644)	1
2	C 18396	SUPPORT - reservoir L.H. (646)	1
3	C 18126	SUPPORT - reservoir R.H. (646)	1
4	113- 118	BOLT - 5/16" x 5/8" NC hex	4
5	C 19439	RESERVOIR - hydraulic oil	1
6	C 11529	CAP - reservoir with insert	1
7	C 11545	INSERT - reservoir cap	1
8	A 70100	STRAP - reservoir mounting	2
9	173- 215	SCREW - 1/4" x 1-1/4" round head machine	2
10	129- 504	NUT - 1/4" NC hex	2
11	C 14690	CUSHION - reservoir	2
12	C 14246	BRACKET - heat exchanger mounting	2
13	187- 1251	SCREW - 1/4" x 1-1/4" NC flat head phillips	4
14	C 14195	EXCHANGER - heat	1



C 19221 HYDRAULIC CONTROL VALVE - TRACTOR



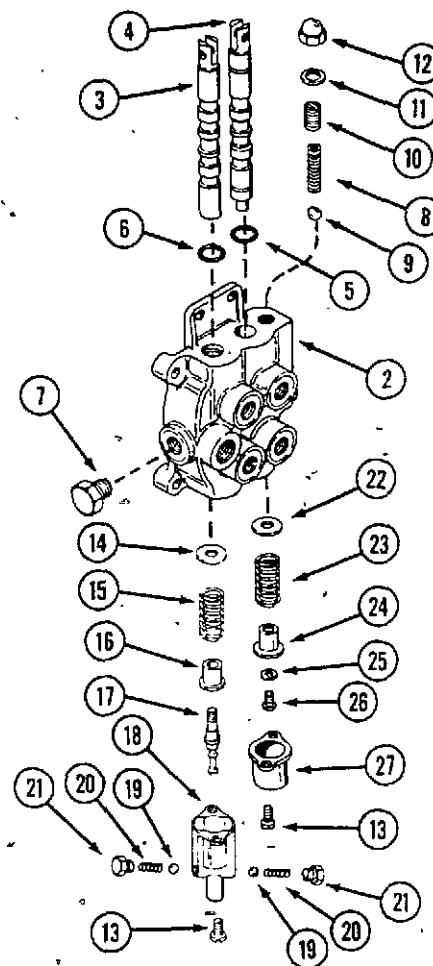
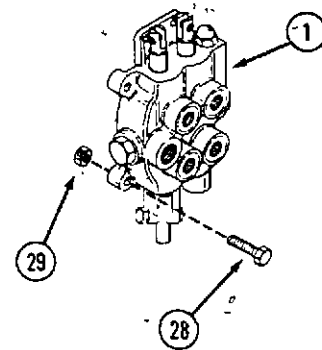
REF.	PART NO.	DESCRIPTION	REQ'D
		644 - used prior to S/N 9698059	
		644 - used S/N 9698139 to 9698168	
		646 - used prior to S/N 9698622	
1	NSS	VALVE - tractor control (order C 21497 valve)	1
2	NSS	BODY - valve (order C21497 valve)	1
3	NSS	SPOOL - valve (order C 21497 valve)	1
4	NSS	SPOOL - valve (order C 21497 valve)	1
5	A 7982	SEAL - "O" ring, spool	4
6	C 17440	WASHER	1
7	C 17441	SPRING - detent	1
8	C 13200	SPACER	1
9	C 17439	DETENT - spool	1
10	C 17438	COVER - detent	1
11	211- 7	BALL - steel 1/4"	3
12	C 17444	SPRING - detent	2
13	C 17443	SCREW - detent, cap.	2
14	169- 114	SCREW - cover	4
15	129- 531	CAP - relief adjust	1
16	C 17435	GASKET - relief adjust cap.	2
17	C 17433	SCREW - relief adjust	2
18	C 17445	SPRING - relief	1
19	C 18852	BUSHING - power beyond	1
20	218- 5007	SEAL - "O" ring, bushing	1
21	A 30097	SEAL - "O" ring	1
22	221- 841	PLUG - pipe 1/4"	1
23	129- 521	WASHER - return	1
24	C 18850	SPRING - return	1
25	C 18853	SPACER	1
26	193- 524	SCREW - with lockwasher	1
27	C 18847	COVER - return	1
28	C 18854	CAP - relief adjust	1
29	C 17432	SPRING - relief	1
30	211- 9	BALL - steel 5/16"	1
31	171- 247	SCREW - valve mounting 5/16" x 1-1/4" flat head machine	2
32	131- 351	NUT - 5/16" NC hex.	2



CASE MODEL 644 AND 646 COMPACT WHEEL LOADERS
C 21497 HYDRAULIC CONTROL VALVE - TRACTOR

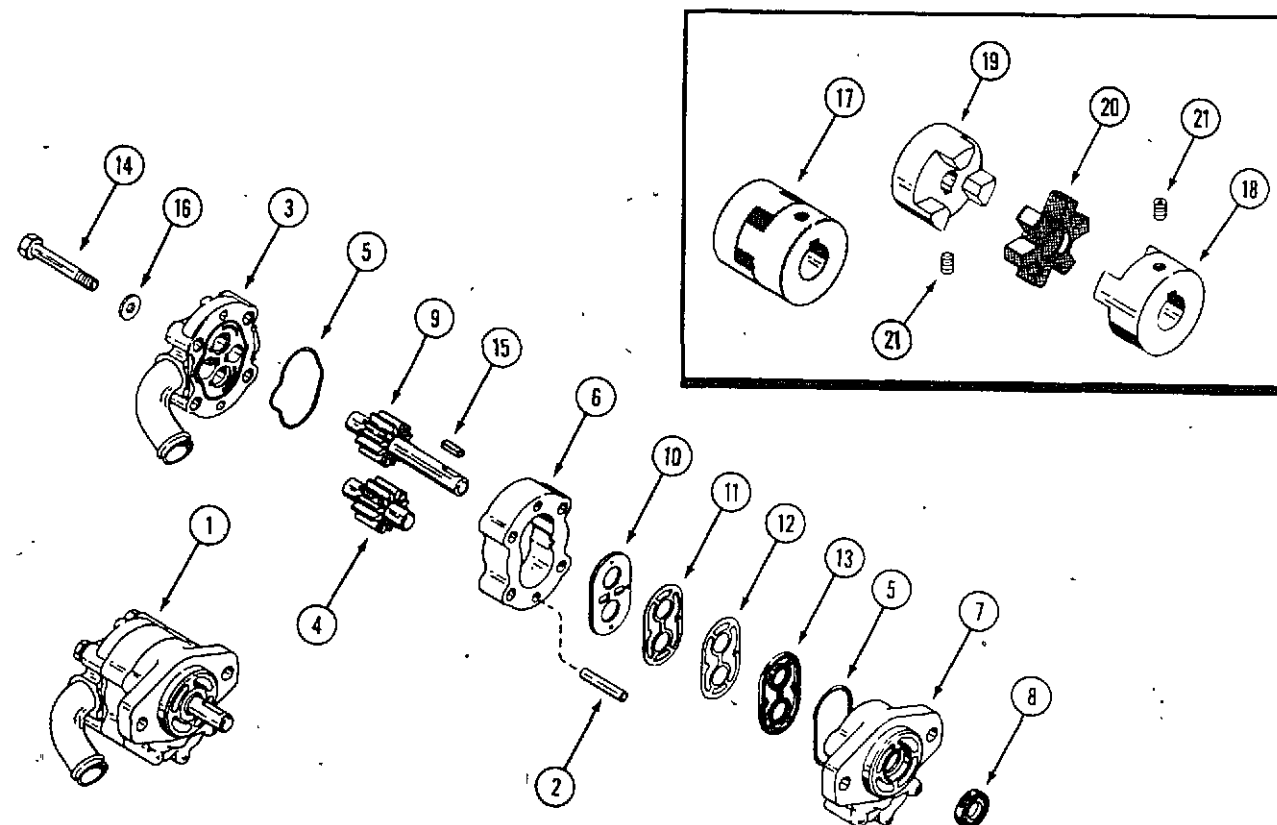
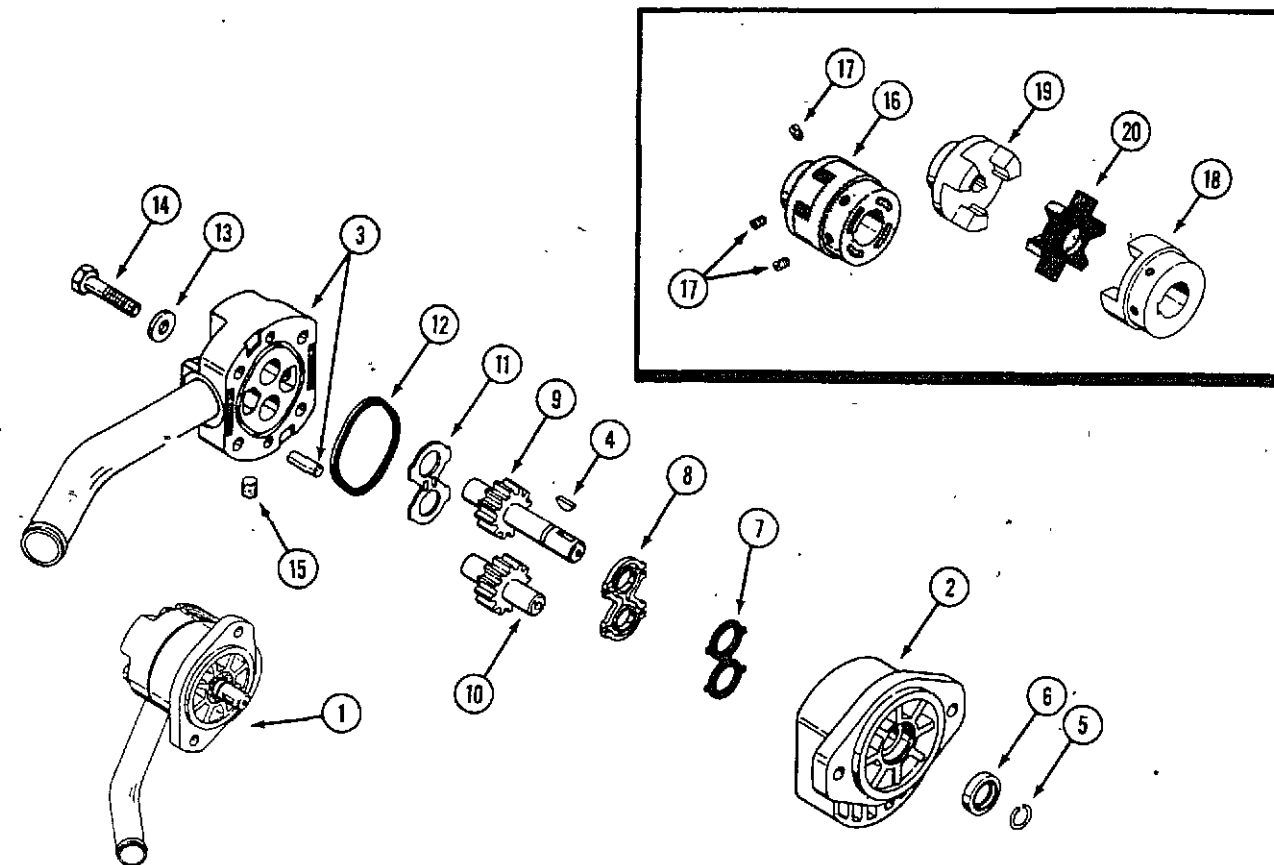
644 - used S/N 9698059 and after
646 - used S/N 9698622 and after

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 21497	VALVE - tractor control	1
2	NSS	BODY - valve (order C 21497 valve)	1
3	NSS	SPOOL - valve (order C 21497 valve)	1
4	NSS	SPOOL - valve (order C 21497 valve)	1
5	A 7982	SEAL - 1/2" ring, spool	4
6	C 17440	WASHER	1
7	D 59376	SPRING - detent	1
8	C 13200	SPACER	1
9	C 17439	DETENT - spool	1
10	C 17438	COVER - detent	1
11	211- 7	BALL - steel 1/4"	3
12	C 17444	SPRING - detent	2
13	C 17443	SCREW - detent, cap.	2
14	169- 114	SCREW - cover	4
15	129- 531	CAP - relief adjust	1
16	C 17435	GASKET - relief adjust cap	1
17	C 17433	SCREW - relief adjust	1
18	C 21505	SPRING - relief	1
19	C 18852	BUSHING - power beyond	1
20	218- 5007	SEAL - "O" ring, bushing	1
21	A 30097	SEAL - "O" ring	1
22	221- 841	PLUG - pipe 1/4"	1
23	195- 521	WASHER - return	1
24	C 18850	SPRING - return	1
25	C 18853	SPACER	1
26	193- 524	SCREW - with lockwasher	1
27	C 18847	COVER - return	1
28	C 21510	CAP - relief adjust	1
29	C 21507	SPRING - relief	1
30	211- 9	BALL - steel 5/16"	1
31	C 21508	GASKET - relief adj. cap	1
32	C 21509	SCREW - relief adjust	1
33	C 21506	RETAINER - ball, relief	1
34	C 21522	SEAT - ball, relief	1
35	171- 247	SCREW - valve mounting 5/16" x 1-1/4" flat head machine	2
36	131- 351	NUT - 5/16" NC hex.	2
37	C 18851	KIT - detent (Includes items 6, 7, 8, 9, 10, 11, 12, 13 & 14)	1
38	C 21511	KIT - relief (Includes items 11, 15, 16, 17 & 18)	1
39	C 21521	KIT - relief (Includes items 28, 29, 30, 31, 32, 33 & 34)	1



HYDRAULIC CONTROL VALVE - BUCKET

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18179	VALVE - bucket control	1
2	NSS	BODY - valve (order C18179 valve)	1
3	NSS	SPOOL - valve (order C18179 valve)	1
4	NSS	SPOOL - valve (order C18179 valve)	1
5	A 7982	SEAL - "O" ring, spool	2
6	D 40816	SEAL - "O" ring, spool	2
7	221- 843	PLUG - 3/8"	1
8	C 17432	SPRING - relief	1
9	211- 9	BALL - steel 5/16"	1
10	C 17433	SCREW - relief adjust	1
11	C 17435	GASKET - adjust screw	1
12	129- 531	CAP - adjust screw	1
13	169- 114	SCREW - cover	4
14	C 17740	WASHER	1
15	C 17741	SPRING - return	1
16	C 13200	SPACER - detent	1
17	C 17439	DETENT - spool	1
18	C 17438	COVER - detent	1
19	211- 7	BALL - steel 1/4"	2
20	C 17444	SPRING - detent	2
21	C 17443	SCREW - detent	2
22	195- 521	WASHER - return	1
23	C 18850	SPRING - return	1
24	C 13200	SPACER	1
25	195- 510	WASHER	1
26	193- 524	SCREW	1
27	C 18847	COVER - centering	1
28	113- 17	BOLT - valve mounting 1/4" x 1-1/4" NC hex	3
29	131- 1102	NUT - lock 1/4" NC hex	3
	C 18846	KIT - spring center (Includes items 22, 23, 24, 25, 26 and 27)	1
	C 18851	KIT - detent (Includes items 14, 15, 16, 17, 18, 19, 20 and 22)	1



