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# *Illustrated Parts Manual*

## *Models*

# *D-SERIES*

**1100830-005**

August 2001, 2001



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**Section 2 ..... Power Plant**

**Section 3 ..... Frame and Operator’s  
Compartment**

**Section 4 ..... Boom and Transfer Carriage**

**Section 5 ..... Boom and Transfer Hydraulics**

**Section 6 ..... Pump, Suction - Return and  
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**Section 7 ..... Control Hydraulics**

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## USING THIS BOOK

644B-37 S/N 101-586
644B-42 S/N 101-156
844C-42 S/N 101-468
1044C-42 S/N 101-113
1044C-54 S/N 101-124
6K-37 S/N 101-274
6K-42 S/N 101-115
8K-42 S/N 101-196
10K-42 S/N 101-106
10K-54 S/N 101
<b>MISSION OIL COOLER ASSEMBLY 1.53.1</b>

(B)

(A)

(C)

644B  
6K  
844C  
8K  
1044C  
10K  
▼

Figure 1

This parts book covers all models, but some pages may only be specific to a few of them. To help you identify the page you're looking for, model numbers are always listed in the lower, far right corner of each parts list page (Figure 1, A).

Specific model and serial number information (B) is located on the lower, right side of each parts list page, above the page title (C).

### How to Find What You're Looking For

To start, you must have the model and serial numbers, but you don't need the whole serial number—just the last digits will do. If it's related to the engine, you may need the engine model also.

A "Section Quick Reference" can be found at the beginning of the book as well as a complete table of contents, and each section has its own table of contents. Find the section, then the subject and page concerning the part you're after. Go to the page and see if it lists your machine's model and serial number. If not, it can probably be found on the pages immediately following that one.

### For example:

You need a throttle part for an **844C-42**, serial number **302**, with a Cummins **6B5.9** engine.

Section 2, "Power Plant", contains information about engine installations. In the table of contents, you find a listing under "Cummins 6B5.9" for "Throttle Group Assembly" on page 2.40.1.

844C-42 S/N 101-291
1044C-42 S/N 101-106
1044C-54 S/N 101-104
8K-42 S/N 101-171
<b>GROUP ASSEMBLY (Cummins 6B5.9) 2.40.1</b>

(E)

(D)

644B  
6K  
**844C**  
8K  
1044C  
10K  
▼

(F)

(G)

Figure 2

After going to that page, you'll see your model listed on the right-hand side in bold text (Figure 2, D). This means that the model is covered on this page, but the machine serial number (302) is not shown in the specific information (E). (Grayed model numbers (F) means that those models are not covered by that page.) The black arrow (G) tells you that more serial numbers and/or different models can be found on the next page.

844C-42 S/N 292-
1044C-42 S/N 107-
1044C-54 S/N 105-
8K-42 S/N 172-
10K-42 S/N 101-
10K-54 S/N 101-
<b>GROUP ASSEMBLY (Cummins 6B5.9) 2.40.1</b>

(I)

(H)

(J)

644B  
6K  
844C  
8K  
1044C  
10K  
▼

Figure 3

The next page (2.40.1.1) shows that it contains the information for your machine model and serial number (Figure 3, H & I). The gray arrow (J) means that's the last page for that particular subject.

### Page Numbers

Understanding how the page numbers are structured will help you navigate through the book.

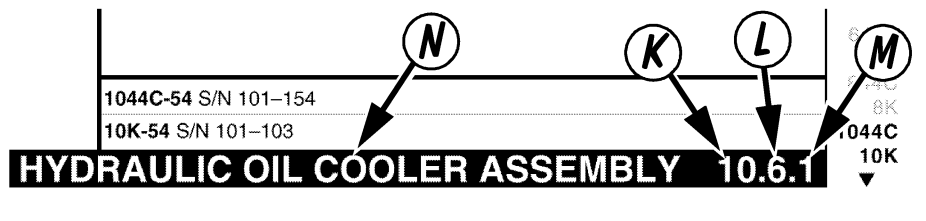


Figure 4

Figure 4 shows a typical page number.

- First number (K): Always matches the section number.
- Second number (L): Represents the subject title (N) in that section only.
- Third number (M): Shows page order for the machine models under that particular subject (N).

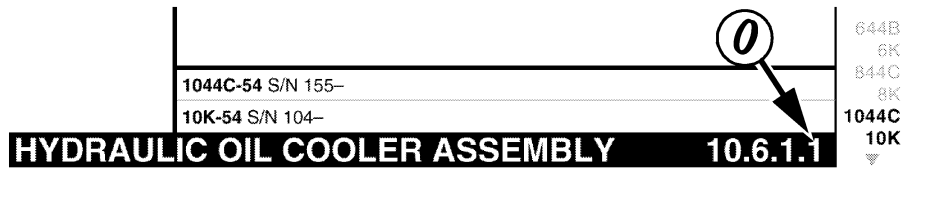


Figure 5

Figure 5 shows a page number with additional serial numbers not covered by the previous page (Figure 4).

- Fourth number (O): First, second, third, etc., page of additional serial numbers for the specified models.

### General Information

The revision appears in the right hand margin of each page. The quantity shown in the "QTY" column is the number of parts used on that assembly. Where parts are referenced "REF" the part shown is included in another assembly or part of another item. For certain parts such as shims, spacers, etc. "A/R" indicates that the quantity to be used is as required.

### Abbreviations

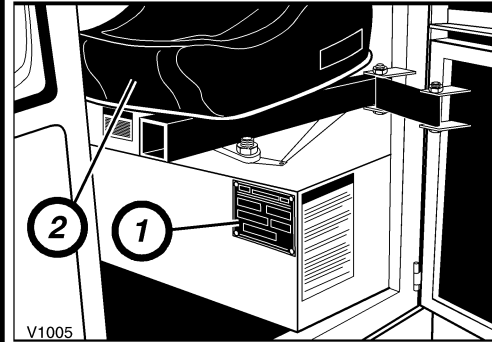
The following abbreviations are commonly used in this manual:

A/R .....	As Required	N/A .....	Not Applicable
Amp .....	Ampere	N.L.A. ....	No Longer Available
Ass'y .....	Assembly	N.P.T. ....	National Pipe Thread
AUX .....	Auxiliary	N.S.S. ....	Not Sold Separately
BCI .....	Battery Council International	O.D. ....	Outside Diameter
C.....	(Metric) Class	Osc. ....	Oscillation
CCA ...	Cold Cranking Performance Rating	oz. ....	Ounce(s)
Cyl. ....	Cylinder	Pcs. ....	Pieces
D.P.D.T. ....	Dual Pole, Dual Throw	P/N .....	Part Number
D.P.S.T. ....	Dual Pole, Single Throw	P.S.I. ....	Pounds Per Square Inch
Dia. ....	Diameter	Pt. ....	Point
Diff. ....	Differential	Rd. ....	Round
GA .....	Gauge	REF .....	Reference
GR .....	Grade	Req. ....	Required
Hd. ....	Head	R.H. ....	Right Hand
Hx. ....	Hex	S.P.D.T. ....	Single Pole, Dual Throw
Hyd. ....	Hydraulic	S.P.S.T. ....	Single Pole, Single Throw
I.D. ....	Inside Diameter	S/N .....	Serial Number
in. ....	Inches	SAE ..	Society of Automotive Engineers
Incl. ....	Includes	STD. ....	Standard
JIC .....	Joint Industry Council	Temp. ....	Temperature
Lg. ....	Long	Trans. ....	Transmission
L.H. ....	Left Hand	w/ .....	With
mm .....	Millimeter	w/o .....	Without

## ORDERING PARTS

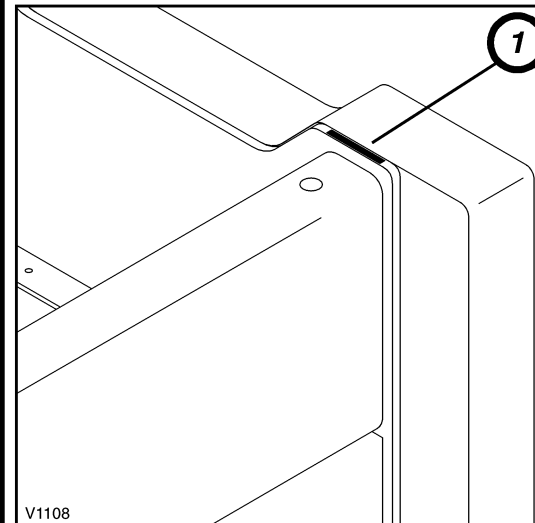
See inside back cover

## SERIAL NUMBER LOCATIONS



The machine serial number plate (1) is mounted in the cab, below seat (2).

**Machine Serial Number Plate**



The machine serial number (1) is also stamped into the frame on the top left, rear corner of the machine.

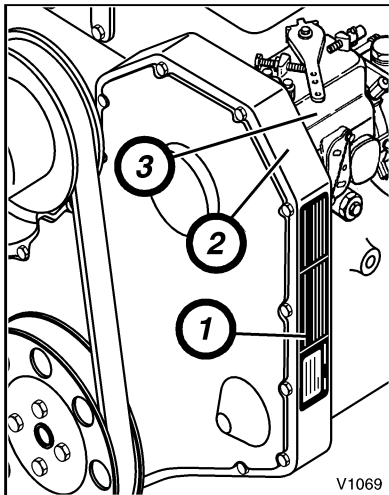
**Stamped Machine Serial Number**



**SERIAL NUMBER CODES**

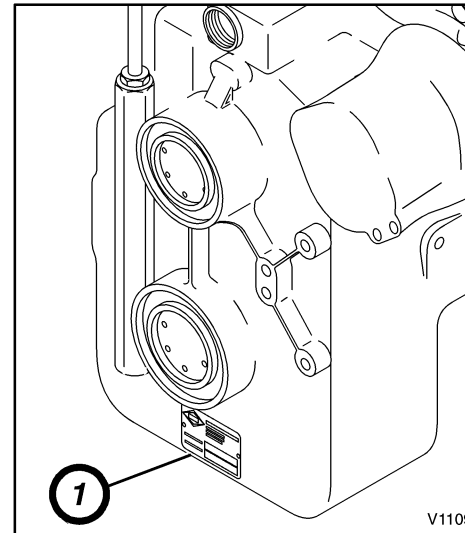
**XX X X X X - 101**

YEAR	MODEL	ENGINE	TRANS.	AXLES	SN
90	V-644B-37	12-DEERE 4039D	N-ZF 3WG 100	15-SPICER 7036-171	STARTING WITH SN 101
91	W-844C-42	13-CUMMINS 4B3.9	P-ZF 4WG 100	16-SPICER 7036-183	
92	X-6K-37	14-CUMMINS 4BT3.9	W-CLARK T12366	17-SPICER 7036-190	
93	Y-8K-42	16-DEERE 4039T		18-SPICER 7036-182	
94	Z-644B-42	17-CUMMINS 6B5.9		19-SPICER 8036-100	
95	AA-1044C-42	18-DEERE 6068D		20-SPICER 8036-101	
96	AB-1044C-54	19-DEERE 4045T (100 hp)		21-SPICER 7036-202	
97	AD-10K-42	20-DEERE 4045T (115 hp)		22-SPICER 7036-209	
98	AE-10K-54	21-CUMMINS 4BT3.9 (EPA)		24-SIGE/ SPICER 420S	
99	AG-6K-42	23-DEERE 4045D			
00	AL-644D-34	24-CUMMINS 4B3.9 (EPA)			
		25-CUMMINS 4BT3.9 (85 hp)			



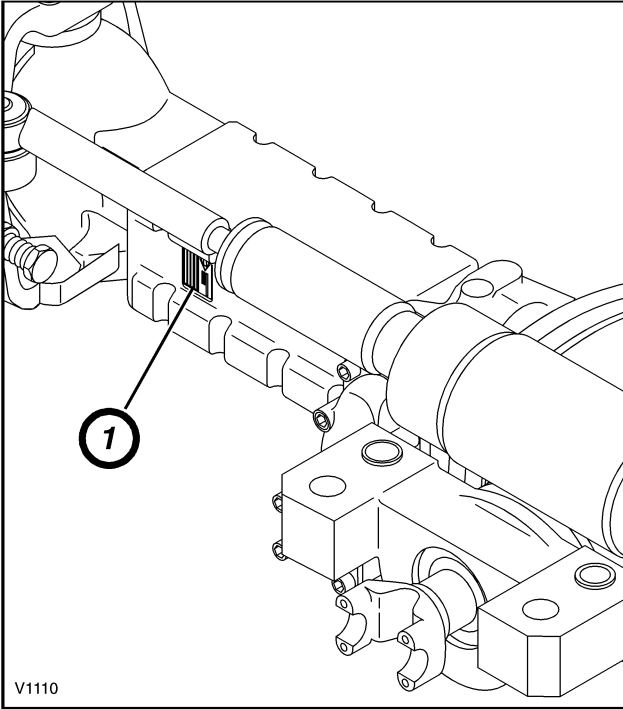
**Engine Serial Number — Cummins**

The engine serial number plate (1) is located on the right side of the engine, on gear housing (2) near the injection fuel pump (3).



The transmission serial number plate (1) is located in the center, lower rear side of the transmission housing.

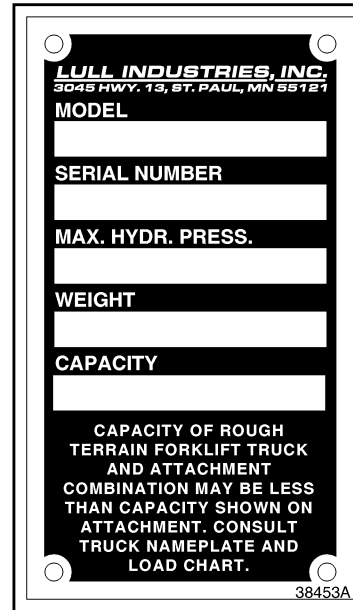
**Transmission Serial Number**



V1110

**Axle Serial Number**

The front axle serial number plate (1) is located on the left, rear side of the axle housing. The rear axle serial number plate is located on the right, front side of the axle housing.



The location of this plate varies with attachment.

**Attachment Serial Number Plate**

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Front & Rear Drive Shaft Assembly . . . . .	1.4.1

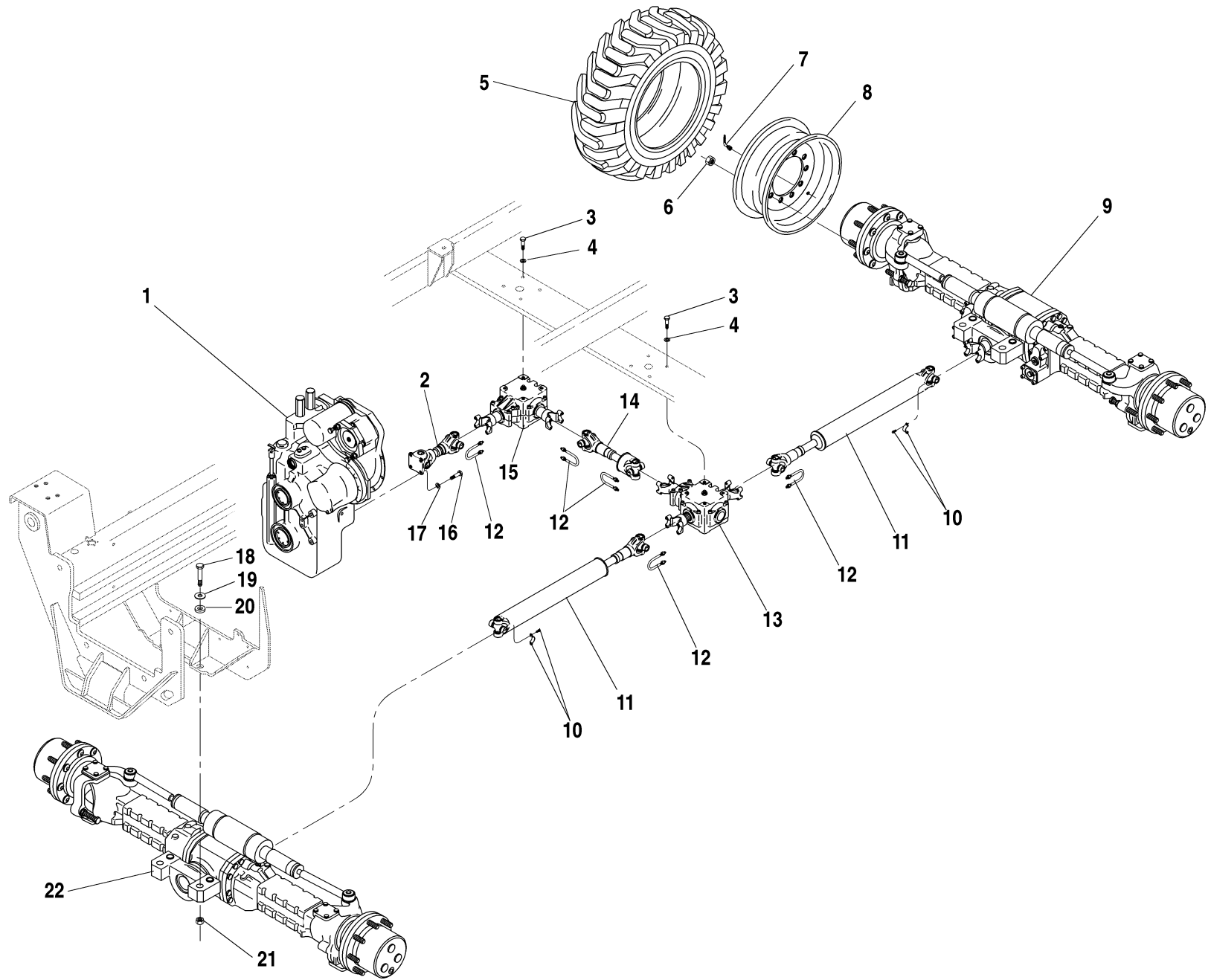
### **Axles (420S)**

Axle Housing Assembly Right Front & Left Rear. . . . .	1.5.1
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Center Gear Box Assembly . . . . .	1.7.1
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### **Transmission T-12000**

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Torque Converter Assembly . . . . .	1.17.1
Pump Drive Group. . . . .	1.18.1
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3rd Gear & Output Shaft Group. . . . .	1.22.1
1st & 2nd Gear Shaft Group . . . . .	1.23.1
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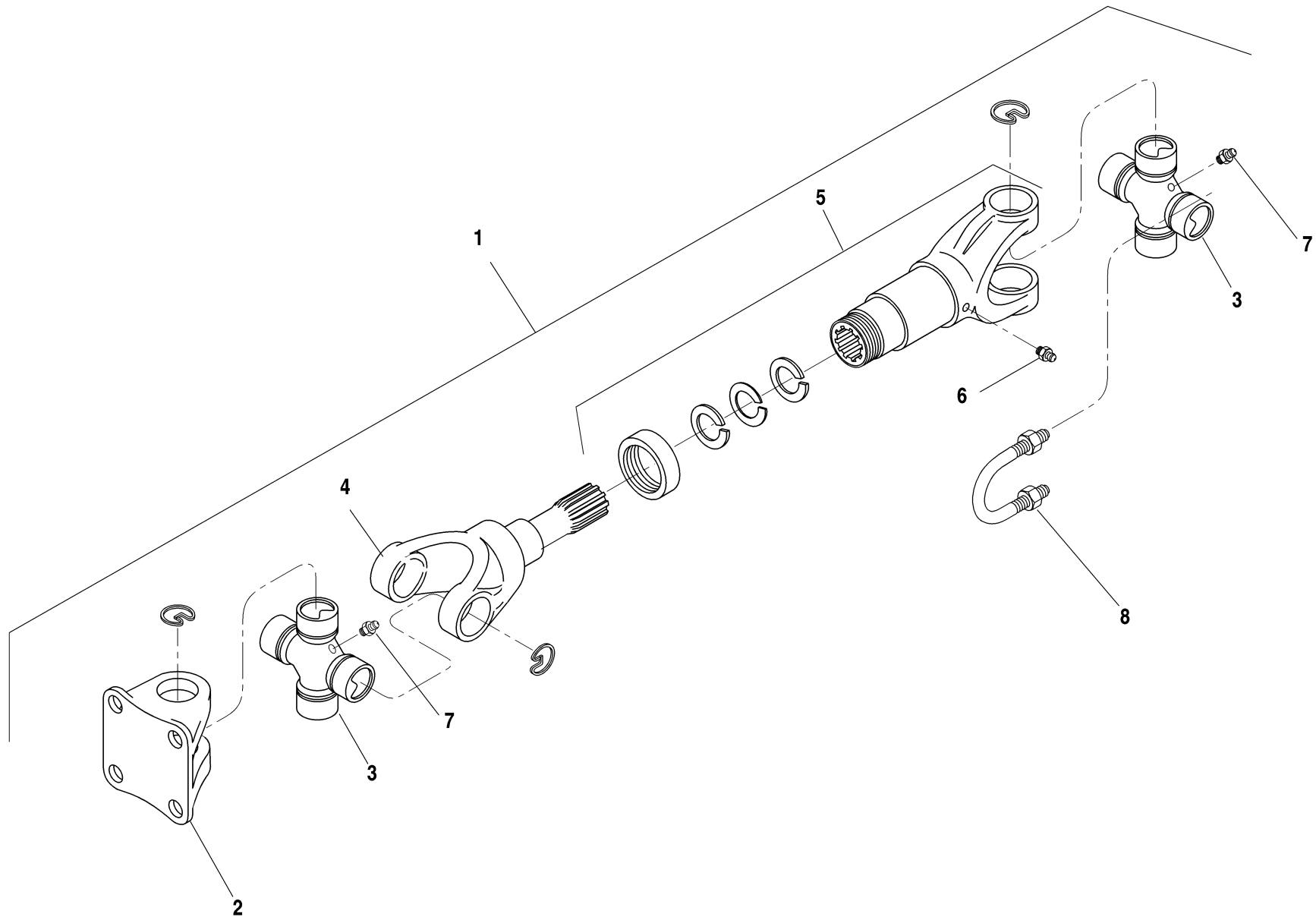
Electric Control Group . . . . .	1.25.1
Transmission Oil Cooler. . . . .	1.26.1



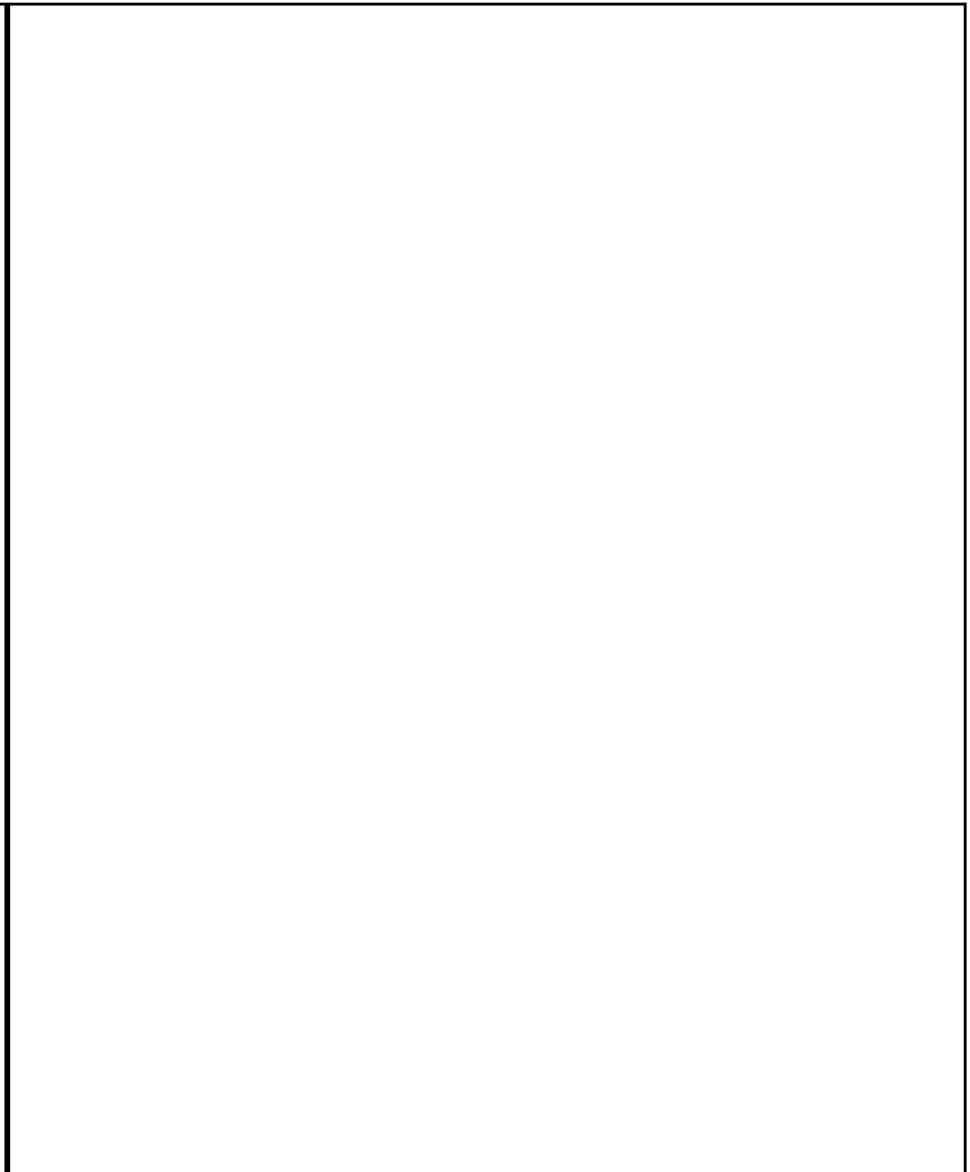
ITEM	PART NO.	QTY.	DESCRIPTION
1	1100224	1	Transmission (See Pages 1.15.1–1.25.1 for Breakdown)
2	67273B	1	Drive Shaft, Transmission Output (See Page 1.2.1 for Breakdown)
3	P00433		Capscrew, Hx., 1/2"-13 x 2" GR 8
4	P01312		Lockwasher, 1/2"
5	P19043	-	Tire, 13.00 x 24 12 Ply, Steel Belt
6	68024X		Lug Nut
7	P13673	4	Valve Stem
8	65448B	4	Wheel Rim, (9 x 24)
9	65261A	1	Axle, Rear (See Pages 1.5.1–1.13.1 for Breakdown)
10	37442X	2	Strap Kit
11	67275B	2	Drive Shaft Gearbox to Axles (See Page 1.4.1 for Breakdown)
12	P12530	10	U-Bolt
13	1101374	1	Gearbox, Tee (See Page 1.28.1 for Breakdown)
14	68960B	1	Drive Shaft, Intermediate (See Page 1.3.1 for Breakdown)
15	1101373		Gearbox, 90° (See Page 1.27.1 for Breakdown)
16	①1100392	4	Capscrew, Socket Hd., 7/16"-20 x 15/16"
17	②8307006	4	Lockwasher, 7/16"
18	P00785	8	Capscrew, Hx., 3/4"-16 x 4"
19	P01257	8	Washer, Flat, 3/4" Dia.
20	65611A	8	Washer, Axel Mounting Bolt
21	P01232		Nut, Hx., 3/4"-16
22	65260A	1	Axle, Front (See Pages 1.5.1–1.13.1 for Breakdown)

ITEM	PART NO.	QTY.	DESCRIPTION
<p>NOTES:</p> <ul style="list-style-type: none"> <li>① For S/N 108 – 656, use 1100419, Capscrew, Socket Hd., M12-1.75 x 30mm CI 10.9 .</li> <li>② For S/N 108 – 656, use P04609, Lockwasher, M12, .</li> </ul>			
644D-34 S/N 108–			

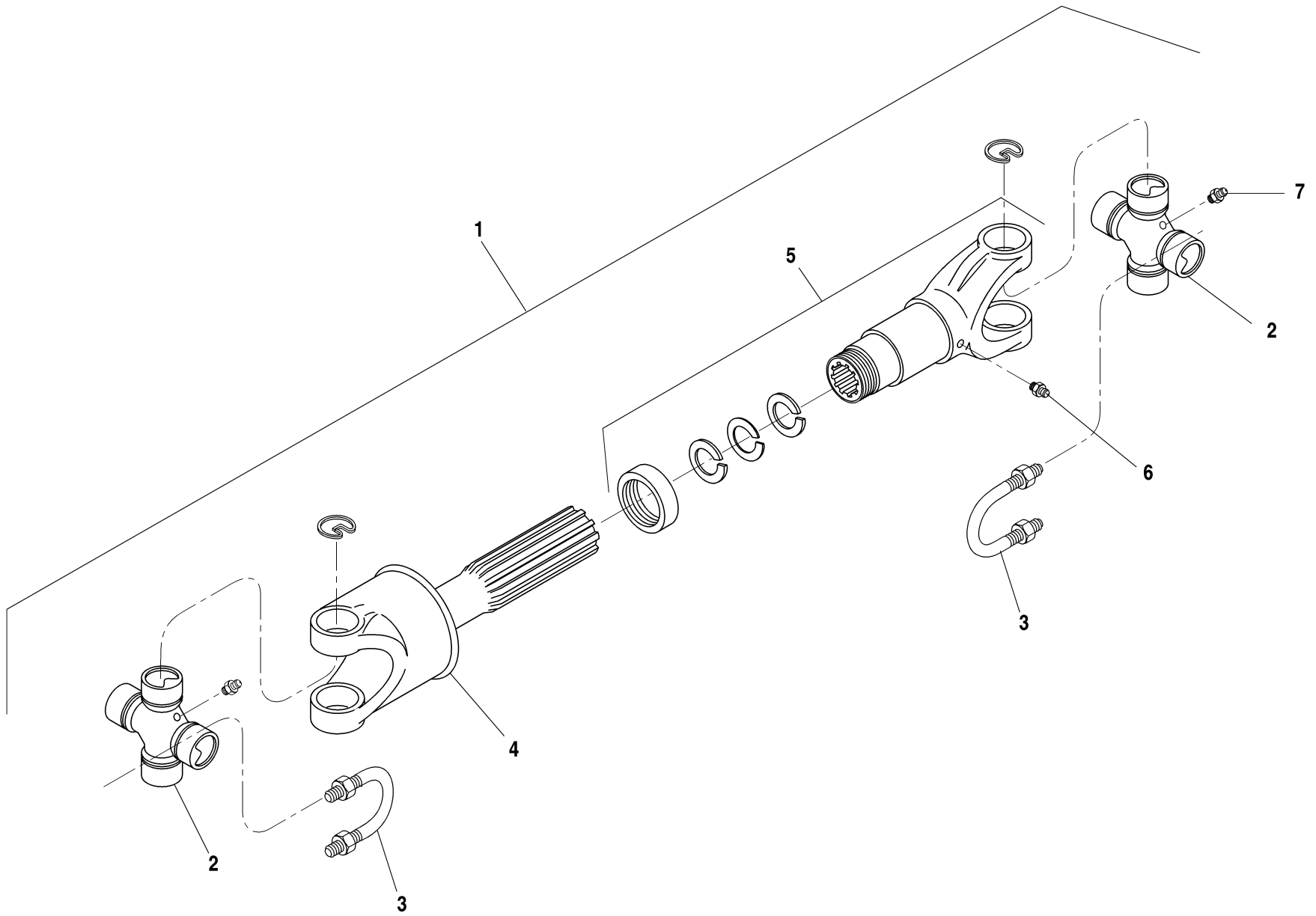
**DRIVE TRAIN GROUP ASSEMBLY 1.1.1**



ITEM	PART NO.	QTY.	DESCRIPTION
1	67273B	-	Drive Shaft (Includes items 2-7)
2	P11695	1	Flange, Yoke
3	P11694	2	U-Joint Assembly (Includes Snap Rings)
4	68348X	1	Yoke, Shaft
5	P12994	1	Yoke, Slip
6	P15272	1	Grease Zerk
7	P16611	2	Grease Zerk
8	P12530	2	U-Bolt



644D-34 S/N 108-





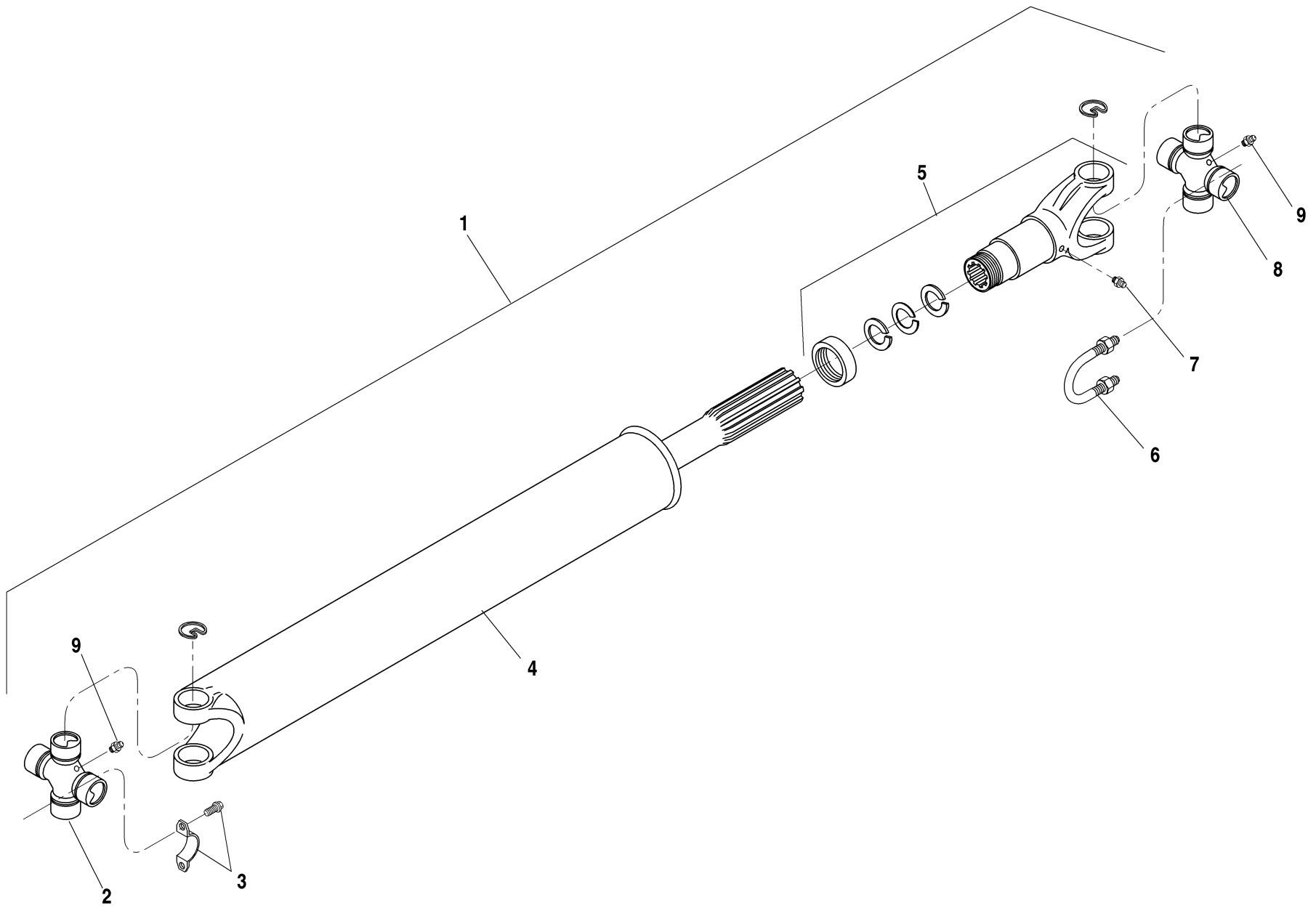
ITEM	PART NO.	QTY.	DESCRIPTION
1	68960B	1	Drive Shaft Intermediate
2	P11694	2	U-Joint Assembly (Includes Snap Rings & Item 7)
3	P12530	4	U-Bolt Kit
4	N.S.S.	-	Yoke Assembly
5	N.S.S.	1	Yoke, Slip
6	P15272	1	Grease Zerk
7	P16611	2	Grease Zerk

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**INTERMEDIATE DRIVE SHAFT ASSEMBLY 1.3.1**

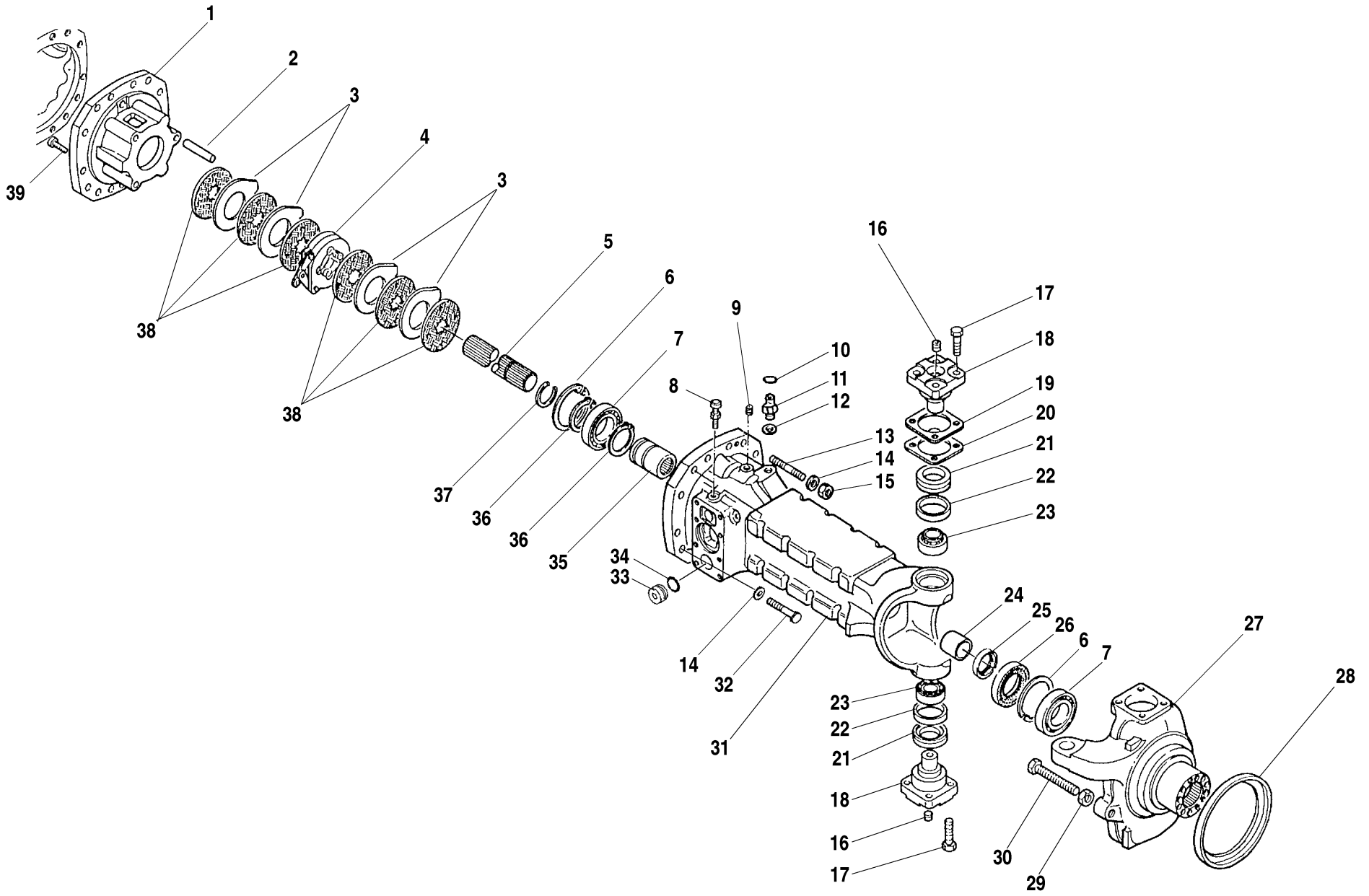
644D  
▼



ITEM	PART NO.	QTY.	DESCRIPTION
1	67275B	2	Driver Shaft Assembly (Includes Items 1-9)
2	P13000	1	U-Joint Assembly (Includes Snap Rings)
3	37442X	2	Strap Kit
4	N.S.S.	-	Shaft Weldment
5	68347X	1	Yoke, Slip
6	P12530	2	U-Bolt Kit
7	P15272	1	Grease Zerk
8	P11694	1	U-Joint Assembly (Includes Snap Rings)
9	P16611	2	Grease Zerk

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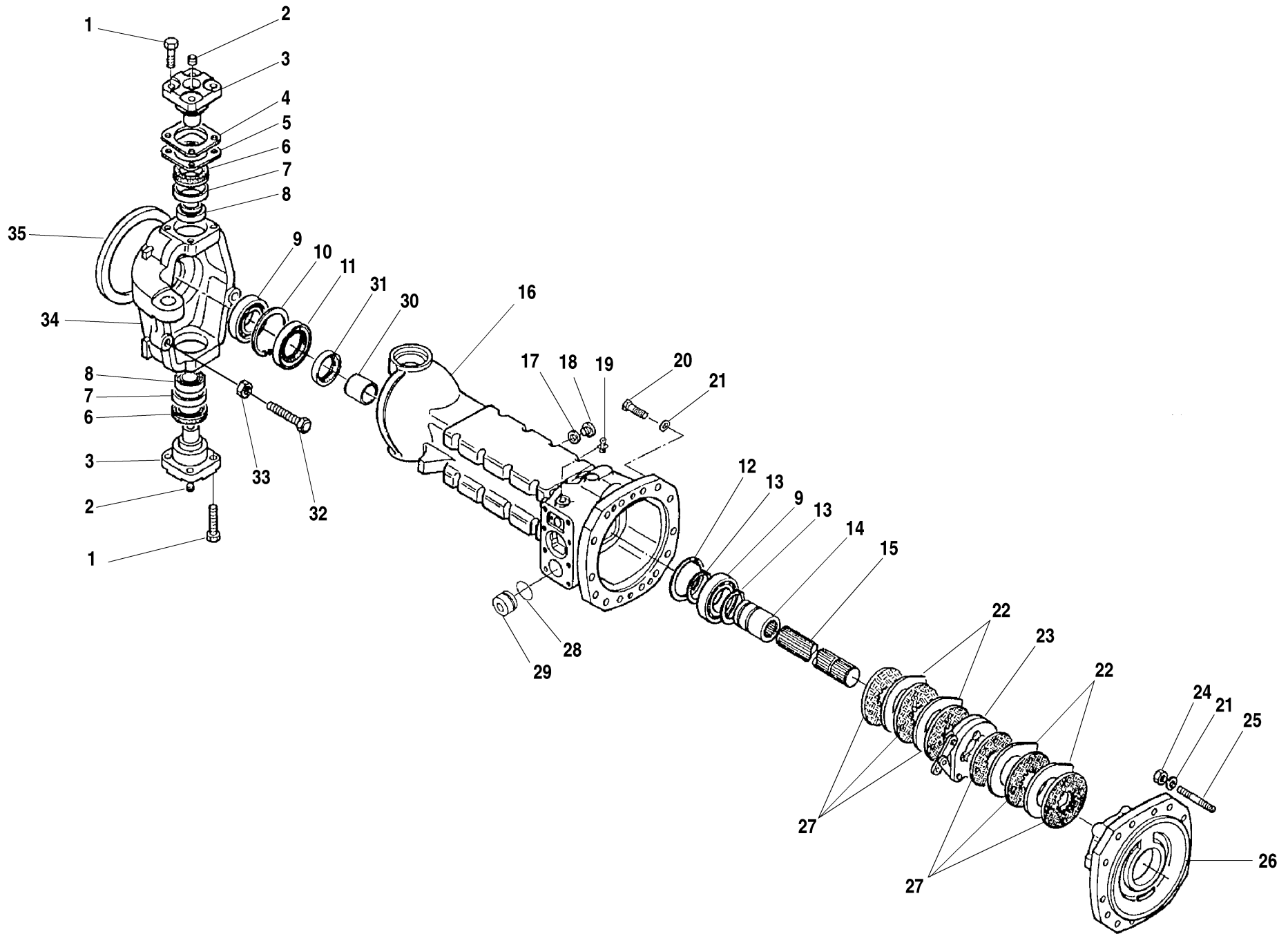
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION
1	67928X	1	Flange
2	67936X	3	Pin
3	67926X	10	Counter, Brake
4	67924X	1	Ball Brake
5	67953X	1	Half Shaft Brake
6	67949X	2	Snap Ring
7	67948X	2	Bearing
8	67906X	1	Bleed Valve
9	67907X	1	Dowel
10	67909X	1	O-Ring
11	67903X	1	Breather
12	67902X	1	Gasket
13	67943X	3	Stud
14	67944X	14	Thrust Washer
15	67945X	11	Nut
16	67938X	2	Dowel
17	67937X	8	Bolt
18	67936X	2	Pin
19	67935X	2	Shim
20	67934X	2	Shim
21	67933X	2	Oil Seal
22	67932X	2	Ring
23	67931X	2	Bearing
24	67904X	1	Bushing, Axle Housing
25	1100334	1	Seal, Axle Housing
26	67947X	1	Oil Seal
27	67917X	1	Steering Knuckle Right Front / Left Rear (Includes Item 28)
28	67919X	1	Cover
29	67923X	2	Nut
30	67922X	2	Capscrew
31	67901X	1	Axle Housing Right Front / Left Rear
32	67937X	11	Capscrew
33	①67938X	1	Plug
34	①67909X	1	O-Ring
35	67951X	1	Sleeve, Brake
36	67906X	3	Snap Ring

ITEM	PART NO.	QTY.	DESCRIPTION
37	67952X	1	Snap Ring
38	67925X	6	Disc, Brake
39	67942X	2	Screw
NOTES:			
① Not Used on Rear Axle.			
644D-34 S/N 108-			

**AXLE HOUSING ASSEMBLY RIGHT FRONT/LEFT REAR (420S) 1.5.1**

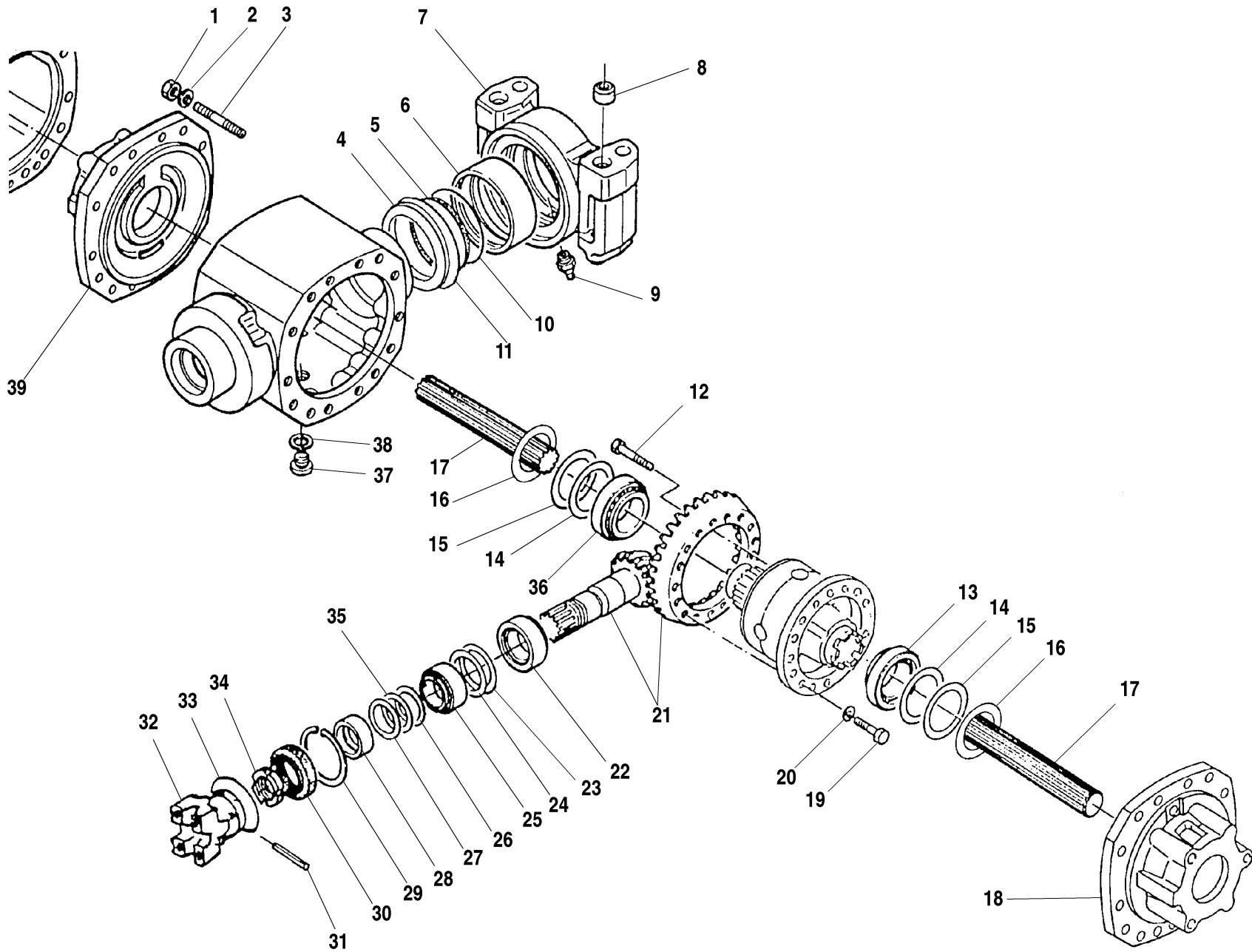


ITEM	PART NO.	QTY.	DESCRIPTION
1	②67937X	8	Bolt, M14x40, GR10.9
2	67938X	2	Dowel
3	67936X	2	Pin
4	67935X	2	Shim
5	67934X	2	Shim
6	67933X	2	Oil Seal
7	67932X	4	Ring
8	67931X	2	Bearing
9	67948X	2	Bearing
10	67949X	2	Snap Ring
11	67947X	1	Oil Seal
12	67906X	3	Snap Ring
13	67950X	2	SnapRing
14	67951X	1	Sleeve, Brake
15	67953X	1	Half Shaft Brake
16	67911X	1	Axle Housing (Left Front / Right Rear)
17	67902X	1	Gasket
18	67915X	1	Oil Plug
19	67903X	1	Breather
20	67946X	11	Capscrew
21	67944X	14	Thrust Washer
22	67926X	10	Counter, Brake
23	67924X	1	Ball Brake
24	67945X	3	Nut
25	67943X	3	Stud
26	67928X	1	Flange
27	67925X	6	Disc, Brake
28	①67909X	1	O-Ring
29	①67938X	1	Plug
30	67904X	1	Bushing, Axle Housing
31	1100334	1	Seal, Axle Housing
32	67922X	2	Capscrew, M16
33	67923X	2	Nut
34	67920X	1	Steering Knuckle (Left Front / Right Rear) (Includes Item 35)
35	67919X	1	Cover

ITEM	PART NO.	QTY.	DESCRIPTION
NOTES:			
① Not Used on Rear Axle.			
② For Machines with fenders use 10704281 on the fender mount.			
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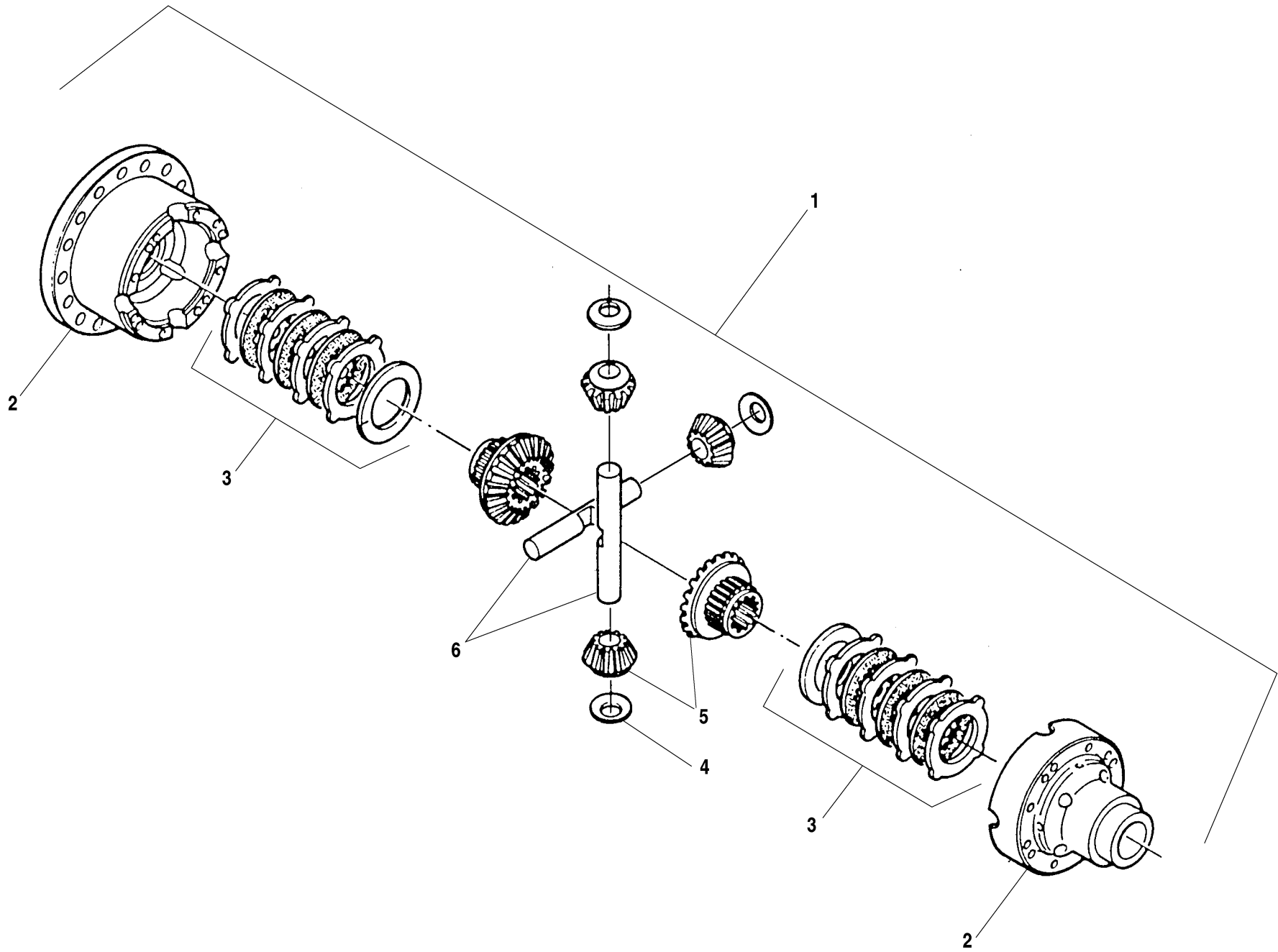
**AXLE HOUSING ASSEMBLY LEFT FRONT/RIGHT REAR (420S) 1.6.1**





ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	67945X	6	Nut	38	67906X	1	Gasket
2	67944X	28	Thrust Washer	39	67940X	1	Flange
3	67943X	6	Stud				
4	67916X	2	Spacer				
5	67965X	2	V-Ring				
6	67957X	2	Bushing				
7	67955X	2	Support				
8	67956X	4	Bushing				
9	67958X	1	Grease Zerk				
10	67959X	2	O-Ring				
11	67960X	2	Spacer				
12	67980X	24	Capscrew				
13	67970X	1	Bearing				
14	67969X	4	Shim				
15	67968X	4	Shim				
16	67967X	4	Shim				
17	67953X	2	Half Shaft, Brake				
18	67939X	1	Flange				
19	67979X	16	Capscrew				
20	67978X	16	Thrustwasher				
21	68079X	1	Bevel Drive				
22	67971X	1	Bearing				
23	67972X	2	Shim				
24	67973X	2	Shim				
25	67974X	1	Bearing				
26	67975X	4	Shim				
27	67977X	4	Shim				
28	67964X	1	Spacer				
29	67963X	1	Snap Ring				
30	67962X	1	Oil Seal				
31	67930X	1	Pin				
32	67928X	1	Flange				
33	67929X	1	Cover				
34	67961X	1	Ring Nut	<b>644D-34 S/N 108-</b>			
35	67976X	4	Shim				
36	67966X	1	Bearing				
37	67915X	1	Oil Plug				

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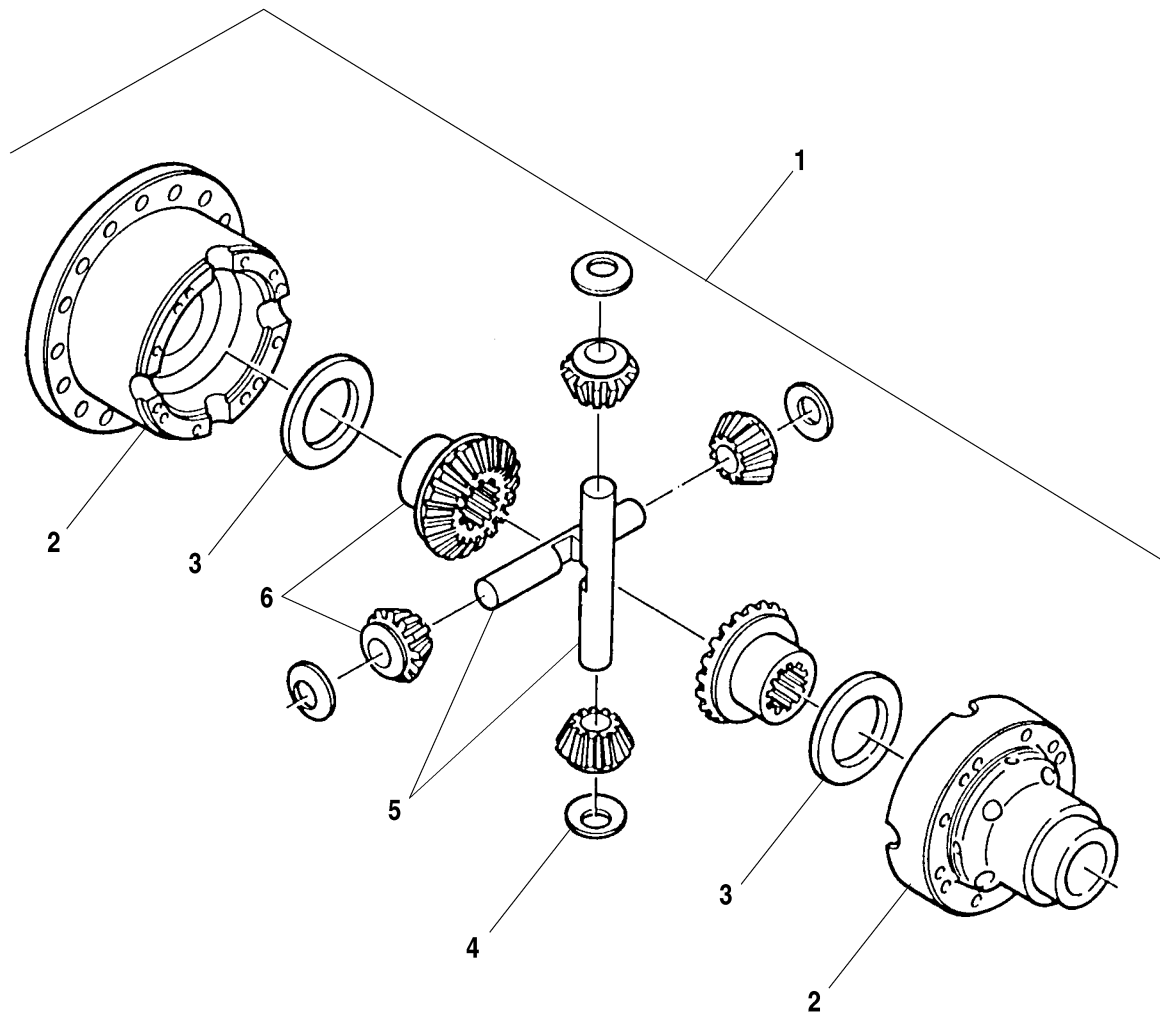
ITEM	PART NO.	QTY.	DESCRIPTION
1	67981X	-	Differential Case Assembly
2	67982X	1	Case, Differential
3	67983X	2	Disc & Friction Plate Kit
4	67985X	4	Thrust Washer
5	67984X	1	Gear, Differential
6	67986X	2	Pin

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**DIFFERENTIAL CASE ASSEMBLY FRONT AXLE (420S) 1.8.1**

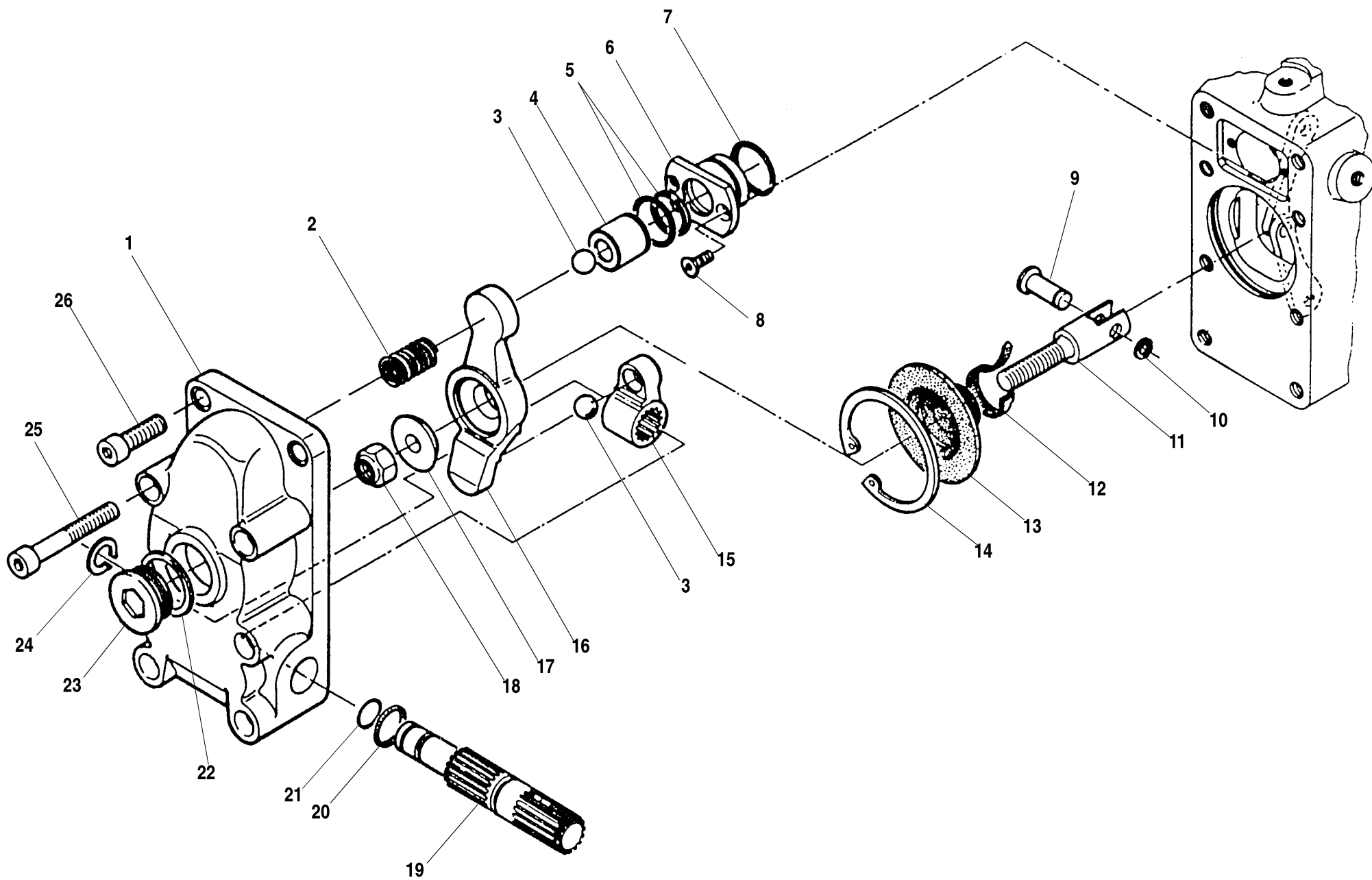
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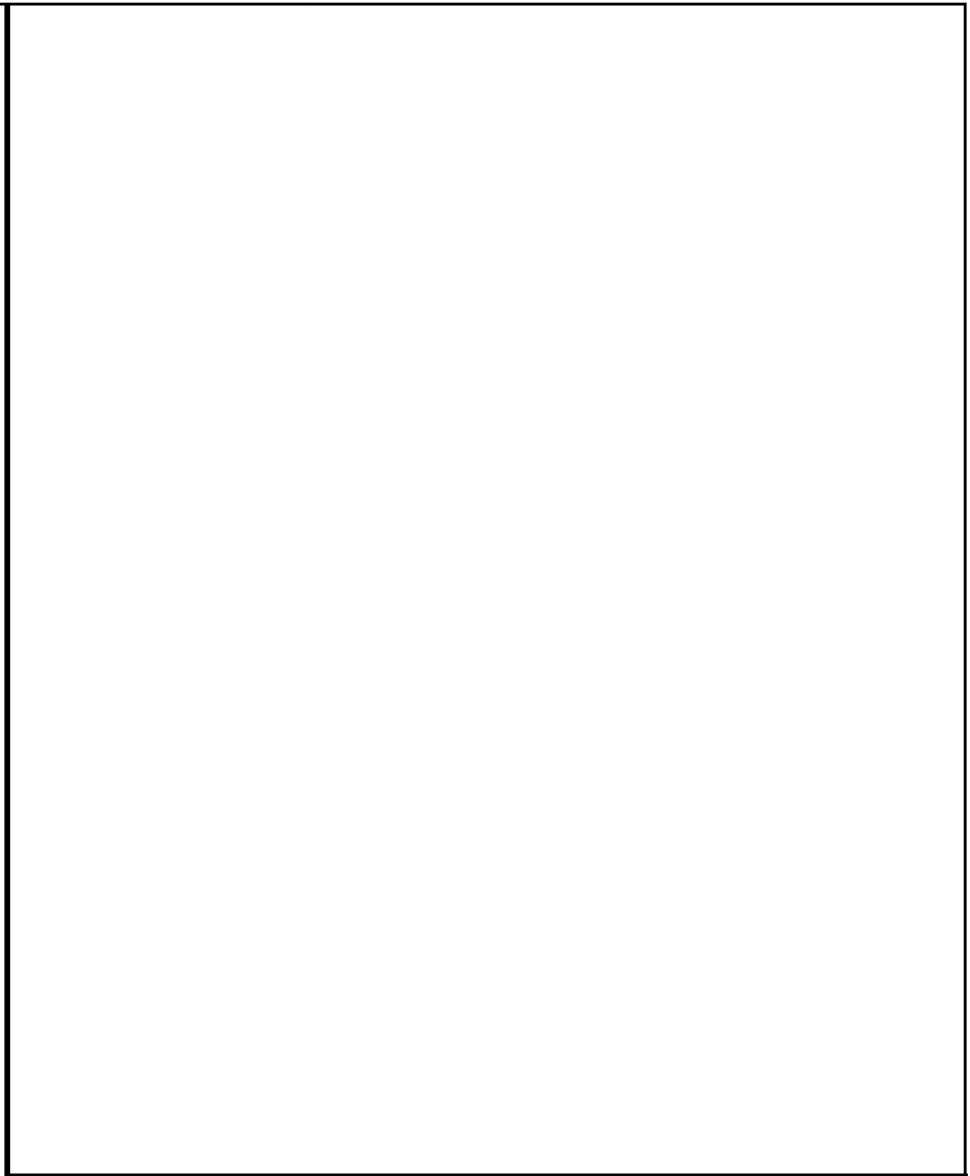
ITEM	PART NO.	QTY.	DESCRIPTION
1	68075X	-	Differential Case Complete
2	68076X	1	Case, Differential
3	68078X	2	Washer
4	67985X	4	Thrust Washer
5	67986X	2	Pin
6	68077X	1	Set, Differential Gear

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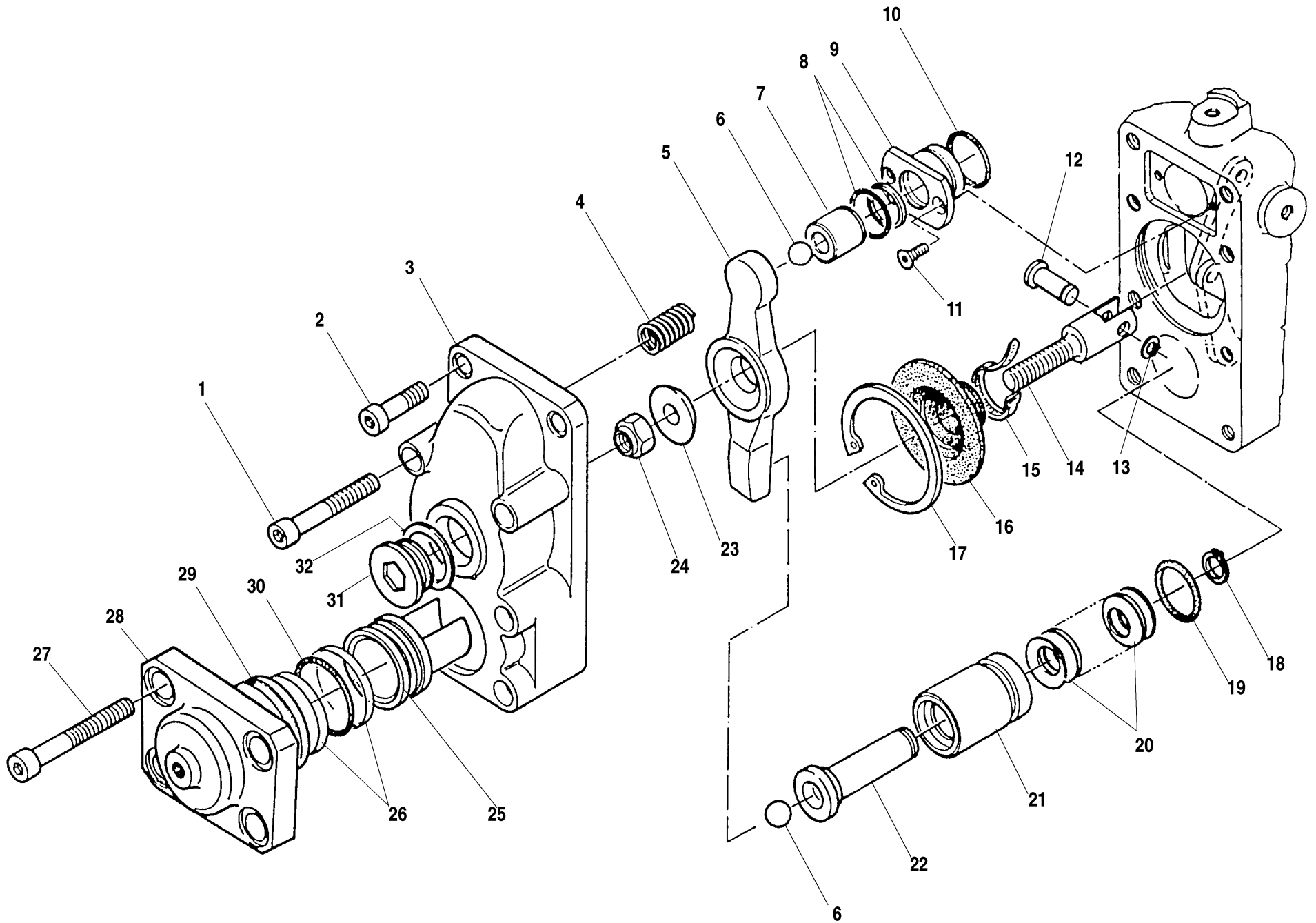


ITEM	PART NO.	QTY.	DESCRIPTION
1	67990X	1	Box, Brake, Right Hand
	67991X	1	Box, Brake, Left Hand
2	67994X	1	Spring
3	68000X	1	Ball
4	67999X	1	Piston, Brake
5	67998X	1	Oil Seal, Brake
6	67997X	1	Bushing
7	67996X	1	O-Ring
8	68001X	2	Screw
9	68009X	1	Pin
10	68011X	1	Snap Ring
11	68010X	1	Fork
12	68008X	1	Clamp
13	68007X	1	Seal Ring
14	68006X	1	Snap Ring
15	68002X	1	Transmission
16	67995X	1	Brake Lever
17	67993X	1	Ball Washer
18	67992X	1	Nut
19	68005X	1	Pin
20	68004X	1	O-Ring
21	68003X	1	O-Ring
22	67989X	1	Gasket
23	67988X	1	Oil Plug
24	68068X	1	Snap Ring
25	67980X	4	Screw
26	67987X	4	Screw



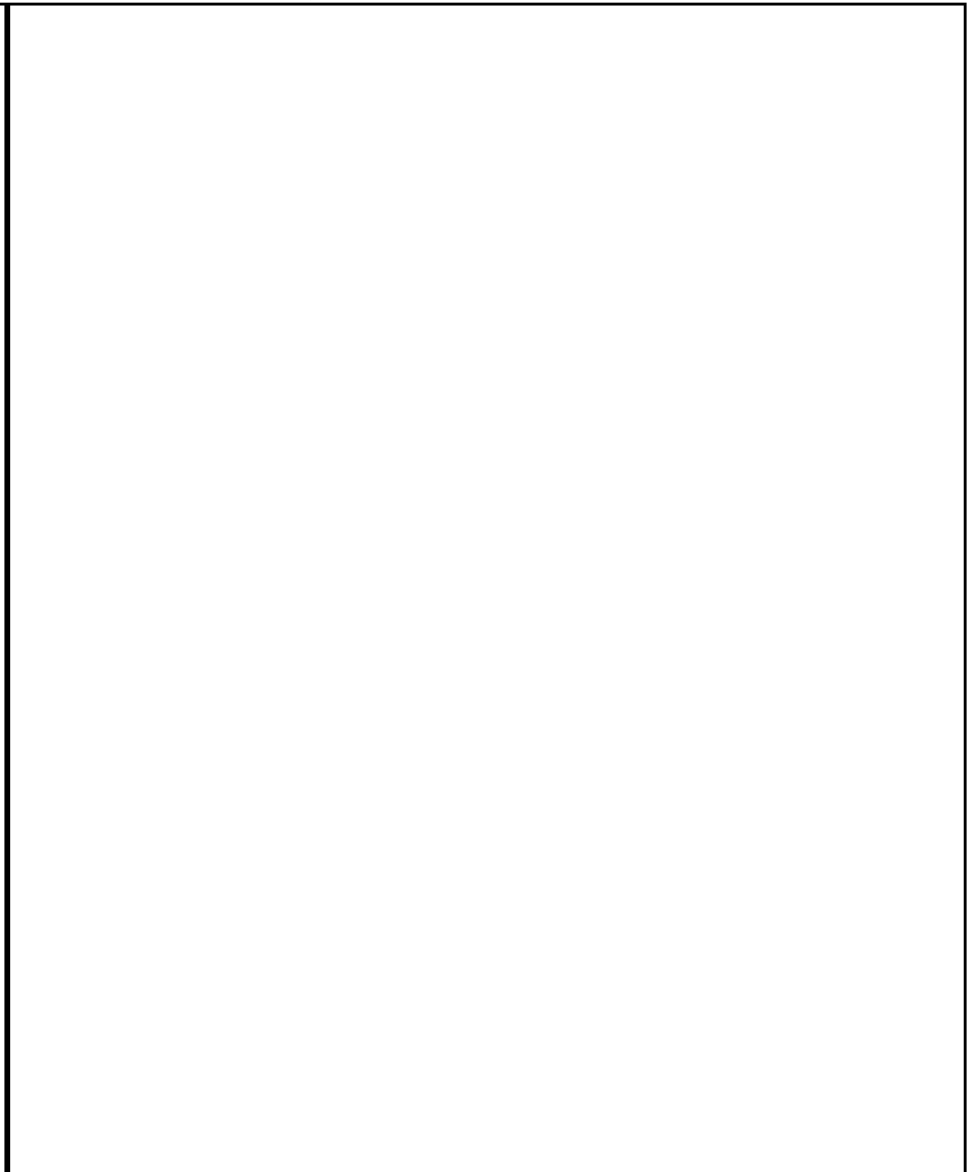
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**BRAKE BOX ASSEMBLY FRONT AXLE (420S) 1.10.1**



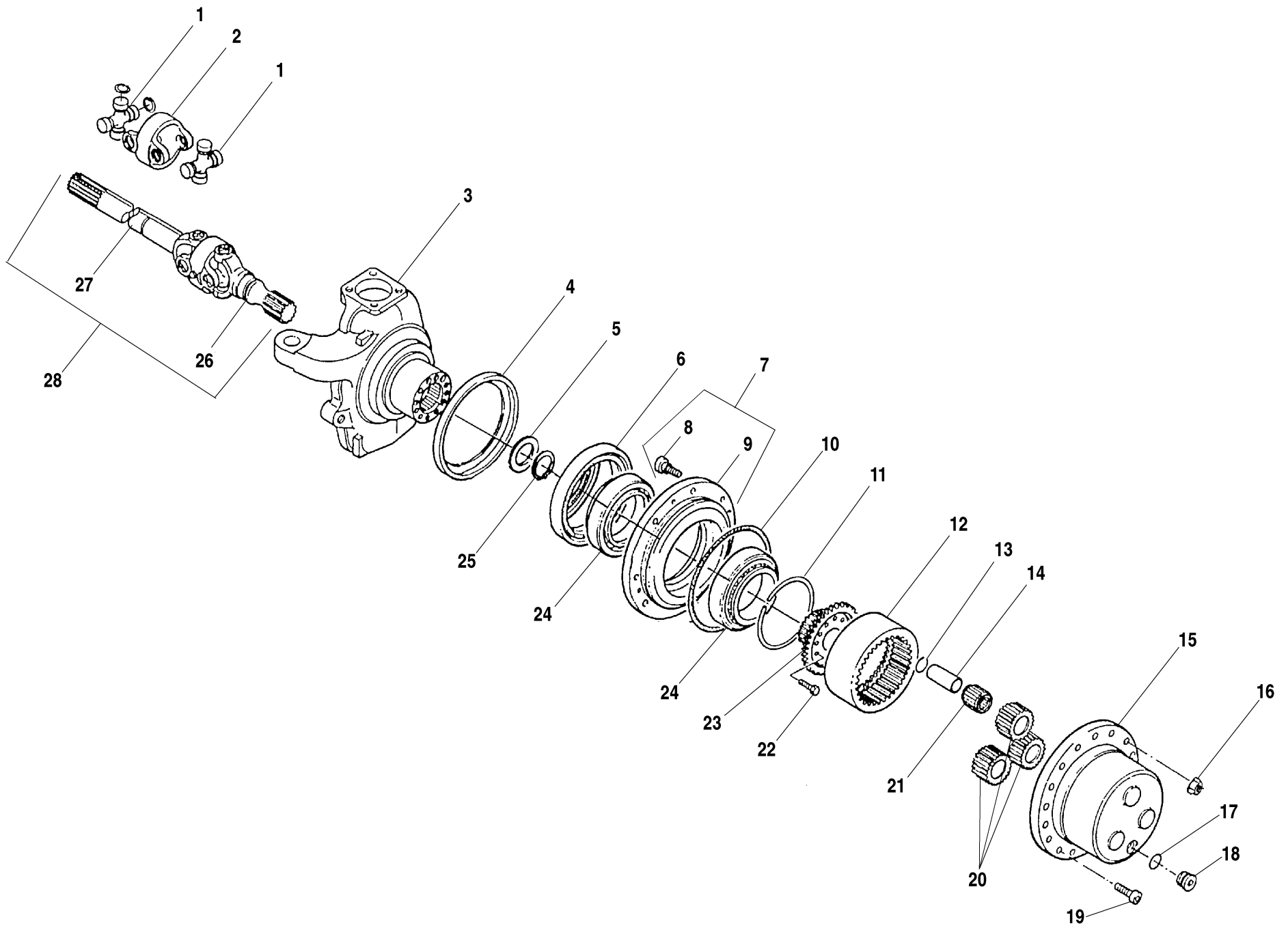


ITEM	PART NO.	QTY.	DESCRIPTION
1	67980X	4	Screw
2	67987X	4	Screw
3	68069X	1	Box, Brake, Rear Axle
4	67994X	1	Spring
5	68070X	1	Lever, Brake
6	68000X	2	Ball
7	67999X	1	Piston, Brake
8	67998X	1	Seal, Oil
9	67997X	1	Bushing, Brake
10	67996X	1	O-Ring
11	68001X	2	Screw
12	68009X	1	Pin
13	68011X	1	Snap Ring
14	68010X	1	Fork
15	68008X	1	Clamp
16	68007X	1	Seal Ring
17	68006X	1	Snap Ring
18	68068X	1	Snap Ring
19	67909X	1	O-Ring
20	68071X	16	Spring
21	68067X	1	Bushing, Brake
22	68065X	1	Pin
23	67993X	1	Ball Washer
24	67992X	1	Nut
25	68062X	1	Piston, Brake
26	68061X	2	Ring
27	68050X	4	Screw
28	68058X	1	Flange
29	68060X	1	O-Ring
30	68063X	1	O-Ring
31	67988X	1	Oil Plug
32	67989X	1	Gasket



