DD-2024 EarthPro Directional Drill Parts Catalog AU111714

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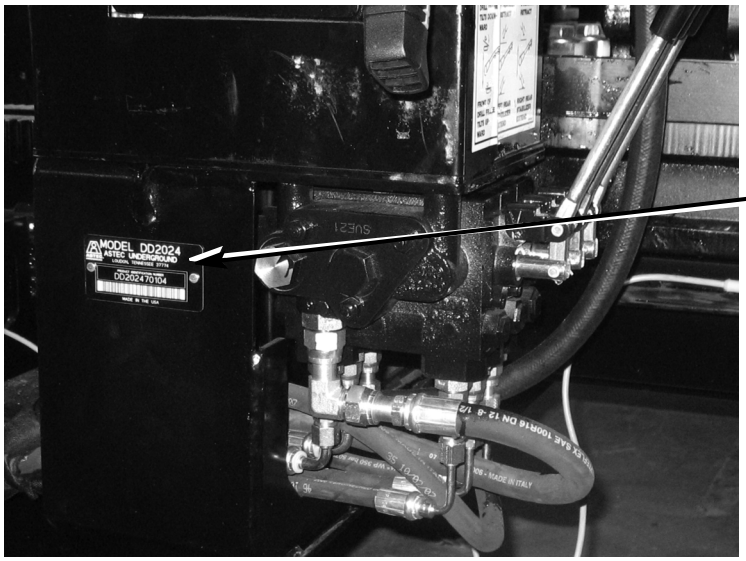
DD2024002

This unit first became available January, 2007.

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LOCATION OF ENGINE SERIAL AND PRODUCT IDENTIFICATION NUMBERS

Please use the horizontal lines provided to record these important serial numbers, product identification numbers and part numbers.

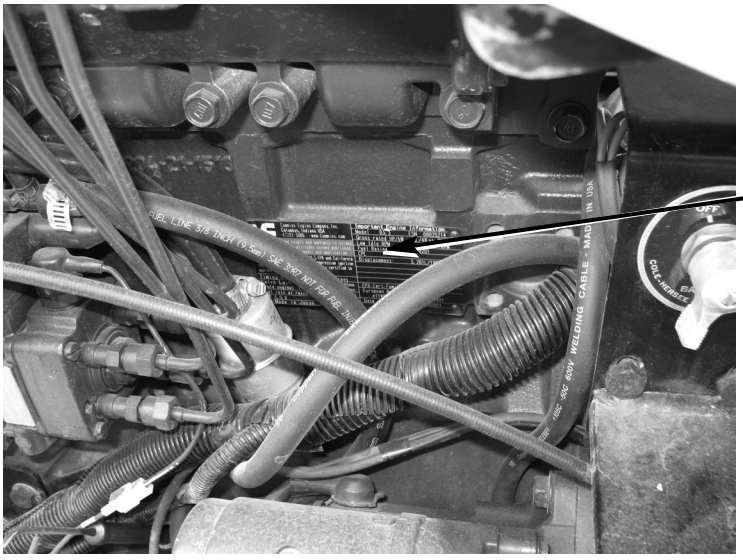


DD2024039

PRODUCT IDENTIFICATION NUMBER (P.I.N.)
(Plate is located on the left side of frame near rear operators station.)



SerNo_Lable



ENGINESERNO2

ENGINE SERIAL NUMBER
(Plate is located at left front of engine on the timing gear cover.)

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GENERAL INFORMATION

Indexes

Section 1 of this catalog contains a SN and P.I.N. location guide and alphabetical index. An alphabetical index also appears at the beginning of each section. Section 10 is the Numerical Index which lists all part numbers in alpha/numeric order with their page location and reference number.

Illustrations

The arrangement of this parts catalog is for easy identification of parts. All parts are illustrated in “exploded views” in proper relation to each other. Reference numbers used in the illustrations refer to those on the text pages. The text pages list reference number, part number, part description and the quantity required.

Abbreviations

P.I.N. “Product Identification Number”

SN “Serial Number”

NSS “Not Serviced Separately” in the part number column indicates this part is not available for service.

REF “Reference” in the part number column indicates this part has special service information. The page where this information can be found is given in the part description column.

UAR “Use As Required” in the quantity required column indicates the number of parts used is determined by service needs.

Right-Hand and Left-Hand Identification

The reference to right-hand and left-hand in this catalog is identified by the operator standing at the rear of the basic unit, looking toward the front of the machine (in normal forward travel). For pages covering any machine attachments, right-hand and left-hand are defined by the operator sitting in the position for proper operation of the attachment.

Catalog Revisions and Supplements

Changes to the product may make it necessary to revise or add pages to this catalog. Each new or revised page will have a new issue date. All revised and new pages must be put into the parts catalog as soon as they are received.

Parts Orders

Orders must specify product model, all necessary serial numbers, correct part number, complete description, quantity required, method of shipment, and shipping address.

Text Format Explanation

An assembly may contain service items. The component parts of an assembly or subassembly may be indented. The quantity required column lists the number of assemblies required for a completed machine, and the number of components required in a complete assembly or subassembly.

The example below illustrates the use of indents and other text page elements explained on this page.

HYDRAULIC FILTER

REF.	PART NO.	DESCRIPTION	REQ’D.
1	D4356734	FILTER ASSEMBLY - hydraulic oil, P.I.N. 7534840 and after	1
	D61903	HEAD ASSEMBLY - filter	1
2	NSS	HEAD - filter	1
3	D58199	VALVE - bypass	1
	D43800	KIT - filter element	1
4	NSS	ELEMENT - filter	1
5	A27994	O-RING - filter	1
6	D61948	HOUSING -filter	1
7	REF	CANOPY - ROPS	1
8	843065C1	HOSE - 3353 mm (132 inch) long, reservoir to pump	1
9	113-323	BOLT - hex, 7/16 NC x 1-3/4 inch	2
10	814-8030	BOLT - hex, 8 - 1.25 x 30 mm	4

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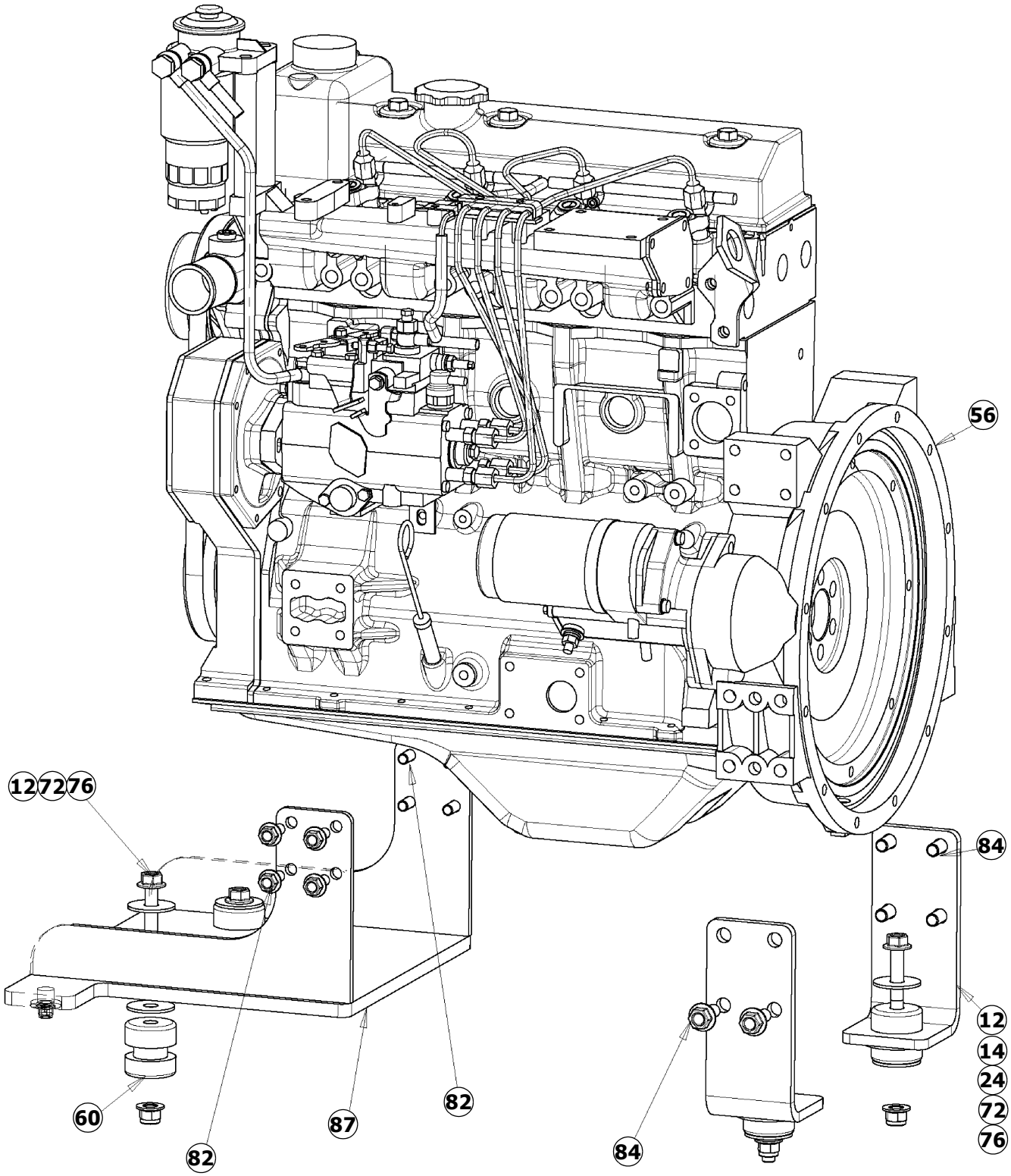
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FILTERS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8NG10018-04	FILTER - Air, Primary Element	1
2	8NG10018-05	FILTER - Air, Secondary Element	1
3	8NG10019-22	FILTER - Oil	1
4	8NG10019-23	FILTER - Fuel, Final	1
5	8NG10019-24	FILTER - Fuel, Pre	1
6	8FL20024-1	FILTER - Hydraulic, Charge	1
7	8FL20025-1	FILTER - Hydraulic, Return	1

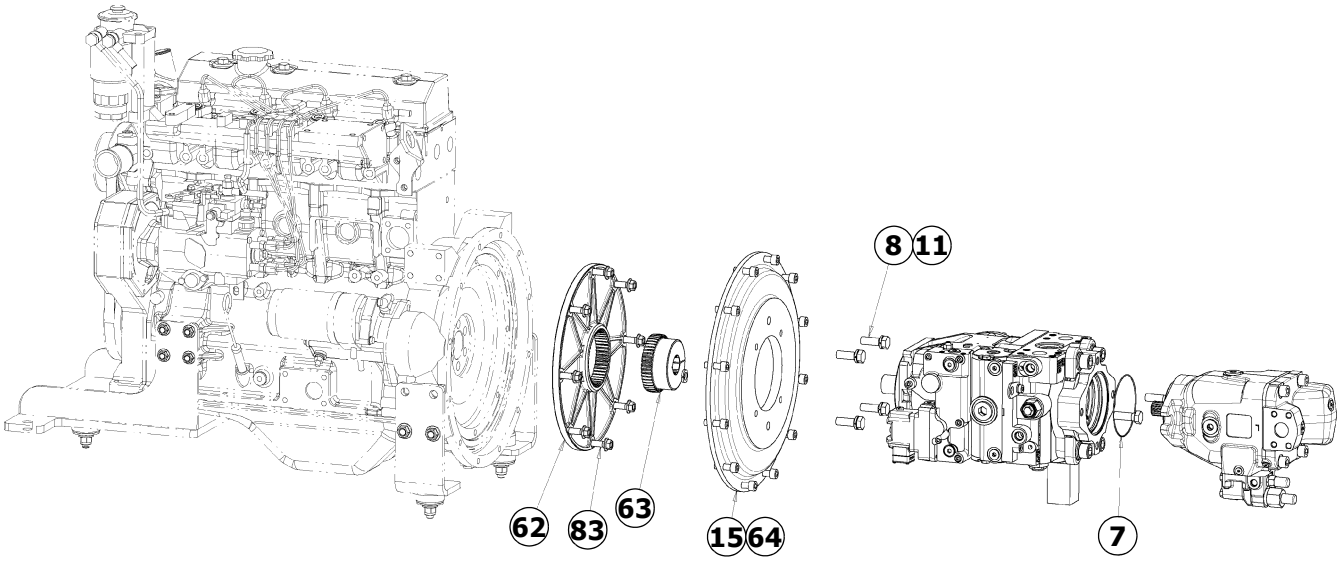
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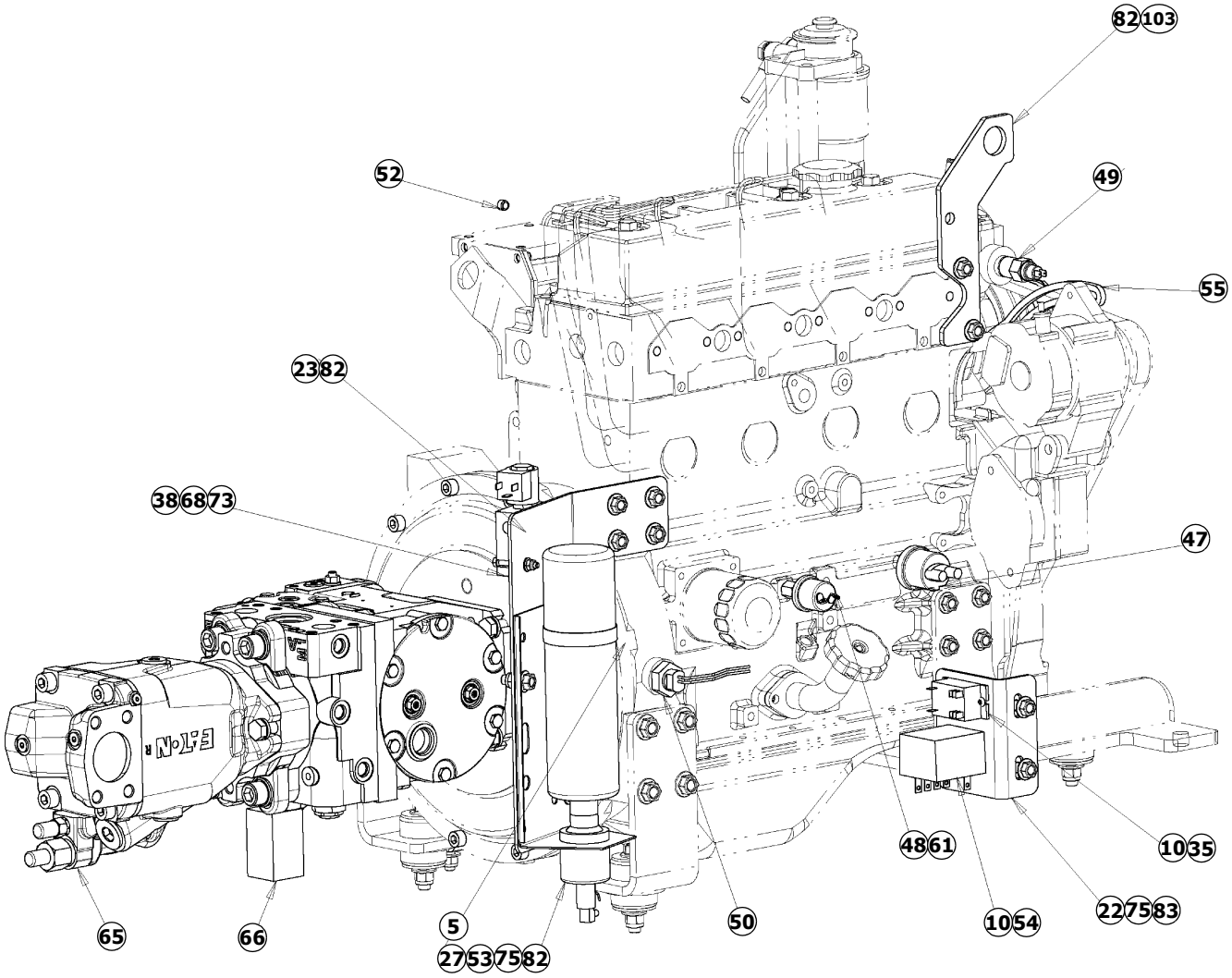
ENGINE MOUNTING

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
12	495-71053	WASHER - .531 x 1.75 x .10 in CST ZND	8
14	496-81017	WASHER - 1.375 x 2.500 x .156 in HDN ZND	2
24	12GB3114	MOUNT - Engine, Rear	2
56	8NG10020	ENGINE	1
60	8NG28121	MOUNT - Isolator	4
72	AU100353	SCREW, METRIC FLANGE w/BODY - M12 x 80	4
76	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	4
82	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	8
84	AU101477	SCREW, METRIC FLANGE w/BODY - M12 x 30	6
87	AU109116	ASSEMBLY - Engine/Radiator Mount	1


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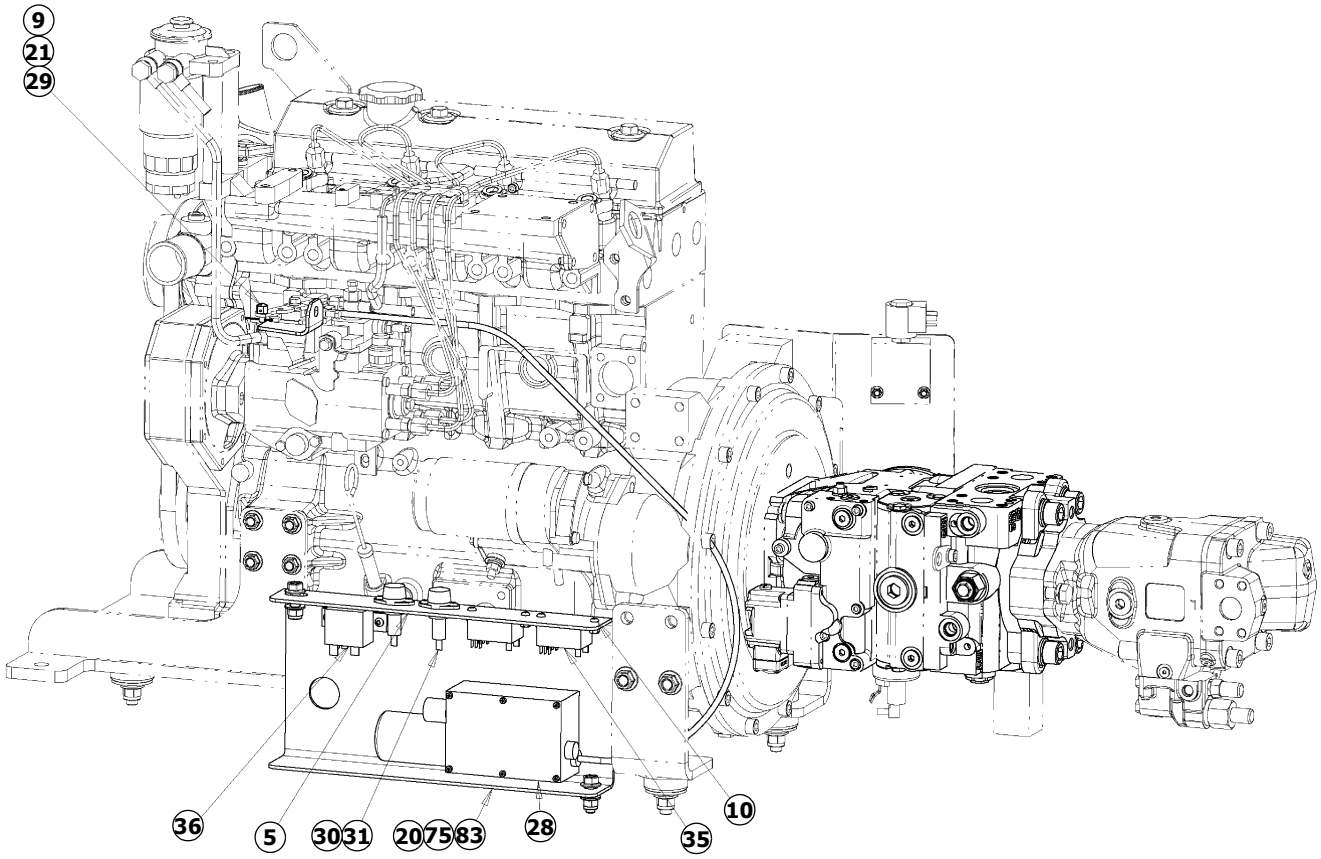
ENGINE BELL HOUSING / PUMP ASSY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
7	238-5045	O-RING - .062 x 4.00 in Class 5	1
8	426-824	BOLT - Hex Hd .500 x 1.50 GR8 ZND	6
11	492-11050	WASHER - Spring Lock Reg .500 in ZND	6
15	862-10030	SCREW - Soc Hd M10 x 30 Class 12.9 ZND	12
62	8PD92012	COUPLING - Flywheel	1
63	8PD92013	COUPLING	1
64	8PD92014	MOUNT - Pump	1
83	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	8


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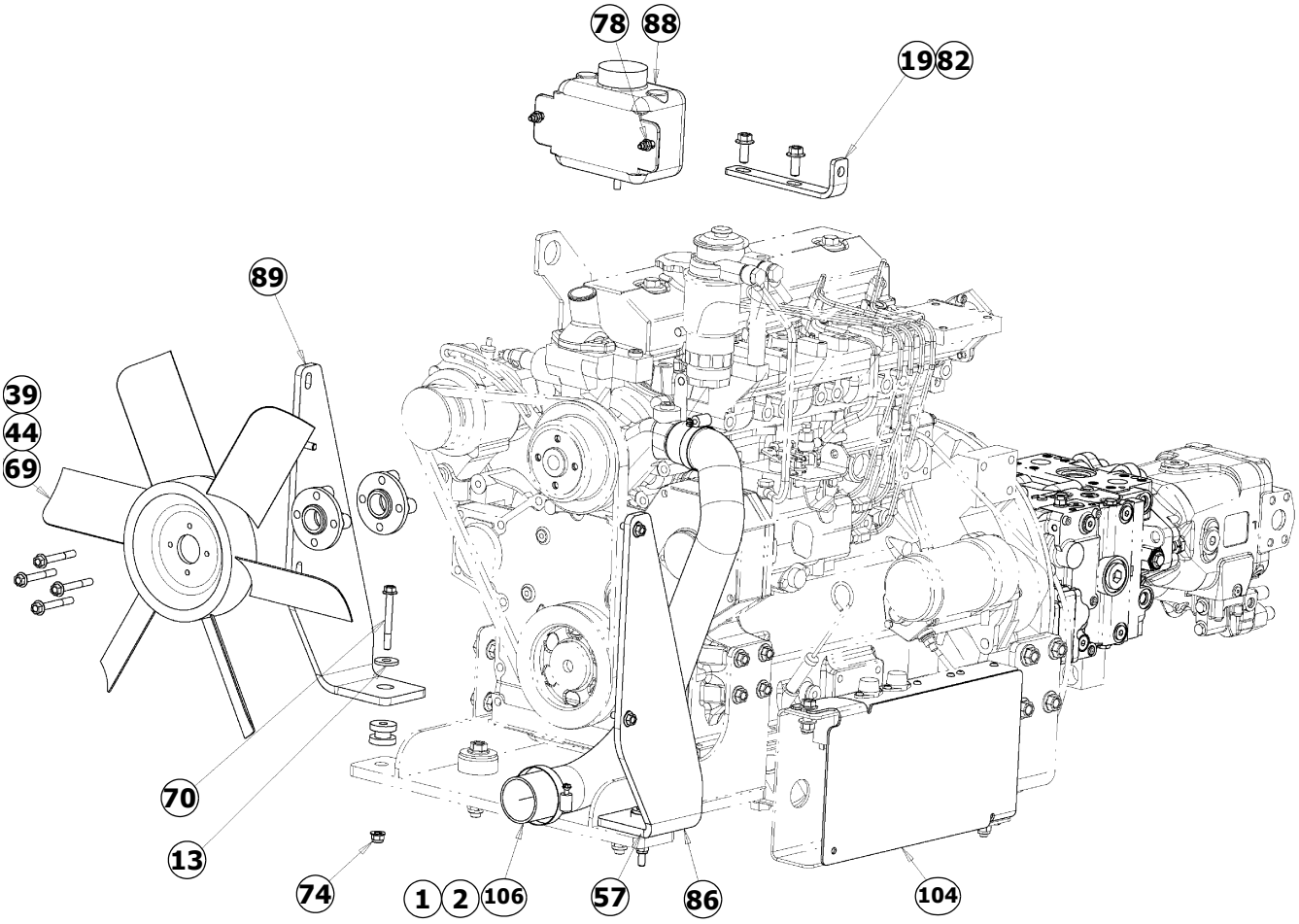
ENGINE COLD START AND MISC ASSEMBLIES

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
5	231-14409	NUT - Prev Trq # 10 GRB ZND Insert	2
10	440-1108	SCREW - PHd Type 1 #10 - 24 x .500 CST ZND	4
22	12GB3052	BRACKET - Relay	1
23	12GB3061	MOUNT - Cold Start	1
27	6EE06001	KIT - Cold Start	1
35	8EP48253	RELAY - 2 Pole 12 VDC Panel Mount	1
38	8HV80118	VALVE - Dir, Cart, 3W2P, Sol, 12 VDC	1
47	8NG10019-27	SENSOR - Oil Pressure	1
48	8NG10019-28	SENSOR - Oil Pressure	1
49	8NG10019-29	SENSOR - Coolant Temp	1
50	8NG10019-30	SENSOR - RPM	1
52	8NG10019-34-2	ATOMIZER - Ether Start	1
53	8NG10019-34-4	BOTTLE - Ether	1
54	8NG10019-35	RELAY	1
55	8NG10019-51	BRACKET - Alternator	1
61	8PB80202	ADAPTER - Pipe	1
65	8PH50041	PUMP - Hydraulic, Load Sense	1
66	8PH60051	PUMP - Hydraulic, Hydrostat	1
68	AU100314	SCREW, METRIC FLANGE w/BODY - M6 x 45	2
73	AU100525	NUT, METRIC FLANGE PREVAILING - M6 Zinc	8
75	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	3
82	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	9
83	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	2
103	AU110823	PLATE	1


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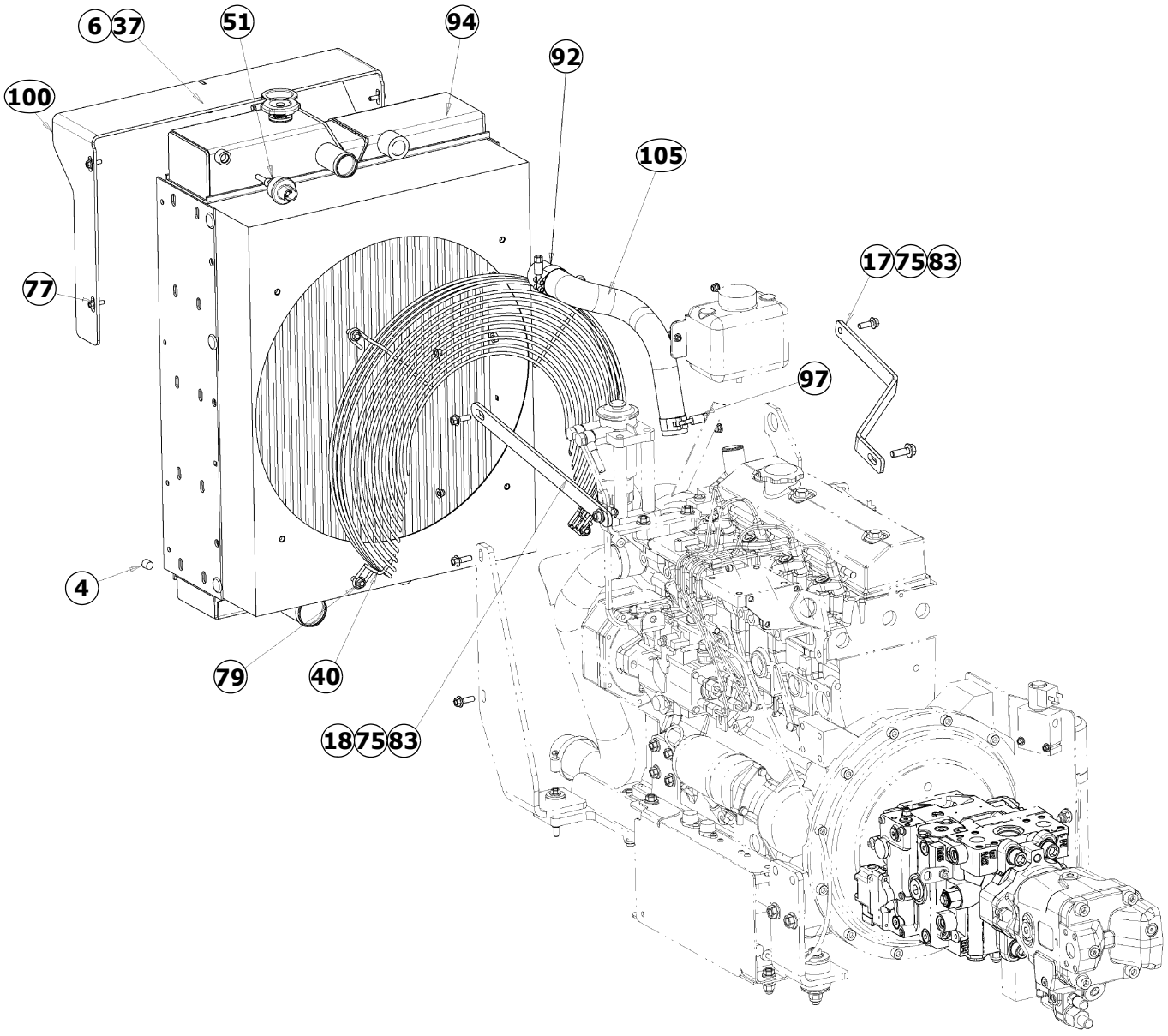
ENGINE ELECTRICAL PANEL ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
5	231-14409	NUT - Prev Trq # 10 GRB ZND Insert	10
9	432-416	PIN - Cotter .062 x 1.00 in ZN	1
10	440-1108	SCREW - PHd Type 1 #10 - 24 x .500 CST ZND	10
20	12GB3041	RELAY BOARD	1
21	12GB3042	BRACKET - Throttle	1
28	6EE30101	ASSEMBLY - Throttle	1
29	8EE30101-1	NUT - Cable Retaining	1
30	8EF10103	FUSE - Miget, 250 VDC, 30A	2
31	8EF19002	HOLDER - Fuse	2
35	8EP48253	RELAY - 2 Pole, 12 VDC, Panel Mount	2
36	8EP48283	RELAY - Power, 12 VDC	1
75	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	1
83	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	2


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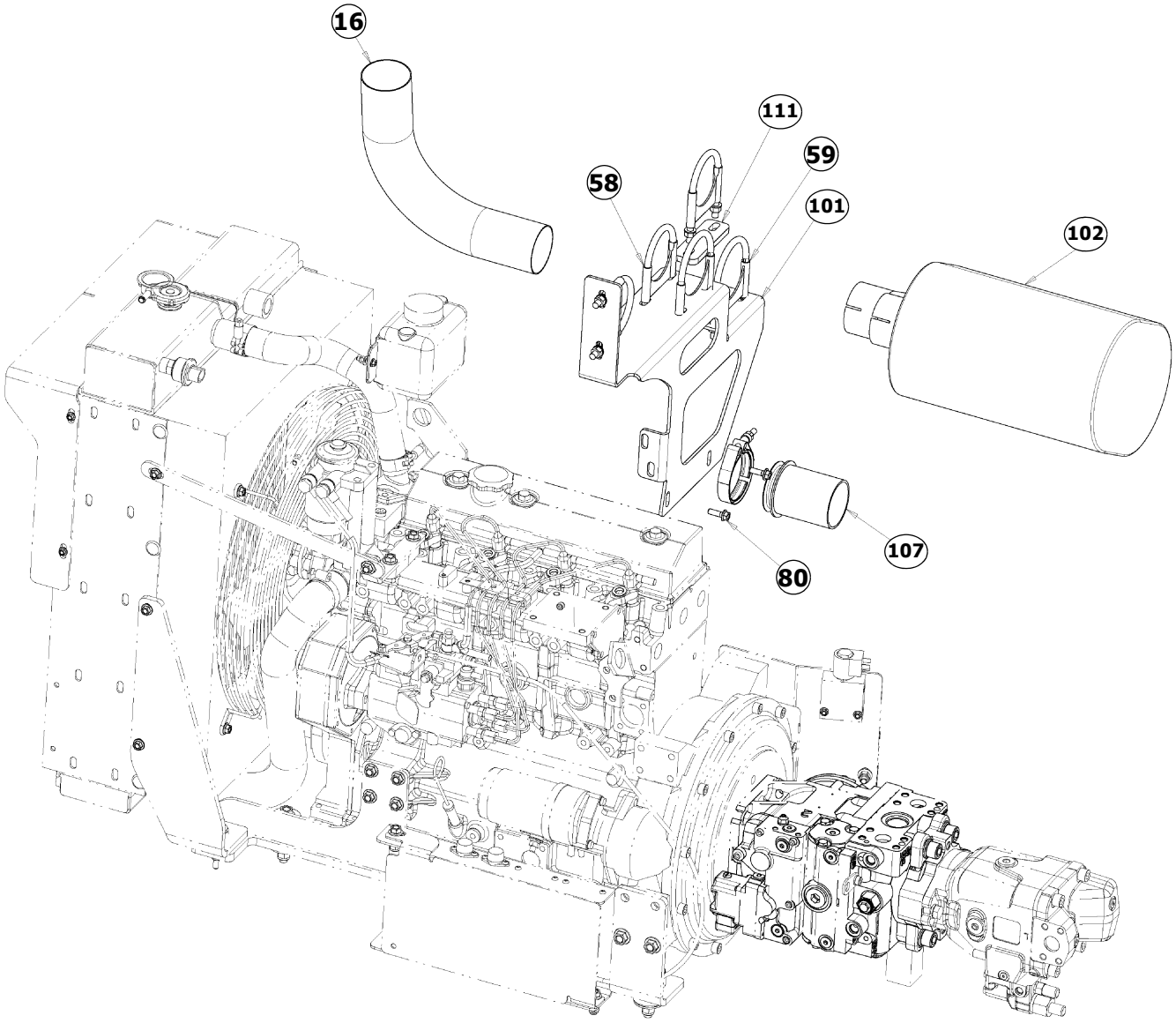
ENGINE RADIATOR PREP ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
1	214-1432	CLAMP - Hose Type F # 32.	1
2	214-1436	CLAMP - Hose Type F # 36.	1
13	496-41041	WASHER - .406 x 1.125 x .134 in HDN ZND	4
19	12GB3034	PLATE - Radiator Strap Mount	1
39	8HX30005-1	FAN	1
44	8NG10019-07	SPACER - Fan Hub	2
57	8NG28093	MOUNT - Isolator.	2
69	AU100323	SCREW, METRIC FLANGE w/BODY - M8 x 60	4
70	AU100325	SCREW, METRIC FLANGE w/BODY - M8 x 70	2
74	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	2
78	AU100870	SCREW, METRIC FLANGE w/BODY - M6 x 25	2
82	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	2
86	AU108374	BRACKET - Radiator Mounting	1
88	AU109352	OVERFLOW TANK	1
89	AU109461	BRACKET - Radiator Mounting	1
104	AU110968	COVER - Electrical	1
106	AU111476	HOSE - Lower Radiator, Molded	1


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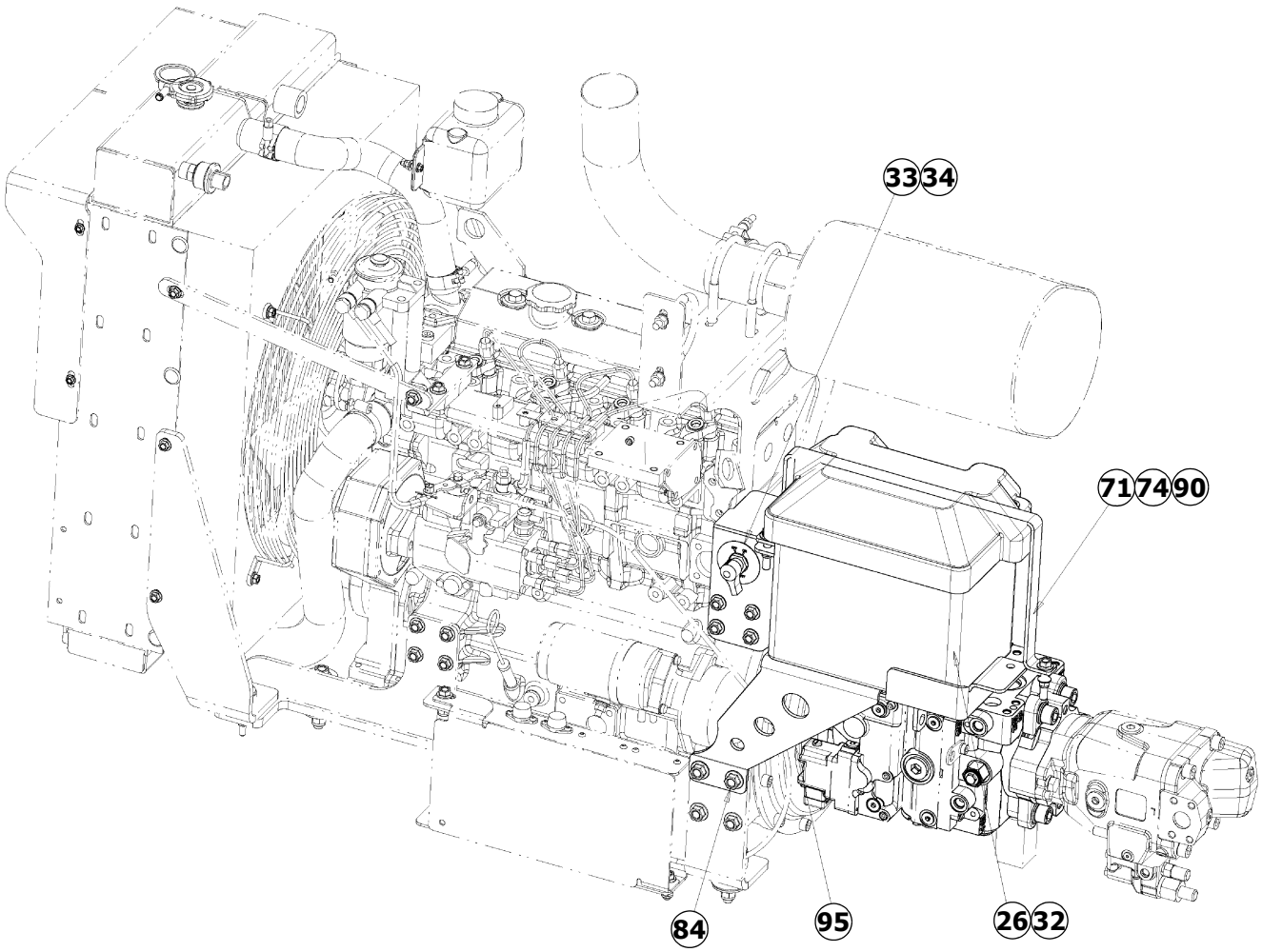
ENGINE RADIATOR ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
4	217-432	PLUG - Hdls Hex Skt Pipe 1/4 ZN	1
6	231-4145	NUT - Prev Trq 5/16 GRB ZND Direct	1
17	12GB3030	STRAP - Radiator	1
18	12GB3032	STRAP - Radiator	1
37	8HH96100	STUD - Pivot	1
40	8HX30005-2	GUARD - Fan	1
51	8NG10019-31	SENSOR - Coolant Level Switch	1
75	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	2
77	AU100869	SCREW, METRIC FLANGE w/BODY - M6 x 20	4
79	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	4
83	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	2
92	AU109908	CLAMP, T-BOLT - Min 41.3 - Max 47.6	1
94	AU110060	RADIATOR - Cooling	1
97	AU110542	FOAM SEAL	2
100	AU110760	ASSEMBLY - Shock Mount	1
105	AU111475	HOSE - Upper Radiator, Molded	1


