

Ditch Witch[®]

RT70


Hydrostatic

ISSUE NO. 04PL-08/05

For Replacement Copy Order **P/N 053-088**

This manual contains information concerning the following models:
RT70H Tractor

Copyright 2001, 2002, 2005 by The Charles Machine Works, Inc.

 **Ditch Witch**, Ditch Witch, CMW, AutoCrowd, Modularmatic, Jet Trac, Roto Witch, Subsite, Fluid Miser, Perma-Soil, Power Pipe, Super Witch, Super Witch II, Pierce Arrow, The Underground, and The Underground Authority Worldwide are registered trademarks of The Charles Machine Works, Inc.

ID0134968

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.

SECTION: DW WARRANTY

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

- Wearable parts are warranted only for defects in material or workmanship. Wearable parts include, but are not limited to, digging teeth, digging chains, sprockets, backhoe buckets, plow blades, drilling pipe, drilling bits, backreamers, and swivels.
- 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 it’ s 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.

DW WARRANTY Policy

1 (2)

January, 2005

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.

CONTENTS

Decals

Decal Location – RT70 8,11

Engine Components

Cold Start Kit 24,25
Engine {70HP} 14,15
Engine Service 16,17
Muffler & Air Filter 20,21
Radiator/Cooler 22,23
Rear Engine Support 18,19

Power Train

Axle – Axle Housing Steerable 46,47
Axle - Differential Steerable/Rigid 48,49
Axle – Diff Lock Steerable/Rigid 44,45
Axle – Double Joint Steerable 54,55
Axle – Gear/Pinion Steerable/Rigid 42,43
Axle – Housing Rigid 36,37
Axle - Potentiometer Steerable 58,59
Axle – Reduction Gear Rigid 38,39
Axle – Reduction Gear Steerable 52,53
Axle – Steering Cyl Steerable 56,57
Axle – Wheel Hub Rigid 40,41
Axle - Wheel Hub Steerable 50,51
Brake Calipers 62,63
Differentials 34,35
Gnd Drive Trans Mt 28,29
Hydrostatic Drive Line 60,61
Manual Shift Transmission 30,33
Park Brake 66,67
Service Brake System 64,65
Tire & Wheel (31 x 15.5-15 E10TT) ... 68,69
Tire & Wheel (35 x 19.00-16.1) 70,71

Frame Components

Backfill Blade Assembly 74,75
BFB Cylinder Guard 76,77
Battery Hold Down - **After** 102,103
Battery Hold Down - **Before** 100,101
Battery Hold Down - **Begins** 104,105
Cab Kit 110,115
Cab Heater Ass'y 116,117
Canopy & Light Kit 118,119
Counterweight, Front 80,81
Counterweight/Grille - **Ends** 78,79
Engine Enclosure 82,83
Fenders/Covers 88,89
Fuel Tank 90,91
Hyd Reservoir - **After** 94,95
Hyd Reservoir - **Ends** 92,93

Frame Components Con't

Seat Platform 96,97
Seat Swivel & Base 98,99
Sound Blankets 120,121
Tilt Steering 84,87
TDM Module 124,125
Trench Depth Meter/Odometer Mt. . 122,123
4-Post ROPS - **Begins** 108,109
4-Post ROPS - **Ends** 106,107

Control Components

Attachment Control Handle 138,139
BFB Control 128,129
Cruise Control 140,141
Gnd Speed Direction Foot Control . 132,133
Gnd Speed Direction Hand Control 130,131
Hand Throttle 136,137
Hydrostatic Shift 134,135
Rear Steer Control 142,143

Hydraulics

Auxiliary Hydraulics 170,171
Auxiliary Hydraulics - **Begins** 172,173
BFB Lift Hydraulics 152,153
BFB Swing Hydraulics 152,153
BFB Tilt Hydraulics 152,153
BFB Valve 154,155
Hyd Control Valve - 3-sp 184,185
Hydraulic Diagram 150,151
Hydraulic Cyl (2x1x3.38) 186,187
Hydraulic Cylinder (2x1.25x8) 188,189
Hydraulic Cylinder (3x1.75x8) 190,191
Hydraulic Filter 176,177
Hydraulic Schematic 146,149
Hydrostatic Pump Attachment Hyd. 174,175
Motor Shift/ Diff. Lock Hydraulics ... 162,163
Motor Shift/Diff. Lock Hyd - **Begins** .. 164,165
No Frame Tilt/No Rear Str Option .. 182,183
Power Steering Valve Hydraulics ... 178,179
Pump Drive Hydraulics 156,157
Pump Drive Hydraulics - **Begins** 158,159
Pump Hydrostatic Assembly 160,161
Rear Steering Hydraulics 180,181
Remote Crowd Hydraulics - **Begins**.. 166,167
Remote Crowd Hydraulics - **Begins**.. 168,169

Continue

CONTENTS

Electrical

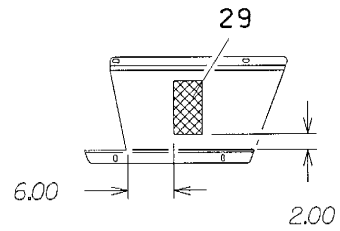
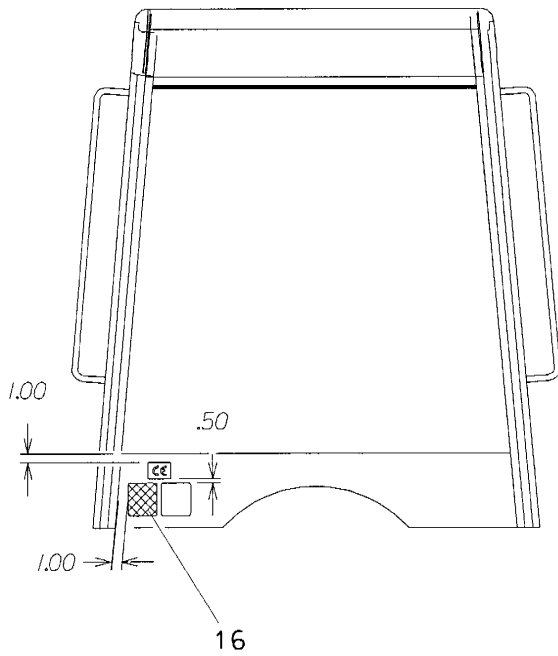
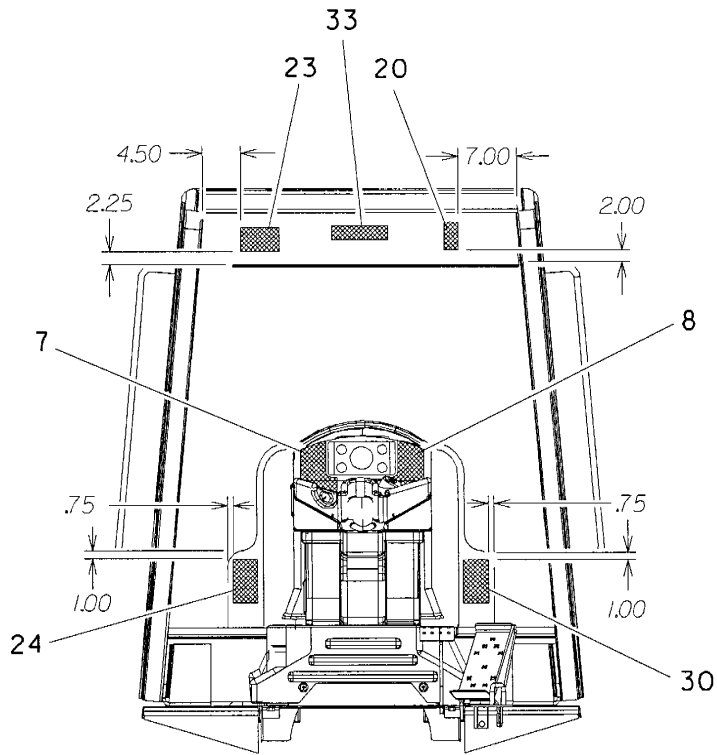
Backup Alarm Kit	224,225
Elect Diag - Backup Alarm	222,223
Elect Diag - Cruise Control	210,211
Elect. Diag – Coordinated Steer	212,213
Elect Diag - Frame, Hydrostat.....	202,205
Elect Diag - Frame Tilt harness	216,217
Elect Diag - Hydraulic Pump	208,209
Elect Diag - Light kit harness	218,219
Elcec Diag - Rear Str/Frame Tilt....	214,215
Elect Diag - Seat	206,207
Elect Diag - Wiper/Washer	220,221
Electrical Schematic	194,201

Miscellaneous

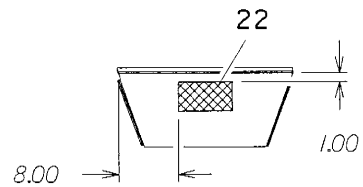
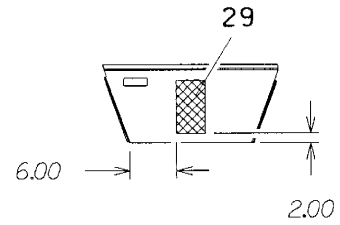
Bolt/Nut Torque Chart.....	228,229
Dash O-Ring/Thread Chart	231
Filters	230
Optional Kits	230
Parts Manual Change Request	232
Related Publications	230
Warranty Registration	233,234

DECALS

DECAL LOCATION RT70

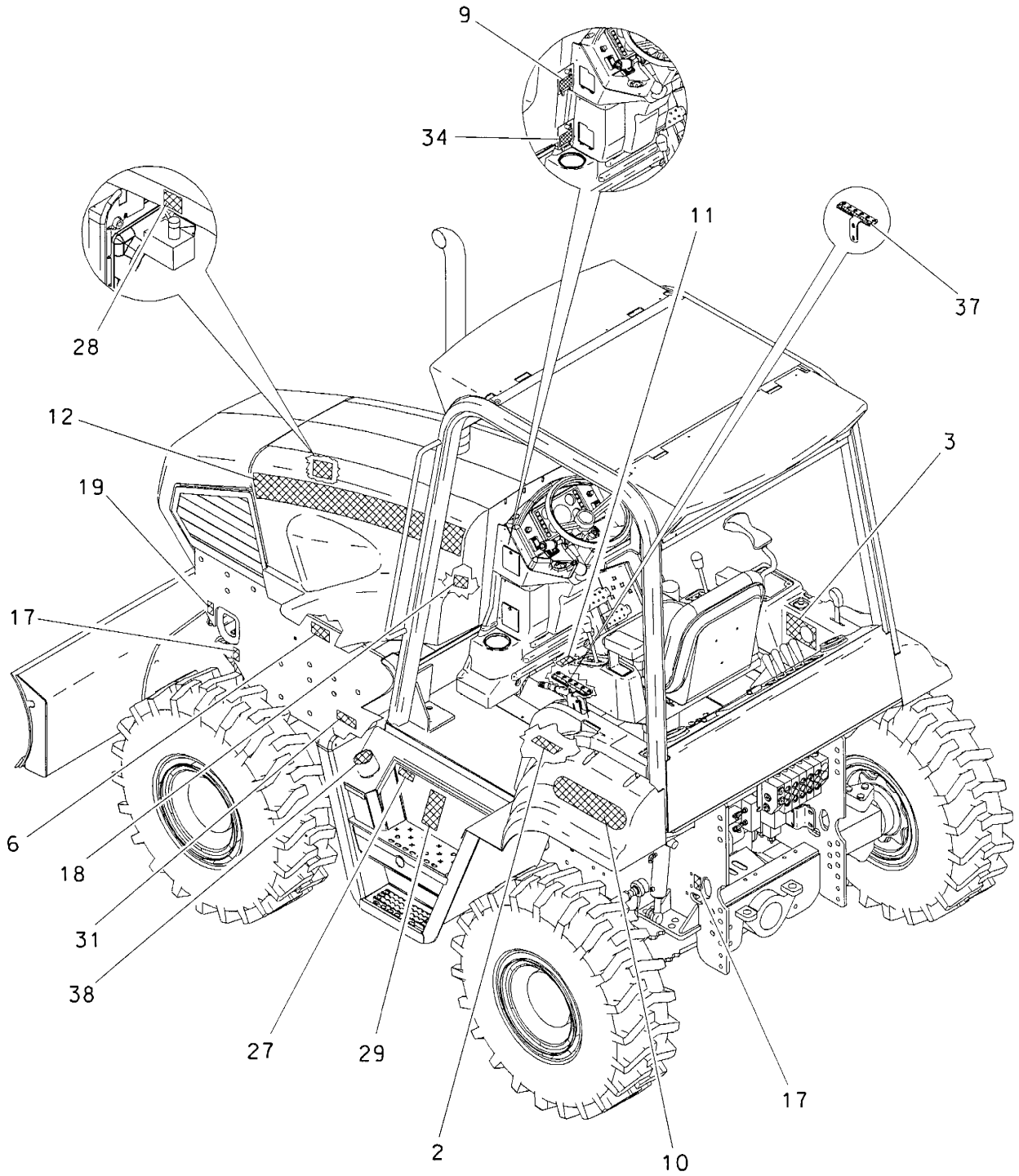


BATTERY DOOR

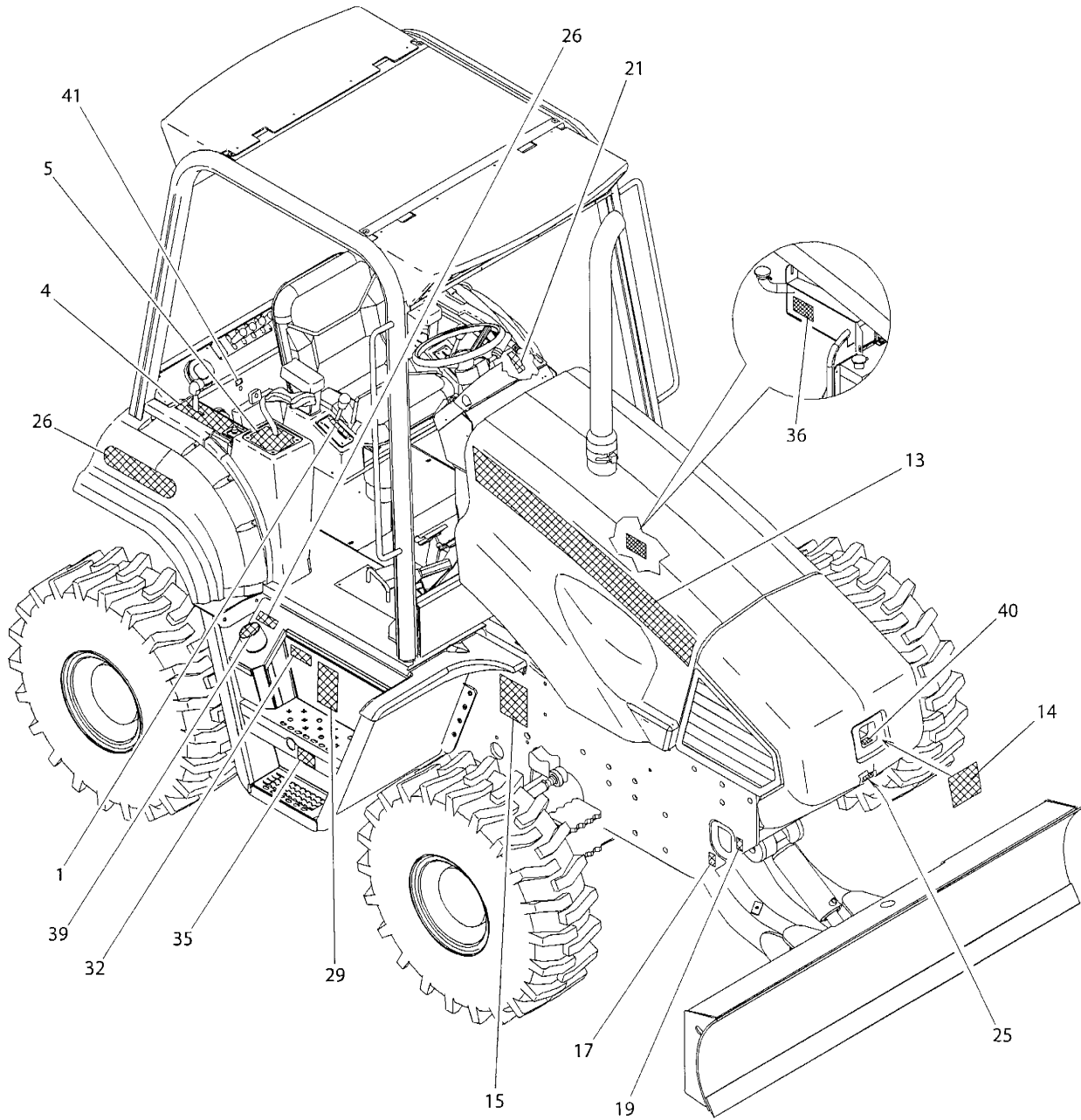


BATTERY DOOR
ROTATED 180°

DECAL LOCATION RT70



DECAL LOCATION RT70



DECAL LOCATION RT70

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	275-835		DECAL KIT - RT70H	
	275-880		DECAL KIT - RT70M	
1	273-092	1	GROUND DRIVE CONTROL	
2	273-263	1	1 AND 2 SHIFT	RT70H
	273-213	1	MOBILE-WORK	RT70M
3	273-094	1	AXLE LOCK/AUXILIARY	
4	273-095	1	STEER / TILT / THROTTLE	
5	273-100	1	BFB FUNCTION	
6	275-400	1	NOTICE OIL LEVEL	
7	273-102	1	REEL CARRIER/COLD START	RT70H
	273-262	1	REEL CARRIER/COLD START	RT70M
8	273-103	1	HORN / ROTOWITCH / IGNITION	
9	273-104	1	FUSE PANEL	
10	273-108	2	DITCH WITCH-ID	
11	273-109	1	TEST PORTS	RT70H
12	273-110	1	LEFT RT70 MODEL IDENTIFIER	
13	273-113	1	RIGHT RT70 MODEL IDENTIFIER	
14	273-246	1	RIGID LOGO PLACARD	
15	273-196	1	LUBRICATION CHART	
16	274-291	1	SOUND POWER 10	SEE FOOTNOTE 1
17	274-318	4	TIE DOWN LOCATION	
18	274-375	1	MASTER DISCONNECT SWITCH	
19	274-442	2	LIFT LOCATION	
20	274-724	1	ONE CALL NOTIFICATION	
21	275-361	1	PARKING BRAKE	
22	275-033	1	NOTICE ELECTRICAL SYSTEM	
23	275-048	1	IMPORTANT SAFETY RULES	
24	275-070	1	WARNING RUNAWAY	
25	700-064	1	POWER BEYOND/RETURN/PRESSURE	
26	275-120	1	RESERVOIR (THF)	
27	275-148	1	FUEL TANK (DIESEL)	
28	273-138	1	NOTICE COOLANT	
29	275-185	2	WARNING SINGLE OPERATOR	
30	275-303	1	WARNING ROLLOVER	
31	275-497	1	OIL DRAIN-ID	
32	275-203	1	BATTERY	
33	273-197	1	OVERHEAD CONSOLE	SEE FOOTNOTE 2
34	273-239	1	RELAY PANEL	
35	274-198	1	NOTICE OIL LEVEL	
36	273-146	1	NOTICE ADD COOLANT	
37	273-252	1	TEST PORTS	RT70H
38	700-062	1	DIESEL FUEL CAP	
39	700-063	1	HYDRAULIC OIL CAP	
40	273-292	1	FRAME NOSE CASTING WEIGHT	
41	273-458	1	EDT	SEE FOOTNOTE 1

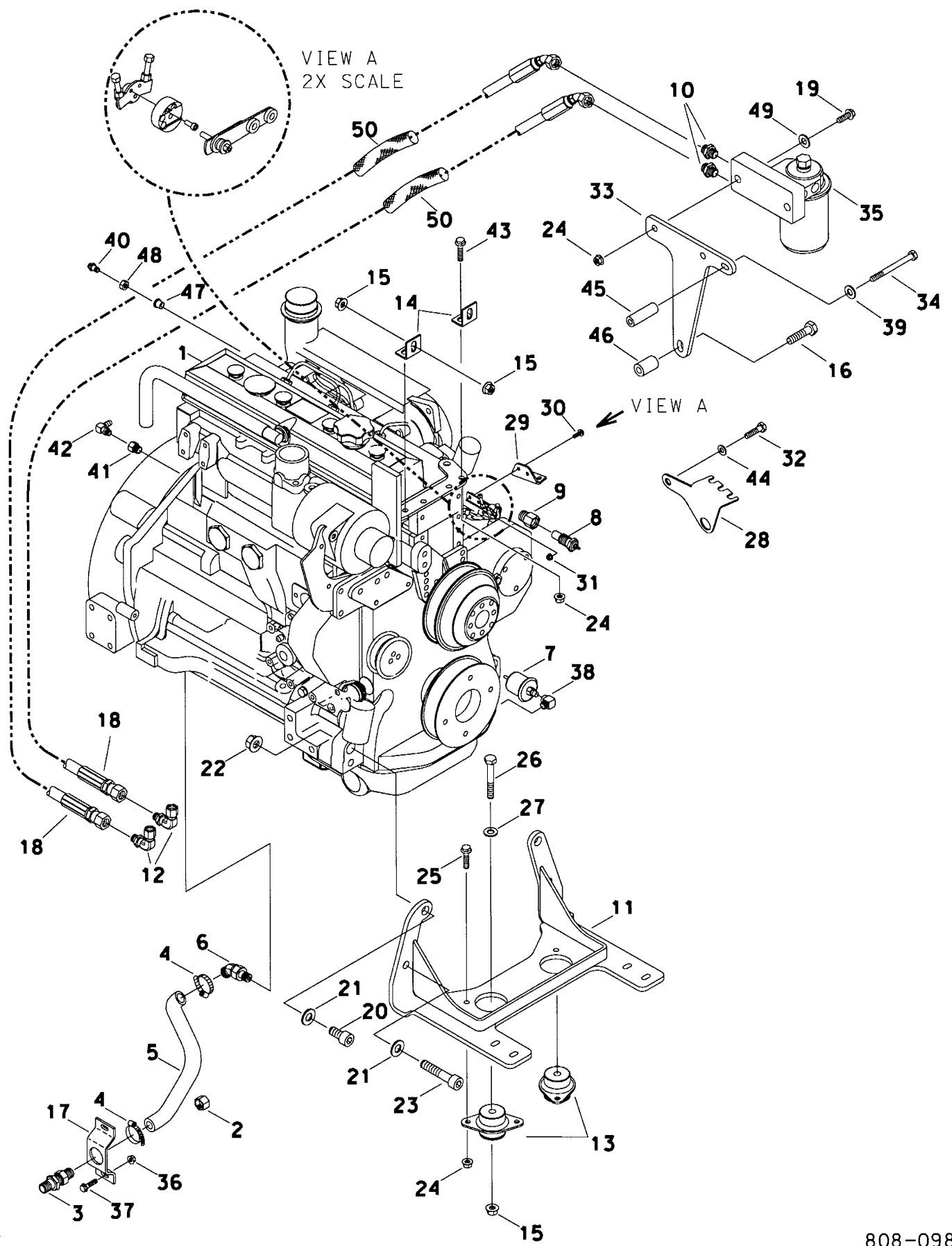
FOOTNOTES

1. NOT PART OF KIT.
2. 273-197 NOT PART OF KIT. PROVIDED IN CANOPY AND LIGHT KIT 600-382.

NOTES:

ENGINE COMPONENTS

JOHN DEERE ENGINE



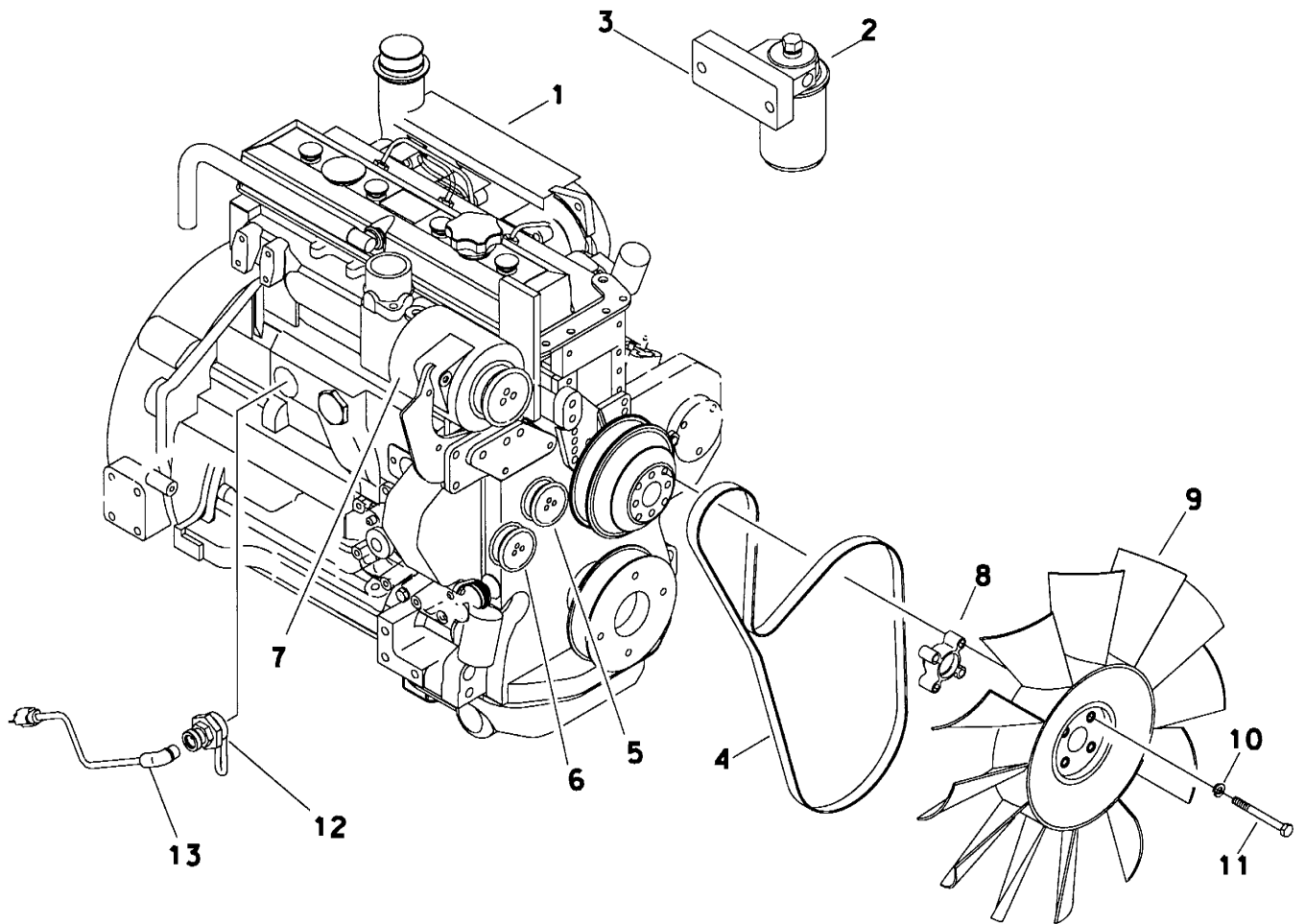
E

808-098

JOHN DEERE ENGINE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-103	1	ENGINE - DEERE DIESEL	
2.	154-324	1	CAP (100F)	
3.	149-624	1	BK S/O COUPLER (100-10H)	
4.	110-217	2	WORM CLAMP (7/16" TO 1")	
5.	116-044	AR	BULK HOSE (5/8", SOLD PER 1")	USE 1@ 18"
6.	153-160	1	S/O COUPER (18M-10H45)	
7.	215-183	1	SENDER, OIL PRESSURE HD	
8.	217-565	1	TEMPERATURE SENDER 100-280F	
9.	217-247	1	WATER TEMPERATURE ADAPTER	
10.	153-970	2	FITTING (M22X1.50-10045)	
11.	337-369	1	FRONT ENGINE BRACKET	
12.	154-315	2	UNION (100-100FX90)	
13.	116-946	2	ENGINE SHOCK MOUNT	POSITION METAL FACE TO FRAME BOTTOM
14.	307-553	2	MOUNT TAB	
15.	106-709	6	FLG LK NUT (M12-1.75)	
16.	106-527	1	SCREW (M14-2.00 X 50mm)	
17.	310-599	1	MOUNT	
18.	515-456	2	HOSE (100FX45-38"-3000)	
19.	107-002	2	FLG LK SCREW (M10-1.50 X 30mm)	
20.	106-643	2	SCREW (M16-2.00 X 25mm, SOC)	
21.	106-398	4	WASHER (M16, HARDENED)	
22.	106-442	2	FLG LOCKNUT (M16-2.00, PRV TRQ)	
23.	107-723	2	SCREW (M16-2.00 X 70mm, SOC)	
24.	106-266	8	FLG NUT (M10-1.5)	
25.	107-001	4	FLG LK SCREW (M10-1.50 X 25mm)	
26.	106-336	2	SCREW (M12-1.75 X 90mm)	
27.	105-475	2	WASHER (1/2")	
28.	307-068	1	CABLE BRACKET	
29.	307-069	1	LEVER BRACKET	
30.	106-640	2	SCREW (M6-1.00 X 20mm, BUT SOC)	
31.	106-385	2	FLG LOCKNUT (M6-1.00)	
32.	106-118	1	SCREW (M14-2.0 X 25mm)	
33.	315-534	1	FILTER MOUNT	
34.	106-124	1	SCREW (M10-1.50 X 110mm)	
35.	194-815	-	OIL FILTER ELEMENT	
36.	106-386	2	FLG LOCKNUT (M8-1.25)	
37.	106-989	2	FLG LK SCREW (M8-1.25 X 35mm)	
38.	156-241	1	STREET ELBOW (02N-02NF90)	
39.	106-396	1	WASHER (M10, HARDENED)	
40.	156-275	1	TUBE CONNECTOR (04H-05T)	
41.	114-033	1	REDUCER (M10-1.0-02NF)	
42.	155-241	1	S/O COUPLER (02N-05H90)	
43.	106-383	2	FLG LK SCREW (M10-1.50 X 30mm)	
44.	105-990	1	LOCK WASHER (9/16")	
45.	178-358	1	SLEEVE	
46.	184-427	1	BOSS	
47.	156-276	1	FERRULE (05T)	
48.	156-277	1	COMPRESSION NUT (05T)	
49.	106-598	1	WASHER (9/16", HARDENED)	
50.	117-214	2	ABRASION SLEEVE (1.25" X 40")	

JOHN DEERE ENGINE SERVICE



JOHN DEERE ENGINE SERVICE

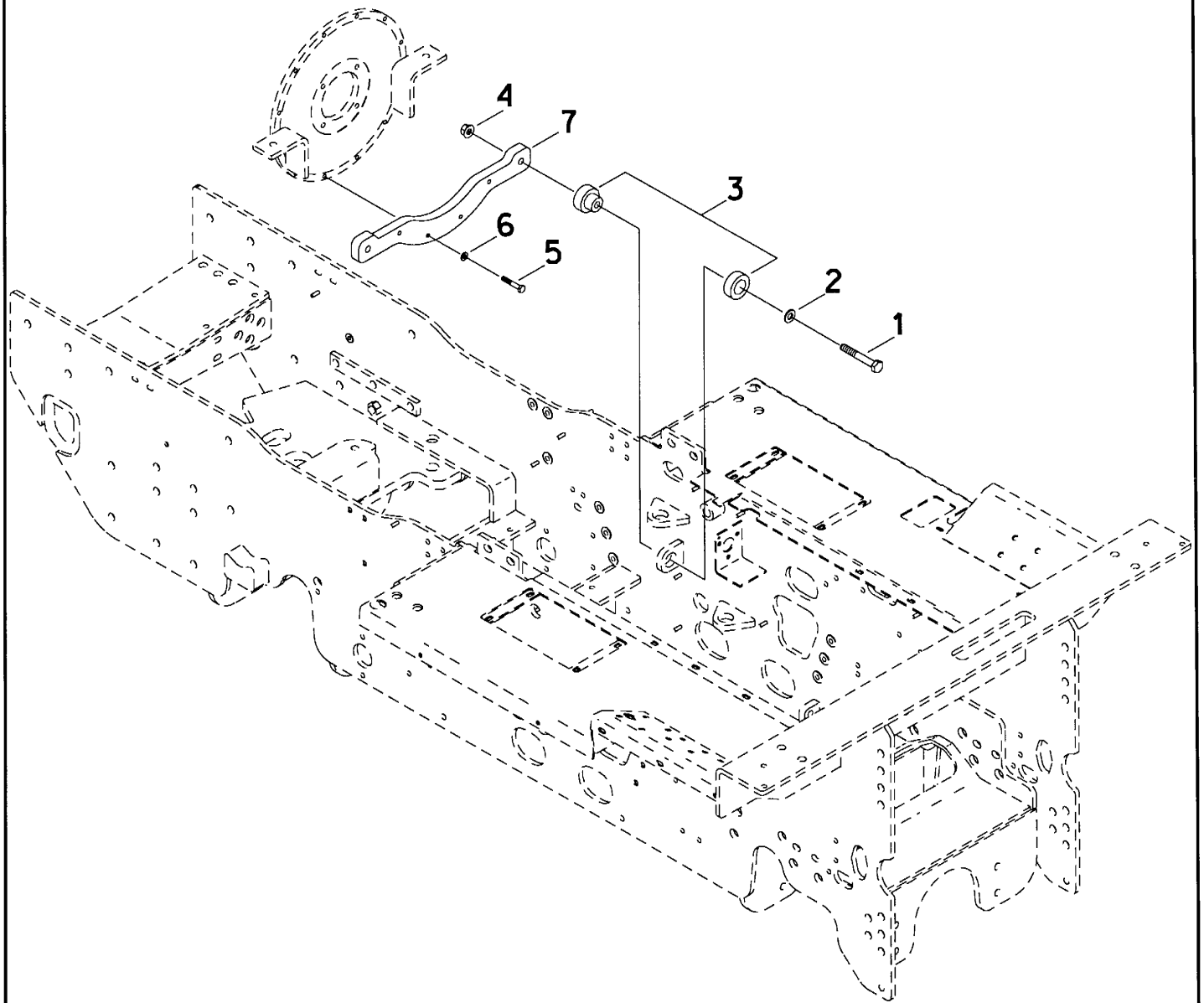
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-103	-	ENGINE - DEERE DIESEL	
2.	194-815	1	OIL FILTER ELEMENT	
3.	153-642	1	FILTER HEAD GASKET	
4.	170-371	1	FAN BELT (DEERE)	
5.	499-318	1	BELT TENSIONER	
6.	170-372	1	IDLER PULLEY	
7.	217-450	1	ALTERNATOR 65 AMP (REMAN)	
8.	194-118	1	FAN SPACER	
9.	194-112	1	FAN (21.80")	
10.	106-090	4	LOCK WASHER (M10)	
11.	106-564	4	SCREW (M10-1.50 X 100mm)	
12.	194-399	1	BLOCK HEATER	OPTION ONLY - REQUIRES 214-980.
13.	214-980	1	CORD ASSEMBLY (110V)	USED ON 194-399

NOT SHOWN:

054-049	1	DEERE "4045/6068" OP./MAINT. MNL.
053-059	1	DEERE "4045DF/TF" PARTS MANUAL
194-253	1	FUEL LIFT PUMP
194-254	1	STARTER
153-641	1	STARTER GASKET
194-255	1	FUEL INJECTION PUMP (194-103)
194-258	1	INJECTOR NOZZLE
194-823	1	THERMOSTAT
165-883	1	GASKET, THERMOSTAT
194-832	1	WATER PUMP (ALUMINUM)
194-432	1	WATER PUMP (CAST IRON)
194-433	1	WATER PUMP INSERT PLATE KIT
168-617	1	GASKET, WATER PUMP
194-816	1	FUEL FILTER ELEMENT
191-145	1	FUEL FILTER SEAL KIT
111-124	1	OIL FILLER CAP
194-831	1	DIPSTICK, ENGINE OIL
153-642	1	FILTER HEAD GASKET

FOOTNOTES

REAR ENGINE SUPPORT



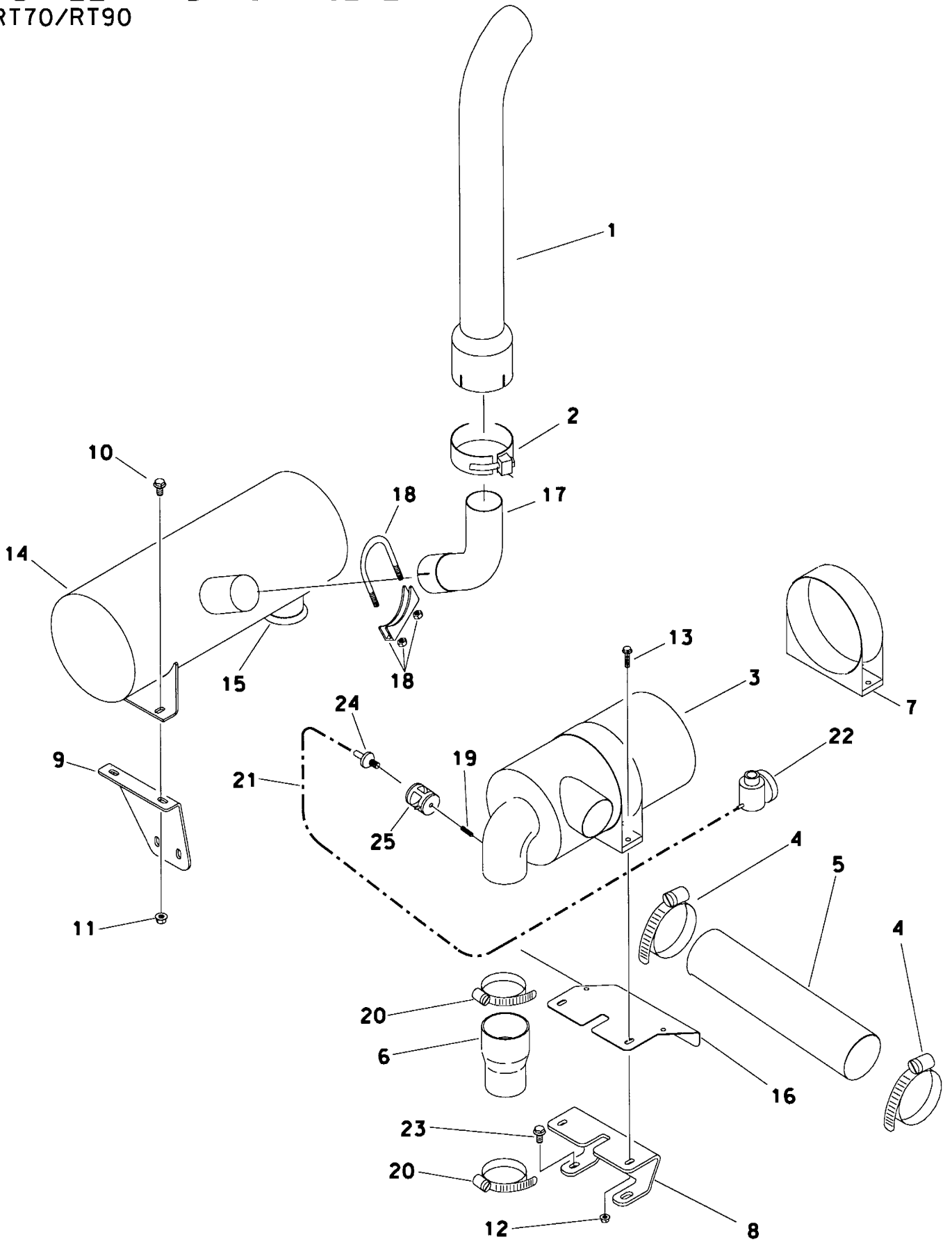
REAR ENGINE SUPPORT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-132		REAR ENGINE SUPPORT KIT	INCLUDES REF. NO'S 1 THRU 7
1.	105-386	2	BOLT (5/8-NC X 4-1/2")	
2.	105-416	2	WASHER (5/8")	
3.	116-151	2	SHOCK MOUNT	
4.	105-994	2	FLG LOCKNUT (5/8-NC)	
5.	105-839	4	SCREW (M10-1.50 X 55mm)	
6.	106-396	4	WASHER (M10, HARDENED)	
7.	313-646	1	BUMPER PLATE	

FOOTNOTES

1. REQUIRED OPTION FOR SAW ATTACHMENTS

MUFFLER AND AIR FILTER RT70/RT90



E

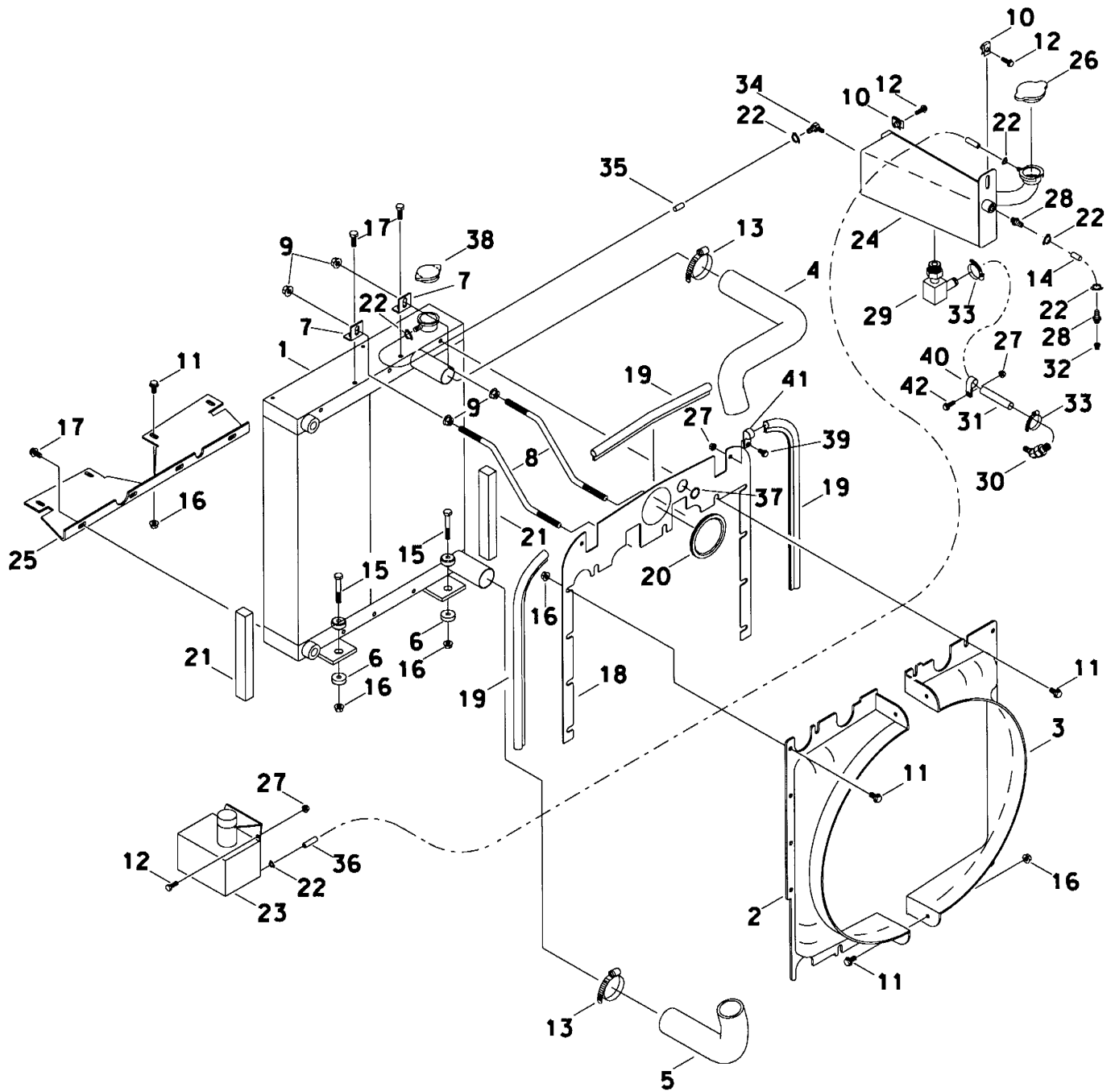
806-239

MUFFLER AND AIR FILTER RT70/RT90

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-140	1	EXHAUST STACK	
2.	194-027	1	MUFFLER CLAMP (4.143")	
3.	197-762	1	AIR FILTER	
	197-763	1	PRIMARY ELEMENT	
	197-764	1	SAFETY ELEMENT	
4.	110-367	2	WORM CLAMP (3.25" TO 4.125")	
5.	116-506	AR	BULK HOSE (3", SOLD PER 1')	USE 1@ 18" RT70, USE 1@ 20" RT90
6.	116-951	1	REDUCER (3.00" X 2.50")	
7.	362-926	1	MOUNTING CLAMP (7.170")	
8.	303-749	1	BRACKET	
9.	303-745	1	MUFFLER BRACKET	
10.	106-999	6	FLG LK SCREW (M10-1.50 X 20mm)	
11.	106-266	2	FLG NUT (M10-1.50)	
12.	106-386	2	FLG LOCKNUT (M8-1.25)	
13.	106-163	2	FLG SCREW (M8-1.25 X 30mm)	
14.	120-083	1	MUFFLER	
15.	196-195	1	LOWER CLAMP (HEADER PIPE)	
16.	307-906	1	HEAT SHIELD	
17.	194-225	1	MUFFLER TUBE	
18.	196-341	1	MUFFLER CLAMP (2-3/4")	
19.	115-180	1	ALL THREAD (1/8-NPT)	AFTER SERIAL NO. _____
20.	110-169	2	WORM CLAMP (2.812" TO 3.750")	
21.	116-192	AR	BULK HOSE (7/64", SOLD PER 1')	BEFORE SERIAL NO. _____, USE 1@ 36"
22.	258-067	1	RESTRICTION INDICATOR (25",H2O)	BEFORE SERIAL NO. _____
23.	105-799	1	FLG LK SCREW (M10-1.50 X 25mm)	
24.	155-150	1	S/O COUPLER (O2N-O2H)	BEFORE SERIAL NO. _____
25.	194-788	1	RESTRICTION INDICATOR (25", H2O)	AFTER SERIAL NO. _____

FOOTNOTES

RADIATOR/COOLER



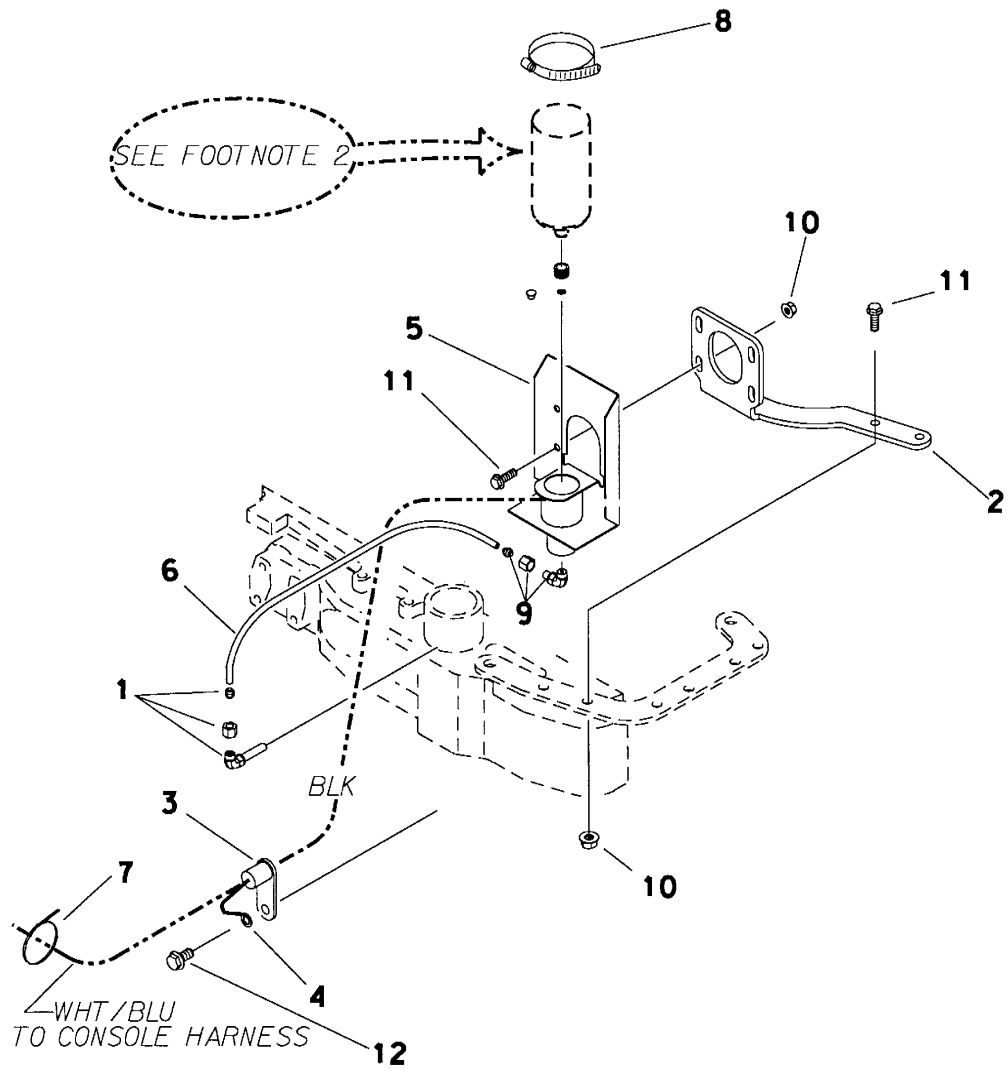
RADIATOR/COOLER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	306-459	1	RADIATOR/OIL COOLER	
2.	194-115	1	LEFT SIDE FAN SHROUD	
3.	194-114	1	RIGHT SIDE FAN SHROUD	
4.	115-059	1	UPPER COOLANT HOSE	
5.	115-058	1	LOWER COOLANT HOSE	
6.	116-128	2	SHOCK MOUNT	
7.	307-553	2	MOUNT TAB	
8.	365-494	2	RADIATOR ROD	
9.	106-709	4	FLG LK NUT (M12-1.75)	
10.	107-135	2	CLIP NUT (M8-1.25)	
11.	107-001	16	FLG LK SCREW (M10-1.50 X 25mm)	
12.	106-992	4	FLG LK SCREW (M8-1.25 X 25mm)	
13.	110-134	4	WORM CLAMP (2.062" TO 2.750")	
14.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1 @ 24"
15.	106-998	2	FLG LK SCREW (M10-1.50 X 70mm)	
16.	106-266	16	FLG NUT (M10-1.50)	
17.	106-999	6	FLG LK SCREW (M10-1.50 X 20mm)	
18.	309-283	1	AIR BARRIER	
19.	116-421	AR	BULK EDGE (1/8", SOLD PER 1')	63 1/2", SEE FOOTNOTE 3
20.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 12"
21.	116-107	AR	BULK STRIP (1.2", SOLD PER 1")	USE 1 @ 11"
22.	110-249	6	WORM CLAMP (1/4" X 5/8")	
23.	364-432	1	COOLANT OVERFLOW RESERVOIR	
24.	364-562	1	PRESSURE TANK	
25.	117-339	1	AIR BARRIER	
26.	111-084	1	RADIATOR CAP (16 PSI)	
27.	106-386	5	FLG LOCKNUT (M8-1.25)	
28.	155-162	2	S/O COUPLER (04N-05H)	
29.	514-285	1	S/O COUPLER (08N-10H90)	
30.	153-160	1	S/O COUPLER (18M-10H45)	SEE FOOTNOTE 1
31.	116-750	AR	BULK HOSE (5/8", SOLD PER 1")	USE 1 @ 22.5"
32.	115-286	1	REDUCER (08N-1/4-NF)	SEE FOOTNOTE 2
33.	110-217	2	WORM CLAMP (7/16" X 1")	
34.	155-164	1	S/O COUPLER (04N-05H90)	
35.	116-108	12	BULK HOSE (5/16", SOLD PER 1")	USE 1 @ 12"
36.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1 @ 29"
37.	502-046	1	GROMMET (3/4)	
38.	111-091	1	RADIATOR CAP	
39.	106-380	2	FLG LK SCREW (M8-1.25 X 16MM)	
40.	110-333	1	BOLT-ON CLAMP (1")	
41.	110-259	2	BOLT-ON CLAMP (.625")	
42.	106-162	1	FLG SCREW (M8-1.25 X 20MM)	

FOOTNOTES

- CONNECTS INTO ENGINE WATER PUMP
- CONNECTS INTO ENGINE CYLINDER HEAD
- REF 19 (116-421) USES THREE PIECES, TWO @ 24 1/4" & ONE @ 15".

COLD START KIT



COLD START KIT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-178		COLD START KIT	INCL REF NO.S 1-12
1.	195-843	1	INJECTOR NOZZLE (CLDSTRT)	
	156-204	-	FERRULE (O2T)	
	156-205	-	COMPRESSION NUT (O2T)	
2.	309-191	1	BRACKET	
3.	215-073	1	SENSOR SWITCH	SEE FOOTNOTE 1
4.	215-590	1	RING TERMINAL (.375")	SEE FOOTNOTE 1
5.	306-628	1	VALVE/CANISTER BRACKET	
6.	156-018	AR	BULK TUBING (1/8", SOLD PER 1")	USE 1@ 15"
7.	110-248	2	CABLE TIE (1/16" TO 1-1/4")	
8.	110-169	1	WORM CLAMP (2.812" TO 3.750")	
9.	156-272	1	TUBE CONNECTOR (O2N-O2T90, DRF)	
	156-204		FERRULE (O2T)	
	156-205		COMPRESSION NUT (O2T)	
10.	106-386	6	FLG LK NUT (M8-1.25)	
11.	106-991	6	FLG LK SCREW (M8-1.25 X 20mm)	
12.	106-654	1	FLG LK SCREW (M10-1.50 X 16mm)	

NOT SHOWN:

306-607	1	HORN BUTTON
306-608	1	BUTTON COVER

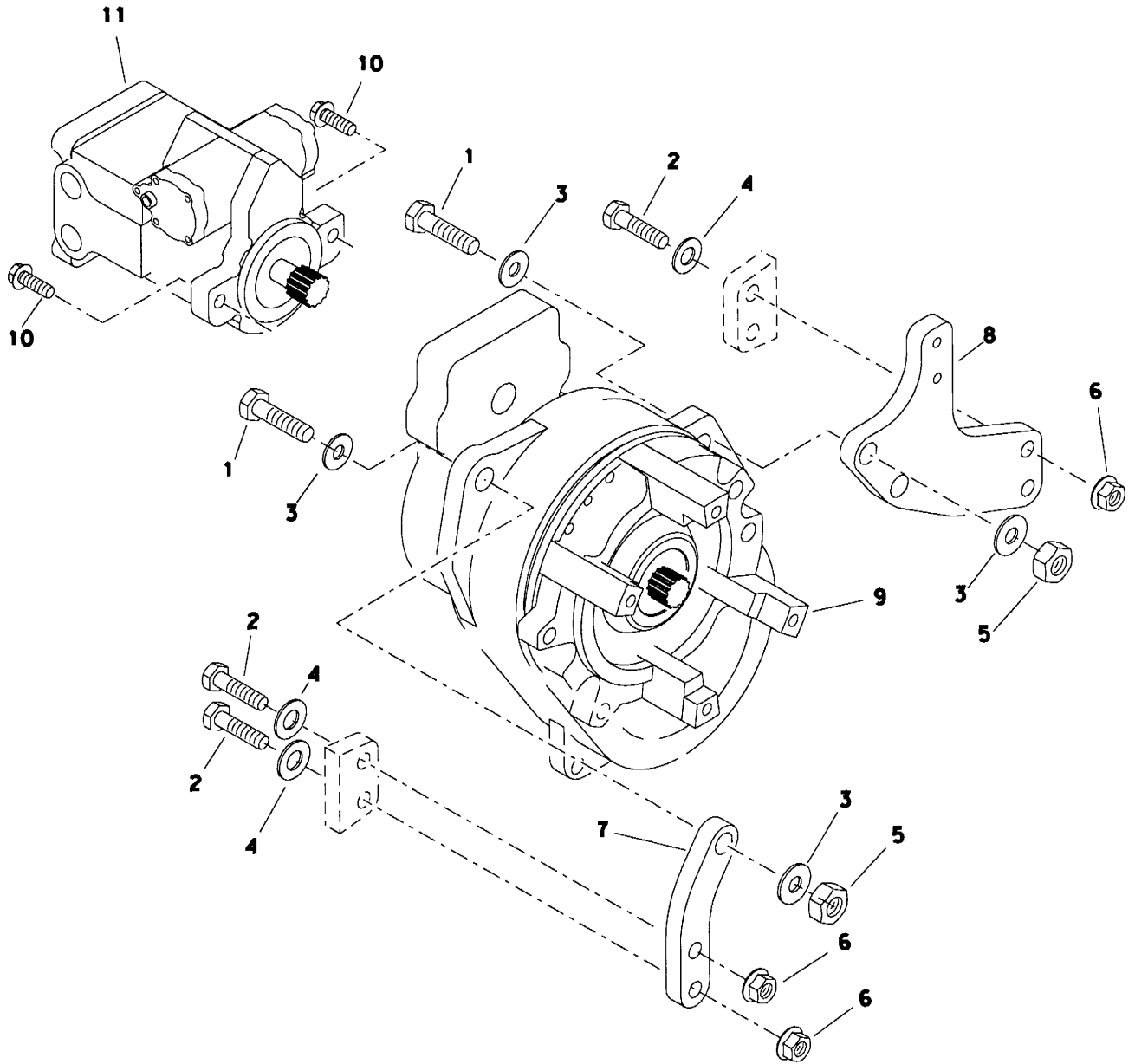
FOOTNOTES

- REF NO.'S 3 & 4 BOLT ONTO ENGINE WITH ALTERNATOR ELECTRICAL HARNESS.
- USE OF 8 OZ. ETHER CANISTER IS REQUIRED, WHICH WILL COME WITH SEALS AND FOAM.

NOTES:

POWER TRAIN

GROUND DRIVE TRANSMISSION MOUNT RT70

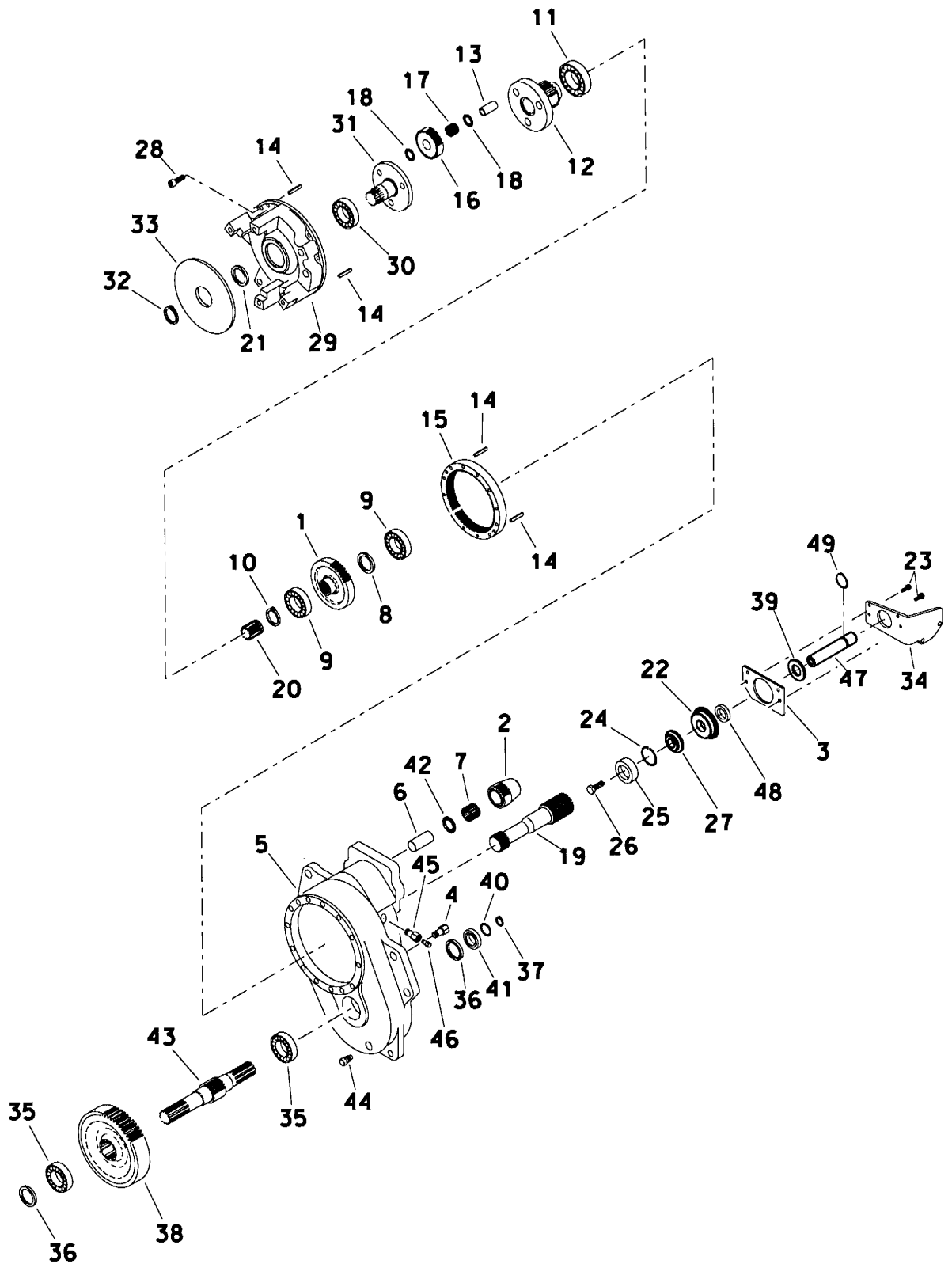


GROUND DRIVE TRANSMISSION MOUNT RT70

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-346	3	SCREW (M20-2.50 X 70mm)	
2.	106-666	4	SCREW (M16-2.00 X 65mm, 10.9)	
3.	106-399	6	WASHER (M20, HARDENED)	
4.	106-398	8	WASHER (M16, HARDENED)	
5.	106-665	3	LOCKNUT (M20-2.50, 10.9)	
6.	106-442	4	FLG LOCKNUT (M16-2.00, PRV TRQ)	
7.	306-969	1	RIGHT MOUNT BRACKET	
8.	306-938	1	LEFT MOUNT BRACKET	
9.	166-313	1	GROUND DRIVE TRANSMISSION	
10.	106-469	2	FLG SCREW (M12-1.75 X 30mm)	
11.	153-094	1	HYD MOTOR - GRD DRIVE	REFER TO PARTS PAGE "PUMP DRIVE HYDRAULICS"

FOOTNOTES

MANUAL SHIFT TRANSMISSION



MANUAL SHIFT TRANSMISSION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	166-313		GROUND DRIVE TRANS.	
1.	166-295	1	INPUT GEAR	
2.	166-294	1	INPUT PINION	
3.	331-386	1	SPACER PLATE	
4.	115-178	1	PLUG (06N, SQ FM)	
5.	164-014	1	TRANSMISSION HOUSING	
6.	167-180	1	SHAFT	
7.	126-031	1	NEEDLE BEARING (1.375")	
8.	184-215	1	SPACER	
9.	125-091	2	BALL BEARING (2.165")	
10.	115-525	1	INTERNAL SNAP RING (3.543")	
11.	125-073	1	BALL BEARING (2.362")	
12.	166-080	1	OUTPUT PINION	
13.	183-749	3	PLANET PIN	
14.	105-534	4	DOWEL PIN (.375"X.875")	
15.	165-149	1	RING GEAR	
16.	165-145	3	PLANET GEAR	
17.	126-065	3	BEARING (NEEDLE ROLLER)	
18.	126-009	6	THRUST WASHER RACE (1.000")	
19.	166-279	1	INPUT SHAFT	
20.	165-152	1	SPLINED SLEEVE	
21.	157-552	1	INTERNAL SEAL (1.969")	
22.	184-815	1	SEAL SLEEVE	
23.	106-379	4	FL LK SCREW (M6-1.00 X 20mm)	
24.	115-544	1	INTERNAL SNAP RING (1.188")	
25.	125-119	1	BALL BEARING (.393")	
26.	107-068	1	BOLT (3/8-NF x 1-1/2")	USE LOCTITE 680

FOOTNOTES

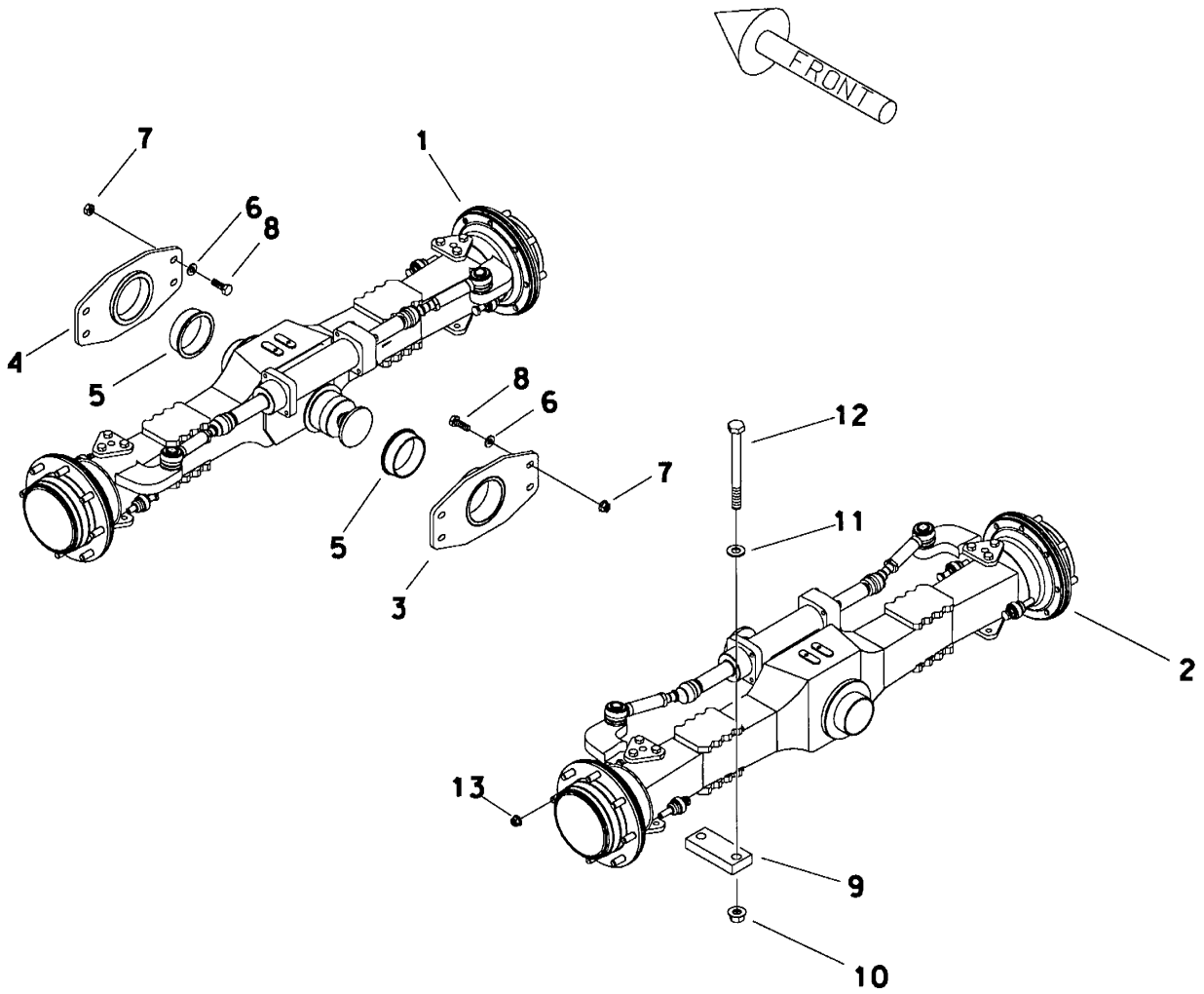
MANUAL SHIFT TRANSMISSION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
27.	184-069	1	KEEPER	
	105-115	1	JAM NUT (5/16-NF)	
28.	107-238	8	SCREW (M10-1.5 X 50mm, SOC)	
29.	166-312	1	TRANSMISSION CAP	
30.	125-040	1	BALL BEARING (1.968")	
31.	169-039	1	BRAKE OUTPUT FLANGE	
32.	115-456	1	EXTERNAL SNAP RING (1.750")	
33.	163-092	1	BRAKE DISC	
34.	307-563	1	SHIFT MOUNT	
35.	125-107	2	BALL BEARING (1.574")	
36.	157-609	2	INTERNAL SEAL	
37.	118-022	1	INTERNAL SNAP RING (3.150")	
38.	165-147	1	OUTPUT GEAR	
39.	326-060	1	WASHER (3/4")	
40.	155-795	1	O-RING (233 D70)	
41.	184-214	1	SEAL RETAINER	
42.	126-059	1	BEARING RACE (1.375")	
43.	167-181	1	OUTPUT SHAFT	
44.	115-211	1	PLUG (O8N, SQ, MAG)	
45.	115-127	1	REDUCER (O8N-O2NF)	
46.	159-003	1	AIR VENT (O2N)	
47.	183-643	1	SHIFTER SHAFT	
48.	155-878	1	INTERNAL SEAL (.750")	
49.	115-545	1	EXTERNAL SNAP RING (.75")	