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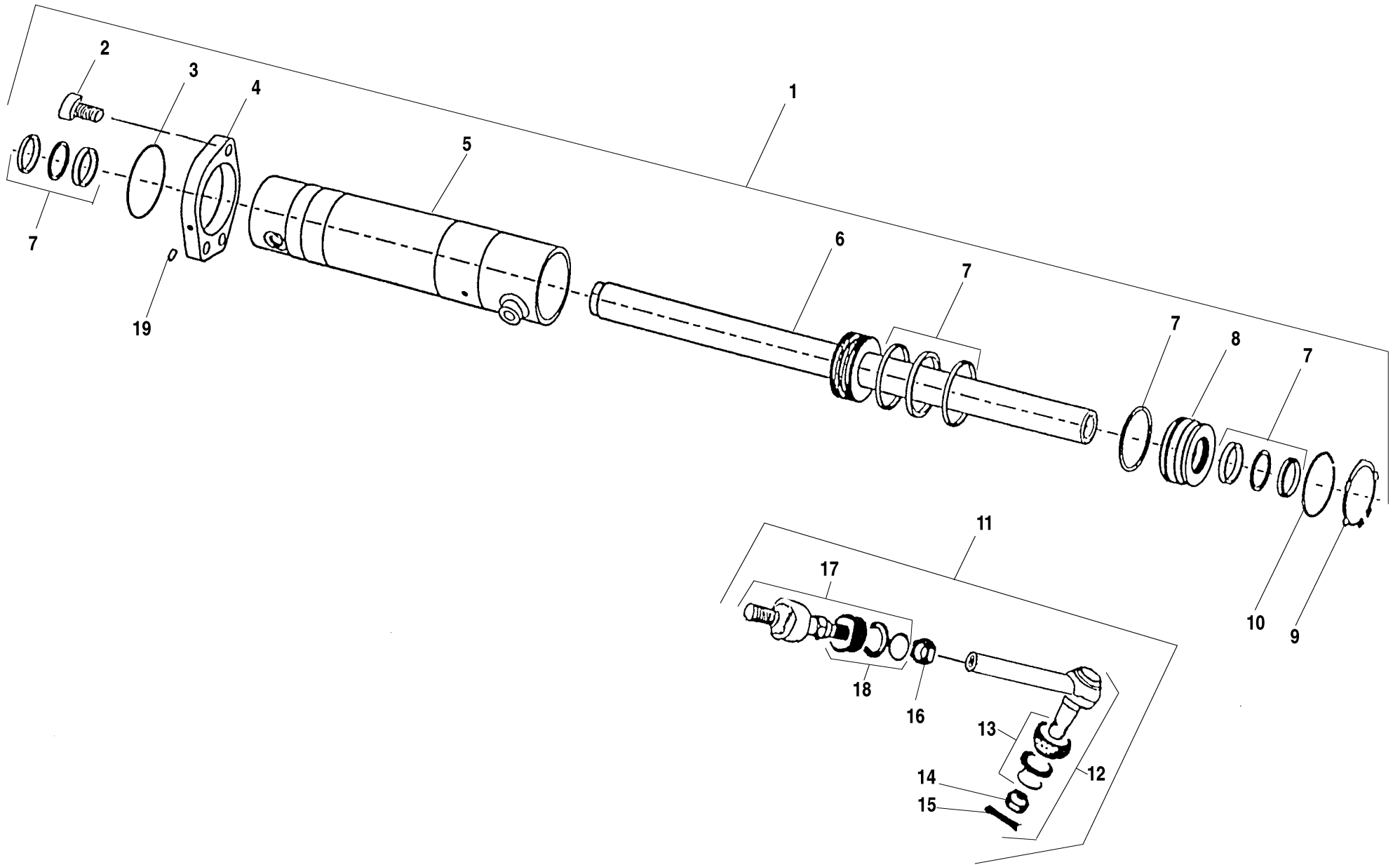

**BRAKE BOX ASSEMBLY REAR AXLE (420S) 1.11.1**



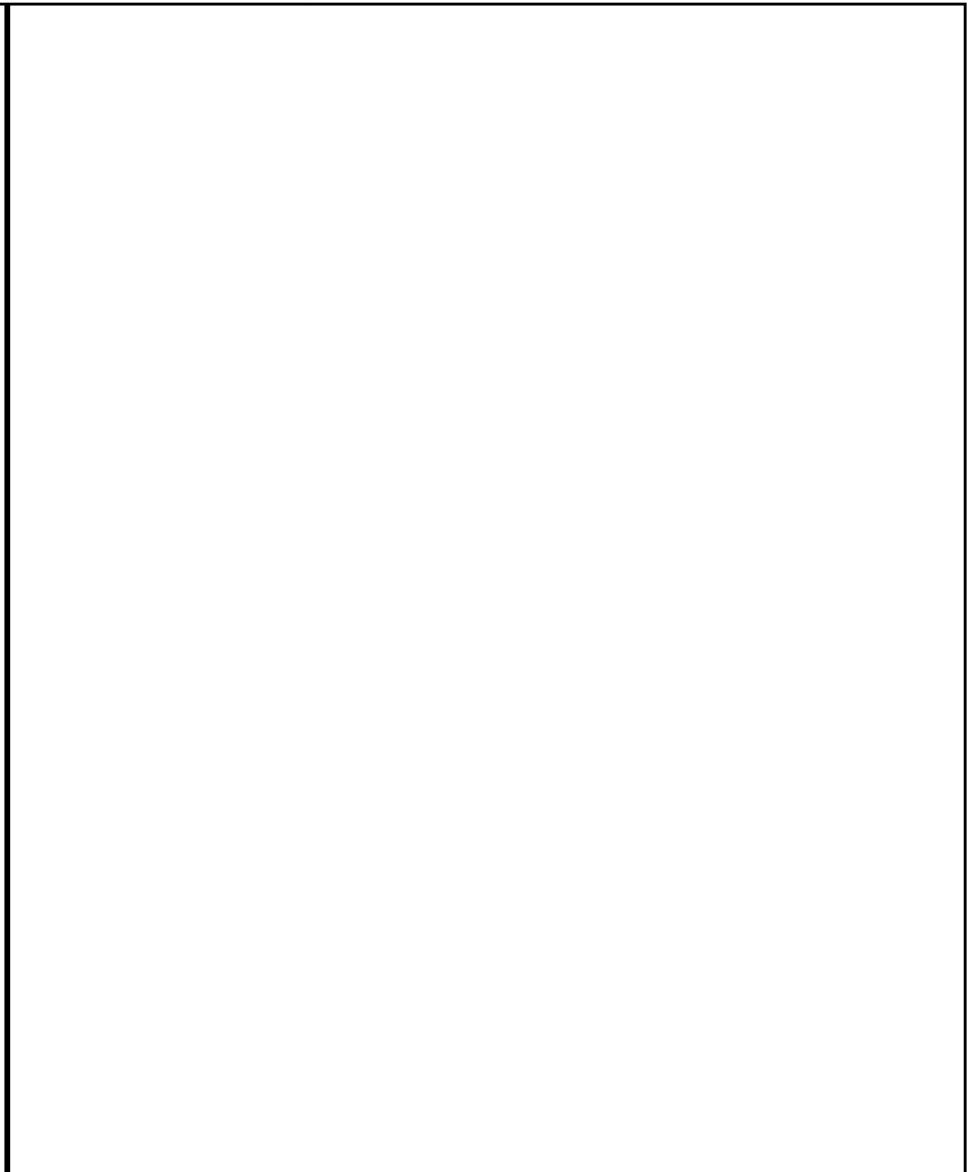
ITEM	PART NO.	QTY.	DESCRIPTION
1	68031X	2	U-Joint
2	68032X	1	Coupling, Yoke
3	67918X	1	Steering Knuckle, Right Front / Left Rear
	67921X	1	Steering Knuckle, Left Front / Right Rear
4	67919X	1	Cover
5	68028X	1	Thrust Washer
6	68072X	1	Box Ring
7	68012X	-	Wheel Hub Complete (Includes Items 9 & 10)
8	68014X	8	Stud, Wheel
9	68013X	1	Hub, Wheel
10	68016X	1	O-Ring
11	68017X	1	Ring
12	68020X	1	Ring Gear
13	68021X	3	Snap Ring
14	68022X	3	Pin, Planet
15	68026X	1	Flange
16	68024X	8	Lug Nut
17	67902X	1	Gasket
18	67915X	1	Oil Plug
19	68027X	2	Screw
20	68025X	1	Set, Planet Gear
21	68023X	3	Cage, Roller Bearing
22	68019X	12	Screw
23	68018X	1	Sun Gear
24	68015X	2	Bearing
25	67950X	1	Snap Ring
26	1100333	1	Half Shaft
27	68033X	1	Differential Half Shaft
28	68029X	1	Shaft Assemble (Includes Items 1-2, 26 & 27)

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**STEER AXLE SHAFTS & KNUCKLE ASSEMBLY (420S) 1.12.1**

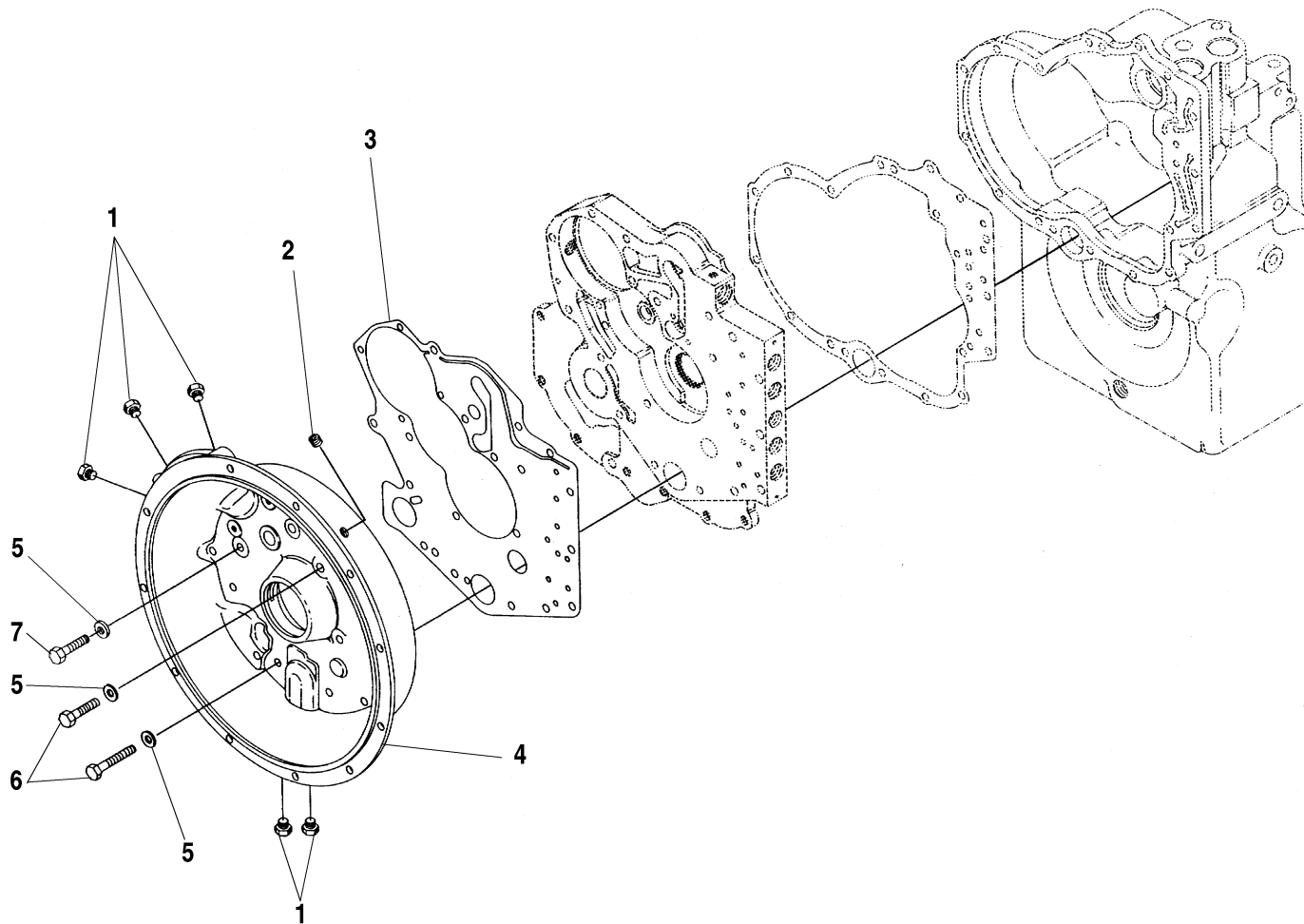


ITEM	PART NO.	QTY.	DESCRIPTION
1	68040X	-	Steer Cylinder (Includes Items 2-10)
2	68050X	3	Screw, Cylinder
3	68048X	1	Snap Ring
4	68047X	1	Flange
5	68046X	1	Barrel, Steer Cylinder
6	68045X	1	Rod, Steer Cylinder
7	68041X	1	Seal Kit
8	68044X	1	Piston
9	68042X	1	Snap Ring RB
10	68043X	1	Snap Ring RW
11	68051X	1	Steering Arm Assembly (Includes Items 12-18)
12	68052X	1	Steering Arm (Includes Items 13-15)
13	68073X	1	Kit, Ring & Guard
14	68056X	1	Nut
15	68055X	1	Split Pin
16	68054X	1	Nut
17	68053X	1	Axial Joint (Includes Item 18)
18	68074X	1	Kit, Ring & Guard
19	68049X	1	Pin, Elastic



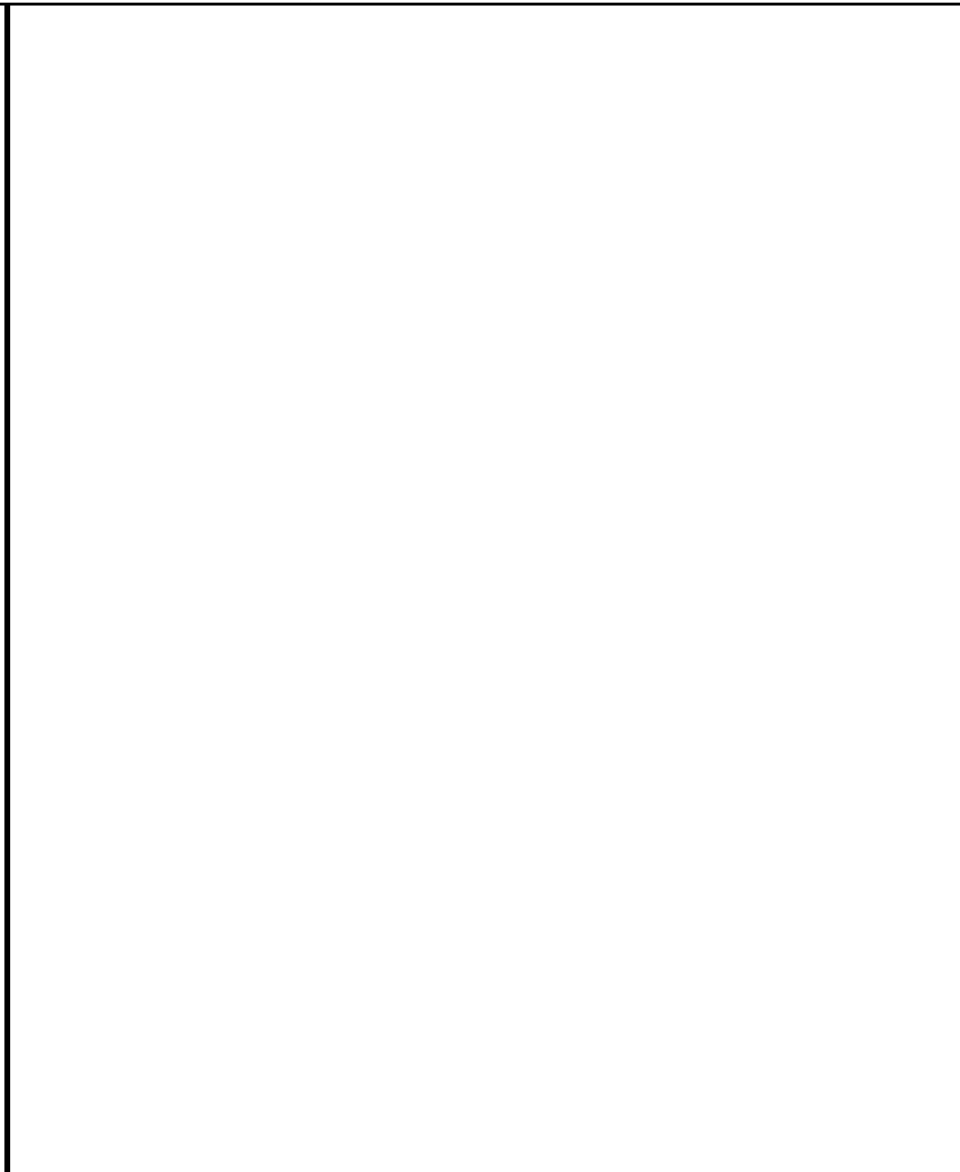
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**STEER CYLINDER ASSEMBLY (420S) 1.13.1**



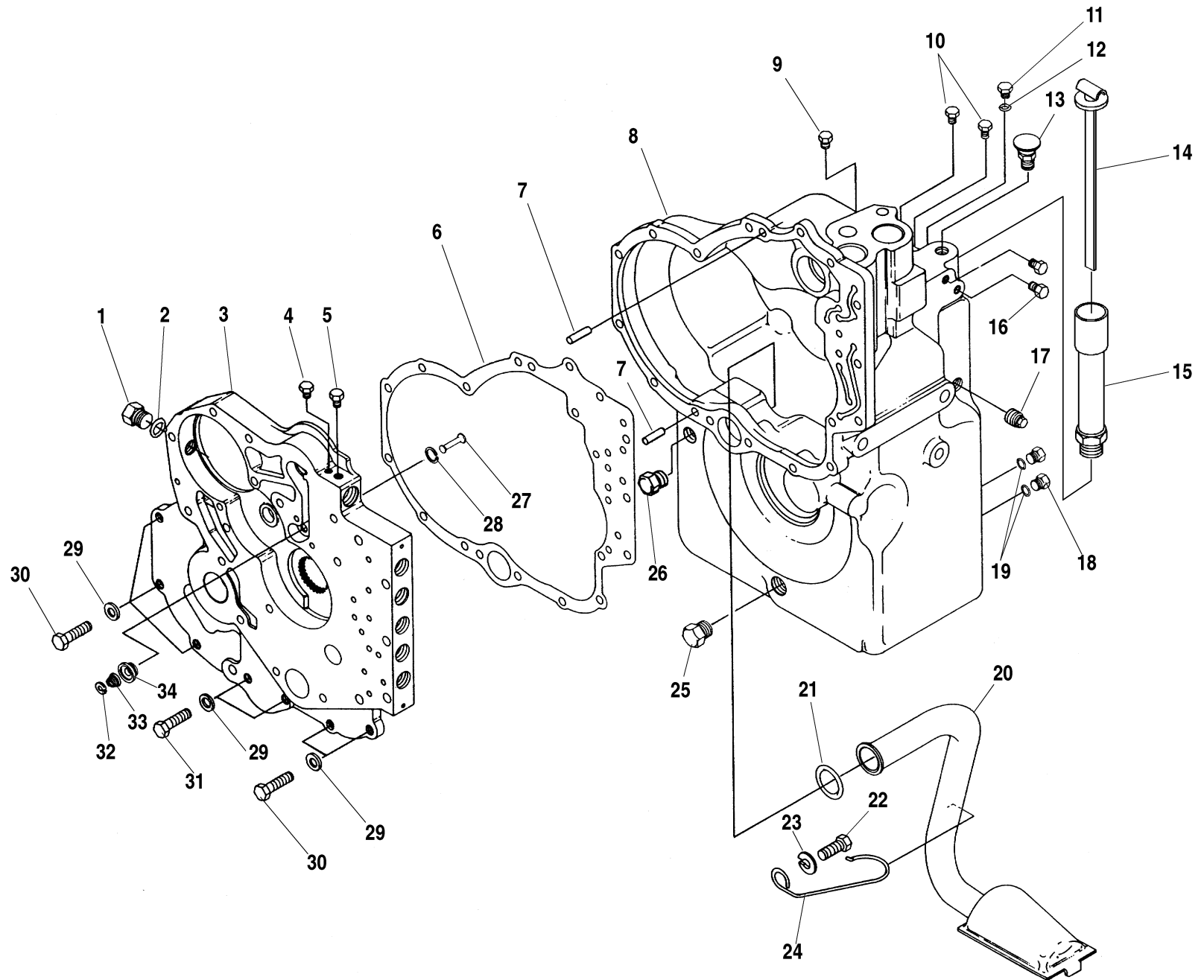
**ITEM PART NO. QTY. DESCRIPTION**

1	68200X	5	Plug
REF	68201X	-	O-Ring for Item 1
2	68202X	1	Plug
3	68203X	1	Gasket, Housing to Plate
4	68204X	1	Converter Housing
5	68205X	22	Lockwasher
6	68206X	16	Capscrew
7	68207X	6	Capscrew



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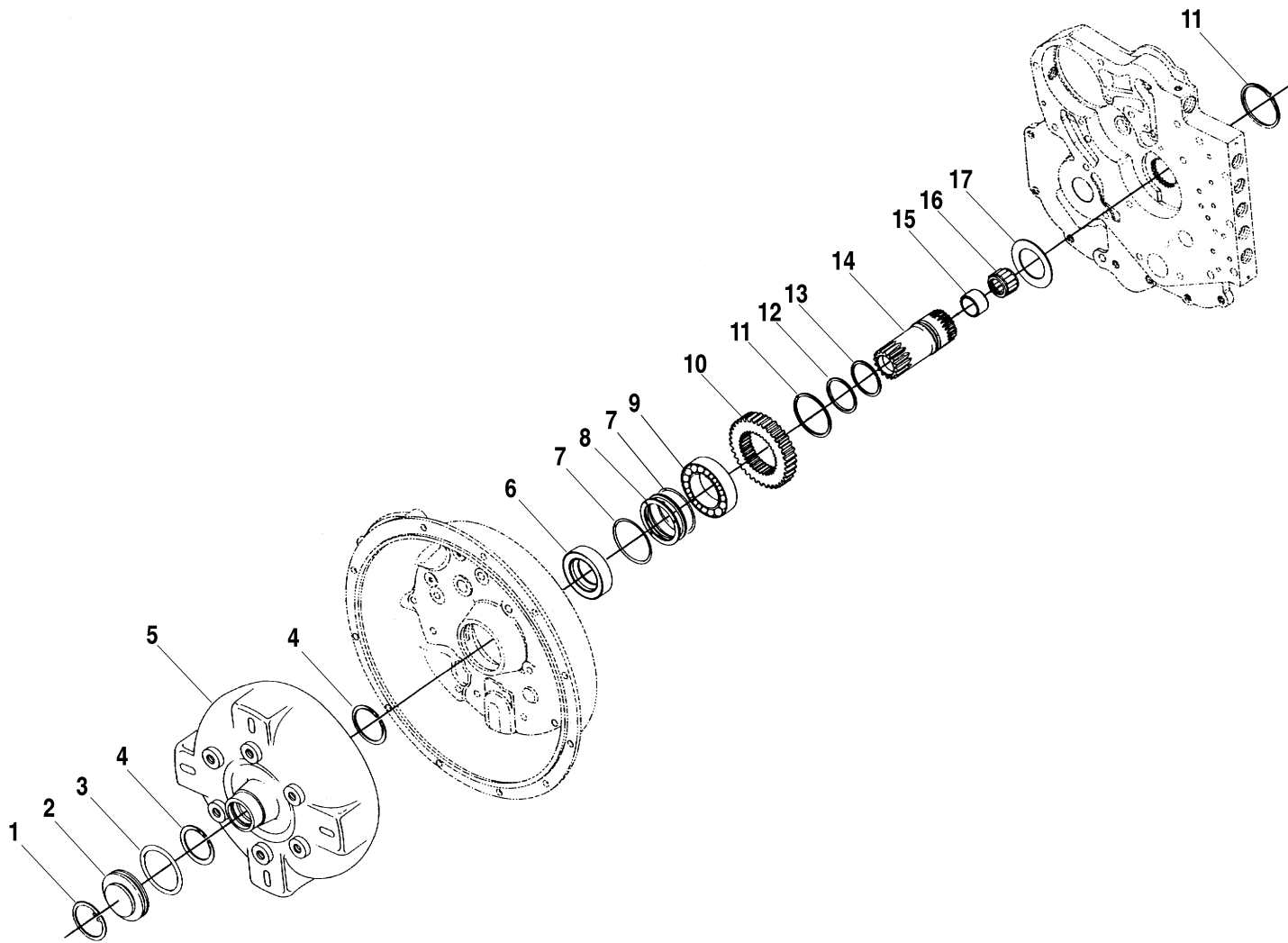
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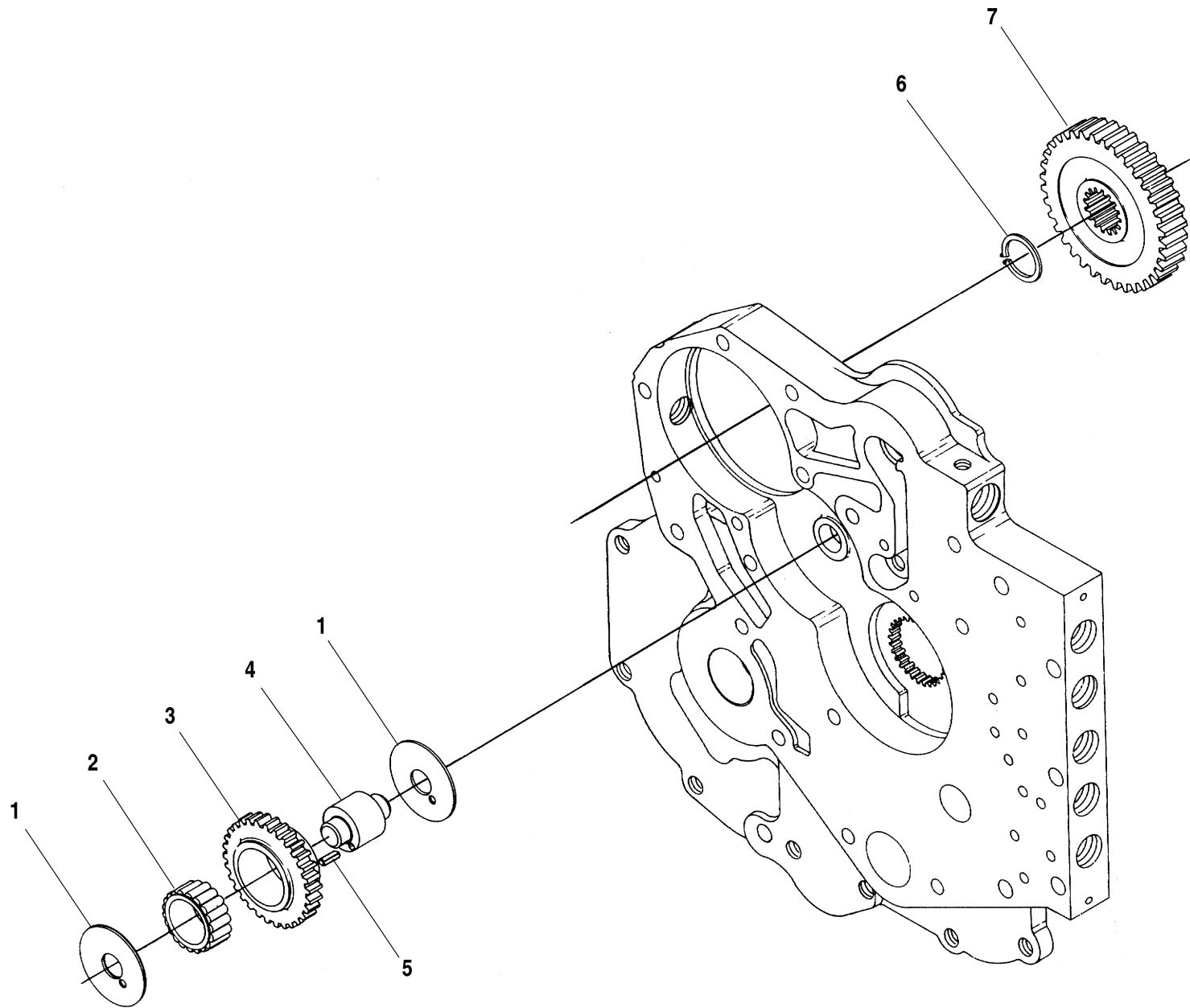
ITEM	PART NO.	QTY.	DESCRIPTION
1	68209X	1	Plug, Sensor Port
2	68210X	1	O-Ring
3	68211X	1	Plate, Spacer
4	P20808	1	Plug, Inlet Pressure Port
5	68212X	1	Plug, Outlet
6	68213X	1	Gasket, Spacer Plate to Transmission
7	68214X	2	Dowel Pin
8	68215X	1	Case, Transmission
9	68216X	1	Plug, Filler
10	P20808	1	Plug, Pipe
11	68208X	1	Plug, Speed Sensor Port
12	68210X	1	O-Ring
13	68217X	1	Air Breather
14	1100332	1	Dipstick, Transmission
15	8034964	1	Tube, Dipstick
16	68200X	2	Plug
17	68218X	1	Plug, Sensor Port
18	68220X	2	Plug, Oil Level
19	68219X	2	O-Ring
20	68221X	1	Oil Supply Tube
21	37074X	1	Seal, Oil Supply Tube
22	68222X	1	Capscrew
23	68223X	1	Washer
24	68224X	1	Retaining Clip
25	P20614	1	Plug, Magnetic Drain
26	68225X	1	Plug, Drain
27	68226X	1	Valve, Poppet
28	68227X	1	Snap Ring
29	68205X	9	Lockwasher
30	68344X	7	Capscrew
31	68228X	2	Capscrew
32	68345X	1	Washer, Poppet
33	P23310	1	Spring, Safety Valve
34	68229X	1	Seat, Safety Valve

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ITEM	PART NO.	QTY.	DESCRIPTION
1	68230X	1	Snap Ring
2	P20565	1	Plug, Torque Converter
3	68231X	1	O-Ring
4	68232X	2	Snap Ring
5	68233X	1	Torque Converter
6	37072X	1	Oil Seal
7	37071X	1	O-Ring
8	68234X	2	Oil Distributor Ring
9	68235X	1	Bearing, Torque Converter
10	68236X	1	Gear, Impeller Hub
11	68237X	1	Snap Ring, Stator Support
12	37070X	2	Piston Ring, Stator Support
13	68238X	1	Expander, Piston Ring, Stator Support
14	68239X	1	Stator Support Assembly (Includes Items 15 & 16)
15	68240X	1	Bushing
16	68242X	1	Bearing
17	68241X	1	Washer, Impeller Hub Gear

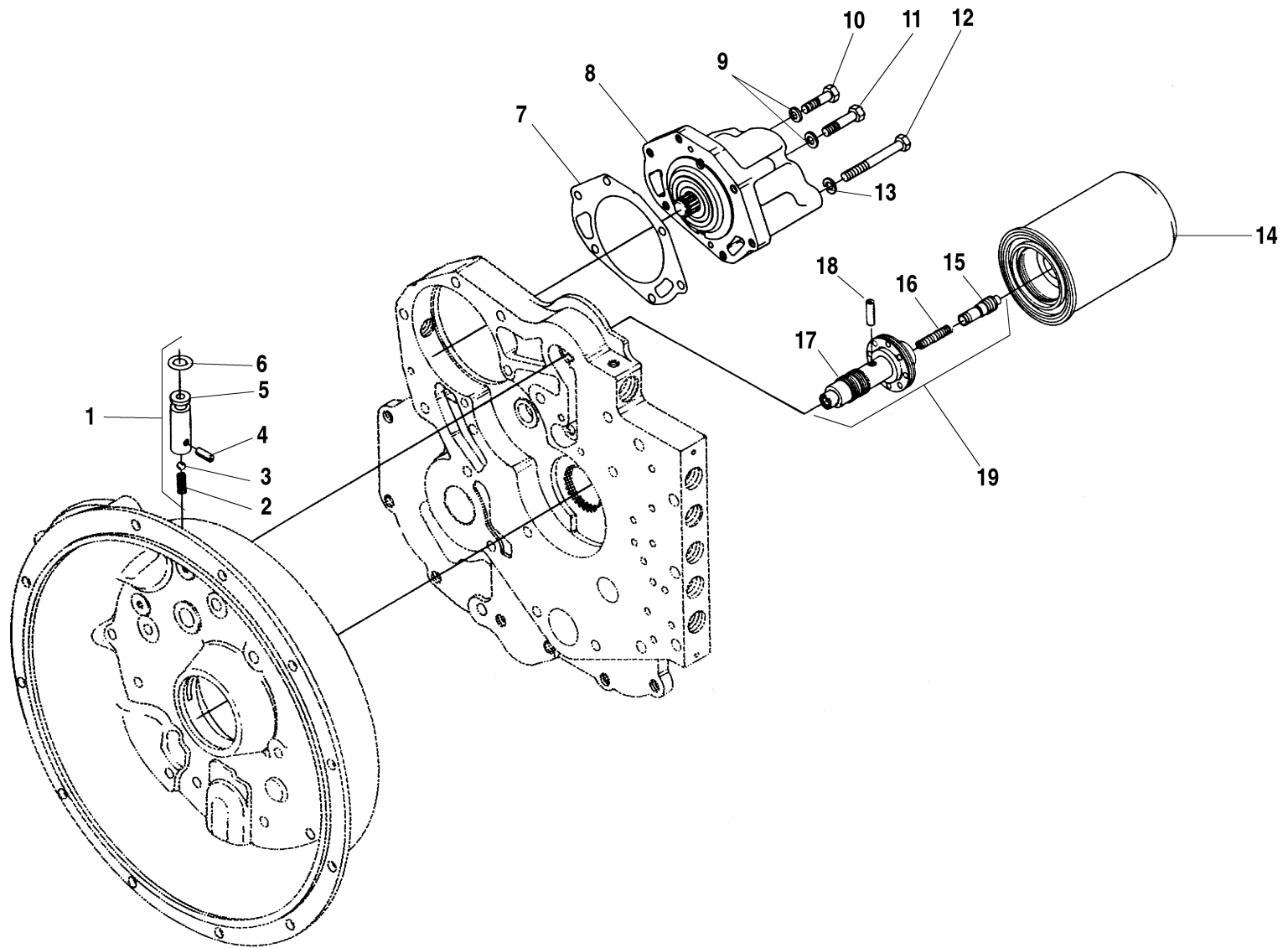
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ITEM	PART NO.	QTY.	DESCRIPTION
1	68243X	2	Thrust Washer, Pump Drive Idler
2	68244X	1	Bearing, Idler Gear
3	68245X	1	Gear, Pump Drive Idler (31T)
4	37073X	1	Pump Drive Idler Shaft (Includes Item 5)
5	68248X	1	Roll Pin
6	68246X	1	Snap Ring
7	68247X	1	Gear, Pump Drive (34T)

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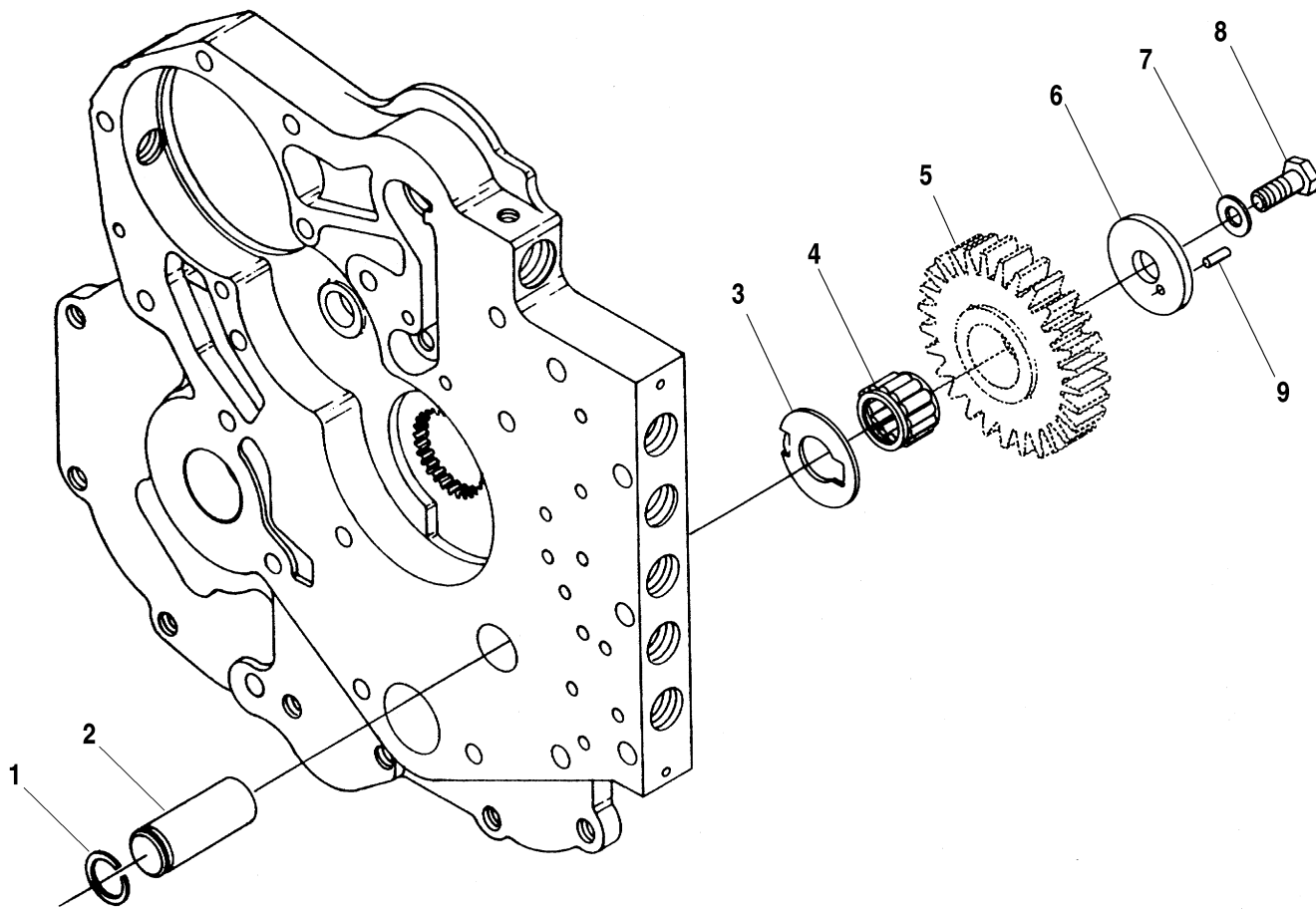
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ITEM	PART NO.	QTY.	DESCRIPTION
1	68250X	1	Check Valve Assembly (Includes Items 2-6)
2	68253X	1	Spring
3	68252X	1	Ball
4	68251X	1	Pin
5	N.S.S.	-	Housing, Check Valve
6	68249X	1	O-Ring
7	68254X	1	Gasket, Charging Pump
8	68255X	1	Pump, Charging
9	68346X	5	Lockwasher
10	68256X	1	Capscrew
11	68257X	4	Capscrew
12	68258X	1	Capscrew
13	68205X	1	Lockwasher
14	68259X	1	Filter
15	68260X	1	Piston
16	68261X	1	Spring
17	68263X	1	Sleeve
18	68262X	1	Pin
19	68264X	1	Regulator Valve Assembly (Includes Items 15-18)

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**CHARGING PUMP & FILTER ASSEMBLY (T12000) 1.19.1**

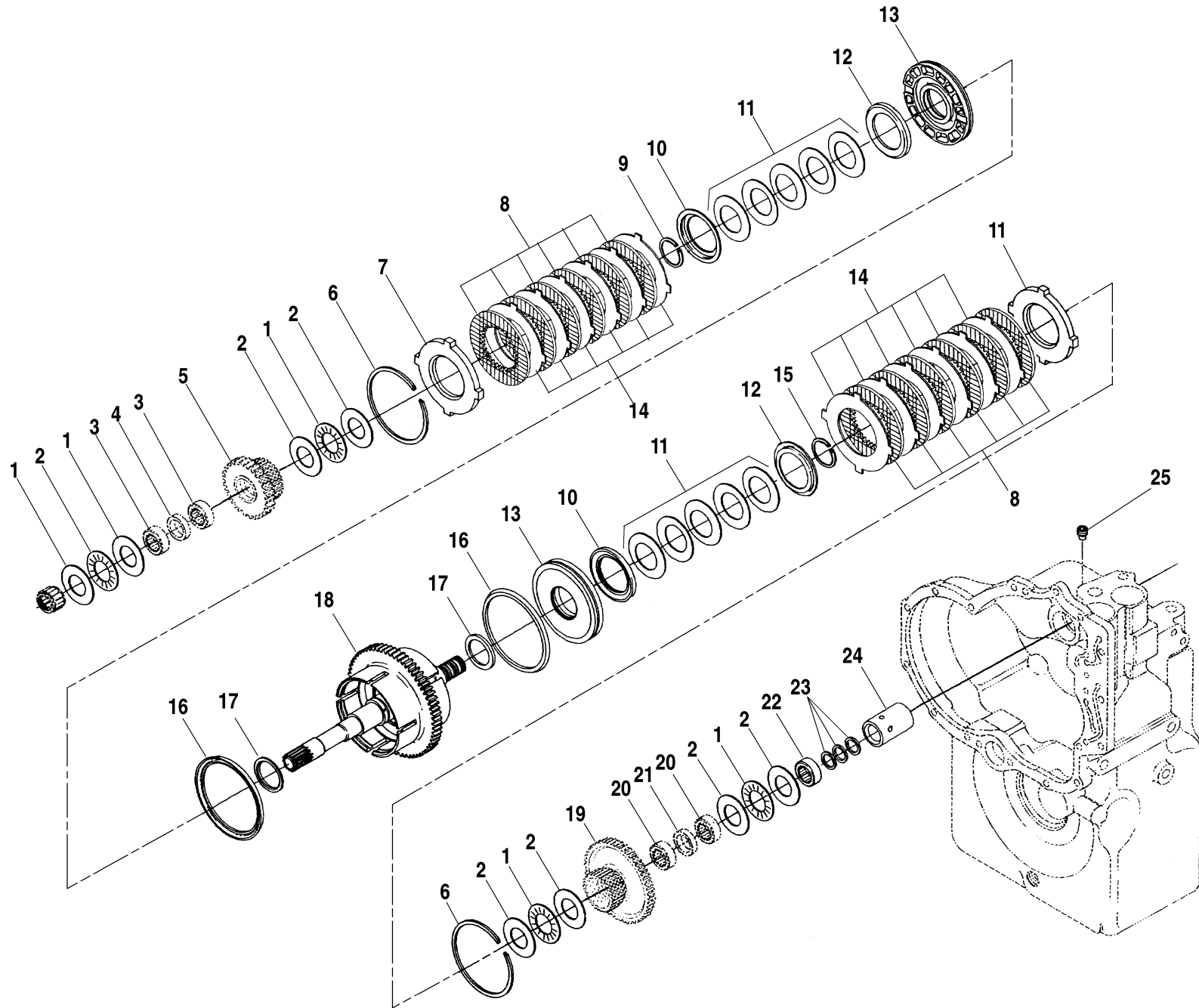




ITEM	PART NO.	QTY.	DESCRIPTION
1	68265X	1	Snap Ring
2	68266X	1	Shaft, Idler & Pilot
3	68267X	1	Thrust Washer
4	68268X	1	Bearing, Reverse Idler Gear
5	68333X	1	Gear, Reverse Idler
6	68269X	1	End Plate
7	68270X	1	Washer
8	68271X	1	Capscrew
9	68272X	1	Roll Pin

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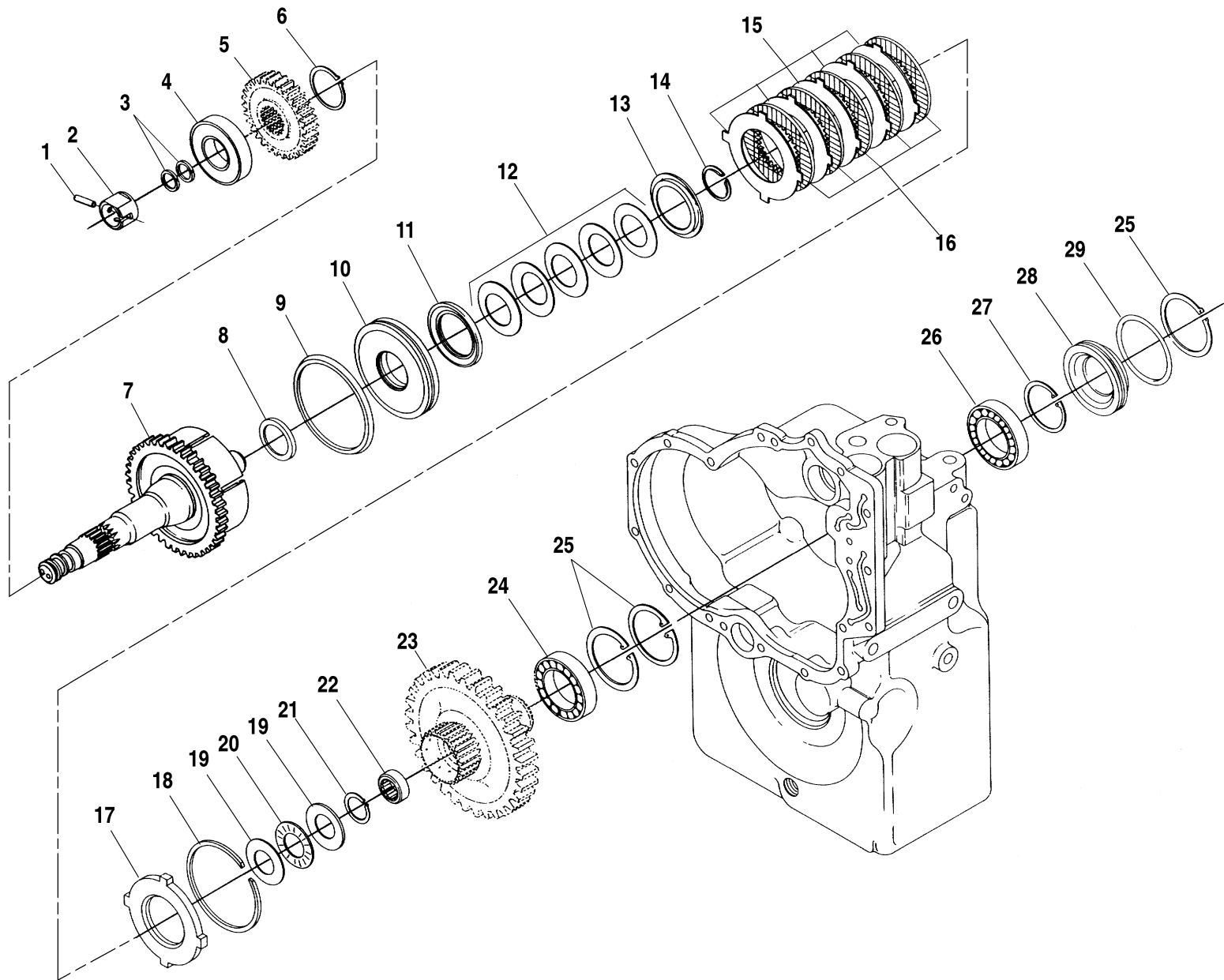
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ITEM	PART NO.	QTY.	DESCRIPTION
1	37066X	8	Thrust Washer
2	37065X	4	Thrust Washer Bearing
3	68334X	2	Reverse Clutch Gear Bearing
4	68335X	1	Reverse Clutch Bearing Spacer
5	68336X	1	Reverse Clutch Gear Bearing Assembly
6	68273X	2	Snap Ring
7	37067X	1	End Plate
8	37064X	12	Inner Disc
9	68274X	1	Snap Ring
10	68275X	2	Retainer, Snap Ring
11	68276X	1	Disc Washer Spring Set (Includes 5 Washers)
12	68277X	2	Wear Plate, Clutch Piston
13	68278X	2	Clutch Piston Assembly (Includes Items 13 & 14)
14	37063X	12	Outer Disc
15	68274X	1	Snap Ring
16	37062X	2	Outer Seal, Clutch Piston
17	37061X	2	Inner Seal, Clutch Piston
18	68279X	1	Turbine Shaft Drum & Plug Assembly
19	68337X	1	Forward Gear & Clutch Assembly
20	68334X	2	Bearing
21	68335X	1	Bearing Spacer
22	68280X	1	Bearing, Turbine Shaft
23	37060X	3	Piston Ring
24	68281X	1	Sleeve, Oil Distribution
25	68282X	1	Retaining Screw

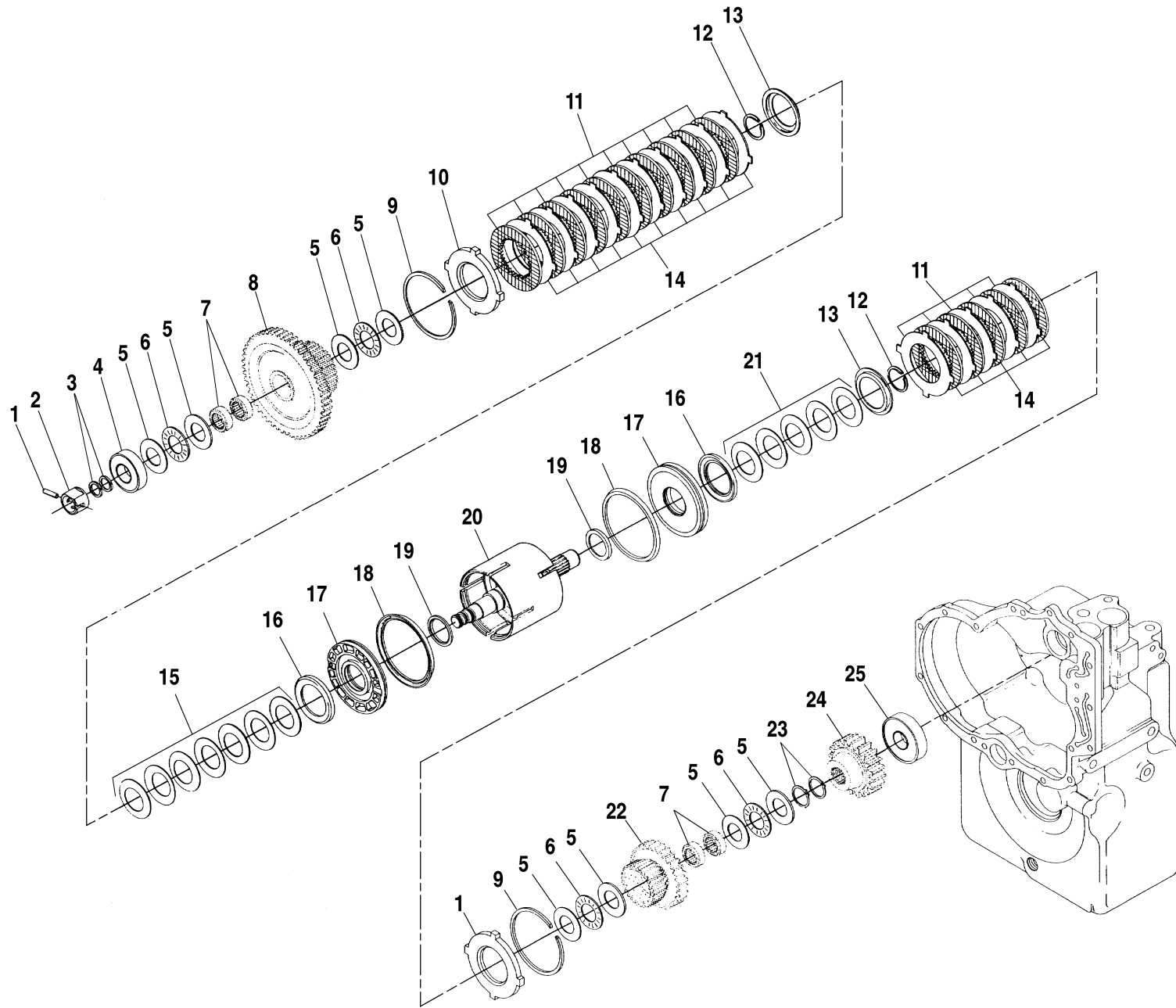
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**FORWARD & REVERSE SHAFT ASSEMBLY (T12000) 1.21.1**



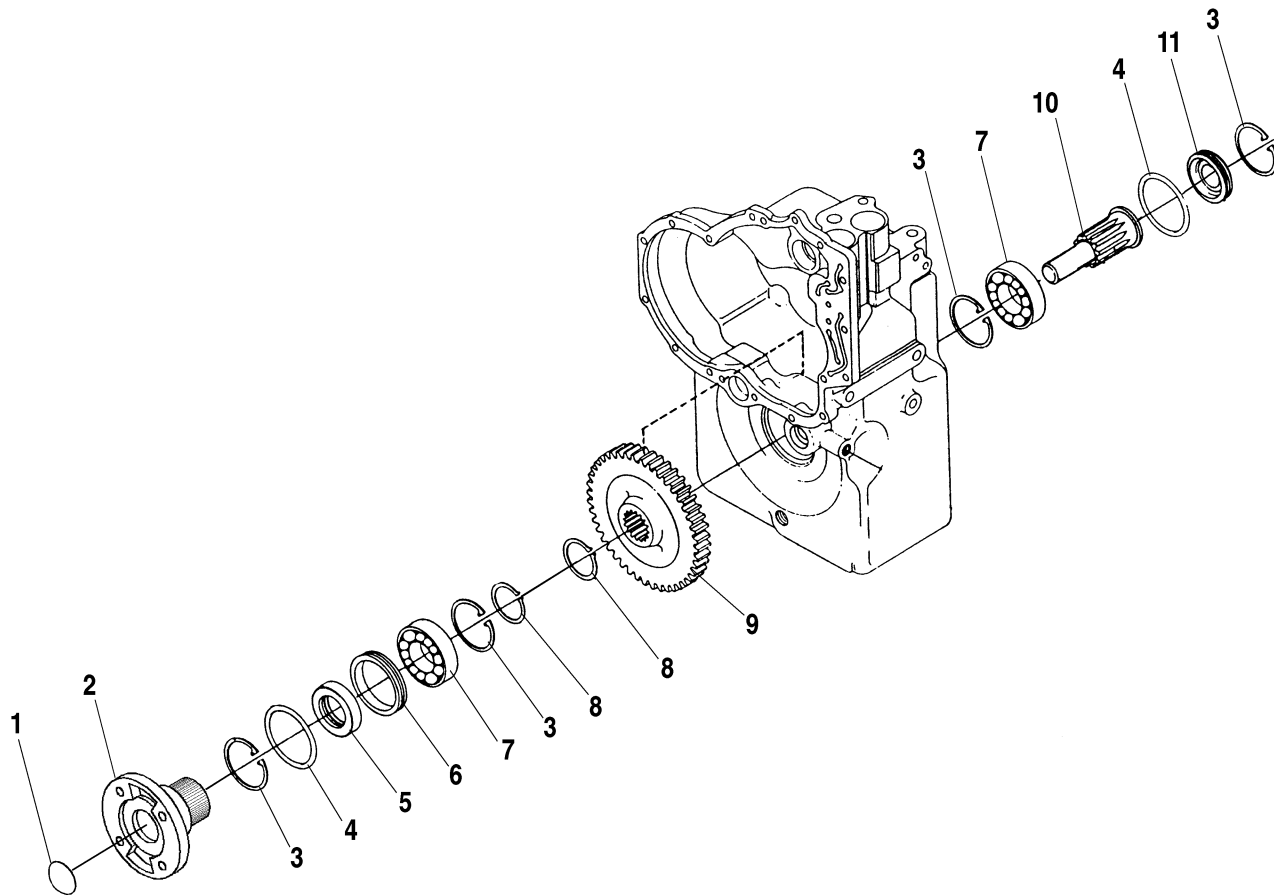
ITEM	PART NO.	QTY.	DESCRIPTION
1	68283X	1	Sleeve locating Screw
2	68284X	1	Sleeve, Oil Distribution
3	37060X	2	Piston Ring
4	68285X	1	Bearing & Seal Assembly
5	68338X	1	Gear, Drive
6	68286X	1	Snap Ring
7	68287X	1	3rd Gear Shaft, Drum & Plug Assembly
8	37061X	1	Seal, Inner Clutch Piston
9	37062X	1	Seal, Outer Clutch Piston
10	68288X	1	Clutch Piston & Ball Seat Assembly
		1	(Includes Items 8 & 9)
11	68277X	1	Clutch Piston Wear Plate
12	68276X	1	Disc Spring Assembly (Includes 5 Springs)
13	68275X	1	Snap Ring Retainer
14	68274X	1	Snap Ring
15	37063X	5	Outer Disc- 3rd Clutch
16	37064X	5	Inner Disc- 3rd Clutch
17	37067X	1	End Plate
18	68273X	1	Snap Ring, End Plate
19	37066X	2	Thrust Washer
20	37065X	1	Thrust Washer Bearing
21	68289X	1	Snap Ring, Thrust Washer Retaining
22	68290X	1	Bearing
23	68339X	1	3rd Gear & Shaft
24	68291X	1	Bearing, Rear
25	68302X	5	Snap Ring, Rear Bearing Retaining
26	P23509	1	Bearing, Output Shaft
27	68292X	1	Snap Ring, Output Shaft Bearing Retaining
28	68293X	1	Plug, Capped End
29	68294X	1	Oil Seal Sleeve O-Ring

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ITEM	PART NO.	QTY.	DESCRIPTION
1	68283X	1	Screw, Sleeve Locating
2	68295X	1	Oil Distribution Sleeve
3	37060X	2	Piston Ring
4	68285X	1	Bearing & Seal Assembly
5	37066X	8	Thrust Washer, Clutch Gear
6	37065X	4	Thrust Washer Bearing, Clutch Gear
7	68337X	2	Bearing Assembly
8	68340X	1	1st Clutch & Gear Assembly
9	68273X	2	Snap Ring, End Plate
10	37067X	2	End Plate
11	37064X	15	Inner Disc
12	68274X	2	Snap Ring, Retaining
13	68275X	2	Retainer, Snap Ring
14	37063X	15	Outer Disc
15	68296X	2	Clutch Disc Spring Set (Includes 7 Springs)
16	68252X	2	Wear Plate, Clutch Piston
17	68297X	2	Clutch Piston & Seal Assembly (Includes Items 17 & 18)
18	37062X	2	Outer Seal, Clutch Piston
19	37061X	2	Inner Seal, Clutch Piston
20	68298X	1	1st & 2nd Gear Shaft, Drum & Plug Assembly
21	68276X	1	2nd Gear Clutch Disc Spring Set (Includes 5 Springs)
22	68341X	1	2nd Clutch & n Gear Assembly
23	68286X	2	Snap Ring
24	68342X	1	3rd Clutch Driven Gear
25	68299X	1	Bearing, Rear

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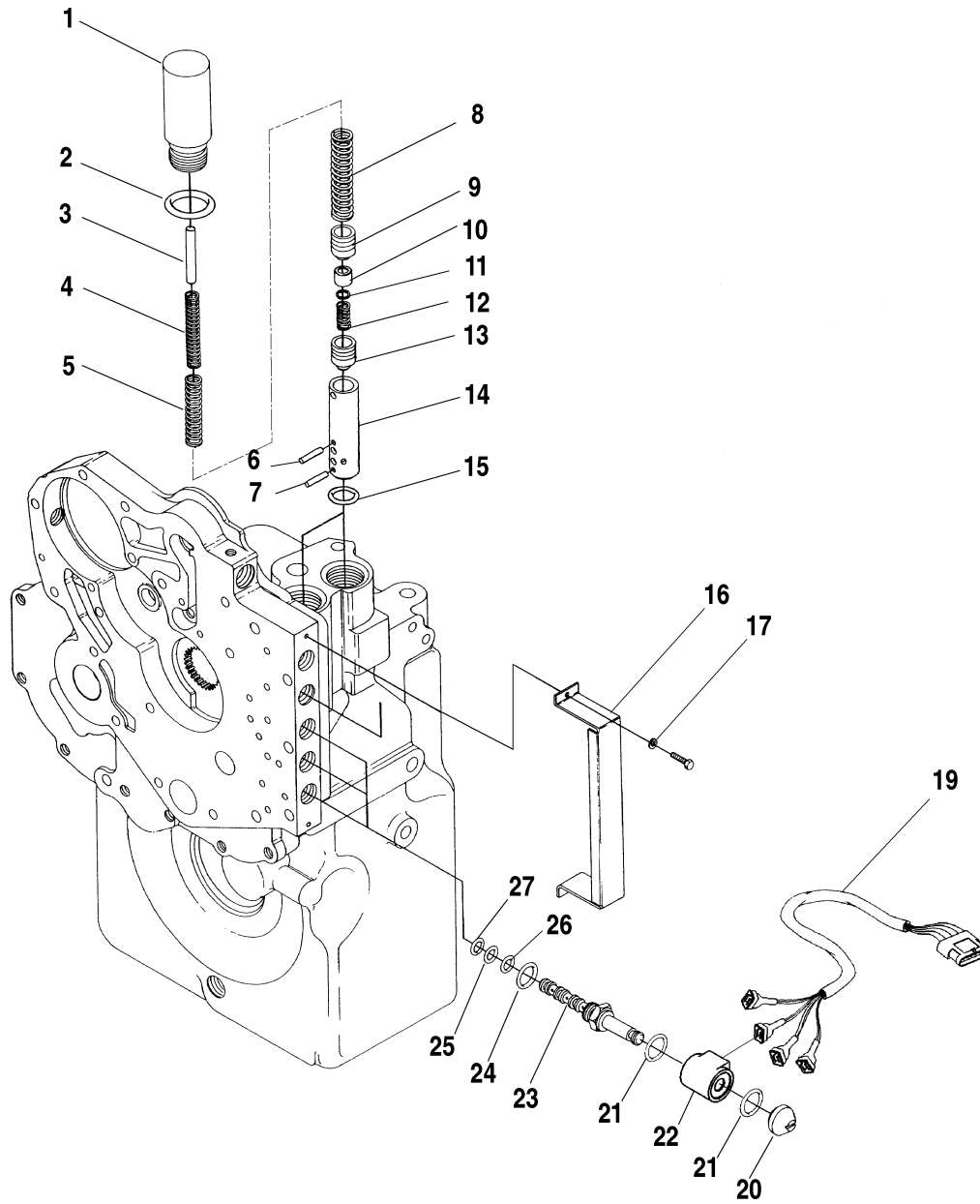
ITEM	PART NO.	QTY.	DESCRIPTION
1	68300X	1	Plug, Flange
2	❶1100322 N.L.A.	1	Output Flange, 7/16"-20 Threads Output Flange, 12MM Threads
3	68302X	2	Snap Ring, Output Shaft Bearing
4	68294X	2	Oil Seal Sleeve O-Ring
5	P20723	1	Oil Seal, Output Shaft
6	68303X	1	Oil Seal, Sleeve
7	P23509	2	Bearing, Output Shaft
8	68292X	2	Snap Ring
9	1100317	1	Gear, Output Shaft
10	1100318	1	Output Shaft & Brake Flange
11	1100319	1	Output Shaft Bore Plug
12	❷8310469	4	Capscrew, Socket Hd., 7/16"-20 x 1 1/4"
13	❷8307006	4	Lockwasher, 7/16"

NOTES:

- ❶ If replacing a metric threaded output flange new drive shaft mounting bolts and washers are required. See itmes 12 & 13.
- ❷ Not illustrated

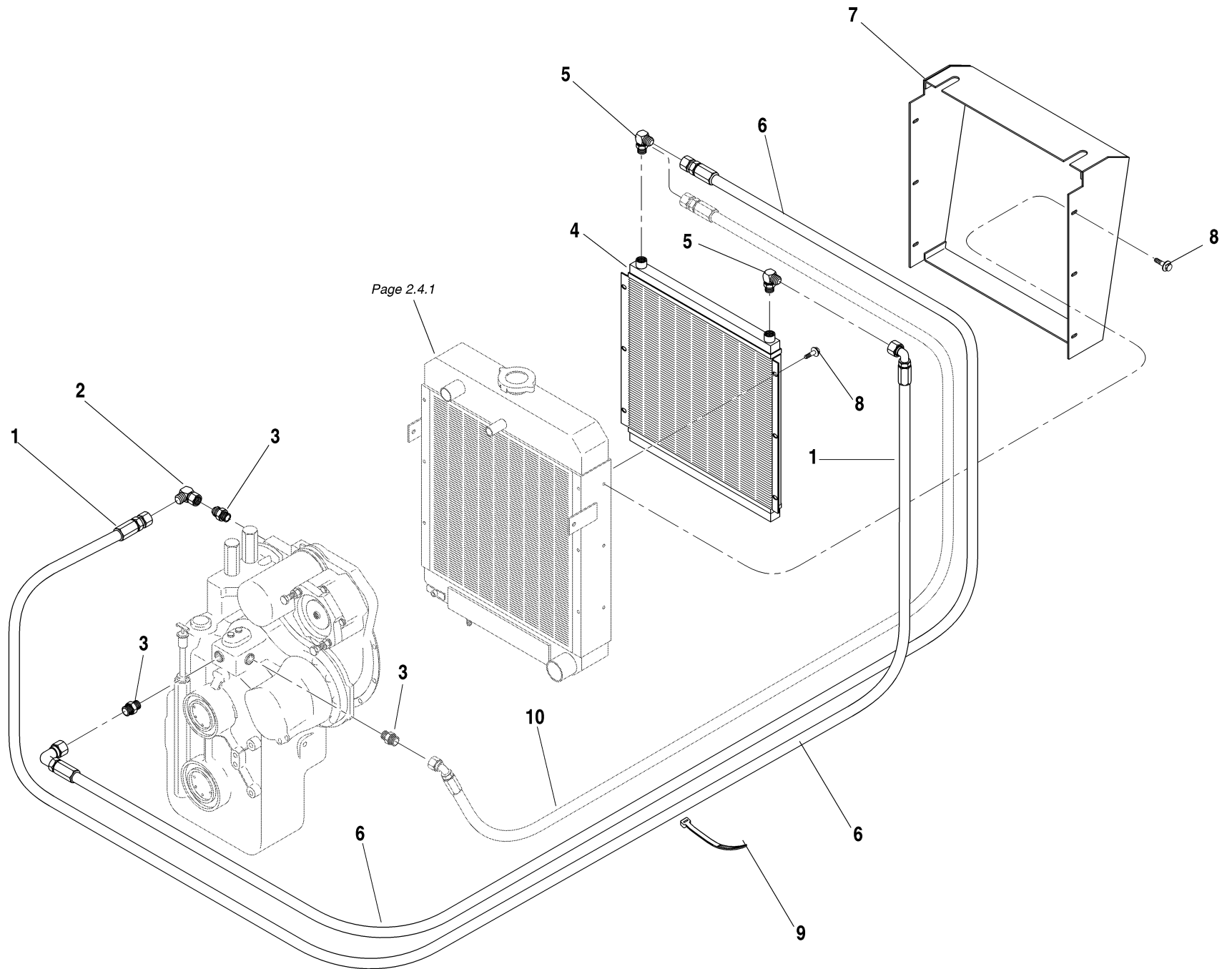
N.S.S. = Not Sold Separately

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ITEM	PART NO.	QTY.	DESCRIPTION
REF	68331X	1	Modulator Valve Assembly (Includes Items 1-14)
1	68306X	1	Housing, Modulator Valve
2	68307X	1	O-Ring
3	68308X	1	Stop Pin
4	68309X	1	Spring, Inner
5	68310X	1	Spring, Middle
6	68311X	1	Pin, Upper
7	68312X	1	Pin, Lower
8	68320X	1	Spring, Outer
9	68319X	1	Accumulator Spool
10	68318X	1	Spring Retainer
11	68317X	1	Spacer, Spring
12	68316X	1	Spring
13	68315X	1	Regulator Spool
14	68314X	1	Sleeve, Modulation Housing
15	68313X	1	O-Ring
16	68323X	1	Cover, Protective
17	68321X	2	Lockwasher
18	68322X	2	Capscrew
19	68396X	1	Wireing Harness
20	68324X	1	Retaining Nut
21	68325X	1	O-Ring
22	68326X	1	Solenoid Coil
23	68332X	4	Valve Cartridge, 4 Way
24	68330X	1	O-Ring
25	68329X	1	O-Ring
26	68328X	1	O-Ring
27	68327X	1	O-Ring

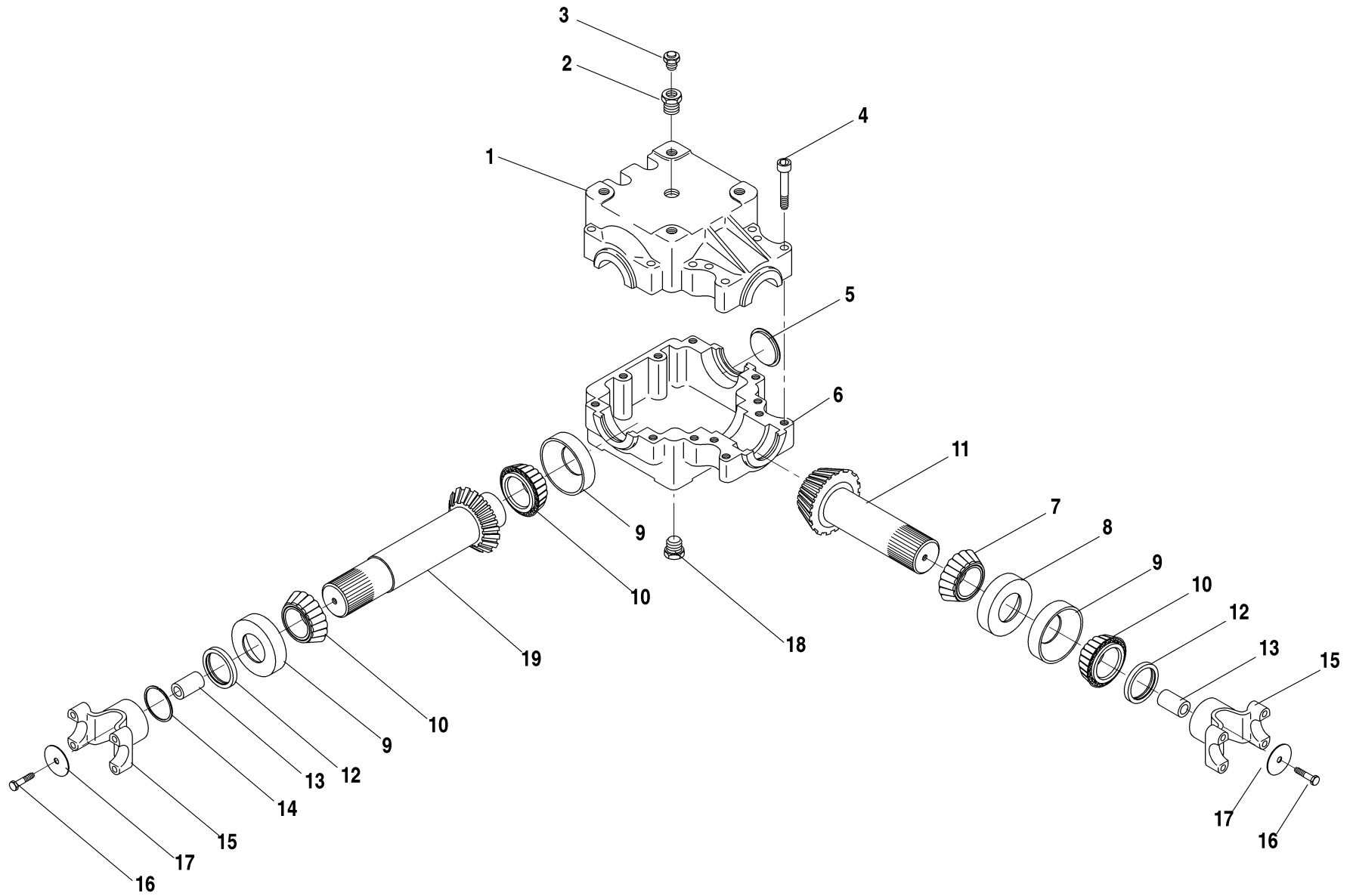
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION
1	66750X	1	Hose, Transmission Oil Cooler
2	P17802	1	Apapter, 90°
3	P23901	1	Apapter, Straight
4	67234B	1	Cooler, Oil
5	P17802	2	Apapter, 90°
6	66747X	1	Hose, Transmission Oil Cooler
7	67381C	1	Shroud, Radiator
8	P05320	6	Capscrew, Hx., 5/16"-18 x 1/2"
9	P17989	A/R	Cable Tie
10	68106X	1	Hose Transmission Oil Cooler

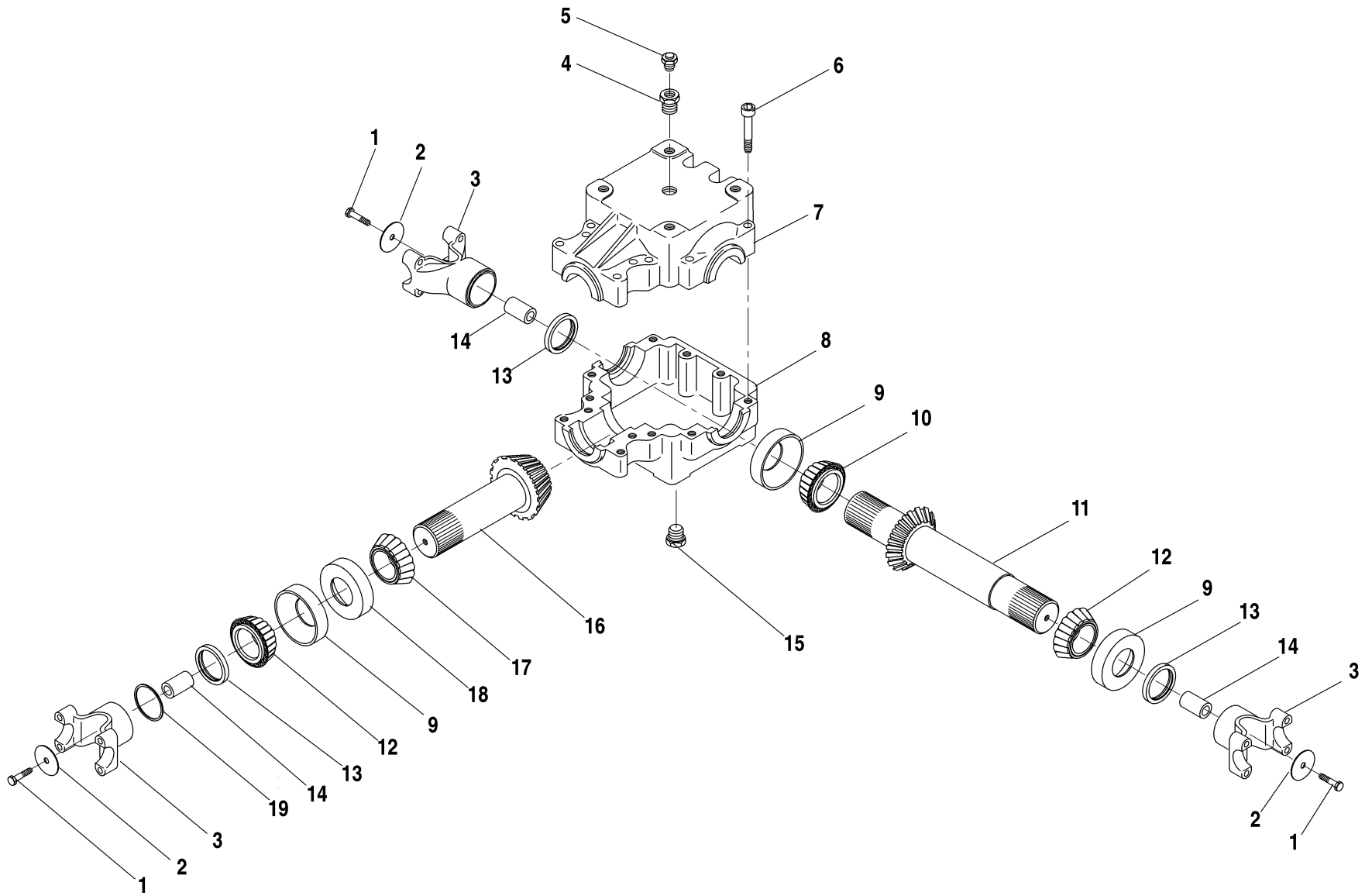
Rev. 001

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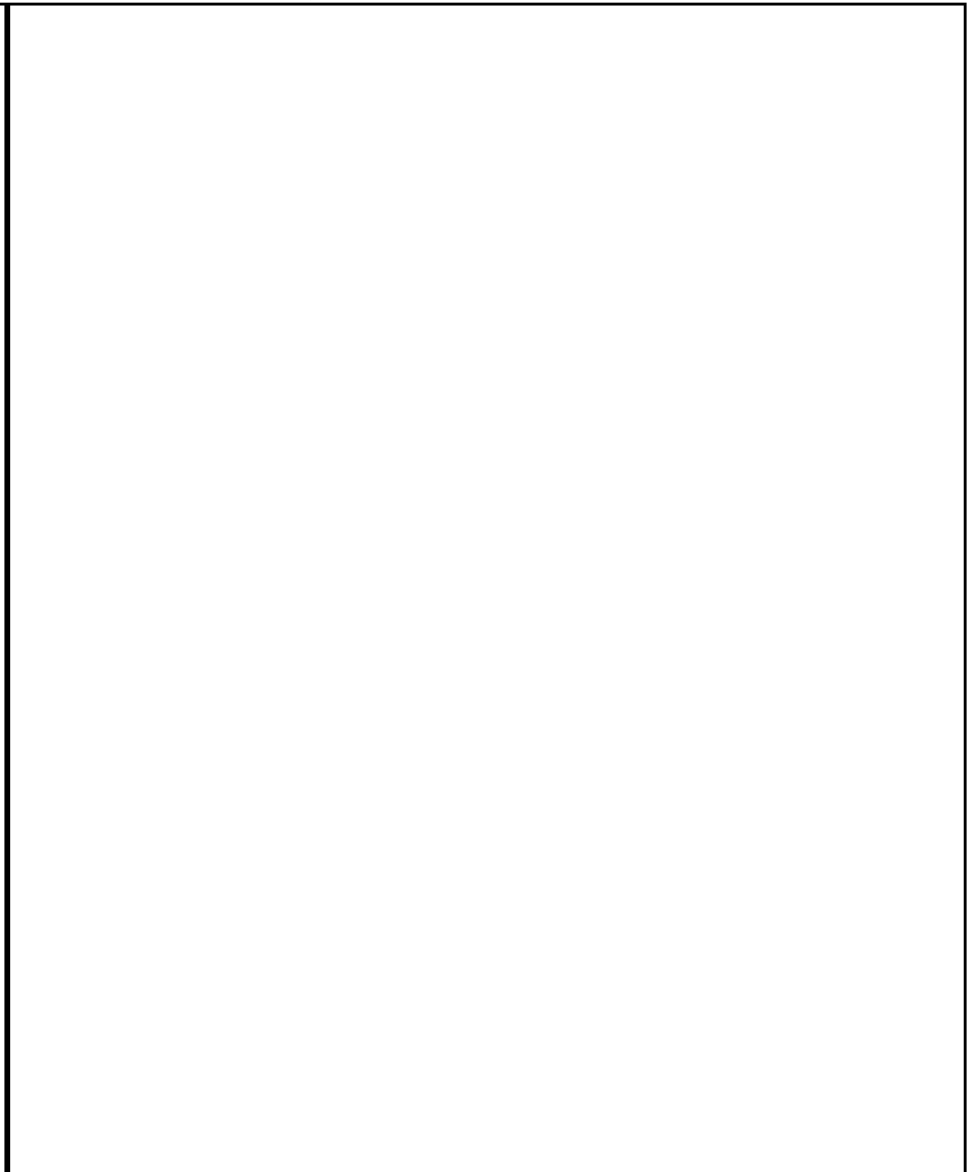
ITEM	PART NO.	QTY.	DESCRIPTION
1	1100301	1	Casting, Machined Upper
2	68392X	1	Bushing, 1/2 NPT to 1/8 NPT
3	1100310	1	Plug, Vent 5 P.S.I.
4	68390X	12	Bolt, 3/8-16 x 2 1/4" SHCS
5	1100315	1	Plug, End
6	1100300	1	Casting, Machined Lower
7	1100304	1	Bearing, Cup
8	1100305	1	Bearing, Cone
9	1100306	3	Bearing, Cup
10	1100307	3	Bearing, Cone
11	1101375	1	Pinion, Shaft/Gear, Assembly
12	1100308	2	Seal
13	1100311	2	Spacer
14	1100309	1	Ring, Retaining 1 3/4"
15	68393X	2	Yoke End
16	68394X	2	SHCS 3/8"-16 x 1 1/4"
17	68395X	2	Washer, .300 x 1.750 Gearbox
18	68389X	1	Plug 1/2 NPT SKHD Hex
19	1101376	1	Pinion\Gear Sub Assembly

