

Lull®

Illustrated Parts Manual

Model
522

10709907
October 1998

ANSI

JLG®

23450-1 **MODEL 522 FINAL ASSEMBLY - Perkins/Standard Axle**
23450-1A **MODEL 522/4 FINAL ASSEMBLY - Perkins/Power Assist Axle**

● **DRIVE TRAIN (Includes Axle and Transmission Breakdown)**

23452 Drive Train Assembly - Perkins
23453 Radiator & Transmission Oil Cooler Assembly
23454 Throttle Assembly
23455 Air Cleaner Assembly
23456 Exhaust Assembly
23457 Engine Cover Assembly

● **STEER AXLE**

23462 Rear Steer Axle Assembly - Standard
23463 Rear Steer Axle Assembly - Power Assist
Wheel Hub Breakdown
23464 Steer Cylinder Assembly

● **FRAME & PLATFORM**

23465 Main Frame Assembly
23466 Operators Compartment Assembly

● **TELESCOPIC BOOM**

23467 Telescopic Boom Assembly

● **UPPER HYDRAULICS**

23468 Boom Hydraulic Assembly
23469 Boom Extension Cylinder Assembly
23470 Front Carriage Tilt Cylinder Assembly

● **LOWER HYDRAULICS**

23471 Control Hydraulic Assembly
23472 Hoist Cylinder Assembly
23473 Frame Tilt Cylinder Assembly
23474 Joystick Handle & Cover Assembly
23475 Pump, Suction - Return Hydraulic Assembly - Standard
23476 Pump, Suction - Return Hydraulic Assembly - Power Assist
Hydraulic Pump Drive Assembly
23477 Hydraulic Steering, Brake & Diff. Lock Assembly

● **BRAKES**

23478 Service & Parking Brake Assembly

● **ELECTRICAL**

23479 Electrical Assembly - Perkins
23480 Wiring Diagram
23481 Electrical Assembly - Power Assist

● **DECALS & ACCESSORIES**

23484 Decal Group Assembly
Optional Equipment (Accessories)

● **FORK CARRIAGES(S)**

GENERAL INFORMATION

The parts book assembly numbers and date appear in the lower right hand corner of each page. Each page also lists the machine serial number to assist in identifying the machine to which the parts book page applies.

The quantity shown in the "Qty." column is the number of parts used on that assembly. Where parts are referenced, the part shown is included in another assembly or part of another item. For certain parts such as shims, spacers, etc. an "A/R" will be shown in the "Qty." column. This "A/R" indicates that the quantity to be used is as required.

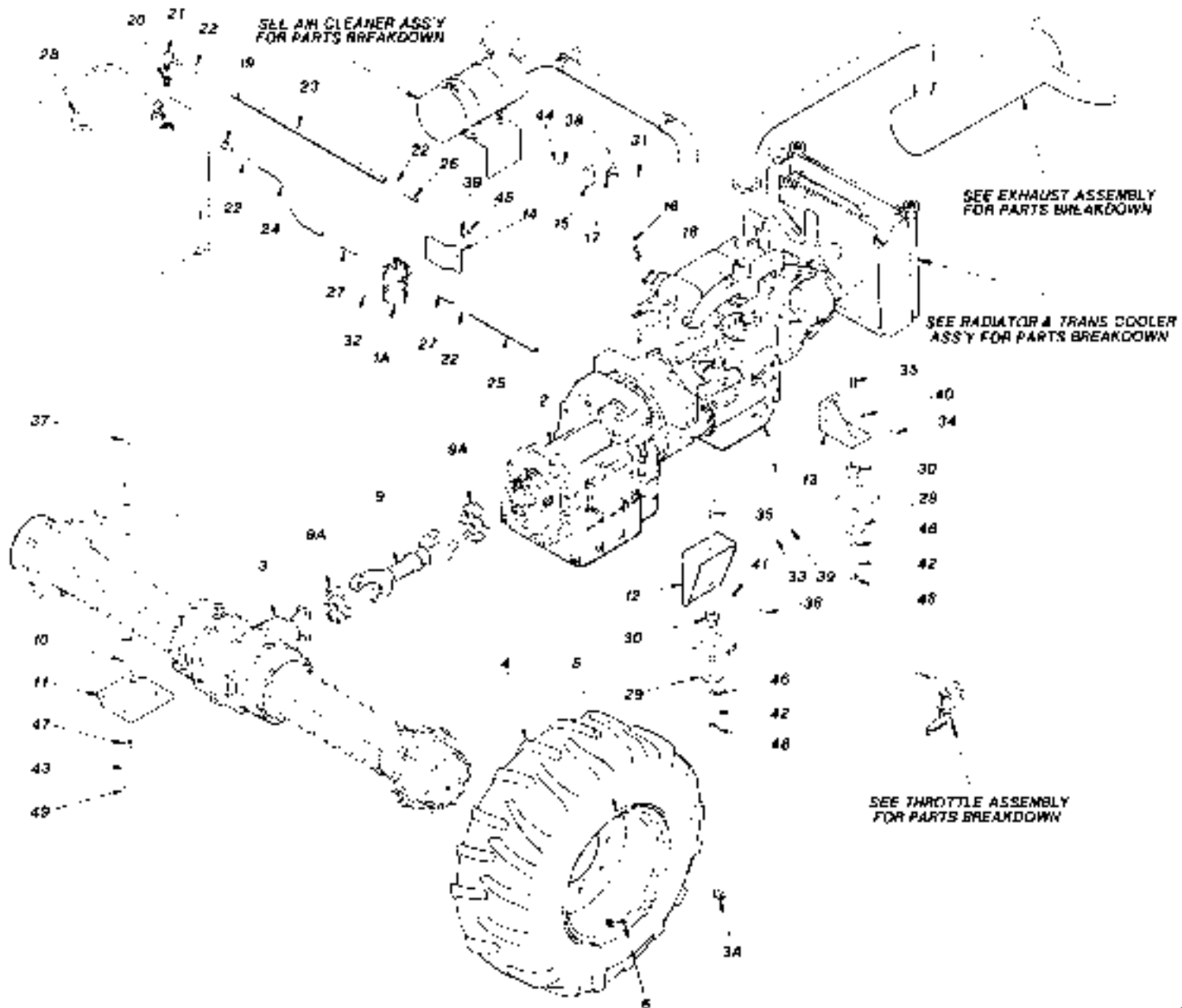
Always check illustration and parts listing page before ordering. Never order from illustration alone. When ordering parts, order by part number only and not by assembly number unless the complete assembly is desired.

The following abbreviations are used in this manual:

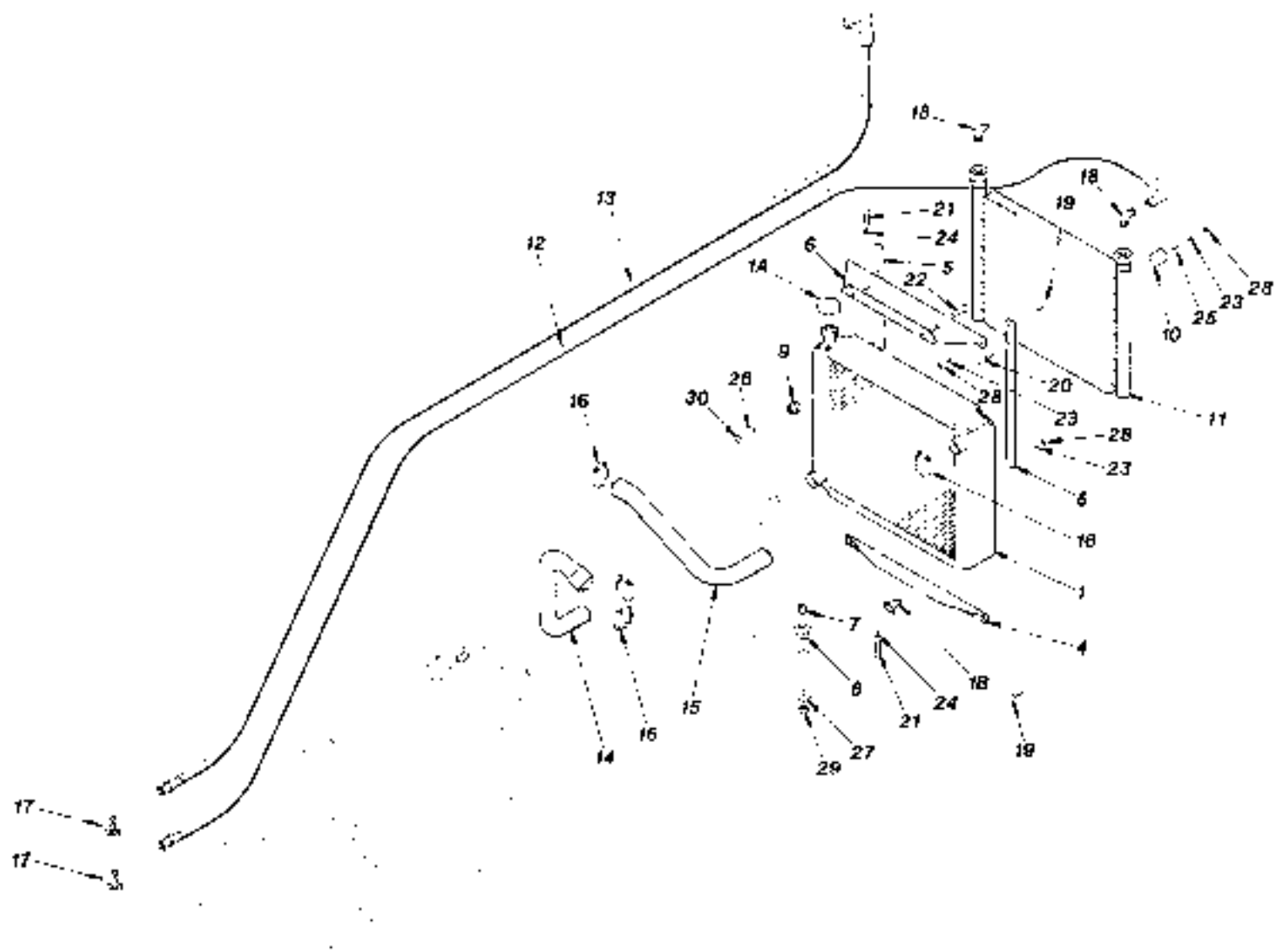
A/R	= As Required	N/A	= Not Applicable
Ass'y	= Assembly	N.L.A.	= No Longer Available
Cont.	= Continuous	Neg.	= Negative
Cyl.	= Cylinder	N.S.S.	= Not Sold Separately
Dia.	= Diameter	O.D.	= Outside Diameter
Diff.	= Differential	Osc.	= Oscillation
Ext.	= Extension	P/N	= Part Number
GA.	= Gauge	Pos.	= Positive
GR	= Grade	Pt.	= Point
Hd.	= Head	REF	= Reference
Hx.	= Hex	Req.	= Required
Hyd.	= Hydraulic	R.F.	= Right Front
I.D.	= Inside Diameter	R.H.	= Right Hand
Incl.	= Includes	R.R.	= Right Rear
Int.	= Internal	Rd.	= Round
LG.	= Long	Slot.	= Slotted
L.F.	= Left Front	Soc.	= Socket
L.H.	= Left Hand	S/N	= Serial Number
L.R.	= Left Rear	Trans	= Transmission

NOTE: Because of owner requirements, equipment variations may exist. It is therefore the owner's responsibility to contact his Lull dealer for specific information that is not covered in this parts book.

WARNING: Do not service or operate the Lull fork-lift without taking the necessary safety precautions. See Operator Safety and Operating Procedures in the Owner/Operator's Manual for this model.



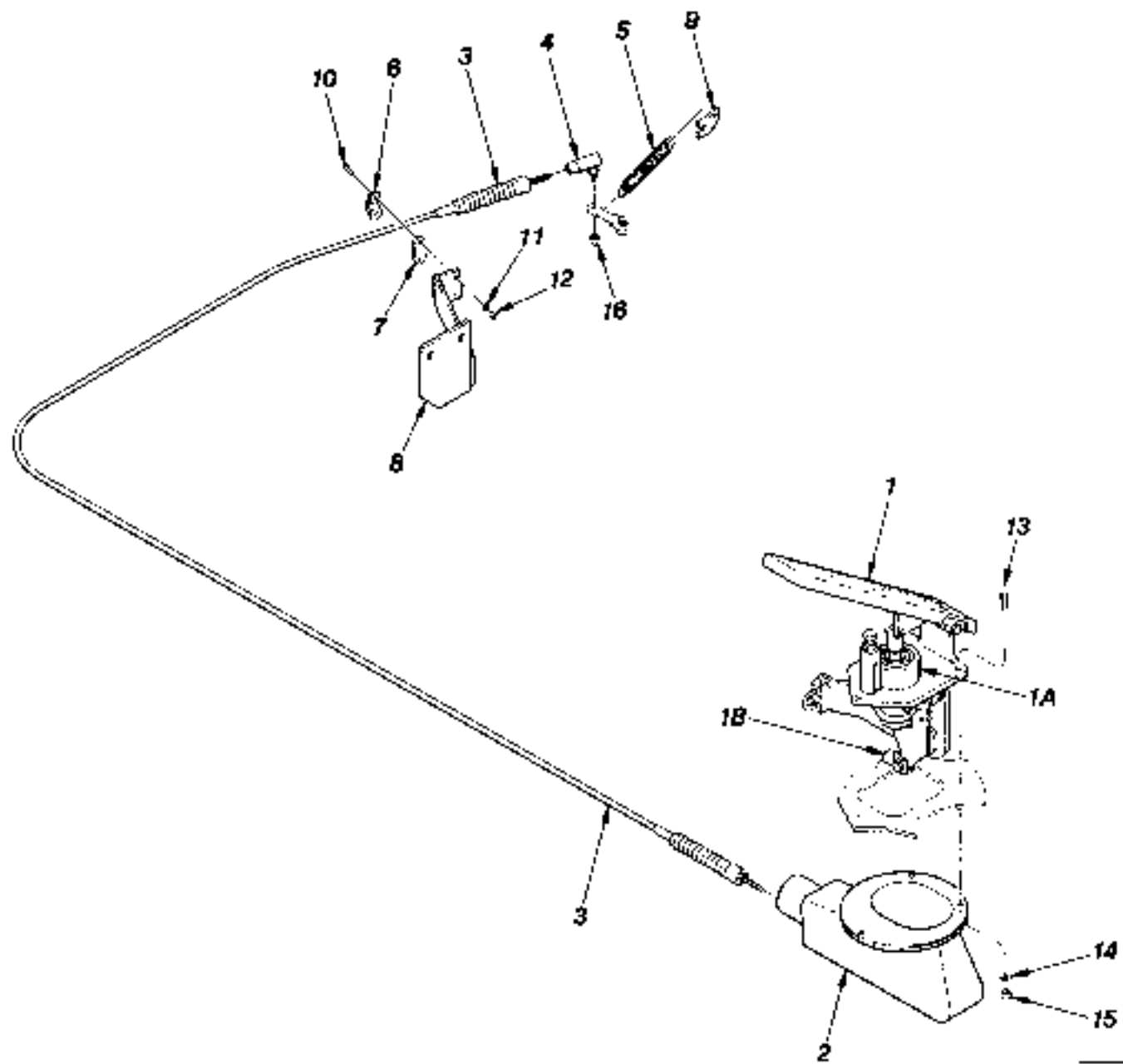
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P25267	1	Engine, Perkins 4.236	39	P01310	14	Lockwasher, 3/8"
1A	P22203	REF	Pre Filter, Water Trap	40	P01311	8	Lockwasher, 7/16"
1B	P28491	REF	Starter, Heavy Duty - 37 MT	41	P01314	8	Lockwasher, 3/4"
2	P26320	1	Transmission	42	P01363	4	Starwasher, 5/8" - External
3	P26150	1	Axle, Drive	43	P01364	8	Starwasher, 3/4" - External
3A	P27000	REF	Lug Nut	44	P01507	1	Nut, Hx., 5/16"-18
4	P21660	2	Tire, 16.9 x 24 10 Ply	45	P01508	2	Nut, Hx., 3/8"-16
5	23373C	2	Wheel, Rim	46	P01535	4	Nut, Hx., 5/8"-18
6	P25387	2	Valve Stem	47	P01536	8	Nut, Hx., 3/4"-16
9	P21679	1	Drive Shaft	48	P01585	4	Jam Nut, Hx., 5/8"-18
9A	P18748	REF	Cross & Bearing (Includes Hardware)	49	P01586	8	Jam Nut, Hx., 3/4"-16
10	N11656	4	Spacer, Axle Pad				
11	23348B	2	Axle Pad				
12	23416B	2	Transmission Mount				
13	23420B	2	Engine Mount				
14	23524A	1	Mounting Bracket, Water Trap	REF	P20995	-	Engine Oil Filter
15	24346A	1	Support Bracket, Dipstick				
16	P26756	1	Dipstick w/Tube	REF	P21001	-	Fuel Filter
17	P17554	1	Clamp, Dipstick				
18	P18936	1	Connector, O-Ring	REF	P19868	-	Transmission Filter
19	P13819	1	Adapter, Pipe to Hose				
20	P10690	1	Reducer Bushing				
21	P21317	1	90° Elbow, Pipe to Hose				
22	P14047	6	Hose Clamp				
23	A)N11832	1	Hose, Return Line 1/4" x 27' LG.				
24	N11574	1	Hose, Fuel Line 5/16" x 24' LG.				
25	N11576	1	Hose, Fuel Line 5/16" x 14' LG.				
26	N11416	1	Tube, 1/4" O.D.				
27	N11430	3	Tube, 5/16" O.D.				
28	P12182	REF	Fuel Cap				
29	P20395	4	Snubbing Washer				
30	P18180	4	Rubber Mount				
31	P00100	1	Bolt, Hx., 5/16"-18 x 1/2"				
32	P00205	2	Bolt, Hx., 3/8"-16 x 1 1/4"				
33	P00206	12	Bolt, Hx., 3/8"-16 x 1 1/2"				
34	P00381	8	Bolt, Hx., 7/16"-20 x 1 1/2"				
35	P00689	4	Bolt, Hx., 5/8"-18 x 3 1/2" GR 8				
36	P00725	8	Bolt, Hx., 3/4"-10 x 1 1/2" GR 8				
37	P00784	8	Bolt, Hx., 3/4"-16 x 8 1/2" GR 8				
38	P01309	1	Lockwasher, 5/16"				
				NOTES: A) Hoses 15' Long, use N11573.			
							23452
522 S/N 101 THRU							4/89
DRIVE TRAIN ASSEMBLY (Perkins)							



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P25512	1	Radiator				
1A	P17140	REF	Cap, Radiator				
1B	P16675	REF	Drain Cock				
4	22374A	1	Bracket, Lower				
5	23563A	2	Bar, Cooler Mount				
6	22376B	1	Bracket, Upper				
7	P24305	2	Bushing				
8	P24306	2	Grommet, Rubber				
9	P18723	2	Grommet				
10	P26312	4	Rubber Block				
11	P17598	1	Transmission Cooler				
12	P21353	1	Hose, Transmission Cooler, 75' Lg.				
13	P21923	1	Hose, Transmission Cooler, 63' Lg.				
14	P26074	1	Hose, Lower Radiator				
15	P26318	1	Hose, Upper Radiator				
16	P10801	4	Hose Clamp				
17	P17802	2	90° Elbow, O-Ring				
18	P17808	2	90° Elbow, JIC - Pipe				
19	P00102	4	Bolt, Hx., 5/16"-18 x 3/4"				
20	P00111	4	Bolt, Hx., 5/16"-18 x 2 3/4"				
21	P00202	4	Bolt, Hx., 3/8"-16 x 3/4"				
22	P00204	2	Bolt, Hx., 3/8"-16 x 1"				
23	P01309	8	Lockwasher, 5/16"				
24	P01310	4	Lockwasher, 3/8"				
25	P01453	4	Flatwasher, 5/16" - Fender				
26	P01404	2	Flatwasher, 3/8"				
27	P01438	2	Flatwasher, 5/8" SAE				
28	P01507	8	Nut, Hx., 5/16"-18				
29	P01510	2	Nut, Hx., 1/2"-13				
30	P01658	2	Locknut, Hx., 3/8"-18				

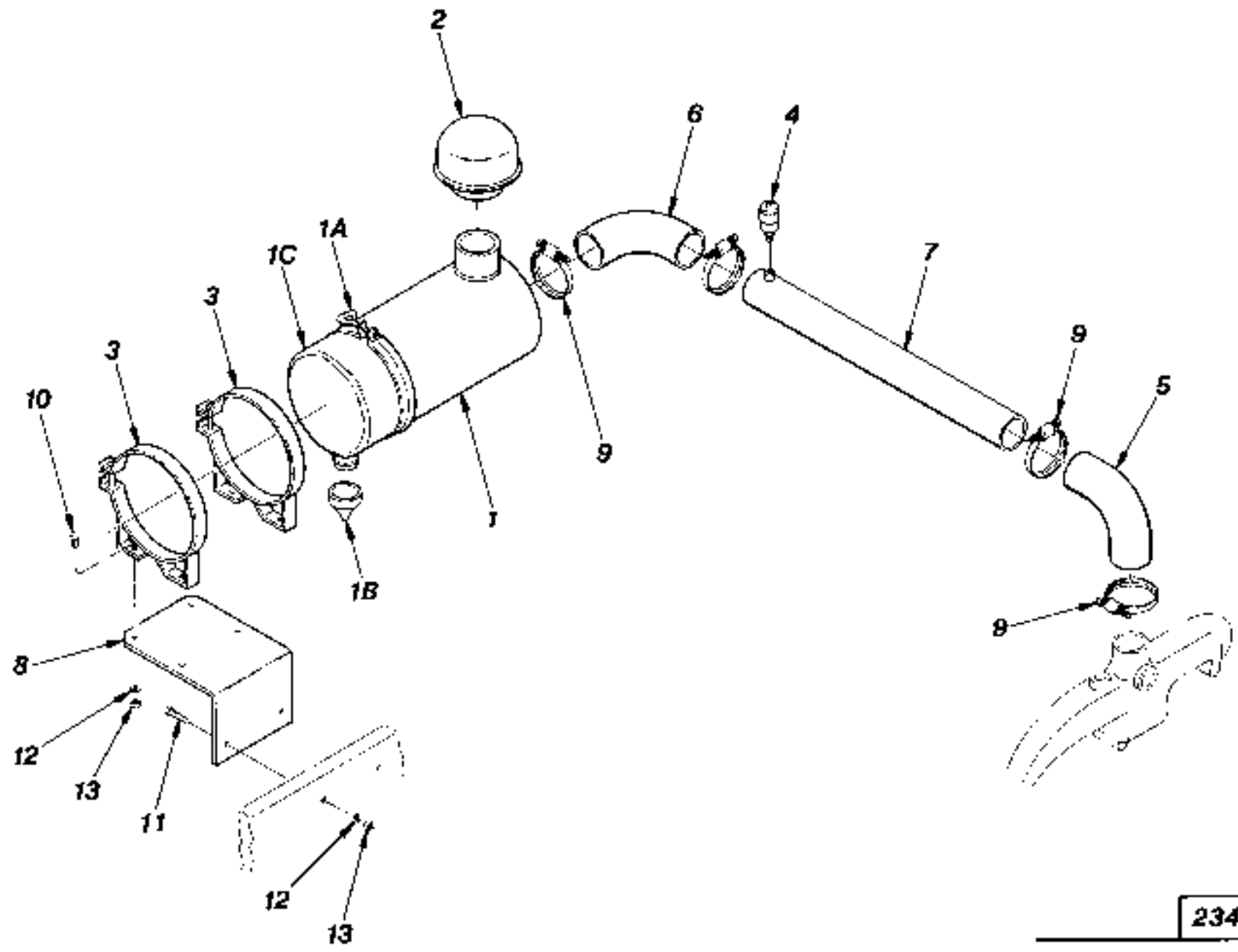
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532 S/N 101 THRU 4/89
RADIATOR & TRANS. OIL COOLER ASSEMBLY (Perkins)



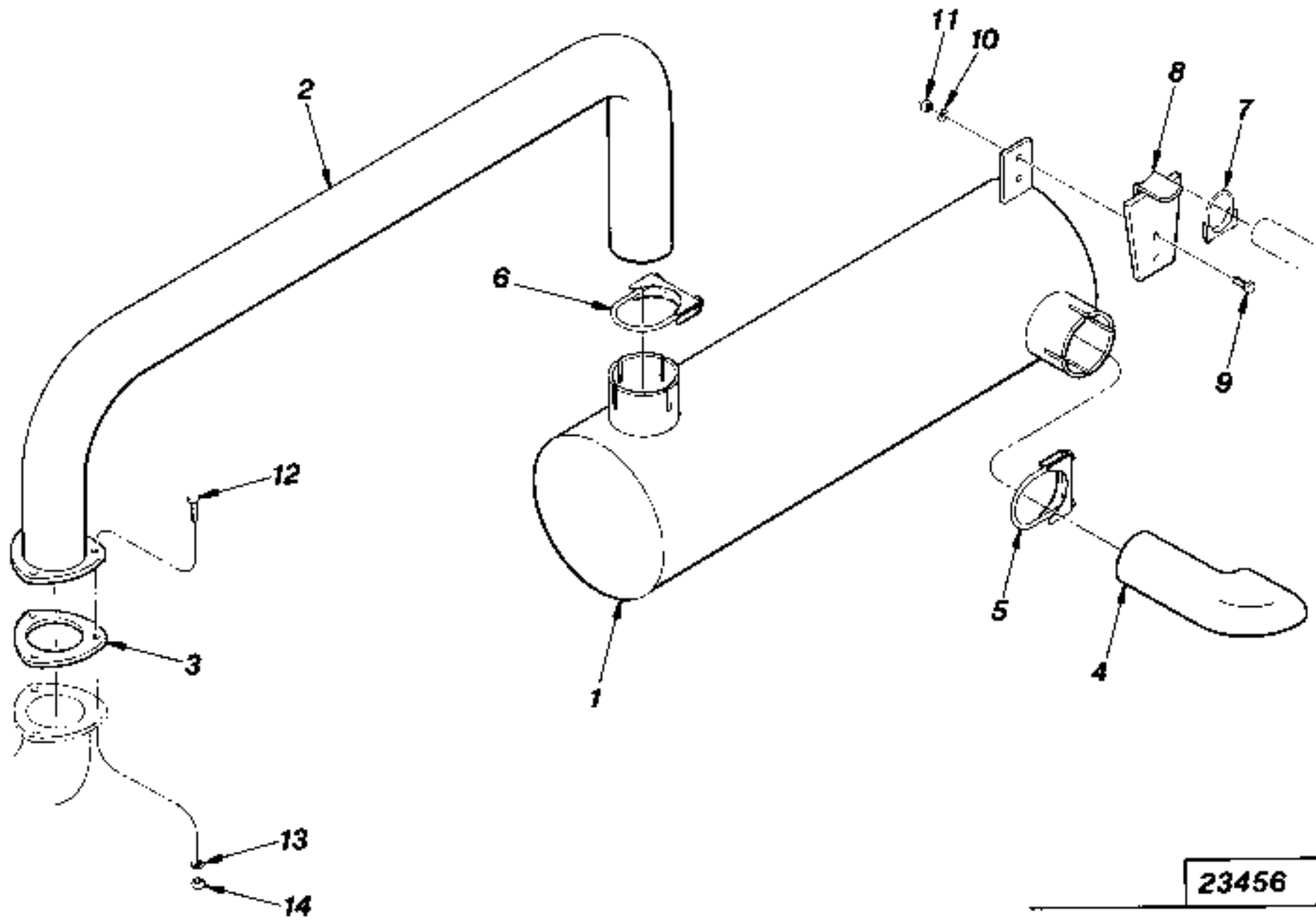
23454

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P19283	1	Accelerator Pedal				
1A	P20059	REF	Bellows				
1B	P20072	REF	Clevis Kit				
2	P19268	1	Boot Guard				
3	P21773	1	Cable, Throttle				
4	P10505	1	Ball Joint				
5	P21260	1	Spring				
6	P17678	1	Clamp, Cable				
7	P19128	1	Shim				
8	22727B	1	Bracket, Cable Support				
9	17786A	1	Spring Anchor				
10	P02057	2	Screw, Rd. Hd., #10-24 x 3/4"				
11	P01306	2	Lockwasher, #10				
12	P01504	2	Nut, Hx., #10-24				
13	P00005	3	Bolt, Hx., 1/4"-20 x 1"				
14	P01308	3	Lockwasher, 1/4"				
15	P10506	3	Nut, Hx., 1/4"-20				
16	P01529	1	Nut, Hx., 1/4"-28				
							23454
522 S/N 101 THRU							4/89
THROTTLE ASSEMBLY (Perkins)							

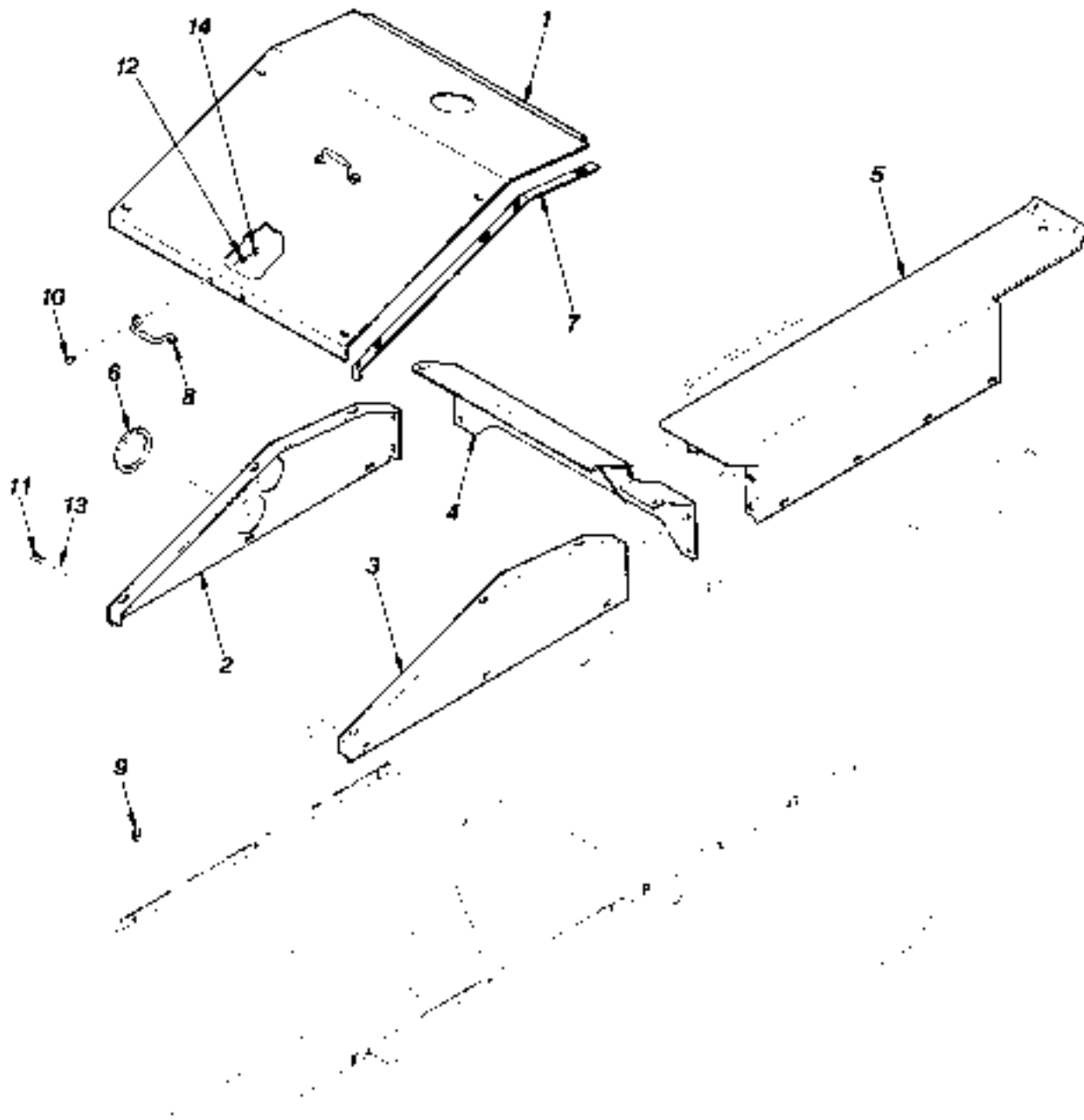


23455

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P12163	1	Air Cleaner				
1A	P20469	REF	Clamp				
1B	P20342	REF	Vaculator Valve				
1C	P19727	REF	Vaculator Cup				
1D*	P17340	REF	Baffle				
1E*	P18169	REF	Thumb Screw				
1F*	P12179	REF	Filter Element				
2	P12164	1	Rain Cap				
3	P12165	2	Mounting Band				
4	P21485	1	Service Indicator (Includes Fitting)				
5	P24314	1	90° Elbow, Rubber				
6	P26511	1	90° Elbow, Rubber				
7	23514B	1	Intake Tube				
8	23439B	1	Support Bracket				
9	P10553	4	Hose Clamp				
10	P00202	4	Bolt, Hx., 3/8"-16 x 3/4"				
11	P00206	2	Bolt, Hx., 3/8"-16 x 1 1/2"				
12	P01310	8	Lockwasher, 3/8"				
13	P01508	8	Nut, Hx., 3/8"-16				
							* Not Illustrated
							23455
522 S/N 101 THRU							4/89
AIR CLEANER ASSEMBLY (Perkins)							



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P26268	1	Muffler				
2	P26514	1	Exhaust Pipe				
3	P26217	1	Gasket				
4	23371A	1	Tail Pipe				
5	P26022	1	Muffler Clamp, 2 3/4"				
6	P12169	1	Muffler Clamp, 2 1/2"				
7	P15470	1	Muffler Clamp, 1 1/4"				
8	P19280	1	Hanger, Muffler				
9	P00104	2	Bolt, Hx., 5/16"-18 x 1"				
10	P01309	2	Lockwasher, 5/16"				
11	P01507	2	Nut, Hx., 5/16"-18				
12	P00206	3	Bolt, Hx., 3/8"-18 x 1 1/2"				
13	P01310	3	Lockwasher, 3/8"				
14	P01508	3	Nut, Hx., 3/8"-18				
							23456
522 S/N 101 THRU							4/89
EXHAUST ASSEMBLY (Perkins)							

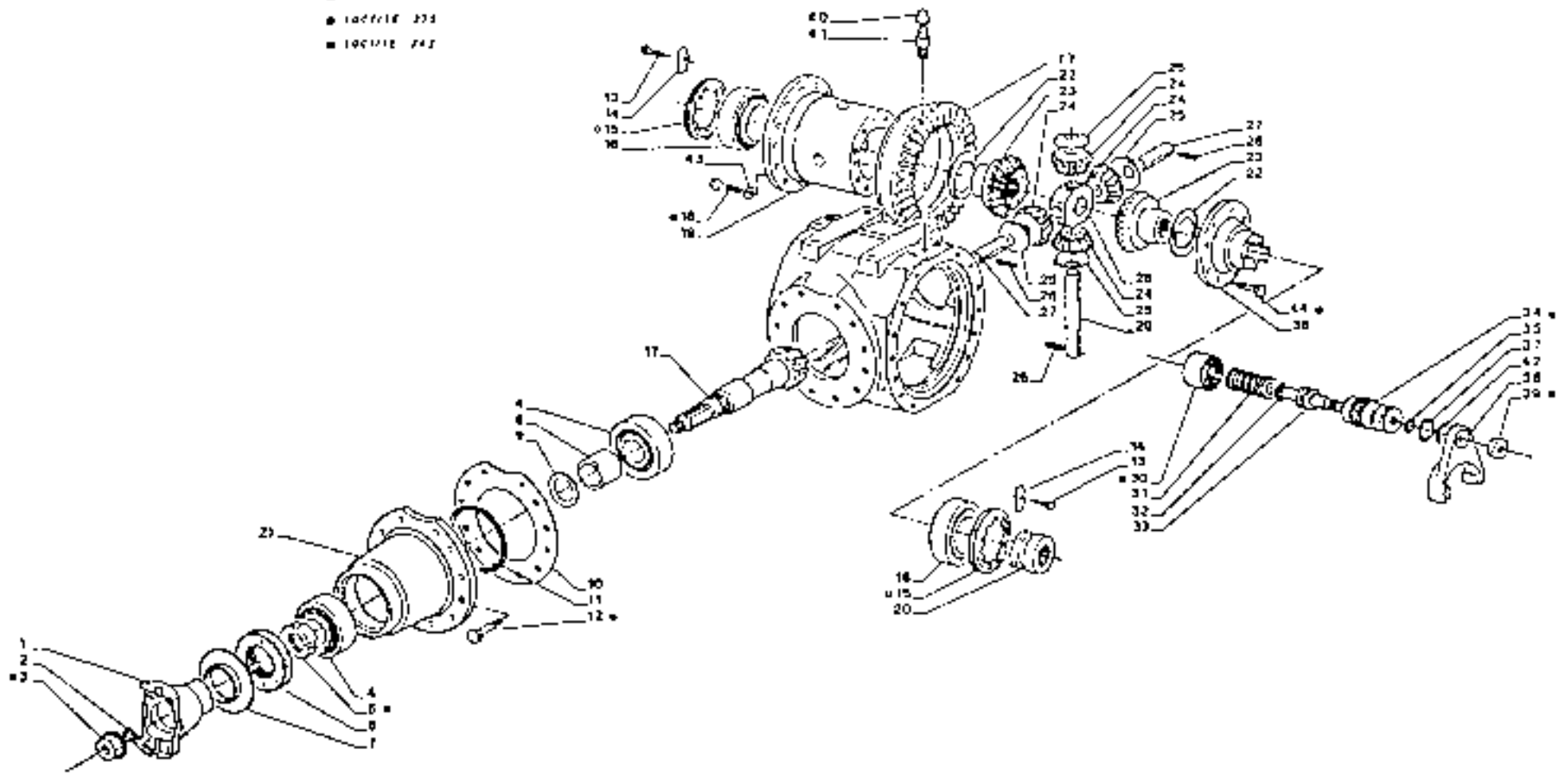


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	24404C	1	Engine Cover				
2	24405C	1	Support Panel, Right				
3	24406C	1	Support Panel, Left				
4	24408B	1	Rear Cover Panel				
5	24348C	1	Cover Panel, Exhaust				
6	N11595	1	Edge Trim				
7	N11596	2	Sponge Gasket				
8	P26713	2	Grab Handle				
9	P20459	20	Speed Nut				
10	P02054	4	Screw, Slotted Rd. Hd., #10-24 x 1/2"				
11	P02157	24	Screw, Slotted Rd. Hd., 5/16"-18 x 3/4"				
12	P01306	4	Lockwasher, #10				
13	P01358	24	Starwasher, 5/16" - External				
14	P01504	4	Nut, Hx., #10-24				
				23457			
				522 S/N 101 THRU 4/89			
				ENGINE COVER ASSEMBLY			

□ LOCATED 222

● LOCATED 223

■ LOCATED 242



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P27007	1	Yoke Flange	33	P27061	1	Piston
2	P27004	1	O-Ring	34	P27062	2	Cylinder
3	P27058	1	Nut, Pinion	35	P27010	1	O-Ring
4	P27018	2	Bearing	36	C)P20989	1	Differential Case Cover
5	P27098	1	Ring Nut	37	P27000	1	O-Ring
6	P27002	1	Seal	38	P27060	1	Lever
7	P27099	1	Cover Plate	39	P26997	1	Jam Nut
8	P27094	1	Spacer	40	P25654	2	Cap Plug
	P27095	-	Spacer	41	P25627	2	Exhausting Bolt
	P27096	-	Spacer	42	P27012	1	O-Ring
	P27097	-	Spacer	43	P26994	16	Spring Washer
9	P27021	1	Shim - 0.35mm	44	P04220	6	Bolt, Hx., M12-1.75 x 30mm
	P27022	-	Shim - 0.40mm	45*	G)P26988	2	Spacer
	P27023	-	Shim - 0.45mm				
	P27024	-	Shim - 0.55mm				
10	P27045	1	Shim				
	P27046	-	Shim				
	P27047	-	Shim				
11	P27006	1	O-Ring				
12	P04203	12	Bolt, Hx., M12-1.75 x 30mm				
13	P04051	2	Bolt, Hx., M6-1 x 10mm				
14	P27065	2	Lock Plate				
15	P27049	2	Ring Nut				
16	F)P20991	2	Bearing				
17	A)P27066	1	Ring Gear & Pinion				
18	U)P26992	15	Bolt, Hx.				
19	C)P27048	1	Differential Case				
20	D)P26967	1	Change Selector				
21	P27044	1	Bearing Cap Retainer				
22	P27056	2	Thrust Washer, Gear				
23	P27051	2	Differential Side Gear				
24	P27050	4	Pinion Gear				
25	P27055	4	Thrust Washer, Pinion				
26	P27034	3	Roll Pin				
27	P27053	2	Pin, Gear				
28	P27054	1	Retainer, Pin				
29	P27052	2	Pin, Gear				
30	P27063	1	Retainer, Spring				
31	P27064	1	Spring				
32	P27011	1	O-Ring				

NOTES:

- A) For 12 Bolt Carriers, Items 18 & 19 must be purchase for repair.
 B) Use P04170 for 12 Bolt Carriers.
 C) For 12 Bolt Carriers, Items 17 & 18 must be purchase for repair.
 D) For S/N "000", use P27057.
 E) For S/N "000", use P27067.
 F) For S/N "000", use P27017.
 G) Not used S/N "000".