FOOTNOTES

DIFFERENTIALS

RT70



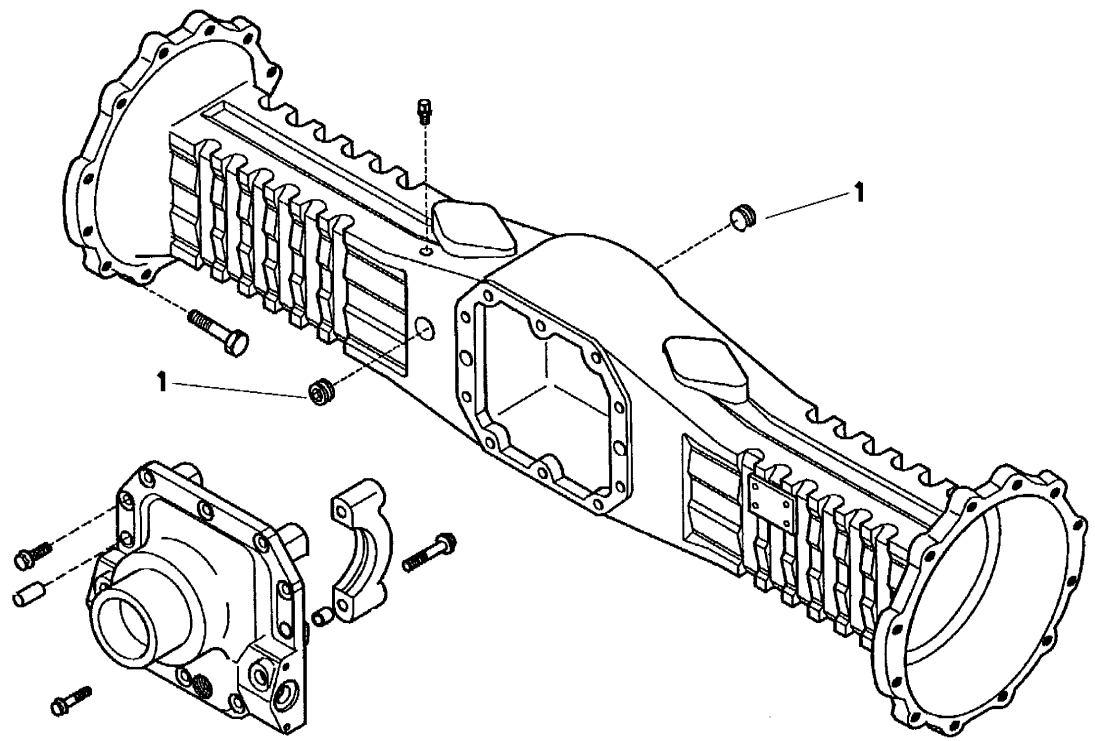
DIFFERENTIALS

RT70

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	160-453	1	STEERABLE AXLE (26.16)	QTY. OF 2 WITH REAR STEER OPTION
2.	166-226	1	RIGID PLANETARY AXLE (28.16)	
	160-453	-	STEERABLE AXLE (26.16)	
3.	306-748	1	AXLE MOUNT	
4.	307-711	1	AXLE MOUNT	
5.	178-365	2	BRONZE BUSHING (4.928")	
6.	106-398	8	WASHER (M16, HARDENED)	
7.	106-355	8	FLG NUT (M16-2.00, 10.9)	
8.	106-616	8	SCREW (M16-2.00 X 55MM, 10.9)	
9.	307-303	2	CLAMP PLATE	QTY. OF 4 WITH RIGID REAR WITH REAR STEER
	307-304	2	CLAMP PLATE	
10.	106-489	4	FLG NUT (M24-3.00, 10.9)	
11.	106-625	4	WASHER (M24)	
12.	107-089	4	SCREW (M24-3.00 X 260mm, 10.9)	
13.	499-521	32	LUG NUT (M20-1.50)	

FOOTNOTES

AXLE
HOUSING
RIGID

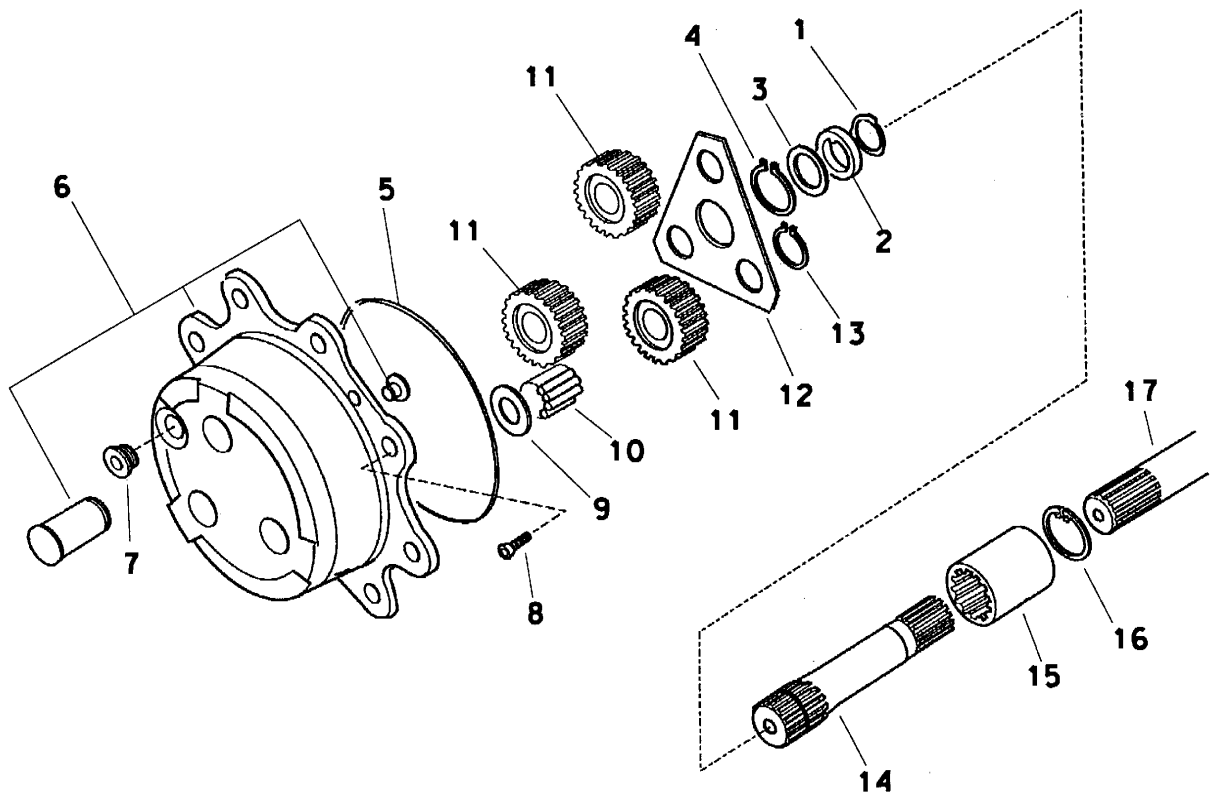


**AXLE
HOUSING
RIGID**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	159-512	2	PLUG (M24-1.50, FILL/DRAIN)	

FOOTNOTES

**AXLE
REDUCTION GEARS
RIGID**

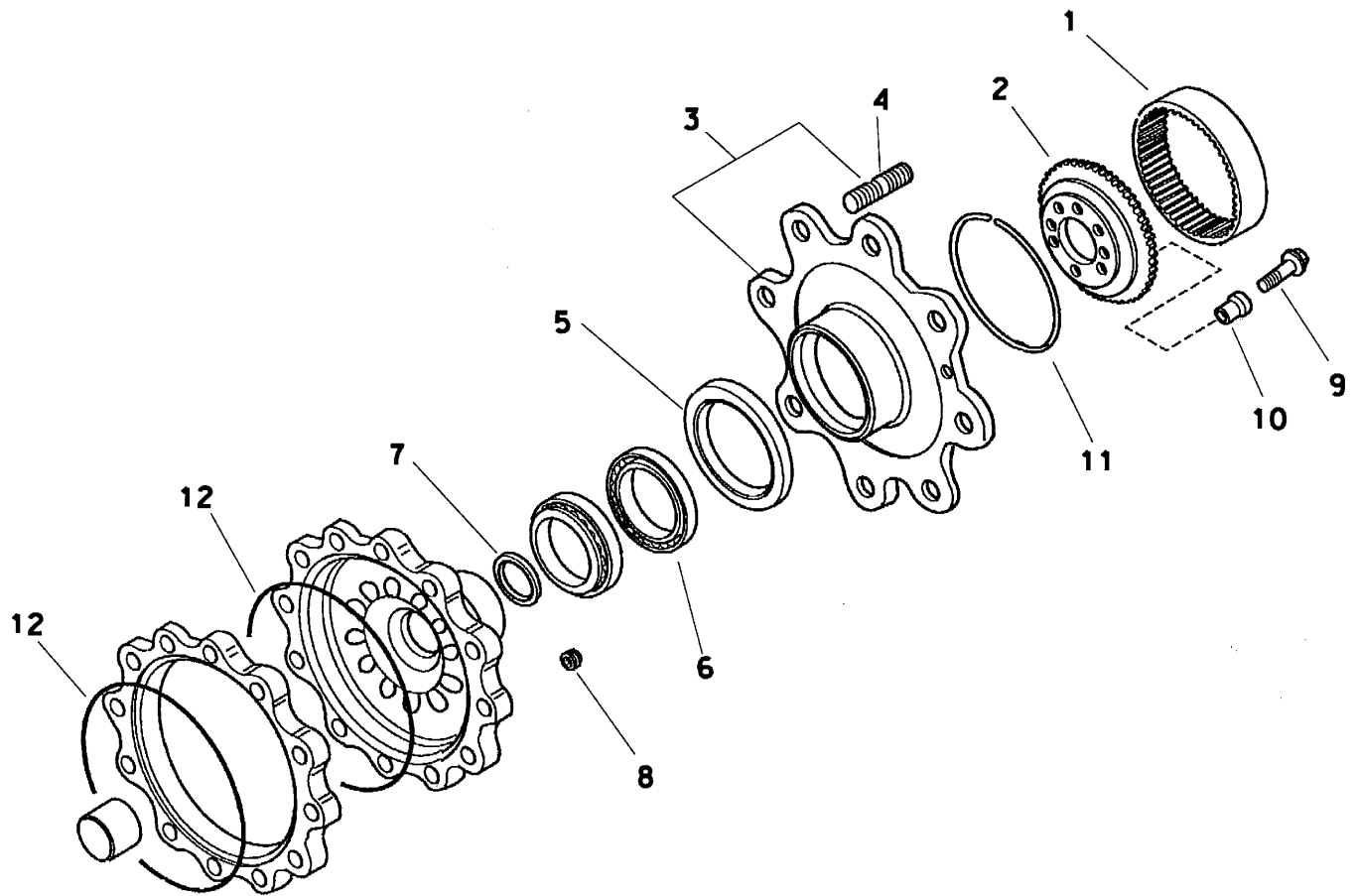


AXLE REDUCTION GEARS RIGID

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	501-897	2	THRUST WASHER	
2.	499-534	2	SPACER	
3.	499-535	2	WASHER	
4.	118-061	2	EXTERNAL SNAP RING	
5.	157-224	2	O-RING	
6.	161-313	2	PLANETARY CARRIER ASS'Y	
7.	114-036	2	PLUG, PLANETARY CARRIER	
8.	107-349	4	SCREW (M8-1.25 X 20mm)	
9.	501-895	6	THRUST WASHER	
10.	499-530	18	NEEDLE BEARING (10)	
11.	501-894	6	PLANETARY GEAR, (Z-23) DIFF	
12.	499-529	2	THRUST WASHER	
13.	118-060	6	EXTERNAL SNAP RING	
14.	499-536	2	HALF-SHAFT Z12	
15.	499-537	2	SLEEVE	
16.	499-538	2	SNAP RING D32	
17.	499-539	2	HALF-SHAFT	

FOOTNOTES

AXLE
WHEEL HUB
RIGID

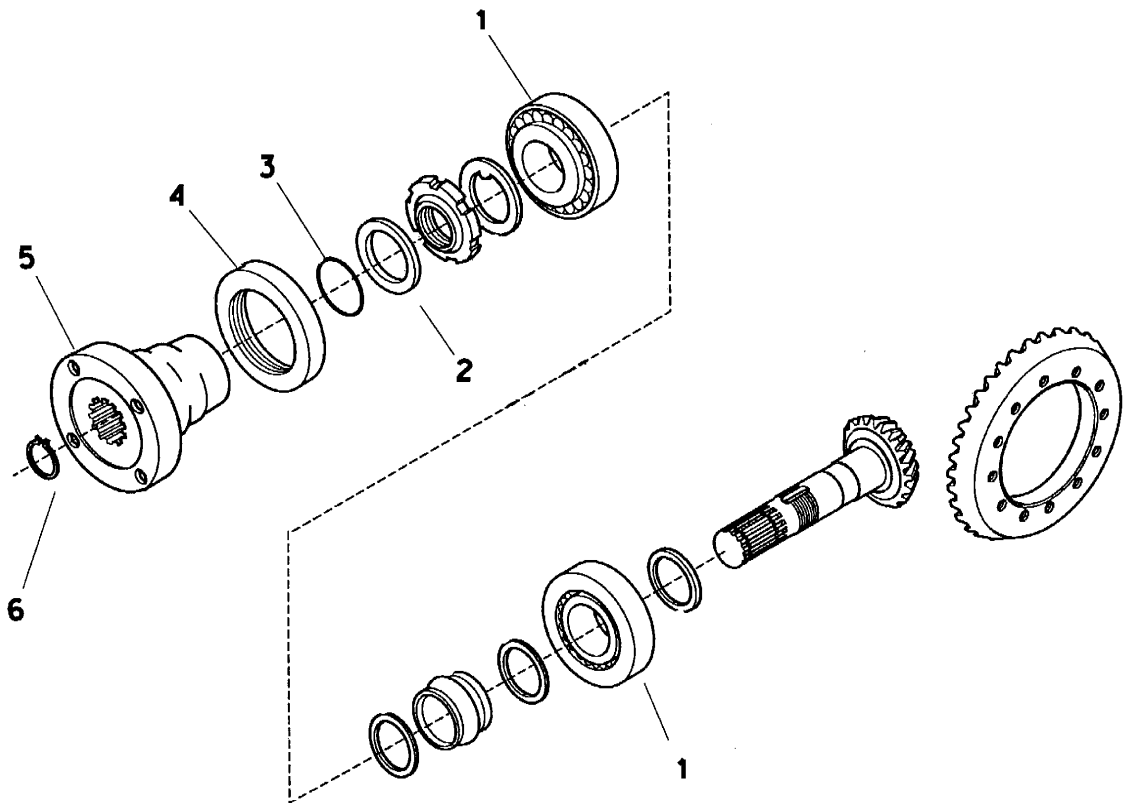


**AXLE
WHEEL HUB
RIGID**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	501-896	2	CROWN GEAR, (Z-60) PLANETARY	
2.	501-899	2	WHEEL CARRIER, PLANETARY	
3.	501-900	2	WHEEL HUB ASS'Y, PLANETARY	INCLUDES REF #4
4.	499-499	8	STUD, PLANETARY WHEEL HUB	QTY PER WHEEL
5.	499-528	2	SEAL RING	
6.	499-531	4	BEARING	
7.	499-532	2	SEAL RING	
8.	159-512	2	PLUG (M24-1.50, FILL/DRAIN)	
9.	107-350	12	LK SCREW (M10-1.50 X 45mm)	
10.	178-175	12	CENTERING BUSHING	
11.	499-501	2	RING	
12.	499-533	2	O-RING	

FOOTNOTES

AXLE -
GEAR/PINION
STEERABLE/RIGID

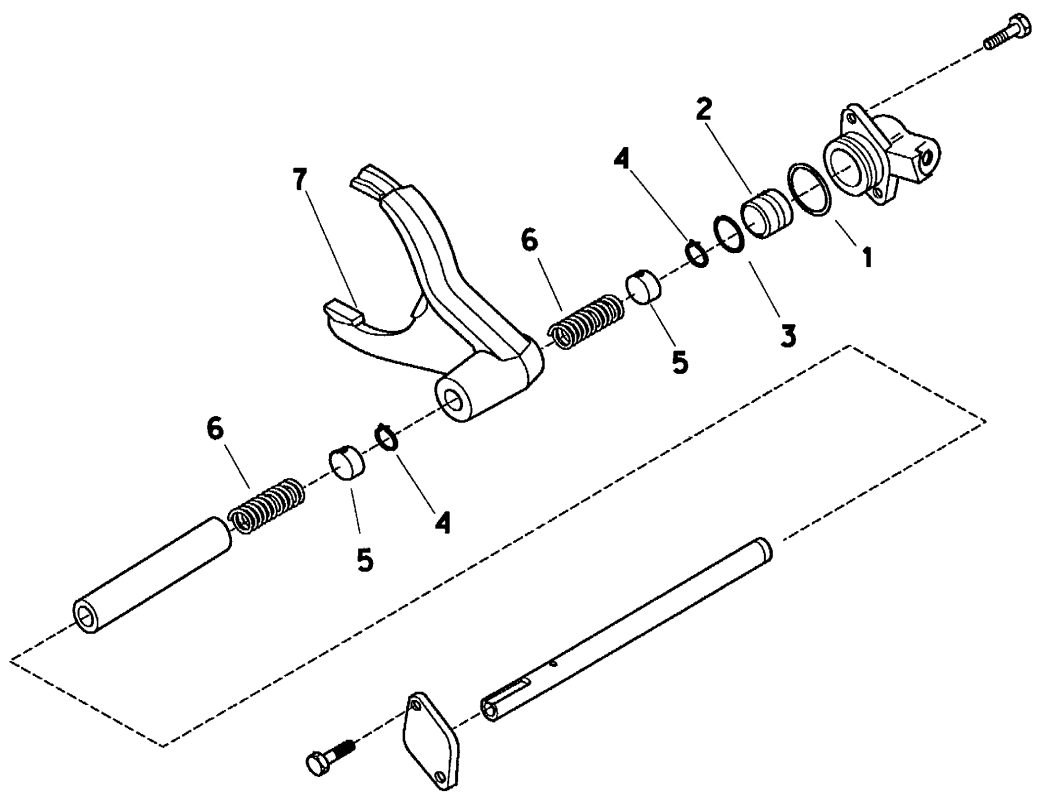


**AXLE -
GEAR/PINION
STEERABLE/RIGID**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	499-524		BEVEL GEAR SET Z12/32	
	168-606		SHIM (2.50mm)	PART OF KIT
	168-607		SHIM (2.60mm)	PART OF KIT
	168-608		SHIM (2.70mm)	PART OF KIT
	168-609		SHIM (2.80mm)	PART OF KIT
	168-610		SHIM (2.90mm)	PART OF KIT
	168-611		SHIM (3.00mm)	PART OF KIT
	168-612		SHIM (3.10mm)	PART OF KIT
	168-613		SHIM (3.20mm)	PART OF KIT
	168-614		SHIM (3.30mm)	PART OF KIT
	168-615		SHIM (3.40mm)	PART OF KIT
1.	126-201	2	BEARING, GEAR & PINION	
2.	501-887	1	WASHER (M31.4)	
3.	157-220	1	O-RING	
4.	157-748	1	OIL SEAL, GEAR & PINION	
5.	501-888	1	FLANGE, GEAR & PINION	
6.	118-058	1	EXTERNAL SNAP RING	

FOOTNOTES

AXLE -
DIFF LOCK
STEERABLE/RIGID

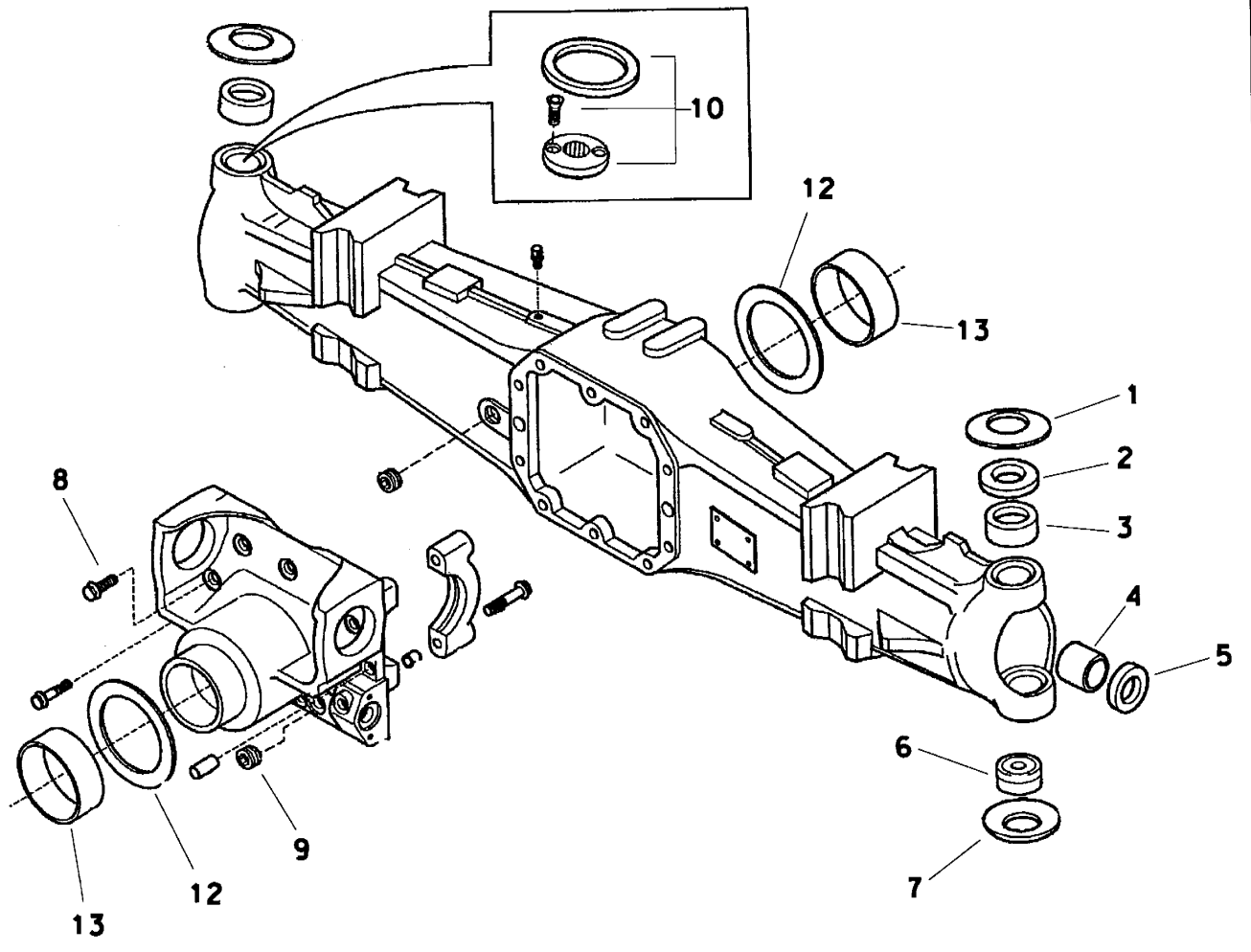


**AXLE -
DIFF LOCK
STEERABLE/RIGID**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	499-488	1	O-RING	
2.	499-489	1	PISTON	
3.	499-490	1	O-RING	
4.	499-491	2	SNAP RING (D12)	
5.	499-492	2	SPACER	
6.	499-493	2	SPRING	
7.	499-494	1	FORK	

FOOTNOTES

AXLE-
AXLE HOUSING
STEERABLE

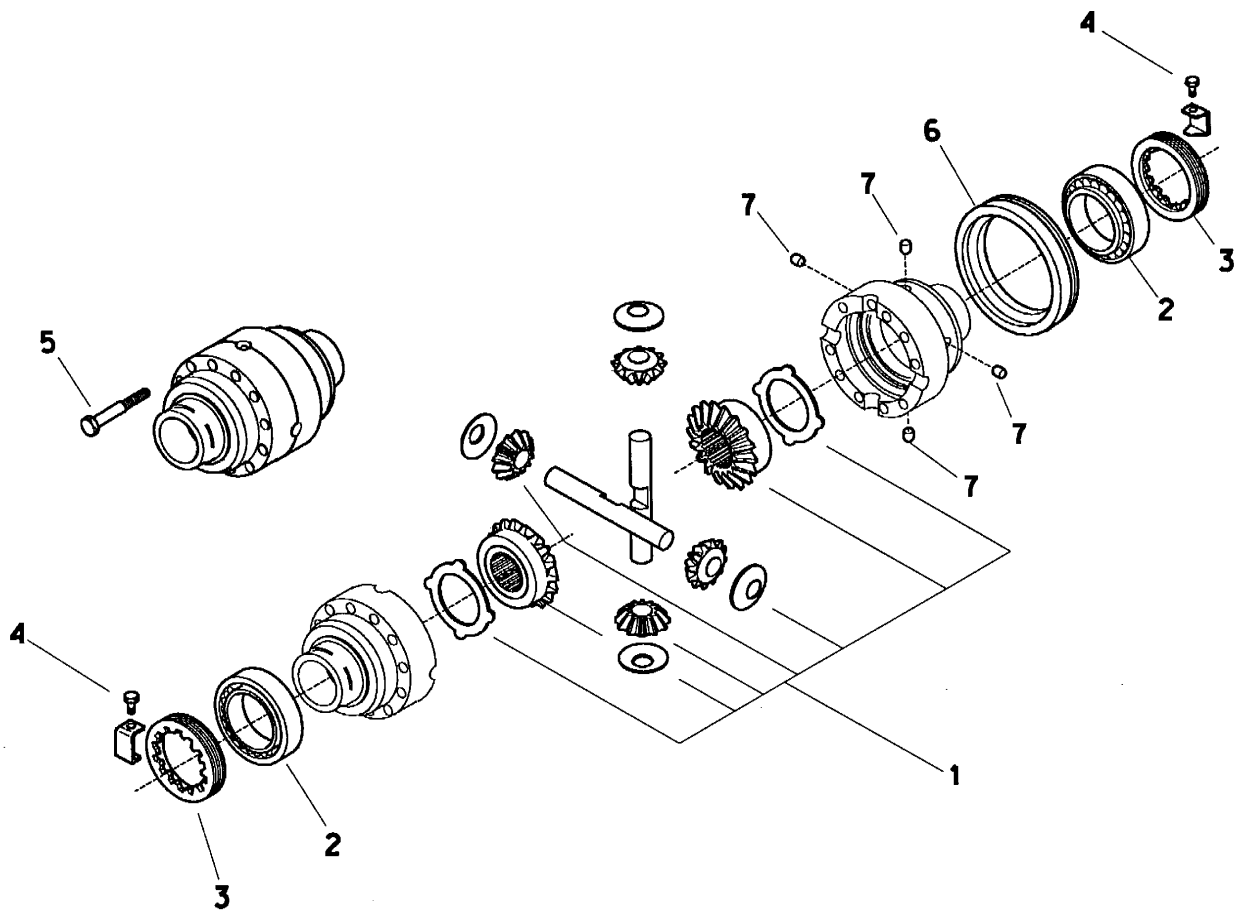


**AXLE -
AXLE HOUSING
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	107-338	1	BELLEVILLE WASHER	
2.	168-605	1	SHIM	
3.	178-167	1	BUSHING	
4.	178-168	2	BUSHING	
5.	157-745	2	OIL SEAL (30 X 44 X11)	
6.	126-200	2	SPHERICAL BEARING (METRIC)	
7.	107-339	2	BELLEVILLE WASHER	
8.	107-340	5	SCREW (M12-1.75 X 33mm)	
9.	159-512	2	PLUG (M24-1.50, FILL/DRAIN)	
10.	499-472		PIN LOCKING WASHER KIT	
11.	159-511	1	VENT PLUG (M10-1)	
12.	499-461	2	THRUST WASHER	
13.	499-462	2	BUSHING	

FOOTNOTES

AXLE -
DIFFERENTIAL
STEERABLE/RIGID

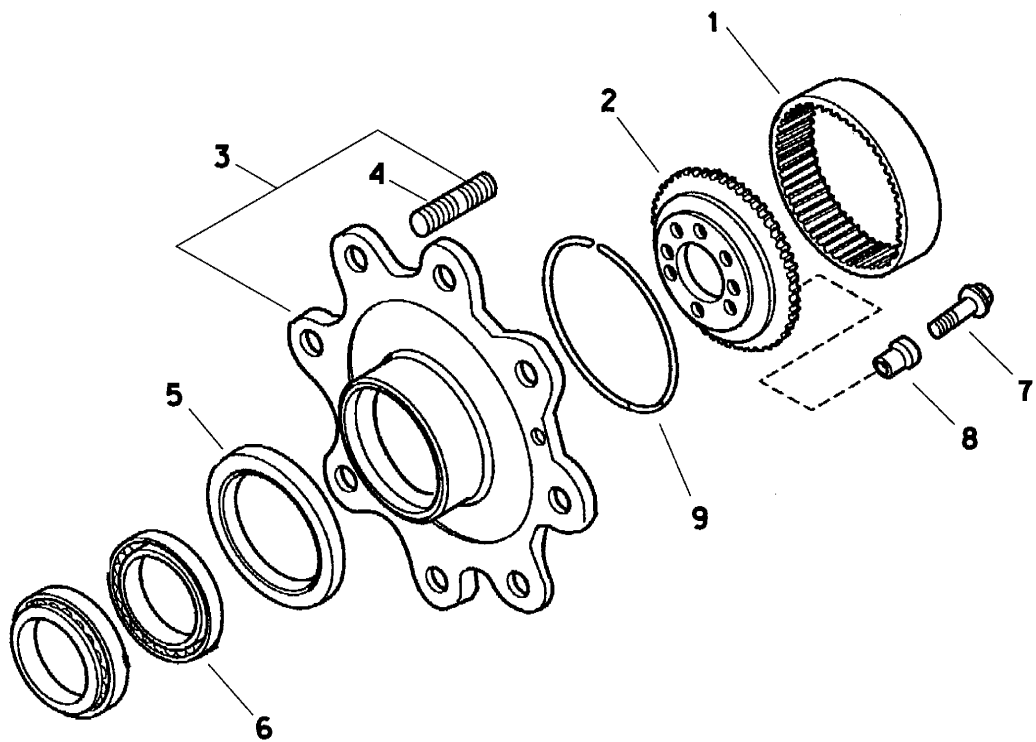


AXLE - DIFFERENTIAL STEERABLE/RIGID

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	499-525		DIFFERENTIAL KIT	
2.	126-202	2	BEARING, DIFF HSNG	
3.	501-893	2	RING NUT	
4.	107-348	2	SCREW (M6-1.00 X 10mm)	
5.	107-346	12	LK SCREW (M10-1.50 X 75mm)	
6.	499-485	1	SLEEVE	
7.	499-487	4	PIN	

FOOTNOTES

AXLE -
WHEEL HUB
STEERABLE

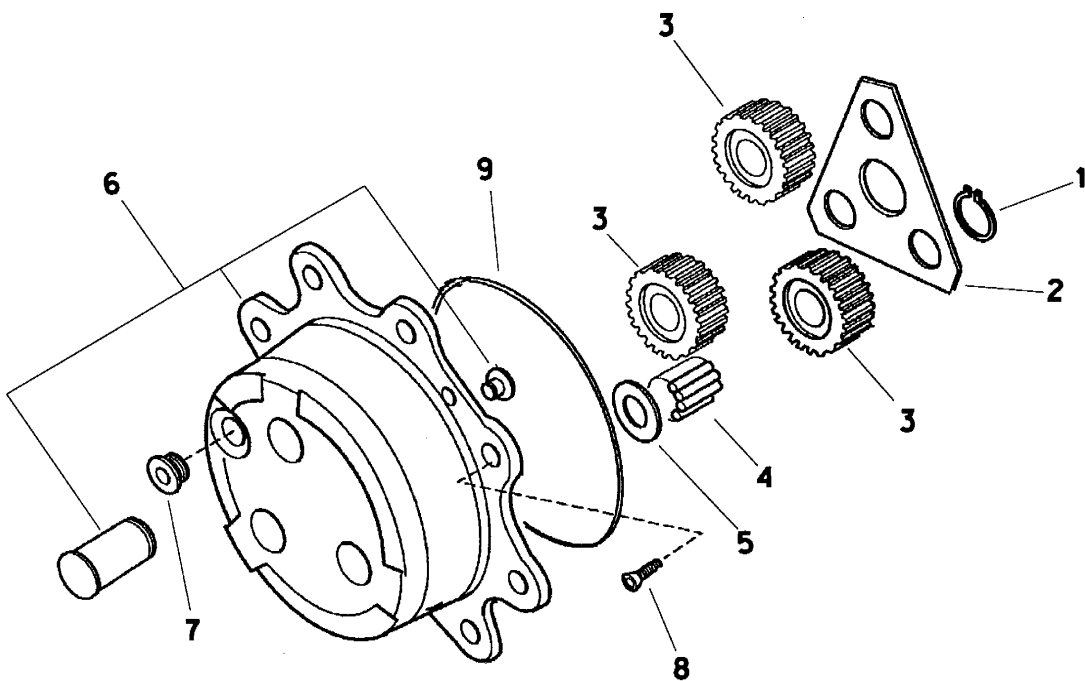


**AXLE -
WHEEL HUB
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	501-896	2	CROWN GEAR, (Z-60) PLANETARY	
2.	501-899	2	WHEEL CARRIER, PLANETARY	
3.	501-900	2	WHEEL HUB ASS'Y, PLANETARY	
4.	499-499	8	STUD, PLANETARY WHEEL HUB	QTY PER WHEEL
5.	157-749	2	SEAL, CASSETTER (PLANETARY)	
6.	126-204	4	BEARING	
7.	107-350	12	LK SCREW (M10-1.50 X 45mm)	
8.	178-175	12	CENTERING BUSHING	
9.	499-501	2	RING	

FOOTNOTES

AXLE -
REDUCTION GEAR
STEERABLE

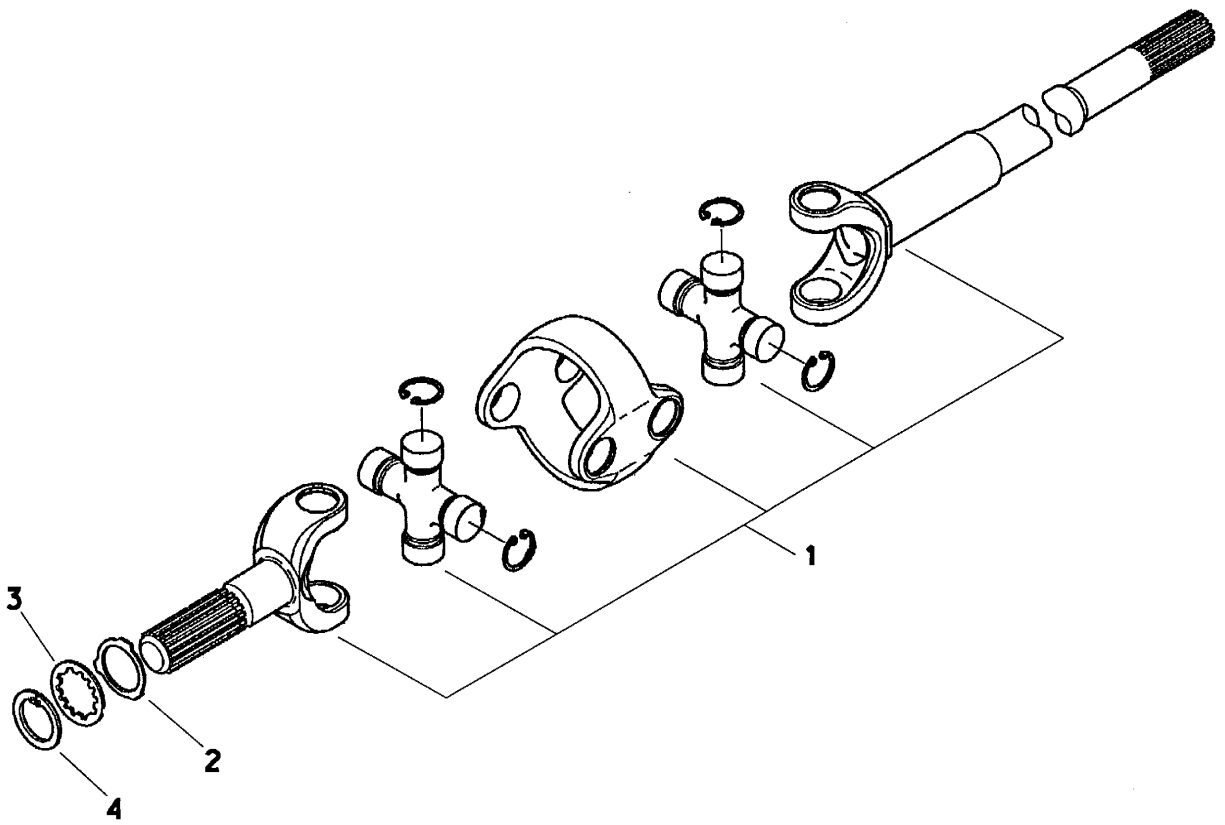


**AXLE -
REDUCTION GEAR
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	118-060	6	EXTERNAL SNAP RING	
2.	499-529	2	THRUST WASHER	
3.	501-894	6	PLANETARY GEAR, (Z-23) DIFF	
4.	499-530	18	NEEDLE BEARING (10)	
5.	501-895	6	THRUST WASHER	
6.	161-313	2	PLANETARY CARRIER ASS'Y	
7.	114-036	2	PLUG, PLANETARY CARRIER	
8.	107-349	4	SCREW (M8-1.25 X 20mm)	
9.	157-224	2	O-RING	

FOOTNOTES

AXLE-
DOUBLE JOINT
STEERABLE

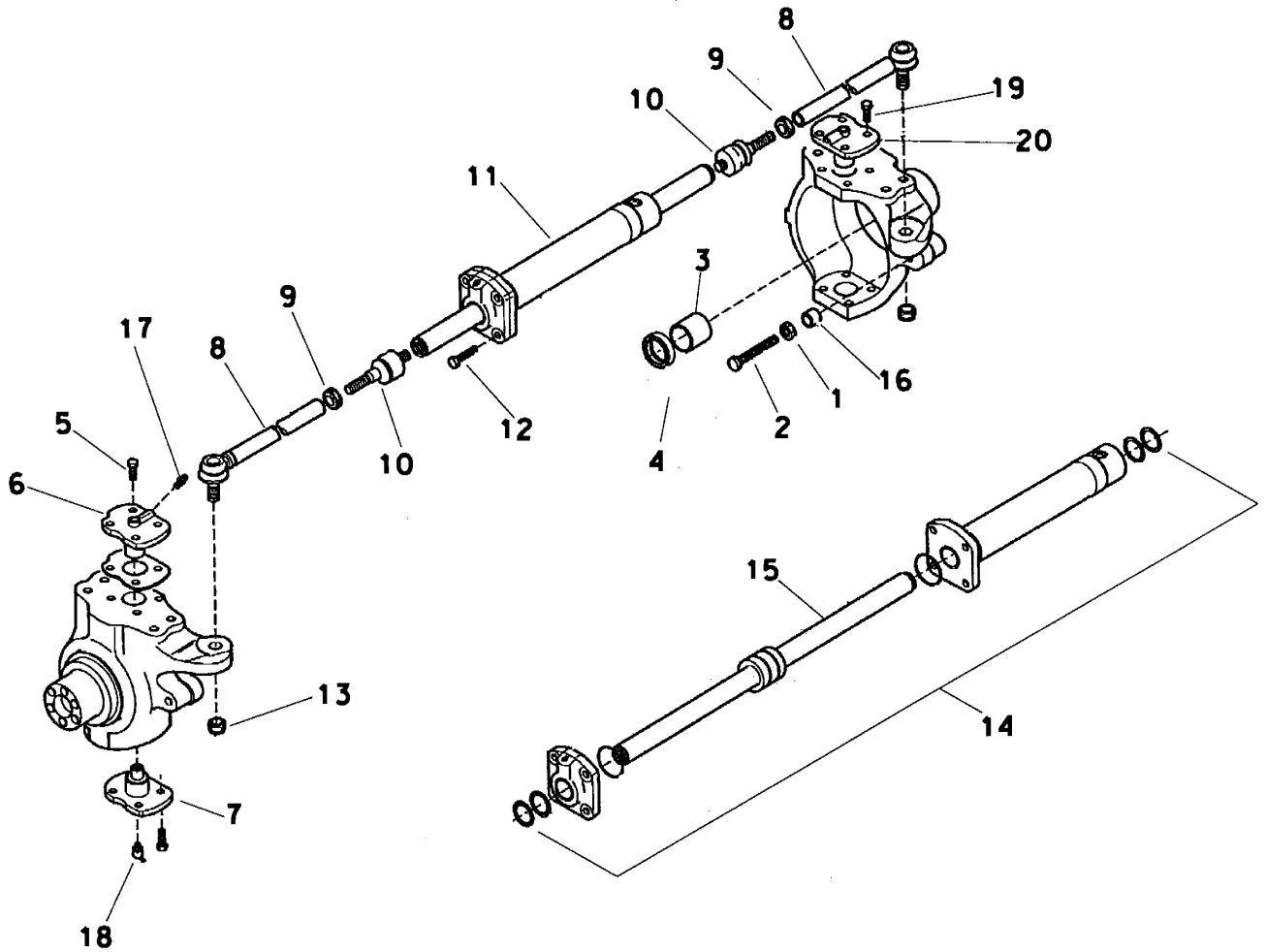


**AXLE-
DOUBLE JOINT
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	499-526	2	DOUBLE JOINT	
2.	501-897	2	THRUST WASHER	
3.	499-535	2	WASHER	
4.	118-061	2	EXTERNAL SNAP RING	

FOOTNOTES

AXLE -
STEERING CYLINDER
STEERABLE

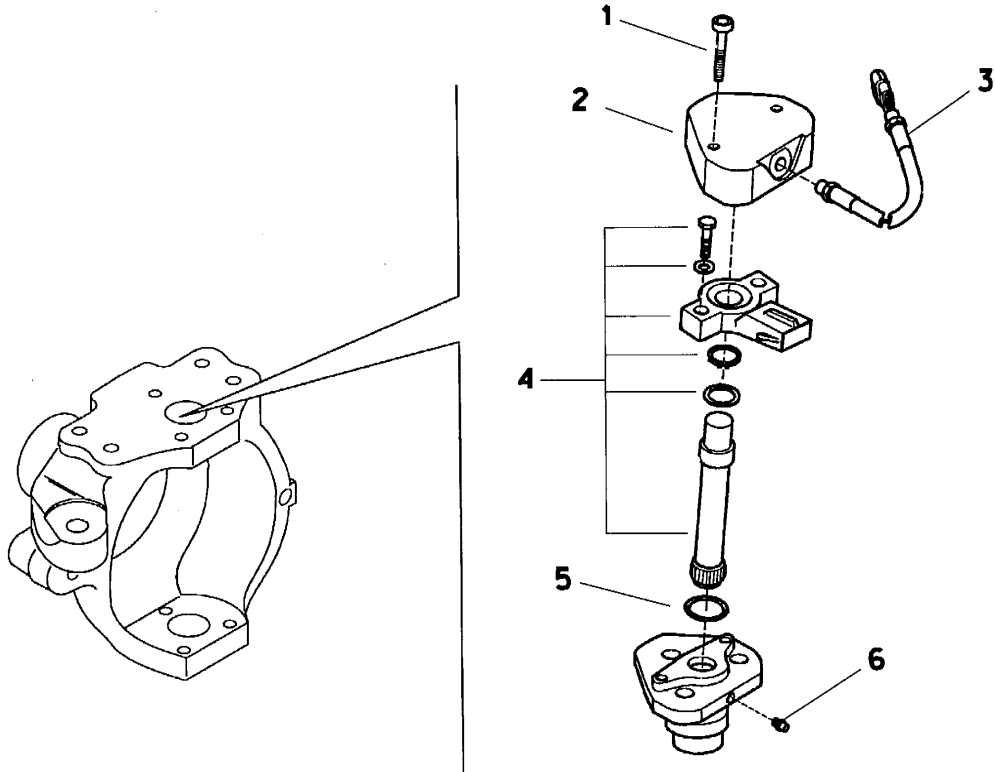


**AXLE -
STEERING CYLINDER
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-077	2	NUT (M16-2.00, 10.9)	
2.	107-457	2	SCREW (M16-2.00 X 75mm, 10.9)	
3.	178-172	2	BUSHING	
4.	157-747	2	OIL SEAL	
5.	106-472	3	SCREW (M16-2.00 X 35mm)	
6.	499-473	1	KING PIN	
7.	501-881	2	KING PIN, SWIVEL HOUSING	
8.	162-029	2	STEERING ARM	
9.	107-343	2	NUT, BALL JOINT	
10.	162-028	2	BALL JOINT	
11.	162-030	1	STEERING CYLINDER	
12.	107-307	4	SCREW (M12-1.75 X 45mm)	
13.	107-342	2	NUT (M18-1.50, SELF LOCK)	
14.	190-894	1	OIL SEAL KIT	
15.	162-031	1	TIE ROD	
16.	499-523	2	BUSHING (25 X 17 X 13)	
17.	115-065	2	ZERK, METRIC (M6 X 1)	
18.	115-066	2	ZERK, METRIC (M6 X 1-45 DEG)	
19.	107-341	12	SCREW (M12-1.75 X 30mm)	
20.	501-882	1	KING PIN, SWIVEL HOUSING	

FOOTNOTES

AXLE -
POTENTIOMETER
STEERABLE

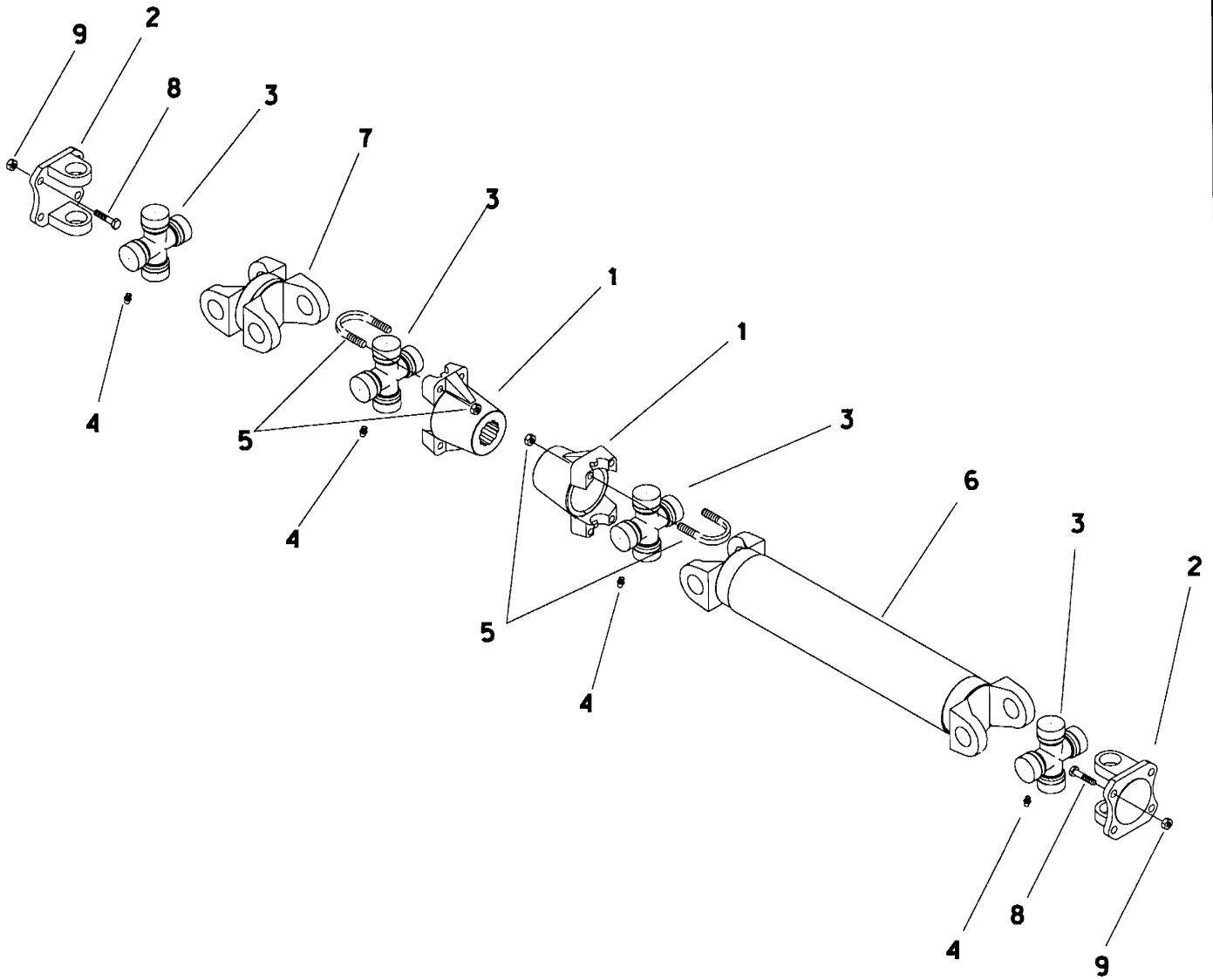


**AXLE-
POTENTIOMETER
STEERABLE**

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	499-508	2	SCREW (M8 X 45)	
2.	499-509	1	COVER	
3.	499-510	1	KIT PONTENTIOMETER	
4.	499-511	1	REAR STEER KIT	
5.	499-512	1	O-RING	
6.	115-065	1	ZERK, METRIC (M6 X 1)	

FOOTNOTES

HYDROSTATIC DRIVE LINE RT70



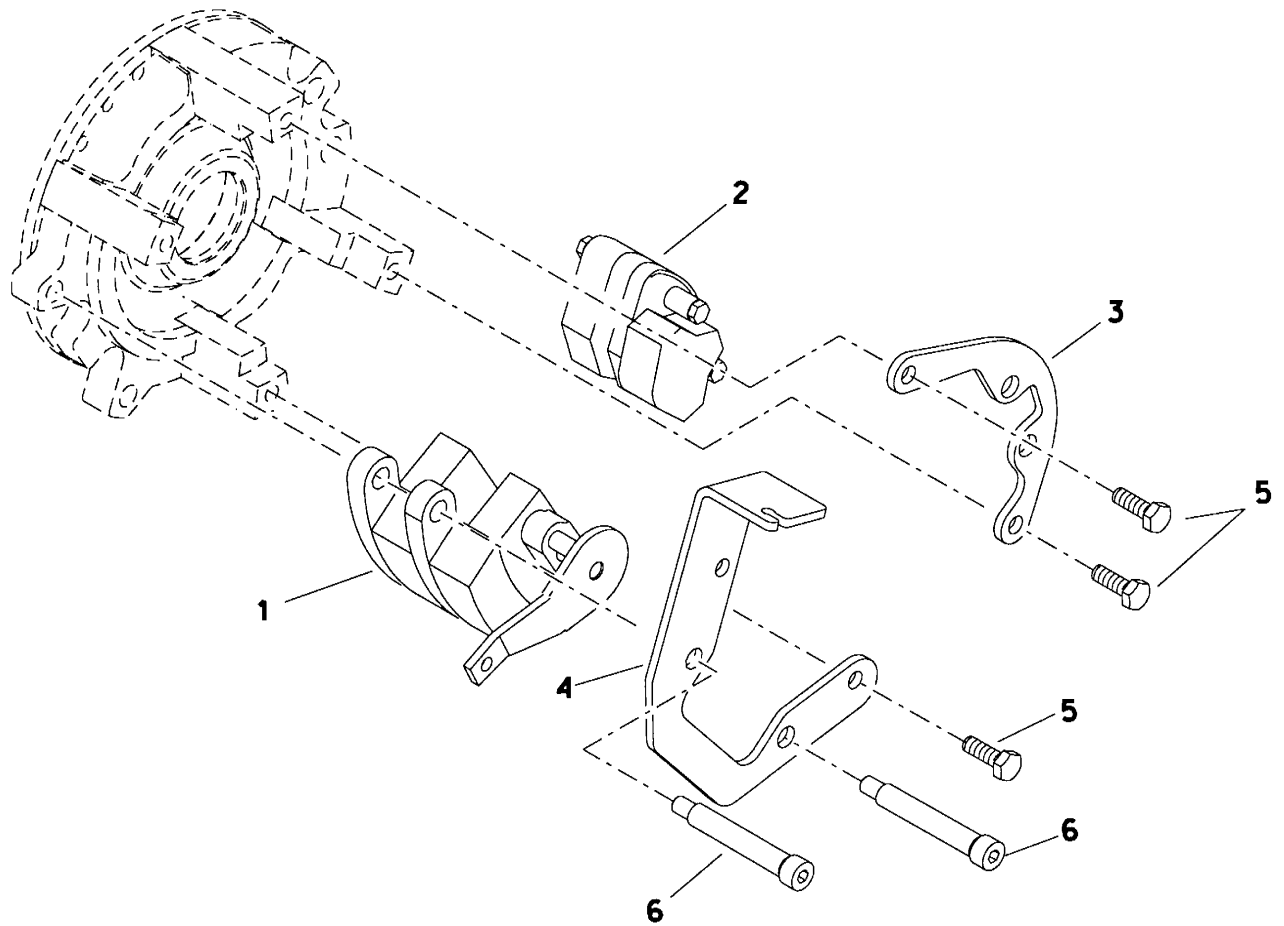
HYDROSTATIC DRIVE LINE RT70

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	182-199	2	410 SERIES HUB MACHINING	
2.	182-173	2	FLANGE YOKE	
3.	182-145	4	CROSS/BEARING KIT (1-3/16")	
4.	115-003	4	ZERK (1/4-NF, STR)	
5.	182-204	4	U BOLT KIT	
6.	166-234	1	FRONT DRIVE SHAFT	
7.	166-231	1	REAR DRIVE SHAFT	
8.	105-119	8	BOLT (7/16 NF X 1-1/2 ")	
9.	105-188	8	LOCKNUT (7/16 NF)	

FOOTNOTES

BRAKE CALIPERS

HYDROSTATIC

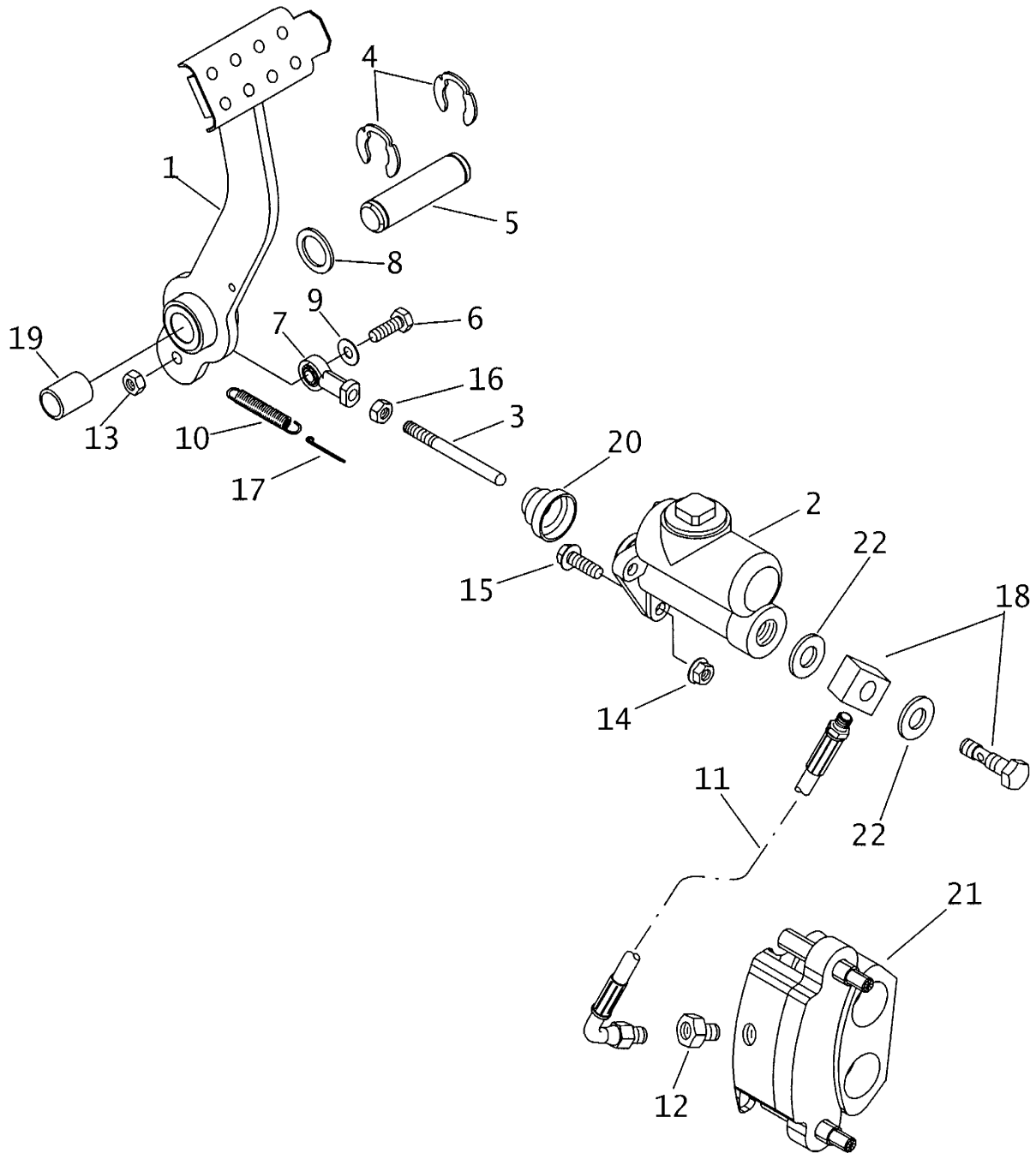


BRAKE CALIPERS HYDROSTATIC

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	160-773	1	BRAKE CALIPER	PARKING
	115-600	1	EXTENSION SPRING	
	505-073	1	FRICTION PAD KIT	PAIR
2.	163-088	1	BRAKE CALIPER	SERVICE - INCLUDES HARDWARE
	160-665	2	BRAKE BLEEDER VALVE	
	505-068	2	PAD PIN	
	505-069	2	CUP SPRING	
	505-095	1	BRAKE PAD	PAIR
	505-080	1	CALIPER PISTON	
	505-081	1	DUST BOOT	
	505-082	1	SQUARE RING (223 D70)	
3.	309-264	1	SERVICE BRAKE BRACKET	
4.	309-382	1	BRAKE BRACKET	
5.	106-559	4	SCREW (M12-1.75 X 25mm)	
6.	107-498	2	SHLD BLT (M16 X 120mm, M12-1.75)	

FOOTNOTES

SERVICE BRAKE SYSTEM



SERVICE BRAKE SYSTEM

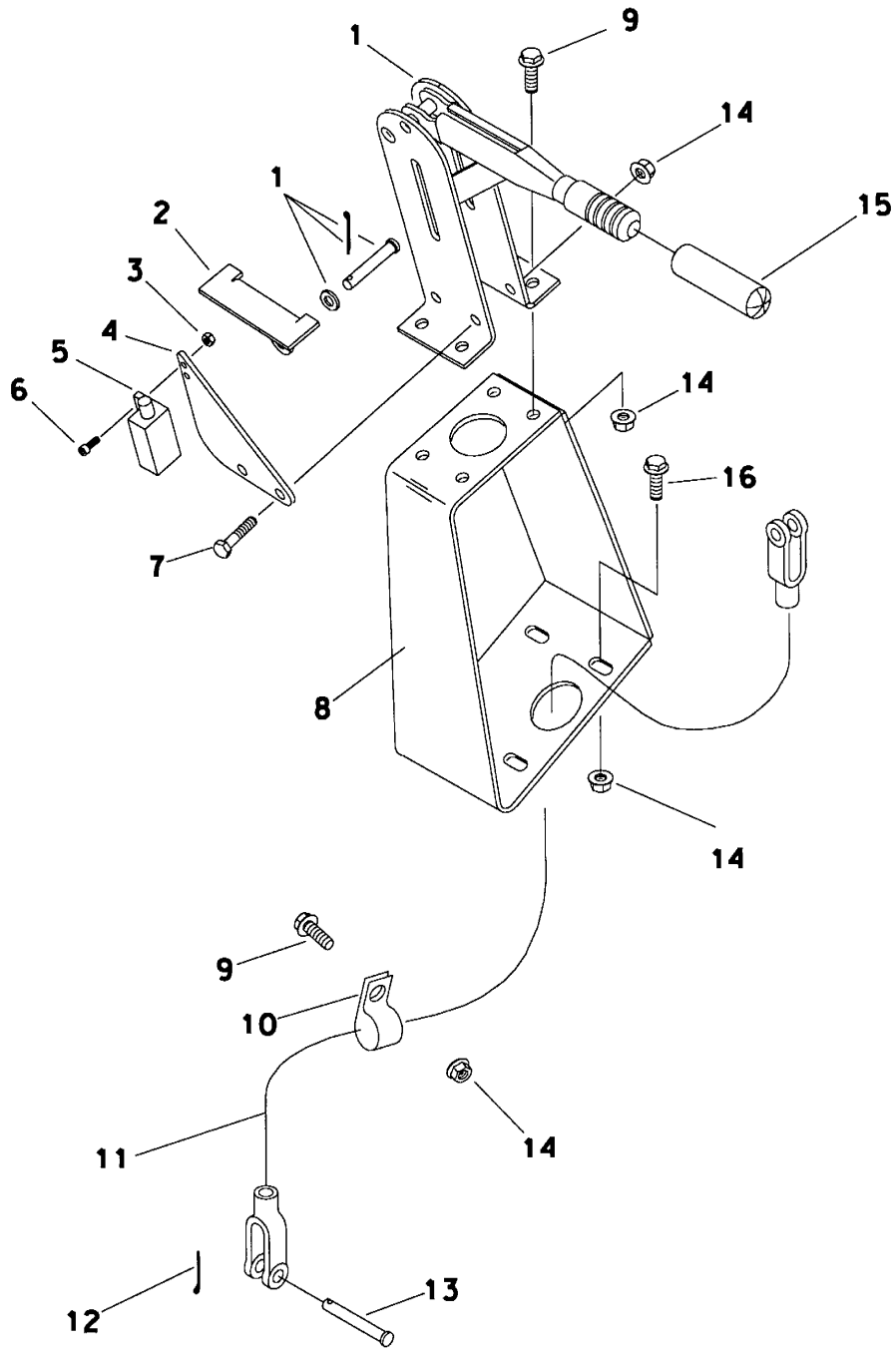
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	306-996	1	BRAKE PEDAL	
2	163-219	1	MASTER CYLINDER	
	191-293		SEAL REPAIR KIT	
	505-026		MASTER CYL CAP (1-5/8 SAE)	COMES WITH GASKET
	165-724		CAP GASKET	
3	361-887	1	MASTER CYLINDER ROD	
4	115-484	2	EXTERNAL SNAP RING (1.000")	
5	178-383	1	PIN (1.000" x 3.900")	
6	107-242	1	LK BOLT (3/8-NC X1-1/2", NLK)	
7	110-102	1	ROD END (3/8-NF, FM)	
8	110-078	1	MACH BUSHING (1.000", 14GA)	
9	106-415	1	WASHER (.406")	
10	115-613	1	EXTENSION SPRING	
11	149-861	1	BRAKE HOSE (3/16T X 19")	
12	156-282	1	FLARE FITTING (03TM-04TFM)	
13	105-053	1	NUT (3/8-NC)	
14	106-266	3	FLG NUT (M10-1.50)	
15	107-002	3	FLG LK SCREW (M10-1.50 X 30mm)	
16	105-093	1	NUT (3/8-NF)	
17	105-504	1	COTTER PIN (.187 X .750)	
18	149-863	1	BANJO S/O CONNECTOR (08-05T)	SEE FOOTNOTE 1
19	125-407	1	BRONZE BUSHING (1.000")	
20	115-329	1	DUST COVER	
21	163-088		BRAKE CALIPER	USED ON HYDROSTAT MACHINES
	505-095		BRAKE PAD (PAIR)	
	160-534		BRAKE CALIPER	USED ON POWERSHIFT MACHINES
	505-083		BRAKE PAD (PAIR)	
22.	502-178	2	SEAL WASHER	

FOOTNOTES

- I. BANJO CONNECTOR (REF #18) COMES WITH 2X 502-178 (REF #22)

NOTE:

PARK BRAKE



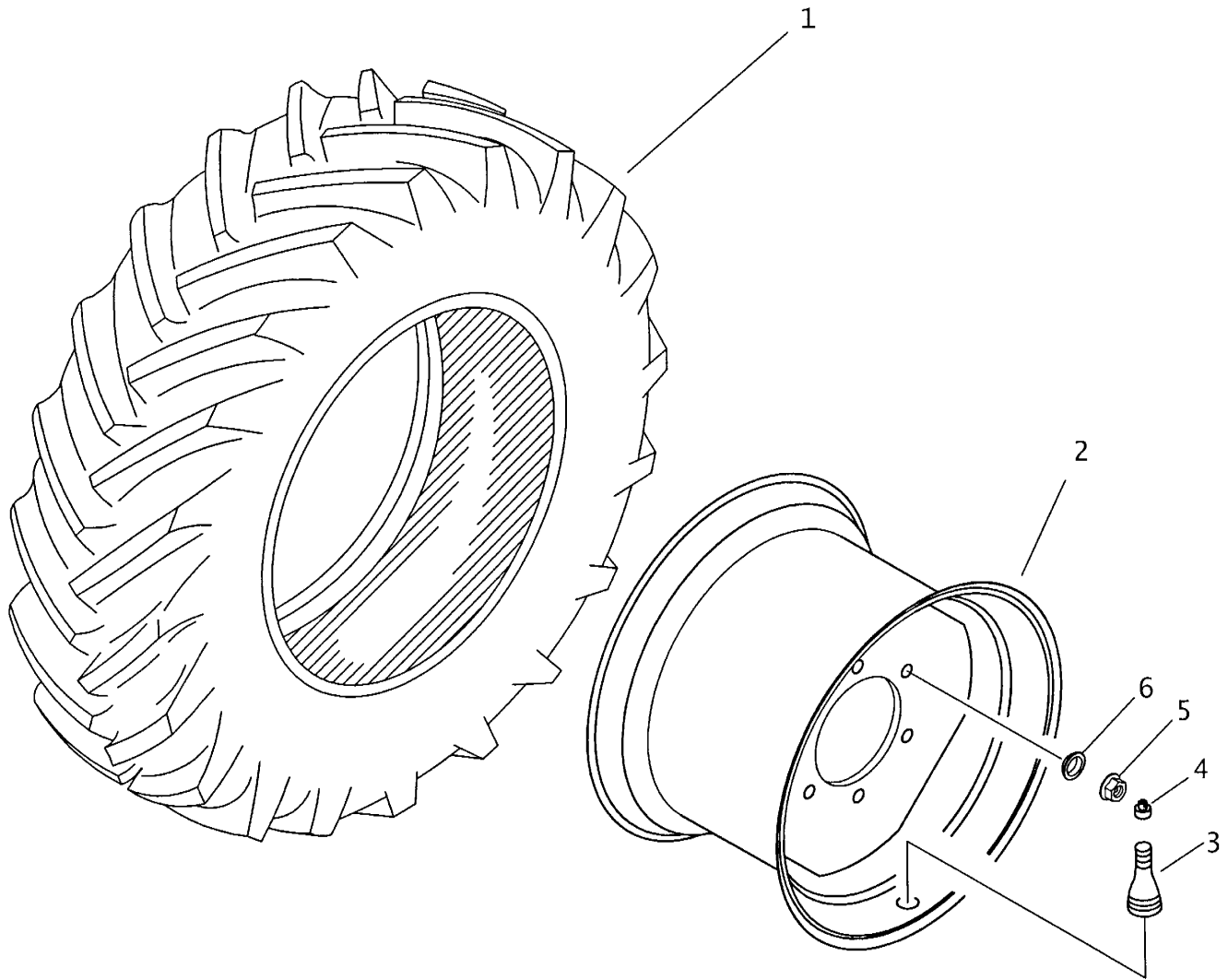
PARK BRAKE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	160-744	1	PARKING BRAKE LEVER	
2.	309-413	1	ACTUATOR BRACKET	
3.	105-680	2	NUT (M4, W/LK WSHR)	
4.	309-412	1	SWITCH BRACKET	
5.	217-705	1	PLUNGER SWITCH	
6.	106-715	2	SCREW (M4-0.70 X 12mm, SOC)	
7.	106-328	2	SCREW (M8-1.25 X 40mm)	
8.	309-383	1	PARK BRAKE BRACKET	
9.	106-991	5	FLG LK SCREW (M8-1.25 X 20mm)	
10.	110-373	1	BOLT ON CLAMP (13/16")	
11.	194-183	1	BRAKE CABLE	USED ON POWER SHIFT
	194-184	1	BRAKE CABLE	USED ON HYDROSTATIC
12.	105-508	1	COTTER PIN (3/32" X 1")	
13.	110-053	1	CLEVIS PIN (3/8" X 1.078")	
14.	106-386	11	FLG LOCKNUT (M8-1.25)	
15.	110-469	1	GRIP (7/8", ORANGE)	
16.	106-162	4	FLG SCREW (M8-1.25 X 20mm)	SEE FOOTNOTE 1