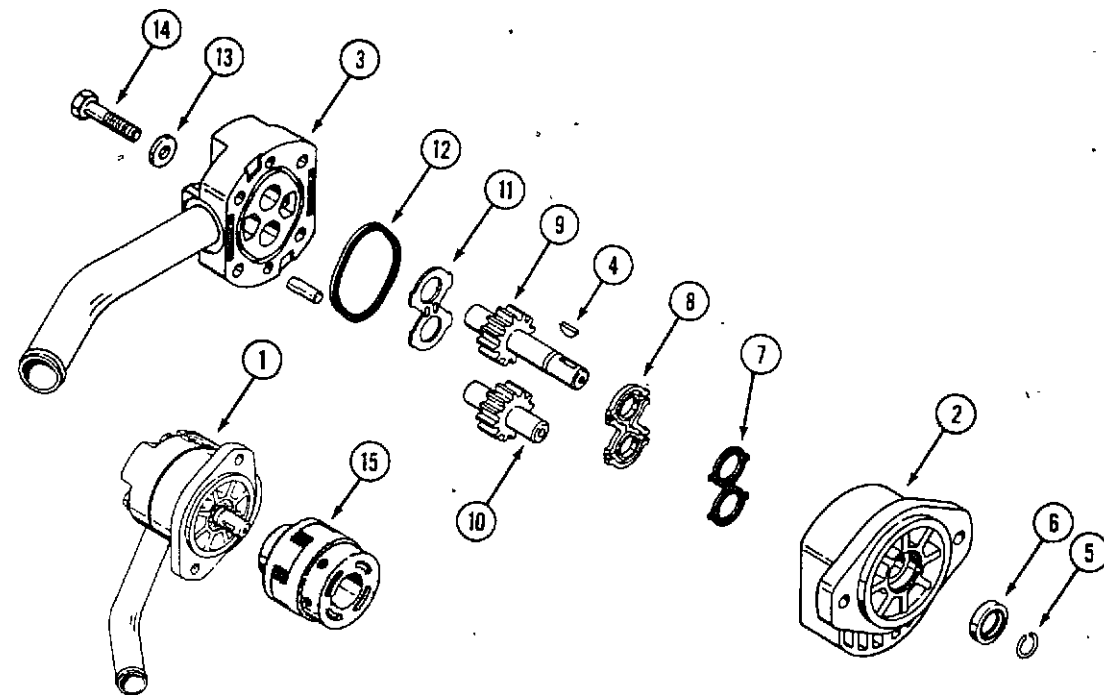
HYDRAULIC PUMP AND COUPLING — 646

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 20122	PUMP - hydraulic (used S/N 9680417 and after)	1
2	C 19277	BODY ASSEMBLY - (Includes bushings)	1
3	C 19278	COVER ASSEMBLY - (Includes bushings & dowel pins)	1
4	126- 12	KEY - woodruff	2
5	C 18768	RING - snap	1
6	C 19281	SEAL - oil	1
7	C 18764	SEAL - pressure load	1
8	C 19279	PLATE - wear	1
9	C 18761	GEAR - drive	1
10	C 18762	GEAR - driven	1
11	C 19280	PLATE - thrust	1
12	C 18769	SEAL - gasket	1
13	195- 2028	WASHER	4
14	113- 233	BOLT	4
15	221- 841	PLUG - pipe	1
16	C 18235	COUPLING - pump	2
17	178- 858	SCREW - set 5/16" x 3/8"	4
18	NSS	HUB - (order C18235)	1
19	NSS	HUB - (order C18235)	1
20	C 18258	SPIDER - coupling	1

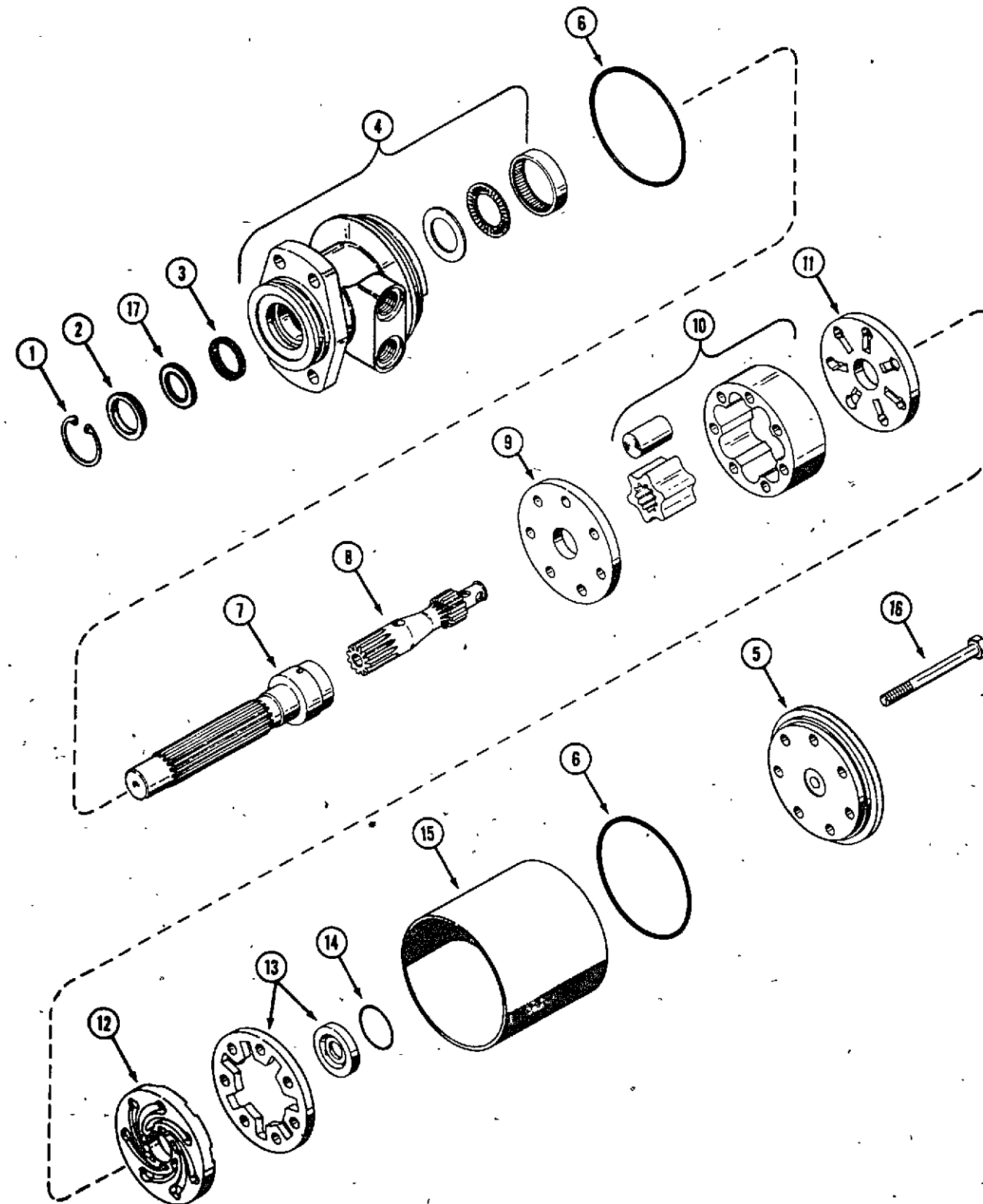
HYDRAULIC PUMP AND COUPLING — 644

1	C 19045	PUMP - hydraulic	1
2	C 15729	PIN - dowel	2
3	C 19113	COVER - rear	1
4	C 15731	GEAR ASSEMBLY - driven	1
5	C 15732	"O" RING	2
6	C 15733	BODY - pump	1
7	C 15734	COVER - front	1
8	C 15735	SEAL - rotary	1
9	C 19114	GEAR ASSEMBLY - drive	1
10	C 15737	PLATE - wear	1
11	C 15738	SHIELD - heat	1
12	C 15739	GASKET	1
13	C 15740	SEAL	1
14	13- 540	BOLT	4
15	C 19207	KEY - 1/8" x 3/4"	1
16	C 19115	WASHER	4
17	C 17298	COUPLING - pump	1
18	NSS	HUB - (order item 17)	1
19	NSS	HUB - (order item 17)	1
20	C 15036	SPIDER - (for C17298 coupling)	1
21	83- 55	SCREW - set 5/16" x 5/16" NC socket head	2

HYDRAULIC PUMP AND COUPLING - 646

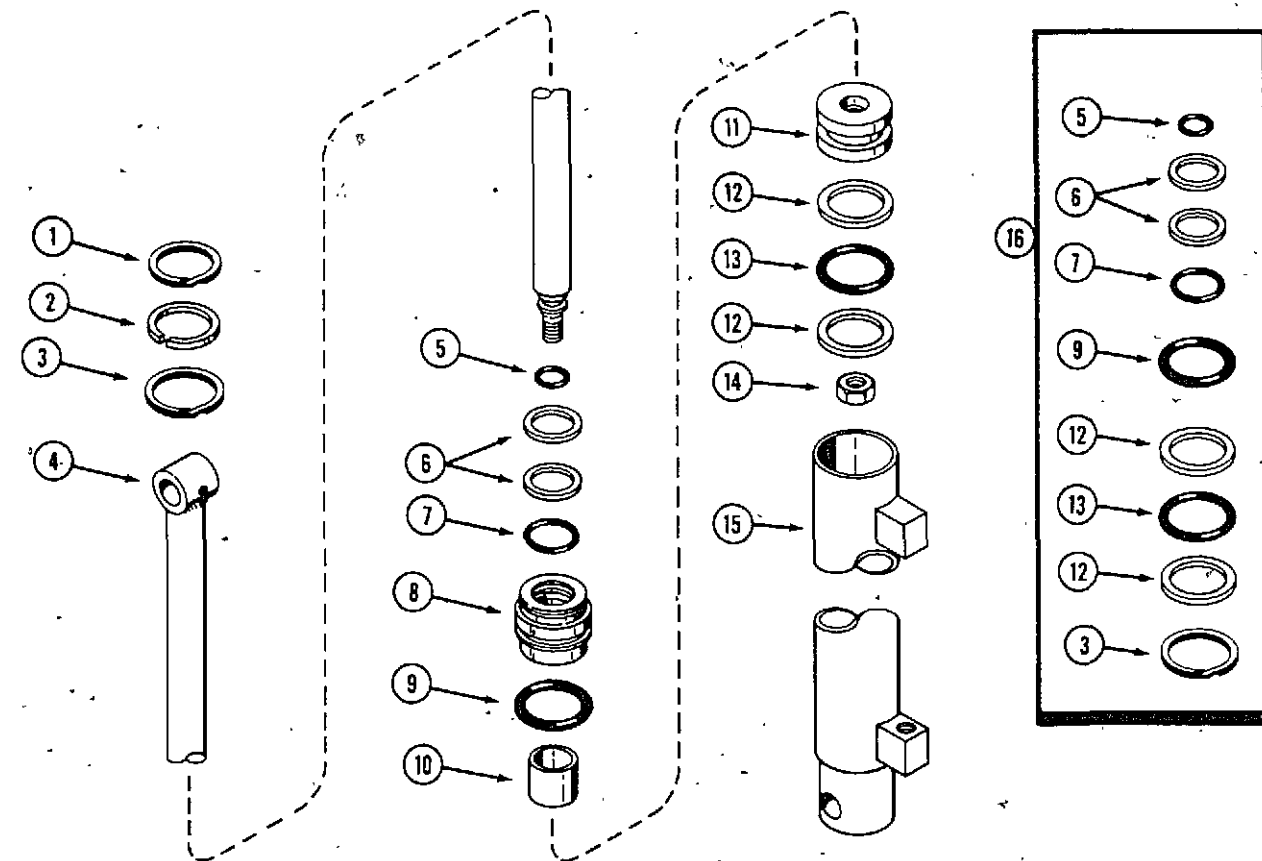


REF.	PART NO.	DESCRIPTION	REQ'D
1	NSS	PUMP - hydraulic, C19176 (used prior to S/N 9680417) order C20122 . . .	1
2	C 20200	BODY - pump	1
3	C 20201	COVER - pump	1
4	126- 112	KEY - woodruff.	2
5	C 18768	RING - snap	1
6	C 18766	SEAL - oil	1
7	C 18764	SEAL - pressure load.	1
8	C 19279	PLATE - wear	1
9	C 18761	GEAR - drive	1
10	C 18762	GEAR - driven.	1
11	C 19280	PLATE - thrust	1
12	C 18769	SEAL - gasket	1
13	A 7200	WASHER	4
14	113- 274	BOLT.	4
15	C 18235	COUPLING - pump	2



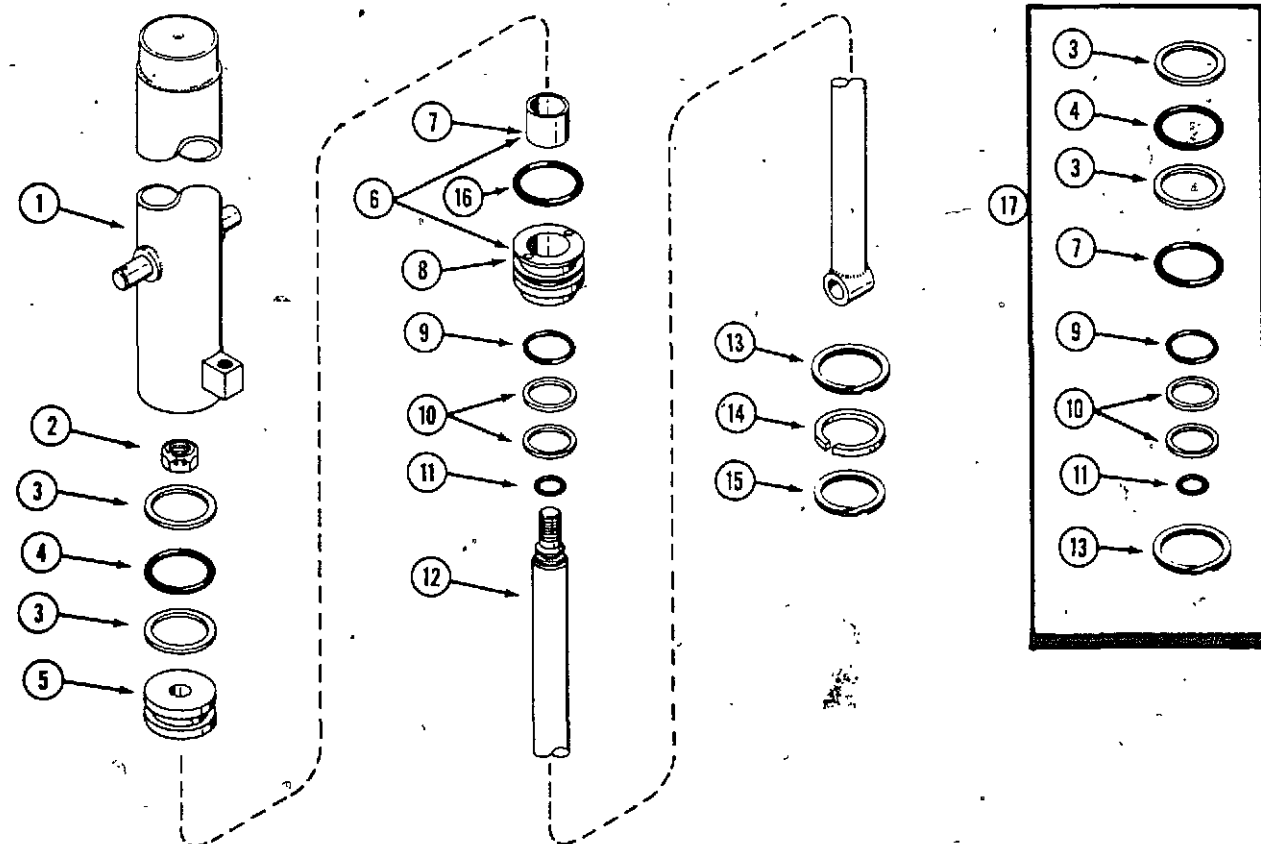
HYDRAULIC DRIVE MOTOR

REF.	PART NO.	DESCRIPTION	REQ'D
	C 14655	MOTOR - hydraulic	1
1	L 30654	RING - retaining	1
2	NSS	SPACER - (See kit below)	1
3	NSS	SEAL - oil (See kit below)	1
4	C 14827	HOUSING ASSEMBLY	1
5	C 14837	END CAP	1
6	NSS	SEAL - (See kit below)	2
7	C 14828	SHAFT - coupling	1
8	C 14829	DRIVE LINK	1
9	C 14830	PLATE - wear	1
10	C 14831	ROTOR ASSEMBLY	1
11	C 14832	PLATE - manifold	1
12	C 14833	MANIFOLD	1
13	C 14834	COMMUTATOR AND RING SET	1
14	NSS	RING - sealing (See kit below)	1
15	C 14836	SLEEVE	1
16	C 14838	BOLT - 3/8" x 4-3/8" NF hex	7
17	NSS	WASHER - back up, .010" (see kit below)	1
	C 19037	KIT - "O" ring and seal	1
	C 19041	RING - sealing	1
	C 19038	SEAL - dirt (not used - throw away item)	1
	C 18382	SEAL	2
	C 19039	SEAL	1
	L 30654	RING - retaining	1
	C 19040	SPACER - seal	1
	C 19212	WASHER - back up, .010"	1

