

Repair Parts Manual

TB 60

**engine powered
diesel
gasoline
LPG**

Manufactured 01-97 through 01-01

General information

About this manual:

This repair parts manual covers current production machines only.

While Snorkel has attempted in every way to confirm that all information in this manual is correct, improvements are being constantly made to the machine that may not be reflected in this manual.

If you find information in this manual that is not correct, or is confusing, you are urged to report your findings to Snorkel for our evaluation.

Your input is important to us and will be used in future printings of this manual.

Every person who repairs this machine must be qualified and authorized to do so.

▲CAUTION

DO NOT modify this aerial platform without prior written consent of Snorkel Engineering Department. Modification may void the warranty, adversely affect stability, or affect the operational characteristics of the aerial platform.

This machine is covered by a limited warranty that specifically identifies items warranted by Snorkel and those items covered by original manufacturers warranty.

A copy of the Snorkel Limited Warranty is located on the inside of the back cover of this manual.

All correspondence relative to this machine, such as field reports, discrepancy reports, requests for information, etc., should be directed to:

Snorkel International, Inc.
P.O. Box 1160
St. Joseph, MO 64502-1160 USA
Phone: (816)-364-0317
<http://www.snorkelusa.com>

Abbreviations

The following abbreviations may be used in this manual:

AC alternating current
ANSI American National Standards Institute
CCA cold cranking amps
cm centimeter
DC direct current
EMS envelope management system
GFCI ground fault circuit interrupt
LP liquified petroleum
LPG liquified petroleum gas
mm millimeters
ft feet
in inch
lbs pounds
no number

NPT national pipe thread
psi pounds per square inch
qty quantity
UL Underwriters Laboratories Inc.

Electrical Hazard

▲DANGER

The aerial platform is not electrically insulated. Death or serious injury can result from contact with, or inadequate clearance from, an energized conductor.

Do not go closer than the minimum safe approach distance as defined by the minimum Safe Approach Distance as defined by ANSI Standards.

Regard all conductors as energized.

Allow for electrical wire sag and aerial platform sway.

If the work platform, or any part of the aerial platform contacts a high-voltage electrical conductor, the entire machine can become electrically charged.

If that happens, remain on the machine and do not contact any other structure or object. This includes the ground, adjacent buildings, poles, and any other objects that are not part of the aerial platform.

Such contact could make your body a conductor to the other object, creating an electrical shock hazard resulting in death or serious injury.

If an aerial platform is in contact with an energized conductor the platform operator must warn ground personnel in the vicinity to stay away. Their bodies can conduct electricity creating an electrical shock hazard resulting in death or serious injury.

Do not approach or leave the aerial platform until the electricity has been turned off.

Do not attempt to operate the lower controls when the work platform or any part of the aerial platform is in contact with a high-voltage electrical conductor or if there is an immediate danger of such contact.

Personnel on or near an aerial platform must be continuously aware of electrical hazards, recognizing that death or serious injury can result from contact with an energized conductor.

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To order service or repair parts

When placing an order for service or repair parts, please have the following information available for your machine.

- ✓ Machine model number
- ✓ Machine serial number
- ✓ Snorkel part number
- ✓ Description of part
- ✓ Quantity of parts required
- ✓ Your purchase order number
- ✓ Address for order to "Ship To"
- ✓ Your desired shipment method

The parts order form on the following page may be mailed or faxed to the attention of Parts Worldwide at the following location:

Snorkel International, Inc.
P.O. Box 1160
St. Joseph, MO 64502-1160 USA
Phone: 1-(800)-255-0317
Parts Worldwide Fax: (816)-364-6312

Attention: Parts Department

For your convenience, our electronic on-line ordering system is available at the following Internet location:

<http://www.omniquip.com>

ANSI and OSHA compliance

All owners and users of the aerial platform must read, understand, and comply with all applicable regulations. Ultimate compliance to OSHA regulations is the responsibility of the user and their employer.

ANSI publications clearly identify the responsibilities of all personnel who may be involved with the aerial platform. A reprint of the "Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors and Lessees of ANSI/SIA A92.5-1992 Boom-Supported Elevating Work Platforms" is available from Snorkel dealers or from the factory upon request.

Copies are also available from:

Scaffold Industry Association
20335 Ventura Blvd. Suite 310
Woodland Hills, CA 91364-2471 USA

Manuals

Manuals are available from Snorkel to support any of the machines that we produce.

The specific manuals for TB 60 are as follows:

- ✓ Operator's Manual
Snorkel part number - 0082168
- ✓ Repair Parts Manual
Snorkel part number - 0082169
- ✓ Troubleshooting Guide
Snorkel part number - 0082801
- ✓ ANSI Manual of Responsibilities
ANSI/SIA A92.5-1992

Record machine information here:

Model number

Serial number

Date of purchase

Purchased from

Snorkel dealer or distributor

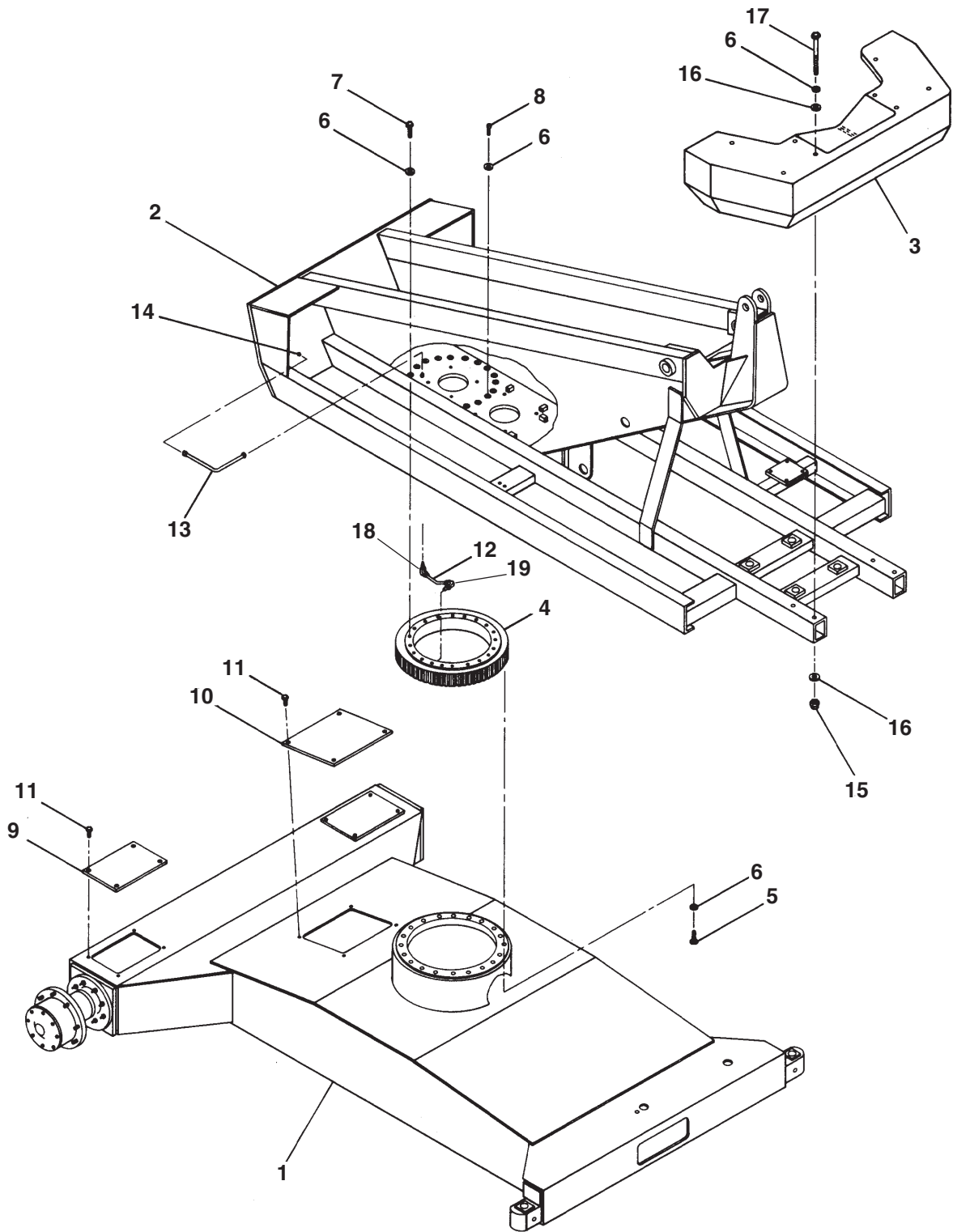
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Chassis/turntable mounting

item	part no	qty	description
1		1	Chassis - (consult factory)
2		1	Turntable - (consult factory)
3		1	Counterweight - (consult factory)
4	0070021	1	Rotation bearing gear
5	5560149	20	Capscrew special 5/8-11 self locking
6	5560169	44	Washer 5/8 hard flat ASTM-F436
7	5560052	18	Capscrew special 5/8-11 self locking
8	5560063	2	Capscrew special 5/8-11 self locking
9	0070024	2	Access cover, drive
10	0070328	1	Access cover, chassis
11	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
12	0070553	1	Lubrication tube, 1/4 inch copper tube
13	0020655	1	Lubrication hose
14	5570001	1	Grease fitting, 1/8 NPT straight
15	5560036	4	Nut 5/8-11 self locking
16	987159	8	Washer 5/8 medium lock
17	971379	4	Capscrew 5/8-11 x 3-3/4 inch long hex head grade 8
18	5033704	1	Male 90° elbow
19	5033703	1	Male 90° elbow

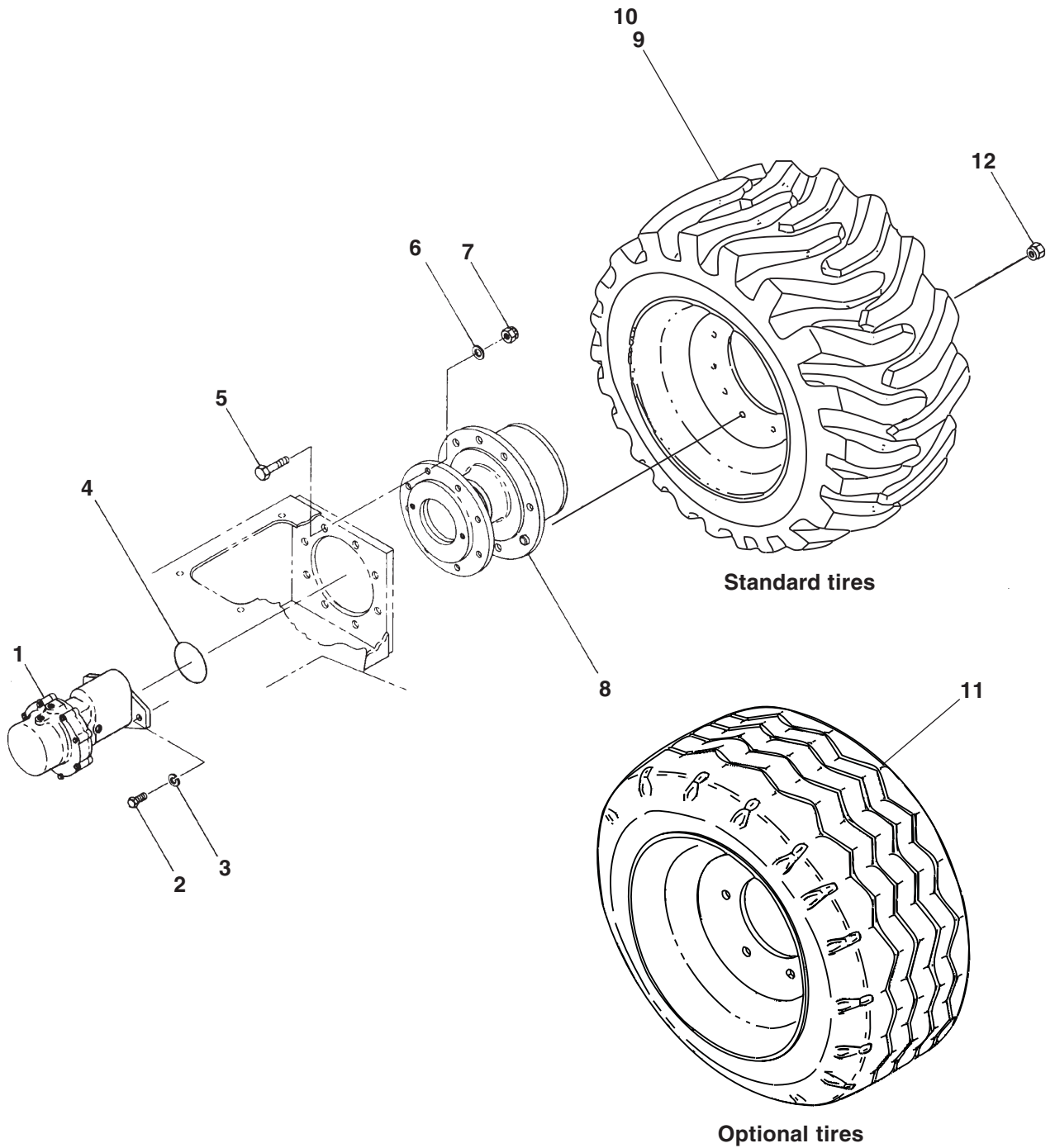
Chassis/turntable mounting



Drive

item	part no	qty	description
1	6030040	2	Drive motor with integral brake - (see page 2-18 for parts breakdown)
2	5560078	4	Capscrew 1/2-13 x 1/2 inch long self locking grade 8
3	987139	4	Washer 1/2 medium lock
4	7110242	2	O-ring
5	5560642	16	Capscrew 5/8-11 x 3-1/4 inch long hex head grade 8
6	5560169	16	Washer 5/8 hard flat ASTM-F436
7	5560131	16	Nut 5/8-11 self locking
8	0081674	2	Gear hub, high torque - (see page 1-74 for parts breakdown)
9	0080965	1	Tire and wheel, foam filled right hand 15-19.5 12 ply lug
10	0080966	1	Tire and wheel, foam filled left hand 15-19.5 12 ply lug
11	0081462	2	Tire and wheel, foam filled 15-19.5 14 ply highway
	0083558	2	Tire and wheel, flotation - (used on 4 wheel drive only)
	7280072	1	Tire, 40/19 x 19.5 flotation
	7280078	1	Drive rim
	7280073	1	Valve stem
12	7280001	16	Lug nut

Drive

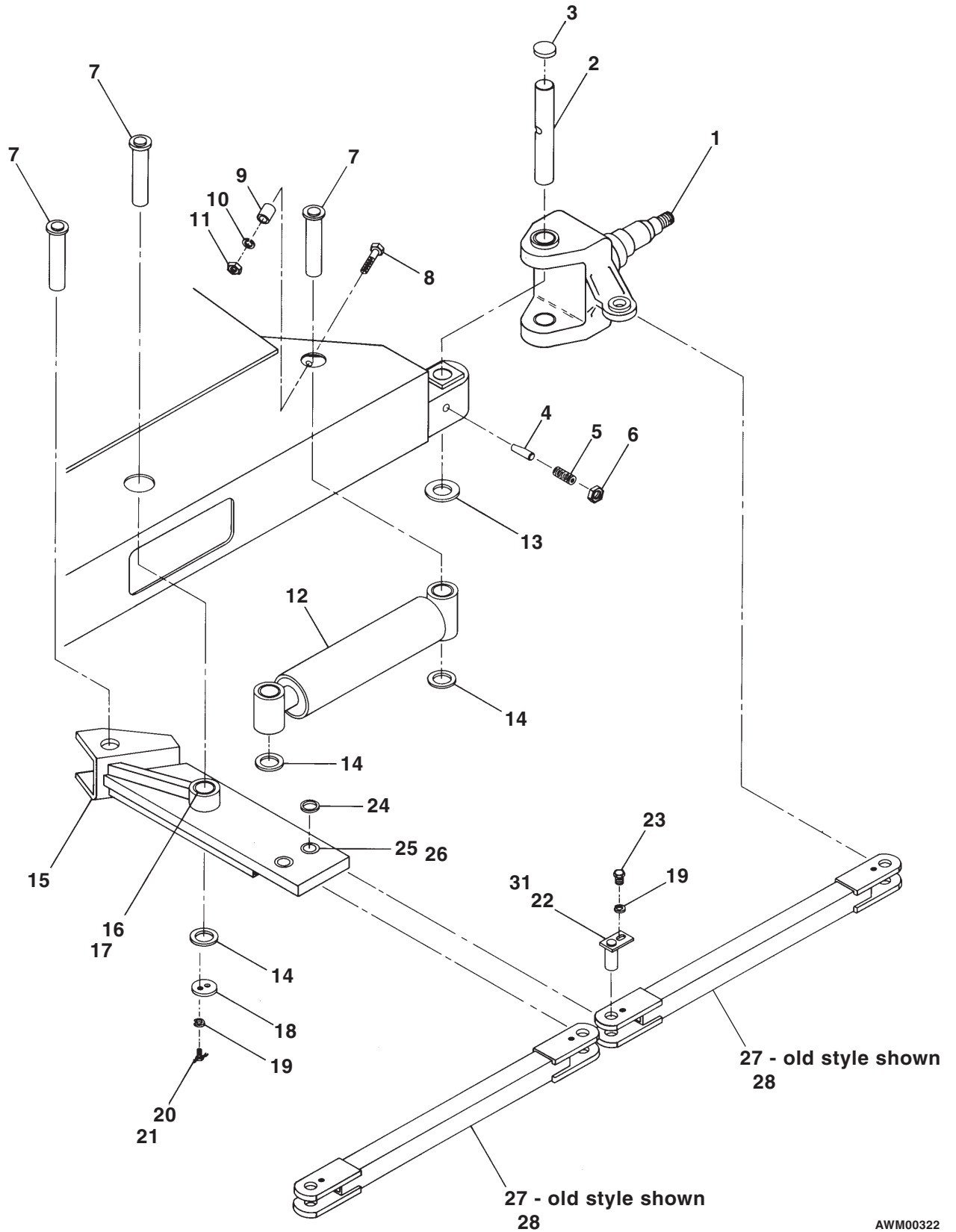


Note: Do not mix tire brands or sizes on any one machine

Steering

item	part no	qty	description
1		1	Steer yoke and wheel - (see page 1-8 for 2 wheel drive, page 1-10 for 4 wheel drive)
2	0080182	2	King pin
3	0080184	2	King pin cap
4	0080183	2	Locking pin
5	5569836	2	Set screw 3/4-10 x 1-3/4 inch long hex socket head
6	984469	2	Nut 3/4-10 hex jam
7	0070442	3	Pin
8	970949	1	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
9	0080098	1	Spacer
10	987139	1	Washer 1/2 medium lock
11	984149	1	Nut 1/2-13 hex
12	0070007	1	Cylinder, steering - (see hydraulics section for parts breakdown)
13	2580001	2	Thrust bearing
14	5560252	3	Machine bushing
15	0083562	1	Steering arm
16	0080187	1	Spacer, steering arm
17	2502416	2	Bearing
18	0070033	2	Pin lock
19	987109	8	Washer 5/16 medium lock
20	0070473	4	Capscrew 5/16-18 drilled head
21	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
22	0110320	4	Lock pin
23	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
24	0080348	4	Spacer, tie rod mounting
25	2690001	2	Bearing, self aligning
26	5570002	2	Grease fitting 1/8 NPT 45°
27	0080094	2	Tie rod, non-adjustable - (machines prior to July 1999)
28	0083416	2	Tie rod, adjustable - (machines after July 1999, requires items 29 and 30)
29	5560202	2	Tie rod hex jam nut for adjustable tie rod
30	0083418	2	Tie rod end for adjustable tie rod
31	5570003	2	Grease fitting 1/8 NPT 90°

Steering

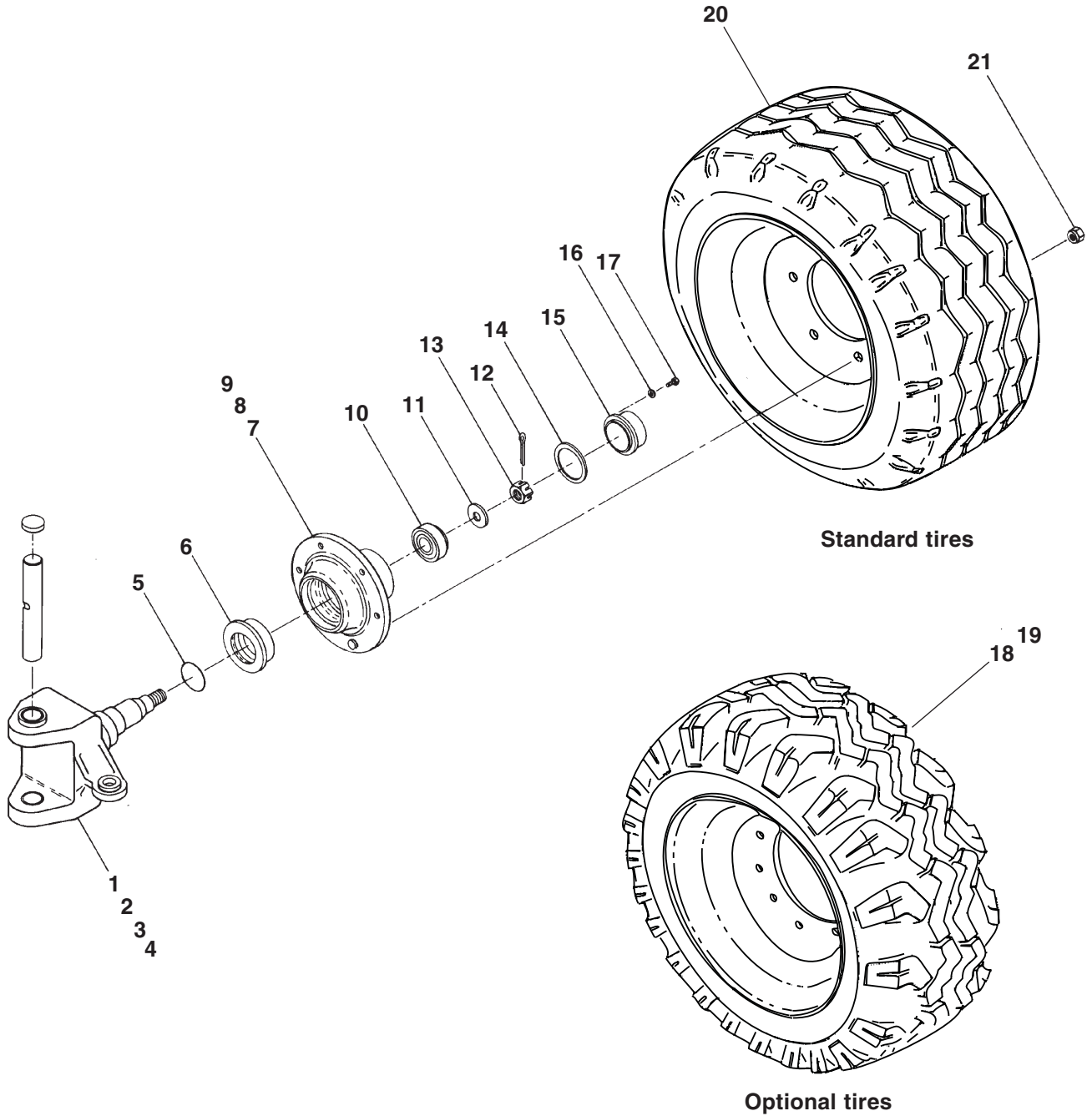


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Steer yoke and wheel, 2 wheel drive

item	part no	qty	description
1	0080349	1	Steering yoke, 2 wheel drive - (before 7-31-00)
	0083571	1	Steering yoke, 2 wheel drive - (after 7-31-00)
2	2690001	2	Bearing, self aligning
3	2503224	4	Bearing
4	5570001	4	Grease fitting, 1/8 NPT straight
5	7150001	2	Grease seal
6	2560006	2	Inner bearing cone
7	0080181	2	Hub
	7280024	20	Replacement wheel bolt
8	2540005	2	Inner bearing cup
9	2540006	2	Outer bearing cup
10	2560005	2	Outer bearing cone
11	5560025	2	Key washer
12	5560661	2	Cotter pin 3/8 inch diameter x 2-1/2 inch long
13	5560026	2	Spindle nut
14	0080185	2	Gasket, hub cap
15	0080186	2	Hub cap
16	987099	8	Washer 1/4 medium lock
17	970009	8	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
18	0080365	1	Tire and wheel, foam filled right hand 15-19.5 14 ply steer
19	0082185	1	Tire and wheel, foam filled left hand 15-19.5 14 ply steer
20	0082205	2	Tire and wheel, foam filled 15-19.5 14 ply highway tread
21	7280010	20	Wheel nut

Steer yoke and wheel, 2 wheel drive

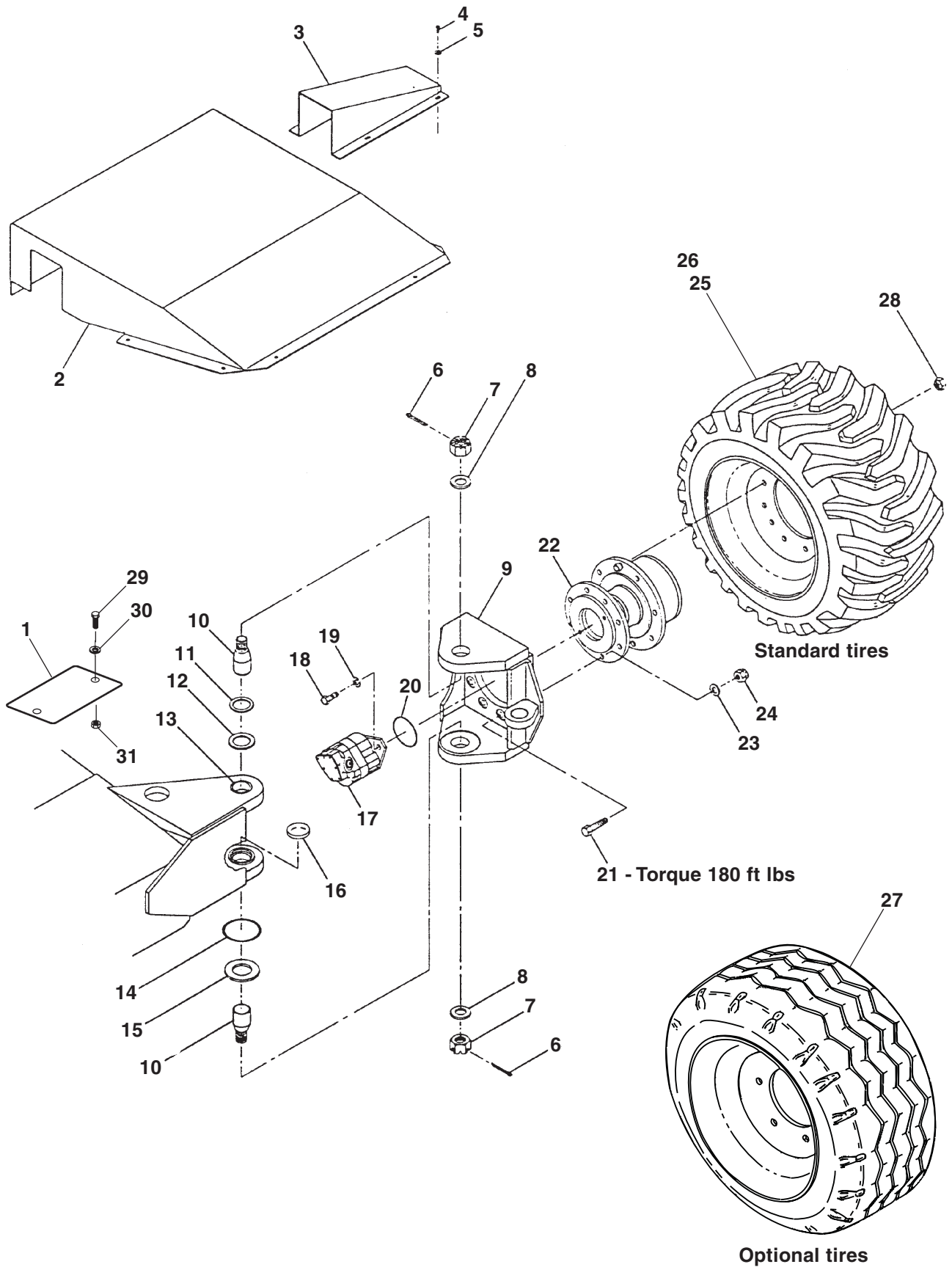


Note: Do not mix tire brands or sizes on any one machine

Steer yoke and wheel, 4 wheel drive

item	part no	qty	description
1	0082282	1	Cover, chassis - 4 wheel drive
2	0080920	1	Cover, hoses
3	0080919	2	Cover, drive motor
4	970449	9	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
5	986299	17	Washer 3/8 medium flat
6	988229	4	Cotter pin 1/4 inch diameter x 2-1/2 inch long
7	5560018	4	Spindle nut
8	0072438	4	Washer
9	0083573	2	Steering yoke, 4 wheel drive
10	0080885	2	King pin
11	25560089	2	Shim, .031 inch thick
	5560091	2	Shim, .015 inch thick
12	5560660	6	Machine bushing 3 inch OD x 2 inch ID x 14 gauge thick
13	2503220	4	Bearing
14	0080948	2	Special O-ring
15	2580001	2	Thrust bearing
16	0070026	2	King pin cap
17	6030018	2	Drive motor - (see page 2-16 for parts breakdown)
18	5560078	4	Capscrew 1/2-13 x 1/2 inch long self locking grade 8
19	987139	4	Washer 1/2 medium lock
20	7110242	2	O-ring
21	5560640	16	Capscrew 5/8-11 x 3 inch long hex head grade 8
22	0081674	2	Gear hub, high torque - (see page 1-74 for parts breakdown)
23	5560169	16	Washer 5/8 hard flat ASTM-F436
24	5560131	16	Nut 5/8-11 self locking
25	0080965	1	Tire and wheel, foam filled right hand 15-19.5 12 ply lug
26	0080966	1	Tire and wheel, foam filled left hand 15-19.5 12 ply lug
27	0081462	2	Tire and wheel, foam filled 15-19.5 14 ply highway
	0083558	2	Tire and wheel, flotation - (used on 4 wheel drive only)
	7280072	1	Tire, 40/19 x 19.5 flotation
	7280078	1	Drive rim
	7280073	1	Valve stem
28	7280001	16	Lug nut
29	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
30	986359	2	Washer 1/2 medium flat
31	5560039	2	Nut 1/2-13 self locking

Steer yoke and wheel, 4 wheel drive



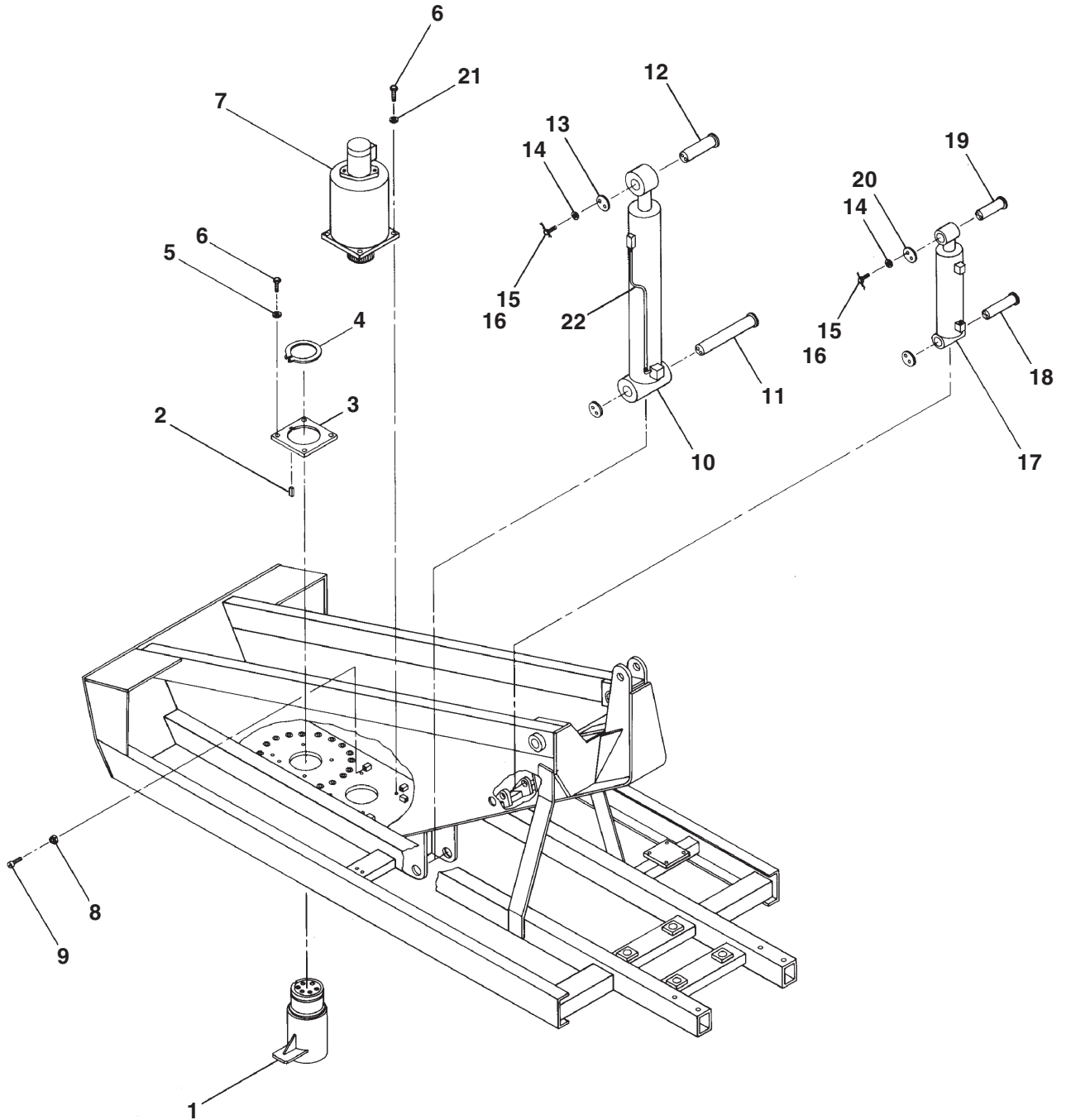
Note: Do not mix tire brands or sizes on any one machine

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Lift and swing

item	part no	qty	description
1	0081486	1	Centerpost and fittings - (see page 2-26 for parts breakdown)
2	0070472	1	Key
3	0070256	1	Adapter plate, centerpost
4	5590003	1	Retaining ring
5	987159	5	Washer 5/8 medium lock
6	5560051	8	Capscrew 5/8-11 self locking
7	0073026	1	Swing drive - (see page 1-14 for parts breakdown)
8	984449	6	Nut 5/8-11 hex jam
9	5560022	6	Adjustment bolt
10	0080053	1	Cylinder, lift - (see page 2-30 for parts breakdown)
11	0080020	1	Pin, lift cylinder base end
12	0080024	1	Pin, lift cylinder rod end
13	0080023	2	Pin lock
14	987109	8	Washer 5/16 medium lock
15	0070473	8	Capscrew 5/16-18 drilled head
16	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
17	0070007	1	Cylinder, master level - (see hydraulics section for parts breakdown)
18	0070442	1	Pin, master level cylinder base end
19	0080028	1	Pin, master level cylinder rod end
20	0070033	2	Pin lock
21	5560169	4	Washer 5/8 hard flat ASTM-F436
22	0080018	1	3/8 inch hydraulic tube - (GBI lift cylinder only)

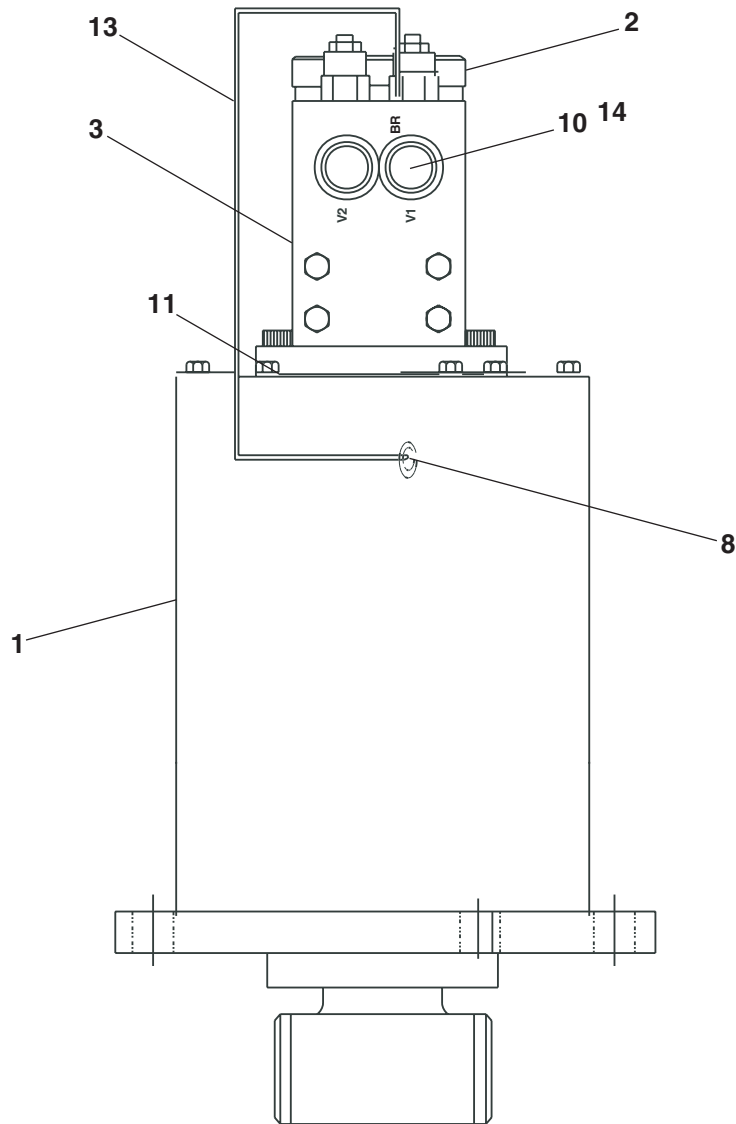
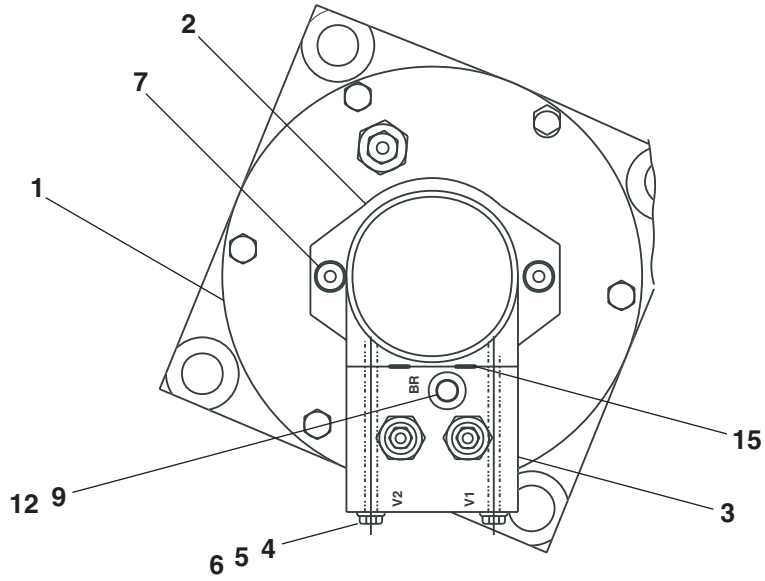
Lift and swing



Swing drive

item	part no	qty	description
1	0073026	1	Swing drive, complete
	0070047	1	Swing drive (Auburn gear swing drive, see page 1-76 for parts breakdown) (Fairfield swing drive, see page 1-78 for parts breakdown) (Gear Products swing drive, see page 1-80 for parts breakdown) (Perfection swing drive, see page 1-74 for parts breakdown) (Tulsa Winch swing drive, see page 1-84 for parts breakdown)
2	6030020	1	Motor, swing drive
	8200004	1	Seal repair kit - Ross/TRW motor
	0090352	1	Seal repair kit - Charlynn/Eaton motor
	0073359	1	Seal repair kit - White/Roller Stator motor
3	6010250	1	Motion control valve, turntable swing - (see page 2-55 for parts breakdown)
4	5560641	4	Capscrew 5/16-18 x 3-1/2 inch long hex head grade 5
5	986269	4	Washer 5/16 medium flat
6	987109	4	Washer 5/16 medium lock
7	5560087	2	Capscrew special self locking
8	5035303	1	Straight thread 90° elbow
9	5065703	1	Straight thread adapter
10	5075726	1	Straight thread adapter
11	7190005	1	Gasket, swing drive
12	5037003	1	Swivel nut 90° elbow
13	0020283	1	1/4 inch hydraulic hose
14	5036905	2	Swivel nut 45° elbow
15	7110112	2	O-ring

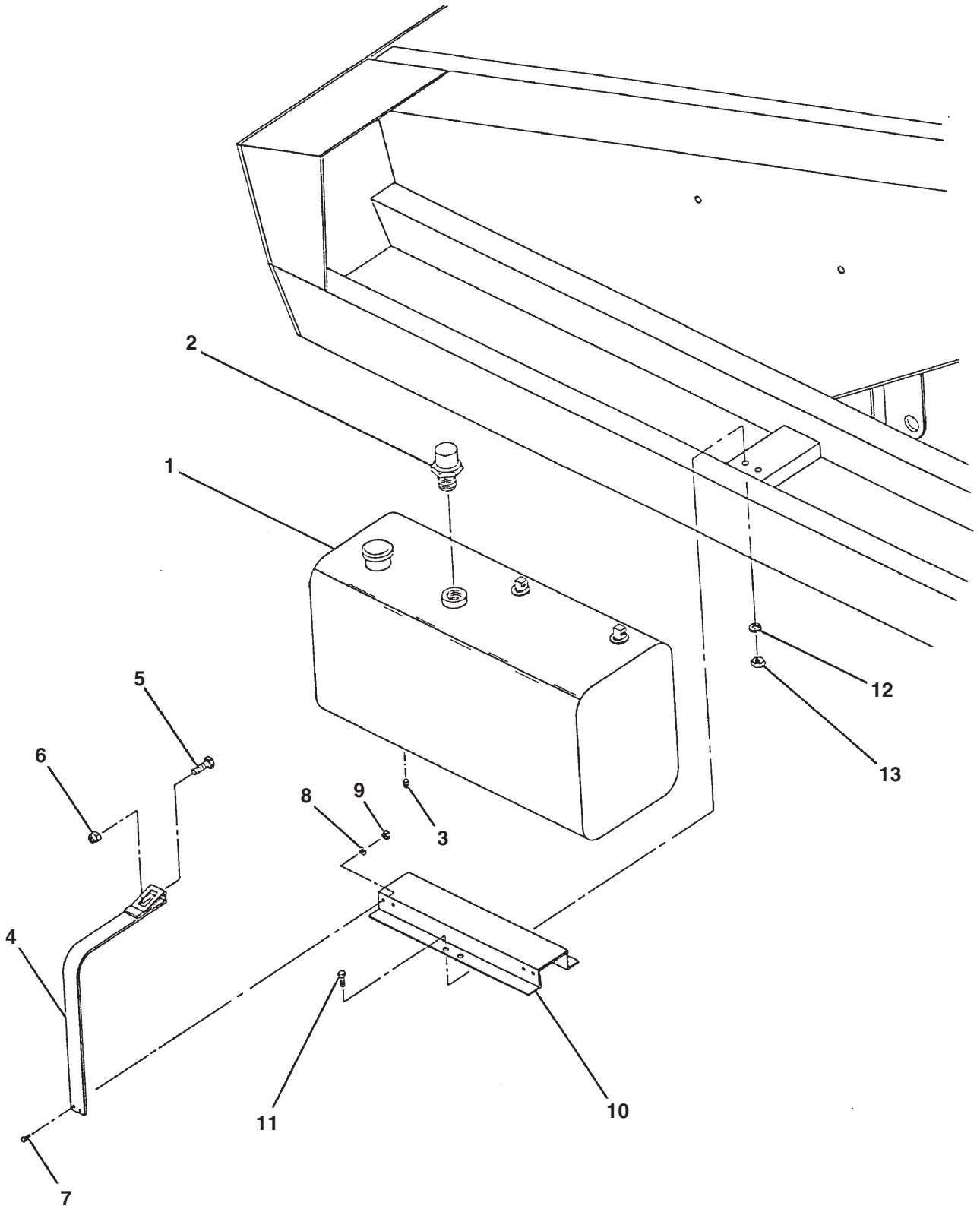
Swing drive



Fuel tank

item	part no	qty	description
1	0080030	1	Fuel tank, 40 gallon capacity - (used with metal cowling) (includes 9940001 replacement cap and fuel gauge, item 2)
	0082906	1	Fuel tank, 40 gallon capacity - (used with plastic cowling) (includes 9940001 replacement cap and fuel gauge, item 2)
2	0070483	1	Fuel gauge - (includes gauge lens)
	8180014	1	Replacement gauge lens
3	7714202	1	Pipe plug 1/4 NPT square head
4	0071940	2	Fuel tank strap
5	970569	2	Capscrew 3/8-16 x 3-1/2 inch long hex head grade 5
6	5560033	2	Nut 3/8-16 self locking
7	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
8	987099	4	Washer 1/4 medium lock
9	984069	4	Nut 1/4-20 hex
10	0080031	1	Fuel tank support
11	970469	8	Capscrew 3/8-16 x 1 inch long hex head grade 5
12	987119	8	Washer 3/8 medium lock
13	984109	8	Nut 3/8-16 hex

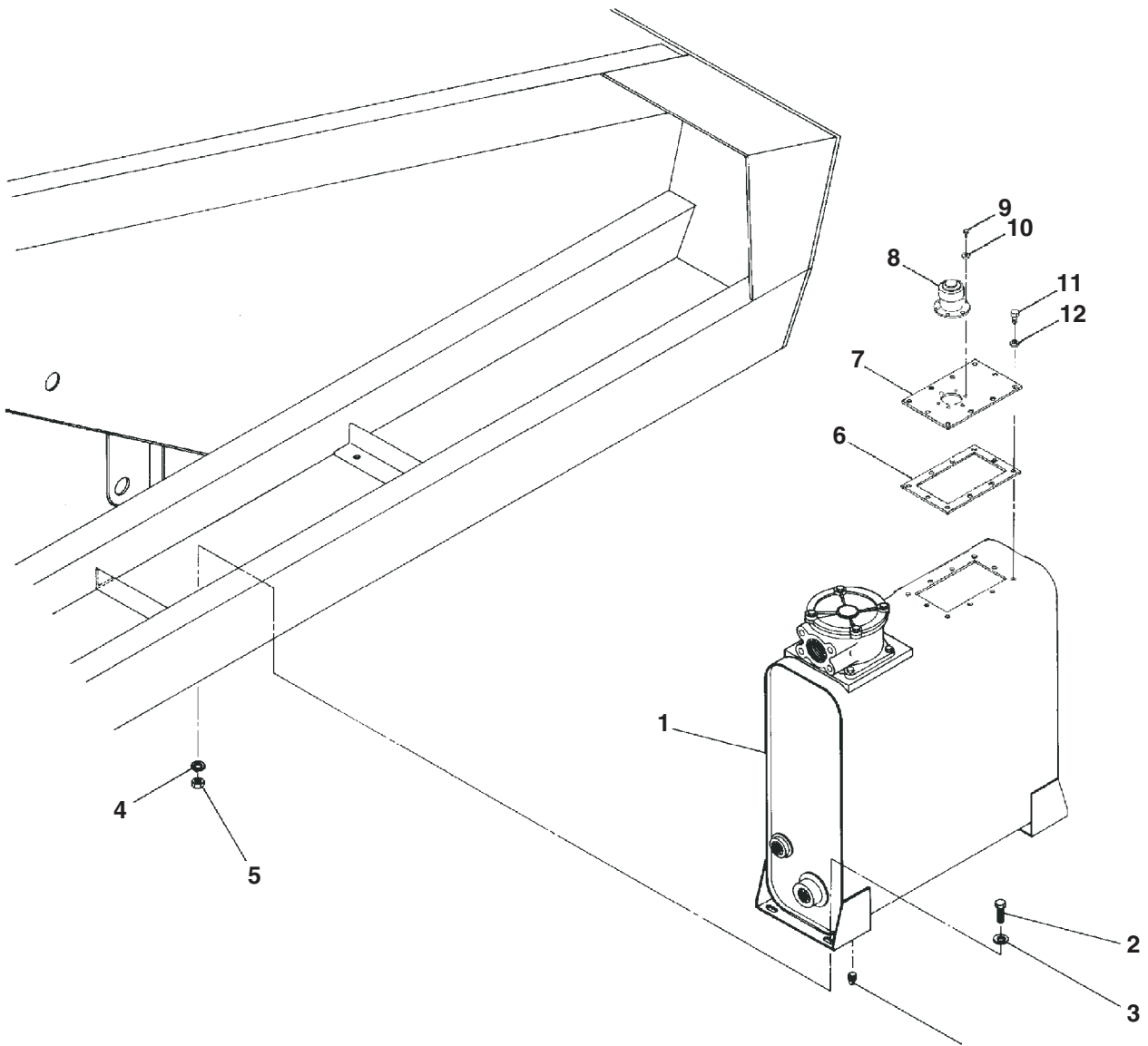
Fuel tank



Hydraulic oil reservoir mounting

item	part no	qty	description
1	0081875	1	Hydraulic oil reservoir - (see page 2-20 for parts breakdown)
2	970479	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
3	986299	4	Washer 3/8 medium flat
4	987119	4	Washer 3/8 medium lock
5	984109	4	Nut 3/8-16 hex
6	8010249	1	Cover plate
7	8010250	1	Cover gasket
8	5090008	1	Filler/breather cap
9	5560609	6	Machine screw #10-24 x 1/2 inch long hex head
10	987089	6	Washer #10 medium lock
11	970369	6	Capscrew 5/16-18 x 1 inch long hex head grade 5
12	987109	6	Washer 5/16 medium lock

Hydraulic oil reservoir mounting



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Boom and hose carrier

item	part no	qty	description
1	0080969	1	Booms - (see page 1-23 for parts breakdown)
2	0072727	1	Hose carrier - (see page 1-26 for parts breakdown)
3	0080962	1	Hose carrier support tube
4	0072951	2	Guide bar
5	5093009	1	Hose clamp
6	0070029	2	Slide pad
7	972559	4	Capscrew 3/8-16 x 1 inch long socket flat head
8	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
9	970369	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
10	986019	12	Washer 1/4 medium flat
11	987109	4	Washer 1/4 medium lock
12	0070505	1	Spacer
13	0070504	1	Pin joint plate
14	0070506	1	Pin lock
15	970426	6	Capscrew 3/8-16 x 7/8 inch long hex head grade 5
16	986299	4	Washer 3/8 medium flat
17	987119	8	Washer 3/8 medium lock
18	0072105	1	Clevis pin
19	5560014	1	Hairpin clip pin
20	970849	9	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
21	986359	9	Washer 1/2 medium flat
22	5560039	9	Nut 1/2-13 self locking
23	0082023	1	Tube bracket
24	9920016	1	Mounting bracket
25	0072937	1	Clamp bar
26	972509	2	Capscrew 3/8-16 x 2 inch long socket flat head
27	5560033	5	Nut 3/8-16 self locking
28	5560004	2	Nut 1/4-20 self locking
29	0110581	2	Spacer
30	970629	1	Capscrew 3/8-16 x 5 inch long hex head grade 5

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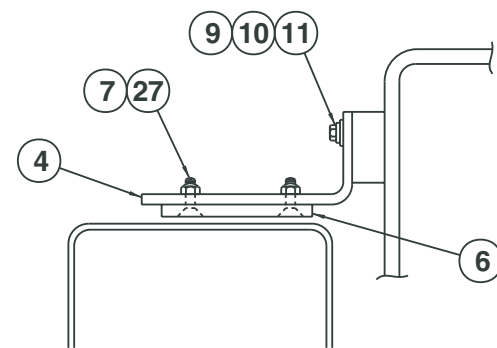
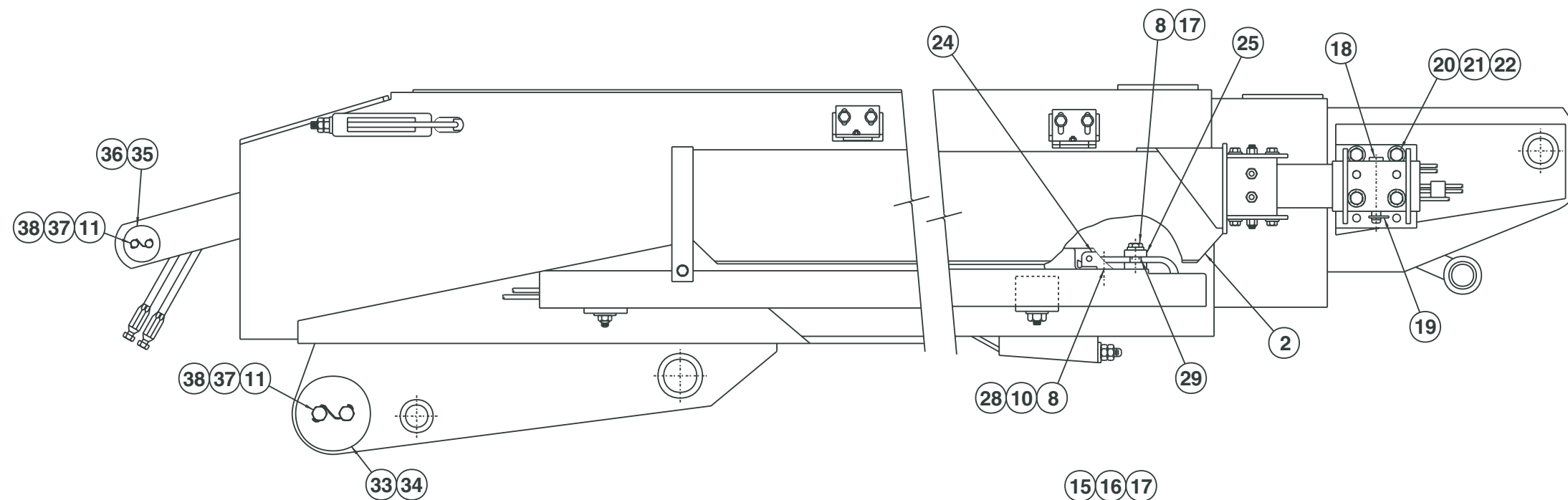
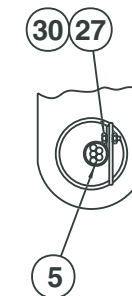
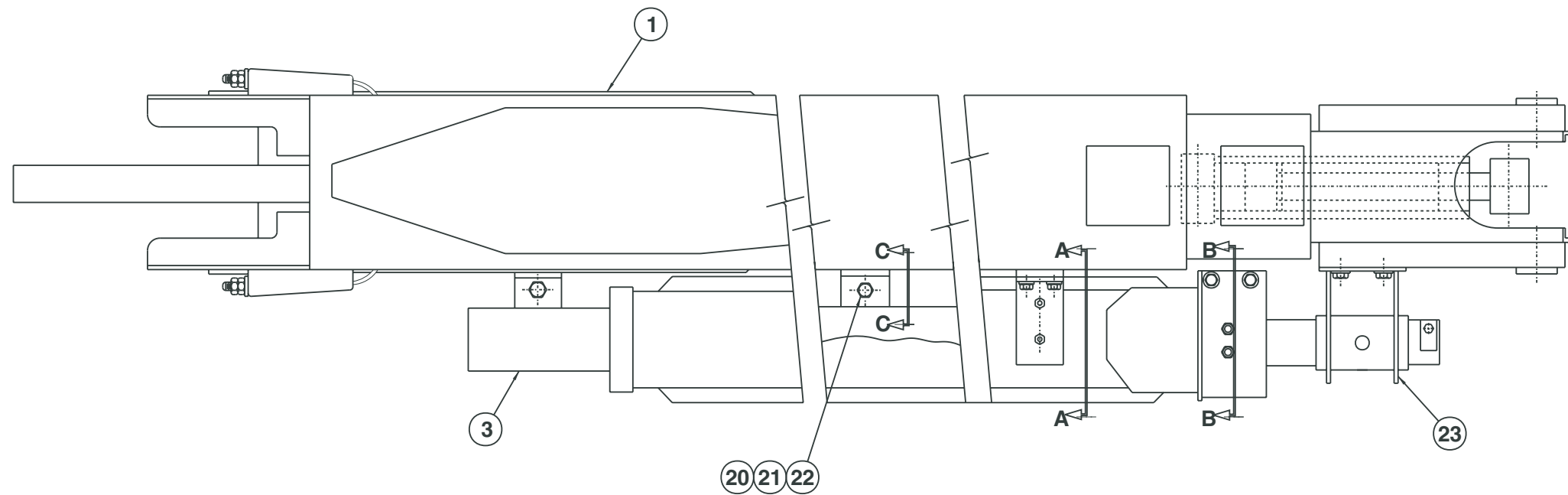
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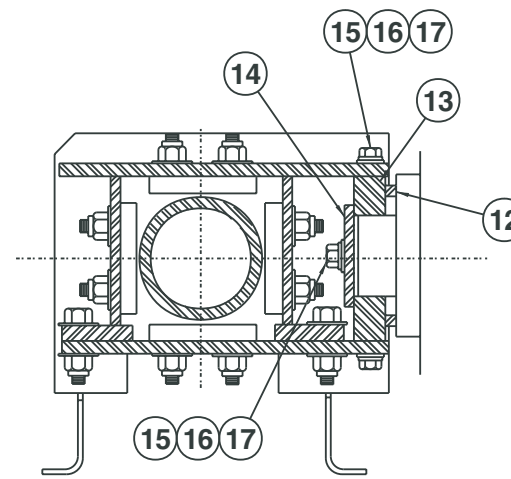
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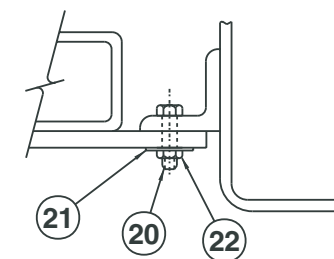
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Section A-A



Section B-B



Section C-C

AW0080977

DWG. 0080977

TITLE Boom and hose carrier
Snorkel model TB 60



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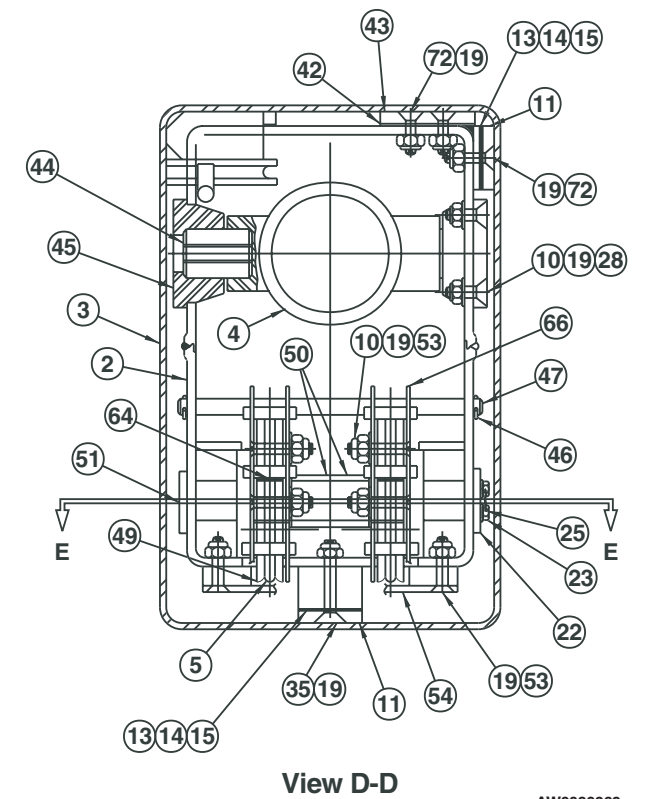
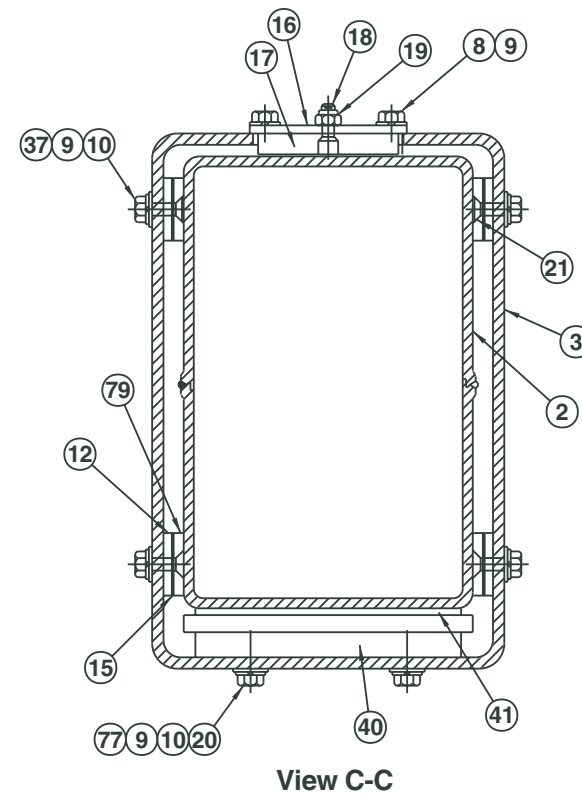
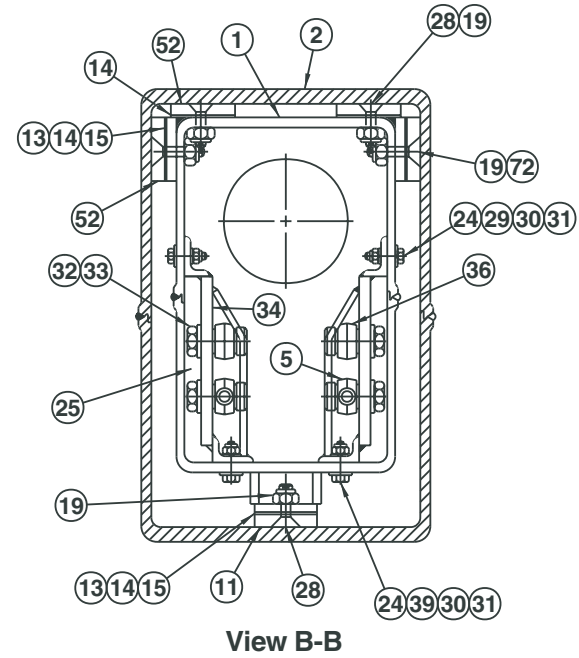
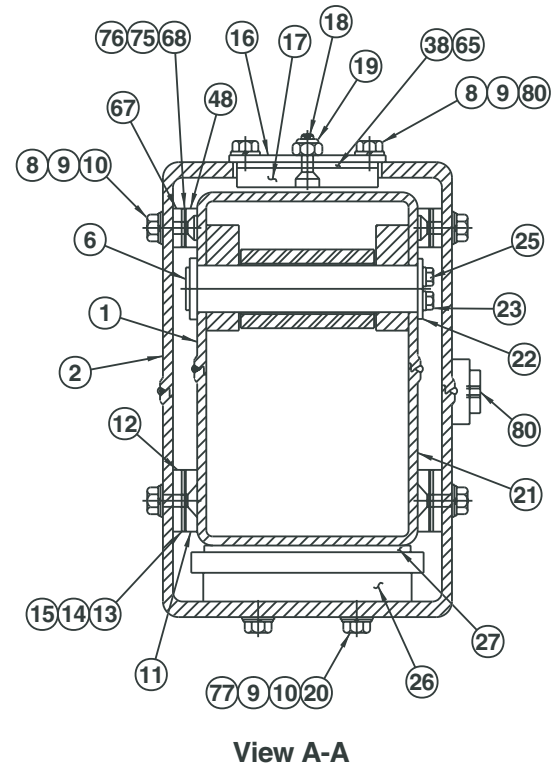
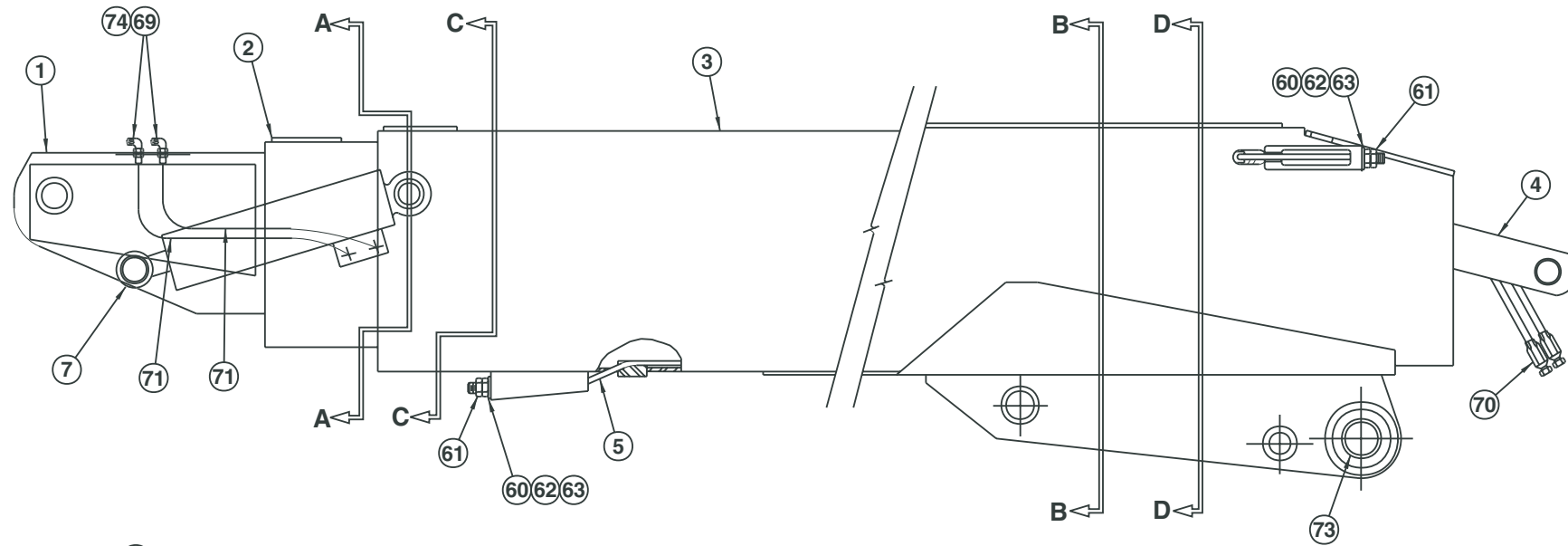
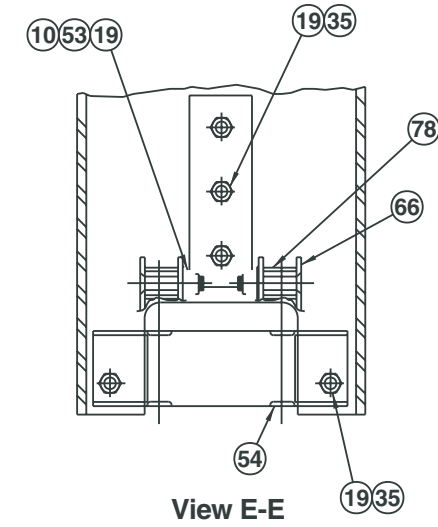
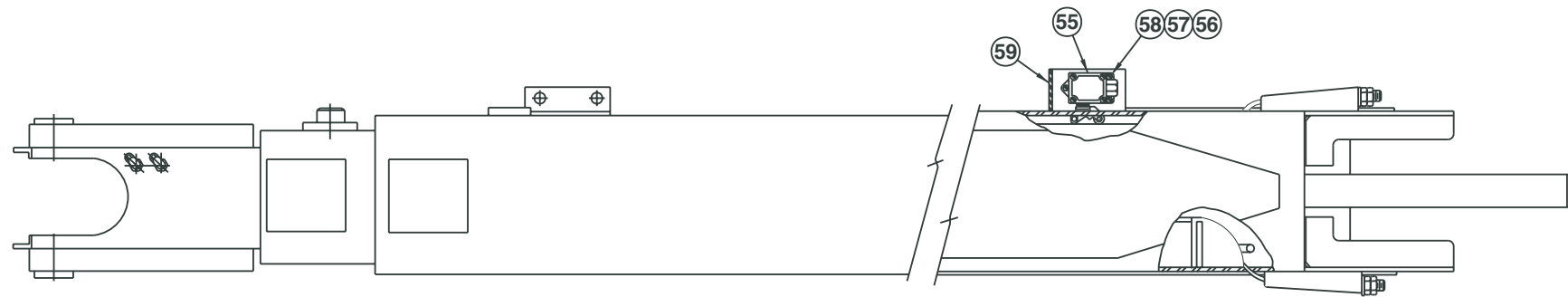
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Booms

item	part no	qty	description
	0080969	1	Booms
1	0080953	1	Tip boom
2	0080955	1	Intermediate boom
3	0080967	1	Base boom
4	0080978	1	Extension cylinder - (see hydraulics section for parts breakdown)
5	0081215	2	Wire rope, retract
6	0070443	1	Pin, slave level cylinder to tip boom
7	0071486	1	Cylinder, slave level - (see hydraulics section for parts breakdown)
8	970449	16	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
9	987119	36	Washer 3/8 medium lock
10	986299	40	Washer 3/8 medium flat
11	0080293	6	Slide pad
12	0070485	6	Slide pad spacer
13	0070030	14	Slide pad shim, .030 inch thick
14	0072567	16	Slide pad shim, .063 inch thick
15	0090141	14	Slide pad shim, .090 inch thick
16	0072681	2	Slide pad mount
17	0072682	2	Slide pad
18	972559	8	Capscrew 3/8-16 x 1 inch long socket flat head
19	5560033	56	Nut 3/8-16 self locking
20	970469	12	Capscrew 3/8-16 x 1 inch long hex head grade 5
21	970439	24	Capscrew 3/8-16 x 5/8 inch long socket flat head
22	0070033	2	Pin lock
23	0070473	4	Capscrew 5/16-18 drilled head
24	987109	8	Washer 5/16 medium lock
25	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
26	0080951	1	Pad plate
27	0080147	1	Slide pad
28	5560644	17	Capscrew 3/8-16 x 1-1/4 inch long socket flat head
29	970369	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
30	986269	8	Washer 5/16 medium flat
31	5560031	8	Nut 5/16-18 self locking
32	986359	4	Washer 1/2 medium flat
33	5560033	4	Nut 1/2-13 hex jam, drilled
34	0080045	2	Wire rope anchor
35	972539	4	Capscrew 3/8-16 x 2-3/4 inch long socket flat head
36	5560005	4	Anchor bolt
37	970429	8	Capscrew 3/8-16 x 1/2 inch long hex head grade 5
38	0072683	1	Slide pad spacer, 1/4 inch thick
39	970269	4	Capscrew 5/16-18 x 1-1/4 inch long hex head grade 5
40	0080952	1	Pad plate
41	0081048	1	Slide pad
42	0072680	2	Slide pad shim
43	0070639	2	Slide pad
44	0070390	2	Cylinder anchor pin
45	0072751	2	Cylinder anchor
46	988179	1	Cotter pin 1/8 inch diameter x 1 inch long
47	0070448	1	Pin, cable retainer
48	0080294	2	Slide pad
49	0081675	2	Cable sheave
50	2500035	2	Bearing
51	0070439	1	Pin, retract sheave
52	0070031	8	Slide pad
53	9702509	6	Capscrew 3/8-16 x 2 inch long socket flat head
54	0081450	1	Cable retainer
55	0081975	1	Boom switch - (see page 3-44 for parts breakdown)
			Parts list continued on next page

Booms

item	part no	qty	description
56	5560649	3	Machine screw #10-24 x 1 inch long truss head
57	986009	6	Washer #10 medium flat
58	984049	3	Nut #10-24 hex
59	0071216	1	Guard, boom switch
60	5560170	8	Washer 3/4 hard flat ASTM-F436
61	984469	8	Nut 3/4-10 hex jam
62	0071922	4	Spacer, 1-1/8 inch thick
63	0071921	4	Spacer, 5/8 inch thick
64	2502028	2	Bearing
65	0073111	1	Slide pad spacer, 1/8 inch thick
66	0073535	2	Sheave cage
67	0073340	2	Slide pad spacer, 1/4 inch thick
68	0070043	2	Slide pad shim, .030 inch thick
69	5034501	2	Bulkhead straight thread 90° elbow
70	0100422	2	3/8 inch hydraulic hose
71	0070768	2	1/4 inch hydraulic hose
72	978409	22	Capscrew 3/8-16 x 1-1/2 inch long socket flat head
73	2503644	2	Bearing
74	5074401	2	Bulkhead run tee
75	0073342	2	Slide pad shim, .063 inch thick
76	0073343	2	Slide pad shim, .090 inch thick
77	5560015	18	Thread insert 3/8-16
78	0074639	8	Slide pad 3/8 Cable sheave

Hose carrier

item	part no	qty	description
	0072727	1	Hose carrier
1	0072743	1	Hose carrier
2	0072737	1	Carrier tube
3	0081089	2	3/16 inch hydraulic hose, 739 inch long - (leveling hoses)
4	0081090	2	3/16 inch hydraulic hose, 790 inch long - (rotation hoses)
5	3010006	1	Power wire, 12 gauge/8 conductor x 75 feet long - (terminals not included)
	3044854		Replacement terminal
6	3010009	1	Control wire #1, 18 gauge/12 conductor x 75 feet long - (terminals not included)
	3046972		Replacement terminal
7	0080963	1	Plastic track
	9920014	111	Replacement plastic track link
8	0092934	2	Slide pad
9	0072910	2	Capscrew, special
10	978409	2	Capscrew 3/8-16 x 1-1/2 inch long socket flat head
11	0100105	4	Slide pad
12	0070029	2	Slide pad
13	0072936	1	Slide pad
14	0080284	6	Spacer
15	0110610	1	Anchor plate
16	0072935	2	Slide pad
17	5560644	8	Capscrew 3/8-16 x 1-1/4 inch long socket flat head
18	5560033	20	Nut 3/8-16 self locking
19	986299	28	Washer 3/8 medium flat
20	972489	4	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
21	972449	7	Capscrew 3/8-16 x 3/4 inch long socket flat head
22	3010005	1	Control wire #2, 18 gauge/19 conductor x 75 feet long - (terminals not included)
	3046972		Replacement terminal
23	5560605	6	Capscrew 3/8-16 x 7 inch long hex head grade 5
24	5560606	1	Capscrew 1/2-13 x 7 inch long hex head grade 5
25	986359	2	Washer 1/2 medium flat
26	5560039	1	Nut 1/2-13 self locking

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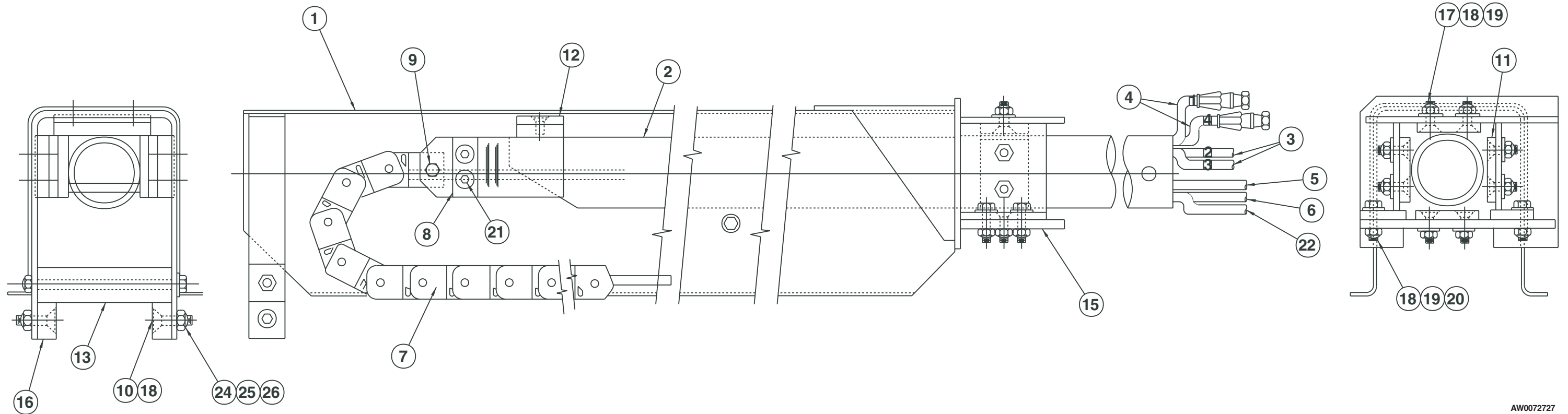
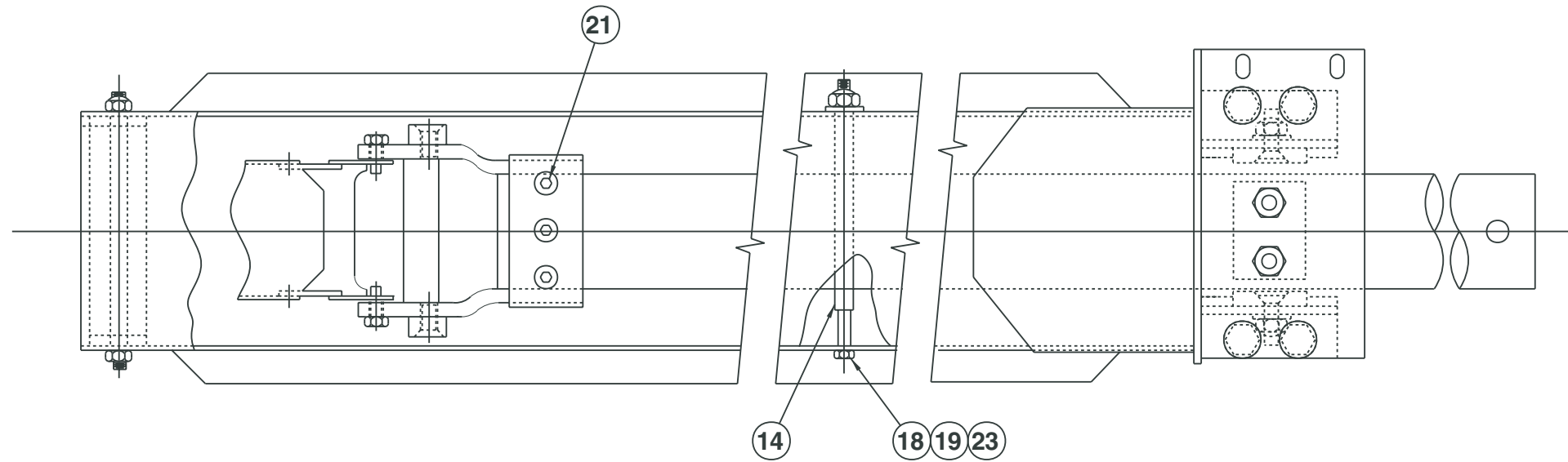
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TITLE Hose carrier

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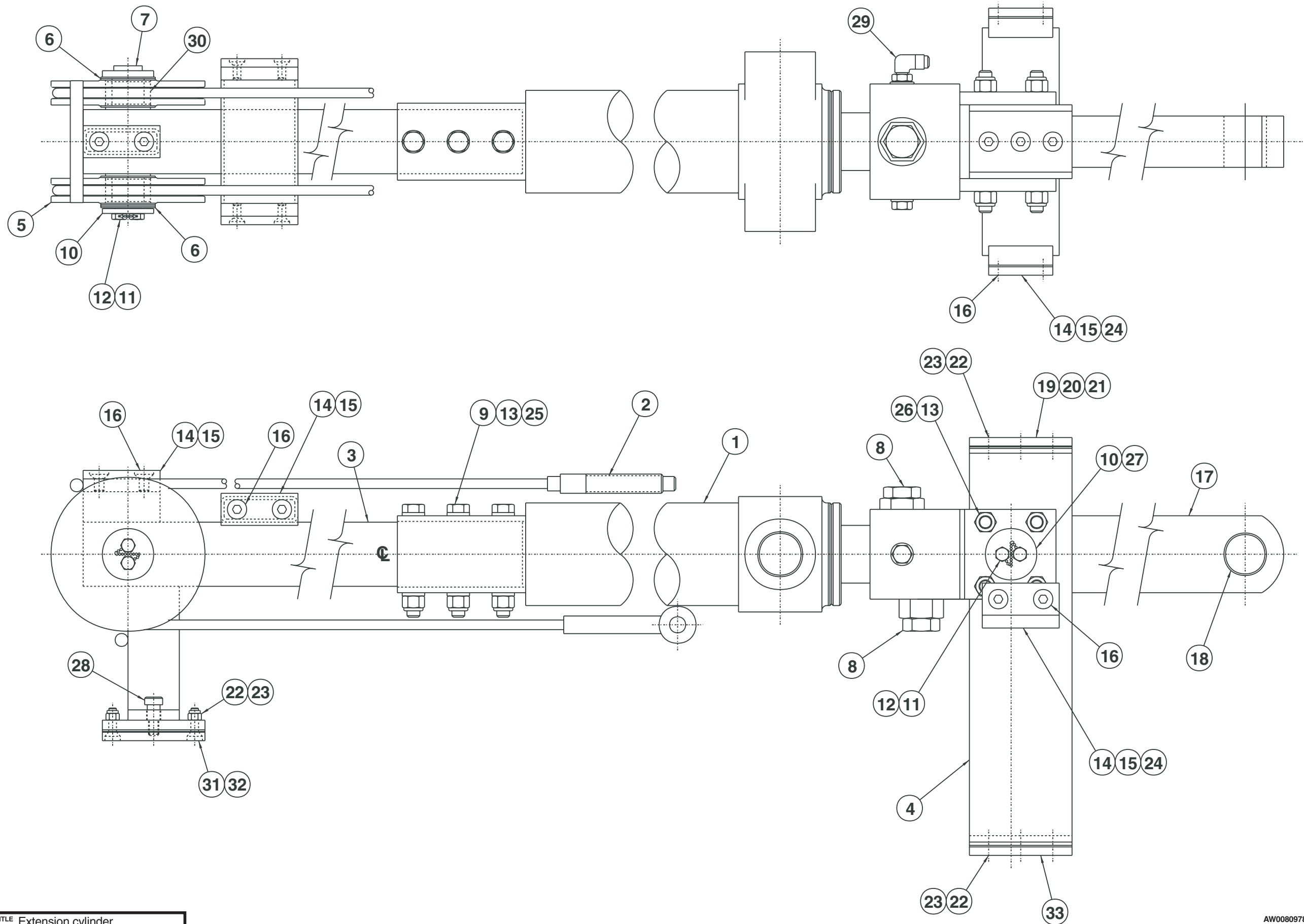
Snorkel model TB 60



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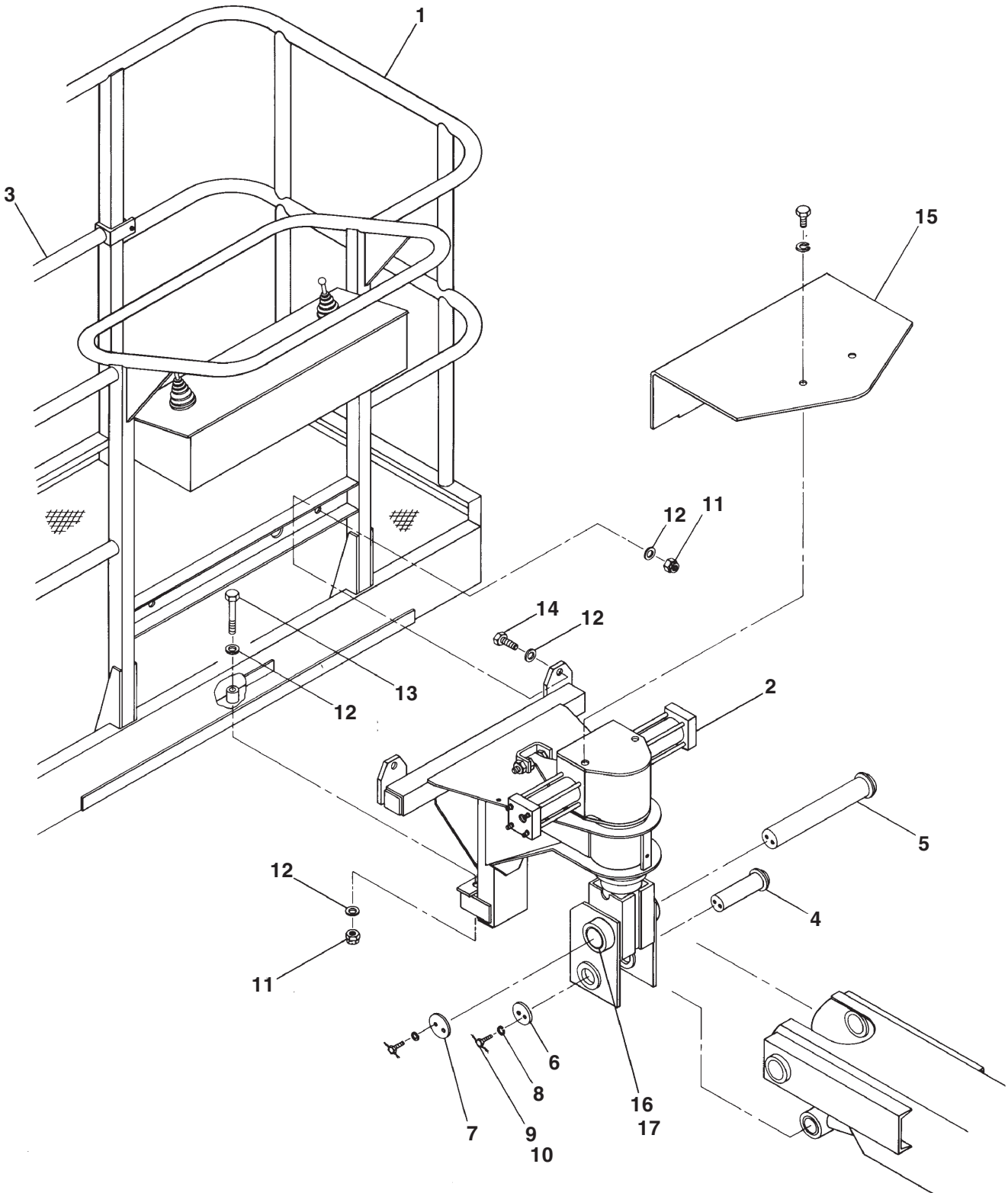
Extension cylinder

item	part no	qty	description
	0080978	1	Extension cylinder
1	0080975	1	Cylinder, extension - (see hydraulics section for parts breakdown)
2	0081214	2	Wire rope, extend
3	0082054	1	Support bracket, extend cylinder base end
4	0080980	1	Support bracket, extend cylinder rod end
5	0081675	2	Cable sheave
6	5560254	7	Thrust washer
7	0070438	1	Pin, extend sheave
8	6010116	2	Cartridge holding valve, included with extension cylinder - (factory preset, do not reset)
9	5560168	6	Washer 1/2 hard flat ASTM-F436
10	0070033	2	Pin lock
11	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
12	0070473	4	Capscrew 5/16-18 drilled head
13	5560039	11	Nut 1/2-13 self locking
14	0070141	5	Slide pad
15	0071341	5	Slide pad shim, .063 inch thick
16	972449	10	Capscrew 3/8-16 x 3/4 inch long socket flat head
17	0080019	1	Link
18	2502432	2	Bearing
19	0070029	1	Slide pad
20	0070838	2	Slide pad shim, .030 inch thick
21	0071272	2	Slide pad shim, .063 inch thick - (before 1-17-00)
22	5560644	10	Capscrew 3/8-16 x 1-1/4 inch long socket flat head
23	5560033	10	Nut 3/8-16 self locking
24	0073650	2	Slide pad shim, 1/4 inch thick
25	970849	3	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
26	970919	8	Capscrew 1/2-13 x 1-3/4 inch long socket flat head
27	0070440	1	Link pin
28	5560005	2	Shoulder bolt
29	5035306	2	Straight thread 90° elbow
30	2502028	2	Bearing
31	0191071	1	Slide pad
32	0191070	2	Slide pad plate
33	0150121	1	Slide pad - (before 1-17-00)
	0150122	1	Slide pad - (after 1-17-00)

Platform mounting

item	part no	qty	description
1		1	Platform - (consult factory)
2	0072552	1	Platform rotator - (see page 1-34 for parts breakdown)
3		1	Platform gate - (see page 1-32 for proper platform gate)
4	0070441	1	Pin, slave level cylinder to platform
5	0070446	1	Pin, platform to tip boom
6	0070033	1	Pin lock
7	0070132	1	Pin lock
8	987109	4	Washer 5/16 medium lock
9	0070473	4	Capscrew 5/16-18 drilled head
10	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
11	5560039	4	Nut 1/2-13 self locking
12	986359	8	Washer 1/2 medium flat
13	971009	2	Capscrew 1/2-13 x 4 inch long hex head grade 5
14	970909	2	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
15	0070874	1	Cover, platform rotator
16	0070351	1	Bearing spacer
17	2502832	2	Bearing