FOOTNOTES

1. USE LOCTITE 242 (BLUE) WHEN INSTALLING BOLTS.

TIRE - WHEEL
(31 X 15.5-15 E10TT)



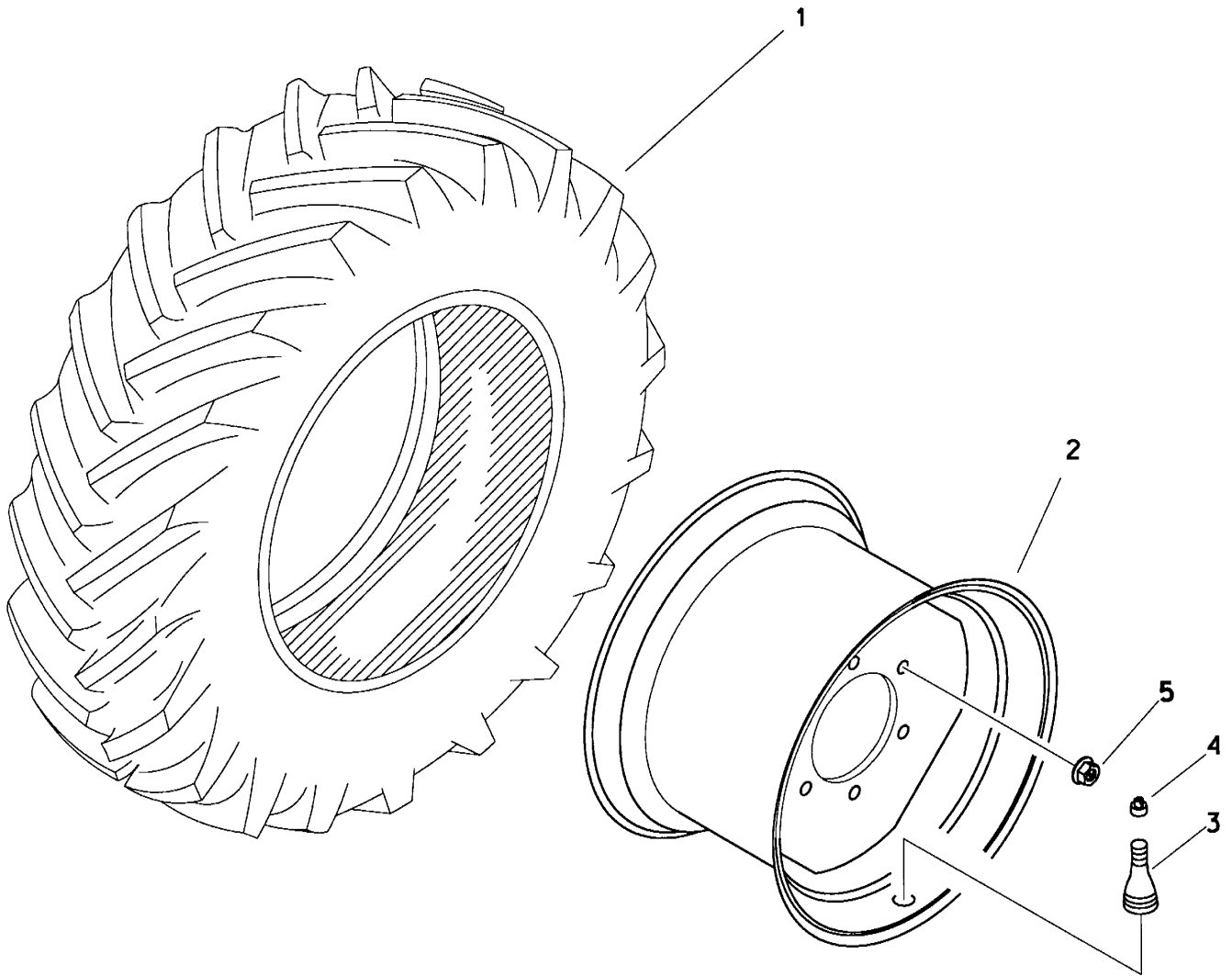
TIRE - WHEEL (31 X 15.5-15 E10TT)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	205-451	4	TIRE & WHEEL (31 X 15.5-15, E10TT)	INCL. REF. #'S 1, 2, 3
1.	205-126	4	TIRE (31 X 15.5-15, E10TT)	
2.	210-007	4	WHEEL (15" X 15.5", W/8)	
3.	205-168	4	VALVE STEM (.625")	
4.	205-165	4	VALVE CAP (.305"-32)	
5.	499-521	-	LUG NUT (M20-1.50)	
6.	108-186	-	CONICAL WASHER (2.5 X 34)	

FOOTNOTES

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

TIRE & WHEEL
(35 x 19.00-16.1)



TIRE & WHEEL (35 x 19.00-16.1)

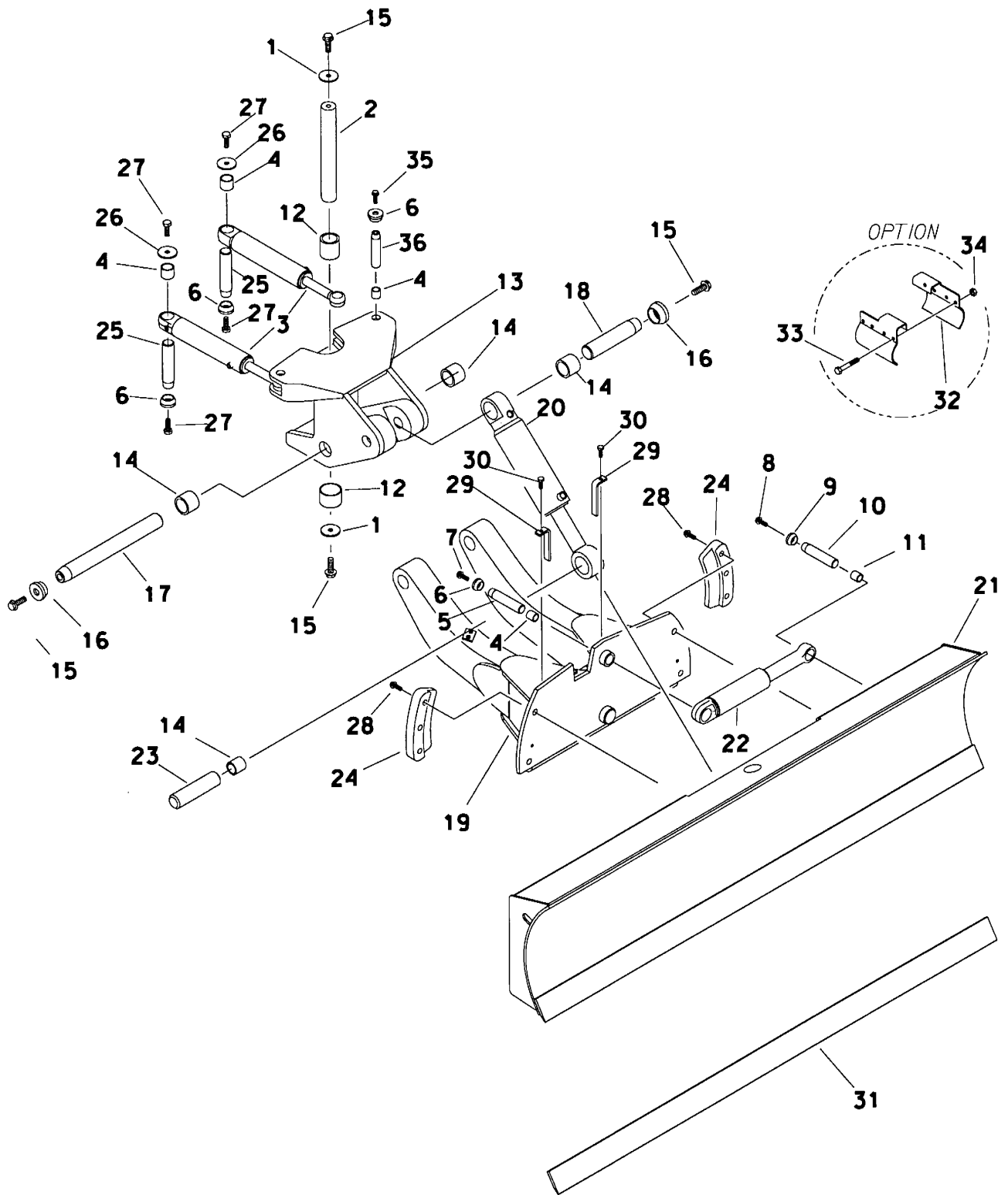
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	205-377	4	TIRE & WHEEL (35 X 19.00-16.1)	INCL. REF. #'S 1, 2, 3
1.	205-184	4	TIRE (35 X 19.00-16.1)	
2.	205-373	4	WHEEL (16.1 X 16 WD W/8)	
3.	205-168	4	VALVE STEM (.625")	
4.	205-165	4	VALVE CAP (.305"-32)	
5.	499-521	-	LUG NUT (M20-1.50)	

FOOTNOTES

NOTES:

FRAME COMPONENTS

BACKFILL BLADE ASSEMBLY



E

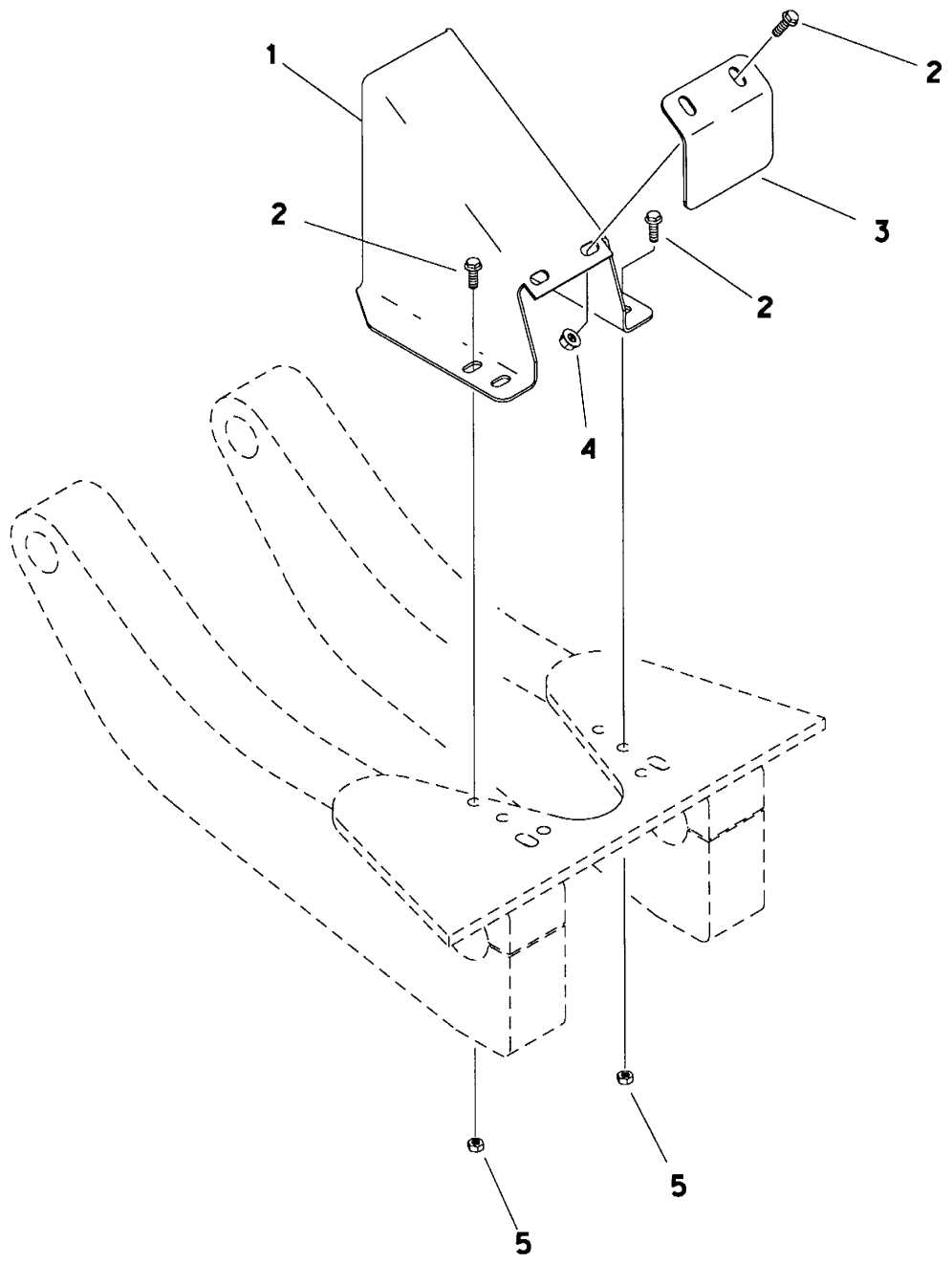
806-201

BACKFILL BLADE ASSEMBLY

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-416	2	WASHER (5/8")	
2.	178-572	1	PIN (1.75" X 12.75")	
3.	151-057	-	CYL (2.0" X 1.25" X 8.0")	
4.	125-771	5	COMPOSITION BUSHING (1.25")	
5.	183-766	1	TAPERED PIN (31.7mm X 90mm)	
6.	181-982	5	TAPERED INSERT (1.25")	
7.	106-469	1	FLG SCREW (M12-1.75 X 30mm)	
8.	106-164	1	FLG LK SCREW (M10-1.50 X 30mm)	
9.	181-981	1	TAPERED INSERT (1")	
10.	183-767	1	TAPERED PIN (25.4mm X 60mm)	
11.	125-770	1	COMPOSITION BUSHING (1")	
12.	125-822	2	COMPOSITION BUSHING (1.750")	
13.	331-475	1	PIVOT	
14.	125-773	4	COMPOSITION BUSHING (1.750")	
15.	106-470	4	FLG SCREW (M16-2.00 X 40mm)	
16.	181-975	2	TAPERED INSERT (1.75")	
17.	178-584	1	TAPERED PIN (1.750" X 13.90")	
18.	183-768	1	TAPERED PIN (44.4mm X 205mm)	
19.	308-921	1	LIFT ARM	
20.	151-070	-	CYL (3" X 1.75" X 8")	
21.	331-747	1	BACKFILL BLADE ASSEMBLY (72")	
22.	151-202	-	CYL (2" X 1" X 3.38")	
23.	178-532	1	PIN (1.750" X 7.000")	
24.	314-104	2	TILT BLADE RETAINER	
25.	178-394	2	TAPERED PIN (1.250" X 4.250")	
26.	105-475	2	WASHER (1/2")	
27.	105-830	4	FLG LK BOLT (1/2-NC X 1-1/4")	
28.	105-885	6	FLG LK BOLT (1/2-NC X 2")	
29.	309-138	2	RETAINER	
30.	106-383	2	FLG LK SCREW (M10-1.50 X 30mm)	
31.	314-087	1	72" CUTTING EDGE	
32.	322-360	2	FITTING GUARD (3.0" CYL)	OPTION
33.	106-330	4	SCREW (M8-1.25 X 70mm)	
34.	106-386	4	FLG LOCKNUT (M8-1.25)	
35.	106-632	2	FLG LK SCREW (M12-1.75 X 35mm, SER)	
36.	179-553	2	TAPERED PIN (1.250" X 2.560")	

FOOTNOTES

BFB CYLINDER GUARD



C

808-539

BFB CYLINDER GUARD

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-285		CYLINDER GUARD KIT	INCLUDES REF NUMBERS 1-5
1.	319-787	1	CYLINDER GUARD	
2.	106-724	6	FLG SCREW (M10-1.50 X 25mm)	
3.	319-789	1	COVER	
4.	106-387	2	FLG LOCKNUT (M10-1.50)	
5.	106-758	4	LOCKNUT (M10-1.50)	

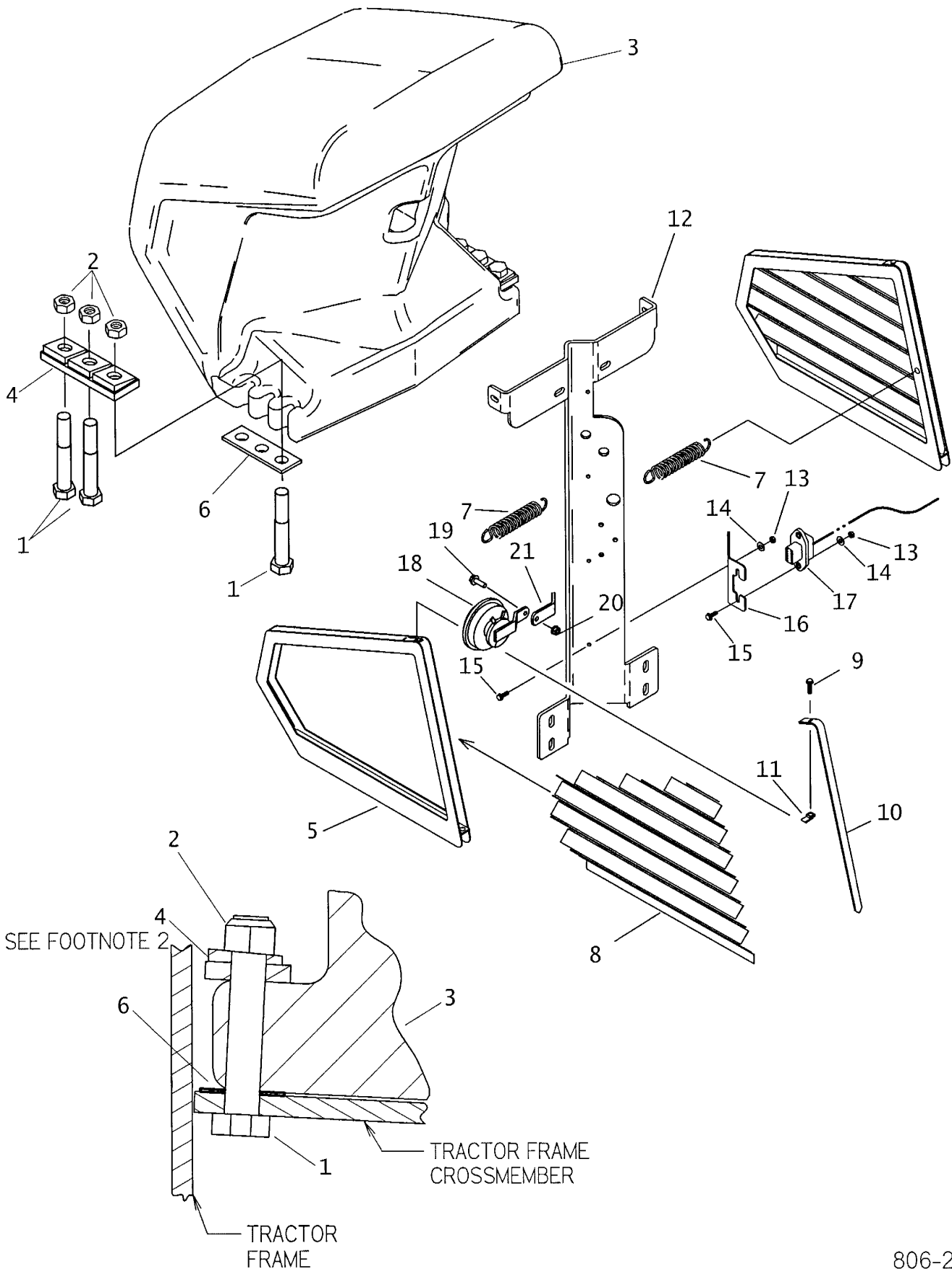
NOTE

REFER TO INSTALLATION INSTRUCTIONS 051-336 FOR INSTALLING BFB CYLINDER GUARD.

FOOTNOTES

COUNTERWEIGHT/GRILLE (RT SERIES)

ENDS WITH SERIAL NUMBER (SEE NOTES)



COUNTERWEIGHT/GRILLE (RT SERIES)

ENDS WITH SERIAL NUMBER (SEE NOTES)

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-633	6	SCREW (M20-2.5 X 130mm)	SEE FOOTNOTE 1, 3 & 4
2.	106-665	6	LOCKNUT (M20-2.50, 10.9)	SEE FOOTNOTE 4
3.	375-370	1	CASTING (FRAME NOSE)	SEE FOOTNOTE 3
4.	327-389	2	CLAMP BAR	SEE FOOTNOTE 2 & 4
5.	313-825	2	GRILLE	SEE FOOTNOTE 4
6.	118-400	2	SHIM (.075")	
7.	117-386	2	EXTENSION SPRING	
8.	308-723	2	SCREEN	
9.	106-987	2	FLG LK SCREW (M6-1.00 X 16mm)	
10.	178-873	2	SCREEN RETAINER	
11.	106-574	2	CLIP NUT(M6-1.00)	
12.	307-909	-	FRONT HOOD SUPPORT	
13.	106-237	3	LOCKNUT (M6-1.00, PRV TRQ, NLK)	
14.	105-284	3	WASHER (3/16")	
15.	106-161	3	FLG SCREW (M6-1.00 X 20mm)	
16.	318-726	1	PLATE	
17.	217-267	1	HYDROSTAT FRAME HARNESS	
	217-268	1	POWERSHIFT FRAME HARNESS	
18.	306-609	1	HIGH FREQUENCY HORN	OBSOLETE
	192-006	1	HIGH FREQUENCY HORN	
	192-005	1	HORN BRACKET	
19.	106-992	2	FLG LK SCREW (M8-1.25 X 25MM)	
20.	106-386	2	FLG LOCKNUT (M8-1.25)	
21.	323-673	1	HORN BRACKET	

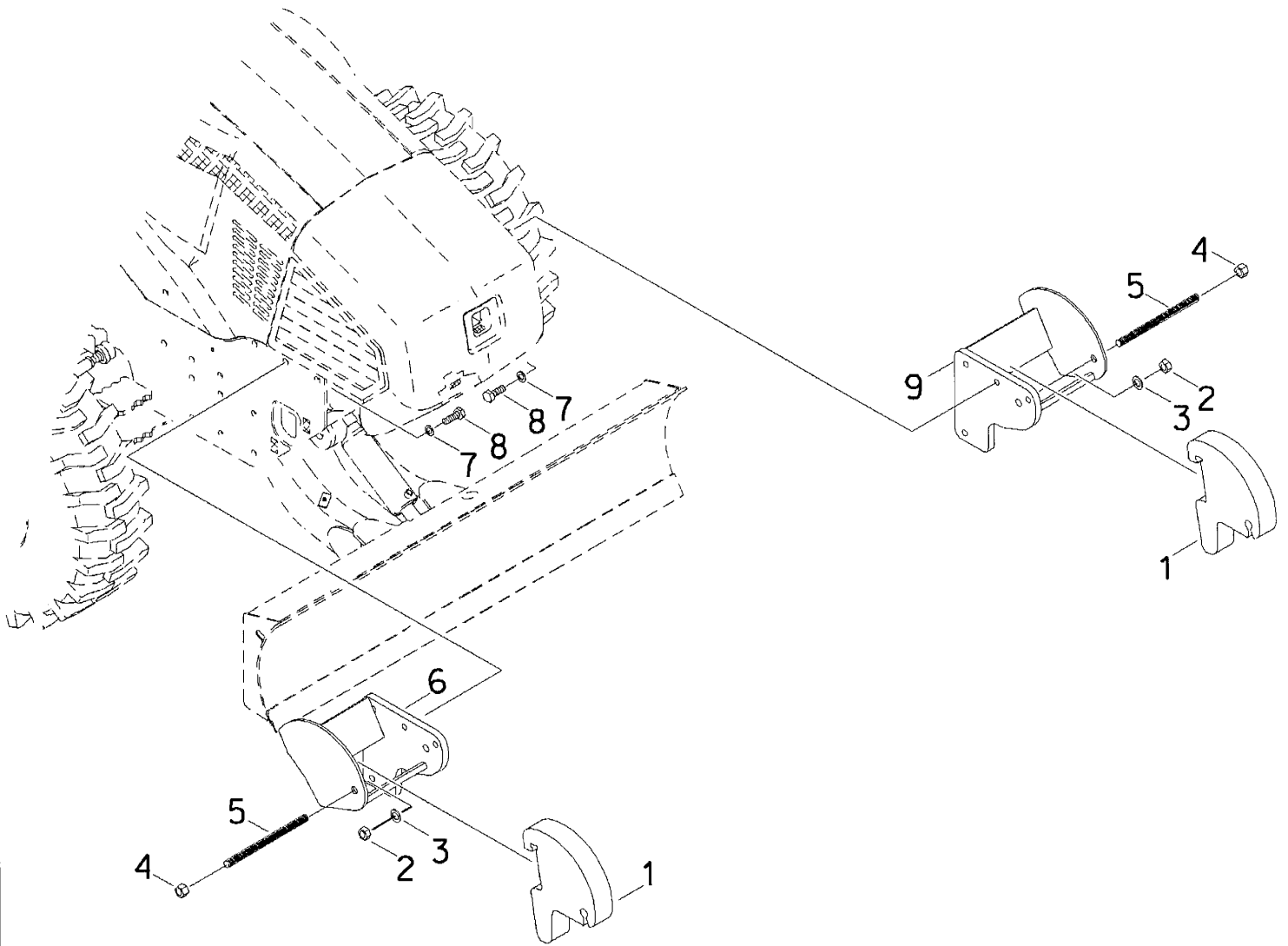
FOOTNOTES

- 1- TORQUE BOLT TO 350 FT/LB (475 N/m)
- 2- INSTALL REF #4 (327-389) WITH THICK EDGE TO FRAME.
- 3- REFER TO NOSE CASTING INSTALLATION INSTRUCTION 051-420.
- 4- 104-186, BOLT AND SHIM KIT, INCLUDES REF #'S 1,2,4 & 6.

NOTE:

1. RT75 ENDS WITH S/N 5Z0663.
2. RT95 / RT115 ENDS WITH S/N 5Z0676

FRONT COUNTERWEIGHT

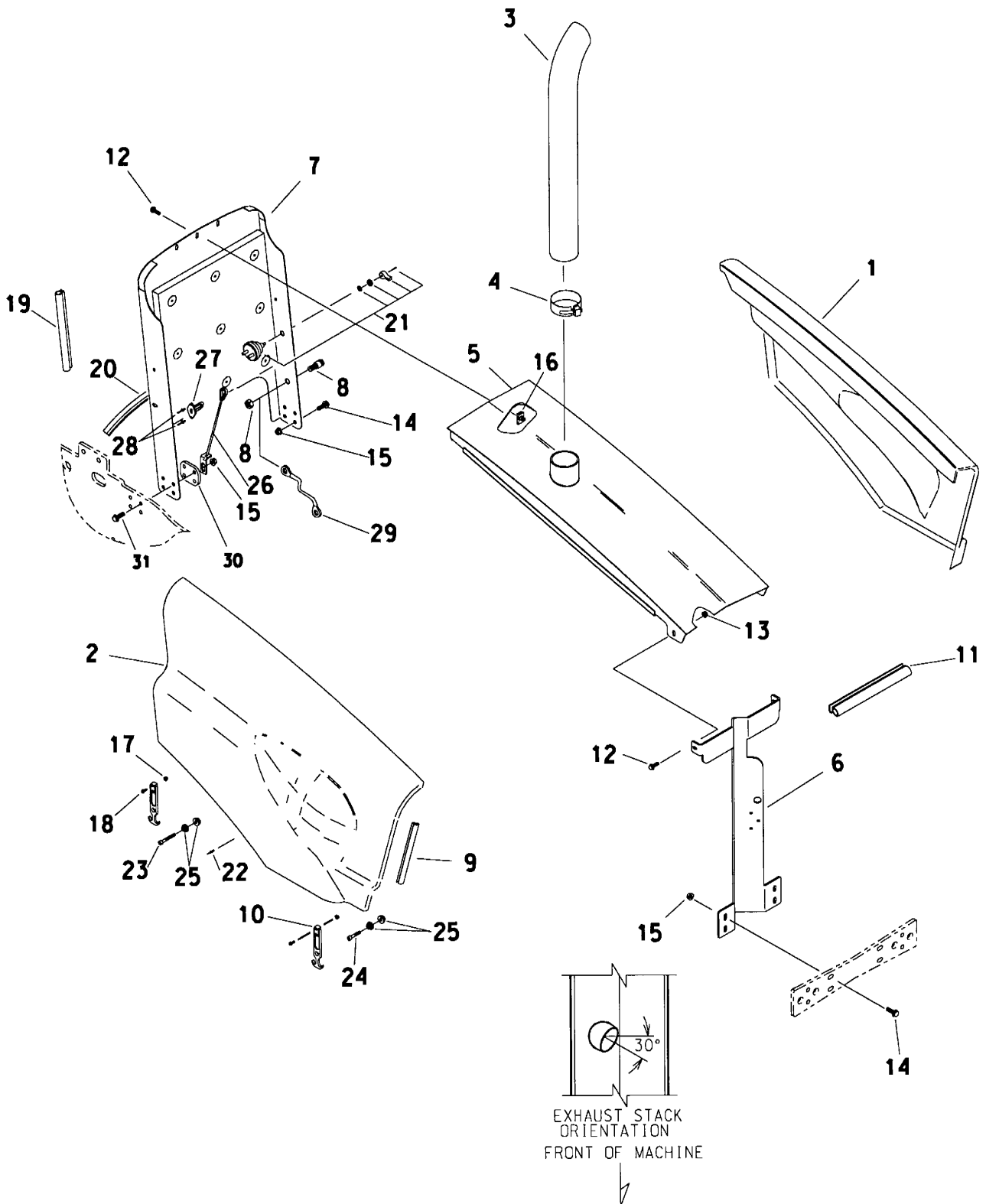


FRONT COUNTERWEIGHT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	100-863	-	COUNTERWEIGHT KIT	INCLUDES REF. NO'S 1-9
1.	375-369	AR	WEIGHT CASTING	
2.	106-352	2	NUT (M24-3.00)	USED ONLY WITH 3 WEIGHTS OR LESS
3.	106-488	2	WASHER (M24, HARDENED)	USED ONLY WITH 3 WEIGHTS OR LESS
4.	106-587	2	LOCKNUT (M24-3.0, PRV TRQ, 10.9)	
5.	179-605	2	ALL THREAD ROD (M24 X 15.00)	
6.	319-948	1	RIGHT WEIGHT RACK	
7.	106-399	8	WASHER (M20, HARDENED)	
8.	106-611	8	SCREW (M20-2.50 X 40mm, 10.9)	
9.	319-947	1	LEFT WEIGHT RACK	

FOOTNOTES

ENGINE ENCLOSURE



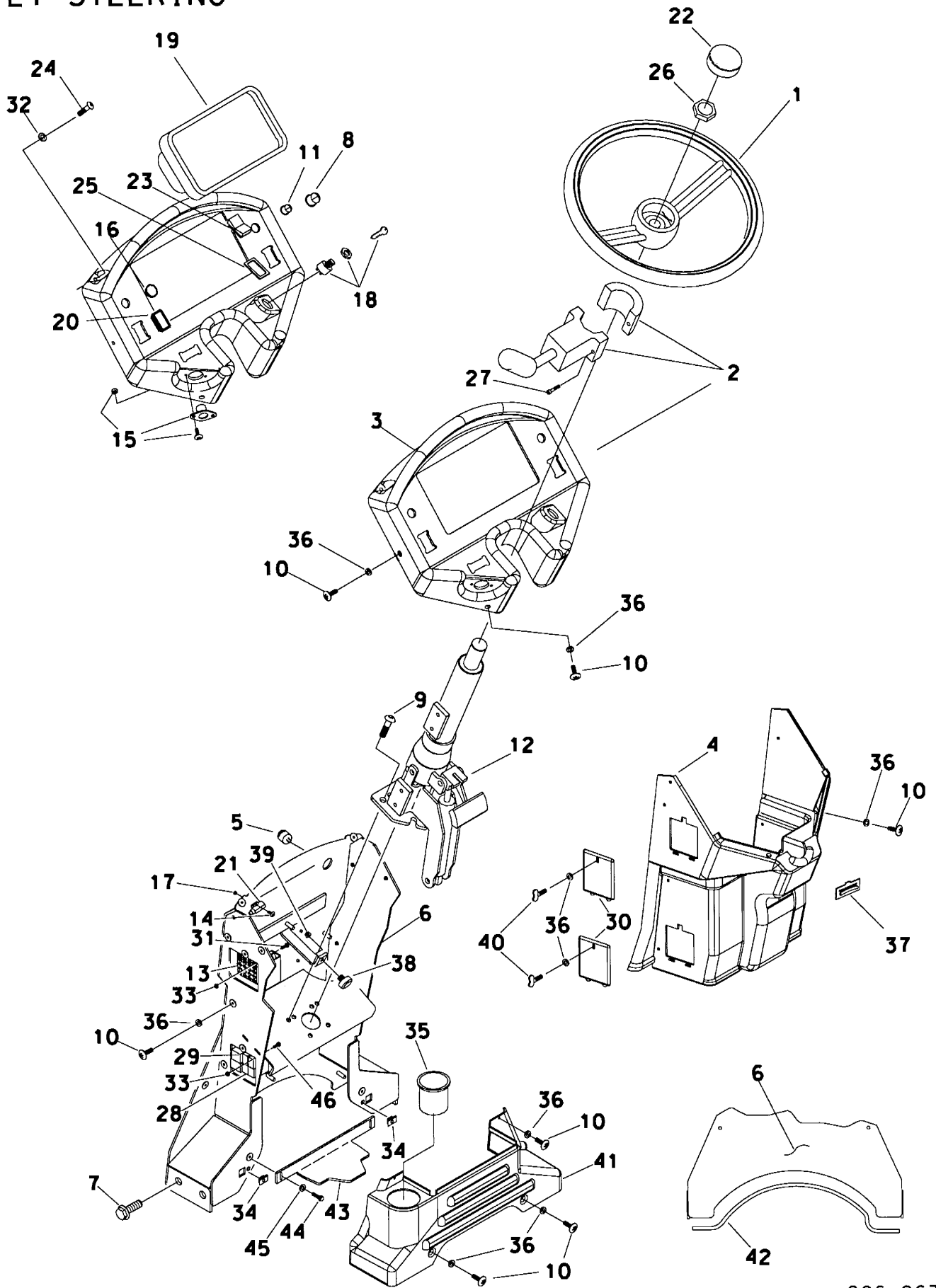
ENGINE ENCLOSURE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-227		SIDE PANEL LOCK KIT	INCLUDES REF #'S 26,27, & 28.
1.	334-092	1	LEFT SIDE PANEL	
2.	334-091	1	RIGHT SIDE PANEL	
3.	194-140	1	EXHAUST STACK	
4.	194-181	1	BAND CLAMP (4.5")	
	194-027	1	BAND CLAMP (4.143")	
5.	303-741	1	MID HOOD	
6.	307-909	1	FRONT HOOD SUPPORT	
7.	310-716	1	FIREWALL	
	111-043	9	INSULATION STUD	
	117-341	1	SOUND INSULATION	
8.	211-087	1	BATTERY JUMPER TERMINALS (RED)	
9.	117-344	AR	BULK EDGE (3/16", SOLD PER 1')	USE 2@ 25"
10.	110-681	4	DRAW LATCH	
11.	117-344	AR	BULK EDGE (3/16", SOLD PER 1')	USE 1@ 16"
12.	107-001	7	FLG LK SCREW (M10-1.50 X 25mm)	
13.	106-266	4	FLG NUT (M10-1.50)	
14.	107-003	11	FLG LK SCREW (M12-1.75 X 35mm)	
15.	106-709	9	FLG LK NUT (M12-1.75)	
16.	106-558	3	CLIP NUT (M10-1.50)	
17.	106-048	8	LOCKNUT (#10-24)	
18.	106-408	8	BOLT (#10-24 X 1-1/4",SOC, GD8)	
19.	116-282	AR	BULK EDGE (1/16", SOLD PER 1')	USE 2@ 27"
20.	116-421	AR	BULK EDGE (1/8", SOLD PER 1')	USE 1@ 26"
21.	217-819	1	BATTERY DISCONNECT SWITCH	INCLUDES HARDWARE
22.	110-253	8	POP RIVET (3/16" X 1/2")	
23.	106-725	2	SCREW (M10-1.50 X 65mm, SOC)	
24.	106-081	2	SCREW (M10-1.50 X 35mm, 12.9)	
25.	106-387	8	FLG LOCKNUT (M10-1.50)	
26.	194-345	2	LOCK CABLE	
27.	318-523	2	LOCK BRACKET	
28.	110-348	4	POP RIVET(3/16" X .664")	
29.	214-873	1	POSITIVE JUMPER CABLE	
30.	320-255	1	THREAD PLATE	
31.	107-004	1	FLG LK SCREW (M12-1.75 X 45mm)	SEE FOOTNOTE 1

FOOTNOTES

- REF #31 (107-004) IS USED IN POSITION SHOWN ONLY, THIS WILL ALLOW REF #26 (LOCK CABLE) TO BE ATTACHED AS REQUIRED.

TILT STEERING



TILT STEERING

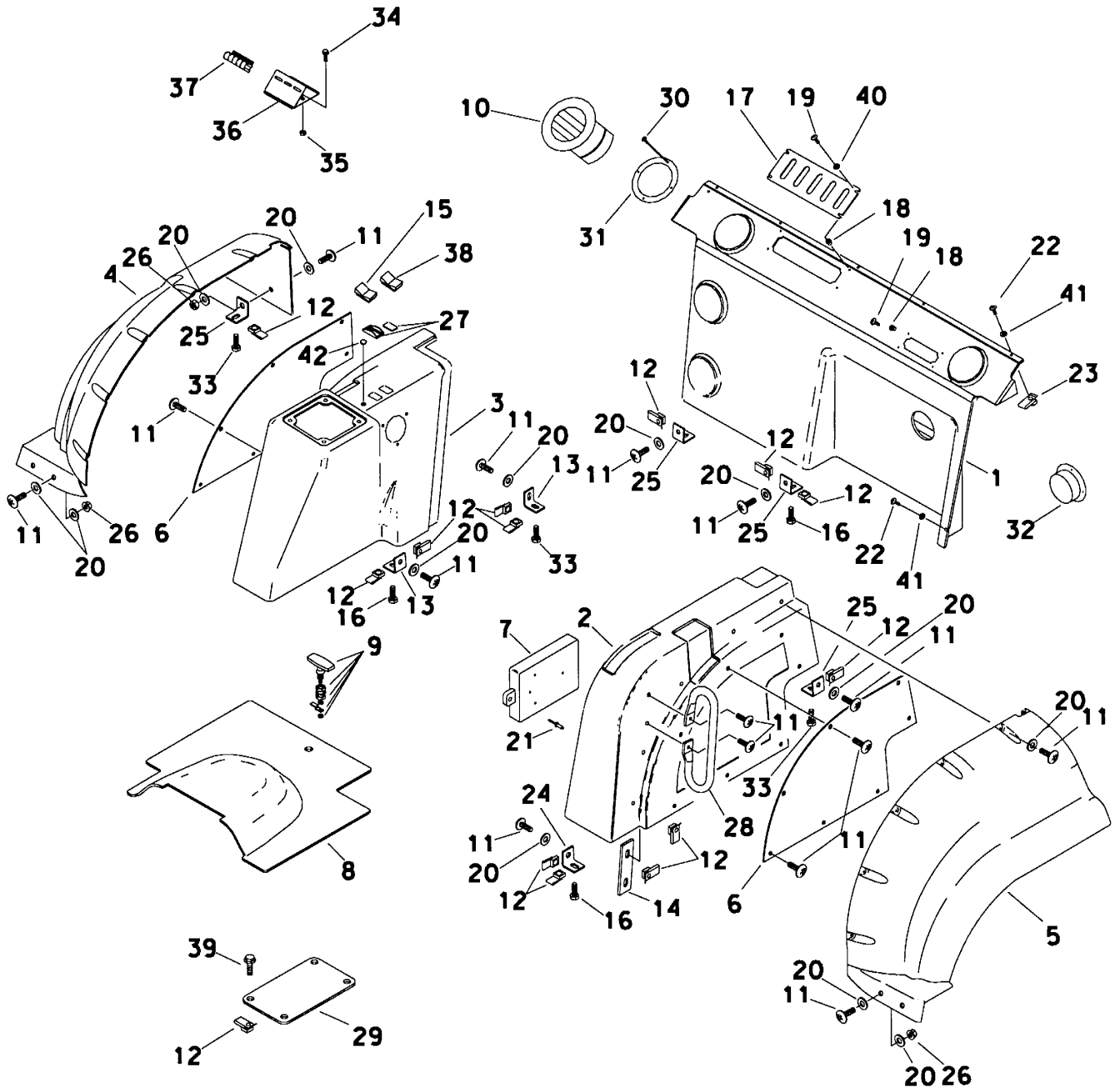
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	160-428	1	STEERING WHEEL	
2.	215-243	1	F-N-R SHIFTER	POWERSHIFT UNITS ONLY
3.	318-555	1	MAIN CONSOLE	
4.	318-556	1	CONSOLE CENTER SECTION	
5.	306-603	1	AUDIO ALARM	
6.	315-142	1	PEDESTAL	
7.	106-470	4	FLG SCREW (M16-2.0 X 40mm)	
8.	306-608	1	BUTTON COVER	
9.	107-864	4	BOLT (3/8-NC X 1.00", BUT SOC)	
10.	107-312	16	SCREW (M6-1 X 25mm, BUT SOC)	
11.	306-607	1	HORN BUTTON	
12.	306-433	1	STEERING COLUMN	
13.	217-791	1	FUSE (MAXI, 40 AMP)	
	217-811	1	FUSE (ATC, 15 AMP)	
	217-812	1	FUSE (ATC, 20 AMP)	
	217-813	1	FUSE (ATC, 30 AMP)	
14.	107-580	2	SCREW (M4-0.70 X 16mm, BUT SOC)	
15.	214-301	1	ACCESSORY SOCKET	
	107-580	2	SCREW (M4-0.70 X 16mm, BUT SOC)	
	105-680	2	NUT (M4, W/LK WSHR)	
16.	211-067	1	DOME PLUG (.687")	
17.	105-680	2	NUT (M4, W/LK WSHR)	
18.	214-852	1	IGNITION SWITCH	BEGINS WITH S/N
	214-961		KEY, PAIR (BASE CODE)	
	214-962		SWITCH MOUNTING NUT	
	214-963		LOCK PLUG W/1 KEY (BASE CODE)	
	217-768	1	IGNITION SWITCH	ENDS WITH S/N
	106-521	1	BEZEL NUT (1-NS)	
	217-769	1	KEY (PAIR)	
19.	211-259	1	5-GAUGE CLUSTER	
	217-223	1	5-GAUGE CLUSTER	
20.	362-823	AR	COVER	3 W/ POWERSHIFT UNITS, 2 W/ HYDROSTAT UNITS
21.	217-704	1	PLUNGER SWITCH	
22.	110-730	1	STEERING WHEEL CAP	
23.	217-762	1	ROCKER SWITCH (SPDT)	HYDROSTAT UNITS ONLY
24.	106-640	2	SCREW (M6-1.00 X 20mm, BUT SOC)	
25.	165-817	1	SWITCH GASKET	HYDROSTAT UNITS ONLY
26.	105-361	1	JAM NUT (13/16 NF)	
27.	106-425	2	(M5-0.80 X 40mm, SOC)	
28.	217-710	2	MICRO RELAY (SPDT)	
29.	217-826	3	MINI RELAY (SPDT)	1 W/ POWERSHIFT UNITS
30.	318-560	2	ACCESS DOOR	

FOOTNOTES

TILT STEERING

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
31.	106-049	6	BOLT (#10-24 X 3/4", PLPS)	
32.	107-744	2	WASHER (M6)	
33.	106-048	8	LOCKNUT (#10-24)	
34.	106-574	2	CLIP NUT (M6-1.00)	
35.	308-888	1	CUP HOLDER	
36.	107-801	18	WASHER (M6)	
37.	110-208	1	LEVEL INDICATOR	
38.	116-525	1	BUMPER	
39.	105-003	1	FLG LOCKNUT (5/16-NC)	
40.	107-800	2	WING SCREW (M6-1 X 25mm)	
41.	318-557	1	CONSOLE BASE	
42.	115-686	AR	BULK EDGE (5/32",SOLD PER 1")	USE 1 @ 25"
43.	314-487	1	BRACE	NOT USED ON POWER SHIFT UNITS
44.	106-987	2	FLG LK SCREW (M6-1.00 X 16mm)	NOT USED ON POWER SHIFT UNITS
45.	105-095	2	WASHER (1/4")	NOT USED ON POWER SHIFT UNITS
46.	105-185	2	BOLT (#10-24 X 1/2 ", RD SLT)	

FENDERS AND COVERS



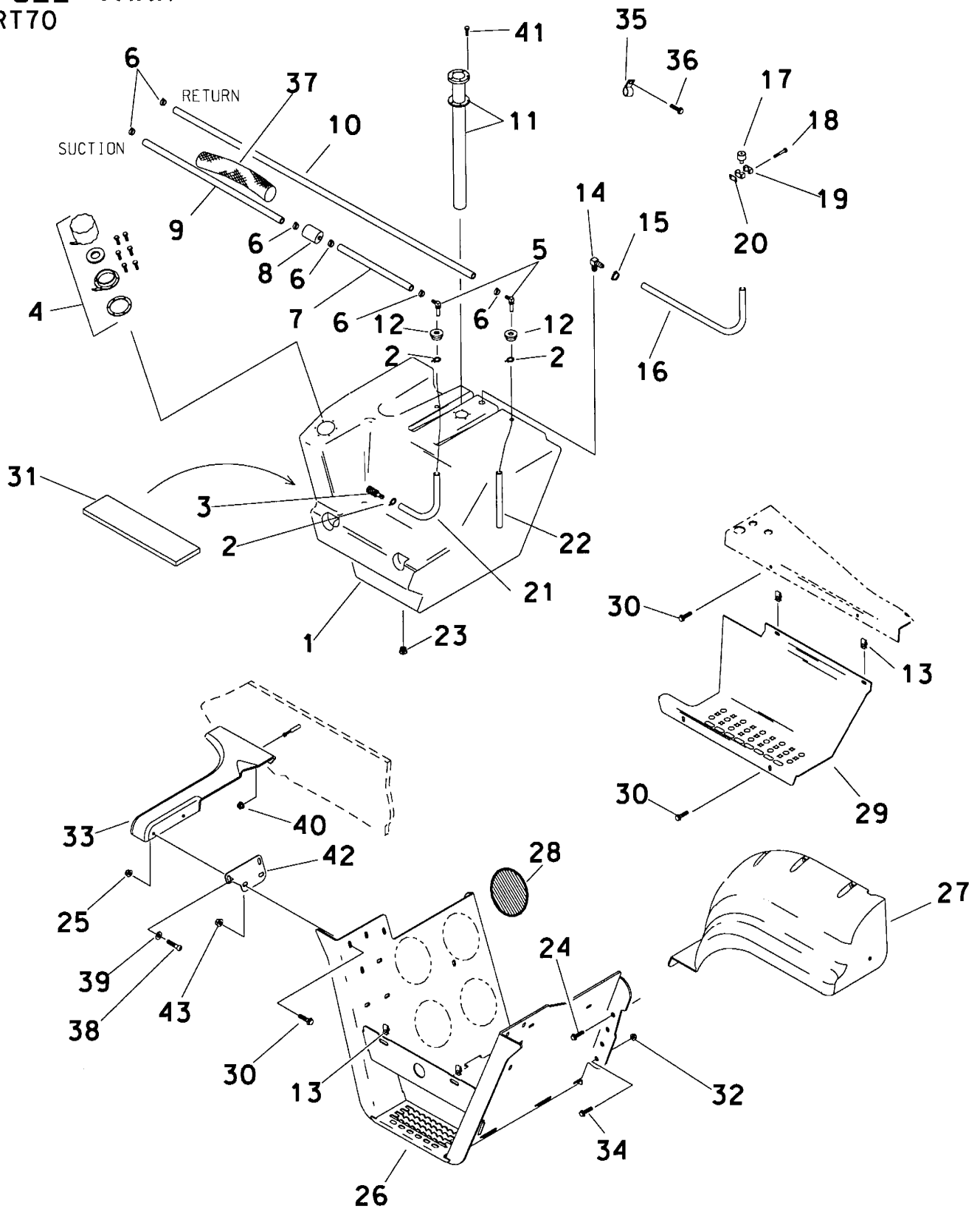
FENDERS AND COVERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	306-492	1	REAR PANEL	
	309-937	1	REAR PANEL	ASSY USED WITH A/C OR HEATER KIT
2.	306-491	1	LEFT FENDER	
3.	306-490	1	RIGHT FENDER	
4.	305-657	1	RIGHT OUTSIDE FENDER	
5.	305-656	1	LEFT OUTSIDE FENDER	
6.	308-897	2	PANEL	
7.	250-622	1	MANUAL COMPARTMENT	
8.	313-238	1	FLOOR PLATE	
	318-793	1	FLOOR PLATE	
9.	107-461	1	LOCKING LATCH	
10.	120-085	4	ADJUSTABLE LOUVER (23-0005)	USED WITH A/C OR HEATER KIT
11.	107-778	48	SCREW (M8-1.25 X 30mm, BUT SOC)	SEE FOOTNOTE 3
12.	107-135	38	CLIP NUT (M8-1.25)	
13.	306-796	2	TAB	
14.	309-816	2	STRAP	
15.	217-762	1	ROCKER SWITCH (SPDT)	USED WITH AXLE LOCK
16.	106-992	10	FLG LK SCREW (M8-1.25 X 25mm)	
17.	307-644	1	COVER	
18.	107-358	8	WELLNUT (M4-0.7)	
19.	107-580	8	SCREW (M4-0.70 X 16mm, BUT SOC)	
20.	107-629	43	WASHER (M8)	
21.	110-348	3	POP RIVET (3/16" X .664")	
22.	106-640	7	SCREW (M6-1.00 X 20mm, BUT SOC)	
23.	106-574	5	CLIP NUT (M6-1.00)	
24.	306-795	1	TAB	
25.	309-434	6	TAB	
26.	107-096	9	LOCKNUT (M8-1.25, NLK)	
27.	362-823	2	COVER	
	110-854	2	SWITCH ACTUATOR GUARD	USED WITH AXLE LOCK AND FRAME TILT OPTION
28.	117-360	2	GRAB HANDLE	
29.	309-847	1	FUEL SENDER COVER	
30.	106-155	20	SCREW (#4-40 X 5/8", PAN PLPS)	USED WITH A/C OR HEATER KIT
31.	120-084	4	HOSE ADAPTER (23-0048)	USED WITH A/C OR HEATER KIT
32.	120-123	1	HOSE ADAPTER (23-0090)	USED WITH A/C OR HEATER KIT
33.	106-989	4	FLG LK SCREW (M8-1.25 X 35mm)	
34.	106-724	2	FLG SCREW (M10-1.50 X 25mm)	USED WITH FRAME TILT OPTION
35.	105-894	2	LOCKNUT (M10-1.50, PRV TRQ, 10.9)	
36.	316-945	1	RELAY MOUNT	SEE FOOTNOTE 1
37.	217-194	10	MICRO RELAY BASE	
38.	217-764	1	ROCKER SWITCH (SPDT)	
39.	106-992	4	FLG LK SCREW (M8-1.25 X 25mm)	
40.	107-744	4	WASHER (M6)	
41.	106-388	7	WASHER (M6)	
42.	157-333	1	HOLE PLUG (.750")	SEE FOOTNOTE 2

FOOTNOTES

1. THIS IS TO BE USED FOR MECHANICAL (POWERSHIFT ONLY)
2. USE LOCTITE 401 ADHESIVE
3. USE LOCTITE 242 OR EQUIVALENT

FUEL TANK RT70



FUEL TANK RT70

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	194-164	1	FUEL TANK	70HP
2.	110-563	3	SPRING CLAMP (3/8")	
3.	156-268	1	FUEL STRAINER (04H)	
4.	364-568	1	FILL NECK ASSY, FUEL	ORIENT PADLOCK LUGS AWAY FROM STAIRWELL.
	153-760	1	CAP	LOCKABLE
	153-594	1	GASKET, FILL NECK CAP	
	153-607	1	FLANGE GASKET	
	107-781	6	HEX SCREW (#10-24 X 5/8")	
	153-761	1	FLANGE	
5.	156-269	2	S/O COUPLER (04H-05H90)	
6.	110-528	6	SNAP-ON CLAMP (.531" TO .593")	
7.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1@ 48"
8.	155-941	1	FUEL FILTER (05H-05H. IN-LINE)	
9.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1@ 4"
10.	116-108	AR	BULK HOSE (5/16", SOLD PER 1")	USE 1@ 46"
11.	214-650	1	FUEL SENDER	
	165-704	1	GASKET	
12.	116-325	2	GROMMET (.362")	
13.	107-287	4	CLIP NUT (M10-1.50)	
14.	156-108	1	S/O COUPLER (08N-08H90)	
15.	110-217	1	WORM CLAMP (7/16" TO 1")	
16.	116-322	AR	BULK HOSE (1/2", SOLD PER 1")	USE 1@ 48"
17.	111-021	1	BREATHER CAP (TANK)	
18.	105-818	2	BOLT (1/4-NC X 1-1/2")	
19.	110-411	1	BOLT-ON CLAMP (3/4", SET)	
20.	322-289	1	BACKUP (BOLT-ON)	
21.	116-166	AR	BULK HOSE (1/4", SOLD PER 1')	USE 1@ 24"
22.	116-166	AR	BULK HOSE (1/4", SOLD PER 1')	USE 1@ 20"
23.	114-002	1	PLUG (06N, SOC)	
24.	105-829	6	FLG LK BOLT (1/2-NC X 1")	
25.	106-386	2	FLG LOCKNUT (M8-1.25)	
26.	309-586	1	CRADLE	
	315-585	1	CRADLE	
27.	305-656	-	LEFT OUTSIDE FENDER	
28.	117-425	AR	LINER PAD (.12" THK)	SEE FOOTNOTE 2
	117-463	AR	LINER PAD (.25" THK)	
29.	313-820	1	TREAD, FUEL	
30.	107-001	8	FLG LK SCREW (M10-1.50 X 25mm)	
31.	117-442	AR	SUPPORT MAT	SEE FOOTNOTE 1
32.	106-198	2	FLG LOCKNUT (1/2-NC, GD8)	
33.	313-909	1	LEFT AIR DEFLECTOR	
34.	105-831	2	FLG LK BOLT (1/2-NC X 1-1/2")	
35.	110-333	1	BOLT-ON CLAMP (1")	
36.	105-033	1	BOLT (5/16-NC X 2")	
37.	117-671	1	ABRASION SLEEVE (1" X 12")	
38.	107-778	2	SCREW (M8-1.25 X 30mm, BUT SOC)	
39.	107-629	2	WASHER (M8)	
40.	105-003	1	FLG LOCKNUT (5/16-NC)	
41.	106-506	5	BOLT (#10-24 X 3/4")	
42.	319-452	1	CONNECTOR PLATE	
43.	106-387	2	FLG LOCKNUT (M10-1.50)	

FOOTNOTES

1. LAYER SUPPORT MAT BETWEEN LEDGE OF TANK AND UNDERSIDE OF STEP UNTIL FIRM PRESSURE IS REQUIRED TO ALIGN SLOTS AND INSERT SCREWS
2. ARRANGE LINER PADS IN AN EVEN PATTERN ON INTERIOR SURFACES OF THE SIDE PLATES, BOTTOM PLATE AND PLATE. USE .12 THICK AND .25 THICK TO PROVIDE A SNUG FIT FOR THE TANK. APPLY AND ADJUST THE LINER PADS UNTIL THE LEAST MOVEMENT POSSIBLE HAS BEEN ACCOMPLISHED. ONCE FILLED THE TANK SHOULD NOT SHIFT.

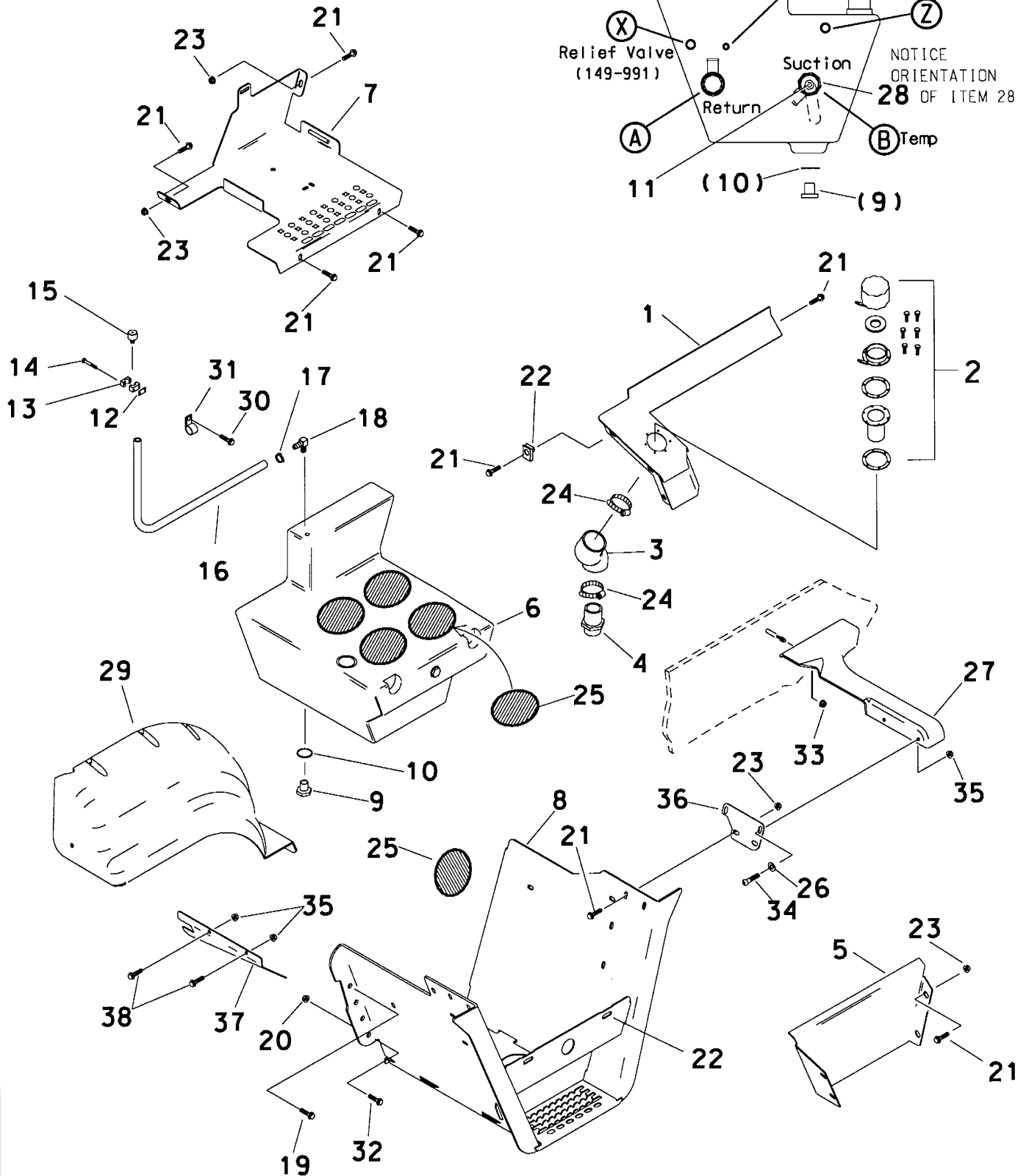
HYDRAULIC RESERVOIR

RT70

ENDS WITH SERIAL NO. -----

REAR VIEW OF TANK
(ENLARGED)

← FRONT OF TRACTOR



HYDRAULIC RESERVOIR

RT70

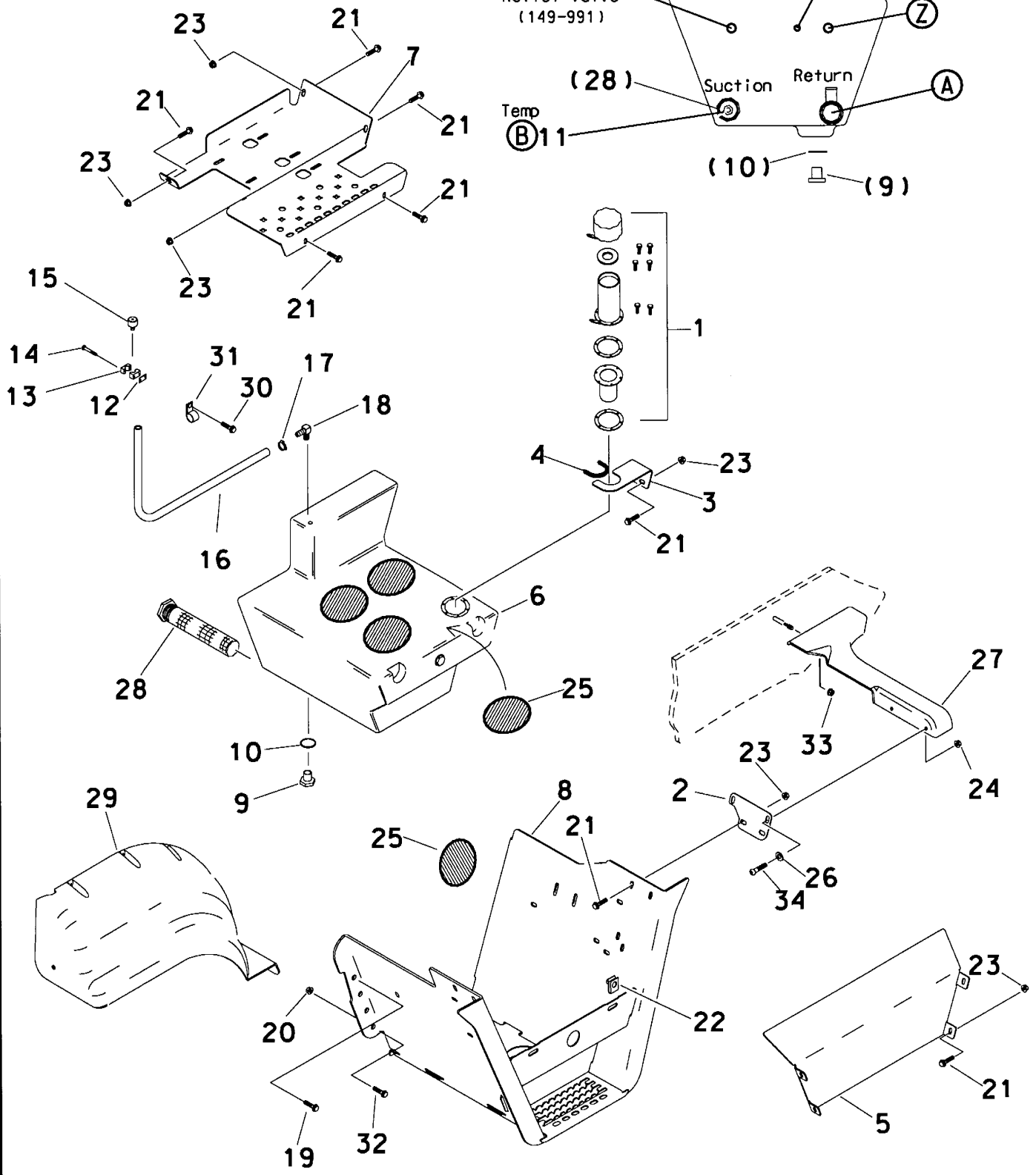
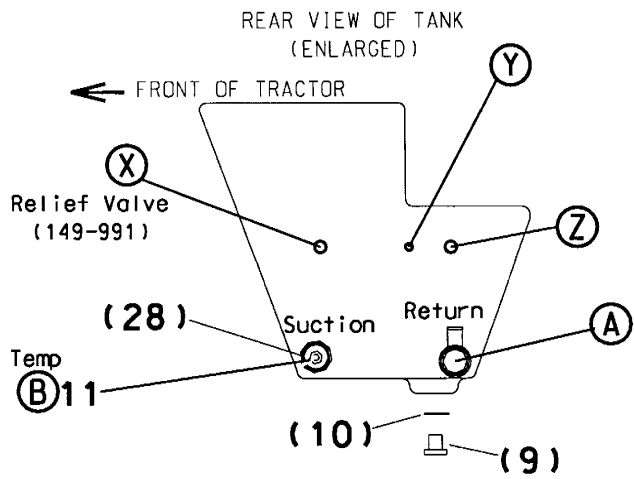
ENDS WITH SERIAL NO. _____

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	309-629	1	FILL NECK COVER	
2.	364-567	1	FILL NECK	SEE FOOTNOTE 4
	153-760	1	CAP	LOCKABLE
	153-594	1	GASKET, FILL NECK CAP	
	153-607	2	FLANGE GASKET	
	153-606	1	STRAINER BASKET	
	107-781	6	HEX SCREW (#10-24 X 5/8")	
	153-761	1	FLANGE	
3.	117-357	1	FILLER HOSE	SEE FOOTNOTE 2
4.	149-998	1	S/O COUPLER (24N-32H)	
5.	309-529	1	BATTERY DOOR	
6.	153-049	1	HYDRAULIC RESERVOIR	
	121-040	1	SIGHT GLASS	
7.	309-614	1	UPPER STEP	
8.	309-468	1	CRADLE	
	315-585	1	CRADLE	
9.	157-466	1	DRAIN PLUG (1-UNF, .375 ORF)	
10.	500-749	1	O-RING (211 D70)	
11.	214-854	-	TEMPERATURE SWITCH	
12.	322-289	1	BACKUP (BOLT-ON)	
13.	110-411	1	BOLT-ON CLAMP (3/4", SET)	
14.	105-818	2	BOLT (1/4 NC X 1-1/2")	
15.	111-021	1	BREATHER CAP (TANK)	
16.	116-322	AR	BULK HOSE (1/2", SOLD PER 1")	USE 1@ 48"
17.	110-217	1	WORM CLAMP (7/16" TO 1")	
18.	156-108	1	S/O COUPLER (08N-08H90)	
19.	105-829	6	FLG LK BOLT (1/2-NC X 1")	
20.	106-198	2	FLG LOCKNUT (1/2-NC, GD8)	
21.	107-001	16	FLG LK SCREW (M10-1.50 X 25mm)	
22.	106-558	7	CLIP NUT (M10-1.5)	
23.	106-387	8	FLG LOCKNUT (M10-1.50)	
24.	110-311	2	WORM CLAMP (1-5/16" TO 3-1/4")	
25.	117-425	AR	LINER PAD (.12" THK)	SEE FOOTNOTE 1
	117-463	AR	LINER PAD (.25" THK)	SEE FOOTNOTE 1
26.	107-629	2	WASHER (M8)	
27.	313-908	1	RIGHT AIR DEFLECTOR	
28.	153-710	-	PICK UP TUBE	
29.	305-657	-	RIGHT OUTSIDE FENDER	
30.	105-033	1	BOLT (5/16-NC X 2")	
31.	110-333	1	BOLT-ON CLAMP (1")	
32.	105-831	2	FLG LK BOLT (1/2-NC X 1-1/2")	
33.	105-003	1	FLG LOCKNUT (5/16-NC)	
34.	107-778	2	SCREW (M8-1.25 X 30mm, BUT SOC)	
35.	106-386	4	FLG LOCKNUT (M8-1.25)	
36.	319-452	1	CONNECTOR PLATE	
37.	315-440	1	TOP MUD SHIELD	
38.	106-162	2	FLG SCREW (M8-1.25 X 20mm)	