"000" = S/N 101 - 116, 121 - 123, 126 - 131, 134 - 152, 159 - 161.

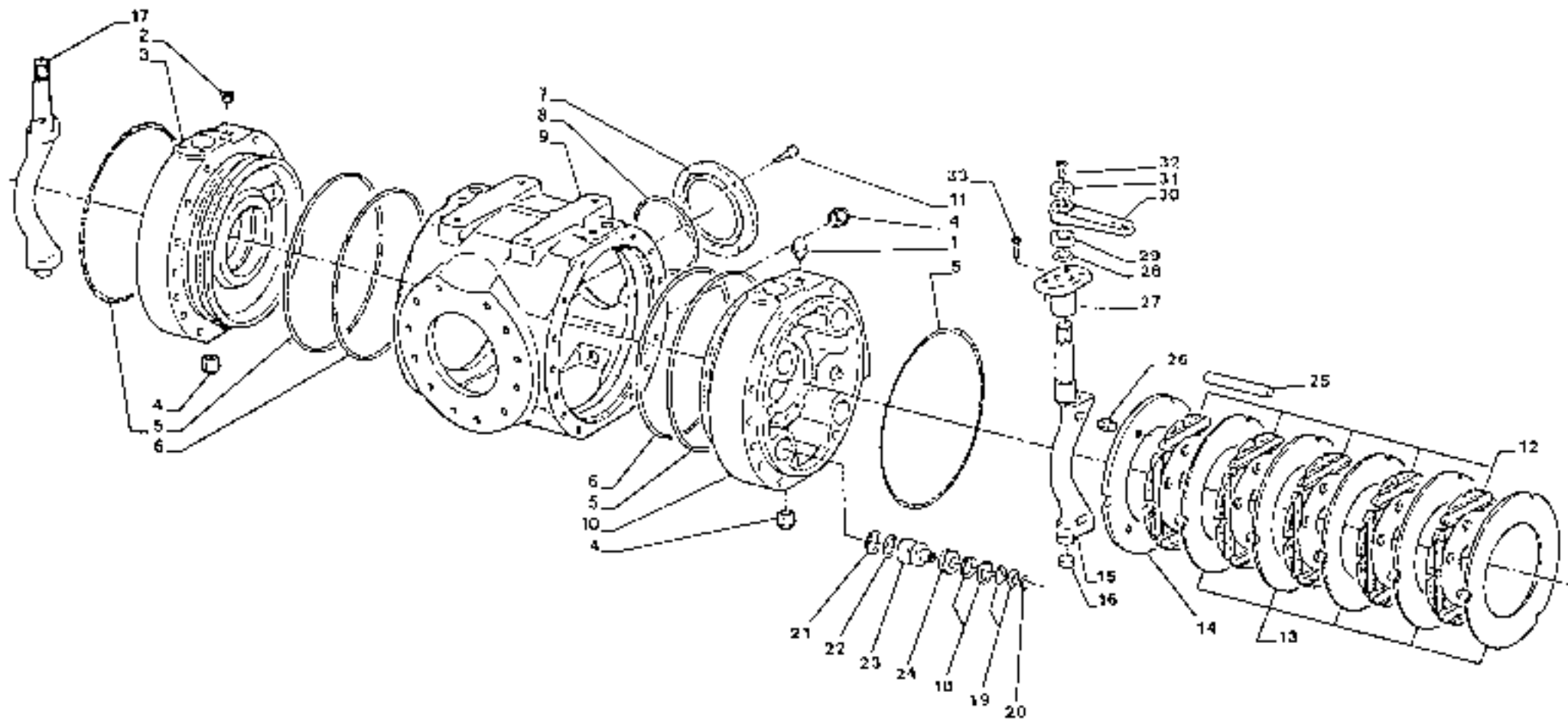
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FRONT DRIVE AXLE ASSEMBLY (Hurb)



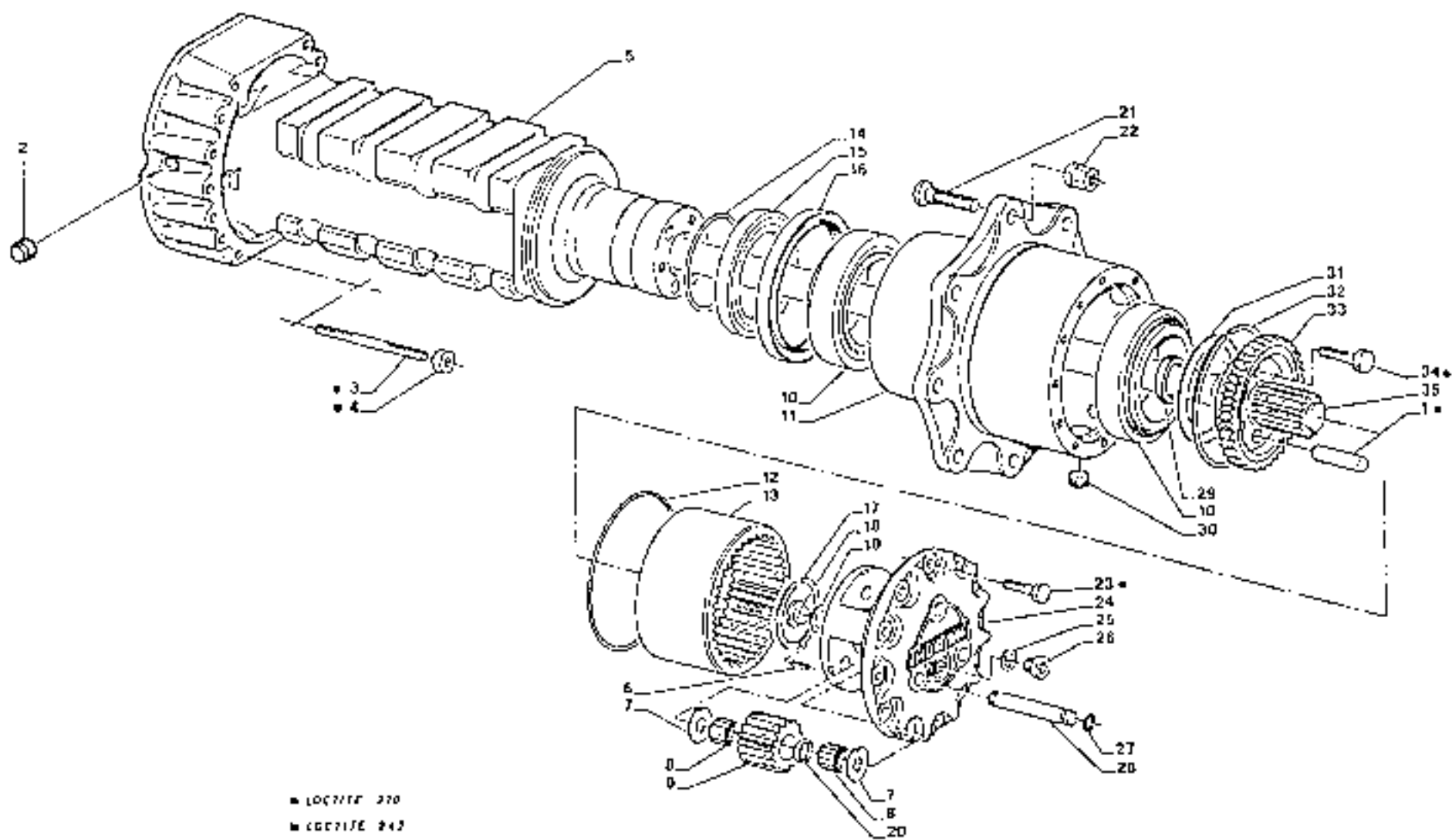
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P25653	1	Vent				
2	P26998	2	Pipe Plug				
3	P27042	1	Axle Case				
4	P25657	3	Plug, Magnet				
5	P25602	4	Seal				
6	P27013	2	O-Ring				
7	P25601	1	Cover				
8	P25553	1	O-Ring				
9	P27040	1	Case, Differential				
10	P27043	1	Axle Case				
11	P25669	4	Bolt, Socket Hd., M8 - 1.25 x 12mm				
12	P27092	10	Brake Disc				
13	P27083	10	Brake Disc, Intermediate				
14	P27084	2	Spacer				
15	P27080	1	Brake Lever				
16	P27036	2	Plug				
17	P27081	1	Brake Lever				
18	P27090	16	Snap ring				
19	P27020	16	Cup Spring				
20	P27014	8	Circlip				
21	P27088	8	Ring				
22	P27087	8	Ring				
23	P27085	8	Piston				
24	P27089	8	Ring				
25	P27086	6	Pin				
26	P27091	4	Pusher				
27	P27082	2	Flange				
28	P27003	2	O-Ring				
29	P27093	2	Spacer				
30	P27039	2	Change Lever				
31	P27059	2	Spacer				
32	P26995	2	Bolt, Countersunk, M8 - 1.25 x 18mm				
33	P04852	8	Bolt, Socket Hd., M8 - 1 x 16mm				

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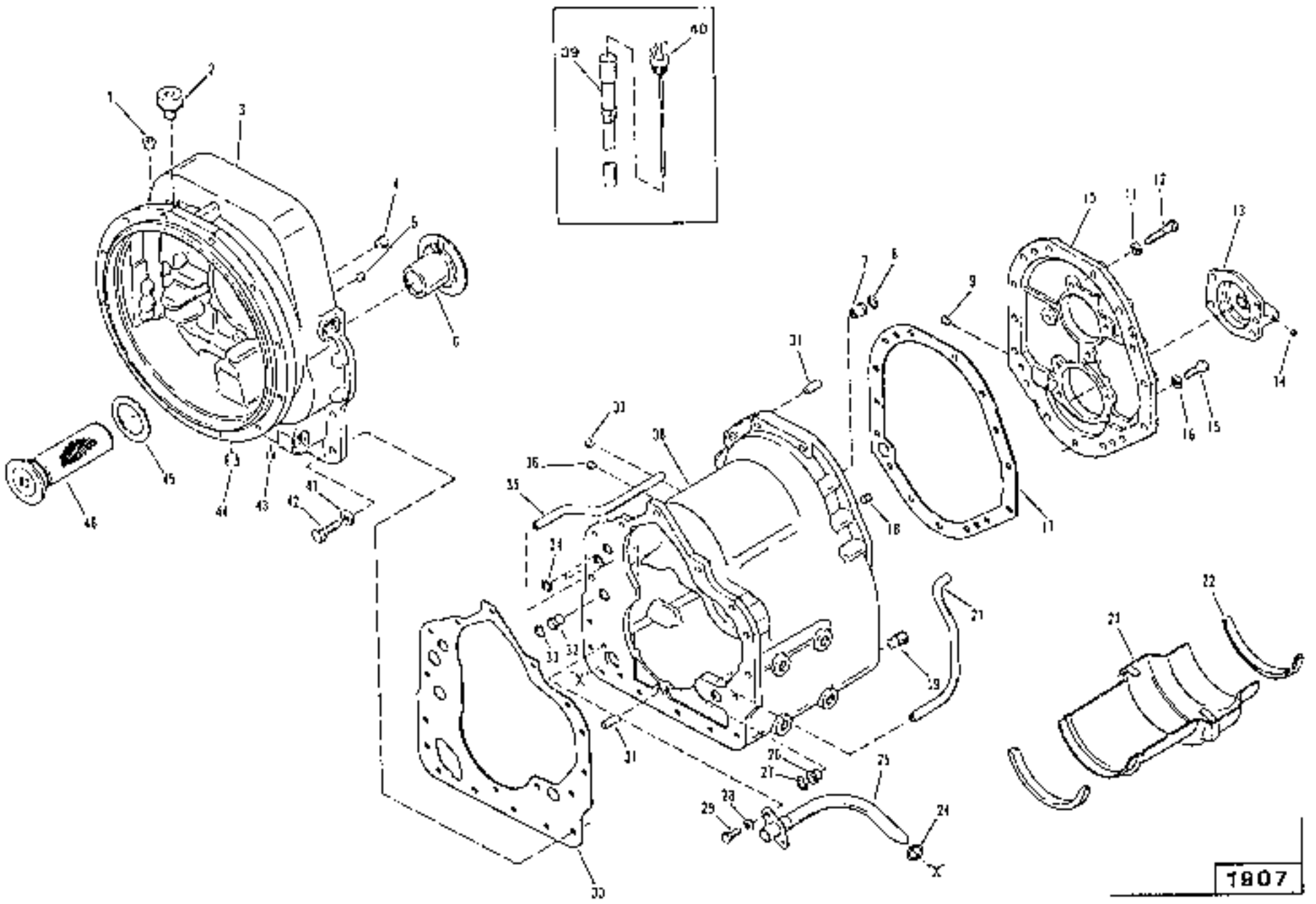
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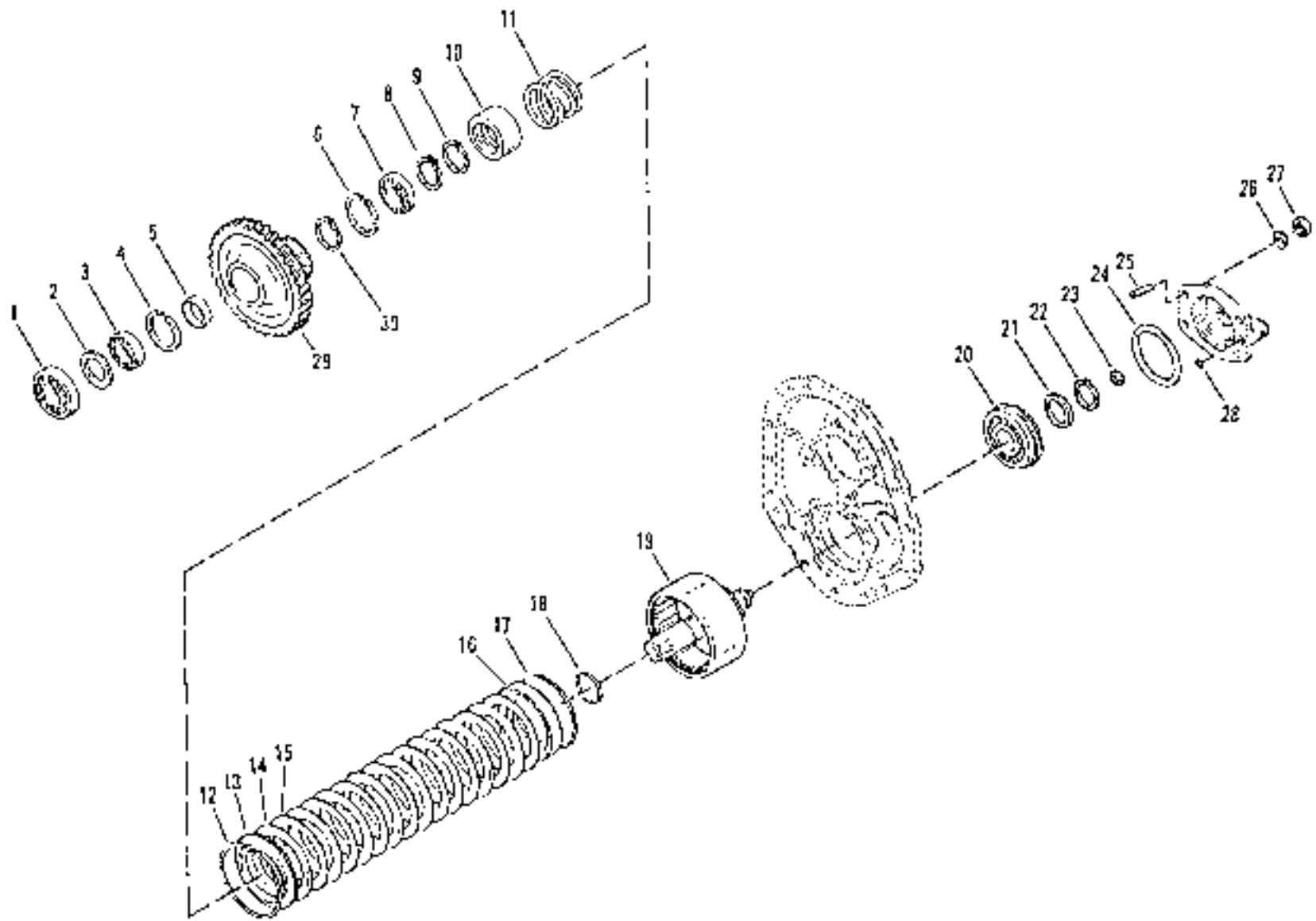
FRONT DRIVE AXLE ASSEMBLY (Hirth)



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P27076	8	Dowel	34	P26996	8	Bolt, Hx., M14-1.5 x 45mm
2	P25658	2	Plug	35	P27068	2	Half Shaft
3	P27078	28	Stud				
4	P25573	28	Nut, Hx., M12 - 1.75				
5	P27041	2	Axle Case, Lateral				
6	P27035	2	Roll Pin				
7	P27074	12	Washer, Keyed				
8	P27019	12	Needle Bearing				
9	P27071	6	Planet Gear				
10	P25564	4	Bearing				
11	P27079	2	Wheel Hub				
12	P27008	2	O-Ring				
13	P27070	2	Ring Gear				
14	P27007	2	O-Ring				
15	P27075	2	Spacer				
16	P25558	2	Seal				
17	P27015	2	Circlip				
18	P25656	2	Plug				
19	P25586	A/R	Shim - .010mm				
	P27030	-	Shim - .020mm				
	P27031	-	Shim - .030mm				
	P27032	-	Shim - .050mm				
	P27033	-	Shim - .100mm				
20	P27077	6	Spacer				
21	P26999	16	Wheel Stud				
22	P27000	16	Wheel Nut				
23	P25661	24	Bolt, Hx., M12 - 1.75 x 30mm				
24	P27069	2	Drive Flange				
25	P26953	2	Seal Washer				
26	P27038	2	Plug				
27	P27005	6	O-Ring				
28	P27073	6	Pin, Planet Gear				
29	P27001	2	Seal				
30	P25659	2	Pipe Plug				
31	P27025	A/R	Shim - 0.15mm				
	P27026	-	Shim - 0.20mm				
	P27027	-	Shim - 0.25mm				
	P27028	-	Shim - 0.30mm				
32	P27016	2	Snap Ring				
33	P27072	2	Ring Gear Support				

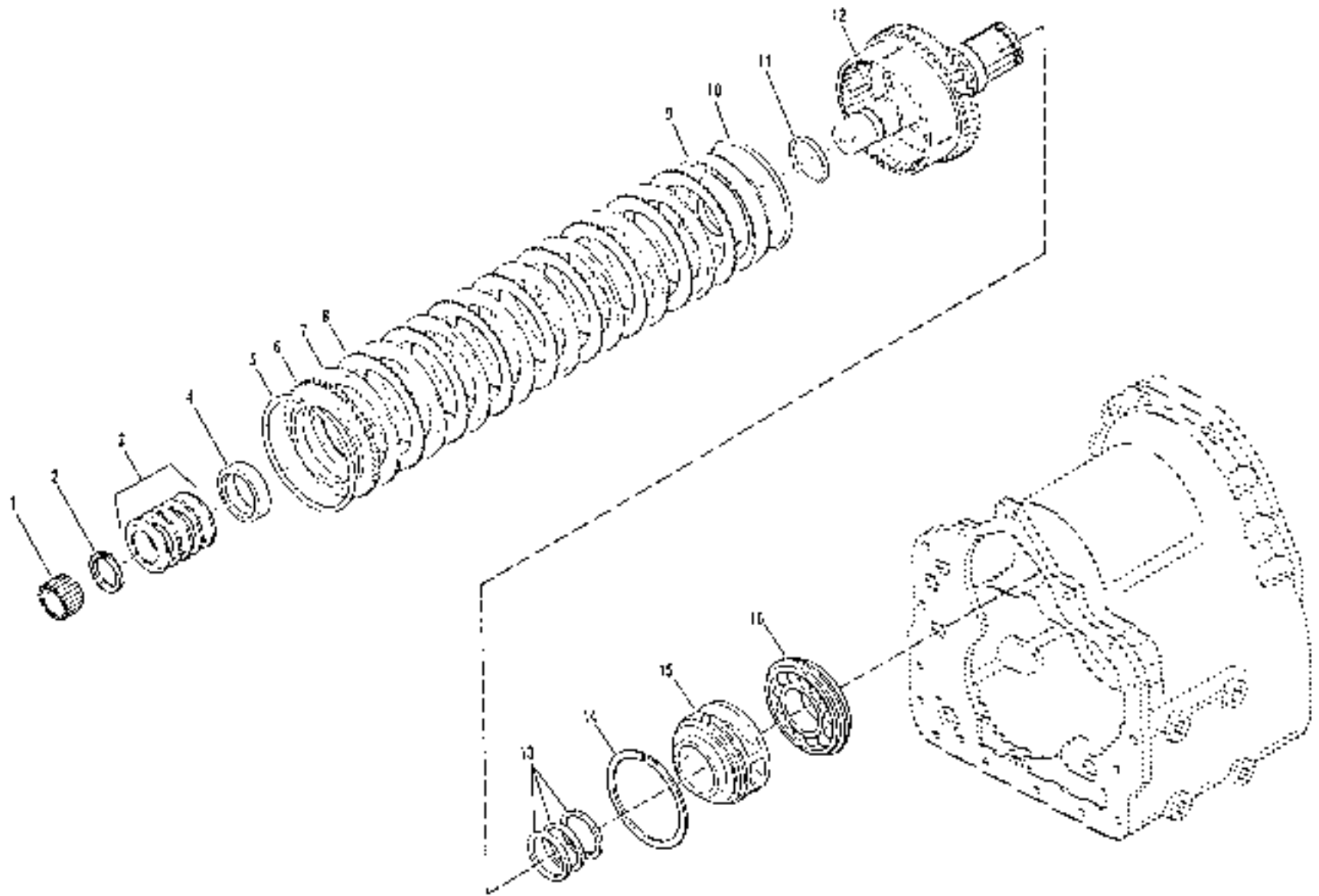
1906-A



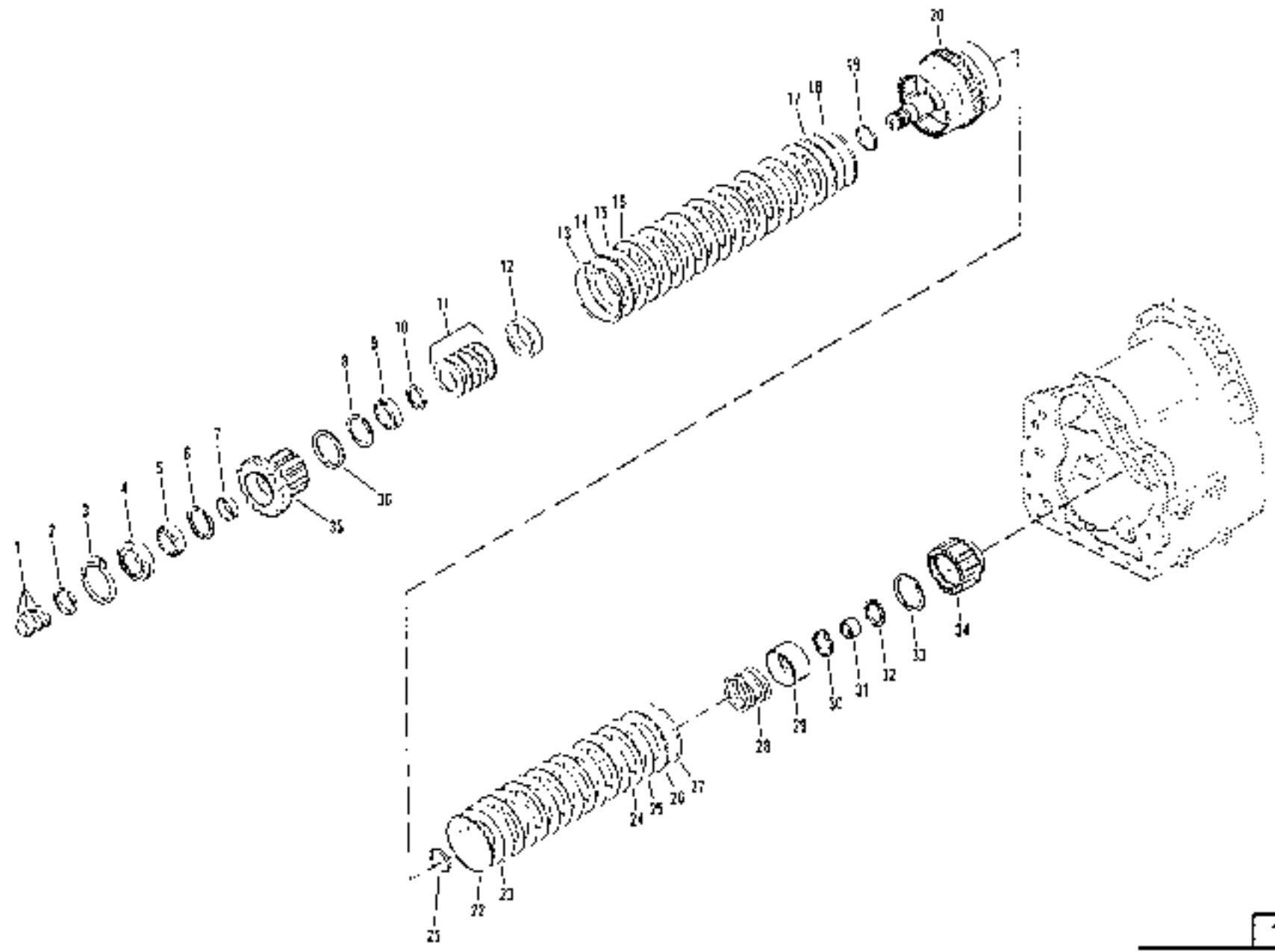


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20661	1	Low Speed Clutch Shaft Front Bearing				
2	P20662	1	Front Bearing Spacer				
3	P20663	1	Low Speed Gear Bearing				
4	P20664	1	Locating Ring				
5	P20665	1	Low Speed Gear Spacer				
6	P20664	1	Locating Ring				
7	P20663	1	Low Speed Gear Bearing				
8	P20651	1	Retaining Ring				
9	P20643	1	Spring Retainer Snap Ring				
10	P20644	1	Spring Retainer				
11	P20645	1	Piston Return Spring				
12	P20773	1	Backing Plate Snap Ring				
13	P20774	1	Clutch Disc Backing Plate				
14	P26905	8	Clutch Inner Disc				
15	P20776	8	Clutch Outer Disc				
16	P20777	1	Clutch Piston				
17	P20778	1	Outer Clutch Piston Ring				
18	P20779	1	Inner Clutch Piston Seal				
19	P26915	1	Low Clutch Shaft Drum & Bleed Valve				
20	P20698	1	Low Speed Shaft Rear Bearing				
21	P20699	1	Rear Bearing Support Washer				
22	P20651	1	Rear Bearing Retaining Ring				
23	P20701	1	Low Shaft Piston Ring				
24	P20702	1	Rear Bearing Cap O-Ring				
25	P26937	4	Bearing Cap Stud				
26	P20503	4	Bearing Cap Stud Lockwasher				
27	P20507	4	Bearing Cap Stud Nut				
28	P20708	1	Bearing Cap O-Ring				
29	P26963	1	Low Shaft Gear (Includes Item 30)				
30	P26945	1	Retaining Ring				

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ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20660	1	Forward Shaft Pilot Bearing				
2	P26919	1	Spring Retaining Snap Ring				
3	P26917	5	Piston Return Spring				
4	P26916	1	Piston Return Spring Spacer				
5	P20773	1	Backing Plate Snap Ring				
6	P20774	1	Clutch Disc Backing Plate				
7	P26912	6	Clutch Inner Disc				
8	P20776	6	Clutch Outer Disc				
9	P20777	1	Clutch Piston				
10	P20778	1	Clutch Piston Ring - Outer				
11	P20779	1	Clutch Piston Seal - Inner				
12	P26918	1	Forward Shaft Drum				
13	P20693	4	Forward Shaft Piston Ring				
14	P20694	1	Piston Ring Sleeve Retaining Ring				
15	P20695	1	Piston Ring Sleeve				
16	P26948	1	Forward Shaft Rear Bearing				
							1909-A
522 S/N 101 THRU							4/89
FORWARD SHAFT GROUP ASSEMBLY							



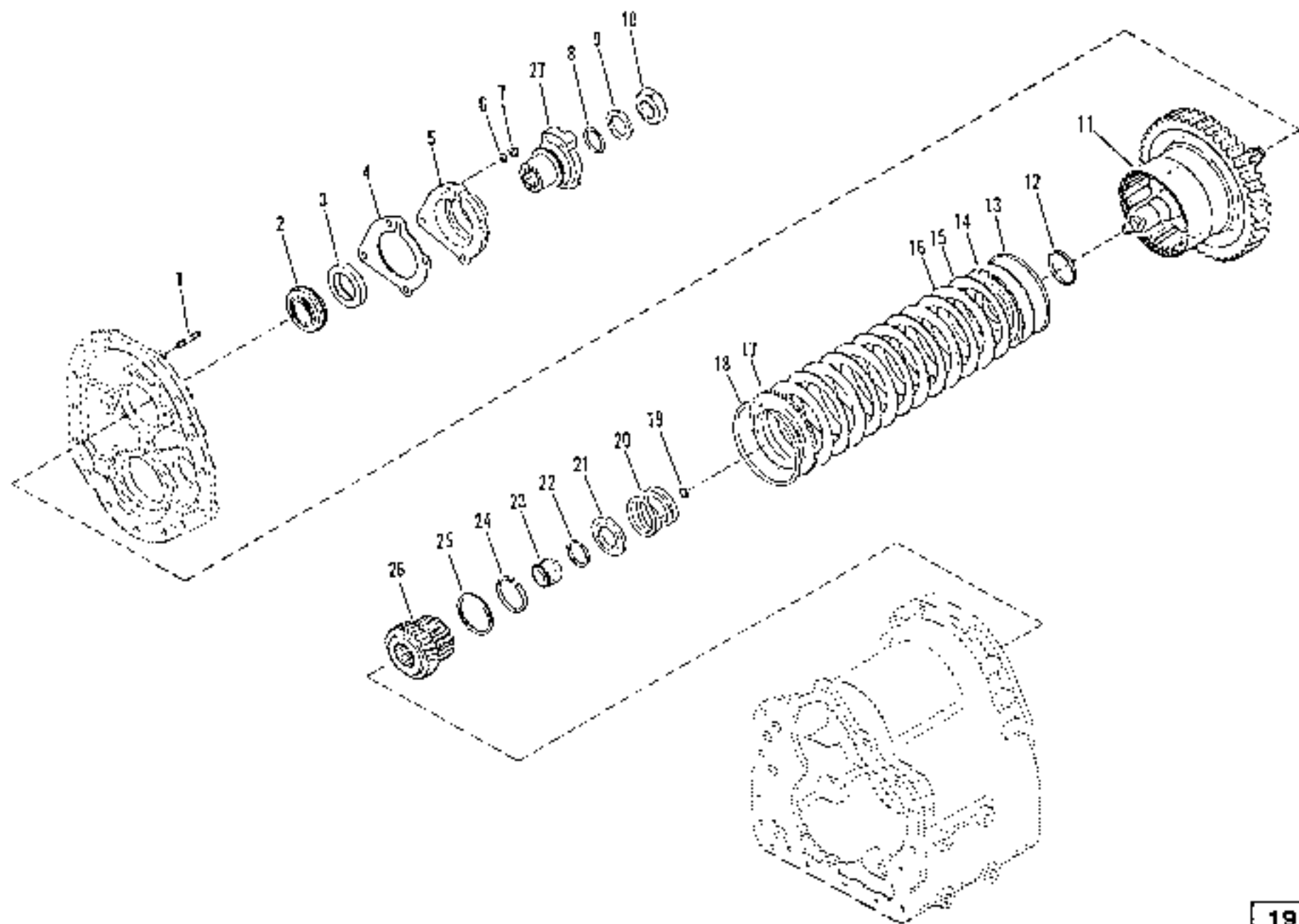
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20633	3	Reverse & 2nd Shaft Piston Ring				
2	P20634	2	Front Bearing Retaining Ring				
3	P20635	1	Front Bearing Snap Ring				
4	P20636	1	Reverse & 2nd Shaft Front bearing				
5	P23424	1	Clutch Driven Gear Bearing				
6	P20638	1	Bearing Retaining Ring				
7	P20639	1	Clutch Driven Gear Bearing Spacer				
8	P20638	1	Bearing Retaining Ring				
9	P20637	1	Clutch Driven Gear Bearing				
10	P26919	1	Spring Retainer Snap Ring				
11	P26917	5	Piston Return Belleville Springs				
12	P26916	1	Piston Return Spring Spacer				
13	P20773	1	Backing Plate Snap Ring				
14	P20774	1	Clutch Disc Backing Plate				
15	P26912	8	Clutch Inner Disc				
16	P20776	8	Clutch Outer Disc				
17	P20777	1	Clutch Piston				
18	P20778	1	Outer Clutch Piston Seal				
19	P20779	1	Inner Clutch Piston Seal				
20	P26950	1	Reverse & 2nd Shaft				
21	P20779	1	Inner Clutch Piston Seal				
22	P20778	1	Outer Clutch Piston Seal				
23	P20516	1	Clutch Piston				
24	P20776	6	Clutch Outer Disc				
25	P26912	6	Clutch Inner Disc				
26	P20774	1	Clutch Disc Backing Plate				
27	P20773	1	Backing Plate Snap Ring				
28	P20645	1	Piston Return Spring				
29	P20644	1	Spring Retainer				
30	P20643	1	Spring Retainer Snap Ring				
31	P20650	1	Reverse & 2nd Shaft Rear Bearing				
32	P20651	1	2nd Clutch Disc Hub Snap Ring				
33	P26945	1	Retaining Ring				
34	P26946	1	2nd Clutch Disc Hub (Includes Item 33)				
35	P26961	1	Reverse Clutch Gear (Includes Item 36)				
36	P26945	1	Retaining Ring				

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REVERSE & 2ND SHAFT GROUP ASSEMBLY