Platform mounting

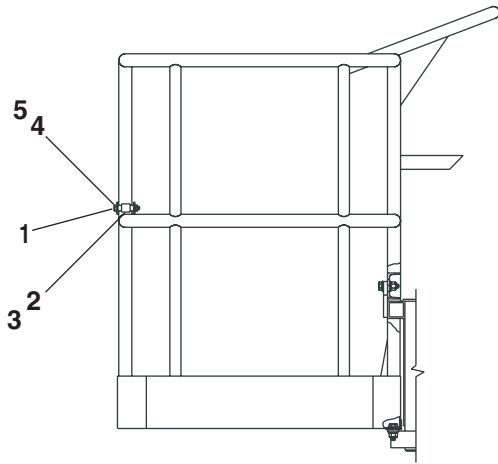


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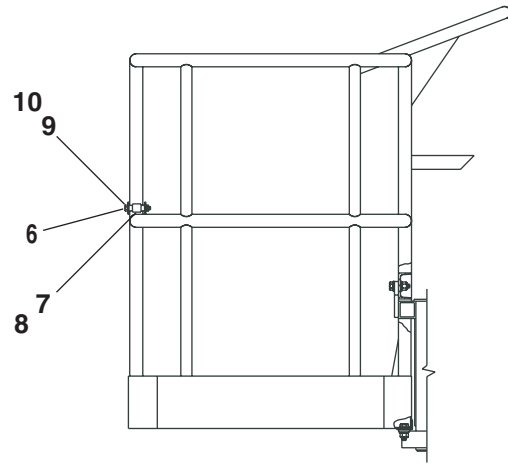
Platform gate

item	part no	qty	description
			Gravity gate for 5 ft and 8 ft steel platforms
1	0071951	1	Gravity gate, steel platform
2	0150509	2	Roller, steel gravity gate
3	0071953	2	Roller spacer, steel gravity gate
4	970529	2	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
5	5560033	2	Nut 3/8-16 self locking
			Gravity gate for 5 ft and 8 ft aluminum platforms
	016117728	1	Gravity gate service kit - (kit includes items 6 through 10)
6	0161177	1	Gravity gate, aluminum platform
7	0161182	2	Roller, aluminum gravity gate
8	0161184	2	Roller spacer, aluminum gravity gate
9	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
10	5560039	2	Nut 1/2-13 self locking
			Swinging gate for 5 ft and 8 ft steel platforms
11	0071834	1	Swinging gate, steel platform
12	0322724	1	Pin, gate hinge
13	988179	2	Cotter pin 1/8 inch diameter x 1 inch long
14	986359	2	Washer 1/2 medium flat
15	0071837	1	Spring, torsion
16	2570002	2	Bearing
17	2667500	1	Knob, gate hinge pin
			Swinging gate for 5 ft and 8 ft aluminum platforms
18	0160970	1	Swinging gate, aluminum platform
19	0322724	1	Pin, gate hinge
20	5560056	1	Roll pin 1/8 inch diameter x 1 inch long
21	0071837	1	Spring, torsion
22	2570002	2	Bearing
23	2667500	1	Knob, gate hinge pin
24	0161472	1	Latch stop
25	970099	3	Capscrew 1/4-20 x 5/8 inch long hex head grade 5
26	984529	3	Nut sert 1/4-20
27	987099	2	Washer 1/4 medium lock
28	986019	1	Washer 1/4 medium flat
29	300891	1	Door latch
			Full height swinging gate for 8 ft steel platforms
30	0074468	1	Full height swinging gate, steel platform
31	0322724	1	Pin, gate hinge
32	988179	2	Cotter pin 1/8 inch diameter x 1 inch long
33	986359	2	Washer 1/2 medium flat
34	0071837	1	Spring, torsion
35	2572002	2	Bearing
36	2667500	1	Knob, gate hinge pin
37	300891	1	Door latch
38	984529	3	Nut sert 1/4-20
39	970099	3	Capscrew 1/4-20 x 5/8 inch long hex head grade 5
40	987099	2	Washer 1/4 medium lock
41	986019	1	Washer 1/4 medium flat
42	0181574	1	Latch stop

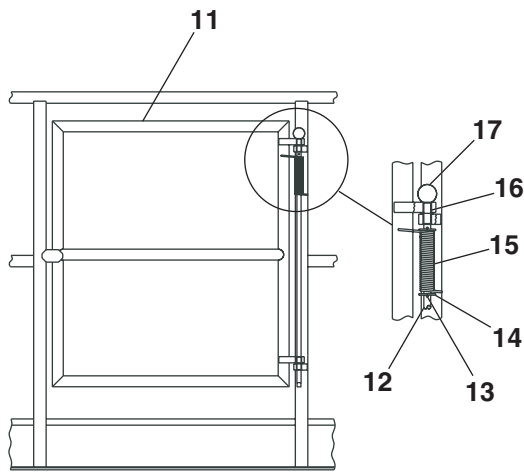
Platform gate



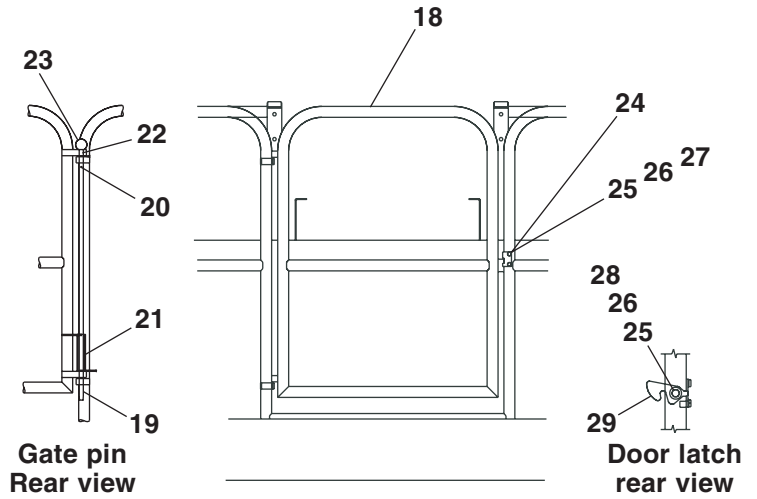
Gravity gate, steel platform



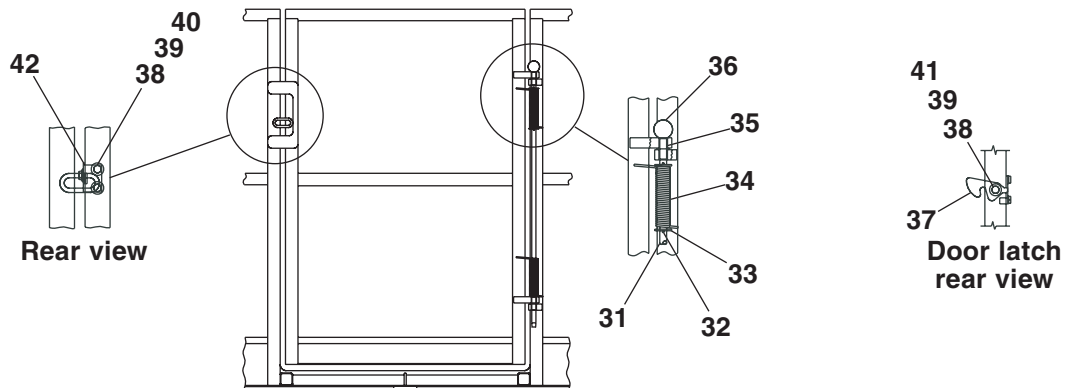
Gravity gate, aluminum platform



Swinging gate, steel platform



Swinging gate, aluminum platform

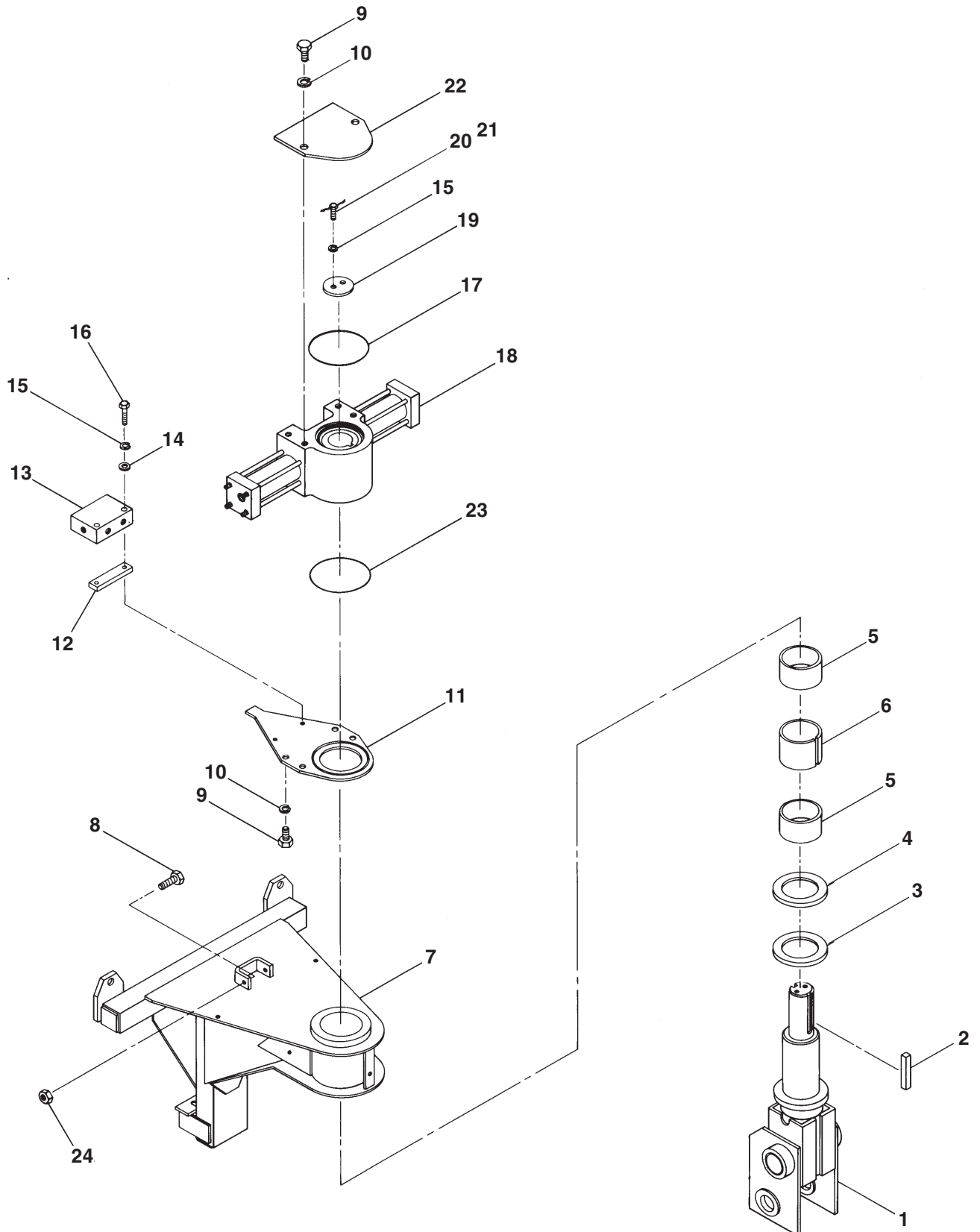


Full height swinging gate, steel platform

Platform rotator

item	part no	qty	description
	0072552	1	Platform rotator
1	0072553	1	Pylon, platform rotator
2	0070916	1	Key
3	0072555	1	Collar
4	0072561	1	Thrust bearing
5	2504856	2	Bearing
6	0072562	1	Bearing spacer
7	0072556	1	Mounting frame, platform rotator
8	970919	2	Capscrew 1/2-13 x 1-3/4 inch long hex head grade 5
9	970849	6	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
10	987139	6	Washer 1/2 medium lock
11	0072818	1	Torque plate, platform rotator
12	0073783	1	Valve spacer
13	6010628	1	Dual holding valve, platform rotation - (see page 2-47 for parts breakdown)
14	986269	2	Washer 5/16 medium flat
15	987109	4	Washer 5/16 medium lock
16	970349	2	Capscrew 5/16-18 x 2-3/4 inch long hex head grade 5
17	7110157	1	O-ring - (used on Helac rotator only)
	7110348	1	O-ring - (used on Parker rotator only)
18	0070570	1	Platform rotator (see page 2-56 Helac rotator)
		1	(see page 2-57 for Parker rotator)
19	0070132	1	Pin lock
20	0070473	2	Capscrew 7/16-18 drilled head
21	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
22	0072508	1	Cover plate, platform rotator
23	7110157	1	O-ring - (used on Helac rotator only)
	7110348	1	O-ring - (used on Parker rotator only)
24	984409	2	Nut 1/2-13 hex jam

Platform rotator

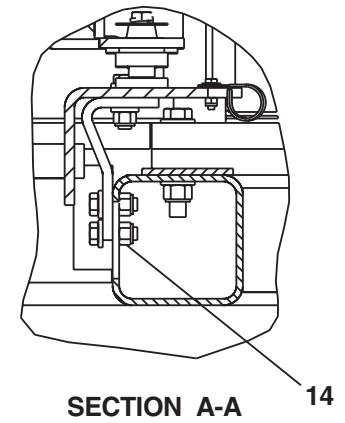
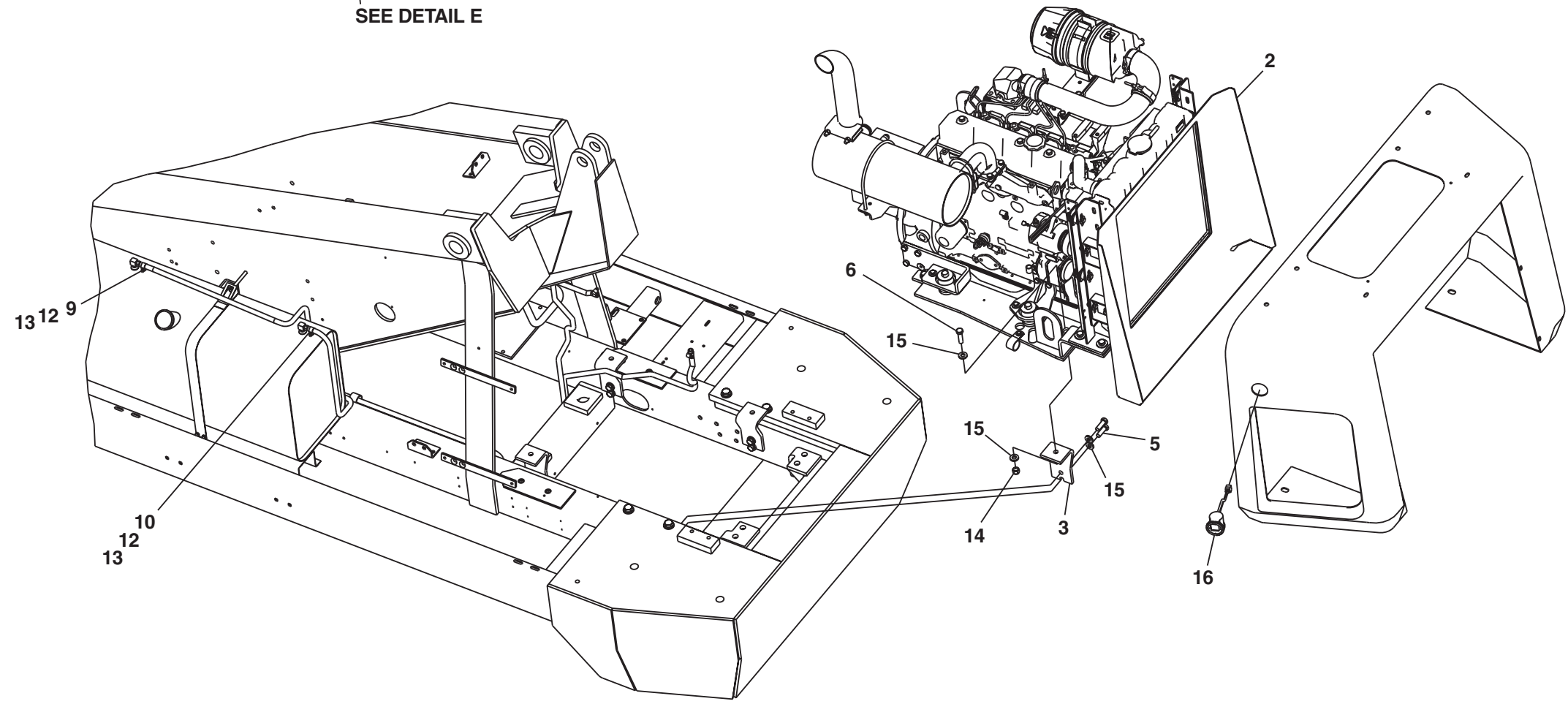
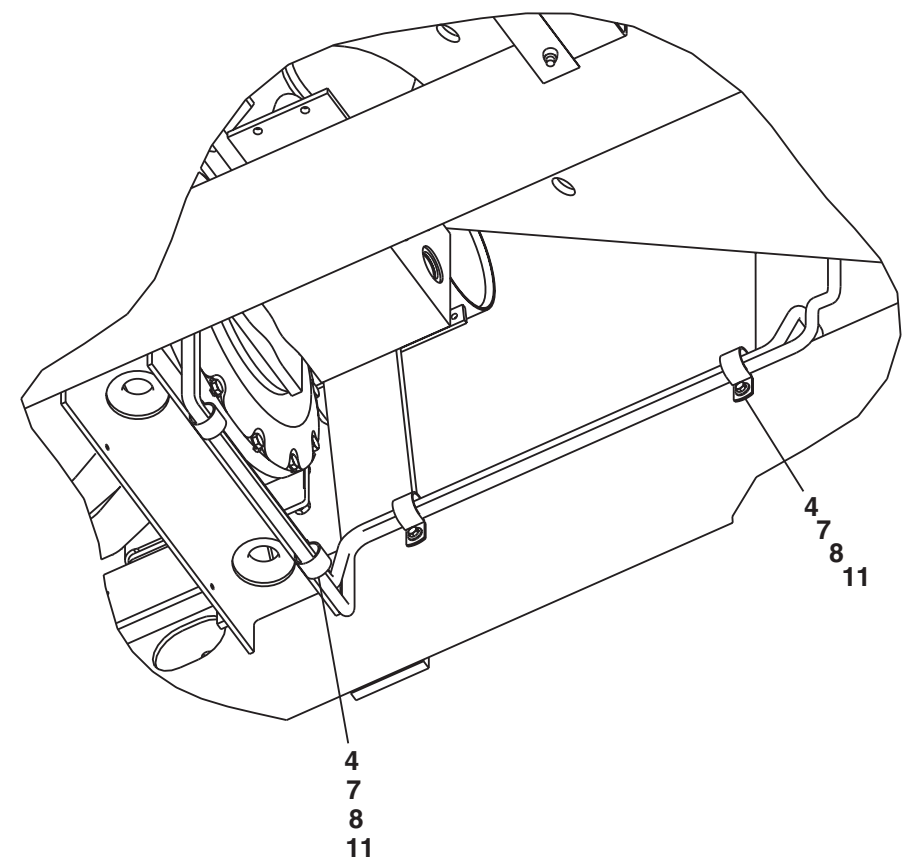
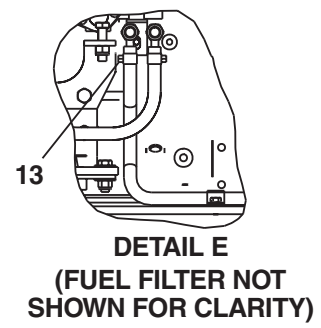
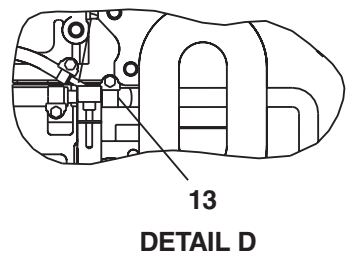
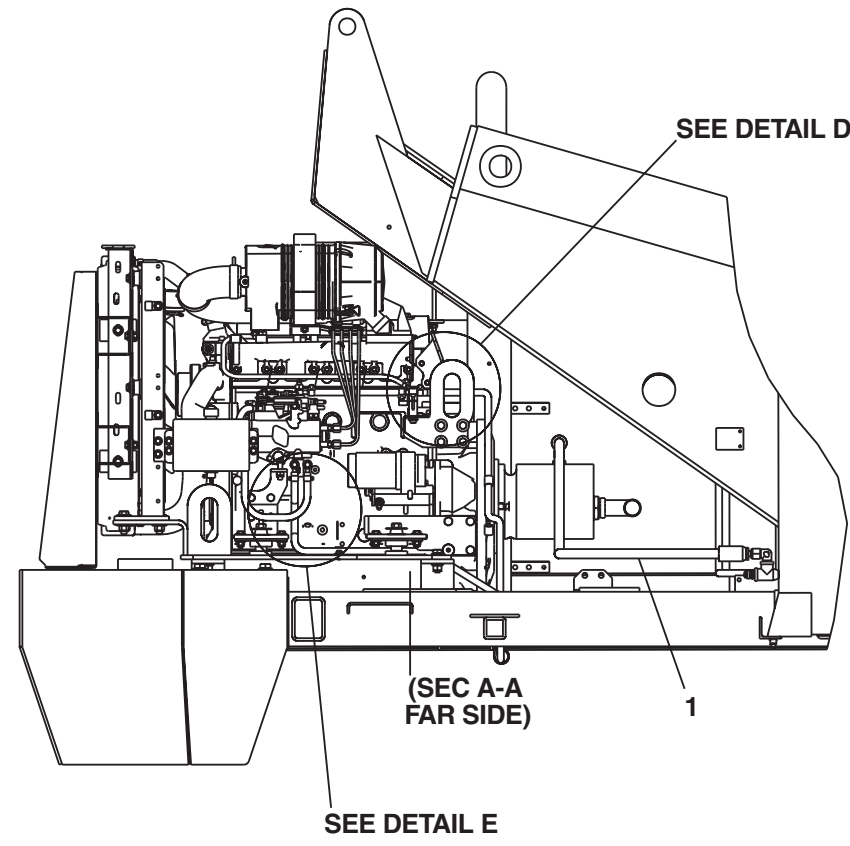


AW0072552

Engine mounting, Cummins 3.3

item	part no	qty	description
1	0070792	1	1/2 inch hydraulic hose
2	0083436	1	Engine and radiator, Cummins 3.3 - (see page 1-39 for parts breakdown)
3	0083438	4	Engine mount, Cummins 3.3
4	970019	4	Capscrew 1/4-20 x 5/8 inch long hex head grade 5
5	970909	8	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
6	970919	4	Capscrew 1/2-13 x 1-3/4 inch long hex head grade 5
7	986019	4	Washer 1/4 medium flat
8	987099	8	Washer 1/4 medium lock
9	5010005	1	Hose 3/8 inch diameter x 126 inch long
10	5010005	1	Hose 3/8 inch diameter x 78 inch long
11	5093024	4	Clamp
12	5093045	2	Fitting, straight brass
13	5550006	4	Clamp
14	5560039	12	Nut 1/2-13 self locking
15	5560168	16	Washer 1/2 hard flat ASTM-F436
16	7630140	1	Filter condition indicator

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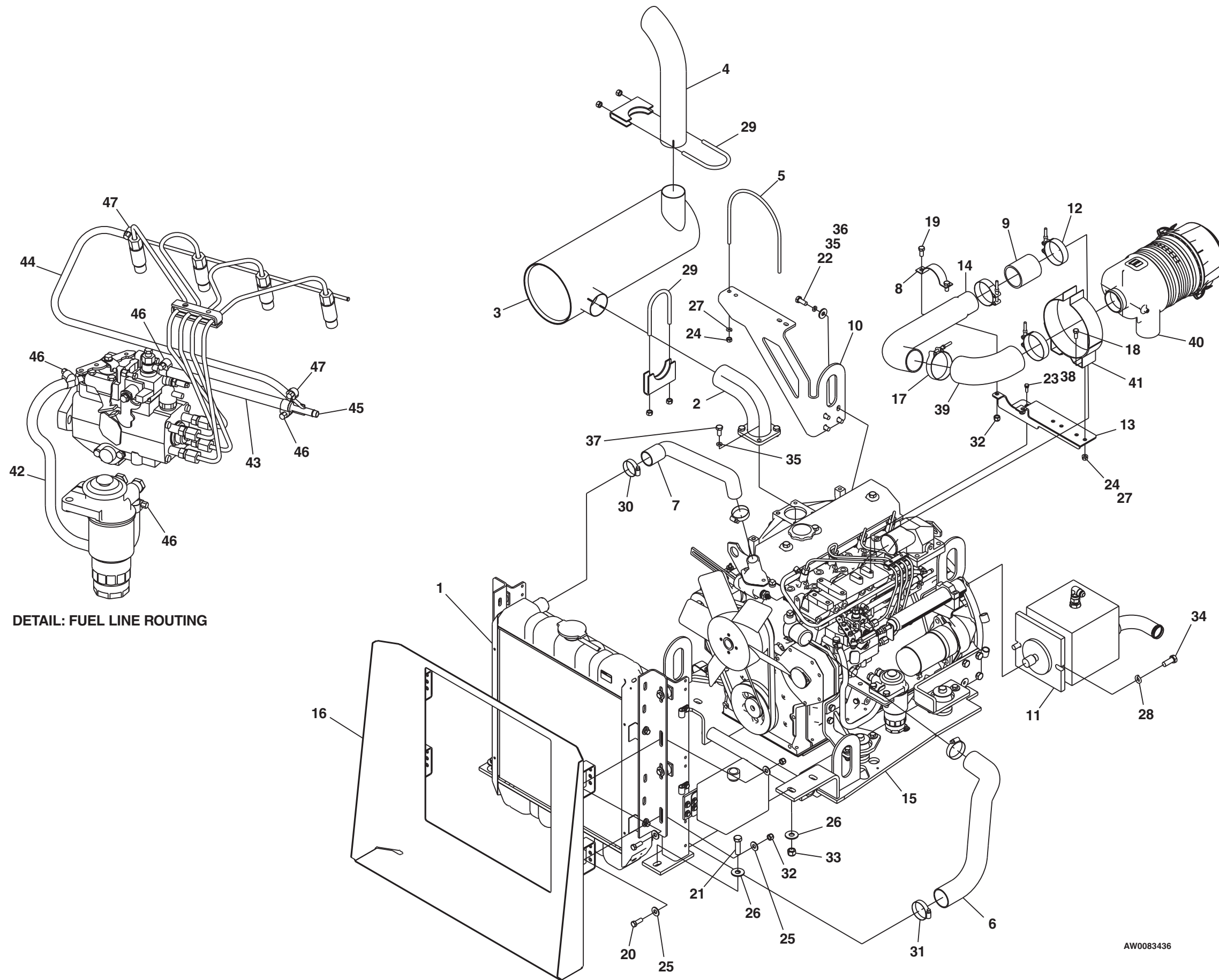
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DETAIL: FUEL LINE ROUTING

AW0083436



TITLE Engine and radiator
 Cummins 3.3
 Snorkel model TB 60

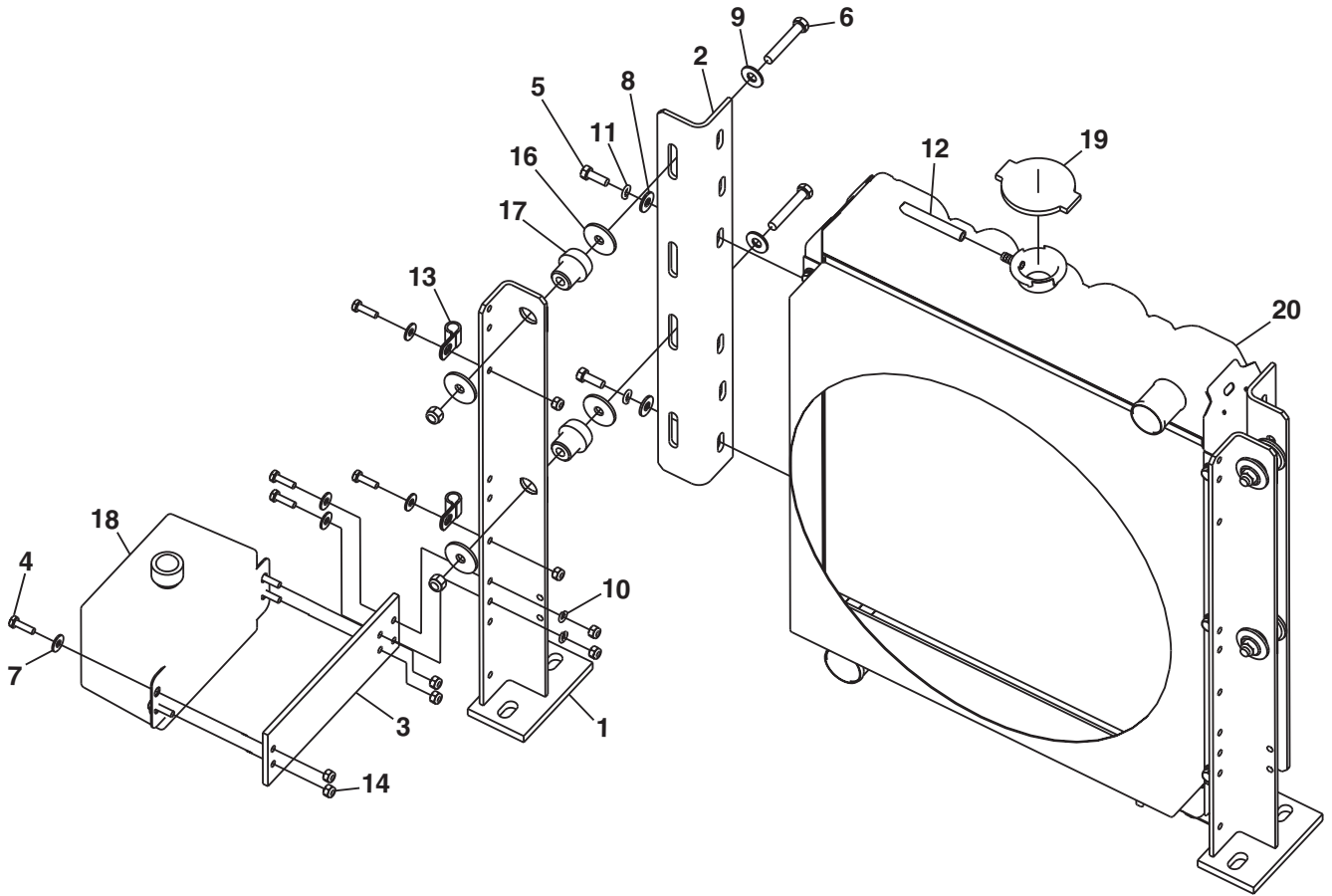
Engine and radiator, Cummins 3.3

item	part no	qty	description
	0083436	1	Engine and radiator, Cummins 3.3
1	0073634	1	Radiator - (see page 1-40 for parts breakdown)
2	0074641	1	Exhaust pipe
3	0074644	1	Muffler, standard
4	0074645	1	Tail pipe
5	0074664	1	Muffler clamp
6	0074684	1	Lower radiator hose
7	0074685	1	Upper radiator hose
8	0074687	1	Air intake tube clamp
9	0074688	1	Air intake hose adapter
10	0074786	1	Muffler support bracket
11	0082138	1	Hydraulic pump - (see page 2-52 for parts breakdown)
12	0083165	2	Clamp, T-bolt
13	0083167	1	Air cleaner mount bracket
14	0083175	1	Air cleaner hose coupler
15	0083445	1	Engine tray, Cummins 3.3 - (see page 1-42 for parts breakdown)
16	0083501	1	Shroud
17	0083544	2	Clamp, T-bolt
18	970239	2	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
19	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
20	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
21	970919	4	Capscrew 1/2-13 x 1-3/4 inch long hex head grade 5
22	972019	4	Capscrew metric M10-1.5 x 25mm long hex head
23	975209	2	Capscrew metric M6-1.00 x 18mm long hex head
24	984089	4	Nut 5/16-18 hex
25	986299	8	Washer 3/8 medium flat
26	986359	8	Washer 1/2 medium flat
27	987109	2	Washer 5/16 medium lock
28	987139	2	Washer 1/2 medium lock
29	5550026	2	Clamp
30	5550038	2	Clamp
31	5550040	2	Clamp
32	5560033	6	Nut 3/8-16 self locking
33	5560039	4	Nut 1/2-13 self locking
34	5560136	2	Capscrew 1/2-13 self locking drilled head
35	5560356	8	Washer metric M10 lock
36	5560364	4	Washer metric M10 flat
37	5560625	4	Capscrew metric M10-1.5 x 20mm long hex head
38	5560664	2	Washer metric M6 lock
39	7630015	1	Elbow, 90° rubber
40	7630755	1	Air cleaner
	8140011	1	Replacement primary filter element
	8140012	1	Replacement dust ejector
	8140013	1	Replacement cover
	8140014	1	Replacement clip
41	7630759	1	Air cleaner bracket
42	5010005	1	Hose 3/8 inch diameter x 33 inch long
43	5010005	1	Hose 3/8 inch diameter x 9 inch long
44	5010027	1	Fuel hose 3/16 inch diameter x 24 inch long
45	5093044	1	Nylon tee
46	5550006	4	Clamp
47	5550028	2	Clamp

Radiator, Cummins 3.3

item	part no	qty	description
	0074634	1	Radiator, Cummins 3.3
1	0074630	2	Radiator bracket
2	0083153	2	Radiator mount angle
3	0180832	1	Mount plate, overflow reservoir
4	970039	8	Capscrew 1/4-20 x 7/8 inch long hex head grade 5
5	970249	4	Capscrew 5/16-18 x 7/8 inch long hex head grade 5
6	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
7	986019	8	Washer 1/4 medium flat
8	986269	4	Washer 5/16 medium flat
9	986299	4	Washer 3/8 medium flat
10	987099	2	Washer 1/4 medium lock
11	987109	4	Washer 5/16 medium lock
12	5010011	1	Fuel hose 5/16 inch diameter x 48 inch long
13	5093001	2	Clamp
14	5560004	8	Nut 1/4-20 self locking
15	5560033	4	Nut 3/8-16 self locking
16	5560179	8	Washer, snubbing
17	7630180	1	Radiator cushion
18	7630227	1	Overflow reservoir
	8060277	1	Replacement reservoir cap
19	7630239	1	Radiator cap - 13 psi
20	7630756	1	Radiator

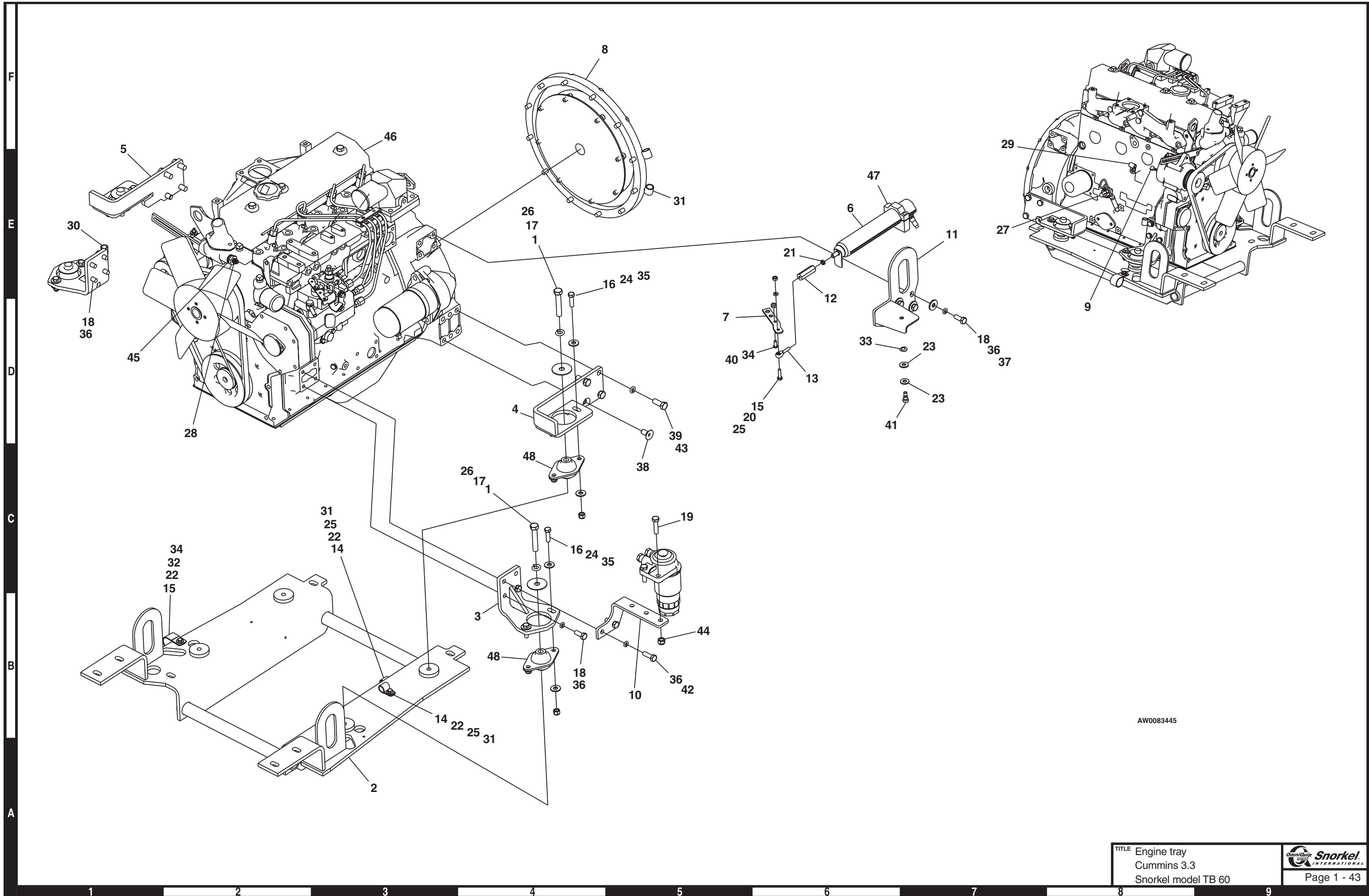
Radiator, Cummins 3.3



AW0074634

Engine tray, Cummins 3.3

item	part no	qty	description
	0083445	1	Engine tray, Cummins 3.3
1	0070148	4	Engine mount washer
2	0074615	1	Engine tray
3	0074622	2	Front engine mount bracket
4	0074625	1	Rear engine mount bracket, left hand
5	0074628	1	Rear engine mount bracket, right hand
6	20082045	1	Throttle actuator
7	0083155	1	Throttle lever extension
8	0083437	1	Flywheel coupling
9	0083512	1	Jumper wire - (after 3-30-00)
10	0083529	1	Fuel filter mount bracket
11	0083570	1	Throttle actuator mount bracket
12	0083586	1	Throttle actuator coupler
13	0083587	1	Rod end
14	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
15	970019	2	Capscrew 1/4-20 x 5/8 inch long hex head grade 5
16	970419	8	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
17	971069	4	Capscrew 1/2-13 x 2-3/4 inch long hex head grade 5
18	972019	10	Capscrew metric M10-1.5 x 25mm long hex head
19	972049	2	Capscrew metric M10-1.5 x 40mm long hex head
20	984069	1	Nut 1/4-20 hex
21	984329	1	Nut 1/4-20 hex jam
22	986019	3	Washer 1/4 medium flat
23	986269	2	Washer 5/16 medium flat
24	986299	16	Washer 3/8 medium flat
25	987099	3	Washer 1/4 medium lock
26	987139	4	Washer 1/2 medium lock
27	3020095	1	Switch, oil pressure
28	3070038	1	Temperature sensor
29	5093000	1	Clamp
30	5093002	1	Clamp
31	5093021	4	Clamp
32	5093024	1	Clamp
33	5530017	1	Washer 3/8 curved spring
34	5560004	2	Nut 1/4-20 self locking
35	5560033	8	Nut 3/8-16 self locking
36	5560356	12	Washer metric M10 lock
37	5560364	4	Washer metric M10 flat
38	5560598	2	Capscrew metric M12-1.75 x 25mm long socket flat head
39	5560614	6	Washer metric M12 lock
40	5560615	1	Capscrew 1/4-20 x 5/8 inch long button head
41	5560618	1	Shoulder bolt 3/8 x 3/8 inch long
42	5560626	2	Capscrew metric M10-1.5 x 30mm long hex head
43	5560631	6	Capscrew metric M12-1.75 x 20mm long hex head
44	5560719	2	Nut metric M10-1.50 self locking
45	5569838	1	Washer metric M16 flat copper - (after 3-30-00)
46	7620065	1	Engine, Cummins 3.3
	8036201	1	Replacement fuel filter
	8036204	1	Replacement oil filter
47	7630323	1	Mounting block
48	7630707	4	Engine isolator



AW0083445

TITLE Engine tray
 Cummins 3.3
 Snorkel model TB 60



Engine mounting, Deutz F4L-1011F

item	part no	qty	description
1	0082013	1	Engine, Deutz F4L-1011F diesel - (see page 1-47 for parts breakdown)
2	0081630	1	Engine mount bracket, right hand front
3	0081631	1	Engine mount bracket, left hand front
4	0071599	8	Engine mount washer
5	7630130	1	Engine mount
6	7630286	1	Fuel filter
7	0151786	1	Fuel hose
8	5010011	1	Fuel hose 5/16 inch diameter x 96 inch long
9	5033604	1	Male adapter
10	5090032	1	Fitting, straight barbed
11	5560169	4	Washer 5/8 hard flat ASTM-F436
12	5550028	5	Hose clamp
13	5560131	4	Nut 5/8-11 self locking
14	5560168	16	Washer 1/2 hard flat ASTM-F436
15	5560039	8	Nut 1/2-13 self locking
16	5560639	4	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
17	970909	6	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
18	970929	2	Capscrew 1/2-13 x 2 inch long hex head grade 5
19	5093002	1	Clamp
20	5093006	4	Clamp
21	5560638	1	Capscrew metric M8-1.25 x 16mm long hex head
22	5560355	1	Washer metric M8 lock
23	0080522	1	1/2 inch hydraulic hose
24	970009	3	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
25	986019	3	Washer 1/4 medium flat
26	987099	3	Washer 1/4 medium lock

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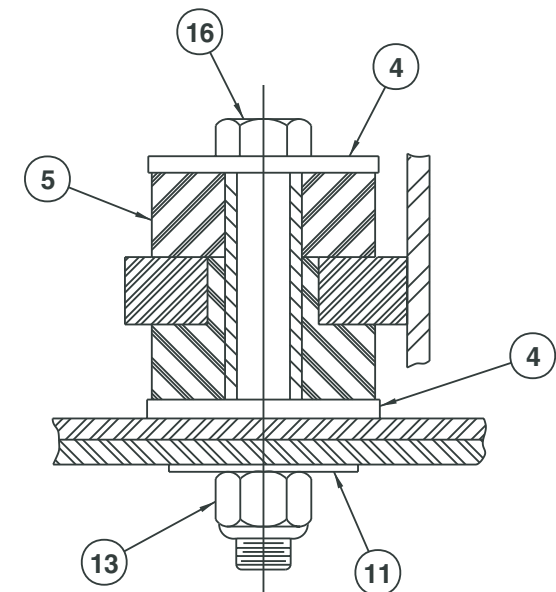
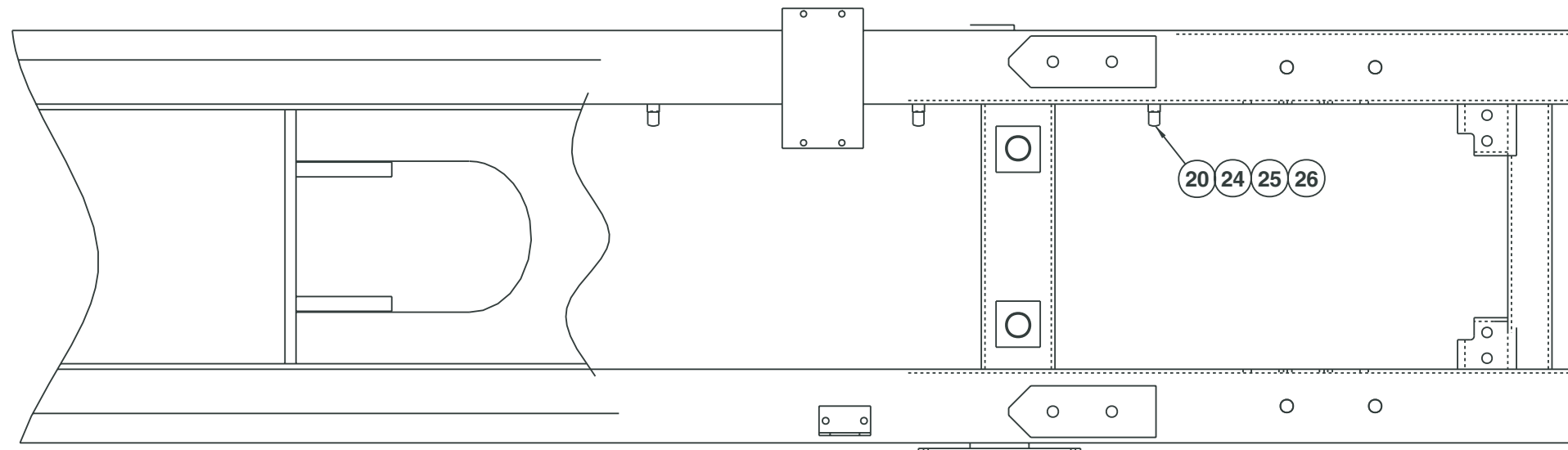
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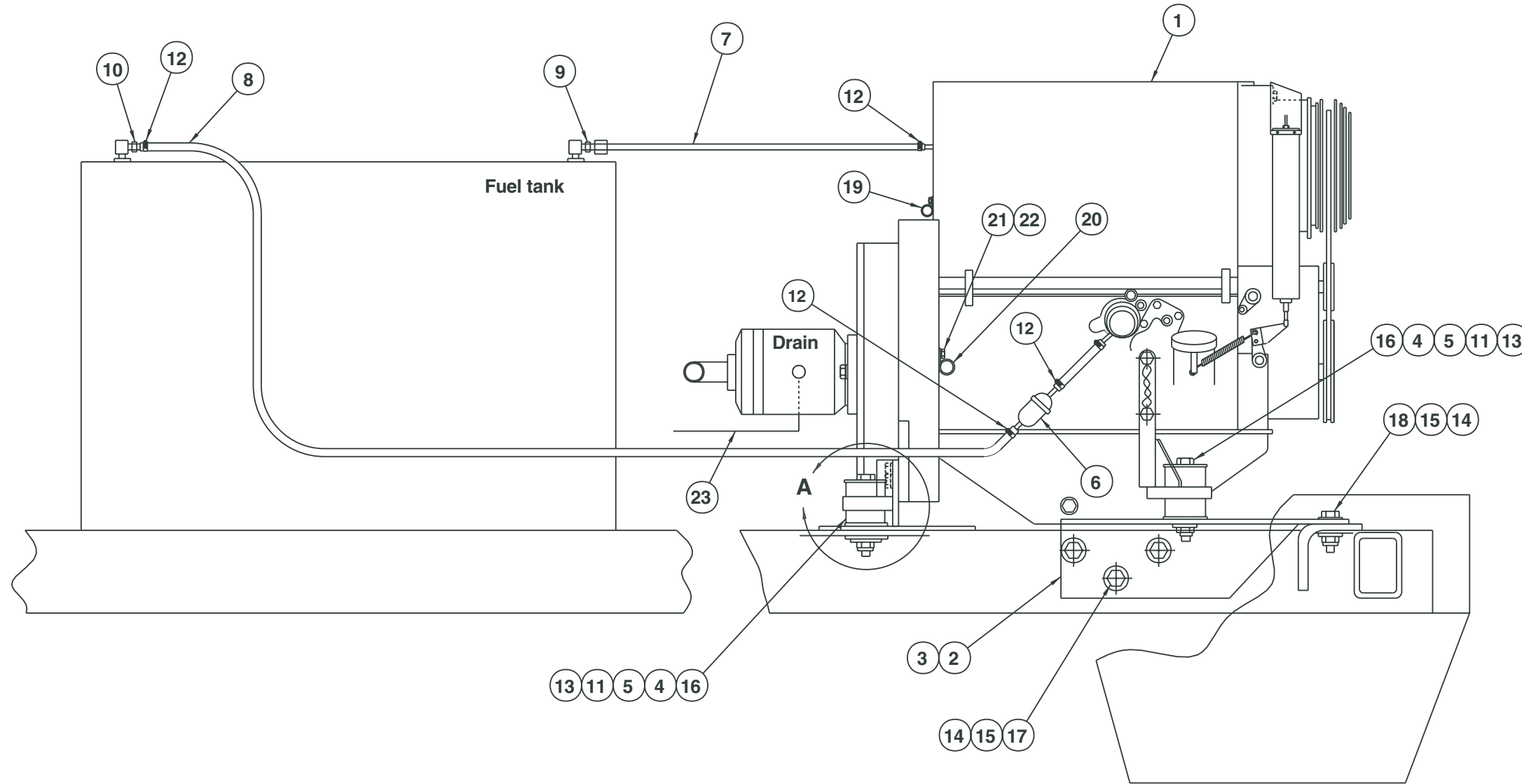
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Detail "A"
typical installation
4 places



AW0082015

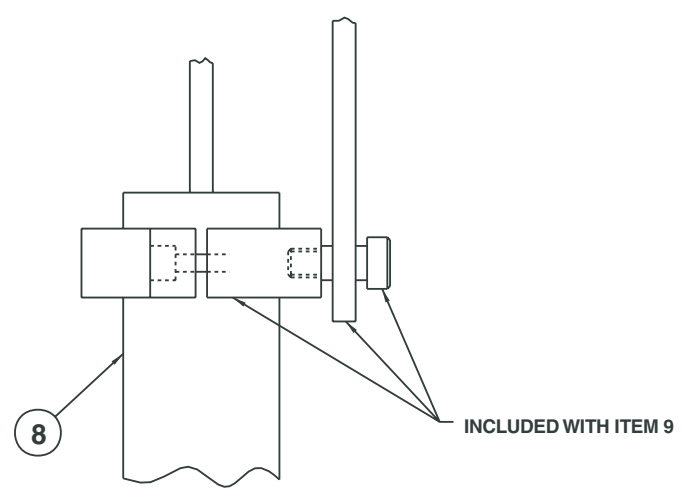
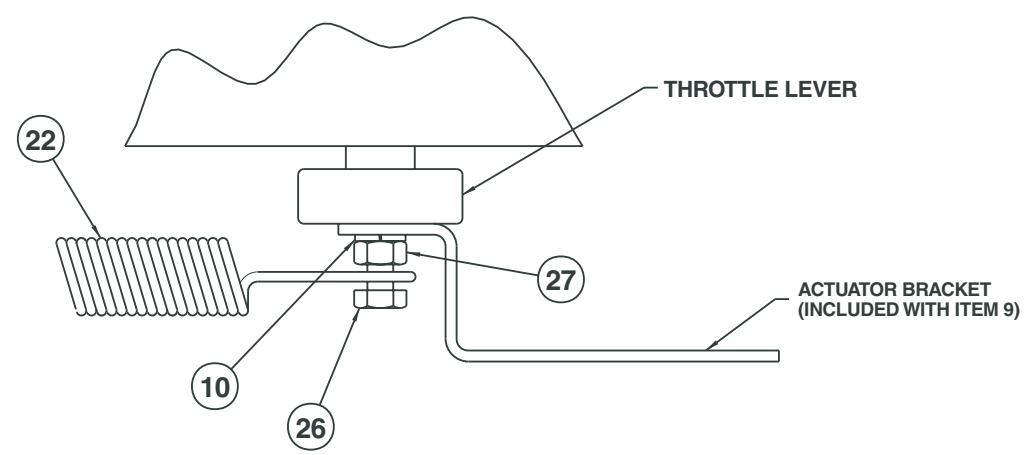
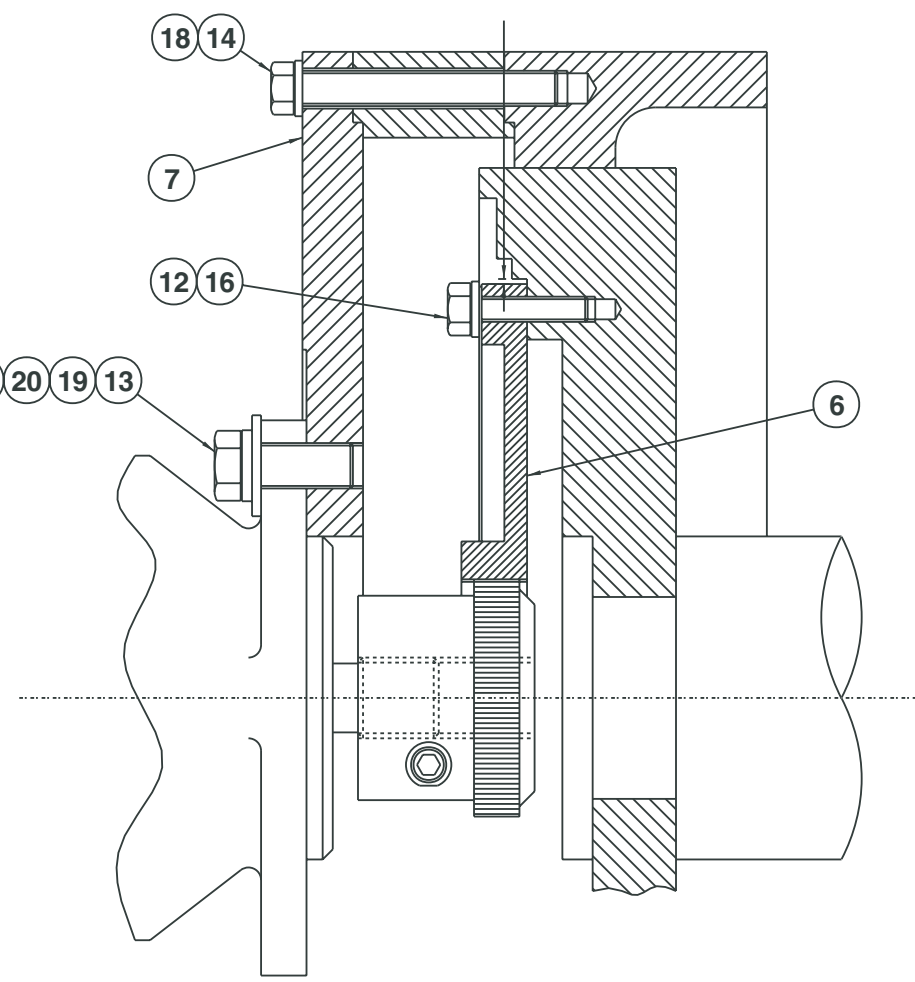
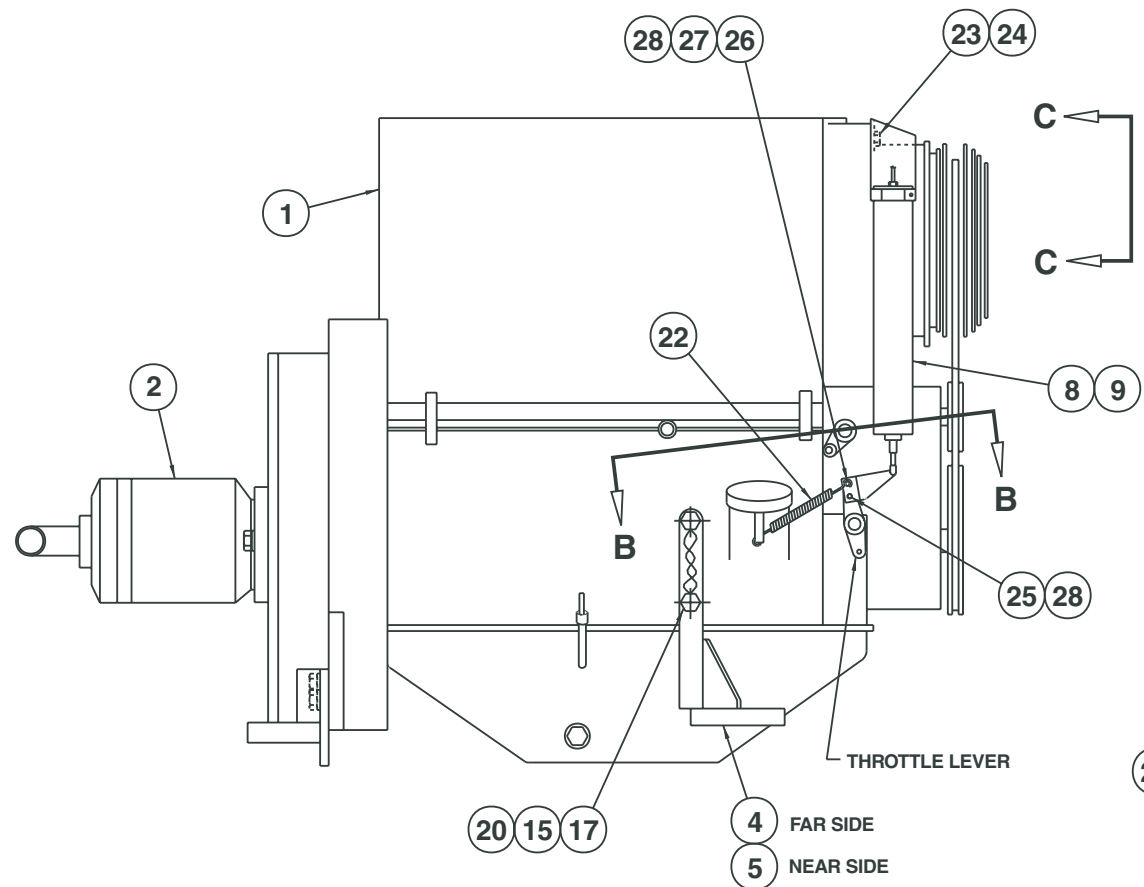
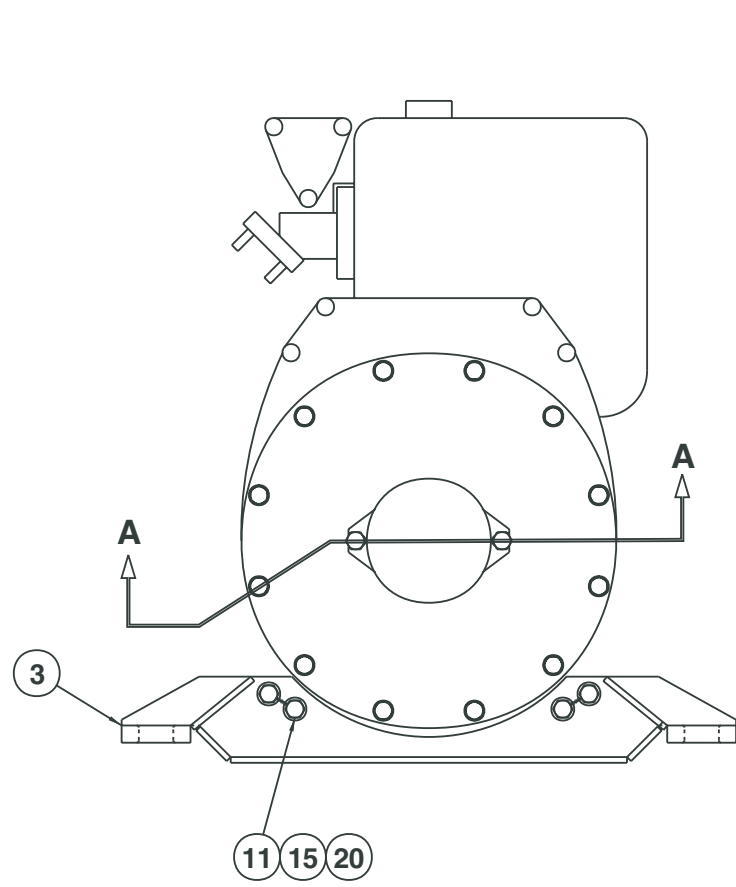
DWG. 0082015

TITLE Engine mounting
Deutz F4L-1011F
Snorkel model TB 60



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VIEW B-B

VIEW C-C

SECTION A-A

AW0082013

Engine, Deutz F4L-1011F

item	part no	qty	description
	0082013	1	Engine, Deutz F4L-1011F diesel
1	7620041	1	Engine, Deutz F4L-1011F diesel
2	0181525	1	Hydraulic pump - (see page 2-52 for parts breakdown)
3	0081624	1	Motor mount, rear
4	0081619	1	Motor mount, front right hand
5	0081614	1	Motor mount, front left hand
6	7630249	1	Flexible coupling
7	0081226	1	Plate, engine coupling
8	20082045	1	Actuator
9	7630311	1	Mount kit, Addco actuator - (includes spring - item 22)
10	5560664	1	Washer metric M6 lock
11	5560207	4	Capscrew metric M12-2.00 x 30mm long hex head drilled
12	986299	6	Washer 3/8 medium flat
13	987139	2	Washer 1/2 medium lock
14	5560356	8	Washer metric M10 lock
15	5560377	8	Washer metric M14 lock
16	5560626	6	Capscrew metric M10-1.5 x 30mm long hex head
17	5560028	4	Capscrew metric M14-2.00 x 50mm long hex head drilled
18	5560653	8	Capscrew metric M10-1.5 x 85mm long hex head
19	5560168	2	Washer 1/2 hard flat ASTM-F436
20	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
21	5560136	2	Capscrew 1/2-13 self locking drilled head
22	8010246	1	Spring - (included with mount kit)
23	5560638	2	Capscrew metric M8-1.25 x 16mm long hex head
24	5560355	2	Washer metric M8 lock
25	5560628	1	Capscrew metric M6-1.0 x 12mm long hex head
26	984169	2	Nut metric M6-1.0 hex

Engine mounting, Ford LRG-423

item	part no	qty	description
1	0111845	1	Engine, Ford LRG-423 - (see page 1-51 for parts breakdown)
2	7630242	1	Radiator - (does not include radiator cap)
3	0180441	1	Bracket, radiator support
4	0081860	2	Angle, radiator
5	7630180	4	Radiator cushion
6	5560179	8	Washer
7	7630332	1	Radiator hose, lower
8	7630191	1	Radiator hose, upper
9	5550030	4	Clamp
10	7630117	4	Engine mount
11	0071599	8	Engine mount washer
12	0180832	1	Mount plate, overflow reservoir
13	7630227	1	Overflow reservoir
	8060277	1	Replacement reservoir cap
14	5010012	1	Radiator overflow hose 5/16 inch diameter x 60 inch long
15	970909	6	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
16	5560039	6	Nut 1/2-13 self locking
17	5550028	4	Clamp
18	5010011	1	Fuel hose 5/16 inch diameter x 120 inch long
19	7714202	1	Pipe plug 1/4 NPT square head
20	5090032	1	Fitting, straight barbed
21		1	Drain cock - (included with engine)
22	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
23	987109	4	Washer 5/16 medium lock
24	970369	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
25	986359	4	Washer 1/2 medium flat
26	987139	4	Washer 1/2 medium lock
27	5560639	4	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
28	5560169	4	Washer 5/8 hard flat ASTM-F436
29	5560036	4	Nut 5/8-11 self locking
30	5560086	6	Capscrew 1/4-20 x 1 inch long hex head grade 5
31	5560004	6	Nut 1/4-20 self locking
32	986019	4	Washer 1/4 medium flat
33	0081464	2	Motor mount, front
34	986269	4	Washer 5/16 medium flat
35	7630239	1	Radiator cap - 13 psi
36	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
37	986299	4	Washer 3/8 medium flat
38	5560033	4	Nut 3/8-16 self locking
39	5093004	2	Clamp
40	987099	1	Washer 1/4 medium lock
41	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
42	0070792	1	1/2 inch hydraulic hose
43	0110868	1	Electric fuel pump - (see page 3-51 for parts breakdown)

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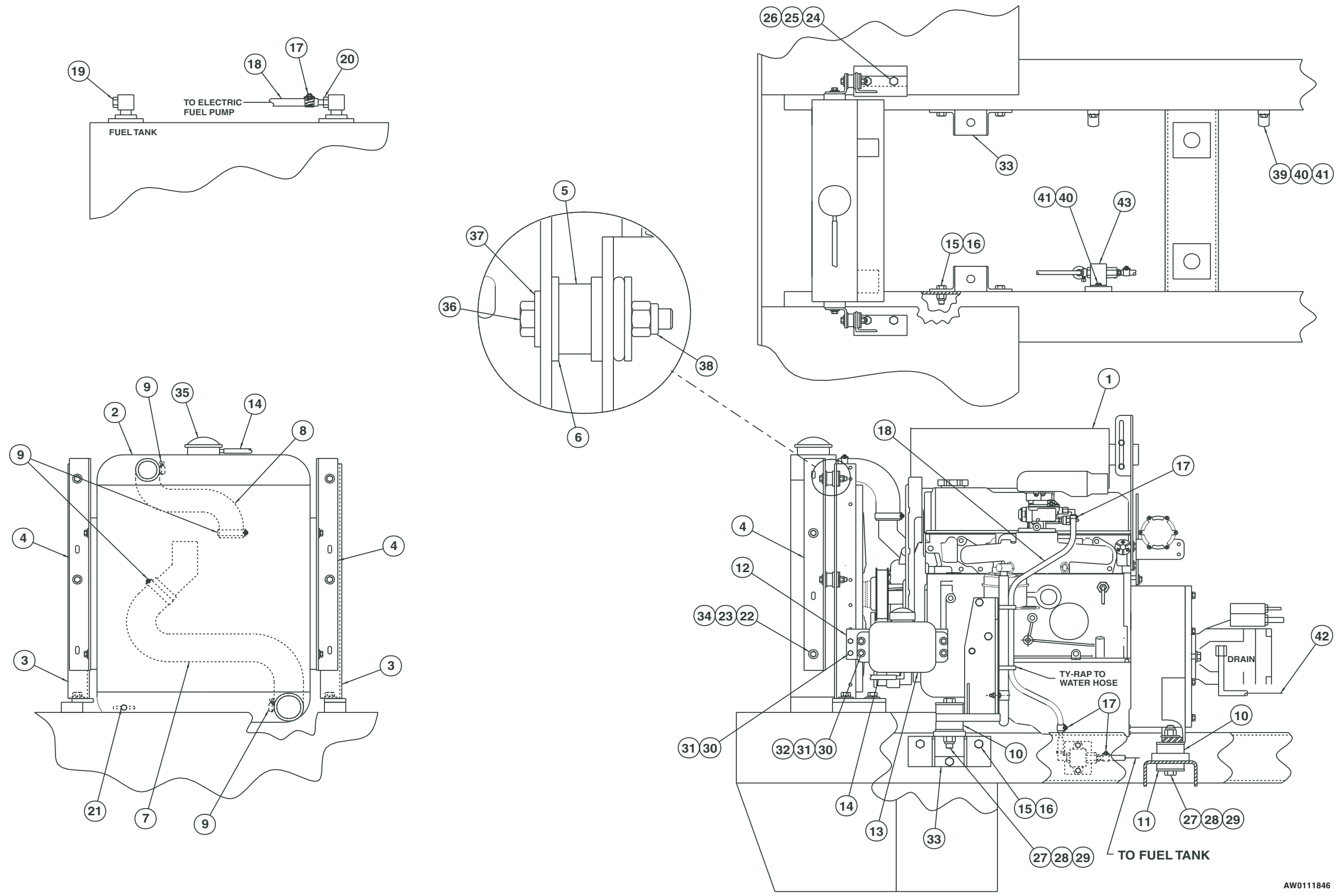
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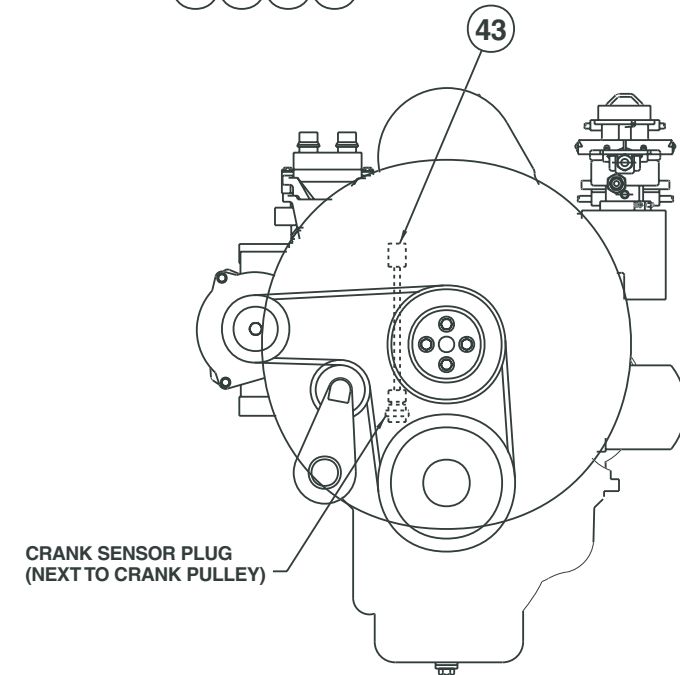
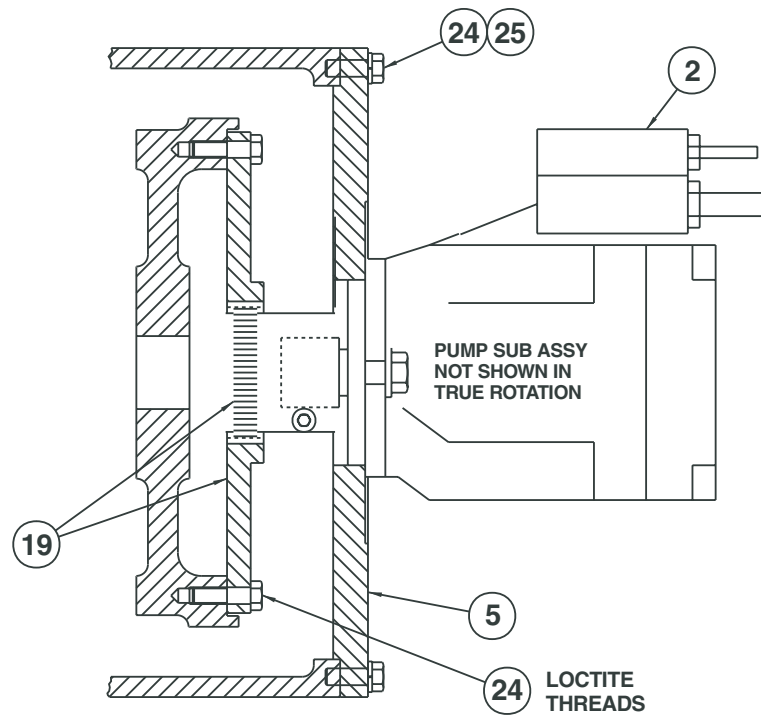
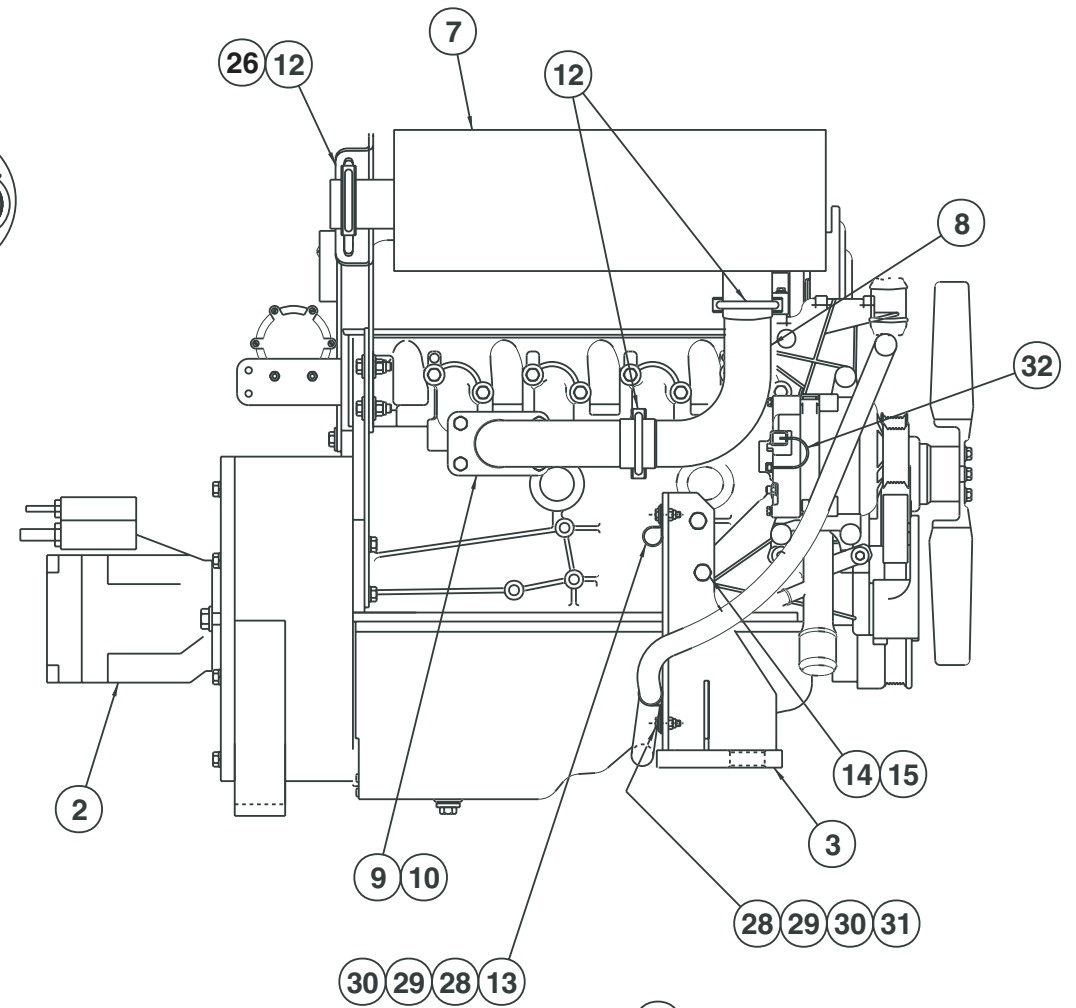
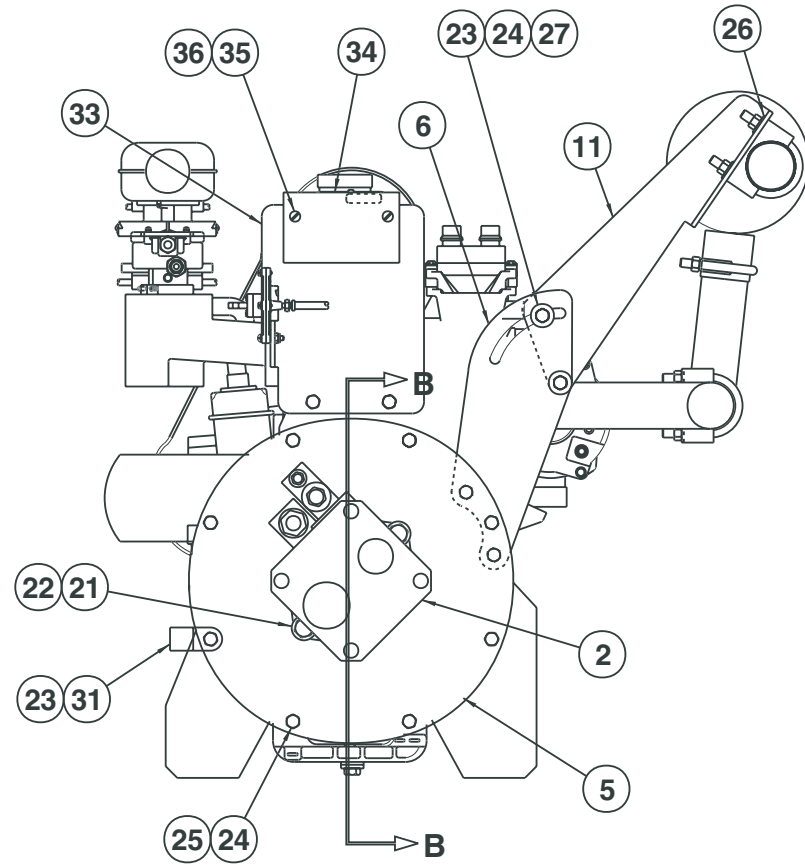
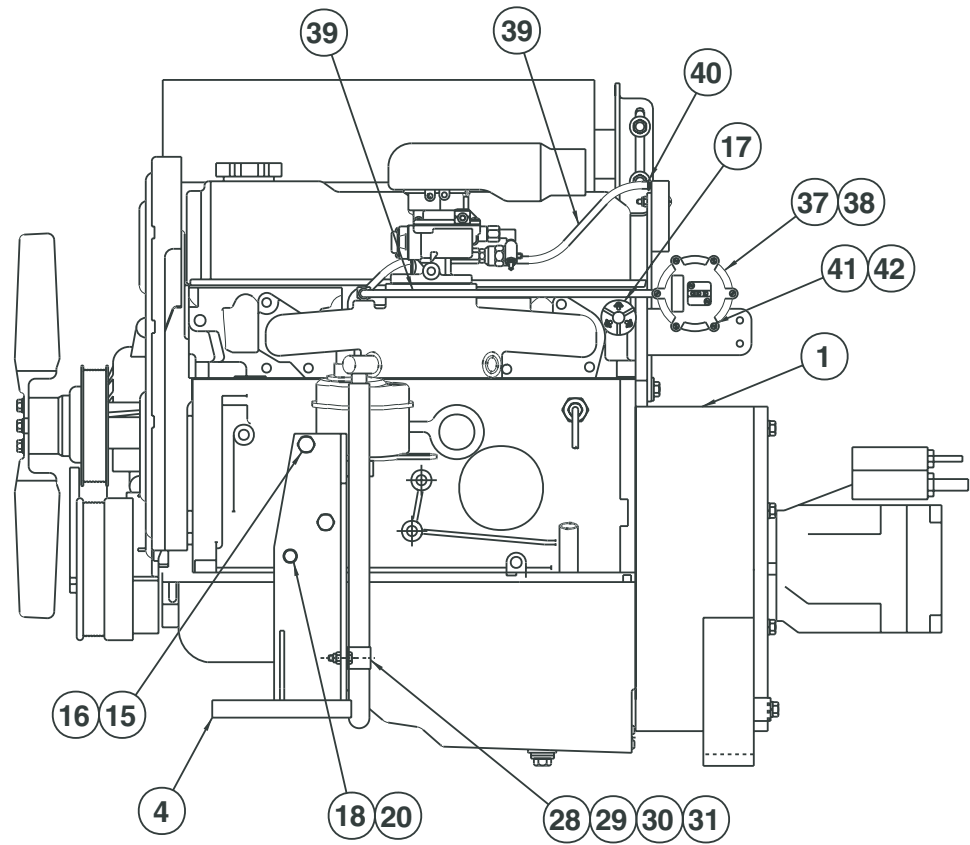


AW0111846

TITLE Engine mounting
 Ford LRG-423
 Snorkel model TB 60

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SECTION B-B

FRONT VIEW OF ENGINE

AW011845



TITLE Engine
Ford LRG-423
Snorkel model TB 60

DWG. 0111845

Engine, Ford LRG-423

item	part no	qty	description
	0111845		Engine, Ford LRG-423
1	7620040	1	Engine, Ford LRG-423 gasoline
	7630328	1	Replacement carburetor
	7630718	1	Carburetor rebuild kit
	7630348	1	Replacement choke
	7630349	1	Replacement metal float
	8260003	1	Replacement fiber float
	7630722	1	Replacement oil filter
2	0181525	1	Hydraulic pump - (see page 2-52 for parts breakdown)
3	0111838	1	Motor mount, right hand
4	0111839	1	Motor mount, left hand
5	0080827	1	Engine adapter, Ford engine
6	0181535	1	Exhaust bracket, lower
7	7630255	1	Muffler, standard
	7630307	1	Muffler, spark arrestor
8	0181453	1	Exhaust pipe
9	0111866	1	Exhaust flange, LRG Ford
10		1	Exhaust gasket - (included with engine, item 1)
11	0181534	1	Exhaust bracket, upper
12	5550014	3	Exhaust clamp
13	5093004	1	Clamp
14	5560652	2	Capscrew metric M10-1.5 x 70mm long hex head
15	5560356	4	Washer metric M10 lock
16	971999	2	Capscrew metric M10-1.5 x 25mm long hex head
17	3020095	1	Switch, oil pressure
18	5560357	1	Capscrew metric M8-1.25 x 25mm long hex head
19	7630249	1	Flexible coupling
20	5560355	3	Washer metric M8 lock
21	970849	2	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
22	5560168	2	Washer 1/2 hard flat ASTM-F436
23	986299	3	Washer 3/8 medium flat
24	970479	17	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
25	987119	8	Washer 3/8 medium lock
26	986269	2	Washer 5/16 medium flat
27	5560033	2	Nut 3/8-16 self locking
28	970029	3	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
29	986019	3	Washer 1/4 medium flat
30	5560004	3	Nut 1/4-20 self locking
31	5093006	3	Clamp
32	0111869	1	wire harness, alternator
33	0110862	1	Bracket, spark module mount
34	7630329	1	Spark module - (included with engine, item 1)
35	5560650	2	Machine screw #10-24 x 2 inch long truss head
36	5560034	2	Nut #10-24 self locking
37	3020054	1	Vacuum switch - (included with engine, item 1)
	8130005	1	Replacement switch
38	5090024	1	Vacuum fitting 1/8 NPT brass straight
39	5010007	1	Vacuum hose, 3/16 inch diameter x 18 inch long
40	5090026	4	Clamp
41	5560651	2	Machine screw #10-32 x 1 inch long truss head
42	5560038	2	Nut #10-32 self locking
43	0111887	1	Wire harness, crank sensor

Engine mounting, Ford LRG-425

item	part no	qty	description
1	0083368	1	Engine, Ford LRG-425 - (see page 1-55 for parts breakdown)
2	7630677	1	Radiator
3	0180441	2	Bracket, radiator support
4	0081860	2	Angle, radiator
5	7630180	4	Radiator cushion
6	5560179	8	Washer
7	7630332	1	Radiator hose, lower
8	7630749	1	Radiator hose, upper
9	5550030	4	Clamp
10	7630117	4	Engine mount
11	0071599	8	Engine mount washer
12	0180832	1	Mount plate, overflow reservoir
13	7630227	1	Overflow reservoir
	8060277	1	Replacement reservoir cap
14	5010012	1	Radiator overflow hose 5/16 inch diameter x 60 inch long
15	970909	6	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
16	5560039	6	Nut 1/2-13 self locking
17	5550028	5	Clamp
18	5010011	1	Fuel hose 5/16 inch diameter x 120 inch long
19	5093012	1	Hose clamp
20	5090032	2	Fitting, straight barbed
21		1	Drain cock - (included with engine)
22	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
23	987109	4	Washer 5/16 medium lock
24	970889	4	Capscrew 1/2-13 x 1 inch long hex head grade 5
25	986359	4	Washer 1/2 medium flat
26	987139	4	Washer 1/2 medium lock
27	5560639	4	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
28	5560169	4	Washer 5/8 hard flat ASTM-F436
29	5560036	4	Nut 5/8-11 self locking
30	5560086	14	Capscrew 1/4-20 x 1 inch long hex head grade 5
31	5560004	16	Nut 1/4-20 self locking
32	986019	11	Washer 1/4 medium flat
33	0081464	2	Motor mount, front
34	986269	4	Washer 5/16 medium flat
35	7630239	1	Radiator cap - 13 psi
36	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
37	986299	4	Washer 3/8 medium flat
38	5560033	4	Nut 3/8-16 self locking
39	0112092	1	Decal, engine control module
40	970029	8	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
41	3020081	1	Switch, toggle
42	5093008	1	Clamp
43	5093004	2	Clamp
44	0181154	1	Shield
45	7630688	1	Indicator lamp
46	0112093	1	Bracket, ECM mounting
47	987099	4	Washer 1/4 medium lock
48	7630687	1	Engine control module, Barber Coleman - (included with engine)
	7630775	1	Engine control module, Precision - (included with engine)
49	7630678	1	Fuel line connector - (included with engine, item 1)
50	7630679	1	Fuel line connector - (included with engine, item 1)
51	7630680	1	Fuel line connector - (included with engine, item 1)
52	7630681	1	Pressure regulator - (included with engine, item 1)
53	7630682	1	Fuel pump - (included with engine, item 1)
54	7630683	1	Fuel filter - (included with engine, item 1)
55	7630686	1	High pressure hose - (included with engine, item 1)
56	7630685	1	Pressure regulator clamp - (included with engine, item 1)
57	7630691	1	High pressure fuel clamp - (included with engine, item 1)

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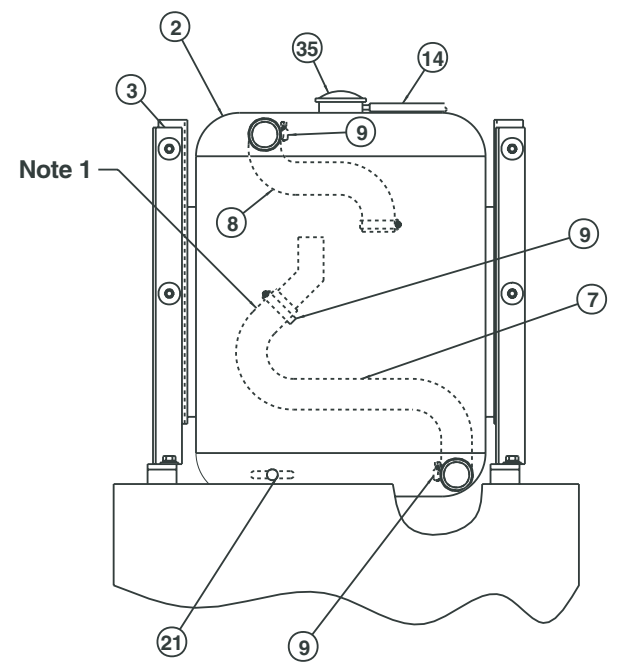
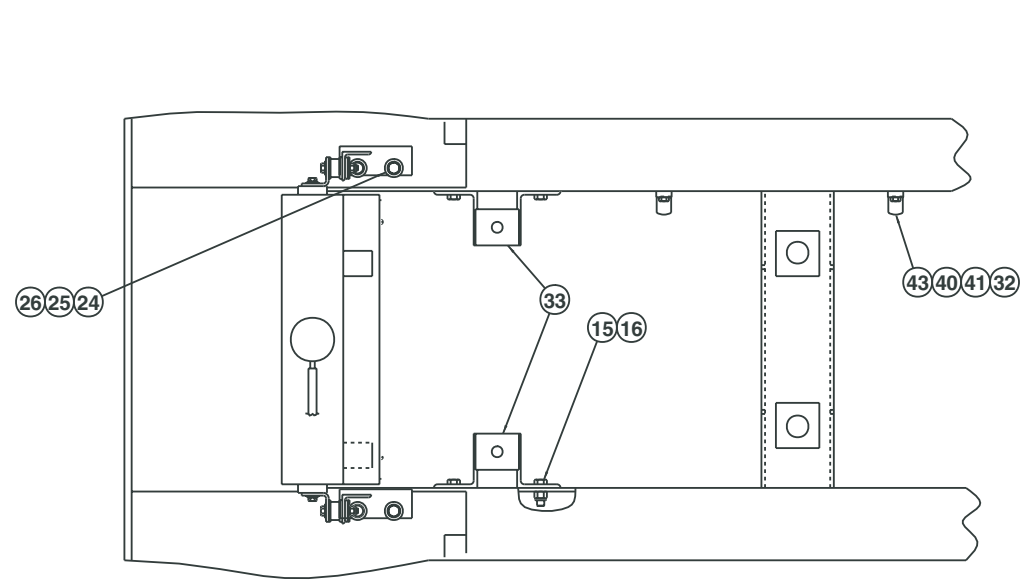
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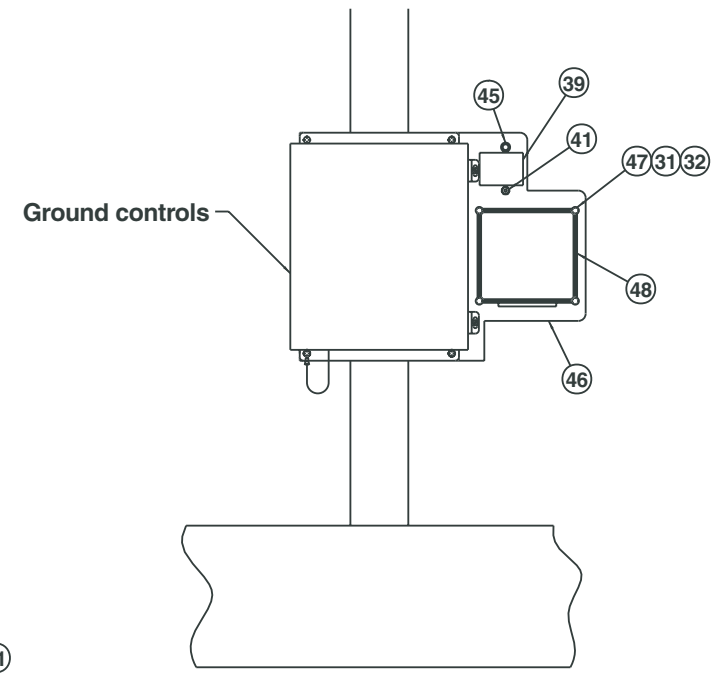
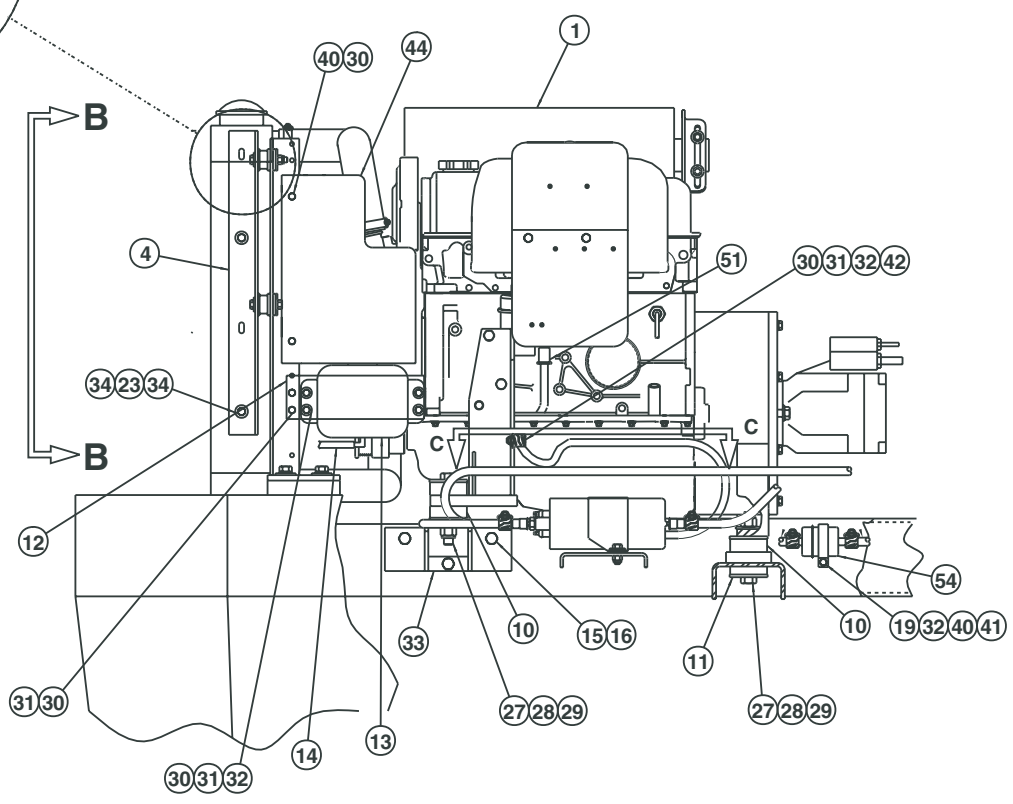
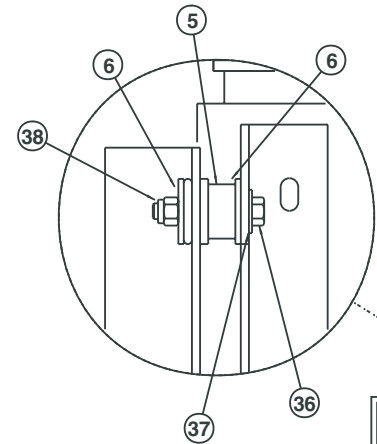
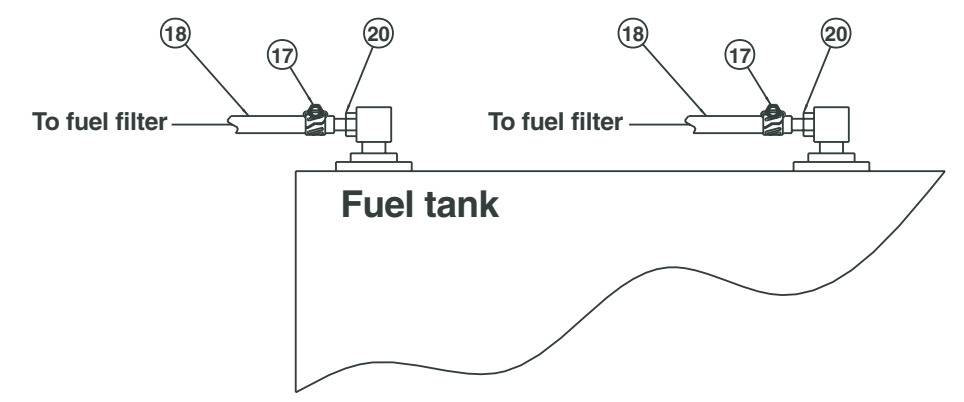
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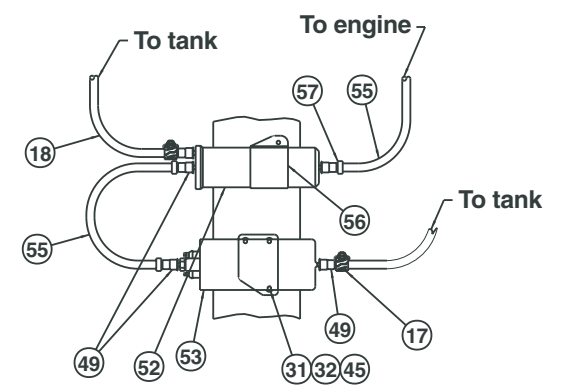