FOOTNOTES

- ARRANGE LINER PADS IN AN EVEN PATTERN ON THE INTERIOR SURFACES OF THE SIDE PLATES, BOTTOM PLATE AND KICK PLATE. USE .12" THICK AND .25" THICK TO PROVIDE A SNUG FIT FOR THE TANK. APPLY AND ADJUST THE LINER PADS UNTIL THE LEAST MOVEMENT POSSIBLE HAS BEEN ACCOMPLISHED. THE TANK SHOULD NOT SHIFT WHEN FILLED
- APPLY PARMA TEX
- REFER TO PAGE "BATTERY HOLD DOWN" FOR BATTERY INSTALL DETAILS
- ORIENT PADLOCK LUGS AWAY FROM STAIRWELL

HYDRAULIC RESERVOIR RT70 AFTER SERIAL NO. -----



A

808-640

HYDRAULIC RESERVOIR

RT70

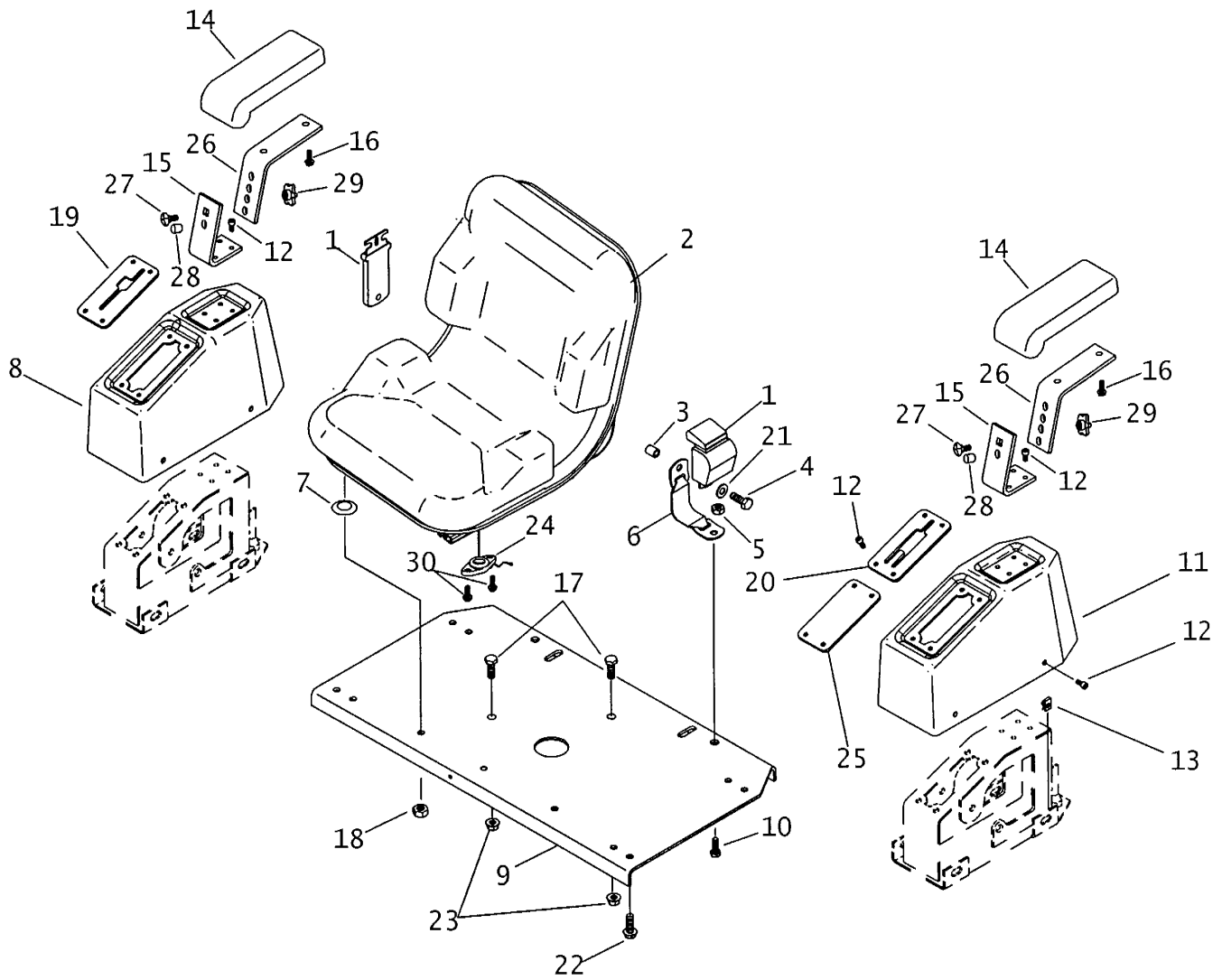
AFTER SERIAL NO. _____

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	364-632	1	FILL NECK	SEE FOOTNOTE 3
	153-760	1	CAP	LOCKABLE
	153-594	1	GASKET, FILL NECK CAP	
	153-607	2	FLANGE GASKET	
	153-606	1	STRAINER BASKET	
	107-781	6	HEX SCREW (#10-24 X 5/8")	
2.	319-452	1	CONNECTOR PLATE	
3.	335-004	1	FILL NECK SUPPORT	
4.	115-686	AR	BULK EDGE (5/32", SOLD PER 1")	USE 1 @ 6"
5.	334-003	1	BATTERY DOOR	SEE FOOTNOTE 2
6.	364-633	1	HYDRAULIC RESERVOIR	
	121-040	1	SIGHT GLASS	
7.	307-311	1	HYDRAULIC TANK STEP	
8.	315-585	1	CRADLE	
9.	157-466	1	DRAIN PLUG (1-UNF, .375 ORF)	
10.	500-749	1	O-RING (211 D70)	
11.	214-854	-	TEMPERATURE SWITCH	
12.	322-289	1	BACKUP (BOLT-ON)	
13.	110-411	1	BOLT-ON CLAMP (3/4", SET)	
14.	105-818	2	BOLT (1/4 NC X 1-1/2")	
15.	111-021	1	BREATHER CAP (TANK)	
16.	116-322	AR	BULK HOSE (1/2", SOLD PER 1")	USE 1 @ 48"
17.	110-217	1	WORM CLAMP (7/16" TO 1")	
18.	156-108	1	S/O COUPLER (08N-08H90)	
19.	105-829	6	FLG LK BOLT (1/2-NC X 1")	
20.	106-198	2	FLG LOCKNUT (1/2-NC, GD8)	
21.	107-001	13	FLG LK SCREW (M10-1.50 X 25mm)	
22.	106-558	2	CLIP NUT (M10-1.5)	
23.	106-387	11	FLG LOCKNUT (M10-1.50)	
24.	106-386	2	FLG LOCKNUT (M8-1.25)	
25.	117-425	AR	LINER PAD (.12" THK)	SEE FOOTNOTE 1
	117-463	AR	LINER PAD (.25" THK)	SEE FOOTNOTE 1
26.	107-629	2	WASHER (M8)	
27.	313-908	1	RIGHT AIR DEFLECTOR	
28.	110-336	1	STRAINER (24S-20SF)	
29.	305-657	-	RIGHT OUTSIDE FENDER	
30.	105-033	1	BOLT (5/16-NC X 2")	
31.	110-333	1	BOLT-ON CLAMP (1")	
32.	105-831	2	FLG LK BOLT (1/2-NC X 1-1/2")	
33.	105-003	1	FLG LOCKNUT (5/16-NC)	
34.	107-778	2	SCREW (M8-1.25 X 30mm, BUT SOC)	

FOOTNOTES

- ARRANGE LINER PADS IN AN EVEN PATTERN ON THE INTERIOR SURFACES OF THE SIDE PLATES, BOTTOM PLATE AND KICK PLATE. USE .12" THICK AND .25" THICK TO PROVIDE A SNUG FIT FOR THE TANK. APPLY AND ADJUST THE LINER PADS UNTIL THE LEAST MOVEMENT POSSIBLE HAS BEEN ACCOMPLISHED. THE TANK SHOULD NOT SHIFT WHEN FILLED.
- REFER TO PAGE "BATTERY HOLD DOWN" FOR BATTERY INSTALL DETAILS
- ORIENT PADLOCK LUGS AWAY FROM STAIRWELL

SEAT PLATFORM



SEAT PLATFORM

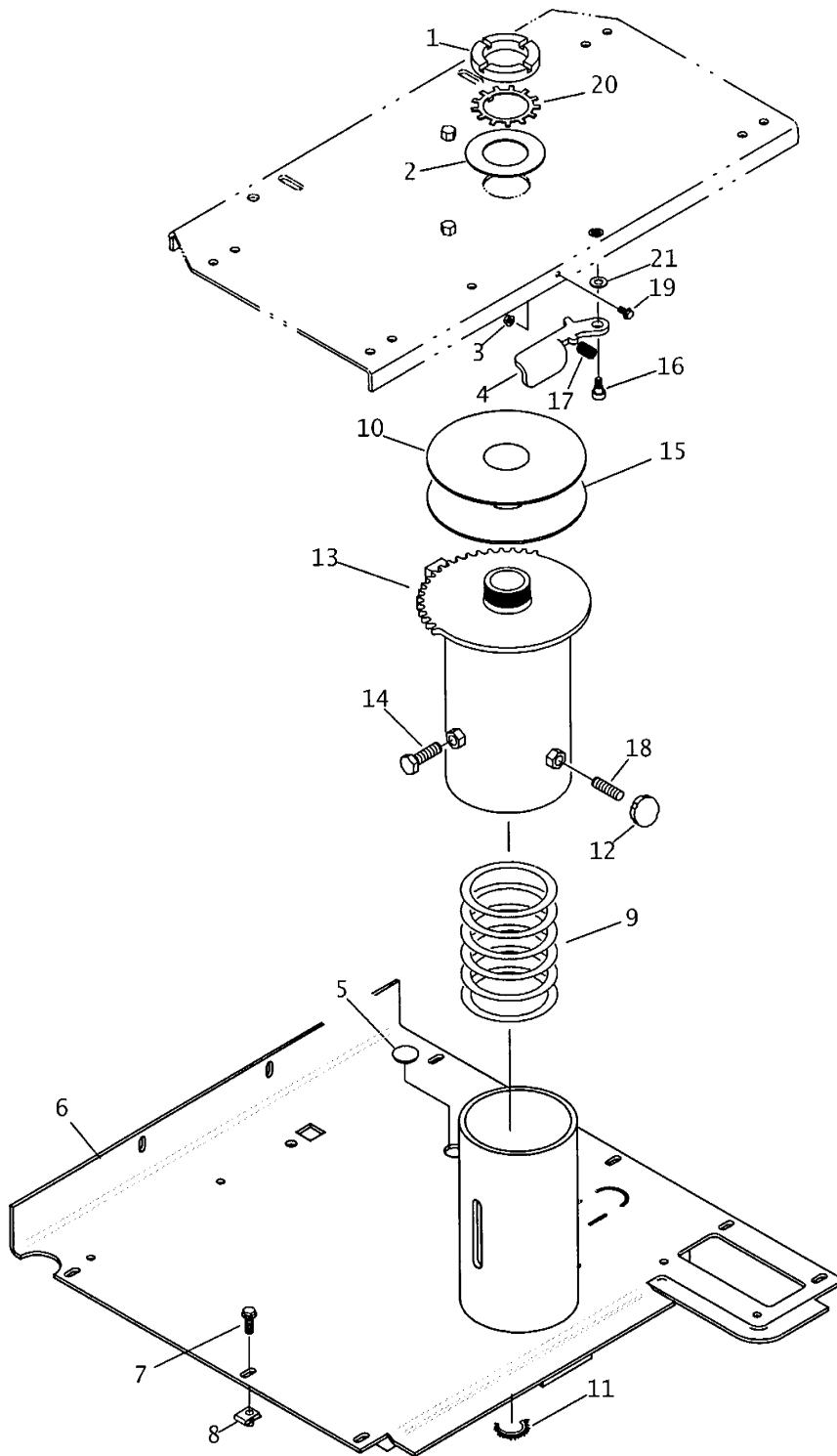
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	117-924	1	SEAT BELT SET W/5.75" TONGUE	
	117-925	-	SEAT BELT TONGUE (5.75")	
2.	117-429	1	SEAT	
	115-445		REPLACEMENT SEAT	
	115-428		ADJUSTABLE TRACK	
3.	184-252	2	BUSHING (.562" X 1" X .590")	
4.	106-333	2	SCREW (M12-1.75 X 40mm, 8.8)	
5.	106-031	2	LOCKNUT (M12-1.75, NLK)	
6.	115-430	2	SEAT BELT TETHER	
7.	105-267	4	CUP WASHER (5/16")	
8.	309-431	1	RIGHT SEAT CONSOLE	
9.	314-594	1	SEAT BASE	
10.	105-273	2	SCREW (M12-1.75 X 30mm)	
11.	305-649	1	LEFT SEAT CONSOLE	
12.	107-312	32	SCREW (M6-1.00 X 25mm, BUT SOC)	
13.	106-574	8	CLIP NUT (M6-1.00)	
14.	117-314	2	ARMREST	
15.	309-294	2	LOWER ARMREST BRACKET	
16.	106-159	4	FLG SCREW (1/4-NC X 3/4")	
17.	105-876	2	SCREW (M10-1.50 X 35mm)	
18.	105-089	4	LOCKNUT (5/16-NC)	
19.	309-295	1	Z-GATE	USED W/ GROUND DRIVE ON ALL MACHINES
	319-158	1	Z-GATE	USED W/ GROUND DRIVE ON ALL MACHINES
20.	313-411	1	Y-GATE	USED WITH COMBO ATTACHMENT
	316-479	1	PLOW GATE	USED WITH PLOW ATTACHMENT
21.	106-391	2	WASHER (M12)	
22.	107-001	8	FLG LK SCREW (M10-1.50 X 25mm)	
23.	106-387	2	FLG LOCKNUT (M10-1.50)	
24.	214-770	1	SEAT SWITCH	
25.	310-801	1	BLANK	USED ON MECHANICAL UNITS ONLY
26.	313-707	2	UPPER ARMREST BRACKET	
27.	107-702	2	CARRIAGE BOLT (3/8-NC X 3/4")	
28.	107-698	2	DOWEL PIN (.375 X .500)	
29.	110-383	2	KNOB (3/8-NC, BLACK)	
30.	106-168	2	FLG LK BOLT (1/4-NC X 3/4")	SEE FOOTNOTE 1

FOOTNOTES

I. USE LOCTITE 242 OR EQUIVALENT

NOTE:

SEAT SWIVEL AND BASE



SEAT SWIVEL AND BASE

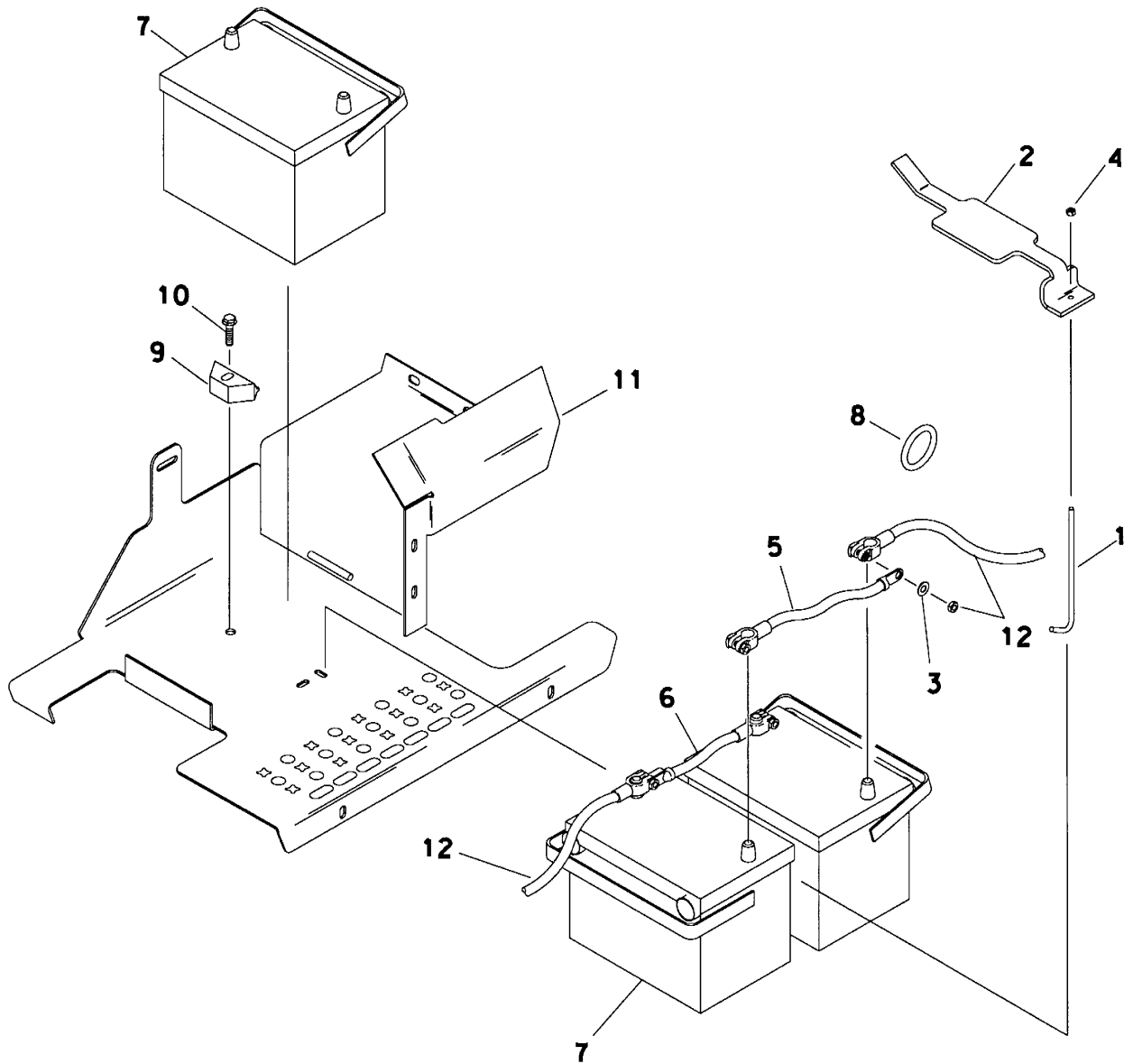
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	107-528	1	PN10 SLOTTED NUT	SEE FOOTNOTE 2
2	106-522	1	WASHER (2-1/16")	
3	106-385	1	FLG LOCKNUT (M6-1.00)	
4	308-895	1	LEVER	
5	110-178	1	PLUG (7/8")	
6	306-844	1	SEAT BASE	
	322-986	1	SEAT BASE	FOR TIER 2 RT90 & RT115
	324-729	1	SEAT BASE	FOR HT115
7	106-992	7	FLG LK SCREW (M8-1.25 X 25mm)	SEE FOOTNOTE 1
8	107-135	11	CLIP NUT (M8-1.25)	
9	117-816	1	COMPRESSION SPRING	
10	179-382	1	SHIM (.020)	
11	115-662	1	GROMMET EDGE (3/16" X 12.7")	
12	110-383	1	KNOB (3/8-NC, BLACK)	
13	308-879	1	SWIVEL	
14	106-559	1	SCREW (M12-1.75 X 25mm)	
15	117-301	1	SWIVEL DISK (7" UHMW)	SEE FOOTNOTE 3
16	107-582	1	SHLD BOLT (3/8" X 1/4", 5/16-NC)	SEE FOOTNOTE 1
17	115-645	1	COMPRESSION SPRING	
18	106-121	1	STUD BOLT (3/8-NC X 1-1/2")	
19	106-986	1	FLG LK SCREW (M6-1.00 X 12mm)	
20	107-606	1	TANG LOCK WASHER (2")	
21	105-095	1	WASHER (1/4")	

FOOTNOTES

1. USE LOCTITE 242 OR EQUIVALENT
2. TORQUE SPANNER NUT TO PREVENT ROTATION, THEN REVERSE DIRECTION AND LOOSEN 1/8 OF A TURN.
3. NO LUBRICANT ON ITEM #15

NOTE:

BATTERY HOLD DOWN
BEFORE SERIAL NO. -----

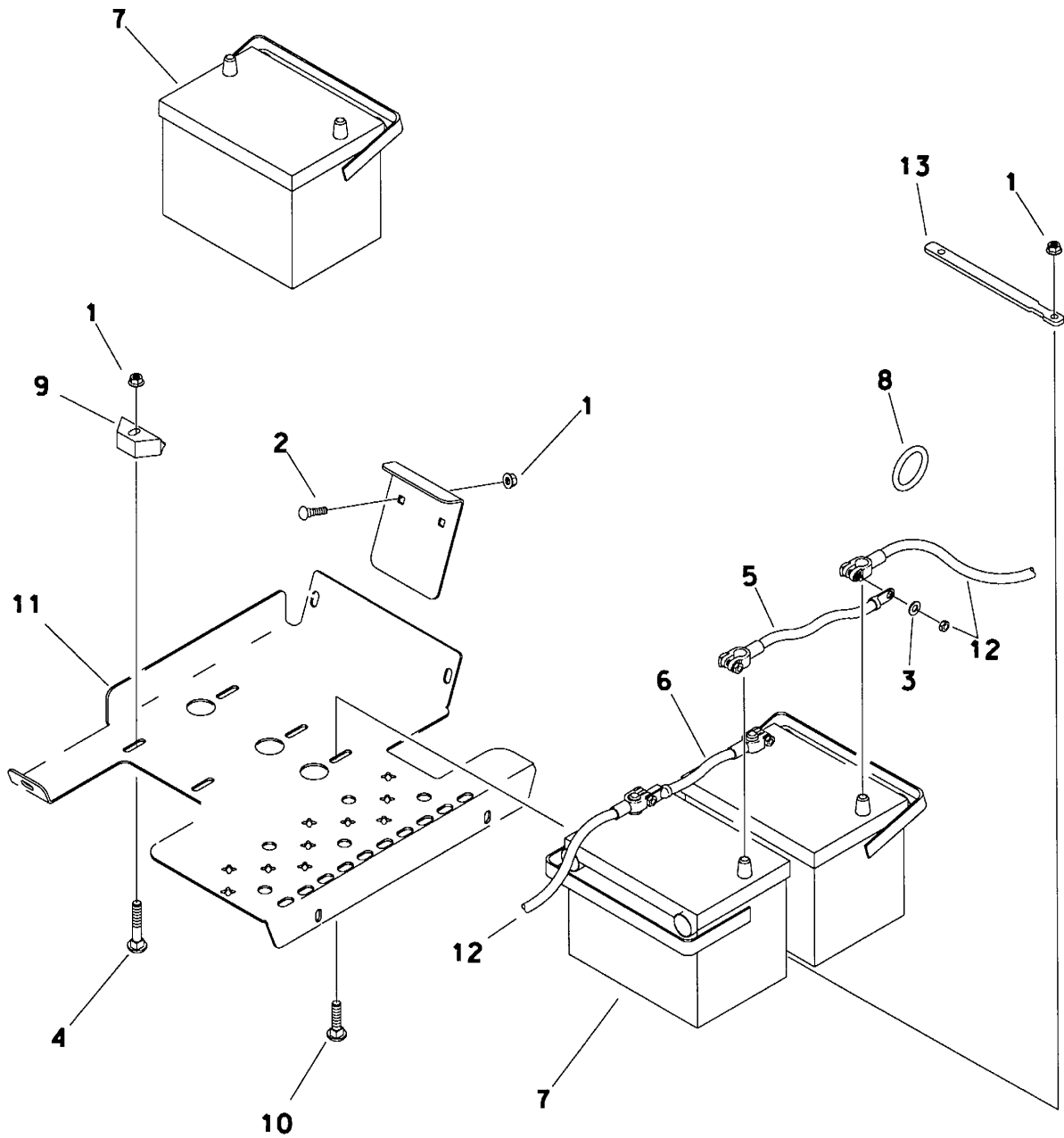


BATTERY HOLD DOWN BEFORE SERIAL NO. _____

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-108	-	DUAL BATTERY CONVERSION KIT	ITEMS 1 THRU 7
1.	306-765	1	J HOOK (7.8")	
2.	309-576	1	DUAL BATTERY HOLD DOWN	
3.	106-390	2	WASHER (M10)	
4.	105-078	1	NUT (1/4-NC)	
5.	215-349	1	BATTERY CABLE (2 GA X 8", RED)	
6.	215-350	1	BAT CABLE (2 GA X 8", BLK)	
7.	215-244	1	BATTERY (12V, 800 AMP)	
8.	115-320	1	GROMMET (1-1/2")	
9.	107-554	1	BATTERY HOLD DOWN	
10.	106-994	1	FLG LK SCREW (M10-1.50 X 40mm)	
11.	309-578	-	UPPER STEP	
12.	215-286	1	BATTERY CABLE KIT	

FOOTNOTES

BATTERY HOLD DOWN AFTER SERIAL NO. -----

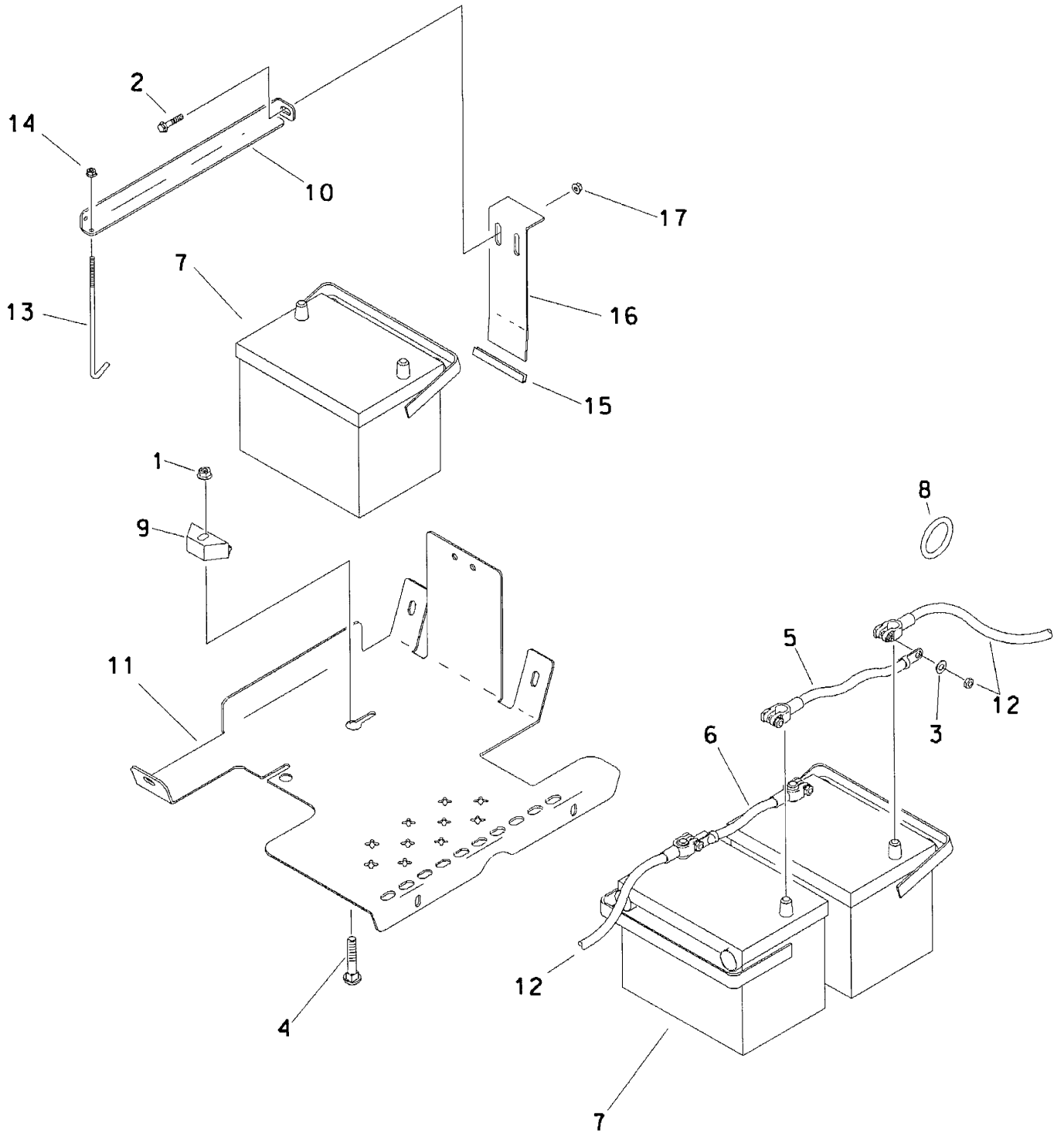


BATTERY HOLD DOWN AFTER SERIAL NO. _____

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	190-944		DUAL BATTERY CONVERSION KIT	INCLUDES ITEMS: 1,3, 5-7, 10,13
1.	105-814	6	FLG LOCKNUT (3/8-NC)	
2.	105-600	2	CARRIAGE BOLT (3/8-NC X 1")	
3.	106-390	2	WASHER (M10)	
4.	107-566	2	CARRIAGE BOLT (3/8-NC X 1-1/2")	
5.	215-349	1	BATTERY CABLE (2 GA X 8", RED)	
6.	215-350	1	BAT CABLE (2 GA X 8", BLK)	
7.	215-244	1	BATTERY (12V, 800 AMP)	
8.	115-320	1	GROMMET (1-1/2")	
9.	107-554	2	BATTERY HOLD DOWN	
10.	105-249	2	CARRIAGE BOLT (3/8-NC X 1-1/4")	
11.	307-311	1	HYDRAULIC TANK STEP	
12.	215-286	1	BATTERY CABLE KIT	
13.	334-089	1	BUAL BATTERY HOLD DOWN	

FOOTNOTES

BATTERY HOLD DOWN
BEGINS SERIAL NO. 5X0465

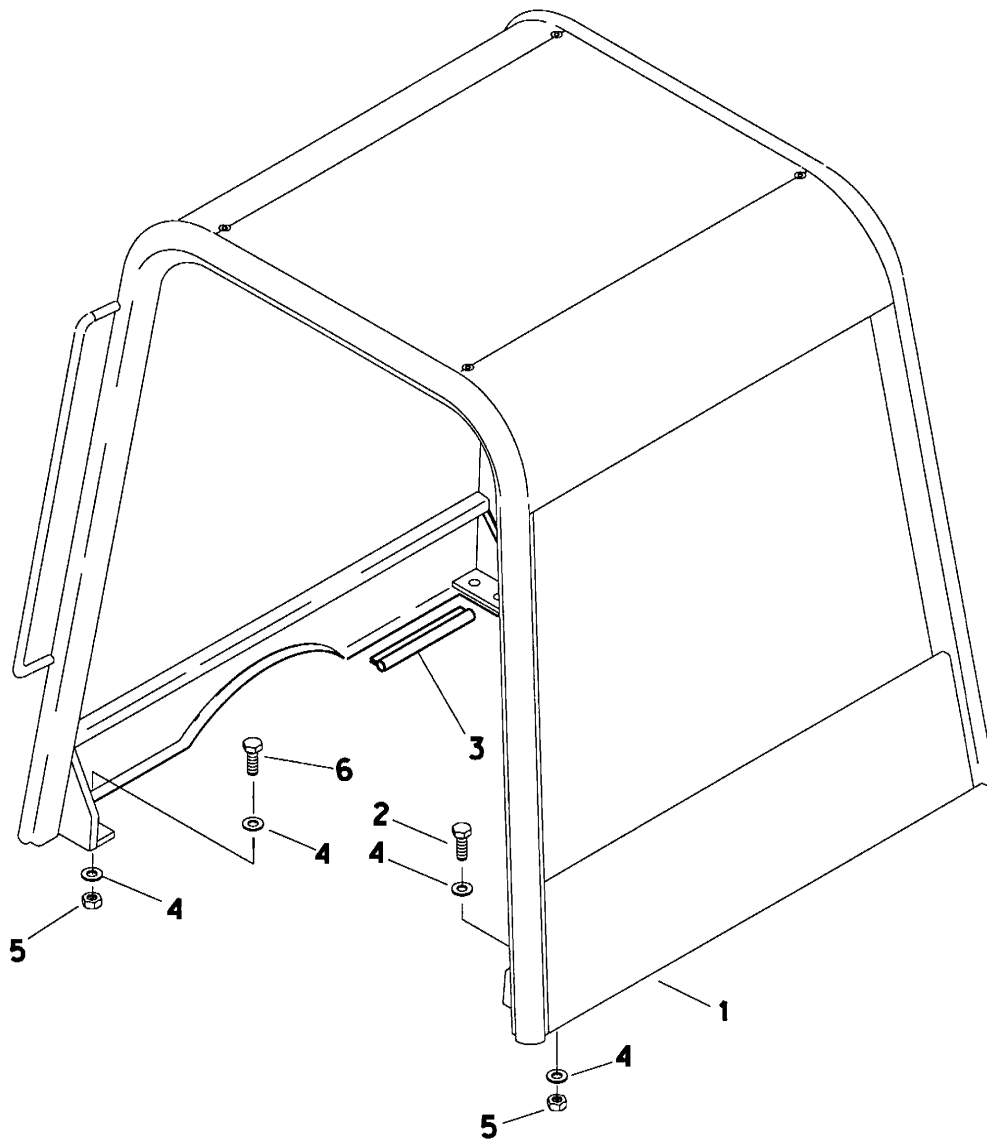


BATTERY HOLD DOWN BEGINS SERIAL NO. 5X0465

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	190-944		DUAL BATTERY CONVERSION KIT	INCLUDES ITEMS: 5,6,7,10,13, & 14
1.	105-814	1	FLG LOCKNUT (3/8-NC)	
2.	107-001	2	FLG LK SCREW (M10-1.50 X 25mm)	
3.	106-390	2	WASHER (M10)	
4.	108-067	1	CARRIAGE BOLT (3/8-NC X 2")	
5.	215-349	1	BATTERY CABLE (2 GA X 8", RED)	
6.	215-350	1	BAT CABLE (2 GA X 8", BLK)	
7.	215-244	1	BATTERY	
8.	115-320	1	GROMMET (1-1/2")	
9.	107-554	1	BATTERY HOLD DOWN	
10.	322-951	1	BATTERY HOLD DOWN	
11.	307-311	1	HYDRAULIC TANK STEP	
12.	215-286	1	BATTERY CABLE KIT	
13.	179-799	1	J-HOOK	
14.	105-832	1	FLG LOCKNUT (1/4-NC)	
15.	116-789	AR	RUBBER EDGE TRIM 1/8" (FT)	USE 3"
16.	320-112	1	HOLD DOWN	
17.	106-387	2	FLG LK NUT (M10-1.50)	

FOOTNOTES

4-POST ROPS
ENDS WITH S/N 5W0526



4-POST ROPS

ENDS WITH S/N 5W0526

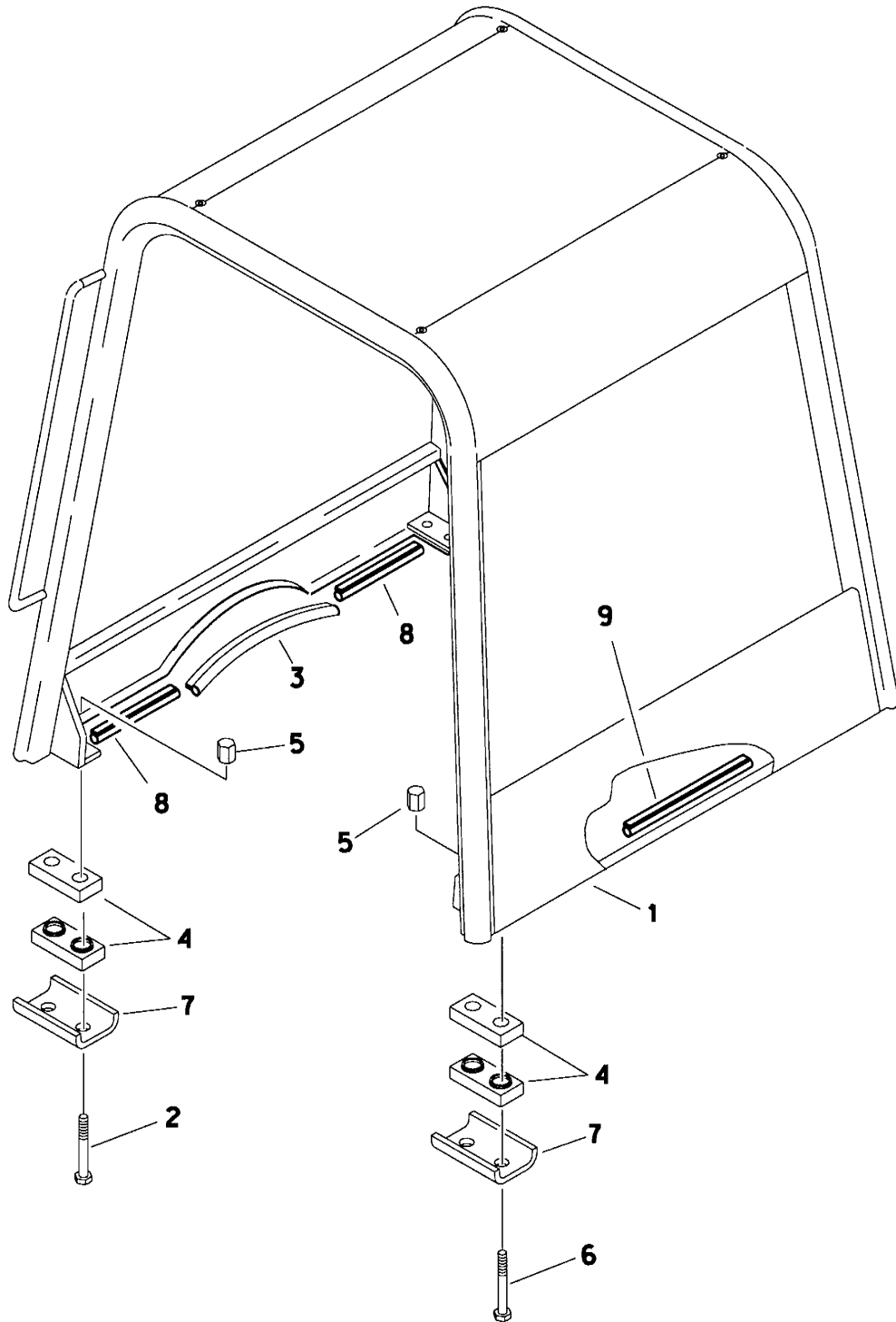
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	318-453	1	4-POST ROPS FRAME	
2.	106-345	4	SCREW (M20-2.50 X 50mm)	SEE FOOTNOTE 1
3.	116-421 AR		BULK EDGE (1/8", SOLD PER 1')	USE 1@ 2.5 FT
4.	106-393	16	WASHER (M20)	
5.	106-665	8	LOCKNUT (M20-2.50, 10.9)	
6.	106-798	4	SCREW (M20-2.50 x 55mm, 10.9)	SEE FOOTNOTE 1

FOOTNOTES

1 CHECK TORQUE CHART

4-POST ROPS

BEGINS WITH S/N 5W0527



A

808-650

4-POST ROPS

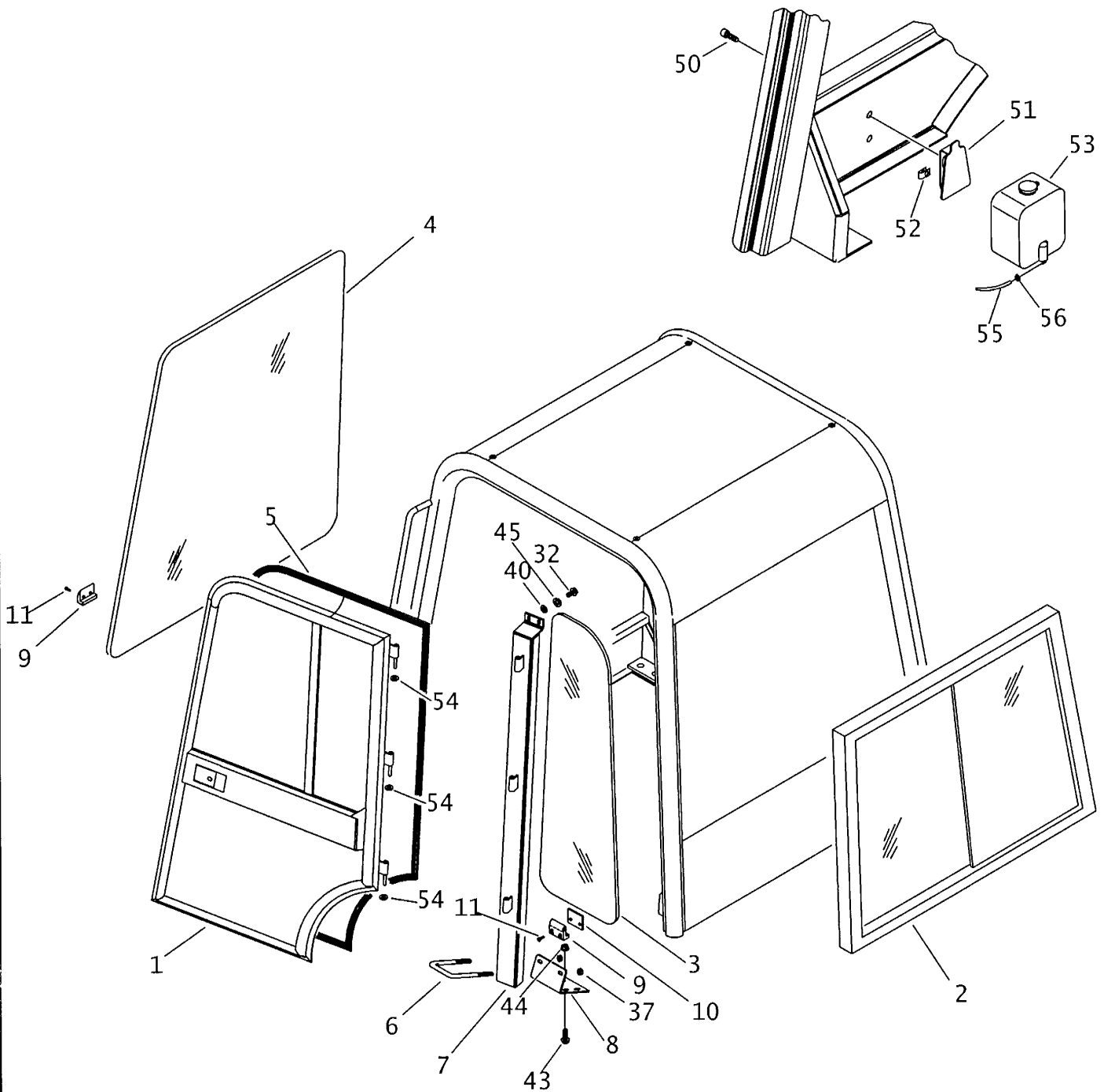
BEGINS WITH S/N 5W0527

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	320-250	1	4-POST ROPS FRAME	
2.	107-923	4	SCREW (3/4-NC X 5", GD5) SPEC.	REFER TO FOOTNOTE 1
3.	116-421 AR		BULK EDGE (1/8", SOLD PER 1')	USE 1@ 2.5 FT
4.	117-973	8	SHOCK MOUNT	
5.	107-924	8	NUT (3/4-NC) SPECIAL	
6.	107-922	4	SCREW (3/4-NC X 4-1/2", GD5) SPEC.	REFER TO FOOTNOTE 2
7.	320-240	4	ISOLATOR IRON	
8.	117-344 AR		BULK EDGE (3/16", SOLD PER 1")	USE 2 @ 1 FT.
9.	117-344 AR		BULK EDGE (3/16", SOLD PER 1")	USE 1 @ 3.5 FT.

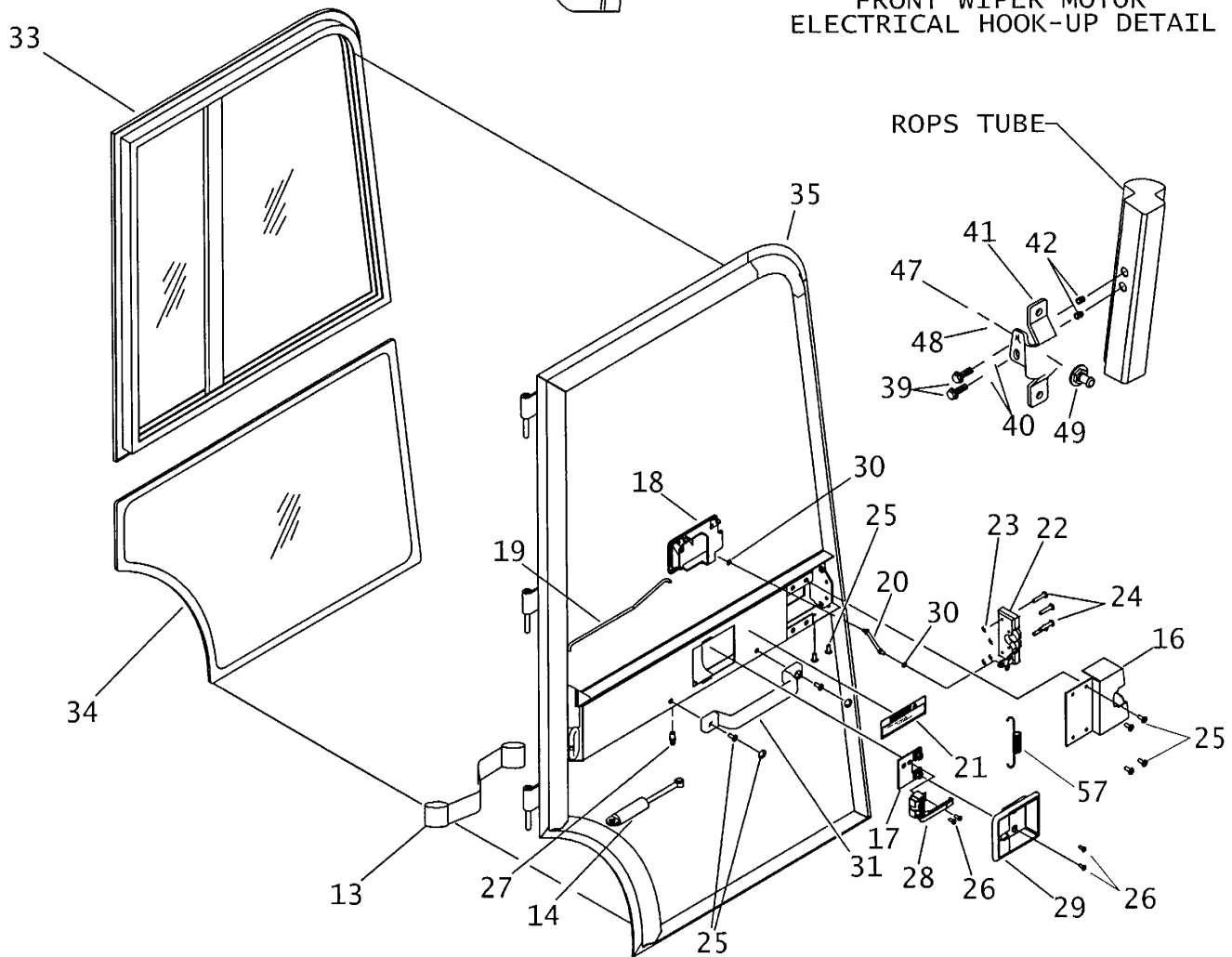
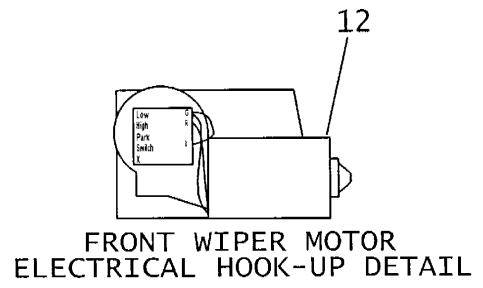
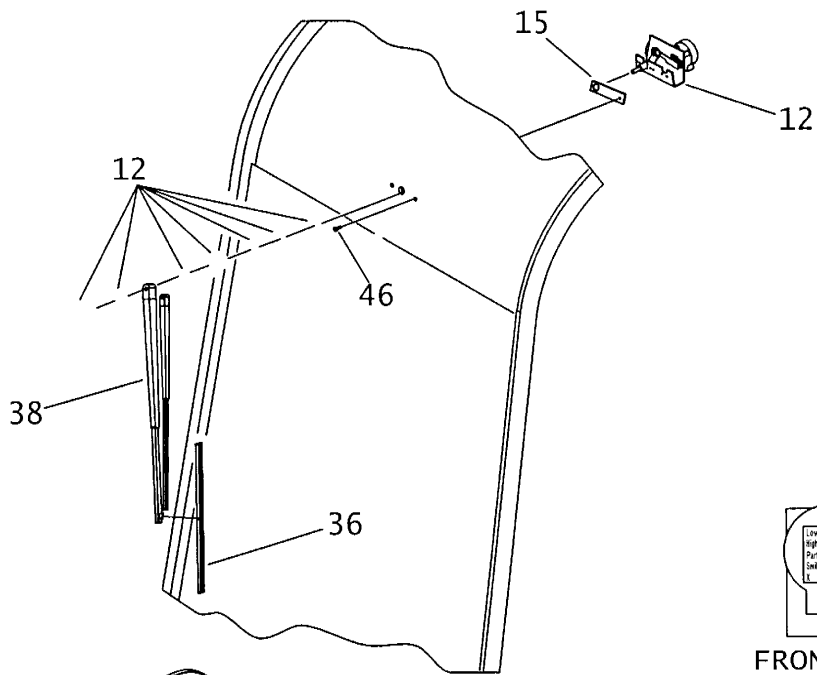
FOOTNOTES

- SCREW (107-923) HAS GOLD PLATING TO DISTINGUISH IT FROM SCREW (107-922). PROPER LOCATION IS IMPORTANT FOR PROPER ASSEMBLY OF THE ROPS. TORQUE TO 200 Ft.Lbs, USE LOCTITE 271 OR EQUIVALENT.
- SCREW (107-922) HAS SILVER PLATING TO DISTINGUISH IT FROM SCREW (107-923). PROPER LOCATION IS IMPORTANT FOR PROPER ASSEMBLY OF THE ROPS. TORQUE TO 200 Ft.Lbs, USE LOCTITE 271 OR EQUIVALENT.

CAB KIT



CAB KIT



NOTES:

CAB KIT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-179		CAB KIT	INCL. REF. #'S 1-56
1.	499-436	1	DOOR ASSY (RIGHT)	
	499-437	1	DOOR ASSY (LEFT)	
2.	121-044	1	SLIDER ASS'Y (REAR)	
	499-747	-	WINDOW FRAME	
	499-748	-	REAR WINDOW	
3.	121-045	1	SIDE WINDOW (LEFT)	
	121-046	1	SIDE WINDOW (RIGHT)	
4.	121-047	1	FRONT WINDOW	
5.	117-829	21	SEAL, PSA DOUBLE D	
6.	318-374	1	U-CLAMP	
7.	318-358	1	DOORPOST (LEFT)	
	318-359	1	DOORPOST (RIGHT)	
8.	318-375	2	BRACKET, LOWER DOOR POST	
9.	318-376	2	SITTING BLOCK	
10.	318-377	2	PLATE	
11.	107-786	32	SCREW, (#10-32 X 1-1/2") HEX	
12.	214-897	1	WIPER MOTOR	
13.	499-441	2	DOOR STRAP	
14.	499-438	2	GAS SPRING STRUT	
15.	119-003	1	SPACER, WIPER MOTOR	
16.	318-360	1	CAM LATCH COVER (RIGHT)	
	318-361	1	CAM LATCH COVER (LEFT)	
17.	318-362	1	INNER BRACKET (RIGHT)	
	318-363	1	INNER BRACKET (LEFT)	
18.	117-825	1	L. LATCH, PADDLE W/KEY	
	117-854	1	R. LATCH, PADDLE W/KEY	
19.	117-821	1	LEFT ROD, DOOR LINKAGE	
	117-855	1	RIGHT ROD, DOOR LINKAGE	
20.	117-856	2	ROD, DOOR LINKAGE	
21.	273-279	1	WARNING TAG	
22.	117-824	1	LEFT LATCH, ROTARY	
	117-857	1	RIGHT LATCH, ROTARY	
23.	105-085	4	LOCKNUT (1/4-NC)	
24.	107-787	4	SCREW (1/4-20 X 1-1/4) TRUS, TORX	
25.	107-788	8	SCREW (1/4 X 5/8) TRUS, TORX T27	COMES WITH SNAP-ON COVER
26.	107-789	4	SCREW (#10-24 X 1/2 ") TRUS, TORX	
27.	166-450	1	STUD, CYLINDER	
28.	117-823	1	LEFT HANDLE, INSIDE	
	117-858	1	RIGHT HANDLE, INSIDE	
29.	499-440	1	INSIDE DOOR BEZEL	
30.	117-828	4	RETAINER, INTERNAL TOOTH	
31.	499-439	1	DOOR PULL	
32.	107-245	4	FLG LK BOLT (3/8-NC X 3/4", NLK)	

FOOTNOTES

NOTE:

MOUNTING A CAB ON THE RT70/RT90/RT115

1. A CAB CAN BE MOUNTED DIRECTLY ON RT70M OR RT90M WHEN OLD ROPS HAS NOT BEEN MODIFIED WITH THE NEW ISOLATORS.
2. A CAB CAN NOT BE MOUNTED ON A RT70H, RT90H OR RT115H WHEN AN OLD ROPS HAS BEEN MODIFIED WITH THE NEW ISOLATORS.
3. A CAB CAN BE MOUNTED ON A RT79H, RT90H OR RT115H WITH A NEW ROPS WITH THE NEW ISOLATORS.

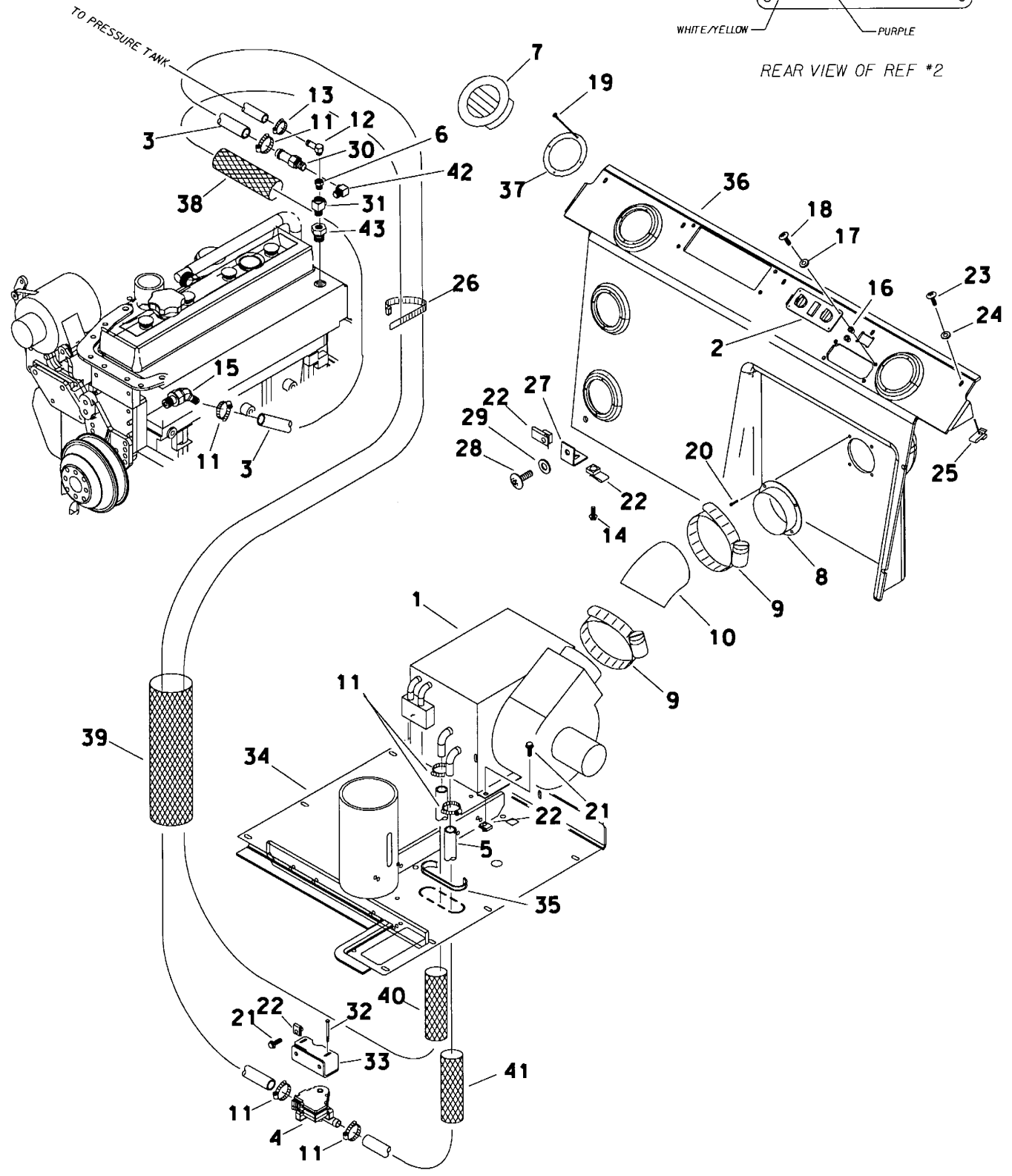
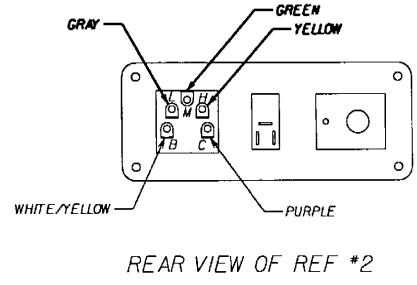
CAB KIT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
33.	121-048	1	SLIDER, (LEFT DOOR)	
	121-049	1	SLIDER, (RIGHT DOOR)	
34.	121-050	1	GLASS (LOWER DOOR), LEFT	
	121-051	1	GLASS (LOWER DOOR), RIGHT	
35.	318-364	1	RIGHT DOOR	
	318-365	1	LEFT DOOR	
36.	121-052	1	WIPER BLADE	
37.	105-047	4	LOCKNUT (3/8-NC)	
38.	121-053	1	WIPER ARM	
39.	106-991	8	FLG LK SCREW (M8-1.25 X 20mm)	
40.	106-415	8	WASHER (.406")	
41.	117-826	1	STRIKE BRACKET (LEFT)	
	117-827	1	STRIKE BRACKET (RIGHT)	
42.	106-565	8	NUTSERT, (M8-1.25)	
43.	106-469	8	FLG SCREW (M12-1.75 X 30mm)	
44.	106-709	8	FLG LK NUT (M12-1.75)	
45.	105-895	4	LOCK WASHER (3/8")	
46.	105-865	1	BOLT (1/4-NC X 3/4", GD8)	
47.	105-151	2	LOCKNUT (7/16-NC)	
48.	105-059	2	WASHER (7/16)	
49.	117-861	2	STRIKER BOLT	
50.	107-778	2	SCREW (M8-1.25 X 30mm, BUT SOC)	
51.	318-879	1	BOTTLE BRACKET	
52.	107-135	2	CLIP NUT (M8-1.25)	
53.	344-115	1	WINDSHIELD WASHER TANK	
54.	107-875	6	WASHER (.400" ID. BRASS)	
55.	116-866	AR	BULK HOSE (3/16", SOLD PER 1")	USE 1 @ 12"
56.	110-249	1	WORM CLAMP (1/4"TO 5/8")	
57.	118-357	1	EXTENSION SPRING	
NOT SHOWN				
	256-669	2	URETHANE ADHESIVE	10.5 FL. OZ. TUBES

FOOTNOTES

NOTE:

CAB HEATER ASS'Y



D

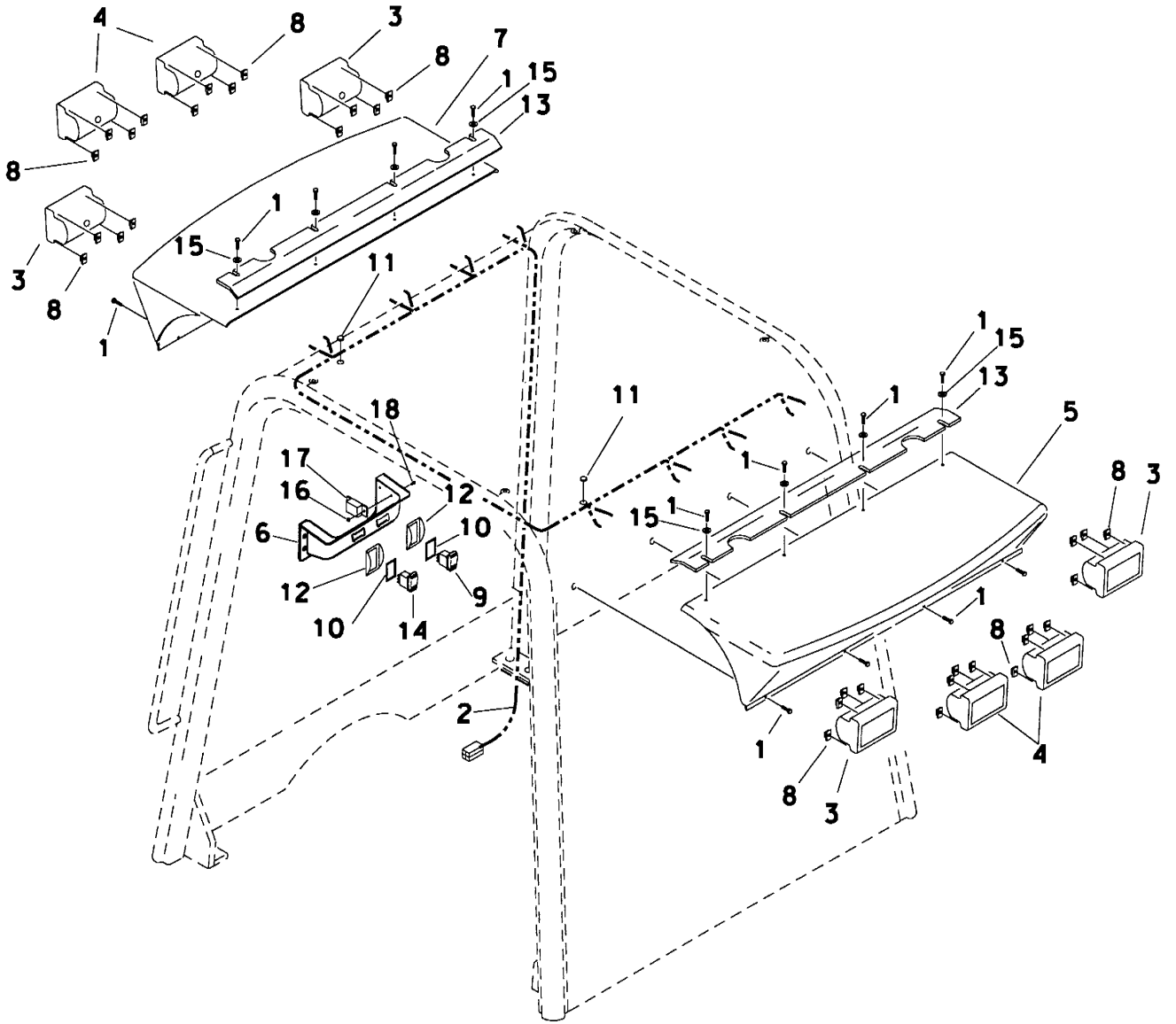
806-219

CAB HEATER ASS'Y

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-247		A/C HEATER KIT	INCL. REF. #'S 1-13,15-25,30-33,35-44.
	191-181		HEATER KIT	INCL. REF. #'S 1-13,15-25,30-33,35-44.
1.	499-551	1	A/C HEATER	
	499-552	1	HEATER	
2.	499-553	1	AC-HEATER CONTROL PANEL	
3.	116-044	AR	BULK HOSE (5/8" , SOLD PER 1")	USE 2 @ 90"
4.	499-554	1	HEATER VALVE	
5.	116-044	AR	BULK HOSE (5/8" , SOLD PER 1")	USE 1 @ 22"
6.	115-106	1	REDUCER (06N-04NF)	
7.	120-085	4	ADJUSTABLE LOUVER (23-0005)	
8.	120-123	1	HOSE ADAPTER (23-0090)	
9.	110-170	2	WORM CLAMP (4-1/8" TO 5")	
10.	157-416	1	AIR DUCT HOSE	USE 1 @ 12"
11.	110-217	6	WORM CLAMP (7/16" TO 1")	
12.	155-164	2	S/O COUPLER (04N-05H90)	
13.	110-249	1	WORM CLAMP (1/4" TO 5/8")	
14.	106-992	-	FLG LK SCREW (M8-1.25 X 25mm)	
15.	153-804	1	CONNECTOR (M14-1.50 X 10H45)	
16.	107-358	4	WELLNUT (M4-0.7 X 12.67mm LG)	
17.	107-597	4	WASHER (M4)	
18.	107-580	4	SCREW (M4-0.70 X 16mm, BUT SOC)	
19.	107-852	16	SCREW (#8 X 5/8" CSK PLPS)	
20.	105-194	4	SCREW (#8-32 X 1/2")	
21.	106-992	4	FLG LK SCREW (M8-1.25 X 25mm)	
22.	107-135	4	CLIP NUT (M8-1.25)	
23.	106-640	5	SCREW (M6-1.00 X 20mm, BUT SOC)	
24.	106-388	5	WASHER (M6)	
25.	106-574	5	CLIP NUT (M6-1.00)	
26.	110-030	1	CABLE TIE (1/16" TO 4")	
27.	309-434	-	TAB	
28.	107-778	-	SCREW (M8-1.25 X 30mm, BUT SOC)	
29.	107-629	-	WASHER (M8)	
30.	155-112	1	S/O COUPLER (06N-10H)	
31.	155-017	1	SERVICE TEE (06N-06NF-06NF)	
32.	107-863	2	SCREW (M4-0.70 X 60mm PAN)	
33.	318-811	1	VALVE BRACKET	
34.	306-844	-	SEAT BASE	
35.	115-662	1	GROMMET EDGE (3/16" X 12.7")	
36.	309-937	1	REAR PANEL	
37.	120-084	4	HOSE ADAPTER (23-0048)	
38.	117-397	1	ABRASION SLEEVE (1.25" X 35")	
39.	117-265	1	ABRASION SLEEVE (1.75" X 50")	
40.	117-396	1	ABRASION SLEEVE (1.25" X 28")	
41.	117-622	1	ABRASION SLEEVE (1.25" X 20")	
42.	156-260	1	STREET ELBOW (06N-06NF90)	
43.	514-085	1	REDUCER (08N-06NF)	