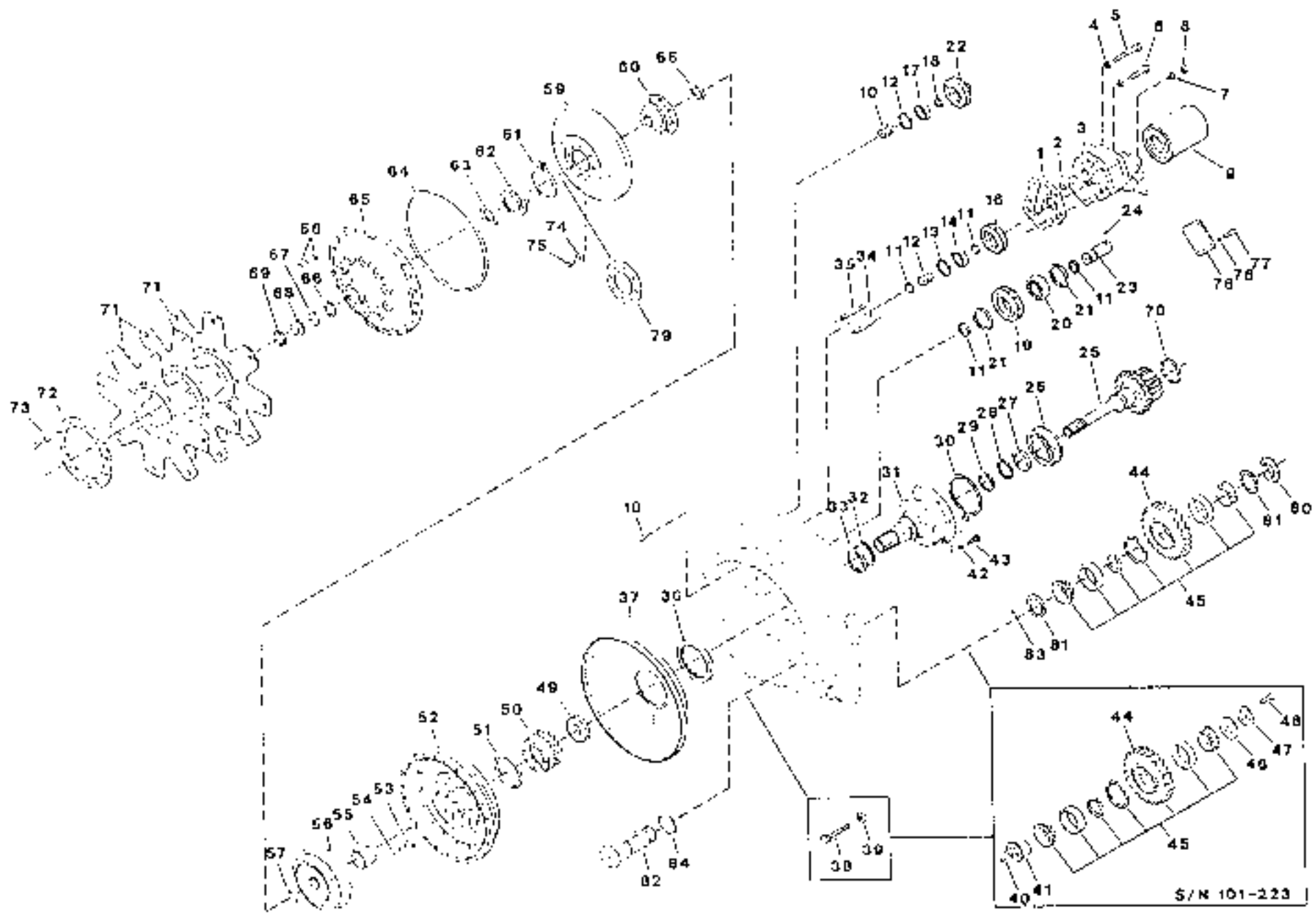
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P26938	4	Output Rear Bearing Cap Stud				
2	P26953	1	Output Shaft Rear Bearing				
3	P26909	1	Rear Bearing Cap Oil Seal				
4	P26907	1	Rear Bearing Cap Gasket				
5	P26949	1	Output Shaft Rear Bearing Cap				
6	P11922	4	Bearing Cap Stud Lockwasher				
7	P20719	4	Bearing Cap Stud Nut				
8	P23335	1	Flange O-Ring				
9	P23334	1	Flange Washer				
10	P23333	1	Flange Nut				
11	P26914	1	Output & 3rd Clutch Shaft, Drum				
12	P20779	1	Inner Clutch Piston Seal				
13	P20778	1	Outer Clutch Piston Seal				
14	P20516	1	Clutch Piston Assembly				
15	P20776	6	Clutch Outer Disc				
16	P26912	6	Clutch Inner Disc				
17	P20774	1	Clutch Disc Backing Plate				
18	P20773	1	Backing Plate Snap Ring				
19	P20701	1	Output Shaft Piston ring				
20	P20645	1	Piston Return Spring				
21	P20644	1	Spring Retainer				
22	P20643	1	Spring Retainer Snap Ring				
23	P26900	1	Pilot Bearing				
24	P20654	1	3rd Gear & Hub Retainer Ring				
25	P26945	1	Retaining Ring				
26	P26962	1	3rd Gear & Hub (Includes Item 25)				
27	P23336	1	Output Flange				

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OUTPUT & 3RD CLUTCH GROUP ASSEMBLY



S/N 101-223

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20500	1	Pump to Housing Gasket	42	P20538	6	Stator Support Screw Lockwasher
2	P20501	1	O-Ring	43	P20537	6	Stator support Screw
3	P20502	1	Charging Pump Assembly	44	P26934	1	Reverse Idler Gear
4	P20503	3	Pump Mounting Screw Lockwasher	45	P20540	1	Reverse Idler Gear Bearing
5	P26955	1	Pump Mounting Screw	46	A)P20543	1	Bearing Retaining Plate
6	P20504	2	Pump Mounting Screw	47	A)P20544	1	Lock Plate
7	P20503	2	Pump Mounting Stud Lockwasher	48	A)P26959	3	Retaining Plate Screw
8	P20507	2	Pump Mounting Stud Nut	49	P26929	1	Impeller Hub Gear Bearing
9	P19868	1	Filter, Transmission	50	P26927	1	Impeller Hub Gear
10	P20509	4	Bearing Support Screw & Lockwasher	51	P20548	1	Impeller Hub O-Ring
11	P20510	5	Bearing Locating Ring	52	P20549	1	Impeller
12	P20511	2	Pump Drive Bearing Support	53	P20550	4	Impeller to Hub Screw Lock Tab
13	P20512	1	Bearing Retaining Ring	54	P26958	8	Impeller to Hub Screw
14	P20513	1	Pump Drive Gear Bearing	55	P26952	1	Impeller to Hub Bearing Spacer
16	P26923	1	Pump Drive Gear	56	P20553	1	Reaction Member
17	P20520	1	Bearing Retaining Ring, Auxiliary	57	P20554	1	Retaining Ring
18	P26925	1	Pump Drive Gear Bearing, Auxiliary	58	P20555	24	Impeller to Cover Screw & Lockwasher
19	P26922	1	Pump Drive Idler Gear	59	P26942	1	Turbine
20	P26926	1	Idler Stub Shaft Bearing	60	P26943	1	Turbine Hub
21	P20664	2	Bearing Retaining Ring	61	P20558	1	Turbine Hub Bearing Locating Ring
22	P26941	1	Auxiliary Pump Drive Gear	62	P20559	1	Turbine Hub Bearing
23	P26924	1	Idler Gear Stub Shaft	63	P20560	1	Bearing Retaining Washer
24	P20523	1	Stub Shaft Lockball	64	P20561	1	Impeller to Cover O-Ring
25	P26944	1	Turbine Shaft	65	P20562	1	Impeller Cover
26	P20525	1	Turbine Shaft Bearing	66	P20556	2	Turbine Retaining Ring
27	P20526	1	Bearing Locating Washer	67	P20564	1	Impeller Cover Bore Plug O-Ring
28	P20527	1	Bearing Retaining Ring	68	P20565	1	Bore Plug
29	P20528	1	Piston Ring	69	P26954	1	Bore Plug Retaining Ring
30	P20529	1	Bearing Snap Ring	70	P26945	1	Retaining Ring, Turbine Shaft
31	P26947	1	Stator Support	71	P26013	1	Driveplate
32	P20531	1	Piston Ring Expander Spring	72	P20569	1	Driveplate Backing Ring
33	P26928	1	Piston Ring	73	P20570	10	Driveplate Mounting Screw & Lockwasher
34	P26934	1	Pump Mounting Stud	74	A)P23380	12	Washer, Turbine to Hub
35	P26935	1	Pump Mounting Stud	75	P23383	12	Screw, Turbine to Hub
36	P20535	1	Oil Seal	76	P26931	1	Cover, Pump
37	P20535	1	Oil Baffle				
38	A)P26960	3	Screw, Reverse Idler Shaft				
39	A)P20503	3	Lockwasher, Reverse Idler Shaft				
40	A)P20541	1	Reverse Idler Shaft Pin				
41	A)P26932	1	Reverse Idler Shaft				

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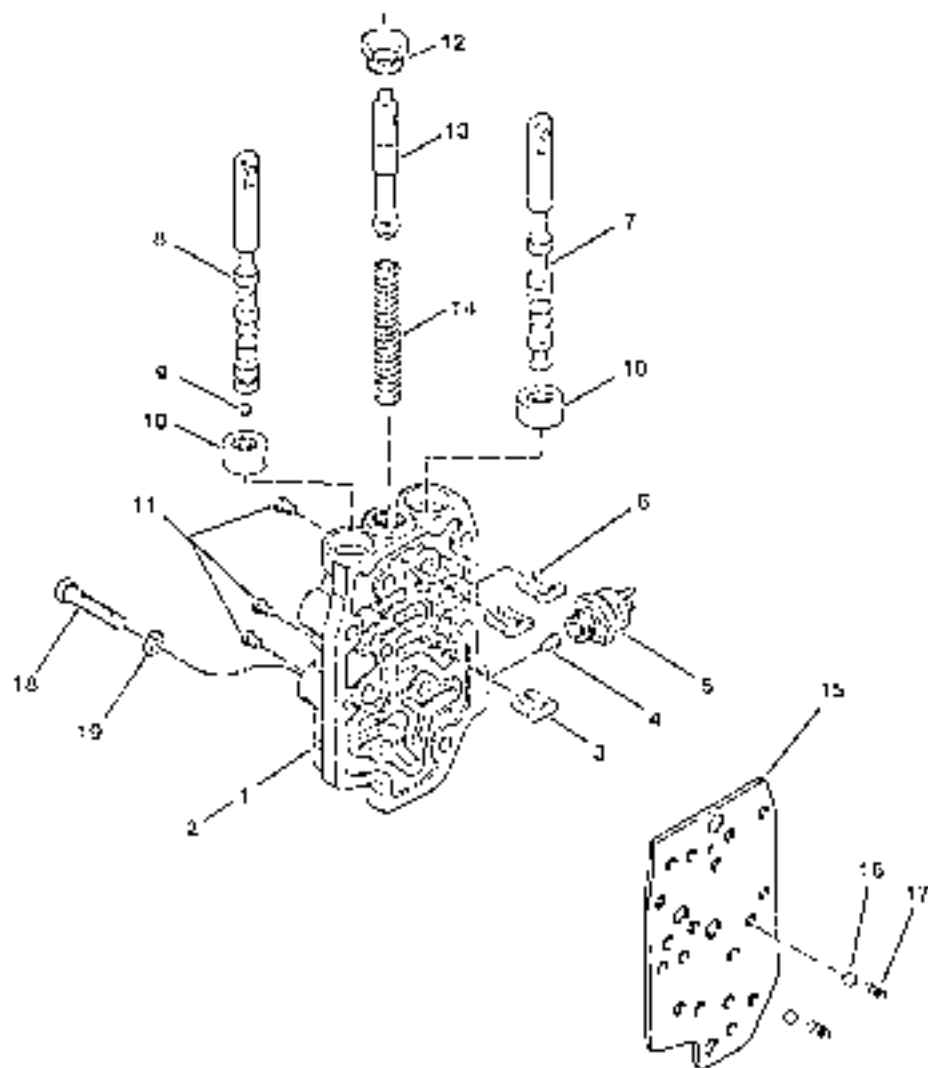
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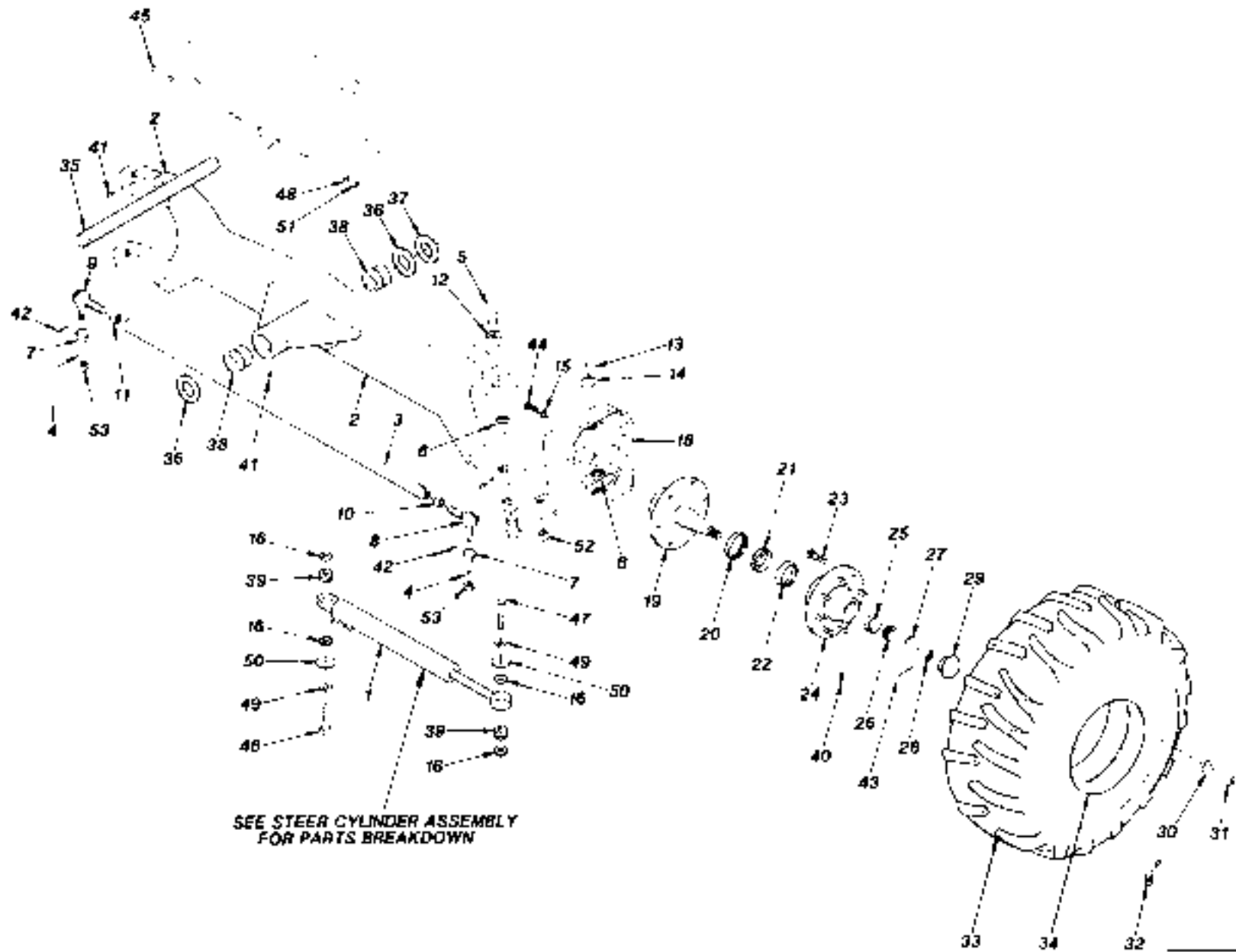
CONVERTER HOUSING GROUP ASSEMBLY PAGE 1 OF 2

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
77	P26956	4	Capscrew, Pump Cover				
78	P11929	4	Lockwasher, Pump Cover				
79	P29305	1	Ring Washer, Turbine to Hub				
80	P29304	1	Nut, Bearing Retainer				
81	P29303	2	Thrust Washer, Idler Gear				
82	P29302	1	Idler Shaft, Reverse				
83	P29301	1	Lockball, Idler Shaft				
84	P29300	1	O-Ring, Idler Shaft				
<p>NOTES:</p> <p>A) Used S/N 101 - 223 only.</p>							
							1912-A
					522 S/N 101 THRU		4/89
					CONVERTER HOUSING GROUP ASSEMBLY PAGE 2 OF 2		



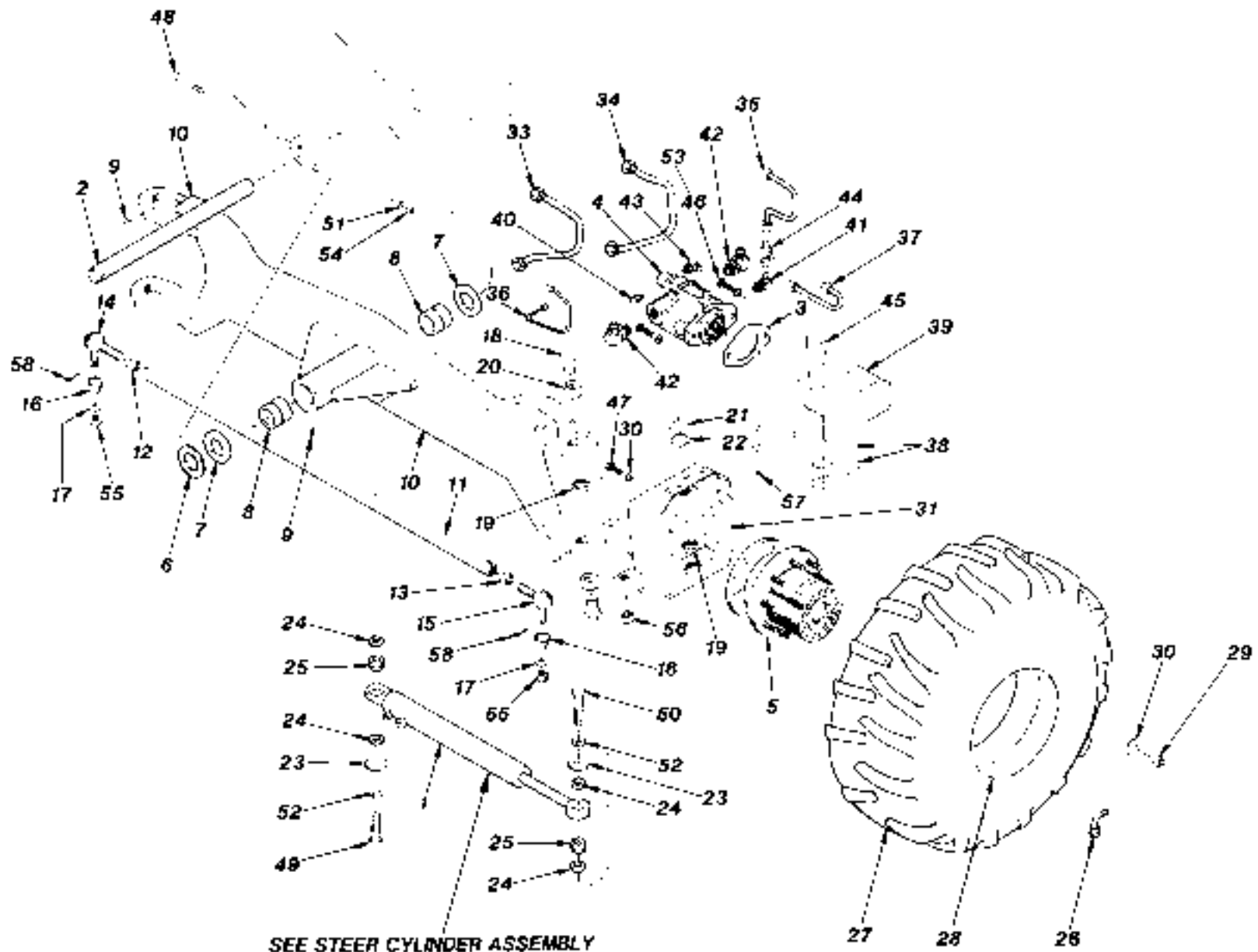
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20579	REF	Control Valve Assembly (Includes Items 3-14)
2	P20809	REF	Control Valve Assembly (Includes Items 3-11)
3	P20810	2	Valve Spool Stop
4	P20811	1	Switch Actuating Pin
5	P20812	1	Neutral Switch
6	P20010	1	Valve Spool Stop
7	P20815	1	Forward & Reverse Valve Spool
8	P20805	1	Speed Selector Spool (Includes Item 9)
9	P23529	1	Plug
10	P20807	2	Oil Seal
11	P20808	3	Pipe Plug
12	P20816	1	Plug
13	P20817	1	Valve Spool
14	P20818	1	Control Valve Spring
15	P20530	1	Gasket, Control Valve
16	P11892	2	Detent Ball
17	P20582	2	Detent Spring
18	P20577	9	Screw
19	P20538	9	Lockwasher

1913



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)P21737	2	Steer Cylinder	41	P16611	6	Grease Zerk
2	P27321	1	Steer Axle	42	P03840	2	Cotter Pin, 1/8" x 1 1/2"
3	P25739	1	Tie Rod	43	P03869	2	Cotter Pin, 3/16" x 2 1/2"
4	P25799	2	Washer, Hardened	44	P00602	12	Bolt, Hx., 5/8"-11 x 1 1/2"
5	P25798	4	Pivot Pin	45	P00864	1	Bolt, Hx., 5/8"-10 x 5"
6	P25796	4	Jam Nut, Pivot Pin	46	P00957	2	Bolt, Hx., 1"-14 x 3 1/4"
7	P25793	2	Rubber Seal	47	P00960	2	Bolt, Hx., 1"-14 x 4"
8	P25792	1	Tie Rod End (L.H. Thread)	48	P01314	1	Lockwasher, 5/8"
9	P25791	1	Tie Rod End	49	P01317	4	Lockwasher, 1"
10	P25790	1	Jam Nut (L.H. Thread)	50	P01442	4	Flatwasher, 1" SAE
11	P25789	1	Jam Nut	51	P01535	1	Nut, Hx., 5/8"-18
12	P25788	4	Bearing, Spherical	52	P01598	2	Jam Nut, Hx., 1"-14
13	P25787	2	Thrust Washer	53	P01635	2	Castle Nut, Hx., 5/8"-18
14	P25786	2	Thrust Washer				
15	P25748	12	Machinery Bushing				
16	P25741	8	Spacer				
17*	P25737	1	Housing, Spindle - R.H.	REF	P25077	-	Hub Assembly (Includes Items 22 - 25, 30, 31, & 40.)
18	P25736	1	Housing, Spindle - L.H.				
19	P25740	2	Spindle				
20	P25079	2	Oil Seal				
21	P25076	2	Bearing, Inner				
22	P25083	2	Cup, Inner				
23	P25084	16	Wheel Lug Bolt				
24	P25082	2	Hub, Wheel				
25	P24329	2	Cup, Outer				
26	P24324	2	Bearing, Outer				
27	P25081	2	Washer, Bearing				
28	P25080	2	Nut, Hub Retainer				
29	P24321	2	Cap, Wheel Hub				
30	P25085	16	Washer, Lug Nut				
31	P25086	16	Lug Nut				
32	P25387	2	Valve Stem				
33	P28230	2	Tire, 14.0 x 17.5				
34	23412B	2	Rim, Wheel				
35	23503A	1	Trunion Pin				
36	19110A	2	Shim, 3/16"				
37	P20431	A/R	Shim, 14 GA.				
38	P19108	2	Bushing, Axle Pivot				
39	P11430	4	Bushing, Self - Align				
40	P15272	2	Grease Zerk				
				NOTES: A) See Parts Breakdown for Service Parts.			
				* Not Illustrated			
				522 S/N 101 THRU			
				(STANDARD) REAR STEER AXLE ASSEMBLY			

23462



SEE STEER CYLINDER ASSEMBLY
FOR PARTS BREAKDOWN

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)P21737	2	Steer Cylinder	40	P18960	2	Connector, O-Ring
2	23503A	1	Trunion Pin	41	P19724	2	90° Elbow, O-Ring
3	P25794	2	Gasket, Motor	42	P19810	4	90° Elbow, O-Ring
4	P27624	2	Motor, Variable	43	P21919	2	90° Elbow, O-Ring
REF	P26001	-	Seal Kit, Variable Motor	44	P19412	2	Tee, Swivel
5	A)P25745	2	Planetary Gear Box	45	P00207	8	Bolt, Hx., 3/8"-16 x 1 3/4"
6	P20431	A/R	Shim, 14 GA	46	P00431	4	Bolt, Hx., 1/2"-13 x 1 1/2" GR B
7	19110A	2	Shim, 3/16"	47	P00602	12	Bolt, Hx., 5/8"-11 x 1 1/2"
8	P19108	2	Bushing	48	P00664	1	Bolt, Hx., 5/8"-18 x 5'
9	P16611	6	Grease Zerk	49	P00957	2	Bolt, Hx., 1"-14 x 3 1/4"
10	P27321	1	Steer Axle	50	P00960	2	Bolt, Hx., 1"-14 x 4"
11	P25739	1	Tie Rod	51	P01314	1	Lockwasher, 5/8"
12	P25789	1	Jam Nut	52	P01317	4	Lockwasher, 1"
13	P25790	1	Jam Nut (L.H. Thread)	53	P01437	4	Flatwasher, 1/2" SAE
14	P25791	1	Tie Rod End	54	P01535	1	Nut, Hx., 5/8"-18
15	P25792	1	Tie Rod End (L.H. Thread)	55	P01635	2	Castle Nut, Hx., 5/8"-18
16	P25793	2	Rubber Seal	56	P01588	2	Jam Nut, Hx., 1"-14
17	P25799	2	Washer, Hardened	57	P01658	4	Locknut, Hx., 5/8"-16
18	P25788	4	Pivot Pin	58	P03840	2	Cotter Pin, 1/8" x 1 1/2"
19	P25796	4	Jam Nut, Pivot Pin				
20	P25786	4	Bearing Spherical				
21	P25787	2	Thrust Washer				
22	P25786	2	Thrust Washer				
23	P25746	4	Flatwasher, 1" SAE				
24	P25741	8	Spacer				
25	P11430	4	Bushing, Self-Align				
26	P25387	2	Valve Stem				
27	P26230	2	Tire, Rear 14.0 x 17.5				
28	23811B	2	Rim, Wheel				
29	P17665	18	Lug Nut				
30	P25748	30	Machinery Bushing				
31	P25736	1	Box Frame, L.H.				
32*	P25373	1	Box Frame, R.H.				
33	P25729	2	Hyd. Tube, 1/2" O.D. (L.F. & R.R.)				
34	P27625	2	Hyd. Tube, 1/2" O.D. (R.F. & L.R.)				
35	P27626	2	Hyd. Tube, 3/8" O.D.				
36	P25732	2	Hyd. Tube, 1/4" O.D.				
37	P25733	2	Hyd. Tube, 3/8" O.D.				
38	P25734	4	Tube Clamp				
39	P25735	2	Tube Guard				

Notes:

A) See Parts Breakdown for Service Parts.

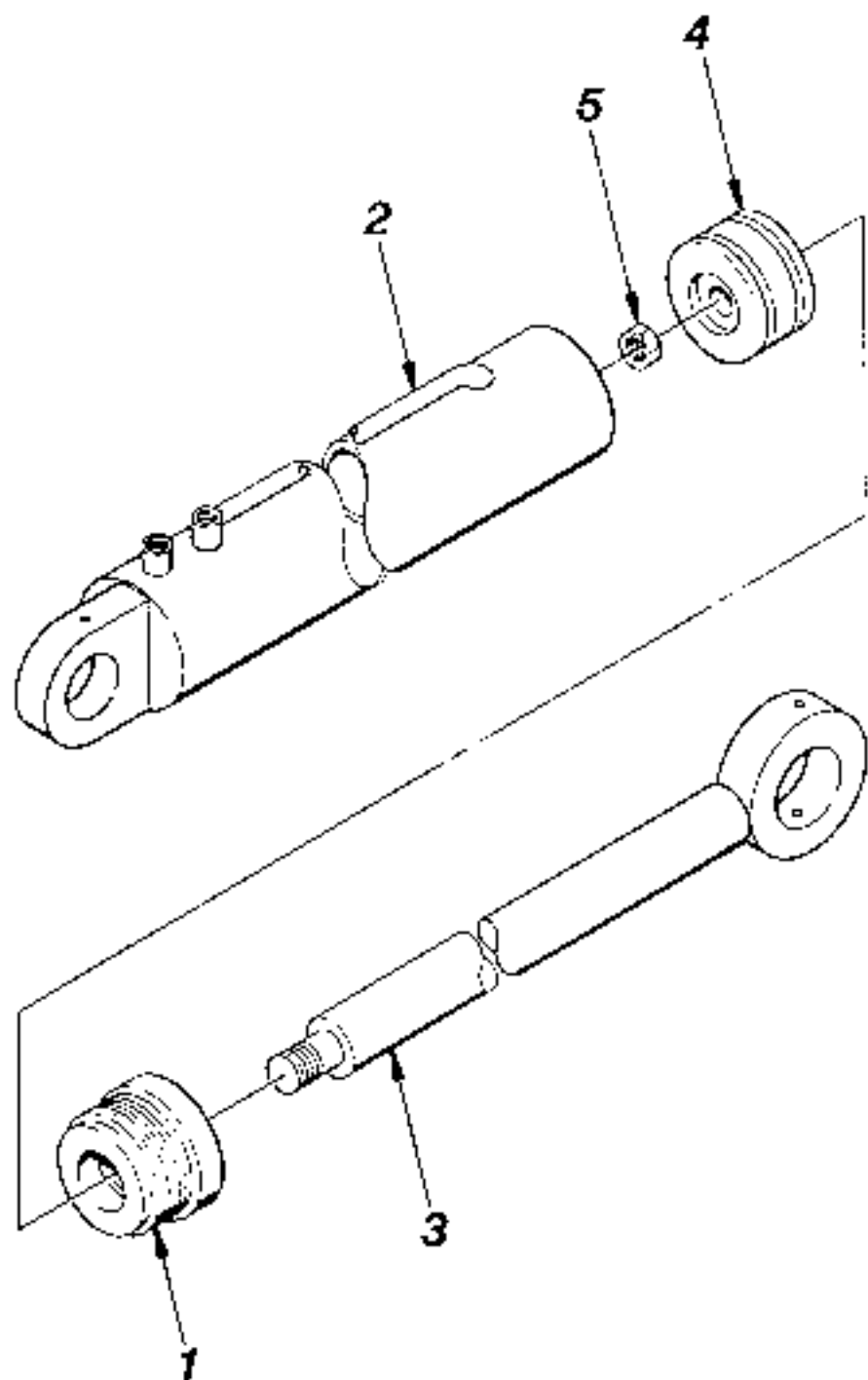
* Not Illustrated

23463

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(POWER ASSIST) REAR STEER AXLE ASSEMBLY

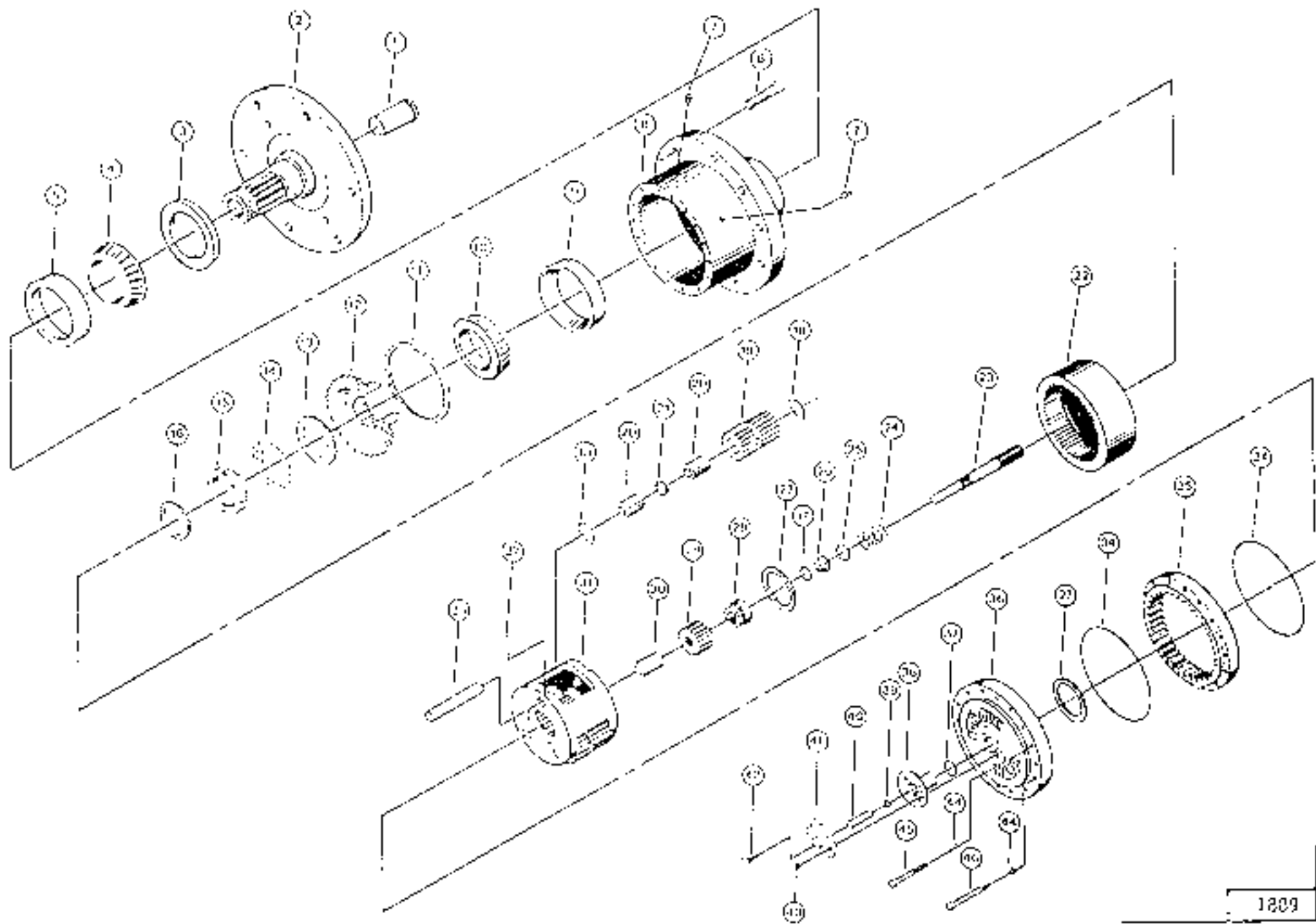


ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P21737	-	Steer Cylinder
1	P25275	1	End Gland
2	P25291	1	Tube Weldment
3	P25295	1	Shaft Weldment
4	P25277	1	Piston
5	P25290	1	Locknut
REF	P25285	1	Seal Kit