Note 1

Section B-B



Ground controls



Section C-C

AW0082693

DWG. 0082693

TITLE Engine mounting
 Ford LRG-425
 Snorkel model TB 60



Page 1 - 53

1 2 3 4 5 6 7 8 9

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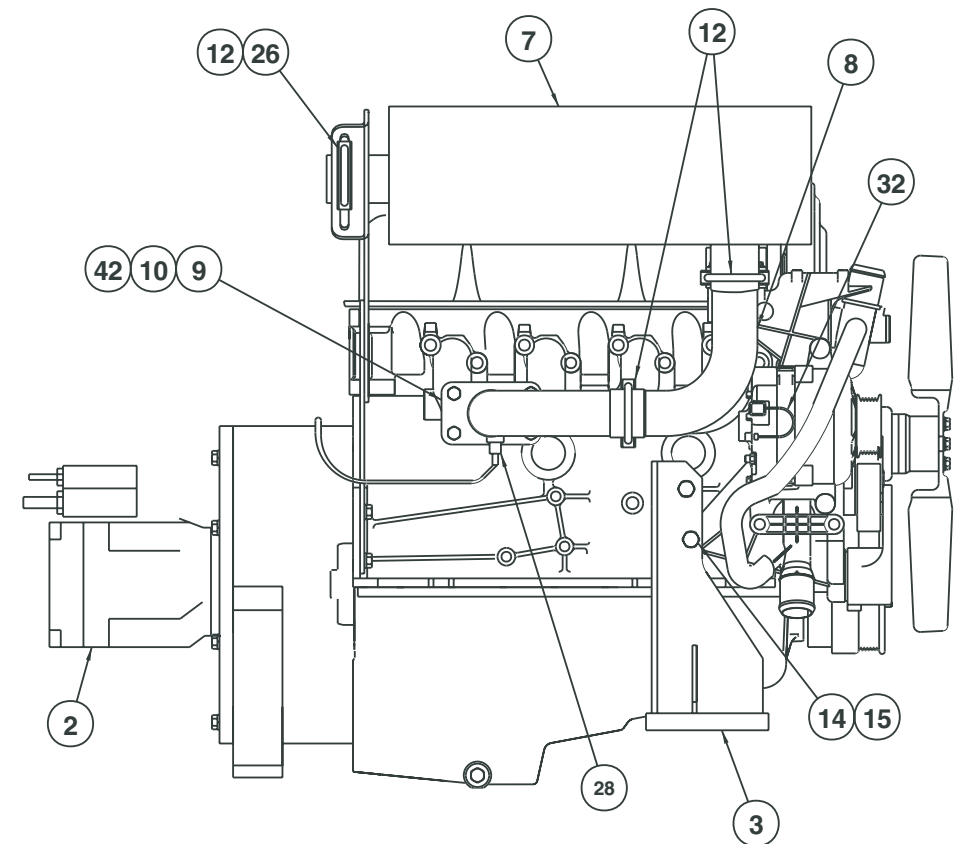
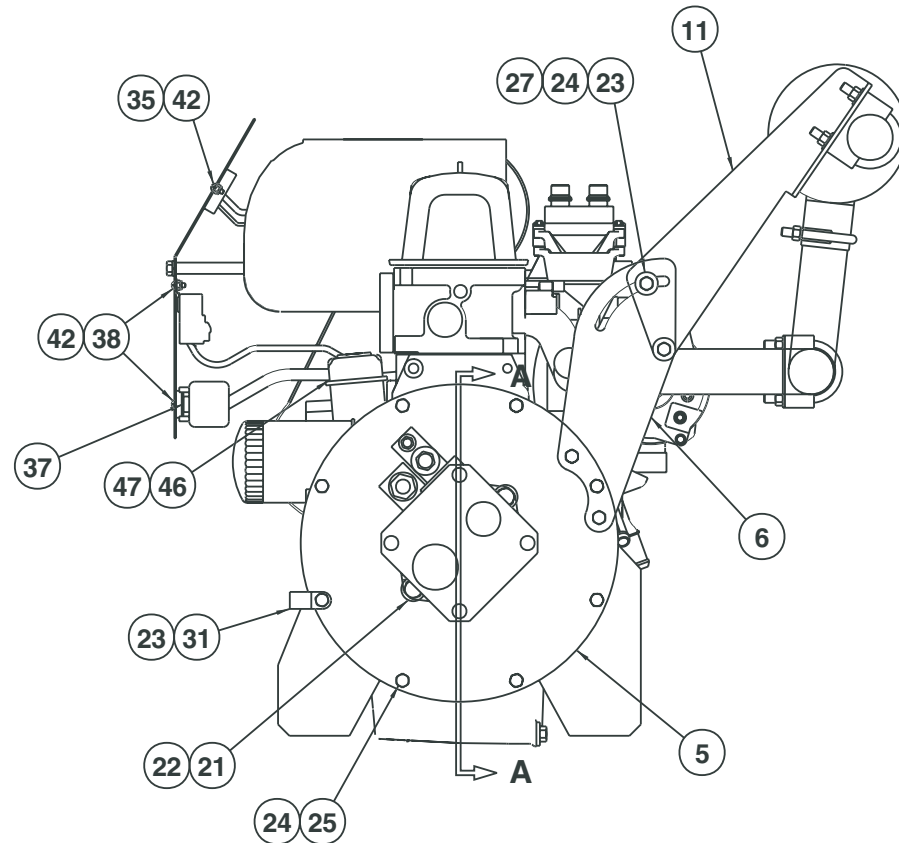
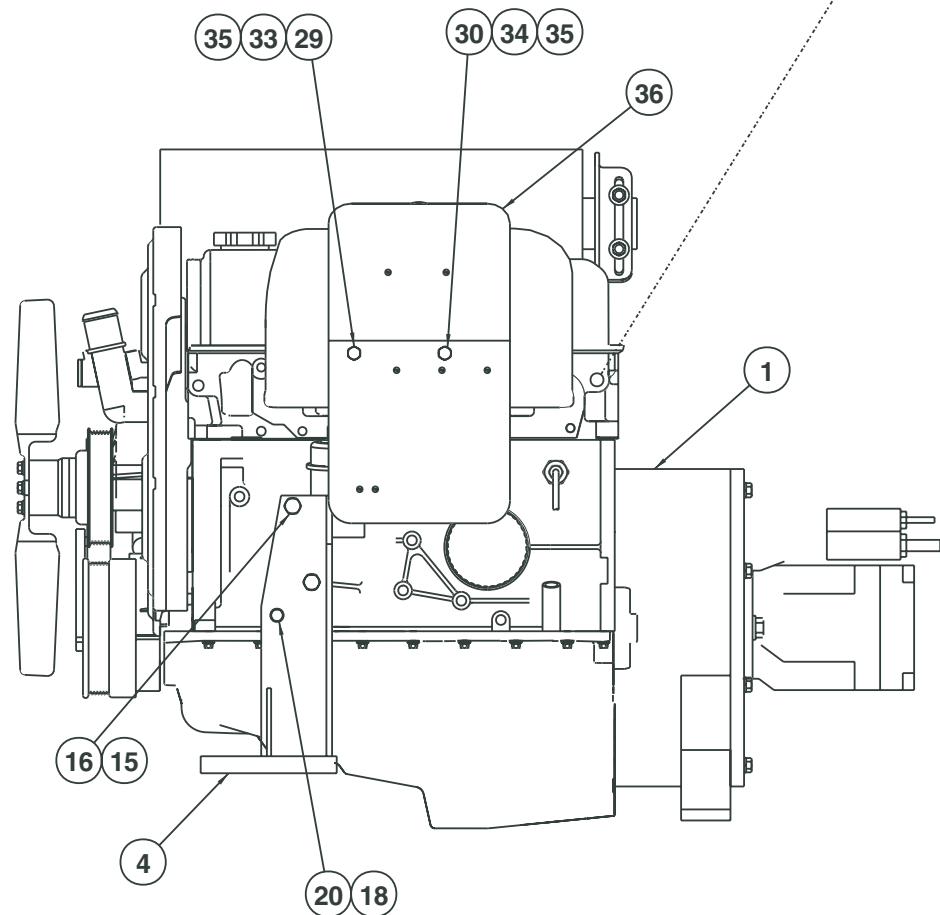
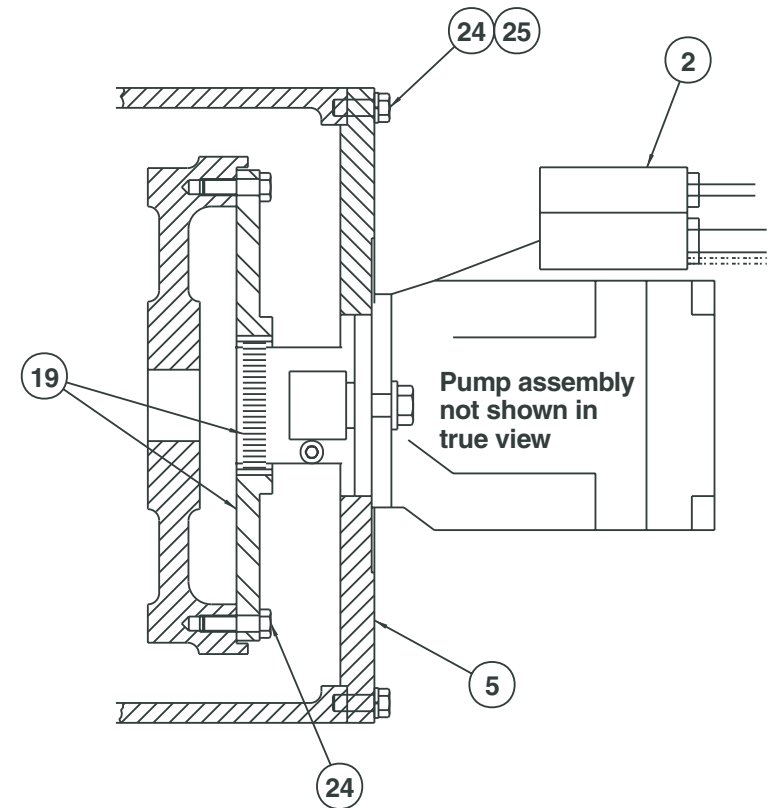
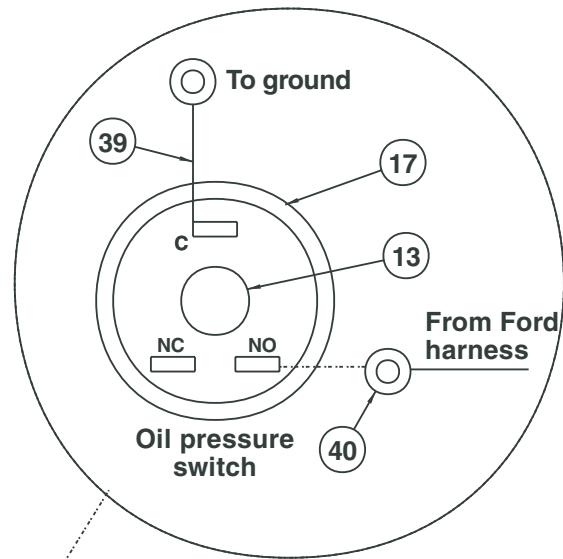
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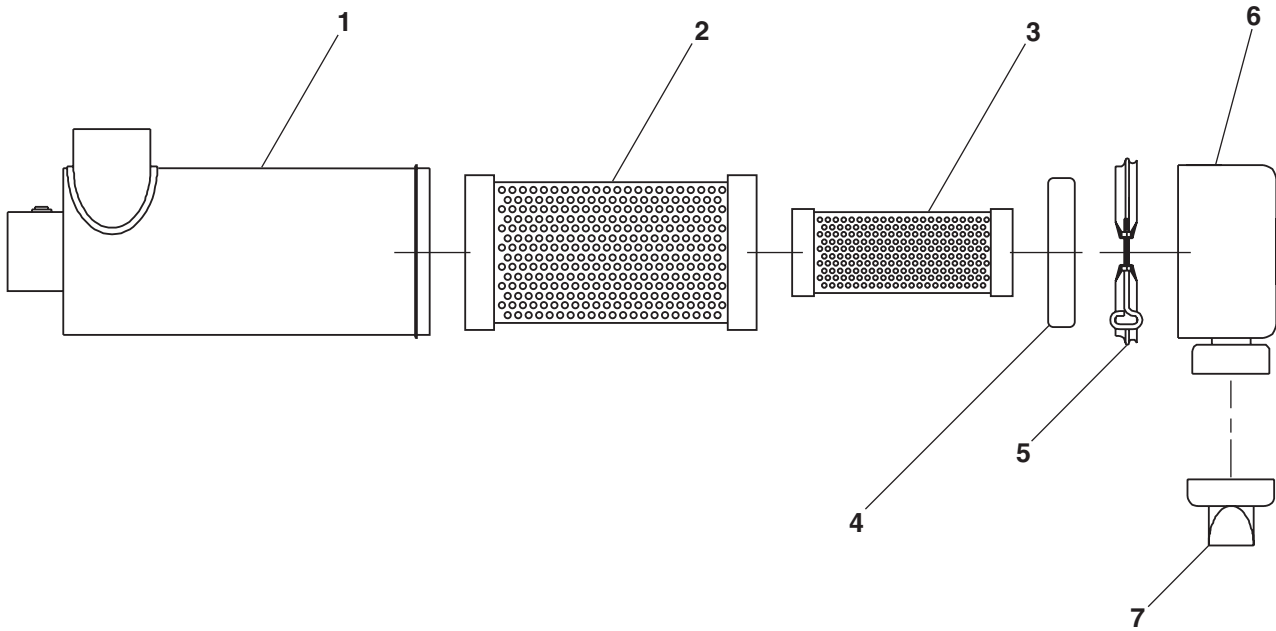
AW0083368

Engine, Ford LRG-425

item	part no	qty	description
	0083368	1	Engine, Ford LRG-425
1	7620055	1	Engine, Ford LRG-425 gasoline
	7630722	1	Replacement oil filter
2	0082138	1	Hydraulic pump - (see page 2-52 for parts breakdown)
3	0111838	1	Motor mount, right hand
4	0111839	1	Motor mount, left hand
5	0080827	1	Engine adapter, Ford engine
6	0181525	1	Exhaust bracket, lower
7	7630255	1	Muffler
	7630307	1	Muffler, spark arrestor
8	0181453	1	Exhaust pipe
9	0112088	1	Exhaust flange, LRG Ford
10		1	Exhaust gasket - (included with engine, item 1)
11	0181543	1	Exhaust bracket, upper
12	5550014	3	Exhaust clamp
13	7720201	1	Reducer
14	5560652	2	Capscrew metric M10-1.5 x 70mm long hex head
15	5560356	4	Washer metric M10 lock
16	971999	2	Capscrew metric M10-1.5 x 25mm long hex head
17	3020095	1	Switch, oil pressure
18	5560357	1	Capscrew metric M8-1.25 x 25mm long hex head
19	7630249	1	Flexible coupling
20	5560355	3	Washer metric M8 lock
21	5560136	2	Capscrew 1/2-13 self locking drilled head
22	5560168	2	Washer 1/2 hard flat ASTM-F436
23	986299	1	Washer 3/8 medium flat
24	970479	14	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
25	987119	14	Washer 3/8 medium lock
26	986269	2	Washer 5/16 medium flat
27	5560033	2	Nut 3/8-16 self locking
28		1	Hego sensor - (included with engine)
29	0112084	1	Spacer, 3 inch
30	0112085	1	Spacer, 4 inch
31	5093006	2	Clamp
32	0111869	1	wire harness, alternator
33	5569823	1	Capscrew metric M8-1.25 x 105mm long hex head
34	5569824	1	Capscrew metric M8-1.25 x 130mm long hex head
35	5560610	2	Machine screw #10-24 x 1-1/4 inch long truss head
36	0112086	1	Engine harness cover plate
37	0112087	1	Connector bracket, 42 pin
38	5560609	5	Machine screw #10-24 x 1/2 inch long truss head
39	0071563	1	Jumper wire
40	3044145	1	Terminal #8 stud insulated 22/18 wire
41	5560034	2	Nut #10-24 self locking
42	5560625	1	Capscrew metric M10-1.5 x 20mm long hex head

Air cleaner

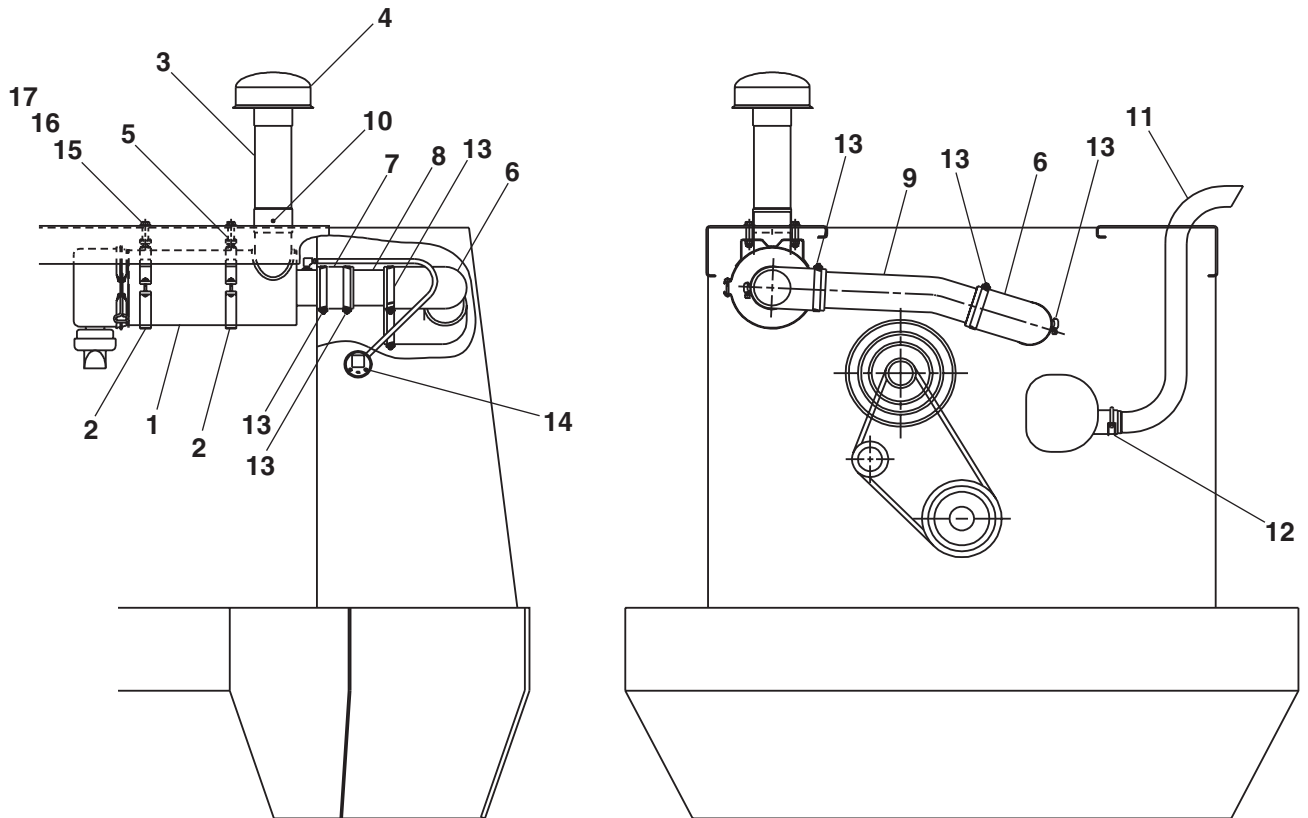
item	part no	qty	description
	7630003	1	Air cleaner
1		1	Housing - (not sold separately)
2	8040106	1	Primary filter element
3	8040107	1	Secondary filter element
4	8040112	1	Cleaner cap baffle
5	8040114	1	Clamp
6	8040111	1	Dust cap
7	8040115	1	Vacuator valve



AW7630003

Exhaust and air cleaner, Deutz

item	part no	qty	description
1	7630003	1	Air cleaner - (see page 1-56 for parts breakdown)
2	7630005	2	Air cleaner mounting band
3	0080879	1	Air inlet tube
4	7630004	1	Air inlet hood
5	0071510	4	Spacer, air cleaner
6	7630016	2	Elbow, 3 inch 90° rubber
7	0081053	1	Air intake hose
8	0081052	1	Air intake tube
9	0081639	1	Air intake tube
10	5560659	1	Pop rivet #AD44-ABS
11	0081640	1	Exhaust pipe
12	5550007	1	Exhaust clamp
13	5550050	1	Clamp
14	7630140	1	Filter condition indicator
15	970499	4	Capscrew 3/8-16 x 1-3/4 inch long hex head grade 5
16	986299	4	Washer 3/8 medium flat
17	5560033	4	Nut 3/8-16 self locking



AW0081638

Exhaust and air cleaner, Ford

item	part no	qty	description
1	7630003	1	Air cleaner, Ford LRG-423 - (see page 1-56 for parts breakdown)
	7630689	1	Air cleaner, Ford LRG-425
	8140006	1	Replacement primary filter element
2	7630004	1	Air inlet hood
3	7630005	2	Air cleaner mounting band - (Ford LRG-423 only)
4	0071510	4	Spacer, air cleaner - (Ford LRG-423)
	0071510	2	Spacer, air cleaner - (Ford LRG-425)
5	0080679	1	Air inlet tube
6	0082123	1	Air cleaner elbow
7	0180988	1	Tail pipe - (Ford LRG-423)
	0111959	1	Tail pipe - (Ford LRG-425)
8	7630016	1	Elbow, 3 inch 90° rubber
9	7630197	2	Elbow, 2 inch 90° rubber - (LRG-425 only)
10	5550050	2	Clamp
11	5550040	4	Clamp
12	0082694	1	Tube elbow
13	7630140	1	Filter condition indicator
14	5010001	1	Emission control hose 1 1/32 inch diameter - (Ford LRG-423)
	5010020	1	Emission control hose 5/8 inch diameter - (Ford LRG-425)
15	5090030	1	Vacuum fitting - (Ford LRG-423 Only)
16	5093006	1	Street elbow 1/8 NPT 90° brass - (Ford LRG-423 only)
17	5090024	1	Vacuum fitting 1/8 NPT brass straight - (Ford LRG-423 only)
18	5560658	3	Pop rivet #AD36-ABS
19	970509	4	Capscrew 3/8-16 x 2 inch long hex head grade 5 - (Ford LRG-423)
	5560357	2	Capscrew metric 8M-1.25 x 25mm long hex head - (Ford LRG-425)
20	986299	8	Washer 3/8 medium flat
21	5560033	4	Nut 3/8-16 self locking
22	5090027	1	Union elbow female 1/8 x 1/8 brass
23	5090302	1	Tube clamp
24	5560609	4	Machine screw #10-24 x 1/2 inch long truss head
25	5560034	4	Nut #10-24 self locking

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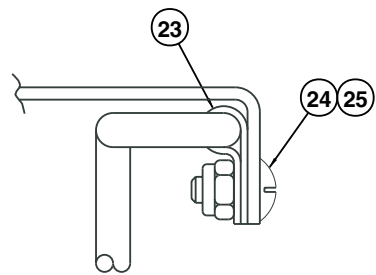
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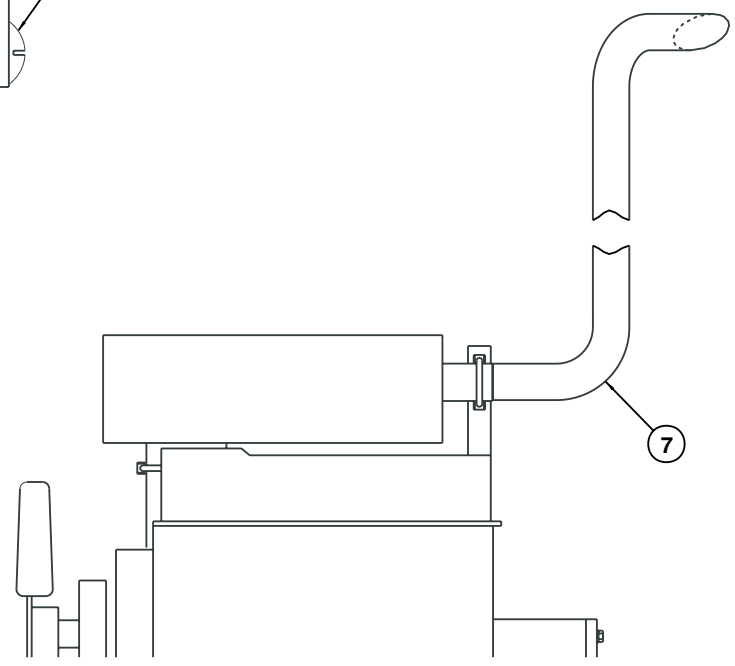
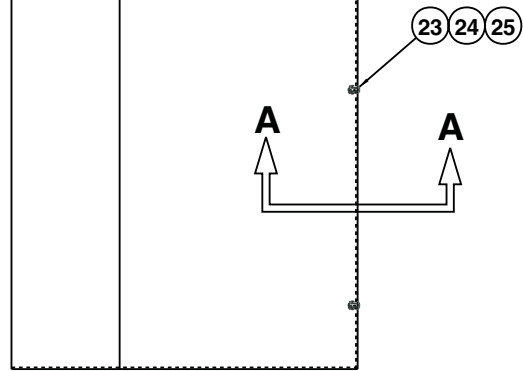
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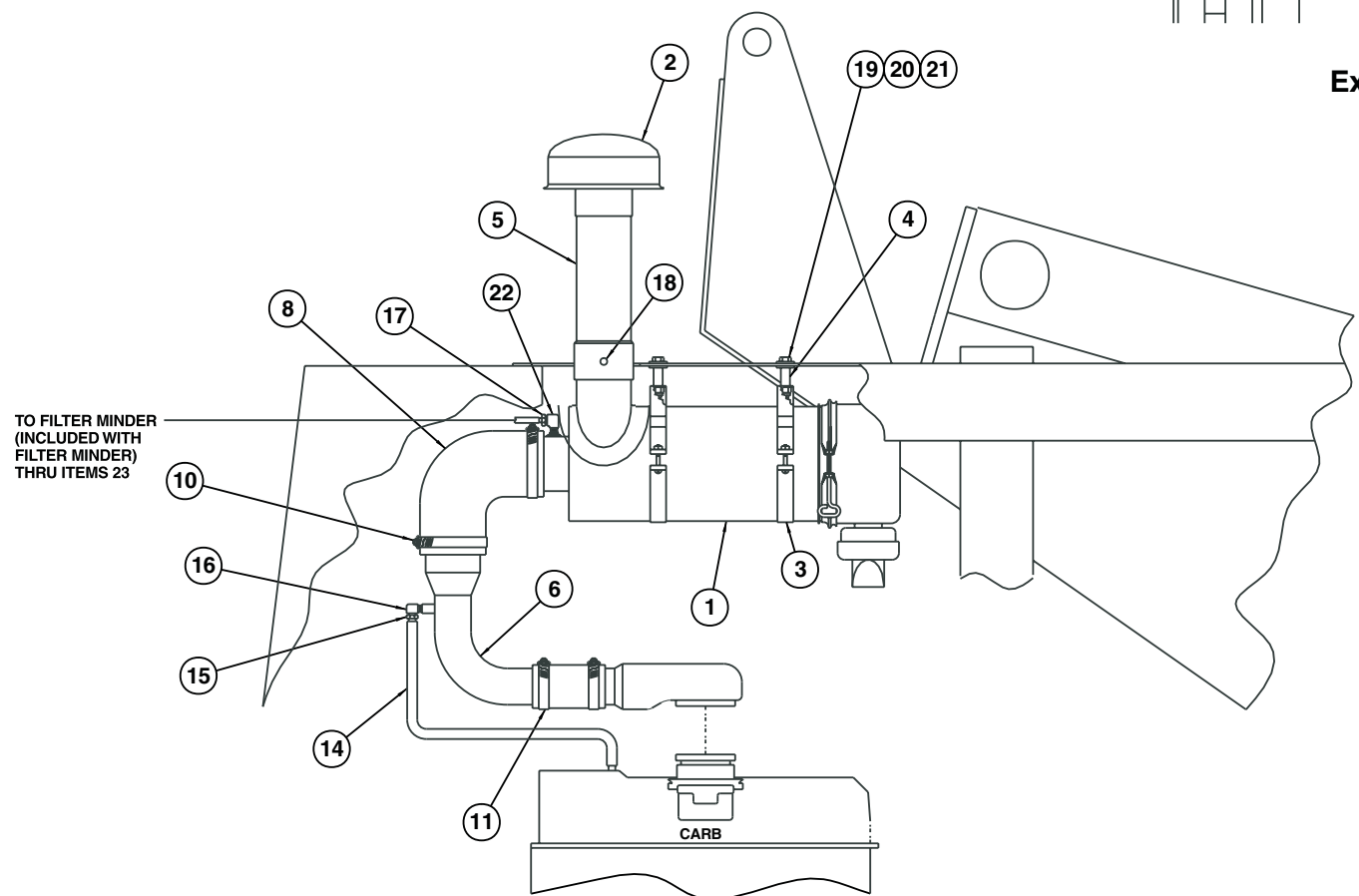
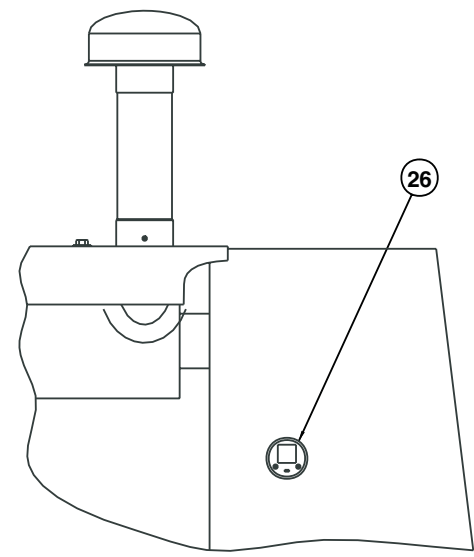
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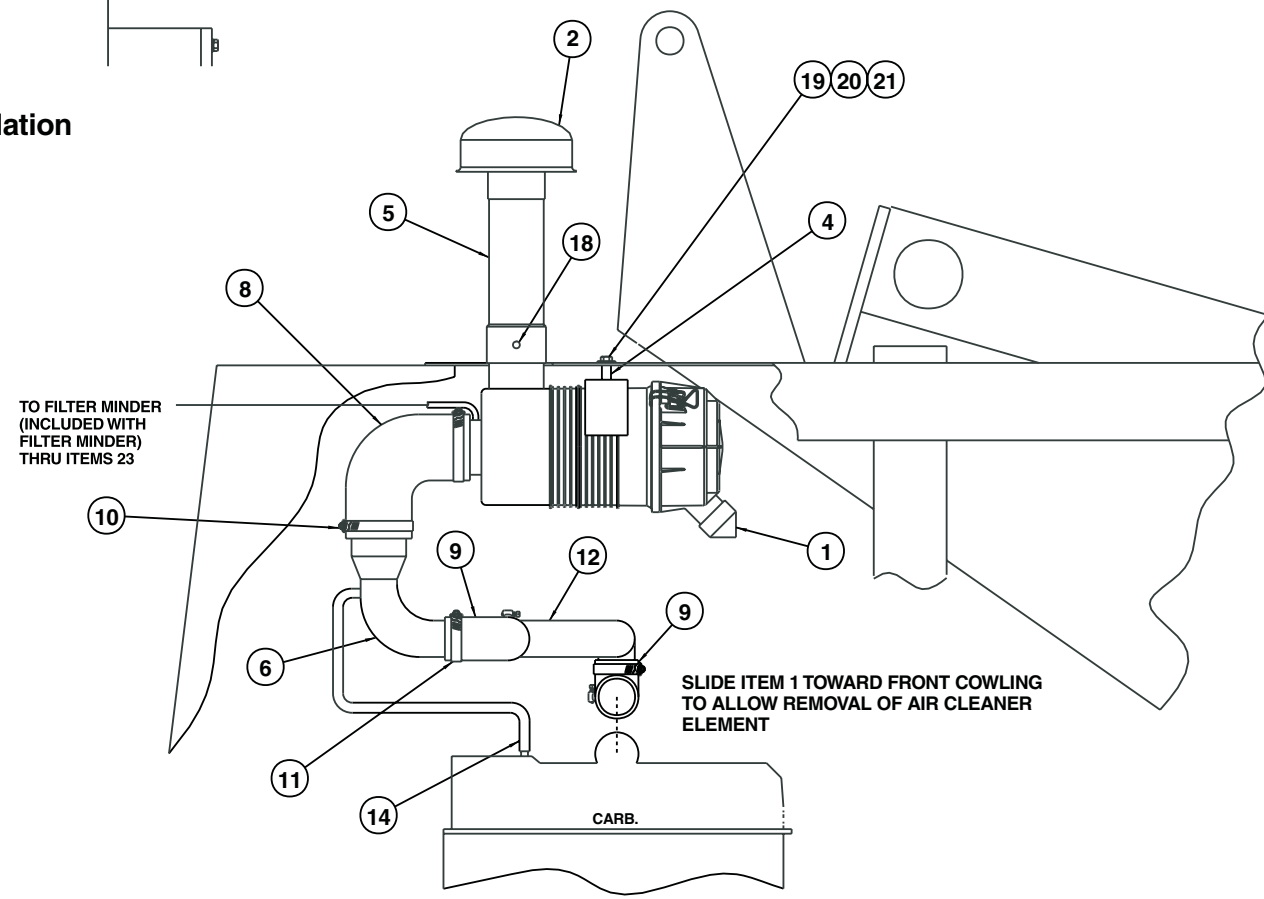
Section A-A



Exhaust installation



Ford LRG-423



Ford LRG-425

TO FILTER MINDER
(INCLUDED WITH
FILTER MINDER)
THRU ITEMS 23

TO FILTER MINDER
(INCLUDED WITH
FILTER MINDER)
THRU ITEMS 23

SLIDE ITEM 1 TOWARD FRONT COWLING
TO ALLOW REMOVAL OF AIR CLEANER
ELEMENT

AW0082695

TITLE Exhaust and air cleaner
Ford LRG-423 and LRG-425
Snorkel model TB 60

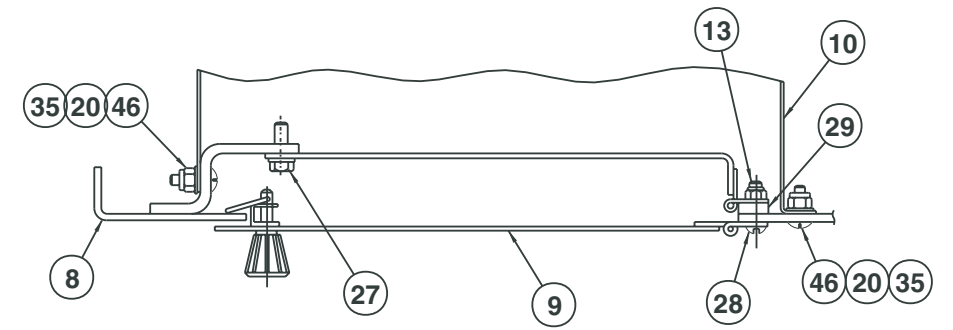
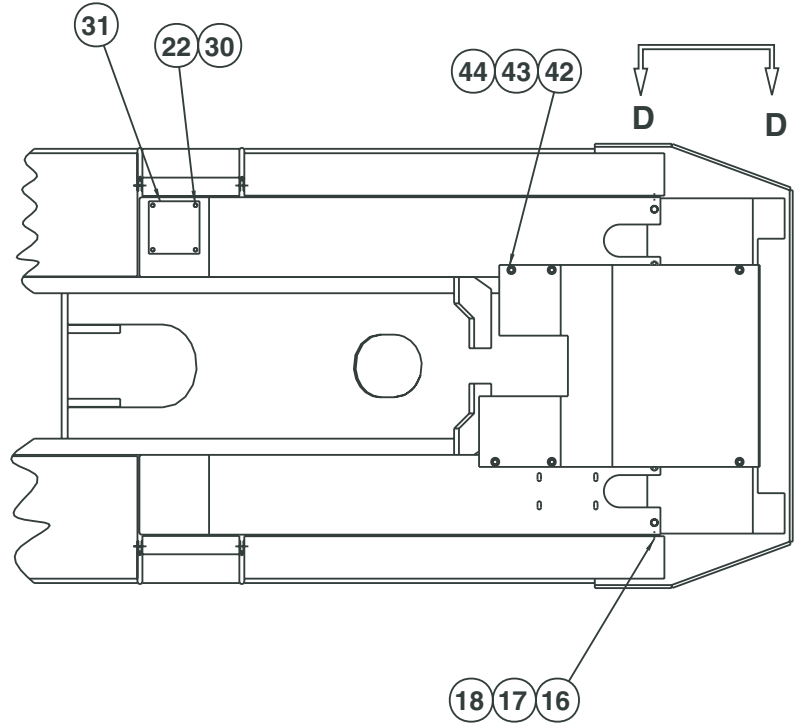
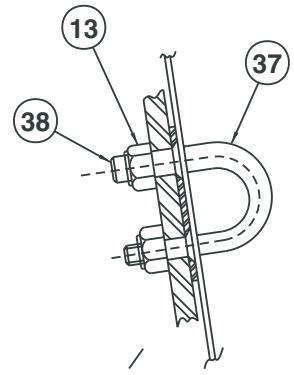


DWG. 0082695

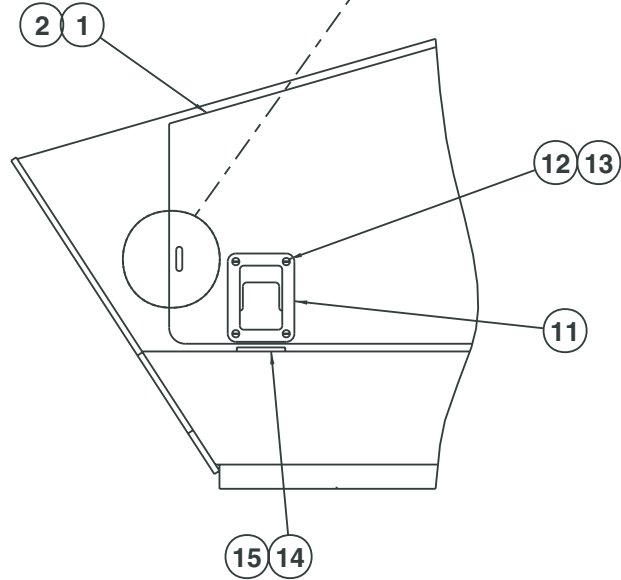
Page 1 - 59



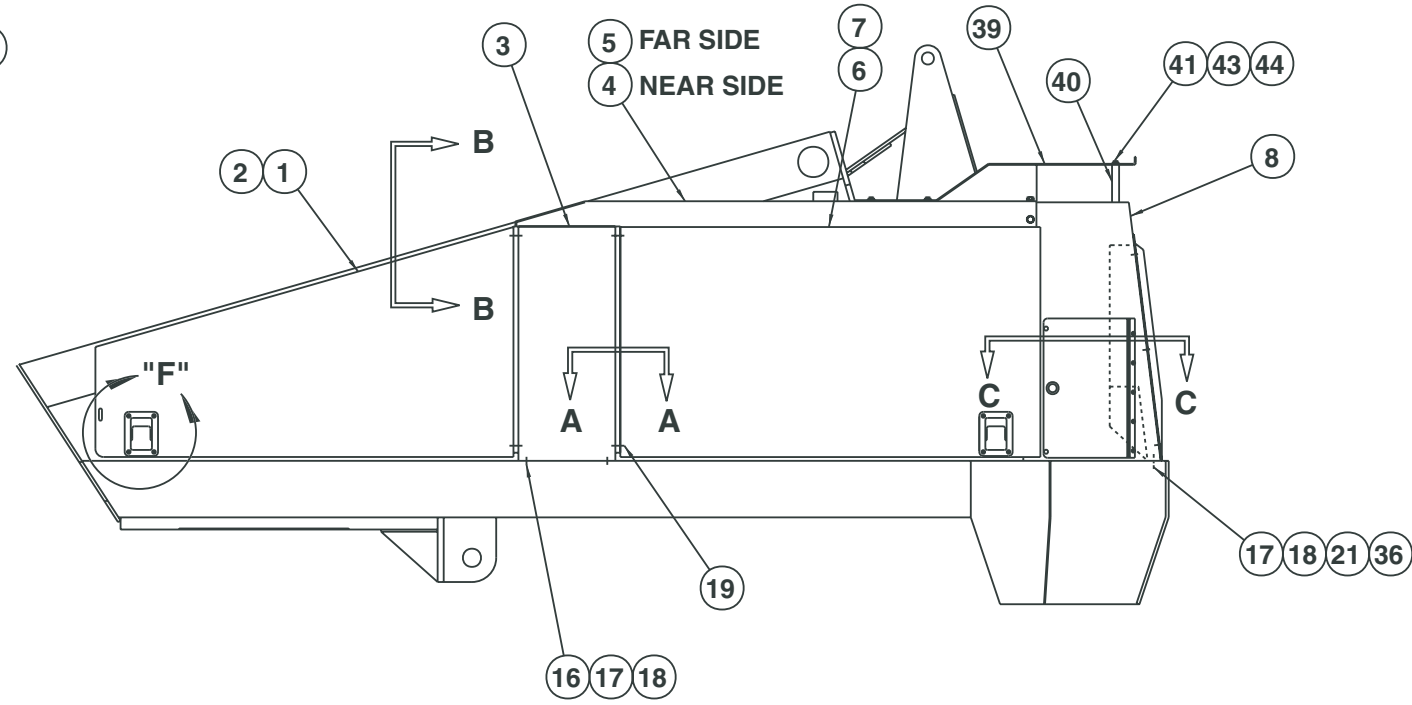
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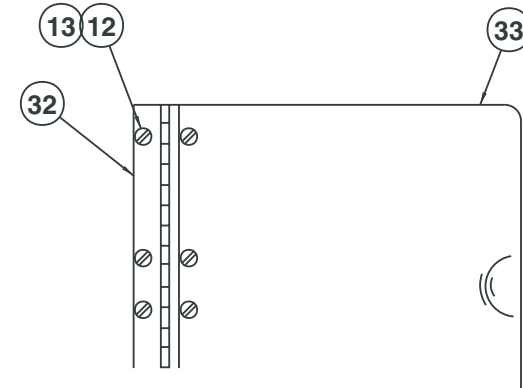
SECTION C-C



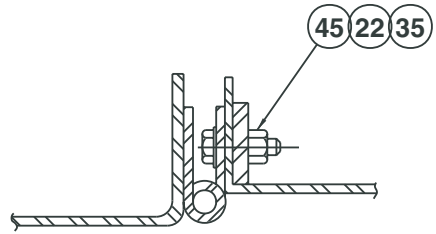
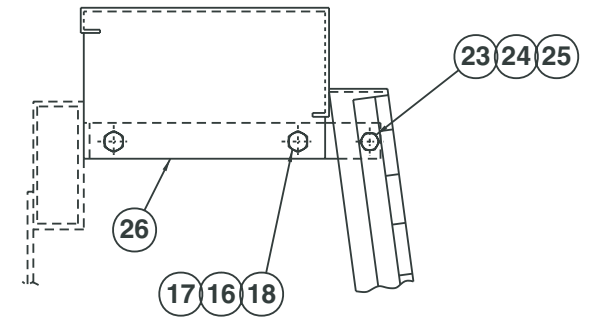
DETAIL "F"



VIEW D-D



VIEW B-B



SECTION A-A

AW0081655

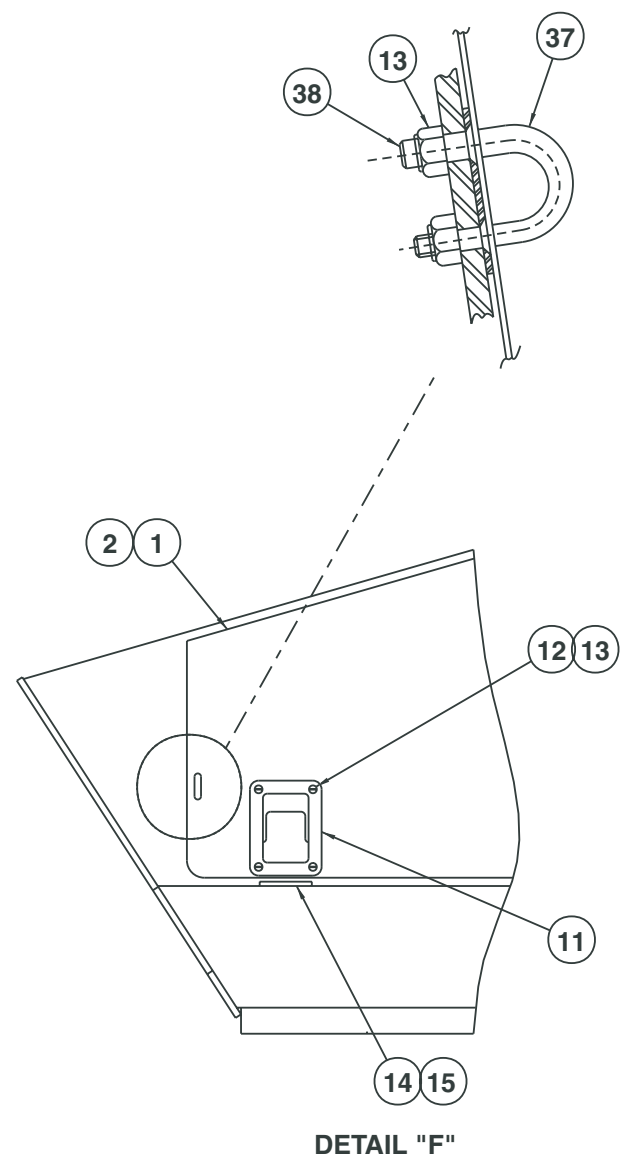
Metal cowling, Deutz engine

item	part no	qty	description
1	0080006	1	Cowling door, rear left hand
2	0080005	1	Cowling door, rear right hand
3	0080007	2	Door post
4	0081641	1	Cowling side, left hand
5	0080972	1	Cowling side, right hand
6	0080008	1	Cowling door, front right hand
7	0080009	1	Cowling door, front left hand
8	0081877	1	Front cowling, complete - (includes the following replacement parts)
	0080974	1	Front cowling
	0081670	1	Shroud, inner air intake
	0081671	1	Shroud, outer
	5560137	6	Speed nut 5/16-18 with captive nut
	970259	6	Capscrew 5/16-18 x 1 inch long hex head grade 5
	986269	6	Washer 5/16 medium flat
9	007414928	1	Lower controls door
	5510003	1	Replacement door latch
10	0110483	1	Cover, cowling rear
11	0070539	4	Door latch
12	5560609	24	Machine screw #10-24 x 1/2 inch long truss head
13	5560034	45	Nut #10-24 self locking
14	0070549	4	Door striker
15	0070441	4	Spacer, door striker
16	970849	20	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
17	984149	24	Nut 1/2-13 hex
18	987139	20	Washer 1/2 medium lock
19	970029	10	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
20	5560004	15	Nut 1/4-20 self locking
21	970949	4	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
22	5560086	14	Capscrew 1/4-20 x 1 inch long hex head grade 5
23	970479	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
24	987119	4	Washer 3/8 medium lock
25	984109	4	Nut 3/8-16 hex
26	0080010	2	Upper door post bracket
27	5560086	2	Capscrew screw 1/4-20 x 1 inch long hex head with sems
28	5560649	5	Machine screw #10-24 x 1 inch long truss head
29	0110482	1	Spacer bar
30	987099	4	Washer 1/4 medium lock
31	0070295	1	Cover, filter access
32	0070554	1	Hinge, air cleaner access door
33	0070555	1	Air cleaner access door
34	0070548	1	Door spring
35	986019	24	Washer 1/4 medium flat
36	986359	4	Washer 1/2 medium flat
37	5560135	4	Staple plate
38	976689	8	Machine screw #10-24 x 3/4 inch long flat head
39	0081117	1	Cover
40	0073158	3	Spacer
41	5560654	3	Capscrew 3/8-16 x 5-1/2 inch long hex head grade 5
42	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
43	986299	7	Washer 3/8 medium flat
44	5560033	7	Nut 3/8-16 self locking
45	984069	10	Nut 1/4-20 hex
46	5560646	5	Capscrew 1/4-20 x 3/4 inch long truss head
47	5569012	10	Bumper - (not shown)

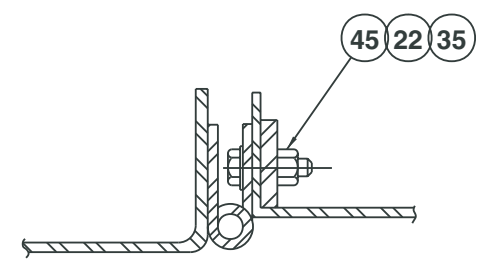
Metal cowling, Ford engine

item	part no	qty	description
1	0080006	1	Cowling door, rear left hand
2	0080005	1	Cowling door, rear right hand
3	0080007	2	Door post
4	0080971	1	Cowling side, left hand
5	0080972	1	Cowling side, right hand
6	0080008	1	Cowling door, front right hand
7	0080009	1	Cowling door, front left hand
8	0080973	1	Front cowling, complete - (includes the following replacement parts)
	0080974	1	Front cowling
	0080626	1	Shroud
	5560137	6	Speed nut 5/16-18 with captive nut
	970259	6	Capscrew 5/16-18 x 1 inch long hex head grade 5
	986269	6	Washer 5/16 medium flat
9	007414928	1	Lower controls door
	5510003	1	Replacement door latch
10	0110483	1	Cover, cowling rear
11	0070539	4	Door latch
12	5560609	12	Machine screw #10-24 x 1/2 inch long truss head
13	5560034	26	Nut #10-24 self locking
14	0070549	4	Door striker
15	0070441	4	Spacer, door striker
16	970849	20	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
17	984149	24	Nut 1/2-13 hex
18	987139	20	Washer 1/2 medium lock
19	970029	10	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
20	5560004	14	Nut 1/4-20 self locking
21	970949	4	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
22	5560086	14	Capscrew 1/4-20 x 1 inch long hex head grade 5
23	970479	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
24	987119	4	Washer 3/8 medium lock
25	984109	4	Nut 3/8-16 hex
26	0080010	2	Upper door post bracket
27	5560086	2	Machine screw 1/4-20 x 1 inch long hex head with sems
28	5560649	5	Machine screw #10-24 x 1 inch long truss head
29	0110482	1	Spacer bar
30	987099	4	Washer 1/4 medium lock
31	0070295	1	Cover, filter access
32	0070554	1	Hinge, air cleaner access door
33	0070555	1	Air cleaner access door
34	0070548	1	Door spring
35	986019	24	Washer 1/4 medium flat
36	986359	4	Washer 1/2 medium flat
37	5560135	4	Staple plate
38	976689	8	Machine screw #10-24 x 3/4 inch long flat head
39	0081357	1	Cover
40	0073481	1	Access door
41	5560654	3	Capscrew 3/8-16 x 5-1/2 inch long hex head grade 5
42	970469	7	Capscrew 3/8-16 x 1 inch long hex head grade 5
43	986299	7	Washer 3/8 medium flat
44	5560033	7	Nut 3/8-16 self locking
45	984069	10	Nut 1/4-20 hex
46	5560646	5	Capscrew 1/4-20 x 3/4 inch long truss head
47	5569012	10	Bumper - (not shown)

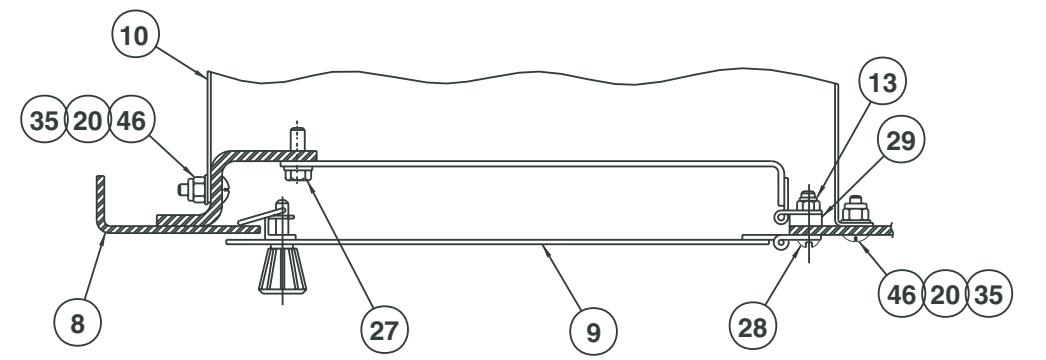
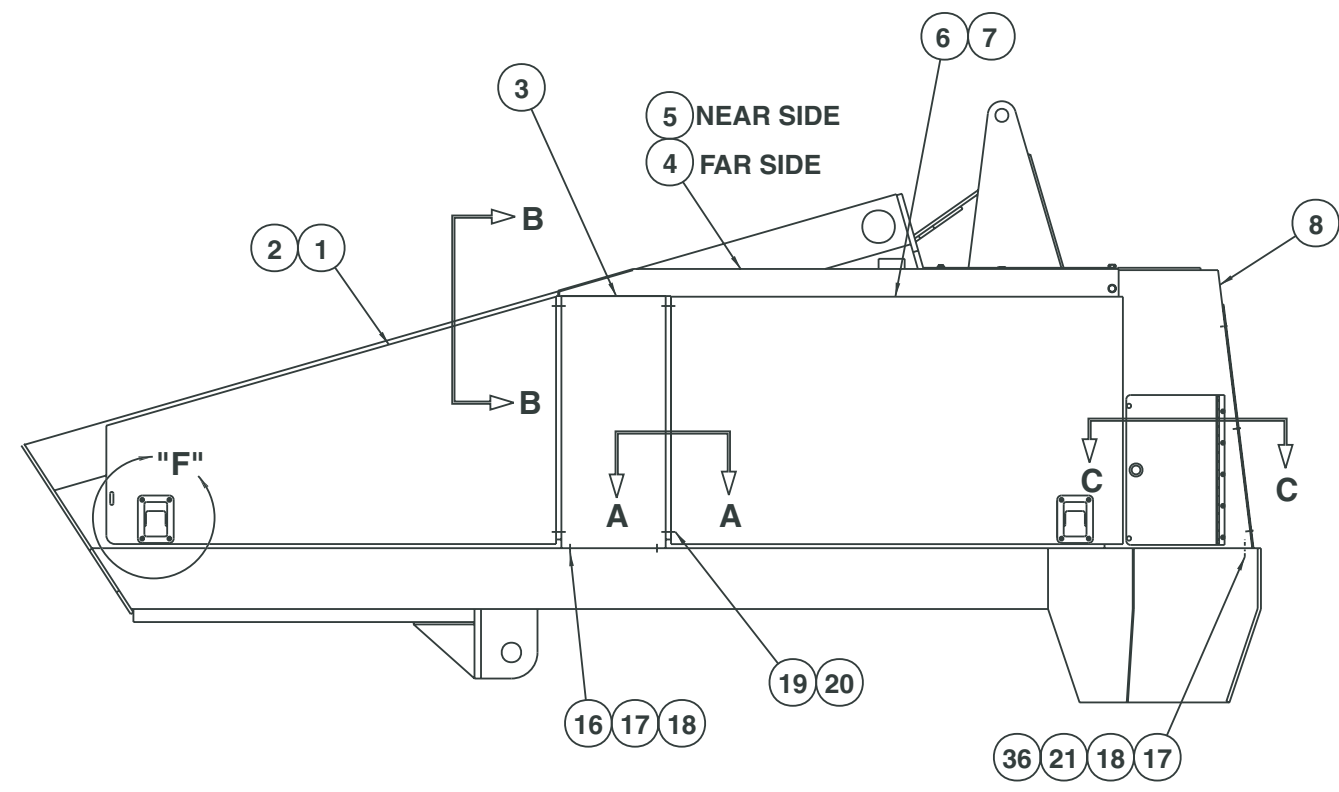
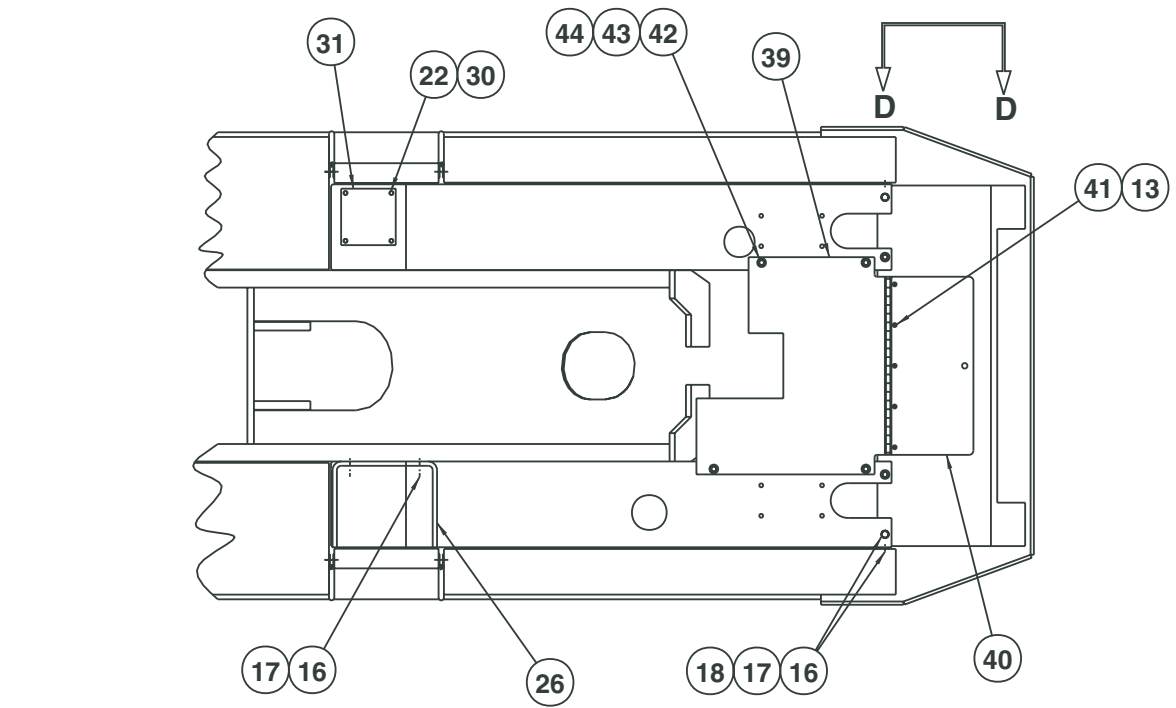
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DETAIL "F"



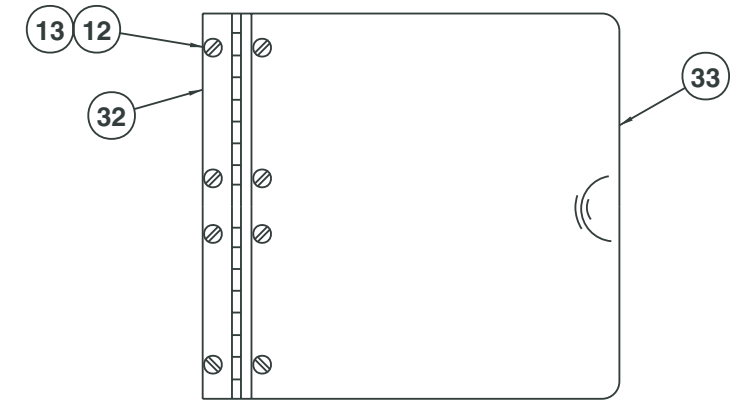
SECTION A-A



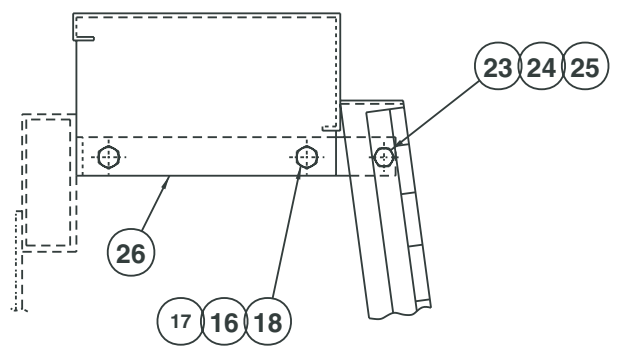
SECTION C-C



VIEW D-D



VIEW B-B

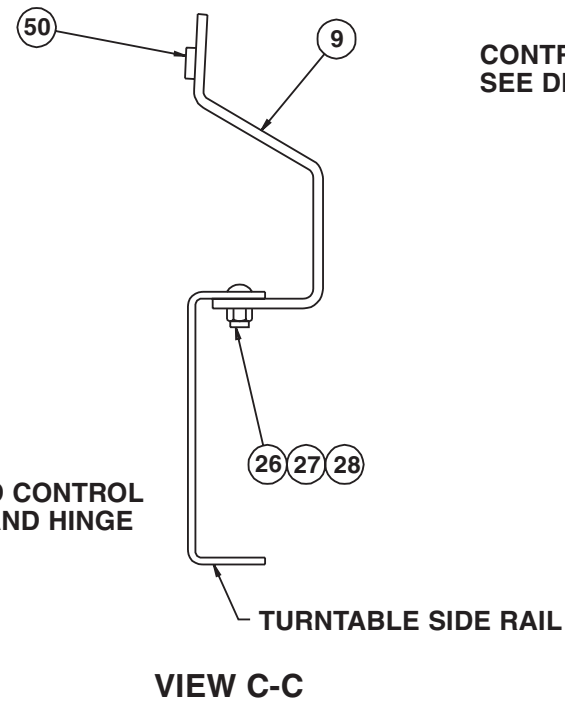
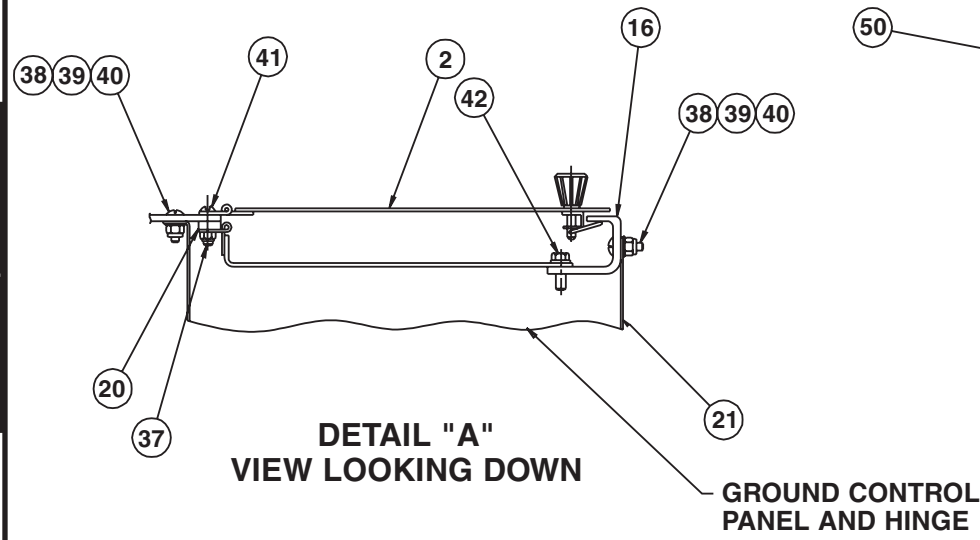


AW0081934

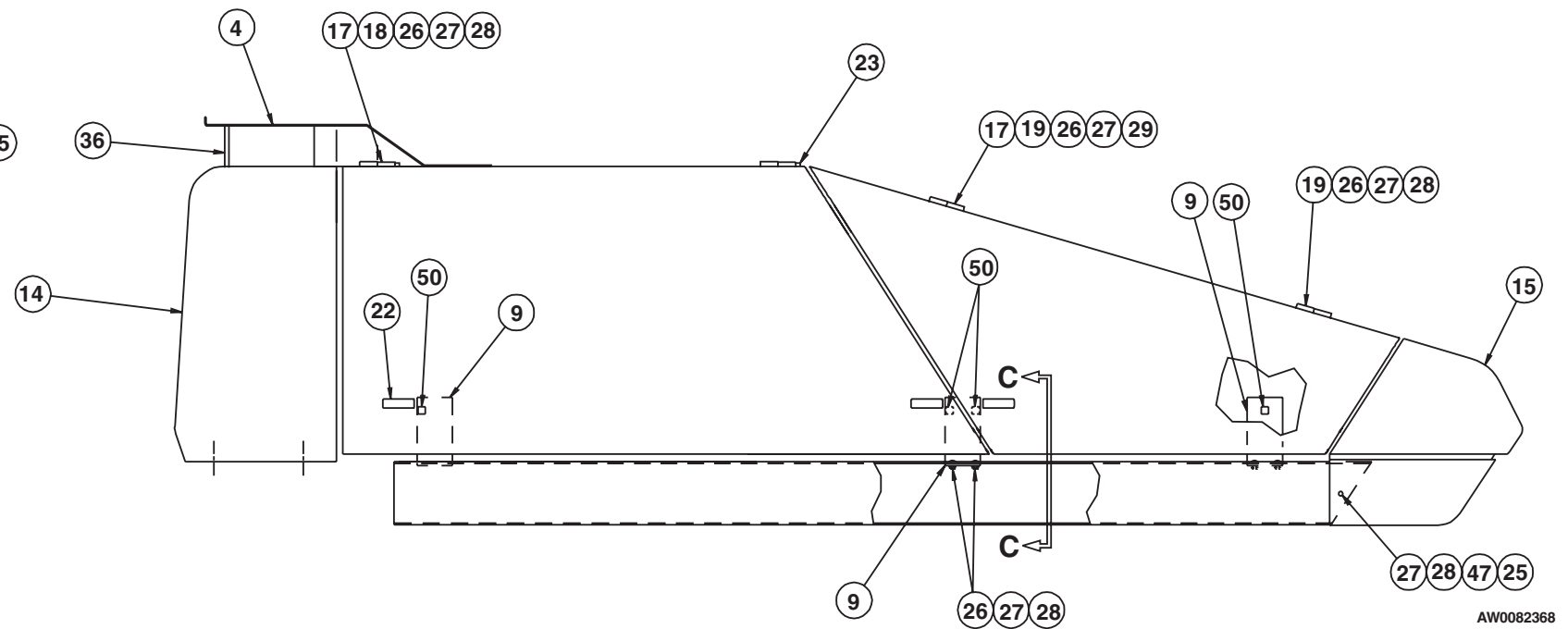
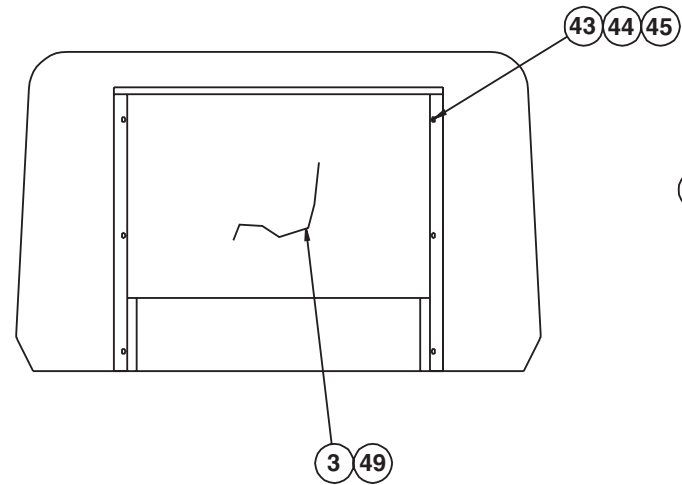
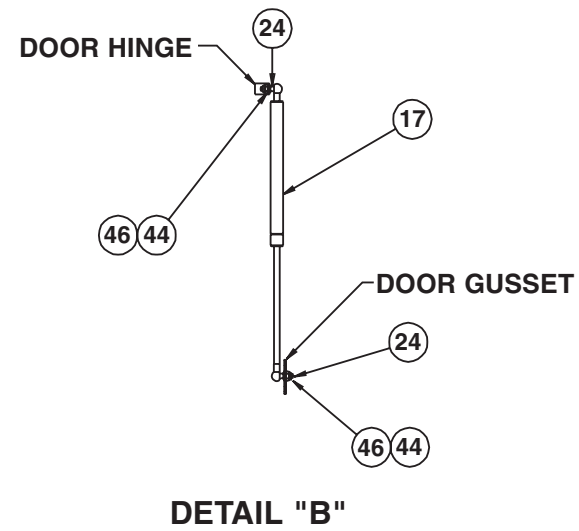
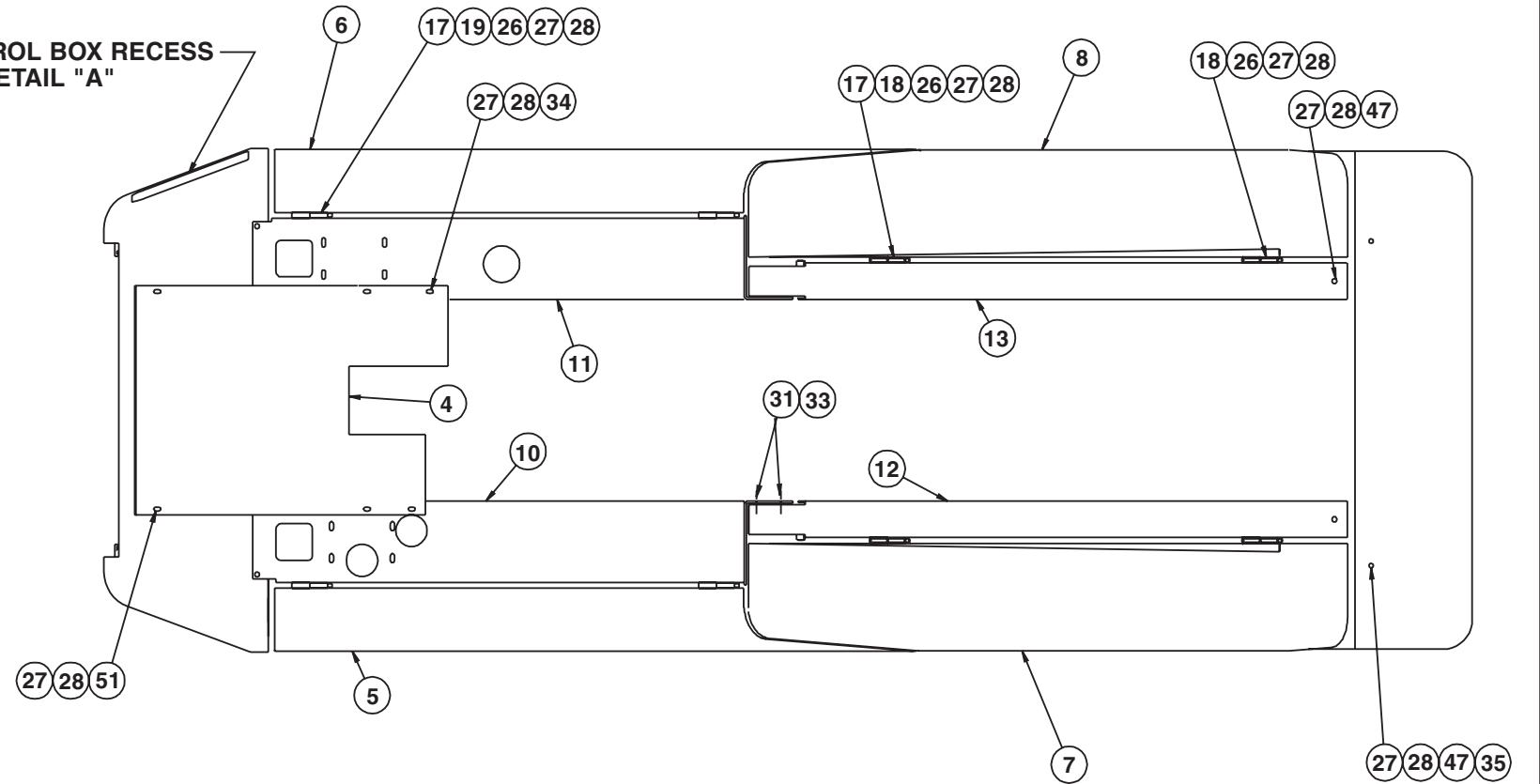
TITLE Metal cowling
Ford engine
Snorkel model TB 60

1 2 3 4 5 6 7 8 9

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CONTROL BOX RECESS
SEE DETAIL "A"



AW0082368

1 2 3 4 5 6 7 8 9

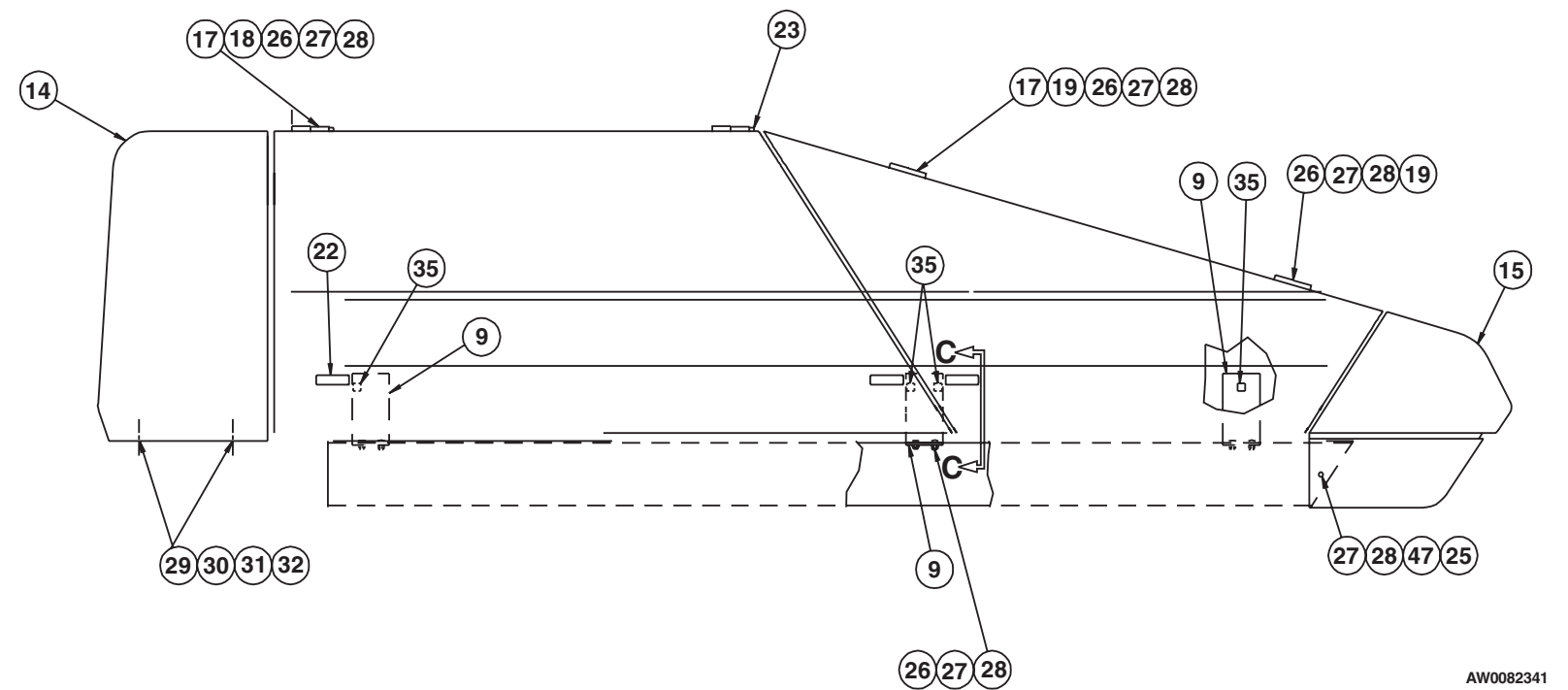
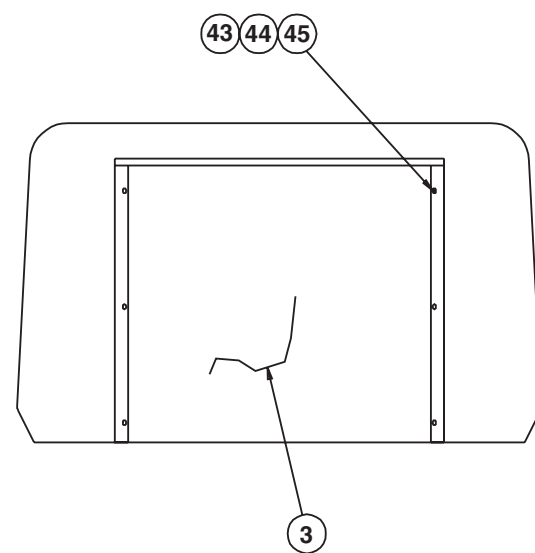
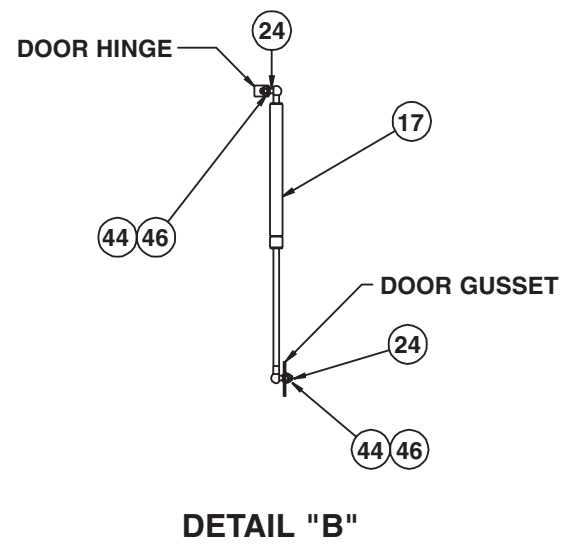
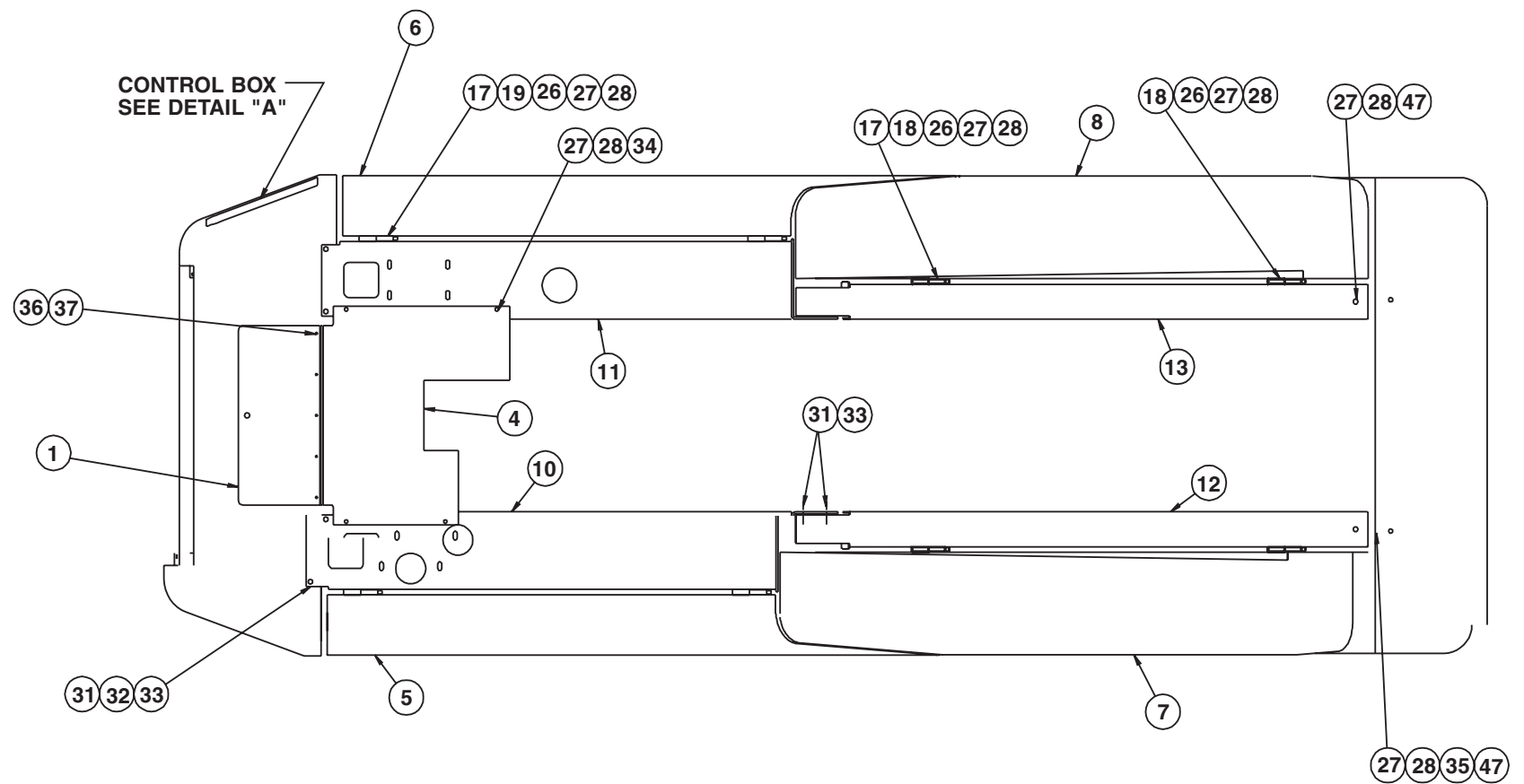
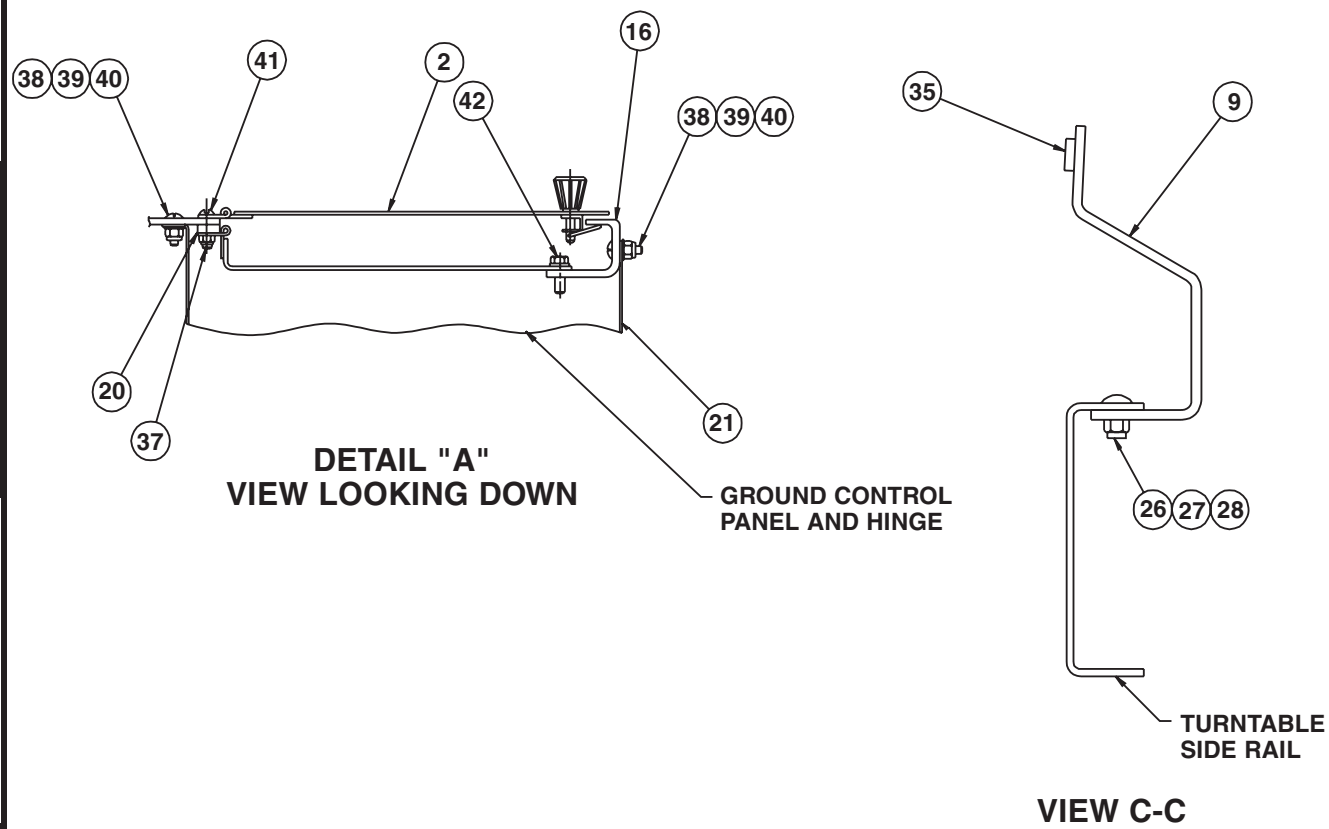
Plastic cowling, Deutz engine

item	part no	qty	description
1	0073481	1	Cover, plastic cowling
2	0074149	1	Lower controls door
3	0081670	1	Shroud, cowling
4	0081117	1	Access cover, cowling
5	0082288	1	Cowling door, front left hand
6	0082290	1	Cowling door, front right hand
7	0082293	1	Cowling door, rear left hand
8	0082294	1	Cowling door, rear right hand
9	0082303	4	Door stop
10	0082304	1	Cowling side, left front
11	0082307	1	Cowling side, right front
12	0082310	1	Rail, side left rear
13	0082311	1	Rail, side right rear
14	008231928	1	Front cowling - (includes following items)
	300808201	1	Installation drawing for front cowling
	0083274	1	Front cowling
	0162758	1	Front cowling support
	5569833	6	Speed nut 5/16-18 with captive nut
15	0082320	1	Cover, turntable rear
16	0082335	1	Mount box
17	0082321	6	Gas spring
18	0082346	4	Hinge half, left front
19	0082349	4	Hinge half, right front
20	0110482	1	Spacer bar
21	0110483	1	Cover, lower controls
22	5510002	6	Adjustable level latch
23	5560310	8	Cap nut 3/8 inch shaft
24	5560311	12	Ball stud
25	0082547	12	Shim
26	5560531	28	Carriage bolt 3/8-16 x 1-1/2 inch long
27	986299	47	Washer 3/8 medium flat
28	5560033	40	Nut 3/8-16 self locking
29	970949	4	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
30	986359	4	Washer 1/2 medium flat
31	987139	12	Washer 1/2 medium lock
32	984149	8	Nut 1/2-13 hex
33	970849	8	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
34	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
35	0082546	20	Shim
36	0073158	2	Spacer
37	5560034	5	Nut #10-24 self locking
38	970029	5	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
39	5560004	5	Nut 1/4-20 self locking
40	986019	5	Washer 1/4 medium flat
41	5560649	5	Machine screw #10-24 x 1 inch long truss head
42	5560086	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
43	970259	6	Capscrew 5/16-18 x 1 inch long hex head grade 5
44	986269	18	Washer 5/16 medium lock
45	5560137	6	Speed nut 5/16-18 with captive nut
46	5560031	12	Nut 5/16-18 self locking
47	970489	6	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
48	5560313	1	Trim lock, .063 inch rubber edge
49	0081671	1	Shroud, outer air intake
50	5560080	10	Bumper
51	5560654	2	Capscrew 3/8-16 x 5-1/2 inch long hex head grade 5