FOOTNOTES

CANOPY AND LIGHT KIT



CANOPY AND LIGHT KIT

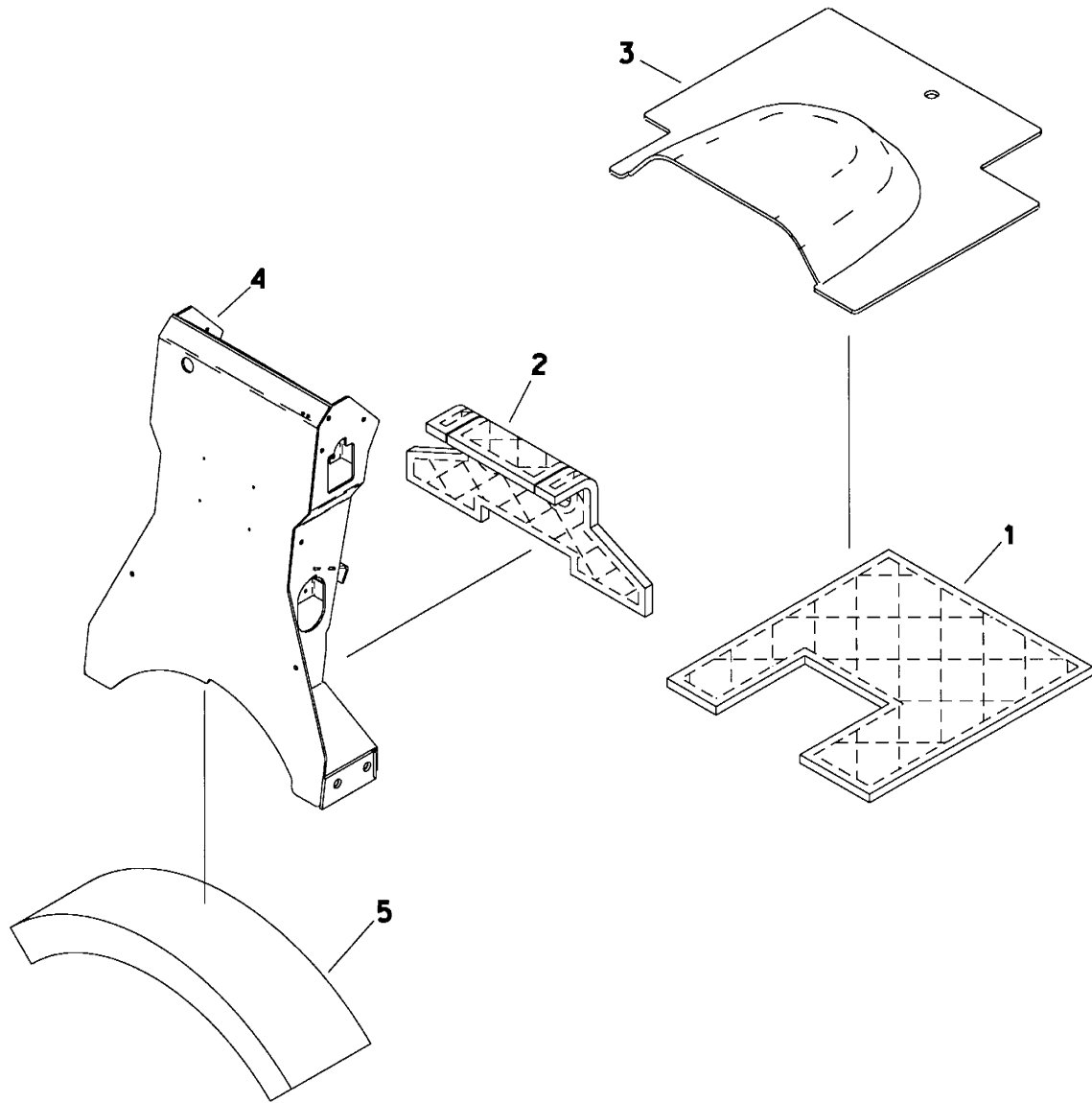
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-180		LIGHT KIT	INCLUDES REF #'S 1-18
1.	107-716	16	SCREW (1/4" - 14 x 7/8" SLF DRL)	
2.	214-659	1	LIGHT KIT HARNESS	
3.	217-288	4	WORK LIGHT (100FD)	
4.	217-287	4	WARNING LIGHT	
5.	305-658	1	EYE-BROW CANOPY	
6.	308-894	1	OVERHEAD CONSOLE	
7.	310-113	1	FRONT EYE-BROW CANOPY	
8.	107-405	32	CLIP NUT (6-32)	
9.	217-762	1	ROCKER SWITCH (SPDT)	
10.	165-817	2	SWITCH GASKET	
11.	115-349	2	GROMMET (1/2")	DRILL 2-23/32" HOLES ON DIMPLES
12.	110-854	2	SWITCH ACTUATOR GUARD	
13.	318-661	2	STRAP	
14.	214-912	1	DPST ON-OFF ROCKER SWITCH	
15.	105-284	8	WASHER (3/16")	
16.	106-048	2	LOCKNUT (#10-24)	
17.	215-041	1	FLASHER	
18.	105-185	2	BOLT (#10-24 X 1/2", RD SLT)	

NOT SHOWN:

217-826	MINI RELAY (SPDT)
362-823	COVER

FOOTNOTES

SOUND BLANKETS

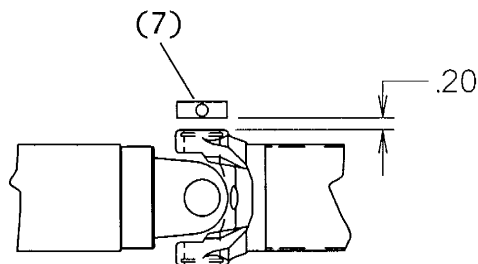
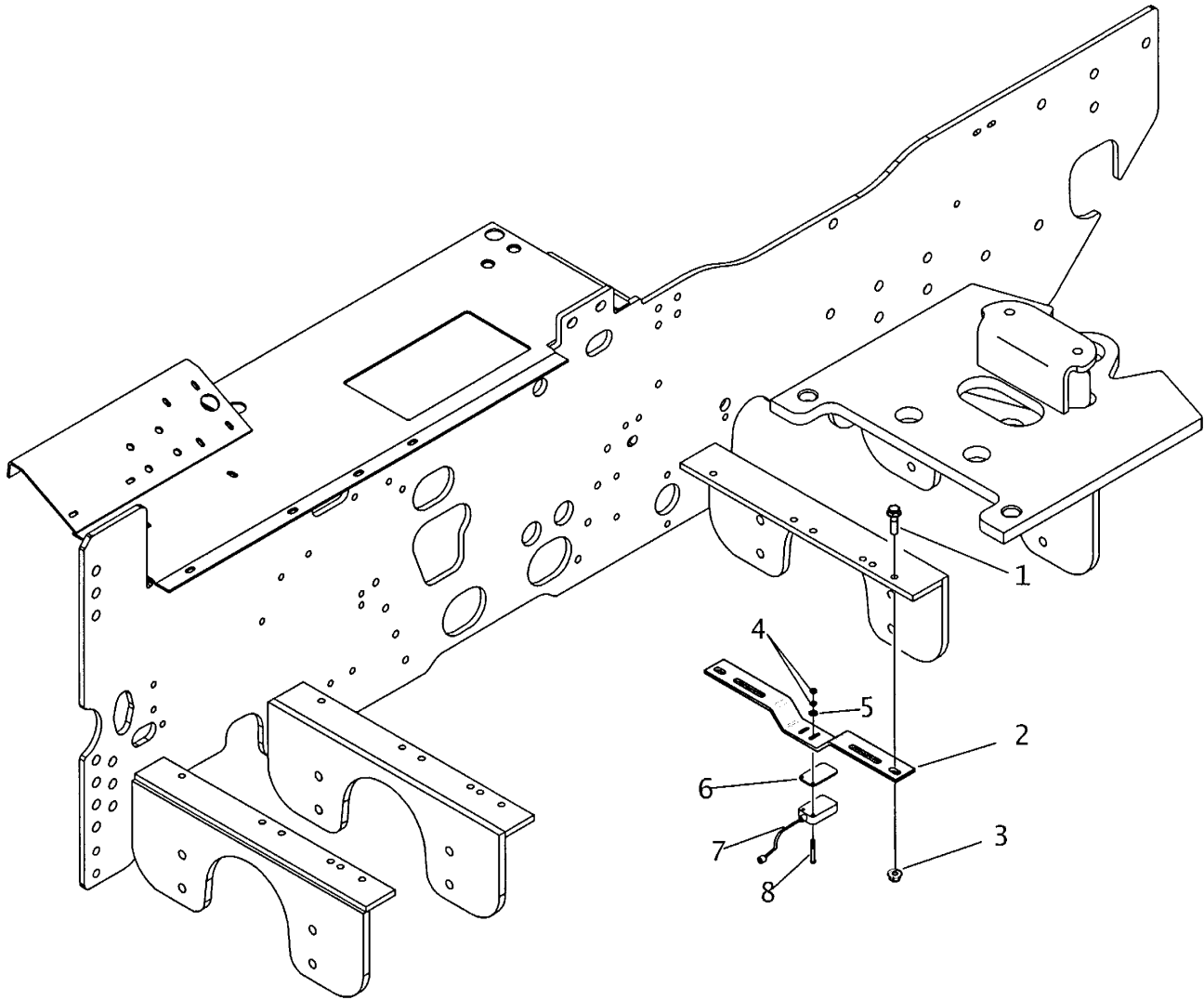


SOUND BLANKETS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	117-833	1	SOUND BLANKET	POWERSHIFT ONLY
	117-832	1	SOUND BLANKET	HYDROSTAT ONLY
2.	117-834	1	SOUND BLANKET	POWERSHIFT ONLY
	117-835	1	SOUND BLANKET	HYDROSTAT ONLY
3.	313-238	-	FLOOR PLATE	
	318-793	-	FLOOR PLATE	
4.	315-142	-	PEDESTAL	
5.	117-847	1	HEAT BLANKET	

FOOTNOTES

TRENCH DEPTH METER/ODOMETER MT



TRENCH DEPTH METER/ODOMETER MT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	107-004	3	FLG LK SCREW (M12-1.75 X 45mm)	RT95 / RT115 & SEE FOOTNOTE 2
2.	315-744	1	SENSOR BRACKET	
3.	106-709	3	FLG LK NUT (M12-1.75)	RT95 / RT115 & SEE FOOTNOTE 2
4.	105-680	2	NUT (M4, W/LK WSHR)	
5.	107-597	2	WASHER (M4)	
6.	107-451	AR	SHIM (.135")	SEE FOOTNOTE 1
7.	214-692	1	PROXIMITY SWITCH	
8.	107-414	2	SCREW (M4-0.70 X 30mm, BUT SOC)	

NOT SHOWN

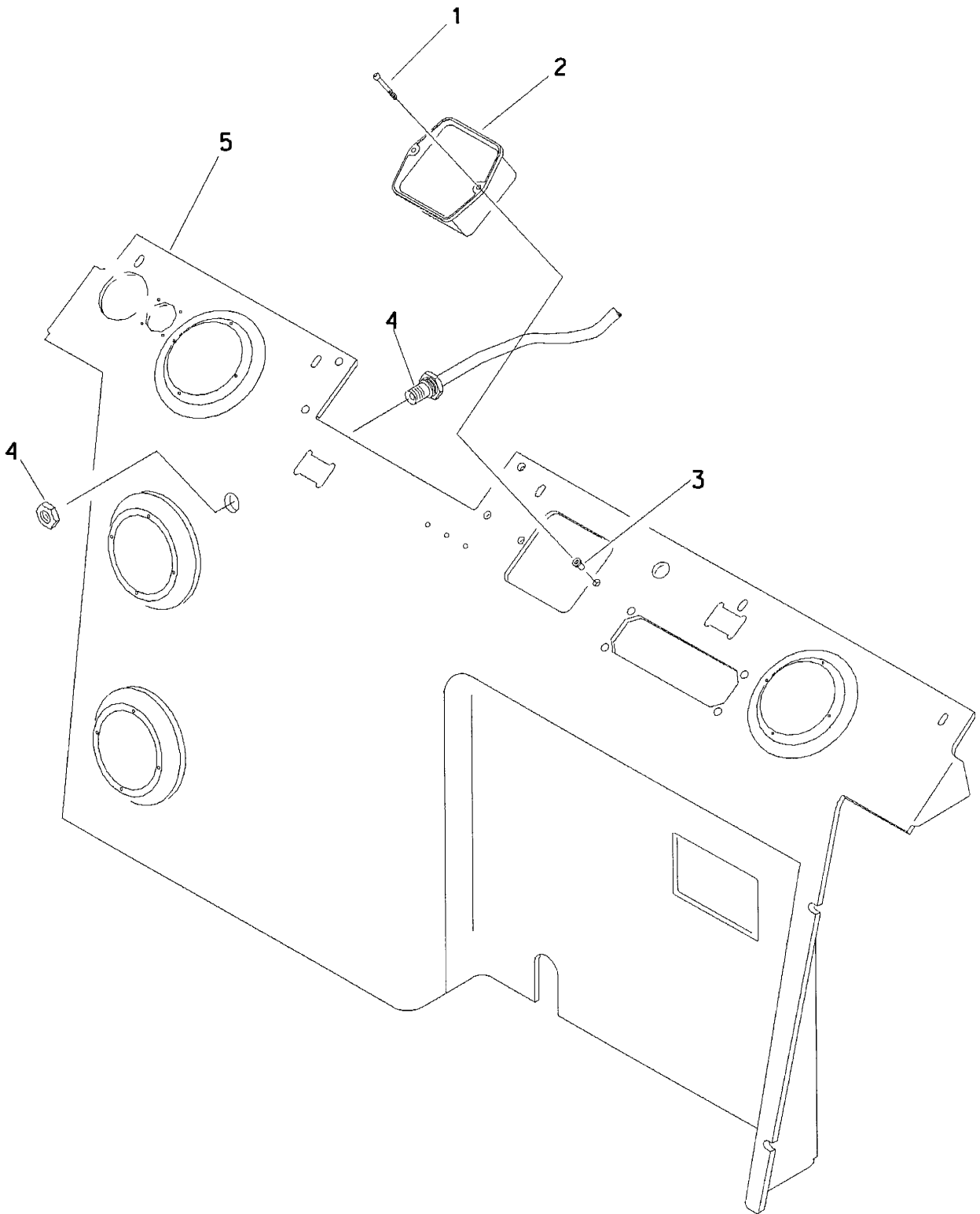
FOOTNOTES

1. SHIMS (107-451) ARE USED TO ADJUST SPACING OF PROXIMITY SWITCH (214-692) FROM THE DRIVE SHAFT.
2. RT75 USES 2X 105-003 (FLG LOCKNUT 5/16-NC) & 2X 105-190 (BOLT 5/16-NC X 2-3/4")

NOTE

TRENCH DEPTH METER MODULE

RT70/RT75/RT90/RT95/RT115



TRENCH DEPTH METER MODULE

RT70/RT75/RT90/RT95/RT115

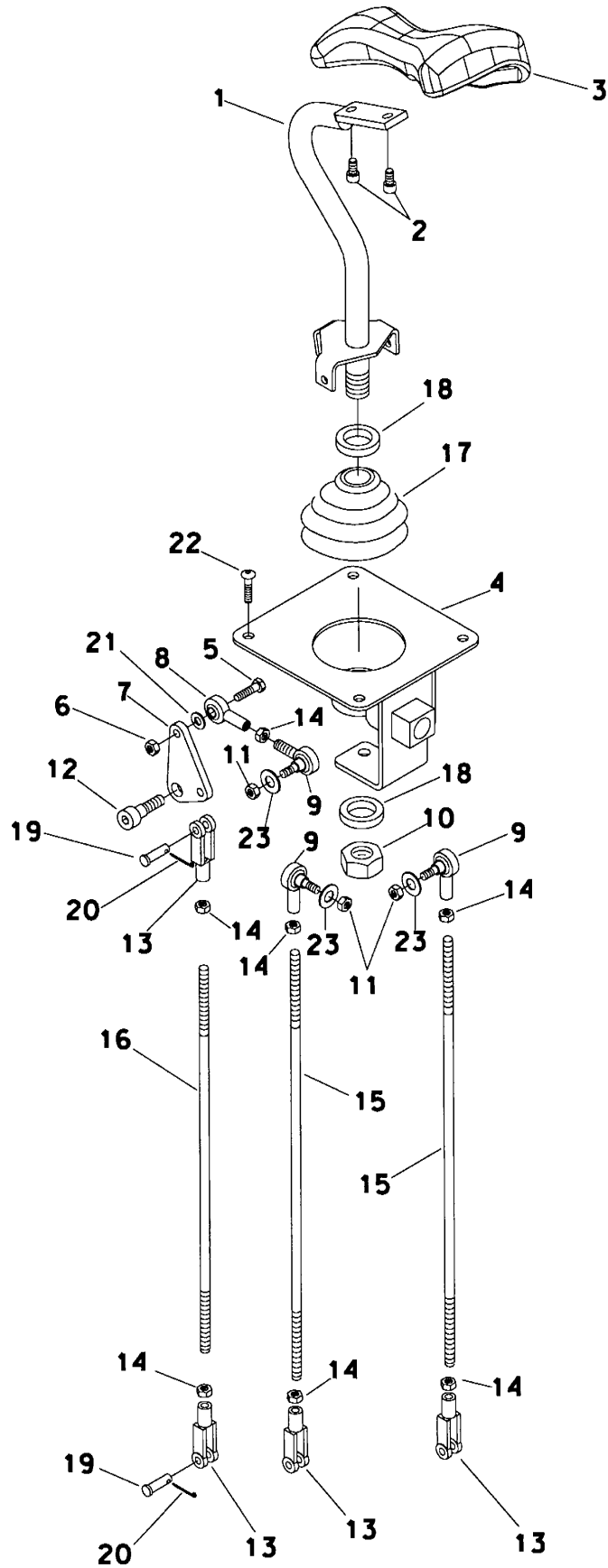
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	107-580	2	SCREW (M4-0.70 X 16mm, BUT SOC)	
2.	220-086	1	TRENCH DEPTH METER	
3.	107-358	2	WELLNUT (M4-0.7 X 12.67mm LG)	
4.	213-075	1	TDM HARNESS	
5.	319-745	-	REAR PANEL	

FOOTNOTES

NOTES:

CONTROL COMPONENTS

BACKFILL BLADE CONTROLS



D

806-287

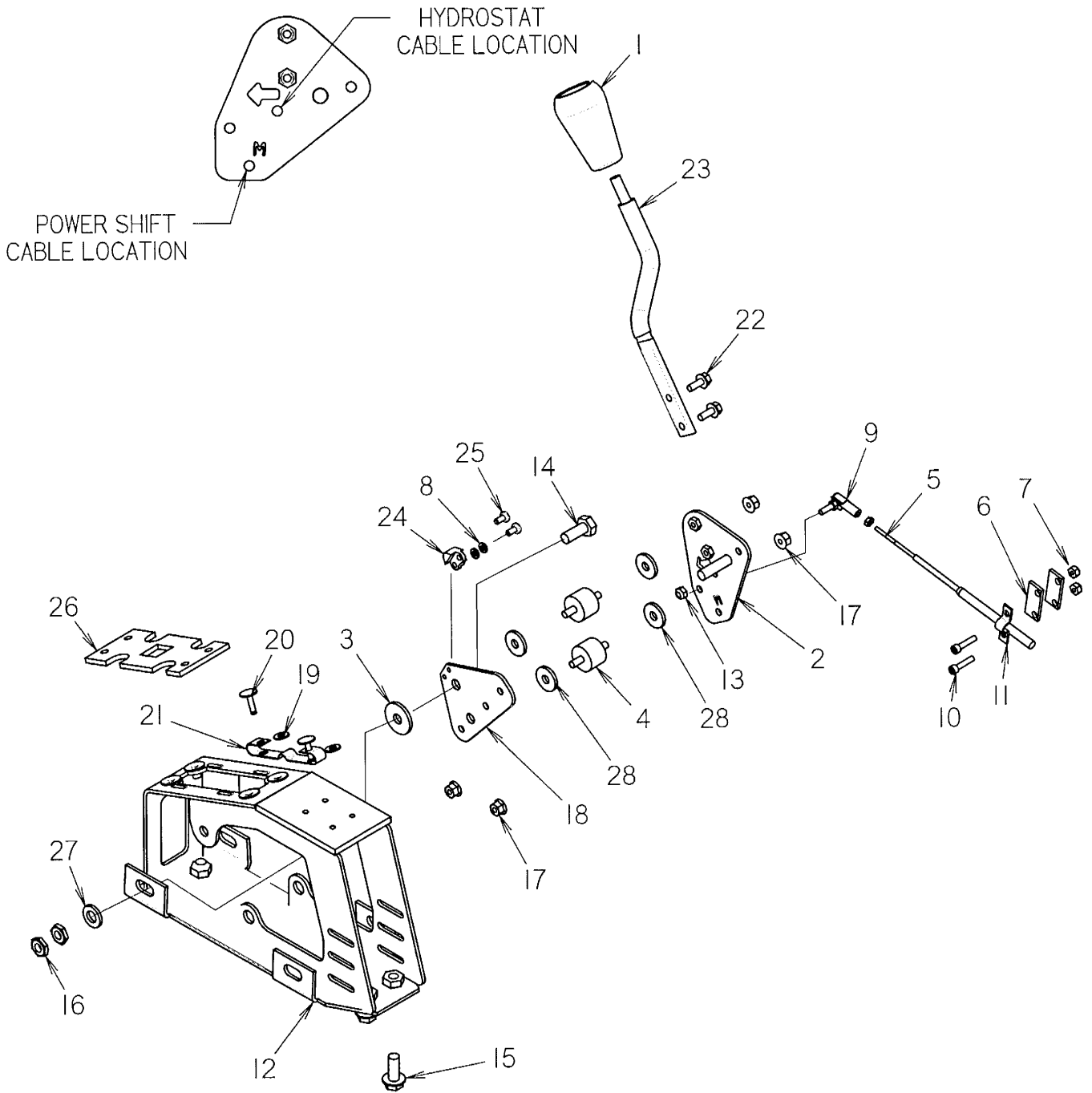
BACKFILL BLADE CONTROLS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	305-728	1	HANDLE	
2	105-263	2	BOLT (1/4-NC X 3/4", CSK, SOC)	
3	117-345	1	CONTROL HANDLE	
4	305-727	1	MOUNT	SEE FOOTNOTE 1
5	105-087	1	BOLT (1/4-NC X 7/8, SOC))	
6	105-085	1	LOCKNUT (1/4-NC)	
7	305-724	1	LINKAGE PLATE	
8	110-281	1	ROD END (1/4-NF, FM)	
9	110-565	3	BALL JOINT (1/4-NF)	
10	105-387	1	LOCKNUT (3/4-NF)	
11	107-770	3	LOCKNUT (1/4-NF, NYLON INSERT)	
12	107-582	1	SHLD BOLT (3/8" X 1/4", 5/16-NC)	
13	110-067	4	CLEVIS (1/4-NF)	
14	105-152	7	NUT (1/4-NF)	
15	306-767	2	LINKAGE ROD	INCLUDES REF #'S 9, 13 AND 14
16	107-581	1	LINKAGE ROD	INCLUDES REF #'S 13 AND 14
17	110-330	1	DUST BOOT	
18	178-421	2	BUSHING	
19	110-082	4	CLEVIS PIN (1/4" X 11/16")	
20	105-508	4	COTTER PIN (3/32" X 1")	
21	105-284	1	WASHER (3/16")	
22	106-640	4	SCREW (M6-1.00 X 20mm, BUT SOC)	
23	106-076	3	WASHER (1/4")	

FOOTNOTES

1 - PROTECT BALL JOINT FROM PAINT. FOR BEST RESULTS DO NOT USE LUBRICANT.

GRND SPEED DIRECTION HAND CNTL



GRND SPEED DIRECTION HAND CNTL

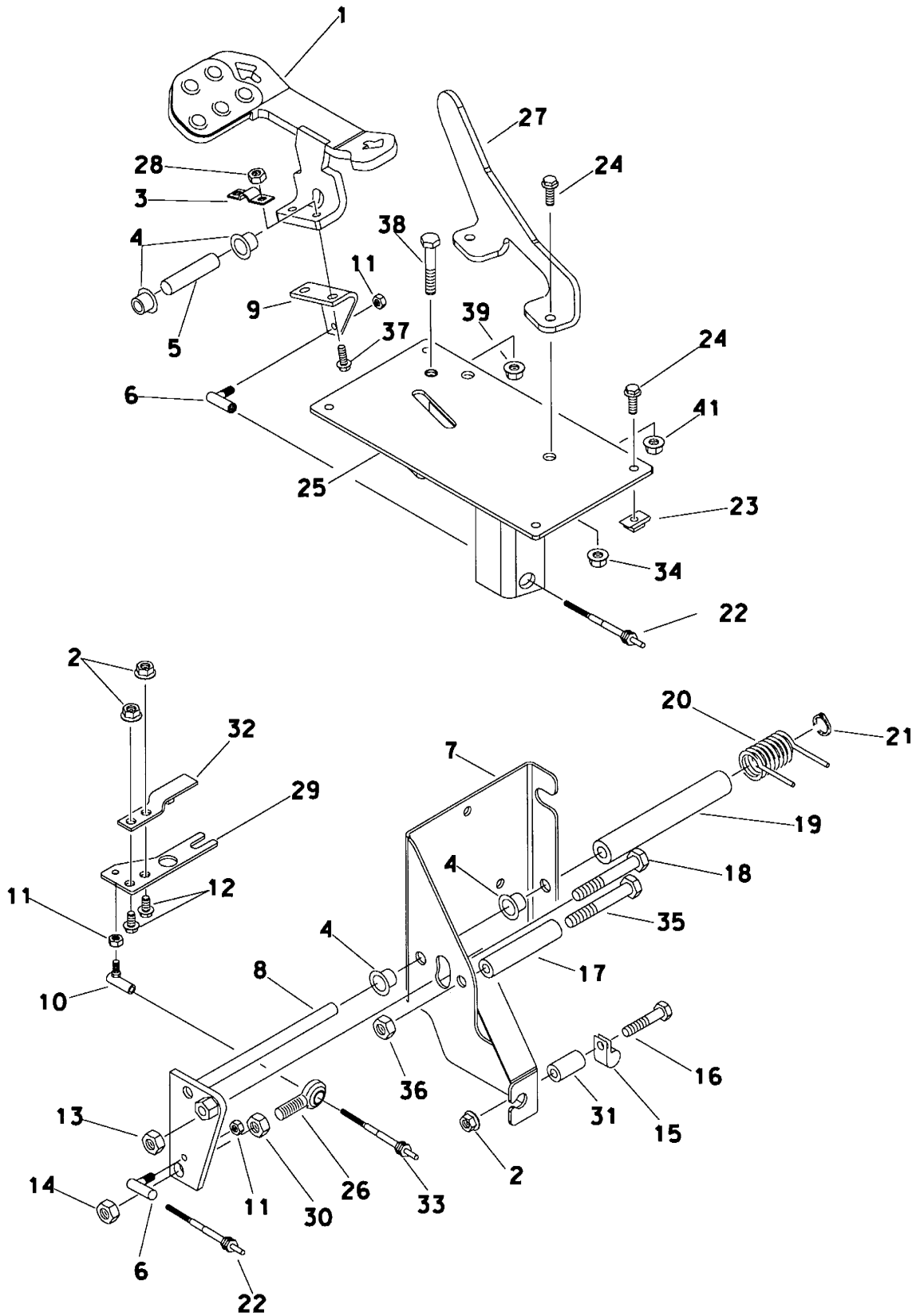
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	110-445	1	KNOB (3/8-NC, ORANGE)	
2	319-914	1	RIGHT CONTROL	SEE FOOTNOTE 3 AND INCLUDES HARDWARE
3	107-529	1	WASHER UHMW (3/8)	
4	116-980	2	SHOCK MOUNT	
5	196-287	1	CONTROL CABLE	SEE FOOTNOTE 4
6	331-166	2	BOLT-ON BACK-UP (.306")	
7	106-048	2	LOCKNUT (#10-24)	
8	106-205	2	WASHER (1.91")	
9	110-318	1	BALL JOINT (#10-32, FM)	
10	105-810	2	BOLT (#10-24 X 7/8", SOCI)	
11	110-697	1	BOLT-ON CLAMP (.360")	
12	309-227	1	CONTROL LEVER FRAME	
13	107-770	1	LOCKNUT (1/4-NF, NYL INSERT)	
14	105-245	1	SCREW (M10-1.50 X 25MM)	
15	107-001	4	FLG LK SCREW (M10-1.50 X 25MM)	
16	107-769	2	JAM NUT (M10-1.50)	SEE FOOTNOTE 2
17	105-832	4	FLG LOCKNUT (1/4-NC)	
18	310-127	1	PIVOT PLATE	
19	105-284	2	WASHER (3/16")	
20	110-348	2	POP RIVET (3/16" X .664")	
21	115-598	1	SPRING DETENT	
22	106-987	2	FLG LK SCREW (M6-1.00 X 16MM)	
23	117-519	1	CONTROL HANDLE	
24	315-149	1	DETENT TIP	
25	106-271	2	SCREW (M5-0.80 X 8MM, PLPS)	SEE FOOTNOTE 1
26	316-476	1	TEMPLATE	
27	106-396	1	WASHER (M10, HARDENED)	
28	106-261	4	WASHER (.334")	

FOOTNOTES

1. USE LOCTITE 242 OR EQUIVALENT
2. TORQUE TO 70 IN.-LBS.
3. IF ORDERING THIS PART FOR MACHINE WITH S/N _____ OR OLDER, YOU MUST ALSO ORDER LEVER (#319-916) AND REFER TO PARTS PAGE "GRD SPEED DIRECTION FOOT CONTROL". IF THIS UNIT IS EQUIPPED WITH CRUISE CONTROL, PART 319-916 IS NOT NEEDED.
4. 196-287 IS FOR HYDROSTAT TRACTORS. USE 194-196 FOR POWER SHIFT TRACTORS.

NOTE:

GROUND SPEED DIRECTION FOOT CONTROL



GROUND SPEED DIRECTION FOOT CONTROL

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	309-943	1	PEDAL	
2.	106-387	3	FLG LOCKNUT (M10-1.5)	
3.	310-411	1	CLAMP	
4.	179-293	4	BRONZE BUSHING	
5.	183-221	1	PIN	
6.	110-774	2	BALL JOINT (1/4-NF)	
7.	309-707	1	CABLE BRACKET	
8.	308-441	1	CONTROL ARM	
9.	309-939	1	CABLE BRACKET	
10.	110-318	1	BALL JOINT (#10-32,FM)	
11.	107-770	3	LOCKNUT (1/4-NF, NYL INSERT)	
12.	106-654	2	FLG LK SCREW (M10-1.50 X 16mm)	
13.	106-685	2	LOCKNUT (M12-1.75, PRV TRQ,10.9)	
14.	105-188	1	LOCKNUT (7/16-NF)	
15.	110-333	1	BOLT-ON CLAMP (1")	
16.	106-628	1	SCREW (M10-1.50 X 60mm)	
17.	370-036	1	SPACER	
18.	106-620	1	SCREW (M12-1.75 X 150mm)	
19.	178-582	1	SPACER	
20.	115-650	1	TORSION SPRING	
21.	115-482	1	GRIP RING (.500")	
22.	196-359	1	CONTROL CABLE	
23.	107-135	4	CLIP NUT (M8-1.25)	
24.	106-992	6	FLG LK SCREW (M8-1.25 X 25mm)	
25.	331-595	1	PEDAL MOUNT	
26.	107-604	1	ROD END (7/16-NF)	
27.	319-365	1	PROTECTIVE BAR	
28.	106-175	2	NUT (M10-1.50)	
29.	309-705	1	LEVER	
	319-914	1	LEVER	SEE FOOTNOTE 1
30.	105-920	1	JAM NUT (7/16-NF)	
31.	181-566	1	SLEEVE (1.5")	
32.	499-432	-	CONTROL LEVER	
33.	196-287	-	CONTROL CABLE	
	506-021	-	NUT (#10-32)	
34.	106-386	2	FLG LOCKNUT (M8-1.25)	
35.	105-472	1	BOLT (1/2-NC X 5")	
36.	105-065	1	LOCKNUT (1/2-NC)	
37.	107-002	2	FLG LK SCREW (M10-1.50 X 30mm)	
38.	106-142	1	SCREW (M10-1.50 X 65mm)	
39.	106-387	1	FLG LOCKNUT (M10-1.5)	

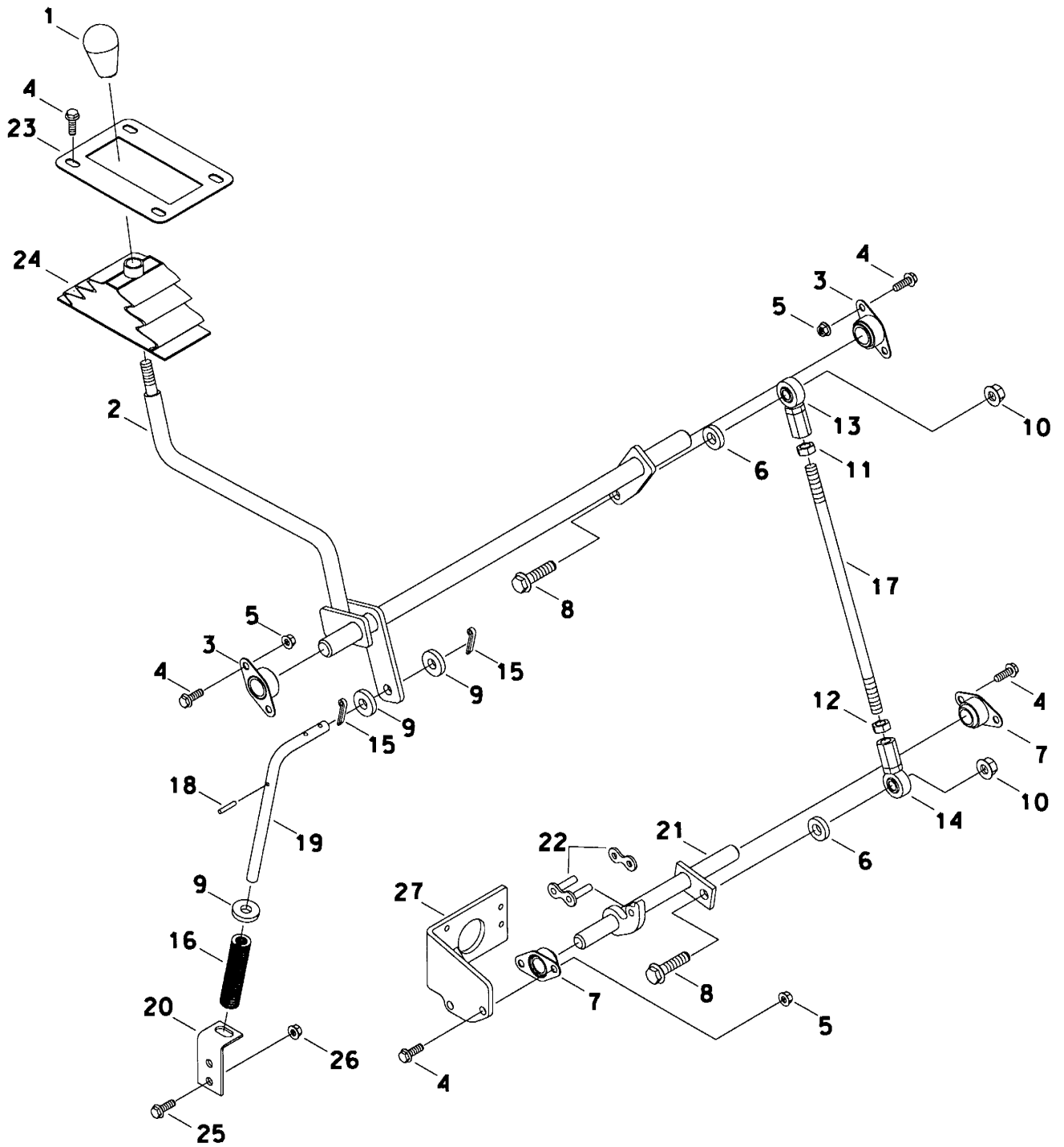
FOOTNOTES

1.- IF ORDERING THIS PART FOR A MACHINE WITH SERIAL NUMBER _____ OR OLDER, YOU MUST ALSO ORDER PART NUMBER 319-914, RIGHT CONTROL LEVER, AND REFER TO PARTS PAGE "GRD SPEED DIRECTION HAND CONTROL".

NOTE:

SEE INSTALLATION INSTRUCTIONS

HYDROSTATIC SHIFT

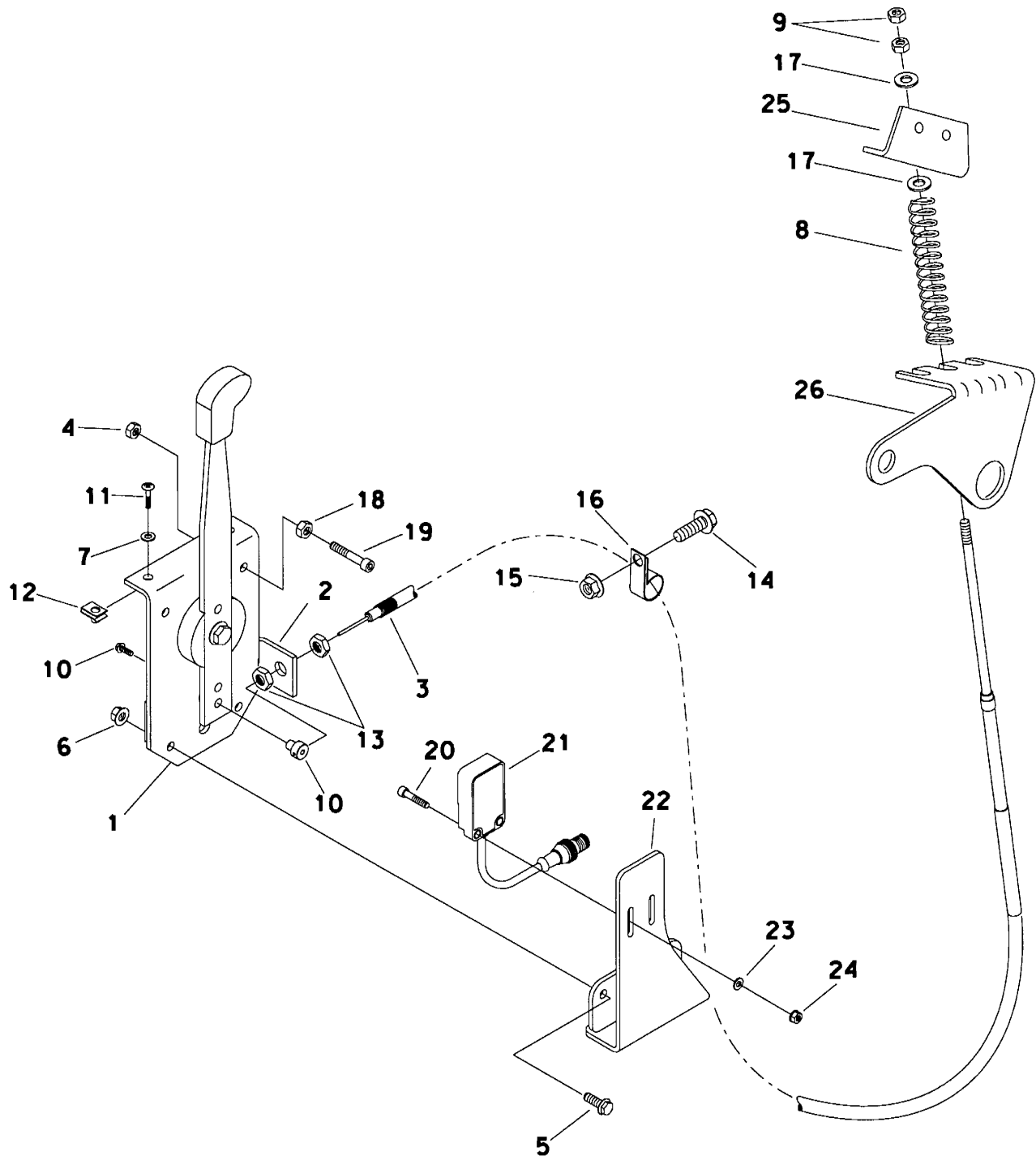


HYDROSTATIC SHIFT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	110-375	1	KNOB (1/2-NC, YELLOW)	
2.	307-718	1	SHIFT ARM	
3.	125-488	2	FLANGE BUSHING (.875")	
4.	106-992	12	FLG LK SCREW (M8-1.25 X 25mm)	
5.	106-386	8	FLG LOCKNUT (M8-1.25)	
6.	106-397	2	WASHER (M12, HARDENED)	
7.	125-609	2	BRONZE BUSHING (.750", FLG)	
8.	107-004	2	FLG LK SCREW (M12-1.75 X 45mm)	
9.	105-244	AR	WASHER (1/2")	
10.	106-354	2	FLANGE NUT (M12-1.75)	
11.	106-447	1	JAM NUT (1/2-NF)	
12.	107-573	1	JAM NUT (1/2-NF, LH)	
13.	110-290	1	ROD END (1/2-NF, FM)	
14.	107-574	1	ROD END (1/2-NF, FM, LH)	
15.	105-506	2	COTTER PIN (3/16" X 1-1/2")	
16.	117-019	1	COMPRESSION SPRING	
17.	306-762	1	SHIFT ROD	
18.	106-131	1	DOWEL PIN (.187 X 1.000)	
19.	306-666	1	SPRING ROD	
20.	307-568	1	SPRING MOUNT	
21.	307-567	1	SHIFT ARM	
22.	130-304	1	CONNECTOR LINK (#80)	
23.	307-580	1	BELLOW MOUNT	
24.	307-585	1	BELLOW	
25.	107-002	2	FLG LK SCREW (M10-1.50 X 30mm)	
26.	106-266	2	FLG NUT (M10-1.50)	
27.	307-563	-	SHIFT MOUNT	

FOOTNOTES

HAND THROTTLE

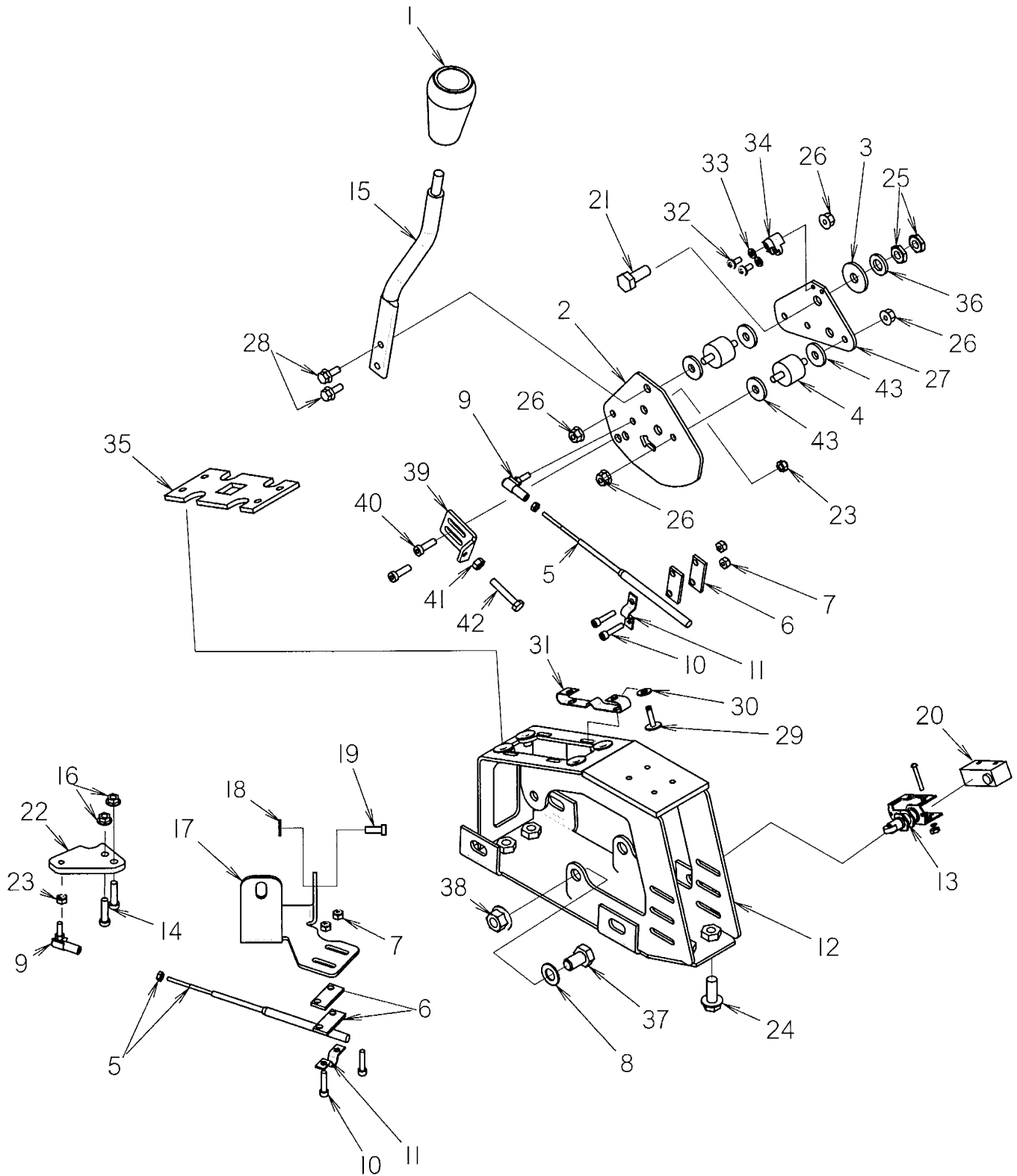


HAND THROTTLE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	306-619	1	CONTROL LEVER	
	117-593	1	KNOB (ORANGE)	
2.	307-067	1	CONTROL BRACKET	
3.	194-124	1	CONTROL CABLE	
4.	106-850	2	LOCKNUT (M5-0.80)	
5.	106-987	2	FLG LK SCREW (M6-1.00 X 16mm)	
6.	106-353	2	FLG NUT (M6-1.00)	
7.	107-744	2	WASHER (M6)	
8.	115-604	1	COMPRESSION SPRING	
9.	506-021	2	NUT (#10-32)	
10.	196-058	1	CABLE SWIVEL (.081")	
	106-205	1	WASHER (.191")	
	505-114	1	THRUST WASHER (.343")	
11.	106-640	2	SCREW (M6-1.00 X 20mm ,BUT SOC)	
12.	106-574	2	CLIP NUT (M6-1.00)	USE LOCTITE 242 OR ITS EQUIVILENT
13.	106-018	2	JAM NUT (3/8-NF)	
14.	106-991	1	FLG LK SCREW (M8-1.25 X 20mm)	
15.	106-386	1	FLG LOCKNUT (M8-1.25)	
16.	110-373	1	BOLT-ON CLAMP (13/16")	
17.	105-095	2	WASHER (1/4")	
18.	106-138	2	NUT (M5-0.80)	
19.	107-465	2	SCREW (M5-0.80 X 30mm, SOC)	
20.	107-268	2	SCREW (M4-0.70 X 20mm, SOC)	POWERSHIFT ONLY
21.	217-269	1	PROXIMITY SWITCH	POWERSHIFT ONLY
22.	316-940	1	SWITCH BRACKET	POWERSHIFT ONLY
23.	107-597	2	WASHER (M4)	POWERSHIFT ONLY
24.	105-680	2	NUT (M4, W/LK WSHR)	POWERSHIFT ONLY
25.	307-069	-	LEVER BRACKET	
26.	307-068	-	CABLE BRACKET	

FOOTNOTES

ATTACHMENT CONTROL HANDLE



ATTACHMENT CONTROL HANDLE

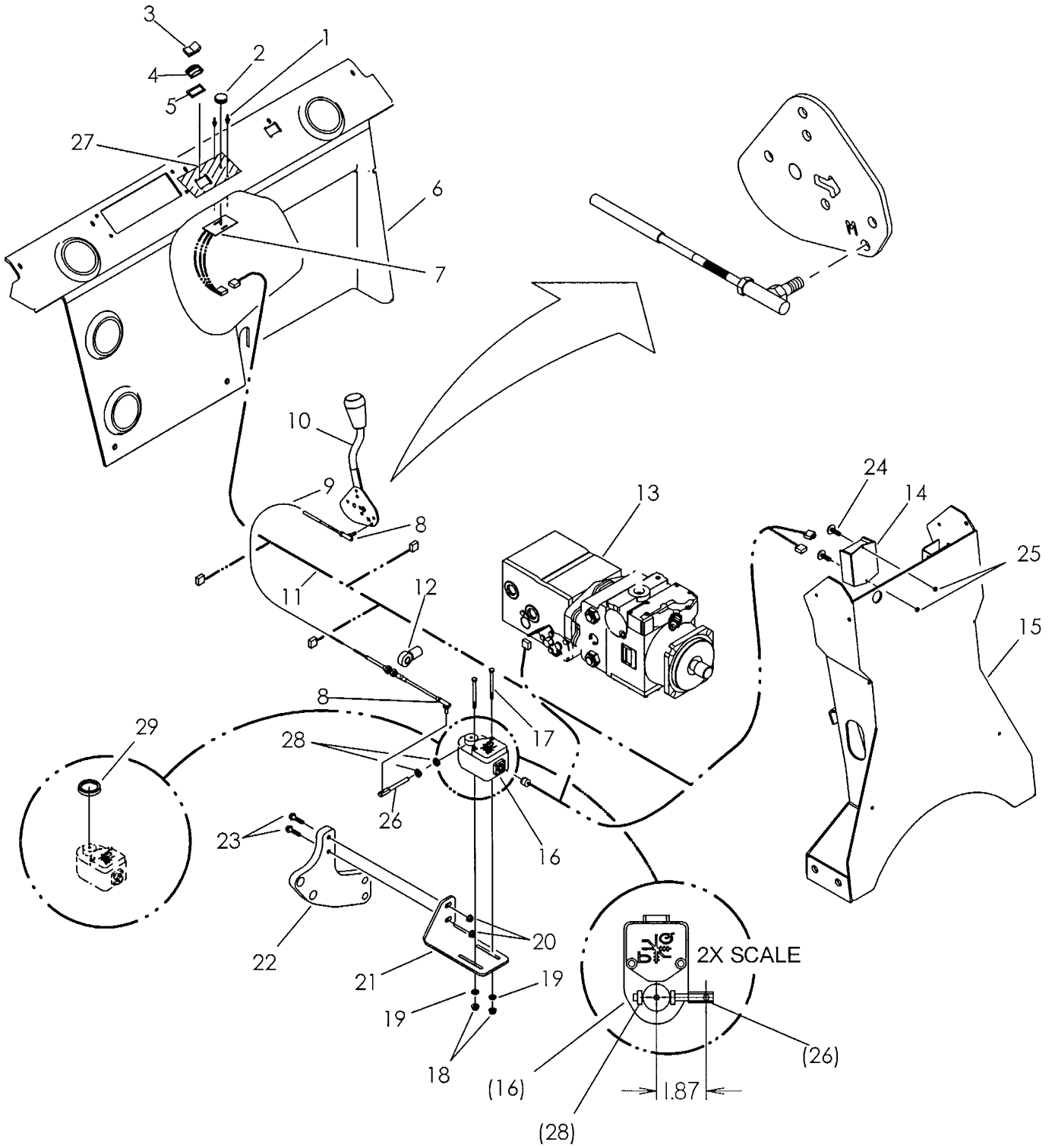
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	117-470	1	KNOB (3/8-NC, YELLOW)	
2	309-671	1	LEFT CONTROL LEVER	
3	107-529	1	WASHER UHMW (3/8)	
4	116-980	2	SHOCK MOUNT	
5	196-294	2	CONTROL CABLE	INCLUDES JAM NUT
6	331-166	4	BOLT-ON BACK-UP (306")	
7	106-048	4	LOCKNUT (#10-24)	
8	105-855	1	WASHER (7/16")	SEE FOOTNOTE 4
9	110-318	2	BALL JOINT (#10-32, FM)	
10	105-810	4	BOLT (#10-24 X 7/8", SOC)	
11	110-697	2	BOLT-ON CLAMP (360")	
12	309-227	1	CONTROL LEVER FRAME	
13	215-082	1	ACTUATOR BRACKET	SEE FOOTNOTE 1 AND INCLUDES HARDWARE
14	107-322	2	SCREW (M6-1.00X25MM,SOC,12.9)	
15	117-519	1	CONTROL HANDLE	
16	106-385	2	FLG LOCKNUT (M6-1.00)	
17	308-682	1	ATTACHMENT BRACKET	
18	106-389	1	WASHER (M8)	
19	106-005	1	SCREW (M8-1.25 X 16MM, SOC)	
20	215-046	1	PLUNGER SWITCH	SEE FOOTNOTE 1 AND INCLUDES HARDWARE
21	105-245	1	SCREW (M10-1.50 X 25MM)	
22	308-901	1	LEVER EXTENSION	
23	107-770	2	LOCKNUT (1/4-NF, NYL INSERT)	
24	107-001	4	FLG LK SCREW (M10-1.50 X 25MM)	
25	107-769	2	JAM NUT (M10-1.50)	SEE FOOTNOTE 3
26	105-832	4	FLG LOCKNUT (1/4-NC)	
27	310-127	1	PIVOT PLATE	
28	106-987	2	FLG LK SCREW (M6-1.00 X 16MM)	
29	110-348	2	POP RIVET (3/16" X .664")	
30	105-284	2	WASHER (3/16")	
31	115-598	1	SPRING DETENT	
32	106-271	2	SCREW (M5-0.80 X 8MM, PLPS)	SEE FOOTNOTE 2
33	106-205	2	WASHER (1.91")	
34	315-149	1	DETENT TIP	
35	316-476	1	TEMPLATE	
36	106-396	1	WASHER (M10, HARDENED)	
37	107-521	1	SCREW (M12-1.75 X 20MM)	SEE FOOTNOTE 4
38	106-709	1	FLG LK NUT (M12-1.75)	SEE FOOTNOTE 4
39	316-851	1	STOP	SEE FOOTNOTE 4
40	106-528	2	SCREW (M6-1.00 X 20MM, SOC)	SEE FOOTNOTE 2
41	106-106	1	NUT (M6-1.00)	SEE FOOTNOTE 4
42	105-688	1	SCREW (M6-1.00 X 35MM)	SEE FOOTNOTE 4
43	106-261	4	WASHER (.334")	

FOOTNOTES

1. USED W/COMBO ATTACHMENTS
2. USE LOCTITE 242 OR EQUIVALENT
3. TORQUE TO 70 IN-LBS
4. USE WITH H732, H752, H932, H952

NOTE:

CRUISE CONTROL



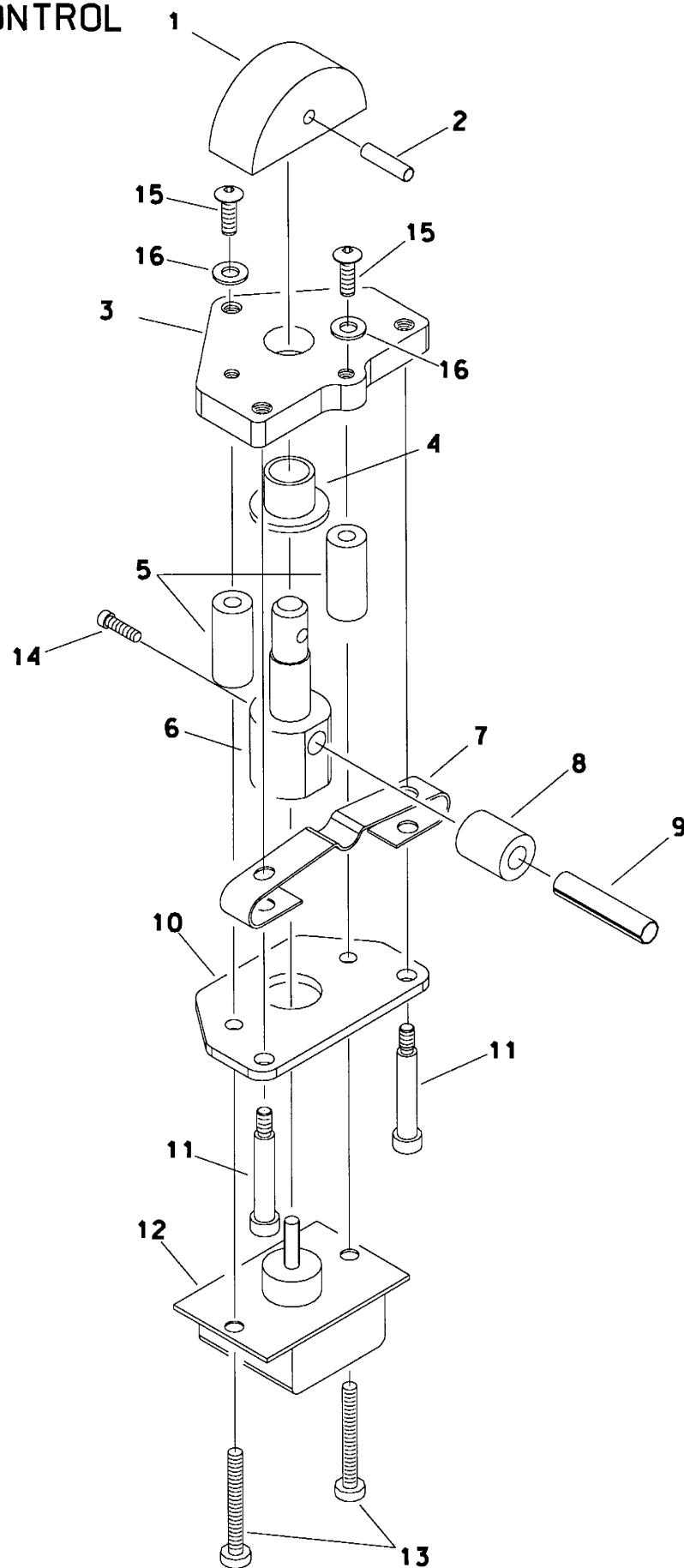
CRUISE CONTROL

REF PART NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	110-560	2	POP RIVET (3/16" X 1/2", ALUM)	
2.	110-641	1	KNOB (1/8", BLK)	
3.	217-762	1	ROCKER SWITCH (SPDT)	
4.	110-854	1	SWITCH ACTUATOR GUARD	
5.	165-817	1	SWITCH GASKET	
6.	306-492	-	REAR PANEL	REFER TO (TILT STEERING) FOR DETAILS
7.	217-892	1	POTENTIOMETER-AUTOCROWD	
8.	110-318	-	BALL JOINT (#10-32, FM)	REFER TO (GRD. SPD. DIRECTION HAND CONTROL) REFER TO (GRD. SPD. DIRECTION HAND CONTROL) REFER TO (GRD. SPD. DIRECTION HAND CONTROL)
9.	196-287	-	CONTROL CABLE	
10.	117-519	-	CONTROL HANDLE	REFER TO (GRD. SPD. DIRECTION FOOT CONTROL)
11.	214-612	1	CRUISE CONTROL HARNESS	RT115 AND SEE FOOTNOTE 1
12.	107-604	-	ROD END (7/16-NF)	RT115 AND SEE FOOTNOTE 2
13.	152-107	1	TANDEM PUMP (CRUISE CONTROL)	EDC
	158-194	-	ATTACHMENT PUMP	RT70, RT90
	157-354	-	GROUND DRIVE PUMP	RT70, RT90
	153-866	1	TANDEM PUMP (CRUISE CONTROL)	EDC
	158-039	-	ATTACHMENT PUMP	
	157-354	-	GROUND DRIVE PUMP	
14.	220-645	1	CRUISE CONTROL MODULE	
15.	315-142	-	PEDESTAL	
16.	217-261	1	P/Q JOYSTICK	
17.	105-843	2	SCREW (M6-1.00 X 80mm)	
18.	106-385	2	FLG LOCKNUT (M6-1.00)	
19.	106-394	2	WASHER (M8, HARDENED)	
20.	106-386	2	FLG LOCKNUT (M8-1.25)	
21.	313-257	1	MOUNT	
22.	306-938	-	LEFT MOUNT BRACKET	
23.	106-267	2	SCREW (M8-1.25 X 35mm)	
24.	105-815	2	BOLT (#10-24 X 1", PAN SLT)	
25.	106-048	2	LOCKNUT (#10-24)	
26.	316-898	1	LEVER	
27.	273-274	1	CRUISE CONTROL OVERLAY	
28.	105-115	2	JAM NUT (5/16-NF)	
29.	159-548	1	V-RING SEAL	

FOOT NOTES

- BEGINNING WITH S/N _____, TANDEM PUMP 152-107 SUPERCEDES TANDEM PUMP 153-867.
- BEGINNING WITH S/N _____, ATTACHMENT PUMP 158-194 SUPERCEDES ATTACHMENT PUMP 158-038.