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ITEM	PART NO.	QTY.	DESCRIPTION
1	68394X	3	SHCS 3/8"-16 x 1 1/4"
2	68395X	3	Washer, .300 x 1.750 Gearbox
3	68393X	3	Yoke End
4	68392X	1	Bushing, 1/2 NPT to 1/8 NPT
5	1100310	1	Plug, Vent 5 P.S.I.
6	68390X	12	Bolt, 3/8-16 x 2 1/4" SHCS
7	1100300	1	Casting, Machined Upper
8	1100301	1	Casting, Machined Lower
9	1100306	3	Bearing, Cup
10	1100312	1	Bearing, Cone
11	1101377	1	Cross/Gear Sub Assembly
12	1100307	2	Bearing, Cup
13	1100308	3	Seal
14	1100311	3	Spacer
15	68389X	1	Plug 1/2 NPT SKHD Hex
16	1101375	1	Pinion/Gear Sub Assembly
17	1100304	1	Bearing, Cone
18	1100305	1	Bearing, Cup
19	1100309	1	Ring, Retaining, 1 3/4"



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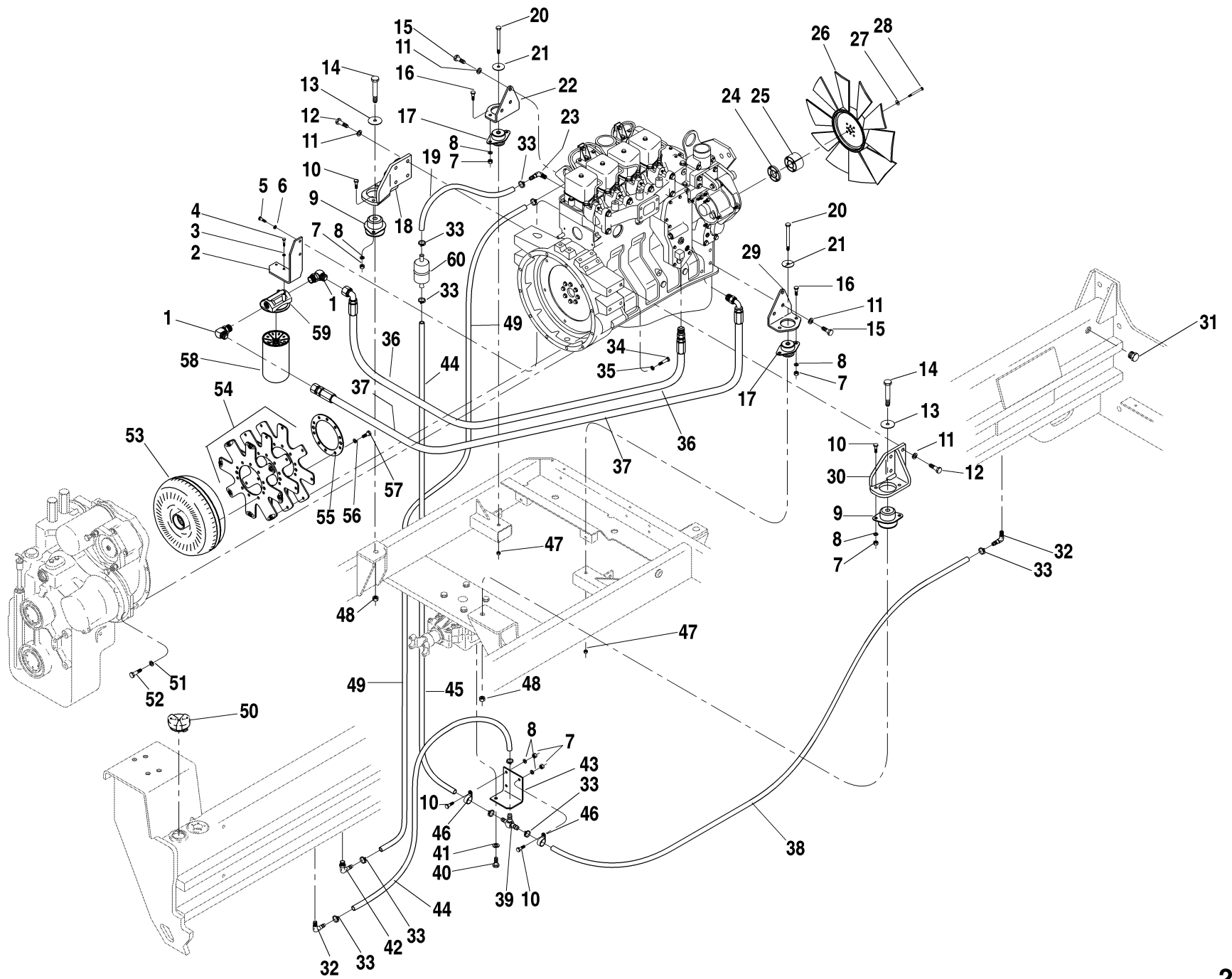
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**Section 2 — Power Plant**

**Cummins 4BT3.9**

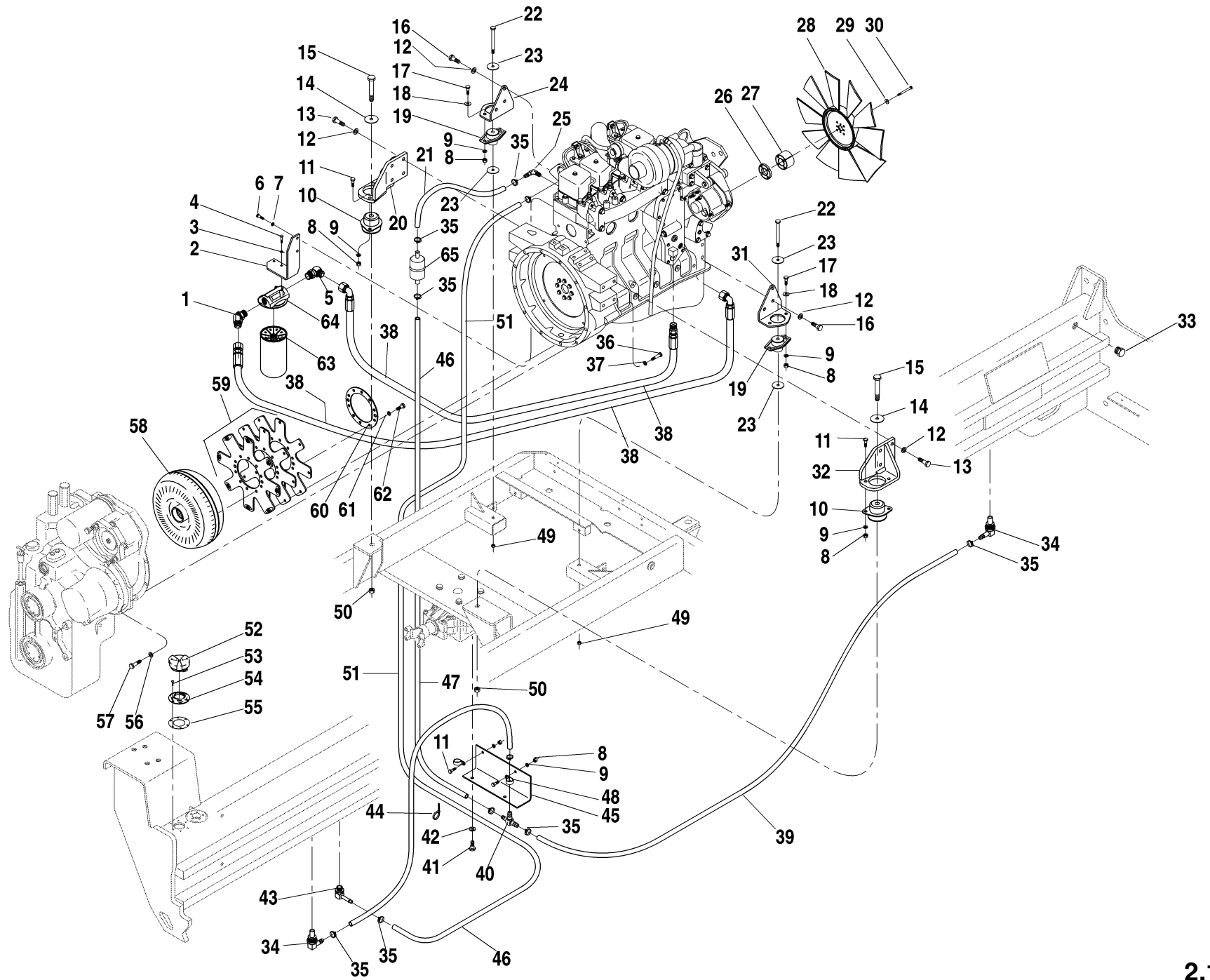
Engine Mounting & Fuel Lines . . . . . 2.1.1  
Exhaust Assembly . . . . . 2.2.1  
Air Cleaner Assembly . . . . . 2.3.1  
Radiator Group Assembly . . . . . 2.4.1  
Throttle Group Assembly . . . . . 2.5.1



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	P17802	2	Adapter 90°	38	67130A-98	1	Hose, Fuel 3/8" × 98"
2	67707B	1	Mount, Oil Filter	39	37652X	1	Tee, Union Hose
3	P01308	2	Lockwasher, 1/4"	40	P00400	1	Capscrew, Hx., 1/2"-13 × 3/4"
4	P00005	2	Capscrew, Hx., 1/4"-20 × 1"	41	P01312	1	Lockwasher, 1/2"
5	P04103	2	Capscrew, Hx., M8-1.25 × 20mm CI 8.8	42	67534X	1	Adapter, Barbed
6	P04607	2	Lockwasher, M8	43	67720A	1	Bracket Fuel Line
7	P01508	8	Nut, Hx., 3/8"-16	44	67130A-62	1	Hose, Fuel 3/8" × 62"
8	P01310	8	Lockwasher, 3/8"	45	67130A-23	1	Hose, Fuel 3/8" × 23"
9	67192X	2	Engine Mount, Rubber, Rear	46	37368X	2	Clamp
10	P00204	4	Capscrew, Hx., 3/8"-16 × 1"	47	P01659	2	Lock Nut, Hx., 7/16"-14 (Nylon Insert)
11	P04609	14	Lockwasher, M12	48	P01662	2	Lock Nut, Hx., 5/8"-11 (Nylon Insert)
12	P04203	6	Capscrew, Hx., M12-1.75 × 30mm	49	67129A-83	1	Hose, Fuel Return 5/16" × 83"
13	P00641	2	Capscrew, Hx., 5/8"-11 × 4" GR 8	50	67714A	1	Cap, Fuel Tank
14	67514X	2	Washer, Rebound 5/8"	51	P04608	11	Lockwasher, M10
15	P04205	8	Capscrew, Hx., M12-1.75 × 40mm	52	P04154	11	Capscrew, Hx., M10-1.5 × 30mm
16	P00205	4	Capscrew, Hx., 3/8"-16 × 1 1/4"	53	68233X	1	Torque Converter
17	67193X	2	Engine Mount, Rubber, Front	54	37075X	1	Kit, Drive Plate
18	67188X	1	Engine Mount, Cummins, Left Rear	55	68092X	1	Drive Plate Backing Ring
19	67130A-3	1	Hose, Fuel 3/8" × 3"	56	P20538	6	Lockwasher
20	P00342	2	Capscrew, Hx., 7/16"-14 × 4 1/2" GR 8	57	68091X	6	Capscrew
21	67513X	2	Washer, Rebound 7/16"	58	P31295	1	Filter, Oil
22	67190X	1	Engine Mount, Cummins, Left Front	59	67510X	1	Head, Lube Oil Filter
23	P28874	1	Adapter, 90° 3/8" Barb	60	66109X	1	Filter, Fuel
24	68094X	1	Spacer, Fan 1/4"				
25	68093X	1	Spacer, Fan 1 1/2"				
26	66113X	1	Fan, 18" Suction				
27	P04630	4	Flatwasher, M8				
28	P04113	4	Capscrew, Hx., M8-1.25 × 70mm CL 8.8				
29	67191X	1	Engine Mount, Cummins, Right Front				
30	67189X	1	Engine Mount, Cummins, Right Rear				
31	10715446	1	Plug, Adapter, SAE 1"				
32	67718A	2	Adapter, 90°				
33	P14047	8	Clamp, Hose, 3/8"				
34	P00284	8	Capscrew, Hx., 3/8"-24 × 1 3/4" GR 8				
35	P01252	8	Flatwasher, 3/8"				
36	66748X	1	Hose Hyd, 3/4" × 31"				
37	66749X	1	Hose Hyd, 3/4" × 38"				

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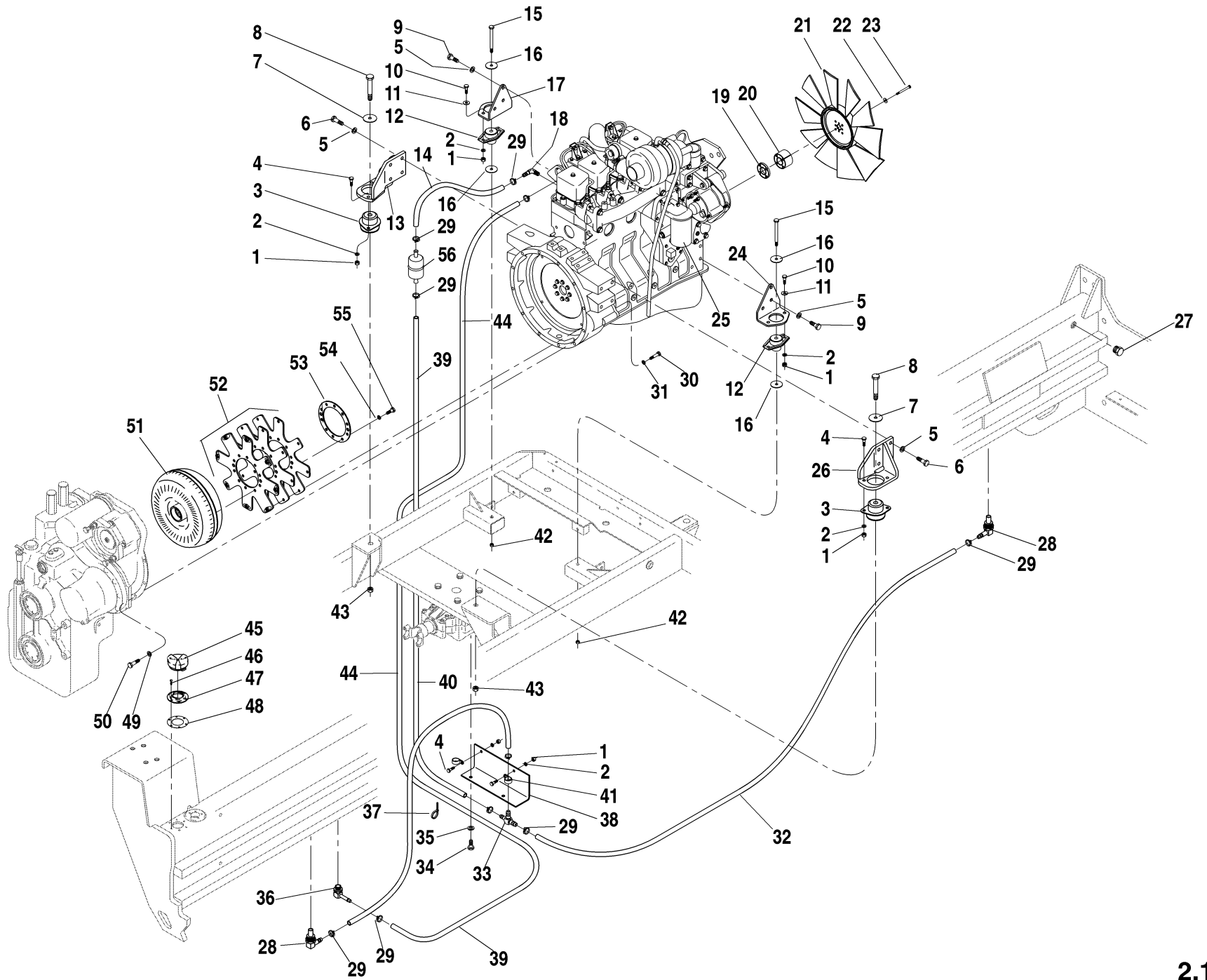


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	P19147	1	Adapter 45°	38	68118X	1	Hose Hyd, 3/4" x 41"
2	67707B	1	Mount, Oil Filter	39	67130A-99	1	Hose, Fuel 3/8" x 99"
3	P01308	2	Lockwasher, 1/4"	40	37652X	1	Tee, Union Hose
4	P00005	2	Capscrew, Hx., 1/4"-20 x 1"	41	P00400	1	Capscrew, Hx., 1/2"-13 x 3/4"
5	P17802	1	Adapter 90°	42	P01312	1	Lockwasher, 1/2"
6	P04103	2	Capscrew, Hx., M8-1.25 x 20mm Cl 8.8	43	67534X	1	Adapter, Barbed
7	P04607	2	Lockwasher, M8	44	P17989	A/R	Cable Tie
8	P01508	8	Nut, Hx., 3/8"-16	45	67720A	1	Bracket Fuel Line
9	P01310	8	Lockwasher, 3/8"	46	67130A-76	1	Hose, Fuel 3/8" x 76"
10	68968B	2	Engine Mount, Rubber, Rear	47	67130A-27	1	Hose, Fuel 3/8" x 27"
11	P00204	4	Capscrew, Hx., 3/8"-16 x 1"	48	37368X	2	Clamp
12	P04609	14	Lockwasher, M12	49	P01659	2	Lock Nut, Hx., 7/16"-14 (Nylon Insert)
13	P04203	6	Capscrew, Hx., M12-1.75 x 30mm	50	P01662	2	Lock Nut, Hx., 5/8"-11 (Nylon Insert)
14	P00641	2	Capscrew, Hx., 5/8"-11 x 4" GR 8	51	67129A-112	1	Hose, Fuel Return 5/16" x 112"
15	67514A	2	Washer, Rebound 5/8"	52	67714A	1	Cap, Fuel Tank
16	P04205	8	Capscrew, Hx., M12-1.75 x 40mm	53	P02077	6	Screw, . #10-32 x 3/8"
17	P00205	4	Capscrew, Hx., 3/8"-16 x 1 1/4"	54	68970B	1	Neck, Fill
18	P01277	4	Flatwasher, 3/8"	55	68971A	1	Gasket
19	68969B	2	Engine Mount, Rubber, Front	56	P04608	11	Lockwasher, M10
20	67188B	1	Engine Mount, Cummins, Left Rear	57	P04154	11	Capscrew, Hx., M10-1.5 x 30mm
21	67130A-3	1	Hose, Fuel 3/8" x 3"	58	68233X	1	Torque Converter
22	P00342	2	Capscrew, Hx., 7/16"-14 x 4 1/2" GR 8	59	37075X	1	Kit, Drive Plate
23	67513A	2	Washer, Rebound 7/16"	60	68092X	1	Drive Plate Backing Ring
24	67190B	1	Engine Mount, Cummins, Left Front	61	P20538	6	Lockwasher
25	P28874	1	Adapter, 90° 3/8" Barb	62	68091X	6	Capscrew
26	68094X	1	Spacer, Fan 1/4"	63	P31295	1	Filter, Oil
27	68093X	1	Spacer, Fan 1 1/2"	64	67510X	1	Head, Lube Oil Filter
28	66113X	1	Fan, 18" Suction	65	66109X	1	Filter, Fuel
29	P04630	4	Flatwasher, M8				
30	P04113	4	Capscrew, Hx., M8-1.25 x 70mm CL 8.8				
31	67191B	1	Engine Mount, Cummins, Right Front				
32	67189B	1	Engine Mount, Cummins, Right Rear				
33	10715446	1	Plug, Adapter, SAE 1"				
34	67718A	2	Adapter, 90°				
35	P14047	8	Clamp, Hose, 3/8"				
36	P00284	8	Capscrew, Hx., 3/8"-24 x 1 3/4" GR 8				
37	P01252	8	Flatwasher, 3/8"				

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**ENGINE MOUNTING & FUEL LINES (Cummins 4BT3.9) 2.1.1.1**





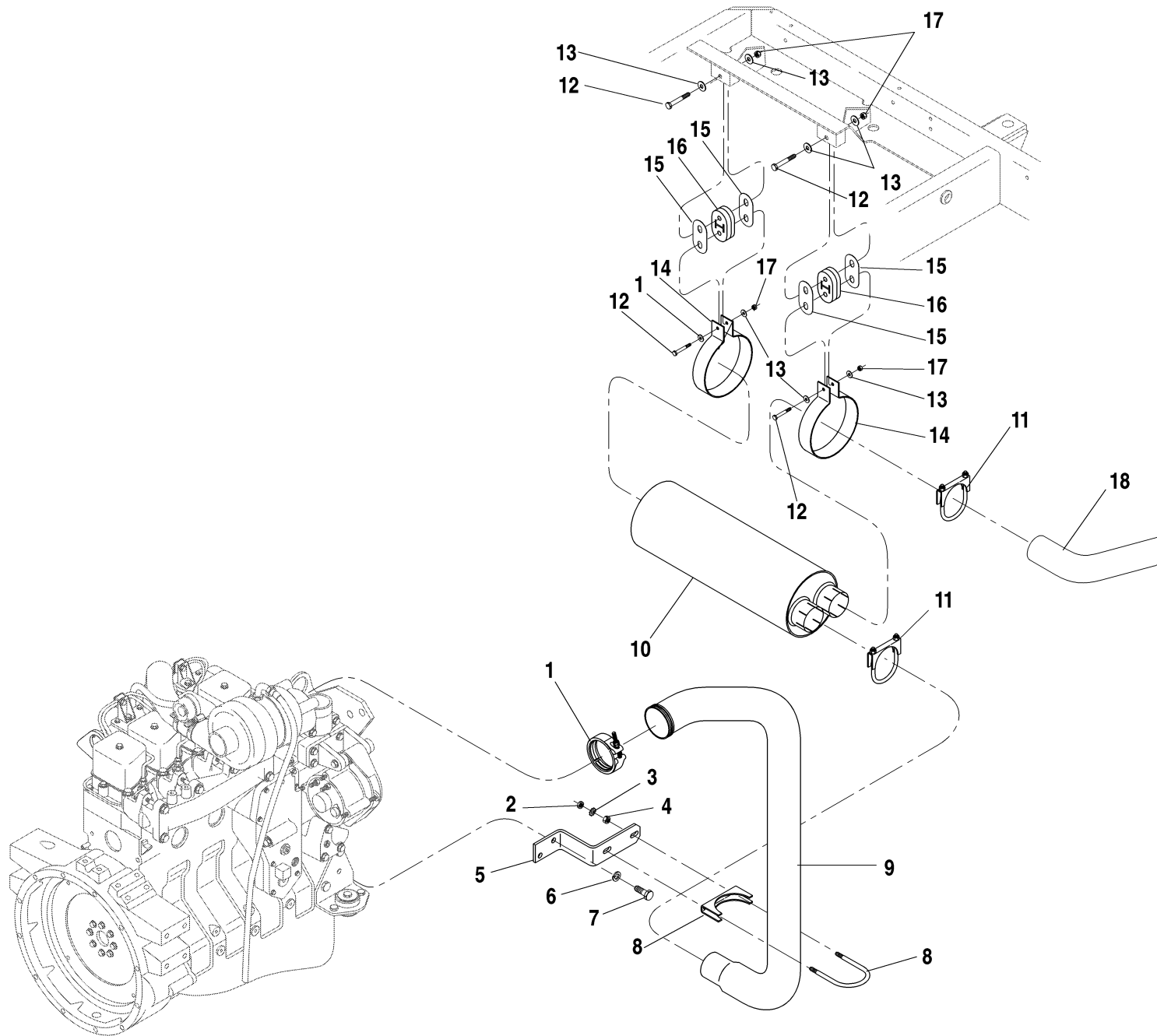


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	P01508	8	Nut, Hx., 3/8"-16	38	67720A	1	Bracket Fuel Line
2	P01310	8	Lockwasher, 3/8"	39	67130A-76	1	Hose, Fuel 3/8" x 76"
3	68968B	2	Engine Mount, Rubber, Rear	40	67130A-27	1	Hose, Fuel 3/8" x 27"
4	P00204	4	Capscrew, Hx., 3/8"-16 x 1"	41	37368X	2	Clamp
5	P04609	14	Lockwasher, M12	42	P01659	2	Lock Nut, Hx., 7/16"-14 (Nylon Insert)
6	P04203	6	Capscrew, Hx., M12-1.75 x 30mm	43	P01662	2	Lock Nut, Hx., 5/8"-11 (Nylon Insert)
7	P00641	2	Capscrew, Hx., 5/8"-11 x 4" GR 8	44	67129A-112	1	Hose, Fuel Return 5/16" x 112"
8	67514A	2	Washer, Rebound 5/8"	45	67714A	1	Cap, Fuel Tank
9	P04205	8	Capscrew, Hx., M12-1.75 x 40mm	46	P02077	6	Screw, #10-32 x 3/8"
10	P00205	4	Capscrew, Hx., 3/8"-16 x 1 1/4"	47	68970B	1	Neck, Fill
11	P01277	4	Flatwasher, 3/8"	48	68971A	1	Gasket
12	68969B	2	Engine Mount, Rubber, Front	49	P04608	11	Lockwasher, M10
13	67188B	1	Engine Mount, Cummins, Left Rear	50	P04154	11	Capscrew, Hx., M10-1.5 x 30mm
14	67130A-3	1	Hose, Fuel 3/8" x 3"	51	68233X	1	Torque Converter
15	P00342	2	Capscrew, Hx., 7/16"-14 x 4 1/2" GR 8	52	37075X	1	Kit, Drive Plate
16	67513A	2	Washer, Rebound 7/16"	53	68092X	1	Drive Plate Backing Ring
17	67190B	1	Engine Mount, Cummins, Left Front	54	P20538	6	Lockwasher
18	P28874	1	Adapter, 90° 3/8" Barb	55	68091X	6	Capscrew
19	68094X	1	Spacer, Fan 1/4"	56	66109X	1	Filter, Fuel
20	68093X	1	Spacer, Fan 1 1/2"				
21	66113X	1	Fan, 18" Suction				
22	P04630	4	Flatwasher, M8				
23	P04113	4	Capscrew, Hx., M8-1.25 x 70mm CL 8.8				
24	67191B	1	Engine Mount, Cummins, Right Front				
25	P31295	REF	Oil Filter				
26	67189B	1	Engine Mount, Cummins, Right Rear				
27	10715446	1	Plug, Adapter, SAE 1"				
28	67718A	2	Adapter, 90°				
29	P14047	8	Clamp, Hose, 3/8"				
30	P00284	8	Capscrew, Hx., 3/8"-24 x 1 3/4" GR 8				
31	P01252	8	Flatwasher, 3/8"				
32	67130A-99	1	Hose, Fuel 3/8" x 99"				
33	37652X	1	Tee, Union Hose				
34	P00400	1	Capscrew, Hx., 1/2"-13 x 3/4"				
35	P01312	1	Lockwasher, 1/2"				
36	67534X	1	Adapter, Barbed				
37	P17989	A/R	Cable Tie				

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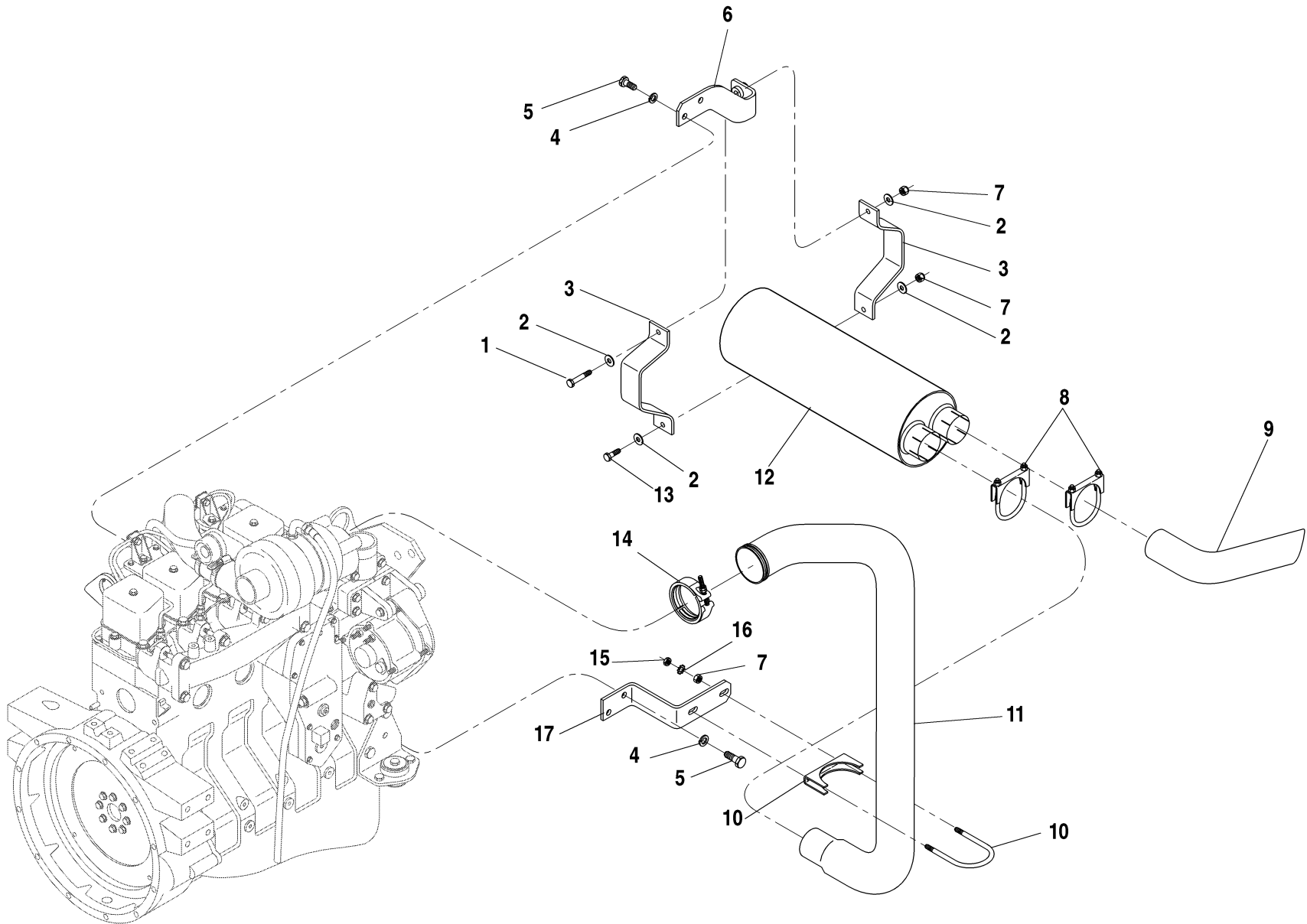
**ENGINE MOUNTING & FUEL LINES (Cummins 4BT3.9) 2.1.1.2**



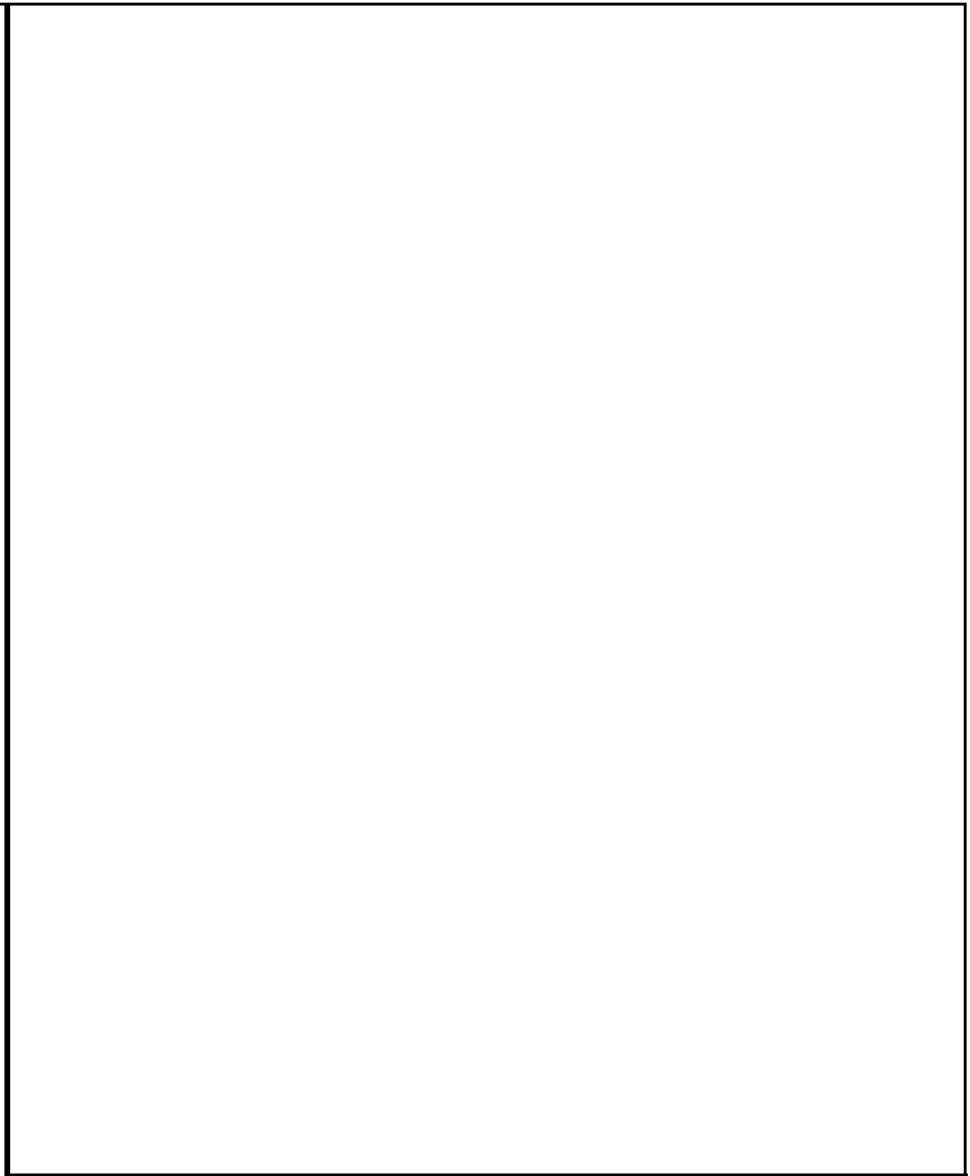


ITEM	PART NO.	QTY.	DESCRIPTION
1	P32986	1	Clamp, Exhaust, Turbo
2	P01359	2	Starwasher, External, 3/8"
3	P01558	2	Nut, Jam 3/8"-16
4	P01508	2	Nut, Hx., 3/8"-16
5	67420B	1	Support, Exhaust Pipe
6	P04609	2	Lockwasher, M12
7	P04205	2	Capscrew, Hx., M12-1.75 x 40mm
8	P17169	1	Clamp, Exhaust 3" ID
9	67279B	1	Pipe, Exhaust, Engine to Muffler
10	37799X	1	Muffler
11	P12169	2	Clamp, Exhaust 2 1/2" ID
12	P00158	4	Capscrew, Hx., 5/16"-24 x 2.0 Gr 5
13	P01434	8	Flatwasher, 5/16"
14	65486B	2	Hanger, Muffler, 6.63" Dia
15	39922A	4	Link, Exhaust Hanger
16	P32982	2	Hanger, Rubber Exhaust
17	P01680	4	Lock nut, 5/16"-24
18	67795A	1	Tailpipe, 2 1/2"

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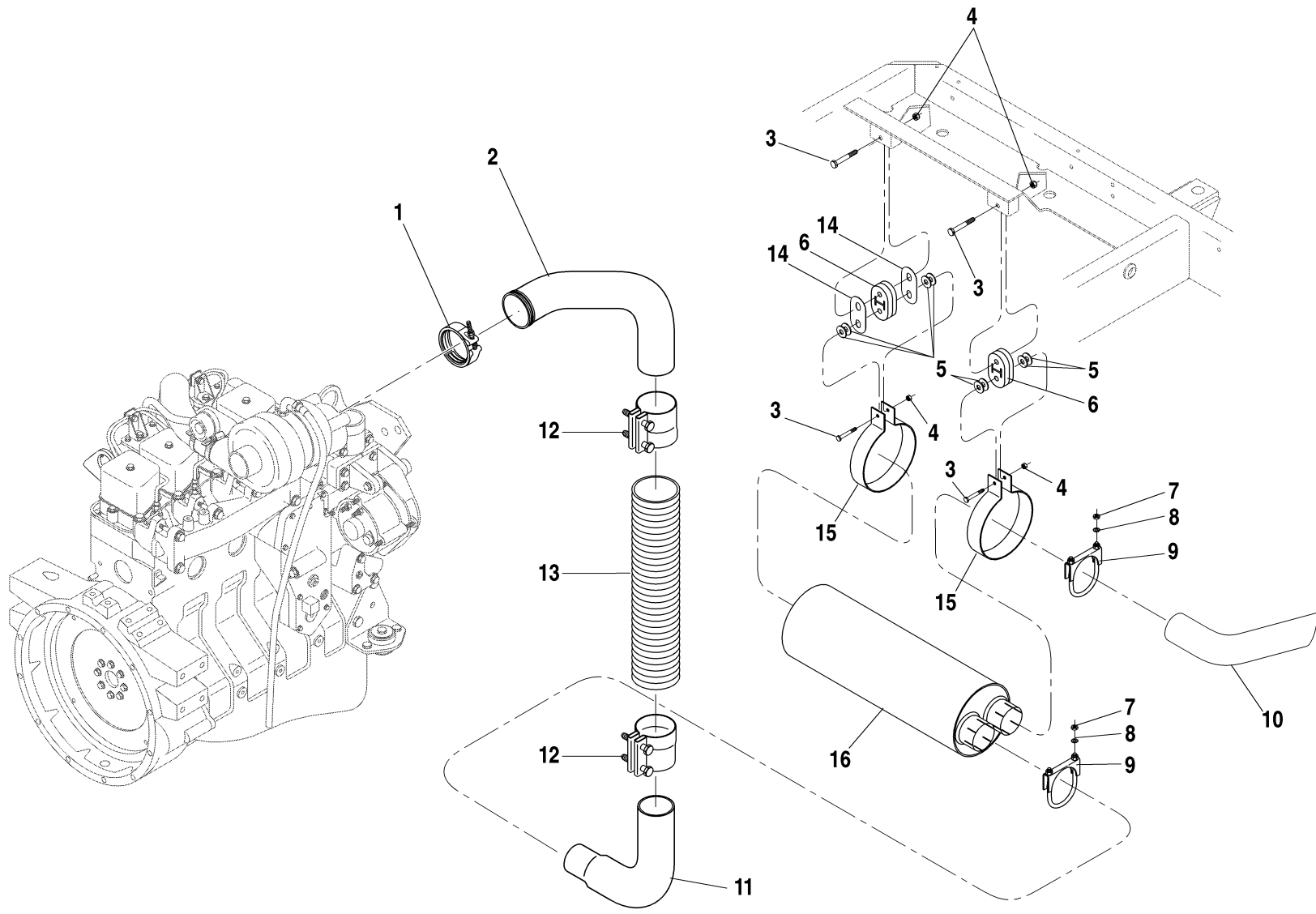


ITEM	PART NO.	QTY.	DESCRIPTION
1	P00209	1	Capscrew, Hx., 3/8"-16x 2 1/4"
2	P01404	4	Flatwasher, 3/8"
3	1100010	2	Hanger, Muffler
4	P04609	2	Lockwasher, M12
5	P04207	2	Capscrew, Hx., M12-1.75 x 50mm 8.8
6	68749B	1	Bracket, Muffler Hanger
7	P01508	4	Nut, Hx., 3/8"-16
8	P12169	2	Clamp, Exhaust 2 1/2" ID
9	67795A	1	Tailpipe, 2 1/2"
10	P17169	1	Clamp, Exhaust 3" ID
11	67279B	1	Pipe, Exhaust, Engine to Muffler
12	37799X	1	Muffler
13	P00205	1	Capscrew, Hx., 3/8"-16x 1 1/4"
14	P32986	1	Clamp, Exhaust, Turbo
15	P01558	2	Nut, Jam 3/8"-16
16	P01359	2	Starwasher, External, 3/8"
17	67420B	1	Support, Exhaust Pipe

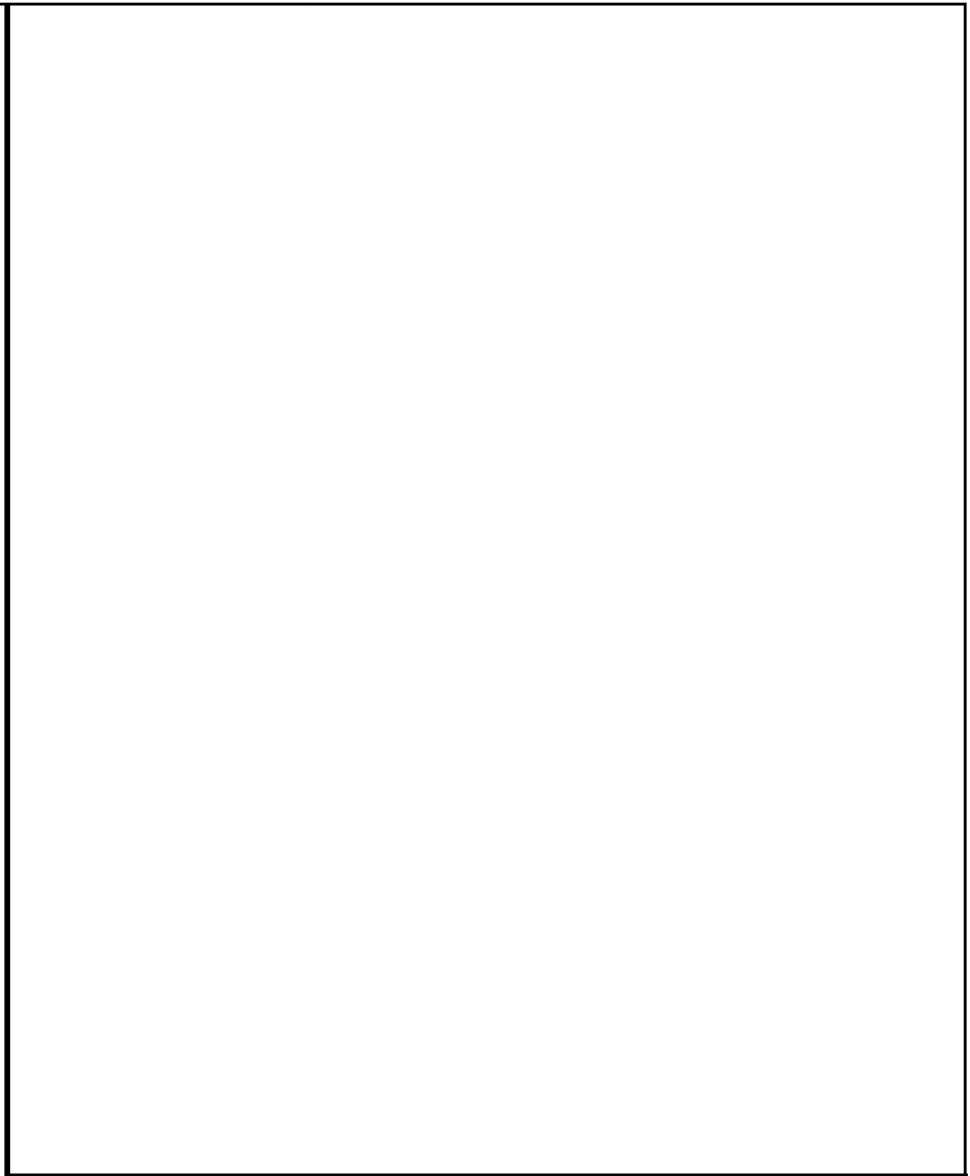


644D-34 S/N 204-680

**EXHAUST ASSEMBLY (Cummins 4BT3.9) 2.2.1.1**



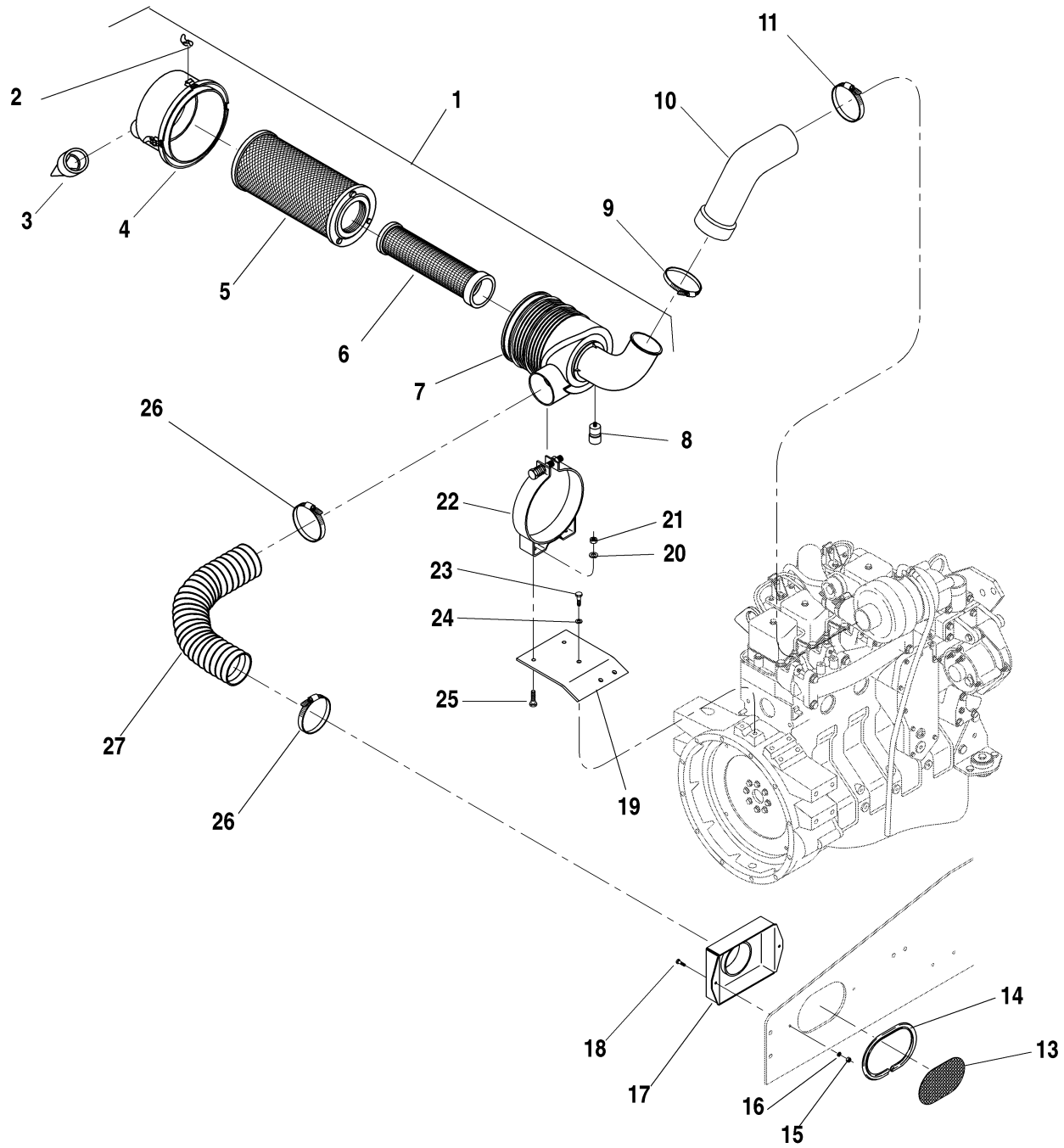
ITEM	PART NO.	QTY.	DESCRIPTION
1	10732986	1	Clamp, Exhaust, Turbo
2	1100196	1	Pipe, Exhaust, Upper
3	10700158	4	Capscrew, Hx., 5/16"-24x 2"
4	10701680	4	Locknut, Hx., 5/16"-24
5	10701434	8	Flatwasher, 5/16"
6	10732982	2	Hanger, Rubber Exhaust
7	10701558	2	Nut, Jam 3/8"-16
8	10701359	2	Starwasher, External, 3/8"
9	1100119	2	Clamp, Exhaust
10	10167795	1	Tailpipe, 2 1/2"
11	1100197	1	Pipe, Exhaust, Lower
12	10733144	2	Clamp, Seal
13	1100124	1	Exhaust Pipe, Flexibile
14	10139922	2	Link, Exhaust Hanger
15	10265486	2	Hanger, Muffler
16	10837799	1	Muffler



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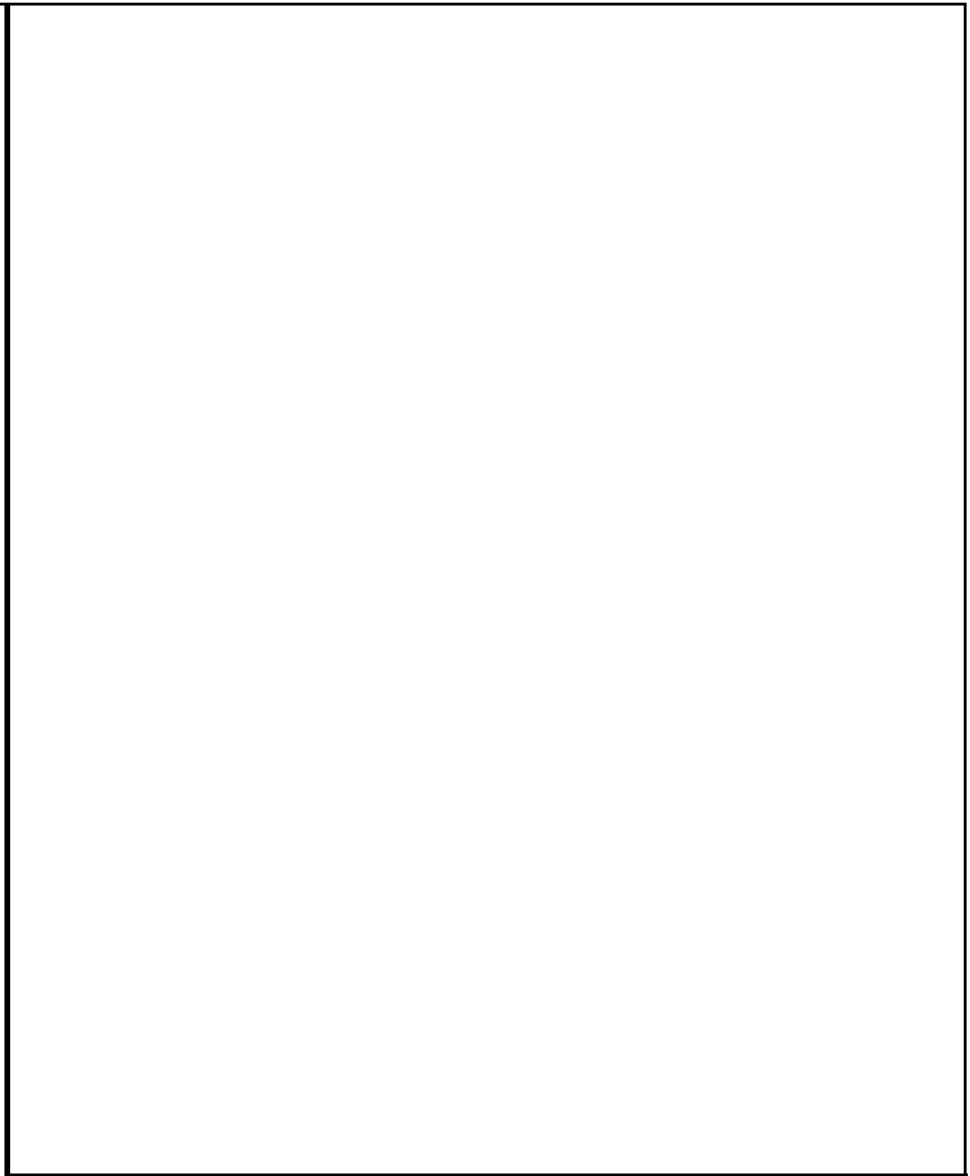

**EXHAUST ASSEMBLY (Cummins 4BT3.9) 2.2.1.2**



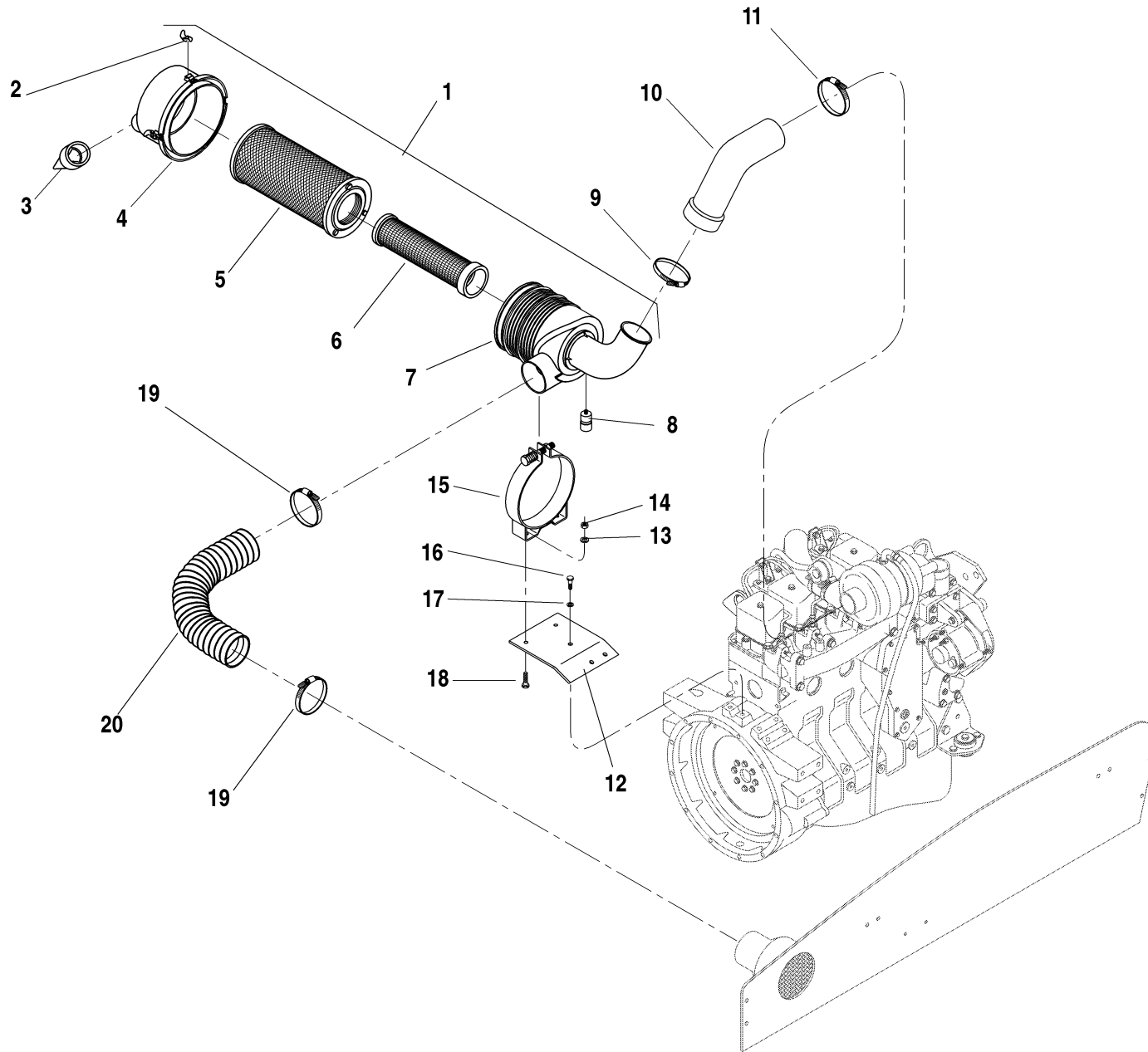




ITEM	PART NO.	QTY.	DESCRIPTION
1	67503D	1	Air Cleaner (Includes Items 2-7)
2	P33184	3	Latch
3	P33183	1	Vacuator Valve
4	P33182	1	Cover (Includes Item 2)
5	P33180	1	Filter Element, Primary
6	P33181	1	Filter Element, Secondary
7	N.S.S.	-	Body
8	67537X	1	Switch, Vacuum
9	67198X	1	Clamp, T-Bolt
10	67186B	1	Tube, Air Intake
11	67197X	1	Clamp, T-Bolt
12	67186X	1	Elbow, Rubber
13	67511X	1	Seal
14	67470A	1	Guard Air Intake
15	P01506	2	Nut, Hx., 1/4"-20
16	P01308	2	Lockwasher, 1/4"
17	67444B	1	Duct, Air Intake
18	P00003	2	Capscrew, Hx., 1/4"-20 x 3/4"
19	67185B	1	Bracket, Air Cleaner Mounting
20	P01309	2	Lockwasher, 5/16"
21	P01507	2	Nut, Hx, 5/16"-18
22	P33142	1	Band, Mounting
23	P00204	3	Capscrew, Hx., 3/8"-16 x 1"
24	P01310	3	Lockwasher, 3/8"
25	P00104	2	Capscrew, Hx., 5/16"-18 x 1"
26	P11124	2	Hose Clamp
27	10167195	1	Hose, Air Cleaner



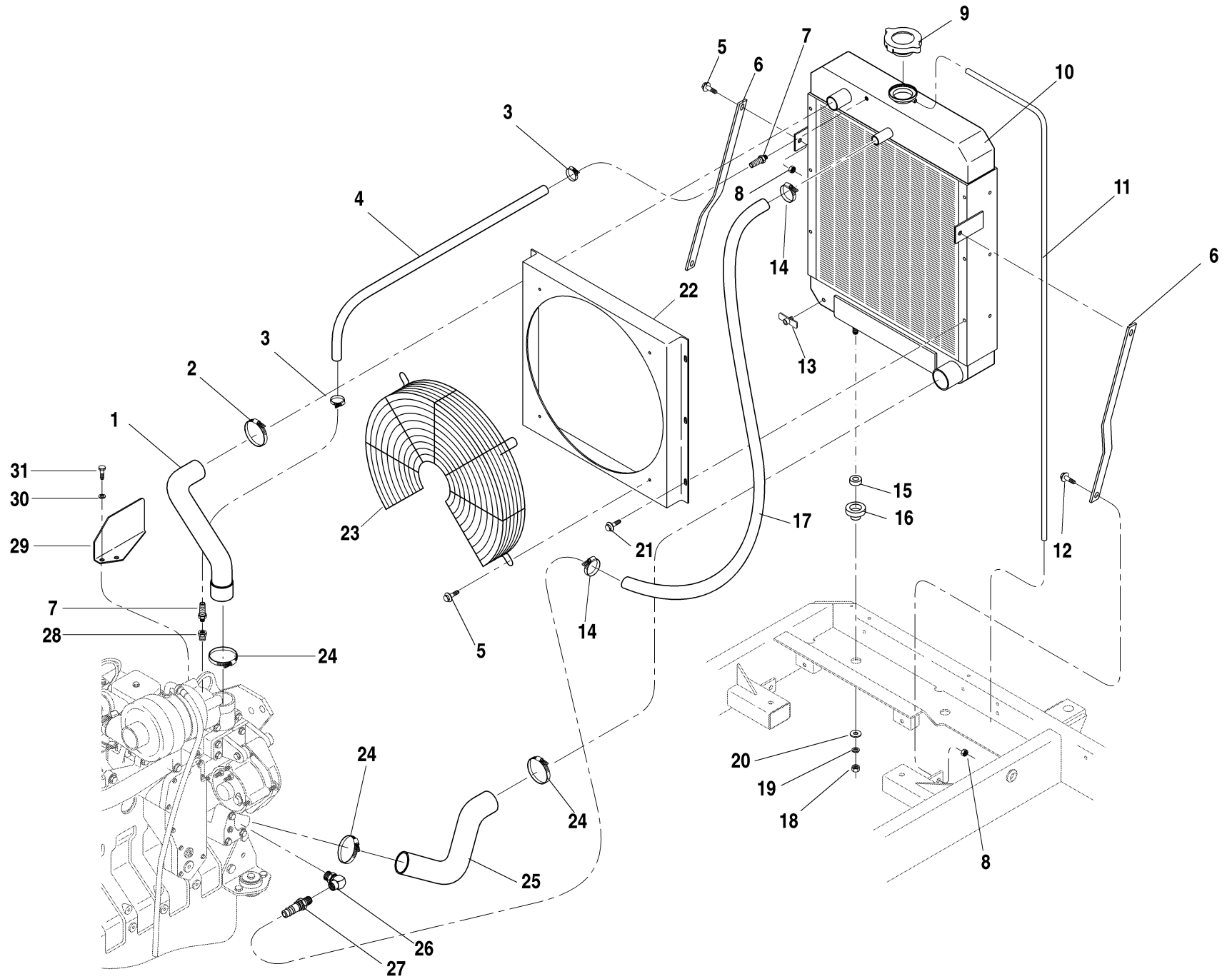
644D-34 S/N 108-276



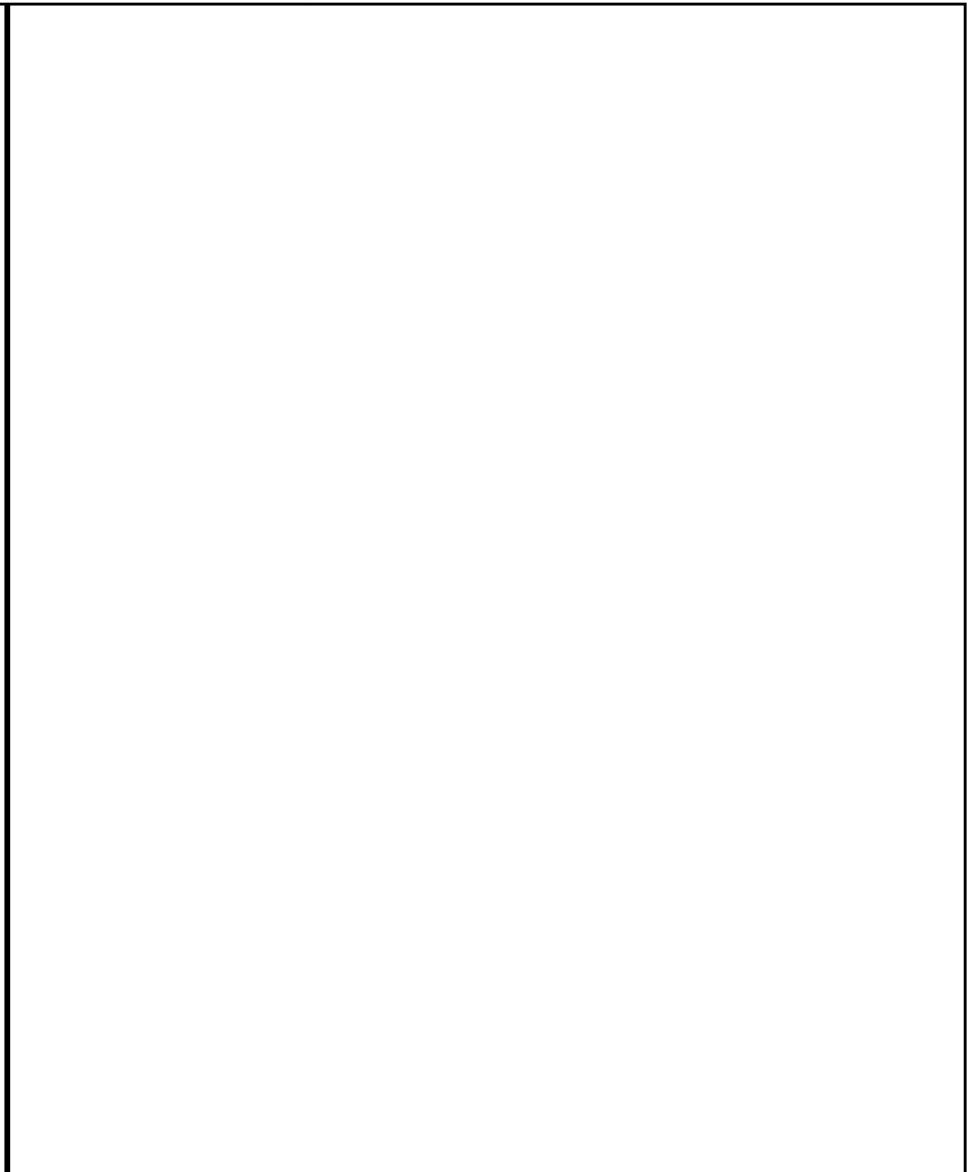
ITEM	PART NO.	QTY.	DESCRIPTION
1	67503D	1	Air Cleaner (Includes Items 2-7)
2	P33184	3	Latch
3	P33183	1	Vacuator Valve
4	P33182	1	Cover (Includes Item 2)
5	P33180	1	Filter Element, Primary
6	P33181	1	Filter Element, Secondary
7	N.S.S.	-	Body
8	67537X	1	Switch, Vacuum
9	67198X	1	Clamp, T-Bolt
10	67186B	1	Tube, Air Intake
11	67197X	1	Clamp, T-Bolt
12	67185B	1	Bracket, Air Cleaner Mounting
13	P01309	2	Lockwasher, 5/16"
14	P01507	2	Nut, Hx, 5/16"-18
15	P33142	1	Band, Mounting
16	P00204	3	Capscrew, Hx., 3/8"-16 x 1"
17	P01310	3	Lockwasher, 3/8"
18	P00104	2	Capscrew, Hx., 5/16"-18 x 1"
19	P11124	2	Hose Clamp
20	10167195	1	Hose, Air Cleaner

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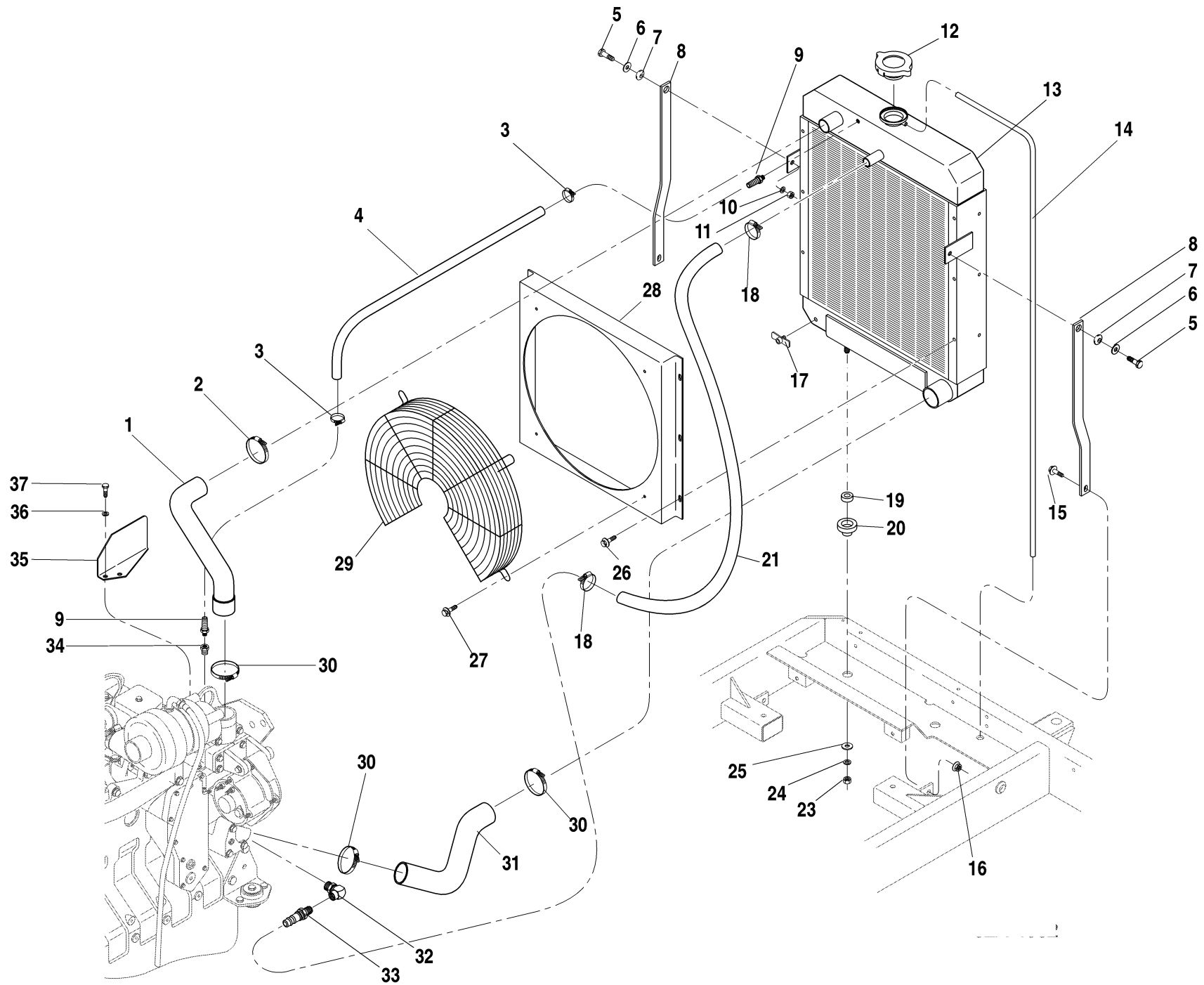
**AIR CLEANER ASSEMBLY (Cummins 4BT3.9) 2.3.1.1**



ITEM	PART NO.	QTY.	DESCRIPTION
1	67488B	1	Hose, Radiator - Upper
2	P14043	1	Hose Clamp, 1" x 2"
3	P14047	2	Hose Clamp, 3/8"
4	67127A-12	1	Hose, 3/16 x 12"
5	P05322	6	Capscrew, Flg Hd., 3/8"-16 x 3/4"
6	67419A	2	Support, Upper Radiator
7	67530X	2	Adapter, 1/8MP-3/8" Barb
8	P01658	4	Locknut, Hx, 3/8"-16
9	68090X	1	Cap, Radiator 10 P.S.I.
10	67233C	1	Radiator
11	36504X	1	Hose, Over Flow 5/16" x 44"
12	P05343	2	Capscrew, Flg Hd., 3/8"-16 x 7/8"
13	P16675	1	Petcock, Drain
14	P10178	2	Clamp, Hose, 1"
15	P24305	2	Bushing
16	P24306	2	Grommet, Rubber 3/8" ID
17	67672A	1	Hose, 1" I.D. x 30"
18	P01510	2	Nut, Hx, 1/2"-13
19	P01312	2	Lockwasher, 1/2"
20	P01406	2	Flatwasher, 1/2"
21	P05320	6	Capscrew, Flg Hd., 5/16"-18 x 1/2"
22	67297B	1	Shroud, Fan
23	10238470	1	Guard, Fan
24	P10601	3	Hose Clamp, 1 3/4" x 2 3/4"
25	67489B	1	Hose, Radiator - Lower
26	67515X	1	Adapter, 8MP-12FP90
27	67517X	1	Adapter, 12MP-16 Hose
28	67529X	1	Bushing, Reducer, 1/2MP-1/8MP
29	67421A	1	Heat Shield
30	P04608	2	Lockwasher, M10
31	P04152	2	Capscrew, Hx., M10-1.5 x 20mm



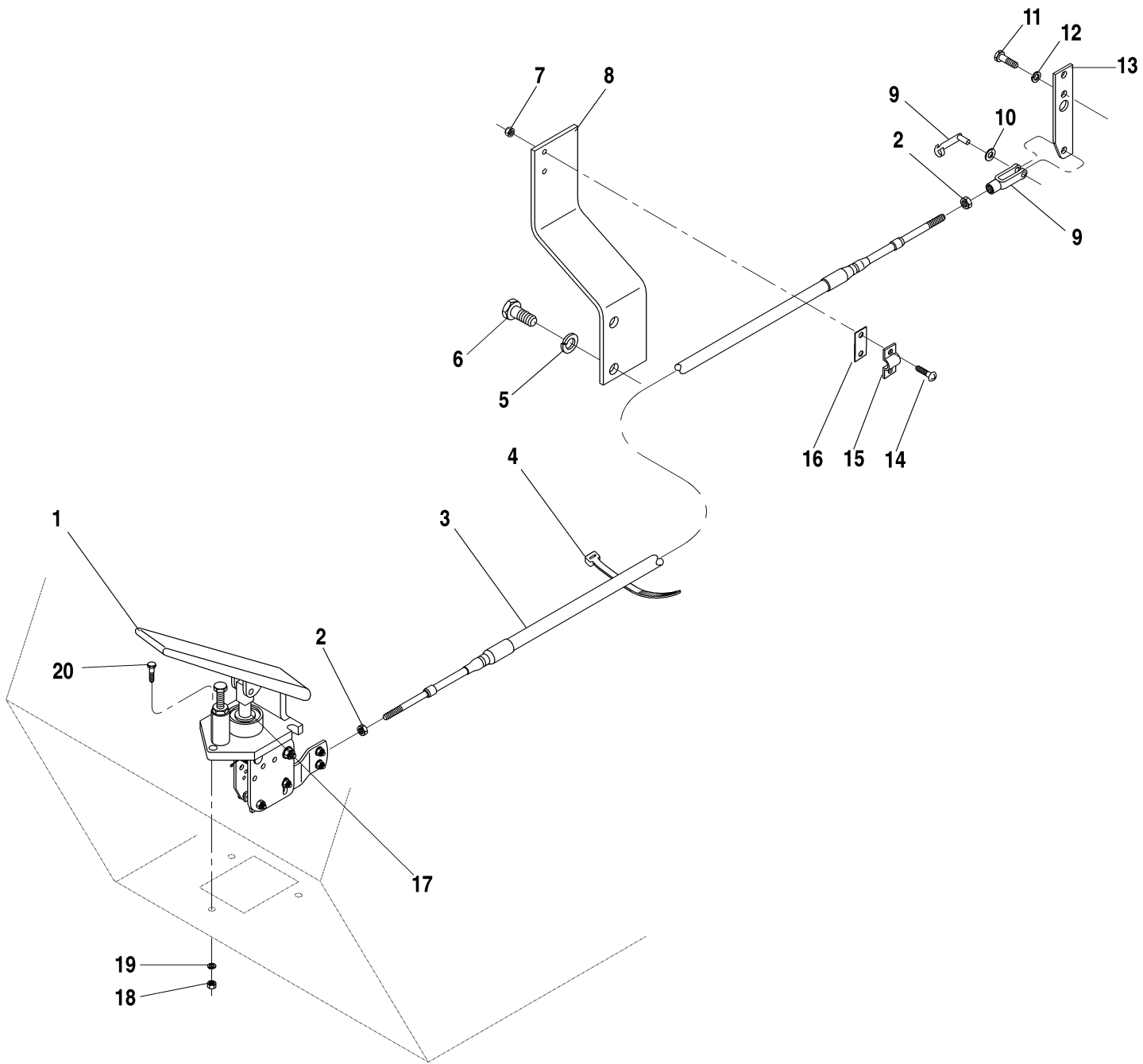
644D-34 S/N 108-856



ITEM	PART NO.	QTY.	DESCRIPTION
1	67488B	1	Hose, Radiator - Upper
2	P14043	1	Hose Clamp, 1" x 2"
3	P14047	2	Hose Clamp, 3/8"
4	67127A-12	1	Hose, 3/16 x 12"
5	10700205	2	Capscrew 3/8"-16 x 1 1/4"
6	10701404	2	Washer, Flat 3/8"
7	10718723	2	Grommet, Rubber
8	1100553	2	Support, Upper Radiator
9	67530X	2	Adapter, 1/8MP-3/8" Barb
10	10701312	2	Washer, Lock, 3/8"
11	P01508	2	Nut, Hx, 3/8"-16
12	68090X	1	Cap, Radiator 10 P.S.I.
13	67233C	1	Radiator
14	36504X	1	Hose, Over Flow 5/16" x 44"
15	10705342	2	Capscrew, Flg Hd., 3/8"-16 x 7/8"
16	10701658	2	Locknut., 3/8"-16
17	P16675	1	Petcock, Drain
18	P10178	2	Clamp, Hose, 1"
19	P24305	2	Bushing
20	P24306	2	Grommet, Rubber 3/8" ID
21	67672A	1	Hose, 1" I.D. x 30"
22	10701406	2	Washer, Flat, 3/8"
23	P01510	2	Nut, Hx, 1/2"-13
24	P01312	2	Lockwasher, 1/2"
25	P01406	2	Flatwasher, 1/2"
26	P05320	6	Capscrew, Flg Hd., 5/16"-18 x 1/2"
27	10705322	4	Capscrew, Flg Hd., 5/16"-18 x 3/4"
28	67297B	1	Shroud, Fan
29	10238470	1	Guard,Fan
30	P10601	3	Hose Clamp, 1 3/4" x 2 3/4"
31	67489B	1	Hose, Radiator - Lower
32	67515X	1	Adapter, 8MP-12FP90
33	67517X	1	Adapter. 12MP-16 Hose
34	67529X	1	Bushing, Reducer, 1/2MP-1/8MP
35	67421A	1	Heat Shield
36	P04608	2	Lockwsaher, M10
37	P04152	2	Capscrew, Hx., M10-1.5 x 20mm

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**RADIATOR GROUP ASSEMBLY (Cummins 4BT3.9) 2.4.1.1**





ITEM	PART NO.	QTY.	DESCRIPTION
1	37378X	1	Accelerator Pedal (Includes Item 21)
2	P01529	2	Nut, Hx., 1/4"-28
3	37760X	1	Cable, Throttle - 120" Long
4	P20496	4	Cable Tie
5	P04203	2	Capscrew, Hx., M12-1.75 x 30mm 8.8
6	P04609	2	Lockwasher, M12
7	P01654	2	Nut, Nylock #10-24
8	67187B	1	Bracket, Throttle Cable
9	38818A	1	Yoke end w/ Spring Pin
10	65906A	1	Spacer
11	P04053	2	Capscrew, Hx., M6-1 x 16mm
12	P04606	2	Lockwasher, M6
13	65925A	1	Extension Throttle Lever
14	P01733	2	Capscrew, Hx., #10-24 x 3/4"
15	14383A	1	Clamp, Cable
16	16401A	1	Shim, Cable Clamp
17	P20069	1	Bellows
18	P01506	3	Nut, Hx., 1/4"-20
19	P01308	3	Lockwasher, 1/4"
20	P00006	3	Capscrew, Hx., 1/4"-20 x 1 1/4"