Plastic cowling, Cummins and Ford engine

item	part no	qty	description
1	0073481	1	Cover, plastic cowling
2	0074149	1	Lower controls door
3	0080626	1	Shroud, cowling
4	0081357	1	Access cover, cowling
5	0082288	1	Cowling door, front left hand
6	0082290	1	Cowling door, front right hand
7	0082293	1	Cowling door, rear left hand
8	0082294	1	Cowling door, rear right hand
9	0082303	4	Door stop
10	0082304	1	Cowling side, left front
11	0082307	1	Cowling side, right front
12	0082310	1	Rail, side left rear
13	0082311	1	Rail, side right rear
14	008231928	1	Front cowling - (includes following items)
	300808201	1	Installation drawing for front cowling
	0083274	1	Front cowling
	0162758	1	Front cowling support
	5569833	6	Speed nut 5/16-18 with captive nut
15	0082320	1	Cover, turntable rear
16	0082335	1	Mount box
17	0082321	6	Gas spring
18	0082346	4	Hinge half, left front
19	0082349	4	Hinge half, right front
20	0110482	1	Spacer bar
21	0110483	1	Cover, lower controls
22	5510002	6	Adjustable level latch
23	5560310	8	Cap nut 3/8 inch shaft
24	5560311	12	Ball stud
25	0082547	12	Shim
26	5560531	28	Carriage bolt 3/8-16 x 1-1/2 inch long
27	986299	44	Washer 3/8 medium flat
28	5560033	38	Nut 3/8-16 self locking
29	970949	4	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
30	986359	4	Washer 1/2 medium flat
31	987139	12	Washer 1/2 medium lock
32	984149	8	Nut 1/2-13 hex
33	970849	8	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
34	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
35	5560080	10	Bumper
36	5560609	5	Machine screw #10-24 x 1/2 inch long truss head
37	5560034	10	Nut #10-24 self locking
38	970029	5	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
39	5560004	5	Nut 1/4-20 self locking
40	986019	5	Washer 1/4 medium flat
41	5560649	5	Machine screw #10-24 x 1 inch long truss head
42	5560086	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
43	970259	6	Capscrew 5/16-18 x 1 inch long hex head grade 5
44	986269	18	Washer 5/16 medium lock
45	5560137	6	Speed nut 5/16-18 with captive nut
46	5560031	12	Nut 5/16-18 self locking
47	970489	6	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
48	5560313	1	Trim lock, .063 inch rubber edge

F
E
D
C
B
A



AW0082341

DWG. 0082341

TITLE Plastic cowling
Cummins and Ford
Snorkel model TB 60



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1 2 3 4 5 6 7 8 9

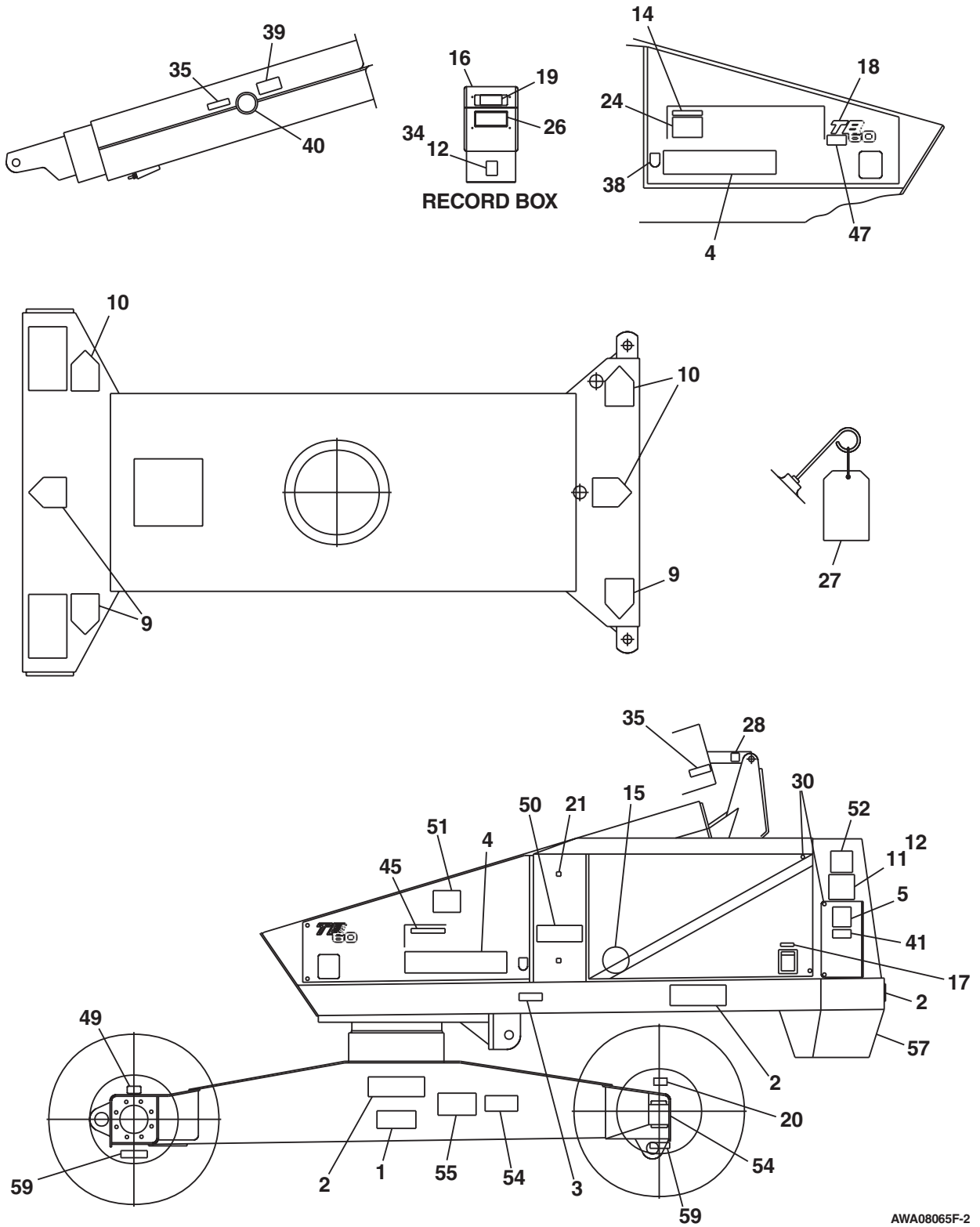
Placards and decals

item	part no	qty	description
	0082952	1	Complete placard and decals kit, TB 60 - (does not include upper control box placards)
	0082953	1	Platform decal kit, TB 60 - (does not include upper control box placards)
1	0073298	2	Placard, danger foam filled tires
2	0323896	5	Decal, danger electrical hazard
3	0070420	1	Placard, emergency bleed down valve
4	560239	4	Decal, Snorkel brand logo
5	0323897	1	Decal, danger you must not operate
6	0074209	1	Placard, pre-start instructions
7		1	Placard, platform capacity - (consult factory)
8	0323899	1	Decal, danger electrical hazard
9	0070540	3	Decal, yellow arrow
10	0070541	3	Decal, blue arrow
11	0070901	1	Placard, caution serial number
12	5560655	8	Pop rivet #AD32-ABS
13	0071425	1	Placard, platform identification
14	0071927	1	Decal, hydraulic oil
15	7030004	2	Decal, OmniQuip logo
16	562386	1	Literature compartment
17	0073491	1	Decal, safe operation information
18	0082176	2	Decal, TB 60 logo
19	0073224	1	Decal, notice manual reorder
20	0072277	2	Placard, lug nut torque
21	5560080	4	Bumper
22	970009	2	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
23	0072531	1	Decal, danger electrical hazard
24	7030003	1	Decal, lube recommendations
25	0070921	2	Placard, 125 volts 15 amps
26	0073043	1	Decal, operating manual enclosed
27	0073139	1	Crankcase oil tag - (used for shipping only)
28	0074311	5	Decal, danger cylinder failure - (1 per cylinder)
29	9980021	2	Plug 3-1/2 inch diameter
30	5569012	8	Rubber bumper
31	0150448	1	Decal, attach fall restraint
32	0073492	1	Decal, rotate while greasing
33	9980022	1	Plug 4 inch diameter
34	0074372	1	Placard, engine rpm
35	0073667	2	Decal, inspect wire ropes
36	0074210	1	Decal, danger electrical/tipping hazard
37	5560004	2	Nut 1/4-20 self locking
38	0073585	2	Decal, made in USA
39	0190989	1	Decal, danger do not reach
40	9980013	2	Cap
41	0181562	1	Placard, ANSI standard
42	0083431	1	Decal, lift/tie down
43	0083426	4	Decal, tie down symbol
44	0080650	4	Decal, lift
45	0071925	1	Decal, gasoline fuel - (gasoline machine)
	0071926	1	Decal, diesel fuel - (diesel machine)
46	0151410	3	Decal, danger rotating engine parts - (Ford only)
47	0074316	1	Decal, caution governor damage - (Ford only)
48	0112092	1	Decal, engine control module - (Ford only)
49	0072276	2	Placard, lug nut torque - (4 x 2 machine)
	0072277	2	Placard, lug nut torque - (4 x 4 machine)
50	0111390	2	Decal, 4 x 4 logo - (4 wheel drive machine)
			Parts list continued on next page

Placards and decals

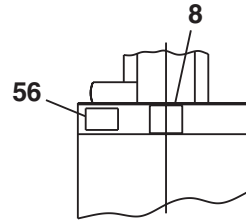
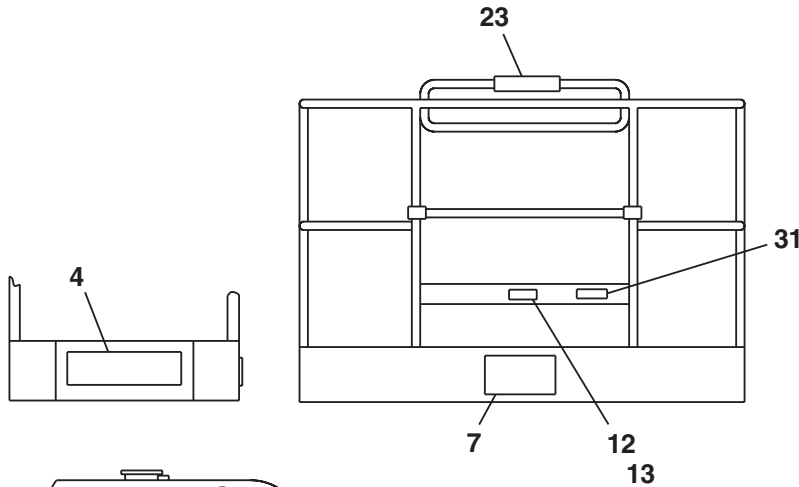
item	part no	qty	description
51	0081441	1	Placard, caution liquid withdrawal - (dual fuel or LP fuel)
52	0081377	1	Decal, LPS logo - (LP fuel only)
53	0090493	1	Decal, dual fuel instructions - (dual fuel machine)
54	0072203	2	Decal, towing instructions - (towing option)
55	0082160	1	Decal, danger tow package - (towing option)
56	0082164	1	Decal, danger do not ride - (towing option)
57	0082203	1	Decal, danger crushing hazard - (towing option)
58	0071793	1	Decal, hydraulic warm-up instructions - (hydraulic warm-up option)
59	0070421	4	Placard, tire pressure - (flotation tire option, 1 per wheel)

Placards and decals

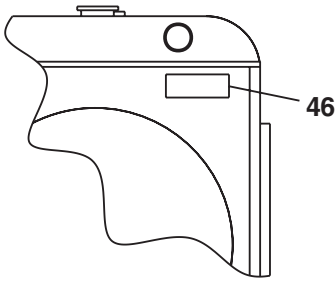


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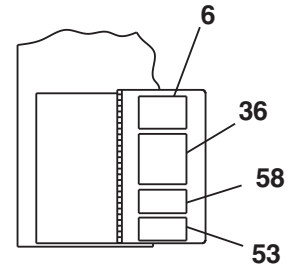
Placards and decals



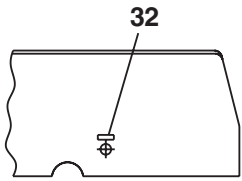
TIP BOOM



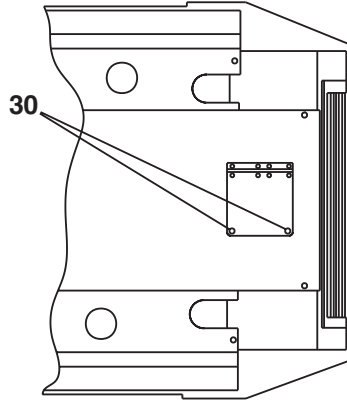
**RADIATOR
FORD ENGINE**



**LOWER CONTROL DOOR
(SHOWN OPEN)**



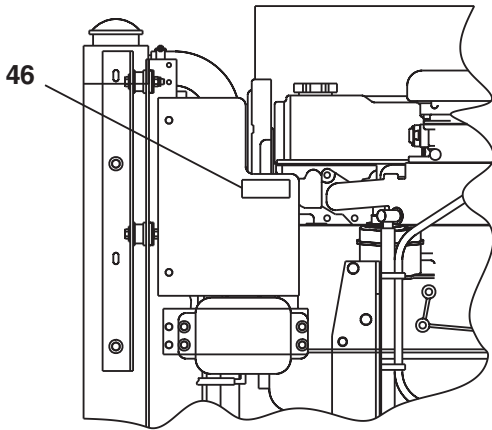
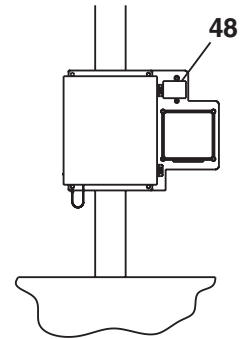
**FRONT VIEW OF
TURNTABLE**



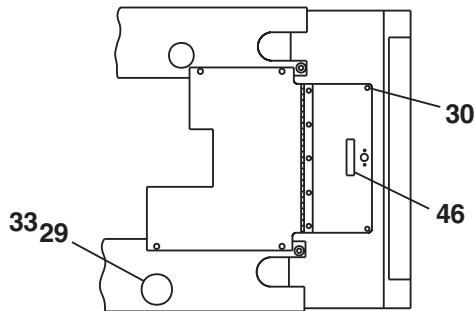
**FRONT COWLING
DEUTZ ENGINE
TOP VIEW**



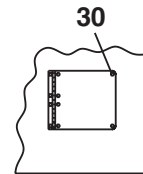
**TOP VIEW OF
GFCI OUTLET BOX**



**FORD ENGINE
SIDE VIEW**



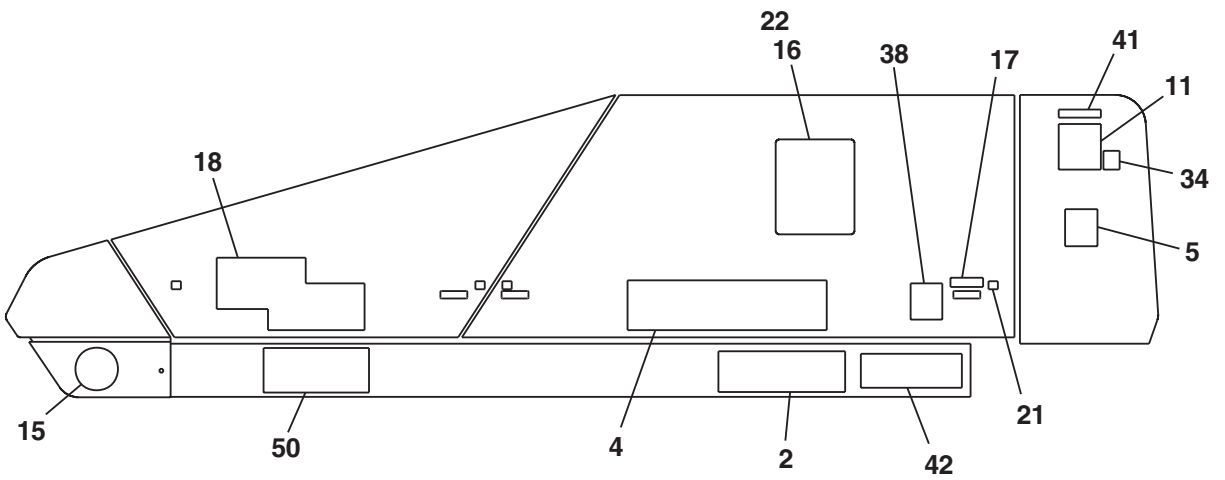
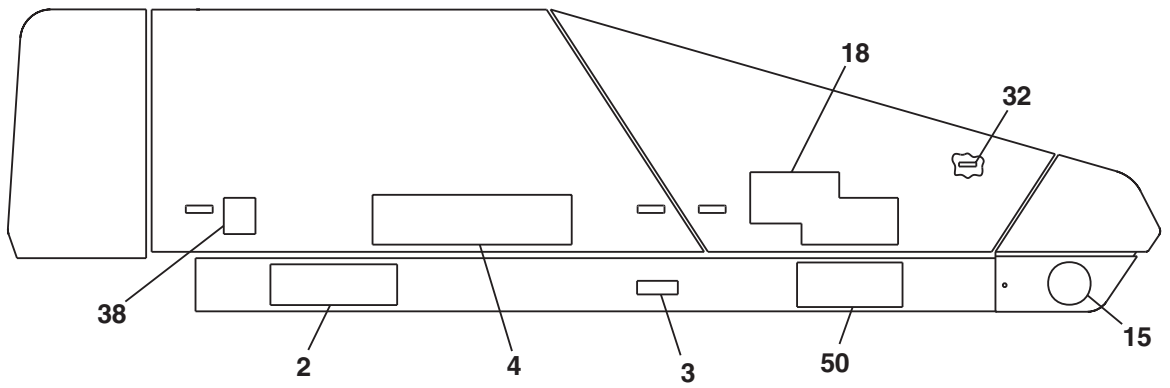
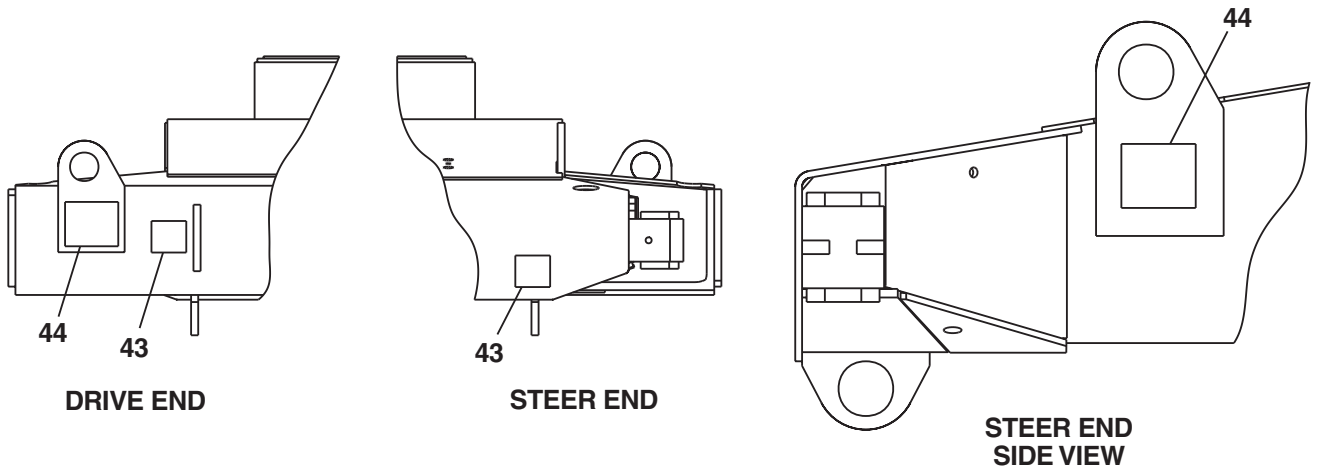
**FRONT COWLING
FORD ENGINE
TOP VIEW**



**FRONT COWLING
LH SIDE**

AWA08065F-3

Placards and decals



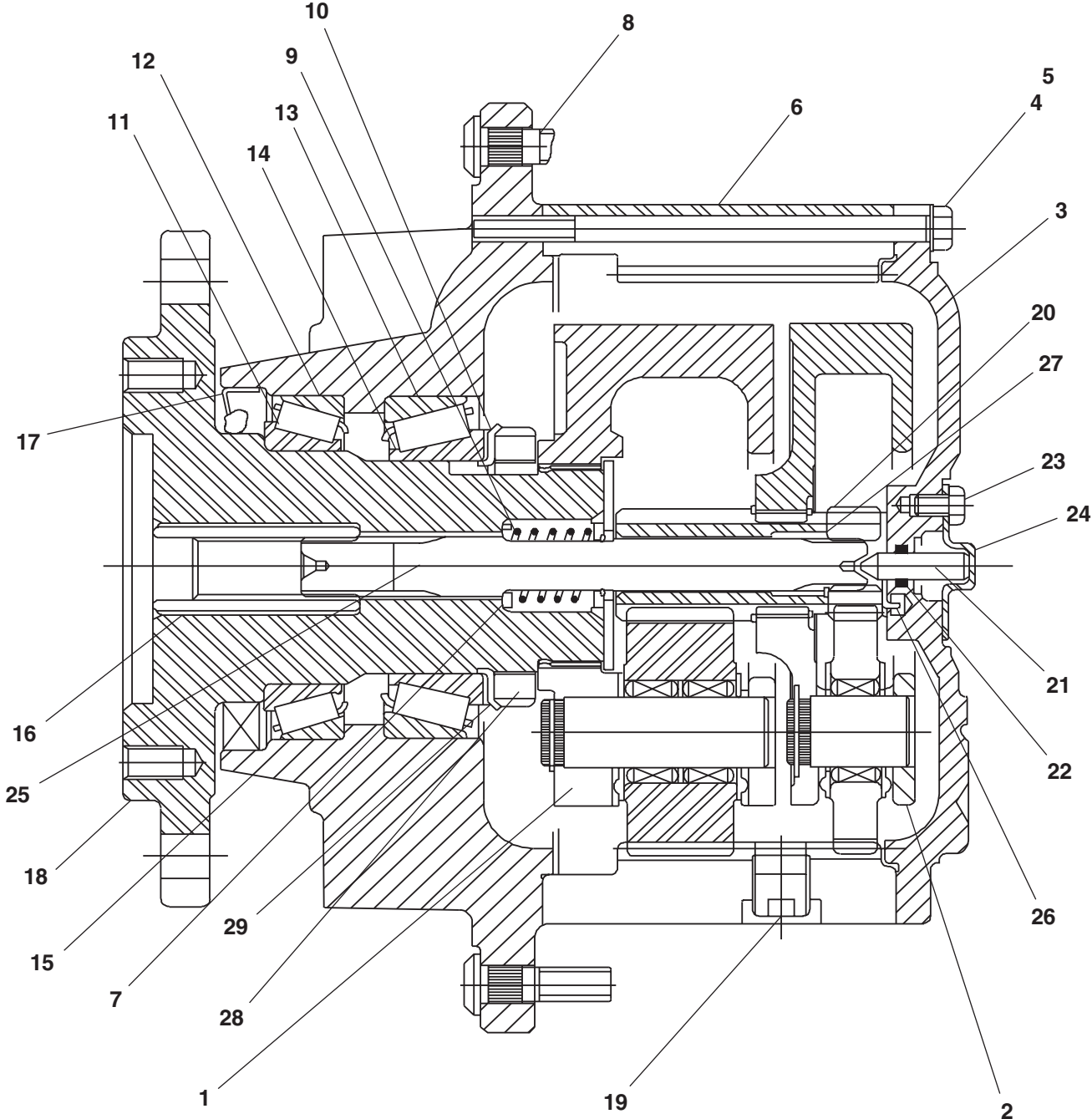
PLASTIC COWLING

AWA08065F-4

Gear hub, high torque

item	part no	qty	description
	0081674	1	Gear hub, high torque
1	8010106	1	Secondary carrier
2	8010107	1	Primary carrier
3	8010097	1	Cover
4	986299	12	Washer 3/8 medium flat
5	8010069	12	Capscrew hex head
6	8010157	1	Ring gear
7	8010175	2	Thrust washer
8	7280022	8	Wheel bolt
9	8010151	1	Spring
10	8010173	1	Thrust washer
11	8010031	1	Bearing cup
12	8010032	1	Bearing cone
13	8010029	1	Bearing cup
14	8010030	1	Bearing cone
15	8010186	1	Hub
16	8010013	1	Coupling
17	8010027	1	Oil seal
18	8010109	1	Spindle
19	8010028	1	Magnetic plug
20	8010108	1	Sun gear
21	8010143	1	Plunger
22	8010149	1	O-ring
23	8010168	2	Capscrew hex head
24	8010080	1	Disengage cover
25	8010169	1	Input shaft
26	8010075	1	Thrust washer
27	8010145	2	Retaining ring
28	8010150	1	Retainer nut

Gear hub, high torque

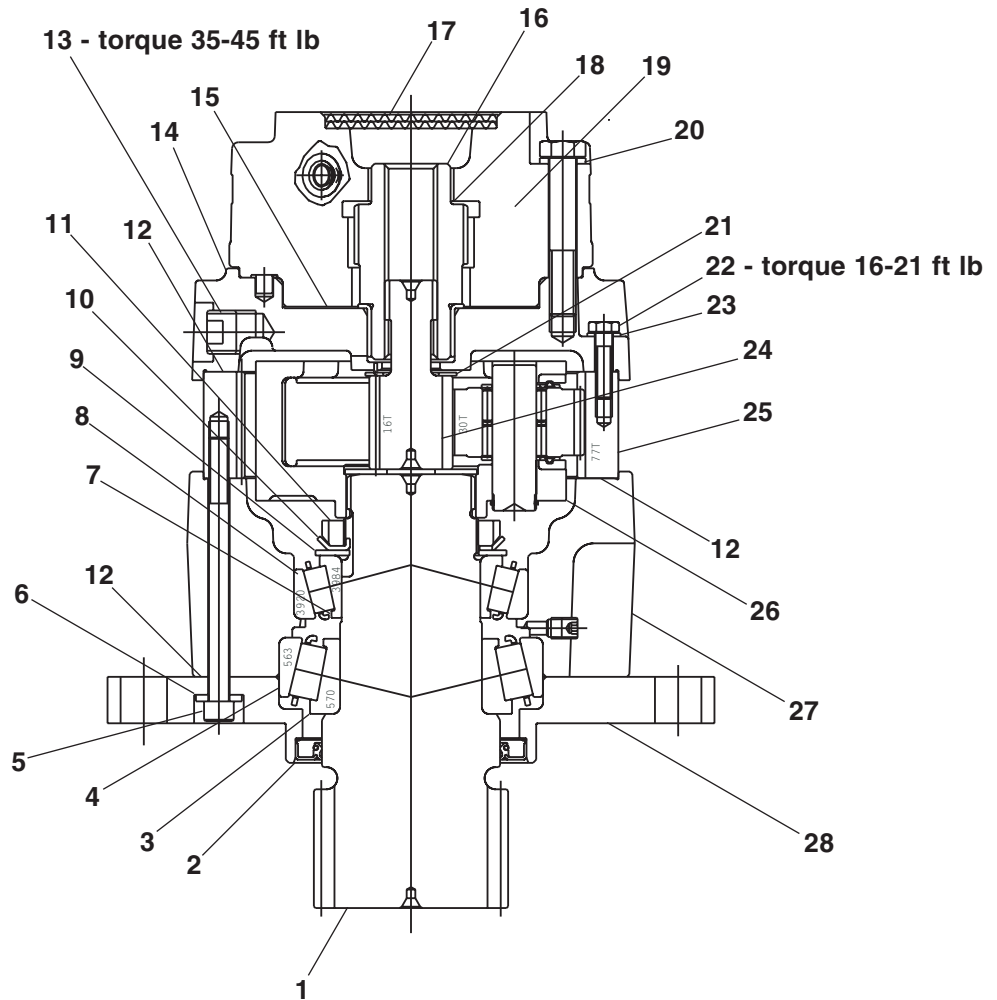
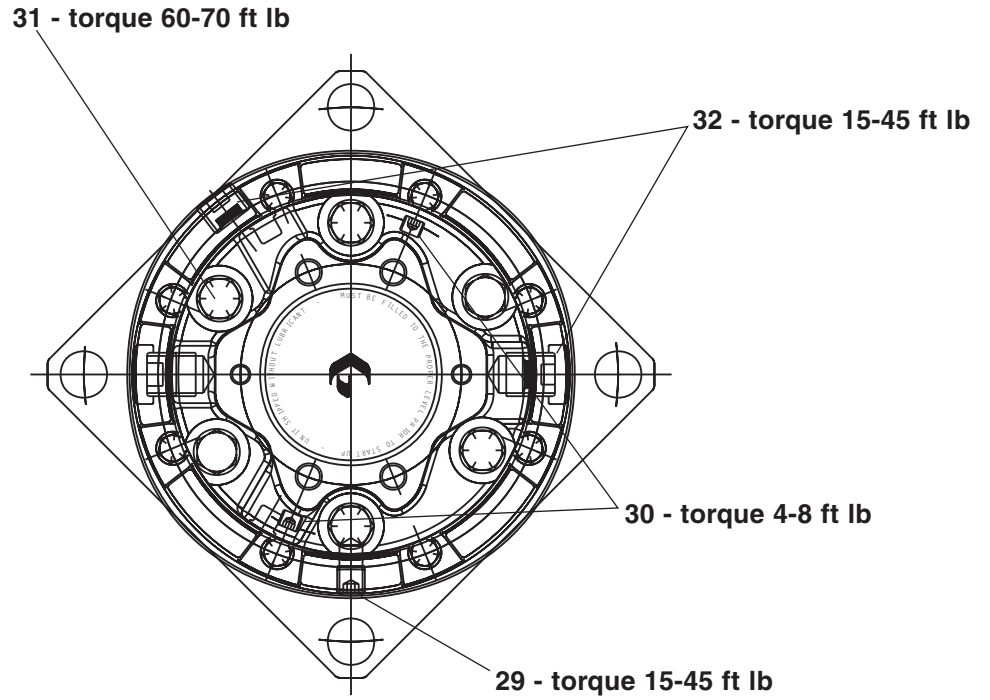


AW0081674

Swing drive, Auburn Gear

item	part no	qty	description
	0070047	1	Swing drive, Auburn Gear
1	8010232	1	Output shaft
2	8010260	1	Oil seal
3	8010227	1	Bearing cone
4	8010226	1	Bearing cup
5	8010235	12	Capscrew, socket head
6	8010221	12	Washer, flat
7	8010225	1	Bearing cone
8	8010224	1	Bearing cup
9	8010236	1	Thrust washer
10	8010222	1	Washer, lock
11	8010229	1	Nut, lock
12	8010261	3	Sealing compound
13	8010262	1	Pipe plug
14	8010219	1	Cover
15	8010263	1	Gasket
16	8010238	1	Adapter, spline
17	8010264	1	Shipping plug
18	8010223	1	Bearing, flange sleeve
19	8010265	1	Brake
	8010247	1	Seal repair kit - Q series
	8010248	1	Seal repair kit - P series
20	8010266	4	Washer, flat
21	8010217	1	Thrust washer
22	8010267	8	Bolt, hex head
23	8010220	8	Washer, flat
24	8010231	1	Gear, sun
25	8010230	1	Gear, ring
26	8010237	1	Carrier
27	8010233	1	Hub
28	8010218	1	Hub flange
29	8010268	1	Pipe plug
30	8010269	2	Pipe plug
31	8010270	4	Bolt, hex head
32	8010271	2	Pipe plug
33	8010239	1	Piston kit - (not shown)
34	8010240	1	Friction disc kit - (not shown)

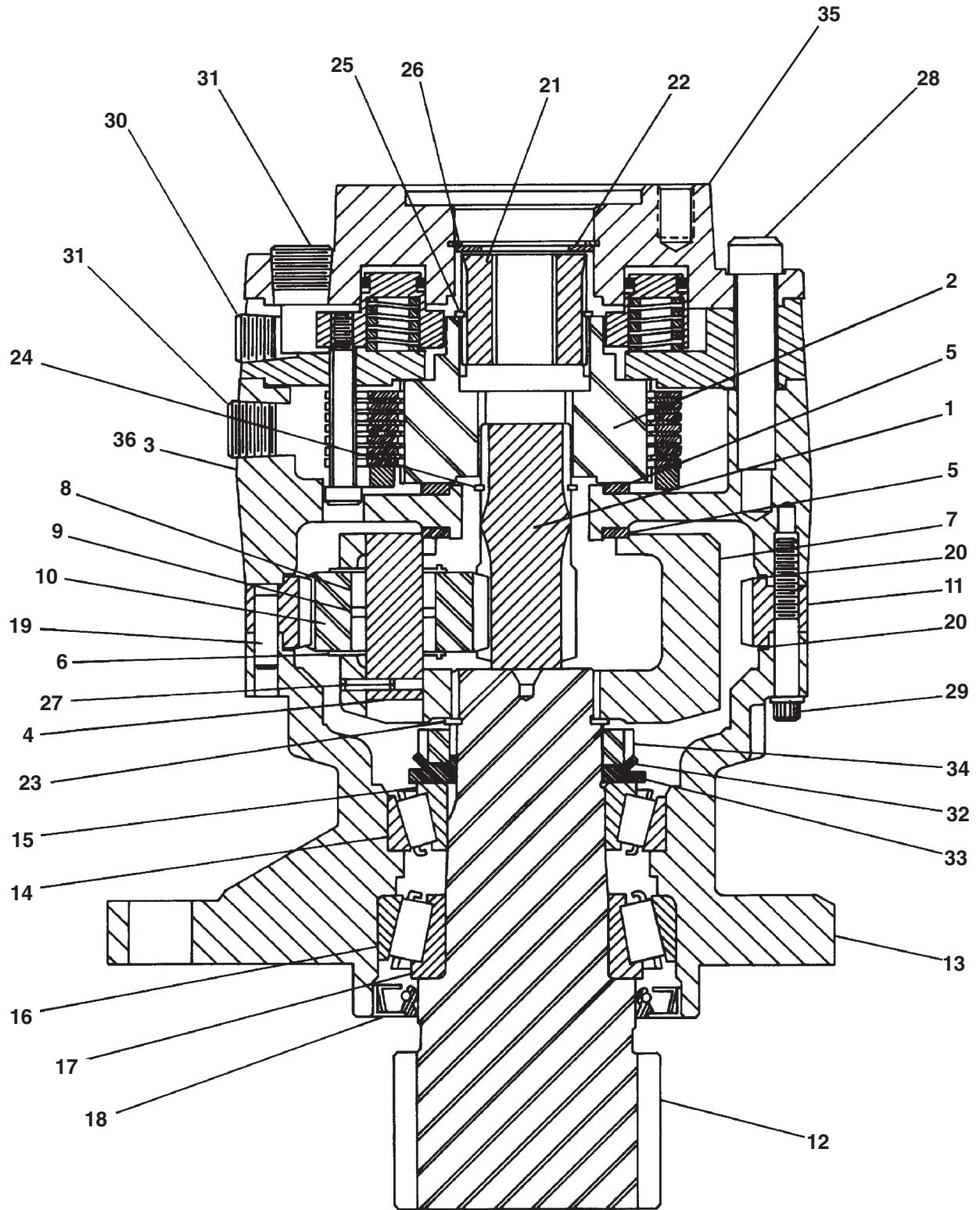
Swing drive, Auburn Gear



Swing drive, Fairfield

item	part no	qty	description
	0070047	1	Swing drive, Fairfield
	8060060	1	Seal repair kit - (seal kit includes items 5, 18, 20, 23, 32 and 33)
1	8060200	1	Input shaft
2	8060121	1	Coupling
3	8060201	1	Brake hub
4	8060090	3	Planet shaft
5	8060202	2	Thrust washer
6	8060091	6	Washer, tanged thrust
7	8060203	1	Carrier
8	8060092	96	Needle bearing
9	8060093	3	Thrust spacer
10	8060123	3	Planet gear
11	8060204	1	Ring gear
12	8060065	1	Output shaft
13	8060205	1	Housing
14	8200017	1	Tapered bearing cup
15	8200018	1	Tapered bearing cone
16	8200019	1	Tapered bearing cup
17	8200020	1	Tapered bearing cone
18	8060206	1	Lip seal
19	8060207	2	Dowel pin
20	8060208	2	Special o-ring
21	8060209	1	Adapter coupling
22	8060122	1	Thrust washer
23	8060210	1	External retaining ring
24	8060094	1	External retaining ring
25	8060095	1	External retaining ring
26	8060096	1	Internal retaining ring
27	8060097	3	Roll pin
28	8060216	4	Capscrew 1/2-13 x 2-3/4 inch long socket head
29	8060141	12	Bolt 5/16-18 x 2-1/4 inch long 12 point flange
30	8060212	2	Pipe plug
31	8060213	3	Magnetic pipe plug
32	8060214	1	Washer, tanged lock
33	8060215	1	Washer, tanged lock
34	8060098	1	Bearing nut
35	8060124	1	Input brake
36	8060211	2	Drive screw
			Swing drive brake replacement parts kits: - (parts not shown)
A	8060112	1	Lining kit
B	8060113	1	Spring kit
C	8060114	1	O-ring kit

Swing drive, Fairfield

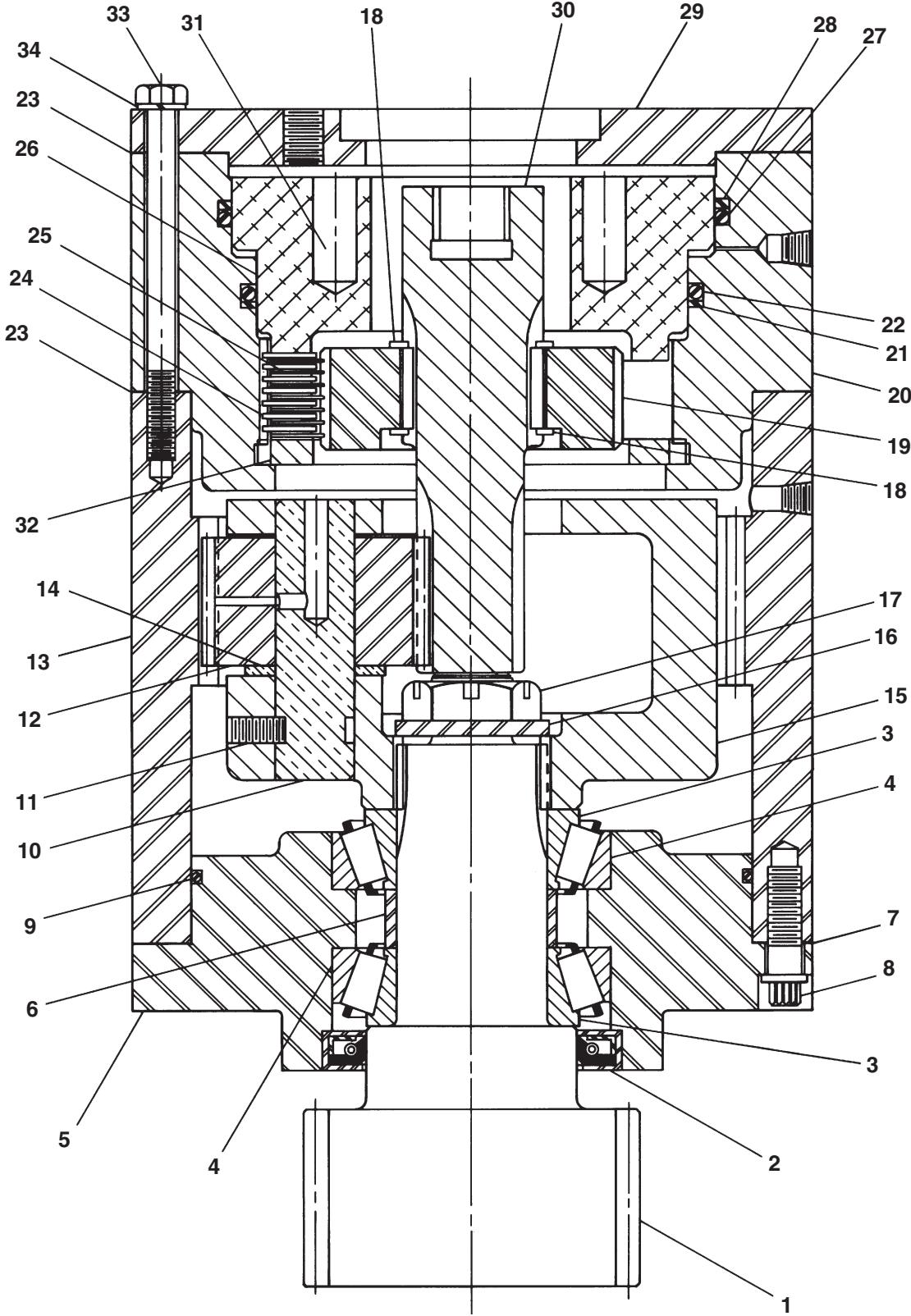


AWV00201

Swing drive, Gear Products

item	part no	qty	description
	0070047	1	Swing drive, Gear Products
	0072059	1	Seal repair kit - (seal kit includes items 2, 7, 9, 21, 22, 23, 27 and 28)
	8070282	1	Replacement air vent - (not shown)
1	8070001	1	Output shaft
2	Kit item	2	Seal
3	8070142	2	Bearing cone
4	8070143	2	Bearing cup
5	8070317	1	Base
6	8070116	1	Bearing spacer
7	Kit item	1	Gasket
8	8070316	5	Capscrew 7/16-14 x 1-1/4 inch long 12 point flange head
9	Kit item	3	O-ring
10	8070125	3	Planetary shaft gear
11	8070318	3	Set screw 5/16-28 x 5/8 inch long socket cup point
12	8070133	1	Planetary gear
13	8070186	1	Housing
14	8070140	3	Thrust ring
15	8070315	1	Planet carrier
16	8070198	1	Washer
17	8070002	1	Castle nut
18	8070319	2	Snap ring
19	8070147	1	Brake drive
20	8070129	1	Cylinder plate
21	Kit item	1	Back-up ring
22	Kit item	1	O-ring
23	Kit item	1	Gasket, 1/64 inch thick
24	8070005	7	Brake disc
25	8070006	7	Friction disc
26	8070007	7	Piston brake
27	Kit item	1	O-ring
28	Kit item	1	Back-up ring
29	8070205	1	Cover
30	8070141	1	Input gear
31	8070004	12	Brake spring
32	8070003	1	Back-up plate
33	970589	6	Capscrew 3/8-16 x 4-1/2 inch long hex head grade 5
34	987119	6	Washer 3/8 medium lock
35	8070320	1	Cotter pin 1/8 inch diameter x 1-1/2 inch long - (not shown)
36	7790005	1	Motor gasket - (not shown)

Swing drive, Gear Products

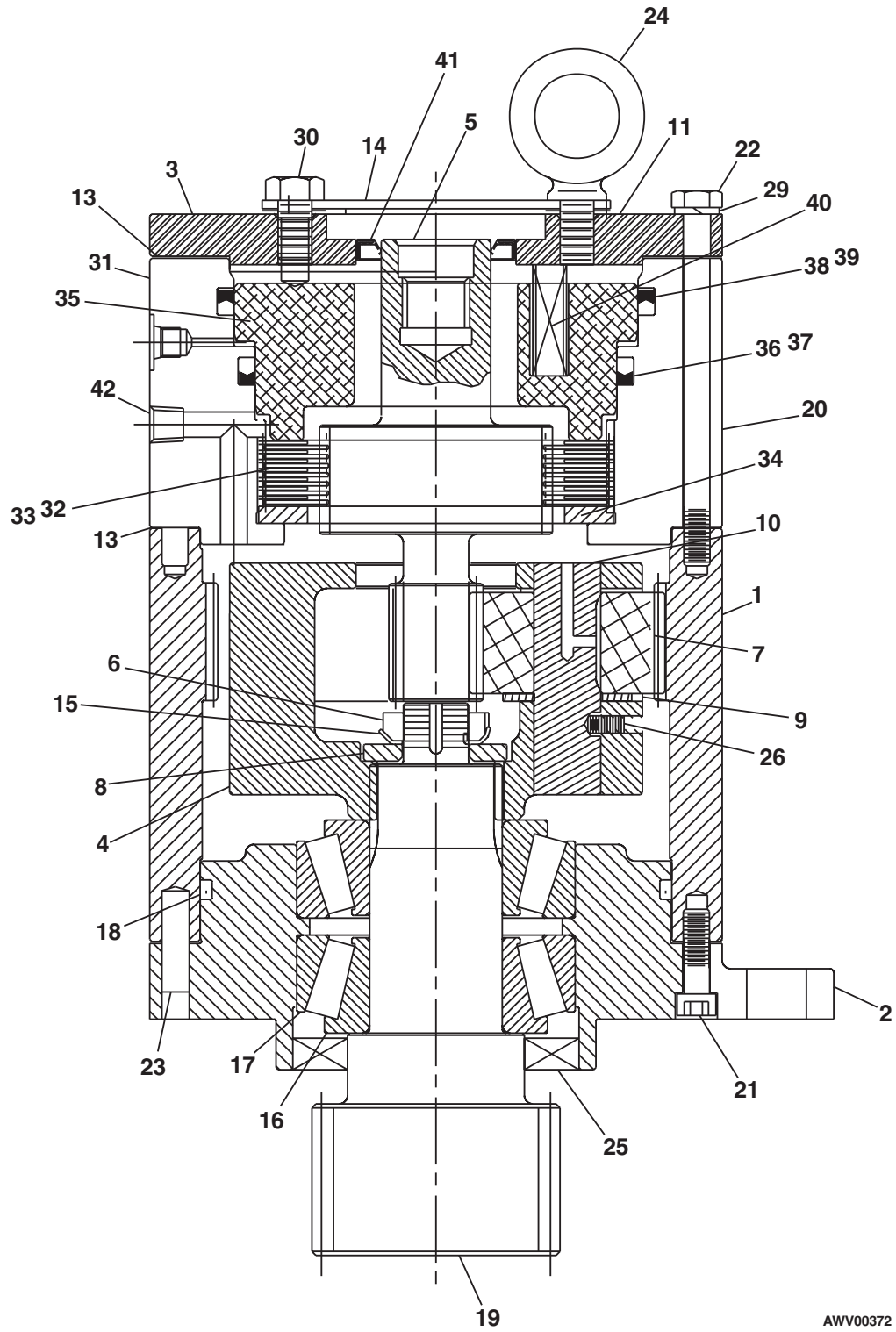


AWV00202

Swing drive, Perfection

item	part no	qty	description
	0070047	1	Swing drive, Perfection
	0074837	1	Seal and shim repair kit #1 - (kit includes items 11, 18, 25 and 41)
	0074838	1	Brake repair kit - (kit includes items 32, 33 and 40)
	0074839	1	Seal and shim repair kit #2 - (kit includes items 11, 36, 37, 38 and 39)
1	0074800	1	Housing
2	0074801	1	Mounting flange
3	0074802	1	Motor adapter
4	0074803	1	Planetary carrier
5	0074804	1	Input pinion
6	0074805	1	Lock nut
7	0074806	3	Spur gear
8	0074807	1	Washer
9	0074808	3	Washer idler
10	0074809	3	Idler pin
11	Kit item	1	Hydraulic motor gasket - (not sold separately)
12	0172054	1	Reducer bushing
13	0074836	2	Brake gasket
14	0074811	1	Hydraulic motor cover
15	0074812	1	Lock washer
16	0074813	2	Bearing cup
17	0074814	2	Bearing cone
18	Kit item	1	O-ring - (not sold separately)
19	0074816	1	Output shaft
20	0172053	1	Pressure vent plug
21	0071817	8	Bolt 3/8-16 x 1-1/4
22	0074818	6	Bolt 3/8-16 x 5-1/4
23	0074819	3	Dowel pin
24	0074820	1	Eyebolt
25	Kit item	1	Oil seal - (not sold separately)
26	0074822	3	Screw
27	0074823	1	Bushing
28	0074824	2	Nut, hex 1/2-13
29	0074825	6	Lock washer
30	0074826	2	Bolt
31	0074827	1	Housing brake
32	Kit item	7	Pressure disc (thin) - (not sold separately)
33	Kit item	7	Friction disc
34	0074830	1	Pressure disc (thick)
35	0074831	1	Piston
36	Kit item	1	O-ring - (not sold separately)
37	Kit item	1	O-ring plate - (not sold separately)
38	Kit item	1	O-ring - (not sold separately)
39	Kit item	1	O-ring plate - (not sold separately)
40	Kit item	24	Spring - (not sold separately)
41	Kit item	1	Oil seal - (not sold separately)
42	0172050	5	Pipe plug

Swing drive, Perfection

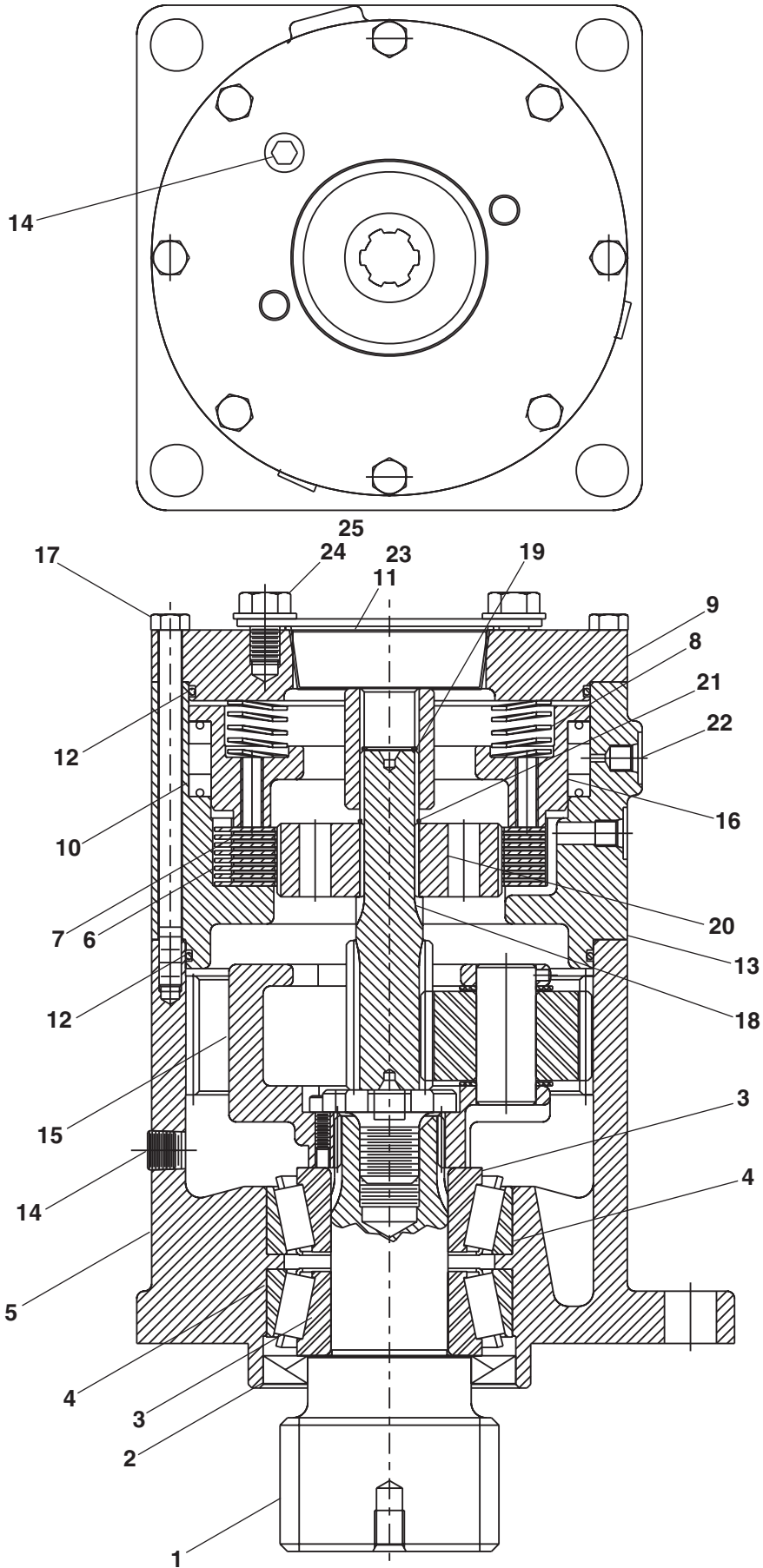


AWV00372

Swing drive, Tulsa Winch

item	part no	qty	description
	0070047	1	Swing drive, Tulsa Winch
	8200059	1	Seal repair kit
1	8200051	1	Output pinion shaft
2	8200052	1	Oil seal
3	8200060	2	Bearing cone
4	8200061	2	Bearing cup
5	8200062	1	Housing
6	8200055	8	Stator plate
7	8200064	7	Friction disc
8	8200057	12	Brake spring
9	8200066	1	Motor adapter
10	8200053	2	Oil seal
11	8200039	1	Gasket
12	8200054	2	O-ring
13	8200069	1	Brake housing
14	8200070	2	Pipe plug
15	8200096	1	Gear set
16	8200071	1	Brake piston
17	8200072	8	Capscrew
18	8200073	1	Input gear
19	8200074	1	Retaining ring
20	8200075	1	Brake driver
21	8200076	1	Retaining ring
22	8200077	1	Cap plug
23	8200078	1	Protector
24	8200079	2	Washer
25	8200080	2	Capscrew
26	8200081	1	Pipe bushing - (not shown)
27	8200082	1	Breather - (not shown)

Swing drive, Tulsa Winch

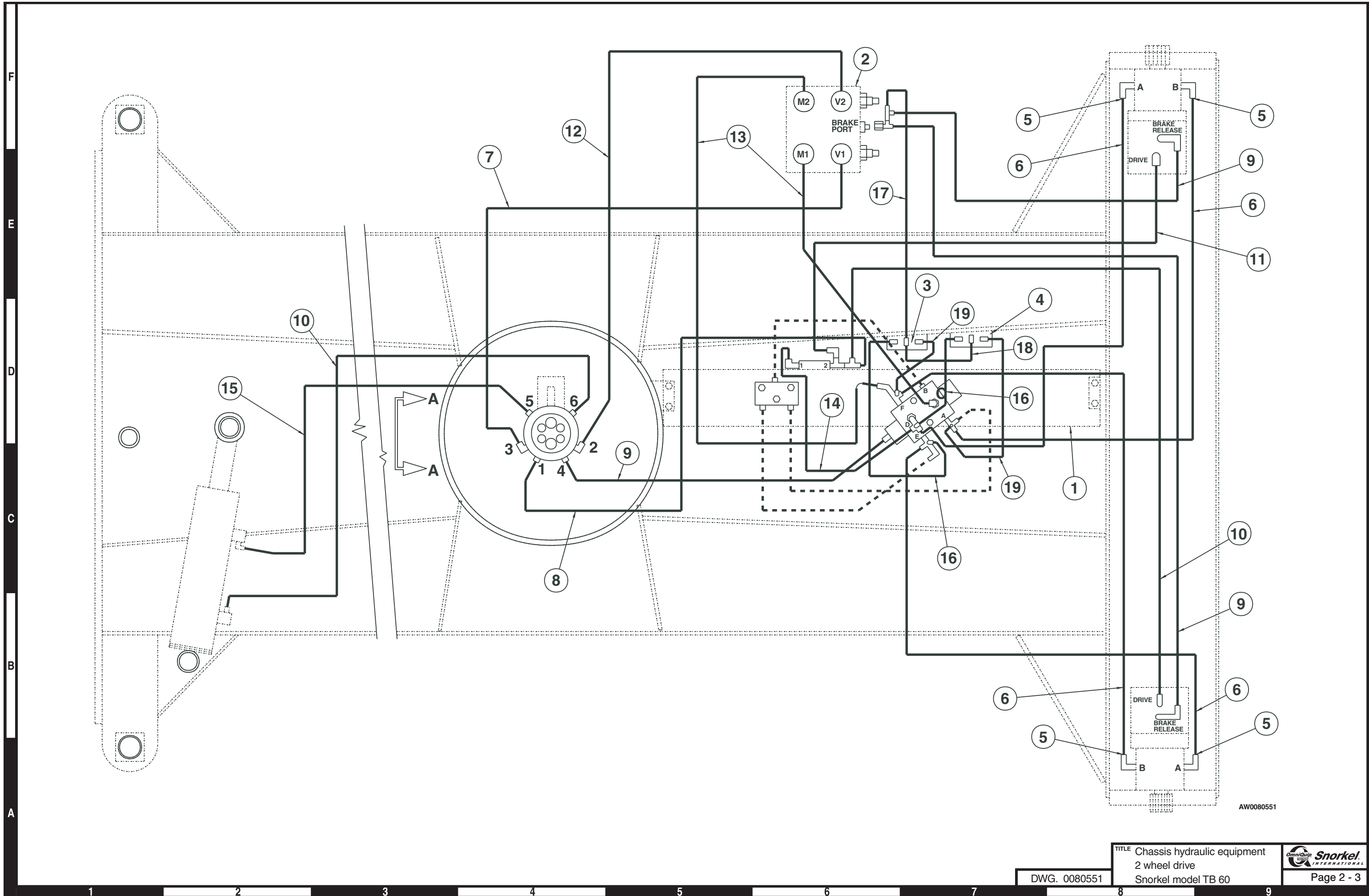


**TB
60**



Chassis hydraulic equipment, 2 wheel drive

item	part no	qty	description
1	0081423	1	Drive valve, high torque - (see page 2-22 for parts breakdown)
2	0081042	1	Motion control valve, drive - (see page 2-54 for parts breakdown)
3	0081600	1	Drive sequence valve, right hand - (see page 2-45 for parts breakdown)
4	0081604	1	Drive sequence valve, left hand - (see page 2-46 for parts breakdown)
5	5080015	4	Last chance filter
6	0080543	4	3/4 inch hydraulic hose
7	0400483	1	3/4 inch hydraulic hose
8	0080522	1	1/2 inch hydraulic hose
9	0070772	3	1/4 inch hydraulic hose
10	0070783	2	1/4 inch hydraulic hose
11	0070781	1	1/4 inch hydraulic hose
12	0110490	1	3/4 inch hydraulic hose
13	0080524	1	3/4 inch hydraulic hose
14	0070792	1	1/4 inch hydraulic hose
15	0070782	1	1/4 inch hydraulic hose
16	0020267	2	3/8 inch hydraulic hose
17	0040276	1	1/4 inch hydraulic hose
18	0070768	1	1/4 inch hydraulic hose
19	0020275	1	3/8 inch hydraulic hose



AW0080551

TITLE Chassis hydraulic equipment
 2 wheel drive
 Snorkel model TB 60

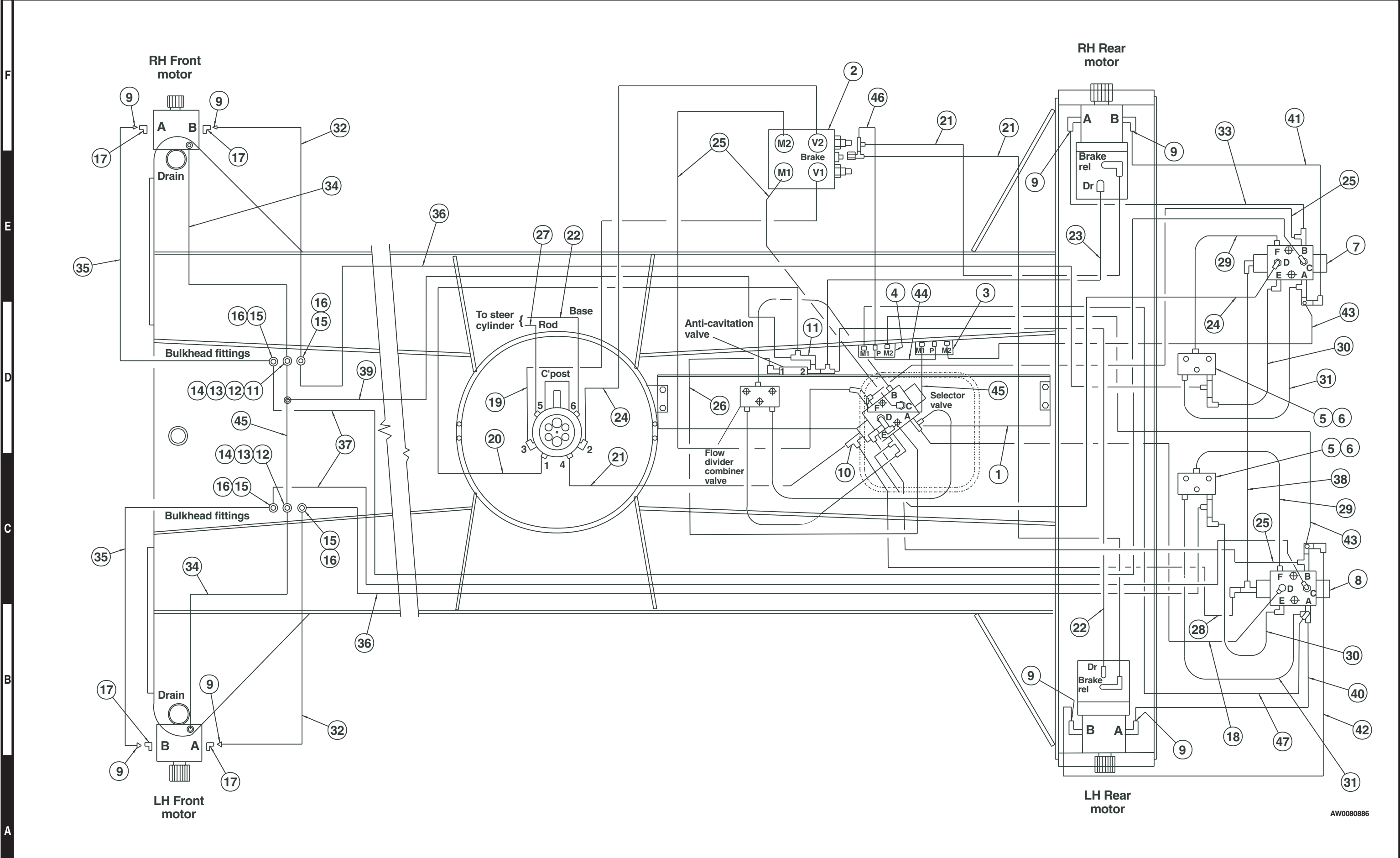


DWG. 0080551

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AW0080886



TITLE Chassis hydraulic equipment
4 wheel drive
Snorkel model TB 60

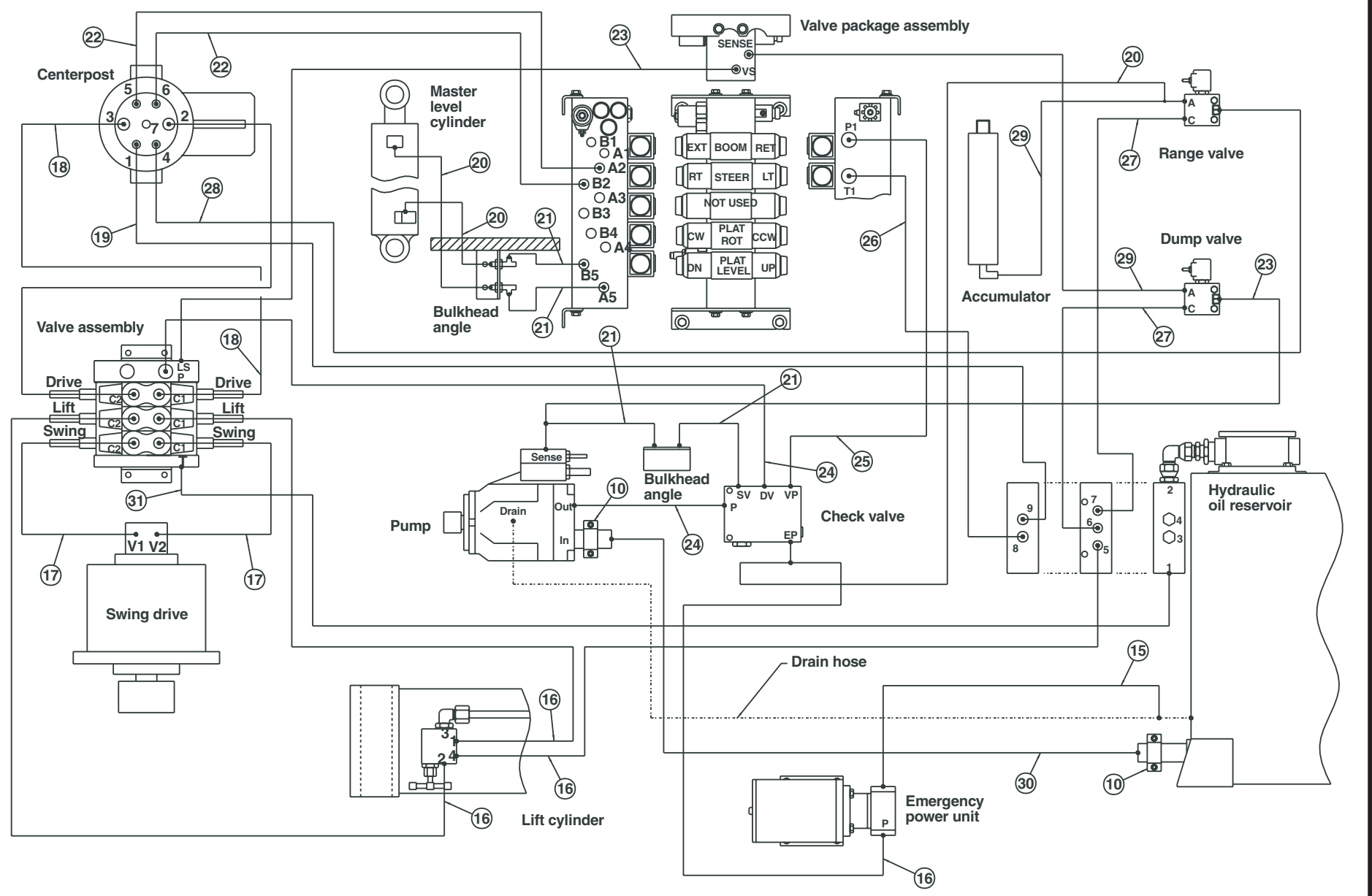
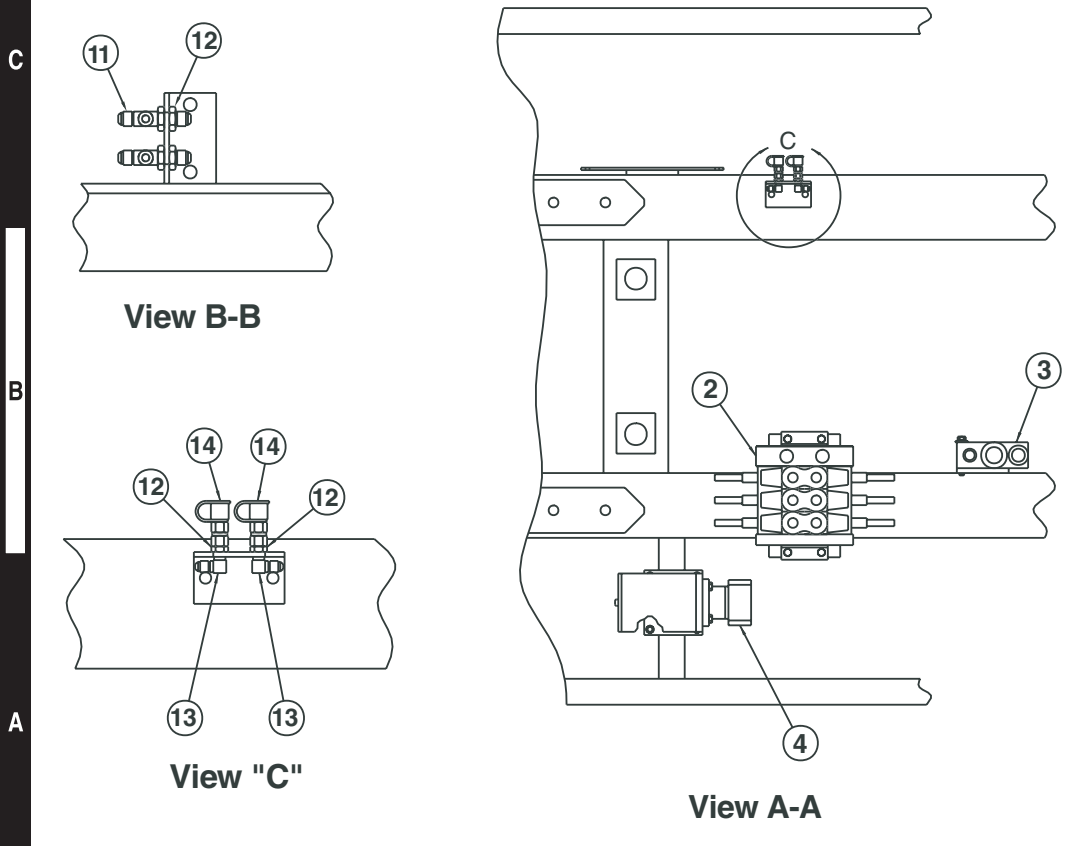
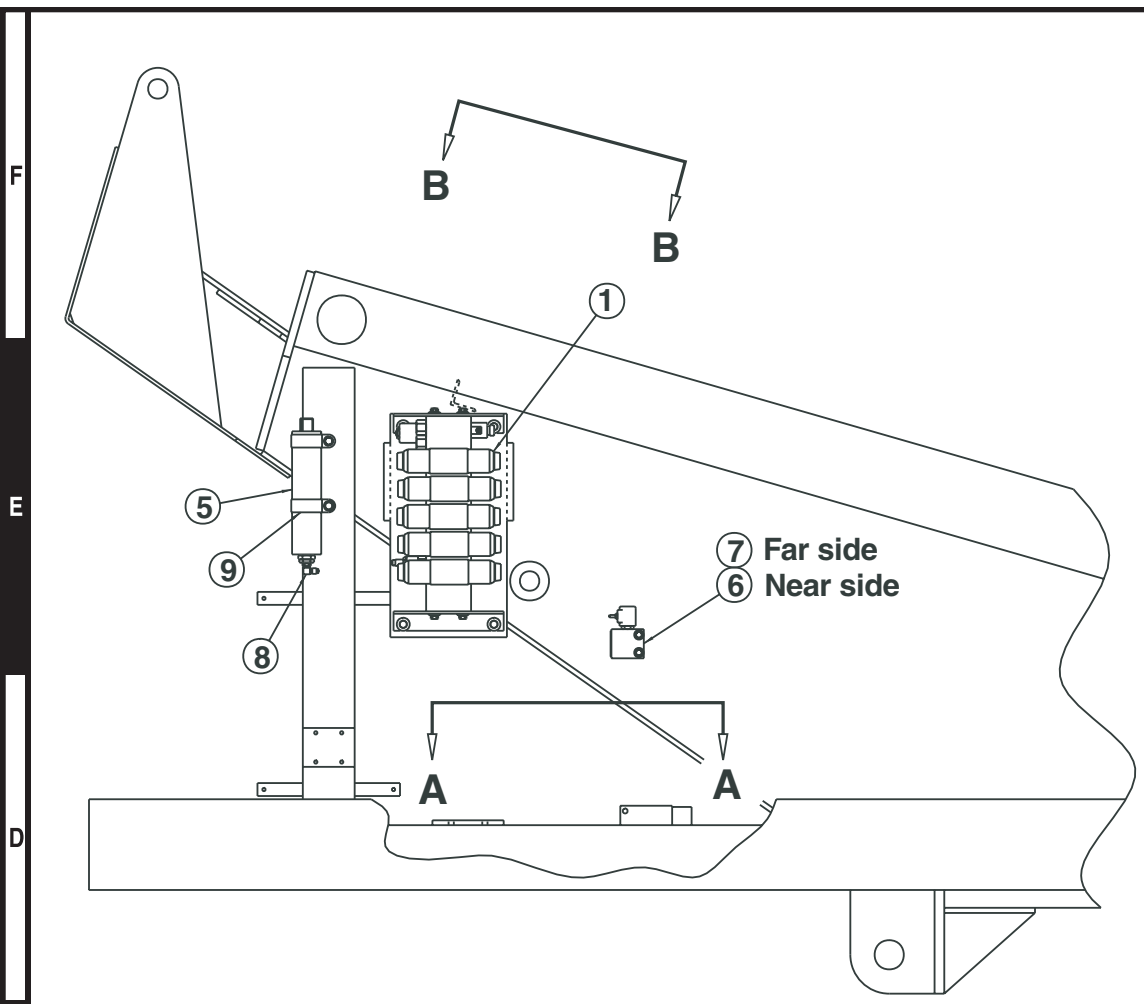
DWG. 0080886

Chassis hydraulic equipment, 4 wheel drive

item	part no	qty	description
1	0081423	1	Drive valve, high torque - (see page 2-22 for parts breakdown)
2	0081042	1	Motion control valve, drive - (see page 2-54 for parts breakdown)
3	0081600	1	Drive sequence valve, right hand - (see page 2-45 for parts breakdown)
4	0081604	1	Drive sequence valve, left hand - (see page 2-46 for parts breakdown)
5	0080958	2	Flow divider/combiner valve - (see page 2-50 for parts breakdown)
6	0081547	2	Spacer, flow divider/combiner valve
7	0080928	1	Selector valve, right hand - (see page 2-61 for parts breakdown)
8	0080929	1	Selector valve, left hand - (see page 2-62 for parts breakdown)
9	5080015	8	Last chance filter
10	5036703	1	Swivel nut run tee
11	5036705	2	Swivel nut run tee
12	5034502	2	Bulkhead 90° elbow
13	5037005	2	Swivel nut 90° elbow
14	5074403	2	Bulkhead locknut
15	5034505	4	Bulkhead straight thread 90° elbow
16	5074406	4	Bulkhead locknut
17	5034206	4	Union 90° elbow - (not used after 6-11-01)
18	0080543	1	3/4 inch hydraulic hose
19	0400483	1	3/4 inch hydraulic hose
20	0080522	1	1/2 inch hydraulic hose
21	0070772	3	1/4 inch hydraulic hose
22	0070783	2	1/4 inch hydraulic hose
23	0070781	1	1/4 inch hydraulic hose
24	0110490	2	3/4 inch hydraulic hose
25	0080524	4	3/4 inch hydraulic hose
26	0070792	1	1/2 inch hydraulic hose
27	0070782	1	1/4 inch hydraulic hose
28	0020655	1	1/4 inch hydraulic hose
29	0080936	2	3/4 inch hydraulic tube
30	0080934	2	3/4 inch hydraulic tube
31	0080937	2	3/4 inch hydraulic tube
32	0080946	2	3/4 inch hydraulic hose - (before 6-11-01)
	0080945	2	3/4 inch hydraulic hose - (after 6-11-01)
33	0080940	1	3/4 inch hydraulic hose
34	0072570	2	1/4 inch hydraulic hose
35	0080945	2	3/4 inch hydraulic hose
36	0080931	2	3/4 inch hydraulic hose
37	0080932	2	3/4 inch hydraulic hose
38	0020283	1	1/4 inch hydraulic hose
39	0080362	1	3/8 inch hydraulic hose
40	0080930	1	3/4 inch hydraulic hose
41	0080941	1	3/4 inch hydraulic hose
42	0080939	1	3/4 inch hydraulic hose
43	0020273	2	3/8 inch hydraulic hose
44	0070766	1	1/4 inch hydraulic hose
45	0070786	2	3/8 inch hydraulic hose
46	0040276	1	1/4 inch hydraulic hose
47	0070764	1	3/8 inch hydraulic hose

Turntable hydraulic equipment

item	part no	qty	description
1	0081874	1	Package valve, non-proportional - (see page 2-9 for parts breakdown)
2	0081873	1	Valve, drive/lift/swing - (see page 2-12 for parts breakdown)
3	0081980	1	Check valve - (see page 2-27 for parts breakdown)
4	0072940	1	Emergency power unit - (see page 2-49 for parts breakdown)
5	0082055	1	Accumulator - (see page 2-24 for parts breakdown)
6	0081982	1	Dump valve - (see page 2-48 for parts breakdown)
7	0081981	1	Range valve - (see page 2-58 for parts breakdown)
8	5037003	1	Swivel nut 90° elbow
9	5093014	2	Hose clamp
10	5058824	2	Clamp
11	5035403	2	Bulkhead run tee
12	5074401	4	Bulkhead locknut
13	5034501	2	Bulkhead straight thread 90° elbow
14	5070005	2	Diagnostic nipple
15	0070927	1	1/2 inch hydraulic hose
16	0020273	4	3/8 inch hydraulic hose
17	0070789	2	3/8 inch hydraulic hose
18	0400497	2	3/4 inch hydraulic hose
19	0100277	1	1/2 inch hydraulic hose
20	0080359	3	1/4 inch hydraulic hose
21	0070765	4	1/4 inch hydraulic hose
22	0080362	2	3/8 inch hydraulic hose
23	0050137	2	1/4 inch hydraulic hose
24	0110199	2	1 inch hydraulic hose
25	0020372	1	1/2 inch hydraulic hose
26	0070926	1	1/2 inch hydraulic hose
27	0020283	2	1/4 inch hydraulic hose
28	0070911	1	1/4 inch hydraulic hose
29	0020280	2	1/4 inch hydraulic hose
30	0080843	1	1-1/2 inch suction hose
31	0081992	1	1 inch hydraulic hose



AW0081872

TITLE Turntable hydraulic equipment

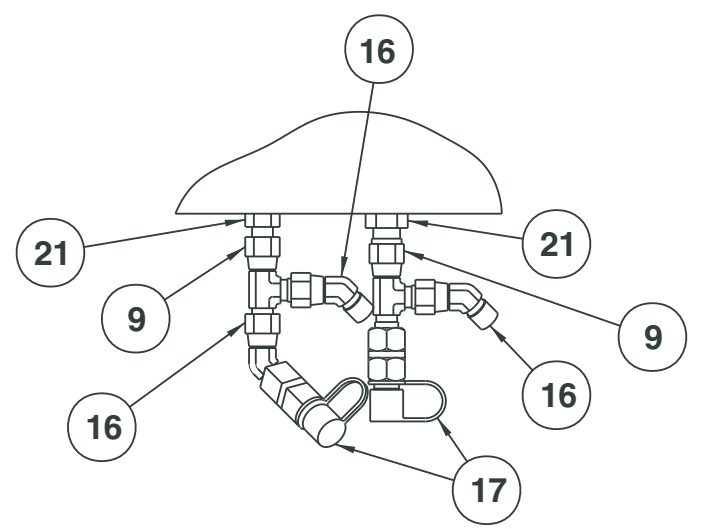
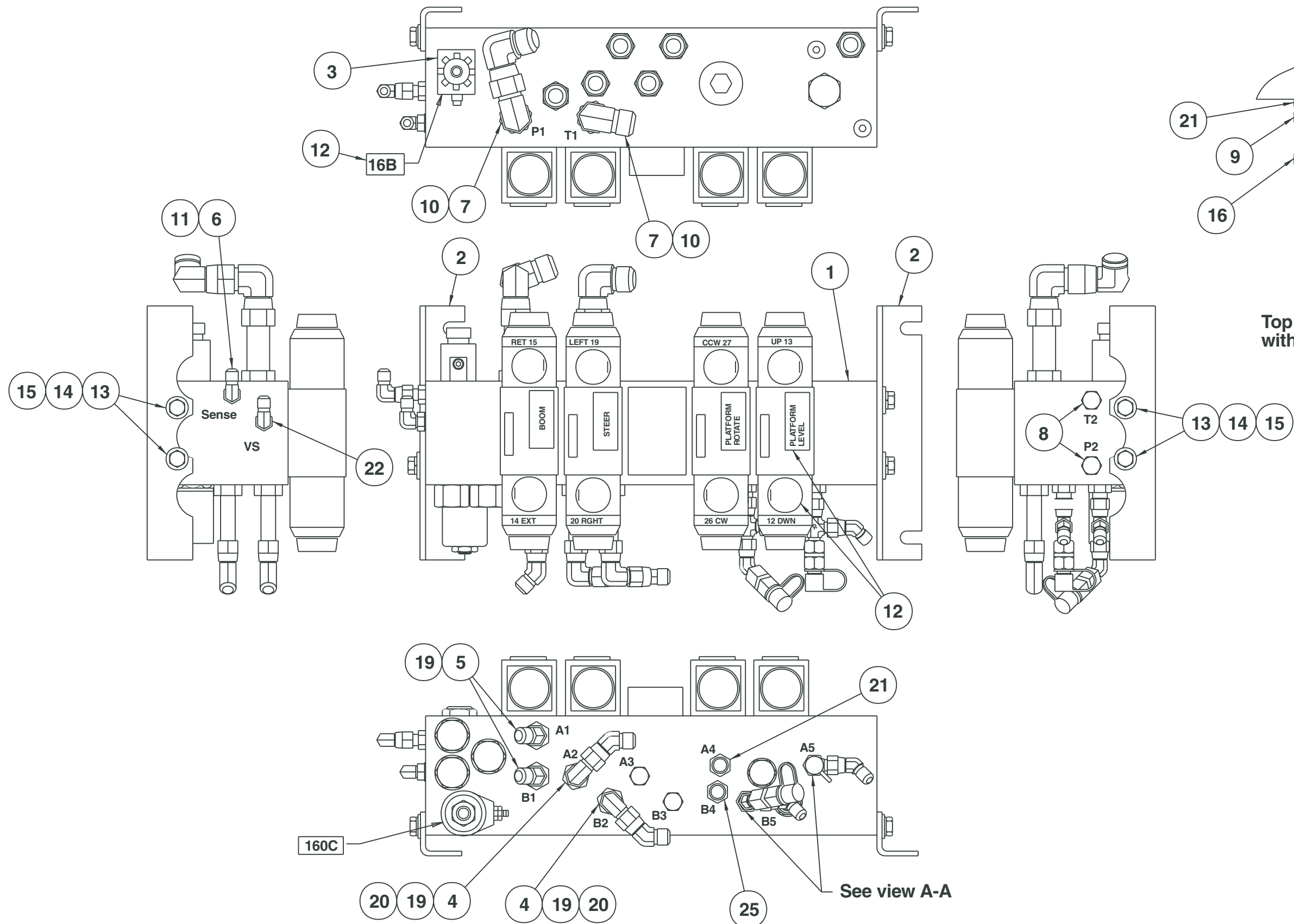


DWG. 0081872

Snorkel model TB 60

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AW0081874

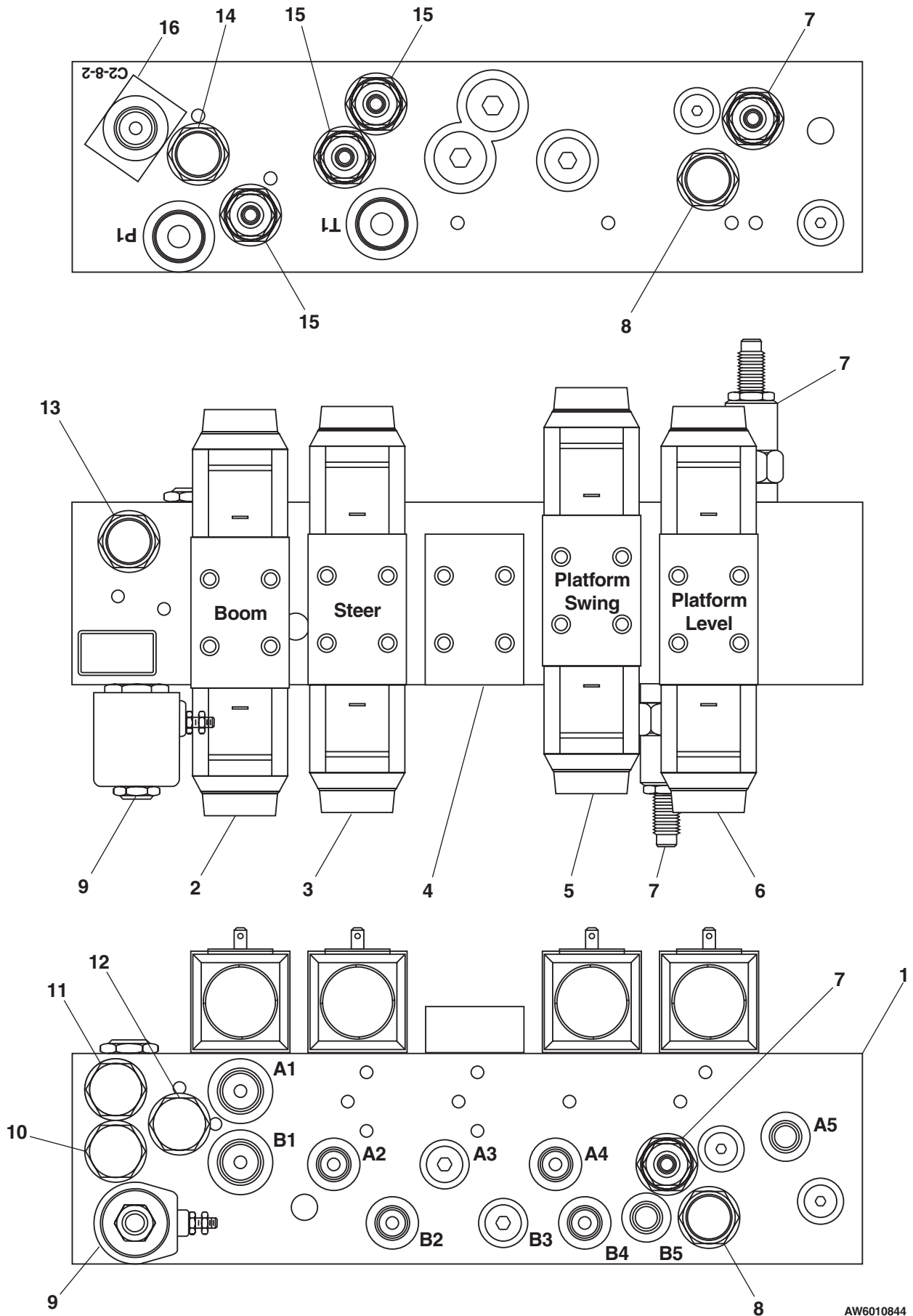
Package valve, non-proportional

item	part no	qty	description
	0081874	1	Package valve, non-proportional
1	6010844	1	Control valve package, non-proportional - (see page 2-10 for parts breakdown)
2	0181449	2	Valve mount angle
3	6010591	1	Solenoid valve and coil
	0180802	1	Seal repair kit
	6010392	1	Replacement cartridge
	3040496	1	Replacement coil, 12 volt DC
4	5065805	2	Long straight thread adapter
5	5065815	2	Long straight thread adapter
6	5065703	1	Straight thread adapter
7	5065807	2	Long straight thread adapter
8	5075205	2	Hex head plug
9	5036703	2	Swivel nut run tee
10	5037007	3	Swivel nut 90° elbow
11	5037003	1	Swivel nut 90° elbow
12	0082010	1	Decal set, non-proportional control valve
13	987109	4	Washer 5/16 medium lock
14	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
15	986269	4	Washer 5/16 medium flat
16	5036903	3	Swivel nut 45° elbow
17	5070005	2	Diagnostic nipple
18	5035303	1	Straight thread 90° elbow
19	5036905	4	Swivel nut 45° elbow
20	5037005	2	Swivel nut 90° elbow
21	5065705	4	Straight thread adapter

Control valve package, non-proportional

item	part no	qty	description
	6010844	1	Control valve package, non-proportional - Vickers
1	6010694	1	Manifold body
2	6010697	1	Extend control valve
	3040551	2	Replacement solenoid, 12 volt DC
3	6010697	1	Steer control valve
	3040551	2	Replacement solenoid, 12 volt DC
4		1	Cover plate - (not sold separately)
5	6010696	1	Platform swing control valve
	3040551	2	Replacement solenoid, 12 volt DC
6	6010696	1	Level control valve
	3040551	2	Replacement solenoid, 12 volt DC
7	6010700	2	Pressure relief cartridge valve
	6010553	1	Seal repair kit
8	6010699	2	Check valve cartridge
9	6010698	1	3-way inlet cartridge valve
	6010537	1	Seal repair kit
	6010707	1	Replacement cartridge
	8220094	1	Replacement solenoid, 12 volt DC
10	6010703	1	Flow regulator cartridge valve
	565666	1	Seal repair kit
11	6010702	1	Flow control cartridge valve
	565666	1	Seal repair kit
12	6010701	1	3-way pilot operated cartridge atmosphere vented
	6010551	1	Seal repair kit
13	6010704	1	Shuttle valve cartridge
	6010537	1	Seal repair kit
14	6010705	1	Check valve cartridge
	565666	1	Seal repair kit
15	6010706	3	Relief valve cartridge
	565666	1	Seal repair kit
16	6010591	1	Solenoid valve and coil
	0180802	1	Seal repair kit
	6010392	1	Replacement cartridge
	3040496	1	Replacement coil, 12 volt DC