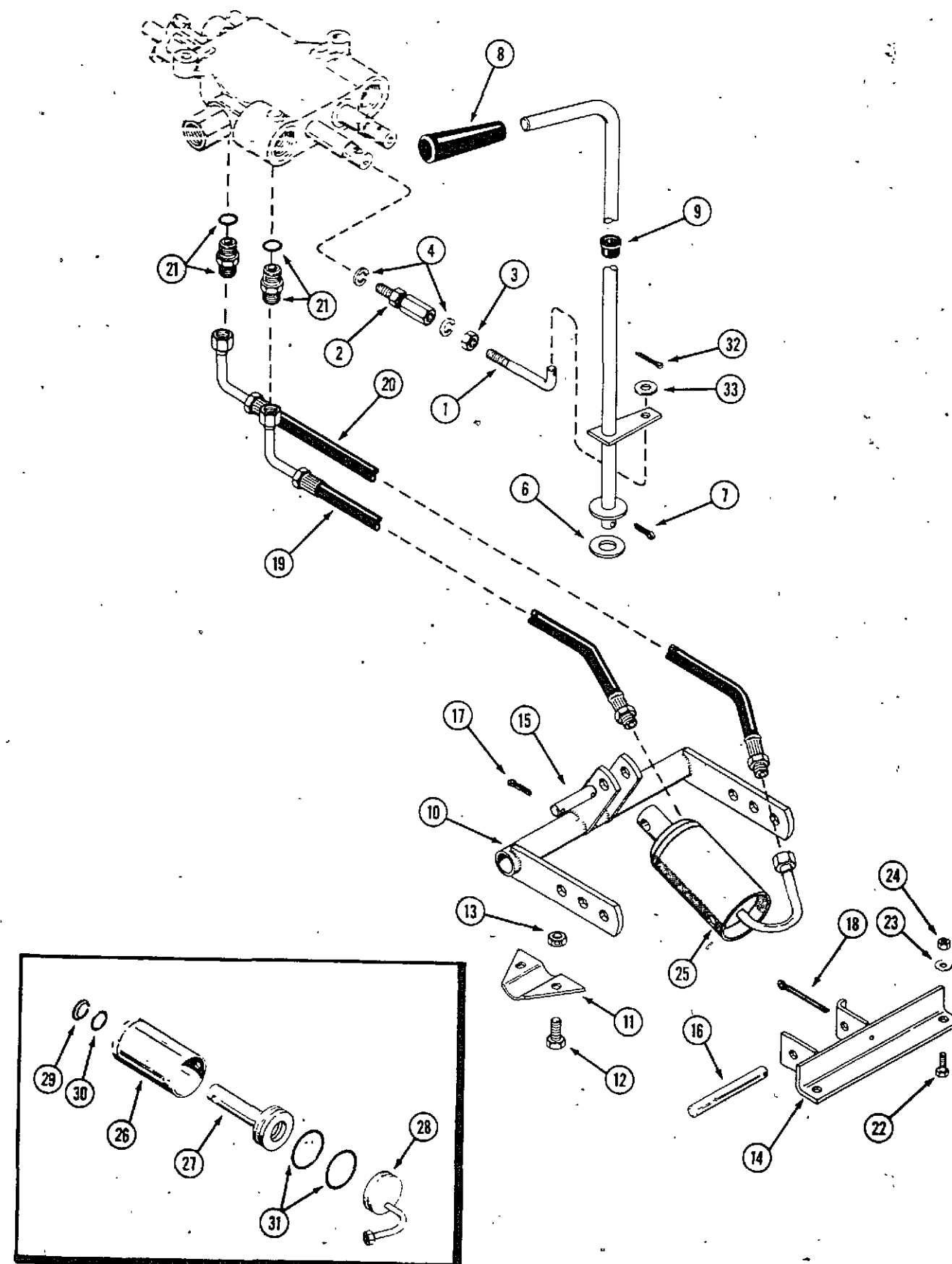


REF.	PART NO.	DESCRIPTION	REQ'D
	C 11527	CYLINDER - lift arm	1
1	T 24080	RING - retaining	1
2	T 24081	SPACER	1
3	NSS	RING - retaining	1
4	C 18575	ROD - cylinder	1
5	NSS	SEAL - "O" - ring, rod	1
6	NSS	WIPER - rod	2
7	NSS	SEAL - "O" - ring, rod	1
8	T 42253	HEAD - cylinder	1
9	NSS	SEAL - head	1
10	T 42254	BUSHING - head	1
11	T 24084	PISTON - cylinder	1
12	NSS	WASHER - backup, piston	2
13	NSS	SEAL - "O" - ring, piston	1
14	25- 159	NUT - jam	1
15	C 18576	BODY - cylinder	1
16	T 41499	KIT - seal	1

CYLINDER - BUCKET

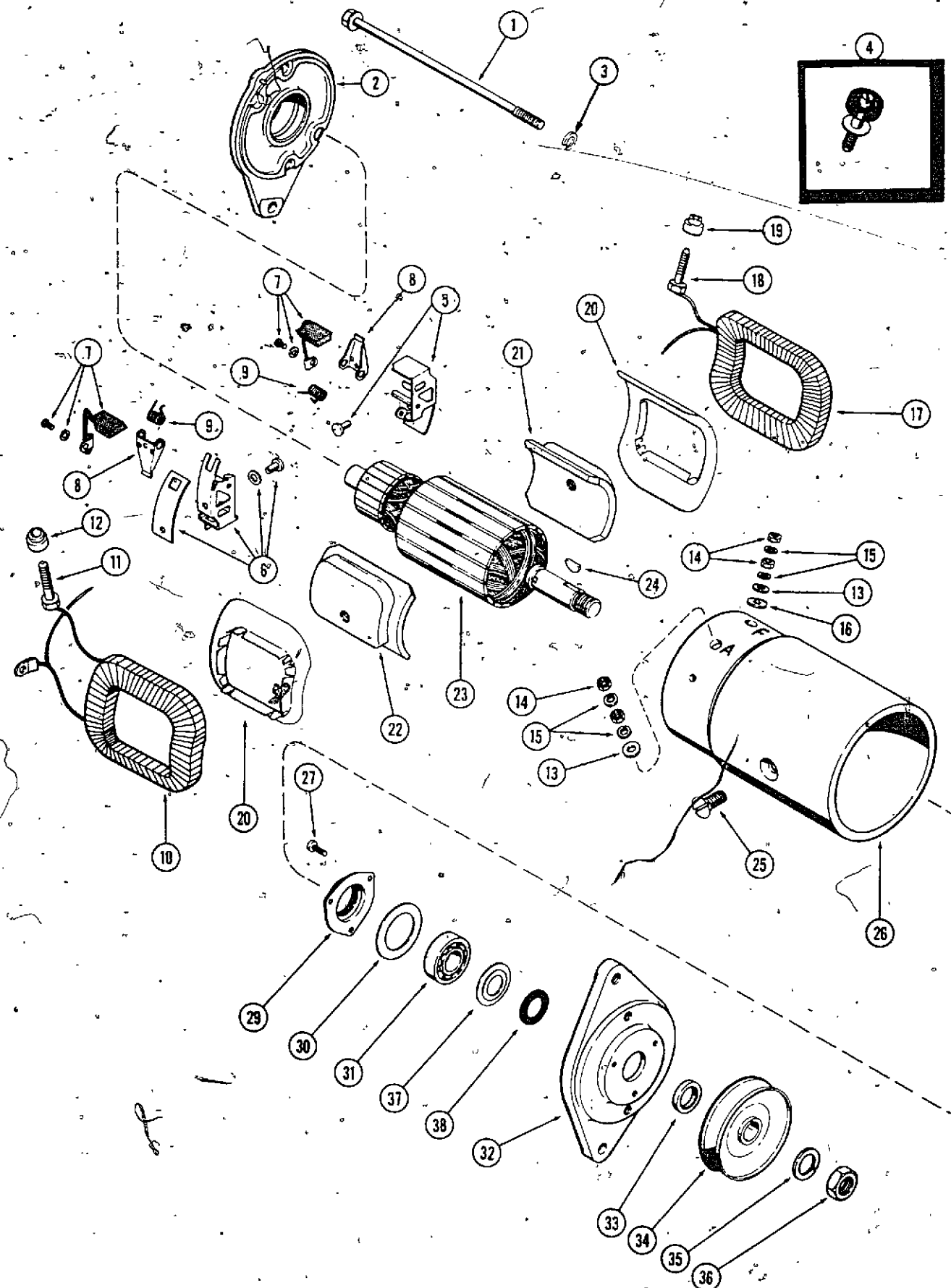


	C 11528	CYLINDER - bucket	1
1	C 18573	BODY - cylinder	1
2	131- 677	NUT - jam	1
3	NSS	WASHER - backup, piston	2
4	NSS	SEAL - "O" - ring, piston	1
5	D 54909	PISTON - cylinder	1
6	C 18486	HEAD ASSEMBLY	1
7	NSS	BUSHING - head	1
8	C 18487	HEAD - cylinder	1
9	NSS	SEAL - "O" - ring, rod	1
10	NSS	WASHER - backup	2
11	NSS	SEAL - "O" - ring, rod	1
12	C 18572	ROD - cylinder	1
13	NSS	RING - retaining	1
14	D 54915	SPACER	1
15	D 54917	RING - retaining	1
16	NSS	SEAL - "O" - ring, head	1
17	C 18574	KIT - seal	1



HYDRAULIC LIFT

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 19384	ROD - lift control	1
2	C 19025	BALL JOINT	1
3	129- 122	NUT - 5/16" NF hex.	1
4	192- 20	LOCKWASHER - 5/16"	2
5	C 17566	LEVER - lift control	1
6	195- 541	WASHER - 5/8"	4
7	132- 48	PIN - cotter 1/8" x 1"	1
8	A 37247	KNOB - lift lever	1
9	C 12093	BUSHING - flip lock	1
10	C 17585	CROSS SHAFT ASSEMBLY	1
11	C 17250	BRACKET - clamp	2
12	113- 221	BOLT - 3/8" x 7/8" NC hex	4
13	131- 178	NUT - lock 3/8" NC hex	4
14	C 17579	BRACKET - cylinder mounting	1
15	C 18251	PIN - cylinder mounting, rod end	1
16	C 17536	PIN - cylinder mounting, foot end	1
17	132- 310	PIN - cotter 1/8" x 1"	2
18	132- 361	PIN - cotter 3/16 x 2-1/2"	1
19	C 18154	HOSE - valve to cylinder, short	1
20	C 18155	HOSE - valve to cylinder, long	1
21	218- 5056	FITTING - valve (includes 218-5004 "O" ring)	2
22	113- 207	BOLT - 3/8" x 1" NC hex	2
23	195- 525	WASHER - 3/8"	2
24	131- 178	NUT - lock 3/8" NC hex	2
25	C 19475	CYLINDER - hydraulic lift	1
26	C 19479	BODY - cylinder	1
27	C 19104	ROD AND PISTON ASSEMBLY	1
28	C 17732	FOOT - cylinder	1
29	NSS	SEAL	1
30	NSS	"O" - RING	1
31	NSS	"O" - RING	2
	C 17268	KIT - SEAL, cylinder (consists of items 29, 30 and 31)	1
32	132- 320	PIN - cotter 3/32" x 3/4"	1
33	195- 102	WASHER - 1/4"	1

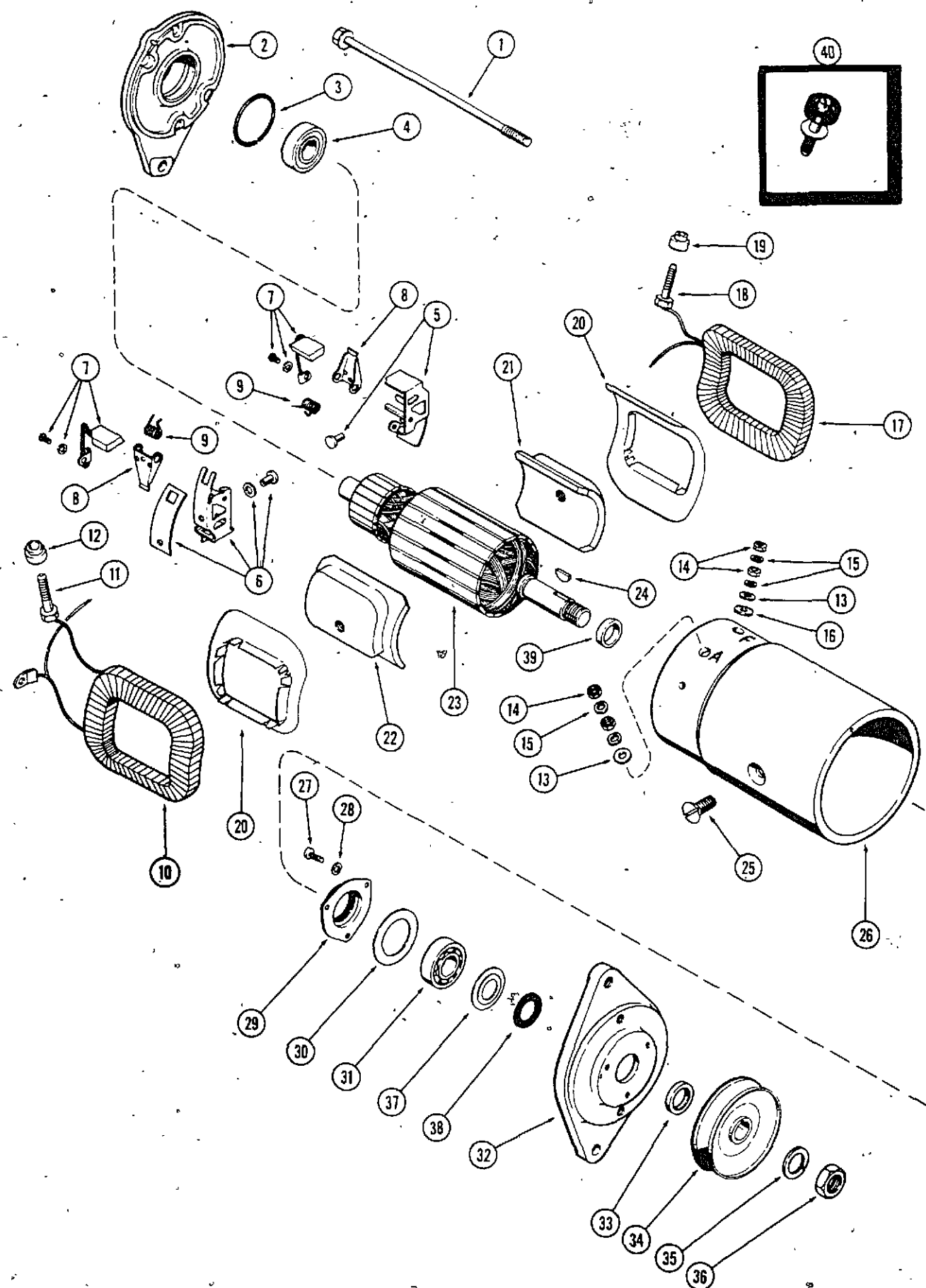
**C 16852 STARTER-GENERATOR**

(DELCO NUMBER 1101875)

(Use A 70202 for Service)

REF.	PART NO.	DESCRIPTION	REQ'D
1	R 15106	BOLT - through	2
2	A 43494	FRAME ASSEMBLY - commutator end	1
3	192- 20	LOCKWASHER - 5/16"	2
4	A 40702	KIT - stud (Includes items 16, 18 and 19)	1
5	A 72039	HOLDER KIT - ground brush	1
6	A 72040	HOLDER KIT - insulated brush	1
7	A 72038	BRUSH ASSEMBLY	2
8	R 15090	ARM - brush pressure	2
9	R 16161	SPRING - brush arm	2
10	A 72042	COIL ASSEMBLY - field R.H.	1
11	A 72048	STUD - armature terminal	1
12	R 16147	BUSHING - insulated, armature stud	1
13	A 41927	WASHER - armature stud	2
14	129- 18	NUT - terminal stud 12-24 hex	4
15	192- 17	LOCKWASHER - terminal stud #12	4
16	R 16148	WASHER - insulated, field stud (Order A40702)	1
17	A 72043	COIL ASSEMBLY - field L.H.	1
18	NSS	STUD - field terminal (Order A40702)	1
19	R 15077	BUSHING - insulated, field stud (Order A40702)	1
20	A 25447	INSULATOR - field coil	2
21	A 40736	SHOE - pole	1
22	A 40736	SHOE - pole	1
23	A 43495	ARMATURE	1
24	126- 111	KEY - Woodruff, armature	1
25	A 42127	SCREW - pole	2
26	NSS	BODY - starter, generator (Order A70202)	1
27	A 41959	SCREW - 10-32 x 1/2" round head	3
29	A 44433	RETAINER ASSEMBLY - bearing	1
30*	NSS	GASKET - bearing retainer (Order A44433)	1
31	A 43356	BEARING - ball, drive end	1
32	A 72046	FRAME ASSEMBLY - drive end	1
33	A 72047	SPACER - pulley	1
34	C 14344	PULLEY - starter, generator drive	1
35	192- 116	LOCKWASHER - 11/16" plated	1
36	A 25546	NUT - armature shaft, drive end	1
37	A 43499	RETAINER - grease	1
38*	NSS	SEAL - felt (Order A44433)	1

* Retainer gasket and felt seal no longer required when servicing with item 29.

