

Ditch Witch[®]

JT8020 T3

ISSUE NO. 04PL-07/11

For Replacement Copy Order **P/N 053-1053**

This manual contains information concerning the following models:
JT8020 Tier 3

This product is covered by one or more of the following patents:

US B1 4,858,704; 4,953,638; 5,148,880; 5,242,026; 5,341,887; 5,490,569; 5,684,466;
5,713,423; 5,794,719; 5,880,680; 5,941,322; 6,085,852; 6,109,371; 6,179,065; 6,216,803;
6,250,403; 6,250,404; 6,290,606; 6,311,790; 6,411,094; 6,543,551; 6,550,547; 6,672,409;
6,739,413; 6,776,246; 6,808,210; 6,827,158; RE37,450; RE37,923; RE37,975; RE38,418

AU 689,533; 706,544; 718,034, 755,862

CA 2,156,398

FR 674,093

DE 694 17 019; 695 29 634; 297 01 406

EP 0683845; 0674093; 0817901; 0846841

GB 2,209,239; 2,312,006; EP674,093; EP846,841

JP 3,458,247

Other U.S. and foreign patents pending

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**Ditch
Witch**

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FOREWORD

This manual contains illustrated parts lists to help you select quality ProTech[®] Replacement parts for your Ditch Witch[®] equipment. Using other replacement parts will lessen the productivity of your equipment.

- ◆ Part numbers enclosed in a box are no longer available from The Charles Machine Works, Inc. Your local Ditch Witch dealer may be able to locate the part for you.
- ◆ Footnotes provide more information to help you identify parts shown in the manual.
- ◆ Assembly instructions and Tech Bits articles referenced in footnotes are available through your local Ditch Witch dealer.
- ◆ Description and specifications in this book were current at publication. However, The Charles Machine Works, Inc. reserves the right to improve equipment, so this manual might not reflect the most current improvements.
- ◆ Instructions on recommended equipment use and maintenance are in the Operator's Manual that was shipped with your equipment.

Keep the following in mind when ordering ProTech replacement parts:

- ◆ Specify parts you need by part number and description, not by illustration reference numbers.
- ◆ Have equipment model and serial number on hand to help ensure you get the right parts for your machine whether it's old or new.

Thank you for buying and using Ditch Witch equipment and ProTech replacement parts.

WARRANTY

DW WARRANTY Policy
July, 2005

POLICY 1: DITCH WITCH® EQUIPMENT AND REPLACEMENT PARTS LIMITED WARRANTY POLICY

Subject to the limitation and exclusions herein, free replacement parts will be provided at any authorized Ditch Witch dealership for any Ditch Witch equipment or parts manufactured by The Charles Machine Works, Inc. (CMW) that fail due to a defect in material or workmanship within one (1) year of first commercial use (Exception: 2 years for all SK500 Attachments). Free labor will be provided at any authorized Ditch Witch dealership for installation of parts under this warranty during the first year following "initial commercial" use of the serial numbered Ditch Witch equipment on which it is installed. The customer is responsible for transporting their equipment to an authorized Ditch Witch dealership for all warranty work.

EXCLUSIONS FROM PRODUCT WARRANTY

- All incidental or consequential damages.
- All defects, damages, or injuries caused by misuse, abuse, improper installation, alteration, neglect, or uses other than those for which products were intended.
- All defects, damages, or injuries caused by improper training, operation, or servicing of products in a manner inconsistent with manufacturer's recommendations.
- All engines and engine accessories (these are covered by original manufacturer's warranty).
- Tires, belts, and other parts which are subject to another manufacturer's warranty. (Such warranty will be available to purchaser.)
- ALL IMPLIED WARRANTIES NOT EXPRESSLY STATED HEREIN, INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY.

IF THE PRODUCTS ARE PURCHASED FOR COMMERCIAL PURPOSES, AS DEFINED BY THE UNIFORM COMMERCIAL CODE, THEN THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF AND THERE ARE NO IMPLIED WARRANTIES OF ANY KIND WHICH EXTEND TO A COMMERCIAL BUYER. ALL OTHER PROVISIONS OF THIS LIMITED WARRANTY APPLY INCLUDING THE DUTIES IMPOSED.

Ditch Witch products have been tested to deliver acceptable performance in most conditions. This does not imply they will deliver acceptable performance in all conditions. Therefore, to assure suitability, products should be operated under anticipated working conditions prior to purchase.

Defects will be determined by an inspection within thirty (30) days of the date of failure of the product or part by CMW or its authorized dealer. CMW will provide the location of its inspection facilities or its nearest authorized dealer upon inquiry. CMW reserves the right to supply remanufactured replacement parts under this warranty as it deems appropriate.

Extended warranties are available upon request from your local Ditch Witch dealer or CMW.

Some states do not allow exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. Further, some states do not allow exclusion of or limitation of how long an implied warranty lasts, so the above limitation may not apply. This limited warranty gives product owner specific legal rights and the product owner may also have other rights which vary from state to state.

For information regarding this limited warranty, contact CMW's Product Support Department, P.O. Box 66, Perry, OK 73077-0066, or contact your local Ditch Witch dealer.

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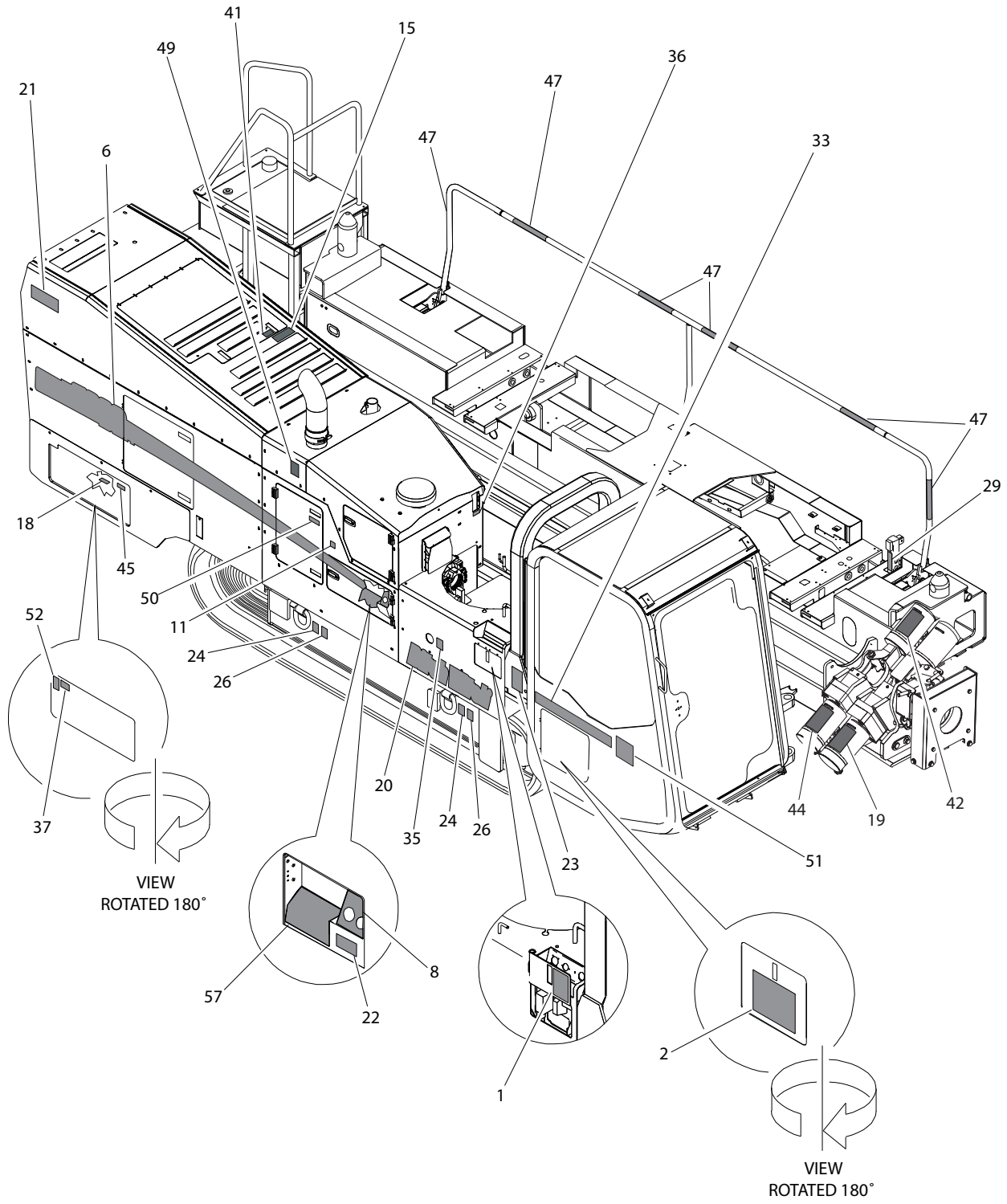
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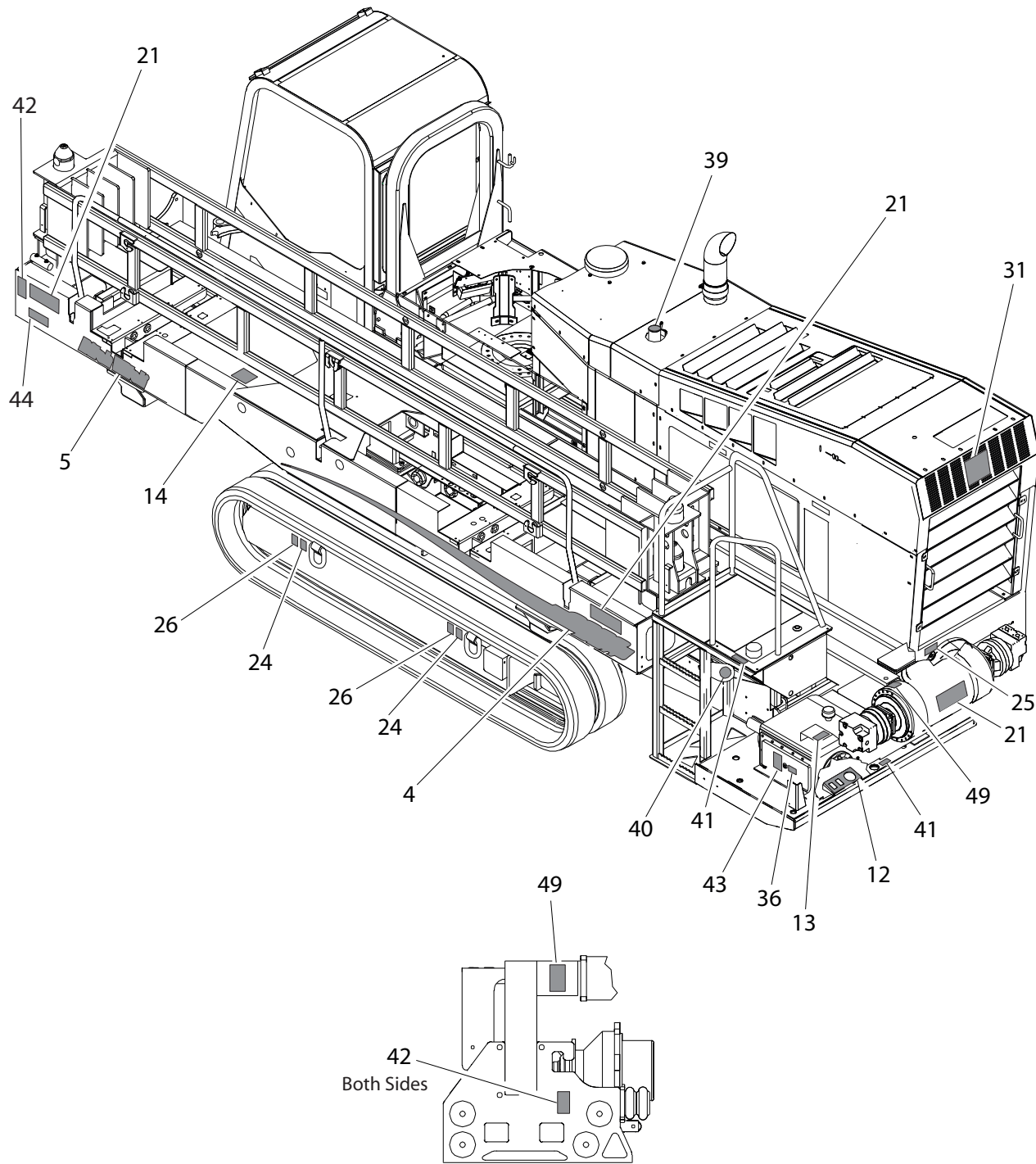
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DECALS

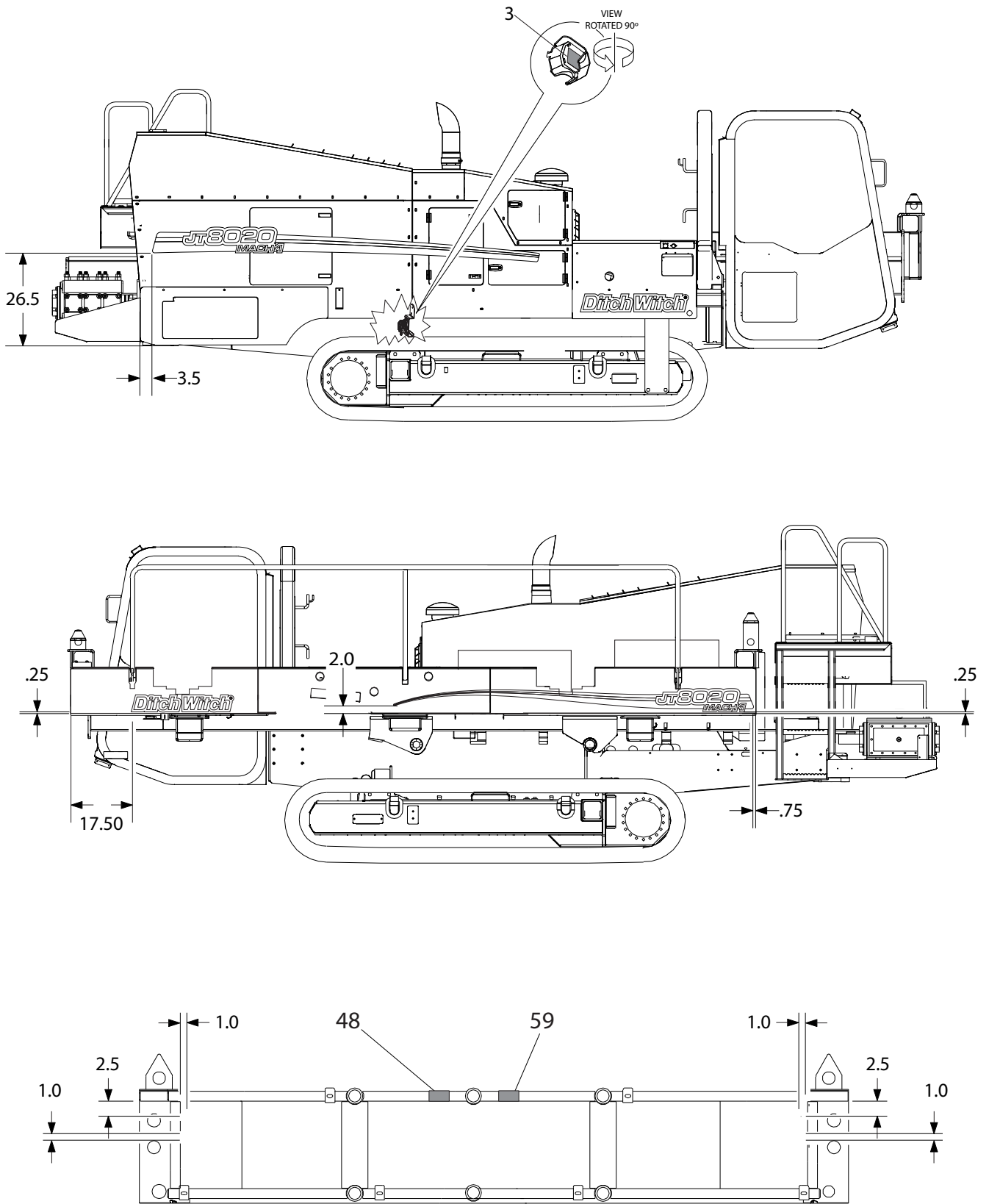
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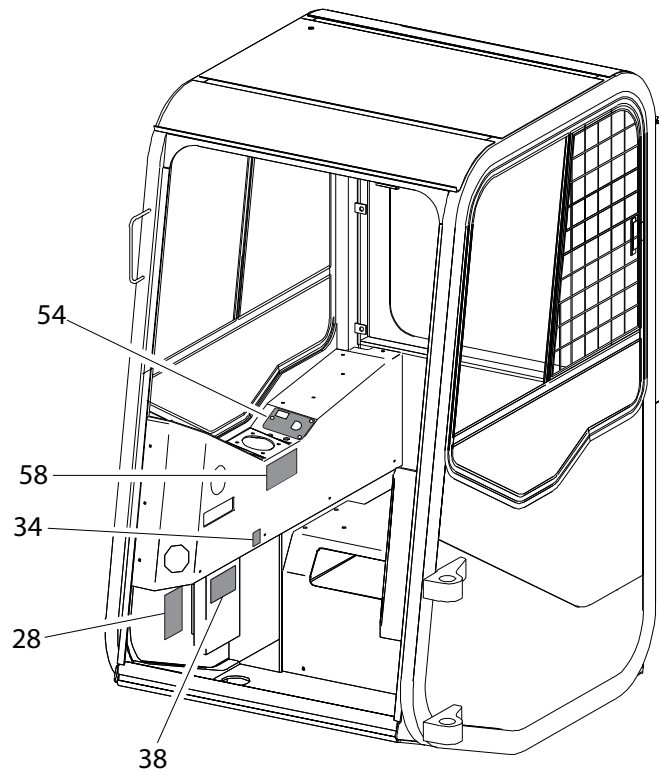
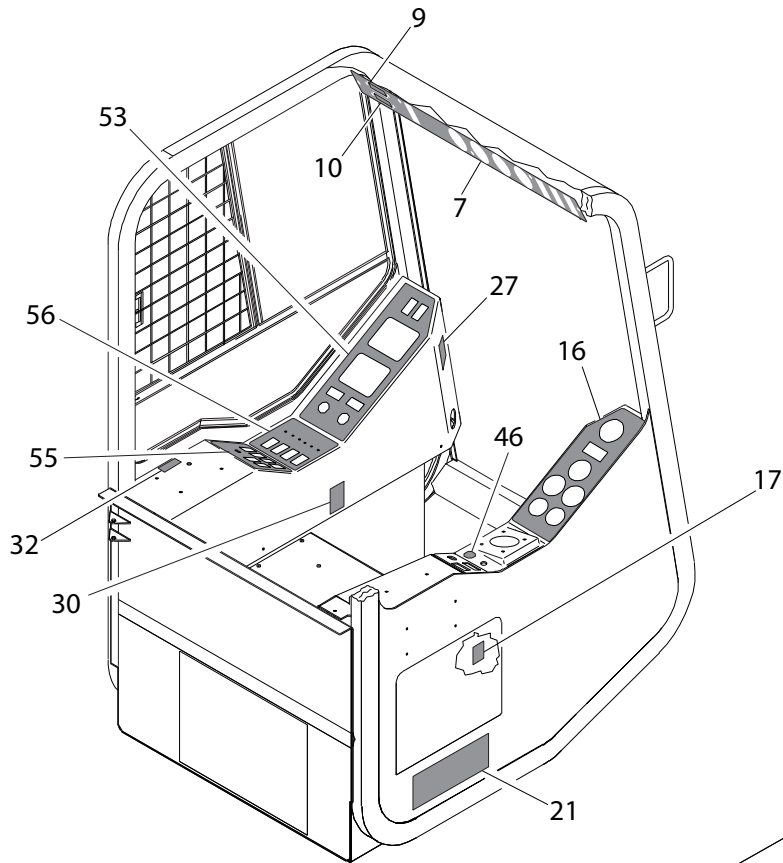
DECAL LOCATION JT8020M1T3



DECAL LOCATION JT8020M1T3



DECAL LOCATION JT8020M1T3



DECAL LOCATION

JT8020M1T3

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	270-1143		DECAL KIT - JT8020MIT3	
1	270-1135		FUSE PANEL DECAL	
2	270-1136	1	ELECTRICAL PANEL	
3	270-1137	1	FUSE BLOCK	
4	270-1138	1	JT8020MIT3 MODEL ID PIPE BOX	
5	270-1139	1	JT8020MIT3 LOGOTYPE PIPE BOX	
6	270-1140	1	JT8020MIT3 MODEL ID	
7	270-1141	1	TOP CONTROL PANEL	
8	270-1142	1	GAUGE PANEL	
9	270-1144	1	JT8020MIT3 LED DISPLAY A	
10	270-1145	1	JT8020MIT3 LED DISPLAY B	
11	273-016	1	SOUND POWER II	SEE FOOTNOTE 1
12	273-117	1	WORKLIGHTS / WASH WAND	
13	273-128	1	NO STEP	
14	273-129	1	JT70MI SOLENOID VALVE	
15	273-138	1	NOTICE COOLANT	
16	273-150	1	RIGHT INSTRUMENT PANEL	
	270-1885	1	RIGHT INSTRUMENT PANEL	BEGINS WITH SN#CMWJT80T3C70000018
17	273-198	1	TRACKER CONTROL	
18	273-267	1	DITCH WITCH BATTERY	SEE FOOTNOTE 2
19	273-278	1	DANGER WRENCH	
20	274-967	1	DITCH WITCH LOGOTYPE	
21	274-049	5	DANGER ELECTROCUTION	
22	274-050	1	WARNING JOBSITE HAZARD	
23	274-204	1	CRUSHING FORCE HAZARD ALERT	
24	274-318	4	TIE DOWN LOCATION	
25	274-375	1	MASTER DISCONNECT SWITCH	
26	274-442	4	LIFT LOCATION	
27	274-724	1	ONE CALL NOTIFICATION	
28	274-780	1	JET TRAC PATENTISI	
29	274-831	1	PIPE ROW INDICATOR	
30	274-852	1	CLIMATE CONTROL	
31	274-854	1	LOGO PLACARD	
32	274-857	1	CAB SWING LOCK / UNLOCK	
33	274-874	1	GRAPHIC STRIPE (SOLD PER INCH)	USE 80" SEE FOOTNOTE 3
34	274-923	1	POWER POINT	
35	274-933	1	LUBRICATION	
36	275-023	2	OIL LEVEL	
37	275-033	1	NOTICE ELECTRICAL SYSTEM	
38	275-048	1	IMPORTANT SAFETY RULES	
39	700-063	1	RESEVOIR (THF)	
40	700-062	1	DIESEL FUEL CAP	
41	275-149	3	COOLANT	
42	275-184	4	WARNING MOVING PARTS	
43	275-185	1	WARNING SINGLE OPERATOR	
44	275-197	2	DANGER ROTATING SHAFT	
45	275-203	1	BATTERY	
46	275-222	1	ENGINE STOP	
47	275-230	6	DANGER STRIPE 1.75" X 18"	
48	275-326	2	WARNING CRUSHING WEIGHT	
49	275-355	3	CAUTION HOT PARTS	
50	275-400	1	NOTICE OIL LEVEL	

FOOTNOTES

1. NOT PART OF KIT. FOR EUPEAN UNITS ONLY.
2. LOCATE DECAL ON BATTERY SO THAT DECAL IS VISIBLE WHEN VIEWING BATTERY.
3. APPLY AROUND BACK SIDE OF OPERATOR STATION.

DECAL LOCATION

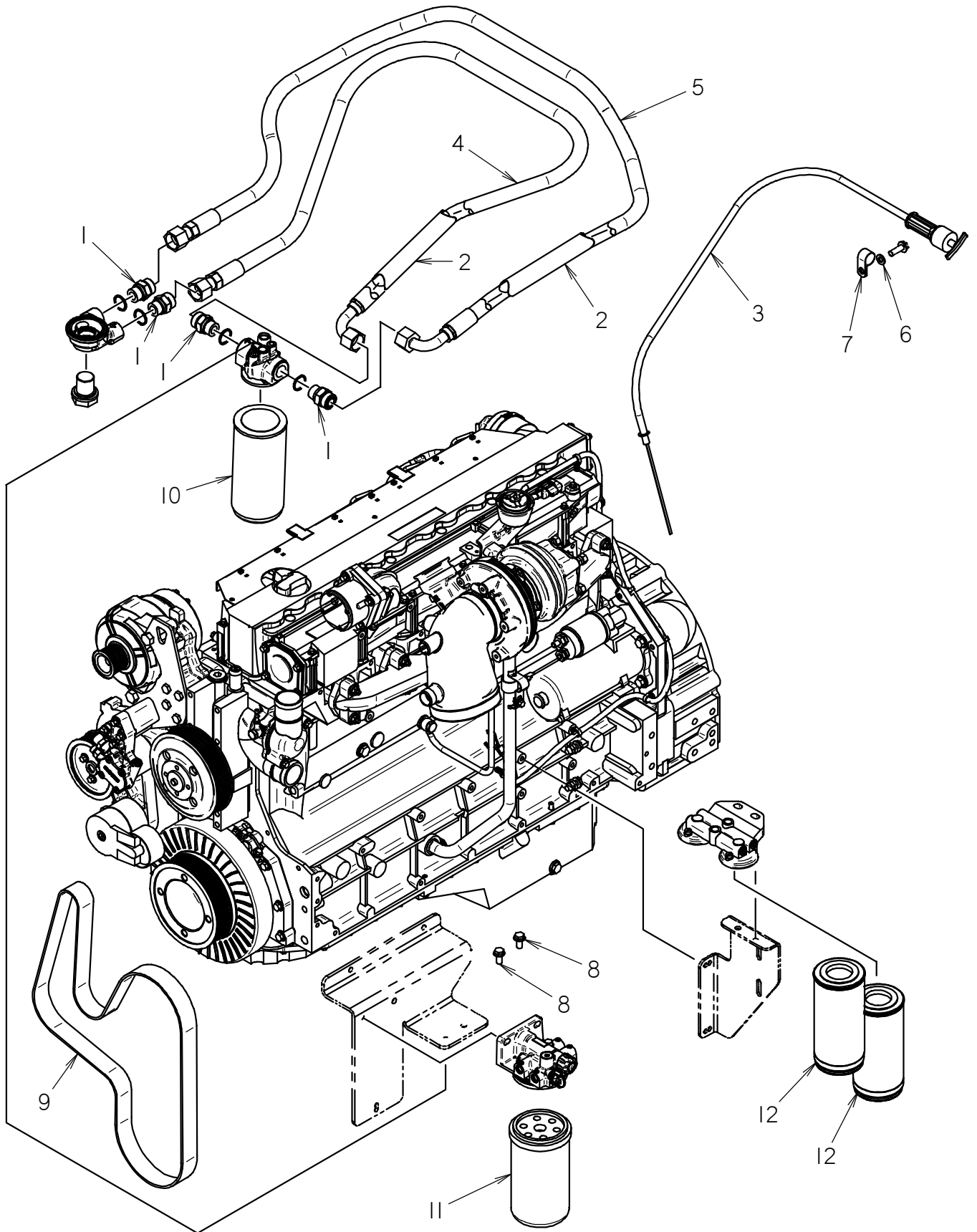
JT8020M1T3

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
51	274-853	1	DITCH WITCH LOGO	
52	275-419	1	WARNING NO FLAME	
53	700-022	1	LEFT INSTRUMENT PANEL	
54	270-1150	1	IGNITION-COLD START	
55	700-025	1	PIPE - HORN - THROTTLE	
56	700-026	1	PIPE - MOBILE - WRENCHES	
57	700-027	1	THROTTLE - LIGHTS - STABILIZER	
58	700-028	1	JOYSTICK CONTROL	
59	701-326	2	WARNING CRUSHING WEIGHT (ISO)	

FOOTNOTES

ENGINE COMPONENTS

ENGINE SERVICE



ENGINE SERVICE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	150-1211	4	CONNECTOR, M26-1.5 X -12ORS STRAIGHT	
2	115-924	2	ABRASION SLEEVE (1.25" X 88")	
3	194-792	1	FLUID LEVEL INDICATOR	
4	150-1240	1	HOSE (120FX90S-91"-300)	
5	150-1240	1	HOSE (120FX90S-91"-300)	
6	106-390	1	WASHER (M10)	
7	110-333	1	BOLT-ON CLAMP (1")	
8	106-382	2	FLG LK SCREW (M10-1.50 X 20MM)	
9	500-1085	1	BELT, SERPENTINE DRIVE	
10	500-1082	1	ELEMENT, ENGINE OIL FILTER	
11	500-2110	1	DEUTZ FUEL FILTER	
12	500-1084	2	ELEMENT, SECONDARY FUEL FILTER	

NOT SHOWN:

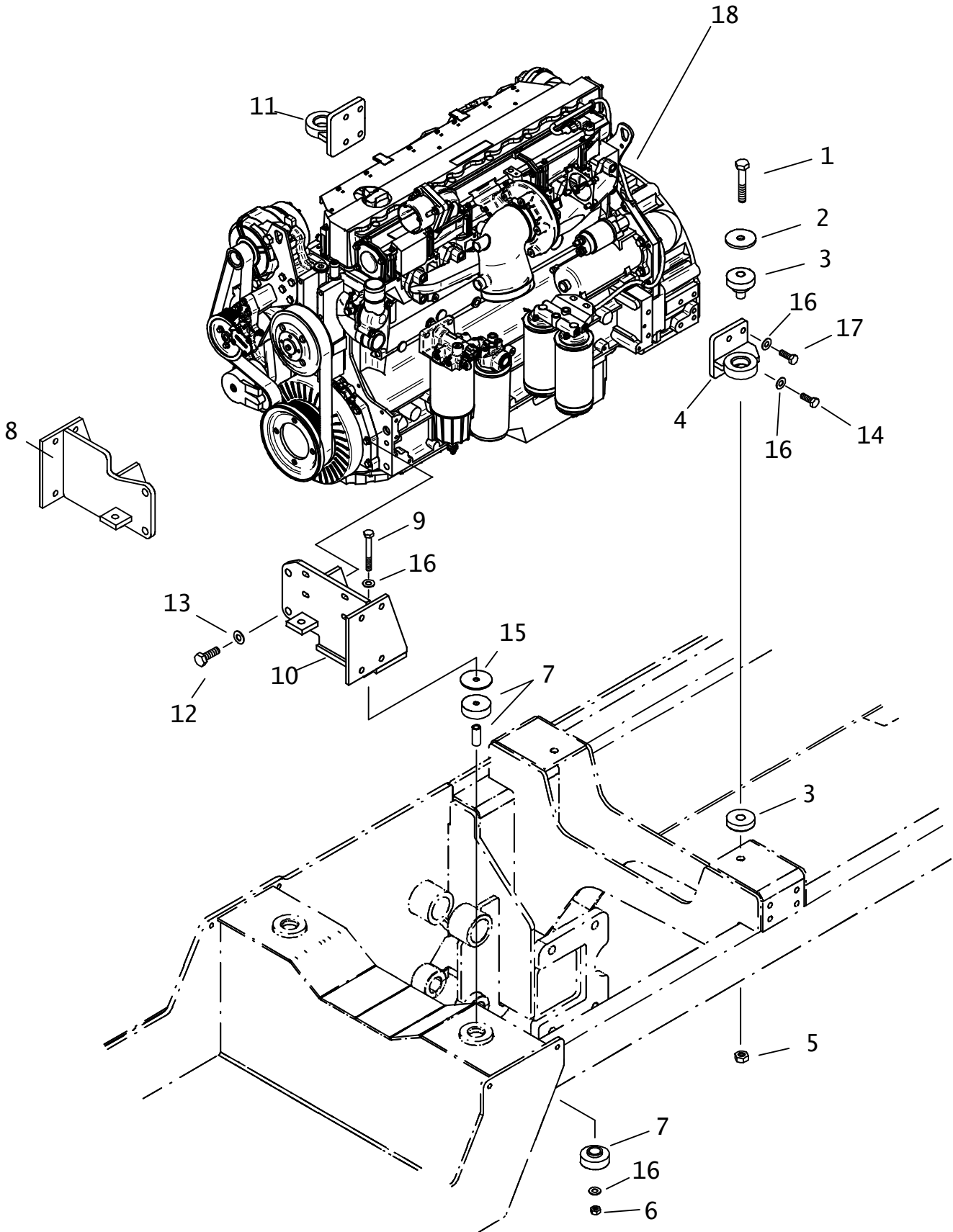
194-833	STARTER, ENGINE	
195-1384	BULK HOSE, 1/4" SILICONE	USE 1 PIECE AT 18"
195-1438	2 HOSE CLAMP	

FOOTNOTES:

BULK HOSE, 1/4" SILICONE

NOTE:

ENGINE MOUNT



ENGINE MOUNT

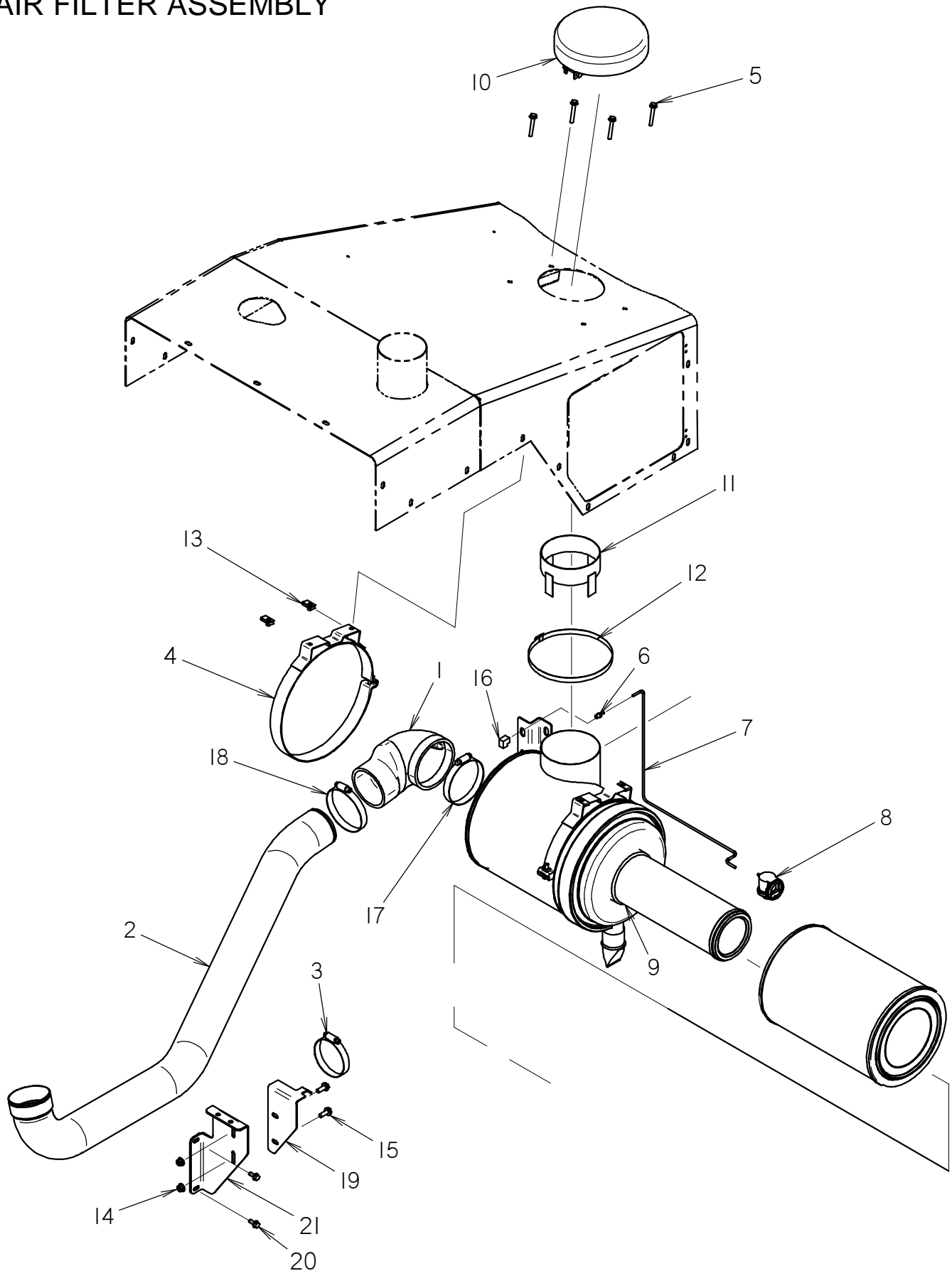
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	107-144	2	SCREW (M16-2.00 X 100mm)	
2.	105-964	2	WASHER (.656")	
3.	116-691	2	SHOCK MOUNT (REAR)	
4.	349-078	1	LEFT REAR ENGINE MOUNT	
5.	106-545	2	LOCKNUT (M16-2.0, PRV TRQ, 10.9)	
6.	106-685	2	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
7.	116-690	2	SHOCK MOUNT (FRONT)	
8.	308-694	1	FRONT ENGINE MOUNT (RT)	
9.	106-336	2	SCREW (M12-1.75 X 90mm)	
10.	300-1789	1	WELDMENT, FRONT ENGINE MOUNT (LEFT)	
11.	349-077	1	RIGHT REAR ENGINE MOUNT	
12.	105-998	4	SCREW (M16-2.00 X 40mm)	TORQUE TO 140 FT LBS; USE LOCTITE 242 OR EQUIVALENT
13.	106-398	4	WASHER (M16, HARDENED)	
14.	105-273	4	SCREW (M12-1.75 X 30mm)	TORQUE TO 60 FT LBS; USE LOCTITE 242 OR EQUIVALENT
15.	178-072	2	WASHER	
16.	106-397	12	WASHER (M12, HARDENED)	
17.	106-333	4	SCREW (M12-1.75 X 40MM, 8.8)	TORQUE TO 60 FT LBS; USE LOCTITE 242 OR EQUIVALENT
18.	194-892	1	ENGINE, DEUTZ TCD2013L062V	OBSOLETE

NOT SHOWN:

FOOTNOTES:

NOTE:

AIR FILTER ASSEMBLY



AIR FILTER ASSEMBLY

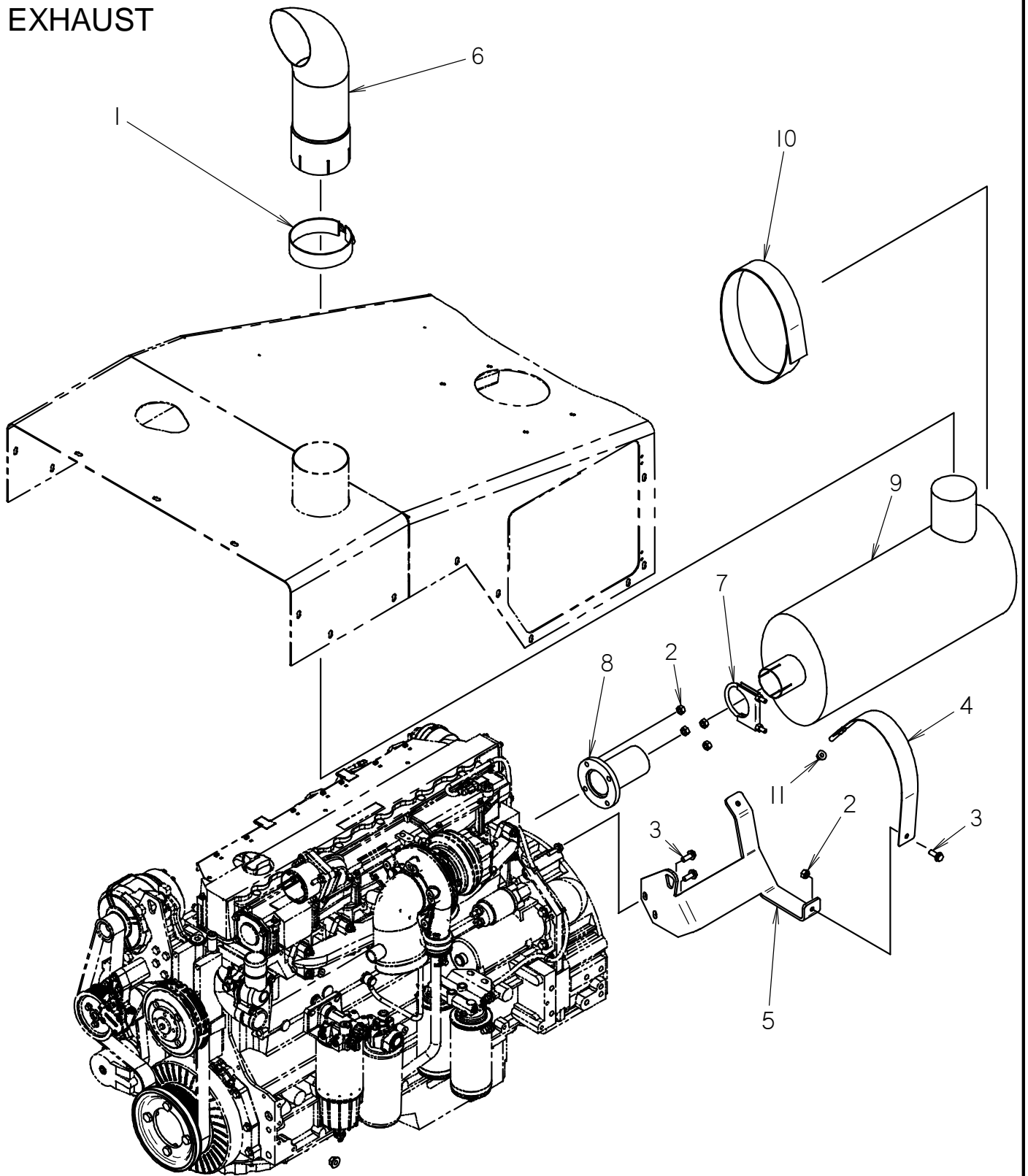
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	118-501	1	INLET HOSE (COBRA HEAD 4"-5")	
2	195-1021	1	TUBE, AIR FILTER	
3	110-367	1	WORM CLAMP (3-1/4" TO 4-1/8")	
4	194-673	2	MOUNTING BAND (13")	
5	105-665	4	FLG SCREW (M8-1.25 X 55MM)	
6	155-150	1	S/O COUPLER (O2N-O2H)	
7	116-192	1	BULK HOSE (7/64", SOLD PER 1')	USE 18"
8	215-150	1	RESTRICTION INDICATOR(20",H2O)	
9	194-672	1	AIR FILTER ASSEMBLY (13")	INCLUDES 500-1086-PRIMARY & 500-1087-SAFETY ELEMENT
10	195-1055	1	AIR INLET HOOD (6")	
11	300-2605	1	WELDMENT, INTAKE TUBE SPACER	
12	110-656	1	WORM CLAMP (2-1/2" TO 8-1/2")	
13	107-135	4	CLIP NUT (M8-1.25)	
14	106-387	2	FLG LOCKNUT (M10-1.50)	
15	106-724	2	FLG SCREW (M10-1.50 X 25MM)	
16	156-228	1	ELBOW (O2NF-O2NF90)	
17	110-391	1	WORM CLAMP (4-3/4" TO 5-5/8")	
18	110-170	1	WORM CLAMP (4-1/8" TO 5")	
19	300-1951	1	SHEET, INTAKE SUPPORT	
20	106-162	2	FLG SCREW (M8-1.25 X 20MM, GD8)	USE LOCTITE 242 OR EQUIVALENT
21	300-1769	1	SHEET, SECONDARY FUEL FILTER MOUNT	

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FOOTNOTES:

NOTE:

EXHAUST



EXHAUST

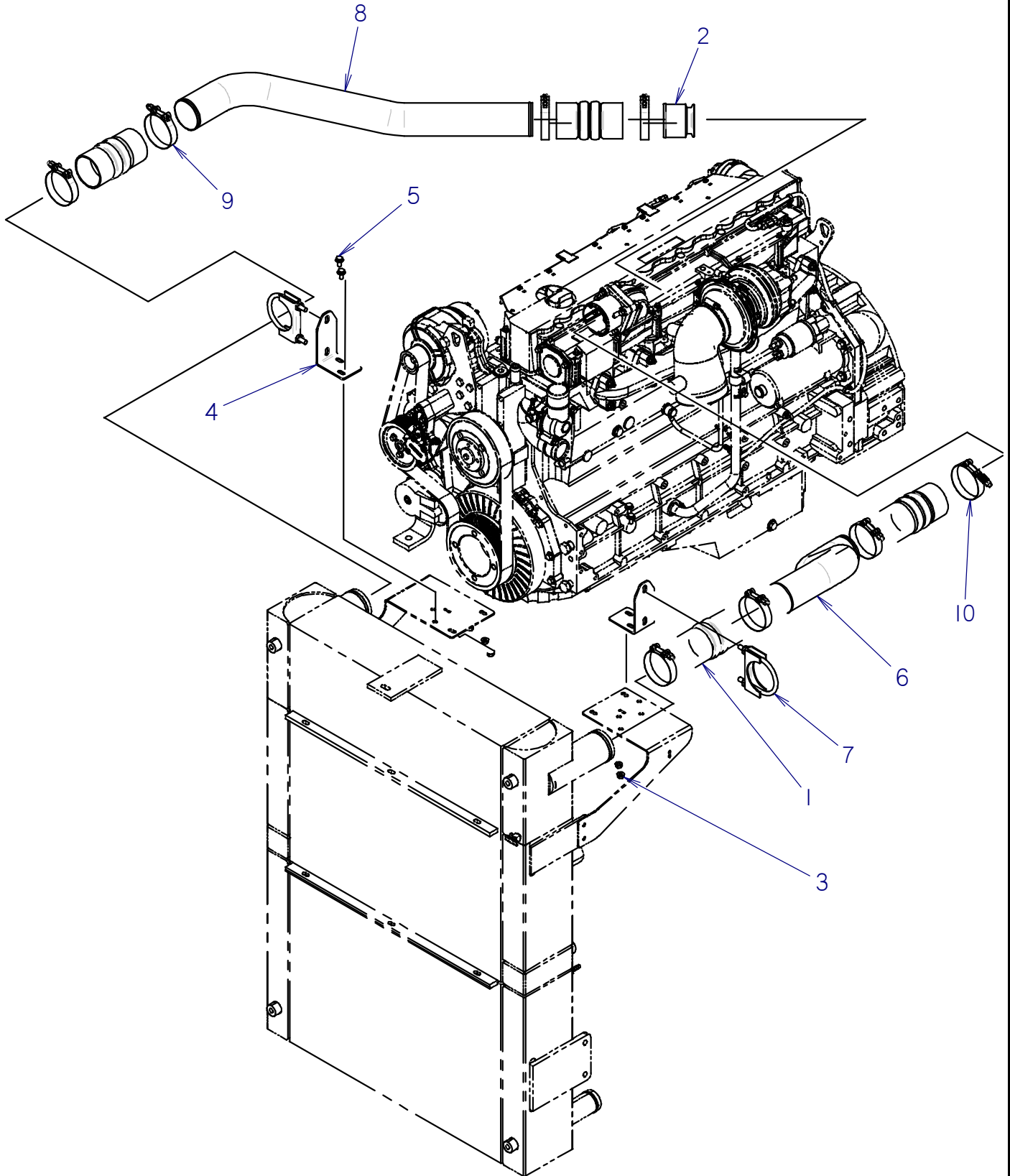
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	194-202	1	EXHAUST CLAMP (5-1/2")	
2	105-894	2	LOCKNUT(M10-1.50,PRV TRQ,10.9)	
3	105-799	2	FLG LK SCREW (M10-1.50 X 25MM)	
4	300-1941	1	WELDMENT, MUFFLER STRAP	
5	300-1938	1	WELDMENT, MUFFLER SUPPORT	
6	194-152	1	EXHAUST	
7	196-341	1	MUFFLER CLAMP (2-3/4")	
8	300-1720	1	WELDMENT, EXHAUST MOUNT TUBE	
9	194-016	1	EXHAUST SILENCER	
10	115-834	AR	EXHAUST WRAP (2", SOLD PER FT)	USE 1 @ 36"
11	106-387	1	FLG LOCKNUT (M10-1.50)	

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FOOTNOTES:

NOTE:

CHARGE AIR COOLER



CHARGE AIR COOLER

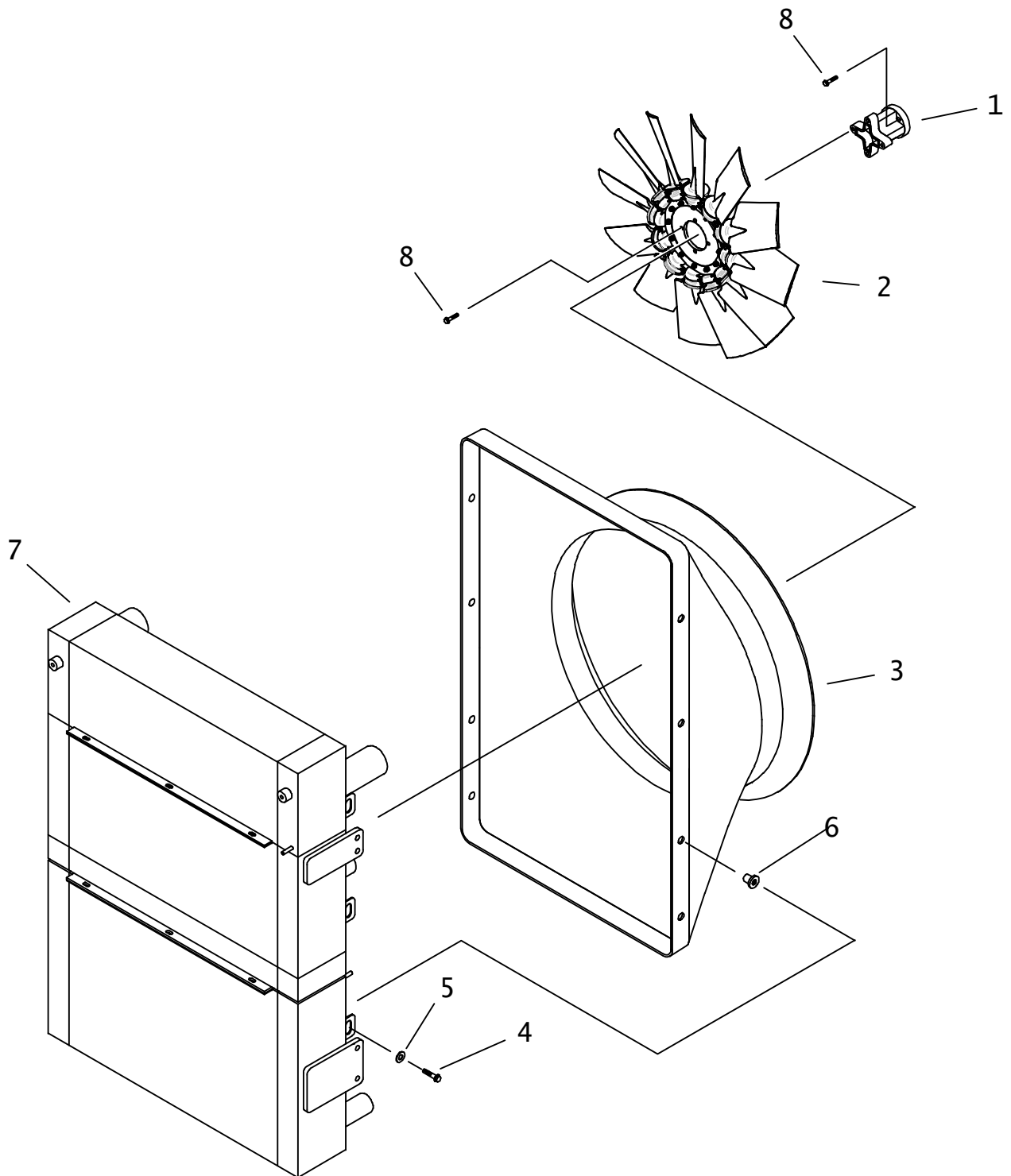
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	116-703	4	CHARGE AIR COOLER HOSE	
2	300-1722	1	TUBE, DEUTZ COMPRESSOR OUTLET	
3	106-386	4	FLG LOCKNUT (M8-1.25)	
4	323-230	2	BRACKET	
5	106-380	4	FLG LK SCREW (M8-1.25 X 16MM)	
6	195-1019	1	TUBE, CAC OUTLET	
7	196-010	2	U-BOLT CLAMP (3")	
8	195-1033	1	TUBE, CAC INLET	
9	110-959	7	T-BOLT CLAMP (3")	
10	118-421	1	T-BOLT CLAMP (3.31" - 3.55")	

NOT SHOWN:

FOOTNOTES:

NOTE:

FAN DRIVE



FAN DRIVE

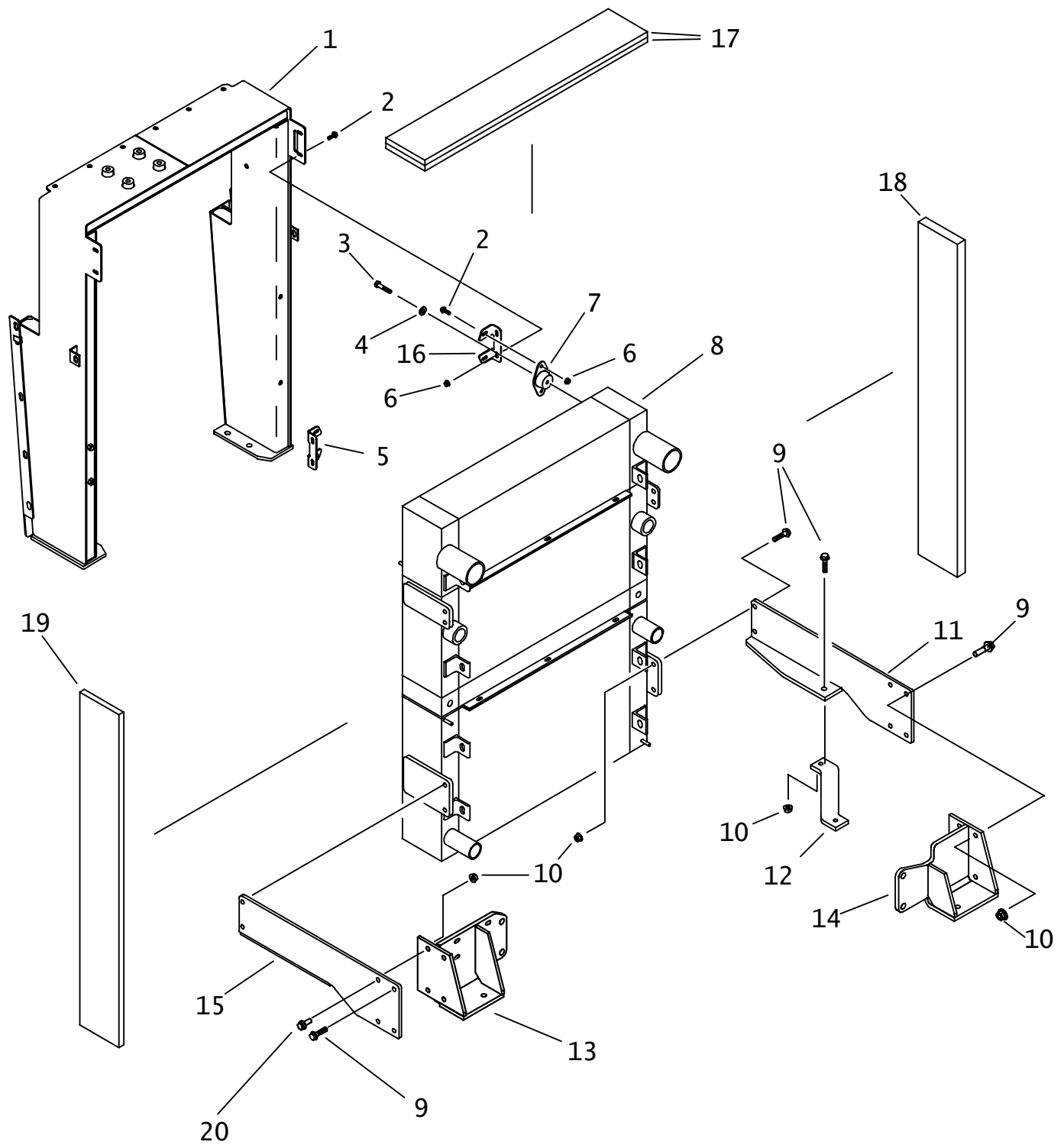
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-193	1	FAN ADAPTER	
2.	195-1030	1	FAN, 26.62 DIA 12 BL SUCKER	
3.	362-962	1	FAN SHROUD	
4.	105-874	8	FLG LK BOLT (3/8-NC X 1-1/2")	
5.	105-118	8	WASHER (3/8")	
6.	107-493	8	WELLNUT (3/8"-16)	
7.	195-1015	1	COOLER, JT8020 TIER 3	
8.	106-163	8	FLG SCREW (M8-1.25 X 30MM)	USE 242 LOCTITE OR EQUIVALANT, TORQUE TO 16 FT LBS

NOT SHOWN:

FOOTNOTES:

NOTE:

RADIATOR MOUNTING



RADIATOR MOUNTING

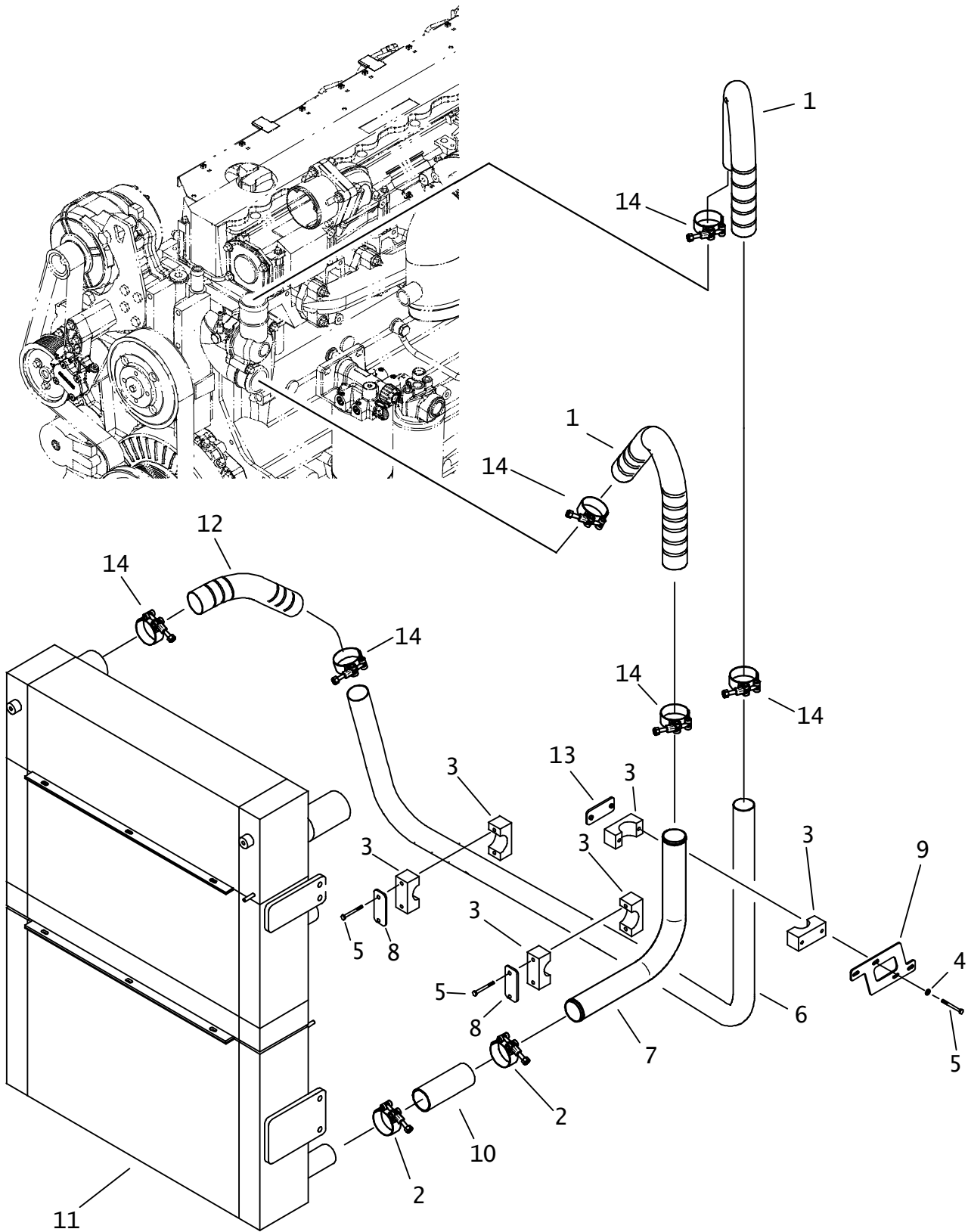
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	308-440	-	GRILLE	
2.	106-162	8	FLG SCREW (M8-1.25 X 20mm)	
3.	105-996	2	SCREW (M10-1.50 X 45mm)	
4.	105-118	2	WASHER (3/8")	
5.	308-632	1	MOUNTING BRACKET	
6.	106-386	8	FLG LOCKNUT (M8-1.25)	
7.	116-683	2	SHOCK MOUNT	
8.	195-1015	-	COOLER, JT8020 TIER 3	
9.	107-004	14	FLG LK SCREW (M12-1.75 X 45mm)	
10.	106-709	12	FLG LOCKNUT (M12-1.75)	
11.	308-947	1	RADIATOR MOUNT	
12.	308-701	2	MOUNT ARM	
13.	300-1789	-	WELDMENT, FRONT ENGINE MOUNT (LEFT)	
14.	308-694	-	RIGHT FRONT ENGINE MOUNT	
15.	308-692	1	RADIATOR MOUNT	
16.	309-500	1	MOUNTING BRACKET	
17.	117-309	2	INSULATION	
18.	117-310	1	INSULATION	
19.	117-311	1	INSULATION	
20.	106-469	2	FLG SCREW (M12-1.75 X 30MM)	

NOT SHOWN:

FOOTNOTES:

NOTE:

RADIATOR PLUMBING



RADIATOR PLUMBING

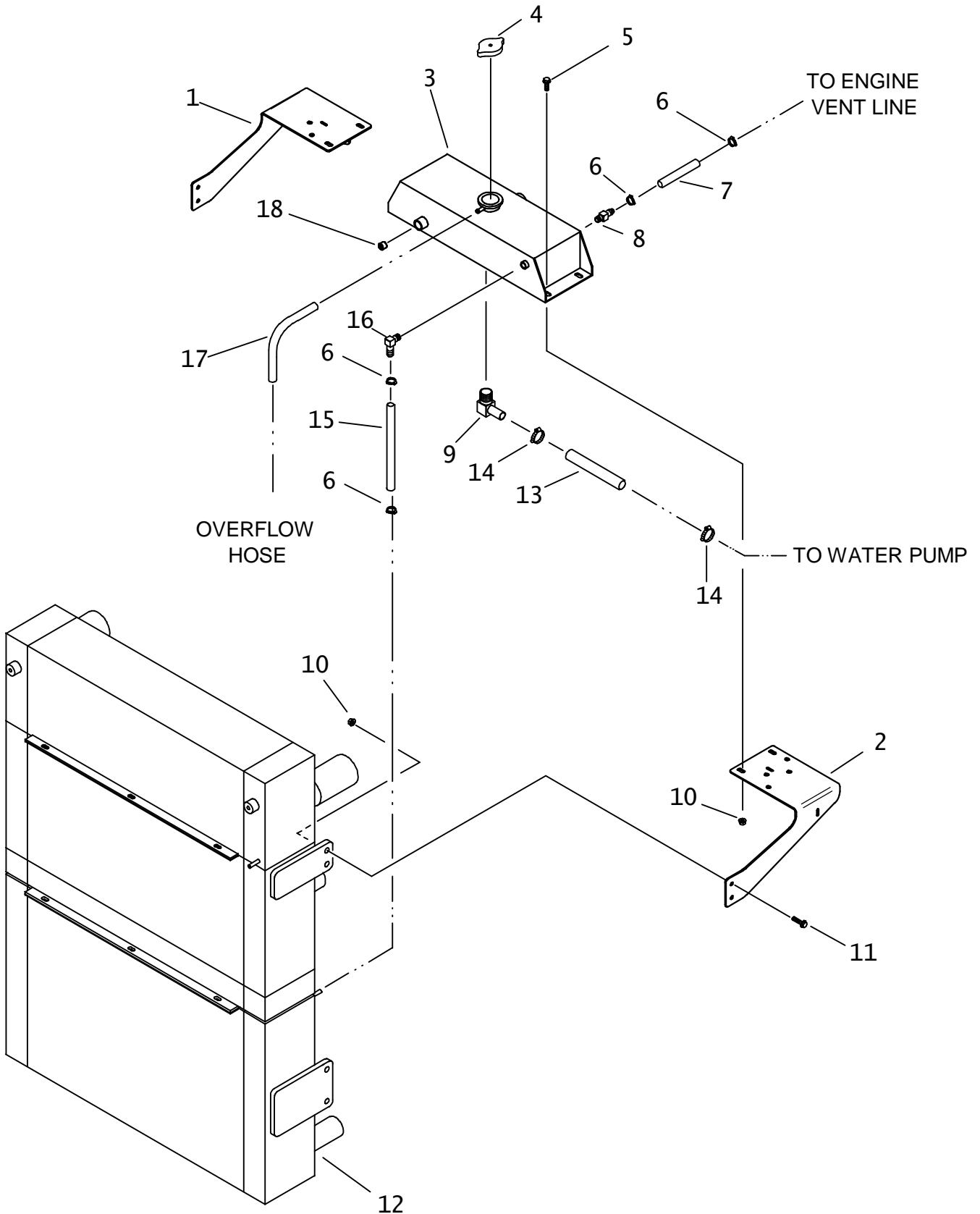
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	116-755	2	COOLANT HOSE	
2.	110-815	2	T-BOLT CLAMP(2.25" TO 2.56"")	
3.	110-970	3	CLAMP (2.00") PAIR	
4.	105-095	2	WASHER (1/4")	
5.	106-967	6	BOLT (1/4-NC X 2-3/4", SIL BRZ)	
6.	194-155	1	UPPER RADIATOR TUBE (-32)	
7.	150-1216	1	TUBE, LOWER RADIATOR (-32)	
8.	110-973	2	COVER PLATE	
9.	308-702	1	CLAMP MOUNT	
10.	116-827	1	COOLANT HOSE	
11.	195-1015	-	COOLER, JT8020 TIER 3	
12.	116-754	1	COOLANT HOSE	
13.	110-972	1	WELD PLATE	
14.	105-1486	6	T-BOLT CLAMP (2.12" TO 2.44")	

NOT SHOWN:

FOOTNOTES:

NOTE:

EXPANSION TANK



EXPANSION TANK

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	308-710	1	TANK MOUNT (RIGHT)	
2.	308-709	1	TANK MOUNT (LEFT)	
3.	364-530	1	EXPANSION TANK	
4.	110-898	-	RADIATOR CAP (14 PSI)	
5.	106-162	4	FLG SCREW (M8-1.25 X 20mm)	
6.	110-249	4	WORM CLAMP (1/4" TO 5/8 ")	
7.	115-381	AR	BULK HOSE (1/4", SOLD PER 1")	USE 1 @ 20"
8.	155-093	1	S/O COUPLER (04N-04H)	
9.	153-151	1	S/O COUPLER (12N-12H90)	
10.	106-386	8	FLG LOCKNUT (M8-1.25)	
11.	106-163	4	FLG SCREW (M8-1.25 X 30mm)	
12.	195-1015	-	COOLER, JT8020 TIER 3	
13.	116-751	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 20"
14.	110-026	2	WORM CLAMP (1/2" TO 1-1/4")	
15.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1 @ 33"
16.	155-164	1	S/O COUPLER (04N-05H90)	
17.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1 @ 67"
18.	115-165	1	PLUG (08N, SOC)	

NOT SHOWN:

FOOTNOTES:

NOTE:

BATTERY & POWER CABLES

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-892	-	ENGINE-DEUTZ 2013 DIESEL T3	OBSOLETE
2.	215-234	1	BATTERY CABLE (4/0 X 127", BLK)	
3.	217-819	-	BATTERY DISCONNECT SWITCH	
4.	215-236	1	BAT CBL (4GA, 157.8", RED, DUAL)	
5.	214-752	1	NEGATIVE BATTERY CABLE	
6.	215-282	-	BATTERY	
7.	105-832	-	FLG LOCKNUT (1/4-NC)	
8.	106-380	4	FLG LK SCREW (M8-1.25 X 16MM)	
9.	110-333	1	BOLT-ON CLAMP (1")	
10.	106-806	1	FLG LK SCREW (M12-1.75 X 25MM)	
11.	215-304	1	BAT CABLE (4 GA X 13", BLK)	USED ON JT8020 T3
	215-1105	1	BRAIDED GROUND STRAP	USED ON JT/AT100
12.	107-196	-	BOLT (1/4-NC X 3")	
13.	322-362	-	BACKUP SPACER	
14.	110-852	-	BLT-ON CLP (1.2", SOLD PER SET)	
15.	300-2456	1	SHEET, FUSE MOUNT	
16.	106-381	2	FLG LK SCREW (M8-1.25 X 25MM)	
17.	106-386	2	FLG LOCKNUT (M8-1.25)	
18.	215-1009	1	MAIN FUSE HOLDER BASE	
19.	106-161	4	FLG SCREW (M6-1.00 X 20MM)	
20.	106-385	4	FLG LOCKNUT (M6-1.00)	
21.	159-448	1	METRIC ADAPTER STUD	
22.	215-1011	1	BUSSBAR (MAIN FUSE HOLDER)	
23.	215-1010	1	MAIN FUSE HOLDER COVER	
24.	105-047	1	LOCKNUT (3/8-NC)	
25.	105-186	6	LOCKNUT (#10-24)	
26.	500-1149	-	RELAY, DEUTZ PREHEAT	SUPPLIED WITH 194-892
27.	106-237	2	LOCKNUT (M6-1.00, PRV TRQ, NLK)	
28.	110-373	2	BOLT-ON CLAMP (13/16")	
29.	106-389	2	WASHER (M8)	
30.	215-1167	1	PRIMARY CABLE	USED ON JT8020 T3
	215-1653	1	PRIMARY CABLE	USED ON JT/AT100
31.	215-1168	1	GLOW PLUG CABLE	
32.	106-056	6	EXT STAR WASHER (#10)	

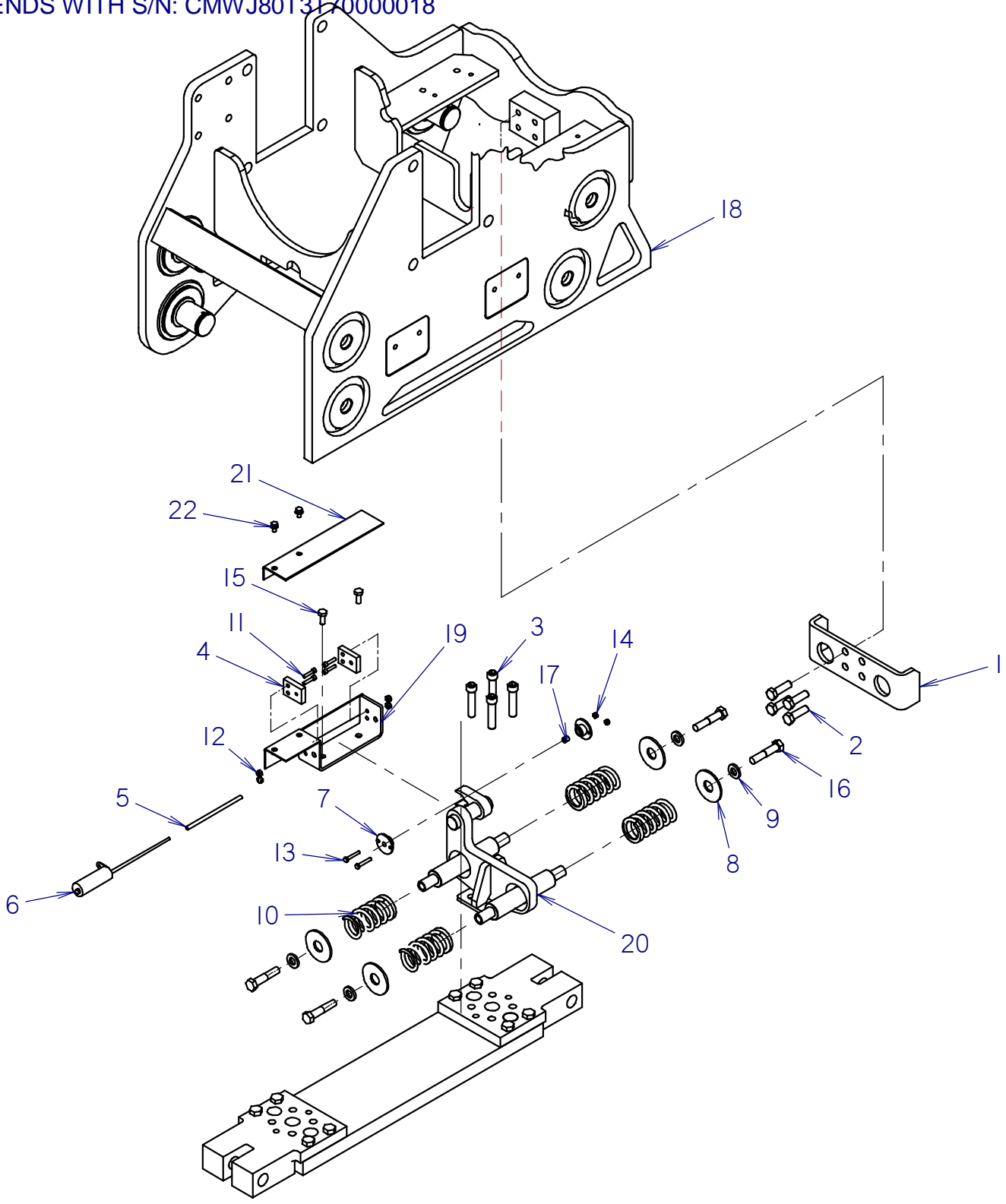
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FOOTNOTES:

NOTE:

FRAME COMPONENTS

ASSISTED MAKEUP
BEGINS WITH S/N: 2Z0237
ENDS WITH S/N: CMWJ80T3T70000018



ASSISTED MAKEUP
BEGINS WITH S/N: 2Z0237
ENDS WITH S/N: CMWJ80T3T70000018

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	327-582	1	SPRING PLATE	
2	106-547	4	SCREW (M12-1.75 X 40MM,10.9)	
3	107-602	4	SCREW (M12-1.75 X 55MM, SOC)	
4	327-484	2	TUBING MOUNT	
5	318-616	1	SENSOR TUBE	
6	222-125	1	POSITION SENSOR (4")	
7	327-468	2	MAGNET MOUNT	
8	108-198	4	SPRING WASHER	
9	106-397	4	WASHER (M12, HARDENED)	
10	118-405	4	COMPRESSION SPRING	
11	105-810	4	BOLT (#10-24 X 7/8", SOC)	
12	106-048	4	LOCKNUT (#10-24)	
13	106-733	2	SCREW (M5-0.80 X 30MM)	
14	106-850	2	LOCKNUT (M5-0.80)	
15	106-083	2	SCREW (M8-1.25 X 20MM)	
16	106-594	4	SCREW (M12-1.75 X 60MM)	USE LOCTITE 242 OR EQUIVALENT
17	222-171	1	POSITION SENSOR MAGNET	
18	305-704	1	CARRIAGE	
19	327-485	1	SENSOR MOUNT	
20	327-472	1	SPRING MOUNT	
21	327-927	1	COVER	
22	106-224	2	FLG SCREW (M6-1.00 X 10MM)	

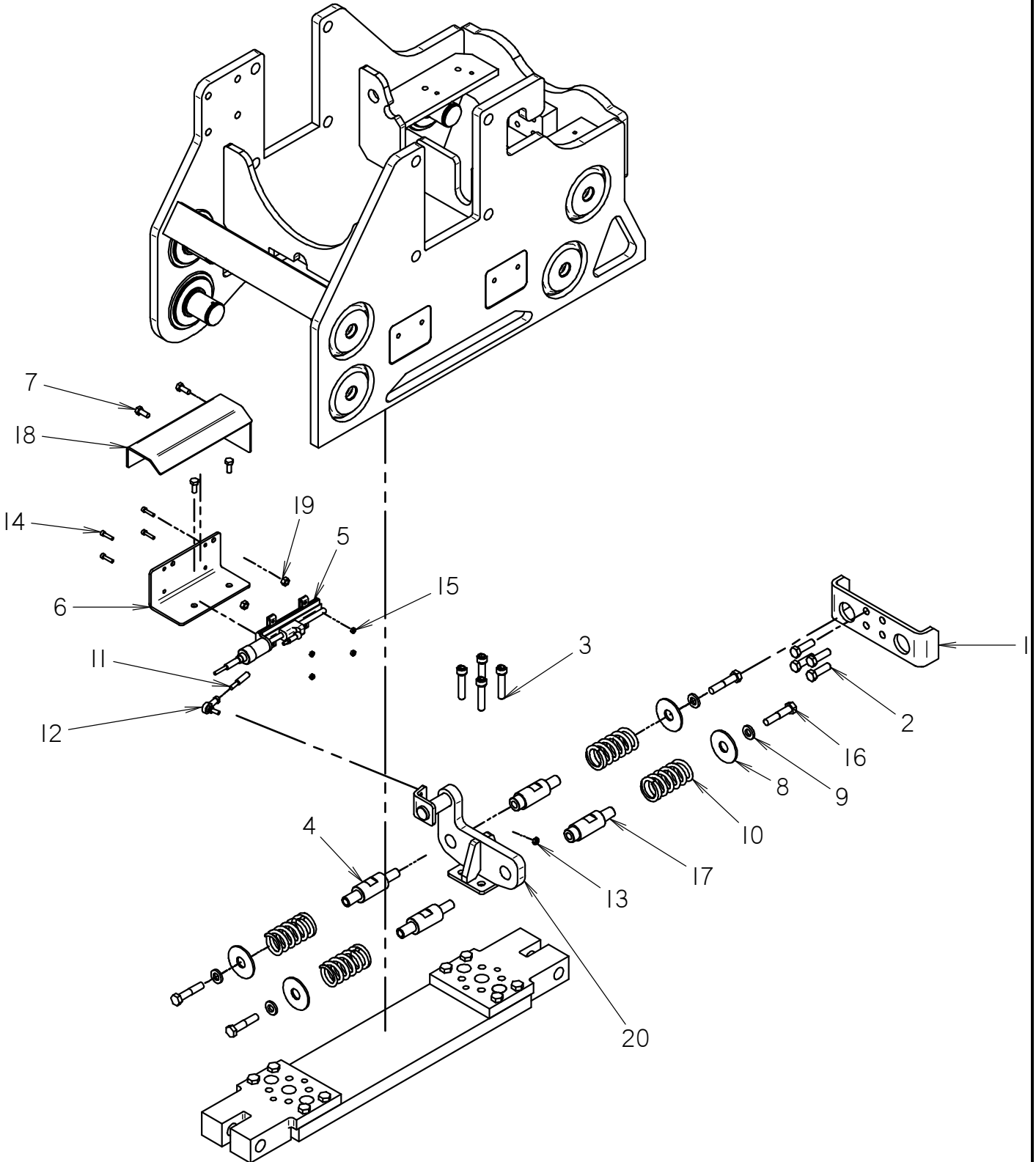
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FOOTNOTES:

NOTE:

ASSISTED MAKEUP

BEGINS WITH S/N: CMWJ80T3T70000019



ASSISTED MAKEUP

BEGINS WITH S/N: CMWJ80T3T70000019

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	327-582	1	SPRING PLATE	
2	106-547	4	SCREW (M12-1.75 X 40MM,10.9)	
3	107-602	4	SCREW (M12-1.75 X 55MM, SOC)	
4	300-3890	2	SPRING BAR	
5	215-1002	1	POSITION SENSOR	SEE FOOTNOTE 1
6	300-3894	1	SUPPORT PLATE	
7	106-083	4	SCREW (M8-1.25 X 20MM)	
8	108-198	4	SPRING WASHER	
9	106-397	4	WASHER (M12, HARDENED)	
10	118-405	4	COMPRESSION SPRING	
11	300-3956	1	LINKAGE ROD	
12	110-774	1	BALL JOINT (1/4"-NF)	
13	105-085	1	LOCKNUT (1/4"-NC)	
14	106-427	4	SCREW (M5-0.80 X 22MM, SOC)	
15	106-850	4	LOCKNUT (M5-0.80)	
16	106-594	4	SCREW (M12-1.75 X 60MM)	
17	300-3891	2	SPRING BAR	
18	300-3944	1	COVER	
19	106-078	2	NUT (M8-1.25)	
20	300-3954	1	SPRING MOUNT	

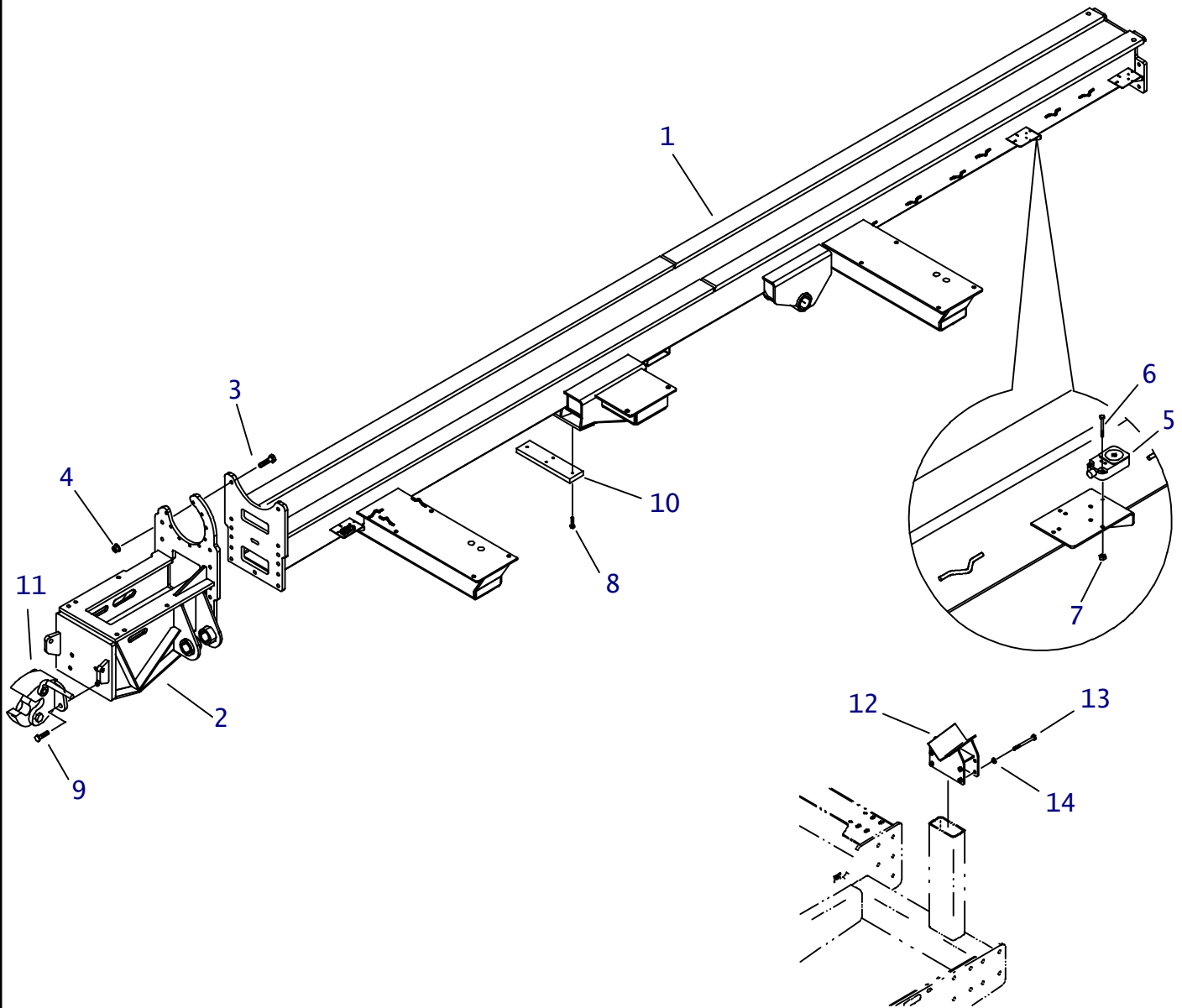
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FOOTNOTES:

1. 215-1617 MAGNETIC SLIDER

NOTE:

DRILL FRAME



DRILL FRAME

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	305-714	1	DRILL FRAME	SEE FOOTNOTE 2
2.	349-675	1	FRONT FRAME	ENDS WITH S/N: 2V2567
	314-557	1	FRONT FRAME	BEGINS WITH S/N: 2W0856
3.	106-074	15	SCREW (M16-2.0 X 60MM)	
4.	106-442	15	FLG LOCKNUT (M16-2.00, PRV TRQ)	TORQUE TO 140 FT LBS (190Nm)
5.	215-1175	3	PROXIMITY SWITCH	
6.	106-427	6	SCREW (M5-0.80 X 22MM, SOC)	
7.	106-850	6	LOCKNUT (M5-0.80)	
8.	105-271	4	SCREW (M10-1.5 X 40MM)	USE LOCTITE 242 OR EQUIVALENT, SEE FOOTNOTE 1
9.	106-098	4	FLG BOLT (3/4-NC X 2", GD8)	USE LOCTITE 242 OR EQUIVALENT
10.	370-364	1	STOP PAD	SEE FOOTNOTE 1
11.	206-076	1	COUPLING	
12.	320-442	1	STOW MOUNT	BEGINS WITH S/N: 2W0856
13.	106-564	4	SCREW (M10-1.50 X 100MM)	BEGINS WITH S/N: 2W0856
14.	106-396	4	WASHER (M10, HARDENED)	BEGINS WITH S/N: 2W0856

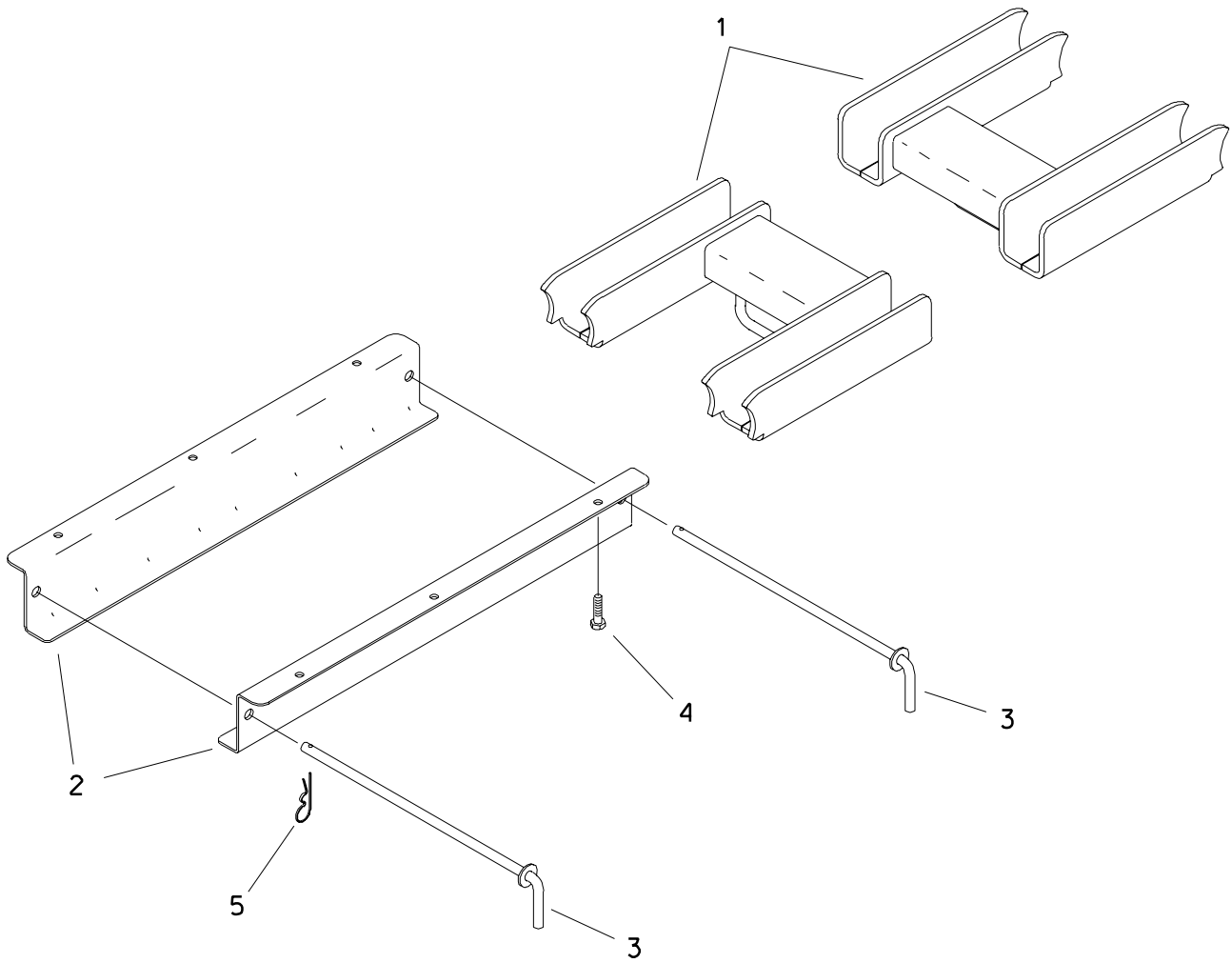
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FOOTNOTES:

1. BEGINS WITH S/N: 2W0856, USED ON STEEL TRACK MODELS ONLY ON UNITS PRIOR TO S/N: 2W0856
2. WHEN USING DRILL FRAME ON UNITS PRIOR TO S/N: 2W0856 IT WILL BE NECESSARY TO REPLACE 320-588 WITH 349-875

NOTE:

CYLINDER LOCKS

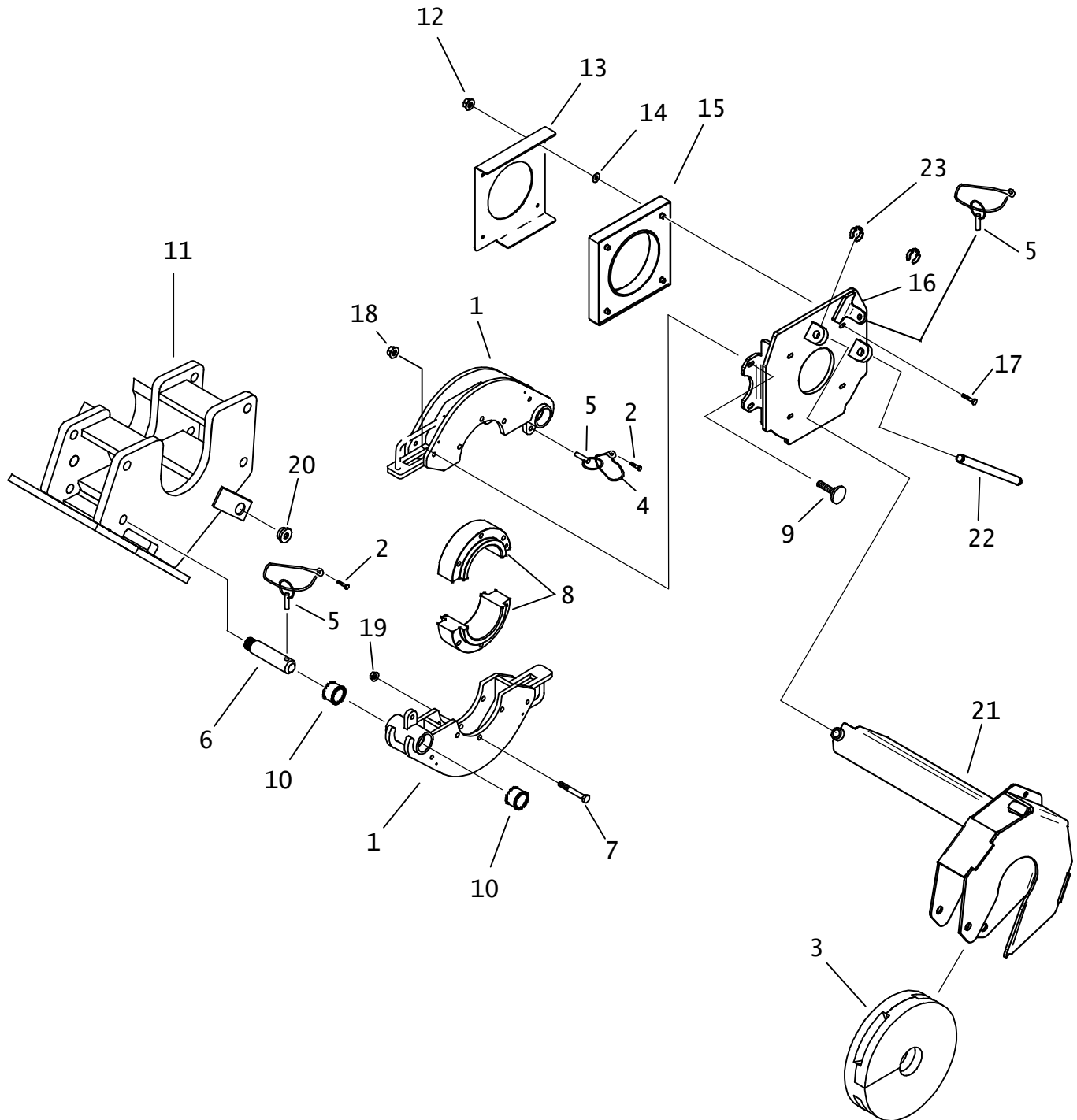


CYLINDER LOCKS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	370-376	2	CYLINDER LOCK	
2.	370-408	2	FORMED PLATE	
3.	370-410	2	PIN	
4.	106-383	6	FLG LK SCREW (M10-1.5 X 30MM)	
5.	110-033	2	HAIR CLIP PIN (1/8" X 1/2")	

FOOTNOTES

PIPE GUIDE



PIPE GUIDE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	370-061	2	TOP GUIDE HALF	
2.	105-184	4	SCREW (#10-24 X .75", SELF-TAP)	
3.	157-196	1	ROD WIPER	
4.	110-710	4	LANYARD (3/64" X 6")	
5.	110-228	5	LYNCH PIN (7/16" X 2")	
6.	370-075	2	GUIDE PIN	
7.	106-584	6	SCREW (M12-1.75 X 100MM)	
8.	370-440	1	SPLIT GUIDE	
9.	107-566	4	CARRIAGE BOLT (3/8-NC X 1.50")	
10.	125-760	4	COMPOSITION BUSHING (1.5")	
11.	370-276	-	STATIONARY CLAMP	
12.	105-003	4	FLG LOCKNUT (5/16-NC)	
13.	306-995	1	BACK COVER PLATE	
14.	116-283	4	WASHER (.531", RUBBER)	
15.	211-084	1	CURRENT TRANSFORMER	
16.	300-9812	-	STRIKE BOX MOUNT	
17.	107-311	4	CARRIAGE BOLT (5/16-NC X 3")	
18.	105-834	4	FLG LOCKNUT (3/8-NC)	
19.	106-354	6	FLANGE NUT (M12-1.75)	
20.	116-203	1	GROMMET (9/16")	
21.	314-732	1	WIPER MOUNT	
22.	178-863	1	PIVOT PIN	
23.	115-503	2	KLIP RING	

NOT SHOWN:

211-042 VOLTAGE LIMITER CABLE
214-542 CURRENT COIL CABLE

FOOTNOTES:

NOTE:

FRONT WRENCHES

BEGINS WITH S/N CMWJT100LB0000037, CMWAT100LA0000005

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	115-003	1	ZERK (1/4-NF, STR)	
2.	184-031	2	TAPERED INSERT (2.25")	
3.	106-345	2	SCREW (M20-2.50 X 50MM)	
4.	106-666	8	SCREW (M16-2.0 X 65MM, 10.9)	USE LOCKTITE 680, TORQUE TO 200 FT-LBS
5.	349-958	-	JAW BLOCK	SEE FOOTNOTE 1
	319-910	4	JAW BLOCK	SEE FOOTNOTE 1
6.	349-884	8	GRIPPER INSERT	SEE FOOTNOTE 1
	319-856	8	GRIPPER INSERT	JT100, SEE FOOTNOTE 1
	375-0002	8	GRIPPER INSERT	AT100
7.	370-028	8	INSERT RETAINER	JT100
	301-1166	8	INSERT RETAINER (AT)	AT100
8.	349-190	8	PIN	
9.	115-499	16	KLIP RING (1.000")	
10.	151-176	4	CYL (6.00" X 4.00" X 3.00")	
11.	106-639	8	SCREW (M10-1.50 X 160MM)	SEE FOOTNOTE 2
12.	106-442	6	FLG LOCKNUT (M16-2.0 PRV TRQ)	
13.	349-675	-	FRONT FRAME	
	314-557	-	FRONT FRAME	
	300-5342	-	FRONT FRAME	
14.	370-135	1	RETAINING RING	
15.	106-333	9	SCREW (M12-1.75 X 40MM, 8.8)	
16.	179-183	1	TAPERED PIN (57.15MM X 195MM)	
17.	179-016	1	TAPERED PIN (57.15MM X 215MM)	
18.	125-781	2	COMPOSITION BUSHING (2.259")	
19.	349-192	AR	SHIM (5.03 ID, 12.12 OD)	
20.	370-275	1	ROTATION CLAMP	
21.	370-276	1	STATIONARY CLAMP	
22.	151-158	1	CYL (4" X 2.25" X 6")	
23.	116-879	2	RUBBER CUSHION	
24.	166-815	1	KEY (3/4" X 4")	
25.	106-645	4	SCREW (M12-1.75 X 110MM, 10.9)	TORQUE TO 80 FT-LBS
26.	370-281	2	CAP	
27.	106-415	8	WASHER (.406")	
28.	106-758	8	LOCKNUT (M10-1.5)	
29.	115-005	1	ZERK (1/4-NF, 90)	

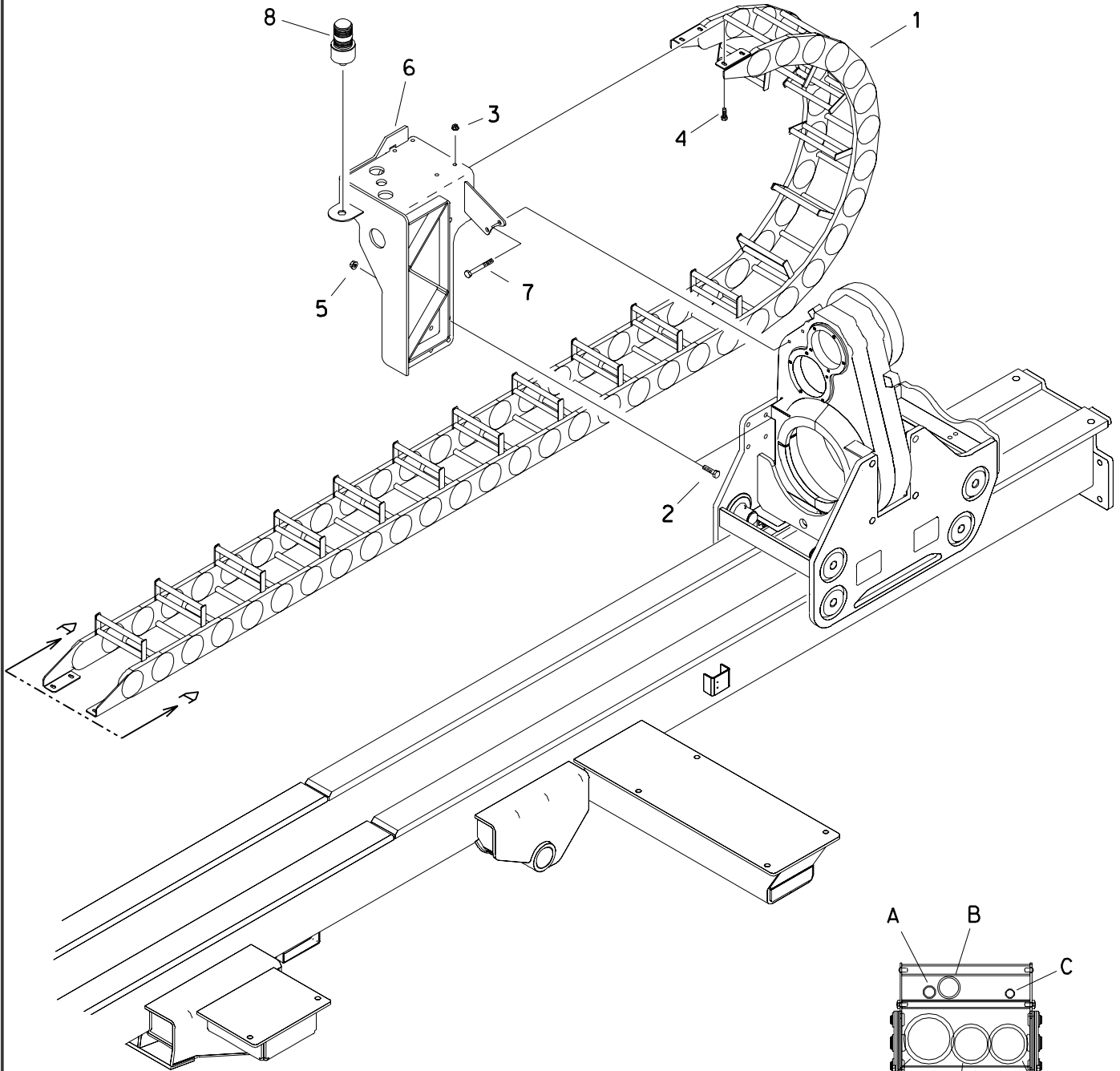
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FOOTNOTES:

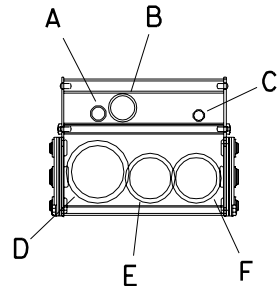
- 319-856 IS INTERCHANGABLE WITH 349-958 & 319-910 JAW BLOCKS.
349-884 MAY BE USED WITH 319-910 BY ADDING CHAMFERS TO CLEAR DOVETAIL RADIUS IN JAWBLOCK.
- 349-958 REQUIRES REF. 11 106-079 QTY. 4 PER JAW BLOCK.

NOTE:

HOSE TRACK



- A - ROTATION MOTOR HARNESS
- B - ROTATION CASE DRAIN
- C - SPINDLE BRAKE
- D - FLUID HOSE
- E - ROTATION "PORT C"
- F - ROTATION "PORT B"



VIEW A-A

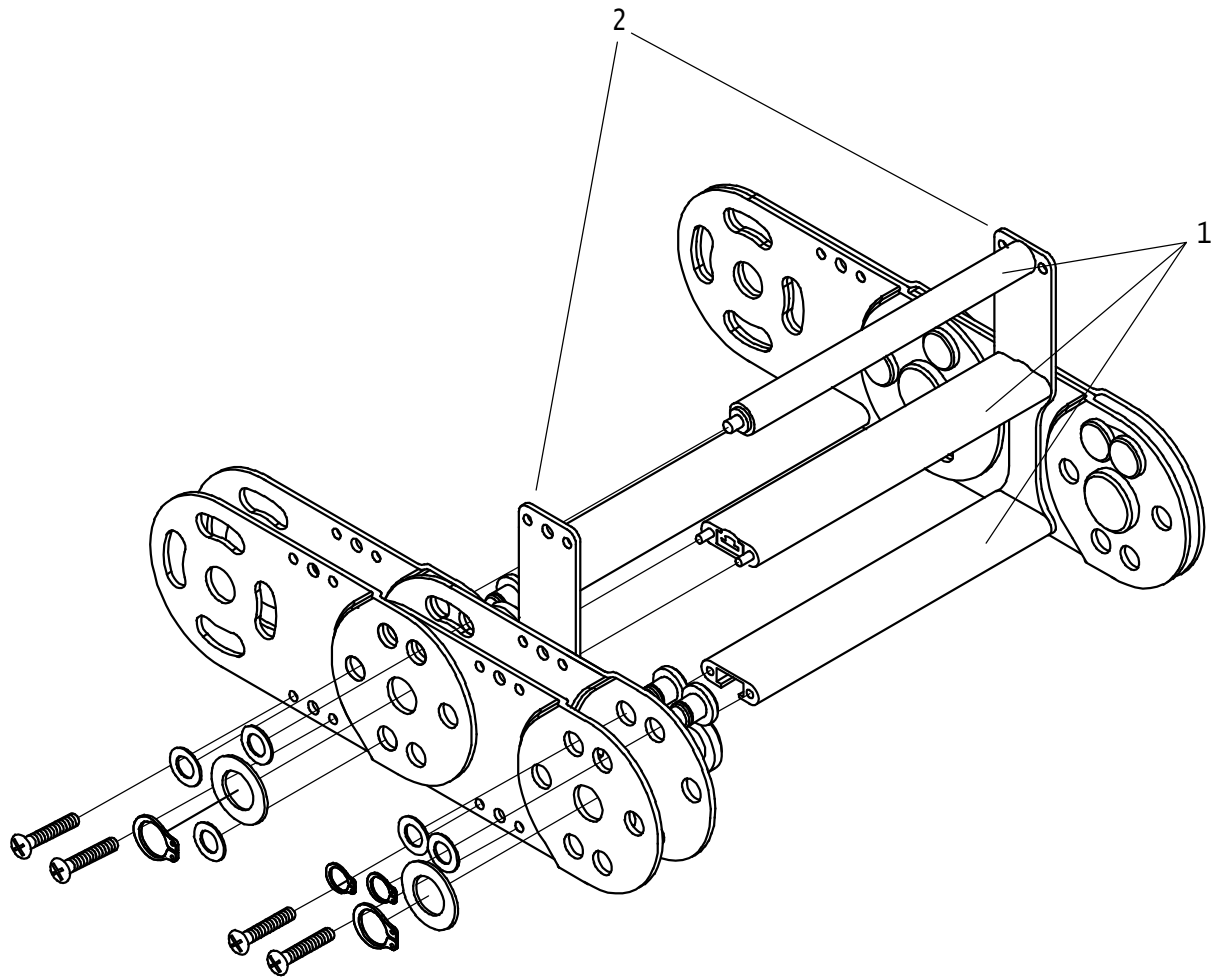
HOSE TRACK

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	309-168	1	HOSE CARRIER	
2.	106-477	4	SCREW (M12-1.75 X 45MM, 10.9)	
3.	105-834	4	FLG LOCKNUT (3/8-NC)	
4.	105-249	4	CARRIAGE BOLT (3/8-NC X 1-1/4")	
5.	106-709	4	FLG LK NUT (M12-1.75)	
6.	309-179	1	CABLE TRAY BRACKET	
7.	106-336	-	SCREW (M12-1.75 X 90MM)	SEE FOOTNOTE 1
8.	214-697	1	STROBE LIGHT (12V, DC, GREEN)	
-	217-297	1	STROBE LIGHT GREEN MED PROFILE	
-	217-303	-	REPLACEMENT LENS (GREEN)	
-	214-991	-	REPLACEMENT FLASH TUBE	
-	217-301	-	BRUSH GUARD	
-	214-104	2	PACKARD MALE TERMINAL	
-	157-645	2	WEATHER-PAC SEAL (2.80MM)	
-	214-103	1	2-WAY MALE CONNECTOR	

FOOTNOTES

1. SCREWS FASTEN GEARBOX HALVES TOGETHER

HOSE TRACK REPAIR SECTION



HOSE TRACK REPAIR SECTION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	500-1495	1	4 LINK REPAIR SECTION	SEE FOOTNOTE 1
1.	191-204	-	BAR KIT	SCREWS INCLUDED
2.	191-205	-	WINDOW EXTENDER KIT	SCREWS INCLUDED

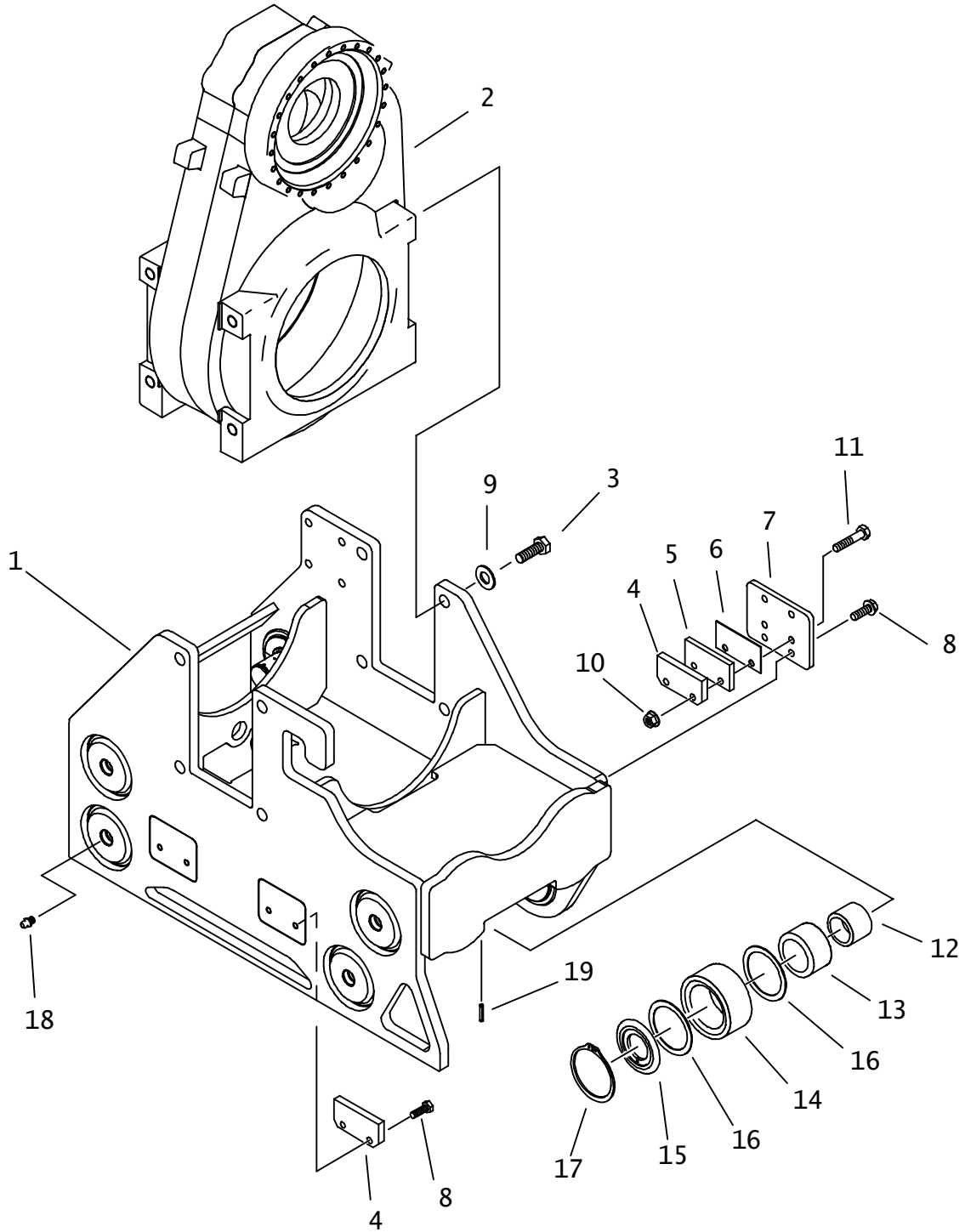
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FOOTNOTES:

- I. FOR USE WITH LRC-415 STYLE TRACK (STAMPED ON SIDE OF TRACK).
L415D REPLACEMENT LINKS NO LONGER AVAILABLE.