Control valve package, non-proportional

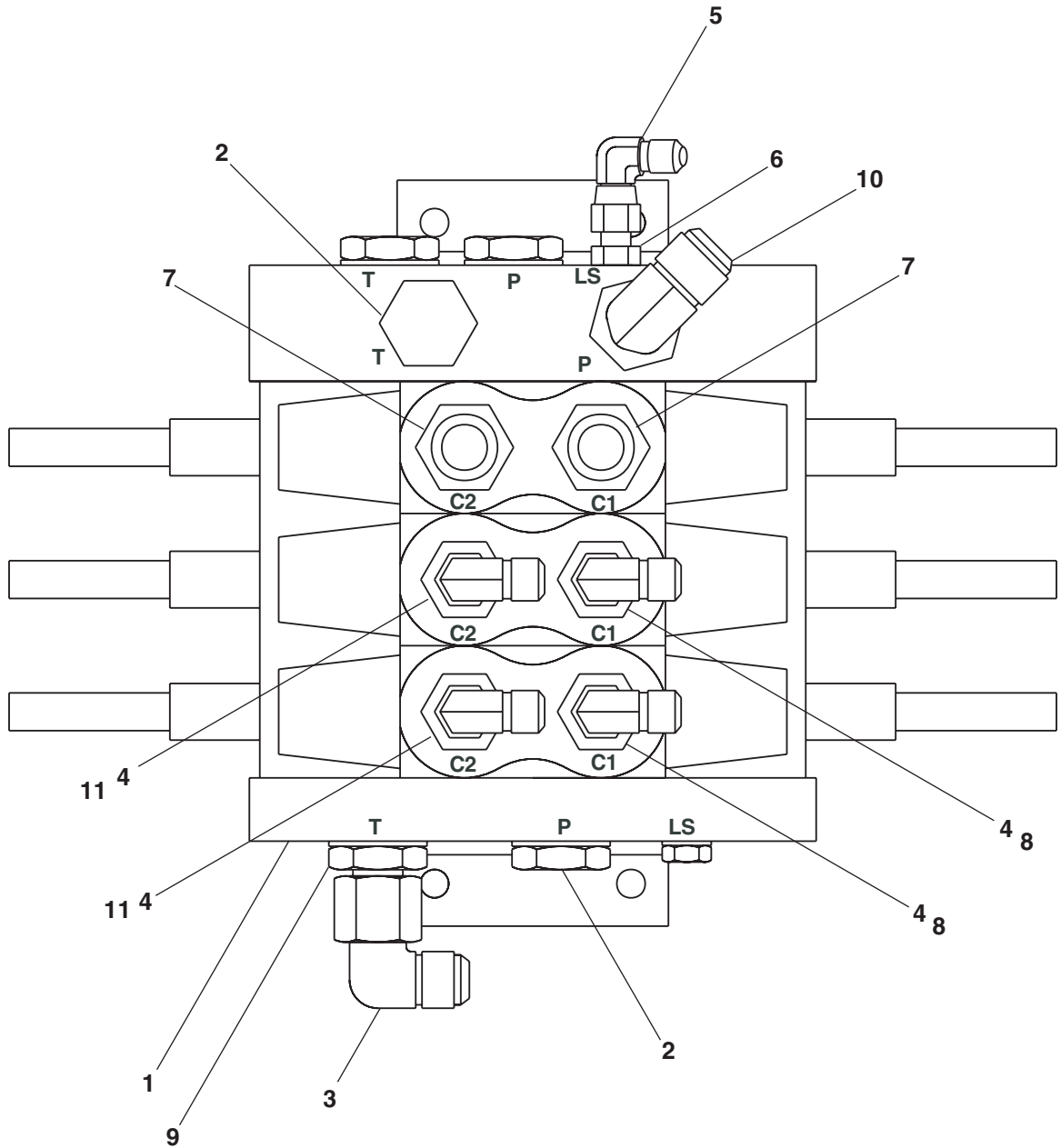


AW6010844

Valve, drive/lift/swing

item	part no	qty	description
	0081873	1	Valve, drive/lift/swing
1	6010823	1	Control valve, drive/lift/swing - (see page 2-14 for parts breakdown)
2	5075208	2	Hex head plug
3	5037010	1	Swivel nut 90° elbow
4	5037005	4	Swivel nut 90° elbow
5	5037003	1	Swivel nut 90° elbow
6	5065703	1	Straight thread adapter
7	5065731	2	Straight thread adapter
8	5065708	2	Straight thread adapter
9	5065719	1	Straight thread adapter
10	5035311	1	Straight thread 90° elbow
11	5065815	2	Long straight thread adapter

Valve, drive/lift/swing

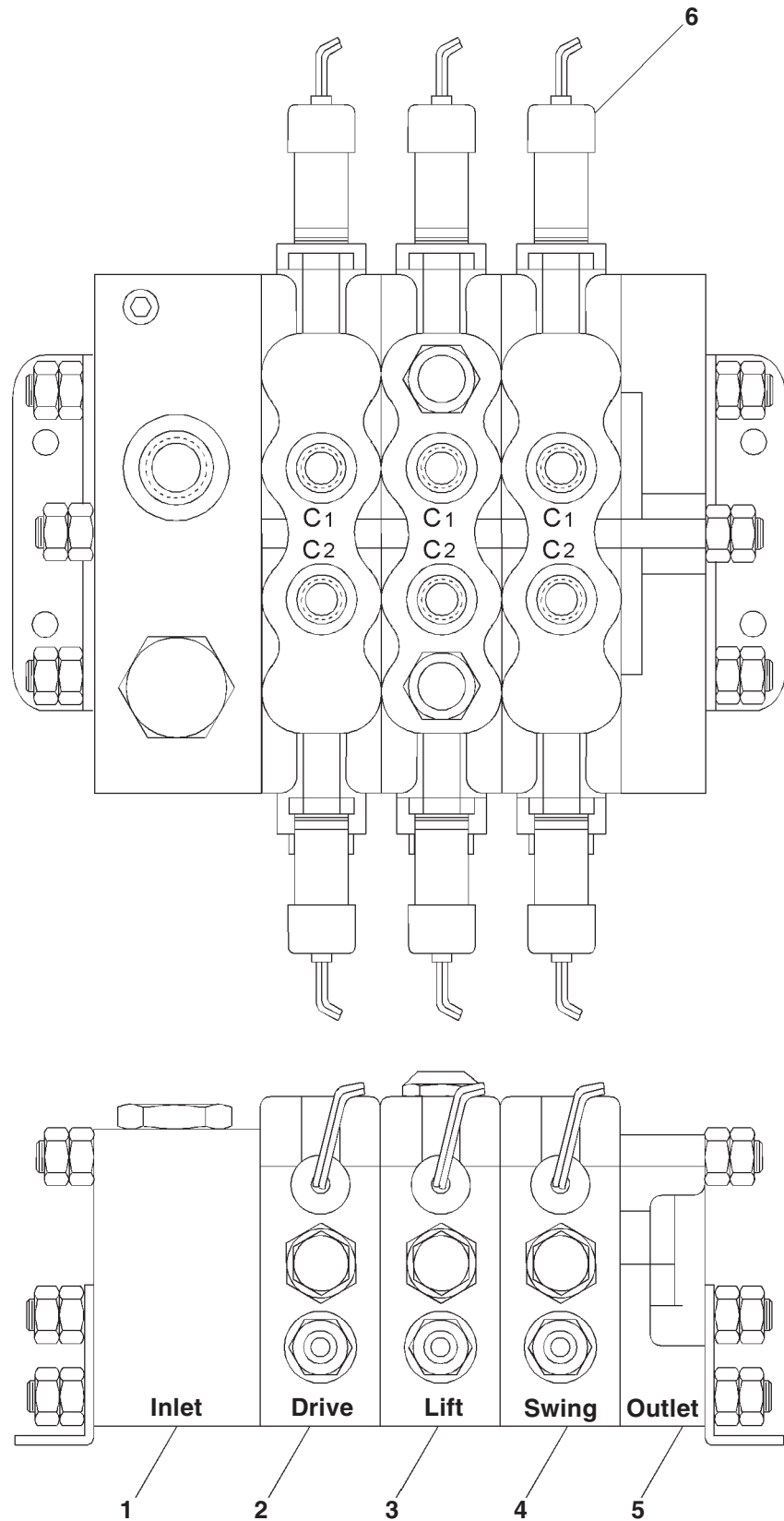


AW0081873

Control valve, drive/lift /swing

item	part no	qty	description
1	6010823	1	Control valve, drive/lift/swing - Apitech
	0082072	1	Seal repair kit, valve section - (total of four (4) kits required to reseal complete valve)
2	6010849	1	Inlet section
	8010272	2	Set screw
	8010273	2	Sealing nut with washer
	6010850	1	Drive control section
3	8010272	2	Set screw
	8010273	2	Sealing nut with washer
	6010851	1	Boom lift control valve section
4	8010272	2	Set screw
	8010273	2	Sealing nut with washer
	6010852	1	Swing control valve section
5	8010272	2	Set screw
	8010273	2	Sealing nut with washer
	6010853	1	Outlet section
6	8010272	2	Set screw
	8010273	2	Sealing nut with washer
	6010653	6	Solenoid cartridge, 12 volt DC - (black = 33 Hz Frequency) (includes solenoid, cartridge, o-ring and orifice disc - must be installed as a complete unit)

Control valve, drive/lift /swing

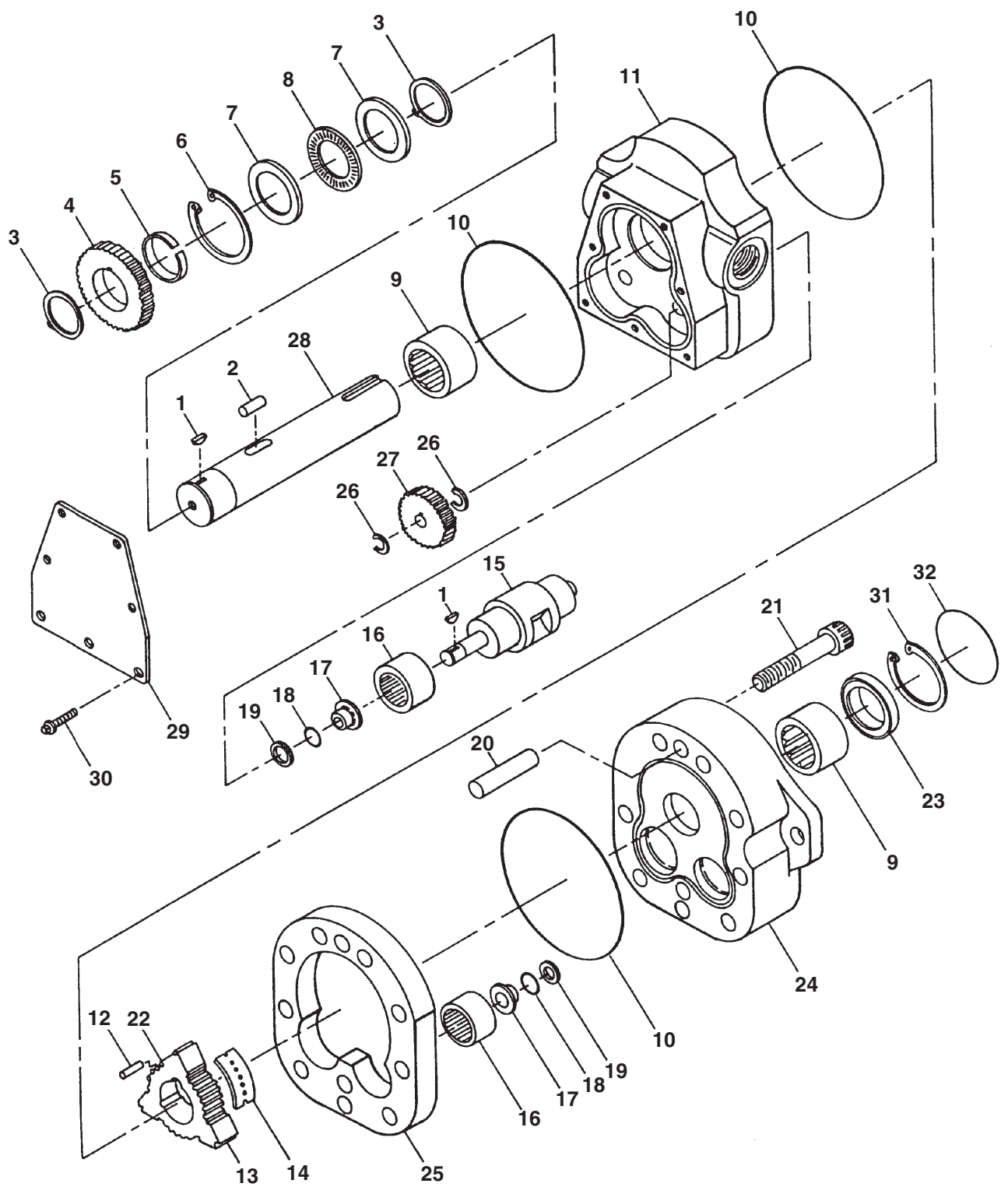


AW6010823

Drive motor

item	part no	qty	description
	6030018	1	Drive motor
	0071092	1	Seal repair kit - (kit includes items 10, 18, 19, 23 and 31)
1	8220126	3	Woodruff key
2	8220127	1	Drive pin
3	8220005	2	Retaining ring
4	8220128	1	Gear drive
5	8220129	1	Spacer washer
6	8220130	1	Retaining ring
7	8220006	2	Thrust bearing race
8	8220007	1	Thrust bearing
9	8220027	2	Needle bearing
10	8220131	3	Oil seal
11	8220132	1	Rear end cap
12	8220133	3	Tip seal roller
13	8220134	1	Rotor
14	8220020	3	Seal plate
15	8220135	2	Abutment valve
16	8220028	4	Needle bearing
17	28220030	4	Step bearing
18	8220136	4	O-ring
19	8220137	4	Back-Up ring
20	8220138	4	Dowel pin
21	8220139	9	Capscrew
22	8220140	18	Body seal roller
23	8220146	1	Shaft seal
24	8220031	1	Front end cap
25	8220141	1	Displacement housing
26	8220142	4	Retaining ring
27	8220143	2	Gear pinion (std)
28	8220156	1	S-shaft
29	8220147	1	Gear cover
30	8220148	7	Capscrew
31	8220144	1	Retaining ring
32	8220145	1	O-ring
33	8220117	1	Front sealing cap

Drive motor

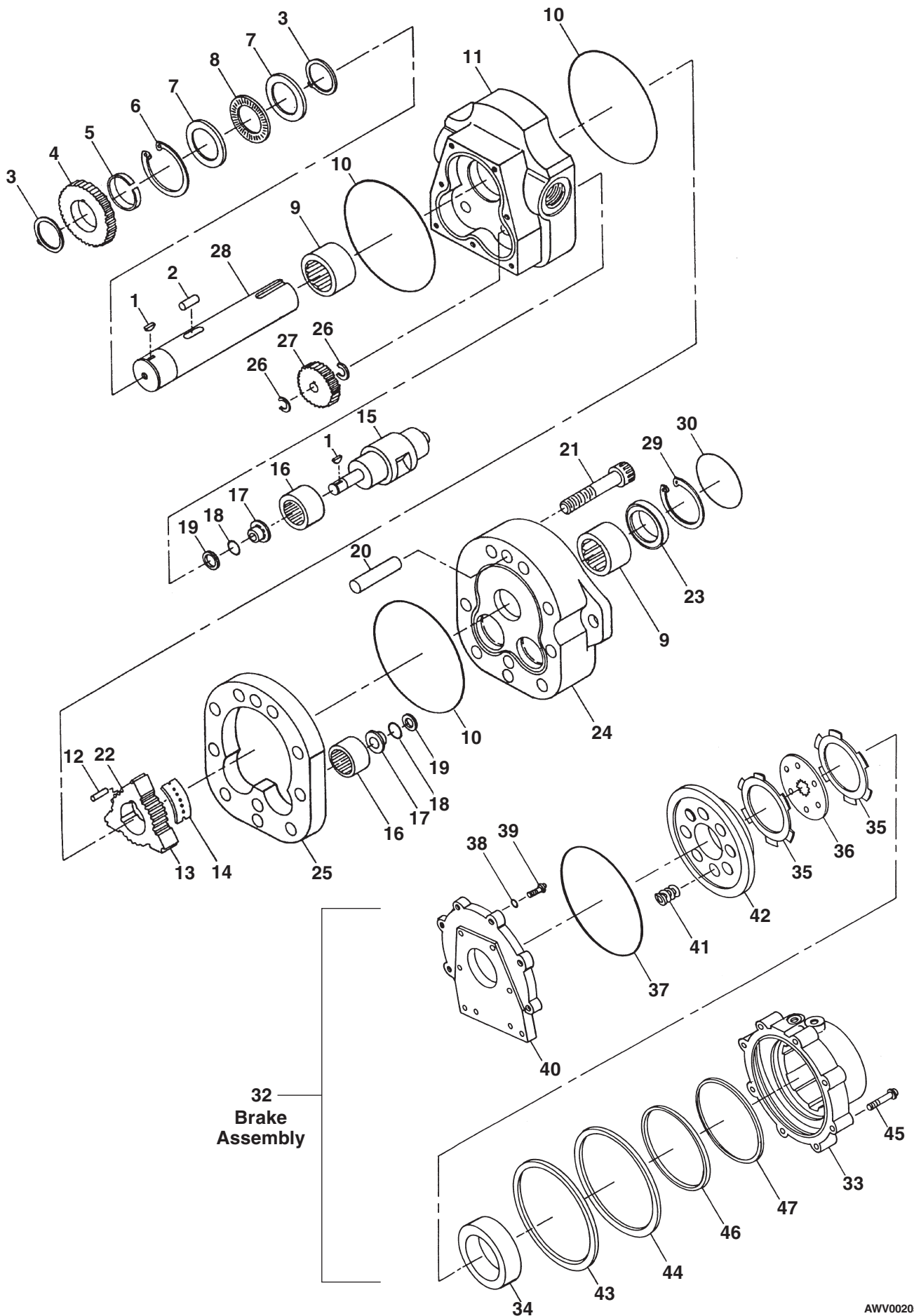


AWV00204

Drive motor with brake

item	part no	qty	description
	6030040-79	1	Drive motor with brake
	0071092	1	Seal repair kit, drive motor - (kit includes items 10, 18, 19, 23 and 31)
	8220149	1	Seal repair kit, drive motor brake - (kit includes items 39, 40, 43, 44, 46 and 47)
1	8220126	3	Woodruff key
2	8220127	1	Drive pin
3	8220005	2	Retaining ring
4	8220128	1	Gear drive
5	8220129	1	Spacer washer
6	8220130	1	Retaining ring
7	8220006	2	Thrust bearing race
8	8220007	1	Thrust bearing
9	8220027	2	Needle bearing
10	Kit item	3	Oil seal - (not sold separately)
11	8220132	1	Rear end cap
12	8220133	3	Tip seal roller
13	8220134	1	Rotor
14	8220020	3	Seal plate
15	8220135	2	Abutment valve
16	8220028	4	Needle bearing
17	28220030	4	Step bearing
18	Kit item	4	O-ring - (not sold separately)
19	Kit item	4	Back-Up ring - (not sold separately)
20	8220138	4	Dowel pin
21	8220139	9	Capscrew
22	8220140	18	Body seal roller
23	Kit item	1	Shaft seal - (not sold separately)
24	8220031	1	Front end cap
25	8220141	1	Displacement housing
26	8220142	4	Retaining ring
27	8220143	2	Gear pinion (std)
28	8220017	1	S-shaft for brake
29	8220144	1	Retaining ring
30	8220145	1	O-ring
31	Kit item	1	Front sealing cap - (not sold separately)
32	8220155	1	Drive motor brake, 4 cubic inch - (complete brake, includes items 33 through 47)
	8220038	1	Brake replacement kit - (includes items 33, 40 and 45)
33	Kit item	1	Housing - (not sold separately)
34	8220150	1	Spacer ring
35	8220014	5	Friction disc
36	8220015	4	Driver plate
37	8220010	1	O-ring
38	8220011	7	Brass washer
39	Kit item	7	Capscrew - (not sold separately)
40	Kit item	1	Adapter plate - (not sold separately)
41	8220025	8	Die spring
42	8220153	1	Pressure plate
43	Kit item	1	Back-up ring - (not sold separately)
44	Kit item	1	O-ring - (not sold separately)
45	8220154	8	Capscrew
46	Kit item	1	O-ring - (not sold separately)
47	Kit item	2	Back-up ring - (not sold separately)

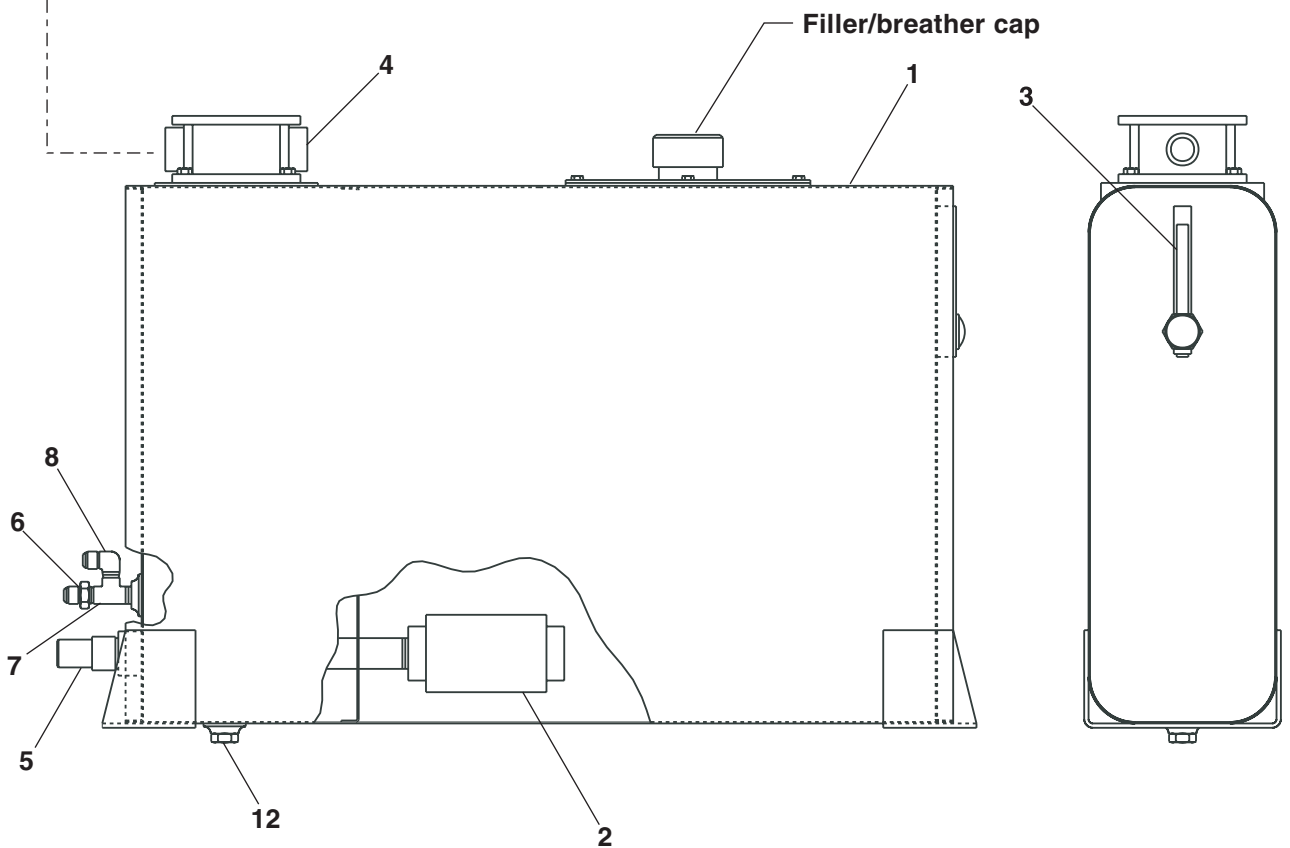
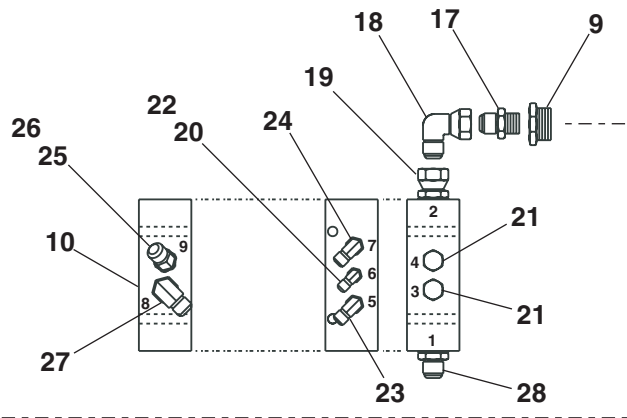
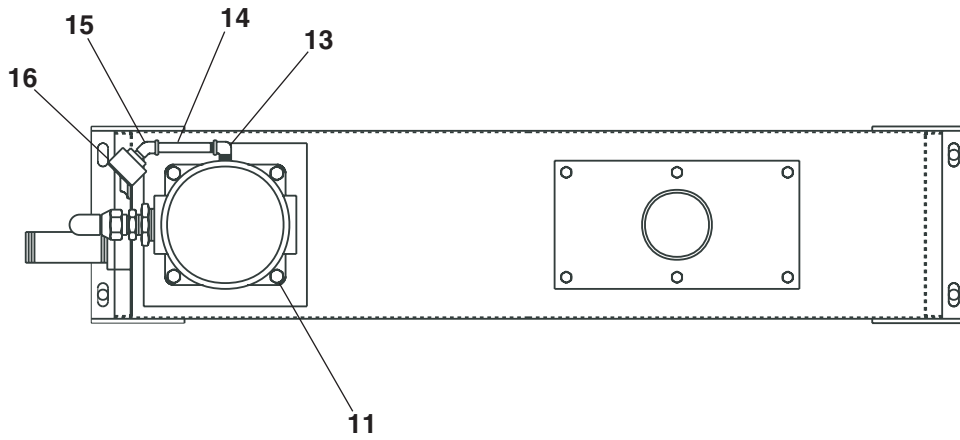
Drive motor with brake



Hydraulic oil reservoir

item	part no	qty	description
	0181875	1	Hydraulic oil reservoir
1	0081562	1	Hydraulic oil reservoir, 26 gallon capacity
	5090008	1	Replacement filler/breather cap
2	5080004	1	Filter, sump strainer
3	5090007	1	Liquid level gauge with thermometer
4	5080003	1	Hydraulic oil filter, in-tank - (includes filter gauge, item 16)
	5080009	1	Replacement filter element
	5080067	1	Hydraulic oil return filter, remote spin-on - (used with plastic cowling)
	5080068	1	Replacement filter element
5	0080425	1	Outlet adapter
6	5033614	1	Male adapter
7	7734204	1	Street tee, 1/2 inch NPT
8	5033713	1	Male 90° elbow
9	7721208	1	Reducer bushing, 1-1/2 inch NPT to 1 inch NPT
10	0110156	1	Pressure manifold
11	5560643	4	Capscrew 3/8-16 x 3-1/4 inch long hex head grade 5
12	7714204	1	Plug, 1/2 inch NPT square head
13	7734701	1	Street 90° elbow, 1/8 inch NPT
14	7740120	1	Nipple, 1/8 inch NPT x 2-1/2 inch long
15	7734401	1	Pipe 45° elbow, 1/8 inch NPT
16	5080011	1	Filter gauge - (included with filter, item 4)
17	5033621	1	Male adapter
18	5037010	1	Swivel nut 90° elbow
19	5025202	1	Straight thread adapter, 37° swivel
20	5037003	1	Swivel nut 90° elbow
21	5075205	2	Hex head plug
22	5065705	1	Straight thread adapter
23	5035305	1	Straight thread 90° elbow
24	5035318	1	Straight thread 90° elbow
25	5065709	1	Straight thread adapter
26	5036906	1	Swivel nut 45° elbow
27	5035322	1	Straight thread 90° elbow
28	5065718	1	Straight thread adapter

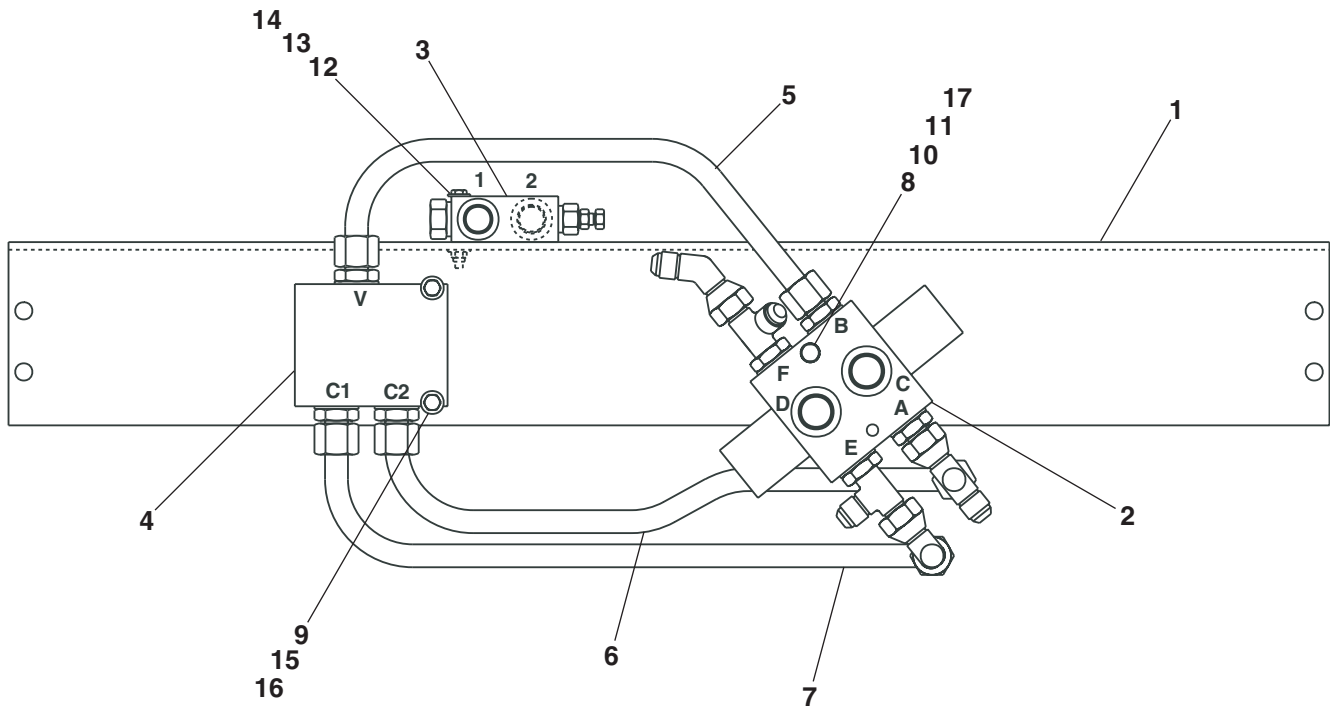
Hydraulic oil reservoir



AW0081875

Drive valve, high torque

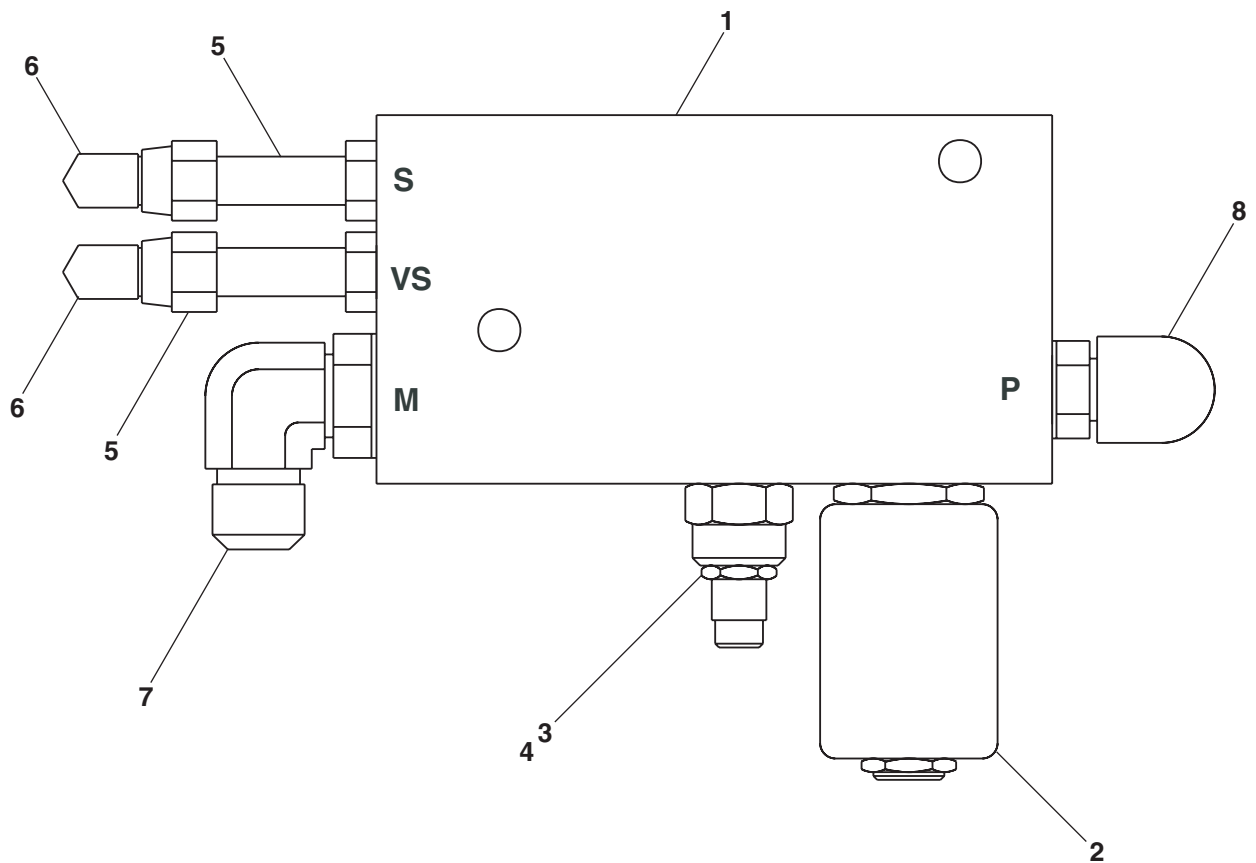
item	part no	qty	description
	0081423	1	Drive valve, high torque
1	0080514	1	Bracket, drive valve
2	0081425	1	Selector valve, 2 wheel drive - (see page 2-59 for parts breakdown)
	0081598	1	Selector valve, 4 wheel drive - (see page 2-60 for parts breakdown)
3	0081181	1	Anti-cavitation valve - (see page 2-25 for parts breakdown)
4	0081424	1	Flow divider valve - (see page 2-51 for parts breakdown)
5	0080513	1	3/4 inch hydraulic tube
6	0080512	1	3/4 inch hydraulic tube
7	0080511	1	3/4 inch hydraulic tube
8	970549	1	Capscrew 3/8-16 x 3 inch long hex head grade 5
9	5560031	2	Nut 5/16-18 self locking
10	5560033	1	Nut 3/8-16 self locking
11	986299	1	Washer 3/8 medium flat
12	969999	2	Capscrew 1/4-20 x 2-1/4 inch long hex head grade 5
13	5560004	2	Nut 1/4-20 self locking
14	986019	4	Washer 1/4 medium flat
15	970349	2	Capscrew 5/16-18 x 2-3/4 inch long hex head grade 5
16	986269	4	Washer 5/16 medium flat
17	987119	2	Washer 3/8 medium lock



AW0081423

AC generator valve

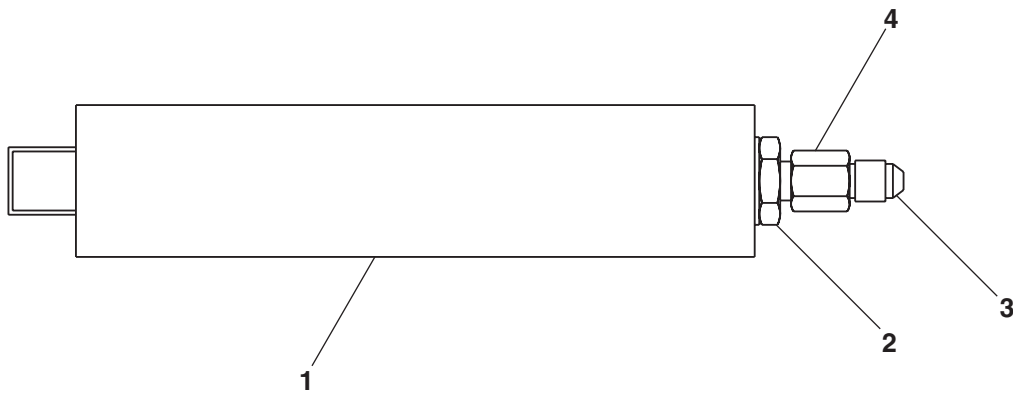
item	part no	qty	description
	0152831	1	AC generator valve
1	6010489	1	AC generator valve - (includes items 2, 3 and 4 — valve is not preset)
2	6010508	1	Cartridge valve with coil
	6010509	1	Replacement cartridge valve
	3040457	1	Replacement coil, 12 volt DC
3	6018901	1	Flow control valve cartridge
4	6010510	1	Shuttle valve cartridge
5	5065803	2	Long straight thread adapter
6	5037003	2	Swivel nut 90° elbow
7	5035306	1	Straight thread 90° elbow
8	5035320	1	Straight thread 90° elbow



AW0152831

Accumulator

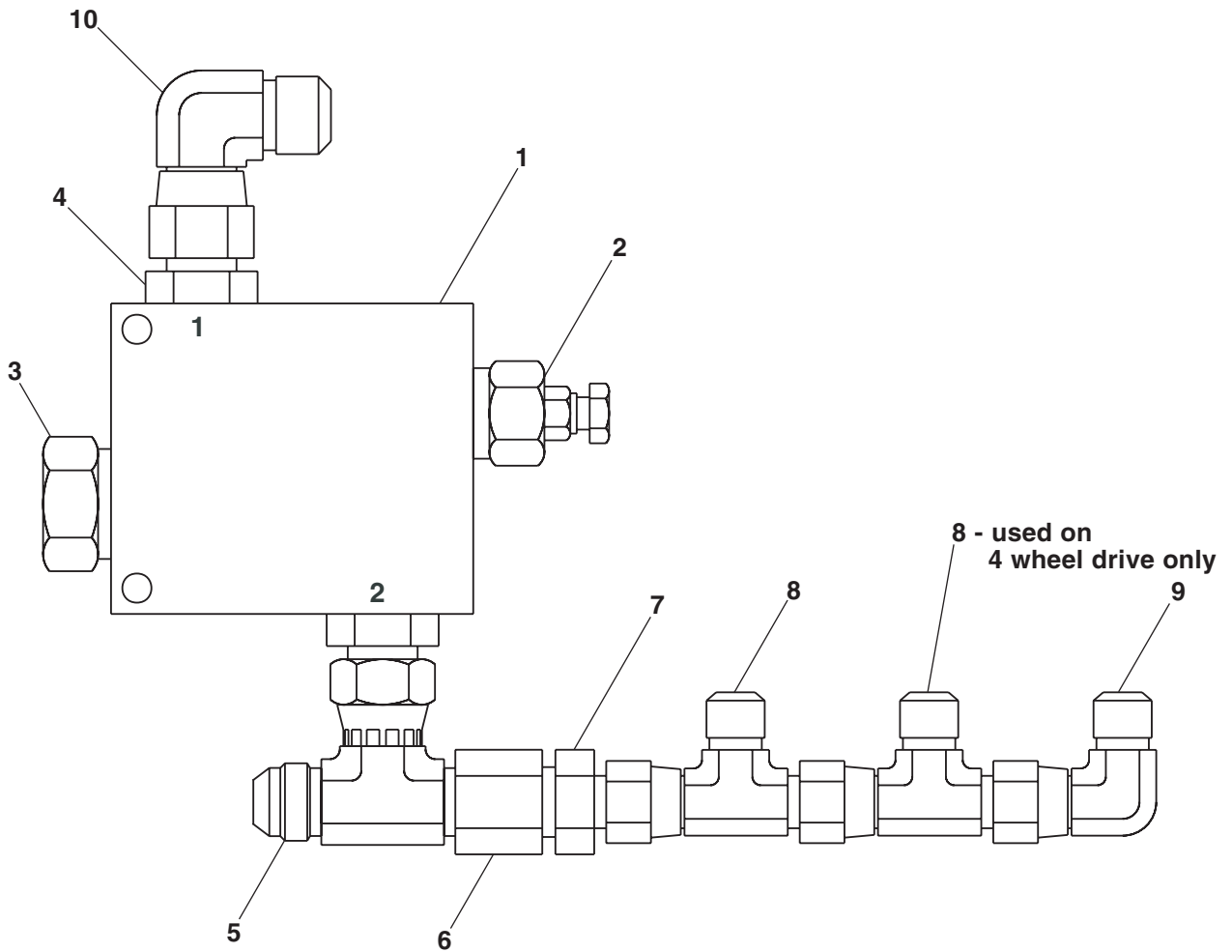
item	part no	qty	description
	0082055	1	Accumulator - (shipped charged)
1	6070005	1	Accumulator - (shipped uncharged, charge to 300 psi with dry nitrogen before use)
2	5065711	1	Straight thread adapter
3	5064002	1	Tube end reducer
4	6063905	1	Fitting nut



AW0082055

Anti-cavitation valve

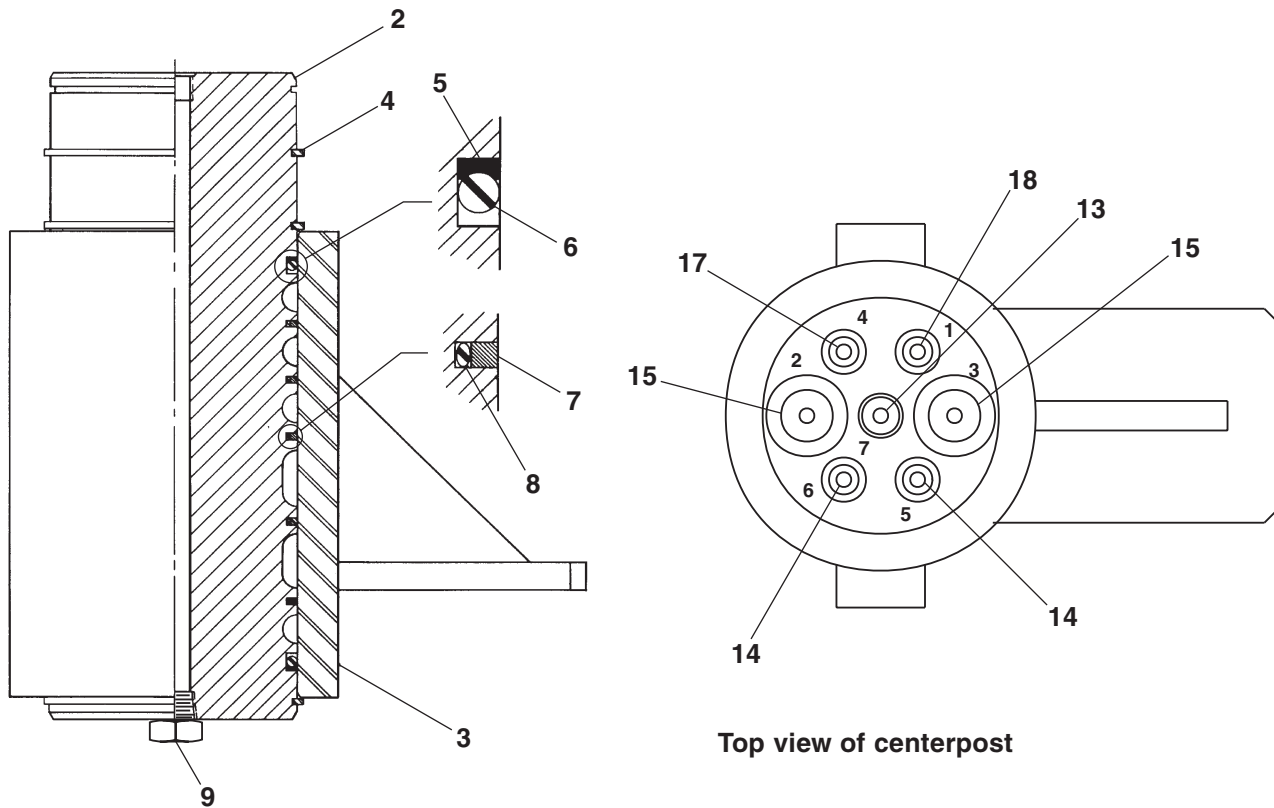
item	part no	qty	description
	0081181	1	Anti-cavitation valve
1	6010229	1	Anti-cavitation valve - (includes items 2 and 3)
	0110683	1	Seal repair kit
2	8230099	1	Relief valve cartridge - (factory preset, do not reset)
3	6010563	1	Check valve cartridge
4	5065710	2	Straight thread adapter
5	5036806	1	Swivel nut branch tee
6	5063906	1	Fitting nut
7	5064003	1	Tube end reducer
8	5036705	2	Swivel nut run tee
9	5037005	1	Swivel nut 90° elbow
10	5037006	1	Swivel nut 90° elbow



AW0081181

Centerpost and fittings

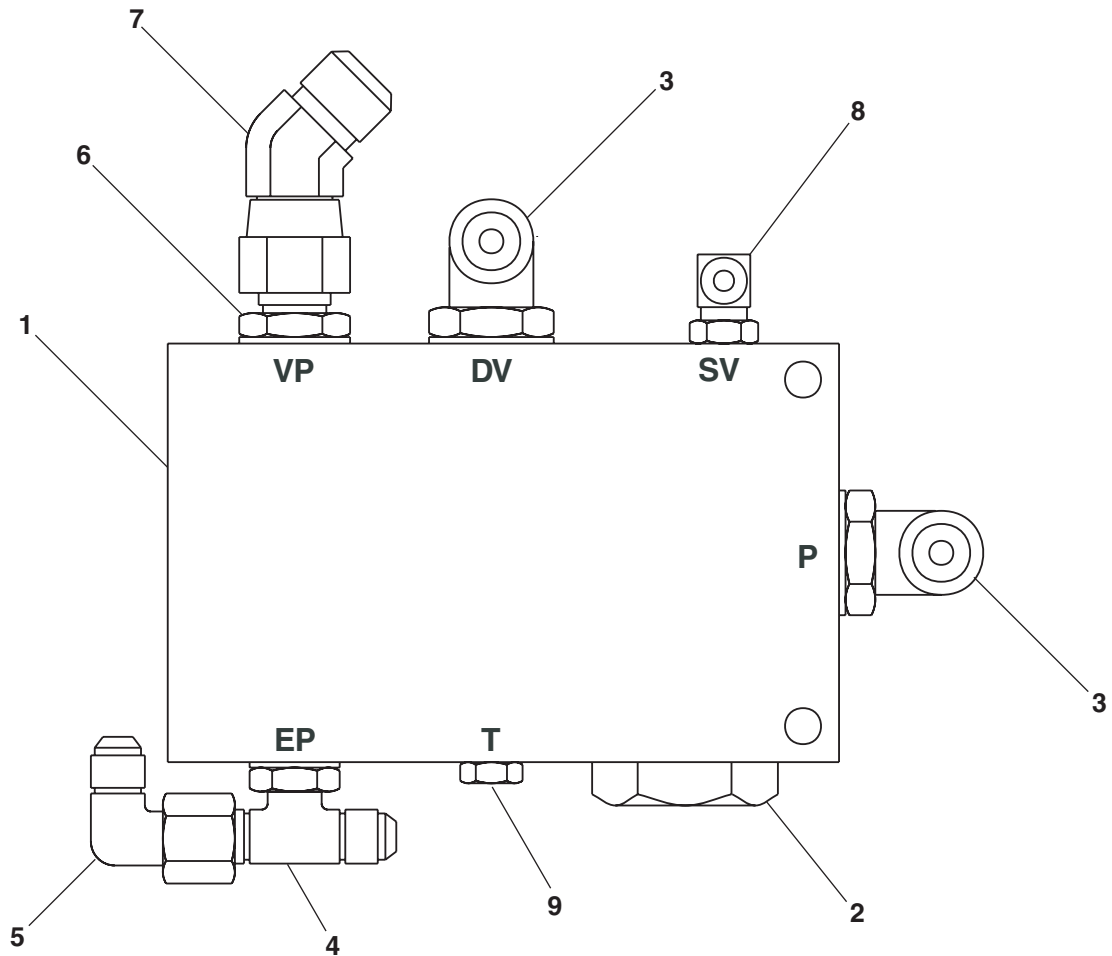
item	part no	qty	description
1	0110465	1	Centerpost - (includes items 2 through 8)
	0070991	1	Seal repair kit - (kit includes items 5, 6, 7 and 8)
2	0110466	1	Centerpost
3	0110467	1	Centerpost manifold
4	5590003	3	Retaining ring
5	Kit item	2	Parbak seal - (not sold separately)
6	Kit item	2	O-ring - (not sold separately)
7	Kit item	5	Seal ring - (not sold separately)
8	Kit item	5	O-ring - (not sold separately)
9	7714203	1	Hex head plug
			Centerpost and manifold port fittings - (fittings not shown, ports marked on parts)
10	5035308	2	Straight thread 90° elbow - (manifold ports no 2 and no 3)
11	5035316	1	Straight thread 90° elbow - (manifold port no 1)
12	5035318	1	Straight thread 90° elbow - (manifold port no 4)
13	5075205	3	Hex head plug - (centerpost port no 7, manifold ports no 8 and no 9)
14	5065707	2	Straight thread adapter - (centerpost ports no 5 and no 6)
15	5065714	2	Straight thread adapter - (centerpost ports no 2 and no 3)
16	5035305	2	Straight thread 90° elbow - (manifold ports no 5 and no 6)
17	5065705	1	Straight thread adapter - (centerpost port no 4)
18	5065728	1	Straight thread adapter - (centerpost port no 1)



AWM00208

Check valve

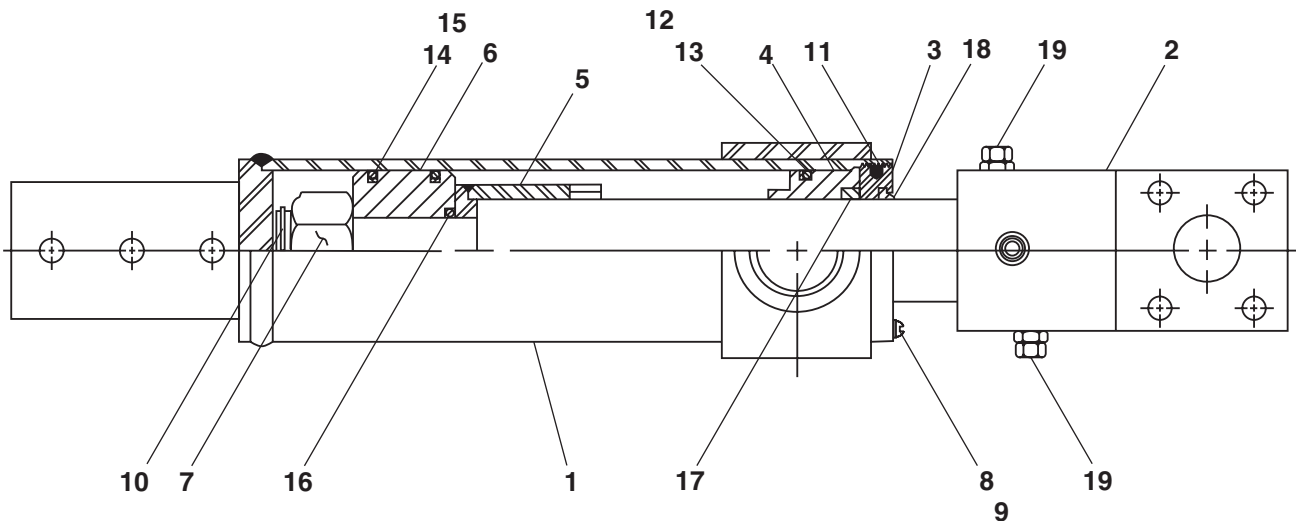
item	part no	qty	description
	0081980	1	Check valve
1	6010579	1	Check valve - (includes cartridge, item 2)
2	6010565	1	Check valve cartridge
	6010605	1	Seal repair kit
3	5035310	2	Straight thread 90° elbow
4	5036505	1	Straight thread branch tee
5	5037005	1	Swivel nut 90° elbow
6	5065729	1	Straight thread adapter
7	5036907	1	Swivel nut 45° elbow
8	5035318	1	Straight thread 90° elbow
9	5075203	1	Hex head plug



AW0081980

Cylinder, extension - GBI

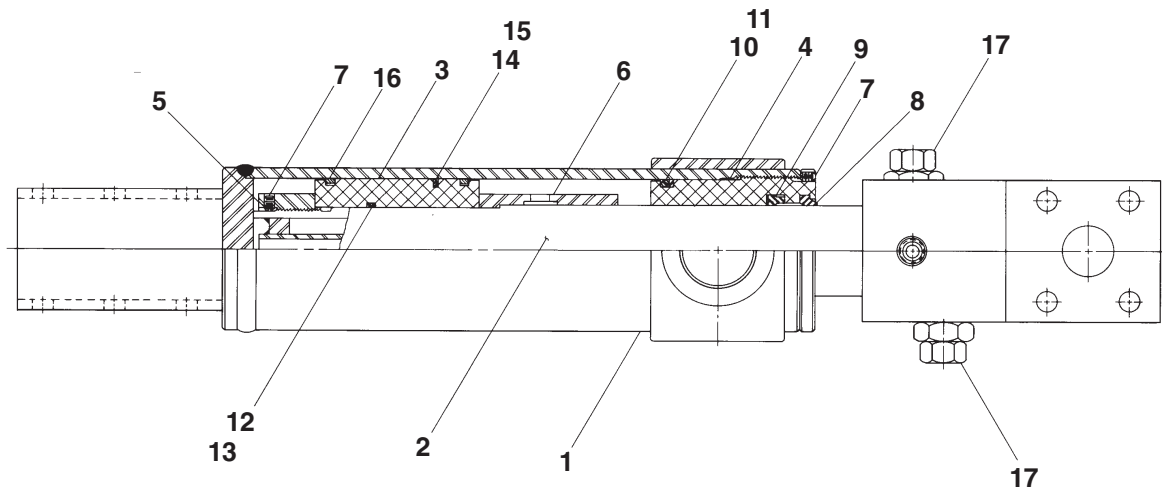
item	part no	qty	description
	0080975	1	Cylinder, extension - GBI
	0080473	1	Seal repair kit - (kit includes items 10 through 18)
1		1	Tube - (not sold separately)
2	8070296	1	Rod
3	8070297	1	Retainer
4	8070298	1	bearing
5	8070299	1	Spacer
6	8070131	1	Piston
7	8070018	1	Nut
8	8070300	1	Lock washer
9	8070301	1	Capscrew
10	Kit item	1	Snap ring - (not sold separately)
11	Kit item	1	Nylon plug - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	1	Back-up - (not sold separately)
14	Kit item	2	O-ring - (not sold separately)
15	Kit item	2	Teflon ring - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	1	U-ring - (not sold separately)
18	Kit item	1	Wiper - (not sold separately)
19	6010116	2	Cartridge holding valve - (factory preset, do not reset)
	0071918	1	Seal repair kit



AW0080975

Cylinder, extension - Seabee

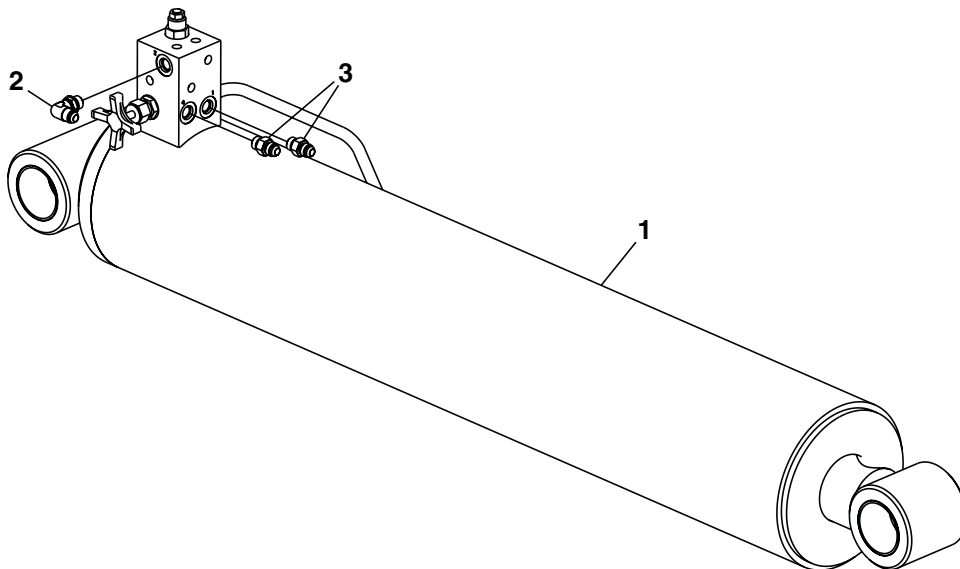
item	part no	qty	description
	0080975	1	Cylinder, extension - Seabee
	0073286	1	Seal repair kit - (kit includes items 8 through 15)
1		1	Case - (not sold separately)
2	8190126	1	Rod
3	8190103	1	Piston
4	8190098	1	Head gland
5	8190127	1	Piston ring nut
6	8190128	1	Spacer
7	8190129	3	Set screw
8	Kit item	1	Wiper - (not sold separately)
9	Kit item	1	U-cup - (not sold separately)
10	Kit item	1	O-ring - (not sold separately)
11	Kit item	1	Back-up - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	2	Back-up - (not sold separately)
14	Kit item	1	Piston seal - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	6090037	1	Cast iron piston ring
17	6010116	2	Cartridge holding valve - (factory preset, do not reset)
	0071918	1	Seal repair kit



AWV00216

Lift cylinder

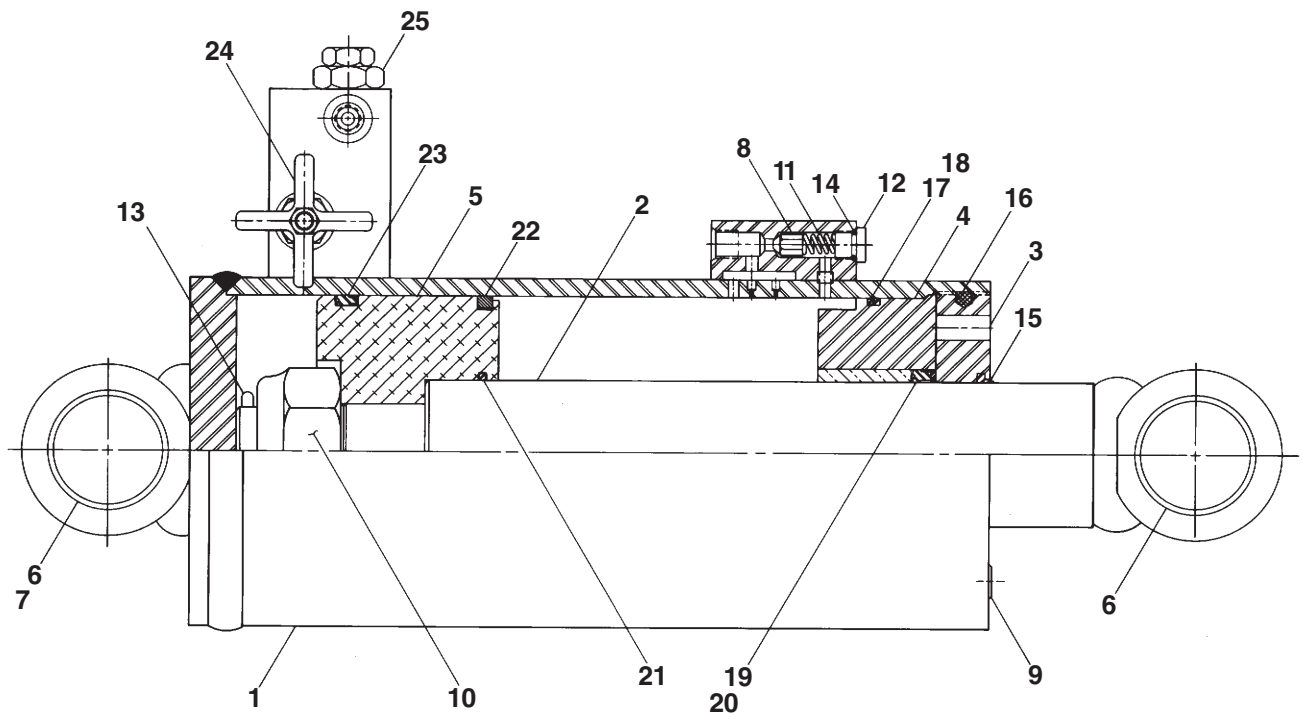
item	part no	qty	description
1	0080053	1	Lift cylinder
	0080061	1	Cylinder, lift - (see page 2-31 for GBI cylinder)
	0083473-99	1	Cylinder, lift - (see page 2-32 for Rosenboom cylinder)
2	5035305	1	Straight thread 90° elbow
3	5065707	2	Straight thread adapter



AW0080053

Cylinder, lift - GBI

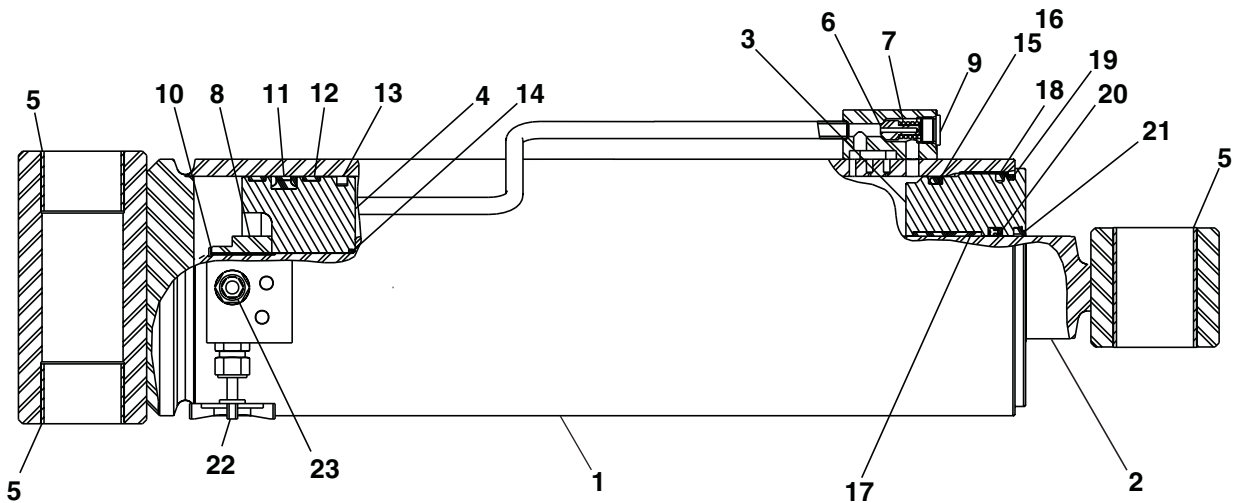
item	part no	qty	description
	0080061	1	Cylinder, lift - GBI
	0080615	1	Seal repair kit - (kit includes items 13 through 23)
1		1	Tube - (not sold separately)
2	8070247	1	Rod
3	8070295	1	Retainer
4	8070220	1	Bearing
5	8070217	1	Piston
6	2503628	4	Bearing
7	8070030	1	Bearing spacer
8	8070012	1	Poppet
9	8070014	1	Pipe plug
10	8070218	1	Nut
11	8070017	1	Spring
12	8070015	1	Port plug
13	Kit item	1	Cotter pin - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	Wiper - (not sold separately)
16	Kit item	1	Nylon plug - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	Back-up - (not sold separately)
19	Kit item	1	U-ring - (not sold separately)
20	Kit item	1	Back-up - (not sold separately)
21	Kit item	1	O-ring - (not sold separately)
22	Kit item	1	Cast iron piston ring - (not sold separately)
23	Kit item	1	Quad seal - (not sold separately)
24	6010115	1	Cartridge needle valve
	0071845	1	Seal repair kit
25	6010116	1	Cartridge holding valve - (factory preset, do not reset)
	0071918	1	Seal repair kit



AWV00217

Cylinder, lift - Rosenboom

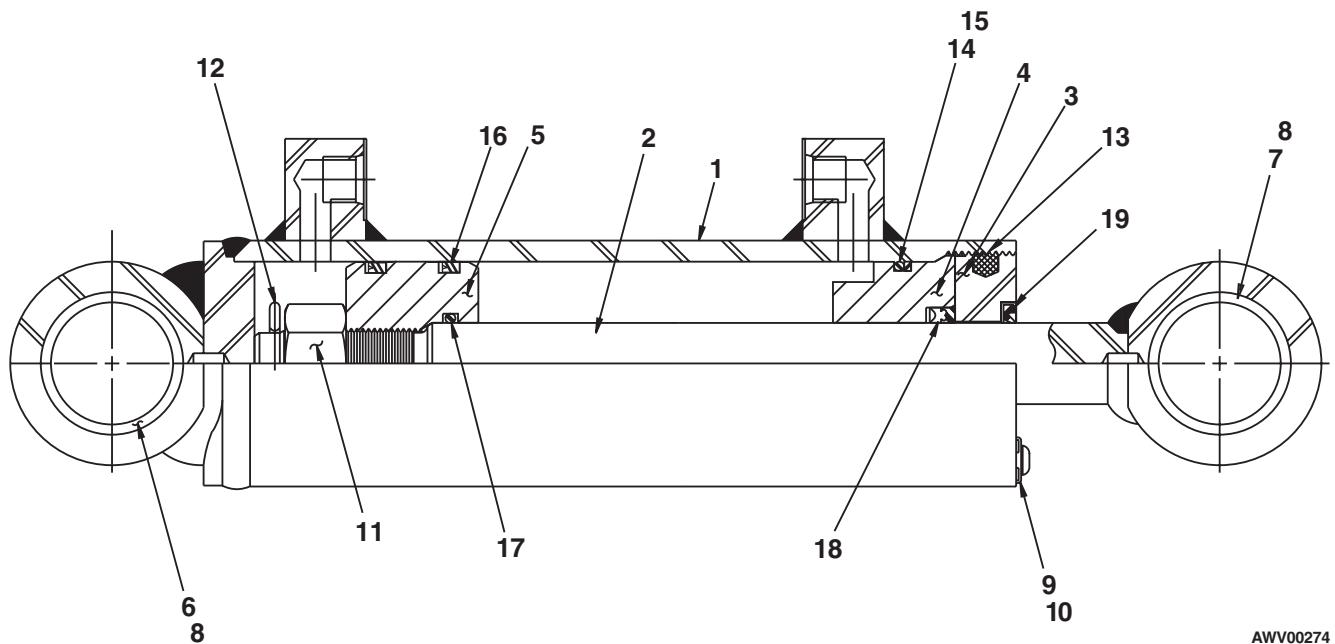
item	part no	qty	description
	0083473-99	1	Cylinder, lift - Rosenboom
	6091253	1	Seal repair kit - (kit includes items 10 through 21)
1		1	Tube - (not sold separately)
2	6091251	1	Rod
3	6091250	1	Head gland cap
4	6091249	1	Piston
5	2503628	4	Bearing
6	6091241	1	Poppet
7	6091246	1	Spring
8	6091252	1	Locking nut
9	5075306	1	Hex plug
10	Kit item	1	Snap ring - (not sold separately)
11	Kit item	1	Capped T-seal - (not sold separately)
12	Kit item	2	Wearband - (not sold separately)
13	Kit item	1	Cast iron ring - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	Back-up - (not sold separately)
17	Kit item	2	Wearband - (not sold separately)
18	Kit item	2	Locking insert - (not sold separately)
19	Kit item	1	O-ring - (not sold separately)
20	Kit item	1	Deep Z-seal - (not sold separately)
21	Kit item	1	Rod wiper - (not sold separately)
22	6010115	1	Cartridge needle valve
	0071845	1	Seal repair kit
23	6091314	1	Counterbalance holding valve - (factory preset, do not reset)



AW0083473

Cylinder, master level - GBI

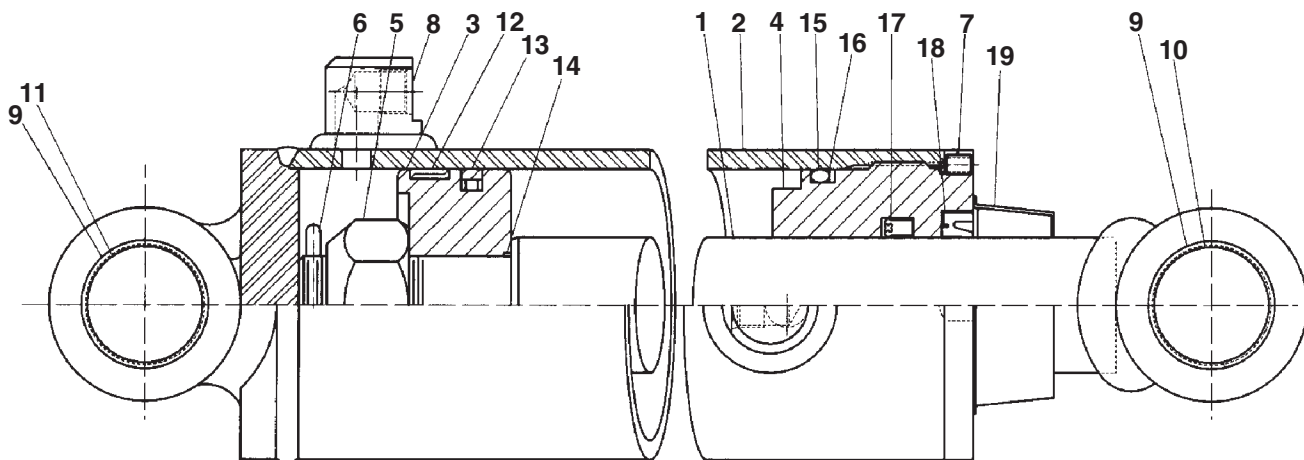
item	part no	qty	description
	0070007	1	Cylinder, master level - GBI
	8070611	1	Seal repair kit - (kit includes items 12 through 19)
1	8070623	1	Rod
2		1	Tube - (not sold separately)
3	8070621	1	Retainer
4	8070620	1	Bearing
5	8070619	1	Piston
6	8070618	1	Spacer
7	8070184	1	Spacer
8	8070616	4	Bushing
9	8070033	1	Nut
10	8070300	1	Lock washer
11	8070301	1	Capscrew
12	Kit item	1	Cotter pin - (not sold separately)
13	Kit item	1	Nylon plug - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	2	U-ring - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	U-ring - (not sold separately)
19	Kit item	1	Wiper - (not sold separately)



AWV00274

Cylinder, master level - Prince

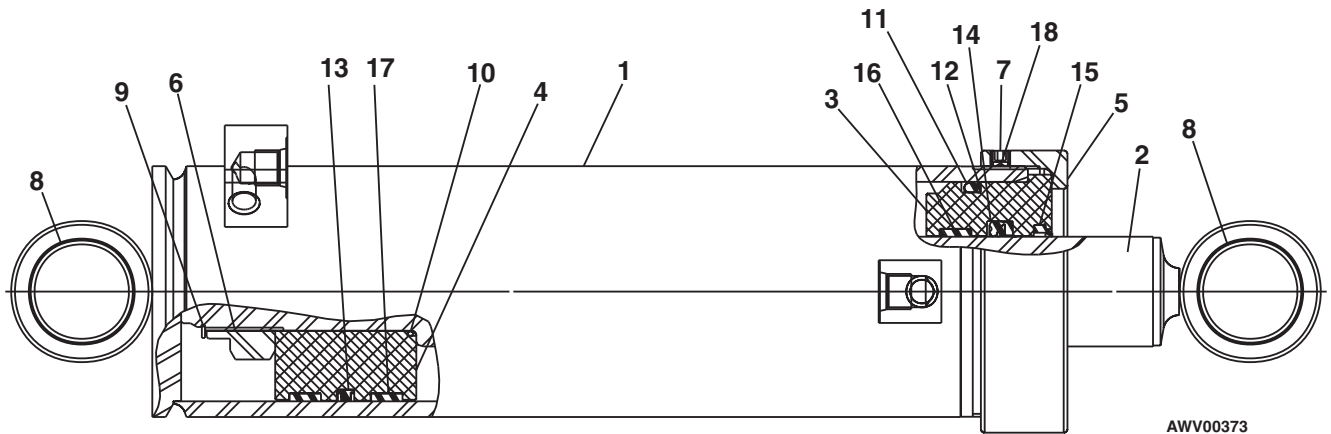
item	part no	qty	description
	0070007	1	Cylinder, master level - Prince
	8160088	1	Seal repair kit - (kit includes items 12 through 18)
1	8160207	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	8160209	1	Piston
4	8160210	1	Gland
5	6091082	1	Locknut
6	8160212	1	Cotter pin
7	6091083	1	Set screw
8	8160131	2	Port plug
9	8160199	4	DU bushing
10	8160213	1	Spacer
11	8160214	1	Spacer
12	Kit item	1	Wear ring - (not sold separately)
13	Kit item	1	Teflon seal - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	BU-washer - (not sold separately)
17	Kit item	1	U-cup - (not sold separately)
18	Kit item	1	Wiper - (not sold separately)
19	8160219	1	Rod and wiper cover



AWV00246

Cylinder, master level - Rosenboom

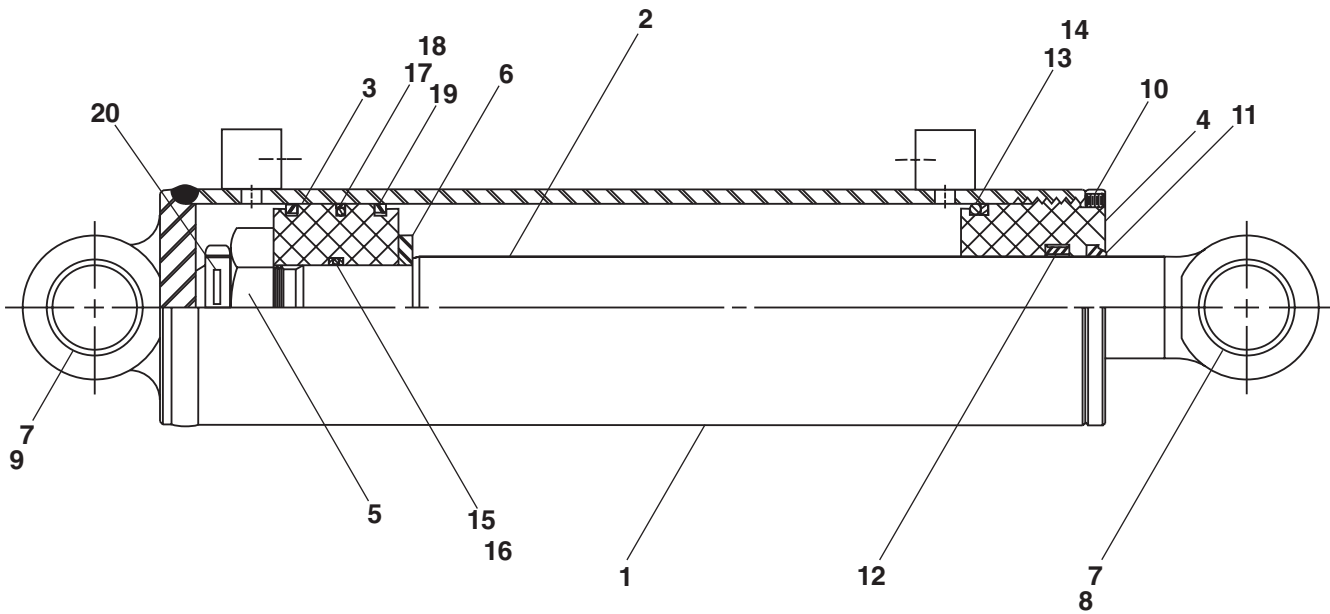
item	part no	qty	description
	0070007	1	Cylinder, master level - Rosenboom
	6091260	1	Seal repair kit - (kit includes items 9 through 18)
1		1	Tube - (not sold separately)
2	6091374	1	Rod
3	6091257	1	Head gland
4	6091256	1	Piston
5	6091250	1	Head gland cap
6	6091259	1	Lock nut
7	5569835	1	Set screw
8	2502416	4	Bearing
9	Kit item	1	Snap ring - (not sold separately)
10	Kit item	1	O-ring - (not sold separately)
11	Kit item	1	O-ring - (not sold separately)
12	Kit item	1	Back-up - (not sold separately)
13	Kit item	1	Capped T-seal - (not sold separately)
14	Kit item	1	Deep Z-seal - (not sold separately)
15	Kit item	1	Rod wiper - (not sold separately)
16	Kit item	1	Wearband - (not sold separately)
17	Kit item	2	Wearband - (not sold separately)
18	Kit item	1	Locking insert - (not sold separately)



AWV00373

Cylinder, master level - Seabee

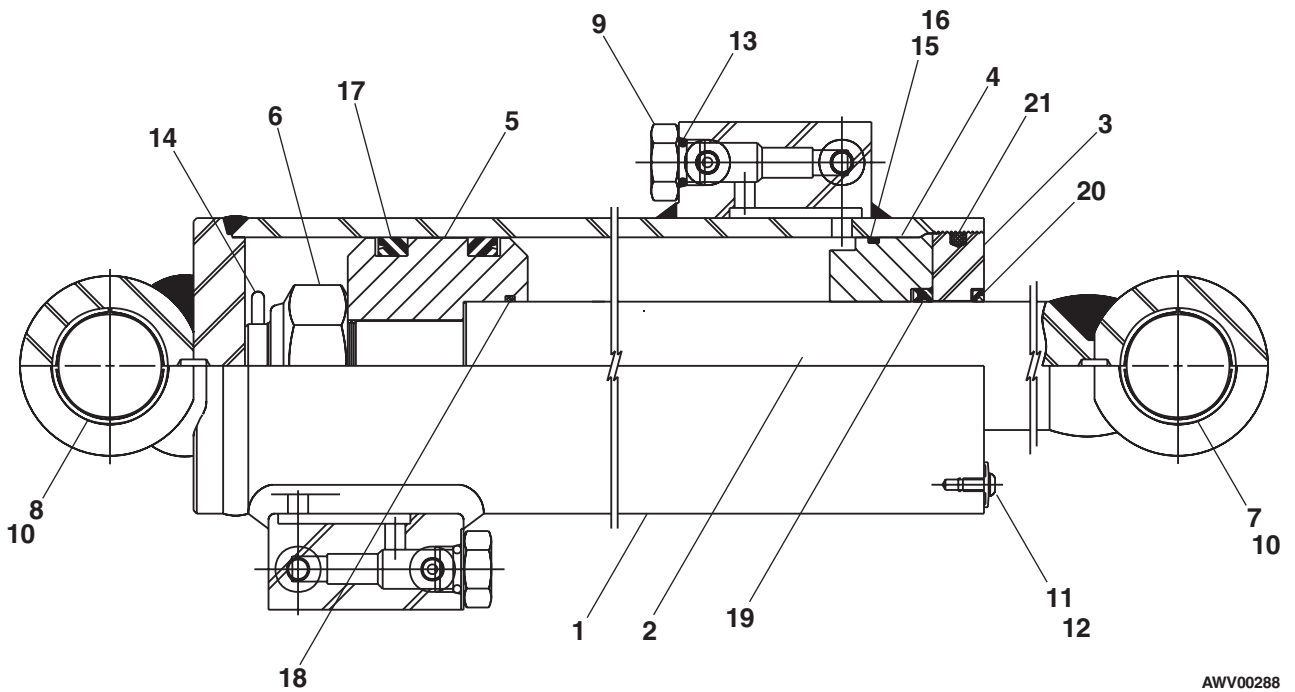
item	part no	qty	description
	0070007	1	Cylinder, master level - Seabee
	0072833	1	Seal repair kit - (kit includes items 11 through 20)
1		1	Case - (not sold separately)
2	8190060	1	Rod
3	8190038	1	Piston
4	8190074	1	Head gland
5	8190123	1	Piston nut
6	8190124	1	Thrust plate
7	2502416	4	Bearing
8	8190066	1	Bearing spacer
9	8190067	1	Bearing spacer
10	8190129	1	Set screw
11	Kit item	1	Wiper - (not sold separately)
12	Kit item	1	U-cup - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	2	Back-up - (not sold separately)
17	Kit item	1	Piston seal - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	2	Piston ring - (not sold separately)
20	Kit item	1	Cotter pin - (not sold separately)



AWV00206

Cylinder, slave level - GBI

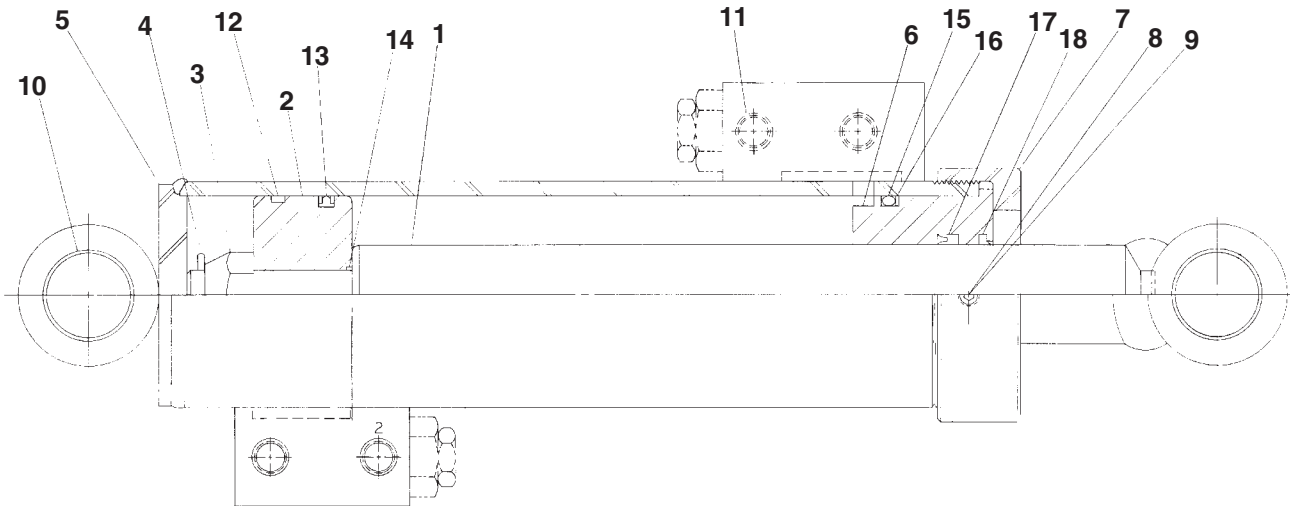
item	part no	qty	description
	0071486	1	Cylinder, Slave level - GBI
	8070624		Seal repair kit - (kit includes items 13 through 21)
1		1	Tube - (not sold separately)
2	8070625	1	Rod
3	8070621	1	Retainer
4	8070620	1	Bearing
5	8070619	1	Piston
6	8070503	1	Nut
7	8070618	1	Spacer
8	8070617	1	Spacer
9	8070564	2	Port plug
10	8070616	4	Bushing
11	8070507	1	Lock washer
12	8070506	1	Capscrew
13	Kit item	2	O-ring - (not sold separately)
14	Kit item	1	Cotter pin - (not sold separately)
15	Kit item	1	Back-up - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	2	U-ring - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	1	U-ring - (not sold separately)
20	Kit item	1	Wiper - (not sold separately)
21	Kit item	1	Nylon plug - (not sold separately)



AWV00288

Cylinder, slave level - Prince

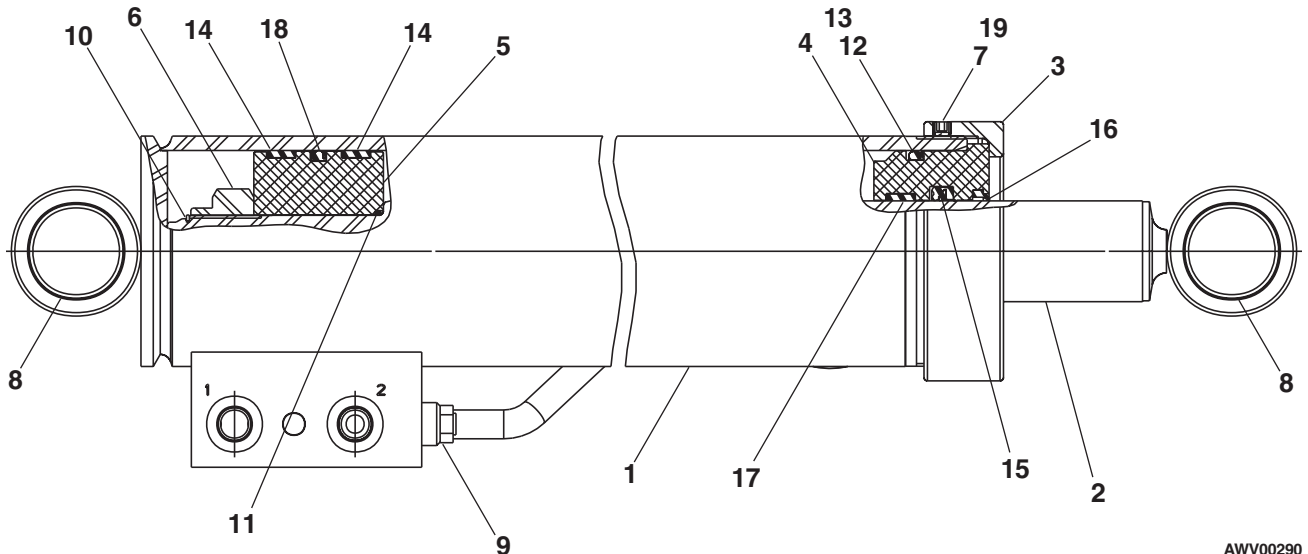
item	part no	qty	description
	0071486	1	Cylinder, slave level - Prince
	8160206	1	Seal repair kit - (kit includes items 4 and 12 through 18)
1	8160195	1	Piston rod
2	8160196	1	Piston
3	6091104	1	Locknut
4	Kit item	1	Cotter pin
5		1	Butt and tube - (not sold separately)
6	8160037	1	Gland
7	8160198	1	Gland cap
8	8160039	1	Nylon lock
9	8160038	1	Set screw
10	8160199	4	Bearing
11	8160131	6	Plug
12	Kit item	1	Piston ring - (not sold separately)
13	Kit item	1	T-seal - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	BU-washer - (not sold separately)
17	Kit item	1	U-cup - (not sold separately)
18	Kit item	1	Wiper - (not sold separately)
19	28160205	2	Plug



AWV00248

Cylinder, slave level - Rosenboom

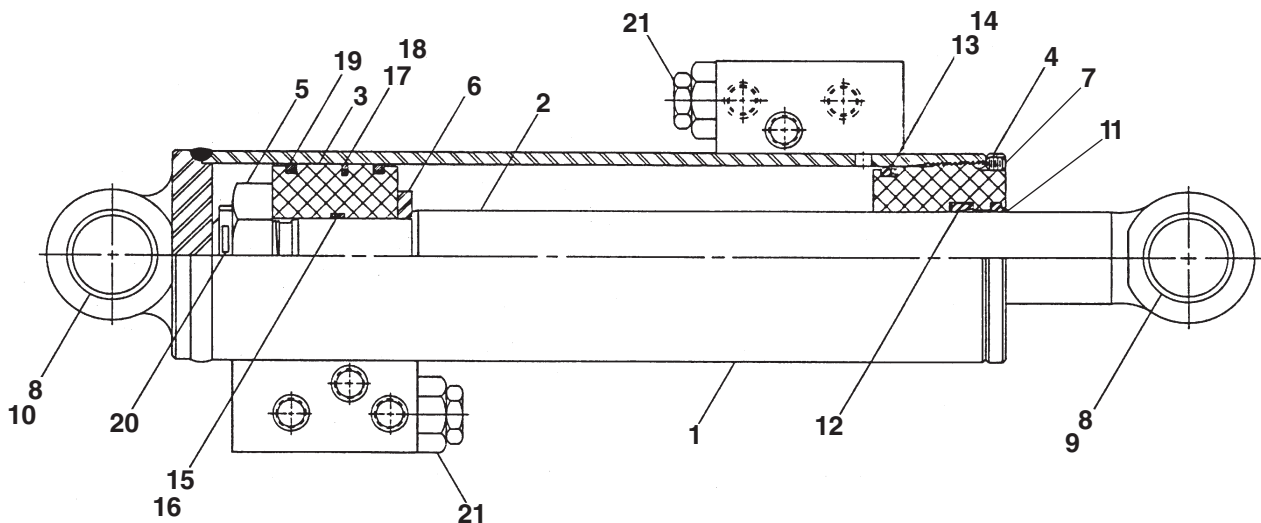
item	part no	qty	description
	0074713	1	Cylinder, slave level - Rosenboom
	6091260	1	Seal repair kit - (kit includes items 10 through 19)
1		1	Cylinder tube - (not sold separately)
2	6091258	1	Rod
3	6091255	1	Head gland cap
4	6091257	1	Head gland
5	6091256	1	Piston
6	6091259	1	Lock nut
7	5569835	1	Set screw
8	2502416	4	Bushing
9	6010794	2	Cartridge holding valve - (factory preset, do not reset)
10	Kit item	1	External snap ring - (not sold separately)
11	Kit item	1	O-ring - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	1	Back-up ring - (not sold separately)
14	Kit item	1	T-seal - (not sold separately)
15	Kit item	1	Deep Z-seal - (not sold separately)
16	Kit item	1	Rod wiper - (not sold separately)
17	Kit item	1	Wearband - (not sold separately)
18	Kit item	2	Wearband - (not sold separately)
19	Kit item	1	Locking insert - (not sold separately)