23464

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STEER CYLINDER ASSEMBLY



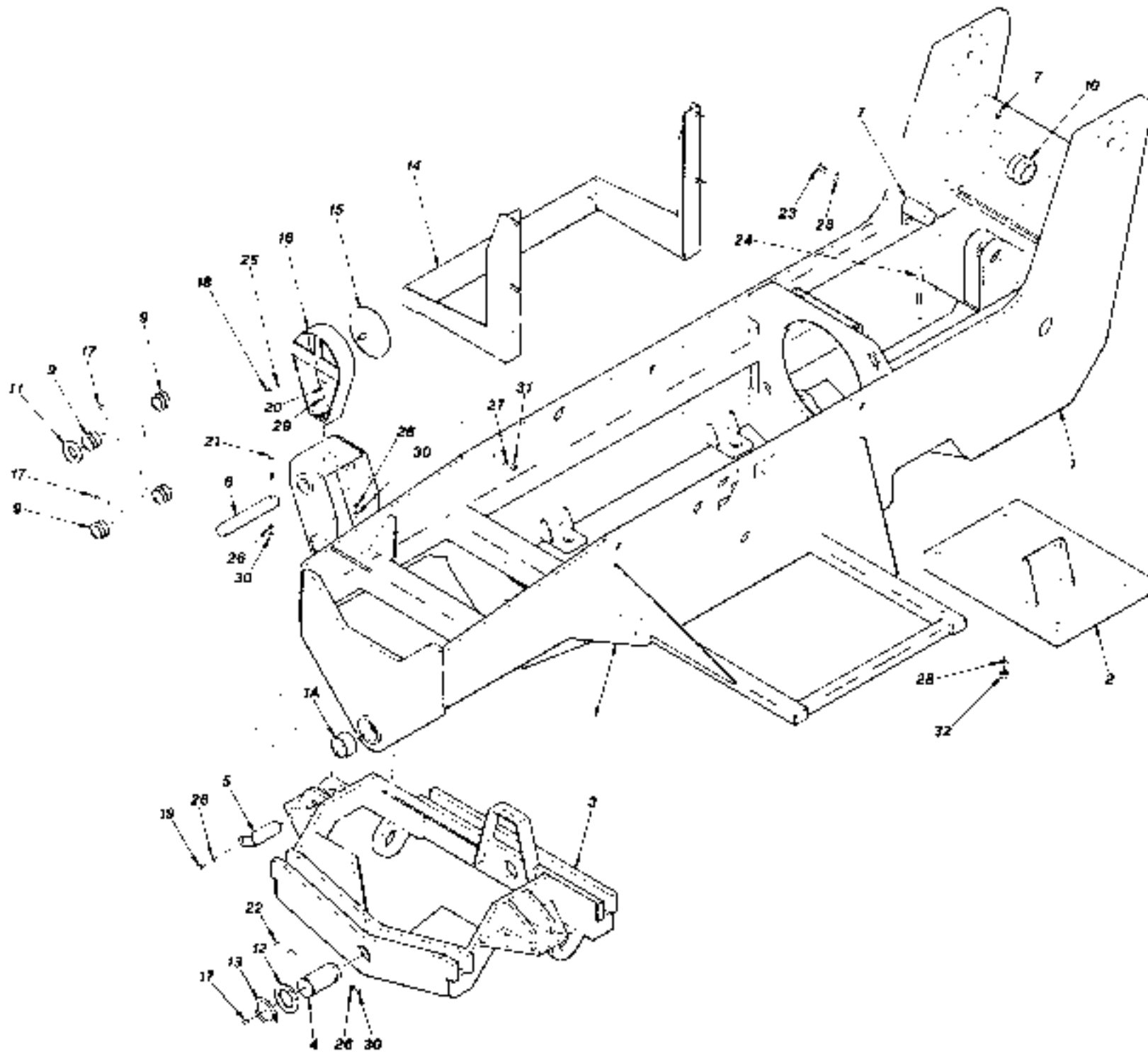
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P25745	-	Planetary Gear Box Assembly	39	N.S.S.	1	O-Ring
1	P25751	1	Coupling	40	P25770	1	Disconnect Rod
2	P25752	1	Spindle	41	P25769	1	Disconnect Cap
3	N.S.S.	1	Spindle Seal	42	P00003	4	Bolt, Hx., 1/4"-20 x 3/4"
4	P25753	1	Bearing Cone	43	P10730	1	Pipe Plug
5	P25754	1	Bearing Cup	44	P01403	16	Flatwasher, 5/16"
6	P25771	9	Stud	45	P00136	12	Bolt, Hx., 5/16"-18 x 2 1/4" GR 8
7	P10737	2	Pipe Plug	46	P25749	4	Shoulder Bolt
8	P25755	1	Hub	REF	P25750	-	Seal Kit - Includes Items 3, 14, 34, 37, & 39
9	P25756	1	Bearing Cup				
10	P25757	1	Bearing Cone				
11	P25758	1	Retaining Ring				
12	P25759	1	Internal Gear Hub				
13	P25760	1	Tongued Washer				
14	N.S.S.	1	Lockwasher				
15	P25761	1	Locknut				
16	P25763	1	Retaining Ring				
17	P25781	1	Retaining Ring				
18	P25773	6	Thrust Washer				
19	P25777	3	Cluster Gear				
20	P25774	96	Needle Roller				
21	P25775	3	Spacer				
22	P25764	1	Internal Gear				
23	P25780	1	Input Shaft				
24	P25782	1	Spring				
25	P25762	1	Spacer				
26	P25765	1	Thrust Spacer				
27	P25785	2	Thrust Washer				
28	P25766	1	Input Spacer				
29	P25783	1	Input Gear				
30	P25764	1	Thrust Spacer				
31	P25772	1	Carrier				
32	P25778	3	Roll Pin				
33	P25776	3	Planet Shaft				
34	N.S.S.	2	O-Ring				
35	P25779	1	Ring Gear				
36	P25767	1	Cover				
37	N.S.S.	1	O-Ring				
38	P25768	1	Cover Cap				

1889-A

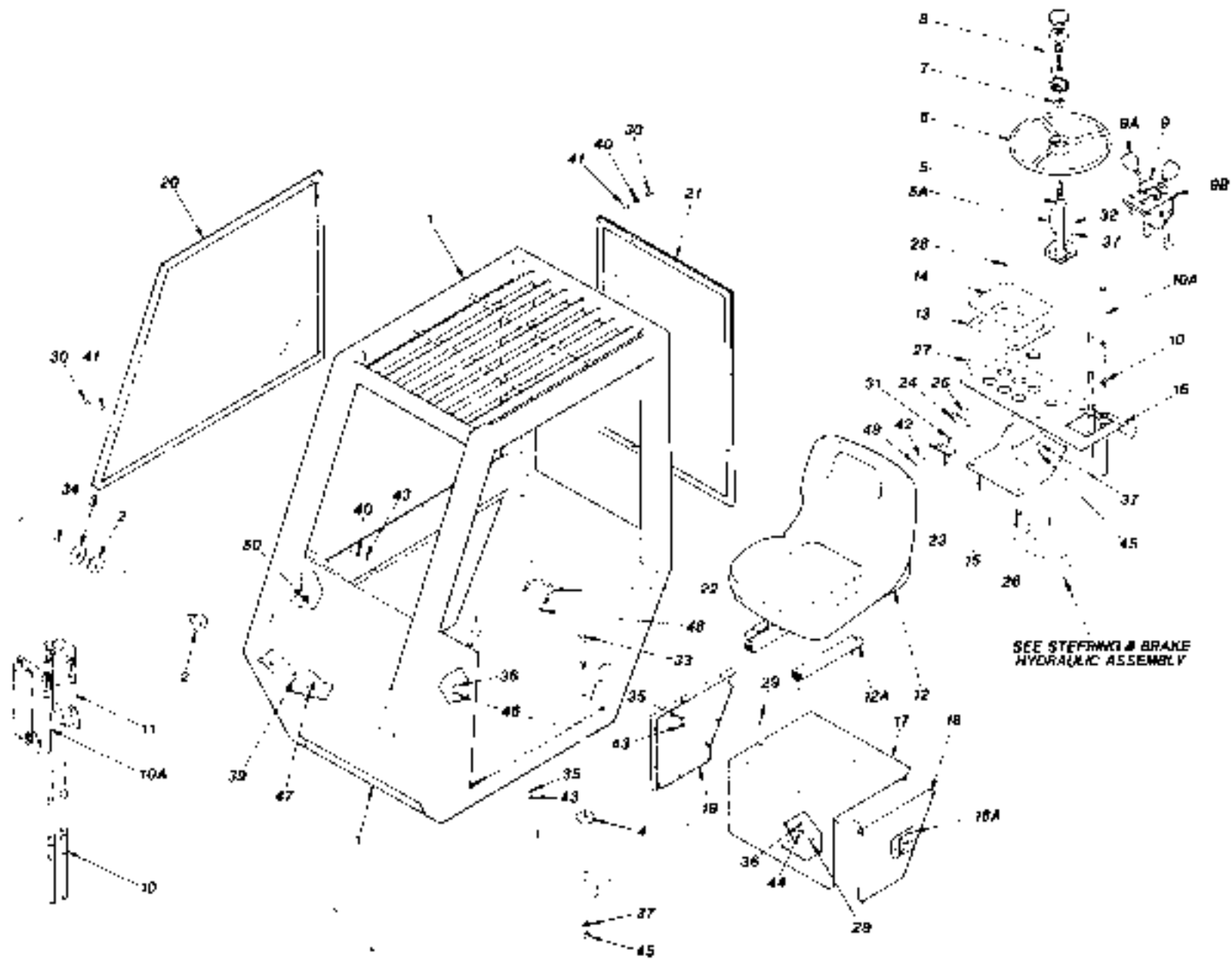
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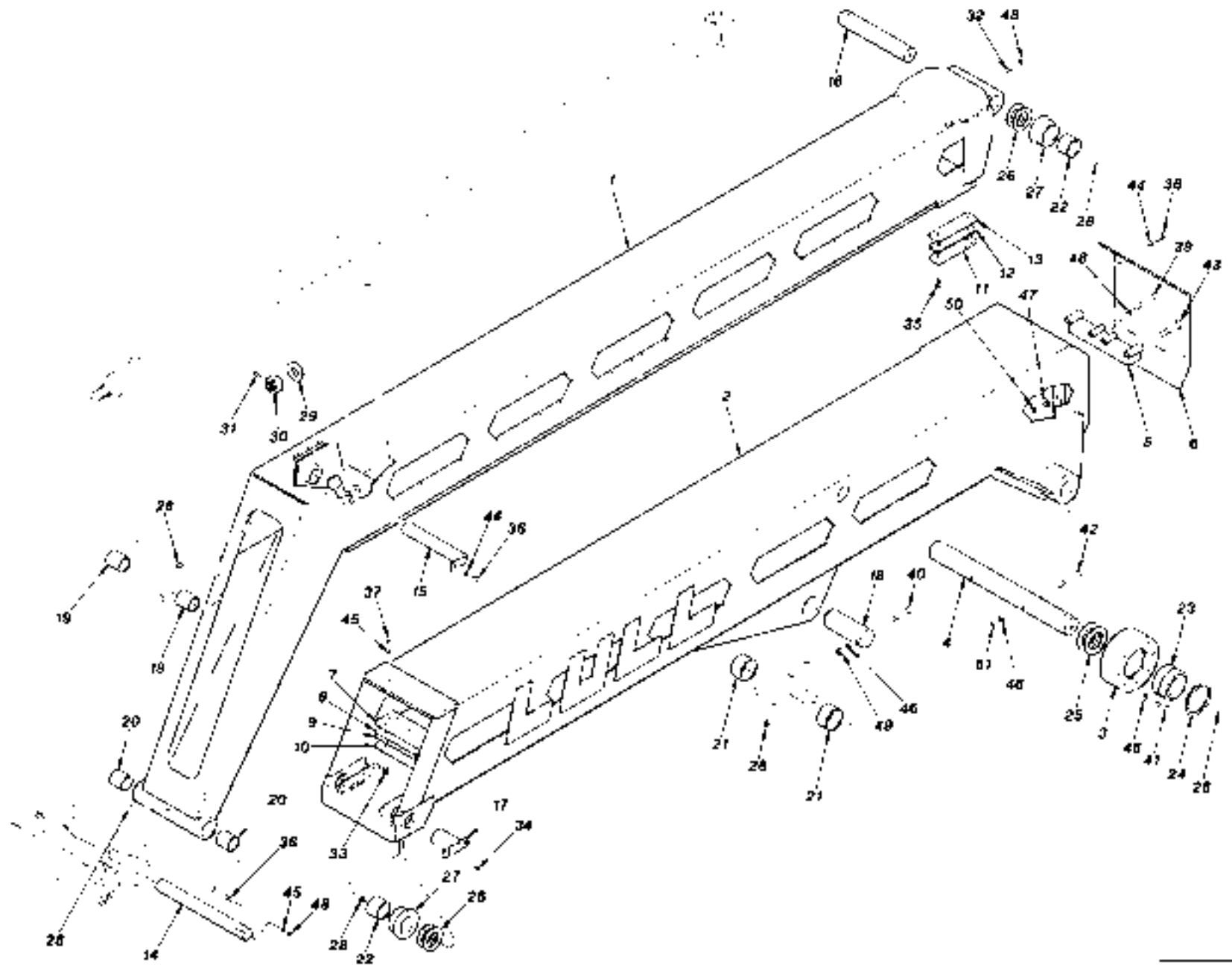
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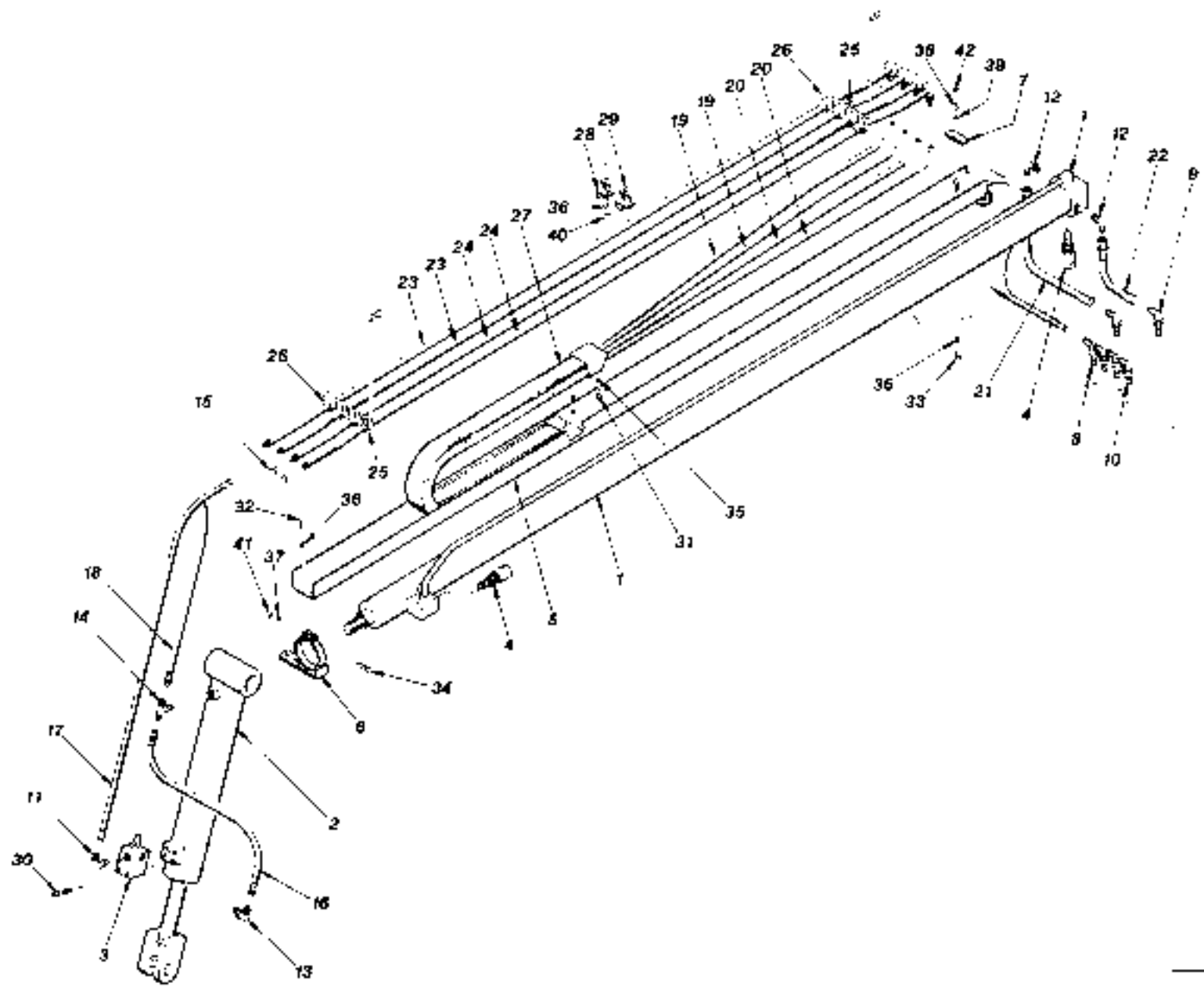
PLANETARY GEAR BOX ASSEMBLY (Rear Axle)



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23347R	1	Main Frame				
1A	P24284	REF	Bushing, Oscillation Frame				
2	24432B	1	Counterweight				
3	23337D	1	Oscillation Frame				
4	21183B	2	Pin, Oscillation Frame				
5	18336A	1	Pin, Frame Tilt-Lower				
6	A)24732A	1	Pin, Frame Tilt-Upper				
7	18082A	1	Pin, Hoist Cylinder				
9	P19106	4	Bushing, Frame Tilt Cylinder				
10	P20484	1	Bushing, Hoist Cylinder				
11	P21586	A/R	Shim, 14 GA.				
12	P24746	2	Shim, 14 GA.				
13	P21693	2	Retaining Ring				
14	P26266	1	Tank Support				
15	P21368	1	Mirror				
16	21355B	1	Bracket, Mirror Guard				
17	P16611	5	Grease Zerk				
18	P00003	1	Bolt, Hx., 1/4"-20 x 3/4"				
19	P00202	1	Bolt, Hx., 3/8"-16 x 3/4"				
20	P00205	4	Bolt, Hx., 3/8"-16 x 1 1/4"				
21	P00216	1	Bolt, Hx., 3/8"-16 x 3 3/4"				
22	P00217	2	Bolt, Hx., 3/8"-16 x 4 1/2"				
23	P00601	1	Bolt, Hx., 5/8"-11 x 1 1/4"				
24	P00614	4	Bolt, Hx., 5/8"-11 x 5"				
25	P01308	1	Lockwasher, 1/4"				
26	P01310	8	Lockwasher, 3/8"				
27	P01312	4	Lockwasher, 1/2"				
28	P01314	6	Lockwasher, 5/8"				
29	P01404	4	Flatwasher, 5/8"				
30	P01508	7	Nut, Hx., 3/8"-16				
31	P01510	4	Nut, Hx., 1/2"-13				
32	P01512	4	Nut, Hx., 5/8"-11				
				NOTES: A) For S/N 101 - 239, use 18339A.			
				23465			
				522 S/N 101 THRU			
				MAIN FRAME ASSEMBLY			
				4/69			







ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)P27750	1	Boom Extension Cylinder	41	P01508	1	Nut. Hx., 3/8"-16
2	P26503	1	Front Carriage Tilt Cylinder	42	P01558	1	Jam Nut, Hx., 1/4"-20
3	P26325	1	Counterbalance Valve				
4	B)P26335	2	Counterbalance Valve				
5	23364C	1	Hose Tray				
6	23365B	1	Support Mount				
7	23369A	1	Hold Down, Hose				
8	P18947	2	45° Elbow, Bulkhead				
9	P18950	2	45° Elbow, Bulkhead				
10	P21580	2	45° Elbow, Bulkhead				
11	P18935	1	90° Elbow, O-Ring				
12	P19055	2	90° Elbow, O-Ring				
13	P21919	1	90° Elbow, O-Ring				
14	P18958	1	Tea, O-Ring				
15	P21627	2	Cap, Hex				
16	P23654	1	Hyd. Hose .25' x 19'				
17	P19498	1	Hyd. Hose .38' x 36'				
18	P27116	1	Hyd. Hose .38' x 16'				
19	P26121	2	Hyd. Hose .38' x 176				
20	P26122	2	Hyd. Hose .50' x 177"				
21	P26120	1	Hyd. Hose .75' x 14'				
22	P26119	1	Hyd. Hose .75' x 12'				
23	P26262	2	Hyd. Tube .38" O.D.				
24	P26261	2	Hyd. Tube .50" O.D.				
25	P20487	4	Tube Clamp, 1/2' Tube				
26	P26015	4	Tube Clamp, 3/8' Tube				
27	P26510	1	Tube, Hose Carrier				
28	P17553	2	Clamp, 3/8' Tube				
29	P17809	2	Clamp, 1/2' Tube				
30	P01791	4	Bolt, Socket Hd., 5/16"-18 x 2 1/4"				
31	P00001	4	Bolt, Hx., 1/4"-20 x 1/2"				
32	P00100	2	Bolt, Hx., 5/16"-18 x 1/2"				
33	P00102	2	Bolt, Hx., 5/16"-18 x 3/4"				
34	P00207	1	Bolt, Hx., 3/8"-16 x 1 3/4"				
35	P01308	4	Lockwasher, 1/4"				
36	P01309	6	Lockwasher, 5/16"				
37	P01310	1	Lockwasher, 3/8"				
38	P01357	1	Starwasher, 1/4"				
39	P01506	1	Nut, Hx., 1/4"-20				
40	P01507	2	Nut, Hx., 5/16"-18				

NOTES:

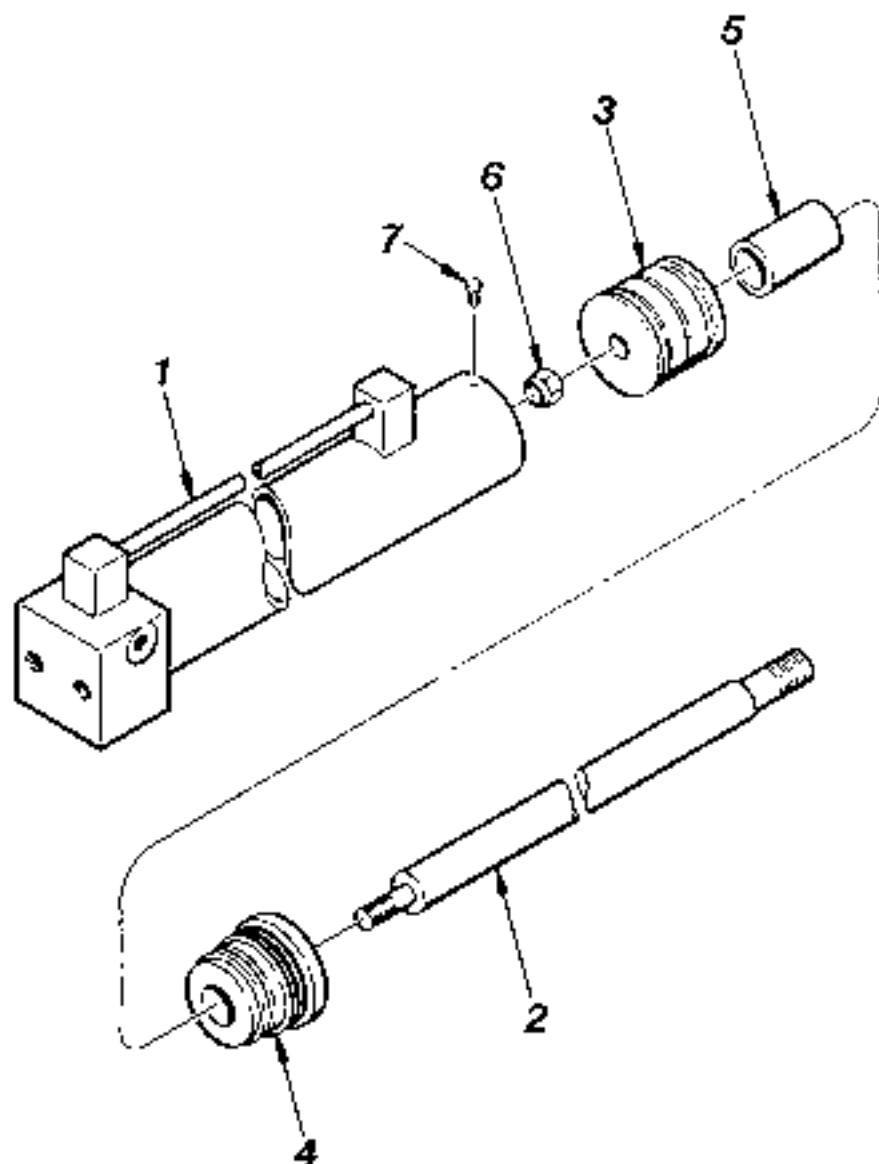
- A) For S/N 101 - 175, Replacement Cylinder Requires 2 (P26335) Counterbalance Valves.
- B) For S/N 101 - 175, Qty. Required was 1.

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4/89

BOOM HYDRAULIC ASSEMBLY



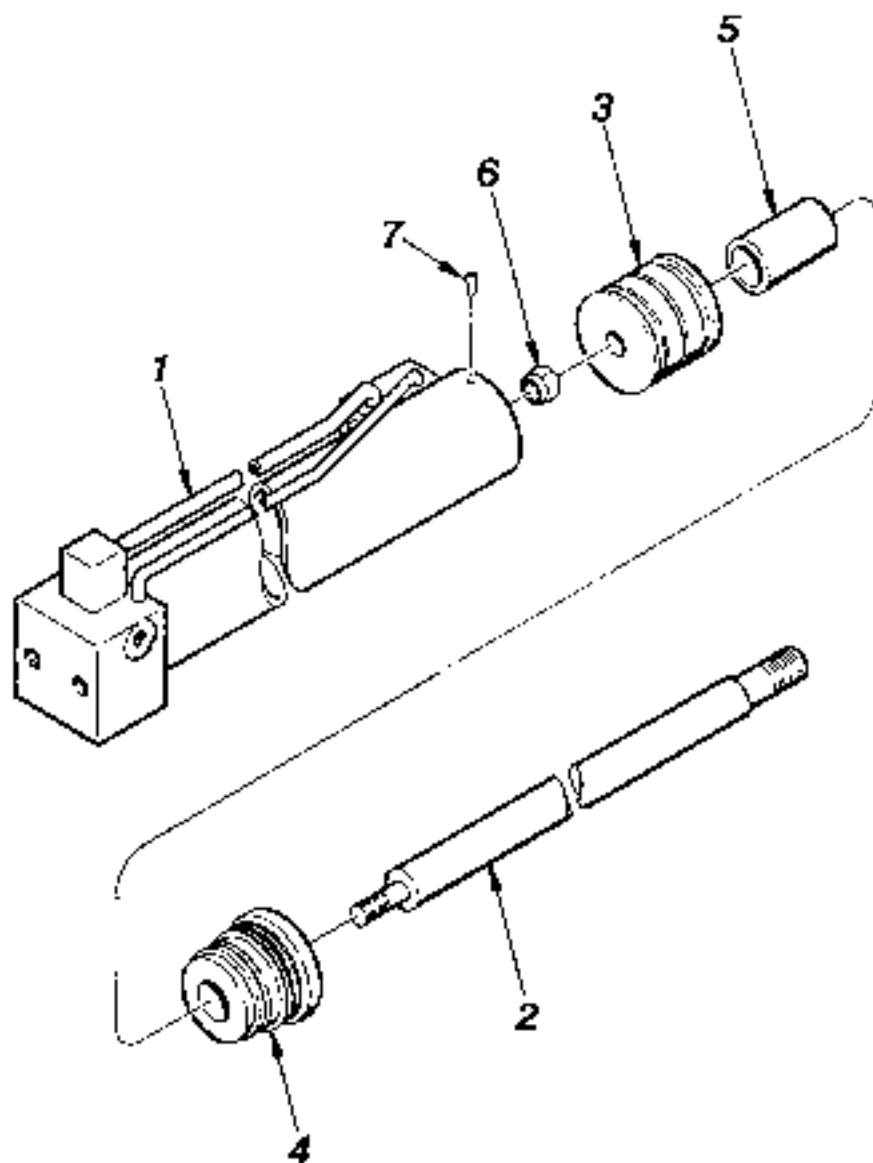
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P26548	-	Boom Extension Cylinder
1	A)P27213	1	Barrel Weldment
2	P26370	1	Rod, Cylinder
3	P24389	1	Piston
4	P24390	1	Rod Bearing
5	B)P27259	1	Stroke Limiter
6	P27278	1	Locknut
7	P24889	1	Capscrew
REF	P24440	1	Seal Kit

NOTES:

A) For S/N 101, use P26361.

B) For S/N 101, use P24407.

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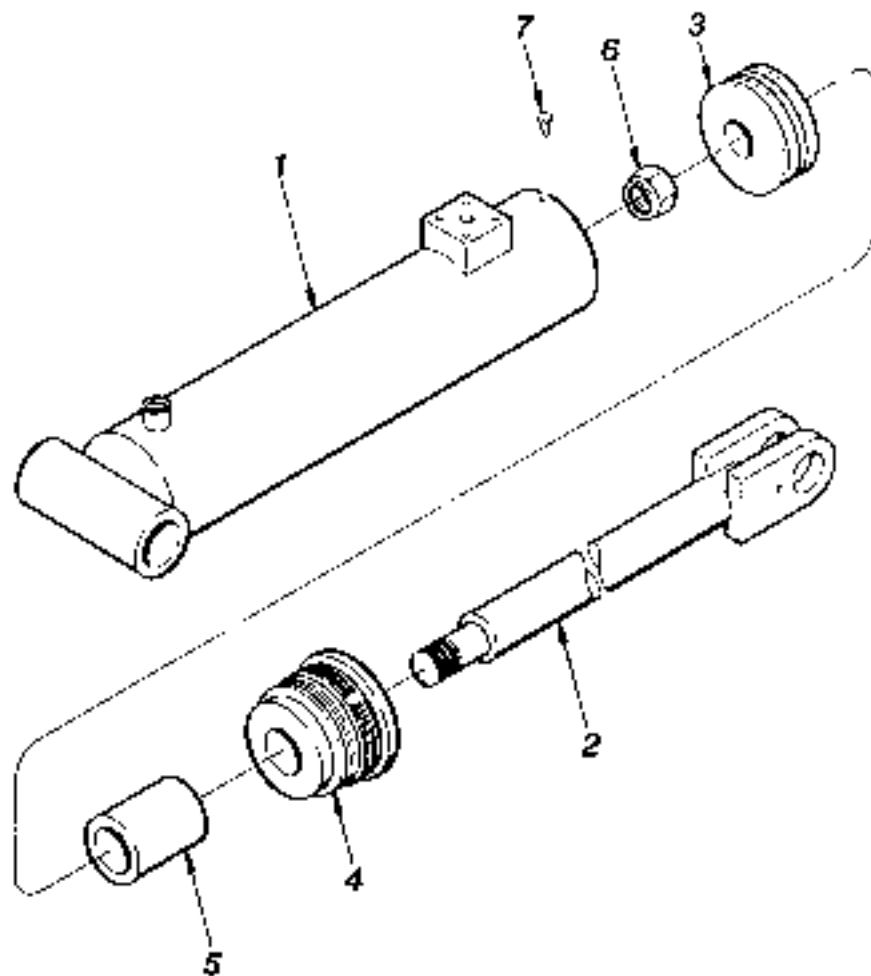
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P27750	-	Boom Extension Cylinder
1	P27221	1	Barrel Weldment
2	P27241	1	Rod, Cylinder
3	P24389	1	Piston
4	P24390	1	Rod Bearing
5	P27854	1	Stroke Limiter
6	P27278	1	Locknut
7	P27852	1	Setscrew
REF	P24440	1	Seal Kit

23469-1

522 S/N 176 THRU

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BOOM EXTENSION CYLINDER ASSEMBLY



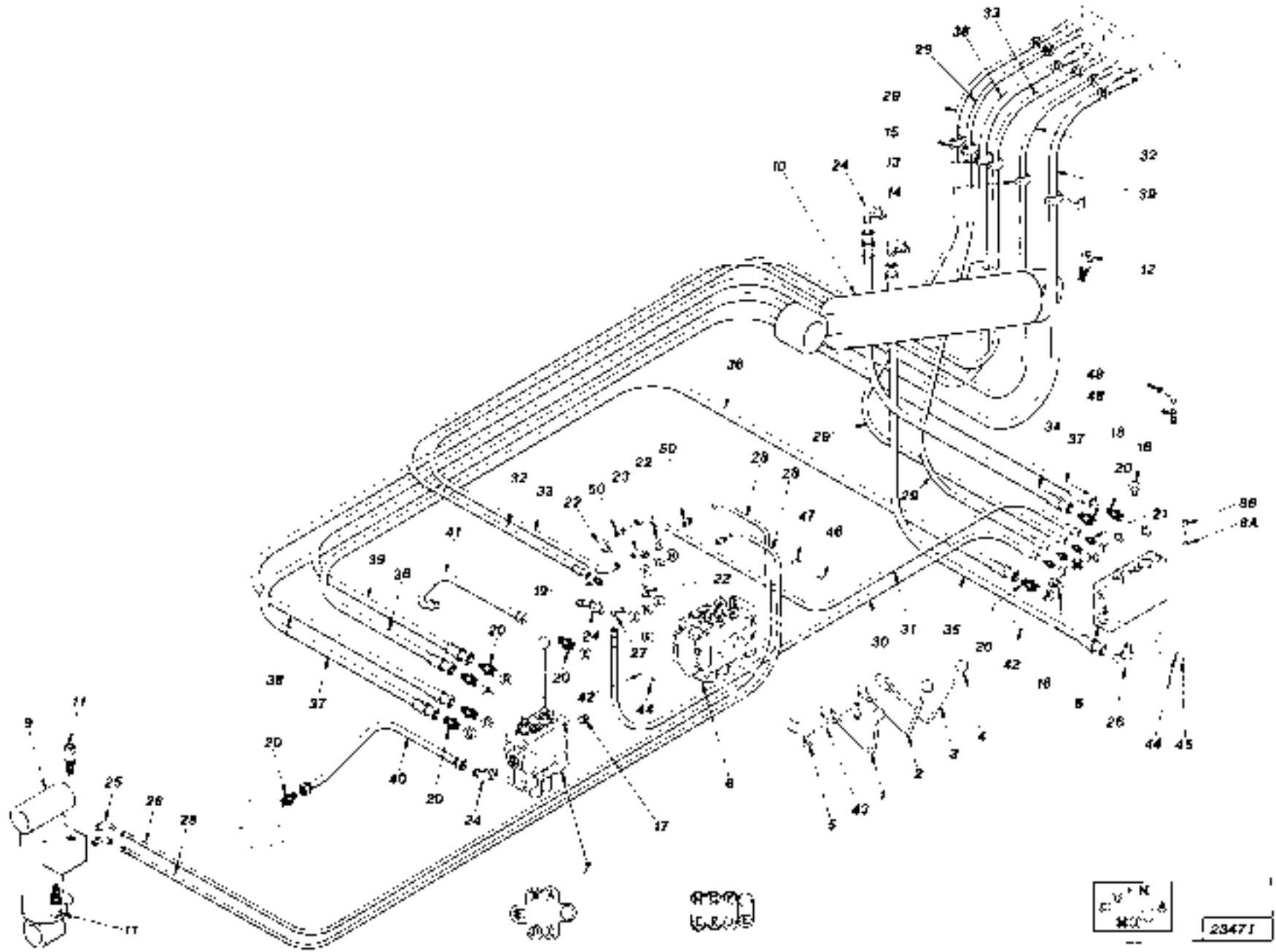
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P26503	-	Front Carriage Tilt Cylinder
1	P27207	1	Barrel Weldment
2	P27231	1	Rod Weldment
3	P27263	1	Piston
4	P26380	1	Rod Bearing
5	P24918	1	Stroke Limiter
6	P27279	1	Locknut
7	P24889	1	Capscrew
REF	P27288	1	Seal Kit

Use as follows for S/N 101 only.

REF	P26258	-	Front Carriage Tilt Cylinder
1	P26359	1	Barrel Weldment
2	P26372	1	Rod Weldment
3	P24387	1	Piston
4	P26385	1	Rod Bearing
5	P24918	1	Stroke Limiter
6*	P24435	1	Setscrew
7	P24889	1	Capscrew
REF	P26399	1	Seal Kit

* Not Illustrated

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C. V. N.
 M. C. A.

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ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23541A	1	Handle, Carriage Tilt	37	P26628	1	Hyd. Hose .75' x 104"
2	23542A	1	Handle, Auxiliary	38	G)P26605	1	Hyd. Hose .62' x 148"
3	23543A	1	Handle, Frame Tilt	39	G)P26606	1	Hyd. Hose .62' x 156"
4	P18721	3	Knob, Handle	40	P26583	1	Hyd. Tube .75" O.D.
5	P27957	REF	Clevis Kit	41	P26594	1	Hyd. Tube .75" O.D.
6	P26729	1	Valve, 3 Spool - Main Controls	42	P00111	5	Boil. Hx., 5/16"-18 x 2 3/4'
7	24372B	1	Valve, 2 Spool - Boom Controls	43	P01402	A/R	Flatwasher, 1/4'
8	P26241	1	Valve, Self-Leveling	44	P01309	5	Lockwasher, 5/16"
8A	A)P27983	REF	Sealing Nut (2 used per Valve)	45	P01507	2	Nut, Hx., 5/16"-18
8B	A)P27984	REF	Adjusting Screw (2 used per Valve)	46	P03810	REF	Cotter Pin, 1/16" x 1/2"
9	P26259	1	Frame Tilt Cylinder	47	P10512	REF	Clevis Pin
10	B)P27908	1	Hoist Cylinder	48	H)P27378	1	Nipple, Pressure Check
11	P21140	2	Counterbalance Valve	49	H)P27805	1	Dust Cap
12	C)P27827	1	Counterbalance Valve	50	J)P26605	-	Reducer, Swivel
13	P26200	2	Clamp, .62' Hyd. Hose				
	D)P20486	-	Clamp, .75" Hyd. Hose				
14	P20468	2	Clamp, .50' Hyd. Hose				
15	P20485	2	Clamp, .38' Hyd. Hose	REF			Seal Kit - 3 Spool Valve - Main Controls
	D)P20466	-	Clamp, .38' Hyd. Hose		P21768	-	Valve Section (1 Req. per Section)
16	P15477	2	Plug, O-Ring		P21759	-	Main Relief
17	P26697	REF	Pressure Plug				
18	P23901	1	Connector, O-Ring	REF	25935A	-	Seal Kit - 2 Spool Valve - Boom Controls
19	P15406	1	Connector, O-Ring				
20	P17805	8	Connector, O-Ring				
21	P18944	4	Connector, O-Ring				
22	E)P26601	3	90° Elbow, O-Ring				
23	P19813	1	45° Elbow, O-Ring				
24	P17802	4	90° Elbow, O-Ring				
25	P18935	2	90° Elbow, O-Ring				
26	P18055	1	90° Elbow, O-Ring				
27	P25247	1	90° Elbow, O-Ring				
28	F)P28629	2	Hyd. Hose .25' x 116"				
29	P26634	2	Hyd. Hose .38' x 66"				
30	P27120	1	Hyd. Hose .38' x 89"				
31	P26639	1	Hyd. Hose .38' x 92"				
32	P26637	1	Hyd. Hose .50' x 127"				
33	P26638	1	Hyd. Hose .50' x 132"				
34	P26633	1	Hyd. Hose .75' x 35"				
35	P26632	1	Hyd. Hose .75' x 41"				
36	P26629	1	Hyd. Hose .75' x 99"				

NOTES:

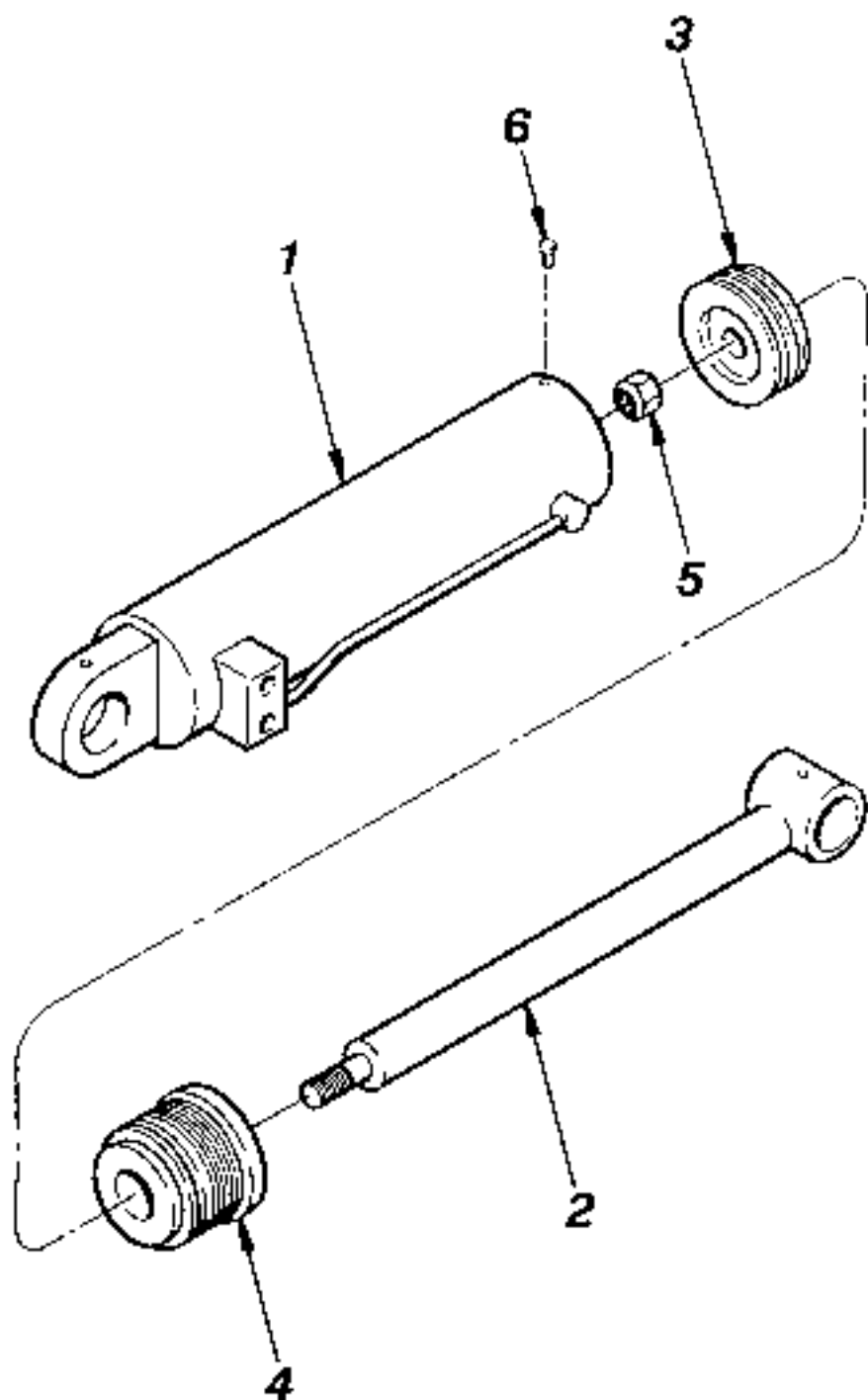
- A) Supersedes Internal Type Adjustment.
- B) For S/N 101 - 236, P27827 Counterbalance Valve must be ordered in conjunction with Cylinder.
- C) For S/N 101 - 236, use P26335.
- D) Used Early Production.
- E) For S/N 101 - 336, use P25247.
- F) For S/N 101 - 336, use P26636.
- G) Supersedes .75" Hyd. Hose.
- H) Production Initiated S/N 267.
- J) Used S/N 101 - 336 only.