NOTE:

CARRIAGE



CARRIAGE

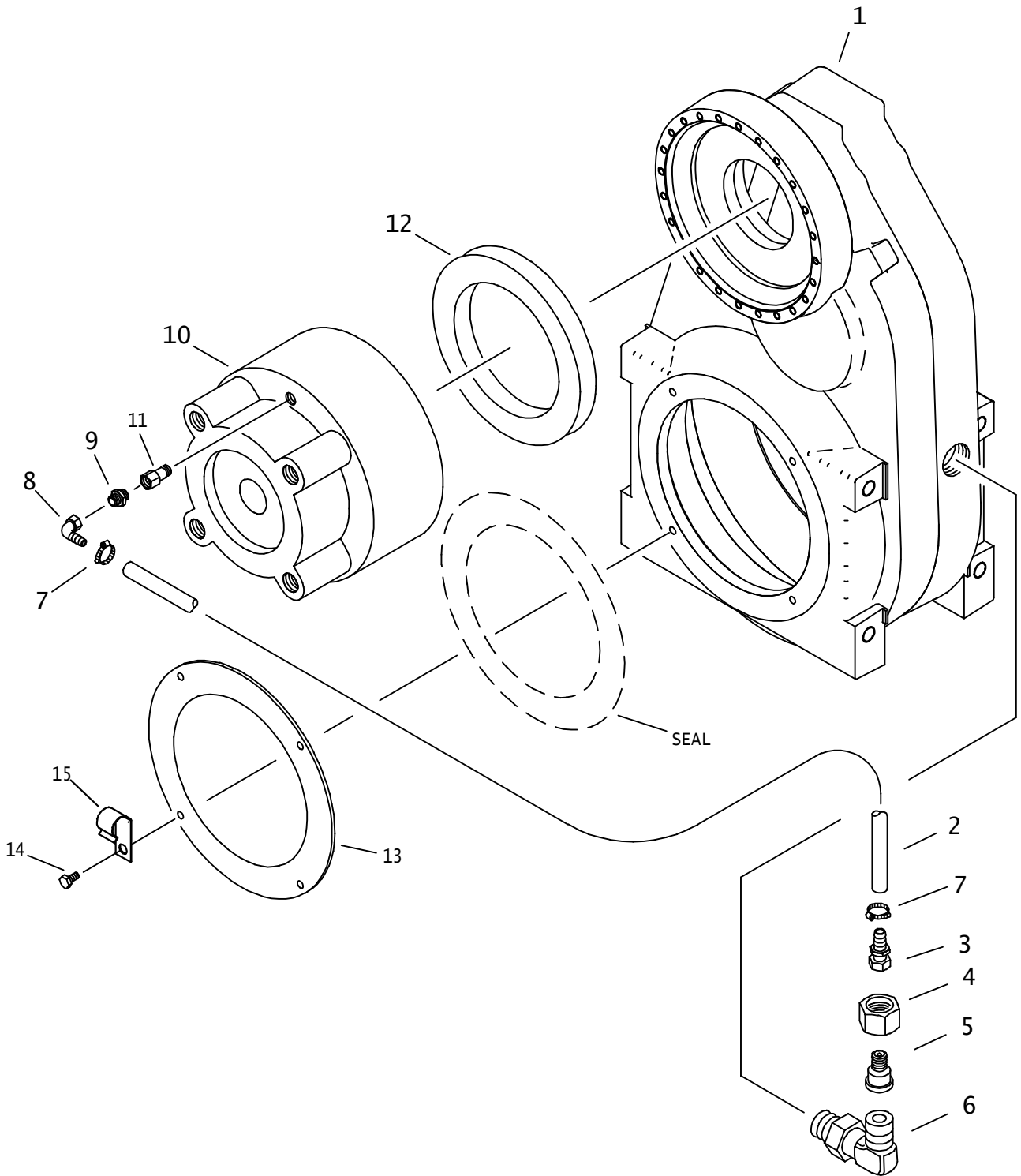
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	305-704	1	CARRIAGE	
2.	166-230	-	DRIVE GEARBOX - ROTATION	
3.	106-075	8	SCREW (M20-2.5 X 60mm, 10.9)	USE 277 LOCTITE AND TORQUE TO 400 FT. LBS
4.	349-573	4	CENTERING PAD	
5.	349-575	2	CLAMP PLATE	
6.	349-572	AR	SHIM	
7.	349-574	2	BOLT BLOCK	
8.	107-001	12	FLG LK SCREW (M10-1.50 X 25mm)	
9.	106-949	8	WASHER (3/4", HARDENED)	
10.	105-894	4	LOCKNUT (M10-1.50, PRV TRQ, 10.9)	
11.	106-331	4	SCREW (M10-1.50 X 50mm)	
12.	125-246	8	NEEDLE RACE (1.750")	USE LOCTITE 680 OR EQUIVALENT
13.	126-155	8	NEEDLE BEARING	
14.	349-551	8	ROLLER SHELL	
15.	349-552	8	RETAINER	
16.	110-926	16	THRUST WASHER (3")	
17.	115-060	8	EXTERNAL SNAP RING (1.750")	
18.	115-001	8	ZERK (02N)	
19.	105-533	8	ROLL PIN (5/32" X 7/8")	

NOT SHOWN:

FOOTNOTES:

NOTE:

CARRIAGE SIGHT TUBE



CARRIAGE SIGHT TUBE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	166-230	-	DRIVE GEARBOX - ROTATION	
2.	117-902	AR	BULK TUBING (1/4, SOLD PER 1')	USE 1 @ 22"
3.	514-427	1	S/O COUPLER (040F-04H)	
4.	154-310	1	REDUCER NUT (100F)	
5.	154-311	1	REDUCER STEM (040)	
6.	154-300	1	CONNECTOR (100-12S90)	
7.	110-249	2	WORM CLAMP (1/4" TO 5/8")	
8.	152-113	1	S/O COUPLER (040F-04H90)	
9.	154-339	1	CONNECTOR (04N-040)	
10.	166-141	-	PLNTRY GEARBOX - ROTATION	
11.	115-106	1	REDUCER (06N-04NF)	
12.	349-396	1	SPACER	
13.	310-418	2	RETAINING PLATE	
14.	107-519	8	SCREW (M8-1.25 X 12MM)	USE LOCTITE 277 OR EQUIVALENT
15.	110-492	1	J-CLIP (.343)	

NOT SHOWN:

FOOTNOTES:

NOTE

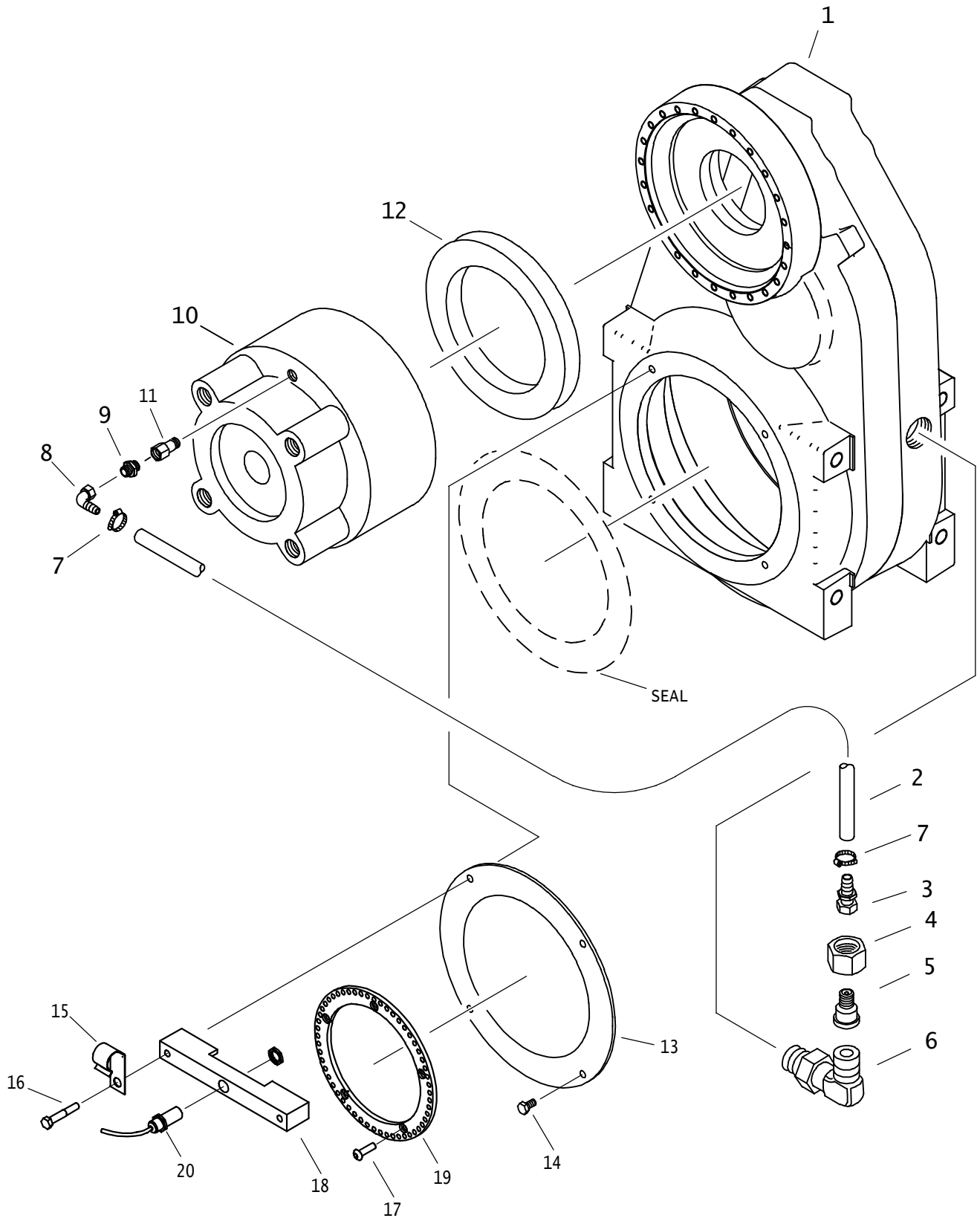
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

NOTE:

CARRIAGE SIGHT TUBE AND SPEED PICKUP

BEGINS WITH S/N: CMWJ80T3K80000039

ENDS WITH S/N: CMWJ80T3A90000078



CARRIAGE SIGHT TUBE AND SPEED PICKUP

BEGINS WITH S/N: CMWJ80T3K80000039

ENDS WITH S/N: CMWJ80T3A90000078

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	166-230	-	DRIVE GEARBOX - ROTATION	
2.	117-902	AR	BULK TUBING (1/4, SOLD PER 1')	USE 1 @ 22"
3.	514-427	1	S/O COUPLER (040F-04H)	
4.	154-310	1	REDUCER NUT (100F)	
5.	154-311	1	REDUCER STEM (040)	
6.	154-300	1	CONNECTOR (100-12S90)	
7.	110-249	2	WORM CLAMP (1/4" TO 5/8")	
8.	152-113	1	S/O COUPLER (040F-04H90)	
9.	154-339	1	CONNECTOR (04N-040)	
10.	166-141	-	PLNTRY GEARBOX - ROTATION	
11.	115-106	1	REDUCER (06N-04NF)	
12.	349-396	1	SPACER	
13.	310-418	2	RETAINING PLATE	
14.	107-519	6	SCREW (M8-1.25 X 12MM)	USE LOCTITE 277 OR EQUIVALENT
15.	110-492	1	J-CLIP (.343)	
16.	106-329	2	SCREW (M8-1.25 X 50MM)	USE LOCTITE 277 OR EQUIVALENT
17.	105-1369	5	SCREW (M6-1.00 X 10MM,BUT SOC,ZP)	USE LOCTITE 277 OR EQUIVALENT
18.	300-7561	1	SENSOR BLOCK	
19.	160-1127	1	SPEED RING	
20.	215-1004	1	SPEED PICKUP	

NOT SHOWN:

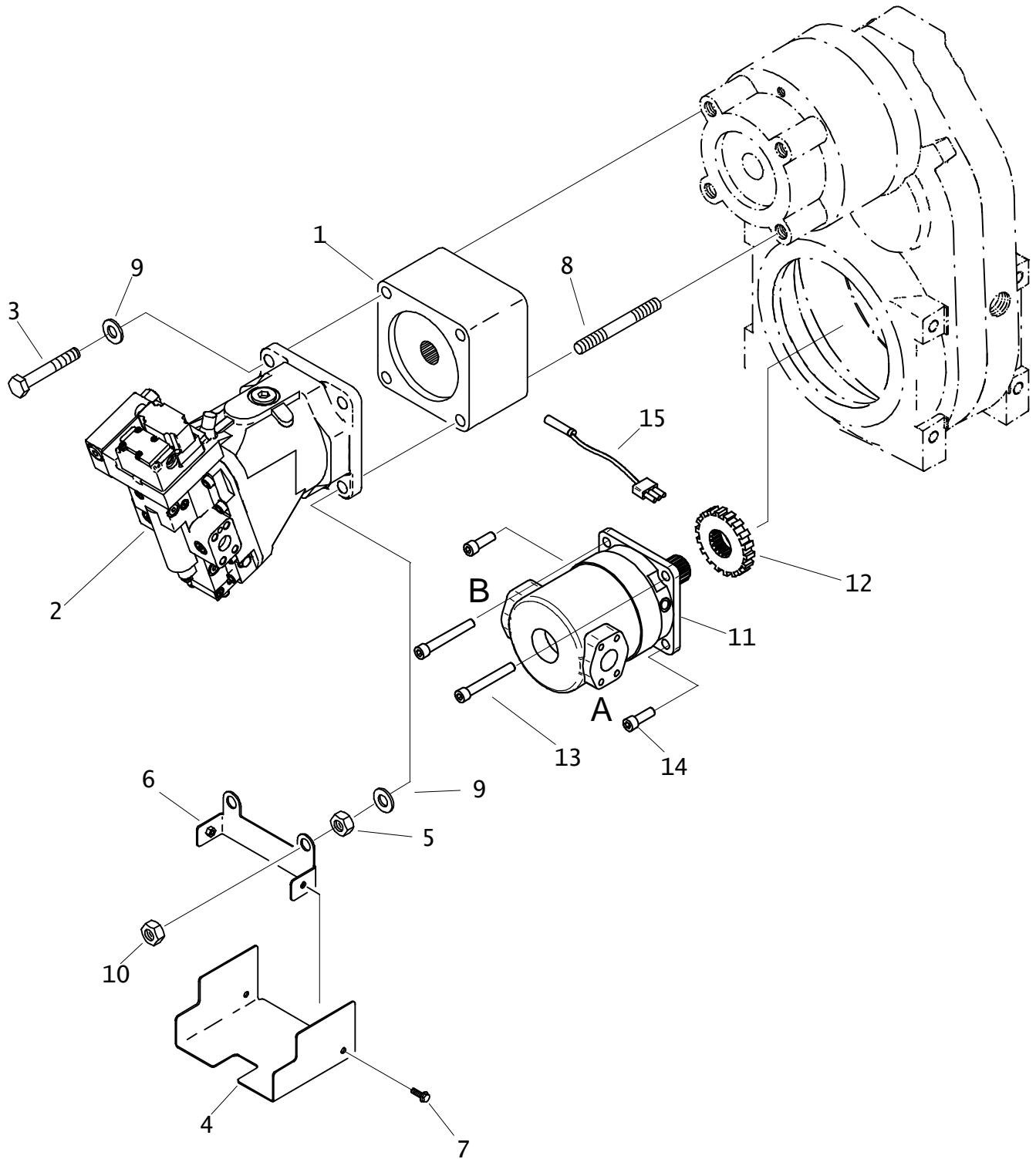
215-1196 1 RESISTOR PACK
215-1433 1 ROTATION SENSOR JUMPER

FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

SPINDLE BRAKE



SPINDLE BRAKE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	160-458	1	MODULAR BRAKE	
	191-123		O-RING KIT	
	500-1578		LIP SEAL	
	191-124		STACK SERVICE KIT	
	191-125		GASKET KIT	
2.	149-397	-	HYD MOTOR (PISTON)	
3.	105-464	2	BOLT (3/4-NC X 7", GD8)	USE LOCTITE 277 OR EQUIVALENT
4.	307-832	1	FORMED PLATE	
5.	105-953	2	LOCKNUT (3/4-NC)	
6.	307-833	1	BRACKET	
7.	106-162	2	FLG SCREW (M8-1.25 X 20MM)	
8.	107-458	2	TIE BOLT	USE LOCTITE 277 OR EQUIVALENT
9.	106-949	4	WASHER (3/4", HARDENED)	
10.	105-310	2	JAM NUT (3/4-NC)	
11.	153-612	1	HYDRAULIC MOTOR	AT ONLY
12.	160-432	1	SPEED SENSOR RING	AT ONLY
13.	105-1351	2	SCREW (M12-1.75 X 120 SOC 12.9 ZP)	AT ONLY
14.	106-797	2	SCREW (M12-1.75 X 35mm, SOC	AT ONLY
15.	215-1472	1	PROXIMITY SWITCH 12MM WP	AT ONLY - REFER TO F/N 1

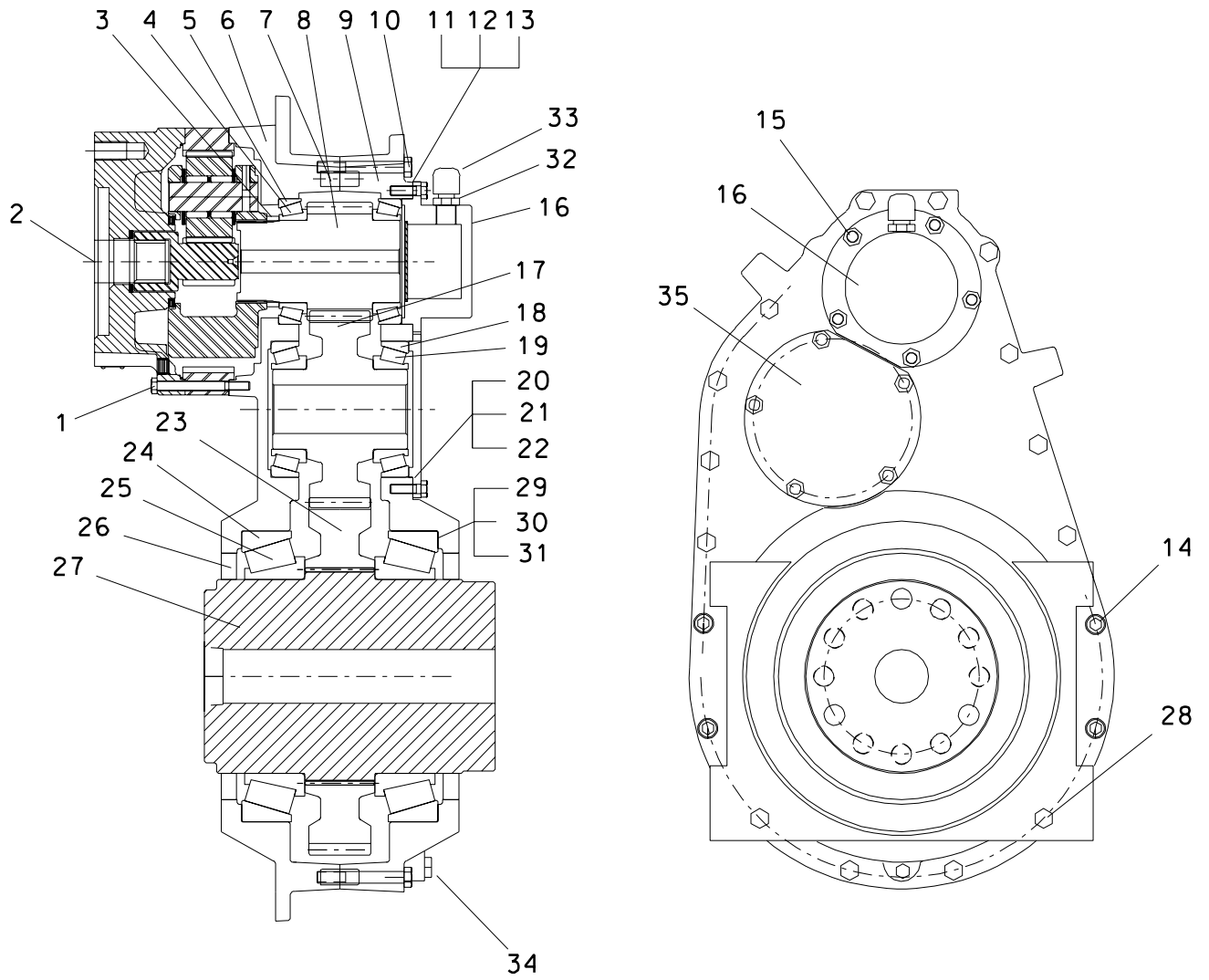
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FOOTNOTES:

1. PROXIMITY SWITCH 215-1472 SUPERCEDES PROXIMITY SWITCH 214-913.

NOTE:

DRIVE GEARBOX - ROTATION



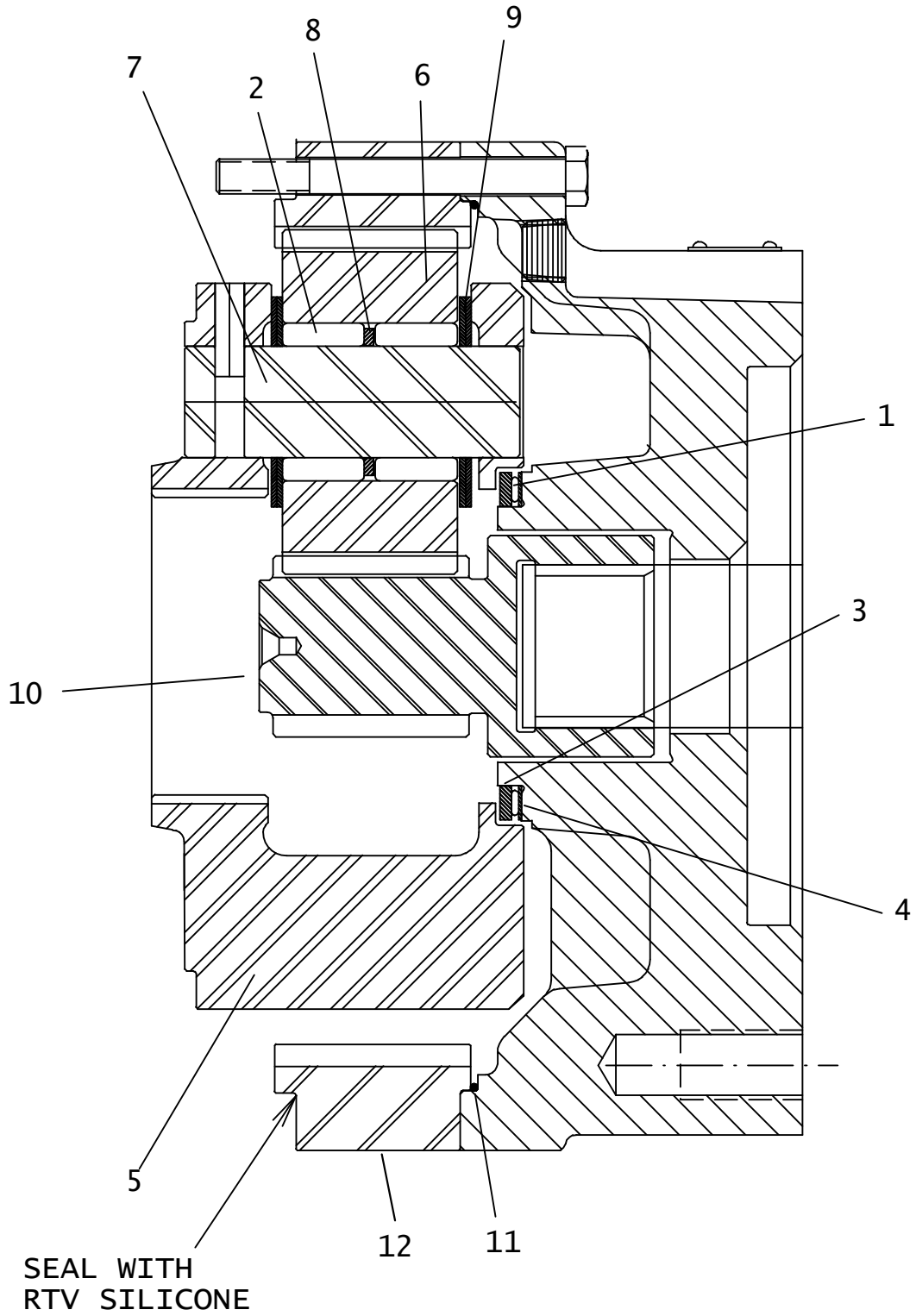
DRIVE GEARBOX - ROTATION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	166-230		DRIVE GEARBOX - ROTATION	
	197-091		REBUILT 166-230 DRIVE GEARBOX	
1.	105-258	20	BOLT (3/8-NC X 3-3/4")	
2.	166-141	1	PLANETARY GEARBOX - ROTATION	
3.	349-396	1	SPACER	
4.	126-075	2	TAPERED BEARING (3.346")	
5.	126-076	2	TAPERED RACE (5.118")	
6.	349-408	1	HOUSING	
7.	500-818	5	DOWEL PIN (16MM X 40MM)	
8.	168-033	1	INPUT PINION	
9.	349-409	1	COVER	
10.	106-336	13	SCREW (M12-1.75 X 90MM)	
11.	165-859	AR	SHIM (.050MM, RED)	
12.	165-860	AR	SHIM (.076MM, GREEN)	
13.	165-861	AR	SHIM (.191MM, TRANSPARENT WHT)	
14.	106-117	4	SCREW (M12-1.75 X 80MM)	
15.	105-245	10	SCREW (M10-1.50 X 25MM)	
16.	350-392	1	UPPER CAP	
17.	168-032	1	INTERMEDIATE GEAR	
18.	126-157	2	TAPERED RACE (130MM)	
19.	126-156	2	TAPERED BEARING (80MM)	
20.	165-862	AR	SHIM (.050MM)	
21.	165-863	AR	SHIM (.076MM)	
22.	165-864	AR	SHIM (.191MM)	
23.	168-031	1	OUTPUT GEAR	
24.	126-159	2	TAPERED RACE (300MM)	
25.	126-158	2	TAPERED BEARING (200MM)	
26.	157-706	2	SEAL (7.875")	
27.	166-229	1	OUTPUT SHAFT	
28.	106-855	2	SCREW (M12-1.75 X 140MM)	
29.	165-865	AR	SHIM (.051MM)	
30.	165-866	AR	SHIM (.178MM)	
31.	165-867	AR	SHIM (.508MM)	
32.	115-133	1	REDUCER (12N-02NF)	
33.	159-003	1	AIR VENT (02N)	
34.	155-074	1	PLUG (08S, SOC, FM)	
35.	349-411	1	LOWER CAP	

FOOTNOTES

NOTE

PLANETARY GEARBOX - ROTATION



PLANETARY GEARBOX - ROTATION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	166-141		PLANETARY GEARBOX - ROTATION	
1.	126-182	1	THRUST BEARING	
2.	126-183	108	NEEDLE BEARING	
3.	501-845	1	THRUST WASHER	
4.	501-846	1	THRUST WASHER	
5.	501-847	1	CARRIER	
6.	501-848	3	PLANET GEAR	
7.	501-850	3	PLANET SHAFT	
8.	501-851	3	THRUST WASHER	
9.	501-852	12	THRUST WASHER	
10.	501-853	1	SUN GEAR	
11.	157-203	2	O-RING	
12.	501-849	1	RING GEAR	

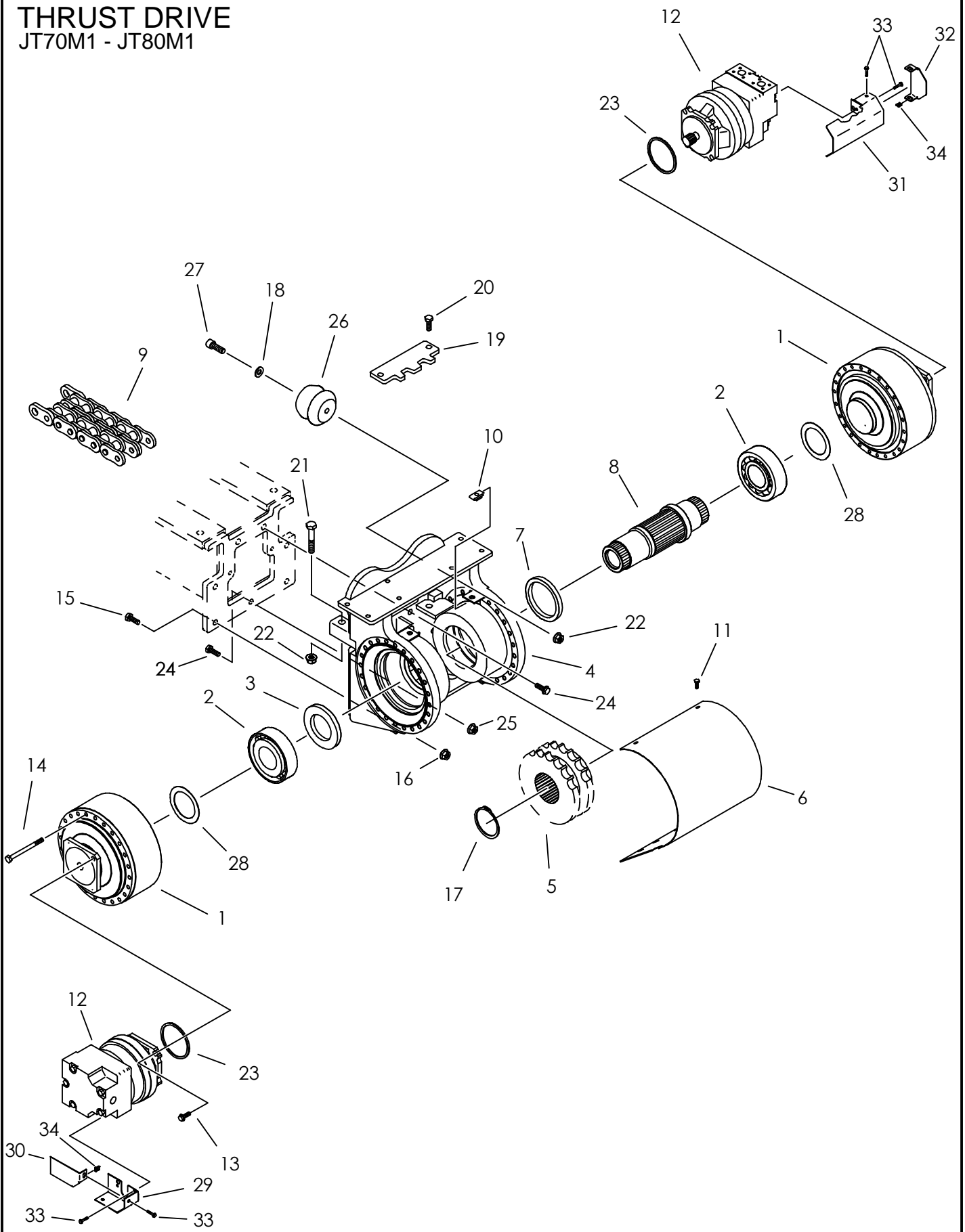
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FOOTNOTES:

DRIVE ROLL PIN INTO PLANET SHAFT, THEN PRESS OUT SHAFT TO REMOVE.. REMOVE ROLL PIN FROM SHAFT ONCE THE SHAFT IS OUT.

NOTE:

THRUST DRIVE JT70M1 - JT80M1

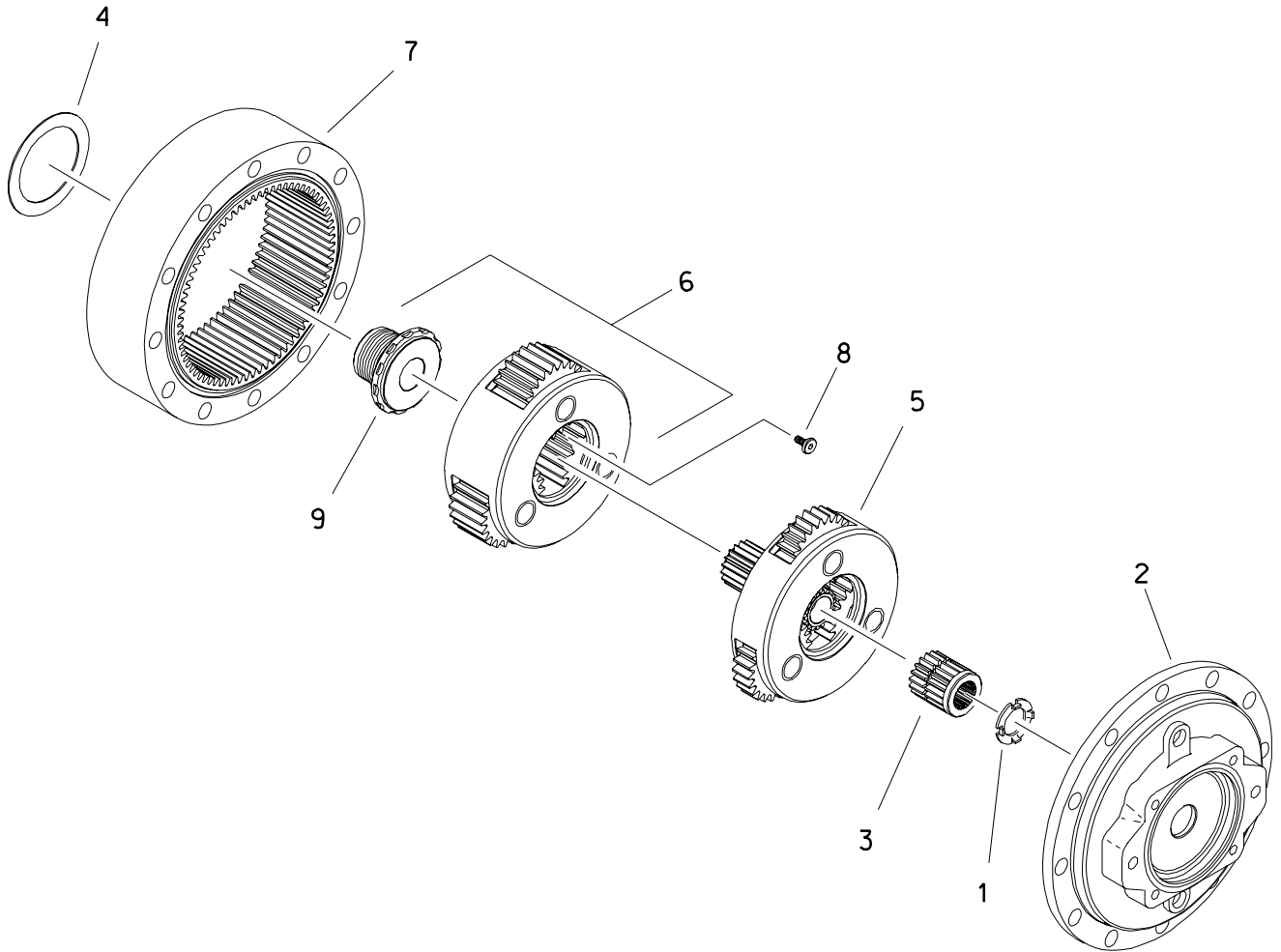


THRUST DRIVE

JT70M1 - JT80M1

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	165-559	-	THRUST GEARBOX	INCL REF 1 - 9,11,12,15,18,20,21 & 29
1.	166-178	2	THRUST PLANETARY GEARBOX	
	N/A	2	BEARING RETENTION NUT	USE SERVICE TOOL 301-575
	499-893	2	THRUST WASHER (1.031")	TANGED WASHER INSIDE COVER
2.	125-1023	2	BEARING SET	
3.	157-790	1	SEAL (3.75" X 5")	
4.	370-218	1	THRUST DRIVE HOUSING (24-BOLT)	
5.	175-746	1	SPROCKET (D160B13)	
6.	349-382	1	COVER	
7.	157-710	1	INTERNAL SEAL (4.75")	
8.	167-337	1	THRUST SHAFT	
9.	130-332	1	ROLLER CHAIN (#160-2, 265P)	THRUST
	130-713	-	CONNECTOR LINK(#160-2)	
	179-250	-	CONNECTOR PIN (#160-2)	
	370-245	-	SPECIAL HEAVY DUTY CLEVIS	
	129-012	-	CLEVIS PLATE LINK	
10.	106-558	2	CLIP NUT (M10-1.5)	
11.	106-724	6	FLG SCREW (M10-1.50 X 25mm)	TORQUE TO 97 FT LBS (131 NM)
12.	158-905	2	HYD MOTOR (THRUST)	
	165-893	1	END CAP GASKET	
	126-196	2	CRADLE BEARING	
	499-083	1	VALVE PLATE	
	157-199	1	O-RING (171 D75)	
	126-020	1	BALL BEARING (1.369")	
	157-740	1	LIP SEAL	
	217-408	-	SOLENOID VALVE (12V)	
	165-894	1	GASKET FRONT COVER	
	157-200	1	O-RING (153 D75)	
	190-765	-	SEAL REPAIR KIT	
13.	106-499	8	FLG BOLT (1/2-NC X 1-1/2", GD8)	
14.	107-298	48	SCREW (M14-2.00 X 160mm)	
15.	106-616	4	SCREW (M16-2.00 X 55mm, 10.9)	
16.	106-355	5	FLG NUT (M16-2.00, 10.9)	
17.	115-453	1	EXTERNAL SNAP RING (4")	
18.	106-393	2	WASHER (M20)	
19.	370-050	1	CHAIN RETAINER	
20.	105-998	2	SCREW (M16-2.00 X 40mm)	
21.	106-663	2	SCREW (M20-2.50 X 110mm, 10.9)	
22.	106-356	4	FLG NUT (M20-2.50, 10.9)	
23.	157-084	2	O-RING (159 D70)	
24.	106-666	3	SCREW (M16-2 X 65mm, 10.9)	
25.	106-442	1	FLG LOCKNUT (M16-2.00, PRV TRQ)	
26.	116-769	2	BUMPER	
27.	107-275	2	SCREW (M20-2.50 X 55mm)	
28.	499-174	-	SHIM (3.55")	
29.	306-396	1	COVER MOUNT	
30.	306-399	1	FORMED MOUNT	
31.	306-400	1	COVER MOUNT	
32.	306-403	1	FORMED COVER	
33.	106-162	8	FLG SCREW (M8-1.25 X 20MM)	
34.	106-551	4	CLIP NUT (M8-1.25)	
NOT SHOWN:				
	259-461	1	PICKUP ALIGNMENT TOOL	

THRUST PLANETARY GEARBOX

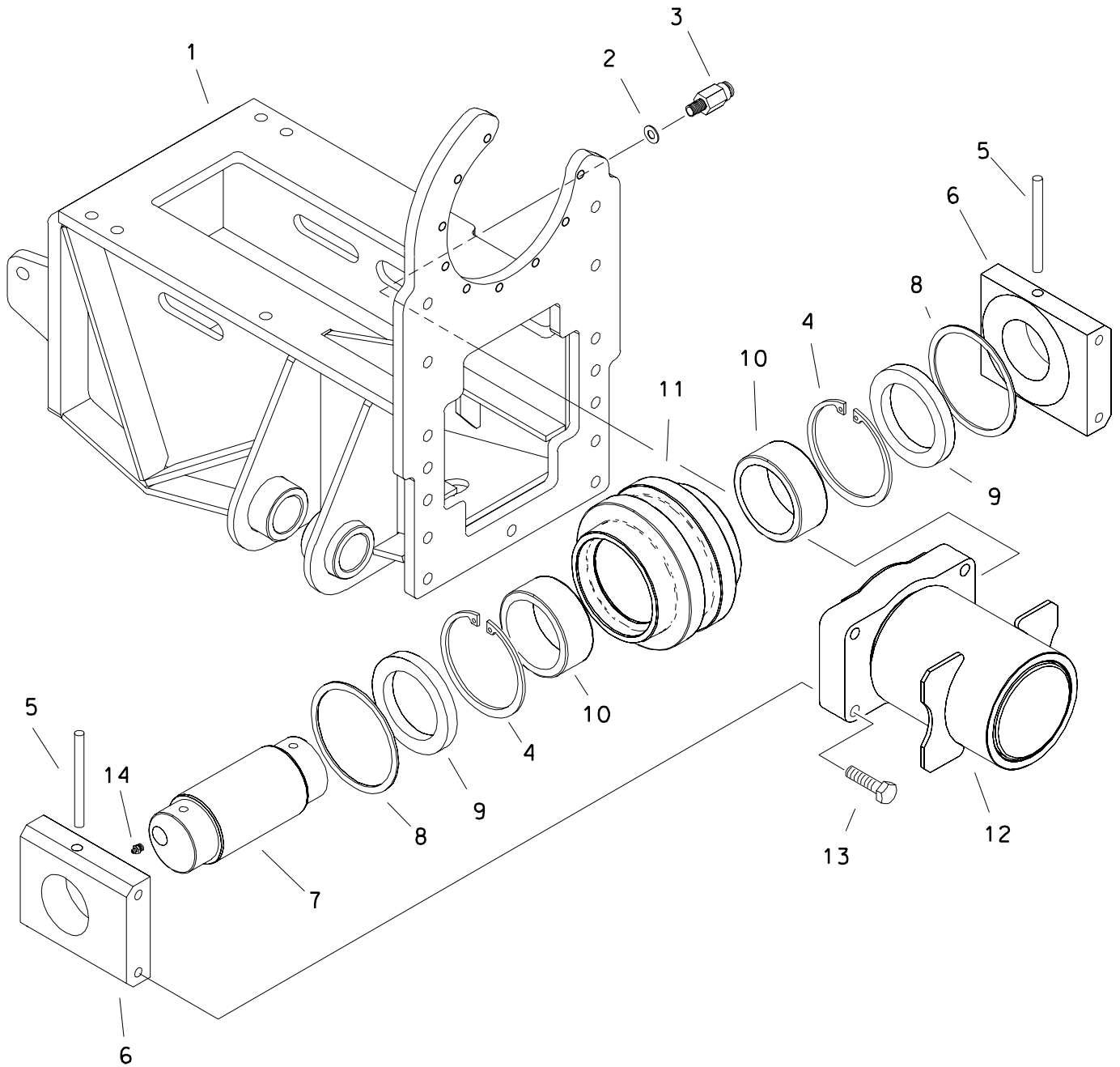


THRUST PLANETARY GEARBOX

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	166-178	1	THRUST PLANETARY GEARBOX	
1.	499-893	1	THRUST WASHER (1.031")	
2.	165-589	1	PLANETARY GEARBOX COVER	
3.	165-590	1	PRIMARY SUN GEAR	
4.	499-174	1	SHIM (3.55")	
5.	165-592	1	PRIMARY CARRIER	
6.	165-593	1	SECONDARY CARRIER	
7.	165-594	1	RING GEAR	
8.	107-362	1	LOCK SCREW (.312" X .500")	
9.	121-026	1	NUT LOCK	USE SERVICE TOOL #301-575 ON NUT

FOOTNOTES

THRUST CHAIN IDLER/ADJUSTMENT



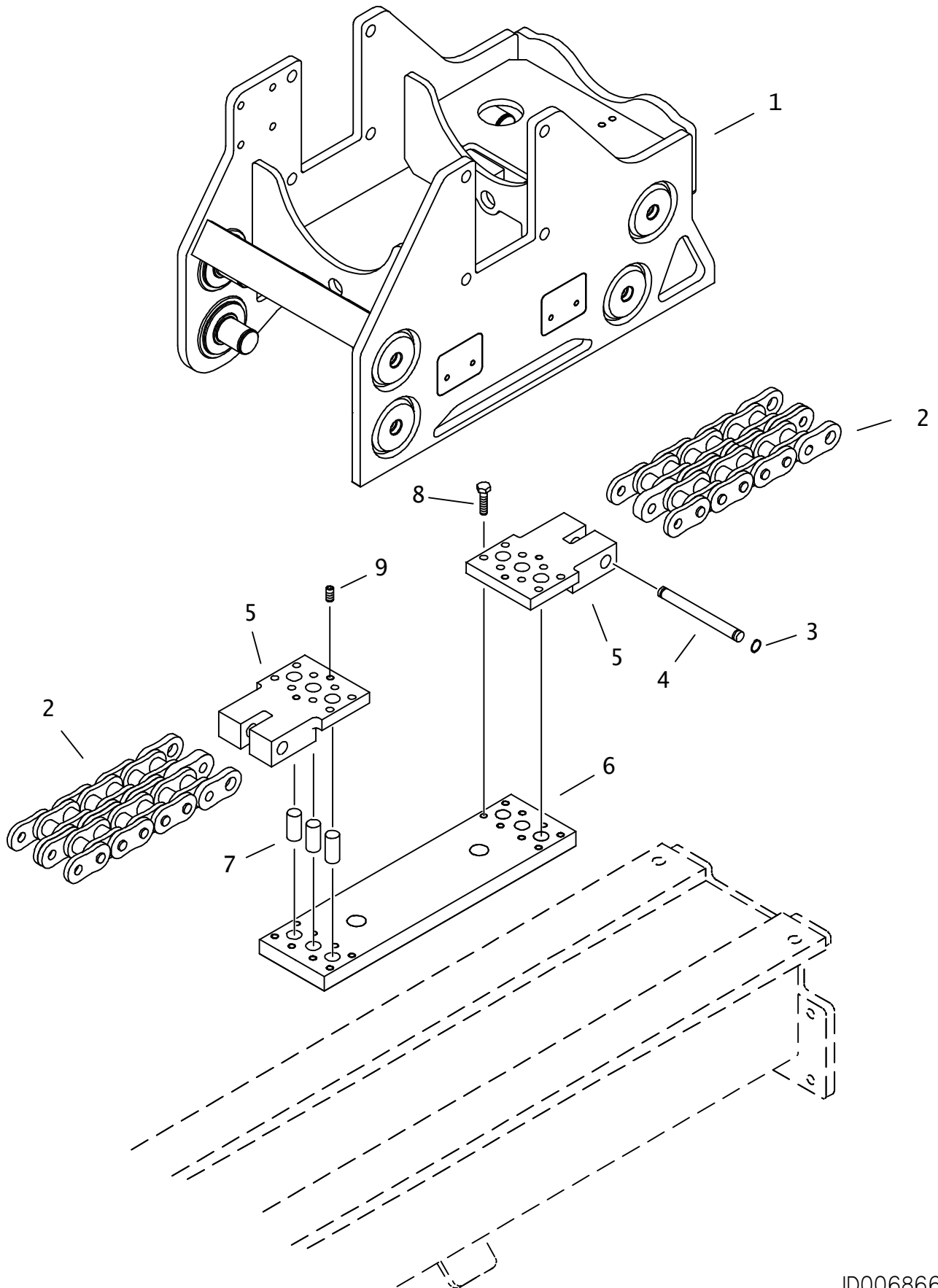
THRUST CHAIN IDLER/ADJUSTMENT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-675	-	FRONT FRAME	ENDS WITH S/N: 2V2567
	314-557	-	FRONT FRAME	BEGINS WITH S/N: 2W0856
2.	115-023	1	SEAL WASHER (M17)	
3.	115-022	1	VALVE ZERK (M16-1.50)	
4.	115-534	2	INTERNAL SNAP RING (5.000")	
5.	105-578	2	ROLL PIN (M12 X 160MM)	
6.	349-385	2	MOUNT BLOCK	
7.	167-310	1	IDLER SHAFT	
8.	110-938	2	THRUST WASHER (3.996", DELRIN)	
9.	157-171	2	EXTERNAL SEAL (4.000")	
10.	126-173	2	NEEDLE BEARING (4.000")	
11.	370-216	1	IDLER	
12.	349-391	1	ADJUSTMENT CYLINDER	
13.	106-341	4	SCREW (M16-2.0 X 70MM)	USE LOCTITE 242 OR EQUIVALENT
14.	115-013	2	ZERK (1/4-NF, STR)	

FOOTNOTES

NOTE

CHAIN CONNECTOR



CHAIN CONNECTOR

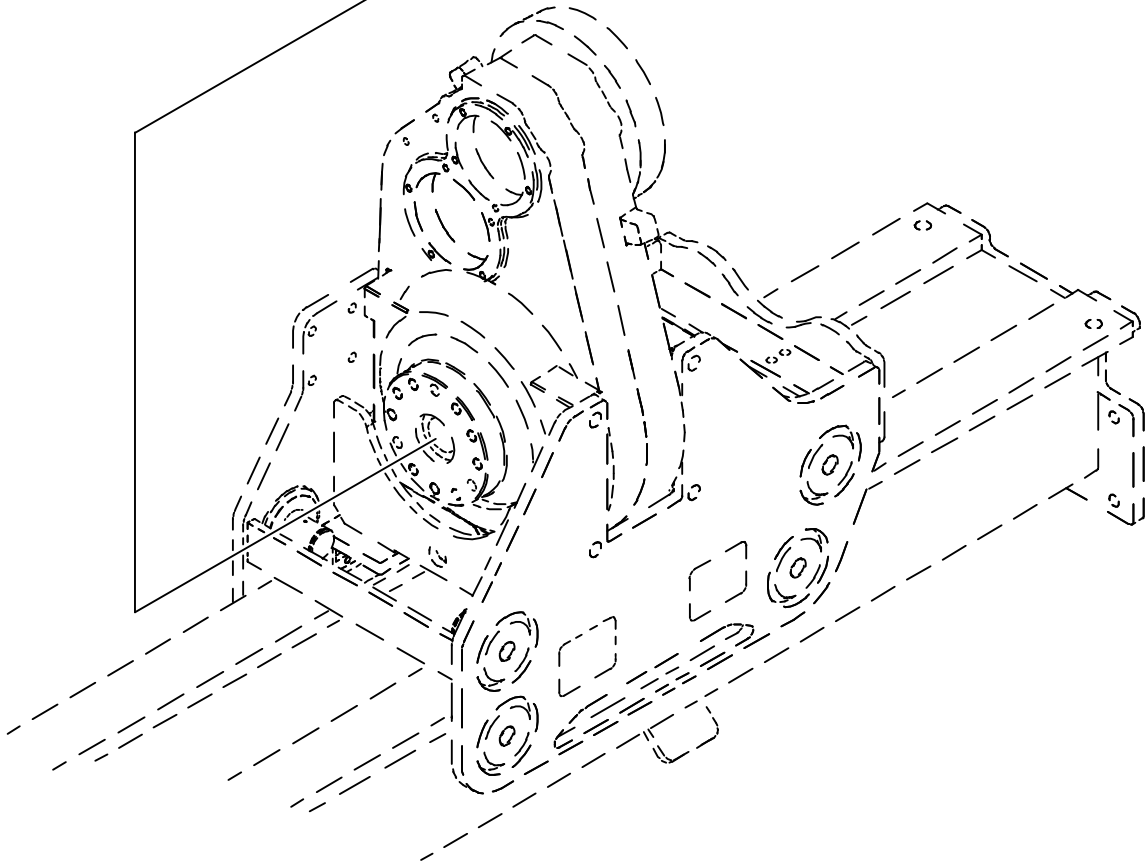
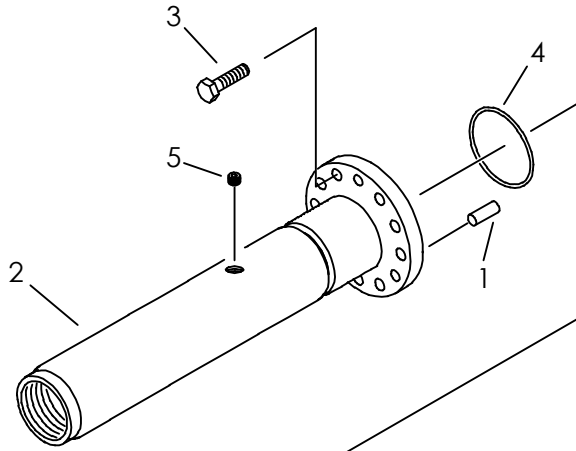
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	305-704	-	CARRIAGE	
2.	130-332	1	ROLLER CHAIN (#160-2, 265P)	INCL REF NO.'S 3, 4 & 5
	129-003	-	3 LINK REPAIR SECTION (2.000P)	
	130-713	-	CONNECTOR LINK (#160-2)	
3.	118-053	4	EXTERNAL SNAP RING (.875")	
4.	179-250	2	CHAIN CONNECTOR PIN (#160-2)	
5.	370-245	2	SPECIAL HEAVY DUTY CLEVIS	
6.	349-557	1	CHAIN CONNECTOR (#160-2)	
7.	105-587	6	DOWEL PIN (1" X 2")	
8.	106-477	16	SCREW (M12-1.75 X 45MM, 10.9)	
9.	107-303	4	SET SCREW (M12-1.75 X 20MM)	

NOT SHOWN:

FOOTNOTES:

NOTE:

SAVER SUB (JT)



SAVER SUB (JT)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	500-818	3	DOWEL PIN (16mm X 40mm)	
2.	400-1132	1	SAVER SUB 10,000T	SUPERSEDES 370-179
3.	106-244	9	SCREW (M16-2 X 60mm)	USE LOCTITE 242 OR EQUIVALENT
4.	155-701	1	O-RING (345 D70)	
5.	115-158	1	PLUG (06N, SQ)	

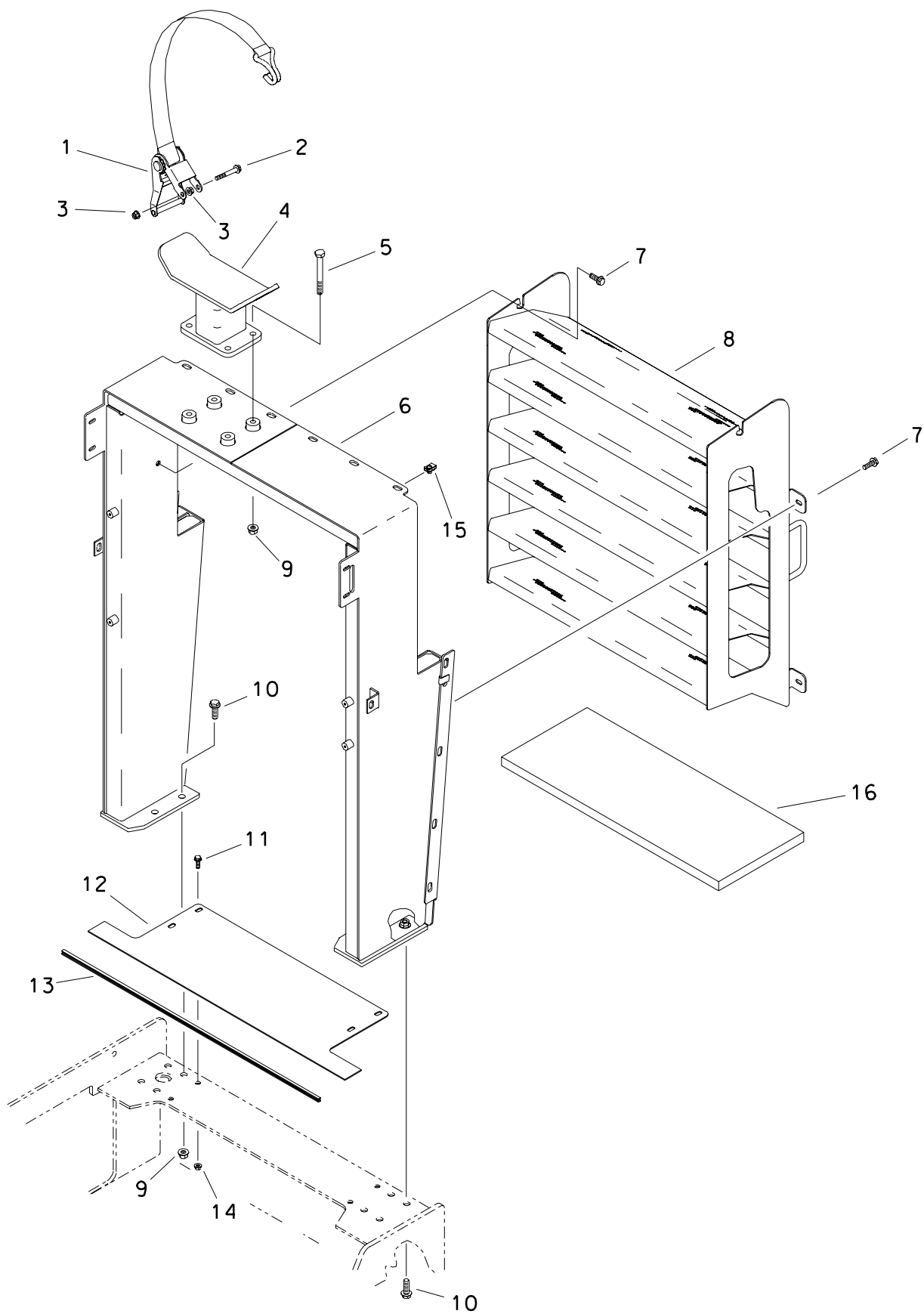
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368-164 THREAD PROTECT PLUG 3.27-4

FOOTNOTES:

NOTE:

GRILLE

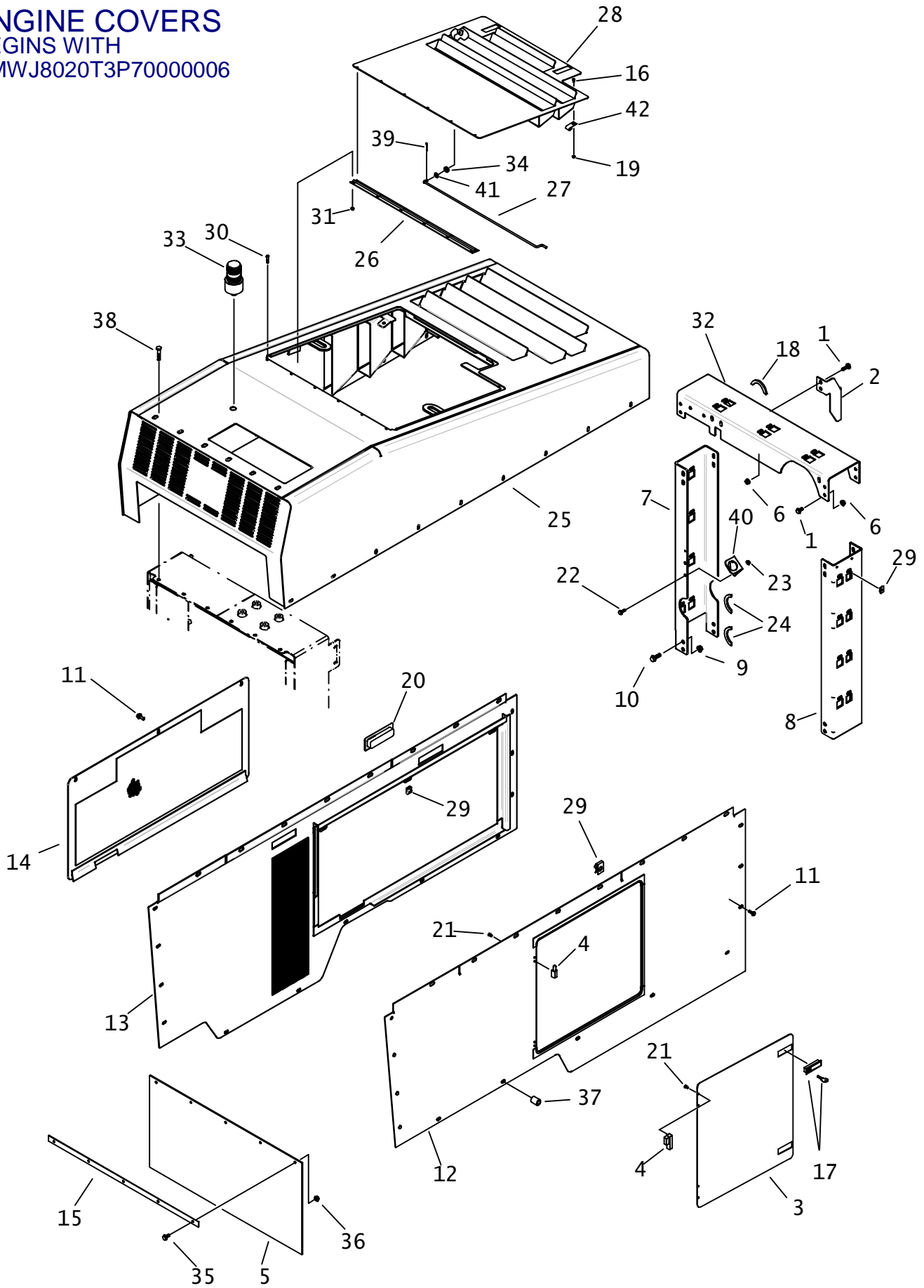


GRILLE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	111-015	1	LOAD BINDER	
2.	106-700	1	SCREW (M12-1.75 X 80MM)	
3.	106-685	2	LOCKNUT(M12-1.75,PRV TRQ,10.9)	
4.	308-618	1	CRANE REST	
5.	106-337	4	SCREW (M12-1.75 X 110mm)	
6.	308-440	1	GRILLE	
7.	106-724	6	FLG SCREW (M10-1.50 X 25mm)	
8.	306-642	1	GRILLE INSERT	
9.	106-709	8	FLG LK NUT (M12-1.75)	
10.	107-004	8	FLG LK SCREW (M12-1.75 X 45mm)	
11.	106-991	4	FLG LK SCREW (M8-1.25 X 20mm)	ENDS WITH S/N: 2V2567
	106-724	4	FLG SCREW (M10-1.50 X 25MM)	BEGINS WITH S/N: 2W0856
12.	309-222	1	COVER PLATE	
13.	116-421	AR	BULK EDGE (1/8", SOLD PER 1')	USE 1 @ 33"
14.	106-386	4	FLG LK NUT (M8-1.25)	ENDS WITH S/N: 2V2567
15.	106-558	6	CLIP NUT (M10-1.50)	
16.	116-948	6	NOISE BARRIER	

FOOTNOTES

ENGINE COVERS
BEGINS WITH
CMWJ8020T3P70000006



ENGINE COVERS

BEGINS WITH

CMWJ8020T3P70000006

REF PART NO. NUMBER	QTY	DESCRIPTION	REMARKS	
1.	106-382	14	FLG LK SCREW (M10-1.5 X 20MM)	
2.	349-693	1	REAR TANK BRACKET	
3.	308-715	1	DOOR	
4.	111-002	2	LIFT-OFF HINGE (OFF-SET)	
5.	117-544	1	DEFLECTOR FLAP	
6.	106-387	14	FLG LOCKNUT (M10-1.50)	
7.	349-690	1	FORMED COLUMN	
8.	349-691	1	FORMED COLUMN	
9.	106-709	8	FLG LK NUT (M12-1.75)	
10.	106-469	8	FLG SCREW (M12-1.75 X 30MM)	
11.	106-991	48	FLG LK SCREW (M8-1.25 X 20MM)	
12.	316-814	1	RIGHT SIDE COVER	
13.	300-4805	1	WELDMENT, LEFT SIDE COVER	
14.	300-4803	1	WELDMENT, INSIDE PANEL	
15.	370-108	1	CLAMP BAR	
16.	107-519	1	SCREW (M8-1.25 X 12MM)	
17.	117-558	4	ADJUST LEVER LATCH (LOCKING)	INCL KEY
	214-961		KEY, PAIR (BASE CODE)	
	217-309		LOCK PLUG 4/LATCH (BASE CODE)	
18.	115-686	AR	BULK EDGE (5/32",SOLD PER 1")	USE 1 @ 6"
19.	106-561	1	LOCKNUT (M8-1.25, PRV TRQ, 10.9)	
20.	110-699	2	PULL (1.210" X 5.190", BLACK)	
21.	106-228	8	SCREW (M5-0.80 X 10MM)	
22.	106-162	2	FLG SCREW (M8-1.25 X 20MM)	
23.	106-386	2	FLG LOCK NUT (M8-1.25)	
24.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 2 @ 6"
25.	300-1684	1	HOOD	
26.	107-552	1	HINGE	
27.	309-157	1	PROP ROD	
28.	309-156	1	TOP DOOR	
29.	106-551	48	CLIP NUT (M8-1.25)	
30.	106-234	12	SCREW (M6-1.00 X 12MM)	
31.	106-385	12	FLG LOCKNUT (M6-1.00)	
32.	300-1716	1	FORMED CROSSMEMBER	

NOT SHOWN:

FOOTNOTES:

NOTE:

ENGINE COVERS

BEGINS WITH

CMWJ8020T3P70000006

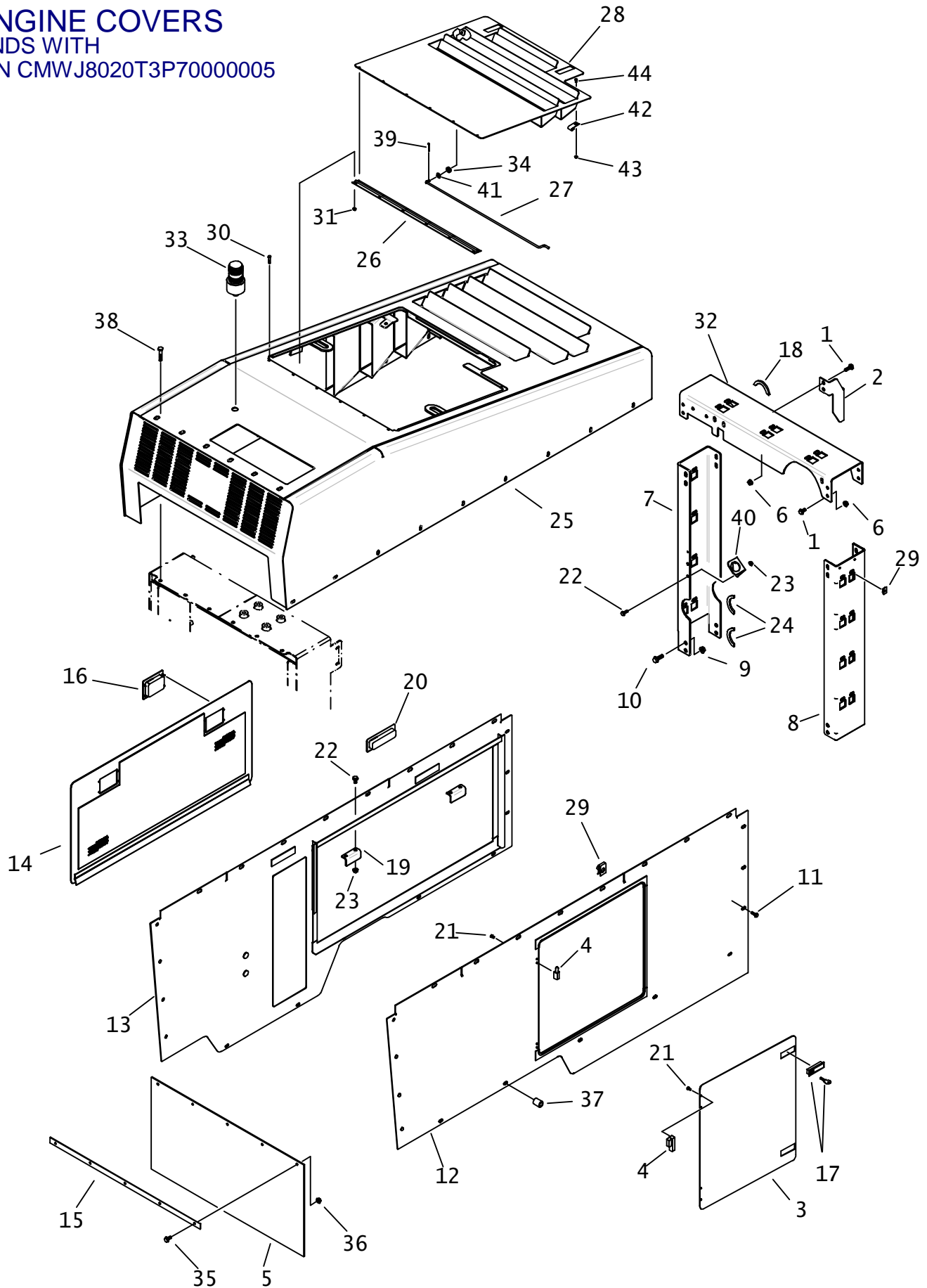
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
33.	217-296	1	STROBE LIGHT AMBER MED PROFILE	
	214-991	-	REPLACEMENT FLASH TUBE	
	217-302	-	REPLACEMENT LENS (AMBER)	
	217-301	-	BRUSH GUARD	
	157-645	2	WEATHER-PAC SEAL (2.80MM)	
	214-104	2	PACKARD MALE TERMINAL	
	214-103	1	2-WAY MALE CONNECTOR	
34.	106-076	1	WASHER (1/4")	
35.	106-162	5	FLG SCREW (M8-1.25 X 20MM)	
36.	106-386	5	FLG LOCKNUT (M8-1.25)	
37.	106-565	3	NUTSERT (M8-1.25)	
38.	107-001	6	FLG LK SCREW (M10-1.50 X 25MM)	
39.	105-523	1	COTTER PIN (.125" X .750")	
40.	300-4685	1	SHEET, BULKHEAD ANGLE MOUNT BRACKET	
41.	117-456	1	GROMMET	
42.	110-492	1	J-CLIP (.343")	

NOT SHOWN:

FOOTNOTES:

NOTE:

ENGINE COVERS
 ENDS WITH
 S/N CMWJ8020T3P70000005



ENGINE COVERS

ENDS WITH

S/N CMWJ8020T3P70000005

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-382	14	FLG LK SCREW (M10-1.5 X 20MM)	
2.	349-693	1	REAR TANK BRACKET	
3.	308-715	1	DOOR	
4.	111-002	2	LIFT-OFF HINGE (OFF-SET)	
5.	117-544	1	DEFLECTOR FLAP	
6.	106-387	14	FLG LOCKNUT (M10-1.50)	
7.	349-690	1	FORMED COLUMN	
8.	349-691	1	FORMED COLUMN	
9.	106-709	8	FLG LK NUT (M12-1.75)	
10.	106-469	8	FLG SCREW (M12-1.75 X 30MM)	
11.	106-991	45	FLG LK SCREW (M8-1.25 X 20MM)	
12.	316-814	1	RIGHT SIDE COVER	
13.	370-481	1	LEFT SIDE COVER	
14.	349-705	1	ACCESS DOOR	
15.	370-108	1	CLAMP BAR	
16.	110-514	2	LOCKING LATCH (ADJUSTABLE)	
17.	117-558	4	ADJUST LEVER LATCH (LOCKING)	INCL KEY
	214-961		KEY, PAIR (BASE CODE)	
	217-309		LOCK PLUG 4/LATCH (BASE CODE)	
18.	115-686	AR	BULK EDGE (5/32",SOLD PER 1")	USE 1 @ 6"
19.	349-807	2	DOOR STOP	
20.	110-699	2	PULL (1.210" X 5.190", BLACK)	
21.	106-228	8	SCREW (M5-0.80 X 10MM)	
22.	106-162	6	FLG SCREW (M8-1.25 X 20MM)	
23.	106-386	6	FLG LOCK NUT (M8-1.25)	
24.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 2 @ 6"
25.	300-1684	1	HOOD	
26.	107-552	1	HINGE	
27.	309-157	1	PROP ROD	
28.	309-156	1	TOP DOOR	
29.	106-551	45	CLIP NUT (M8-1.25)	
30.	106-234	12	SCREW (M6-1.00 X 12MM)	
31.	106-385	12	FLG LOCKNUT (M6-1.00)	
32.	300-1716	1	FORMED CROSSMEMBER	

NOT SHOWN:

FOOTNOTES:

NOTE:

ENGINE COVERS

ENDS WITH

S/N CMWJ8020T3P70000005

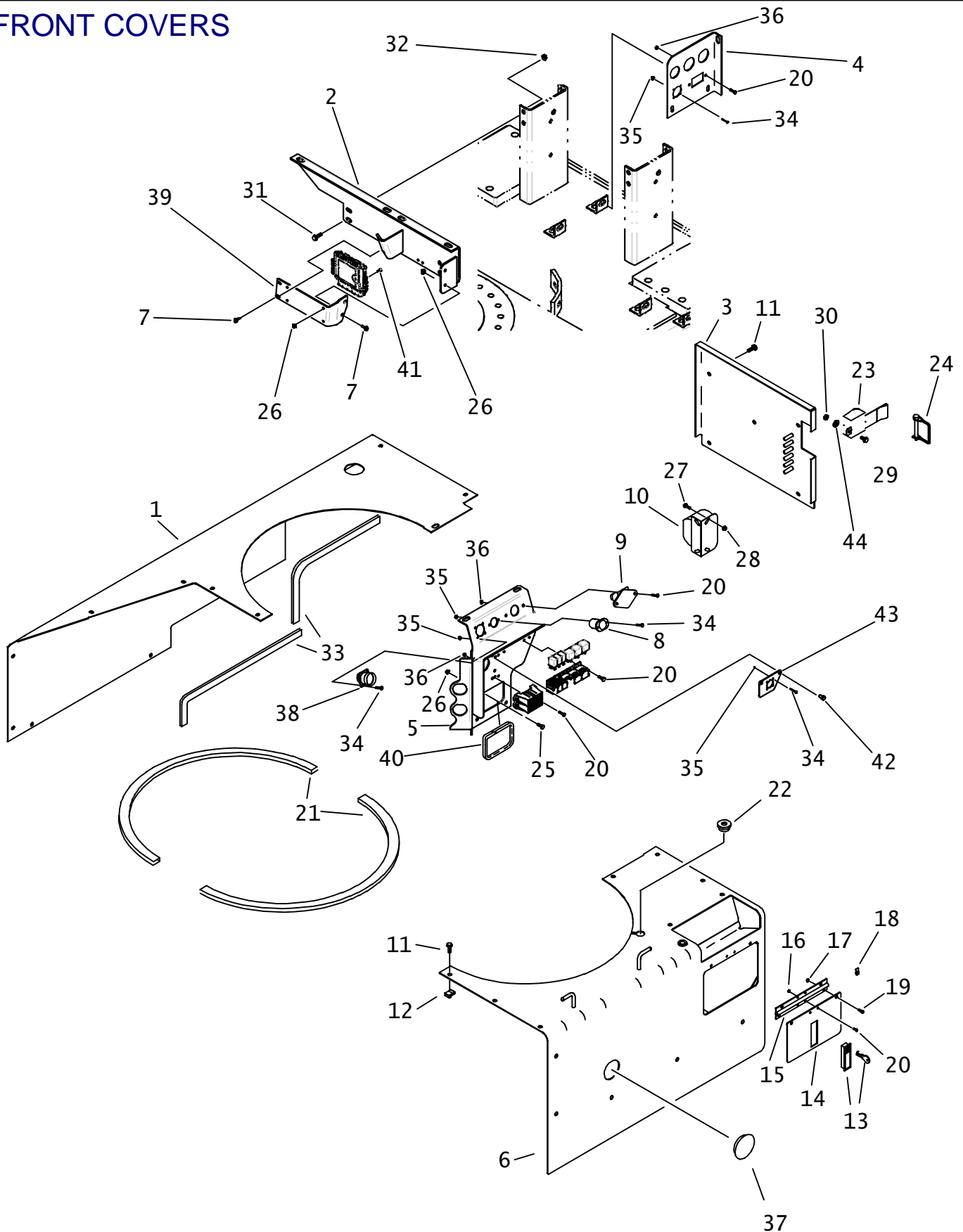
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
33.	217-296	1	STROBE LIGHT AMBER MED PROFILE	
	214-991	-	REPLACEMENT FLASH TUBE	
	217-302	-	REPLACEMENT LENS (AMBER)	
	217-301	-	BRUSH GUARD	
	157-645	2	WEATHER-PAC SEAL (2.80MM)	
	214-104	2	PACKARD MALE TERMINAL	
	214-103	1	2-WAY MALE CONNECTOR	
34.	106-076	1	WASHER (1/4")	
35.	106-162	5	FLG SCREW (M8-1.25 X 20MM)	
36.	106-386	5	FLG LOCKNUT (M8-1.25)	
37.	106-565	3	NUTSERT (M8-1.25)	
38.	107-001	6	FLG LK SCREW (M10-1.50 X 25MM)	
39.	105-523	1	COTTER PIN (.125" X .750")	
40.	300-4685	1	SHEET, BULKHEAD ANGLE MOUNT BRACKET	
41.	117-456	1	GROMMET	
42.	110-492	1	J-CLIP (.343")	
43.	106-561	1	LOCKNUT (M8-1.25, PRV TRQ, 10.9)	
44.	107-519	1	SCREW (M8-1.25 X 12MM)	

NOT SHOWN:

FOOTNOTES:

NOTE:

FRONT COVERS



FRONT COVERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-798	1	LEFT COVER	USE WITH HOIST OPTION
	370-458	1	LEFT COVER	USE W/OUT HOIST OPTION
2.	300-1776	1	WELDMENT, ECU MOUNT	
3.	349-828	1	COVER PLATE	
4.	300-2585	1	SHEET, BULKHEAD MOUNT	
5.	301-745	1	CONNECTOR/FUSE PANEL	
6.	316-815	1	RIGHT COVER	USE WITH HOIST OPTION
	320-699	1	RIGHT COVER	USE W/OUT HOIST OPTION
7.	106-379	4	FLG LK SCREW (M6-1.00 X 20MM)	
8.	214-301	1	ACCESSORY SOCKET	
9.	217-017	1	CONNECTOR (4-WAY, FM)	
10.	306-602	1	ALARM	
11.	106-991	33	FLG LK SCREW (M8-1.25 X 20MM)	
12.	106-551	33	CLIP NUT (M8-1.25)	
13.	117-558	1	ADJUST LEVER LATCH (LOCKING)	
	214-961		KEY, PAIR (BASE CODE)	
	217-309		LOCK PLUG 4/LATCH (BASE CODE)	
14.	348-299	1	ACCESS PANEL	
15.	111-047	1	HINGE (214MM)	
16.	106-138	4	NUT (M5-0.80)	
17.	106-385	4	LOCKNUT (M6-1.00)	
18.	110-524	1	SPRING RETAINER	
19.	106-640	4	SCREW (M6-1.00 X 20MM, BUT SOC)	
20.	106-542	10	SCREW (M5-0.80 X 16MM, PAN PLPS)	
21.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 2 @ 40", USED ONLY WITH HOIST OPTION
22.	116-768	1	GROMMET (1/4")	
23.	171-008	1	RETRACTABLE BELT (ORANGE)	
24.	110-032	1	SNAPPER PIN (5/16" X 2-1/2")	
25.	106-234	4	SCREW (M6-1.00 X 12MM)	
26.	106-385	12	FLG LOCKNUT (M6-1.00)	

NOT SHOWN:

FOOTNOTES:

NOTE:

FRONT COVERS

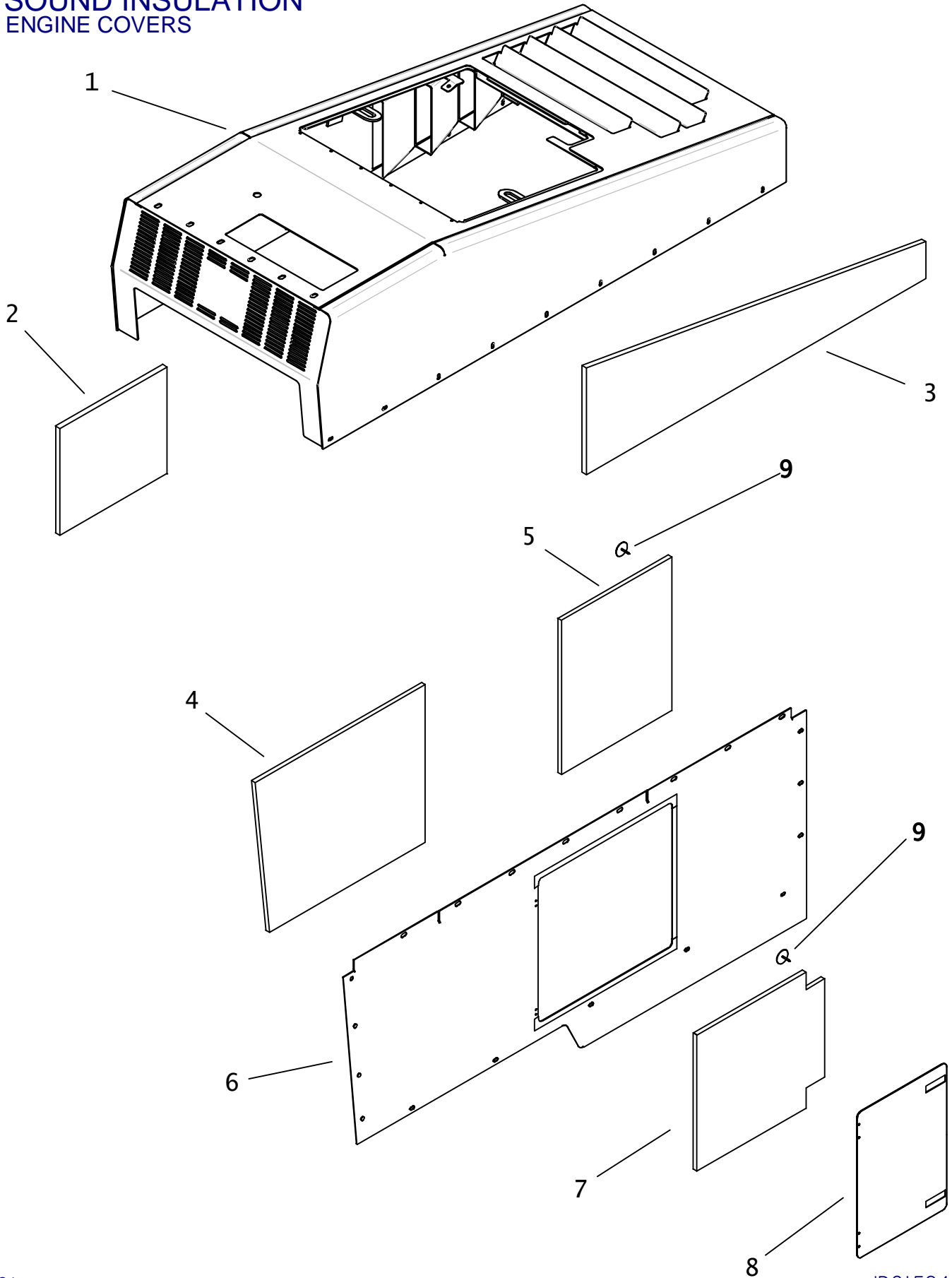
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
27.	106-162	2	FLG SCREW (M8-1.25 X 20MM)	
28.	106-386	2	FLG LOCKNUT (M8-1.25)	
29.	106-469	1	FLG SCREW (M12-1.75 X 30MM)	
30.	106-685	1	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
31.	106-382	4	FLG LK SCREW (M10-1.50 X 20MM)	
32.	106-387	4	FLG LOCKNUT (M10-1.50)	
33.	115-686	AR	BULK EDGE (5/32",SOLD PER 1")	USE 1 @ 44"
34.	105-189	14	SCREW (#6-32 X 1/2")	
35.	105-215	14	NUT (#6-32)	
36.	106-850	6	LOCKNUT (M5-0.80)	
37.	110-982	1	DOME PLUG (2.5")	
38.	214-468	-	RECEPTACLE (19 PIN)	
39.	300-1908	1	SHEET, ECU MOUNT	
40.	115-686	AR	BULK EDGE (5/32", SOLD/ 1")	USE 1 @ 18"
41.	107-312	4	SCREW (M6-1.00 X 25MM, BUT SOC)	
42.	106-234	2	SCREW (M6-1.00 X 12MM)	
43.	300-3153	1	SHEET, DIAGNOSTIC CONNECTOR MOUNT	
44.	106-743	1	WASHER (.531", HARDENED)	

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FOOTNOTES:

NOTE:

SOUND INSULATION ENGINE COVERS



SOUND INSULATION ENGINE COVERS

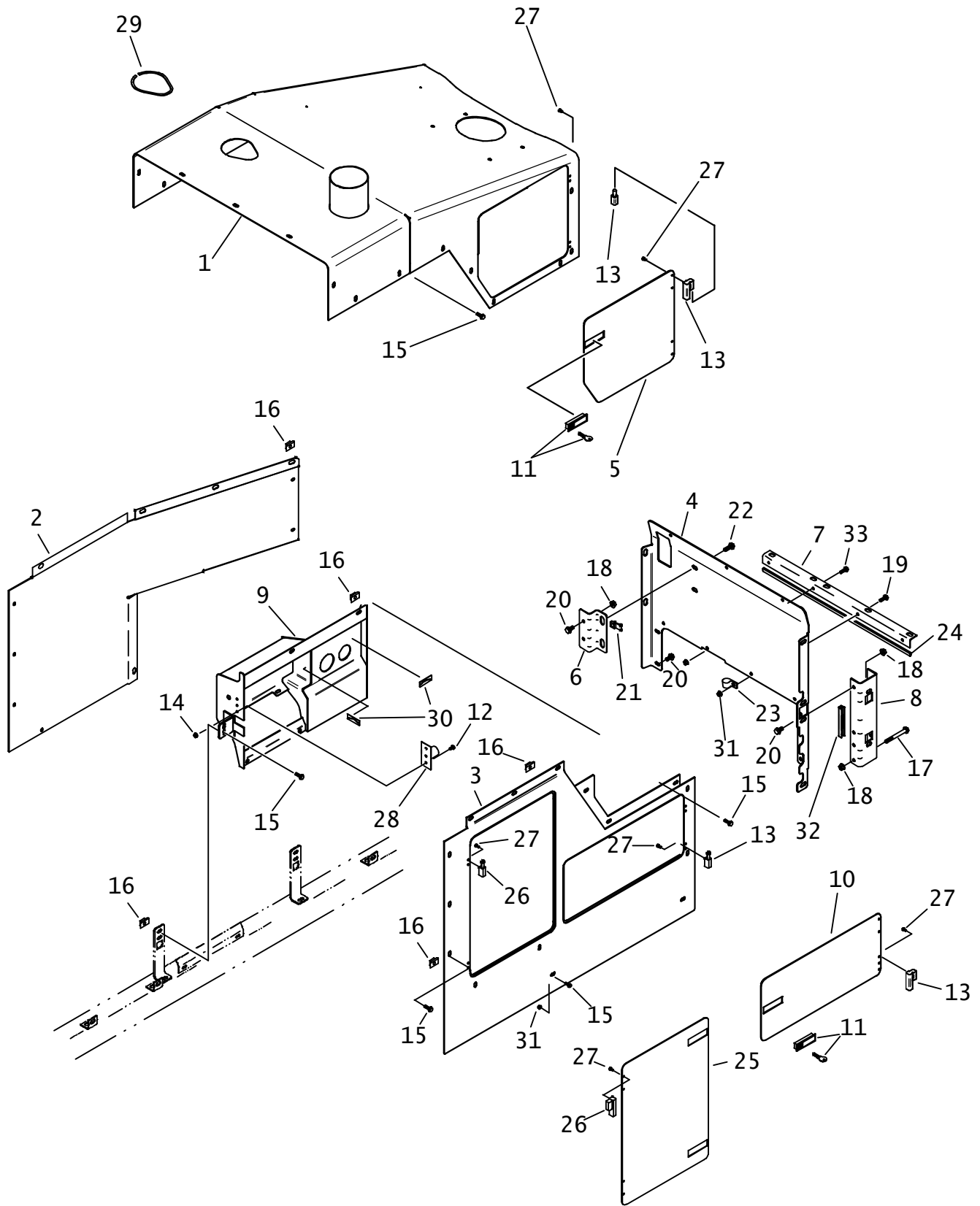
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	300-1684	-	REAR HOOD	
2.	117-366	1	SOUND INSULATION	
3.	117-362	1	SOUND INSULATION	
4.	117-363	1	SOUND INSULATION	
5.	117-365	1	SOUND INSULATION	
6.	316-814	-	RIGHT SIDE COVER	
7.	117-364	-	SOUND INSULATION	
8.	308-715	-	DOOR	
9.	107-950	11	INSULATION STUD	

NOT SHOWN:

FOOTNOTES:

NOTE:

COVERS



COVERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	300-1687	1	WELDMENT, FRONT HOOD	
2.	349-794	1	FRONT LEFT SIDE PLATE	
3.	300-1689	1	WELDMENT, FRONT RIGHT SIDE PANEL	
4.	300-1713	1	SHEET, FRONT END PLATE	
5.	300-1704	1	SHEET, AIR FILTER DOOR	
6.	300-3149	1	FRONT TANK BRACKET	
7.	349-806	1	BRACKET	
8.	349-796	1	CHANNEL	
9.	300-1683	1	WELDMENT, VALVE COVER	
10.	300-1705	1	SHEET, SETUP DOOR	
11.	117-558	4	ADJUST LEVER LATCH (LOCKING)	
	214-961		KEY, PAIR (BASE CODE)	
	217-309		LOCK PLUG 4/LATCH (BASE CODE)	
12.	106-378	2	FLG LK SCREW (M6-1.00 X 12MM)	
13.	105-617	4	LIFT-OFF HINGE (OFF-SET)	
14.	106-385	2	FLG LOCKNUT (M6-1.00)	
15.	106-991	40	FLG LK SCREW (M8-1.25 X 20MM)	
16.	106-551	38	CLIP NUT (M8-1.25)	
17.	106-206	2	SCREW (M10-1.50 X 90MM)	
18.	106-387	6	FLG LOCKNUT (M10-1.50)	
19.	106-381	1	FLG. LK. SCREW (M8-1.25 X 25MM)	
20.	106-382	6	FLG LK SCREW (M10-1.50 X 20MM)	
21.	106-558	2	CLIP NUT (M10-1.50)	
22.	106-383	2	FLG LK SCREW (M10-1.50 X 30MM)	
23.	110-333	1	BOLT ON CLAMP (1")	
24.	116-259	AR	BULK EDGE (1/4", SOLD PER 1")	USE 1 @ 8"
25.	349-398	1	DOOR	
26.	111-002	2	LIFT-OFF HINGE (OFF-SET)	
27.	106-228	16	SCREW (M5-0.80 X 10MM)	
28.	215-412	1	LICENSE PLATE LAMP	
29.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 15"
30.	110-208	2	LEVEL INDICATOR	
31.	106-386	4	FLG LOCKNUT (M8-1.25)	
32.	115-686	AR	BULK EDGE (5/32",SOLD PER 1")	USE 1 @ 4"
33.	106-162	3	FLG SCREW (M8-1.25 X 20MM, GD8)	

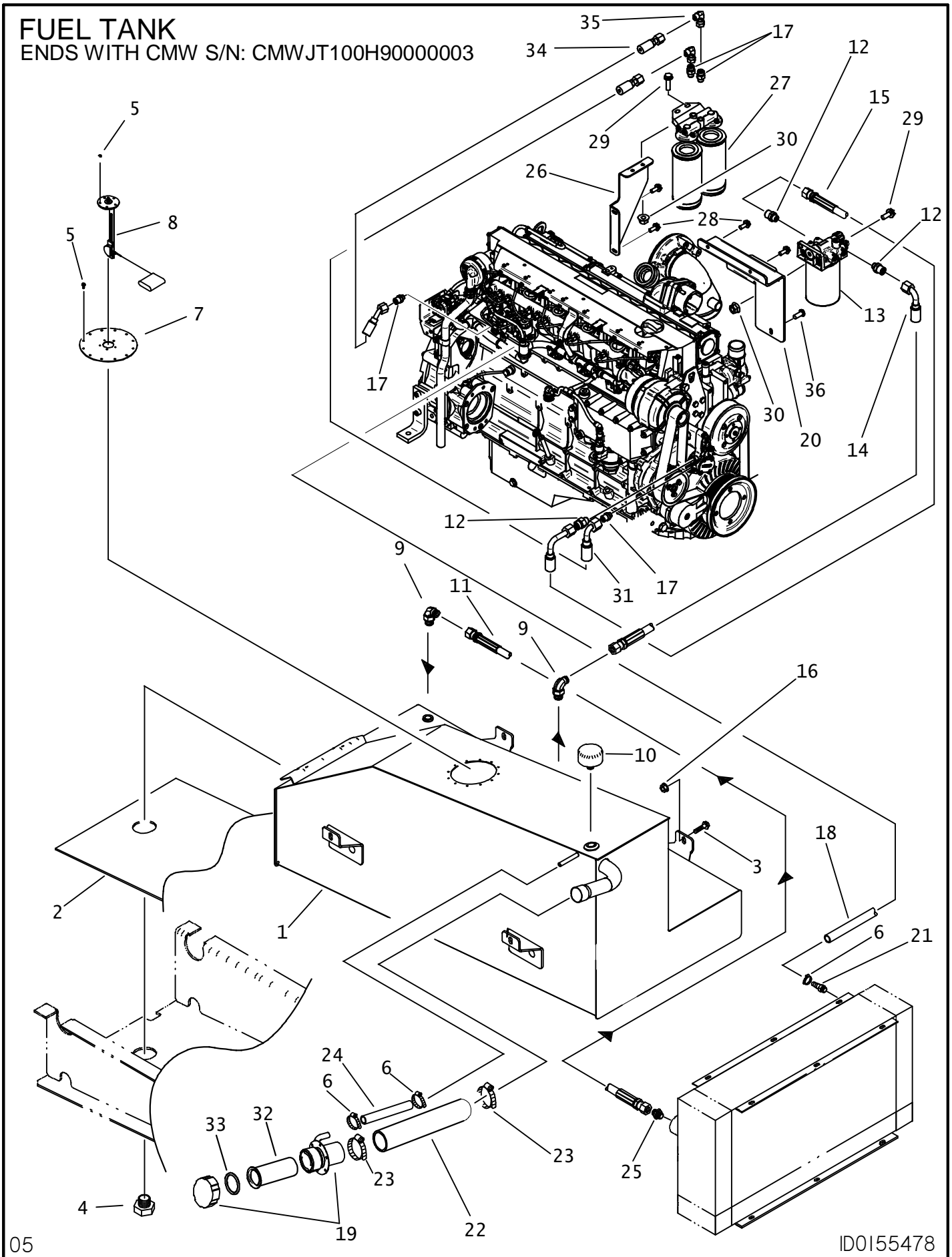
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FOOTNOTES:

NOTE:

FUEL TANK

ENDS WITH CMW S/N: CMWJT100H90000003



FUEL TANK

ENDS WITH CMW S/N: CMWJT100H90000003

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	315-402	1	FUEL TANK	
2.	309-160	1	TANK PAD	
3.	106-632	4	FLG LK SCREW (M12-1.75 X 35MM, SER)	
4.	115-152	1	PLUG (12N, SQ FM)	
5.	105-214	16	FLG SCREW (#10-24 X 1/2")	
6.	110-217	4	WORM CLAMP (7/16" TO 1")	
7.	349-887	1	COVER PLATE	SEE FOOTNOTE 1
8.	214-871	1	FUEL SENDER	
9.	154-352	2	CONNECTOR (08N-08090)	
10.	159-446	1	BREATHER VENT	
11.	153-303	1	HOSE (080FX-65"-3000)	
12.	159-754	3	CONNECTOR (M16-1.5-080)	
13.	500-2110	-	DEUTZ FUEL FILTER	
14.	154-971	1	HOSE (080FX90-78"-3000)	
15.	154-877	1	HOSE (080FX90-90"-3000)	
16.	106-709	4	FLG NUT (M12-1.75)	
17.	150-1214	4	CONNECTOR (M14X1.5-060)	
18.	116-322	AR	BULK HOSE (1/2", SOLD PER 1')	USE 1 @ 94"
19.	364-661	1	FILLER NECK	
	153-760	1	CAP	
20.	300-1768	1	PLATE, FILTER MOUNT	
21.	149-989	1	S/O COUPLER (08S-08H)	
22.	116-952	-	FUEL HOSE (2" X 32")	USE 1 @ 24"
23.	110-134	2	WORM CLAMP (2.06"-2.75")	
24.	116-322	AR	BULK HOSE (1/2", SOLD PER 1")	USE 1 @ 35"
25.	154-233	1	CONNECTOR (08S-080)	
26.	300-1769	1	SHEET, SECONDARY FUEL FILTER MOUNT	
27.	500-1084	-	ELEMENT, SECONDARY FUEL FILTER	
28.	106-162	4	FLG SCREW (M8-1.25 X 20MM)	USE 242 LOCTITE
29.	107-111	4	FLG SCREW (M10-1.50 X 35MM)	
30.	106-387	4	FLG LOCKNUT (M10-1.50)	
31.	154-954	1	HOSE (060FX90S-70"-3000)	
32.	364-663	1	FILLER NECK SCREEN	
33.	155-708	1	O-RING (218 D70)	
34.	150-1136	1	HOSE (060FX45-74"-3000)	
35.	154-228	2	UNION (060-060FX90)	
36.	107-032	1	SCREW (M8-1.25 X 20MM, BUT SOC)	USE 242 LOCTITE

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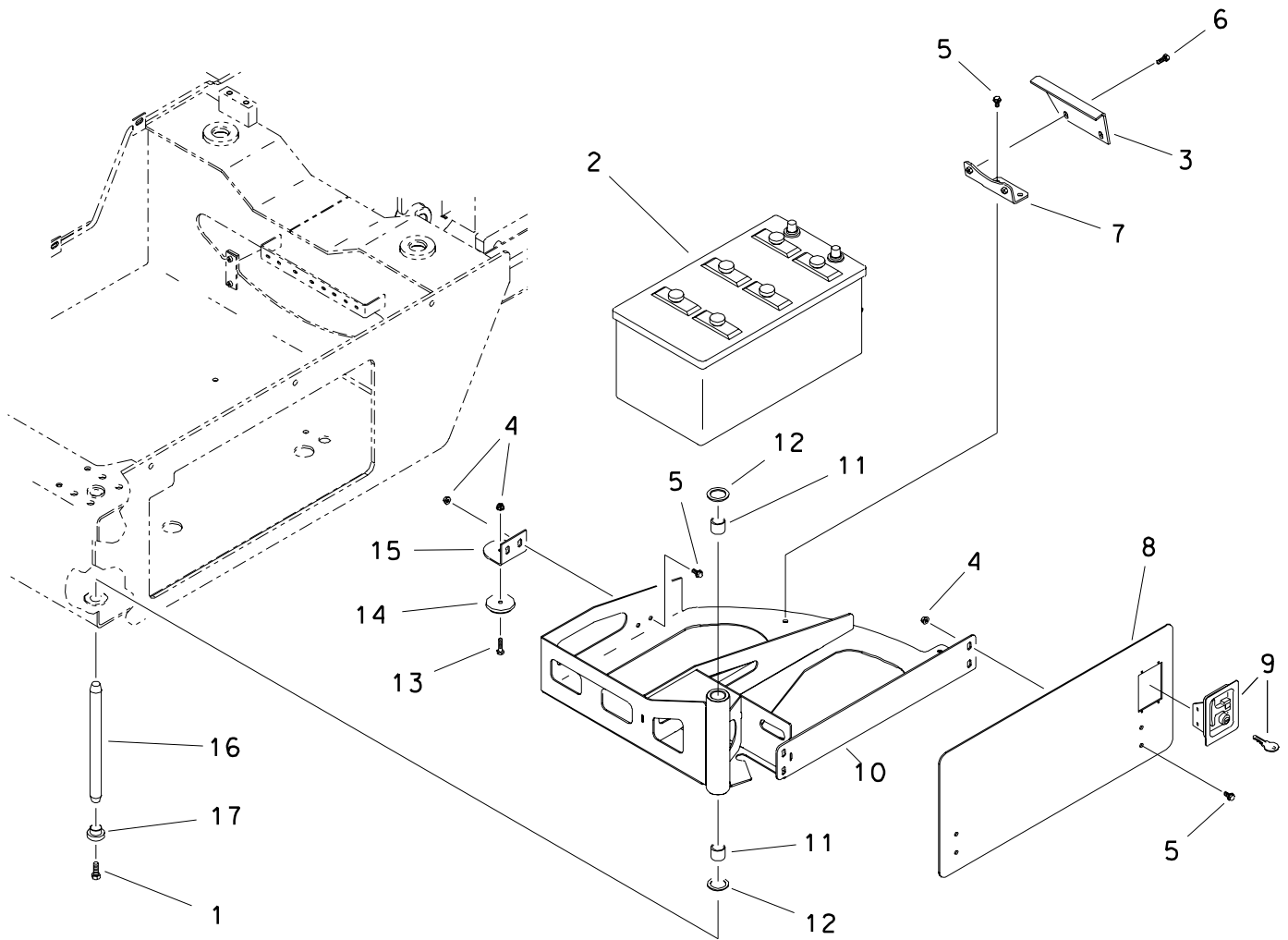
FOOTNOTES:

1. USE LOCTITE AVIATION SEALANT OR EQUIVALENT

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS

BATTERY BOX

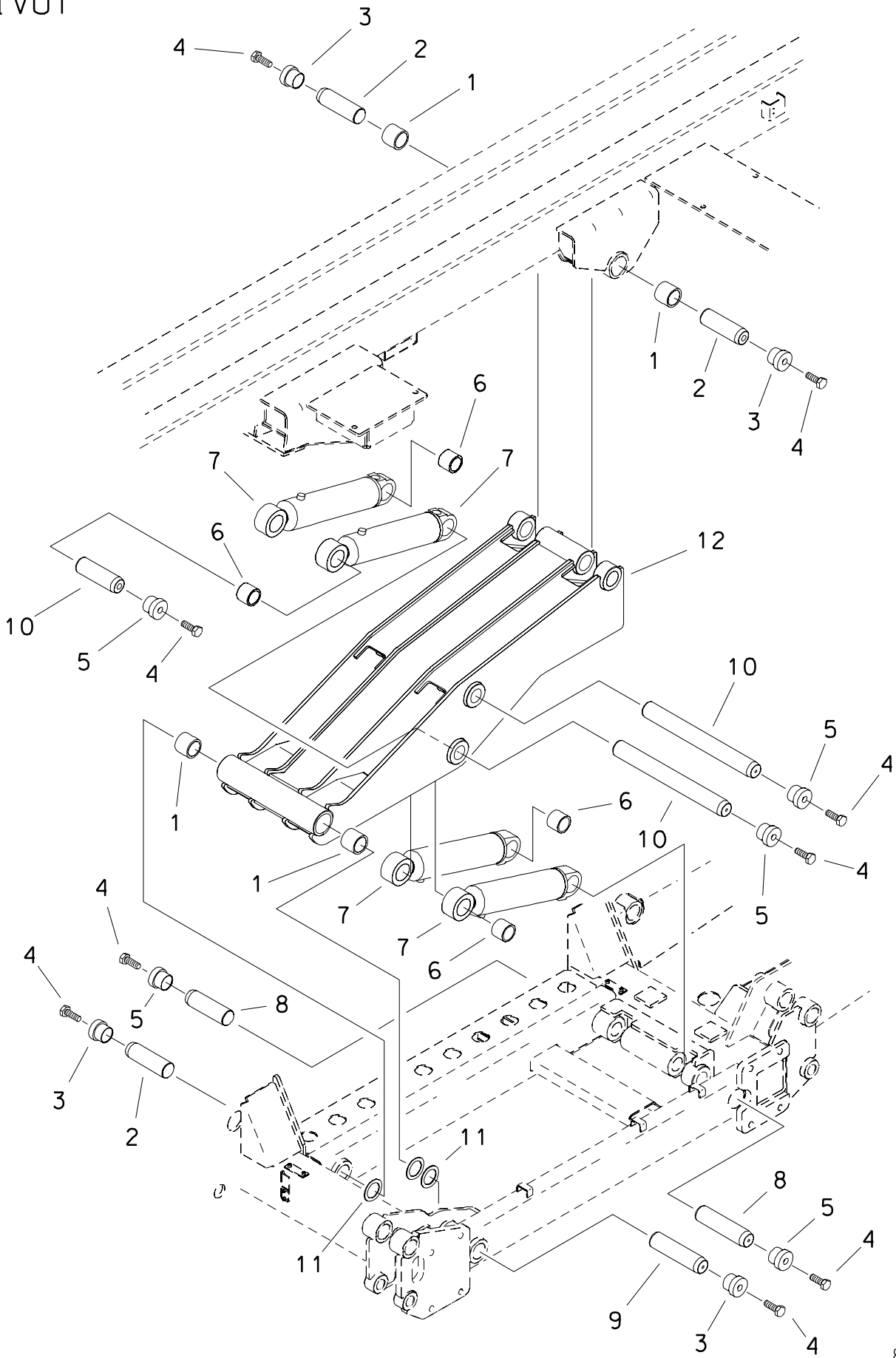


BATTERY BOX

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-245	1	SCREW (M10-1.50 X 25MM)	
2.	215-282	2	BATTERY	
3.	308-761	2	HOLD DOWN	
4.	106-386	7	FLG LOCKNUT (M8-1.25)	
5.	106-380	8	FLG LK SCREW (M8-1.25 X 16MM)	
6.	106-162	4	FLG SCREW (M8-1.25 X 20MM)	
7.	308-753	2	BRACKET	
8.	308-763	1	DOOR	
9.	110-514	1	LOCKING LATCH (ADJUSTABLE)	INCL. KEY
	110-596	-	KEY (PAIR)	
10.	308-752	1	BATTERY SWING BOX	
11.	125-770	2	COMPOSITION BUSHING (1")	
12.	110-084	AR	BRASS BUSHING (1-5/32")	
13.	107-187	1	SCREW (M8-1.25 X 35MM)	
14.	308-764	1	SLIDE RING	
15.	308-769	1	SLIDE BRACKET	
16.	178-533	1	TAPERED PIN (25.4MM X 312MM)	
17.	181-981	1	TAPERED INSERT (1")	