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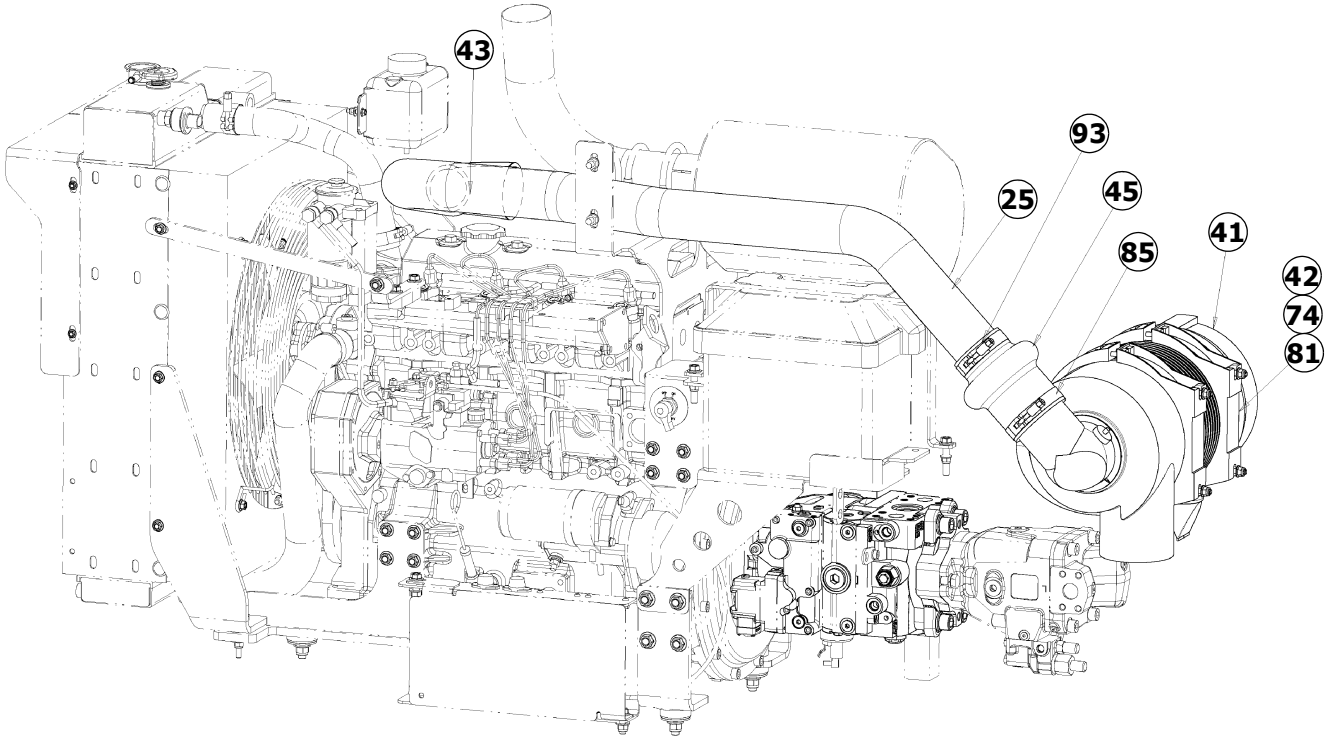
ENGINE EXHAUST ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
16	21000793	ELBOW - Exhaust 3.00 " x 90	1
58	8NG28118	CLAMP - Gillotine	3
59	8NG28119	CLAMP - Pipe	2
80	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	8
101	AU110821	MOUNT - Muffler	1
102	AU110822	ASSEMBLY - Muffler	1
107	AU112469	TURBO - Flange Adaptor	1
111	AU112600	SPACER - Muffler	1


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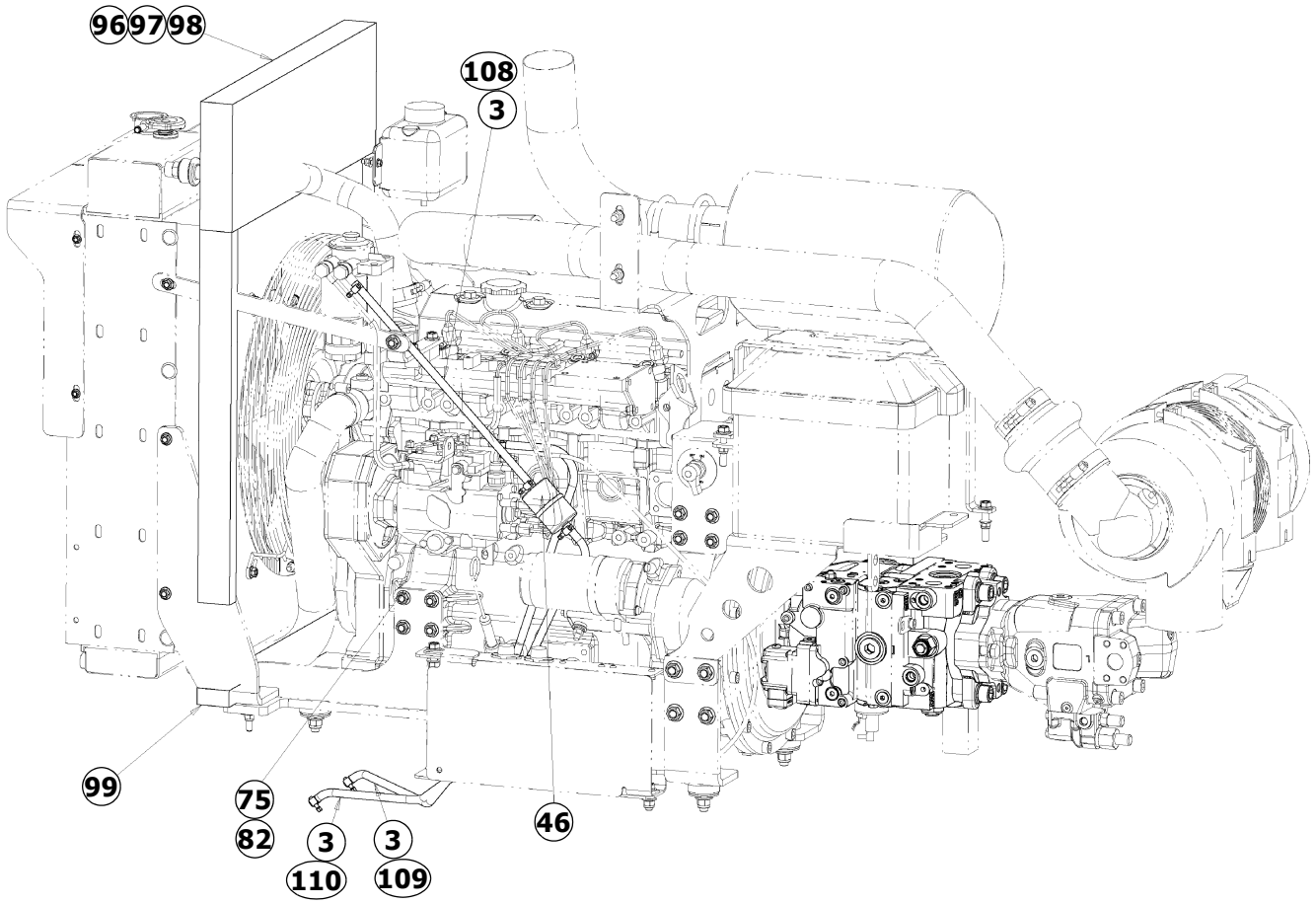
ENGINE BATTERY ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
26	48BM8393	BOX - Battery	1
32	8EP01105	BATTERY - 12VDC (obtain from local dealer)	1
33	8EP02901	SWITCH - Battery	1
34	8EP02902	DECAL - Battery On/Off	1
71	AU100333	SCREW, METRIC FLANGE w/BODY - M10 x 50	2
74	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	2
84	AU101477	SCREW, METRIC FLANGE w/BODY - M12 x 30	2
90	AU109845	STRAP - Battery	1
95	AU110454	ASSEMBLY - Battery Mount	1


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ENGINE AIR CLEANER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
25	20GB3020	TUBE - Air Intake	1
41	8NG10018-03	ASSEMBLY - Air Cleaner	1
42	8NG10018-07	MOUNT - Air Cleaner	2
43	8NG10019-05	RUBBER HOSE REDUCER	1
45	8NG10019-09	HUMP HOSE REDUCER	1
74	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	4
81	AU100874	SCREW, METRIC FLANGE w/BODY - M8 x 30	4
85	AU101639	CLAMP - TBolt, Min 95.3 Max 103.2	1
93	AU109911	CLAMP - TBolt, Min 85.7 Max 93.7	1


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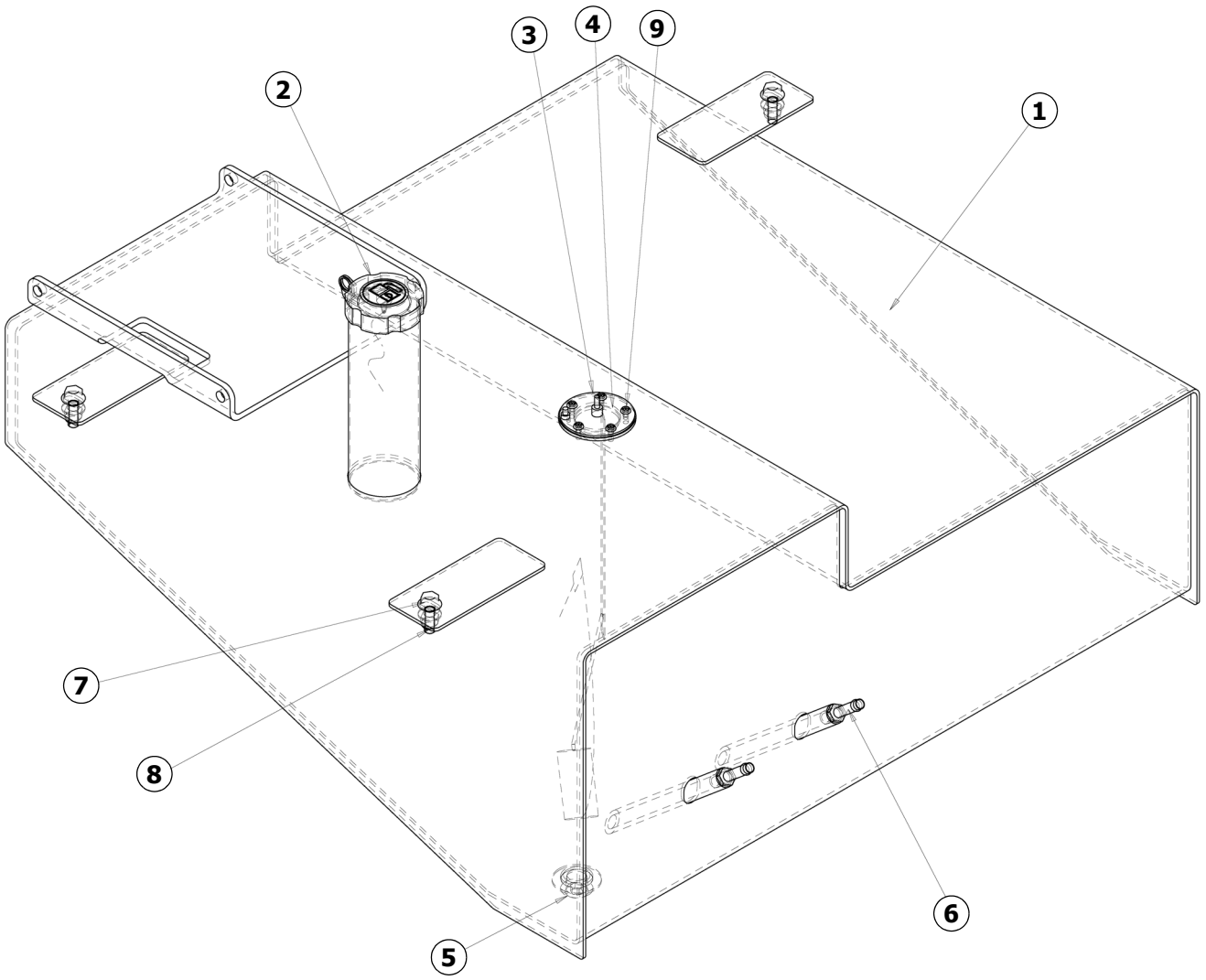
ENGINE COOLANT OVERFLOW & FUEL FILTER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3000	ASSEMBLY - Engine	1
3	214-1706	CLAMP - Hose Type M # 06	6
46	8NG10019-24	FILTER - Fuel	1
75	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	2
82	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	3
96	AU110541	FOAM SEAL	1
97	AU110542	FOAM SEAL	1
98	AU110543	FOAM SEAL	1
99	AU110544	FOAM SEAL	1
108	AU112471	FUEL LINE - 3/8" ID, 16" Length	1
109	AU112472	FUEL LINE - 3/8" ID, 42" Length	1
110	AU112492	FUEL LINE - Return, 3/8" ID, 40" Length	1

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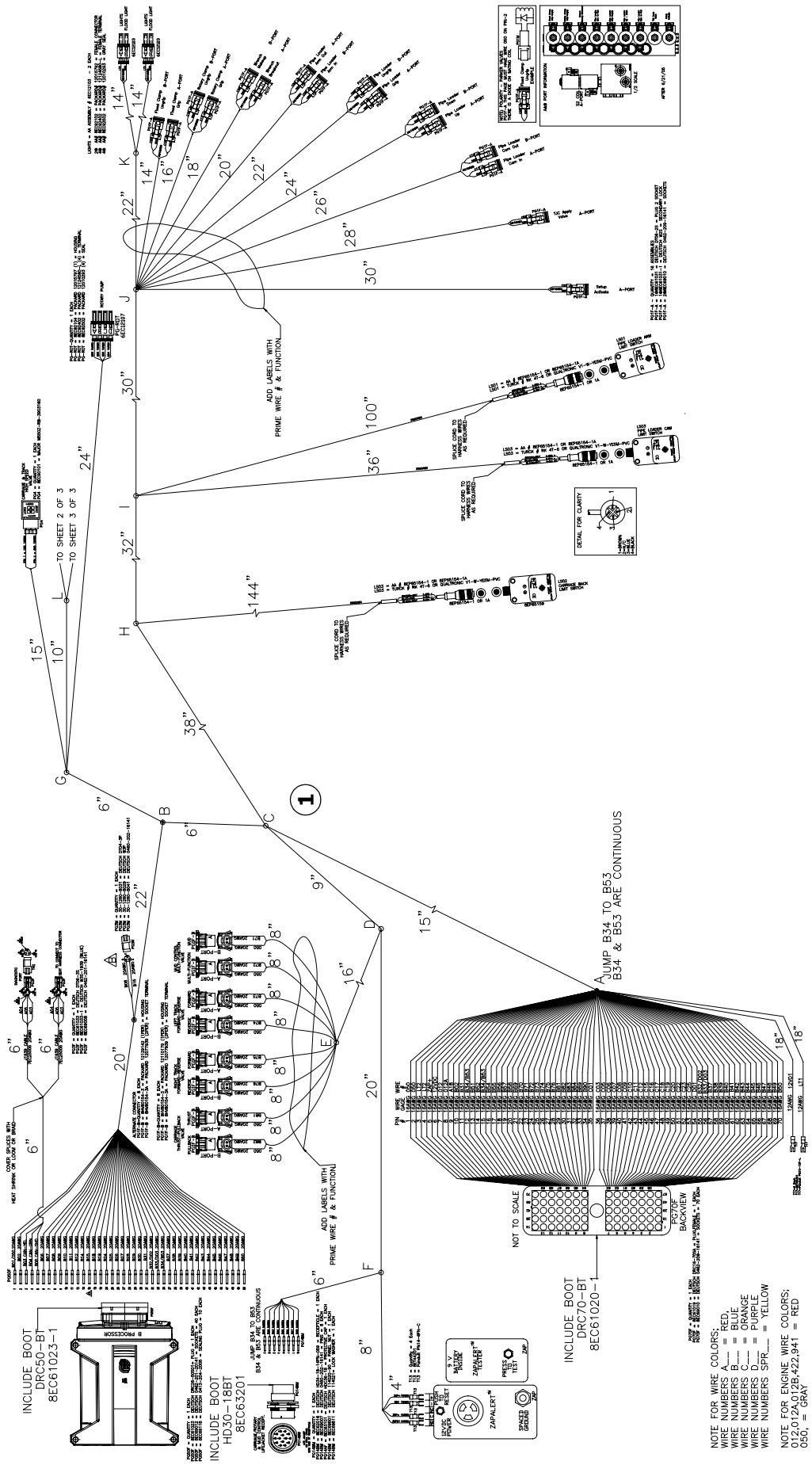


FUEL TANK

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU111265	ASSEMBLY - Fuel Tank	1
1	AU111011	TANK - Fuel	1
2	AU102188	CAP - Diesel Fuel w/Lock	1
3	528359R4	GASKET - Sending Unit	1
4	118484A1	SENDER - Fuel	1
5	217-439	PLUG - HDLS Hex Skt Pipe 1/2 PLN	1
6	217-151	STEM - Str Bead Hose 3/8 ID x 1/4 NPTF	2
7	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	3
8	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	3
9	760-34313	SCREW - Pan Hd Machine	5

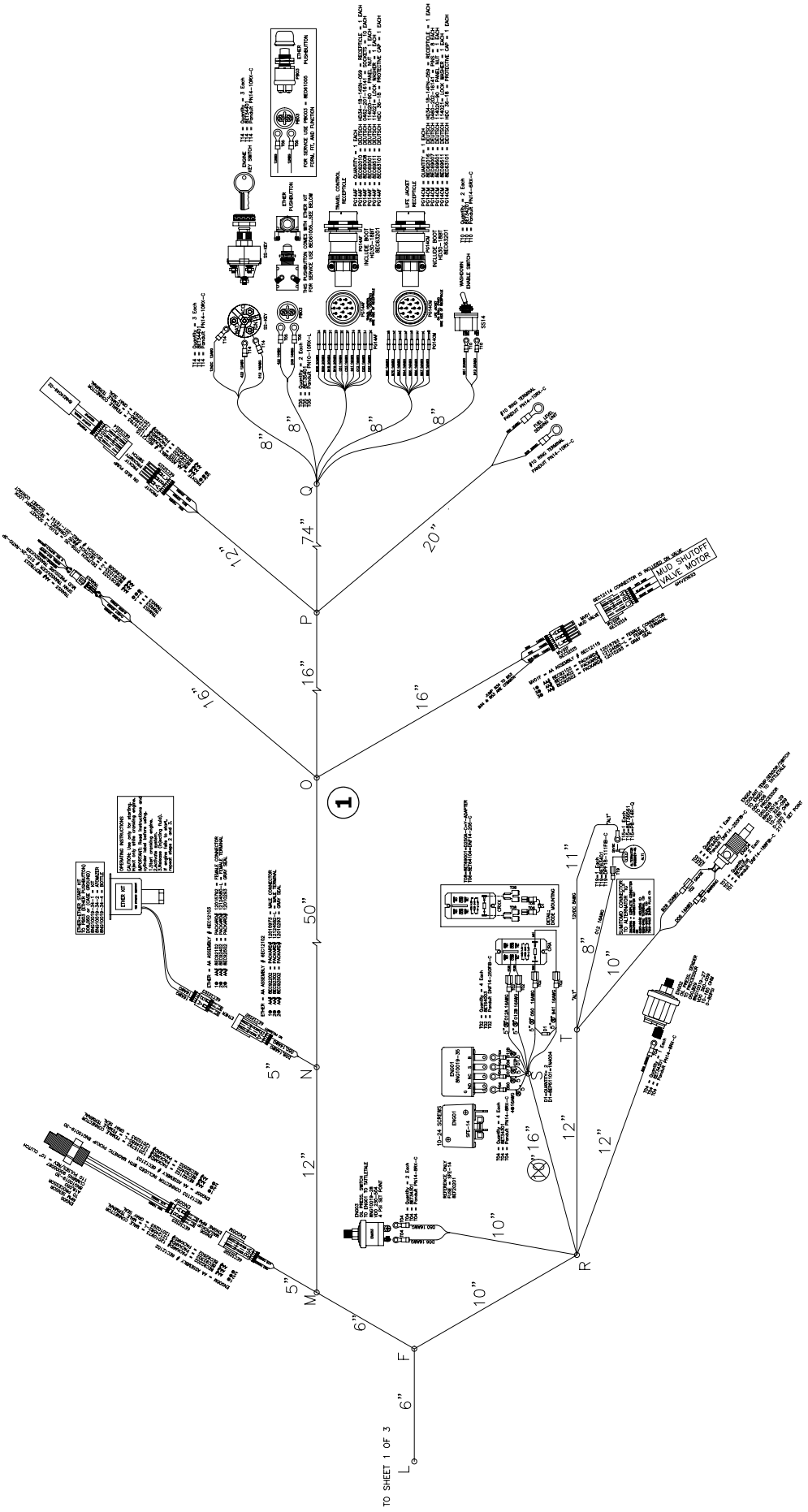
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INCLUDE BOOT
DRC50-BT
8EC61023-1
INCLUDE BOOT
HD30-18BT
8EC63201
INCLUDE BOOT
DRC70-BT
8EC61020-1
JUMP B34 TO B53
B34 & B53 ARE CONTINUOUS
ADD LABELS WITH
PRIME WIRE # & FUNCTION
TO SHEET 2 OF 3
TO SHEET 3 OF 3
NOT TO SCALE
PIN OUT
BACKVIEW
NOTE FOR WIRE COLORS;
WIRE NUMBERS A__ = RED,
WIRE NUMBERS B__ = BLUE
WIRE NUMBERS C__ = ORANGE
WIRE NUMBERS D__ = PURPLE
WIRE NUMBERS SPR__ = YELLOW
NOTE FOR ENGINE WIRE COLORS;
012,012A,012B,42,941 = RED
050, = GRAY

MAIN HARNESS

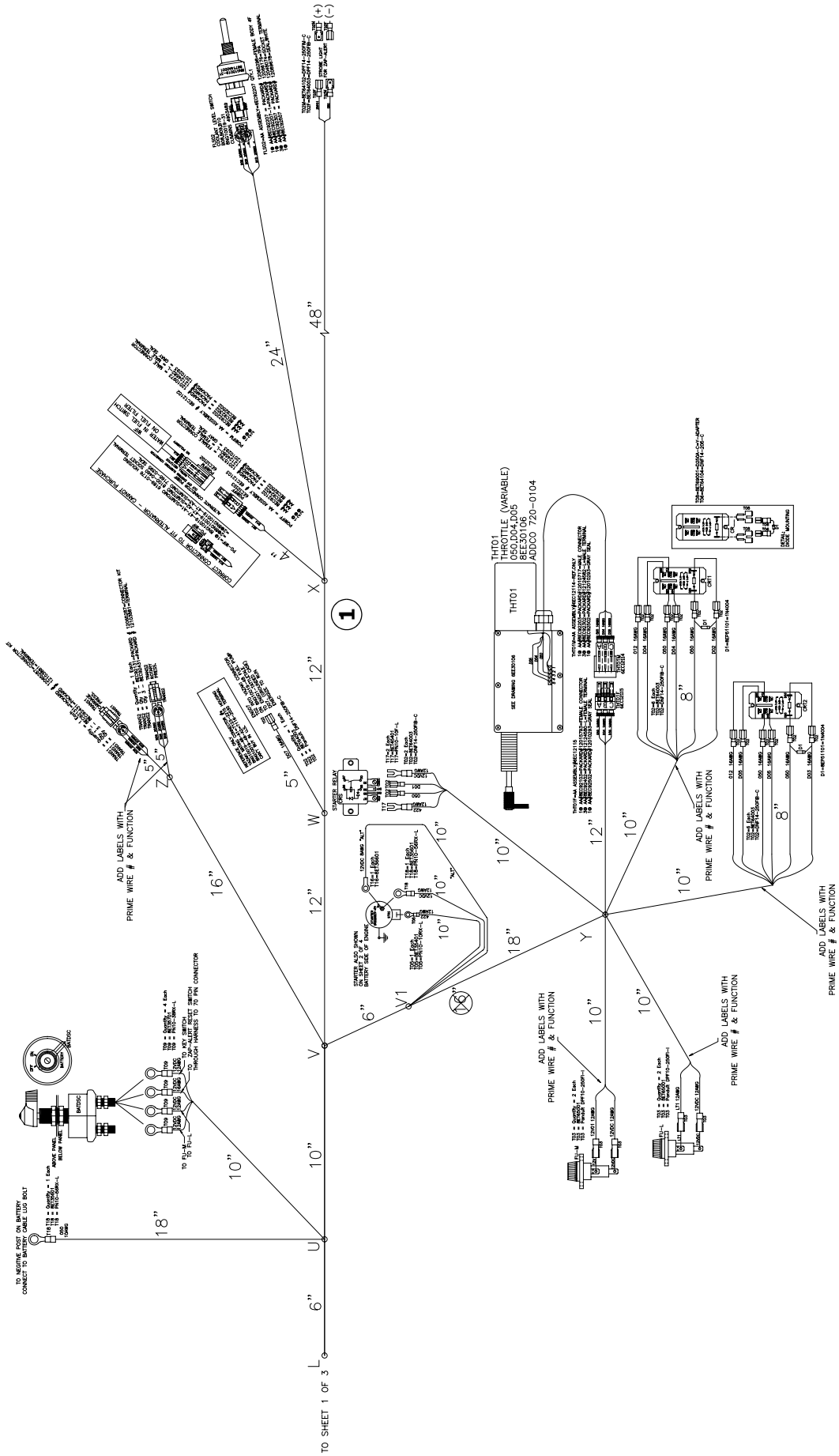
REF.	PART NO.	DESCRIPTION	REQ'D.
1	AU111708	HARNESS - Mini DD-2024	1


MUD SHUTOFF VALVE MOTOR
TO SHEET 1 OF 3

MAIN HARNESS

Thrust Side of Engine

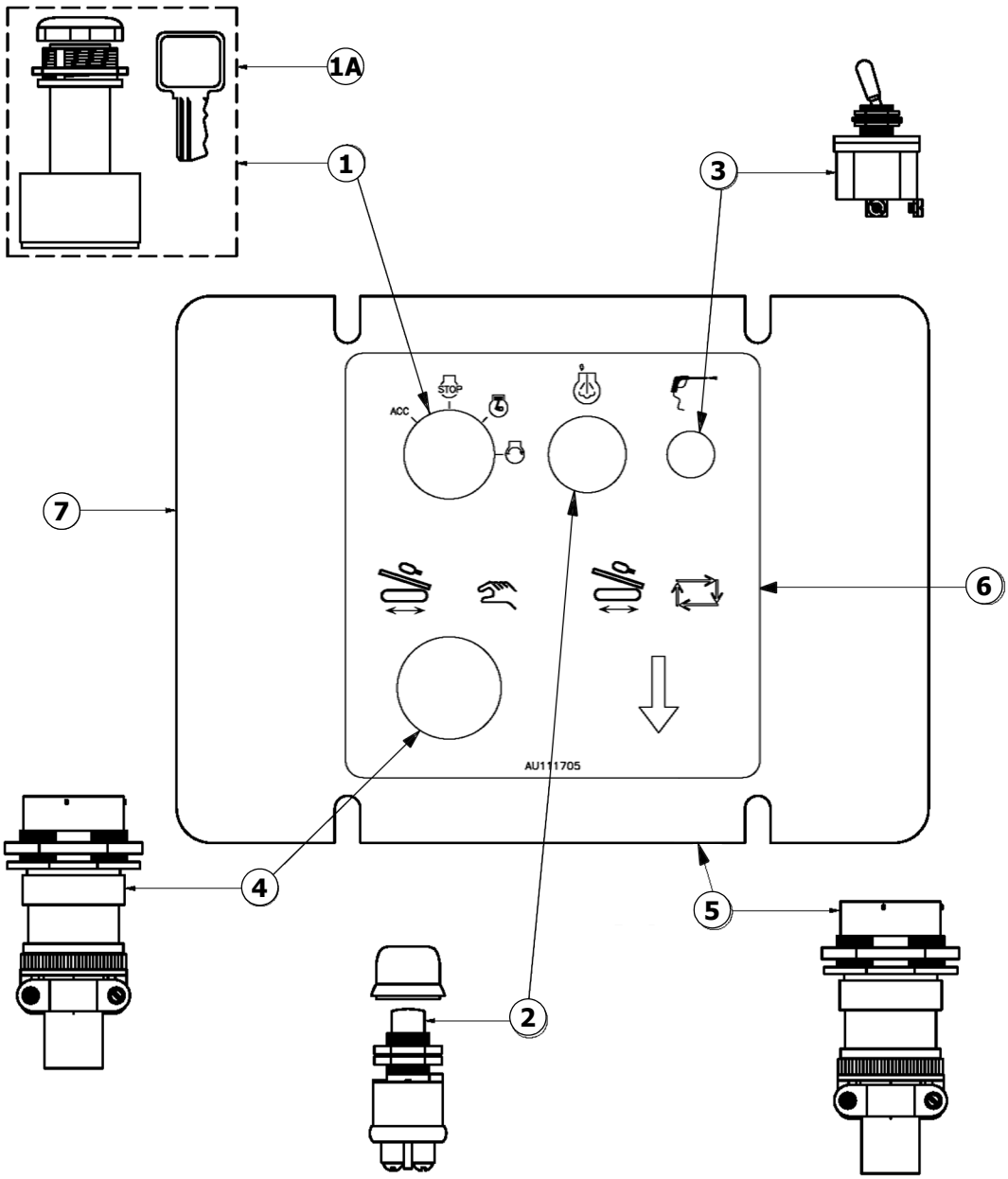
REF.	PART NO.	DESCRIPTION	REQ'D.
1	AU111708	HARNESS - Main DD-2024 Thrust Frame Side Of Engine	1


TO SHEET 1 OF 3
TO NEGATIVE POST ON BATTERY
CONNECT TO BATTERY CABLE LUG BOLT
ADD LABELS WITH
PRIME WIRE # & FUNCTION
TO KEY SWITCH
TO OAP-ALERT RESET SWITCH
THROUGH HARNESS TO 31 PIN CONNECTOR
TO P2-M
TO P2-L
STARTER RELAY
STARTER A2/B (BROWN
WIRE) SIDE OF ENGINE
THT01
THROTTLE (VARIABLE)
050,D04,D05
8EE30106
ADD00 720-0104
SEE DRAWING 4E53106
ADD LABELS WITH
PRIME WIRE # & FUNCTION
ADD LABELS WITH
PRIME WIRE # & FUNCTION
ADD LABELS WITH
PRIME WIRE # & FUNCTION
ADD LABELS WITH
PRIME WIRE # & FUNCTION
ADD LABELS WITH
PRIME WIRE # & FUNCTION
48"
24"
16"
18"
10"
12"
6"
5"
4"
8"
L
U
V
W
X
Y
Z
1

MAIN HARNESS

Battery Side of Engine

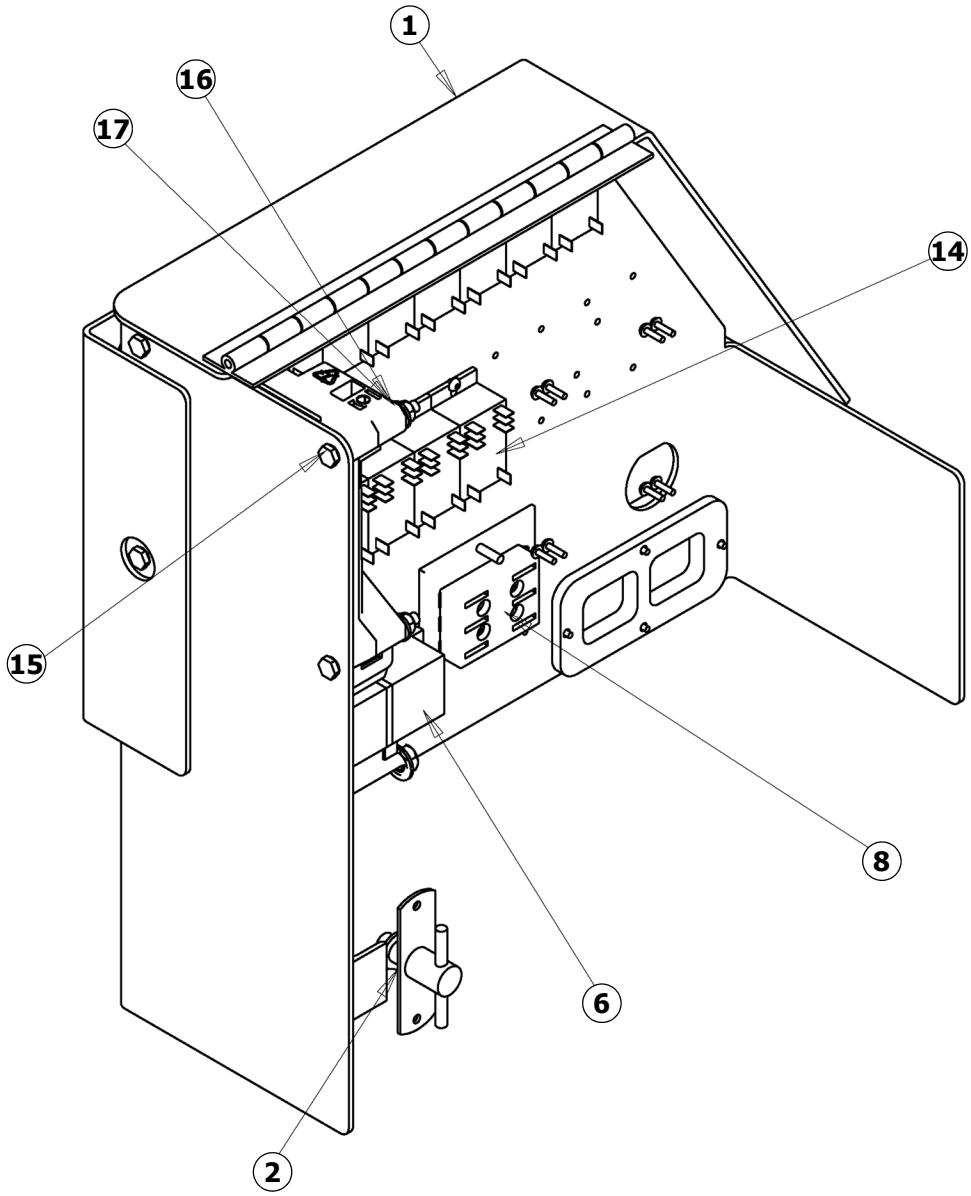
REF.	PART NO.	DESCRIPTION	REQ'D.
1	AU111708	HARNESS - Main DD-2024 Battery Frame Side Of Engine	1



FOR SERVICE USE 8ED61005

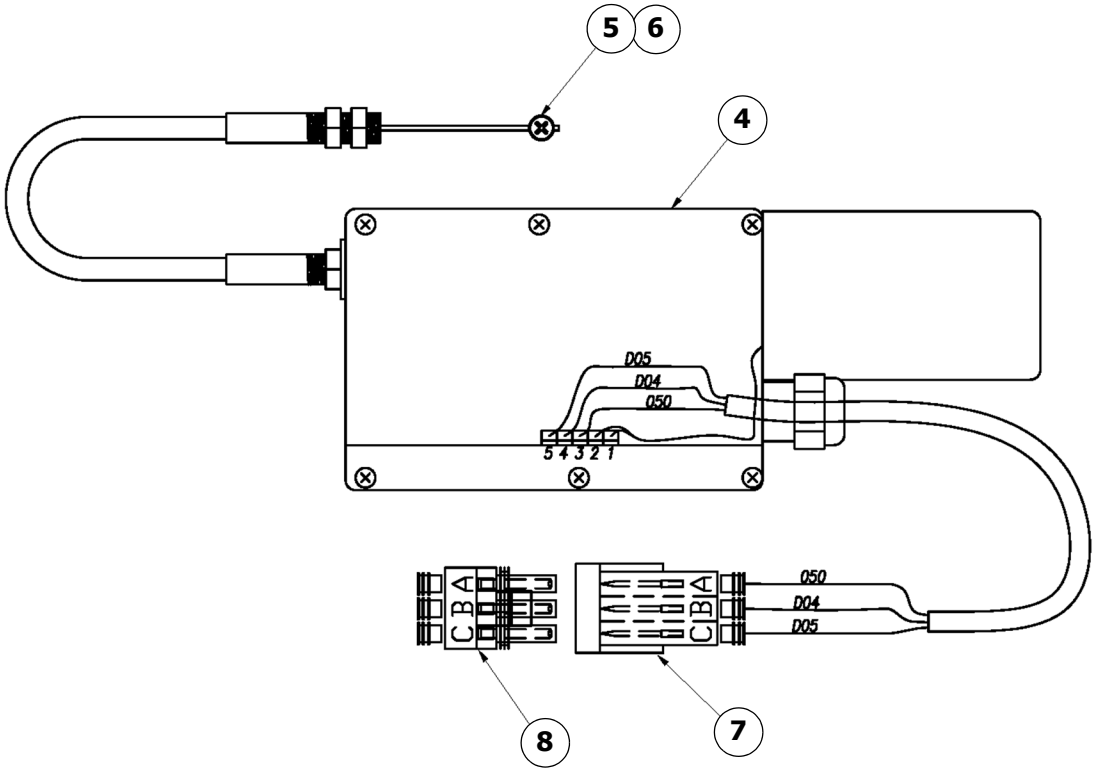
BACK BOX ELECTRICAL

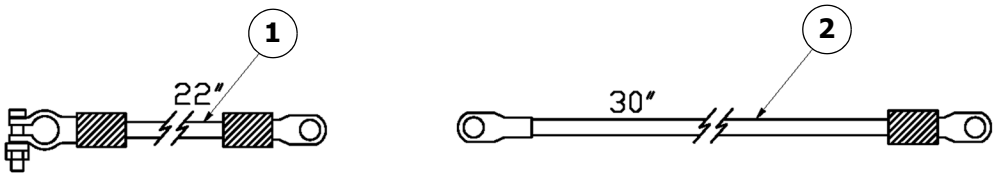
REF.	PART NO.	DESCRIPTION	REQ'D.
1	8NG10019-25	SWITCH - Ignition, Keyed	1
1A	8NG10019-25-01	KEY - for Keyswitch (comes with keyswitch)	1
2	8EO61005	SWITCH - Pushbutton, Ether	1
3	8EO72001	SWITCH - Toggle	1
4	6EC62016-01	RECEPTACLE - Male, 18-14	1
5	6EC62010-01	RECEPTACLE - Female, 18-14	1
6	AU111705	OVERLAY	1
7	12GB2311	PLATE - Mounting	1

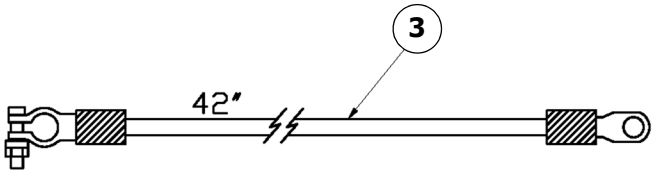

1
16
17
14
15
8
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2

MAIN RELAY PANEL

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB9712	ASSEMBLY - Relay Panel	1
1	12GB2351	BOX - Electrical	1
2	L102515	ASSEMBLY - Latch	1
3	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	3
4	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	3
5	AU110994	CONTROLLER - Module B	1
6	8EP48283	RELAY - Power, 12VDC	2
7	8EP29105	ALARM - Backup	1
8	8EF40006	FUSEHOLDER	1
9	8EF41020	FUSE - 20 Amp	3
10	8ET02001	TERM STRIP	2
11	8EO51505	RESISTOR - 5 Ohm	2
12	8EO51518	RESISTOR - 7.5 Ohm	6
13	8EO51519	RESISTOR - 12 Ohm	2
14	8EP48253	RELAY - 2 Pole	10
15	326-440	BOLT - Hex Hd .250 x 2.50 GR8 PHC	4
16	495-11028	WASHER - .281 x 0.625 x .065 in CST ZND	4
17	425-104	NUT - Hex .250 - 20 GR5 ZND	4
18	8EF41002	FUSE - 2 Amp	3
19	8EP02262	TERM STUD - 3/8" Black	1
20	8EP02263	TERM STUD - 3/8" Red	1
21	8EP51102	DIODE - 40V 9 Amp	2
22	8ET35401	TERM RING - Nylon	2
23	8EC61019	FEMALE PLUG	1
24	8EC62019	RECEPTICLE - Male	1
25	8ET65001	DISCONNECT	21
26	8ET35701	TERM RING - Nylon	12
27	8EP51101	DIODE - 400V 1 Amp	13
28	8EC61020-L	BOOT - 70 Pin Connector	2
29	8ET64003	DISCONNECT	65
30	8ET64104	DISCONNECT - Female	22
31	8ET44201	TERM FORK - Nylon	20
32	8ET69001	TERM-Y ADAPTER	22
33	8ET55003	BUTTSPLICE	6
34	8EC69009	PIN CONTACT	70
35	8ET34301	TERM RING - Nylon	2
36	8ET45401	TERM FORK - Nylon	4
37	8EC61033	PLUG - 3 Socket	1
38	8EC61033-L	SECONDARY LOCK	1
39	8EC69008	SOCKET CONTACT	3
40	7ES02206	COATING - Conform	1
41	8EC62033-J1939	RESISTOR - Terminating	2
42	8EC69010	SOCKET CONTACT	37
43	425-106	NUT - Hex .375 - 16 GR5 ZND	2
44	495-11041	WASHER - .406 x 0.812 x .065 in CST ZND	4
45	760-34313	SCREW - Pan Hd Machine	40
46	470-11016	SCREW - PHd Sltd #10 - 24 x 1.00 CST ZND	2
47	193-1004	NUT - KEPS Ext T Washer #10 - 24 UNC ZP	2