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CONTROL HYDRAULIC ASSEMBLY



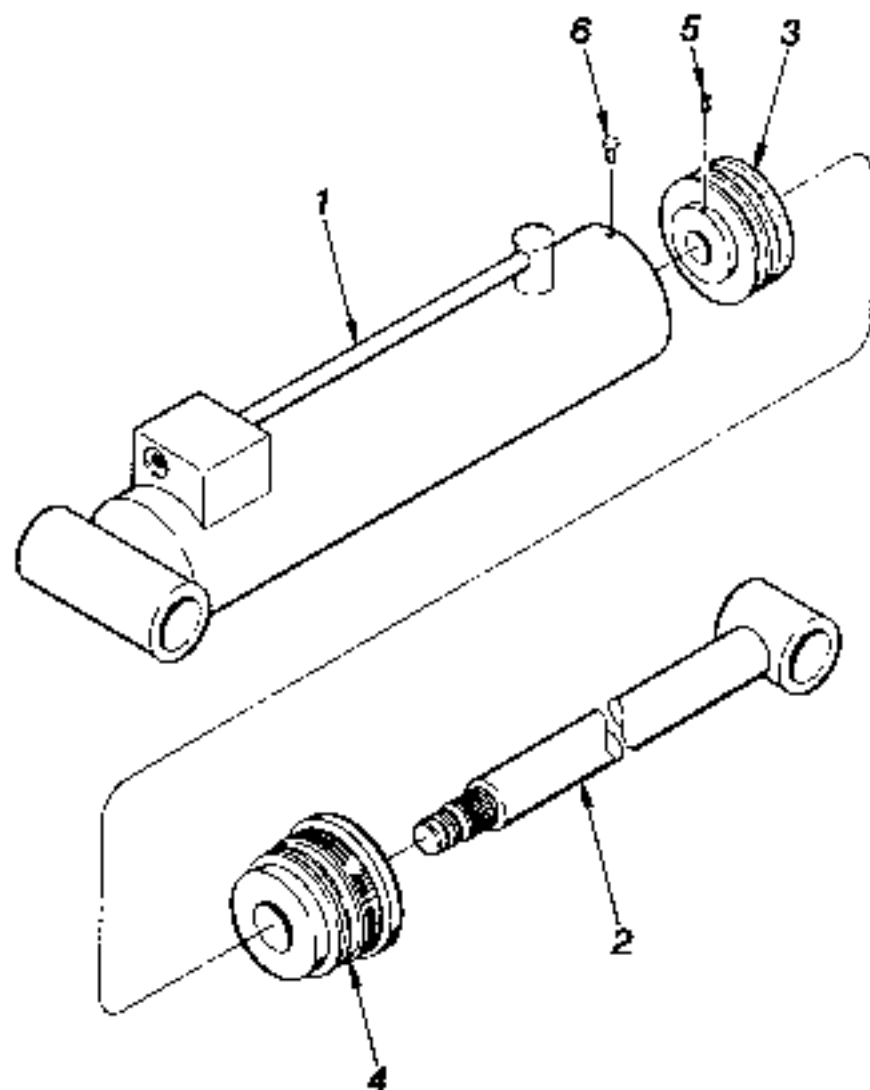
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P27908	-	Hoist Cylinder
1	P27208	1	Barrel Weldment
2	P27232	1	Rod Weldment
3	P27265	1	Piston
4	P27272	1	Rod Bearing
5	P27280	1	Locknut
6	P24889	1	Capscrew
REF	P27289	1	Seal Kit
<u>Use as follows for S/N 101 only.</u>			
REF	P26256	-	Hoist Cylinder
1	P26360	1	Barrel Weldment
2	P26373	1	Rod Weldment
3	P24384	1	Piston
4	P26382	1	Rod Bearing
5*	P24435	1	Setscrew
6	P24889	1	Capscrew
REF	P26398	1	Seal Kit
* Not Illustrated			

23472

522 S/N 101 THRU

4/89

HOIST CYLINDER ASSEMBLY



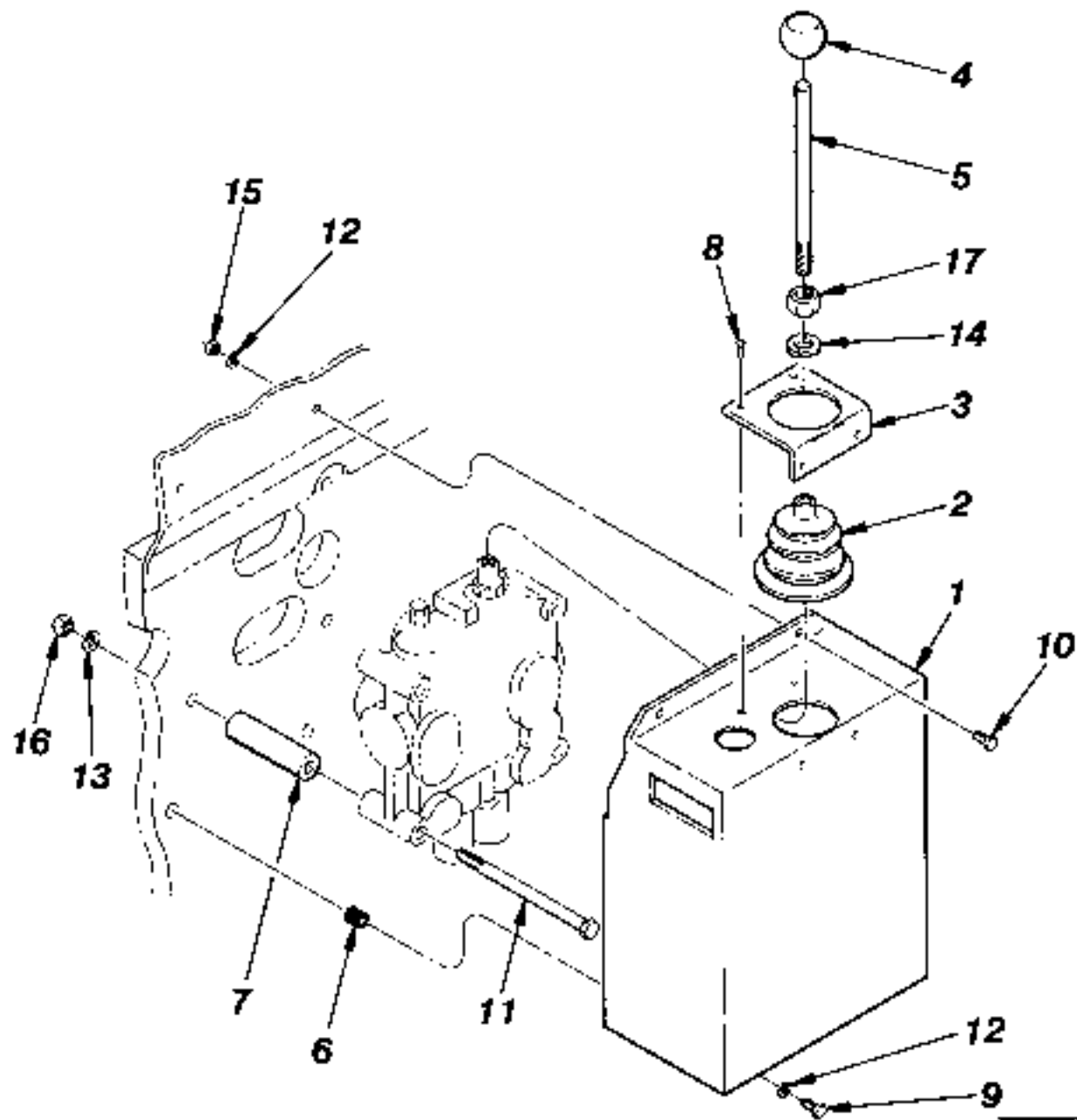
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P26259	-	Frame Tilt Cylinder
1	P26358	1	Barrel Weldment
2	P26371	1	Rod Weldment
3	P24388	1	Piston
4	P24396	1	Rod Bearing
5	P24435	1	Selfscrew
6	P24889	1	Capscrew
REF	P24437	1	Seal Kit

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522 S/N 101 THRU

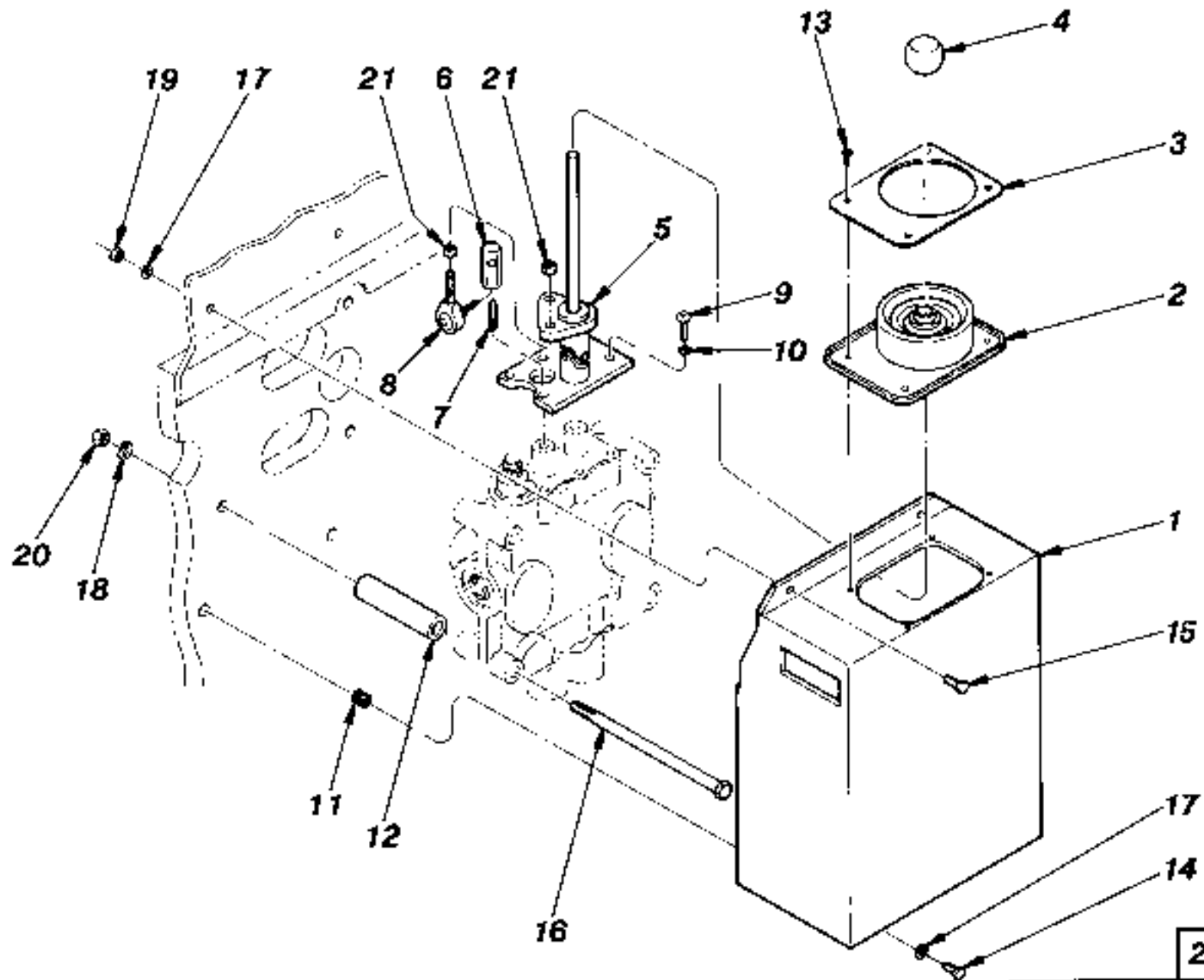
4/89

FRAME TILT CYLINDER ASSEMBLY

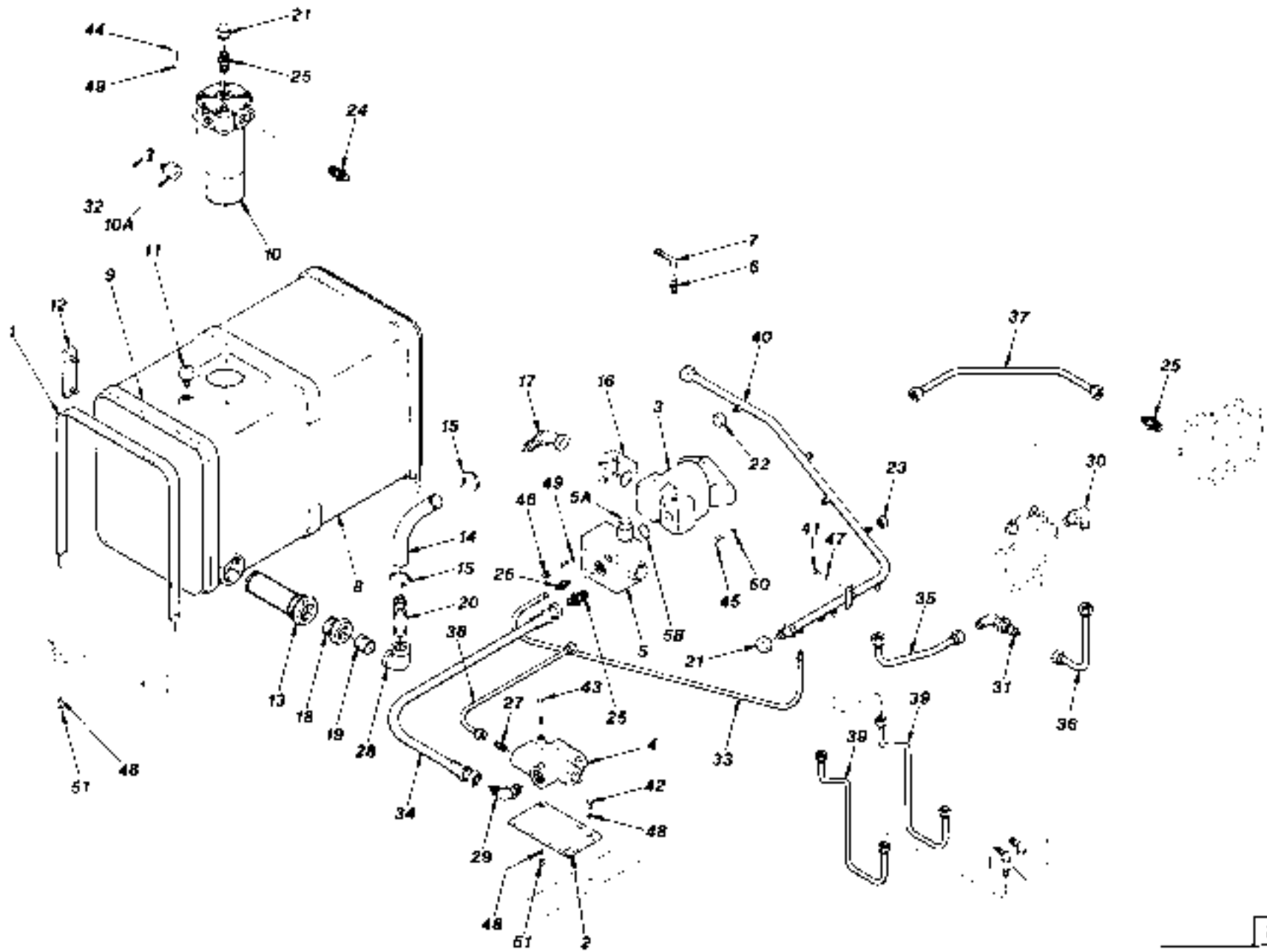


23474

ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23598D	1	Cover, Valve				
2	P26073	1	Boot, Joystick				
3	22B19A	1	Hold Down Plate, Boot				
4	A)P18721	1	Knob, Handle				
5	B)23082A	1	Handle, Joystick				
6	P26023	2	Drive Sert				
7	C)23540A	3	Spacer, Valve				
8	P03528	4	Tapping Screw, #10-24 x 1/2"				
9	P00001	2	Bolt, Hx., 1/4"-20 x 1/2"				
10	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"				
11	C)P00223	3	Bolt, Hx., 3/8"-16 x 7 1/2"				
12	P01308	4	Lockwasher, 1/4"				
13	C)P01310	3	Lockwasher, 3/8"				
14	D)P01310	1	Lockwasher, 3/8"				
15	P01506	2	Nut, Hx., 1/4"-20				
16	C)P01508	3	Nut, Hx., 3/8"-16				
17	E)P01508	1	Nut, Hx., 3/8"-16				
REF	25768A	-	Joystick Handle Replacement Kit (Includes: Valve Linkage, Handle, Knob, Cover, & Boot)				
<p>NOTES:</p> <p>A) For S/N 183 - 196, use P27609.</p> <p>B) For S/N 183 - 196, use 25243A.</p> <p>C) Early Production used Qty. of 4.</p> <p>D) For S/N 183 - 196, use P01314 - 5/8" Lockwasher.</p> <p>E) For S/N 183 - 196, use P01585 - 5/8" Jam Nut.</p>							
							23474
522 S/N 101 - 196 4/89							
JOYSTICK HANDLE AND COVER ASSEMBLY							



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	25470D	1	Cover, Valve				
2	P27648	1	Boot, Joystick				
3	P27649	1	Hold Down Plate, Boot				
4	P18721	1	Knob, Handle				
5	A)26348C	1	Handle, Joystick - Bent				
	25548C	-	Handle, Joystick - Straight				
6	B)25606B	2	Mount Block, Valve Spool				
7	C)P27962	2	Slotted Setscrew, 3/8"-16 x 1 1/4" GR 8				
8	P27828	2	Ball Joint				
9	P03196	5	Capscrew, Button Hd., 1/4"-20 x 3/4"				
10	P01357	5	Starwasher, 1/4" - External				
11	P26023	2	Drive Sert				
12	23540A	3	Spacer, Valve				
13	P03528	4	Tapping Screw, Slot. Rd. Hd., #10-24 x 1/2"				
14	P00001	2	Bolt, Hx., 1/4"-20 x 1/2"				
15	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"				
16	P00223	3	Bolt, Hx., 3/8"-16 x 7 1/2"				
17	P01308	4	Lockwasher, 1/4"				
18	P01310	3	Lockwasher, 3/8"				
19	P01506	2	Nut, Hx., 1/4"-20				
20	P01508	3	Nut, Hx., 3/8"-16				
21	P01530	4	Nut, Hx., 5/16"-24				
<p>NOTES:</p> <p>A) Production Initiated S/N 293, 299 THRU.</p> <p>B) For S/N 197 - 236, 3/8" Setscrew (Item #7) must be ordered in conjunction with replacement Mount Block, also refer to note "C".</p> <p>C) For repair on S/N 197 - 236, Valve Spools are tapped 1/4"-20. To rework, drill 5/16" dia. x 1" deep, tap 3/8"-16.</p>							
				23474-1			
				522 S/N 197 THRU			
				4/89			
JOYSTICK HANDLE AND COVER ASSEMBLY							



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	234426	2	Strap Tank	33	P26840	1	Hyd. Hose .38" x 22'
2	23580A	1	Mounting Plate, Valve	34	P27432	1	Hyd. Hose .75" x 17'
3	P26236	1	Pump, Gear	35	P26592	1	Hyd. Tube .75" O.D.
4	P19292	1	Priority Valve, Steer	36	P26593	1	Hyd. Tube .75" O.D.
5	P25456	1	Priority Valve, Brake	37	P26595	1	Hyd. Tube .75" O.D.
5A	P25473	-	Relief Valve	38	P26596	1	Hyd. Tube .38" O.D.
5B	P11169	-	O-Ring	39	P26659	2	Hyd. Tube .50" O.D.
6	AJP27378	1	Nipple, Pressure Check	40	P26587	1	Hyd. Tube 1.25" O.D.
7	AJP27805	1	Dust Plug	41	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"
8	P26082	1	Tank, Fuel/Hydraulic	42	P00102	2	Bolt, Hx., 5/16"-18 x 3/4"
9	P26049	2	Belling, Chemprene	43	P00113	2	Bolt, Hx., 5/16"-18 x 3 1/4"
10	P27606	1	Return Filter, Hydraulic Oil	44	P00204	4	Bolt, Hx., 3/8"-16 x 1"
10A	P24981	-	Gauge, Pressure	45	P00403	2	Bolt, Hx., 1/2"-13 x 1 1/4"
10B*	P27810	-	Filter Element	46	P01827	4	Bolt, Socket Hd., 3/8"-16 x 3 1/4"
10C*	P26040	-	Gasket, Tank	47	P01308	2	Lockwasher, 1/4"
10D*	P26041	-	O-Ring, Element	48	P01309	8	Lockwasher, 5/16"
10E*	P26042	-	O-Ring, Head	49	P01310	8	Lockwasher, 3/8"
10F*	P26043	-	O-Ring, Cover	50	P01312	2	Lockwasher, 1/2"
11	P21674	1	Breather, Hydraulic Tank	51	P01507	6	Nut, Hx., 5/16"-18
12	P21482	1	Sight Gauge, Hyd. Oil (Includes Hardware)				
13	P19878	1	Suction Strainer				
14	N11590	1	Hose, Suction				
15	P10801	2	Hose Clamp				
16	P25711	1	Flange Kit				
17	P25712	1	Hose Adapter, 45° Flange Elbow				
18	P10705	1	Reducer Bushing				
19	P10693	1	Nipple, Close				
20	P20635	1	Swaged Hose Nipple				
21	P17785	2	Cap, Hex				
22	P18929	1	Cap, Hex				
23	P21627	1	Cap, Hex				
24	P21246	1	Connector, JIC - Pipe				
25	P17805	3	Connector, O-Ring				
26	P18936	1	Connector, O-Ring				
27	P19478	1	Connector, O-Ring				
28	P10232	1	90° Elbow, Pipe				
29	P17802	1	90° Elbow, O-Ring				
30	P20359	1	90° Elbow, O-Ring				
31	P21916	1	90° Elbow, Bulkhead				
32	P27358	1	90° Elbow, Hyd. Pipe				

NOTES:

A) Not Used In Early Production.

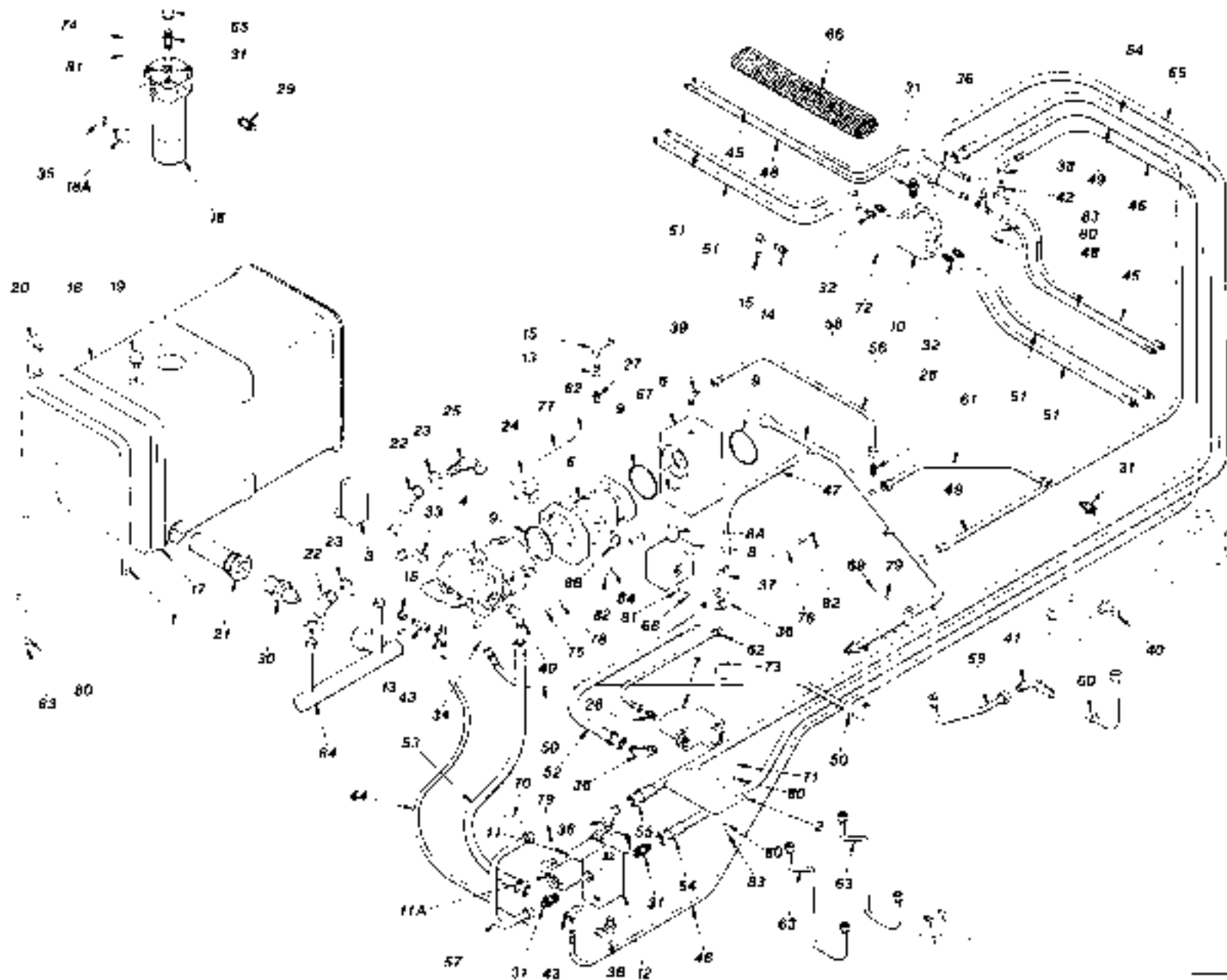
* Not Illustrated

23475

522 S/N 101 THRU

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PUMP, SUCTION - RETURN HYDRAULIC ASSEMBLY



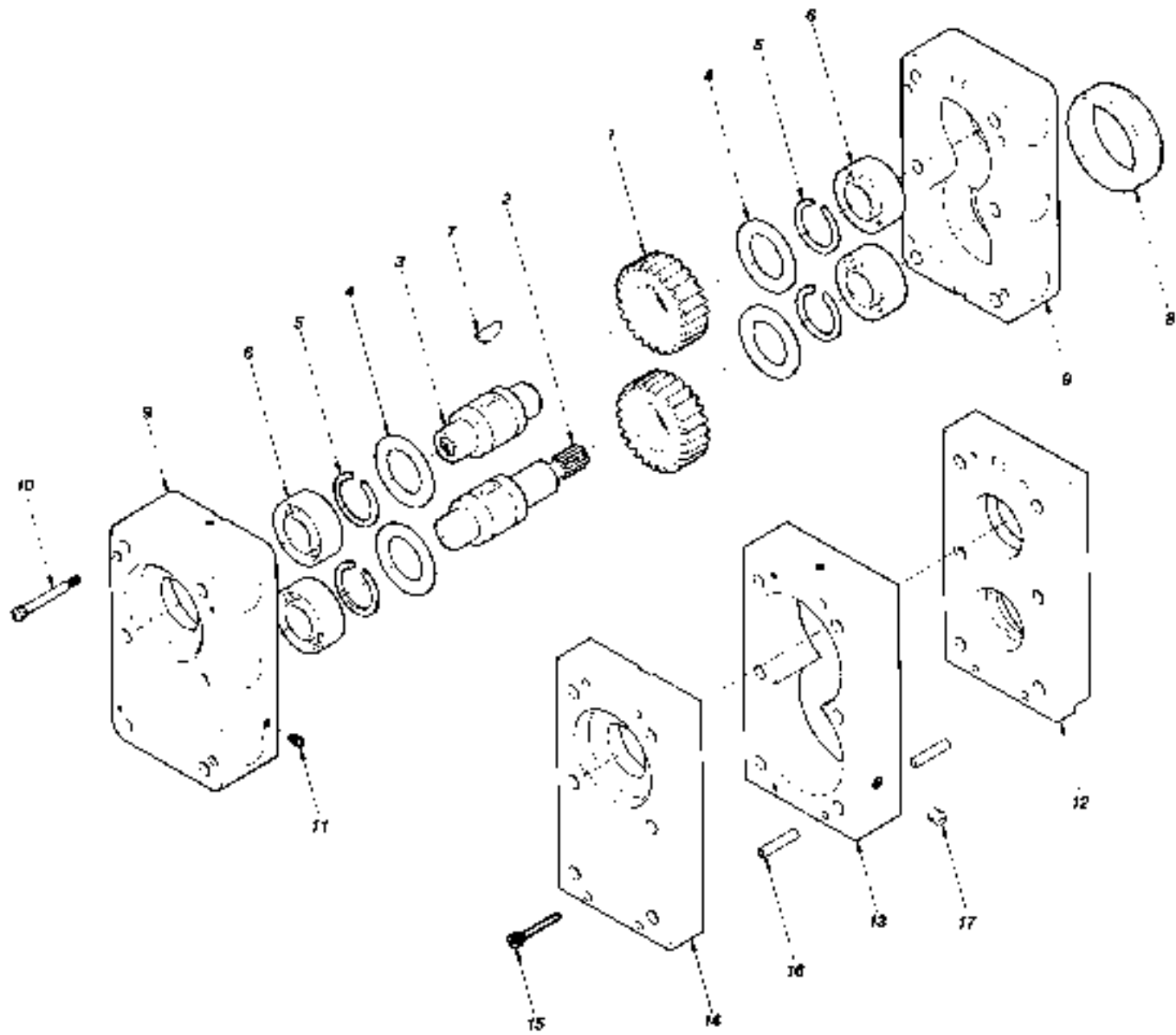
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23442B	2	Strap, Tank
2	23560A	1	Mounting Plate, Valve
3	23848B	1	Support Bracket, Pump
4	P25392	1	Pump, Piston
5	P25383	1	Pump, Gear
6	D)P26783	1	Pump, Drive
7	P18282	1	Priority Valve, Steer
8	P25456	1	Priority Valve, Brake
8A	P25473	-	Relief Valve
8B	P11169	-	O-Ring, Valve
9	P25680	3	O-Ring, Pump
10	P25725	1	Equatrac Valve
11	P25726	1	Valve, Selector
REF	P26307	-	Seal Kit, Selector Valve
11A	P26305	-	Solenoid
12	P25725	1	Subplate Valve
13	A)P27374	2	Nipple, Pressure Check
14	A)P27378	2	Nipple, Pressure Check
15	A)P27805	4	Dust Plug
16	P26082	1	Tank, Fuel/Hydraulic
17	P26049	2	Belling, Chemprene
18	P27808	1	Return Filter, Hydraulic Oil
18A	P24981	-	Gauge, Pressure
18B*	P27810	-	Filter Element
18C*	P26040	-	Gasket, Tank
18D*	P26041	-	O-Ring, Element
18E*	P26042	-	O-Ring, Head
18F*	P26043	-	O-Ring, Cover
19	P21674	1	Breather, Hydraulic Tank
20	P21482	1	Sight Gauge, Hyd. Oil (Includes Hardware)
21	P19878	1	Suction Strainer
22	N11590	2	Hose, Suction
23	P10801	4	Hose Clamp
24	P25711	1	Flange Kit
25	P25712	1	Hose Adaptor, 45° Flange Elbow
26	P19478	1	Connector, O-Ring
27	P27382	1	Connector, O-Ring
28	P18939	1	Connector, JIC - Pipe
29	P21248	1	Connector, JIC - Pipe
30	P26606	1	Connector, JIC - Pipe

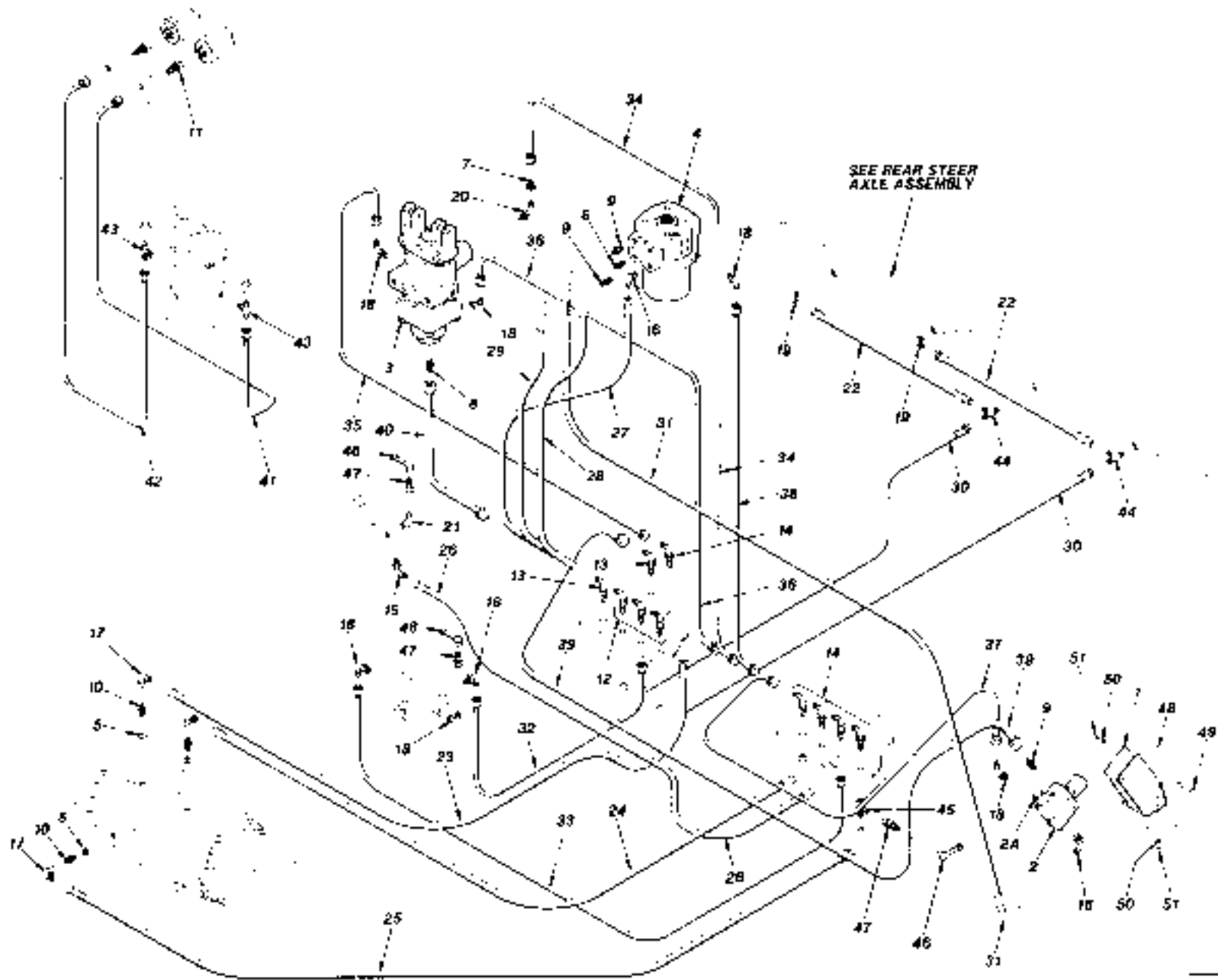
ITEM	PART NUMBER	QTY.	DESCRIPTION
31	P17805	5	Connector, O-Ring
32	P18997	4	Connector, O-Ring
33	P26705	1	45° Elbow, O-Ring To Hose
34	P19813	1	45° Elbow, O-Ring
35	P27358	1	90° Elbow, Hyd. Pipe
36	P17802	6	90° Elbow, O-Ring
37	P18935	1	90° Elbow, O-Ring
38	P18957	1	90° Elbow, Swivel
39	P19726	1	90° Elbow, JIC - Pipe
40	P20359	2	90° Elbow, O-Ring
41	P21916	1	90° Elbow, Bulkhead
42	P18942	2	Tee, Bulkhead
43	P26640	2	Tee, O-Ring
44	P28637	1	Hyd. Hose .25' x 23'
45	P27114	2	Hyd. Hose .25' x 40'
46	P26623	1	Hyd. Hose .25' x 120'
47	P27117	1	Hyd. Hose .38' x 13'
48	P27115	2	Hyd. Hose .38' x 40'
49	P26626	1	Hyd. Hose .38' x 103'
50	P26827	1	Hyd. Hose .50' x 14'
51	B)P27899	4	Hyd. Hose .50' x 36'
52	P26620	1	Hyd. Hose .75' x 18'
53	P26824	1	Hyd. Hose .75' x 22'
54	P26621	1	Hyd. Hose .75' x 112'
55	P26622	1	Hyd. Hose .75' x 114'
56	P26660	1	Hyd. Tube .38" O.D.
57	P26586	1	Hyd. Tube .75" O.D.
58	P26587	1	Hyd. Tube 1.25" O.D.
59	P26582	1	Hyd. Tube .75" O.D.
60	P26593	1	Hyd. Tube .75" O.D.
61	P26595	1	Hyd. Tube .75" O.D.
62	P26596	1	Hyd. Tube .38" O.D.
63	P26658	2	Hyd. Tube .50" O.D.
64	P26598	1	Hyd. Tube, Suction
65	P17785	1	Cap, Hex