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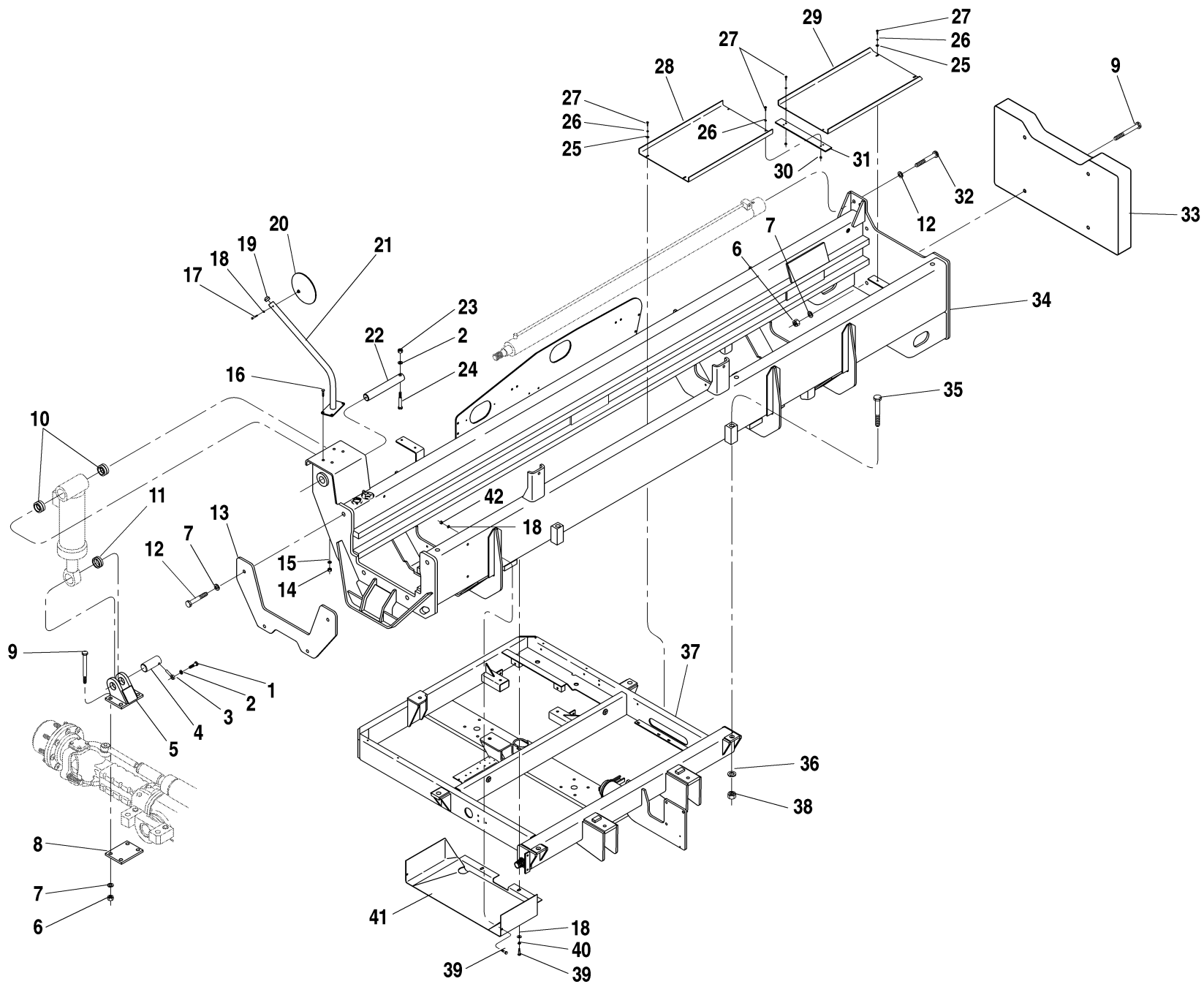
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## Section 3 — Frame and Operator's Compartment

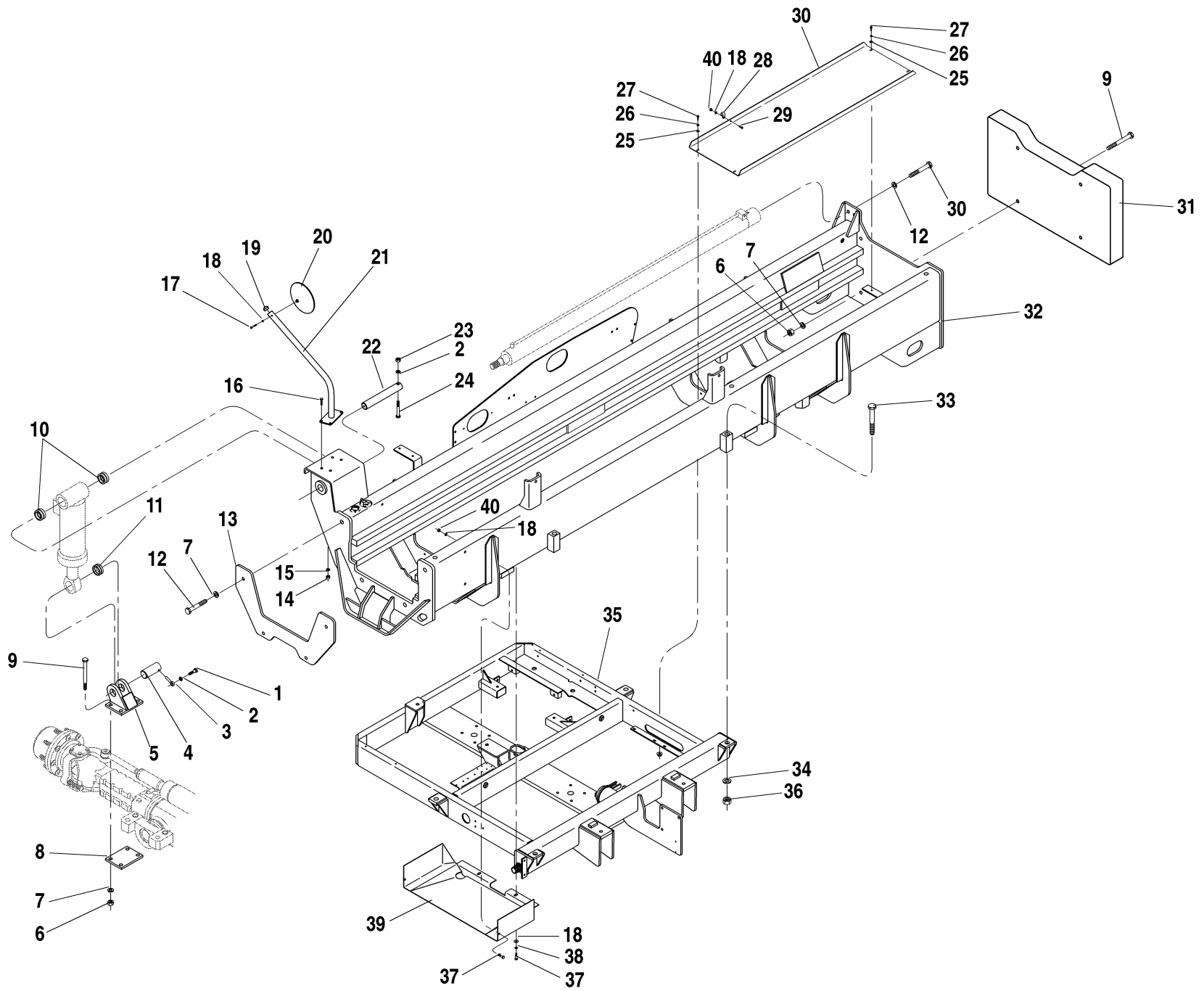
Main Frame Assembly .....	3.1.1
Engine Cowel Assembly .....	3.2.1
Operator's Compartment Assembly .....	3.3.1
Instrument Panel Assembly .....	3.4.1
Steer Column Assembly .....	3.5.1
Fender Assembly .....	3.6.1

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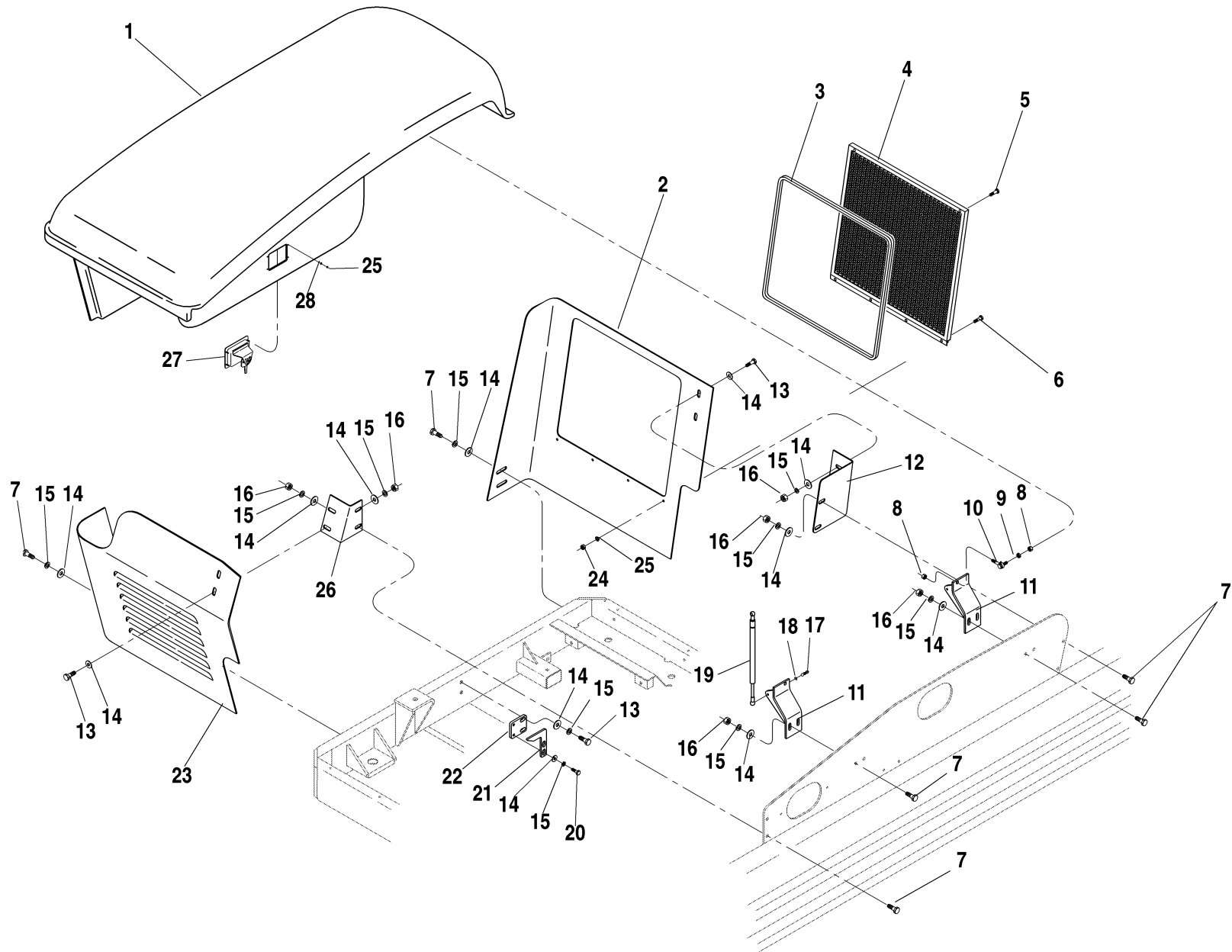
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	P00403	1	Capscrew, Hx., 1/2"-13 x 1 1/4"	38	P01209	4	Nut, Hx 1"-8 GRD 8
2	P01312	2	Lockwasher, 1/2"	39	P00104	4	Capscrew, Hx., 5/16"-18 x 1"
3	34178A	1	Lock Pin	40	P01403	2	Flatwasher, 5/16"
4	65601A	1	Pin, Frame Tilt Cylinder - Lower	41	67694C	1	Guard, Filter
5	65558B	1	Mount, Frame Tilt Cylinder	42	P01507	2	Nut Hx., 5/16"-18
6	P01315	14	Nut, Hx., 3/4"-10 GR C				
7	P01315	12	Lockwasher, 3/4"				
8	65561A	1	Plate, Frame Tilt Support Ear Hose Guard, Cab				
9	P00742	8	Capscrew, Hx., 3/4"-10 x 7 1/2" GR 8				
10	16228A	2	Bushing, Cylinder				
11	21665A	1	Bushing, Cylinder				
12	P00706	4	Capscrew, Hx., 3/4"-10 x 3"				
13	65462B	1	Plate, Front, Upper Frame Assembly				
14	P01508	4	Nut, Hx., 3/8"-16				
15	P01310	4	Lockwasher, 3/8"				
16	P00205	4	Capscrew, Hx., 3/8"-16 x 1 /14"				
17	P00107	1	Capscrew, Hx., 5/16"-16 x 1 3/4"				
18	P01309	4	Lockwasher, 5/16"				
19	69129X	1	Plug, End Cap				
20	P32579	1	Mirror, Convex				
21	67705B	1	Bracket, Mirror				
22	24732A	1	Pin, Frame Tilt Cylinder - Upper				
23	P01510	1	Nut, Hx., 1/2"-13				
24	P00414	1	Capscrew, Hx., 1/2"-13 x 4"				
25	P01402	8	Flatwasher, 1/4"				
26	P01308	8	Lockwasher, 1/4"				
27	P03196	8	Capscrew, Button Hd. Socket, 1/4"-20 x 3/4"				
28	65570A	1	Hose Tray, Front				
29	65800A	1	Hose Tray, Rear				
30	P01506	4	Nut, Hx., 1/4"-20				
31	65801A	1	Mount, Hose Tray				
32	P00753	2	Capscrew, Hx., 3/4"-16 x 2 1/2"				
33	67703B	1	Counterweight				
34	65422D	1	Frame, Upper	<b>644D-34</b> S/N 108-577			
35	P00941	4	Capscrew, Hx., 1"-8 x 7"				
36	P01259	4	Flatwasher, 1" SAE				
37	66478D	1	Frame, Lower				

**MAIN FRAME ASSEMBLY 3.1.1**



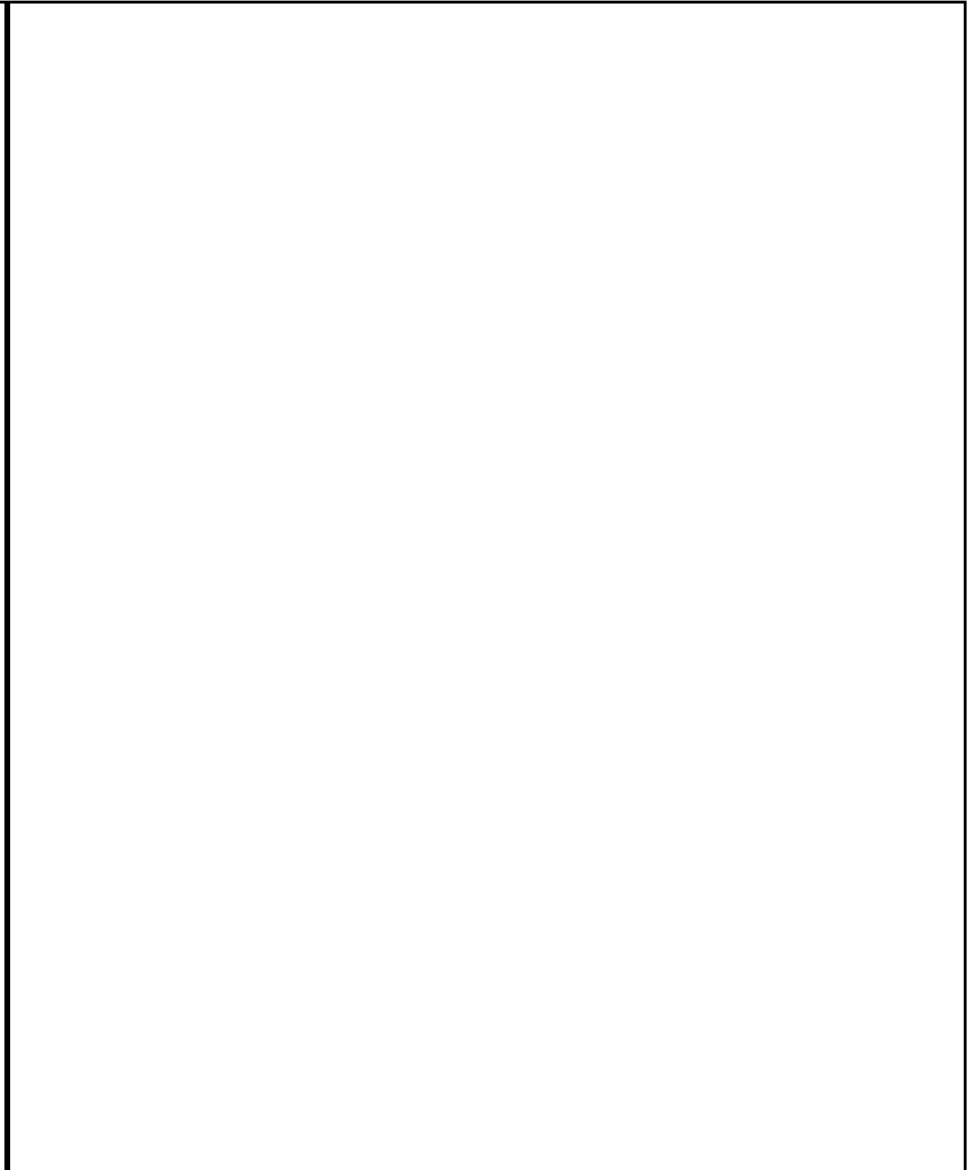
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	P00403	1	Capscrew, Hx., 1/2"-13 x 1 1/4"	38	P01403	2	Flatwasher, 5/16"
2	P01312	2	Lockwasher, 1/2"	39	67694C	1	Guard, Filter
3	34178A	1	Lock Pin	40	P01507	2	Nut Hx., 5/16"-18
4	65601A	1	Pin, Frame Tilt Cylinder - Lower				
5	65558B	1	Mount, Frame Tilt Cylinder				
6	P01315	14	Nut, Hx., 3/4"-10 GR C				
7	P01315	12	Lockwasher, 3/4"				
8	65561A	1	Plate, Frame Tilt Support Ear Hose Guard, Cab				
9	P00742	8	Capscrew, Hx., 3/4"-10 x 7 1/2" GR 8				
10	16228A	2	Bushing, Cylinder				
11	21665A	1	Bushing, Cylinder				
12	P00706	4	Capscrew, Hx., 3/4"-10 x 3"				
13	65462B	1	Plate, Front, Upper Frame Assembly				
14	P01508	4	Nut, Hx., 3/8"-16				
15	P01310	4	Lockwasher, 3/8"				
16	P00205	4	Capscrew, Hx., 3/8"-16 x 1 1/4"				
17	P00107	1	Capscrew, Hx., 5/16"-18 x 1 3/4"				
18	P01309	4	Lockwasher, 5/16"				
19	69129X	1	Plug, End Cap				
20	P32579	1	Mirror, Convex				
21	67705B	1	Bracket, Mirror				
22	24732A	1	Pin, Frame Tilt Cylinder - Upper				
23	P01510	1	Nut, Hx., 1/2"-13				
24	P00414	1	Capscrew, Hx., 1/2"-13 x 4"				
25	P01402	4	Flatwasher, 1/4"				
26	P01308	4	Lockwasher, 1/4"				
27	P03196	4	Capscrew, Button Hd. Socket, 1/4"-20 x 3/4"				
28	37368X	1	Hose Clamp, Double				
29	P27829	1	MS, Truss Hd., Phillips, 5/16"x3/4"				
30	P00753	2	Capscrew, Hx., 3/4"-16 x 2 1/2"				
31	67703B	1	Counterweight				
32	65422D	1	Frame, Upper				
33	P00941	4	Capscrew, Hx., 1"-8 x 7"				
34	P01259	4	Flatwasher, 1" SAE				
35	66478D	1	Frame, Lower				
36	P01209	4	Nut, Hx 1"-8 GRD 8				
37	P00104	4	Capscrew, Hx., 5/16"-18 x 1"				
				<b>644D-34 S/N 578-</b>			

**MAIN FRAME ASSEMBLY 3.1.1.1**

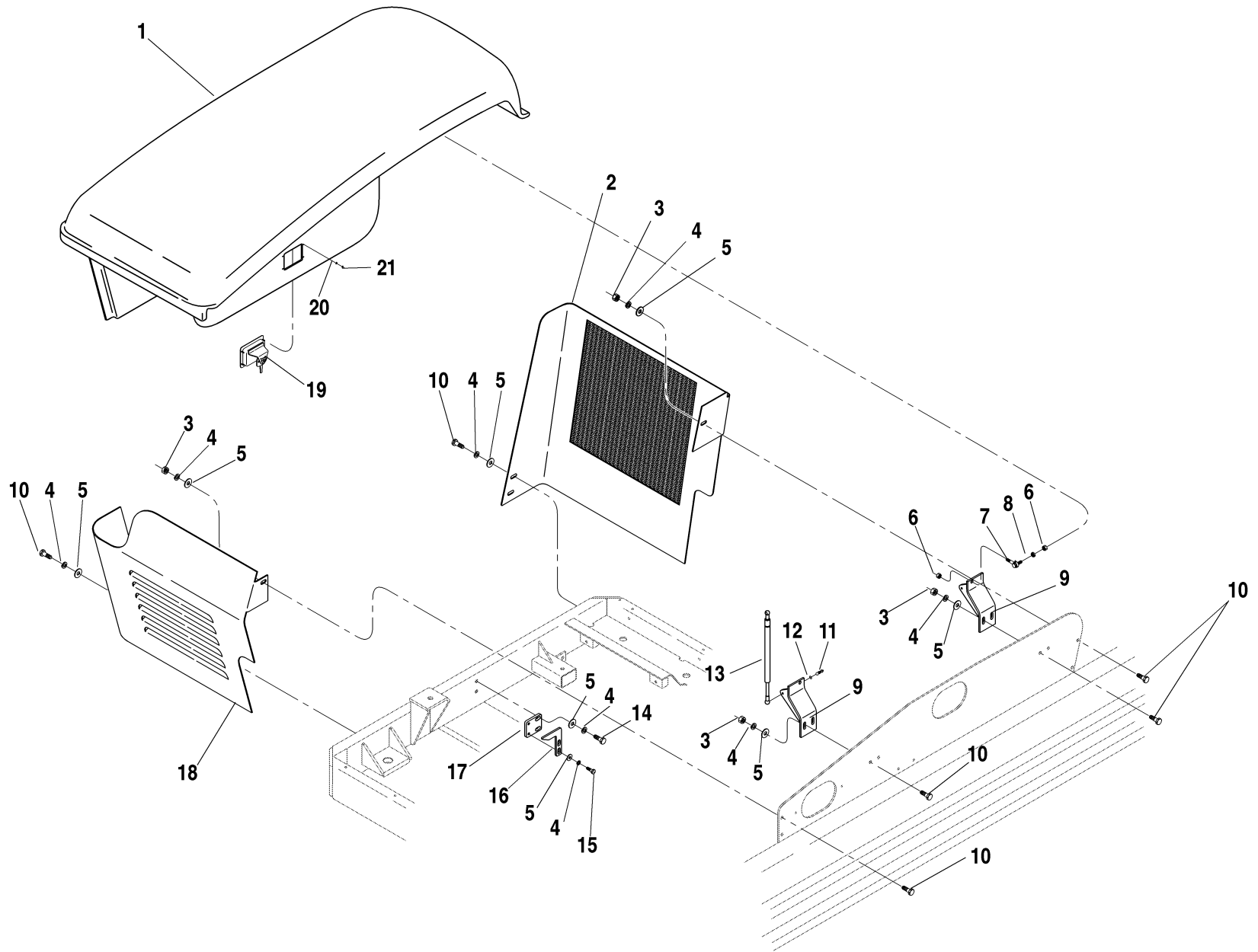




ITEM	PART NO.	QTY.	DESCRIPTION
1	67144D	1	Hood, Fiberglass
2	67148D	1	Engine Compartment Rear Panel
3	67184X	1	Door Seal
4	67376C	1	Rear Grille
5	P00007	2	Capscrew, Hx., 1/4"-20 x 1 1/2"
6	P00001	5	Capscrew, Hx., 1/4"-20 x 1/2"
7	P00205	12	Capscrew, Hx., 3/8-16 x 1 1/4"
8	P01681	4	LockNut, Hx., 3/8"-16 (Nylock)
9	P01584	2	JamNut, Hx., 3/8"-16
10	67547X	2	Rodend
11	67731B	2	Mounting Bracket, Hinge
12	67857B	1	Mounting Bracket, Rear Panel
13	P00204	4	Capscrew, Hx., 3/8-16 x 1"
14	P01404	24	Flatwasher, 3/8"
15	P01310	20	Lockwasher, 3/8"
16	P01508	12	Nut, Hx., 3/8"-16
17	66148X	4	Stud, Ball
18	66149X	4	Clip Retaining
19	67554X	2	Gas Spring
20	P00202	2	Capscrew, Hx., 3/8-16 x 3/4"
21	67863B	1	Catch, Latch
22	67890A	1	Mount, Latch Catch
23	67364D	1	Cover, Front Engine
24	P01528	4	Nut, Hx., #10-24
25	P01306	4	Lockwasher, #10
26	67856B	1	Mounting Bracket, Front Louver
27	67556X	1	Latch
28	P01355	4	Starwasher, #10



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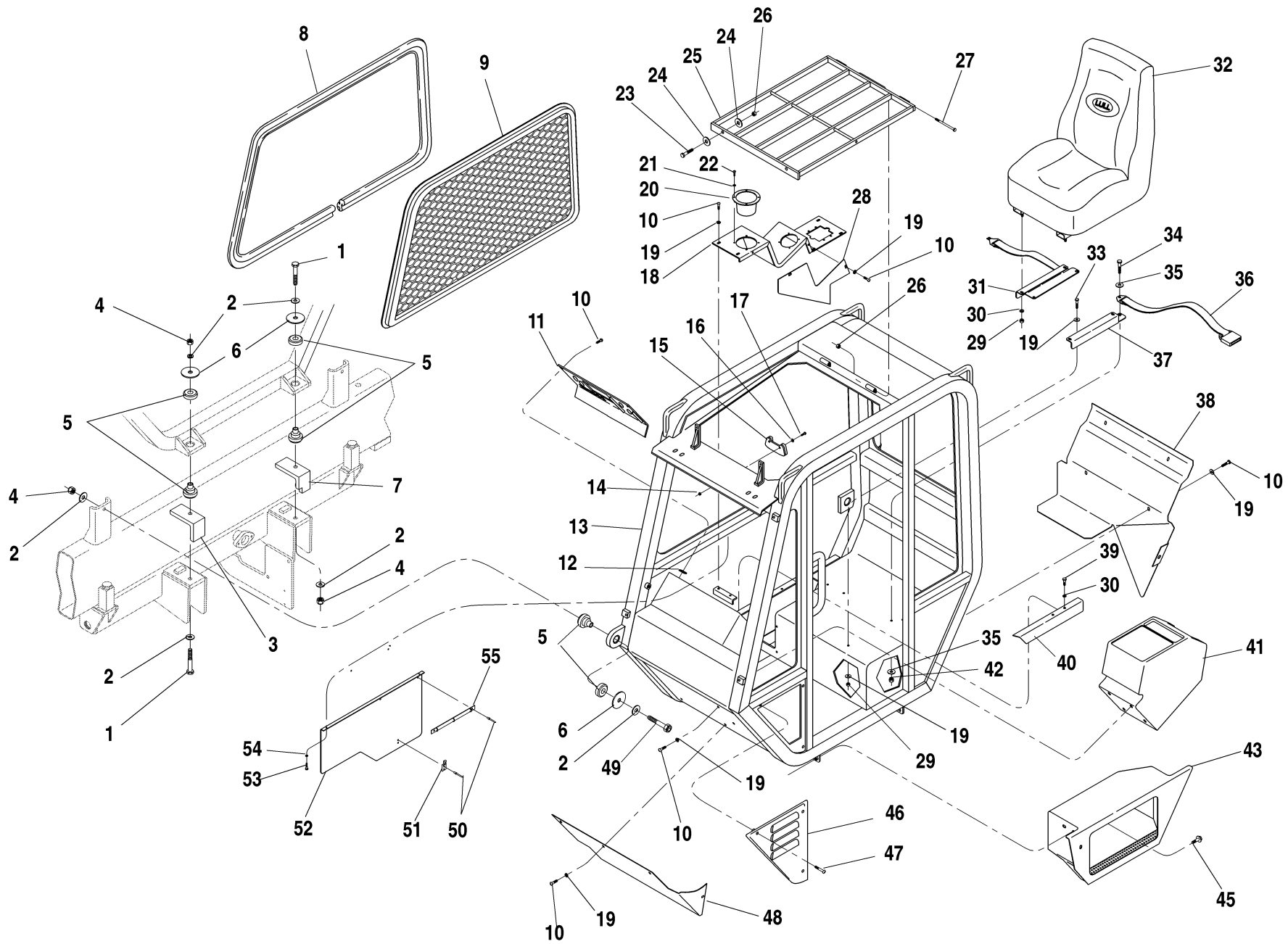


ITEM	PART NO.	QTY.	DESCRIPTION
1	67144D	1	Hood, Fiberglass
2	1100009	1	Engine Compartment Rear Panel
3	P01508	12	Nut, Hx., 3/8"-16
4	P01310	12	Lockwasher, 3/8"
5	P01404	12	Flatwasher, 3/8"
6	P01681	4	LockNut, Hx., 3/8"-16 (Nylock)
7	67547X	2	Rodend
8	P01584	2	JamNut, Hx., 3/8"-16
9	67731B	2	①Mounting Bracket, Hinge
10	P00205	8	Capscrew, Hx., 3/8-16 × 1 1/4"
11	66148X	4	Stud, Ball
12	66149X	4	Clip Retaining
13	67554X	2	Gas Spring
14	P00202	2	Capscrew, Hx., 3/8-16 × 3/4"
15	P00204	2	Capscrew, Hx., 3/8-16 × 1"
16	67863B	1	Catch, Latch
17	67890A	1	Mount, Latch Catch
18	10469132	1	Cover, Front Engine
19	67556X	1	Latch
20	P01355	4	Stawasher, #10
21	P01528	4	Nut, Hx., #10-24

NOTES:

- ① On machine S/N 703 and after the hinge mounting brackets are welded on.

644D-34 S/N 220-



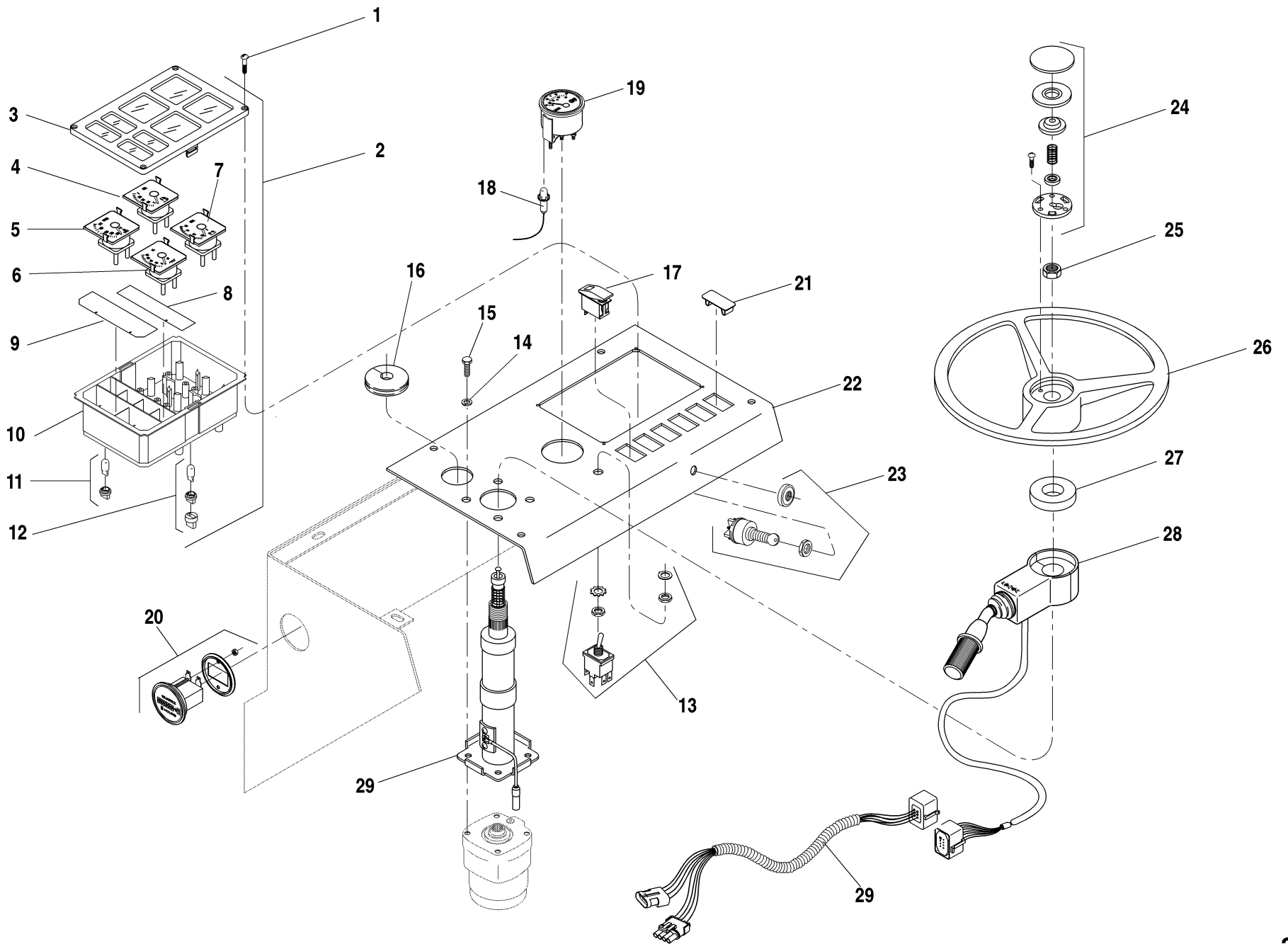
ITEM	PART NO.	QTY.	DESCRIPTION
1	P01929	2	Capscrew, Hx., 5/8"-18 x 5 1/2" GR8
2	P01256	9	Flatwasher, Hardened., 5/8"
3	68850A	1	Stop Block, Angle
4	P06083	4	Lock Nut, Hx., 5/8"-18(Nylock)
5	P33152	4	Rubber Mount, Two Piece
6	36262A	4	Snubbing Washer
7	68851A	1	Stop Block, Angle
8	N12354	1	Rubber Locking Channel
9	39390C	1	Screen Slide
10	P27829	24	Screw, Phillips Truss Hd., 5/16"-18 x 3/4"
11	65545B	1	Instrument Panel
12	P20459	4	Speed Nut
13	67266E	1	Operator's Compartment
14	P01653	2	Locknut, Hx., #8-32
15	P28470	1	Level Indicator
16	P01327	2	Flatwasher, #8 SAE
17	P02034	2	Screw, Slotted Rd. Hd., #8-32 x 1/2"
18	66290C	1	Control Panel
19	P01403	20	Flatwasher, 5/16"
20	38316A	1	Cup Holder
21	P01357	4	Starwasher, 1/4" External
22	P03196	4	Capscrew, Button Hd, Socket,. 1/4"-20 x 3/4"
23	P00234	2	Capscrew, Hx., 3/8"-16 x 1 3/4" GR 8
24	P01404	4	Flatwasher, 3/8"
25	36887C	1	Overhead Guard
26	P01658	4	Locknut, Hx., 3/8"-16
27	P00245	2	Capscrew, Hx., 3/8"-16 x 5" GR 8
28	36436B	1	Side Cover, Control Panel
29	P01507	6	Nut, Hx., 5/16"-18
30	P01309	6	Lockwasher, 5/16"
31	65863B	1	Sea Mount, Right
32	36478C	1	Seat, Operator's
	38383C	-	Suspension Seat, Operator's (Optional)
33	P00102	4	Capscrew, Hx., 5/16"-18 x 3/4"
34	P00102	2	Capscrew, Hx., 7/16"-14 x 1 1/4"
35	P01405	4	Flatwasher, 7/16"
36	39367B	1	Seat Belt - 2" Wide

ITEM	PART NO.	QTY.	DESCRIPTION
	①P25464	-	Seat Belt - 3" Wide
37	65862B	1	Seat Mount, Left
38	65907C	1	Cover, Rear
39	P03209	2	Capscrew, Button Hd. Socket, 5/16"-18 x 1/2"
40	67747B	1	Guard, Cable and Hose
41	38246B	1	Storage Box
42	P05003	2	Locknut, Hx., 7/16"-14
43	65894B	1	Step, Operator's
44	P00202	4	Capscrew, Hx., 3/8"-16 x 3/4"
45	P01310	4	Lockwasher, 3/8"
46	36849B	1	Cover, Side
47	37113X	3	Screw, Phillips Truss Hd., 5/16"-18 x 1 1/2"
48	36958B	1	Cover, Front
49	P00642	2	Capscrew, Hx., 5/8"-11 x 4 1/2" GR8
50	P32958	4	Pop-Rivet, Aluminum, 1/8" Dia. x.337" Long
51	37364X	1	Holder, Flip Card
52	②36542B	1	Mounting Plate, Decal
53	②P00001	2	Capscrew, Hx., 1/4"-20 x 1/2"
54	②P01308	2	Lockwasher, 1/4"
55	38718A	1	3-Ring Hanger, Flip Card

NOTES:

- ① Required in California.
- ② Used with Optional Enclosed Cab Only.

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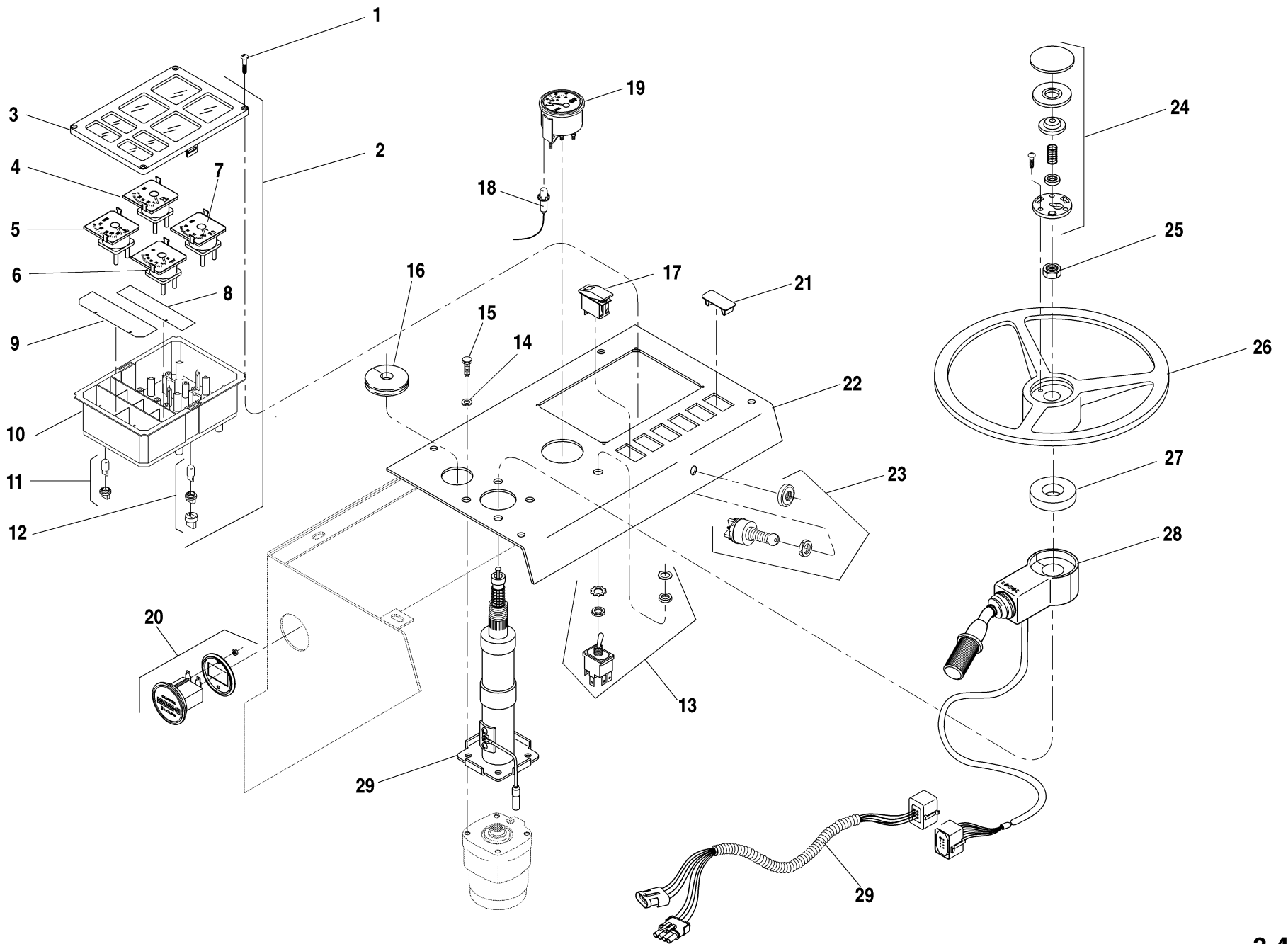
ITEM	PART NO.	QTY.	DESCRIPTION
1	P02057	4	Screw, Slotted Rd. Hd., #10-24 x 3/4"
2	36830B	1	Cluster Gauge (Includes Items 3-12)
3	37330X	1	Bezel
4	37331X	1	Gauge, Fuel
5	37332X	1	Gauge, Water Temperature
6	37333X	1	Gauge, Oil Pressure
7	37334X	1	Gauge, Voltmeter
8	38222B	1	Lens, Diff Lock, "Park Brake" and "Brake"
9	38221B	1	Lens, "Rear Osc Lock"
10	N.S.S.	1	Body, Cluster Gauge
11	37328X	6	Light Socket (with G.E. #194 Lamp)
12	37329X	2	Light Socket (with G.E. #168 Lamp)
13	67524X	1	Switch, Parking Switch
14	P01310	4	Lockwasher, 3/8"
15	P00205	4	Capscrew, Hx., 3/8"-16 x 1 1/4"
16	P32575	1	Grommet
17	38094A	1	Switch, Rocker (Transmission Declutch)
18	38462A	1	Light Source
19	36805X	1	Gauge, Transmission Oil Temp
20	36804X	1	Gauge, Hourmeter
21	36512X	5	Plug, Hole
22	65545B	1	Instrument Panel
23	P11092	1	Switch, Ignition
REF	P32926	-	Key
24	P18141	1	Horn Button
25	P13009	1	Nut, Steering
26	P28704	1	Steering Wheel
27	34667A	1	Mounting Pad, Rubber
28	1026722A	1	Shift Control, Electric
29	P33122	1	Steering Column
30	①68410B	1	Harness, Jumper, Shifter

NOTES:

- ① Used S/N 108-612. Not Required when ordering a new Shift Control (item 28).

N.S.S. = Not Sold Separately

644D-34 S/N 108-1279





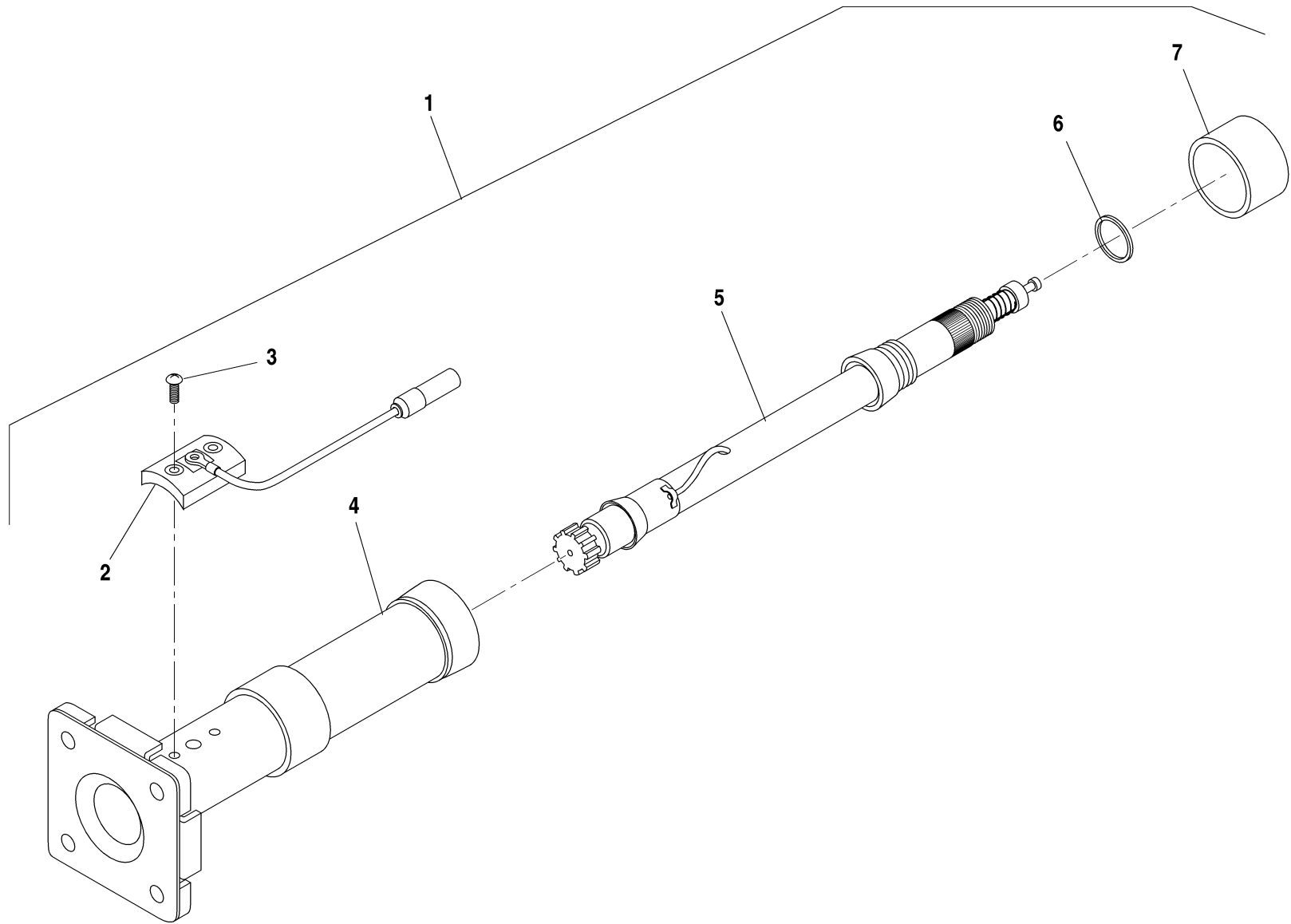
ITEM	PART NO.	QTY.	DESCRIPTION
1	P02057	4	Screw, Slotted Rd. Hd., #10-24 x 3/4"
2	36830B	1	Cluster Gauge (Includes Items 3-12)
3	37330X	1	Bezel
4	37331X	1	Gauge, Fuel
5	37332X	1	Gauge, Water Temperature
6	37333X	1	Gauge, Oil Pressure
7	37334X	1	Gauge, Voltmeter
8	38222B	1	Lens, Diff Lock, "Park Brake" and "Brake"
9	38221B	1	Lens, "Rear Osc Lock"
10	N.S.S.	1	Body, Cluster Gauge
11	37328X	6	Light Socket (with G.E. #194 Lamp)
12	37329X	2	Light Socket (with G.E. #168 Lamp)
13	67524X	1	Switch, Parking Switch
14	P01310	4	Lockwasher, 3/8"
15	P00205	4	Capscrew, Hx., 3/8"-16 x 1 1/4"
16	P32575	1	Grommet
17	38094A	1	Switch, Rocker (Transmission Declutch)
18	38462A	1	Light Source
19	36805X	1	Gauge, Transmission Oil Temp
20	36804X	1	Gauge, Hourmeter
21	36512X	5	Plug, Hole
22	65545B	1	Instrument Panel
23	1101202	1	Switch, Ignition (includes 2ea keys)
REF	1101203	-	Key
24	P18141	1	Horn Button
25	P13009	1	Nut, Steering
26	P28704	1	Steering Wheel
27	34667A	1	Mounting Pad, Rubber
28	1026722A	1	Shift Control, Electric
29	P33122	1	Steering Column
30	①68410B	1	Harness, Jumper, Shifter

NOTES:

- ① Used S/N 108-612. Not Required when ordering a new Shift Control (item 28).

N.S.S. = Not Sold Separately

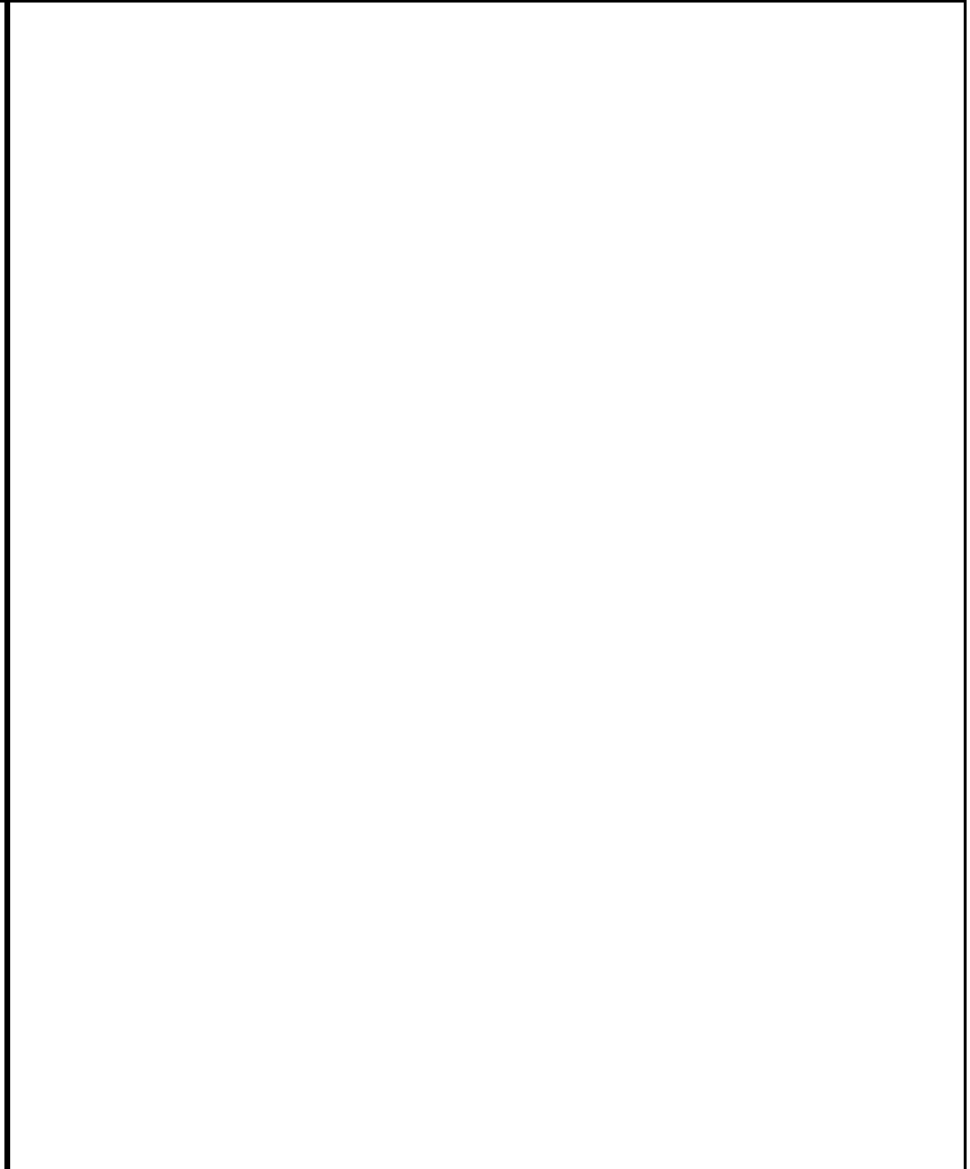
644D-34 S/N 1280-



**ITEM PART NO. QTY. DESCRIPTION**

1	P33122	1	Steer Column Assembly
2	P18740	1	Brush Assembly (Includes Item 3)
3	N.S.S.	2	Screw
4	N.S.S.	1	Tube Assembly
5	N.S.S.	1	Shaft Assembly
6	N.S.S.	1	Retainer, Shaft
7	P18738	1	Cap, Tube

N.S.S. = Not Sold Separately



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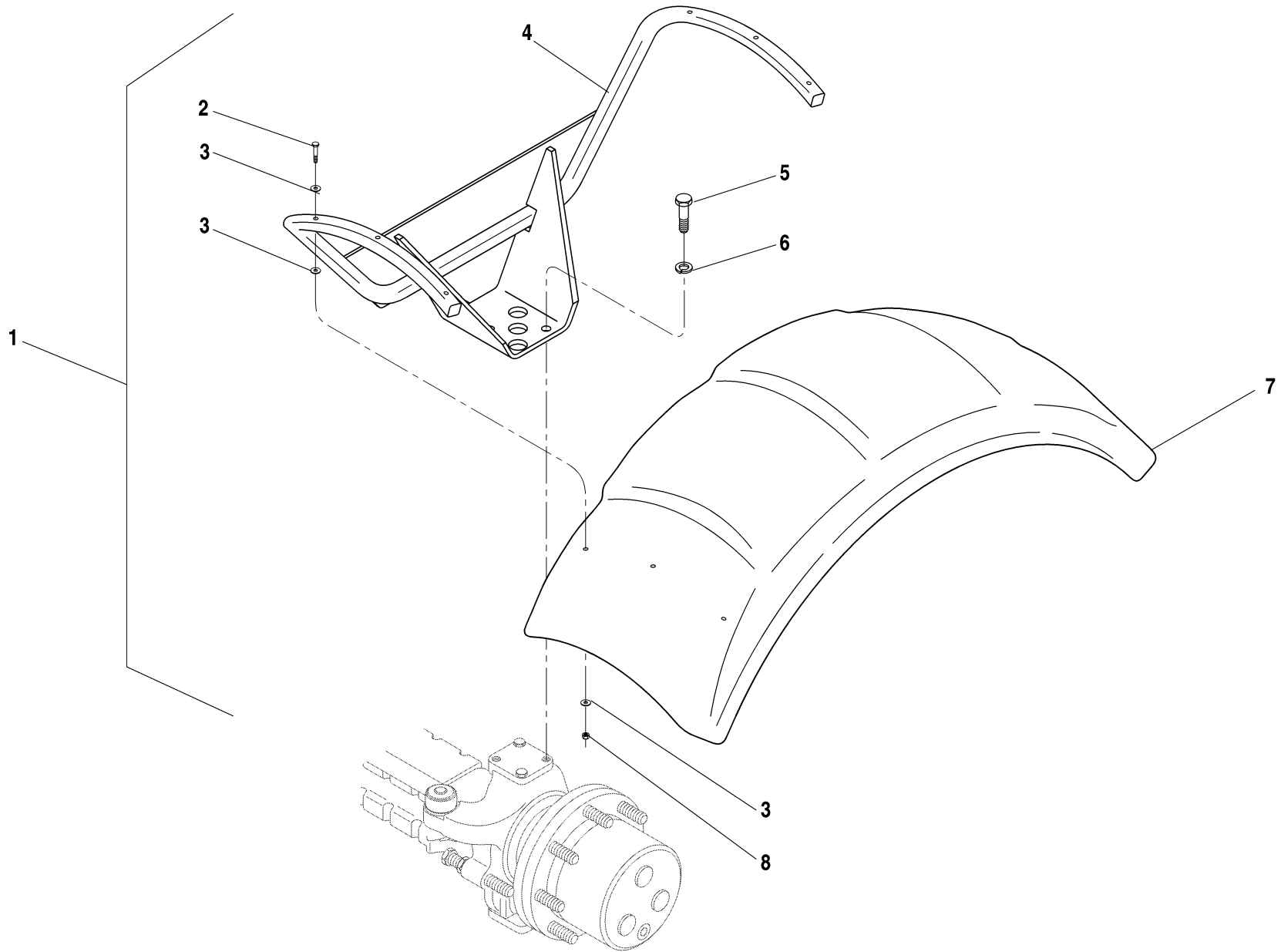


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Rev. 000



ITEM	PART NO.	QTY.	DESCRIPTION
1	1100706	-	Fender Assembly (includes items 2-8)
2	10700008	6	Capscrew, Hx., 1/4"-20 X1 3/4"
3	8307109	18	Flatwasher, 1/4"
4	1100475	1	Support, Fender
5	10704281	2	Capscrew, Hx., M14-2.0 X 50mm GR 10.9
6	8310173	2	Flatwasher, 14mm
7	1100705	1	Fender, 16" Wide X 46" Long
8	10705000	6	Nut, Toplock., 1/4" 20

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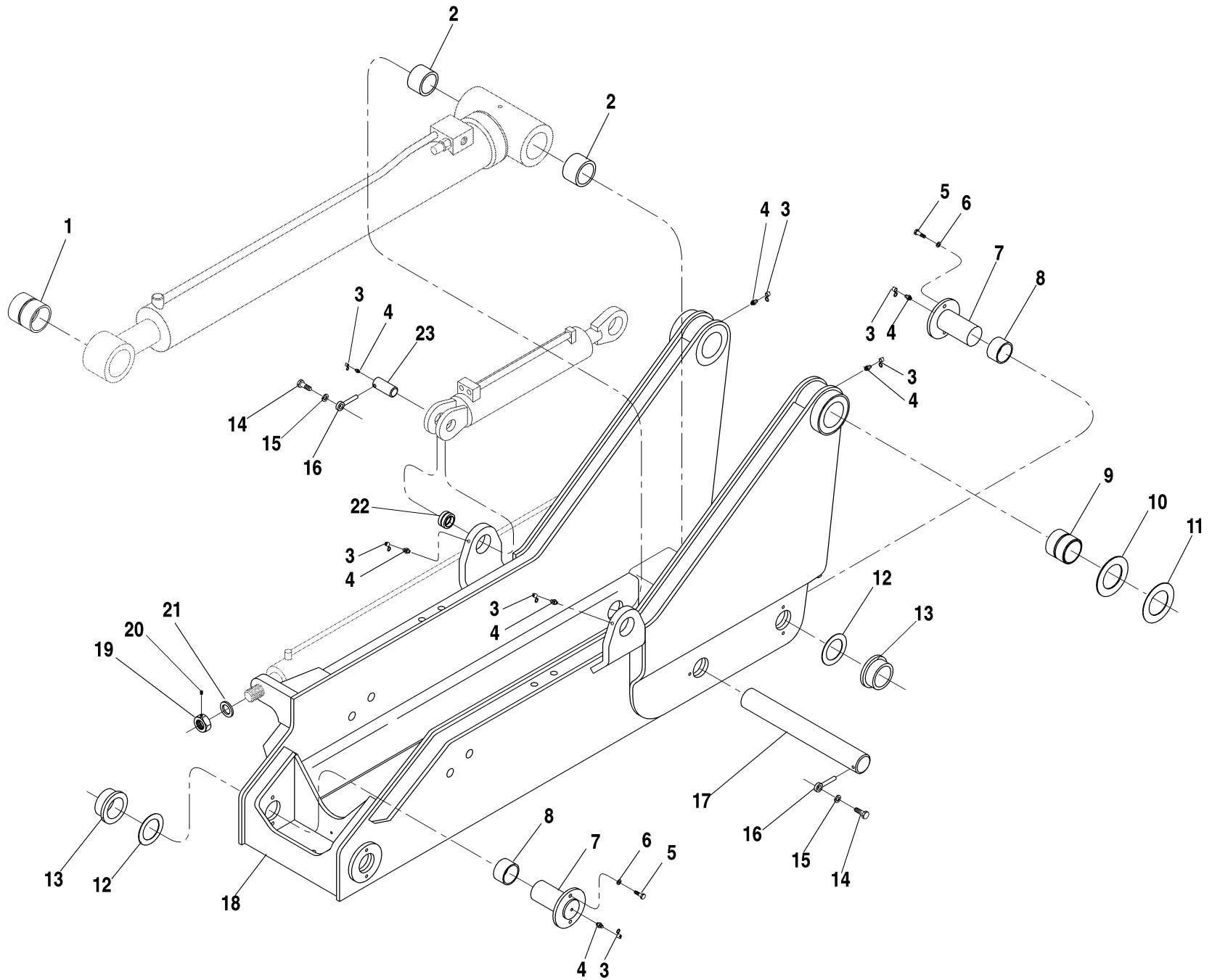
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## Section 4 — Boom and Transfer Carriage

Transfer Carriage Assembly/Boom Cradle Assembly . . . . .	4.1.1
Outer Boom Assembly, 3-Section . . . . .	4.2.1
Middle Boom Assembly, 3-Section . . . . .	4.3.1
Inner Boom Assembly, 3-Section . . . . .	4.4.1
Quick Attach Group Assembly . . . . .	4.7.1

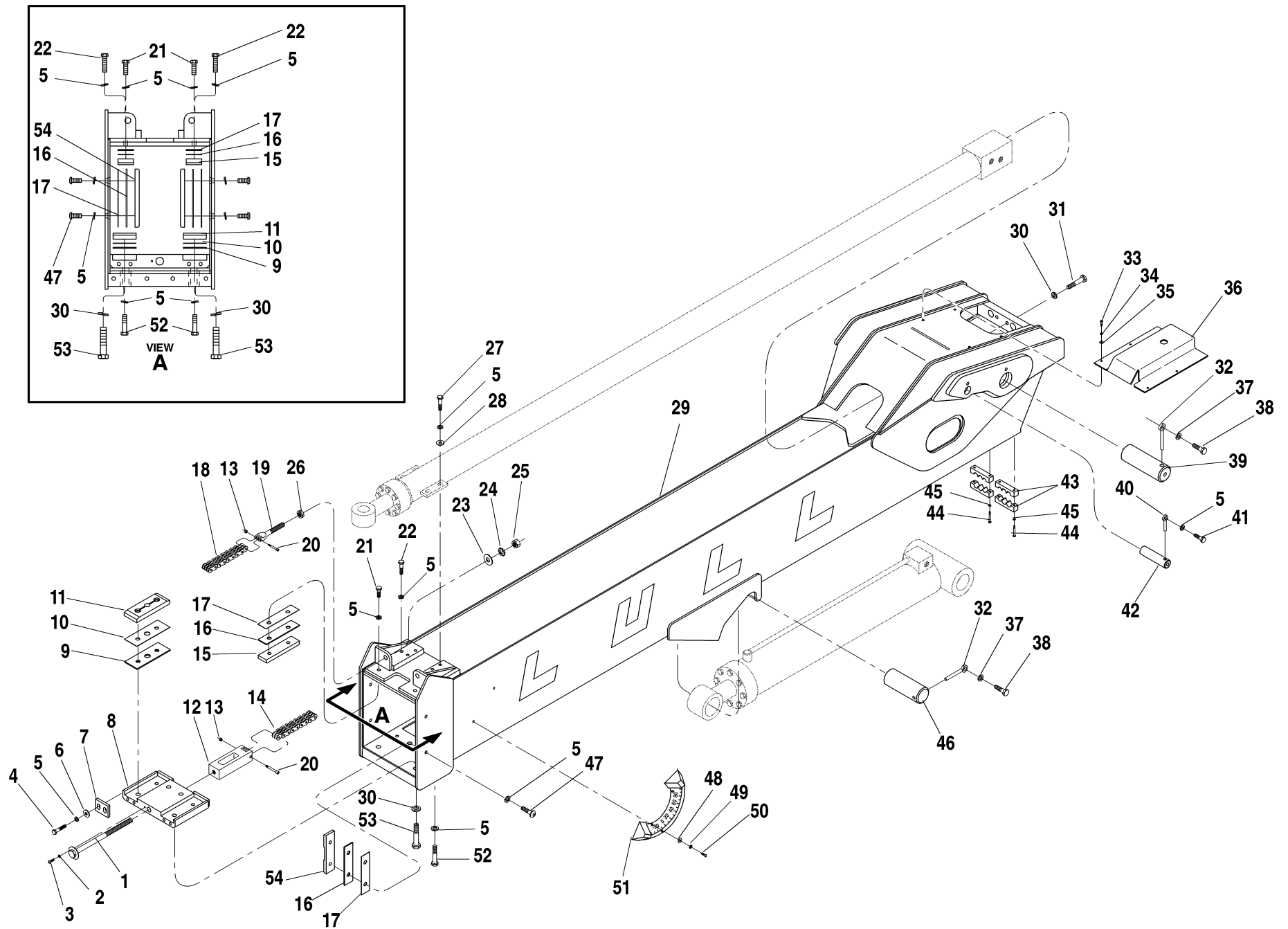
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ITEM	PART NO.	QTY.	DESCRIPTION
1	15959A	1	Bushing, Hoist Cylinder, Lower
2	65692A	2	Bushing, Hoist Cylinder, Upper
3	P32689	7	Cover, Grease Fitting
4	P15367	1	Grease Fitting 45°
5	P00204	4	Capscrew, Hx., 3/8"-16 x 1"
6	P01310	4	Lockwasher, 3/8"
7	66596A	4	Roller Pin
8	24257A	4	Bushing, Roller Transfer Carriage
9	P27758	2	Bushing, Boom Pivot
10	P24746	A/R	Shim -.07"
11	P24747	A/R	Shim -.10"
12	17012A	4	Thrust Washer
13	15969B	4	Roller, Transfer
14	P00403	4	Capscrew, Hx., 1/2"-13 x 1 1/4"
15	P01312	4	Lockwasher 1/2"
16	34178A	4	Lock Pin
17	65610A	1	Pin, Hoist Cylinder, Transfer Carriage
18	65331D	1	Transfer Carriage
19	16369A	1	Nut, Transfer Cylinder
20	P02614	2	Setscrew, Socket Cup Pt., 3/8"-16 x 1/2"
21	15976A	1	Boss, Cylinder Rod
22	P13449	2	Bushing, Rear Carriage Tilt Cylinder Mount
23	36464A	2	Pin, Rear Carriage Tilt

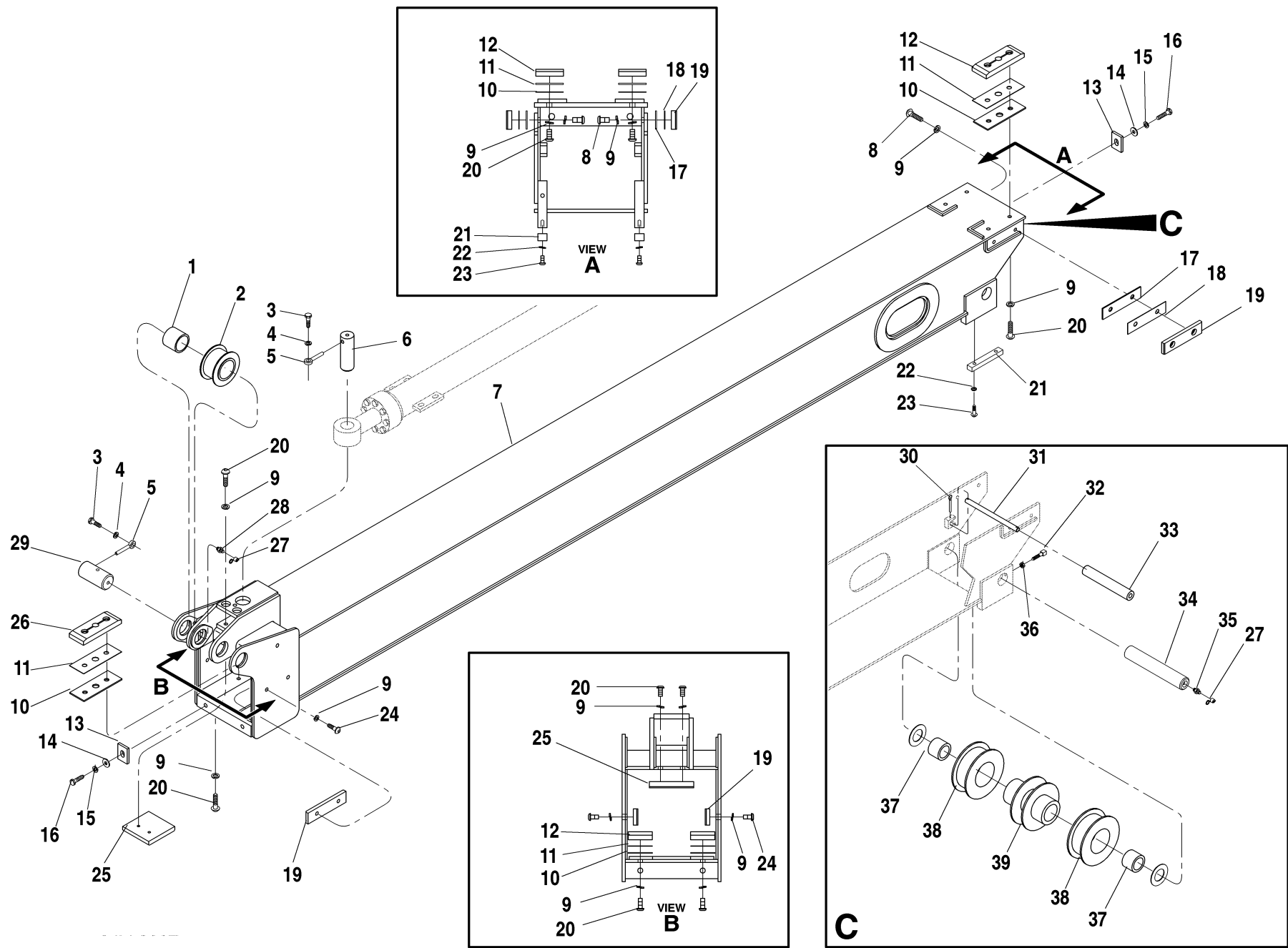
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION
1	38374A	1	Adjustment Rod, Chain
2	P01308	1	Lockwasher, 1/4"
3	P03194	1	Capscrew, Hx., 1/4"-20 x 1/4"
4	P00404	4	Capscrew, Hx., 1/2"-13 x 1 1/2"
5	②P01312	18	Lockwasher, 1/2"
	②P01361	-	Starwasher, External 1/2"
	②P01406	-	Flatwasher, 1/2"
6	P01279	4	Flatwasher, 1/2" - Hardened
7	37100A	2	Pad Retainer, Aluminum
8	65235B	1	Anchor Base
9	38769A	A/R	Shim, 10 GA (.135" x 3" Wide)
10	38770A	A/R	Shim, 16 GA (.135" x 3" Wide)
11	1100082	4	Slide Pad, Boom (1" x 3" Wide)
12	39013B	1	Adjustment Block, Chain
13	P05000	4	Locknut, Hx., 1/4"-20
14	65682A	1	Chain, Lower, 146 1/2"
15	39024A	2	Slide Pad, Boom (3/4" x 2" Wide)
16	36328A	A/R	Shim, 10 GA (.135" x 2" Wide)
17	36329A	A/R	Shim, 16 GA (.135" x 2" Wide)
18	65681A	2	Chain, Upper, 162"
19	66345A	2	Anchor, Chain Adjustment
20	37456X	3	Shoulder Bolt, 5/16" Dia. x 2 1/2"
21	P00481	2	Capscrew, Hx., 1/2"-20 x 1 1/2"
22	P00485	2	Capscrew, Hx., 1/2"-20 x 2 1/2"
23	P01257	2	Flatwasher, 3/4" SAE
24	P01232	4	Nut, Hx., 3/4"-16 GR8
25	P01364	2	Starwasher, 3/4" External
26	P01586	2	Jam Nut, Hx., 3/4"-16"
27	P00432	4	Capscrew, Hx., 1/2"-13 x 1 3/4"
28	P01406	4	Flatwasher, 1/2"
29	68976D	1	Weldment, Outer Boom
30	P01315	2	Lockwasher, 3/4"
31	P00733	2	Capscrew, Hx., 3/4"-10 x 3 1/2"
32	32432A	3	Lock Pin
33	10700003	4	Capscrew, Hx., 1/4"-20 x 3/4"
34	10701308	4	Lockwasher, 1/4"
35	10701402	4	Flatwasher, 1/4"

ITEM	PART NO.	QTY.	DESCRIPTION
36	1100393	1	Cover, Cylinder
37	P01314	3	Lockwasher, 5/8"
38	P00632	3	Capscrew, Hx., 5/8"-11 x 1 3/4"
39	65330A	2	Pin, Boom Pivot
40	34178A	2	Lock Pin
41	P00403	2	Capscrew, Hx., 1/2"-13 x 1 1/4"
42	36240A	2	Pin, Slave Cylinder
43	66909A	2	Hose Clamp
44	P00011	4	Capscrew, Hx., 1/4"-20 x 2 1/2"
45	P01308	4	Lockwasher, 1/4"
46	65329A	1	Pin, Boom Hoist - Rod End
47	①P03236	-	Capscrew, Button Hd. Socket, 1/2"-20 x 3/4"
	①P03237	-	Capscrew, Button Hd. Socket, 1/2"-20 x 1"
	①P03242	12	Capscrew, Button Hd. Socket, 1/2"-20 x 1 1/4"
48	P01327	2	Flatwasher, #8
49	P01354	2	Starwasher, #8 External
50	P02034	2	Screw, Slotted Rd. Hd., #8-32 x 1/2"
51	38252B	1	Inclinometer, Boom Angle
52	P00456	2	Capscrew, Hx., 1/2"-20 x 1 1/2"
53	P00733	4	Capscrew, Hx., 3/4"-10 x 3 1/2"
54	66399A	1	Slide Pad, Boom (9/16" x 2" Wide) Left Side
	39604A	1	Slide Pad, Boom (7/16" x 2" Wide) Right Side
NOTES:			
① Capscrew length will vary with shimming requirements.			
② Washers will vary with shimming requirements.			
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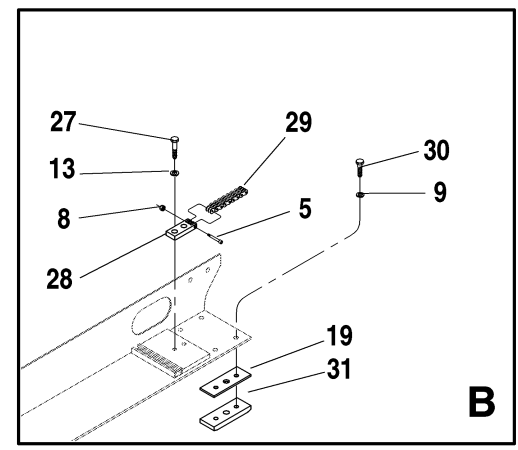
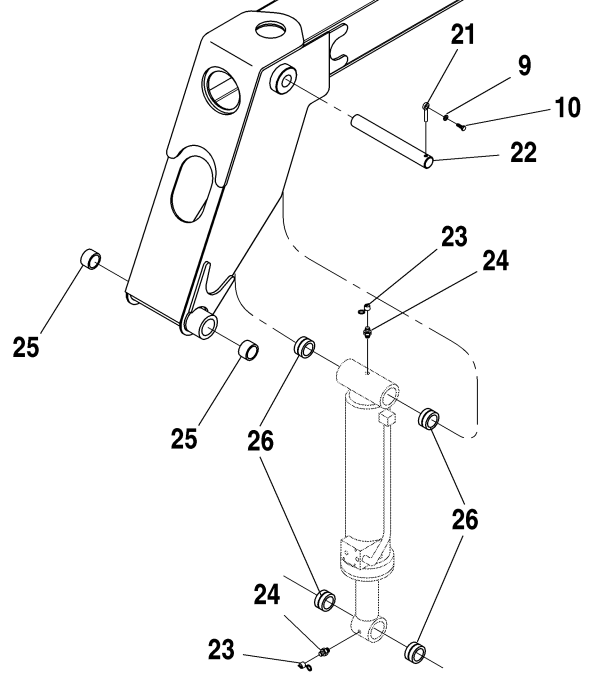
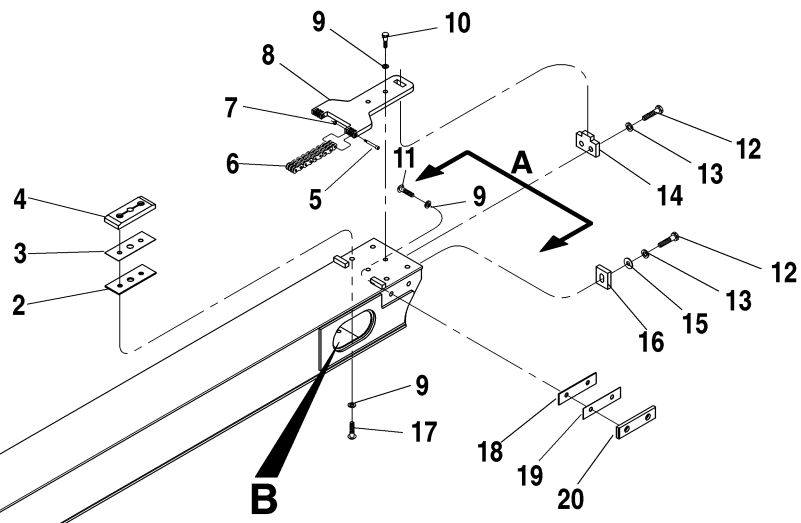
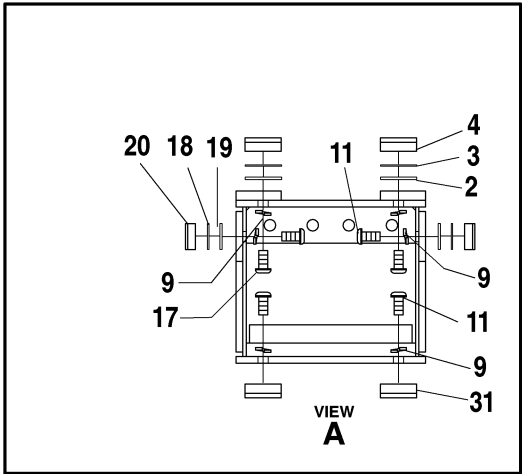
**OUTER BOOM ASSEMBLY (3 Section) 4.2.1**



ITEM	PART NO.	QTY.	DESCRIPTION
1	65715A	2	Bushing
2	65833B	2	Chain Sheave
3	P00403	2	Capscrew, Hx., 1/2"-13 x 1 1/4"
4	P01312	16	Lockwasher, 1/2"
5	34178A	2	Lock Pin, 1/2" Dia.
6	65214A	1	Pin, Boom Extend Cylinder
7	65123D	1	Middle Boom
8	①P03242	16	Capscrew, Button Hd. Socket, 1/2"-20 x 1 1/4"
	①P03236	-	Capscrew, Button Hd. Socket, 1/2"-20 x 3/4"
	①P03237	-	Capscrew, Button Hd. Socket, 1/2"-20 x 1"
9	②P01312	16	Lockwasher, 1/2"
	②P01361	-	Starwasher, External 1/2"
	②P01406	-	Flatwasher, 1/2"
10	38769A	A/R	Shim, 10 GA
11	38770A	A/R	Shim, 16 GA
12	1100084	2	Slide Pad, Boom (3/4" x 3" Wide)
13	39809A	2	Pad Retainer, Aluminum
14	P01440	2	Flatwasher, 3/4" SAE
15	P01315	2	Lockwasher, 3/4"
16	P00726	2	Capscrew, Hx., 3/4"-10 x 1 3/4"
17	36328A	A/R	Shim, 10 GA (.135" x 2" Wide)
18	36329A	A/R	Shim, 16 GA (.060" x 2" Wide)
19	39604A	4	Slide Pad, Boom (7/16" x 2" Wide)
20	P00452	4	Capscrew, Hx., 1/2"-20 x 1" GR 8
21	65626A	2	Slide Pad, Boom (3/4" x 1" Wide)
22	P01359	4	Starwasher 3/8"
23	P03225	4	Capscrew, Button Hd. Socket, 3/8"-16 x 3/4"
24	P00452	8	Capscrew, Hx., 1/2"-20 x 1"
25	65622A	1	Slide Pad, Boom
26	1100082	2	Slide Pad, Boom (1" x 3" Wide)
27	P32689	4	Cover, Grease Fitting
28	P15277	3	Grease Fitting
29	1100712	1	Pin, Front Chain Sheave
30	10169065	1	Pin, Hitch
31	65678A	1	Mounting Shaft, Hose Follower
32	P02757	1	Setscrew, Square Hd., Cup Pt., 1/2"-13 x 1 3/4"
33	65676A	1	Roller, Hose Follower

ITEM	PART NO.	QTY.	DESCRIPTION
34	65266A	1	Pin, Chain Sheave & Hose Sleeve
35	P16611	2	Grease Fitting
36	P01560	1	Jamnut, Hx., 1/2"-13
37	65723A	2	Bushing
38	65270B	2	Hose Sheave
39	66275B	1	Roller, Chain/Hose
NOTES:			
① Capscrew length will vary with shimming requirements.			
② Washers will vary with shimming requirements.			
644D-34 S/N 108-			

**MIDDLE BOOM ASSEMBLY (3 Section) 4.3.1**

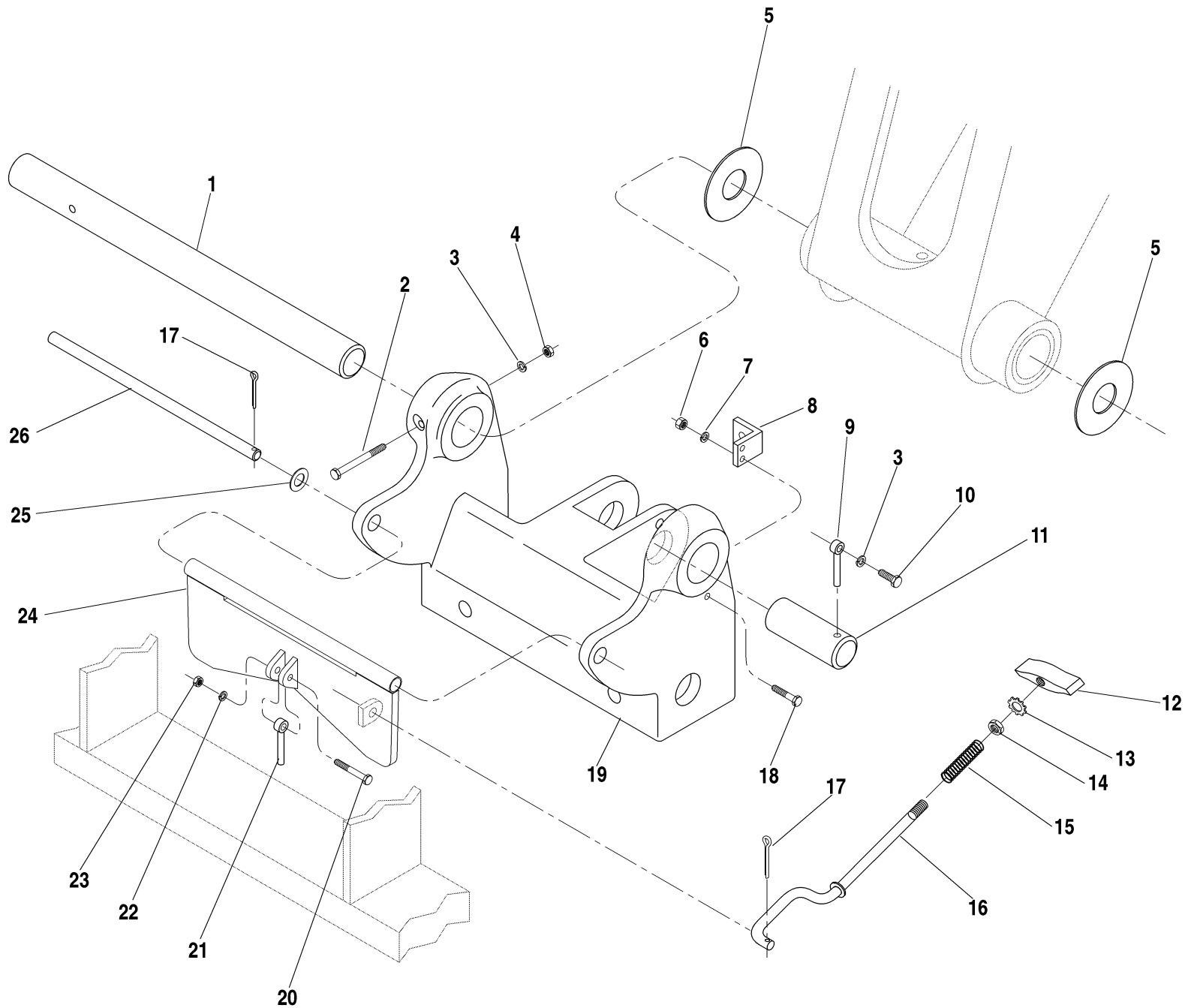


ITEM	PART NO.	QTY.	DESCRIPTION
1	65124D	1	Inner Boom
2	38769A	A/R	Shim, 10 GA (.135" x 3" Wide)
3	38770A	A/R	Shim, 16 GA (.135" x 3" Wide)
4	1100082	2	Slide Pad, Boom (1" x 3" Wide)
5	P27310	2	Shoulder Bolt, 5/16" x 2"
6	65681A	2	Chain, Upper 162"
7	P05000	2	Lock Nut, Hx., 1/4"-20
8	65264B	1	Chain Anchor, Upper
9	①P01312	13	Lockwasher, 1/2"
	①P01361	-	Starwasher, External 1/2"
	①P01406	-	Flatwasher, 1/2"
10	P00403	3	Capscrew, Hx., 1/2"-13 x 1 1/4"
11	P00450	-	Capscrew, Hx., 1/2"-20 x 3/4"
12	P00726	2	Capscrew, Hx., 3/4"-10 x 3 1/2"
13	P01315	6	Lockwasher, 3/4"
14	65265A	1	Chain Anchor Shear Block
15	P01440	2	Flatwasher, 3/4" SAE
16	39809A	2	Pad Retainer, Aluminum
17	P00453	4	Capscrew, Hx., 1/2"-20 x 1 1/2"
18	36328A	A/R	Shim, 10 GA (.135" x 2" Wide)
19	36329A	A/R	Shim, 16 GA (.135" x 2" Wide)
20	39604A	2	Slide Pad, Boom (7/16"x 2" Wide)
21	34178A	1	Lock Pin
22	65624A	1	Pin, Front Carriage Tilt Cylinder, Base End
23	P32689	2	Cover, Grease Fitting
24	P15337	2	Grease Fitting
25	24257A	2	Bushing, Boom - Quick Attach Pivot
26	16228A	4	Bushing, Front Carriage Tilt Cylinder
27	P00726	2	Capscrew, Hx., 3/4"-10 x 1 3/4"
28	38724B	1	Chain Anchor
29	65682A	1	Chain, Lower 146 1/2"
30	P00452	4	Capscrew, Hx., 1/2"-20 x 1"
31	39024A	2	Slide Pad, Boom (1" x 3" Wide)

NOTES:

- ① Washers will vary with shimming requirements.