REAR STEER CONTROL



E

808-231

REAR STEER CONTROL

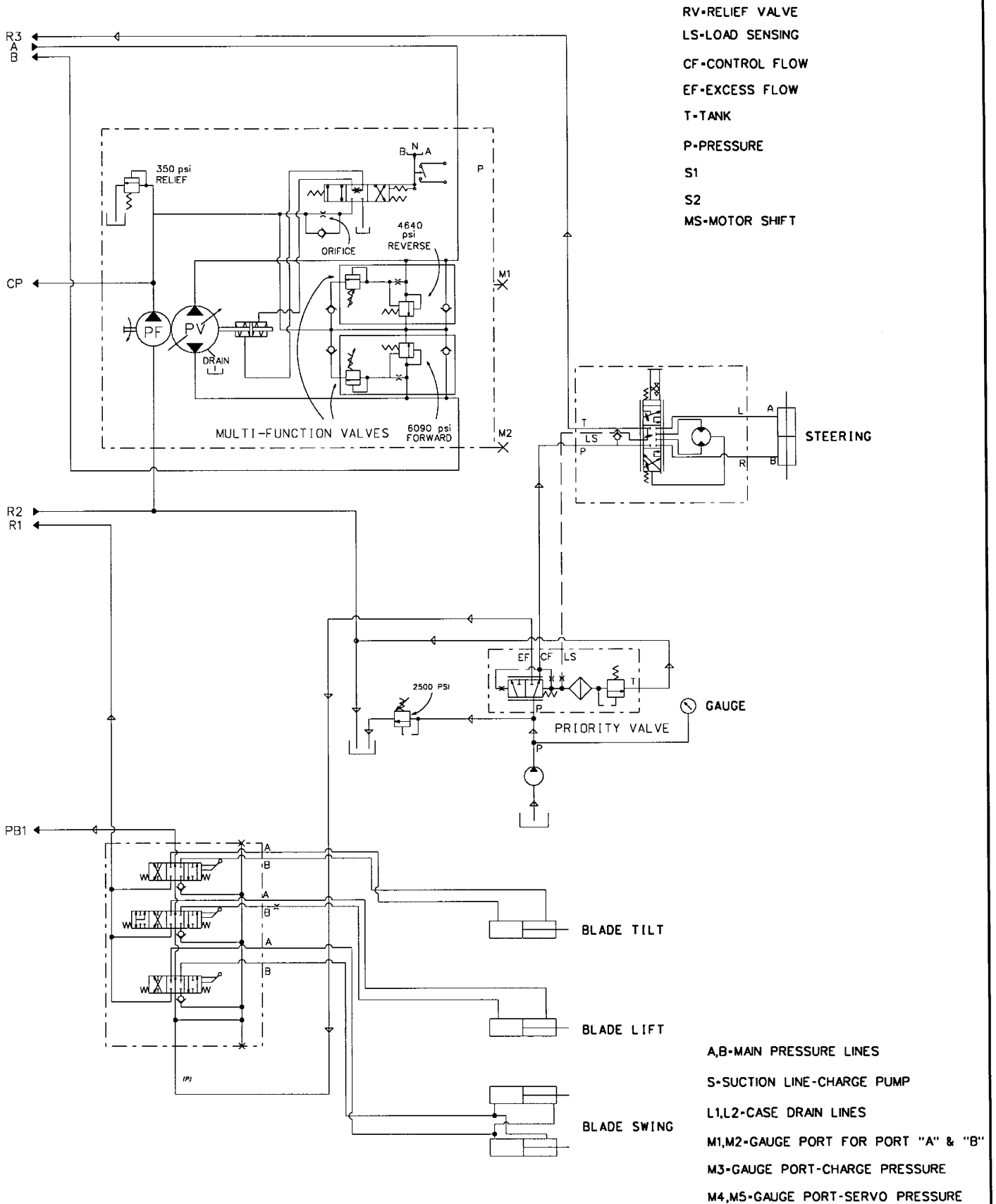
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-221	-	REAR STEER CONTROL KIT	INCL. REF #'S 1-16
1.	117-820	1	KNOB	
2.	105-522	1	ROLL PIN (3/16" X 3/4")	
3.	318-366	1	MOUNT PLATE	
4.	125-447	1	FLG BRONZE BUSHING (.502")	
5.	179-416	2	BOSS	
6.	166-449	1	SHAFT	
7.	115-598	1	SPRING DETENT	
8.	179-418	1	BUSHING	
9.	105-529	1	ROLL PIN (5/16" X 1-1/2")	
10.	318-367	1	BOTTOM PLATE	
11.	107-785	2	SHLD BLT (1/4" X 1-1/4", #10-24)	SEE FOOTNOTE 1
12.	217-273	1	POSITION POTENTIOMETER	
13.	106-120	2	BOLT (#10-24 X 1-3/4")	SEE FOOTNOTE 1
14.	501-343	1	BOLT (#10-24 X 1/2", SOC)	SEE FOOTNOTE 1
15.	107-193	2	SCREW (M6-1.00 X 16MM, BUT SOC)	
16.	107-744	2	WASHER (M6)	

FOOTNOTES

1 USE LOCTITE 242 OR EQUIVALENT

HYDRAULICS

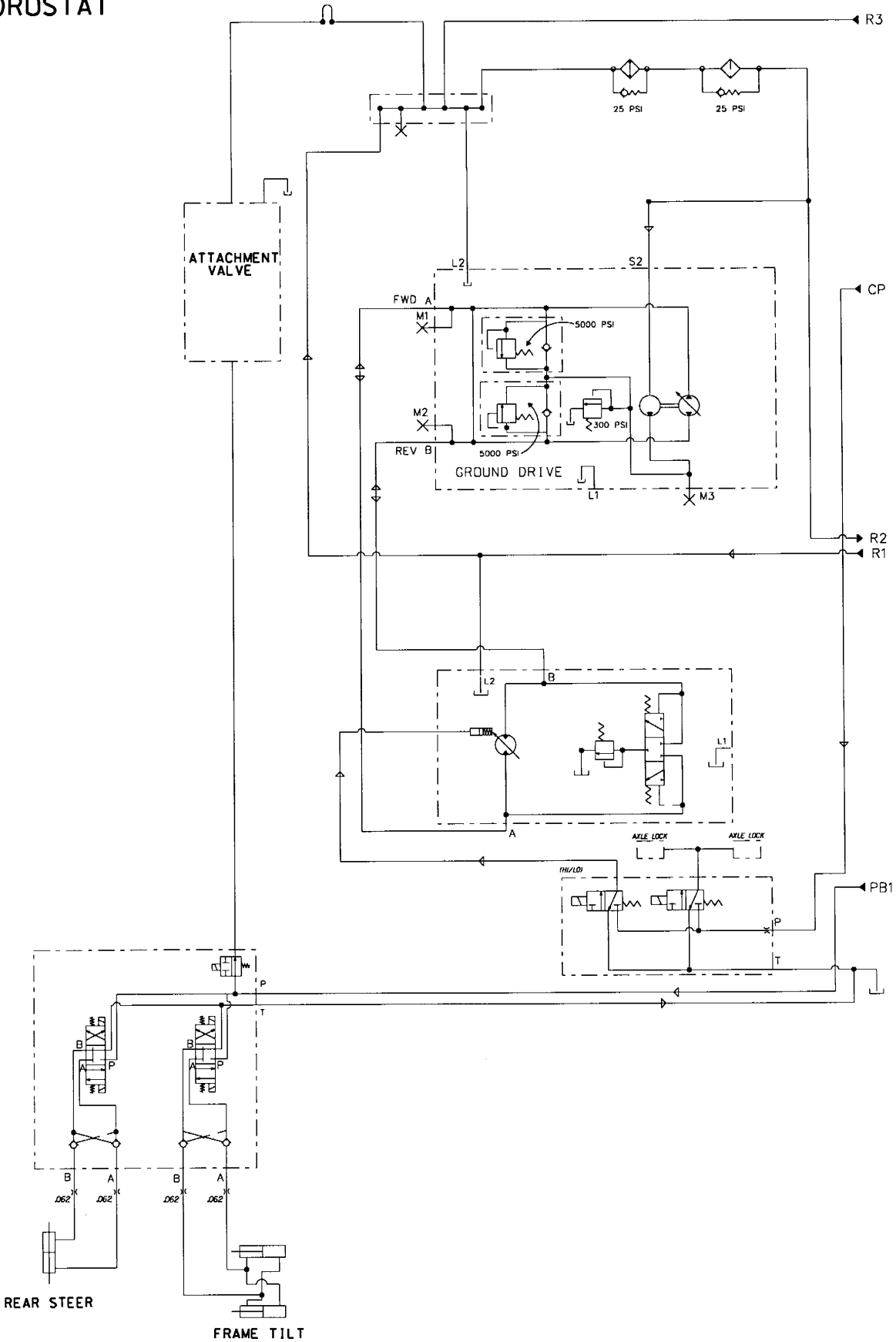
HYDRAULIC SCHEMATIC HYDROSTAT



B

808-191

HYDRAULIC SCHEMATIC HYDROSTAT



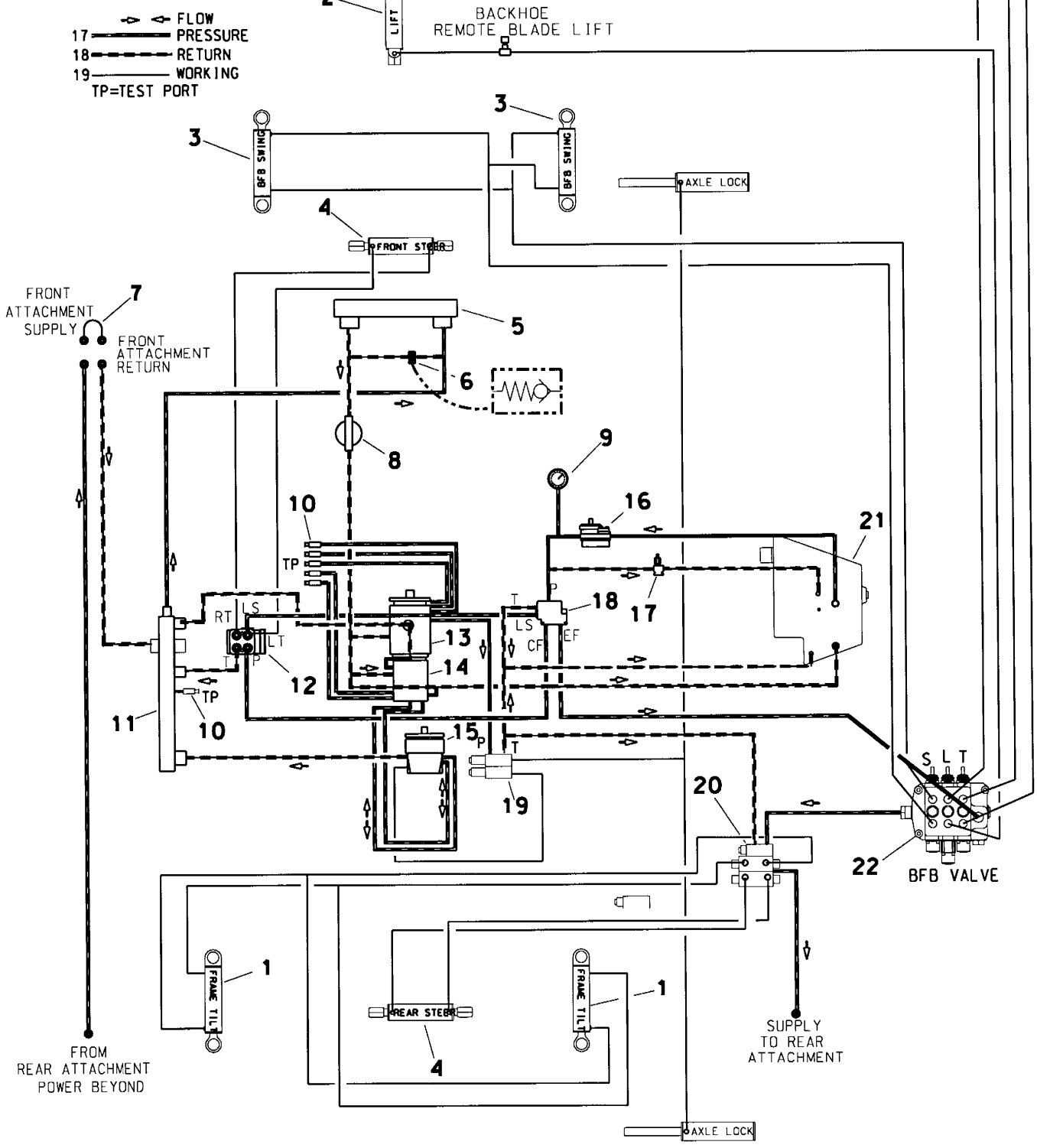
NOTES:

HYDRAULIC SCHEMATIC HYDROSTAT

SPECIFICATIONS

ENGINE		PUMP			MOTOR	
MFG (NO LOAD)	RPM	TYPE	GPM	DISPLACEMENT	TYPE	DISPLACEMENT
JOHN DEERE	2650	GROUND DRIVE			GROUND DRIVE	50cc/31cc
		70/90/115			70	
		CHARGE	9.2	14 cc (.86 in. ³)		
		PUMP	30.4	46 cc (2.82 in. ³)		
		ATTACHMENT			90/115	65cc/31cc
		70/90				
		CHARGE	9.2	14 cc (.86 in. ³)		
		PUMP	36.3	55 cc (3.35 in. ³)		
		115				
		CHARGE	11.1	16.9 cc (1.03 in. ³)		
		PUMP	49.5	75 cc (4.57 in. ³)		
		AUXILIARY	14.8	22.4 cc (1.37 in. ³)		

HYDRAULIC DIAGRAM HYDROSTATIC RT70H / RT90H



E

806-262

HYDRAULIC DIAGRAM

HYDROSTATIC

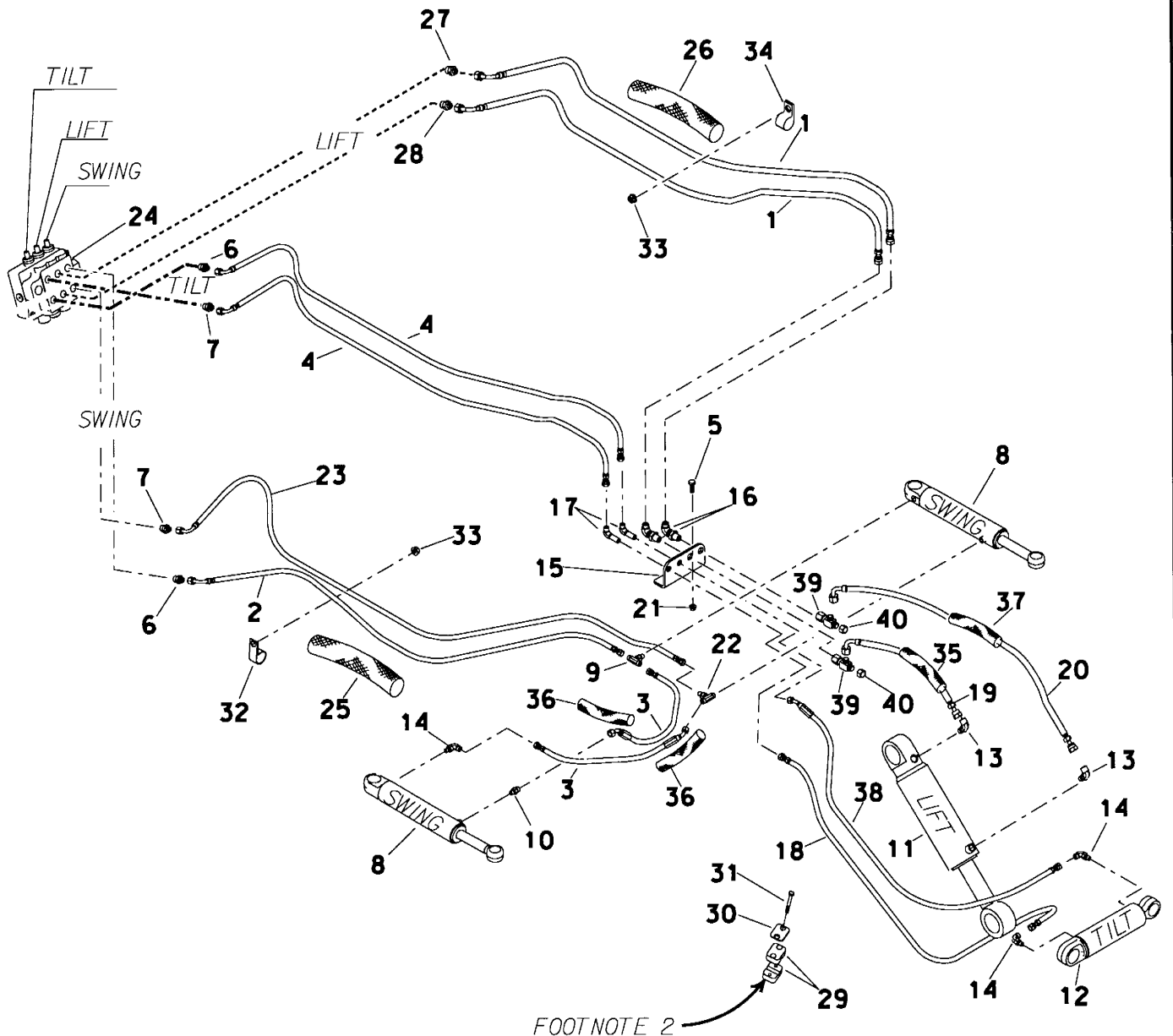
RT70H / RT90H

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	151-202		CYL (2" X 1" X 3.38")	
2.	151-070		CYL (3" X 1.75" X 8")	
3.	151-031		CYL (2" X 1" X 8")	
4.			STEERING CYLINDER	PART OF STEERING AXLE
5.	306-459		RADIATOR / OIL COOLER	
6.	153-888		CHECK VALVE(16SF-16SF, 25PSI)	
7.	149-821		HYD. LINE (-10)	
8.	153-792		FILTER ELEMENT (10 MICRON)	
9.	217-551		PRESSURE GAUGE (3000 PSI)	
10.	155-260		BK QDC ADAPTER (02-04DBK)	
11.	307-535		RETURN MANIFOLD	
12.	158-900		POWER STEERING VALVE	
13.	158-039		ATTACHMENT PUMP	SEE FOOTNOTE 1
14.	158-040		GROUND DRIVE PUMP	SEE FOOTNOTE 1
15.	157-358		HYD. MOTOR	RT70 GROUND DRIVE
	157-359		HYD. MOTOR	RT90 GROUND DRIVE
16.	153-807		HYD. PUMP	AUXILIARY
17.	158-053		HYD. RELIEF VALVE (2500 PSI)	
18.	158-901		PRIORITY VALVE	
19.	157-246		MANIFOLD (2-SPL)	
20.	153-785		HYD. VALVE (1-SPL)	
	153-786		HYD. VALVE (2-SPL)	
21.	153-049		HYD RESERVOIR	RT70
	153-112		HYD RESERVOIR	RT90 / RT115
22.	158-033		HYD CONTROL VALVE	BFB VALVE

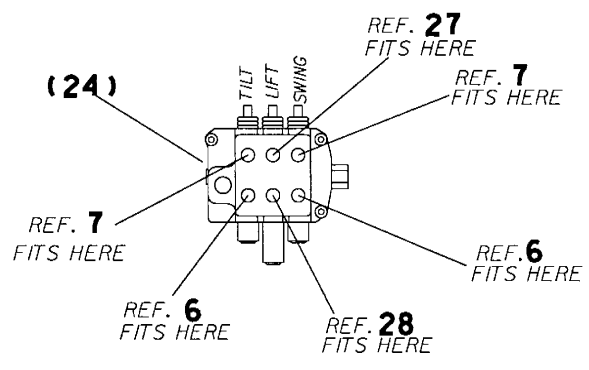
FOOTNOTES

- THIS IS PART OF TANDEM PUMP 158-048

BACKFILL BLADE HYDRAULICS



FOOTNOTE 2



BACKFILL BLADE HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	515-714	2	HOSE (06DFX90S-82"-3000)	LIFT
2.	153-968	1	HOSE (04DFX90S-82"-5000)	SWING
3.	515-310	2	HOSE (04DFX45-22"-5000)	SWING
4.	515-075	2	HOSE (04DFX90S-82"-3000)	TILT
5.	106-327	2	SCREW (M8-1.25 X 30mm)	
6.	154-261	2	CONNECTOR (040-08S)	
7.	154-374	2	CONNECTOR (040-08S, DRF)	
8.	151-057	2	CYL (2" X 1.25" X 8.0")	SEE FOOTNOTE 1
9.	154-293	1	BRANCH TEE (04S-040-040)	
10.	154-278	1	CONNECTOR (04S-040)	
11.	151-070	1	CYL (3" X 1.75" X 8")	SEE FOOTNOTE 1
12.	151-202	1	CYL (2" X 1" X 3.38")	SEE FOOTNOTE 1
13.	154-342	2	CONNECTOR (06S-06090)	
14.	154-252	3	CONNECTOR (04S-04090)	
15.	307-416	1	BK BRACKET	
16.	154-229	2	BK CONNECTOR (060-06090BK)	
17.	154-355	2	BK CONNECTOR (040-04090BK)	
18.	154-921	1	HOSE (04DFX-54"-3000-AR)	TILT
19.	154-929	1	HOSE (06DFX90-19"-3000)	LIFT
20.	515-221	1	HOSE (06DFX90S-28"-3000)	LIFT
21.	106-386	2	FLG LOCKNUT (M8-1.25)	
22.	154-316	1	RUN TEE (04S-040-040)	
23.	153-967	1	HOSE (04DFX90S-90"-5000)	SWING
24.	158-033	-	HYD. CONTROL VALVE (3-SPOOL)	
25.	117-691	1	ABRASION SLEEVE (1.25" X 68")	
26.	115-920	1	ABRASION SLEEVE (2.38" X 70")	
27.	514-294	1	CONNECTOR (08S-060, DRF)	
28.	154-222	1	CONNECTOR (060-08S)	
29.	110-866	2	CLAMP (1/2")	SEE FOOTNOTE 2
30.	110-958	2	BACKUP PLATE	
31.	105-818	4	BOLT (1/4-NC X 1-1/2")	
32.	110-332	1	BOLT-ON CLAMP (1-5/8")	SEE FOOTNOTE 3
33.	105-003	2	FLG LOCKNUT (5/16-NC)	SEE FOOTNOTE 3
34.	110-333	1	BOLT-ON CLAMP (1")	SEE FOOTNOTE 3
35.	117-328	1	ABRASION SLEEVE (1.00" X 18")	
36.	117-672	2	ABRASION SLEEVE (1.00" X 20")	
37.	117-409	1	ABRASION SLEEVE (1.00" X 28")	
38.	153-973	1	HOSE (04DFX90S-54"-3000 AR)	TILT
39.	154-344	2	UN RUN TEE (06DFX-060-060)	
40.	154-326	2	CAP (060F)	

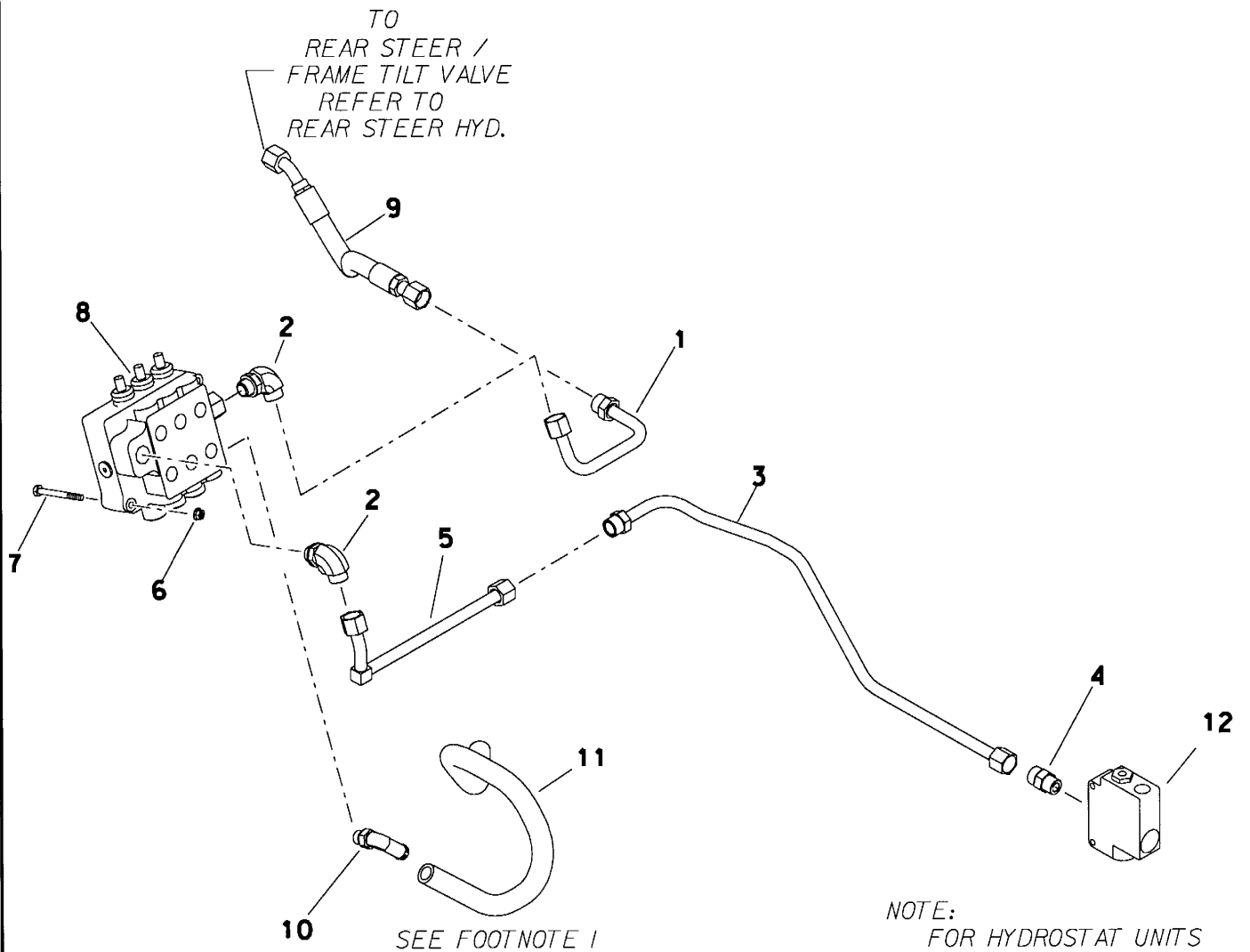
FOOTNOTES

1. REFER TO PARTS PAGE "BACKFILL BLADE ASSEMBLY" FOR CYLINDER INSTALLATION HARDWARE.
2. CLAMP (110-866) BOLTS ONTO WELD PLATE ON BFB LIFT ARM.
3. #110-333, 105-003 & 110-332 ATTACH TO STUD BOLTS ON FRAME PLATES.

NOTE

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

BACKFILL BLADE VALVE



NOTE:
FOR HYDROSTAT UNITS
REFER TO
AUXILIARY HYD. - HYDROSTAT
&
FOR POWER SHIFT UNITS
REFER
AUXILIARY HYD. - POWERSHIFT

BACKFILL BLADE VALVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	149-851	1	HYD LINE (-10)	
2.	154-298	2	CONNECTOR (10S-10090)	
3.	149-850	1	HYD LINE (-10)	
4.	154-301	1	CONNECTOR (10S-100)	
5.	157-322	1	HYD LINE (-10)	
6.	105-292	3	SCREW (M8-1.25 X 75mm)	
7.	106-386	3	FLG LOCKNUT (M8-1.25)	
8.	158-033	1	HYD CONTROL VALVE (3-SPOOL)	SEE FOOTNOTE 1
9.	153-907	1	HOSE (100FX45-16"-3000)	
10.	154-362	-	S/O COUPLER (10S-12H90)	
11.	116-636	-	BULK HOSE (3/4", SOLD PER 1')	
12.	158-901	-	PRIORITY VALVE	

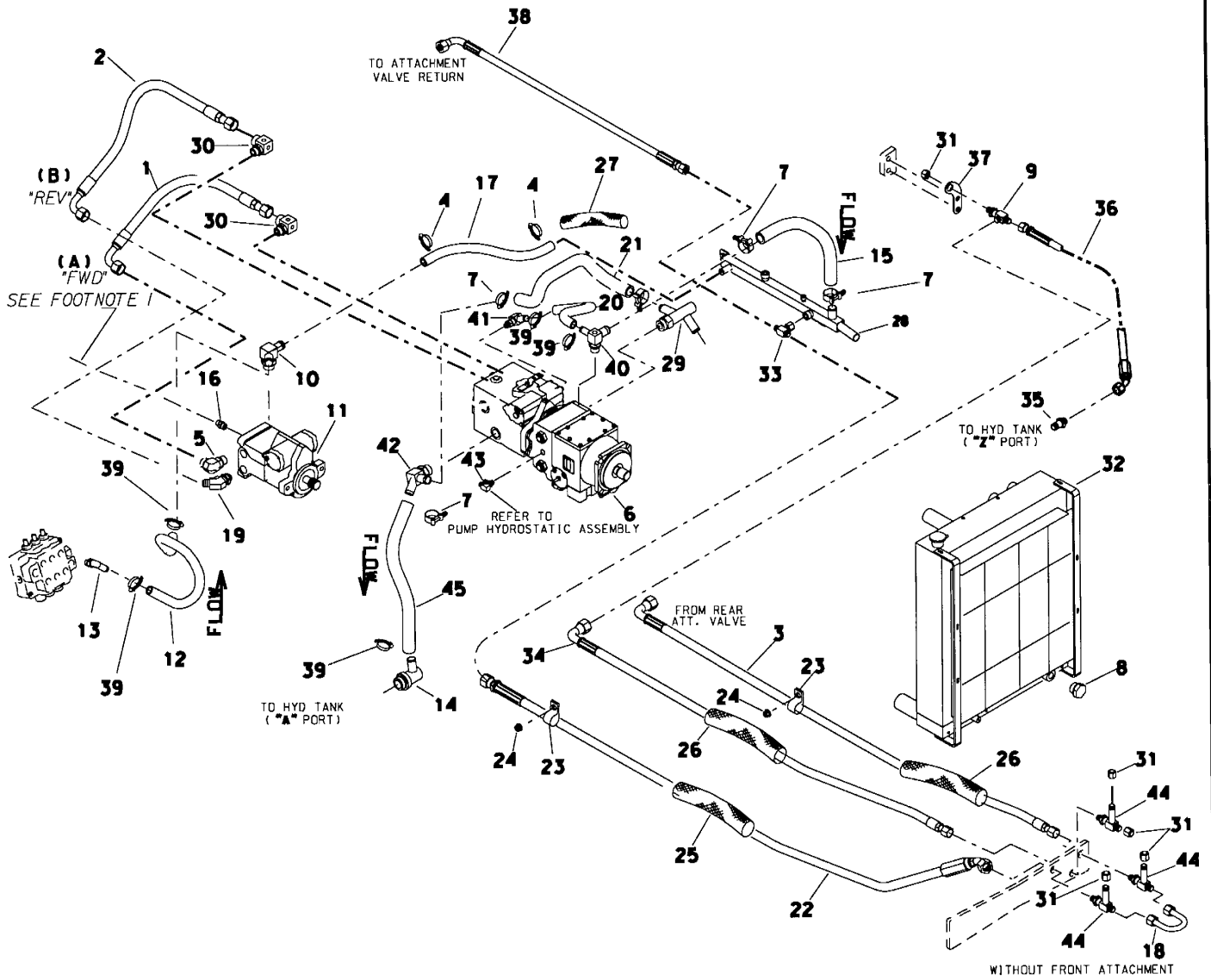
FOOTNOTES

- FOR BFB VALVE RETURN HOSE'S REFER TO PAGE "PUMP DRIVE HYDRAULICS" FOR HYDROSTATICS OR PAGE "GROUND DRIVE MOTOR HYDRAULICS" FOR POWERSHIFTS.

NOTE

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

PUMP DRIVE HYDRAULICS HYDROSTATIC



PUMP DRIVE HYDRAULICS HYDROSTATIC

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-076	1	HOSE (120FX90S-28"-5000)	REVERSE
2.	153-077	1	HOSE (120FX90S-32"-5000)	FORWARD
3.	157-343	1	HOSE (100FX90S-120"-3000)	
4.	110-353	2	WORM CLAMP (3/4" TO 1-1/2")	
5.	154-270	1	CONNECTOR (12S-12090)	
6.	158-048	-	TANDEM PUMP	
7.	111-027	5	T-BOLT CLAMP (1.25"-1.50")	
8.	155-184	1	PLUG (16S)	
9.	154-319	1	BK RUN TEE (100)	
10.	514-307	1	S/O TEE (12S-12H-12H90)	
11.	153-094	-	HYD MOTOR - GRD DRIVE	
	157-358	-	HYD MOTOR - GRD DRIVE	REFER TO "GROUND DRIVE TRANS MOUNT" PAGE
12.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 25"
13.	154-362	1	S/O COUPLER (10S-12H90)	
14.	153-142	1	S/O COUPLER (20S-16H90)	
15.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 32"
16.	154-278	1	CONNECTOR (04S-040)	SEE FOOTNOTE 1
17.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 24"
18.	149-821	1	HYD. LINE (-10)	
19.	154-251	1	CONNECTOR (12S-12045)	
20.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 12"
21.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 20"
22.	157-244	1	HOSE (100FX45-68"-3000)	
23.	110-333	2	BOLT-ON CLAMP (1")	SEE FOOTNOTE 2
24.	105-003	2	FLG LOCKNUT (5/16-NC)	SEE FOOTNOTE 2
25.	117-764	1	ABRASION SLEEVE (1.59" X 90")	
26.	117-392	2	ABRASION SLEEVE (1.25" X 60")	
27.	115-687	AR	ABRASION SLEEVE (SOLD PER FOOT)	USE 1 @ 12" & SEE FOOTNOTE 3
28.	307-535	1	RETURN MANIFOLD	
29.	149-820	-	S/O COUPLER (16S-16H90-16H45, XL)	
30.	149-058	-	RUN TEE (16S-120-06SF-06SF-06SF)	
31.	154-324	5	CAP (100F)	
32.	306-459	-	RADIATOR/OIL COOLER	
33.	154-325	1	UN BR TEE (100FX-100-100)	
34.	155-466	1	HOSE (100FX90-74"-2750)	
35.	154-391	1	CONNECTOR (08S-100)	
36.	153-957	1	HOSE (100FX45-44"-3000)	BEFORE SERIAL #_____
	515-515	1	HOSE (100FX45-50"-3000)	AFTER SERIAL #_____
37.	316-822	1	RETURN BRACKET	SEE FOOTNOTE 4
38.	153-956	1	HOSE (100FX90-50"-3000)	
39.	111-011	5	WORM CLAMP (1" TO 1-3/4")	
40.	155-224	-	S/O BR TEE (12S-12H-16H90)	
41.	155-198	-	S/O COUPLER (12S-12H90-06SF)	
42.	149-819	-	S/O COUPLER (16S-16H-16H45)	
43.	154-230	-	BRANCH TEE (06S-040-040)	
44.	153-984	3	BK RUN TEE (100-100-100L)	
45.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 26"

FOOTNOTES

- FOR DESTINATION OF 154-278 (REF #16) REFER TO PARTS PAGE "MOTOR SHIFT/DIFF LOCK HYDRAULICS" REF #6.
- #110-333 & #105-003 ATTACH TO STUD BOLTS ON LEFT FRAME PLATE.
- ABRASION SLEEVE (REF #27) IS USED TO WRAP HOSE (REF #21) AS IT WRAPS AROUND PUMP.
- RETURN BRACKET (316-822) IS ATTACHED USING CURRENT HARDWARE ON TRANSMISSION MOUNT.

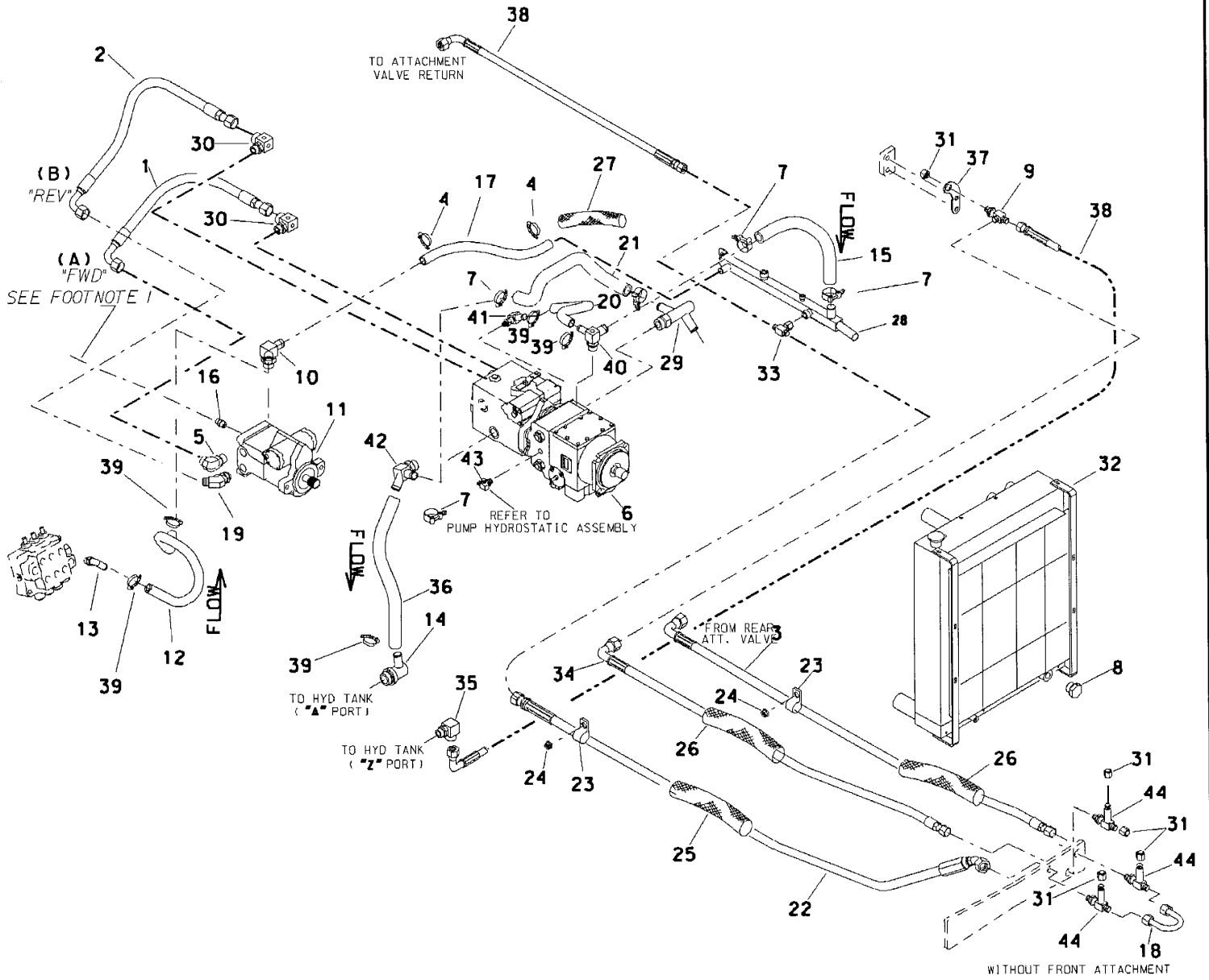
NOTE

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

PUMP DRIVE HYDRAULICS

HYDROSTATIC

BEGINS WITH S/N 5X0465



PUMP DRIVE HYDRAULICS

HYDROSTATIC

BEGINS WITH S/N 5X0465

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-076	1	HOSE (120FX90S-28"-5000)	REVERSE
2.	153-077	1	HOSE (120FX90S-32"-5000)	FORWARD
3.	157-343	1	HOSE (100FX90S-120"-3000)	
4.	110-353	2	WORM CLAMP (3/4" TO 1-1/2")	
5.	154-270	1	CONNECTOR (12S-12090)	
6.	158-048	-	TANDEM PUMP	
7.	111-027	5	T-BOLT CLAMP (1.25"-1.50")	
8.	155-184	1	PLUG (16S)	
9.	154-319	1	BK RUN TEE (100)	
10.	514-307	1	S/O TEE (12S-12H-12H90)	
11.	153-094	-	HYD MOTOR - GRD DRIVE	
	157-358	-	HYD MOTOR - GRD DRIVE	REFER TO "GROUND DRIVE TRANS MOUNT" PAGE
12.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 25"
13.	154-362	1	S/O COUPLER (10S-12H90)	
14.	153-142	1	S/O COUPLER (20S-16H90)	
15.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 32"
16.	154-278	1	CONNECTOR (04S-040)	SEE FOOTNOTE 1
17.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 24"
18.	149-821	1	HYD. LINE (-10)	
19.	154-251	1	CONNECTOR (12S-12045)	
20.	116-636	AR	BULK HOSE (3/4", SOLD PER 1')	USE 1 @ 12"
21.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 20"
22.	157-244	1	HOSE (100FX45-68"-3000)	
23.	110-333	2	BOLT-ON CLAMP (1")	SEE FOOTNOTE 2
24.	105-003	2	FLG LOCKNUT (5/16-NC)	SEE FOOTNOTE 2
25.	117-764	1	ABRASION SLEEVE (1.59" X 90")	
26.	117-392	2	ABRASION SLEEVE (1.25" X 60")	
27.	115-687	AR	ABRASION SLEEVE (SOLD PER FOOT)	USE 1 @ 12" & SEE FOOTNOTE 3
28.	307-535	1	RETURN MANIFOLD	
29.	149-820	-	S/O COUPLER (16S-16H90-16H45, XL)	
30.	149-058	-	RUN TEE (16S-120-06SF-06SF-06SF)	
31.	154-324	5	CAP (100F)	
32.	306-459	-	RADIATOR/OIL COOLER	
33.	154-325	1	UN BR TEE (100FX-100-100)	
34.	155-466	1	HOSE (100FX90-74"-2750)	
35.	514-274	1	CONNECTOR (08S-10090)	
36.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 26"
37.	316-822	1	RETURN BRACKET	SEE FOOTNOTE 4
38.	153-956	2	HOSE (100FX90-50"-3000)	
39.	111-011	5	WORM CLAMP (1" TO 1-3/4")	
40.	155-224	-	S/O BR TEE (12S-12H-16H90)	
41.	155-198	-	S/O COUPLER (12S-12H90-06SF)	
42.	149-819	-	S/O COUPLER (16S-16H-16H45)	
43.	154-230	-	BRANCH TEE (06S-040-040)	
44.	153-984	3	BK RUN TEE (100-100-100L)	

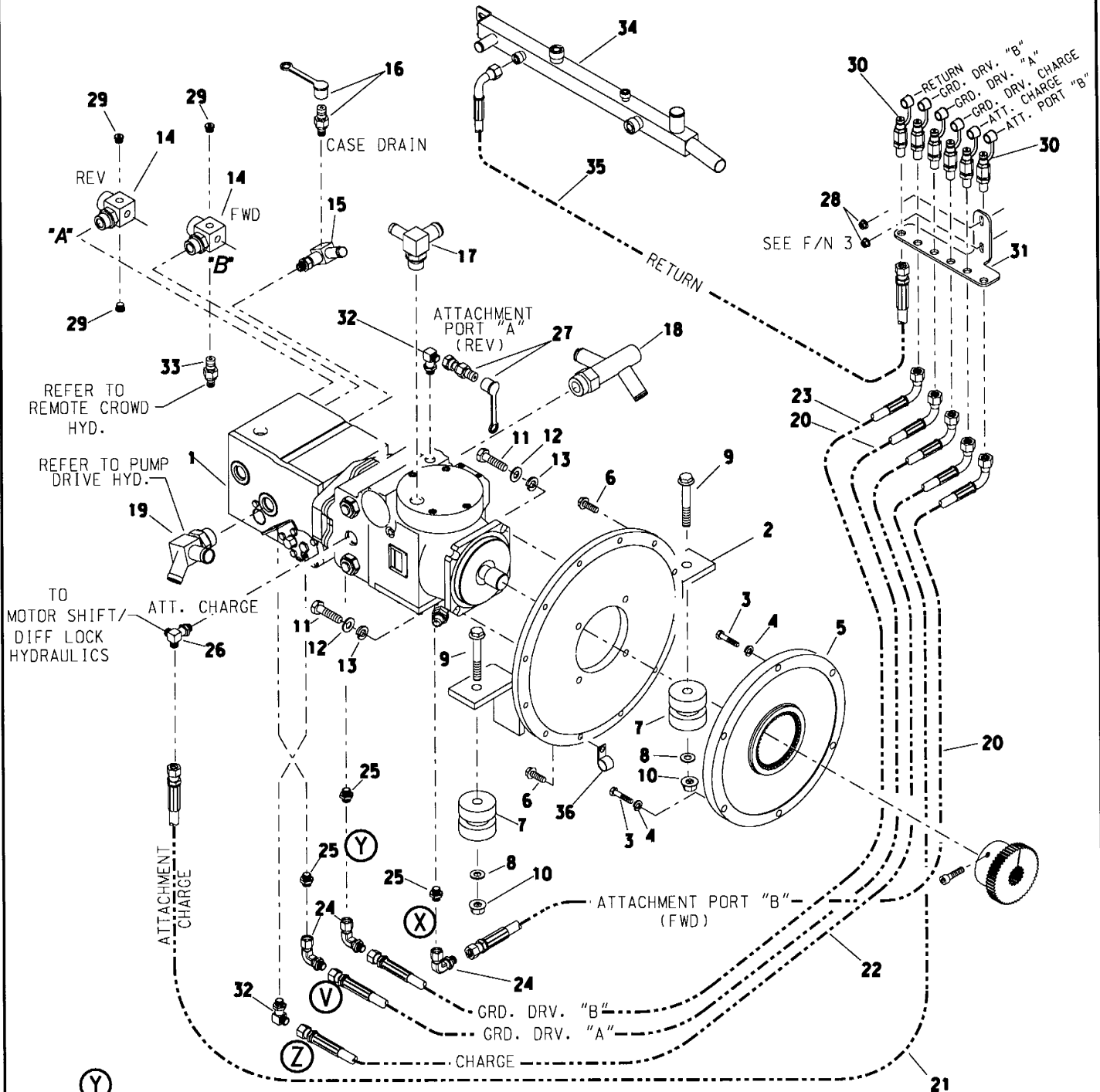
FOOTNOTES

- FOR DESTINATION OF 154-278 (REF #16) REFER TO PARTS PAGE "MOTOR SHIFT/DIFF LOCK HYDRAULICS" REF #6.
- #110-333 & #105-003 ATTACH TO STUD BOLTS ON LEFT FRAME PLATE.
- ABRASION SLEEVE (REF #27) IS USED TO WRAP HOSE (REF #21) AS IT WRAPS AROUND PUMP.
- RETURN BRACKET (316-822) IS ATTACHED USING CURRENT HARDWARE ON TRANSMISSION MOUNT.

NOTE

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

PUMP HYDROSTATIC ASSEMBLY



NOTES:

- 1: REFER TO PARTS PAGE "PUMP DRIVE HYDRAULICS" FOR HYDRAULIC HOSE ROUTING INFORMATION.
- 2: HUB ON PUMP MEASURES 2-3/4" FROM PUMP MOUNTING SURFACE TO CENTER OF SPLINES.

PUMP HYDROSTATIC ASSEMBLY

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	158-048	1	TANDEM PUMP	
	158-039		ATTACHMENT PUMP	
	214-892		PRESSURE SWITCH	
	190-679		SEAL REPAIR KIT	
	499-449		MULTIFUNCTION VALVE (#7)	
	500-764		MULTIFUNCTION VALVE (#1)	
	158-040		GROUND DRIVE PUMP	
	500-806		SEAL REPAIR KIT	
	499-448		SERVO COVER	
	499-447		SERVO COVER (FULL DISPL.)	
	165-728		SERVO GASKET	
2.	307-330	1	PUMP MOUNT	
3.	107-416	6	BOLT (5/16-NC X 1-1/2")	SEE FOOTNOTE 1
4.	105-091	6	LOCKWASHER (5/16")	
5.	165-889	1	FLYWHEEL COUPLING	SEE FOOTNOTE 3
6.	106-383	12	FLG LK SCREW (M10-1.50 X 30mm)	SEE FOOTNOTE 1
7.	116-151	2	SHOCK MOUNT	
8.	105-475	4	WASHER (1/2")	
9.	105-993	2	FLG BOLT (5/8-NC X 4")	
10.	105-994	2	FLG LOCKNUT (5/8-NC)	
11.	105-066	4	BOLT (1/2-NC X 1-3/4")	SEE FOOTNOTE 1
12.	105-244	4	WASHER (1/2")	
13.	105-070	4	LOCKWASHER (1/2")	
14.	149-058	2	RUN TEE (16S-120-06SF-06SF-06SF)	REFER TO PUMP DRIVE HYD. PARTS PAGE
15.	155-198	1	S/O COUPLER (12S-12H90-06SF)	
16.	159-147	1	QDC ADAPTER (02-06S)	
17.	155-224	1	S/O BRANCH TEE (12S-12H-16H90)	
18.	149-820	1	S/O COUPLER (16S-16H90-16H45, XL)	
19.	149-819	1	S/O COUPLER (16S-16H-16H45)	
20.	153-911	2	HOSE (040FX90-10"-5000-AR)	
21.	515-462	1	HOSE (040FX90-22"-3000-AR)	
22.	515-396	1	HOSE (040FX90-8.0"-5000)	
23.	515-358	1	HOSE (040FX90-11"-5000)	
24.	154-255	3	UNION (040-040FX90)	
25.	154-220	3	CONNECTOR (040-06S)	
26.	154-230	-	BRANCH TEE (06S-040-040)	REFER TO MOTOR SHIFT/DIFF LOCK HYDRAULICS PARTS PAGE
27.	159-156	1	QDC ADAPTER (02-040F)	
28.	105-003	2	FLG LOCKNUT (5/16-NC)	
29.	154-384	3	PLUG (06S)	
30.	155-260	6	BK QDC ADAPTER (02-040BK)	
31.	310-246	1	TEST PORT BRACKET	SEE FOOTNOTE 2
32.	154-226	2	CONNECTOR (040-06S90)	
33.	159-381	-	CHECK VALVE (06S-060)	REFER TO PUMP DRIVE HYD. PARTS PAGE
34.	307-535	-	RETURN MANIFOLD	
35.	515-085	1	HOSE (040FX90-8.5"-3000)	
36.	110-332	1	BOLT-ON CLAMP (1-5/8")	

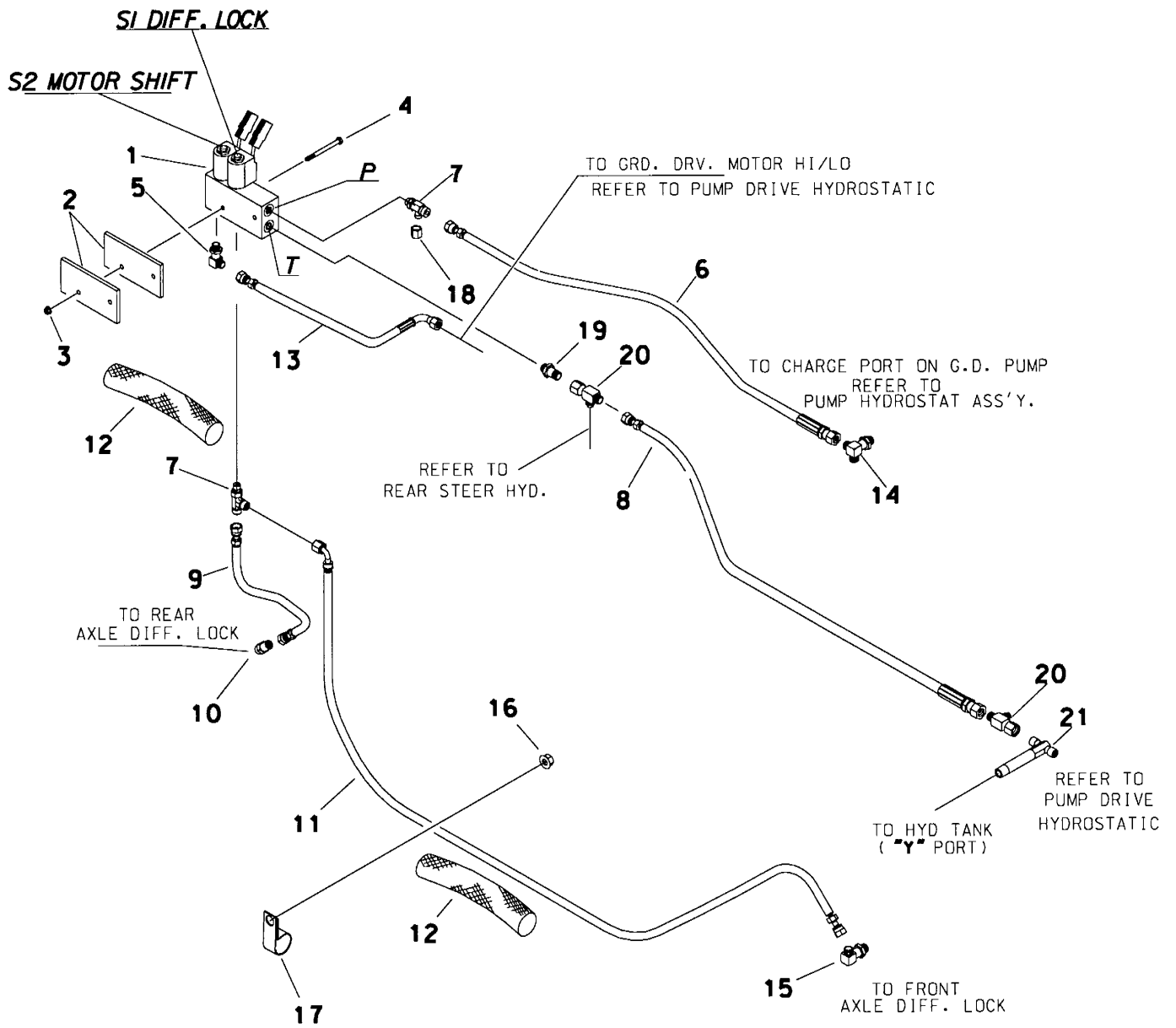
FOOTNOTES

- USE LOCTITE NO. 242 OR ITS EQUIVALENT
- TEST PORT BRACKET (REF 31) BOLTS TO .312" STUD BOLTS ON FRAME.
- TORQUE TO 90 FT-LBS AND USE 242 LOCTITE.

NOTE

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

MOTOR SHIFT/DIFF LOCK HYDRAULICS HYDROSTATIC



MOTOR SHIFT/DIFF LOCK HYDRAULICS HYDROSTATIC

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	157-246	1	MANIFOLD (2-SP)	SEE FOOTNOTE 2
	214-491		COIL, 12V	
	499-446		SOLENOID (3 WAY-2 POS VALVE)	
2.	306-885	2	MOUNT PLATE	SEE FOOTNOTE 3
3.	106-385	2	FLG LOCKNUT (M6-1.00)	
4.	106-566	2	SCREW (M6-1.00 X 70mm)	
5.	154-252	1	CONNECTOR (04S-04090)	
6.	515-249	1	HOSE (040FX-26"-3000)	
7.	154-316	2	RUN TEE (04S-040-040)	DIFF. LOCK
8.	515-711	1	HOSE (060FX-25"-3000)	
9.	154-743	1	HOSE (040FX90-23"-3000)	
10.	154-220	1	CONNECTOR (040-06S)	
11.	515-174	1	HOSE (040FX90-74"-3000)	
12.	117-611	2	ABRASION SLEEVE (1.00" X 22")	
13.	154-726	1	HOSE (040FX90-15"-3000)	
14.	154-230	1	BRANCH TEE (06S-040-040)	
15.	154-226	1	CONNECTOR (040-06S90)	
16.	105-003	1	FLG LOCKNUT (5/16-NC)	SEE FOOTNOTE 1
17.	110-333	1	BOLT-ON CLAMP (1")	SEE FOOTNOTE 1
18.	154-296	1	CAP (040F)	
19.	154-411	1	CONNECTOR (04S-060)	
20.	154-344	2	UN RUN TEE (060FX-060-060)	
21.	153-917	1	TEE (08N-060-060)	

FOOTNOTES

- #105-003 & #110-333 ATTACH TO STUD BOLTS ON FRAME PLATE.
- EARLY PRODUCTION MANIFOLDS HAVE A CAVITY PLUG WHERE THE RELIEF VALVE WAS LOCATED.
- WHEN "FRAME TILT" OPTION IS USED TWO MOUNT PLATES (306-885) IS REQUIRED, ONE ON EITHER SIDE OF FRAME. WITH NO FRAME TILT ONLY ONE MOUNT PLATE (306-885) IS USED ON OUTSIDE OF FRAME.

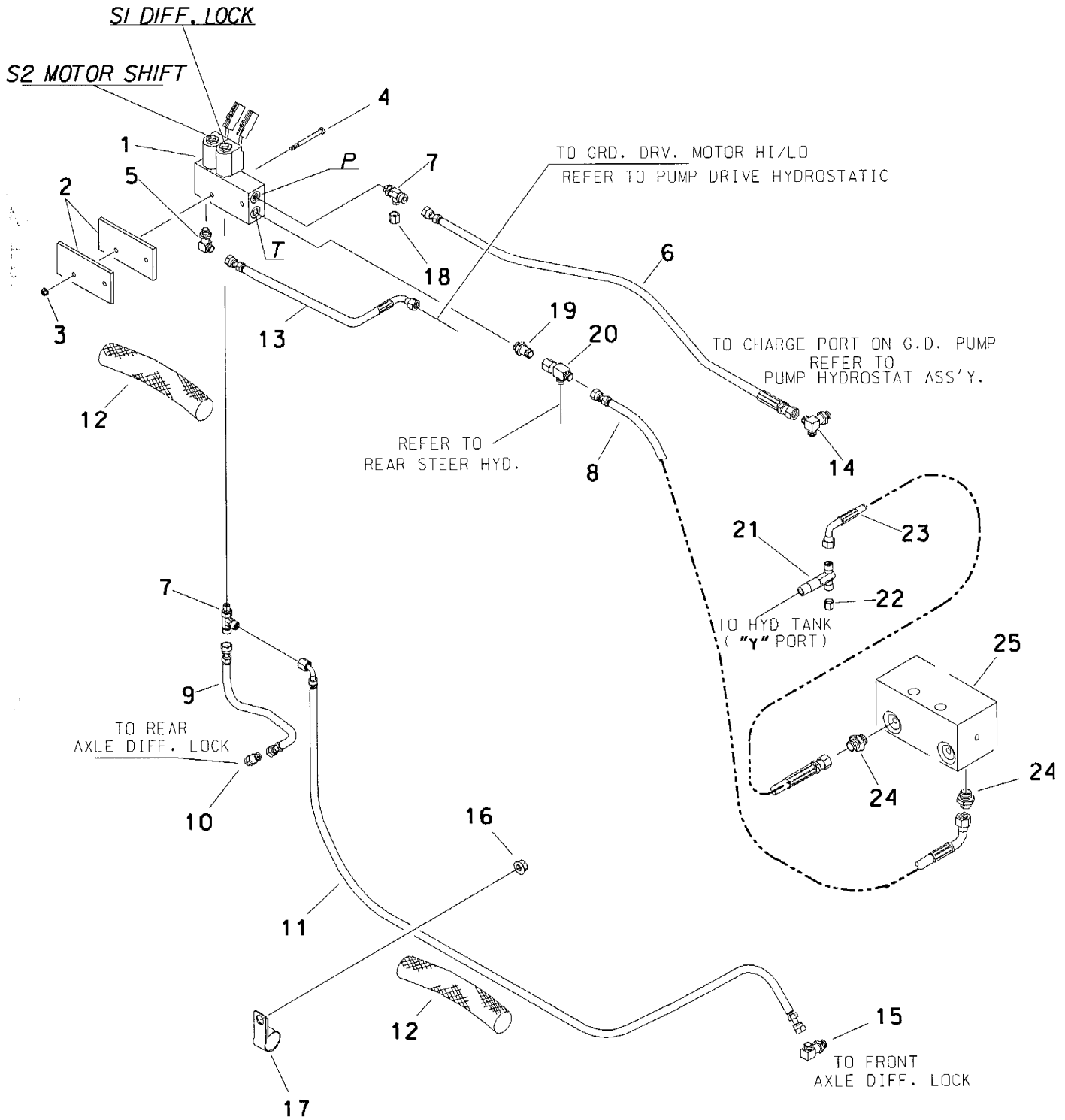
NOTE

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

MOTOR SHIFT/DIFF LOCK HYDRAULICS

HYDROSTATIC

BEGINS WITH S/N 5X0710.



MOTOR SHIFT/DIFF LOCK HYDRAULICS

HYDROSTATIC
BEGINS WITH S/N 5X0710.

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	157-246	1	MANIFOLD (2-SP)	SEE FOOTNOTE 2
	214-491		COIL, 12V	
	499-446		SOLENOID (3 WAY-2 POS VALVE)	
2.	306-885	2	MOUNT PLATE	SEE FOOTNOTE 3
3.	106-385	2	FLG LOCKNUT (M6-1.00)	
4.	106-566	2	SCREW (M6-1.00 X 70mm)	
5.	154-252	1	CONNECTOR (04S-04090)	
6.	515-249	1	HOSE (040FX-26"-3000)	
7.	154-316	2	RUN TEE (04S-040-040)	DIFF. LOCK
8.	515-716	1	HOSE (060FX90-42"-3000)	
9.	154-743	1	HOSE (040FX90S-23"-3000)	
10.	154-220	1	CONNECTOR (040-06S)	
11.	515-174	1	HOSE (040FX90-74"-3000)	
12.	117-611	2	ABRASION SLEEVE (1.00" X 22")	
13.	154-726	1	HOSE (040FX90-15"-3000)	
14.	154-230	1	BRANCH TEE (06S-040-040)	
15.	154-226	1	CONNECTOR (040-06S90)	
16.	105-003	1	FLG LOCKNUT (5/16-NC)	SEE FOOTNOTE 1
17.	110-333	1	BOLT-ON CLAMP (1")	SEE FOOTNOTE 1
18.	154-296	1	CAP (040F)	
19.	154-411	1	CONNECTOR (04S-060)	
20.	154-344	1	UN RU TEE (060FX-060-060)	
21.	159-643	1	TEE (08N-060-060 X 2.375")	
22.	154-326	1	CAP (060F)	
23.	157-899	-	HOSE (060FX90S-11"-3000)	REFER TO PAGE "REMOTE CROWD HYDRAULICS"
24.	154-221	-	CONNECTOR (06S-060)	
25.	159-218	-	HYD. MANIFOLD (4-PORT)	

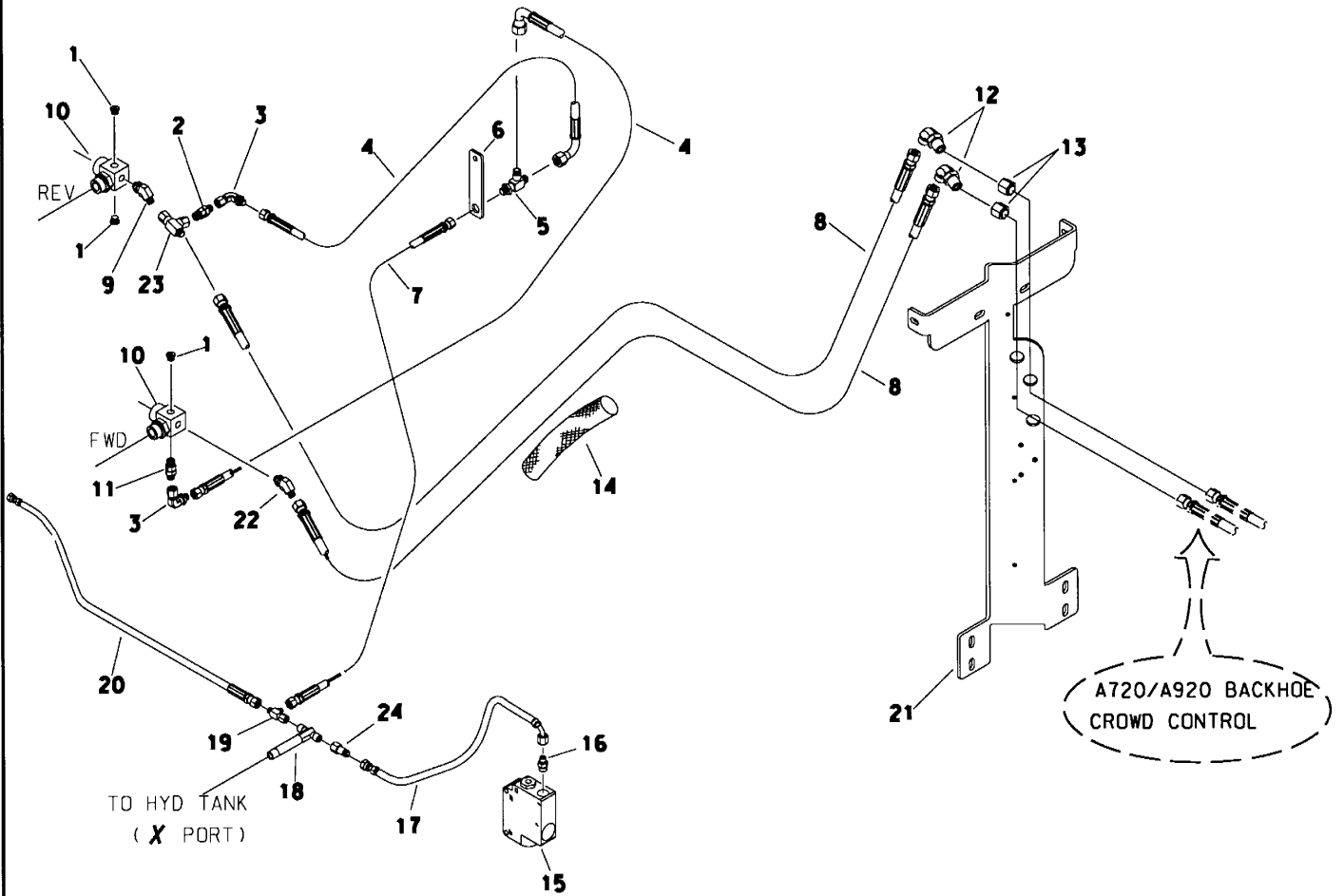
FOOTNOTES

- #105-003 & #110-333 ATTACH TO STUD BOLTS ON FRAME PLATE.
- EARLY PRODUCTION MANIFOLDS HAVE A CAVITY PLUG WHERE THE RELIEF VALVE WAS LOCATED.
- WHEN "FRAME TILT" OPTION IS USED TWO MOUNT PLATES (306-885) IS REQUIRED, ONE ON EITHER SIDE OF FRAME. WITH NO FRAME TILT ONLY ONE MOUNT PLATE (306-885) IS USED ON OUTSIDE OF FRAME.

NOTE

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

REMOTE CROWD HYDRAULICS BEGINS WITH S/N 5W0062



REMOTE CROWD HYDRAULICS BEGINS WITH S/N 5W0062

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-384	-	PLUG (06S)	
2.	149-871	1	FLOW CHECK VALVE (060-060)	
3.	154-228	2	UNION (060-060FX90)	
4.	149-826	2	HOSE (060FX90L-12"-3000)	
5.	154-400	1	BK RUN TEE (060-060-060BK)	
6.	318-606	1	BULKHEAD BRACKET	
7.	515-089	1	HOSE (060FX-15"-3000)	
8.	157-263	2	HOSE (040FX-102"-5000)	
9.	154-224	1	CONNECTOR (06S-06045)	
10.	149-058	-	RUN TEE (16S-120-06SF-06SF-06SF)	
11.	159-381	1	CHECK VALVE (06S-060)	
12.	154-355	2	BK CONNECTOR (040-04090BK)	
13.	154-296	2	CAP (040F)	
14.	115-902	1	ABRASION SLEEVE (1.59" X 100")	
15.	158-901	-	PRIORITY VALVE	
16.	154-278	-	CONNECTOR (04S-040)	
17.	515-437	-	HOSE (040FX90-21"-3000)	
18.	153-917	-	TEE (08N-060-060)	
19.	154-344	-	UN RUN TEE (060FX-060-060)	
20.	515-711	-	HOSE (060FX-25"-3000)	
21.	307-909	-	FRONT HOOD SUPPORT	
22.	154-250	1	CONNECTOR (040-06S45)	
23.	157-264	1	TEE (040-060F-060F)	
24.	154-373	-	REDUCER (040-060F)	

FOOTNOTES

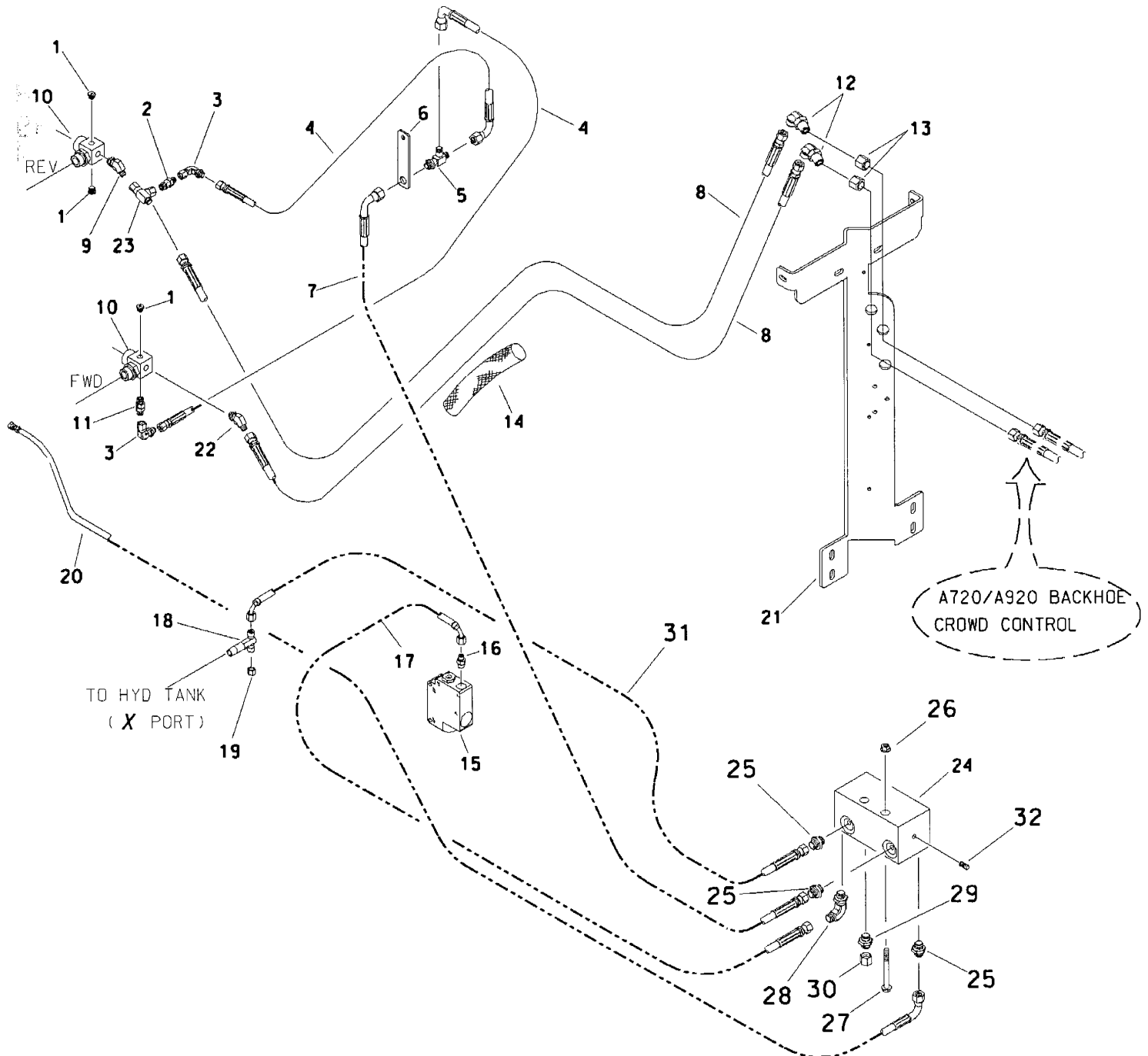
NOTE

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

REMOTE CROWD HYDRAULICS

BEGINS WITH S/N 5X0465 RT70/RT75

BEGINS WITH S/N 5X0710 RT90/RT95/RT115



REMOTE CROWD HYDRAULICS

BEGINS WITH S/N 5X0465 RT70/RT75

BEGINS WITH S/N 5X0710 RT90/RT95/RT115

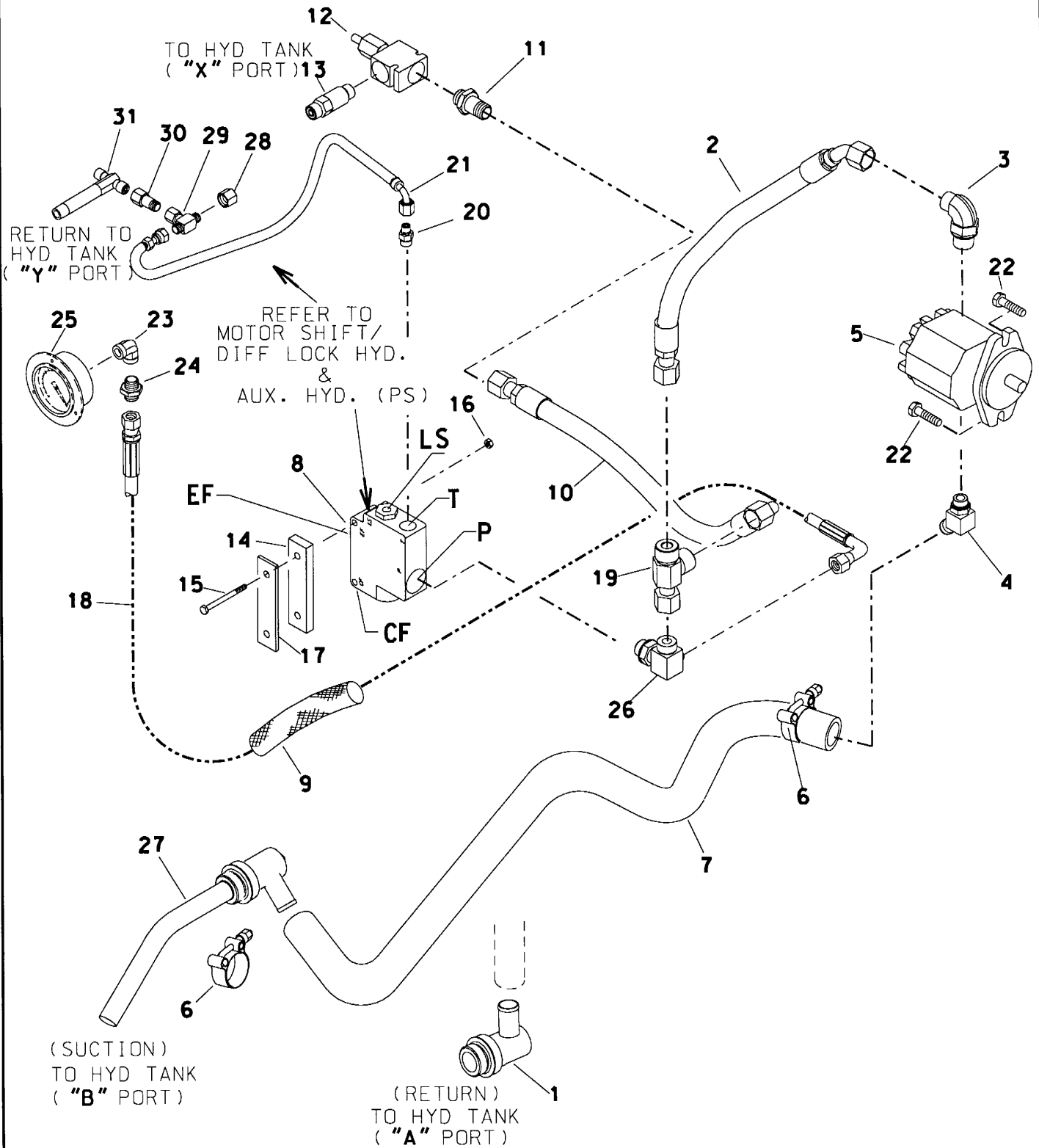
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-384	-	PLUG (06S)	
2.	149-871	1	FLOW CHECK VALVE (060-060)	
3.	154-228	2	UNION (060-060FX90)	
4.	149-826	2	HOSE (060FX90L-12"-3000)	
5.	154-400	1	BK RUN TEE (060-060-060BK)	
6.	318-606	1	BULKHEAD BRACKET	
7.	154-887	1	HOSE (060FX45-23"-3000)	
8.	157-263	2	HOSE (040FX-102"-5000)	
9.	154-224	1	CONNECTOR (06S-06045)	
10.	149-058	-	RUN TEE (16S-120-06SF-06SF-06SF)	
11.	159-381	1	CHECK VALVE (06S-060)	
12.	154-355	2	BK CONNECTOR (040-04090BK)	
13.	154-296	2	CAP (040F)	
14.	115-934	1	ABRASION SLEEVE (1.75" X 100")	
15.	157-917	-	PRIORITY VALVE	
16.	154-278	-	CONNECTOR (04S-040)	
17.	154-743	-	HOSE (040FX90S-23"-3000)	
18.	159-643	-	TEE (08N-060-060 X 2.375")	
19.	154-326	-	CAP (060F)	
20.	515-716	-	HOSE (060FX90-42"-3000)	
21.	307-909	-	FRONT HOOD SUPPORT	
22.	154-250	1	CONNECTOR (040-06S45)	
23.	157-264	1	TEE (040-060F-060F)	
24.	159-218	1	HYD. MANIFOLD (4-PORT)	
25.	154-221	3	CONNECTOR (06S-060)	
26.	106-386	2	FLG LOCKNUT (M8-1.25)	
27.	105-665	2	FLG SCREW (M8-1.25 X 55mm)	
28.	154-226	1	CONNECTOR (040-06S90)	
29.	154-220	1	CONNECTOR (040-06S)	
30.	154-296	1	CAP (040F)	REFER TO "GEARBOX & VIBRATOR DRV HYD" H752/H952
31.	157-899	1	HOSE (060FX90S-11"-3000)	
32.	110-264	1	EXPANDER PLUG (.275")	

FOOTNOTES

NOTE

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

AUXILIARY HYDRAULICS HYDROSTATIC



E

806-225

AUXILIARY HYDRAULICS HYDROSTATIC

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-142	1	S/O COUPLER (20S-16H90)	
2.	515-734	1	HOSE (100FX45-28"-3000)	
3.	154-298	1	CONNECTOR (10S-10090)	
4.	155-230	1	S/O COUPLER (16S-16H45)	
5.	153-807	1	HYDRAULIC PUMP (AUX)	
	500-966	1	SEAL REPAIR KIT	
6.	111-027	2	T-BOLT CLAMP (1.25" - 1.50")	
7.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 54"
8.	158-901	1	PRIORITY VALVE	
9.	117-218	1	ABRASION SLEEVE (1.00" X 52")	
10.	153-805	1	HOSE (100FX90S-9"-3000)	BEFORE SERIAL #_____
	153-775	1	HOSE (100FX90-13"-3000)	AFTER SERIAL #_____
11.	154-391	1	CONNECTOR (08S-100)	
12.	158-053	1	HYD. RELIEF VALVE (2500 PSI)	
13.	149-991	1	CONNECTOR (08S-08S, XLG HEX)	
14.	306-886	1	SPACER	USED ON INSIDE OF FRAME PLATE
15.	107-054	2	SCREW (M6-1.00 X 90mm)	
16.	106-385	2	FLG LOCKNUT (M6-1.00)	
17.	309-817	1	SPACER PLATE	USED ON OUTSIDE OF FRAME PLATE
18.	515-075	1	HOSE (040FX90S-82"-3000)	
19.	154-488	1	UN RUN TEE (100FX-100-100)	
20.	154-278	1	CONNECTOR (04S-040)	
21.	515-437	1	HOSE (040FX90-21"-3000)	BEFORE SERIAL #_____
	154-743	1	HOSE (040FX90-23"-3000)	AFTER SERIAL #_____
22.	105-876	2	SCREW (M10-1.50 X 35mm)	
23.	149-896	1	STREET ELBOW (04NF-04NF90)	
24.	154-339	1	CONNECTOR (04N-040)	
25.	217-551	1	PRESSURE GAUGE (3000 PSI)	SEE FOOTNOTE 1
26.	153-787	1	TEE (100-10S-040)	
27.	153-710	-	PICK UP TUBE	
28.	154-296	1	CAP (040F)	
29.	154-379	1	UN BR TEE (040FX-040-040)	
30.	154-373	1	REDUCER (040-060F)	
31.	153-917	-	TEE (08N-060-060)	

FOOTNOTES

- REFER #25 (217-551) IS DEPICTED WITH FACE OF GAUGE SHOWING, ACTUALLY IT FITS INSIDE THE FENDER AND FACES THE OPERATOR.