Continued on next page

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ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
66	C)N11824	4	Hose Protection Cover, Nylon				
67	P26315	2	Stud, Carbon Steel				
68	P01827	4	Bolt, Socket Hd., 3/8"-16 x 3 1/4"				
69	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"				
70	P00013	2	Bolt, Hx., 1/4"-20 x 3"				
71	P00102	2	Bolt, Hx., 5/16"-18 x 3/4"				
72	P00106	2	Bolt, Hx., 5/16"-18 x 1 1/2"				
73	P00113	2	Bolt, Hx., 5/16"-18 x 3 1/4"				
74	P00204	4	Bolt, Hx., 3/8"-16 x 1"				
75	P00405	2	Bolt, Hx., 1/2"-13 x 1 3/4"				
76	P00426	2	Bolt, Hx., 1/2"-13 x 5 3/4"				
77	P00419	2	Bolt, Hx., 1/2"-13 x 6 1/2"				
78	P01406	4	Flatwasher, 1/2"				
79	P01308	4	Lockwasher, 1/4"				
80	P01309	10	Lockwasher, 5/16"				
81	P01310	6	Lockwasher, 3/8"				
82	P01312	6	Lockwasher, 1/2"				
83	P01507	8	Nut, Hx., 5/16"-18				
84	P01510	4	Nut, Hx., 1/2"-13				
<p>NOTES:</p> <p>A) Production Initiated S/N 267.</p> <p>B) For S/N 101 - 181, use P27116.</p> <p>C) For S/N 101 - 181, use N11449.</p> <p>D) See Parts Breakdown for Service Parts.</p>							
<div style="border: 1px solid black; display: inline-block; padding: 5px;">23476</div>							
<p>* Not Illustrated</p>				<p>522 S/N 101 THRU (POWER ASSIST)</p>		<p>4/89</p>	
<p>PUMP, SUCTION - RETURN HYD. ASS'Y Page 2 of 2</p>							



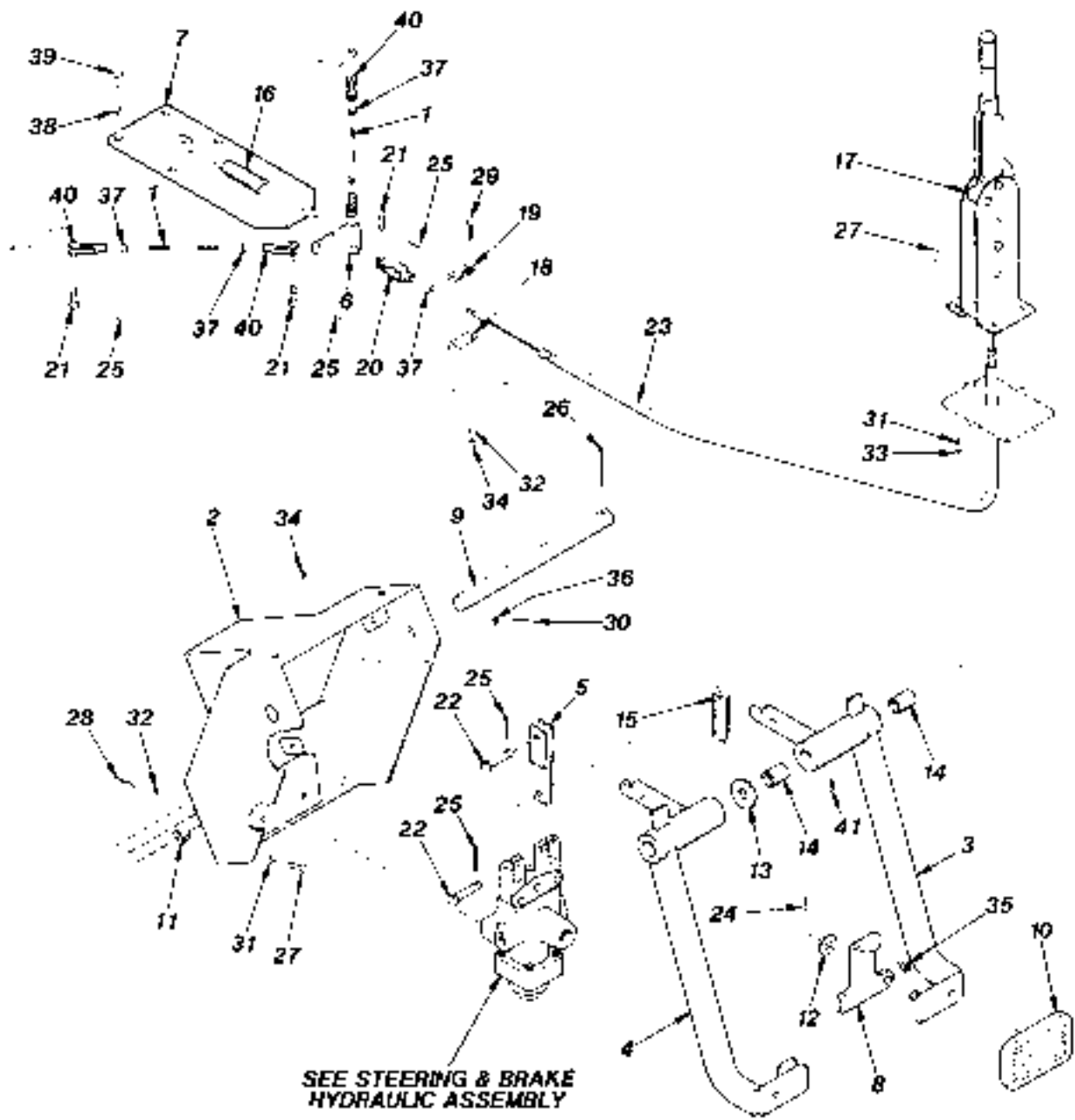


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	22013C	1	Mount, Diff. Lock Valve	40	P26651	1	Hyd. Tube .50" O.D.
2	P25455	1	Valve, Differential Lock	41	P26652	1	Hyd. Tube .25" O.D.
2A	P25473	REF	Relief Valve	42	P26653	1	Hyd. Tube .25" O.D.
3	P24950	1	Brake Valve	43	P25715	2	Tee, O-Ring
4	P19283	1	Steer Motor	44	P24648	2	Tee, JIC - Pipe
5	P12506	3	Washer, Copper	45	B)P27399	1	Tee, Swivel
6	P18414	1	Check Valve	46	A)P27805	3	Dust Cap
7	P26607	1	Reducer, Swivel	47	A)P27374	3	Nipple, Pressure Check
8	P15406	1	Connector, O-Ring	48	P00001	3	Bolt, Hx., 1/4"-20 x 1/2"
9	P18944	3	Connector, O-Ring	49	P00009	4	Bolt, Hx., 1/4"-20 x 2"
10	P25396	3	Connector, Metric	50	P01308	2	Lockwasher, 1/4"
11	P25713	2	Connector, Bulkhead	51	P01506	7	Nut, Hx., 1/4"-2
12	P18947	3	45° Elbow, Bulkhead				
13	P21680	2	45° Elbow, Bulkhead				
14	P25684	5	45° Elbow, Bulkhead				
15	P18835	1	90° Elbow, O-Ring				
16	P18956	3	90° Elbow, O-Ring				
17	P18957	3	90° Elbow, O-Ring				
18	P19248	6	90° Elbow, O-Ring				
19	P20374	2	90° Elbow, JIC - Pipe				
20	P25247	1	90° Elbow, O-Ring				
21	P21819	1	45° Elbow, O-Ring				
22	P25346	2	Hyd. Hose .25" x 13'				
23	P26641	1	Hyd. Hose .25" x 64'				
24	P26642	1	Hyd. Hose .25" x 82'				
25	P26643	1	Hyd. Hose .25" x 98'				
26	P26644	1	Hyd. Hose .25" x 50'				
27	P26635	1	Hyd. Hose .38" x 33"				
28	P26646	1	Hyd. Hose .38" x 34"				
29	P26647	1	Hyd. Hose .38" x 33"				
30	P25867	2	Hyd. Hose .38" x 56"				
31	P26645	1	Hyd. Hose .50" x 37"				
32	P26584	1	Hyd. Tube .50" O.D.				
33	P26585	1	Hyd. Tube .25" O.D.				
34	P26654	1	Hyd. Tube .25" O.D.				
35	P26655	1	Hyd. Tube .25" O.D.				
36	P26656	1	Hyd. Tube .25" O.D.				
37	P26657	1	Hyd. Tube .25" O.D.				
38	P26658	1	Hyd. Tube .25" O.D.				
39	P26650	1	Hyd. Tube .50" O.D.				

NOTES:

- A) Production Initiated S/N 267 for Steering & Brakes.
Production Initiated S/N 321 for Differential Lock.
- B) Production Initiated S/N 321.

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ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23520A	2	Connecting Rod	41	P16611	2	Grease Zerk
2	21058C	1	Brake Pedal Housing				
3	23667C	1	Brake Pedal, R.H.				
4	23666C	1	Brake Pedal, L.H.				
5	21061A	2	Connecting Link				
6	23519A	1	Toggle Plate				
7	23526B	1	Spring Return				
8	21091A	1	Pedal Lock				
9	21093A	1	Pin, Brake Pedals				
10	P17733	2	Foot Pad, Brake				
11	P24308	4	Spring Nut				
12	P21449	1	Shim Washer				
13	18846A	1	Spacer, Pedal				
14	P20391	4	Bushing				
15	P10581	2	Spring, Pedal				
16	P26331	1	Spring, Cable				
17	A)P28457	1	Hand Brake, Parking (Includes Switch)				
18	P17598	1	Spacer, Cable				
19	P17595	1	Clamp, Cable				
20	P17694	1	Clevis				
21	P10040	5	Clevis Pin				
22	P15331	4	Clevis Pin				
23	P26276	1	Cable, Hand Brake				
24	P03637	1	Cotter Pin, 1/8" x 3/4"				
25	P03838	9	Cotter Pin, 1/8" x 1"				
26	P03840	1	Cotter Pin, 1/8" x 1 1/2"				
27	P00102	8	Bolt, Hx., 5/16"-18 x 3/4"				
28	P00202	2	Bolt, Hx., 3/8"-16 x 3/4"				
29	P00205	2	Bolt, Hx., 3/8"-16 x 1 1/4"				
30	P00206	2	Bolt, Hx., 3/8"-16 x 1 1/2"				
31	P01309	8	Lockwasher, 5/16"				
32	P01310	4	Lockwasher, 3/8"				
33	P01507	4	Nut, Hx., 5/16"-18				
34	P01508	4	Nut, Hx., 3/8"-16				
35	P01531	2	Nut, Hx., 3/8"-24				
36	P01558	2	Jam Nut, Hx., 3/8"-16				
37	P01581	5	Jam Nut, Hx., 3/8"-24				
38	P04611	4	Lockwasher, M18				
39	P04300	4	Bolt, Hx., M16-2 x 25 mm				
40	P10193	4	Clevis				

NOTES:

A) For S/N 101 - 298, use 26317C for Complete Parking Brake Buzzer/Light Kit.

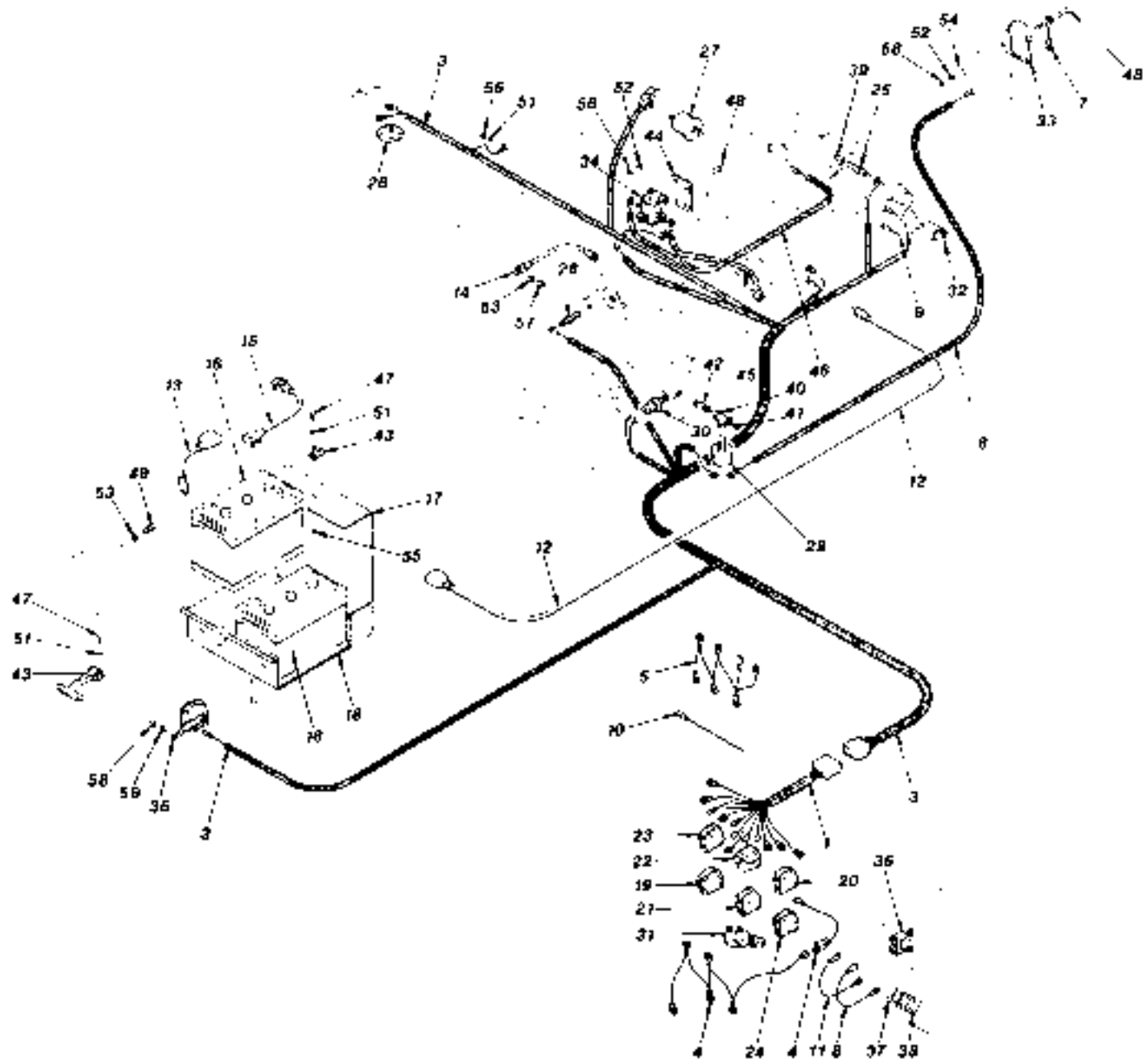
See Axle Breakdown for Internal Brake Parts.

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522 S/N 101 THRU

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SERVICE AND PARKING BRAKE ASSEMBLY



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P26071	1	Wire Harness, Upper	42	P10759	1	Nipple, Pipe
3	P26512	1	Wire Harness, Lower	43	P26248	1	Draw Latch
4	P26072	1	Wires, Gauges - Power	44	24317A	1	Bracket, Solenoid
5	P19284	1	Wires, Gauges - Ground	45	P27518	1	Wire, Solenoid - Starter
6	P24274	1	Wire Harness, Back-Up Alarm	46	P27519	1	Wire, Solenoid - Glow Plug
7	P27504	1	Wire, Alarm - Ground (Black - 16 GA.)	47	P02057	4	Screw, Slotted Rd. Hd., #10-24 x 3/4"
8	P27506	1	Wire, Fuse Block - Relay (Red - 14 GA.)	48	P00003	4	Bolt, Hx., 1/4"-20 x 3/4"
9	P27509	1	Wire, Alt. - Volt Regulator (White - 14 GA.)	49	P00202	4	Bolt, Hx., 3/8"-16 x 3/4"
10	P27517	1	Wire, Fuse Block - Ignition (Red - 12 GA.)	51	P01306	5	Lockwasher, #10
11	P27520	1	Wire, Horn Button to Relay (Black - 16 GA.)	52	P01308	4	Lockwasher, 1/4"
12	A)P28785	1	Battery Cable, Positive	53	P01310	5	Lockwasher, 3/8"
13	P19834	1	Battery Cable, Negative	54	P01402	4	Flatwasher, 1/4"
14	P19835	1	Battery Cable, Ground	55	P01504	3	Nut, Hx., #10-24
15	P18122	1	Battery Cable, Negative to Positive	56	P01506	4	Nut, Hx., 1/4"-20
16	P25385	(B)	Battery, 6 Volt	57	P01508	2	Nut, Hx., 3/8"-16
17	23425C	1	Battery Box Cover	58	P01507	1	Nut, Hx., 5/16"-18
18	23426C	1	Battery Box Tray	59	P01309	1	Lockwasher, 5/16"
19	P23214	1	Gauge, Fuel	60*	P02015	2	Screw, Slotted Rd. Hd., #8-32 x 1/2"
20	P23215	1	Gauge, Oil Pressure	61*	P01353	2	Starwasher, #6
21	P23216	1	Gauge, Ammeter	62*	P01502	2	Nut, Hx., #6-32
22	P23218	1	Gauge, Hour Meter				
23	P23220	1	Gauge, Transmission Oil Temp.				
24	P23221	1	Gauge, Water Temperature				
25	P23222	1	Sender, Water Temperature				
26	P23215	REF	Sender, Fuel				
27	P23217	1	Sender, Oil Pressure				
28	P19472	1	Sender, Transmission Oil				
29	P19105	1	Switch, Back-Up				
30	P20812	REF	Switch, Neutral Start				
31	P28319	REF	Switch, Ignition				
32	P21787	REF	Diode Module				
33	P13774	1	Back-Up Alarm				
34	P21777	1	Solenoid				
35	P13707	1	Horn				
36	P13709	1	Horn Relay				
37	P19203	2	Fuse, AGC-30 AMP				
38	P24349	1	Fuse Block				
39	P10158	1	Reducer Bushing				
40	P10200	1	Tee, Pipe				
41	C)P10736	1	Plug, Pipe				

NOTES:

A) Supersedes Standard Duty Cable.

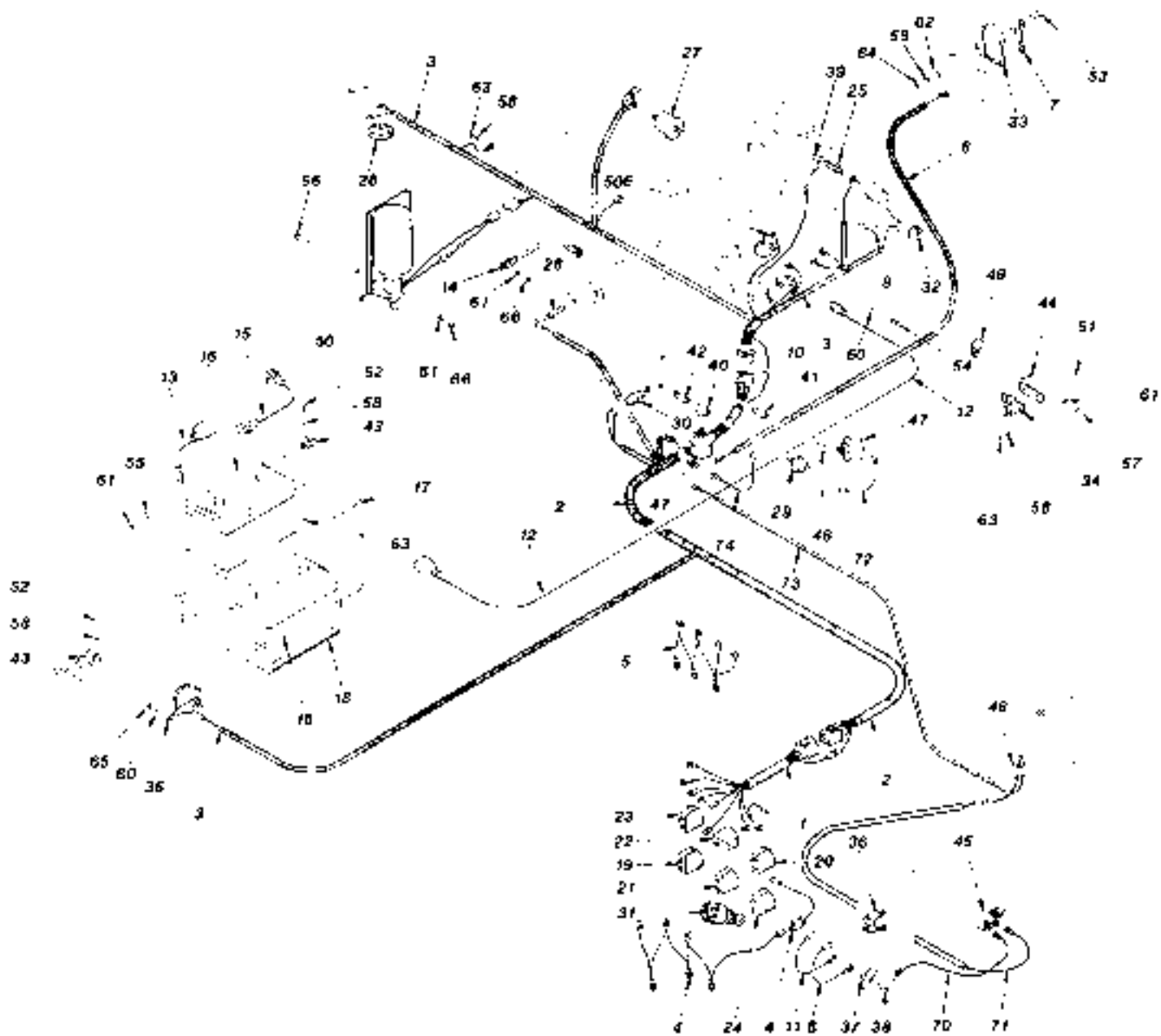
B) Procure Locally.

C) Not Required on Power Assist Models.

* Not Illustrated.

Items 60 - 62, Mount Fuse Block.

23479



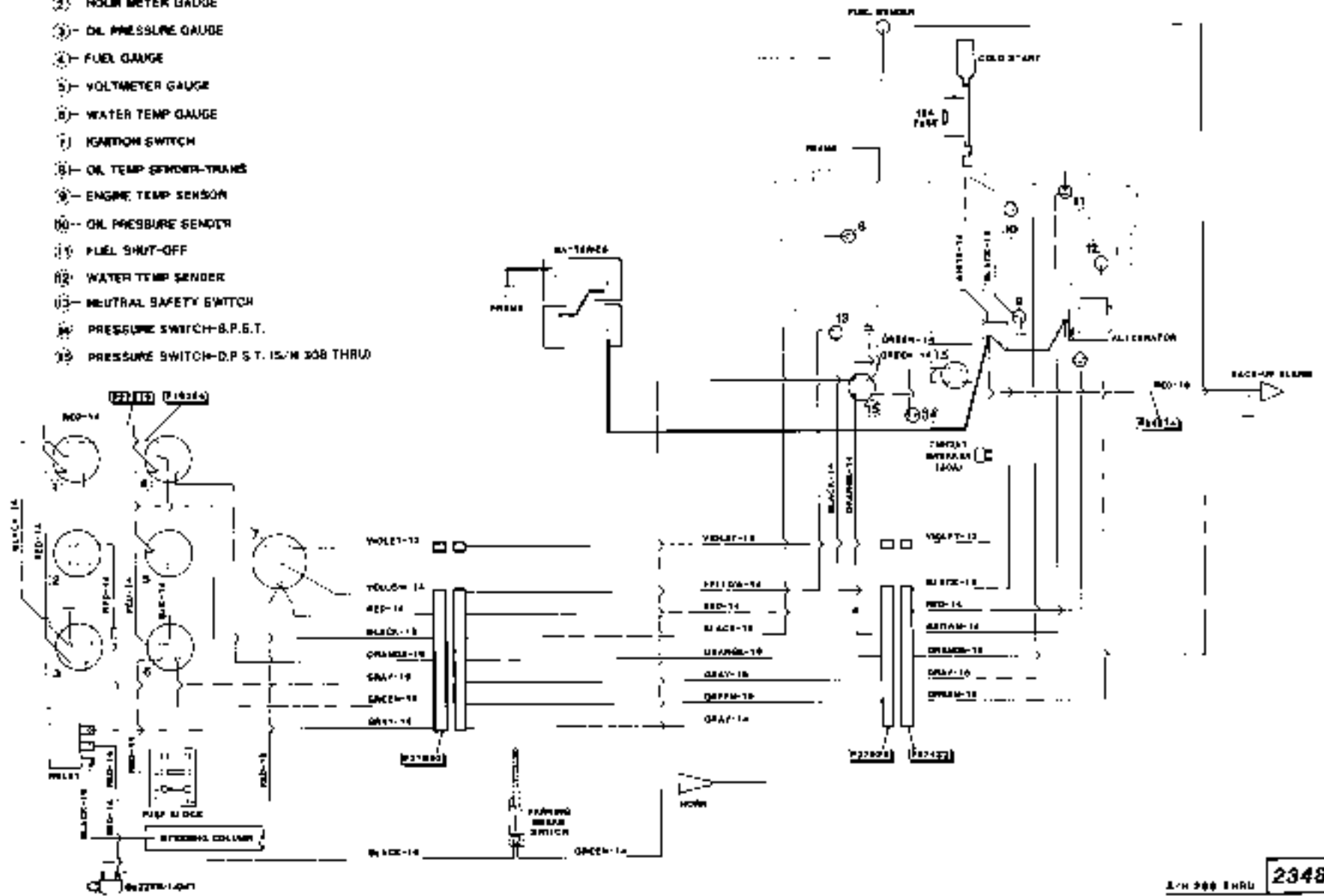
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P27920	1	Wire Harness, Upper	41	B)P10758	1	Nipple, Pipe
2	P27922	1	Wire Harness, Intermediate	42	P10759	1	Nipple, Pipe
3	P27923	1	Wire Harness, Lower	43	P26248	1	Draw Latch
4	P27919	1	Wires, Gauges - Power	44	24317A	1	Bracket, Circuit Breaker
5	P19284	1	Wires, Gauges - Ground	45	P28456	1	Buzzer/Light, Parking Brake
6	P24274	1	Wire Harness, Back-Up Alarm	46	B)P10205	1	45° Elbow, Pipe
7	P27504	1	Wire, Alarm - Ground (Black - 18 GA.)	47	B)P28721	2	Switch, Pressure - D.P.S.T.
8	P27506	1	Wire, Fuse Block - Relay (Red - 14 GA.)	48	P28714	REF	Switch, Parking Brake
9	P27509	1	Wire, Alt. - Volt Regulator (White - 14 GA.)	49	P17554	1	Clamp, Harness
10	P27542	1	Wire, Alternator - Starter (Red - 6 GA.)	50	26092B	1	Quick Start (Item 50F Not Included)
11	P27520	1	Wire, Horn Button - Relay (Black - 16 GA.)	50A*	P28747	-	Fuse, AGC - 15 AMP
12	P28785	1	Battery Cable, Positive	50B*	P27303	-	Valve Gasket
13	P19834	1	Battery Cable, Negative	50C*	P27304	-	Filter, O-Ring
14	P19835	1	Battery Cable, Ground	50D*	P27305	-	Coupling, Dirt Eliminator
15	P18122	1	Battery Cable, Negative to Positive	50E	P27306	-	Sensor, Engine Temp. (40° Surface)
16	P25385	(A)	Battery, 6 Volt	50F	N.L.A.	(A)	Starting Fluid Cylinder
17	23425C	1	Battery Box Cover	51	P02054	2	Screw, Slotted Rd. Hd., #10-24 x 1/2"
18	23426C	1	Battery Box Tray	52	P02057	4	Screw, Slotted Rd. Hd., #10-24 x 3/4"
19	P23214	1	Gauge, Fuel	53	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"
20	P23216	1	Gauge, Oil Pressure	54	P00150	1	Bolt, Hx., 5/16"-24 x 1/2"
21	P27820	1	Gauge, Voltmeter	55	P00202	4	Bolt, Hx., 3/8"-16 x 3/4"
21	P23219	1	Gauge, Hour Meter	56	P00205	2	Bolt, Hx., 3/8"-16 x 1 1/4"
23	P23220	1	Gauge, Transmission Oil Temp.	57	P00250	1	Bolt, Hx., 3/8"-24 x 1/2"
24	P23221	1	Gauge, Water Temperature	58	P01306	7	Lockwasher, #10
25	P23222	1	Sender, Water Temperature	59	P01308	2	Lockwasher, 1/4"
26	P23215	REF	Sender, Fuel	60	P01309	2	Lockwasher, 5/16"
27	P23217	1	Sender, Oil Pressure	61	P01310	7	Lockwasher, 3/8"
28	P19472	1	Sender, Transmission Oil	62	P01402	4	Flatwasher, 1/4"
29	P18105	1	Switch, Pressure - S.P.S.T.	63	P01504	5	Nut, Hx., #10-24
30	P20812	REF	Switch, Neutral Start	64	P01506	2	Nut, Hx., 1/4"-20
31	P11092	REF	Switch, Ignition	65	P01507	1	Nut, Hx., 5/16"-18
32	P21787	REF	Diode Module	66	P01508	3	Nut, Hx., 3/8"-18
33	P13774	1	Back-Up Alarm	67	P01502	2	Nut, Hx., #6-32
34	P27316	1	Circuit Breaker	68	P01353	2	Starwasher, #6
35	P13707	1	Horn	69	P0201B	2	Screw, Slotted Rd. Hd., #8-32 x 1/2"
36	P13709	1	Horn Relay				
37	P19203	2	Fuse, AGC-30 AMP				
38	P24349	1	Fuse Block				
39	P10158	1	Reducer Bushing				
40	P10200	1	Tee, Pipe				

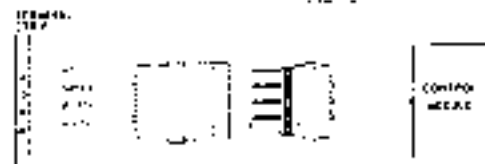
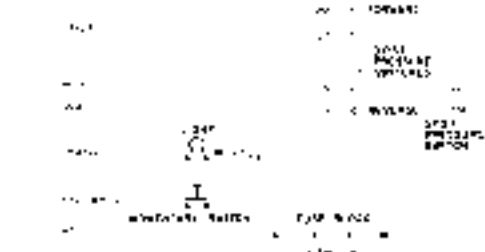
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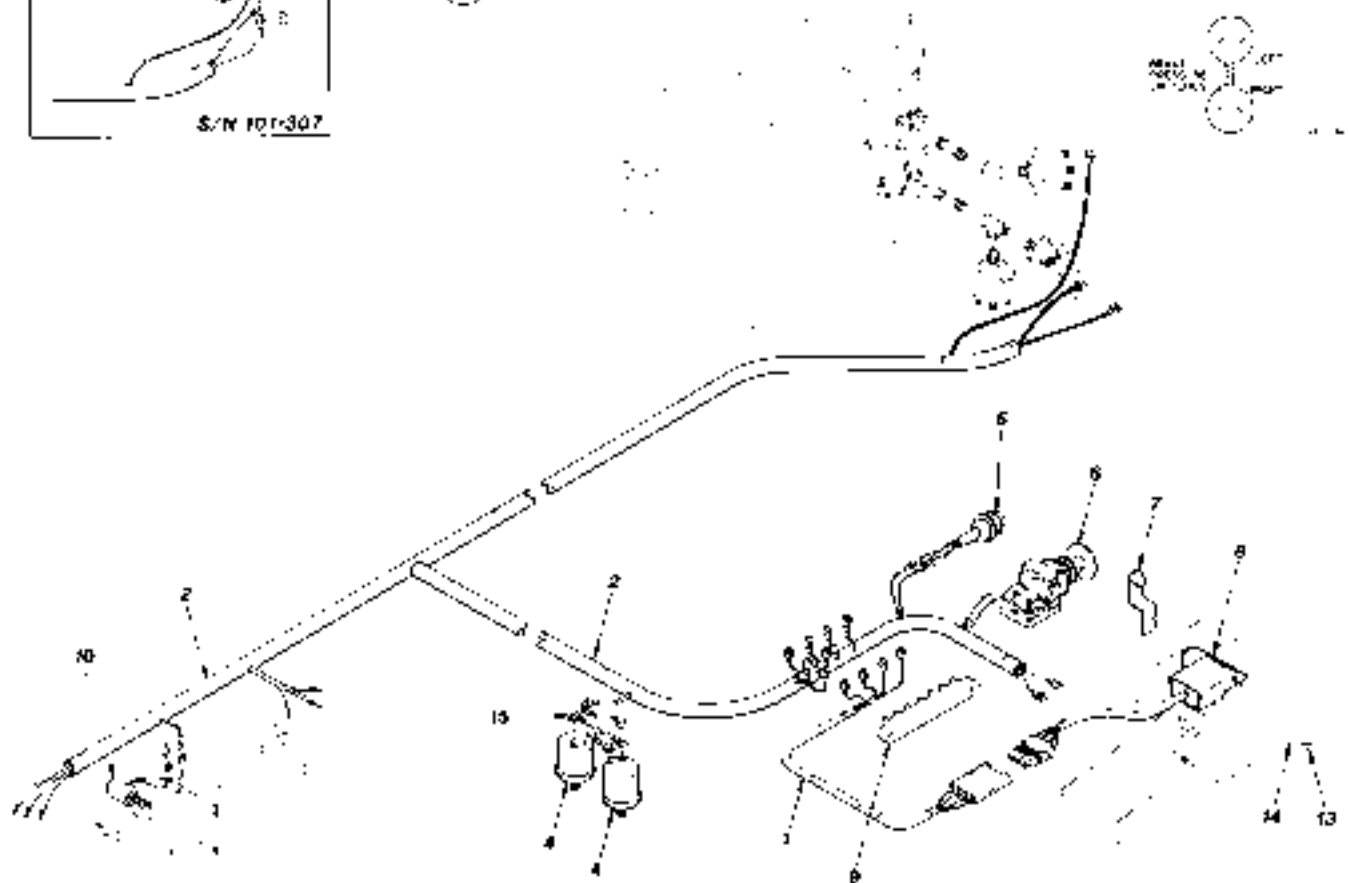
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
70	P27548	1	Wire, Fuse Block - Buzzer (Red - 14 GA.)				
71	P28551	1	Wire, Park Brake - Buzzer (Black - 14 GA.)				
72	P27501	3	Wire, Switch - Jumper (Green - 14 GA.)				
73	B)P28559	1	Wire, Pressure Switch to Parking Brake Switch (Green - 14 GA.)				
74	B)P28650	1	Wire, Pressure Switch to Ground (Black - 14 GA.)				
<p>NOTES:</p> <p>A) Procure Locally.</p> <p>B) Production Initiated S/N 308.</p> <p>* Not Illustrated</p> <p>Items 67 - 69, Mount Fuse Block.</p>							
				23479-1			
				522 S/N 288 THRU			
				4/89			
				ELECTRICAL ASSEMBLY (Perkins)			
				Page 2 of 2			

- ① TRANS OIL TEMP GAUGE
- ② HOUR METER GAUGE
- ③ OIL PRESSURE GAUGE
- ④ FUEL GAUGE
- ⑤ VOLTMETER GAUGE
- ⑥ WATER TEMP GAUGE
- ⑦ IGNITION SWITCH
- ⑧ OIL TEMP SENSOR-TRANS
- ⑨ ENGINE TEMP SENSOR
- ⑩ OIL PRESSURE SENDER
- ⑪ FUEL SHUT-OFF
- ⑫ WATER TEMP SENDER
- ⑬ NEUTRAL SAFETY SWITCH
- ⑭ PRESSURE SWITCH-S.P.S.T.
- ⑮ PRESSURE SWITCH-D.P.S.T. 15/16 308 THRU





WIRING DIAGRAM



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P25719	1	Wire Harness, Pigtail				
2	P25720	1	Wire Harness, Main				
3 ●	P19105	2	Pressure Switch, Transmission				
4	P25722	2	Pressure Switch, Brake				
5	P25723	1	Indicator Light				
6	P25724	1	Momentary Switch				
7	P25742	1	Magnet Arm				
8	P25743	1	Control Module				
9	P25744	1	Terminal Strip				
10	P25728	1	Solenoid Valve				
11 ●	P10664	1	Coupling, Pipe				
12 ●	P10759	1	Nipple				
13	P03651	4	Screw, Self-Tap, 1/4"-20 x 1/2"				
14	P01357	4	Starwasher, 1/4" External				
15	P27502	2	Jumper Wire, Yellow				
16 ●	P27501	1	Jumper Wire, Green				
17*	P25495	1	Fuse, SFE 8 Amp				

● Used S/N 101 - 307 Only.