FOOTNOTES

PIVOT



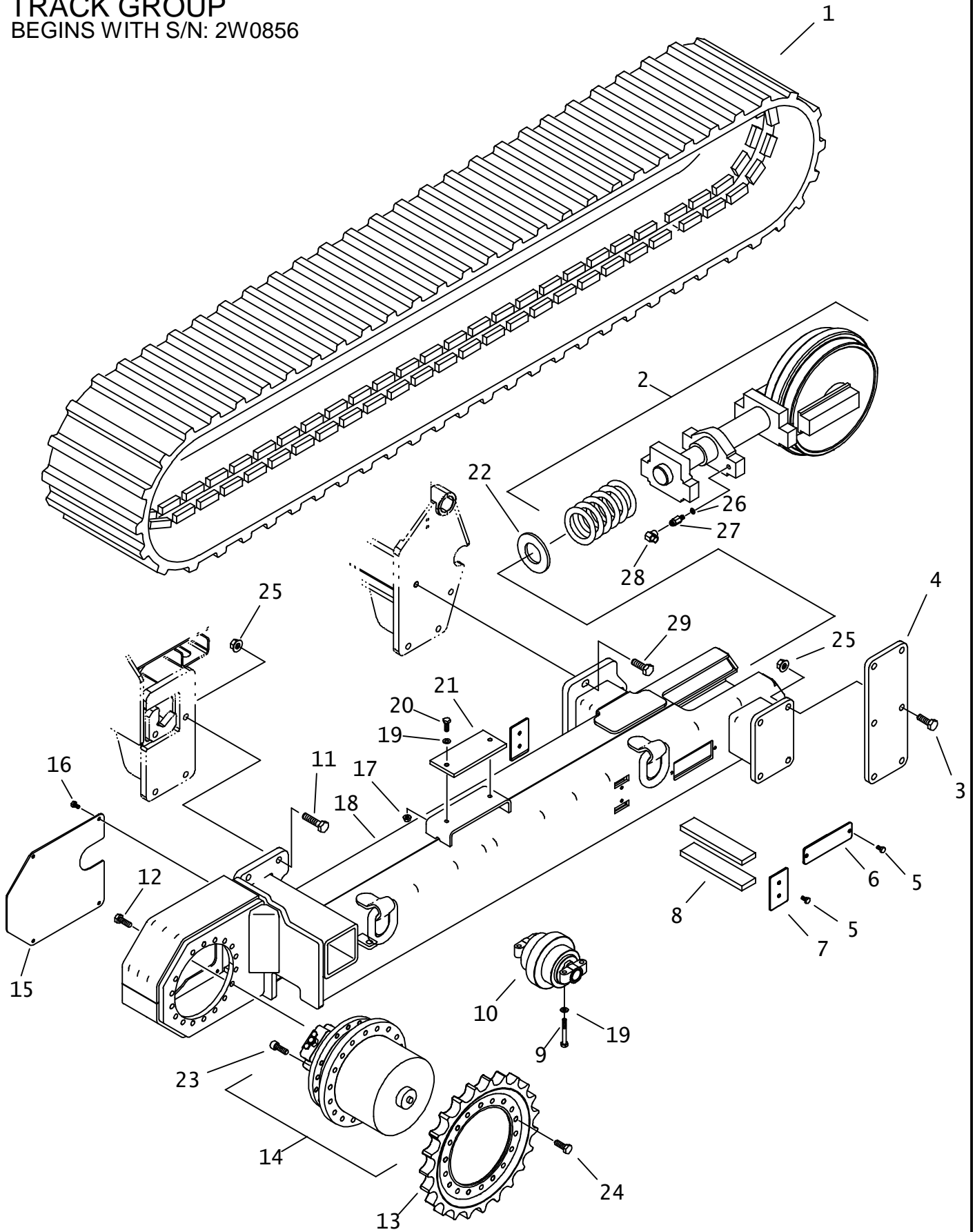
PIVOT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	125-781	4	COMPOSITION BUSHING (2.259")	
2.	183-837	3	TAPERED PIN (57.15mm X 180mm)	
3.	184-031	4	TAPERED INSERT (2.25")	
4.	106-345	9	SCREW (M20-2.50 X 50mm)	USE LOCKTITE WITH 242 OR EQUIVALENT
5.	184-064	5	TAPERED INSERT (2")	
6.	125-754	8	COMPOSITION BUSHING (2")	
7.	151-047	4	CYL (3.5" X 2.0" X 12.0")	
8.	183-919	2	TAPERED PIN (50.8mm X 190mm)	
9.	183-838	1	TAPERED PIN (57.1mm X 250mm)	
10.	179-177	3	TAPERED PIN (50.8mm X 460mm)	
11.	110-211	AR	MACHINERY BUSHING (2.25")	
12.	349-350	1	PIVOT	

FOOTNOTES

TRACK GROUP

BEGINS WITH S/N: 2W0856



TRACK GROUP

BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-004	2	RUBBER TRACK (450MM, 88P, 71MM)	
2.	349-006	2	IDLER	
3.	106-075	6	SCREW (M20-2.50 X 60MM, 10.9)	
4.	315-984	1	SUPPORT PLATE	
5.	106-382	12	FLG LK SCREW (M10-1.5 X 20MM)	
6.	349-330	2	COVER	
7.	349-324	4	COVER	
8.	349-325	4	RECOIL STOP BAR	
9.	106-335	56	SCREW (M12-1.75 X 70MM)	USE LOCTITE 242 OR EQUIVALENT
10.	129-004	14	TRACK ROLLER	
11.	107-127	13	SCREW (M20-2.50 X 80MM, 10.9)	USE LOCTITE 242 OR EQUIVALENT
12.	105-998	34	SCREW (M16-2.00 X 40MM)	USE LOCTITE 242 OR EQUIVALENT
13.	175-736	2	SPROCKET (5.303" A23)	GROUND DRIVE
14.	166-162	2	GEARBOX & DRIVE PLANETARY	OBSOLETE, ENDS WITH S/N:CMWJT100HA0000023
	160-1173	2	GEARBOX & DRIVE PLANETARY	BEGINS WITH S/N:CMWJT100EA0000024
	166-139	1	GROUND DRIVE PLANETARY	OBSOLETE, ENDS WITH S/N:CMWJT100HA0000023
	160-1172	1	GROUND DRIVE PLANETARY	BEGINS WITH S/N:CMWJT100EA0000024
	159-910	1	HYDRAULIC MOTOR	
15.	349-336	2	COVER	
16.	106-654	8	FLG LK SCREW (M10-1.50 X 16MM)	
17.	106-685	4	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
18.	315-883	1	RIGHT ROLLER FRAME	
	315-882	1	LEFT ROLLER FRAME	
19.	106-397	60	WASHER (M12, HARDENED)	
20.	106-333	4	SCREW (M12-1.75 X 40MM, 8.8)	
21.	349-314	2	SLIDE PAD	
22.	370-382	2	SPACER RING	SEE FOOTNOTE 1
23.	107-116	4	SCREW (M16-2.00 X 35MM)	TORQUE TO 240 FT LBS; USE LOCTITE 242 OR EQUIVALENT.
24.	106-340	36	SCREW (M16-2.00 X 50MM)	TORQUE TO 240 FT LBS; USE LOCTITE 242 OR EQUIVALENT.
25.	106-356	19	FLG NUT (M20-2.50 10.9)	
26.	115-023	2	SEAL WASHER (M17)	
27.	115-022	2	VALVE ZERK (M16-1.50)	
28.	115-258	1	COUPLER (O2NF, BUT)	
29.	106-607	3	SCREW (M20-2.50 X 50MM, 10.9)	USE LOCTITE 277 OR EQUIVALENT

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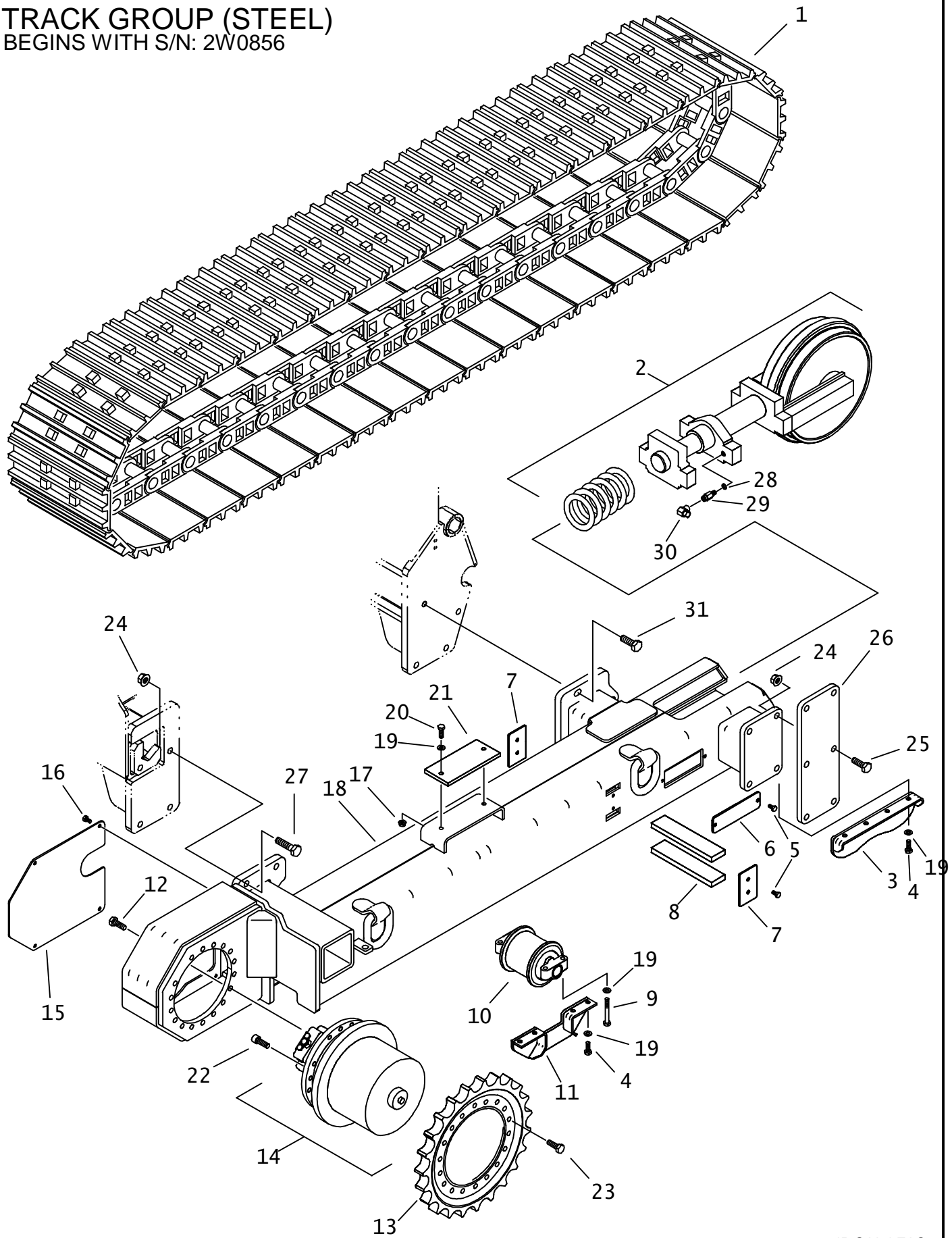
FOOTNOTES:

1. DO NOT INSTALL SPACER RINGS WITH IDLER UNITS HAVING .375" SPACER BARS.

NOTE:

TRACK GROUP (STEEL)

BEGINS WITH S/N: 2W0856



TRACK GROUP (STEEL)

BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-003	2	STEEL TRACK (450MM, 88P, 71MM)	
	370-501	44	TRACK LINK (RH)	
	370-502	44	TRACK LINK (LH)	
	370-503	86	TRACK BUSHING	
	370-504	2	TRACK MASTER BUSHING	
	370-505	86	TRACK PIN	
	370-506	2	TRACK MASTER PIN	
	370-507	176	TRACK SPACER	
2.	349-006	2	IDLER	
3.	349-341	4	FRONT GUARD	
4.	105-273	32	SCREW (M12-1.75 X 30MM)	
5.	106-382	12	FLG LK SCREW (M10-1.5 X 20MM)	
6.	349-330	2	COVER	
7.	349-324	4	COVER	
8.	349-333	4	RECOIL STOP BAR	
9.	106-335	56	SCREW (M12-1.75 X 70MM)	USE LOCTITE 242 OR EQUIVALENT
10.	349-002	14	TRACK ROLLER	
11.	349-337	4	MIDDLE GUARD	
12.	105-998	34	SCREW (M16-2.00 X 40MM)	USE LOCTITE 242 OR EQUIVALENT
13.	142-083	2	SPROCKET (5.515" A21)	
14.	166-162	2	GEARBOX & DRIVE PLANETARY	ENDS WITH S/N:CMWJT100HA0000023
	160-1173	2	GEARBOX & DRIVE PLANETARY	BEGINS WITH S/N:CMWJT100EA0000024
	166-139	1	GROUND DRIVE PLANETARY	ENDS WITH S/N:CMWJT100HA0000023
	160-1172	1	GROUND DRIVE PLANETARY	BEGINS WITH S/N:CMWJT100EA0000024
	159-910	1	HYDRAULIC MOTOR	
15.	349-336	2	COVER	
16.	106-654	8	FLG LK SCREW (M10-1.50 X 16MM)	
17.	106-685	4	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
18.	315-883	1	RIGHT ROLLER FRAME	
	315-882	1	LEFT ROLLER FRAME	
19.	106-397	92	WASHER (M12, HARDENED)	
20.	106-333	4	SCREW (M12-1.75 X 40MM, 8.8)	USE LOCTITE 242 OR EQUIVALENT
21.	349-314	2	SLIDE PAD	
22.	106-478	4	SCREW (M16-2.00 X 40MM, 10.9)	TORQUE TO 240 FT LBS; USE LOCTITE 242 OR EQUIVALENT
23.	106-340	36	SCREW (M16-2.00 X 50MM)	TORQUE TO 240 FT LBS; USE LOCTITE 242 OR EQUIVALENT
24.	106-356	19	FLG NUT (M20-2.50, 10.9)	
25.	106-075	6	SCREW (M20-2.50 X 60MM, 10.9)	
26.	315-984	1	SUPPORT PLATE	
27.	107-127	13	SCREW (M20-2.50 X 80MM, 10.9)	USE LOCTITE 277 OR EQUIVALENT
28.	115-023	1	SEAL WASHER (M17)	
29.	115-022	1	VALVE ZERK (M16-1.50)	
30.	115-258	1	COUPLER (02NF, BUT)	
31.	106-607	3	SCREW (M20-2.50 X 50MM, 10.9)	USE LOCTITE 277 OR EQUIVALENT

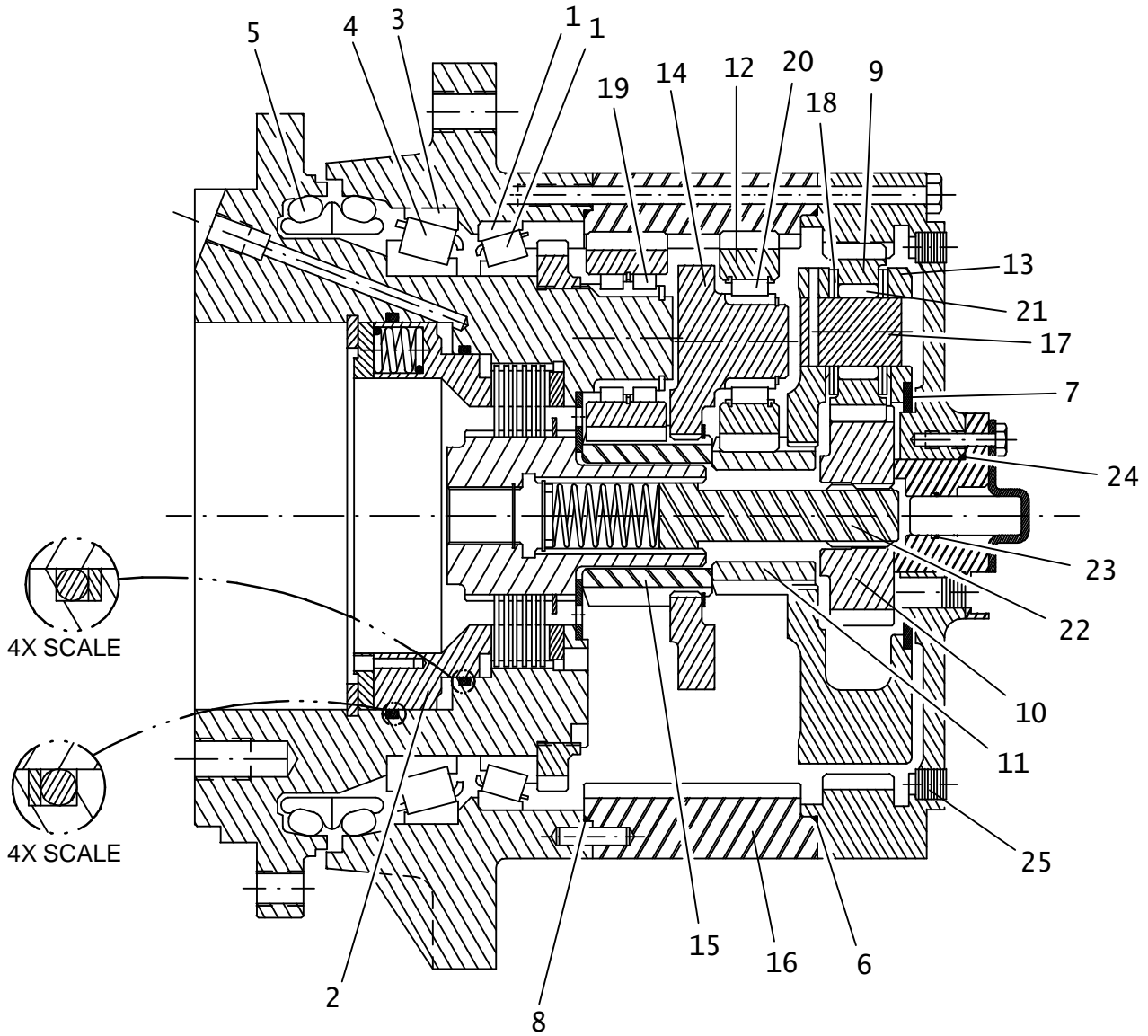
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FOOTNOTES:

NOTE:

GROUND DRIVE PLANETARY GEARBOX

ENDS WITH S/N:CMWJT100HA0000023



GROUND DRIVE PLANETARY GEARBOX

ENDS WITH S/N:CMWJT100HA0000023

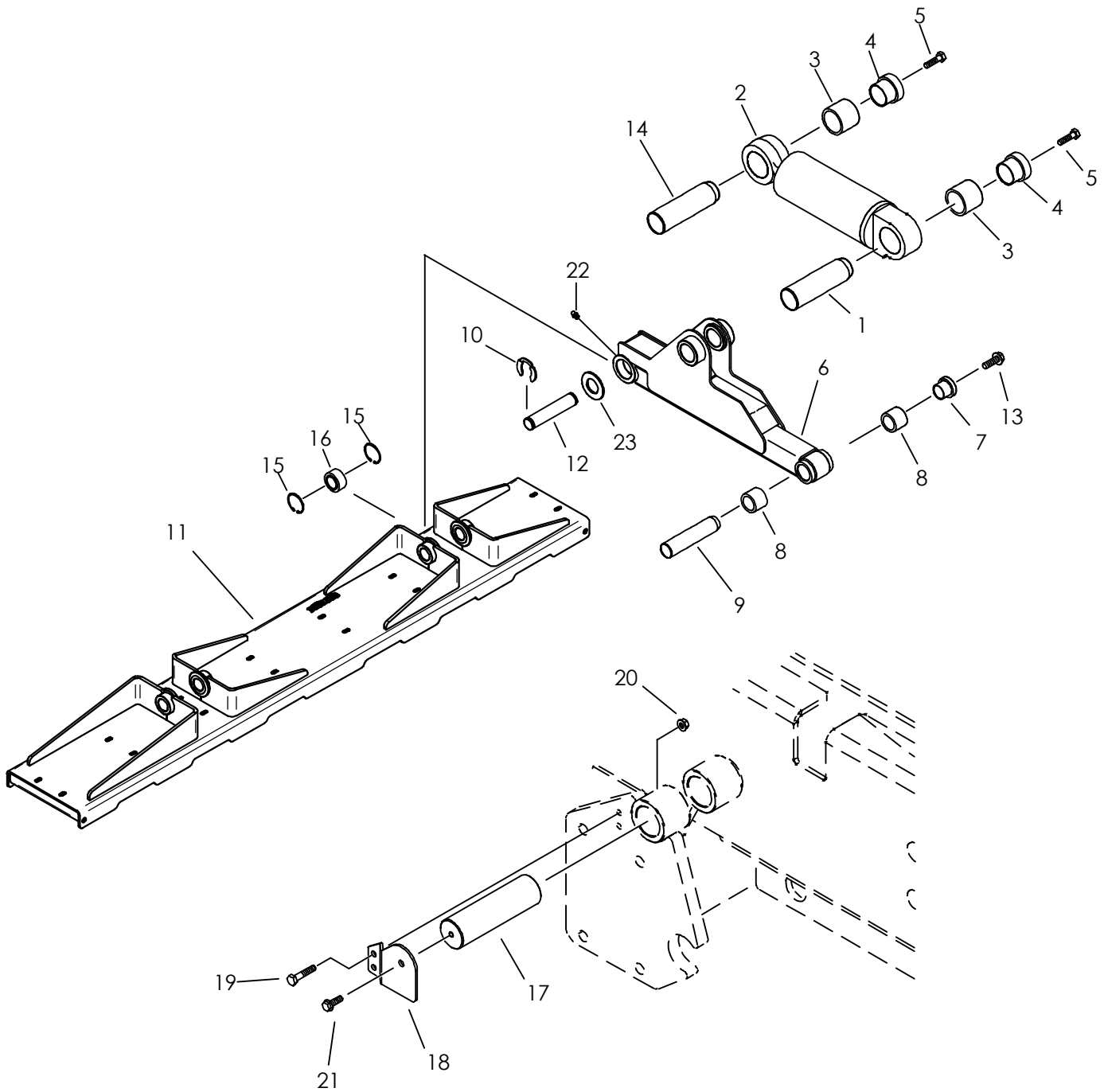
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	500-1571	1	BEARING	SUPERSEDES 125-191 TAPERED RACE AND 125-186 TAPERED BEARING.
2.	160-508	1	BRAKE, INPUT (PLANETARY CT-26)	
3.	125-192	1	TAPERED RACE	
4.	125-187	1	TAPERED BEARING	
5.	149-403	1	FACE SEAL	
6.	157-203	1	O-RING	
7.	105-771	1	THRUST WASHER	
8.	149-405	1	O-RING (-178)	
9.	230-006	3	PLANET GEAR	
10.	230-007	1	SUN GEAR	
11.	230-008	1	SUN GEAR (63,69,95, 110:1)	
12.	230-009	3	PLANET GEAR (2ND STG. 110:1)	
13.	166-215	1	CARRIER (1ST STG 63:1)	
14.	166-216	1	CARRIER (CT18 63,69,95,110:1)	
15.	230-010	1	SUN GEAR	
16.	230-011	1	RING GEAR	
17.	166-213	3	PLANET SHAFT	
18.	105-772	12	THRUST WASHER	
19.	125-188	5	CYL ROLLER BEARING	
20.	125-189	3	CYL ROLLER BEARING	
21.	125-190	57	NEEDLE BEARING	
22.	166-214	1	INPUT SHAFT	
23.	149-406	1	O-RING (-112)	
24.	149-407	1	O-RING(-131)	
25.	115-153	3	PLUG (04N, SQ)	

NOT SHOWN:

FOOTNOTES:

NOTE:

STABILIZERS



STABILIZERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	179-183	3	TAPERED PIN (57.1mm X 195mm)	
2.	151-095	4	CYL (4" X 2.25" X 8")	SEE FOOTNOTE 1
3.	125-781	8	COMPOSITION BUSHING (2.259")	
4.	184-031	7	TAPERED INSERT (2.25")	
5.	106-345	7	SCREW (M20-2.5 X 50mm)	
6.	349-511	3	STABILIZER	
	349-516	1	FRONT RIGHT STABILIZER	
7.	181-974	4	TAPERED INSERT (1.5")	
8.	125-772	8	COMPOSITION BUSHING (1.5")	
9.	179-241	4	TAPERED PIN (1.500" X 7.20")	
10.	115-511	8	KLIP RING (1-1/2")	
11.	309-307	1	FRONT STABILIZER PAD	SUPERCEDED BY 301-5015, SEE FOOTNOTE 2
	301-5015	1	FRONT STABILIZER PAD	SEE FOOTNOTE 2
	309-308	1	BACK STABILIZER PAD	
12.	349-956	2	PAD PIN	USED WITH BACK STABILIZER PAD AND FRONT STABILIZER PAD, 309-307
	301-2336	2	LONG PAD PIN	USE WITH FRONT STABILIZER PAD 301-5015, SEE FOOTNOTE 2
13.	105-970	4	FLG BOLT (5/8-NC X 1-3/4, GD8)	
14.	179-101	4	TAPERED PIN (57.1mm X 155mm)	
15.	115-509	8	INTERNAL SNAP RING (2.440")	
16.	125-131	4	SPHERICAL BEARING (1.500" ID)	
17.	370-040	1	PIN	
18.	370-039	1	RETAINER PLATE	
19.	106-995	2	FLG LK SCREW (M10-1.50 X 45mm)	
20.	106-387	2	FLG LOCKNUT (M10-1.50)	
21.	107-001	1	FLG LK SCREW (M10-1.50 X 25mm)	
22.	115-001	4	ZERK (02N)	
23.	106-509	2	WASHER (1-1/2", HARDENED)	USE WITH FRONT STABILIZER PAD 301-5015, SEE FOOTNOTE 2

NOT SHOWN:

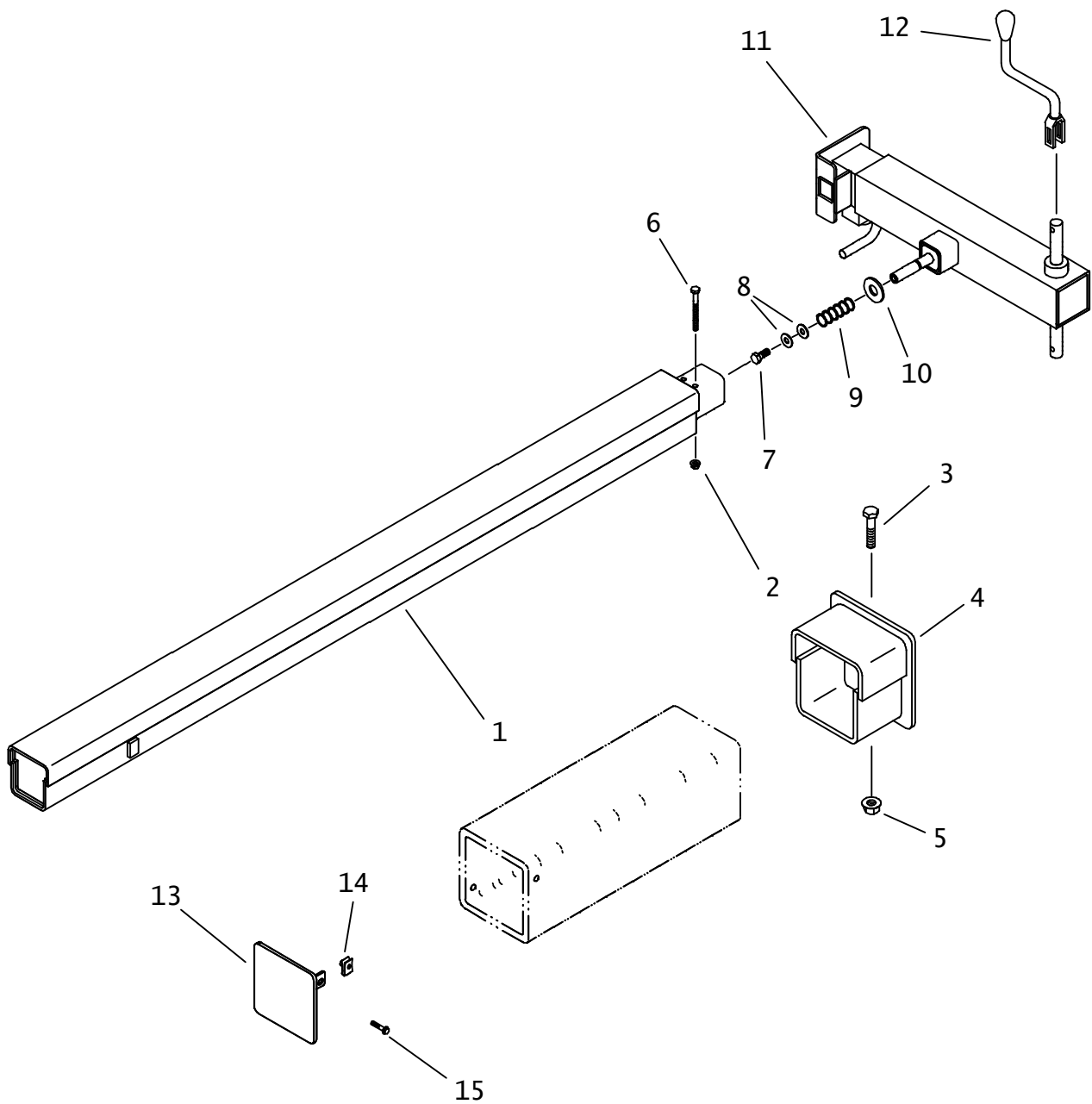
FOOTNOTES:

1. PORTS GO UP ON REAR CYLINDERS, DOWN ON FRONT CYLINDERS.
2. BEGINS WITH S/N CMWJT100_-----

NOTE:

AUXILIARY STABILIZER

BEGINS WITH S/N: 2W0856



AUXILIARY STABILIZER

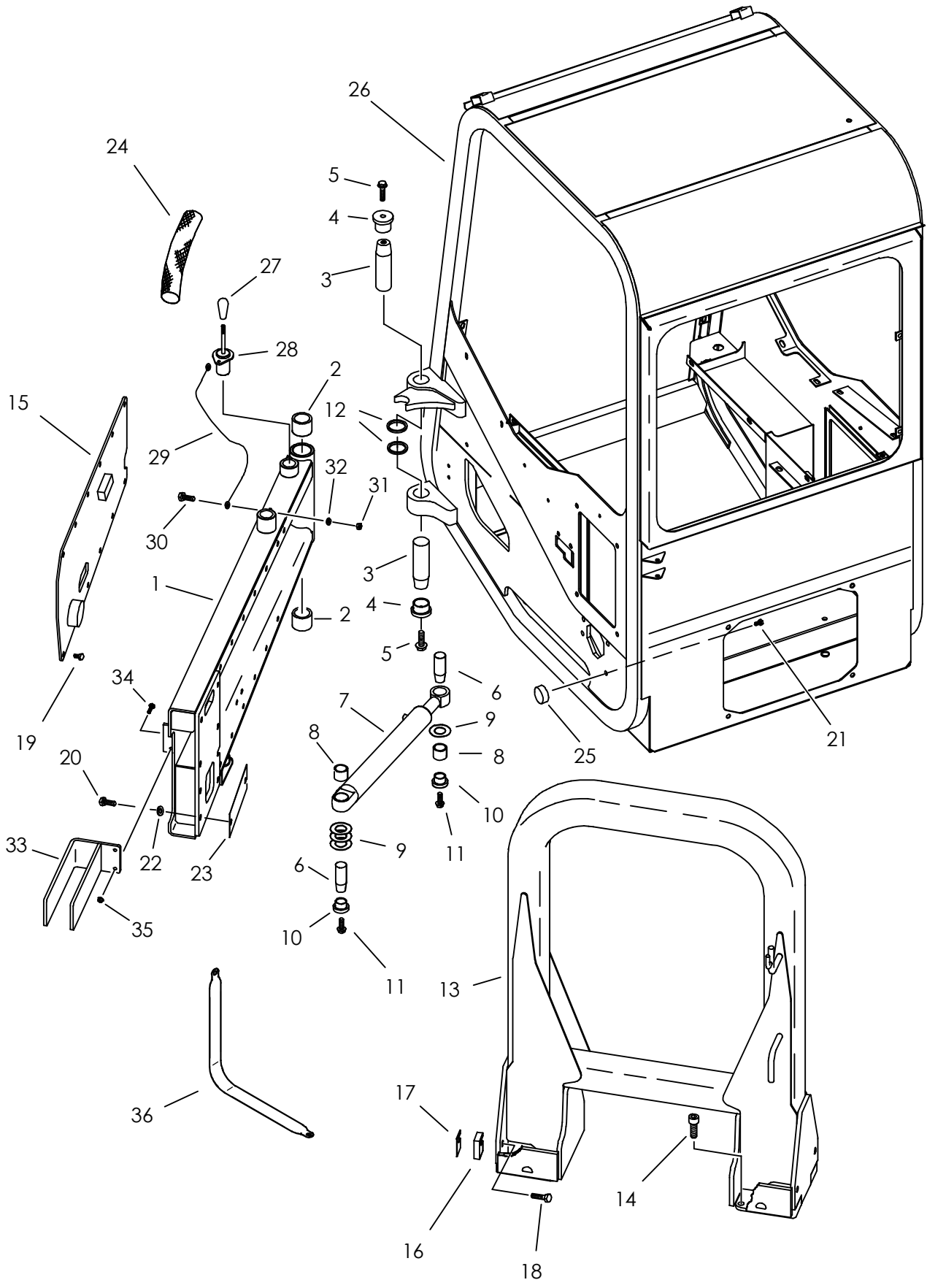
BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	315-940	1	STABILIZER ARM	
2.	105-047	2	LOCKNUT (3/8-NC)	
3.	106-098	1	FLG BOLT (3/4-NC X 2", GD8)	
4.	310-723	1	PLUG	
5.	105-340	1	FLG LOCKNUT (3/4-NC)	
6.	105-022	2	BOLT (3/8-NC X 4")	
7.	105-045	1	LK BOLT (1/2-NC X 1-1/4", NLK)	
8.	105-059	3	WASHER (7/16")	
9.	115-591	1	COMPRESSION SPRING	
10.	105-439	1	WASHER (7/8")	
11.	349-520	1	JACK	
12.	206-351	1	JACK CRANK	INCL MOUNTING HARDWARE
13.	349-878	1	CAP	
14.	106-551	2	CLIP NUT (M8-1.25)	
15.	106-989	2	FLG LK SCREW (M8-1.25 X 35MM)	

FOOTNOTES

NOTE:

CAB ARM AND ROPS



CAB ARM AND ROPS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-172	1	CAB SUPPORT ARM	
2.	125-773	2	COMPOSITION BUSHING (1.75")	
3.	183-957	2	TAPERED PIN (1.75 X 4.33)	
4.	181-975	2	TAPERED INSERT (1.75")	
5.	106-470	2	FLG SCREW (M16-2.0 X 40MM)	
6.	183-765	2	TAPERED PIN (31.7MM X 110MM)	
7.	151-182	1	CYL (2" X 1.25" X 14.25")	
8.	125-771	2	COMPOSITION BUSHING (1.25")	
9.	180-118	4	BRASS BUSHING (1.25")	
10.	181-982	2	TAPERED INSERT (1.25")	
11.	106-469	2	FLG SCREW (M12-1.75 X 30MM)	
12.	501-125	2	MACHINERY BUSHING (1.784")	
13.	349-022	1	ROPS	
14.	107-275	12	SCREW (M20-2.5 X 55MM, SOC)	USE 277 LOCTITE OR EQUIVALENT:TORQUE TO 310 FT LBS
15.	349-487	1	COVER PLATE	ENDS WITH S/N: 2V2567
	320-293	1	COVER	BEGINS WITH S/N: 2W0856
16.	349-485	2	SPACER	
17.	349-486	AR	SHIM	
18.	106-341	2	SCREW (M16-2.0 X 70MM)	USE 277 LOCTITE OR EQUIVALENT
19.	106-559	13	SCREW (M12-1.75 X 25MM)	
20.	106-340	6	SCREW (M16-2.0 X 50MM)	
21.	106-654	1	FLG LK SCREW (M10-1.5 X 16MM)	
22.	106-398	6	WASHER (M16, HARDENED)	
23.	349-397	3	SHIM	SEE FOOTNOTE 1
24.	117-789	1	HOSE BAG (4" X 36")	
25.	116-788	1	BUFFER	
26.	307-683	1	CAB FRAME	
	599-296	-	CAB SPACER KIT	SEE FOOTNOTE 2
27.	110-375	1	KNOB (1/2-NC, YELLOW)	
28.	370-392	1	LOCKOUT PIN	
29.	110-239	1	LANYARD CABLE (13.5")	
30.	106-542	2	SCREW (M5-0.80 X 16MM, PAN PLPS)	
31.	106-850	2	LOCKNUT (M5-0.80)	
32.	106-388	2	WASHER (M6)	
33.	310-383	1	FORK BRACKET	
34.	106-163	2	FLG SCREW (M8-1.25 X 30MM)	
35.	106-386	2	FLG LOCKNUT (M8-1.25)	
36.	215-1019	1	BATTERY GROUND STRAP	

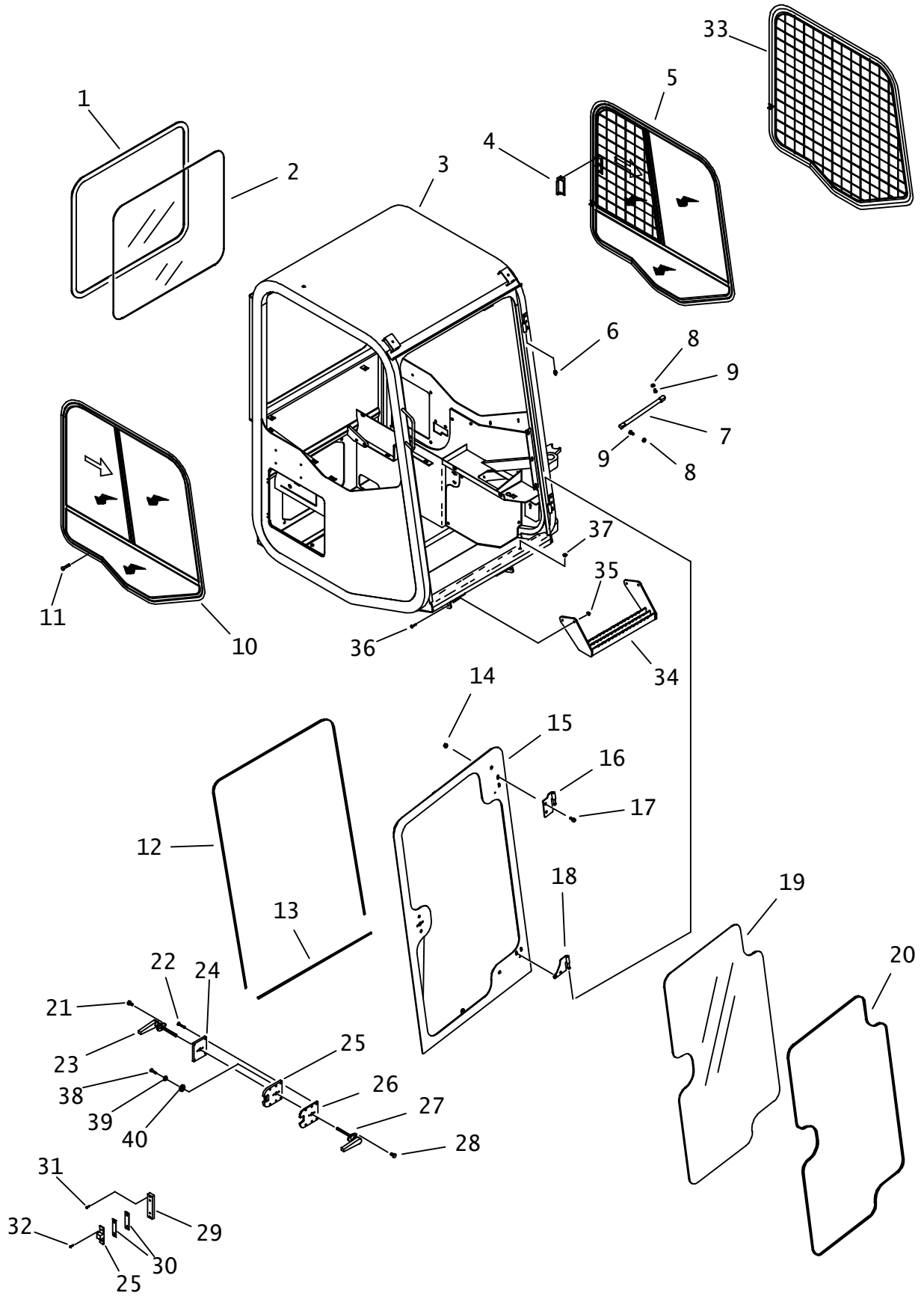
NOT SHOWN:

FOOTNOTES:

1. USE 2 SHIMS IN TOP HOLES; 1 SHIM IN MIDDLE HOLES
2. THIS KIT IS REQUIRED WHEN INSTALLING CAB FRAME ON UNITS PRIOR TO S/N 2W0856

NOTE:

CAB DOOR/WINDOWS



CAB DOOR/WINDOWS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	116-722	AR	LOCKING GASKET (SOLD PER 1')	USE 1 @ 115"
2.	349-421	1	REAR WINDOW	
3.	307-683	-	CAB FRAME	
4.	370-420	1	LATCH	
5.	349-419	1	LEFT WINDOW	
6.	115-001	2	ZERK (02N)	
7.	111-016	2	STRUT	
8.	105-003	3	FLG LOCKNUT (5/16-NC)	
9.	110-655	4	BALL SCREW (5/16-NC X 1/2")	
10.	349-418	1	RIGHT WINDOW	
11.	106-640	18	SCREW (M6-1.00 X 20MM, BUT SOC)	
12.	117-306	1	RUBBER SEAL	USE 1 @ 141"
13.	116-848	AR	BULK EDGE (SOLD BY INCH)	USE 1 @ 33"
14.	106-387	4	FLG LOCKNUT (M10-1.50MM)	
15.	308-975	1	DOOR FRAME	
16.	308-823	1	HINGE	
17.	107-537	4	BOLT (M10-1.50 X 20MM, BUT SOC)	
18.	308-822	1	HINGE	
19.	370-418	1	FRONT WINDSHIELD	
20.	116-722	AR	LOCKING GASKET (SOLD PER 1')	USE 1 @ 161"
21.	107-327	2	SCREW (#10-24 X 1/2", CSK PHLPS)	
22.	106-925	6	BOLT (1/4-NC X 1-1/2", BUT SOC)	
23.	111-062	1	HANDLE	
24.	370-434	1	LOCK PLATE	
25.	111-061	1	LATCH	
26.	370-435	1	LOCK PLATE	
27.	149-133	1	LEVER HANDLE	
28.	106-408	2	BOLT (#10-24 X 1-1/4", SOC, GD8)	
29.	370-429	1	SPACER BAR	
30.	370-438	AR	SHIM	
31.	106-848	2	FLG SCREW (M6-1.00 X 25MM)	
32.	106-161	2	FLG SCREW (M6-1.00 X 20MM)	
33.	349-420	1	WINDOW	
34.	315-557	1	STEP	BEGINS WITH S/N: 2w0856
35.	106-386	4	FLG LOCKNUT (M8-1.25)	
36.	106-163	4	FLG SCREW (M8-1.25 X 30MM)	
37.	106-038	1	NUTSERT (5/16-NC)	
38.	107-296	2	BOLT (1/4-NC X 1-3/4", SOC)	
39.	105-284	2	WASHER (3/16")	
40.	107-936	2	WASHER (1/4" ID X 1" OD)	

NOT SHOWN:

FOOTNOTES:

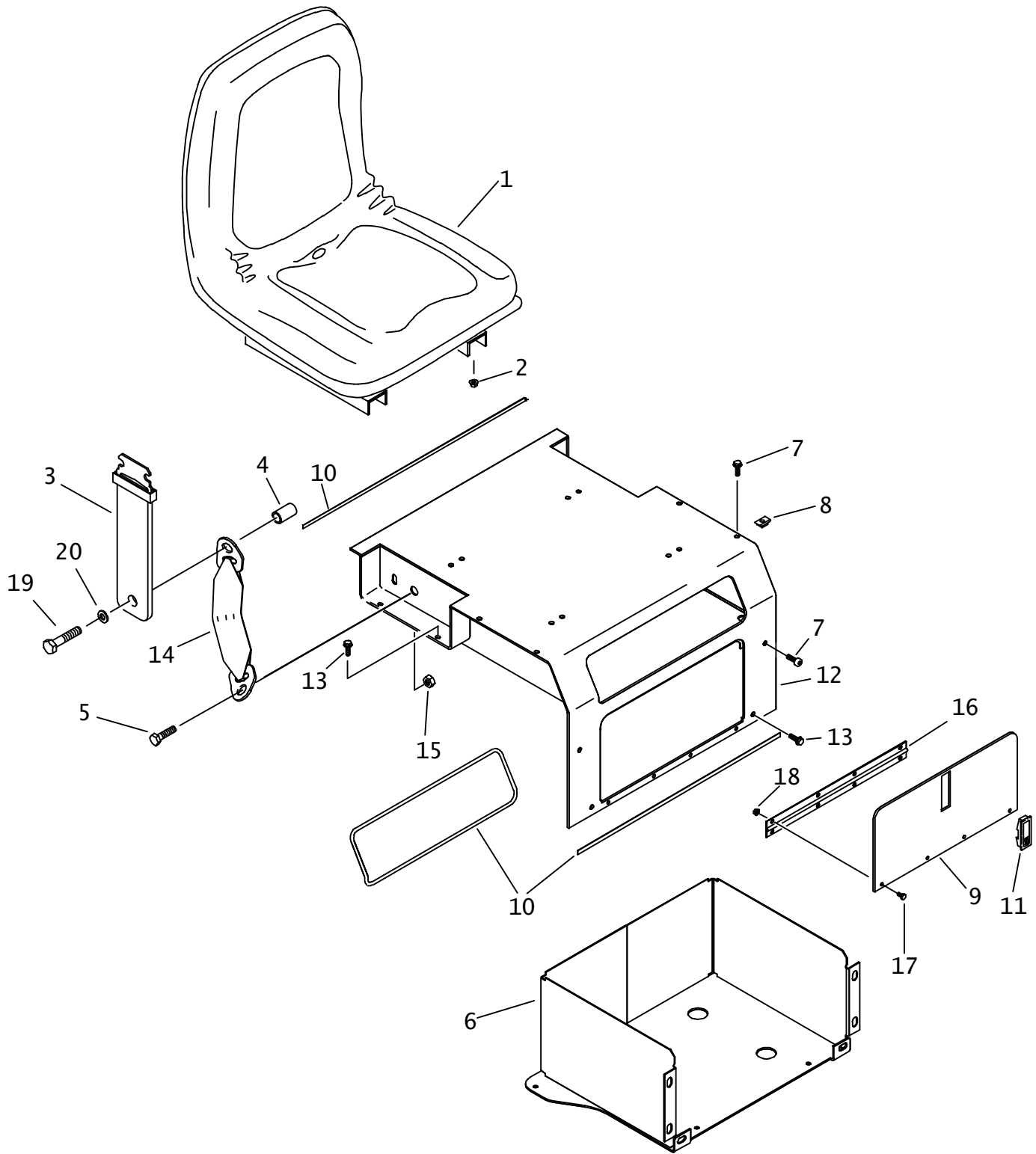
KEY IS SHORTENED ON ITEM #23 TO 20mm

KEY IS SHORTENED ON ITEM #27 TO 40mm

NOTE:

SEAT MOUNT

WITHOUT HEAT/AIR



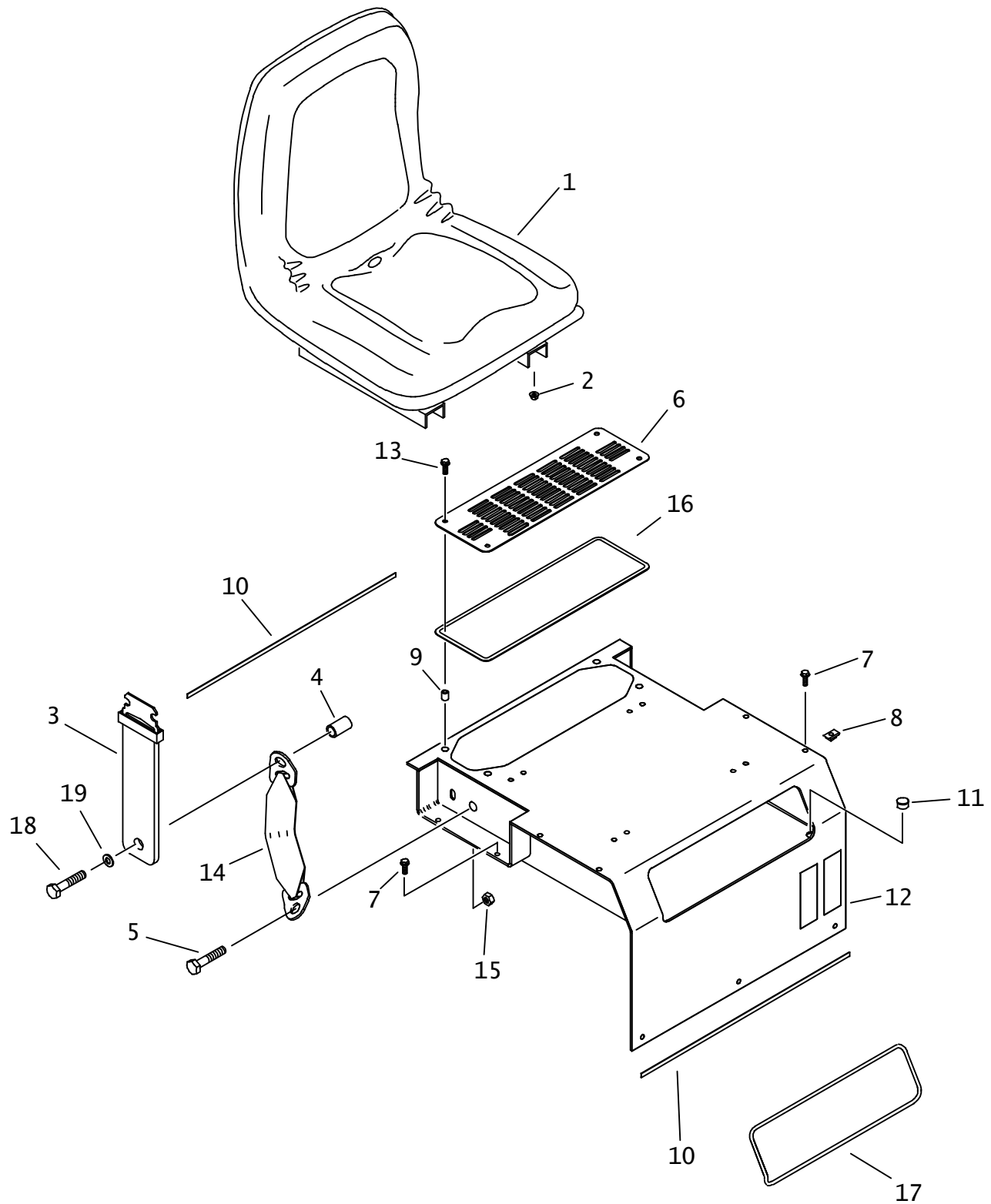
SEAT MOUNT WITHOUT HEAT/AIR

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	<u>117-100</u>	1	SEAT	ENDS WITH S/N 2Z0237
	117-631	1	SEAT ASSY	BEGINS WITH S/N 2Z0658
2.	105-003	4	FLG LOCKNUT (5/16-NC)	
3.	<u>171-011</u>	1	SEAT BELT SET	ENDS WITH S/N 2Z0237
	118-271	1	SEAT BELT	BEGINS WITH S/N 2Z0658
4.	184-252	2	BUSHING (.562" X 1" X .590")	
5.	105-247	2	SCREW (M12-1.75 X 35MM)	
6.	370-128	1	LOWER COMPARTMENT	
7.	106-381	8	FLG LK SCREW (M8-1.25 X 25MM)	
8.	106-551	12	CLIP NUT (M8-1.25)	USE 2 @ 23"; 1 @ 40"
9.	370-130	1	COMPARTMENT DOOR	
10.	116-723	AR	BULK EDGE (3/32", SOLD PER 1')	
	256-665	AR	ADHESIVE	
11.	117-558	1	ADJUST LEVER LATCH (LOCKING)	
	<u>214-961</u>		KEY, PAIR (BASE CODE)	INCL KEY
	217-309		LOCK PLUG 4/ LATCH (BASE CODE)	
	110-757	1	LEVER LATCH (ADJUST, LOCKING)	
	110-596		KEY (PAIR)	
12.	370-126	1	SEAT MOUNT	
13.	106-162	6	FLG SCREW (M8-1.25 X 20mm)	
14.	115-430	2	SEAT BELT TETHER	
15.	106-685	2	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
16.	110-430	1	HINGE (14-5/8")	
17.	106-234	8	SCREW (M6-1.0 X 12mm)	
18.	106-385	8	FLG LOCKNUT (M6-1.00)	
19.	106-477	2	SCREW (M12-1.75 X 45MM, 10.9)	
20.	106-397	2	WASHER (M12, HARDENED)	

FOOTNOTES

NOTE:

SEAT MOUNT WITH HEAT/AIR



SEAT MOUNT WITH HEAT/AIR

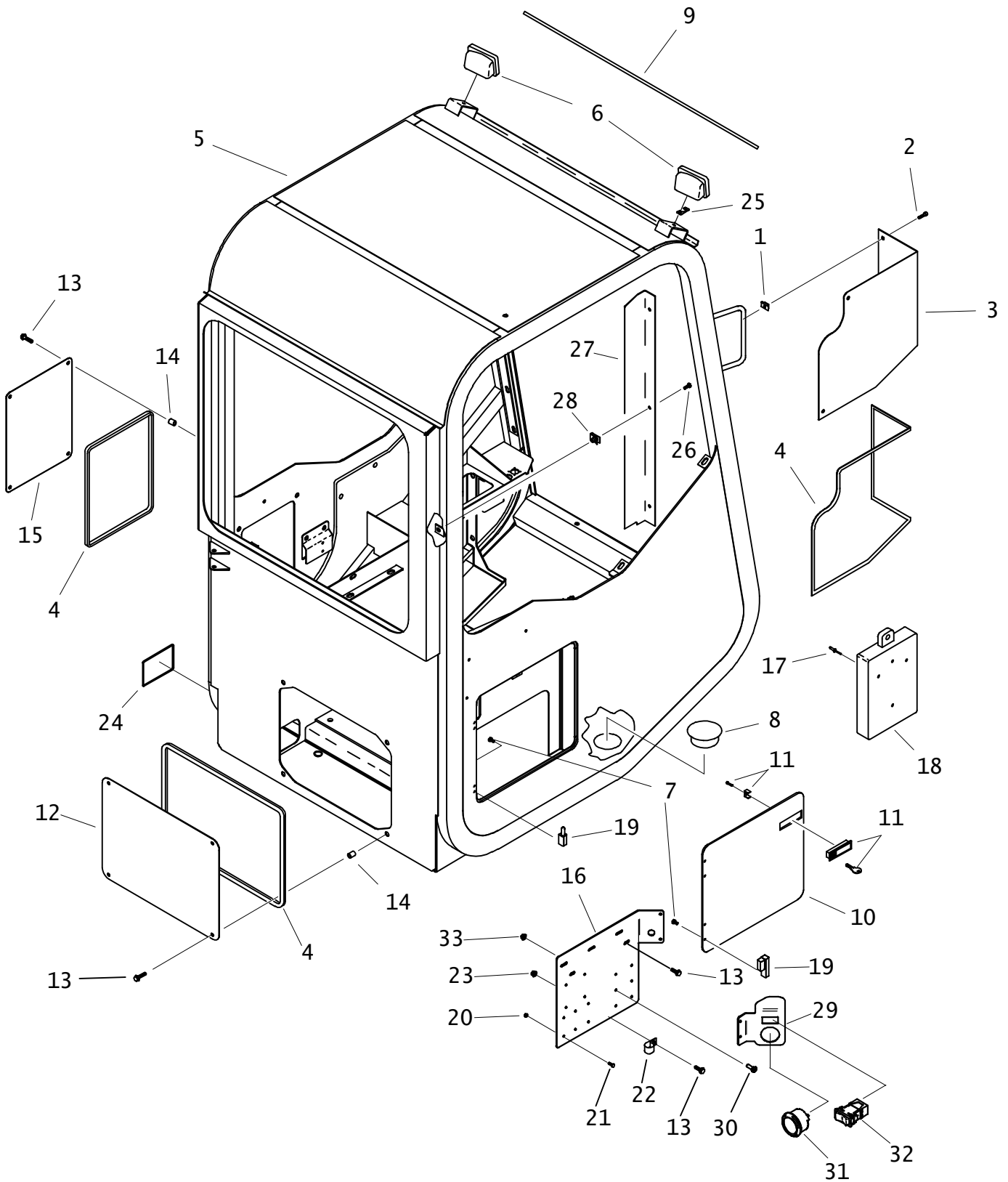
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	<u>117-100</u>	1	SEAT	ENDS WITH S/N 2Z0237
	117-631	1	SEAT ASSY	BEGINS WITH S/N 2Z0658
2.	105-003	4	FLG LOCKNUT (5/16-NC)	
3.	<u>171-011</u>	1	SEAT BELT SET	ENDS WITH S/N 2Z0237
	118-271	1	SEAT BELT	BEGINS WITH S/N 2Z0658
4.	184-252	2	BUSHING (.562" X 1" X .590")	
5.	105-247	2	SCREW (M12-1.75 X 35MM)	
6.	349-746	1	VENT PLATE	
7.	106-334	8	SCREW (M8-1.25 X 25MM, BUT SOC)	
8.	106-551	10	CLIP NUT (M8-1.25)	
9.	105-633	4	NUTSERT (M8X1.25) 3.8-7.9" THK	
10.	116-723	AR	BULK EDGE (3/32", SOLD PER 1')	USE 2 @ 23"
	256-665	AR	ADHESIVE	
11.	110-653	2	PLUG (3/4")	
12.	349-464	1	SEAT MOUNT	
13.	106-162	4	FLG SCREW (M8-1.25 X 20mm)	
14.	115-430	2	SEAT BELT TETHER	
15.	106-685	2	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
16.	116-724	AR	BULK SEAL (3/32", SOLD PER 1')	USE 1 @ 44"
17.	116-723	AR	BULK EDGE (3/32", SOLD PER 1')	USE 1 @ 40"
18.	106-477	2	SCREW (M12-1.75 X 45MM, 10.9)	
19.	106-397	2	WASHER (M12, HARDENED)	

NOT SHOWN:

FOOTNOTES:

NOTE:

CAB COVERS



CAB COVERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-551	4	CLIP NUT (M8-1.25)	
2.	107-334	4	SCREW (M8-1.25 X 25MM, BUT SOC)	
3.	349-479	1	LOWER COVER	
4.	116-724	2	BULK SEAL (3/32", SOLD PER 1')	USE 2 @ 63", USE 1 @ 46 1/2"
5.	307-683	-	CAB FRAME	
6.	217-057	2	WORKING LIGHT - CLEAR	
7.	106-228	2	SCREW (M5-0.80 X 10MM)	
8.	110-947	1	DOME PLUG (3")	
9.	115-686	1	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 36"
10.	349-477	1	ACCESS DOOR	
11.	117-558	1	ADJUST LEVER LATCH (LOCKING)	
	214-961		KEY, PAIR (BASE CODE)	
	217-309		LOCK PLUG 4/LATCH (BASE CODE)	
12.	349-745	1	ACCESS COVER	
13.	106-162	11	FLG SCREW (M8-1.25 X 20MM)	
14.	105-633	4	NUTSERT (M8-1.25) 3.8-7.9" THK	
15.	349-475	1	ACCESS COVER	
16.	307-540	1	RELAY PANEL	
17.	110-560	3	POP RIVET (3/16" X 1/2", ALUM)	
18.	250-622	1	MANUAL COMPARTMENT	
19.	111-002	2	LIFT-OFF HINGE (OFF-SET)	
20.	106-850	29	LOCKNUT (M5-0.80)	
21.	106-542	29	SCREW (M5-0.80 X 16MM, PAN PLPS)	
22.	110-332	1	BOLT-ON CLAMP (1-5/8")	
23.	106-386	1	FLG LOCKNUT (M8-1.25)	
24.	115-686	1	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 17 1/2"
25.	211-041	2	CONNECTOR CLIP	
26.	106-640	3	SCREW (M6-1.00 X 20MM, BUT SOC)	
27.	349-478	1	CABLE COVER	
28.	106-574	3	CLIP NUT (M6-1.00)	
29.	300-8294	1	BRACKET	AT UNITS ONLY
30.	106-542	2	SCREW (M5-0.80 X 16mm, PAN PLPS)	AT UNITS ONLY
31.	215-128	1	HOUR METER	AT UNITS ONLY
32.	217-912	1	ROCKER SWITCH	AT UNITS ONLY
33.	106-850	2	LOCKNUT (M5-0.80)	AT UNITS ONLY

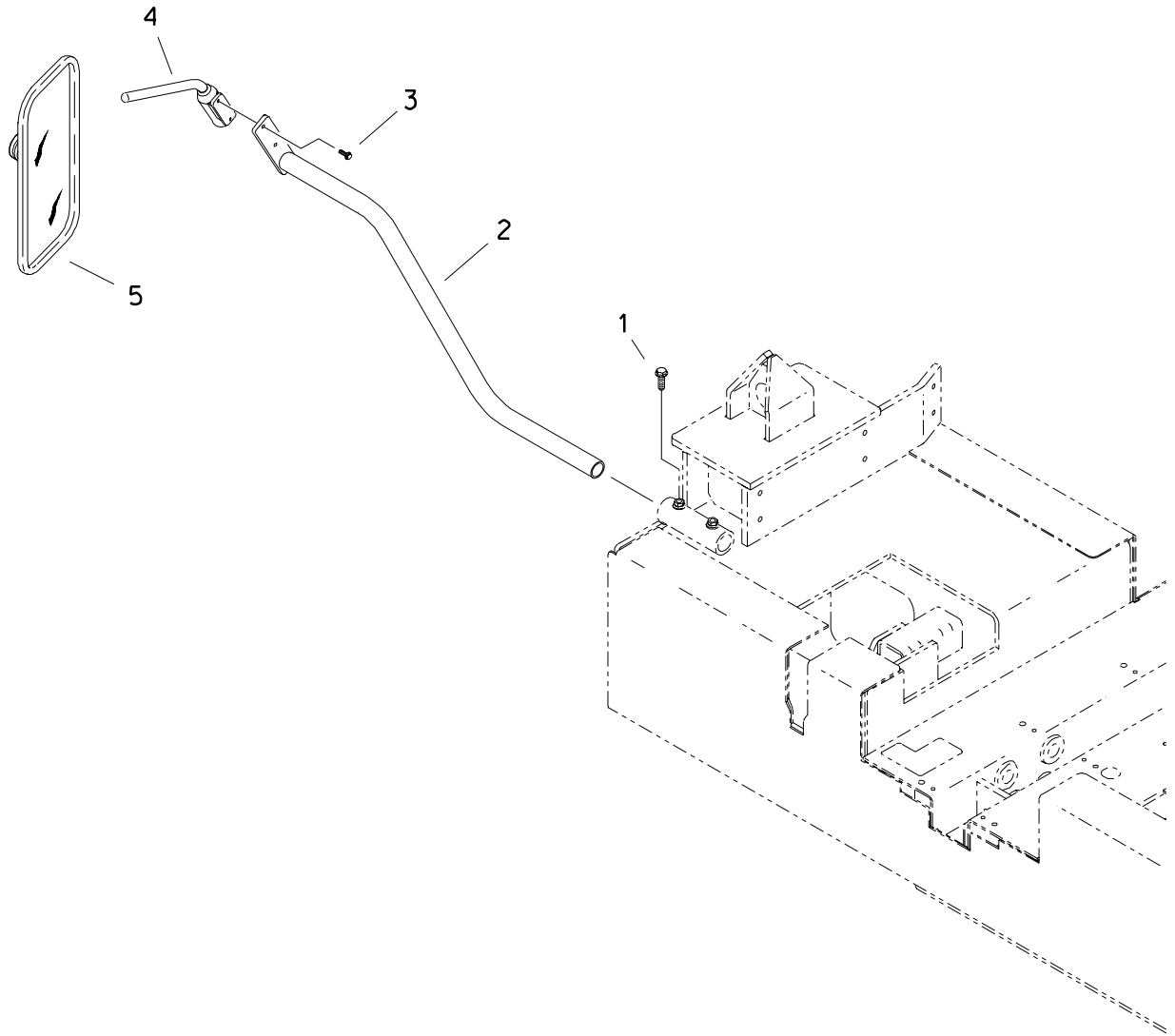
NOT SHOWN:

116-737	1	FLOOR MAT	
115-318	AR	BULK NON-SKID (6", SOLD PER 1')	USE 1 @ 30"
215-734	AR	CABLE 16ga 2 WIRE	USE 2 @ 1 1/2'
214-103	4	2 WAY MALE CONNECTOR	
214-047	2	2 WAY WEATHER PAC FEMALE CONNECTOR	
214-048	4	PACKARD WP TERMINAL FEMALE	
214-104	8	PACKARD MALE TERMINAL	
157-645	12	WEATHER PAC SEAL (2.80MM)	

FOOTNOTES:

NOTE:

REAR VIEW MIRROR LEFT SIDE

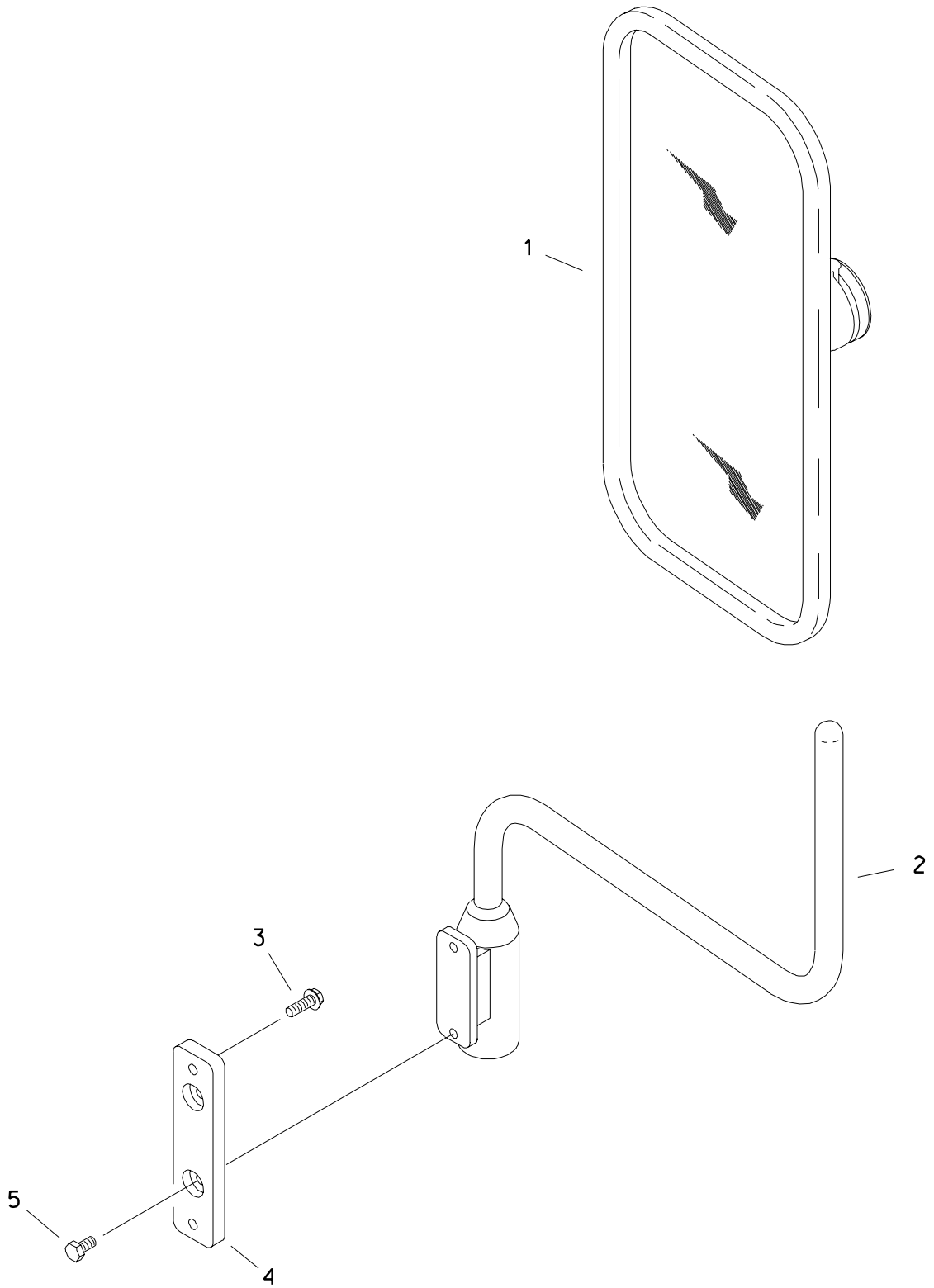


REAR VIEW MIRROR LEFT SIDE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-245	2	SCREW (M10-1.50 X 25MM)	
2.	370-399	1	ADJUSTMENT ARM	
3.	106-161	2	FLG SCREW (M6-1.00 X 20MM)	
4.	116-851	1	MIRROR ARM	
5.	214-426	1	CONVEX MIRROR	

FOOTNOTES

REAR VIEW MIRROR
RIGHT SIDE

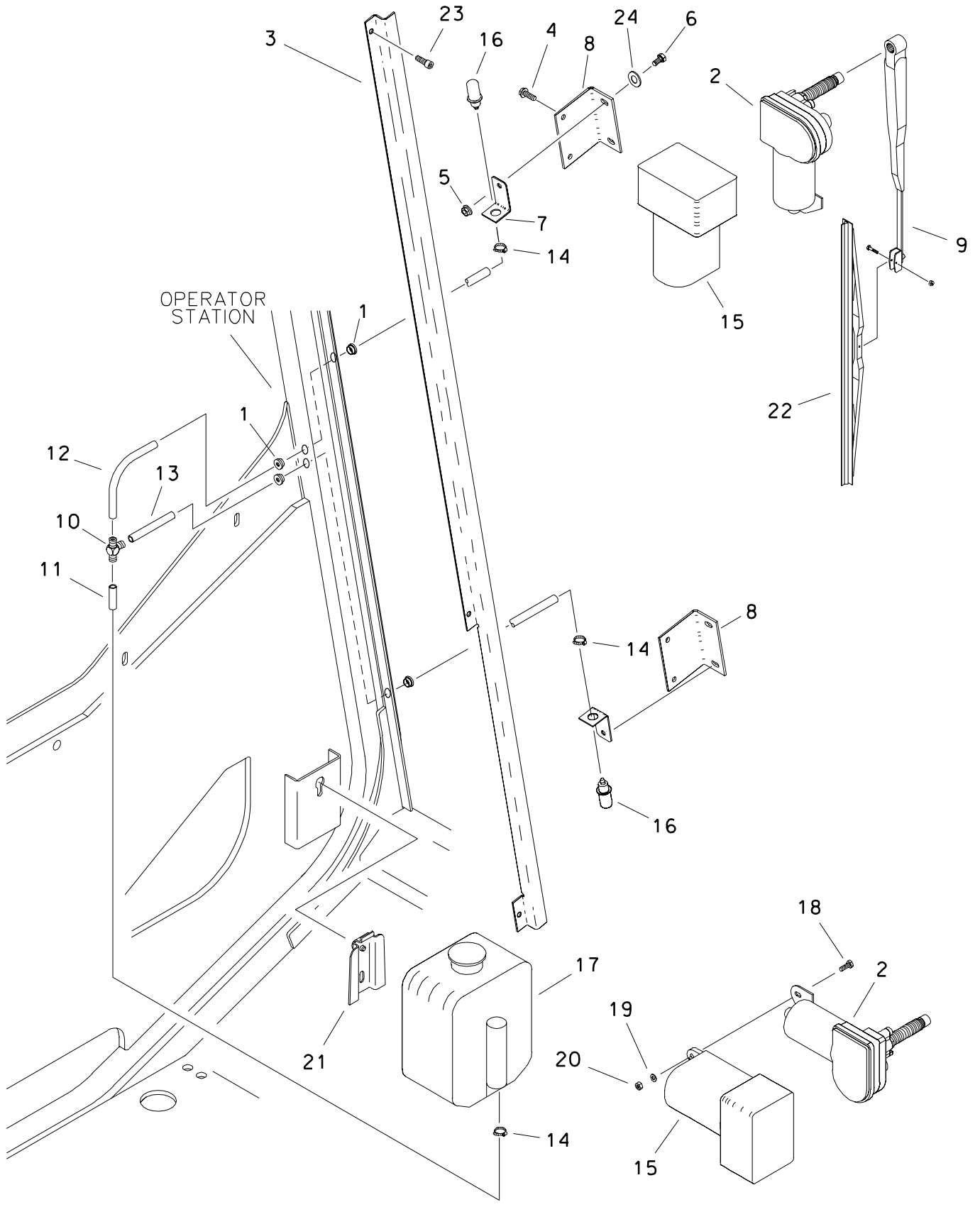


REAR VIEW MIRROR RIGHT SIDE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-426	1	CONVEX MIRROR	
2.	116-874	1	MIRROR ARM	
3.	106-541	2	FLG SCREW (M6-1.00 X 20MM)	
4.	370-445	1	MOUNT PLATE	
5.	106-378	2	FLG LK SCREW (M6-1.00 X 12MM)	

FOOTNOTES

WINDSHIELD WIPERS/WASHER



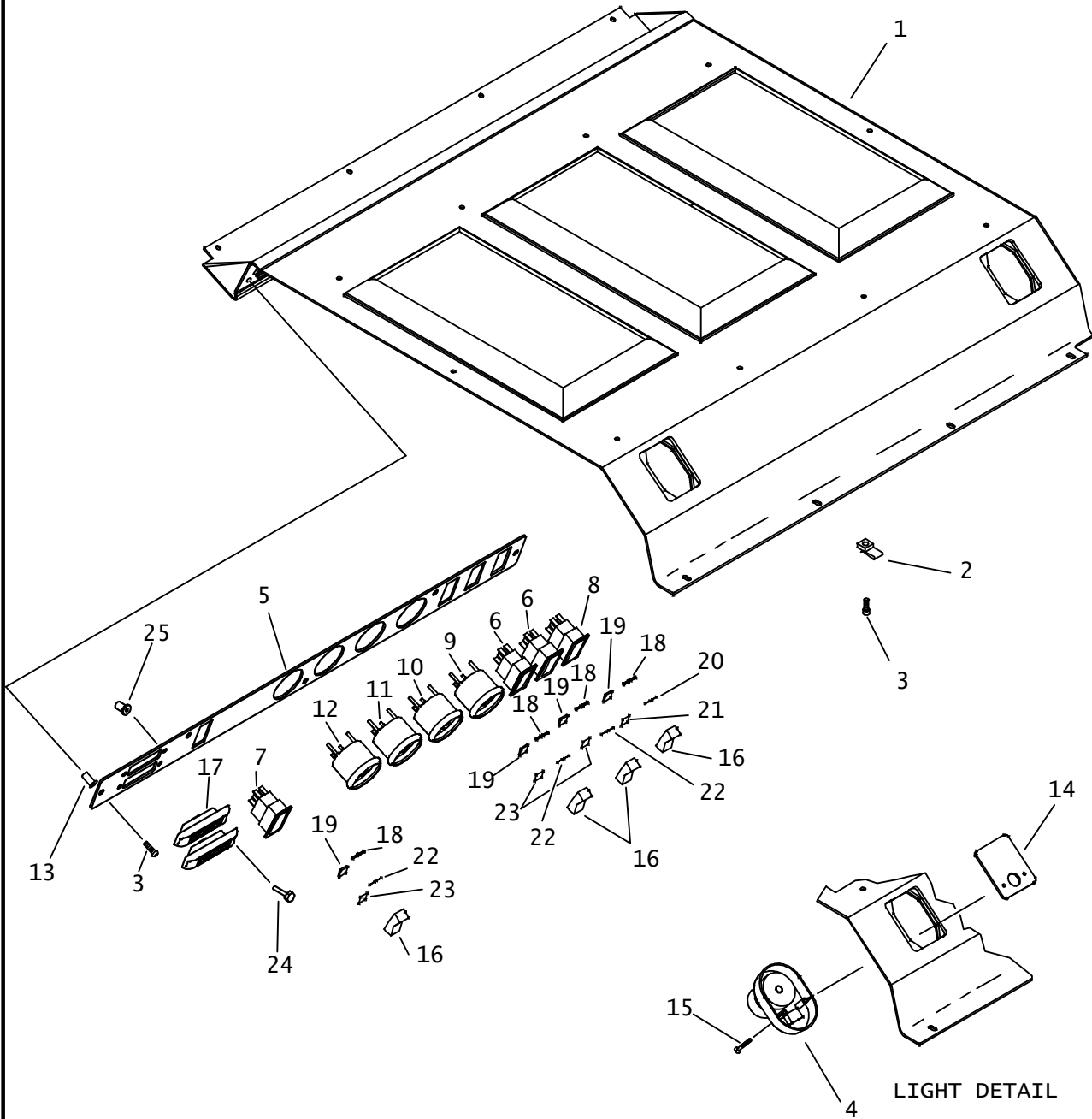
WINDSHIELD WIPERS/WASHER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	115-349	4	GROMMET (1/2")	
2.	502-063	2	WIPER MOTOR (100 DEG)	
3.	349-957	1	CABLE COVER	
4.	106-541	4	FLG SCREW (M6-1.00 X 20mm)	
5.	106-385	2	FLG LOCKNUT (M6-1.00)	
6.	106-234	2	SCREW (M6-1 X 12mm)	
7.	349-959	2	NOZZLE BRACKET	
8.	349-960	2	COVER PLATE	
9.	111-058	2	WIPER ARM	
10.	514-380	1	S/D TEE (04H-04H-04H)	
11.	116-770	AR	BULK HOSE (3/32", SOLD PER 1")	USE 1 @ 29"
12.	116-770	AR	BULK HOSE (3/32", SOLD PER 1")	USE 1 @ 25"
13.	116-770	AR	BULK HOSE (3/32", SOLD PER 1")	USE 1 @ 15"
14.	110-249	3	WORM CLAMP (1/4" TO 5/8")	
15.	116-862	2	COVER	
16.	149-122	2	WASHER NOZZLE	
17.	344-115	1	WINDSHIELD WASHER TANK	SEE FOOTNOTE 1
	190-053		POLY-PATCH TANK REPAIR KIT	
18.	106-542	2	SCREW (M5-0.80 X 16mm, PAN PLPS)	
19.	105-284	2	WASHER (3/16")	
20.	106-850	2	LOCKNUT (M5-0.80)	
21.	370-430	1	TANK BRACKET	
22.	111-059	2	WIPER BLADE	
23.	106-640	3	SCREW (M6-1.00 X 20mm, BUT SOC)	
24.	106-389	2	WASHER (M8)	

FOOTNOTES

- 1. CAP CANNOT BE PURCHASED SEPARATELY.

TOP LINING/PANEL



TOP LINING/PANEL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-412	1	TOP LINING	
2.	106-574	18	CLIP NUT (M6-1.00)	
3.	107-312	23	SCREW (M6-1.00 X 25MM, BUT SOC)	
4.	213-214	2	DIRECTIONAL LIGHT	
5.	300-2023	1	SHEET, TOP INSTRUMENT PANEL	
6.	217-919	2	ROCKER SW (DPDT) ON-ON-(ON)	WINDSHIELD WIPER/WASHER
7.	217-918	1	ROCKER SW {DPDT} ON-ON	WORK LIGHTS
8.	217-228	1	ROCKER SWITCH (DPDT){ON}-OFF-{ON}	CAB SWING
9.	211-1020	1	FUEL GAUGE BLACK	
10.	211-1003	1	VOLT METER BLACK	
11.	211-1013	1	2.06" CAN ENG OIL PRESS GAUGE	
12.	211-1012	1	2.06" CAN COOLANT TEMP GAUGE	
13.	105-643	5	WELLNUT (M6-1.00 X 16MM LG)	
14.	323-892	2	ADAPTER PLATE	
15.	107-863	4	SCREW (M4-0.7 X 60mm PAN)	
16.	217-925	4	ROCKER SWITCH (ACTUATOR)	
17.	220-664	2	INDICATOR LIGHT	
18.	217-156	4	DIFFUSION LENS (GREEN)	
19.	217-158	4	DIFFUSION LENS (WHITE)	
20.	217-149	1	ICON (WHT) OPERATOR SEAT- IN	
21.	217-148	1	ICON (WHT) OPERATOR SEAT- OUT	
22.	217-136	3	ICON (WHT) ON-START	
23.	217-137	3	ICON (WHT) OFF-STOP	
24.	107-393	4	SCREW (M4-0.70 X 16MM, BX)	
25.	107-358	4	WELLNUT (M4-0.7 X 12.67MM LG)	

NOT SHOWN:

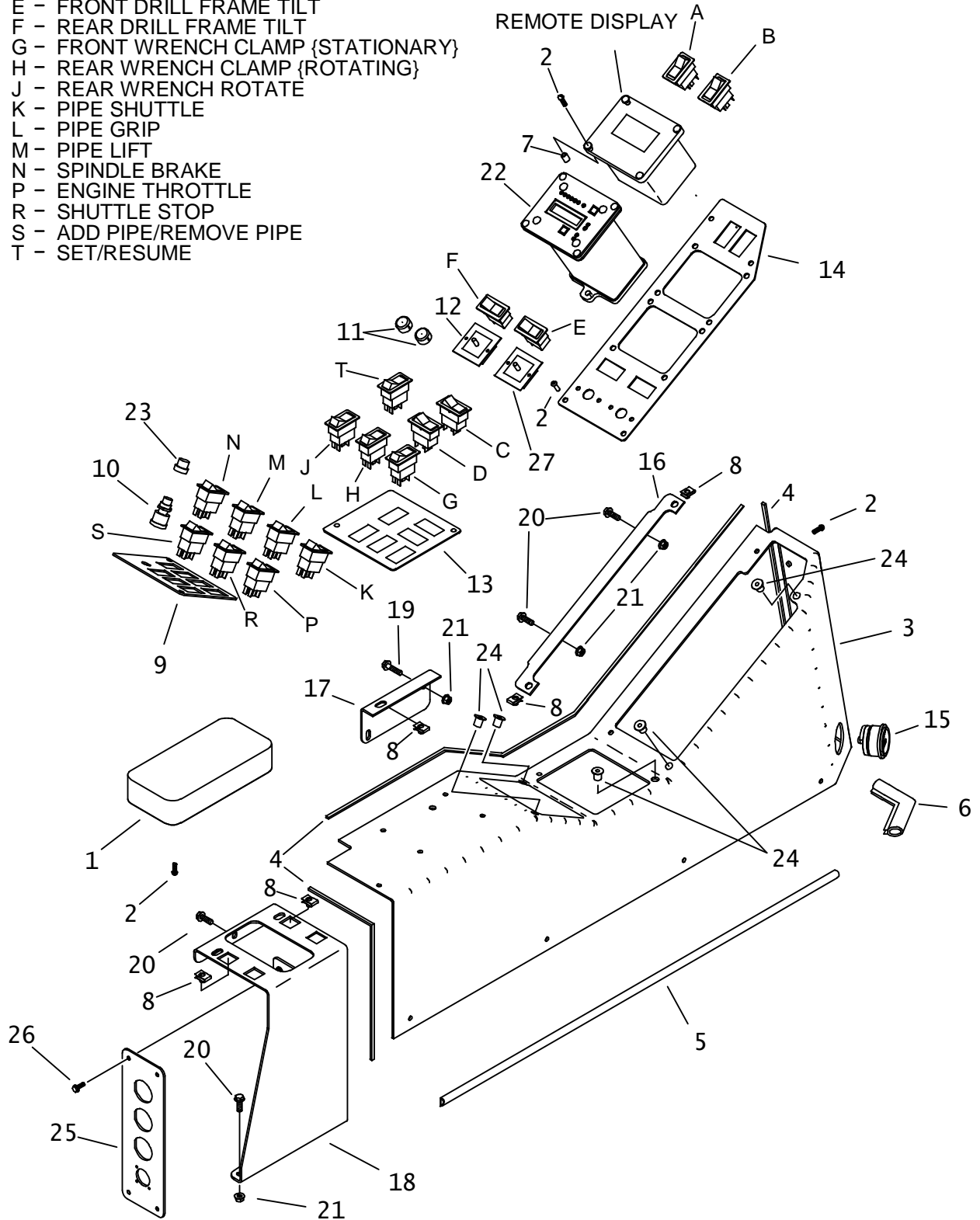
FOOTNOTES:

NOTE:

LEFT CONSOLE

— SWITCH LEGEND —

- A - HEAT/AIR FAN SPEED
- B - HEAT/AIR ON/OFF
- C - MOBILE BORE
- D - LUBRICATOR
- E - FRONT DRILL FRAME TILT
- F - REAR DRILL FRAME TILT
- G - FRONT WRENCH CLAMP {STATIONARY}
- H - REAR WRENCH CLAMP {ROTATING}
- J - REAR WRENCH ROTATE
- K - PIPE SHUTTLE
- L - PIPE GRIP
- M - PIPE LIFT
- N - SPINDLE BRAKE
- P - ENGINE THROTTLE
- R - SHUTTLE STOP
- S - ADD PIPE/REMOVE PIPE
- T - SET/RESUME



LEFT CONSOLE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-406	1	ARM REST PAD	
2.	107-312	28	SCREW (M6-1.00 X 25MM, BUT SOC)	
3.	349-414	1	LEFT CONSOLE	
4.	116-723	AR	BULK EDGE (3/32", SOLD PER 1')	USE 1 @ 78.7"
	256-665	AR	ADHESIVE	
5.	116-724	AR	BULK SEAL (3/32", SOLD PER 1')	USE 1 @ 41.7"
6.	116-421	AR	BULK EDGE (1/8", SOLD PER 1')	USE 1 @ 7.9"
7.	105-630	8	NUTSERT (M6X1.0).70-4.20THK	
8.	106-574	14	CLIP NUT (M6-1.00)	
9.	303-931	1	LEFT REAR PANEL	
10.	306-607	1	HORN BUTTON	
11.	116-849	-	POTENTIOMETER KNOB	
12.	214-566	1	POTENTIOMETER	ROTATION; INCLUDES REF NO. 11
13.	303-930	1	LEFT CENTER PANEL	
14.	303-932	1	LEFT INSTRUMENT PANEL	
15.	215-128	1	HOUR METER	
16.	349-446	1	LEFT CONSOLE MOUNT	
17.	349-404	1	LEFT CONSOLE CENTER MOUNT	
18.	370-412	1	LEFT REAR MOUNT	
19.	106-163	4	FLG SCREW (M8-1.25 X 30MM)	
20.	106-162	3	FLG SCREW (M8-1.25 X 20MM, GD8)	
21.	106-386	7	FLG LOCKNUT (M8-1.25)	
22.	220-1222	1	ESID MODULE	
23.	306-608	1	BUTTON COVER	
24.	107-871	5	WELLNUT (M6-1.00 X 20MM LG)	
25.	300-2584	1	SHEET, CONNECTOR PANEL	
26.	106-379	4	FLG LK SCREW (M6-1.00 X 20MM)	
27.	214-566	1	POTENTIOMETER	DRILLING FLUID; INCLUDES REF NO. 11

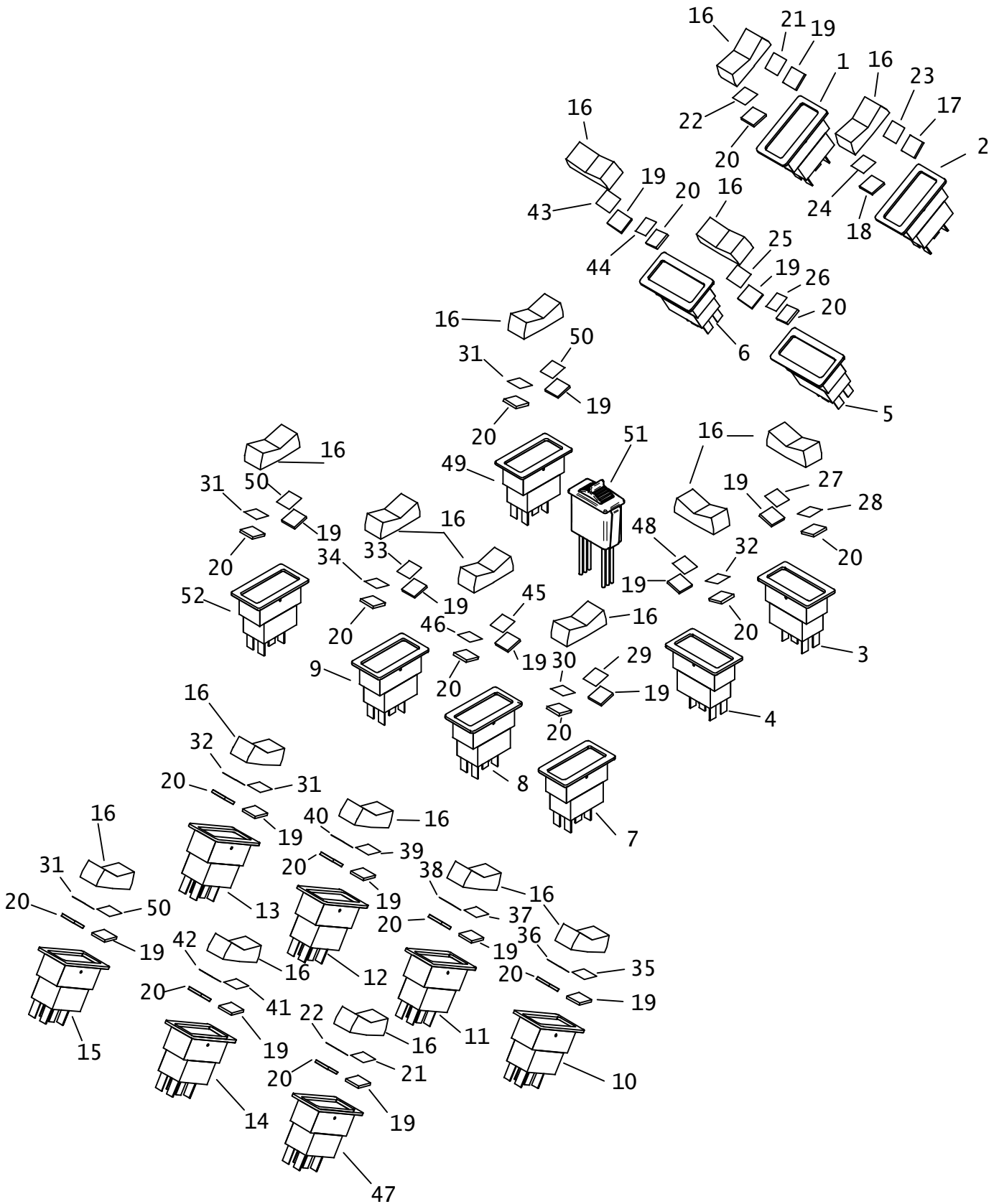
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211-042 VOLTAGE LIMITOR CABLE
214-542 CURRENT COIL CABLE

FOOTNOTES:

NOTE:

LEFT CONSOLE SWITCHES



LEFT CONSOLE SWITCHES

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	217-922	1	ROCKER SW (SPDT) ON-ON-ON	HEAT/AIR FAN SPEED
2.	217-923	1	ROCKER SW (DPDT) ON-OFF-ON	HEAT/AIR ON/OFF
3.	217-923	1	ROCKER SW (DPDT) ON-OFF-ON	MOBILE BORE
4.	217-924	1	ROCKER SW (DPDT) OFF-{ON}	LUBRICATOR
5.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	FRONT DRILL FRAME TILT
6.	<u>217-921</u>	1	ROCKER SW (SPDT) (ON)-OFF-(ON)	REAR DRILL FRAME TILT
	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	FRONT WRENCH CLAMP
	<u>217-921</u>	1	ROCKER SW (SPDT) (ON)-OFF-(ON)	REAR WRENCH CLAMP
7.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	REAR WRENCH ROTATE
8.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	PIPE SHUTTLE
9.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	PIPE GRIP
10.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	PIPE LIFT
11.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	SPINDLE BRAKE
12.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	SHUTTLE STOP
13.	217-918	1	ROCKER SW {DPDT} ON-ON	ADD PIPE/REMOVE PIPE
14.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	
	<u>217-921</u>	1	ROCKER SW (SPDT) (ON)-OFF-(ON)	
15.	217-922	1	ROCKER SW (SPDT) ON-ON-ON	
16.	217-925	17	ROCKER SWITCH (ACTUATOR)	
17.	217-157	1	DIFFUSION LENS (RED)	
18.	217-155	1	DIFFUSION LENS (BLUE)	
19.	217-156	16	DIFFUSION LENS (GREEN)	
20.	217-158	15	DIFFUSION LENS (WHITE)	
21.	217-138	2	ICON (WHT) FAST	
22.	217-139	2	ICON (WHT) SLOW	
23.	217-144	1	ICON (WHT) INTERIOR HEAT	
24.	217-145	1	ICON (WHT) AIR CONDITION	
25.	217-167	1	ICON (WHT) FRAME EXTEND-FRONT	
26.	217-168	1	ICON (WHT) FRAME RETRACT-FRONT	
27.	217-147	1	ICON (WHT) DRILL HEAD	
28.	217-146	1	ICON (WHT) BORING - GND DRIVE	
29.	217-171	1	ICON (WHT) FRONT CLAMP - OPEN	
30.	217-172	1	ICON (WHT) FRONT CLAMP - CLOSE	
31.	217-136	5	ICON (WHT) ON-START	
32.	217-137	3	ICON (WHT) OFF-STOP	
33.	217-176	1	ICON (WHT) REAR CLAMP-ROTATE CCW	
34.	217-175	1	ICON (WHT) REAR CLAMP-ROTATE CW	
35.	217-179	1	ICON (WHT) SHUTTLE-RETRACT	

FOOTNOTES:

NOTE:

LEFT CONSOLE SWITCHES

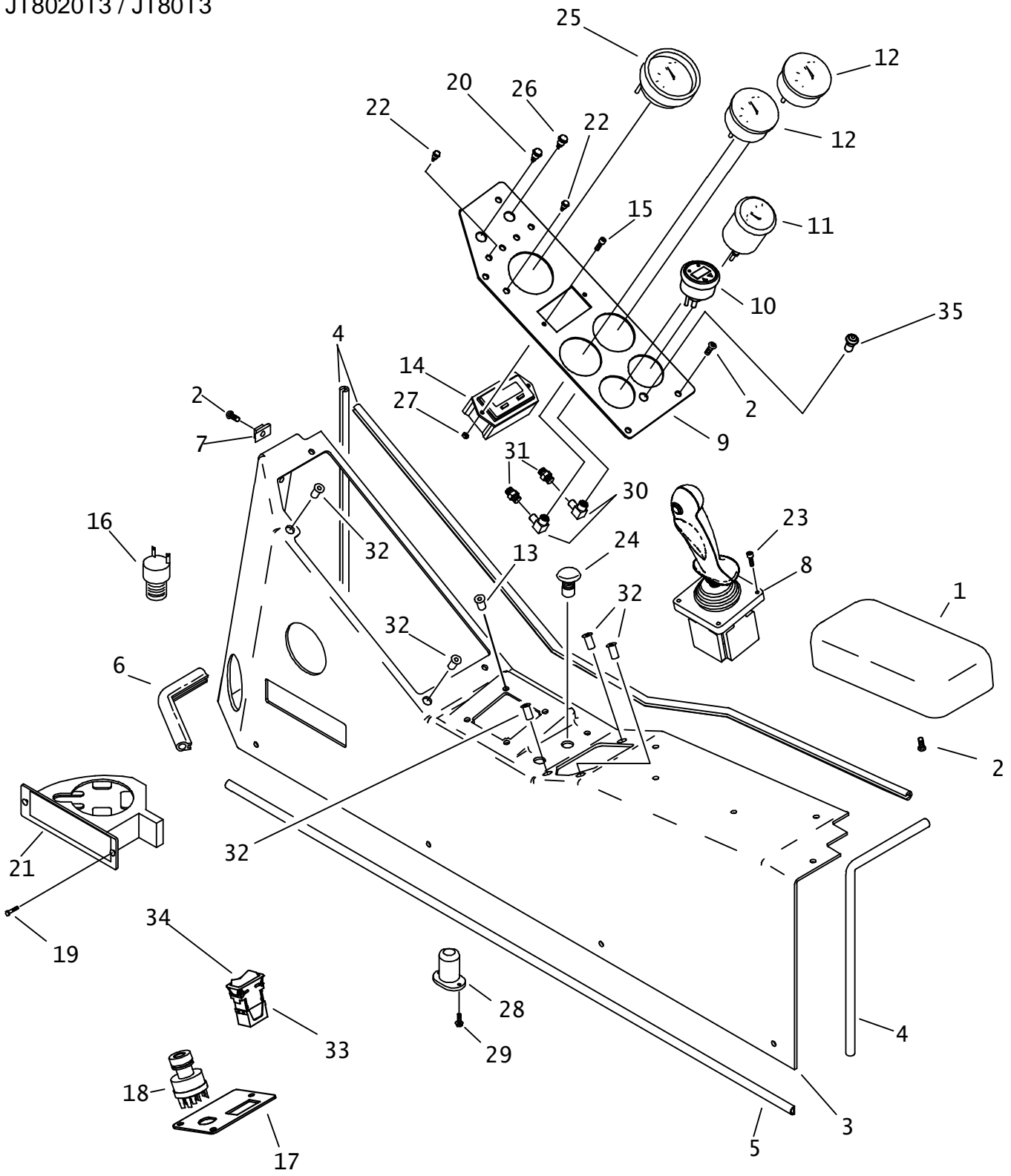
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
36.	217-153	1	ICON (WHT) LOADER-SHUTTLE	
37.	217-178	1	ICON (WHT) PIPE GRIP - CLOSE	
38.	217-177	1	ICON (WHT) PIPE GRIP - OPEN	
39.	217-181	1	ICON (WHT) PIPE LIFT-LOWER	
40.	217-180	1	ICON (WHT) PIPE LIFT-RAISE	
41.	217-150	1	ICON (WHT) LOADER-ROW-OUT	
42.	217-151	1	ICON (WHT) LOADER-ROW-IN	
43.	217-170	1	ICON (WHT) FRAME-RETRACT REAR	
44.	217-169	1	ICON (WHT) FRAME-EXTEND REAR	
45.	217-173	1	ICON (WHT) REAR CLAMP-OPEN	
46.	217-174	1	ICON (WHT) REAR CLAMP-CLOSE	
47.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	THROTTLE
48.	217-192	1	ICON (WHT) AUTO LUBRICATION	
49.	217-922	1	ROCKER SW (DPDT) (ON-ON)	SET/RESUME
	<u>217-921</u>	1	ROCKER SW (SPDT) (ON)-OFF-(ON)	
50.	700-035	3	ICON, INCREASE/POSTIVE	
51.	215-1016	1	ROTATION DITHER SW	AT ONLY
52.	217-922	1	ROCKER SW (SPDT) ON-ON	AT ONLY

FOOTNOTES:

NOTE:

RIGHT CONSOLE

JT8020M1 / JT8020M1T3
JT8020T3 / JT80T3



RIGHT CONSOLE

JT8020M1 / JT8020M1T3
JT8020T3 / JT80T3

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-406	1	ARM REST PAD	
2.	107-312	20	SCREW (M6-1.00X25MM, BUT SOC)	
3.	306-914	1	RIGHT CONSOLE	
4.	116-723	AR	BULK EDGE (3/32", SOLD PER 1')	USE 1 @ 79"
5.	116-724	AR	BULK SEAL (3/32", SOLD PER 1')	USE 1 @ 42"
6.	116-421	AR	BULK EDGE (1/8", SOLD PER 1')	USE 1 @ 8"
7.	106-574	13	CLIP NUT (M6-1.00)	
8.	215-1224	1	DUAL AXIS HALL EFFECT JOYSTICK	
9.	300-4811	1	SHEET, RIGHT INSTRUMENT PANEL	
10.	211-275	1	DIAGNOSTIC GAUGE	
11.	211-053	1	TACHOMETER (250RPM)	SPINDLE, SEE FOOTNOTE 1
12.	217-079	2	PRESSURE GAUGE (10000 PSI)	
13.	107-358	4	WELLNUT (M4-0.7)	
14.	217-221	1	FLOW METER DISPLAY	
15.	105-649	2	BOLT (#10-32 X .75", BUT)	
16.	306-603	1	AUDIO ALARM	
17.	303-934	1	RIGHT REAR PANEL	
18.	214-852	1	IGNITION SWITCH	
	214-961		KEY, PAIR	
	214-962		SWITCH MOUNTING NUT	
19.	107-327	2	SCREW (#10-24X1/2",CSK PLPS)	
20.	214-563	1	RED LED (12V)	
21.	349-416	1	CUP HOLDER	
22.	214-701	5	STATUS LIGHT	ENGINE STOP
23.	107-414	4	SCREW (M4-0.70 X 30MM BUT SOC)	
24.	217-206	1	BUTTON SWITCH (SPST)	
25.	150-1444	1	PRESSURE GAUGE(2000 PSI)	
26.	214-840	1	GREEN LED (12V DC)	
27.	106-850	2	LOCKNUT (M5-0.80)	
28.	214-301	1	ACCESSORY SOCKET	
29.	106-058	2	BOLT (#6-32 X 1-1/8", RD SLT)	
30.	514-355	2	CONNECTOR (04NF-04NF90)	
31.	154-020	2	CONNECTOR (04N-04J)	
32.	105-643	5	WELLNUT (M6-1.00)	
33.	217-924	1	ROCKER SWITCH (DPDT) OFF-{ON}	
34.	217-925	1	ROCKER SWITCH (ACTUATOR)	
35.	215-1015	1	MOMENTARY PUSHBUTTON SWITCH	

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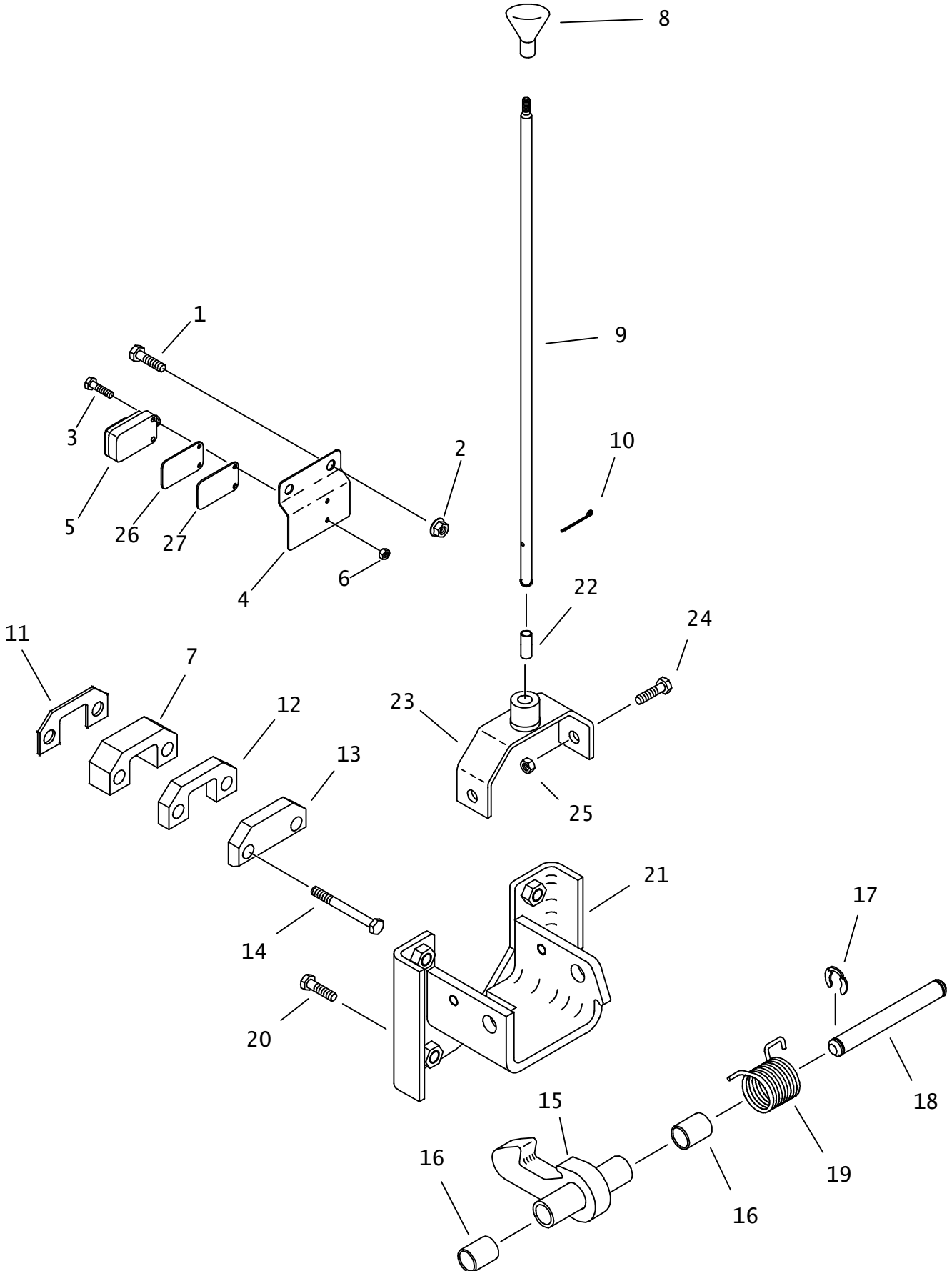
217-291 2 TERMINAL SOCKET

FOOTNOTES:

- USE 211-099 ON THE FOLLOWING S/N'S ONLY
BEGINS WITH S/N: CMWJ80T3K80000039
ENDS WITH S/N: CMWJ80T3A90000078

NOTE:

CAB LOCK



CAB LOCK

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-162	2	FLG SCREW (M8-1.25 X 20MM)	
2.	106-386	2	FLG LOCKNUT (M8-1.25)	
3.	106-427	2	SCREW (M5-0.80 X 22MM, SOC)	
4.	307-724	1	BRACKET	
5.	215-1175	1	PROXIMITY SWITCH	
6.	106-850	2	LOCKNUT (M5-0.80)	
7.	179-445	1	LATCH SPACER	BEGINS WITH S/N: 2W0856
8.	110-071	1	KNOB (1/4-NC, BLACK)	
9.	349-900	1	ROD	
10.	105-523	1	COTTER PIN (.125" X .750")	
11.	349-955	AR	SHIM	
12.	349-954	AR	SPACER	
13.	349-953	1	LATCH PLATE	
14.	106-700	2	SCREW (M12-1.75 X 80MM)	ENDS WITH S/N: 2V2567
	106-337	2	SCREW (M12-1.75 X 110MM)	BEGINS WITH S/N: 2W0856
15.	349-945	1	LATCH	
16.	125-403	2	BRONZE BUSHING (.625")	
17.	115-780	2	KLIP RING (.625")	
18.	349-948	1	PIN	
19.	117-054	1	TORSION SPRING	
20.	105-273	4	SCREW (M12-1.75 X 30MM)	
21.	349-942	1	LATCH MOUNT	
22.	125-436	1	BRONZE BUSHING (.376")	
23.	349-951	1	ROD GUIDE	
24.	105-245	2	SCREW (M10-1.50 X 25MM)	
25.	105-894	2	LOCKNUT (M10-1.50, PRV TRQ,10.9)	
26.	107-450	AR	SHIM (.075")	SEE FOOTNOTE 1
27.	107-451	AR	SHIM (.135")	SEE FOOTNOTE 1