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ITEM	PART NO.	QTY.	DESCRIPTION
1	36863A	1	Pin, Quick Attach Pivot
2	P00420	1	Capscrew, Hx., 1/2"-13 x 7"
3	P01312	2	Lockwasher, 1/2"
4	P01510	1	Nut, Hx., 1/2"-13
5	36013A	A/R	Shim -.036" (.91mm)
	17012A	A/R	Shim -.075" (1.90mm)
6	P01200	2	Nut, Hx., 1/4"-20
7	P01308	2	Lockwasher, 1/4"
8	38177A	1	Bracket, Rod Support
9	34178A	1	Lock Pin
10	P00403	1	Capscrew, Hx., 1/2"-13 x 1 1/4"
11	65667A	1	Pin, Front Carriage Tilt - Rod End
12	37103X	1	Handle, Release
13	P01361	1	Starwasher, 1/2"
14	P01560	1	Jam Nut, Hx., 1/2"-13
15	66835X	1	Spring, Release
16	67059A	1	Rod, Quick Attach Release
17	P03865	3	Cotter Pin, 3/16" x 1 1/2"
18	P00008	2	Capscrew, Hx., 1/4"-20 x 1 3/4"
19	38176D	1	Quick Attach Casting
20	P00209	1	Capscrew, Hx., 3/8"-16 x 2 1/4"
21	32493A	1	Lock Pin
22	P01310	1	Lockwasher, 3/8"
23	P01508	1	Nut, Hx., 3/8"-16
24	65671B	1	Lock Plate
25	P01411	2	Flatwasher, 1"
26	65668A	1	Pin, Lock Pivot Plate

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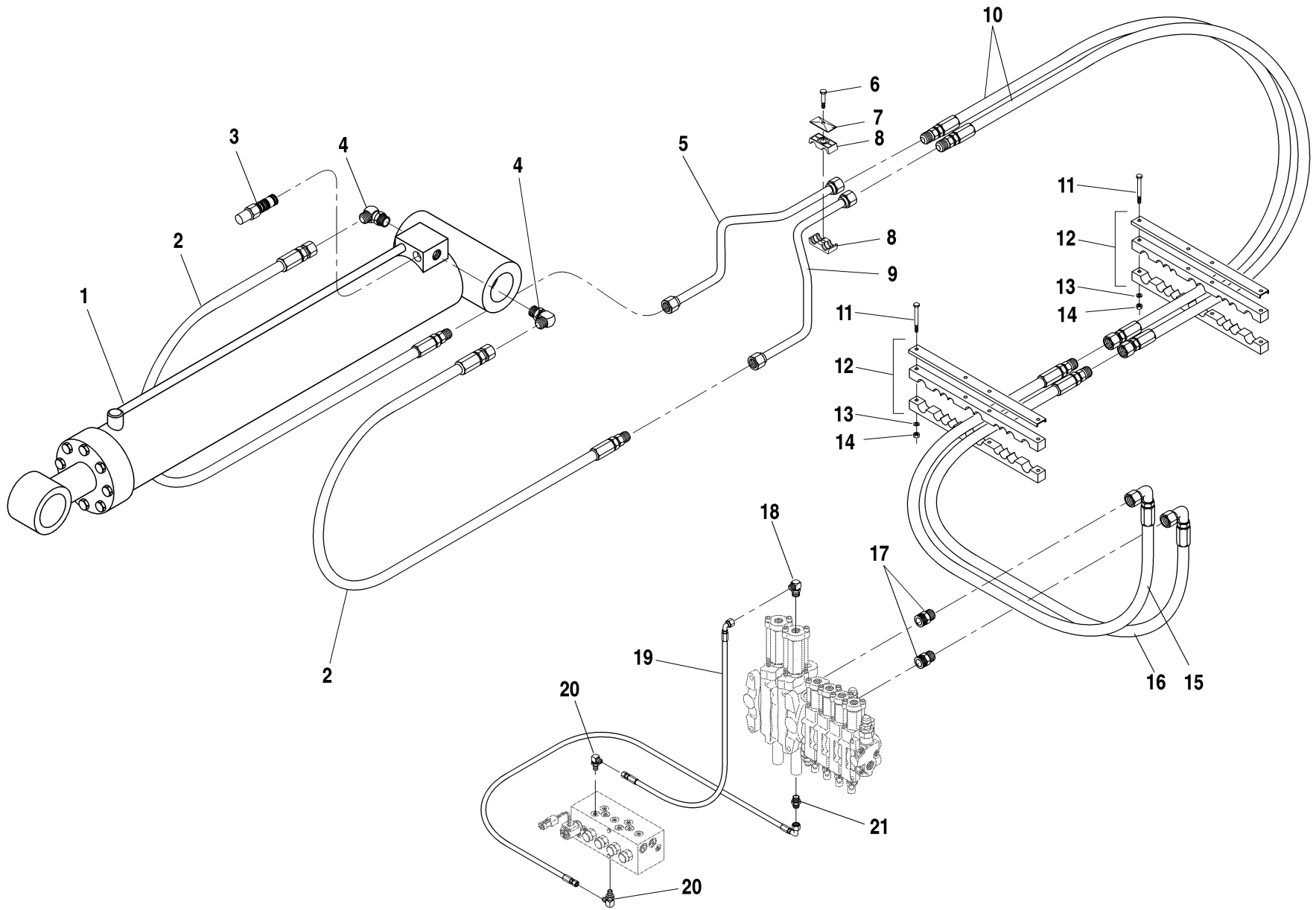
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## Section 5 — Boom and Transfer Hydraulics

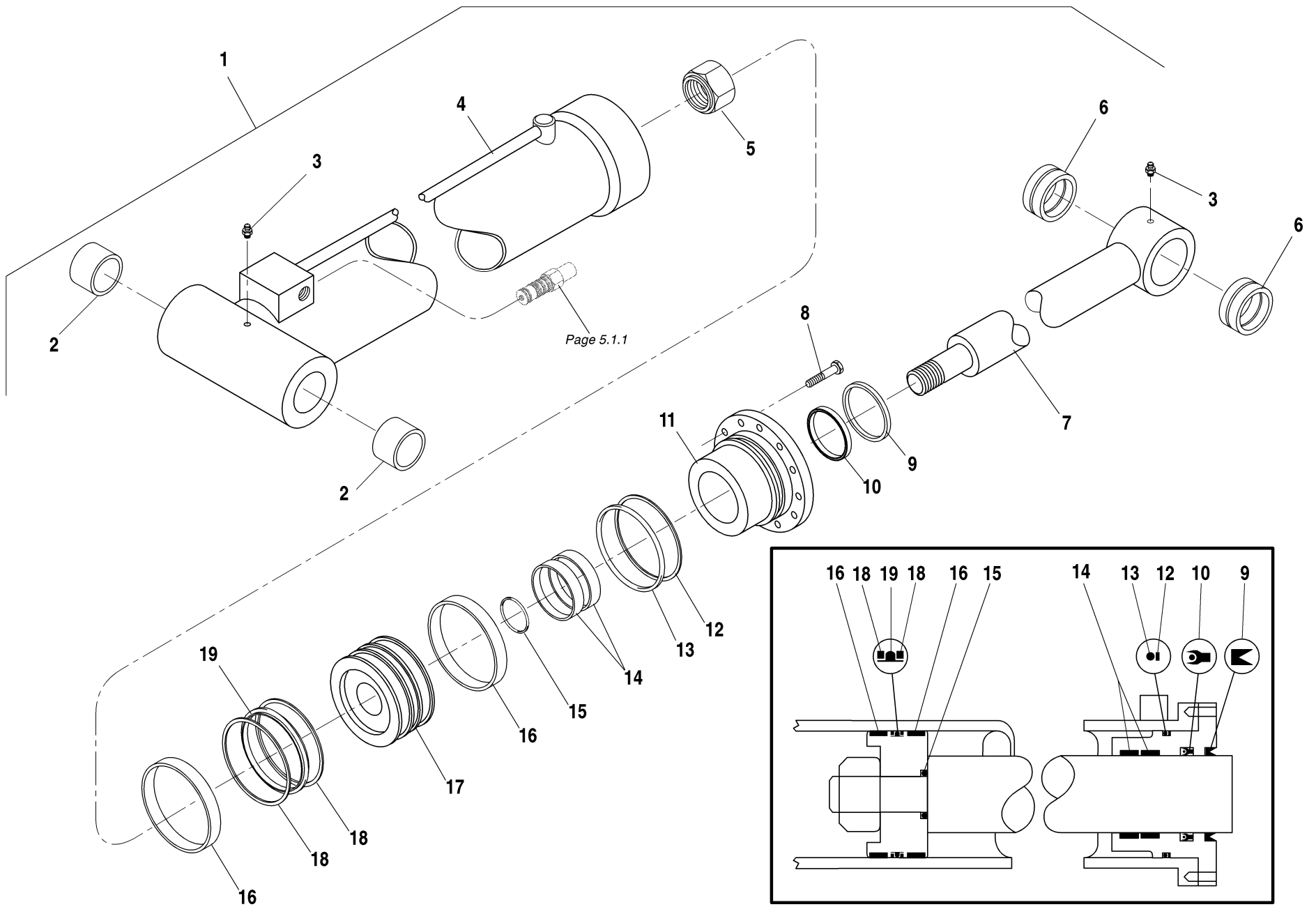
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Hoist Cylinder Assembly . . . . .	5.2.1
Rear Carriage Tilt Hydraulic Circuit . . . . .	5.3.1
Rear Carriage Tilt Cylinder Assembly . . . . .	5.4.1
Transfer Hydraulic Circuit . . . . .	5.5.1
Transfer Cylinder Assembly . . . . .	5.6.1
Boom Hydraulic Circuit, 3-Section . . . . .	5.7.1
Boom Extension Cylinder Assembly, 3-Section . . . . .	5.8.1
Front Carriage Tilt Cylinder Assembly . . . . .	5.11.1

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ITEM	PART NO.	QTY.	DESCRIPTION
1	34847B	1	Cylinder, Hoist (See Page 5.2.1 for Breakdown)
2	37833X	2	Hyd. Hose, 3/4" x 48"
3	P27827	1	Cartridge, Counterbalance Valve
REF	P40491	-	Seal Kit for Item 3
4	P17802	2	90° Elbow, O-Ring
5	65468B	1	Hyd. Tube, 3/4" O.D.
6	P00107		Capscrew, Hx., 1/4"-20 x 3"
7	37734X	1	Cover, Clamp
8	37733X	1	Clamp, Tube, 5/8"
9	65467B	1	Hyd. Tube, 3/4" O.D.
10	37850X	2	Hyd. Hose, 3/4" x 71"
11	P00013	4	Capscrew, Hx., 1/4"-20 x 3"
12	85482B	1	Clamp, Multiple Hose
13	P01308	4	Lockwasher, 1/4"
14	P01506	4	Nut, Hx., 1/4"-20
15	66752X	1	Hyd. Hose, 3/4" x 44"
16	66741X	1	Hyd. Hose, 3/4" x 42"
17	P17805	2	Connector, O-Ring
18	P18935	1	90° Elbow
19	P30173	1	Hyd. Hose, 1/4" x 20"
20	P19248	1	90° Elbow
21	P18936	1	Connector

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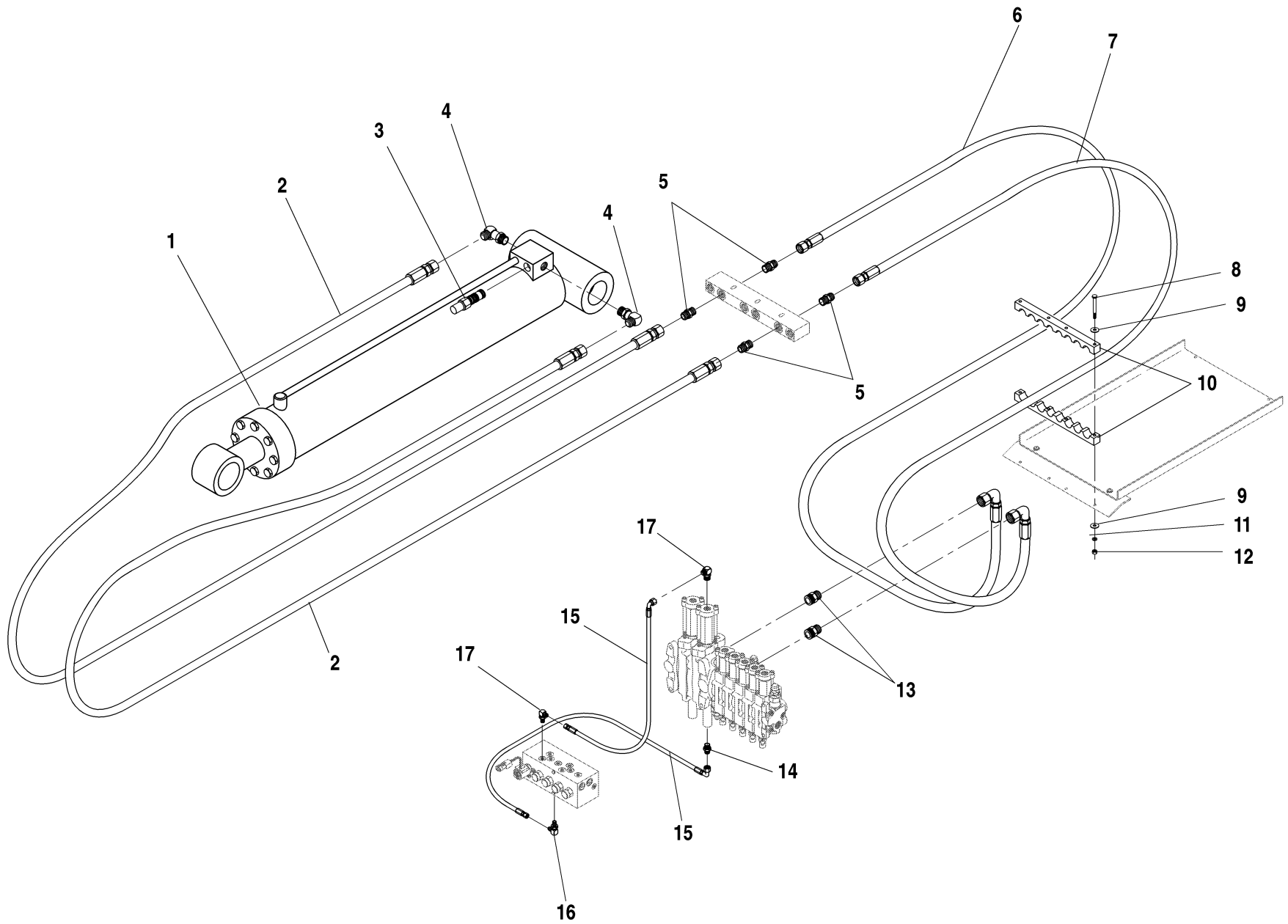
ITEM	PART NO.	QTY.	DESCRIPTION
1	34847B	-	Cylinder Assembly, Hoist
2	65692A	2	Bushing
3	P16611	2	Grease Fittings
4	68364X	1	Barrel Weldment
5	P40461	1	Nut, Crownlock
6	P19111	2	Bushing
7	68365X	1	Rod Weldment
8	68368X	12	Capscrew, Hx.,
9	*N.S.S.	1	Wiper
10	*N.S.S.	1	Seal
11	68367X	1	Head, Rod Bearing
12	*N.S.S.	1	Back-Up Ring
13	*N.S.S.	1	O-Ring
14	*N.S.S.	2	Wear Ring
15	*N.S.S.	1	O-Ring
16	*N.S.S.	2	Wear Ring
17	68366X	1	Piston
18	N.S.S.	2	Back-Up Ring
19	N.S.S.	1	Pistion Seal
REF	68369X	1	Seal Kit

NOTES:

\* Items Included in Seal Kit.

N.S.S. = Not Sold Separately

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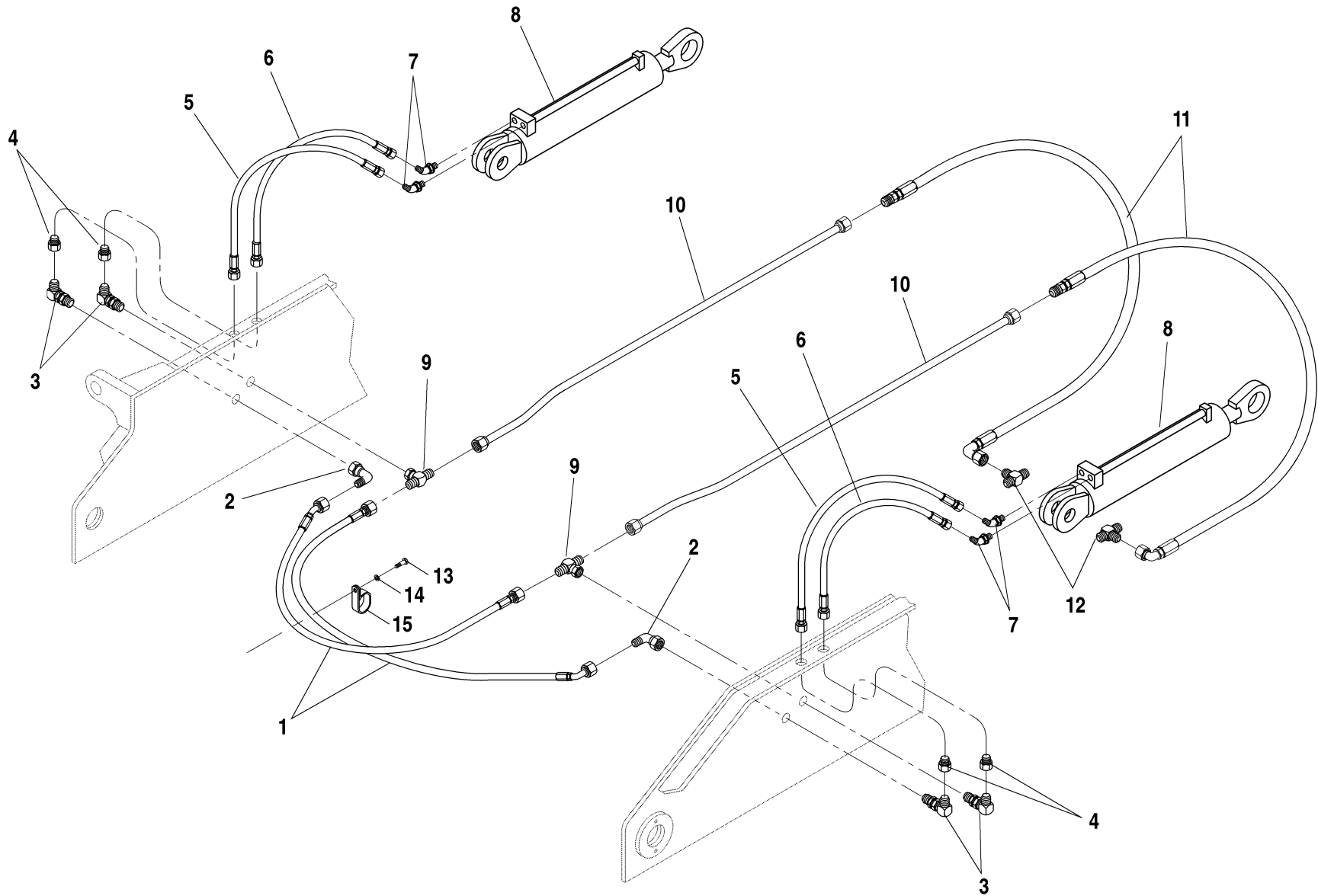


ITEM	PART NO.	QTY.	DESCRIPTION
1	34847B	1	Cylinder, Hoist (See Page 5.2.1 for Breakdown)
2	68107X	2	Hyd. Hose, 3/4" x 48"
3	P27827	1	Cartridge, Counterbalance Valve
REF	P40491	-	Seal Kit for Item 3
4	P33165	2	90° Elbow, O-Ring, Long
5	P18964	5	Connector, O-Ring
6	68986B	1	Hyd. Hose, 3/4" x 128"
7	68985B	1	Hyd. Hose, 3/4" x 124"
8	P00013	4	Capscrew, Hx., 1/4"-20 x 3"
9	P01402	1	Flatwasher 1/4"
10	68972A	1	Clamp, Multiple Hose
11	P01308	4	Lockwasher, 1/4"
12	P01506	4	Nut, Hx., 1/4"-20
13	P17805	2	Connector, O-Ring
14	P18936	1	Connector
15	P30173	5	Hyd. Hose, 1/4" x 20"
16	P19248	1	90° Elbow
17	P18935	1	90° Elbow

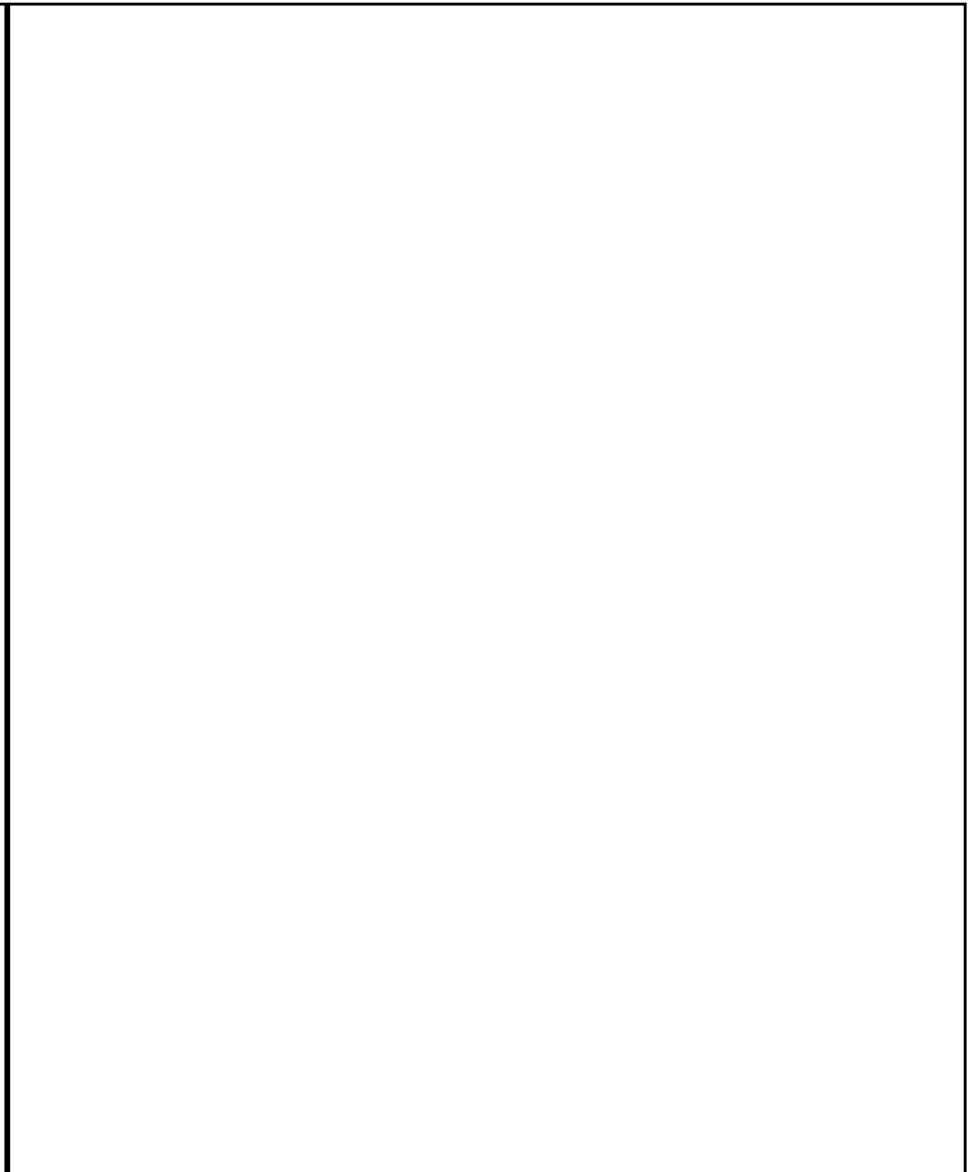
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**HOIST HYDRAULIC CIRCUIT 5.1.1.1**



ITEM	PART NO.	QTY.	DESCRIPTION
1	37898X	2	Hyd. Hose, 1/2" x 57"
2	P21632	2	90° Elbow, Swivel
3	P21916	4	90° Elbow, Bulkhead
4	P28381	4	Adapter, O-Ring
5	P24689	2	Hyd. Hose, 1/2" x 30"
6	37897X	2	Hyd. Hose, 1/2" x 25"
7	P21229	4	45° Elbow, O-Ring
8	34828B	2	Cylinder, Rear Carriage Tilt
			(See Page 5.4.1 for Breakdown)
9	P24651	2	Tee, Swivel Nut
10	65466B	2	Hyd. Tube, 3/4" O.D.
11	37872X	2	Hyd. Hose, 3/4" x 71"
12	P27388	2	Tee, Union
13	P00205	1	Capscrew, Hx., 3/8"-16 x 1 1/4"
14	P01310	1	Lockwasher, 3/8"
15	37368X	1	Clamp, Hose, Double



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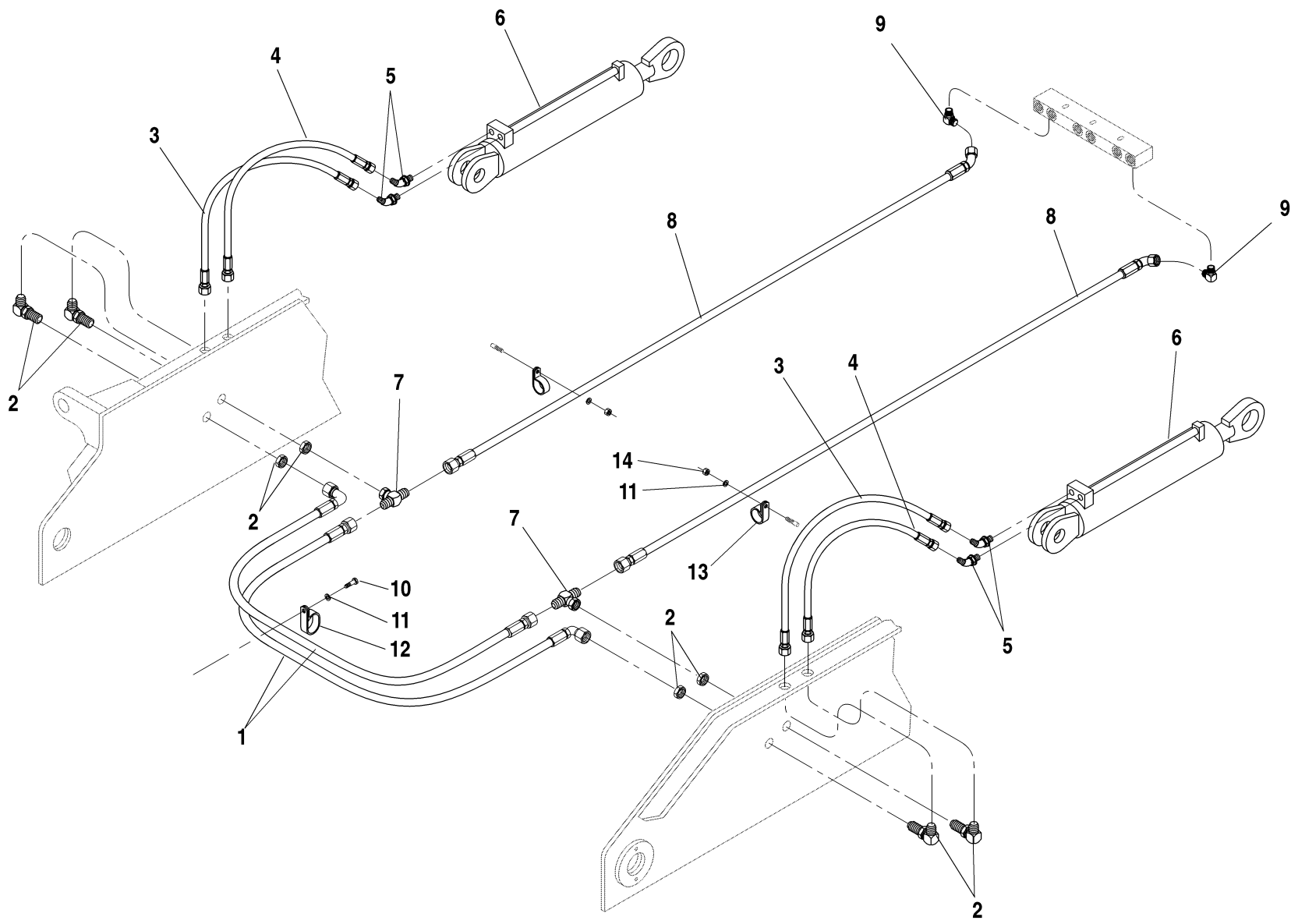
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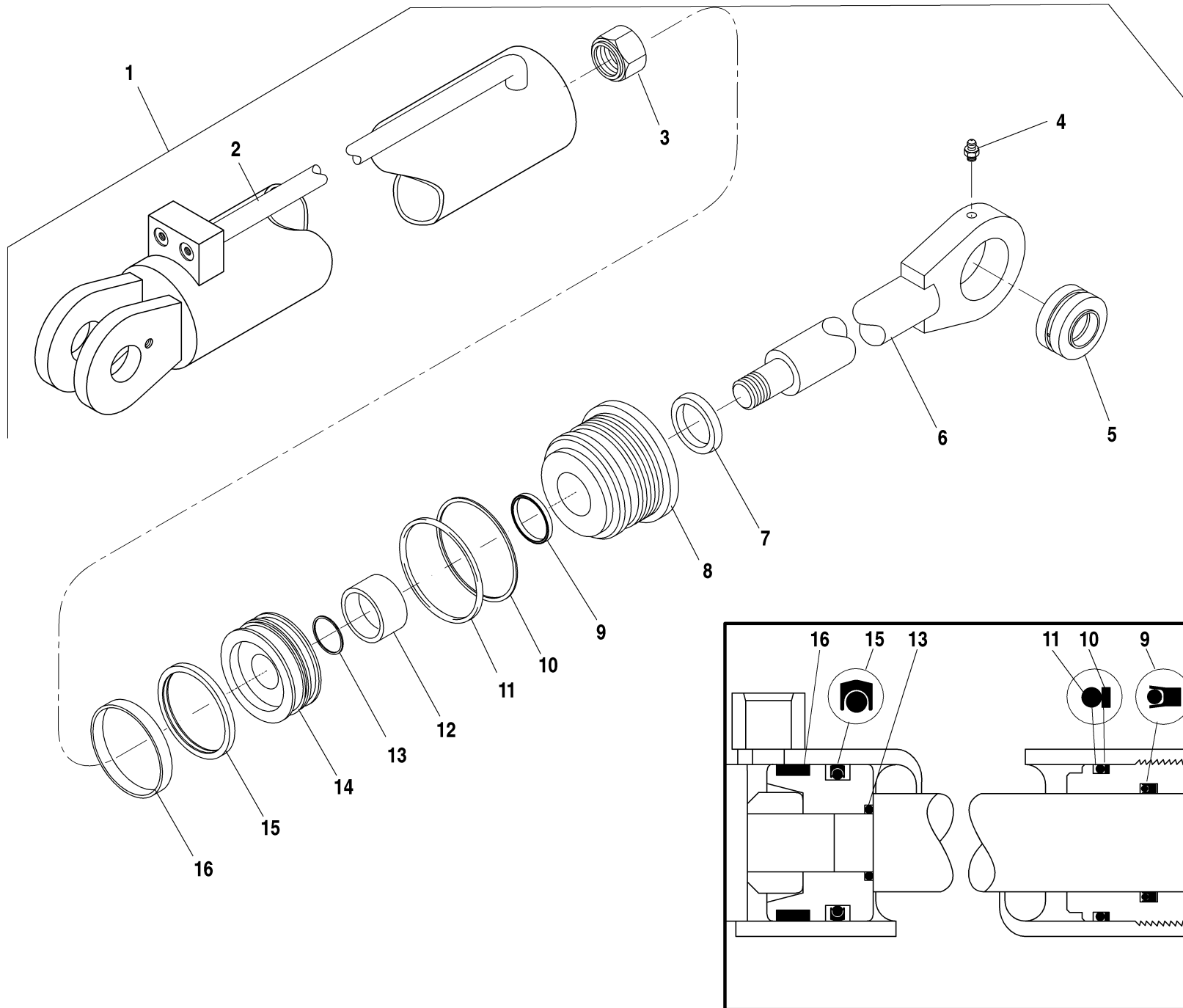
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ITEM	PART NO.	QTY.	DESCRIPTION
1	37898X	2	Hyd. Hose, 1/2" x 57"
2	P21916	4	90° Elbow, Bulkhead
3	68113X	2	Hyd. Hose, 1/2" x 30"
4	68112X	2	Hyd. Hose, 1/2" x 25"
5	P21229	4	45° Elbow, O-Ring
6	34828B	2	Cylinder, Rear Carriage Tilt (See Page 5.4.1 for Breakdown)
7	P24651	2	Tee, Swivel Nut
8	68108X	2	Hyd. Hose, 3/4" x 71"
9	P18924	2	90° Elbow, O-Ring
10	P00205	1	Capscrew, Hx., 3/8"-16 x 1 1/4"
11	P01310	3	Lockwasher, 3/8"
12	37368X	1	Clamp, Hose, Double
13	P18195	2	Clamp, Hose
14	P05108	2	Nut, Hx., 3/8"-16

644D-34 S/N 181-

**REAR CARRIAGE TILT HYDRAULIC CIRCUIT 5.3.1.1**



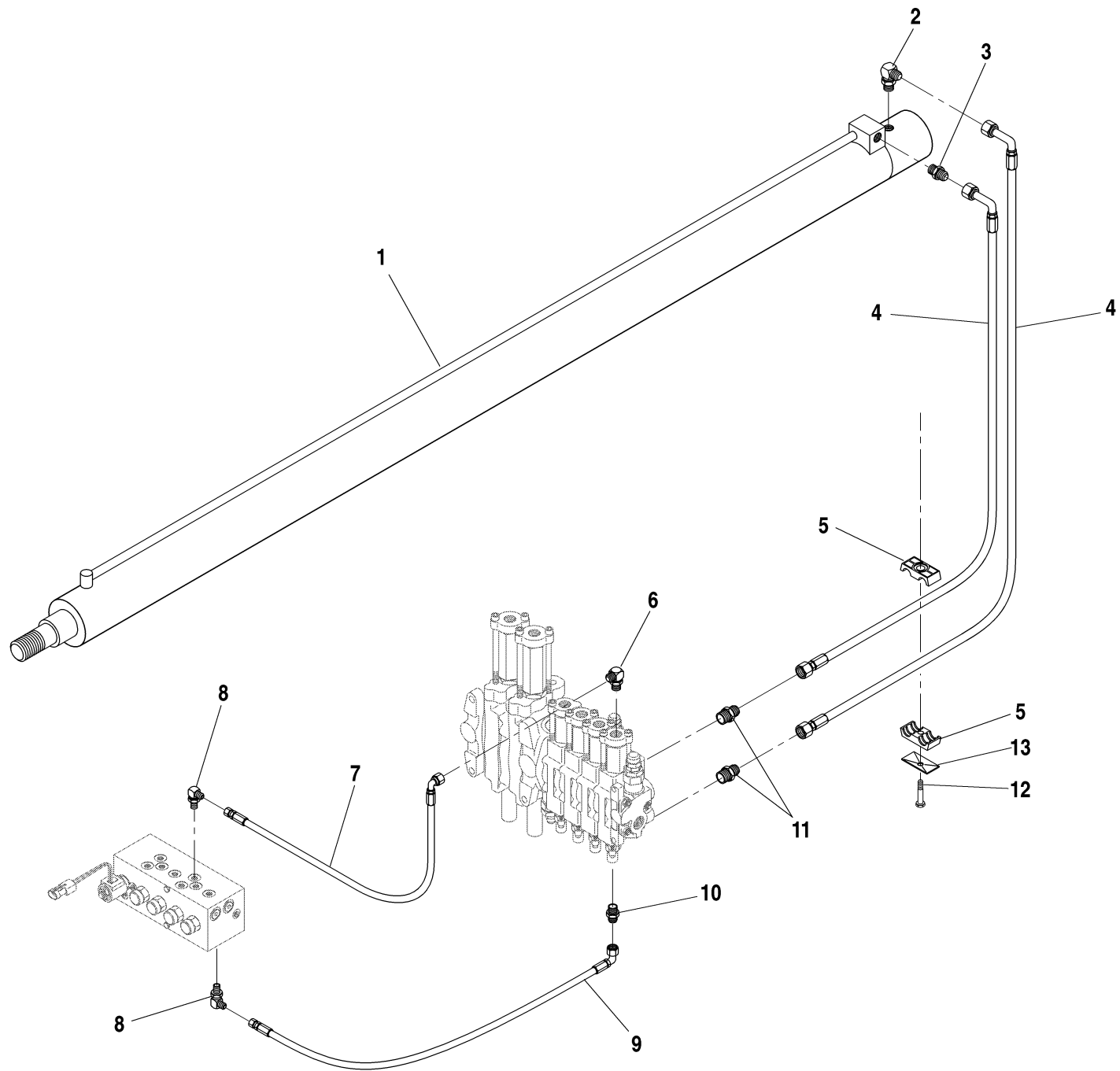
ITEM	PART NO.	QTY.	DESCRIPTION
1	34828B	-	Cylinder Assembly, Rear Carriage Tilt
2	P32239	1	Barrel Weldment
3	P19217	1	Nut, Crownlock
4	P16611	1	Zerk, Grease
5	P13449	1	Bushing, Self-Aligned
6	P32319	1	Rod Weldment
7	N.S.S.	1	*Wiper
8	P32331	1	Rod Bearing
9	N.S.S.	1	*Loaded Urethane U-Cup
10	N.S.S.	1	*Back-Up Ring
11	N.S.S.	1	*O-Ring
12	P32342	1	Stroke Limiter
13	N.S.S.	1	*O-Ring
14	P23799	1	Piston
15	N.S.S.	1	*Piston Seal
16	N.S.S.	1	*Wear-Ring
REF	①P32314	1	Seal Kit (Includes Items 7, 9, 10, 11,13, 15 & 16)

NOTES:

\* Items Included in Seal Kit.

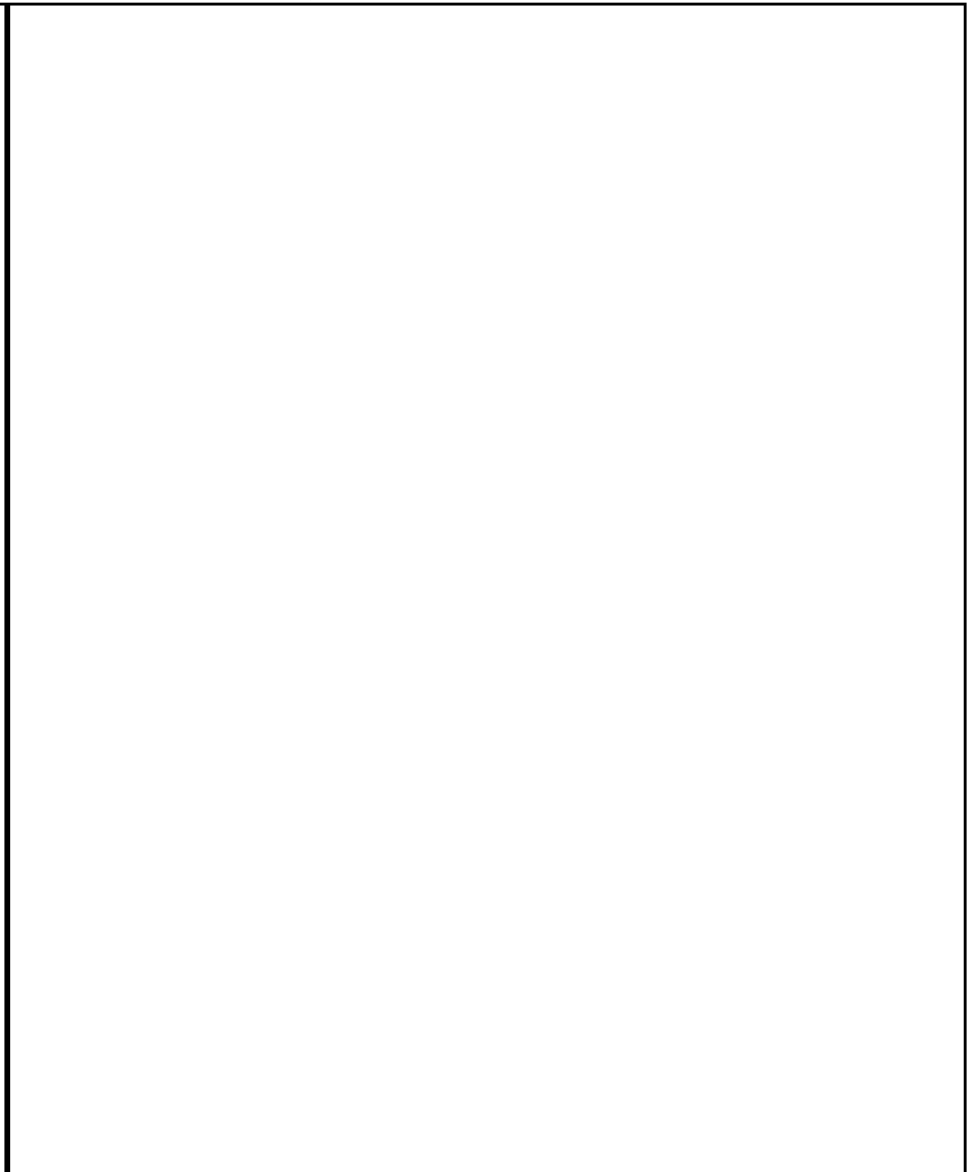
N.S.S. = Not Sold Separately

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ITEM	PART NO.	QTY.	DESCRIPTION
1	34845B	1	Cylinder, Transfer (See Page 5.6.1 for Breakdown)
2	P18956	1	90° Elbow, O-Ring
3	P18944	1	Connector, O-Ring
4	37892X	2	Hyd. Hose, 3/8" x 154"
5	37733X	1	Clamp, Hyd. Hose
6	P18935	1	90° Elbow
7	P30174	1	Hyd. Hose, 1/4" x 16"
8	P19248	2	90° Elbow
9	37298X	1	Hyd. Hose, 1/4" x 14"
10	P19836	1	Connector, O-Ring
11	P15406	2	Connector, O-Ring
12	37735X	1	Bolt
13	37734X	1	Cover



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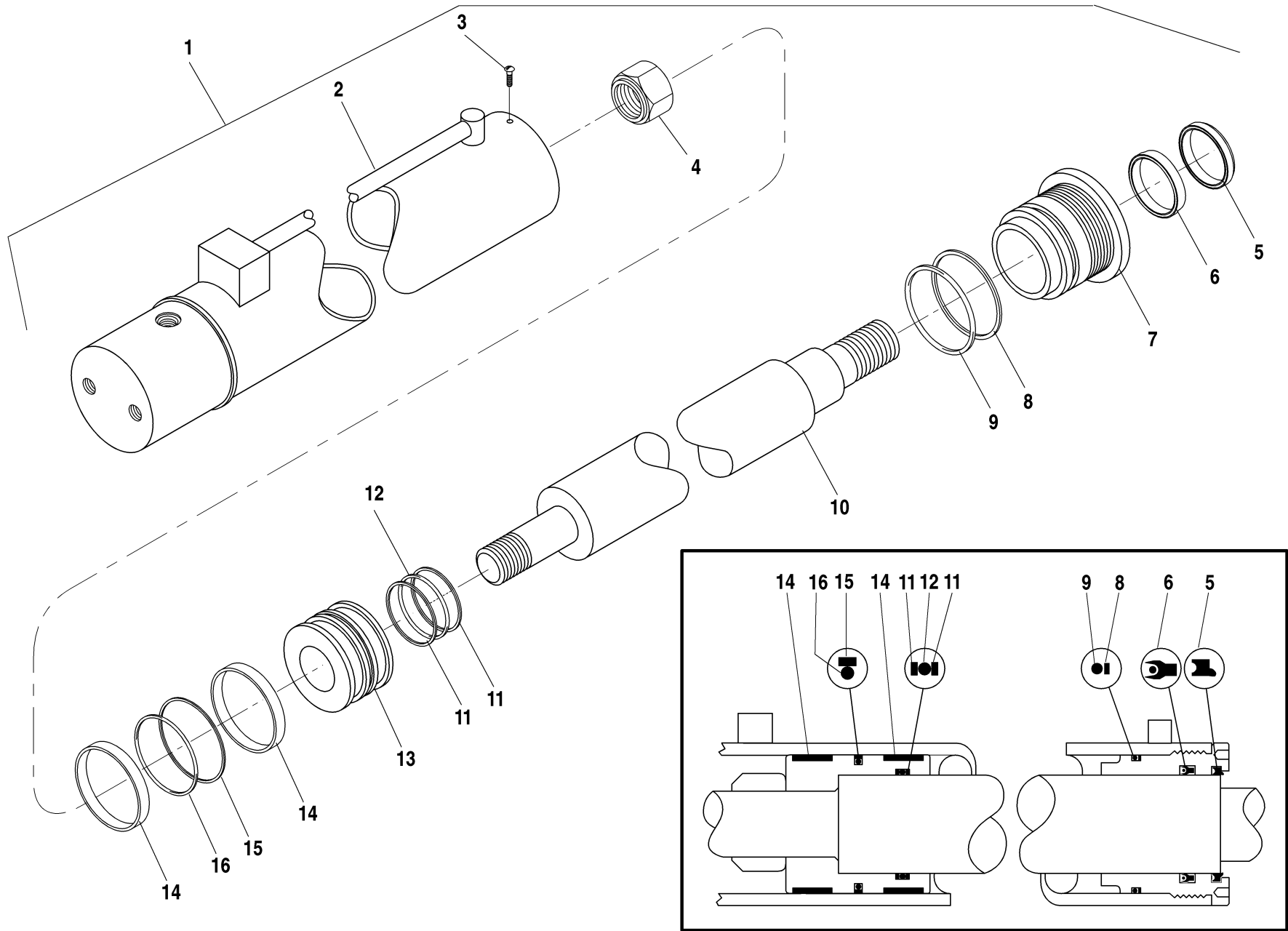
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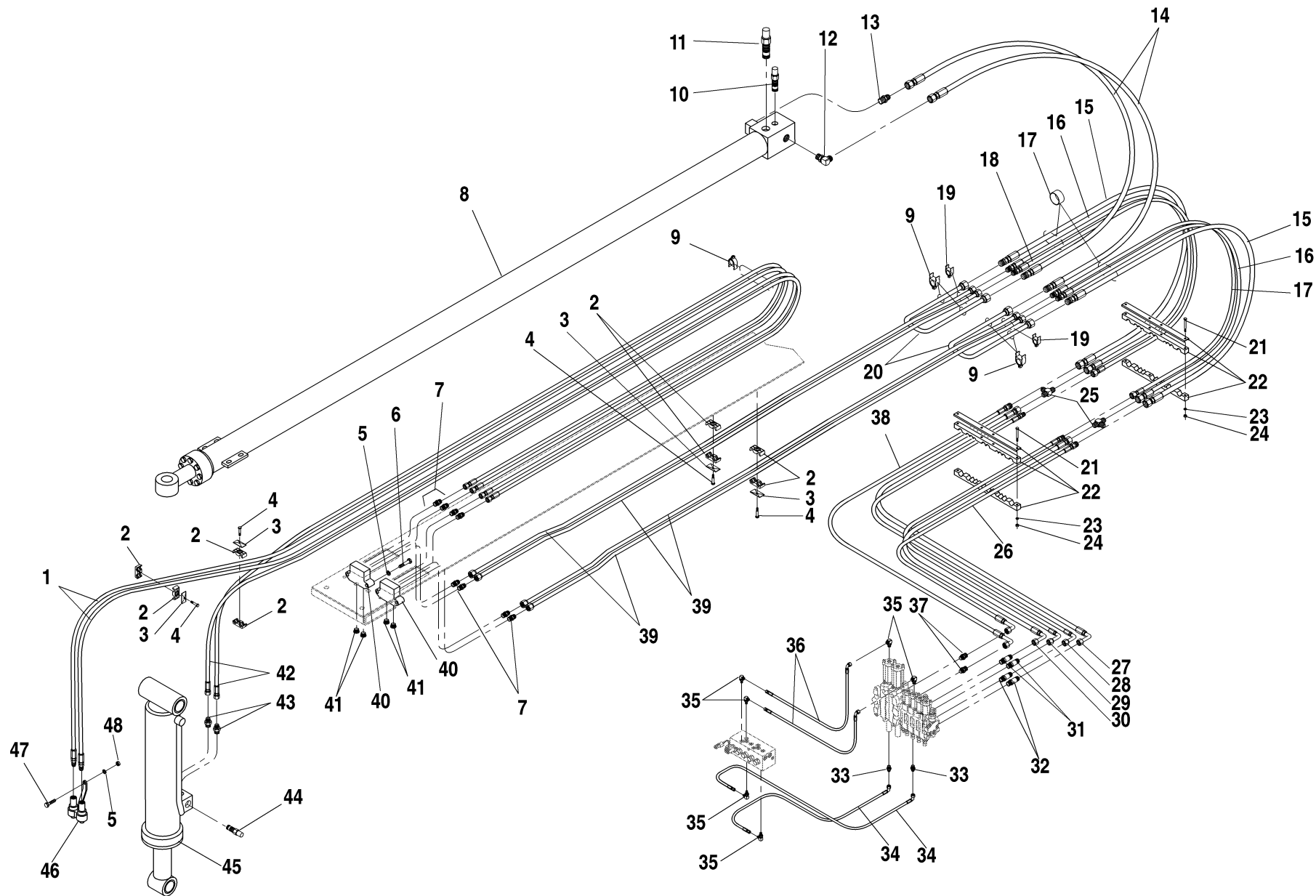
ITEM	PART NO.	QTY.	DESCRIPTION
1	34845B	1	Cylinder Assembly, Transfer
2	68370X	1	Barrel Weldment
3	68377X	1	*Screw, Self-Tapping
4	P40459	1	Nut, Crownlock
5	N.S.S	1	*Wiper
6	N.S.S	1	*Seal
7	P32279	1	Head, Rod Bearing
8	N.S.S	1	*Back-Up Ring
9	N.S.S	1	*O-Ring
10	68371X	1	Rod
11	N.S.S	2	*Back-Up Ring
12	N.S.S	1	*O-Ring
13	68372X	1	Piston
14	N.S.S	2	*Wear Ring
15	N.S.S	1	*Piston Seal
16	N.S.S	1	*O-Ring
REF	P30656	1	Seal Kit

NOTES:

\* Items Included in Seal Kit.

N.S.S. = Not Sold Separately

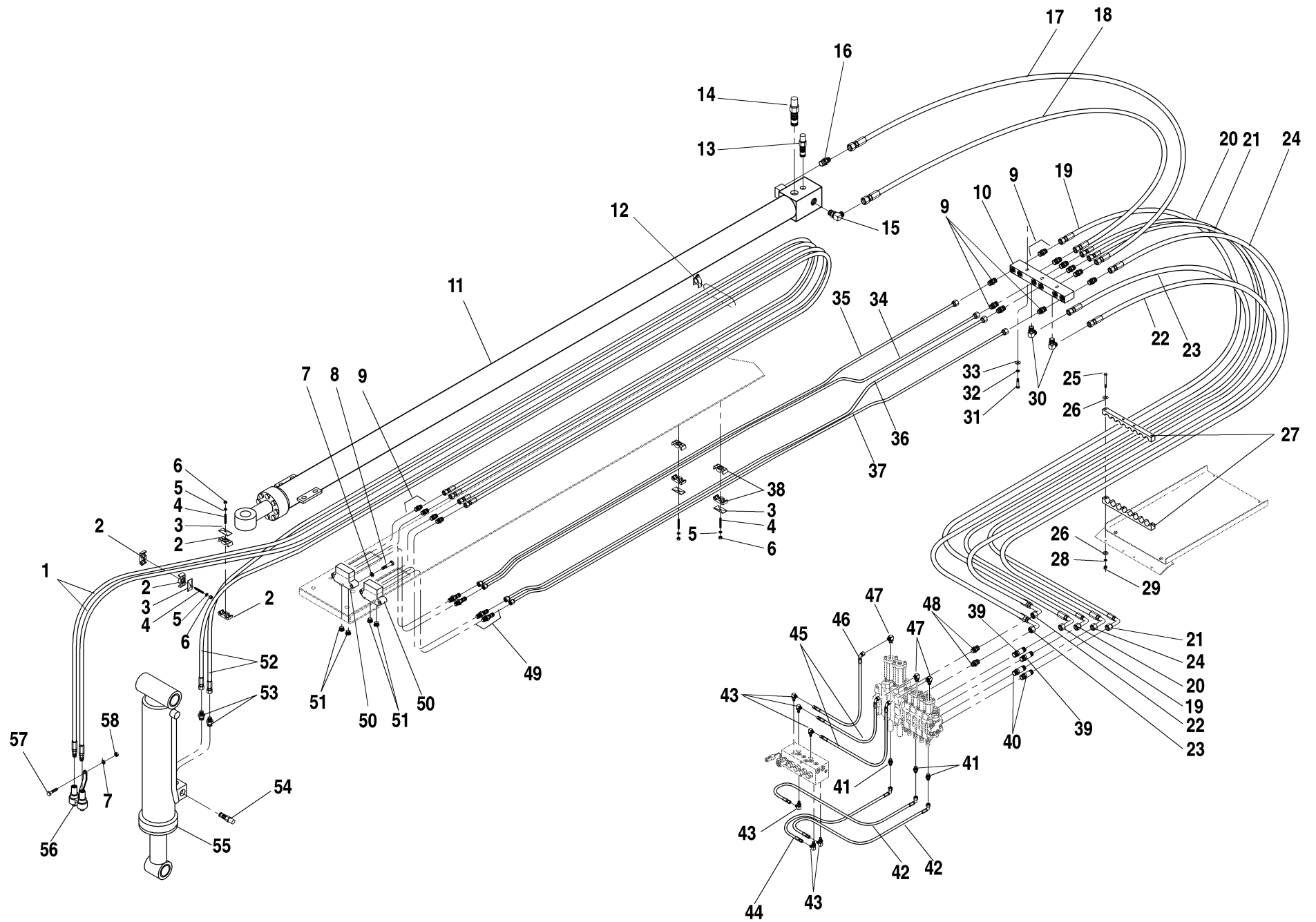
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	66724X	2	Hyd. Hose, 1/2" x 336"	35	P19248	6	90° Elbow, O-Ring
2	37733X	4	Clamp Body, 5/8"	36	37821X	2	Hyd. Hose, 1/4" x 22"
3	37734X	4	Clamp Cover	37	P18996	1	Connector, O-Ring
4	37735X	4	Capscrew, Hx., 5/16"-18 x 1 3/4"	38	66746X	1	Hyd. Hose, 5/8" x 45"
5	P01312	4	Lockwasher, 1/2"	39	65469B	4	Hyd. Tube
6	P00407	4	Capscrew, Hx., 1/2"-13 x 2 1/4"	40	65944A	2	Manifold, Hydraulic
7	P18964	9	Connector, O-Ring	41	P27937	4	Plug, O-Ring
8	34848B	1	Cylinder, Boom Extension	42	37853X	2	Hyd. Hose, 1/2" x 326"
			(See Page 5.8.1 for Breakdown)	43	P15406	2	Connector, O-Ring
9	P20465	4	Clamp, Hyd. Hose, 3/4"	44	P29947	1	Valve, Counterbalance, 15 GPM
10	P27827	1	Valve, Counterbalance - 30 GPM	REF	P40484		Seal Kit for Item 44
REF	P40491		Seal Kit for Item 10	45	65751B	1	Cylinder, Front Carriage Tilt
11	P30444	1	Valve, Counterbalance - 60 GPM				(See Page 5.11.1 for Breakdown)
REF	P30927		Seal Kit for Item 11	46	66347B	1	Quick Coupler (Incl. dust caps & male connectors)
12	P17802	1	90° Elbow, O-Ring	47	P00404	1	Capscrew, Hx., 1/2"-13 x 1 1/2"
13	P17805	1	Connector, O-Ring	48	P01510	1	Nut, Hx., 1/2"-13
14	37852X	2	Hyd. Hose, 5/8" x 34"				
15	37849X	2	Hyd. Hose., 5/8" x 90"				
16	37848X	2	Hyd. Hose., 5/8" x 86"				
17	37727X	4	Band, Power Grip Heat Shrink				
18	37847X	2	Hyd. Hose., 1/2" x 91"				
19	P20466	4	Clamp, Hyd. Hose, 5/8"				
20	65463B	2	Hyd. Tube, Boom				
21	P00013	4	Capscrew, Hx., 1/4"-20 x 3"				
22	65482B	1	Hose Clamp, Multiple				
23	P01308	4	Lockwasher, 1/4"				
24	P01506	4	Nut, Hx., 1/4"-20				
25	P27388	2	Connector, Tee				
26	66745X	1	Hyd. Hose, 5/8" x 36"				
27	66744X	1	Hyd. Hose, 5/8" x 45"				
28	66742X	1	Hyd. Hose, 1/2" x 53"				
29	37899X	1	Hyd. Hose, 1/2" x 47"				
30	66743X	1	Hyd. Hose, 5/8" x 46"				
31	P18964	2	Connector, O-Ring				
32	P27384	2	Connector, O-Ring, (Long)				
33	P19836	1	Connector, O-Ring				
34	37298X	2	Hyd. Hose, 3/8" x 154"				
				<b>644D-34 S/N 108-180</b>			

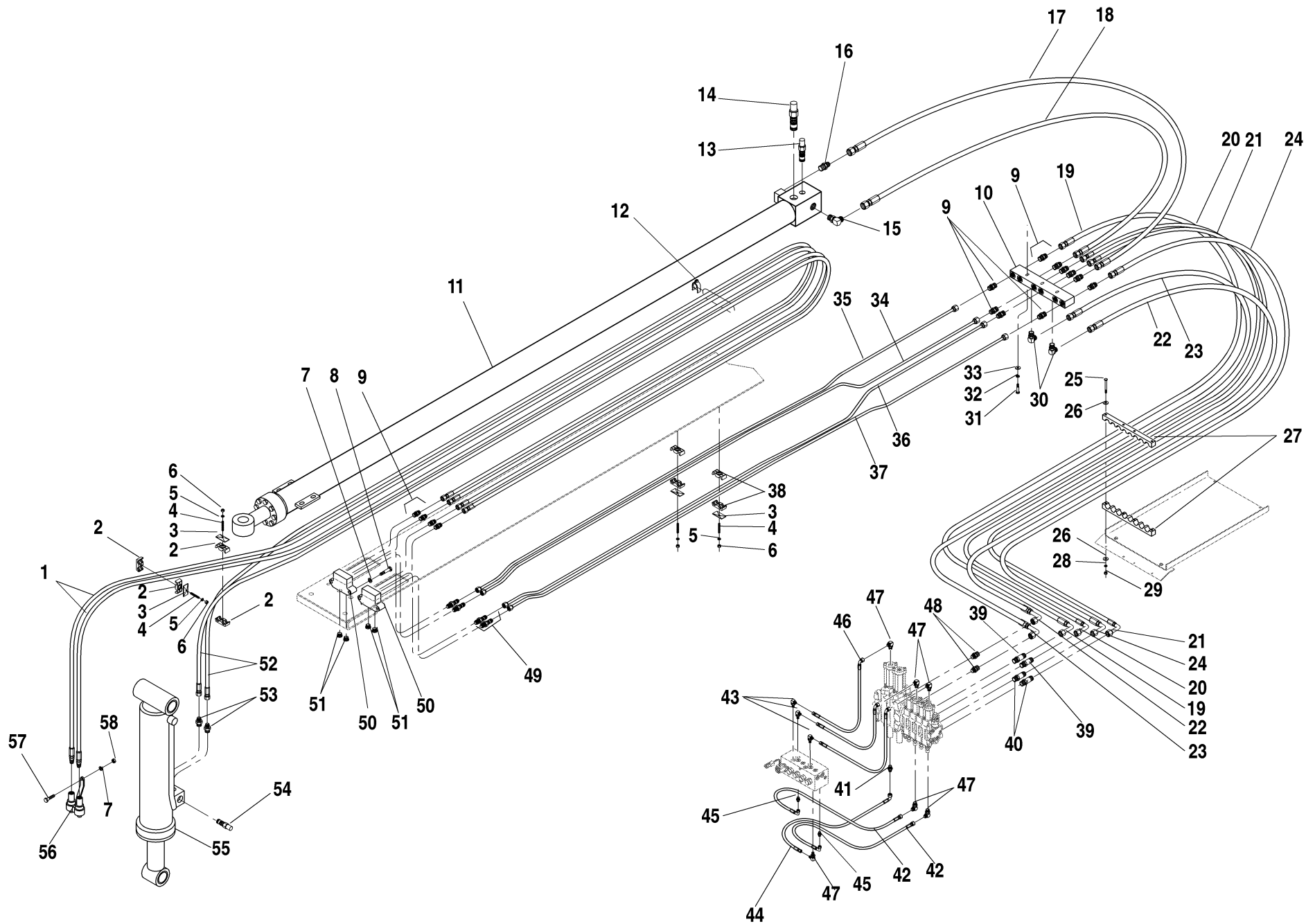
**BOOM HYDRAULIC CIRCUIT (3 Section) 5.7.1**





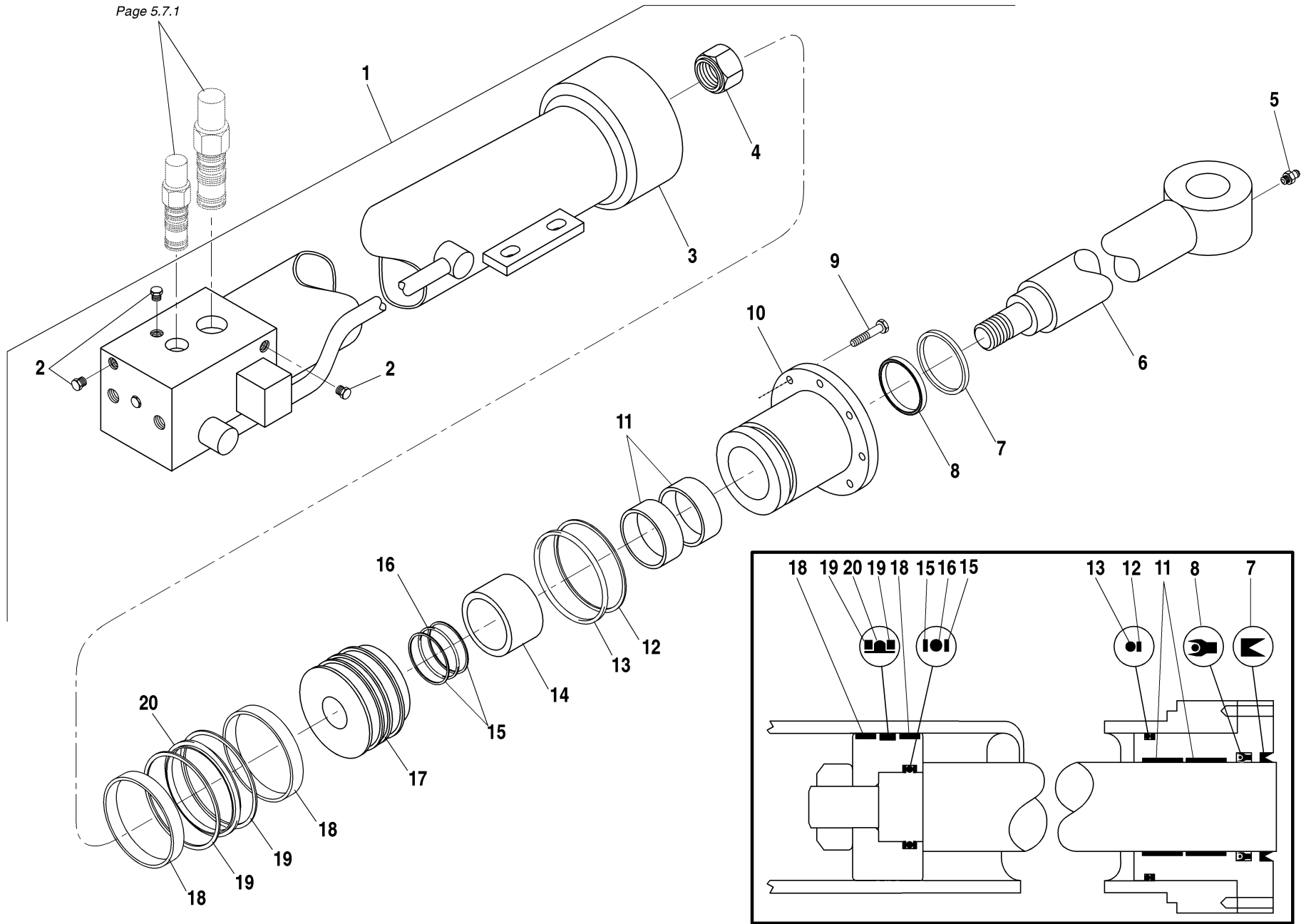
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	68117X	2	Hyd. Hose, 1/2" x 333"	35	69069B	1	Hyd. Tube, Boom, R/S Outer
2	37732X	4	Clamp Body, 3/4"	36	69078B	1	Hyd. Tube, Boom, L/S Inner
3	37734X	4	Clamp Cover	37	69079B	1	Hyd. Tube, Boom, L/S Outer
4	68743A	4	Setscrew., 5/16"-18 x 2 1/2"	38	37733X	2	Clamp Body, 5/8"
5	P01309	4	Lockwasher, 5/16"	39	P18964	2	Connector, O-Ring
6	P01507	4	Nut, Hx., 5/16"- 18	40	P27384	2	Connector, O-Ring, (Long)
7	P01312	4	Lockwasher, 1/2"	41	P18936	1	Connector, O-Ring
8	P00407	4	Capscrew, Hx., 1/2"-13 x 2 1/4"	42	37298X	2	Hyd. Hose, 3/8" x 18"
9	P18964	9	Connector, O-Ring	43	P19248	6	90° Elbow, O-Ring
10	69052C	1	Manifold, Hydraulic	44	P30173	1	Hyd. Hose, 1/4" x 20"
11	34848B	1	Cylinder, Boom Extension (See Page 5.8.1 for Breakdown)	45	P30174	2	Hyd. Hose, 1/4" x 16"
12	P20465	4	Clamp, Hyd. Hose, 3/4"	46	37821X	1	Hyd. Hose, 1/4" x 22"
13	P27827	1	Valve, Counterbalance - 30 GPM	47	P18935	3	90° Elbow, O-Ring
REF	P40491		Seal Kit for Item 13	48	P18996	1	Connector, O-Ring
14	67580X	1	Valve, Counterbalance - 60 GPM	49	68975A	4	Connector, Special
REF	P30927		Seal Kit for Item 14	50	65944A	2	Manifold, Hydraulic
15	P17802	1	90° Elbow, O-Ring	51	P27937	4	Plug, O-Ring
16	P17805	1	Connector, O-Ring	52	68123X	2	Hyd. Hose, 1/2" x 326"
17	68109X	1	Hyd. Hose, 5/8" x 40"	53	P15406	2	Connector, O-Ring
18	68110X	1	Hyd. Hose, 5/8" x 39"	54	P27847	1	Valve, Counterbalance, 15 GPM
19	68984B	1	Hyd. Hose, 5/8" x 128"	REF	P40484		Seal Kit for Item 54
20	68988B	1	Hyd. Hose, 5/8" x 131"	55	65751B	1	Cylinder, Front Carriage Tilt (See Page 5.11.1 for Breakdown)
21	68987B	1	Hyd. Hose, 5/8" x 135"	56	66347B	1	Quick Coupler (Incl. dust caps & male connectors)
22	68990B	1	Hyd. Hose, 5/8" x 125"	57	P00404	1	Capscrew, Hx., 1/2"-13 x 1 1/2"
23	68989B	1	Hyd. Hose, 5/8" x 127	58	P01510	1	Nut, Hx., 1/2"-13
24	68983B	1	Hyd. Hose, 5/8" x 135				
25	P00013	2	Capscrew, Hx., 1/4"-20 x 3"				
26	P01402	2	Flatwasher, 1/4"				
27	68972A	1	Hose Clamp, Multiple				
28	P01308	2	Lockwasher 1/4"				
29	P01506		Nut, Hx., 1/4"-20				
30	P18924	2	90° Elbow, O-Ring				
31	P00208	3	Capscrew, Hx., 3/8"-16 x 2"				
32	P01310	3	Lockwasher. 3/8"				
33	P01404	3	Flatwasher, 3/8"				
34	69068B	1	Hyd. Tube, Boom, R/S Inner				
				<b>644D-34 S/N 181-1341</b>			

**BOOM HYDRAULIC CIRCUIT (3 Section) 5.7.1.1**









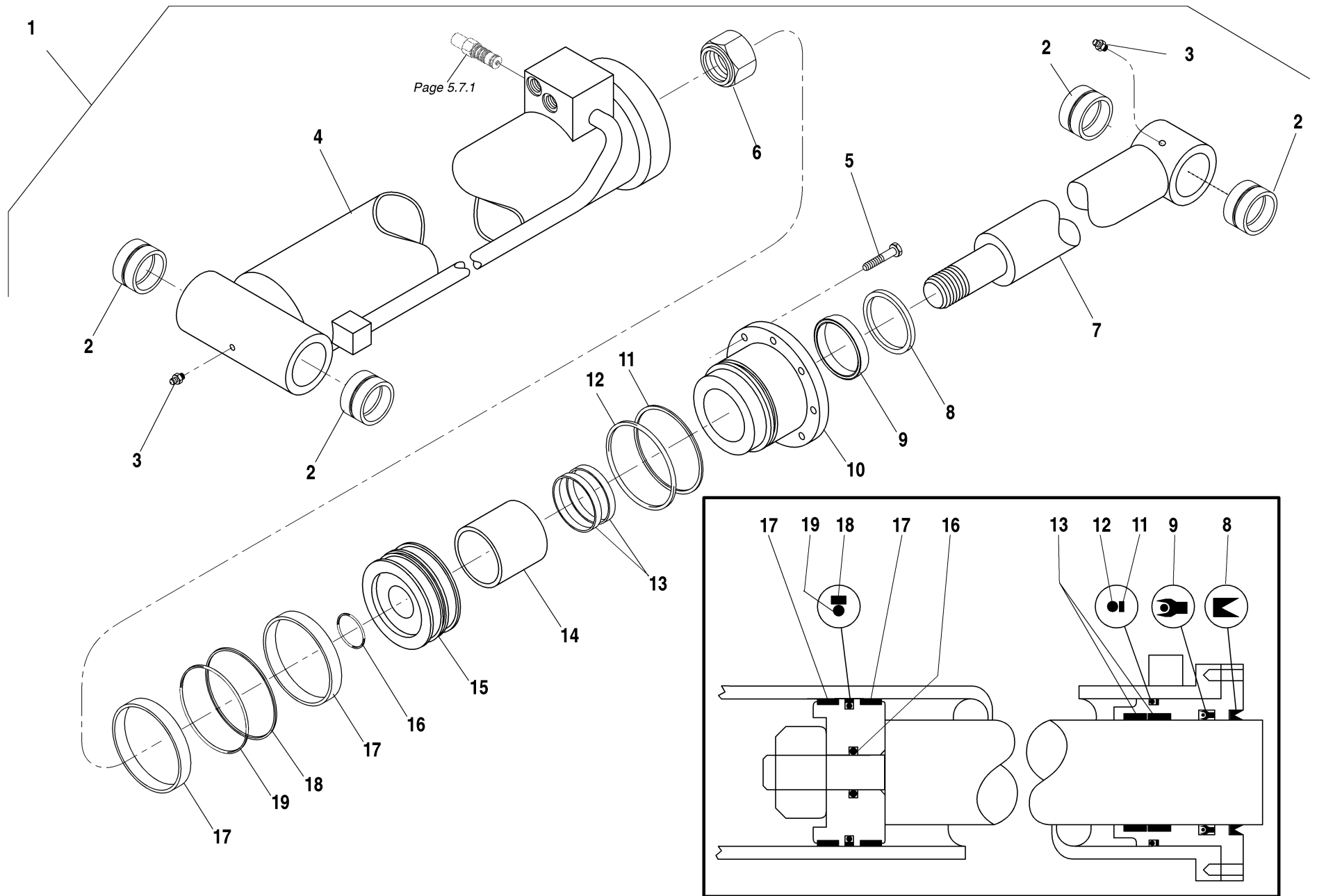
ITEM	PART NO.	QTY.	DESCRIPTION
1	34848B	1	Cylinder Assembly, Boom Extension
2	P27993	4	O-Ring Plug
3	68357X	1	Barrel Weldment
4	P30667	1	Nut, Crownlock
5	P16611	1	Grease Fitting
6	68358X	1	Rod Assembly
7	N.S.S.	1	*Wiper
8	N.S.S.	1	*Seal
9	68362X	8	Capscrew, Hx.,
10	68361X	1	Head, Rod Bearing
11	N.S.S.	2	*Wear Ring
12	N.S.S.	1	*Back-Up Ring
13	N.S.S.	1	*O-Ring
14	68359X	1	Stroke Limiter
15	N.S.S.	2	*Back-Up Ring
16	N.S.S.	1	*O-Ring
17	68360X	1	Piston
18	N.S.S.	2	*Wear Ring
19	N.S.S.	2	*Back-Up Ring
20	N.S.S.	1	*Piston Seal
REF	68363X	1	Seal Kit

NOTES:

\* Items Included in Seal Kit.