5
6
4
D05
D04
050
5 4 3 2 1
C B A
C B A
050
D04
D05
8
7

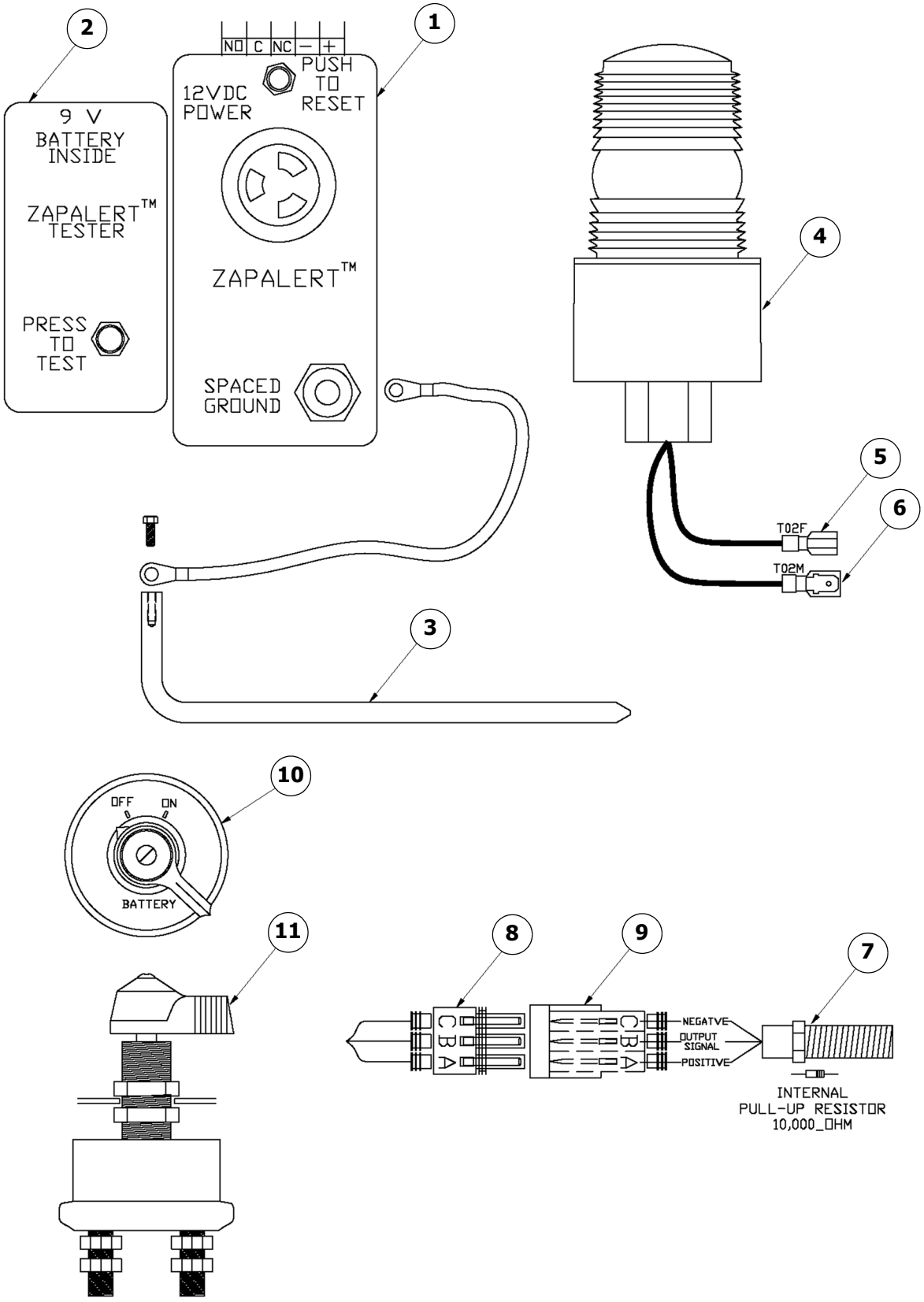

1
22"
2
30"


3
42"


9
ALTERNATOR
8NG10019-46
ALT1
10
STARTER
8NG10019-49
B+
STR1

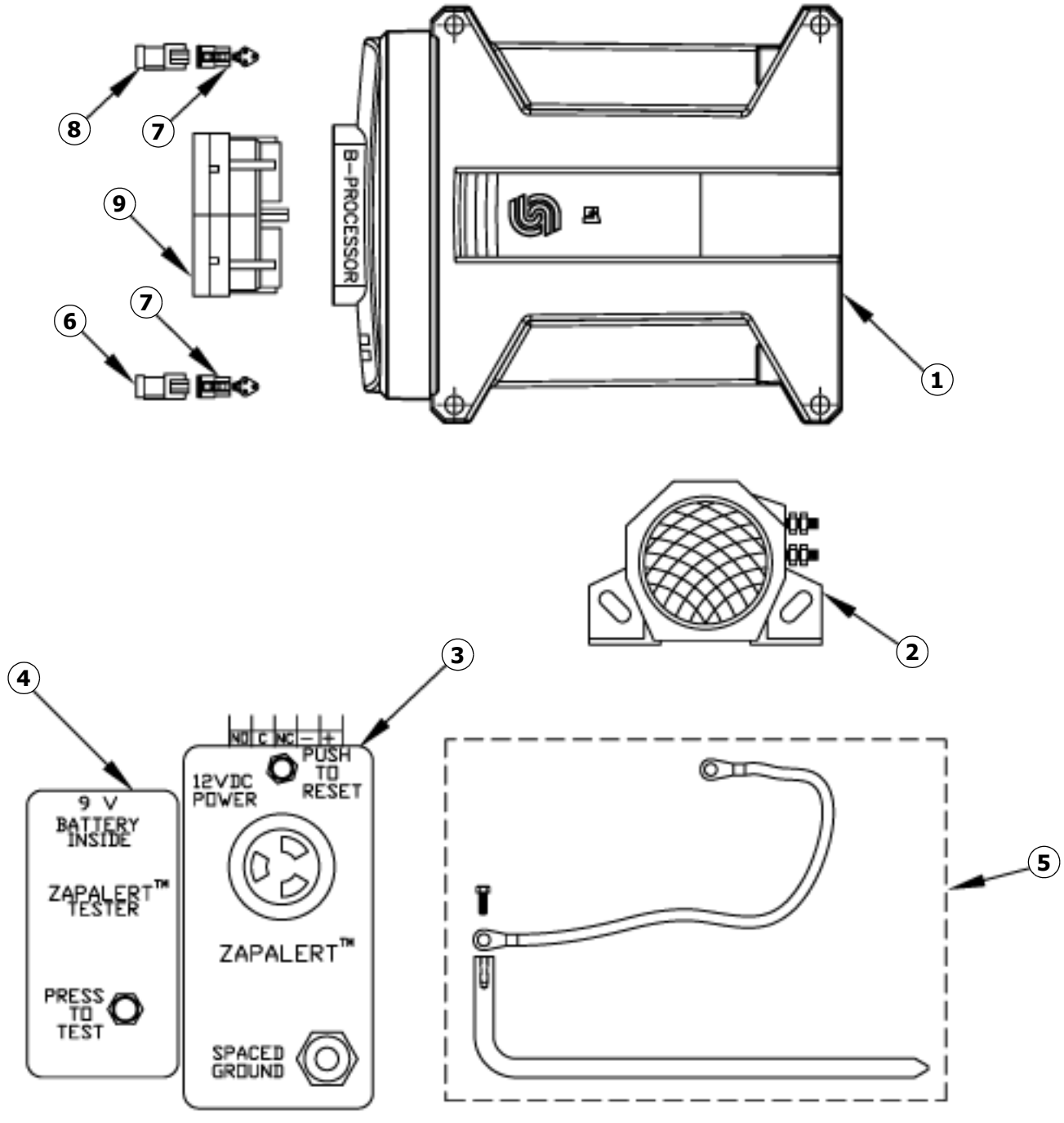
BATTERY CABLES AND THROTTLE

REF.	PART NO.	DESCRIPTION	REQ'D.
1	6EP02206-02	CABLE - Battery, Positive	1
2	8ET20005-02	CABLE - Battery, Extension	1
3	8EP02207-02	CABLE - Battery, Negative	1
4	6EE30101	ASSEMBLY - Actuator, Throttle, 12V	1
5	6EE30101-1	THROTTLE PIVOT - 1/4" Shaft	1
6	8CP10204	PIN - Cotter	1
7	6EC12114-01	CONNECTOR - 3 Pin	1
8	6EC12115-01	CONNECTOR - 3 Socket	1
9	8NG10019-46	ALTERNATOR	1
10	8NG10019-49	STARTER	1


2
1
NO C NC – +
PUSH TO RESET
12VDC POWER
9 V BATTERY INSIDE
ZAPALERT™ TESTER
PRESS TO TEST
ZAPALERT™
SPACED GROUND
4
5
6
T02F
T02M
3
10
OFF ON
BATTERY
11
8
9
7
C B A
C B A
NEGATVE
OUTPUT SIGNAL
POSITIVE
INTERNAL PULL-UP RESISTOR 10,000_OHM

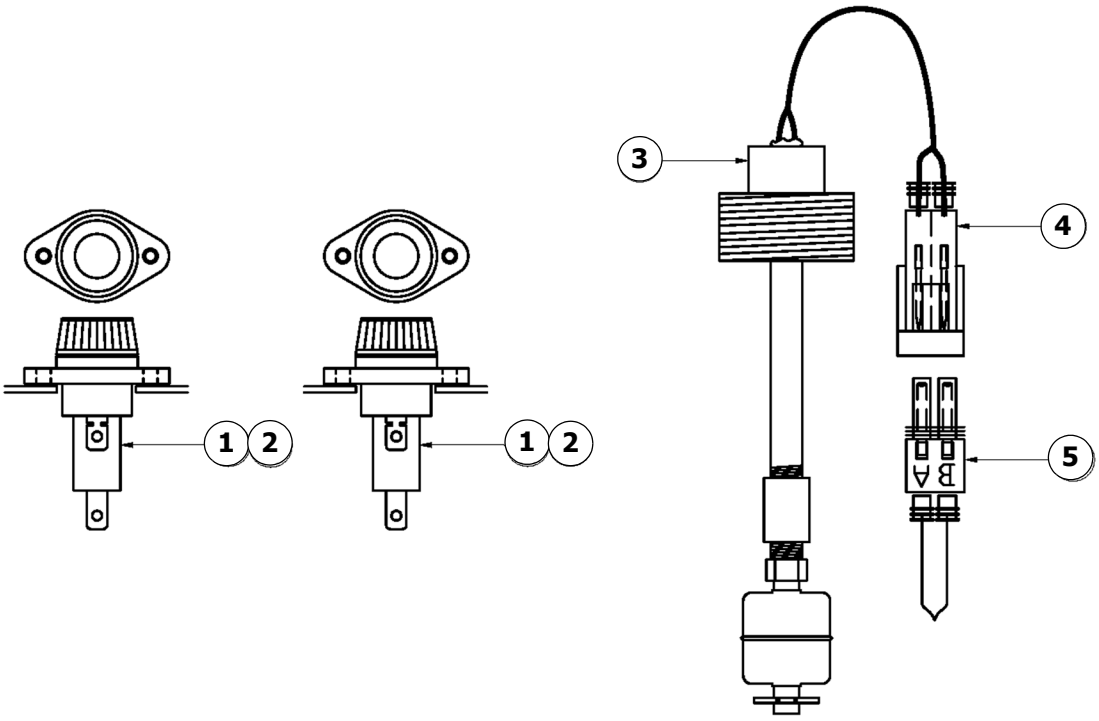
ELECTRICAL COMPONENTS

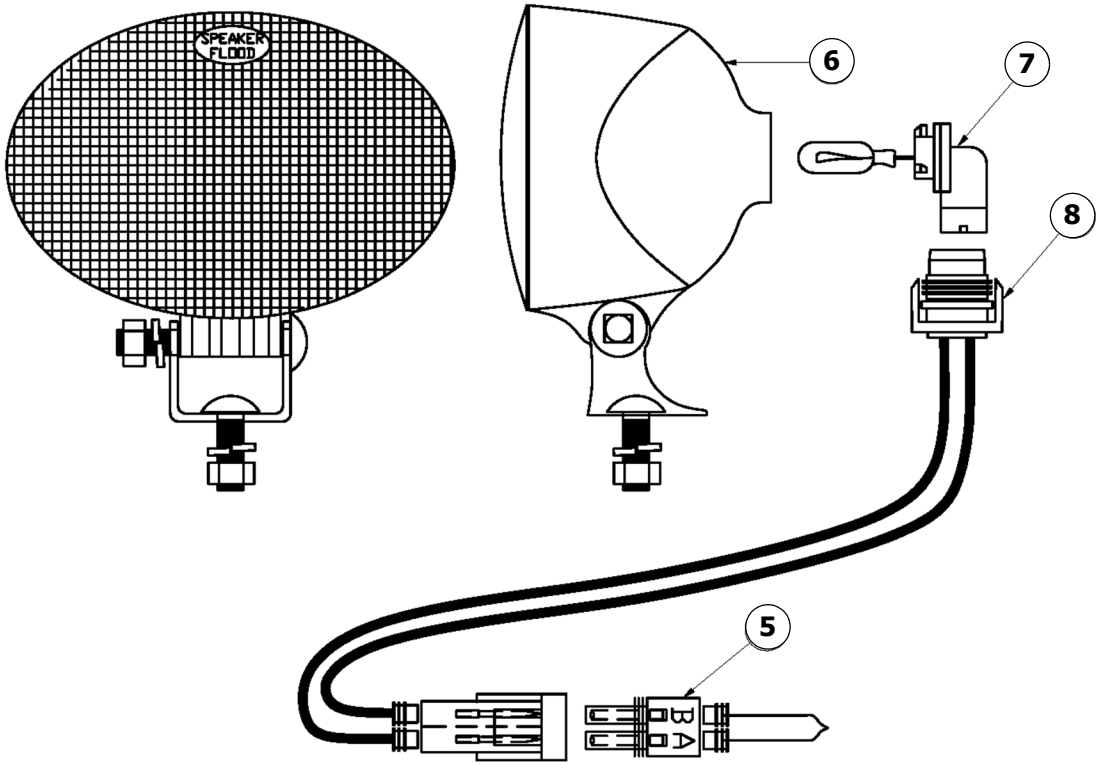
REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EE27103	ZAP ALERT	1
2	8EE27104	TESTER - Zap Alert	1
3	8EE27103-2	GROUND STAKE - Zap Alert	1
4	6EE27201-01	ASSEMBLY - Strobe (small)	1
5	8ET64003	QUICK CONNECT - Female	1
6	8ET64102	QUICK CONNECT - Male	1
7	8HM24049-02	SPEED PICKUP - for 8HM24053 Mud Pump	1
8	6EC12115-01	CONNECTOR - 3 Socket	1
9	6EC12114-01	CONNECTOR - 3 Pin	1
10	8EP02902	FACEPLATE - for 8EP02901	1
11	8EP02901	SWITCH - Battery Disconnect	1


8
7
9
7
6
B-PROCESSOR
1
2
4
3
NO C NC – +
9 V
BATTERY
INSIDE
ZAPALERT™
TESTER
PRESS
TO
TEST
12VDC
POWER
PUSH
TO
RESET
ZAPALERT™
SPACED
GROUND
5

ADDITIONAL ELECTRICAL COMPONENTS

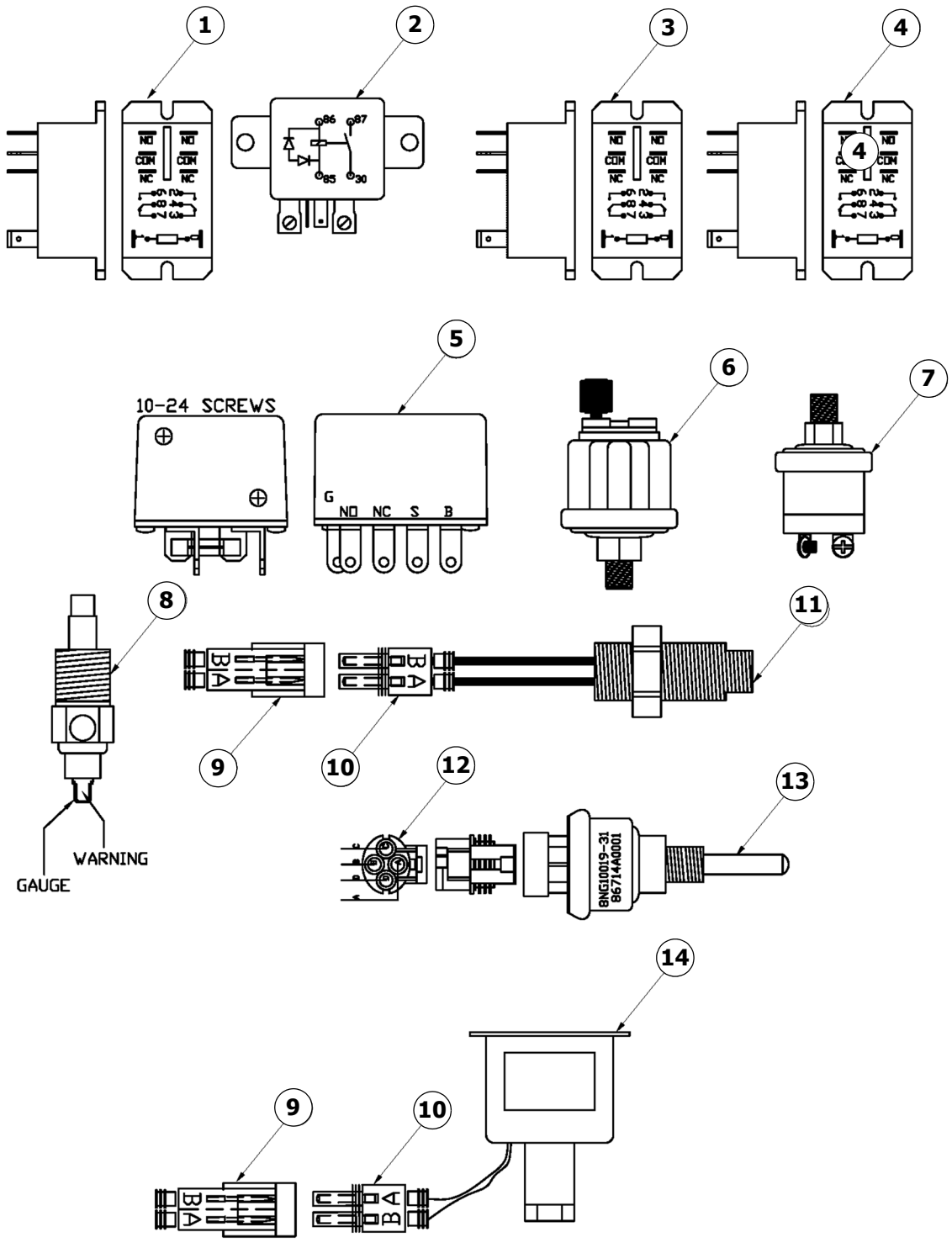
REF.	PART NO.	DESCRIPTION	REQ'D.
1	AU103217	CONTROL MODULE - A and B	2
2	8EP29105	TRAVEL ALARM	1
3	8EE27103	ZAP ALERT	1
4	8EE27104	ZAP ALERT TESTER	1
5	8EE27103-2	STAKE - Ground with Cable and Ends	1
6	8EC62033-J1939	TERMINATING RESISTOR - 120 OHM	1
7	6EC61033-01	PLUG ASSEMBLY	2
8	8EC62033-J1939	TERMINATING RESISTOR - 120 OHM	1
9	6EC61023-01	PLUG ASSEMBLY	1


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2
1
2
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4
5
B
A


SPEAKER
FLOOD
6
7
8
5
B
A

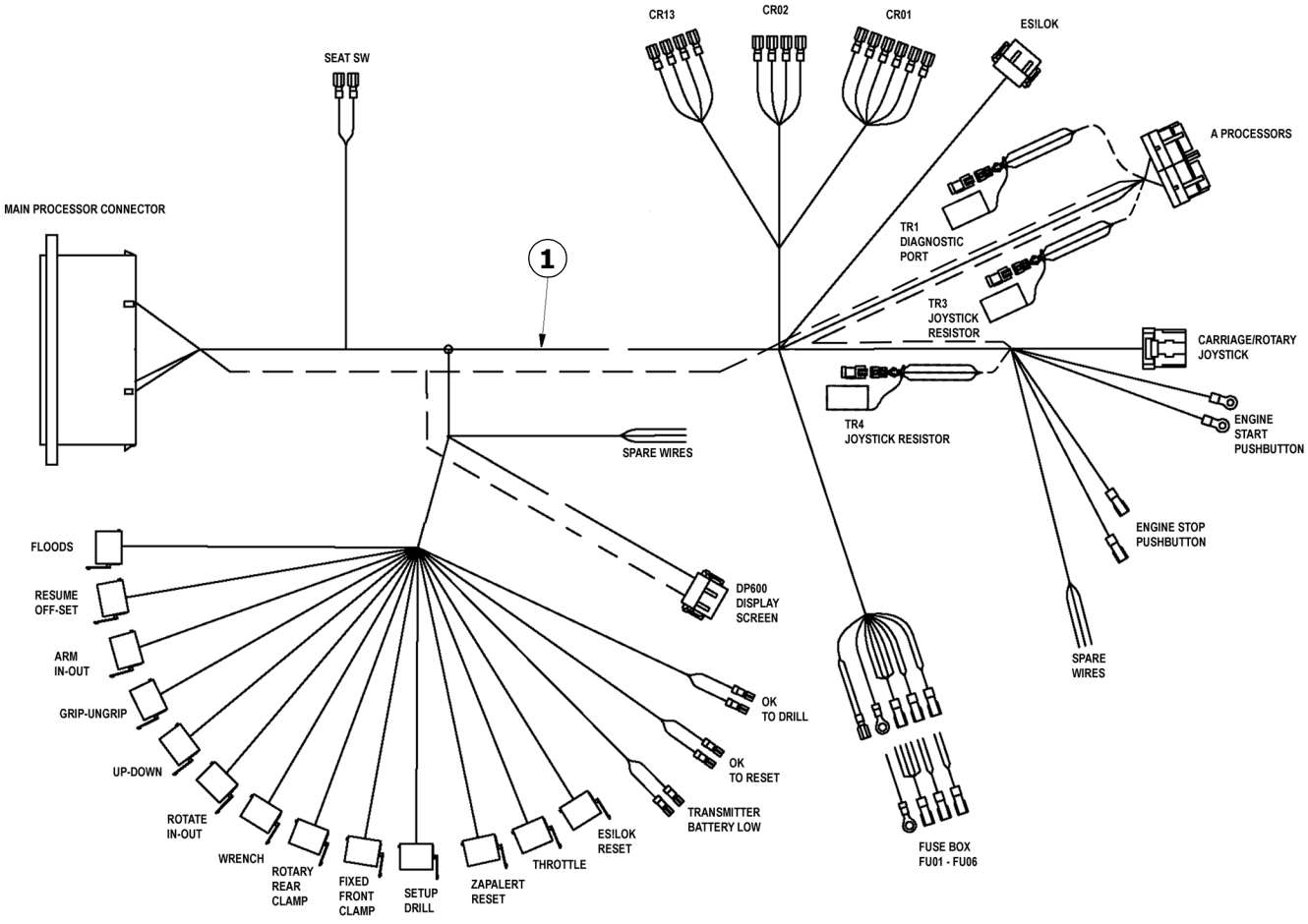
ADDITIONAL ELECTRICAL COMPONENTS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EF19002	FUSEHOLDER - 30 Amp	2
2	8EF10103	FUSE - 30 Amp	2
3	6EP59006	SWITCH ASSEMBLY - Float	1
4	6EC12102-01	CONNECTOR ASSEMBLY - 2 Pin	1
5	6EC12103-01	CONNECTOR ASSEMBLY - 2 Socket	1
6	6EP02720	FLOOD LIGHT ASSEMBLY	2
7	8EP02020-1	BULB - 886	2
8	8EP02720-2	PIGTAIL	2


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4
NO
COM
NC
86
87
85
30
5
10-24 SCREWS
G
NO NC S B
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10
12
13
BNG10019-31
867144A0001
WARNING
GAUGE
14
9
10
B
A

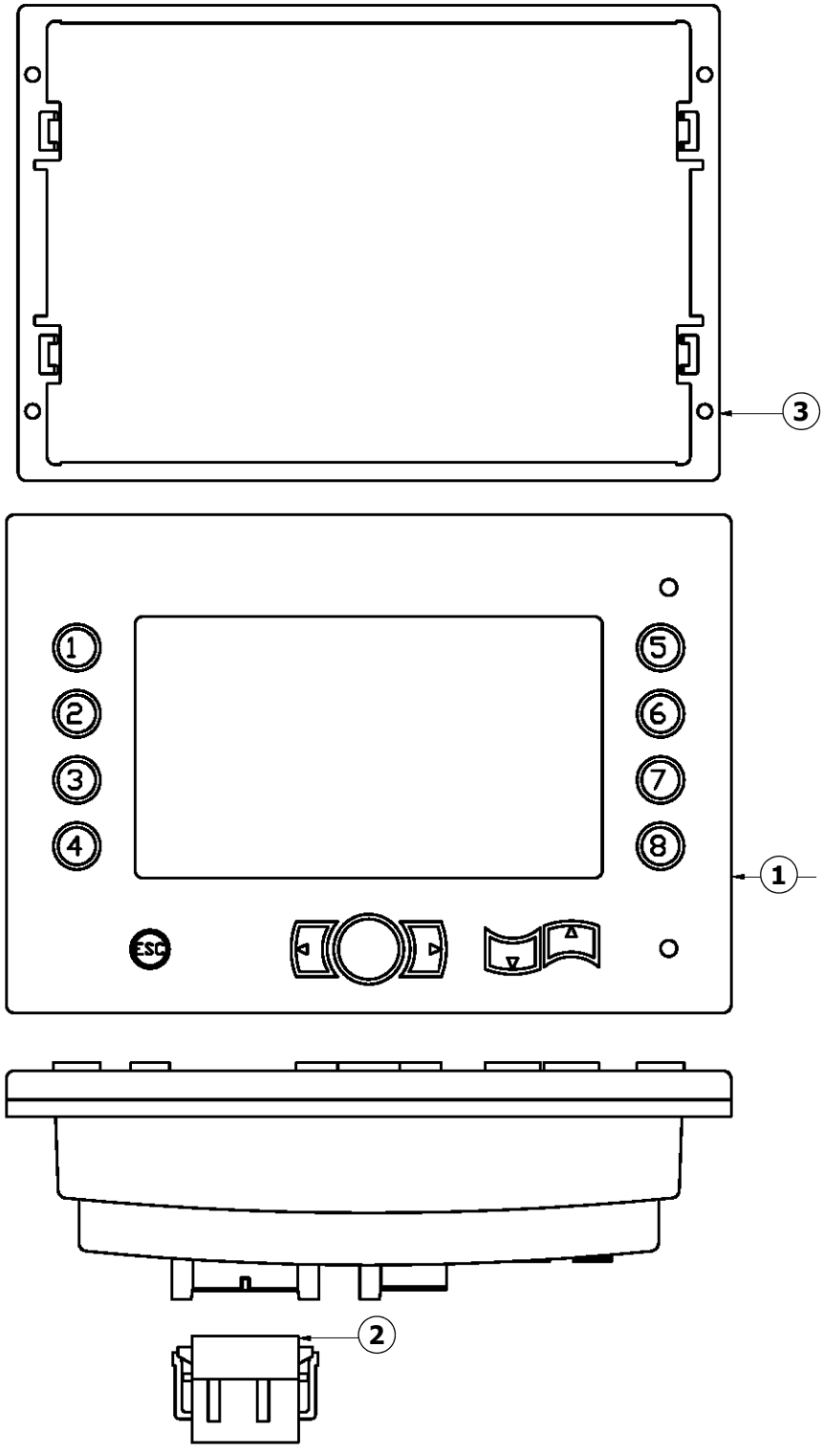
ADDITIONAL ELECTRICAL COMPONENTS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EP48253	CONTROL RELAY	1
2	8EP48283	CONTROL RELAY	1
3	8EP48253	CONTROL RELAY	1
4	8EP48253	CONTROL RELAY	1
5	8NG10019-35	RELAY - Engine Control	1
6	8NG10019-27	SENSOR - Oil Pressure	1
7	8NG10019-28	SENSOR - Oil Pressure Switch	1
8	8NG10019-29	SENSOR - Coolant Temperature	1
9	6EC12102-01	CONNECTOR - 2 Pin	2
10	6EC12103-01	CONNECTOR - 2 Socket	2
11	8NG10019-30	SENSOR - RPM, Magnetic Pickup	1
12	6EC92207-01	CONNECTOR ASSEMBLY	1
13	8NG10019-31	SENSOR - Coolant Level Switch	1
14	6EE06001	ASSEMBLY - Ether Start Kit	1


CR13
CR02
CR01
ESILOK
SEAT SW
A PROCESSORS
MAIN PROCESSOR CONNECTOR
1
TR1
DIAGNOSTIC
PORT
TR3
JOYSTICK
RESISTOR
CARRIAGE/ROTARY
JOYSTICK
TR4
JOYSTICK RESISTOR
ENGINE
START
PUSHBUTTON
SPARE WIRES
ENGINE STOP
PUSHBUTTON
FLOODS
RESUME
OFF-SET
ARM
IN-OUT
GRIP-UNGRIP
UP-DOWN
ROTATE
IN-OUT
WRENCH
ROTARY
REAR
CLAMP
FIXED
FRONT
CLAMP
SETUP
DRILL
ZAPALERT
RESET
THROTTLE
ESILOK
RESET
TRANSMITTER
BATTERY LOW
OK
TO RESET
OK
TO DRILL
DP600
DISPLAY
SCREEN
SPARE
WIRES
FUSE BOX
FU01 - FU06

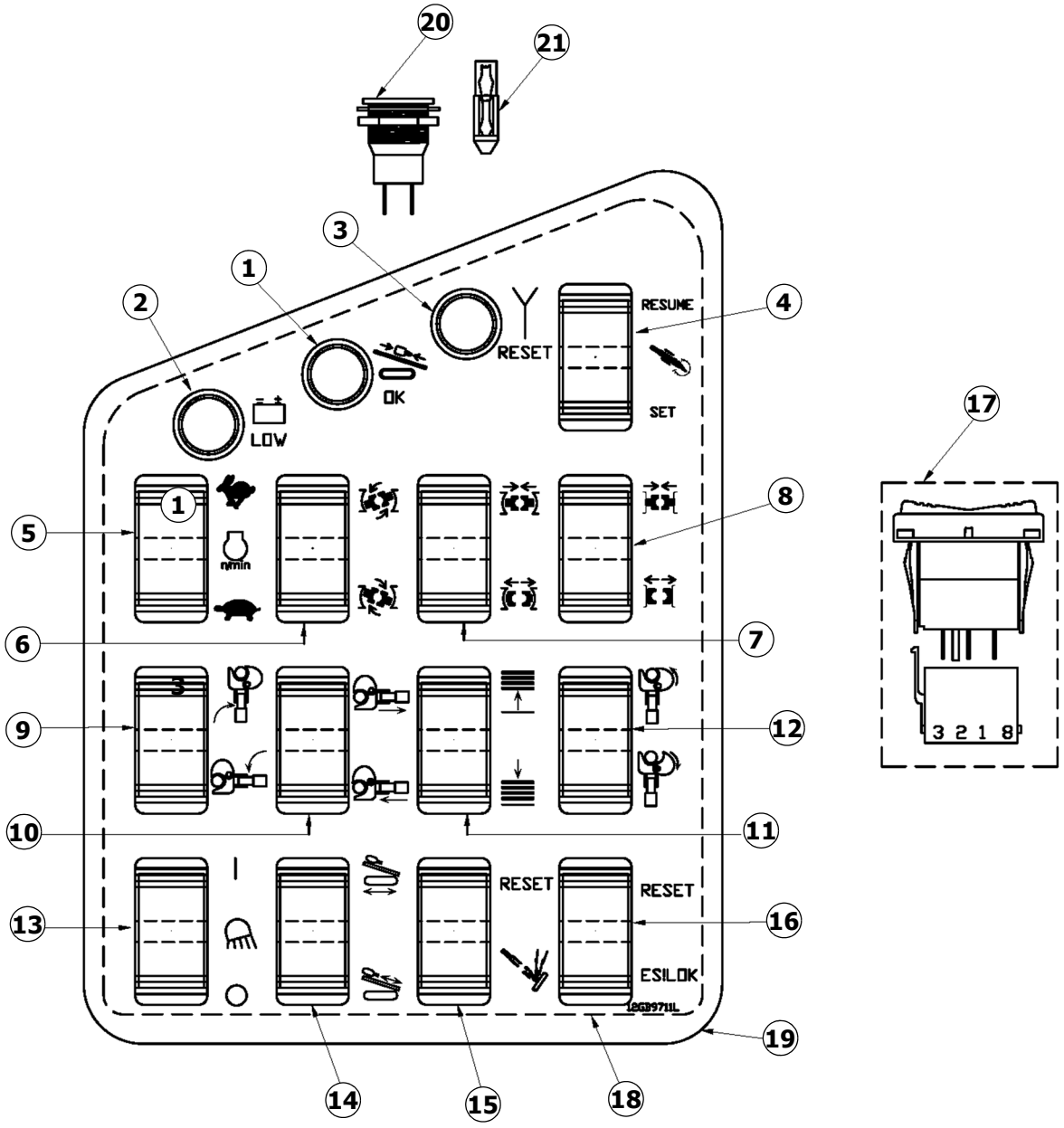
SEAT HARNESS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	AU111496	HARNESS - Seat	1


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ESC

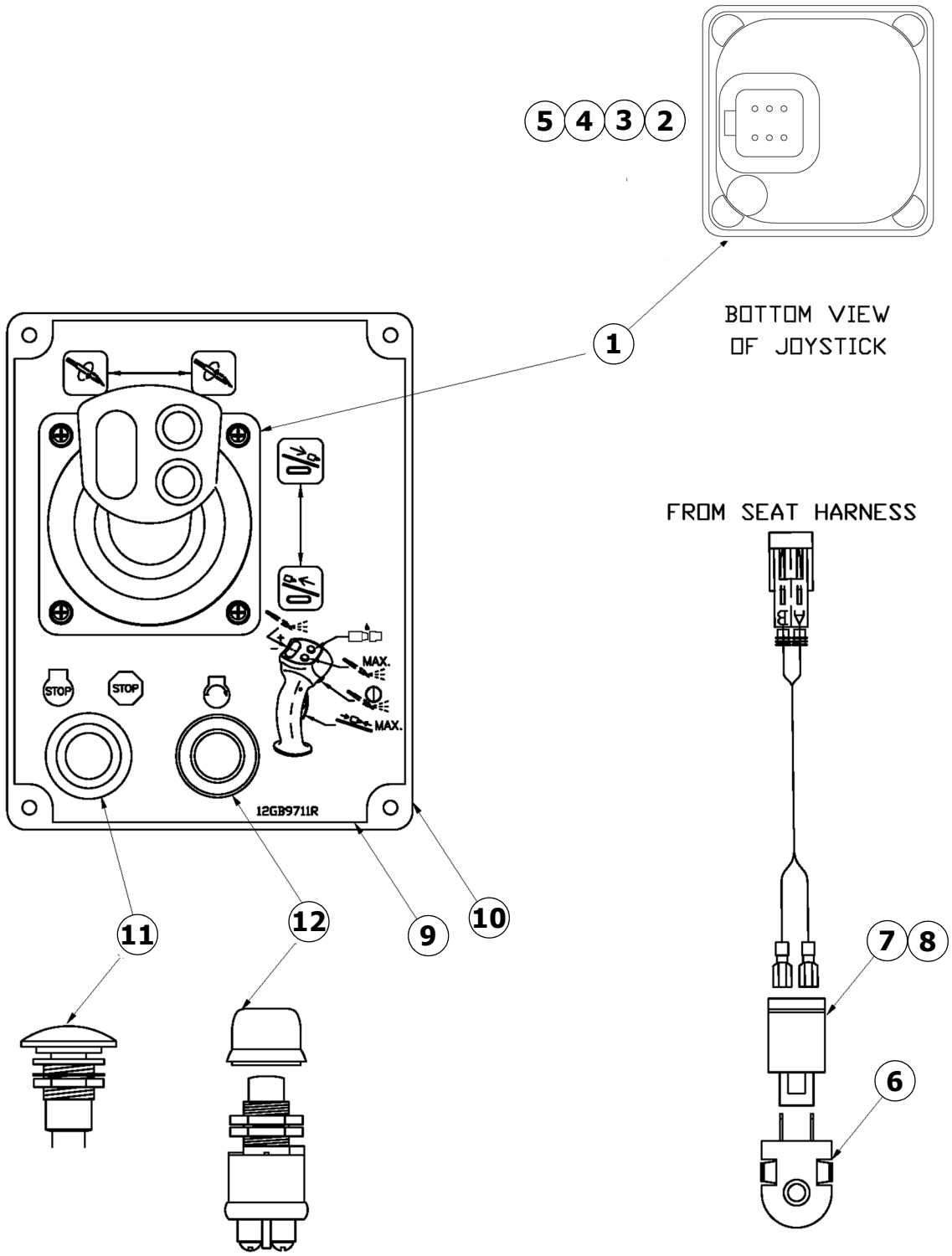
OPERATORS DISPLAY

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EA23002-B	DISPLAY MODULE	1
2	8EC61052-01	PLUG - Female, 12 Socket	1
3	8EA23002-1	MOUNTING HARDWARE	1


20
21
3
1
2
RESET
RESUME
4
OK
SET
LOW
17
1
5
8
6
7
3
9
12
10
11
RESET
RESET
13
16
ESILOK
19
14
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18
3 2 1 8

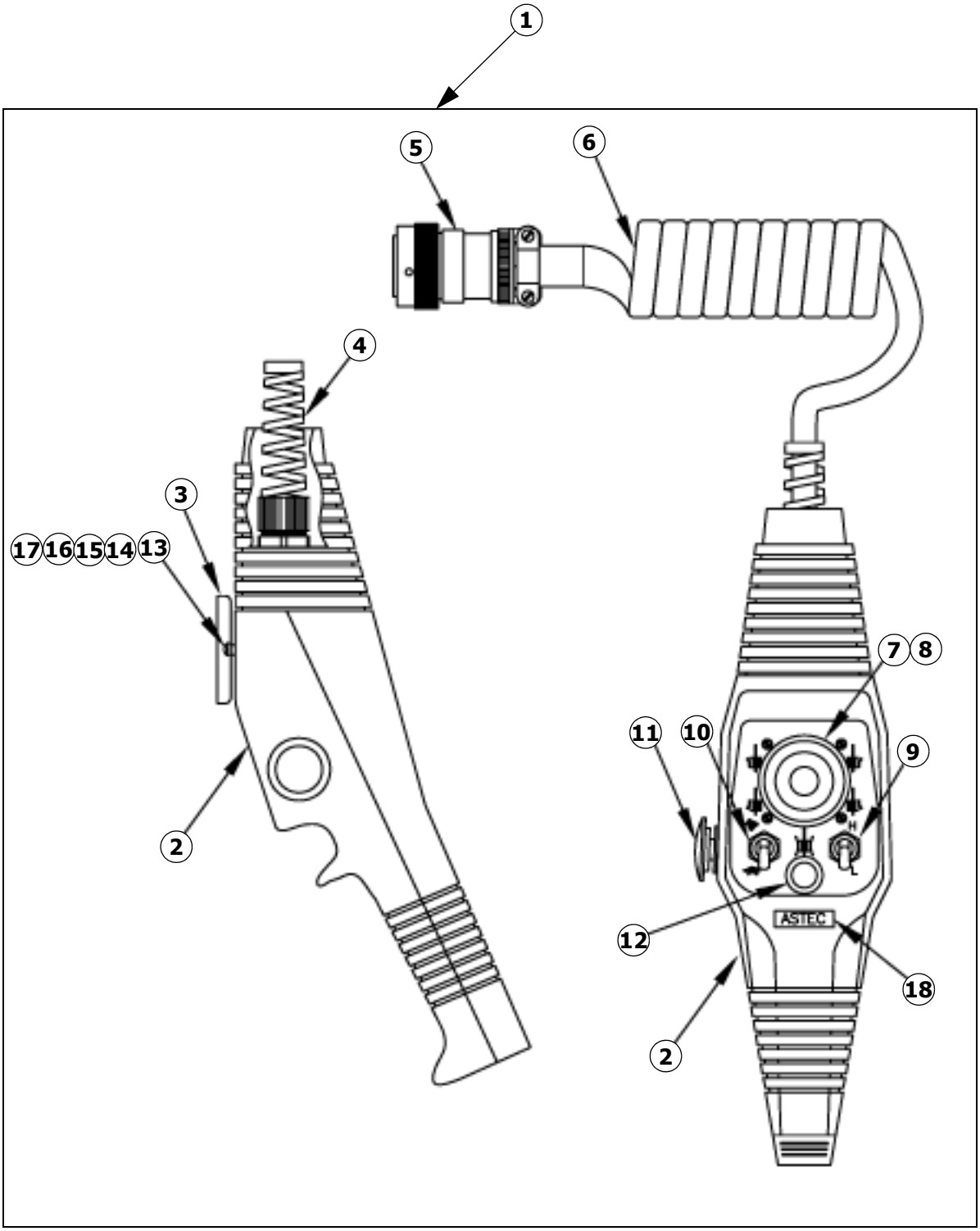
OPERATORS SWITCH PANEL

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EO21403	LENS - Green	1
2	8EO21402	LENS - Red	1
3	8EO21406	LENS - Amber	1
4	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
5	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
6	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
7	8EO73204DP	SWITCH - Rocker, ON - OFF - (ON)	1
8	8EO73204DP	SWITCH - Rocker, ON - OFF - (ON)	1
9	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
10	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
11	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
12	8EO73206DP	SWITCH - Rocker, (ON) - OFF - (ON)	1
13	8EO73201DP	SWITCH - Rocker, ON - OFF, 2 Pole	1
14	8EO73201DP	SWITCH - Rocker, ON - OFF, 2 Pole	1
15	8EO73207	SWITCH - Rocker, ON - (OFF)	1
16	8EO73208	SWITCH - Rocker, (ON) - OFF	1
17	8EO73901-01	CONNECTOR ASSEMBLY - Rocker Switch Kit	13
18	12GB9711	OVERLAY - 32GB9711L	1
19	AU108630	PLATE - Cover, Left Console	1
20	8EO21401	ASSEMBLY - Socket	3
21	8EO91101	BULB	3