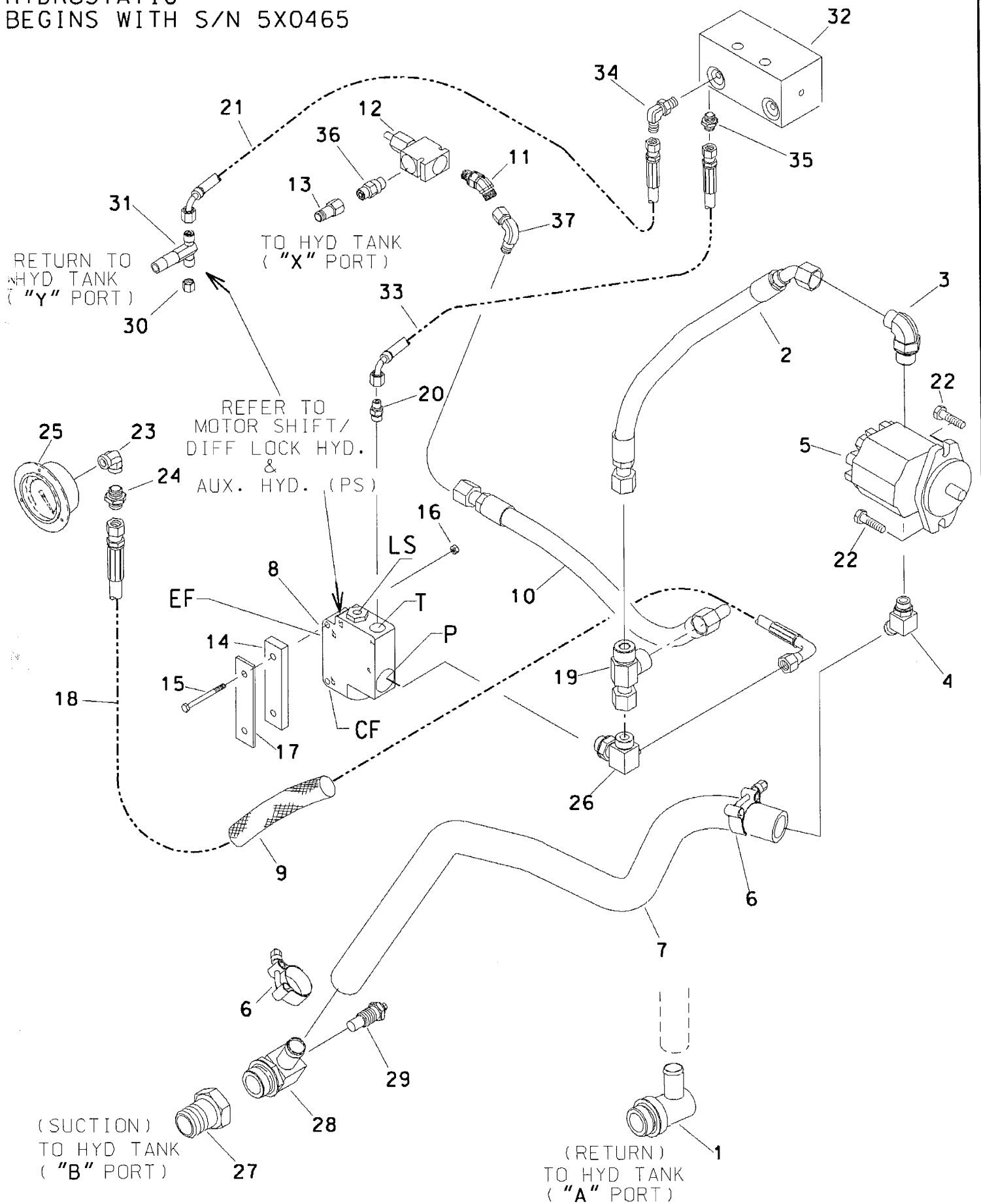
NOTE

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

AUXILIARY HYDRAULICS

HYDROSTATIC

BEGINS WITH S/N 5X0465



AUXILIARY HYDRAULICS

HYDROSTATIC

BEGINS WITH S/N 5X0465

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	153-142	1	S/O COUPLER (20S-16H90)	
2.	515-734	1	HOSE (100FX45-28"-3000)	
3.	154-298	1	CONNECTOR (10S-10090)	
4.	155-230	1	S/O COUPLER (16S-16H45)	
5.	153-807	1	HYDRAULIC PUMP (AUX)	
	500-966	1	SEAL REPAIR KIT	
6.	111-027	2	T-BOLT CLAMP (1.25" - 1.50")	
7.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 54"
8.	157-917	1	PRIORITY VALVE	
9.	117-218	1	ABRASION SLEEVE (1.00" X 52")	
10.	155-491	1	HOSE (100FX90L-12"-3000)	
11.	154-391	1	CONNECTOR (08S-100)	
12.	158-681	1	RELIEF VALVE (AUXILIARY)	PRE SET TO 2500 PSI
13.	153-995	1	CONNECTOR (08S-08SF)	
14.	306-886	1	SPACER	USED ON INSIDE OF FRAME PLATE
15.	107-054	2	SCREW (M6-1.00 X 90mm)	
16.	106-385	2	FLG LOCKNUT (M6-1.00)	
17.	309-817	1	SPACER PLATE	USED ON OUTSIDE OF FRAME PLATE
18.	515-075	1	HOSE (040FX90S-82"-3000)	
19.	154-488	1	UN RUN TEE (100FX-100-100)	
20.	154-278	1	CONNECTOR (04S-040)	
21.	515-188	1	HOSE (060FX90S-23"-3000)	
22.	105-876	2	SCREW (M10-1.50 X 35mm)	
23.	149-896	1	STREET ELBOW (04NF-04NF90)	
24.	154-339	1	CONNECTOR (04N-040)	
25.	217-551	1	PRESSURE GAUGE (3000 PSI)	SEE FOOTNOTE 1
26.	153-787	1	TEE (100-10S-040)	
27.	514-446	-	REDUCER (24S-20SF)	
28.	157-987	1	S/O COUPLER (20S-16H90, 04NF)	
29.	214-854	1	TEMPERATURE SWITCH	
30.	154-326	-	CAP (060F)	
31.	159-643	-	TEE (08N-060-060, X 2.375")	
32.	159-218	-	HYD. MANIFOLD (4-PORT)	
33.	515-437	-	HOSE (040FX90-21"-3000)	
34.	154-342	-	CONNECTOR (06S-06090)	
35.	154-220	-	CONNECTOR (04Q-06S)	
36.	154-466	1	CONNECTOR (08S-08S)	
37.	154-315	1	UNION (100-100FX90)	

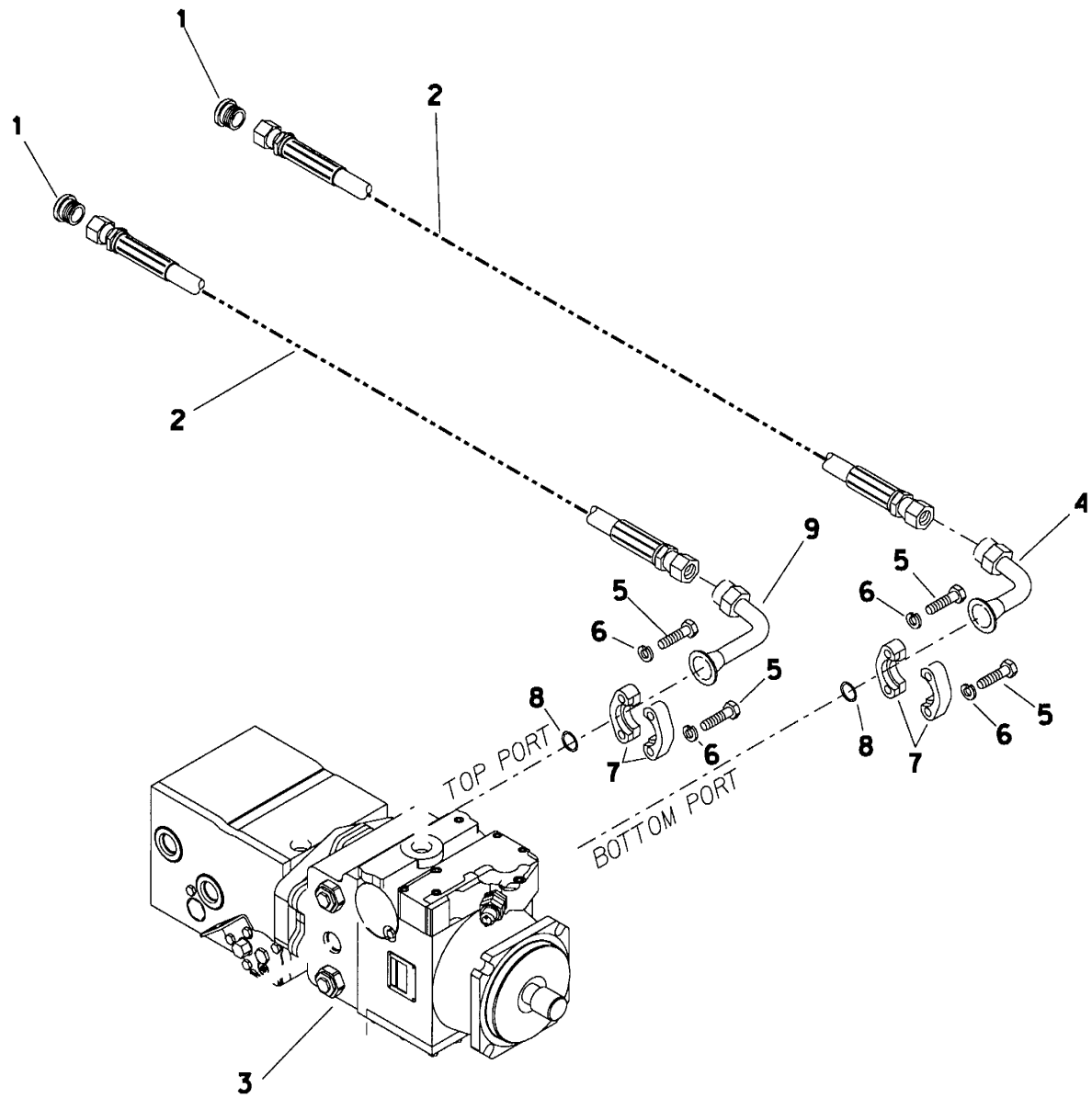
FOOTNOTES

- REFER #25 (217-551) IS DEPICTED WITH FACE OF GAUGE SHOWING, ACTUALLY IT FITS INSIDE THE FENDER AND FACES THE OPERATOR.

NOTE

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

HYDROSTATIC PUMP ATTACHMENT HYDRAULICS

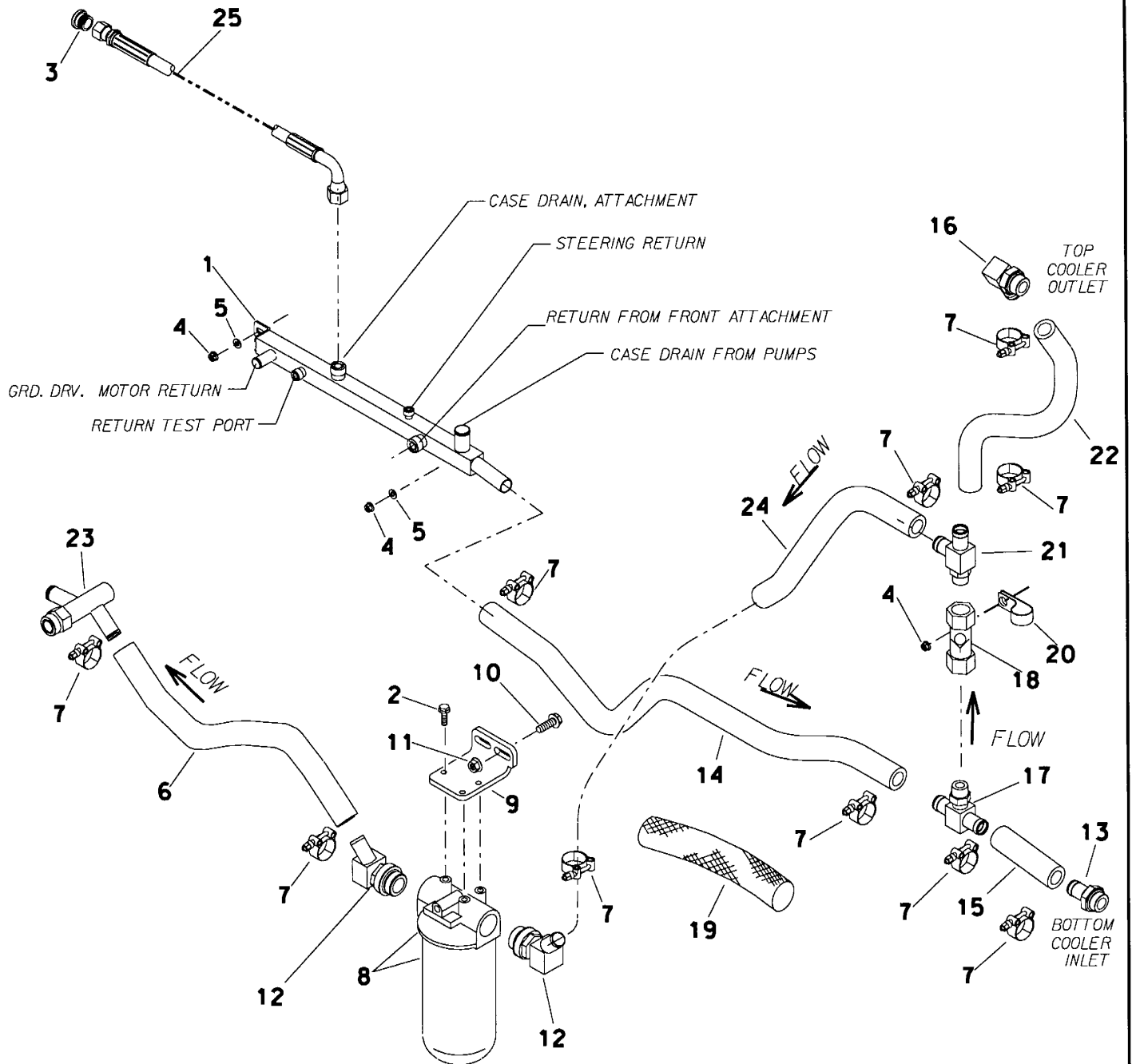


HYDROSTATIC PUMP ATTACHMENT HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-334	2	PLUG (160)	
2.	515-621	2	HOSE (160FX-50"-6000)	
3.	158-048	-	TANDEM PUMP	
4.	154-404	1	CONNECTOR (160-16FL90)	
5.	105-222	8	BOLT (7/16-NC X 1-3/4")	
6.	105-073	8	LOCK WASHER (7/16")	
7.	159-077	2	SPLIT FLANGE (16SFL)	
8.	157-029	2	O-RING (219 D90)	
9.	153-929	1	CONNECTOR (160-16FL90, XL)	

FOOTNOTES

HYDRAULIC FILTER HYDROSTATIC



HYDRAULIC FILTER HYDROSTATIC

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	307-535	1	RETURN MANIFOLD	
2.	105-826	3	FLG LK BOLT (3/8-NC X 1")	
3.	154-331	1	PLUG (O80)	
4.	105-003	3	FLG LOCKNUT (5/16-NC)	
5.	105-881	2	WASHER (5/16")	
6.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 15"
7.	111-027	10	T-BOLT CLAMP (1.25" - 1.50")	
8.	157-345	1	HYD OIL FILTER (2OSF-2OSF)	SEE FOOTNOTE 1
	153-792		FILTER ELEMENT (10 MICRON)	
	153-791		FILTER ELEMENT (5 MICRON)	SEE FOOTNOTE 2
	217-765		INDICATOR SWITCH	
9.	306-862	1	BRACKET	
10.	107-003	2	FLG LK SCREW (M12-1.75 X 35mm)	
11.	106-709	2	FLG LK NUT (M12-1.75)	
12.	153-110	2	S/O COUPLER (20S-16H45)	
13.	514-088	1	S/O COUPLER (16S-16H)	
14.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 42"
15.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 5.5"
16.	154-188	1	S/O COUPLER (16S-16H90)	
17.	155-231	1	S/O BR TEE (16S-16H-16H)	
18.	153-888	1	CHECK VALVE (16SF-16SF, 25 PSI)	
19.	115-733	AR	ABRASION SLEEVE (SOLD PER FOOT)	USE 1 @ 12"
20.	110-332	1	BOLT-ON CLAMP (1-5/8")	
21.	149-908	1	RUN TEE (16S-16H-16H)	
22.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 18"
23.	149-820	-	S/O CPLR (16S-16H90-16H45XL)	
24.	116-460	AR	BULK HOSE (1", SOLD PER 1')	USE 1 @ 24"
25.	515-025	1	HOSE (O80FX90-40"-3000)	

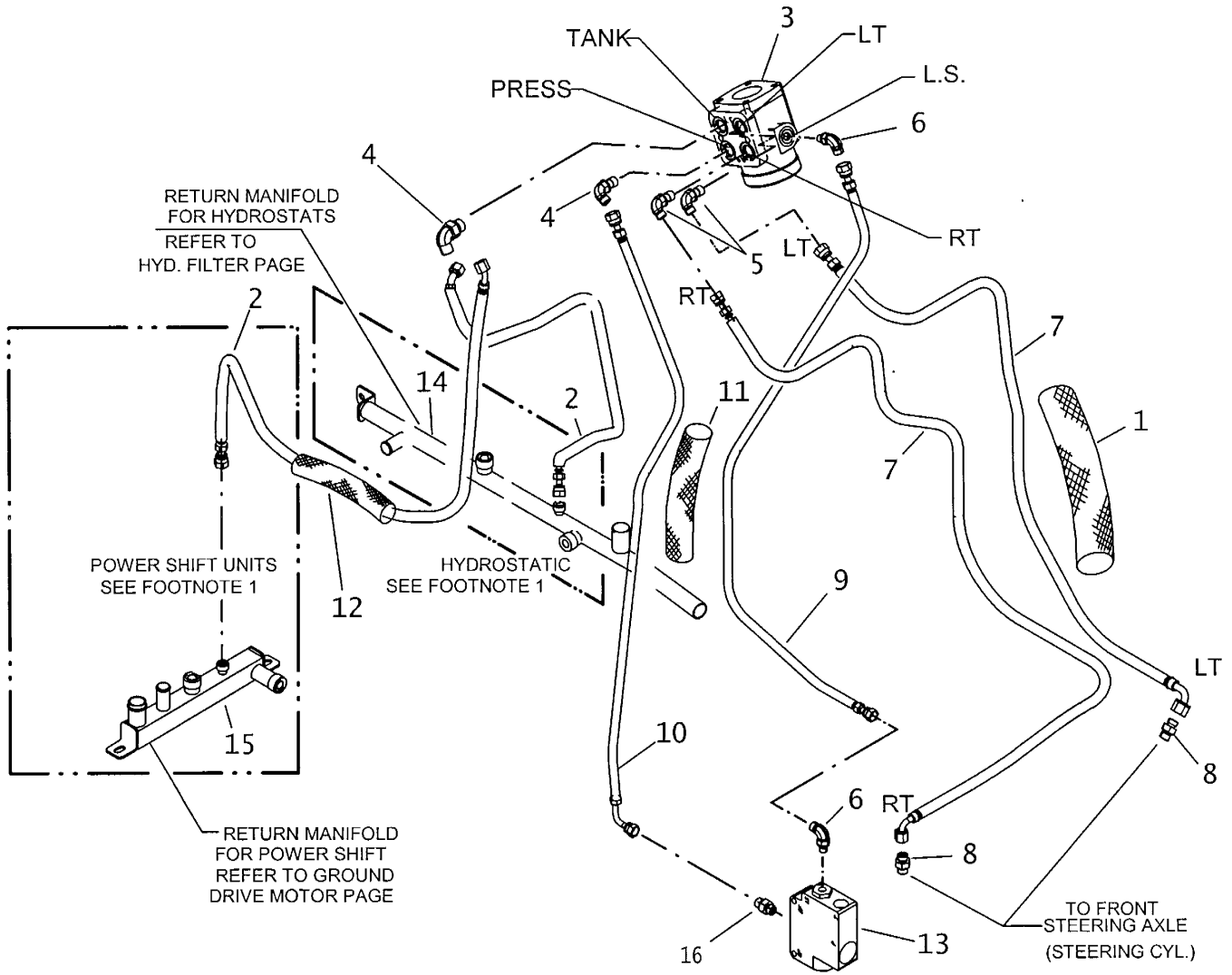
FOOTNOTES

- 157-345 IS THE FILTER HEAD AND REGULAR FILTER ELEMENT 153-792.
- IF THE HYDRAULIC SYSTEM IS EXPOSED TO CONTAMINATES, A NEW BREAK-IN FILTER 153-791 IS INSTALLED FOR 50 HOURS.

FOOTNOTES

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

POWER STEERING VALVE HYD



POWER STEERING VALVE HYD

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	117-214	1	ABRASION SLEEVE (1.25" X 40")	
2.	515-222	1	HOSE (060FX45-46"-3000)	HYDROSTAT UNITS ONLY & SEE FOOTNOTE 1
	149-358	1	HOSE (060FX45-55"-3000)	POWER SHIFT UNITS ONLY & SEE FOOTNOTE 1
3.	158-900	1	POWER STEERING VALVE	
	190-913	1	SEAL REPAIR KIT	
4.	154-227	2	CONNECTOR (060-08S90)	
5.	154-276	2	CONNECTOR (040-08S90)	
6.	154-252	2	CONNECTOR (04S-04090)	
7.	154-705	2	HOSE (040FX90-60"-3000)	
8.	152-146	2	CONNECTOR (040-08S) SHORT	
9.	154-695	1	HOSE (040FX-38"-3000)	
10.	153-315	1	HOSE (060FX90S-36"-3000)	
11.	117-396	1	ABRASION SLEEVE (1.25" X 28")	
12.	117-387	1	ABRASION SLEEVE (1.00" X 42")	
13.	158-901	-	PRIORITY VALVE	
14.	307-535	-	RETURN MANIFOLD	
15.	153-210	-	MANIFOLD (5-PORT)	
16.	154-222	1	CONNECTOR (060-08S)	

NOT SHOWN

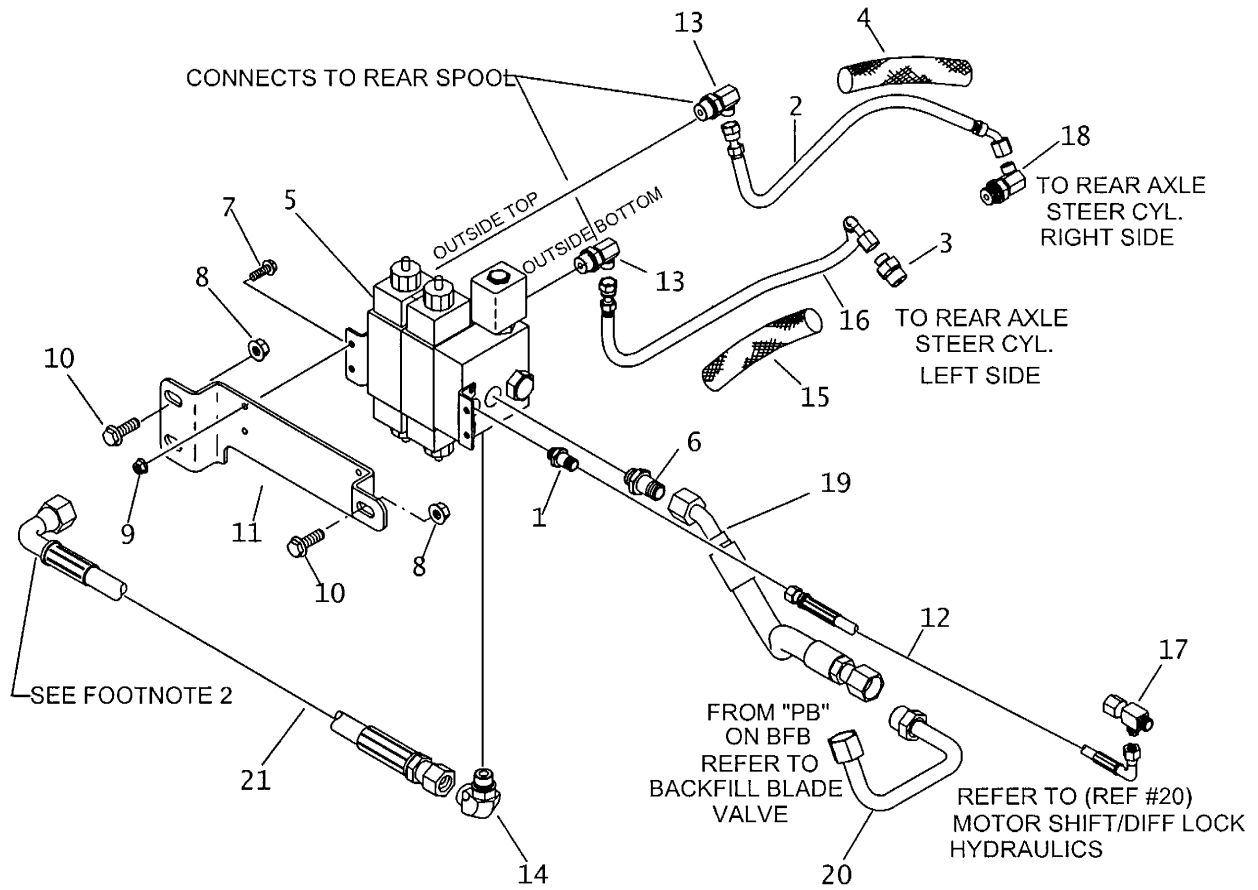
FOOTNOTES

1. AS INDICATED BY THE GRAPHICS, "RETURN TO TANK" ON HYDROSTATIC UNITS RETURNS TO RETURN MANIFOLD ON SIDE OF LEFT FRAME PLATE. "RETURN TO TANK" ON POWER SHIFT UNITS RETURNS TO RETURN MANIFOLD ON CROSSMEMBER OF FRAME.

NOTE

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

REAR STEER HYDRAULICS



REAR STEER HYDRAULICS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	154-222	1	CONNECTOR (060-08S)	
2.	154-934	1	HOSE (040FX45-18"-3000)	
3.	152-146	1	CONNECTOR (040-08S) SHORT	
4.	117-608	1	ABRASION SLEEVE (1.00" X 15")	
5.	153-785	1	HYDRAULIC VALVE (SGL SPOOL)	
	153-786	1	HYDRAULIC VALVE (2-SPOOL)	SEE FOOTNOTE 1
	159-505	-	SOLENOID TUBE	
	149-616	-	CAP NUT	
6.	154-391	1	CONNECTOR (08S-100)	
7.	106-379	4	FLG LK SCREW (M6-1.00 X 20mm)	
8.	106-354	3	FLANGE NUT (M12-1.75)	
9.	106-385	4	FLG LOCKNUT (M6-1.00)	
10.	106-632	3	FLG LK SCREW (M12-1.75 X 35mm, SER)	
11.	307-074	1	BRACKET	
12.	153-320	1	HOSE (060FX90L-17"-3000)	
13.	157-334	2	CONNECTOR (040-06S90, ORF)	
14.	154-298	1	CONNECTOR (10S-10090)	
15.	117-328	1	ABRASION SLEEVE (1.00" X 18")	
16.	515-462	1	HOSE (040FX90-22"-3000 AR)	
17.	154-344	-	UN RUN TEE (060FX-060-060)	REFER TO "MOTOR SHIFT/DIFF LOCK HYD" FOR DESTINATION
18.	154-276	1	CONNECTOR (040-08S90)	
19.	153-907	-	HOSE (100FX45-16"-3000)	
20.	149-851	-	HYD. LINE (-10)	
21.	515-129	-	HOSE (100FX90-30"-3000)	SEE FOOTNOTE 2

NOT SHOWN

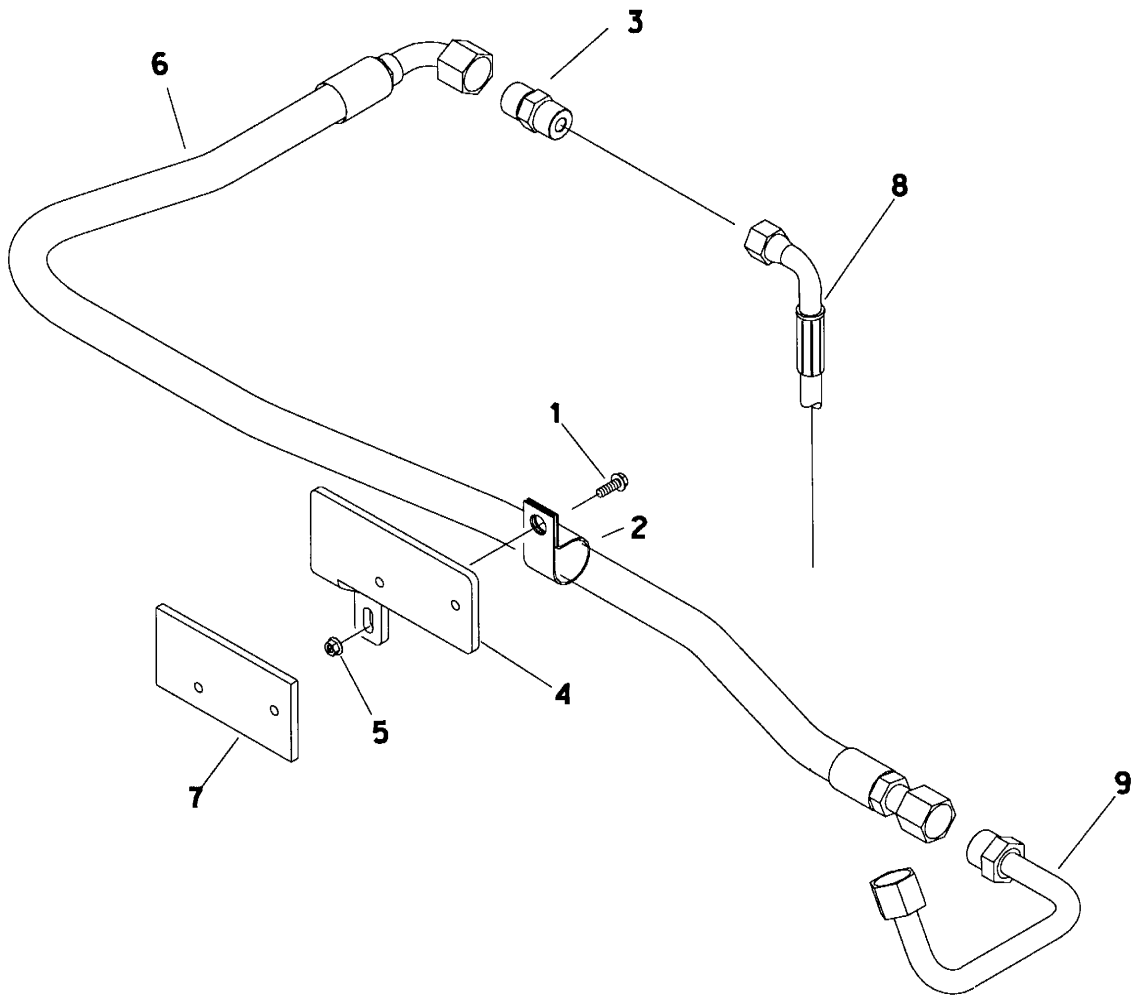
FOOTNOTES

- 153-786 (2 SPOOL VALVE) IS USED WHEN FRAME TILT & REAR STEER OPTIONS ARE BOTH USED.
- REFERENCE #3 FROM "PUMP DRIVE HYD" WILL ATTACH HERE UNTIL A REAR ATTACHMENT IS ATTACHED ON TRACTOR.

NOTE

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

NO FRAME TILT / NO REAR STEER OPTION



NO FRAME TILT / NO REAR STEER OPTION

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-988	1	FLG LK SCREW (M6-1.00 X 20mm)	
2.	110-333	1	BOLT-ON CLAMP (1")	
3.	154-464	1	CONNECTOR (100-100)	
4.	315-176	1	SPACER BRACKET	SEE FOOTNOTE 1
5.	106-385	1	FLG LOCKNUT (M6-1.00)	
6.	154-939	1	HOSE (100FX90S-50"-3000)	
7.	306-885	-	MOUNT PLATE	
8.	157-343	-	HOSE (100FX90S-120"-3000)	
9.	149-851	-	HYD LINE (-10)	

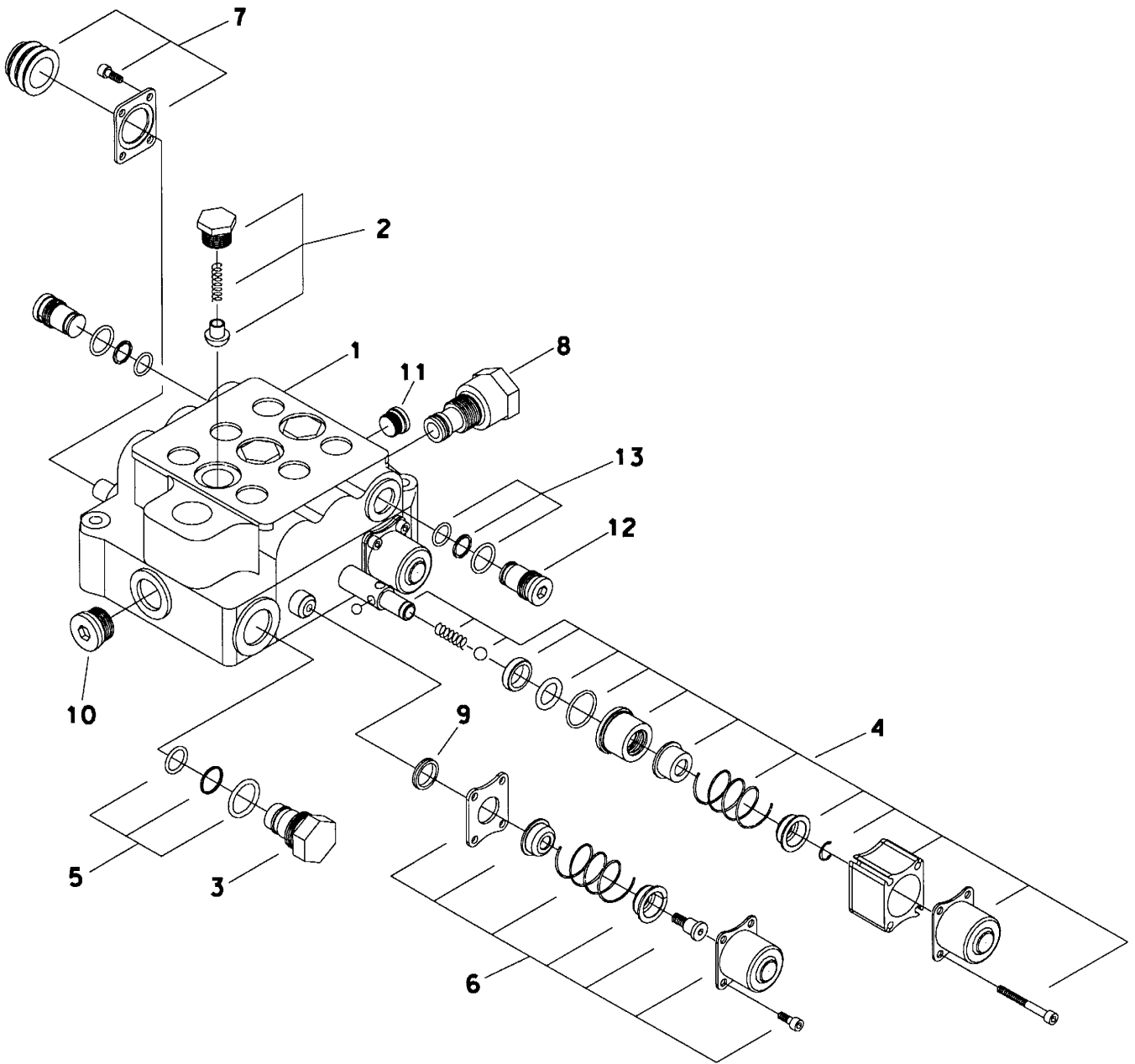
FOOTNOTES

- REFERENCE #4 (315-176) WILL REPLACE (1X) REFERENCE #2 ON PARTS PAGE "MOTOR SHIFT/DIFF LOCK HYD" WHEN "NO FRAME TILT/NO REAR STEER" IS USED.

NOTE

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

HYDRAULIC CONTROL VALVE 3 SPOOL UPPER VALVE



HYDRAULIC CONTROL VALVE

3 SPOOL UPPER VALVE

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	158-033	1	HYD CONTROL VALVE (3-SPOOL)	
2.	500-933	3	LOAD CHECK PLUG KIT	
3.	599-278	1	NR PLUG KIT	
4.	500-935	1	FLOAT POSITIONER KIT	
5.	191-149	1	PLUG SEAL KIT	
6.	500-934	2	SPOOL POSITIONER KIT	
7.	191-153	3	SPOOL BOOT KIT	
8.	191-157	1	POWER BEYOND SLEEVE	
9.	191-151	6	SPOOL LIP SEAL KIT	
10.	155-179	1	PLUG (10S, SOC)	
11.	154-384	1	PLUG (06S)	
12.	599-279	2	WORK PORT NR PLUG KIT	SEE FOOTNOTE 1
13.	500-928	2	SEAL REPAIR KIT	

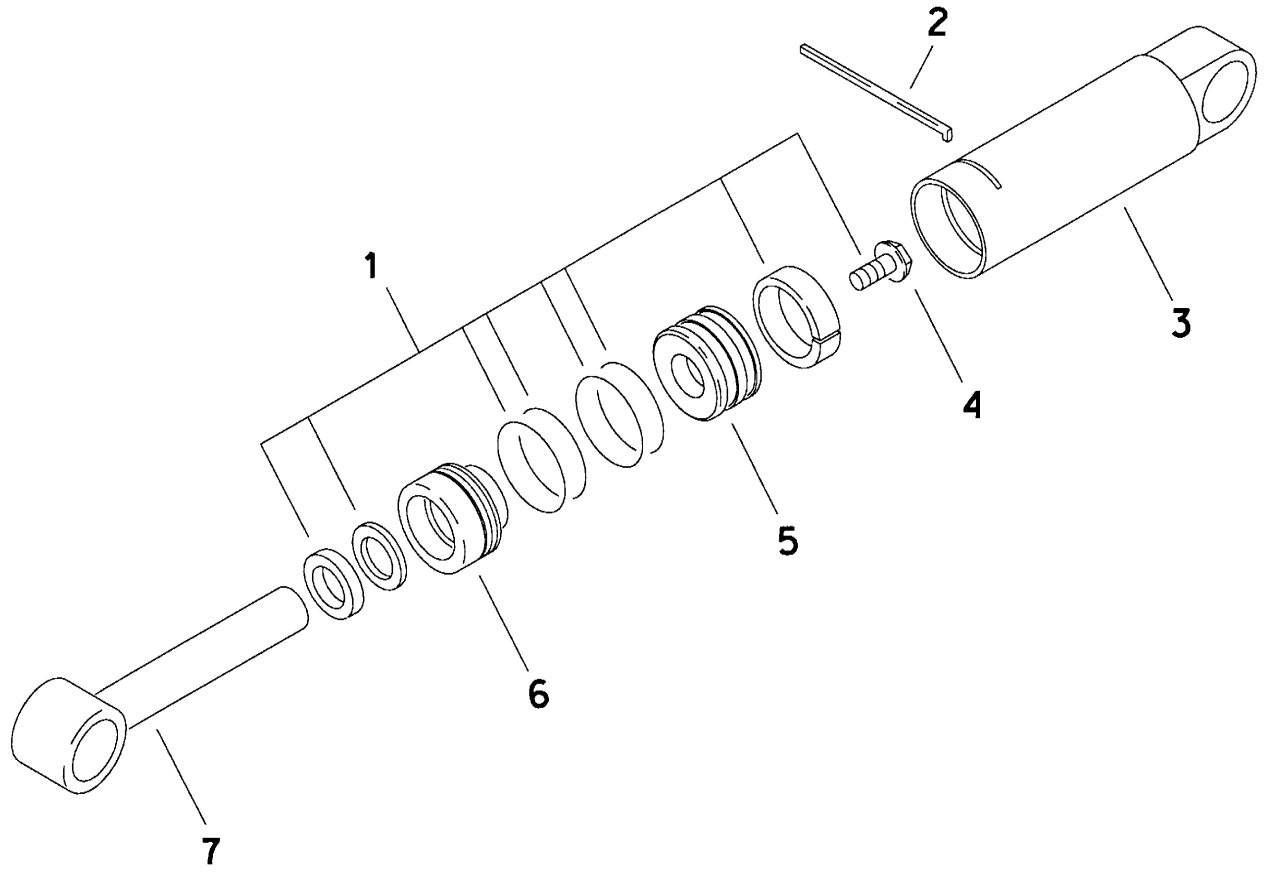
FOOTNOTES

1. EARLY PRODUCTION VALVES HAVE A MACHINED WORK PORT WITH A PLUG INSTALLED, FUTURE PRODUCTION VALVES WILL NOT HAVE A MACHINED WORK PORT.

NOTE:

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

HYDRAULIC CYLINDER
2.0" X 1.00" X 3.38"



HYDRAULIC CYLINDER

2.0" X 1.00" X 3.38"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-202		HYD CYL (2" X 1" X 3.38")	
1.	190-165	1	SEAL REPAIR KIT (2" X 1")	
2.	150-778	1	LOCK RING (2")	
3.	150-700	1	CYLINDER BARREL	
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.	150-698	1	CYLINDER ROD	

NOT SHOWN:

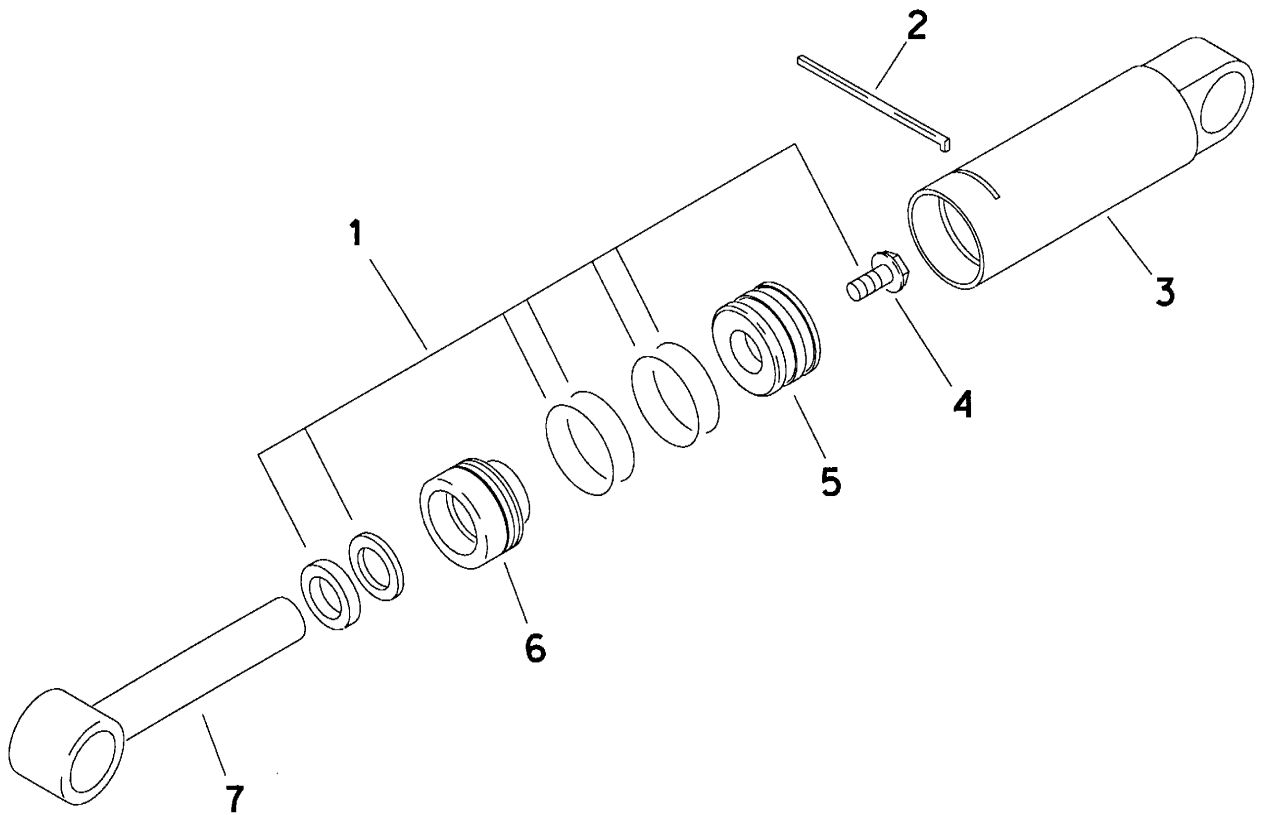
259-100	U-SEAL INSTALLER (1" -1.499")
259-188	CYL HEAD SPANNER - TWO PIN
259-239	WIPER SEAL INSTALLER (2")
259-241	PISTON INSTALLER (2")

FOOTNOTES

1-LUBRICATE WITH WD-40 OR EQUAL.TORQUE TO 90-100 FT-LBS (120-135 N.M)

HYDRAULIC CYLINDER

2" X 1.25" X 8"



HYDRAULIC CYLINDER

2" X 1.25" X 8"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-057		HYD CYLINDER (2" X 1.25" X 8")	INCL REF NO.'S 1 THRU 7
1.	190-169	1	SEAL REPAIR KIT (2.0" X 1.25")	
2.	150-778	1	LOCK RING (2.0")	
3.	150-285	1	CYLINDER BARREL (2")	
4.	106-097	1	FLG BOLT (5/8-NC X 1-3/4",GD8)	SEE FOOTNOTE 1
5.	150-771	1	CYLINDER PISTON (2" X 1.25")	SEE FOOTNOTE 2
6.	150-770	1	CYLINDER HEAD (2" X 1.25")	
7.	150-427	1	CYLINDER ROD	

NOT SHOWN:

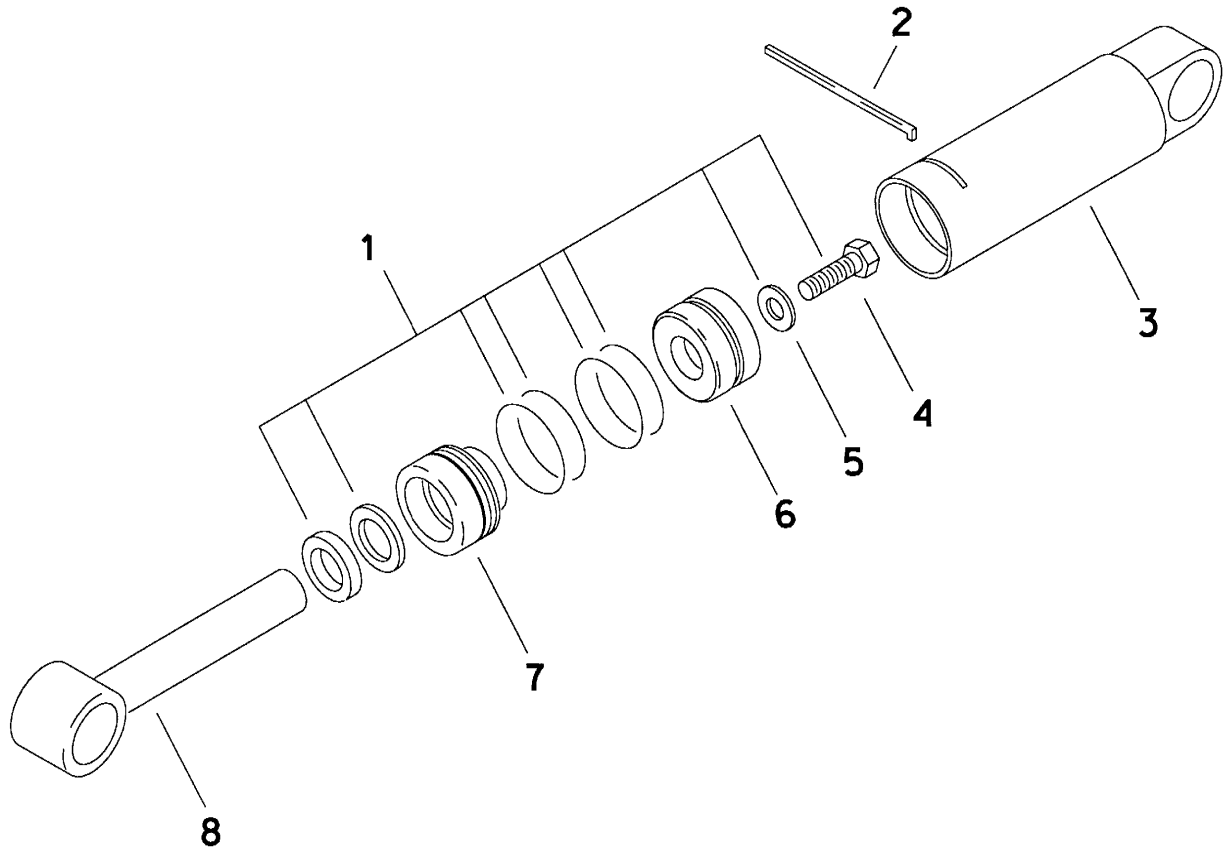
259-100	U-SEAL INSTALLER (1"-1.499")
259-236	WIPER INSTALLER (1.25")
259-239	WIPER/SEAL INSTALLER (2")
259-241	PISTON INSTALLER (2")
259-188	CYLINDER HEAD SPANNER - TWO PIN

FOOTNOTES

1. USE LOCTITE 277, AND TORQUE TO 180-200 FT-LBS (245-270 N.M)
2. INCLUDES MOLDED-ON WEAR RING, H.P. SEAL, AND O-RING.

HYDRAULIC CYLINDER

3" X 1.75" X 8"



HYDRAULIC CYLINDER

3" X 1.75" X 8"

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	151-070		CYL (3.0" X 1.75" X 8.0")	INCL REF NO.'S 1 THRU 7
1.	190-172	1	SEAL REPAIR KIT (3.0" X 1.75")	INCL REF NO.'S 4 THRU 5
2.	150-911	1	LOCK RING (3")	
3.	152-014	1	CYLINDER BARREL (3")	
4.	106-122	1	BOLT (7/8-NC X 2-1/4", GD8)	SEE FOOTNOTE 1
5.	105-363	1	WASHER (7/8")	
6.	150-765	1	CYLINDER PISTON (3" X 1.75")	INCL MOLDED-ON WEAR RING
7.	150-763	1	CYLINDER HEAD (3" X 1.75")	
8.	150-436	1	CYLINDER ROD (1.75")	

NOT SHOWN:

259-040	U-SEAL INSTALLER (1.5" - UP)
259-238	WIPER INSTALLER (1.75")
259-065	PISTON SEAL INSTALLER (3")
259-066	PISTON INSTALLER (3")
259-188	CYL HEAD SPANNER - TWO PIN

FOOTNOTES

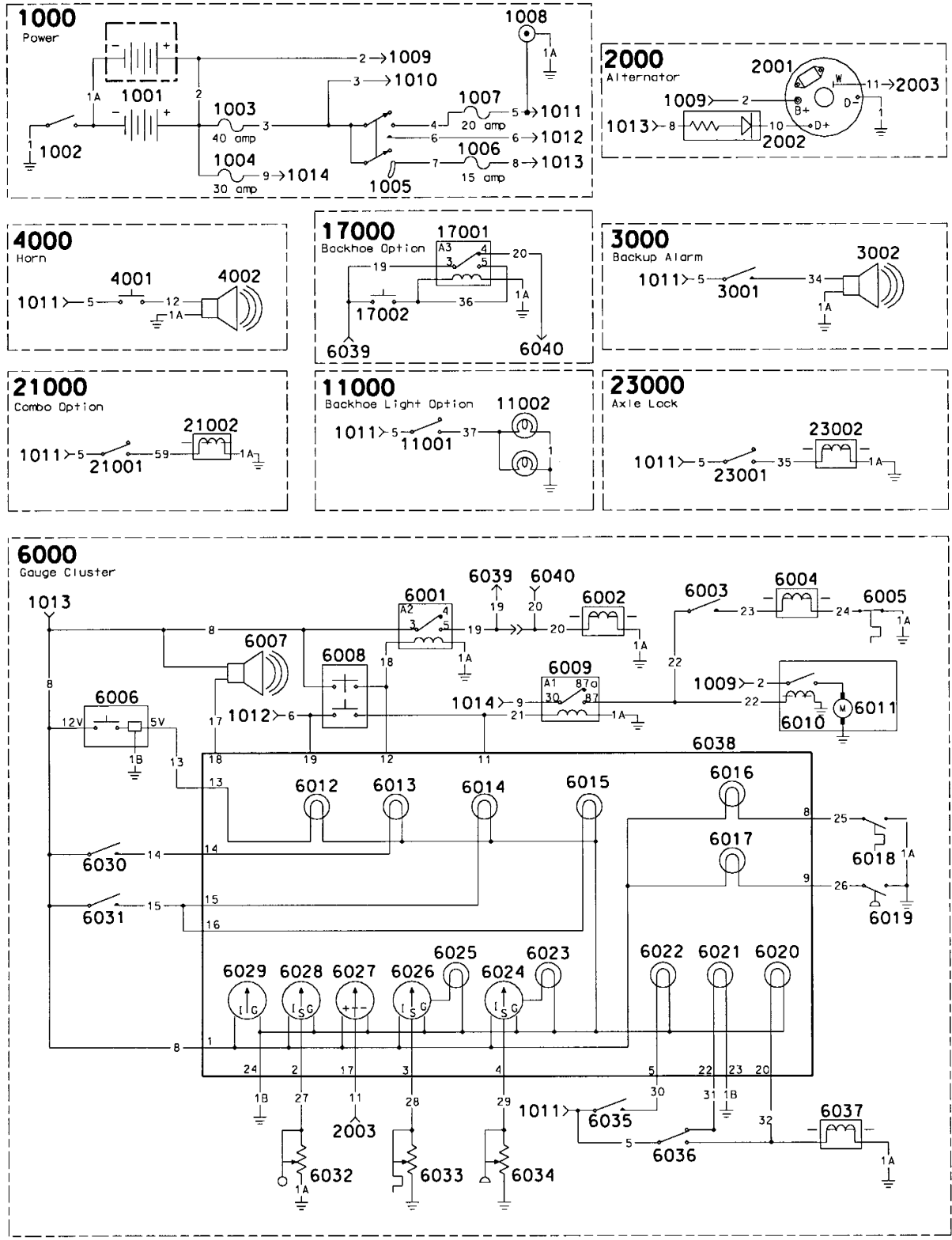
1. CLEAN & DRY THREADS. APPLY RED LOCTITE (RC 271 OR RC 272). TORQUE TO 410-460 FT-LBS (560-625 N.M.)

ELECTRICAL

ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115

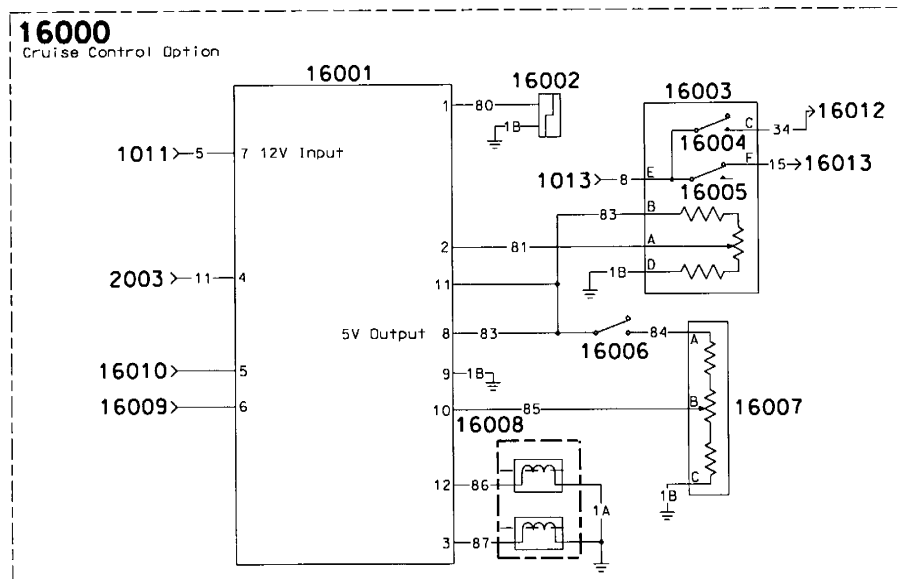
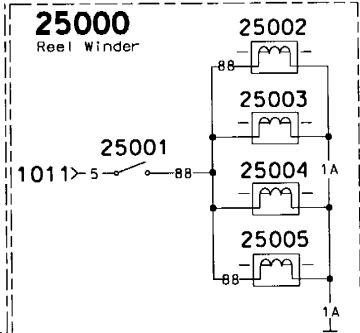
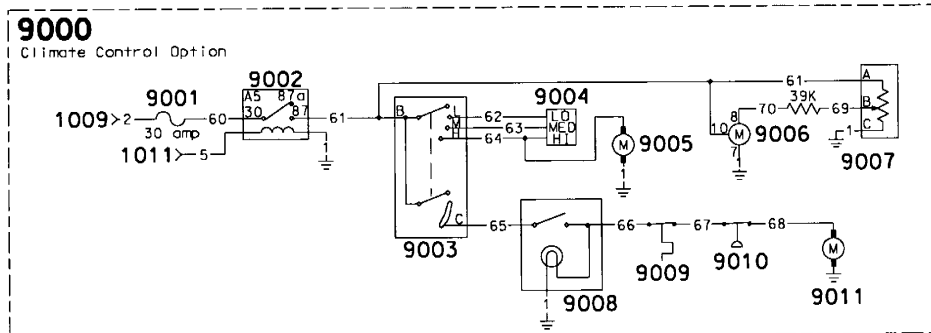
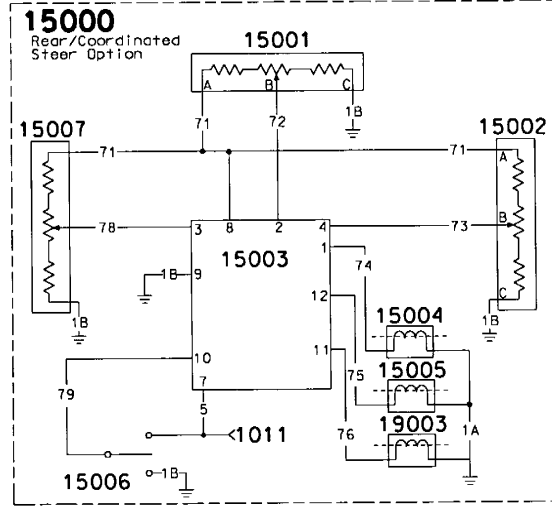
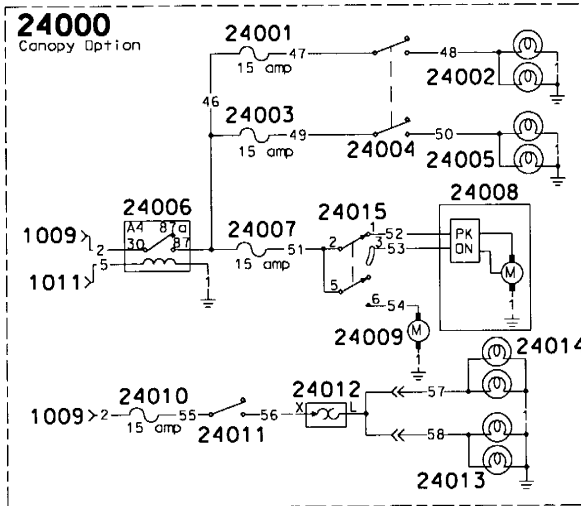
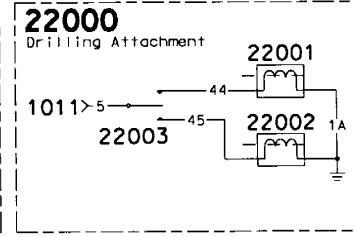
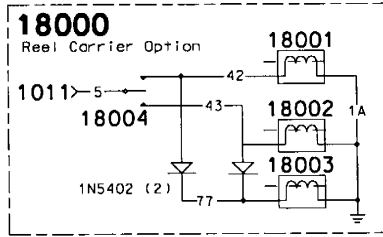
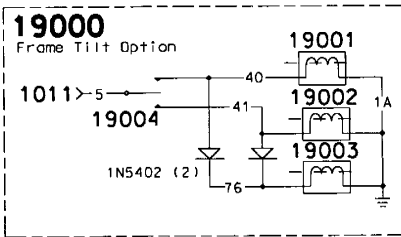
HYDROSTAT



ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115

HYDROSTAT



ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115
HYDROSTAT

1000--POWER

Ref.	Description	Wire Description	Notes
1001	Battery	1A BLK/RED, 2 RED	Dual batteries optional
1002	Battery Disconnect Switch	1 BLK	
1003	Fuse #1	3 RED/GRN	40 amp, p/n 217-791
1004	Fuse #2	9 PUR	30 amp, p/n 217-813
1005	Ignition Switch	3 RED/GRN, 4 BRN, 6 RED/BLK, 8 ORG/GRN	
1006	Fuse #4	7 ORG/BLU, 8 ORG/GRN	15 amp, p/n 217-811
1007	Fuse #3	4 BRN, 5 ORG	20 amp, p/n 217-812
1008	Accessory Socket	5 ORG	
1009	to Battery	2 RED	
1010	to Battery Fused	3 RED/GRN	
1011	to Accessory	5 ORG	
1012	to Starter	6 RED/BLK	
1013	to Ignition	8 ORG/GRN	
1014	to Start Relay	9 PUR	

2000--Alternator

Ref.	Description	Wire Description	Notes
2001	Alternator	2 RED, 10 ORG/BLU, 11 YEL, 1 BLK	
2002	Diode Pack	8 ORG/GRN, 10 ORG/BLU	p/n 214-256. Includes resistor
2003	to Tachometer	11 YEL	

3000--Backup Alarm Option (Saw Attachment Only)

Ref.	Description	Wire Description	Notes
3001	Backup Switch	5 ORG, 34 TAN/RED	
3002	Alarm	34 TAN/RED, 1A BLK/RED	

4000--Horn

Ref.	Description	Wire Description	Notes
4001	Horn Button	5 ORG, 12 TAN	
4002	Horn	12 TAN, 1A BLK/RED	

6000--Gauge Cluster

Ref.	Description	Wire Description	Notes
6001	Fuel Relay	8 ORG/GRN, 19 ORG/GRA 18 ORG/BLK, 1A BLK/RED	p/n 217-710
6002	Fuel Solenoid	20 ORG/BLK, 1A BLK/RED	
6003	Cold Start Switch	22 PUR, 23 BRN	Option
6004	Cold Start Solenoid	23 BRN, 24 BLK/ORG	
6005	Temperature Switch	24 BLK/ORG, 1A BLK/RED	
6006	Seat Switch	8 ORG/GRN, 13 BLU/GRN, 1B BLK/BLU	Six-second delay timer is built into the gauge cluster
6007	Warning Light Alarm	8 ORG/GRN, 17 BRN/YEL	
6008	Bypass Switch	8 ORG/GRN, 18 ORG/BLK, 6 RED/BLK, 21 WHT/BLK	
6009	Start Relay	9 PUR, 21 WHT/BLK, 22 PUR, 1A BLK/RED	
6010	Starter Solenoid	22 PUR	These two parts sold as one component

ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115
HYDROSTAT

Ref.	Description	Wire Description	Notes
6011	Starter Motor	2 RED	
6012	Seat Switch Indicator	13 BLU/GRN	Wire 13 has 5V
6013	Attachment Neutral Indicator	13 BLU/GRN, 14 WHT/GRN	
6014	Grnd Drv #1 Neutral Indicator	13 BLU/GRN, 15 WHT/BLU	
6015	Grnd Drv #2 Neutral Indicator	13 BLU/GRN, 115 WHT/BLU	Wire 13 has 5V
6016	Hydraulic High Temp Indicator	8 ORG/GRN	
6017	Hydraulic Filter Indicator	8 ORG/GRN, 9 PUR	
6018	Hydraulic High Temp Switch	25 GRA/BLK, 1A BLK/RED	
6019	Hydraulic Filter Switch	26 GRA/YEL, 1A BLK/RED	
6020	Ground Drive High Indicator	32 PUR/ORG, 1B BLK/BLU	
6021	Ground Drive Low Indicator	31 BLU/ORG, 1B BLK/BLU	
6022	Parking Brake Indicator	30 TAN, 1B BLK/BLU	
6023	Engine Oil Pressure Indicator	1B BLK/BLU	
6024	Engine Oil Pressure Gauge	29 BLU, 8 ORG/GRN, 1B BLK/BLU	
6025	Engine Water Temp Indicator	1B BLK/BLU	
6026	Engine Water Temp Gauge	28 GRN, 8 ORG/GRN, 1B BLK/BLU	
6027	Tachometer/Hourmeter	11 YEL, 8 ORG/GRN, 1B BLK/BLU	
6028	Fuel Gauge	27 BRN, 8 ORG/GRN, 1B BLK/BLU	
6029	Voltmeter	8 ORG/GRN, 1B BLK/BLU	
6030	Attachment Neutral Switch	8 ORG/GRN, 14 WHT/GRN	
6031	Ground Drive Neutral Switch	8 ORG/GRN, 15 WHT/BLU	
6032	Fuel Sender	27 BRN, 1A BLK/RED	
6033	Engine Water Temp Sender	28 GRN, 1A BLK/RED	
6034	Engine Oil Pressure Sender	29 BLU, 1A BLK/RED	
6035	Parking Brake Switch	5 ORG, 30 TAN	
6036	Hydraulic Motor Speed Switch	5 ORG, 31 BLU/ORG, 32 PUR/ORG	
6037	High Speed Solenoid	32 PUR/ORG, 1A BLK/RED	
6038	Gauge Cluster	8 ORG/GRN, 15 WHT/BLU, 14 WHT/GRN, 13 BLU/GRN, 17 BRN/YEL, 6 RED/BLK, 18 ORG/BLK, 21 WHT/BLK, 25 GRA/BLK, 26 GRA/YEL, 32 PUR/ORG, 1 BLK, 31 BLU/ORG, 30 TAN, 29 BLU, 28 GRN, 11 YEL, 27 BRN	No replaceable parts other than light bulbs
6039	to Backhoe Option	19 ORG/GRA	If not equipped with backhoe, a jumper connects wires 19 and 20
6040	to Backhoe Option	20 ORG/BLK	

ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115
HYDROSTAT

9000--Climate Control Option

Ref.	Description	Wire Description	Notes
9001	Fuse #9	2 RED, 60 RED/GRN	30 amp, p/n 217-813 p/n 217-826
9002	A/C Relay	60 RED/GRN, 5 ORG, 61 PUR, 1 BLK	
9003	Blower Switch	61 PUR, 62 YEL, 63GRN, 64 GRA, 65 WHT/YEL	
9004	Resistor	62 YEL, 63GRN, 64 GRA	
9005	Blower Motor	64 GRA, 1 BLK	
9006	heater control valve	61 PUR, 70 WHT/BLU,1 BLK	
9007	Temp Control Potentiometer	61 PUR, 69 WHT/RED, 1 BLK	
9008	A/C Switch	65 WHT/YEL, 66 BLU,1 BLK	
9009	Thermostat	66 BLU, 67 GRN/RED	
9010	Pressure Switch	67 GRN/RED, 68 YEL/PUR	
9011	Compressor	68 YEL/PUR, 1 BLK	

11000-Backhoe Light Option

Ref.	Description	Wire Description	Notes
11001	Backhoe Light Switch	5 ORG, 37 YEL/GRN	
11002	Backhoe Lights	37 YEL/GRN, 1 BLK	

15000-Rear/Coordinated Steer Option

Ref.	Description	Wire Description	Notes
15001	Rear Steer Potentiometer	71 BLU/GRN, 72 GRA/BLU, 1 BLK/BLU	71 has 5V, 72 is variable from .5 - 4.5V (2.5V at center)
15002	Rear Axle Position Sensor	71 BLU/GRN, 73 GRN/BLU, 1 BLK/BLU	71 has 5V, 73 is variable from .5 - 4.5V (2.5V at center)
15003	Rear Steer Module	1B BLK/BLU, 5 ORG, 71 BLU/GRN, 72 GRA/BLU, 74 GRN/BLK, 75 BLU/BLK, 76 TAN/BLU, 73 GRN/BLU, 78 GRN/RED, 79 ORG/BRN	71 has 5V,72,73 &78 are variable from .5 - 4.5V (2.5V at center)
15004	Rear Steer Right Solenoid	74 GRN/BLK, 1A BLK/RED	
15005	Rear Steer Left Solenoid	75 BLU/BLK, 1A BLK/RED	
15006	Coordinated Steer Switch	1B BLK/BLU, 5 ORG, 79 ORG/BRN,	
15007	Front Axle Position Sensor	1B BLK/BLU, 71 BLU/GRN, 78 GRN/RED	

16000-Cruise Control Option

Ref.	Description	Wire Description	Notes
16001	Cruise Control Module	5 ORG, 11YEL, 80 WHT/ORG, 81 TAN/BLU, 83 BLU/GRN, 1B BLK/BLU, 85 GRA, 86 TAN/WHT,87 TAN/BLK	83 has 5V
16002	Machine Identification	80 WHT/ORG,1B BLK/BLU	

ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115

HYDROSTAT

Ref.	Description	Wire Description	Notes
16003	PQ Converter Box	8 ORG/GRN, 83 BLU/GRN, 81 TAN/BLU, 1B BLK/BLU, 34 TAN/RED	83 has 5V; 81 is variable from .5 - 4.5V (2.5V at center)
16004	Reverse Switch	8 ORG/GRN	83 has 5V; 84 has 5V in auto position 84 has 5V, 85 is variable from .5 - 4.5V (2.5V at center)
16005	Neutral Switch	8 ORG, 34 TAN/RED	
16006	Auto/Manual Switch	83 BLU/GRN, 84 BLU/GRN	
16007	RPM Potentiometer	84 BLU/GRN, 85 GRA, 1B BLK/BLU	84 has 5V, 85 is variable from .5 - 4.5V (2.5V at center)
16008	EDC	86 TAN/WHT, 87 TAN/BLK, 1A BLK/RED	86 goes to forward; 87 goes to reverse; both are PWM signals to the EDC
16009	EDT Port	n/a	
16010	EDT Port	n/a	
16012	to Backup Alarm	34 TAN/RED	
16013	to Gauge Cluster	15 WHT/BLU	

17000-Backhoe Option

Ref.	Description	Wire Description	Notes
17001	Engine Stop Relay	19 ORG/GRA, 20 ORG/BLK, 1A BLK/RED	
17002	Stop Switch	19 ORG/BLK, 36 YEL/RED	

18000-Reel Carrier Option

Ref.	Description	Wire Description	Notes
18001	Reel Carrier Up Solenoid	42 TAN/GRN, 1A BLK/RED	
18002	Reel Carrier Down Solenoid	43 TAN/WHT, 1A BLK/RED	
18003	Reel Carrier Bypass Solenoid	77 BLU/WHT, 1A BLK/RED	
18004	Reel Carrier Switch	5 ORG, 42 TAN/GRN, 43 TAN/WHT	

19000-Frame Tilt Option

Ref.	Description	Wire Description	Notes
19001	Frame Tilt Right Solenoid	40 GRA/BLU, 1A BLK/RED	Also used for rear steer option
19002	Frame Tilt Left Solenoid	41 GRA/GRN, 1A BLK/RED	
19003	Bypass Solenoid	76 TAN/BLU, 1A BLK/RED	
19004	Frame Tilt Switch	5 ORG, 40 GRA/BLU, 41 GRA/GRN	

21000-Combo Attachment Option

Ref.	Description	Wire Description	Notes
21001	Plow/Trench Switch	5 ORG, 59 TAN/ORG	
21002	Plow/Trench Solenoid	59 TAN/ORG, 1A BLK/RED	

NOTES:

ELECTRICAL SCHEMATIC

RT70H, RT90H, RT115
HYDROSTAT

22000-Drilling Attachment Option

Ref.	Description	Wire Description	Notes
22001	Clockwise Solenoid	44 YEL/GRA, 1A BLK/RED	
22002	Counterclockwise Solenoid	45 YEL/BLU, 1A BLK/RED	
22003	Drilling Attachment Switch	5 ORG, 44 YEL/GRA, 45 YEL/BLU	

23000-Axle Lock

Ref.	Description	Wire Description	Notes
23001	Axle Lock Switch	5 ORG, 35 TAN/RED	
23002	Axle Lock Solenoid	35 TAN/RED, 1A BLK/RED	

24000-Canopy Option

Ref.	Description	Wire Description	Notes
24001	Fuse #5	46 PUR/WHT, 47 PUR	15 amp, p/n 217-811
24002	Front Lights	48 PUR/BLK, 1 BLK	
24003	Fuse #6	46 PUR/WHT, 49 GRN	15 amp, p/n 217-811
24004	Work Light Switch	47 PUR, 49 GRN, 48 PUR/BLK, 50 GRN/BLK 50 GRN/BLK, 1 BLK	
24005	Rear Lights		
24006	Canopy relay	2 RED, 5 ORG, 46 PUR/WHT, 1 BLK	p/n 217-826
24007	Fuse #7	46 PUR/WHT, 51 BRN	15 amp, p/n 217-811
24008	Windshield Wiper Motor	52 PNK, 53 PNK/BLU, 1 BLK	
24009	Windshield Washer Pump	54 TAN, 1 BLK	
24010	Fuse #8	2 RED, 55 WHT	15 amp, p/n 217-811
24011	Hazard Lights Switch	55 WHT, 56 BLU/YEL	
24012	Flasher	56 BLU/YEL, 57 YEL/BLK, 58 YEL/BLU	
24013	Rear Hazard Lights	58 YEL/BLU, 1 BLK	
24014	Front Hazard Lights	57 YEL/BLK, 1 BLK	
24015	Wiper/Washer Switch	51 BRN, 52 PNK, 53 PNK/BLU, 54 TAN	

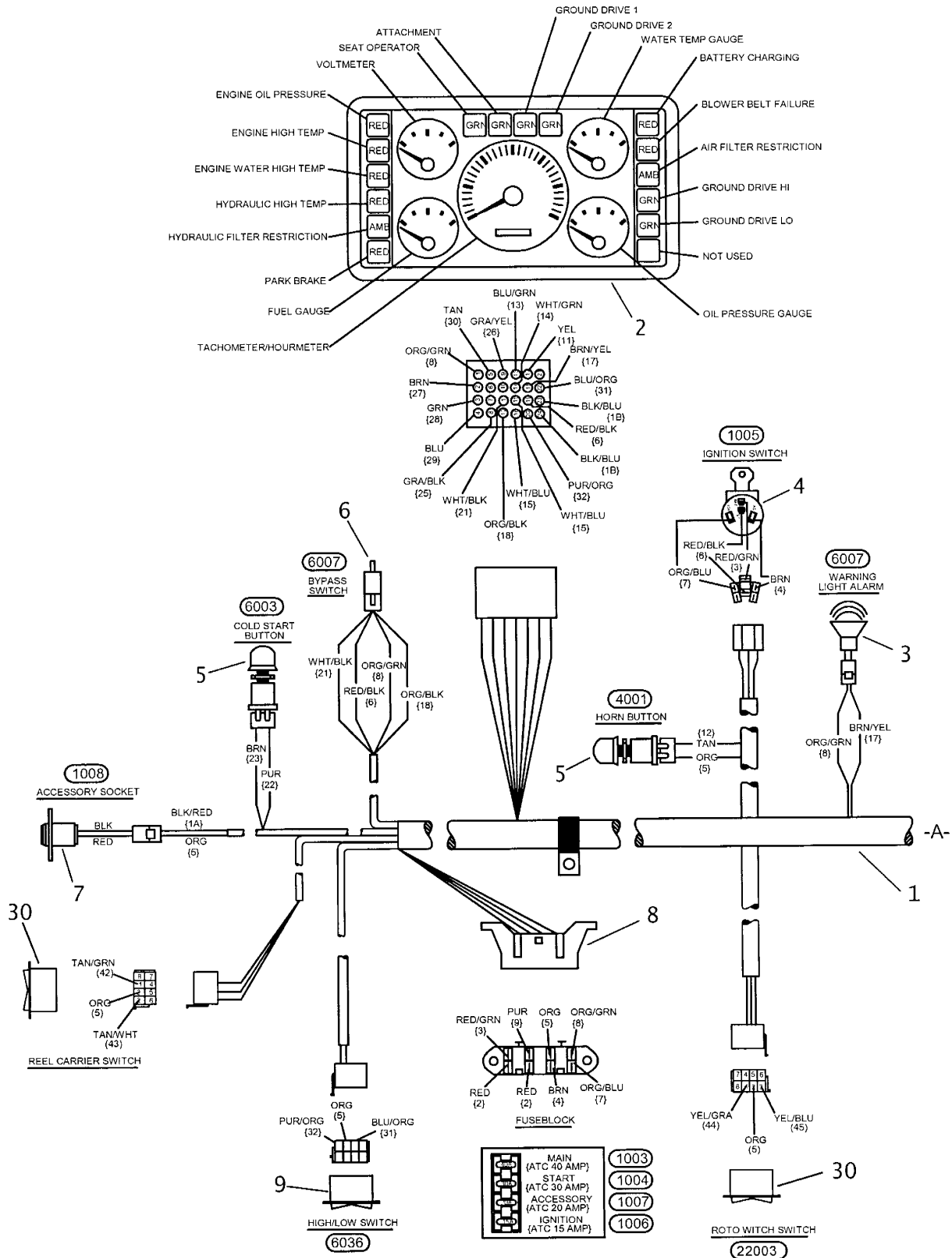
25000-Reel Winder Option

Ref.	Description	Wire Description	Notes
25001	Reel Winder Switch	5 ORG, 88 TAN/RED	
25002	Reel Winder Solenoid #1	1A BLK/RED, 88 TAN/RED	
25003	Reel Winder Solenoid #2	1A BLK/RED, 88 TAN/RED	
25004	Reel Winder Solenoid #3	1A BLK/RED, 88 TAN/RED	
25005	Reel Winder Solenoid #4	1A BLK/RED, 88 TAN/RED	

ELE DIA-FRAME HARN (HYD)

FRAME HARNESS HYDROSTAT

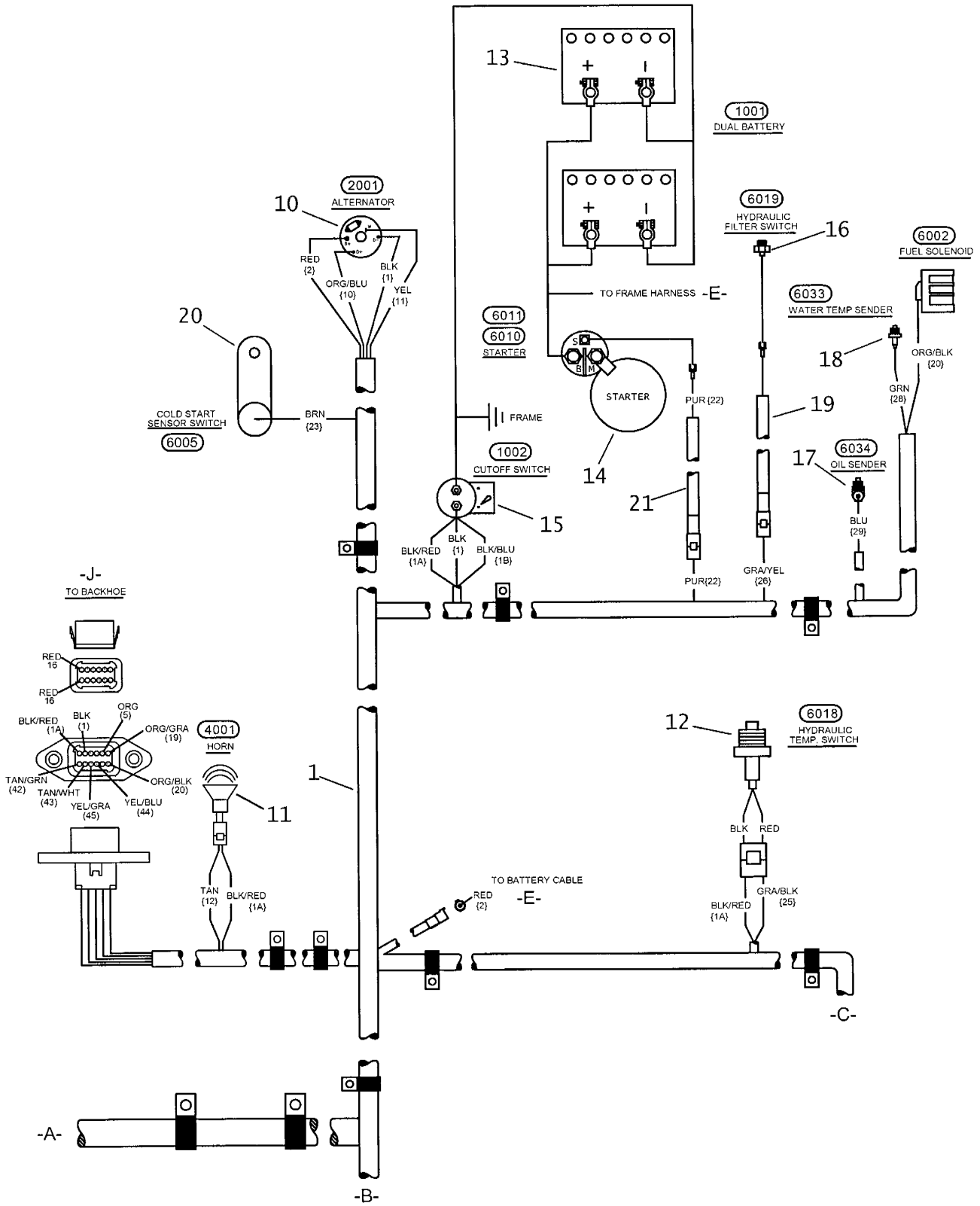
6038
GAUGE CLUSTER



ELE DIA-FRAME HARN (HYD)

FRAME HARNESS

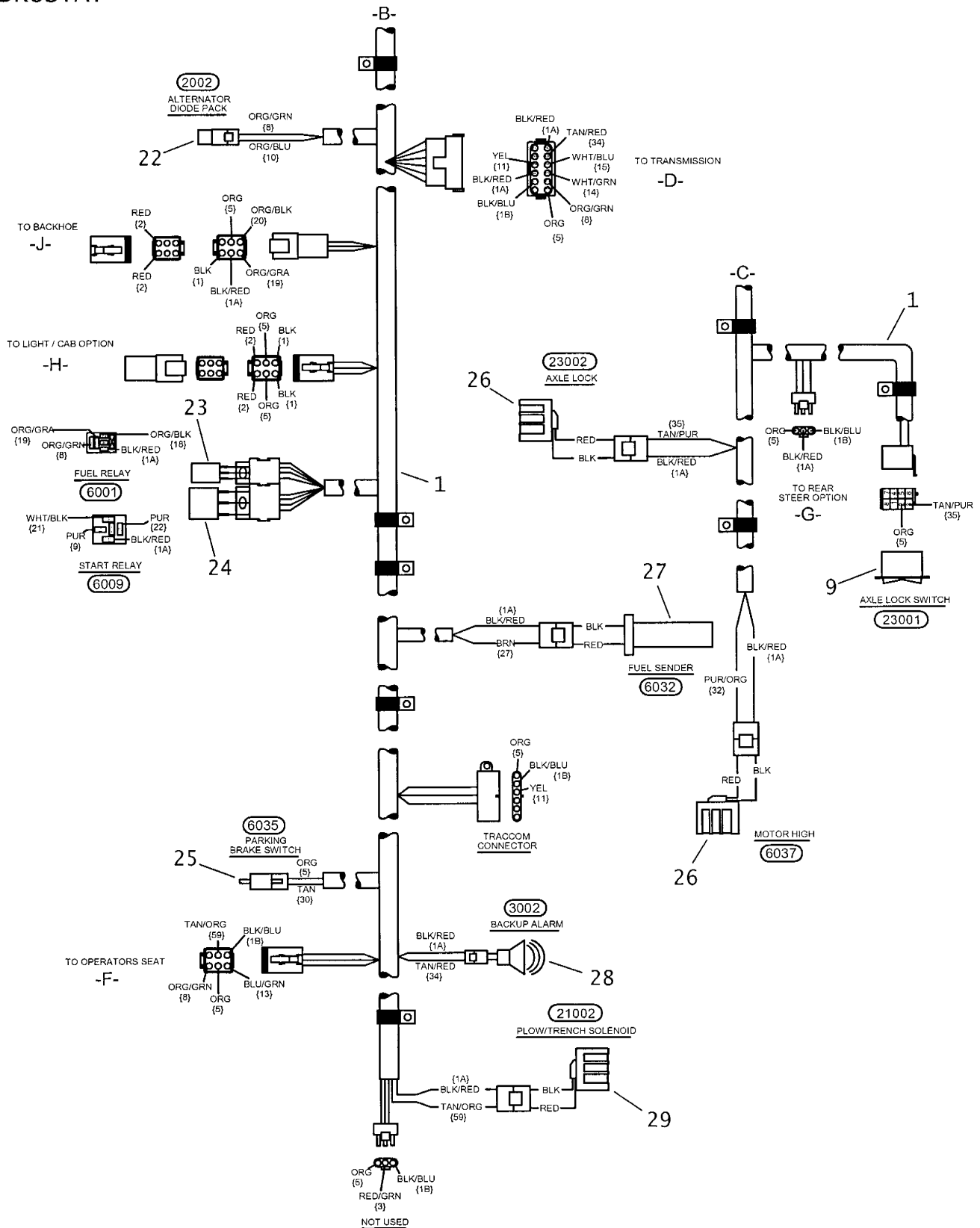
HYDROSTAT



ELE DIA-FRAME HARN (HYD)

FRAME HARNESS

HYDROSTAT



ELE DIA-FRAME HARN (HYD)

FRAME HARNESS

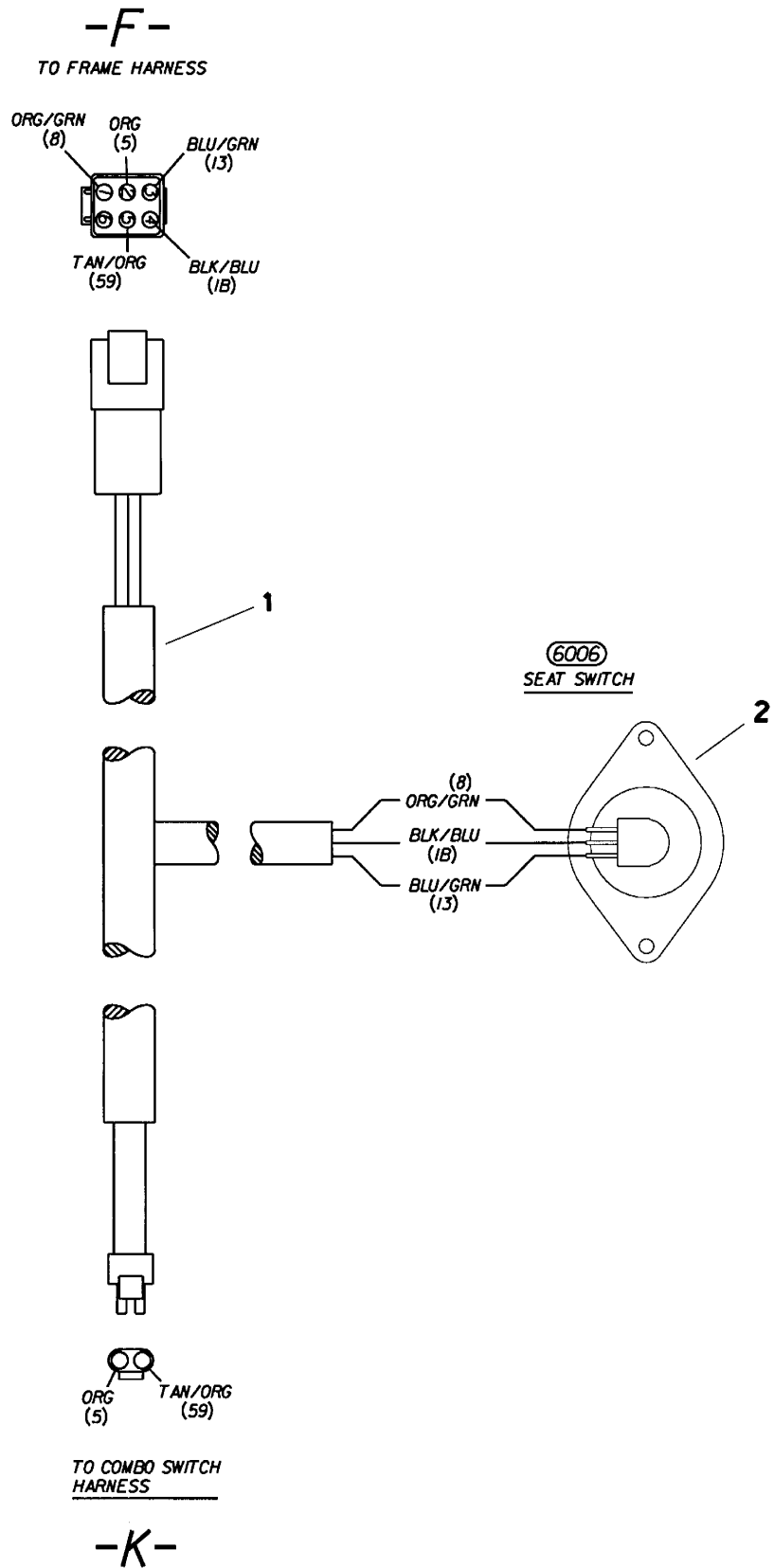
HYDROSTAT

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	217-267	1	HYDROSTAT FRAME HARNESS	
2.	211-259	1	5-GAUGE CLUSTER	
	217-223	1	5-GAUGE CLUSTER	OBSOLETE
3.	306-603	1	AUDIO ALARM	
4.	214-852	1	IGNITION SWITCH	
	214-961		KEY, PAIR (BASE CODE)	
	214-962		SWITCH MOUNTING NUT	
	214-963		LOCK PLUG W/1 KEY (BASE CODE)	
	217-768	1	IGNITION SWITCH	OBSOLETE
5.	306-607	2	HORN BUTTON	
	306-608	2	BUTTON COVER	
6.	217-704	1	PLUNGER SWITCH	
7.	214-301	1	ACCESSORY SOCKET	
8.	217-791	1	FUSE (MAXI, 40 AMP)	
	217-811	1	FUSE (ATC, 15 AMP)	
	217-812	1	FUSE (ATC, 20 AMP)	
	217-813	1	FUSE (ATC, 30 AMP)	
9.	217-762	2	ROCKER SWITCH (SPDT)	
10.	217-450	1	ALTERNATOR 65 AMP (REMAN)	
11.	192-006	1	HIGH FREQUENCY HORN	
	306-609	1	HIGH FREQUENCY HORN	OBSOLETE
12.	214-854	1	TEMPERATURE SWITCH	
13.	215-244	1	BATTERY	
14.	194-254	1	STARTER	
15.	217-819	1	BATTERY DISCONNECT SWITCH	
16.	217-765	1	INDICATOR SWITCH	
17.	215-183	1	SENDER, OIL PRESSURE HD	
18.	217-565	1	TEMPERATURE SENDER 100-280 F	
19.	214-887	1	HYDRAULIC FILTER HARNESS (HYD)	
20.	215-073	1	SENSOR SWITCH	
21.	214-889	1	STARTER SOLENOID HARNESS	
22.	214-256	1	DIODE CONNECTOR	
23.	217-710	1	MICRO RELAY (SPDT)	
24.	217-826	1	MINI RELAY (SPDT)	
25.	217-705	1	PLUNGER SWITCH	
26.	214-491	2	COIL (12V)	
27.	214-650	1	FUEL SENDER	
28.	306-602	1	BACKUP ALARM	
29.	217-770	1	SOLENOID COIL	
30.	217-764	2	ROCKER SWITCH (SPDT)	

FOOTNOTES

NOTE:

ELECTRICAL DIAGRAM SEAT HARNESS



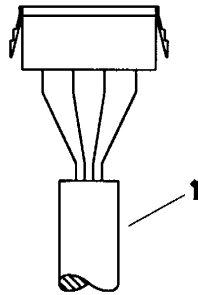
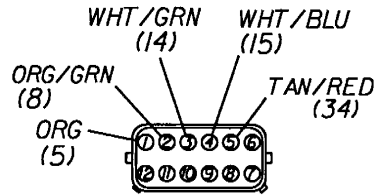
ELECTRICAL DIAGRAM SEAT HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-655	1	SEAT HARNESS	
2.	214-770	1	SEAT SWITCH	

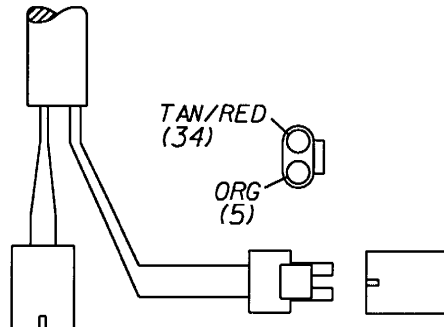
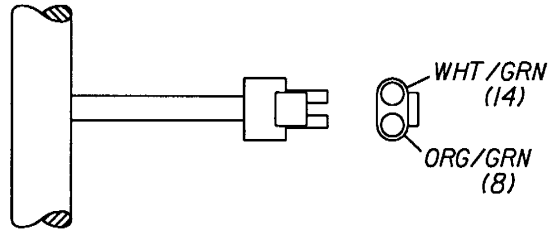
FOOTNOTES

ELECTRICAL DIAGRAM HYDRAULIC PUMP HARNESS

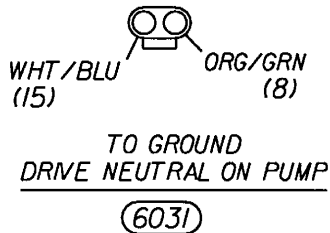
-D-
TO FRAME HARNESS



6030
TO ATTACHMENT
NEUTRAL ON PUMP



-RR-
TO BACKUP
ALARM HARNESS

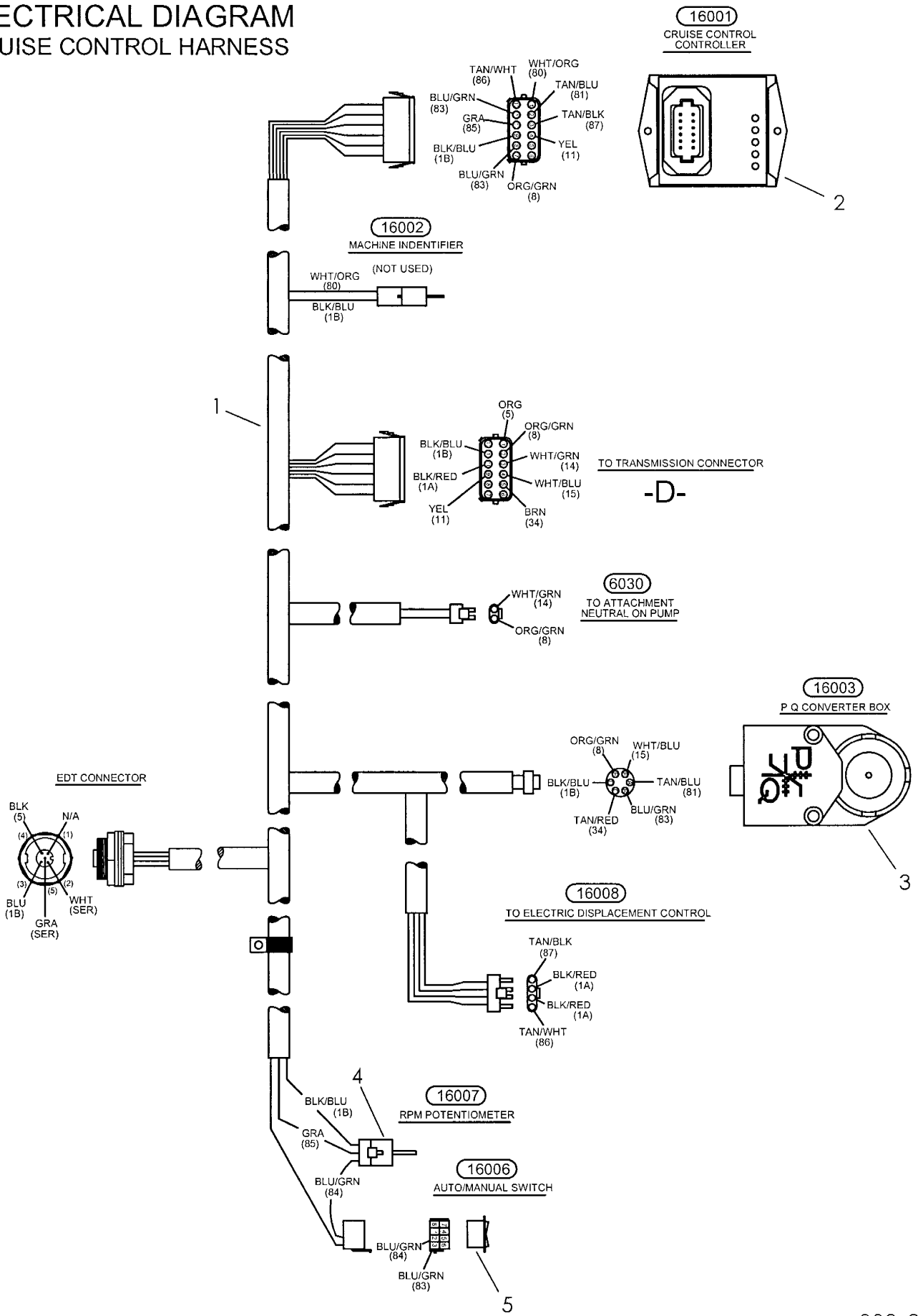


ELECTRICAL DIAGRAM HYDRAULIC PUMP HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-686	1	HYD PUMP HARNESS	

FOOTNOTES

ELECTRICAL DIAGRAM CRUISE CONTROL HARNESS



ELECTRICAL DIAGRAM

CRUISE CONTROL HARNESS

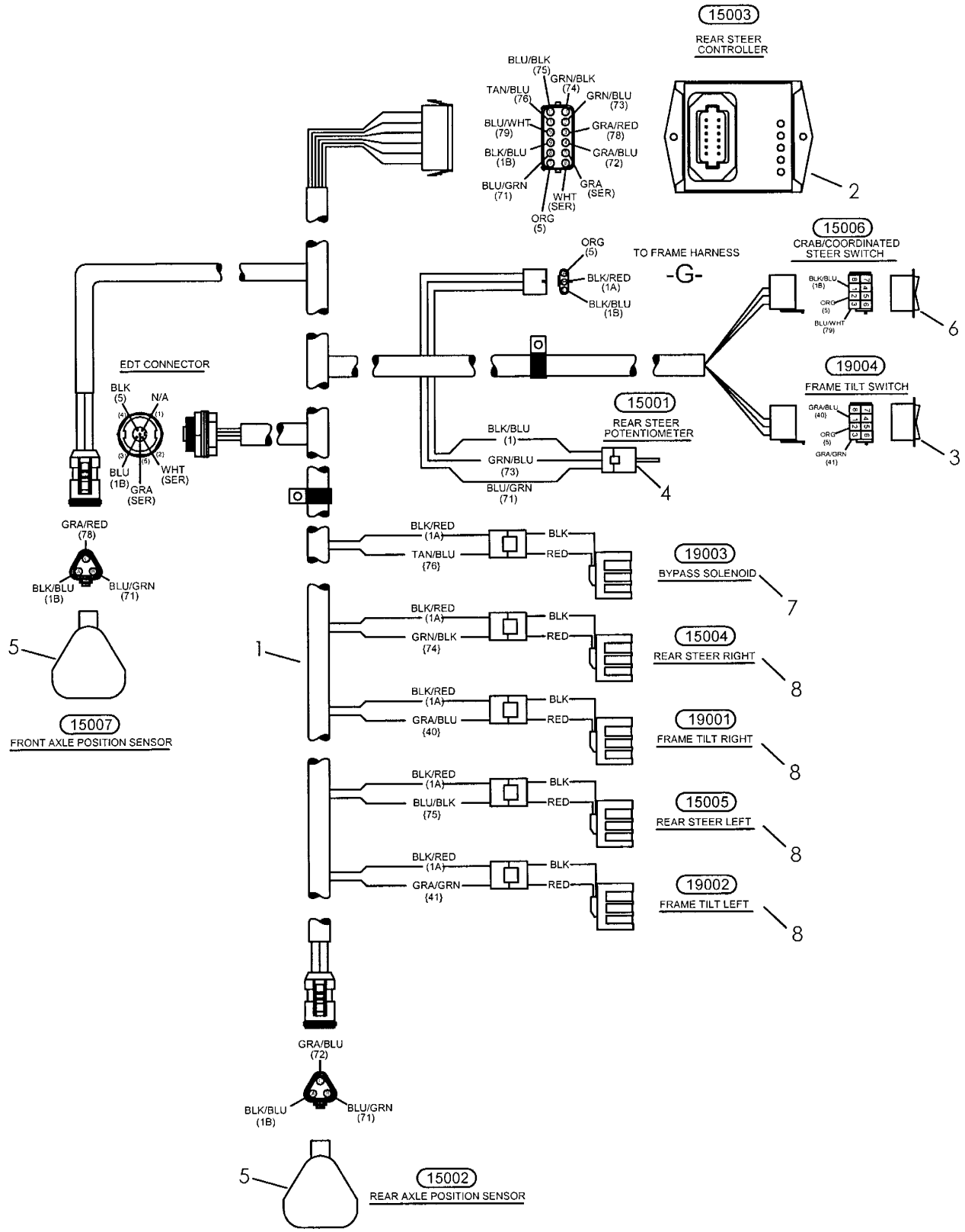
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	213-334	1	CRUISE CONTROL HARNESS	
2.	220-645	1	CRUISE CONTROL MODULE	
3.	217-261	1	P/Q JOYSTICK	
4.	217-892	1	POTENTIOMETER-AUTOCROWD	
5.	217-762	1	ROCKER SWITCH (SPDT)	

FOOTNOTES

NOTE:

ELECTRICAL DIAGRAM

COORDINATED STEER HARNESS



ELECTRICAL DIAGRAM

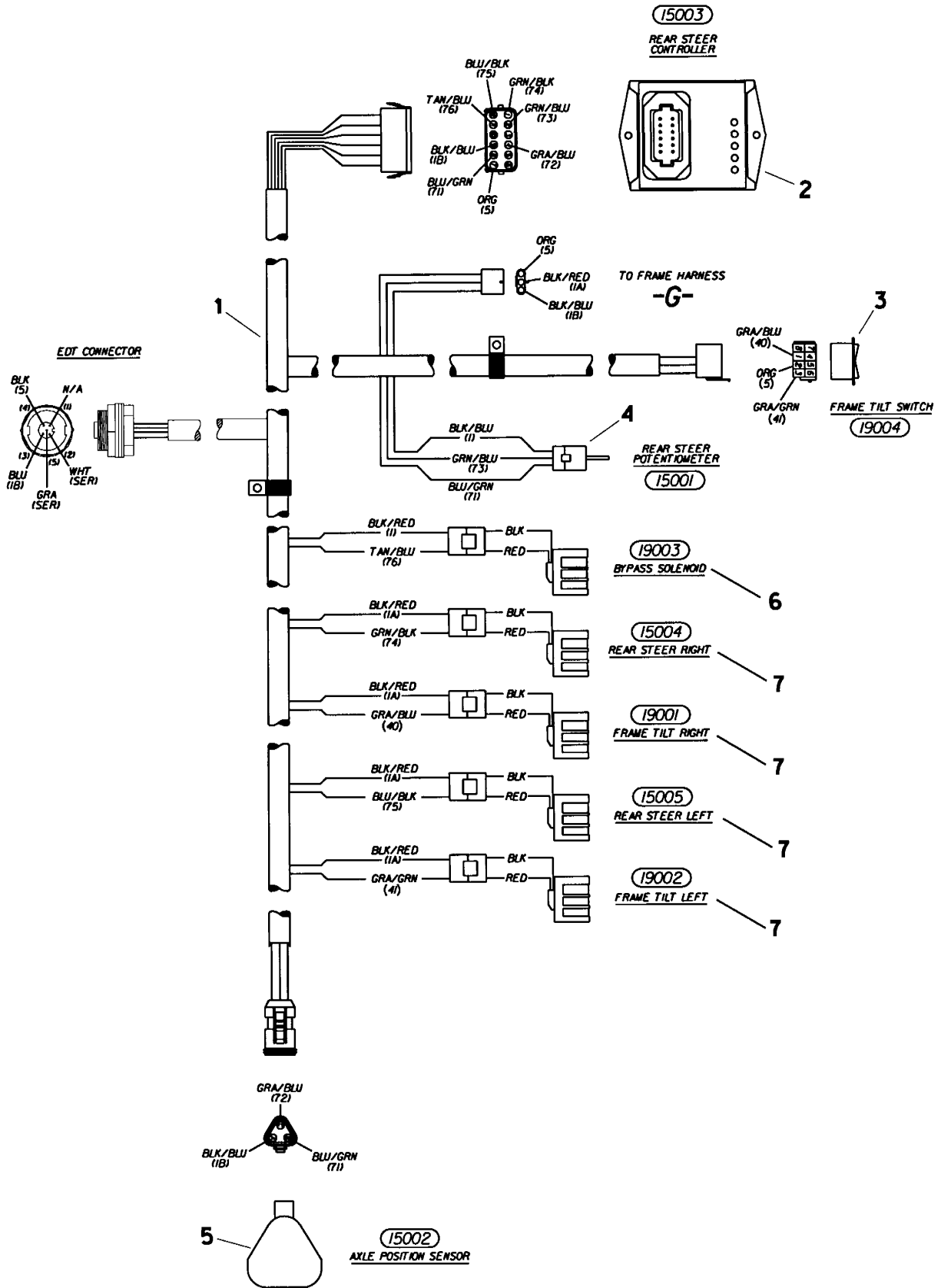
COORDINATED STEER HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	217-272	1	COORDINATED STEER HARNESS	
2.	217-239	1	CONTROL MODULE REAR STEER	
3.	217-764	1	ROCKER SWITCH (SPDT)	
4.	217-273	1	POSITION POTENTIOMETER	
5.	217-259	1	REAR STEER SENSOR	
6.	217-854	1	ROCKER SWITCH (SPDT)	
7.	214-909	1	SOLENOID COIL	
8.	217-948	4	COIL, 12VDC	

FOOTNOTES

NOTE:

ELECTRICAL DIAGRAM REAR STEER/FRAME TILT HARNESS



ELECTRICAL DIAGRAM

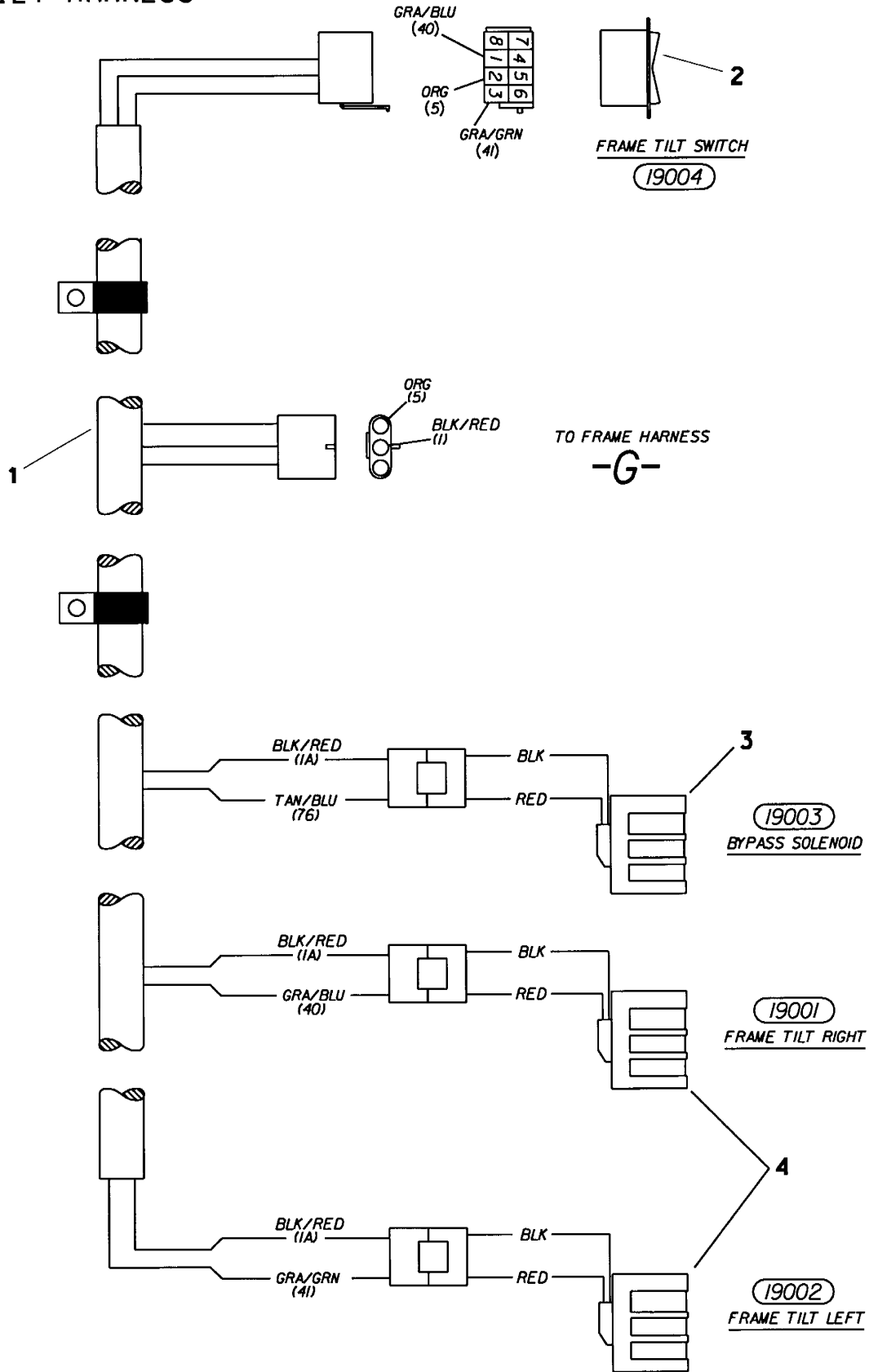
REAR STEER/FRAME TILT HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-657	1	REAR STEER/FRAME TILT HARNESS	
2.	217-239	1	CONTROL MODULE REAR STEER ASS'Y	
3.	217-764	1	ROCKER SWITCH (SPDT)	
4.	217-273	1	POSITION POTENTIOMETER	
5.	217-259	1	REAR STEER SENSOR	
6.	214-909	1	SOLENOID COIL	
7.	217-948	4	COIL, 12VDC	

FOOTNOTES

ELECTRICAL DIAGRAM

FRAME TILT HARNESS



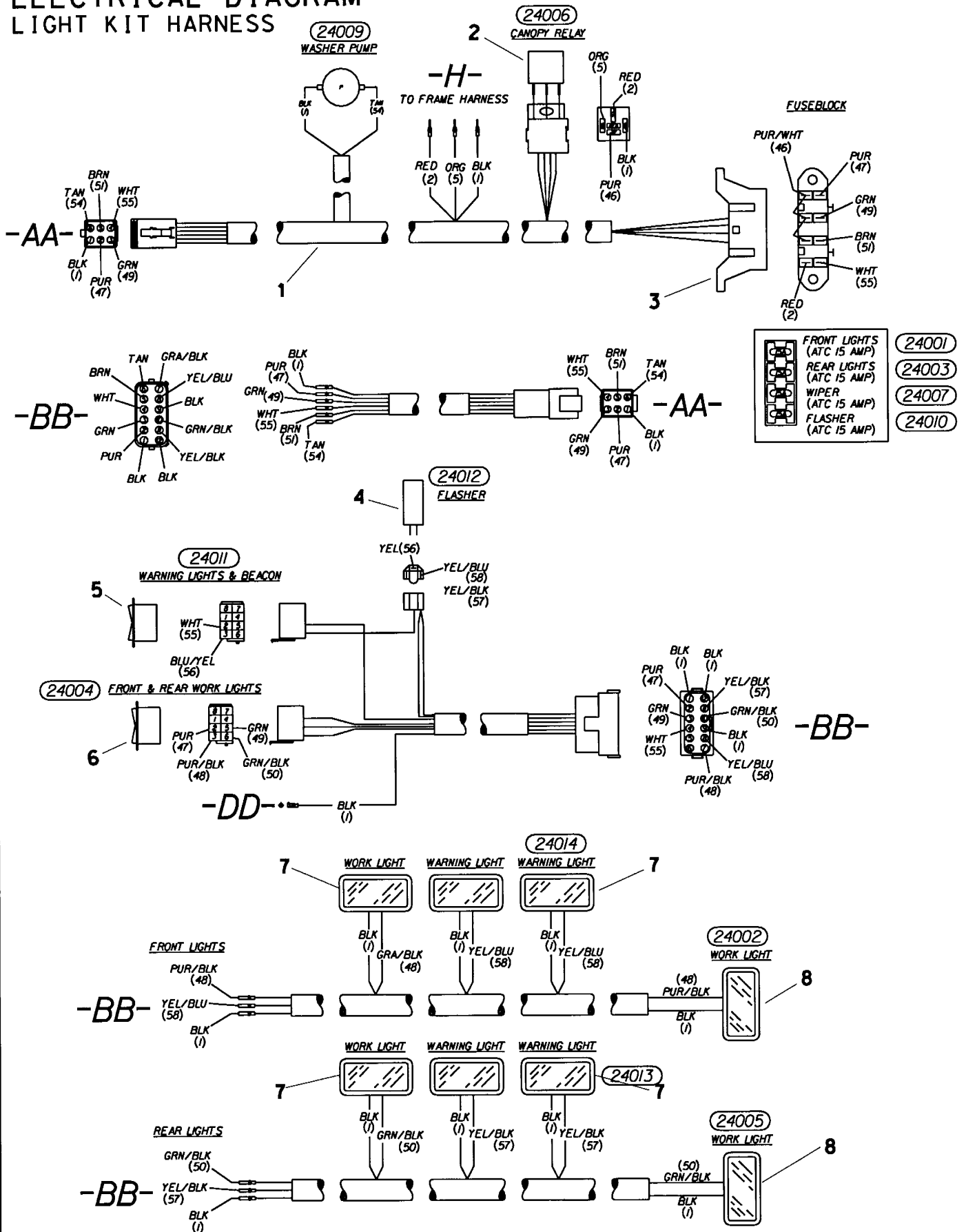
ELECTRICAL DIAGRAM

FRAME TILT HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-851	1	FRAME TILT OPTION HARNESS	
2.	217-764	1	ROCKER SWITCH (SPDT)	
3.	214-909	1	SOLENOID COIL	
4.	217-948	2	COIL, 12VDC	

FOOTNOTES

ELECTRICAL DIAGRAM LIGHT KIT HARNESS

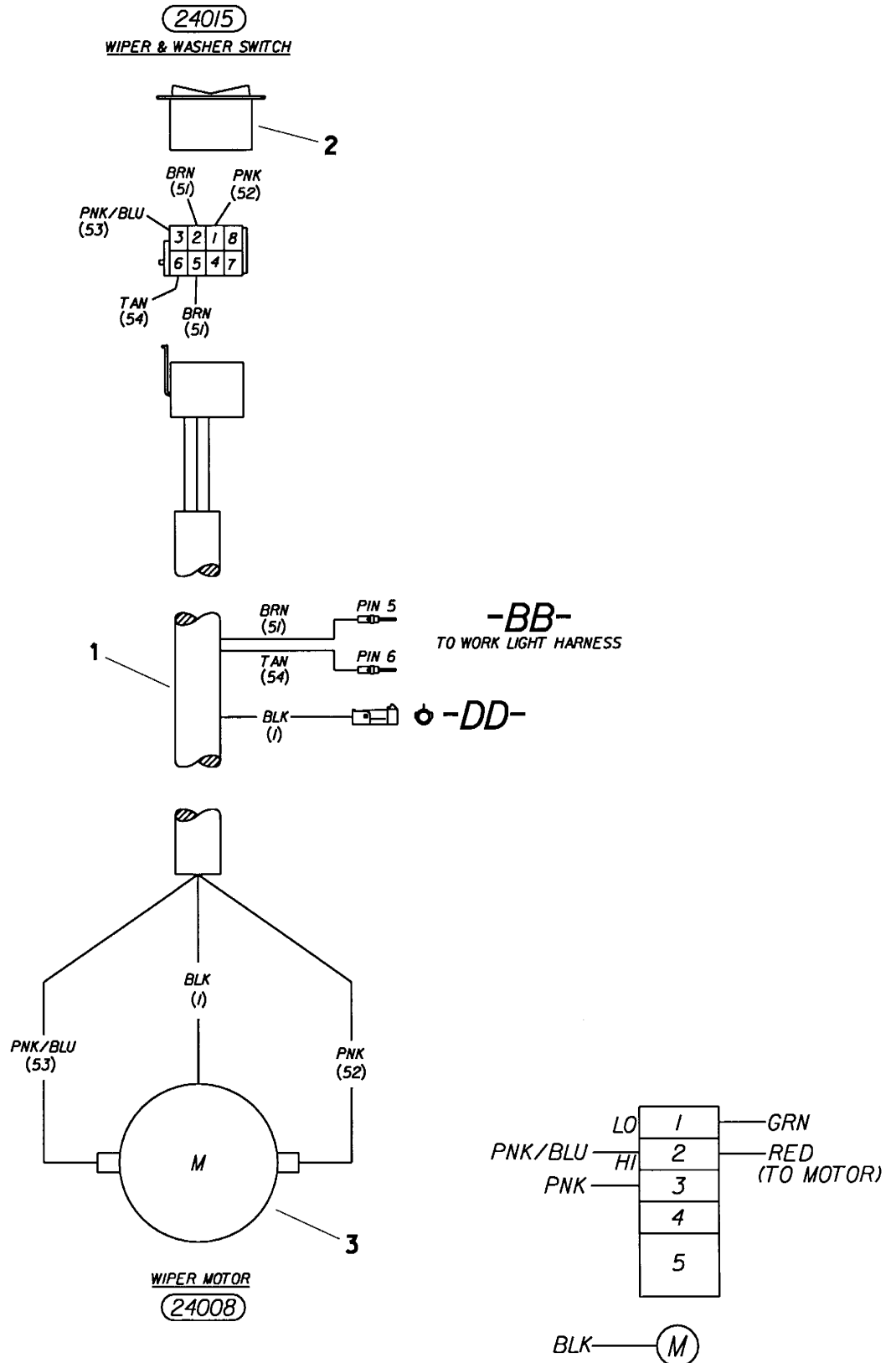


ELECTRICAL DIAGRAM LIGHT KIT HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-659	1	LIGHT KIT HARNESS	
2.	217-826	1	MINI RELAY (SPDT)	
3.	217-811	4	FUSE (ATC, 15 AMP)	
4.	215-041	1	FLASHER	
5.	217-762	1	ROCKER SWITCH (SPDT)	
6.	217-072	1	ROCKER SWITCH	
7.	217-287	4	WARNING LIGHT	
8.	217-288	4	WORK LIGHT 100FO	

FOOTNOTES

ELECTRICAL DIAGRAM WIPER/WASHER HARNESS



ELECTRICAL DIAGRAM

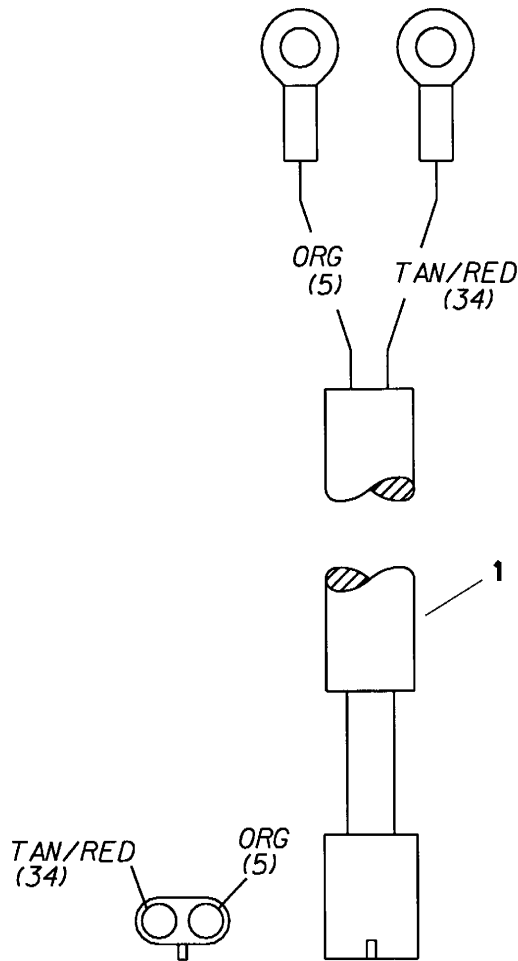
WIPER/WASHER HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	214-784	1	WIPER/WASHER HARNESS	
2.	217-893	1	ROCKER SWITCH ON-ON-(ON)	
3.	214-897	1	WIPER MOTOR	

FOOTNOTES

ELECTRICAL DIAGRAM
BACKUP ALARM HARNESS

3001
TO BACKUP
ALARM SWITCH ON PUMP



-RR-

TO HYDRAULIC PUMP HARNESS

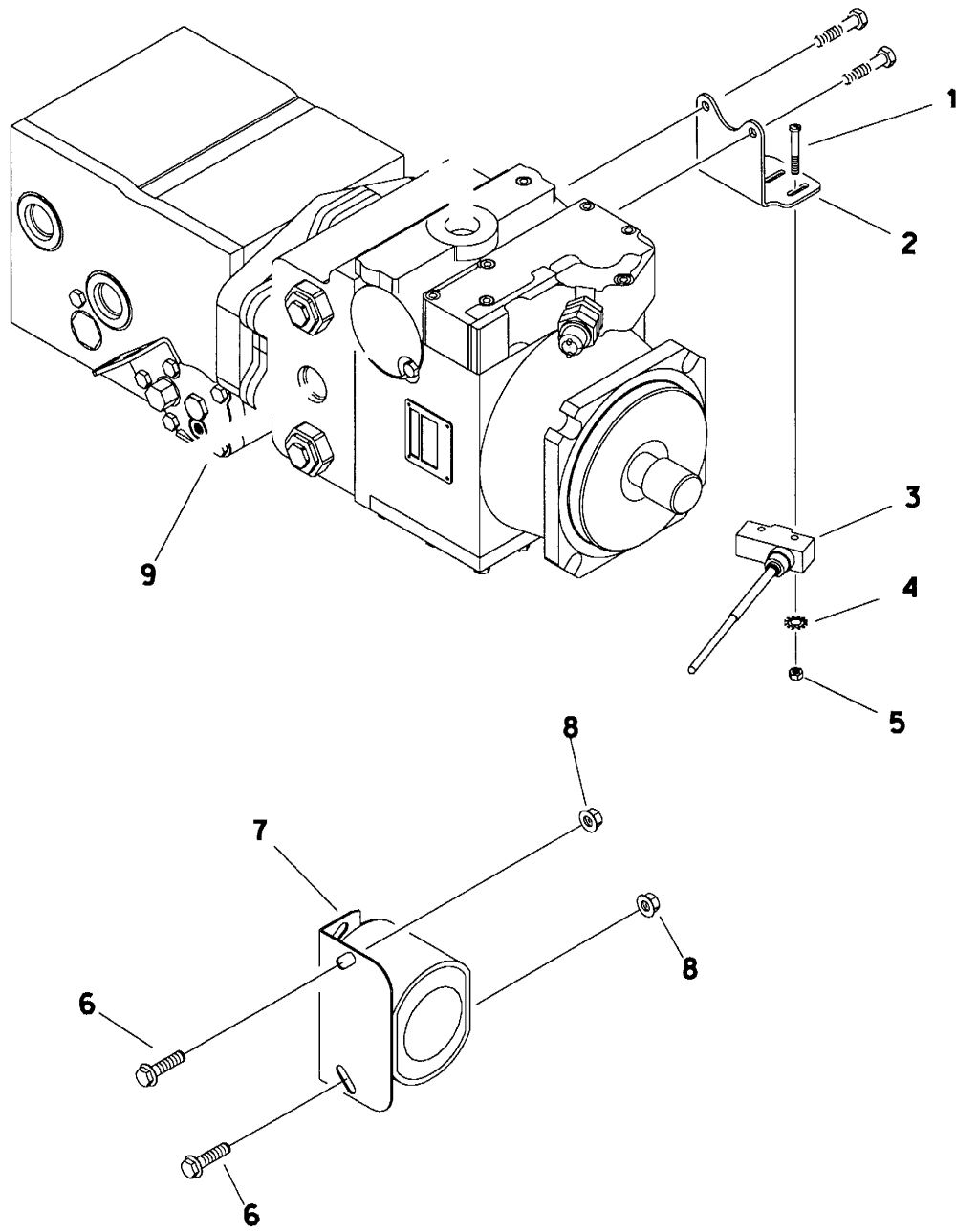
ELECTRICAL DIAGRAM

BACKUP ALARM HARNESS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	217-293	1	BACKUP ALARM HARNESS	

FOOTNOTES

BACKUP ALARM KIT RT70/RT90/RT115



B

808-433

BACKUP ALARM KIT RT70/RT90/RT115

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	191-137		BACKUP ALARM KIT (W/O CRUISE)	INCLUDES REF NO'S 1-9
	191-265		BACKUP ALARM KIT (W/CRUISE)	INCLUDES REF NO'S 4,5 & 8
1.	106-058	2	BOLT (#6-32 X 1-1/8", RD SLT)	
2.	319-152	1	ALARM SWITCH BRACKET	REFER TO FOOTNOTE 1
3.	217-703	1	OMNI LEVER SWITCH	
4.	106-040	2	EXT STAR WASHER (#6)	
5.	105-215	2	NUT (#6-32)	
6.	106-163	2	FLG SCREW (M8-1.25 X 30mm)	
7.	306-602	1	BACKUP ALARM	
8.	106-386	2	FLG LOCKNUT (M8-1.25)	
9.	158-048	-	TANDEM PUMP	

NOT SHOWN

217-293 BACKUP ALARM HARNESS

FOOTNOTES

1. TO MOUNT SWITCH BRACKET FIRST REMOVE SCREWS FROM PUMP AND THEN REINSERT THEM THRU BRACKET.

MISCELLANEOUS

METRIC TORQUE VALUE CHART

Size	Class 4.8				Class 8.8 & 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	26	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 a 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 the strength of the 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 Locknut to approximately 50 percent of the dry torque indicated on the chart. Apply torque to the nut – not the bolt head. Tighten toothed or serrated type lock nuts to the full torque value.

Reference: Bossard International Inc., Handbook.

1. **LUBRICATED** means coated with a lubricant such as engines oil, WD-40, anti-seize compound or phosphate and oil coatings.
DRY means plain or zinc plated without any other type of lubricant.

SAE TORQUE VALUE CHART

Grade-5: UNC or UNF						
Thread Size	Hex Nuts or Bolts Tapped Hex Nut or Drilled & Tapped Hole		Hex Top Deformed Locknut		Serrated Flange Nut or Locknut Tapped Flange Nut or Drilled & Tapped 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	102
7/16	65	88	40	55	125	170
1/2	100	135	60	82	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	1050	1425
1	840	1140	500	680	1580	2145
1-1/8	1030	1400	620	840	1950	2645
1-1/4	1460	1980	880	1195	2760	3745

Grade-8: UNC or UNF						
Thread Size	Hex Nuts or Bolts Tapped Hex Nut or Drilled & Tapped Hole		Hex Top Deformed Locknut		Serrated Flange Nut or Locknut Tapped Flange Nut or Drilled & Tapped 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	75	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	220	430	585
3/4	450	610	270	365	750	1015
7/8	730	990	440	600	1210	1640
1	1090	1480	650	880	1820	2470
1-1/8	1550	2100	930	1260	2580	3500
1-1/4	2180	2955	1310	1780	3640	4935

ⓐ For nuts that are not Grade-C, use torque values for Grade-5

RT70H

Related Publications

Component	Ass'y	P/N
Model:		
RT70	Parts Manual	053-088
RT70	Operators Manual	054-077
RT70	Repair Guide (Service Manual)	N/A
RT70	Supplementary Maint Guide - Trencher	050-633
RT70	Special Tools Guide	052-901
Engine:		
John Deere	Parts Manual – 4045DF150	194-103 053-059
John Deere	Operators Manual - 4045DF150.....	054-049
John Deere	Service (Shop) Manual - 4045DF150.....	054-049


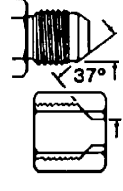

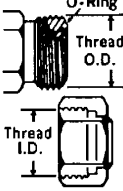
Filters

Engine:		
Air Filter Parts Ass'y		197-762
Element (primary)		197-763
Element (secondary)		197-764
Oil Filter Element (spin-on) - John Deere		194-815
Fuel Filter Element (slip-on) – In-Line		155-941
Fuel Strainer (04H) Tank.....		156-268
Fuel Filter Element-John Deer.....		194-816
Hydraulic:		
Oil Filter Element (1-1/2-UNF, spin-on, Replacement)		153-792
Element (1-1/2-UNF, spin-on, Break-In)		153-791

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

**DASH, O-RING & THREAD SIZE
CORRESPONDING CHART**

Dash Size	Fraction Size	NPT & NPTF	JIC	SAE (Port Seal O-Ring)		ORS or ORFS (Face Seal O-Ring)		Flange
		① Thread Size	① Thread Size	① Thread Size	② O-Ring P/N	① Thread Size	② O-Ring P/N	② O-Ring P/N
-01	1/16"	①N/A	①N/A	①N/A	②N/A	①N/A	②N/A	②N/A
-02	1/8"	1/8-27	5/16-24	5/16-24	②N/A	①N/A	②N/A	②N/A
-03	3/16"	①N/A	3/8-24	3/8-24	②N/A	①N/A	②N/A	②N/A
-04	1/4"	1/4-18	7/16-20	7/16-20	155-760	9/16-18	157-037	②N/A
-05	5/16"	①N/A	1/2-20	1/2-20	155-717	①N/A	②N/A	②N/A
-06	3/8"	3/8-18	9/16-18	9/16-18	155-705	11/16-16	157-038	②N/A
-08	1/2"	1/2-14	3/4-16	3/4-16	155-706	13/16-16	157-039	②N/A
-10	5/8"	①N/A	7/8-14	7/8-14	155-707	1-14	157-040	②N/A
-12	3/4"	3/4-14	1-1/16-12	1-1/16-12	155-709	1-3/16-12	157-017	155-723
-14	7/8"	①N/A	1-3/16-12	1-3/16-12	155-747	①N/A	②N/A	②N/A
-16	1"	1-11.5	1-5/16-12	1-5/16-12	155-748	1-7/16-12	155-714	157-029
-20	1-1/4"	1-1/4-11.5	1-5/8-12	1-5/8-12	155-702	1-11/16-12	157-129	157-078
-24	1-1/2"	1-1/2-11.5	1-7/8-12	1-7/8-12	157-001	2-12	157-130	157-128
-32	2"	2-11.5	2-1/2-12	2-1/2-12	②N/A	①N/A	②N/A	500-031
-40	2-1/2"	2-1/2-8	3-12	3-12	②N/A	①N/A	②N/A	②N/A
-48	3"	3-8	3-1/2-12	3-1/2-12	②N/A	①N/A	②N/A	②N/A
-56	3-1/2"	3-1/2-8	①N/A	①N/A	②N/A	①N/A	②N/A	②N/A
-64	4"	4-8	①N/A	①N/A	②N/A	①N/A	②N/A	②N/A
								

① Diameter of threads in fractions of an inch and number of threads per inch
 ② N/A - Not a current thread or CMW p/n'd o-ring for dash size, not used in current CMW applications.

- BSPT:** A thread type which tapers similar to the npt except that the thread pitches are different in most sizes, and the thread form and od's are close but not the same. The seal take place by thread distortion. A thread sealant is recommended.
- NPT:** A thread type which tapers approximately 3/4" per foot. The seal takes place by deformation of the male and female threads.
- JIC:** A thread type which is a straight thread with 37° cone seat. The seal takes place by establishing a line contact between the male flare and the female cone seat.
- SAE:** A thread type which is a straight thread with o-ring seat. The seal takes place by the use of an o-ring on the male end being forced tightly against a machined boss around the female thread port.
- ORS:** A thread type which is a straight thread with o-ring groove in the face of male end. The seal takes place by compressing the o-ring onto the flat face of the female end.
- Flange:** A flat, non-threaded end with a machined groove for an o-ring which is held against the workpiece by a split flange held down with four bolts. The seal takes place by compressing the o-ring onto the flange head and the flat surface surrounding the port. The threaded bolts hold the connection together.

**NOTE: Flange {Code 61, <4999 PSI, Less than}
 Flange {Code 62, >5000 PSI, Greater than}**



**Ditch
Witch**

Parts Manual Change Request

(Please print clearly)

Date: _____ Dealer No. (required): _____

Your Name: _____ Position: _____

Phone: _____ Fax: _____ E-mail: _____

Publication Information:

Parts Manual No.: _____ - _____ Model: _____

Illustration Part No.: _____ Manual Page No.:

- | | |
|------------------------|----------|
| 1. _____ - _____ | 1. _____ |
| 2. _____ - _____ | 2. _____ |
| 3. _____ - _____ | 3. _____ |

Nature of Change Request:

Text Graphics Missing Information

Describe change requested (if possible, include copy of publication page with changes marked.):

**Please fax completed form to
Parts Manual Department (580) 336-9637**

Thank you for taking the time to submit this request. We will contact you if further information is needed to process your request.

**A Note To
Ditch Witch
Equipment Owners:**

If your equipment was purchased through a Ditch Witch dealer, there is no need to read further.

However, if you purchased from any other source, please fill out the form on the reverse side and return it to us.

This will enable you to receive updates on this equipment as well as information on new products of interest.

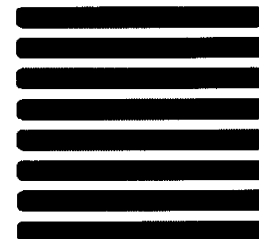
Thanks for using Ditch Witch equipment.

(Please Fold Along This Line And Seal At Bottom With Tape)



**NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES**

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO 23 PERRY OKLAHOMA



POSTAGE WILL BE PAID BY

**The Charles Machine Works, Inc.
P.O. Box 66
Perry, Oklahoma 73077-9989**



Ditch Witch® Registration Card

Please Type or Print All Information

Purchaser's Company Name

Attention

Street Address or P.O. Box

City

County

State

Zip

Nation

()

Phone Number With Area Code

Model

Serial Number

Attachments/Accessories

Serial Numbers

Attachments/Accessories

Serial Numbers

Attachments/Accessories

Serial Numbers

Name of Ditch Witch Dealership

Your Signature