N.S.S. = Not Sold Separately

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ITEM	PART NO.	QTY.	DESCRIPTION
1	65751B	1	Cylinder Assembly, Front Carriage Tilt
2	P19106	4	Bushing
3	P16611	2	Grease Fitting
4	68350X	1	Barrel Weldment
5	P40460	8	Capscrew, Hx.,
6	P27279	1	Nut, Crownlock
7	68351X	1	Rod Weldment
8	N.S.S	1	*Wiper
9	N.S.S	1	*Seal
10	P30674	1	Head, Rod Bearing
11	N.S.S	1	*Backup-Ring
12	N.S.S	1	*O-Ring
13	N.S.S	2	*Wear-Ring
14	68352X	1	Stroke Limiter
15	P29878	1	Piston
16	N.S.S	1	*O-Ring
17	N.S.S	1	*Wear Ring
18	N.S.S	1	*Backup-Ring
19	N.S.S	1	*O-Ring
Ref	P30653	1	Seal Kit

NOTES:

\* Items Included in Seal Kit.

N.S.S. = Not Sold Separately

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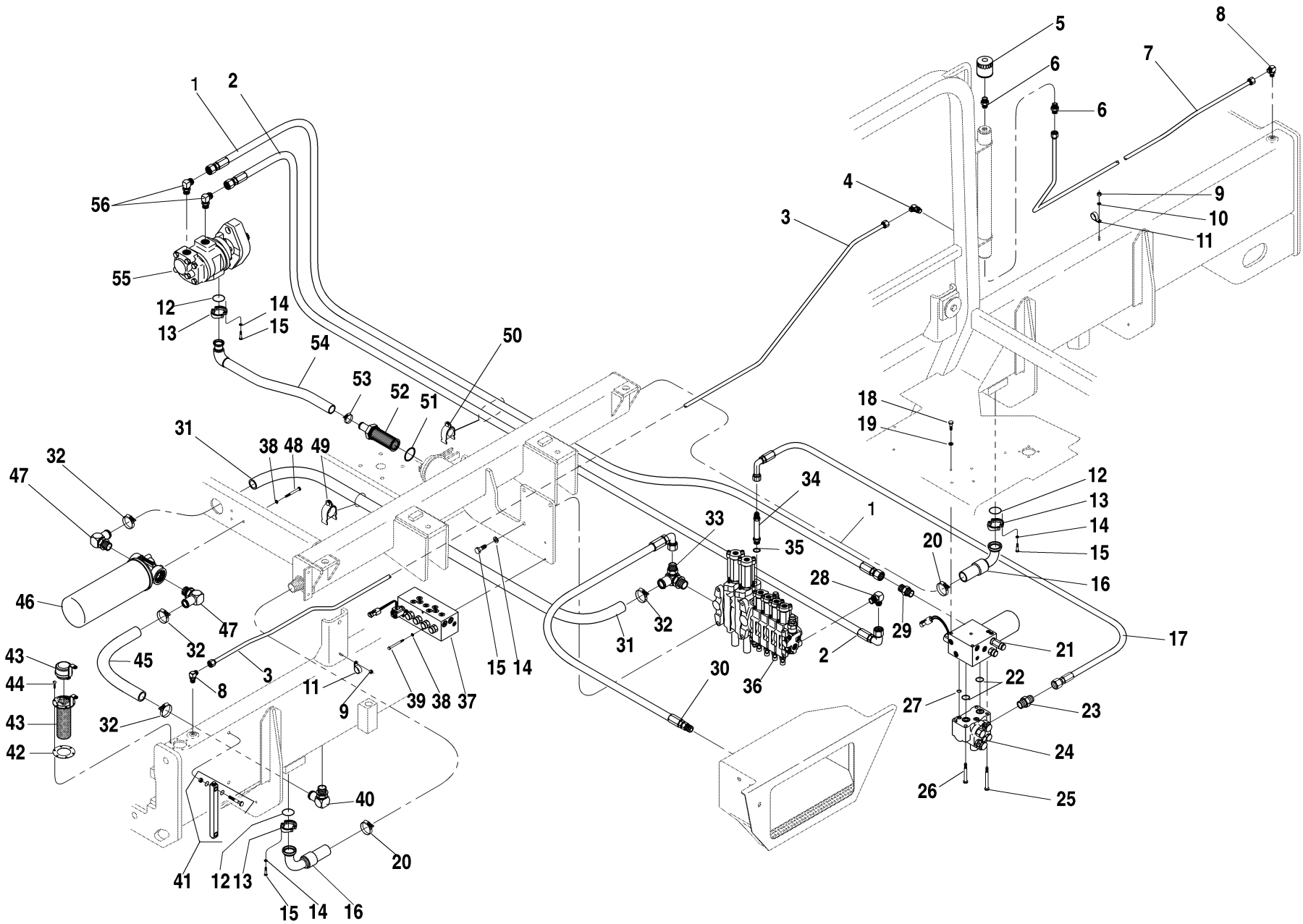
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## Section 6 — Pump, Suction - Return and Valve Plate Components

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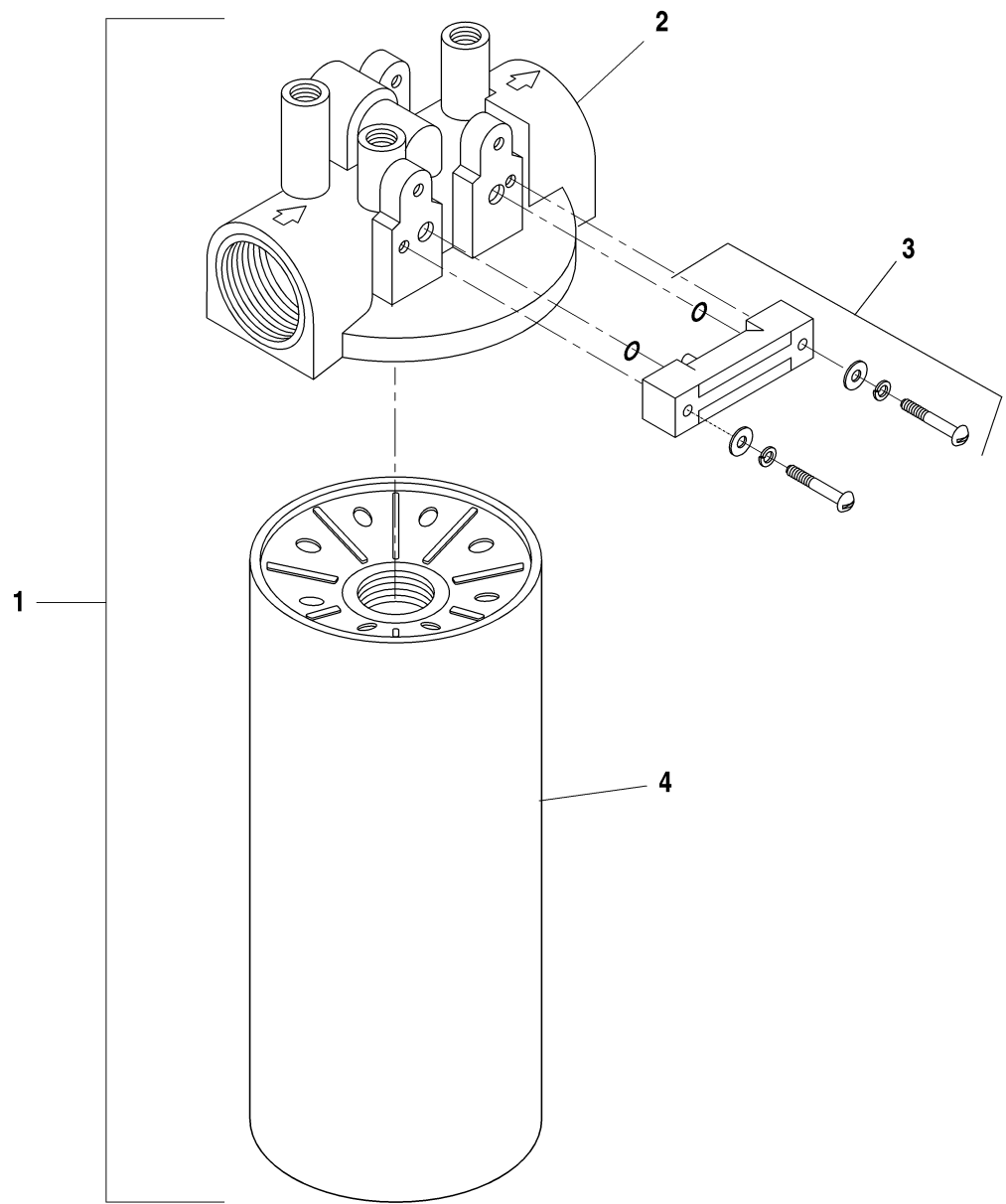
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ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	37193X	1	Hyd. Hose, 3/4" x 98"	36	67028B	1	Valve, Mid-Inlet 6 Section (See Pages 6.5.1-6.10.1 for Breakdown)
2	P26621	1	Hyd. Hose, 3/4" x 112"	37	65597C	1	Valve, Selector (See Page 6.2.1 for Breakdown)
3	66927B	1	Hydraulic Tube, Breather Front	38	P01309	5	Lockwasher, 5/16"
4	P18952	1	90° Connector	39	P00125	2	Capscrew, Hx., 5/16"-18 x 4 1/4"
5	39022A	1	Breather, Hydraulic Tank	40	38985A	1	Elbow
6	P18944	1	Connector	41	P27809	1	Sight Gauge, Hydraulic Oil
7	66926B	1	Hydraulic Tube, Breather, Rear	42	68088X	2	Gasket
8	P21173	2	90° Connector	43	67891B	1	Filler Cap/ Strainer Assembly (Includes Item 42- 44)
9	P01508	2	Nut, Hx., 3/8"-16	44	P03541	6	Tapping Screw, Slotted Rd, Hd., 10-32 x 1/2"
10	P01310	2	Lockwasher, 3/8"	45	66444X	1	Hose, 1 1/2" O.D., 16" Long
11	P30249	2	Clamp	46	37710X	1	Return Filter (See Page 6.2.1 for Breakdown)
12	P12971	2	O-Ring	47	38985A	3	90° Adapter, O-Ring
13	14315A	4	Flange, Half	48	P00112	2	Capscrew, Hx., 5/16"-18 x 3"
14	P01312	11	Lockwasher, 1/2"	49	37696X	1	Cushion Clamp, 1 3/4"
15	P00404	11	Capscrew, Hx., 1/2"-13 x 1 1/2"	50	37000X	2	Cushion Clamp, 1 1/8"
16	65507A	2	Hose, Suction Frame	51	37698X	1	O-Ring
17	P18922	1	Hyd. Hose, 3/4" x 24"	52	67783A	1	Strainer, Hyd
18	P00202	3	Capscrew, Hx., 3/8"-16 x 3/4"	53	67593X	1	Hose Clamp
19	P01310	6	Lockwasher, 3/8"	54	66754X	1	Hyd. Hose, Suction
20	67592X	4	Clamp, Hose, High Torque (Replaces P14043)	55	67787D	1	Pump, Hydraulic (See Page 6.4.1 for Breakdown)
21	67680C	1	Valve, Filter Mounting (See Page 6.11.1 for Breakdown)	56	P17802	2	90° Elbow, O-Ring
22	P40659	2	O-Ring	<b>644D-34 S/N 108-</b>			
23	P17805	1	Adapter, O-Ring				
24	66922C	1	Valve, Priority Charge				
REF	37083X	-	Repair Kit, Priority Charge Valve				
25	P01826	2	Capscrew, Socket Hd., 3/8"-16 x 3"				
26	P01822	2	Capscrew, Socket Hd., 3/8"-16 x 2"				
27	P22254	1	O-Ring				
28	P19055	1	Connector, O-Ring				
29	P17805	1	Adapter, O-Ring				
30	66756X	1	Hyd. Hose,				
31	66443X	1	Hyd. Hose, 1 1/2" x 57"				
32	P14043	4	Hose Clamp				
33	67743B	1	Adapter, Tee				
34	39537A	1	Adapeter (Long)				
35	10728957	1	O-Ring				

**PUMP, SUCTION - RETURN HYDRAULIC CIRCUIT 6.1.1**



ITEM	PART NO.	QTY.	DESCRIPTION
1	37710X	1	Return Filter Assembly
2	N.S.S.	1	Head Assembly
3	68378X	1	Indicator Assembly (Includes Mounting Hardware)
4	68379X	1	Filter

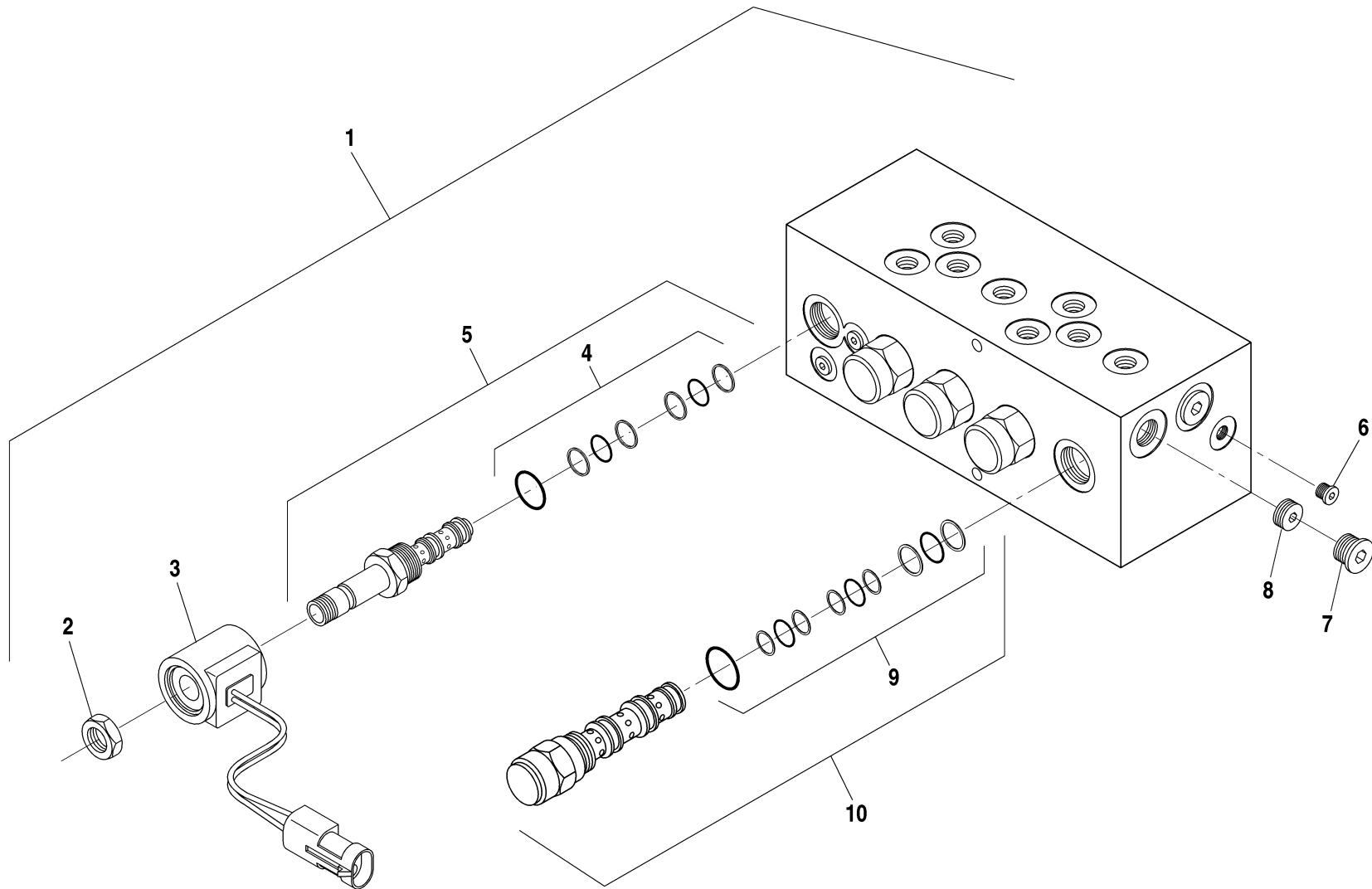
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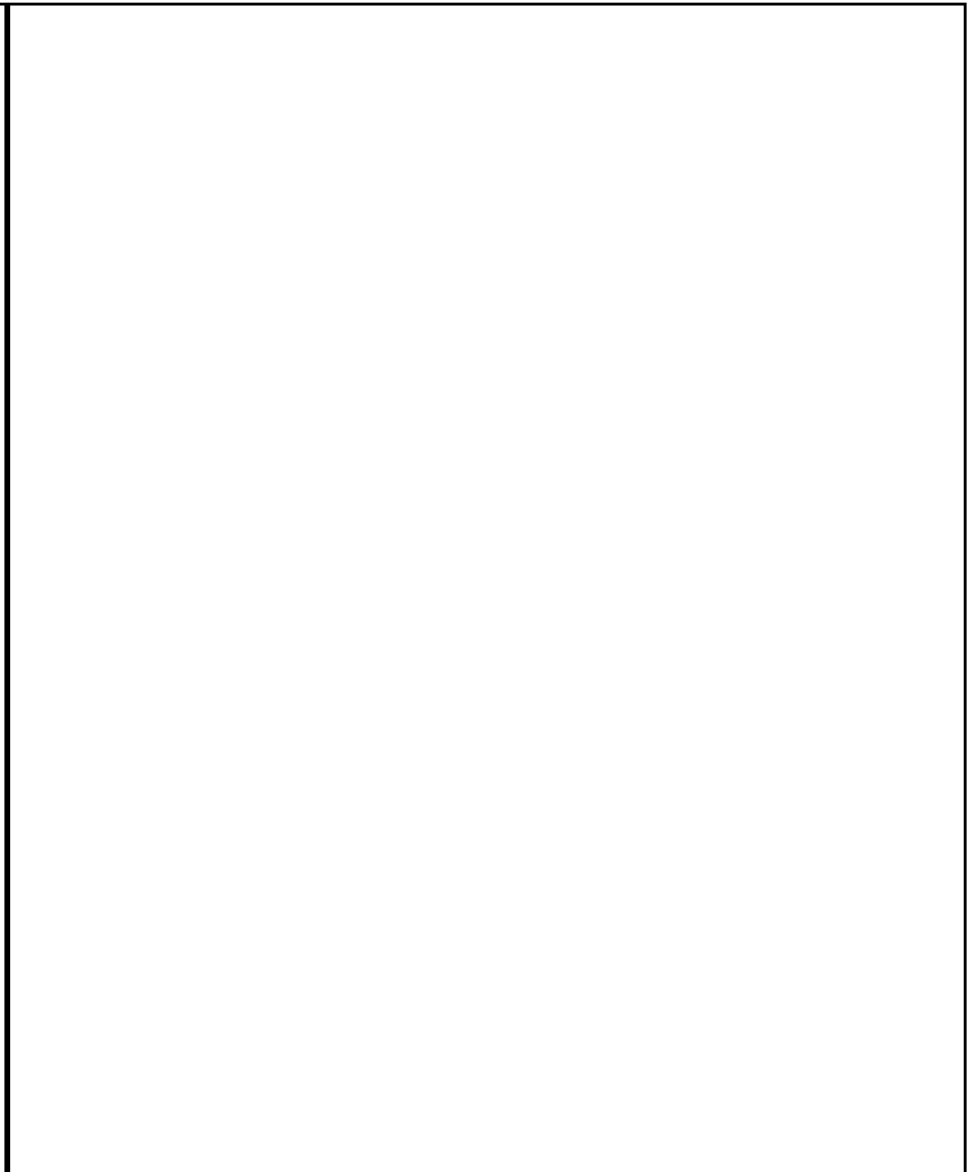
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**HYDRAULIC RETURN FILTER ASSEMBLY 6.2.1**

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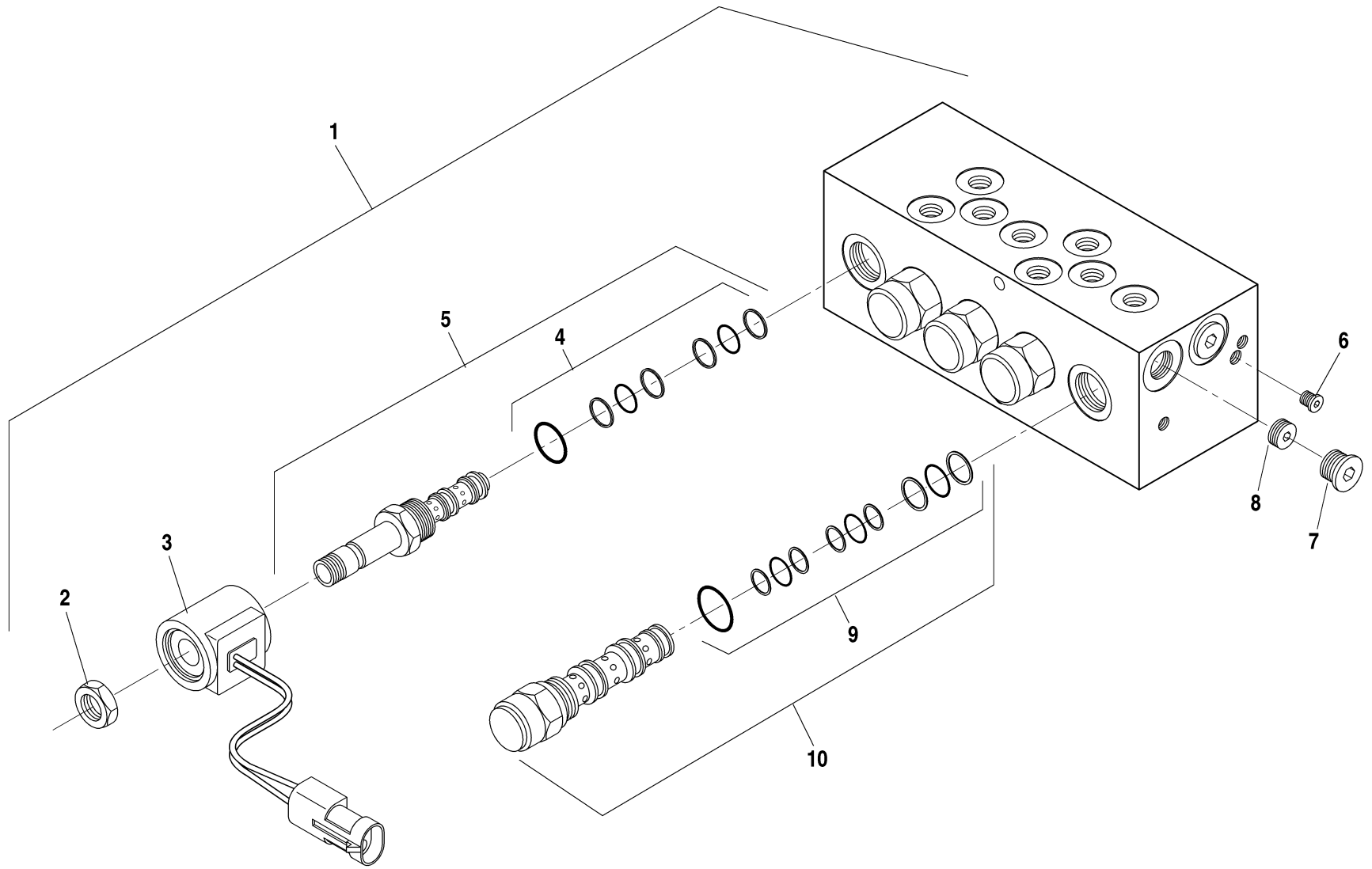


ITEM	PART NO.	QTY.	DESCRIPTION
1	65597C	1	Selector Valve
2	P40662	1	Nut
3	38329A	1	Coil
4	37355X	1	Seal Kit
5	37352X	1	Solenoid Valve
6	P27931	4	Plug, Hollow Hex, SAE #2
7	P27933	4	Plug, Hollow Hex, SAE #4
8	37571X	4	Orifice Plug
9	37005X	4	Seal Kit
10	37764X	4	Valve, Piloted, 3-Way

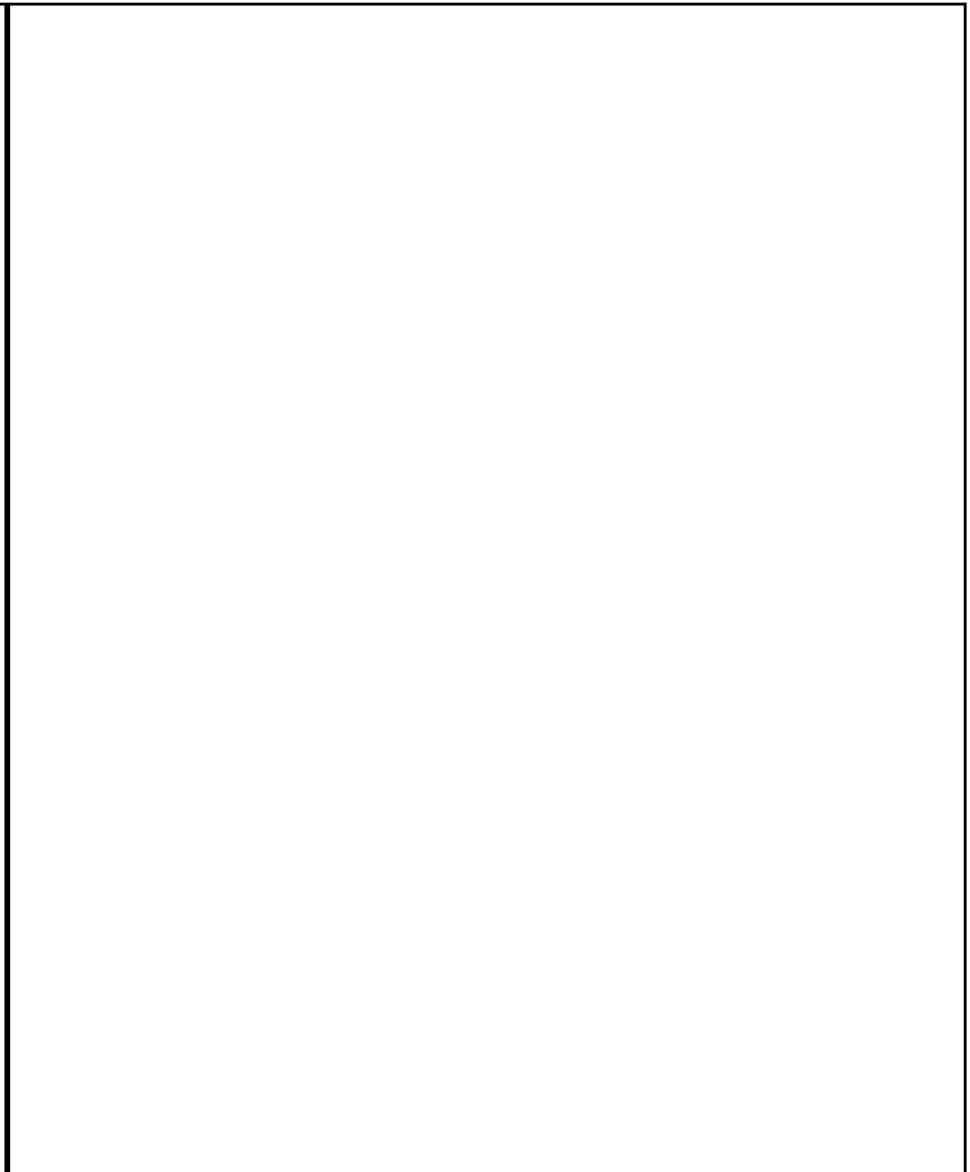


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**SELECTOR VALVE ASSEMBLY 6.3.1**

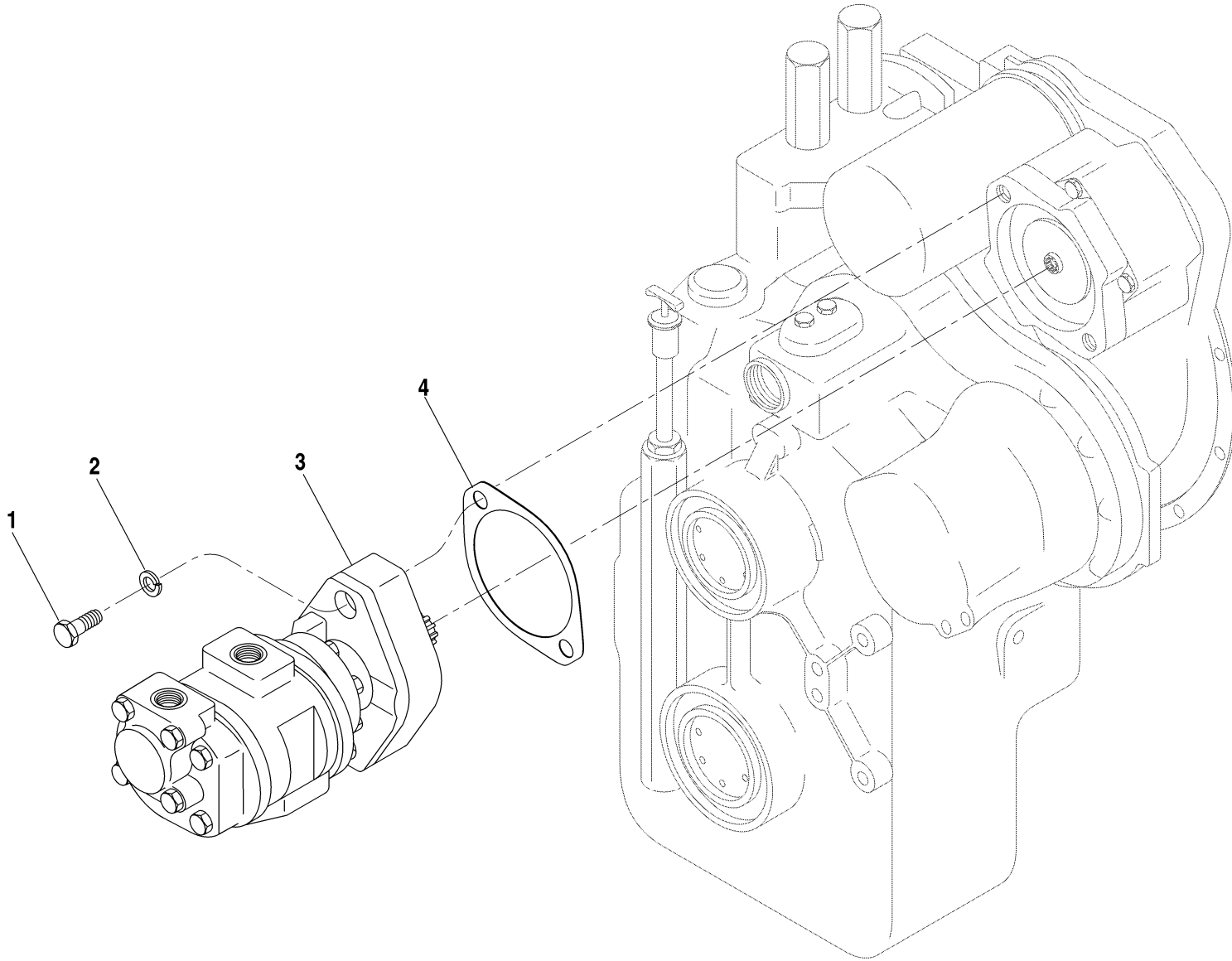


ITEM	PART NO.	QTY.	DESCRIPTION
1	1100061	1	Selector Valve
2	P40662	1	Nut
3	38329A	1	Coil
4	37355X	1	Seal Kit
5	37352X	1	Solenoid Valve
6	P27931	4	Plug, Hollow Hex, SAE #2
7	P27933	4	Plug, Hollow Hex, SAE #4
8	37571X	4	Orifice Plug
9	1100339	4	Seal Kit
10	1100372	4	Valve, Piloted, 3-Way



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**SELECTOR VALVE ASSEMBLY 6.3.1.1**

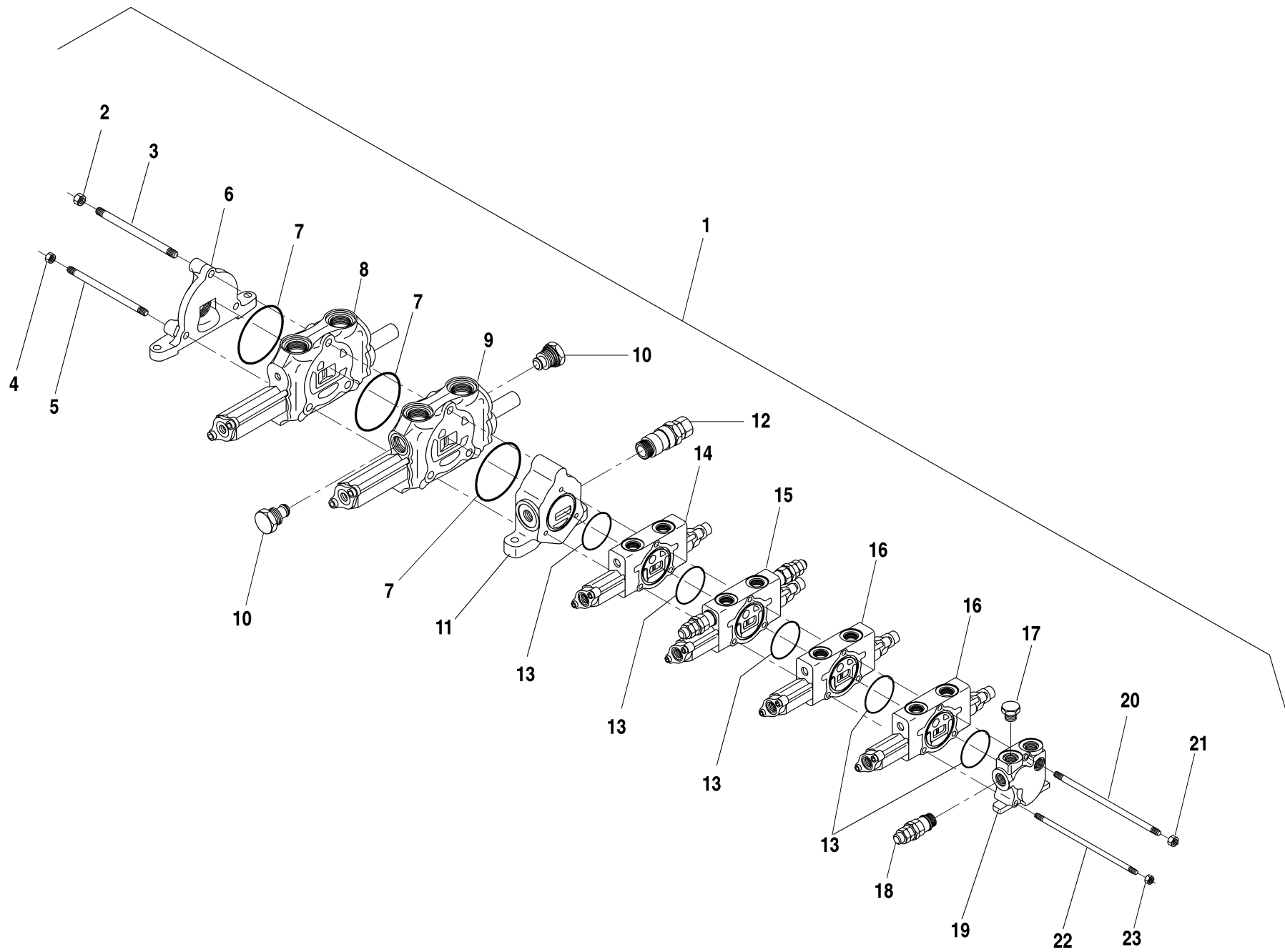




ITEM	PART NO.	QTY.	DESCRIPTION
1	P00409	2	Capscrew, Hx., 1/2"-13 x 2 3/4"
2	P01312	2	Lockwasher, 1/2"
3	67787D	1	Pump, Hydraulic
4	P19921	1	Gasket (Replaces 67522X O-Ring)

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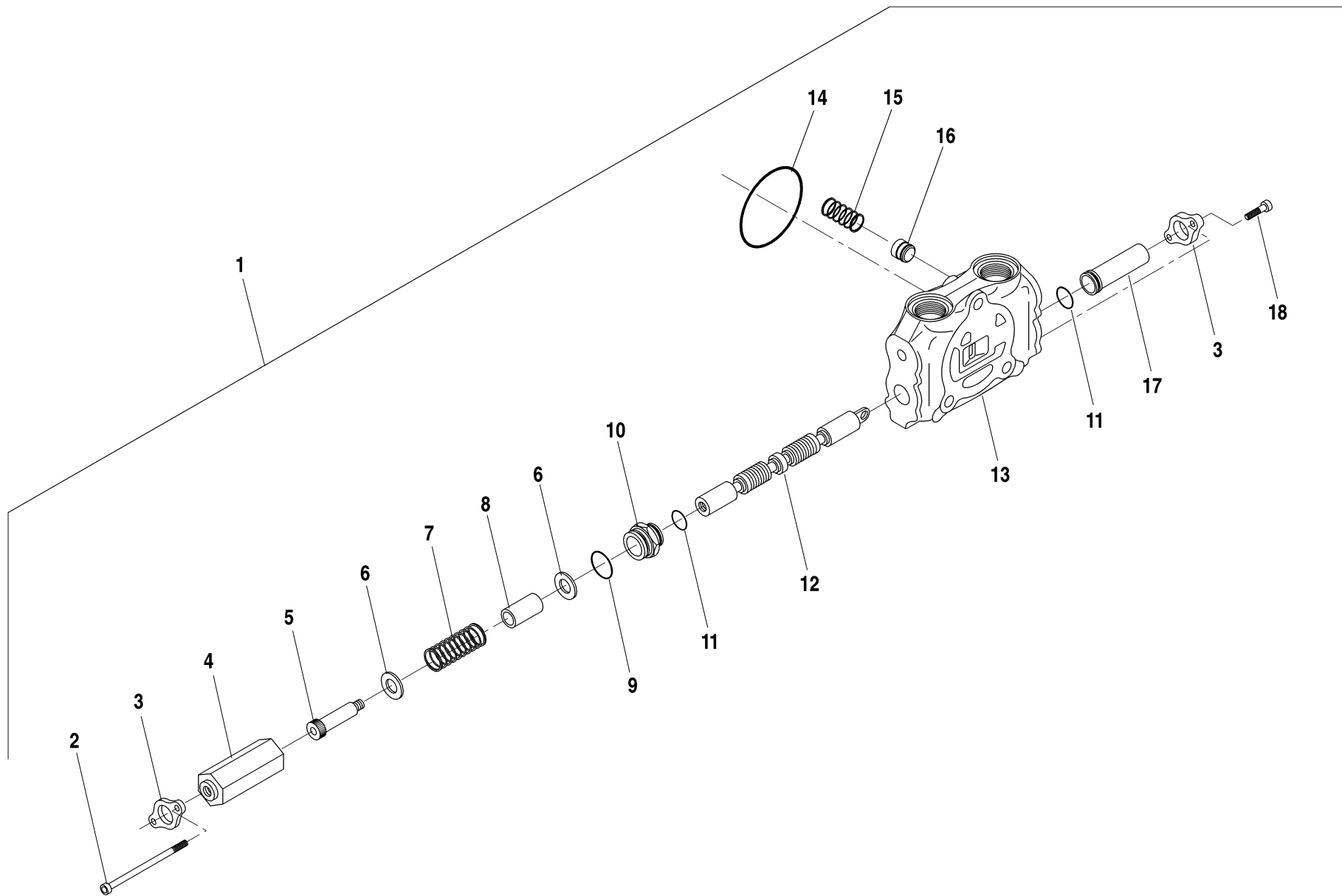


ITEM	PART NO.	QTY.	DESCRIPTION
1	67028B	1	6 Section Mid-Inlet Valve Assembly
2	P05029	1	Locknut, Hx., 1/2"-20 Grade C
3	37909X	1	Tie Rod, 1/2"-20
4	P05028	2	Locknut, Hx., 7/16"-20 Grade C
5	37910X	2	Tie Rod, 7/16"-20
6	37902X	1	Outlet Section
7	P91782	3	O-Ring
8	37908X	1	Valve Section Assembly - Boom Extension (See Page 6.6.1 for Breakdown)
9	37907X	1	Valve Section Assembly - Boom Hoist (See Page 6.6.1 for Breakdown)
10	37953X	2	Shut-Off Plug
11	37901X	1	Mid-Inlet Section
12	37952X	1	Relief Valve Assembly (See Page 6.10.1 for Breakdown)
13	37923X	①	O-Ring
14	37904X	3	Valve Section Assembly - Frame Tilt (See Page 6.7.1 for Breakdown)
15	37906X	1	Valve Section Assembly - Carriage Fork Tilt (See Page 6.8.1 for Breakdown)
16	37905X	2	Valve Section Assembly - Transfer/Auxilliary (See Page 6.7.1 for Breakdown)
17	P15447	1	O-Ring Plug, Hex
18	37951X	1	Relief Valve Assembly (See Page 6.9.1 for Breakdown)
19	37900X	1	Inlet Section
20	37919X	1	Tie Rod, 3/8"-24 (For 6 Section Valve)
21	P05027	1	Locknut, Hx., 3/8"-24 Grade C
22	37913X	2	Tie Rod, 5/16"-18 (For 6 Section Valve)
23	P05001	2	Locknut, Hx., 5/16"-18 Grade C

NOTES:

① 5 Required for 6 Section Valve.

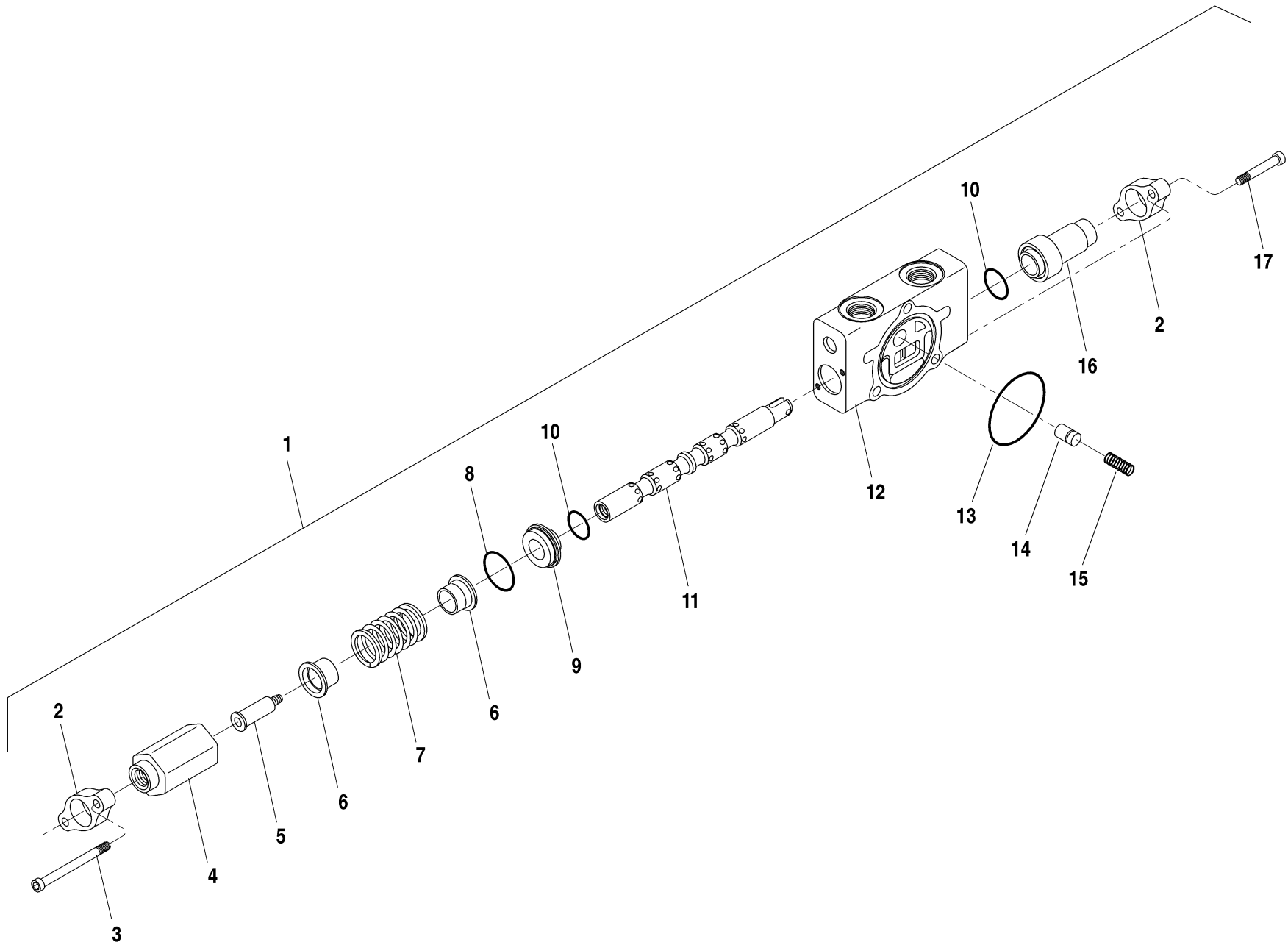
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ITEM	PART NO.	QTY.	DESCRIPTION
1	37907X	-	Valve Section Assembly - Boom Hoist
	37908X	-	Valve Section Assembly - Boom Extension
2	P01766	2	Capscrew, Socket Hd., 1/4"-20 x 4 1/2"
3	P32927	2	Retainer
4	P32929	1	Cap, Spool
5	P21701	1	Shoulder Bolt, Socket Hd., 1/2" Dia. x 2"
6	P91776	2	Washer, Flat
7	P91777	1	Spring
8	P91778	1	Spacer
9	P32931	1	O-Ring
10	P32930	1	Retainer, Spool Cap
11	P91781	2	O-Ring
12	N.S.S.	1	Spool
13	N.S.S.	1	Housing
14	P91782	1	O-Ring
15	P91783	1	Spring
16	P91784	1	Poppet
17	P32928	1	Cap, Spool
18	P01755	2	Capscrew, Socket Hd., 1/4"-20 x 1"

N.S.S. = Not Sold Separately

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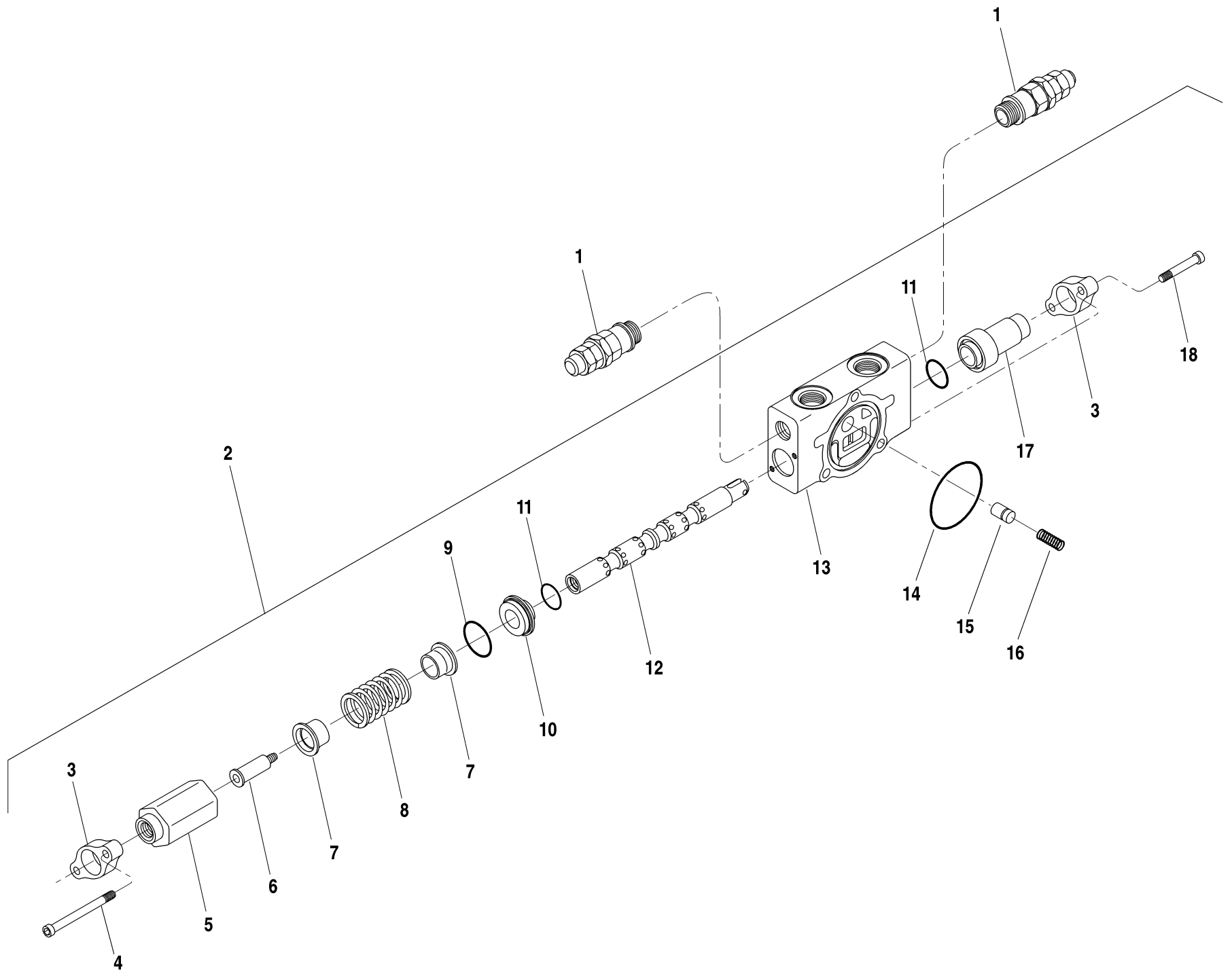


ITEM	PART NO.	QTY.	DESCRIPTION
1	37905X	-	Valve Section Assembly - Transfer/Auxiliary
	37904X	-	Valve Section Assembly - Frame Tilt/Outriggers
2	37962X	2	Plate, Seal
3	P01763	2	Capscrew, Socket Hd., 1/4"-20 x 3"
4	37960X	1	Cap, Spool
5	37964X	1	Spool End
6	37965X	2	Seat, Spring
7	37941X	1	Spring
8	37924X	1	O-Ring
9	37963X	1	Retainer, Spool Cap
10	37925X	2	O-Ring
11	N.S.S.	1	Spool
12	N.S.S.	1	Housing
13	37923X	1	O-Ring
14	37929X	1	Poppet
15	37937X	1	Spring
16	37961X	1	Cap, Spool
17	P01757	2	Capscrew, Socket Hd., 1/4"-20 x 1 1/2"

N.S.S. = Not Sold Separately

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**VALVE SECTION ASSEMBLY - Auxiliary/ Transfer/ Frame Tilt 6.7.1**

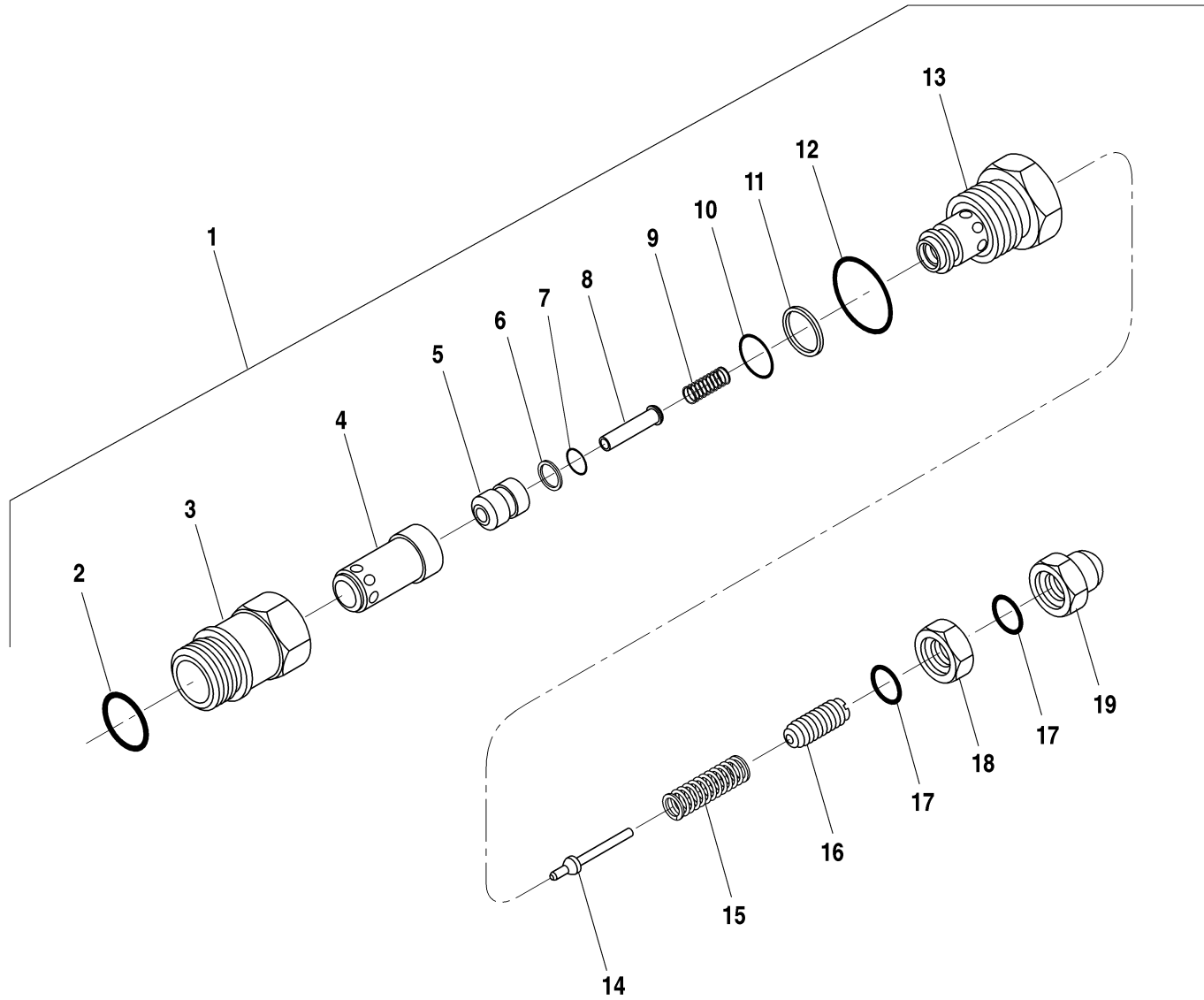




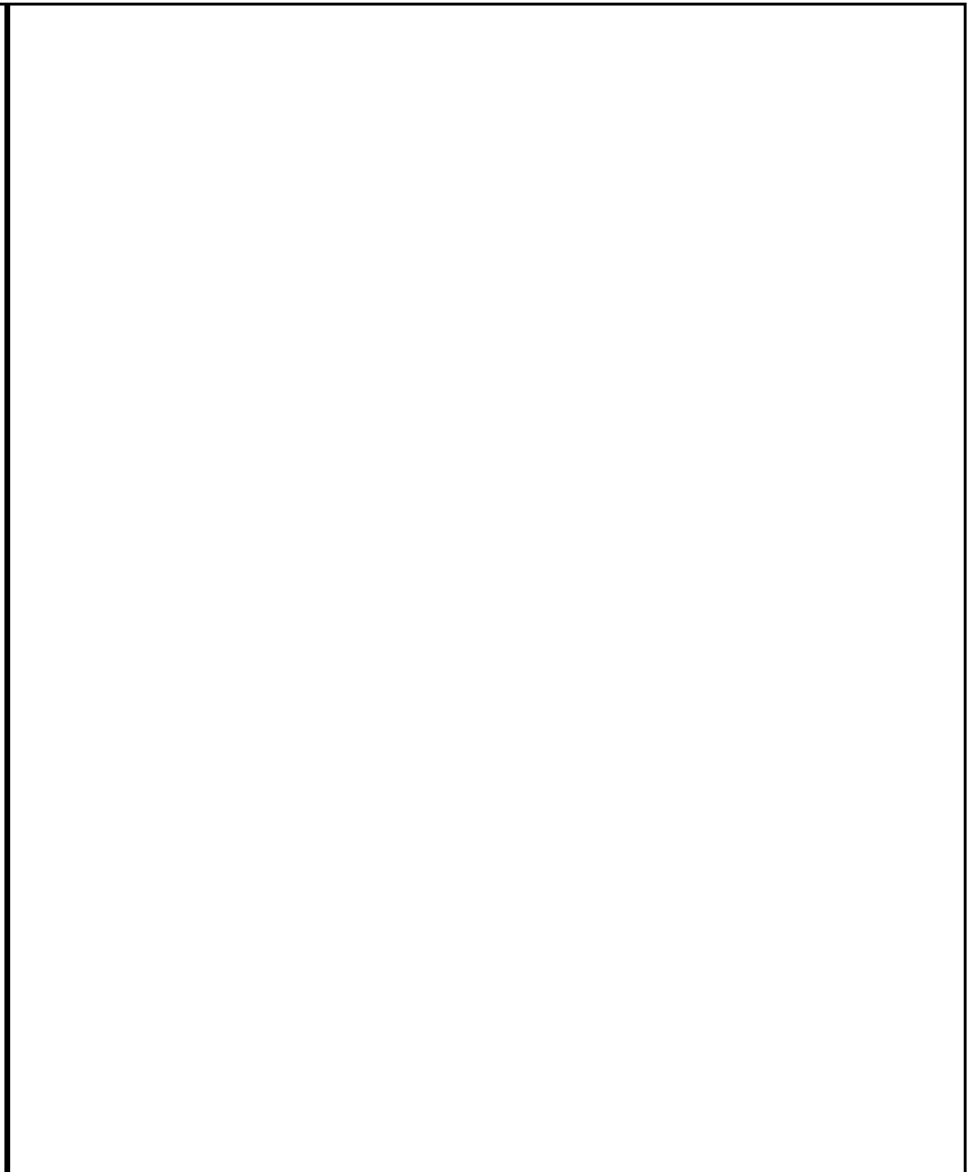
ITEM	PART NO.	QTY.	DESCRIPTION
1	37950X	2	Relief Valve Assembly (See Page 6.9.1 for Breakdown)
2	37906X	-	Valve Section Assembly - Carriage Fork Tilt (Includes Items 3 - 18)
3	37962X	2	Plate, Seal
4	P01763	2	Capscrew, Socket Hd., 1/4"-20 x 3"
5	37960X	1	Cap, Spool
6	37964X	1	Spool End
7	37965X	2	Seat, Spring
8	37941X	1	Spring
9	37924X	1	O-Ring
10	37963X	1	Retainer, Spool Cap
11	37925X	2	O-Ring
12	N.S.S.	1	Spool
13	N.S.S.	1	Housing
14	37923X	1	O-Ring
15	37929X	1	Poppet
16	37937X	1	Spring
17	37961X	1	Cap, Spool
18	P01757	2	Capscrew, Socket Hd., 1/4"-20 x 1 1/2"

N.S.S. = Not Sold Separately

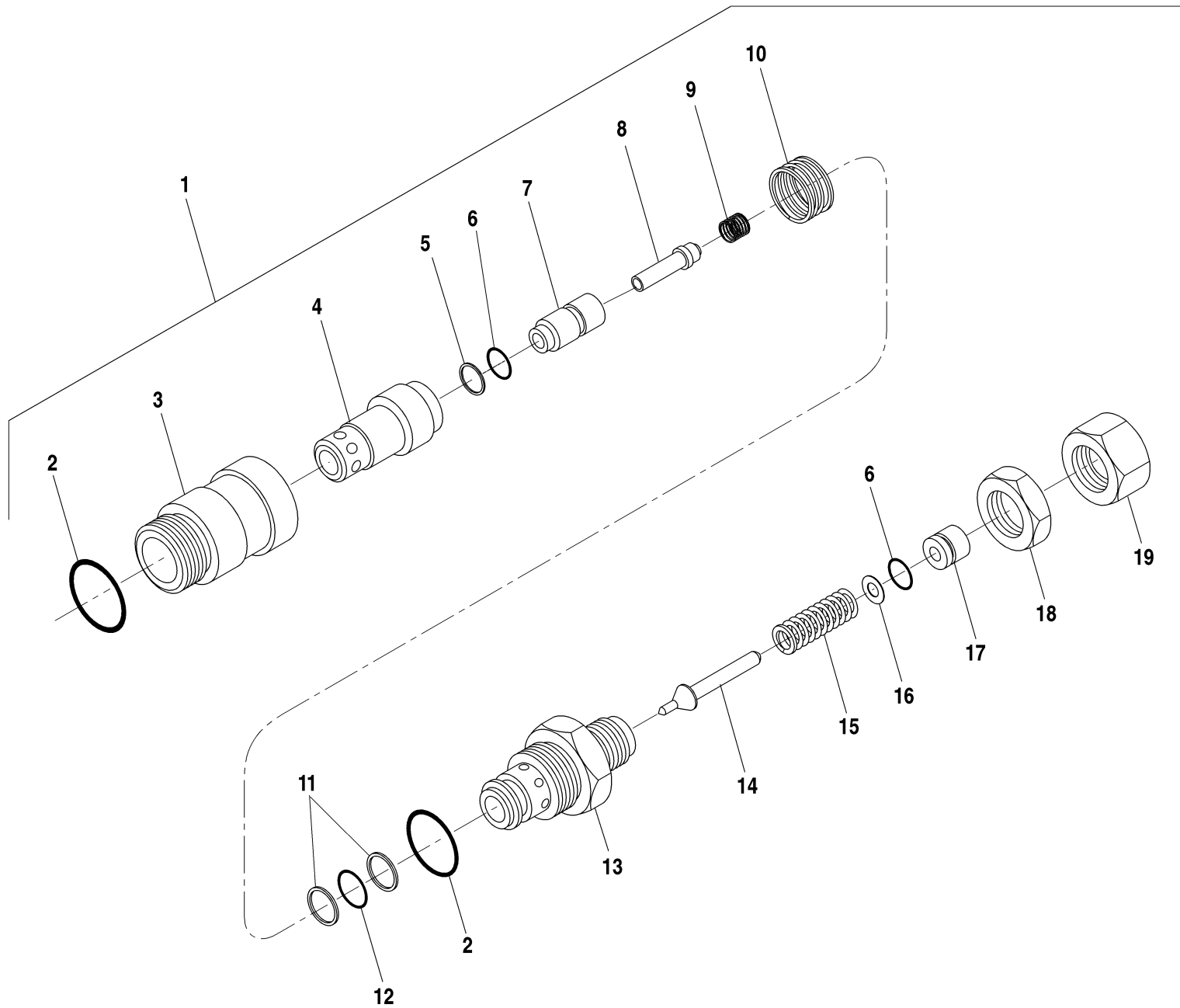
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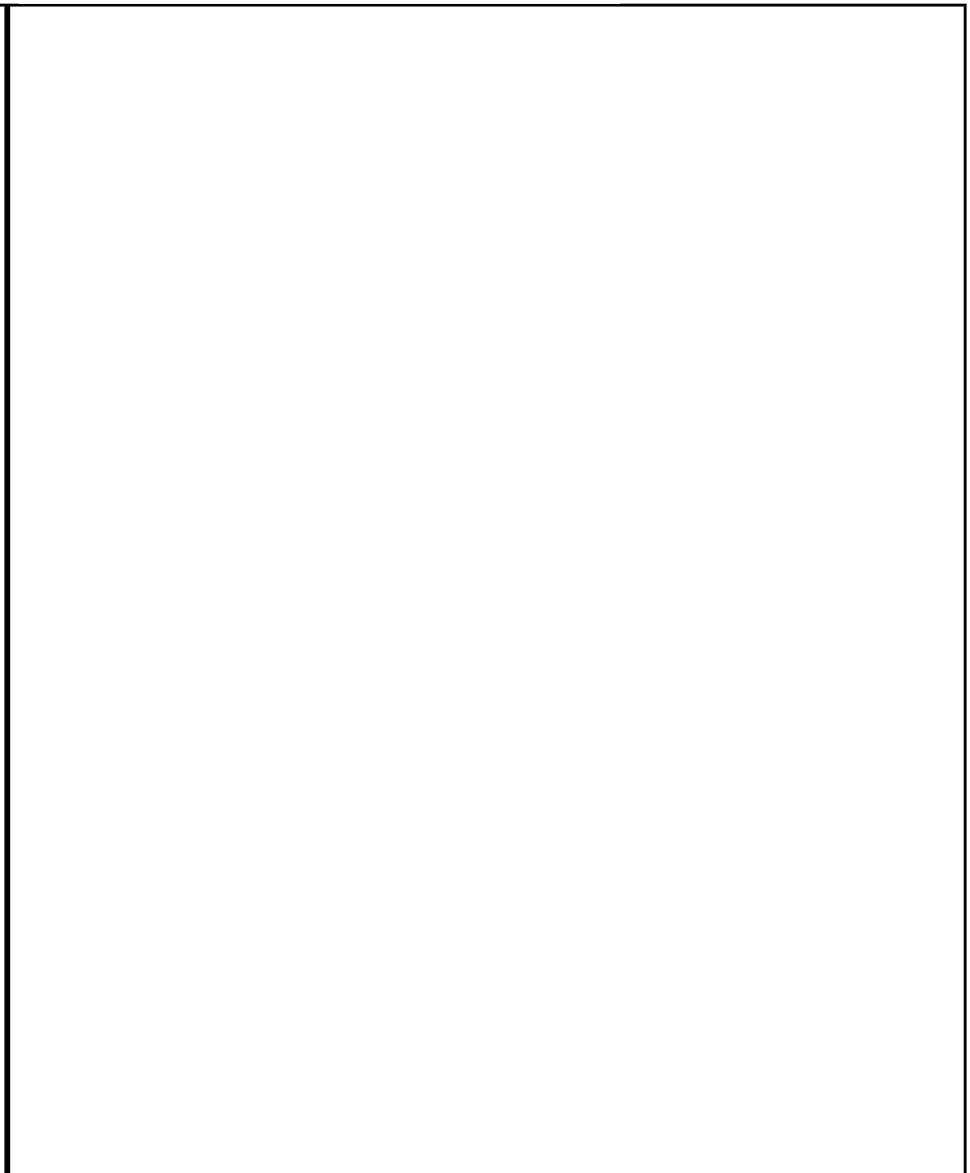
ITEM	PART NO.	QTY.	DESCRIPTION
1	37950X	2	Relief Valve Assembly - 2800 P.S.I.
	37951X	1	Relief Valve Assembly - 3150 P.S.I.
2	37928X	1	O-Ring
3	37946X	1	Body
4	37932X	1	Poppet
5	37931X	1	Poppet
6	37944X	1	Back-up Ring
7	37926X	1	O-Ring
8	37947X	1	Piston
9	37938X	1	Spring
10	P91796	1	O-Ring
11	37943X	1	Back-up Ring
12	37927X	1	O-Ring
13	37945X	1	Plug
14	37930X	1	Poppet
15	37936X	1	Spring
16	37942X	1	Screw, Adjustment
17	P91805	2	O-Ring
18	P91806	1	Nut, Special
19	P91807	1	Nut, Special
REF	37948X	1	Seal and Spring Kit (Includes Items 2, 6, 7, 9, 10, 11, 12, 15, 17)



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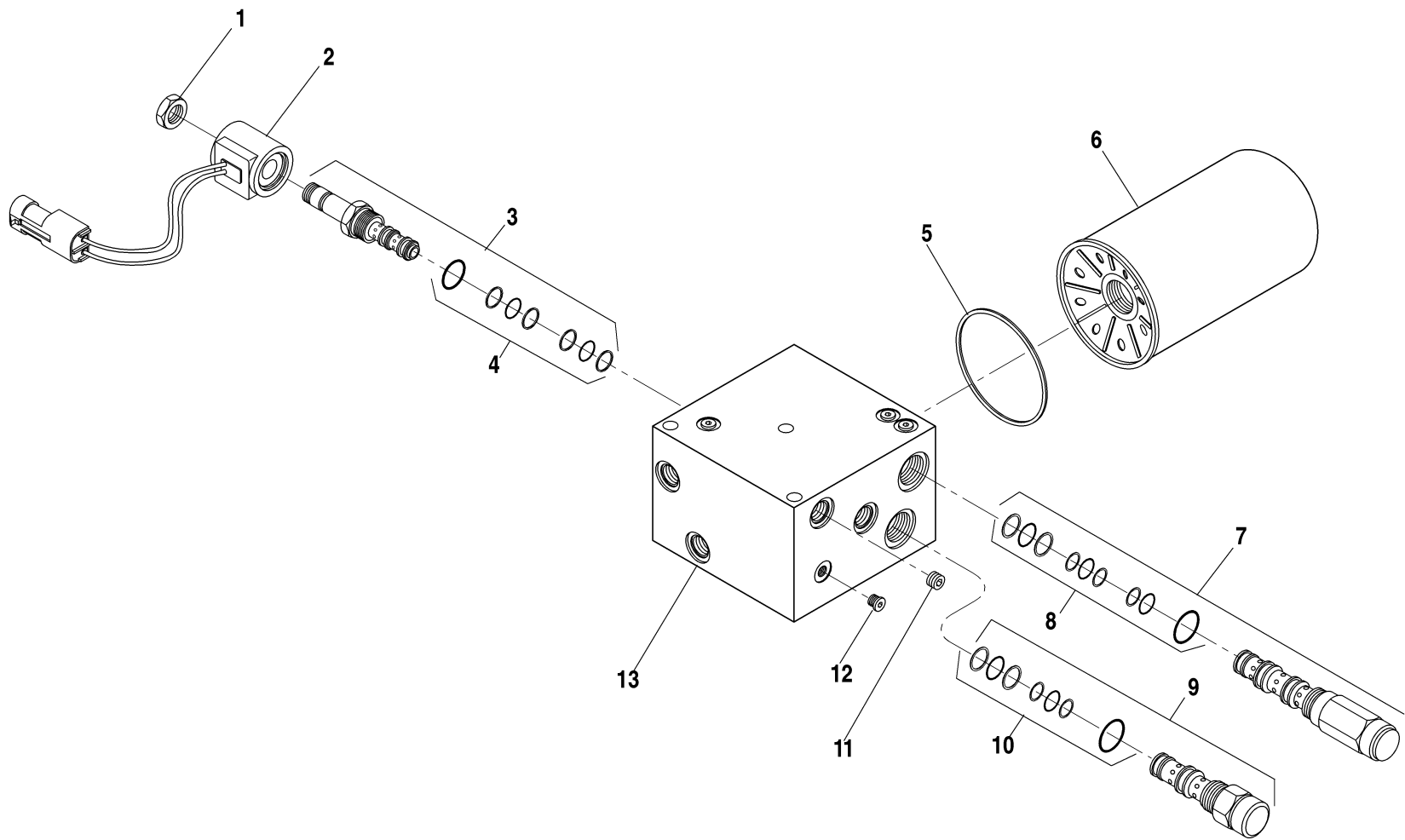
ITEM	PART NO.	QTY.	DESCRIPTION
1	37952X	1	Relief Valve Assembly
2	P91791	2	O-Ring
3	P91792	1	Body
4	37935X	1	Poppet
5	P91795	1	Back-up Ring
6	P91796	2	O-Ring
7	37933X	1	Poppet
8	37957X	1	Piston
9	P91798	1	Spring
10	37940X	1	Spring
11	P91800	1	Back-up Ring
12	P91799	1	O-Ring
13	37958X	1	Plug
14	37934X	1	Poppet
15	37939X	1	Spring
16	37959X	A/R	Shim
17	37954X	1	Plug, Adjustment
18	37956X	1	Nut, Special
19	37955X	1	Nut, Special
REF	37949X	1	Seal and Spring Kit (Includes Items 2, 5, 6, 9, 10, 11, 12, 15)



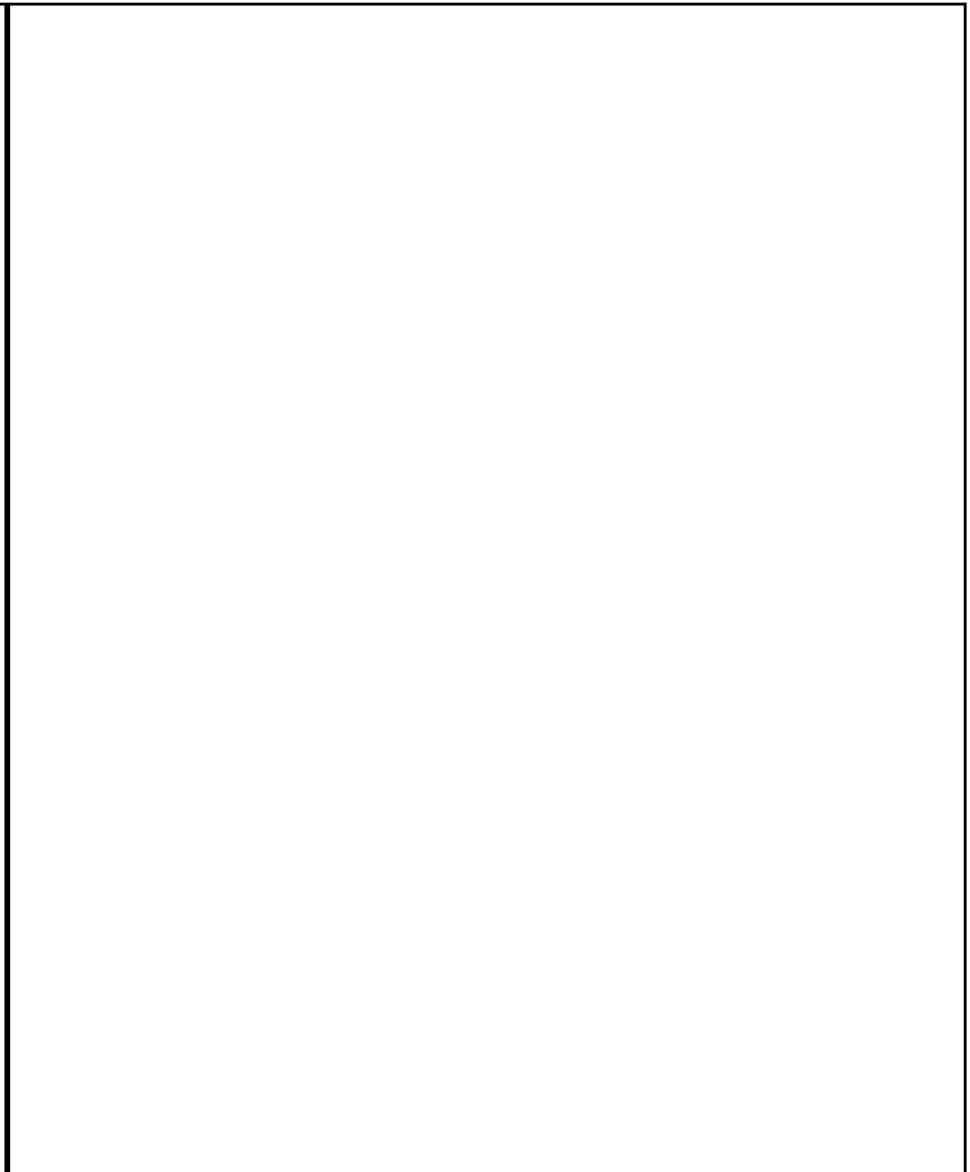
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**RELIEF VALVE ASSEMBLY - MID INLET 6.10.1**





ITEM	PART NO.	QTY.	DESCRIPTION
1	P40662	1	Nut
2	38329A	1	Coil Assembly
3	37352X	1	Solenoid Valve
4	37355X	1	Seal Kit
5	1100331	1	Seal, Filter
6	67527X	1	Filter Element, Spin On
7	37002X	1	Valve Pressure Reducing
8	37003X	1	Seal Kit
9	37004X	1	Valve, Piloted, 3-Way
10	37005X	1	Seal Kit
11	67528X	1	Orifice Plug
12	P27931	5	Hex Plug, Hollow SAE #2
13	N.S.S.	-	Filter Block Assembly



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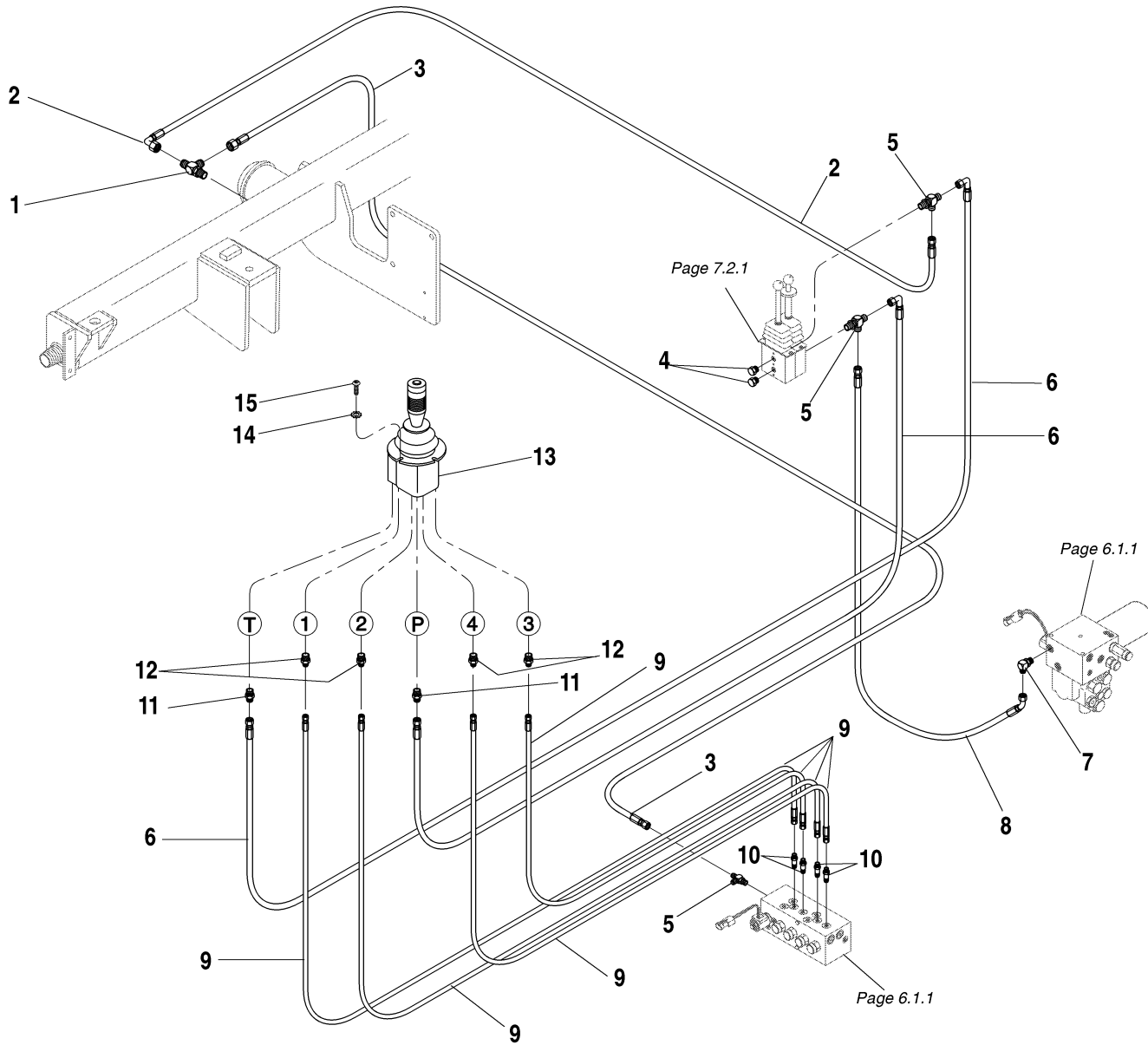
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## Section 7 — Control Hydraulics