AWV00290

Cylinder, slave level - Seabee

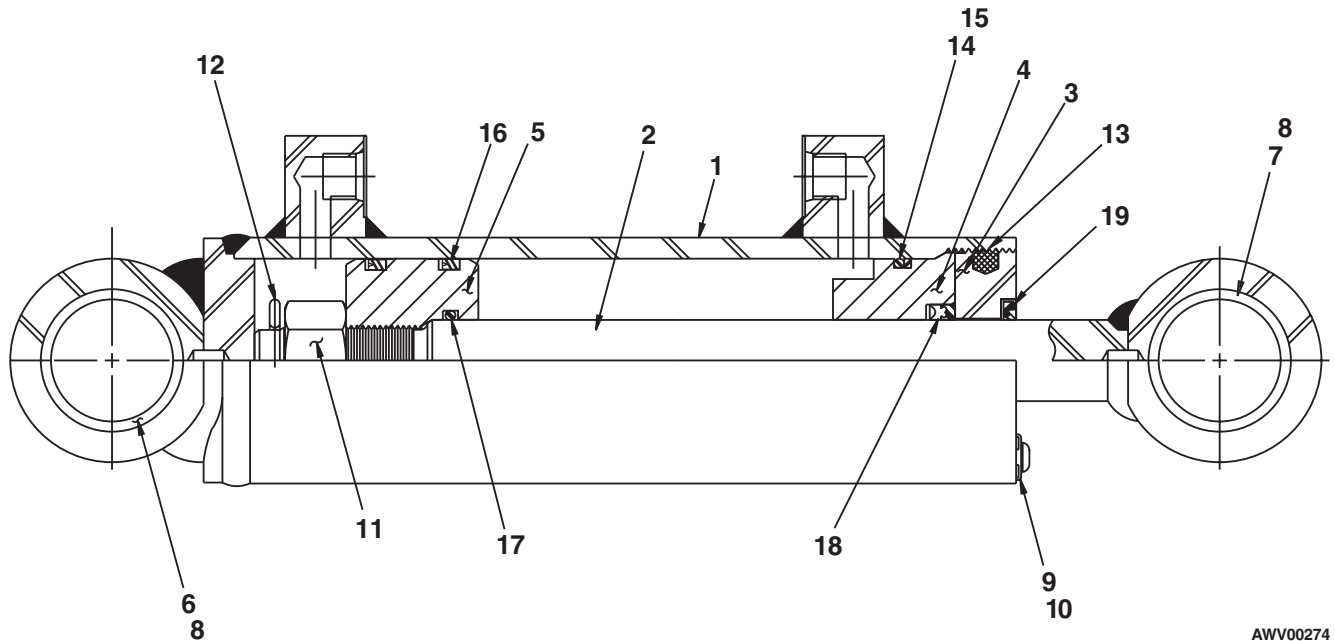
item	part no	qty	description
	0071486	1	Cylinder, slave level - Seabee
	0072833	1	Seal repair kit - (kit includes items 11 through 20)
1		1	Case - (not sold separately)
2	8190036	1	Shaft
3	8190038	1	Piston
4	8190074	1	Head gland
5	8190123	1	Piston nut
6	8190124	1	Thrust plate
7	8190125	1	Set screw
8	2502416	4	Bearing
9	8190066	1	Bearing spacer, rod end
10	8190067	1	Bearing spacer, base end
11	Kit item	1	Wiper - (not sold separately)
12	Kit item	1	U-ring - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	2	Back-up - (not sold separately)
17	Kit item	1	Piston seal - (not sold separately)
18	Kit item	2	O-ring - (not sold separately)
19	Kit item	2	Piston ring - (not sold separately)
20	Kit item	1	Cotter pin - (not sold separately)
21	6010120	1	Cartridge holding valve - (factory preset, do not reset)



AWV00208

Cylinder, steering - GBI

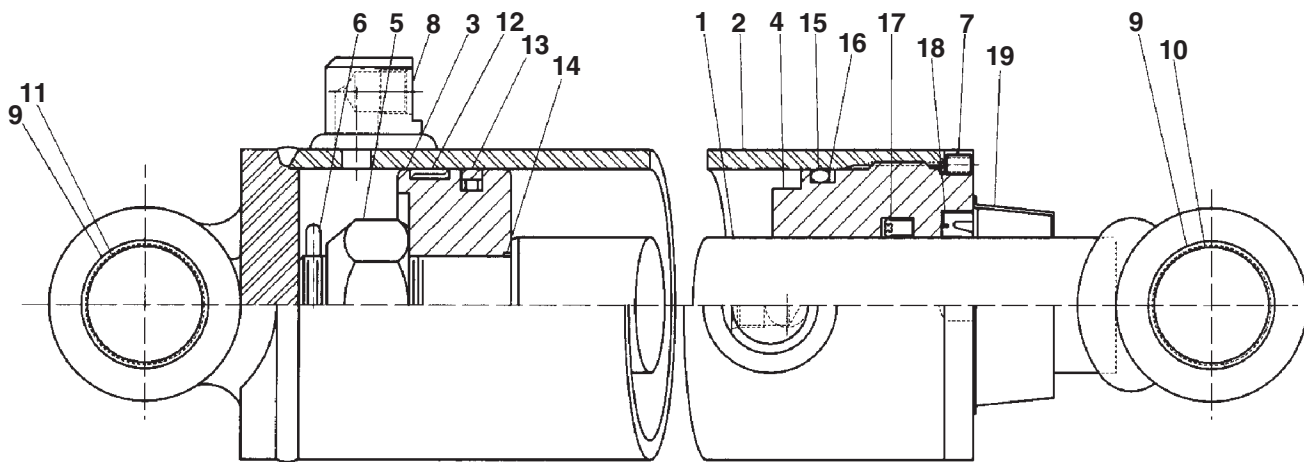
item	part no	qty	description
	0070007	1	Cylinder, steering - GBI
	8070611	1	Seal repair kit - (kit includes items 12 through 19)
1	8070623	1	Rod
2		1	Tube - (not sold separately)
3	8070621	1	Retainer
4	8070620	1	Bearing
5	8070619	1	Piston
6	8070618	1	Spacer
7	8070184	1	Spacer
8	8070616	4	Bushing
9	8070033	1	Nut
10	8070300	1	Lock washer
11	8070301	1	Capscrew
12	Kit item	1	Cotter pin - (not sold separately)
13	Kit item	1	Nylon plug - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	2	U-ring - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	U-ring - (not sold separately)
19	Kit item	1	Wiper - (not sold separately)



AWV00274

Cylinder, steering - Prince

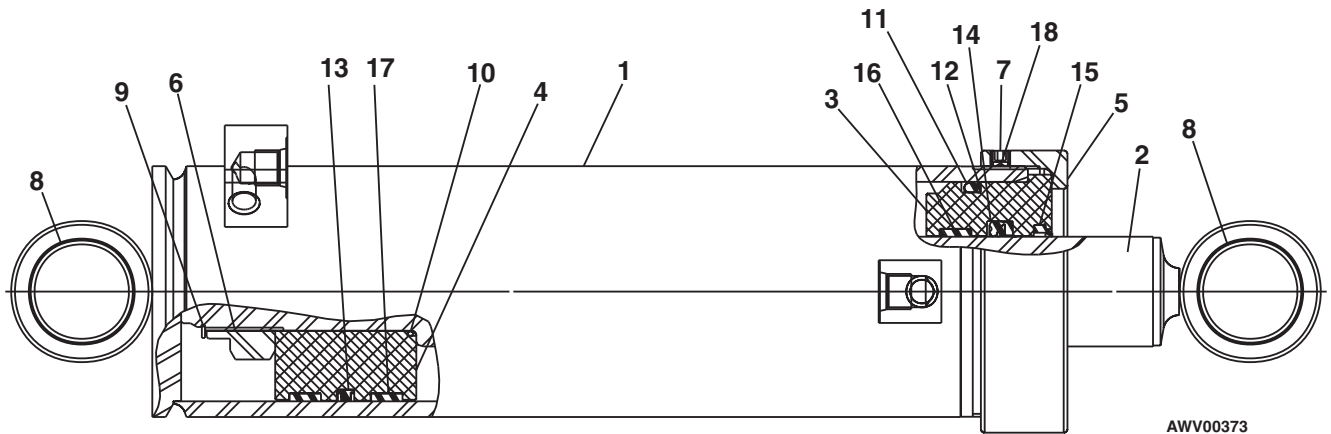
item	part no	qty	description
	0070007	1	Cylinder, steering - Prince
	8160088	1	Seal repair kit - (kit includes items 12 through 18)
1	8160207	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	8160209	1	Piston
4	8160210	1	Gland
5	6091082	1	Locknut
6	8160212	1	Cotter pin
7	6091083	1	Set screw
8	8160131	2	Port plug
9	8160199	4	DU bushing
10	8160213	1	Spacer
11	8160214	1	Spacer
12	Kit item	1	Wear ring - (not sold separately)
13	Kit item	1	Teflon seal - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	BU-washer - (not sold separately)
17	Kit item	1	U-cup - (not sold separately)
18	Kit item	1	Wiper - (not sold separately)
19	8160219	1	Rod and wiper cover



AWV00246

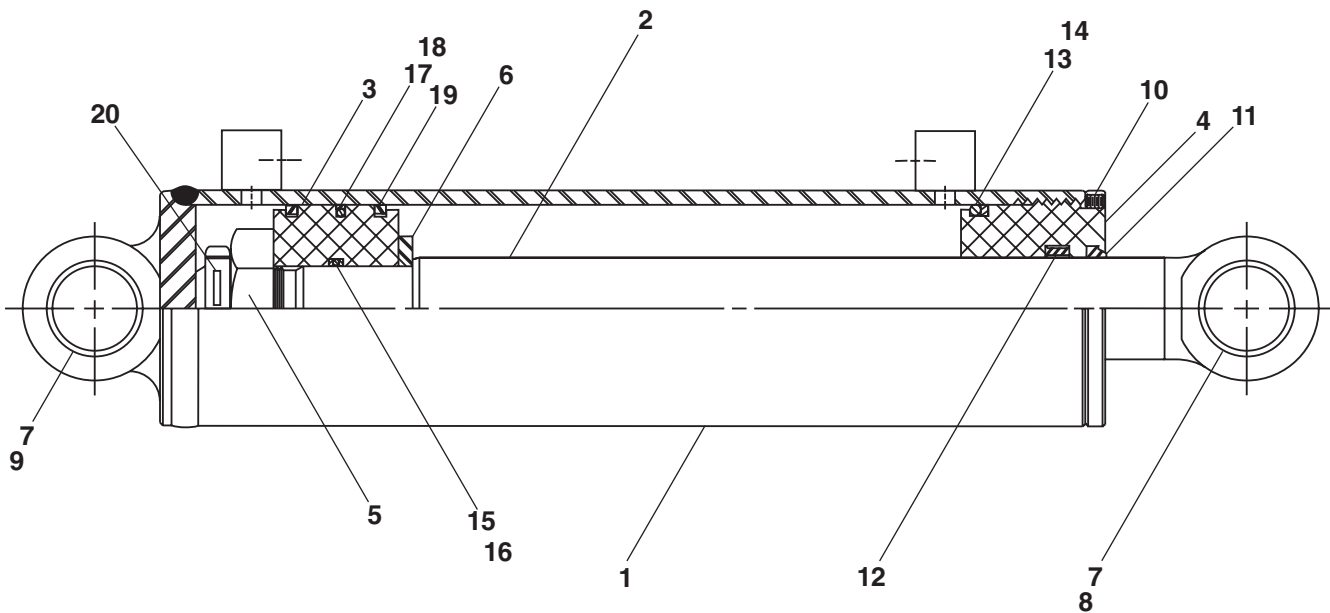
Cylinder, steering - Rosenboom

item	part no	qty	description
	0070007	1	Cylinder, Steering - Rosenboom
	6091260	1	Seal repair kit - (kit includes items 9 through 18)
1		1	Tube - (not sold separately)
2	6091374	1	Rod
3	6091257	1	Head gland
4	6091256	1	Piston
5	6091250	1	Head gland cap
6	6091259	1	Lock nut
7	5569835	1	Set screw
8	2502416	4	Bearing
9	Kit item	1	Snap ring - (not sold separately)
10	Kit item	1	O-ring - (not sold separately)
11	Kit item	1	O-ring - (not sold separately)
12	Kit item	1	Back-up - (not sold separately)
13	Kit item	1	Capped T-seal - (not sold separately)
14	Kit item	1	Deep Z-seal - (not sold separately)
15	Kit item	1	Rod wiper - (not sold separately)
16	Kit item	1	Wearband - (not sold separately)
17	Kit item	2	Wearband - (not sold separately)
18	Kit item	1	Locking insert - (not sold separately)



Cylinder, steering - Seabee

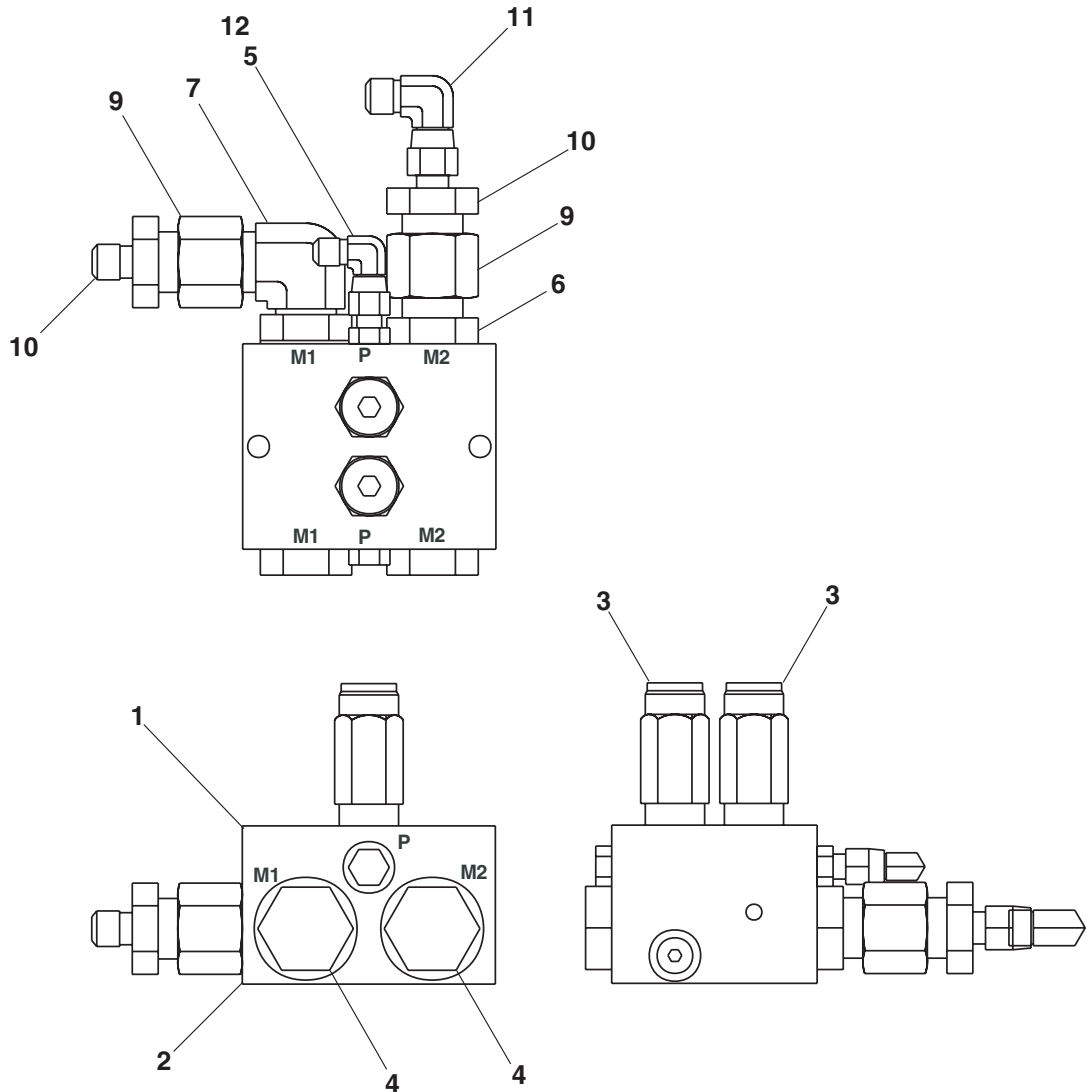
item	part no	qty	description
	0070007	1	Cylinder, steering - Seabee
	0072833	1	Seal repair kit - (kit includes items 11 through 20)
1		1	Case - (not sold separately)
2	8190060	1	Rod
3	8190038	1	Piston
4	8190074	1	Head gland
5	8190123	1	Piston nut
6	8190124	1	Thrust plate
7	2502416	4	Bearing
8	8190066	1	Bearing spacer
9	8190067	1	Bearing spacer
10	8190129	1	Set screw
11	Kit item	1	Wiper - (not sold separately)
12	Kit item	1	U-cup - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	2	Back-up - (not sold separately)
17	Kit item	1	Piston seal - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	2	Piston ring - (not sold separately)
20	Kit item	1	Cotter pin - (not sold separately)



AWV00206

Drive sequence valve, right hand

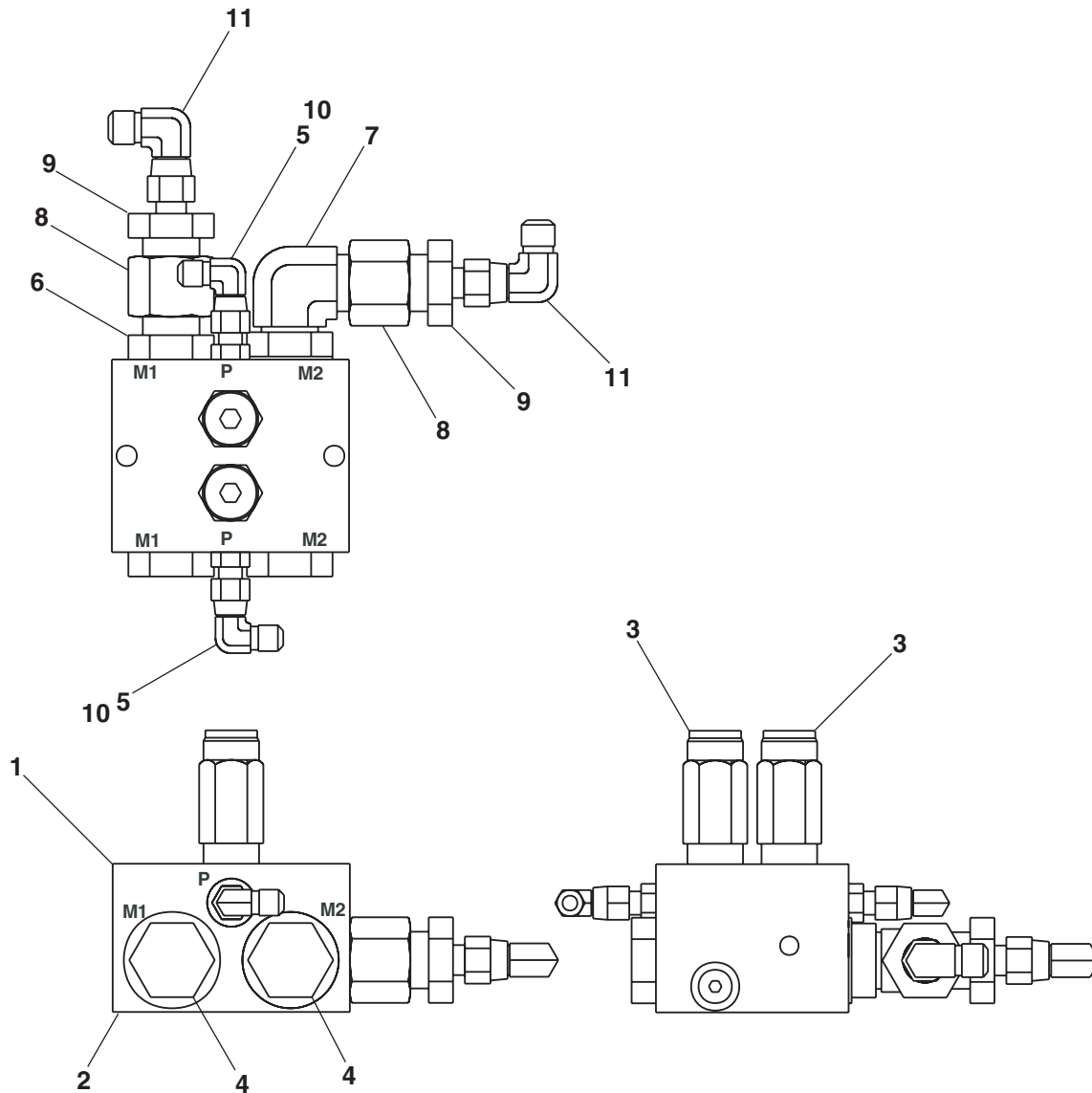
item	part no	qty	description
	0081600	1	Drive sequence valve, right hand
1	6010613	1	Dual sequence valve, Fluid Tech or Weco- (includes items 2 and 3)
2	6010614	1	Valve body, Fluid Tech
	6010624	1	Valve body, Weco
3	6010615	2	Cartridge sequence valve, Fluid Tech - (factory preset, do not reset)
	6010269	2	Cartridge sequence valve, Weco - (factory preset, do not reset)
4	5075208	2	Hex head plug
5	5065703	1	Straight thread adapter
6	5065714	1	Straight thread adapter
7	5035308	1	Straight thread 90° elbow
8	5075203	1	Hex head plug
9	5063908	2	Fitting nut
10	5064007	2	Tube end reducer
11	5037005	1	Swivel nut 90° elbow
12	5037003	1	Swivel nut 90° elbow



AW0081600

Drive sequence valve, left hand

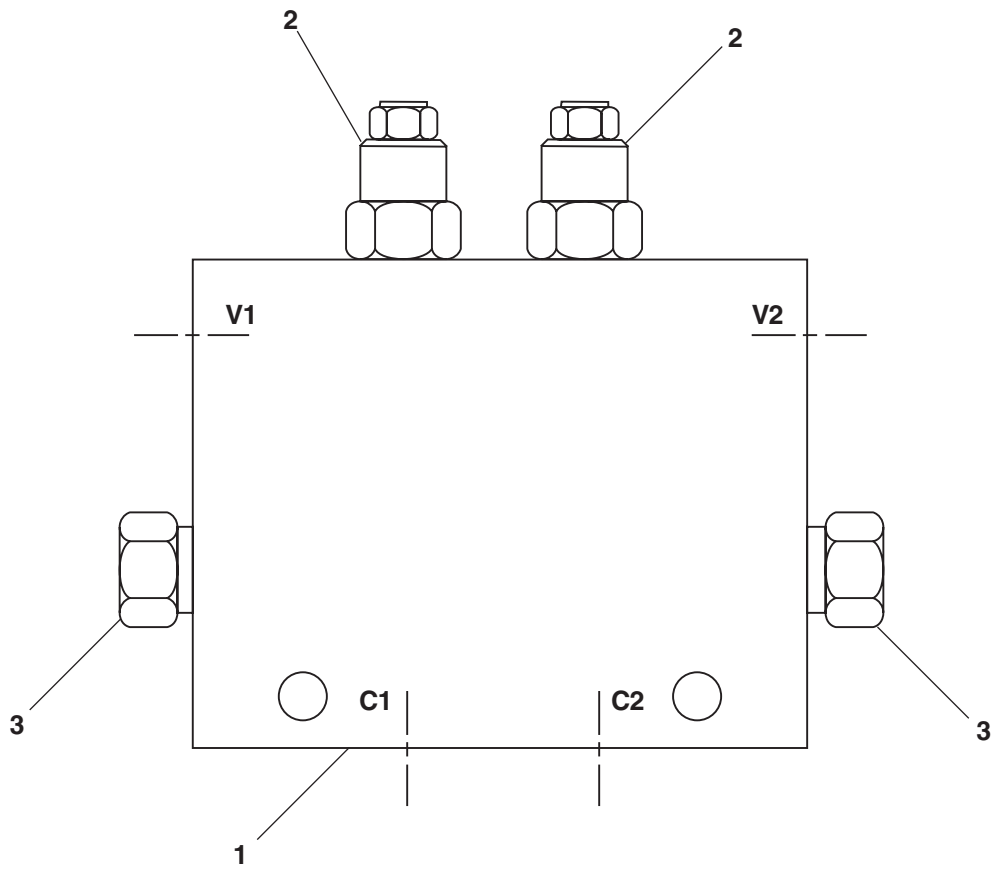
item	part no	qty	description
	0081604	1	Drive sequence valve, left hand
1	6010613	1	Dual sequence valve, Fluid Tech or Weco- (includes items 2 and 3)
2	6010614	1	Valve body, Fluid Tech
	6010624	1	Valve body, Weco
3	6010615	2	Cartridge sequence valve, Fluid Tech - (factory preset, do not reset)
	6010269	2	Cartridge sequence valve, Weco - (factory preset, do not reset)
4	5075208	2	Hex head plug
5	5065703	2	Straight thread adapter
6	5065714	1	Straight thread adapter
7	5035308	1	Straight thread 90° elbow
8	5063908	2	Fitting nut
9	5064007	2	Tube end reducer
10	5037003	2	Swivel nut 90° elbow
11	5037005	2	Swivel nut 90° elbow



AW0081604

Dual holding valve, platform rotation

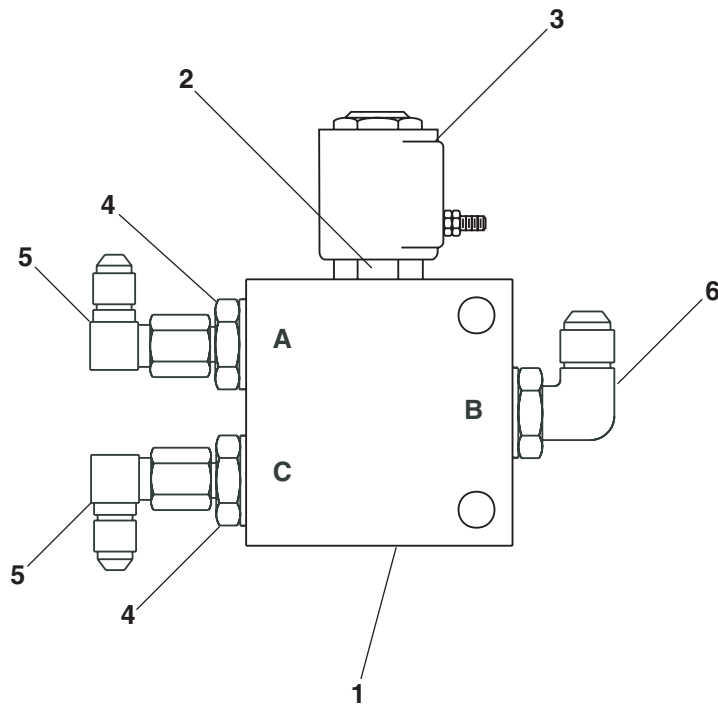
item	part no	qty	description
1	6010628	1	Dual holding valve, platform rotation
2	6010794	2	Cartridge holding valve - (factory preset, do not reset)
	0150563	1	Seal repair kit
3	6010640	2	Flow control cartridge



AW6010628

Dump valve

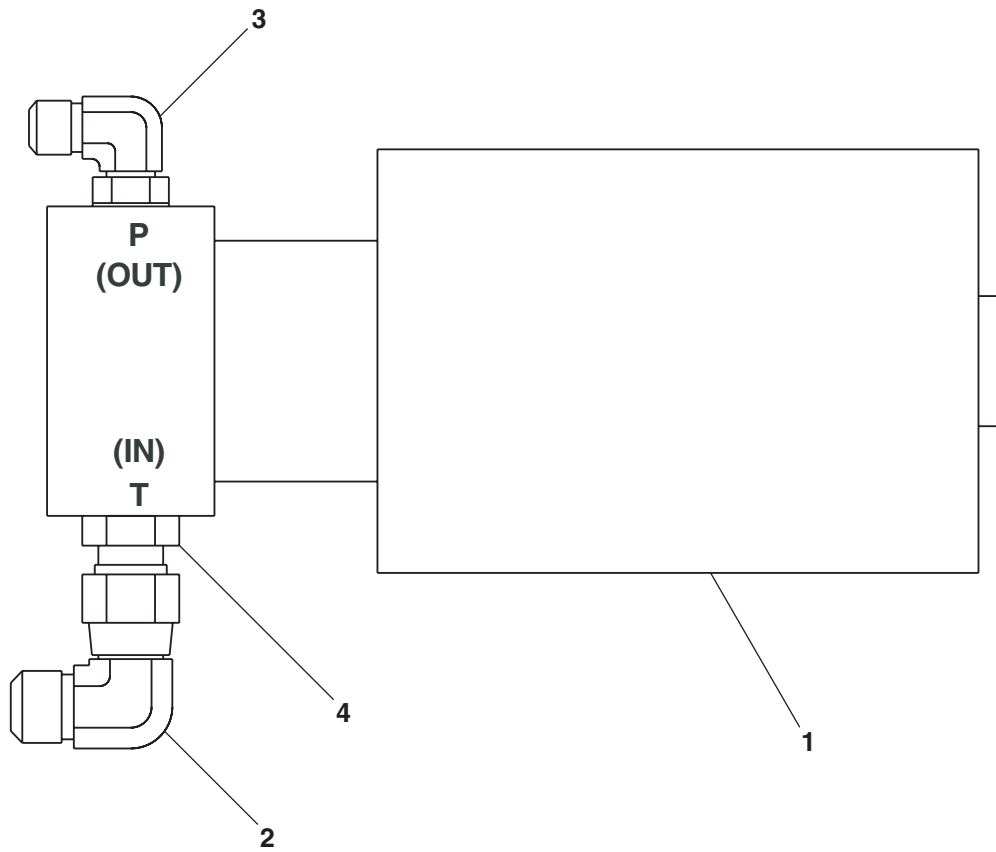
item	part no	qty	description
	0081982	1	Dump valve
1	6010499	1	Dump valve - (includes items 2 and 3)
	0073620	1	Seal repair kit
2	6010472	1	Cartridge - (factory preset, do not reset)
3	3040473	1	Cartridge solenoid, 10 volt DC
4	5065705	2	Straight thread adapter
5	5037003	2	Swivel nut 90° elbow
6	5035318	1	Straight thread 90° elbow



AW0081982

Emergency power unit

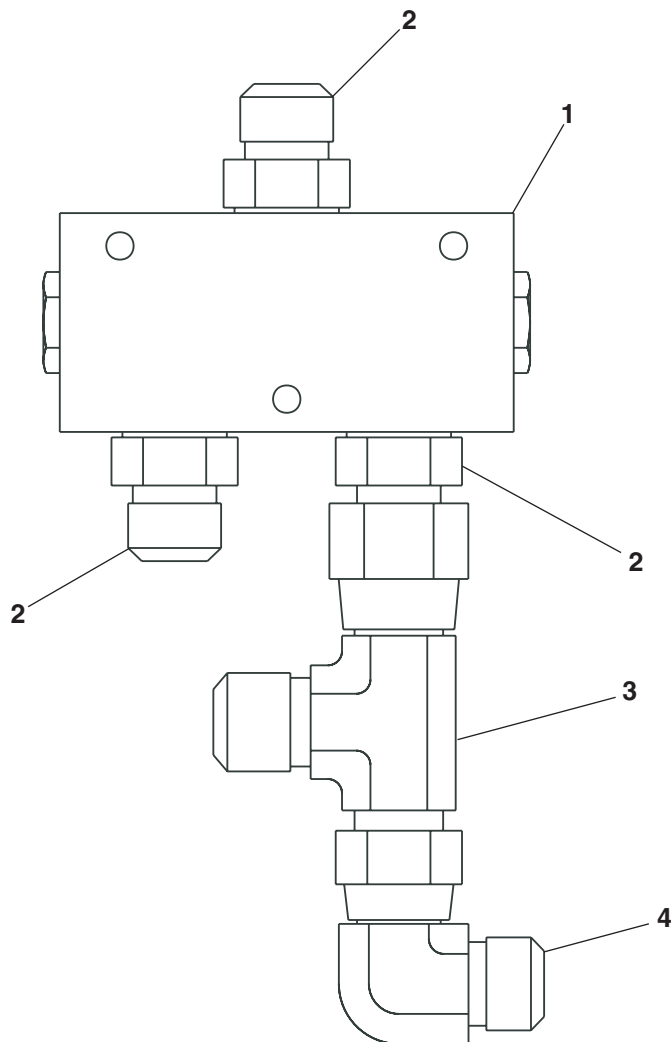
item	part no	qty	description
	0072940	1	Emergency power unit
1	6020058	1	Emergency power motor/pump
2	5037006	1	Swivel nut 90° elbow
3	5035305	1	Straight thread 90° elbow
4	5065709	1	Straight thread adapter



AW0072940

Flow divider/combiner valve

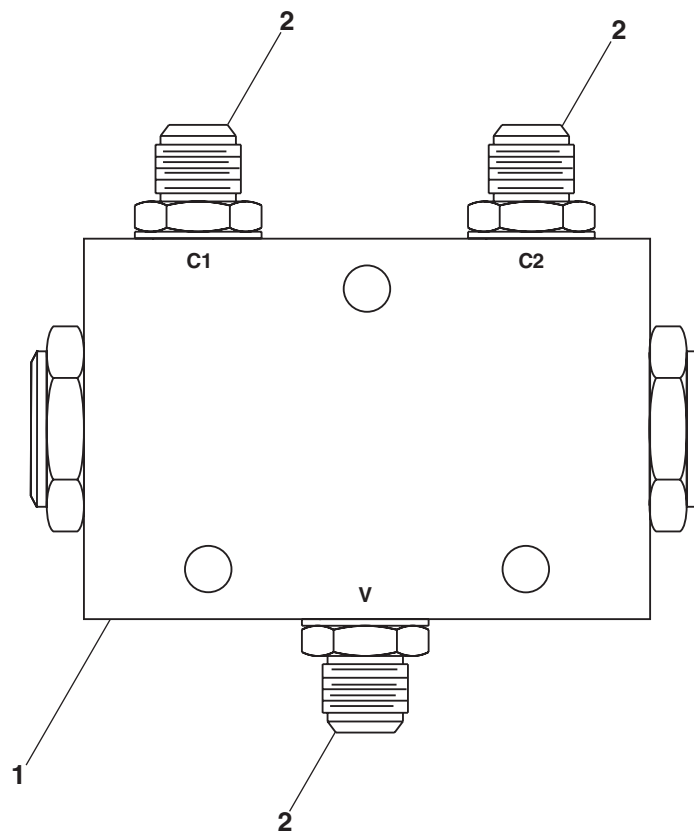
item	part no	qty	description
	0080958	1	Flow divider/combiner valve
1	6010437	1	Flow divider/combiner valve
2	5065731	3	Straight thread adapter
3	5036708	1	Swivel nut run tee
4	5037008	1	Swivel nut 90° elbow



AW0080958

Flow divider valve

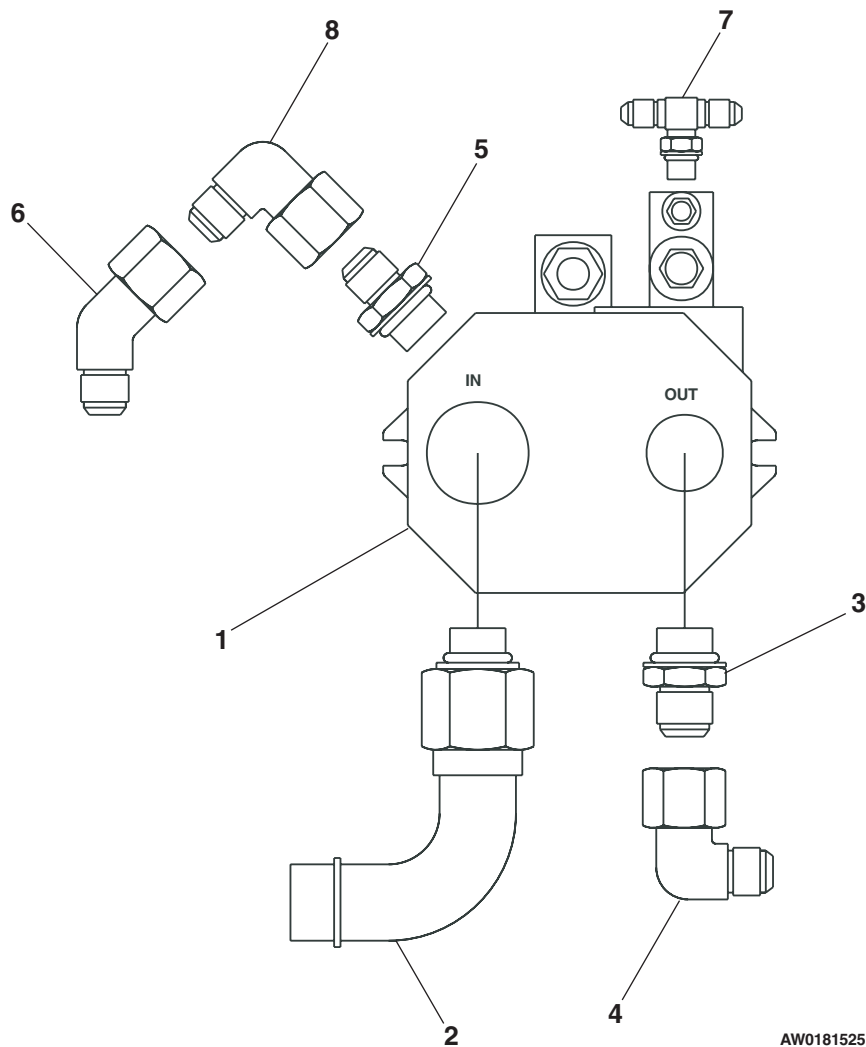
item	part no	qty	description
1	0081424	1	Flow divider valve
1	6010231	1	Flow divider/combiner valve
2	5065714	3	Straight thread adapter



AW6010231

Hydraulic pump

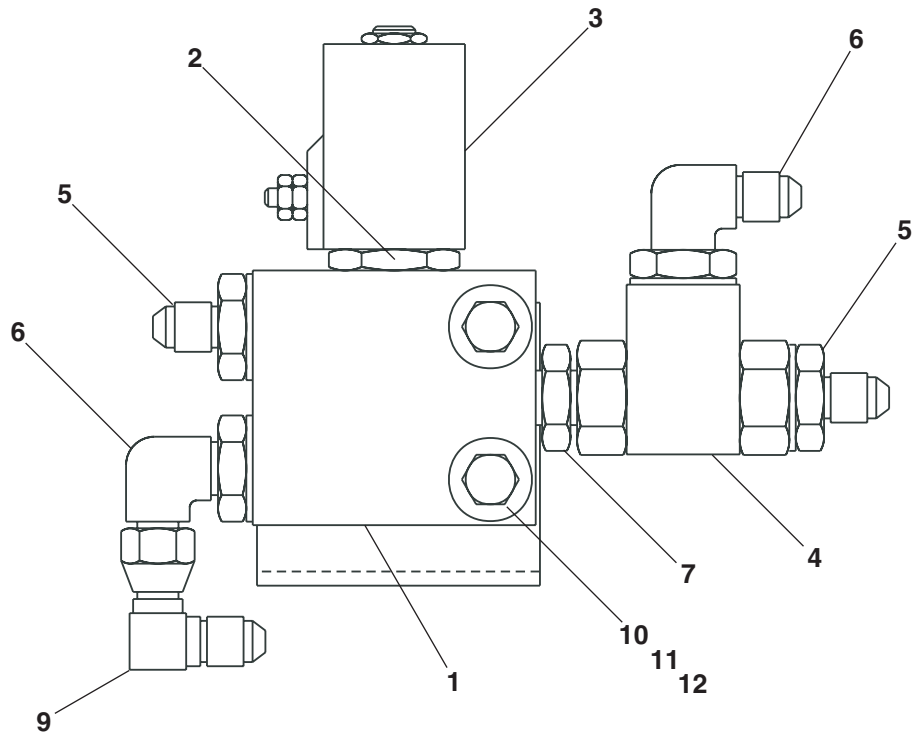
item	part no	qty	description
1	0082138	1	Hydraulic pump, Deutz and Ford LRG-423 engines - (includes items 1 through 7)
	0181525	1	Hydraulic pump, Ford LRG-425 engines - (includes items 1 through 8)
	6020065	1	Hydraulic pump - (pump compensator is not preset)
	8220119	1	Seal repair kit - Vickers pump
	8160100	1	Seal repair kit - Parker pump
	8180021	1	Seal repair kit - Rexroth pump
	8220120	1	Replacement compensator - Vickers pump
	6090057	1	Replacement compensator - Parker pump
	8180023	1	Replacement compensator - Rexroth pump
2	5038005	1	Beaded 90° elbow
3	5065718	1	Straight thread adapter
4	5037010	1	Swivel nut 90° elbow
5	5065710	1	Straight thread adapter
6	5037006	1	Swivel nut 90° elbow
7	5036503	1	Straight thread branch tee
8	5036906	1	Swivel nut 45° elbow - (used on Ford LRG-425 engine only)



AW0181525

Hydraulic warm-up valve

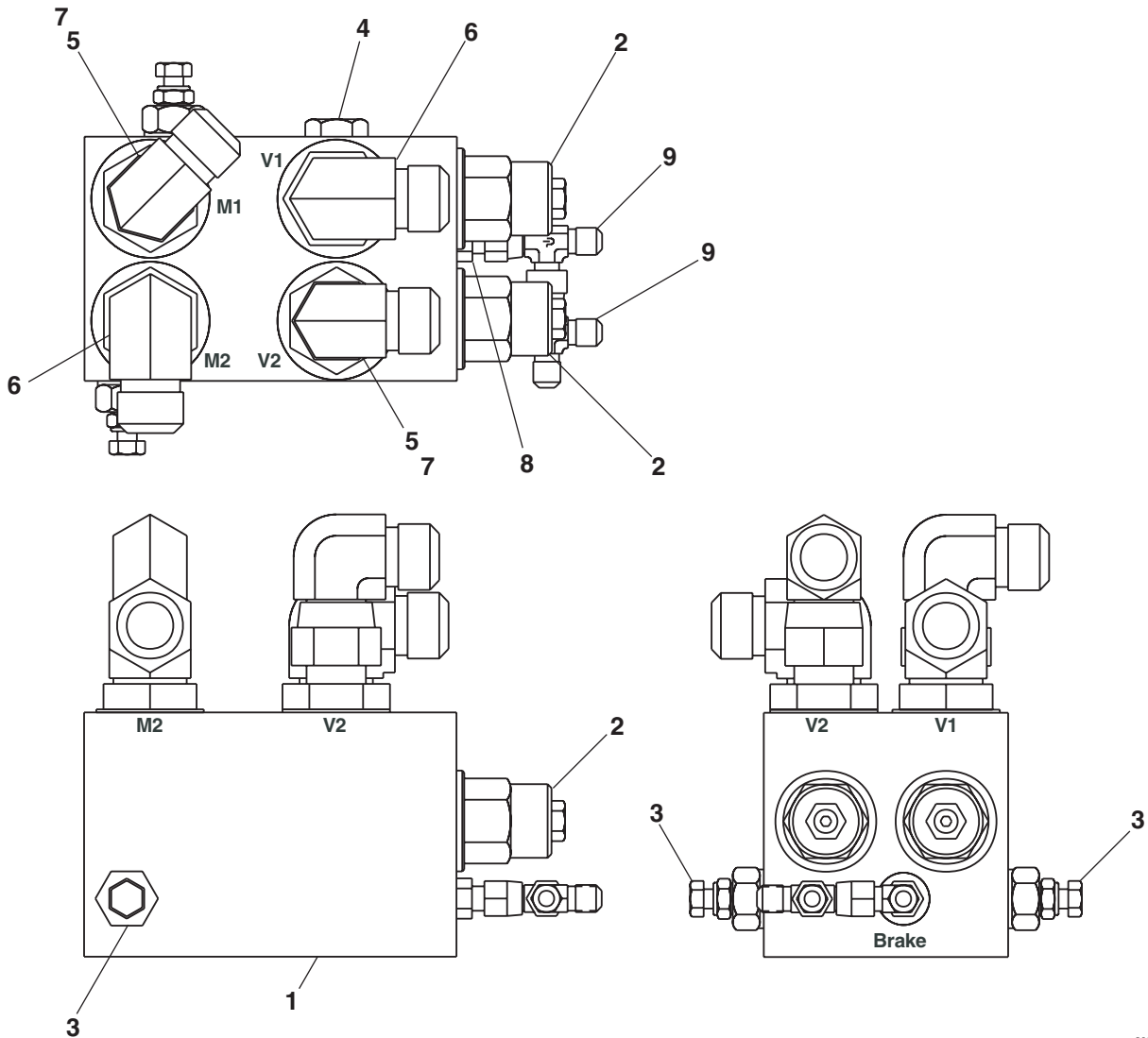
item	part no	qty	description
	0082053	1	Hydraulic warm-up valve
1	6010499	1	Warm-up valve - (includes items 2 and 3)
	0073620	1	Seal repair kit
2	6010472	1	Cartridge - (factory preset, do not reset)
3	3040473	1	Cartridge solenoid, 10 volt DC
4	6010083	1	Shuttle valve
5	5065705	2	Straight thread adapter
6	5035318	1	Straight thread 90° elbow
7	5076301	1	Union
8	0071805	1	Mounting bracket
9	5037003	1	Swivel nut 90° elbow
10	970169	2	Capscrew 1/4-20 x 2 inch long hex head grade 5
11	986019	2	Washer 1/4 medium flat
12	5560004	2	Nut 1/4-20 self locking



AW0082053

Motion control valve, drive

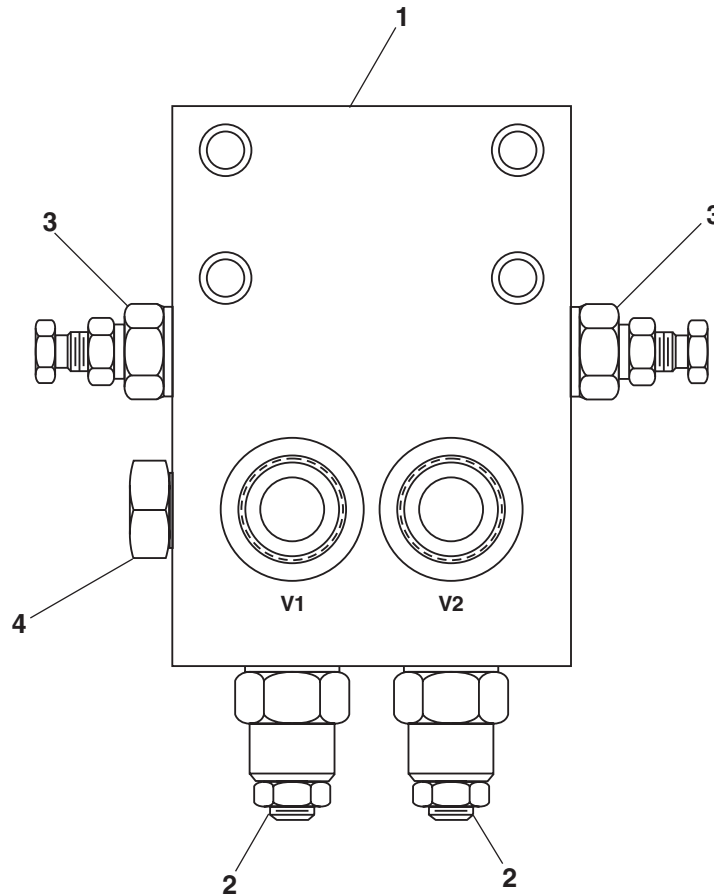
item	part no	qty	description
	0081042	1	Motion control valve, drive
1	6010228	1	Motion control valve, drive - (includes items 2, 3 and 4)
	0110683	1	Seal repair kit
2	6010523	2	Counterbalance valve cartridge - (factory preset, do not reset)
3	6010269	2	Sequence valve cartridge - (factory preset, do not reset)
4	6010531	1	Shuttle valve cartridge
5	5065715	2	Straight thread adapter
6	5035319	2	Straight thread 90° elbow
7	5037008	2	Swivel nut 90° elbow
8	5065703	1	Straight thread adapter
9	5036703	2	Swivel nut run tee



AW0081042

Motion control valve, turntable swing

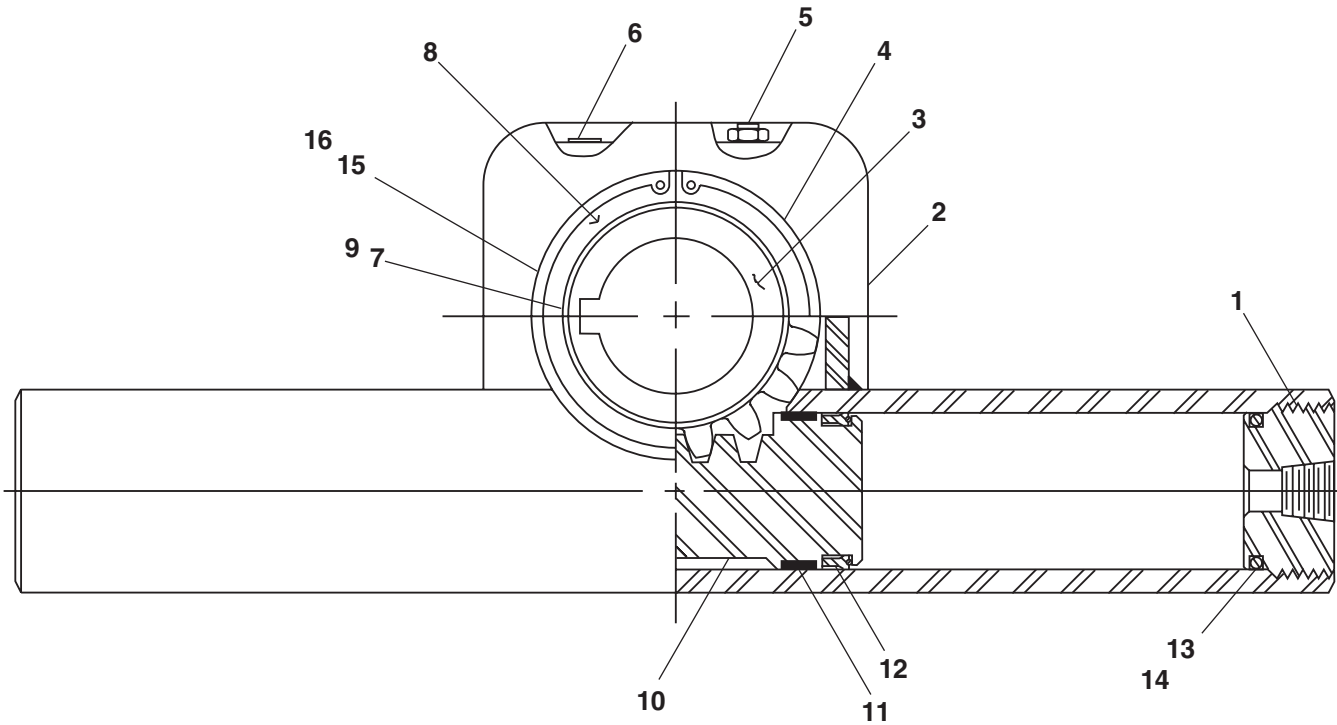
item	part no	qty	description
1	6010250	1	Motion control valve, turntable swing
2	6010256	2	Counterbalance valve cartridge - (factory preset, do not reset)
3	6010321	2	Cartridge relief valve - (factory preset, do not reset)
	0150563	1	Seal repair kit
4	6010531	1	Shuttle valve



AW6010250

Platform rotator, Helac

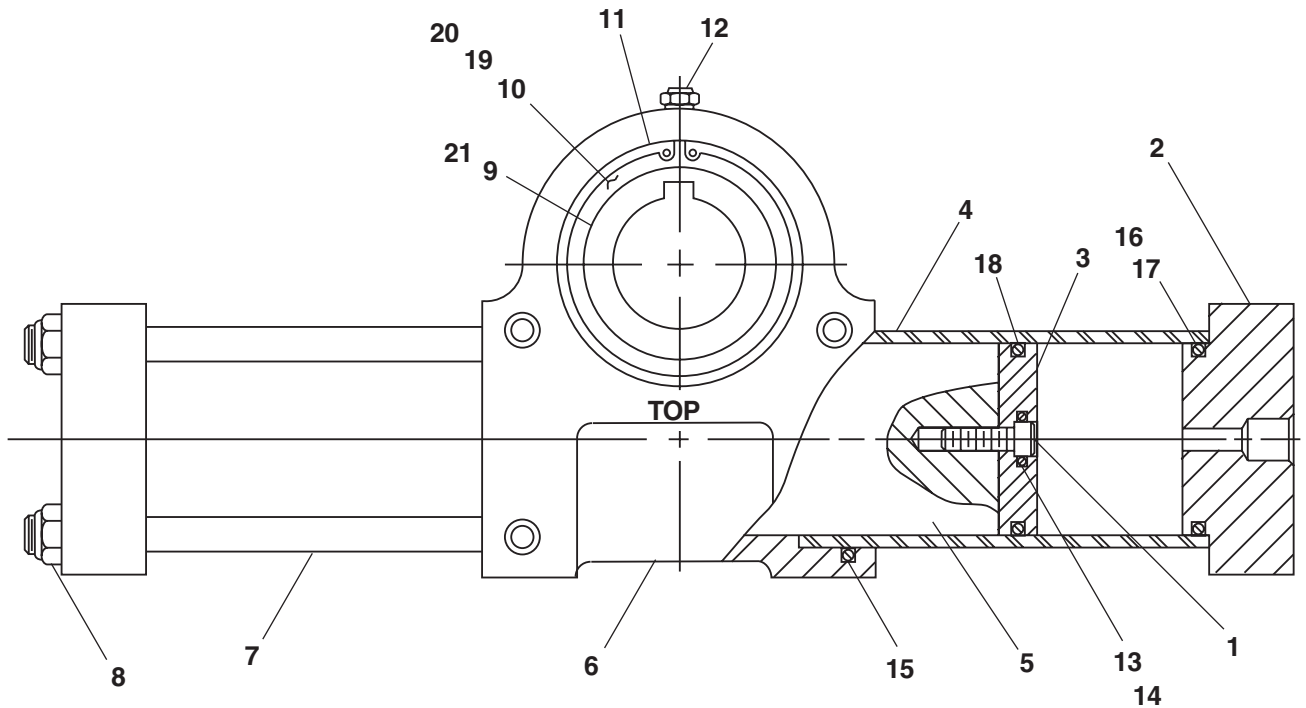
item	part no	qty	description
	0070570	1	Platform rotator, Helac
	0073223	1	Seal repair kit - (kit includes items 12 through 16)
	0074709	1	Bearing kit - (wear guides only, kit includes items 7, 9 and 11)
1	8080119	2	End cap
2	8080114	1	Housing, foot mounted
3	8080115	1	Pinion
4	8080099	2	Snap ring
5	8080100	1	Relief valve
6	8080116	2	Filler plug
7	Kit item	2	Wear guides
8	8080117	2	Shaft bearing
9	Kit item	1	Wear guides
10	8080118	2	Rack
11	Kit item	2	Wear guides
12	Kit item	2	Polypak seal
13	Kit item	2	O-ring
14	Kit item	2	Back-up
15	Kit item	2	O-ring
16	Kit item	2	Polypak seal



AWV00213

Platform rotator, Parker

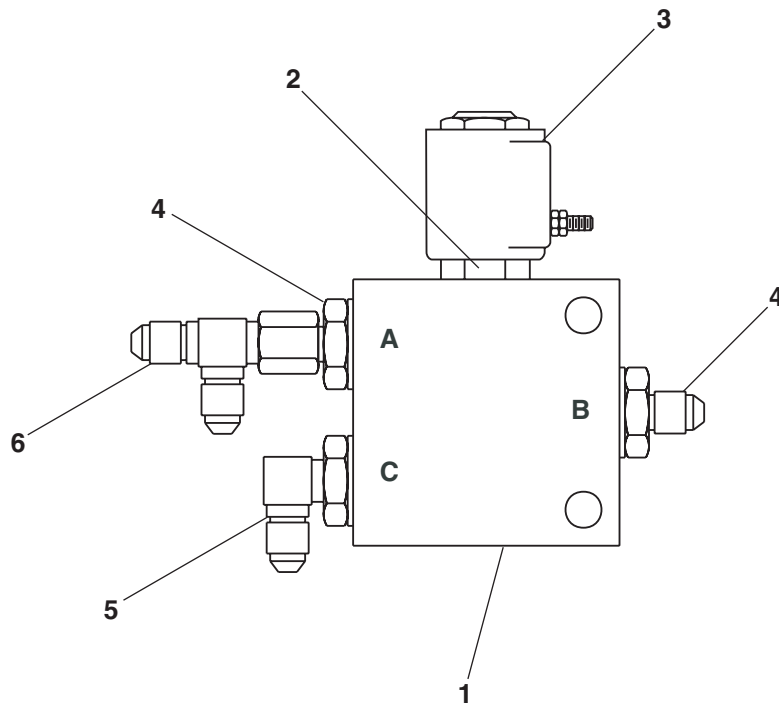
item	part no	qty	description
	0070570	1	Platform rotator, Parker
	0071275	1	Seal repair kit - (kit includes items 13 through 21)
1	8080018	2	Rack bolt
2	8080016	2	End cap
3	8080015	2	Piston
4	8080040	2	Cylinder
5	8080060	1	Rack </td
6	8080039	1	Housing
7	0073281	8	Tie rod
8	8080041	8	Lock nut
9	8080061	1	Pinion
10	8080038	2	Pinion bushing
11	8080062	2	Snap ring
12	8080064	1	Relief valve
13	Kit item	2	O-ring - (not sold separately)
14	Kit item	2	Parbat seal - (not sold separately)
15	Kit item	2	O-ring - (not sold separately)
16	Kit item	2	O-ring - (not sold separately)
17	Kit item	2	Parbat seal - (not sold separately)
18	Kit item	2	Polypak seal - (not sold separately)
19	Kit item	2	O-ring - (not sold separately)
20	Kit item	2	Parbat seal - (not sold separately)
21	Kit item	1	O-ring - (not sold separately)



AWV00214

Range valve

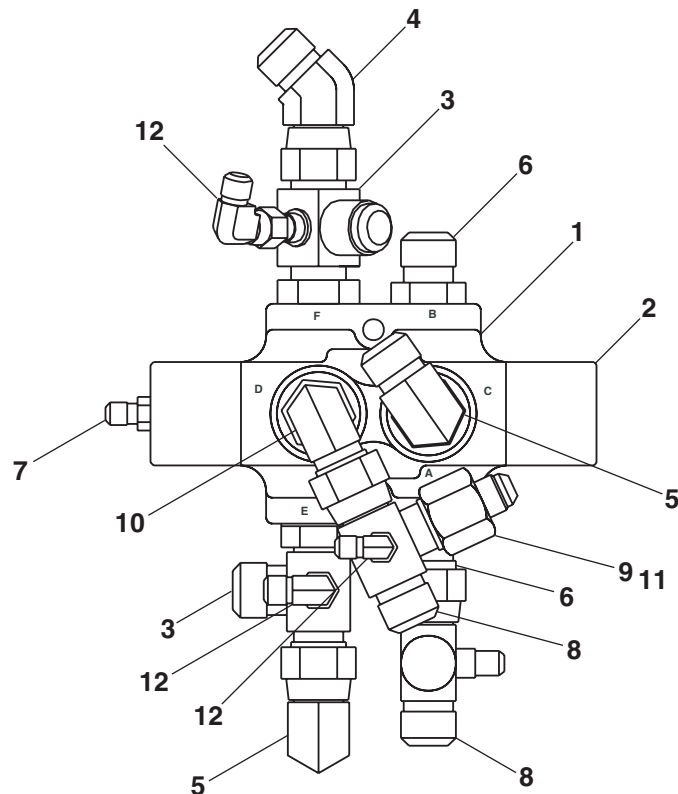
item	part no	qty	description
	0081981	1	Range valve
1	6010499	1	Range valve - (includes items 2 and 3)
	0073620	1	Seal repair kit
2	6010472	1	Cartridge - (factory preset, do not reset)
3	3040473	1	Cartridge solenoid, 10 volt DC
4	5065705	2	Straight thread adapter
5	5035318	1	Straight thread 90° elbow
6	5036703	1	Swivel nut run tee



AW0081981

Selector valve, 2 wheel drive

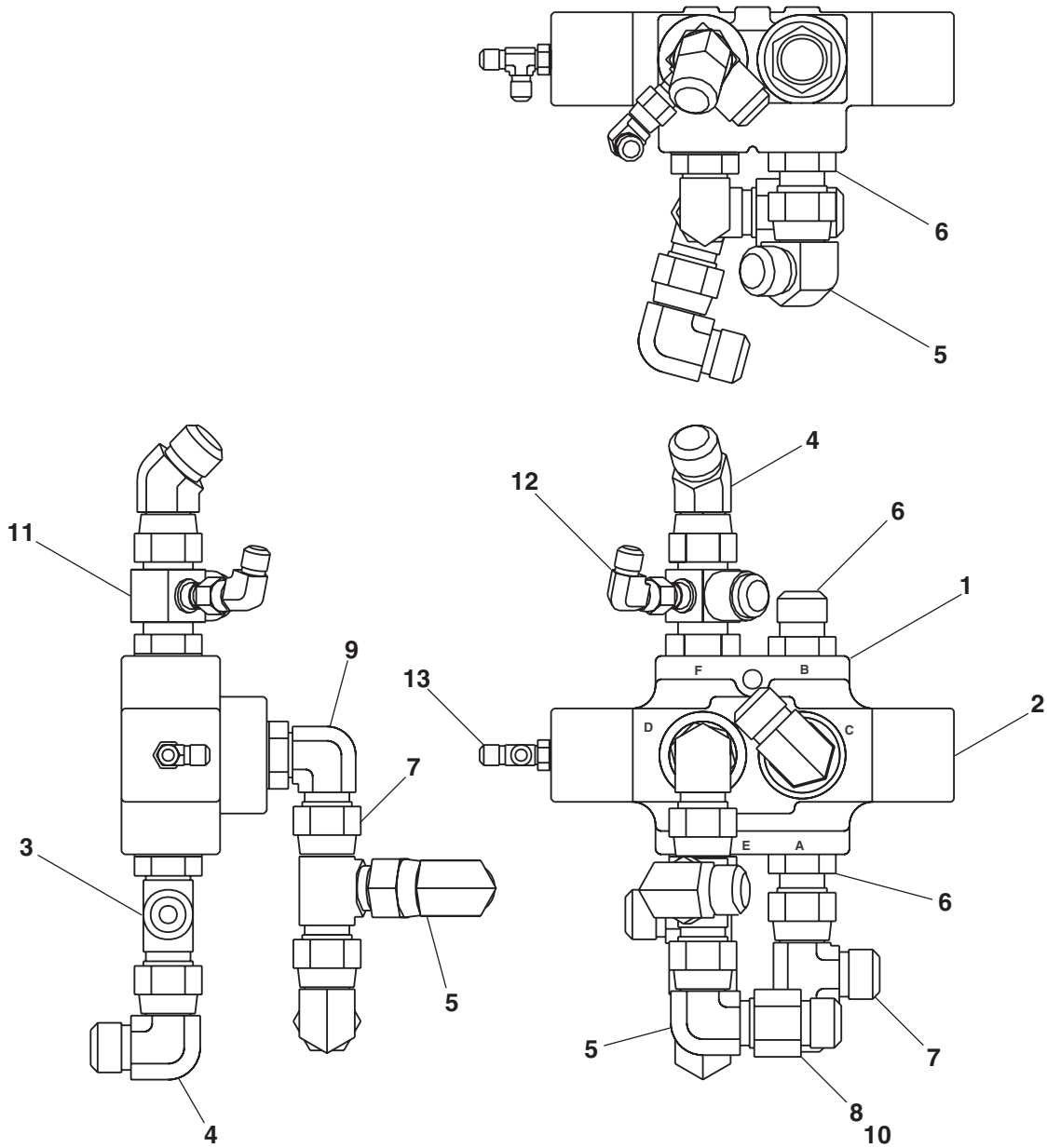
item	part no	qty	description
	0081425	1	Selector valve, 2 wheel drive
1	0080529	1	Selector valve - (includes item 2)
	0081127	1	Seal repair kit
2	0080528	1	Valve end cap
3	0081596	2	Special swivel nut run tee with side port
4	5036908	1	Swivel nut 45° elbow
5	5037008	2	Swivel nut 90° elbow
6	5065714	3	Straight thread adapter
7	5065703	1	Straight thread adapter
8	0081597	2	Special swivel nut run tee with side port
9	5064008	1	Tube end reducer
10	5035308	1	Straight thread 90° elbow
11	5063908	1	Fitting nut
12	5037005	3	Swivel nut 90° elbow



AW0081425

Selector valve, 4 wheel drive

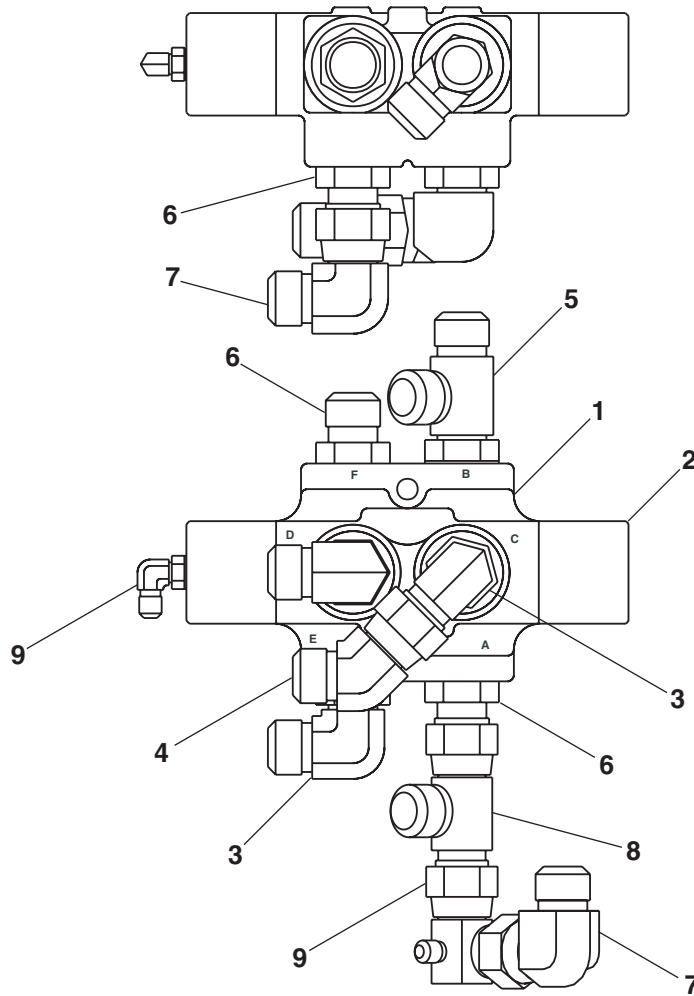
item	part no	qty	description
	0081598	1	Selector valve, 4 wheel drive
1	0080529	1	Selector valve - (includes item 2)
	0081127	1	Seal repair kit
2	0080528	1	Valve end cap
3	5036108	1	Straight thread run tee
4	5036908	1	Swivel nut 45° elbow
5	5037008	2	Swivel nut 90° elbow
6	5065714	3	Straight thread adapter
7	5036708	4	Swivel nut run tee
8	5064008	1	Tube end reducer
9	5035308	1	Straight thread 90° elbow
10	5063908	1	Fitting nut
11	0081596	1	Special swivel nut run tee with side port
12	5037005	1	Swivel nut 90° elbow
13	5036103	1	Straight thread run tee



AW0081598

Selector valve, right hand

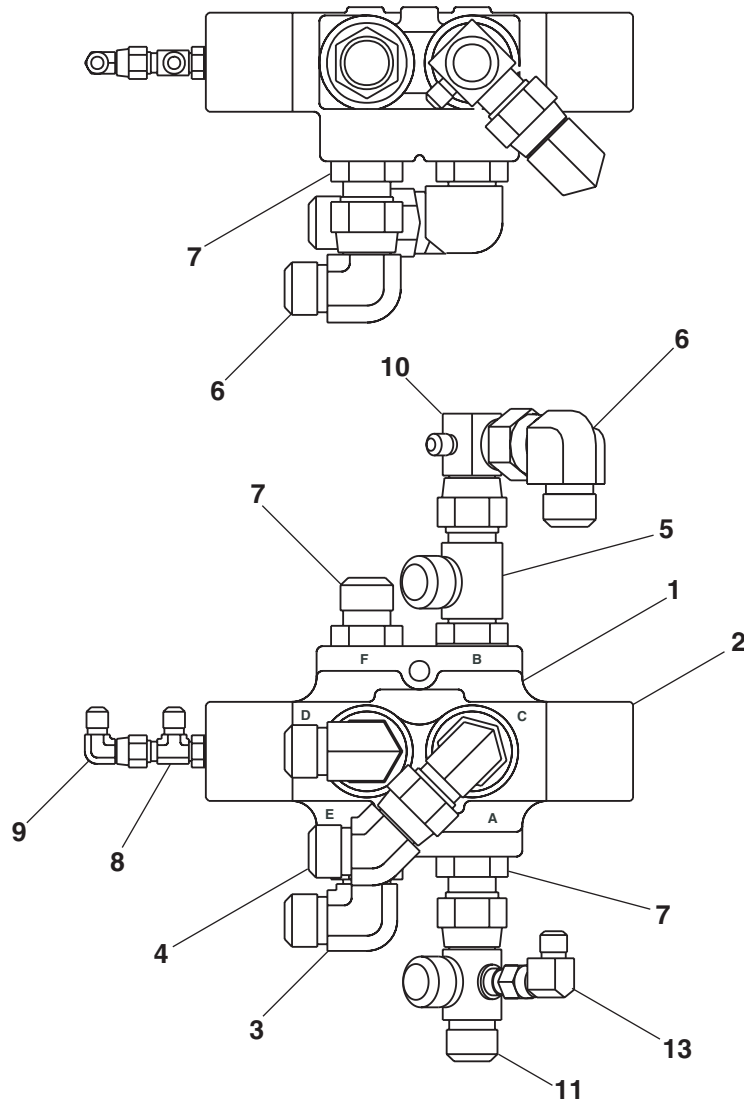
item	part no	qty	description
	0080928	1	Selector valve, right hand
1	0080529	1	Selector valve - (includes item 2)
	0081127	1	Seal repair kit
2	0080528	1	Valve end cap
3	5035308	2	Straight thread 90° elbow
4	5036908	1	Swivel nut 45° elbow
5	5036108	1	Straight thread run tee
6	5065714	3	Straight thread adapter
7	5037008	2	Swivel nut 90° elbow
8	5036708	1	Swivel nut run tee
9	5035303	1	Straight thread 90° elbow
10	0140500	1	Special swivel nut 90° elbow with side port



AW0080928

Selector valve, left hand

item	part no	qty	description
	0080929	1	Selector valve, left hand
1	0080529	1	Selector valve - (includes item 2)
	0081127	1	Seal repair kit
2	0080528	1	Valve end cap
3	5035308	2	Straight thread 90° elbow
4	5036908	1	Swivel nut 45° elbow
5	5036108	1	Straight thread run tee
6	5037008	2	Swivel nut 90° elbow
7	5065714	3	Straight thread adapter
8	5036103	1	Straight thread run tee
9	5037003	1	Swivel nut 90° elbow
10	0140288	1	Special swivel nut 90° elbow with side port
11	0081595	1	Special swivel nut run tee with side port
12	5037005	1	Swivel nut 90° elbow



AW0080929

**TB
60**



Turntable electrical, Cummins 3.3

item	part no	qty	description
1	0081998	1	Wiring box - (see page 3-36 for parts breakdown)
2	0083530	1	Lower controls - (see page 3-26 for parts breakdown)
3	3050002	2	Battery, 12 volt DC - 550 CCA
4	3020049	1	Switch, battery disconnect
5	3050008	2	Battery hold down
6	3050004	4	Battery hold down bolt
7	0181503	1	Bracket, tilt alarm
8	0073051	1	Bracket, battery disconnect switch
9	3020040	1	Tilt alarm sensor 5°
10	480652	1	Siren, tilt alarm
11	0083508	1	Wire harness, Cummins 3.3 engine
12	0081846	1	Wire harness, turntable
13	3040534	1	PWM module
14	5560666	2	Machine screw #6-32 x 1/2 inch long truss head
15	20082046	1	Actuator module - (included with engine)
16	5093008	2	Clamp
17	5093002	2	Clamp
18	5093024	4	Clamp
19	3040506	1	Solenoid, 12 volt DC
20	0073089	1	Placard, battery disconnect switch
21	3040469	1	Relay, 12 volt DC
22	3040047	2	Terminal .250 tab female slip-on fully insulated 22/18 wire
23	0150545	1	Jumper wire
24	0071568	1	Jumper wire
25	3044146	2	Terminal #10 ring tongue insulated 22/18 wire
26	3040082	4	Terminal .250 tab male slip-on fully insulated 16/14 wire
27	0130115	1	Jumper wire
28	0080483	1	Jumper wire
29	0080484	1	Jumper wire
30	0080482	1	Jumper wire
31	3030122	1	EPS anti-restart module
32	3040268	3	Insulator boot
33	0070705	1	Jumper wire
34	3044161	1	Terminal #10 stud insulated 16/14 wire
35	0090319	1	Jumper wire
36	3044162	1	Terminal 1/4 ring tongue insulated 16/14 wire
37	3040270	1	Insulator boot
38	3040269	1	Insulator boot
39	974289	2	Machine screw #6-32 x 1-1/4 inch long round head
40	984009	4	Nut #6-32 hex
41	986159	4	Washer #6 medium flat
42	987349	4	Washer #6 medium lock
43	987109	1	Washer 5/16 medium lock
44	5560034	6	Nut #10-24 self locking
45	974659	4	Machine screw #10-24 x 1/2 inch long round head
46	974709	2	Machine screw #10-24 x 1 inch long round head
47	986009	2	Washer #10 medium flat
48	5560703	1	Washer #10 star tooth lock
49	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
50	987099	9	Washer 1/4 medium lock
51	5560004	12	Nut 1/4-20 self locking
52	986019	12	Washer 1/4 medium flat
53	970049	7	Capscrew 1/4-20 x 1 inch long hex head grade 5
54	970009	3	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
55	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5

Parts list continued on next page

Turntable electrical, Cummins 3.3

item	part no	qty	description
56	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
57	5560033	2	Nut 3/8-16 self locking
58	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
59	987119	2	Washer 3/8 medium lock
60	986299	2	Washer 3/8 medium flat
61	970239	1	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
62	987109	1	Washer 5/16 medium lock

F

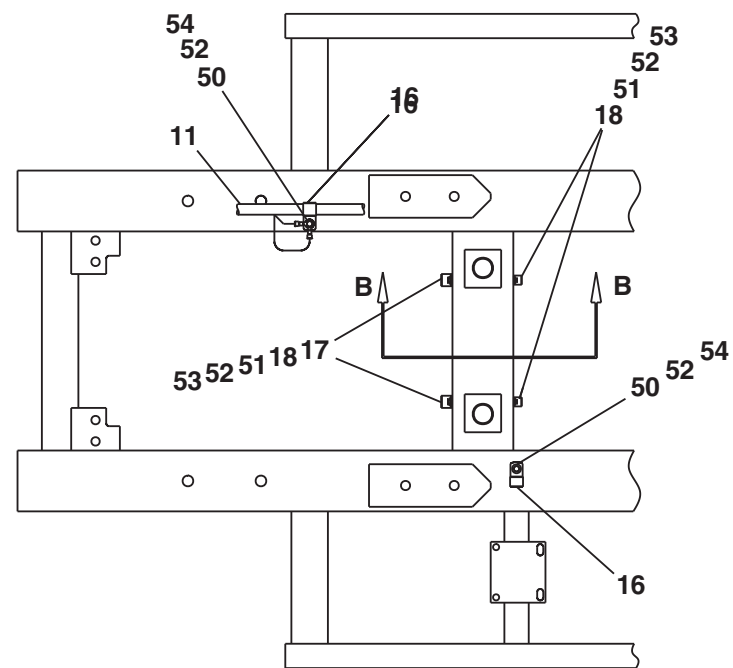
E

D

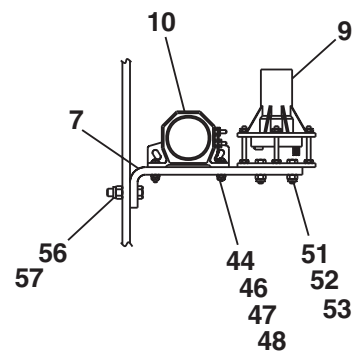
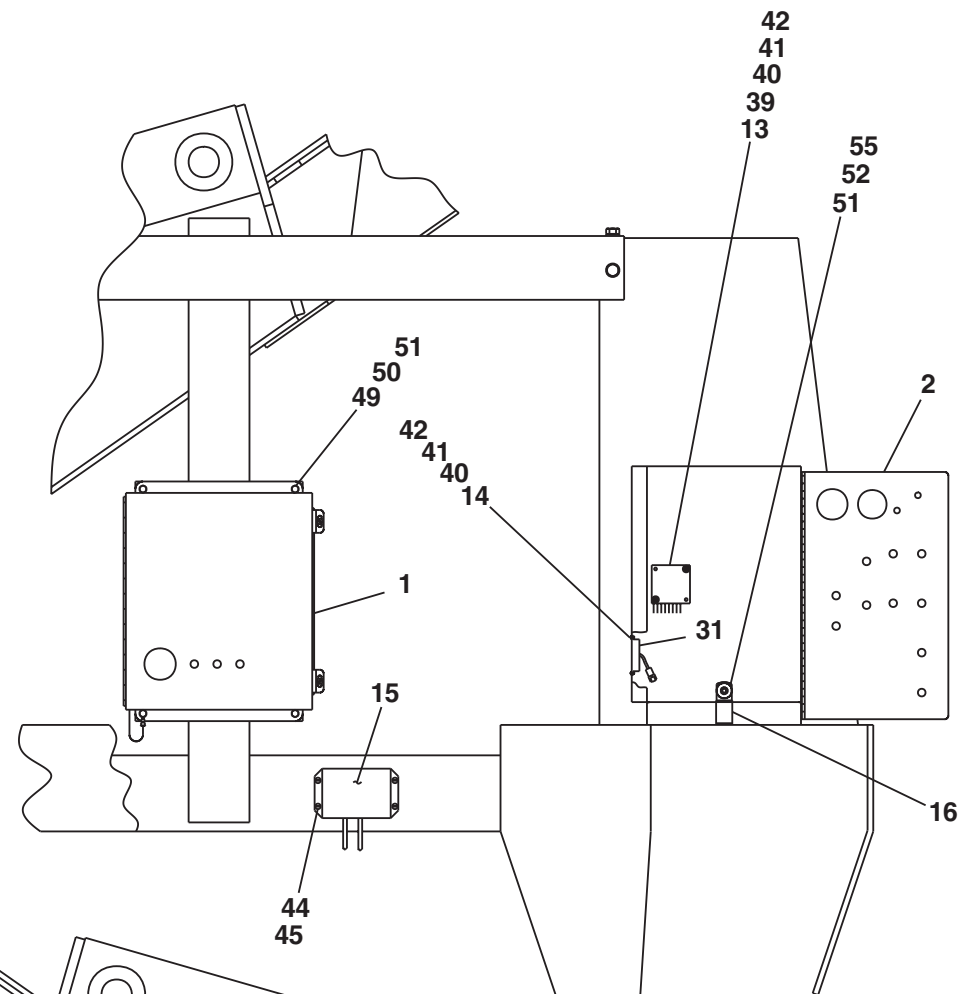
C

B

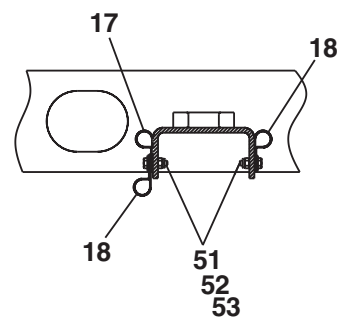
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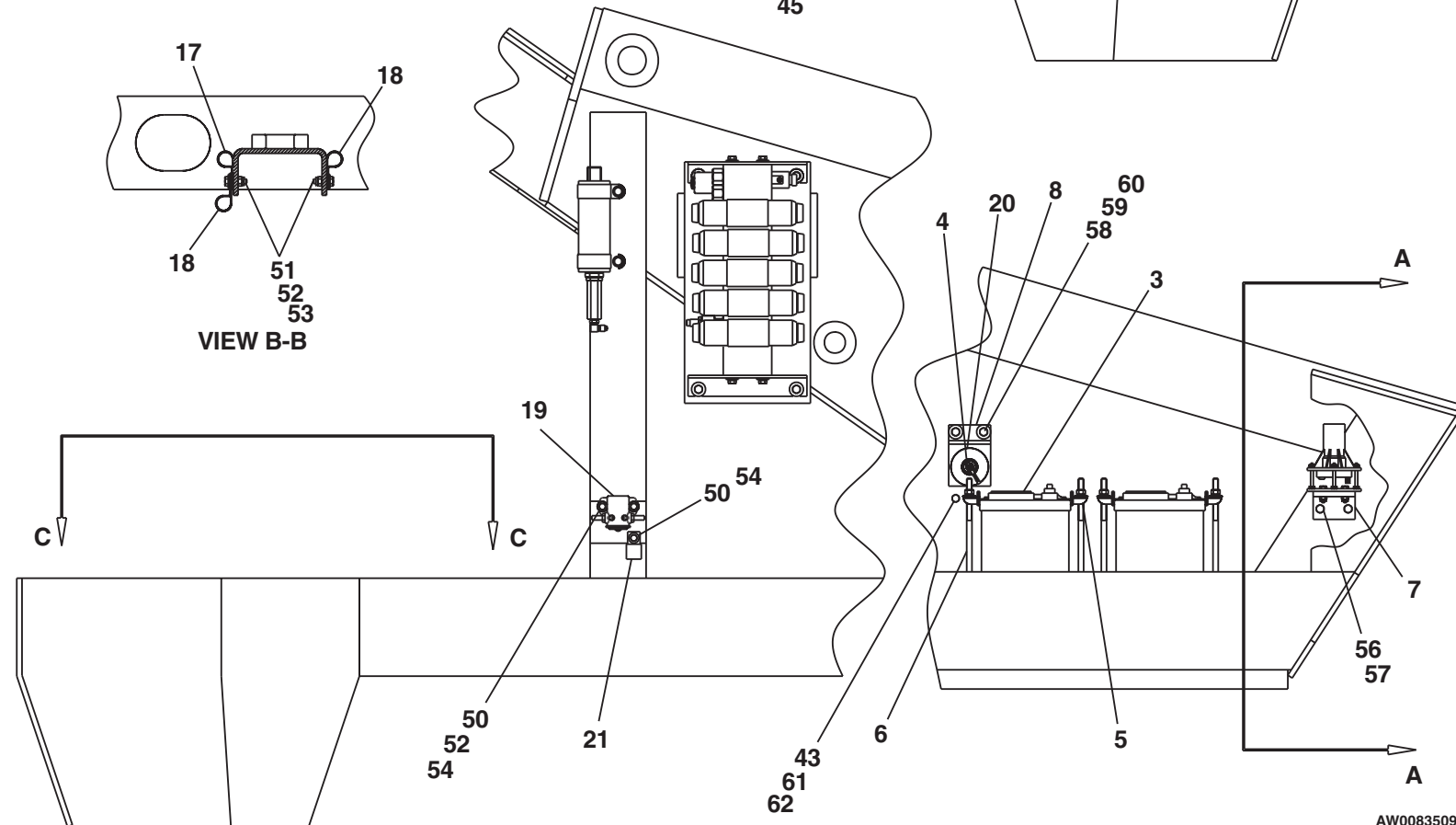
VIEW C-C