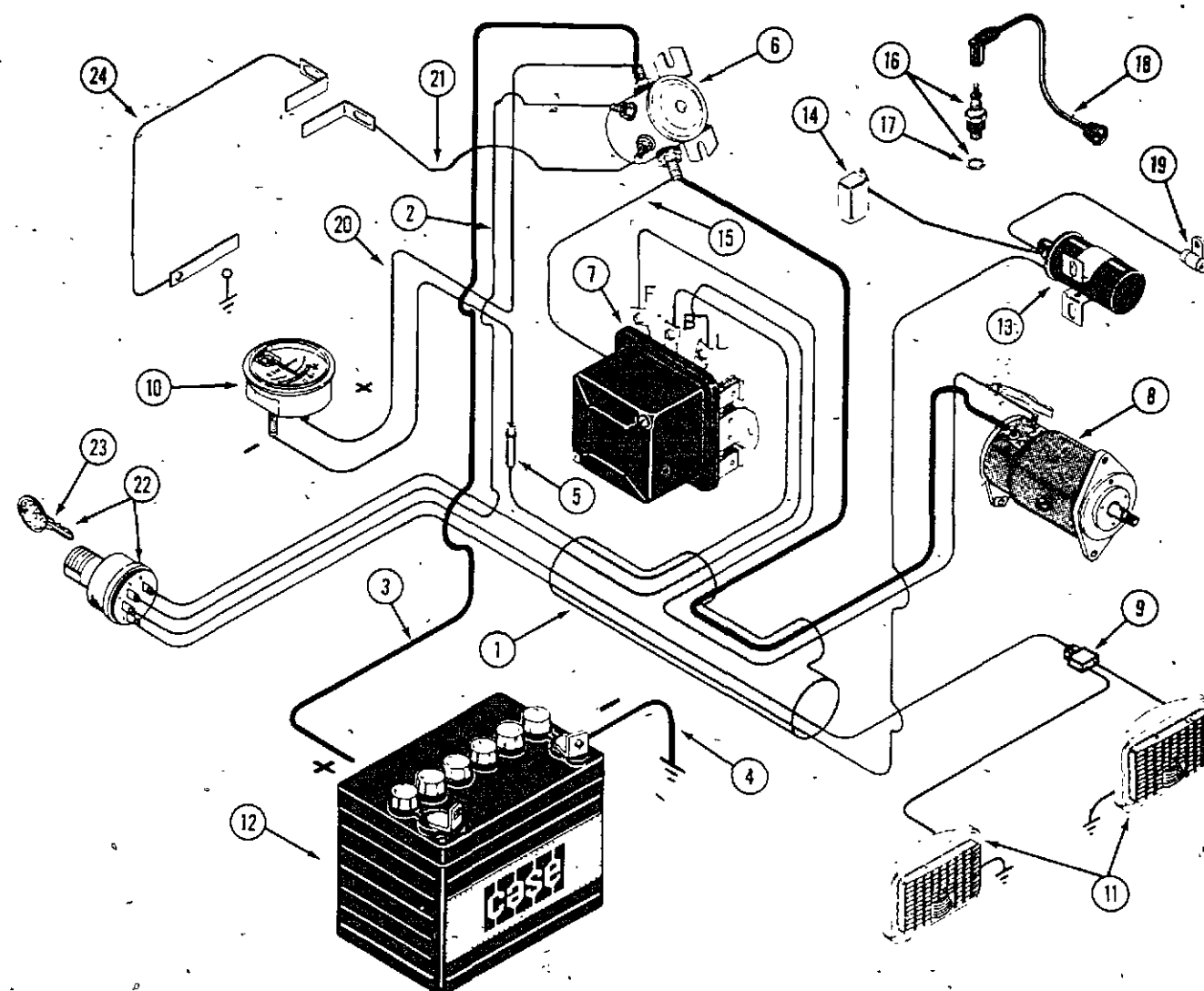


A 70202 STARTER-GENERATOR (DELCO NUMBER 1101970)

REF.	PART NO.	DESCRIPTION	REQ'D
1	R 15106	BOLT - through (Includes washer)	2
2	A 72104	FRAME ASSEMBLY - commutator end	1
3	R 15087	RING - bearing retainer	1
4	A 25461	BEARING - commutator end ball	1
5	A 72039	HOLDER KIT - ground brush	1
6	A 72040	HOLDER KIT - insulated brush	1
7	A 72038	BRUSH ASSEMBLY	2
8	R 15090	ARM - brush pressure	2
9	R 16161	SPRING - brush arm	2
10	A 72042	COIL ASSEMBLY - field R.H.	1
11	A 72048	STUD - armature terminal	1
12	R 16147	BUSHING - insulated, armature stud	1
13	A 41927	WASHER - armature stud	2
14	129- 18	NUT - terminal stud 12-24 hex	4
15	192- 17	LOCKWASHER - terminal stud #12	4
16	R 16148	WASHER - insulated, field stud	1
17	A 72043	COIL ASSEMBLY - field L.H.	1
18	NSS	STUD - field terminal (See Ref. 40)	1
19	R 15077	BUSHING - insulated, field stud (Order A40702)	1
20	A 25447	INSULATOR - field coil	2
21	A 40736	SHOE - pole, plain	1
22	A 40736	SHOE - pole, notched	1
23	A 72041	ARMATURE	1
24	126- 111	KEY - Woodruff, armature	1
25	74- 610	SCREW - pole	2
26	NSS	BODY - starter, generator (Order A70202)	1
27	173- 237	SCREW - 10-32 x 1/2" Rd. Hd.	3
28	192- 18	LOCKWASHER - 3/16" plated	3
29	A 44433	RETAINER ASSEMBLY - bearing	1
30*	NSS	GASKET - bearing retainer (order A44433)	1
31	A 25441	BEARING - ball, drive end	1
32	A 72046	FRAME ASSEMBLY - drive end	1
33	A 72047	SPACER - pulley	1
34	C 14344	PULLEY - starter, generator drive	1
35	192- 26	LOCKWASHER - 11/16" plated	1
36	A 25546	NUT - armature shaft, drive end	1
37	A 43499	RETAINER - grease	1
38*	NSS	SEAL - felt (Order A44433)	1
39	NSS	SPACER - armature shaft, inner	1
40	A 40702	KIT - stud (Includes items 16, 18 and 19)	1

* Retainer gasket and felt seal no longer required when servicing with item 29.

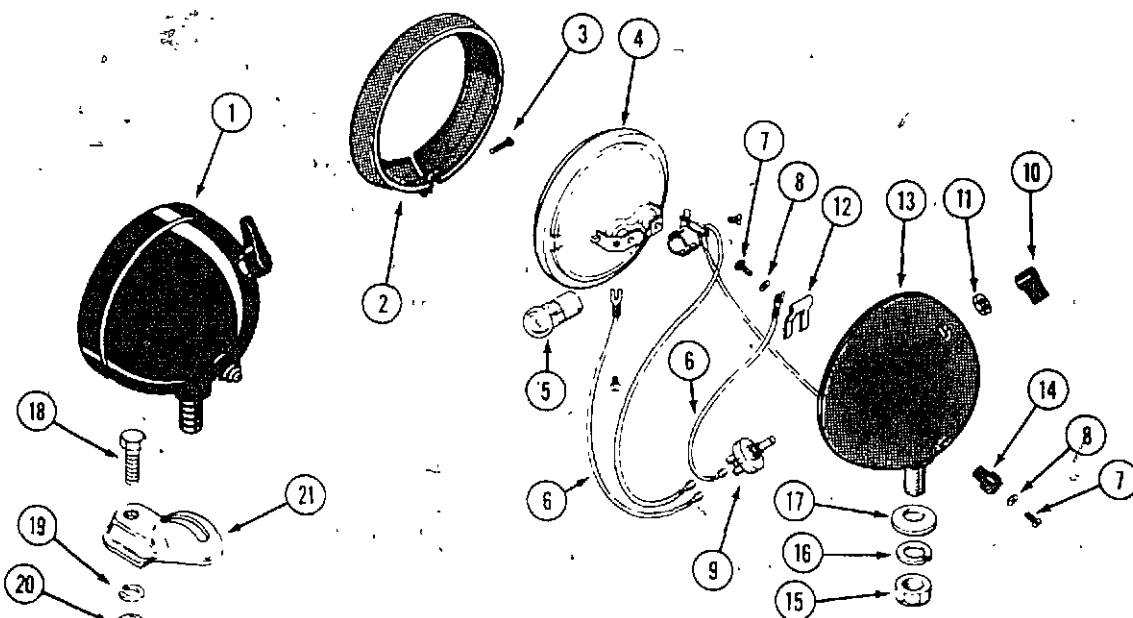
ELECTRICAL SYSTEM — 644

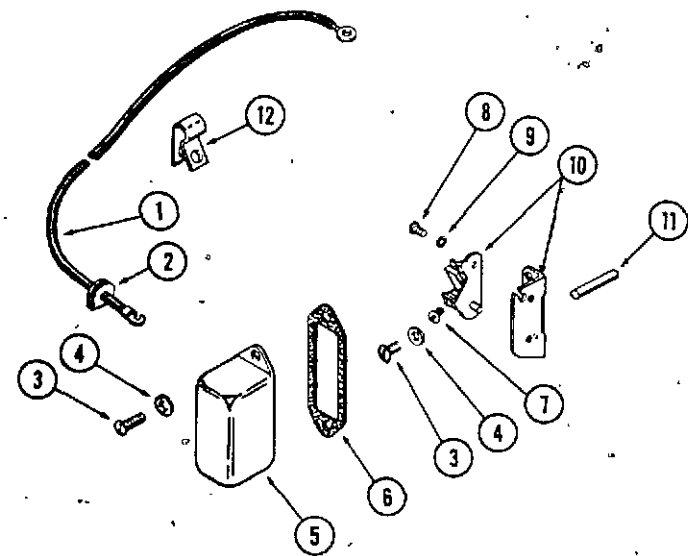
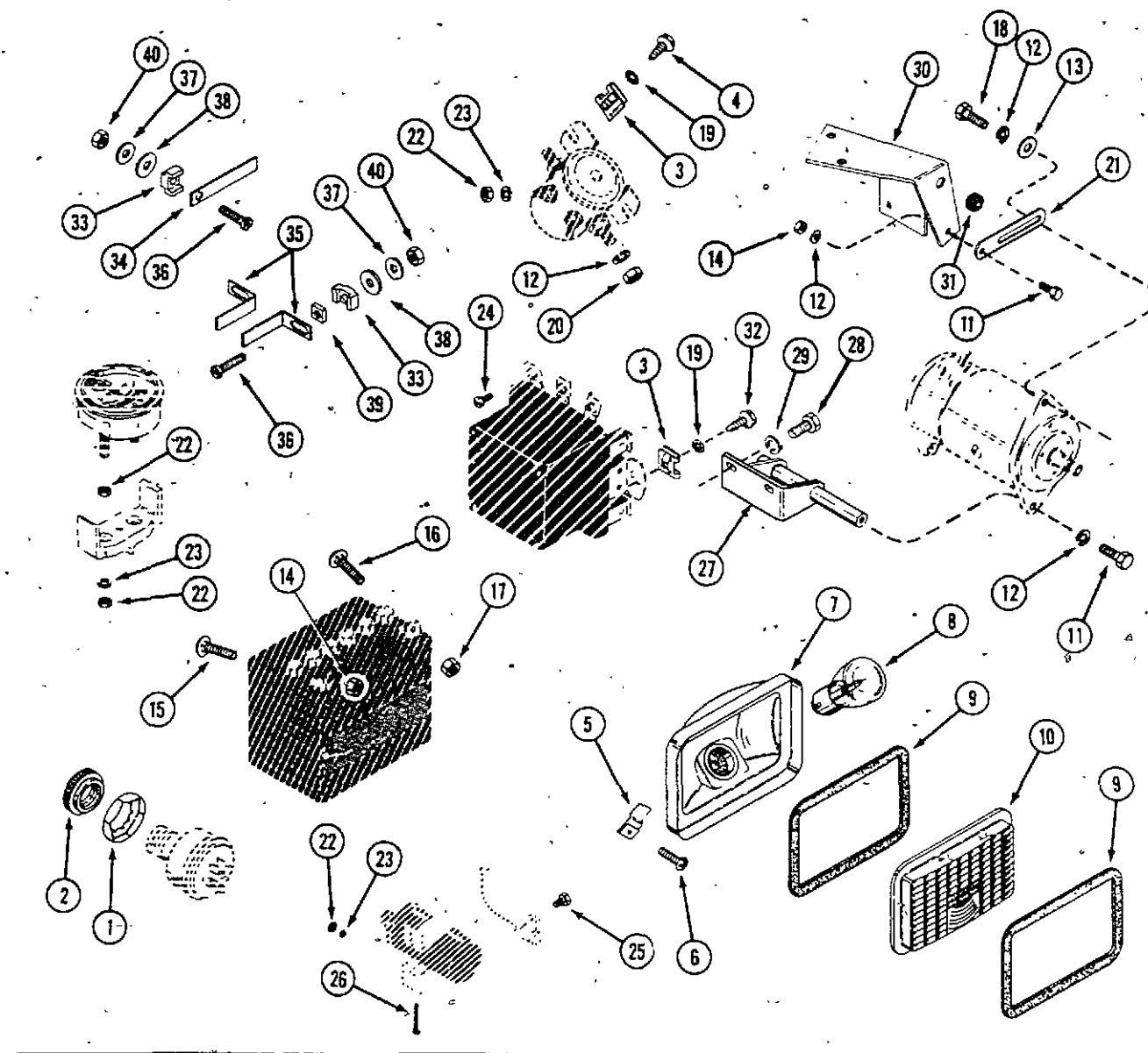


REF.	PART NO.	DESCRIPTION	REQ'D
1	C 19365	HARNESS - wire	1
2	C 17187	WIRE - ignition switch to solenoid (yellow 8")	1
3	C 14565	CABLE - battery positive (red 10-1/2")	1
4	C 18267	CABLE - battery ground (black 16")	1
5	223- 20	FUSE - 20 amp.	1
6	C 14553	SOLENOID - start	1
7	A 70221	REGULATOR - voltage	1
8	C 16852	STARTER - generator 12 volt, DELCO No. 1101875	1
8	A 70202	STARTER - generator 12 volt, DELCO No. 110970	1
9	C 14537	CONNECTOR - headlamp	1
10	C 18389	GAUGE - ammeter	1
11	C 22571	HEADLAMP ASSEMBLY - 12 volt (Repairs page 91)	2
12	C 18197	BATTERY - 12 volt	1
13	KO 231281	COIL - ignition 12 volt	1
14	KO 232535	COVER - breaker contacts	1
15	C 17275	WIRE - regulator ground to solenoid (white 7")	1
16	M 20007	SPARK PLUG - (Includes gasket)	1
17	A 27251	GASKET - spark plug	1
18	KO 238057	CABLE - high tension	1
19	KO 230722	CONDENSER	1
20	C 18261	WIRE - amp. gauge to solenoid (range 6")	1
21	C 18140	WIRE - solenoid to safety switch (black 6")	1
22	C 21595	SWITCH - ignition (Includes key)	1
23	C 17763	KEY - ignition	1
24	C 19055	WIRE - safety switch (black 21")	1
	C 19521	CLIP - wire holder	2
	353- 407	PLUG - hole, dash	1