5 4 3 2
BOTTOM VIEW
OF JOYSTICK
1
FROM SEAT HARNESS
STOP
STOP
MAX.
MAX.
12GB9711R
11
12
9
10
7 8
6

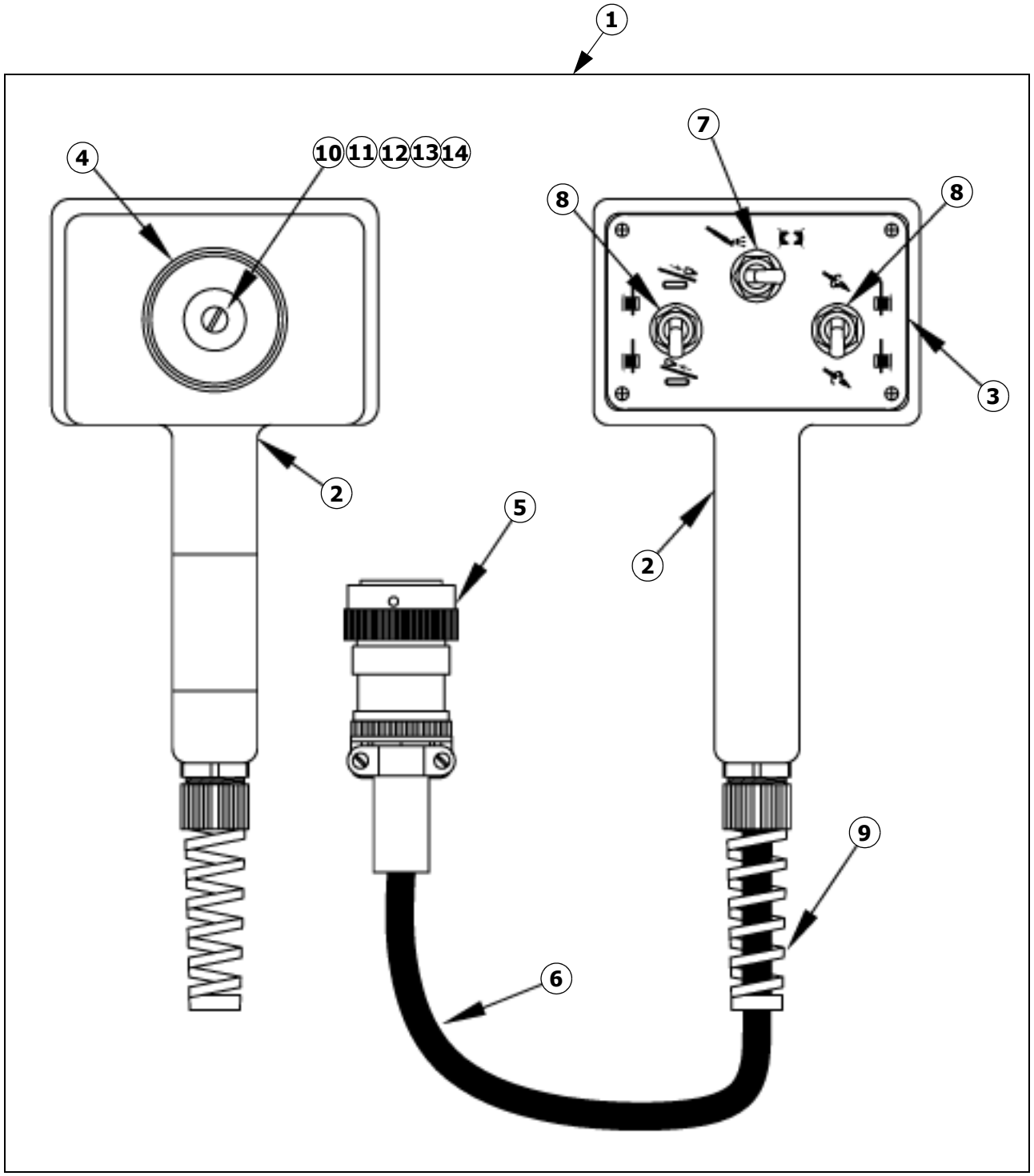
OPERATORS CONTROL PANEL

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EP47613	JOYSTICK - Carriage/Rotary	1
2	21001069	CONNECTOR - 6 Pin	1
3	70-W6S	WEDGE - Locking	1
4	8EC69118	SEALING PLUG - 20 AWG, Deutsch	1
5	8EC69012	SOC CONTACT - 20 AWG, Deutsch	5
6	8EP47010-01	SWITCH - Seat	1
7	8EP47010-01-A	HOUSING - Connector	1
8	8EP47010-01-B	CONTACTS - Socket	1
9	12GB9711	OVERLAY - 12GB9711R	1
10	AU108631	PLATE - Mounting	1
11	8EP46103	ENGINE STOP - Push/Pull	1
12	8EO61005	ENGINE START - Pushbutton	1


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ASTEC
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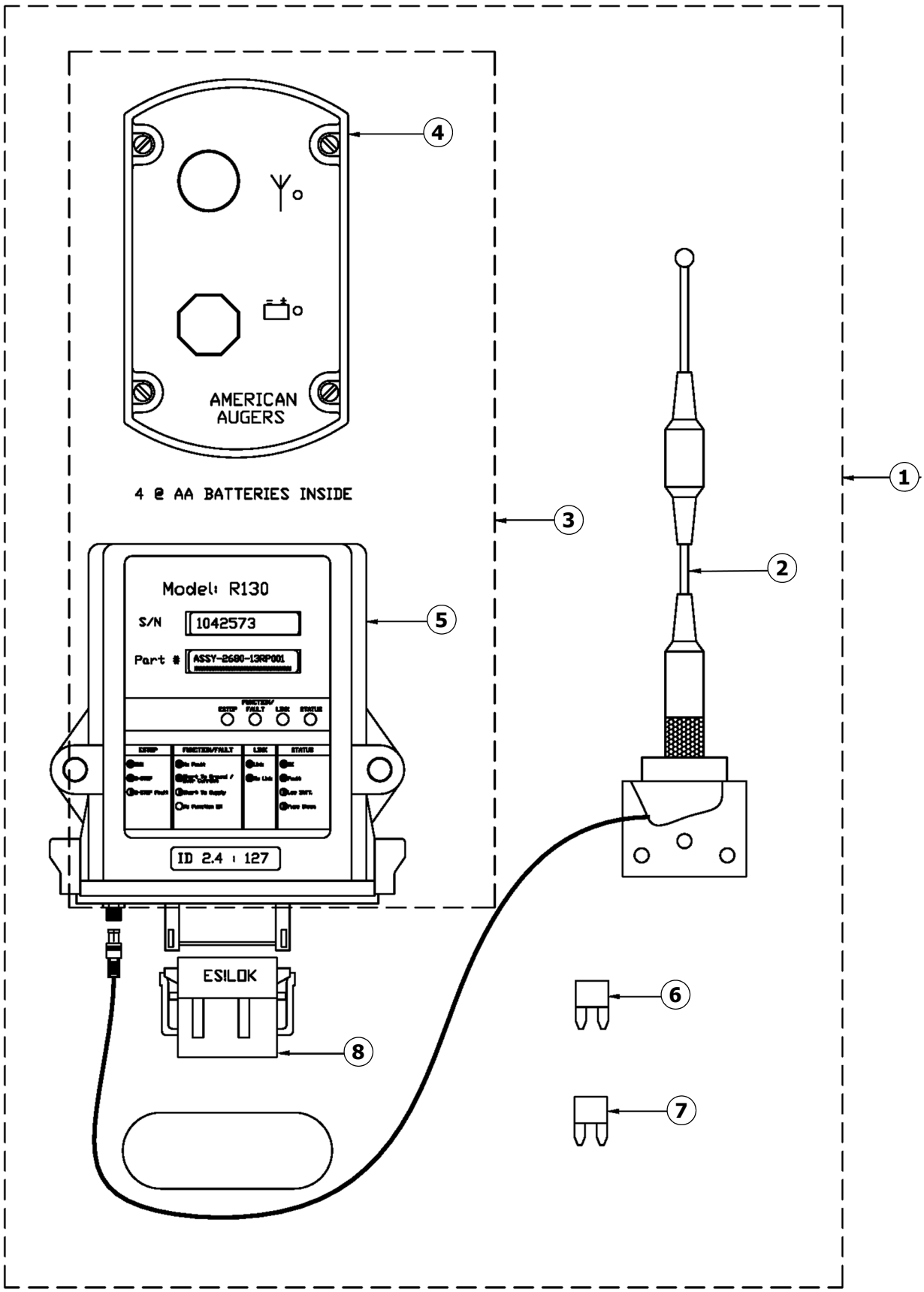
TRAVEL PENDANT

REF.	PART NO.	DESCRIPTION	REQ'D.
1	32GB9810	ASSEMBLY - Travel Pendant	1
2	6EN83101	HOUSING - Pendant	1
3	8EH12002	MAGNET - Ceramic, 2.03 Diameter x .312 H	1
4	8EP19301	CORD GRIP - with Spiral, .39-.55, Black	1
5	8EC61010-01	PLUG - Male, with Clamp, 18-14	1
6	8EC81305	CORD - Control, Retract 24 inch/10Foot	1
7	8EP47612	JOYSTICK - Travel	1
8	8EP47612-1	CONNECTOR - 8 Way, with 15.75 inch Leads	1
9	8EP46142	SWITCH - Toggle, Mini, Off-None-On	1
10	8EP46141	SWITCH - Toggle, Mini, (On)-Off-(On)	1
11	8EP46101A	PUSHBUTTON, Red Mushroom, Momentary	1
12	8EP46111	PUSHBUTTON, Raised, Normally Open	1
13	8HN32004	NUT - Hex, #10-32, 303 Stainless Steel	1
14	8FW31004	WASHER - Flat, #10, 303 Stainless Steel	1
15	8FW01203	WASHER - Flat, 1/4 inch Stainless Steel	1
16	8LW60096	WASHER - Lock, Split Type, No. 10	1
17	8MS32406	SCREW - Machine, Slotted Pan Head	1
18	32GB9811-2	OVERLAY - 32GB9810 - Astec Logo	1


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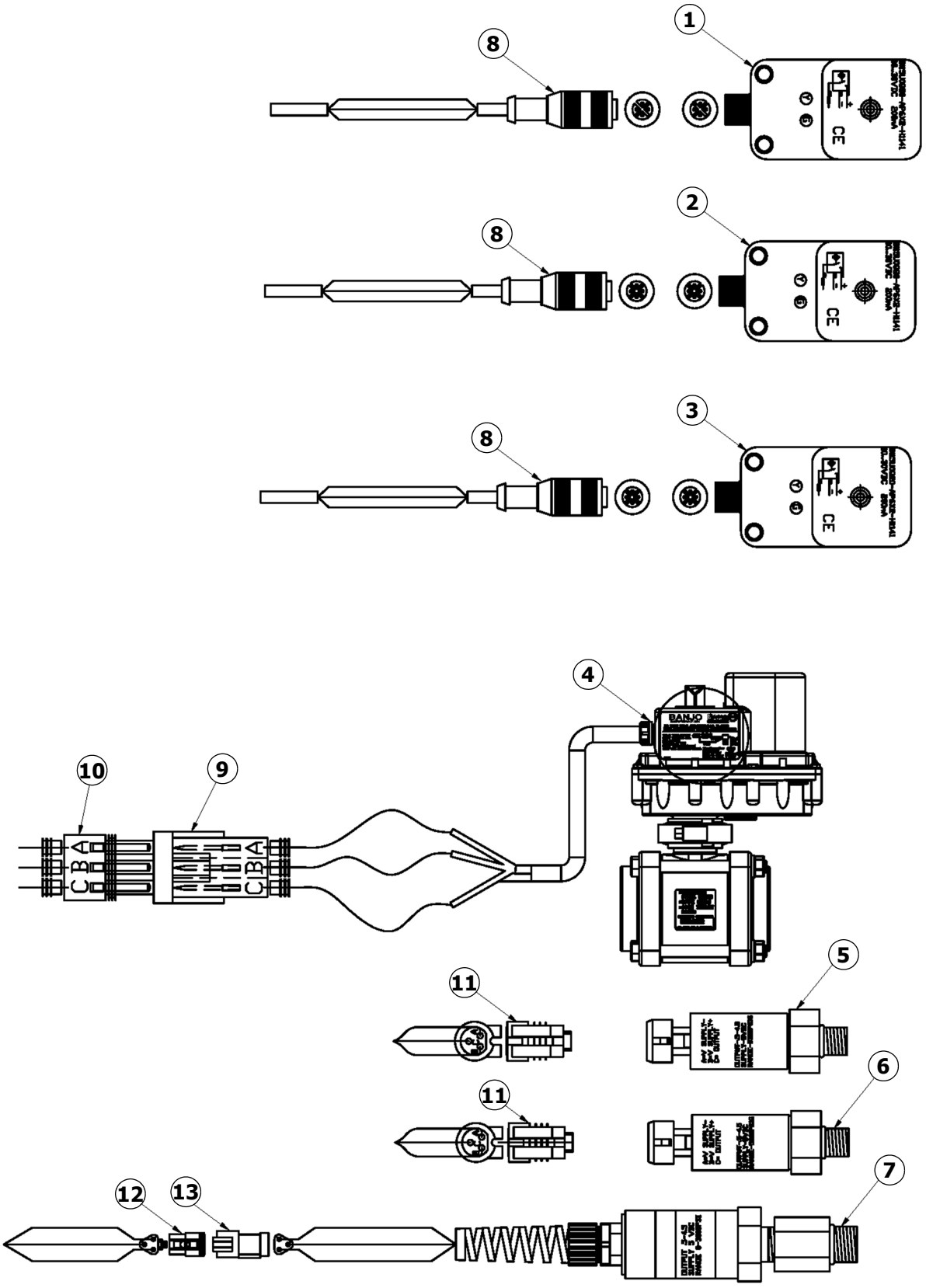
LIFE JACKET DEVICE

REF.	PART NO.	DESCRIPTION	REQ'D.
1	32GB9820	ASSEMBLY - Life Jacket Device	1
2	8EN83005	ENCLOSURE - Pendant, 8 x 5 x 4 Nom	1
3	32GB9821-1	PLATE - Mounting, Life Jacket	1
4	8EH12002	MAGNET - Ceramic, 2.03 Diameter x .312 H	1
5	8EC61016-01	PLUG - Female, with Clamp, 18-14	1
6	7EC23108	CABLE - Type SDN, 18/10, 6 Feet	1
7	8EO72003	SWITCH - Toggle, SPDT, On-Off-On, Seal	1
8	8EO72004	SWITCH - Toggle, SPDT, (On)-Off-(On), Seal	2
9	8EP19321	CORD GRIP - With Spiral, .24-.47, Black	1
10	8HN32004	NUT - Hex, #10-32, 303 Stainless Steel	1
11	8FW31004	WASHER - Flat, #10, 303 Stainless Steel	1
12	8FW01203	WASHER - Flat, 1/4 inch Stainless Steel	1
13	8LW60096	WASHER - Lock, Split Type, No. 10	1
14	8MS32406	SCREW - Machine, Slotted Pan Head	1


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AMERICAN
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eS!LOK™

REF.	PART NO.	DESCRIPTION	REQ'D.
1	6ER20002	EXIT SIDE LOCKOUT SYSTEM	1
2	8ER20006	ANTENNA	1
3	8ER20000	EXIT SIDE LOCKOUT - T50+R130	1
4	8ER20002	TRANSMITTER	1
5	8ER20003	RECEIVER	1
6	A149799	FUSE - 7.5 Amp	1
7	A149800	FUSE - 10 Amp	1
8	8EC61052-02	PLUG - Female, 12 Socket	1

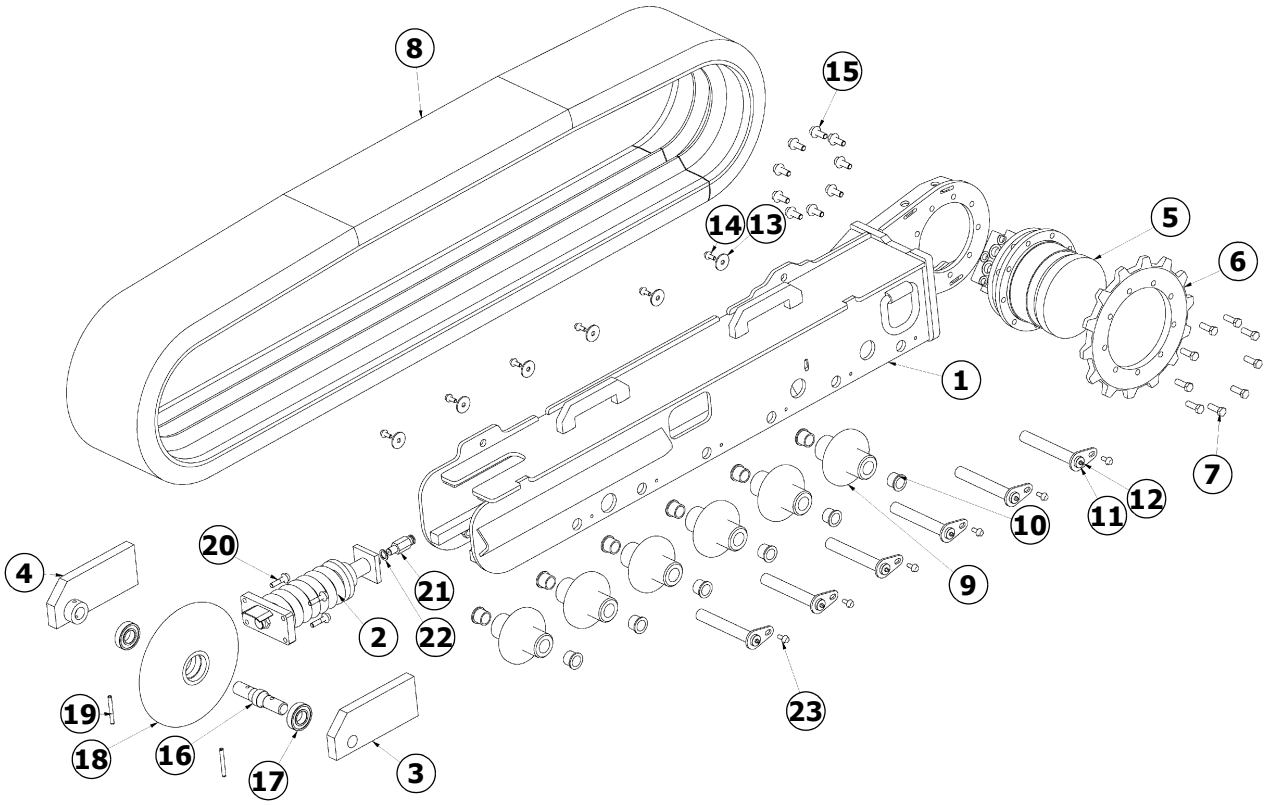

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TRANSDUCERS / PROXIMITY SWITCHES

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8EP65159	SWITCH - Pipe Loader Arm Limit	1
2	8EP65159	SWITCH - Carriage Limit	1
3	8EP65159	SWITCH - Pipe Loader Cam Limit	1
4	6HV29033	VALVE ASSEMBLY - with Connector Assembly	1
5	8EP78222	TRANSDUCER - 3300 PSI, 7/16 - 20 SAE	1
6	8EP78221	TRANSDUCER - 5300 PSI, 7/16 - 20 SAE	1
7	8EP78223	TRANSDUCER - 3000 PSI, 9/16 - 18 SAE	1
8	8EP65154-1A	CORD SET - 4 Pin	3
9	8EC12114-01	CONNECTOR ASSEMBLY	1
10	6EC12115-01	CONNECTOR ASSEMBLY - 3 Socket	1
11	6EC92131-01	PLUG ASSEMBLY - 8EP78221 and 8EP78222 Transducers	2
12	6EC61033-02	PLUG ASSEMBLY - 8EP78223 Transducer	1
13	6EC62033-02	RECEPTACLE ASSEMBLY - 3 Pin	1

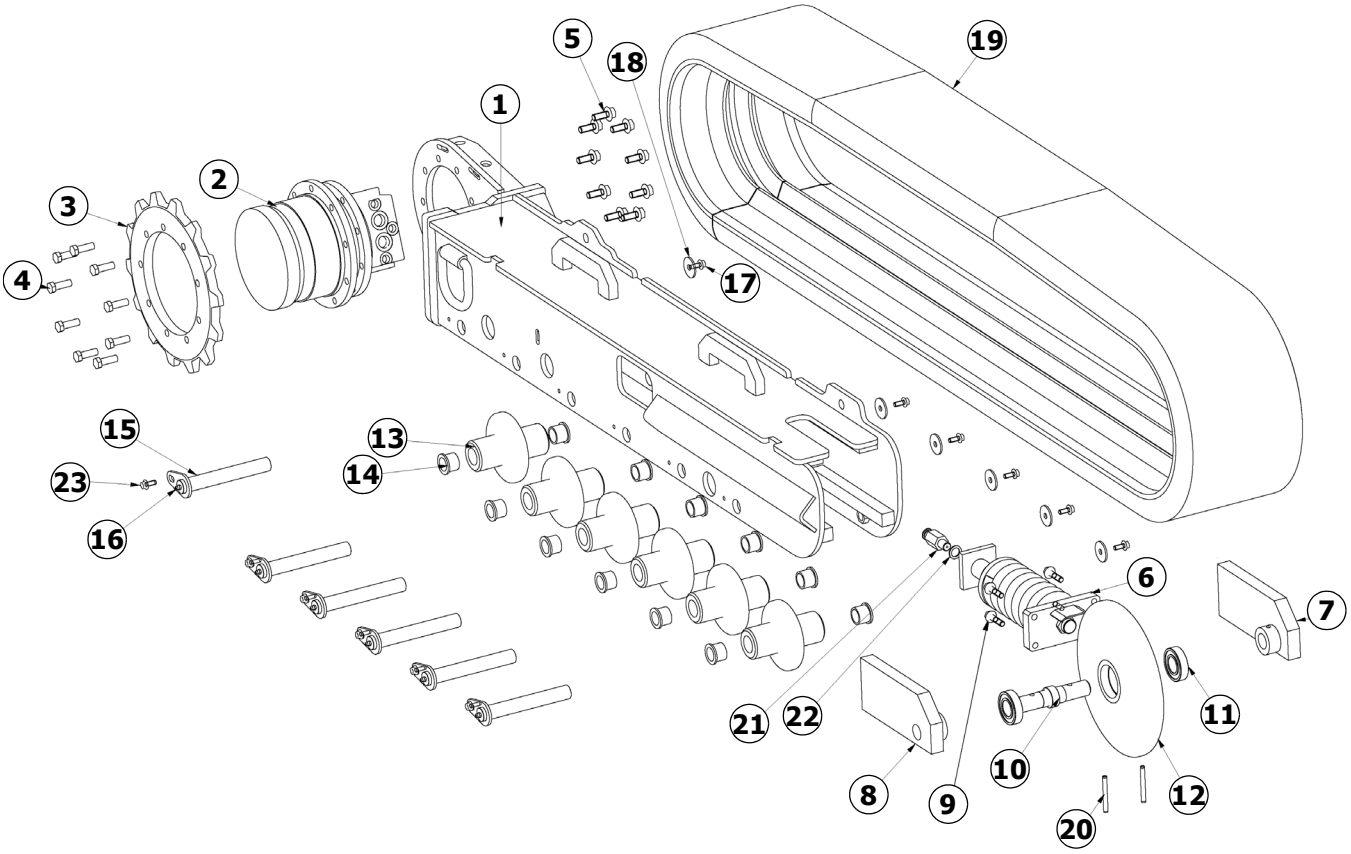
ALPHABETICAL INDEX
TRACKS

DESCRIPTION	PAGE	DESCRIPTION	PAGE
T			
Track Assembly LH	5-5		
Track Assembly RH	5-3		
U			
Undercarriage Assembly	5-7		


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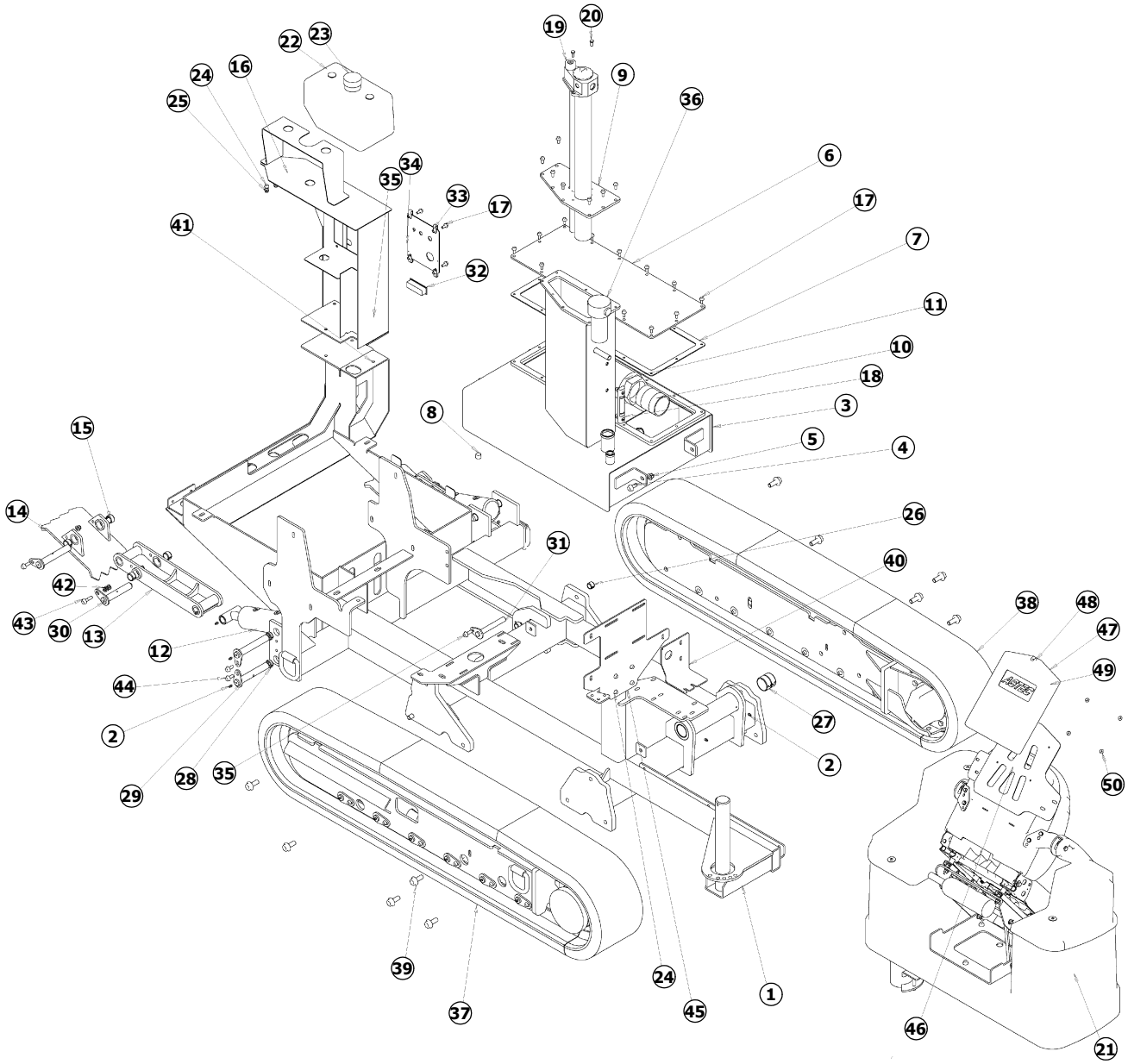
TRACK ASSEMBLY RH

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109342	ASSEMBLY - Track RH	1
1	AU108605	WELDMENT - Track, RH	1
2	12GB2412	TENSIONER - Spring / Grease	1
3	12GB2476	BRACKET - Idler, Right	1
4	12GB2477	BRACKET - Idler, Left	1
5	8GB85014	WHEEL MOTOR	1
6	12GB2424	SPROCKET DRIVE	1
7	614-12035	BOLT - Thd to Hd M12 x 35 CL8.8 ZND	9
8	12GB2411	TRACK - Rubber	1
9	12GB2459	ROLLER - Track	6
10	8CF90016	BEARING - Plain, 1" ID, Flanged	12
11	AU111968	PIN - Flag, Track Assy	6
12	219-8	FITTING - Lube, 1/4 - 28 TPR SAE-LT .54 Lg	6
13	495-81143	WASHER - .406 x 1.50 x .119 in CST ZND	6
14	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	6
15	AU101477	SCREW, METRIC FLANGE w/BODY - M12 x 30	9
16	12GB2461	SHAFT - Idler, Track	1
17	8CF40021	BEARING - Ball	2
18	12GB2460	WHEEL - Idler Track	1
19	38-12044	PIN - Slt Spring .312 x 2.75 in Pln	2
20	AU100331	SCREW, METRIC FLANGE w/BODY - M10 x 40	4
21	30-807L-1060	FITTING - Grease, Adjuster	1
22	30-807L-1059	GASKET - Berco (AT 35)	1
23	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 20	6


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TRACK ASSEMBLY LH

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109343	ASSEMBLY - Track, LH	1
1	AU108604	WELDMENT - Track, LH	1
2	8GB85014	WHEEL MOTOR	1
3	12GB2424	SPROCKET DRIVE	1
4	614-12035	BOLT - Thd to Hd M12 x 35 CL8.8 ZND	9
5	AU101477	SCREW, METRIC FLANGE w/BODY - M12 x 30	9
6	12GB2412	TENSIONER - Spring / Grease	1
7	12GB2476	BRACKET - Idler, Right	1
8	12GB2477	BRACKET - Idler, Left	1
9	AU100331	SCREW, METRIC FLANGE w/BODY - M10 x 40	4
10	12GB2461	SHAFT - Idler, Track	1
11	8CF40021	BEARING - Ball	2
12	12GB2460	WHEEL - Idler Track	1
13	12GB2459	ROLLER - Track	6
14	8CF90016	BEARING - Plain, 1" ID, Flanged	12
15	AU111968	PIN - Flag, Track Assy	6
16	219-8	FITTING - Lube, 1/4 - 28 TPR SAE-LT .54 Lg	6
17	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	6
18	495-81143	WASHER - .406 x 1.50 x .119 in CST ZND	6
19	12GB2411	TRACK - Rubber	1
20	38-12044	PIN - Slt Spring .312 x 2.75 in Pln	2
21	30-807L-1060	FITTING - Grease, Adjuster	1
22	30-807L-1059	GASKET - Berco (AT 35)	1
23	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 20	6


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UNDERCARRIAGE ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109879	ASSEMBLY - Undercarriage	1
1	AU109877	FRAME - Main	1
2	219-8	FITTING - Lube 1/4 - 28 Tpr SAE-LT .54 Lg	10
3	AU109880	TANK - Hydraulic	1
4	AU101477	SCREW, METRIC FLANGE w/BODY - M12 x 30	4
5	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	4
6	12GB3355	PLATE - Hydraulic Tank Cover	1
7	12GB2331	GASKET - Hydraulic Tank	1
8	217-439	PLUG - Hdls Hex Skt Pipe 1/2 Pln	1
9	AU109354	WELDMENT - Hydraulic Tank Lid	1
10	8PN24800	PIPE - 3" x 4" Nipple, SCH 40	1
11	8FL10008	STRAINER - Suction	1
12	103989A1	CYLINDER - 3" B x 5.125"	2
13	AU108449	WELDMENT - Stabilizer Leg	2
14	AU108446	WELDMENT - Stabilizer Foot	2
15	AU109014	SPRING BUSHING - 1.00" ID x 1.25" OD x .75" L	8
16	AU111027	WELDMENT - Rear Controls Box	1
17	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	26
18	L116247	GAUGE - Liquid Level	1
19	8FL20025	FILTER - Hydraulic Tank	1
20	326-512	BOLT - Hex Hd .312 x .750 GR8 PHC	2
21	AU110232	ASSEMBLY - Operators Console	1
22	12GB2312	BOTTLE - Mud Pump System Anti-Freeze	1
23	12GB2313	CAP - Anti-Freeze Bottle	1
24	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	6
25	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	6
26	AU108957	SPRING BUSHING - .75" ID x 1.00" OD x .75" L	2
27	AU108955	SPRING BUSHING - 2.0" ID x 2.25" OD x 2" L, Grooved	2
28	AU108958	SPRING BUSHING - 1.0" ID x 1.25" OD x .5" L	8
29	AU108615	PIN - Flag	6
30	AU111526	PIN - Flag	2
31	AU109348	ASSEMBLY - Flagged Pin	1
32	50GB2302	LOCK - Key	1
33	AU100862	NUT, U - M8 x 1.25 Long	4
34	AU108628	PLATE - Rear Controls Panel	1
35	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	4
36	8FL20024	FILTER ELEMENT - Hydraulic Tank	1
37	AU109342	ASSEMBLY - Track RH	1
38	AU109343	ASSEMBLY - Track LH	1
39	AU100831	SCREW, METRIC FLANGE w/BODY - M16 x 40	12
40	12GB2375	PLATE - Mount	1
41	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	5
42	495-81129	WASHER - .406 x 0.75 x .119 in CST ZND	6
43	AU100331	SCREW, METRIC FLANGE w/BODY - M10 x 40	2
44	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	4
45	AU108549	PLATE - Fuse Box Mount	1
46	AU111717	PLATE - Operators Manual Case Mounting	1
47	AU103216	CASE - Operators Manual	1
48	R46465	LANYARD - Manual Retention, 36 in	1
49	R46463	POST - Manual Retention	1
50	151-522	RIVET - Lg Flg Brk Morl .187 x .575 in Pln	4

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HYDRAULIC

DESCRIPTION	PAGE	DESCRIPTION	PAGE
H			
Hoses and Fittings	8-11, 8-13		
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Seal Kits for Hydraulic Motors	8-3		
Seal Kits for Hydraulic Pumps	8-5		
Seal Kits for Hydraulic Valves	8-7		

SEAL KITS FOR HYDRAULIC MOTORS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8HM24050-1	SEAL KIT - Rotary Motor, 8HM24050	1
2	8HM24053-1	SEAL KIT - Mud Pump Motor, 8HM24053	1
3	8HM24052-1	SEAL KIT - Carriage Motor, 8HM24052	1
4	8HM24055-1	SEAL KIT - Auger Stake Down Motor, 8HM24055	1
5	8GB85014-1	SEAL KIT - Crawler Drive Assembly, 8GB85014	1

SEAL KITS FOR HYDRAULIC PUMPS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8PH60049-3	SEAL KIT - Closed Circuit Rotary, Pump 8PH60049	1
2	8PH50040-1	SEAL KIT - Open Circuit Load Sense, Pump 8PH50040	1

SEAL KITS FOR HYDRAULIC VALVES

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8HV80118-3	KIT - Seal, for Two Speed Shift Valve	1
2	8HV61011-1	CARTRIDGE - Spike Relief Valve	1
3	8HV61011-2	KIT - Seal, Spike Relief Valve	1
4	8HV80153-1	VALVE - 3 Section	1
5	8HV80156-2	VALVE - 4 Section	1
6	8HV80158-1	VALVE - 7 Section Control Valve	1
7	8HV80159-1	VALVE - 2 Section	1
8	8HV01001-1	VALVE - Oil Cooler Thermostat	1
9	270083-1	VALVE - Shuttle, for Hydraulic Gauge	1
10	8HV41006-2	KIT - Seal for Two Way Flow Divider/Combiner Valve	1

SEAL KITS FOR HYDRAULIC CYLINDERS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8HC21004-1	KIT - Seal for Pipe Loader Elevate	1
2	8HC10008-1	KIT - Seal, for Pipe Loader Extend	1
3	8HC10125-1	KIT - Packing for Pipe Loader Grip	1
4	8HC20005-2	KIT - Packing for Pipe Rotate	1
5	8HC20030-1	KIT - Seal, for Auger Stakedown	1
6	8HC20010-1	KIT - Seal, for Rear Stabilizer, Drill Frame Tilt	1
7	8HC40175-01	KIT - Seal, for Wrench Clamp	1
8	8HC21004-1	KIT - Seal, for Wrench Makeup/Breakout	1

HOSES AND FITTINGS

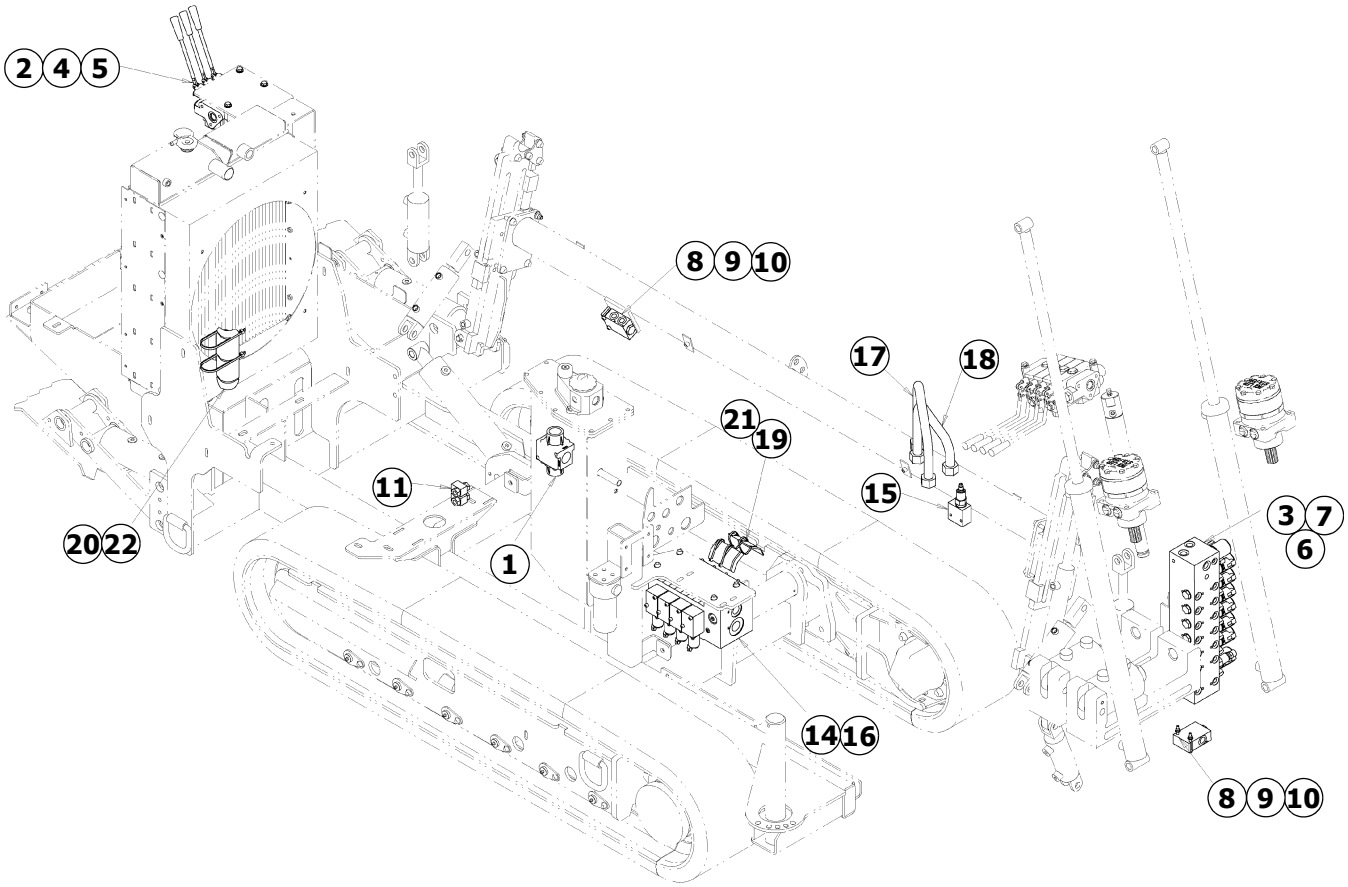
NOTE: Part numbers on this page are printed on hydraulic hose cover; reference hose cover for correct part number.