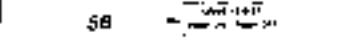
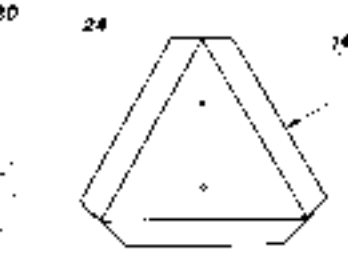
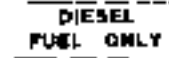
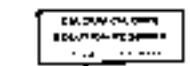
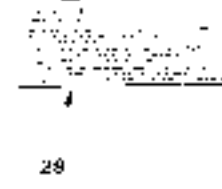
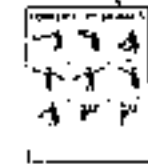
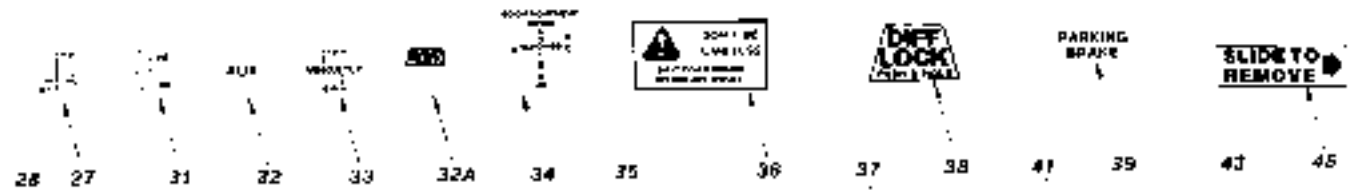
* Not Illustrated.

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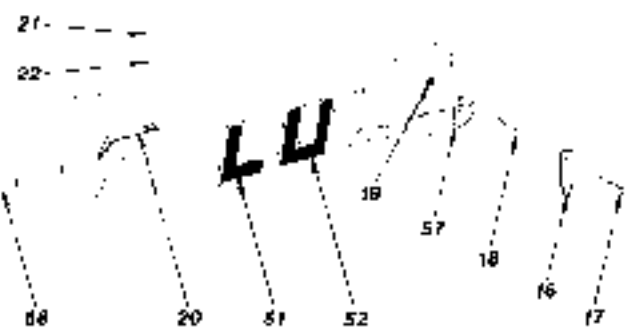
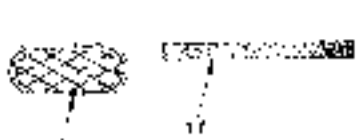
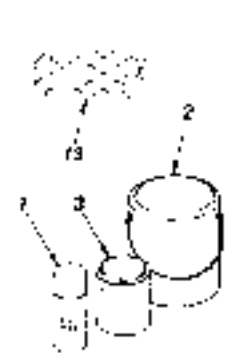
522 S/N 101 THRU

4/89

POWER ASSIST ELECTRICAL ASSEMBLY



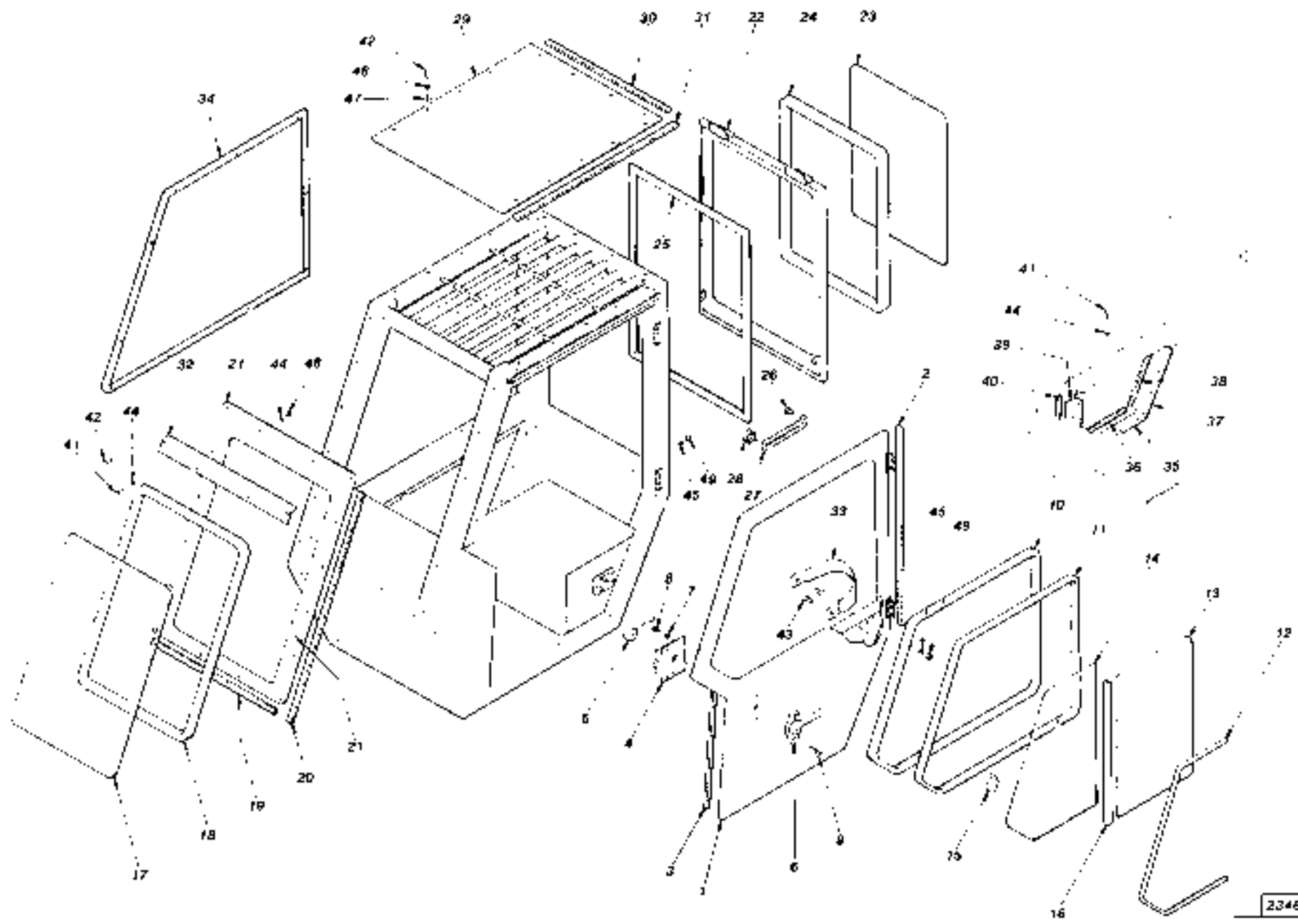
54 - Lull Corporation
OF THE WORLD



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P18950-7	(A)	Orange Enamel Spray Paint	46	P27585	1	Decal, Carriage Safety
2	N.L.A.	(B)	Orange Enamel Paint	47	P26087	2	Decal, Number "5"
3	N.L.A.	(B)	Primer, Paint	48	P25541	4	Decal, Number "2"
4	N.L.A.	(B)	Thinner, Paint	49	P25543	2	Decal, Slash
11	M11599	3	No-Slip Surfacing (2' x 20' Long)	50	P25542	2	Decal, Number "4"
12	P18991	2	Reflector, Red	51	P18185	6	Decal, Letter "L"
13	P18992	2	Reflector, Yellow	52	P18185	2	Decal, Letter "U"
14	P19841	1	Slow Moving Vehicle Sign	53	P17586	1	Decal, 'LULL' Logo
15*	P27610	2	Screw, Hx. Washer Hd., #10-24 x 1/2"	54	P17607	1	Decal, Manufacture
16	P26295	1	Pointer, Boom Angle Indicator	55	P25539	1	Decal, Drive Assist
17	P00105	1	Bolt, Hx., 5/16"-18 x 1 1/4"	56	P25544	1	Decal, Assist On/Off
18	P01403	3	Flatwasher, 5/16"	57	P18003	1	Decal, Boom Angle Indicator
19	P01657	1	Locknut, Hx., 5/16"-18	58	23105A	1	Decal, Boom Extension Indicator
20	18306A	1	Pointer, Boom Extension	59	P28781	2	Decal, American Flag
21	P00202	1	Bolt, Hx., 3/8"-16 x 3/4"				
22	P01310	1	Lockwasher, 3/8"				
23*	P15355	8	Drive Screw, Rd. Hd., #4 x 1/4"				
24	P16634	1	Plate, Serial Number				
25	P26474	2	Plate, Caution	REF	18784A	1	Decal Replacement Package Includes Items 28 - 59.
26	P28515	REF	Decal, Load Chart - Tower				
27	P18835	REF	Decal, Tower Lift Motion				
28	P26473	1	Decal, Notice				
29	P26472	1	Decal, Load Chart				
30	P28098	1	Decal, Lubrication Schedule				
31	P18188	1	Decal, Carriage Tilt Control				
32	P18190	1	Decal, Auxiliary Control				
32A	P26523	-	Decal, Carriage Side Tilt Control				
33	P18818	1	Decal, Vehicle Tilt Control				
34	P18836	1	Decal, Boom Movement (Joystick)				
35	P21406	1	Decal, Fork Lift Signals				
36	P24705	1	Decal, Don't Be Careless				
37	P24704	1	Decal, Carry Load Low				
38	P25548	1	Decal, Diff. Lock - Foot Control				
39	P28522	1	Decal, Parking Brake				
40	P27558	4	Decal, Calcium Chloride Required				
41	P25545	1	Decal, Hydraulic Oil Only				
42	P25546	1	Decal, Diesel Fuel Only				
43	P25930	1	Decal, Axle Lube				
44	P24703	1	Decal, Engine Oil				
45	P26479	1	Decal, Battery Box Cover				
				NOTES: A) Available Only in Cases of (25) 12.5 oz. Spray Cans. B) Procure All Chemical and Paint Supplies Locally.			
				* Not Illustrated			
				522 S/N 101 THRU			
				DECAL GROUP ASSEMBLY			

23484

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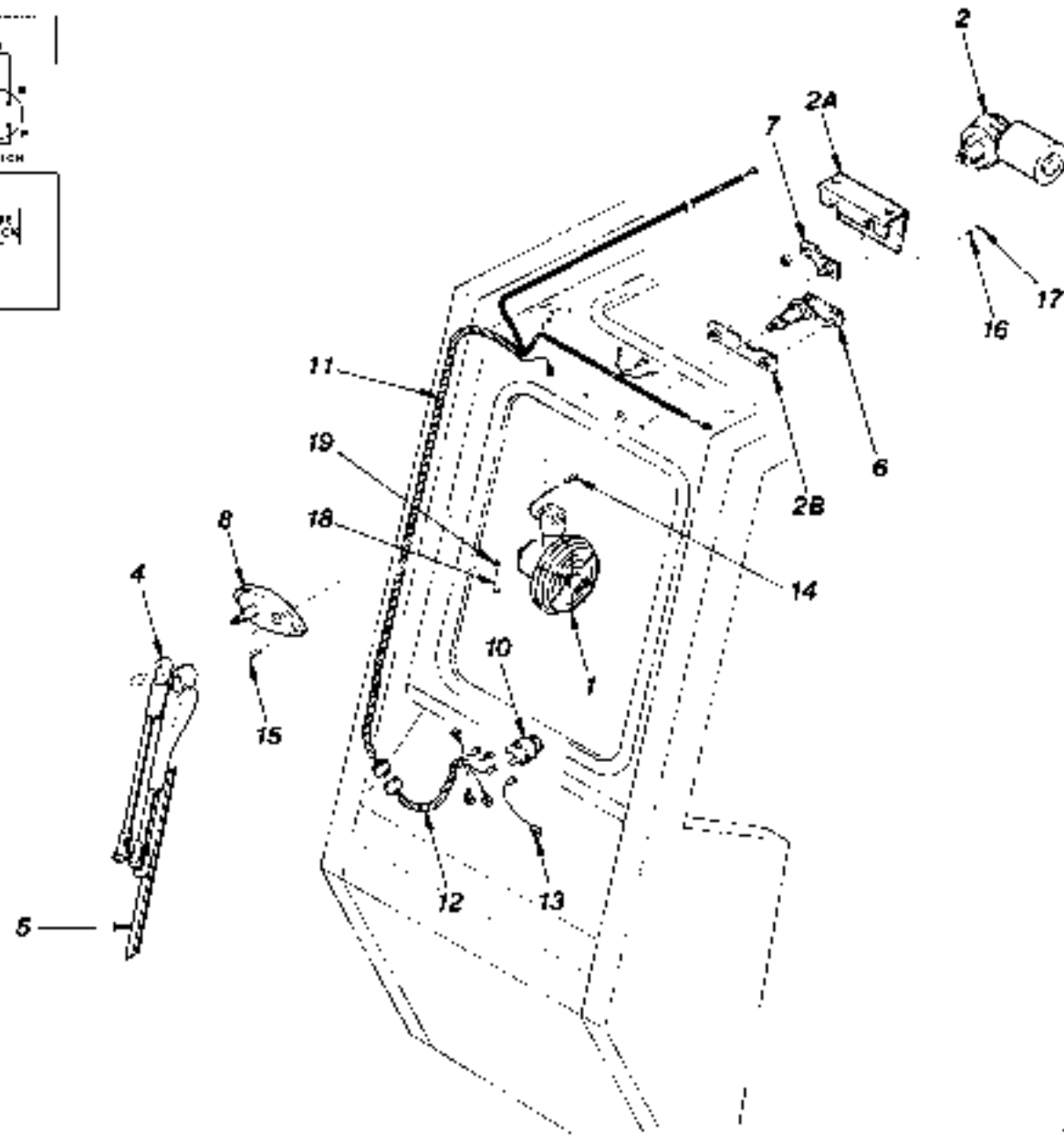
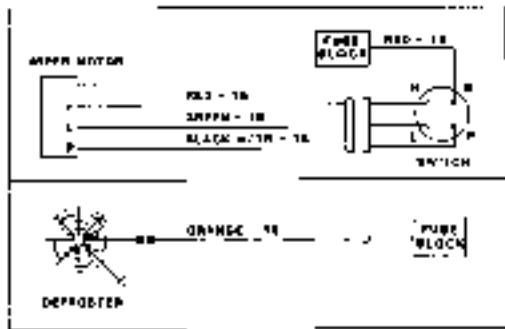


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
	25029D	REF	Door Assembly (Incl. Items 1 - 16)	36	N11566	1	Sponge Gasket, Self-Stick, 1/2' x 1' x 27"
1	25030D	1	Door Frame	37	25053B	1	Filler Panel, Rear
1A	22587A	-	Hinge, Door	38	N11567	1	Sponge Gasket, Self-Stick, 1/2' x 1' x 21"
2	N11792	1	Sponge Gasket, Self-Stick, 1/2' x 1' x 37"	39	25054B	1	Filler Panel, Front
3	N11565	1	Sponge Gasket, Self-Stick, 1/4' x 1' x 156'	40	N11597	1	Sponge Gasket, Self-Stick, 1/2' x 1' x 18"
4	P24342	1	Door Lock	41	P00003	25	Bolt, Hx., 1/4'-20 x 3/4"
5	P24343	1	Door Handle, Inside	42	P00005	18	Bolt, Hx., 1/4'-20 x 1'
6	P24344	1	Door Handle, Outside	43	P00360	2	Bolt, Hx., 7/16'-14 x 3/4"
7	P01355	8	Starwasher, #10	44	P01308	27	Lockwasher, 1/4"
8	P02079	6	Screw, Rd. Hd., #10-32 x 1/2"	45	P01311	2	Lockwasher, 7/16"
9	P03045	2	Screw, Fl. Hd., #10-32 x 3/4"	46	P01393	14	Starwasher, 1/4" - External
10	N11793	1	Weather Stripping	47	P01402	14	Flatwasher, 1/4"
11	N11794	1	Flex Channel, Window	48	P01506	5	Nut, Hx., 1/4'-20
12	N11795	1	Rubber Spacer, Window	49	P01509	2	Nut, Hx., 7/16'-14
13	P28546	1	Glass Window, Door - Stationary				
14	P28547	1	Glass Window, Door - Sliding				
15	P24268	1	Finger Pull				
16	N11412	1	Rigid Channel, Window				
	25043C	REF	Front Window Ass'y (Incl. Items 17 - 21)				
17	P28548	1	Glass Window, Front				
18	N11791	1	Weather Stripping				
19	N11560	1	Sponge Gasket, Self-Stick, 1/4' x 1' x 29"				
20	N11790	2	Sponge Gasket, Self-Stick, 1/4' x 1' x 41"				
21	25044C	1	Frame, Front Window				
	25048C	REF	Rear Window Ass'y (Incl. Items 22 - 27)				
22	25049C	1	Frame, Rear Window				
22A	22587A	-	Hinge, Window Frame				
23	25051A	1	Window, Rear - Lexan				
24	N11410	1	Weather Stripping				
25	N11789	1	Seal Strip, Window Frame				
26	P19126	2	Rivot, Window Stay				
27	P19186	2	Window Stay Adjusting Strap				
28	P19127	2	Hand Knob				
29	25046B	1	Window, Top - Lexan				
30	N11560	1	Sponge Gasket, Self-Stick, 1/4' x 1' x 29"				
31	N11596	2	Sponge Gasket, Self-Stick, 1/4' x 1' x 38"				
32	25047B	1	Deflector				
33	P28731	1	Strap, Door				
34	24854C	REF	Window, Side - Lexan				
35	25052B	1	Filler Panel, Lower				

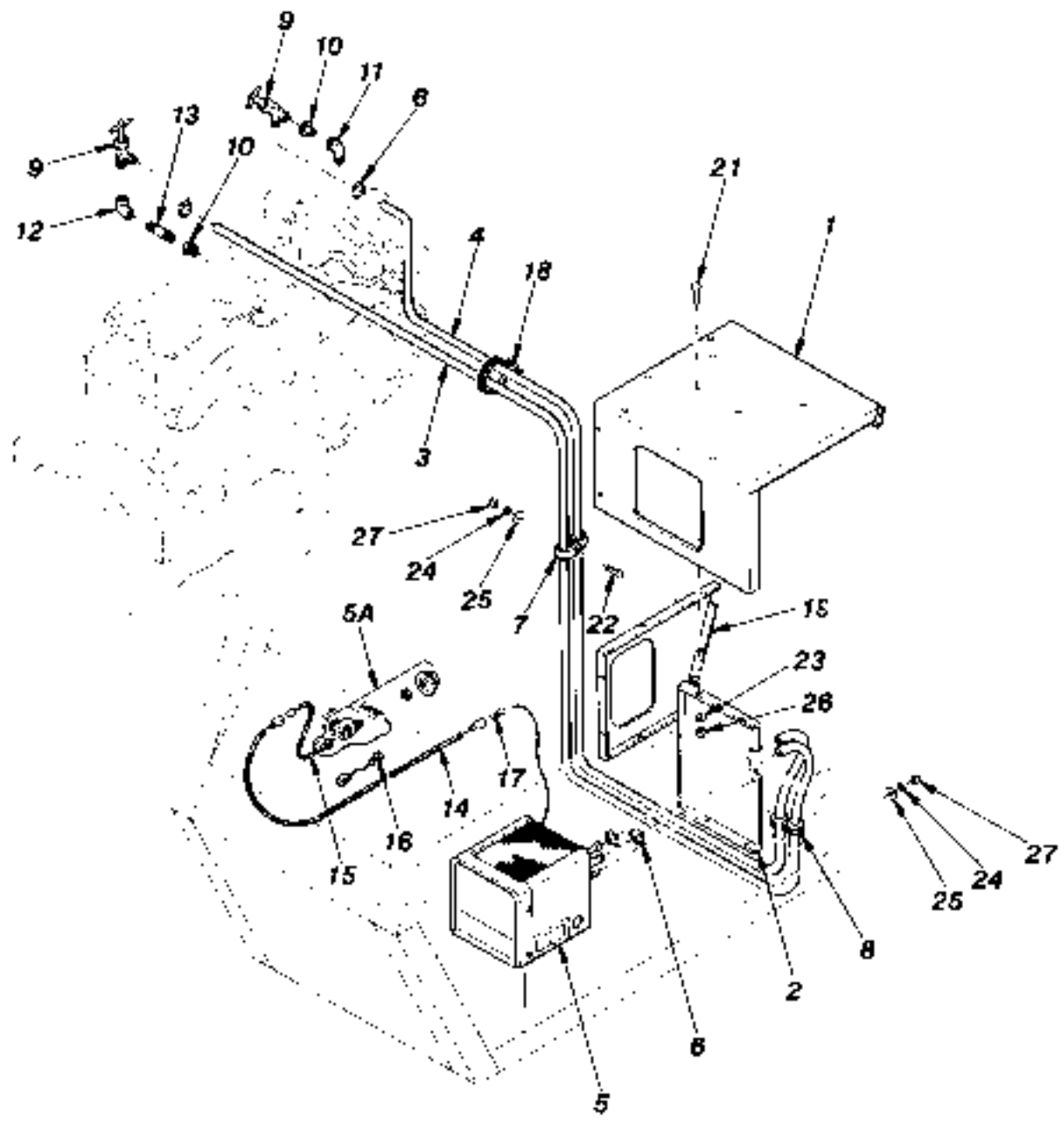
23485

532 OPTION
CAB ASSEMBLY

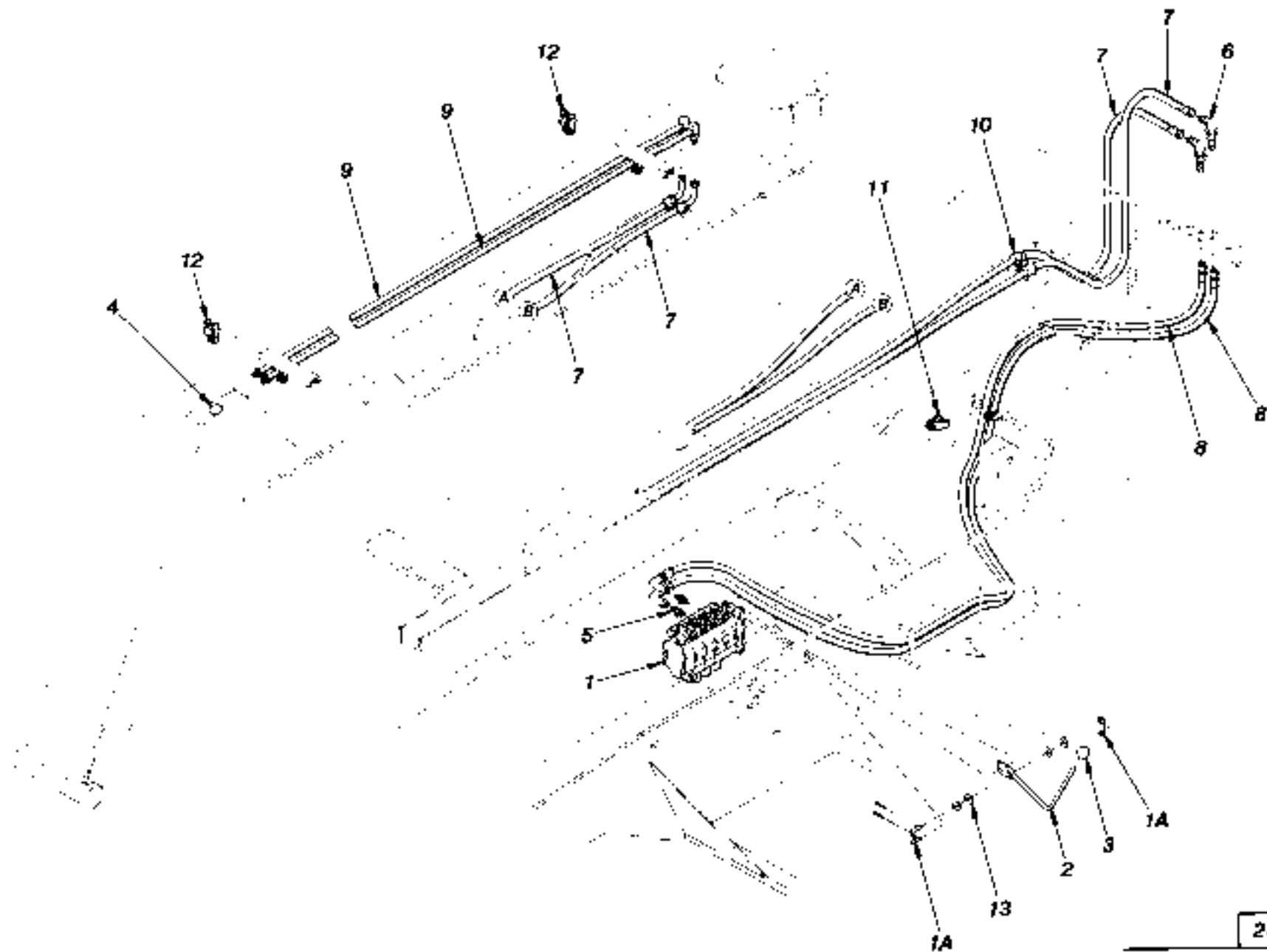
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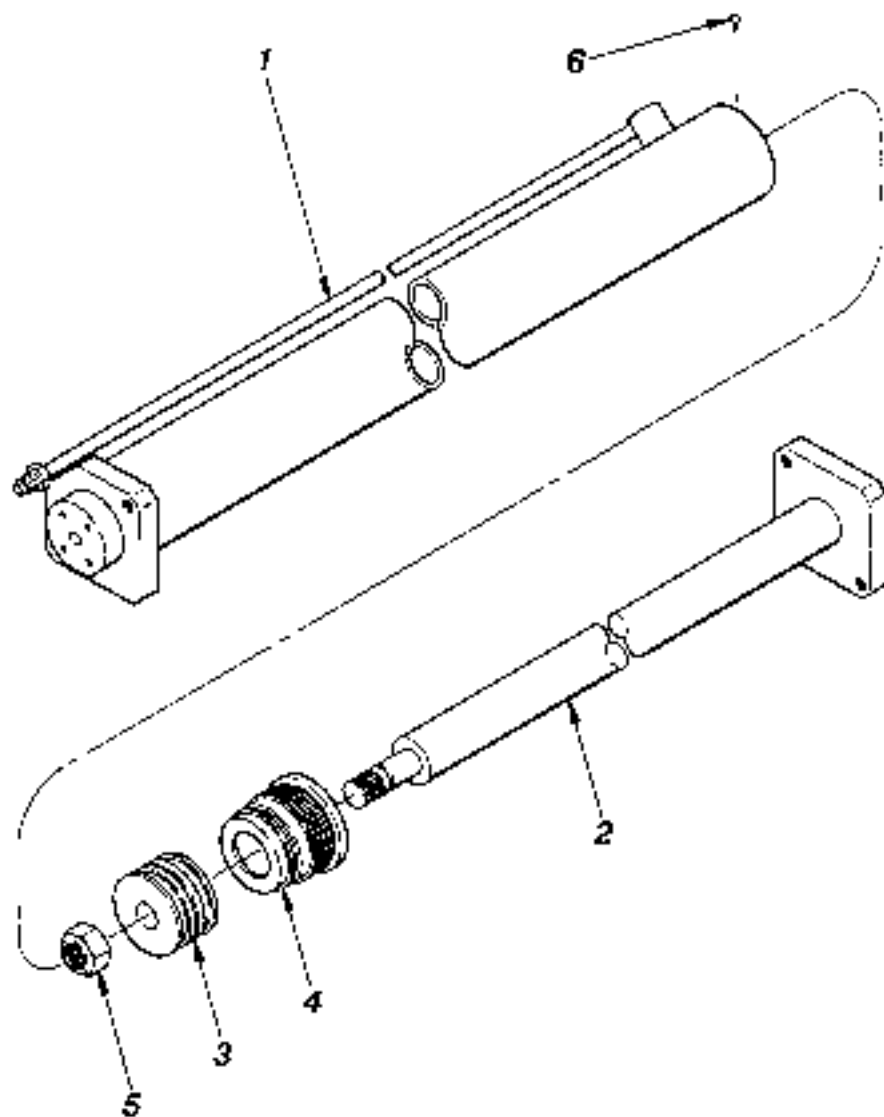
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P14059	1	Defroster Fan				
2	P25353	1	Wiper Motor				
2A	N.S.S.	REF	Bracket, Motor				
2B	P25359	REF	Connecting Link				
4	P25992	1	Wiper Arm				
5	P25993	1	Wiper Blade				
6	P25356	1	Pivot Shaft				
7	P25357	1	Crank Arm				
8	P25358	1	Pantograph Adapter				
10	P25371	1	Switch, Wiper - 2 Speed				
11	P26485	1	Wire Harness, Upper				
12	P26770	1	Wire Harness, Lower				
13	P27544	1	Wire, Switch To Fuse Block (Red - 16 GA.)				
14	P13510	1	Terminal, Male (For Defroster)				
15	P00003	2	Bolt, Hx., 1/4"-20 x 3/4"				
16	P01306	2	Lockwasher, 1/4"				
17	P01508	2	Nut, Hx., 1/4"-20				
18	P02054	4	Screw, Slotted Rd. Hd., #10-24 x 1/2"				
19	P01306	4	Lockwasher, #10				
				23486			
				522 OPTION 4/89			
				WIPER AND DEFROSTER ASSEMBLY			



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)26051C	1	Seat Box, Heater				
2	25203C	1	Mounting Panel, Heater				
3	N11729	1	Heater Hose, 5/8" x 72'				
4	N11730	1	Heater Hose, 5/8" x 66'				
5	P13290	1	Heater, Hot Water				
5A	P25987	REF	Switch, Heater				
6	P10186	4	Hose Clamp				
7	P17593	4	Clamp, Heater Hose				
8	P24763	2	Grommet, Hose				
9	P23266	2	Shut-Off Valve				
10	P10120	2	Reducer Bushing				
11	P10118	1	45° Elbow, Street				
12	P10224	1	90° Elbow, Pipe				
13	P10789	1	Nipple, Pipe				
14	P26484	1	Wire Harness, Lower				
15	P26771	1	Wire Harness, Upper				
16	P27545	1	Wire, Switch To Fuse Block (Red - 16 GA.)				
17	P13510	1	Terminal, Male				
18	P17969	3	Ty-Rap				
19	A)28067C	1	Panel, Side				
21	P00001	4	Bolt, Hx., 1/4"-20 x 1/2"				
22	P00102	2	Bolt, Hx., 5/16"-18 x 3/4"				
23	P01308	4	Lockwasher, 1/4"				
24	P01309	5	Lockwasher, 5/16"				
25	P01403	5	Flatwasher, 5/16"				
26	P01506	4	Nut, Hx., 1/4"-20				
27	P01507	5	Nut, Hx., 5/16"-18				
NOTES: A) Replaces Standard Equipment.							
23487							
522 OPTION 4/89							
CAB HEATER ASSEMBLY (HOT WATER)							

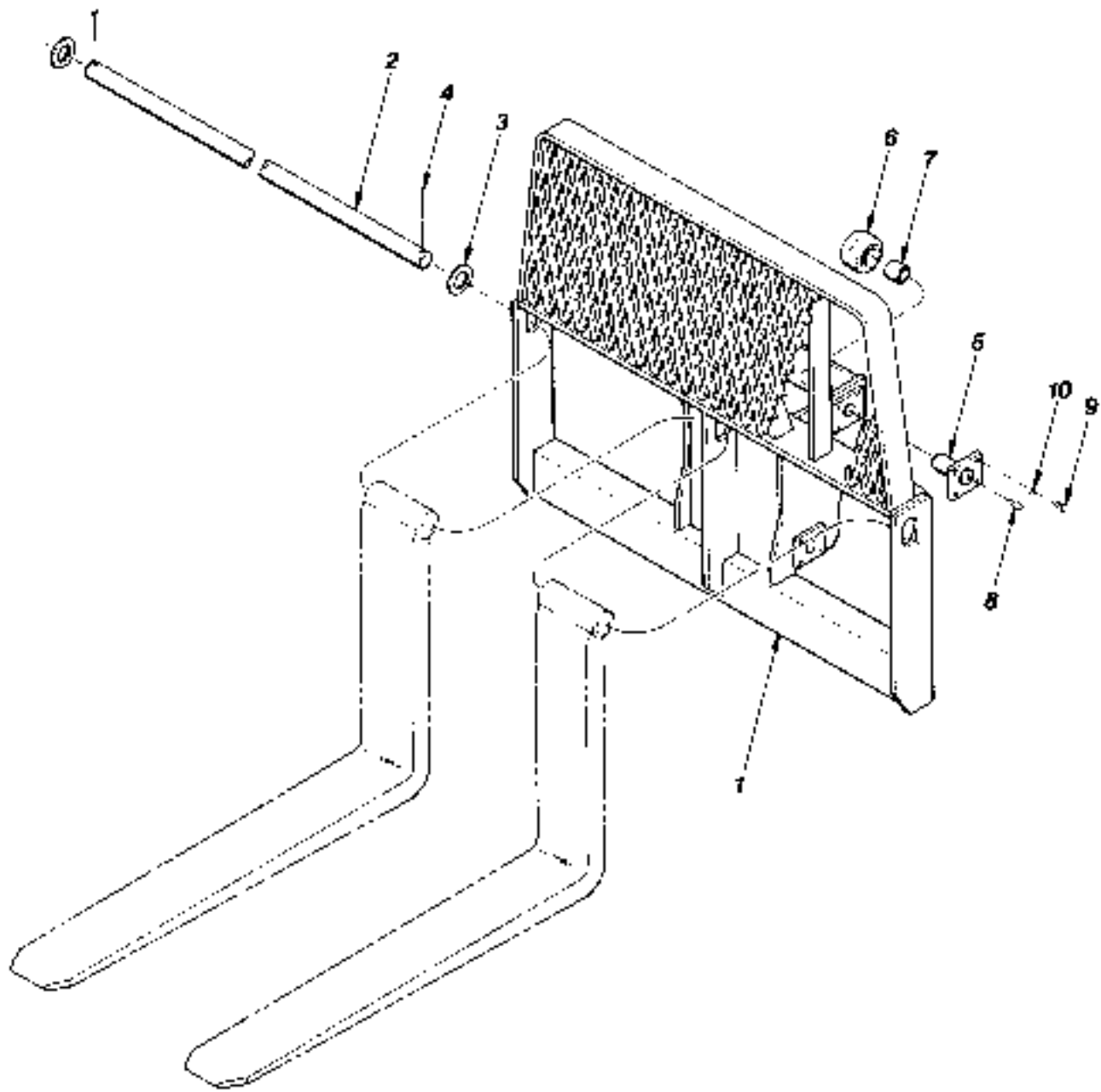


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P2849D	1	Valve, 4 Spool				
1A	P27957	REF	Clevis Kit				
1B	P28737	-	Valve Section, 2nd Auxiliary				
1C	P28738	-	Stud Kit (4 Section)				
2	26390A	1	Handle, Valve				
3	P18721	1	Knob, Handle				
4	P21627	2	Cap, Hex				
5	P15406	2	Connector, O-Ring				
6	P18947	2	45° Elbow, Bulkhead				
7	P28641	2	Hyd. Hose .38" x 177"				
8	P28642	2	Hyd. Hose .38" x 119"				
9	P26262	2	Hyd. Tube .38" O.D.				
10	P17553	2	Clamp, Hyd. Hose				
11	P20466	2	Clamp, Hyd. Hose				
12	P26015	4	Clamp, Hyd. Tube				
13	P01402	4	Flatwasher, 1/4"				
							24089
							4/89
							522 OPTION
							2nd AUXILIARY ASSEMBLY