TAIL LAMP

1	A 20965	LAMP ASSEMBLY - flood and tail	1
2	B 50255	MOLDING - lamp retaining	1
3	10934	SCREW - molding	1
4	A 40855	LAMP - sealed unit	1
5	B 50223	BULB - red 15 C.P. 12 volt	1
6	B 50273	WIRE - switch	2
7	173- 73	SCREW - wire	2
8	193- 4	WASHER - 1/4" lock	2
9	NSS	SWITCH (see kit below)	1
10	NSS	KNOB - switch (see kit below)	1
11	A 39888	NUT - switch	1
12	10927	SPRING - terminal	1
13	NSS	BODY	1
14	B 50293	TERMINAL - wire	1
15	129- 105	NUT - 1/2" NC hex	1
16	192- 23	WASHER - 1/2" lock	1
17	10923	WASHER - bearing	1
18	113- 209	BOLT - 3/8" x 1-1/2" NC hex, zinc plated	1
19	192- 21	LOCKWASHER - 3/8" zinc plated	1
20	129- 103	NUT - 3/8" NC hex, zinc plated	1
21	A 34046	BRACKET - mounting, tail lamp	1
	A 43182	KIT - switch, includes knob	1





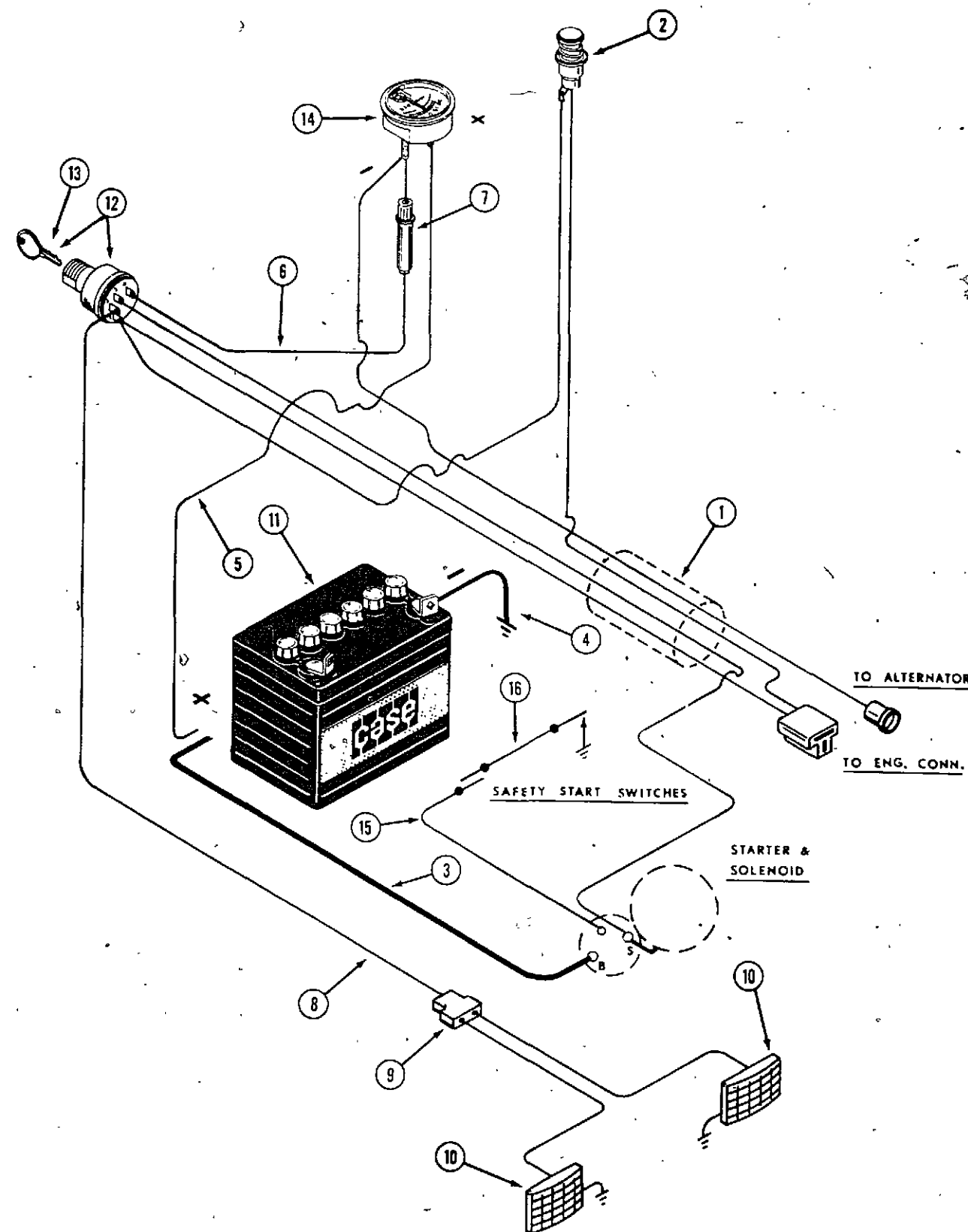
ELECTRICAL SYSTEM HARDWARE - 644

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 14060	NUT - back up 3/4"	1
2	C 17921	NUT - escutcheon 3/4"	1
3	C 10836	NUT - speed type "U"	4
4	187- 485	SCREW - #10 x 5/8" self-tapping hex	2
5	131- 629	NUT - speed type "U"	4
6	187- 1047	SCREW - #8 x 1/2" self-tapping round head, Phillips	4
C 22571		HEADLAMP ASSEMBLY	2
7	NSS	RECEPTACLE - headlamp (Order C22571)	1
8	C 14305	BULB - headlamp	1
9	C 14304	GASKET - headlamp	2
10	C 22573	LENS - headlamp	1
11	113- 103	BOLT - 5/16" x 1" NC hex, zinc plated	2
12	192- 20	LOCKWASHER - 5/16" zinc plated	5
13	195- 520	WASHER - 5/16" plain, zinc plated	2
14	129- 102	NUT - 5/16" NC hex, zinc plated	2
15	111- 202	BOLT - 5/16" x 3/4" NC, round head, square neck	1
16	111- 108	BOLT - 1/4" x 3/4" NC, round head, square neck	1
17	129- 101	NUT - 1/4" NC hex	1
18	113- 102	BOLT - 5/16" x 3/4" NC, zinc plated	1
19	193- 70	LOCKWASHER - #10 external tooth	2
20	129- 122	NUT - 5/16" NF hex	2
21	C 14599	BRACKET - starter generator adjust	1
22	129- 27	NUT - #10 NF hex	4
23	192- 18	LOCKWASHER - #10	4
24	169- 131	SCREW - #8 x 5/16" NC fillister head	3
25	113- 1	BOLT - 1/4" x 1/2" NC hex, zinc plated	2
26	187- 1844	SCREW - #10 x 1-1/2" NF self tap	1
27	C 18788	SUPPORT - starter generator	1
28	13- 612	BOLT - 3/8" x 3/4" NC hex	2
29	192- 21	LOCKWASHER - 3/8"	2
30	C 18999	SUPPORT - starter generator adjust	1
31	C 17546	GROMMET - wire	1
32	187- 130	SCREW - #10 x 5/8" self tapping	2
33	C 19246	HOLDER - strip switch	3
34	C 19258	STRIP-SWITCH	1
35	C 18115	STRIP-SWITCH, PTO	2
36	182- 523	SCREW - #10 x 7/8" binder head	3
37	195- 513	WASHER - #10	3
38	C 19254	WASHER - nylon 13/64"	3
39	129- 77	NUT - #10 NF Square	2
40	129- 37	NUT - #10 NF hex	3

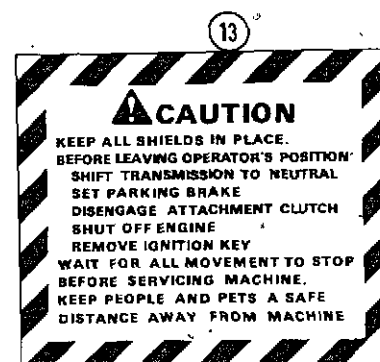
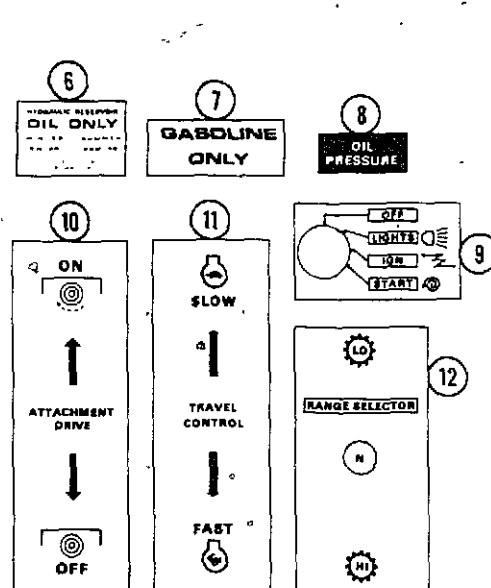
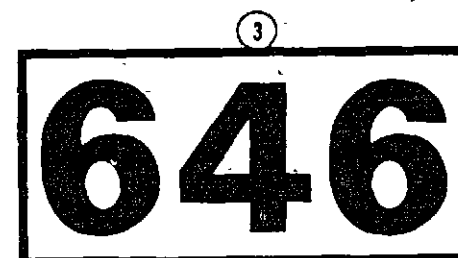
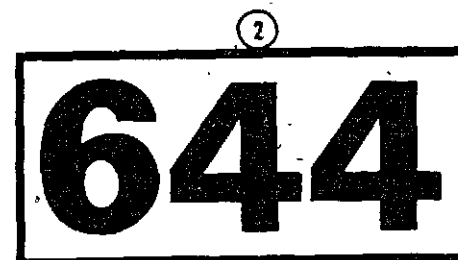
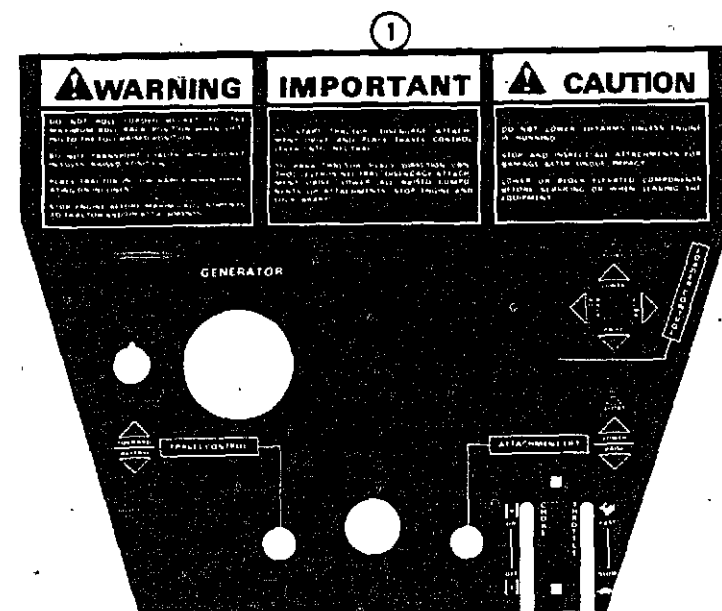
BREAKER CONTACTS - 644

1	KOA 231533	LEAD - breaker contact (Includes grommet)	1
2	KO 220297	GROMMET - contact lead	1
3	173- 210	SCREW - #10 x 3/8" round head, zinc plated	4
4	192- 18	LOCKWASHER - 3/16" zinc plated	4
5	KO 232535	COVER - breaker contact	1
6	KO 220174	GASKET - cover	1
7	187- 408	SCREW - #6 x 3/8" Self-Tapping	1
8	173- 224	SCREW - #8 x 1/4" NC round head	1
9	193- 5	LOCKWASHER - #8 internal tooth	1
10	KOA 220474	POINT SET - breaker assembly	1
11	C 18100	ROD - breaker contact push	1
12	KO 275182	CLIP - wire	1

ELECTRICAL SYSTEM — 646

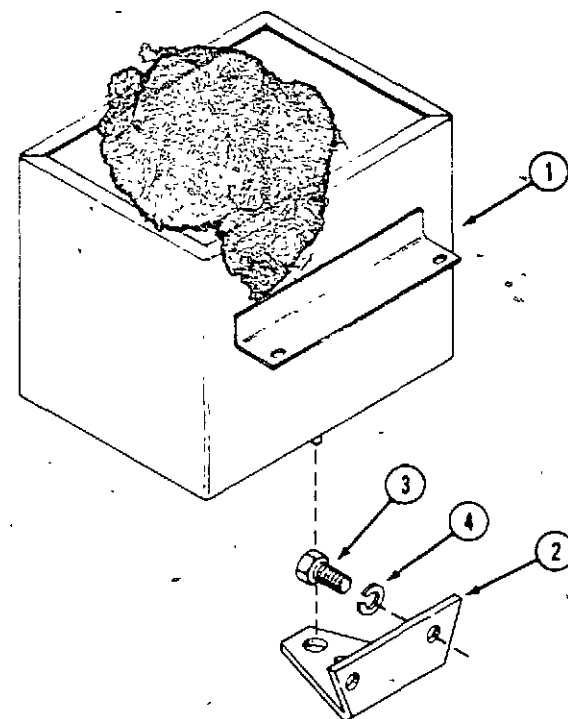


REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18265	HARNESS - wire	1
2	C 18283	LAMP ASSEMBLY - oil indicator	1
	B 50213	BULB - oil indicator 12 volt, (red)	1
3	C 18266	CABLE - battery positive (red 27")	1
4	C 14566	CABLE - battery ground (black 12")	1
5	C 18268	WIRE - battery positive to amp. gauge (white 14-1/2")	1
6	C 18401	WIRE ASSEMBLY - fused (yellow 10-3/4")	1
7	223- 31	FUSE - 30 amp.	2
8	C 18270	WIRE - ignition switch to lights (pink 44")	1
9	C 14537	CONNECTOR - headlamp	1
10	C 22571	HEADLAMP - 12 volt	2
11	C 18197	BATTERY - 12 volt	1
12	C 21595	SWITCH - ignition (includes key)	1
13	C 17763	KEY - ignition	1
14	C 18389	GAUGE - ammeter	1
15	C 18203	WIRE - solenoid to safety switch (black 14")	1
16	C 19055	WIRE - safety switch to PTO switch (black 21")	1
	214- 1102	CLIP - wire, grille	2
	C 19521	CLIP - wire holder	1



DECALS

REF.	PART NO.	DESCRIPTION	REQ'D
1	321- 2144	DECAL - instrument panel	1
2	321- 2141	DECAL - (644)	1
3	321- 2140	DECAL - (646)	1
4	321- 1571	DECAL - "CASE"	3
5	321- 2139	DECAL - "CASE", brushed aluminum	1
6	C 14539	DECAL - oil, hydraulic reservoir	1
7	C 14066	DECAL - gasoline	1
8	321- 2171	DECAL - oil pressure	1
9	321- 2147	DECAL - ignition switch	1
10	321- 2111	DECAL - attachment drive	1
11	321- 2338	DECAL - travel control	1
12	321- 1788	DECAL - range selector	1
13	321- 2487	DECAL - caution	1