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3200	KIT - Hose	1
1	20GB3200-03	HOSE - Hydraulic -8	1
2	20GB3200-04	HOSE - Hydraulic -8	1
3	12GB3200-06	HOSE - Hydraulic -12	1
4	20GB3200-08	HOSE - Hydraulic -12	1
5	20GB3200-09	HOSE - Hydraulic -12	1
6	20GB3200-10	HOSE - Hydraulic -16	1
7	20GB3200-11	HOSE - Hydraulic -16	1
8	20GB3200-12	HOSE - Hydraulic -10	1
9	20GB3200-13	HOSE - Hydraulic -12	1
10	20GB3200-14	HOSE - Hydraulic -16	1
11	20GB3200-15	HOSE - Hydraulic -4	1
12	20GB3200-16	HOSE - Hydraulic -8	1
13	20GB3200-17	HOSE - Hydraulic -8	1
14	20GB3200-18	HOSE - Hydraulic -8	1
15	20GB3200-19	HOSE - Hydraulic -8	1
16	20GB3200-20	HOSE - Hydraulic -10	1
17	20GB3200-21	HOSE - Hydraulic -10	1
18	20GB3200-22	HOSE - Hydraulic -8	1
19	20GB3200-23	HOSE - Hydraulic -8	1
20	20GB3200-24	HOSE - Hydraulic -8	1
21	20GB3200-25	HOSE - Hydraulic -8	1
22	20GB3200-26	HOSE - Hydraulic -4	1
23	12GB3200-27	HOSE - Hydraulic -4	1
24	20GB3200-28	HOSE - Hydraulic -4	1
25	12GB3200-29	HOSE - Hydraulic -4	1
26	12GB3200-30	HOSE - Hydraulic -4	1
27	12GB3200-31	HOSE - Hydraulic -4	1
28	12GB3200-32	HOSE - Hydraulic -4	1
29	12GB3200-34	HOSE - Hydraulic -6	1
30	12GB3200-35	HOSE - Hydraulic -6	1
31	12GB3200-36	HOSE - Hydraulic -8	1
32	12GB3200-37A	HOSE - Hydraulic -4	1
33	12GB3200-37B	HOSE - Hydraulic -4	1
34	12GB3200-38A	HOSE - Hydraulic -4	1
35	12GB3200-38B	HOSE - Hydraulic -4	1
36	12GB3200-39A	HOSE - Hydraulic -4	1
37	20GB3200-39B	HOSE - Hydraulic -4	1
38	12GB3200-40A	HOSE - Hydraulic -4	1
39	12GB3200-40B	HOSE - Hydraulic -4	1
40	20GB3200-41	HOSE - Hydraulic -8	1
41	12GB3200-42	HOSE - Hydraulic -4	1
42	12GB3200-43	HOSE - Hydraulic -4	1
43	20GB3200-44	HOSE - Hydraulic -4	1
44	20GB3200-45	HOSE - Hydraulic -4	1
45	12GB3200-46	HOSE - Hydraulic -4	1
46	12GB3200-47	HOSE - Hydraulic -4	1
47	20GB3200-48	HOSE - Hydraulic -4	1
48	20GB3200-49	HOSE - Hydraulic -4	1
49	20GB3200-50	HOSE - Hydraulic -4	1
50	20GB3200-51	HOSE - Hydraulic -4	1
51	20GB3200-52	HOSE - Hydraulic -4	1

HOSES AND FITTINGS

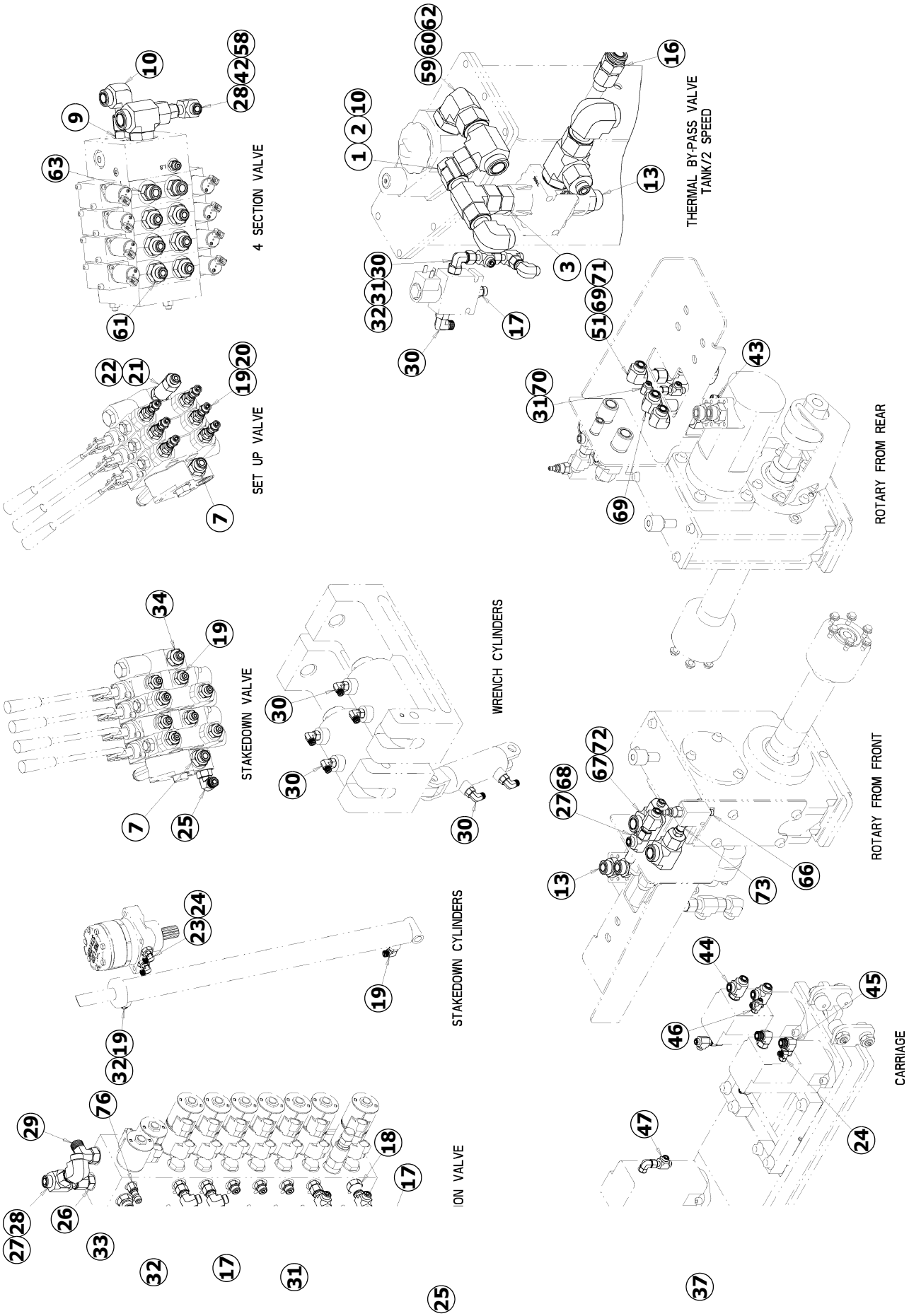
NOTE: Part numbers on this page are printed on hydraulic hose cover; reference hose cover for correct part number.

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3200	KIT - Hose	1
52	20GB3200-53	HOSE - Hydraulic -4	1
53	20GB3200-55A	HOSE - Hydraulic -4	1
54	20GB3200-55B	HOSE - Hydraulic -4	1
55	20GB3200-56	HOSE - Hydraulic -4	1
56	20GB3200-57	HOSE - Hydraulic -4	1
57	20GB3200-58	HOSE - Hydraulic -4	1
58	20GB3200-59A	HOSE - Hydraulic -4	1
59	20GB3200-59B	HOSE - Hydraulic -4	1
60	20GB3200-60A	HOSE - Hydraulic -4	1
61	20GB3200-60B	HOSE - Hydraulic -4	1
62	20GB3200-60C	HOSE - Hydraulic -4	1
63	20GB3200-61A	HOSE - Hydraulic -4	1
64	20GB3200-61B	HOSE - Hydraulic -4	1
65	20GB3200-61C	HOSE - Hydraulic -4	1
66	12GB3200-62	HOSE - Hydraulic -4	1
67	12GB3200-63	HOSE - Hydraulic -4	1
68	20GB3200-64	HOSE - Hydraulic -4	1
69	12GB3200-65	HOSE - Hydraulic -4	1
70	12GB3200-66	HOSE - Hydraulic -4	1
71	20GB3200-67	HOSE - Hydraulic -4	1
72	12GB3200-68	HOSE - Hydraulic -4	1
73	20GB3200-69	HOSE - Hydraulic -4	1
74	20GB3200-70	HOSE - Hydraulic -4	1
75	20GB3200-71	HOSE - Hydraulic -4	1
76	12GB3200-75	HOSE - Hydraulic -8	1
77	20GB3200-76	HOSE - Hydraulic -10	1
78	12GB3200-79	HOSE - Hydraulic -4	1
79	20GB3200-80	HOSE - Hydraulic -16	1
80	20GB3200-81	HOSE - Hydraulic -16	1
81	20GB3200-82	HOSE - Hydraulic -10	1
82	20GB3200-83	HOSE - Hydraulic -10	1
83	20GB3200-84	HOSE - Hydraulic -8	1
84	20GB3200-85	HOSE - Hydraulic -8	1
85	20GB3200-86	HOSE - Hydraulic -4	1
86	20GB3200-89	HOSE - Hydraulic -4	1
87	20GB3200-90	HOSE - Hydraulic -8	1
88	20GB3200-91	HOSE - Hydraulic -10	1
89	20GB3200-92	HOSE - Hydraulic -8	1
90	20GB3200-93	HOSE - Hydraulic -8	1
91	20GB3200-94	HOSE - Hydraulic -8	1
92	20GB3200-95	HOSE - Hydraulic -8	1
93	20GB3200-95A	HOSE - Hydraulic -4	1
94	20GB3200-96B	HOSE - Hydraulic -4	1
95	20GB3200-97A	HOSE - Hydraulic -4	1
96	20GB3200-97B	HOSE - Hydraulic -4	1
97	20GB3200-98	HOSE - Hydraulic -6	1
98	20GB3200-99	HOSE - Hydraulic -6	1
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100	20GB3200-101	HOSE - Hydraulic -4	1
101	20GB3200-102	HOSE - Hydraulic -4	1
102	20GB3200-103	HOSE - Hydraulic -4	1


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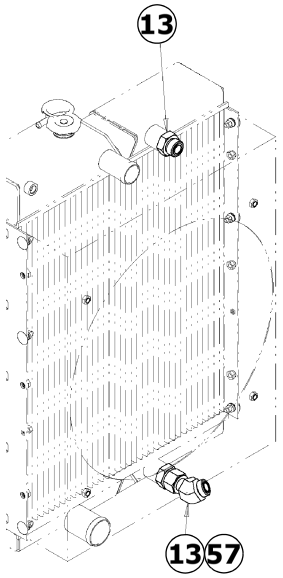
HYDRAULICS

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3550	ASSEMBLY - Hydraulics	1
1	8HV01001	VALVE - Thermal Bypass	1
2	8HV80153	VALVE - Setup	1
3	AU111494	VALVE - 9 Section / Multifunction	1
4	496-21041	WASHER - .406 x 0.812 x .089 in Hdn ZND	3
5	426-620	BOLT - Hex Hd .375 x 1.25 GR8 ZND	3
6	495-11041	WASHER - .406 x 0.812 x .065 in CST ZND	4
7	426-612	BOLT - Hex Hd .375 x .750 GR8 ZND	4
8	AU112323	FLOW DIVIDER -8 Orb / -6 Orb, -6 Orb	2
9	AU100315	SCREW, METRIC FLANGE w/BODY - M6 x 60	4
10	AU100525	NUT, METRIC FLANGE PREVAILING - M6 Zinc	4
11	270083	VALVE - Shuttle	2
12	20GB3200	ASSEMBLY - Hose Kit	1
13	20GB3201	KIT - Hydraulic Fittings	1
14	8HV80160	VALVE - Hydraulic 4 Section	1
15	8HV61011	VALVE - Pressure Relief 150-6000 PSI	1
16	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	4
17	AU111677	TUBE - Hydraulic, Hiflow - Rotary B	1
18	AU111678	TUBE - Hydraulic, Hiflow - Rotary A	1
19	AU112950	HOSE PROTECTOR - 4" Black	2
20	AU112951	HOSE PROTECTOR - 8" Black	1
21	L11541	STRAP - Cable Tie, Black, Obl 30 x 60 Nylon	4
22	L18331	TIE - Hose	2

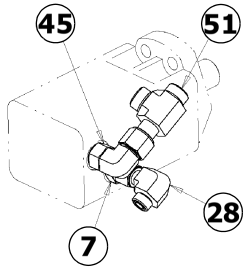

4 SECTION VALVE
SET UP VALVE
THERMAL BY-PASS VALVE
TANK/2 SPEED
ROTARY FROM REAR
STAKEDOWN VALVE
WRENCH CYLINDERS
ROTARY FROM FRONT
STAKEDOWN CYLINDERS
CARRIAGE
ION VALVE

HYDRAULIC FITTINGS

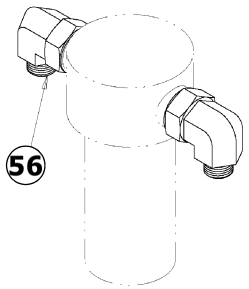
REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3201	KIT - Hydraulic Fittings	1
1	8OA31208	CONNECTION - Straight, -12 ORFS / -8 ORB	1
2	8OR81212	CONNECTION - Run Tee, -12 ORFS / -12 ORFS	1
3	8SA31612	CONNECTION - Adapter, -16 ORB / -12 ORFS	1
7	8OA30810	CONNECTION - Straight, -8 ORFS / -10 ORB	2
9	8OA31212	CONNECTION - Straight, -12 ORFS / -12 ORB	2
10	8OL81212	CONNECTION - 90 Degree, -12 ORFS / -12 ORFS	2
13	8OA31216	CONNECTION - Straight, -12 ORFS / -16 ORB	3
16	8TA61212	FITTING - 12-12 ORFS	1
17	8OA30406	CONNECTION - Straight, -4 ORFS / -6 ORB	17
18	AU112767	CONNECTION - Straight, -4 ORFS / -6 ORB Orifice	1
19	8OA30408	CONNECTION - Straight, -4 ORFS / -8 ORB	18
20	AU111506	ORIFICE FITTING - .047", -4-4 ORFS	6
21	8OA41010	CONNECTION - Straight, Long, -10 ORFS / -10 ORFS	1
22	8OA81006	CONNECTION - Reducer, -10 ORFS / -6 ORFS	1
23	8SA31004	REDUCER - -4 ORB / 7/8 - 14 Thd	4
24	8OL30404	CONNECTION - 90 Degree, -4 ORFS / -4 ORB	6
25	8OL30608	CONNECTION - 90 Degree, -6 ORFS / -8 ORB	2
26	8OA30808	CONNECTION - Straight, -8 ORFS / -8 ORB	1
27	8OR80808	CONNECTION - Run Tee, -8 ORFS / -8 ORFS	2
28	8OL80808	CONNECTION - 90 Degree, -8 ORFS / -8 ORFS	2
29	8OL30808	CONNECTION - 90 Degree, -8 ORFS / -8 ORB	1
30	8OL30406	CONNECTION - 90 Degree, -4 ORFS / -6 ORB	8
31	8OR80404	CONNECTION - Run Tee, -4 ORFS / -4 ORFS	6
32	8OL80404	CONNECTION - 90 Degree, -4 ORFS / -4 ORFS	7
33	8OA30608	CONNECTION - Straight, -6 ORFS / -8 ORB	1
34	8OA30610	CONNECTION - Straight, -6 ORFS / -10 ORB	1
37	8OL30606	CONNECTION - 90 Degree, -6 ORFS / -6 ORB	4
42	8OA81608	CONNECTION - Reducer, -16 ORFS / -8 ORFS	2
43	8OA30806	CONNECTION - Straight, -8 ORFS / -6 ORB	1
44	8OR31010	CONNECTION - Run Tee, -10 ORFS / -10 ORB	4
45	8OL31010	CONNECTION - 90 Degree, -10 ORFS / -10 ORB	4
46	8OR30404	CONNECTION - Run Tee, -4 ORFS / -4 ORB	2
47	8OR80606	CONNECTION - Run Tee, -6 ORFS / -6 ORFS	2
51	8OR81010	CONNECTION - Run Tee, -10 ORFS / -10 ORFS	2
58	8OB31616	CONNECTION - Branch Tee, -16 ORFS / -16 ORB	1
59	8OL31620	CONNECTION - 90 Degree, -16 ORFS / -20 ORB	1
60	8OR81616	CONNECTION - Run Tee, -16 ORFS / -16 ORFS	1
61	8OA30812	CONNECTION - Straight, -8 ORFS / -12 ORB	6
62	8OA81612	CONNECTION - Reducer, -16 ORFS / -12 ORFS	1
63	8OA31012	CONNECTION - Straight, -10 ORFS / -12 ORB	2
66	8OA30606	CONNECTION - Straight, -6 ORFS / -6 ORB	1
67	8OR91616	CONNECTION - Run Tee, Bulkhead, -16 ORFS / -16 ORFS	2
68	8OR90808	CONNECTION - Run Tee, Bulkhead, -8 ORFS / -8 ORFS	1
69	8OL91010	CONNECTION - 90 Degree, Bulkhead, -10 ORFS / -10 ORFS	3
70	8OL90404	CONNECTION - 90 Degree, Bulkhead, -4 ORFS / -4 ORFS	1
71	8OL81010	CONNECTION - 90 Degree, -10 ORFS / -10 ORFS	2
72	8OA81606	CONNECTION - Reducer, -16 ORFS / -6 ORFS	2
73	8OA00606	CONNECTION - Straight, -6 ORFS / -6 ORB	1
76	8QD63501	COUPLING - Quick Disconnect	1



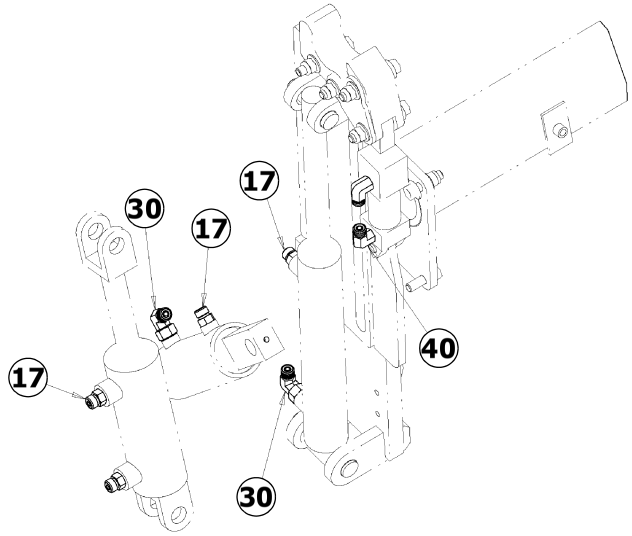
RADIATOR



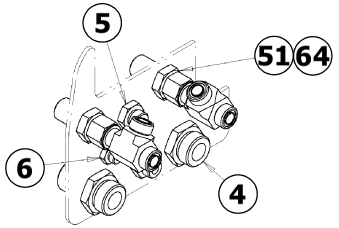
MUD PUMP DRIVE MOTOR



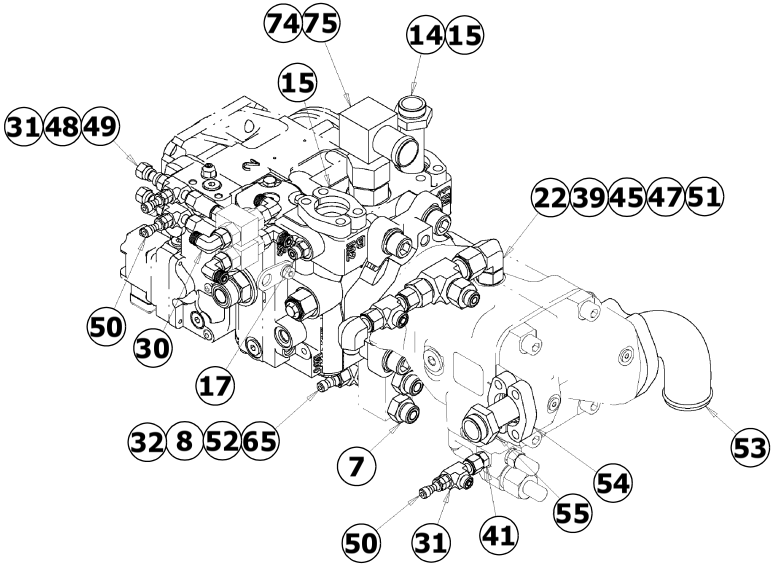
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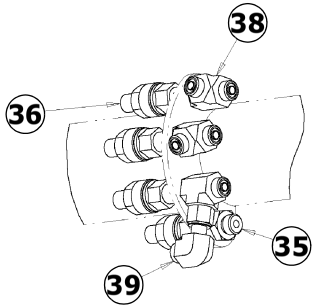
FRONT ROD LOADER AREA



LOWER DRILL FRAME BULKHEAD



ROTARY PUMP/LOAD SENSE PUMP
SHUTTLE VALVES

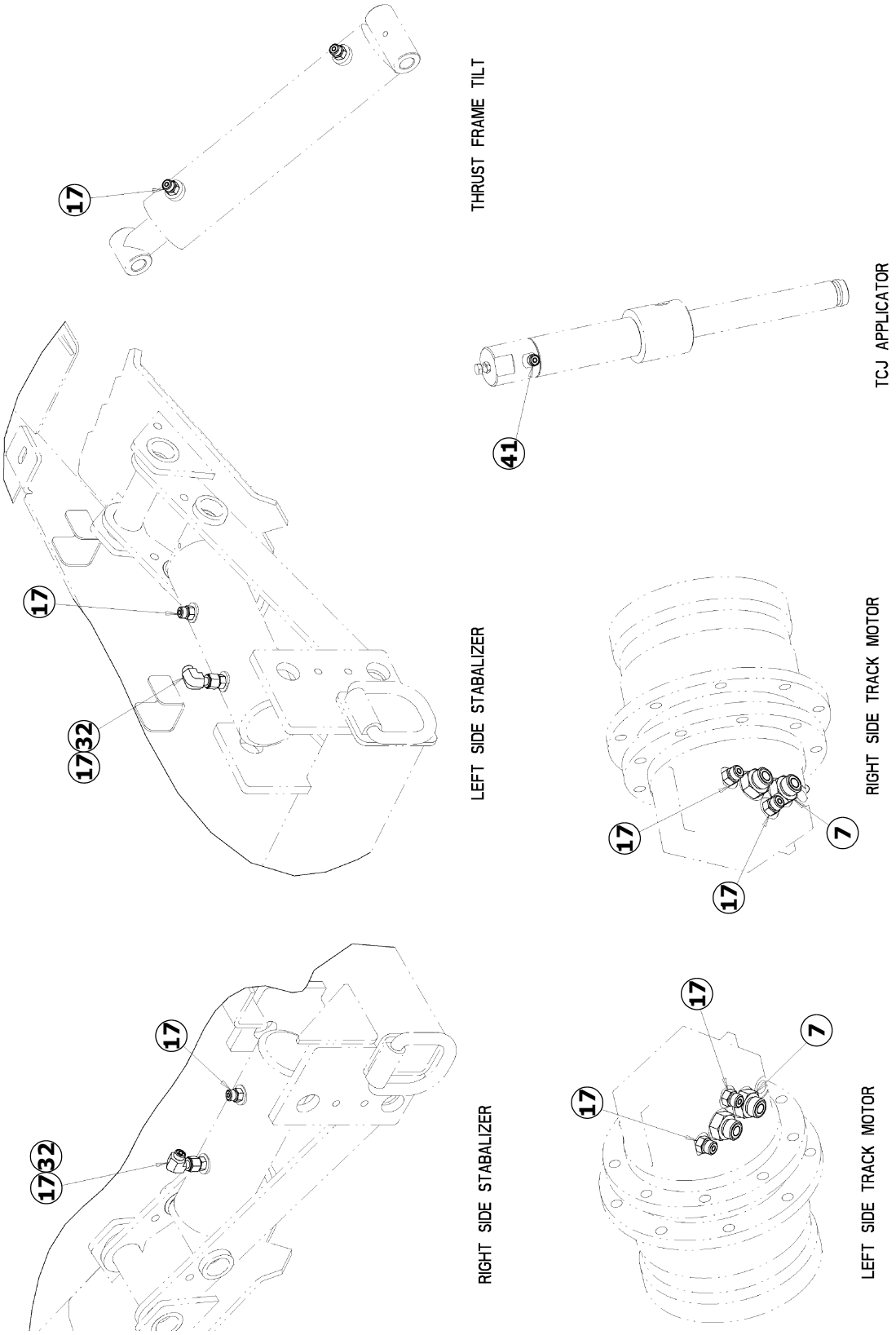


ROD LOADER CAM BULKHEAD

REAR ROD LOADER AREA

HYDRAULIC FITTINGS

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3201	KIT - Hydraulic Fittings	1
4	8OA91616	CONNECTION - Straight, Bulkhead, ORFS	2
5	8OA90808	CONNECTION - Straight, Bulkhead, ORFS	2
6	8OA90404	CONNECTION - Straight, Bulkhead, -4 ORFS / -4 ORB	1
7	8OA30810	CONNECTION - Straight, -8 ORFS / -10 ORB	3
8	8OB30606	CONNECTION - Branch Tee, -6 ORFS / -6 ORB	1
13	8OA31216	CONNECTION - Straight, -12 ORFS / -16 ORB	2
14	8OS51616	SPLIT FLANGE ADAPTER -16 ORFS / -16 Flange Code 62	1
15	8TS46216	KIT - Split Flange, -16 SAE, w/O-Rings and Bolts	2
17	8OA30406	CONNECTION - Straight, -4 ORFS / -6 ORB	8
22	8OA81006	CONNECTION - Reducer, -10 ORFS / -6 ORFS	2
25	8OL30608	CONNECTION - 90 Degree, -6 ORFS / -8 ORB	1
28	8OL80808	CONNECTION - 90 Degree, -8 ORFS / -8 ORFS	1
30	8OL30406	CONNECTION - 90 Degree, -4 ORFS / -6 ORB	9
31	8OR80404	CONNECTION - Run Tee, -4 ORFS / -4 ORFS	2
32	8OL80404	CONNECTION - 90 Degree, -4 ORFS / -4 ORFS	1
35	8OA90606	CONNECTION - Straight, Bulkhead, ORFS	1
38	8OR90606	CONNECTION - Run Tee, Bulkhead, -6 ORFS / -6 ORFS	4
40	8OL10404	CONNECTION - 90 Degree, -4 ORFS / -4 NPT	1
41	8OA30404	CONNECTION - Straight, -4 ORFS / -4 ORB	3
45	8OL31010	CONNECTION - 90 Degree, -10 ORFS / -10 ORB	3
47	8OR80606	CONNECTION - Run Tee, -6 ORFS / -6 ORFS	4
48	8OA90406	CONNECTION - Bulkhead, -4 ORFS / -6 ORFS	2
49	8SA60404	CONNECTION - Straight, -4 ORFS / -4 ORFS	2
51	8OR81010	CONNECTION - Run Tee, -10 ORFS / -10 ORFS	1
52	8QD14506	COUPLING - Quick Disconnect	2
53	8HF18501	HOSE END - Formrite ORFC - 32 - 90	2
54	8TS46116	KIT - Split Flange, -16 SAE, w/O-Rings and Bolts	3
56	8OL30812	CONNECTION - 90 Degree, -8 ORFS / -12 ORB	4
57	8OE81212	CONNECTION - 45 Degree, -12 ORFS / -12 ORFS	1
64	8OA91010	CONNECTION - Straight, Bulkhead, ORFS	1
65	8OA80406	CONNECTION - 90 Degree, -6 ORFS / -4 ORFS	1
66	8OA30606	CONNECTION - Straight, -6 ORFS / -6 ORB	1
74	91-2066-16-16S	CONNECTION - Adapter, -16 ORB / -16 ORFS	2
75	217-166	STEM - 1.0 ID x 1.25 NPTF	1

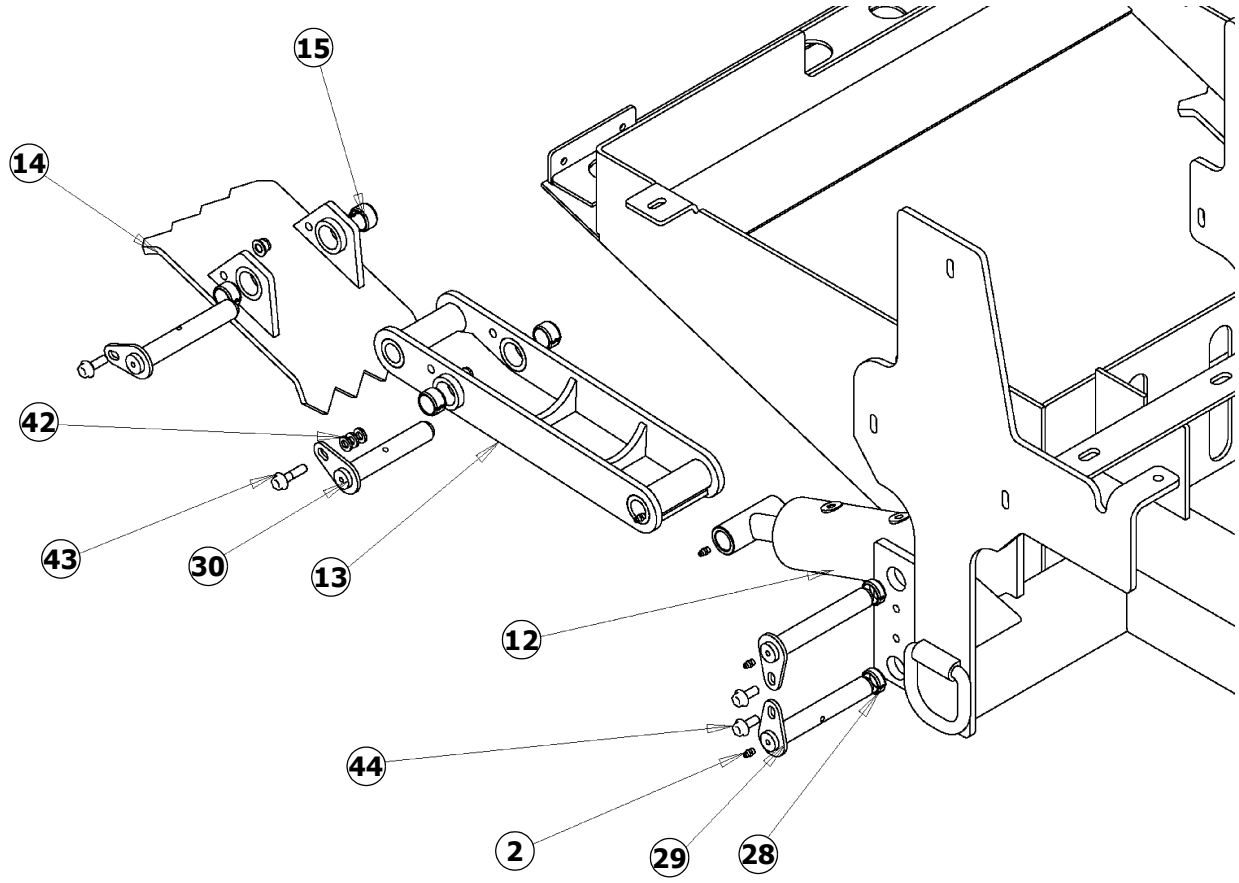

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THRUST FRAME TILT
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TCJ APPLICATOR
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LEFT SIDE STABALIZER
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RIGHT SIDE TRACK MOTOR
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32
RIGHT SIDE STABALIZER
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LEFT SIDE TRACK MOTOR

HYDRAULIC FITTINGS

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB3201	KIT - Hydraulic Fittings	1
7	8OA30810	CONNECTION - Straight, -8 ORFS / -10 ORB	4
17	8OA30406	CONNECTION - Straight, -4 ORFS / -6 ORB	10
32	8OL80404	CONNECTION - 90 Degree, -4 ORFS / -4 ORFS	2
41	8OA30404	CONNECTION - Straight, -4 ORFS / -4 ORB	1

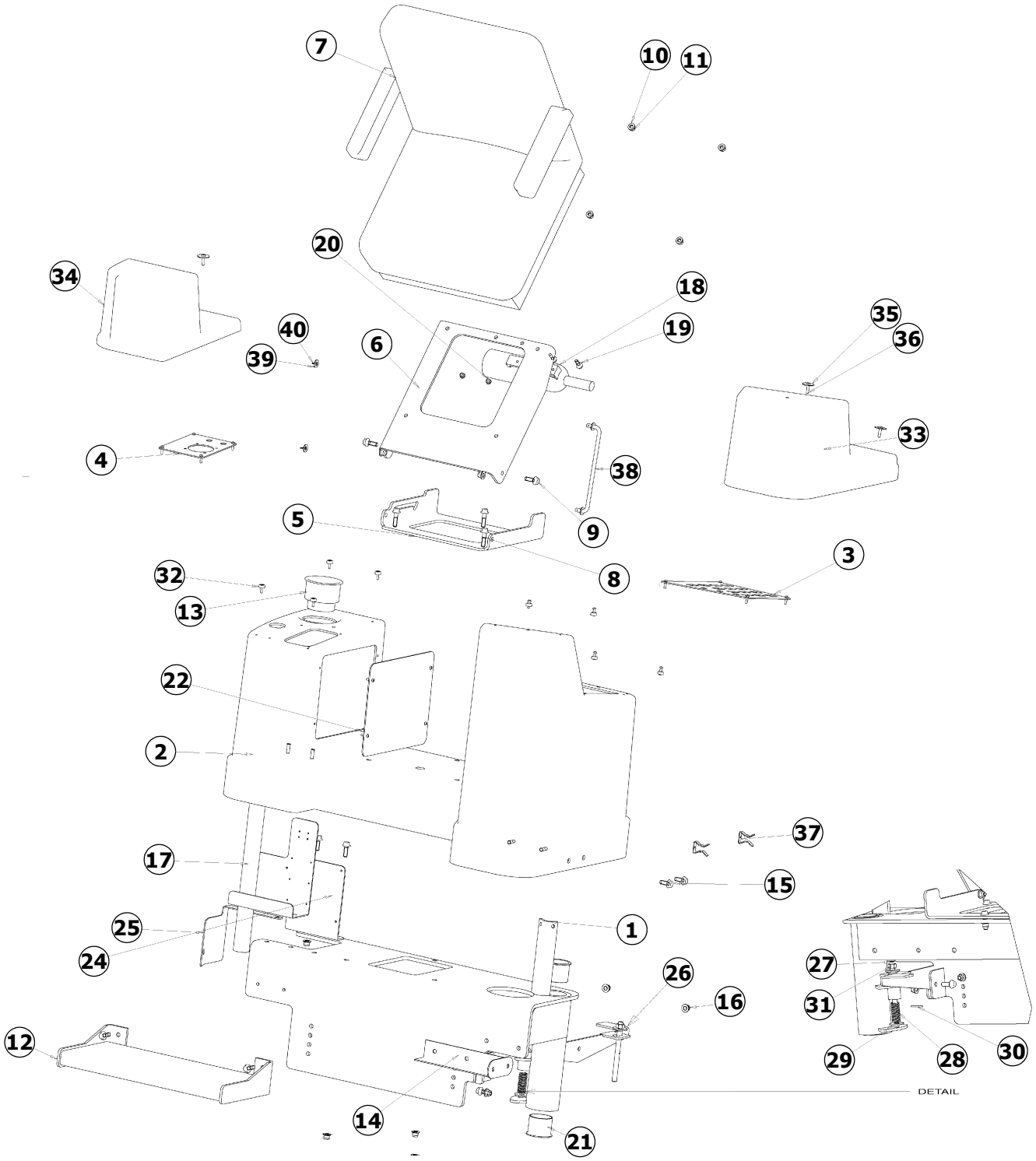
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CHASSIS/MOUNTED EQUIPMENT

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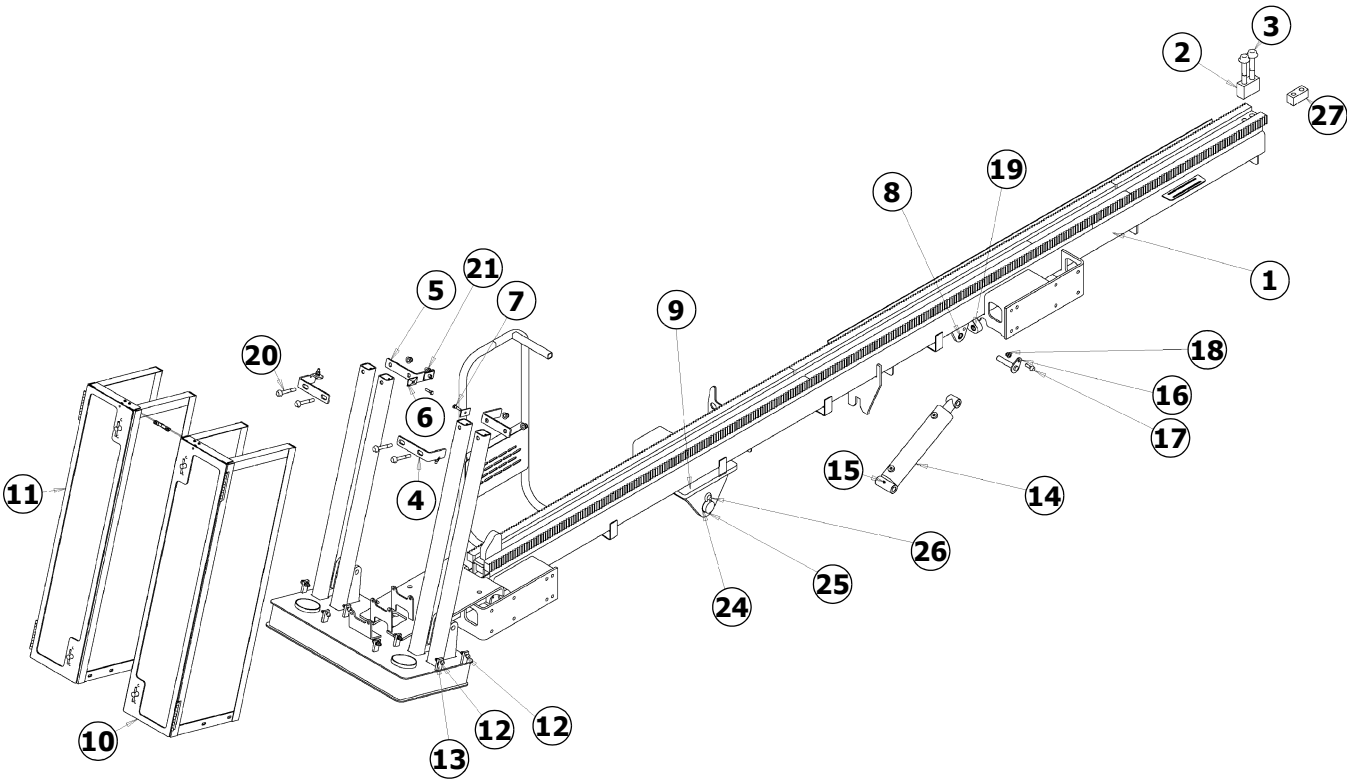
REAR STABILIZER

REF.	PART NO.	DESCRIPTION	REQ'D.
2	219-8	FITTING - Lube 1/4 - 28 Tpr SAE-LT .54 Lg	1
12	103989A1	CYLINDER - 3" x 5.125"	1
13	AU108449	WELDMENT - Stabilizer Leg	1
14	AU108446	WELDMENT - Stabilizer Foot	1
15	AU109014	SPRING BUSHING - 1.00" ID x 1.25" OD x .75" L	4
28	AU108958	SPRING BUSHING - 1.00" ID x 1.25" OD x .50" L	4
29	AU108615	PIN - Flag	3
30	AU111526	PIN - Flag	1
42	495-81129	WASHER - .406 x 0.75 x .119 in CST ZND	3
43	AU100331	SCREW, METRIC FLANGE w/BODY - M10 x 40	1
44	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	2


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DETAIL

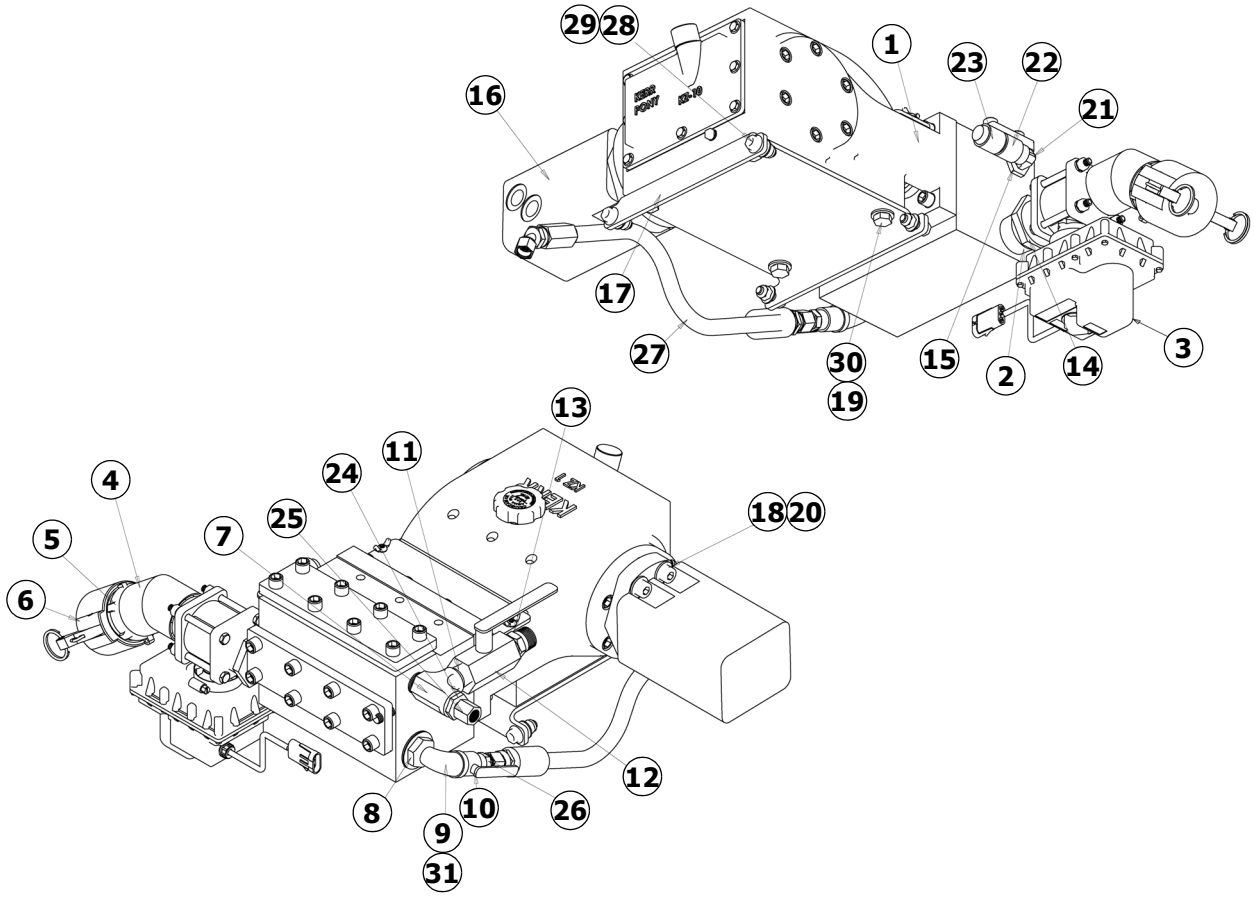
OPERATOR'S CONSOLE ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU110232	ASSEMBLY - Operators Console	1
1	AU110259	WELDMENT - Operators Console	1
2	12GB9210	CONSOLE - Fiberglass	1
3	AU108630	PLATE - Console/Switch	1
4	AU108631	PLATE - Joystick Mount	1
5	AU108632	PLATE - Seat Mount Bottom	1
6	AU108633	PLATE - Seat Mount Top	1
7	8EP47010	SEAT - Operators	1
8	AU100331	SCREW, METRIC FLANGE w/BODY - M10 x 40	3
9	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	11
10	495-81129	WASHER - .406 x 0.75 x .119 in CST ZND	4
11	329-106	NUT - Hex .375 - 16 GR8 PHC	4
12	12GB9202	ASSEMBLY - Foot Rest	1
13	8EO24121	CUP HOLDER - Two Step Black HDPE	1
14	12GB9228	WELDMENT - Operators Console Support	1
15	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	2
16	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	16
17	12GB9230	WELDMENT - Umbrella Mount	1
18	32GB9219	EXTINGUISHER - Fire	1
19	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	2
20	AU100525	NUT, METRIC FLANGE PREVAILING - M6 Zinc	2
21	12GB9215	BEARING - Seat Pivot	2
22	AU108634	PLATE - Seat Ins Panel	1
23	440-11012	SCREW - PHd Type 1 # 10 - 24 x .75 CST ZND	20
24	AU108635	PLATE - CPU Mount	1
25	AU108897	PLATAE - Mount	1
26	AU108997	ASSEMBLY - Arm, Seat Adjustment	1
27	AU108909	ROD - Seat Swing	1
28	AU109011	SPRING - Seat Pivot Lock	1
29	495-81163	WASHER - .531 x 1.50 x .119 in CST ZND	2
30	432-816	PIN - Cotter .125 x 1.00 in ZN	1
31	425-108	NUT - Hex .500 - 13 GR5 ZN	1
32	8EO24122	WASHER - Rubber	8
33	12GB9218	COVER - Console, LH	1
34	12GB9219	COVER - Console, RH	1
35	495-81119	WASHER - .344 x 1.25 x .061 in CST ZND	3
36	8BH21012	SCREW - Button Head (Allen)	3
37	AU109018	CLIP - Ground Stake	2
38	AU109357	ROD - Seat Prop	1
39	495-11041	WASHER - .406 x 0.812 x .065 in CST ZND	2
40	432-612	PIN - Cotter .094 x .75 in ZN	2