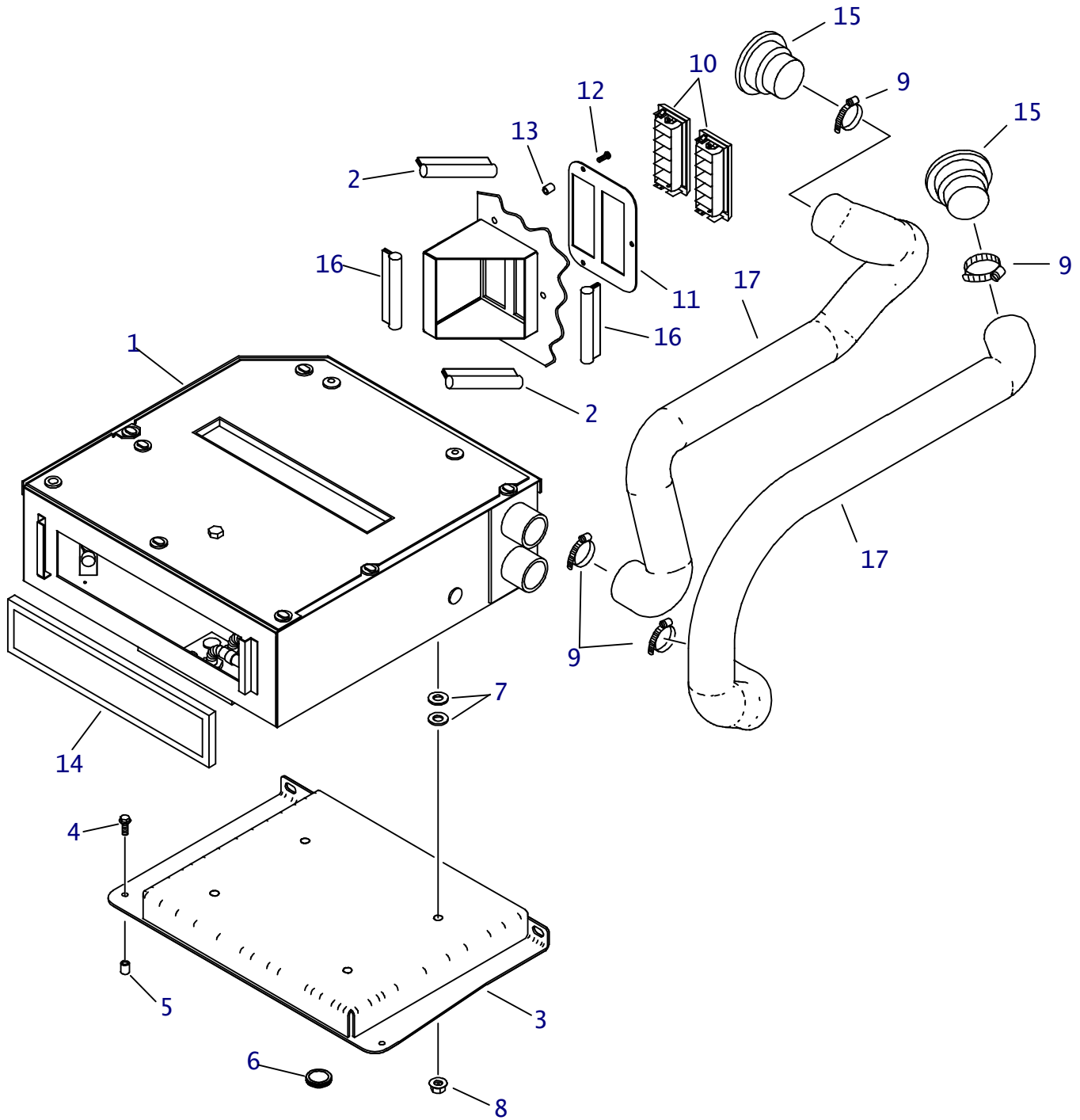
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FOOTNOTES:

1. SHIMS ARE OPTIONAL

NOTE:

CAB HEAT/AIR



CAB HEAT/AIR

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	500-1385	1	HEAT/AIR SYSTEM	
2.	116-421 AR		BULK EDGE (1/8", SOLD PER 1')	USE 2 @ 5"
3.	349-471	1	HEAT/AIR MOUNT	
4.	106-162	4	FLG SCREW (M8-1.25 X 20mm)	
5.	105-633	4	NUTSERT (M8X1.25) 3.8-7.9" THK	
6.	116-689	2	GROMMET	
7.	106-397	8	WASHER (M12, HARDENED)	
8.	105-833	4	FLG LOCKNUT (1/2-NC)	
9.	110-134	4	WORM CLAMP (2.062" TO 2.75")	
10.	502-064	2	RECTANGULAR LOUVER	
11.	349-894	1	LOUVER PLATE	
12.	106-640	3	SCREW (M6-1.0 X 20mm, BUT SOC)	
13.	105-631	3	NUTSERT (M6X1.0) 4.20-6.60THK	
14.	502-066	1	FOAM FILTER (1/2" X 4" X 17")	
15.	502-065	2	ROUND LOUVER	
	502-067	2	HOSE ADAPTER	
16.	116-421 AR		BULK EDGE (1/8", SOLD PER 1')	USE 2 @ 5.50"
17.	500-1383	1	HOSE KIT	

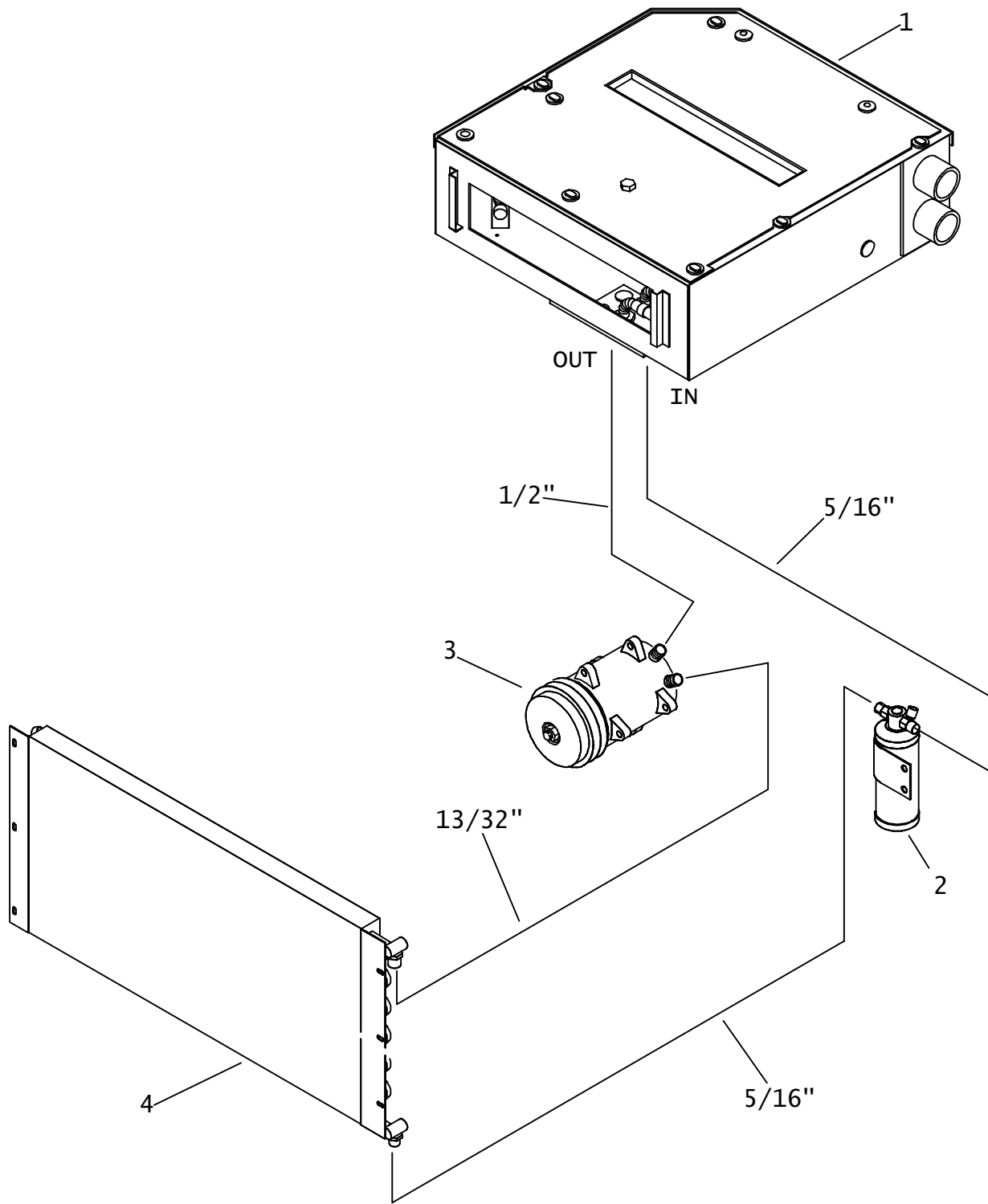
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499-210	1	EXPANSION VALVE
499-205	1	DRIER
499-211	1	COMPRESSOR
500-1382	1	CONDENSER
500-1286	1	HOSE, AC

FOOTNOTES:

NOTE:

HEAT/AIR DIAGRAM



HEAT/AIR DIAGRAM

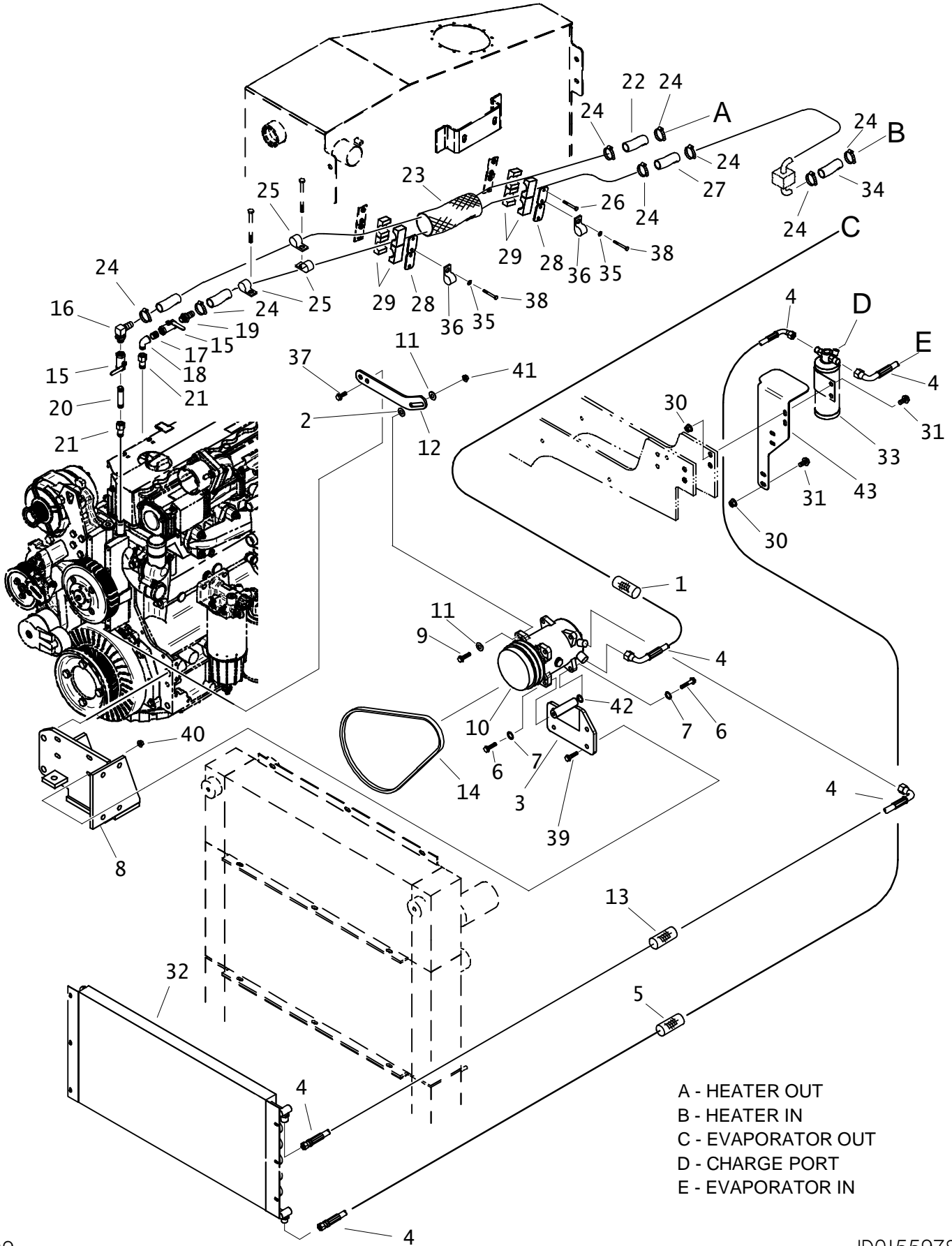
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	500-1385	-	HEAT/AIR SYSTEM	
	499-210	-	EXPANSION VALVE	
2.	499-205	-	DRYER	
3.	499-211	-	COMPRESSOR	
4.	500-1382	-	CONDENSER COIL	

NOT SHOWN:

FOOTNOTES:

NOTE:
TORQUE FITTINGS TO THE FOLLOWING SPECIFICATIONS
-6 HOSES: 11-13 FT-LBS
-8 HOSES: 15-20 FT-LBS
-10 HOSES: 21-27 FT-LBS

HEAT/AIR COMPONENT MOUNT



HEAT/AIR COMPONENT MOUNT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	117-719	1	ABRASION SLEEVE (1.75" X 36")	
2.	105-264	4	WASHER (3/8")	
3.	300-1774	1	WELDMENT, COMPRESSOR MOUNT	
4.	499-558	-	A/C HOSE KIT (R134)	
5.	117-718	1	ABRASION SLEEVE (1" X 36")	
6.	106-755	2	SCREW (M10-1.50 X 30MM, SOC)	
7.	106-390	2	WASHER (M10)	
8.	300-1789	-	WELDMENT, FRONT ENGINE MOUNT (LEFT)	
9.	105-286	1	BOLT (3/8-NC X 1-3/4")	
10.	499-211	-	A/C COMPRESSOR	
11.	105-117	2	WASHER (5/16")	
12.	300-4683	1	SHEET, A/C COMPRESSOR TENSIONER	
13.	117-392	1	ABRASION SLEEVE (1.25" X 60")	
14.	171-007	1	COMPRESSOR BELT	
15.	158-579	2	SHUT-OFF (08NF-08NF)	
16.	514-285	1	S/O COUPLER (08N-10H90)	
17.	115-122	1	NIPPLE (08N-1-1/2")	
18.	115-115	1	STREET ELBOW (08N-08NF90)	
19.	514-140	1	S/O COUPLER (08N-10H)	
20.	115-162	1	NIPPLE (08N-4")	
21.	514-335	2	REDUCER (M26-1.50-08NF)	SEE FOOTNOTE 1
22.	116-750	AR	BULK HOSE (5/8", SOLD PER 1')	USE 1 @ 250"
23.	117-610	1	ABRASION SLEEVE (1.75" X 138")	
24.	110-026	8	WORM CLAMP (1/2" TO 1-1/4")	
25.	110-226	3	BOLT-ON CLAMP (1")	
26.	105-818	6	BOLT (1/4-NC X 1-1/2")	
27.	116-750	AR	BULK HOSE (5/8", SOLD PER 1')	USE 1 @ 205"
28.	322-289	4	BACKUP (BOLT-ON)	
29.	111-007	4	BOLT-ON CLAMP (7/8", SET)	
30.	106-386	4	FLG LOCKNUT (3/8-NC)	
31.	106-162	7	FLG SCREW (M8-1.25 X 20MM)	
32.	499-213	-	CONDENSER COIL	
33.	499-205	-	RECEIVER DRIER	
34.	116-750	AR	BULK HOSE (5/8", SOLD PER 1')	USE 1 @ 42"
35.	105-095	2	WASHER (1/4")	
36.	110-333	2	BOLT-ON CLAMP (1")	
37.	106-382	1	FLG LK SCREW (M10-1.50 X 20MM)	
38.	105-198	2	BOLT (1/4-NC X 1-3/4")	
39.	107-111	4	FLG SCREW (M10-1.50 X 35MM)	
40.	106-387	4	FLG LOCKNUT (M10-1.50)	
41.	105-834	2	FLG LOCKNUT (3/8-NC)	
42.	106-711	AR	WASHER	USE AS SHIM
43.	301-1346	1	BRACKET	

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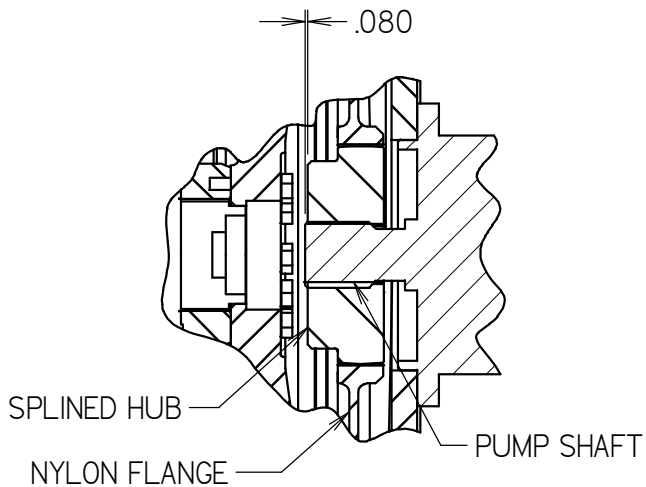
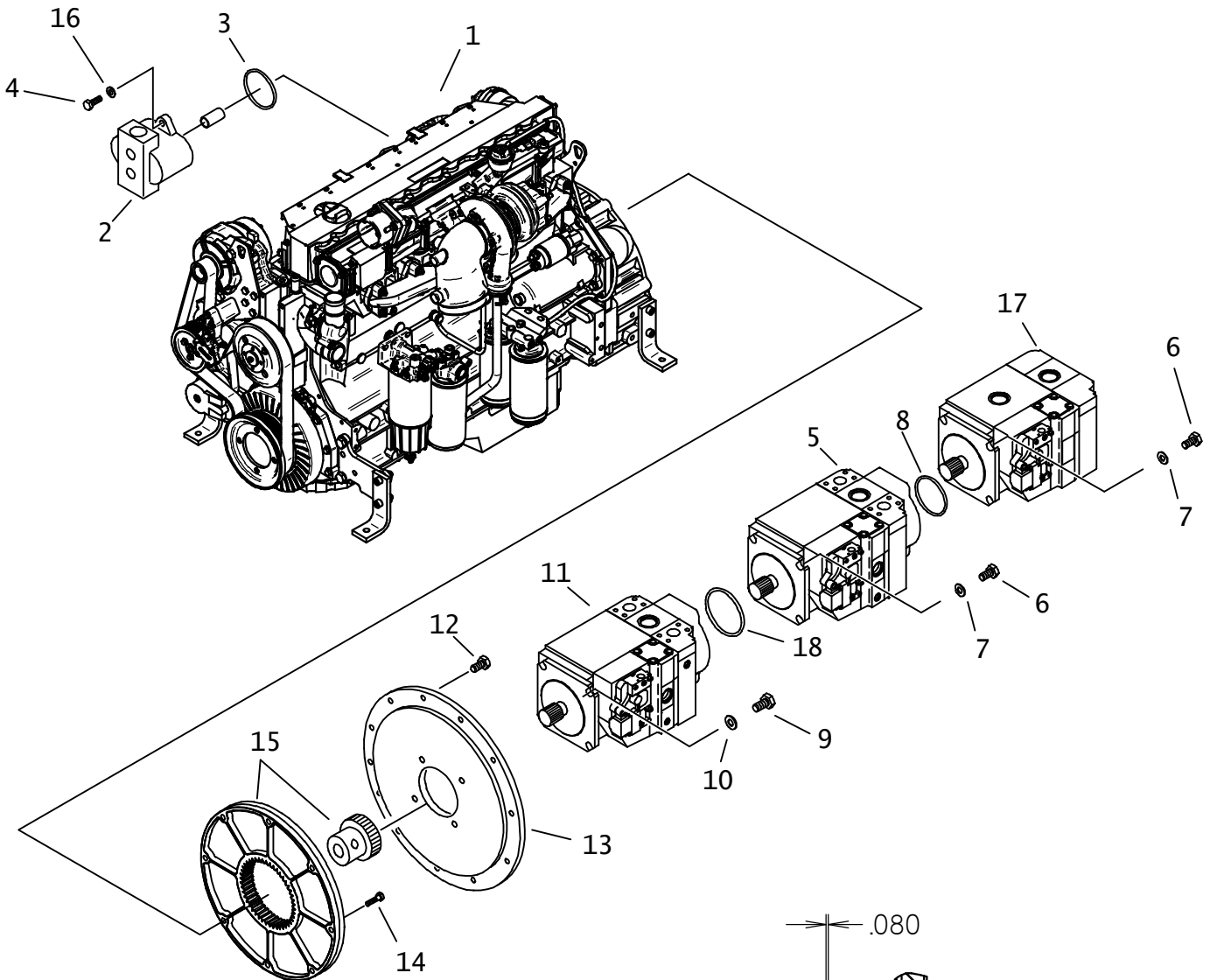
FOOTNOTES:

1. REMOVE 2 PLUGS FROM ENGINE. REINSTALL WASHERS FROM THE PLUGS BEFORE INSTALLING REDUCERS.

NOTE:

HYDRAULICS

PUMP MOUNTING



PUMP MOUNTING

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-892	-	ENGINE- DEUTZ 2013 DIESEL T3	OBSOLETE, INCL REF NO. 3
2.	158-490	1	HYDRAULIC PUMP	
3.	499-955	-	O-RING (ID 3.95, OD 4.25)	AUX PUMP MOUNTING
4.	106-333	2	SCREW (M12-1.75 X 40MM, 8.8)	USE LOCTITE 242 OR EQUIVALENT
5.	149-902	1	HYDRAULIC PUMP (100 CC)	
	190-764		SEAL REPAIR KIT	
6.	105-858	8	BOLT (1/2-NC X 1-1/4")	USE LOCTITE 242 OR EQUIVALENT
7.	106-743	8	WASHER (.531, HARDENED)	
8.	157-1001	1	O-RING (2-158 D75)	
9.	105-319	4	BOLT (3/4-NC X 1-1/2")	USE LOCTITE 242 OR EQUIVALENT
10.	106-949	4	WASHER (3/4", HARDENED)	
11.	149-901	1	HYDRAULIC PUMP (130 CC)	
	190-763		SEAL REPAIR KIT	
12.	106-383	12	FLG LK SCREW (M10-1.50 X 30MM)	USE LOCTITE 242 OR EQUIVALENT
13.	349-001	1	FLYWHEEL HOUSING COVER	
14.	105-876	8	SCREW (M10-1.50 X 35MM)	USE LOCTITE 242 OR EQUIVALENT; TORQUE TO 32 FT LBS
15.	194-777	1	FLYWHEEL COUPLING	OBSOLETE, SEE FOOTNOTE 1
16.	106-397	2	WASHER (M12, HARDENED)	
17.	149-903	1	HYDRAULIC PUMP (75 CC) JT	
18.	157-1001	1	O-RING (2-158 D75)	USE AFTER SN CMWJT100J90000009
	157-183	1	O-RING (048 D70)	USE BEFORE SN CMW JT100K9000008, SEE FOOTNOTE 2

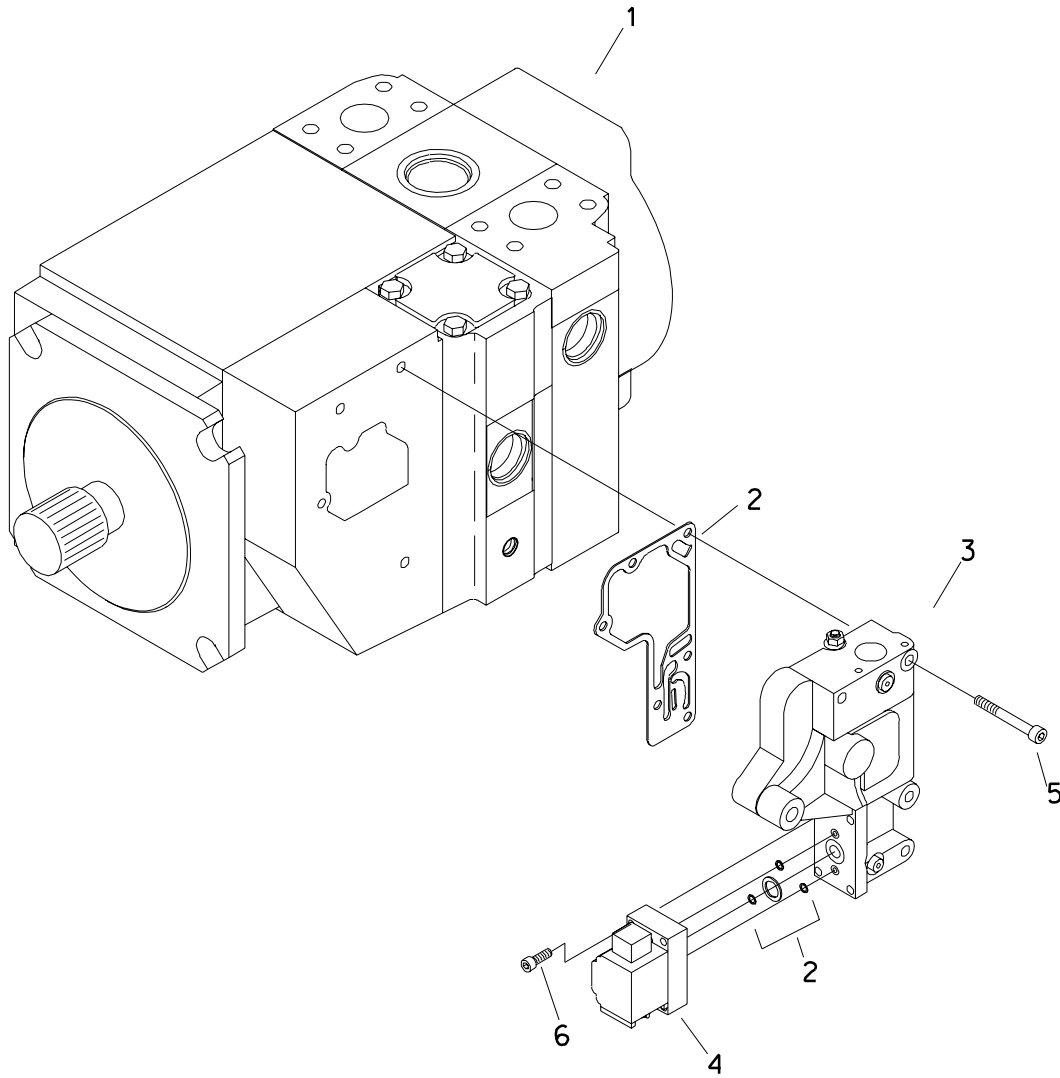
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FOOTNOTES:

1. REPLACE WITH FLYWHEEL COUPLING 195-1685. FLAT SIDE OF NYLON FLANGE GOES TOWARD FLYWHEEL. HUB FACE SHOULD MEASURE .080 INCHES FROM END OF PUMP SHAFT, SEE SKETCH. USE LOCTITE 242 OR EQUIVALENT & TORQUE TO 200 FT LBS.
2. USE O-RING 157-1001 ON ALL AT UNITS EXCEPT CMWAT100A90000001. USE 157-183 ON CMWAT100A90000001.

NOTE:

ROTATION PUMP CONTROL

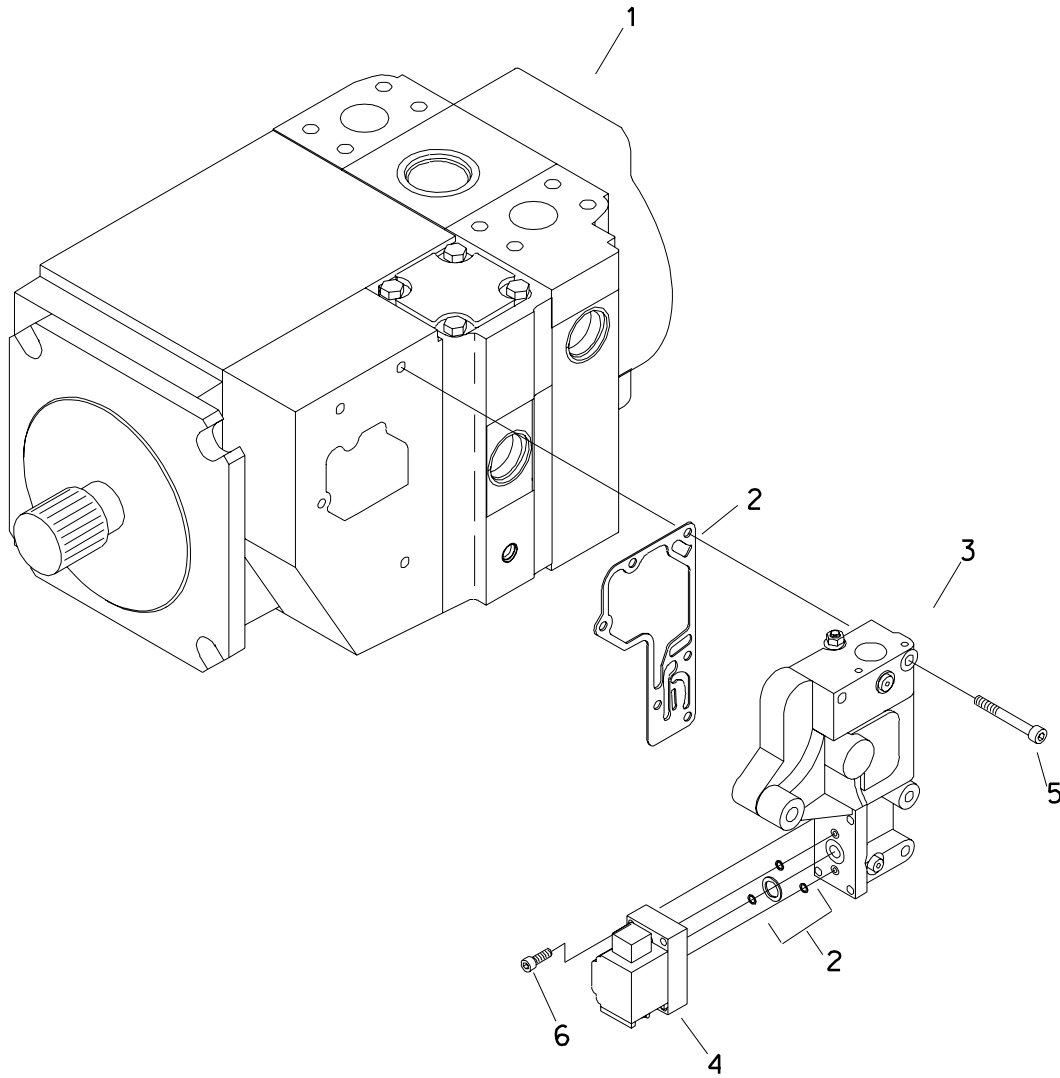


ROTATION PUMP CONTROL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-901	-	HYDRAULIC PUMP (130 CC)	
	499-175	-	MULTIFUNCTION VALVE	
2.	190-981	1	EDC KIT 75/100/130CC	
3.	149-545	1	EDC CONTROLLER F/130CC	
4.	149-546	1	PILOT VALVE	
5.	107-402	4	SCREW (M6-1.00 X 50MM, SOC)	
6.	106-428	4	SCREW (M5-0.80X14MM, SOC)	

FOOTNOTES

THRUST PUMP CONTROL

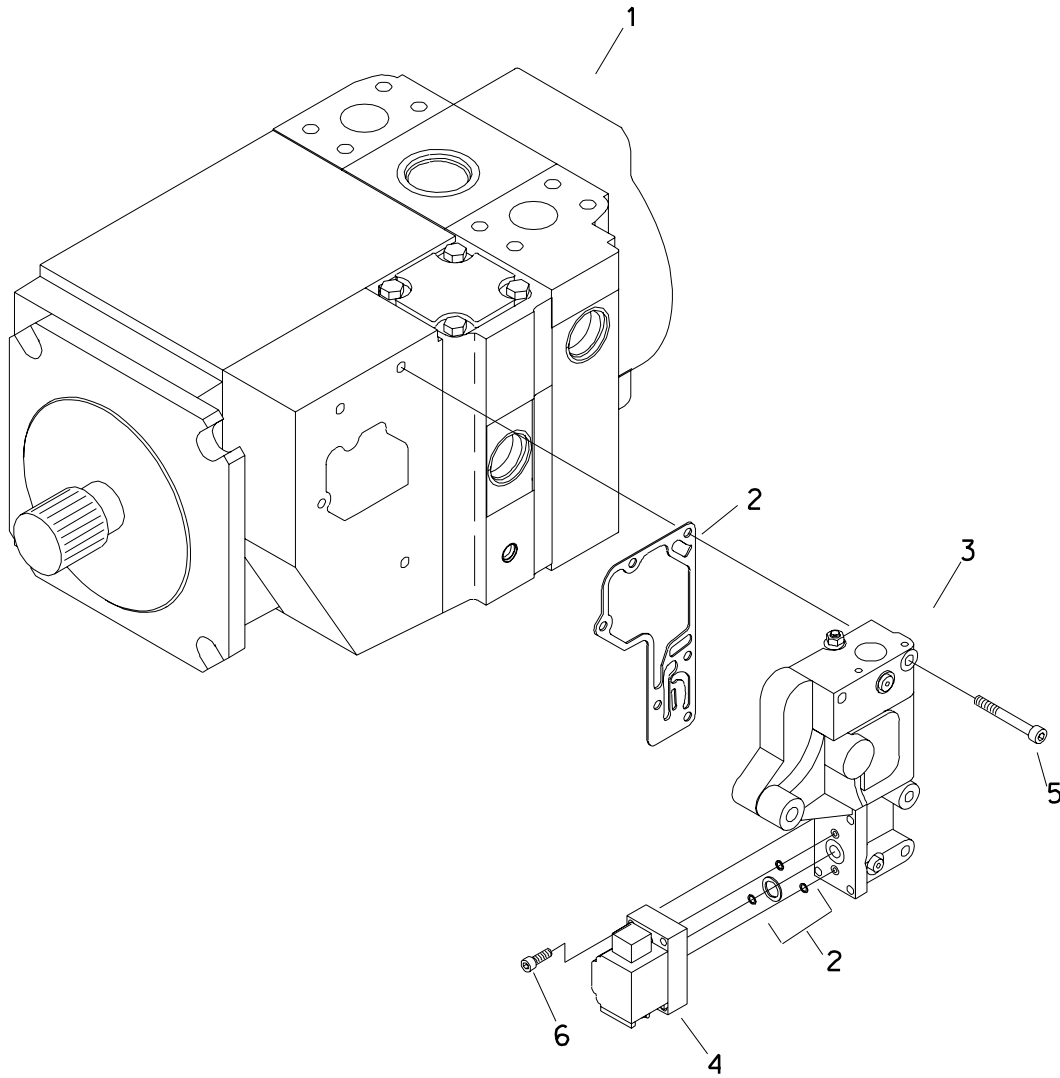


THRUST PUMP CONTROL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-902	-	HYDRAULIC PUMP (100 CC)	
	500-764	-	MULTIFUNCTION VALVE	
2.	190-981	1	EDC KIT 75/100/130CC	
3.	149-544	1	EDC CONTROLLER F/100CC	
4.	149-546	1	PILOT VALVE	
5.	107-402	4	SCREW (M6-1.00 X 50MM, SOC)	
6.	106-428	4	SCREW (M5-0.80X14MM, SOC)	

FOOTNOTES

FLUID PUMP CONTROL



FLUID PUMP CONTROL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-903	-	HYDRAULIC PUMP (75 CC)	
	500-764	-	MULTIFUNCTION VALVE	
	190-806	-	SEAL KIT	
2.	190-981	1	EDC KIT 75/100/130CC	
3.	159-533	1	EDC CONTROLLER F/75CC	
4.	149-546	1	PILOT VALVE	
5.	107-402	4	SCREW (M6-1.00 X 50MM, SOC)	
6.	106-428	4	SCREW (M5-0.80X14MM, SOC)	

FOOTNOTES

CHARGE FILTER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	349-734	1	FILTER BRACKET	
2	149-837	2	CONNECTOR (I6S-I6SF90)	
3	149-353	1	REMOTE FILTER	SEE FOOTNOTE I
4	149-367	2	CONNECTOR I6S-100-080-080-04SF	
5	154-301	2	CONNECTOR (I0S-I00)	
6	154-279	3	CONNECTOR (I080-I0S)	
7	154-322	1	CONNECTOR (I080-I0S90)	
8	154-266	1	UNION RUN TEE (I080FX-080-080)	
9	155-260	1	QDC ADAPTER (I02-040BK)	
10	105-825	4	FLG LK BOLT (3/8-NC X 3/4)	
11	117-718	1	ABRASION SLEEVE (1" X 36")	
12	117-324	1	ABRASION SLEEVE (1.25" X 48")	
13	117-655	3	ABRASION SLEEVE (1.59" X 38")	
14	117-674	1	ABRASION SLEEVE (1.59" X 122")	
15	154-252	1	CONNECTOR (I04S-04090)	
16	155-125	1	PLUG (I04S)	
17	117-388	1	ABRASION SLEEVE (1.25" X 42")	
18	154-699	1	HOSE (I100FX-36"-2750)	
19	515-380	1	HOSE (I080FX45-46"-3000)	
20	154-745	1	HOSE (I080FX-50"-3000)	
21	515-380	1	HOSE (I080FX45-46"-3000)	
22	154-884	1	HOSE (I080FX90-60"-3000)	
23	515-701	1	HOSE (I080FX90-122"-3000)	
24	153-365	1	HOSE (I040FX90S-34"-3000)	
25	154-699	1	HOSE (I100FX-36"-2750)	

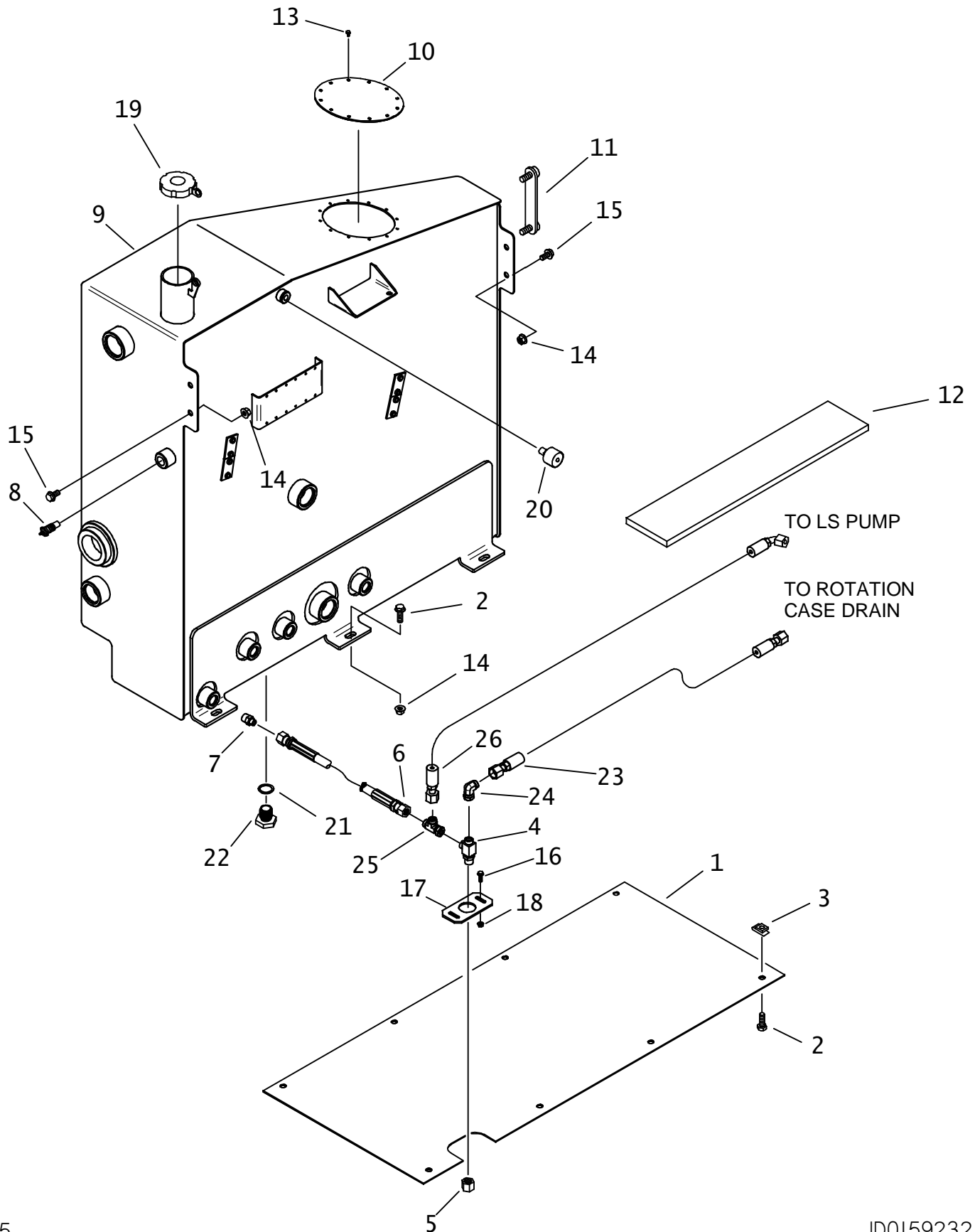
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FOOTNOTES:

- I. 153-375 IS SERVICE ELEMENT FOR 149-353

NOTE:

HYDRAULIC RESERVOIR



HYDRAULIC RESERVOIR

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	370-314	1	BOTTOM COVER	
2.	106-724	7	FLG SCREW (M10-1.5 X 25MM)	
3.	106-558	4	CLIP NUT (M10-1.5)	
4.	514-002	1	BK RUN TEE (120)	
5.	154-328	1	CAP (120F)	
6.	150-2364	1	HOSE (120FX-15.5"-3000)	JT ONLY
	150-1830	1	HOSE (120FX-12.3"-3000)	AT ONLY
7.	154-247	1	CONNECTOR (10S-120)	
8.	214-819	1	TEMPERATURE SWITCH	
9.	300-2394	1	WELDMENT, HYDRAULIC TANK	USE ON "JT" OPTION
10.	349-090	1	LID	USE LOCTITE AVIATION SEALANT OR EQUIVALENT
11.	364-171	1	SIGHT GAUGE	
12.	349-098	1	HYD TANK PAD	SEE FOOTNOTE 1
13.	105-214	12	FLG SCREW (#10-24 X .5")	
14.	106-387	7	FLG LOCKNUT (M10-1.50)	
15.	106-382	4	FLG LK SCREW (M10-1.50 X 20MM)	
16.	106-379	2	FLG LK SCREW (M6-1.00 X 20MM)	
17.	300-9494	1	MOUNT BAR	
18.	106-385	2	FLG LOCKNUT (M6-1.00)	
19.	111-046	1	LOCKING CAP (NON-VENTED)	
20.	111-021	1	BREATHER CAP (TANK)	
21.	149-829	1	1" SEAL WASHER	
22.	149-398	1	DRAIN PLUG (1-UNF, .375 ORF)	
23.	150-2704	1	HOSE (120FX-424"-3000)	
24.	154-457	1	UNION (120-120FX90)	
25.	154-368	1	UN RUN TEE (120FX-120-120)	AT ONLY
26.	150-3088	1	HOSE (120FX45-34"-4000)	AT ONLY

NOT SHOWN:

SERVICE PARTS:

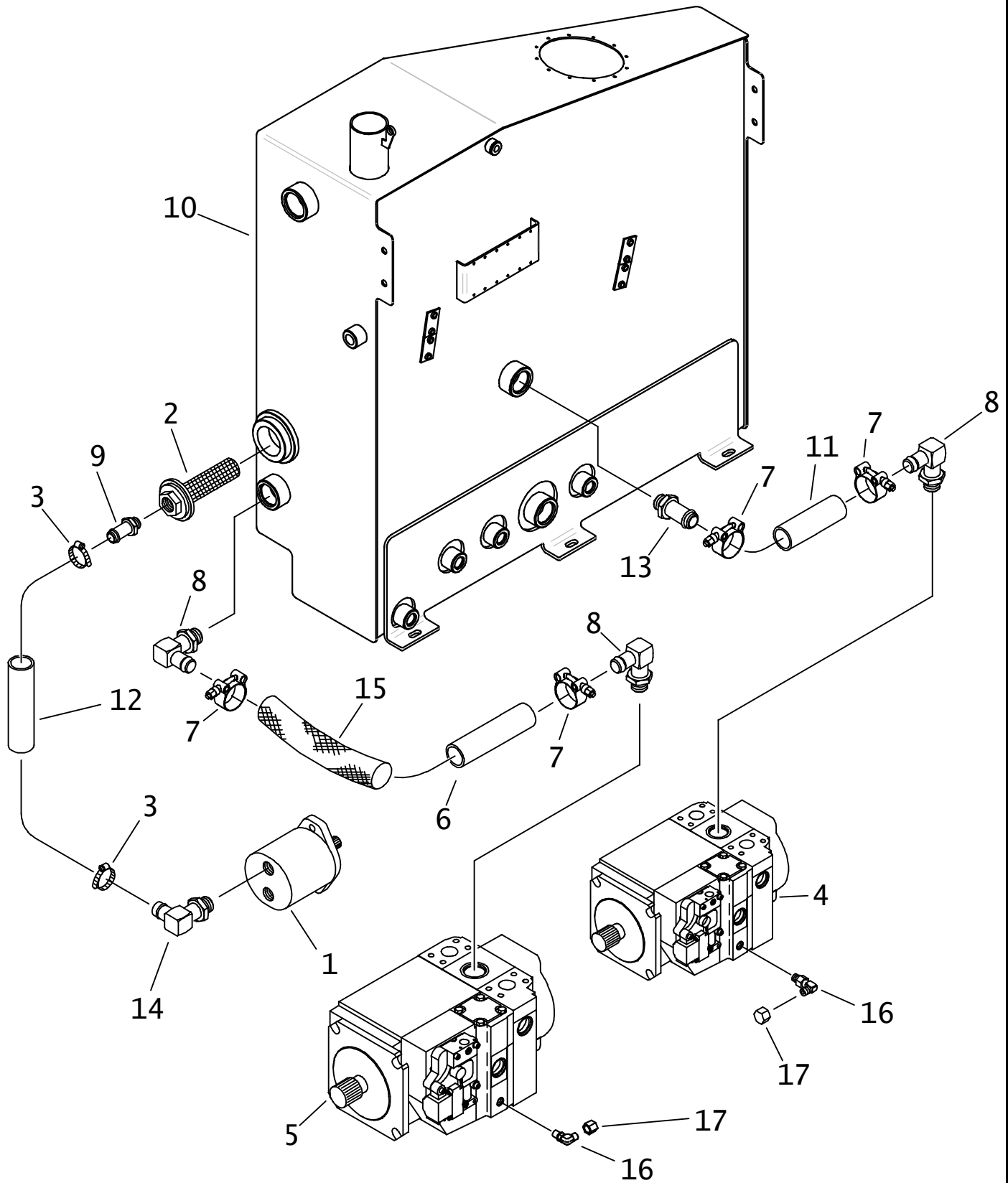
150-1876	RELIEF VALVE
500-1415	SEAL REPAIR KIT
500-1575	2-POS, 2-WAY BLOCKING VALVE
500-1311	SOLENOID COIL, 12VDC W/ZENER DIODE
500-1414	SEAL REPAIR KIT

FOOTNOTES:

1. APPLY ADHESIVE (P/N 256-665) TO BOTTOM OF PAD BEFORE INSTALLING ON MAIN FRAME.

NOTE:

PUMP HYDRAULICS



PUMP HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	158-490	-	HYDRAULIC PUMP	
	500-747	-	SEAL REPAIR KIT	
2.	159-432	1	TANK FILTER SCREEN	
3.	110-353	2	WORM CLAMP (3/4" TO 1-1/2")	
4.	149-902	-	HYDRAULIC PUMP (100 CC)	
	190-764	-	SEAL REPAIR KIT	
5.	149-901	-	HYDRAULIC PUMP (130 CC)	
	190-763	-	SEAL REPAIR KIT	
6.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 23.5"
7.	111-028	4	T-BOLT CLAMP (1-3/4" TO 2")	
8.	514-136	3	S/O COUPLER (20S-24H90)	
9.	154-476	1	S/O COUPLER (20S-16H)	
10.	300-2394	-	WELDMENT, HYDRAULIC TANK	
11.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 13"
12.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 23"
13.	155-148	1	S/O COUPLER (20S-24H)	
14.	155-195	1	S/O COUPLER (20S-16H90)	
15.	115-680	1	ABRASION SLEEVE (2.07" X 21")	
16.	154-226	2	CONNECTOR (040-06S90)	
17.	154-296	2	CAP (040F)	

NOT SHOWN:

FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

HYDROSTATIC GAUGE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	217-079	2	PRESSURE GAUGE (10,000PSI)	
	499-202		GAUGE CLAMP & STUDS	
2.	514-355	2	CONNECTOR (04NF-04NF90)	
3.	154-020	2	CONNECTOR (04N-04J)	
4.	155-490	2	HOSE (04JFX-306"-6000)	
5.	154-220	2	CONNECTOR (04O-06S)	
6.	515-304	1	HOSE (040FX90S-15"-5000)	
7.	154-226	2	CONNECTOR (04O-06S90)	
8.	159-475	2	SHUTTLE VALVE	
9.	154-221	2	CONNECTOR (06S-06O)	
10.	154-343	2	UNION (06S-06OFX90)	
11.	149-043	2	BK BR TEE (06S-04J-04SF)	
12.	159-154	1	QDC ADAPTER (02-04S)	BEGINS WITH S/N: 2W0856
13.	116-840	1	ABRASION SLEEVE (1.00" X 306")	
14.	515-305	1	HOSE (040FX90-21"-5000)	
15.	149-901	-	HYDRAULIC PUMP (130 CC)	
16.	149-902	-	HYDRAULIC PUMP (100 CC)	
17.	154-252	1	CONNECTOR (04S-04O90)	BEGINS WITH S/N: 2W0856
18.	159-156	1	QDC ADAPTER (02-04OF)	BEGINS WITH S/N: 2W0856

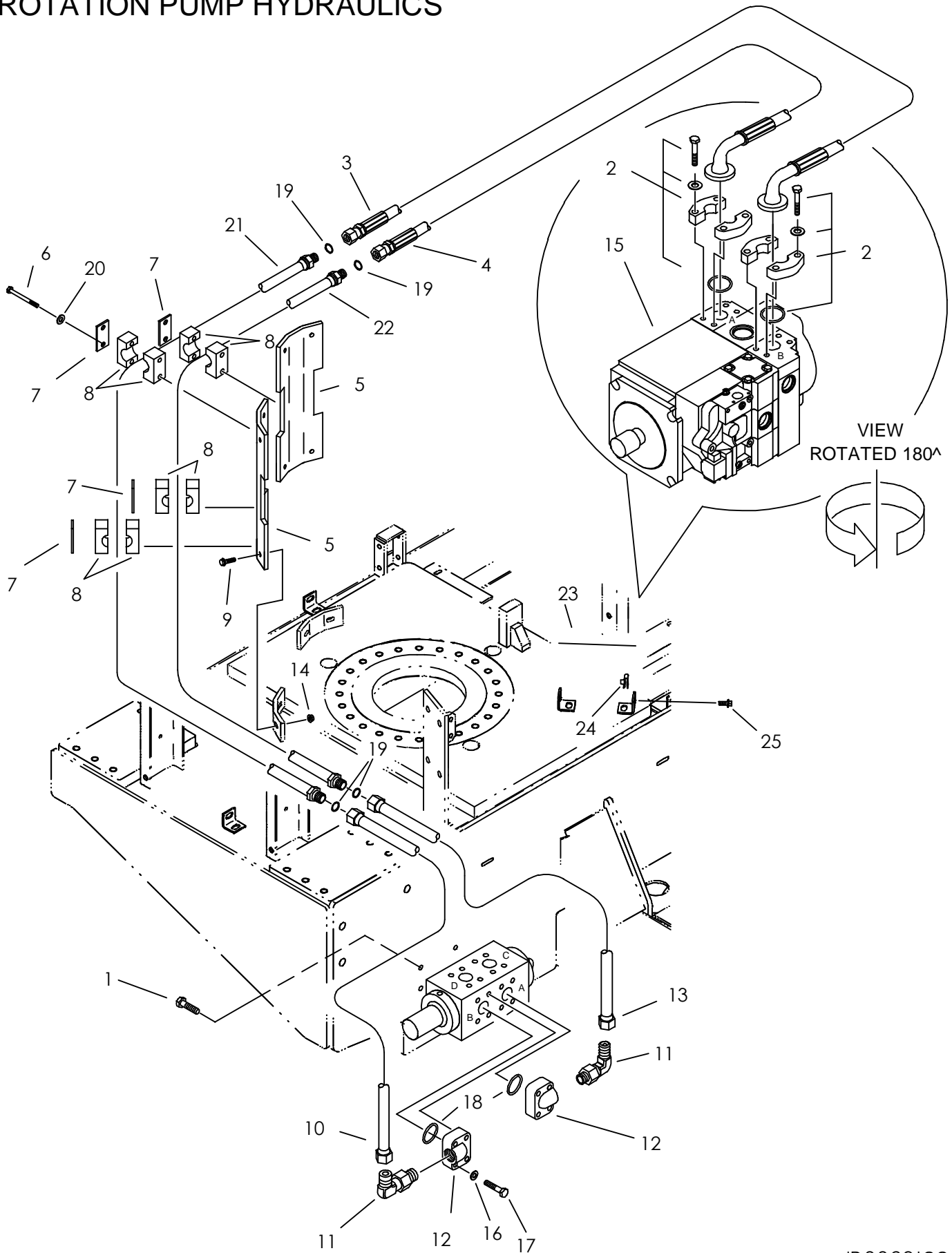
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FOOTNOTES:

NOTE:
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

NOTE:

ROTATION PUMP HYDRAULICS



ROTATION PUMP HYDRAULICS

REF PART NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-829	4	FLG LK BOLT (1/2-NC X 1")	
2.	159-436	2	SPLIT FLANGE (20SF, SET)	
	105-066	4	BOLT (1/2-NC X 1-3/4")	TORQUE TO 45 FT/LBS
	105-070	4	LOCK WASHER (1/2")	
	157-078	1	O-RING (222 D90)	
3.	515-565	1	HOSE (20OFX-20FLH90-43"-6000)	
4.	515-566	1	HOSE (20OFX-20FLH90-45"-6000)	
5.	349-851	2	MOUNT CLAMP	
6.	105-224	8	BOLT (1/4-NC X 2-1/2")	
7.	322-362	4	BACKUP SPACER	
8.	110-852	4	BLT-ON CLP (1.25", SOLD PER SET)	
9.	106-724	4	FLG SCREW (M10-1.50 X 25MM)	
10.	156-137	-	HYD LINE (-20)	ENDS WITH S/N: 2V2567
	153-569	1	HYD LINE (-20)	BEGINS WITH S/N: 2W0856
11.	514-095	2	CONNECTOR (20S-20O90)	
12.	514-333	2	HEAD FLANGE (20FL-16SF)	
13.	156-136	-	HYD LINE (-20)	ENDS WITH S/N: 2V2567
	153-571	1	HYD LINE (-20)	BEGINS WITH S/N: 2W0856
14.	106-387	4	FLG LOCKNUT (M10-1.50)	
15.	149-901	-	HYDRAULIC PUMP (130CC)	
16.	105-070	8	LOCK WASHER (1/2")	
17.	105-067	8	BOLT (1/2-NC X 2-3/4")	TORQUE TO 45 FT/LBS
18.	157-078	2	O-RING (222 D90)	
19.	157-129	4	O-RING (025 D90)	
20.	106-388	8	WASHER (M6)	
21.	156-137	-	HYD LINE (-20)	ENDS WITH S/N: 2V2567
	153-568	1	HYD LINE (-20)	BEGINS WITH S/N: 2W0856
22.	156-136	-	HYD LINE (-20)	ENDS WITH S/N: 2V2567
	153-570	1	HYD LINE (-20)	BEGINS WITH S/N: 2W0856
23.	349-853	1	RETAINER BAR	
24.	106-551	2	CLIP NUT(M8-1.25)	
25.	106-991	2	FLG LK SCREW (M8-1.25 X 20MM)	

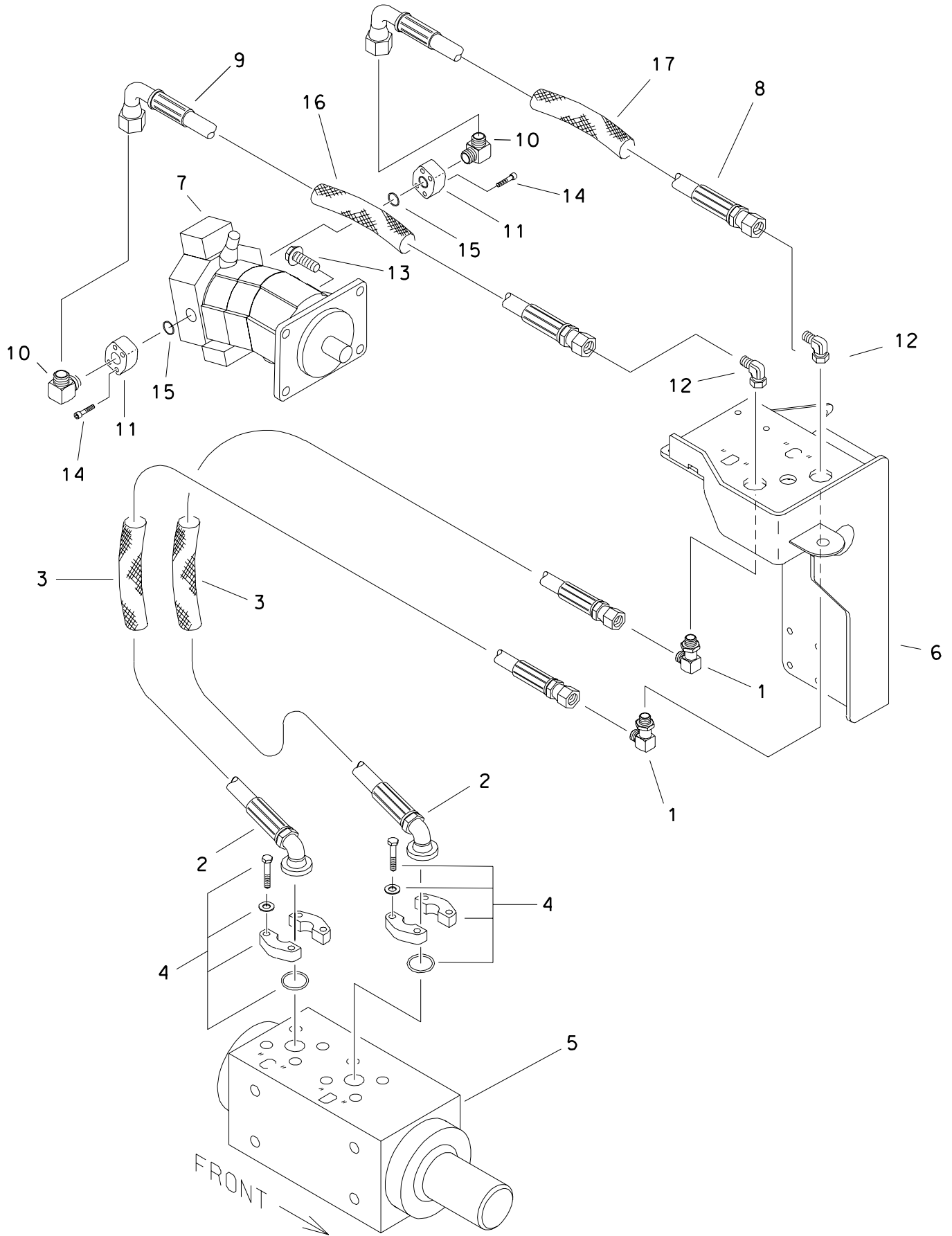
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

ROTATION MOTOR HYDRAULICS



ROTATION MOTOR HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	514-178	2	BK CONNECTOR (200-20090BK)	
2.	153-120	2	HOSE (200FX-20FL45-230"-6000)	
3.	115-962	2	ABRASION SLEEVE (2.54" X 255")	
4.	159-436	2	SPLIT FLANGE (20SF, SOLD PER SET)	
	105-066	8	BOLT (1/2-NC X 1-3/4")	
	157-078	2	O-RING (222 D90)	
	105-070	8	LOCK WASHER (.500")	
5.	516-033	-	SELECTOR VALVE DIVERTER	
6.	309-179	-	CABLE TRAY BRACKET	
7.	149-397	-	HYD MOTOR (PISTON)	
	191-212	-	SEAL REPAIR KIT	
	217-745	-	CONTROL SOLENOID	
8.	149-479	1	HOSE (200FX90S-45"-6000)	
9.	149-481	1	HOSE (200FX90S-40"-6000)	
10.	514-244	2	CONNECTOR (16S-20090)	
11.	149-995	2	HEAD FLANGE (20HFL-16SF)	
12.	514-422	2	CONNECTOR (200-200FX90)	
13.	106-098	4	FLG BOLT (3/4-NC X 2", GD8)	
14.	106-204	8	BOLT (1/2-NC X 1-1/2", SOC)	
15.	157-078	2	O-RING (222 D90)	
16.	115-925	1	ABRASION SLEEVE (2.38" X 40")	
17.	117-651	1	ABRASION SLEEVE (2.38" X 45")	

NOT SHOWN:

214-337	1	ROTATION CABLE	SEE FOOTNOTE 1; PRIOR TO MACH I UNITS
115-447	1	ABRASION SLEEVE (1.59" X 120")	SEE FOOTNOTE 1; PRIOR TO MACH I UNITS
117-655	1	ABRASION SLEEVE (1.59" X 38")	SEE FOOTNOTE 1; PRIOR TO MACH I UNITS
214-630	1	SPINDLE HARNESS	MACH I UNITS
117-327	1	ABRASION SLEEVE (1.59" X 231")	MACH I UNITS

FOOTNOTES

1. 115-447 AND 117-655 ARE USED ON THE ROTATION CABLE (214-337). 115-447 IS USED ON THE FRONT END AND 117-655 ON THE BACK END.

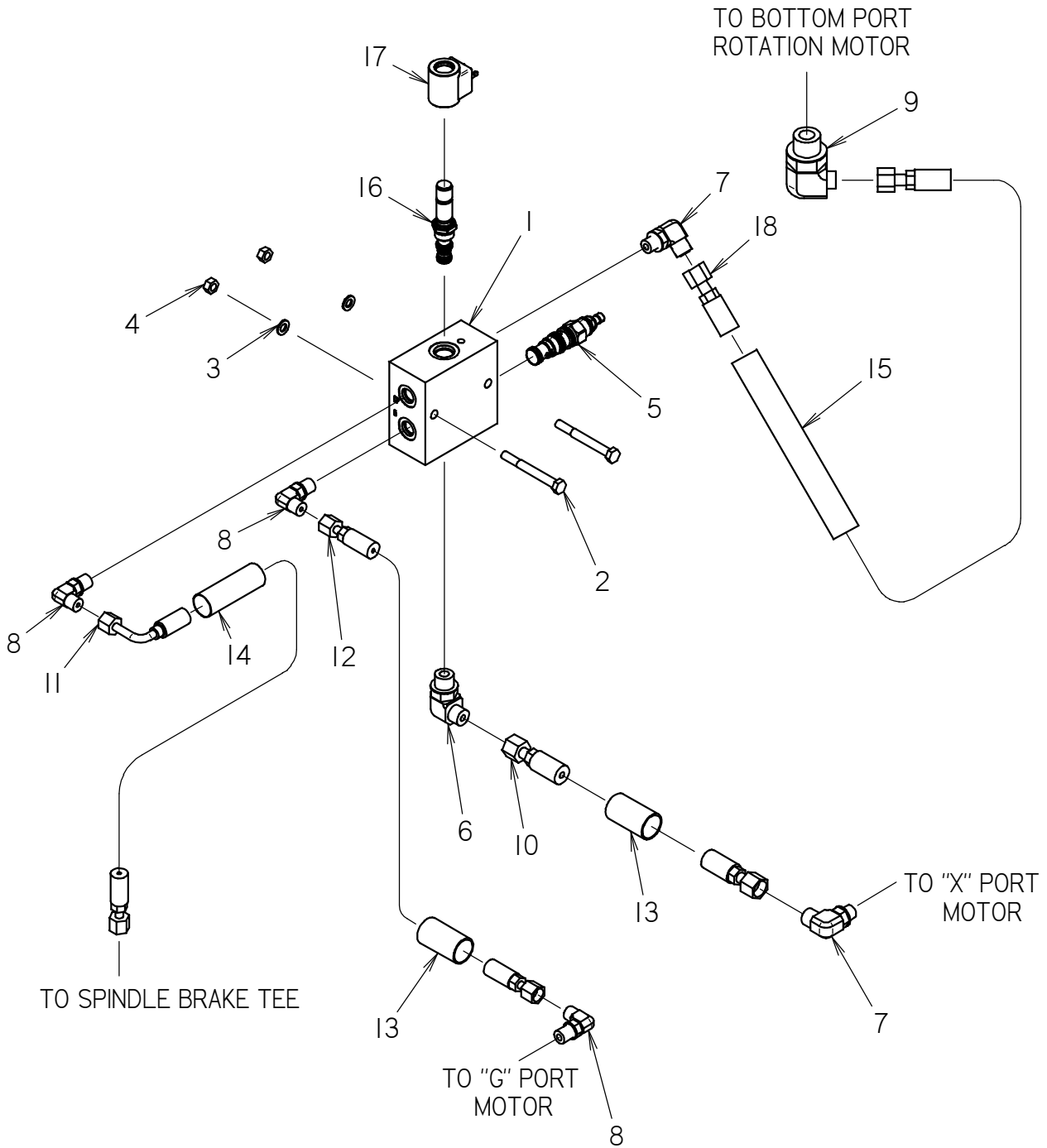
NOTE

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS

MOTOR CONTROL

BEGINS WITH S/N: CMWJ80T3K80000039

ENDS WITH S/N: CMWJ80T3A90000078



MOTOR CONTROL
BEGINS WITH S/N: CMWJ80T3K80000039
ENDS WITH S/N: CMWJ80T3A90000078

REF PART

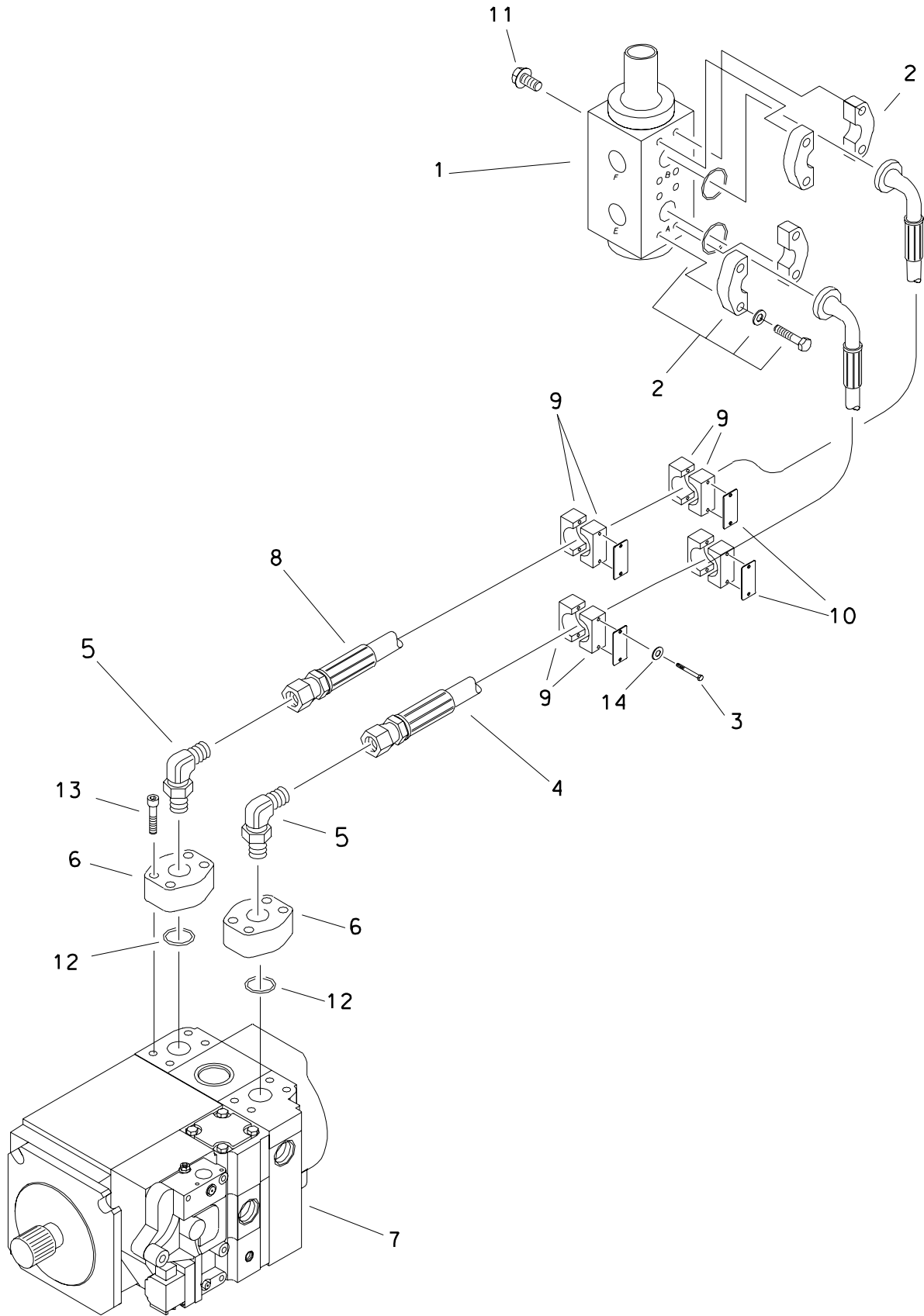
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	150-2106	1	MANIFOLD	
2	105-292	2	SCREW (M8-1.25 X 75MM)	
3	106-395	2	WASHER (M8, HARDENED)	
4	106-561	2	LOCKNUT (M8-1.25,PRV TRQ,10.9)	
5	500-1564	1	2-POS, 3-WAY PILOT OP DIRECTIONAL VALVE	TORQUE TO 35 FT-LBS
6	154-227	1	CONNECTOR (060-08S90)	
7	154-342	2	CONNECTOR (06S-06090)	
8	154-226	3	CONNECTOR (040-06S90)	
9	514-197	1	CONNECTOR (060-12S90)	
10	154-826	1	HOSE (060FX-12"-3000)	
11	154-857	1	HOSE (040FX90-19"-3000)	
12	150-2141	1	HOSE (040FX-12"-5000)	
13	117-670	2	ABRASION SLEEVE (1" X 10")	
14	105-1104	1	ABRASION SLEEVE (1.00" X 17")	
15	117-607	1	ABRASION SLEEVE (1.00" X 21")	
16	500-1562	1	PROPORTIONAL CARTRIDGE VALVE	TORQUE TO 20 FT-LBS
17	500-1563	1	PROPORTIONAL SOLENOID COIL, 12VDC	TORQUE TO 6 FT-LBS
18	154-832	1	HOSE (060FX-23"-3000)	

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FOOTNOTES:

NOTE:

THRUST PUMP HYDRAULICS



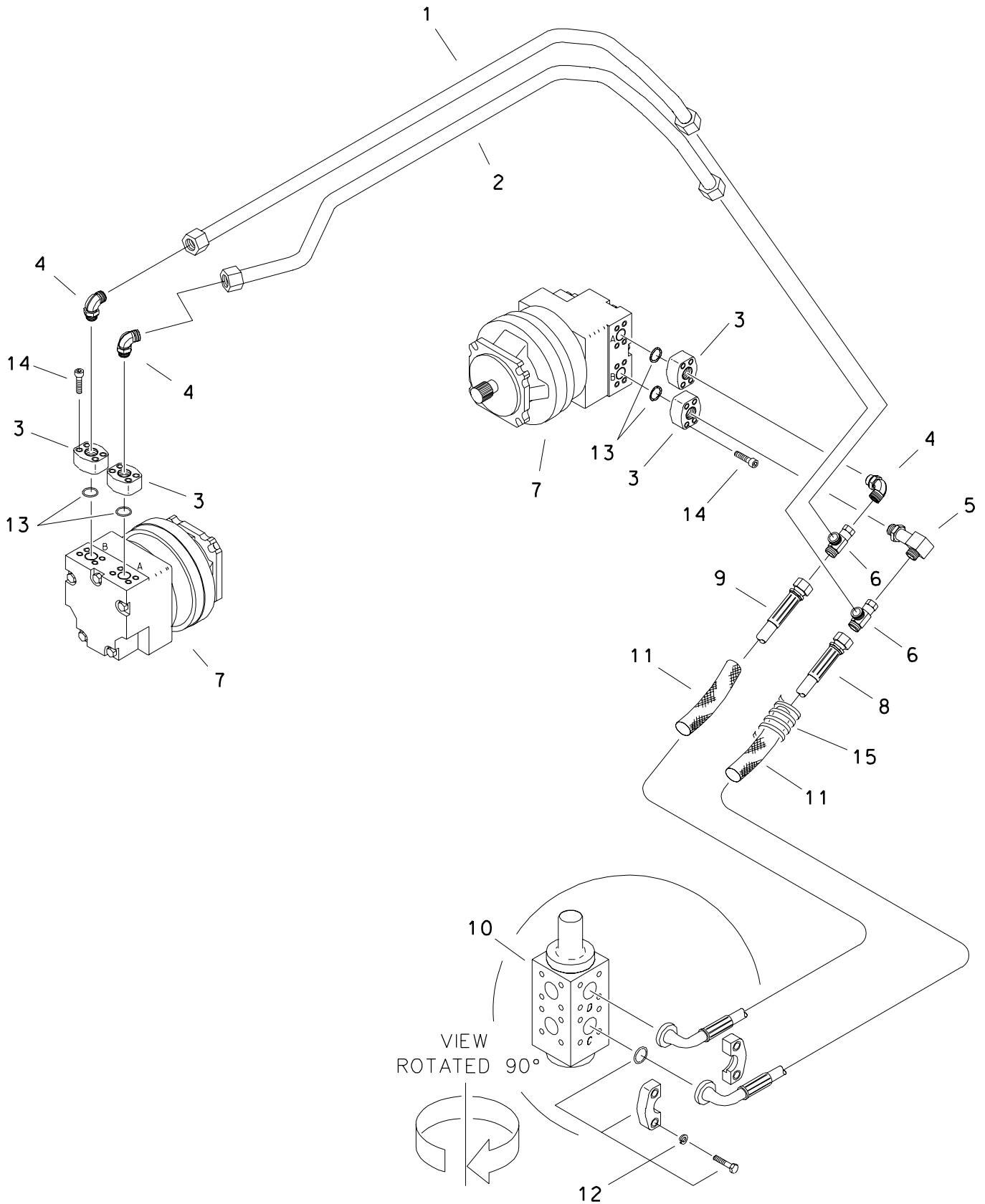
THRUST PUMP HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	516-033	1	SELECTOR VALVE DIVERTER	
2.	159-436	2	SPLIT FLANGE (20SF, SET)	
	105-066	4	BOLT (1/2-NC X 1-3/4")	
	105-070	4	LOCK WASHER (1/2")	
	157-078	1	O-RING (222 D90)	
3.	105-224	8	BOLT (1/4-NC X 2-1/2")	
4.	515-564	1	HOSE (160FX-20FL90-68"-6000)	ENDS WITH S/N: 2Y0040
	157-998	1	HOSE (160FX-20FLS90-68"-6000)	BEGINS WITH S/N: 2Y0470
5.	154-287	2	CONNECTOR (16S-16090)	
6.	514-245	2	HEAD FLANGE (16HFL-16SF)	
7.	149-902	-	HYDRAULIC PUMP (100CC)	
8.	515-563	1	HOSE (160FX-20FL90-71"-6000)	ENDS WITH S/N: 2Y0040
	159-926	1	HOSE (160FX-20FLS90-71"-6000)	BEGINS WITH S/N: 2Y0470
9.	111-008	4	BOLT-ON CLAMP (1.5", SOLD PER SET)	
10.	322-362	4	BACKUP SPACER	
11.	105-829	4	FLG LK BOLT (1/2-NC X 1")	
12.	157-029	2	O-RING (219 D90)	
13.	105-918	8	BOLT (7/16-NC X 1-1/2", SDC)	
14.	106-388	8	WASHER (M6)	

FOOTNOTES

NOTE
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

THRUST MOTOR HYDRAULICS



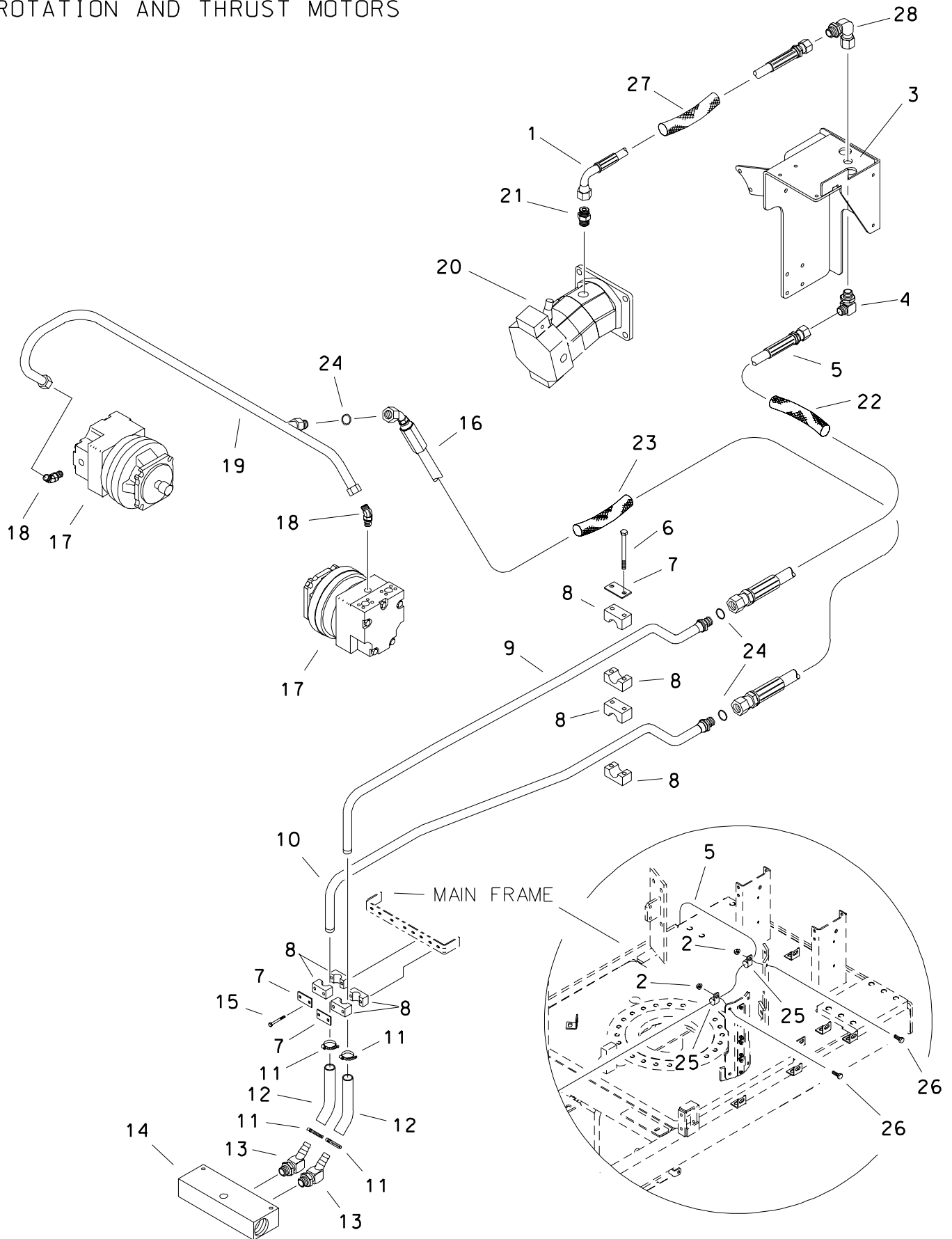
THRUST MOTOR HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	156-298	1	HYD LINE (-16)	
2.	156-297	1	HYD LINE (-16)	
3.	514-245	4	HD FLANGE (16HFL-16SF)	
4.	154-287	3	CONNECTOR (16S-16090)	
5.	154-289	1	CONNECTOR (16S-16090, XL)	
6.	154-409	2	UNION RUN TEE (160FX-160-160)	
7.	158-905	-	HYD MOTOR - THRUST	
	190-765		SEAL REPAIR KIT	
	217-408	1	SOLENOID VALVE (12V)	
	126-195	1	ROLLER BEARING	
	126-196	2	CRADLE BEARING	
	165-893	1	END CAP GASKET	
	165-894	1	GASKET, FRONT COVER	
	157-199	1	O-RING (171 D75)	
	157-200	1	O-RING (153 D75)	
	157-740	1	LIP SEAL	
	499-083	1	VALVE PLATE	
8.	515-567	-	HOSE (160FX-20FLH90L-208"-6000)	
9.	153-117	-	HOSE (160FX-20FLH90L-212"-6000)	
10.	516-033	-	SELECTOR VALVE DIVERTER	
11.	117-329	2	ABRASION SLEEVE (2.07" X 212")	
12.	159-436	4	SPLIT FLANGE (20SF, SET)	
	105-066	8	BOLT (1/2-NC X 1-3/4")	
	105-070	8	LOCK WASHER (1/2")	
	157-078	2	O-RING (222 D90)	
13.	157-029	4	O-RING (219 D90)	
14.	105-918	16	BOLT (7/16-NC X 1-1/2", SOC)	
15.	110-930	1	SPIRAL WRAP (1.5", SOLD PER FT)	USE 1 @ 12"

FOOTNOTES

NOTE
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

CASE DRAIN HYDRAULICS ROTATION AND THRUST MOTORS



CASE DRAIN HYDRAULICS

ROTATION AND THRUST MOTORS

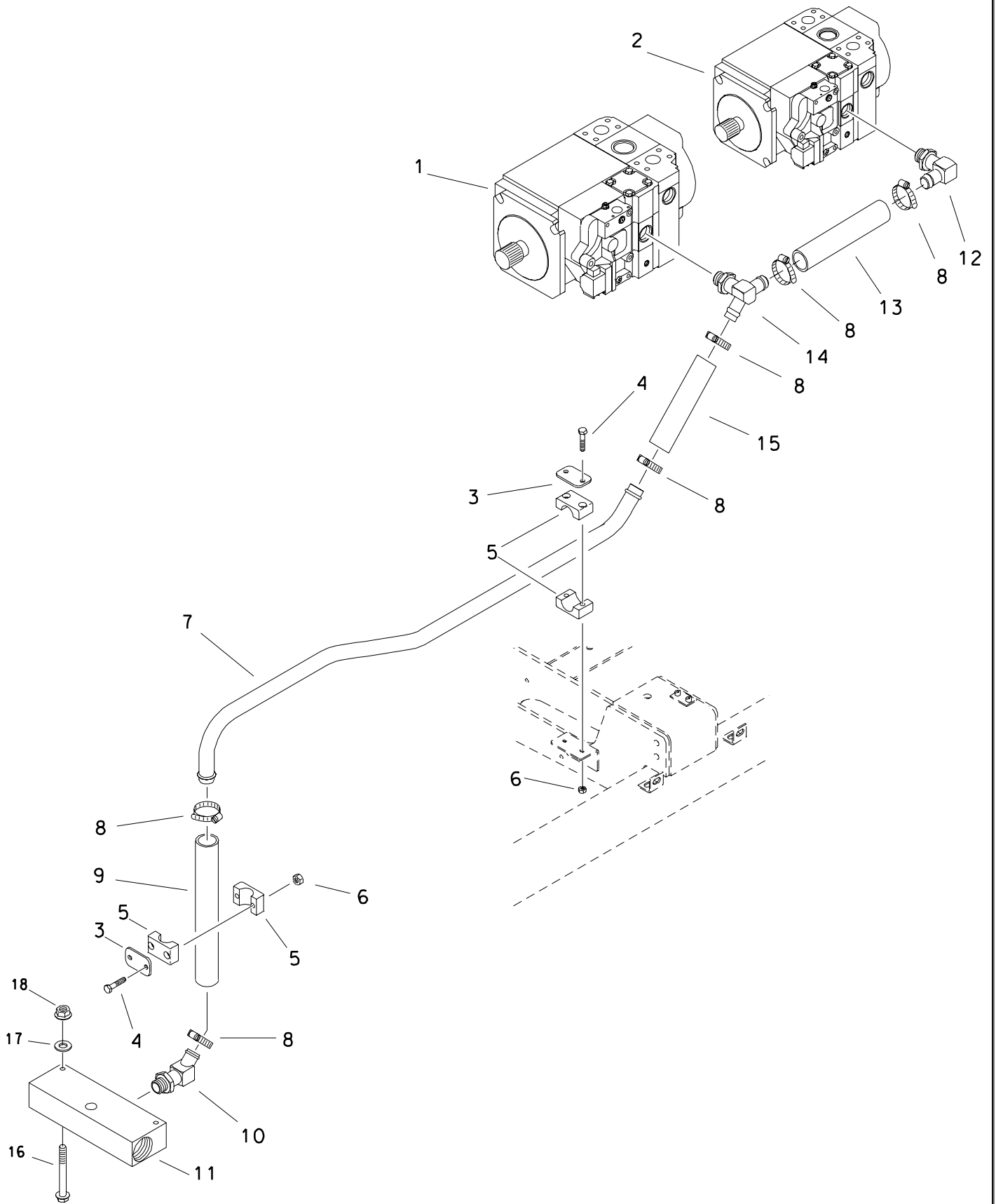
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-867	1	HOSE (120FX90-36"-2250)	
2.	106-387	2	FLG LOCKNUT (M10-1.50)	
3.	309-179	-	CABLE TRAY BRACKET	
4.	156-482	1	BK CONNECTOR (120-12090BK)	
5.	153-119	1	HOSE (120FX-316"-3000)	
6.	107-196	2	BOLT (1/4-NC X 3")	
7.	322-289	3	BACKUP (BOLT-ON)	
8.	110-573	4	BOLT-ON CLAMP (1", SOLD PER SET)	
9.	156-134	1	HYD LINE (-16)	
10.	156-135	1	HYD LINE (-16)	
11.	111-011	4	WORM CLAMP (1" TO 1-3/4")	
12.	116-094	AR	BULK HOSE (1", SOLD PER 1")	USE 2 @ 9.5"
13.	155-230	2	S/O COUPLER (16S-16H45)	
14.	159-414	-	CASE DRAIN MANIFOLD	
15.	105-106	4	BOLT (1/4-NC X 2")	
16.	153-118	1	HOSE (120FX45-291"-3000)	
17.	158-905	2	HYD MOTOR - (THRUST)	
	190-765	-	SEAL REPAIR KIT	
	217-408	-	SOLENOID VALVE (12V)	
	165-893	1	END CAP GASKET	
	126-196	2	CRADLE BEARING	
	499-083	1	VALVE PLATE	
	157-199	1	O-RING (171 D75)	
	126-020	1	BALL BEARING (1.369")	
	157-740	1	LIP SEAL	
	165-894	1	GASKET, FRONT COVER	
	157-200	1	O-RING (153 D75)	
	217-408	1	SOLENOID VALVE (12V)	
18.	154-371	2	CONNECTOR (12S-16045)	
19.	156-299	1	HYD LINE (-16)	
20.	149-397	-	HYD MOTOR (PISTON)	
	191-212	-	SEAL REPAIR KIT	
	217-745	-	CONTROL SOLENOID	
21.	154-269	1	CONNECTOR (12S-120)	
22.	117-331	-	ABRASION SLEEVE (1.75" X 314")	USE W/O HOSE SOCK
	117-610	1	ABRASION SLEEVE (1.75" X 138")	USE WITH HOSE SOCK
23.	117-330	1	ABRASION SLEEVE (1.75" X 289")	
24.	157-017	3	O-RING (O18 D90)	
25.	110-332	2	BOLT-ON CLAMP (1-5/8")	
26.	107-001	2	FLG LK SCREW (M10-1.50 X 25mm)	
27.	117-655	1	ABRASION SLEEVE (1.59" X 38")	
28.	154-457	1	UNION (120-120FX90)	

FOOTNOTES

NOTE

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

CASE DRAIN HYDRAULICS ROTATION AND THRUST PUMPS



A

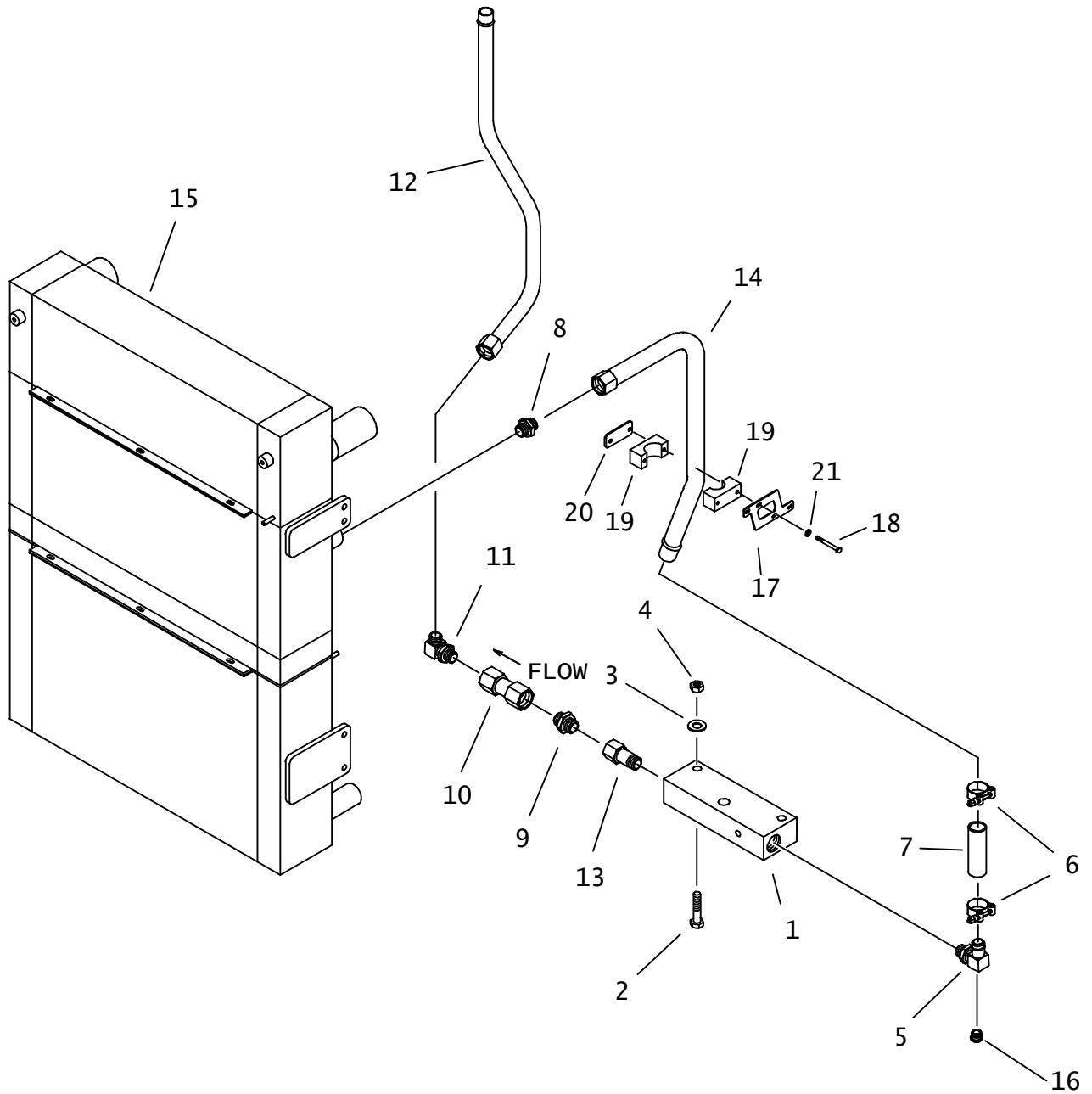
CASE DRAIN HYDRAULICS ROTATION AND THRUST PUMPS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-901	1	HYDRAULIC PUMP (130 CC)	
	190-763		SEAL REPAIR KIT	
2.	149-902	1	HYDRAULIC PUMP (100 CC)	
	190-764		SEAL REPAIR KIT	
3.	322-362	2	BACKUP SPACER	
4.	107-196	4	BOLT (1/4-NC X 3")	
5.	110-852	2	BLT-ON CLP (1.2", SOLD PER SET)	
6.	105-832	4	FLG LOCKNUT (1/4-NC)	
7.	156-133	1	HYD LINE (-20)	
8.	111-011	6	WORM CLAMP (1" TO 1-3/4")	
9.	115-373	AR	BULK HOSE (1-1/4", SOLD PER 1")	USE 1 @ 9.5"
10.	115-281	1	S/D COUPLER (16S-20H45)	
11.	159-414	-	CASE DRAIN MANIFOLD	
12.	514-027	1	S/D COUPLER (12S-20H90)	
13.	115-373	AR	BULK HOSE (1-1/4", SOLD PER 1")	USE 1 @ 15"
14.	514-360	1	S/D BR TEE (16S-20H-20H)	
15.	115-373	AR	BULK HOSE (1-1/4", SOLD PER 1")	USE 1 @ 8"
16.	106-206	2	SCREW (M10-1.50 X 90MM)	
17.	106-390	2	WASHER (M10)	
18.	105-894	2	LOCKNUT (M10-1.50, PRV TRQ, 10.9)	

FOOTNOTES

NOTE
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

OIL COOLER HYDRAULICS



OIL COOLER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	159-414	1	CASE DRAIN MANIFOLD	
2.	106-206	2	SCREW (M10-1.50 X 90MM)	
3.	106-390	2	WASHER (M10)	
4.	105-894	2	LOCKNUT (M10-1.50,PRV TRQ, 10.9)	
5.	514-429	1	S/O COUPLER (20S-24H90-04S)	
6.	111-028	2	T-BOLT CLAMP (1-3/4" TO 2")	
7.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 20"
8.	514-354	1	CONNECTOR (20S-240)	
9.	514-131	1	CONNECTOR (16S-16S)	
10.	158-693	1	FLOW CHECK (16SF-16SF)	
11.	156-895	1	CONNECTOR (16S-20090)	
12.	156-131	-	HYD LINE (-20)	
13.	514-353	1	REDUCER (20S-16SF)	
14.	149-942	1	HYD LINE (-24)	
15.	195-1015	-	COOLER, JT8020 TIER 3	
16.	154-383	1	PLUG (04S)	
17.	308-702	-	CLAMP MOUNT	
18.	105-224	2	BOLT (1/4-NC X 2-1/2")	
19.	111-008	1	BLT-ON CLAMP (1.5", SOLD PER SET)	
20.	322-363	1	WELD PLATE	
21.	105-095	2	WASHER (1/4")	

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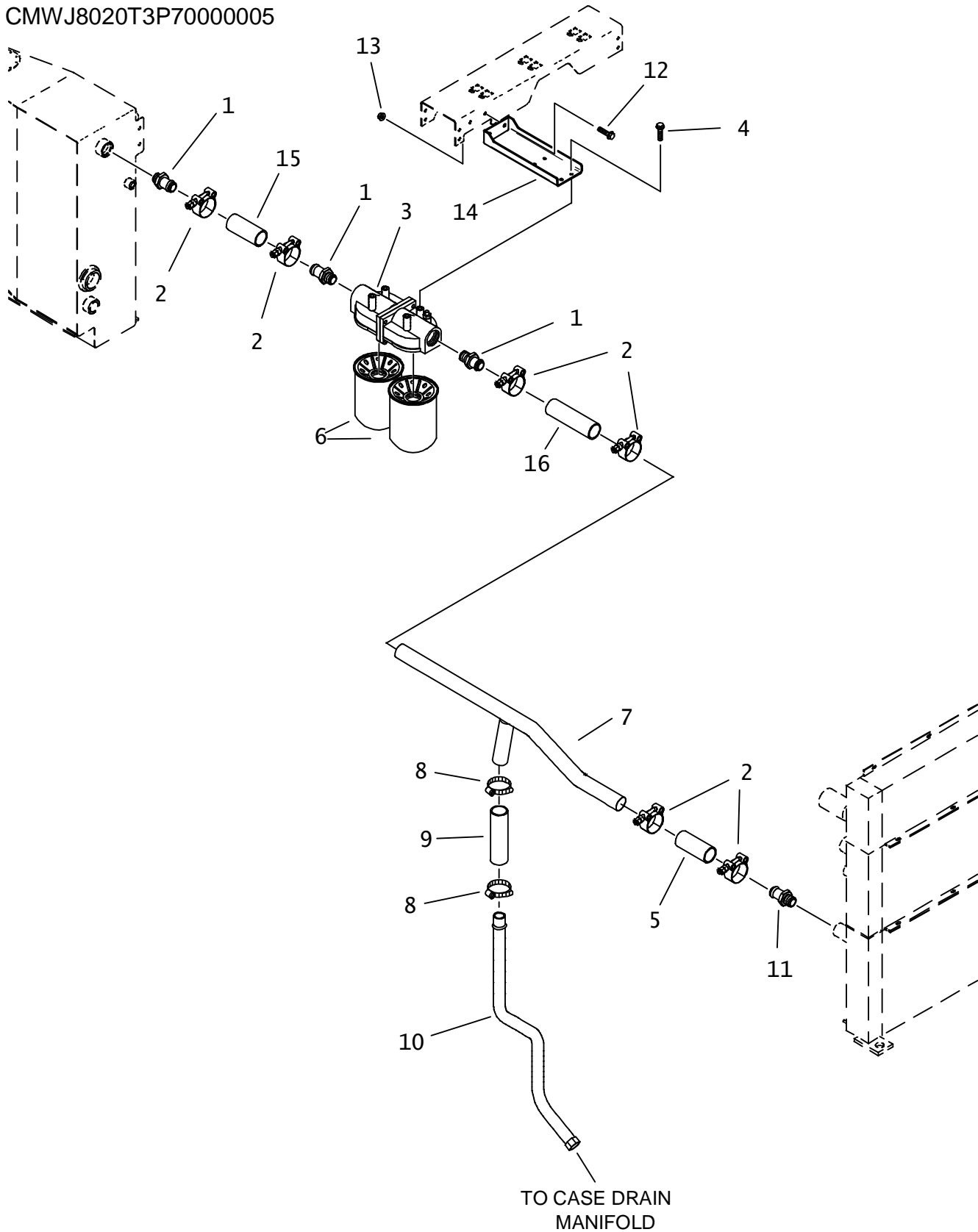
FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

COOLER OUTLET HYDRAULICS

ENDS WITH
CMWJ8020T3P70000005



COOLER OUTLET HYDRAULICS ENDS WITH CMWJ8020T3P70000005

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	514-138	3	S/O COUPLER (24S-24H)	
2.	111-028	6	T-BOLT CLAMP (1-3/4" TO 2")	
3.	159-411	1	FILTER HEAD (20SF-20SF)	
	168-616	1	FILTER HEAD GASKET	
4.	105-825	4	FLG LK BOLT (3/8-NC X .75")	
5.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 6"
6.	159-079	2	FILTER ELEMENT (1-1/2-UNF)	
	153-791	2	FILTER ELEMENT (1-1/2-UNF)	SEE FOOTNOTE 1
7.	149-954	1	HYD LINE (24H)	
8.	111-011	2	WORM CLAMP (1" - 1-3/4")	
9.	116-587	AR	BULK HOSE (1-1/4", SOLD PER 1')	USE 1 @ 12.5"
10.	156-131	1	HYD LINE (-20)	
11.	155-148	1	S/O COUPLER (20S-24H)	
12.	106-724	2	FLG SCREW (M10-1.50 X 25MM)	
13.	106-387	2	FLG NUT (M10-1.50)	
14.	300-2392	1	WELDMENT, HYD OIL FILTER BRACKET	
15.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 14"
16.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 6"

NOT SHOWN:

FOOTNOTES:

1. USE 153-792 ELEMENT FOR NORMAL MAINTENCE. USE 153-791 ELEMENT AFTER HOSE OR COMPONENT REPLACEMENT.

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

COOLER OUTLET HYDRAULICS BEGINS WITH S/N CMWJ8020T3P70000006

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	514-138	2	S/O COUPLER (24S-24H)	
2.	111-028	6	T-BOLT CLAMP (1-3/4" TO 2")	
3.	159-411	1	FILTER HEAD (20SF-20SF)	
	168-616	1	FILTER HEAD GASKET	
4.	105-825	4	FLG LK BOLT (3/8-NC X .75")	
5.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 6"
6.	153-792	2	FILTER ELEMENT (1-1/2-UNF)	
	153-791	2	FILTER ELEMENT (1-1/2-UNF)	SEE FOOTNOTE 1
7.	149-954	1	HYD LINE (24H)	
8.	111-011	2	WORM CLAMP (1" - 1-3/4")	
9.	116-587	AR	BULK HOSE (1-1/4", SOLD PER 1')	USE 1 @ 12.5"
10.	156-131	1	HYD LINE (-20)	
11.	155-148	1	S/O COUPLER (20S-24H)	
12.	106-724	2	FLG SCREW (M10-1.50 X 25MM)	
13.	106-387	2	FLG NUT (M10-1.50)	
14.	300-4530	1	WELDMENT, HYD OIL FILTER BRACKET	
15.	116-588	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 2 @ 9.5"
16.	153-370	1	S/O COUPLER (24S-24H45)	

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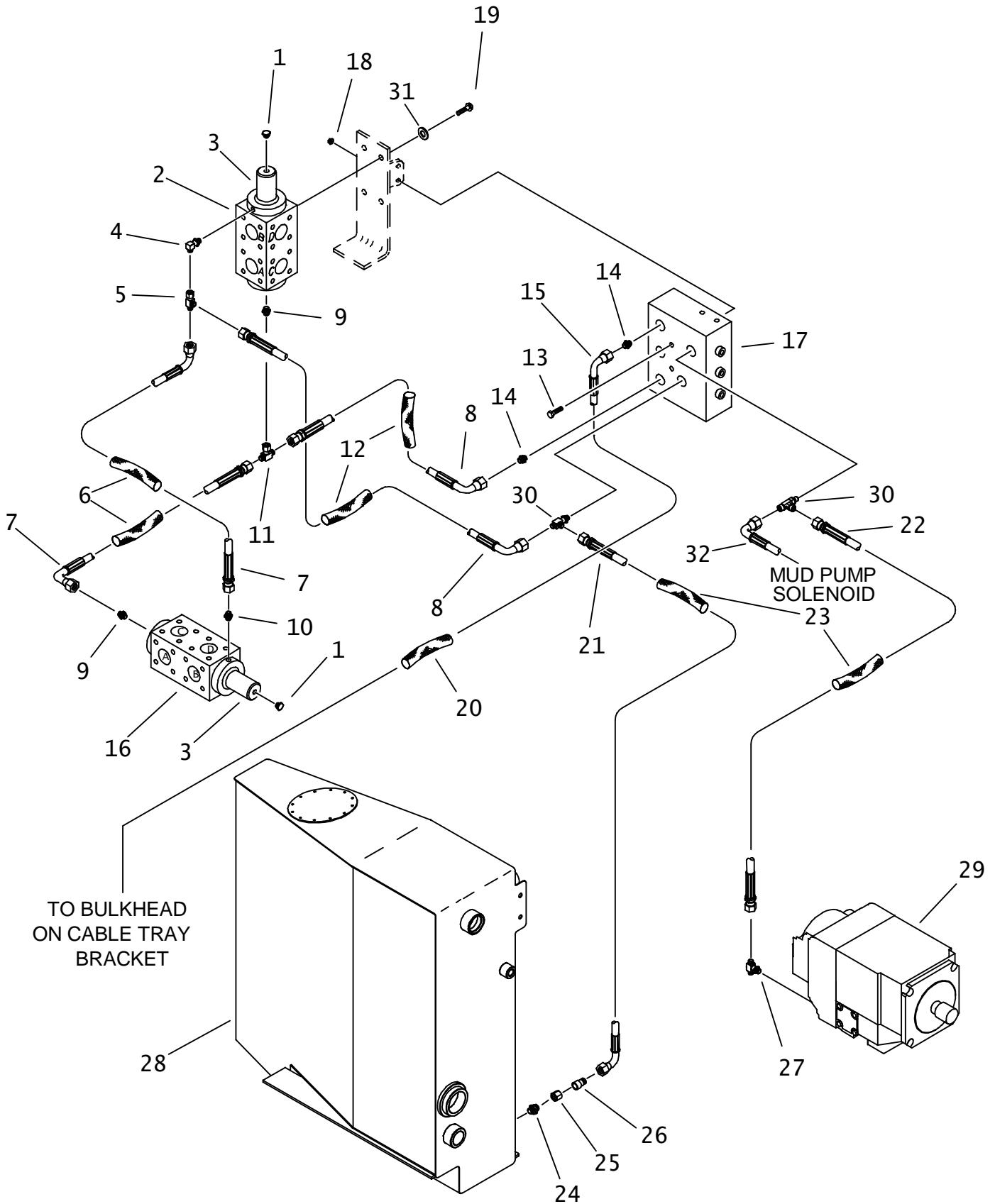
FOOTNOTES:

1. USE 153-792 ELEMENT FOR NORMAL MAINTENCE. USE 153-791 ELEMENT AFTER HOSE OR COMPONENT REPLACEMENT.

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PILOT VALVE HYDRAULICS



PILOT VALVE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	115-153	2	PLUG (04N, SQ)	
2.	516-033	1	SELECTOR VALVE DIVERTER	
3.	159-426	-	SPRING OFFSET KIT	
4.	154-482	1	CONNECTOR (04N-04090)	
5.	154-265	1	UNION RUN TEE (040FX-040-040)	
6.	117-676	2	ABRASION SLEEVE (1" X 30")	
7.	154-727	2	HYD HOSE (040FX90-30"-3000)	
8.	515-041	2	HYD HOSE (040FX90-20"-3000)	
9.	514-005	2	CONNECTOR (040-06N)	
10.	154-339	1	CONNECTOR (04N-040)	
11.	154-379	1	UN BR TEE (040FX-040-040)	
12.	117-672	2	ABRASION SLEEVE (1" X 20")	
13.	105-839	2	SCREW (M10-1.50 X 55MM)	
14.	154-278	2	CONNECTOR (04S-040)	
15.	153-115	1	HOSE (040FX90S-231"-3000)	
16.	516-033	1	SELECTOR VALVE DIVERTER	SEE FOOTNOTE #1
17.	159-194	1	CHARGE MANIFOLD	
18.	106-387	2	FLG LOCKNUT (M10-1.50)	
19.	105-829	8	FLG LK BOLT (1/2-NC X 1")	
20.	117-327	1	ABRASION SLEEVE (1.59"X 231")	USE W/O HOSE SOCK
21.	154-964	1	HYD HOSE (040FX90-70"-3000)	
22.	154-670	1	HYD HOSE (040FX-70"-3000)	
23.	117-702	2	ABRASION SLEEVE (1" X 68")	
24.	154-279	1	CONNECTOR (080-10S)	
25.	154-272	1	REDUCER NUT (080F)	
26.	154-248	1	REDUCER STEM (040)	
27.	154-230	1	BRANCH TEE (06S-040-040)	
28.	300-2394	-	WELDMENT, HYDRAULIC TANK	
29.	149-901	-	HYDRAULIC PUMP (130 CC)	
30.	154-316	2	RUN TEE (04S-040-040)	
31.	106-397	4	WASHER (M12, HARDENED)	
32.	149-482	-	HOSE (040FX90S-217"-3000)	

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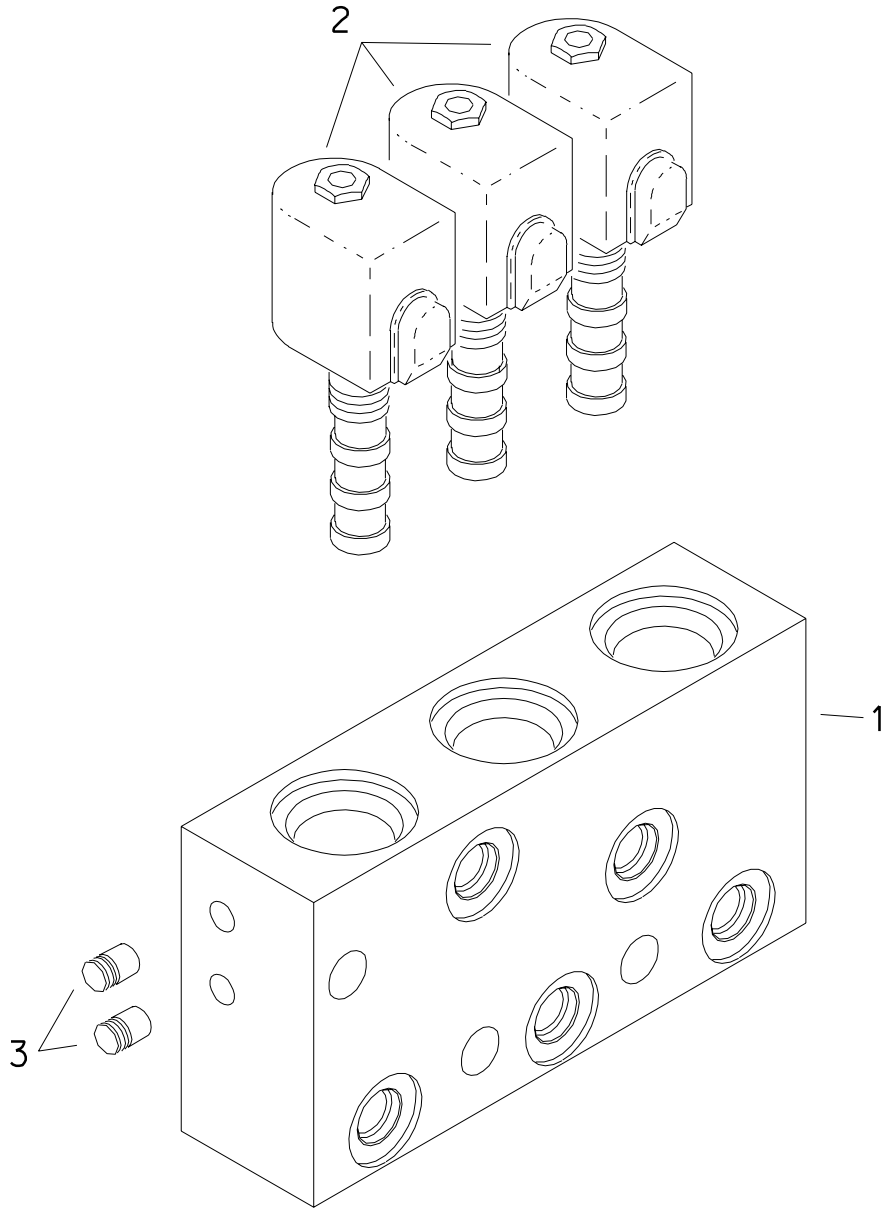
FOOTNOTES:

1. ROTATE "D" TO BE IN LINE WITH FITTING

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

CHARGE MANIFOLD

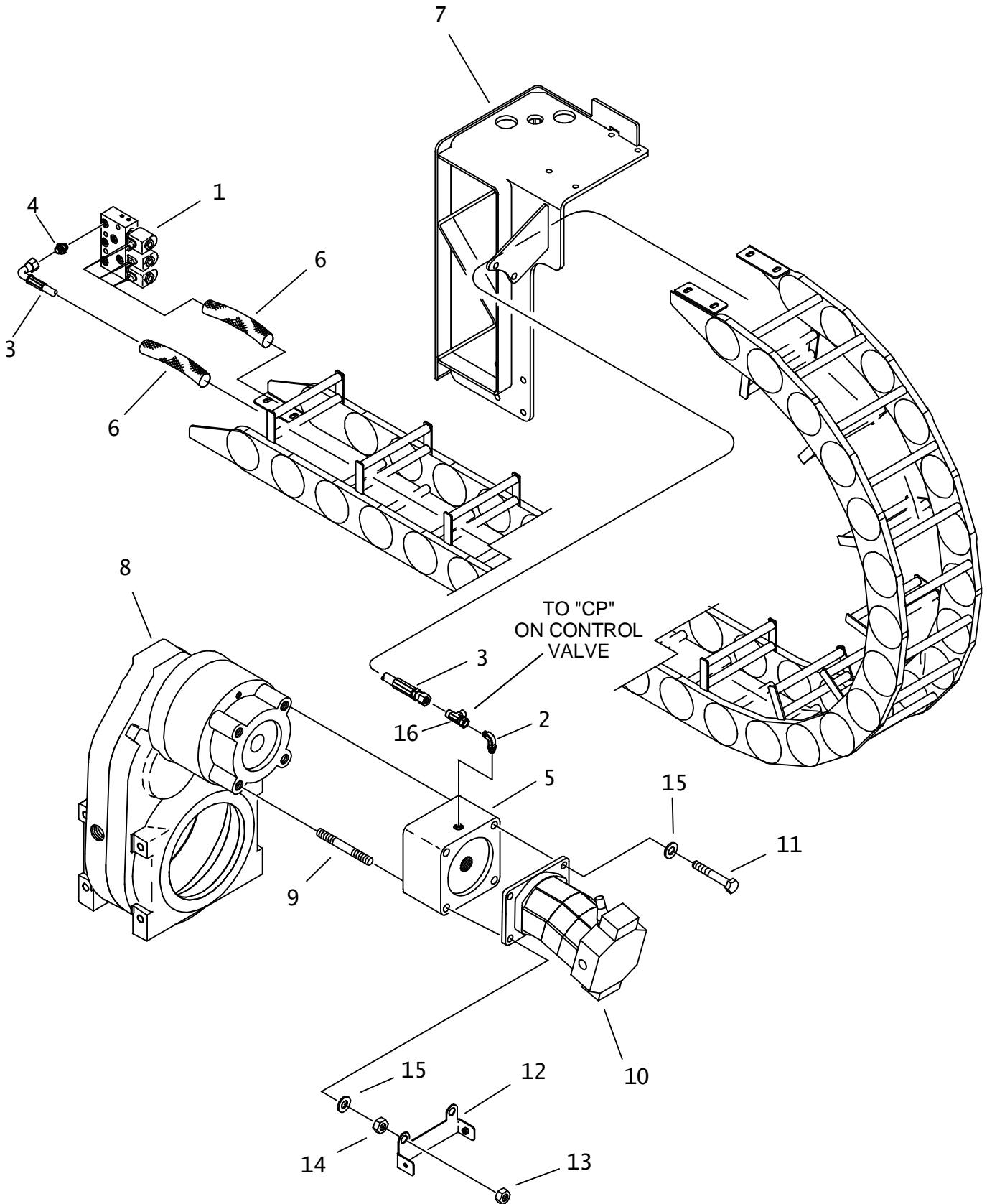


CHARGE MANIFOLD

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	159-194		CHARGE MANIFOLD	INCL REF NO.'S 1 THRU 3
1.	159-149	1	MANIFOLD BLOCK	
2.	158-636	3	SOLENOID VALVE CARTRIDGE	TORQUE TO 30 FT LBS
	500-756		SEAL REPAIR KIT	
	217-770		SOLENOID COIL	
3.	110-264	4	EXPANDER PLUG (.275")	

FOOTNOTES

SPINDLE BRAKE HYDRAULICS



SPINDLE BRAKE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	159-194	-	CHARGE MANIFOLD	
2.	154-252	1	CONNECTOR (04S-04090)	
3.	153-115	1	HOSE (040FX90S-231"-3000)	
4.	154-278	1	CONNECTOR (04S-040)	
5.	160-458	-	MODULAR BRAKE	
6.	117-327	2	ABRASION SLEEVE (1.59" X 231")	
7.	300-5454	-	CABLE TRAY BRACKET	
8.	166-230	-	DRIVE GEARBOX - ROTATION	
	166-634	-	GEARBOX W/PLANETARY	
9.	107-458	2	TIE BOLT	USE LOCTITE 277 OR EQUIVALENT
10.	149-397	-	HYD MOTOR (PISTON)	
	191-212	-	SEAL REPAIR KIT	
	217-745	-	CONTROL SOLENOID	
11.	105-464	2	BOLT (3/4-NC X 7", GD8)	USE LOCTITE 277 OR EQUIVALENT
12.	307-833	-	BRACKET WELDMENT	
13.	105-310	2	JAM NUT (3/4-NC)	
14.	105-953	2	LOCKNUT (3/4-NC)	
15.	106-949	4	WASHER (3/4", HARDENED)	
16.	154-265	1	UNION TEE (040FX-040-040)	SEE FOOTNOTE 1

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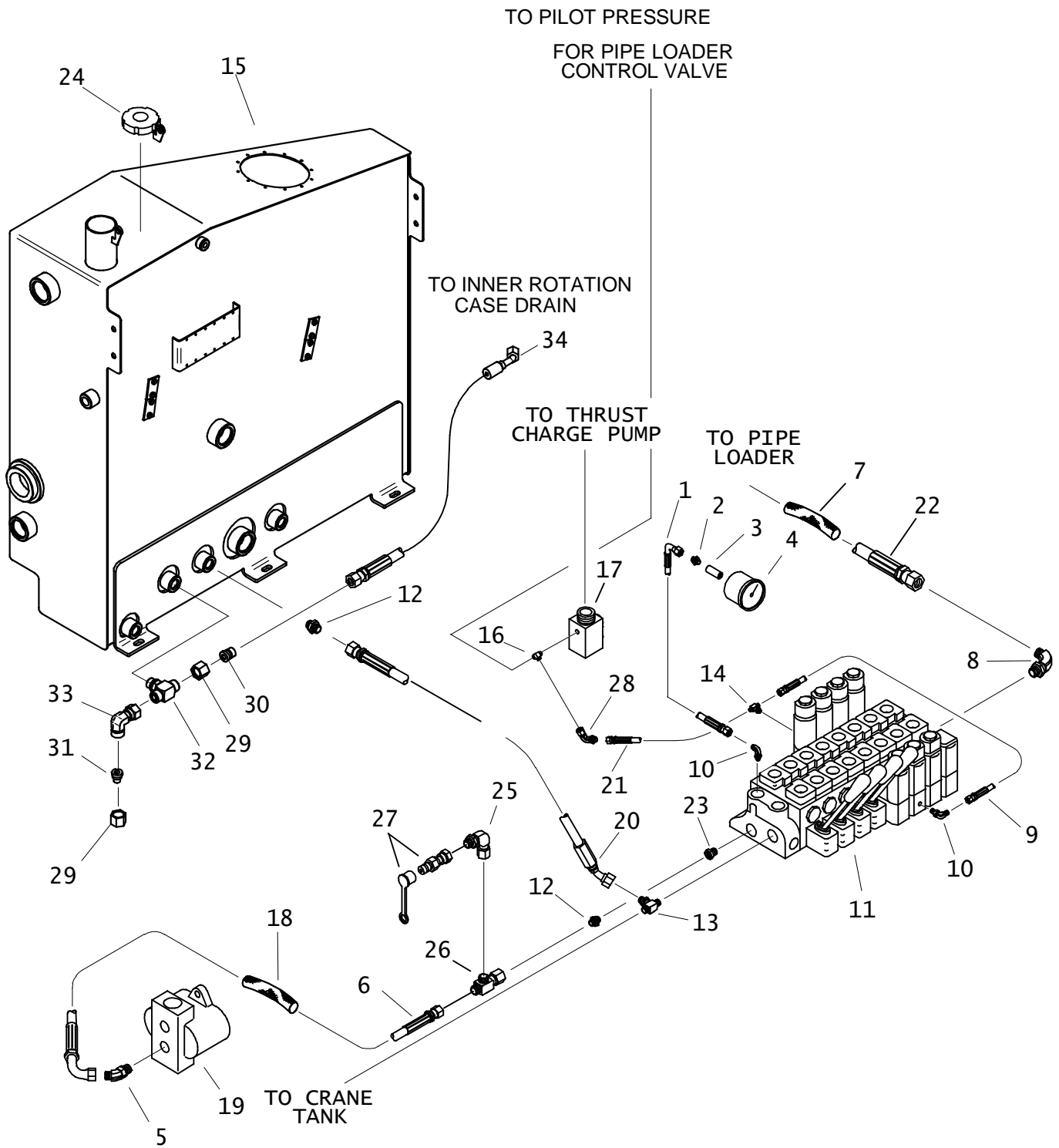
FOOTNOTES:

- I. BEGINS WITH S/N: CMWJ80T3K80000039
 ENDS WITH S/N: CMWJ80T3A90000078

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

AUXILIARY VALVE HYDRAULICS



AUXILIARY VALVE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	515-304	1	HOSE (040FX90S-15"-5000)	
2.	154-339	1	CONNECTOR (04N-040)	
3.	115-170	1	COLLAR (04NF)	
4.	217-552	1	PRESSURE GAUGE (6000 PSI)	
5.	154-470	1	CONNECTOR (100-12S45)	
6.	515-368	1	HOSE (100FX90-68"-3000)	
7.	117-312	1	ABRASION SLEEVE (1.59" X 80")	
8.	154-298	1	CONNECTOR (10S-10090)	JT
	154-399	1	CONNECTOR (10S-10045)	AT
9.	515-735	1	HOSE (040FX-22"-3000)	
10.	154-252	2	CONNECTOR (04S-04090)	
11.	153-215	-	HYDRAULIC VALVE	BEFORE SN. CMWJT100JA0000015
	150-2730	-	HYDRAULIC VALVE	AFTER SN. CMWJT100CA0000016
12.	154-301	2	CONNECTOR (10S-100)	JT
13.	154-370	1	RUN TEE (12S-100-100)	
14.	154-293	1	BRANCH TEE (04S-040-040)	
15.	300-2394	1	WELDMENT, HYDRAULIC TANK JT	
	300-8281	1	WELDMENT, HYDRAULIC TANK AT	
16.	154-230	1	BRANCH TEE (06S-040-040)	
17.	149-845	-	REMOTE FILTRATION KIT (75/100)	
18.	115-938	1	ABRASION SLEEVE (1.59" X 66")	
19.	158-490	-	HYD PUMP	
20.	515-604	1	HOSE (100FX45-20"-3000)	
21.	155-484	1	HOSE (040FX-16"-3000)	
22.	154-986	1	HOSE (100FX90-80"-3000)	
23.	510-017	1	REDUCER (12S-10SF)	
24.	111-046	-	LOCKING CAP (NON-VENTED)	
25.	154-315	1	CONNECTOR (100-100FX90)	
26.	154-488	1	UN RUN TEE (100FX-100-100)	
27.	159-159	1	QDC ADAPTER (02-100FX)	
28.	154-255	1	UNION (040-040FX90)	
29.	154-310	2	REDUCER NUT (100F)	AT
30.	154-312	1	REDUCER STEM (080)	AT
31.	154-311	1	REDUCER STEM (040)	AT
32.	154-318	1	BRANCH TEE (10S-100-100)	AT & REFER TO FOOTNOTE 1
33.	154-315	1	UNION (080-080FX90)	AT
34.	150-2826	1	HOSE (080FX45-92"-3000)	AT

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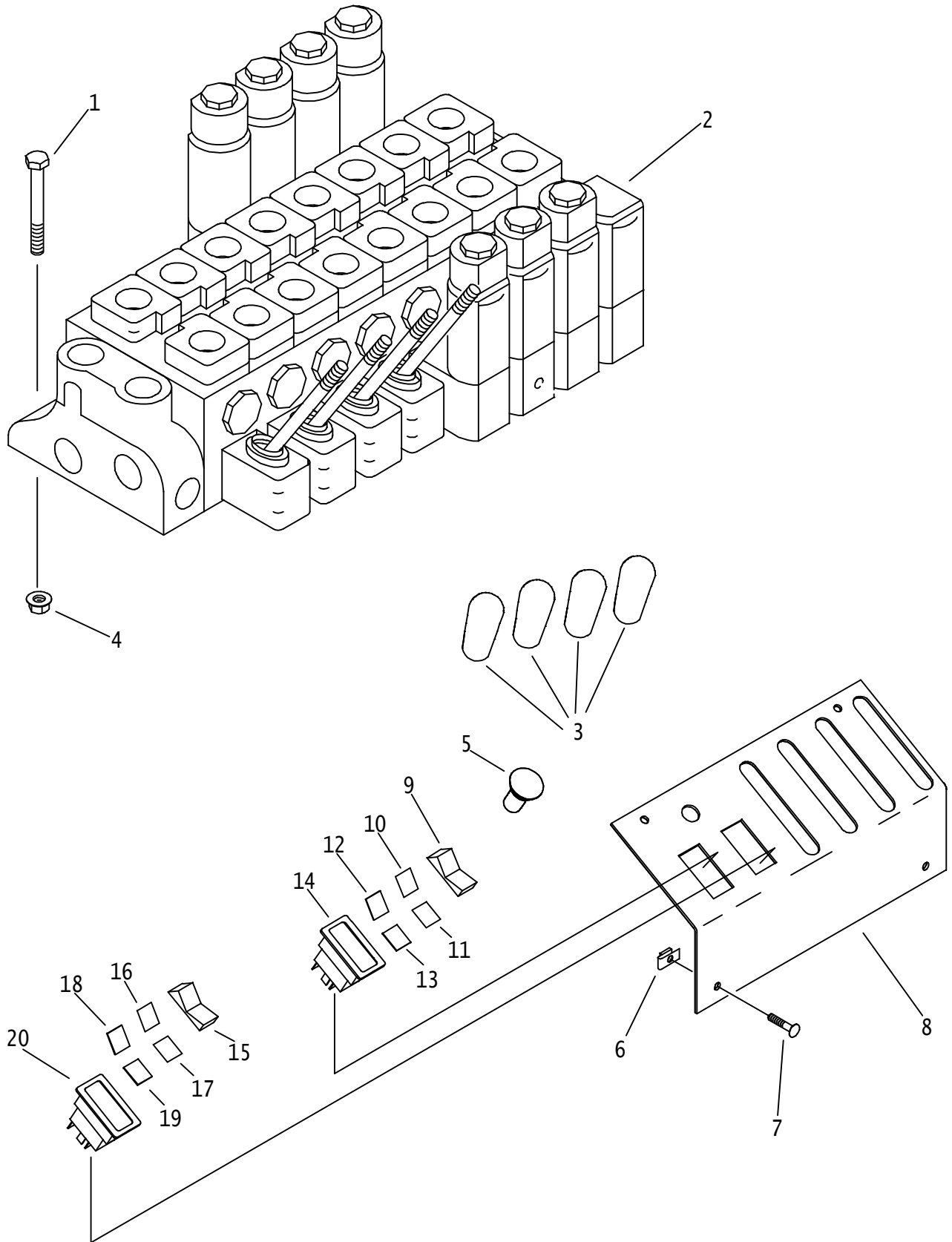
FOOTNOTES:

- I. FOR "AT" PURPOSES REPLACE REF. #12 (154-301) WITH REF. #32 (154-318).

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

AUXILIARY VALVE



AUXILIARY VALVE

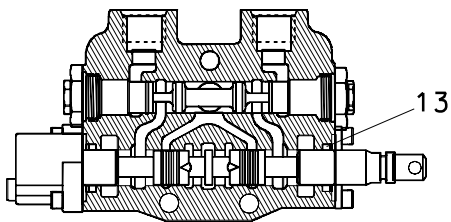
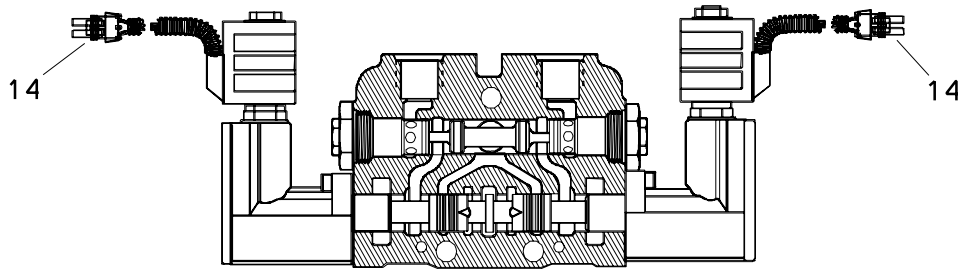
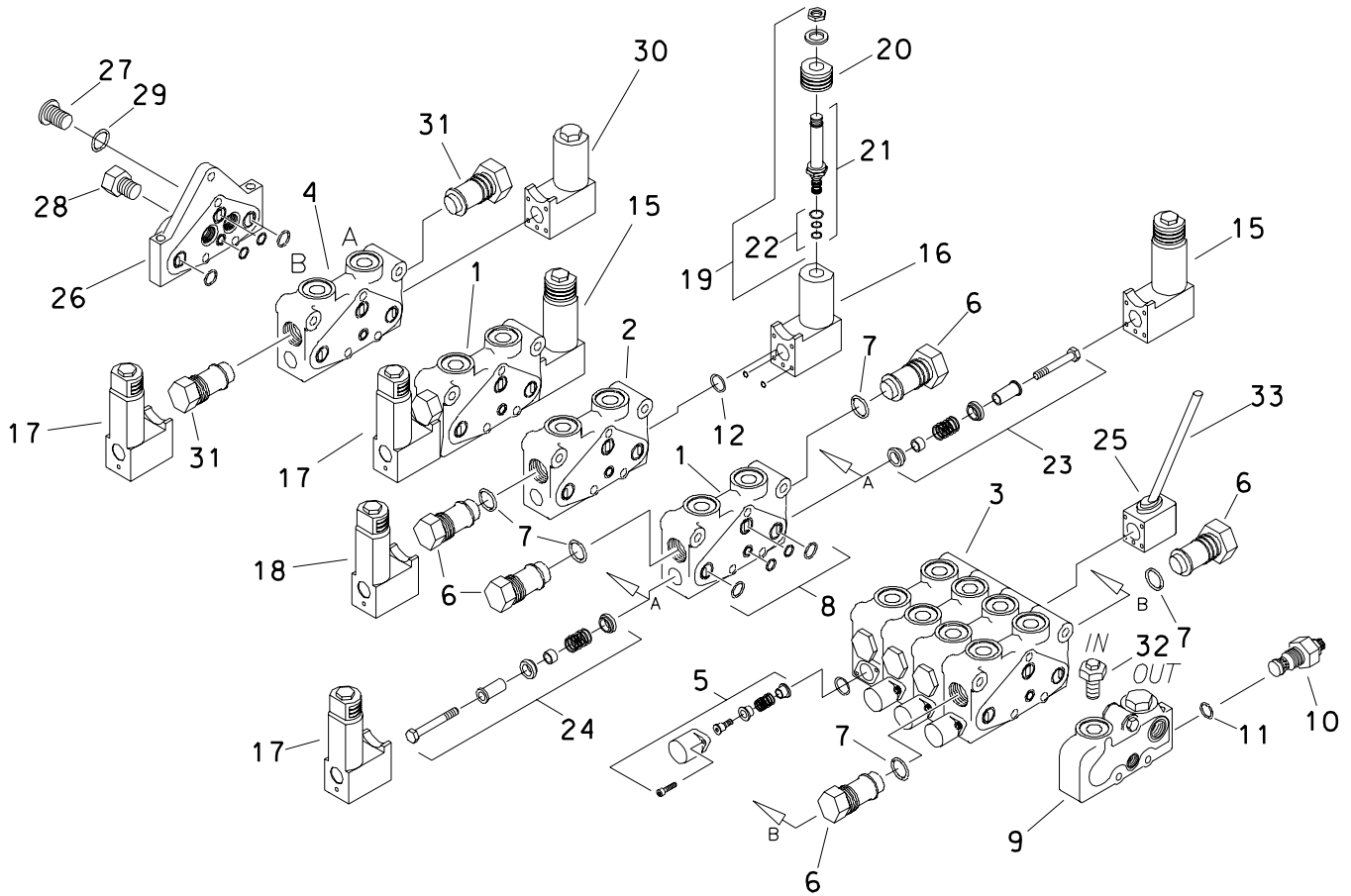
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-330	2	SCREW (M8-1.25 X 70MM)	
2.	153-215	1	HYDRAULIC VALVE	BEFORE SN. CMWJT100JA0000015
	150-2730	1	HYDRAULIC VALVE	AFTER SN. CMWJT100CA0000016
3.	110-283	4	KNOB (3/8-NC, BLACK)	
4.	106-386	3	FLG LOCKNUT (M8-1.25)	
5.	217-206	1	BUTTON SWITCH (SPST)	
6.	106-574	4	CLIP NUT (M6-1.00)	
7.	106-640	4	SCREW (M6-1.00 X 20MM, BUT SOC)	
8.	349-752	1	VALVE COVER	
9.	217-925	1	ROCKER SWITCH (ACTUATOR)	
10.	217-138	1	ICON (WHT) FAST	
11.	217-139	1	ICON (WHT) SLOW	
12.	217-156	1	DIFFUSION LENS (GREEN)	
13.	217-158	1	DIFFUSION LENS (WHITE)	
14.	217-228	1	ROCKER SW (DPDT) {ON}-OFF-{ON}	THROTTLE
15.	217-925	1	ROCKER SWITCH (ACTUATOR)	
16.	217-136	1	ICON (WHT) ON-START	
17.	217-137	1	ICON (WHT) OFF-STOP	
18.	217-156	1	DIFFUSION LENS (GREEN)	
19.	217-158	1	DIFFUSION LENS (WHITE)	
20.	217-918	1	ROCKER SW (DPDT) ON-ON	WORK LIGHTS

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FOOTNOTES:

NOTE:

HYDRAULIC CONTROL VALVE AUXILIARY

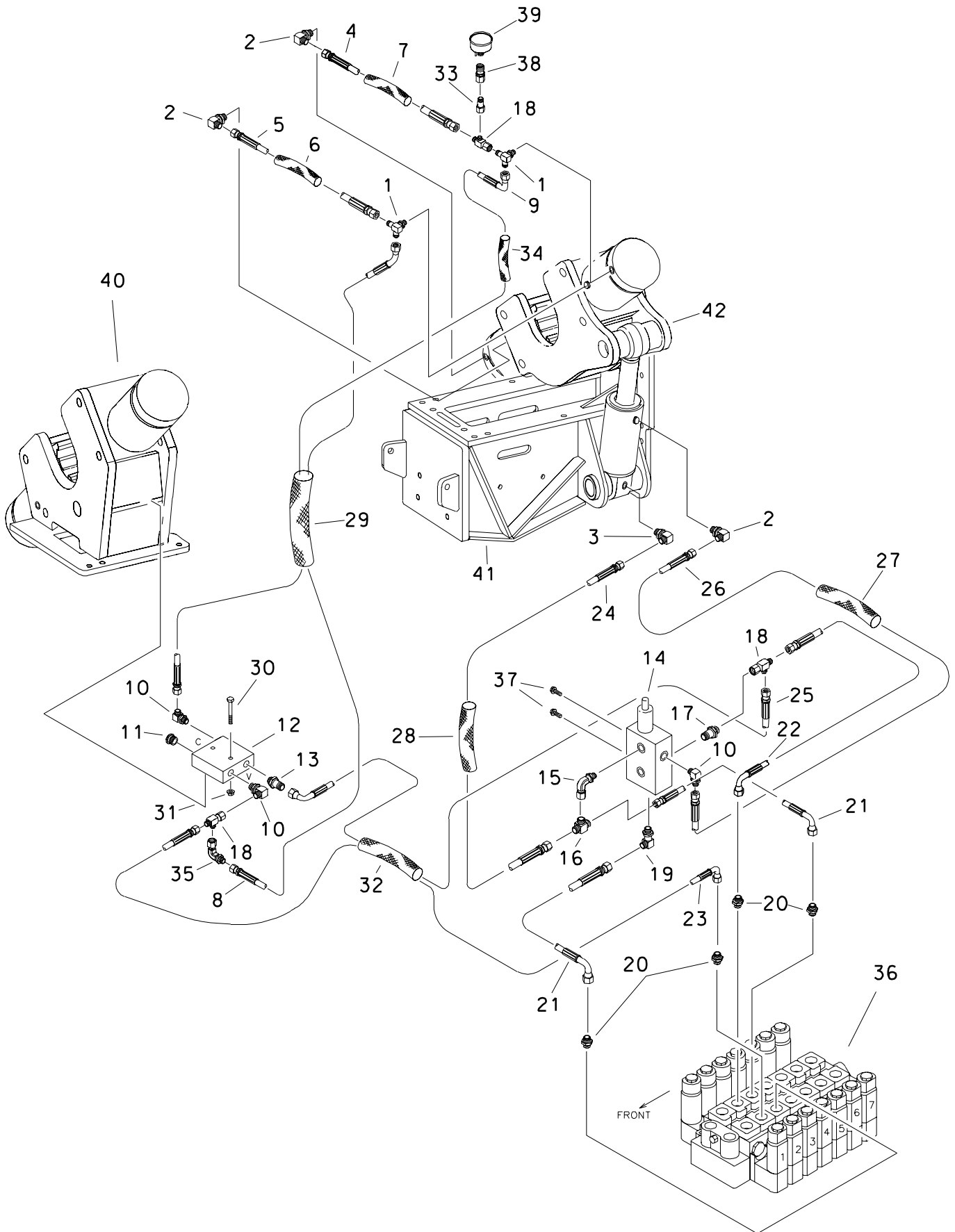


HYDRAULIC CONTROL VALVE AUXILIARY

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	153-215		HYD CONTROL VALVE 8 SPOOL	
1.	499-145	2	VALVE SECTION	
2.	499-146	1	VALVE SECTION	
3.	499-291	4	VALVE SECTION	
4.	499-296	1	VALVE SECTION	
5.	500-592	4	STANDARD SPOOL POSITIONER KIT	
6.	499-029	14	LOCK OUT CARTRIDGE	
7.	499-030	-	LOCK OUT CARTRIDGE SEAL KIT	
8.	500-588	8	SECTIONAL O-RING REPAIR KIT	
9.	500-296	1	INLET COVER	
10.	500-956	1	WH RELIEF CARTRIDGE (3000 PSI)	
11.	500-581	-	SEAL REPAIR KIT	
12.	499-150	-	BONNET SEAL KIT	
13.	500-587	-	SPOOL SEAL REPAIR KIT	
14.	499-151	-	COIL CONNECTOR KIT	
15.	499-156	2	SOLENOID ACTUATOR	
16.	499-157	1	SOLENOID ACTUATOR	
17.	499-158	2	SOLENOID ACTUATOR	
18.	499-159	1	SOLENOID ACTUATOR	
19.	217-949	-	SOLENOID CARTRIDGE KIT	
20.	217-950	-	SOLENOID COIL KIT (W/CONN)	
21.	499-152	-	CARTRIDGE TUBE KIT	
22.	499-153	-	CARTRIDGE SEAL KIT	
23.	499-154	3	SPRING	
24.	499-155	3	SPRING	
25.	159-319	-	RUBBER DUST BOOT	
26.	499-293	1	OUTLET COVER	
27.	500-302	1	PLUG (12S, SOC)	
28.	499-160	-	POWER BEYOND SLEEVE KIT	
29.	499-055	-	SLEEVE SEAL KIT	
30.	499-294	1	SOLENOID ACTUATOR	
31.	500-587	2	SPOOL SEAL REPAIR KIT	
32.	499-295	1	PLUG	
33.	499-292	4	ENCLOSED HANDLE	

FOOTNOTES

ROTATING CLAMP HYDRAULICS



ROTATING CLAMP HYDRAULICS

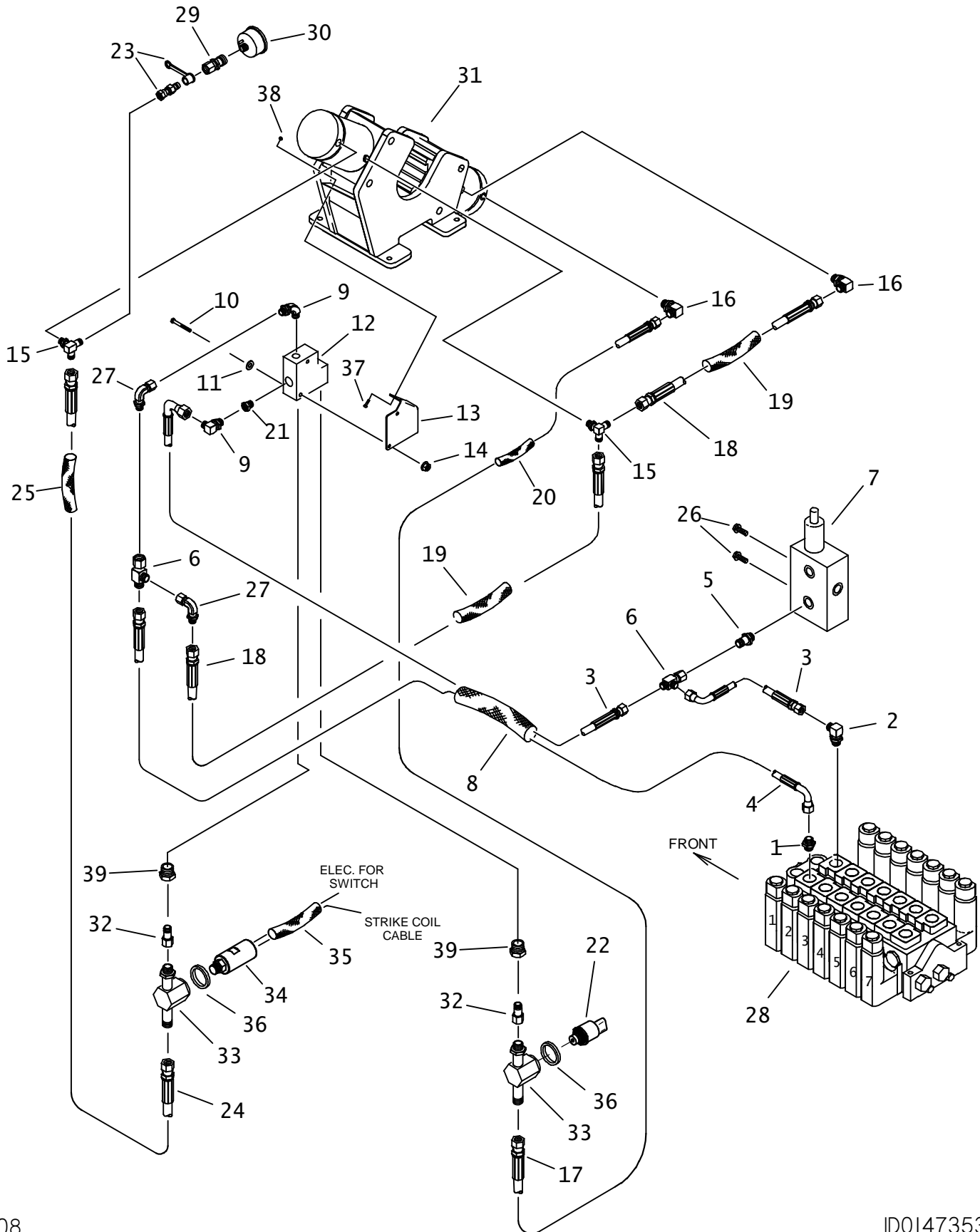
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	514-051	2	BRANCH TEE (08S-060-060)	
2.	154-227	3	CONNECTOR (060-08S90)	
3.	154-225	1	CONNECTOR (060-08S45)	
4.	515-637	1	HOSE (060FX-38"-4000)	
5.	515-638	1	HOSE (060FX-26"-4000)	
6.	117-684	1	ABRASION SLEEVE (1" X 26")	
7.	117-718	1	ABRASION SLEEVE (1" X 36")	
8.	515-635	1	HOSE (060FX45-22"-4000)	
9.	515-636	1	HOSE (060FX90S-28"-4000)	
10.	154-342	3	CONNECTOR (06S-06090)	
11.	155-130	1	PLUG (06S)	
12.	155-623	1	DOUBLE LOCKOUT VALVE	
13.	154-221	1	CONNECTOR (06S-060)	
14.	159-279	1	SEQUENCE VALVE	
15.	154-460	1	CONNECTOR (06S-06SF90)	
16.	154-346	1	BRANCH TEE (06S-060-060)	
17.	158-813	1	FLOW CHECK VALVE (06S-060)	
18.	154-344	3	UN RUN TEE (060FX-060-060)	
19.	149-039	1	CONNECTOR (04N-06090)	
20.	154-369	4	CONNECTOR (060-10S)	
21.	515-632	2	HOSE (060FX90-40"-4000)	
22.	515-630	1	HOSE (060FX90-33"-4000)	
23.	515-629	1	HOSE (060FX90-75"-4000)	
24.	515-634	1	HOSE (060FX-20"-4000)	
25.	515-631	1	HOSE (060FX90-47"-4000)	
26.	515-627	1	HOSE (060FX-13"-4000)	
27.	117-671	1	ABRASION SLEEVE (1" X 12")	
28.	117-672	1	ABRASION SLEEVE (1.00" X 20")	
29.	117-675	1	ABRASION SLEEVE (1.75" X 24")	
30.	502-651	2	SCREW (M6-1.00 X 35MM)	
31.	106-385	2	FLG LOCKNUT (M6-1.00)	
32.	115-737	1	ABRASION SLEEVE (1.59" X 40")	
33.	159-157	1	QDC ADAPTER (02-060F)	
34.	117-670	1	ABRASION SLEEVE (1.00" X 10")	
35.	154-228	1	UNION (060-060FX90)	
36.	153-252	-	HYD CONTROL VALVE (7-SPOOL)	
37.	105-826	2	FLG LOCK BOLT (3/8-NC X 1")	
38.	159-146	1	QDC BODY (02-04NF)	
39.	215-116	1	PRESSURE GAUGE (5000 PSI)	
40.	370-276	-	STATIONARY CLAMP	
41.	349-675	-	FRONT FRAME	ENDS WITH S/N: 2V2567
	314-557	-	FRONT FRAME	BEGINS WITH S/N: 2W0856
42.	370-275	-	ROTATION CLAMP	

FOOTNOTES

NOTE
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

STATIONARY CLAMP HYDRAULICS

ENDS WITH CMW S/N: CMWJT100L9000001



STATIONARY CLAMP HYDRAULICS

ENDS WITH CMW S/N: CMWJT100L90000001

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-369	1	CONNECTOR (060-10S)	
2.	154-421	1	CONNECTOR (060-10S90)	
3.	515-633	2	HOSE (060FX90-38"-4000)	
4.	515-629	1	HOSE (060FX90-75"-4000)	
5.	158-813	1	FLOW CHECK VALVE (06S-060)	
6.	154-344	2	UN RUN TEE (060FX-060-060)	
7.	159-279	-	SEQUENCE VALVE	
8.	115-737	1	ABRASION SLEEVE (1.59" X 40")	
9.	154-342	2	CONNECTOR (06S-06090)	
10.	106-332	2	SCREW (M10-1.50 X 70MM)	
11.	106-390	2	WASHER (M10)	
12.	149-791	1	HYDRAULIC CONTROL VALVE	USE SERVICE PARTS: 500-2041 SEAL KIT & 500-2042 SEAL
13.	313-946	1	MOUNT BRACKET	
14.	105-894	2	LOCKNUT(M10-1.50, PRV TRQ,10.9)	
15.	514-051	2	BRANCH TEE (08S-060-060)	
16.	154-227	2	CONNECTOR (060-08S90)	
17.	515-637	1	HOSE (060FX-38"-4000)	
18.	515-638	2	HOSE (060FX-26"-4000)	
19.	117-684	2	ABRASION SLEEVE (1" X 26")	
20.	117-718	1	ABRASION SLEEVE (1" X 36")	
21.	155-171	1	REDUCER (10S-06SF)	
22.	215-1489	1	PRESSURE SWITCH (2850PSI)	
23.	159-157	1	QDC ADAPTER (02-060F)	
	159-148		DUST CAP (1/8")	
24.	154-755	1	HOSE (060FX-34"-3000)	
25.	117-412	1	ABRASION SLEEVE (1.00" X 34")	
26.	105-826	2	FLG LOCK BOLT (3/8-NC X 1")	
27.	154-228	2	UNION (060-060FX90)	
28.	150-2731	1	HYD CONTROL VALVE (8-SECTION)	BEGINS WITH S/N
	153-252	1	HYD CONTROL VALVE (7-SPOOL)	ENDS WITH S/N
29.	159-146	1	QDC BODY (02-04NF)	
30.	215-116	1	PRESSURE GAUGE (5000PSI)	
31.	370-276	-	STATIONARY CLAMP	
32.	155-254	2	REDUCER (06S-04SF)	
33.	149-843	2	TEE (04S-06SF-060)	
34.	215-1204	1	PRESSURE SWITCH (1850PSI)	
35.	117-679	1	ABRASION SLEEVE (1.59" X 32")	
36.	155-705	1	O-RING (906 D90)	
37.	106-231	2	SCREW (M6-1.00 X 16MM)	
38.	106-385	2	FLG LOCKNUT (M6-1.00)	
39.	155-163	2	REDUCER (08S-06SF)	

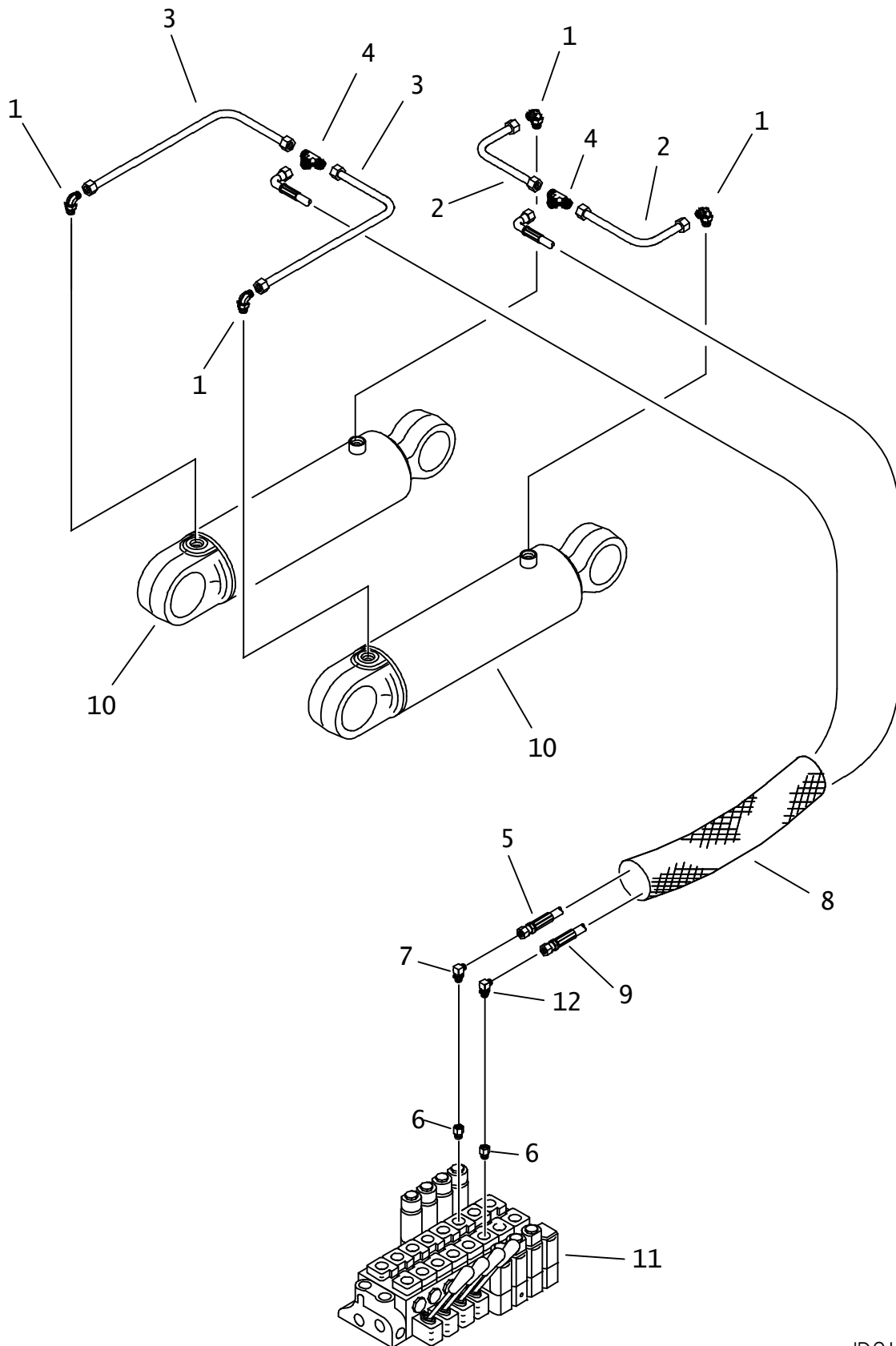
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PIVOT FRONT LIFT HYDRAULICS



PIVOT FRONT LINE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-227	4	CONNECTOR (060-08S90)	
2.	156-156	2	HYD LINE (-06)	
3.	156-157	2	HYD LINE (-06)	
4.	154-437	2	TEE (060-060-060)	
5.	153-121	1	HOSE (060FX90S-74"-3000)	
6.	155-171	2	REDUCER (10S-06SF)	
7.	514-436	1	CONNECTOR (06S-06090, ORF)	FOR "AT" APPLICATION, QUANTITY IS 2
8.	117-761	1	ABRASION SLEEVE (1.59" X 70")	
9.	153-122	1	HOSE (060FX90S-77"-3000)	
10.	151-047	-	CYL (3.5" X 2" X 12")	
11.	153-215	-	HYDRAULIC VALVE	BEFORE SN. CMWJT100JA0000015
	150-2730	-	HYDRAULIC VALVE	AFTER SN. CMWJT100CA0000016
12.	514-437	1	CONNECTOR (06S-06045, ORF)	JT ONLY, USE REF #7 FOR "AT"

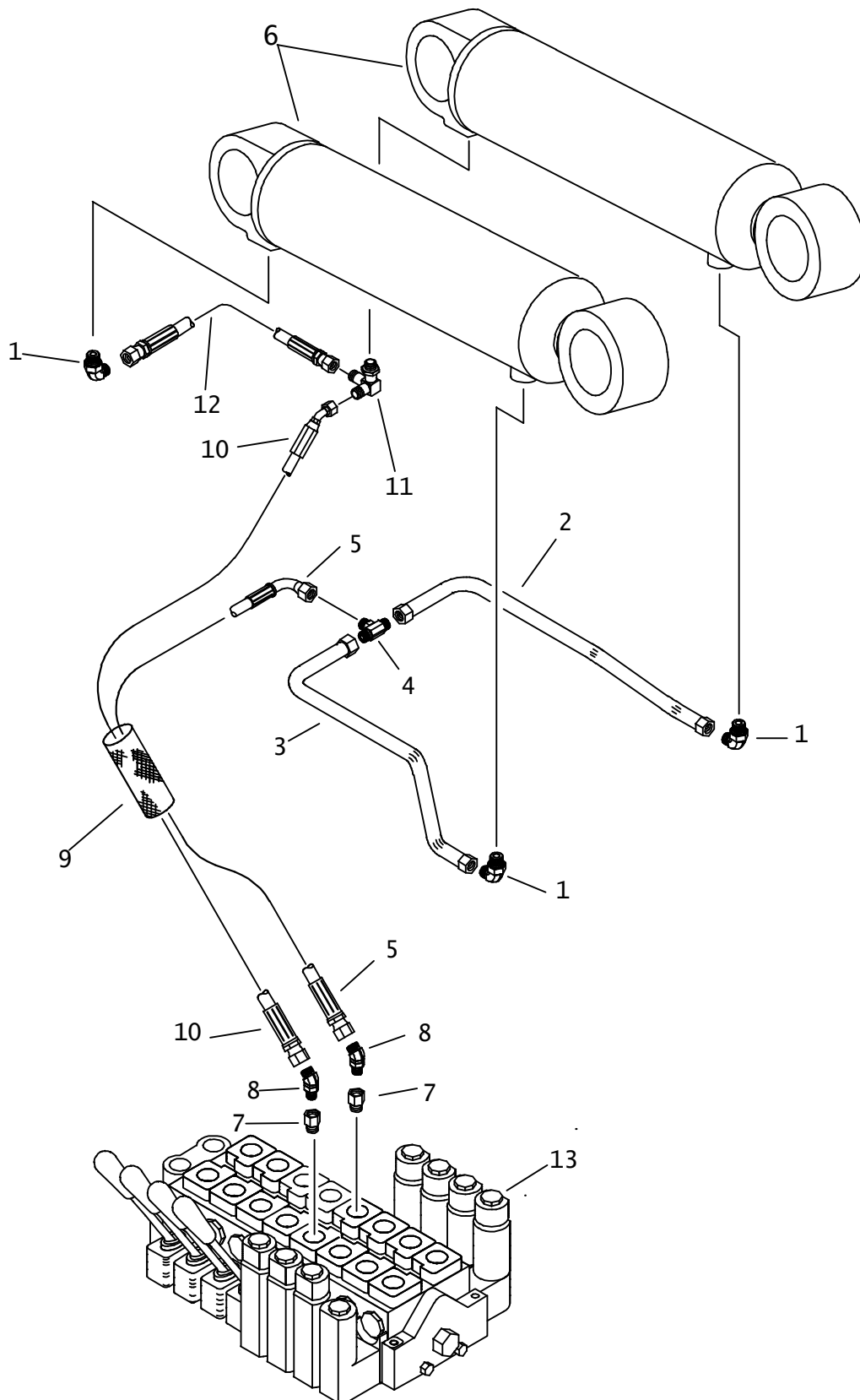
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PIVOT REAR LIFT HYDRAULICS



PIVOT REAR LIFT HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-227	3	CONNECTOR (060-08S90)	
2.	156-158	1	HYD LINE (060FX)	
3.	156-159	1	HYD LINE (-06)	
4.	154-437	1	TEE (060-060-060)	
5.	515-411	1	HOSE (060FX90-118"-3000)	
6.	151-047	-	CYL (3.5" X 2" X 12")	
7.	155-171	2	REDUCER (10S-06SF)	
8.	514-437	2	CONNECTOR (06S-06045,ORF)	
9.	117-674	1	ABRASION SLEEVE (1.59" X 122")	
10.	515-351	1	HOSE (060FX45S-114"-3000)	
11.	514-051	1	BRANCH TEE (08S-060-060)	
12.	515-354	1	HOSE (060FX-10.5"-3000)	
13.	153-215	-	HYDRAULIC VALVE	

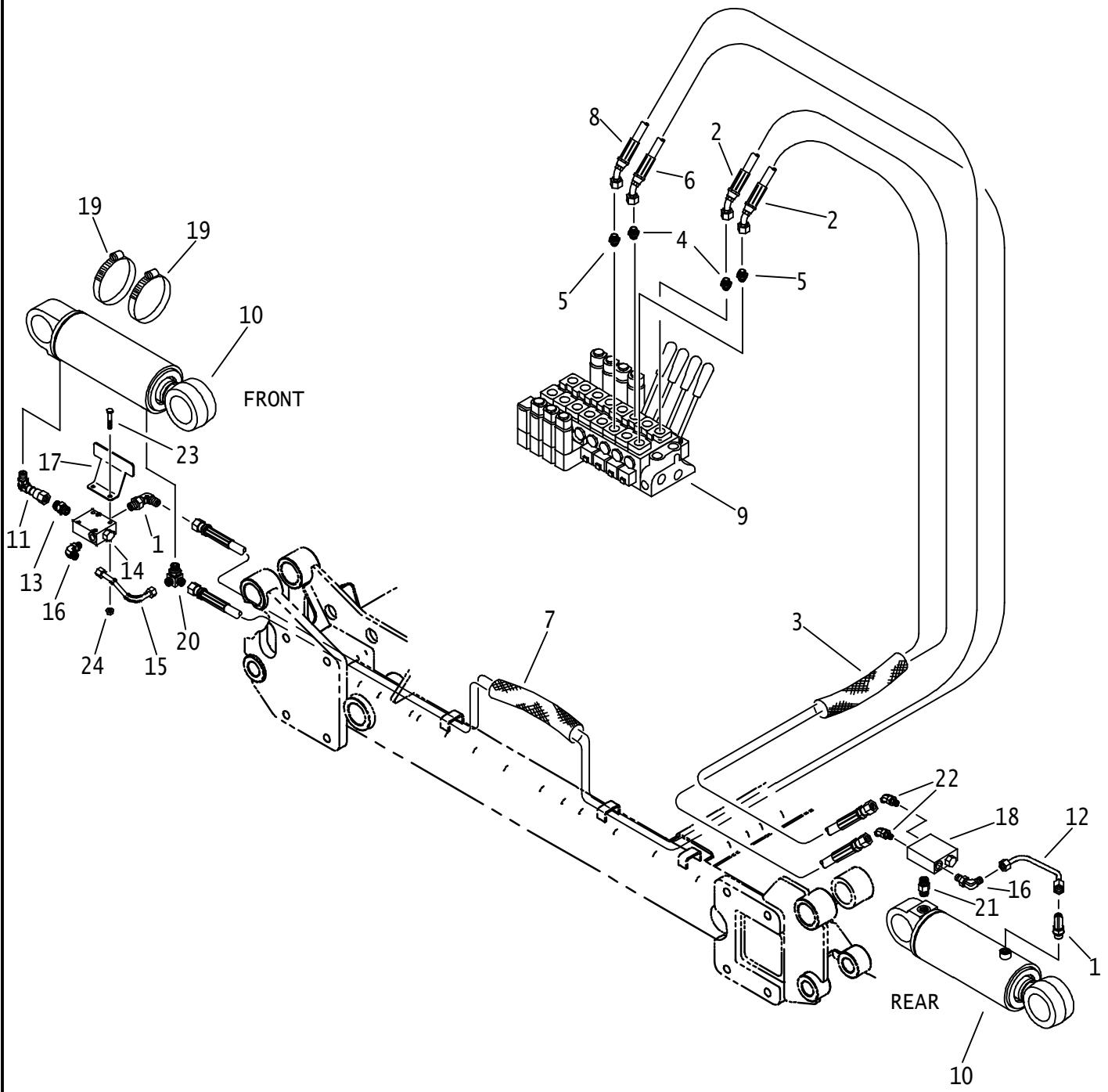
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

LEFT STABILIZER HYDRAULICS



LEFT STABILIZER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-227	2	CONNECTOR (060-08S90)	
2.	515-410	2	HOSE (060FX45-118"-3000)	
3.	117-674	1	ABRASION SLEEVE (1.59" X 122")	
4.	154-369	2	CONNECTOR (060-10S)	
5.	514-352	2	CONNECTOR (060-10S, ORF)	
6.	515-559	1	HOSE (060FX45-153"-3000)	
7.	117-771	1	ABRASION SLEEVE (1.59" X 155")	
8.	515-558	1	HOSE (060FX45-165"-3000)	
9.	153-215	1	HYD CONTROL VALVE 8 SPOOL	BEFORE SN. CMWJT100JA0000015
	150-2730	1	HYD CONTROL VALVE 8 SPOOL	AFTER SN. CMWJT100CA0000016
10.	151-095	1	CYL (4" X 2.25" X 8")	
11.	154-418	1	UNION (08S-080FX90)	
12.	149-090	1	HYD LINE (-06)	
13.	154-233	1	CONNECTOR (08S-080)	
14.	159-487	1	CHECK VALVE	
15.	149-091	1	HYD LINE (-06)	
16.	154-342	2	CONNECTOR (06S-06090)	
17.	370-363	1	CLAMP BRACKET	
18.	159-482	1	CHECK VALVE	
19.	110-391	2	WORM CLAMP (4-3/4" TO 5-5/8")	
20.	514-051	1	BRANCH TEE (08S-060-060)	
21.	154-466	1	CONNECTOR (08S-08S)	
22.	154-224	2	CONNECTOR (06S-06045)	
23.	106-932	2	SCREW (M8-1.25 X 45MM)	
24.	106-386	2	FLG LOCKNUT (M8-1.25)	

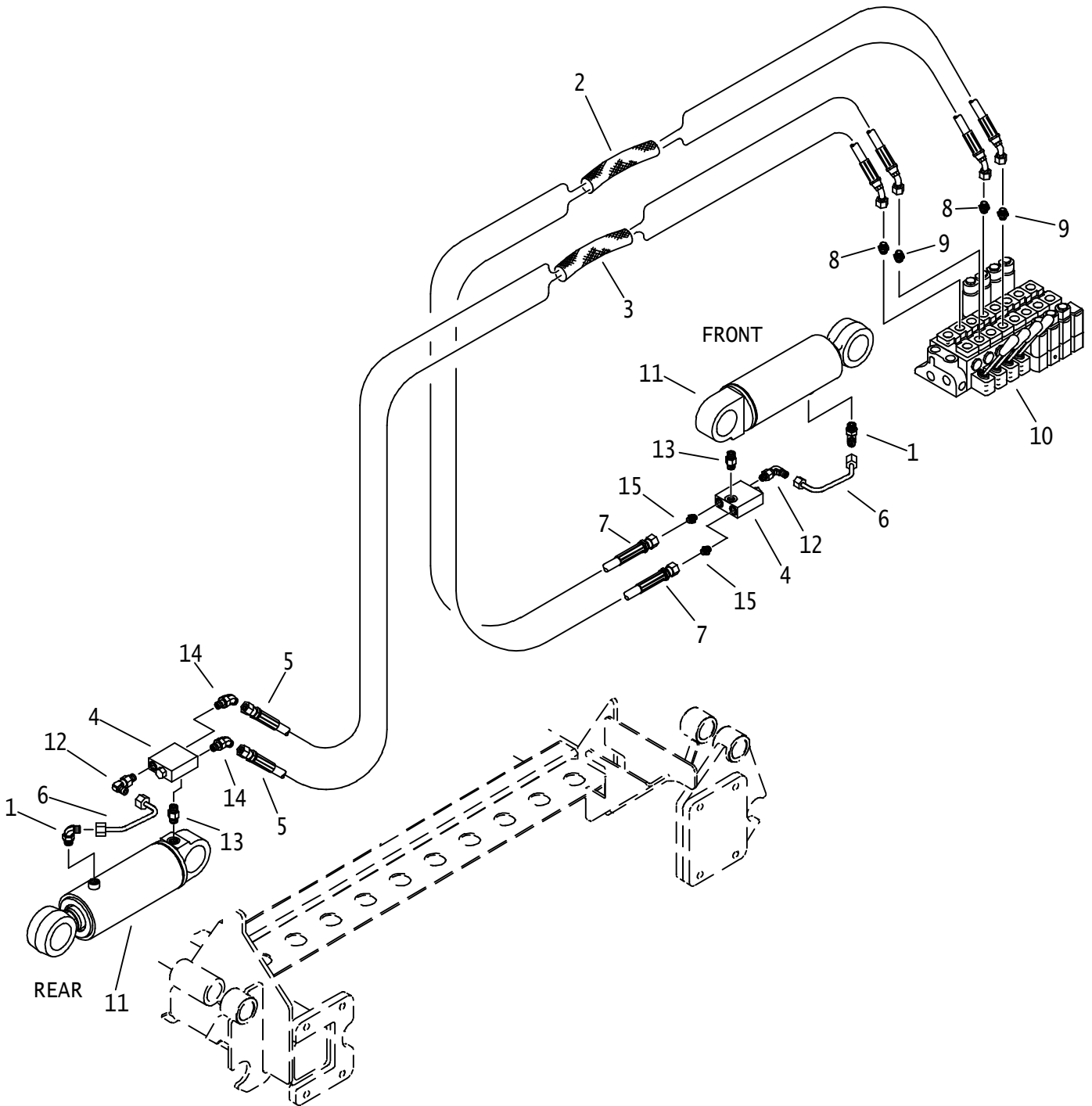
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

RIGHT STABILIZER HYDRAULICS



RIGHT STABILIZER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-227	2	CONNECTOR (060-08S90)	
2.	116-633	1	ABRASION SLEEVE (1.59" X 115")	
3.	115-938	1	ABRASION SLEEVE (1.59" X 66")	
4.	159-482	2	CHECK VALVE	
5.	154-969	2	HOSE (060FX45-58"-3000)	
6.	149-090	2	HYD LINE (-06)	
7.	515-560	2	HOSE (060FX45-106"-3000)	
8.	514-352	2	CONNECTOR (060-10S ORF)	
9.	154-369	2	CONNECTOR (060-10S)	
10.	153-215	1	HYD CONTROL VALVE 8 SPOOL	JT
	150-2730	1	HYD CONTROL VALVE 8 SPOOL	AT
11.	151-095	1	CYL (4" X 2.25 X 8")	
12.	154-342	2	CONNECTOR (06S-06090)	
13.	154-466	2	CONNECTOR (08S-08S)	
14.	154-224	2	CONNECTOR (06S-06045)	
15.	154-221	1	CONNECTOR (06S-060)	

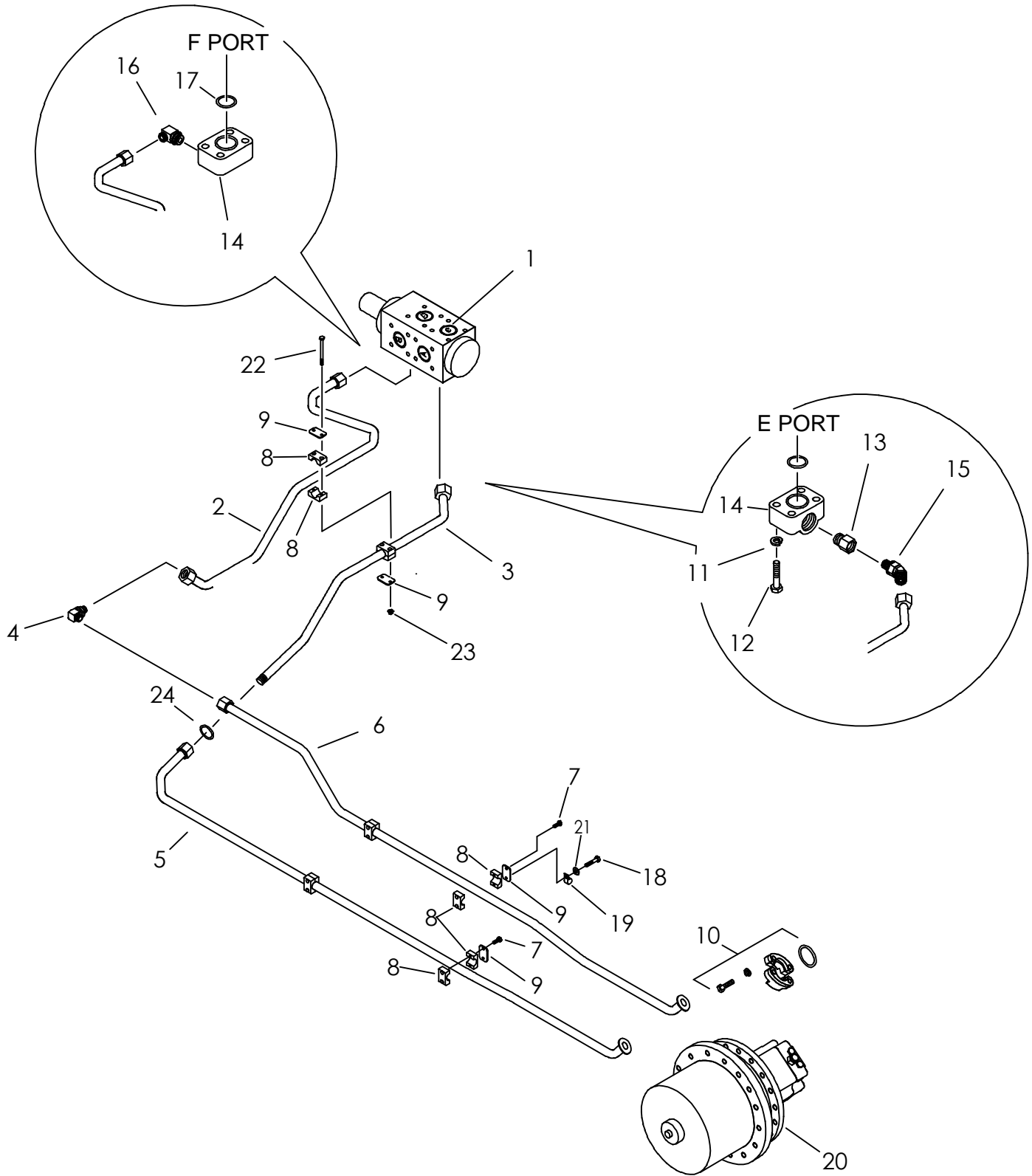
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FOOTNOTES:

NOTE:
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

LEFT GROUND DRIVE HYDRAULICS

BEGINS WITH S/N 2W0856



LEFT GROUND DRIVE HYDRAULICS BEGINS WITH S/N 2W0856

REF PART NO. NUMBER	QTY	DESCRIPTION	REMARKS
1.		516-033 - SELECTOR VALVE DIVERTER	
2.	1	153-819 HYD LINE (-16)	
3.	1	153-817 HYD LINE (16O-16OFX)	
4.	1	514-009 CONNECTOR (16O-16O90)	
5.	1	153-818 HYD LINE (16OFX-16FL)	
6.	1	156-155 HYD LINE (16OFX-16FL)	
7.	4	105-818 BOLT (1/4-NC X 1-1/2")	
8.	6	110-573 BOLT-ON CLAMP (1",SOLD PER SET)	
9.	6	322-289 BACKUP (BOLT-ON)	
10.	2	159-077 SPLIT FLANGE (16SFL)	
	2	157-029 O-RING (219 D90)	
	8	105-156 BOLT (3/8-NC X 1-1/2")	TORQUE TO 45 FT/LBS
	8	105-072 LOCK WASHER (3/8")	
11.	8	105-070 LOCK WASHER (1/2")	
12.	8	105-067 BOLT (1/2-NC X 2-3/4")	TORQUE TO 45 FT/LBS
13.	1	514-353 REDUCER (20S-16SF)	
14.	2	514-333 HEAD FLANGE (20FL-16SF)	
15.	1	154-388 CONNECTOR (16S-16O45)	
16.	1	514-196 CONNECTOR (16O-20S90)	
17.	2	157-078 O-RING (222 D90)	
18.	2	105-198 BOLT (1/4-NC X 1-3/4")	
19.	2	110-373 BOLT-ON CLAMP (13/16")	
20.	1	166-162 GEARBOX & GROUND DRIVE PLANETARY	
21.	2	105-095 WASHER (1/4")	
22.	2	105-870 BOLT (1/4-NC X 3-1/2")	
23.	2	105-832 FLG LOCKNUT (1/4-NC)	
24.	1	155-714 O-RING (021-D90)	

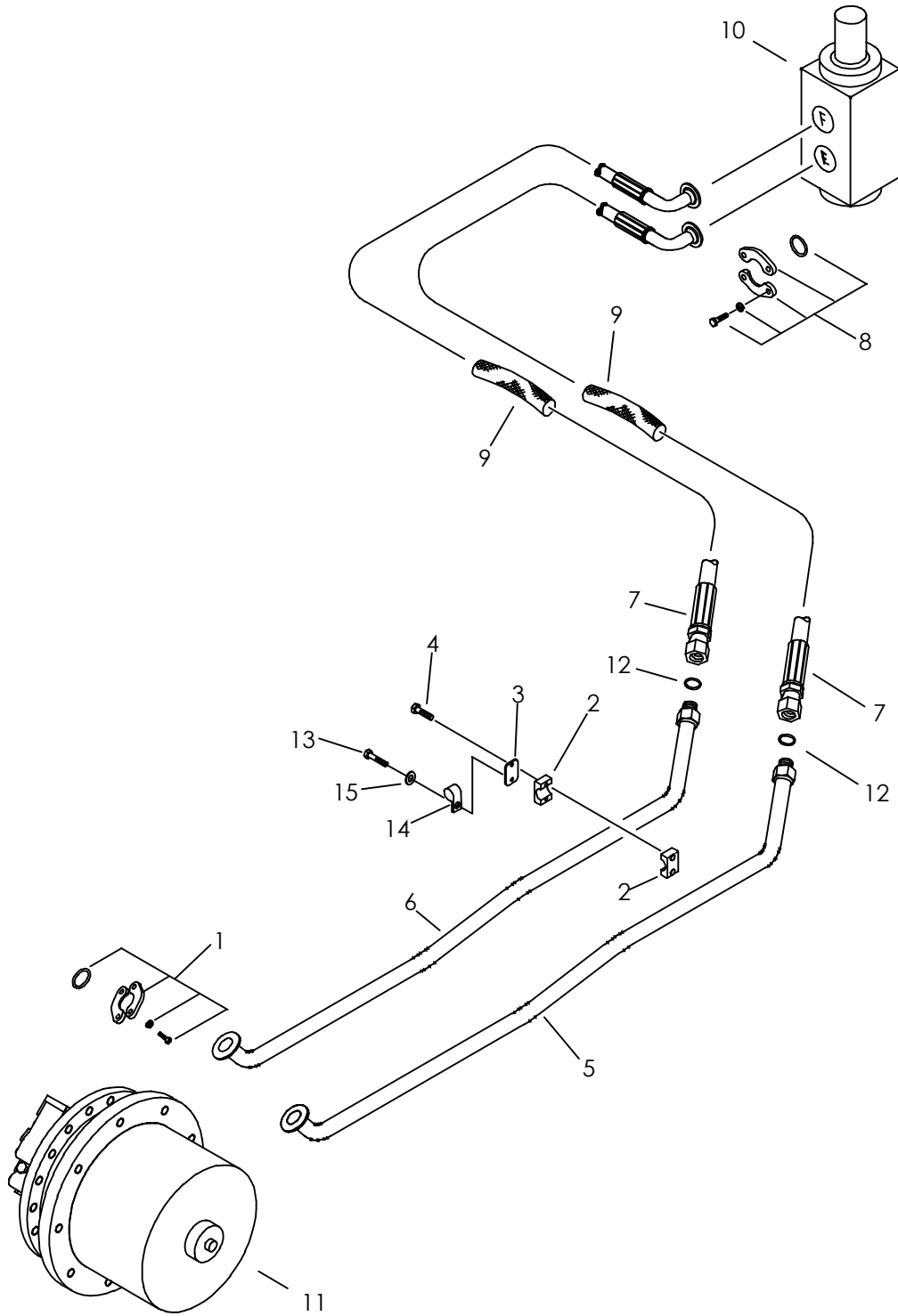
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

RIGHT GROUND DRIVE HUDRAULICS



RIGHT GROUND DRIVE HUDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	159-077	2	SPLIT FLANGE (16SFL)	
	157-029	2	O-RING (219 D90)	
	105-156	8	BOLT (3/8-NC X 1-1/2")	
	105-072	8	LOCK WASHER (3/8")	
2.	110-573	2	BOLT-ON CLAMP (1", SOLD PER SET)	
3.	322-289	2	BACKUP (BOLT-ON)	
4.	105-818	3	BOLT (1/4-NC X 1-1/2")	
5.	156-152	1	HYD LINE (-16)	
6.	156-153	1	HYD LINE (-16)	
7.	515-575	2	HOSE (160FX-20FL90-62"-6000)	ENDS WITH S/N: 2V2567
	157-998	2	HOSE (160FX-20FL90-68"-6000)	BEGINS WITH S/N: 2W0856
8.	159-436	2	SPLIT FLANGE (20SF, SET)	
	157-078	1	O-RING (222 D90)	
	105-070	4	LOCK WASHER (1/2")	
	105-066	4	BOLT (1/2-NC X 1-3/4")	TORQUE TO 45 FT. LB.
9.	117-179	2	ABRASION SLEEVE (2.07" X 62")	ENDS WITH S/N: 2V2567
	117-292	2	ABRASION SLEEVE (2.07" X 70")	BEGINS WITH S/N: 2W0856
10.	516-033	-	SELECTOR VALVE DIVERTER	
11.	166-162	-	GEARBOX AND GRND DRIVE PLANETARY	
12.	155-714	2	O-RING (021 D90)	
13.	105-198	1	BOLT (1/4-NC X 1-3/4")	
14.	110-373	1	BOLT-ON CLAMP (13/16")	
15.	105-095	1	WASHER (1/4")	

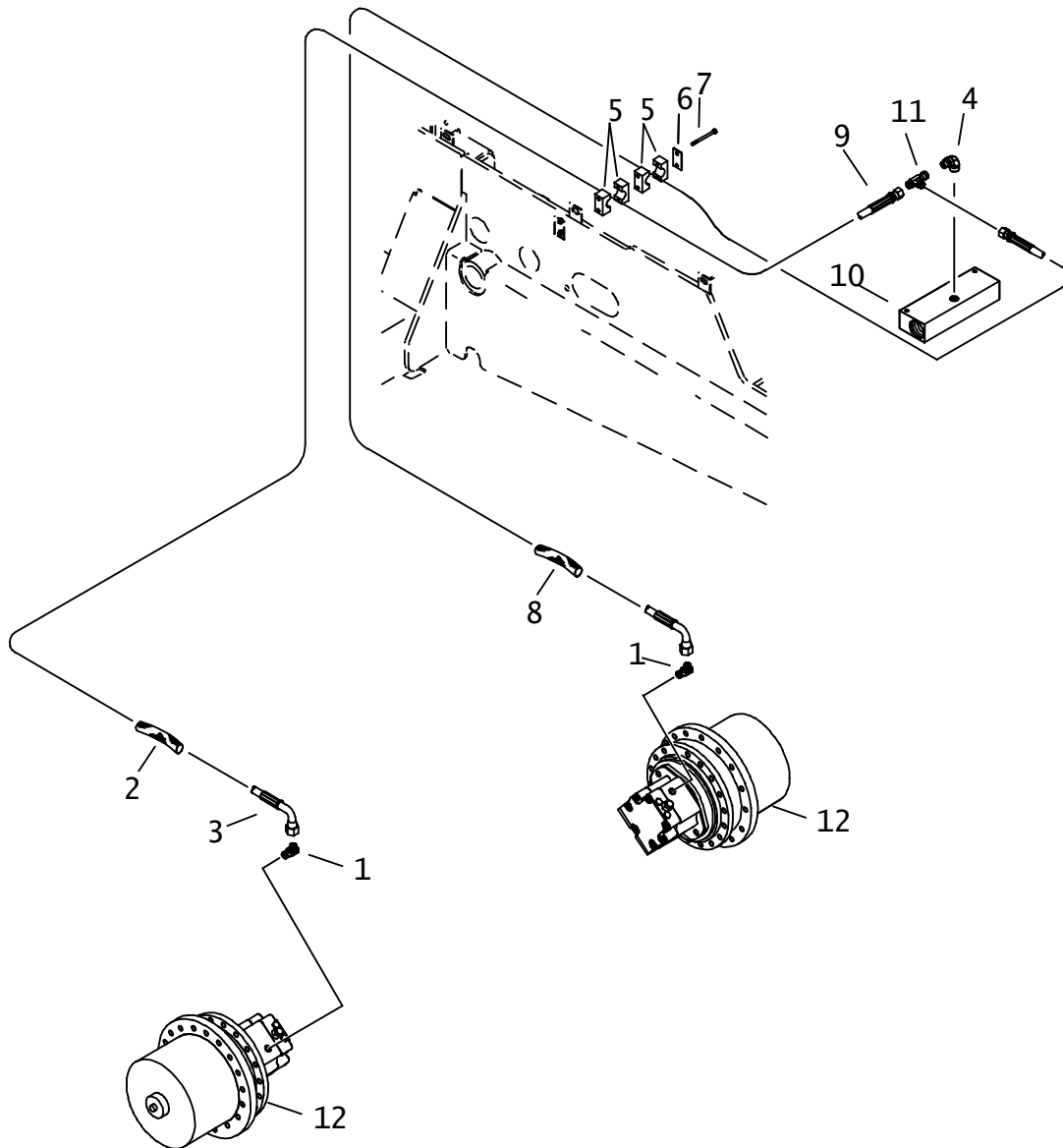
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

CASE DRAIN (GROUND DRIVE)



CASE DRAIN (GROUND DRIVE)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-264	2	CONNECTOR (080-10S45)	
2.	117-619	1	ABRASION SLEEVE (1.59" X 135")	
3.	153-116	1	HOSE (080FX90S-188"-3000)	
4.	154-253	1	CONNECTOR (06S-08090)	
5.	111-007	2	BOLT-ON CLAMP (7/8", SOLD PER SET)	
6.	322-289	1	BACKUP (BOLT-ON)	
7.	106-967	2	BOLT (1/4-NC X 2-3/4" SIL BRZ)	
8.	117-764	1	ABRASION SLEEVE (1.59" X 90")	
9.	515-572	1	HOSE (080FX90S-134"-3000)	
10.	159-414	-	CASE DRAIN MANIFOLD	
11.	154-266	1	UNION RUN TEE (080FX-080-080)	
12.	166-162	-	GEARBOX AND DRIVE PLANETARY	

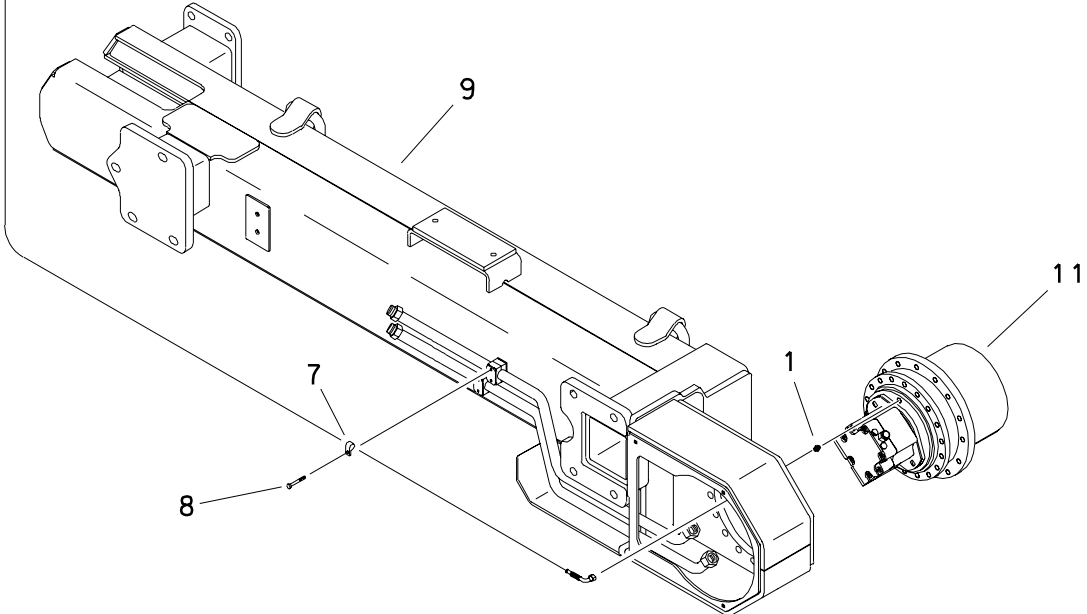
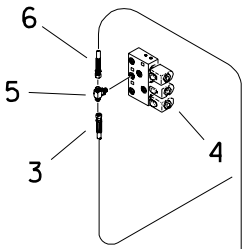
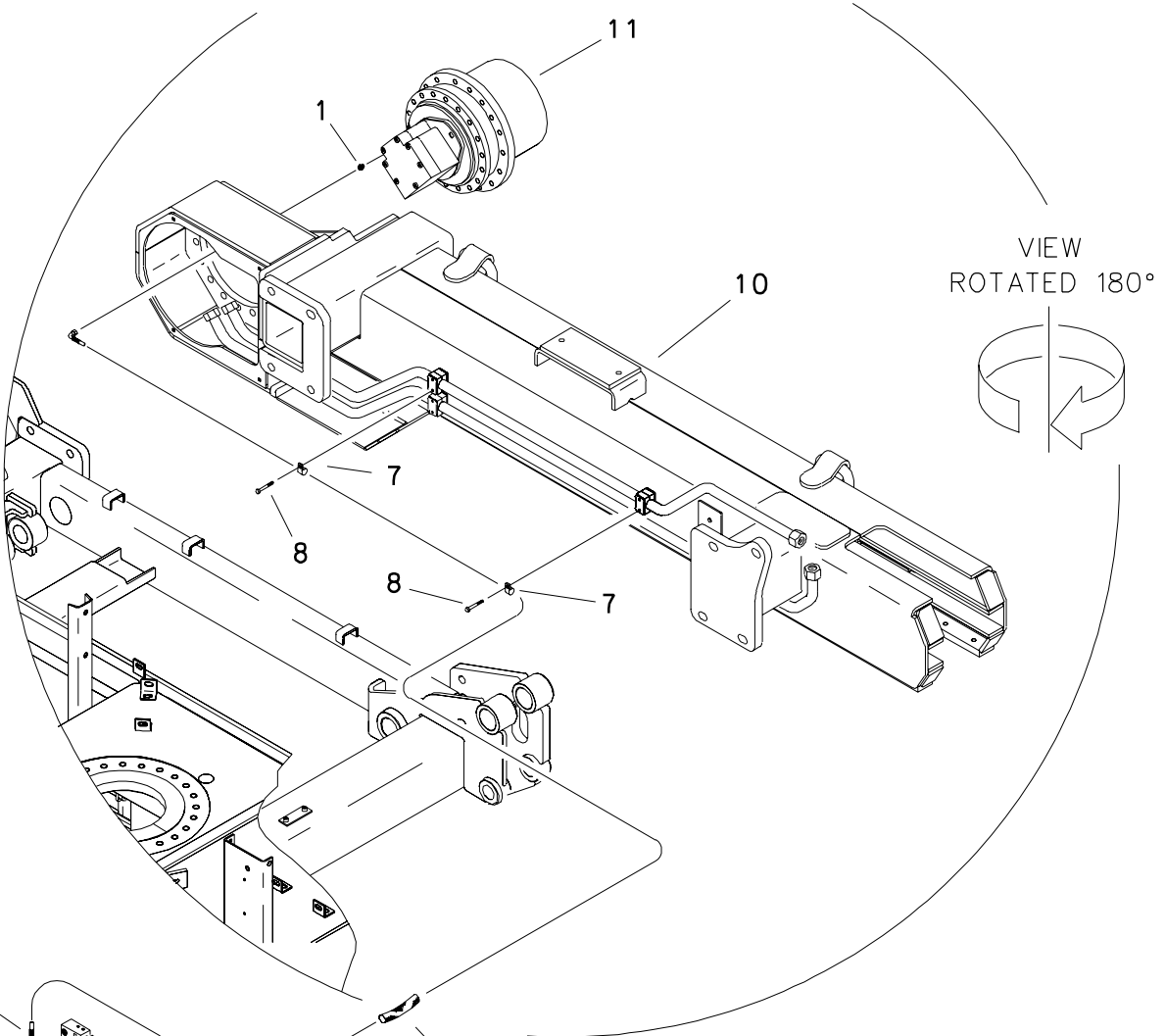
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PARK BRAKE HYDRAULICS



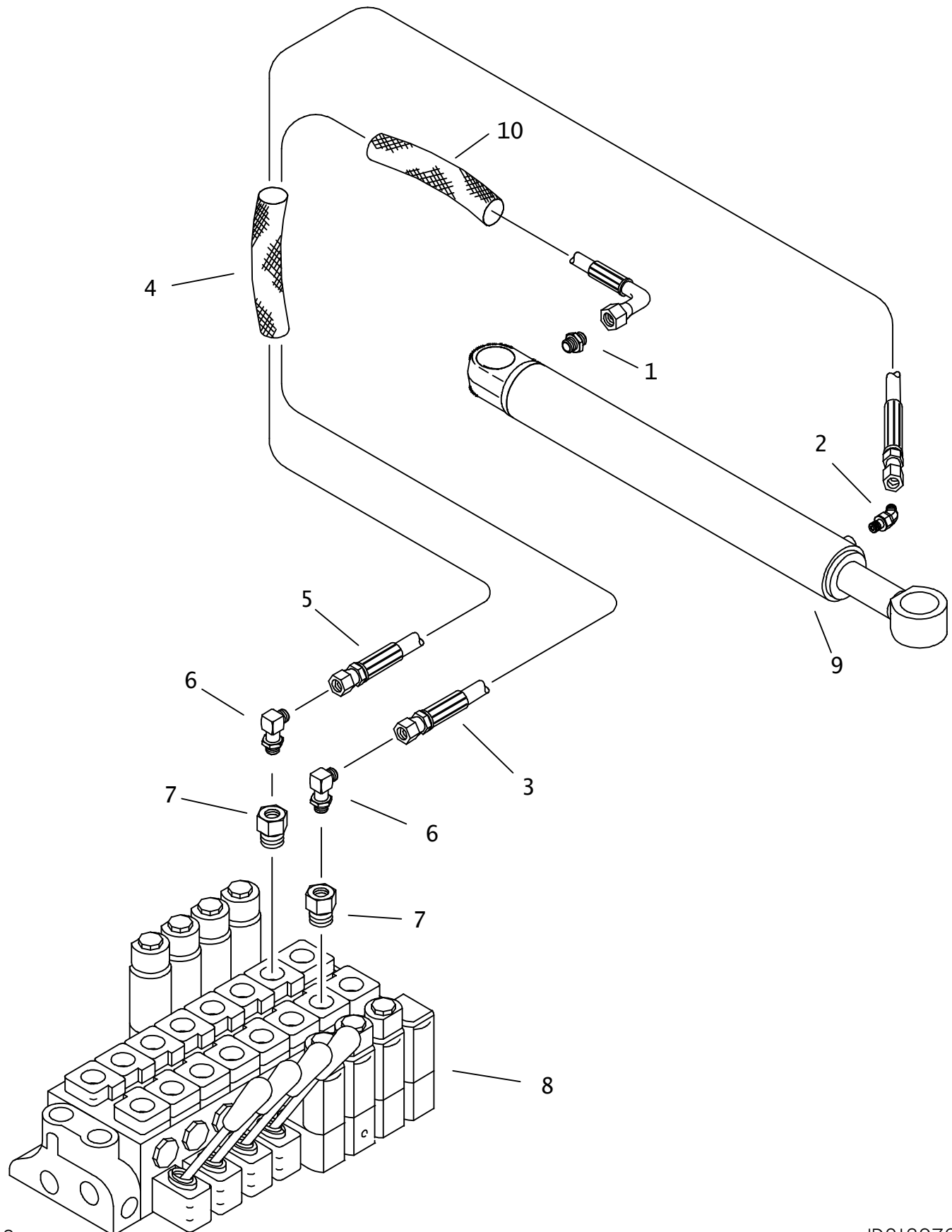
PARK BRAKE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	514-301	2	CONNECTOR (040-M12-1.50)	
2.	117-673	1	ABRASION SLEEVE (1" X 150")	
3.	515-571	1	HOSE (04DFX90S-170"-3000)	
4.	159-194	-	CHARGE MANIFOLD	
5.	154-293	1	BRANCH TEE (04S-040-040)	
6.	515-277	1	HOSE (04DFX90S-128"-3000)	
7.	110-373	3	BOLT-ON CLAMP (13/16")	
8.	105-106	3	BOLT (1/4-NC X 2")	
9.	349-300	-	RIGHT ROLLER FRAME	ENDS WITH S/N: 2V2567
	315-883	-	RIGHT ROLLER FRAME	BEGINS WITH S/N: 2W0856
10.	349-301	-	LEFT ROLLER FRAME	ENDS WITH S/N: 2V2567
	315-882	-	LEFT ROLLER FRAME	BEGINS WITH S/N: 2W0856
11.	166-162	-	GEARBOX AND GRND DRIVE PLANETARY	

FOOTNOTES

NOTE
 REFER TO O-RING CHART (800-301) IN BACK OF BOOK FOR REPLACEMENT OF O-RINGS.

CAB SWING HYDRAULICS



CAB SWING HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-278	1	CONNECTOR (04S-040)	
2.	154-263	1	CONNECTOR (04S-04045)	
3.	515-277	1	HOSE (040FX90-128"-3000)	
4.	116-633	1	ABRASION SLEEVE (1.59" X 115")	
5.	515-098	1	HOSE (040FX-110"-3000)	
6.	154-364	2	CONNECTOR (040-06S90, ORF)	
7.	155-171	2	REDUCER (10S-06SF)	
8.	153-215	-	HYDRAULIC VALVE	BEFORE SN. CMWJT100JA0000015
	150-2730	-	HYDRAULIC VALVE	AFTER SN. CMWJT100CA0000016
9.	151-182	-	CYL (2.0" X 1.25" X 14.250")	
10.	117-611	1	ABRASION SLEEVE (1.00" X 22")	

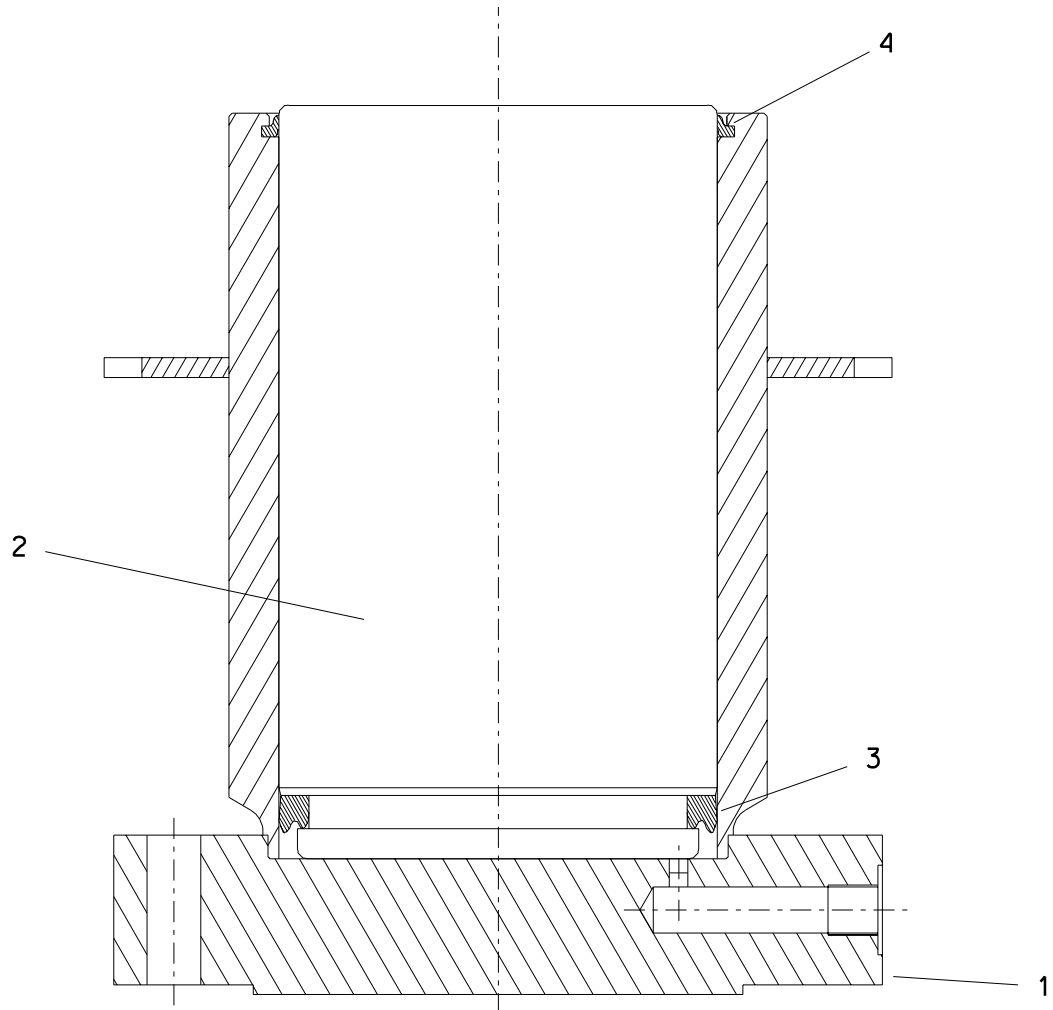
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

ADJUSTMENT CYLINDER



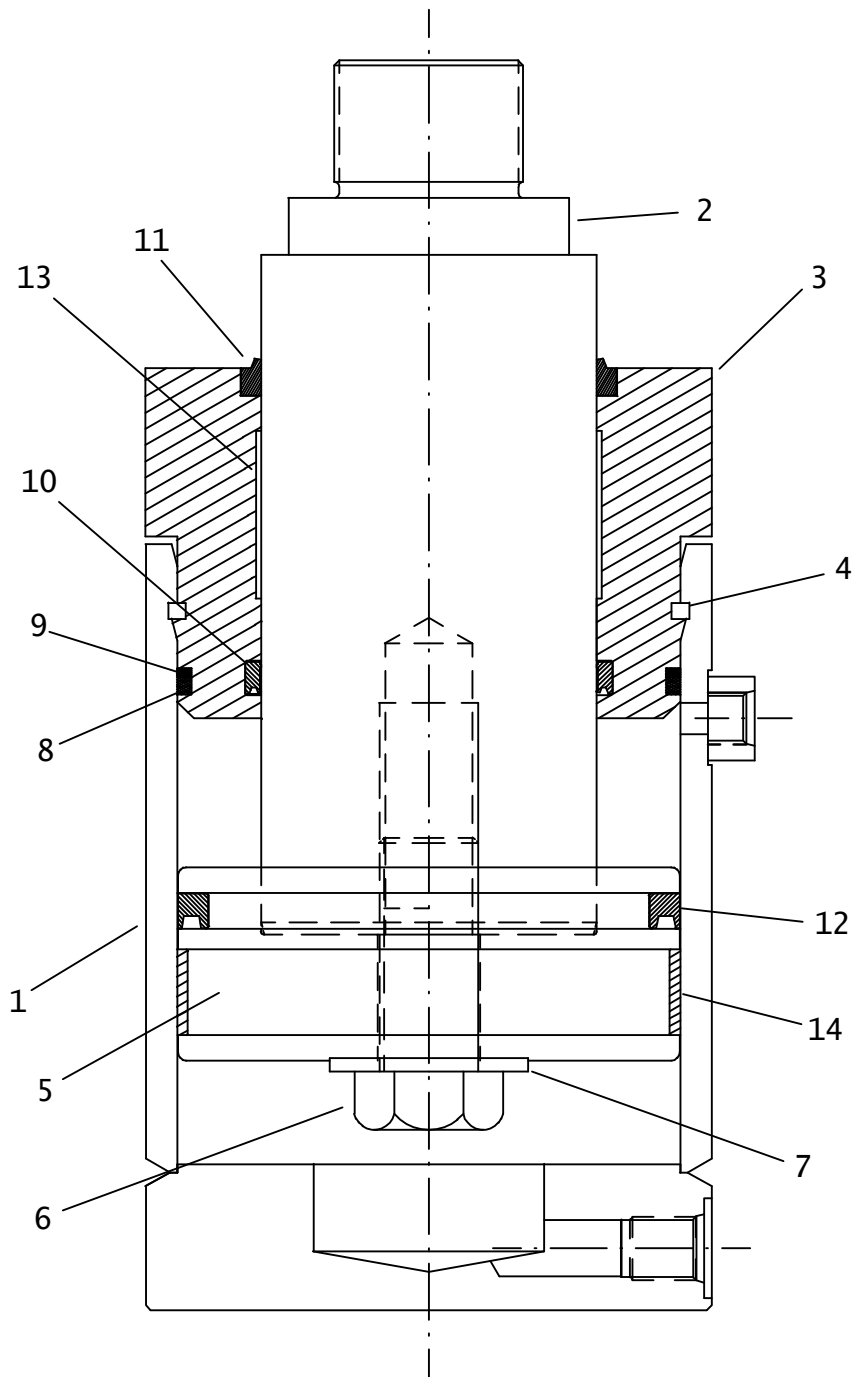
ADJUSTMENT CYLINDER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	349-391	-	ADJUSTMENT CYLINDER	INCL REF NO.'S 1 - 4
1.	349-388	1	CYL BARREL	
2.	349-386	1	CYL RAM	
3.	157-172	1	PISTON SEAL	
4.	157-173	1	ROD WIPER SEAL (5.5")	

FOOTNOTES

HYDRAULIC CYLINDER

6" X 4" X 3"



HYDRAULIC CYLINDER

6" X 4" X 3"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-176		CYL (6.00" X 4.00" X 3.00")	INCL REF NO.'S 1 - 14
	190-774		SEAL REPAIR KIT	INCL REF NO.'S 6, 8 - 14,
1.	152-615	1	BARREL	
2.	150-681	1	CYLINDER ROD	
3.	151-175	1	CYL GLAND	
4.	150-707	1	LOCK RING	
5.	149-319	1	PISTON (6")	
6.	105-1074	1	SCREW (M30-1.50 X 90MM,10.9)	SEE FOOTNOTE # 1
7.	106-780	1	WASHER (M30)	
8.	157-082	1	O-RING (358 D90)	
9.	157-083	1	BACKUP RING (358 D90)	
10.	157-729	1	U-SEAL	
11.	157-648	1	PISTON SEAL (4")	
12.	157-186	1	PISTON SEAL 6.00"	
13.	125-851	1	WEAR RING	
14.	125-850	1	WEAR RING	

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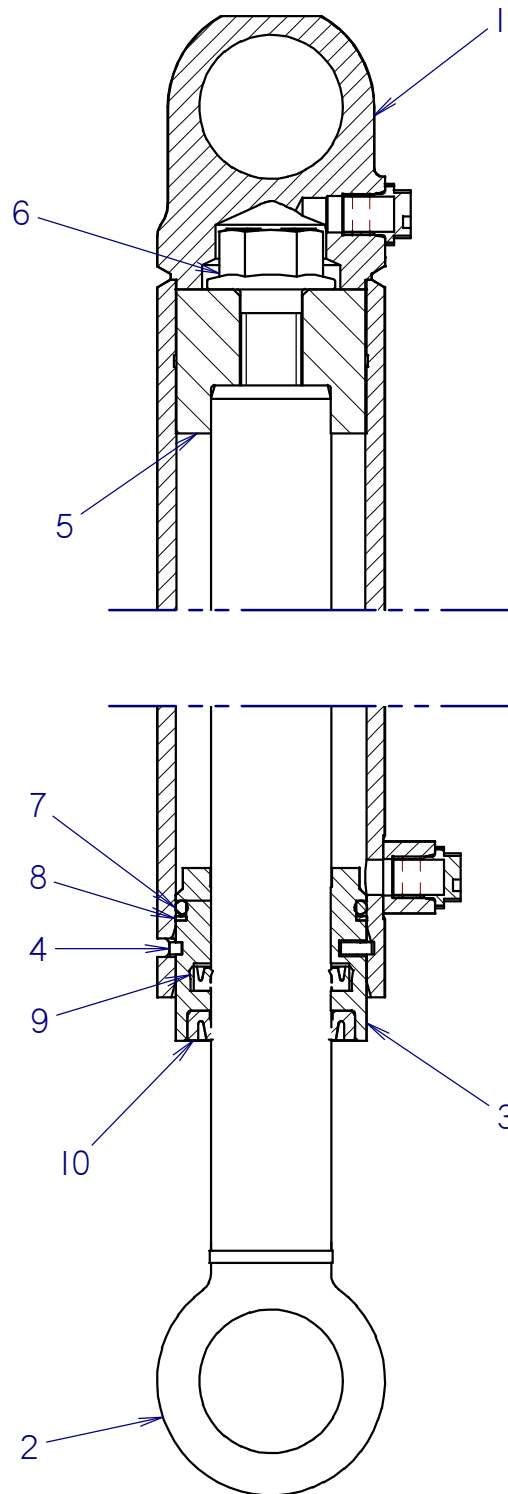
FOOTNOTES:

I. CLEAN AND DRY THREADS. APPLY RED LOCTITE (RC 271 OR 277). TORQUE TO 1300 FT/LBS.

NOTE:

HYDRAULIC CYLINDER (2.0 X 1.25 X 14.25)

2" X 1.25" X 14.25"



HYDRAULIC CYLINDER (2.0 X 1.25 X 14.25)

2" X 1.25" X 14.25"

REF PART NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-182	-	CYL (2.0 X 1.25 X 14.25)	INCL REF NO'S 1 THRU 10, SEE FOOTNOTE 1
1	152-069	1	CYLINDER BARREL (2.0 X	
2	150-448	1	CYLINDER ROD (1.25 X 16.0)	
3	150-770	1	CYLINDER HEAD (2.0 X 1.25)	
4	150-778	1	LOCK RING (2.0)	
5	150-771	1	CYLINDER PISTON (2.0 X 1.25)	INCL MOLDED-ON WEAR RING
6	106-097	1	FLG BOLT (5/8-NC X 1-3/4",GD8)	SEE FOOTNOTE 2
7	157-022	1	O-RING (224 D90)	
8	155-732	1	BACKUP RING (224 D90)	
9	157-541	1	U-SEAL (1.250")	
10	157-538	1	WIPER SEAL (1.250")	

NOT SHOWN:

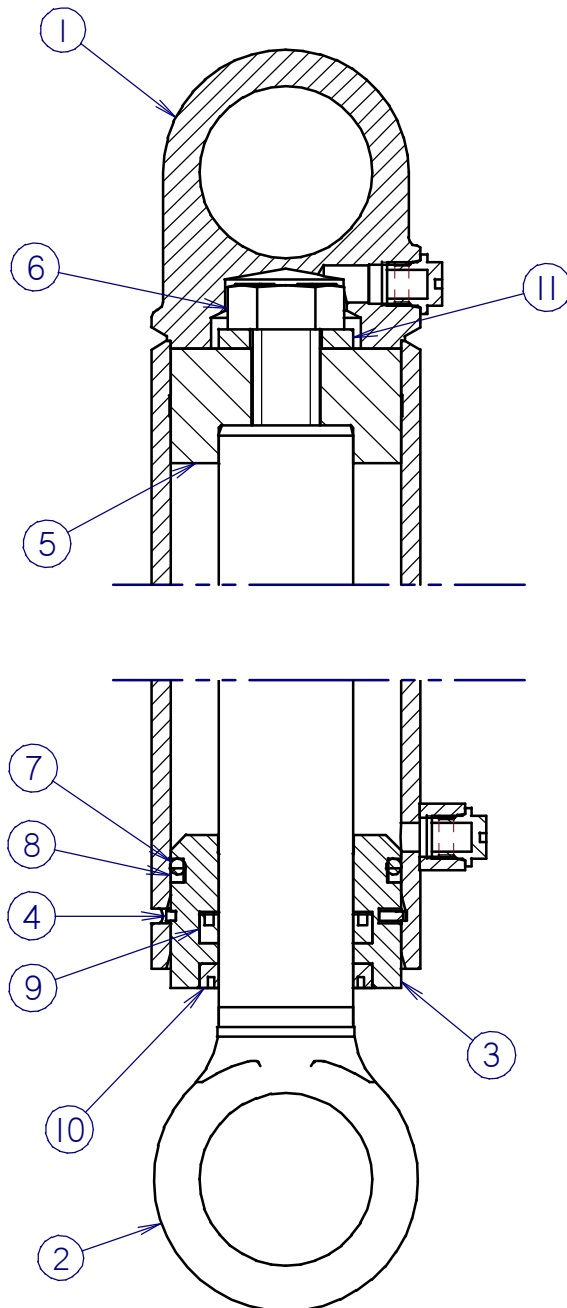
FOOTNOTES:

1. SEAL KIT P/N: 190-169
2. APPLY LOCTITE 277 OR EQUIVALENT, TORQUE TO 180-200 FT-LBS

NOTE:

259-100	U-SEAL INSTALLER (1"-4.99")
259-236	WIPER INSTALLER (1.25")
259-239	WIPER/SEAL INSTALLER (2")
259-241	PISTON INSTALLER (2")
259-188	CYL HEAD SPANNER - TWO PIN

HYDRAULIC CYLINDERS (3.0" X 1.75")



HYDRAULIC CYLINDERS (3.0" X 1.75")

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	149-683	-	CYL (3.0 X 1.75 X 3.0)	SEE FOOTNOTES 1 & 2
1	150-299	1	CYLINDER BARREL (3.0 X 3.0)	
2	150-446	1	CYLINDER ROD (1.75 X 3.0)	
	149-684	-	CYL (3.0 X 1.75 X 4.0)	SEE FOOTNOTES 1 & 2
1	152-004	1	CYLINDER BARREL (3.0 X 4.0)	
2	153-015	1	CYLINDER ROD (1.75 X 4.0)	
	149-685	-	CYL (3.0 X 1.75 X 5.0)	SEE FOOTNOTES 1 & 2
1	152-068	1	CYLINDER BARREL (3.0 X 5.0)	
2	150-432	1	CYLINDER ROD (1.75 X 5.0)	
	151-058	-	CYL (3.0 X 1.75 X 6.0)	SEE FOOTNOTES 1 & 2
1	152-008	1	CYLINDER BARREL (3.0 X 6.0)	
2	150-428	1	CYLINDER ROD (1.75 X 6.0)	
	151-070	-	CYL (3.0 X 1.75 X 8.0)	SEE FOOTNOTES 1 & 2
1	152-014	1	CYLINDER BARREL (3.0 X 8.0)	
2	150-436	1	CYLINDER ROD (1.75 X 8.0)	
	149-686	-	CYL (3.0 X 1.75 X 10.0)	SEE FOOTNOTES 1 & 2
1	150-284	1	CYLINDER BARREL (3.0 X 10.0)	
2	149-732	1	CYLINDER ROD (1.75 X 10.0)	
	151-042	-	CYL (3.0 X 1.75 X 12.0)	SEE FOOTNOTES 1 & 2
1	150-293	1	CYLINDER BARREL (3.0 X 12.0)	
2	150-425	1	CYLINDER ROD (1.75 X 12.0)	
	151-083	-	CYL (3.0 X 1.75 X 16.0)	SEE FOOTNOTES 1 & 2
1	150-288	1	CYLINDER BARREL (3.0 X 16.0)	
2	153-004	1	CYLINDER ROD (1.75 X 16.0)	
	151-122	-	CYL (3.0 X 1.75 X 20.0)	SEE FOOTNOTES 1 & 2
1	150-667	1	CYLINDER BARREL (3.0 X 20.0)	
2	153-020	1	CYLINDER ROD (1.75 X 20.0)	
	149-687	-	CYL (3.0 X 1.75 X 24.0)	SEE FOOTNOTES 1 & 2
1	149-763	1	CYLINDER BARREL (3.0 X 24.0)	
2	149-733	1	CYLINDER ROD (1.75 X 24.0)	
	149-688	-	CYL (3.0 X 1.75 X 30.0)	SEE FOOTNOTES 1 & 2
1	149-764	1	CYLINDER BARREL (3.0 X 30.0)	
2	149-734	1	CYLINDER ROD (1.75 X 30.0)	
3	150-763	1	CYLINDER HEAD (3.0 X 1.75)	
4	150-911	1	LOCK RING (3.0)	
5	150-765	1	CYLINDER PISTON (3.0 X 1.75)	INCL. MOLDED-ON WEAR RING
6	106-122	1	BOLT (7/8-NC X 2-1/4", GD8)	SEE FOOTNOTE 3
7	155-734	1	O-RING (334 D90)	
8	155-733	1	BACKUP RING (334 D90)	
9	157-550	1	U-SEAL (1.750")	
10	157-549	1	WIPER SEAL (1.750")	
11	105-363	1	WASHER (7/8")	

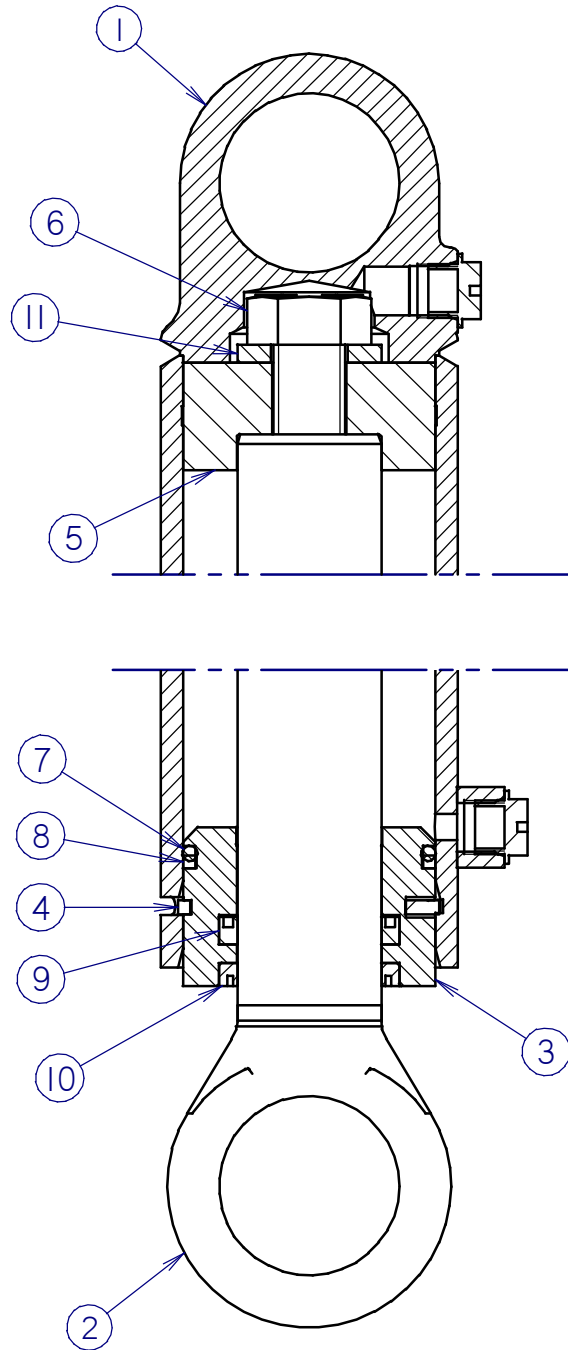
FOOTNOTES

- REF. #1 & #2 ARE SPECIFIC TO EACH CYLINDER, REF. #3 THRU #11 ARE COMMON FOR ALL THE ABOVE LISTED CYLINDERS.
- SEAL REPAIR KIT P/N: 190-172
- APPLY LOCTITE 277 OR EQUIVALENT, TORQUE TO 410-460 FT-LBS

NOT SHOWN:

- 259-040 U-SEAL INSTALLER (1.5" - UPI)
- 259-238 WIPER INSTALLER (1.75")
- 259-244 PISTON SEAL INSTALLER (3.5")
- 259-245 PISTON INSTALLER (3.5")
- 259-188 CYL HEAD SPANNER - TWO PIN

HYDRAULIC CYLINDERS (3.5" X 2.0")



HYDRAULIC CYLINDERS (3.5" X 2.0")