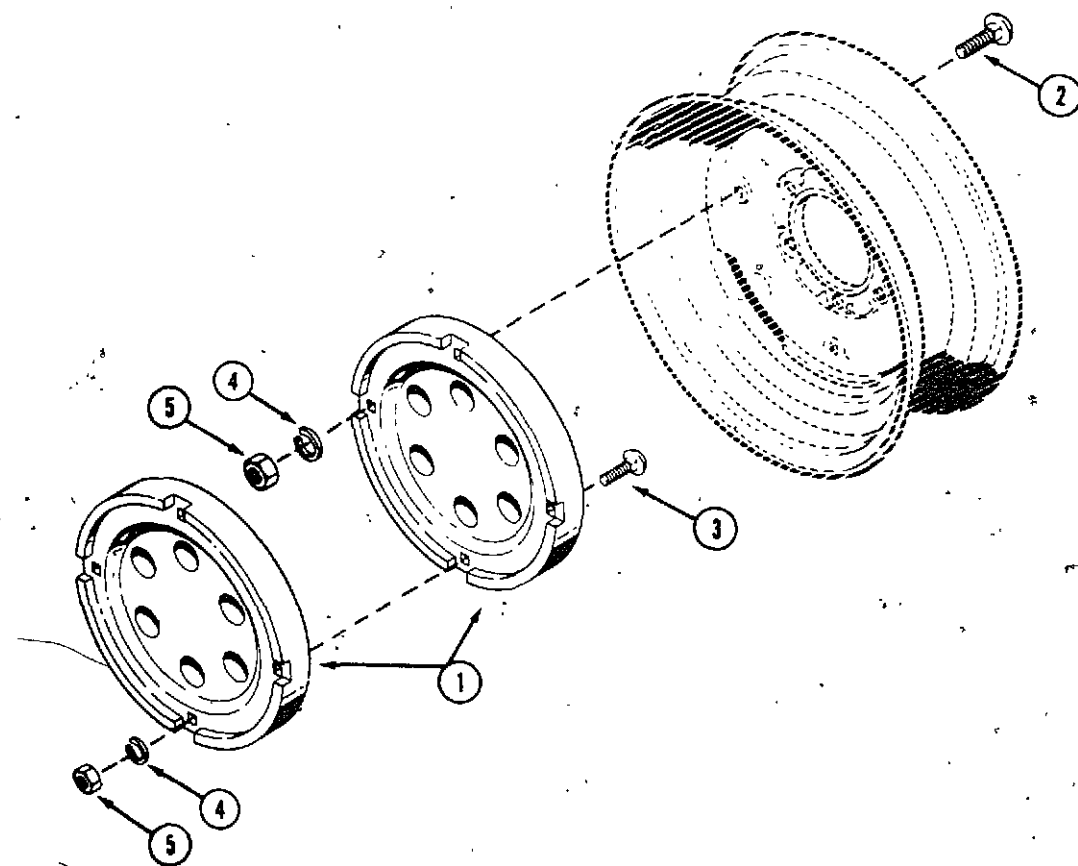


WEIGHT BOX AND DRAW BAR

REF.	PART NO.		DESCRIPTION	REQ'D
1	C	17641	WEIGHT BOX	1
2	C	13360	DRAWBAR	1
3	113-	424	BOLT - 1/2" x 1" NC hex	2
4	192-	23	LOCKWASHER - 1/2"	2

D10 WHEEL WEIGHTS

1	NSS		WEIGHT - wheel (Order as machinery item)	4
2	111-	530	BOLT - 1/2" x 2-1/2" NC round head, square neck ZP	4
3	111-	531	BOLT - 1/2" x 2-3/4" NC round head, square neck ZP	4
4	92-	8	LOCKWASHER - 1/2"	8
5	129-	105	NUT - 1/2" NC hex	8

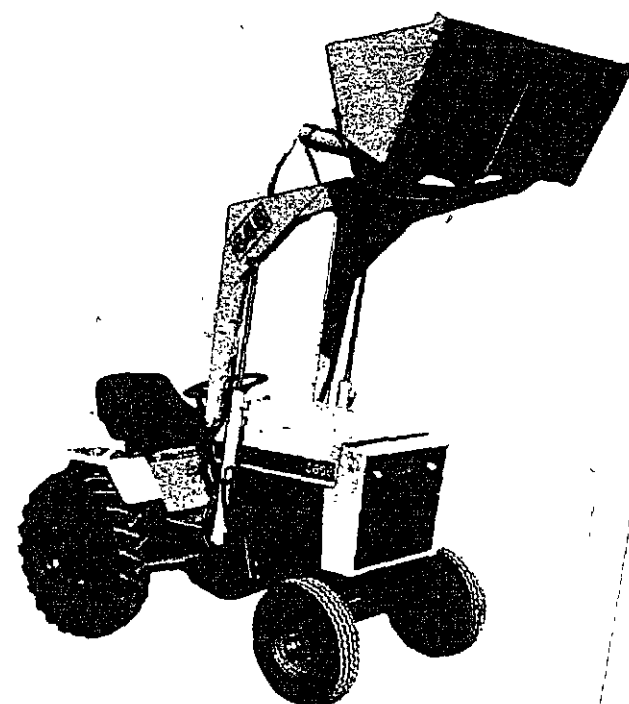


MODEL 644 S/N 9662906 THRU S/N 9698283
MODEL 646 S/N 9663323 THRU S/N 9698982
COMPACT WHEEL LOADERS

Parts Catalog No. A1281

Whitehall 2500 6-76 PRINTED IN U.S.A.

Note: This Parts Catalog replaces the previous issue - 1281 - which is obsolete and should be discarded.



ALPHABETICAL INDEX

KOHLER ENGINE SECTION

	PAGE	GRID		PAGE	GRID
Air Cleaner	39	C12	Filter, Breather	27	B14
Battery	89	G6	Flywheel	31	C4
Belt, Starter-Generator	35	C8	Fuel Pump	41-43	C14-D2
Breather, Crankcase	27	B14	Fuel Strainer	43	D2
Camshaft	27	B14	Fuel System	43	D2
Carburetor	41-43	C14-D2	Gasket Kits	33	C6
Connecting Rod	29	C2	Governor	37	C10
Crankshaft	29	C2	Muffler	25	B12
Cylinder Block	31	C4	Oil Pan	31	C4
Cylinder Head	31	C4	Piston	29	C2
Electrical System	89-91	G6-G8	PTO Clutch	43-45	D2-D4
Engine Block & Attaching Parts	31	C4	Spark Plug	89	G6
Exchanger, Heat	59	E4	Starter-Generator	85-87	G2-G4
Exhaust System	25	B12	Tank Fuel	43	D2
Fan	25	B12	Throttle Linkage	37	C10
			Valves	27	B14

ONAN ENGINE SECTION

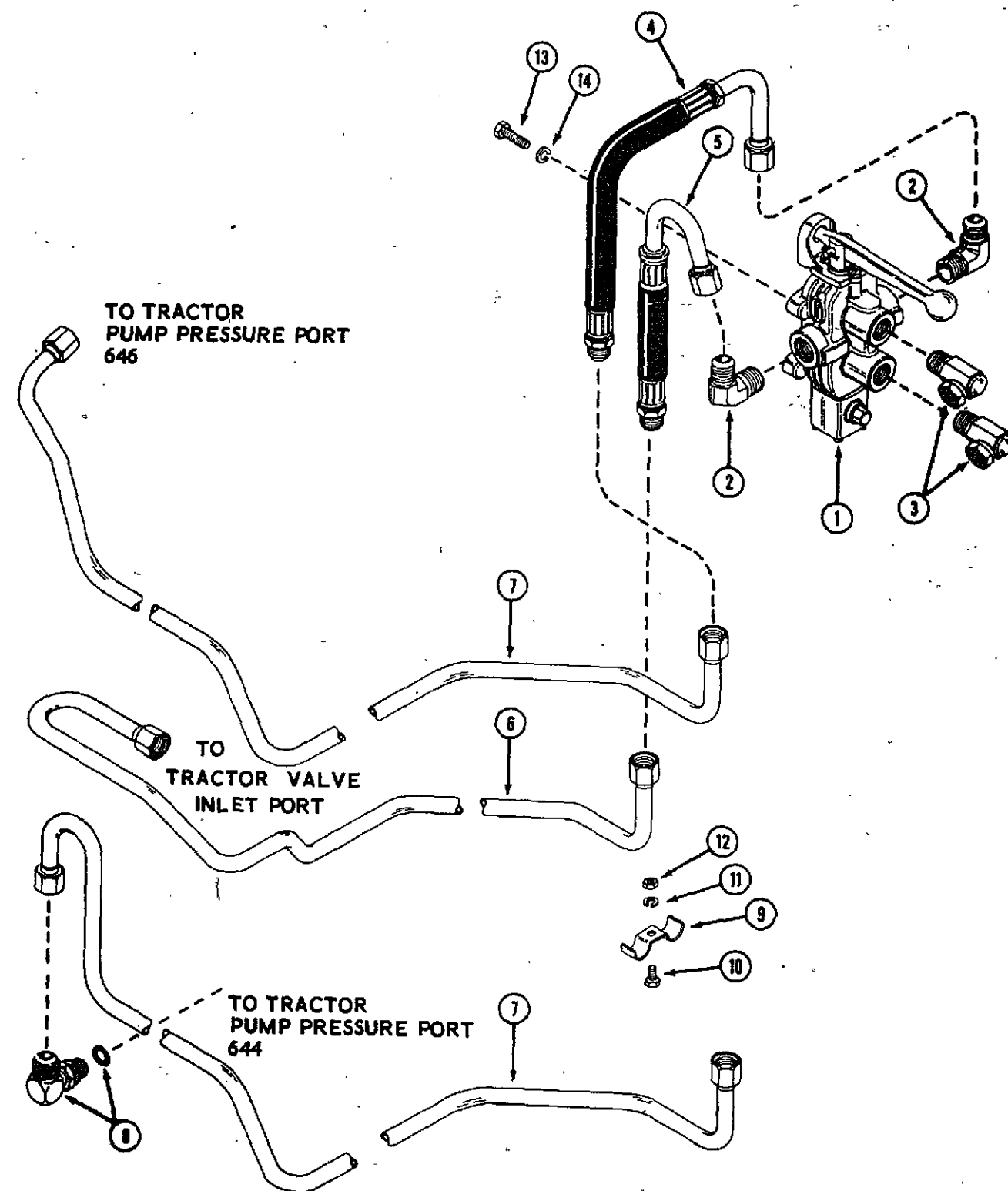
	PAGE	GRID		PAGE	GRID
Air Cleaner	5	A6	Flywheel	11	A12
Blower Housing	19	B6	Fuel Pump	9	A10
Camshaft	11	A12	Governor	19	B6
Carburetor	5-7	A6-A8	Motor - Starter	23	B10
Crankshaft	11	A12	Oil Base	17	B4
Electrical - Engine	21	B8	Oil Pump	17	B4
Engine Block & Attaching Parts	13-15	A14-B2	Pistons & Rods	11	A12
Exhaust System	25	B12	Points - Breaker Contact	21	B8
Filter, Oil	17	B4	Valves	13-15	A14-B2

BASIC TRACTOR SECTION

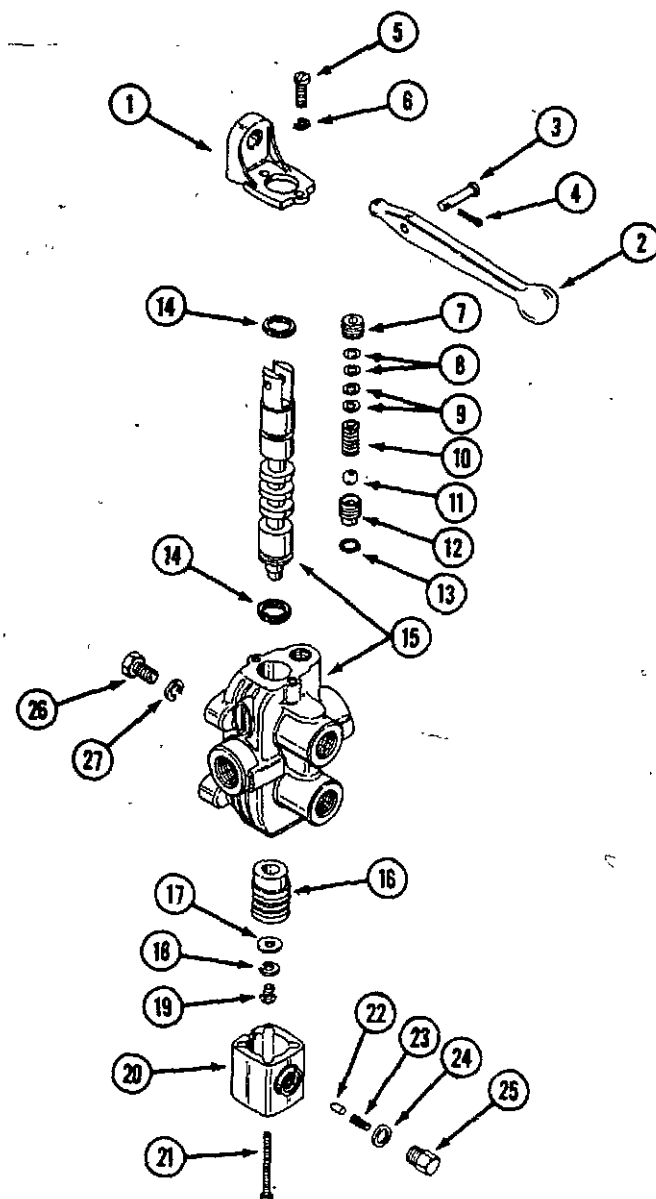
	PAGE	GRID		PAGE	GRID
Axle - Front	51	D10	Hydraulics - Bucket	63	E8
Axle - Rear	57	E2	Cylinder - Arms	63-81	E8-F12
Baffles & Shrouds	35	C8	Cylinder - Bucket	63-81	E8-F12
Brakes	53	D12	Hoses, Lines & Fittings	63	E8
Bucket & Arms	55	D14	Valve - Bucket Control	63-73	E8-F4
Control-Speed, Hydraulic	65	E10	Valve Control Linkage, Bucket	67	E12
Decals	95	G12	Hydraulic Connections & Components for LT-26		
Electrical System	89-91-93	G6-G8-G10	Three Point Hitch	105	A10*
Fenders	49	D8	Hydraulic PTO Kit LT-16 & LT-17	99	A4*
Frame	47	D6	Hydraulic PTO Valve LT-16 & LT-17	101	A6*
Frame, Lift Rods and Arms for LT-26 Three Point Hitch	103	A8*	Implement Lift, Hydraulic	83	F14
F-27 Hitch Adapter	105	A10*	Instruments, Electrical	89	G6
Grille	47	D6	Lever - Range Selector	49	D8
Hitch	97	G14	Model D10 Wheel Weights	97	G14
Hood	47	D6	PTO Clutch	45	D4
Hydraulics - Tractor	59-61	E4-E6	Seat, Operator's	49	D8
Coupling, Pump Drive	75-77	F6-F8	Steering Wheel & Gear	51	D10
Hoses, Lines & Fittings	59-61	E4-E6	Tail Lamp	89	G6
Motor, Hydraulic Drive	79	F10	Tool Box	45	D4
Pump	75-77	F6-F8	Transmission	57	E2
Valve, Control, Tractor	69-71	E14-F2	Weight Box	97	G14
Valve Control Linkage	65	E10	Wheels, Front & Rear	53	D12