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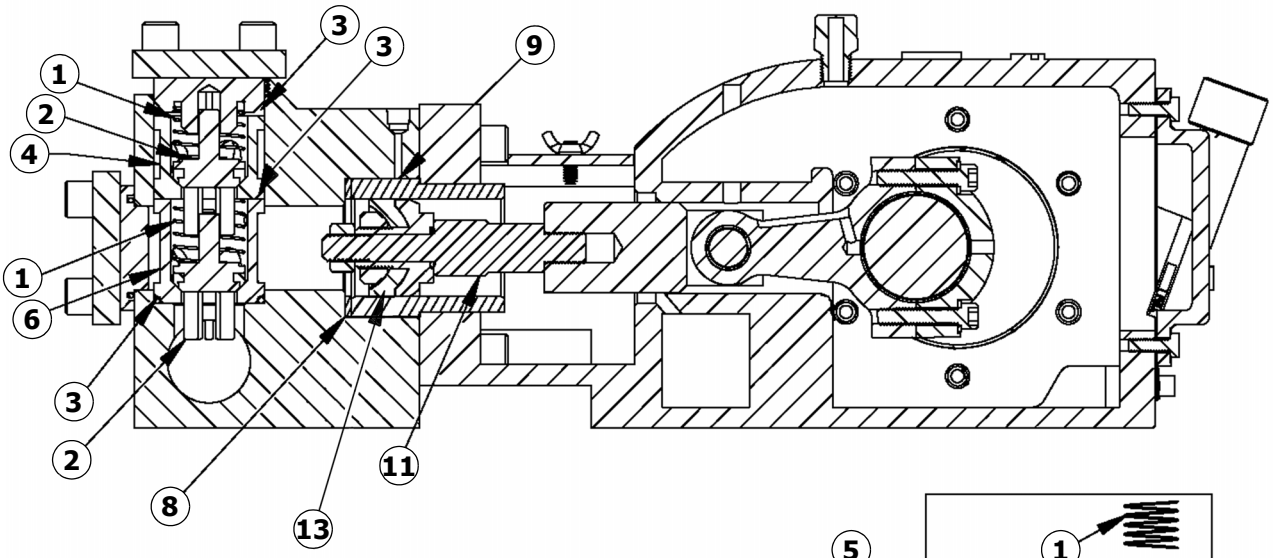
THRUST FRAME

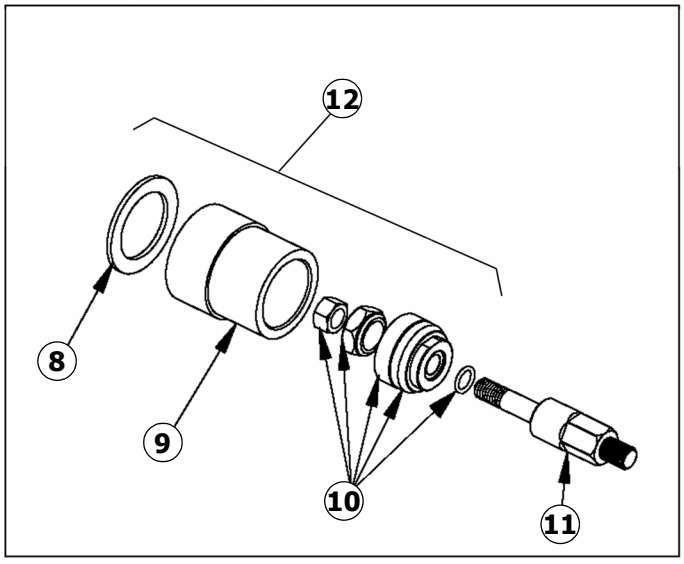
REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109470	ASSEMBLY - Thrust Frame	1
1	AU109469	WELDMENT - Thrust Frame	1
2	12GB2030	STOP BLOCK - Rear	1
3	AU100378	SCREW, METRIC FLANGE w/BODY - M20 x 120	2
4	AU108991	POST - Tie, Stakedown	2
5	12GB2011	HOLDER - Hose	2
6	8CL21201	TWIN COVER - T2-TCP	2
7	426-520	BOLT - Hex Hd .312 x 1.25 GR8 ZND	2
8	AU108956	SPRING BUSHING - .75" ID x 1.00" OD x .5" Long	2
9	AU108974	SPRING BUSHING - 2" ID x 2.25" OD x .75" Long	2
10	AU108977	COVER - Stakedown, LH	1
11	AU108931	COVER - Stakedown, RH	1
12	AU100318	SCREW, METRIC FLANGE w/BODY - M8 x 35	10
13	AU100526	NUT, METRIC FLANGE PREVAILING - M8, Zinc	10
14	AU109341	CYLINDER - 2"B x 4"	1
15	219-8	FITTING - Lube, 1/4 - 28 TPR SAE-LT .54 Long	2
16	AU109483	ASSEMBLY - Flagged Pin	1
17	AU100878	SCREW, METRIC FLANGE w/BODY - M10 x 35	1
18	AU100527	NUT, METRIC FLANGE PREVAILING - M10, Zinc	1
19	AU109676	SPRING BUSHING - .75" ID x 1.00" OD x 1.00" Long	2
20	AU100354	SCREW, METRIC FLANGE w/BODY - M12 x 90	4
21	AU100528	NUT, METRIC FLANGE PREVAILING - M12, Zinc	4
24	AU109489	PIN ASSEMBLY - Boom	1
25	H313981	PIN - Cotter	1
26	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	1
27	AU112132	BLOCK - Tapped	1


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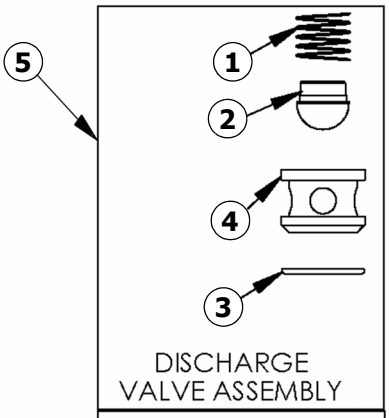
MUD PUMP ASSEMBLY - 15 GPM

REF.	PART NO.	DESCRIPTION	REQ'D.
	20GB1200	ASSEMBLY - Mud Pump 30 GPM	1
1	14MP4113	MUD PUMP - Kerr, 30 GPM 1500 PSI	1
2	65-CI-1988	NIPPLE - Pipe 1.5 NPTF x 1.00 Black Stl	1
3	6HV29033	VALVE - 2" Electric	1
4	8PE15032	FITTING - Elbow, 45 - 2"	1
5	AU110378	ADAPTER - Male 2"	1
6	AU110379	CAP - 2" Quick Disc	1
7	0PT40003	TEE, PIPE, PLATED STL 3/4" - 2-Female, 1-Male	1
8	8PB12408	BUSHING - Reducer 1-1/2 x 1/2 NPT	1
9	8PE18008	FITTING - 90 Elb Pipe Street 1/2	1
10	8HV21008	VALVE - Ball 1/2 Full Port	1
11	221-1211	NIPPLE - Pipe 3/4 NPTF x 1.375 Galv Stl	1
12	8HV23012	VALVE - Ball 3/4" 3000 PSI	1
13	8OA11212	ORFS MALE CONNECTOR - 12-12-FLO	1
14	65-CI-1747	BUSHING - Hex Reducer	1
15	221-91	BUSHING - Hex Reducer Pipe 3/4 x 1/4 Galv	1
16	8HM24061	MOTOR, HYDRAULIC - LSHT 8.0 CID	1
17	AU111010	PLATE - Mud Pump Mount	1
18	495-11053	WASHER - .531 x 1.062 x .095 in CST ZND	4
19	426-812	BOLT - Hex Hd .500 x .75 GR8 ZND	4
20	864-12040	SCREW - Soc Hd M12 x 40 CL 8.8 ZND	4
21	8PE48004	ELBOW - 90 Deg Street, Steel 1/4	1
22	8QD55204	MALE QUICK DISCONNECT - 1/4 Male NPT	1
23	8QD09204	DUST CAP - Plastic	1
24	221-92	BUSHING - Hex Reducer Pipe 3/4 x 3/8 Blk	1
25	8SA20606	ADAPTER - 06 SAE Fem x 3/8 NPT Male	1
26	8OA30806	CONNECTION, STRAIGHT -8 ORFS / -6 ORB	1
27	AU110411	HOSE - Mud Pump to Anti-Freeze Tank	1
28	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	4
29	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	4
30	492-11050	WASHER - Spring Lock Reg .500 in ZND	4
31	221-1190	NIPPLE - Pipe	1

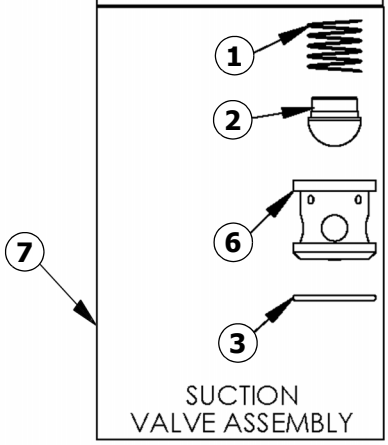




PISTON DETAIL



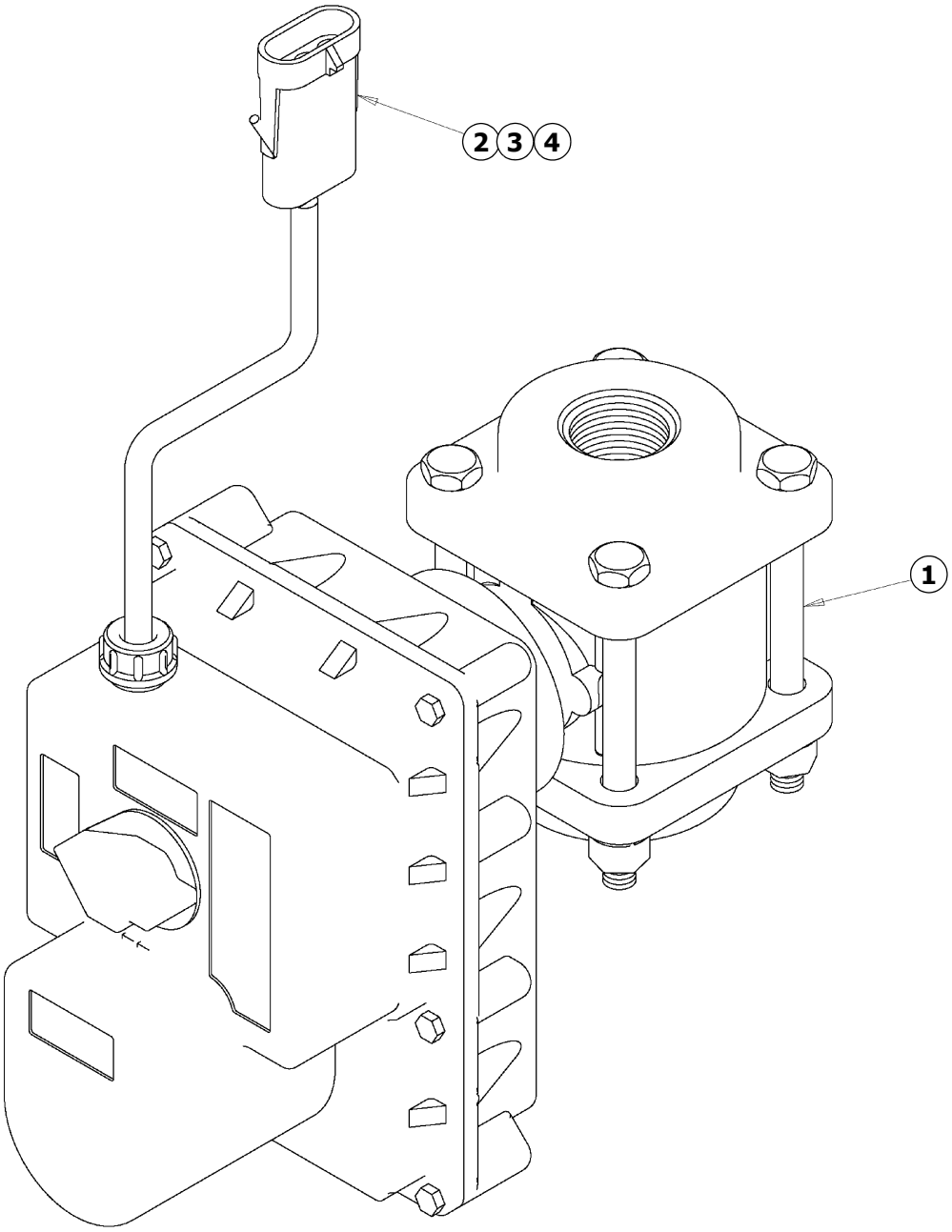
DISCHARGE
VALVE ASSEMBLY



SUCTION
VALVE ASSEMBLY

MUD PUMP - 30 GPM

REF.	PART NO.	DESCRIPTION	REQ'D.
	14MP4113	Mud Pump - 30 GPM	1
1	AU112479	Valve Spring	6
2	AU112480	Valve Inserted Wing-Guided Stainless Steel HT	6
3	AU112481	Valve Seat O-Ring	9
4	AU112482	Discharge Valve Seat Wing-Guided HT	3
5	AU112483	Discharge Valve Assembly	3
6	AU112484	Suction Valve Seat Wing-Guided HT	3
7	AU112485	Suction Valve Assembly	3
8	AU112486	Liner Gasket	3
9	AU112487	Liner, 1-7/8" Ceramic	3
10	AU112488	Piston, Complete, 1-7/8"	3
11	AU112489	Piston Extension Rod 1-7/8"	3
12	AU112490	Piston and Liner Repair Kit	3
13	AU112497	Piston Cup 1-7/8"	3

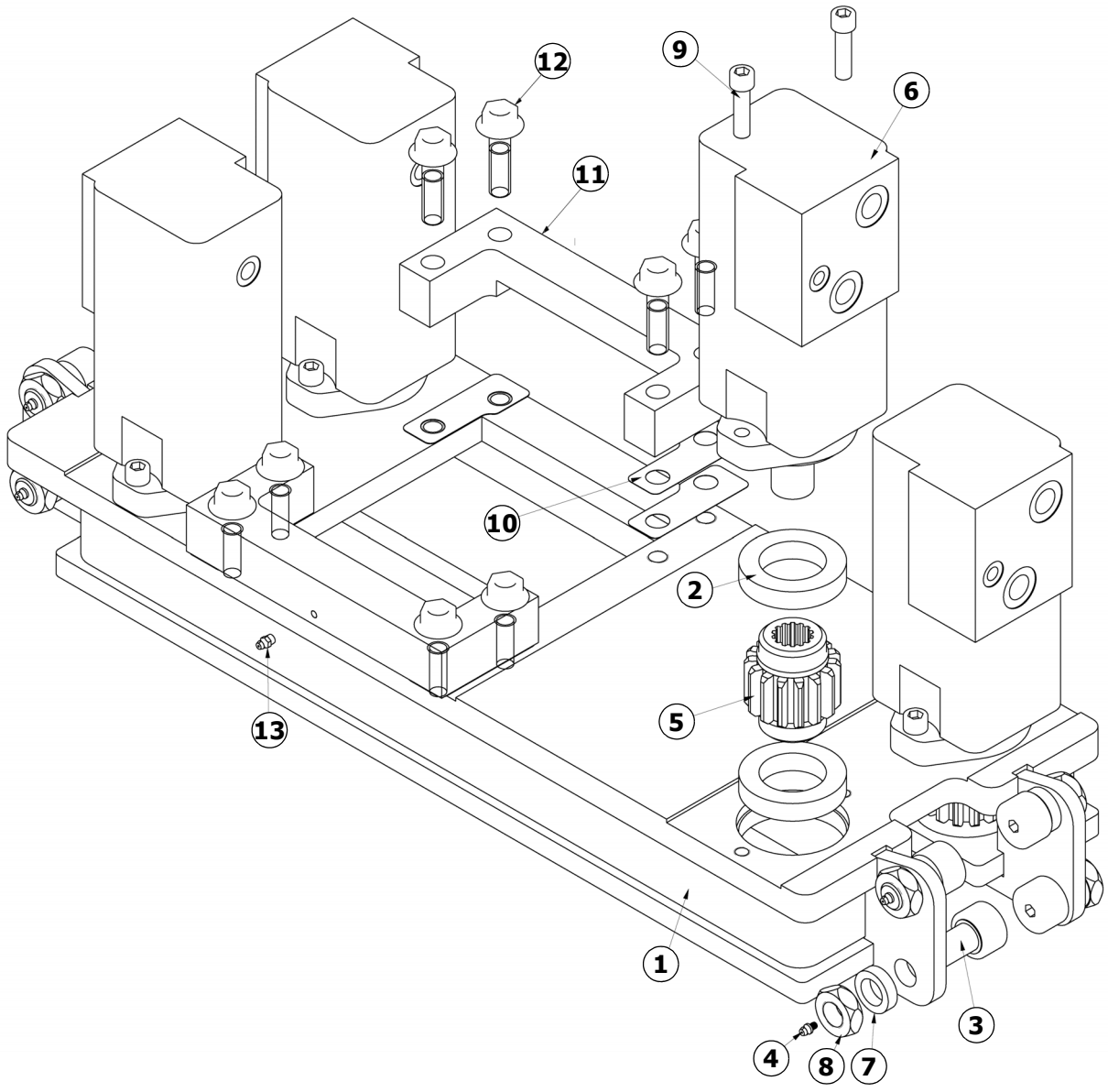

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VALVE - 2” ELECTRIC

REF.	PART NO.	DESCRIPTION	REQ’D.
	6HV29033	VALVE - 2” Electric	1
1	8HV29033	VALVE, BALL - 2” Electric	1
2	8EC92203	CONNECTOR - 3 Way Male Packard	1
3	8EC92502	SEAL - Packard 14/16 AWG	3
4	8EC92302	TERMINAL - Male, 14-16 GA	3

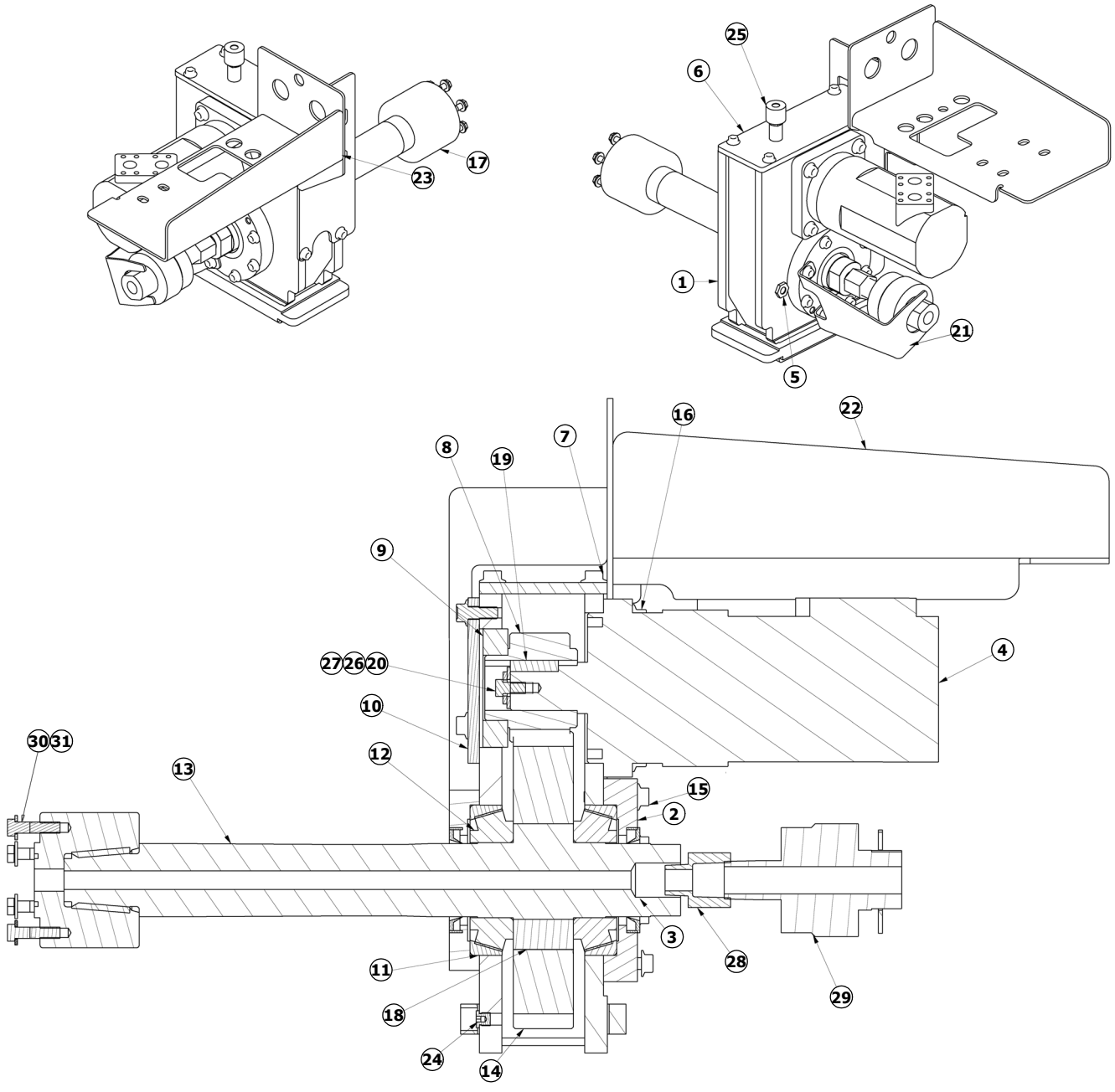
MUD PUMP ASSEMBLY - 15 GPM
Service Parts

REF.	PART NO.	DESCRIPTION	REQ'D.
1	8HV29033	VALVE - Ball, 2"	1
2	8HV24053	MOTOR - Hydraulic, LSHT 4.9 CID	1
3	8HV21008	VALVE - Ball, 1/2" Full Port	1
4	8HV22008	VALVE - Ball, 1/2" NPT	1


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CARRIAGE ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU110529	ASSEMBLY - Carriage	1
1	AU110514	CARRIAGE - Weldment/Machining	1
2	8CF40008	BEARING - Double Ball, Sealed	8
3	8CF30025	BEARING - Cam Follower 1-1/2"	8
4	219-17	FITTING - STR Grease 3/16"	8
5	12GB4108	GEAR - Input Pinion	4
6	8HM24035	MOTOR - Hydraulic, LSHT, 2 Spd	4
7	12GB4025	SPACER - Cam Follower	8
8	129-369	NUT - Hex, Jam, 7/8" - 14	8
9	864-12045	SCREW - Socket Head, M12 x 45 Class 8.8 ZND	8
10	AU111132	SHIM - Rotary Slide Block	8
11	AU110676	BLOCK - Rotary Slide	2
12	AU100362	SCREW, METRIC FLANGE w/BODY - M16 x 60	8
13	219-8	FITTING - Lube 1/4 - 28 TPR SAE - LT .54" Long	2

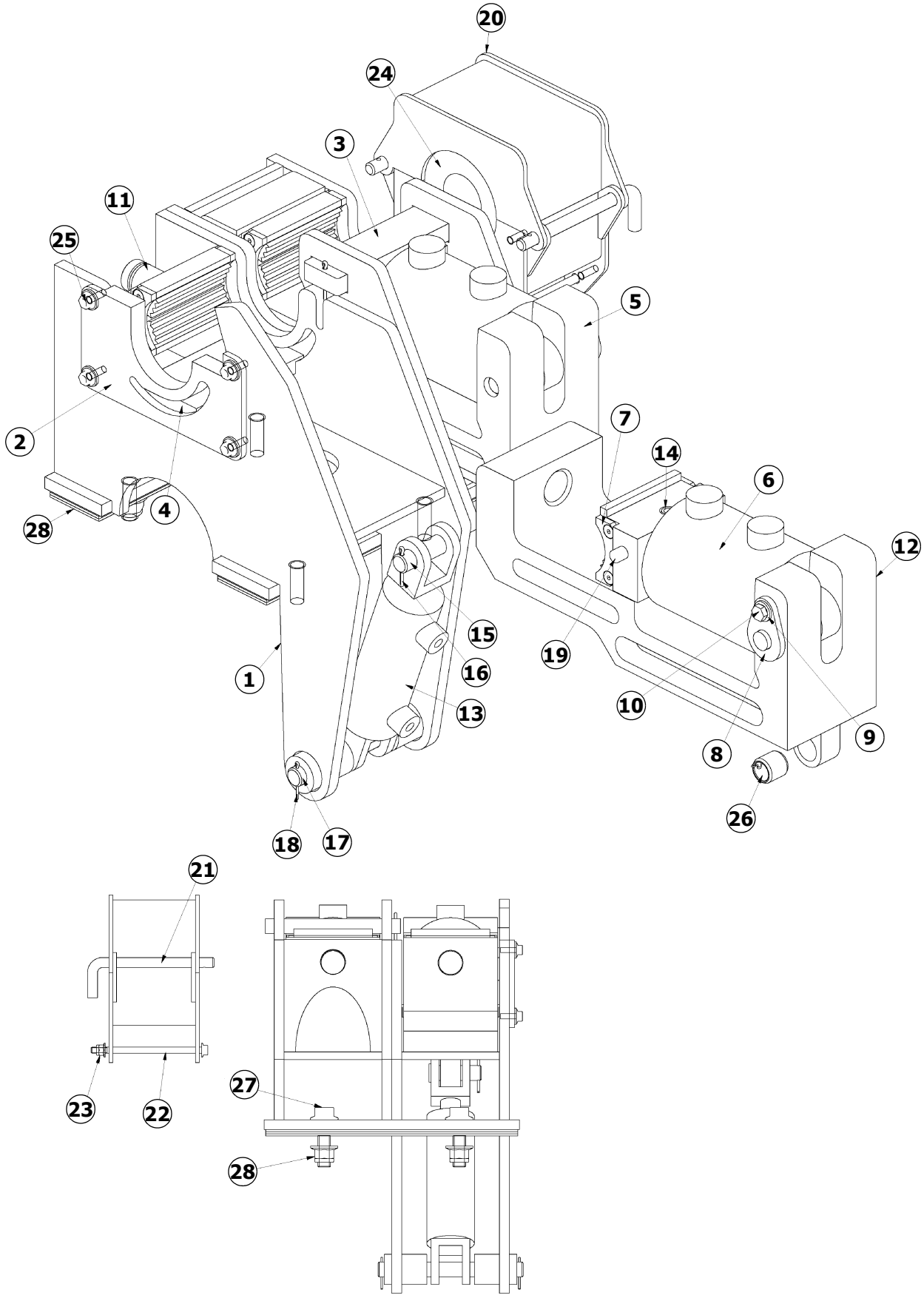

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ROTARY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU110588	ASSEMBLY - Rotary	1
1	12GB4403	WELDMENT - Rotary Box	1
2	12GB4412	PLATE - Bearing Cap	1
3	8HS11033	SEAL - Shaft, 2.438" x 3.35" Diameter	2
4	8HM24051	MOTOR - 6000 Series	1
5	8PP70008	PLUG - Site Glass	1
6	12GB4450	ASSEMBLY - Top Plate	1
7	AU100876	SCREW, METRIC FLANGE w/BODY - M10 x 25	7
8	12GB4460	GEAR - Pinion	1
9	8CF40011	BEARING - Ball, 6211	1
10	12GB4461	PLATE - Retaining	1
11	8CF63017	BEARING - Cup, 5" OD, HM813810	2
12	8CF63016	BEARING - Cone, 2.5" ID, HM813842	2
13	12GB4420	SPINDLE - Rotary, 2-3/8" Astec	1
14	12GB4465	GEAR - A4150 RS HT OR 4140 HT STEEL 269	1
15	AU100332	SCREW, METRIC FLANGE w/BODY - M10 x 45	8
16	AU100830	SCREW, METRIC FLANGE w/BODY - M12 x 40	4
17	12GB4480	FLANGE - Drive Chuck	1
18	12GB4455	KEY - 1" x 1" x 2"	1
19	12GB4456	KEY - 3/8" x 3/8" x 1.6" Long	1
20	495-21056	WASHER - .562 x 1.375 x .109 in CST ZND	1
21	AU110608	BRACKET - Mud Swivel	1
22	AU110587	MOUNT - Hose Carrier, Rotary	1
23	AU100875	SCREW, METRIC FLANGE w/BODY - M10 x 20	4
24	218-5207	PLUG - Soc Hd Orb 1/4	1
25	31543	BREATHER	1
26	496-21053	WASHER - .531 x 1.062 x .134 in HDN ZND	1
27	426-612	BOLT - Hex Hd .375 x .750 GR8 ZND	1
28	217-1006	ADAPTER - 1" NPT Fem to 3/4" NPT Male	1
29	12GB4210	SWIVEL - Rotary	1
30	496-21041	WASHER - .406 x 0.812 x .089 in Hdn ZND	6
31	426-624	BOLT - Hex Hd .375 x 1.50 GR8 ZND	6

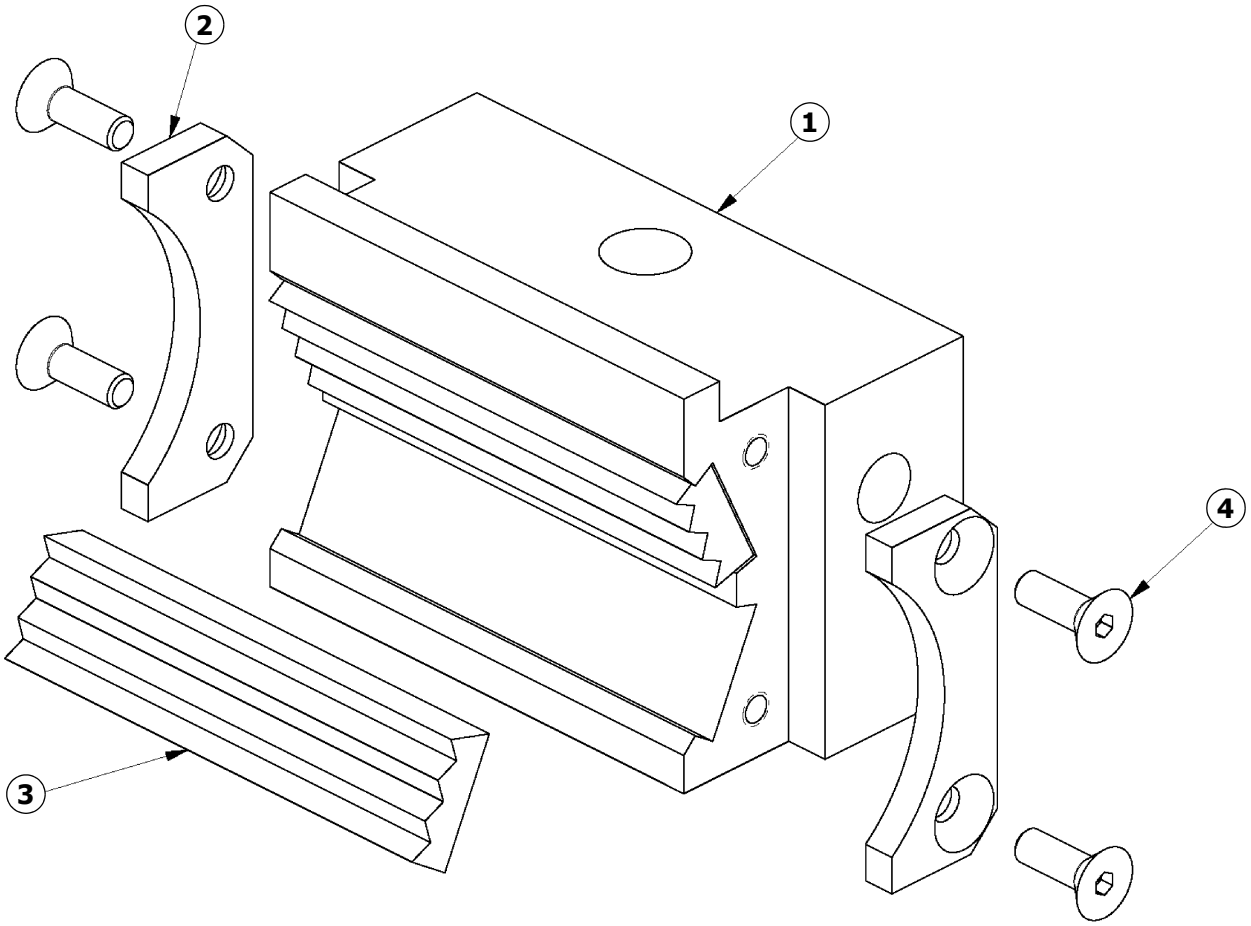
NOTE: Shim bearings to achieve 180 inlb (15 ft lbs) on spindal shaft. This is equal to .004 preload.

32	12GB4425-001	SHIM - .001"	UAR
33	12GB4425-003	SHIM - .003"	UAR
34	12GB4425-005	SHIM - .005"	UAR
35	12GB4425-010	SHIM - .010"	UAR


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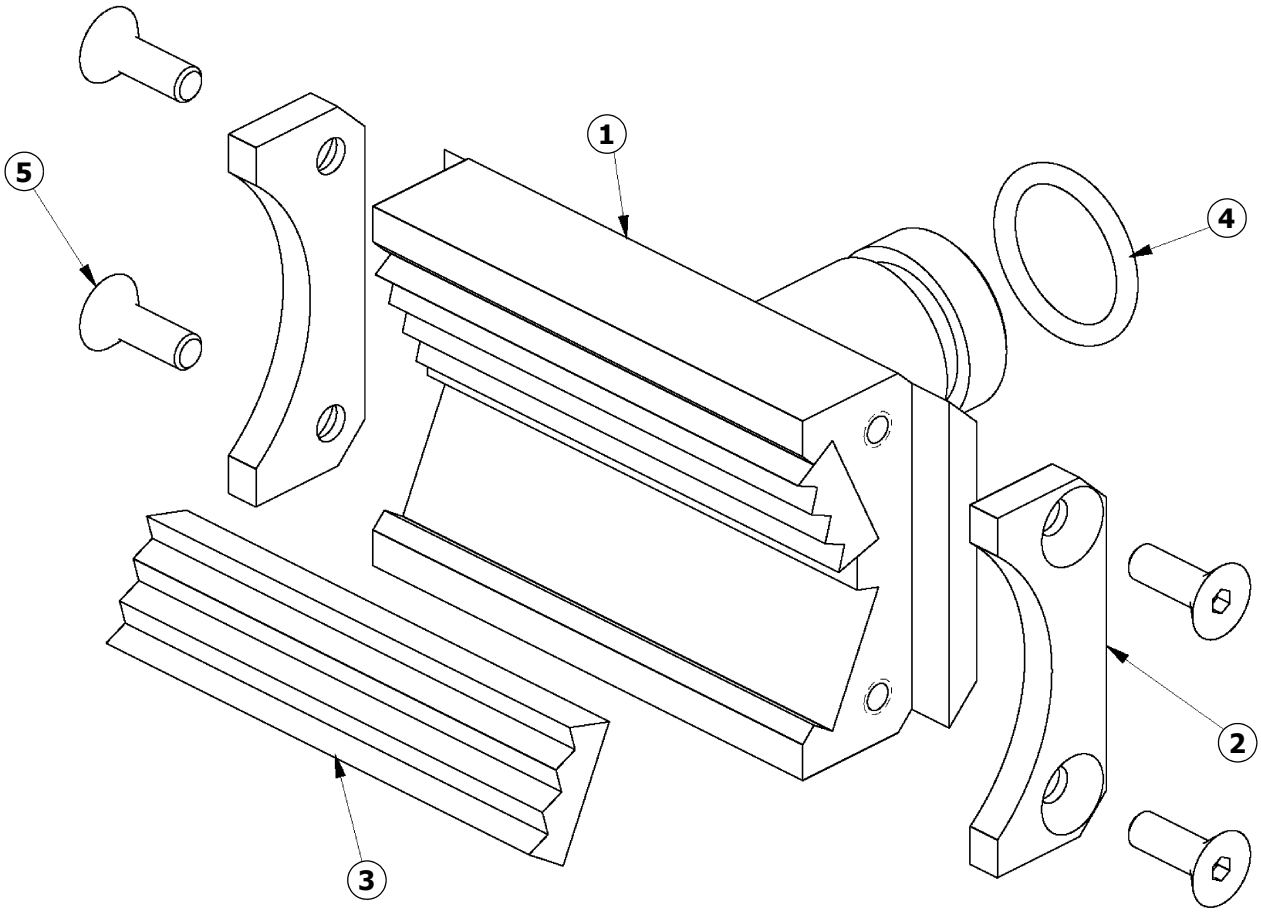
WRENCH

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU110488	ASSEMBLY - Wrench	1
1	12GB6001	WELDMENT - Wrench, DD1215	1
2	12GB6010	RETAINER - Pivot Key, Wrench	1
3	12GB6015	PIN - Retaining, Die Holder	1
4	12GB6014	KEY - Pivot, Wrench	1
5	12GB6046	BASE - Fixed Clamp, Wrench	1
6	8HC40175	CYLINDER - Hydraulic, 4" Bore x 1.75" Stroke	2
7	12GB6020	ASSEMBLY - Die Holder, Moving	2
8	12GB6055	PIN - Cylinder, Clamp	2
9	496-21041	WASHER - .406 x 0.812 x .089 in HDN ZND	6
10	426-612	BOLT - Hex Hd .375 x .750 GR8 ZND.	2
11	12GB6025	ASSEMBLY - Die Holder, Fixed	2
12	12GB6041	ROTATING CLAMP - Wrench	1
13	8HC21004	CYLINDER - Hydraulic, 2" Bore x 4" Stroke, Prince AU0206	1
14	12GB6056	PIN - Spring, 1/2" x 2-3/4"	2
15	AU109885	PIN - .75 x 2.5" Clevis	1
16	432-820	PIN - Cotter, .125 x 1.25 in ZN	2
17	12GB6057	PIN - Cylinder, 3/4" x 7-1/4"	1
18	432-620	PIN - Cotter, .094 x 1.25 in ZN	2
19	8CT61601	DOWELL - 1/2 x 1	1
20	12GB2073	ASSEMBLY - Drill Guide	1
21	8CP73205	PIN - Hitch, 1/2 x 5.	2
22	AU109985	SCREW, METRIC FLANGE w/BODY - M8 x 140	2
23	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	2
24	12GB6304	GUIDE - Bushing	1
25	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	4
26	AU109676	SPRING BUSHING - .75" ID x 1.0" x 1.0" Long.	1
27	AU100362	SCREW, METRIC FLANGE w/BODY - M16 x 60	4
28	AU112270	PLATE - Shim	6
29	AU100529	NUT, METRIC FLANGE PREVAILING - M16 Zinc	4