Joystick Control Hydraulic Circuit . . . . .	7.1.1
Frame Tilt & Auxilliary Hydraulic Circuit . . . . .	7.2.1
Test Port Hydraulics Circuit. . . . .	7.3.1
Joystick Control Valve Assembly . . . . .	7.4.1
Frame Tilt Control Valve Assembly. . . . .	7.5.1
Auxilliary Control Valve Assembly. . . . .	7.6.1
Frame Tilt Cylinder Assembly . . . . .	7.7.1

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ITEM	PART NO.	QTY.	DESCRIPTION
1	P21219	1	Adapter, Tee
2	66737X	1	Hyd. Hose, 3/8" x 38"
3	P29768	1	Hyd. Hose, 3/8" x 16"
4	P25691	2	Plug, O-Ring
5	P21914	3	Tee, Run, O-Ring
6	P33059	2	Hyd. Hose, 1/4" x 22"
7	P18935	1	90° Elbow, O-Ring
8	P29195	1	Hyd. Hose, 3/8" x 22"
9	37874X	4	Hyd. Hose, 3/8" x 23"
10	P28146	4	Connector, O-Ring (Long)
11	P18936	2	Connector, O-Ring
12	P24612	2	Connector, O-Ring
13	65474B	1	Joystick Control Valve (See Page 7.4.1 for Breakdown)
14	P01357	4	Starwasher, 1/4" External
15	P03196	4	Capscrew, Button Hd. Socket, 1/4"-20 x 3/4"

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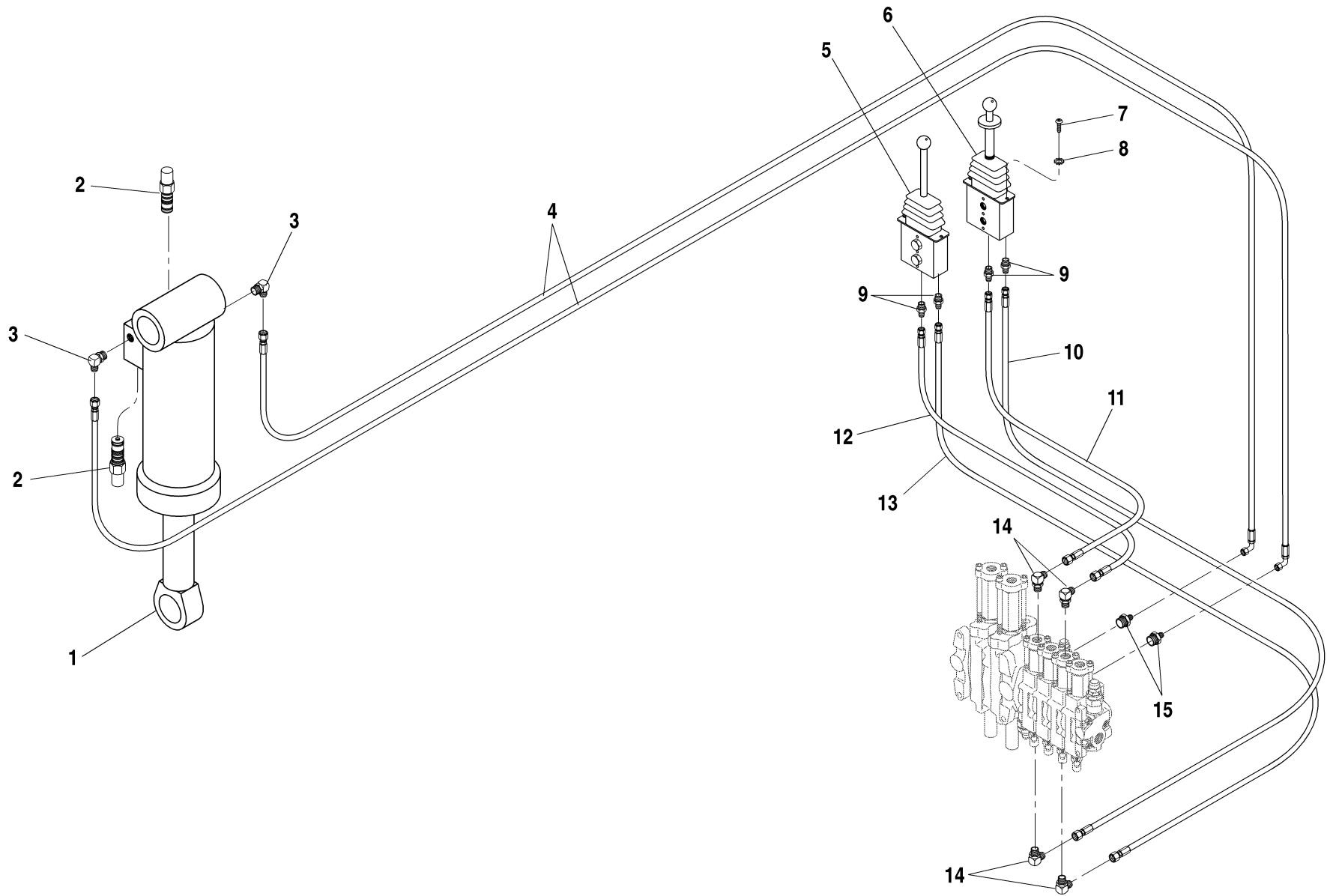
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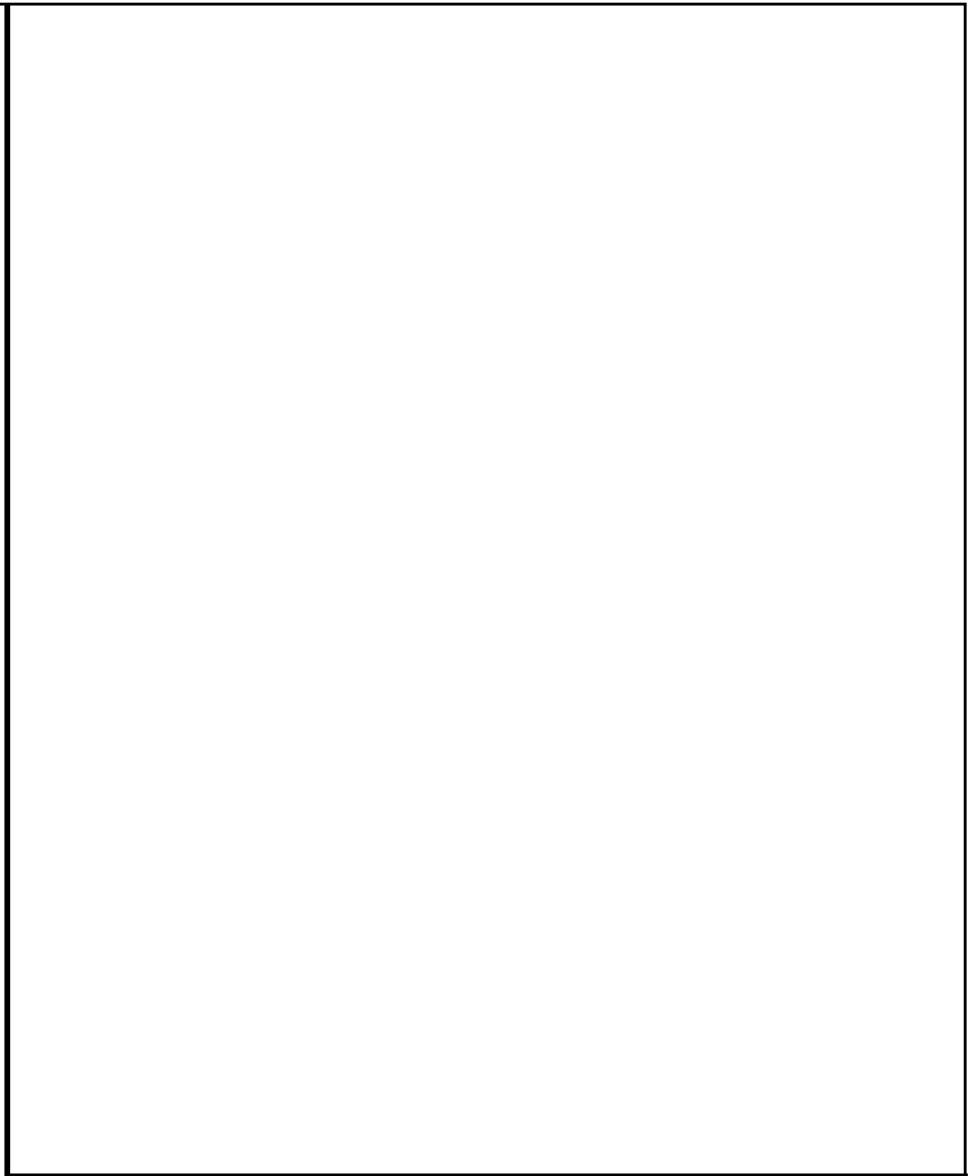
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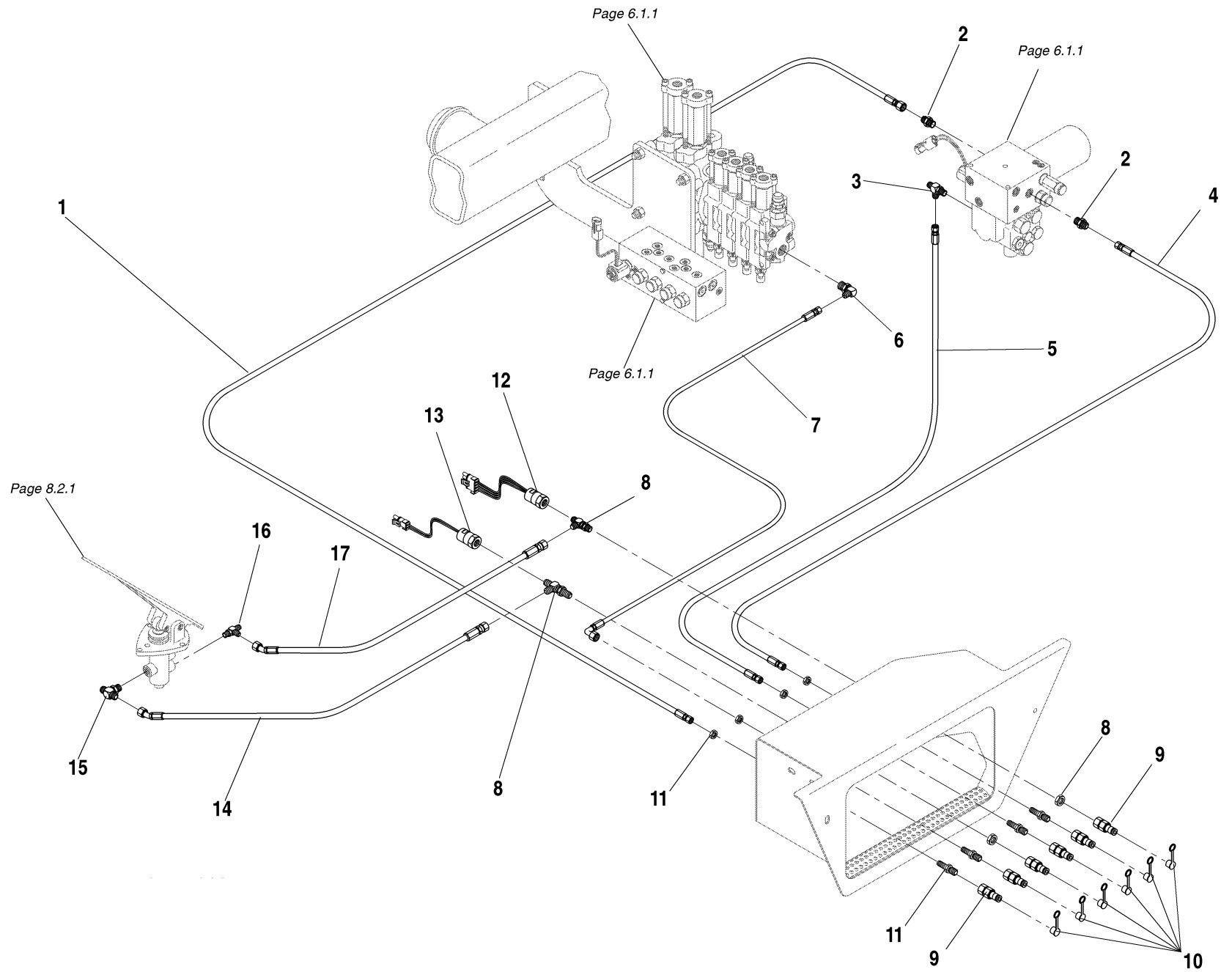
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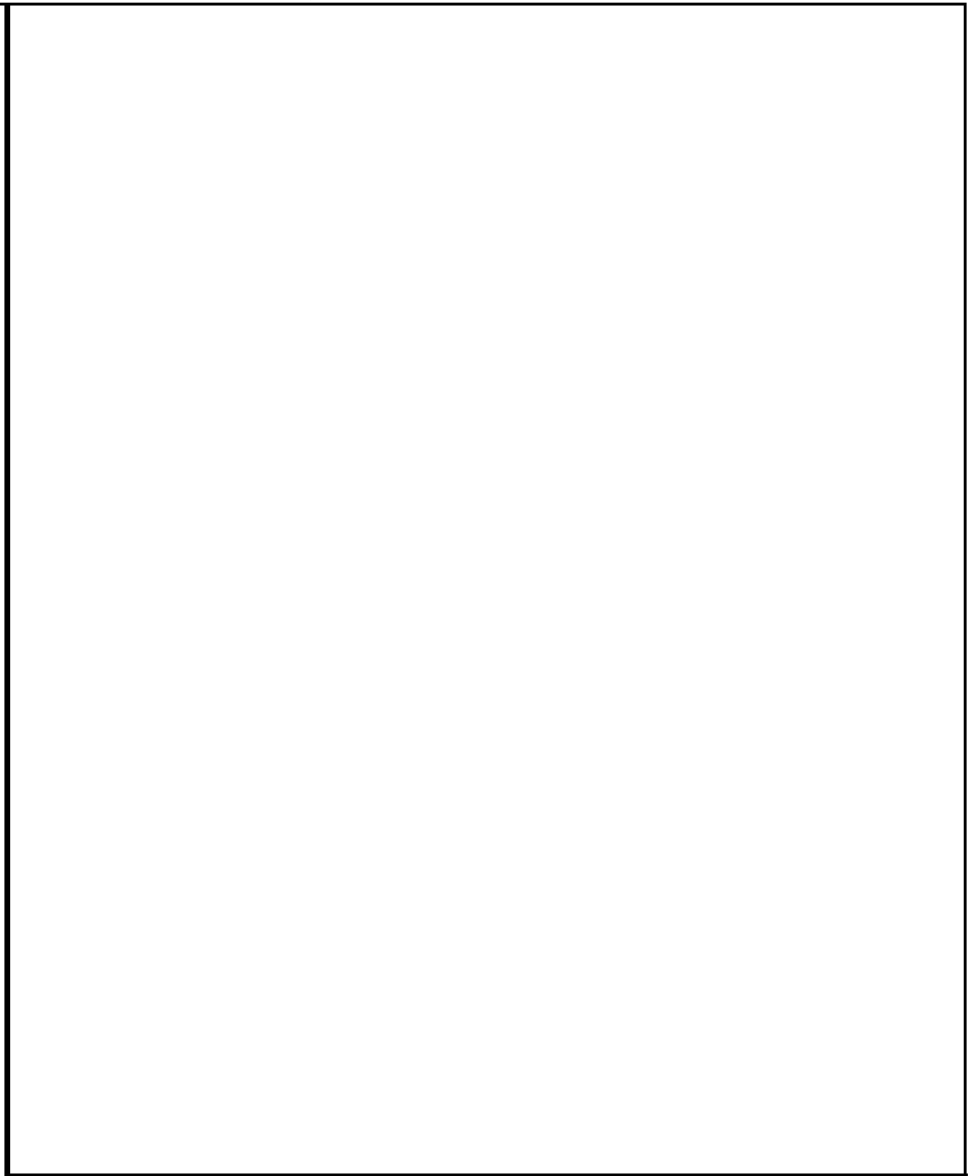
ITEM	PART NO.	QTY.	DESCRIPTION
1	65213B	1	Cylinder, Frame Tilt (See Page 7.7.1 for Breakdown)
2	P29947	2	Cartridge, Counterbalance Valve
REF	P40490	-	Seal Kit for Item 2
3	P19724	2	90° Elbow
4	37877X	2	Hyd. Hose, 1/4" x 125"
5	65848B	1	Control Valve, Auxillary (See Page 7.6.1 for Breakdown)
6	P31443	1	Control Valve, Frame Tilt (See Page 7.5.1 for Breakdown)
7	P03196	4	Capscrew, Button Hd. Socket, 1/4"-20 x 3/4"
8	P01357	4	Starwasher, 1/4" External
9	P24612	4	Connector, O-Ring
10	37875X	1	Hyd. Hose, 1/4" x 28"
11	P25852	1	Hyd. Hose, 1/4" x 19"
12	37876X	1	Hyd. Hose, 1/4" x 21"
13	P29152	1	Hyd. Hose, 1/4" x 30"
14	P18935	4	90° Elbow, O-Ring
15	P25697	2	Connector, O-Ring



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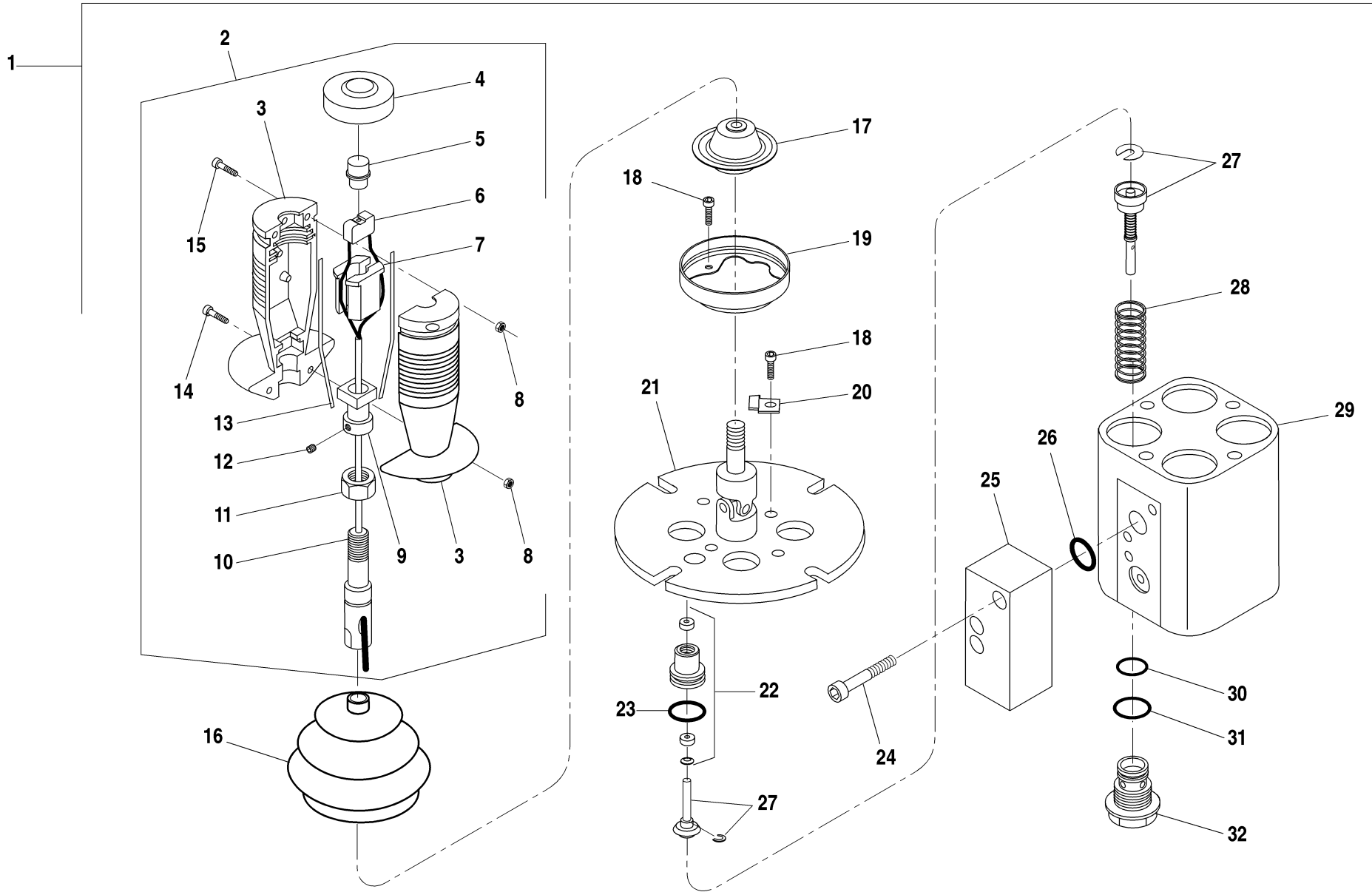
ITEM	PART NO.	QTY.	DESCRIPTION
1	P25861	1	Hyd. Hose, 1/4" x 41"
2	P18936	1	Connector, O-Ring
3	P26604	1	Run, Tee
4	66733X	1	Hyd. Hose, 1/4" x 26"
5	P27164	1	Hyd. Hose, 1/4" x 19"
6	P24609	1	90° Elbow
7	P26625	1	Hyd. Hose, 1/4" x 22"
8	P25302	2	Tee, Bulkhead
9	P27374	8	End Tube, Nipple
10	P27805	8	Dust Cap
11	P18948	4	Connector, Bulkhead
12	66680A	1	Switch, Pressure-D.P.S.T. Normally Closed, 850 P.S.I Low Brake Pressure
13	66679A	1	Switch, Pressure-S.P.S.T. Normally Open, 250 P.S.I Brake Pressure
	67062A	-	Switch, Pressure-S.P.S.T. Normally Open, 250 P.S.I Use w/ Roadway Lights
14	66731X	1	Hyd. Hose, 3/8" x 15"
15	P18985		Tee, Branch O-Ring
16	P21918		Tee, O-Ring
17	P25872	1	Hyd. Hose, 3/8" x 23"



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**TESTPORT HYDRAULIC CIRCUIT 7.3.1**

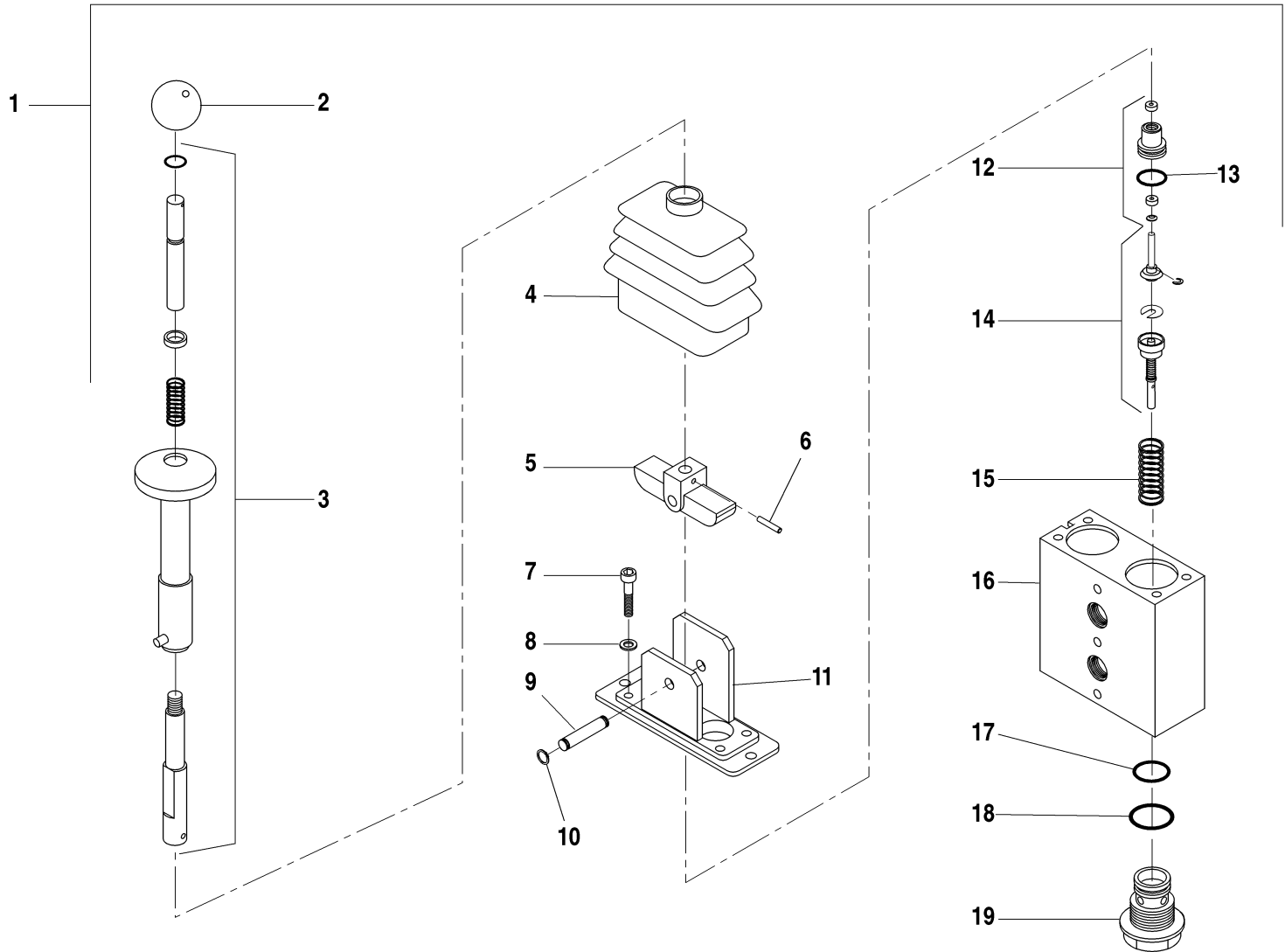






ITEM	PART NO.	QTY.	DESCRIPTION
1	65474B	1	Joystick Control Valve
2	P32693	1	Handle Assembly (Includes Items 3–15)
3	P33095	2	Handle, Half
4	P31489	1	Cap
5	P32206	1	Button, Push
6	P31598	1	Switch
7	N.S.S.	2	Guide
8	①N.S.S.	4	Nut
9	N.S.S.	1	Lever Joint
10	N.S.S.	1	Stem
11	①N.S.S.	1	Locknut
12	①N.S.S.	1	Setscrew
13	N.S.S.	2	Seal
14	①N.S.S.	2	Capscrew, Socket Hd.
15	①N.S.S.	2	Capscrew, Socket Hd.
16	P31477	1	Boot
17	P33094	1	Cam
18	P31472	6	Capscrew, Socket Hd.
19	P32204	1	Retainer
20	P32205	4	Clip
21	P31473	1	Flange
22	P31462	4	Guide Assembly
23	②N.S.S.	1	O-Ring
24	P31475	3	Capscrew, Socket Hd.
25	P32203	1	Manifold
26	②N.S.S.	1	O-Ring
27	P32201	1	Spring Pack
28	P32215	4	Spring
29	N.S.S.	1	Body
30	②N.S.S.	4	O-Ring
31	②N.S.S.	4	O-Ring
32	P32202	4	Ported Guide
REF	P31487	1	Hardware Kit, Joystick Handle (Includes items 8, 11, 12, 14, 15)

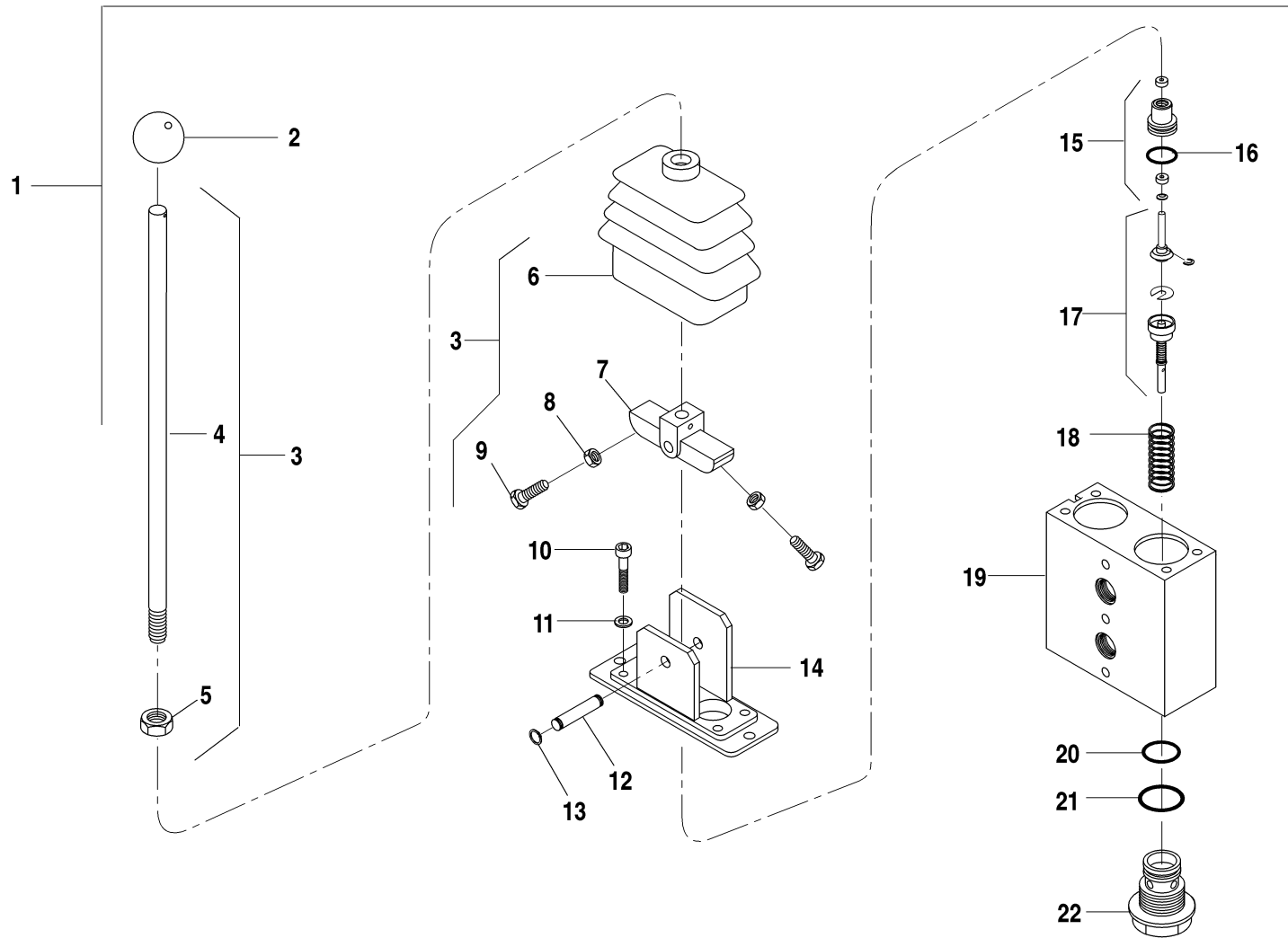
ITEM	PART NO.	QTY.	DESCRIPTION
REF	P32578	1	Seal Kit (Includes Items 23, 26, 30, 31)
<p>NOTES:</p> <p>① Available in Hardware Kit P31487.</p> <p>② Available in Seal Kit P32578.</p> <p style="text-align: center;">N.S.S. = Not Sold Separately</p>			
644D-34 S/N 108-			



ITEM	PART NO.	QTY.	DESCRIPTION
1	P31443	1	Frame Tilt Control Valve Assembly
2	P32543	1	Knob
3	P32545	1	Lever Assembly
4	P32544	1	Boot, Rubber
5	P32546	1	Cam (Includes Item 6)
6	P32547	1	Pin
7	P32548	4	Capscrew
8	P32549	4	Washer
9	P31463	1	Pivot Pin (Includes Item 10)
10	P31464	2	Circlip
11	P32209	1	Flange
12	P31462	2	Guide Assembly
13	N.S.S.	1	O-Ring
14	P32201	2	Spring Pack
15	P31474	2	Spring
16	N.S.S.	1	Body
17	N.S.S.	2	O-Ring
18	N.S.S.	2	O-Ring
19	P32202	2	Ported Guide
REF	P33168	1	Seal Kit (Includes Items 13, 17, 18)

N.S.S. = Not Sold Separately

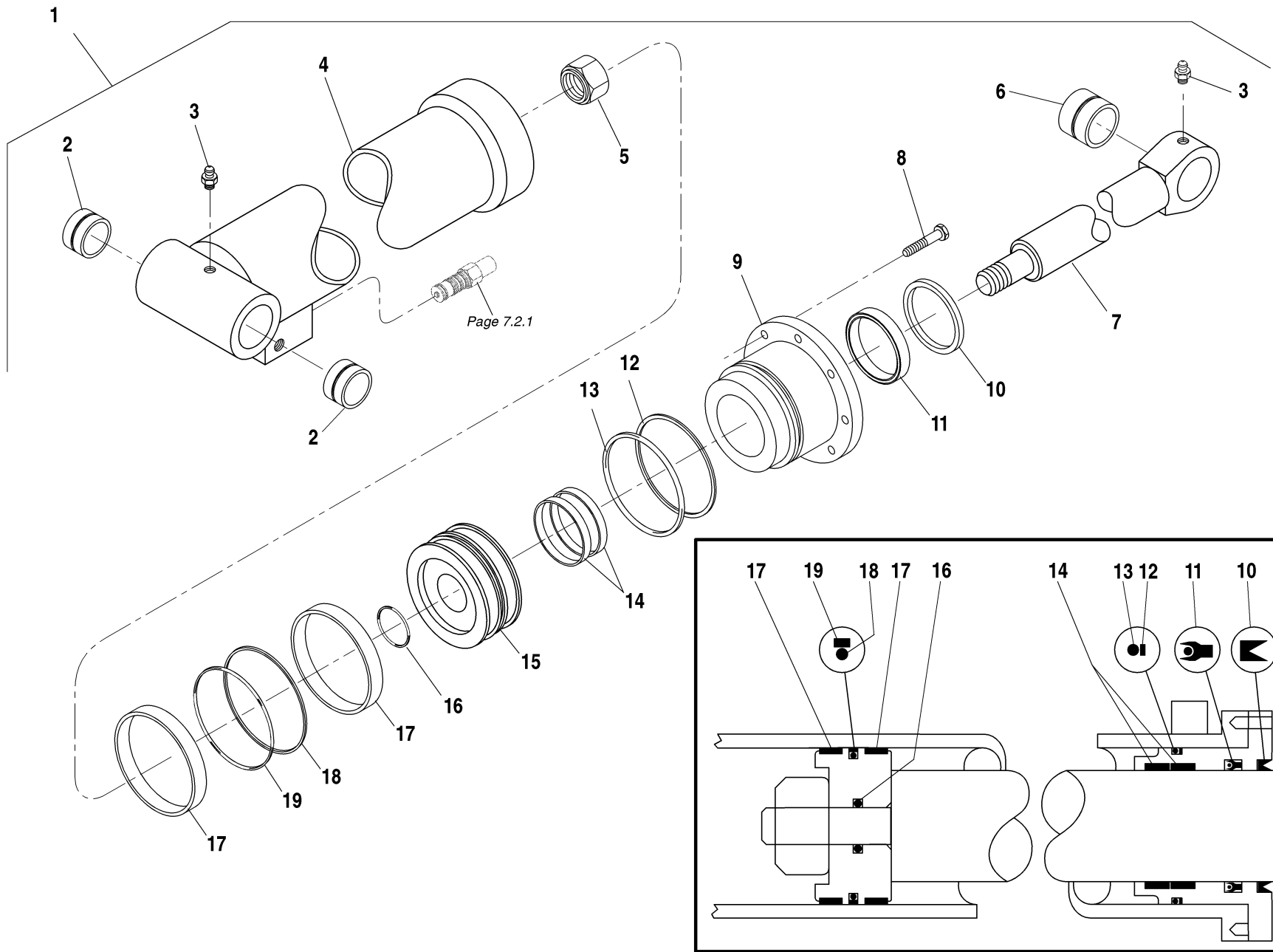
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ITEM	PART NO.	QTY.	DESCRIPTION
1	P31444	2	Auxilliary Control Valve Assembly
2	P32543	1	Knob
3	P32207	1	Lever Kit (Includes Items 4-9)
4	P32211	1	Lever
5	P32212	1	Nut, Metric
6	P32544	1	Boot, Rubber
7	P32208	1	Cam
8	P32213	2	Jam Nut, Metric
9	P32214	2	Capscrew
10	P32548	4	Capscrew, Socket Hd.
11	P32549	4	Washer
12	P31463	1	Pivot Pin (Includes Item 10)
13	P31464	2	Circlip
14	P32210	1	Flange
15	P31462	1	Guide Assembly
16	N.S.S.	1	O-Ring
17	P32201	1	Spring Pack
18	P32215	1	Spring
19	N.S.S.	1	Body
20	N.S.S.	1	O-Ring
21	N.S.S.	1	O-Ring
22	P32202	1	Ported Guide
REF	P33168		Seal Kit (Includes Items 16, 20 & 21)

N.S.S. = Not Sold Separately

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ITEM	PART NO.	QTY.	DESCRIPTION
1	65213A	1	Cylinder Assembly, Frame Tilt
2	16228A	2	Bushing
3	P16611	2	Grease Fitting
4	68353X	1	Barrel Weldment
5	P40460	1	Nut, Crownlock
6	P25911	1	Bushing
7	68354X	1	Rod Weldment
8	68356X	8	Capscrew, Hx.,
9	68355X	1	Head, Rod Bearing
10	N.S.S	1	*Wiper
11	N.S.S	1	*Seal
12	N.S.S	1	*Back-Up Ring
13	N.S.S	1	*O-Ring
14	N.S.S	2	*Wear Ring
15	P29878	1	Piston
16	N.S.S	1	*O-Ring
17	N.S.S	2	*Wear Ring
18	N.S.S	1	*O-Ring
19	N.S.S	1	*Piston Seal
Ref	P30653	1	Seal Kit

NOTES:

\* Items Included in Seal Kit.

N.S.S. = Not Sold Separately

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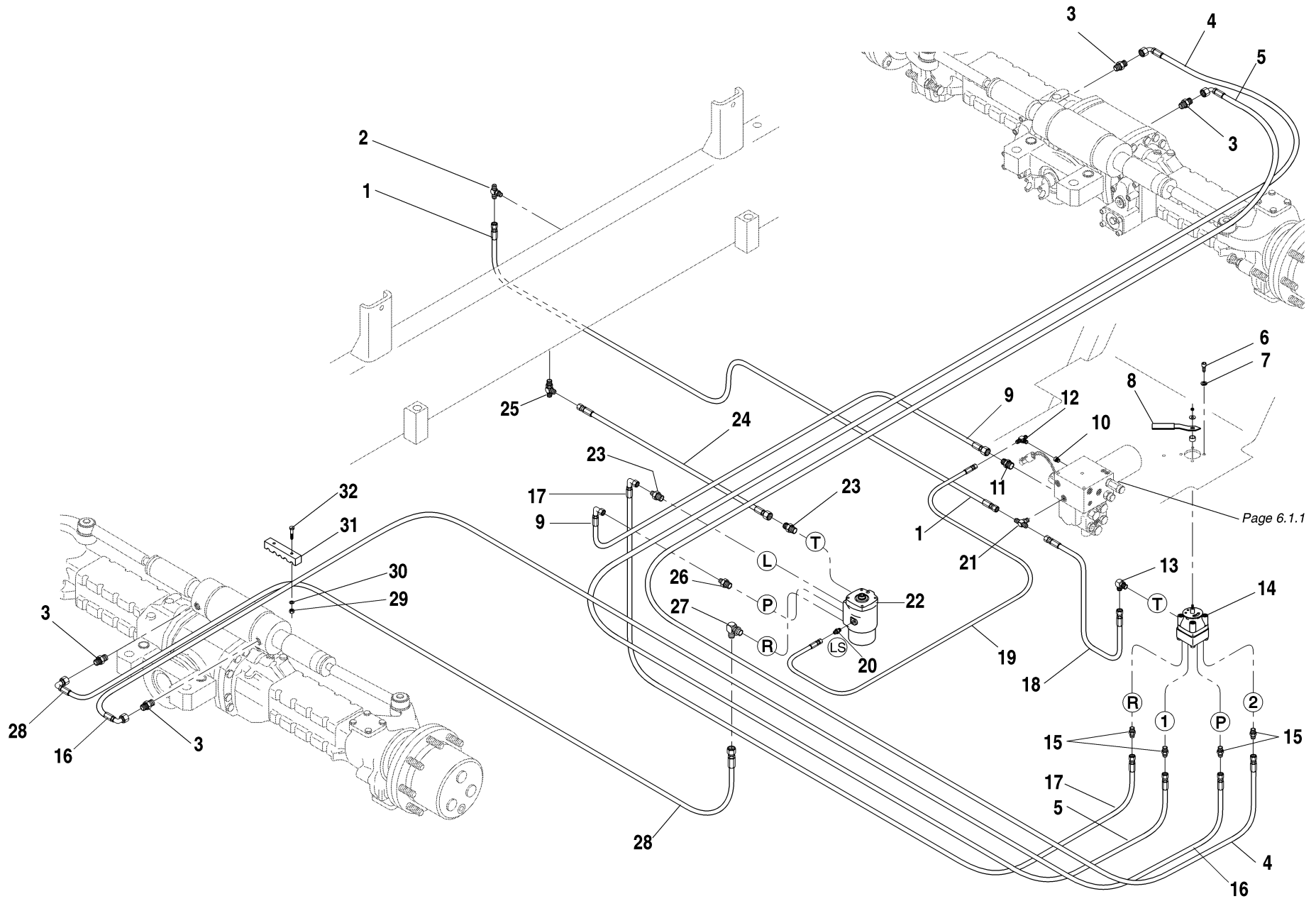
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**Section 8 — Steering and Brake Hydraulics**

Steering Hydraulic Circuit . . . . . 8.1.1  
Service Brake Hydraulic Circuit. . . . . 8.2.1  
Service Brake Valve Assembly . . . . . 8.3.1  
Park Brake Hydraulic Circuit . . . . . 8.4.1  
Accumulator Assembly . . . . . 8.5.1

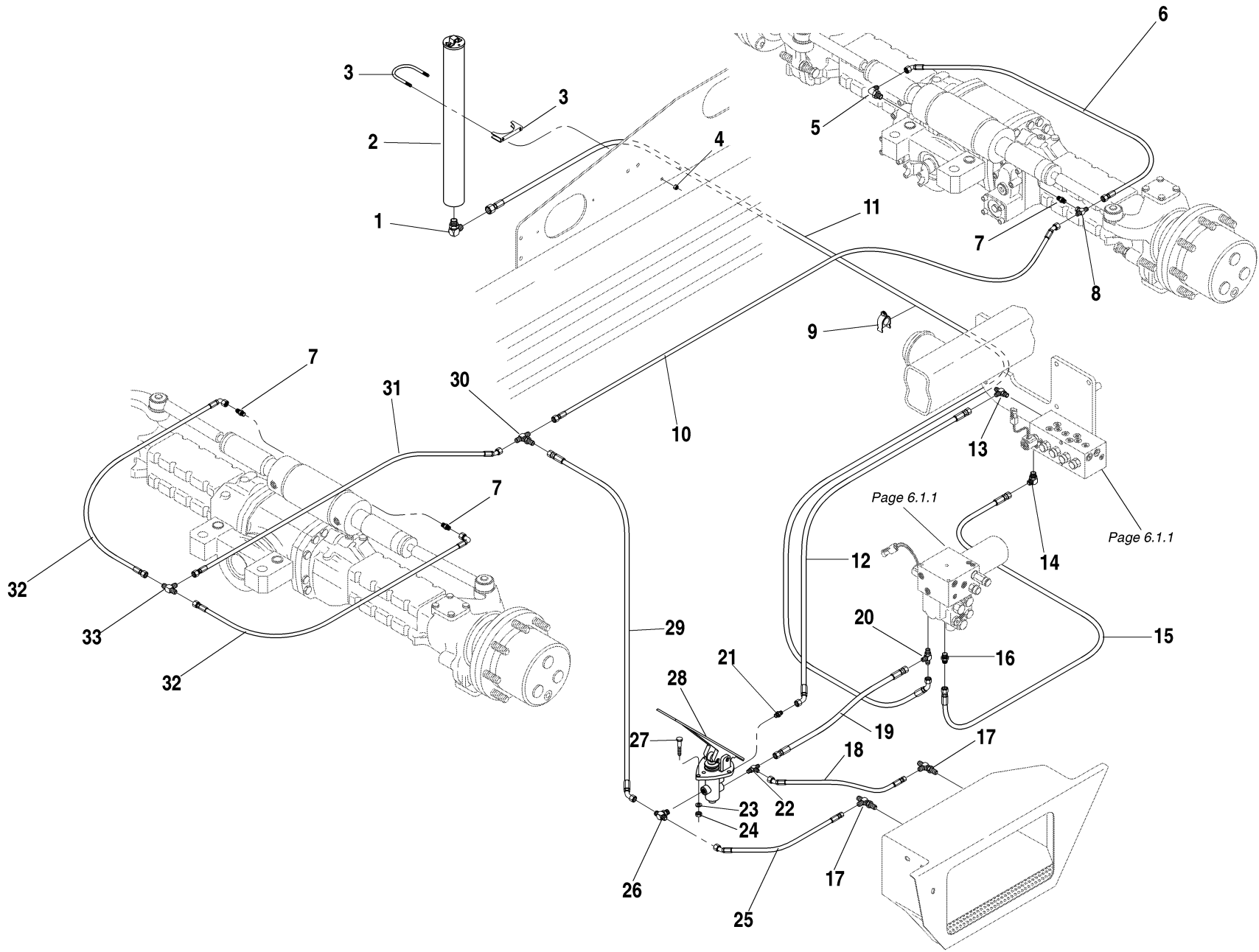
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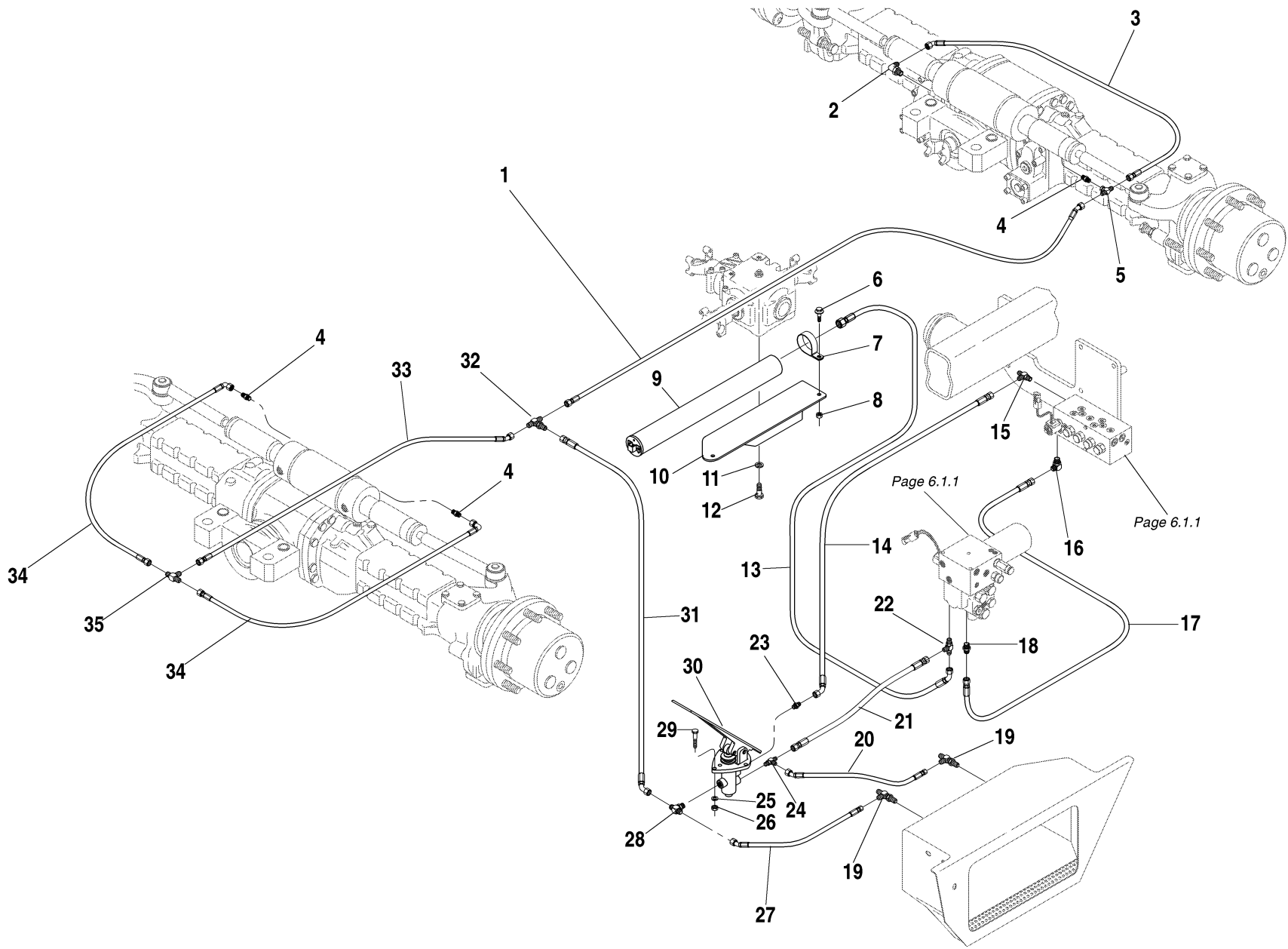
ITEM	PART NO.	QTY.	DESCRIPTION
1	P25213	1	Hyd. Hose, 3/8" x 44"
2	P21219	1	Adapter, Tee
3	37713X	4	Adapter, Straight, Male JIC to Male Metric
4	37829X	1	Hyd. Hose, 3/8" x 128"
5	P18894	1	Hyd. Hose, 3/8" x 118"
6	P01816	4	Capscrew, Socket Hd., 3/8"-16 x 3/4"
7	P01310	4	Lockwasher, 3/8"
8	P18085	1	Handle, Steering Selector
9	66739X	1	Hyd. Hose, 3/8" x 71"
10	67528X	1	Orifice Plug
11	P15406	1	Adapter
12	P18936	1	Adapter
13	P18935	1	90° Elbow
14	P29100	1	Valve, Steering Selector
15	P18936	4	Connector, O-Ring
16	37885X	1	Hyd. Hose, 3/8" x 113"
17	66738X	1	Hyd. Hose, 3/8" x 92"
18	P29968	1	Hyd. Hose, 3/8" x 16"
19	P29273	1	Hyd. Hose, 3/8" x 68"
20	P18960	1	Adapter, Str
21	P18958	1	Adapter, Tee
22	39751B	1	Steer Motor
REF	P92396	1	Seal Kit, Steer Motor
23	37053X	2	Connector, O-Ring
24	66740X	1	Hyd. Hose, 3/8" x 83"
25	P21219	1	Tee
26	P19414	1	Check Valve
27	P18965	1	Adapter,90° Elbow
28	P33126	1	Hyd. Hose, 3/8" x 143"
29	P01506	2	Nut, Hx., 1/4"-20
30	P01308	2	Lockwasher 1/4"
31	66372X	1	Hose Clamp, Multiple
32	P00013	2	Capscrew, Hx., 1/4"-20 x 3"

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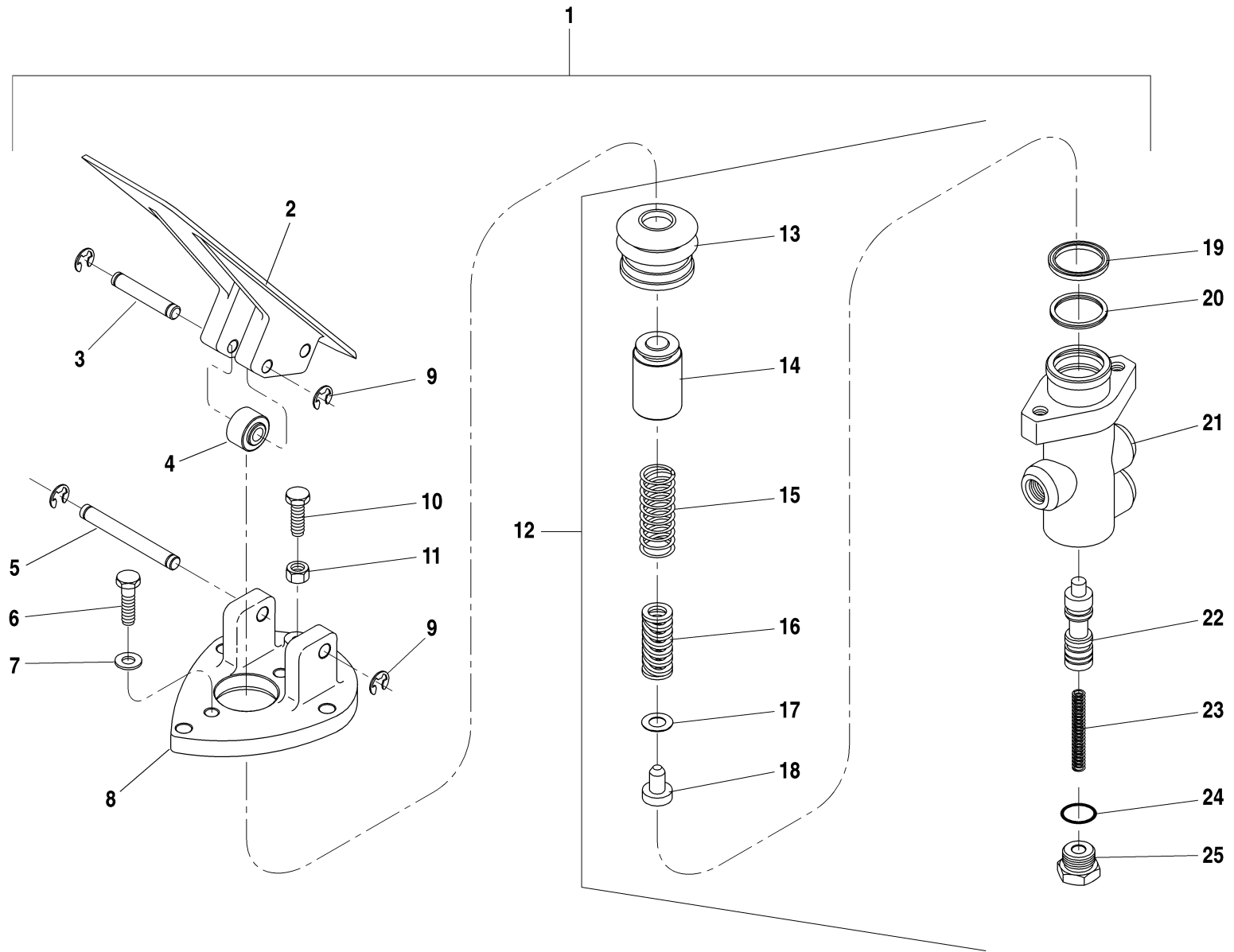
ITEM	PART NO.	QTY.	DESCRIPTION
1	P18956	1	90° Adapter
2	1100389	1	Accumulator (Replaces 37714X) (See Page 8.5.1 for Breakdown)
3	P12169	1	Clamp
4	P05005	4	Locknut, Hx., 3/8"-16
5	37769X	1	90° Adapter, Male JIC to Male Metric
6	37880X	1	Hyd. Hose, 1/4" x 29"
7	P25396	1	Adapter, O-Ring
8	P19845	1	Adapter, Swivel Tee
9	P20466	1	Cushion Clamp, 5/8"
10	37882X	1	Hyd. Hose, 1/4" x 64"
11	66736X	1	Hyd. Hose, 3/8" x 76"
12	1100094	1	Hyd. Hose, 3/8" x 27"
13	P21914	1	Adapter, RunTee
14	P18935	1	90° Adapter,
15	P27170	1	Hyd. Hose, 1/4" x 28"
16	P18936	1	Connector, O-Ring
17	P28823	1	Tee, Bulkhead
18	66732X	1	Hyd. Hose, 3/8" x 18"
19	P25872	1	Hyd. Hose, 3/8" x 23"
20	P21914	1	Tee, O-Ring
21	P18936	1	Connector, O-Ring
22	P21914	1	Tee, O-Ring
23	P01310	3	Lockwasher 3/8"
24	P01508	5	Nut, Hx., 3/8"-16
25	66731X	1	Hyd. Hose, 3/8" x 15"
26	P18985	1	Tee, Branch O-Ring
27	P00207	3	Capscrew, Hx., 3/8"-16 x 1 3/4"
28	65581B	1	Valve, Brake (See Page 8.3.1 for Breakdown)
29	37280X	1	Hyd. Hose, 3/8" x 32"
30	P18945	1	Adapter, Bulkhead Tee
31	66734X	2	Hyd. Hose, 3/8" x 58"
32	P30175		Hyd. Hose, 3/8" x16"
33	P18995		Adapter, Tee

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ITEM	PART NO.	QTY.	DESCRIPTION
1	37882X	1	Hyd. Hose, 1/4" x 64"
2	37769X	1	90° Adapter, Male JIC to Male Metric
3	37880X	1	Hyd. Hose, 1/4" x 29"
4	P25396	1	Adapter, O-Ring
5	P19845	1	Adapter, Swivel Tee
6	10705344	2	Capscrew, Hx, Fig., 3/8"-16 x 1"
7	10237460	2	Clamp, Support, 2 1/4"
8	10705108	2	Nut, Hx, Fig., 3/8"-16
9	1100389	1	Accumulator (Replaces 37714X) (See Page 8.5.1 for Breakdown)
10	1100390	1	Bracket, Accumulator
11	10701406	2	Flatwasher, 1/2"
12	10700403	2	Capscrew, Hx., 1/2"-13x 1 1/4"
13	1100391	1	Hyd. Hose, 3/8" x 41"
14	1100094	1	Hyd. Hose, 3/8" x 27"
15	P21914	1	Adapter, RunTee
16	P18935	1	90° Adapter,
17	P27170	1	Hyd. Hose, 1/4" x 28"
18	P18936	1	Connector, O-Ring
19	P28823	1	Tee, Bulkhead
20	66732X	1	Hyd. Hose, 3/8" x 18"
21	P25872	1	Hyd. Hose, 3/8" x 23"
22	P21914	1	Tee, O-Ring
23	P18936	1	Connector, O-Ring
24	P21914	1	Tee, O-Ring
25	P01310	3	Lockwasher 3/8"
26	P01508	5	Nut, Hx., 3/8"-16
27	66731X	1	Hyd. Hose, 3/8" x 15"
28	P18985	1	Tee, Branch O-Ring
29	P00207	3	Capscrew, Hx., 3/8"-16 x 1 3/4"
30	65581B	1	Valve, Brake (See Page 8.3.1 for Breakdown)
31	37280X	1	Hyd. Hose, 3/8" x 32"
32	P18945	1	Adapter, Bulkhead Tee
33	66734X	2	Hyd. Hose, 3/8" x 58"
34	P30175		Hyd. Hose, 3/8" x16"
35	P18995		Adapter, Tee

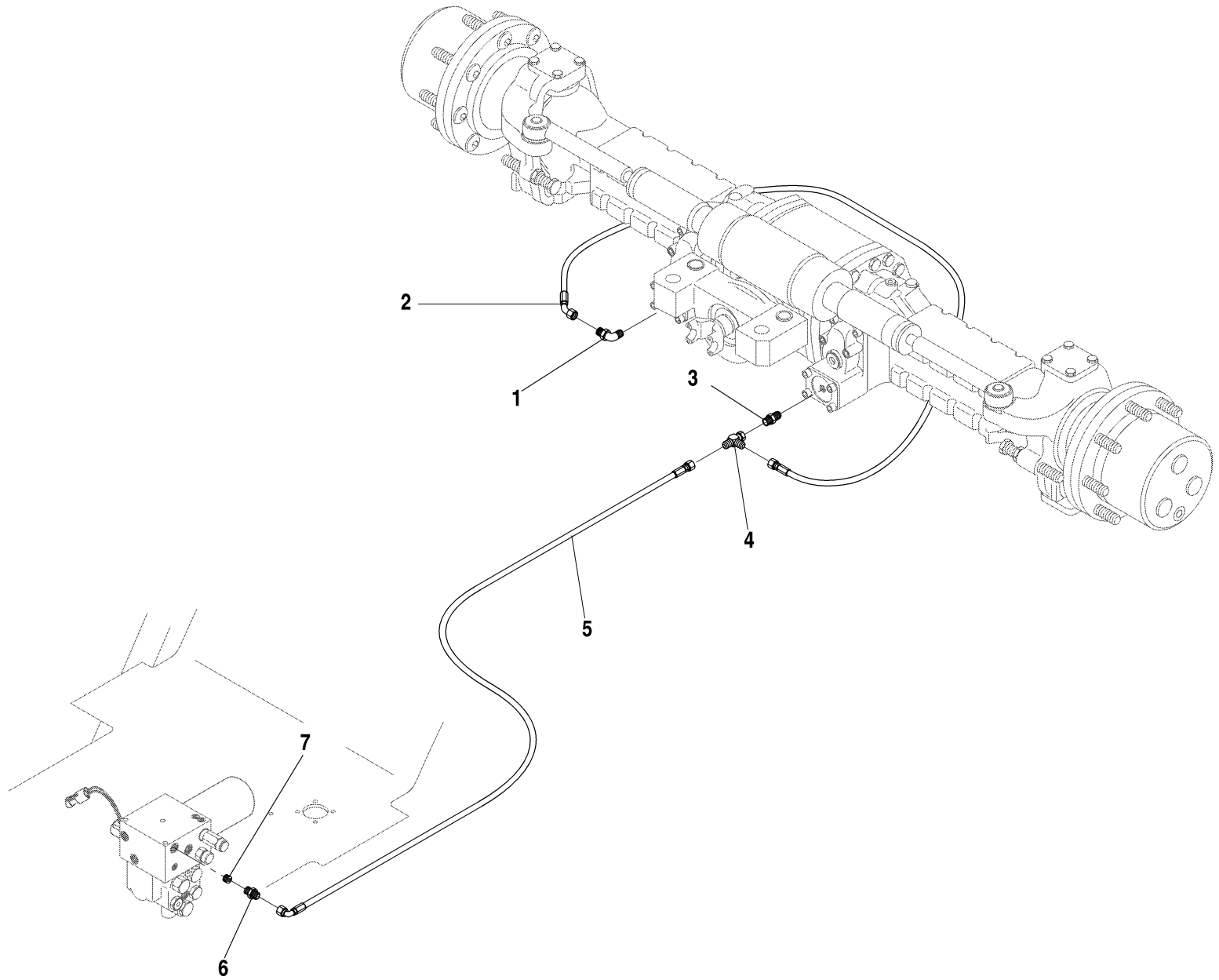
644D-34 S/N 770-





ITEM	PART NO.	QTY.	DESCRIPTION
1	65581B	1	Brake Valve Assembly
2	N.S.S.	1	Pedal, Brake
3	N.S.S.	1	Pin, Cam
4	N.S.S.	1	Cam
5	N.S.S.	1	Pin, Pedal Mounting
6	P00132	2	Capscrew, Hx. Hd., 5/16"-18 x 1 1/4" GR 8
7	P01434	2	Flatwasher, 5/16" SAE
8	N.S.S.	1	Base, Actuator
9	N.S.S.	4	C-Clip
10	P00104	1	Capscrew, Hx. Hd., 5/16"-18 x 1"
11	P01507	1	Nut, Hx., 5/16"-18
12	37081X	1	Valve Assembly (Includes Items 13-25)
13	N.S.S.	1	Boot, Rubber
14	N.S.S.	1	Piston
15	N.S.S.	1	Spring
16	N.S.S.	1	Spring
17	N.S.S.	A/R	Shim
18	N.S.S.	1	Seat, Spring
19	N.S.S.	1	Cup
20	N.S.S.	1	Seal
21	N.S.S.	1	Body
22	N.S.S.	1	Spool
23	N.S.S.	1	Spring, Spool Return
24	N.S.S.	1	O-Ring
25	N.S.S.	1	Plug
REF	37080X	1	Repair Kit (Includes Items 6, 13, 19, 20, 24)

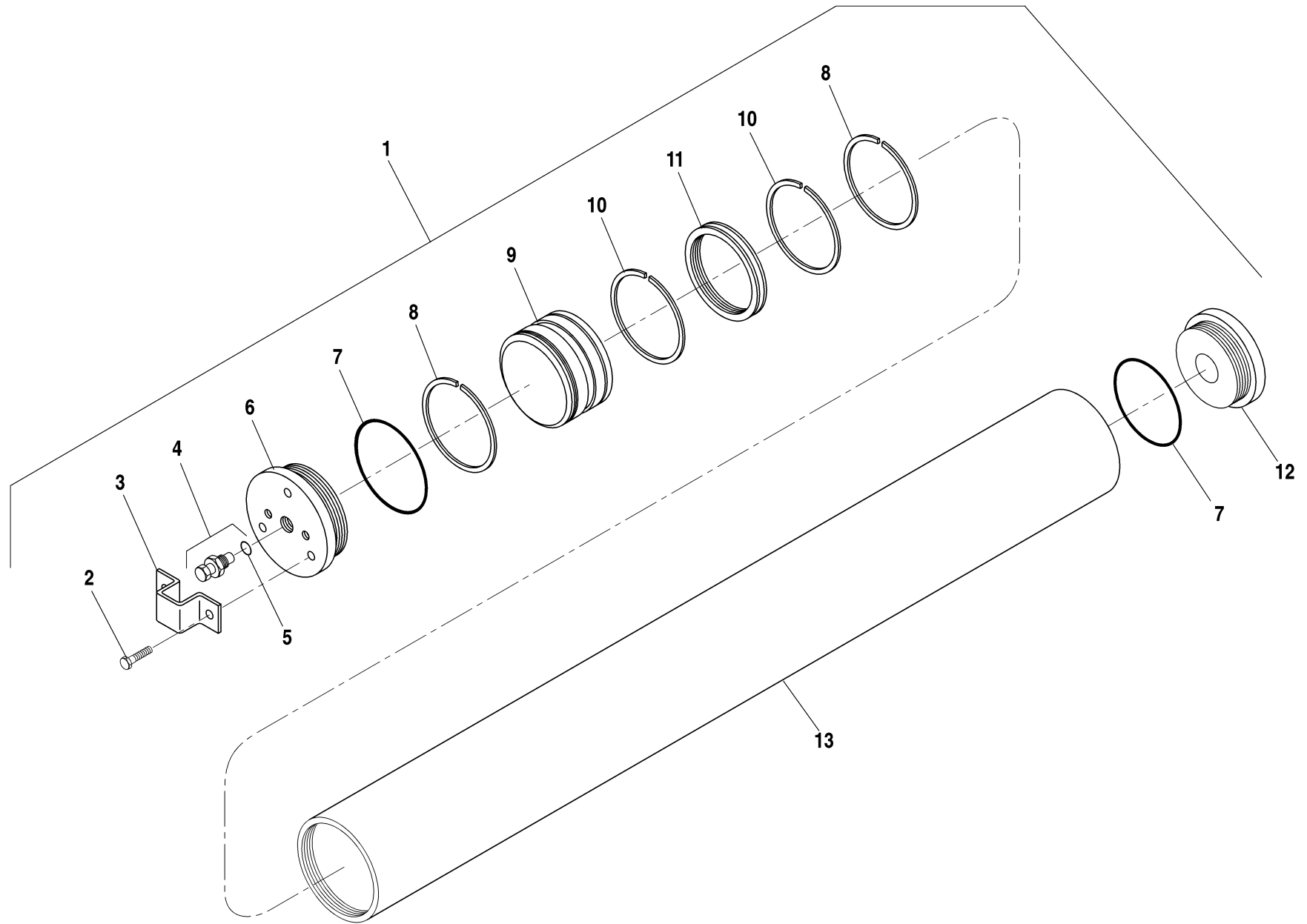
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION
1	37769X	1	90° Elbow, Bulkhead
2	37881X	1	Hyd. Hose, 1/4" x 44"
3	P25396	1	Adapter
4	P19412	1	Adapter, Swivel Tee
5	66735X	1	Hyd. Hose, 1/4" x 94"
6	P18936	1	Adapter
7	67528X	1	Orifice Plug

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ITEM	PART NO.	QTY.	DESCRIPTION
1	1100389	1	Accumulator Assembly (Replaces 37714X)
2	68097X	2	Screw
3	68096X	1	Guard, Valve
4	P91947	1	Gas Valve
5	N.S.S.	1	O-Ring
6	N.S.S.	1	End Cap, Gas
7	N.S.S.	2	O-Ring
8	N.S.S.	2	Teflon Ring
9	68095X	1	Piston
10	N.S.S.	2	Back-Up Washer
11	N.S.S.	1	"V" O-Ring
12	N.S.S.	1	End Cap
13	N.S.S.	1	Body, Accumulator
Ref	1100405	1	Repair Kit (Includes Items 5, 7, 8, 12, 13)

N.S.S.= Not Sold Separately

644D-34 S/N 108-

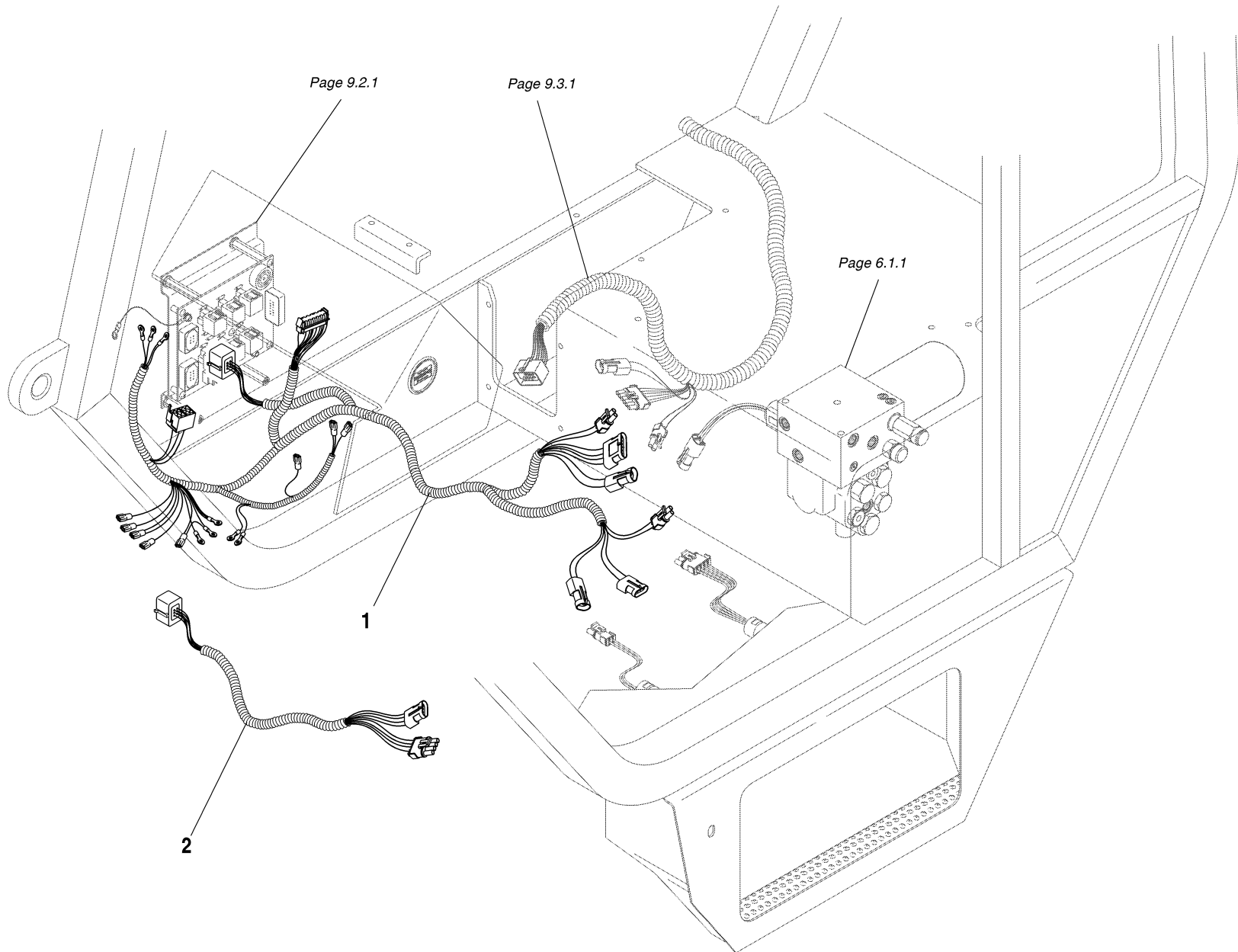


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**Section 9 — Electrical**

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Electrical Group - Frame, Engine & Transmission Control . . . . . 9.3.1





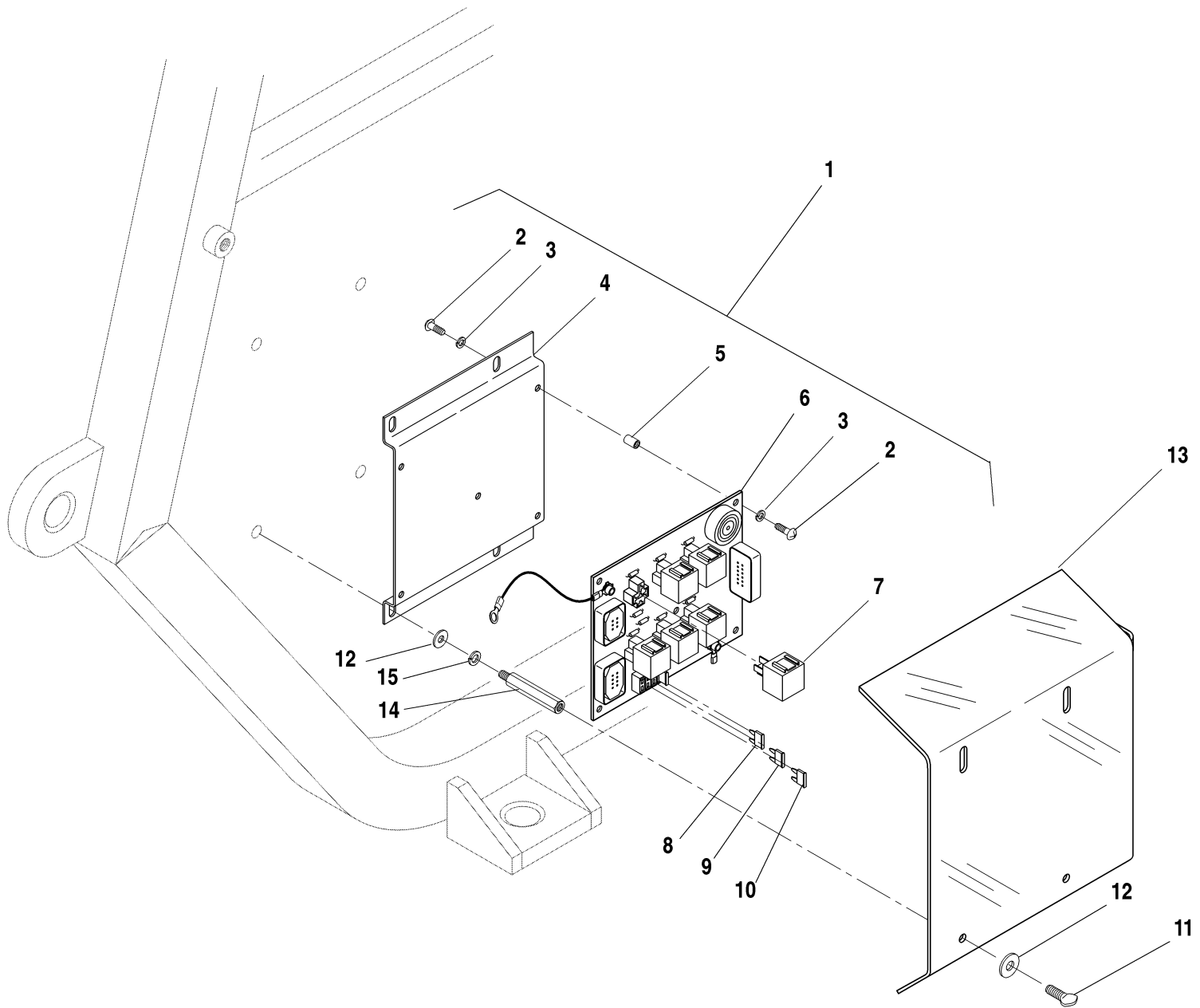
ITEM	PART NO.	QTY.	DESCRIPTION
1	67117D	1	Wirring Harness, Operators Compartment
2	①68410B	1	Harness, Jumper, Shifter

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NOTES:

- ① Used S/N 108-612.