* contained on microfiche 35

MODEL LT-16 AND LT-17 HYDRAULIC PTO KIT

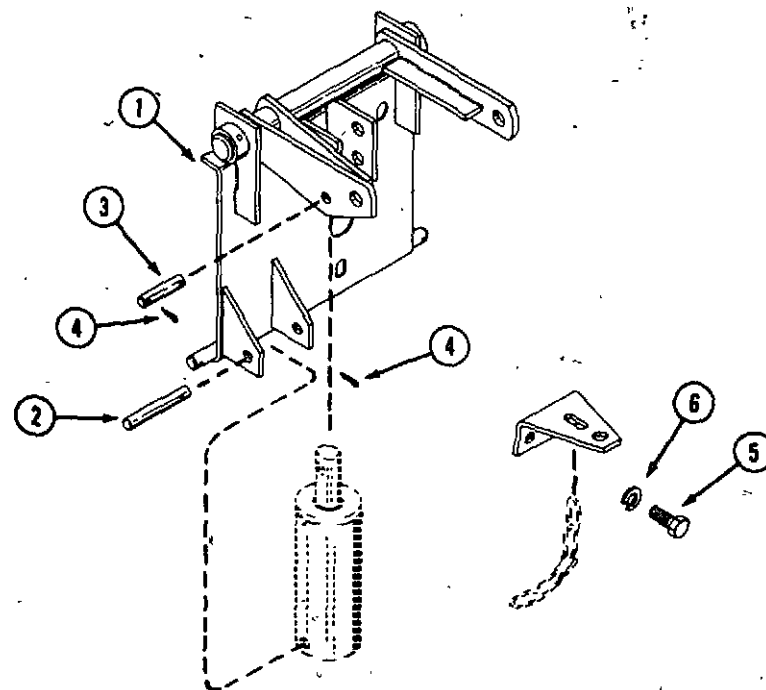
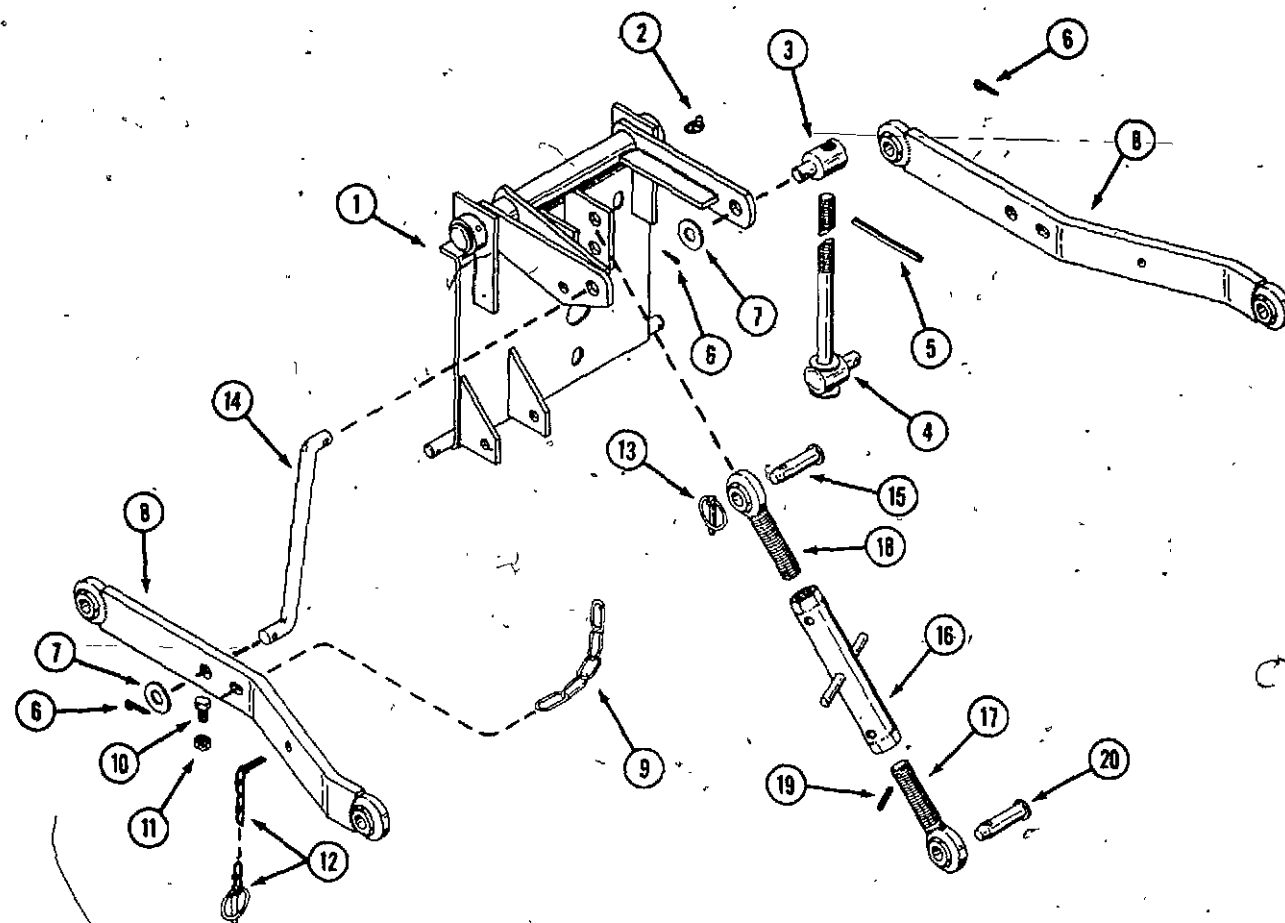
ILLUSTRATED AS VIEWED FROM
LEFT REAR OF TRACTOR

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 18314	VALVE - hydraulic, PTO (repairs page 101)	1
2	218- 494	FITTING - elbow, 90°	2
3	218- 927	FITTING - swivel, 90°	2
4	C 18287	HOSE, - valve inlet	1
5	C 18288	HOSE - valve outlet	1
6	C 18285	TUBE - PTO valve to tractor valve	1
7	C 18286	TUBE - pump to PTO valve (646)	1
7	C 18317	TUBE - pump to PTO valve (644)	1
8	218- 5117	FITTING - pump 90° (includes 218-5007 "O" - ring) 644	1
9	C 15389	CLAMP - tube support	1
10	113- 3	BOLT - 1/4" x 3/4" NC hex.	1
11	192- 19	LOCKWASHER 1/4"	1
12	129- 101	NUT - 1/4" NC hex	1
13	113- 206	BOLT - 3/8" x 3/4" NC hex.	4
14	192- 21	LOCKWASHER - 3/8"	4



LT-16 AND LT-17 HYDRAULIC PTO VALVE

REF.	PART NO.	DESCRIPTION	REQ'D
	C 18314	VALVE - hydraulic PTO	1
1	C 11888	BRACKET - handle	1
2	C 11889	HANDLE - valve	1
3	36627	PIN - clevis	1
4	132- 5	PIN - cotter 1/16 x 1/2"	1
5	75- 410	SCREW	2
6	92- 4	LOCKWASHER - 1/4"	2
7	221- 842	PLUG - relief 3/8" NPT	1
8	D 39712	WASHER - relief .010"	UAR
9	A 55894	WASHER - relief .020"	UAR
10	T 40189	SPRING - relief	1
11	211- 11	BALL - relief 3/8"	1
12	C 18417	SEAT - relief	1
13	A 27891	SEAL - "O" - ring, relief seat	1
14	C 11891	SEAL - "U" cup	2
15	NSS	BODY AND SPOOL ASSEMBLY (order C18314 valve)	1
16	C 11895	ADAPTER - spool	1
17	95- 4	WASHER - detent 1/4"	1
18	36628	LOCKWASHER - 1/4"	1
19	75- 48	SCREW - 1/4" x 1/2" rd. hd. machine	1
20	C 11893	BONNET - detent	1
21	169- 108	SCREW - bonnet #8" x 2-1/2" fillister hd.	4
22	C 11901	PIN - detent	1
23	C 11892	SPRING - detent	1
24	C 11886	WASHER - detent cap	1
25	C 11887	CAP - detent	1
26	113- 206	BOLT - 3/8" x 3/4" NC hex	4
27	192- 21	LOCKWASHER - 3/8"	4

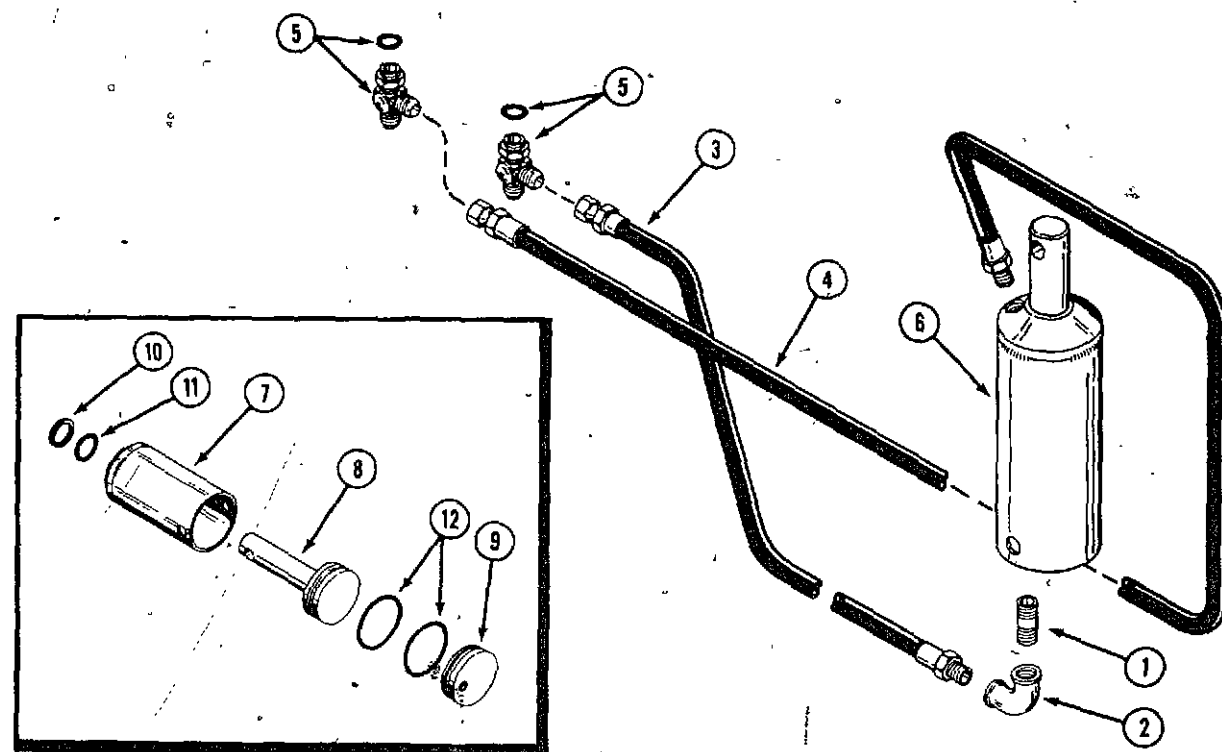


LT 26 THREE POINT HITCH 644 AND 646 FRAME, LIFT RODS AND ARMS

REF.	PART NO.	DESCRIPTION	REQ'D
1	C 20117	HITCH PLATE ASSEMBLY.....	1
2	219- 405	FITTING - lube.....	2
3	C 14722	NUT - lift rod.....	1
4	C 14724	ROD ASSEMBLY - R.H. lift.....	1
5	138- 309	PIN - roll 1/4 x 4".....	1
6	132- 91	PIN - cotter 3/16 x 1".....	6
7	195- 541	WASHER - plain 5/8".....	4
8	C 14715	ARM - lift.....	2
9	C 14991	CHAIN - stay 19 links.....	1
10	113- 118	BOLT - 5/16" x 5/8" NC hex, zinc plated.....	2
11	131- 176	NUT - lock 5/16" NC hex.....	2
12	B 52118	PIN - klik.....	2
13	A 30338	PIN - klik.....	3
14	C 14725	ROD - lift L.H.....	1
15	C 14717	PIN - clevis.....	1
	C 14712	LINK ASSEMBLY.....	1
16	C 14703	CENTER TUBE ASSEMBLY.....	1
17	C 14709	BALL END ASSEMBLY R.H. THREAD.....	1
18	C 14710	BALL END ASSEMBLY L.H. THREAD.....	1
19	138 59	PIN - roll 1/8" x 7/8".....	2
20	C 16128	PIN - clevis 5/8" x 3".....	1

CYLINDER AND DRAWBAR MOUNTING

1	C 20117	HITCH PLATE ASSEMBLY.....	1
2	C 19481	PIN - lower cylinder mounting.....	1
3	C 14976	PIN - upper cylinder mounting.....	1
4	132- 310	PIN - cotter 1/8" x 1".....	3
5	113- 417	BOLT - 1/2" x 1-1/4" NC hex, zinc plated.....	4
6	192- 23	LOCKWASHER - 1/2".....	4

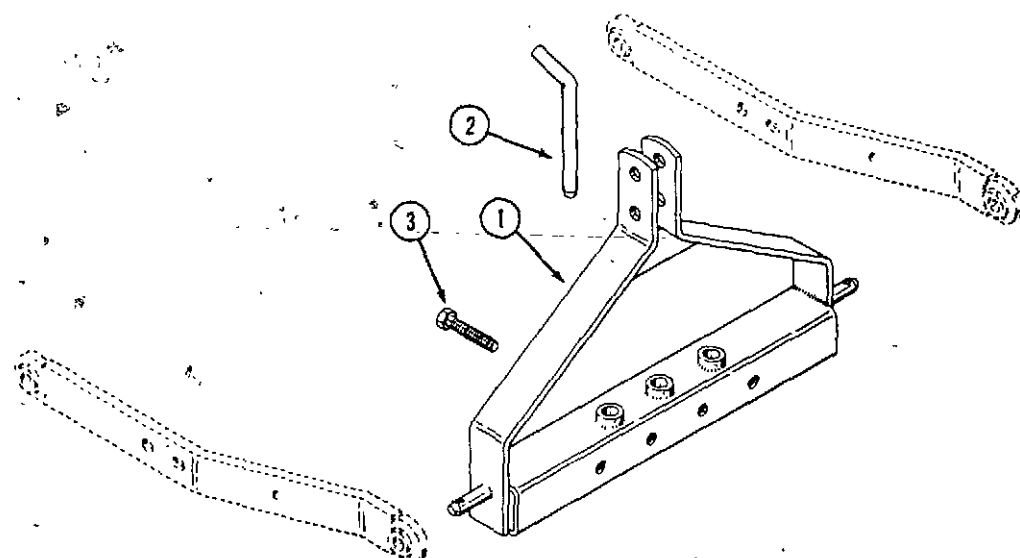


**MODEL LT26 THREE POINT HITCH AND MODEL
F27 HITCH ADAPTER
HYDRAULIC CONNECTIONS AND COMPONENTS**

REF.	PART NO.	DESCRIPTION	REQ'D
1	221- 1139	NIPPLE - 1/4" x 3"	1
2	221- 1375	ELBOW - 90°	1
3	C 17188	HOSE - hydraulic short	1
4	C 17189	HOSE - hydraulic long	1
5	218- 5291	FITTING - tee (Includes 218-5004 "O" ring)	2
6	C 19480	CYLINDER ASSEMBLY	1
7	C 19476	BODY - cylinder	1
8	C 19469	ROD AND PISTON ASSEMBLY	1
9	C 14692	FOOT - cylinder	1
10	NSS	SEAL - wiper	1
11	NSS	"O" RING	1
12	NSS	"O" RING	2
	C 17268	KIT - seal (Consists of items 10, 11 and 12)	1