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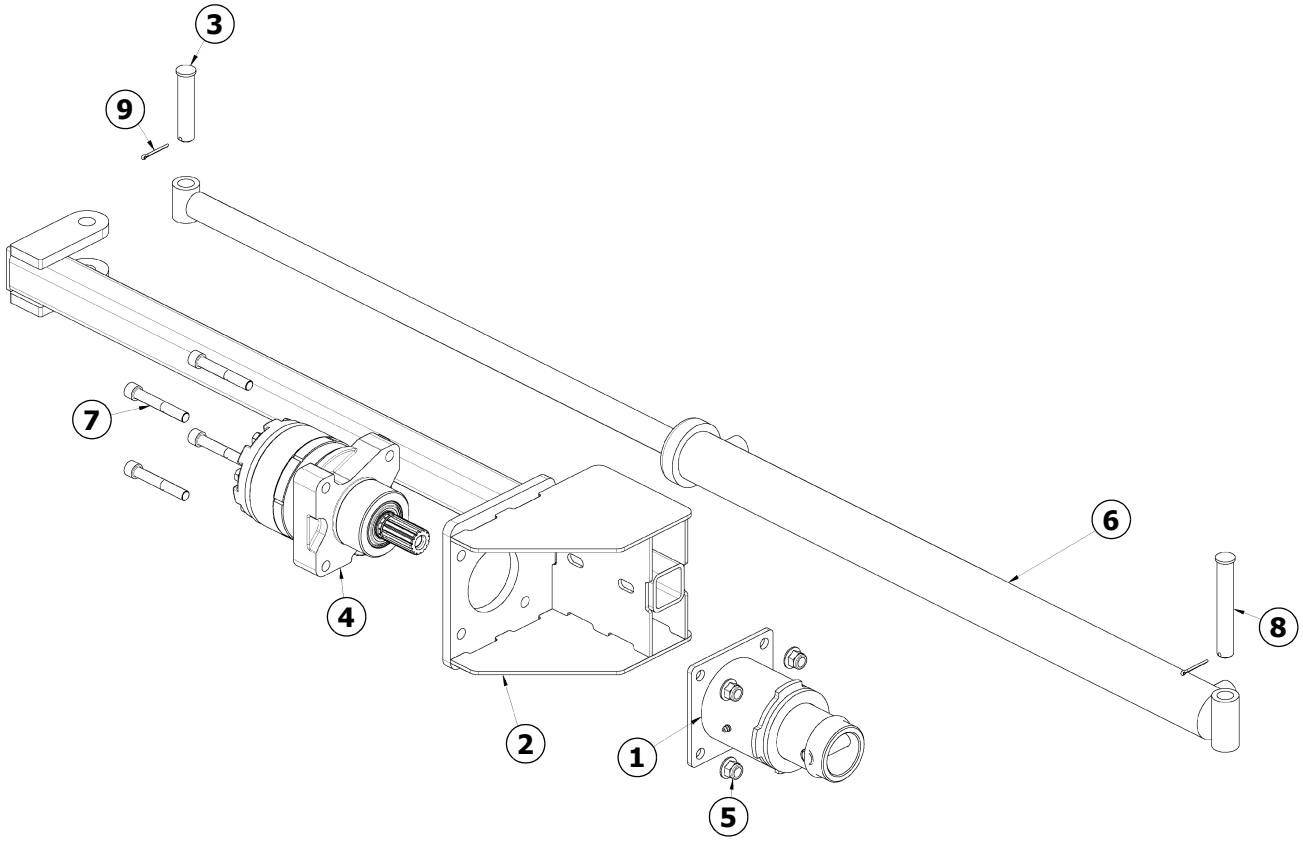
DIE HOLDER - MOVING

REF.	PART NO.	DESCRIPTION	REQ'D.
	12GB6020	ASSEMBLY - Die Holder, Moving	1
1	12GB6021	BLOCK - Die Holder	1
2	12GB6027	PLATE - End Cap	2
3	12GB6036	DIE - 3/8 x 1 x 3-7/8	2
4	461-42512	SCREW - Hex Soc Flh 1/4 UNRC x .75 ZND	4


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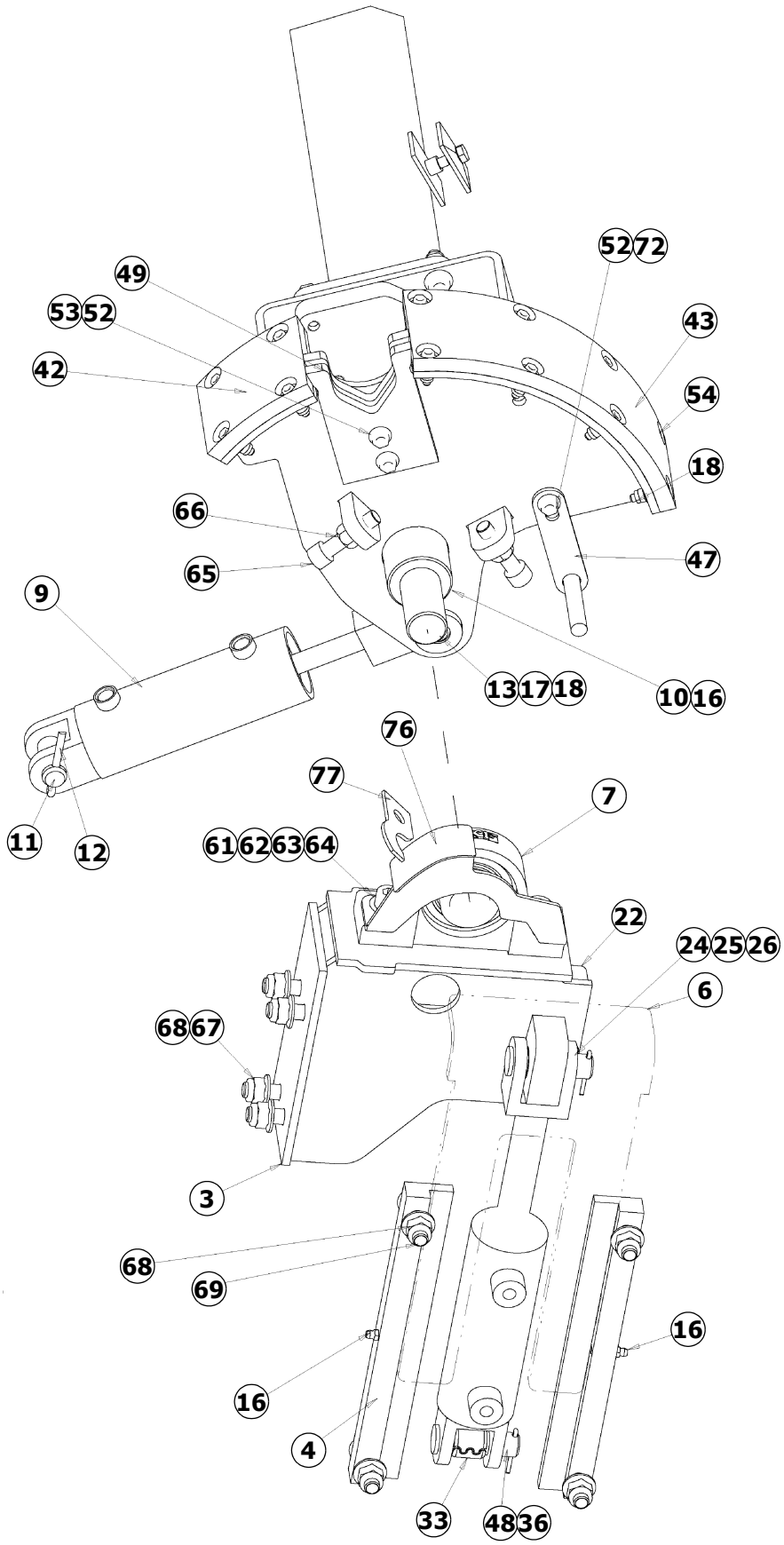
DIE HOLDER - FIXED

REF.	PART NO.	DESCRIPTION	REQ'D.
	12GB6025	ASSEMBLY - Die Holder, Fixed	1
1	12GB6026	BLOCK - Die Holder	1
2	12GB6027	PLATE - End Cap	2
3	12GB6036	DIE - 3/8 x 1 x 3-7/8	2
4	8HS51214	O-RING - Size 214	1
5	461-42512	SCREW - Hex Soc Flh 1/4 UNRC x .75 ZND	4


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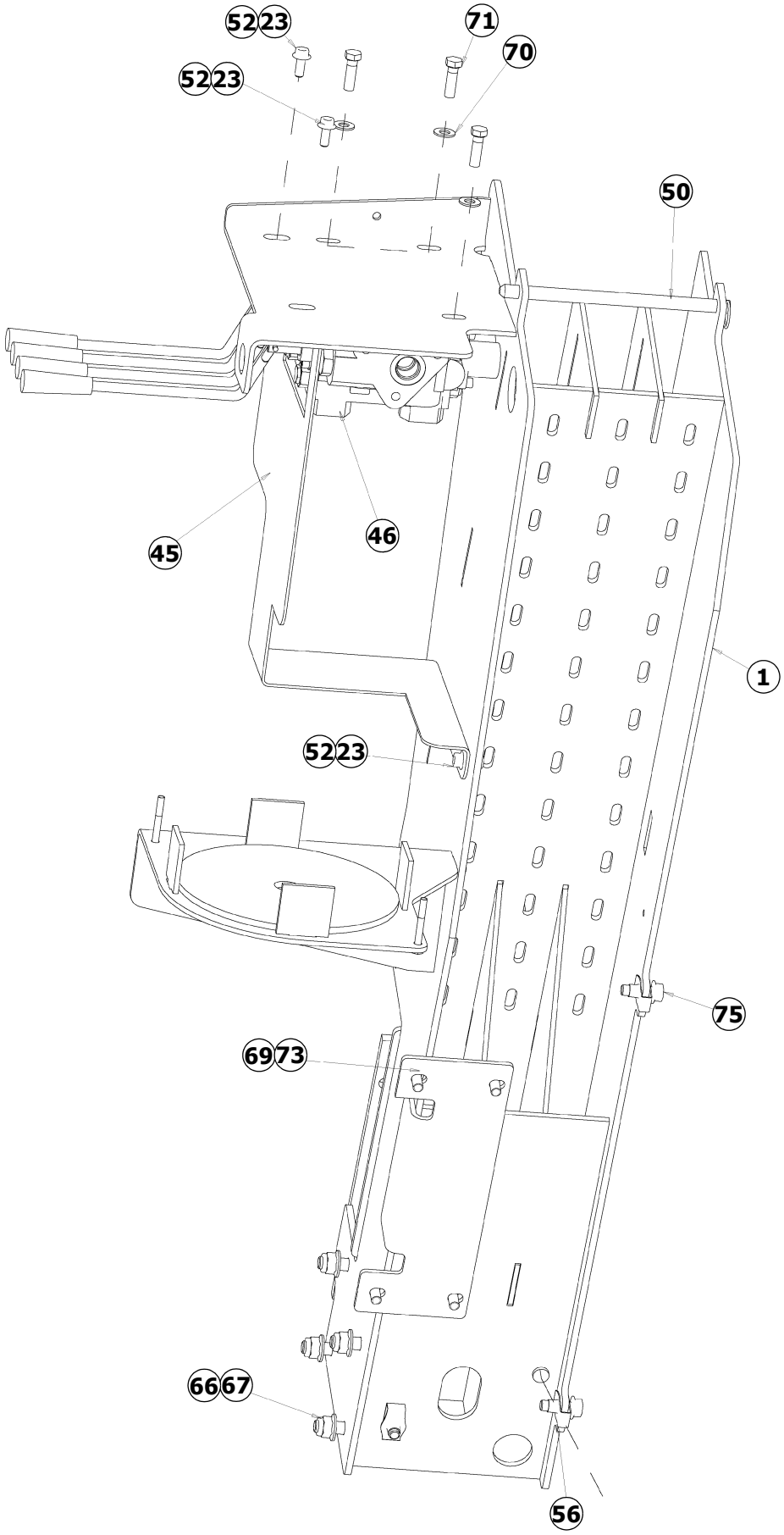
STAKEDOWN ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	12GB7501	ASSEMBLY - Stakedown	1
1	12GB7507	ASSEMBLY - Coupling, Stake, DD1215	1
2	12GB7508	WELDMENT - Stake Down, DD1215	1
3	AU110281	PIN - .75 x 3.5" Clevis	1
4	8HM24055	MOTOR - Hydraulic, LSHT, 28.3 CIR, 14T	1
5	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	4
6	8HC20030	CYLINDER - Hydraulic, 2" Bore x 30" Stroke	1
7	864-12080	SCREW - Cap, Socket Head M12 x 80 Class 8.8 Znd	4
8	AU110282	PIN - .75 x 5" Clevis	1
9	432-820	PIN - Cotter .125 x 1.25 in ZN	2
10	12MB00003	STAKE - not shown	2


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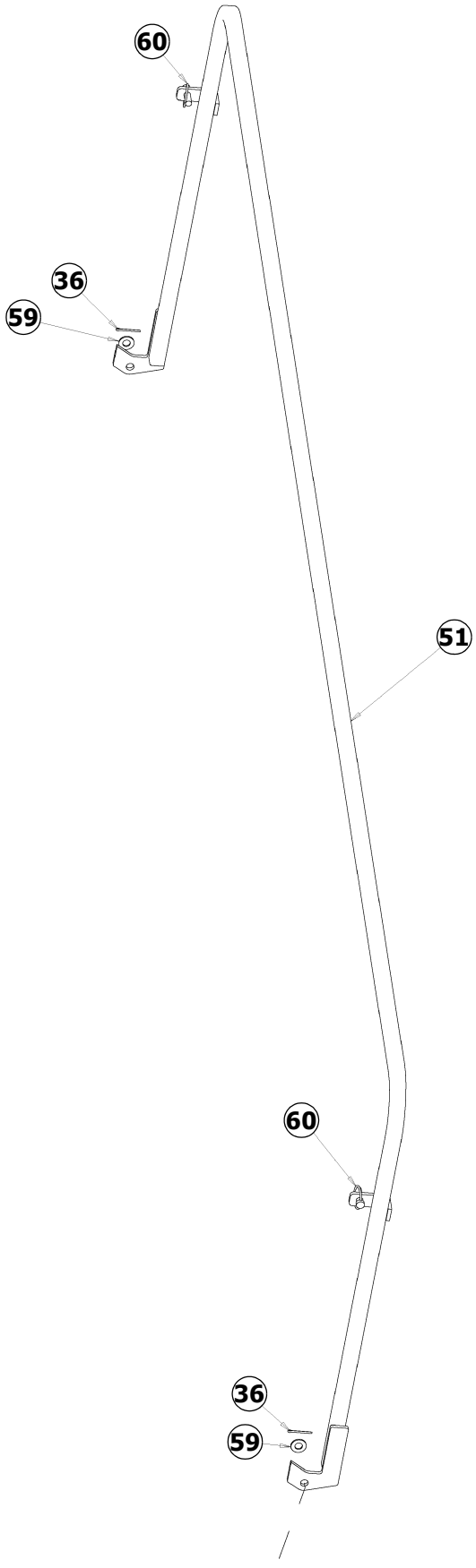
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
3	AU109966	ASSEMBLY - Bearing Mount	1
4	12GB2036	PLATE - Elevator Guide	2
6	12GB2035	ASSEMBLY - Elevator	1
7	AU109963	BEARING - 1.25" Pillow	1
9	8HC20005	CYLINDER - Hydraulic	1
10	12GB7338	BLOCK - Rod End	2
11	H30262	PIN - Clevis	1
12	432-1628	PIN - Cotter .250 x 1.75 in ZN	1
13	AU109680	PIN - Straight	2
16	219-8	FITTING - Lube 1/4 - 28 TPR SAE-LT .54 Lg	4
17	AU109721	SCREW, METRIC FLANGE w/BODY - M6 x 50	2
18	AU100525	NUT, METRIC FLANGE PREVAILING - M6 Zinc	14
22	8EP65159	SWITCH - Proximity	1
24	470-11016	SCREW - PHd Sltd # 10 - 24 x 1.00 CST ZND	2
25	495-31020	WASHER - .203 x 0.469 x .049 in CST ZND	2
26	231-14409	NUT - Prev Trq # 10 GR8 ZND Insert	2
33	AU109676	SPRING BUSHING - .75" ID x 1.00" OD x 1.00" L	2
36	432-820	PIN - Cotter .125 x 1.25 in ZN	1
42	12GB7316	PLATE - 1/2 x 3-1/2 x 10-3/4 L	1
43	12GB7315	PLATE - 1/2 x 3-1/2 x 10-3/4 L	1
47	12GB7339	ASSEMBLY - Sensor Flag	1
48	AU109885	PIN - .75 x 2.5" Clevis	2
49	AU111864	PLATE - Pipe Guide 1.9	2
52	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	5
53	AU100319	SCREW, METRIC FLANGE w/BODY - M8 x 40	4
54	AU100870	SCREW, METRIC FLANGE w/BODY - M6 x 25	12
61	496-21053	WASHER - .531 x 1.062 x .134 in HDN ZND	4
62	461-35032	SCREW - Soc Hd .500 - 13 UNRC x 2.00 ZNd	2
63	492-11050	WASHER - Spring Lock Reg .500 in ZND	2
64	425-108	NUT - Hex .500 - 13 GR5 ZND	2
65	864-12050	SCREW - Soc Hd M12 x 50 Class 8.8 ZND	4
66	829-1412	NUT - M12 Class 10 Zinc	4
67	AU100416	SCREW, METRIC FLANGE FULL - M12 x 35	4
68	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	8
69	AU100418	SCREW, METRIC FLANGE FULL - M12 x 50	4
72	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	1
76	AU111657	ASSEMBLY - Row Decal Mount	1
77	AU111660	PLATE - Pointer	1


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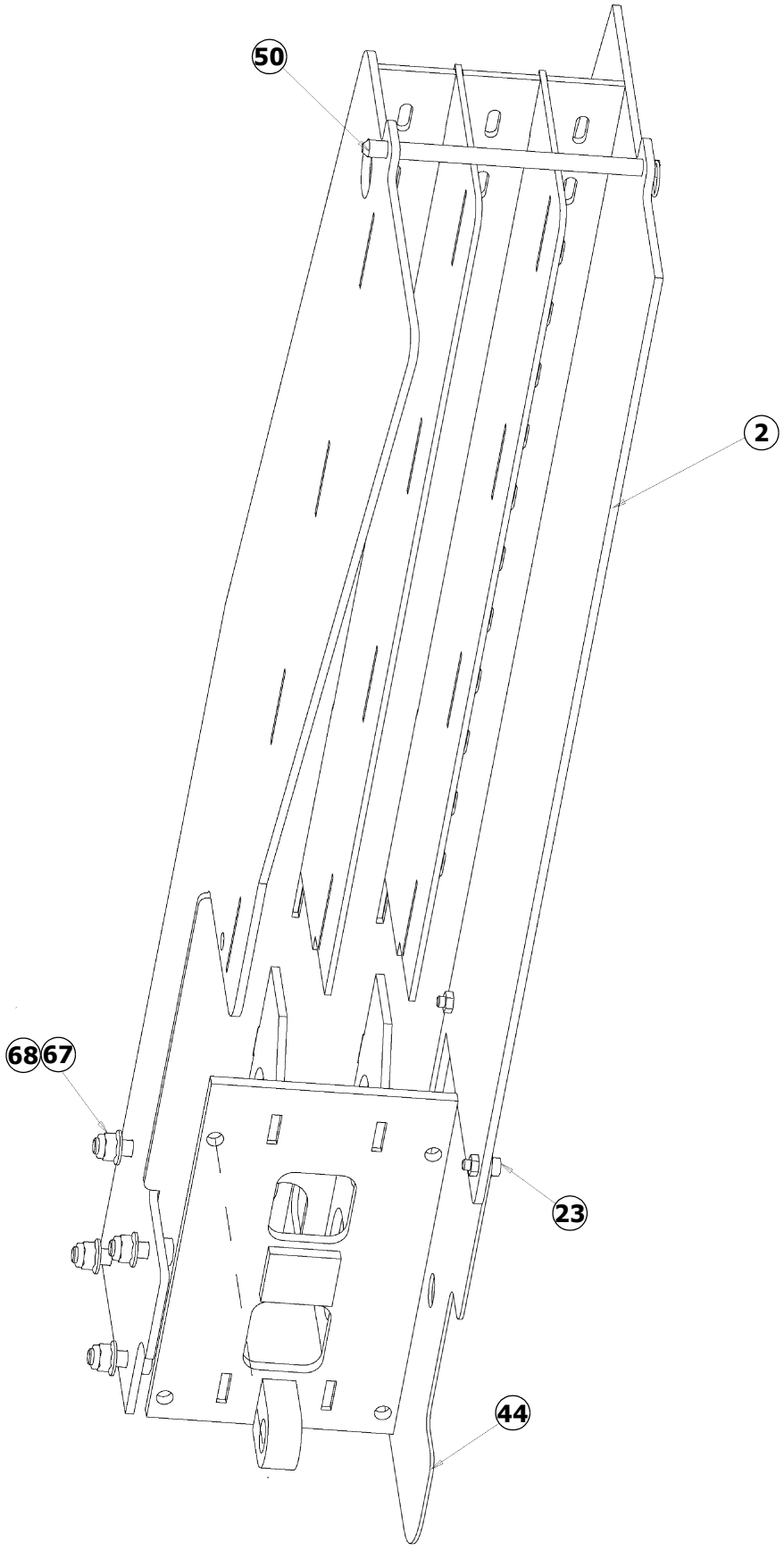
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
1	AU110491	ASSEMBLY - Front Rod Box	1
23	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	3
45	AU109816	PLATE - Guard	1
46	8HV80159	VALVE - Stakedown	1
50	AU109894	PIN - 1/2 x 8"	1
52	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	3
56	AU100863	NUT - Clip	3
67	AU100416	SCREW, METRIC FLANGE FULL - M12 x 35	4
68	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	4
70	495-11041	WASHER - .406 x 0.812 x .065 in CST ZND	7
71	426-620	BOLT - Hex Hd .375 x 1.25 GR8 ZND	3
73	426-612	BOLT - Hex Hd .375 x .750 GR8 ZND	4
75	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	3


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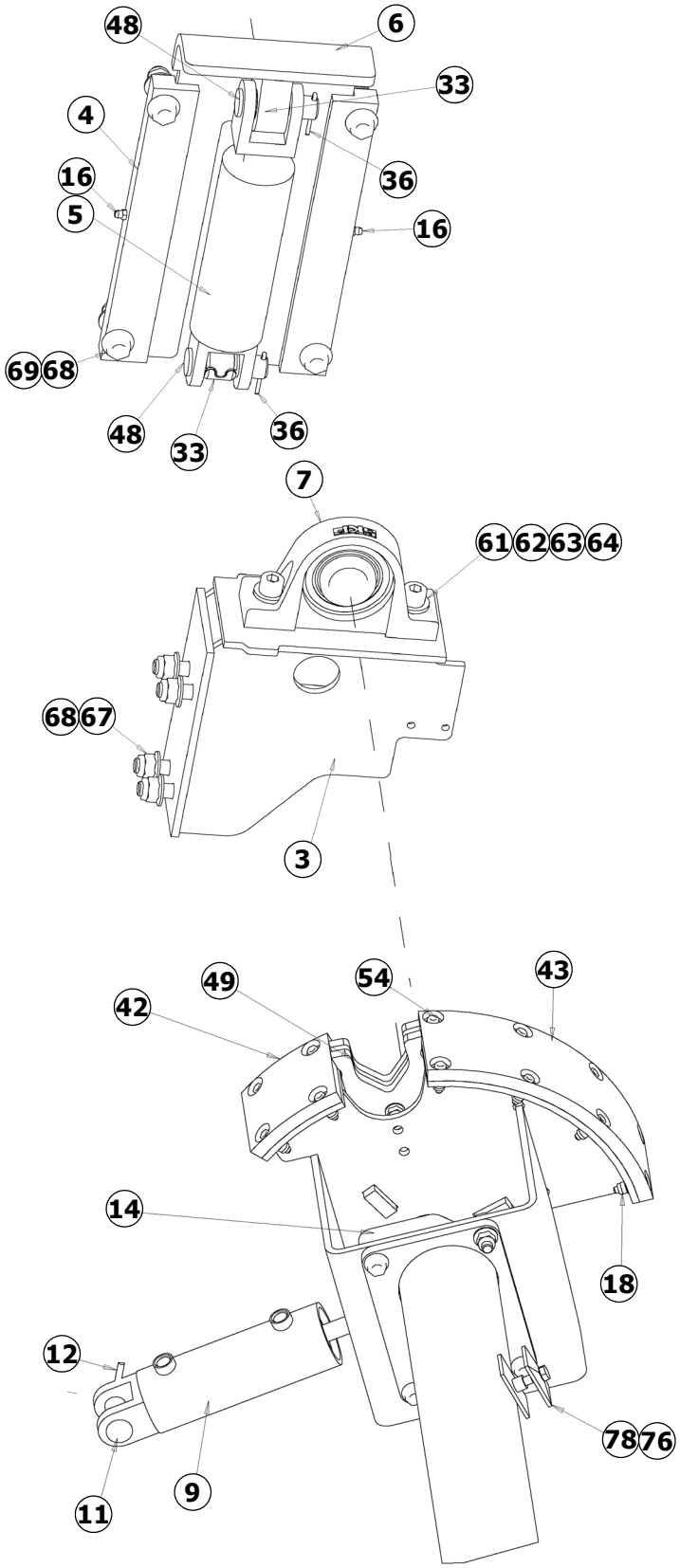
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
36	432-820	PIN - Cotter .125 x 1.25 in ZN	2
51	AU109905	ASSEMBLY - Guard	1
59	495-11053	WASHER - .531 x 1.062 x .095 in CST ZND	2
60	AU109970	PIN - Snap Ring	2


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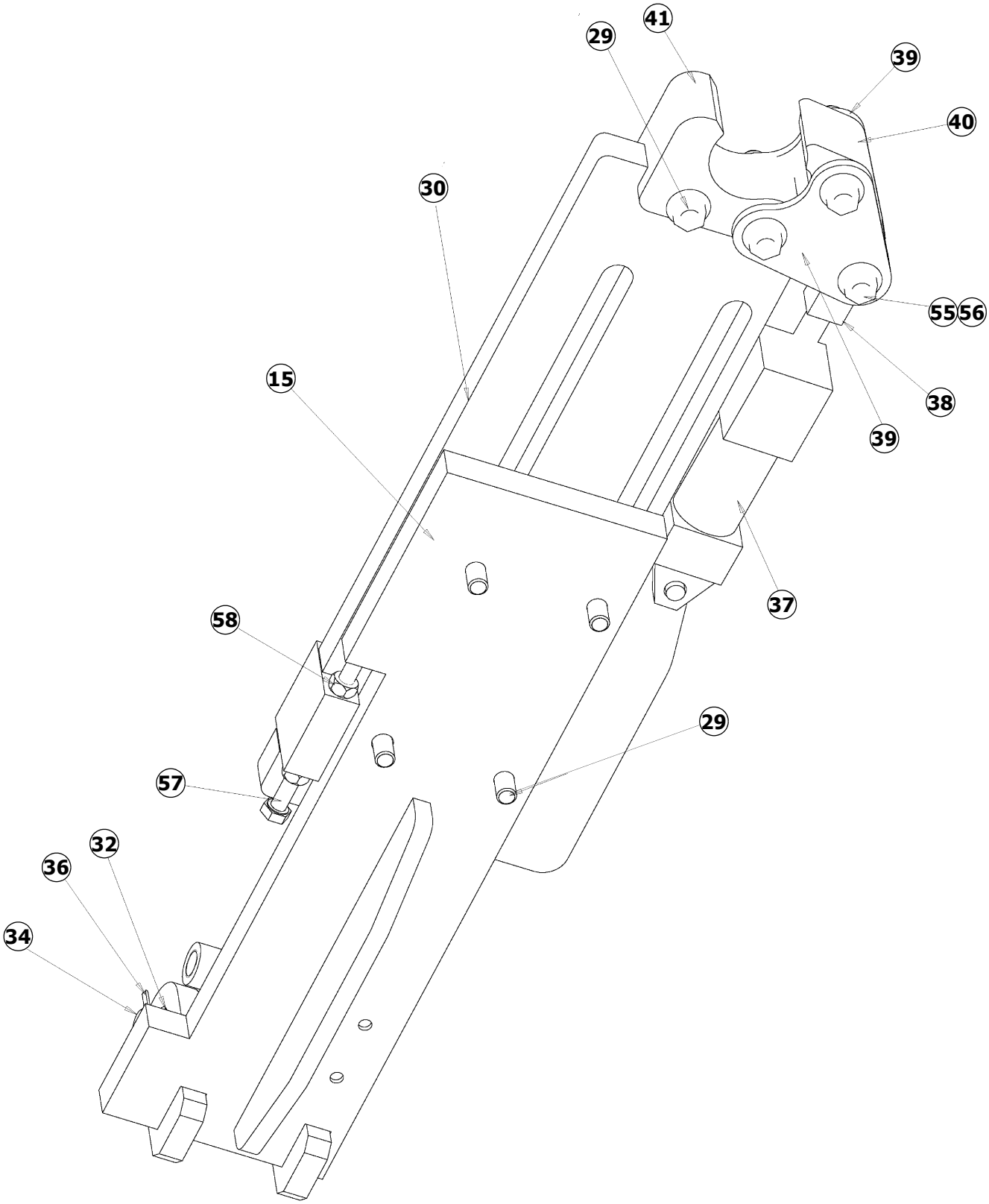
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
2	AU110492	WELDMENT - Rear Rod Box	1
23	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	6
44	12GB7390	PLATE - Guard	2
50	AU109894	PIN - 1/2 x 8"	1
67	AU100416	SCREW, METRIC FLANGE FULL - M12 x 35	4
68	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	4


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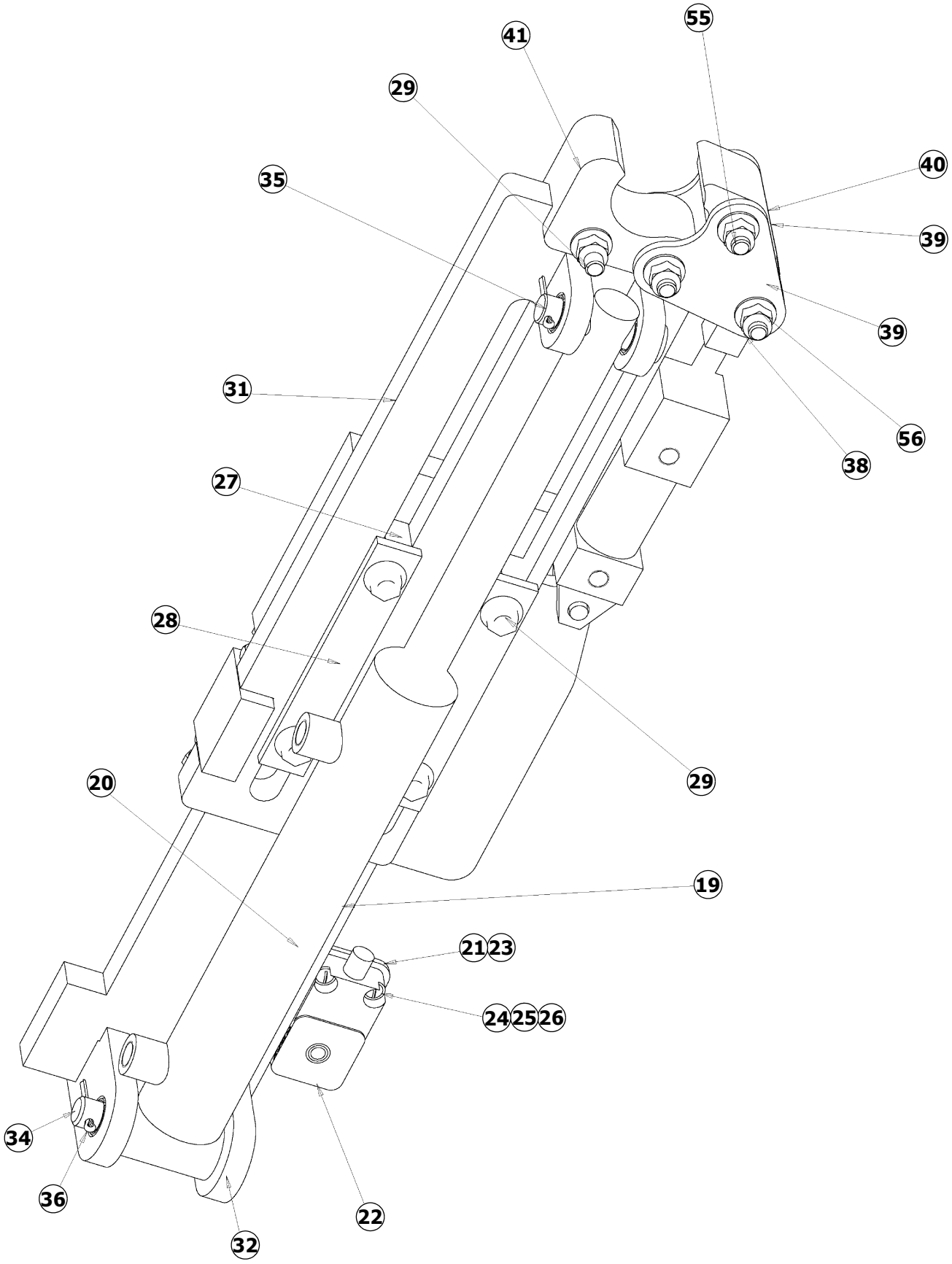
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
3	AU109966	ASSEMBLY - Bearing Mount	1
4	12GB2036	PLATE - Elevator Guide	2
5	8HC21004	CYLINDER - 2" B x 4"	2
6	12GB2035	ASSEMBLY - Elevator	1
7	AU109963	BEARING - 1/25" Pillow	1
9	8HC20005	CYLINDER - Hydraulic	1
11	H030262	PIN - Clevis	1
12	432-1628	PIN - Cotter .250 x 1.75 in ZN	1
14	AU109578	PLATE - Spacer	2
16	219-8	FITTING - Lube 1/4 - 28 TPR SAE-LT .54 Lg	2
18	AU100525	NUT, METRIC FLANGE PREVAILING - M6 Zinc	12
33	AU109676	SPRING BUSHING - .75" ID x 1.00" OD x 1.00" L	2
36	432-820	PIN - Cotter .125 x 1.25 in ZN	2
42	12GB7316	PLATE - 1/2 x 3-1/2 x 3-13/16	1
43	12GB7315	PLATE - 1/2 x 3-1/2 x 10-3/4 L	1
48	AU109885	PIN - .75 x 2.5" Clevis	2
49	AU111864	PLATE - Pipe Guide 1.9	2
54	AU100870	SCREW, METRIC FLANGE w/BODY - M6 x 25	12
61	496-21053	WASHER - .531 x 1.062 x .134 in HDN ZND	4
62	461-35032	SCREW - Soc Hd .500 - 13 UNRC x 2.00 ZND	2
63	492-11050	WASHER - Spring Lock Reg .500 in ZND	2
64	425-108	NUT - Hex .500 - 13 GR5 ZND	2
67	AU100416	SCREW, METRIC FLANGE FULL - M12 x 35	4
68	AU100528	NUT, METRIC FLANGE PREVAILING - M12 Zinc	8
69	AU100418	SCREW, METRIC FLANGE FULL - M12 x 50	4
78	8CL21201	T2-TCP Twin Cover	4
79	426-520	BOLT - Hex Hd .312 x 1.25 GR8 ZND	4


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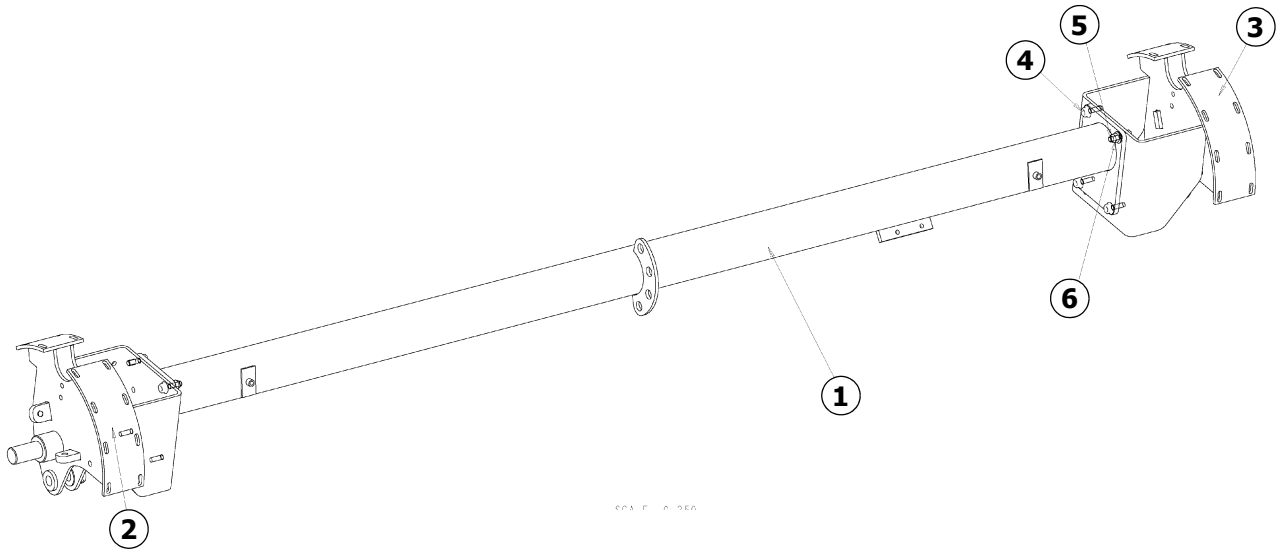
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
15	AU109581	ASSEMBLY - Spacer	1
29	AU100335	SCREW, METRIC FLANGE w/BODY - M10 x 60	5
30	AU109586	ASSEMBLY - Slider Extension	1
32	AU109762	SPRING CUSHION - .75" ID x 1.00" OD x 1.00" L	4
34	AU109771	PIN - Clevis	1
36	432-820	PIN - Cotter .125 x 1.25 in ZN	2
37	8HC10125	CYLINDER - Hydraulic	2
38	12GB7347	BLOCK - Rod Eye	1
39	12GB7379	PLATE - Gripper	2
40	20GB7359	INSERT - Gripper	1
41	20GB7358	INSERT - Gripper	1
55	AU100336	SCREW, METRIC FLANGE w/BODY - M10 x 65	3
56	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	4
57	614-8035	BOLT - Thd to Hd M8 x 35 CL 8.8 ZND	4
58	825-1408	NUT - M8 Class 8 ZND	4


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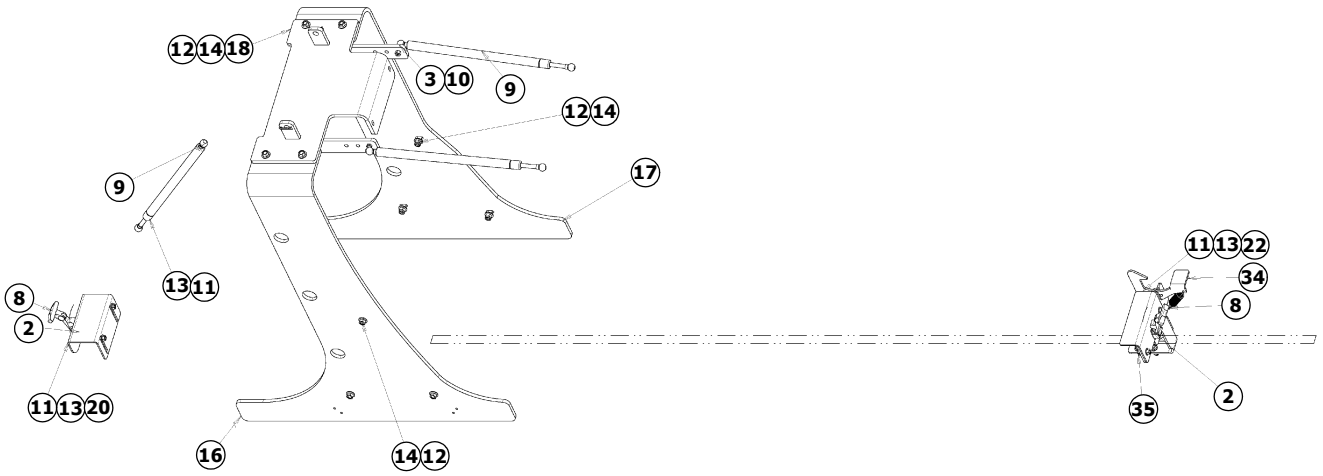
ROD LOADER ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109104	ASSEMBLY - Rod Loader	1
19	AU109731	ASSEMBLY - Extension Arm	1
20	8HC10008	CYLINDER - Hydraulic	2
21	12GB7334	PLATE - Sensor Mount	1
22	8EP65159	SWITCH - Proximity	1
23	AU100872	SCREW, METRIC FLANGE w/BODY - M8 x 20	2
24	470-11016	SCREW - PHd Sltd #10 - 24 x 1.00 CST ZND	2
25	495-31020	WASHER - .203 x 0.469 x .049 in CST ZND	2
26	231-14409	NUT - Prev Trq # 10 GRB ZND Insert	2
27	12GB7342	PLATE - Guide	4
28	12GB7343	PLATE - Cap	4
29	AU100335	SCREW, METRIC FLANGE w/BODY - M10 x 60	5
31	AU109758	ASSEMBLY - Slider Extension	1
32	AU109762	SPRING BUSHING - .75" ID x 1.00" OD x 1.00" L	4
34	AU109771	PIN - Clevis	1
35	H32920	PIN - Clevis	2
36	432-820	PIN - Cotter .125 x 1.25 in ZN	2
38	12GB7347	BLOCK - Rod Eye	1
39	12GB7379	PLATE - Gripper	2
40	20GB7359	INSERT - Gripper	1
41	20GB7358	INSERT - Gripper	1
55	AU100336	SCREW, METRIC FLANGE w/BODY - M10 x 65	3
56	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	4