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-123	-	CYL (3.5 X 2.0 X 4.0)	SEE FOOTNOTES 1 & 2
1	152-037	1	CYLINDER BARREL (3.5 X 4.0)	
2	153-021	1	CYLINDER ROD (2.00 X 4.0)	
	151-178	-	CYL (3.5 X 2.0 X 5.0)	SEE FOOTNOTES 1 & 2
1	150-300	1	CYLINDER BARREL (3.5 X 5.0)	
2	150-440	1	CYLINDER ROD (2.00 X 5.0)	
	149-692	-	CYL (3.5 X 2.0 X 5.0)	SEE FOOTNOTES 1 & 2
1	150-296	1	CYLINDER BARREL (3.5 X 6.0)	
2	149-735	1	CYLINDER ROD (2.00 X 6.0)	
	149-693	-	CYL (3.5 X 2.0 X 8.0)	SEE FOOTNOTES 1 & 2
1	152-006	1	CYLINDER BARREL (3.5 X 8.0)	
2	149-736	1	CYLINDER ROD (2.00 X 8.0)	
	151-116	-	CYL (3.5 X 2.0 X 10.0)	SEE FOOTNOTES 1 & 2
1	152-040	1	CYLINDER BARREL (3.5 X 10.0)	
2	153-016	1	CYLINDER ROD (2.00 X 10.0)	
	151-047	-	CYL (3.5 X 2.0 X 12.0)	SEE FOOTNOTES 1 & 2
1	150-297	1	CYLINDER BARREL (3.5 X 12.0)	
2	150-429	1	CYLINDER ROD (2.00 X 12.0)	
	149-694	-	CYL (3.5 X 2.0 X 16.0)	SEE FOOTNOTE 1 & 2
1	149-737	1	CYLINDER ROD (2.00 X 16.0)	
2	149-805	1	CYLINDER BARREL (3.5 X 16.0)	
	149-695	-	CYL (3.5 X 2.0 X 20.0)	SEE FOOTNOTES 1 & 2
1	149-765	1	CYLINDER BARREL (3.5 X 20.0)	
2	149-738	1	CYLINDER ROD (2.00 X 20.0)	
	149-696	-	CYL (3.5 X 2.0 X 24.0)	SEE FOOTNOTES 1 & 2
1	149-766	1	CYLINDER BARREL (3.5 X 24.0)	
2	149-739	1	CYLINDER ROD (2.00 X 24.0)	
	149-697	-	CYL (3.5 X 2.0 X 30.0)	SEE FOOTNOTES 1 & 2
1	149-767	1	CYLINDER BARREL (3.5 X 30.0)	
2	149-740	1	CYLINDER ROD (2.00 X 30.0)	
3	150-759	1	CYLINDER HEAD (3.5 x 2.00)	
4	149-302	1	LOCK RING (3.5)	
5	150-992	1	CYLINDER PISTON (3.5 X 2.00)	INCL. MOLDED-ON WEAR RING
6	106-145	1	BOLT (1-NC X 2-1/4", GD8)	SEE FOOTNOTE 3
7	157-030	1	O-RING (338 D90)	
8	157-032	1	BACKUP RING (338 D90)	
9	157-559	1	U-SEAL (2.000")	
10	157-558	1	WIPER SEAL (2.000")	
11	106-144	1	WASHER (1")	

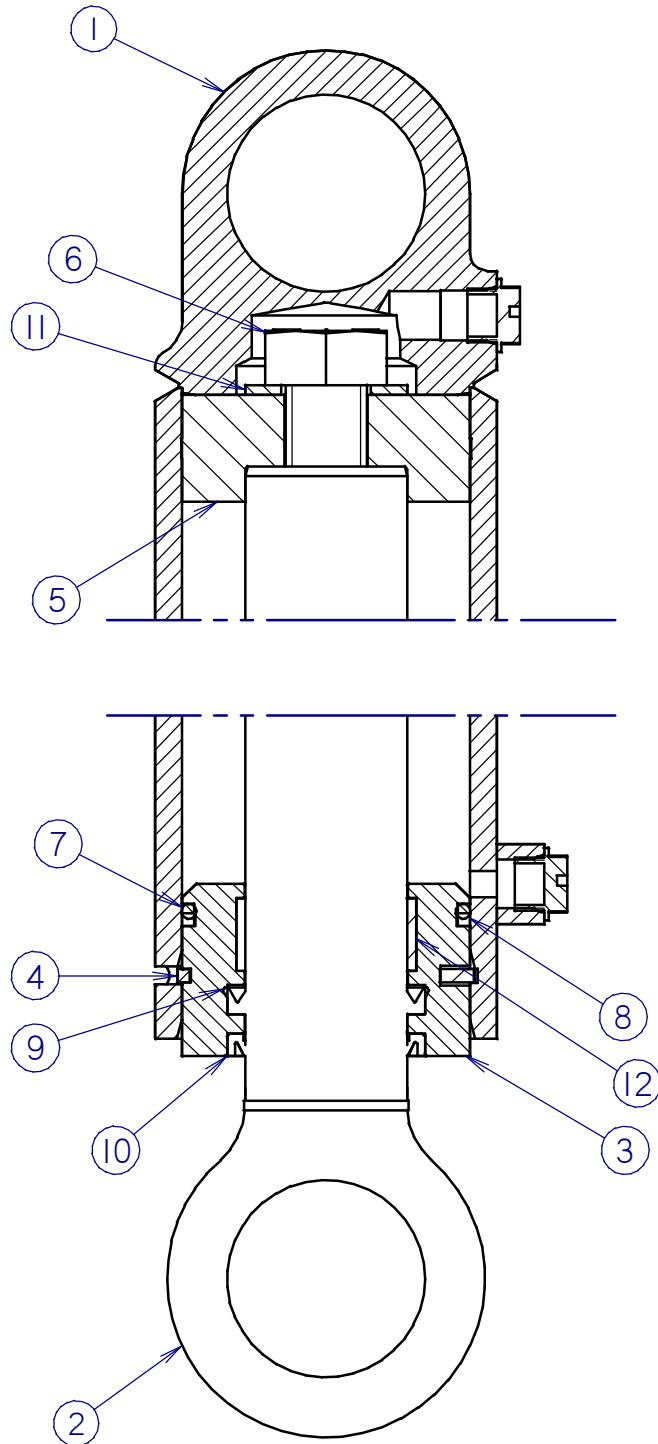
FOOTNOTES

- REF. #1 & #2 ARE SPECIFIC TO EACH CYLINDER, REF. #3 THRU #11 ARE COMMON FOR ALL THE ABOVE LISTED CYLINDERS.
- SEAL REPAIR KIT P/N: 190-175
- APPLY LOCTITE 277 OR EQUIVALENT, TORQUE TO 630-700 FT-LBS

NOT SHOWN:

- 259-040 U-SEAL INSTALLER (1.5" - UPI)
- 259-239 WIPER/SEAL INSTALLER (2")
- 259-244 PISTON SEAL INSTALLER (3.5")
- 259-245 PISTON INSTALLER (3.5")
- 259-188 CYL HEAD SPANNER - TWO PIN

HYDRAULIC CYLINDERS (4.0" X 2.25")



HYDRAULIC CYLINDERS (4.0" X 2.25")

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	149-705	-	CYL (4.0 X 2.25 X 4.0)	SEE FOOTNOTES 1 & 2
1	149-768	1	CYLINDER BARREL (4.0 X 4.0)	
2	149-741	1	CYLINDER ROD (2.25 X 4.0)	
	151-132	-	CYL (4.0 X 2.25 X 5.0)	SEE FOOTNOTES 1 & 2
1	152-012	1	CYLINDER BARREL (4.0 X 5.0)	
2	153-023	1	CYLINDER ROD (2.25 X 5.0)	
	151-158	-	CYL (4.0 X 2.25 X 6.0)	SEE FOOTNOTES 1 & 2
1	152-062	1	CYLINDER BARREL (4.0 X 6.0)	
2	153-036	1	CYLINDER ROD (2.25 X 6.0)	
	151-095	-	CYL (4.0 X 2.25 X 8.0)	SEE FOOTNOTES 1 & 2
1	152-030	1	CYLINDER BARREL (4.0 X 8.0)	
2	153-008	1	CYLINDER ROD (2.25 X 8.0)	
	149-706	-	CYL (4.0 X 2.25 X 10.0)	SEE FOOTNOTES 1 & 2
1	149-769	1	CYLINDER BARREL (4.0 X 10.0)	
2	149-742	1	CYLINDER ROD (2.25 X 10.0)	
	151-048	-	CYL (4.0 X 2.25 X 12.0)	SEE FOOTNOTES 1 & 2
1	150-298	1	CYLINDER BARREL (4.0 X 12.0)	
2	150-430	1	CYLINDER ROD (2.25 X 12.0)	
	151-059	-	CYL (4.0 X 2.25 X 16.0)	SEE FOOTNOTES 1 & 2
1	152-007	1	CYLINDER BARREL (4.0 X 16.0)	
2	150-470	1	CYLINDER ROD (2.25 X 16.0)	
	149-707	-	CYL (4.0 X 2.25 X 20.0)	SEE FOOTNOTES 1 & 2
1	149-770	1	CYLINDER BARREL (4.0 X 20.0)	
2	149-801	1	CYLINDER ROD (2.25 X 20.0)	
	151-162	-	CYL (4.0 X 2.25 X 24.0)	SEE FOOTNOTES 1 & 2
1	152-063	1	CYLINDER BARREL (4.0 X 24.0)	
2	153-037	1	CYLINDER ROD (2.25 X 24.0)	
	149-708	-	CYL (4.0 X 2.25 X 30.0)	SEE FOOTNOTES 1 & 2
1	149-771	1	CYLINDER BARREL (4.0 X 30.0)	
2	149-743	1	CYLINDER ROD (2.25 X 30.0)	
	149-709	-	CYL (4.0 X 2.25 X 30.0)	SEE FOOTNOTES 1 & 2
1	149-772	1	CYLINDER BARREL (4.0 X 36.0)	
2	149-744	1	CYLINDER ROD (2.25 X 36.0)	
3	150-757	1	CYLINDER HEAD (4.0 X 2.25)	
4	149-303	1	LOCK RING (4.0)	
5	150-993	1	CYLINDER PISTON (4.0 X 2.25)	
6	106-146	1	BOLT (1-1/8-NC X 2-1/2", GD8)	SEE FOOTNOTE 3
7	157-035	1	O-RING (3/42 D90)	
8	157-036	1	BACKUP RING (3/42 D90)	
9	157-526	1	U-SEAL (2.250")	
10	157-527	1	WIPER SEAL (2.250")	
11	106-147	1	WASHER (1-1/8")	
12	149-318	1	WEAR RING	

FOOTNOTES

- REF. #1 & #2 ARE SPECIFIC TO EACH CYLINDER, REF. #3 THRU #12 ARE COMMON FOR ALL THE ABOVE LISTED CYLINDERS.
- SEAL REPAIR KIT P/N: 190-177
- APPLY LOCTITE 277 OR EQUIVALENT, TORQUE TO 770-850 FT-LBS

NOT SHOWN:

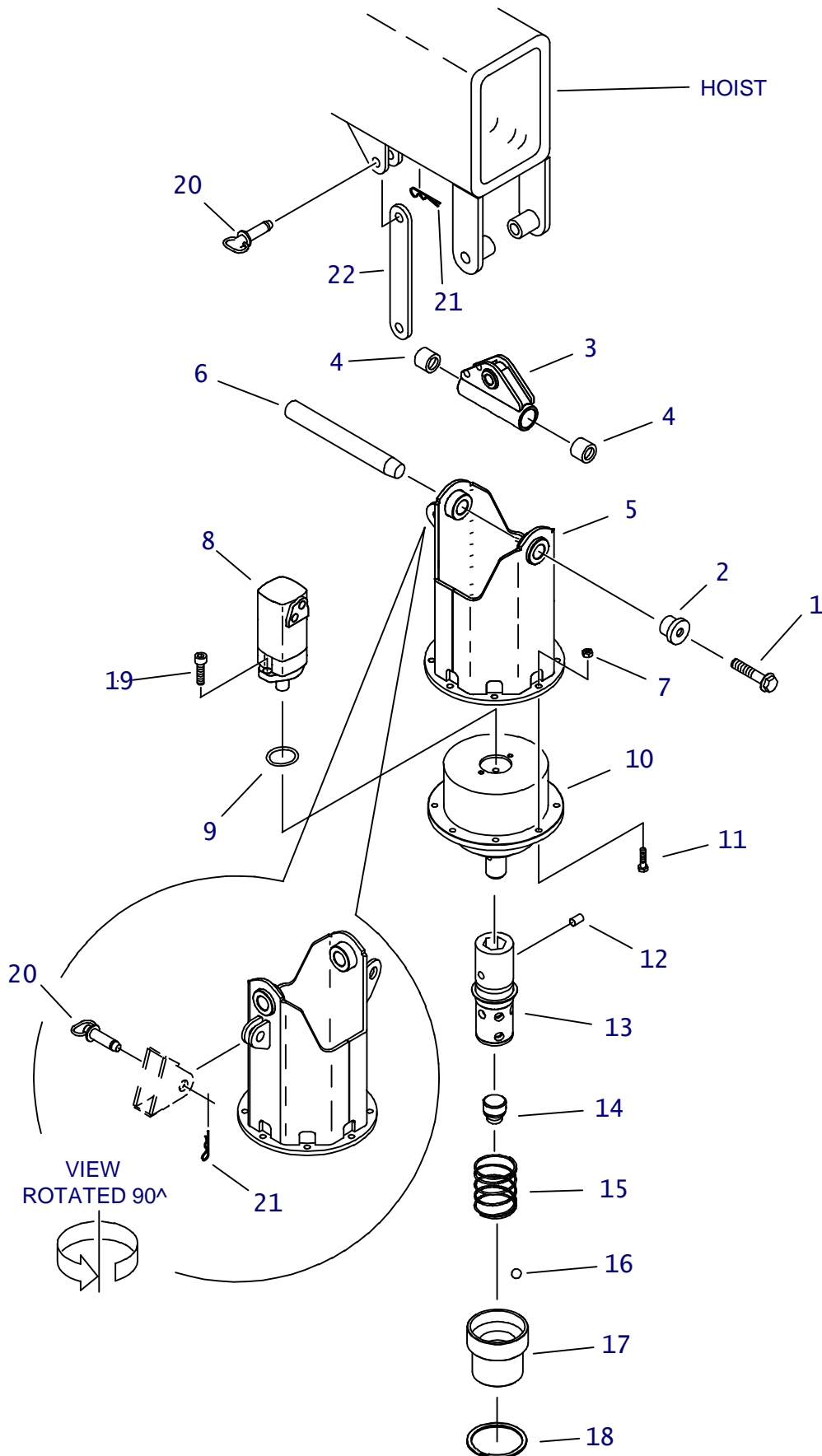
- 259-040 U-SEAL INSTALLER (1.5" - UPI)
- 259-240 WIPER/SEAL INSTALLER (2.25")
- 259-246 PISTON SEAL INSTALLER (4")
- 259-247 PISTON INSTALLER (4")
- 259-188 CYL HEAD SPANNER - TWO PIN

ELECTRICAL

**SEE TECHNICAL SUPPLEMENT FOR FURTHER
ELECTRICAL INFORMATION**

ANCHOR COMPONENTS

AUGER DRIVE



AUGER DRIVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	370-072		ANCHOR DRIVER PARTS	
1.	106-470	1	FLG SCREW (M16-2.00 X 40mm)	
2.	181-974	1	TAPERED INSERT (1.5")	
3.	349-840	1	COUPLING	
4.	125-772	2	COMPOSITION BUSHING (1.5")	
5.	349-839	1	AUGER DRIVER	
6.	179-209	1	TAPERED PIN (38.1mm X 320mm)	
7.	106-526	8	NUT (M14- 2.0, 10.9)	
8.	158-753	1	THRUST DRIVE MOTOR	
	500-658		SEAL REPAIR KIT	
9.	157-099	1	O-RING (042 D70)	
10.	166-161	1	AUGER DRIVE GEARBOX	
11.	106-527	8	SCREW (M14-2.00 X 50mm)	
12.	105-585	2	ROLL PIN (.750" X 1.250")	
13.	309-977	1	ANCHOR DRIVER	USES SIX BALLS (REF 16) TO RETAIN STOP (REF 14) FOOT NOTE 2
	303-643	1	ANCHOR DRIVER	USED THREE BALLS (REF 16) TO RETAIN STOP (REF 14)
14.	370-054	1	WEIGHT/STOP	
15.	117-160	1	COMPRESSION SPRING	
16.	125-150	9	DETENT BALL (.875")	
17.	178-591	1	LOCK COLLAR	
18.	116-761	1	SPIRAL RETAINING RING	FOOT NOTE 1
19.	106-204	2	BOLT (1/2-NC X 1-1/2", SOC)	USE 242 LOCTITE OR EQUIVALENT
20.	183-328	2	PULL PIN (1.000" X 2.750")	
21.	110-128	2	SPRING CLIP PIN (5/32" X 1")	
22.	307-671	1	STOW BAR	

NOT SHOWN:

FOOTNOTES:

1. USE WHEN INSTALLING UPDATED 309-977
2. UPDATED VERSION NECKED-DOWN FOR THICKER 116-761

NOTE:

ANCHOR DRIVER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-233	4	CONNECTOR (08S-080)	
2.	117-741	1	ABRASION SLEEVE (1.59" X 145")	
3.	515-754	2	HOSE (080FX-080 -170"-3000)	
4.	154-396	2	BK CONNECTOR (080-08090BK)	
5.	156-732	2	CONNECTOR (08J-080)	
6.	155-706	2	O-RING (908 D90)	
7.	155-989	2	QDC BODY (08-08SF)	
8.	155-990	2	QDC ADAPTER (08-08SF)	
9.	154-830	2	HOSE (080FX90-18"- 3000)	
10.	515-642	2	HOSE (080FX90-176"-3000)	
11.	158-753	-	THRUST DRIVE MOTOR	
12.	349-839	-	AUGER DRIVER	
13.	306-936	-	HOIST/CRANE	
14.	154-279	2	CONNECTOR (080-10S)	
15.	159-419	1	DUAL HOSE REEL	
16.	105-885	2	FLG LK BOLT (1/2-NC X 2")	
17.	105-833	2	FLG LOCKNUT (1/2-NC)	
18.	117-622	1	ABRASION SLEEVE (1.25" X 20")	
19.	349-485	2	SPACER	
20.	155-935	2	DUST CAP (1/2" - 3/4")	
21.	155-936	2	DUST PLUG (1/2" - 3/4")	
22.	117-721	2	ABRASION SLEEVE (1.59" X 172")	

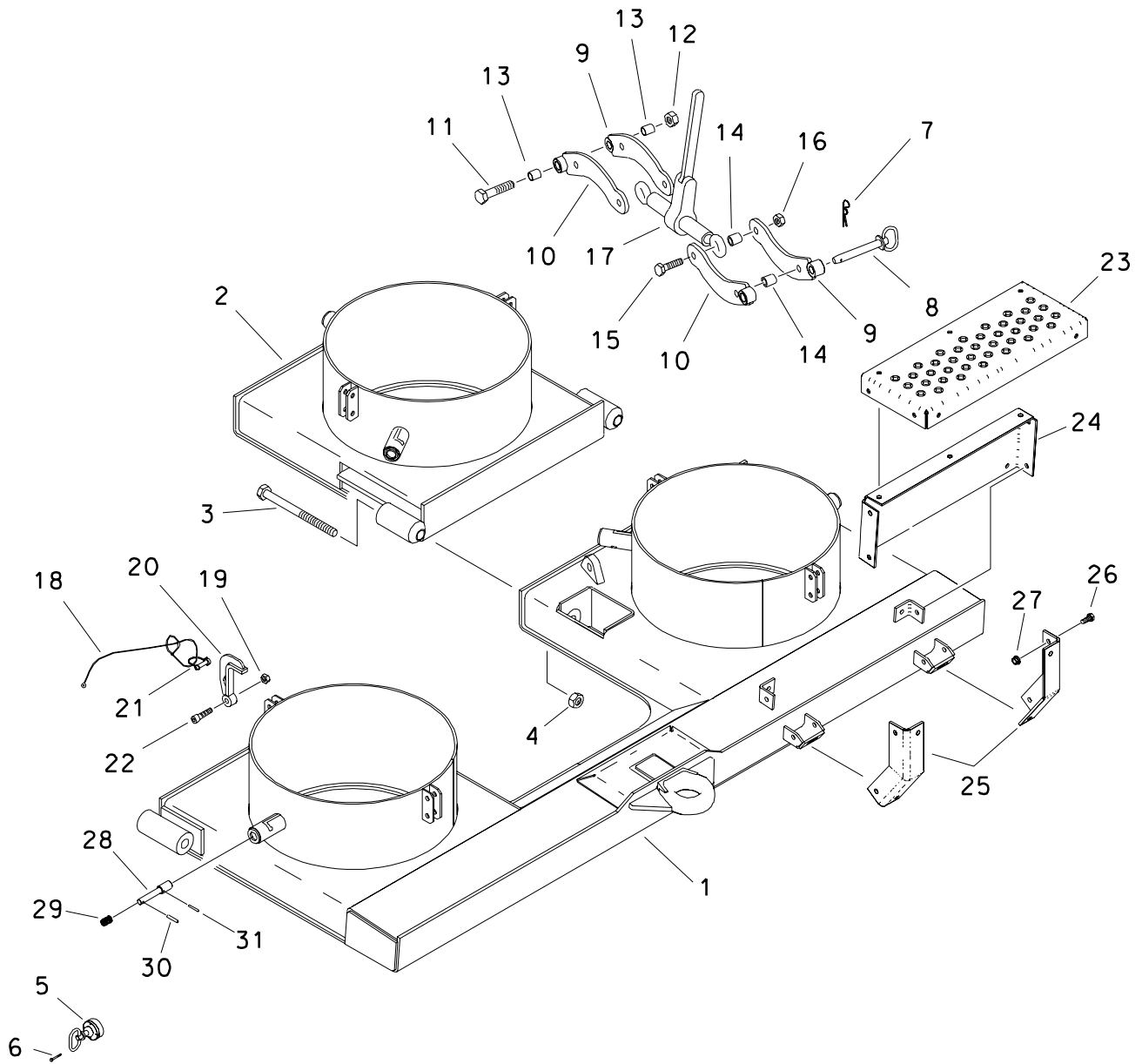
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FOOTNOTES:

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

ANCHORING PLATES

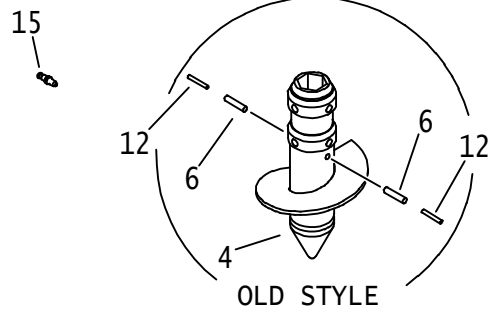
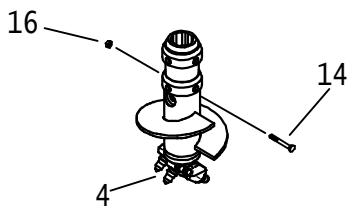
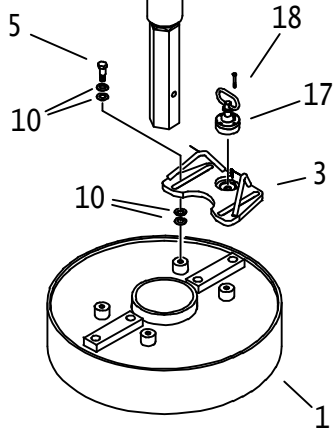
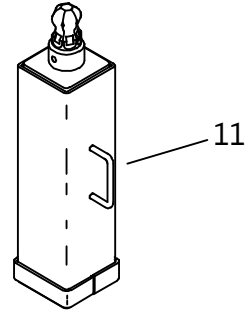
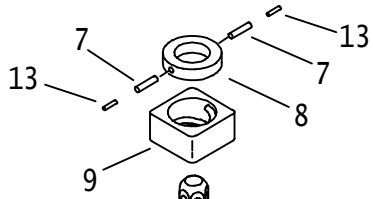


ANCHORING PLATES

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	370-080	1	ANCHOR PLATE	
	370-522	1	ANCHOR PLATE	
2.	370-520	2	SINGLE ANCHOR	OPTIONAL
3.	105-934	4	BOLT (7/8-NC X 1 1/2")	
4.	105-985	4	FLG NUT (7/8-NC)	
5.	347-888	6	SPRING LOADED PIN	
6.	106-796	12	SCREW (M4-.70 X 30mm)	
7.	110-128	2	SPRING CLIP PIN (5/32" X 1")	
8.	183-110	2	PULL PIN (3/4" X 4-1/2")	
9.	370-219	4	RIGHT ARM BAR	
10.	370-203	4	LEFT ARM BAR	
11.	105-365	2	BOLT (3/4-NC X 4")	
12.	105-372	2	LOCKNUT (3/4-NC)	
13.	125-424	4	BRONZE BUSHING (.759")	
14.	370-189	8	SPACER	
15.	107-197	8	SCREW (M16-2.00 X 80mm, 10.9)	
16.	106-545	8	LOCKNUT (M16-2.00)	
17.	111-017	2	LOAD BINDER	
18.	110-710	4	LANYARD (6")	
19.	106-685	4	LOCKNUT (M12-1.75, PRV TRQ)	
20.	370-230	4	CAP RETAINER	
21.	110-368	4	SNAPPER PIN (3/8" X 1-1/2")	
22.	106-707	4	SCREW (M12-1.75 X 45mm, ALN)	
23.	370-267	1	STEP PLATE	
24.	370-269	1	FRONT PLATE	
25.	370-268	2	STEP LEG	
26.	105-245	17	SCREW (M10-1.50 X 25mm)	
27.	106-387	17	FLG LOCKNUT (M10-1.50)	
28.	184-535	4	LOCK PIN	
29.	115-560	4	COMPRESSION SPRING	
30.	105-561	4	ROLL PIN (3/8" X 2-3/4")	
31.	105-503	4	ROLL PIN (1/4" X 2")	

FOOTNOTES

ANCHOR SHAFT



ANCHOR SHAFT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	370-190	2	AUGER CAP	
2.	166-200	2	SHAFT	
3.	370-196	4	LATCH	
	370-111	AR	AUGER (240MM)	
	370-110	-	AUGER (380MM)	
	370-112	-	AUGER (480MM)	
4.	301-0249	AR	ROCK ANCHOR (9.5")	SEE FOOTNOTE 6
	301-0250	AR	ROCK ANCHOR (7.5")	SEE FOOTNOTE 6
	300-9589	AR	ROCK ANCHOR	
5.	106-739	8	SHLD BLT (M12 X 20MM, M10-1.50)	
6.	105-575	-	ROLL PIN (1/2" X 1-1/4")	
7.	105-548	4	ROLL PIN (1/2" X 2-1/4")	USE 277 LOCTITE OR EQUIVALENT
	105-609	4	ROLL PIN (5/8" X 2-1/4")	
8.	370-106	2	LOCK COLLAR (3.031")	SEE FOOTNOTE 1
	370-320	2	LOCK COLLAR	SEE FOOTNOTE 2
9.	370-244	2	ANCHOR NUT (CAST)	SEE FOOTNOTE 1
10.	105-058	AR	BELLVILLE WASHER (1/2")	SEE FOOTNOTE 2
11.	370-120	1	NUT DRIVER	
12.	105-547	-	ROLL PIN (5/16" X 1-1/4")	
13.	105-529	4	ROLL PIN (5/16" X 1-1/2")	SEE FOOTNOTE 1
	105-520	2	ROLL PIN (3/8" X 1-1/4")	SEE FOOTNOTE 2
14.	106-342	2	SCREW (M16-2.00 X 90MM)	SEE FOOTNOTE 1 & 2
15.	136-101	AR	INSERT BIT	SEE FOOTNOTE 4
	131-259	AR	INSERT BIT	
16.	106-545	2	LOCKNUT (M16-2.0, PRV TRQ, 10.9)	SEE FOOTNOTE 2 & 3
17.	347-888	2	SPRING LOADED PIN	
18.	106-796	4	SCREW (M4-.70 X 30MM)	

NOT SHOWN:

FOOTNOTES:

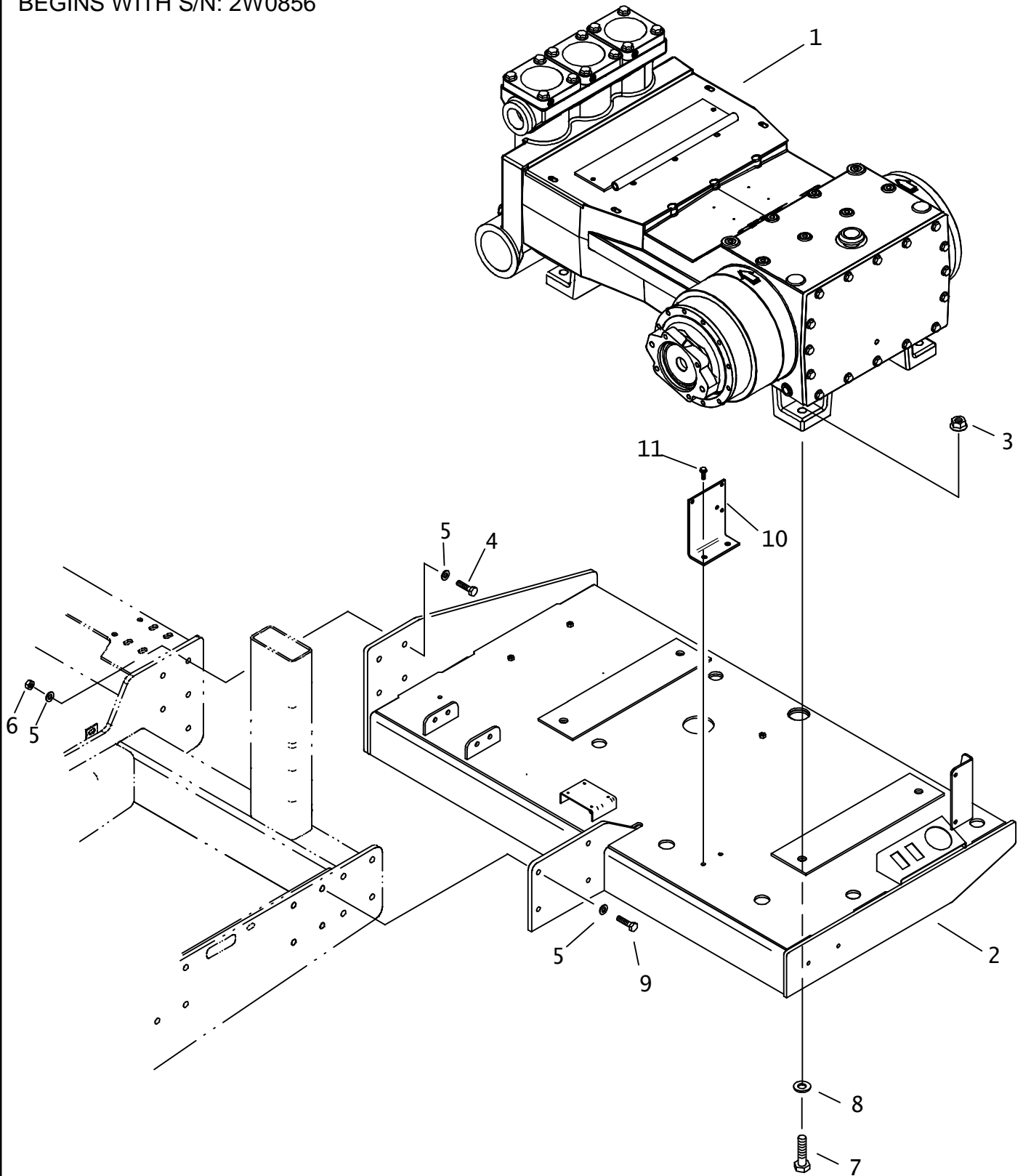
1. USE WITH 370-102 AUGER SHAFT
2. USE WITH 166-200 AUGER SHAFT
3. USE REF. NO. 27 WITH M12 BOLT
4. USE WITH 370-443 ROCK ANCHOR & 370-453 ROCK ANCHOR.
5. USE WITH 300-9589 ROCK ANCHOR
6. INCLUDES BIT 136-102. BITS 136-100 & 136-101 ALSO FIT.

NOTE:

FLUID SYSTEMS

FLUID PUMP MOUNTING (JT)

BEGINS WITH S/N: 2W0856



FLUID PUMP MOUNTING (JT)

BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-776	1	FLUID PUMP	
2.	310-997	1	FLUID PUMP MOUNT	
3.	106-356	4	FLG NUT (M20-2.5, 10.9)	
4.	106-477	6	SCREW (M12-1.75 X 45MM, 10.9)	USE 277 LOCTITE OR EQUIVALANT
5.	106-397	16	WASHER (M12, HARDENED)	
6.	106-685	6	LOCKNUT(M12-1.75,PRV TRQ,10.9)	
7.	107-127	4	SCREW (M20-2.50 X 80MM, 10.9)	USE 277 LOCTITE OR EQUIVALANT
8.	106-399	4	WASHER (M20, HARDENED)	
9.	107-748	4	SCREW (M12-1.75 X 50MM, 10.9)	USE 277 LOCTITE OR EQUIVALANT
10.	313-219	1	MOUNT BRACKET	
11.	106-162	2	FLG SCREW (M8-1.25 X 20MM)	

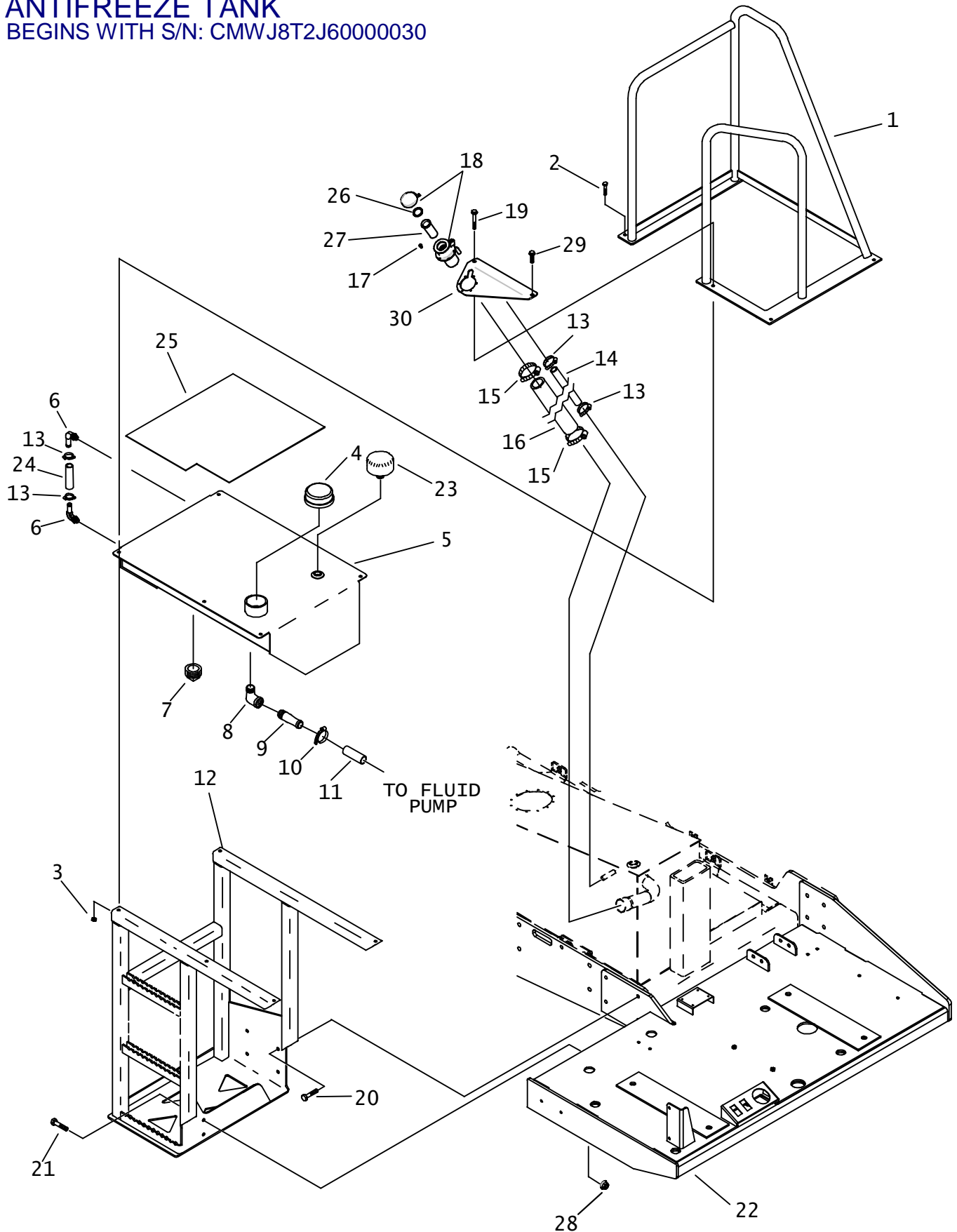
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FOOTNOTES:

NOTE:

ANTIFREEZE TANK

BEGINS WITH S/N: CMWJ8T2J60000030



ANTIFREEZE TANK

BEGINS WITH S/N: CMWJ8T2J60000030

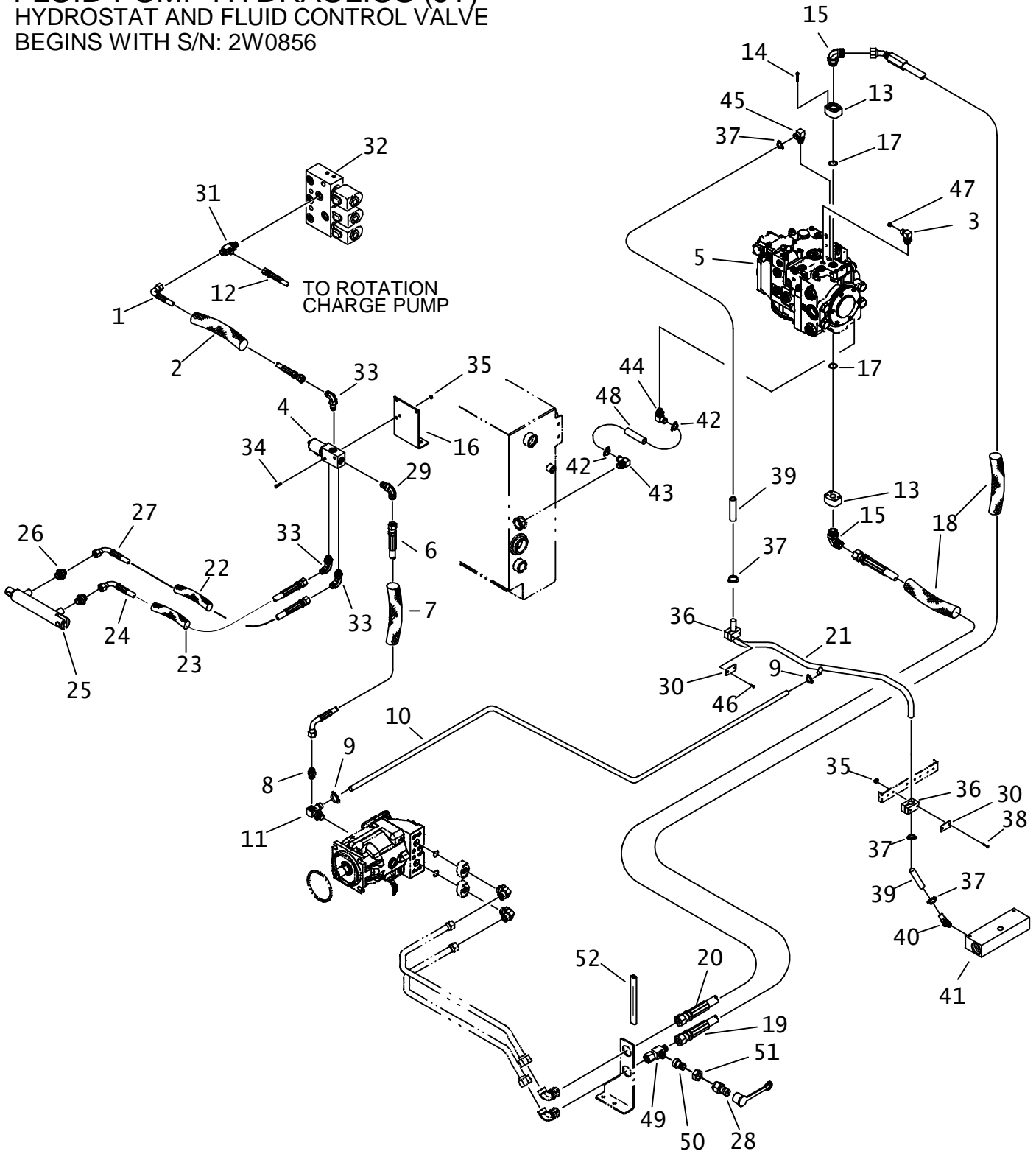
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	314-777	1	HANDRAIL FRAME	
2.	106-724	3	FLG BOLT (M10-1.50 X 25MM)	
3.	107-661	5	FLG NUT (M10-1.50, PRV TRQ)	
4.	153-763	1	PIPE CAP (-48NF)	
5.	314-778	1	ANTIFREEZE TANK	
6.	156-108	2	S/O COUPLER (08N-08H90)	
7.	114-008	1	PLUG (32N, SQ, GALV)	
8.	115-132	1	STREET ELBOW (20N-20NF90)	
9.	156-940	1	S/O COUPLER (20N-20H)	
10.	111-011	1	WORM CLAMP (1" TO 1-3/4")	
11.	116-587	-	BULK HOSE (1-1/4", SOLD PER 1')	USE 1 @ 24"
12.	314-779	1	PLATFORM FRAME	
13.	110-217	4	WORM CLAMP (7/16" TO 1")	
14.	116-322	-	BULK HOSE (1/2", SOLD PER 1")	USE 1 @ 35"
15.	110-134	2	WORM CLAMP (2.06"-2.75")	
16.	116-952	-	FUEL HOSE	
17.	105-214	5	FLG SCREW (#10-24 X 1/2")	
18.	364-661	-	FILLER NECK	
	153-760	-	CAP	
19.	106-617	1	SCREW (M10-1.50 X 80MM)	
20.	107-748	4	SCREW (M12-1.75 X 50MM, 10.9)	USE LOCTITE 277 OR EQUIVALENT
21.	106-496	2	FLG BOLT (M12-1.75 X 35MM)	
22.	310-997	1	FLUID PUMP MOUNT	
23.	159-446	1	BREATHER VENT	
24.	118-432	1	BULK HOSE (1/2", SOLD PER 1")	USE 1 @ 9"
25.	325-147	1	TANK PAD	
26.	155-708	1	O-RING (218 D70)	
27.	364-663	1	FILLER NECK SCREEN	
28.	106-709	2	FLG LK NUT (M12-1.75)	
29.	105-876	1	BOLT (M10-1.50 X 35MM)	
30.	300-1273	1	FILL NECK BRACKET	

NOT SHOWN:

FOOTNOTES:

NOTE:
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR
REPLACEMENT OF O-RINGS

FLUID PUMP HYDRAULICS (JT)
HYDROSTAT AND FLUID CONTROL VALVE
BEGINS WITH S/N: 2W0856



FLUID PUMP HYDRAULICS (JT) HYDROSTAT AND FLUID CONTROL VALVE BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-482	1	HOSE (040FX90S-217"-3000)	
2.	117-988	1	ABRASION SLEEVE (1.00" X 216")	
3.	154-226	2	CONNECTOR (040-06S90)	
4.	158-805	1	HYD CONTROL VALVE (4-WAY,2POS)	SEE FOOTNOTE 1
5.	149-903	-	HYDRAULIC PUMP (75 CC)	
6.	515-188	1	HOSE (060FX90S-23"-3000)	
7.	117-611	1	ABRASION SLEEVE (1.00" X 22")	
8.	154-221	1	CONNECTOR (06S-060)	
9.	110-026	2	WORM CLAMP (1/2" TO 1-1/4")	
10.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 120"
11.	155-198	1	S/O COUPLER (12S-12H90-06SF)	
12.	154-670	-	HOSE (040FX-70"-3000)	
13.	514-245	2	HEAD FLANGE (16HFL-16SF)	
14.	105-918	8	BOLT (7/16-NC X 1-1/2", SOC)	
15.	154-287	4	CONNECTOR (16S-16090)	
16.	313-219	-	MOUNT BRACKET	
17.	157-029	2	O-RING (219 D90)	
18.	118-077	2	ABRASION SLEEVE (2.38" X 155")	
19.	157-421	1	HOSE (160FX45-155"-6000)	
20.	153-916	1	HOSE (160FX-155"-6000)	
21.	156-132	1	HYD LINE (-16)	
22.	117-613	1	ABRASION SLEEVE (1.00" X 64")	
23.	117-693	1	ABRASION SLEEVE (1.00" X 60")	
24.	154-705	1	HOSE (040FX90-60"-3000)	
25.	151-211	-	CYL (1.25" X .50" X 4.00")	
26.	154-278	2	CONNECTOR (04S-040)	
27.	515-030	1	HOSE (040FX90S-64"-3000)	
28.	159-159	1	QDC ADAPTER (02-100FX)	
29.	154-342	1	CONNECTOR (06S-06090)	
30.	322-289	2	BACKUP (BOLT -ON)	
31.	154-316	-	RUN TEE (04S-040-040)	
32.	159-194	-	CHARGE MANIFOLD	
33.	154-226	3	CONNECTOR (040-06S90)	
34.	105-106	2	BOLT (1/4-NC X 2")	
35.	105-832	4	FLG LOCKNUT (1/4-NC)	
36.	110-573	4	BOLT-ON CLAMP (1",SOLD PER SET)	
37.	111-011	4	WORM CLAMP (1" TO 1-3/4")	
38.	105-106	2	BOLT (1/4-NC X 2")	
39.	116-094	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 57", 1 @ 9.5"
40.	155-230	1	S/O COUPLER (16S-16H45)	
41.	159-414	1	CASE DRAIN MANIFOLD	
42.	110-133	2	WORM CLMP (1-1/16" TO 1-15/16")	
43.	155-168	1	S/O COUPLER (20S-20H90)	
44.	155-149	1	S/O COUPLER (16S-20H90)	
45.	155-146	1	S/O COUPLER (12S-16H90)	
46.	105-818	1	BOLT (1/4-NC X 1-1/2")	
47.	154-296	1	CAP (040F)	
48.	116-587	AR	BULK HOSE (1-1/4", SOLD PER 1')	USE 1 @ 22"
49.	154-409	1	UNION RUN TEE (160FX-160-160)	
50.	154-442	1	REDUCER STEM (100)	
51.	154-340	1	REDUCER NUT (160F)	
52.	115-686	AR	BULK EDGING (5/32", SOLD PER 1')	USE 1 @ 8"

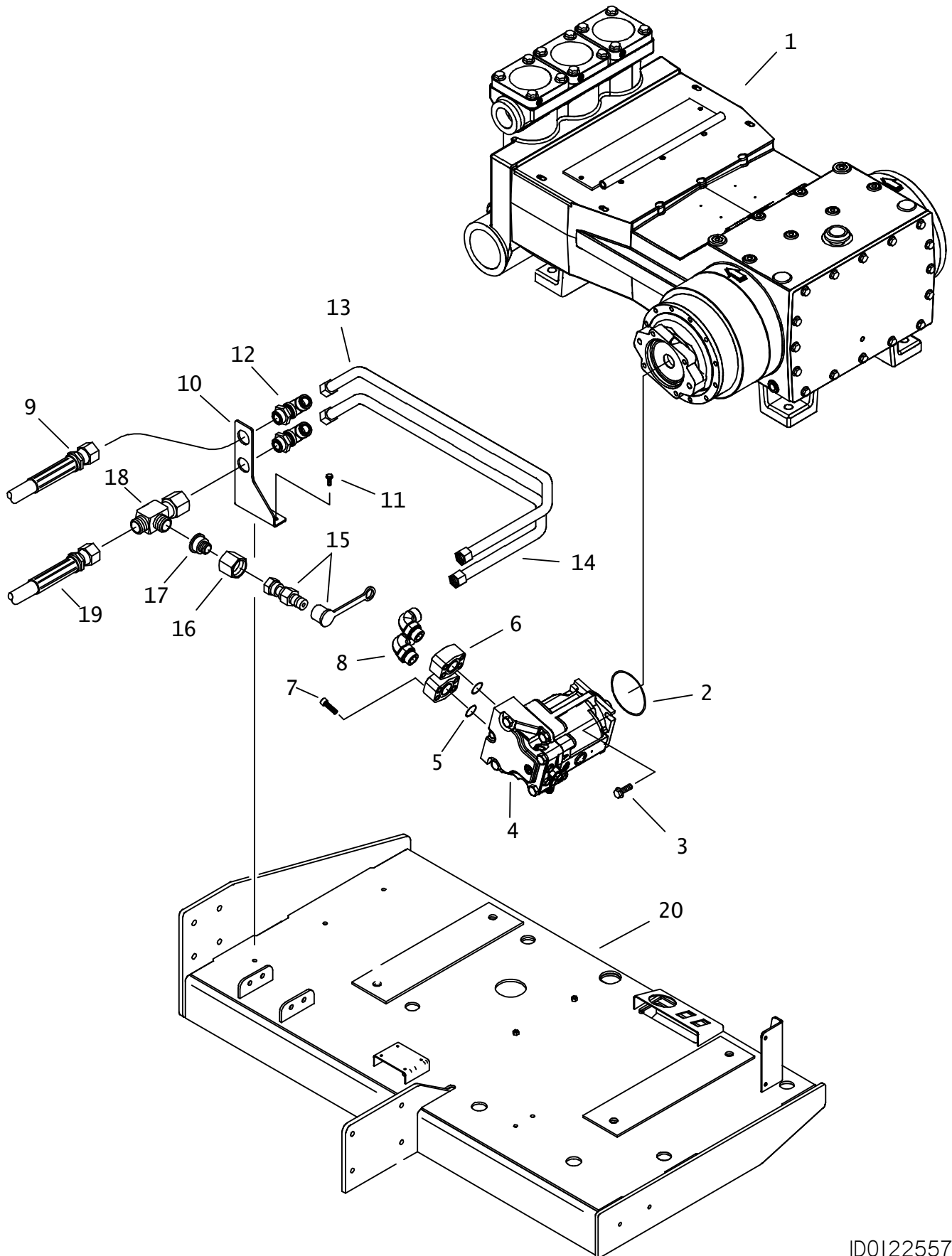
NOTES:

FOOTNOTES:

1. PORT 1 BARREL, PORT 2 INLET, PORT 3 ROD, PORT 4 RETURN
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

FLUID PUMP HYDRAULICS (JT)

BEGINS WITH S/N: 2W0856



FLUID PUMP HYDRAULICS (JT)

BEGINS WITH S/N: 2W0856

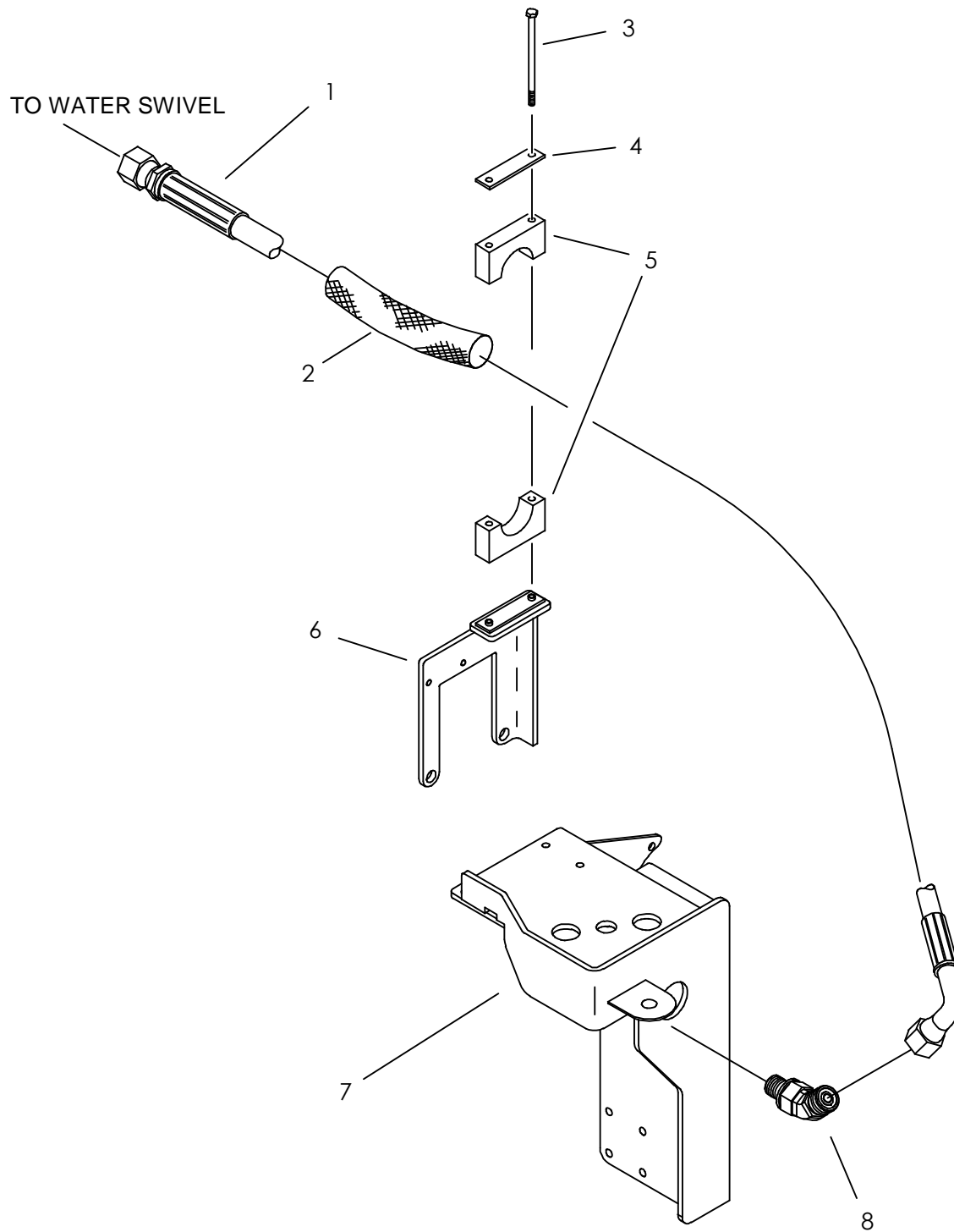
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-776	-	FLUID PUMP	
2.	157-201	1	O-RING (049 D70)	
3.	106-499	4	FLG BOLT (1/2-NC X 1-1/2",GD8)	
4.	149-822	1	HYDRAULIC MOTOR	
5.	157-029	2	O-RING (219 D90)	
6.	514-245	2	HEAD FLANGE (16HFL-16SF)	
7.	105-918	8	BOLT (7/16-NC X 1-1/2", SOC)	
8.	154-287	2	CONNECTOR (16S-16090)	
9.	153-916	-	HOSE (160FX-155"-6000)	
10.	315-770	1	BULKHEAD PLATE	
11.	106-162	2	FLG SCREW (M8-1.25 X 20MM, GD 8)	
12.	154-419	2	BK CONNECTOR (160-16090BK)	
13.	153-824	1	HYD LINE (-16) M1432	
14.	153-825	1	HYD LINE (-16) M1432	
15.	159-159	1	QDC ADAPTER (02-100FX)	
16.	154-340	1	REDUCER NUT (160F)	
17.	154-442	1	REDUCER STEM (100)	
18.	154-409	1	UNION RUN TEE (160FX-160-160)	
19.	157-421	-	HOSE (160FX45-155"-6000)	
20.	310-997	-	FLUID PUMP MOUNT	

NOT SHOWN:

FOOTNOTES:

NOTE:

FLUID SUPPLY (SWIVEL)



FLUID SUPPLY (SWIVEL)

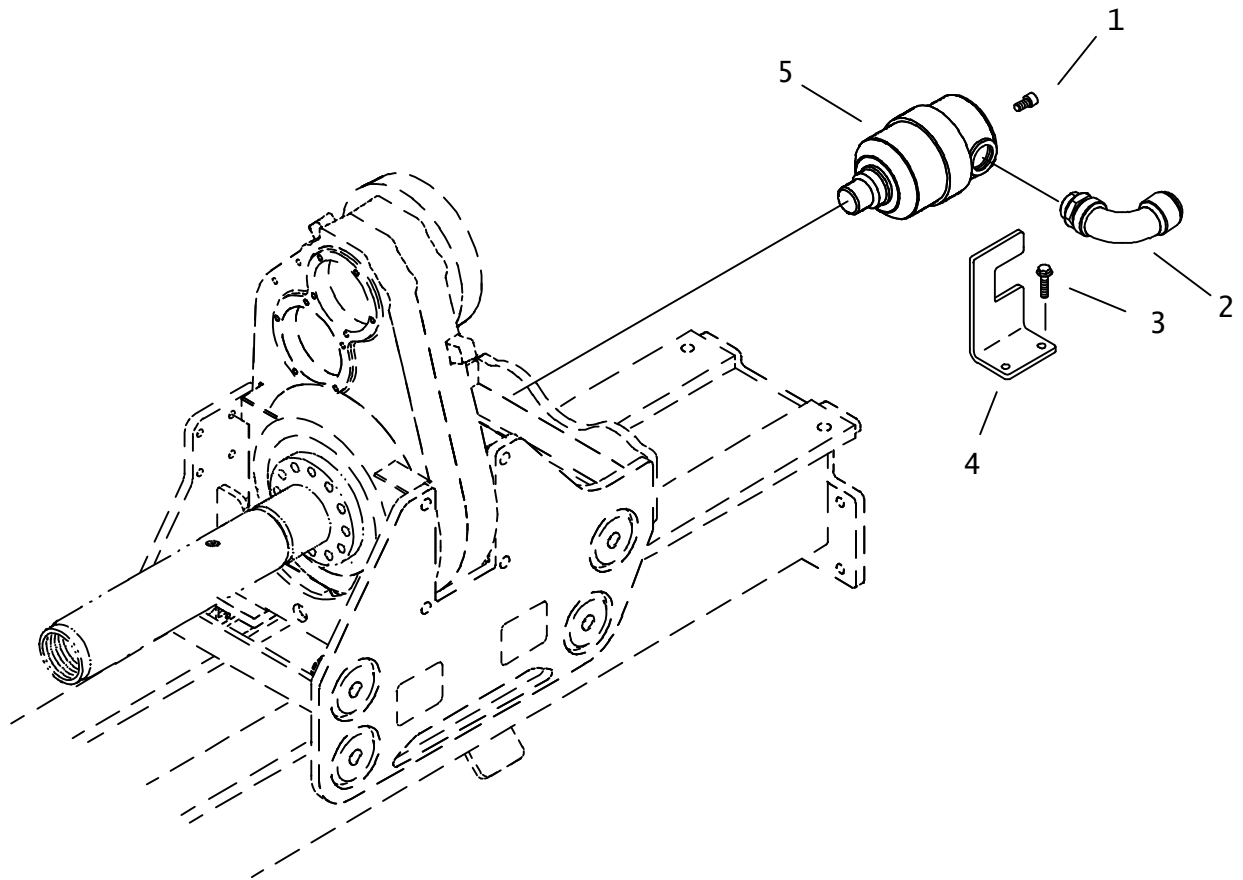
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-240	1	HOSE (32JFX90S-90"-1300)	
2.	117-375	1	ABRASION SLEEVE (3.66" X 35")	
3.	107-443	2	SCREW (7/16-NC X 4")	
4.	307-532	1	COVER PLATE	
5.	310-994	1	CLAMP HALVES (SET OF 2)	
6.	310-852	1	REAR STRAP	
7.	309-179	-	CABLE TRAY BRACKET	
8.	153-207	1	BULKHEAD FITTING	USE 680 LOCTITE OR EQUIVALENT ON NUT

NOT SHOWN:

FOOTNOTES:

NOTE:

FLUID SUPPLY
WATER SWIVEL
BEGINS WITH S/N: 2W0856



FLUID SUPPLY
WATER SWIVEL
BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	115-165	1	PLUG (Ø8N, SOC)	
2.	153-150	1	CONNECTOR (24S-32J90)	
3.	106-559	2	SCREW (M12-1.75 X 25MM)	
4.	309-881	1	SWIVEL TORQUE BRACKET	
5.	149-592	1	WATER SWIVEL	SEE FOOTNOTE I
	190-821	2	SEAL KIT	

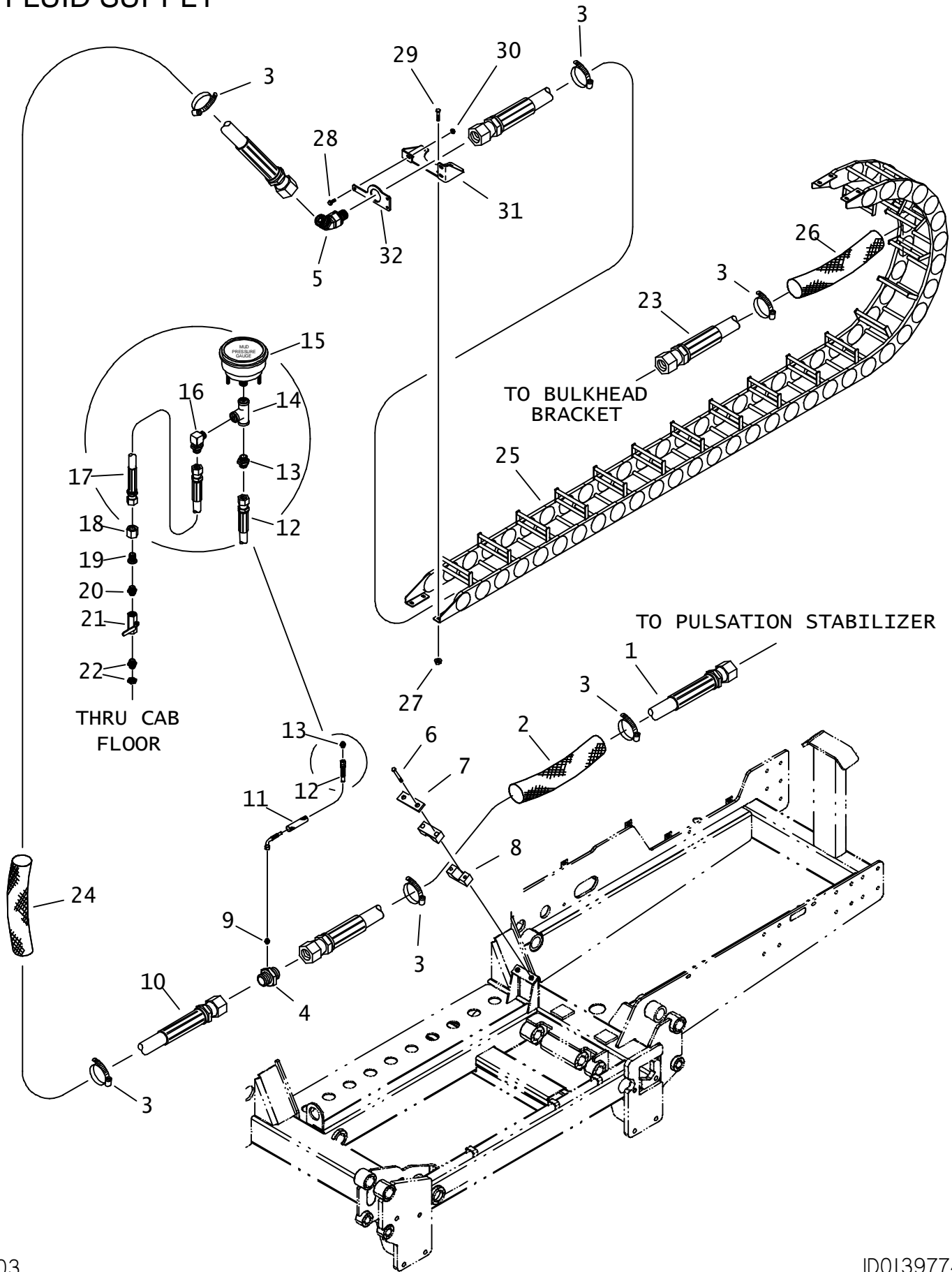
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FOOTNOTES:

I. INSTALL USING NICKLE THREAD SEALING TAPE (I17-555) ON MALE THREADS.

NOTE:

FLUID SUPPLY



FLUID SUPPLY

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-610	1	HOSE (32JFX-84.75"-1300)	
2.	117-637	1	ABRASION SLEEVE (3.66" X 90")	
3.	110-311	4	WORM CLAMP (1-5/16" TO 3-1/4")	
4.	150-2711	1	BK CONNECTOR (24S-32J)	
5.	150-2727	1	BULKHEAD FITTING	
6.	107-443	2	SCREW (7/16-NC X 4")	USE 242 LOCTITE OR EQUIVALANT
7.	307-532	1	COVER PLATE	
8.	310-994	1	CLAMP HALVES (2 PER SET)	
9.	154-339	1	CONNECTOR (04N-040)	
10.	153-348	1	HOSE (32JFX-77.75"-1300)	
11.	117-170	1	ABRASION SLEEVE (1" X 197")	
12.	153-297	1	HOSE (040FX90M-198"-3000)	
13.	154-339	1	CONNECTOR (04N-040)	
14.	115-130	1	TEE (04NF-04NF-04NF)	
15.	217-543	-	PRESSURE GAUGE (3000PSI)	
16.	154-482	1	CONNECTOR (04N-04090)	
17.	515-249	1	HOSE (040FX-26"-3000)	
18.	154-272	1	REDUCER NUT (080F)	USE 680 LOCTITE OR EQUIVALANT ON NUT
19.	154-248	1	REDUCER STEM (040)	
20.	154-349	1	CONNECTOR (08N-080)	
21.	158-579	1	SHUT-OFF (08NF-08NF)	
22.	149-364	1	BK CONN (08N-080)	
23.	153-146	1	HOSE (32JFX90S-183.5"-1300)	
24.	117-376	1	ABRASION SLEEVE (3.66" X 77")	
25.	309-168	-	HOSE CARRIER	
26.	117-461	1	ABRASION SLEEVE (3.66" X 182")	
27.	105-834	4	FLG LOCKNUT (3/8-NC)	
28.	106-383	3	FLG LK SCREW (M10-1.50 X 30MM)	
29.	107-566	4	CARRIAGE BOLT (3/8-NC X 1.50")	
30.	106-387	3	FLG LOCKNUT (M10-1.50)	
31.	310-268	1	BULKHEAD	
32.	310-263	1	BULKHEAD PLATE	

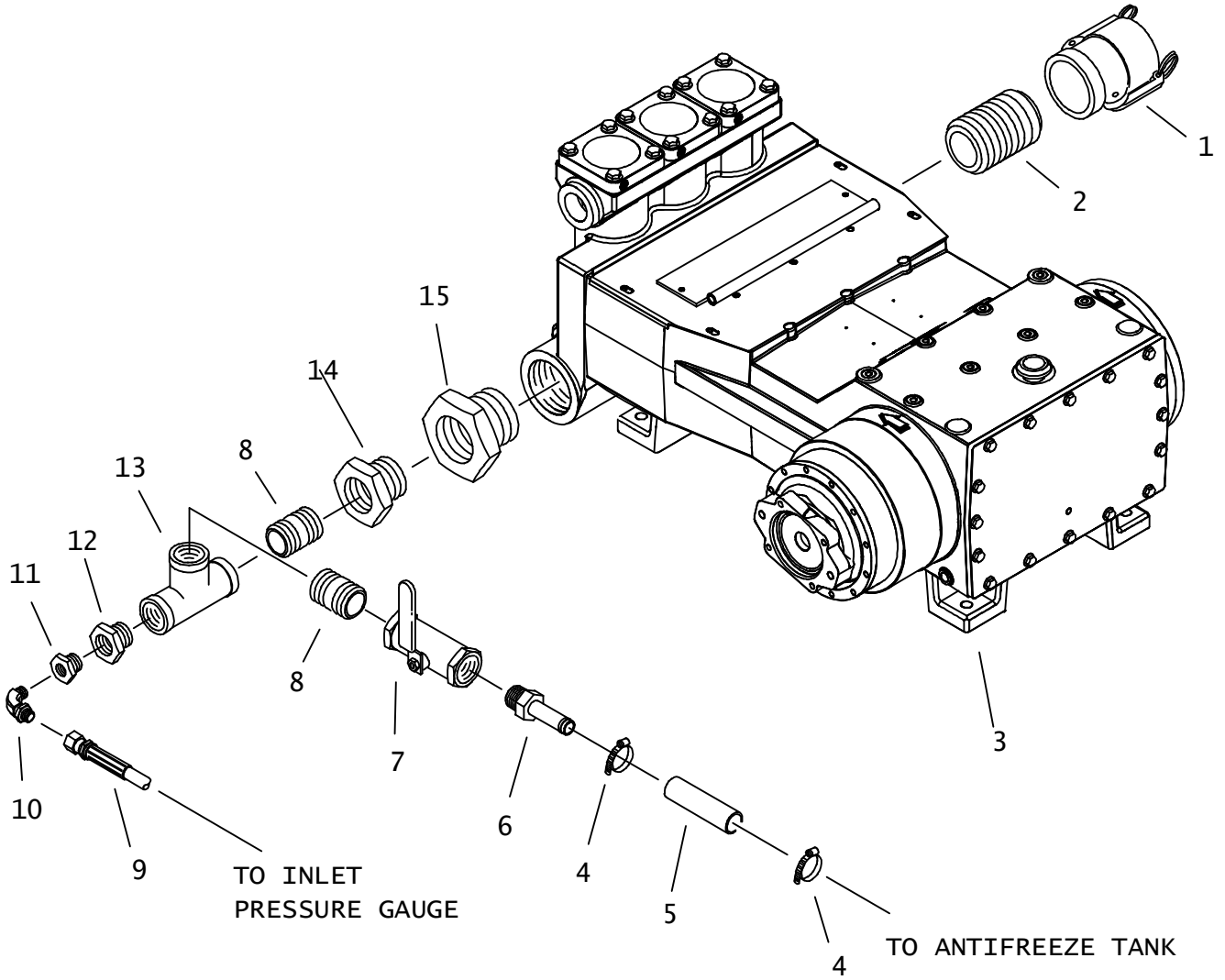
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FOOTNOTES:

NOTE:

REFER TO THE O-RING CHART (800-301) IN THE BACK OF THE BOOK FOR REPLACEMENT O-RINGS

FLUID PUMP PLUMBING (JT)
SUCTION SIDE
BEGINS WITH S/N: 2W0856



FLUID PUMP PLUMBING (JT)

SUCTION SIDE

BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	153-914	1	FHC BODY (4-1/2 FHCF X 4" NPTF)	
2.	153-953	1	CLOSE NIPPLE (64N)	
3.	153-776	1	FLUID PUMP	
4.	111-011	2	WORM CLAMP (1" TO 1-3/4")	
5.	116-587	AR	BULK HOSE (1-1/4", SOLD PER 1')	
6.	156-940	1	S/O COUPLER (20N-20H)	
7.	149-786	1	SHUT-OFF (20NF)	
8.	115-207	2	NIPPLE (20N-2")	
9.	154-805	-	HOSE (060FX90S-54"-3000)	
10.	154-420	1	CONNECTOR (08N-06090)	
11.	115-276	1	REDUCER (16N-08NF)	
12.	115-236	1	REDUCER (20N-16NF)	
13.	115-264	1	PIPE TEE (20NF)	
14.	178-407	1	REDUCER (48N-20NF)	
15.	115-252	1	REDUCER (64N-48NF)	

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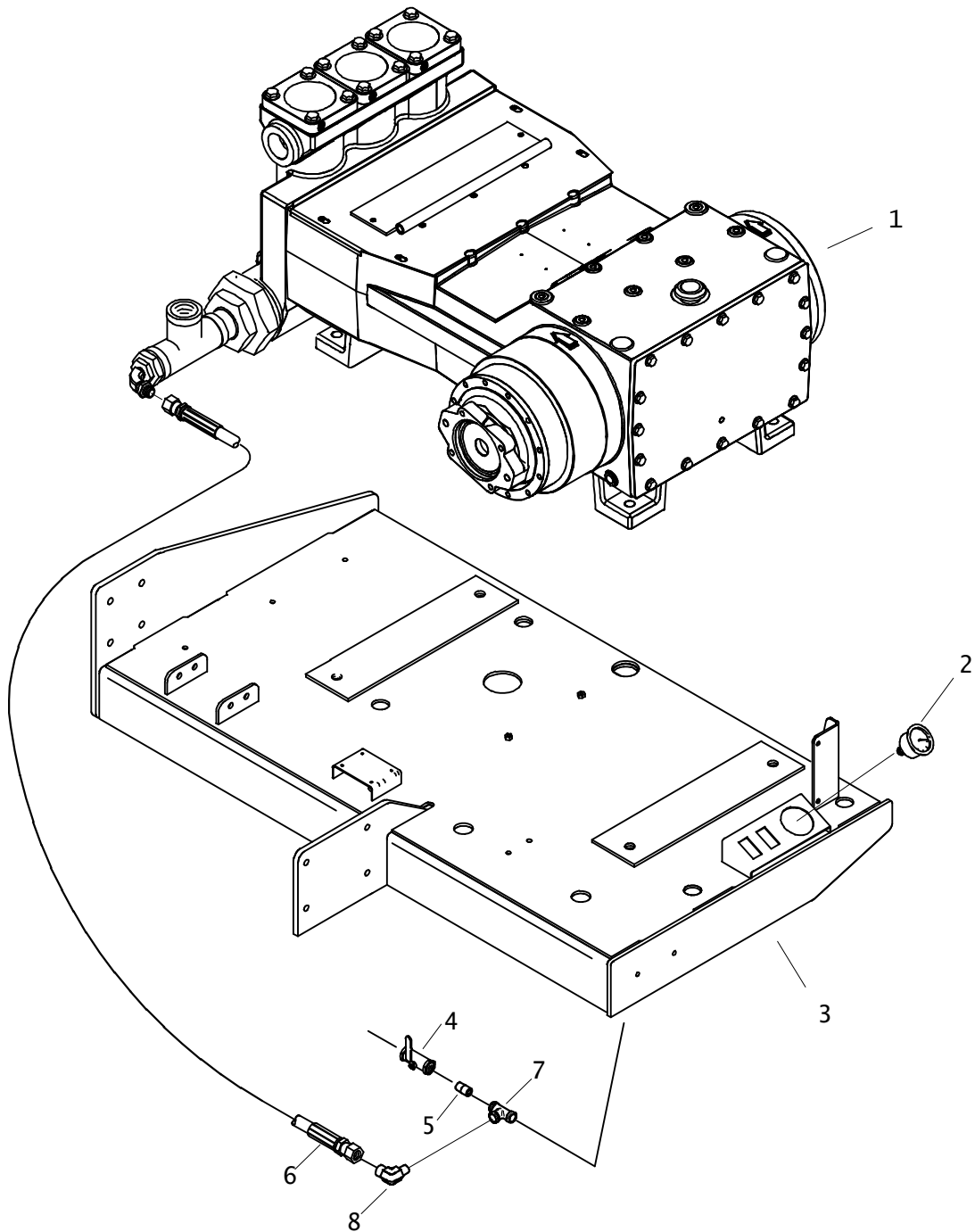
153-915	FHC PLUG (-64)
153-954	REDUCER 4 FHCM-3 FHCF

FOOTNOTES:

NOTE:

INLET GAUGE PLUMBING (JT)

SUCTION SIDE
BEGINS WITH S/N: 2W0856



INLET GAUGE PLUMBING (JT)

SUCTION SIDE

BEGINS WITH S/N: 2W0856

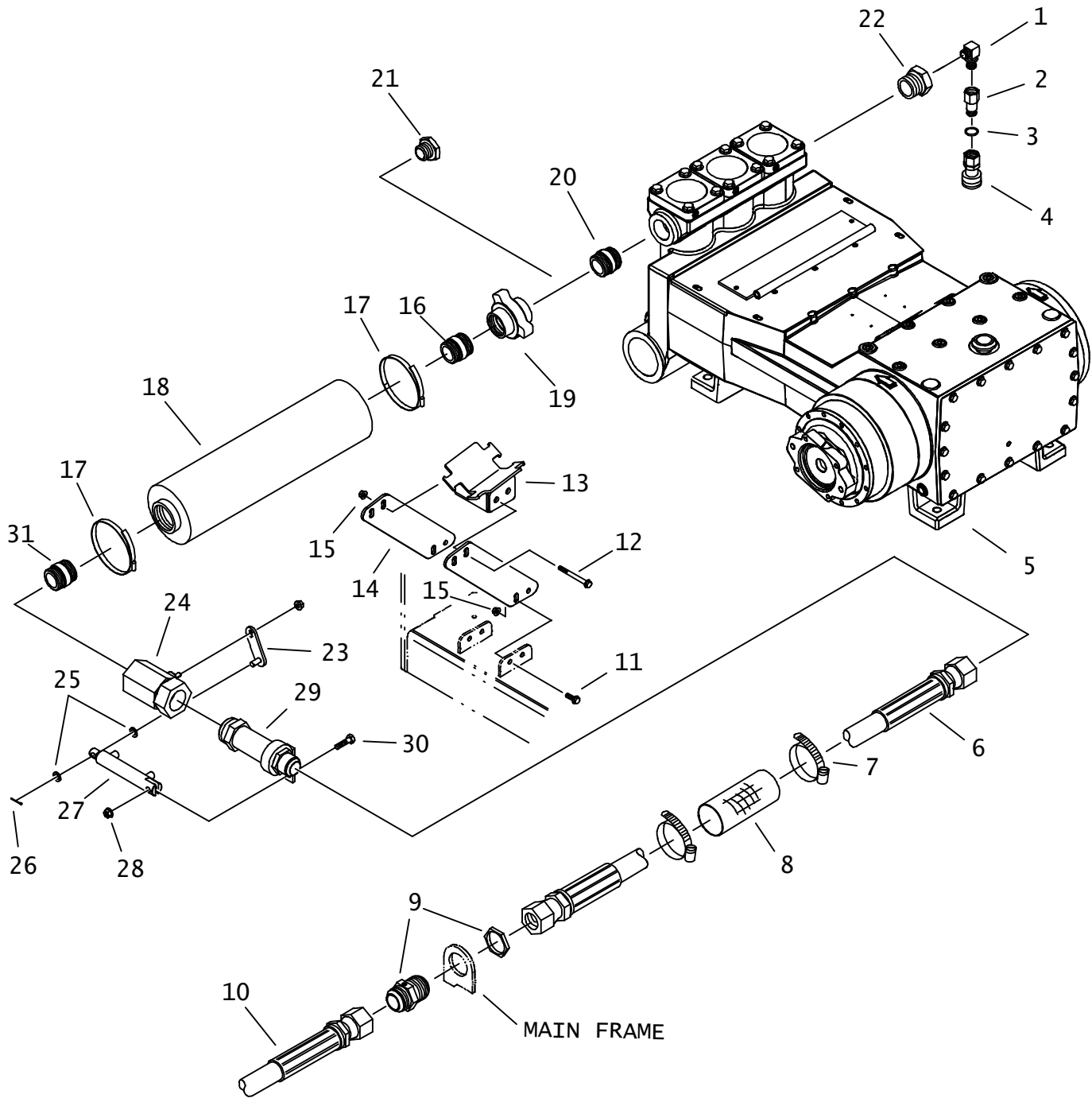
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	153-776	-	FLUID PUMP	
2.	258-048	1	PRESSURE GAUGE (0-160 PSI)	
3.	310-997	-	FLUID PUMP MOUNT	
4.	120-090	1	SHUT-OFF (04NF-04NF, NONVENTED)	
5.	115-129	1	ALL THREAD (04N) SCH 80	
6.	154-805	1	HOSE (060FX90S-54"-3000)	ENDS WITH S/N: 2Z1021
	149-193	1	HOSE (060FX90-69"-3000-AR)	BEGINS WITH S/N: 2Z1022
7.	115-130	1	TEE (04NF-04NF-04NF)	
8.	149-039	1	CONNECTOR (04N-06090)	

NOT SHOWN:

FOOTNOTES:

NOTE:

FLUID PUMP PLUMBING (JT)
 DISCHARGE SIDE / WASH WAND CONNECTION
 BEGINS WITH S/N: 2W0856



FLUID PUMP PLUMBING (JT)
DISCHARGE SIDE / WASH WAND CONNECTION
BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-490	1	CONNECTOR (12N-08090)	
2.	156-732	1	CONNECTOR (08J-080)	
3.	155-706	1	O-RING (908 D90)	
4.	159-088	1	QDC BODY (08-08SF)	
5.	153-776	-	FLUID PUMP	
6.	153-610	-	FLUID HOSE (32JFX-84.75"-1300)	
7.	110-311	2	WORM CLAMP (1-5/16" TO 3-1/4")	
8.	117-637	-	ABRASION SLEEVE (3.66" X 90")	
9.	150-2711	-	BK CONNECTOR (32J-32JBK)	USE O-RING 105-1434
10.	153-348	-	HOSE (32JFX-77.75"-1300)	
11.	106-164	4	FLG LK SCREW (M10-1.50 X 30MM)	
12.	106-639	2	SCREW (M10-1.50 X 160MM)	
13.	315-146	1	DAMPENER MOUNT	
14.	316-594	2	MOUNT PLATE	
15.	106-387	6	FLG LOCKNUT (M10-1.50)	
16.	515-680	1	NIPPLE (32N-2")	
17.	110-656	2	WORM CLAMP (2-1/2" TO 8-1/2")	
18.	313-485	1	PULSATION DAMPNER (DISCHARGE)	SEE FOOTNOTE 1
19.	149-785	1	HEX HD UNION (32NF)	
20.	153-595	1	CONNECTOR (32N-32N8)	
21.	114-008	1	PLUG (32N, SQ, GALV)	NON ON-BOARD FLUID ONLY
22.	115-064	1	REDUCER (32N-12NF)	
23.	306-388	1	VALVE ARM	
24.	149-1001	1	SHUT-OFF (32NF-32NF)	
	191-069	-	BALL VALVE REPAIR KIT	
25.	106-391	2	WASHER (M12)	
26.	105-512	1	COTTER PIN (3/32" X 3/4")	
27.	151-211	1	CYL (1.25" X .50" X 4.00")	
28.	106-685	1	LOCKNUT(M12-1.75,PRV TRQ,10.9)	USE O-RING 105-1434
29.	150-2733	1	CYLINDER MOUNT (32N-32JBK SPECIAL)	
30.	106-334	1	SCREW (M12-1.75 X 50MM)	
31.	153-952	1	NIPPLE (32N-5") EX HEAVY	

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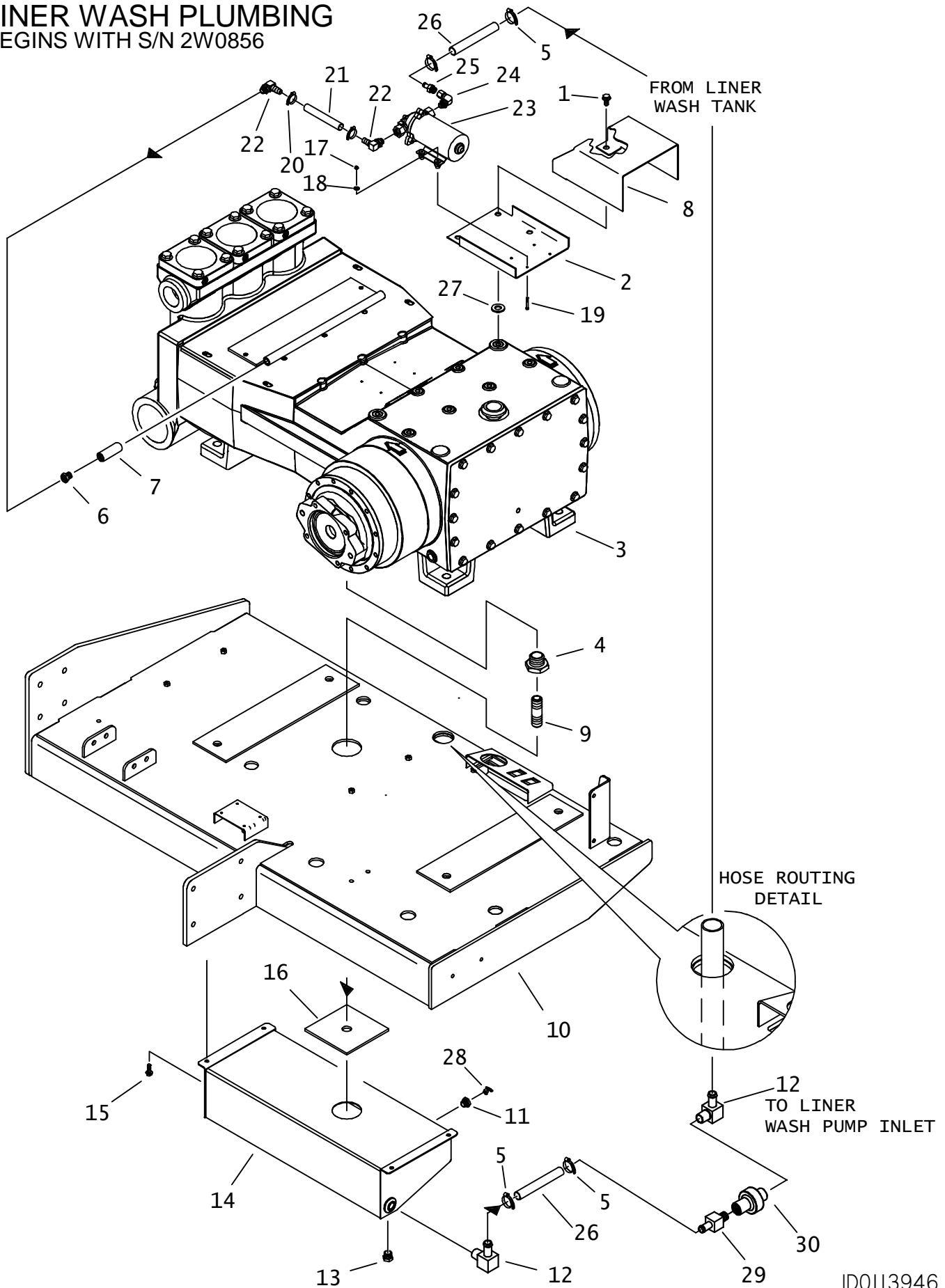
FOOTNOTES:

1. FOR MAXIMUM PERFORMANCE STABILIZER IS FACTORY INSTALLED WITH NITROGEN (250 PSI). IF SERVICING IN FIELD, COMPRESSED AIR IS ACCEPTABLE.

NOTE:

LINER WASH PLUMBING

BEGINS WITH S/N 2W0856



LINER WASH PLUMBING

BEGINS WITH S/N 2W0856

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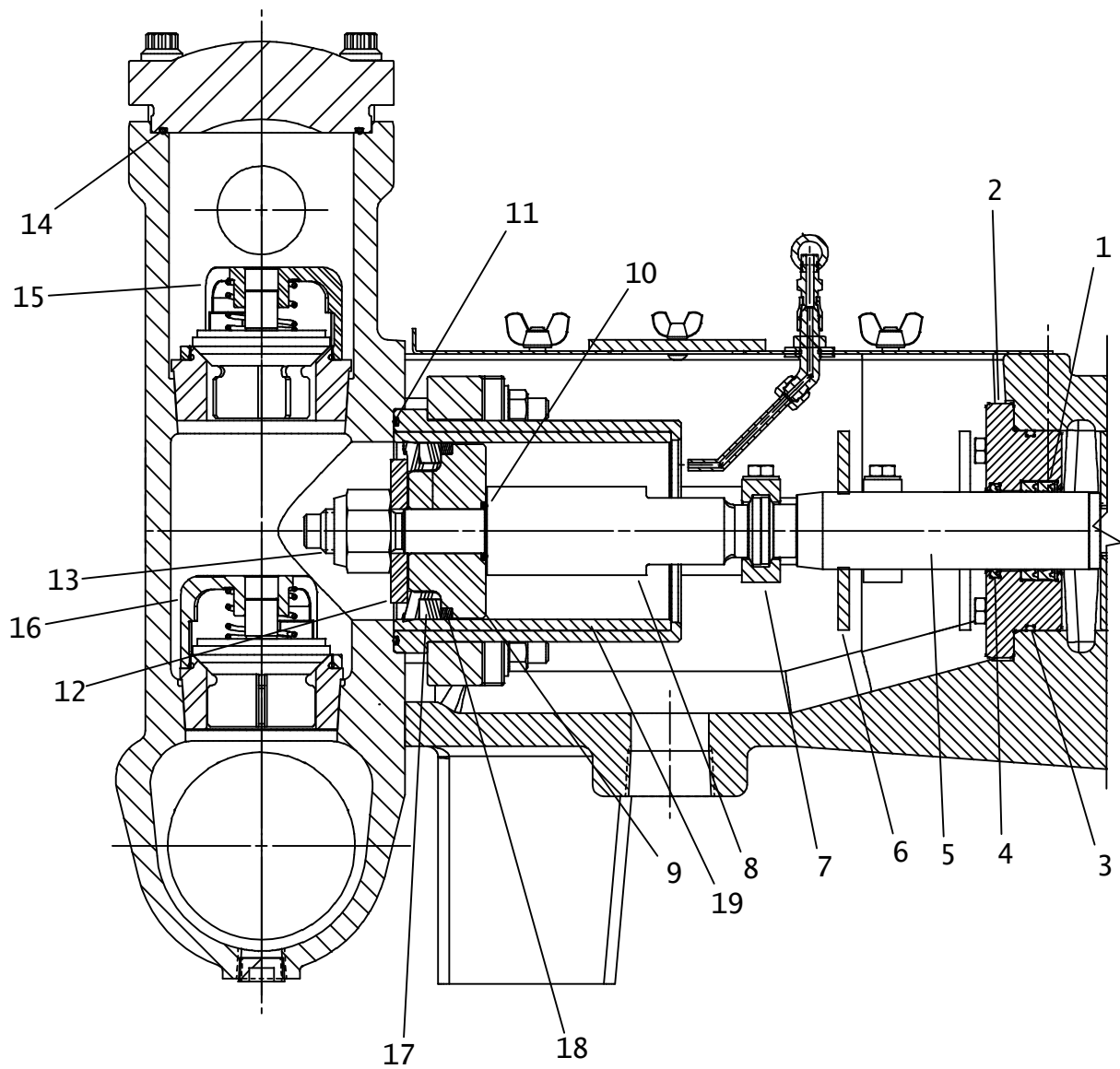
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-828	4	FLG LK BOLT (1/2-NC X 3/4 ")	
2.	318-368	-	PUMP MOUNT	
3.	153-776	1	FLUID PUMP	FMC M1432
4.	514-314	1	REDUCER (24N-16NF)	
5.	110-217	4	WORM CLAMP (7/16" TO 1")	
6.	115-156	1	REDUCER (08N-06NF)	
7.	115-155	1	COLLAR (08NF)	
8.	320-408	1	COVER	
9.	115-273	1	NIPPLE (16N-6")	
10.	310-997	1	FLUID PUMP MOUNT	
11.	115-135	1	REDUCER (08N-04NF)	
12.	514-285	2	S/O COUPLER (08N-10H90)	
13.	115-112	1	PLUG, (08N, SQ)	
14.	313-773	1	LINER WASH TANK	
15.	106-162	4	FLG SCREW (M8-1.25 X 20MM, GD8)	
16.	153-223	1	TANK SEAL	
17.	106-048	4	LOCKNUT (#10-24)	
18.	106-205	4	WASHER (.191")	
19.	106-408	4	BOLT (#10-24 X 1-1/4", SOC, GD8)	
20.	110-249	2	WORM CLAMP (1/4" TO 5/8 ")	
21.	116-881	AR	BULK HOSE (3/8", SOLD PER 1')	USE 1 @ 27"
22.	153-871	2	S/O COUPLER (06N-06H90, BRS)	
23.	153-738	1	LINER WASH PUMP	
24.	156-260	1	STREET ELBOW (06N-06NF90)	
25.	155-112	1	S/O COUPLER (06N-10H)	
26.	116-855	AR	BULK HOSE (.625", SOLD PER 1")	USE 1 @ 8", USE 1 @ 28"
27.	106-743	AR	WASHER (.531", HARDENED)	
28.	110-141	1	DRAIN VALVE (04N)	
29.	514-140	1	COUPLER (08N-10H)	
30.	150-1506	1	CHECK VALVE 1/2", 1.5 PSI	BEGINS WITH S/N: CMWJ80T3C7000012

NOT SHOWN:

FOOTNOTES:

NOTE:

FLUID PUMP - FMC (JT)
FLUID END
BEGINS WITH S/N: 2W0856



FLUID PUMP - FMC (JT)

FLUID END

BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	499-450		VALVE KIT (M14)	INCLUDES REF NO. 14, 15 AND 16
	191-214		PISTON / CYL. REPLACEMENT KIT	INCLUDES REF NO. 10, 11, 13, 17, 18 AND 19
	191-215		PISTON REPLACEMENT KIT	INCLUDES REF NO. 10, 11, 17 AND 18
1.	157-275	3	PLUNGER ROD SEAL (U-CUP)	
2.	499-457	3	PLUNGER ROD SEAL HOUSING	
3.	157-302	3	O-RING (2-244)	
4.	157-274	3	PLUNGER ROD SEAL (SCRAPER)	
5.	190-1712	3	CROSSHEAD	
6.	499-458	3	DEFLECTOR SHIELD	
7.	499-455	3	PLUNGER CLAMP	
8.	499-454	3	PISTON ROD	
9.	499-452	3	PISTON HOLDER	
10.	157-069	3	O-RING (215 D90)	
11.	157-269	3	O-RING (-249 D90)	
12.	499-453	3	PISTON RETAINER	
13.	107-794	3	LOCKNUT (1" NC)	REPLACE WITH NEW WHEN REMOVED. TORQUE TO 250 FT LBS.
14.	N/A		O-RING (-245 D70)	
15.	N/A		DISCHARGE VALVE	
16.	N/A		SUCTION VALVE	
17.	N/A		PISTON	
18.	N/A		WEAR RING	
19.	500-1421		CYLINDER SLEEVE	

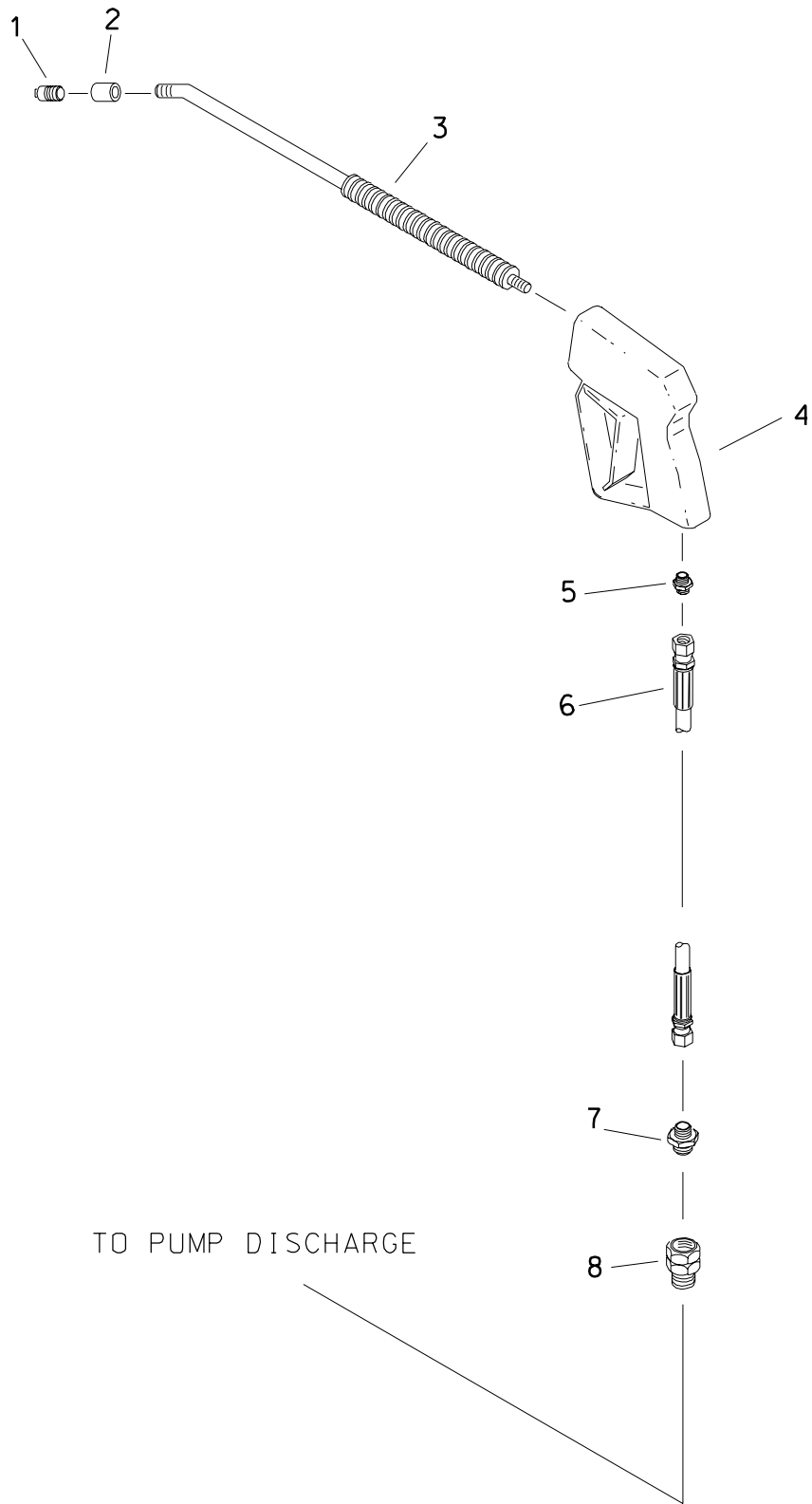
NOT SHOWN:

157-272	2	OIL SEAL
157-271	1	O-RING (-373 D70)
157-268	1	BACK COVER GASKET
499-451	AR	VALVE PULLER (M14)
499-394	1	SIGHT GAGE

FOOTNOTES:

NOTE:

WASH WAND



TO PUMP DISCHARGE

WASH WAND

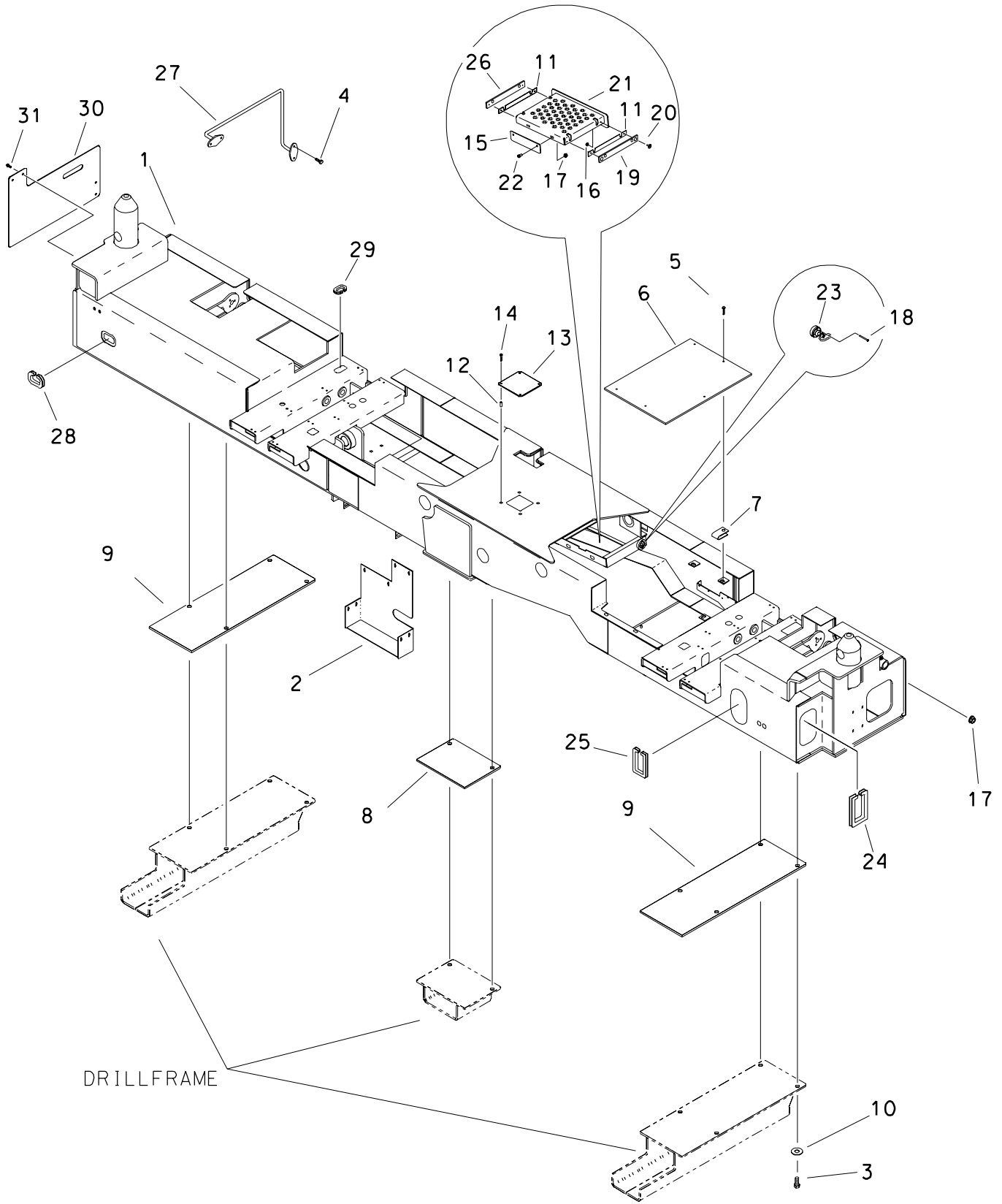
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	155-242	1	NOZZLE (04N, DRF.047", TC)	
2.	115-170	1	COLLAR (04NF)	
3.	259-353	1	WASH WAND (04N-36")	
4.	259-197	1	SPRAY GUN	
	190-179	1	SEAL REPAIR KIT	RHINO
	190-938	1	SPRAY GUN, REPAIR KIT	CHAPPELL
5.	514-141	1	CONNECTOR (06N-080)	
6.	154-753	1	HOSE (080FX-600"-3000)	
7.	154-233	1	CONNECTOR (08S-080)	
8.	159-089	1	QDC ADAPTER (08-08SF)	

FOOTNOTES

NOTE:
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PIPE LOADER SYSTEMS

PIPE LOADER (MOUNT)

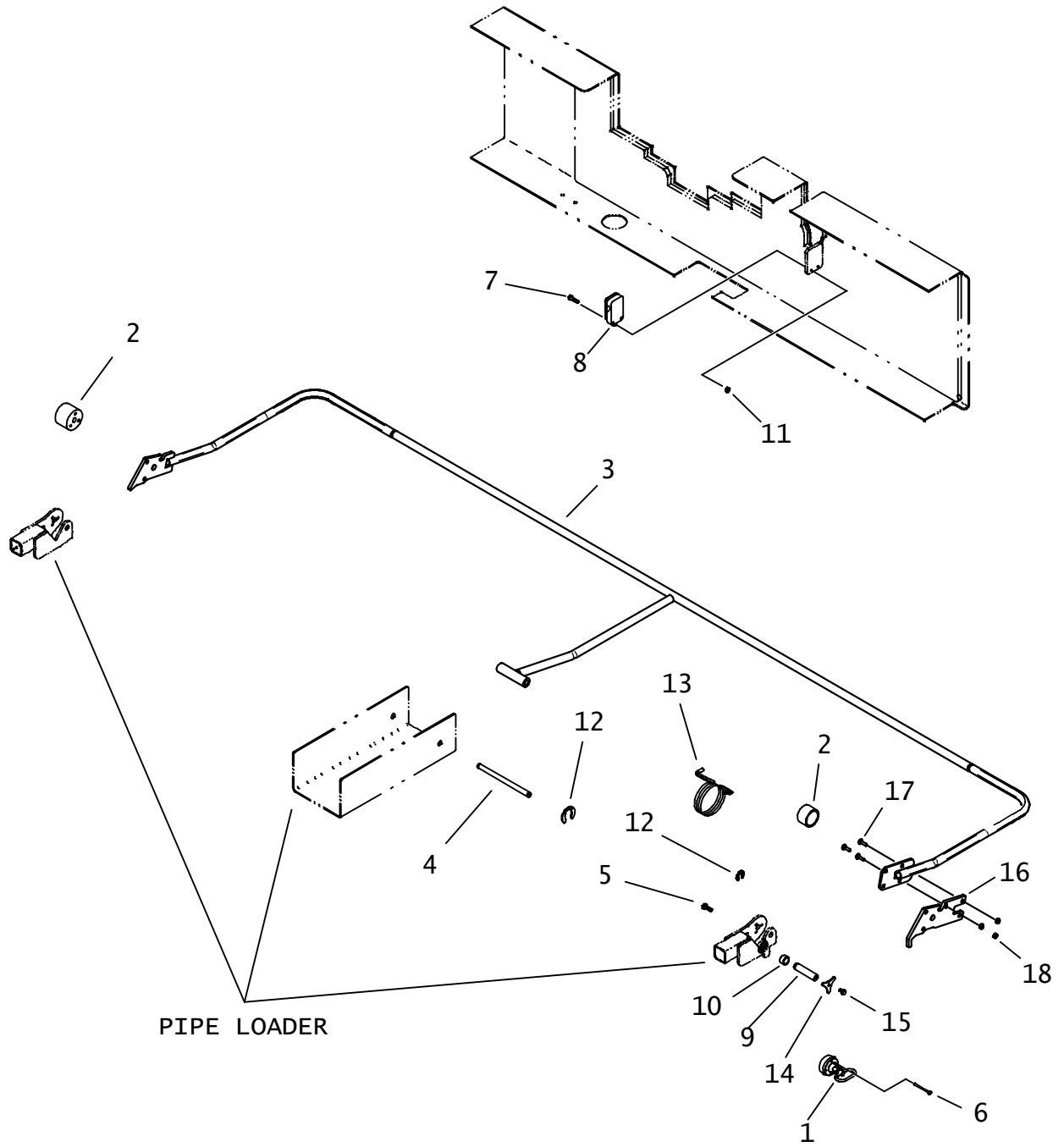


PIPE LOADER (MOUNT)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	306-697	1	PIPE LOADER	
2.	370-369	1	COVER	
3.	106-340	10	SCREW (M16-2.0 X 50mm)	USE LOCTITE 277 OR EQUIVALENT
4.	106-383	4	FLG LK SCREW (M10-1.50 X 30mm)	ENDS WITH S/N: 2V2567
5.	106-162	13	FLG SCREW (M8-1.25 X 20mm)	
6.	370-133	1	COVER PLATE	
7.	106-551	13	CLIP NUT (M8-1.25)	
8.	370-148	AR	TOP FLG PLATE	
	370-165	AR	CENTER SHIM PLATE	
9.	370-163	AR	SPACER PLATE	
	370-164	AR	SHIM PLATE	
10.	106-398	10	WASHER (M16, HARDENED)	
11.	370-325	AR	SHIM (.065")	
12.	105-633	1	NUTSERT (M8-1.25) 3.80-7.9" THK	
13.	370-079	1	COVER PLATE	
14.	107-032	4	SCREW (M8-1.25 X 20mm, BUT SOC)	
15.	370-242	1	STOP PLATE	
16.	106-353	4	FLG NUT (M6-1.00)	
17.	106-386	8	FLG LOCKNUT (M8-1.25)	
18.	106-796	2	SCREW (M4-.70 X 30mm)	
19.	370-243	1	SLIDE BAR	
20.	107-170	4	BOLT (M6-1.00 X 20mm)	
21.	370-231	1	STEP	
22.	106-380	2	FLG LK SCREW (M8-1.25 X 16mm)	
23.	347-888	1	SPRING LOADED PIN	
24.	116-259	AR	BULK EDGE (1/2", SOLD PER FT)	USE 1 @ 18"
25.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 22"
26.	370-241	1	CROSS BAR	
27.	307-820	1	HANDRAIL	ENDS WITH S/N: 2V2567
28.	115-686	1	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 9"
29.	116-259	1	BULK EDGE (1/2", SOLD PER FT)	USE 1 @ 9"
30.	324-358	1	COVER	
31.	106-724	1	FLG LK SCREW (M10-1.50 X 25mm)	

FOOTNOTES

GUARD RAIL



GUARD RAIL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	347-888	1	SPRING LOADED PIN	
2.	348-098	2	SPRING TUBE	
3.	300-6264	1	GUARD RAIL	SEE FOOTNOTE 1
4.	348-068	1	SUPPORT PIN	
5.	106-381	6	FLG LK SCREW (M8-1.25 X 25MM)	
6.	106-796	2	SCREW (M4-0.70 X 30MM)	
7.	106-427	2	SCREW (M5-0.80 X 22MM, SOC)	
8.	215-1175	1	PROXIMITY SWITCH	
9.	370-334	2	PIN	
10.	125-731	2	COMPOSITION BUSHING (.750")	USE LOCTITE 680 OR EQUIVALENT
11.	106-850	2	LOCKNUT (M5-0.80)	
12.	115-503	4	KLIP RING (.750")	
13.	117-121	2	TORSION SPRING	
14.	370-335	2	HEAD PLATE	
15.	106-378	2	FLG LK SCREW (M6-1.00 X 12MM)	USE LOCTITE 242 OR EQUIVALENT
16.	300-6259	1	TUBE END PLATE	
17.	105-249	3	CARRIAGE BOLT (3/8-NC X 1-1/4")	
18.	105-834	3	FLG LOCKNUT (3/8-NC)	

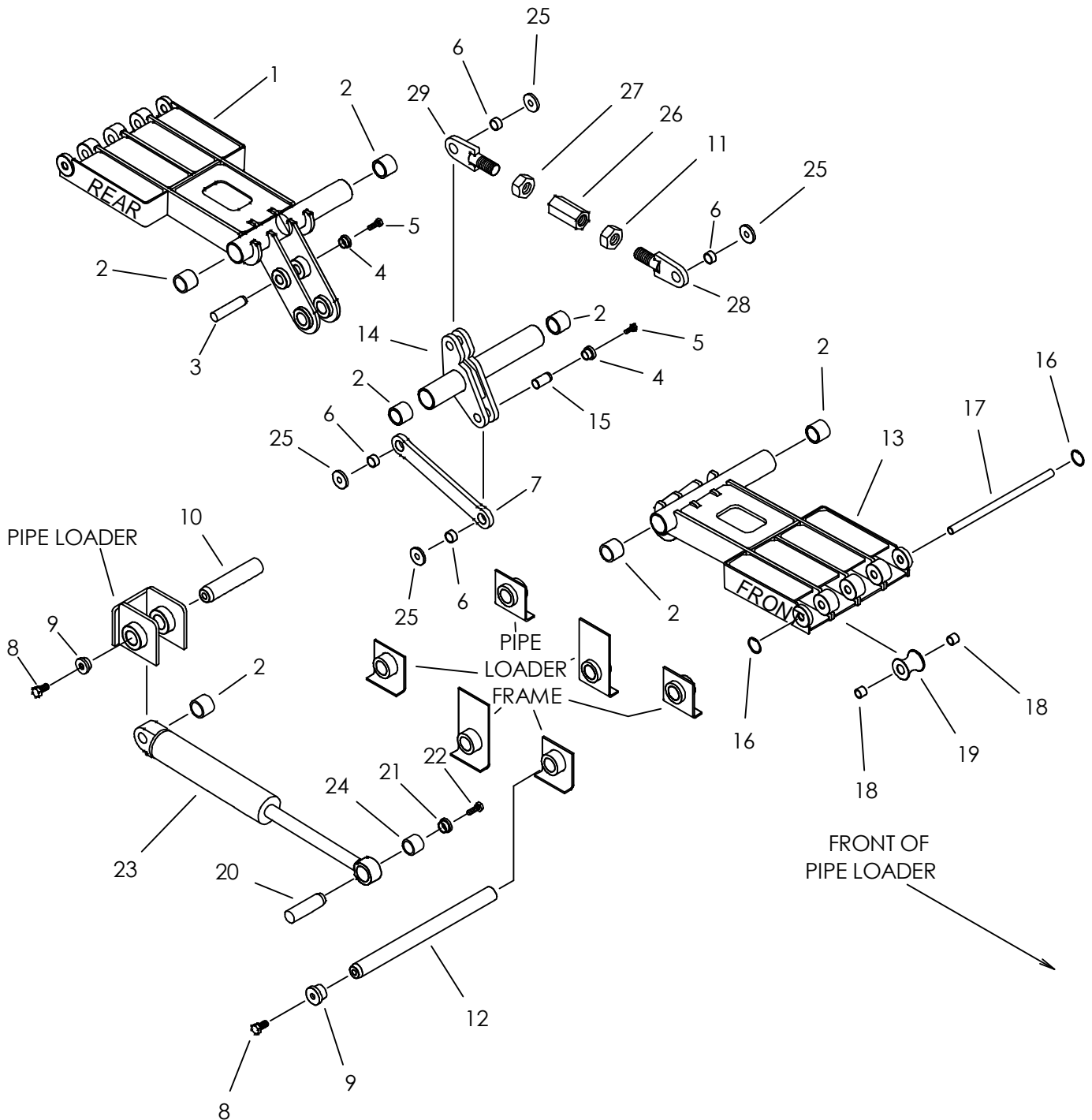
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FOOTNOTES:

I. 307-789 GUARD RAIL (BEFORE S/N CMWJT100PA0000027) IS NO LONGER AVAILABLE. REPLACE WITH 300-6264 AND REF. NO'S 16, 17 AND 18.