MODEL F27 HITCH ADAPTER

1	C 14872	BRACKET - hitch adapter	1
2	C 14568	PIN - drawbar	1
3	113- 425	BOLT - 1/2" x 3" NC hex, zinc plated	4



NUMERICAL INDEX

NUMERICAL INDEX

PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.						
C	18145	55	15	C	18284	61	9	C	18853	71	25	C	19476	105	7	C	20383	11	17	C	20535	21	34
C	18154	83	19	C	18285	99	6	C	18854	71	28	C	19479	83	26	C	20384	11	17	C	20536	13	23
C	18155	83	20	C	18286	99	7	C	18907	45	2	C	19480	105	6	C	20386	11	17	C	20540	13	25
C	18156	63	12	C	18287	99	4	C	18908	45	15	C	19481	103	2	C	20394	11	17	C	20541	13	26
C	18157	63	22	C	18288	99	5	C	18940	45	17	C	19521	89		C	20400	11	17	C	20544	17	3
C	18158	63	24	C	18291	45	24	C	18989	35	1	C	19521	93		C	20402	11	16	C	20545	17	4
C	18159	59	11	C	18295	63	16	C	18999	91	30	C	19900	65	6	C	20403	11	18	C	20546	17	5
C	18159	61	11	C	18299	53	3	C	19018	47	10	C	19902	65	15	C	20408	11	18	C	20547	17	6
C	18160	59	12	C	18300	53	12	C	19021	35	15	C	20117	103	1	C	20409	11	18	C	20548	21	33
C	18160	61	12	C	18301	53	9	C	19025	65	21	C	20122	61	6	C	20410	11	18	C	20549	17	8
C	18161	59	30	C	18304	63	13	C	19025	83	2	C	20122	75	1	C	20411	9	17	C	20551	17	1
C	18161	61	32	C	18305	53	17	C	19037	79		C	20200	77	2	C	20428	9	7	C	20552	17	11
C	18162	59	14	C	18306	53	19	C	19038	79		C	20201	77	3	C	20433	9	10	C	20553	17	24
C	18162	61	14	C	18311	37	1	C	19039	79		C	20219	11	23	C	20434	9	5	C	20554	17	25
C	18163	59	16	C	18312	37	3	C	19040	79		C	20223	11	1	C	20437	9	6	C	20555	17	19
C	18164	63	11	C	18314	99	1	C	19041	79		C	20228	11	6	C	20439	7	15	C	20556	17	18
C	18165	63	23	C	18314	101		C	19045	59	6	C	20229	11	7	C	20440	9	3	C	20557	17	20
C	18166	63	21	C	18317	99	7	C	19045	75	1	C	20233	11	10	C	20448	9	4	C	20562	17	23
C	18167	59	9	C	18321	59	10	C	19055	89	24	C	20247	15	36	C	20480	11	18	C	20563	17	23
C	18168	63	19	C	18321	61	10	C	19055	93	16	C	20248	13	27	C	20481	11	15	C	20564	5	19
C	18169	63	17	C	18382	79		C	19104	83	27	C	20252	13	2	C	20482	11	19	C	20564	17	26
C	18170	63	7	C	18385	35	5	C	19113	75	3	C	20262	13	4	C	20483	11	21	C	20565	17	40
C	18171	63	8	C	18389	89	10	C	19114	75	9	C	20263	13	31	C	20484	21	25	C	20566	17	37
C	18172	63	29	C	18389	93	14	C	19115	75	16	C	20264	13	31	C	20487	11	24	C	20568	17	39
C	18173	63	30	C	18391	65	12	C	19169	5	12	C	20265	15	31	C	20489	13	1	C	20569	19	2
C	18174	63	20	C	18396	67	2	C	19170	5	8	C	20266	15	31	C	20490	13	19	C	20570	17	29
C	18175	63	5	C	18401	93	6	C	19170	5	8	C	20267	13	5	C	20491	13	20	C	20572	19	4
C	18176	63	18	C	18417	101	12	C	19193	53	10	C	20271	13	9	C	20492	13	21	C	20573	19	5
C	18177	61	16	C	18486	81	6	C	19196	45	22	C	20272	13	10	C	20493	13	22	C	20574	17	36
C	18179	63	32	C	18487	81	8	C	19197	43	1	C	20276	15	40	C	20494	15	32	C	20577	17	38
C	18179	73	1	C	18572	81	12	C	19197	45		C	20277	15	40	C	20495	15	33	C	20579	17	13
C	18190	39	4	C	18573	81	1	C	19204	45	12	C	20293	15	38	C	20497	13	3	C	20580	19	28
C	18190	43	20	C	18574	81	17	C	19207	75	15	C	20294	15	39	C	20498	15	34	C	20582	19	29
C	18193	47	20	C	18575	81	4	C	19212	79		C	20308	11	4	C	20499	13	28	C	20584	19	30
C	18197	89	12	C	18576	81	15	C	19220	65	19	C	20309	17	7	C	20500	13	29	C	20585	21	14
C	18197	93	11	C	18586	47	27	C	19246	91	33	C	20310	17	2	C	20501	13	29	C	20586	23	6
C	18201	47	14	C	18627	5		C	19254	91	38	C	20312	17	10	C	20502	13	30	C	20587	23	2
C	18203	93	15	C	18628	5	5	C	19258	65	28	C	20314	17	12	C	20503	13	30	C	20588	21	35
C	18214	25	3	C	18629	5	3	C	19258	91	34	C	20317	11	5	C	20504	13	24	C	20589	23	1
C	18215	25	2	C	18733	47	35	C	19276	43	1	C	20318	21	23	C	20505	21	28	C	20590	21	7
C	18216	25	7	C	18761	75	9	C	19276	45		C	20320	17	34	C	20506	21	29	C	20591	21	1
C	18217	49	8	C	18761	77	9	C	19277	75	2	C	20321	21	24	C	20507	21	16	C	20592	21	2
C	18235	61	5	C	18762	75	10	C	19278	75	3	C	20322	17	35	C	20509	21	30	C	20593	21	3
C	18235	75	16	C	18762	77	10	C	19279	75	8	C	20323	17	30	C	20511	13	6	C	20594	21	5
C	18235	77	15	C	18762	77	10	C	19279	77	8	C	20325	17	31	C	20512	13	7				

NUMERICAL INDEX

NUMERICAL INDEX

PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.
C	20631	5	18	C	21510	69	28	KO	235047	27	9	KO	275143	27	4	HARDWARE CODE NUMBERS	
C	20632	5	22	C	21511	69	38	KO	235048	27	6	KO	275144	27	11		
C	20634	5	14	C	21512	65	1	KO	235048	33	11	KO	275144	33	12	113-	113
C	20645	9	11	C	21521	69	39	KO	235053	27	28	KO	275182	91	12	113-	118
C	20647	9	15	C	21522	69	34	KO	235054	35	14	KO	275220	27	3	113-	118
C	20650	9	19	C	21565	45	18	KO	235057	33	14	KO	275231	41	5	113-	122
C	20651	9	20	C	21569	13	18	KO	235070	31	29	KO	275341	33	10	113-	206
C	20653	9	1	C	21595	89	22	KO	235070	33	5	KO	275341	39	6	113-	206
C	20655	15		C	21595	93	12	KO	235084	37	19	KO	275341	43	11	113-	206
C	20658	5	23	C	21596	45	11	KO	235085	37	18	KO	275690	37	15	113-	207
C	20660	5	15	C	21814	31	12	KO	235086	37	17	KOA	220474	91	10	113-	207
C	20663	23	7	C	21815	31	31	KO	235117	27	8	KOA	231533	91	1	113-	207
C	20664	23	12	C	21816	41		KO	235118	27	7	KOA	235100	39	1	113-	207
C	20665	23	17	C	21816	43	1	KO	235125-S	37	29	KOA	235256-S	37	26	113-	207
C	20666	23	18	C	22005	41	3	KO	235168	27	19	KOA	235743-S	37	28	113-	207
C	20667	23	19	C	22571	89	11	KO	235207	35	6	KOA	236205	43	8	113-	207
C	20668	23	20	C	22571	91		KO	235277	37	23	KOA	236507	29	30	113-	207
C	20669	23	30	C	22571	93	10	KO	235278	37	24	KOA	236919	37	34	113-	209
C	20670	23	16	C	22573	91	10	KO	235353	31	20	KOA	237033	31	8	113-	209
C	20671	23	15	C	22260	11	2	KO	235353	33	4	KOA	237344	29	10	113-	209
C	20672	23	14	C	23514	65	3	KO	235447	41	10	KOA	237401	29	6	113-	221
C	20673	23	13	C	23740	45	6	KO	235448	41	9	KOA	237403	29	15	113-	233
C	20674	23	21	D	29266	53	7	KO	235476	37	25	KOA	237404	29	15	113-	257
C	20675	23	27	D	29267	53	11	KO	235496	37	12	KOA	237405	29	15	113-	274
C	20676	23	25	D	31945	57	4	KO	235582	27	15	KOB	237034	29	22	113-	410
C	20677	23	26	D	39712	101	8	KO	235603	37	33	KOB	237182	31	7	113-	412
C	20678	23	8	D	40816	73	6	KO	235631	27	10	KOD	235327	27	22	113-	412
C	20679	23	24	D	54909	81	5	KO	235652	35	5	KOE	235646	27	25	113-	417
C	20680	23	23	D	54915	81	14	KO	235748	31	42	L	30654	79		113-	417
C	20682	23	28	D	54917	81	15	KO	235757	31	29	L	30654	79	1	113-	424
C	20683	23	9	D	59376	69	7	KO	235757	33	5	M	20007	89	16	113-	424
C	20684	23	31	D	59949	39	12	KO	235803	29	8	O	2815-N	45	16	113-	424
C	20685	23	22	F	19892	41		KO	235811	29	7	O	5904-AB	51	38	113-	425
C	20686	23	10	F	19892	41	7	KO	235818	31	35	O	5999-AB	21	21	113-	200
C	20687	23	11	F	59014	45	14	KO	235838	27	14	R	13338	11	22	114-	200
C	20689	7		KO	200372	41	15	KO	235868	29	17	R	15077	85	19	121-	3
C	20691	7	3	KO	200375	41	13	KO	235900	37	32	R	15077	87	19	121-	106
C	20693	7	5	KO	200380	41	1	KO	235901	35	11	R	15087	87	3	126-	9
C	20694	7	6	KO	200380	41	6	KO	236387	41	1	R	15090	85	8	126-	12
C	20699	7	22	KO	290383	41	4	KO	236504	29	28	R	15090	87	8	126-	16
C	20700	7	12	KO	200408	41	8	KO	236506	29	31	R	15106	85	1	126-	16
C	20701	7	13	KO	200439	41	14	KO	236509	29	29	R	15106	87	1	126-	32
C	20704	7	16	KO	200443	41	12	KO	236510	29	32	R	16147	85	12	126-	111
C	20705	7	19	KO	220174	33	7	KO	236559	29	33	R	16147	87	12	126-	111
C	20707	7	21	KO	220174	91	6	KO	236611	29	13	R	16148	85	16	126-	112
C	20708	7	10	KO	220297	91	2	KO	236763	29	2	R	16148	87	16	126-	128
C	20709	7	25	KO	230020	27	20	KO	236764	29	16	R	16161	85	9	129-	17
C	20711	7	27	KO	230170	27	16	KO	236765	29	16	R	16161	87	9	129-	18
C	20712	7	11	KO	230170	31	9	KO	236766	29	16	R	16287	29	19	129-	18
C	20713	7	28	KO	230265	27	29	KO	236886	31	1	R	16287	31	27	129-	27
C	20715	7	30	KO	230265	31	11	KO	237064	31	6	R	16287	33	2	129-	27
C	20716	7	31	KO	230722	89	19	KO	237277	31	49	R	17820	57	33	129-	27
C	20718	7	33	KO	231032	27	5	KO	237421	39	9	T	24080	81	1	129-	27
C	20735	9	14	KO	231032	33	16	KO	237421	39	9	T	24081	81	2	129-	37
C	20738	9	8	KO	231052	37	16	KO	237653	37	8	T	24084	81	11	129-	37
C	20739	9	9	KO	231281	89	13	KO	237658	31	5	T	27067	61	7	129-	77
C	20740	9	2	KO	231355	37	31	KO	237658	33	15	T	27809	53	8	129-	77
C	20754	15		KO	231555	41	11	KO	237670	31	4	T	40189	101	10	129-	101
C	20755	15		KO	232535	89	14	KO	237677	35	4	T	41499	81	16	129-	101
C	21497	59	27	KO	232535	91	5	KO	237727	33	1	T	42253	81	8	129-	102
C	21497	61	27	KO	235003	29	11	KO	237808	31	23	T	42254	81	10	129-	102
C	21497	69	1	KO	235007	31	10	KO	238057	89	18	V	34346	27	26	129-	102
C	21505	69	18	KO	235007-S	27	17	KO	240013	27	21	W	5063-S	29	21	129-	103
C	21506	69	33	KO	235011	27	18	KO	270158	31	2					129-	103
C	21507	69	29	KO	235025	31	16	KO	270889	31	3					129-	103
C	21508	69	31	KO	235025	33	3	KO	275066	27	27					129-	103
C	21509	69	32	KO	235026	31	17	KO	275067	27	27						

NUMERICAL INDEX

PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.
129-103	89	20	138-309	103	5	192-20	43	6
129-105	47	30	138-319	57	14	192-20	65	5
129-105	51	33	138-2005	55	9	192-20	83	4
129-105	53	22	141-4	53	13	192-20	85	3
129-105	89	15	164-40	45	4	192-20	91	12
129-105	97	5	164-50	45	4	192-21	31	15
129-122	65	22	166-86	59	23	192-21	31	24
129-122	83	3	166-86	61	23	192-21	31	32
129-122	91	20	169-61	7	17	192-21	31	48
129-127	51	19	169-74	19	20	192-21	45	21
129-143	31	46	169-95	37	35	192-21	47	4
129-327	51	21	169-97	7	1	192-21	47	19
129-409	39	2	169-108	101	21	192-21	47	25
129-504	39	7	169-114	69	14	192-21	47	29
129-504	43	22	169-114	71	14	192-21	59	4
129-504	67	10	169-114	73	13	192-21	61	4
129-513	13	11	169-131	91	24	192-21	89	19
129-518	25	9	171-247	59	24	192-21	91	29
129-521	71	23	171-247	61	24	192-21	99	14
129-531	69	15	171-247	69	35	192-21	101	27
129-531	71	15	171-247	71	31	192-23	47	29
129-531	73	12	173-73	89	7	192-23	49	5
129-665	7	26	173-210	91	3	192-23	51	7
129-665	19	1	173-215	39	6	192-23	53	21
129-900	5	1	173-215	43	21	192-23	57	41
131-159	47	36	173-215	67	9	192-23	89	16
131-165	47	30	173-221	31	21	192-23	97	4
131-165	65	14	173-224	91	8	192-23	103	6
131-173	63	3	173-237	87	27	192-25	51	20
131-176	65	18	174-222	5	7	192-26	87	35
131-176	103	11	175-436	35	10	192-45	25	6
131-178	43	14	177-94	39	7	192-116	85	35
131-178	49	21	177-97	17	14	193-4	89	8
131-178	53	4	177-133	23	29	193-5	91	9
131-178	83	13	178-858	75	17	193-26	31	22
131-178	83	24	178-860	51	30	193-56	45	5
131-309	29	26	182-523	91	36	193-60	43	10
131-309	31	37	182-525	35	2	193-70	91	19
131-351	59	25	187-130	91	32	193-76	45	5
131-351	61	25	187-408	91	7	193-524	69	26
131-351	69	36	187-484	35	6	193-524	71	26
131-351	71	32	187-485	91	4	193-524	73	26
131-356	51	24	187-1036	47	22	195-14	19	18
131-366	57	35	187-1036	63	14	195-102	65	20
131-629	91	5	187-1046	47	11	195-102	83	33
131-677	81	2	187-1047	91	6	195-104	47	5
131-1102	53	9	187-1080	47	16	195-510	73	25
131-1102	73	29	187-1251	67	13	195-512	39	8
132-5	101	4	187-1844	91	26	195-513	5	2
132-46	65	4	192-17	5	9	195-513	35	4
132-48	43	9	192-17	85	15	195-513	91	37
132-48	83	7	192-17	87	15	195-515	35	8
132-49	53	4	192-18	35	3	195-515	37	10
132-71	55	17	192-18	37	6	195-520	91	13
132-91	103	6	192-18	37	21	195-521	35	18
132-310	53	14	192-18	87	28	195-521	43	7
132-310	83	17	192-18	91	4	195-521	47	33
132-310	103	4	192-18	91	23	195-521	67	9
132-320	65	23	192-19	9	12	195-521	69	23
132-320	67	10	192-19	31	18	195-521	73	22
132-320	83	32	192-19	35	2	195-525	43	8
132-321	67	6	192-19	35	9	195-525	43	13
132-361	83	18	192-19	35	13	195-525	83	23
136-2	19	19	192-19	37	13	195-533	55	16
138-59	103	19	192-19	57	19	195-533	67	5
138-77	53	18	192-19	99	11	195-536	51	8
138-92	53	5	192-20	35	17	195-541	65	13

NUMERICAL INDEX

PART NO.	PAGE NO.	REF. NO.	PART NO.	PAGE NO.	REF. NO.
195-541	83	6	222-1014	9	16
195-541	103	7	223-20	89	5
195-545	31	36	223-31	93	7
195-545	55	13	321-1571	95	4
195-2021	49	10	321-1788	95	12
195-2028	75	13	321-2111	95	10
195-2029	49	18	321-2139	95	5
195-2115	51	39	321-2140	95	3
211-5	17	9	321-2141	95	2
211-7	69	11	321-2144	95	1
211-7	71	11	321-2147	95	9
211-7	73	19	321-2171	95	8
211-9	69	30	321-2338	95	11
211-9	71	30	321-2487	95	13
211-9	73	9	353-407	89	
211-11	101	11			
211-14	11	3			
213-4	53	12			
214-9	59	20			
214-9	61	20			
214-14	59	32			
214-14	61	33			
214-251	5	13			
214-251	9	18			
214-251	39	9			
214-251	43	4			
214-262	63	27			
214-1102	93				
218-443	63	26			
218-455	63	10			
218-494	99	2			
218-533	63	9			
218-596	59	15			
218-596	61	15			
218-927	99	3			
218-1254	63	25			
218-1255	63	31			
218-5007	69	20			
218-5007	71	20			
218-5056	83	21			
218-5065	59	13			
218-5065	61	13			
218-5066	59	8			
218-5066	63	4			
218-5107	61	8			
218-5117	99	8			
218-5243	63	15			
218-5291	105	5			
218-5351	63	6			
218-5353	59	29			
218-5353	61	31			
219-17	47	12			
219-17	51	13			
219-20	55	3			
219-405	103	2			
221-4	57	7			
221-13	17	21			
221-14	17	22			
221-841	69	22			
221-841	71	22			
221-841	75	15			
221-842	101	7			
221-843	73	7			
221-1139	105	1			
221-1375	105	2			
221-1412	31	45			

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