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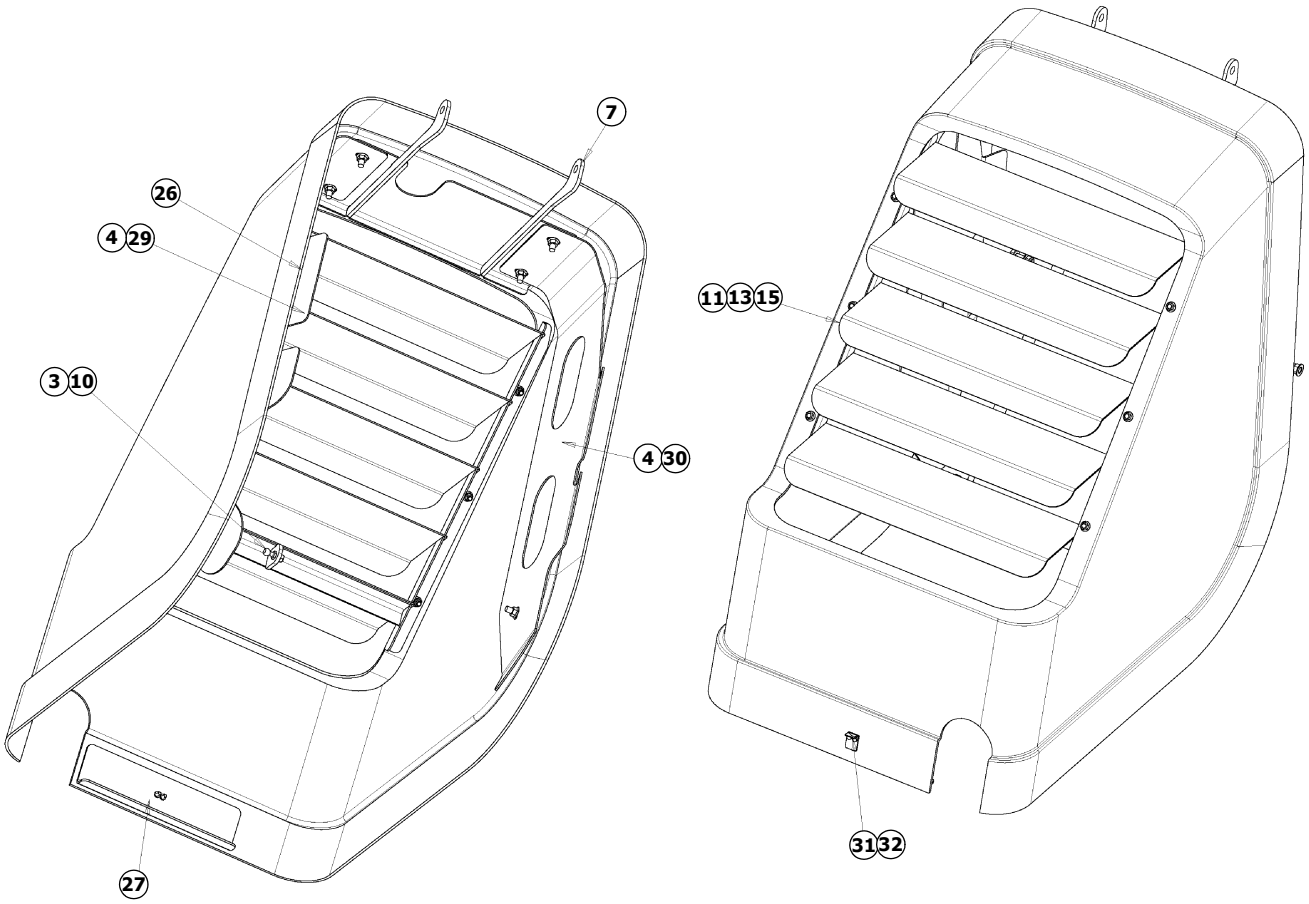
CAM ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU109120	ASSEMBLY - Cam.	1
1	AU109516	ASSEMBLY - Rod Loader Spine	1
2	AU109517	ASSEMBLY - Cam.	1
3	AU110318	ASSEMBLY - Cam.	1
4	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	8
5	AU100878	SCREW, METRIC FLANGE w/BODY - M10 x 35	2
6	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	2


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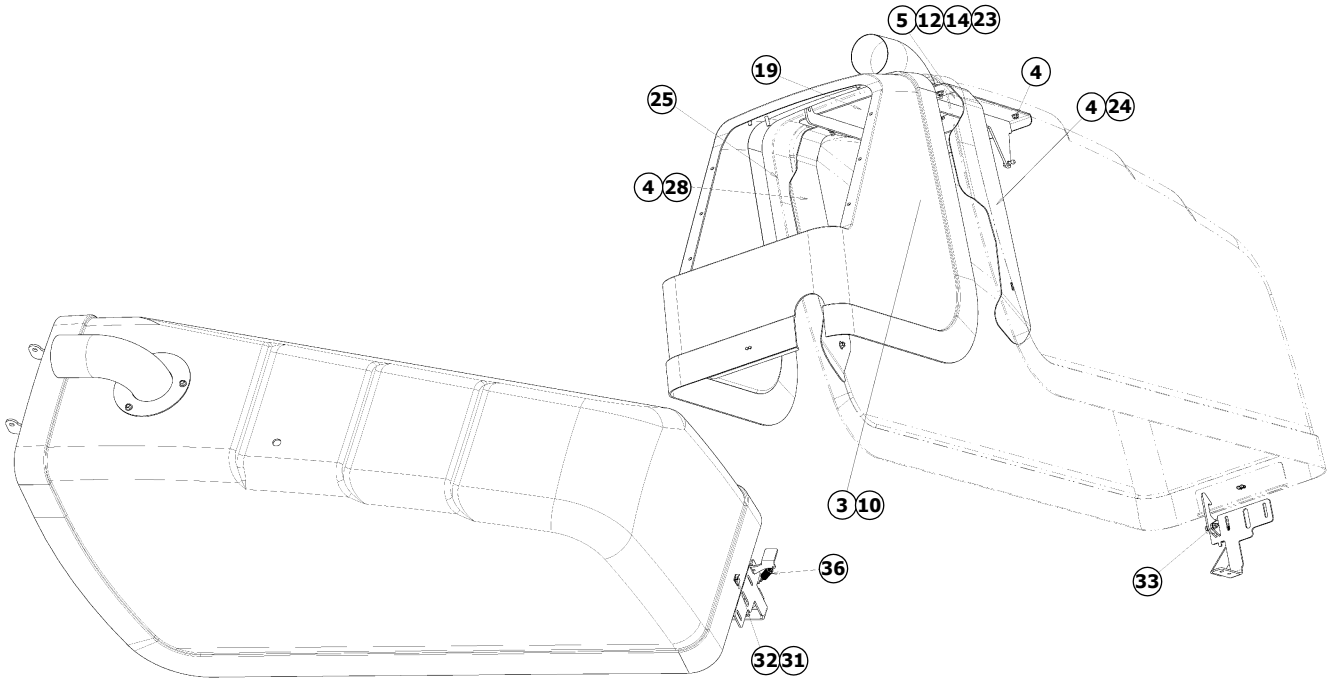
ENGINE ENCLOSURE SUPPORT AND STOPS

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108265	ASSEMBLY - Engine Enclosure	1
2	151-559	RIVET - Blind Brk Mdrl .187 x .700 in ZND	4
3	231-4145	NUT - Prev Trq 5/16 GRB ZND Direct	2
8	235363A1	LATCH - Flexible Draw	2
9	32GB5110	CYLINDER - Gas	3
10	8HH96100	STUD - Pivot	5
11	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	6
12	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	10
13	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	6
14	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	10
16	AU108376	PLATE - Hood Mount	1
17	AU108377	PLATE - Hood Mount	1
18	AU109125	ASSEMBLY - Shroud Support	1
20	AU109344	STOP - Rear Hood	1
22	AU109350	STOP - Front Hood	1
34	AU111869	LATCH - Hood Safety	1
35	AU111871	MOUNT - Hood Safety Latch	1


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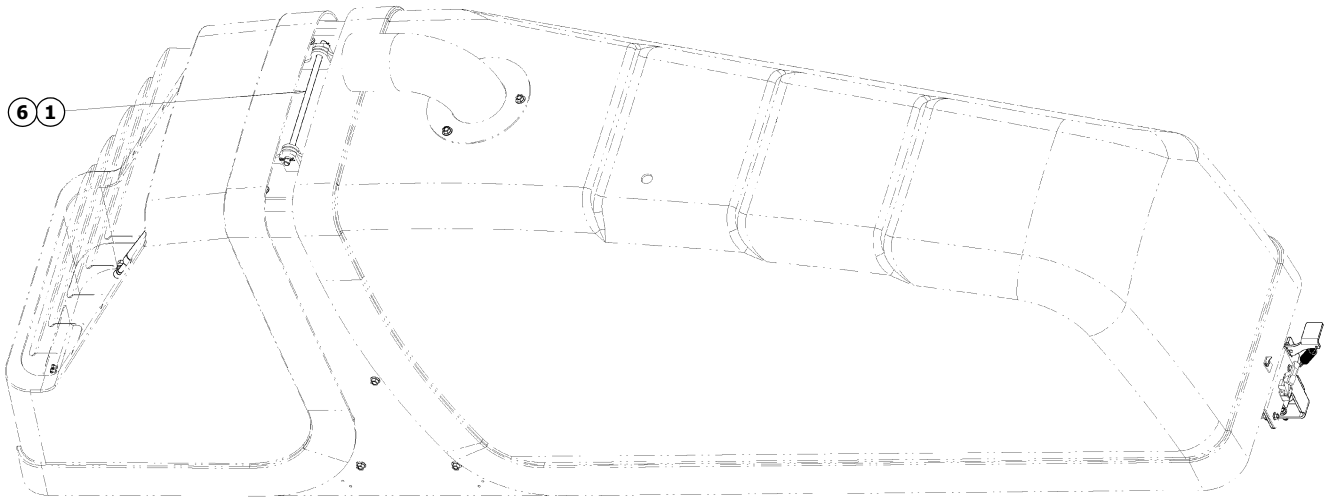
ENGINE ENCLOSURE REAR HOOD

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108265	ASSEMBLY - Engine Enclosure	1
3	231-4145	NUT - Prev Trq 5/16 GRB ZND DIRECT	1
4	231-5146	NUT - Serr Flg 3/8 - 16 UNC GR5 ZND	6
7	12GB3112	ASSEMBLY - Rear Hood Mount	1
10	8HH96100	STUD - Pivot	1
11	AU100526	NUT, METRIC FLANGE PREVAILING - M8 Zinc	7
13	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	6
15	AU108370	ASSEMBLY - Louver	1
26	AU110192	ASSEMBLY - Rear Hood	1
27	AU110276	PLATE - Backing	1
29	AU110289	PLATE - Guide	1
30	AU110290	PLATE - Guide	1
31	193-1004	NUT, KEPS - Ext T Wshr #10 - 24 UNC ZP	2
32	363-11014	SCREW - Hex Hd #10 - 24 x .875 CST PHC	2


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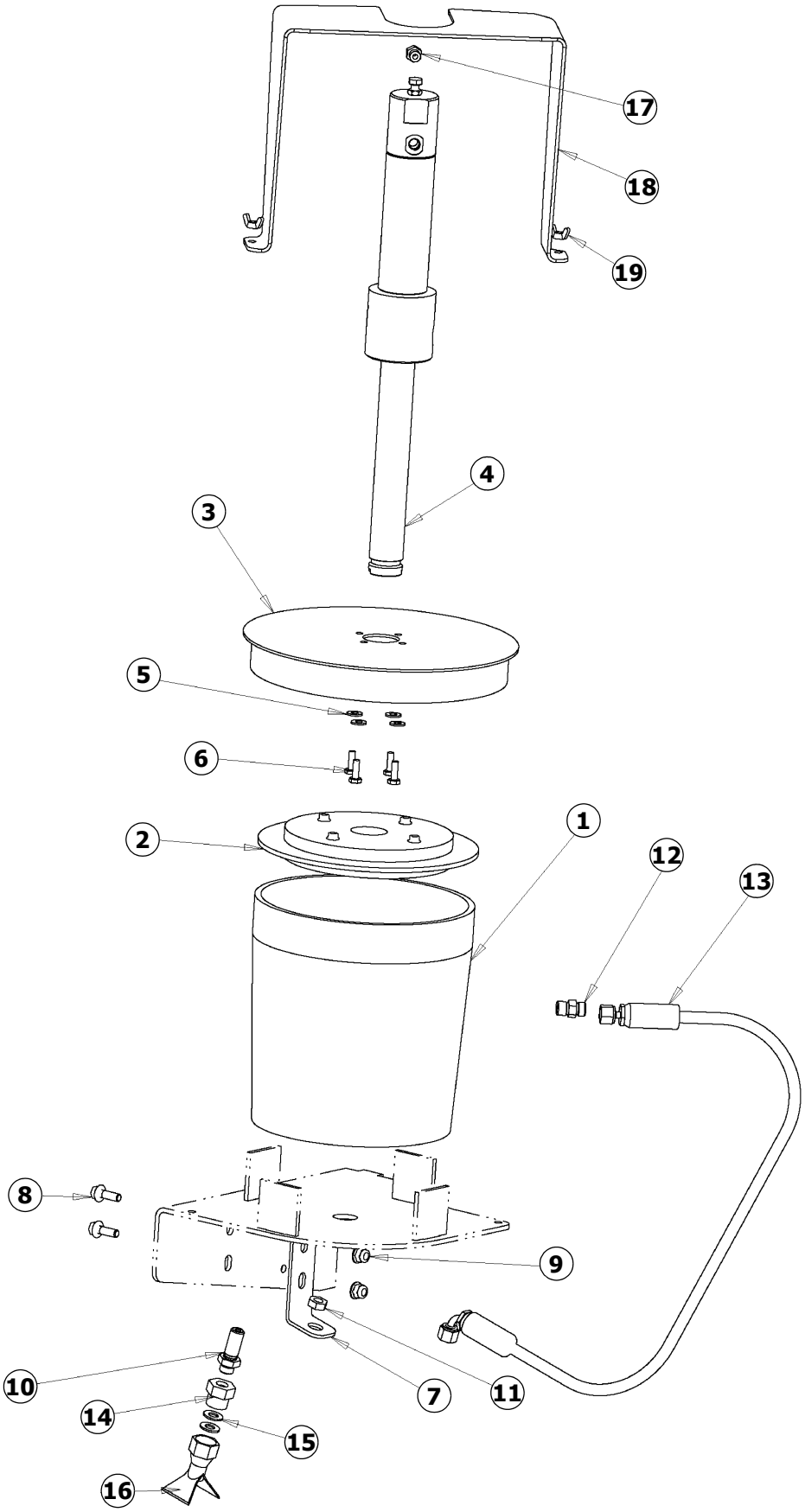
ENGINE ENCLOSURE FRONT HOOD

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108265	ASSEMBLY - Engine Enclosure	1
3	231-4145	NUT - Prev Trq 5/16 GRB ZND Direct	2
4	231-5146	NUT - Serr Flg 3/8 - 16 UNC GR5 ZND	6
5	495-21056	WASHER - .562 x 1.375 x .109 in CST ZND	3
10	8HH96100	STUD - Pivot	2
12	AU100527	NUT, METRIC FLANGE PREVAILING - M10 Zinc	3
14	AU100877	SCREW, METRIC FLANGE w/BODY - M10 x 30	3
19	AU109340	ASSEMBLY - Front Hood Mount	1
23	AU110186	ASSEMBLY - Exhause Stack	1
24	AU110187	PLATE - Guide	1
25	AU110191	ASSEMBLY - Front Hood	1
28	AU110280	PLATE - Guide	1
31	193-1004	NUT, KEPS - Ext T Wshr #10 - 24 UNC ZP	2
32	363-11014	SCREW - Hex Hd #10 - 24 x .875 CST PHC	2
33	AU100318	SCREW, METRIC FLANGE w/BODY - M8 x 35	1
36	AU112966	SPRING - Tension	1


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ENGINE ENCLOSURE HOOD HINGE

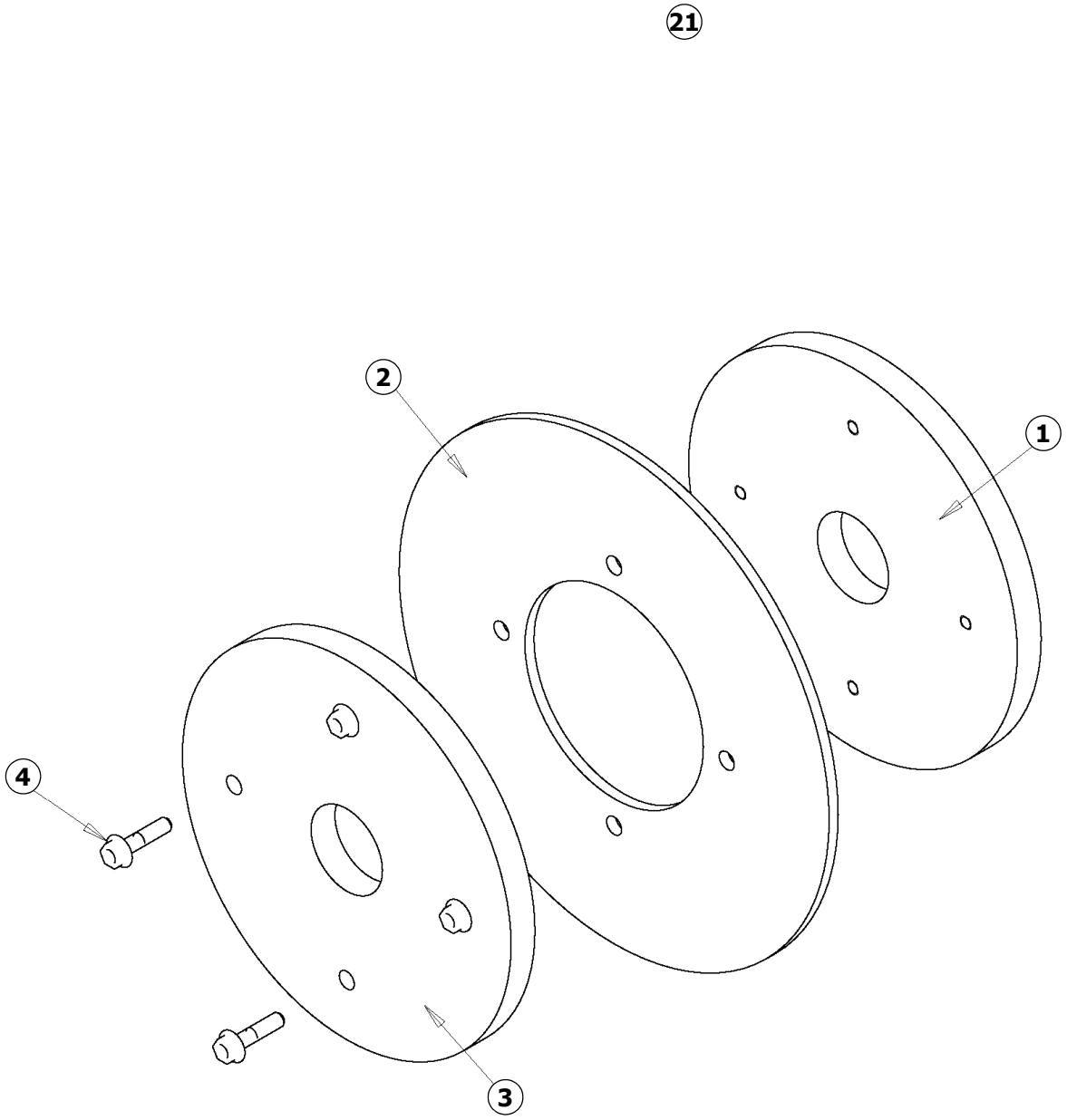
REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108265	ASSEMBLY - Engine Enclosure	1
1	136-159	PIN - Cotter Hair Int 3/16 in ZND	2
6	12GB2324	PIN - Hood Hinge	1


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TOOL JOINT LUBE APPLICATOR

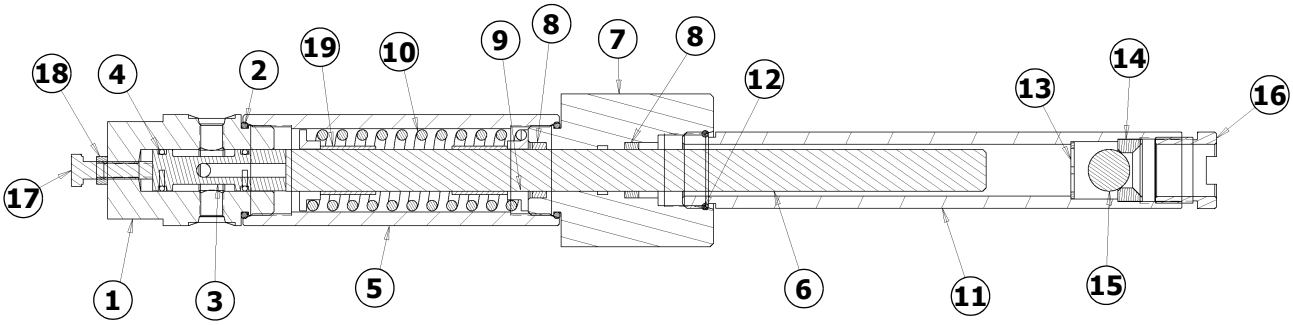
REF.	PART NO.	DESCRIPTION	REQ'D.
1	01DT9904	THREAD COMPOUND - Kopr-Kote	1
2	AU108646	ASSEMBLY - Seal, Follower	1
3	AU108790	WELDMENT - Cover	1
4	AU108837	PUMP - Grease, TJC, Hydraulic, Cartridge	1
5	495-11028	WASHER - .281 x 0.625 x .065 in CST ZND	4
6	326-412	BOLT - Hex Hd .250 x .750 GR8 PHC	4
7	AU108816	BRACKET - Nozzle, Greaser	1
8	AU100873	SCREW, METRIC FLANGE w/BODY - M8 x 25	2
9	AU100526	NUT, METRIC FLANGE PREVAILING - M8, Zinc	2
10	8OA90404	CONNECTOR, BULKHEAD - Straight -4 ORFS / -4 ORB	1
11	218-1252	NUT - BHD LOCK 7/16 - 20 1/4 Tube	1
12	8OA30406	CONNECTOR - Straight -4 ORFS / -6 ORB	1
13	AU108645	HOSE, HYDRAULIC - 36" x -4, Pump to Nozzle	1
14	8SA31004	REDUCER - -4 ORB / 7/8 - 14 THD	1
15	496-11041	WASHER - .406 x 0.812 x .065 in HDN ZND	2
16	AU108817	NOZZLE, SPRAY - Airless, .026	1
17	218-5153	PLUG - Hex Hd ORB 1/4	1
18	AU109840	TIE DOWN - Grease Cover	1
19	129-409	NUT - Wing, 1/4 - 20 UNC ZND	2

NOTE: When rebuilding fill grease tube half full with coppercoat grease to prime pump.


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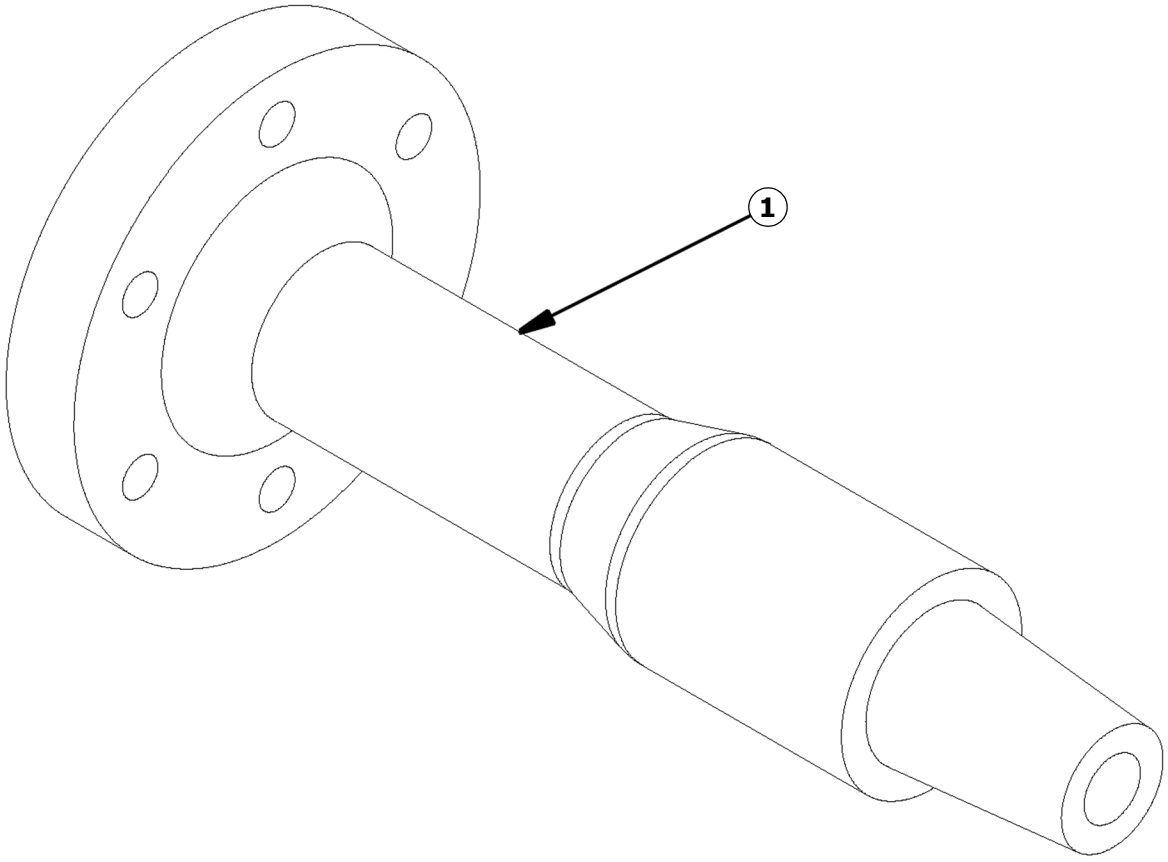
SEAL, FOLLOWER

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108646	ASSEMBLY, SEAL - Follower	1
1	AU108641	PLATE	1
2	AU108814	SEAL - Rubber, Follower	1
3	AU108640	PLATE	1
4	AU100870	SCREW, METRIC FLANGE w/BODY - M6 x 25	4


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PUMP, HYDRAULIC GREASE CARTRIDGE

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU108837	PUMP - Hydraulic Grease Cartridge	1
1	AU108858	CAP - Cylinder	1
2	8HS51920	SEAL, O-RING - Buna-N, -920 Size	2
3	AU108861	SPOOL - Adjusting	1
4	238-5113	O-RING - .094 x .562 in Class 5	2
5	AU108862	BARREL - Cylinder	1
6	AU108865	PLUNGER	1
7	AU108859	BODY - Pump	1
8	8HS10002	SEAL, DEEP POLYPAK - Buna-N, 3/4" ID x 1" OD x .174" Thk	2
9	AU108863	GUIDE - Rod	1
10	AU108870	SPRING	1
11	AU108866	BARREL - Pump	1
12	8HS51916	SEAL, O-RING - Buna-N, -916 Size	1
13	AU108860	CLIP - Retainer	1
14	AU108867	SEAT - Valve	1
15	AU108869	BALL - Stainless Steel, 3/4" Dia	1
16	AU108868	TUBE - Inlet	1
17	326-520	BOLT - Hex Hd .312 x 1.25 GR8 PHC	1
18	425-145	NUT - Hex Jam, .312 - 18 GR5 ZND	1
19	AU108871	BEARING - Sleeve, Bronze	2

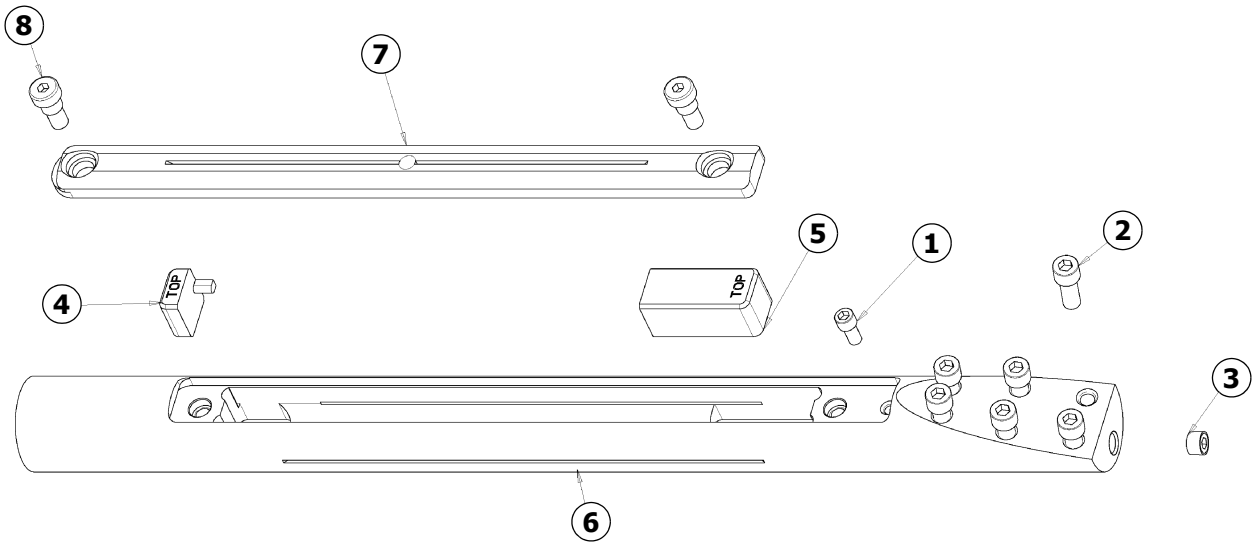

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FLANGE ADAPTER

REF.	PART NO.	DESCRIPTION	REQ'D.
1	20GB4481	FLANGE ADAPTER, 2.0 Astec X Flange	1

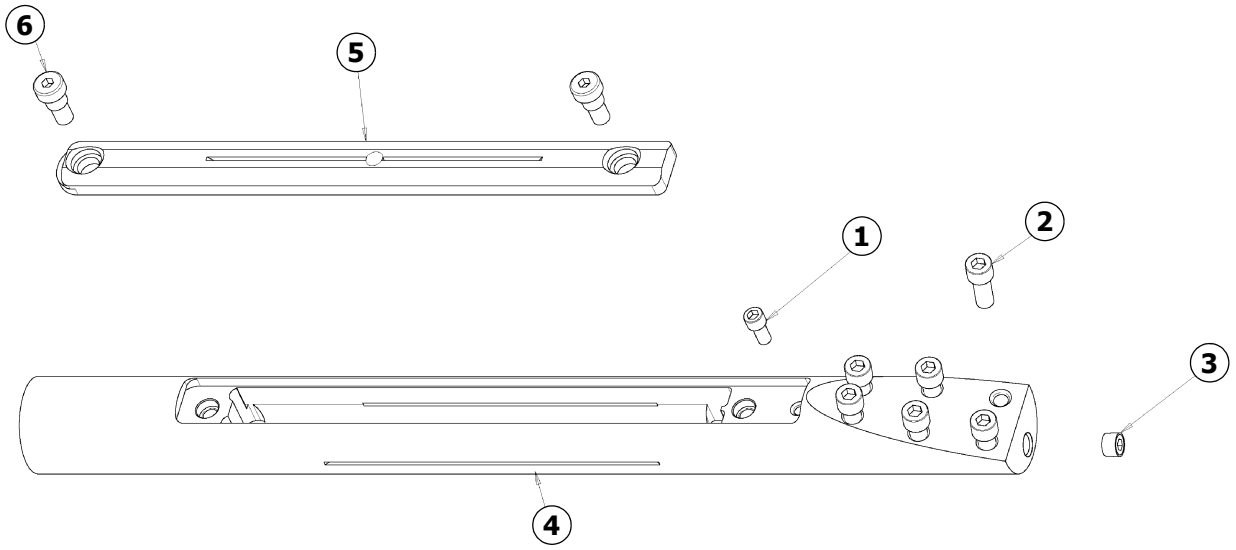
KIT, VANDALISM SHIELD

REF.	PART NO.	DESCRIPTION	REQ'D.
	00GB7600	KIT - Vandalism Shield	1
1	12GB9218	COVER - Protective, LH	1
2	12GB9219	COVER - Protective, RH	1
3	8BH21012	SCREW - Cap, Button Hd 1/4"	3
4	8FW22119	WASHER - Fender, SS 1/4"	3
5	8LN82101	NUT - 1/4 - 20 Rivet	3
6	8EO24122	GROMMET - Rubber	8
7	8NS32410	SCREW - Machine, Slt Pan Hd, #10 - 32	8
8	8HN32004	NUT - Hex, #10 - 32, 303 SS	8
9	8EO24123	WRENCH - Rivet Nut	1
10	8HH51205	SCREW - Cap, Hex Hd, 1/4 - 20	1


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UNIVERSAL SONDE HOUSING ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU112528	ASSEMBLY - Universal Sonde Housing (Includes item 3A)	1
1	61-33812	SCREW - Soc Hd .375 - 16 UNRC x .75 Pln	1
2	461-35020	SCREW - Soc Hd .500 - 13 UNRC x 1.25 ZND	6
3A	01DT42002	NOZZLE - .196 Dia, Downhole Tooling	1
3B	AU112496	NOZZLE - .250 Dia, Downhole Tooling (Optional)	1
3C	AU112350	NOZZLE - .120 Dia, Downhole Tooling (Optional)	1
4	AU112431	SUBSITE INSERT - Downhole Tooling	1
5	AU112432	DCI INSERT - Downhole Tooling	1
6	AU112529	UNIVERSAL SONDE HOUSING - Downhole Tooling	1
7	AU112530	UNIVERSAL SONDE HOUSING LID - Downhole Tooling	1
8	AU112651	SHOULDER SCREW - SH 1/2 - 13 UNC GR8 BLO	2


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UNIVERSAL SONDE HOUSING ASSEMBLY

REF.	PART NO.	DESCRIPTION	REQ'D.
	AU112534	ASSEMBLY - Universal Sonde Housing (Includes item 3A)	1
1	61-33812	SCREW - Soc Hd .375 - 16 UNRC x .75 Pln	1
2	461-35020	SCREW - Soc Hd .500 - 13 UNRC x 1.25 ZND	6
3A	01DT42002	NOZZLE - .196 Dia, Downhole Tooling	1
3B	AU112496	NOZZLE - .250 Dia, Downhole Tooling (Optional)	1
3C	AU112350	NOZZLE - .120 Dia, Downhole Tooling (Optional)	
4	AU112535	UNIVERSAL SONDE HOUSING - Downhole Tooling	1
5	AU112536	UNIVERSAL SONDE HOUSING LID - Downhole Tooling	1
6	AU112651	SHOULDER SCREW - SH 1/2 - 13 UNC GR8 BLO	2



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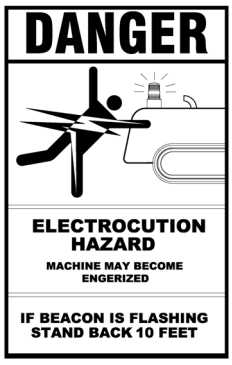
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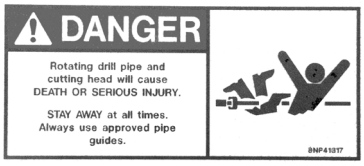
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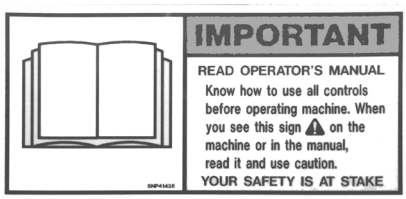
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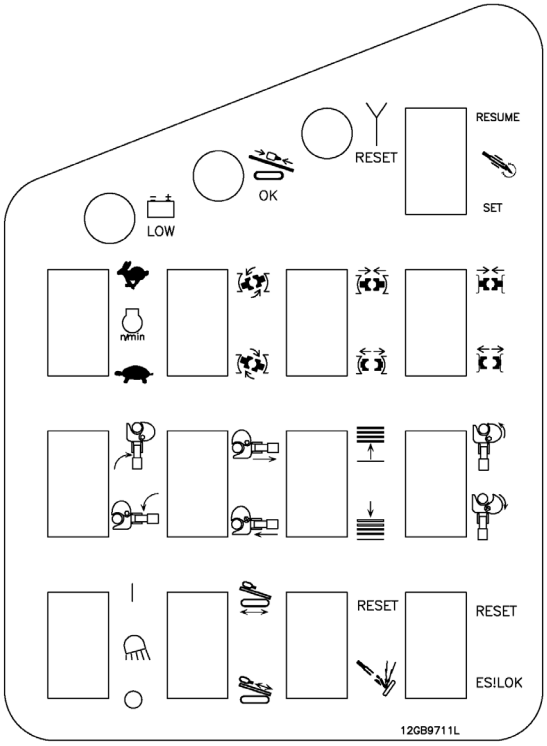
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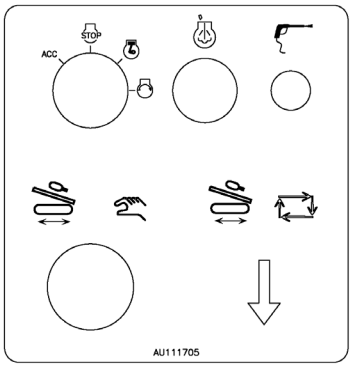
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DECALS

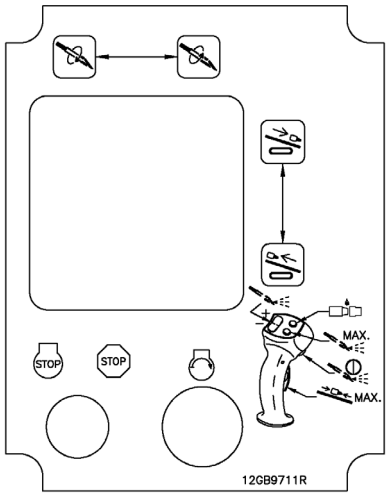
REF.	PART NO.	DESCRIPTION	REQ'D.
1	8NP41433	DECAL - Danger, Run Over Hazard	2
2	AU110578	DECAL - Warning, Call Before You Dig	2
3	283607A2	DECAL - Danger, Entanglement	1
4	283606A1	DECAL - Warning, Hazardous Area	3
5	369848A1	DECAL - Warning, Grease Under Pressure	2
6	8NP41470	DECAL - Danger, Electrocution	2
7	405377A1	DECAL - Danger, Explosion Hazard	1
8	8NP41431	DECAL - Danger, Impact Hazard	1
9	AU111652	DECAL - Warning, Crush Hazard	2
10	AU111651	DECAL - Danger, Hydraulic Components Contain High Pressure Fluid	2
11	8NP41317	DECAL - Danger, Rotating Drill and Cutting Head	2
12	8NP41426	DECAL - Important, Read Operators Manual	2
13	384267A1	DECAL - Warning, Fan	1
14	8NP41425	DECAL - Danger, Moving Parts - Keep Hands and Feet Away	3
15	8NP47282	DECAL - Important, Welding Can Damage Electronic Components	1
16	AU111691	DECAL - Caution, Cylinder Lock	1
17	8NP41297	DECAL - Danger, Tramming Operation	1



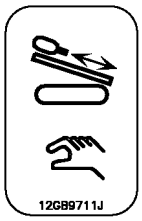
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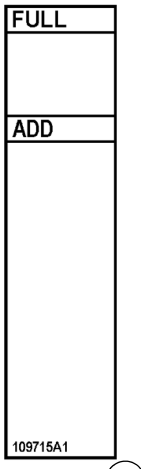
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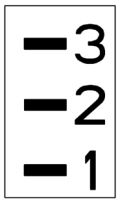
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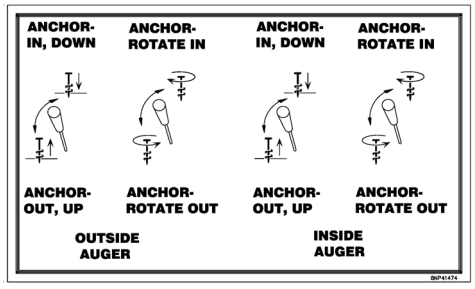
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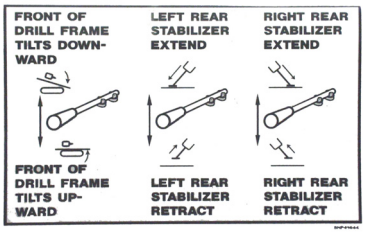
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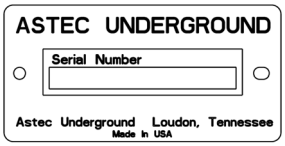
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DECALS

REF.	PART NO.	DESCRIPTION	REQ'D.
18	12GB9711L	DECAL - Switch Overlay	1
19	AU111705	DECAL - Rear Controls Overlay	1
20	12GB9711R	DECAL - Joystick Overlay	1
21	12GB9711J	DECAL - Remote Plug	1
22	AU111692	DECAL - A, Astec Underground	1
23	8NP41474	DECAL - Auger Control Functions	1
24	139728A1	DECAL - Machine Tie Down	4
25	139729A1	DECAL - Important, Use Spreader Bar For Lifting	4
26	109715A1	DECAL - Hydraulic Fluid Level	1
27	AU111682	DECAL - Row Selector	1
28	8NP41482	DECAL - Tilt and Stabilizer Lever Controls	1
29	AU100572	PLATE - Serial Number	1
30	AU103971	DECAL - Hydraulic Oil	1
31	8NP41445	DECAL - Astec Red and Blue Swoosh	1
32	AU111653	DECAL - EarthPro Series	1
33	8NP41455	DECAL - DD-2024	2

SHIPPING KIT

REF.	PART NO.	DESCRIPTION	REQ'D.
	12GB7600	KIT - Shipping	1
1	32GB7610	WAND - Wash Down	1
2	01DT0018	WIPER - Rod	1
3	32GB1215	KIT, 2" - Y Strainer	1
4	AU112723	PLATE - Tilt Cylinder Lockout	1
5	AU109760	PIN - Retaining	2

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01DT42002	9-65	3A
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0PT40003	9-9	7
103989A1	5-7	12
103989A1	9-3	12
109715A1	9-69	26
118484A1	3-3	4
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12GB2030	9-7	2
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12GB2351	4-11	1
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