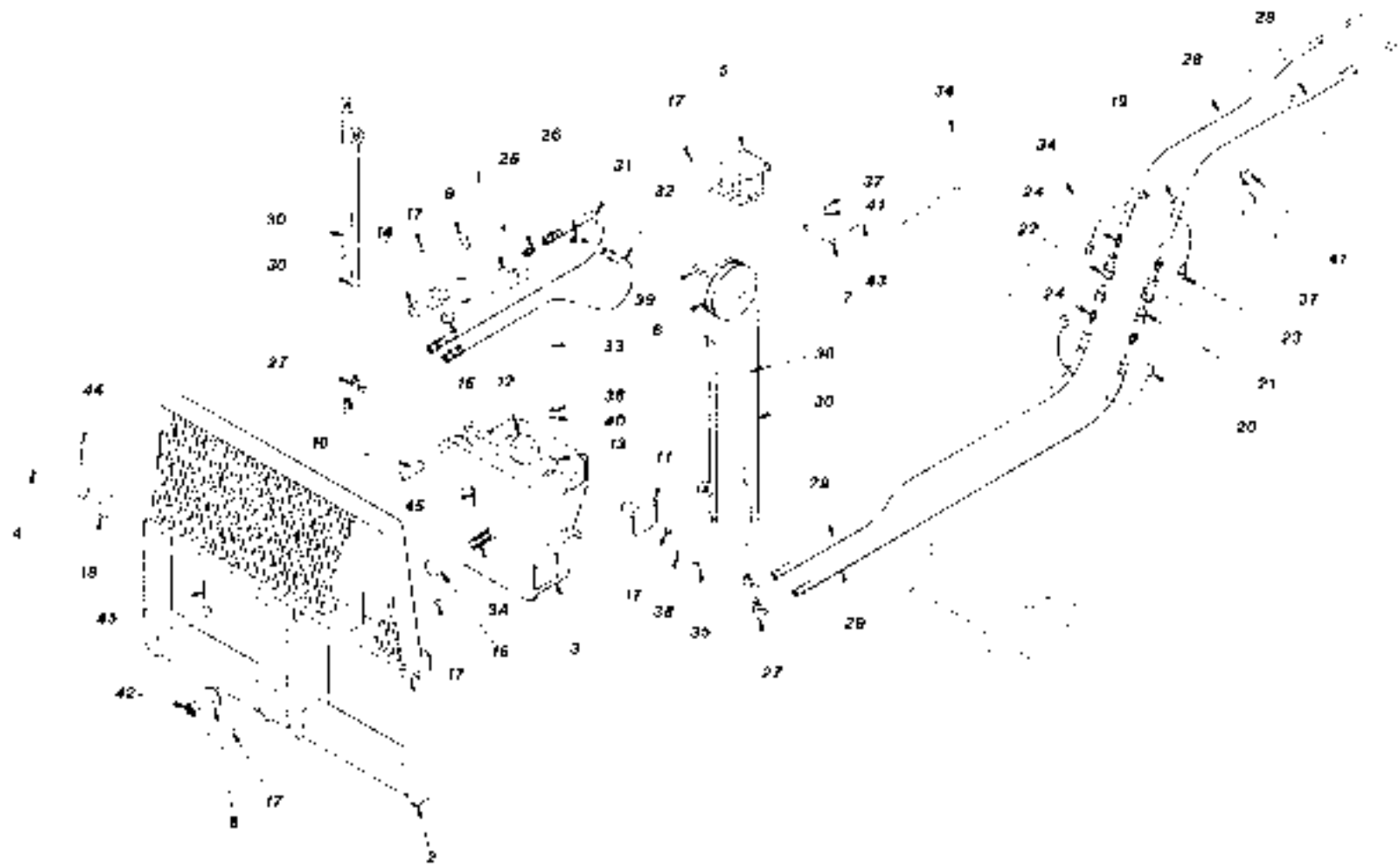


ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P27791	-	Tower Cylinder
			<u>For Cylinders With 2" Dia. Rod</u>
1	P27894	1	Barrel Weldment
2	P27895	1	Rod Weldment (2.00" Dia.)
3	P27896	1	Piston
4	P27897	1	Rod Bearing
5	P20085	1	Locknut
7*	P27898	1	Stroke Limiter
REF	P27899	1	Seal Kit
			<u>For Cylinders With 1 3/4" Dia. Rod</u>
1	P27266	1	Barrel Weldment
2	P27867	1	Rod Weldment (1 3/4" Dia.)
3	P27875	1	Piston
4	P27881	1	Rod Bearing
5	P27276	1	Locknut
6	P24889	1	Capscrew
REF	P27288	1	Seal Kit
			* Not Illustrated

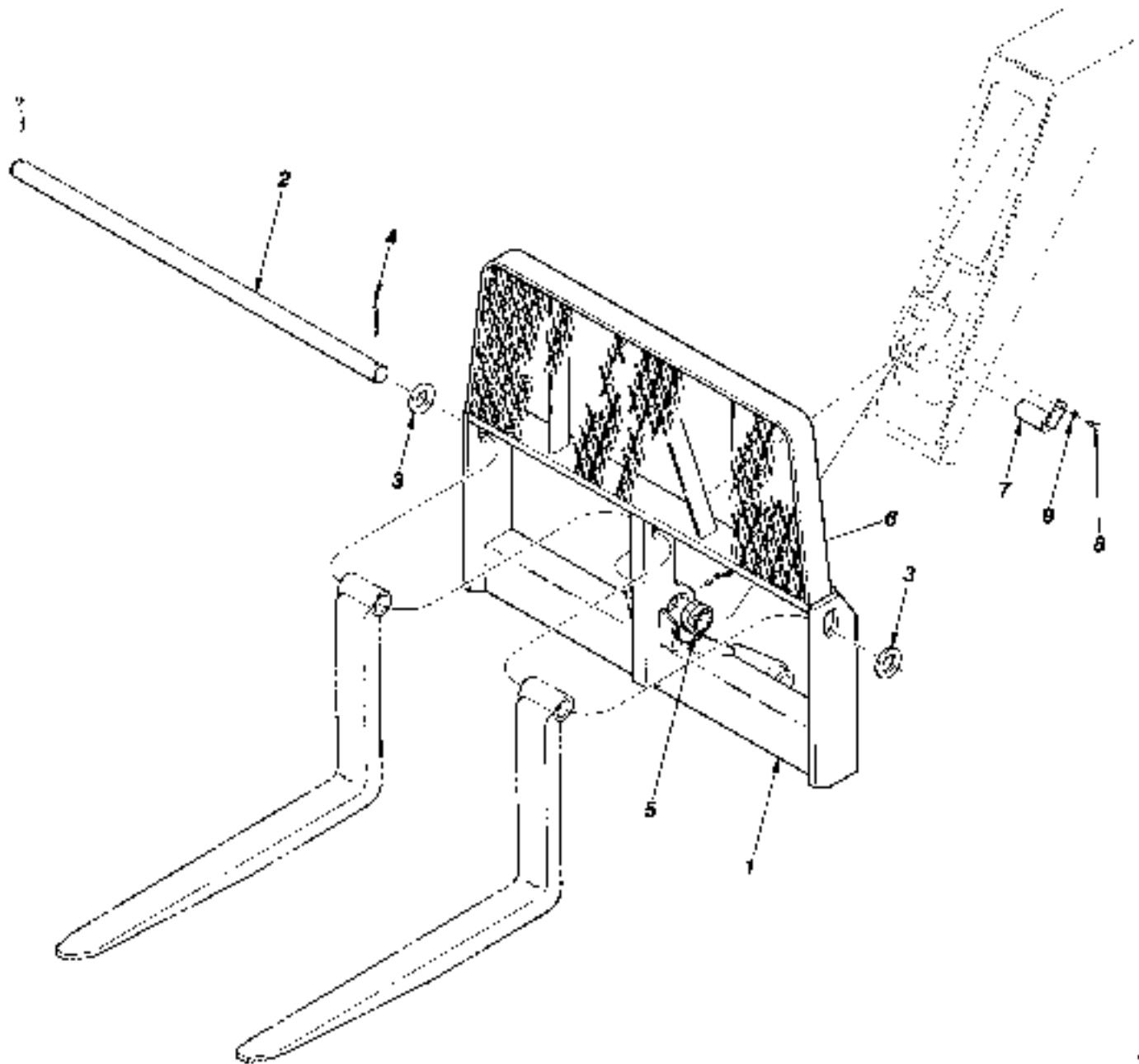
24091



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	25121D	1	Carriage, Tower				
2	18134A	1	Fork Shaft				
3	P1892B	2	Washer, Fork Shaft				
4	P0390B	2	Cotter Pin, 3/8" x 3"				
5	25146B	4	Spindle				
6	25150B	4	Roller				
7	P18110	4	Bushing, Roller				
8	P16611	4	Grease Zerk				
9	P00204	16	Bolt, Hx., 3/8"-16 x 1"				
10	P01310	16	Lockwasher, 3/8"				
				24092			
				522 OPTION 4/89			
STANDARD (NON - TILT) TOWER CARRIAGE ASSEMBLY							

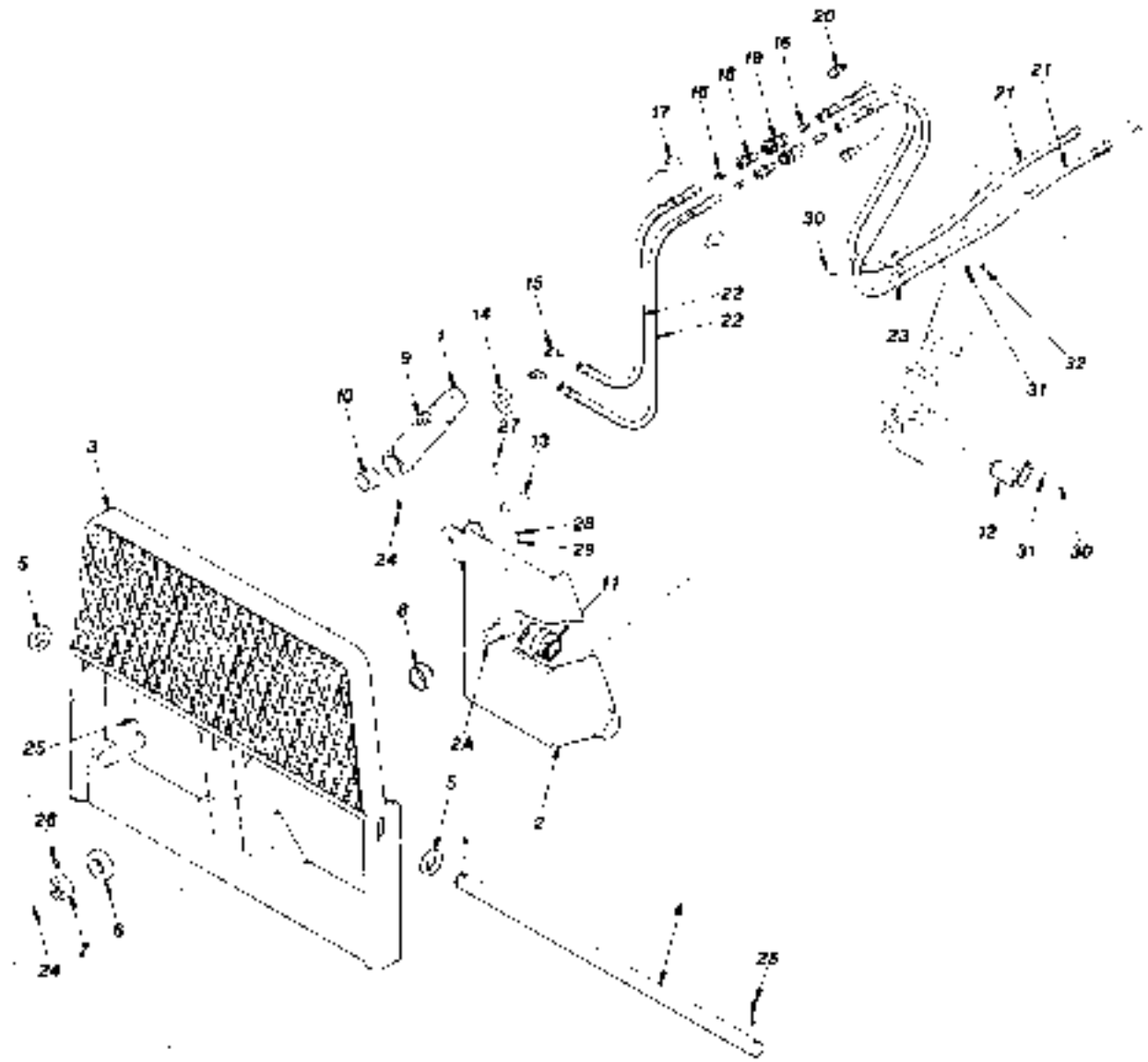


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P20139	1	Cylinder, Carriage Tilt	40	P01507	1	Nut, Hx., 5/16"-18
2	26298D	1	Outer Carriage, Tower	41	P01508	3	Nut, Hx., 3/8"-16
3	28301D	1	Inner Carriage, Tower	42	P01627	1	Slotted Nut, Hx., 1 3/4"-12
3A	30390D	REF	Pivot Shaft Field Repair	43	P03840	1	Cotter Pin, 1/8" x 1 1/2"
4	18134A	1	Fork Shaft	44	P03905	2	Cotter Pin, 3/8" x 2 1/2"
5	16114B	1	Housing, Hose Sheave	45	P03906	2	Cotter Pin, 3/8" x 3"
6	16115B	1	Hose Sheave				
7	16117A	1	Pin, Hose Sheave				
8	16223A	1	Thrust Washer, Pivot Pin				
9	16226A	1	Washer, Spacer				
10	16229A	1	Pin, Tilt Cylinder, Upper				
11	26146B	4	Spindle, Roller				
12	26150B	4	Roller, Tower				
13	P19110	4	Bushing, Roller				
14	P19106	1	Bushing, Cylinder - Lower				
15	P25199	1	Bushing, Cylinder - Upper				
16	P20890	1	Bushing, Pivot Pin				
17	P16811	10	Grease Zerk				
18	P19926	2	Washer, Fork Shaft				
19	P17553	2	Clamp, Hyd. Hose				
20	P10325	2	Cap, Dust				
21	P11353	2	Quick Coupler, Male				
22	P11354	2	Quick Coupler, Female				
23	P10326	2	Plug, Dust				
24	P18875	4	Connector, JIC - Pipe				
25	P18938	1	Connector, JIC - Pipe				
26	P18843	1	45° Elbow, JIC - Pipe				
27	P18931	4	90° Elbow, Bulkhead				
28	P18904	2	Hyd. Hose .38" x 38"				
29	P18094	2	Hyd. Hose .38" x 38"				
30	P21960	2	Hyd. Hose .38" x 108"				
31	P25212	1	Hyd. Hose .38" x 19"				
32	P18087	1	Hyd. Hose .38" x 21"				
33	P00108	1	Bolt, Hx., 5/16"-18 x 2"				
34	P00204	3	Bolt, Hx., 3/8"-16 x 1"				
35	P00403	16	Bolt, Hx., 1/2"-13 x 1"				
36	P01309	1	Lockwasher, 5/16"				
37	P01310	3	Lockwasher, 3/8"				
38	P01312	16	Lockwasher, 1/2"				
39	P01408	6	Flatwasher, 5/8"				
							24093
				522 OPTION			4/89
				TOWER TILTING CARRIAGE ASSEMBLY			

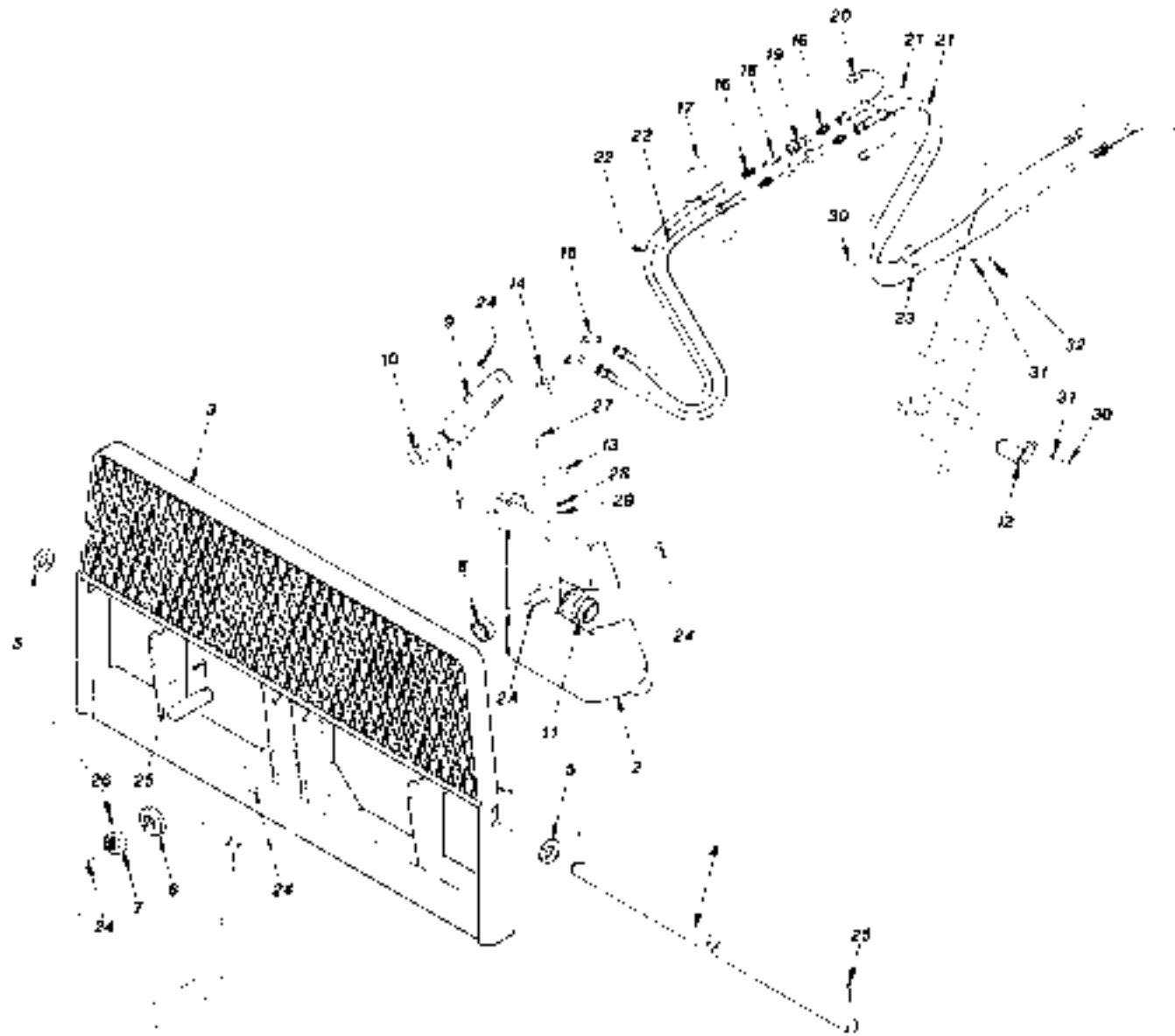


ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	23709D	1	Carriage, Standard				
2	18134A	1	Fork Shaft				
3	P19826	2	Washer, Fork Shaft				
4	P03906	2	Cotter Pin, 3/8" x 3"				
5	P18830	1	Bushing, Self - Aligning				
6	P15367	1	Grease Zerk, 45°				
7	18128A	1	Pin, Carriage Pivot				
8	P00204	1	Bolt, Hx., 3/8"-16 x 1"				
9	P01310	1	Lockwasher, 3/8"				
REF	P19255	-	Pallet Fork, 42" x 4" x 2"				
REF	P19389	-	Pallet Fork, 48" x 4" x 2"				
REF	13278D	-	Cubing Fork, 48" x 2" x 2"				
							23490
522 OPTION							4/89
50" STANDARD (NON - TILT) CARRIAGE ASSEMBLY							

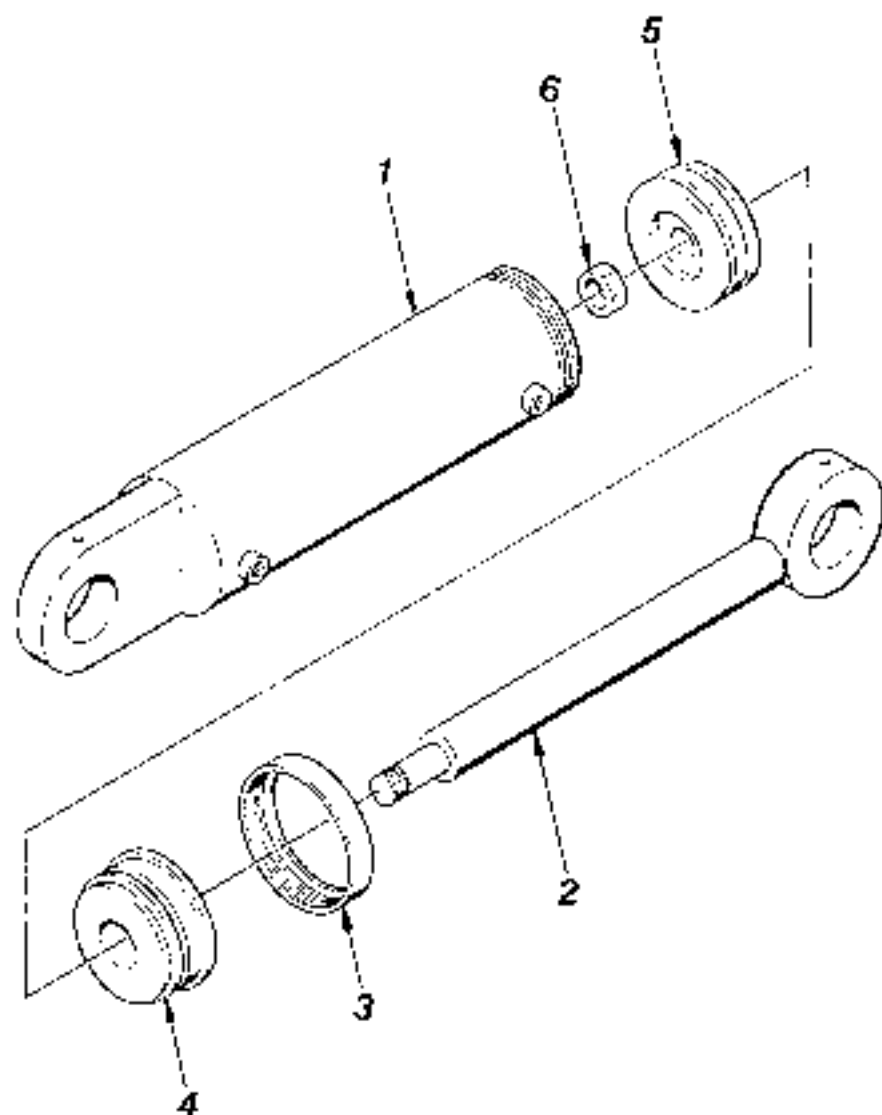
ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	24412D	1	Carriage, Framers				
2	16136A	1	Fork Shaft				
3	P19929	2	Washer, Fork Shaft				
4	P03908	2	Cotter Pin, 3/8" x 3"				
5	P18830	1	Bushing, Self - Aligning				
6	P15367	1	Grease Zerk, 45°				
7	10128A	1	Pin, Carriage Pivot				
8	P00204	1	Bolt, Hx., 3/8"-16 x 1"				
9	P01310	1	Lockwasher, 3/8"				
REF	P19255	-	Pallet Fork, 42' x 4' x 2'				
REF	P19389	-	Pallet Fork, 48' x 4' x 2'				
REF	13278D	-	Cubing Fork, 48' x 2' x 2'				
							23491
522 OPTION							4/89
74° FRAMERS (NON - TILT) CARRIAGE ASSEMBLY							



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)P20139	1	Cylinder, Tilting Carriage				
2	24300D	1	Inner Carriage				
2A	30387D	REF	Pivot Shaft (Field Repair)				
3	18279D	1	Carriage, Standard Tilting				
4	18134A	1	Fork Shaft				
5	P19826	2	Washer, Fork Shaft				
6	18223A	1	Thrust Washer				
7	16224A	1	Nut, Pivot Shaft				
8	P20889	1	Bushing, Pivot Shaft				
9	P25199	1	Bushing, Cylinder - Upper				
10	P18106	1	Bushing, Cylinder - Lower				
11	P18830	1	Bushing, Self - Aligning				
12	18128A	1	Pin, Carriage Pivot				
13	16229A	1	Pin, Tilt Carriage Cylinder				
14	16323A	1	Washer, Special				
15	P18943	2	45° Elbow, JIC - Pipe				
16	P19875	4	Connector, JIC - Pipe				
17	P10325	2	Cap, Dust				
18	P11353	2	Quick Coupler, Male				
19	P11354	2	Quick Coupler, Female				
20	P10326	2	Plug, Dust				
21	P18904	2	Hyd. Hose .38" x 36"				
22	P18856	2	Hyd. Hose .38" x 47"				
23	P17553	2	Clamp, Hyd. Hose				
24	P16611	6	Grease Zerk				
25	P03906	3	Cotter Pin, 3/8" x 3"				
26	P02612	2	Selfscrew, Cup Pt., 3/8"-18 x 3/8"				
27	P00108	1	Bolt, Hx., 5/16"-18 x 2"				
28	P01309	1	Lockwasher, 5/16"				
29	P01507	1	Nut, Hx., 5/16"-18				
30	P00204	2	Bolt, Hx., 3/8"-16 x 1"				
31	P01310	2	Lockwasher, 3/8"				
32	P01508	1	Nut, Hx., 3/8"-18				
REF	P19255	-	Pallet Fork, 42" x 4" x 2"				
REF	P19389	-	Pallet Fork, 48" x 4" x 2"				
REF	13278D	-	Cubing Fork, 48" x 2" x 2"				
				NOTES: A) For Parts Breakdown, See Tilting Carriage Cylinder Assembly.			
				23492			
				522 OPTION 4/89			
				50° STANDARD TILTING CARRIAGE ASSEMBLY			



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A)P20139	1	Cylinder, Tilting Carriage				
2	24390D	1	Inner Carriage				
2A	30387D	REF	Pivot Shaft (Field Repair)				
3	18260D	1	Carriage, Framers Tilting				
4	18138A	1	Fork Shaft				
5	P19926	2	Washer, Fork Shaft				
6	16223A	1	Thrust Washer				
7	16224A	1	Nut, Pivot Shaft				
8	P20889	1	Bushing, Pivot Shaft				
9	P25199	1	Bushing, Cylinder - Upper				
10	P18106	1	Bushing, Cylinder - Lower				
11	P18830	1	Bushing, Self - Aligning				
12	18126A	1	Pin, Carriage Pivot				
13	16229A	1	Pin, Tilt Carriage Cylinder				
14	16323A	1	Washer, Special				
15	P18943	2	45° Elbow, JIC - Pipe				
16	P19875	4	Connector, JIC - Pipe				
17	P10325	2	Cap, Dust				
18	P11353	2	Quick Coupler, Male				
19	P11354	2	Quick Coupler, Female				
20	P10326	2	Plug, Dust				
21	P18904	2	Hyd. Hose .38" x 36'				
22	P18856	2	Hyd. Hose .38" x 47'				
23	P17653	2	Clamp, Hyd. Hose				
24	P16611	6	Grease Zerk				
25	P03906	3	Cotter Pin, 3/8" x 3'				
26	P02812	2	Setscrew, Cup PL, 3/8"-16 x 3/8"				
27	P00108	1	Bolt, Hx., 5/16"-18 x 2"				
28	P01309	1	Lockwasher, 5/16"				
29	P01507	1	Nut, Hx., 5/16"-18				
30	P00204	2	Bolt, Hx., 3/8"-16 x 1"				
31	P01310	2	Lockwasher, 3/8"				
32	P01508	1	Nut, Hx., 3/8"-16				
REF	P19255	-	Pallet Fork, 42" x 4" x 2"				
REF	P19389	-	Pallet Fork, 48" x 4" x 2"				
REF	13278D	-	Cubing Fork, 48" x 2" x 2"				
				NOTES: A) For Parts Breakdown, See Tilting Carriage Cylinder Assembly.			
				23493			
				522 OPTION 4/89			
				74" FRAMERS TILTING CARRIAGE ASSEMBLY			



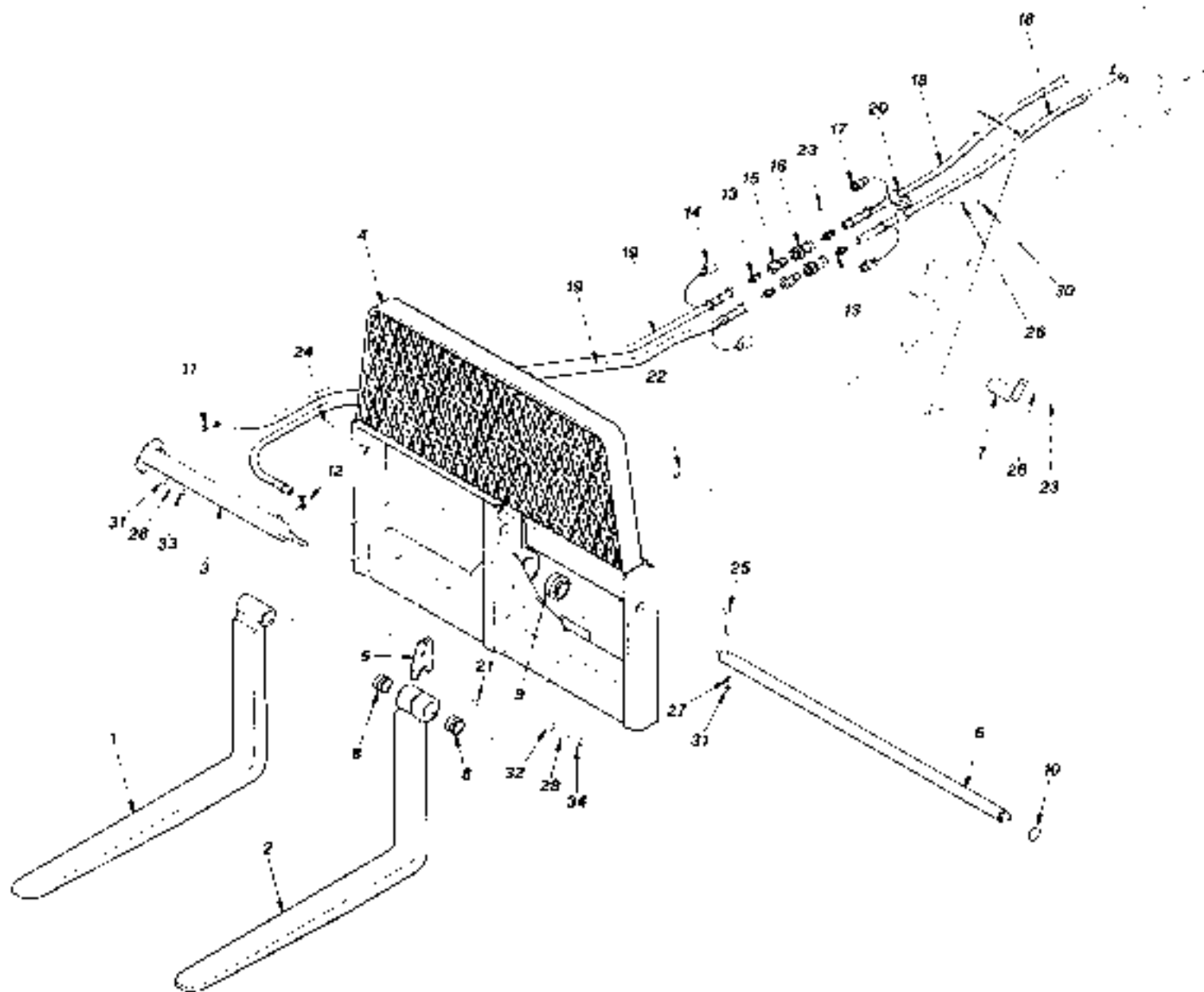
ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	P20139	-	Tilting Carriage Cylinder
1	P25293	1	Barrel Weldment
2	P25297	1	Rod Weldment
3	P23778	1	Rod Bearing Retainer
4	P23788	1	Rod Bearing
5	P19224	1	Piston
6	P19217	1	Locknut
REF	P20119	1	Seal Kit

23494

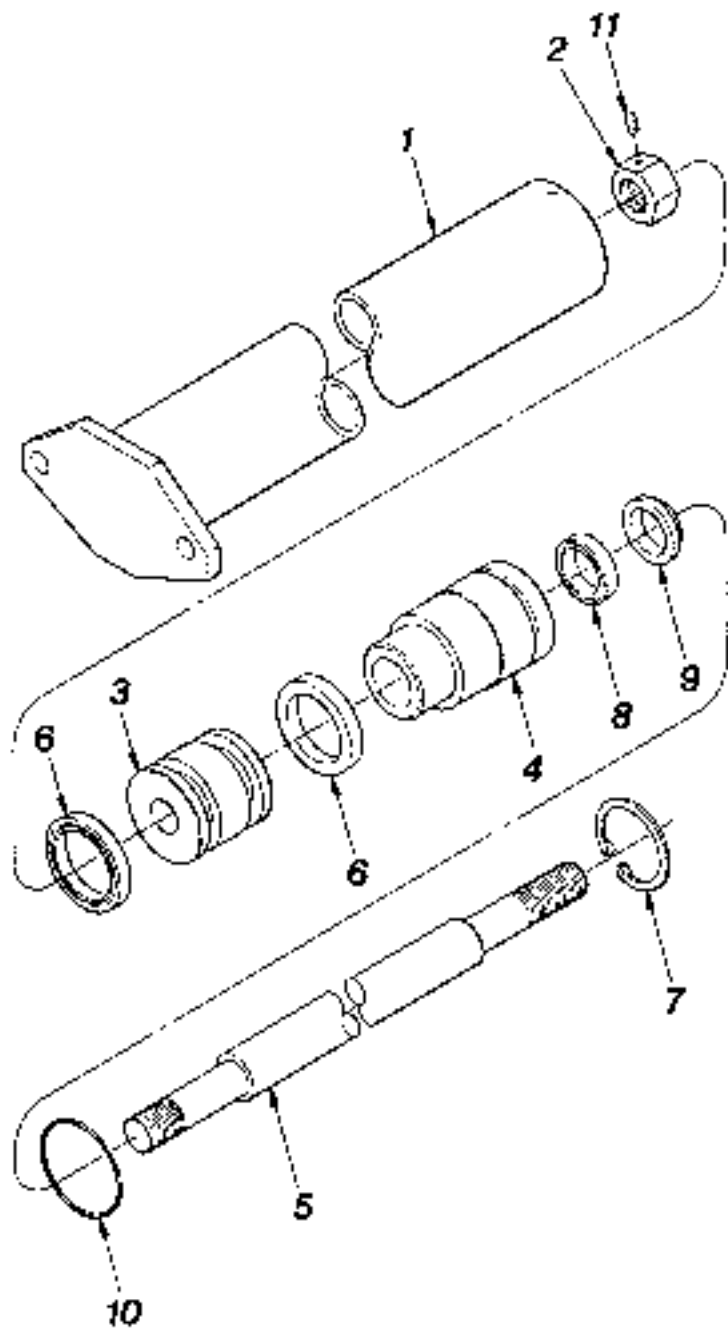
522 OPTION

4/89

TILTING CARRIAGE CYLINDER ASSEMBLY



ITEM	PART NUMBER	QTY.	DESCRIPTION	ITEM	PART NUMBER	QTY.	DESCRIPTION
1	P19255	REF	Pallet Fork, 42' x 4' x 2'				
	P19389	REF	Pallet Fork, 48' x 4' x 2'				
2	18658B	REF	Pallet Fork, 42' x 4' x 2'				
	18404B	REF	Pallet Fork, 48" x 4' x 2"				
3	A)18617D	1	Cylinder, Fork Shift				
4	25233D	1	Carriage, Fork Shift				
5	16643A	1	Fork Shifter				
6	18658A	1	Fork Shaft				
7	18128A	1	Pin, Carriage Pivot				
8	18657A	2	Bushing, Shift Fork				
9	P18830	1	Bushing, Self - Aligning				
10	P19486	1	Snap Ring				
11	P19550	1	45° Elbow, JIC - Pipe				
12	P20374	1	90° Elbow, JIC - Pipe				
13	P18875	4	Connector, JIC - Pipe				
14	P10325	2	Cap, Dust				
15	P11353	2	Quick Coupler, Male				
16	P11354	2	Quick Coupler, Female				
17	P10326	2	Plug, Dust				
18	P18904	2	Hyd. Hose .38" x 36'				
19	P19487	2	Hyd. Hose .38" x 60'				
20	P17553	2	Clamp, Hyd. Hose				
21	P18611	2	Grease Zerk				
22	P15367	1	Grease Zerk, 45°				
23	P00204	2	Bolt, Hx., 3/8"-16 x 1"				
24	P00406	2	Bolt, Hx., 1/2"-13 x 2"				
25	P00410	1	Bolt, Hx., 1/2"-13 x 3"				
26	P01310	2	Lockwasher, 3/8"				
27	P01312	1	Lockwasher, 1/2"				
28	P01381	2	Starwasher, 1/2"				
29	P01364	1	Starwasher, 3/4"				
30	P01508	1	Nut, Hx., 3/8"-16				
31	P01510	3	Nut, Hx., 1/2"-13				
32	P01513	1	Nut, Hx., 3/4"-10				
33	P01560	2	Jam Nut, Hx., 1/2"-13				
34	P01563	1	Jam Nut, Hx., 3/4"-10				
				NOTES: A) For Parts Breakdown, See Fork Shift Cylinder Assembly.			
				23495			
				522 OPTION 4/89			
				FORK SHIFT CARRIAGE ASSEMBLY			



ITEM	PART NUMBER	QTY.	DESCRIPTION
REF	16817D	-	Fork Shift Cylinder
1	16652D	1	Barrel Weldment
2	16849A	1	Nut, Special
3	16648A	1	Piston
4	16847A	1	Rod Bearing
5	16646A	1	Rod, Cylinder
6	P19419	2	Seal, Plston
7	P19418	1	Snap Ring
8	P19417	1	Seal, Rod
9	P19416	1	Wiper, Rod
10	P11425	1	O-Ring
11	P02562	1	Setscrew, Cup Pt., 1/4"-20 x 1/4"

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The parts information in this publication is based on data available at the time it was printed. Because of continual improvement and advancing product design, your vehicle may not be identical to the parts information shown. Whenever there is a question, obtain the latest parts information available from your local dealer. JLG Industries, Inc. continually updates these publications electronically within our *OnLine Services*.



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