VIEW A-A



VIEW B-B



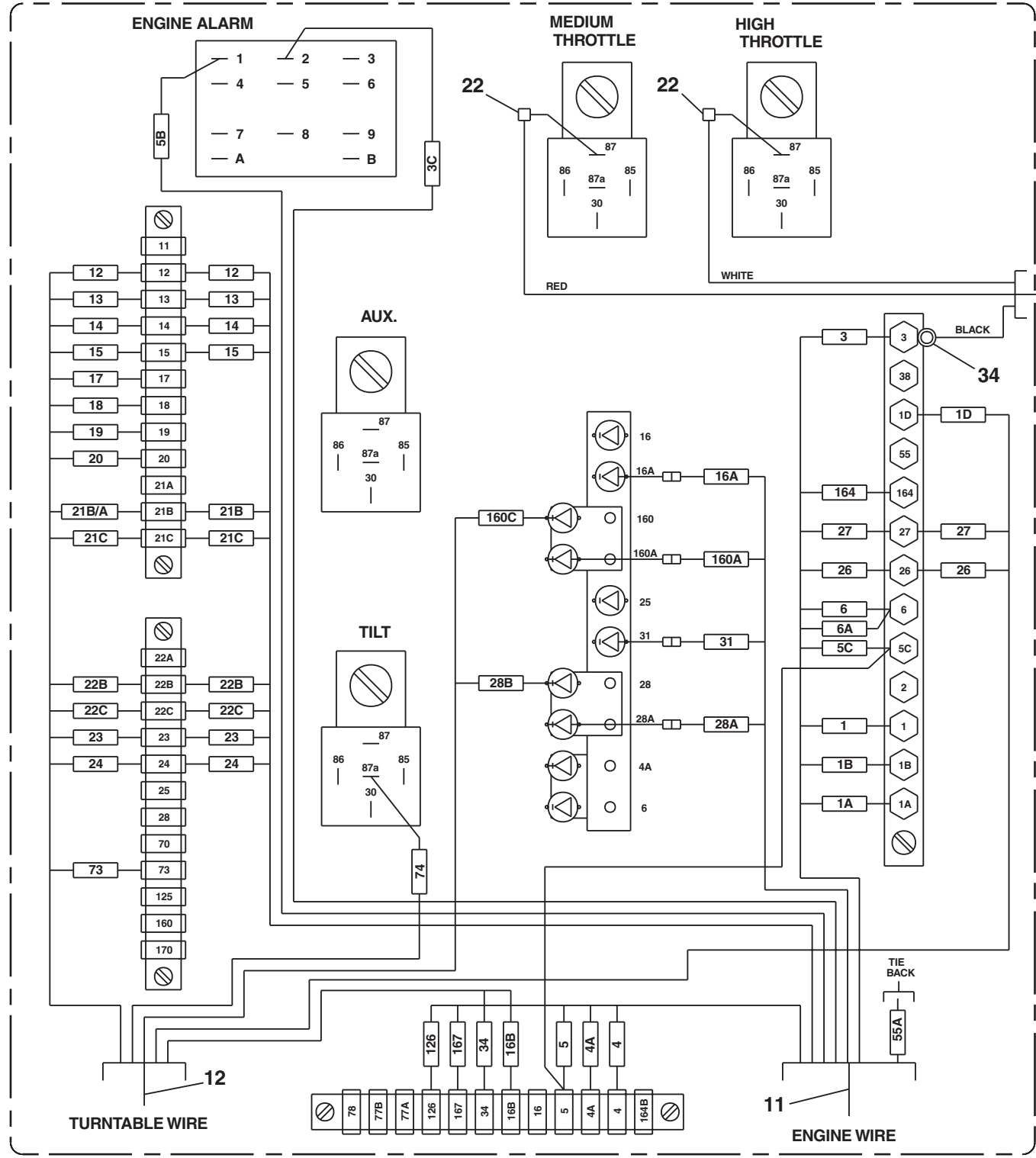
AW0083509-1

TITLE Turntable electrical
 Cummins 3.3, sheet 1
 Snorkel model TB 60

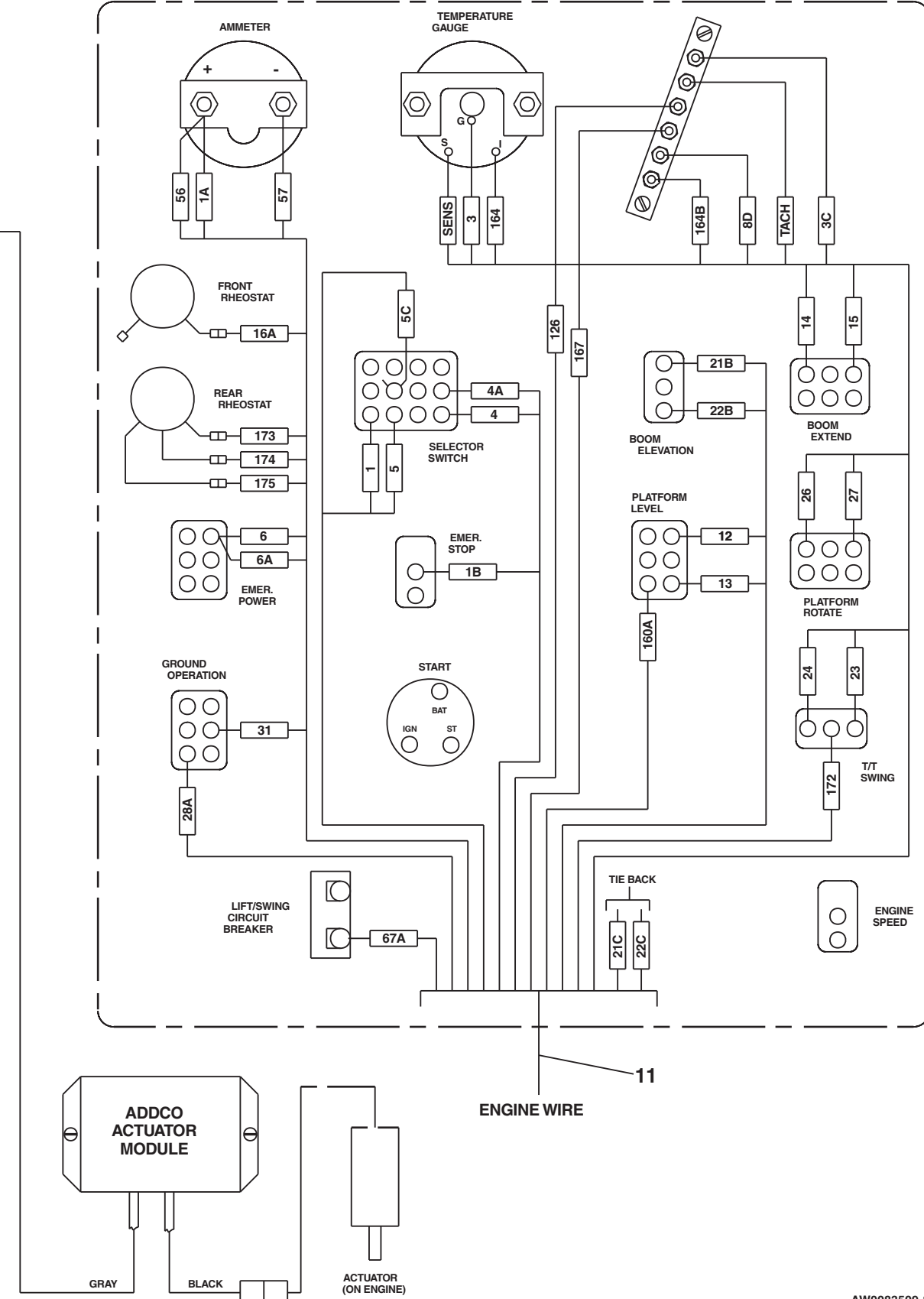


1 2 3 4 5 6 7 8 9

WIRING BOX



GROUND CONTROL PANEL



AW0083509-2

F

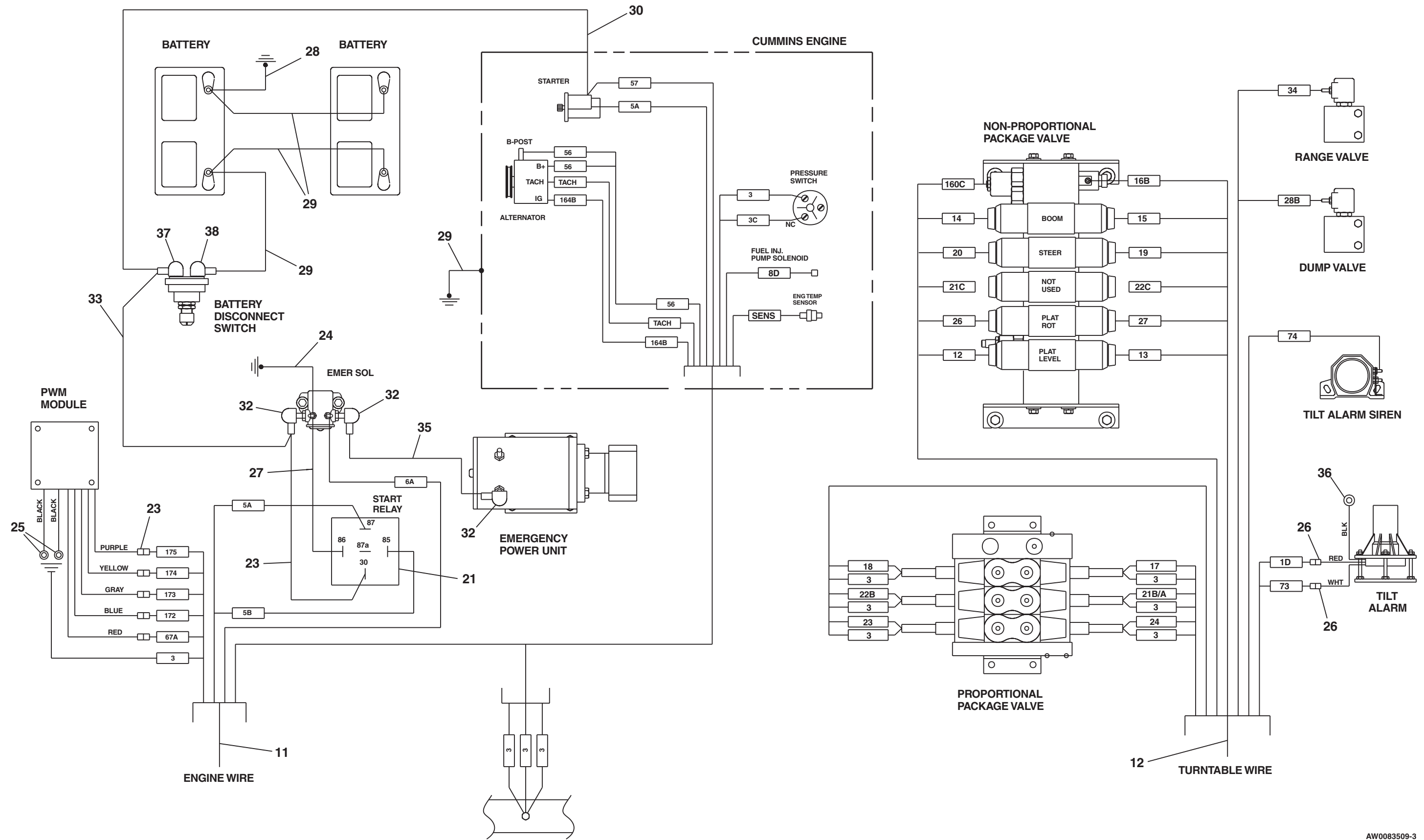
E

D

C

B

A



AW0083509-3

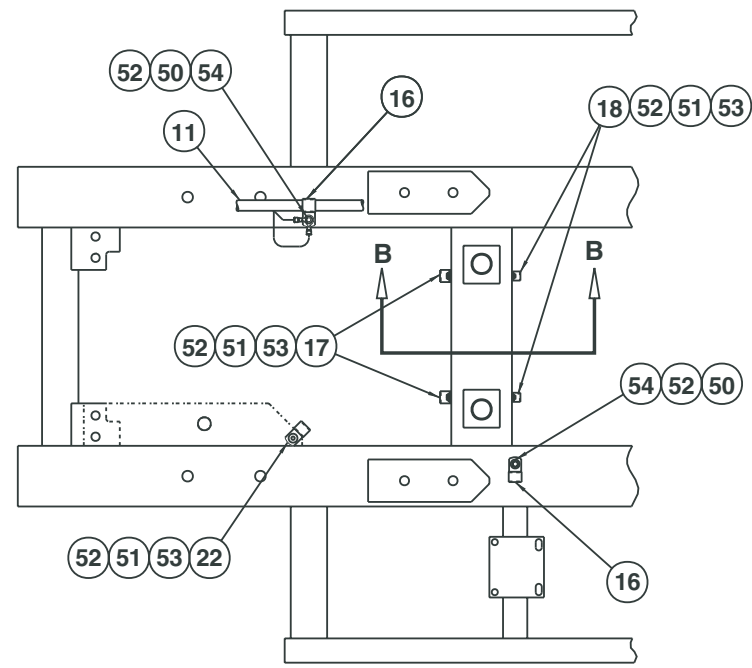
Turntable electrical, Deutz F4L-1011F

item	part no	qty	description
1	0081998	1	Wiring box - (see page 3-36 for parts breakdown)
2	0082032	1	Lower controls - (prior to 11-09-1999, see page 3-28 for parts breakdown)
	0083397	1	Lower controls - (after 11-09-1999, see page 3-31 for parts breakdown)
3	3020005	2	Battery, 12 volt DC - 550 CCA
4	3020049	1	Switch, battery disconnect
5	3050008	2	Battery hold down
6	3050004	4	Battery hold down bolt
7	0181503	1	Bracket, tilt alarm
8	0073051	1	Bracket, battery disconnect switch
9	3020040	1	Tilt alarm sensor 5°
10	480652	1	Siren, tilt alarm
11	0081859	1	Wire harness, Deutz engine - (before 11-08-99)
	0083395	1	Wire harness, Deutz engine - (after 11-08-99)
12	0081846	1	Wire harness, turntable
13	3040534	1	PWM module
14	0082029	1	Mount plate, actuator module - (before 3-20-00)
15	20082046	1	Actuator module
16	5093008	2	Clamp
17	5093004	2	Clamp
18	5093000	2	Clamp
19	3040506	2	Relay, 12 volt DC
20	0073089	1	Placard, battery disconnect switch
21	5560666	2	Machine screw #6-32 x 1/2 inch long truss head
22	5093002	1	Clamp
23	3030117	1	Engine protection module - (11-09-99 to 6-19-00)
	3030122	1	EPS anti-restart module - (after 6-19-00)
24	3072118	1	Temperature sensor - (11-08-99 to 6-19-00)
	3070039	1	Temperature sensor - (after 6-19-00)
25	3044146	1	Terminal #10 stud insulated 22/18 wire
26	3040082	4	Terminal .250 tab male slip-on fully insulated 16/14 wire
27	0151920	1	Alternator connection wire
28	0080483	1	Jumper wire
29	0080484	4	Jumper wire
30	0080482	1	Jumper wire
31	0151372	1	Jumper wire
32	0151370	1	Jumper wire
33	0070705	1	Jumper wire
34	0070724	1	Jumper wire
35	0090319	1	Jumper wire
36	3044162	1	Terminal 1/4 stud insulated 16/14 wire
37	3040270	1	Insulator boot
38	3040269	1	Insulator boot
39	974289	2	Machine screw #6-32 x 1-1/4 inch long round head
40	984009	4	Nut #6-32 hex
41	986159	4	Washer #6 medium flat
42	987349	4	Washer #6 medium lock
43	7630230	3	Sandwich mount - (after 3-20-00)
44	5560034	4	Nut #10-24 self locking
45	974659	2	Machine screw #10-24 x 1/2 inch long round head
46	974709	2	Machine screw #10-24 x 1 inch long round head
47	986009	2	Washer #10 medium flat
48	5560654	1	Washer #10 star tooth lock
49	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
50	987099	10	Washer 1/4 medium lock

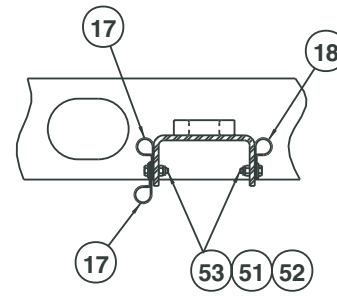
Parts list continued on next page

Turntable electrical, Deutz F4L-1011F

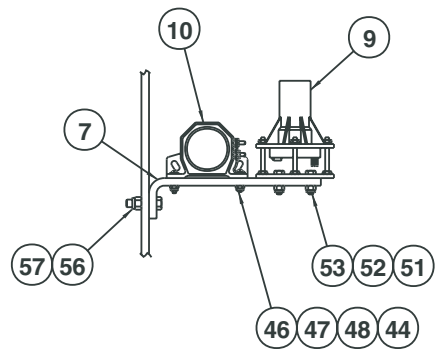
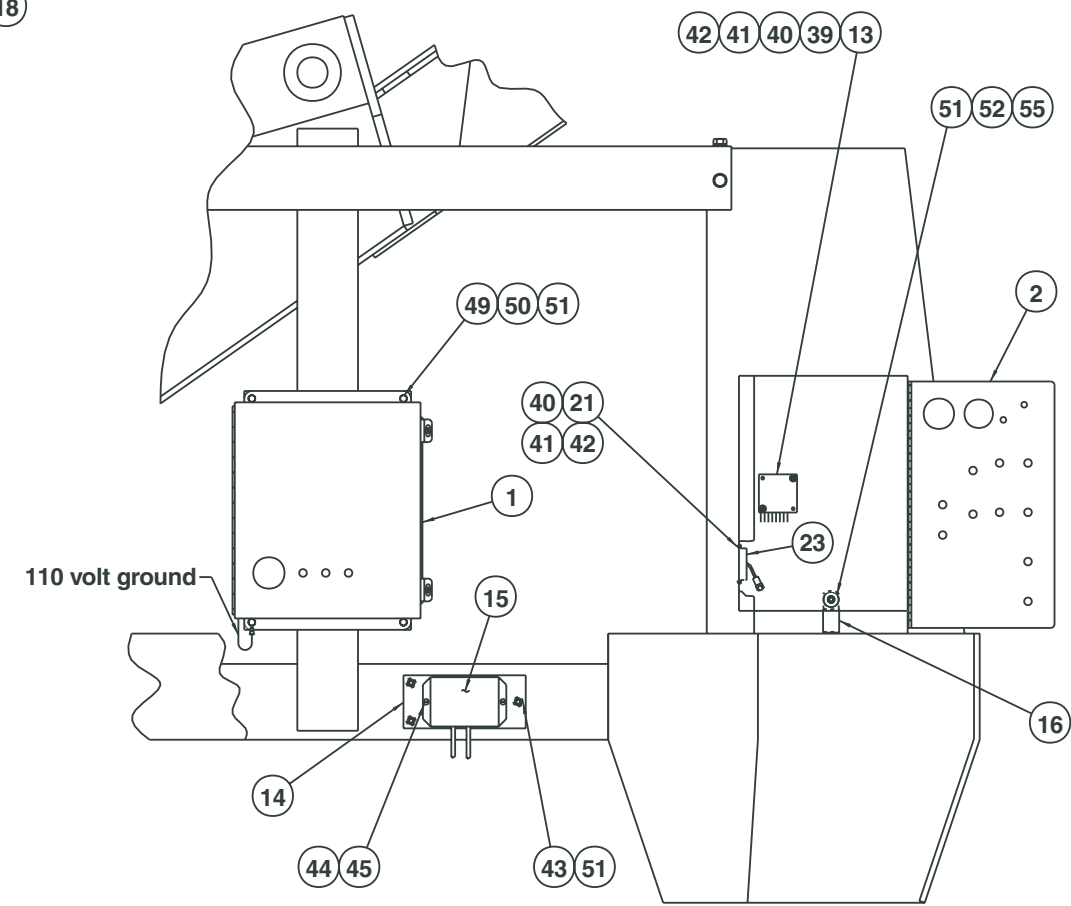
item	part no	qty	description
51	986019	10	Washer 1/4 medium flat
52	5560004	17	Nut 1/4-20 self locking
53	970049	9	Capscrew 1/4-20 x 1 inch long hex head grade 5
54	970009	6	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
55	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
56	972489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
57	5560033	2	Nut 3/8-16 self locking
58	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
59	987119	2	Washer 3/8 medium lock
60	986299	2	Washer 3/8 medium flat
61	970239	1	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
62	986269	2	Washer 5/16 medium flat
63	987109	1	Washer 5/16 medium lock
64	0082006	1	Alternator wire - (prior to 11-09-1999)
	0074579	1	Alternator wire - (after 11-09-1999)
65	0181026	1	Diode wire
66	3044161	1	Terminal #10 stud insulated 16/14 wire
67	3040268	3	Insulator boot
68	3040452	2	Insulator boot
69	5093002	1	Clamp



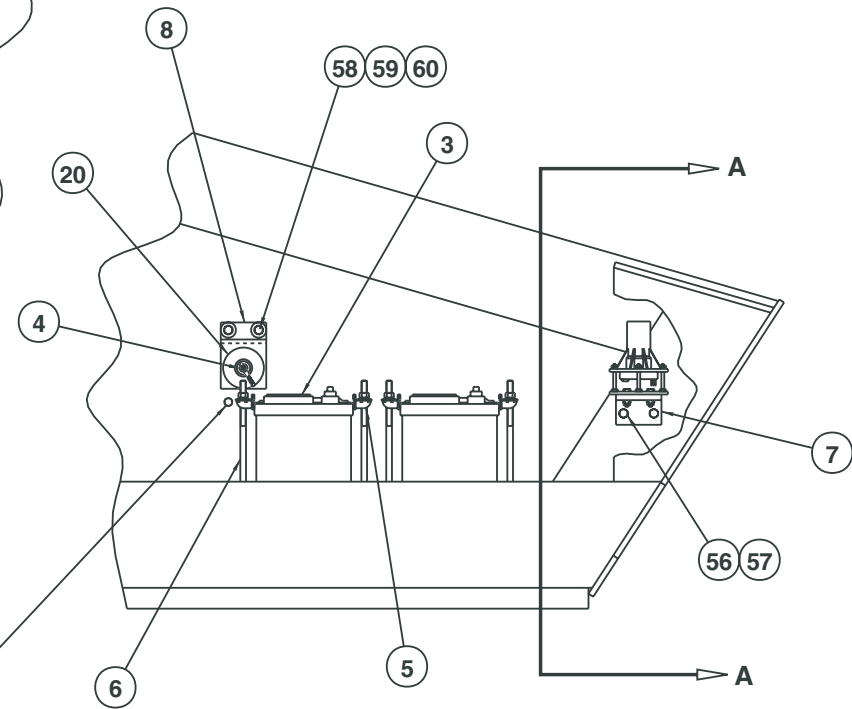
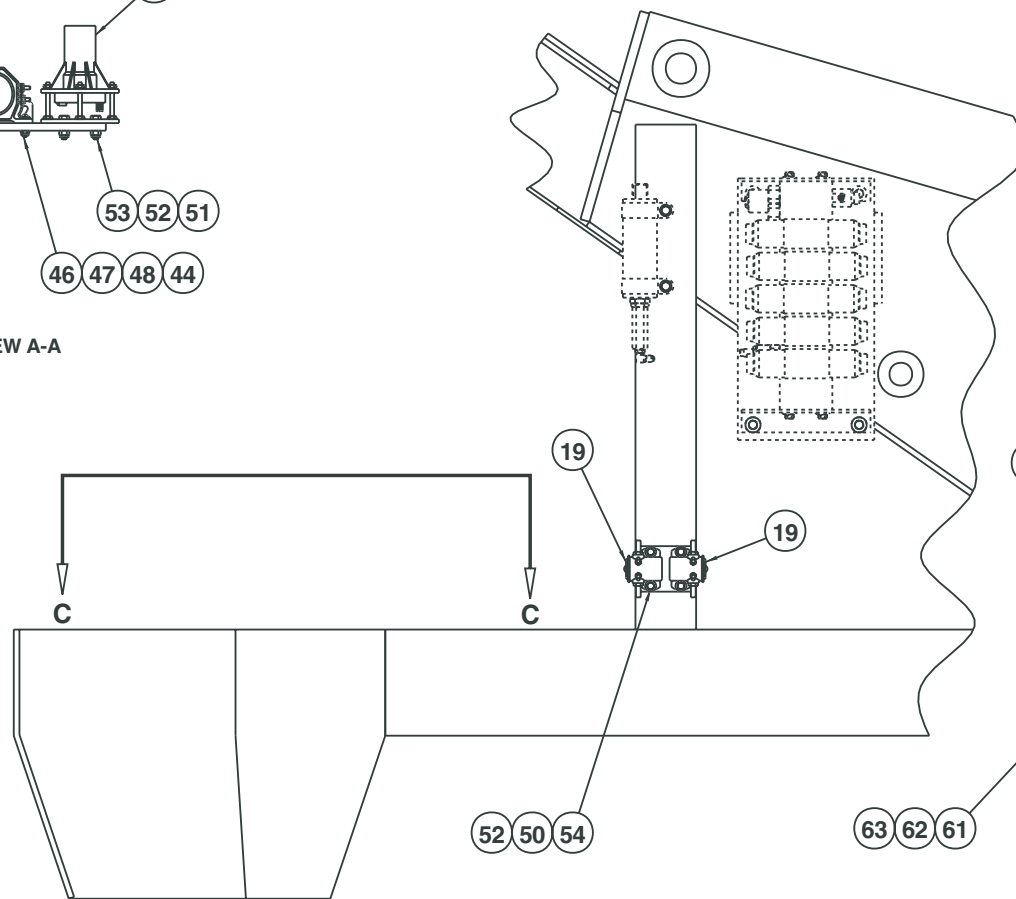
VIEW C-C



VIEW B-B



VIEW A-A



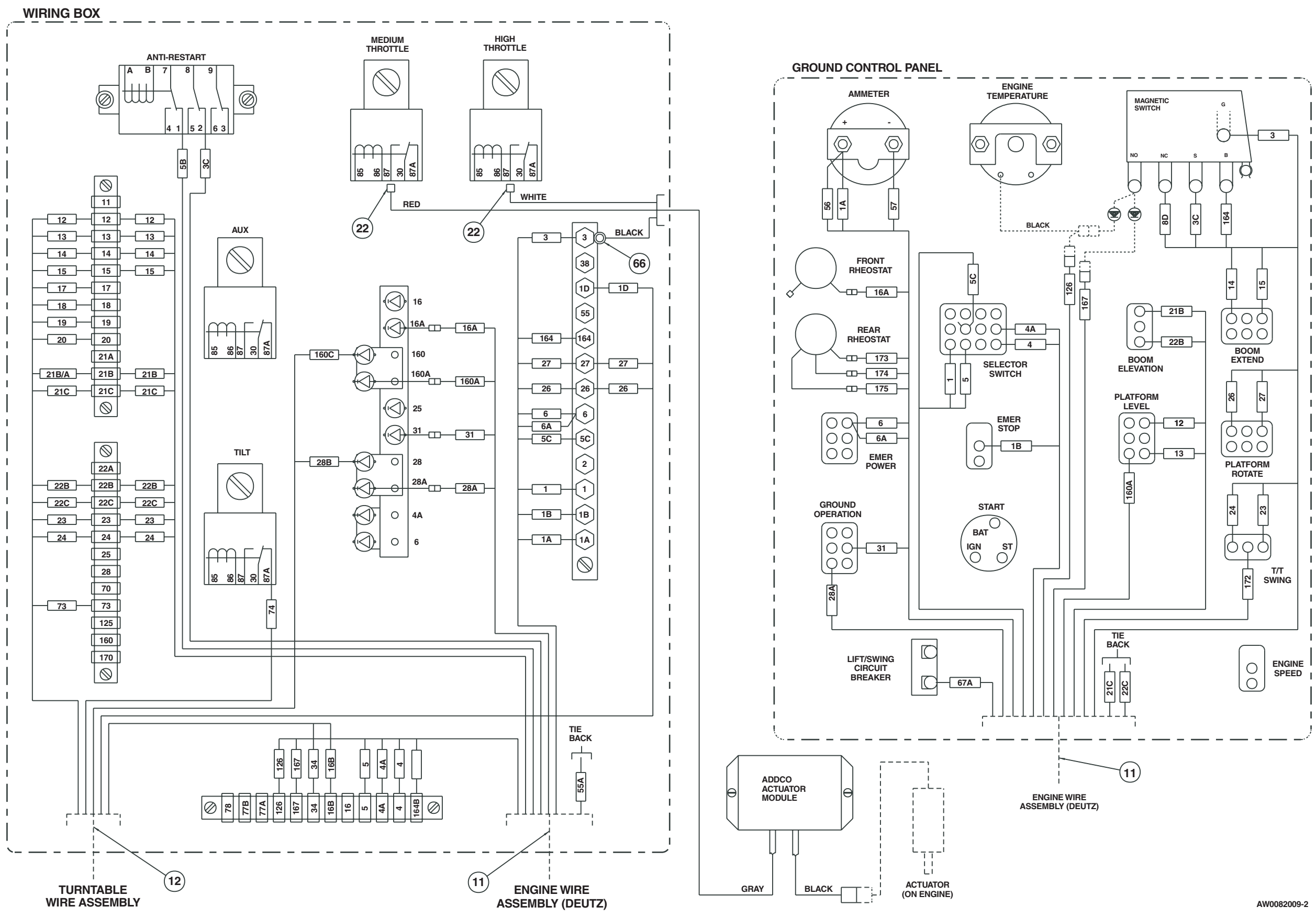
AW0082009-1

TITLE Turntable electrical
Deutz F4L-1011F - sheet 1
Snorkel model TB 60



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Used on machines manufactured prior to 11-09-1999

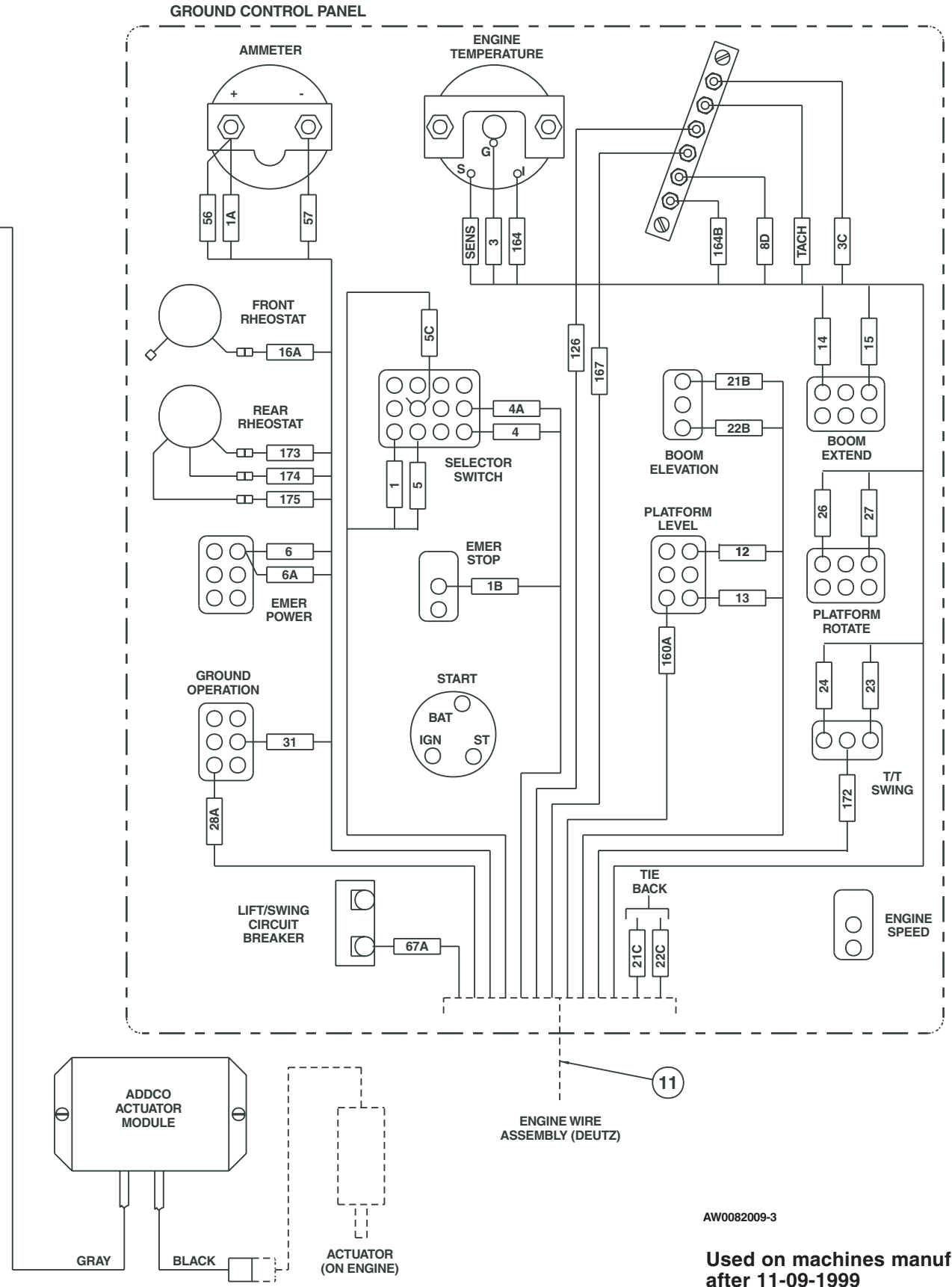
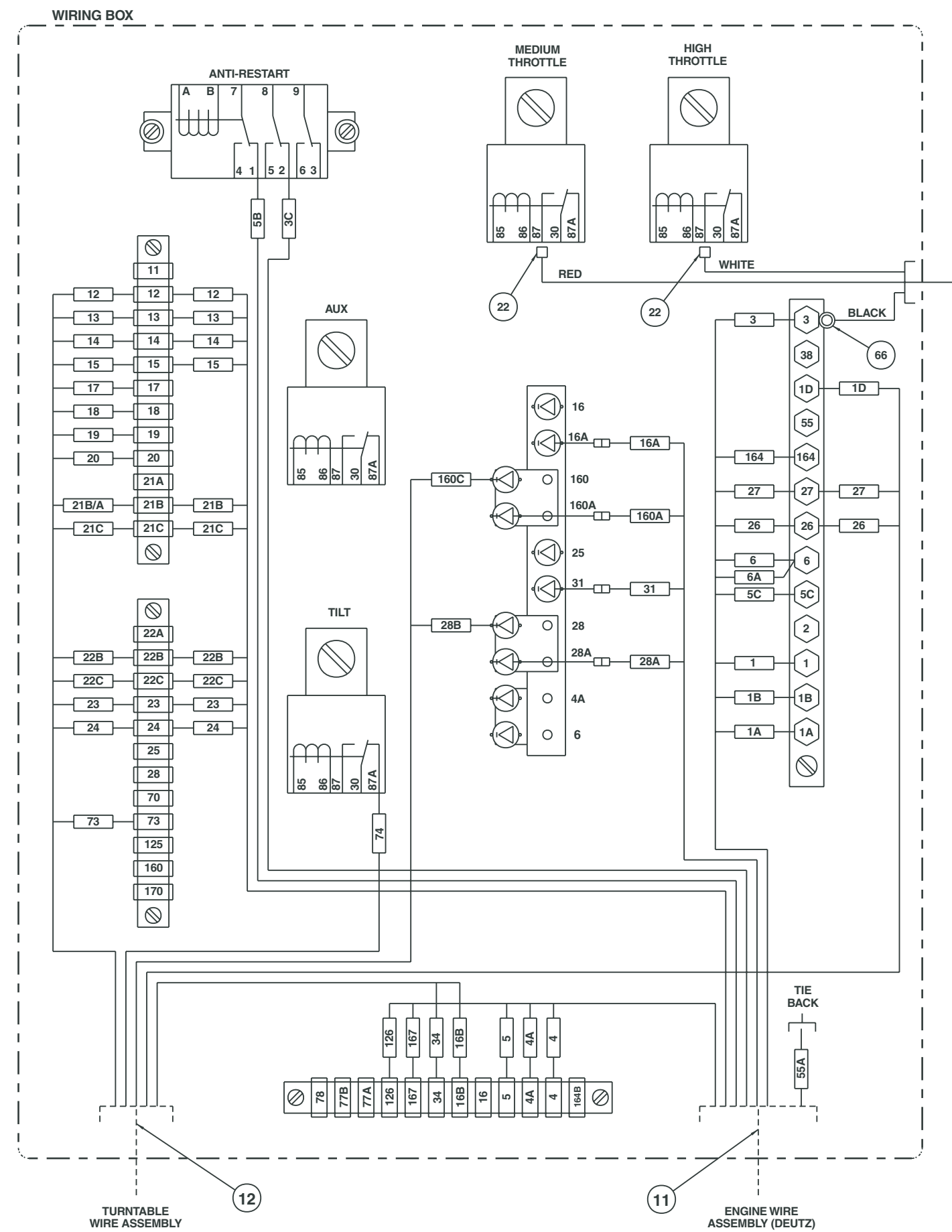


TITLE Turntable electrical
Deutz F4L-1011F - sheet 2
Snorkel model TB 60

DWG. 0082009-2

AW0082009-2

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AW0082009-3

Used on machines manufactured after 11-09-1999

TITLE Turntable electrical
Deutz F4L-1011F - sheet 3
Snorkel model TB 60



DWG. 0082009-3

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1 2 3 4 5 6 7 8 9

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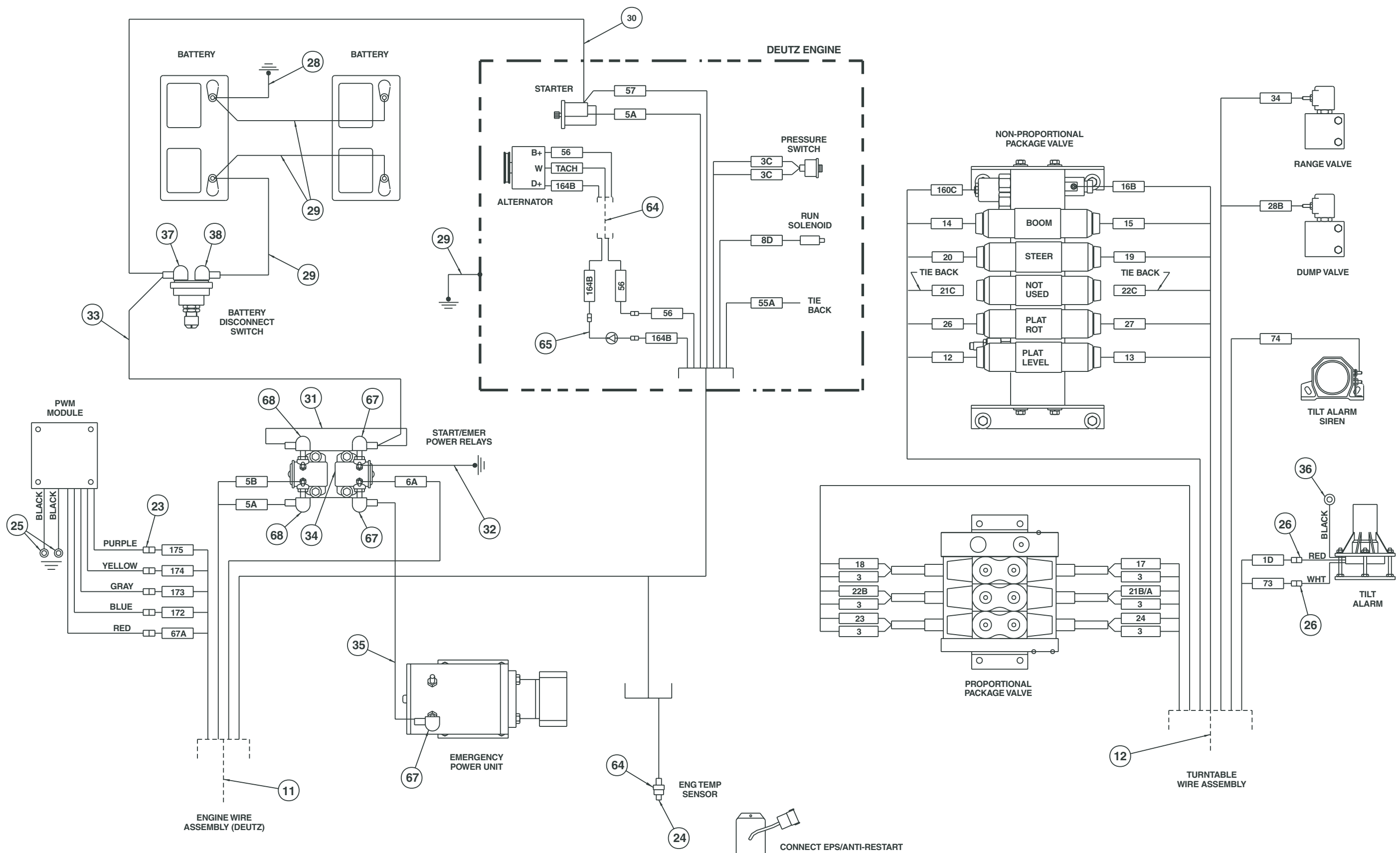
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CONNECT EPS/ANTI-RESTART
MODULE TO EPS WIRE ASSEMBLY
COMING FROM GROUND CONTROLS

AW0082009-4

Turntable electrical, Ford LRG-423

item	part no	qty	description
1	0081998	1	Wiring box - (see page 3-36 for parts breakdown)
2	0081999	1	Lower controls - (see page 3-32 for parts breakdown)
3	3050002	1	Battery, 12 volt DC - 550 CCA
4	3020049	1	Switch, battery disconnect
5	3050008	1	Battery hold down
6	3050004	2	Battery hold down bolt
7	0181503	1	Bracket, tilt alarm
8	0073051	1	Bracket, battery disconnect switch
9	3020040	1	Tilt alarm sensor 5°
10	480652	1	Siren, tilt alarm
11	0111865	1	Wire harness, Ford LRG-423 engine
12	0081846	1	Wire harness, turntable
13	3040534	1	PWM module
14	0074128	1	Mount plate, governor
15	7630319	1	Barber/Coleman governor
16	5093008	4	Clamp
17	5093004	5	Clamp
18	986299	3	Washer 3/8 medium flat
19	3040506	2	Relay 12 volt DC
20	0073089	1	Placard, battery disconnect switch
21	3040452	2	Insulator boot
22	3040268	3	Insulator boot
23	970239	1	Washer 5/16 medium lock
24	986269	1	Washer 5/16 medium flat
25	3044146	1	Terminal #10 stud insulated 22/18 wire
26	3040082	2	Terminal .250 tab male slip-on fully insulated 16/14 wire
27	987119	3	Washer 3/8 medium lock
28	0080483	1	Jumper wire
29	0080484	2	Jumper wire
30	0080482	1	Jumper wire
31	0151372	1	Jumper wire
32	0151370	1	Jumper wire
33	0070705	1	Jumper wire
34	0070724	1	Jumper wire
35	0090319	1	Jumper wire
36	3044162	1	Terminal 1/4 stud insulated 16/14 wire
37	3040270	1	Insulator boot
38	3040269	1	Insulator boot
39	974289	2	Machine screw #6-32 x 1-1/4 inch long round head
40	984009	2	Nut #6-32 hex
41	986159	2	Washer #6 medium flat
42	987349	2	Washer #6 medium lock
43	970239	1	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
44	5560034	4	Nut #10-24 self locking
45	5560649	2	Machine screw #10-24 x 1 inch long truss head
46	974709	2	Machine screw #10-24 x 1 inch long round head
47	986009	2	Washer #10 medium flat
48	5560654	1	Washer #10 star tooth lock
49	970239	5	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
50	987099	10	Washer 1/4 medium lock

Parts list continued on next page

Turntable electrical, Ford LRG-423

item	part no	qty	description
51	5560004	16	Nut 1/4-20 self locking
52	986019	16	Washer 1/4 medium flat
53	970049	10	Capscrew 1/4-20 x 1 inch long hex head grade 5
54	970009	6	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
55	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
56	972489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
57	5560033	2	Nut 3/8-16 hex self locking
58	970469	3	Capscrew 3/8-16 x 1 inch long hex head grade 5
59	0081558	1	Jumper wire
60	5093006	1	Clamp
61	0111887	1	Wire harness, crank sensor

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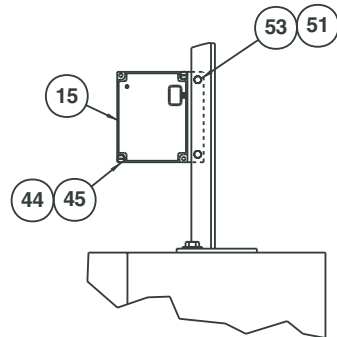
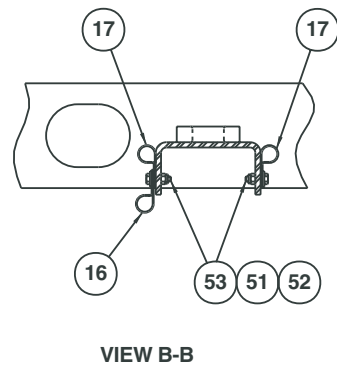
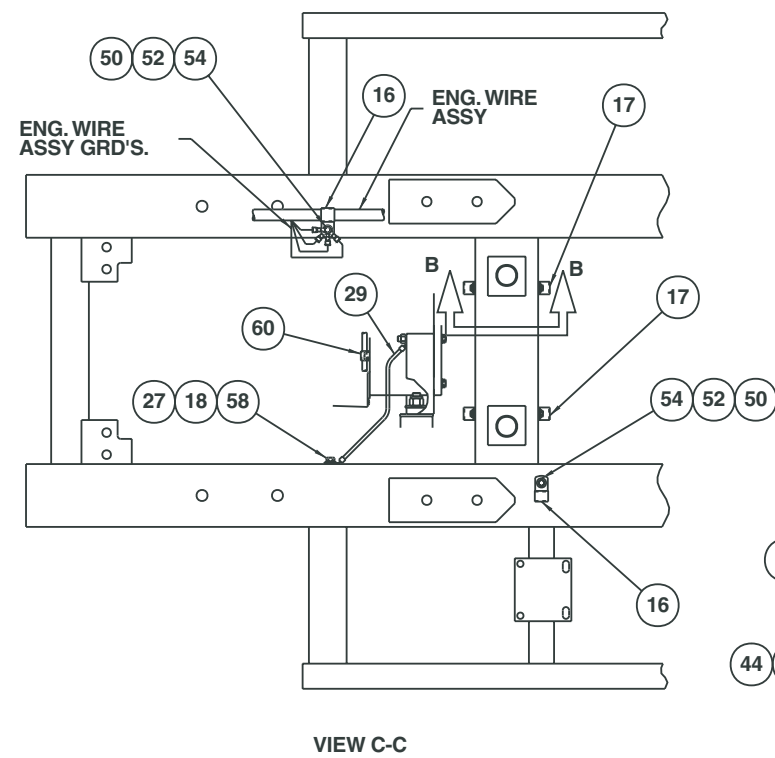
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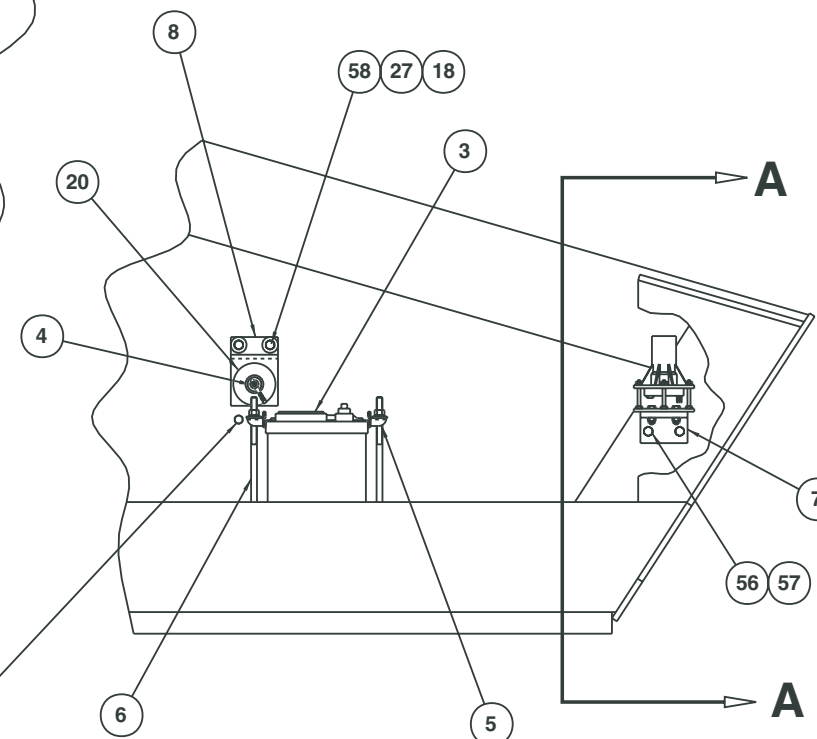
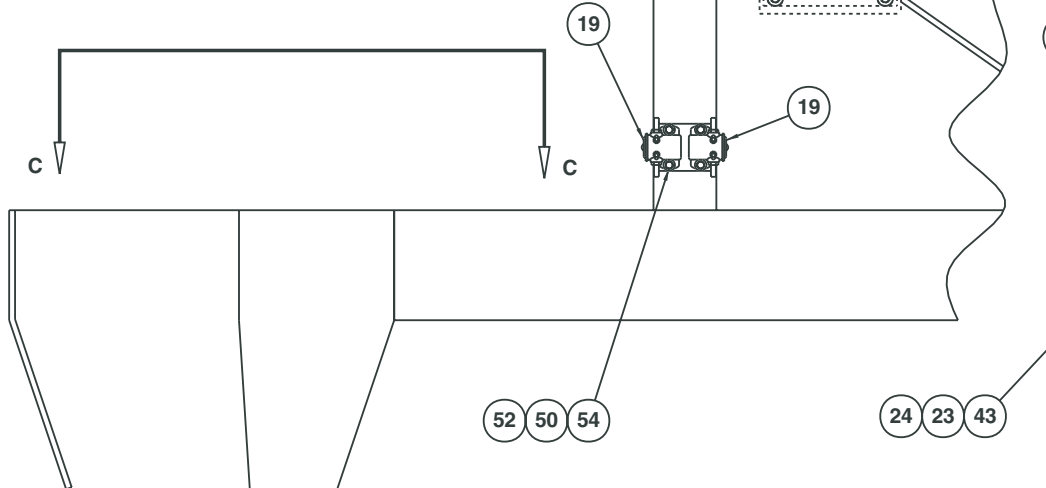
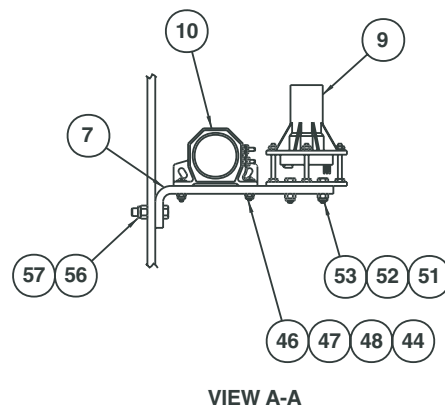
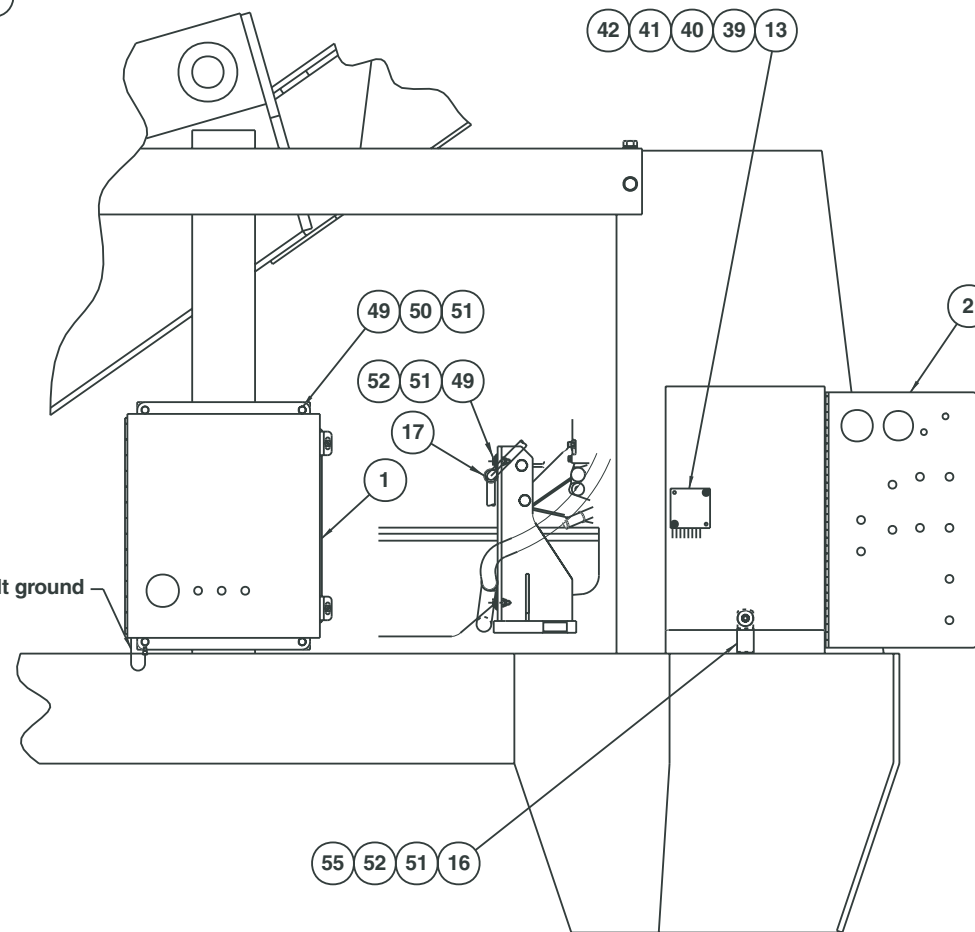
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110 Volt ground



AW0082085-1

DWG. 0082085-1

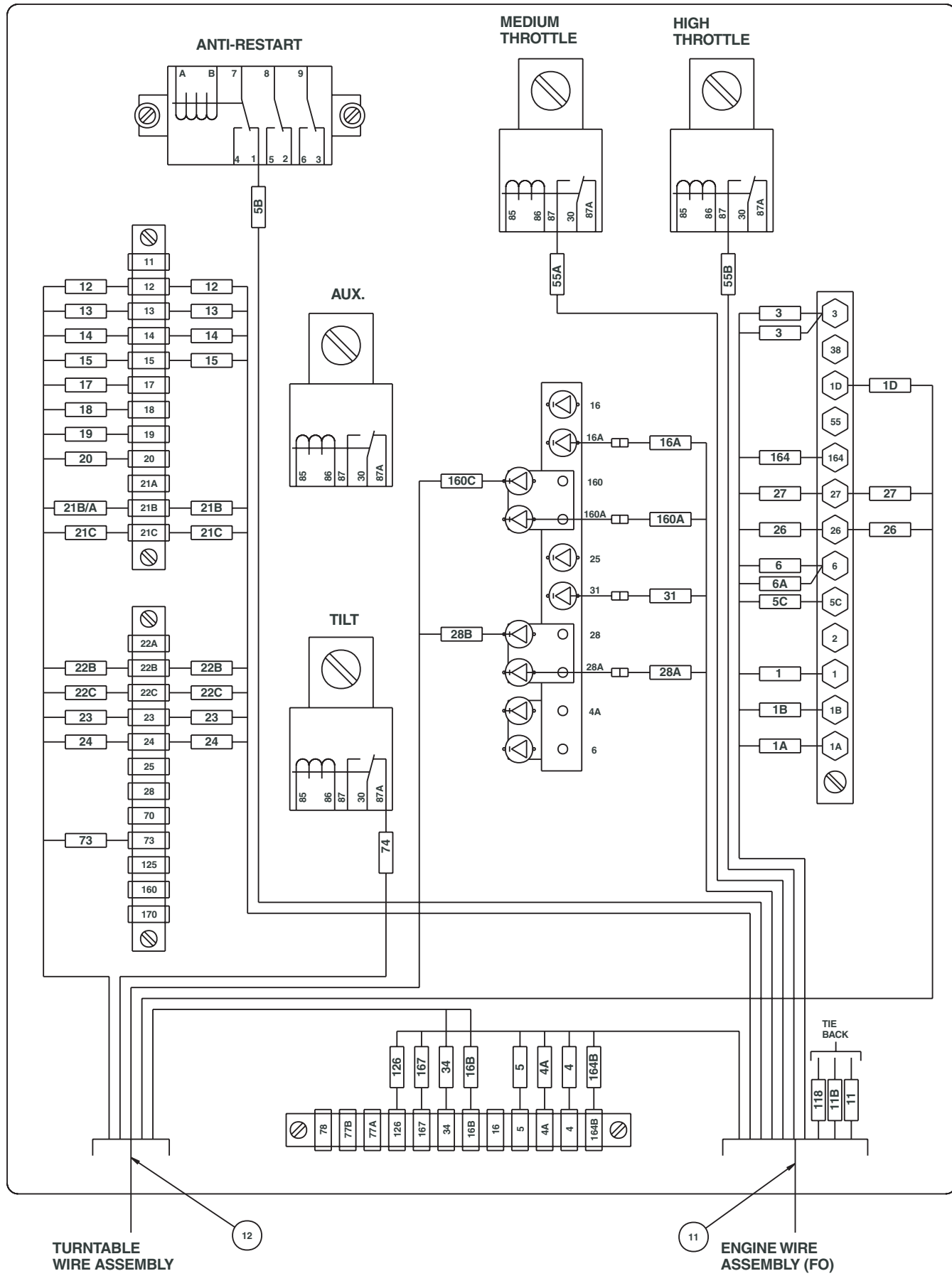
TITLE Turntable electrical
 Ford LRG-423 - sheet 1
 Snorkel model TB 60



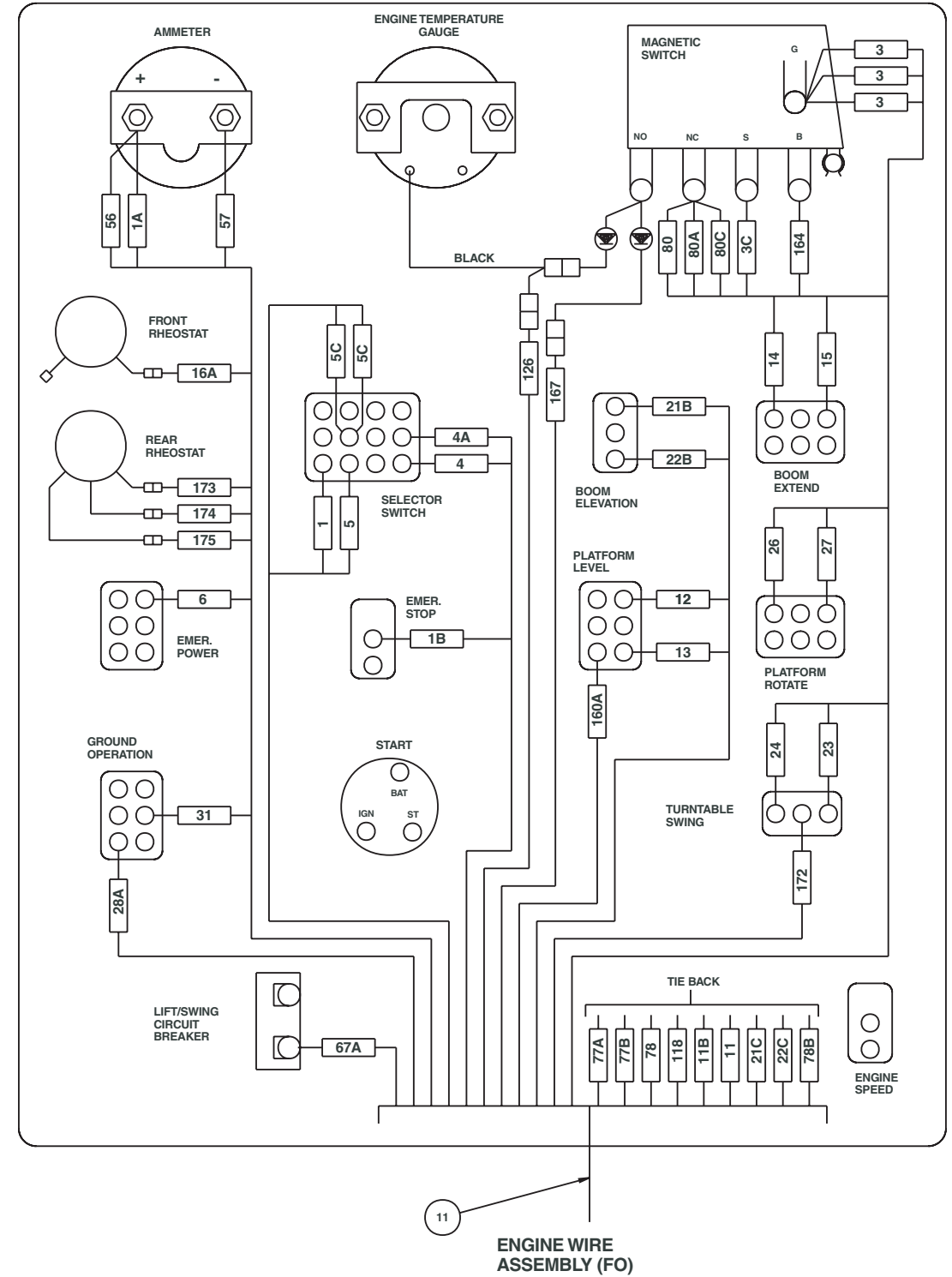
Page 3 - 17

1 2 3 4 5 6 7 8 9

WIRING BOX



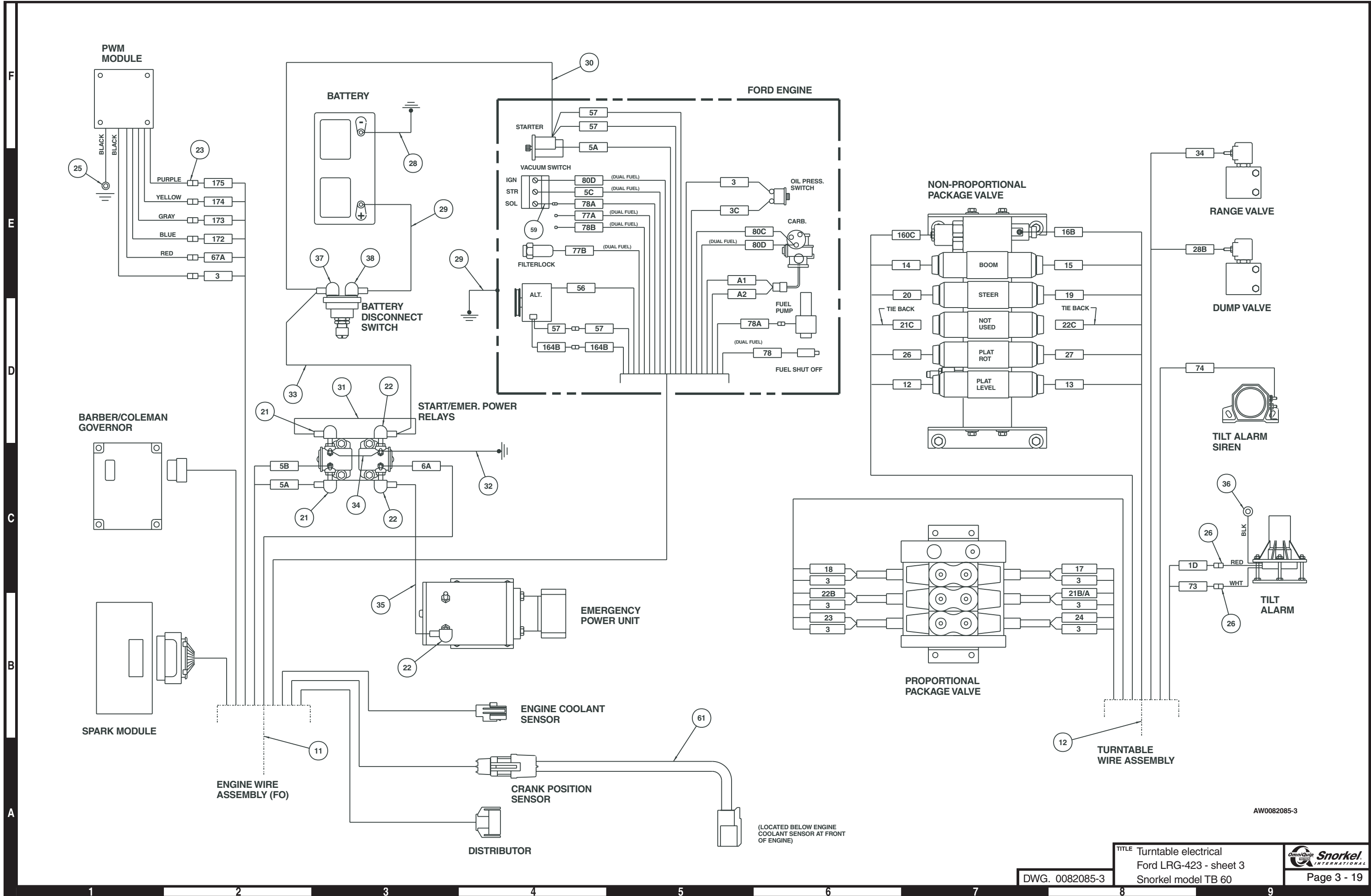
GROUND CONTROL PANEL



AW0082085-2

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AW0082085-3

Turntable electrical, Ford LRG-425

item	part no	qty	description
1	0082689	1	Wiring box - (see page 3-40 for parts breakdown)
2	0082691	1	Lower controls - (see page 3-35 for parts breakdown)
3	3050002	1	Battery, 12 volt DC - 550 CCA
4	3020049	1	Switch, battery disconnect
5	3050008	1	Battery hold down
6	3050004	2	Battery hold down bolt
7	0181503	1	Bracket, tilt alarm
8	0073051	1	Bracket, battery disconnect switch
9	3020040	1	Tilt alarm sensor 5°
10	480652	1	Siren, tilt alarm
11	0111865	1	Wire harness, Ford LRG-423 engine
12	0081846	1	Wire harness, turntable
13	3040534	1	PWM module
14	0071563	1	Jumper wire
15	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
16	5093008	4	Clamp
17	5093004	4	Clamp
18	986299	3	Washer 3/8 medium flat
19	3040506	2	Relay 12 volt DC
20	0073089	1	Placard, battery disconnect switch
21	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
22	3040268	3	Insulator boot
23	970239	1	Washer 5/16 medium lock
24	986269	1	Washer 5/16 medium flat
25	3044146	1	Terminal #10 stud insulated 22/18 wire
26	3040082	2	Terminal .250 tab male slip-on fully insulated 16/14 wire
27	987119	3	Washer 3/8 medium lock
28	0080483	1	Jumper wire
29	0080484	2	Jumper wire
30	0080482	1	Jumper wire
31	5093008	1	Clamp
32	0151370	1	Jumper wire
33	0070705	1	Jumper wire
34	970469	3	Capscrew 3/8-16 x 1 inch long hex head grade 5
35	0090319	1	Jumper wire
36	3044162	1	Terminal 1/4 stud insulated 16/14 wire
37	3040270	1	Insulator boot
38	3040269	1	Insulator boot
39	974289	2	Machine screw #6-32 x 1-1/4 inch long round head
40	984009	2	Nut #6-32 hex
41	986159	2	Washer #6 medium flat
42	987349	2	Washer #6 medium lock
43	970239	1	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
44	5560034	2	Nut #10-24 self locking
45	5560033	2	Nut 3/8-16 self locking
46	974709	2	Machine screw #10-24 x 1 inch long round head
47	986009	2	Washer #10 medium flat
48	5560654	1	Washer #10 star tooth lock
49	970239	5	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
50	987099	8	Washer 1/4 medium lock

Parts list continued on next page

Turntable electrical, Ford LRG-425

item	part no	qty	description
51	5560004	14	Nut 1/4-20 self locking
52	986019	14	Washer 1/4 medium flat
53	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
54	970009	4	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
55	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
56	972489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5

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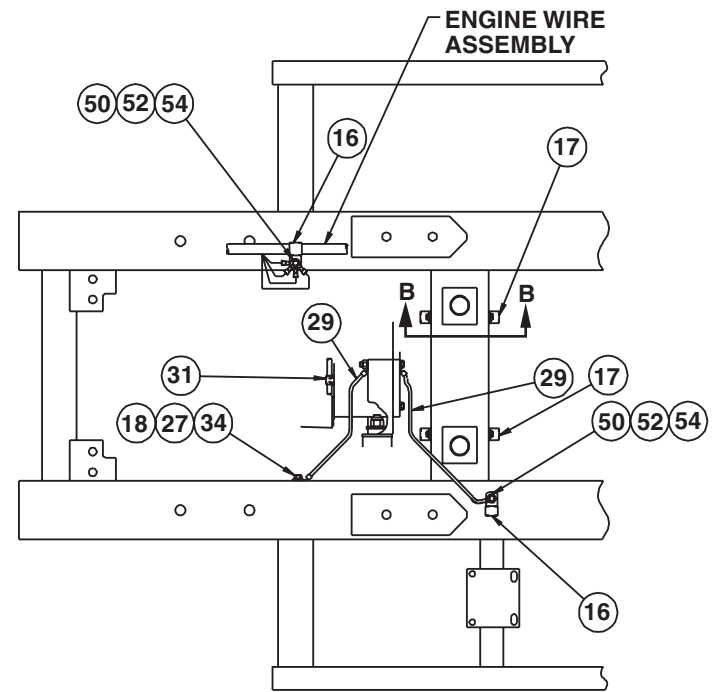
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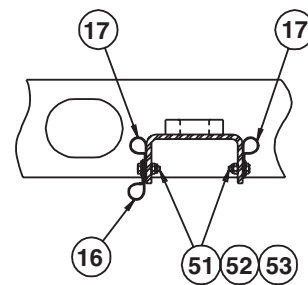
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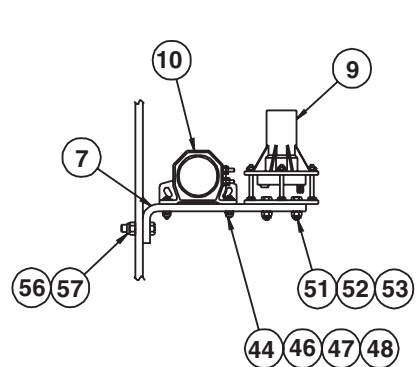
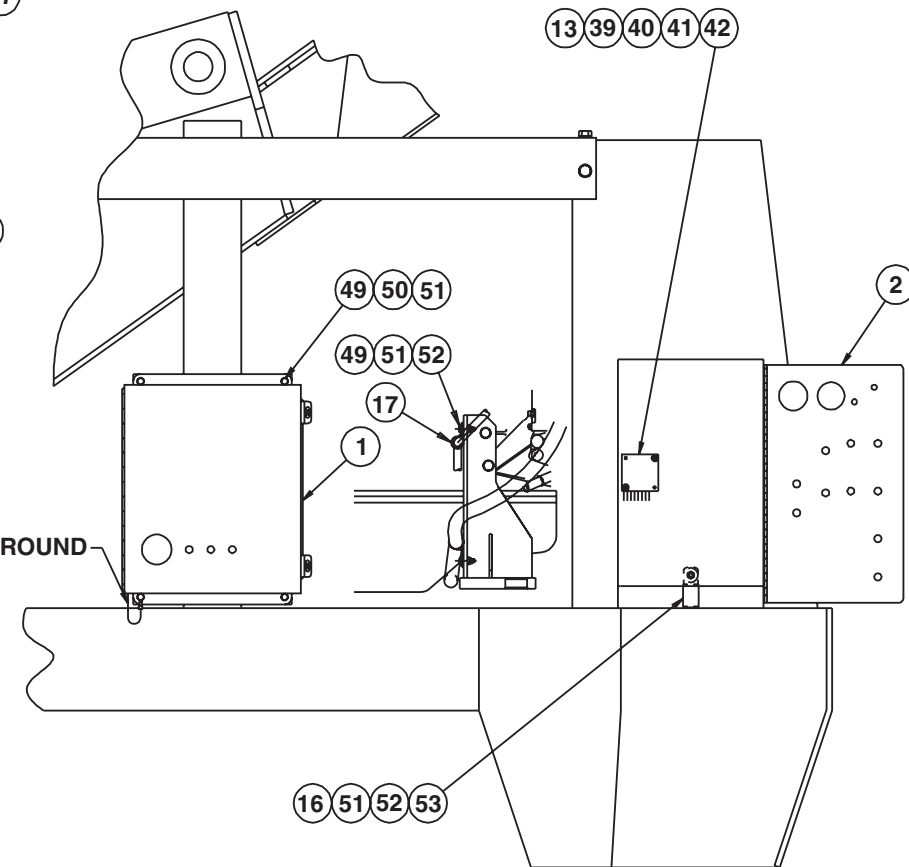
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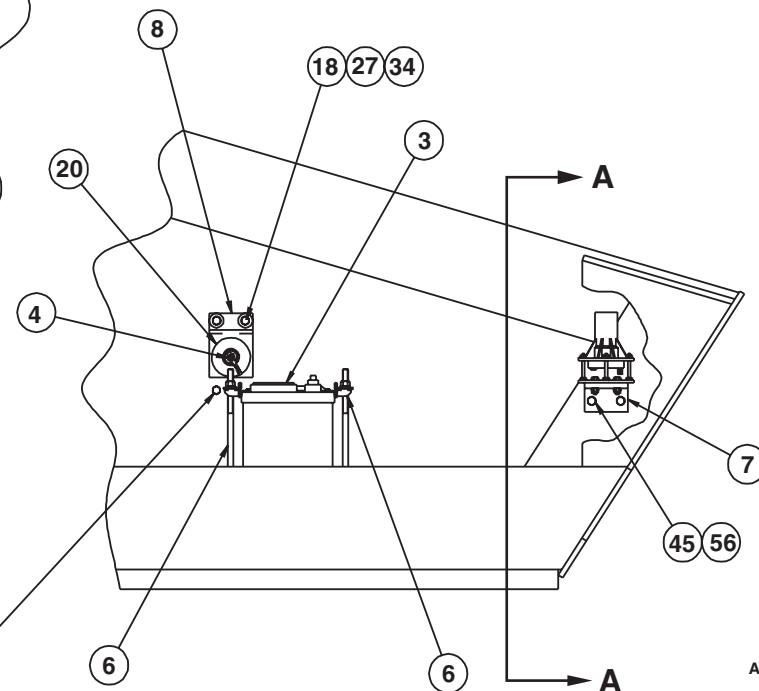
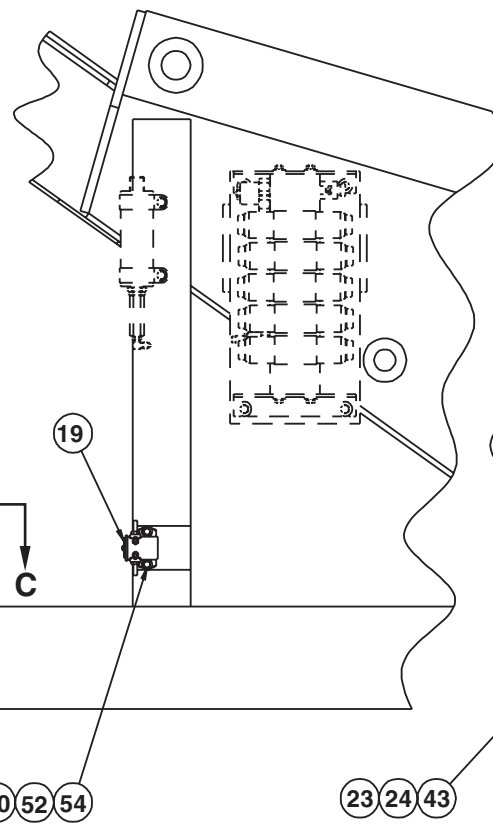
VIEW C-C



VIEW B-B



VIEW A-A



AW0082690-1

DWG. 0082690-1

TITLE Turntable electrical
 Ford LRG-425 - sheet 1
 Snorkel model TB 60



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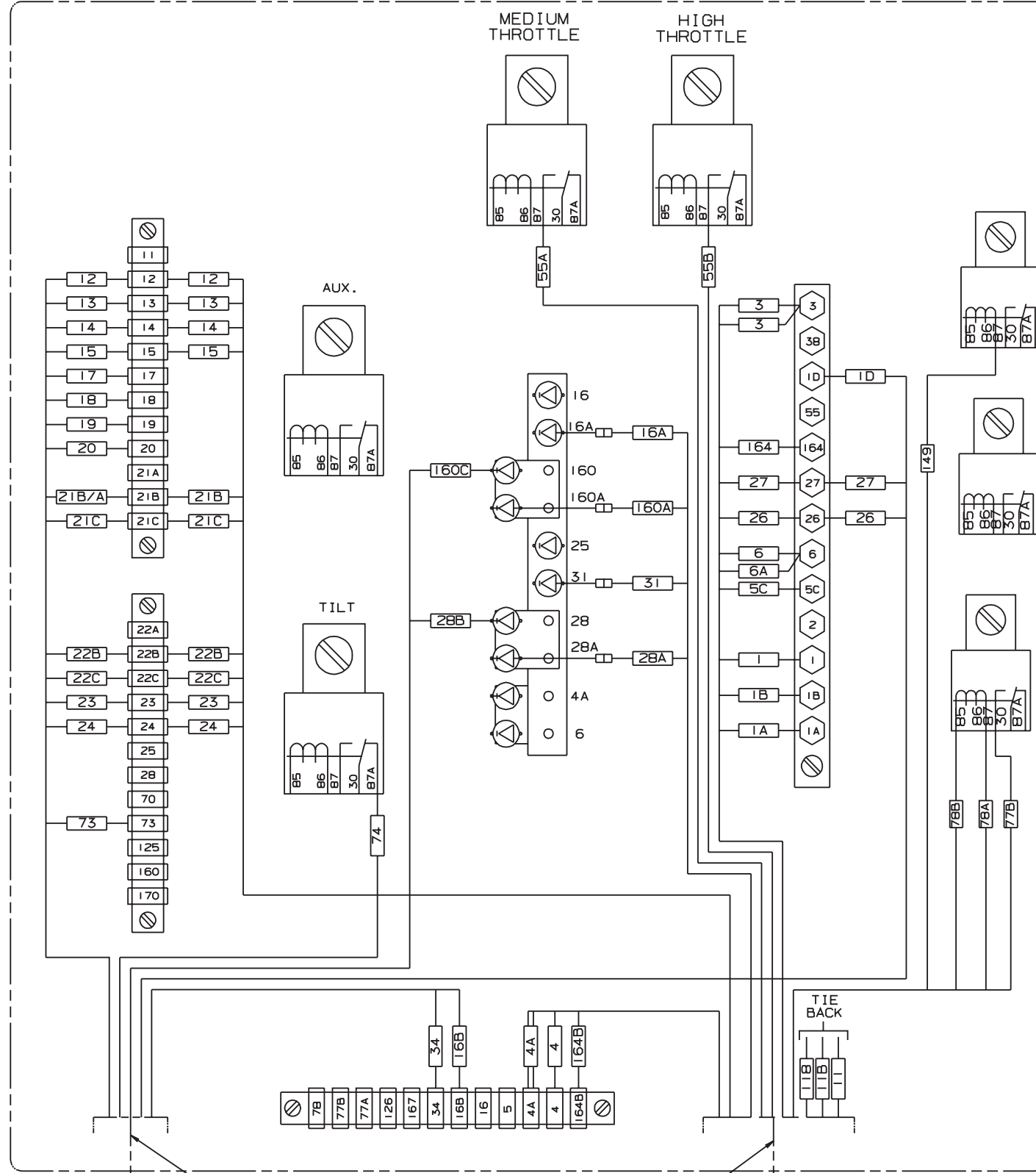
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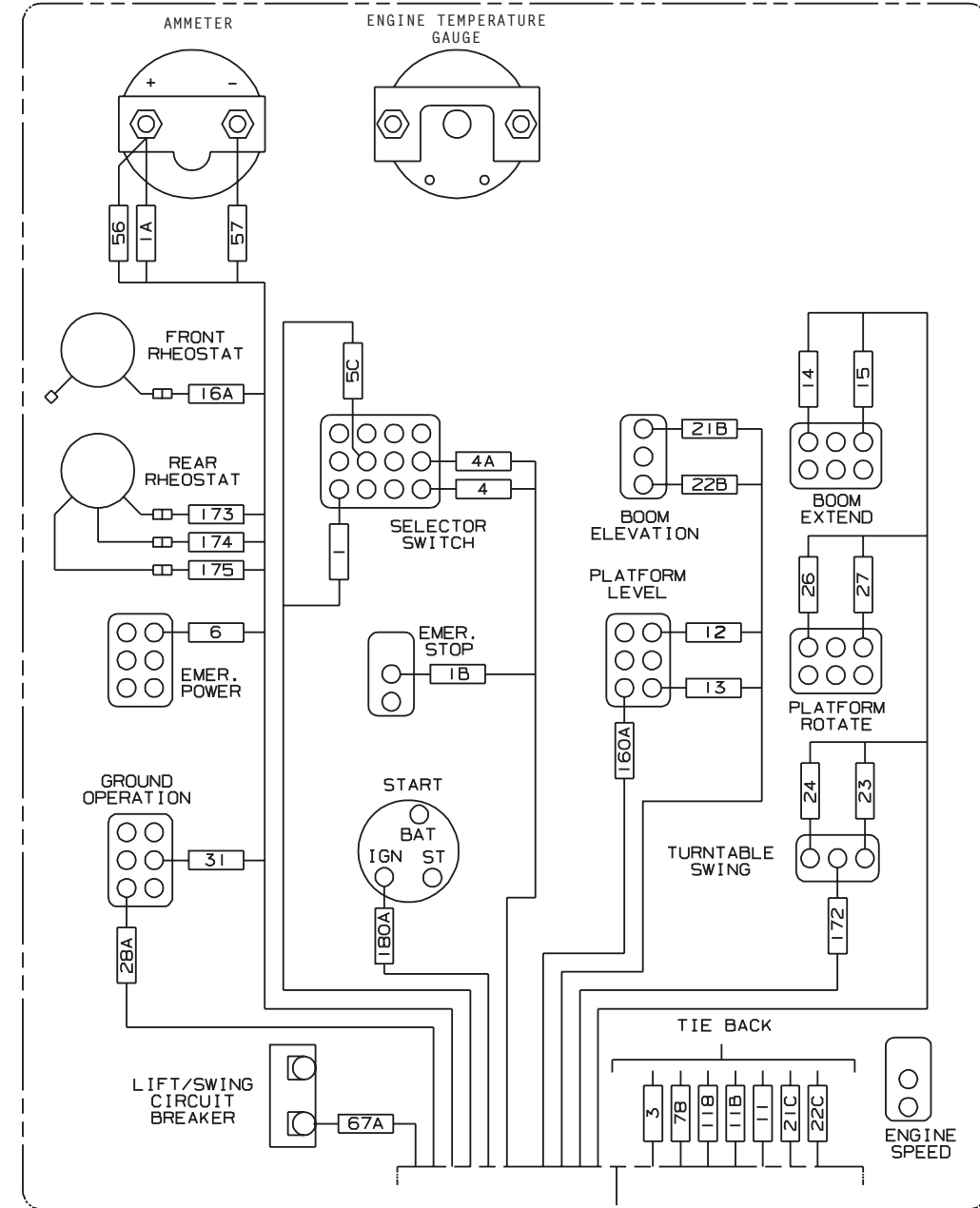
WIRING BOX



TURNTABLE WIRE ASSEMBLY (12)

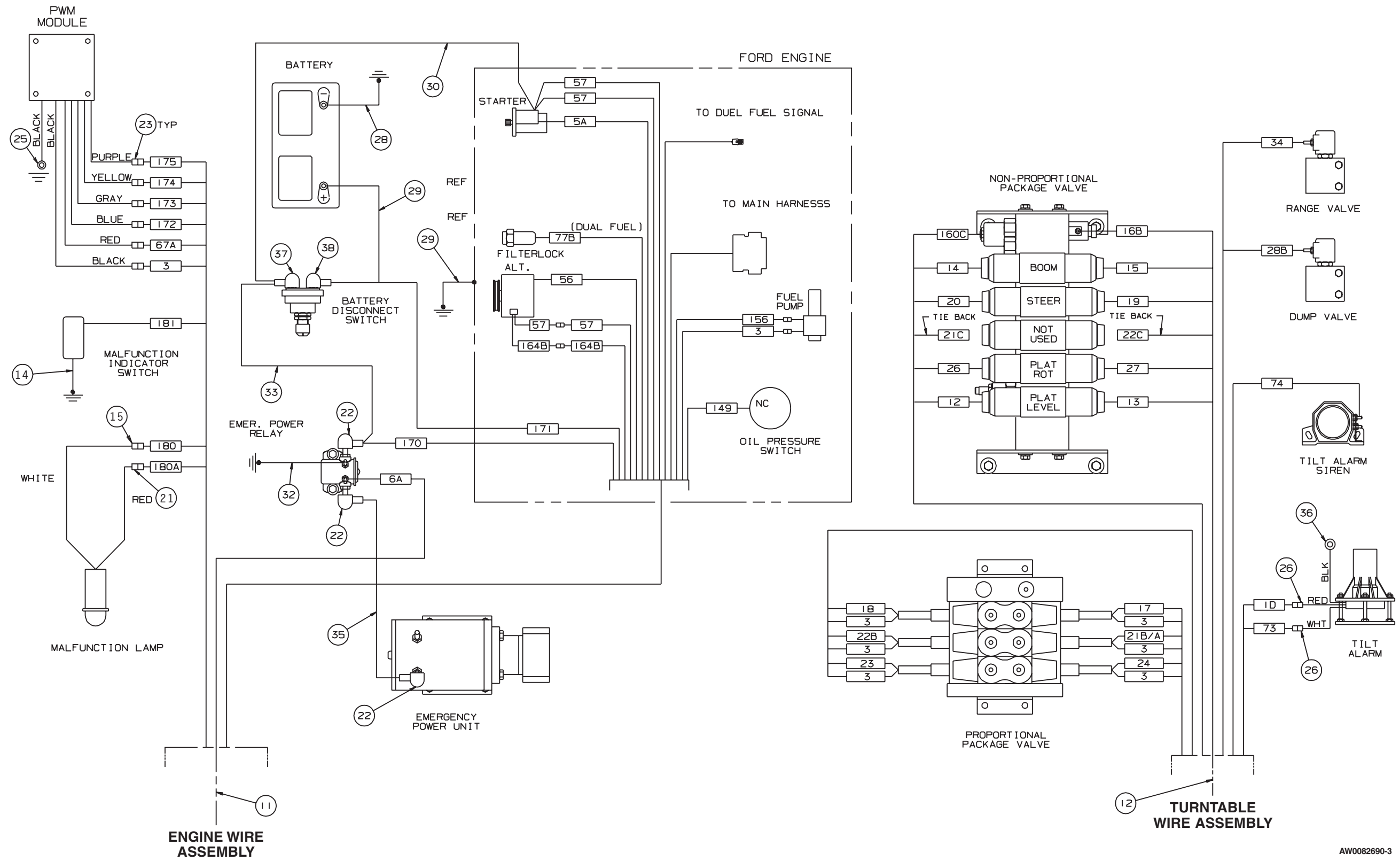
ENGINE WIRE ASSEMBLY (11)

GROUND CONTROL PANEL



REF (11) ENGINE WIRE ASSEMBLY

AW0082690-2



AW0082690-3

Lower controls, Cummins 3.3

item	part no	qty	description
	0083530	1	Lower controls, Cummins 3.3
1	0060373	3	Jumper strap
2	0070730	3	Jumper wire
3	0070735	1	Jumper wire
4	0070742	2	Jumper wire
5	0070746	3	Jumper wire
6	0070747	5	Jumper wire
7	0070753	3	Jumper wire
8	0071541	1	Jumper wire
9	0074585	1	Lower control panel and hinge
10	0082002	1	Rheostat switch
	3040619	1	Replacement switch
	0150647	1	Replacement jumper wire
11	0082003	1	Placard, lower controls
12	0083300	1	Wire harness, EPS
13	0090757	1	Jumper wire
14	0180949	1	Speed control switch
	3040497	1	Replacement switch
15	0181104	1	Jumper wire
16	0240483	1	Jumper wire
17	300489	1	Terminal strip, 6 circuit #10 stud
18	3020013	2	Switch, toggle
19	3020016	2	Switch, toggle
20	3020018	3	Switch, toggle
21	3020048	1	Switch, toggle
22	3020081	2	Switch, toggle
23	3020087	1	Switch, keyed start
	8030044	1	Replacement key
24	3040348	1	Switch knob
25	3040535	1	Circuit breaker, 3 amp capacity
26	3040620	1	Coupler kit
27	3070003	1	Ammeter
28	3070040	1	Temperature gauge
29	5093006	1	Clamp
30	562236	1	Guard, emergency stop switch
31	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
32	5560004	1	Nut 1/4-20 self locking
33	986019	1	Washer 1/4 medium flat
34	5560649	2	Machine screw #10-24 x 1 inch long truss head
35	5560034	2	Nut #10-24 self locking