NOTE:

PIPE LOADER LIFT ARMS
 ENDS WITH S/N: CMWJT100PA0000027



PIPE LOADER LIFT ARMS

ENDS WITH S/N: CMWJT100PA0000027

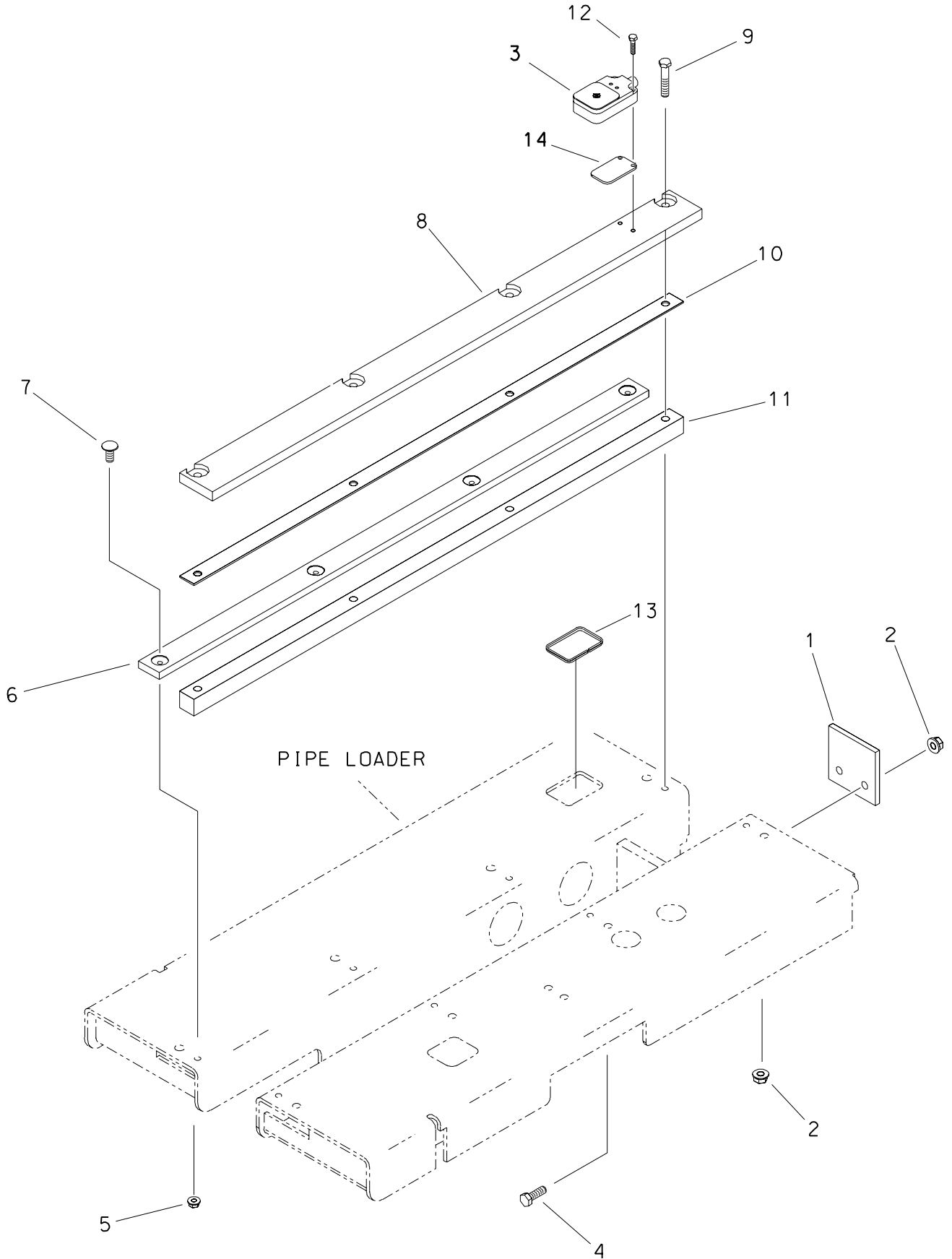
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-967	1	LIFT ARM	
2.	125-754	7	COMPOSITION BUSHING (2")	
3.	179-042	2	TAPERED PIN (31.75MM X 144MM)	
4.	181-982	4	TAPERED INSERT (1.25")	
5.	105-247	2	SCREW (M12-1.75 X 35MM)	USE LOCTITE 242 OR EQUIVALENT
6.	125-143	4	BRONZE BUSHING (1.250")	
7.	349-965	1	LINKAGE ARM	
8.	106-344	4	SCREW (M20-2.5 X 40MM)	USE LOCTITE 242 OR EQUIVALENT
9.	184-064	4	TAPERED INSERT (2")	
10.	179-236	1	TAPERED PIN (50.8MM X 200MM)	
11.	105-604	1	JAM NUT (1-1/2 NF-12, LH THD)	
12.	179-168	3	TAPERED PIN (50.8MM X 655MM)	
13.	349-237	1	LIFT ARM	
14.	349-962	1	CENTER LINKAGE	
15.	179-232	2	TAPERED PIN (31.75MM X 65MM)	
16.	118-047	4	INTERNAL SNAP RING (1.000")	
17.	349-240	2	LIFT BAR	
18.	125-770	16	COMPOSITION BUSHING (1")	
19.	349-766	8	ROLLER	
20.	183-878	1	TAPERED PIN (44.4MM X 135MM)	
21.	181-975	1	TAPERED INSERT (1.75")	
22.	106-470	1	FLG SCREW (M16-2.0 X 40MM)	USE LOCTITE 242 OR EQUIVALENT
23.	151-085	1	CYL (3.5" X 1.75" X 16")	
24.	125-773	1	COMPOSITION BUSHING (1.75")	
25.	110-056	AR	MACHINERY BUSHING (1.25")	
26.	370-303	1	ADJUSTMENT BAR	
27.	105-377	1	JAM NUT (1-1/2-NF)	
28.	370-298	1	FRONT LINK	
29.	370-301	1	BACK LINK	

NOT SHOWN:

FOOTNOTES:

NOTE:

PIPE LOADER (SHUTTLE MOUNT)



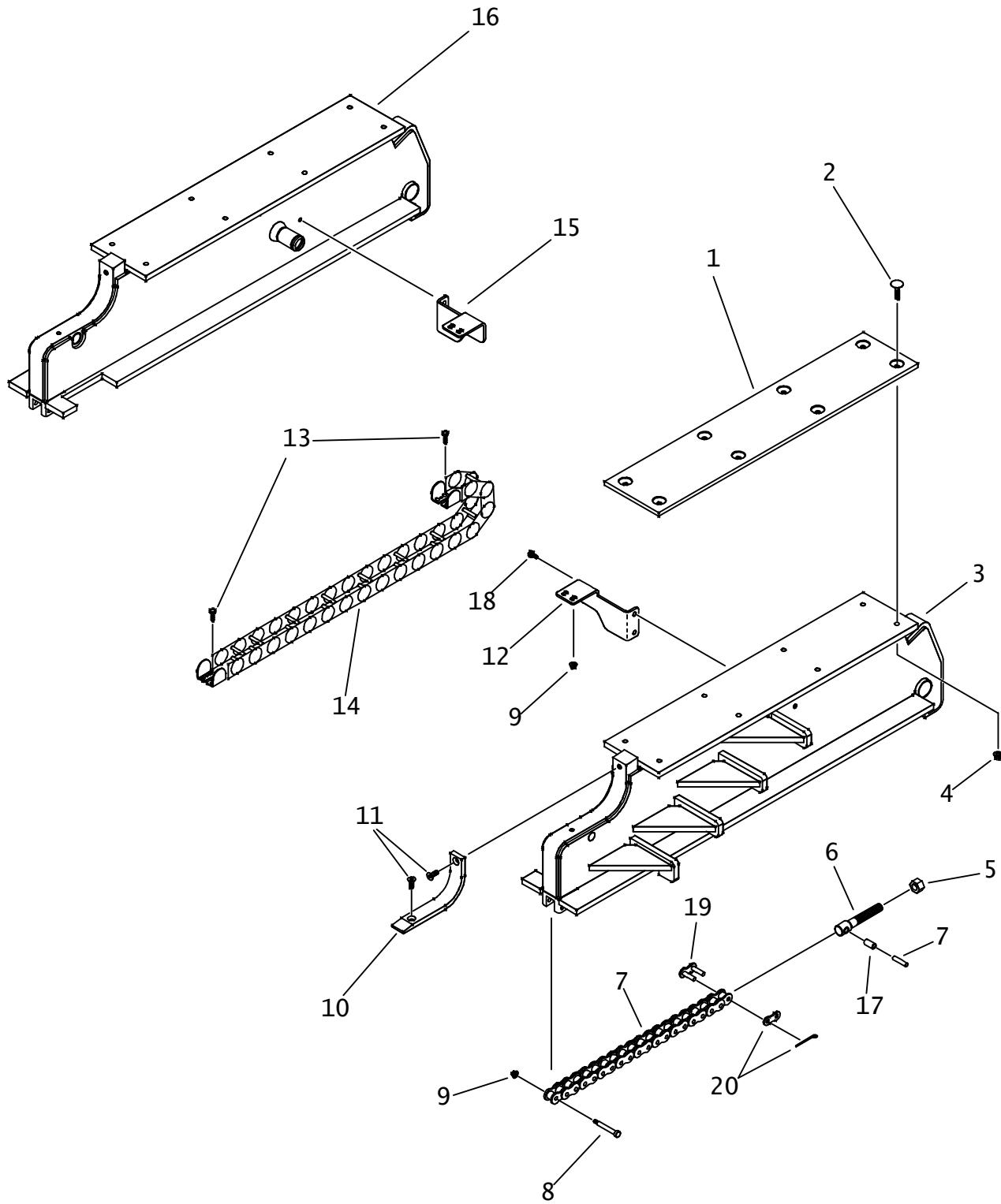
PIPE LOADER (SHUTTLE MOUNT)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	348-064	2	SHIM	
2.	106-386	20	FLG LOCKNUT (M8-1.25)	
3.	214-692	1	PROXIMITY SWITCH	
4.	106-163	4	FLG SCREW (M8-1.25 X 30MM)	
5.	106-353	16	FLG NUT (M6-1.00)	
6.	349-297	4	BOTTOM SLIDE BAR	
7.	107-170	16	SCREW (M6-1.00 X 20MM)	
8.	305-804	1	RETAINER BAR	
	305-810	3	RETAINER BAR	
9.	106-329	16	SCREW (M8-1.25 X 50MM)	
10.	348-065	4	OUTER SHIM	
11.	349-278	4	BAR	
12.	106-427	2	SCREW (M5-0.80 X 22MM, SOC)	
13.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 9". SEE FOOTNOTE 1.
14.	107-451	AR	SHIM (.135")	

FOOTNOTES

1. USE 116-325 GROMMET (.362") ON OLDER MODELS AS REQUIRED

PIPE LOADER SHUTTLES
 ENDS WITH S/N: CMWJT100PA0000027



PIPE LOADER SHUTTLES

ENDS WITH S/N: CMWJT100PA0000027

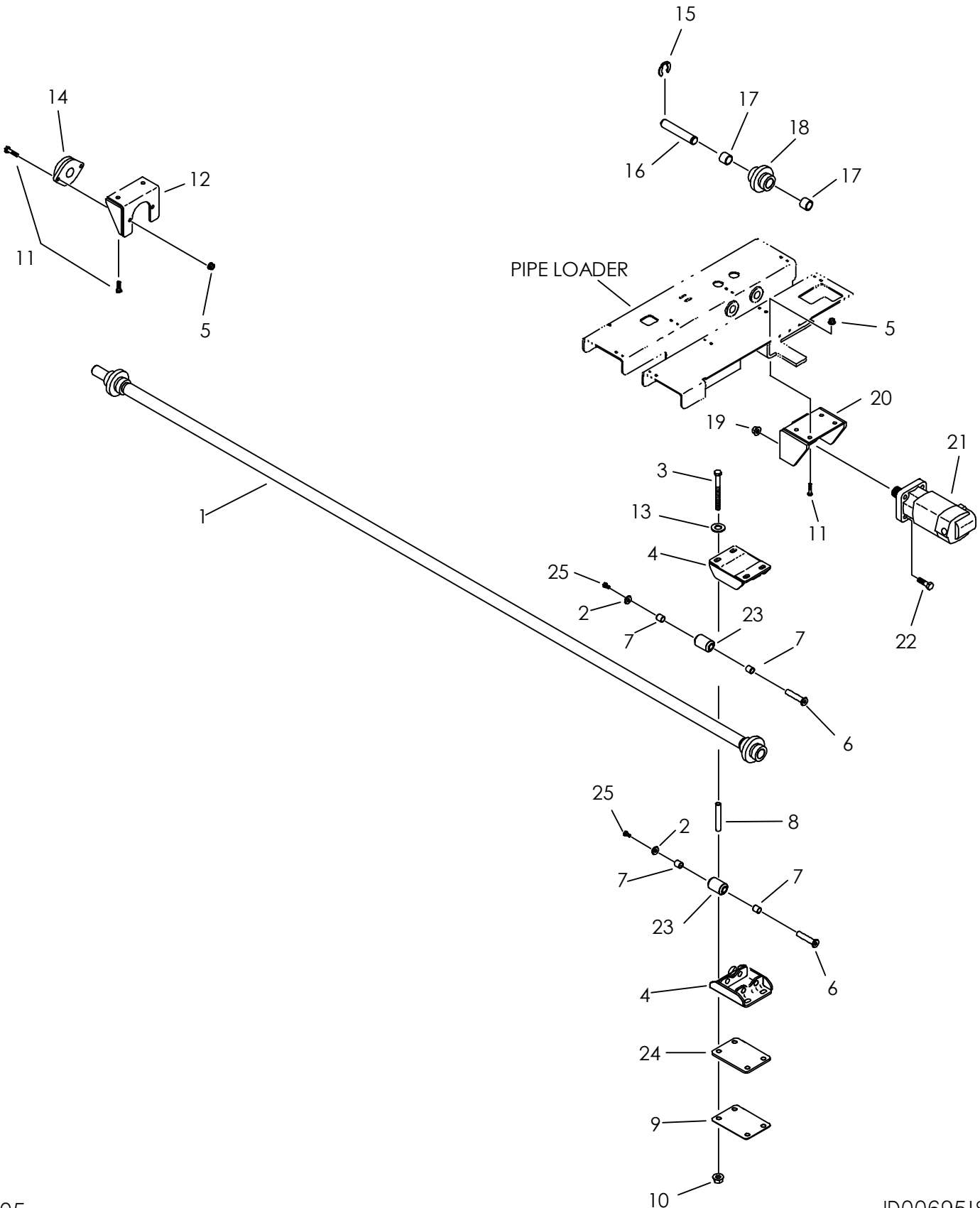
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-296	2	TOP SLIDE BAR	
2.	107-187	16	SCREW (M8-1.25 x 35mm)	
3.	306-898	1	FRONT SHUTTLE	
4.	106-386	16	FLG LOCKNUT (M8-1.25)	
5.	105-357	2	LOCKNUT (5/8-NC)	
6.	356-205	2	CHAIN ADJUSTER (#80)	
7.	130-330	2	ROLLER CHAIN (#80, 58P)	INCL REF NO'S 19 AND 20
8.	107-160	2	SHLDR BOLT (M8 X 50MM, M6-1.00)	
9.	106-353	10	FLG NUT (M6-1.00)	USE 242 LOCTITE OR EQUIVALENT
10.	348-036	2	WEAR PAD	
11.	106-943	4	SCREW (M8-1.25 x 16mm, CSK SLT)	
12.	349-978	1	TRACK BRACKET	
13.	106-379	8	FLG LK SCREW (M6-1.00 x 20mm)	
14.	349-068	2	HOSE TRACK (34.4")	
15.	349-980	1	TRACK BRACKET	
16.	306-897	1	BACK SHUTTLE	
17.	130-300	2	ROLLER BUSHING (#80)	
18.	106-381	4	FLG LK SCREW (M8-1.25 x 25mm)	
19.	130-304	-	CONNECTOR LINK (#80)	

NOT SHOWN:

FOOTNOTES:

NOTE:

PIPE LOADER (SHUTTLE DRIVE)



PIPE LOADER

PIPE LOADER (SHUTTLE DRIVE)

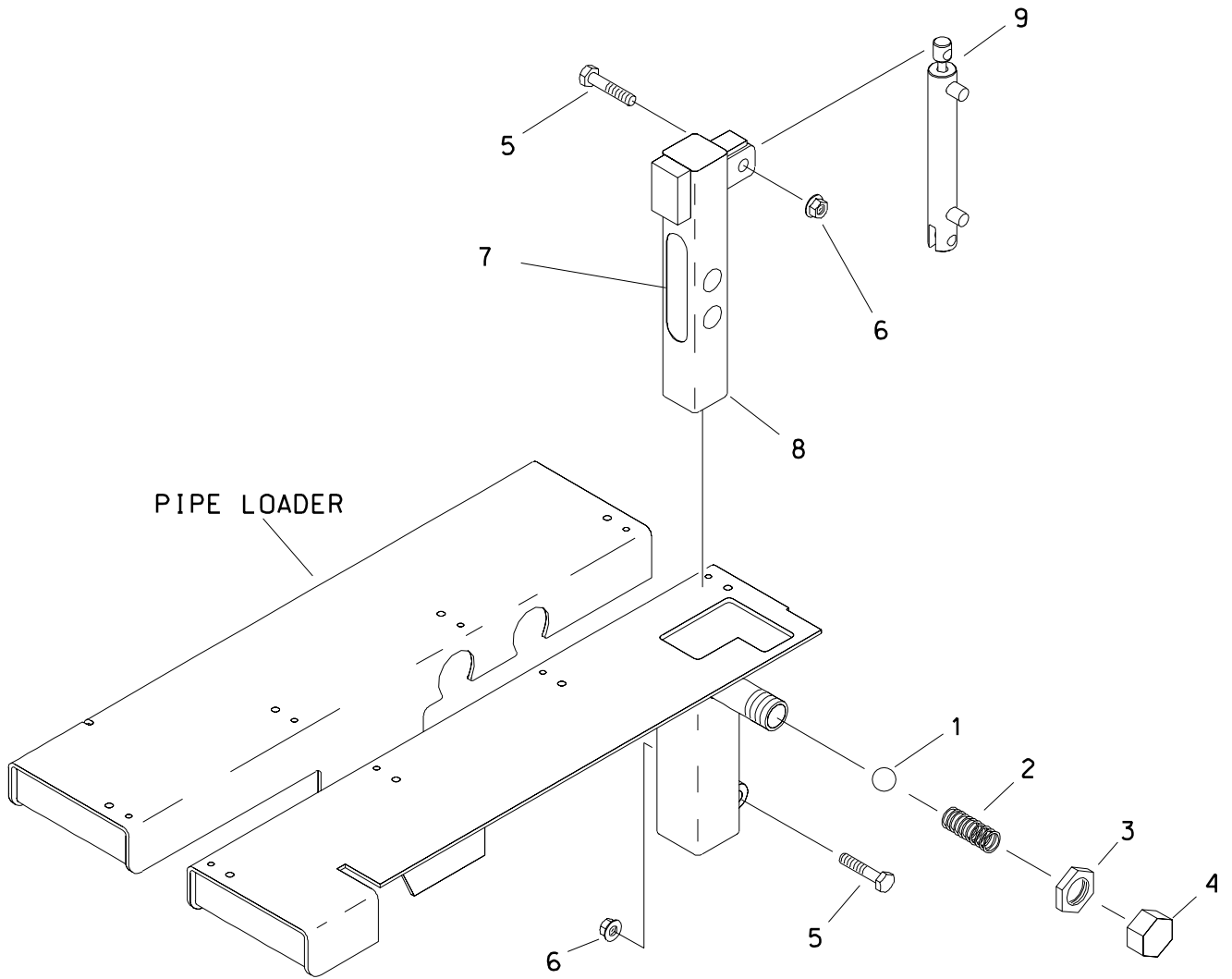
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	349-228	1	SHAFT	
2.	105-264	8	WASHER (3/8")	
3.	106-620	8	SCREW (M12-1.75 X 150MM)	
4.	348-053	4	SHAFT SUPPORT	
5.	106-387	8	FLG LOCKNUT (M10-1.50)	
6.	370-518	8	PIN	
7.	125-403	16	BRONZE BUSHING (.625")	
8.	370-036	8	SPACER	
9.	348-067	AR	SUPPORT SHIM	
10.	106-354	6	FLG NUT (M12-1.75)	
11.	106-383	8	FLG LK SCREW (M10-1.50 x 30MM)	
12.	348-062	1	BEARING MOUNT	
13.	106-391	8	WASHER (M12)	
14.	125-605	1	FLANGE BEARING (1.25", 2-BLT)	
15.	115-499	8	KLIP RING (1.000")	
16.	183-912	4	PIN	
17.	125-770	8	COMPOSITION BUSHING (1")	
18.	175-529	4	IDLER SPROCKET (80B9)	
19.	106-198	4	FLG LOCKNUT (1/2-NC, GD8)	
20.	348-060	1	MOTOR MOUNT	
21.	158-952	1	HYD MOTOR (SHUTTLE)	SEE FOOTNOTE 1
22.	105-066	4	BOLT (1/2-NC X 1.75")	
23.	370-361	8	ROLLER	
24.	370-360	AR	SPACER PLATE	
25.	105-274	8	SCREW (M10-1.50 X 20MM)	USE LOCTITE 242 OR EQUIVALENT

NOT SHOWN:

FOOTNOTES:
1. SEAL REPAIR KIT 500-658

NOTE:

PIPE LOADER (SHUTTLE STOP)



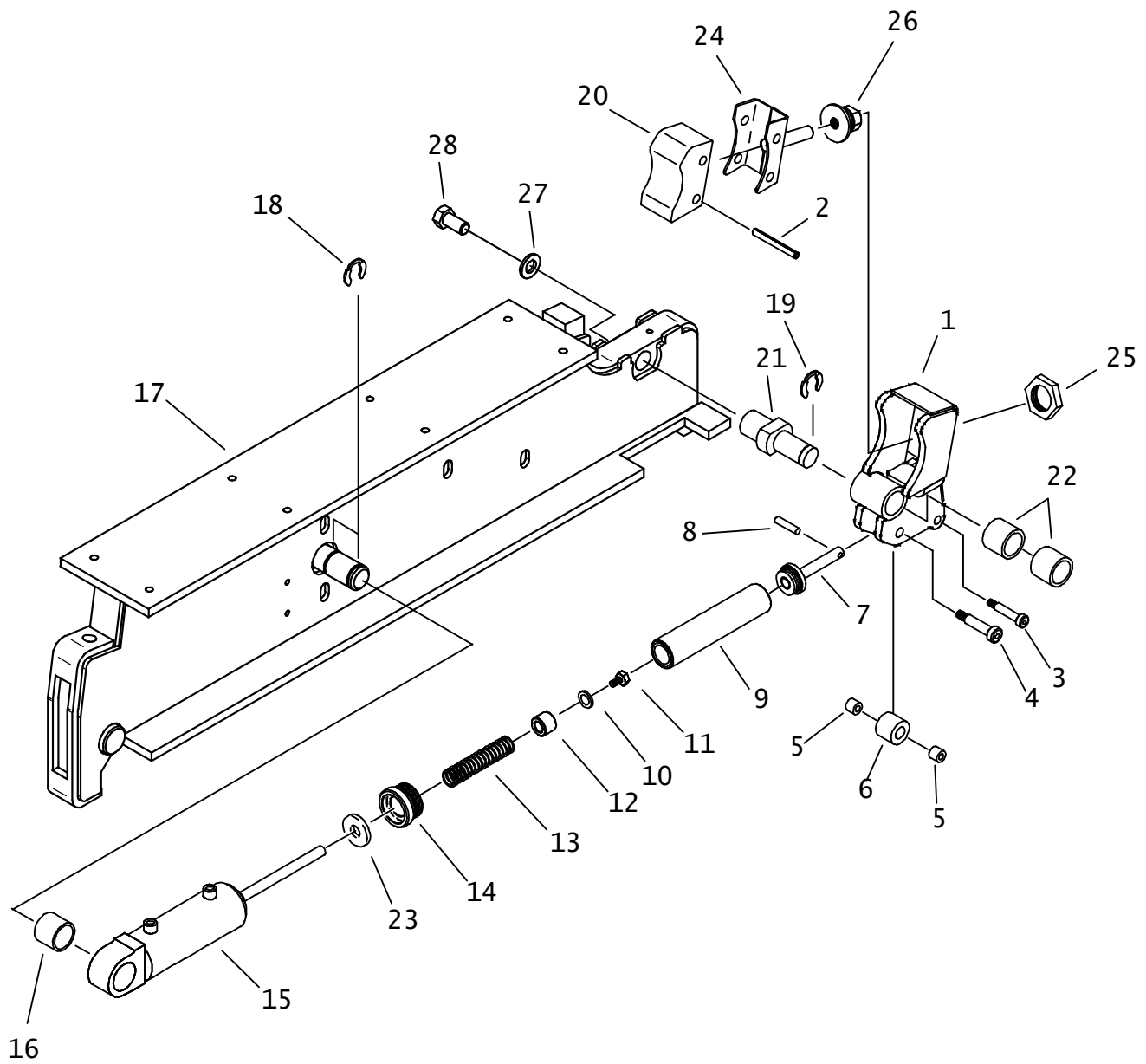
PIPE LOADER (SHUTTLE STOP)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	125-121	1	DETENT BALL (1.000", CHROME)	
2.	117-115	1	COMPRESSION SPRING	
3.	107-108	1	JAM NUT (1-5/16")	
4.	370-263	1	CAP	
5.	106-334	2	SCREW (M12-1.75 X 50MM)	
6.	106-685	2	LOCKNUT (M12-1.75, PRV TRQ, 10.9)	
7.	274-831	1	PIPE ROW INDICATOR	
8.	349-258	1	ROW SELECT TUBE	
9.	150-726	-	CYL (1.0" X 6.0")	

FOOTNOTES

PIPE LOADER GRIPPERS

BEGINS WITH S/N 2WO856



PIPE LOADER GRIPPERS

BEGINS WITH S/N 2WO856

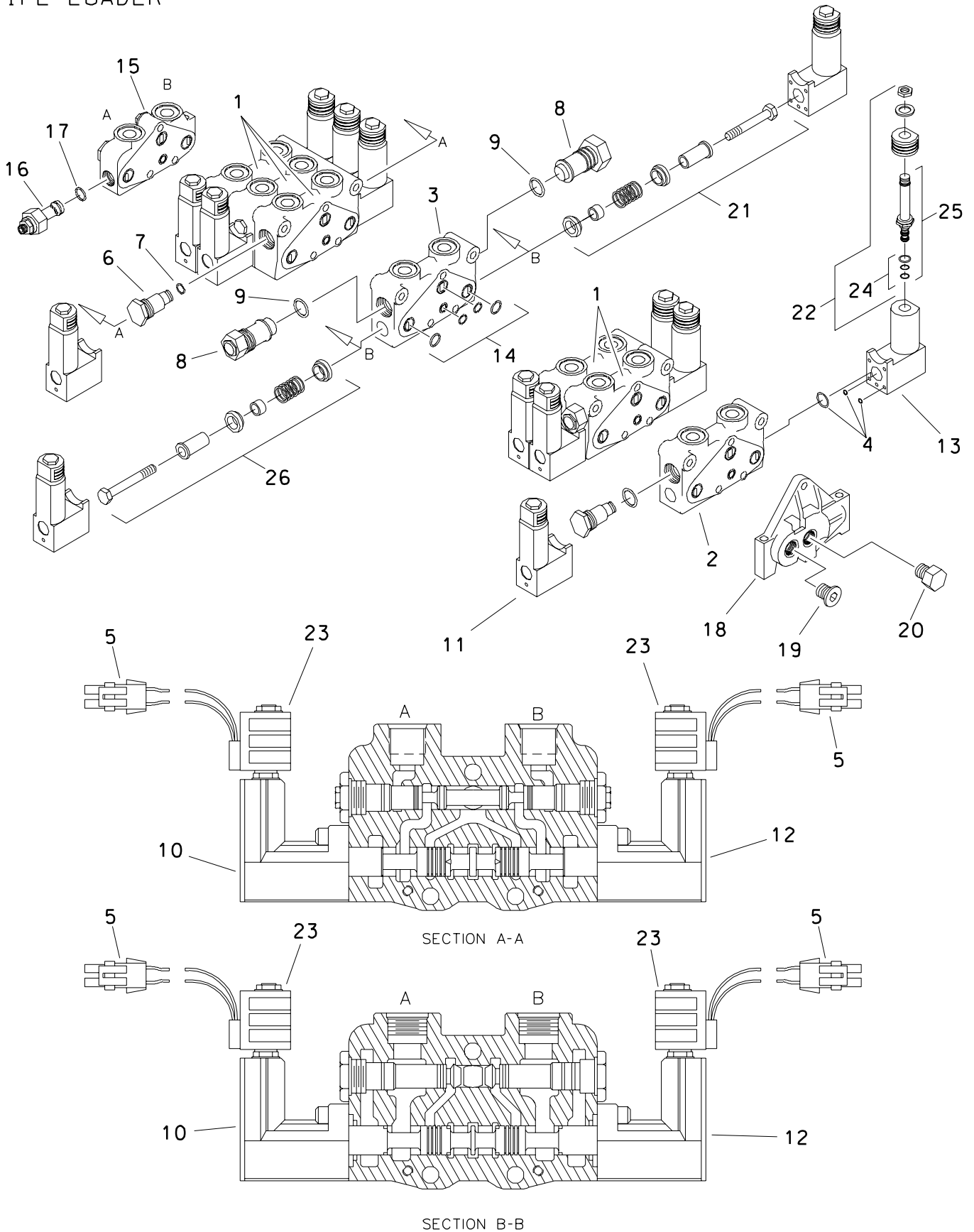
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	308-939	1	FRONT GRIPPER	
	308-938	1	REAR GRIPPER	
2.	107-682	4	ROLL PIN (M12 X 50MM)	
3.	107-223	2	SHLD BOLT (M10 X 35MM,M8-1.25)	USE 242 LOCTITE OR EQUIVALENT
4.	107-043	2	SHLD BLT (M12 X 35MM,M10-1.50)	USE 242 LOCTITE OR EQUIVALENT
5.	125-137	4	BALL BEARING (.375)	
6.	370-154	2	ROLLER	
7.	349-057	2	PLUNGER	
8.	125-430	2	BRONZE BUSHING (.502")	
9.	349-060	2	TUBE	
10.	348-037	2	SPRING WASHER (1.56")	
11.	105-858	2	BOLT (1/2-NC X 1-1/4")	
12.	349-061	2	SPRING GUIDE	
13.	117-128	2	COMPRESSION SPRING	
14.	351-163	2	CAP	
15.	151-163	-	CYL (2" X 1" X 3")	
16.	125-771	2	COMPOSITION BUSHING (1.25")	
17.	306-897	-	BACK SHUTTLE	ENDS WITH S/N: CMWJT100PA0000027
	306-898	-	FRONT SHUTTLE	ENDS WITH S/N: CMWJT100PA0000027
	301-1041	1	BACK SHUTTLE	
	301-1030	1	FRONT SHUTTLE	
18.	115-483	2	KLIP RING (1.250")	
19.	115-499	2	KLIP RING (1.000")	
20.	308-940	2	GRIP PAD	
21.	349-972	-	PIN (1.5" X 4.539")	ENDS WITH S/N: CMWJT100PA0000027
	300-6323	2	PIN (1.5" X 4.5")	
22.	125-770	4	COMPOSITION BUSHING (1")	
23.	157-537	2	WIPER SEAL (1.500")	
24.	308-944	2	GRIP PAD HOLDER	
25.	105-304	2	JAM NUT (1-5/16-NF)	
26.	107-928	2	ADJUSTMENT NUT	
27.	106-398	2	WASHER (M16, HARDENED)	
28.	107-181	2	BOLT (5/8-NC X 1-1/4", GD8)	

NOT SHOWN:

FOOTNOTES:

NOTE:

CONTROL VALVE PIPE LOADER

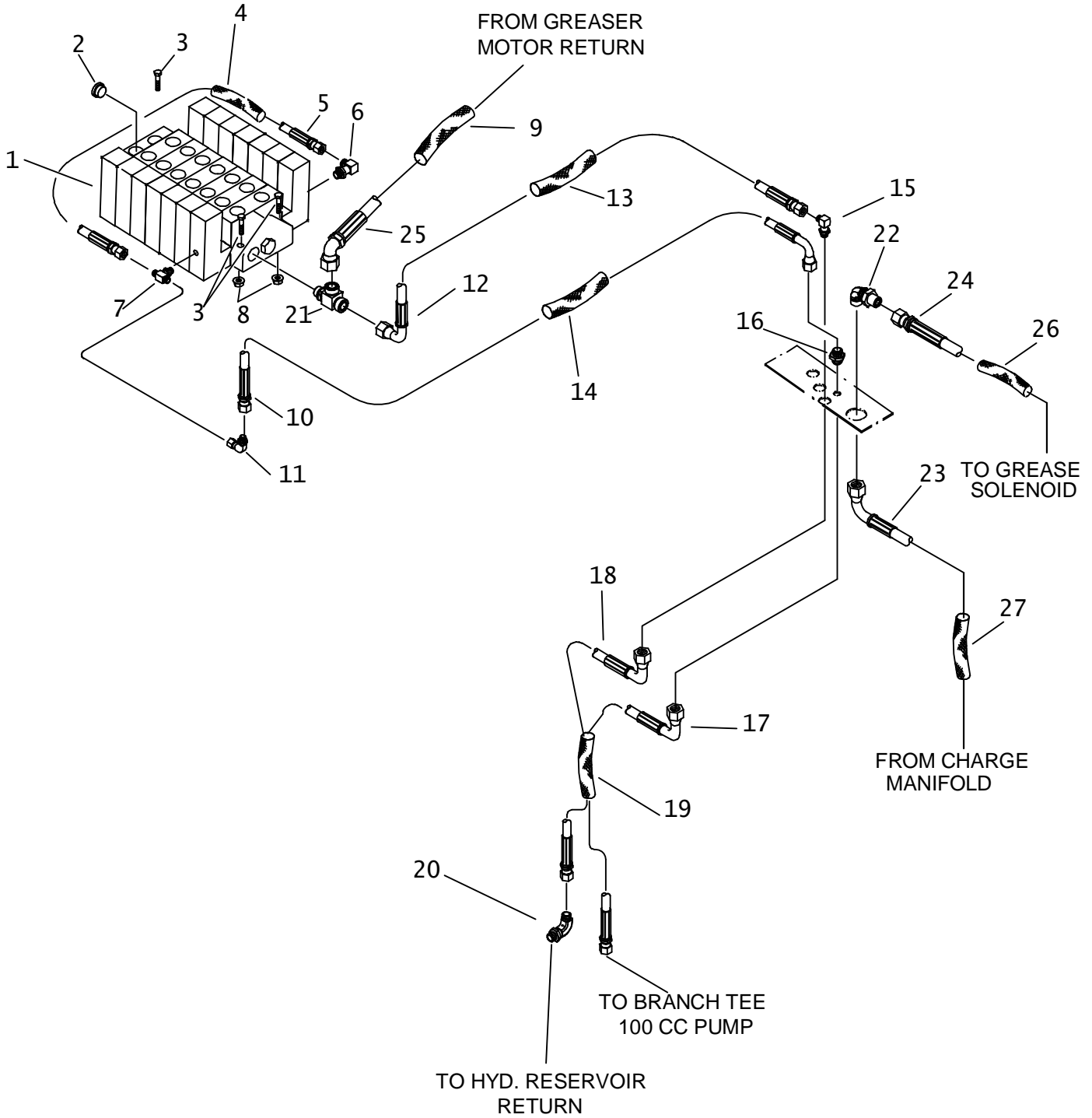


CONTROL VALVE PIPE LOADER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	153-252		CONTROL VALVE (7-SPOOL)	
1.	499-145	5	VALVE SECTION	
2.	499-146	1	VALVE SECTION	
3.	499-147	1	VALVE SECTION	
4.	499-150	14	BONNET SEAL KIT	
5.	499-151	14	COIL CONNECTOR KIT	
6.	499-029	12	LOCK OUT CARTRIDGE	
7.	499-030	12	LOCK OUT CARTRIDGE SEAL KIT	
8.	500-638	2	RC RELIEF CARTRIDGE (1500 PSI)	
9.	500-950	2	RELIEF CARTRIDGE SEAL KIT	
10.	499-156	6	SOLENOID ACTUATOR	
11.	499-157	1	SOLENOID ACTUATOR	
12.	499-158	6	SOLENOID ACTUATOR	CONTAINS PILOT PORT
13.	499-159	1	SOLENOID ACTUATOR	
14.	500-588	8	SECTIONAL O-RING REPAIR KIT	CONTAINS PILOT PORT
15.	499-144	1	INLET COVER HOUSING	
16.	155-630	1	WH RELIEF CARTRIDGE (2000 PSI)	
17.	500-581	1	SEAL REPAIR KIT	
18.	500-298	1	OUTLET COVER	
19.	500-302	1	PLUG (12S, SOC)	
20.	155-160	1	PLUG (14 SAE, SOC)	
21.	499-155	-	SPRING	
22.	217-949	-	SOLENOID CARTRIDGE KIT	
23.	217-950	-	SOLENOID COIL KIT (W/CONN)	
24.	499-153	-	CARTRIDGE SEAL KIT	
25.	499-152	-	CARTRIDGE TUBE KIT	
26.	499-154	-	SPRING	

FOOTNOTES

PIPE LOADER VALVE HYDRAULICS



PIPE LOADER VALVE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-252	1	HYD CONTROL VALVE (7-SPOOL)	INCL. REF. NO. 2
2.	500-302	1	PLUG (12S SOC)	SEE FOOTNOTE 1
3.	105-292	3	SCREW (M8-1.25 X 75MM)	
4.	117-718	1	ABRASION SLEEVE (1" X 36")	
5.	154-911	1	HOSE (040FX-36"-3000 AR)	
6.	154-252	1	CONNECTOR (04S-04090)	
7.	154-293	1	BR TEE (04S-040-040)	
8.	106-386	3	FLG LOCKNUT (M8-1.25)	
9.	117-737	1	ABRASION SLEEVE (1.59" X 140")	
10.	116-804	1	HOSE (040FX90-69"-3000)	
11.	154-255	1	UNION (040-04FX90)	
12.	116-806	1	HOSE (100FX90S-62"-3000)	ENDS WITH SN CMWJT100C90000005
12.	116-805	1	HOSE (100FX90S-58"-3000)	BEGINS WITH SN CMWJT100T90000006
13.	116-634	1	ABRASION SLEEVE (1.59" X 65")	ENDS WITH SN CMWJT100C90000005
13.	115-755	1	ABRASION SLEEVE (1.59" X 60")	BEGINS WITH SN CMWJT100T90000006
14.	117-702	1	ABRASION SLEEVE (1" X 68")	
15.	154-291	1	BK CONNECTOR (100-10090BK)	
16.	154-275	1	BK CONNECTOR (040-040BK)	
17.	153-125	1	HOSE (040FX90L-85"-3000)	
18.	153-126	1	HOSE (100FX90L-82"-3000)	
19.	117-312	1	ABRASION SLEEVE (1.59" X 80")	
20.	154-298	1	CONNECTOR (10S-10090)	
21.	154-370	1	RUN TEE (12S-100-100)	
22.	154-396	1	BK CONNECTOR (080-08090BK)	
23.	515-701	1	HOSE (080FX90-122"-3000)	
24.	515-233	1	HOSE (080FX90S-95"-3000)	
25.	515-616	1	HOSE (100FX90-140"-3000)	
26.	116-787	1	ABRASION SLEEVE (1.59" X 95")	
27.	117-674	1	ABRASION SLEEVE (1.59" X 122")	

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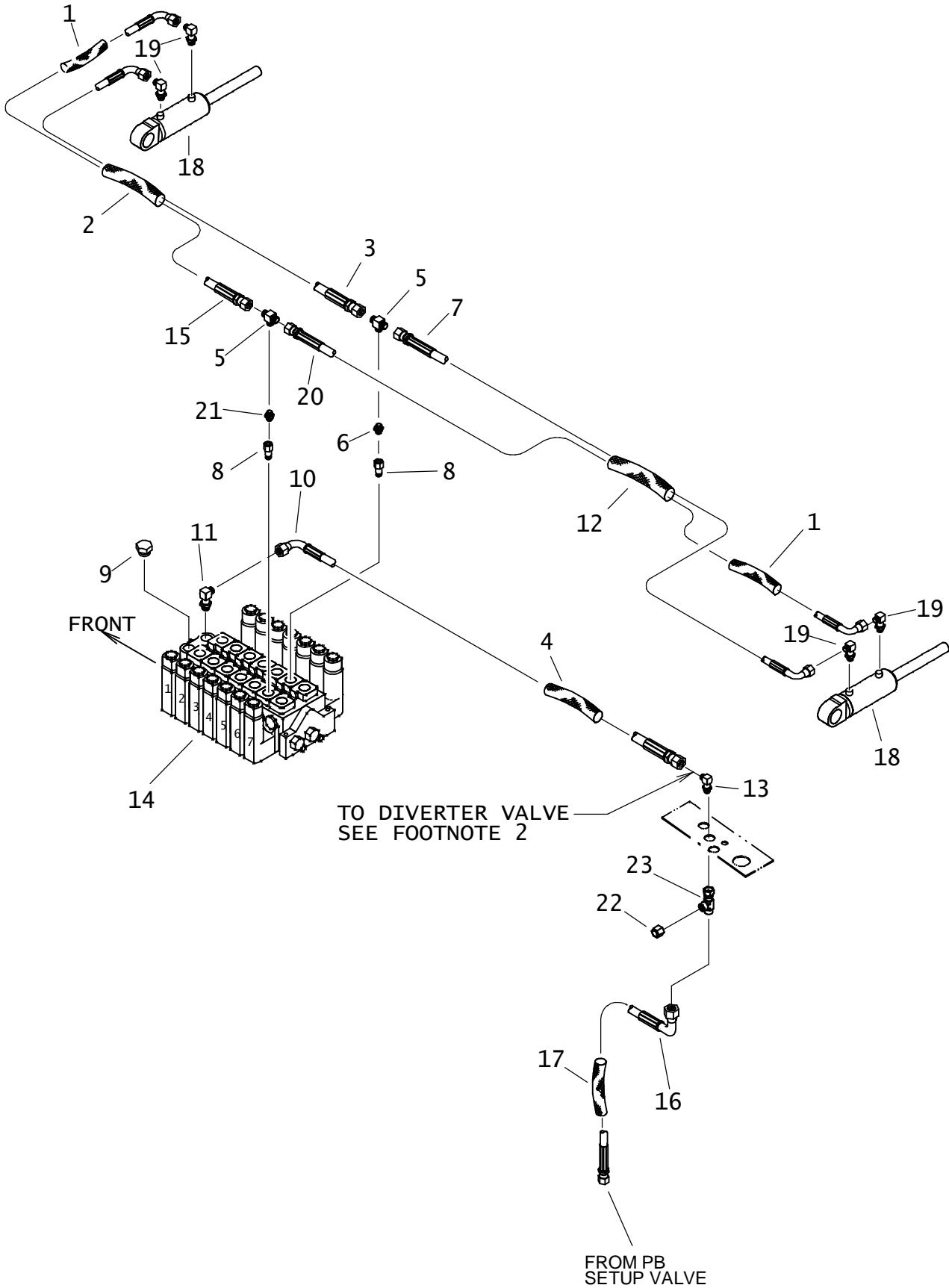
FOOTNOTES:

I. TAKE EXISTING PLUG OUT OF RETURN PORT AND PLACE IN THE PORT SHOWN.

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

PIPE GRIP HYDRAULICS
 ENDS WITH S/N: CMWJT100PA0000027



PIPE GRIP HYDRAULICS

ENDS WITH S/N: CMWJT100PA0000027

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	117-670	2	ABRASION SLEEVE (1.00" X 10")	
2.	117-761	1	ABRASION SLEEVE (1.59" X 70")	
3.	515-240	1	HOSE (040FX90-72"-3000)	
4.	115-963	1	ABRASION SLEEVE (1.59" X 75")	SEE FOOTNOTE 2
5.	154-379	2	UN BR TEE (040FX-040-040)	
6.	514-018	1	CONNECTOR (040-06S, ORF)	
7.	116-809	1	HOSE (040FX90-132"-3000)	
8.	155-171	2	REDUCER (10S-06SF)	
9.	500-302	-	PLUG (12S)	SEE FOOTNOTE 1
10.	116-812	1	HOSE (100FX90-71"-3000)	SEE FOOTNOTE 2
11.	154-300	1	CONNECTOR (100-12S90)	
12.	116-632	1	ABRASION SLEEVE (1.59" X 130")	
13.	154-291	1	BK CONNECTOR (100-10090BK)	
14.	153-252	-	HYD CONTROL VALVE (7-SPOOL)	INCL. REF. NO. 9
	150-2731	-	HYD CONTROL VALVE (8-SPOOL)	INCL. REF. NO. 9 ; BEGINS WITH S/N: CMWJT100T90000006
15.	116-810	1	HOSE (040FX90-76"-3000)	
16.	154-986	1	HOSE (10FX90-80"-3000)	
17.	117-312	1	ABRASION SLEEVE (1.59" X 80")	
18.	151-163	2	HYD CYL (2" X 1" X 3")	
19.	154-252	4	CONNECTOR (04S-04090)	
20.	116-808	1	HOSE (040FX90L-138"-3000)	
21.	154-220	1	CONNECTOR (040-06S)	
22.	154-324	1	CAP (100F)	
23.	154-488	1	UNION RUN TEE (100F-100-100)	

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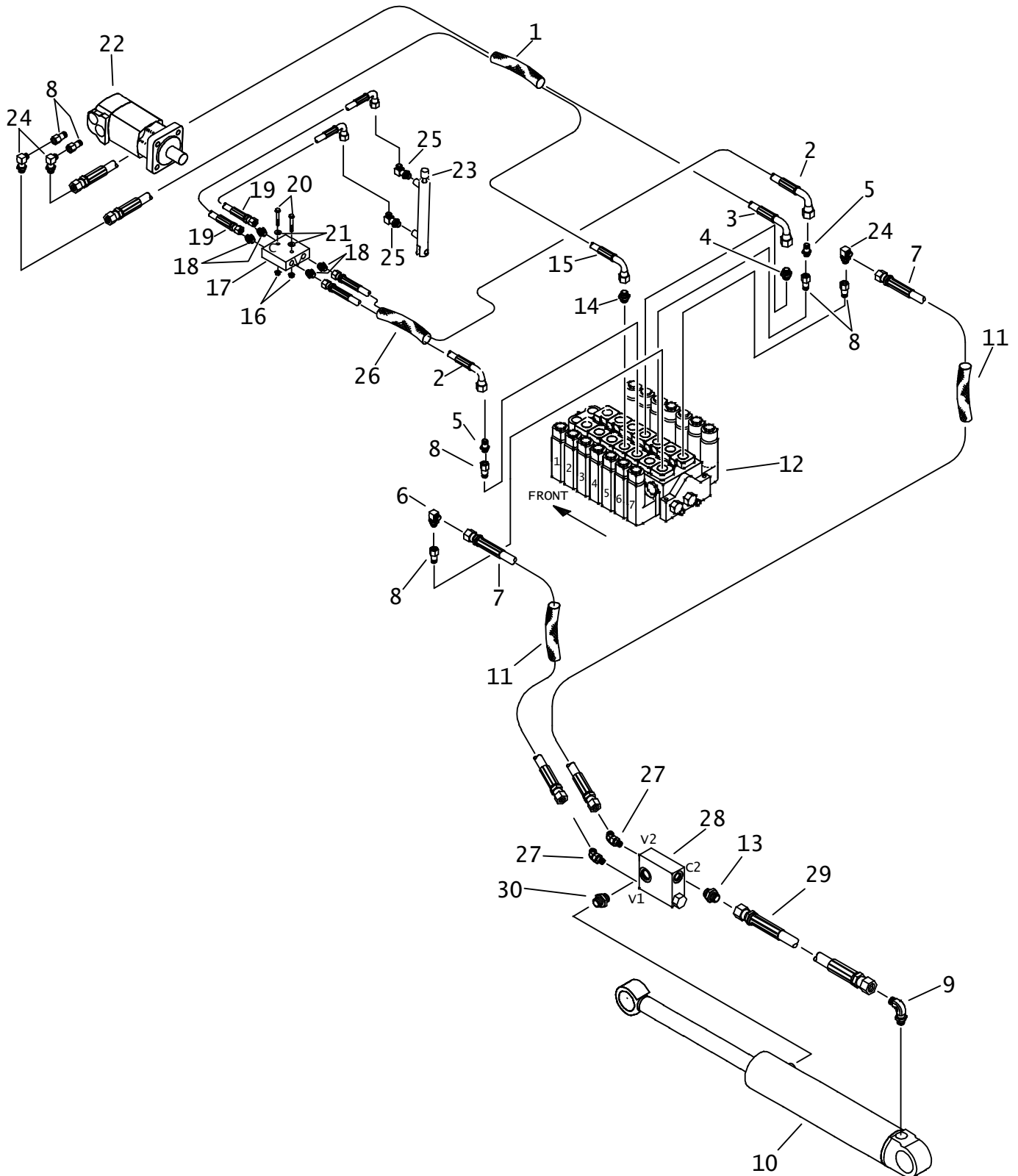
FOOTNOTES:

1. TAKE EXISTING PLUG OUT OF RETURN PORT AND PLACE IN THE PORT SHOWN.
2. REFERENCE NO.'S 4 & 10 NOT USED IN CURRENT PRODUCTION, SEE PAGE ENTITLED "DIVERTOR VALVE HYDRAULICS".

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT O-RINGS.

PIPE LIFT AND SHUTTLE HYDRAULICS



PIPE LIFT AND SHUTTLE HYDRAULICS

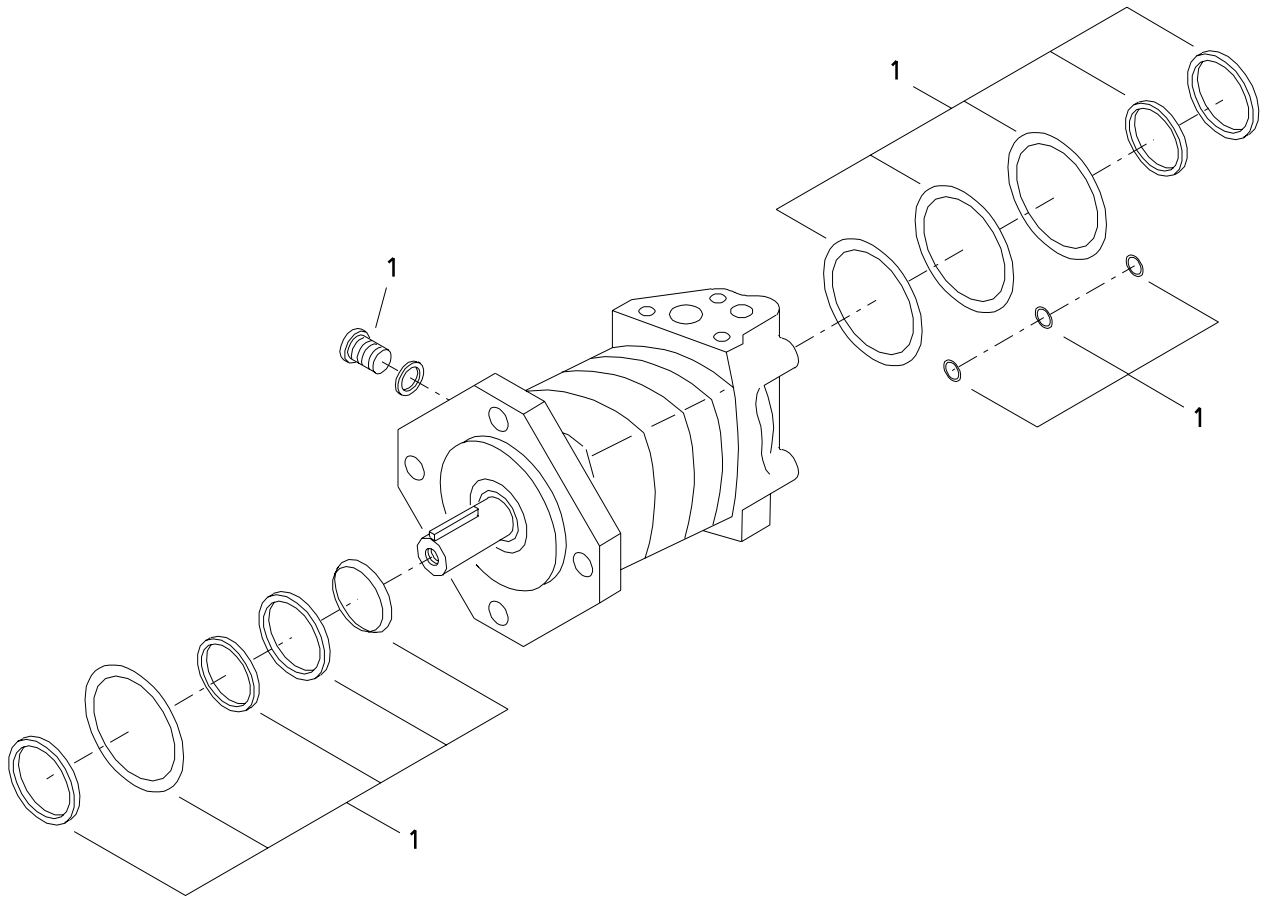
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	115-737	1	ABRASION SLEEVE (1.59" X 40")	
2.	154-743	2	HOSE (040FX90S-23"-3000)	
3.	116-811	1	HOSE (060FX90-40"-3000)	
4.	156-993	1	CONNECTOR (060-10S, ORF)	
5.	514-074	2	CONNECTOR (06S-040, ORF)	
6.	156-193	1	CONNECTOR (06S-06090, ORF)	
7.	154-798	2	HOSE (060FX-62"-3000)	
8.	155-171	6	REDUCER (10S-06SF)	
9.	154-227	1	CONNECTOR (060-08S90)	
10.	151-085	1	CYL (3.5" X 1.75" X 16")	
11.	116-613	2	ABRASION SLEEVE (1.00" X 64")	
12.	153-252	1	HYD CONTROL VALVE (7 SPOOL)	ENDS WITH CMW S/N:
	150-2730	1	HYD CONTROL VALVE (8 SPOOL)	BEGINS WITH CMW S/N:
13.	154-221	1	CONNECTOR (06S-060)	
14.	154-369	1	CONNECTOR (060-10S)	
15.	515-015	1	HOSE (060FX90M-44"-3000)	
16.	105-832	2	FLG LOCKNUT (1/4-NC)	
17.	155-623	1	DOUBLE LOCKOUT VALVE	
18.	154-220	4	CONNECTOR (040-06S)	
19.	515-041	2	HOSE (040FX90-20"-3000)	
20.	105-106	2	BOLT (1/4-NC X 2")	
21.	105-095	2	WASHER (1/4")	
22.	158-952	1	HYD MOTOR (SHUTTLE)	
23.	150-726	1	CYL (1.0" X 6.0")	
24.	154-342	3	CONNECTOR (06S-06090)	
25.	154-252	2	CONNECTOR (04S-04090)	
26.	117-706	1	ABRASION SLEEVE (1.59" X 17")	
27.	154-224	2	CONNECTOR (06S-06045)	
28.	159-482	1	CHECK VALVE	
29.	154-731	1	HOSE (060FX-17"-3000)	
30.	154-466	1	CONNECTOR (08S-08S)	

NOT SHOWN:

FOOTNOTES:

NOTE:
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

HYDRAULIC MOTOR
SHUTTLE DRIVE
SAE MOUNT PORTS



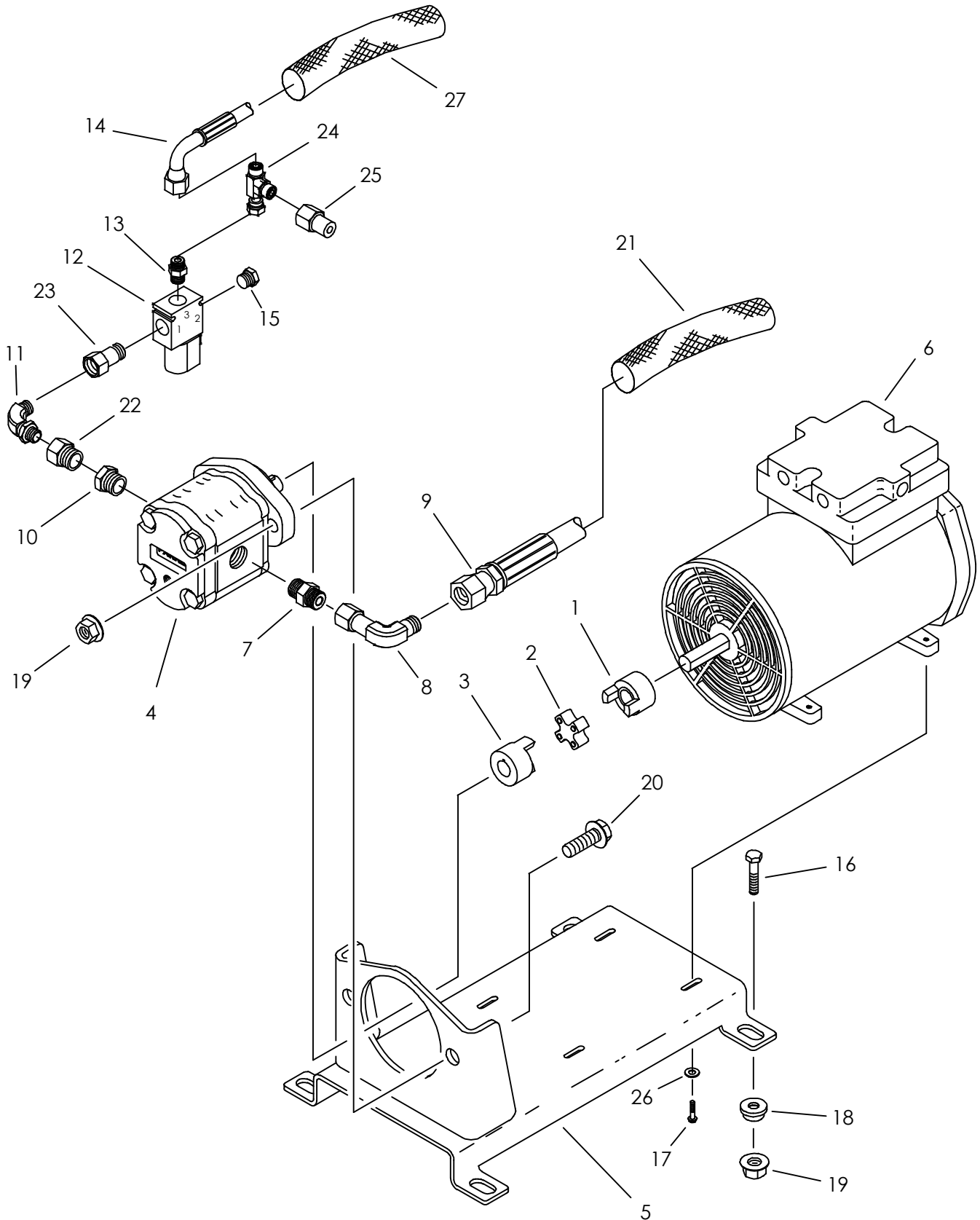
HYDRAULIC MOTOR SHUTTLE DRIVE SAE MOUNT PORTS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	158-952		HYDRAULIC MOTOR (SHUTTLE)	
1.	500-658	1	SEAL REPAIR KIT	
	157-712	1	SHAFT SEAL	

FOOTNOTES

AIR COMPRESSOR

ENDS WITH S/N:CMWJT100C90000005



AIR COMPRESSOR

ENDS WITH S/N:CMWJT100C90000005

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	166-317	1	COUPLER 1/2" W/OUT KEYWAY	
2.	166-318	1	SPIDER CENTER L070	
3.	166-319	1	COUPLER 5/8" W/KEYWAY	
4.	158-918	1	HYDRAULIC MOTOR	
	500-966		SEAL KIT	
5.	307-078	1	COMPRESSOR STAND	
6.	120-086	1	AIR COMPRESSOR	OBSOLETE, SUPERCEDED WITH I90-I697 HYD GREASE PUMP KIT
	191-160		SERVICE REPAIR KIT	
	499-330		FILTER ASSEMBLY	
7.	154-308	1	CONNECTOR (100-12S)	
8.	154-315	1	CONNECTOR (100-100FX90)	
9.	515-616	1	HOSE (100FX90-140"-3000)	
10.	510-017	1	REDUCER (12S-10SF)	
11.	154-342	1	CONNECTOR (06S-06090)	
12.	158-627	1	SOLENOID VALVE	SEE FOOTNOTE 1
13.	154-246	1	CONNECTOR (06S-080)	
14.	515-233	1	HOSE (080FX90S-95"-3000)	
15.	155-130	1	PLUG (06S)	
16.	105-271	4	SCREW (M10-1.5 X 40mm)	
17.	106-349	4	SCREW (#8-32 X 3/4", PAN)	
18.	214-658	4	RUBBER ISOLATOR	
19.	106-387	6	FLG LOCKNUT (M10-1.50)	
20.	106-079	2	SCREW (M10-1.50 X 30MM)	
21.	117-737	1	ABRASION SLEEVE (1.59" X 140")	
22.	159-947	1	REDUCER(10S-06SF)	
23.	514-409	1	UNION (06J-060FX)	SEE FOOTNOTE 2
24.	154-266	1	UNION RUN TEE (080FX-080-080)	
25.	159-158	1	QDC ADAPTER (02-080FX)	
26.	106-205	4	WASHER (.191")	
27.	116-787	1	ABRASION SLEEVE (1.59" X 95")	

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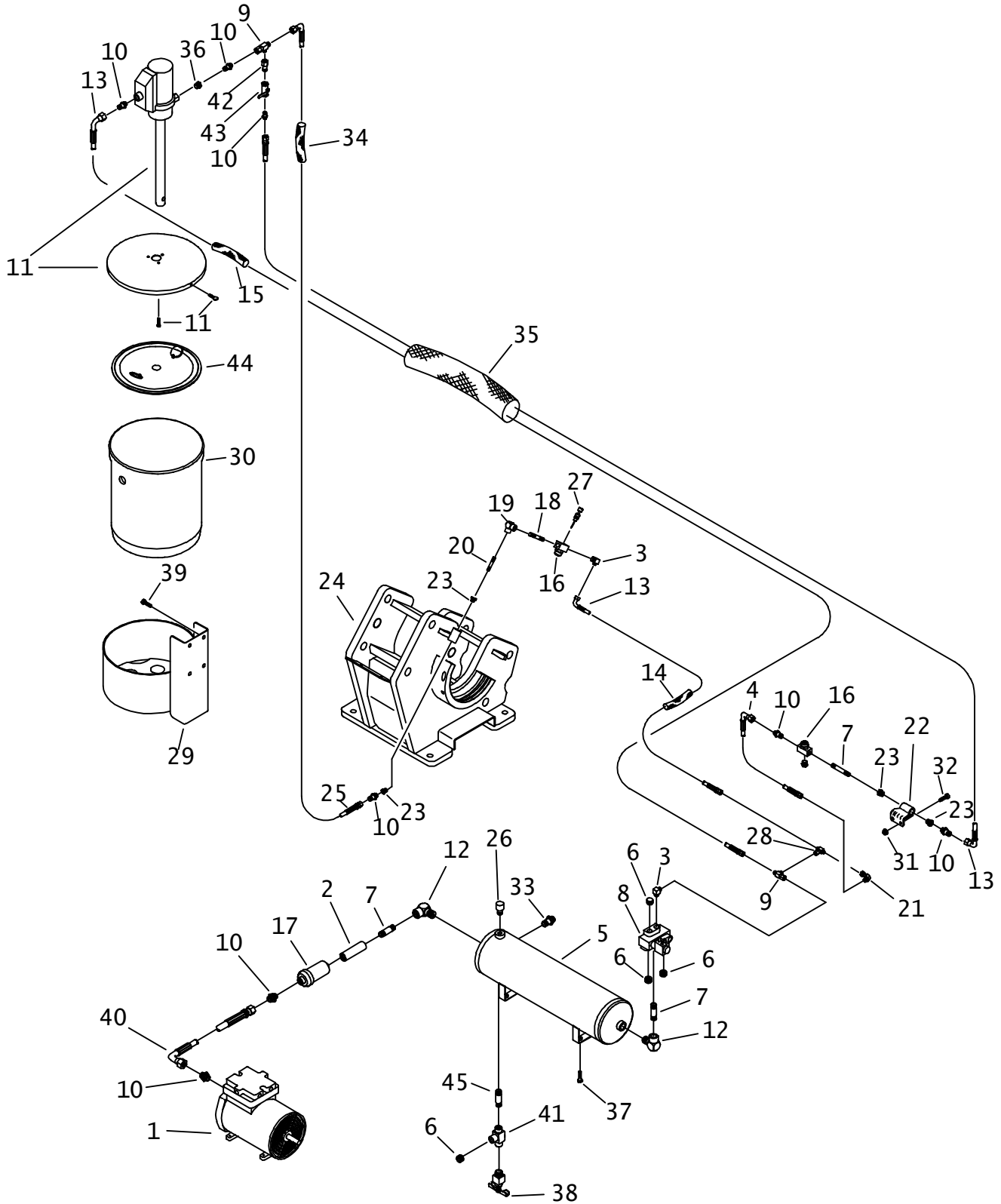
FOOTNOTES:

- #12 VALVE 158-627 (PORT #1 OUTLET, PORT #2 PLUGGED, PORT #3 INLET)
- USE O-RING 155-705 AS NEEDED FOR UNION 514-409

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RING.

AUTO-GREASER
 ENDS WITH CMW S/N:



AUTO-GREASER

ENDS WITH CMW S/N:

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	120-086	-	AIR COMPRESSOR	OBSOLETE, SUPERCEDED WITH I90-I697 HYD GREASE PUMP KIT
2.	115-170	1	COLLAR (04NF)	
3.	154-482	2	CONNECTOR (04N-04090)	
4.	154-743	1	HOSE(040FX90S-23"-3000)	
5.	120-089	1	AIR TANK	
6.	115-444	4	PLUG (04N, SOC, SS)	
7.	115-136	3	NIPPLE (04N-4")	
8.	214-417	1	SOLENOID VALVE	SEE FOOTNOTE 1
9.	154-265	2	UN RUN TEE(040FX-040-040)	
10.	154-339	8	CONNECTOR (04N-040)	
11.	156-189	1	GREASE PUMP	
	191-096	1	AIR VALVE KIT	
	191-064	1	PUMP TUBE REPAIR KIT	
12.	155-120	2	STREET ELBOW (04N-04NF90)	
13.	149-068	3	HOSE (04NFX90-230"-3000)	
14.	117-612	1	ABRASION SLEEVE (1.00" X 46")	
15.	117-672	1	ABRASION SLEEVE (1.00" X 20")	
16.	149-056	2	SPRAY NOZZLE	
	159-480	1	AIR CAP,SS	
	159-481	1	FLUID CAP,SS	
	165-890	1	GASKET, PLUG	
	165-891	1	GASKET,FLUID CAP	
17.	120-088	1	INLINE DESICCANT DRYER	HAND TIGHTEN TO LEAK PROOF SEAL
18.	149-071	1	NIPPLE (04N-5")	
19.	115-114	1	ELBOW (04NF-04NF90)	
20.	115-1010	1	NIPPLE (04N-2.0")	
21.	154-255	1	UNION (040-040FX90)	
22.	370-296	1	NOZZLE MOUNT	
23.	115-135	4	REDUCER (08N-04NF)	
24.	370-276	-	STATIONARY CLAMP	
25.	154-963	1	HOSE (040FX45-24"-3000)	
26.	217-243	1	PRESSURE SWITCH	
27.	156-927	1	NEEDLE VALVE	
28.	154-379	1	UN BR TEE (040FX-040-040)	
29.	370-292	1	GREASE BUCKET CONTAINER	
30.	256-025	-	TOOL JNT LUBE, SUMR SPRY 5 GAL	
	256-027	1	TOOL JNT LUBE, STD SPRAY 5 GAL	
31.	106-386	2	FLG LOCKNUT (M8-1.25)	
32.	106-327	2	SCREW (M8-1.25 X 30MM)	
33.	149-812	1	RELIEF VALVE	
34.	117-611	1	ABRASION SLEEVE (1.00" X 22")	
35.	115-737	1	ABRASION SLEEVE (1.59" X 40")	
36.	115-106	1	REDUCER (06N-04NF)	
37.	105-873	4	FLG LK BOLT (5/16-NC X 1")	
38.	110-141	1	DRAIN VALVE (04N)	
39.	106-383	4	FLG LK SCREW (M10-1.50 X 30MM)	
40.	515-744	1	HOSE (040FX90S-28"-3000)	
41.	115-130	1	TEE (04NF-04NF-04NF)	
42.	149-868	1	CONNECTOR (04N-040FX)	
43.	120-090	1	SHUT-OFF (04NF-04NF, NONVENTED)	
44.	499-299	1	GREASE FOLLOWER	
45.	115-1010	1	NIPPLE (04N-2.0")	

FOOTNOTES:

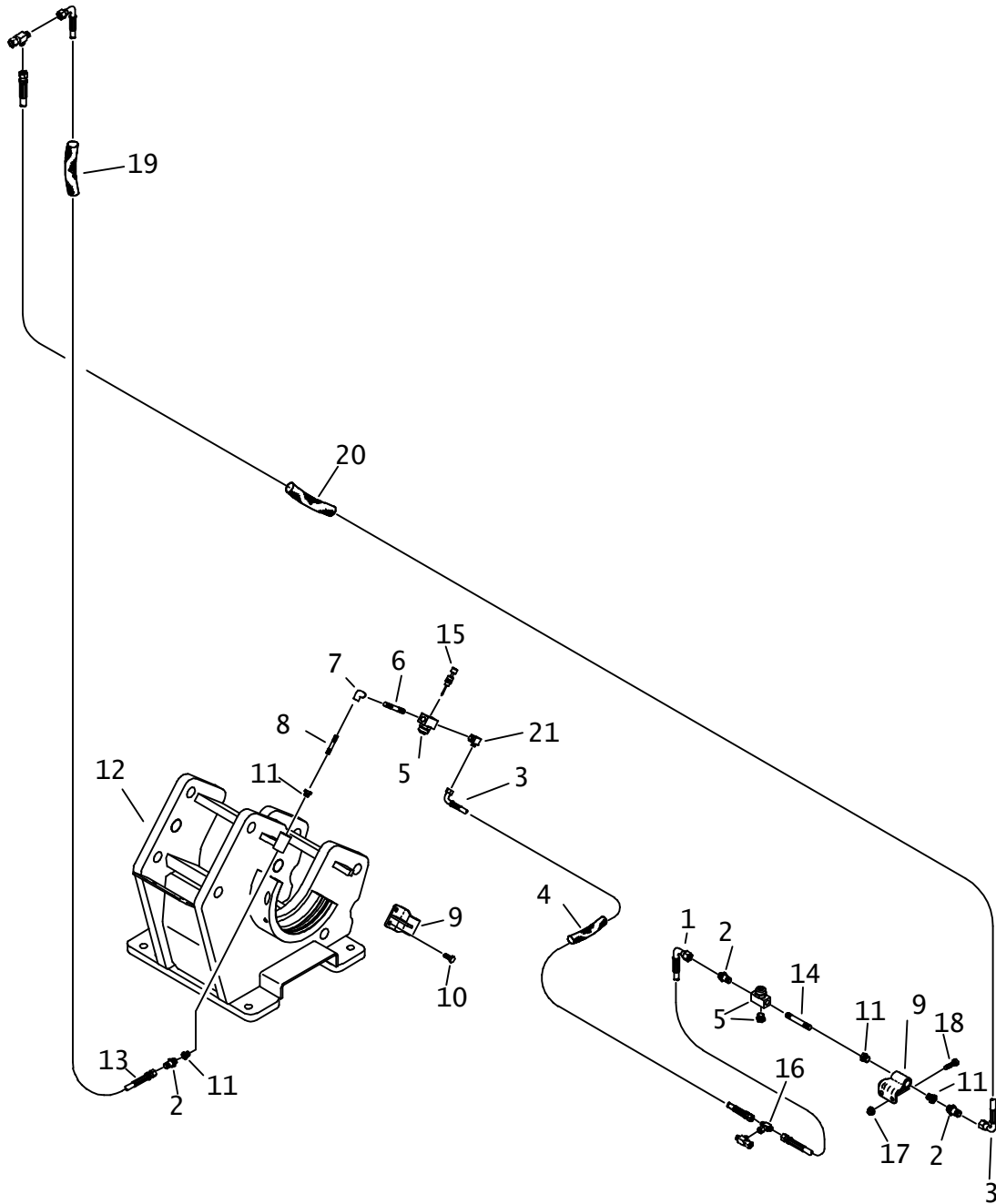
1. PORT 1 INLET, PORT 4 OUTLET, PORT 2, 3, AND 5 ARE PLUGGED

NOTE:

REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RING.

AUTO-GREASER (NOZZLES)

ENDS WITH CMW S/N:



AUTO-GREASER (NOZZLES)

ENDS WITH CMW S/N:

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-743	1	HOSE (040FX90-23"-3000)	
2.	154-339	4	CONNECTOR (04N-040)	
3.	149-068	2	HOSE (04NFX90-230"-3000)	
4.	117-612	1	ABRASION SLEEVE (1.00" X 46")	
5.	149-056	2	SPRAY NOZZLE	
	159-480	1	AIR CAP (SS)	
	159-481	1	FLUID CAP (SS)	
	165-890	1	GASKET, PLUG	
	165-891	1	GASKET, FLUID CAP	
6.	149-071	1	NIPPLE (04N-5")	
7.	115-114	1	ELBOW (04NF-04NF90)	
8.	115-1010	1	NIPPLE (04N-2.0")	
9.	370-296	2	NOZZLE MOUNT	FRONT NOZZLE MOUNT USED ON EARLY MODELS ONLY USED ON EARLY UNITS
10.	106-083	-	SCREW (M8-1.25 X 20MM)	
11.	115-135	4	REDUCER (08N-04NF)	
12.	370-276	1	STATIONARY CLAMP	
13.	154-963	1	HOSE (040FX45-24"-3000)	
14.	115-136	1	NIPPLE (04N-4")	
15.	156-927	1	NEEDLE VALVE	
16.	154-379	1	UN BR TEE (040FX-040-040)	
17.	106-386	2	FLG LOCKNUT (M8-1.25)	
18.	106-327	2	SCREW (M8-1.25 X 30MM)	
19.	117-611	1	ABRASION SLEEVE (1.0" X 22")	
20.	115-737	1	ABRASION SLEEVE (1.59" X 40")	
21.	154-482	1	CONNECTOR (04N-04090)	

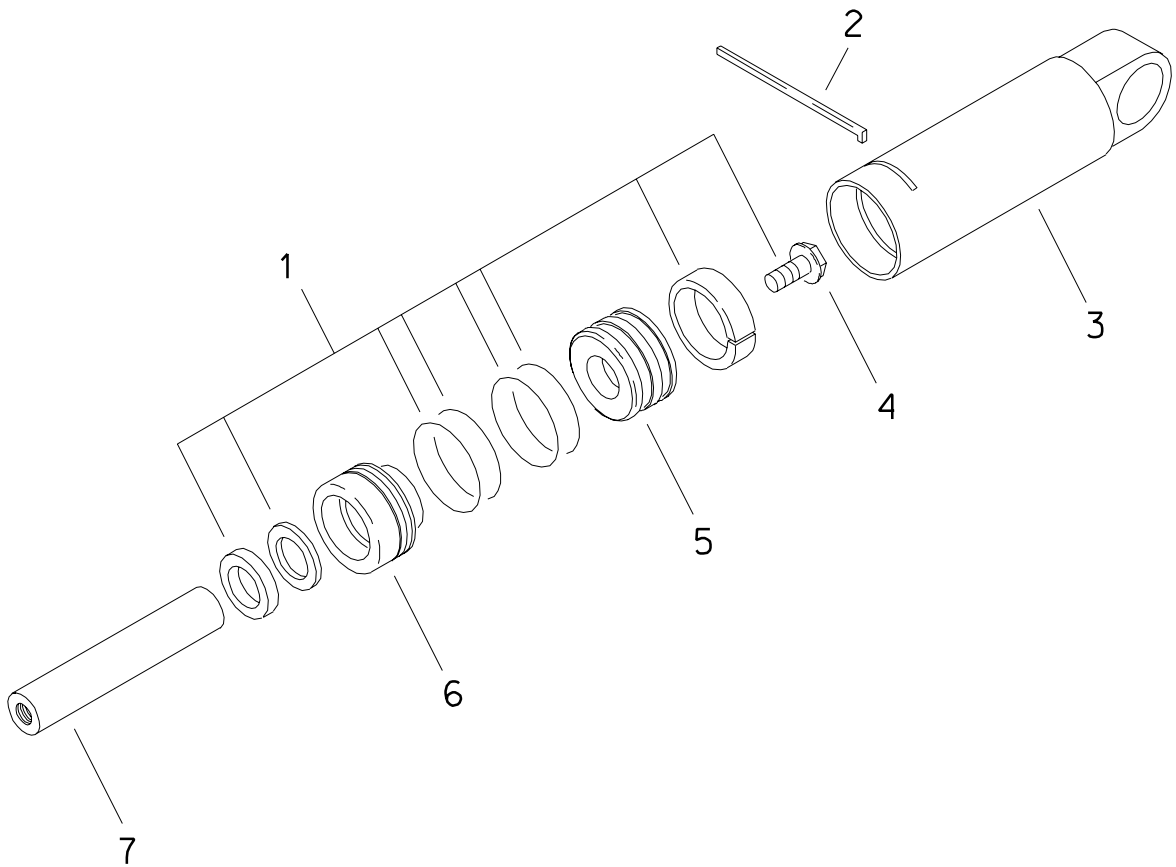
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FOOTNOTES:

NOTE:

HYDRAULIC CYLINDER

2" X 1" X 3"



HYDRAULIC CYLINDER

2" X 1" X 3"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-163		CYL (2" X 1" X 3")	INCL REF NO.'S 1 - 7
1.	190-165	1	SEAL REPAIR KIT (2" X 1")	
2.	150-778	1	LOCK RING (2")	
3.	150-282	1	CYLINDER BARREL (2")	
4.	106-096	1	FLG BOLT (1/2-NC X 1-3/4", GD 8)	SEE FOOTNOTE 1
5.	150-775	1	CYLINDER PISTON (2" X 1")	
6.	150-772	1	CYLINDER HEAD (2" X 1")	
7.	150-676	1	CYLINDER ROD	

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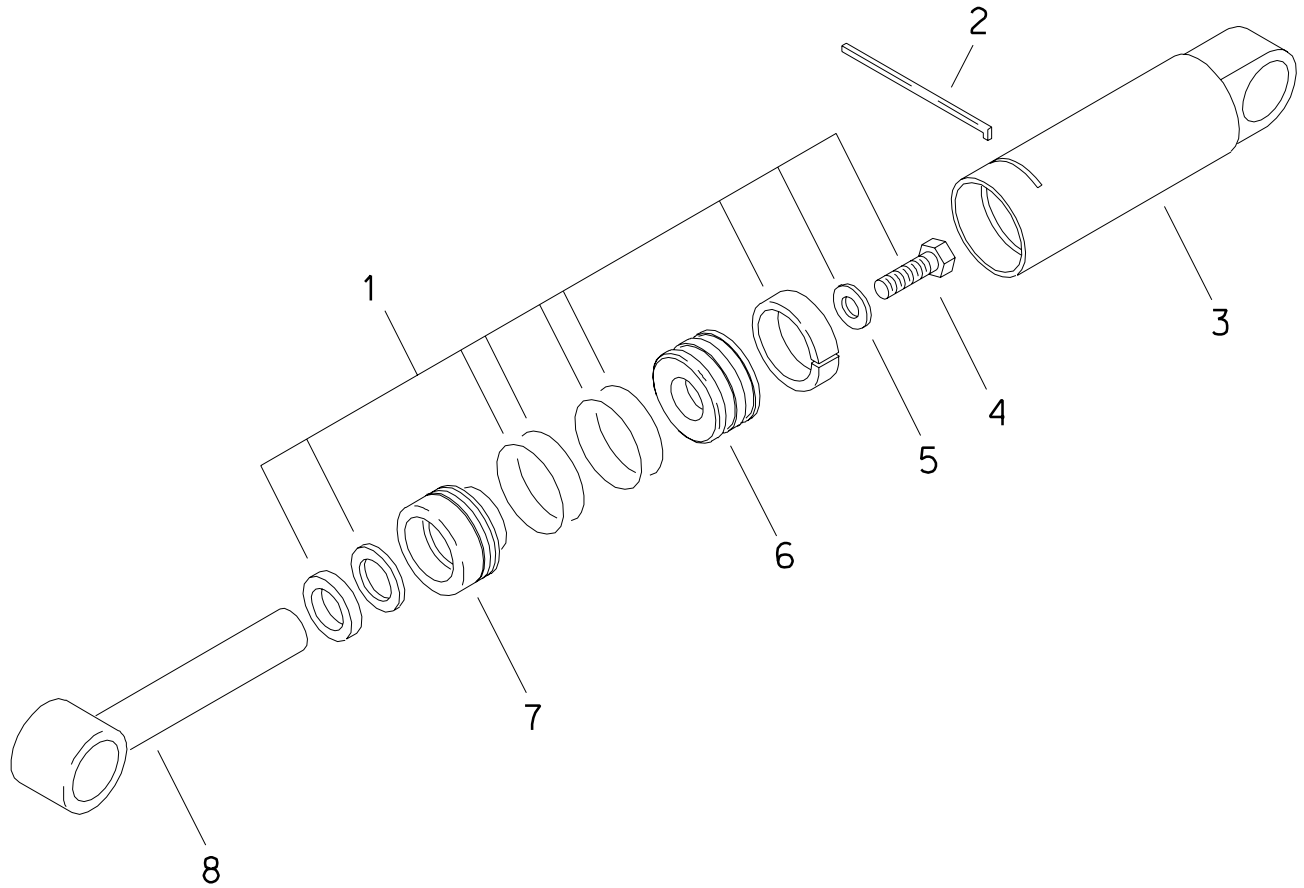
259-100	U-SEAL INSTALLER (1" - 1.499")
259-239	WIPER/SEAL INSTALLER (2")
259-241	PISTON INSTALLER (2")
259-188	CYL HEAD SPANNER - TWO PIN

FOOTNOTES

1. CLEAN AND DRY THREADS. APPLY RED LOCKTITE (RC271 OR RC272). TORQUE TO 90-100 FT-LBS (120-135 NM).

HYDRAULIC CYLINDER

3.5" X 1.75" X 16"



HYDRAULIC CYLINDER

3.5" X 1.75" X 16"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-085		CYL (3.5" X 1.75" X 16")	INCL. REF. NO.'S 1 - 7
1.	190-174	1	SEAL REPAIR KIT (3.5" X 1.75")	INCL. REF. NO.'S 4 & 5
2.	149-302	1	LOCK RING (3.5")	
3.	152-021	1	CYLINDER BARREL	
4.	106-122	1	BOLT (7/8-NC X 2-1/4", GD 8)	SEE FOOTNOTE 1
5.	105-363	1	WASHER (7/8")	
6.	149-301	1	CYL PISTON 3.5" X 1.75"	
7.	150-761	1	CYL HEAD (3.5" X 1.75")	
8.	153-004	1	1.75" ROD ASSEMBLY	

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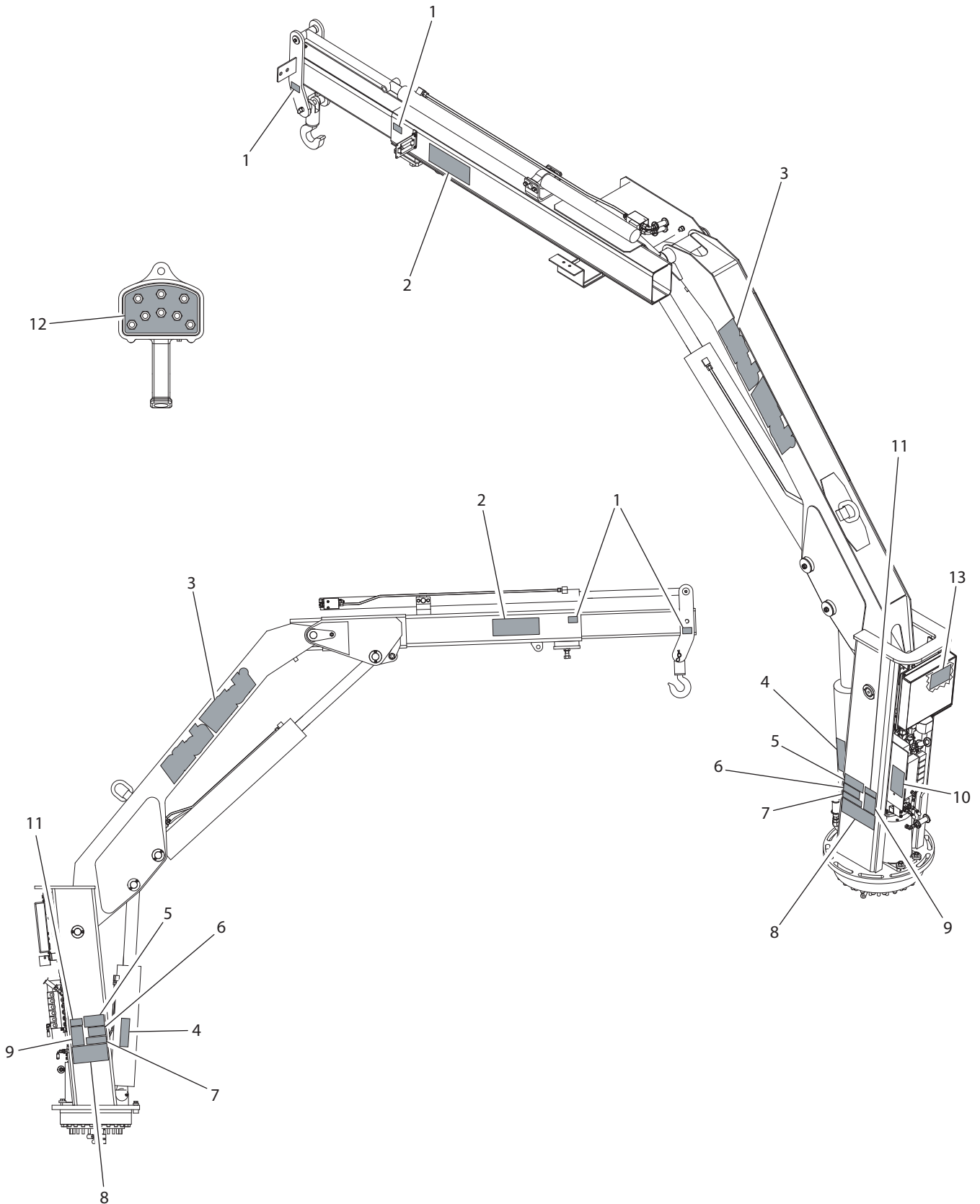
	259-040		U-SEAL INSTALLER (1.50" - UP)	
	259-238		WIPER INSTALLER (1.75")	
	259-244		PISTON SEAL INSTALLER (3.50")	
	259-245		PISTON INSTALLER (3.5")	
	259-188		CYL HEAD SPANNER - TWD PIN	

FOOTNOTES

1-USE LOCTITE 277, TORQUE TO 410-460 FT-LBS (550-625 N.M)

HOIST SYSTEMS

DECAL LOCATION CRANE

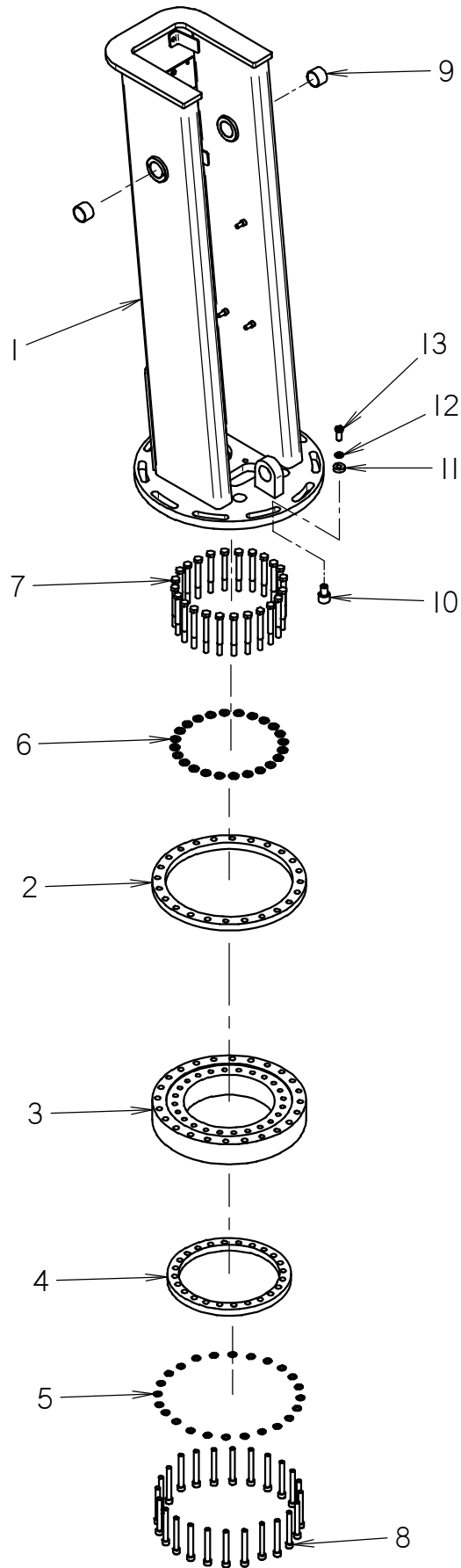


DECAL LOCATION CRANE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	275-792		DECAL KIT - CRANE	
1	274-968	4	STAY CLEAR OF BOOM	
2	274-966	2	ELECTROCUTION HAZARD	
3	274-967	2	DITCH WITCH LOGOTYPE	
4	274-965	2	PINCH POINT	
5	274-960	2	EXTEND OUTRIGGER	
6	275-326	2	WARNING CRUSHING WEIGHT	
7	274-962	2	NEVER RIDE ON HOOK	
8	274-957	2	LOAD CHART	
9	274-959	2	OPERATION INSTRUCTIONS	
10	700-963	1	MANUAL VALVE OPERATION	
11	273-475	2	NOTICE - READ MANUAL	
12	700-958	1	PENDANT CONTROL	
13	273-670	1	TERMINAL BLOCK	

FOOTNOTES

PEDESTAL



PEDESTAL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	324-755	1	PEDESTAL	
2	348-285	1	SPACER, OUTER RACE	
3	499-265	1	ROTATION BEARING	
4	325-339	1	SPACER, INNER RACE	
5	108-222	24	WASHER (5/8" HARDENED)	
6	106-398	24	WASHER (M16, HARDENED)	
7	106-983	24	SCREW (M16-2.00 X 150MM, 10.9)	USE LOCTITE 277 OR EQUIVALENT; SEE FOOTNOTE 1
8	108-221	24	BOLT (5/8-NC X 5", SOC, GD8)	USE LOCTITE 277 OR EQUIVALENT, TORQUE TO 180 FT. LB.
9	125-483	2	COMPOSITION BUSHING (2.000")	
10	179-270	1	SLIDE STOP PIN	
11	499-266	1	SLIDE STOP WASHER	
12	105-385	1	LOCK WASHER (5/8")	
13	105-358	1	BOLT (5/8-NC X 1-1/2", GD8)	

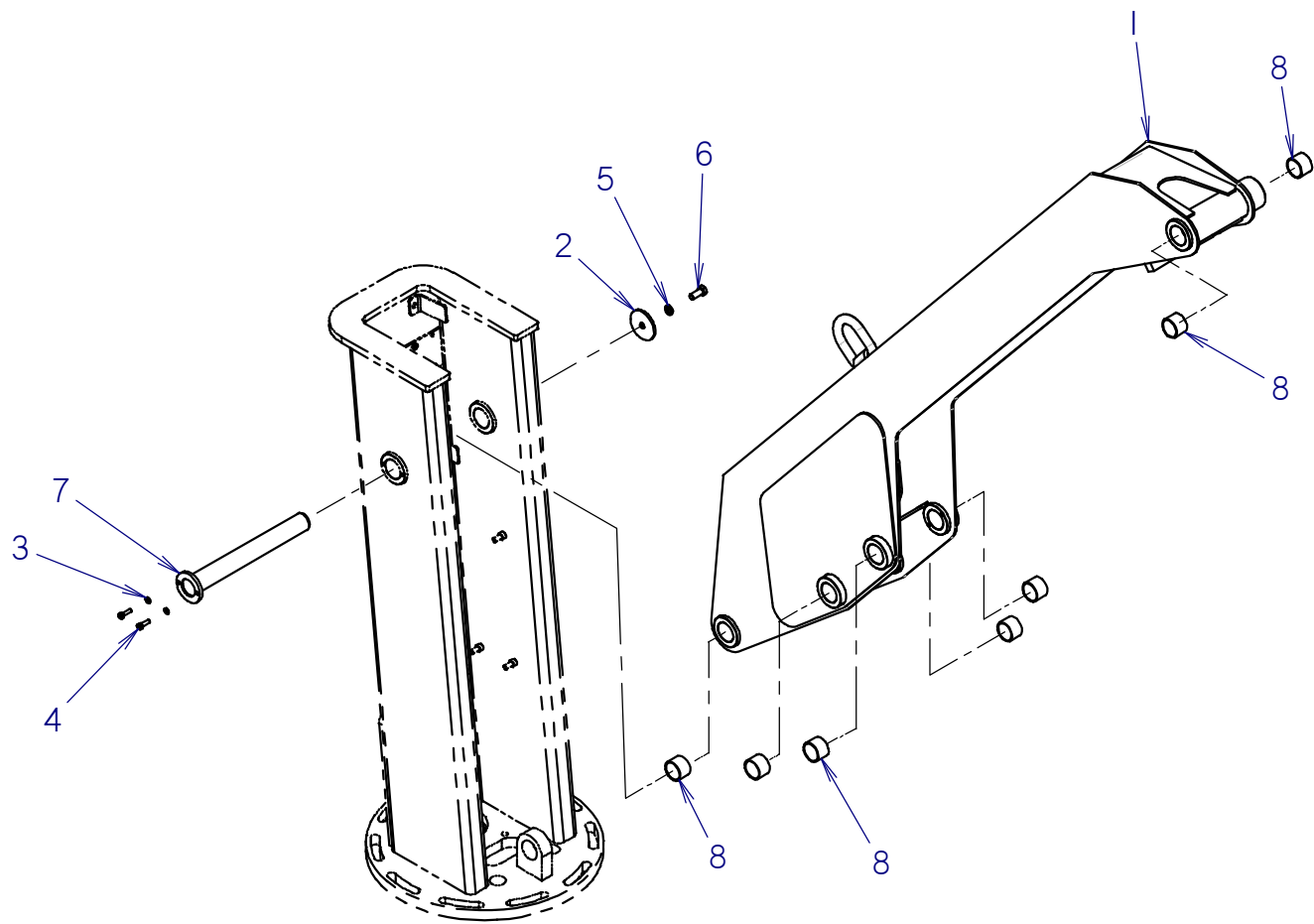
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FOOTNOTES:

- I. TIGHTEN BOLTS THROUGH ACCESS HOLES ON PEDESTAL BASE

NOTE:

INNER BOOM



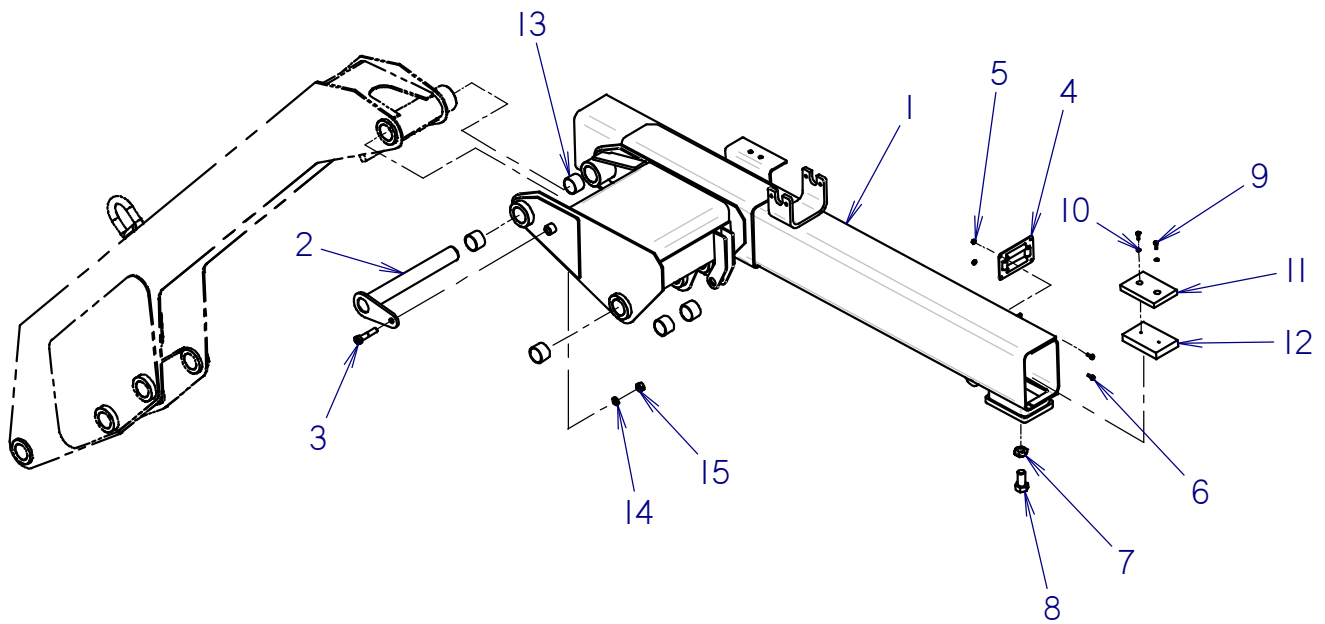
INNER BOOM

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	324-756	1	INNER BOOM	
2	499-235	1	PIN WASHER	
3	105-072	2	LOCK WASHER (3/8")	
4	105-052	2	BOLT (3/8-NC X 1-1/4")	USE LOCTITE 242 OR EQUIVALENT
5	105-385	1	LOCK WASHER (5/8")	
6	105-358	1	BOLT (5/8-NC X 1-1/2", GD8)	USE LOCTITE 242 OR EQUIVALENT
7	179-268	1	PIN	
8	125-483	7	COMPOSITION BUSHING (2.000")	

FOOTNOTES

NOTE:

OUTER BOOM



OUTER BOOM

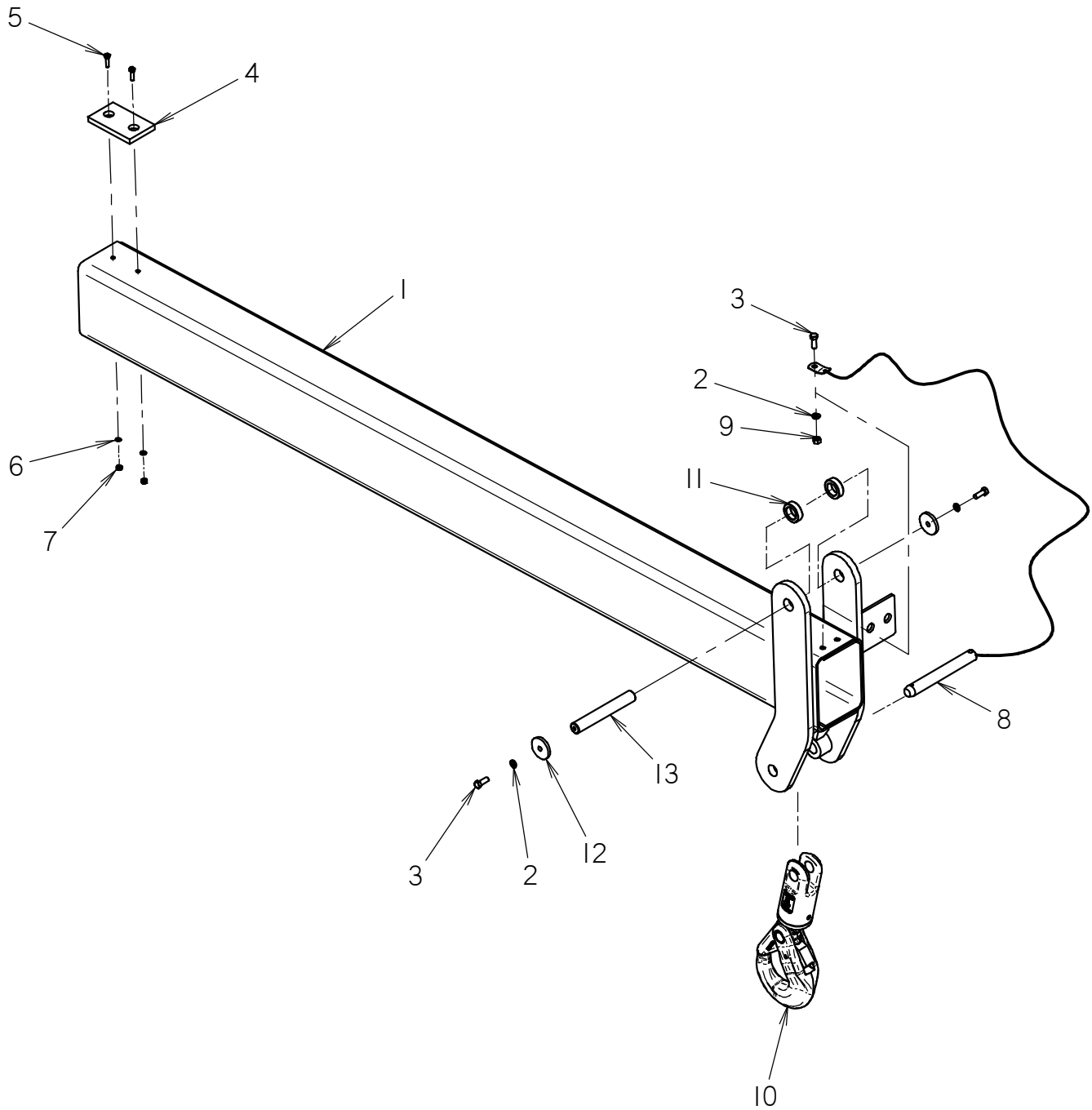
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	324-757	1	OUTER BOOM	
2	179-271	1	PIN	
3	105-376	1	BOLT (5/8-NC X 3", GD8)	
4	370-288	1	HOSE REEL GUIDE	
5	106-385	2	FLG LOCKNUT (M6-1.00)	
6	106-379	2	FLG LK SCREW (M6-1.00 X 20MM)	
7	106-033	1	JAM NUT (11-NC)	
8	106-167	1	BOLT (11-NC X 2") GRADE 5	
9	105-865	2	BOLT (11/4-NC X 3/4", GD8)	
10	105-079	2	LOCK WASHER (11/4)	
11	348-286	1	SLIDE PAD	USE EP GEAR GREASE FOR LUBRICATION
12	499-261	1	SLIDE PAD MOUNT	
13	125-483	5	COMPOSITION BUSHING (2.000")	
14	105-385	1	LOCK WASHER (5/8")	
15	105-357	1	LOCKNUT (5/8-NC)	

NOT SHOWN:

FOOTNOTES:

NOTE:

EXTENTION BOOM



EXTENTION BOOM

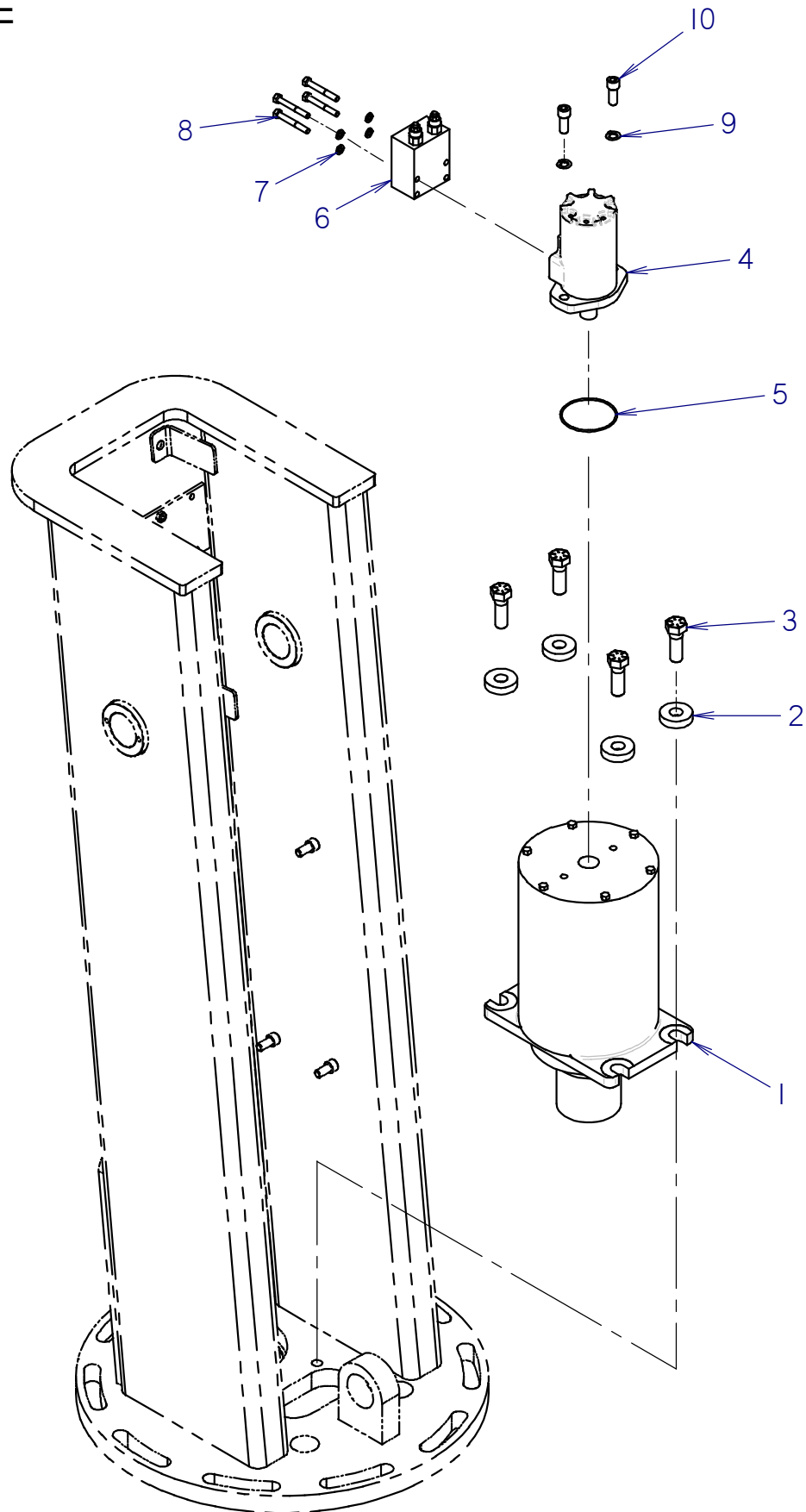
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	324-758	1	EXTENSION BOOM	
2	105-072	3	LOCK WASHER (3/8")	
3	105-031	3	BOLT (3/8-NC X 1")	USE LOCTITE 242 OR EQUIVALENT; TORQUE TO 37 FT-LBS
4	348-287	1	SLIDE PAD	
5	105-197	2	BOLT (1/4-NC X 1")	
6	105-079	2	LOCK WASHER (1/4)	
7	105-078	2	NUT (1/4-NC)	
8	179-274	1	HOOK PIN	
9	105-053	1	NUT (3/8 NC) HEX	
10	105-1569	1	SWIVEL HOOK	
11	181-965	2	SPACER	
12	105-223	2	WASHER (3/8")	
13	499-260	1	PIN	

NOT SHOWN:

FOOTNOTES:

NOTE:

SWING DRIVE



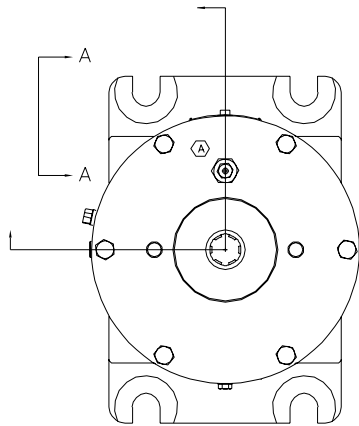
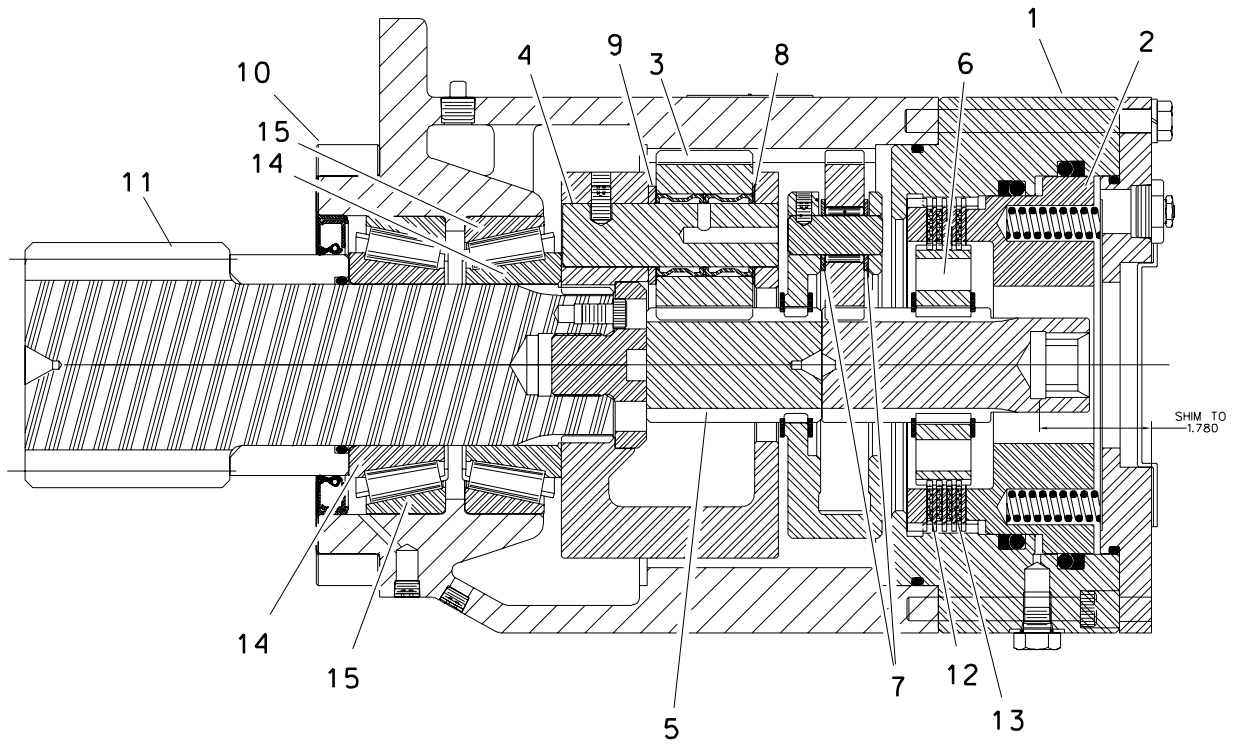
SWING DRIVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	499-236	1	SWING DRIVE	USE 80W-90 GEAR OIL, 3 QUART CAPACITY
2	370-162	4	WASHER (812, HARDENED)	
3	105-320	4	BOLT (3/4-NC X 2-1/4", GD8)	USE LOCTITE 277 OR EQUIVALENT; TORQUE TO 180 FT-LBS
4	499-238	1	HYDRAULIC MOTOR	
5	157-041	1	O-RING (152 D70)	
6	516-117	1	COUNTERBALANCE VALVE	
7	105-091	4	LOCK WASHER (5/16")	
8	105-178	4	BOLT (5/16-NC X 2-1/2", GD8)	USE LOCTITE 242 OR EQUIVALENT
9	105-070	2	LOCK WASHER (1/2")	
10	105-282	2	BOLT (1/2 - NC X 1.25", SOC)	USE LOCTITE 277 OR EQUIVALENT; TORQUE TO 90 FT-LBS

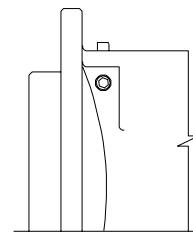
FOOTNOTES

NOTE:

SWING DRIVE



TOP VIEW
NOT TO SCALE



VIEW A-A
NOT TO SCALE

NOTES:

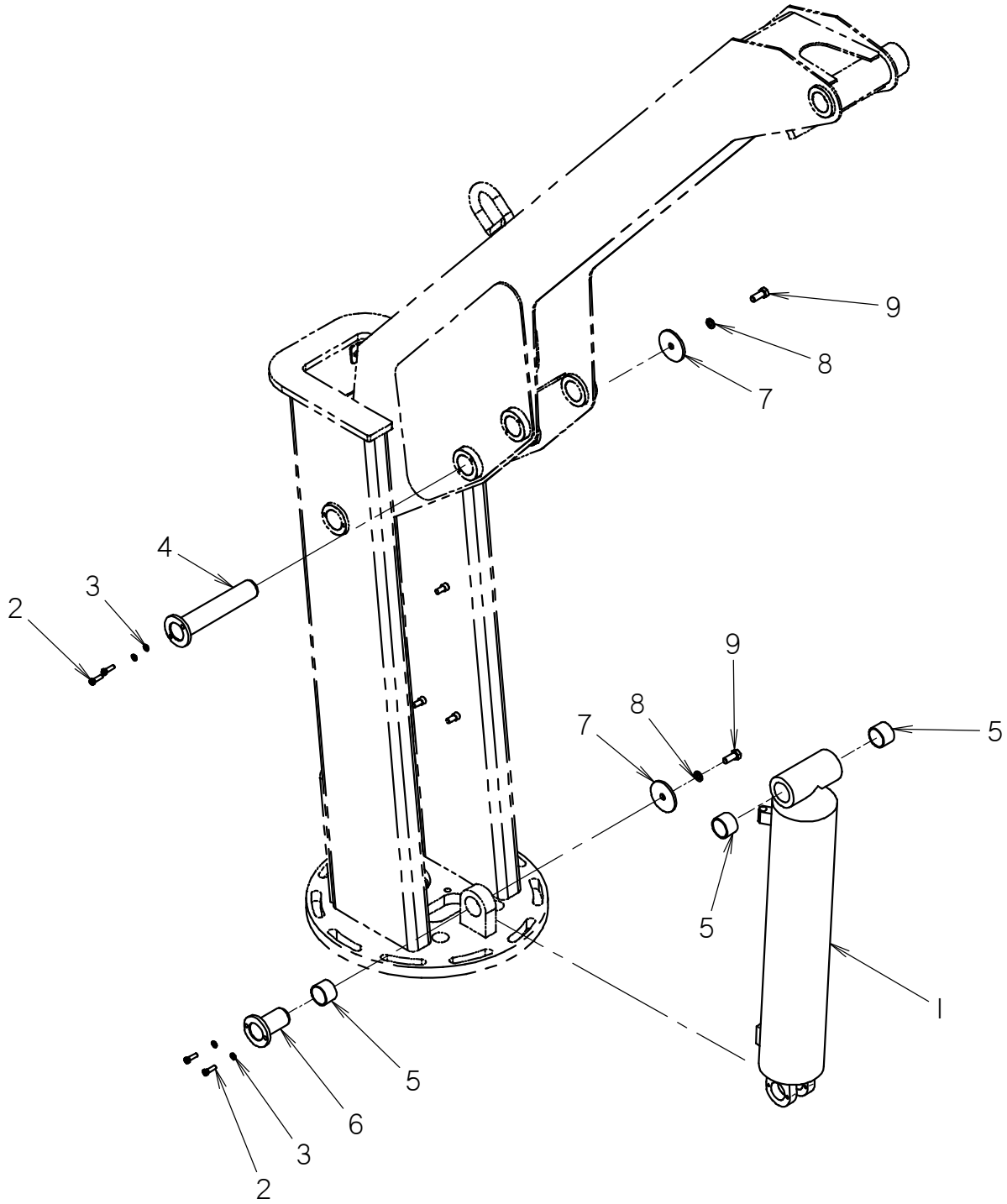
1. PRELOAD THE TIMKEN BEARINGS TO 40-60 IN.-LBS AND LOCK BOLT IN PLACE
2. TORQUE ITEMS *58 & *60 TO 39 FT.-LBS.
3. STAKE ITEMS *62 & *63
4. AIR TEST FOR LEAKS

SWING DRIVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	499-236		SWING DRIVE	
1.	499-239	1	BRAKE CYLINDER	
2.	499-240	1	BRAKE PISTON	
3.	499-241	1	PLANET GEAR	
4.	499-242	1	PLANET GEAR SHAFT	
5.	499-243	1	OUTPUT GEAR SHAFT	
6.	499-244	1	BRAKE DRIVER	
7.	499-248	1	THRUST WASHER RACE (.625")	
8.	499-249	-	THRUST WASHER RACE (1.000")	
9.	499-250	-	THRUST WASHER RACE (1.000")	
10.	499-251	1	ECCENTRIC RING	
11.	499-252	1	PINION	
12.	499-253	1	REACTION DISC	
13.	499-254	1	BRAKE DISC	
14.	499-255	1	TAPERED BEARING	
15.	499-256	1	TAPERED RACE	

FOOTNOTES

LIFT CYLINDER



LIFT CYLINDER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	151-198	1	LIFT CYLINDER	SEE FOOTNOTE 1
2	105-052	4	BOLT (3/8-NC X 1-1/4")	USE 242 LOCTITE OR EQUIVALENT
3	105-072	4	LOCK WASHER (3/8")	
4	179-269	1	PIN	
5	125-483	3	COMPOSITION BUSHING (2.000")	
6	179-267	1	PIN	USE 242 LOCTITE OR EQUIVALENT
7	499-235	2	PIN WASHER	
8	105-385	2	LOCK WASHER (5/8")	
9	105-358	2	BOLT (5/8-NC X 1-1/2", GD8)	

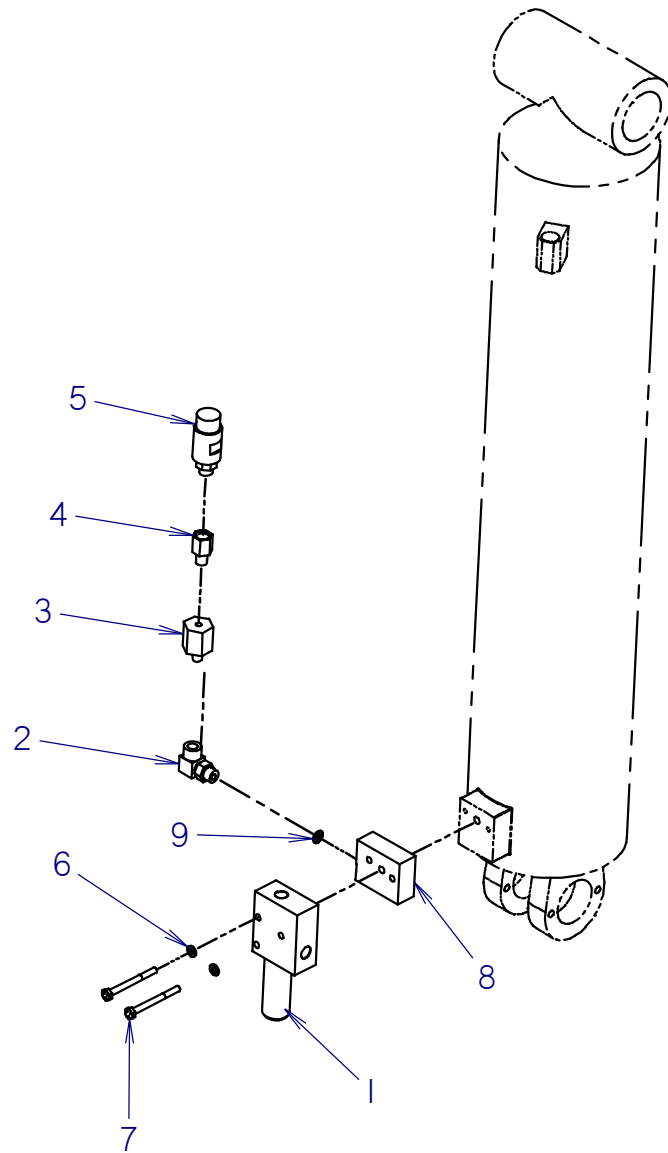
NOT SHOWN:

FOOTNOTES:

1. SEAL KIT 500-2120.

NOTE:

OVERLOAD



OVERLOAD

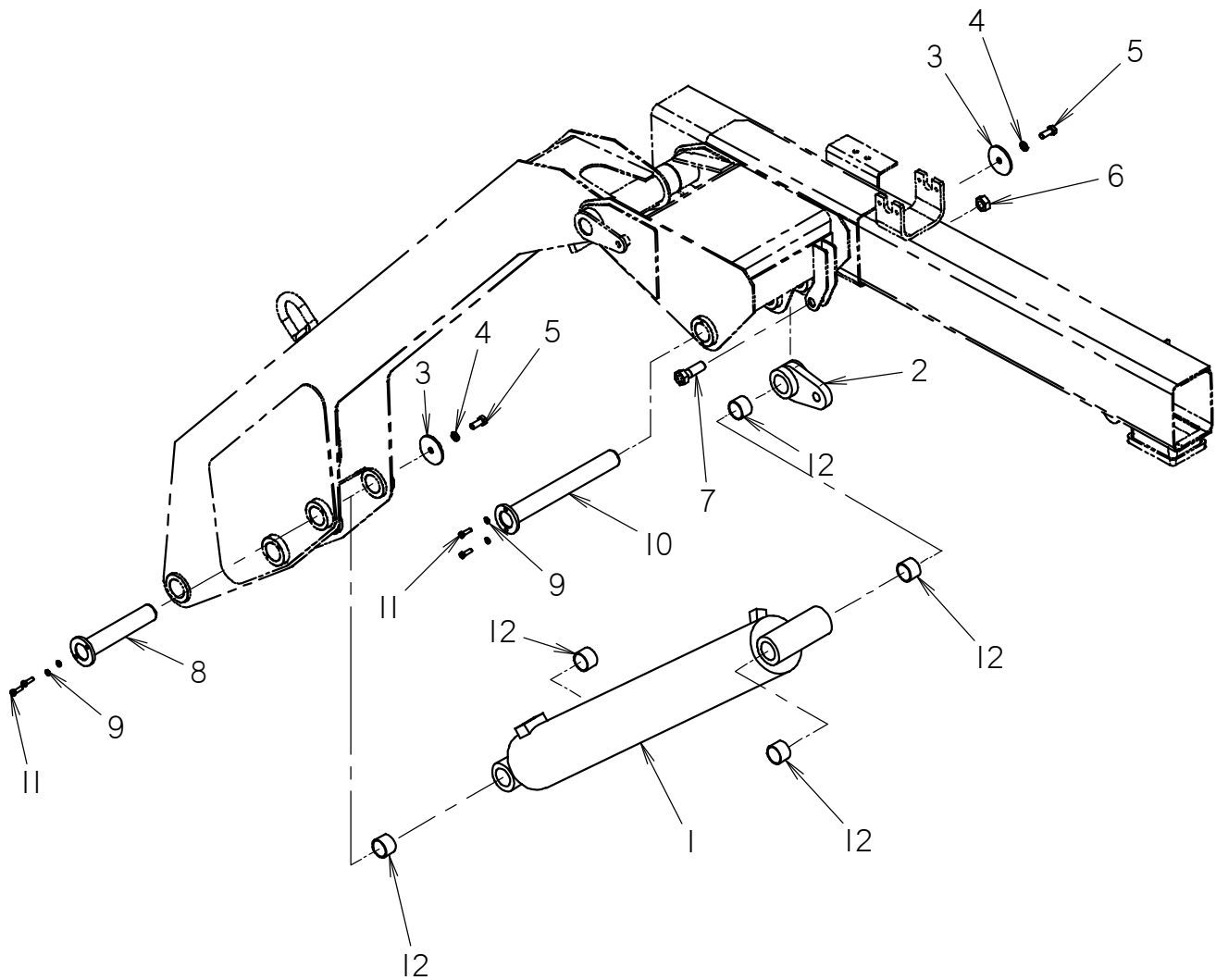
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	516-112	1	COUNTERBALANCE VALVE	
2	153-203	1	ELBOW (060-04N90)	
3	153-202	1	ADJUSTABLE GAUGE SNUBBER	
4	153-264	1	REDUCER (04N-06SF)	
5	213-315	1	PRESSURE SWITCH	
6	105-079	2	LOCK WASHER (1/4)	
7	107-743	2	BOLT (1/4-NC X 2.75, GD5)	
8	516-111	1	SENSE MANIFOLD	
9	158-079	1	ORIFICE DISC (016)	

NOT SHOWN:

FOOTNOTES:

NOTE:

OUTER BOOM CYLINDER



OUTER BOOM CYLINDER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	151-197	1	OUTER BOOM CYLINDER	SEE FOOTNOTE 1.
2	499-262	1	LIFTING LUG	
3	499-235	2	PIN WASHER	
4	105-385	2	LOCK WASHER (5/8")	
5	105-358	2	BOLT (5/8-NC X 1-1/2", GD8)	USE LOCTITE 242 OR EQUIVALENT
6	105-375	1	NUT (1-NC)	
7	105-373	1	BOLT (1-NC X 3")	
8	179-269	1	PIN	
9	105-072	4	LOCK WASHER (3/8")	
10	179-268	1	PIN	
11	105-052	4	BOLT (3/8-NC X 1-1/4")	USE LOCTITE 242 OR EQUIVALENT
12	125-483	5	COMPOSITION BUSHING (2.000")	

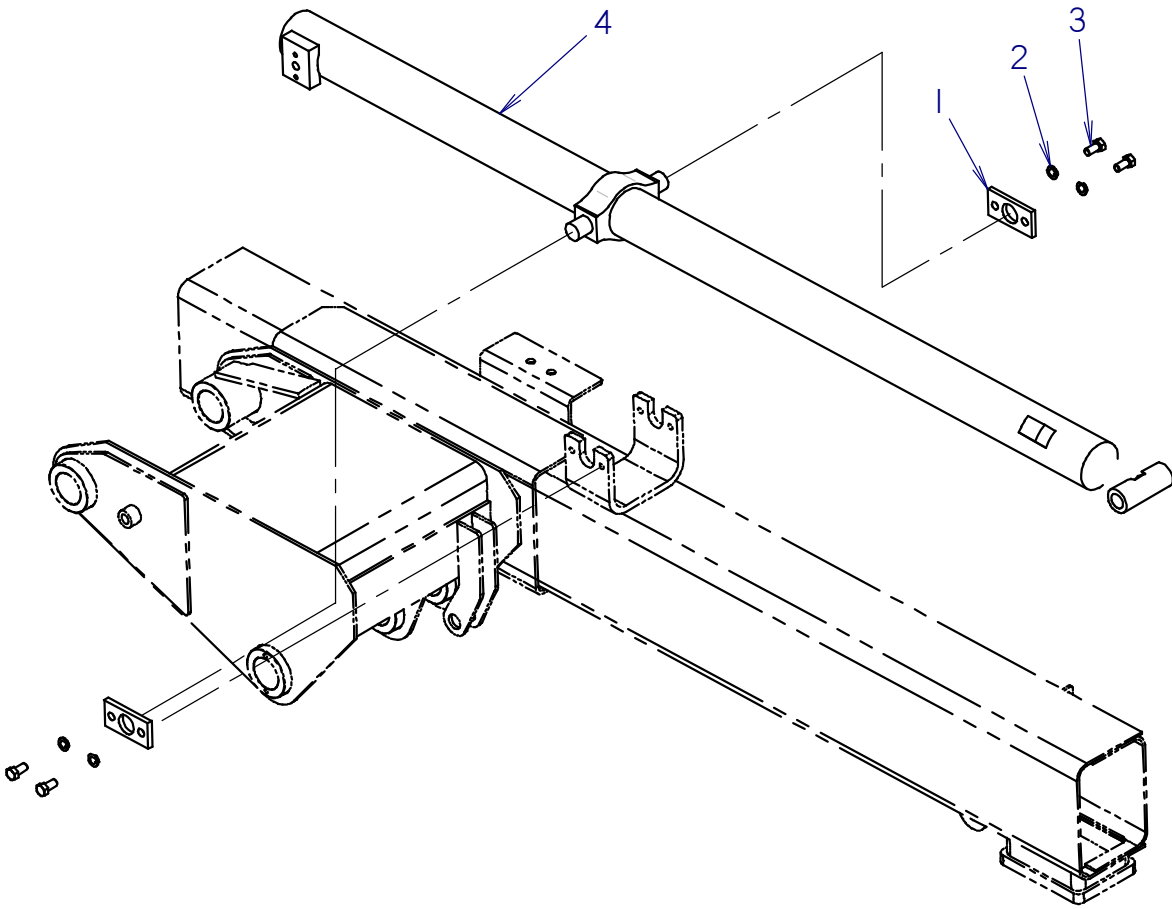
NOT SHOWN:

FOOTNOTES:

1. SEAL KIT 500-2120.

NOTE:

EXTENSION CYLINDER



EXTENSION CYLINDER

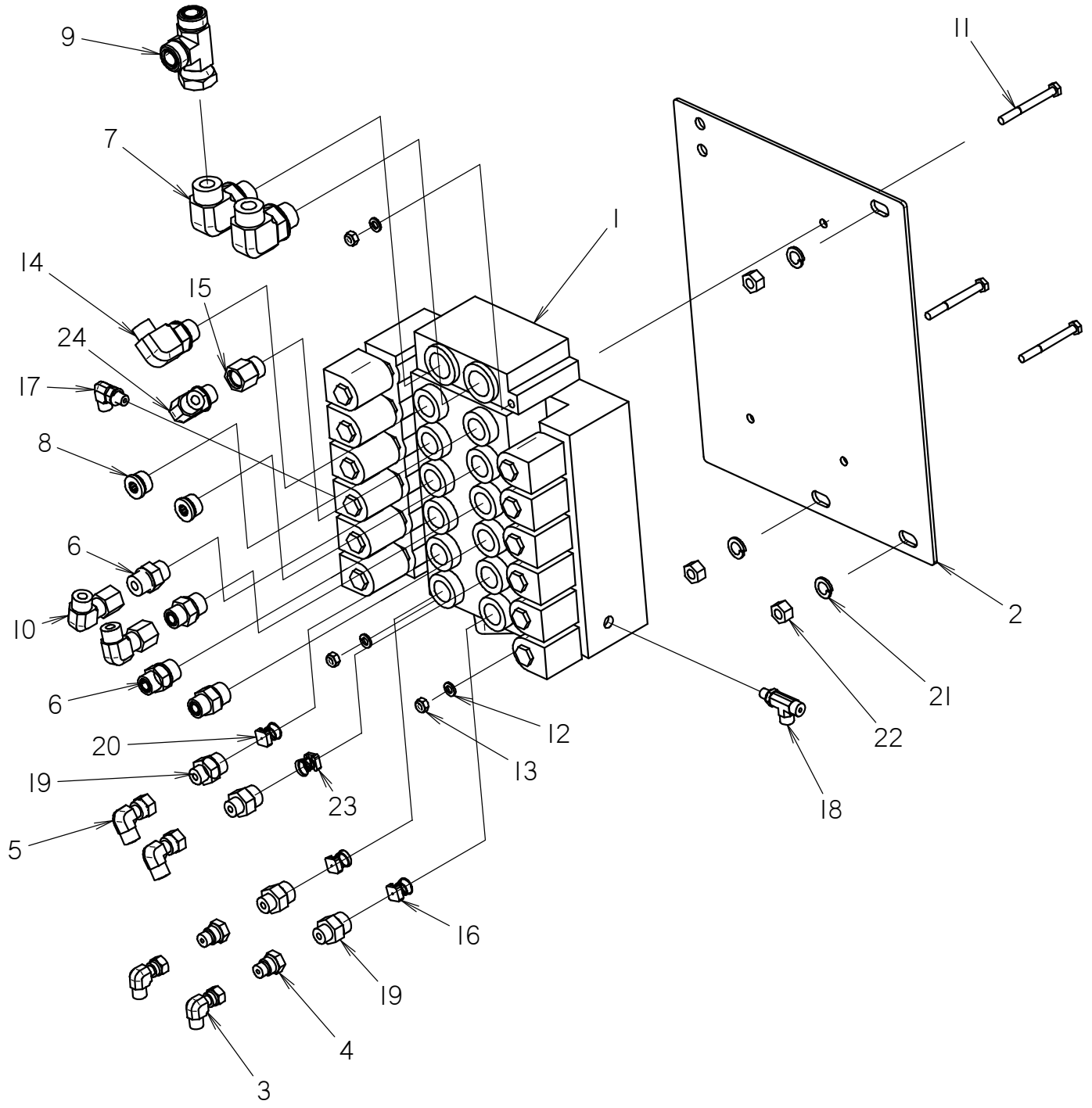
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	348-297	2	TRUNNION CAP	
2	105-070	4	LOCK WASHER (1/2")	
3	105-121	4	BOLT (1/2-NC X 1")	USE LOCTITE 242 OR EQUIVALENT; TORQUE TO 90 FT-LBS
4	499-259	1	EXTENSION BOOM CYLINDER	

NOT SHOWN:

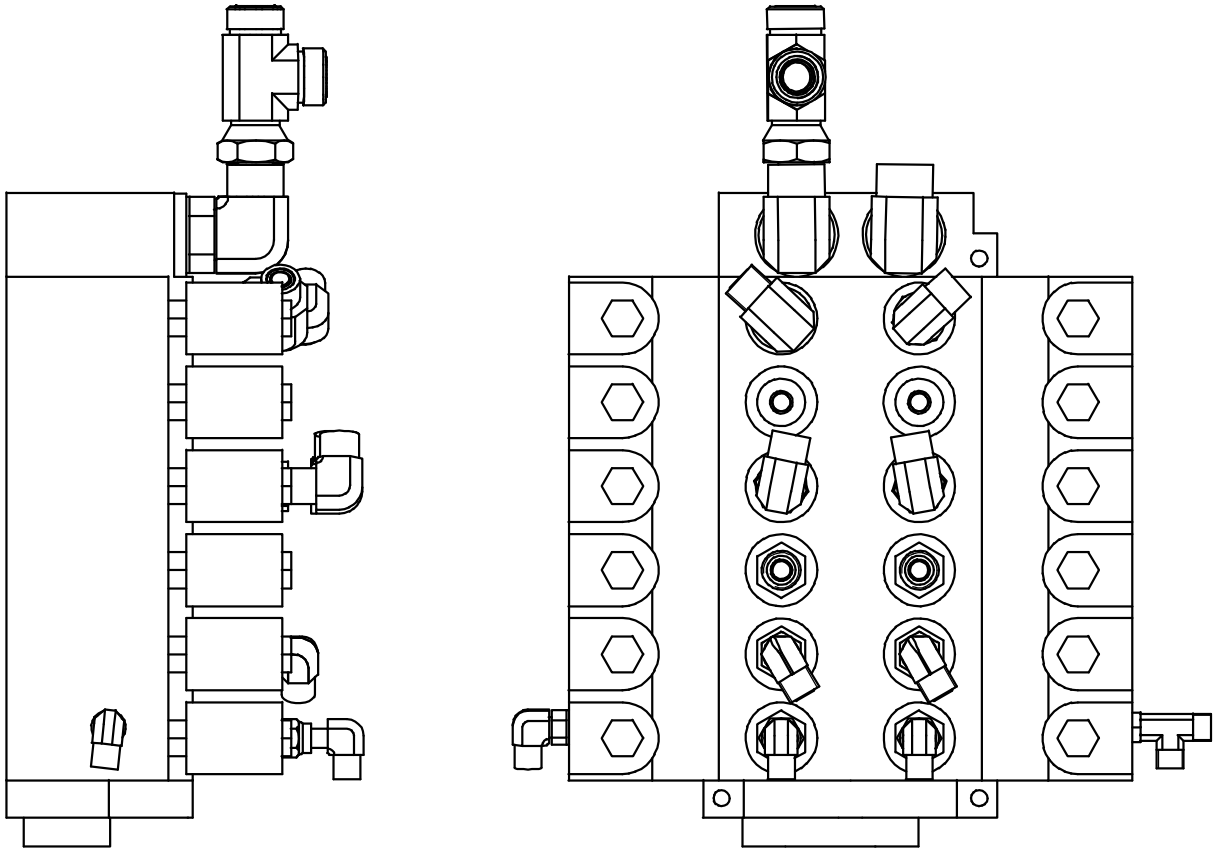
FOOTNOTES:

NOTE:

CONTROL VALVE



CONTROL VALVE



CONTROL VALVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	499-237	1	HYD CONTROL VALVE	SEE NOT SHOWN FOR SERVICE PARTS.
2	370-073	1	VALVE MOUNT	
3	154-255	2	UNION (040-040FX90)	
4	154-373	2	REDUCER (040-060F)	
5	154-228	2	UNION (060-060FX90)	
6	154-279	4	CONNECTOR (080-10S)	
7	154-270	2	CONNECTOR (12S-12090)	
8	500-294	2	PLUG (10S)	
9	154-368	1	UN RUN TEE (120FX-120-120)	
10	154-256	2	UNION (080-080FX90)	
11	105-170	3	BOLT (5/16-NC X 3")	
12	105-091	3	LOCK WASHER (5/16")	
13	105-089	3	LOCKNUT (5/16-NC)	
14	154-322	1	CONNECTOR (080-10S90)	
15	155-193	1	REDUCER (10S-08SF)	
16	158-076	2	FLOW RESTRICTOR (053)	
17	154-252	1	CONNECTOR (04S-04090)	
18	154-316	1	RUN TEE (04S-040-040)	
19	150-1133	4	CONNECTOR (060-10S)	
20	158-282	1	FLOW RESTRICTOR (047)	
21	105-070	3	LOCK WASHER (1/2")	
22	105-021	3	NUT(1/2-NC)	
23	158-283	1	FLOW RESTRICTOR (062)	INSTALL WITH SPRING SIDE UP
24	154-235	1	CONNECTOR (08S-08090)	

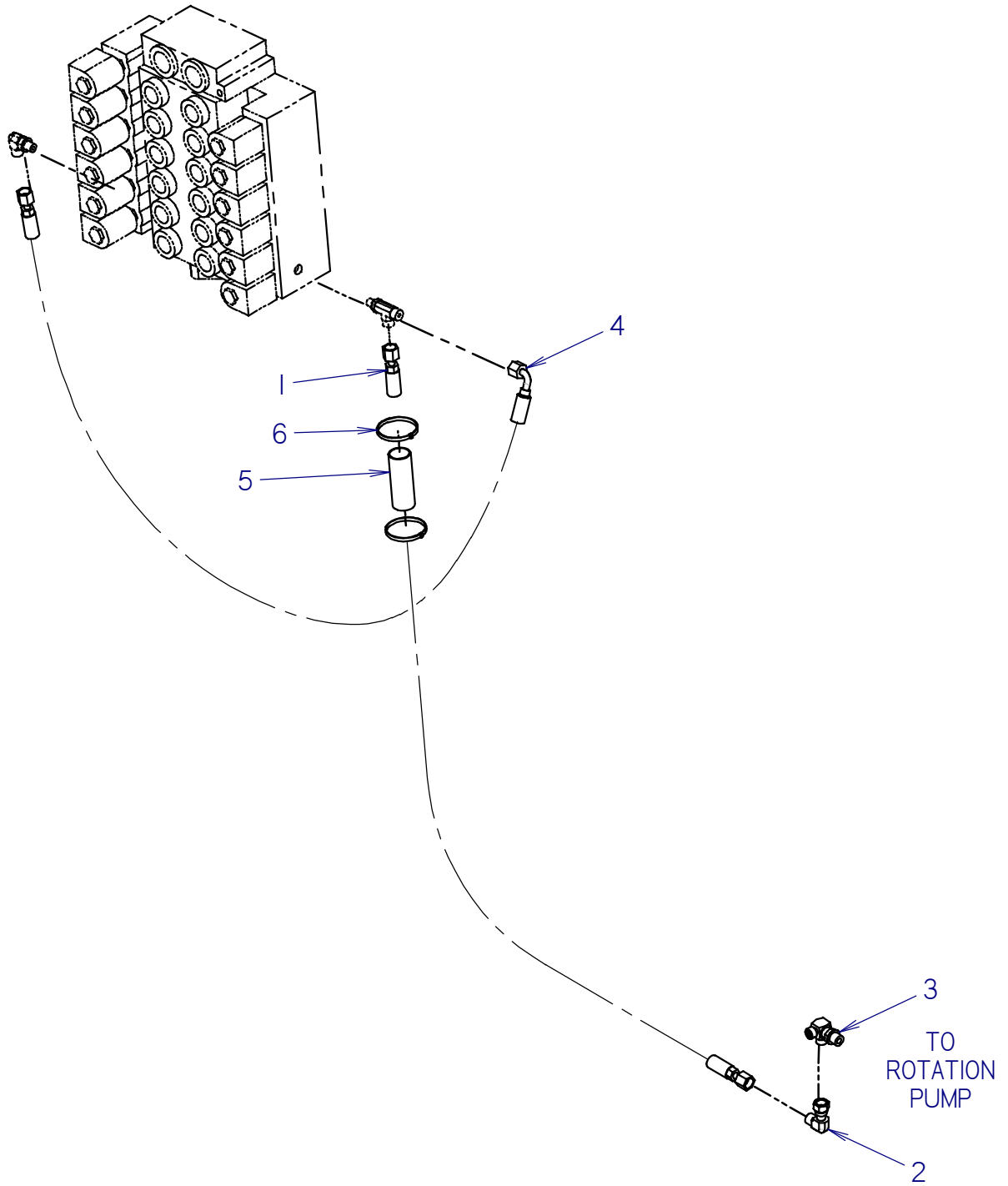
NOT SHOWN:

500-2034 SOLENOID ACTUATOR
 500-2035 SOLENOID ACTUATOR
 500-2036 SOLENOID ACTUATOR
 500-2037 COIL KIT
 500-2038 OUTLET COVER
 499-150 BONNET SEAL KIT
 500-581 PLUG SEAL KIT
 500-2050 RELIEF VALVE

FOOTNOTES:

NOTE:

CONTROL VALVE CHARGE HYDRAULICS



CONTROL VALVE CHARGE HYDRAULICS

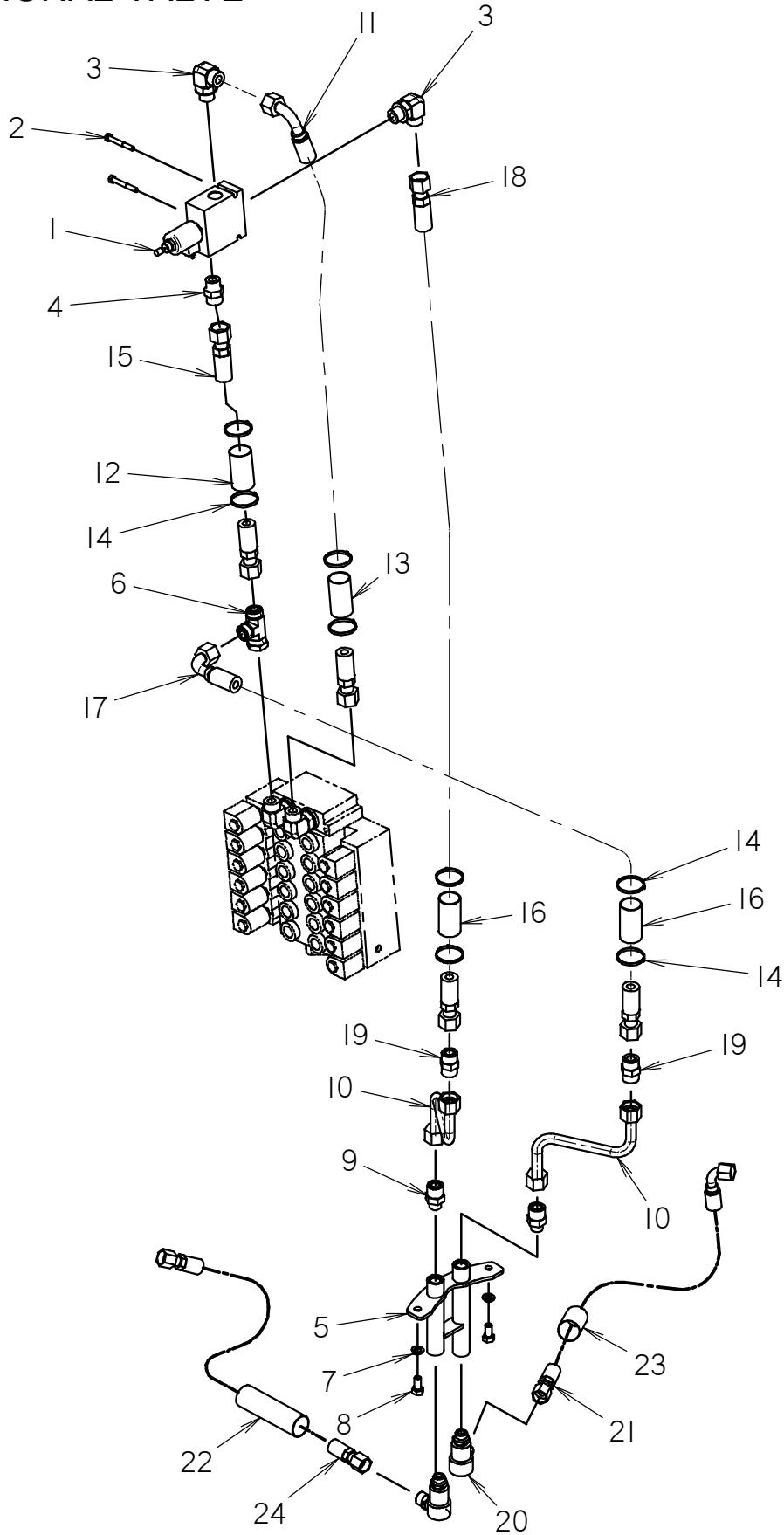
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	515-639	1	HOSE (040FX-140"-3000)	
2	154-255	1	UNION (040-040FX90)	
3	154-230	1	BRANCH TEE (06S-040-040)	INSTALL IN ROTATION PUMP
4	154-743	1	HOSE (040FX90S-23"-3000)	
5	117-203	1	ABRASION SLEEVE (1.00" X 143")	
6	110-030	2	CABLE TIE (1/16" TO 4")	

NOT SHOWN:

FOOTNOTES:

NOTE:

PROPORTIONAL VALVE



PROPORTIONAL VALVE

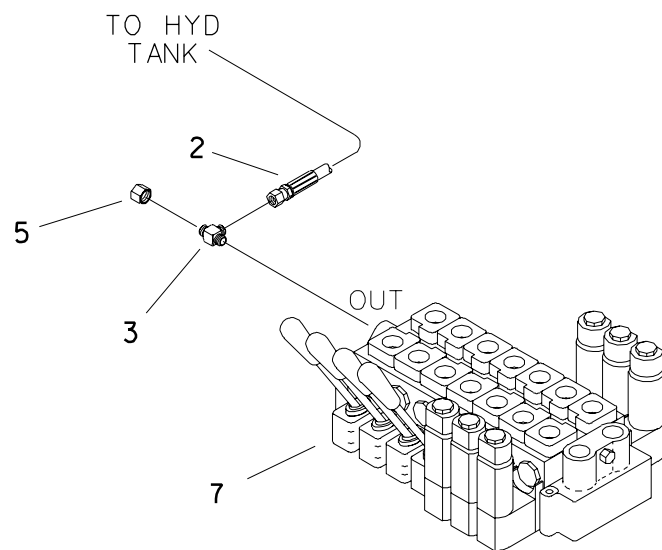
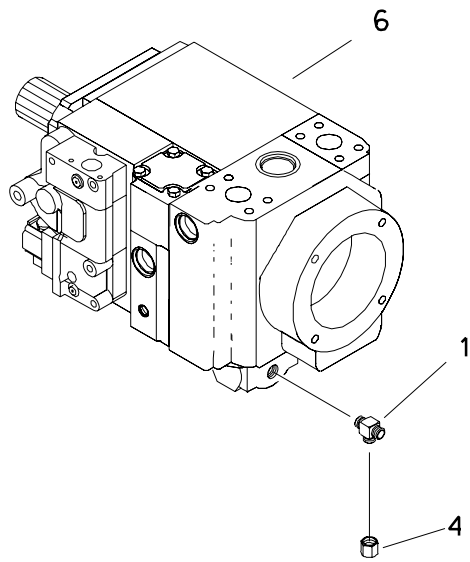
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	499-267	1	PROPORTIONAL VALVE	
2	105-178	2	BOLT (5/16-NC X 2-1/2", GD8)	
3	154-270	2	CONNECTOR (I2S-I2090)	
4	154-269	1	CONNECTOR (I2S-I20)	
5	153-552	1	MANIFOLD	
6	154-368	1	UN RUN TEE (I20FX-I20-I20)	
7	105-070	2	LOCK WASHER (1/2")	
8	105-121	2	BOLT (1/2-NC X 1")	
9	154-247	2	CONNECTOR (I10S-I20)	
10	150-1021	2	HYDRAULIC LINE (I-12)	
11	159-782	1	HOSE (I20FX90S-24"-4000)	
12	115-777	1	ABRASION SLEEVE (1.59" X 15")	
13	115-811	1	ABRASION SLEEVE (1.59" X 20")	
14	110-030	8	CABLE TIE (1/16" TO 4")	
15	150-1032	1	HOSE (I20FX-15"-3000)	
16	117-720	2	ABRASION SLEEVE (1.59" X 48")	
17	150-1033	1	HOSE (I20FX90L-37"-3000)	
18	150-1034	1	HOSE (I20FX-51"-3000)	
19	154-431	2	CONNECTOR (I20-I20)	
20	153-772	2	HYD SWIVEL	
21	515-082	1	HOSE (I100FX90S-60"-3000)	
22	117-204	1	ABRASION SLEEVE (1.59" X 108")	
23	115-755	1	ABRASION SLEEVE (1.59" X 60")	
24	515-202	1	HOSE (I100FX-106"-3000)	

NOT SHOWN:

FOOTNOTES:

NOTE:

HOIST HYDRAULICS WITHOUT HOIST



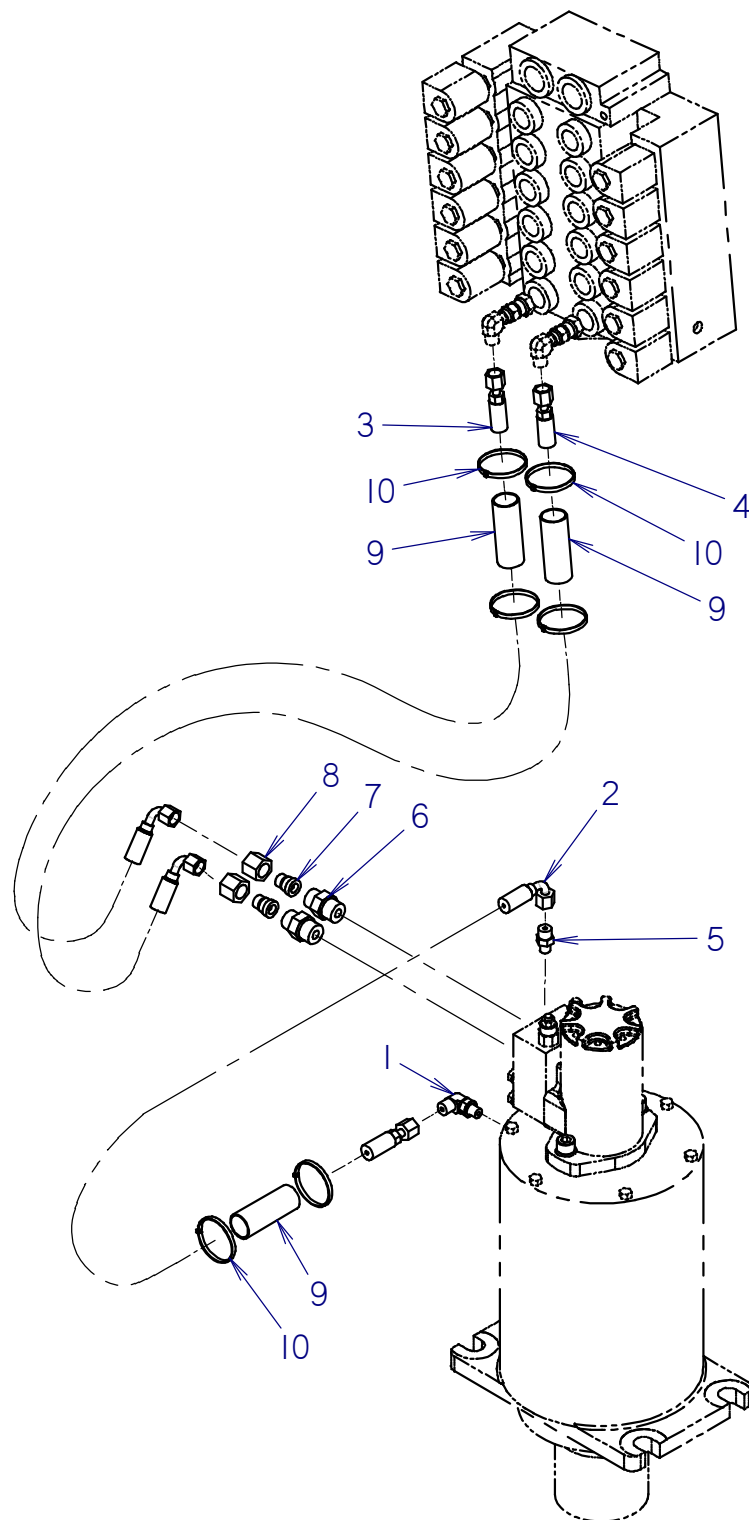
HOIST HYDRAULICS WITHOUT HOIST

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-230	-	BRANCH TEE (06S-040-040)	
2.	515-259	-	HOSE (100FX45-14"-3000)	
3.	154-370	-	RUN TEE (12S-100-100)	
4.	154-296	1	CAP (040F)	
5.	154-324	1	CAP (100F)	
6.	149-901	-	HYDRAULIC PUMP (130)	
7.	516-049	-	HYD CONTROL VALVE (7-SPOOL)	

FOOTNOTES

NOTE
REFER TO O-RING CHART (800-301) IN BACK OF THE BOOK FOR REPLACEMENT OF O-RINGS.

SWING DRIVE HYDRAULICS



SWING DRIVE HYDRAULICS

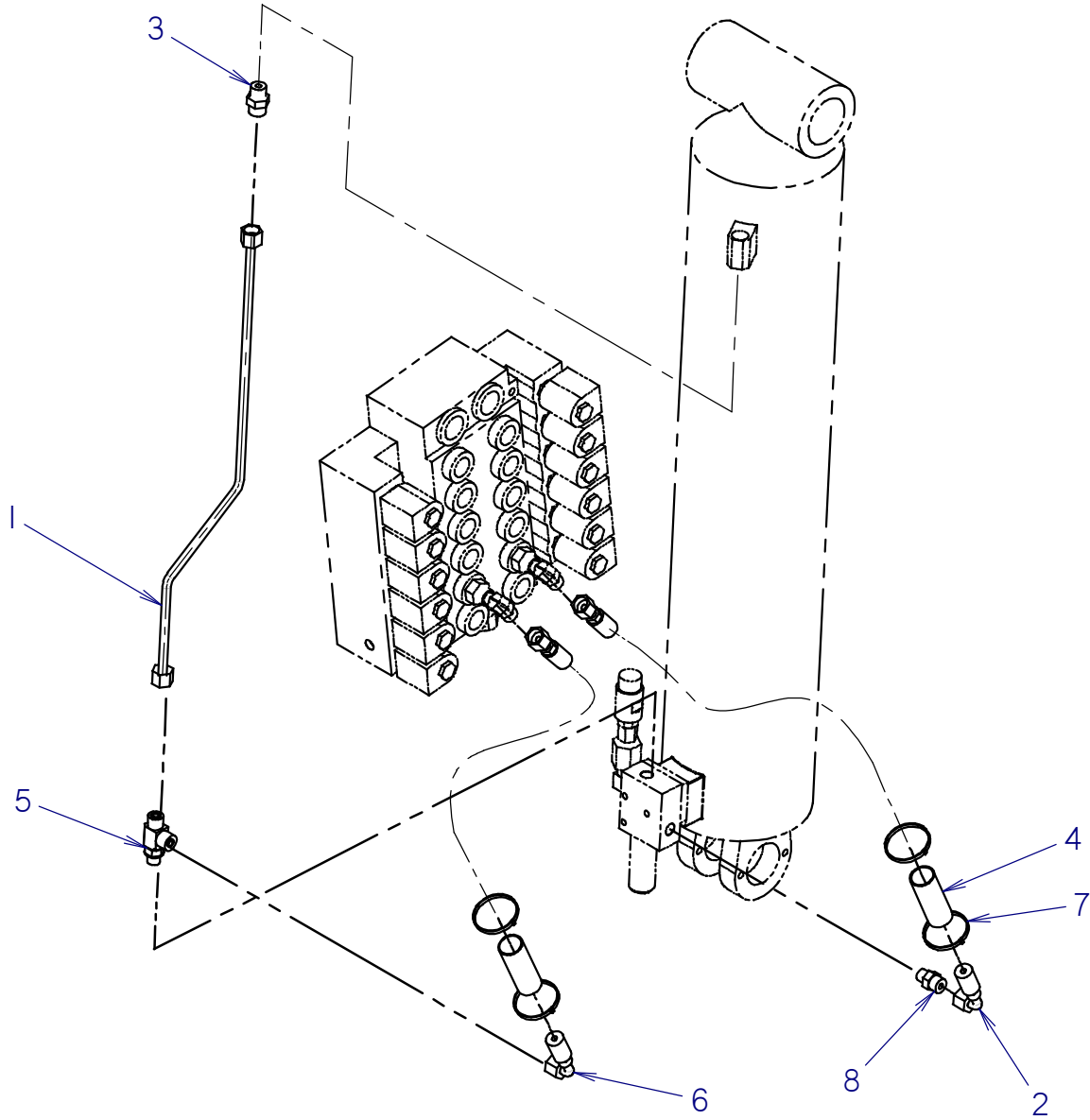
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	154-252	1	CONNECTOR (04S-04090)	
2	150-1029	1	HOSE (040FX90S-16"-6000) - NEW PART	
3	150-1029	1	HOSE (040FX90S-16"-6000) - NEW PART	
4	150-1029	1	HOSE (040FX90S-16"-6000) - NEW PART	
5	154-278	1	CONNECTOR (04S-040)	
6	154-279	2	CONNECTOR (080-10S)	
7	154-248	2	REDUCER STEM (040)	
8	154-272	2	REDUCER NUT (080F)	
9	117-278	3	ABRASION SLEEVE (1.00" X 14")	
10	110-030	6	CABLE TIE (1/16" TO 4")	

NOT SHOWN:

FOOTNOTES:

NOTE:

LIFT CYLINDER HYDRAULICS



LIFT CYLINDER HYDRAULICS

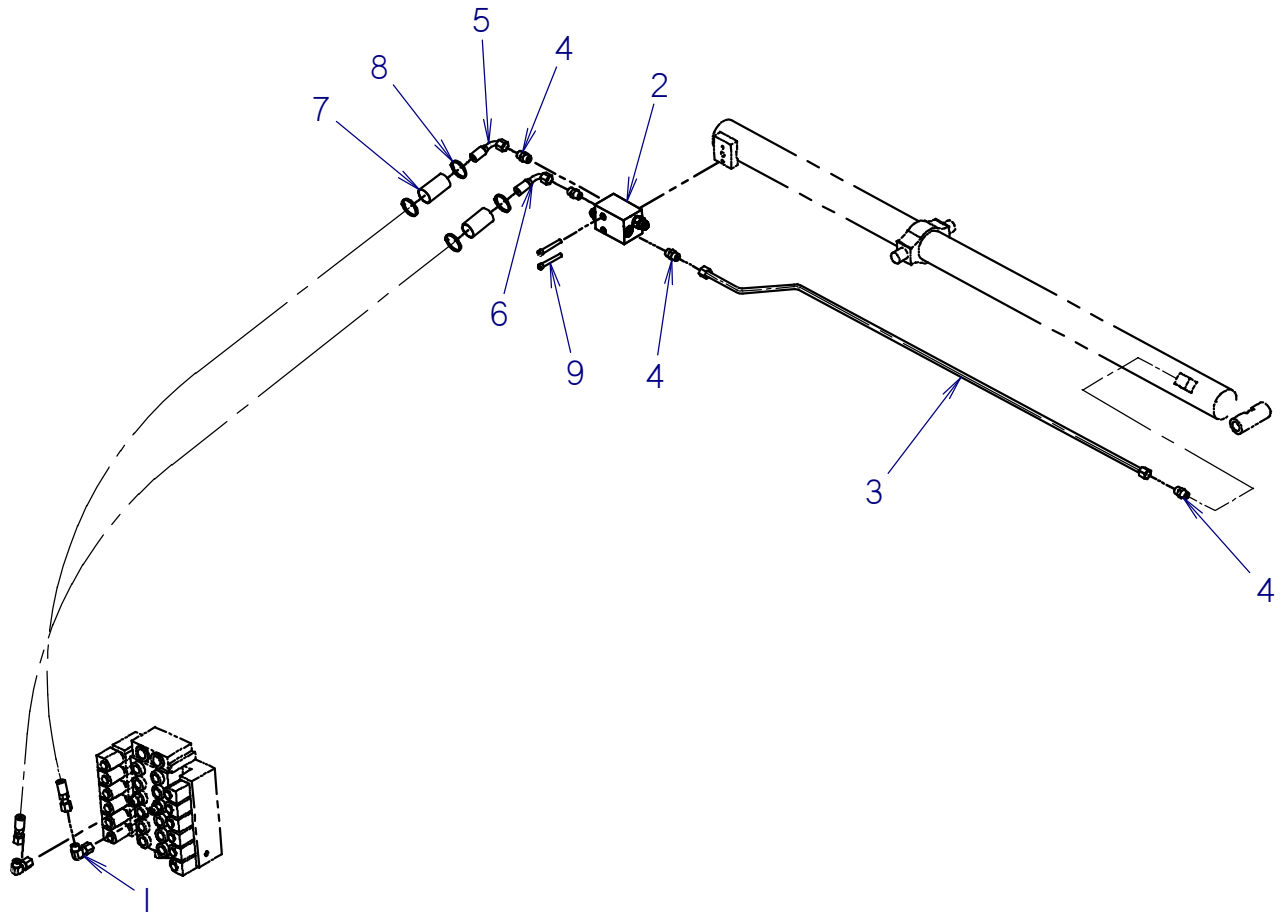
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	159-997	1	HYDRAULIC LINE (1-08)	
2	515-188	1	HOSE (060FX90S-23"-3000)	
3	154-222	1	CONNECTOR (060-08S)	
4	117-672	2	ABRASION SLEEVE (1.00" X 20")	
5	154-345	1	RUN TEE (06S-060-060)	
6	515-188	1	HOSE (060FX90S-23"-3000)	
7	110-030	4	CABLE TIE (1/16" TO 4")	
8	154-221	1	CONNECTOR (06S-060)	

NOT SHOWN:

FOOTNOTES:

NOTE:

EXTENSION CYLINDER HYDRAULICS



EXTENSION CYLINDER HYDRAULICS

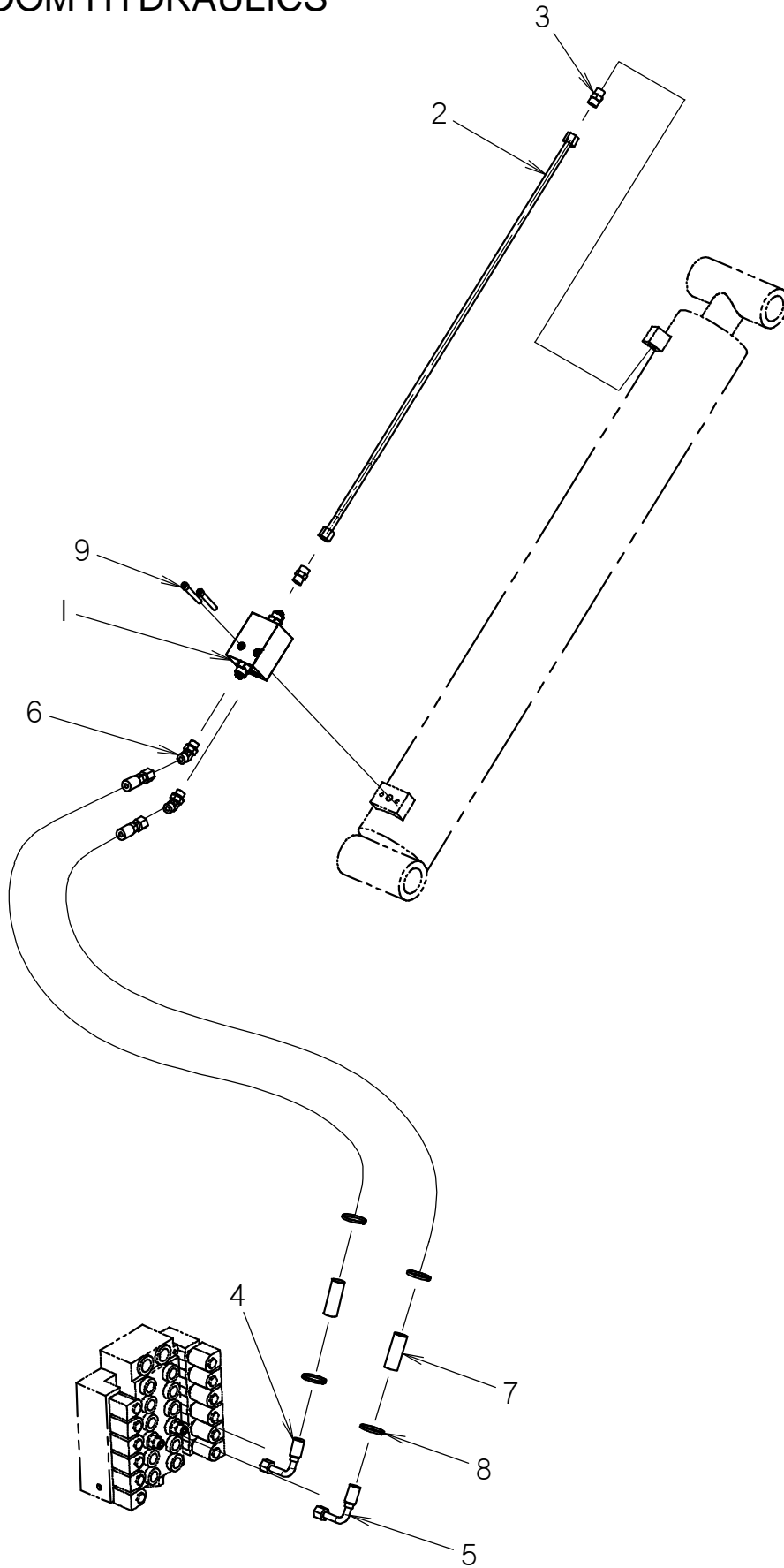
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	154-256	2	UNION (080-080FX90)	
2	516-118	1	COUNTERBALANCE VALVE	
3	159-995	1	HYDRAULIC LINE (1-08)	
4	154-233	4	CONNECTOR (08S-080)	
5	150-1030	1	HOSE (080FX90S-155"-4000)	CONNECT TO V1 PORT ON COUNTERBALANCE VALVE
6	150-1030	1	HOSE (080FX90S-155"-4000)	CONNECT TO V2 PORT ON COUNTERBALANCE VALVE
7	116-640	2	ABRASION SLEEVE (1.59" X 150")	
8	110-030	4	CABLE TIE (1/16" TO 4")	
9	105-1064	2	BOLT (3/8-NC X 2-3/4", SOC)	

NOT SHOWN:

FOOTNOTES:

NOTE:

OUTER BOOM HYDRAULICS



OUTER BOOM HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	516-118	1	COUNTERBALANCE VALVE	SEE FOOTNOTE 1
2	159-996	1	HYDRAULIC LINE (-08)	
3	154-233	2	CONNECTOR (08S-080)	
4	159-853	1	HOSE (080FX90L-64"-4000)	
5	159-853	1	HOSE (080FX90L-64"-4000)	
6	154-284	2	CONNECTOR (08S-08045)	
7	117-693	2	ABRASION SLEEVE (1.00" X 60")	
8	110-030	4	CABLE TIE (1/16" TO 4")	
9	105-1064	2	BOLT (3/8-NC X 2-3/4", SOC)	

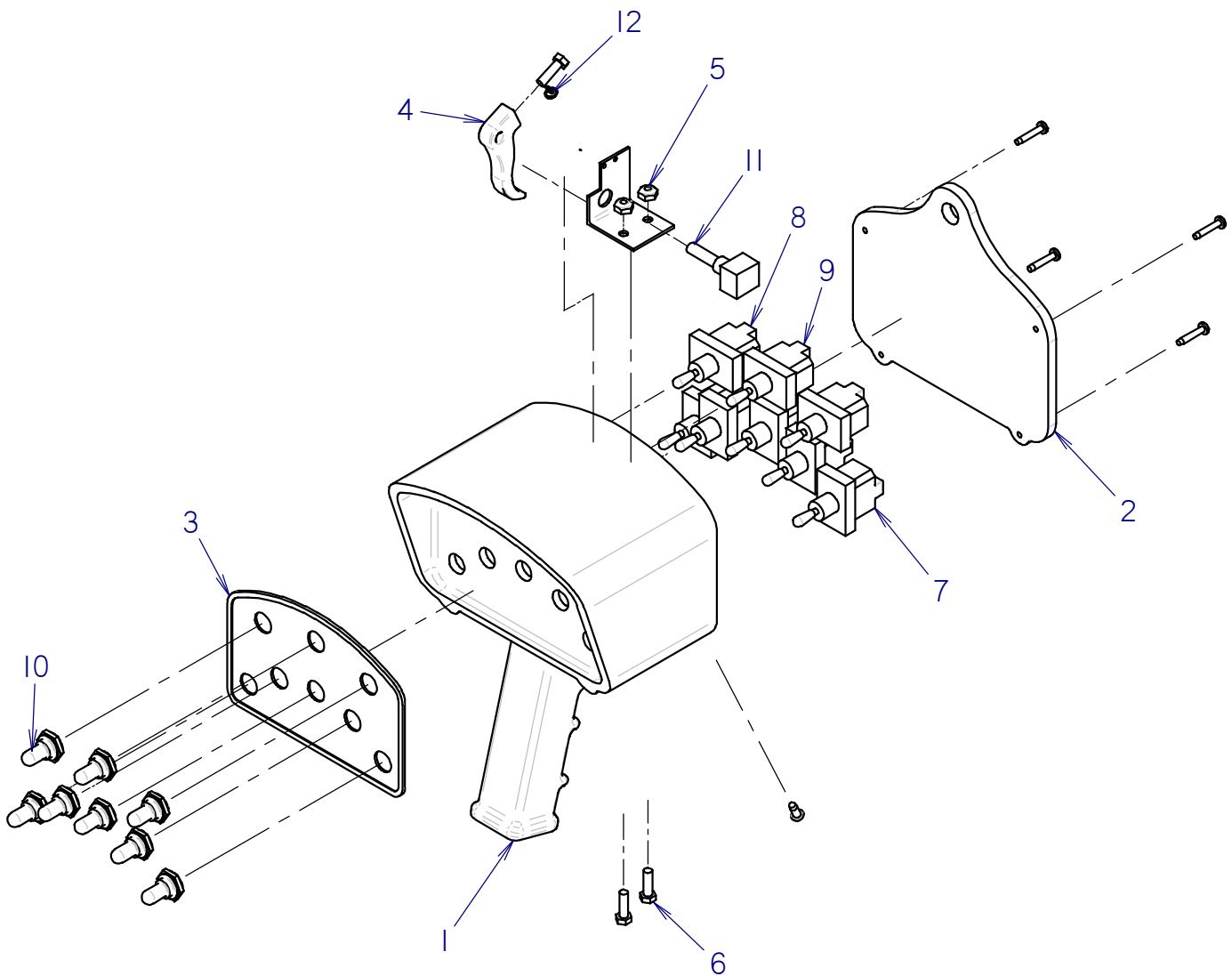
NOT SHOWN:

FOOTNOTES:

1. V1 INSIDE / V2 OUTSIDE

NOTE:

PENDANT



PENDANT

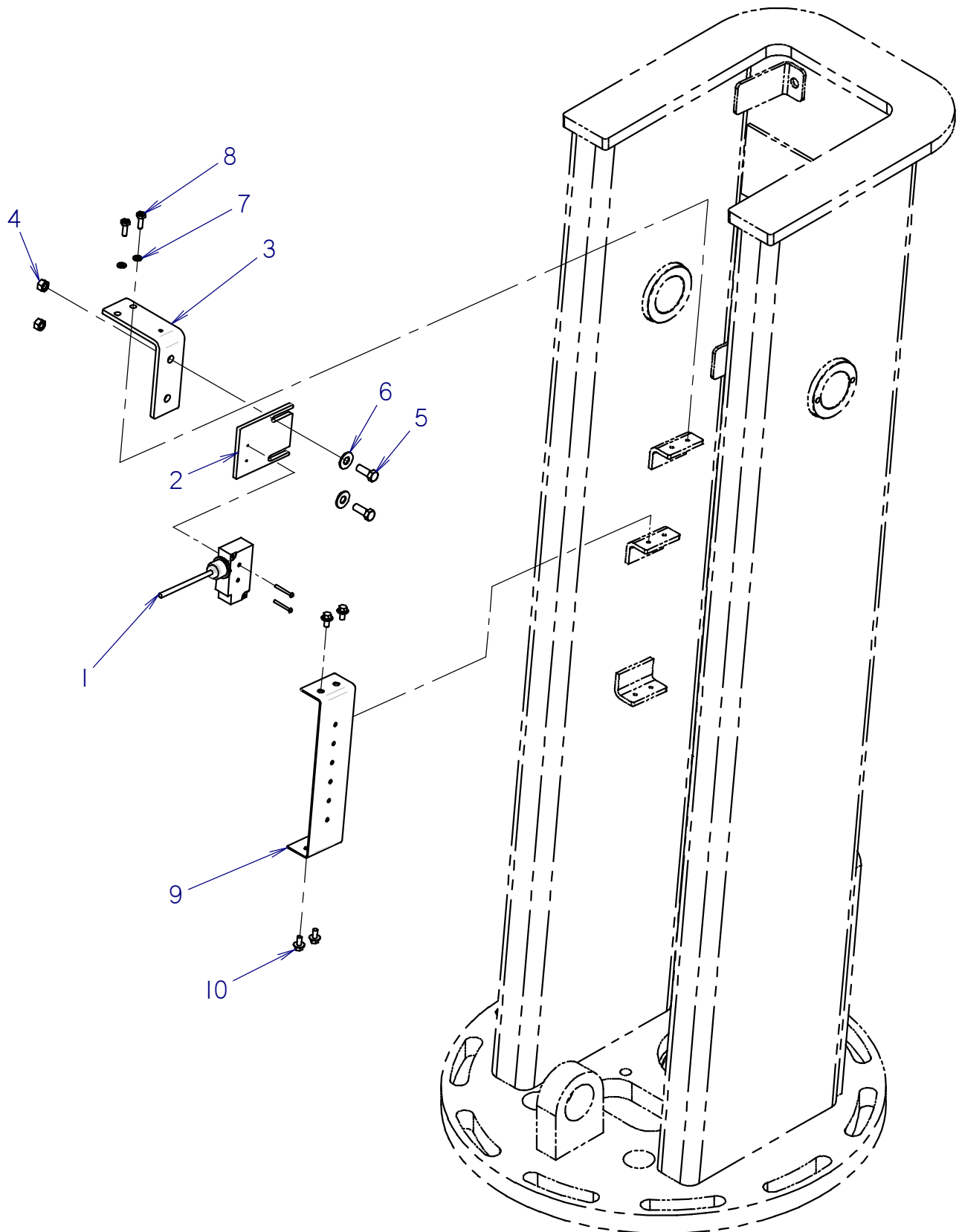
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	164-034	1	CASE PENDANT	
2	325-344	1	PENDANT BACK PLATE	
3	700-958	1	PENDANT - 8 FUNCTION	
4	499-431	1	TRIGGER, PENDANT	
5	106-048	2	LOCKNUT (#10-24)	
6	107-781	3	HEX SCREW (#10-24 X 5/8')	
7	499-271	6	TOGGLE SWITCH (DPDT)	
8	213-386	1	TOGGLE SWITCH (ON/OFF)	
9	213-387	1	TOGGLE SWITCH (SPDT)	
10	499-273	8	TOGGLE BOOT	
11	217-406	1	POTENTIOMETER	
12	117-206	1	EXTENSION SPRING	

NOT SHOWN:

FOOTNOTES:

NOTE:

LIMIT SWITCH



LIMIT SWITCH

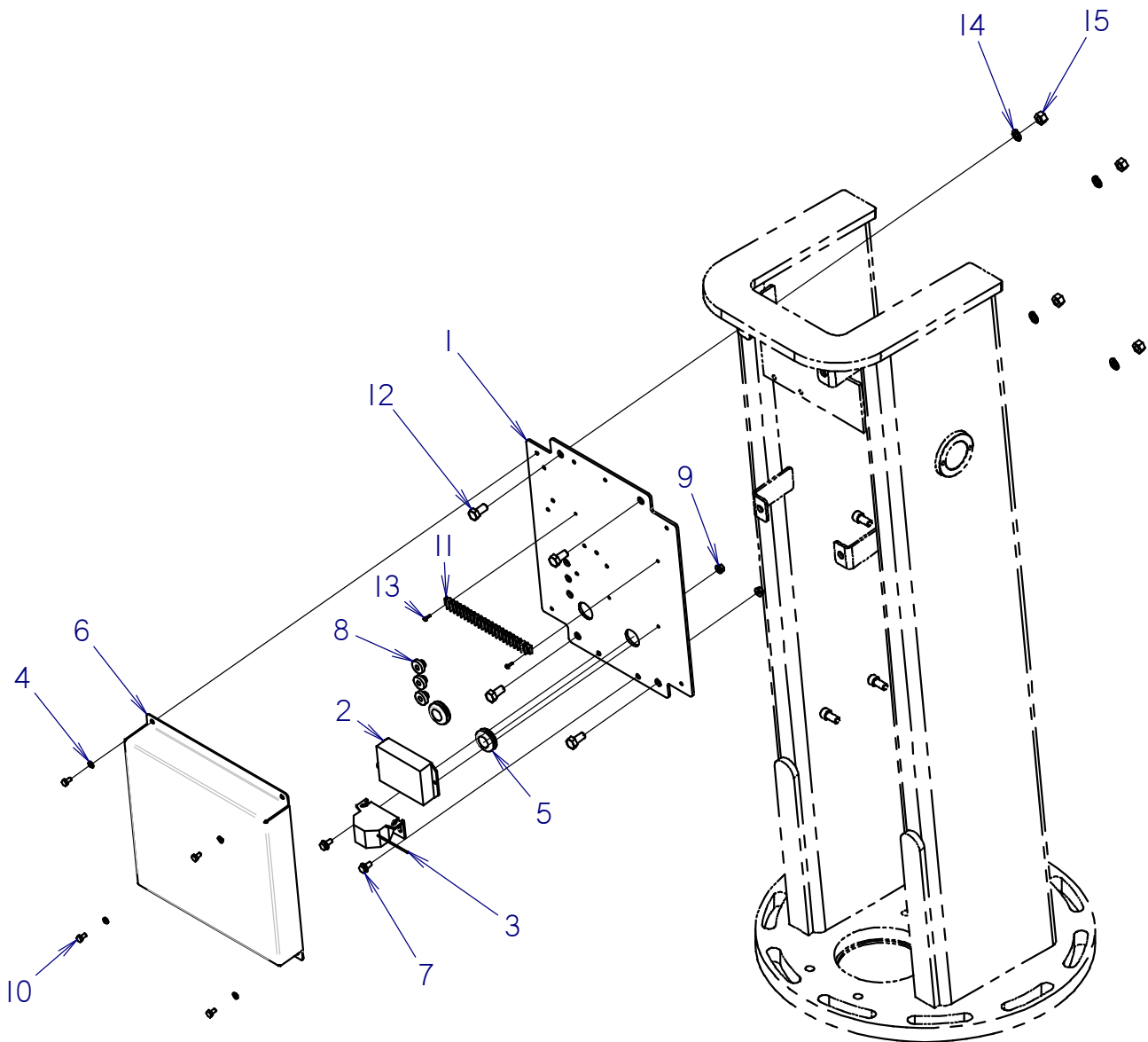
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	213-384	1	LIMIT SWITCH	
2	325-342	1	SWITCH MOUNT	
3	325-341	1	SWITCH MOUNT	
4	105-053	2	NUT (3/8 NC) HEX	
5	105-031	2	BOLT (3/8-NC X 1")	
6	105-118	2	WASHER (3/8")	
7	105-079	2	LOCK WASHER (1/4)	
8	105-865	2	BOLT (1/4-NC X 3/4", GD8)	
9	325-340	1	BRACKET, WEATHER PACK	
10	105-836	4	FLG LK BOLT (1/4-NC X 1/2")	

NOT SHOWN:

FOOTNOTES:

NOTE:

ELECTRICAL COMPONENTS



ELECTRICAL COMPONENTS

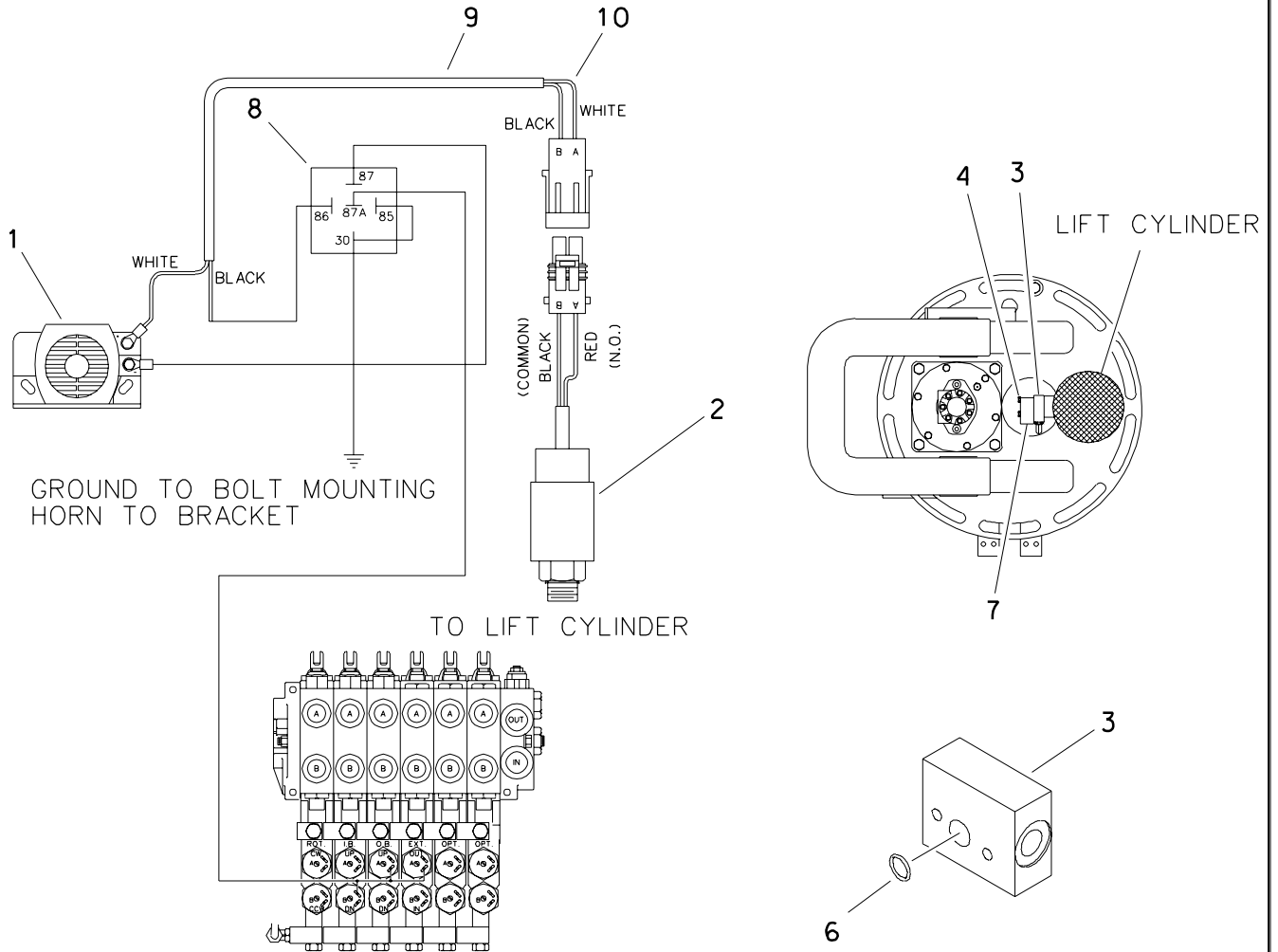
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	349-589	1	PROPORTIONAL MOUNT	
2	213-316	1	PROPORTIONAL AMPLIFIER	
3	214-416	1		
4	105-079	4	LOCK WASHER (1/4)	
5	115-355	2	GROMMET (1-3/8")	
6	329-592	1	COVER	
7	106-380	2	FLG LK SCREW (M8-1.25 X 16MM)	
8	116-325	3	GROMMET (.362")	
9	106-386	2	FLG LOCKNUT (M8-1.25)	
10	105-174	4	BOLT (1/4-NC X 1/2")	
11	213-314	1	TERMINAL BLOCK, 22 STA	
12	105-121	4	BOLT (1/2-NC X 1")	
13	106-367	2	SCREW (#6-32 X 1/2" PLPS SS)	
14	105-070	4	LOCK WASHER (1/2")	
15	105-021	4	NUT(1/2-NC)	

NOT SHOWN:

FOOTNOTES:

NOTE:

OVERLOAD ALERT

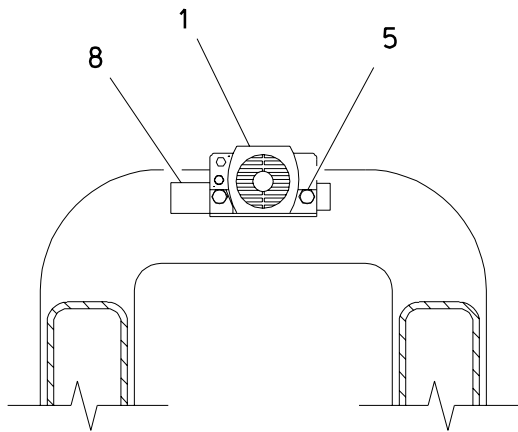


GROUND TO BOLT MOUNTING
HORN TO BRACKET

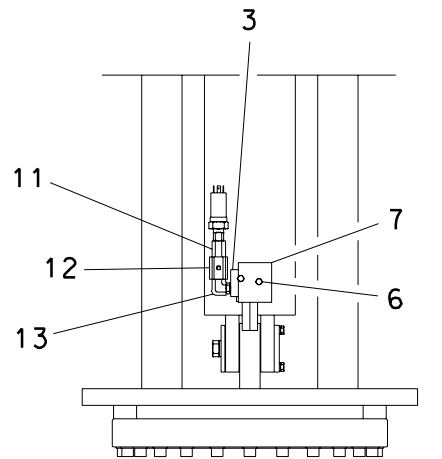
TO LIFT CYLINDER

WIRE HARNESS & GROUNDS NOT USED
IN OVERLOAD PROTECTION CIRCUIT RE-
MOVED FOR CLARITY.

WIRING DETAIL



HORN MOUNTING DETAIL
UNDERSIDE OF TOP OF PEDESTAL



PRESSURE SWITCH DETAIL
LIFT CYLINDER

OVERLOAD ALERT

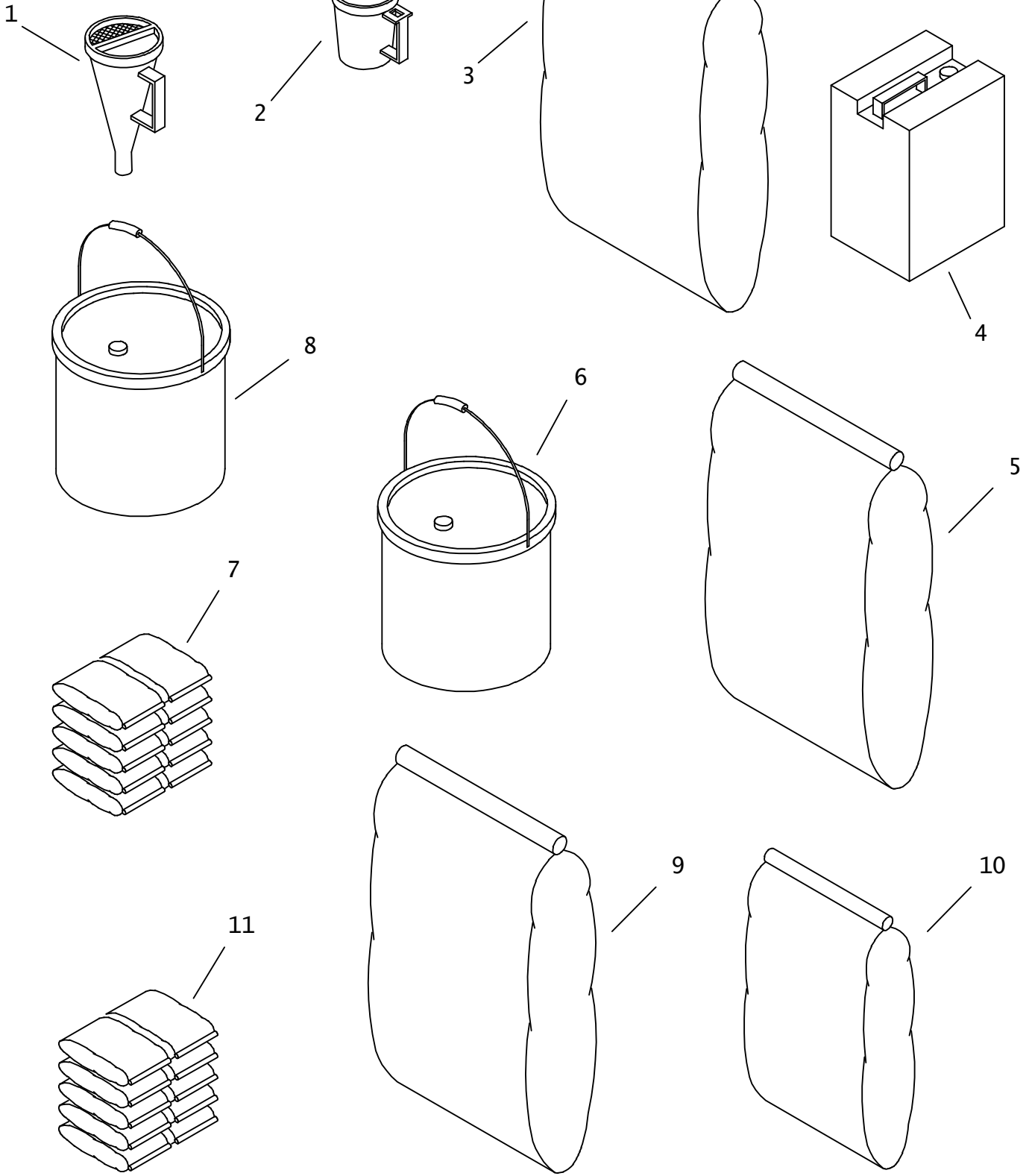
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	306-610	-	HORN ALERT	CRANE
2.	217-943	-	PRESSURE SWITCH	CRANE
3.	516-111	-	VALVE, SENSE	CRANE
4.	105-224	-	BOLT (1/4-NC X 2-1/2")	
5.	105-197	-	BOLT (1/4-NC X 1")	
	105-152	-	NUT (1/4-NF)	
	105-095	-	WASHER (1/4")	
	105-079	-	LOCK WASHER (1/4")	
6.	157-743	-	O-RING SEAL	CRANE
7.	516-112	-	COUNTERBALANCE VALVE	
8.	217-944	-	RELAY, OVERLOAD	CRANE
9.	214-461	-	LODM. (WIRE ASS'Y SLEEVE)	
10.	214-462	-	HORN ALERT WIRE	
11.	153-201	-	ADAPTER	
12.	153-202	-	ADJUSTABLE GAUGE SNUBBER	
13.	153-203	-	ELBOW	

FOOTNOTES

REMOVE METAL TAB FROM HORN COVERING GROUND TO ISOLATE GROUND.

ACCESSORIES

FLUID MIXING ACCESSORIES



FLUID MIXING ACCESSORIES

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	259-195	1	VISCOSITY FUNNEL	
2.	259-196	1	VISCOSITY CUP	
3.	259-804	AR	BENTONITE, QUIK-GEL (50 LB)	
4.	259-805	AR	LIQUID POLYMER, EZ-MUD (5 GAL)	
5.	259-807	AR	BENTONITE, BORE-GEL (50 LB)	
6.	259-808	AR	VISCOSIFIER, LIQUI-TROL (5 GAL)	
7.	259-809	AR	POWDER POLYMER, QUIK-TROL (20 LB)	
8.	259-810	AR	WET AGENT, CON-DET (5 GAL)	
9.	259-821	AR	'PAC-R' FILTRATION CONTROL	
10.	259-822	AR	'BARAZAN D+' VISCOSIFIER	
11.	259-832	AR	'NO SAG' (20# BOX/10-2#BAGS)	

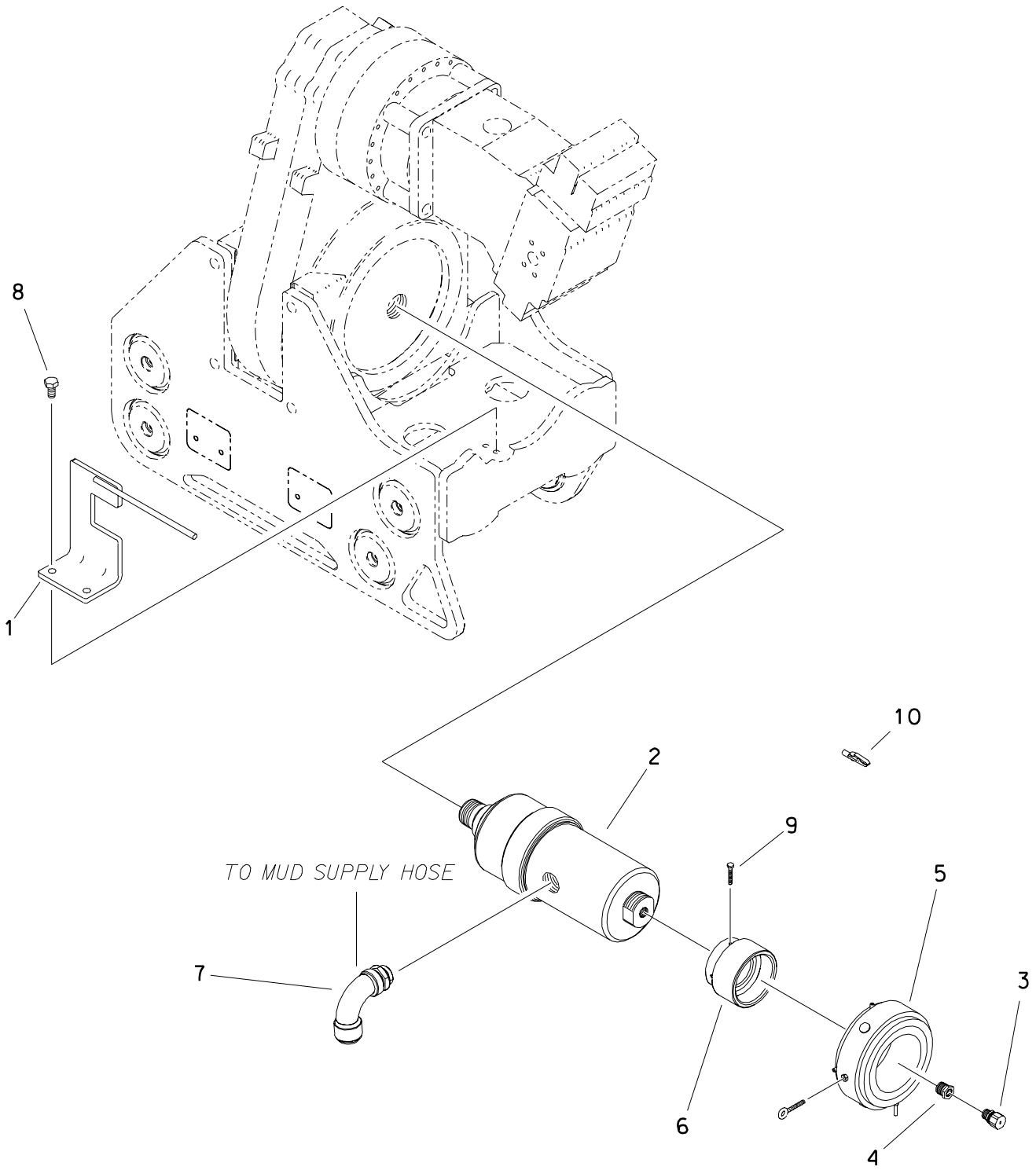
NOT SHOWN:

191-158	1	DRILLING FLUID TEST KIT
259-487	1	SHEAROMETER

FOOTNOTES:

NOTE:

WIRELINER KIT

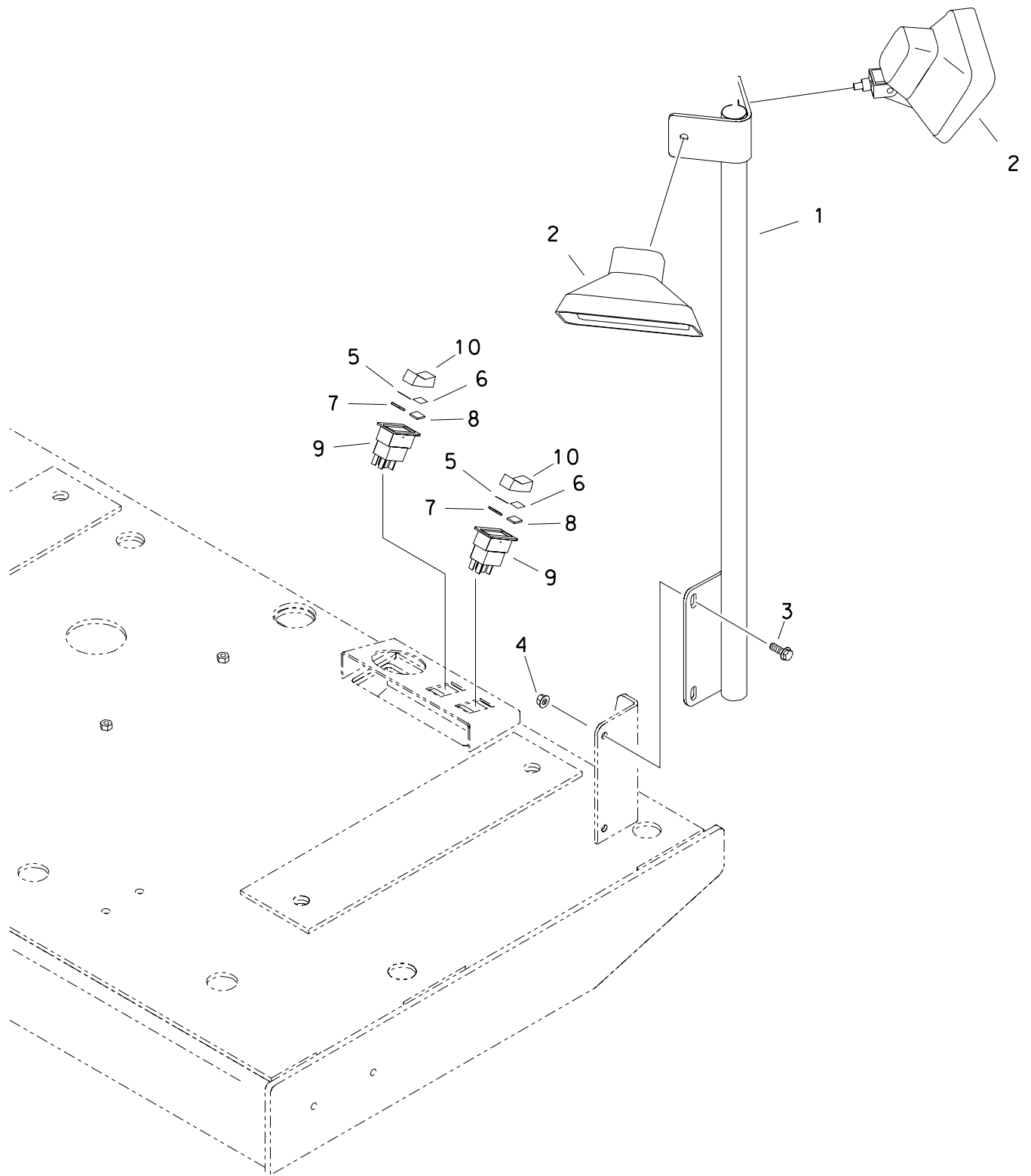


WIRELINE KIT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	101-059	-	WIRELINE KIT REAR ENTRY	
1.	308-450	1	TORQUE BRACKET	
2.	149-592	1	WATER SWIVEL (WIRELINE)	
	190-821	2	SEAL KIT	
3.	358-855	1	PACK-OFF FITTING (.125 - .187)	
4.	115-156	1	REDUCER (08N-06NF)	
5.	214-548	1	COLLECTOR RING	
6.	350-630	1	COIL MOUNT	
7.	153-150	1	CONNECTOR (24S-32J90)	
8.	106-559	2	SCREW (M12-1.75 X 25mm)	
9.	105-688	3	SCREW (M6-1.00 X 35mm)	
10.	105-693	1	ALLIGATOR CLIP .312" X 2.343"	

FOOTNOTES

WORK LIGHTS
BEGINS WITH S/N: 2W0856



WORK LIGHTS

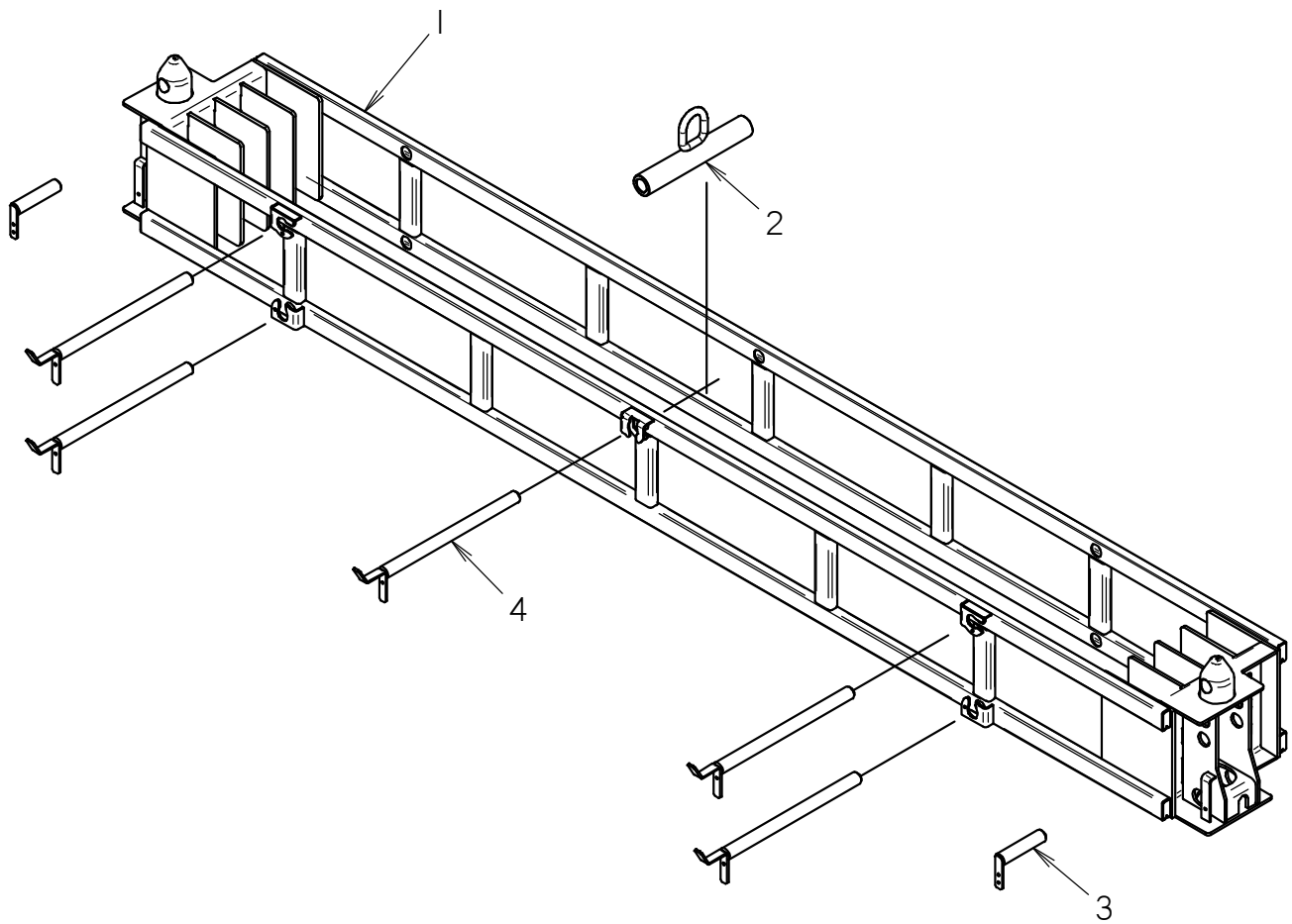
BEGINS WITH S/N: 2W0856

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	305-924	1	SUPPORT, WORK LIGHT	
2.	217-057	2	WORKING LIGHT - CLEAR	
3.	106-991	2	FLG LK SCREW (M8-1.25 X 20MM)	
4.	106-386	2	FLG LOCKNUT (M8-1.25)	
5.	217-136	2	ICON (WHT) ON-START	
6.	217-137	2	ICON (WHT) OFF-STOP	
7.	217-156	2	DIFFUSION LENS (GREEN)	
8.	217-158	2	DIFFUSION LENS (WHITE)	
9.	217-918	2	ROCKER SW (DPDT) ON-ON	
10.	217-925	2	ROCKER SWITCH (ACTUATOR)	

FOOTNOTES

PIPE BOX

JT100



PIPE BOX

JT100

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	303-941		PIPE BOX ASSY	INCLUDES REF NO.'S 1, 3 & 4
1	369-694	1	PIPE BOX	
2	348-091	1	PIPE BOX LIFT MOUNT	
3	303-943	2	PIN	
4	303-942	5	PIN	

NOT SHOWN:

FOOTNOTES:

NOTE:

MISCELLANEOUS

SAE Bolt and Nut Torque Value Chart

Grade 5: UNC or UNF Thread

Size	Hex nut, or bolt tapped into hex nut, or d&t hole		Hex top deformed locknut		Flange nut, locknut, or bolt tapped into flange nut or d&t* hole	
	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m
1/4	12	16	8	11	20	27
5/16	25	34	15	20	45	60
3/8	40	54	25	34	75	100
7/16	65	90	40	55	125	170
1/2	100	135	60	80	190	260
9/16	150	200	90	125	270	370
5/8	200	270	120	165	370	500
3/4	350	475	210	285	650	880
7/8	560	760	340	460	1250	1425
1	840	1140	500	680	1580	2145
1-1/8	1030	1400	320	840	1950	3645
1-1/4	1460	1980	880	1195	2760	3475

Grade 8: UNC or UNF Thread

Size	Hex nut, or bolt tapped into hex nut, or d&t hole		Hex top deformed locknut		Flange nut, locknut, or bolt tapped into flange nut or d&t* hole	
	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m
1/4	14	19	10	14	24	33
5/16	30	40	18	25	50	70
3/8	55	73	35	50	90	125
7/16	85	115	50	70	140	190
1/2	130	175	80	110	220	300
9/16	190	260	110	150	310	420
5/8	260	355	160	245	430	585
3/4	450	610	270	365	750	1015
7/8	730	990	440	600	1210	1640
1	1090	1480	650	880	1320	2465
1-1/8	1550	2100	930	1260	2580	3500
1-1/4	2180	2955	1310	1780	3640	4935

*drilled and tapped

Metric Bolt and Cap Screw Torque Values

Size	Class 4.8				Class 8.8 and 9.8				Class 10.9				Class 12.9			
	Lubricated		Dry		Lubricated		Dry		Lubricated		Dry		Lubricated		Dry	
	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	225	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1600	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

Do not use these values if a different torque value or tightening procedure is given for specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class fasteners.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to strength of original.

Make sure fastener threads are clean and that the threads are properly started. This will prevent them from cross threading or galling when tightened.

Tighten plastic insert or crimped type steel locknuts to approximately 50% of dry torque indicated on chart. Apply torque to the nut - not the bolt head. Tighten toothed or serrated type locknuts to full torque value.

LUBRICATED means coated with lubricant. DRY means plain or zinc plated without any type of lubricant.

Hydraulic Cylinder Bolt Torque Chart

Bolt Size (inch)	Bolt Part No.	Cylinder Repair Kit Part No.	Torque (ft•lb)	Torque (N•m)
1/2	106-096	190-165	90-100	120-135
5/8	106-097	190-166 & 190-169	180-200	245-270
3/4	106-098	190-167 & 190-170	290-325	395-440
7/8	106-122	190-172 & 190-174	410-640	550-625
1	106-145	190-175 & 190-189	630-700	855-950
1-1/8	106-146	190-177	770-850	1045-1170

As a general rule:

- 1/2-inch bolts are used in cylinders with 1-inch rods
- 5/8-inch bolts are used in cylinders with 1 1/4-inch rods
- 3/4-inch bolts are used in cylinders with 1 1/2-inch rods
- 7/8-inch bolts are used in cylinders with 1 3/4-inch rods
- 1-inch bolts are used in cylinders with 2-inch rods (one with 1 3/4-inch)
- 1-1/8-inch bolts are used in cylinders with 2-1/4-inch rods

IMPORTANT: Do not reuse cylinder piston bolts when rebuilding a hydraulic cylinder. Each cylinder repair kit contains a new bolt. Use it. Lubricate lightly and torque to value shown on chart.

SAE & ORS Hydraulic Fitting Replacement O-Ring Chart

Fraction Size	Dash Size	SAE (Port Seal O-Ring)		ORS (Face Seal O-Ring)	
		Thread Size	O-Ring P/N	Thread Size	O-Ring P/N
1/16	1	NA	NA	NA	NA
1/8	2	5/16 - 24	NA	NA	NA
3/16	3	3/8 - 24	NA	NA	NA
1/4	4	7/16 - 20	155-760	9/16 - 18	157-037
5/16	5	1/2 - 20	NA	NA	NA
3/8	6	9/16 - 18	155-705	11/16 - 16	157-038
1/2	8	3/4 - 16	155-706	13/16 - 16	157-039
5/8	10	7/8 - 14	155-707	1 - 14	157-040
3/4	12	1-1/16 - 12	155-709	1-3/16 - 12	157-017
7/8	14	1-3/16 - 12	155-747	NA	NA
1	16	1-5/16 - 12	155-748	1-7/16 - 12	155-714
1-1/4	20	1-5/8 - 12	155-702	1-11/16 - 12	NA
1-1/2	24	1-7/8 - 12	157-001	2 - 12	NA
2	32	2-1/2 - 12	NA	NA	NA
2-1/2	40	3 - 12	NA	NA	NA
3	48	3-1/2 - 12	NA	NA	NA

Thread size indicates the diameter of the threaded area in fractions of an inch and number of threads per inch.

NA = not a current CMW part numbered o-ring, or dash size does not occur in current CMW applications

SAE = straight thread fitting that seals by sandwiching a hard o-ring between a shoulder on the male part and an angular surface at the mouth of the female port.

ORS = o-ring face seal; a type of fitting that seals by compressing a hard, captive o-ring between two flat parallel faces, one grooved for the o-ring and the other plain to act as the sealing surface

JT8020 Tier 3

Related Publications

Component	Ass'y	P/N
Model:		
JT8020 TIER 3 Parts Manual		053-1053
JT8020 TIER 3 Operators Manual		053-1099
JT8020 TIER 3 Repair Guide (Service Manual)		055-064
JT8020 TIER 3 Technical Supplement		053-1094
JT8020 TIER 3 Special Tools Guide		052-901
Engine:		
Deutz Operators Manual - TCD2013L062V	194-892	053-1093
Deutz Problem Diagnosis Guide		050-555
Deutz Sales & Service Directory		050-556

Filters

Engine:		
Air Filter Parts Ass'y		194-672
Element (primary)		500-1086
Element (safety)		500-1087
Oil Filter Element (spin-on) - Deutz		500-1082
Fuel Filter Element (pre-filter, cartridge) - Deutz		500-1083
Element (primary, spin-on) - Deutz		500-1084
Hydraulic:		
Oil Filter Element (cartridge), Pall (HC9104FKS8H) - Charge		149-354
Element (1-3/8-UNF, spin-on)		159-074
Element (1-1/2-UNF, spin-on, Replacement)		159-079
Element (1-1/2-UNF, spin-on, Break-In)		149-840
Oil Strainer (2-1/2-UN-20SF)		159-432
Water {H2O}:		
Water Strainer (2.250" x 7.0") - Y-Strainer		159-239
Strainer (4.000" x 9.0") - Y-Strainer		159-490

Optional Kits

O-ring Repair Kit - FLG, ORS & SAE (15 different O-rings)	190-051
O-ring Repair Kit - Field Service (46 different O-rings)	190-052



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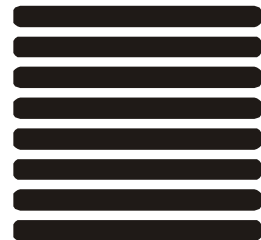
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