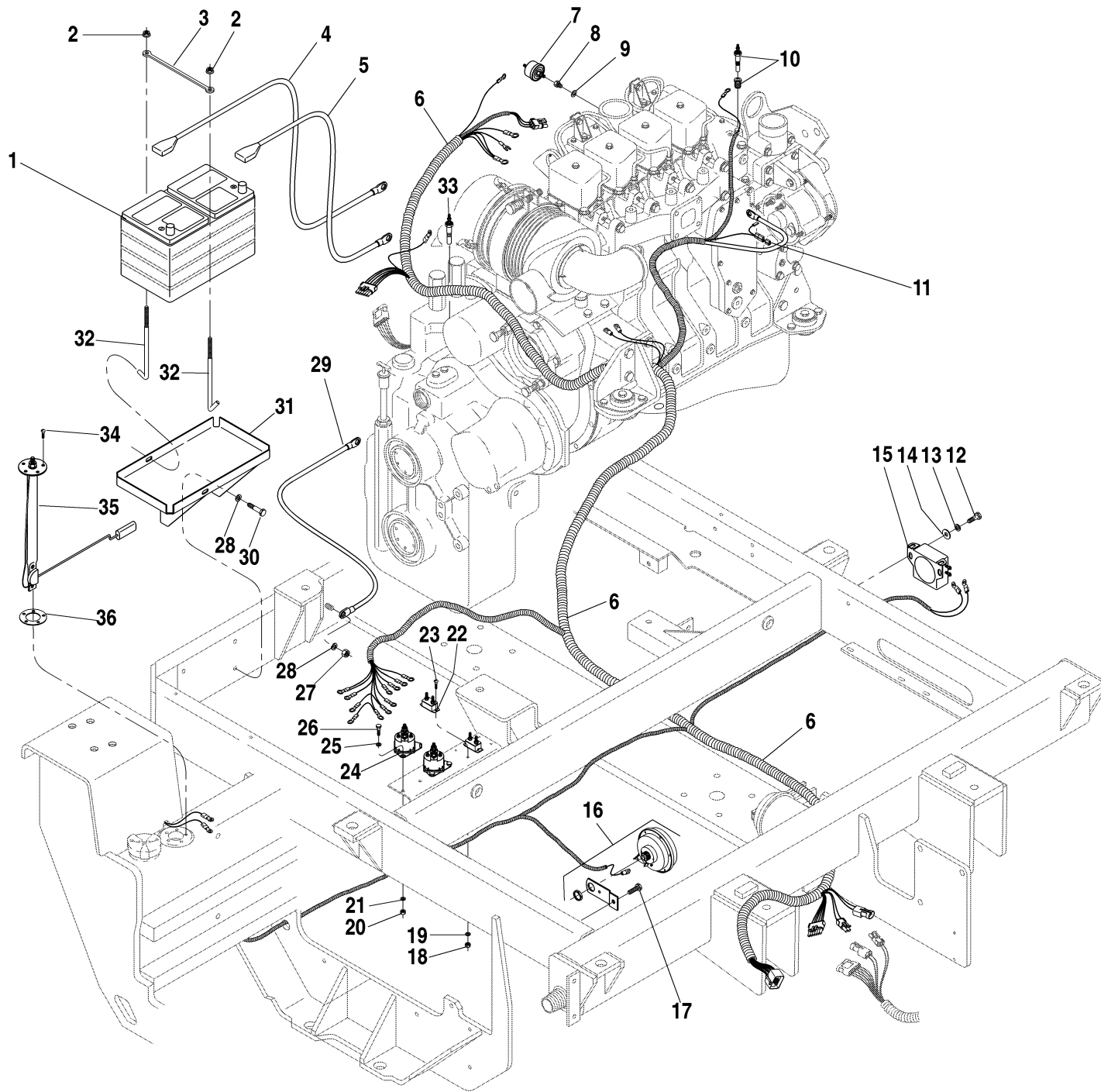
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ITEM	PART NO.	QTY.	DESCRIPTION
1	67654C	1	Circuit Board assembly (Includes items 2-10)
2	67173X	10	Screw, Slotted Rd. Hd., #8-32 x 3/8"
3	P01305	10	Lockwasher, #8
4	67681B	1	Mounting Panel, Circuit Board
5	67159X	5	Standoff, #8-32 x 1/4" Long
6	N.S.S.	1	Circuit Board
7	66820X	6	Relay
8	66827X	1	Fuse, 7.5 Amp (Brown)
9	66828X	1	Fuse, 10 Amp (Red)
10	66829X	1	Fuse, 15 Amp (Blue)
11	38251A	3	Thumb Screw, 1/4"-20
12	P01402	7	Flatwasher 1/4"
13	38319B	1	Cover, Circuit Board
14	38327A	4	Standoff, 3 1/4" Long Hex
15	P01308	4	Lockwasher, 1/4"

N.S.S. = Not Sold Separately

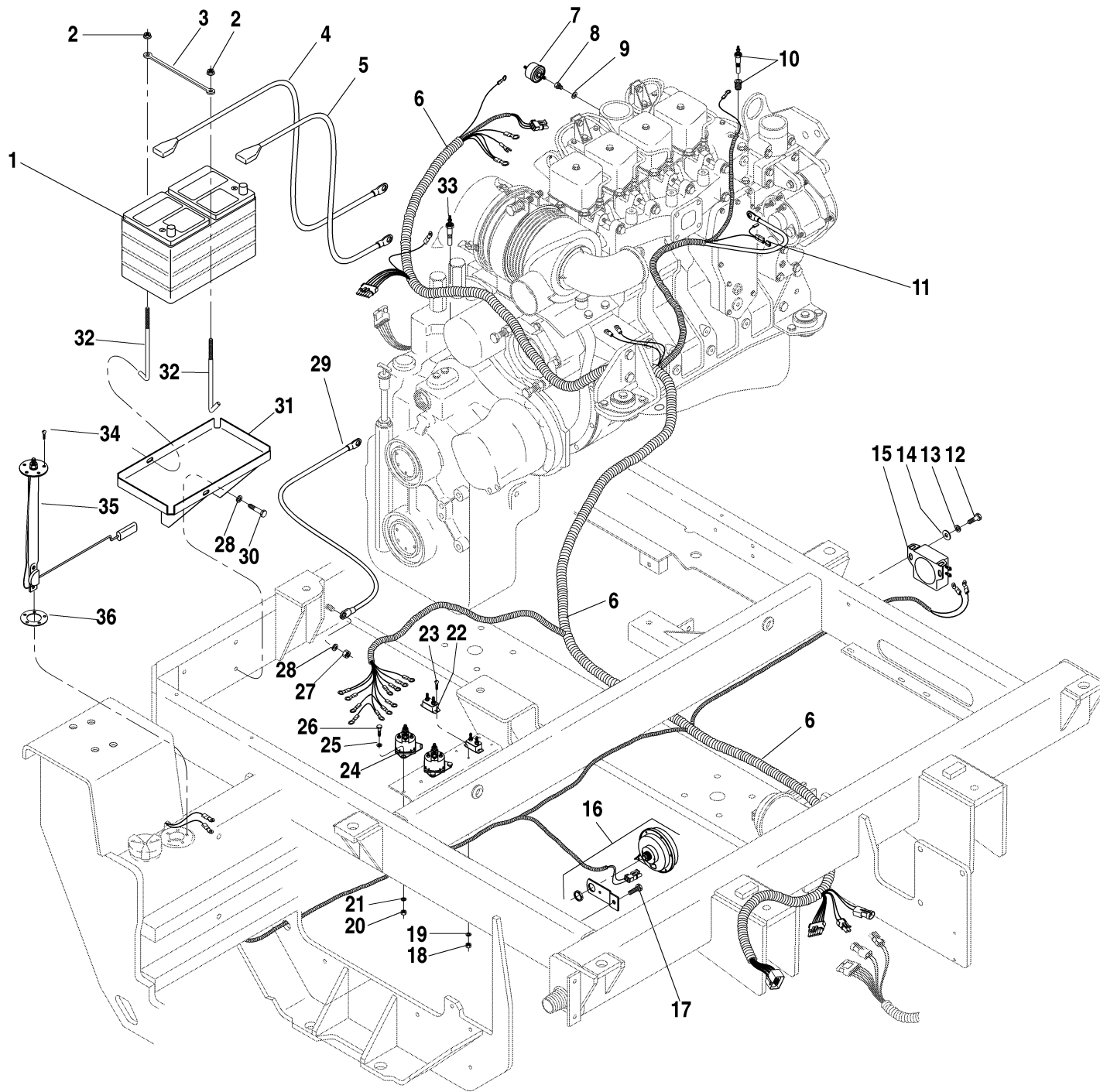
644D-34 S/N 108-



ITEM	PART NO.	QTY.	DESCRIPTION
1	❶	1	Battery, 12 Volt,BCI Group 31, 925 CCA
2	P01506	2	Nut, Hx., (Included with Item 32)
3	37708X	1	Tie Down, Battery
4	65742C-21	1	Battery Cable, Negative, 30"
5	65742C-22	1	Battery Cable, Positive, 24"
6	67120D	1	Wire Harness, Frame, Engine & Transmission
7	P23217	1	Sender, Oil Pressure
8	66115X	1	Adapter
9	66114X	1	Washer
10	P23222	1	Sender, Water Temperature
11	P21787	1	Diode Module
12	P00003	2	Capscrew, Hx., 1/4"-20 x 3/4"
13	P01308	2	Lockwasher, 1/4"
14	P01402	2	Flatwasher, 1/4'
15	P13774	1	Alarm, Back-Up (Reverse)
16	P13707	1	Horn
17	P00102	1	Capscrew, Hx., 5/16"-18 x 3/4"
18	P01404	4	Nut, Hx., #10-24
19	P01306	4	Lockwasher, #10
20	P01506	4	Nut, Hx., 1/4"-20
21	P01308	4	Lockwasher, 1/4"
22	P29694	2	Circuit Breaker
23	P02054	4	Screw, Slotted,Rd. Hd., #10-24 x 1/2"
24	67789A	2	Starter Relay
25	P01402	4	Flatwasher, 1/4"
26	P00003	4	Capscrew, Hx., 1/4"-20 x 3/4"
27	P01508	1	Nut, Hx., 3/8"-16
28	P01310	5	Lockwasher, 3/8"
29	38200C-3	1	Cable, Ground
30	P00202	4	Capscrew, Hx., 3/8"-16 x 3/4"
31	67439B	1	Battery Tray
32	37704X	2	Hold Down, Battery
33	P19472	1	Sender, Transmission Oil Temperature
34	P02334	5	Screw, Slotted Rd. Hd., 10-32 x 1"
35	1100525	1	Sender, Fuel (Replaces 67155X)
36	68089X	1	Gasket, Fuel Sender

NOTES:  
 ❶ Obtain Locally.

644D-34 S/N 108-231



ITEM	PART NO.	QTY.	DESCRIPTION
1	①	1	Battery, 12 Volt,BCI Group 31, 925 CCA
2	P01506	2	Nut, Hx., (Included with Item 32)
3	37708X	1	Tie Down, Battery
4	65742C-21	1	Battery Cable, Negative, 30"
5	65742C-22	1	Battery Cable, Positive, 24"
6	68667D	1	Wire Harness, Frame, Engine & Transmission
7	P23217	1	Sender, Oil Pressure
8	66115X	1	Adapter
9	66114X	1	Washer
10	P23222	1	Sender, Water Temperature
11	P21787	1	Diode Module
12	P00003	2	Capscrew, Hx., 1/4"-20 x 3/4"
13	P01308	2	Lockwasher, 1/4"
14	P01402	2	Flatwasher, 1/4'
15	P13774	1	Alarm, Back-Up (Reverse)
16	68663B	1	Horn
17	P00102	1	Capscrew, Hx., 5/16"-18 x 3/4"
18	P01404	4	Nut, Hx., #10-24
19	P01306	4	Lockwasher, #10
20	P01506	4	Nut, Hx., 1/4"-20
21	P01308	4	Lockwasher, 1/4"
22	P29694	2	Circuit Breaker
23	P02054	4	Screw, Slotted,Rd. Hd., #10-24 x 1/2"
24	67789A	2	Starter Relay
25	P01402	4	Flatwasher, 1/4"
26	P00003	4	Capscrew, Hx., 1/4"-20 x 3/4"
27	P01508	1	Nut, Hx., 3/8"-16
28	P01310	5	Lockwasher, 3/8"
29	38200C-3	1	Cable, Ground
30	P00202	4	Capscrew, Hx., 3/8"-16 x 3/4"
31	67439B	1	Battery Tray
32	37704X	2	Hold Down, Battery
33	P19472	1	Sender, Transmission Oil Temperature
34	P02334	5	Screw, Slotted Rd. Hd., 10-32 x 1"
35	1100525	1	Sender, Fuel (Replaces 67155X)
36	68089X	1	Gasket, Fuel Sender

NOTES:  
 ① Obtain Locally.

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**ELECTRICAL GROUP - FRAME, ENGINE & TRANSMISSION 9.3.1.1**





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## Section 10 — Optional Equipment

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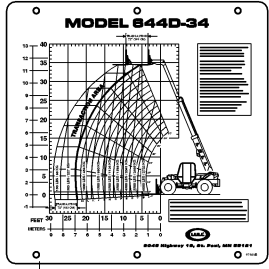
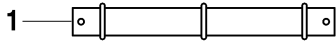
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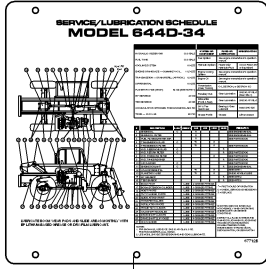
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5



6

DO NOT OPERATE MACHINE WHEN  
LOW BRAKE PRESSURE LIGHT IS ON

7

TRANSMISSION  
DECLUTCH

8



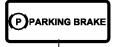
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10



11



12

DIESEL  
FUEL ONLY

13

HYDRAULIC  
OIL ONLY

14



15

HYDRAULIC BREATHER  
DO NOT FILL

16



17



18



19



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21



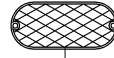
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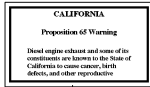
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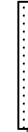


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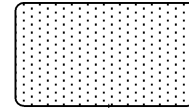


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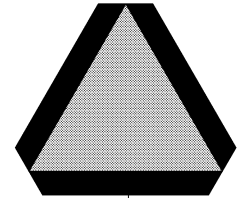
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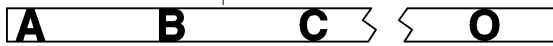
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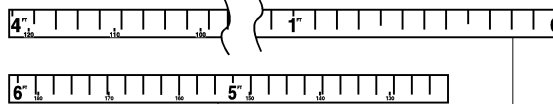
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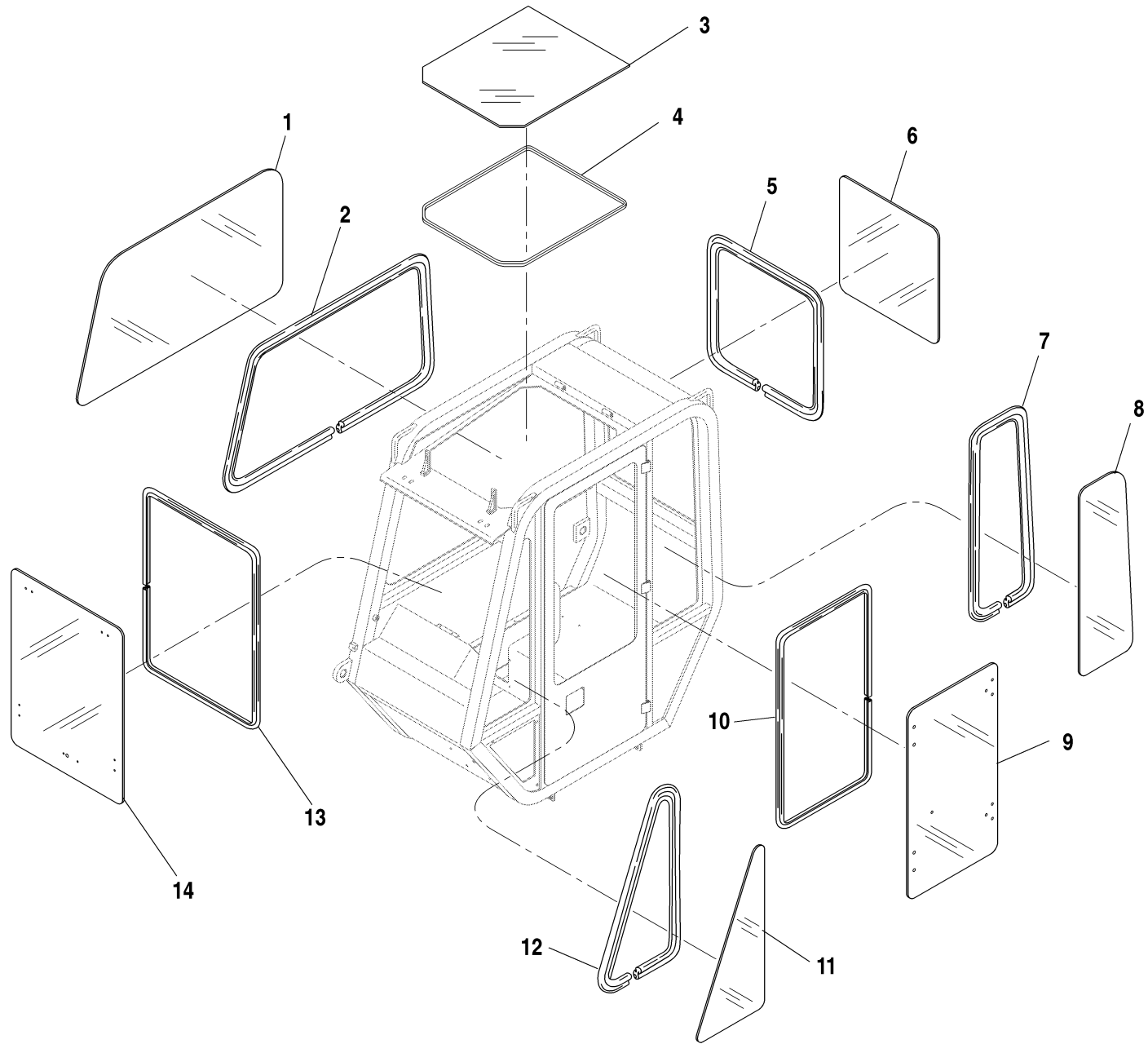


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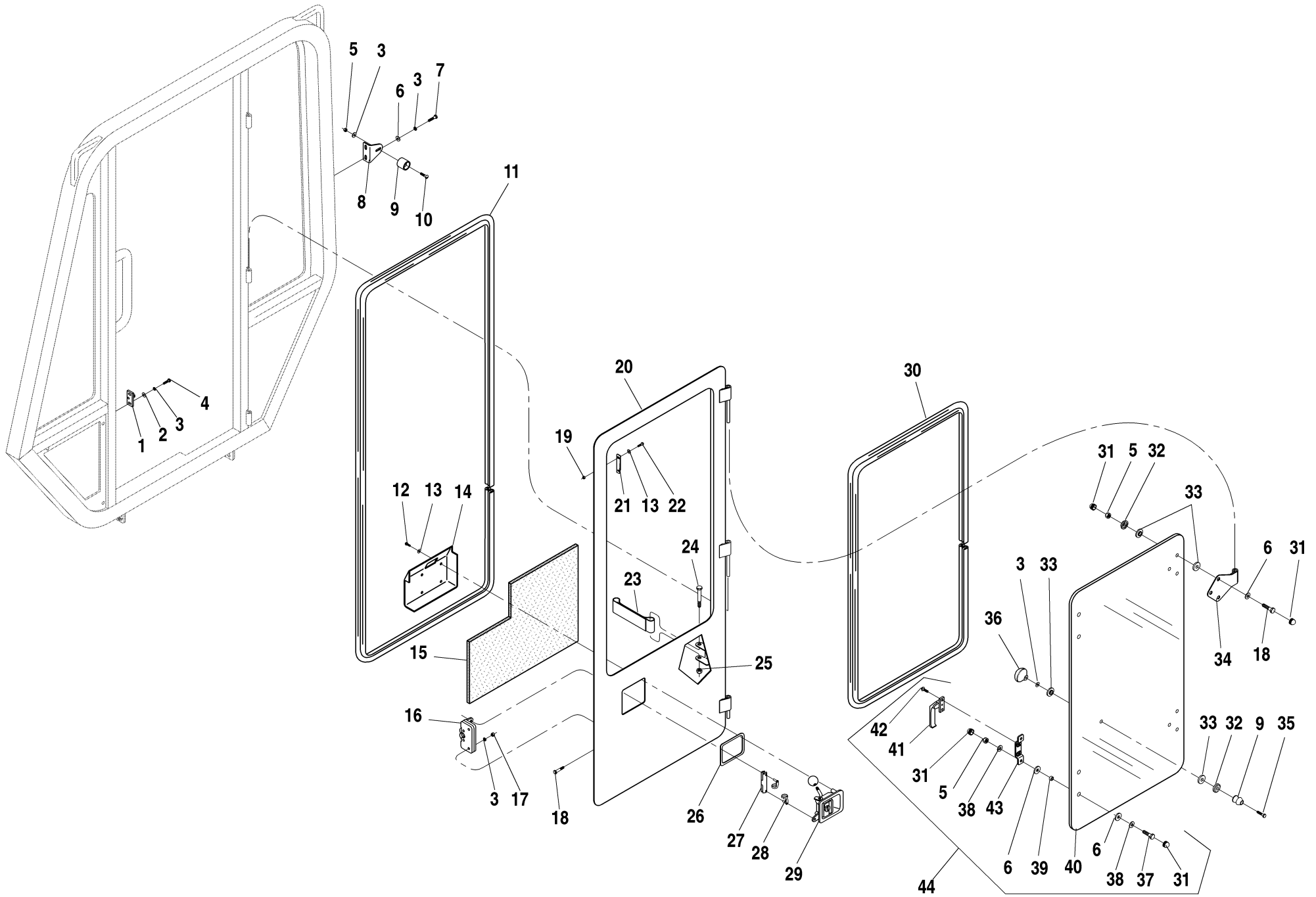
ITEM	PART NO.	QTY.	DESCRIPTION
1	38718A	1	3-Ringer Hanger, Flip Card
2	67893B	1	Flip Card, Load Chart Capacities 644D-34
3	37364X	1	Holder, Flip Card
4	67712B	1	Flip Card, Lube Schedule
5	67683B	1	*Decal, Safty
6	39617B	1	*Decal, Forklift Signals
7	24906A	1	*Decal, Low Brake Pressure Warning
8	35082A	1	*Decal, Transmission Declutch
9	30487A	1	Frame Tilt
10	67270A	1	Aux
11	21319A	2	*Decal, Don't Be Careless
12	67229A	1	*Decal, Parking Brake
13	20989A	1	*Decal, Diesel Fuel Only
14	20988A	1	*Decal, Hydraulic Oil Only
15	67267A	1	*Decal, Boom Movement Control
16	39619A	1	*Decal, Hydraulic Breather
17	20964B	1	Plate, Caution
18	66044B	2	*Decal, OmniQuip
19	35092A	1	*Decal, Disconnect Battery
20	21318A	1	*Decal, Caution, Carry Load Low
21	24752B	2	*Decal, Carriage Safety
22	15731B	4	Decal, Letter "L"
23	15732B	2	Decal, Letter "U"
24	P18991	2	*Reflector, Red
25	P18992	2	*Reflector, Yellow
26	39376C	1	*Decal, "Lull" Logo - Large (18")
	38843B	2	*Decal, "Lull" Logo - Small (8")
27	26431B	2	*Decal, American Flag
28	N.S.S.	1	Plate, Serial Number
29	N.S.S	1	Plate, Attachment Capacity
30	P32958	14	Pop-Rivet, Aluminum, 1/8" dia. x.337" long
31	12750A	1	Plate, Steer Selector
32	39369A	1	Decal, California Proposition 65 Warning
33	38335C	1	Decal, Boom Extension Indicator
34	67269B	1	Decal, Pressure Test Ports
35	N12350	1	*No-Slip Surfacing (2" x 14" Adhesive Strip)

ITEM	PART NO.	QTY.	DESCRIPTION
36	39087A	1	*Foot Mat, No-Slip Adhesive Surfacing
37	25252B	1	Slow Moving Vehicle Sign
38	67886B	1	Decal, 644D
39	38304D	1	Decal, Transfer Extension Indicator, Cab
40	67796B	1	Decal, Transfer, Indicator, Frame
41	16346A	1	Decal, Arrow
42	68422B	2	Decal, LULL, Boom
43	68421B	1	Decal, LULL, Counterweight
NOTES:			
* Items Included in Decal Replacement Kit 1100779.			
N.S.S. = Not Sold Separately			
644D-34 S/N 108-			



ITEM	PART NO.	QTY.	DESCRIPTION
1	36314C	1	Glass, Right Side
2	N12354	1	Seal, Right Side
3	36318B	1	Glass, Skylight
4	67150X	1	Seal, Roof, Self Stick
5	N12362	1	Seal, Rear
6	39478B	1	Glass, Rear, Fixed
7	N12361	1	Seal, Left Side, Rear
8	36500B	1	Glass, Left Side, Rear
9	38872B	1	Glass, Door, Hinged
	39176X	-	Glass, Door, Non Hinged
10	N12364	1	Seal, Door Glass, Hinged
	39177X	-	Seal, Door Glass, Non Hinged
11	36499B	1	Glass, Left Side, Front
12	N12360	1	Seal, Left Side, Front
13	N12356	1	Seal, Windshield
14	36317C	1	Glass, Windshield, Hinged

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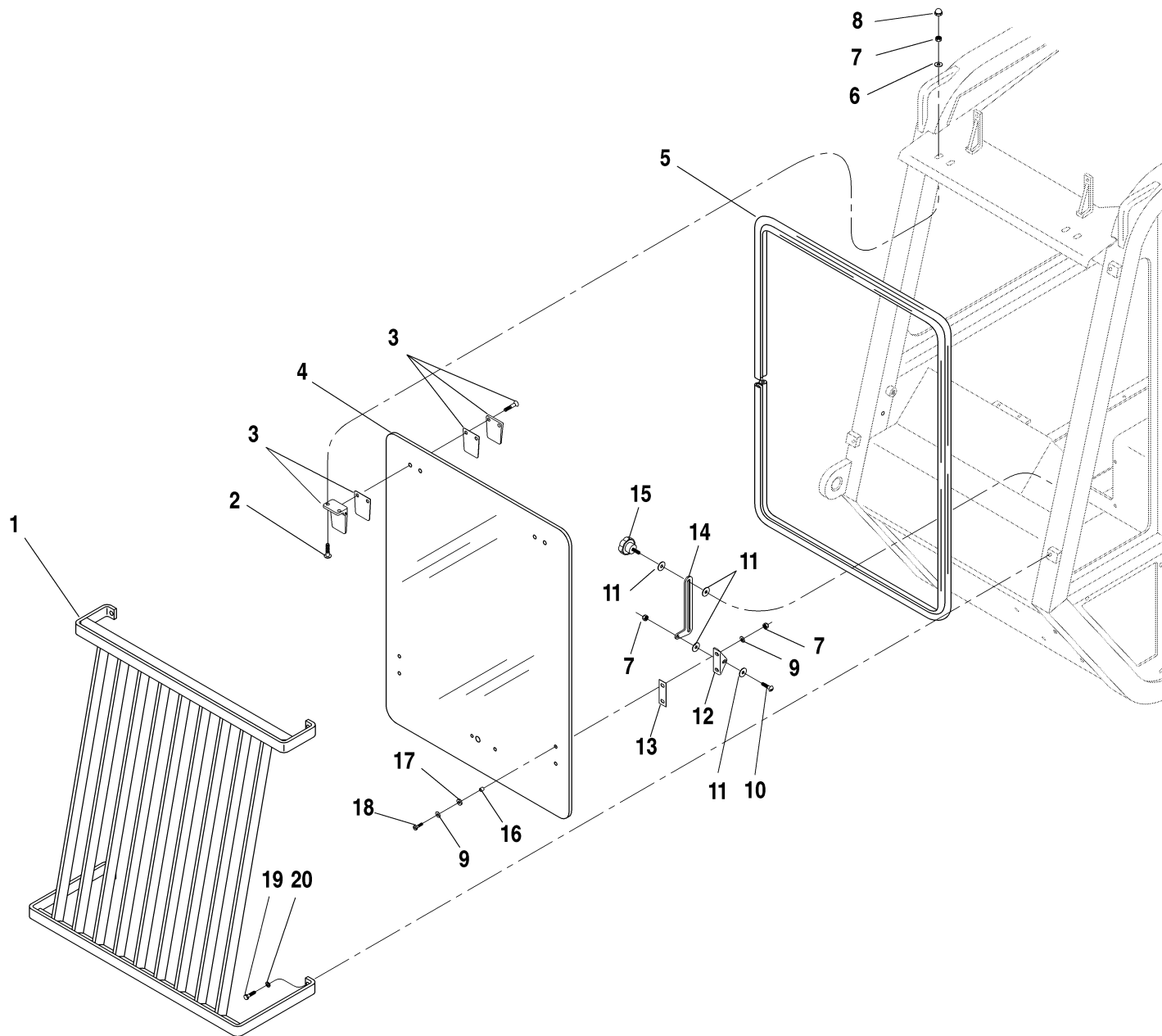


ITEM	PART NO.	QTY.	DESCRIPTION
1	37413X	1	Striker Mount
2	P01402	2	Flatwasher, 1/4"
3	P01308	2	Lockwasher, 1/4"
4	P00005	2	Capscrew, Hx., 1/4"- 20 x 1"
5	37394X	11	Locknut, Hx., 1/4" x 20
6	37398X	14	Flatwasher, 1/4"
7	P00003	1	Capscrew, Hx., 1/4"- 20 x 3/4"
8	39799A	1	Bracket, Door Holder
9	37407X	1	Door Holder, Plunger & Socket
10	37391X	1	Screw Slotted Rd, Hd., 1/4"-20 x 3/4"
11	N12365	1	Seal, Door
12	P02057	4	Screw Slotted Rd, Hd., #10-24 x 3/4"
13	P01400	4	Flatwasher, #10
14	37414X	1	Cover, Latch
15	38870B	1	Ins, door
16	37412X	1	Latch, Rotary
17	P01656	2	Locknut, Hx., 1/4"-20
18	P00007	2	Capscrew, Hx., 1/4"- 20 x 1 1/2"
19	P01654	4	Locknut, Hx., #10-24
20	38913C	1	Door
21	37415X	2	Bracket, Latch, Window
22	P02059	4	Screw Slotted Rd, Hd., #10-24 x 1"
23	37416X	1	Strap
24	P00110	1	Capscrew, Hx., 5/16" -18 x 2 1/2"
25	P16057	1	Locknut, Hx., 5/16" x 18
26	37411X	1	Seal, Latch
27	P91534	1	Link, Connecting
28	P91533	2	Pin, Spring
29	P91531	1	Handle, Paddle Assembly
30	N12364	1	Seal, Door Glass
31	37406X	10	Cap, Acorn
32	37410X	12	Glass Mount
33	37409X	12	Washer, Shoulder, Glass Mount
34	39790B	2	Hinge
35	P04060	1	Capscrew, Hx., M6.1 x 50mm GR 8.8
36	37408X	1	Knob
37	P00006	4	Capscrew, Hx., 1/4"- 20 x 1 1/4"

ITEM	PART NO.	QTY.	DESCRIPTION
38	37392X	2	Washer, Fiber
39	39222A	4	Spacer, Window
40	38872B	1	Glass, Door, Hinged
41	37405X	2	Latch
42	37391X	2	Screw, Slotted Rd. Hd., 1/4"-20 x 3/4"
43	67596X	2	Mount, Handle
44	37403X	2	Kit, Handle Mounting

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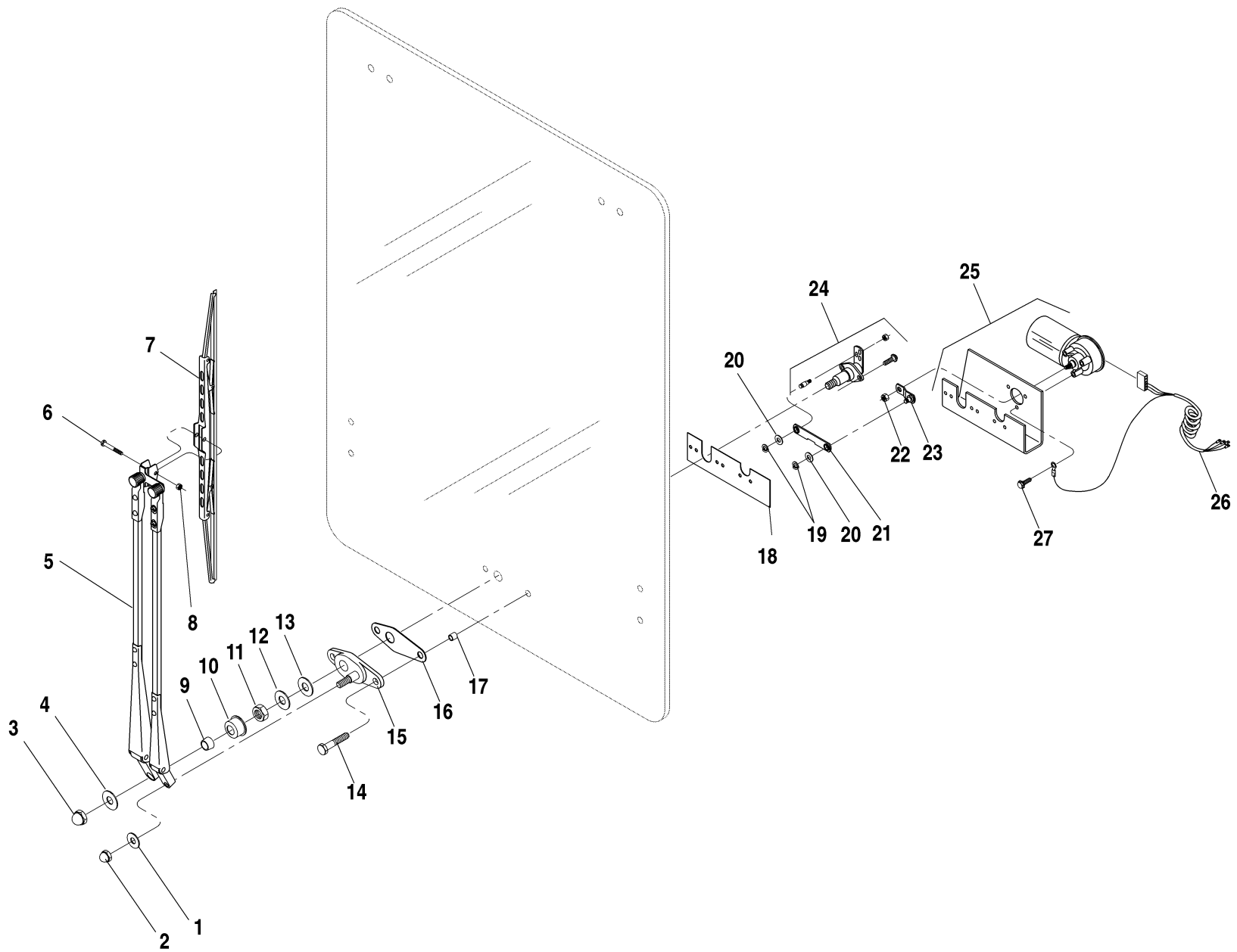
**DOOR ASSEMBLY, ENCLOSED CAB 10.6.1**



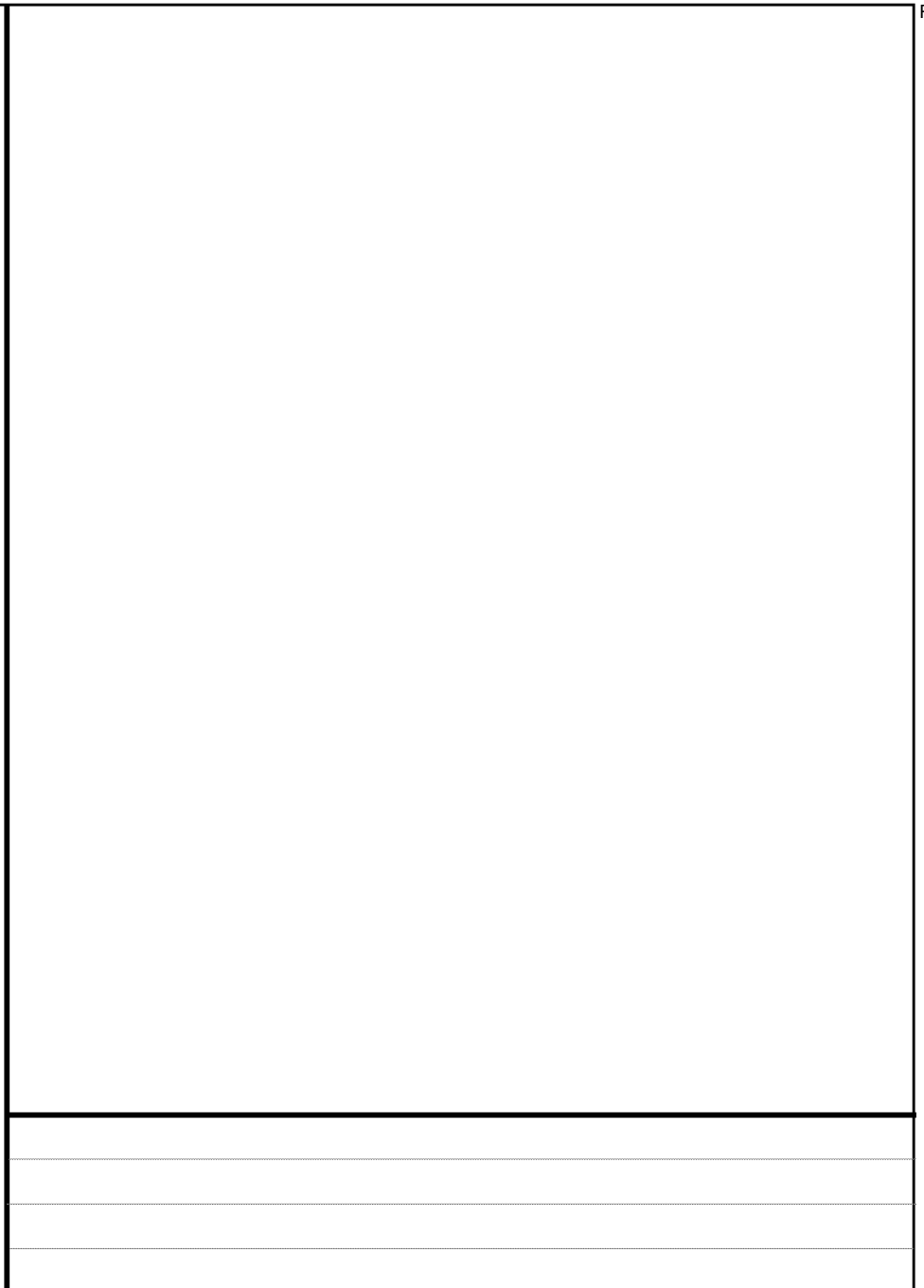


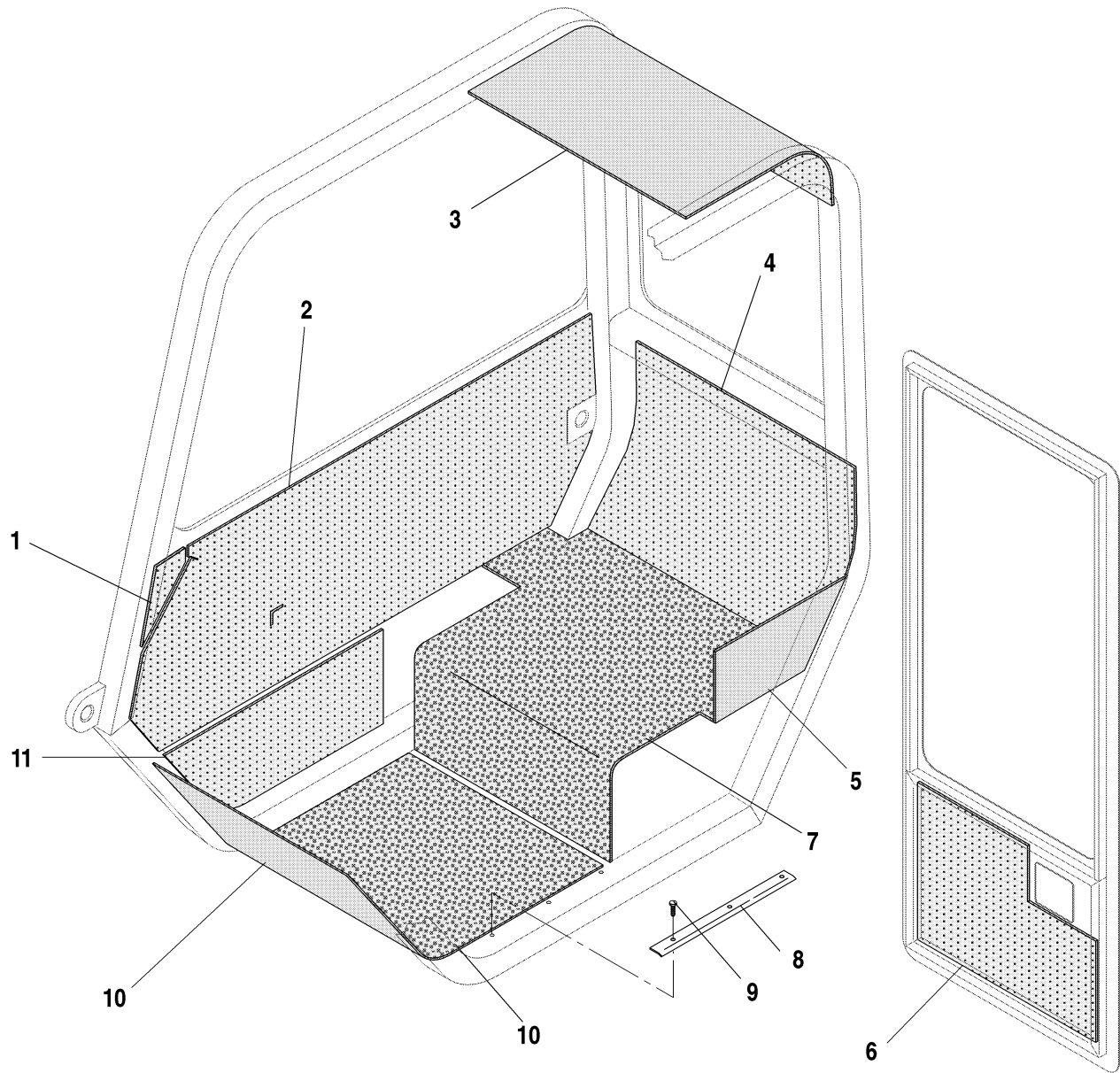
ITEM	PART NO.	QTY.	DESCRIPTION
1	36520D	1	Guard Assembly, Front Windshield
2	37397X	4	Screw, Slotted Rd. Hd., 1/4"-20 x 1"
3	37389X	2	Hinge, Flat
4	36317C	1	Glass, Windshield, Hinged
5	N12356	1	Seal, Windshield
6	37398X	4	Flatwasher, 1/4
7	37394X	4	Locknut, Hx., 1/4"-20
8	36408A	4	Cap, Acorn
9	37395X	5	Flatwasher 3/16"
10	37391X	2	Screw, Slotted Rd. Hd., 1/4"-20 x 3/4"
11	37392X	2	Flatwasher, Fiber
12	38848B	2	Bracket, Window Stay
13	39225A	2	Gasket, Rubber
14	38849B	2	Window Stay
15	37396X	2	Knob
16	39222A	4	Sleeve, Window
17	39224A	4	Washer, Rubber
18	37393X	4	Screw, Slotted Rd. Hd., 1/4"-20 x 1"
19	P01310	4	Lockwasher, 3/8
20	P00204	4	Capscrew, Hx., 3/8"-16 x 1"

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ITEM	PART NO.	QTY.	DESCRIPTION
1	P01400	1	Flatwasher,
2	P91581	1	Nut, Acorn #10-24
3	P91583	1	Nut, Acorn
4	P91584	1	Flatwasher
5	37390X	1	Wiper Arm, Dual
6	P91577	1	Screw, Slotted, #4-40 x 7/8"
7	P32558	1	Blade, Wiper
8	P01650		Locknut, Hx., 4-40
9	P91585	1	Driver
10	P91586	1	Cap, Rubber
11	P91581	1	Nut, Hx
12	P91588	1	Washer, Steel
13	P91589	1	Washer, Plastic
14	37399X	2	Capscrew, Hx., 1/4"-28 x 3/4"
15	P32556	1	Adapter, Pantographic
16	P91579	1	Gasket
17	39222A	2	Sleeve, Plastic
18	39223A	1	Gasket, Wiper Motor
19	P91601	2	Spring Clip
20	P91600	2	Flatwasher
21	P91599	1	Link
22	P01531	1	Nut, Hx., 3/8"-24
23	P32555	1	Driver Arm
24	P32554	1	Shaft, Pivot
25	P32551	1	Wiper Motor (Includes Bracket)
REF	P32568	1	Wiper Motor
26	38366B	1	Cable, Wiper Motor
27	P91598	3	Screw





ITEM	PART NO.	QTY.	DESCRIPTION
1	38766B	1	Insulation, Right Front
2	38767B	1	Insulation, Right Side
3	38764B	1	Insulation, Roof
4	38771B	1	Insulation, Rear
5	38765B	1	Insulation, Lower Left Rear
6	38870B	1	Insulation, Lower Door
7	38772B	1	Insulation, Seat Deck
8	36477B	1	Threshold, Floor Mat
9	P00005	3	Capscrew, Hx., 1/4"-20x1"
10	36323C	1	Mat, Floor
11	38768B	1	Insulation, Lower Right Front

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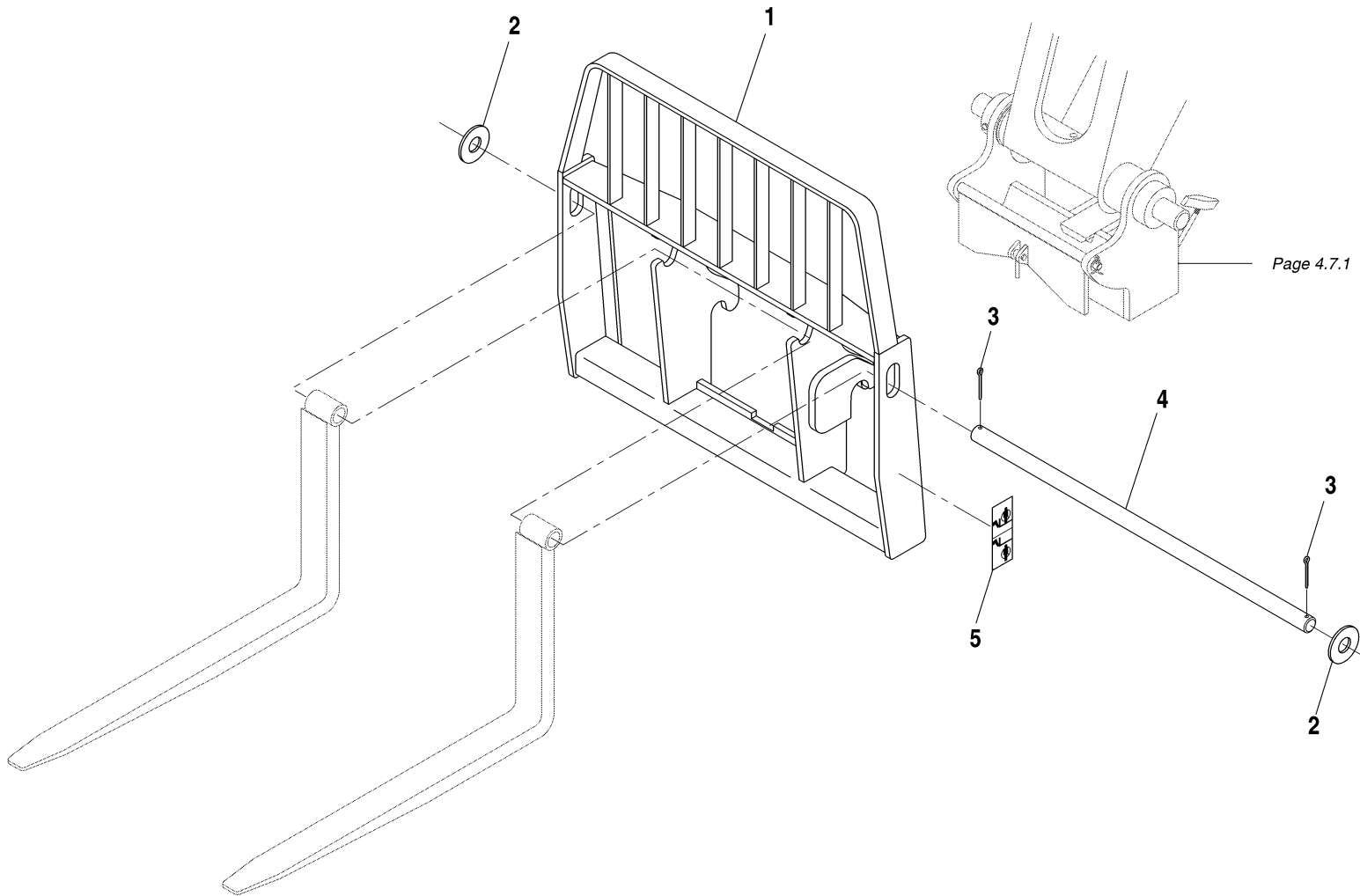
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## Section 11 — Attachments

Standard (Non-Tilt) Fork Carriage Assembly . . . . .	11.1.1
Framers (Non-Tilt) Fork Carriage Assembly . . . . .	11.2.1
Standard Tilting Fork Carriage Assembly . . . . .	11.3.1
Framers Tilting Fork Carriage Assembly . . . . .	11.4.1
Tilt Carriage Cylinder Assembly . . . . .	11.5.1

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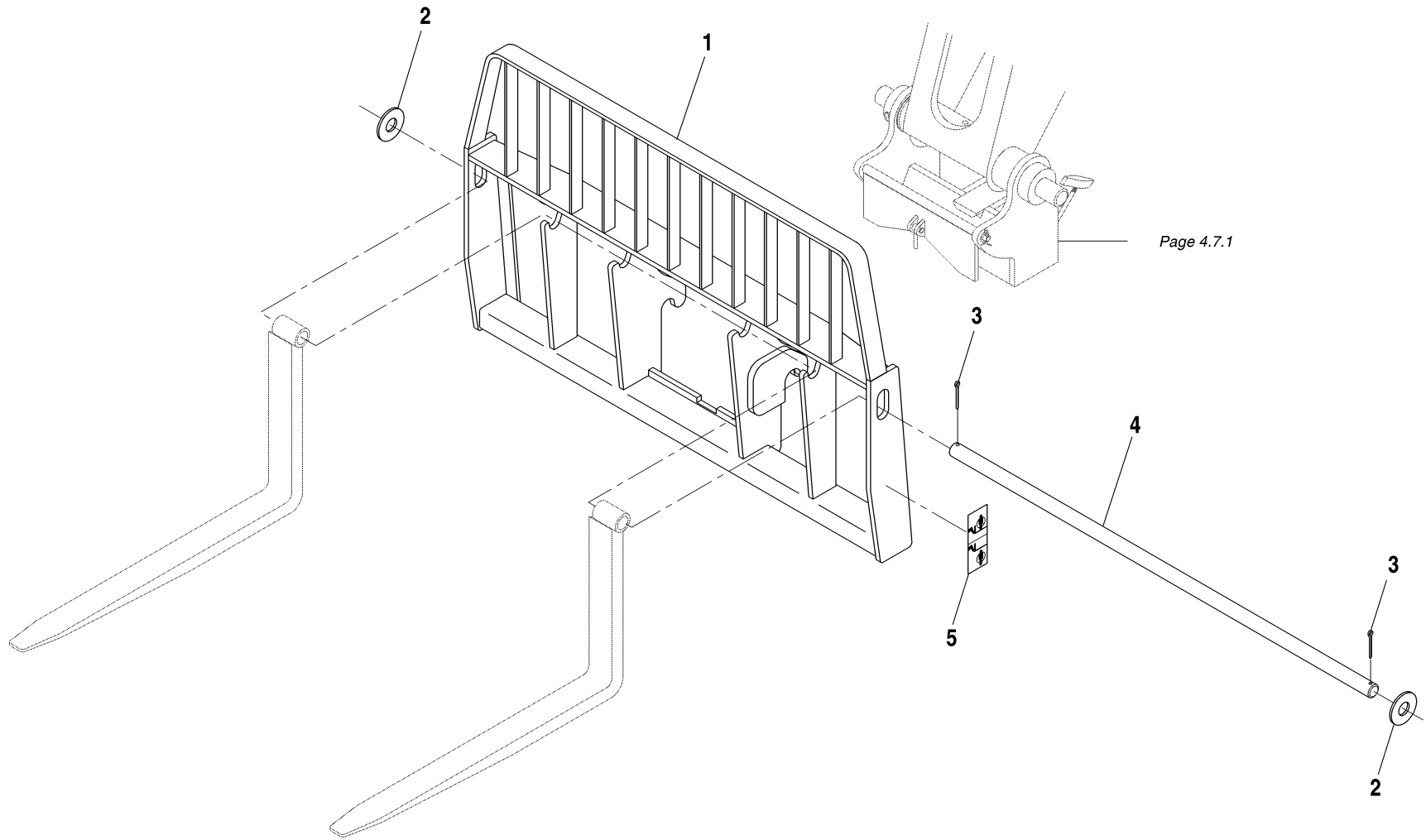
ITEM	PART NO.	QTY.	DESCRIPTION
REF	48000	-	Standard (Non-Tilt) Fork Carriage Assembly (Includes items 1-5)
1	38000D	1	Carriage, Standard (Non-Tilt)
2	18129A	2	Washer, Fork Shaft
3	P03906	2	Cotter Pin, 3/8" x 3"
4	38064A	1	Fork Shaft
5	24752B	2	Decal, Carriage Safety
REF	38026B	-	Pallet Fork, 42" x 4" x 2"
REF	38025B	-	Pallet Fork, 48" x 4" x 2"
REF	38117B	-	Pallet Fork, 60" x 4" x 2"
REF	38118B	-	Cubing Fork, 48" x 2" x 2"
REF	17103B	-	Lumber Fork, 48" x 6" x 1 1/2"

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**STANDARD (NON-TILT) FORK CARRIAGE ASSEMBLY 11.1.1**

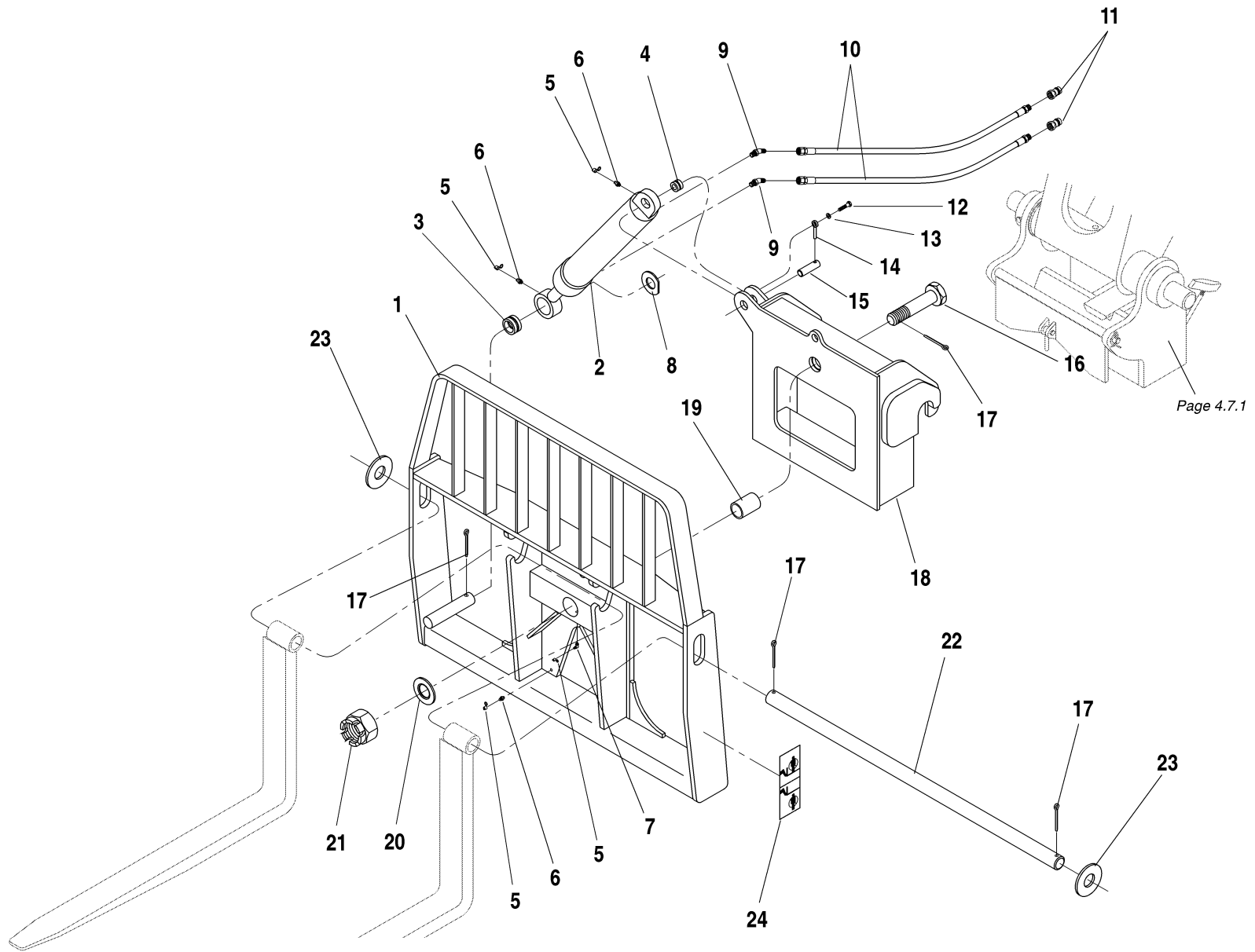
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ITEM	PART NO.	QTY.	DESCRIPTION
REF	48002	-	Framers (Non-Tilt) Fork Carriage Assembly (Includes items 1-5)
1	38001D	1	Carriage, Framers (Non-Tilt)
2	18129A	2	Washer, Fork Shaft
3	P03906	2	Cotter Pin, 3/8" x 3"
4	16207A	1	Fork Shaft
5	24752B	2	Decal, Carriage Safety
REF	38026B	-	Pallet Fork, 42" x 4" x 2"
REF	38025B	-	Pallet Fork, 48" x 4" x 2"
REF	38117B	-	Pallet Fork, 60" x 4" x 2"
REF	38118B	-	Cubing Fork, 48" x 2" x 2"
REF	17103B	-	Lumber Fork, 48" x 6" x 1 1/2"
REF	23610B	-	Lumber Fork, 60" x 6" x 1 1/2"

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**FRAMERS (NON-TILT) FORK CARRIAGE ASSEMBLY 11.2.1**



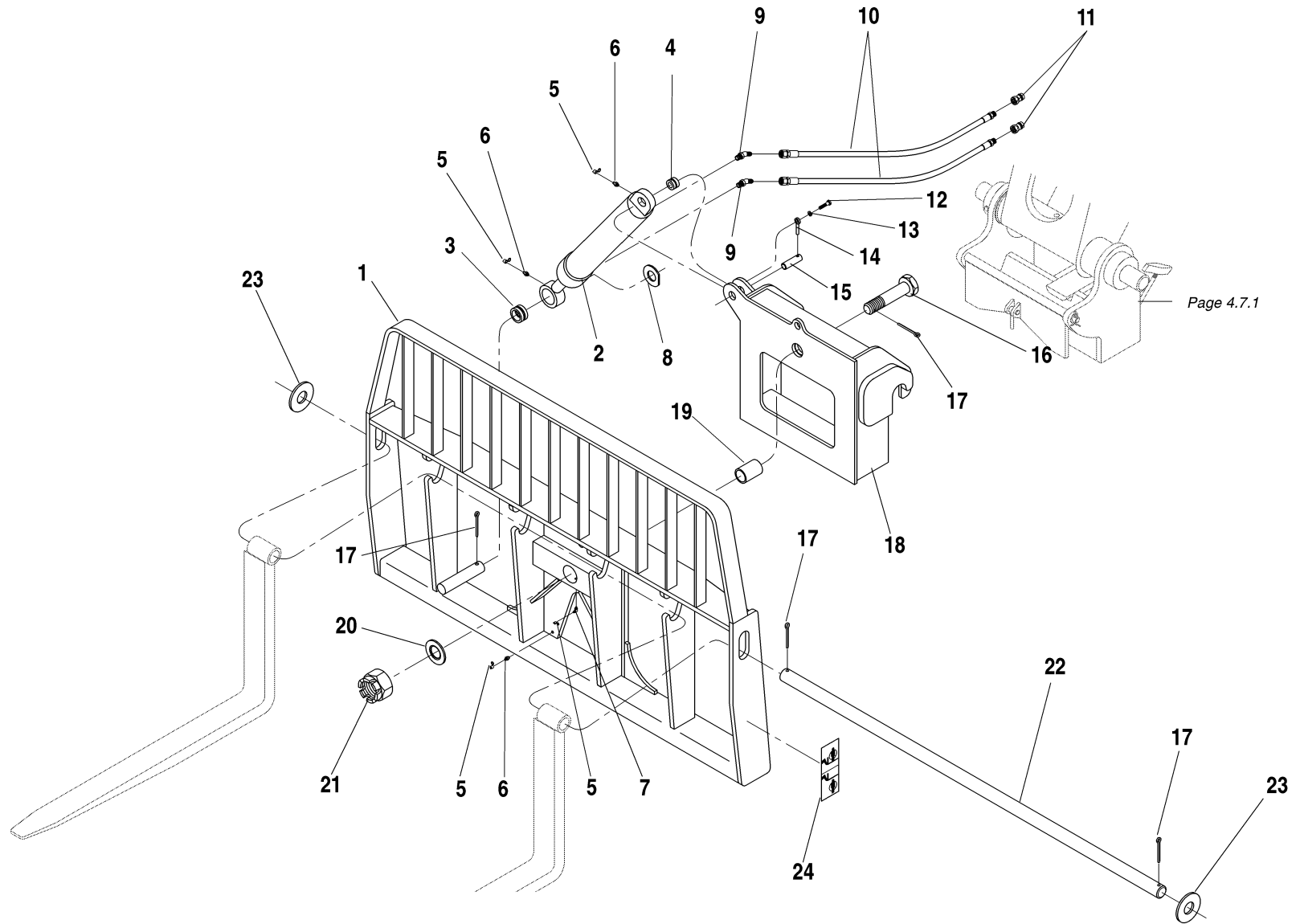
Page 4.7.1

ITEM	PART NO.	QTY.	DESCRIPTION
REF	48001	-	Standard Tilting Fork Carriage Assembly (Includes items 1-23)
1	38002D	1	Carriage, Standard Tilting
2	66218B	1	Cylinder, Tilting Carriage w/O-Ring Ports (See Page 11.5.1 for Breakdown)
3	16228A	1	Bushing, Cylinder - Rod End
4	16227A	1	Bushing, Cylinder - Base End
5	P32689	5	Cover, Grease Fitting
6	P16611	4	Grease Fitting
7	P15337	1	Grease Fitting, 90°
8	16323A	1	Washer, Special
9	P19815	2	45° Elbow, O-Ring
10	37863X	2	Hyd. Hose, 3/8" x 40" (O-Ring Ends)
11	66136X	2	Male, Quick Coupler
12	P00403	1	Capscrew, Hx., 1/2"-13 x 1 1/4"
13	P01312	1	Lockwasher, 1/2"
14	35707A	1	Lock Pin
15	38014A	1	Pin, Tilt Cylinder
16	38065A	1	Pivot Shaft
17	P03906	4	Cotter Pin, 3/8" x 3"
18	38004C	1	Inner Carriage
19	38013A	1	Sleeve, Pivot
20	38066A	1	Washer, Pivot
21	37794X	1	Castle Nut, Hx., 2"-12
22	38064A	1	Fork Shaft
23	18129A	2	Washer, Fork Shaft
24	24752B	2	Decal, Carriage Safety
REF	38026B	-	Pallet Fork, 42" x 4" x 2"

ITEM	PART NO.	QTY.	DESCRIPTION
REF	38025B	-	Pallet Fork, 48" x 4" x 2"
REF	38117B	-	Pallet Fork, 60" x 4" x 2"
REF	38118B	-	Cubing Fork, 48" x 2" x 2"
REF	17103B	-	Lumber Fork, 48" x 6" x 1 1/2"
REF	23610B	-	Lumber Fork, 60" x 6" x 1 1/2"
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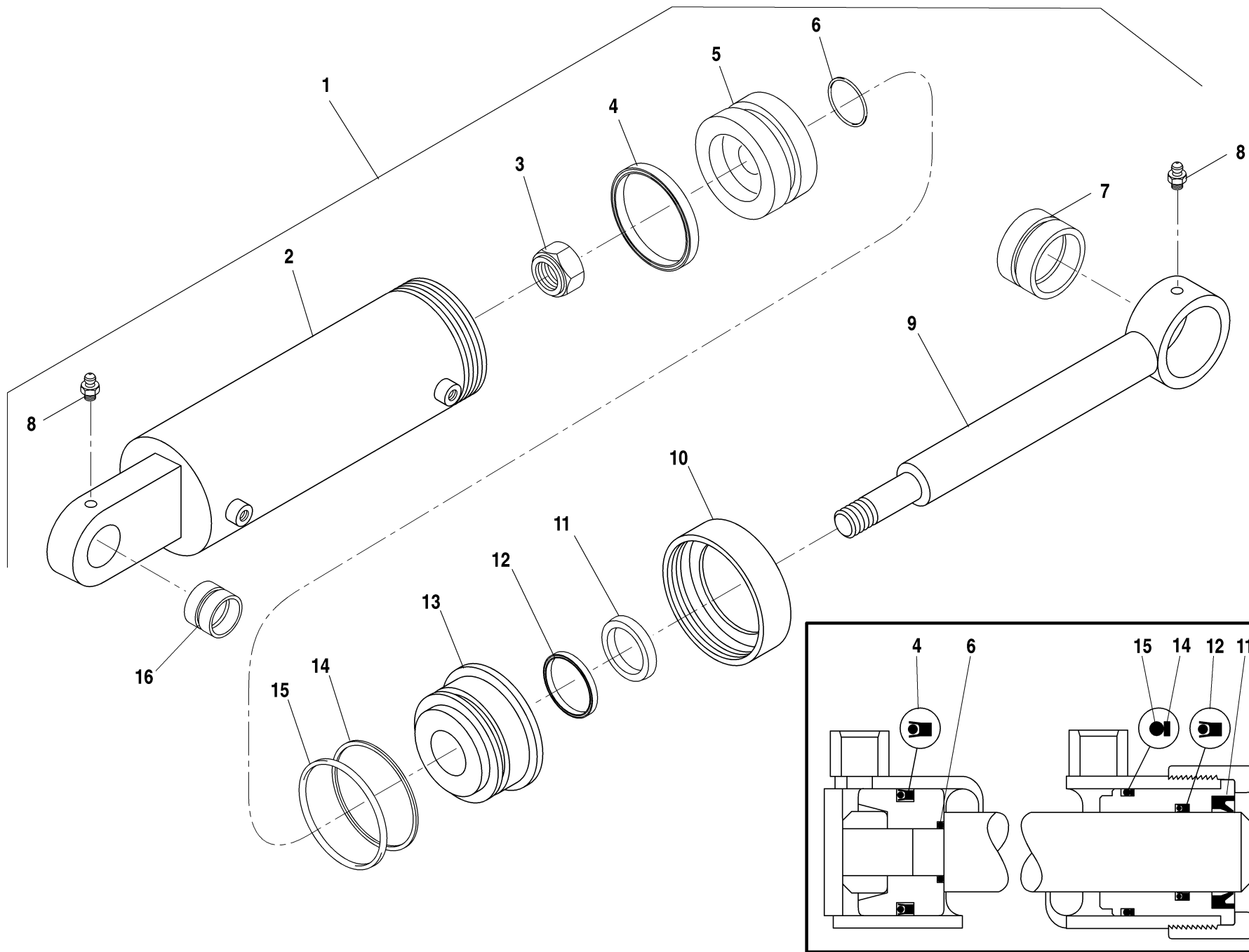
**STANDARD TILTING FORK CARRIAGE ASSEMBLY 11.3.1**



ITEM	PART NO.	QTY.	DESCRIPTION
REF	48003	-	Framers Tilting Fork Carriage Assembly (Includes items 1-23)
1	38003D	1	Carriage, Framers Tilting
2	66218B	1	Cylinder, Tilting Carriage w/O-Ring Ports (Includes Items 3 & 4) (See Page 11.5.1 for Breakdown)
3	16228A	1	Bushing, Cylinder - Rod End
4	16227A	1	Bushing, Cylinder - Base End
5	P32689	5	Cover, Grease Fitting
6	P16611	4	Grease Fitting
7	P15337	1	Grease Fitting, 90°
8	16323A	1	Washer, Special
9	P19815	2	45° Elbow, O-Ring
10	37863X	2	Hyd. Hose, 3/8" x 40" (O-Ring Ends)
11	66136X	2	Male, Quick Coupler, O-Ring
12	P00403	1	Capscrew, Hx., 1/2"-13 x 1 1/4"
13	P01312	1	Lockwasher, 1/2"
14	35707A	1	Lock Pin
15	38014A	1	Pin, Tilt Cylinder
16	38065A	1	Pivot Shaft
17	P03906	4	Cotter Pin, 3/8" x 3"
18	38004C	1	Inner Carriage
19	38013A	1	Sleeve, Pivot
20	38066A	1	Washer, Pivot
21	37794X	1	Castle Nut, Hx., 2"-12
22	16207A	1	Fork Shaft
23	18129A	2	Washer, Fork Shaft
24	24752B	2	Decal, Carriage Safety
REF	38026B	-	Pallet Fork, 42" x 4" x 2"

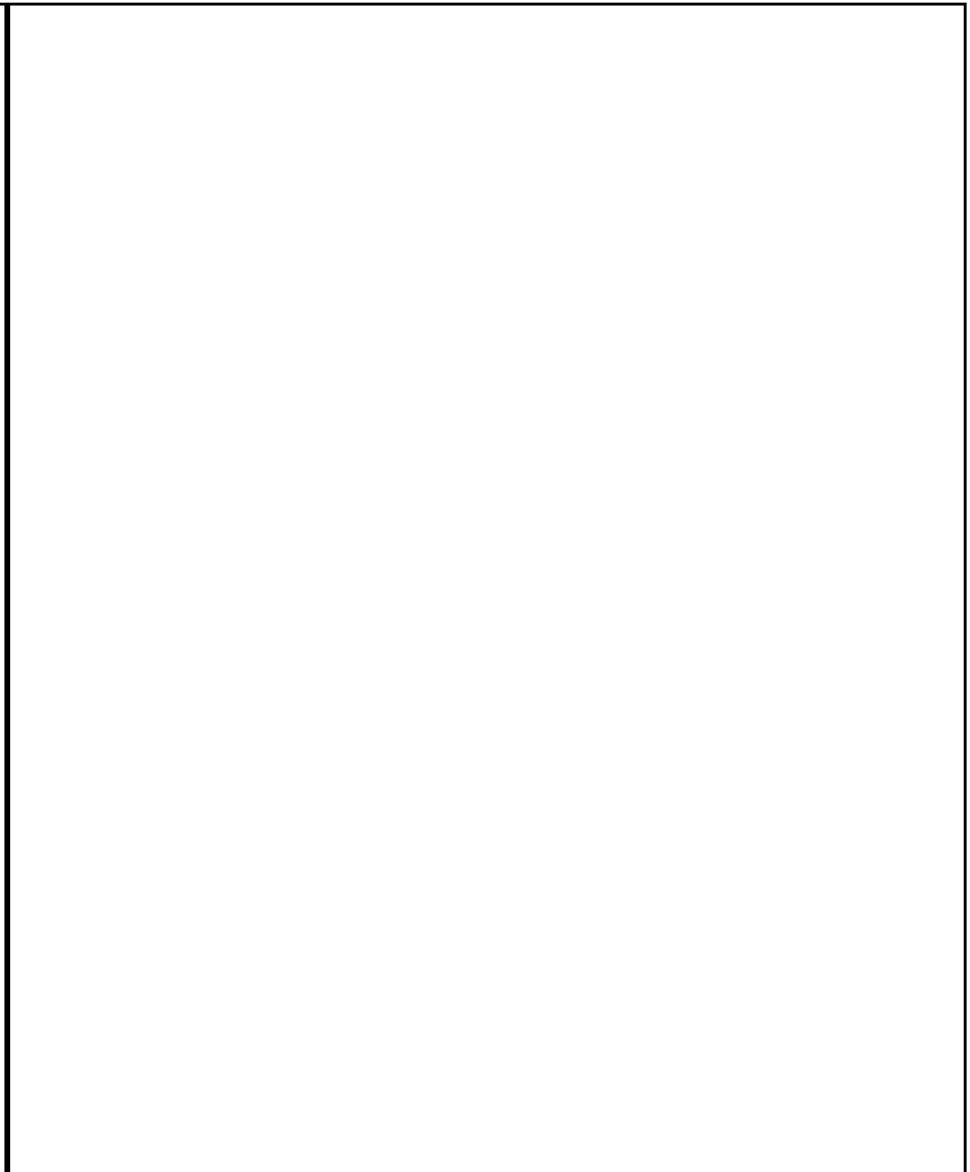
ITEM	PART NO.	QTY.	DESCRIPTION
REF	38025B	-	Pallet Fork, 48" x 4" x 2"
REF	38117B	-	Pallet Fork, 60" x 4" x 2"
REF	38118B	-	Cubing Fork, 48" x 2" x 2"
REF	17103B	-	Lumber Fork, 48" x 6" x 1 1/2"
REF	23610B	-	Lumber Fork, 60" x 6" x 1 1/2"
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ITEM	PART NO.	QTY.	DESCRIPTION
1	66218B	-	Cylinder Assembly, Tilting Carriage
2	37652X	1	Barrel Weldment
3	P19217	1	Locknut
4	N.S.S.		*Wiper
5	37051X	1	Piston
6	N.S.S.	1	*Seal
7	16228A	1	Bushing
8	P16611	2	Grease Zerk
9	P25297	1	Rod Weldment
10	P23778	1	Retainer, Rod Bearing
11	N.S.S.	1	*Back-Up Ring
12	N.S.S.	1	*O-Ring
13	P23788	1	Rod Bearing
14	N.S.S.	1	*O-Ring
15	N.S.S.	1	*Piston Seal
16	16227A	1	Bushing
REF	37050X	1	Seal Kit
<p>NOTES:</p> <p>* Items Included in Seal Kit.</p> <p>N.S.S. = Not Sold Separately</p>			



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**TILTING CARRIAGE CYLINDER ASSEMBLY 11.5.1**



Part Number	Page(s)	Part Number	Page(s)	Part Number	Page(s)	Part Number	Page(s)	Part Number	Page(s)
N12350	10.1.1	P00234	3.3.1	P01279	4.2.1	P01402	3.1.1, 3.1.1., 5.1.1.1,	P01659	2.1.1, 2.1.1.1, 2.1.1.2
N12354	3.3.1, 10.5.1	P00245	3.3.1	P01305	9.2.1		5.7.1.1, 5.7.1.2,	P01662	2.1.1, 2.1.1.1, 2.1.1.2
N12356	10.5.1, 10.7.1	P00284	2.1.1, 2.1.1.1, 2.1.1.2	P01306	3.2.1, 9.3.1, 9.3.1.1		9.2.1, 9.3.1, 9.3.1.1,	P01680	2.2.1
N12360	10.5.1	P00342	2.1.1, 2.1.1.1, 2.1.1.2	P01308	2.1.1, 2.1.1.1, 2.3.1,		10.6.1	P01681	3.2.1, 3.2.1.1
N12361	10.5.1	P00400	2.1.1, 2.1.1.1, 2.1.1.2		2.5.1, 3.1.1, 3.1.1.,	P01403	3.1.1, 3.1.1., 3.3.1	P01733	2.5.1
N12362	10.5.1	P00403	3.1.1, 3.1.1., 4.1.1,		3.3.1, 4.2.1, 4.7.1,	P01404	2.2.1.1, 3.2.1,	P01755	6.6.1
N12364	10.5.1, 10.6.1		4.2.1, 4.3.1, 4.4.1,		5.1.1, 5.1.1.1, 5.7.1,		3.2.1.1, 3.3.1,	P01757	6.7.1, 6.8.1
N12365	10.6.1		4.7.1, 6.1.1, 11.3.1,		5.7.1.1, 5.7.1.2,		5.7.1.1, 5.7.1.2,	P01763	6.7.1, 6.8.1
P00001	3.2.1, 3.3.1		11.4.1		8.8.1, 9.2.1, 9.3.1,		9.3.1, 9.3.1.1	P01766	6.6.1
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P00005	2.1.1, 2.1.1.1, 10.6.1,	P00407	5.7.1, 5.7.1.1, 5.7.1.2		3.1.1., 3.3.1, 5.7.1.1,		4.3.1, 4.4.1	P01826	6.1.1
	10.9.1	P00409	6.4.1		5.7.1.2, 6.1.1	P01411	4.7.1	P01929	3.3.1
P00006	2.5.1, 10.6.1	P00414	3.1.1, 3.1.1.	P01310	2.1.1, 2.1.1.1,	P01434	2.2.1, 8.3.1	P02034	3.3.1, 4.2.1
P00007	3.2.1, 10.6.1	P00420	4.7.1		2.1.1.2, 2.3.1,	P01440	4.3.1, 4.4.1	P02054	9.3.1, 9.3.1.1
P00008	4.7.1	P00432	4.2.1		2.3.1.1, 3.1.1, 3.1.1.,	P01506	2.3.1, 2.5.1, 3.1.1,	P02057	3.4.1, 3.4.1.1, 10.6.1
P00011	4.2.1	P00433	1.1.1		3.2.1, 3.2.1.1, 3.3.1,		5.1.1, 5.1.1.1, 5.7.1,	P02059	10.6.1
P00013	5.1.1, 5.1.1.1, 5.7.1,	P00450	4.4.1		3.4.1, 3.4.1.1, 4.1.1,		5.7.1.1, 5.7.1.2,	P02077	2.1.1.1, 2.1.1.2
	5.7.1.1, 5.7.1.2, 8.8.1	P00452	4.3.1, 4.4.1		4.7.1, 5.3.1, 5.3.1.1,		8.8.1, 9.3.1, 9.3.1.1	P02614	4.1.1
P00102	3.3.1, 9.3.1, 9.3.1.1	P00453	4.4.1		5.7.1.1, 5.7.1.2,	P01507	2.3.1, 2.3.1.1, 3.1.1,	P02757	4.3.1
P00104	2.3.1, 2.3.1.1, 3.1.1,	P00456	4.2.1		6.1.1, 8.8.1, 8.2.1,		3.1.1., 3.3.1, 5.7.1.1,	P03194	4.2.1
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P00110	10.6.1	P00632	4.2.1		2.1.1.2, 2.4.1,		2.2.1.1, 3.1.1, 3.1.1.,	P03209	3.3.1
P00112	6.1.1	P00641	2.1.1, 2.1.1.1, 2.1.1.2		2.4.1.1, 3.1.1, 3.1.1.,		3.2.1, 3.2.1.1, 4.7.1,	P03225	4.3.1
P00125	6.1.1	P00642	3.3.1		4.1.1, 4.2.1, 4.3.1,		6.1.1, 8.2.1, 8.2.1.1,	P03236	4.2.1, 4.3.1
P00132	8.3.1	P00706	3.1.1, 3.1.1.		4.4.1, 4.7.1, 5.7.1,		9.3.1, 9.3.1.1	P03237	4.2.1, 4.3.1
P00158	2.2.1	P00726	4.3.1, 4.4.1		5.7.1.1, 5.7.1.2,			P03242	4.2.1, 4.3.1
P00202	3.2.1, 3.2.1.1, 3.3.1,	P00733	4.2.1		6.1.1, 6.4.1, 11.3.1,	P01510	2.4.1, 2.4.1.1, 3.1.1,	P03444	5.7.1
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P00204	2.1.1, 2.1.1.1,	P00753	3.1.1, 3.1.1.	P01314	4.2.1	P01528	3.2.1, 3.2.1.1	P03906	11.1.1, 11.2.1,
	2.1.1.2, 2.3.1,	P00785	1.1.1		3.1.1, 3.1.1., 4.2.1,		2.5.1		11.3.1, 11.4.1
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P00205	2.1.1, 2.1.1.1,	P01209	3.1.1, 3.1.1.		3.3.1, 4.2.1	P01558	2.2.1, 2.2.1.1	P04060	10.6.1
	2.1.1.2, 2.2.1.1,	P01232	1.1.1	P01354	4.2.1		4.3.1, 4.7.1	P04103	2.1.1, 2.1.1.1
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	3.2.1.1, 3.4.1,	P01256	3.3.1	P01357	3.3.1, 7.1.1, 7.2.1	P01584	4.2.1	P04152	2.4.1, 2.4.1.1
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68015X	1.12.1	68067X	1.11.1	68212X	1.16.1	68252X	1.19.1, 1.23.1	68293X	1.22.1
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68017X	1.12.1	68069X	1.11.1	68214X	1.16.1	68254X	1.19.1	68295X	1.23.1
68018X	1.12.1	68070X	1.11.1	68215X	1.16.1	68255X	1.19.1	68296X	1.23.1
68019X	1.12.1	68071X	1.11.1	68216X	1.16.1	68256X	1.19.1	68297X	1.23.1
68020X	1.12.1	68072X	1.12.1	68217X	1.16.1	68257X	1.19.1	68298X	1.23.1
68021X	1.12.1	68073X	1.13.1	68218X	1.16.1	68258X	1.19.1	68299X	1.23.1
68022X	1.12.1	68074X	1.13.1	68219X	1.16.1	68259X	1.19.1	68300X	1.24.1
68023X	1.12.1	68075X	1.9.1	68220X	1.16.1	68260X	1.19.1	68302X	1.22.1, 1.24.1
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68025X	1.12.1	68077X	1.9.1	68222X	1.16.1	68262X	1.19.1	68306X	1.25.1
68026X	1.12.1	68078X	1.9.1	68223X	1.16.1	68263X	1.19.1	68307X	1.25.1
68027X	1.12.1	68079X	1.7.1	68224X	1.16.1	68264X	1.19.1	68308X	1.25.1
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68042X	1.13.1	68096X	8.5.1	68232X	1.17.1	68272X	1.20.1	68316X	1.25.1
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