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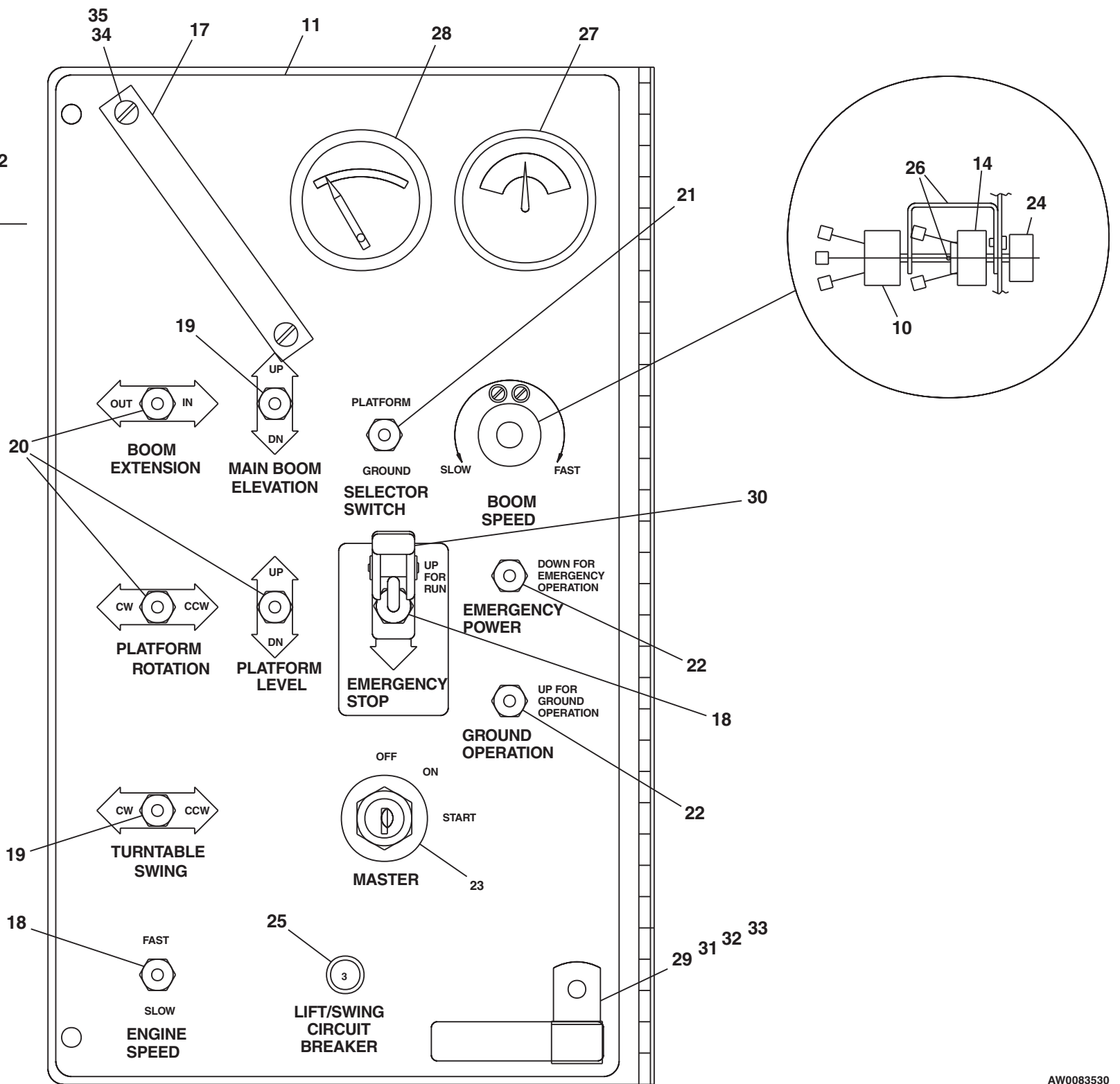
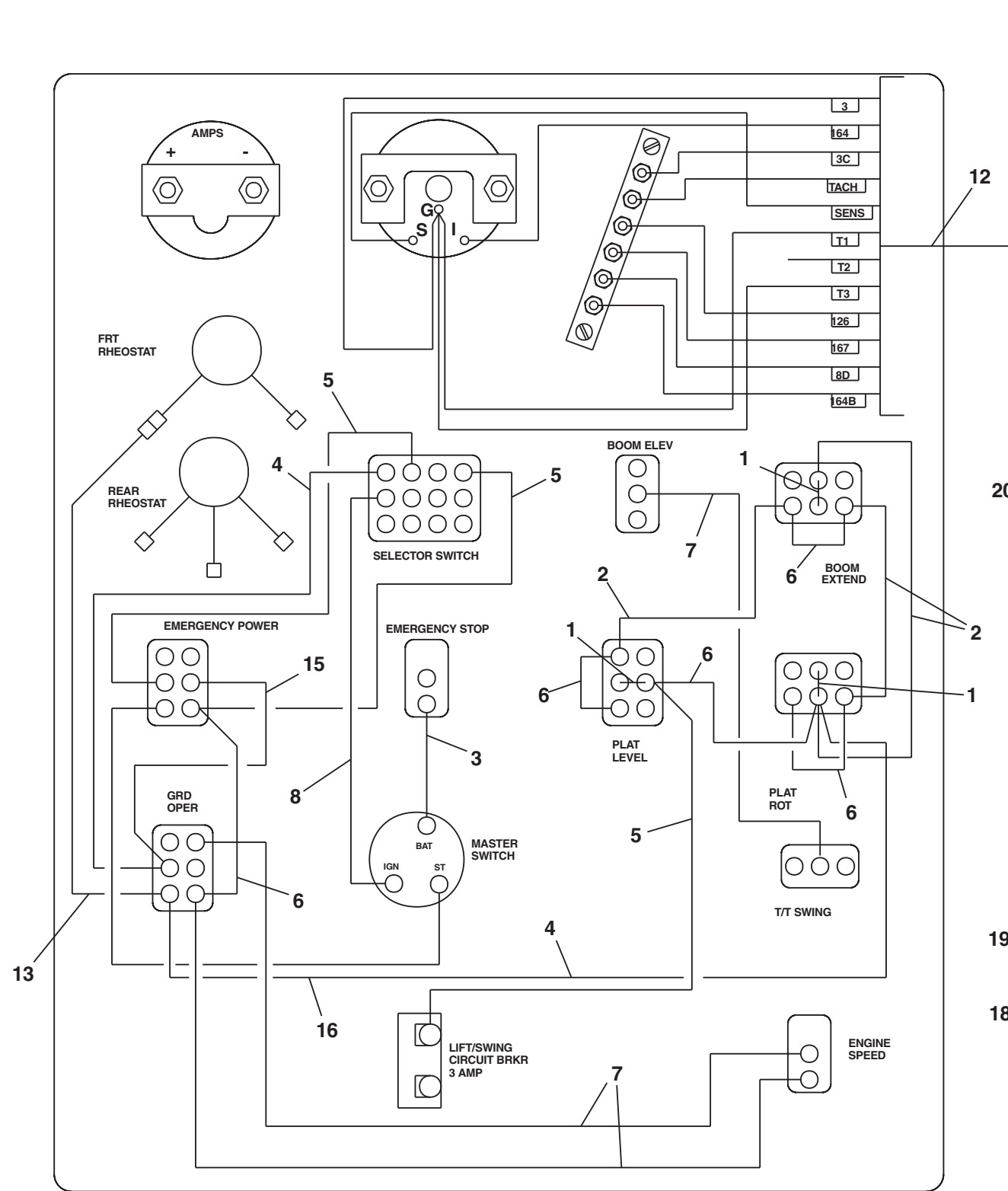
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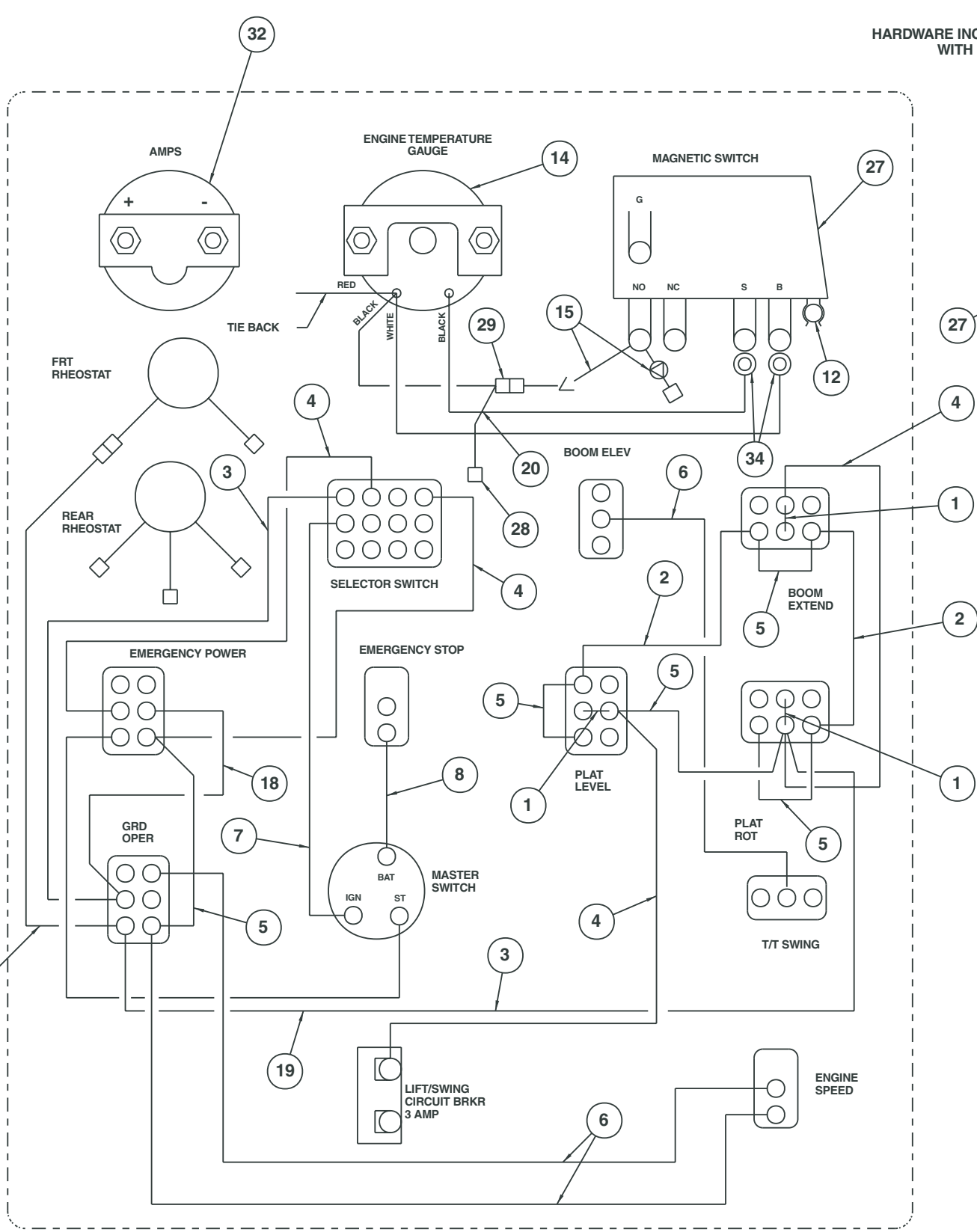


AW0083530

Lower controls, Deutz before 11-09-99

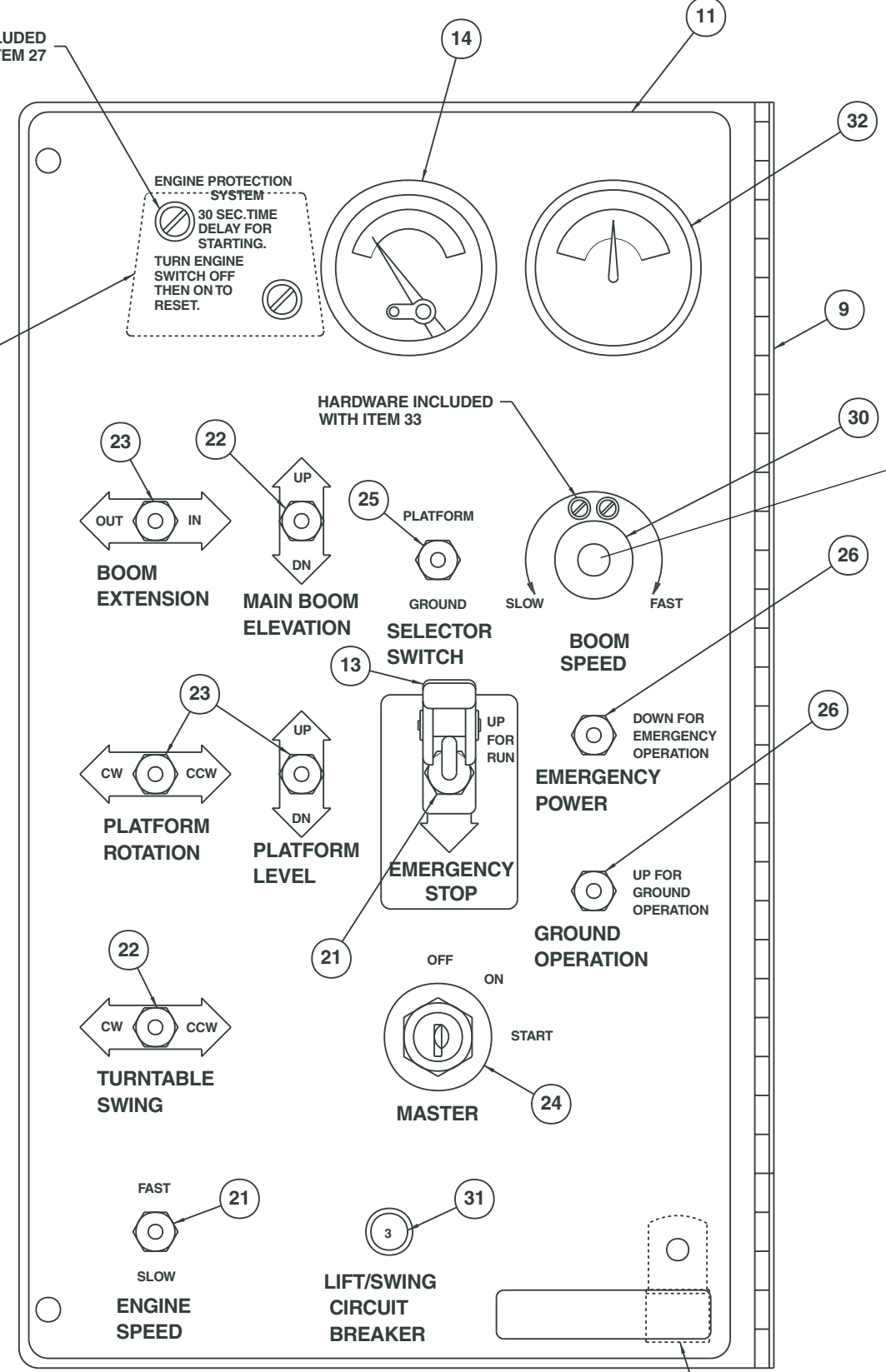
item	part no	qty	description
	0082032	1	Lower controls, Deutz - (machines before 11-09-1999)
1	0060373	3	Jumper strap
2	0070730	2	Jumper wire
3	0070742	2	Jumper wire
4	0070746	4	Jumper wire
5	0070747	5	Jumper wire
6	0070753	3	Jumper wire
7	0071541	1	Jumper wire
8	0070735	1	Jumper wire
9	0081819	1	Lower control panel and hinge
10	0082002	1	Rheostat switch
	3040619	1	Replacement switch
	0150647	1	Replacement jumper wire
11	0082003	1	Placard, lower controls
12	0111552	1	Jumper wire
13	562236	1	Guard, emergency stop switch
14	3070023	1	Temperature gauge
15	0151813	2	Diode wire
16	0090757	1	Jumper wire
17	0180949	1	Rheostat switch
	3040497	1	Replacement switch
18	0181104	1	Jumper wire
19	0240483	1	Jumper wire
20	3011801	1	Wire 18 gauge single conductor x 5 feet long
21	3020013	2	Switch, toggle
22	3020016	2	Switch, toggle
23	3020018	3	Switch, toggle
24	3020087	1	Switch, keyed start
	8030044	1	Replacement key
25	3020048	1	Switch, toggle
26	3020081	2	Switch, toggle
27	3020093	1	Switch, engine shut down
28	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
29	3040083	1	Terminal .250 tab male fully insulated 16/14 wire
30	3040348	1	Switch knob
31	3040535	1	Circuit breaker, 3 amp capacity
32	3070003	1	Ammeter
33	3040620	1	Coupler kit
34	3044145	2	Terminal #8 stud insulated 22/18 wire
35	5093006	1	Clamp
36	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
37	986019	1	Washer 1/4 medium flat
38	5560004	1	Nut 1/4-20 self locking

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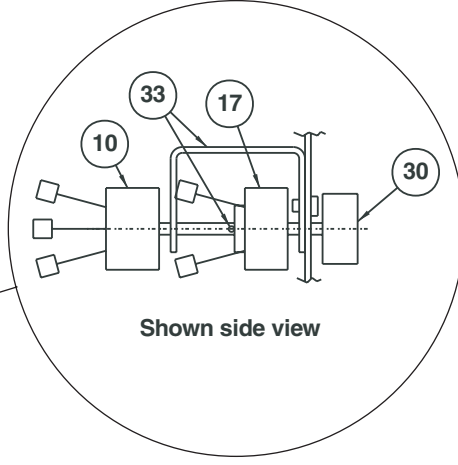


REAR VIEW

HARDWARE INCLUDED WITH ITEM 27



FRONT VIEW



Shown side view

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AW0082032

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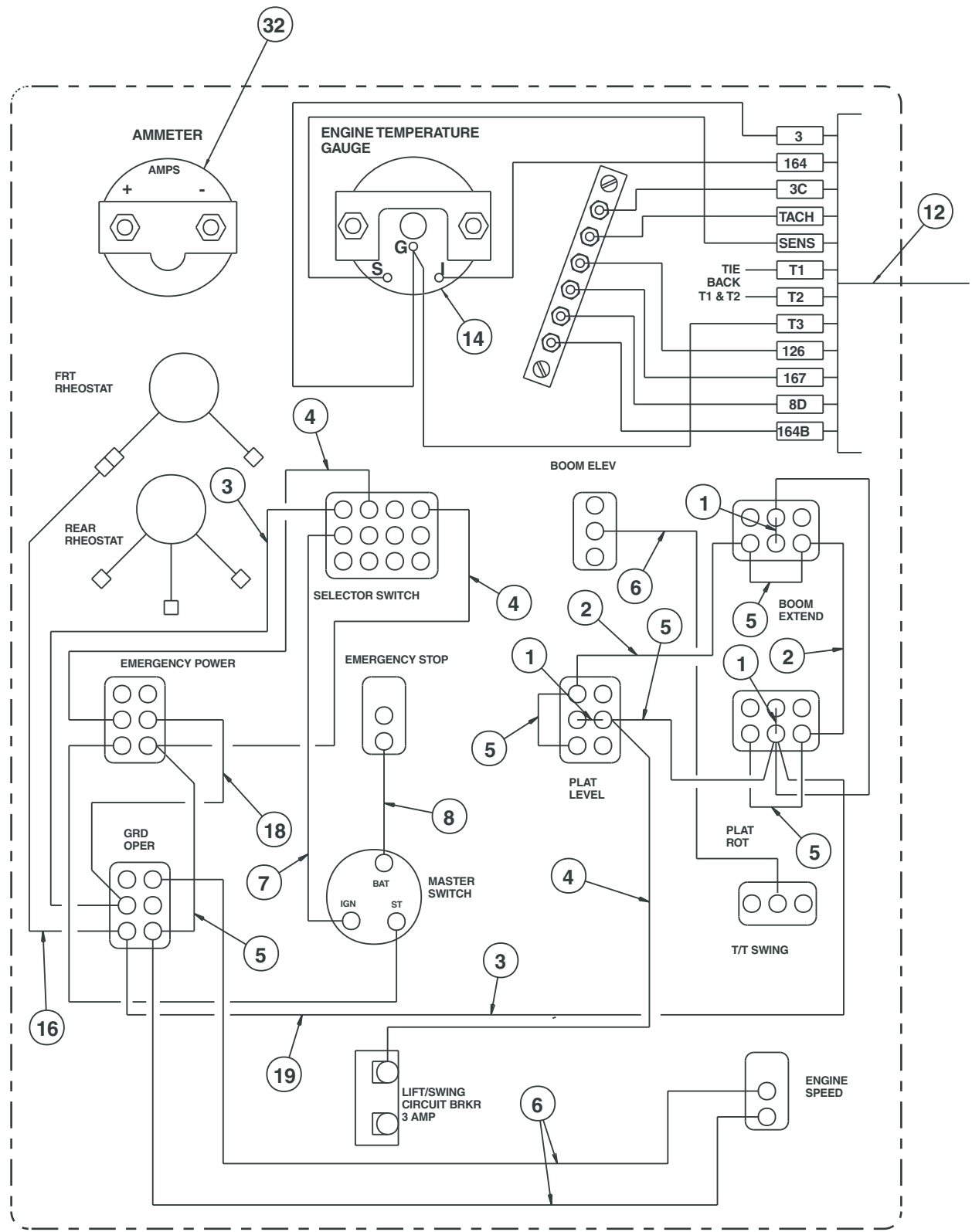
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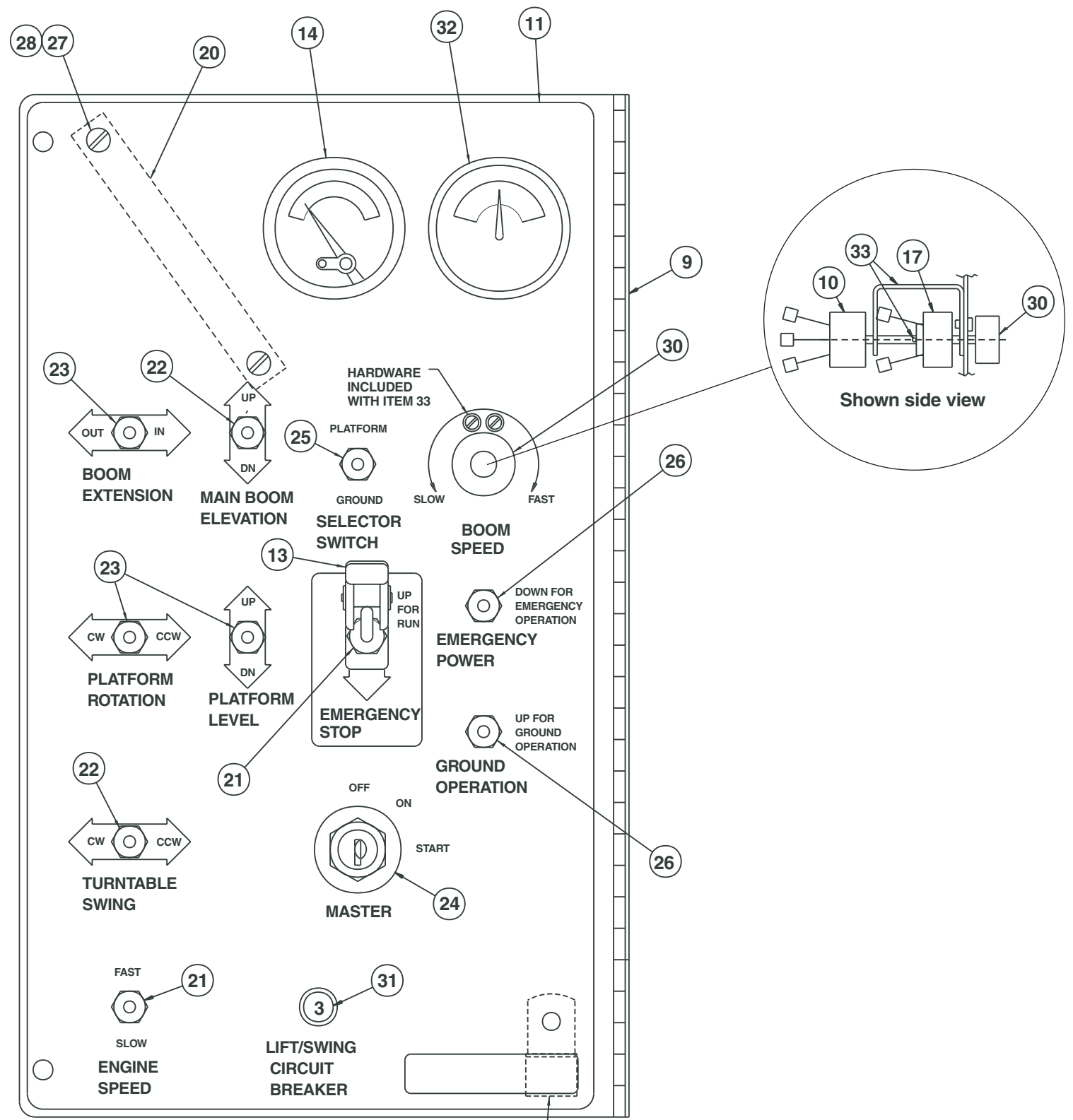
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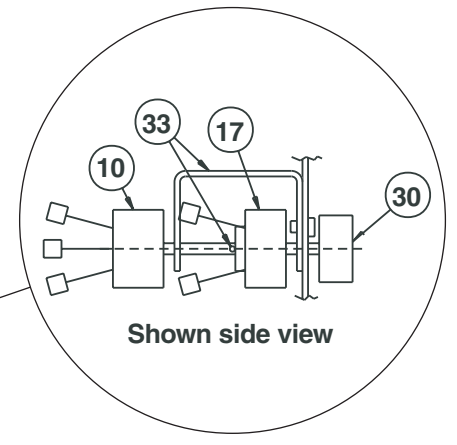
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REAR VIEW



FRONT VIEW



AW0083397

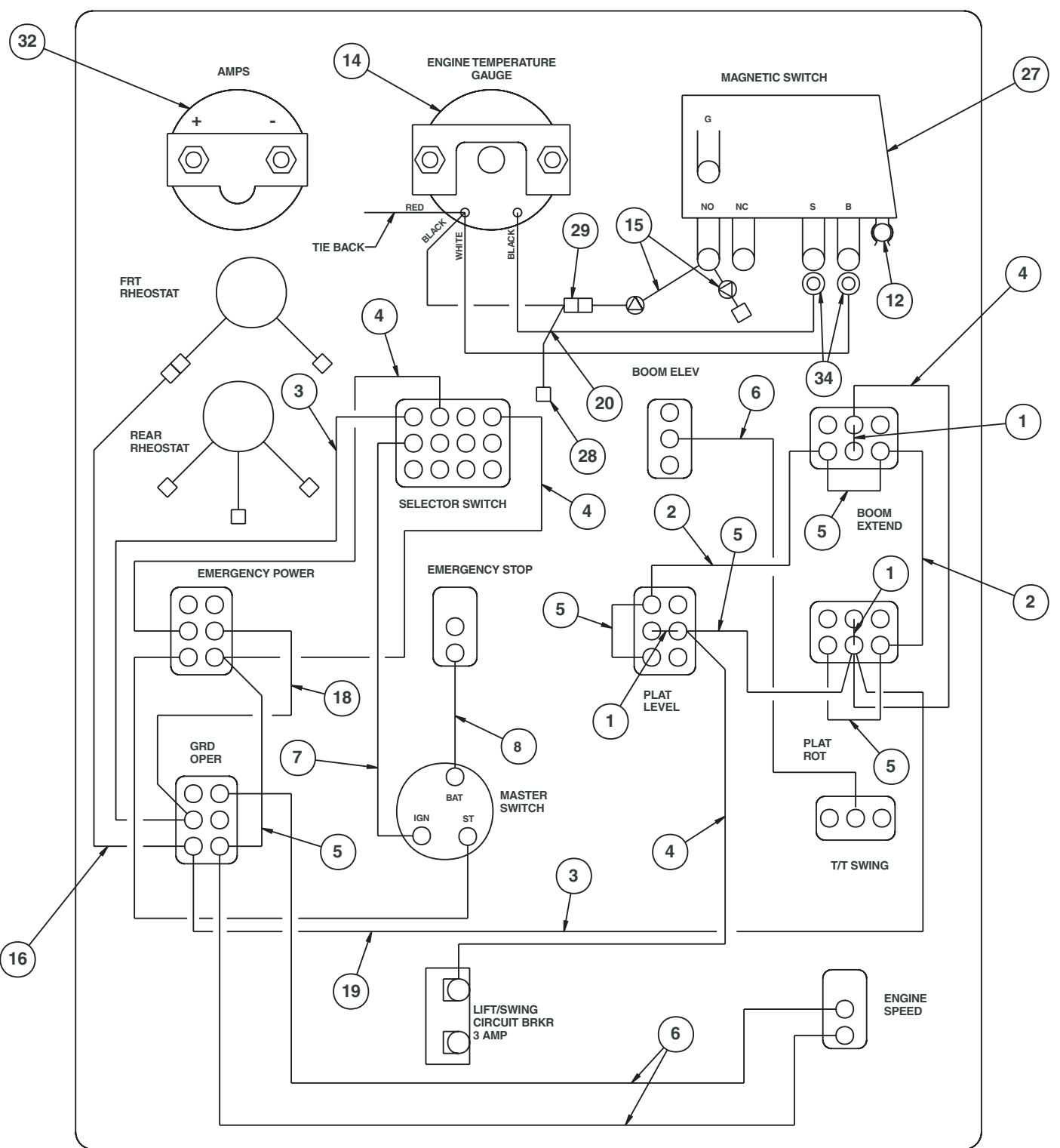
Lower controls, Deutz after 11-09-1999

item	part no	qty	description
	0083397	1	Lower controls, Deutz - (machines after 11-09-1999)
1	0060373	3	Jumper strap
2	0070730	3	Jumper wire
3	0070742	3	Jumper wire
4	0070746	4	Jumper wire
5	0070747	3	Jumper wire
6	0070753	3	Jumper wire
7	0071541	1	Jumper wire
8	0070735	1	Jumper wire
9	0074585	1	Lower control panel and hinge
10	0082002	1	Rheostat switch
	3040619	1	Replacement switch
	0150647	1	Replacement jumper wire
11	0082003	1	Placard, lower controls
12	0083300	1	Wire harness, EPS
13	562236	1	Guard, emergency stop switch
14	3072120	1	Temperature gauge - (before 6-19-00)
	3070041	1	Temperature gauge - (after 6-19-00)
15	0151813	2	Diode wire
16	0090757	1	Jumper wire
17	0180949	1	Rheostat switch
	3040497	1	Replacement switch
18	0181104	1	Jumper wire
19	0240483	1	Jumper wire
20	300489	1	Terminal strip, 6 circuit #10 stud
21	3020013	2	Switch, toggle
22	3020016	2	Switch, toggle
23	3020018	3	Switch, toggle
24	3020087	1	Switch, keyed start
	8030044	1	Replacement key
25	3020048	1	Switch, toggle
26	3020081	2	Switch, toggle
27	974709	2	Machine screw #10-24 x 1 inch long round head
28	5560034	2	Nut #10-24 self locking
29	986019	1	Washer 1/4 medium flat
30	3040348	1	Switch knob
31	3040535	1	Circuit breaker, 3 amp capacity
32	3070003	1	Ammeter
33	3040620	1	Coupler kit
34	5560004	1	Nut 1/4-20 self locking
35	5093006	1	Clamp
36	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5

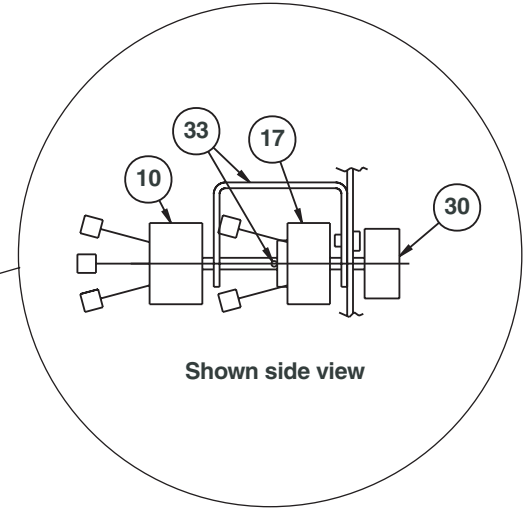
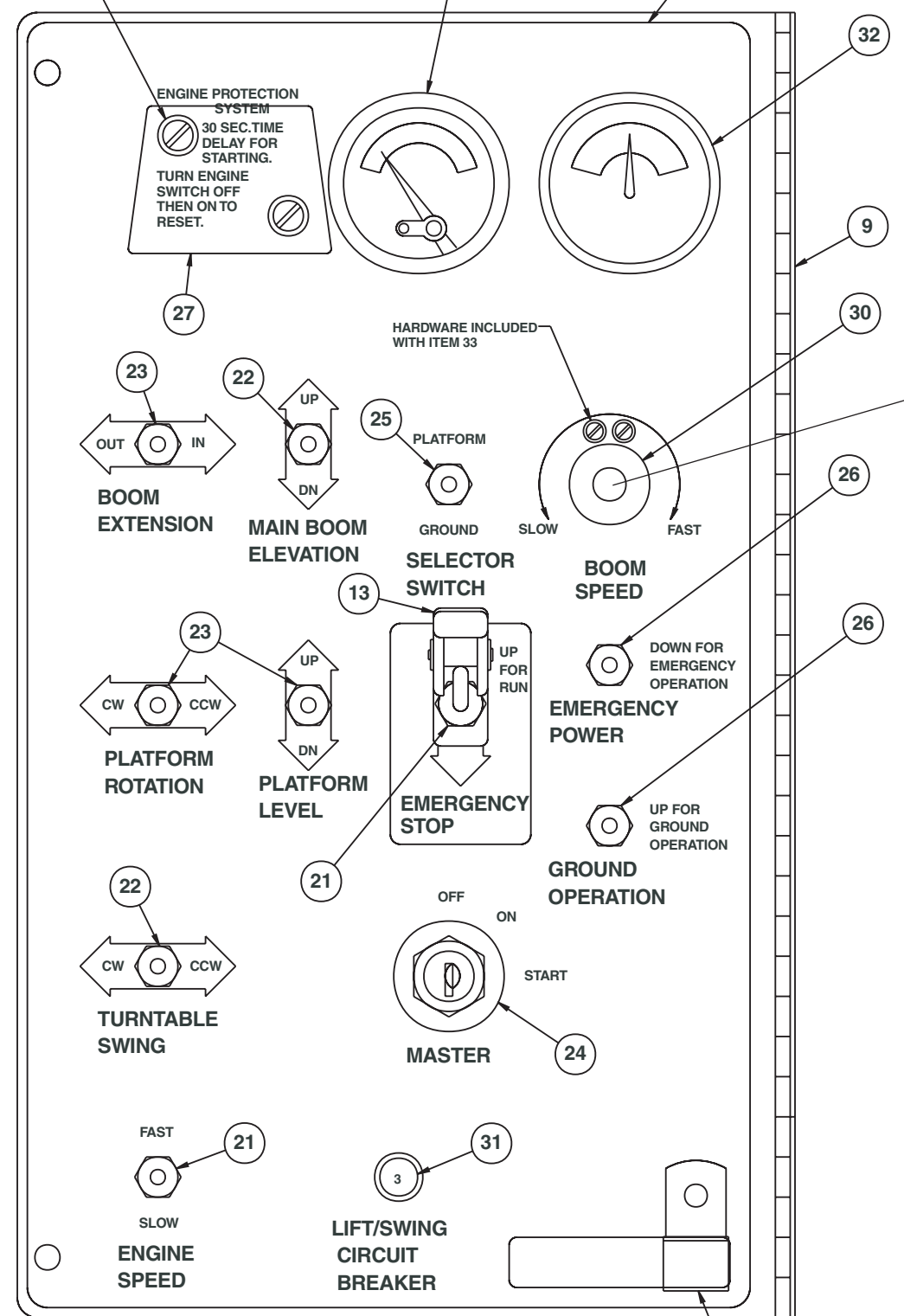
Lower controls, Ford LRG-423

item	part no	qty	description
	0081999	1	Lower controls, Ford LRG-423
1	0060373	3	Jumper strap
2	0070730	2	Jumper wire
3	0070742	2	Jumper wire
4	0070746	4	Jumper wire
5	0070747	5	Jumper wire
6	0070753	3	Jumper wire
7	0071541	1	Jumper wire
8	0070735	1	Jumper wire
9	0081819	1	Lower control panel and hinge
10	0082002	1	Rheostat switch
	3040619	1	Replacement switch
	0150647	1	Replacement jumper wire
11	0082003	1	Placard, Lower controls
12	0111512	1	Jumper bar
13	562236	1	Guard, emergency stop switch
14	3070021	1	Temperature gauge
15	0151813	2	Diode wire
16	0090757	1	Jumper wire
17	0180949	1	Rheostat switch
	3040497	1	Replacement switch
18	0181104	1	Jumper wire
19	0240483	1	Jumper wire
20	3011801	1	Wire 18 gauge single conductor x 5 feet long
21	3020013	2	Switch, toggle
22	3020016	2	Switch, toggle
23	3020018	3	Switch, toggle
24	3020087	1	Switch, keyed start
	8030044	1	Replacement key
25	3020048	1	Switch, toggle
26	3020081	2	Switch, toggle
27	3020093	1	Switch, engine shut down
28	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
29	3040083	1	Terminal .250 tab male fully insulated 16/14 wire
30	3040348	1	Switch knob
31	3040535	1	Circuit breaker, 3 amp capacity
32	3070003	1	Ammeter
33	3040620	1	Coupler kit
34	3044145	2	Terminal #8 stud insulated 22/18 wire
35	5093006	1	Clamp
36	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
37	986019	1	Washer 1/4 medium flat
38	5560004	1	Nut 1/4-20 self locking

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HARDWARE INCLUDED WITH ITEM 27



AW0081999

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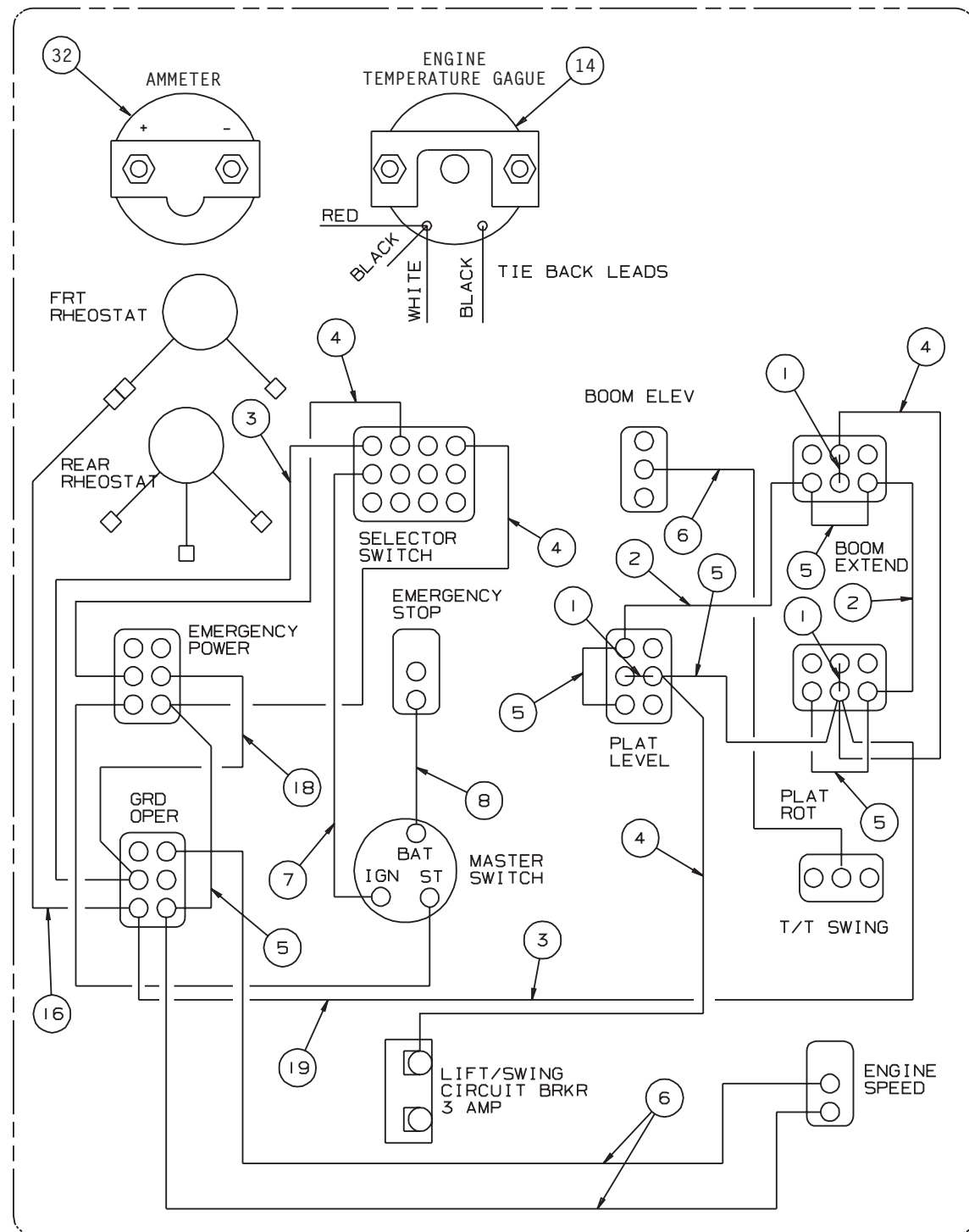
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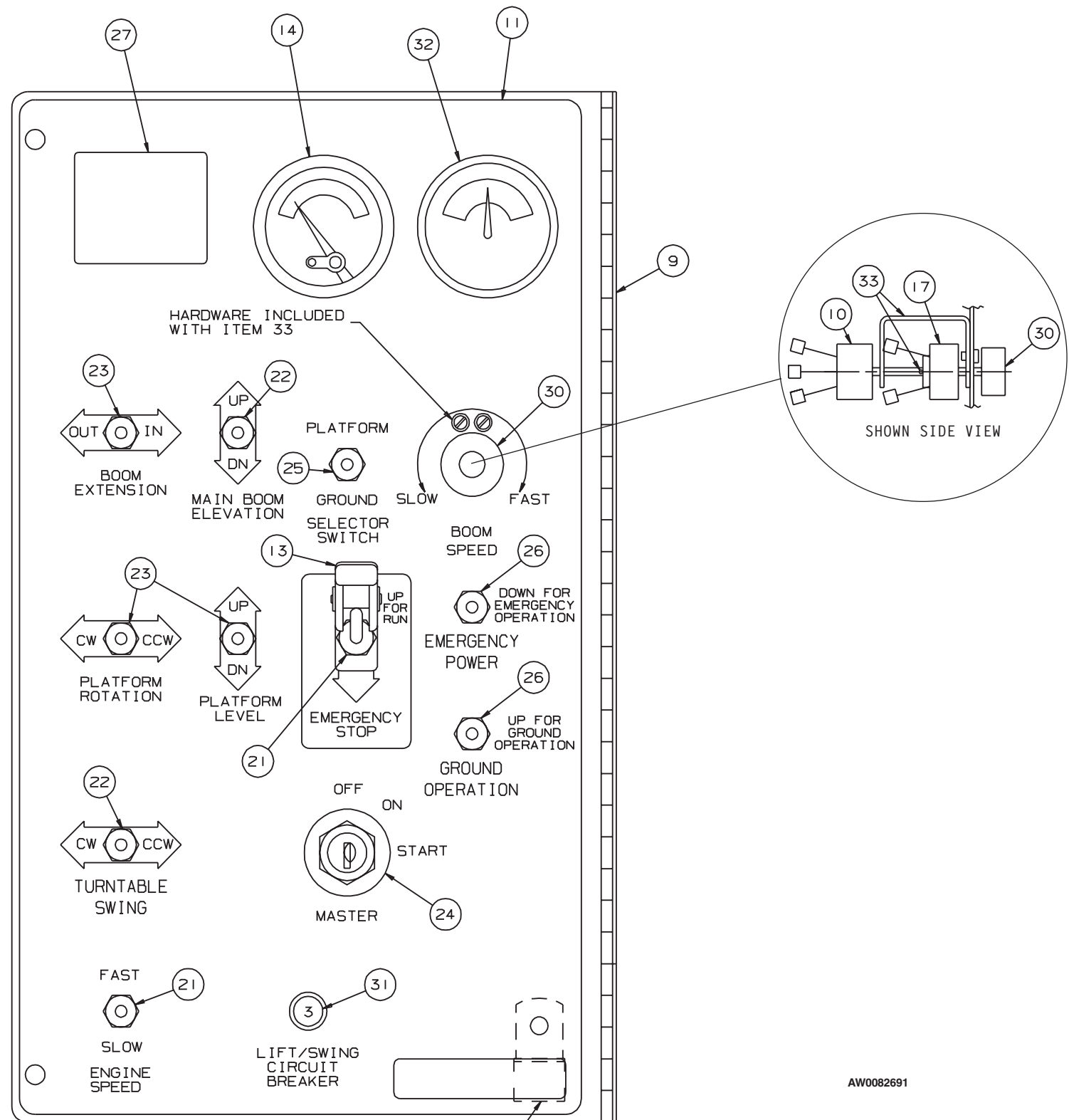
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REAR VIEW



FRONT VIEW

AW0082691

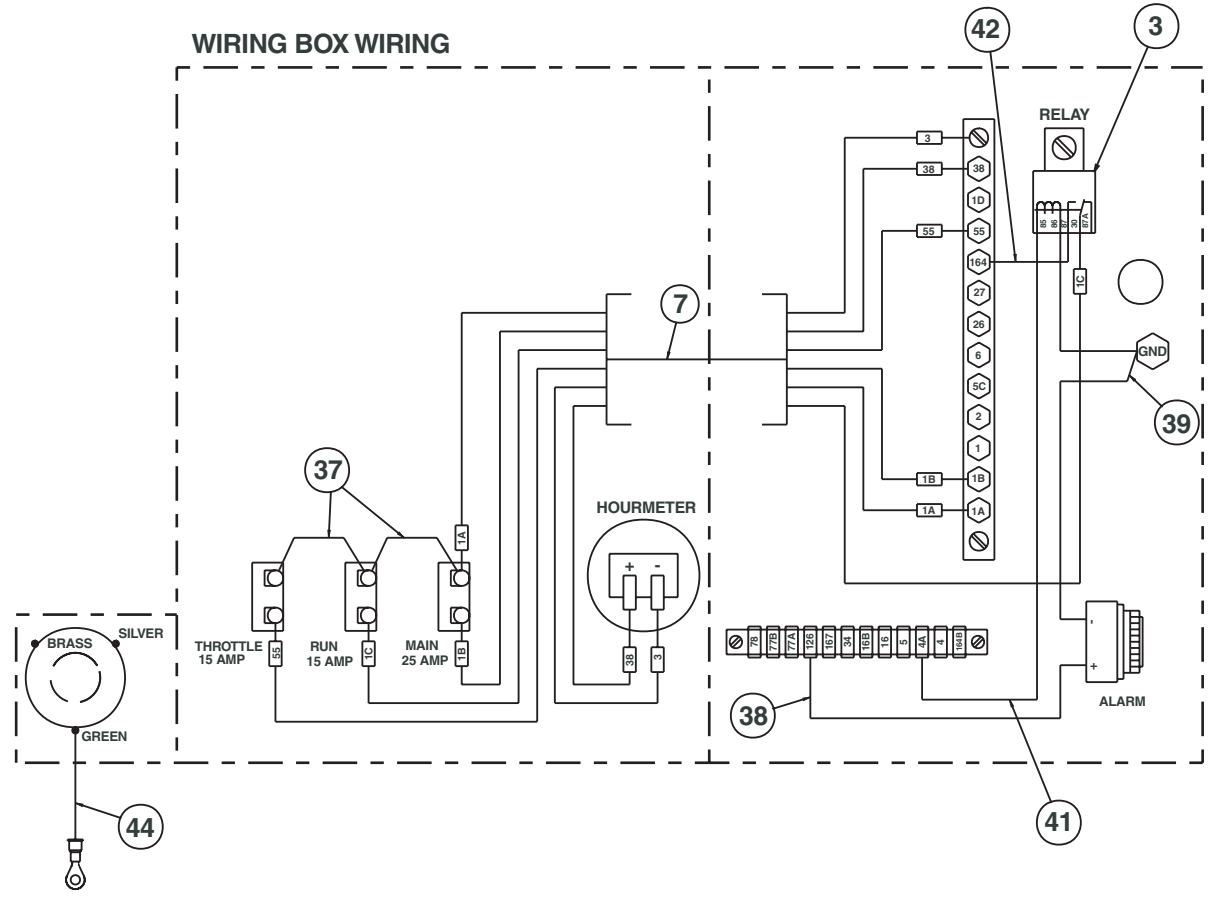
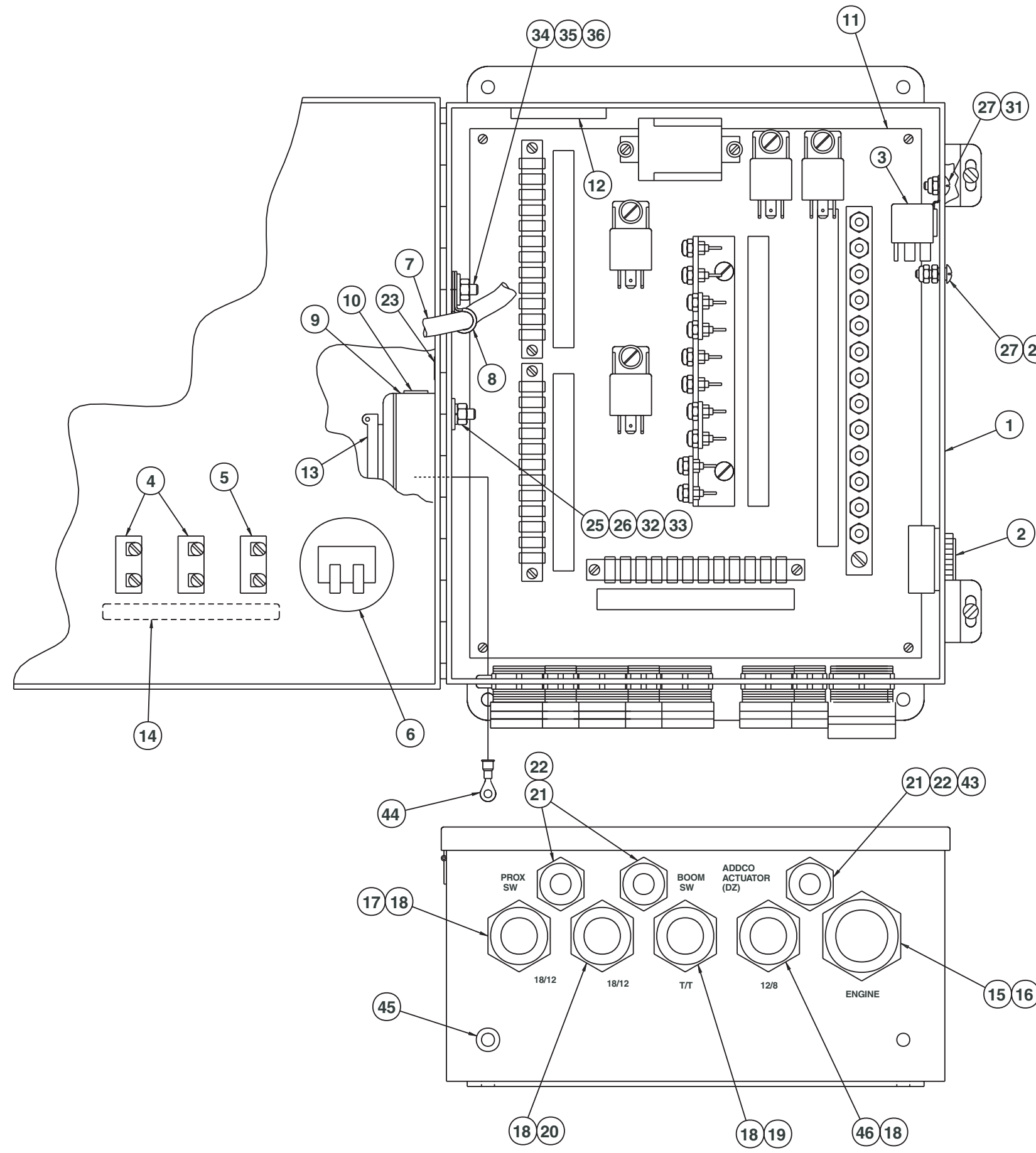
Lower controls, Ford LRG-425

item	part no	qty	description
	0082691	1	Lower controls, Ford LRG-425
1	0060373	3	Jumper strap
2	0070730	2	Jumper wire
3	0070742	2	Jumper wire
4	0070746	4	Jumper wire
5	0070747	5	Jumper wire
6	0070753	3	Jumper wire
7	0071541	1	Jumper wire
8	0070735	1	Jumper wire
9	0081819	1	Lower control panel and hinge
10	0082002	1	Rheostat switch
	3040619	1	Replacement switch
	0150647	1	Replacement jumper wire
11	0082003	1	Placard, lower controls
12	5093006	1	Clamp
13	562236	1	Guard, emergency stop switch
14	3070021	1	Temperature gauge
15	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
16	0090757	1	Jumper wire
17	0180949	1	Rheostat switch
	3040497	1	Replacement switch
18	0181104	1	Jumper wire
19	0240483	1	Jumper wire
20	3044145	2	Terminal #8 stud insulated 22/18 wire
21	3020013	2	Switch, toggle
22	3020016	2	Switch, toggle
23	3020018	3	Switch, toggle
24	3020087	1	Switch, keyed start
	8030044	1	Replacement key
25	3020048	1	Switch, toggle
26	3020081	2	Switch, toggle
27	0082828	1	Placard, blank
28	986019		Washer 1/4 medium flat
29	5560004		Nut 1/4-20 self locking
30	3040348	1	Switch knob
31	3040535	1	Circuit breaker, 3 amp capacity
32	3070003	1	Ammeter
33	3040620	1	Coupler kit

Wiring box, Deutz and Ford LRG-423

item	part no	qty	description
	0081998	1	Wiring box, Deutz and Ford LRG-423
1	0081996	1	Wiring box, drilled
2	3040411	1	Mini siren
3	3040469	1	Relay, 12 volt DC
4	3040252	2	Circuit breaker, 15 amp capacity
5	3040069	1	Circuit breaker, 25 amp capacity
6	3070001	1	Hour meter
7	0081997	1	Wire harness, wiring box internal
8	5093001	1	Clamp
9	3040118	1	Extension with gasket
10	3040121	4	Close-up plug
11	0081995	1	Wiring box panel - (before 11-08-1999, see page 3-39 for parts breakdown)
	0112165	1	Wiring box panel - (between 11-08-1999 and 1-04-00, see page 3-39 for parts breakdown)
	0083467	1	Wiring box panel - (after 1-04-00, see page 3-39 for parts breakdown)
12	0070967	1	Corrosion inhibitor
13	3045278	1	Flanged electrical outlet with cover
14	0111735	1	Placard, circuit breaker
15	3040386	1	Connector
16	3040387	1	Locknut
17	3040116	2	Connector - (before 11-08-99)
	3040116	1	Connector - (after 11-08-99)
18	3040110	4	Locknut
19	3040298	1	Connector
20	3040285	1	Connector
21	3040187	3	Connector
22	3040070	3	Locknut
23	0070921	1	Placard, 110 volt power
24	5560655	2	Pop rivet #AD32-ABS
25	974239	2	Machine screw #6-32 x 1/2 inch long round head
26	984009	2	Nut #6-32 hex
27	5560648	2	Machine screw #10-24 x 3/4 inch long truss head
28	5560654	1	Washer #10 star tooth lock
29	987089	1	Washer #10 medium lock
30	984049	1	Nut #10-24 hex
31	5560034	2	Nut #10-24 self locking
32	986159	2	Washer #6 medium flat
33	987349	2	Washer #6 medium lock
34	986019	1	Washer 1/4 medium flat
35	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
36	5560004	1	Nut 1/4-20 self locking
37	0070735	2	Jumper wire
38	0181028	1	Jumper wire
39	0240483	1	Jumper wire
40	0081559	1	Jumper wire
41	0071528	1	Jumper wire
42	0073057	1	Jumper wire
43	970469	1	Capscrew 3/8-16 x 1 inch long hex head grade 5
44	0071561	1	Jumper wire
45	5569003	1	Grommet
46	3040295	1	Connector

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AW0081998

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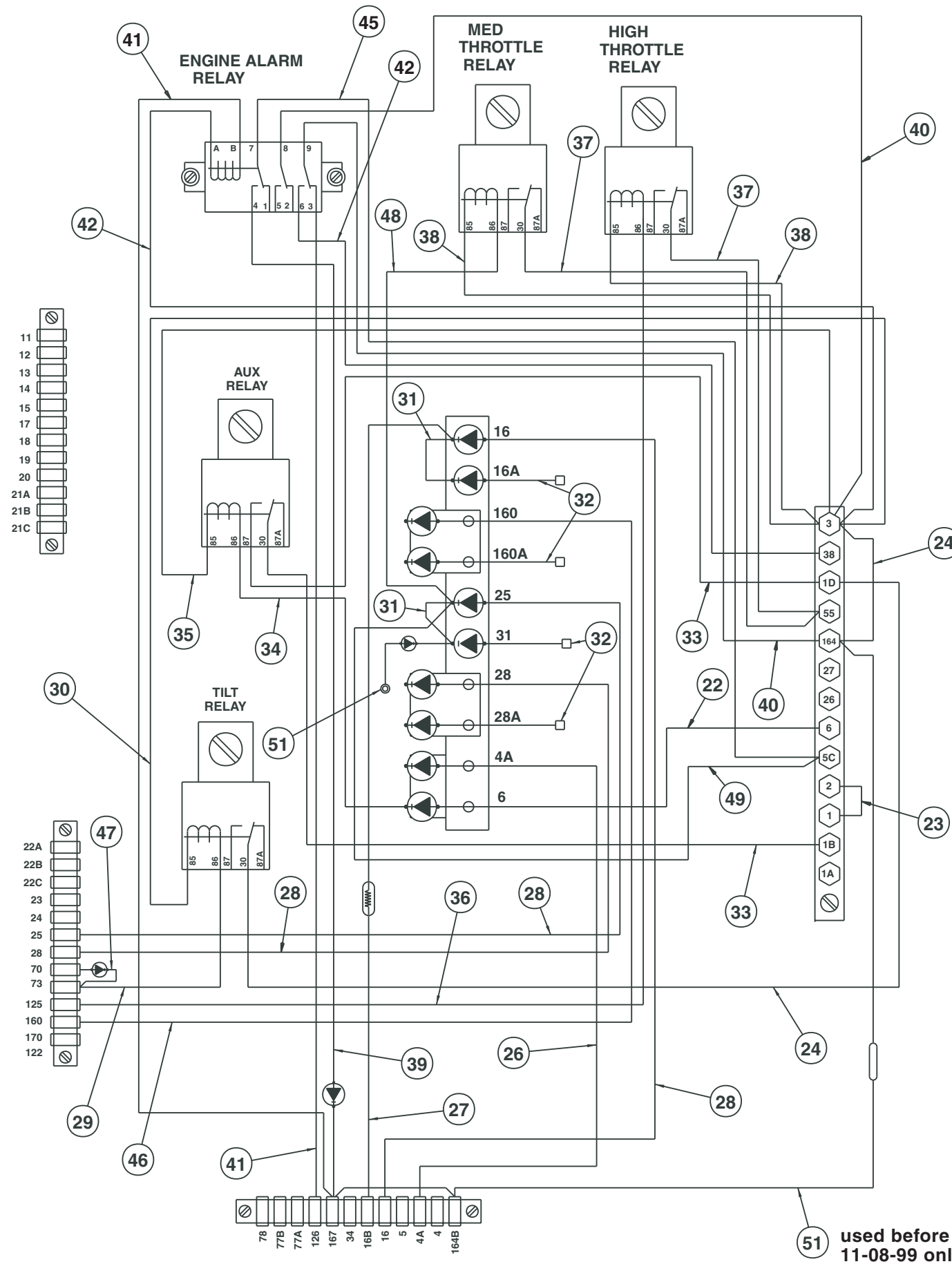
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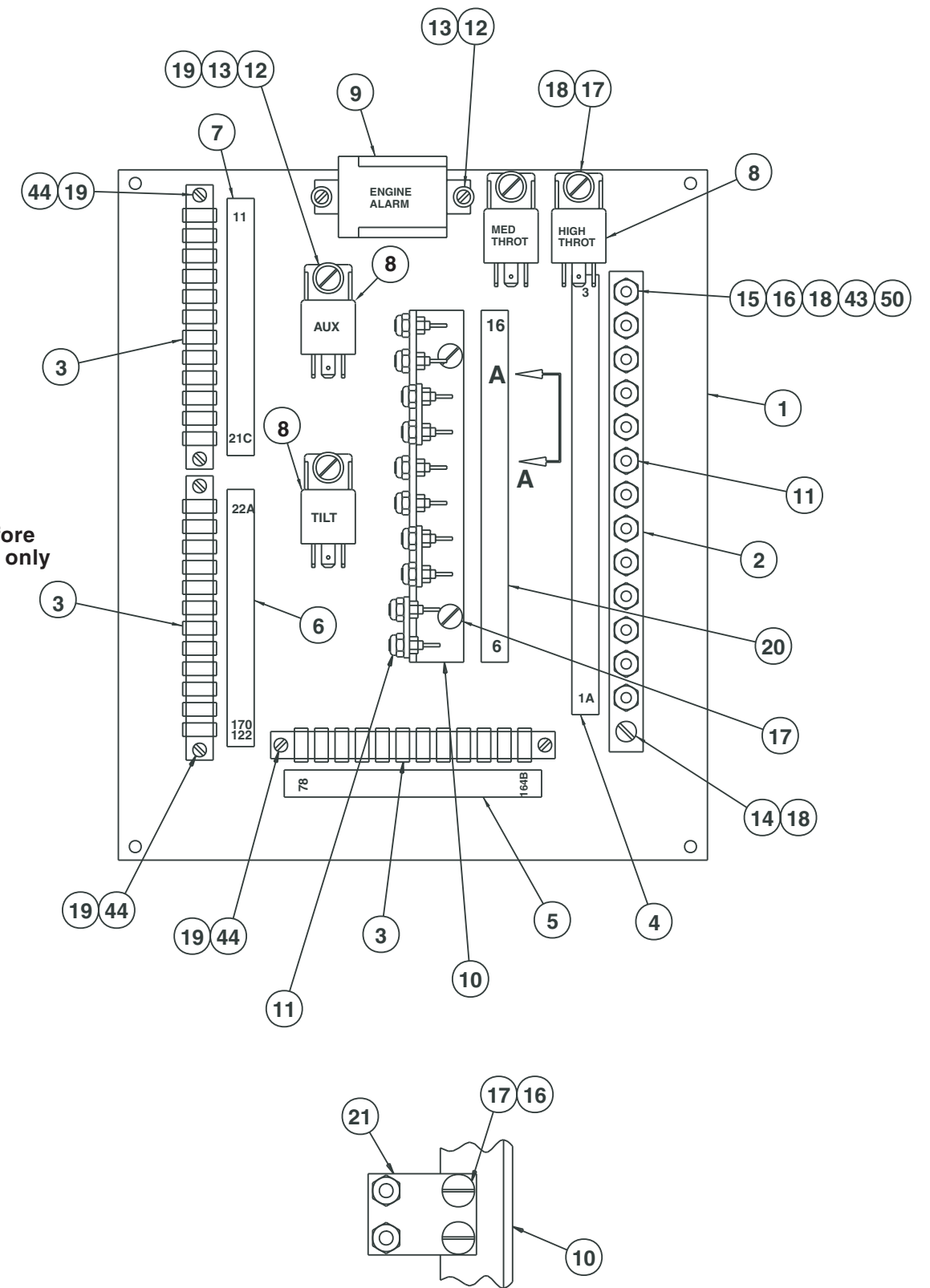
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used before 11-08-99 only

51 used before 11-08-99 only



VIEW A-A

AW0081995

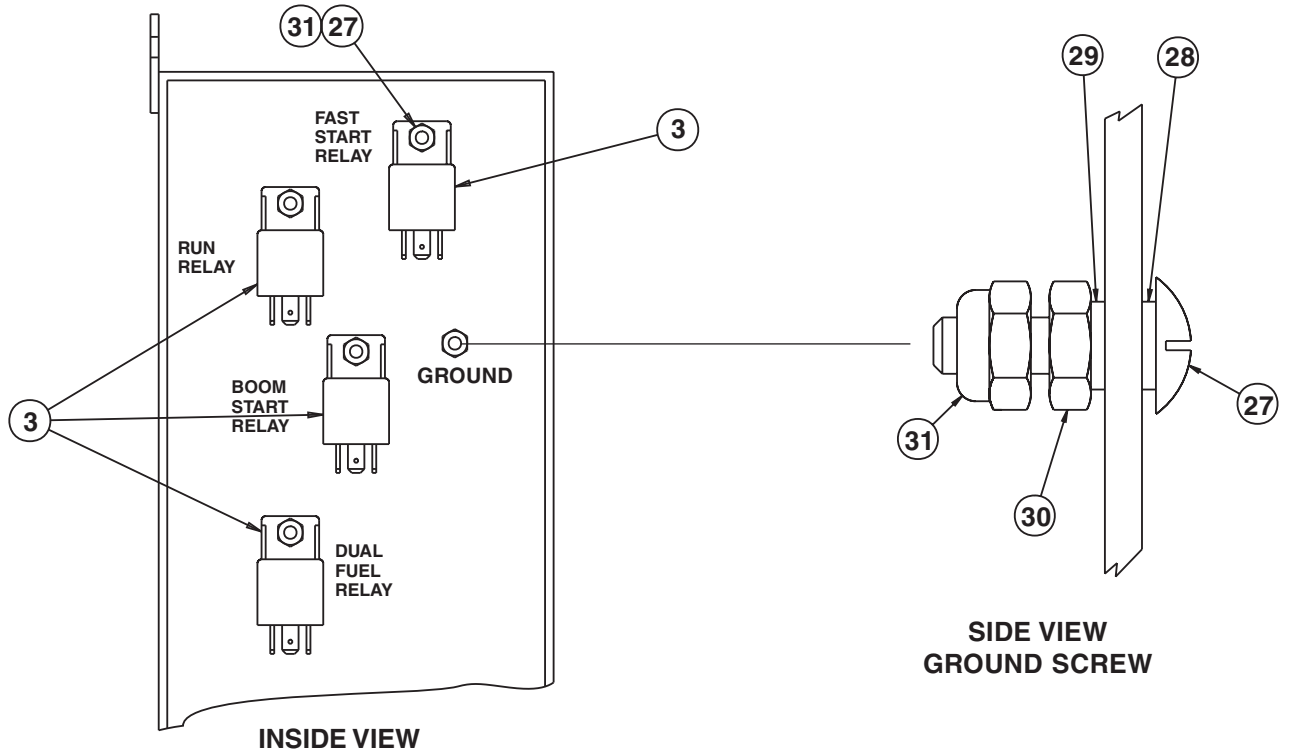
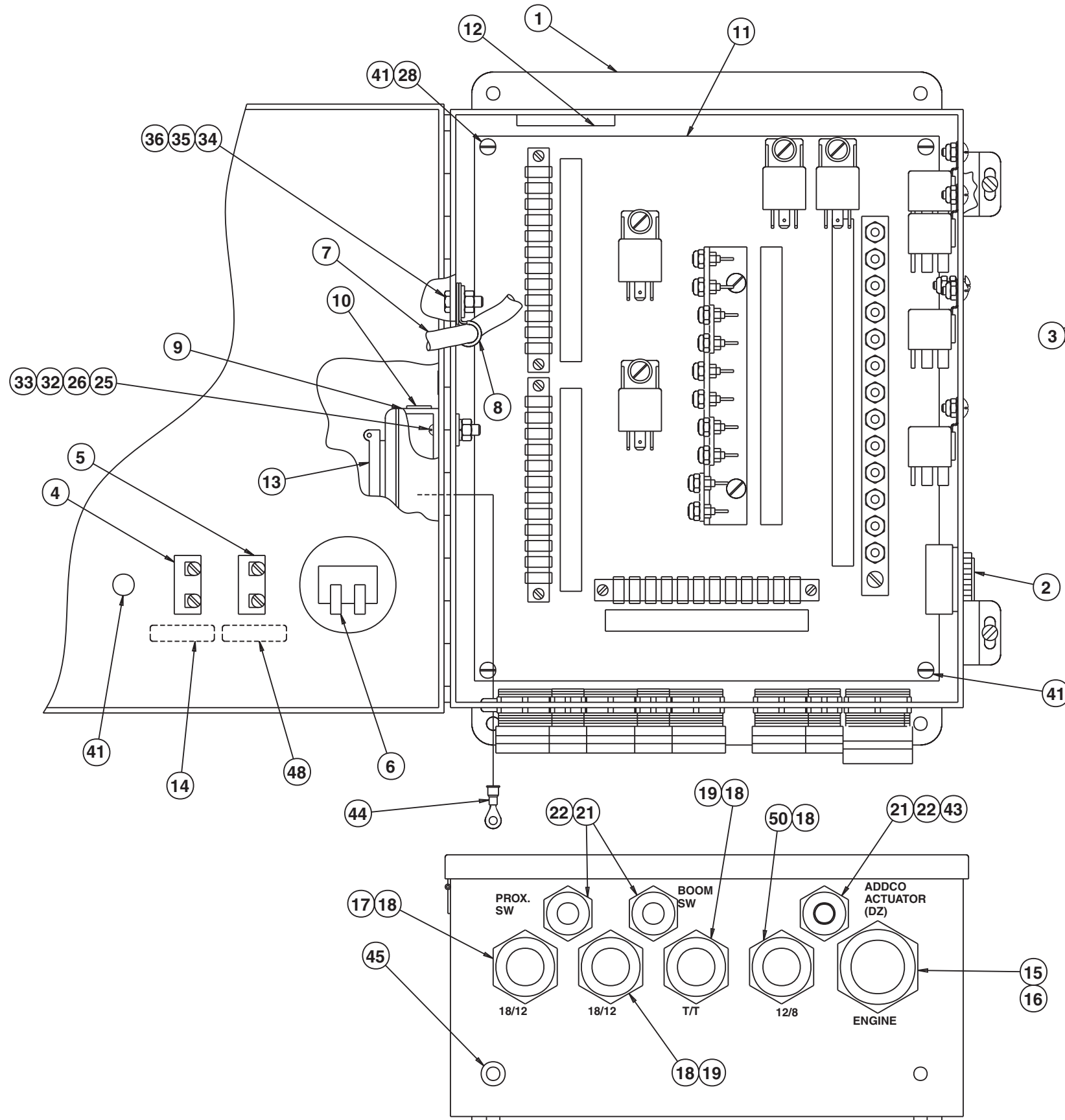
Wiring box panel, Deutz and Ford LRG-423

item	part no	qty	description
	0081995	1	Wiring box panel, Deutz & Ford 423 - (before 11-08-1999)
	0112165	1	Wiring box panel, Deutz & Ford 423 - (between 11-08-1999 and 1-04-00)
	0083467	1	Wiring box panel, Deutz & Ford 423 - (after 1-04-00)
1	0180796	1	Panel, drilled
2	3044712	1	Terminal strip, 12 circuit #10 stud
3	3040433	3	Terminal strip, 12 circuit .188 tab slip-on
4	0181552	1	Decal, power wire
5	0181553	1	Decal, terminal strip
6	0181107	1	Decal, control wire #2
7	0181106	1	Decal, control wire #1
8	3040469	4	Relay, 12 volt DC
9	3040287	1	Relay, 12 volt DC
10	0150488	1	Diode holder
11	5560038	22	Nut #10-32 self locking
12	974239	4	Machine screw #6-32 x 1/2 inch long round head
13	986159	4	Washer #6 medium flat
14	974689	1	Machine screw #10-24 x 3/4 inch long round head
15	974729	1	Machine screw #10-24 x 1-1/4 inch long round head
16	5560034	7	Nut #10-24 self locking
17	5560609	10	Machine screw #10-24 x 1/2 inch long truss head
18	987089	4	Washer #10 medium lock
19	987349	10	Washer #6 medium lock
20	0181554	1	Decal, diode
21	0073631	3	Diode stand off
22	0070681	1	Jumper wire
23	0070711	1	Jumper wire
24	0071812	2	Jumper wire - (before 1-04-00)
	0071812	1	Jumper wire - (after 1-04-00)
25	0181434	1	Diode/resister wire
26	0070682	1	Diode wire
27	0181073	1	Resister wire - (5 ohm)
28	0140317	3	Diode wire
29	0151205	1	Jumper wire
30	0081560	1	Jumper wire
31	0070724	2	Jumper wire
32	0180110	4	Diode wire
	3040108	1	Replacement diode
33	0181031	2	Jumper wire
34	0081559	1	Jumper wire
35	0081515	1	Jumper wire
36	0181030	1	Diode wire
37	0181136	2	Jumper wire
38	0181111	2	Jumper wire
39	0181432	1	Diode wire - (before 1-04-00)
	0112164	1	Diode wire - (after 1-04-00)
40	0070713	2	Jumper wire
41	0140323	2	Jumper wire
42	0140332	2	Jumper wire
43	5560654	1	Washer #10 star tooth lock
44	974279	6	Machine screw #6-32 x 3/4 inch long round head
45	0090621	1	Jumper wire
46	0110471	1	Diode wire
47	0170335	1	Diode wire
48	0181113	1	Jumper wire
49	0073253	2	Jumper wire
50	984049	1	Nut #10-24 hex
51	0181434	1	Diode wire - (used on machines before 1-04-00)

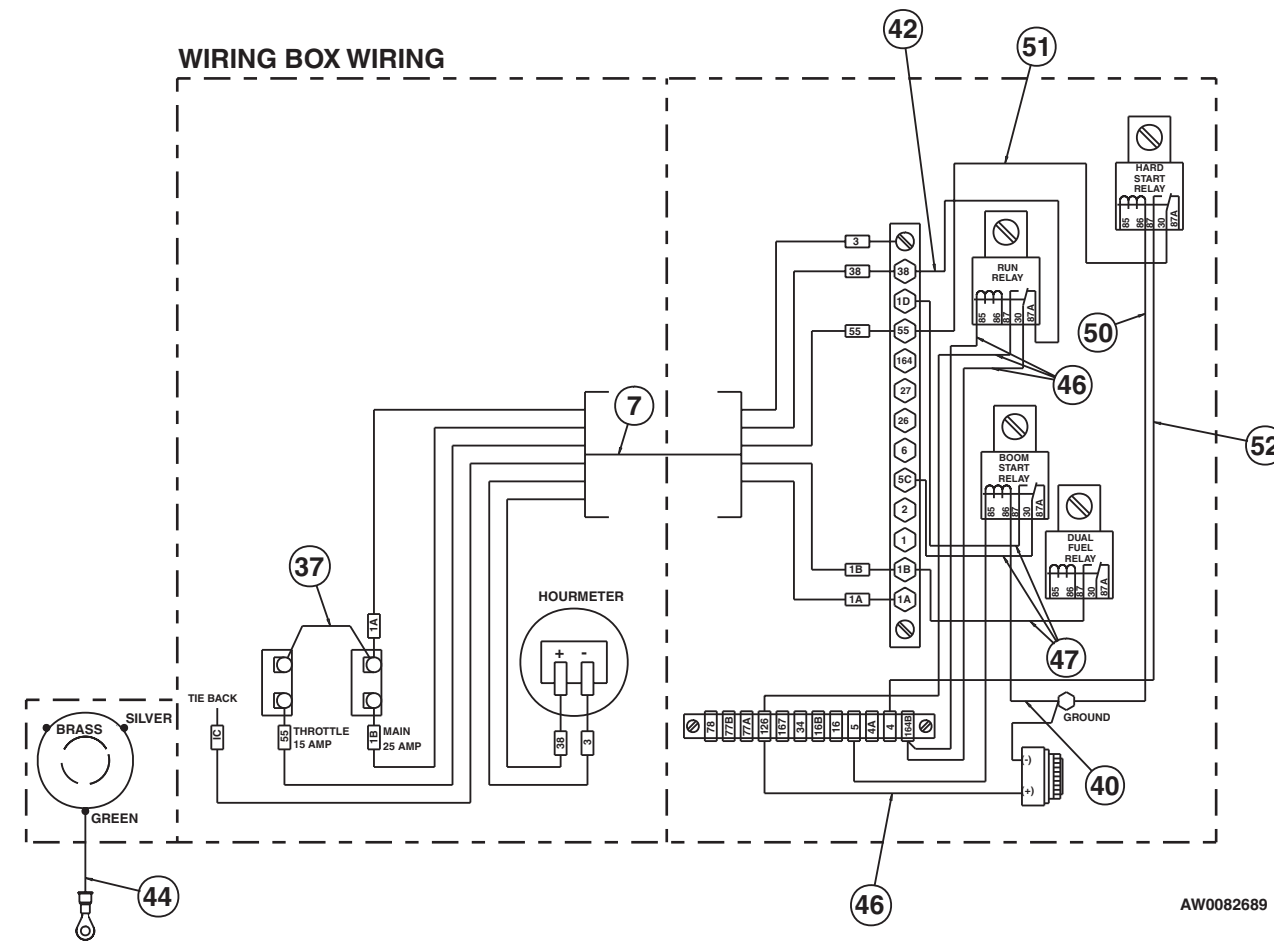
Wiring box, Ford LRG-425

item	part no	qty	description
	0082689	1	Wiring box, Ford LRG-425
1	0081996	1	Wiring box, drilled
2	3040411	1	Mini siren
3	3040469	3	Relay, 12 volt DC
4	3040252	1	Circuit breaker, 15 amp capacity
5	3040069	1	Circuit breaker, 25 amp capacity
6	3070001	1	Hour meter
7	0081997	1	Wire harness, wiring box internal
8	5093001	1	Clamp
9	3040118	1	Extension with gasket
10	3040121	4	Close-up plug
11	0082688	1	Wiring box panel - (see page 3-43 for parts breakdown)
12	0070967	1	Corrosion inhibitor
13	3045278	1	Flanged electrical outlet with cover
14	0170623	1	Decal, throttle
15	3040386	1	Connector
16	3040387	1	Locknut
17	3040116	1	Connector
18	3040110	4	Locknut
19	3040298	1	Connector
20	3040285	1	Connector
21	3040187	3	Connector
22	3040070	3	Locknut
23	0070921	1	Placard, 110 volt power
24	5560655	2	Pop rivet #AD32-ABS
25	974239	2	Machine screw #6-32 x 1/2 inch long round head
26	984009	2	Nut #6-32 hex
27	5560648	5	Machine screw #10-24 x 3/4 inch long truss head
28	5560654	2	Washer #10 star tooth lock
29	987089	1	Washer #10 medium lock
30	984049	1	Nut #10-24 hex
31	5560034	4	Nut #10-24 self locking
32	986159	2	Washer #6 medium flat
33	987349	2	Washer #6 medium lock
34	986019	1	Washer 1/4 medium flat
35	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
36	5560004	1	Nut 1/4-20 self locking
37	0070735	2	Jumper wire
38	0181028	1	Jumper wire
39	0240483	1	Jumper wire
40	0081559	1	Jumper wire
41	5560667	4	Machine screw #10-24 x 3/8 inch long pan head
42	0073057	1	Jumper wire
43	970469	1	Capscrew 3/8-16 x 1 inch long hex head grade 5
44	0071561	1	Jumper wire
45	5569003	1	Grommet
46	0071528	4	Jumper wire
47	0071555	3	Jumper wire
48	0071778	1	Decal, main circuit breaker
49	3040115	1	Hole plug, 1/2 inch diameter
50	3040295	1	Connector
51	0181031	1	Jumper wire
52	0112231	1	Jumper wire

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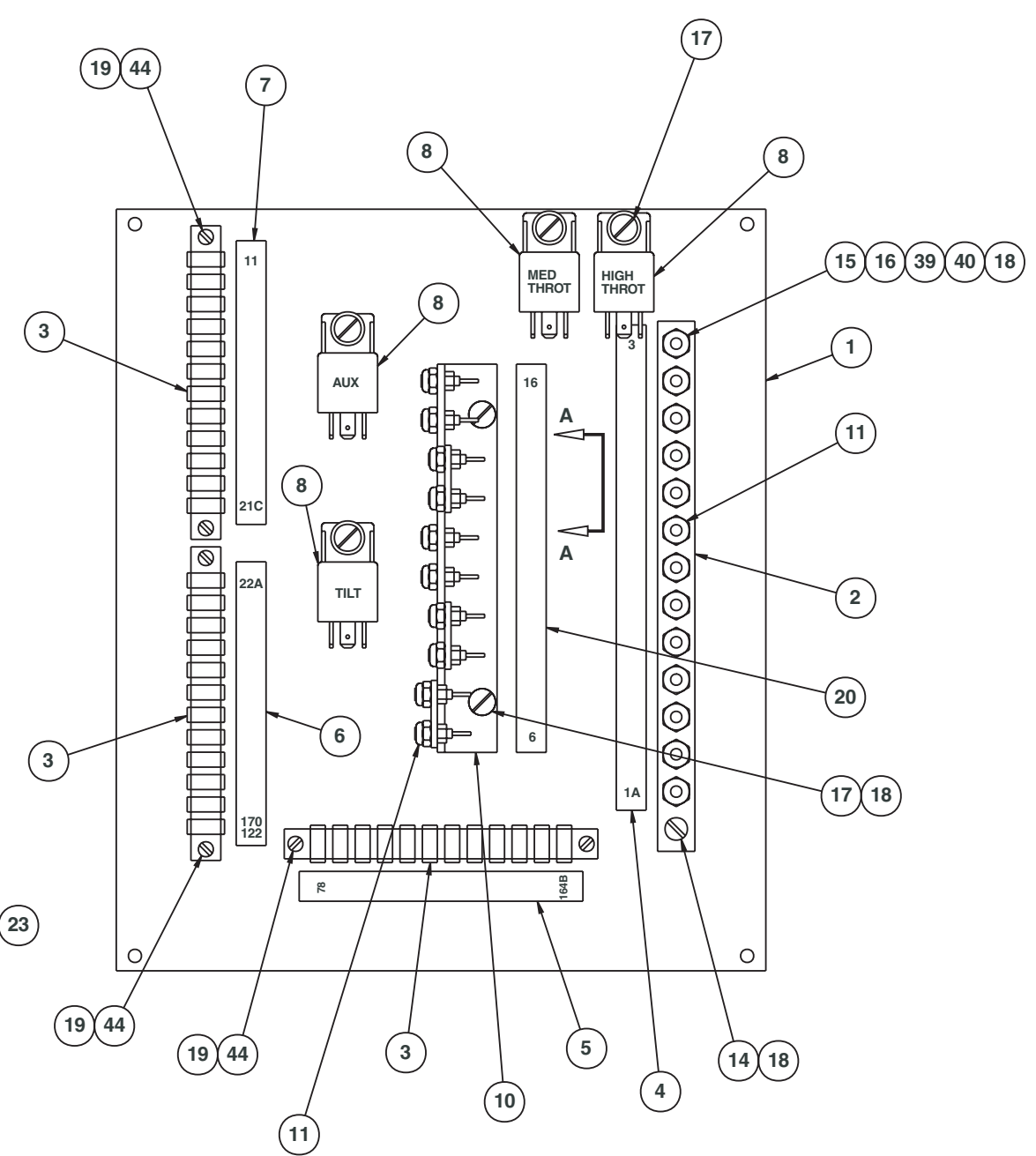
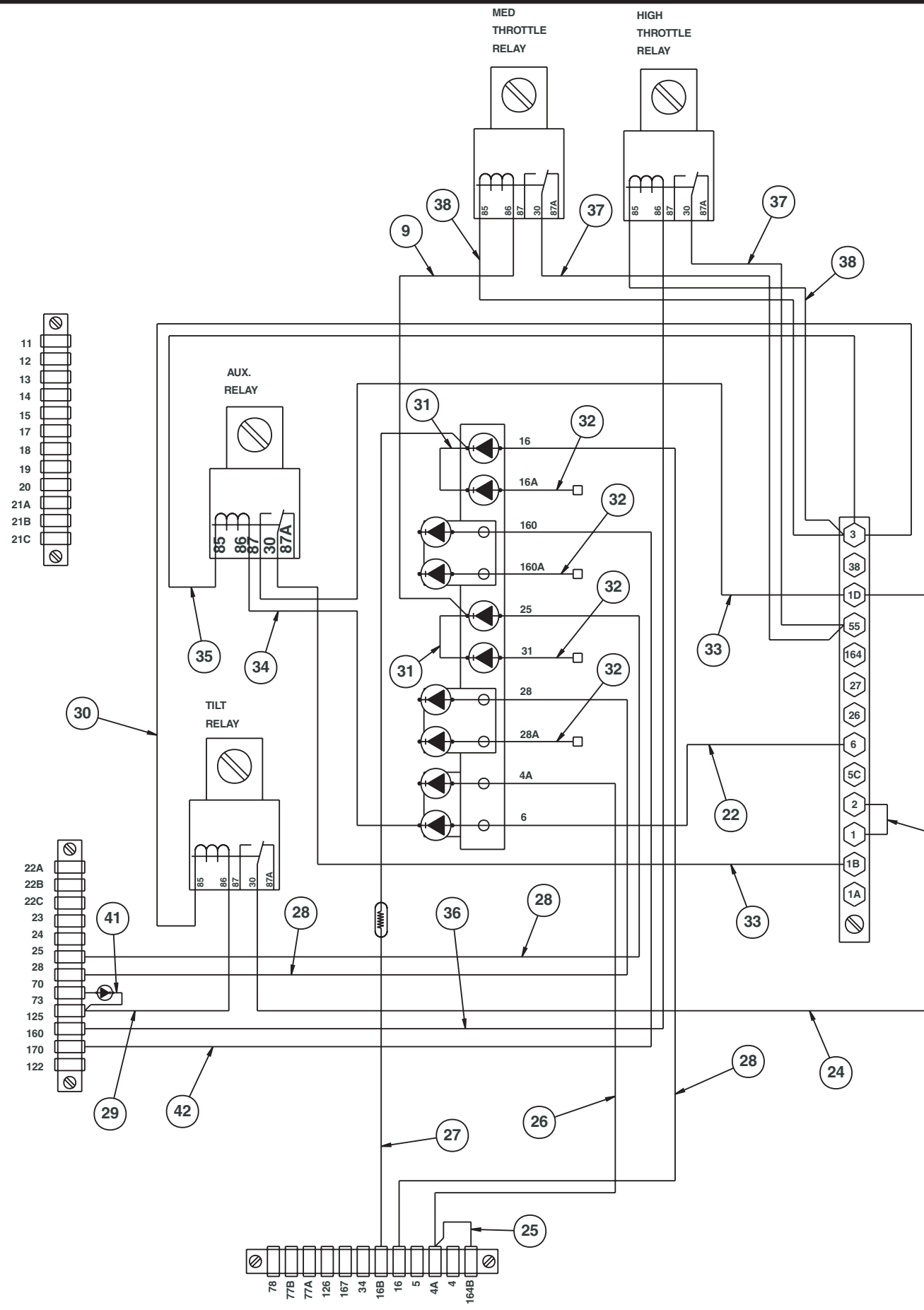
WIRING BOX WIRING



AW0082689

TITLE Wiring box
Ford LRG-425
Snorkel model TB 60

1 2 3 4 5 6 7 8 9



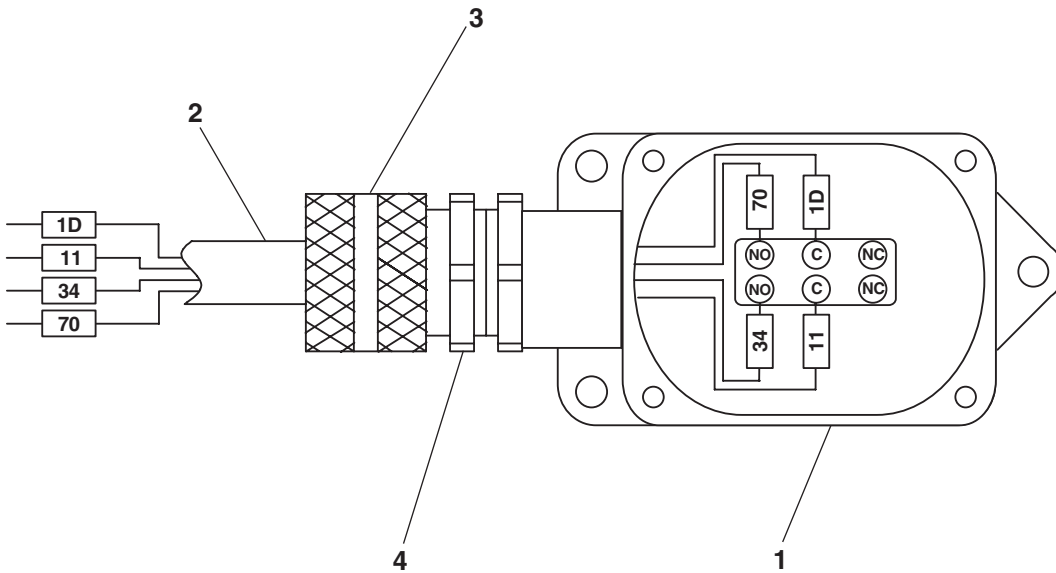
AW0082688

Wiring box panel, Ford LRG-425

item	part no	qty	description
	0082688	1	Wiring box panel, Ford LRG-425
1	0180796	1	Panel, drilled
2	3044712	1	Terminal strip, 12 circuit #10 stud
3	3040433	3	Terminal strip, 12 circuit .187 tab slip-on
4	0181552	1	Decal, power wire
5	0181553	1	Decal, terminal strip
6	0181107	1	Decal, control wire #2
7	0181106	1	Decal, control wire #1
8	3040469	4	Relay, 12 volt DC
9	0181113	1	Jumper wire
10	0150488	1	Diode holder
11	5560038	22	Nut #10-32 self locking
12	974239	1	Machine screw #6-32 x 1/2 inch long round head
13	986159	3	Washer #6 medium flat
14	974689	1	Machine screw #10-24 x 3/4 inch long round head
15	974729	1	Machine screw #10-24 x 1-1/4 inch long round head
16	5560034	7	Nut #10-24 self locking
17	5560609	12	Machine screw #10-24 x 1/2 inch long truss head
18	987089	3	Washer #10 medium lock
19	987349	10	Washer #6 medium lock
20	0181554	1	Decal, diode
21	0073631	3	Diode stand off
22	0070681	1	Jumper wire
23	0070711	1	Jumper wire
24	0071812	2	Jumper wire
25	0110458	1	Jumper wire
26	0070682	1	Diode wire
27	0181073	1	Resister wire - (5 ohm)
28	0140317	3	Diode wire
29	0151205	1	Jumper wire
30	0081560	1	Jumper wire
31	0070724	2	Jumper wire
32	0180110	4	Diode wire
	3040108	1	Replacement diode
33	0181031	2	Jumper wire
34	0081559	1	Jumper wire
35	0081515	1	Jumper wire
36	0181030	1	Diode wire
37	0181136	2	Jumper wire
38	0181111	2	Jumper wire
39	984049	1	Nut #10-24 hex
40	5560654	1	Washer #10 star tooth lock
41	0170335	1	Diode wire
42	0110471	1	Diode wire

Boom switch

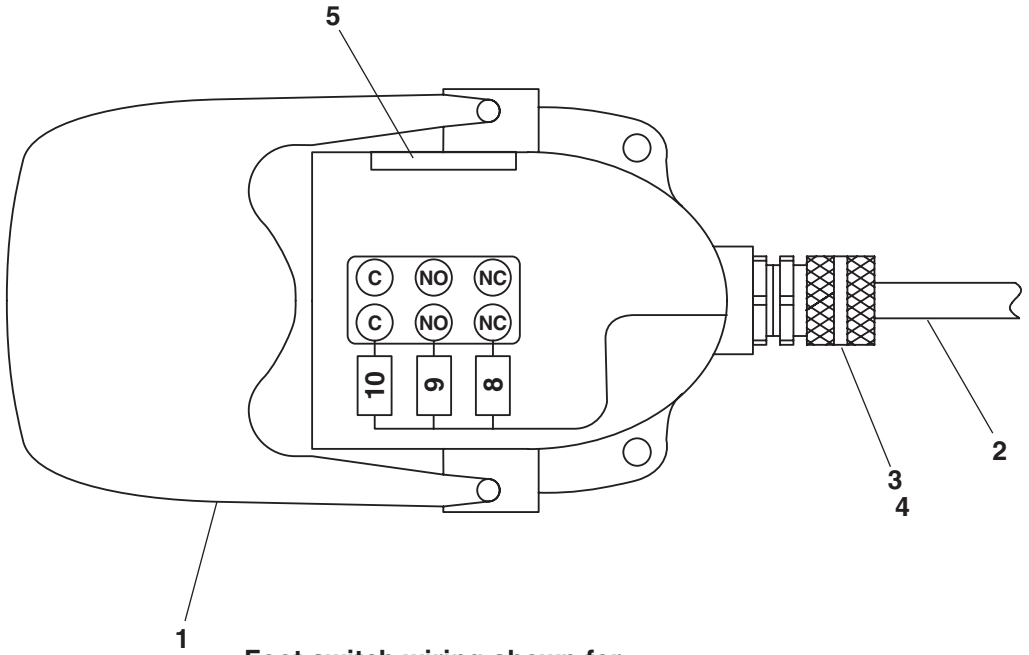
item	part no	qty	description
	0081975	1	Boom switch
1	3020019	1	Switch
2	0081976	1	wire harness, boom switch
3	3040187	1	Connector
4	3040070	1	Locknut



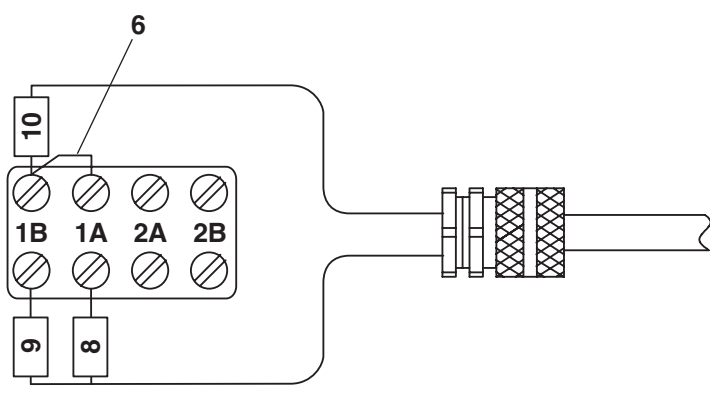
AW0081975

Platform foot switch

item	part no	qty	description
1	0071800	1	Platform foot switch
	3020021	1	Foot switch
	3020037	1	Replacement switch, Square D switch
	3020038	1	Replacement switch, Linemaster switch
2	0070596	1	wire harness, platform foot switch
3	3040116	1	Connector
4	3040110	1	Locknut
5	0070967	1	Corrosion inhibitor
6	0060373	1	Jumper strap - (used on Square D switch only)



Foot switch wiring shown for Linemaster switch



Foot switch wiring shown for Square D switch

AW0071800

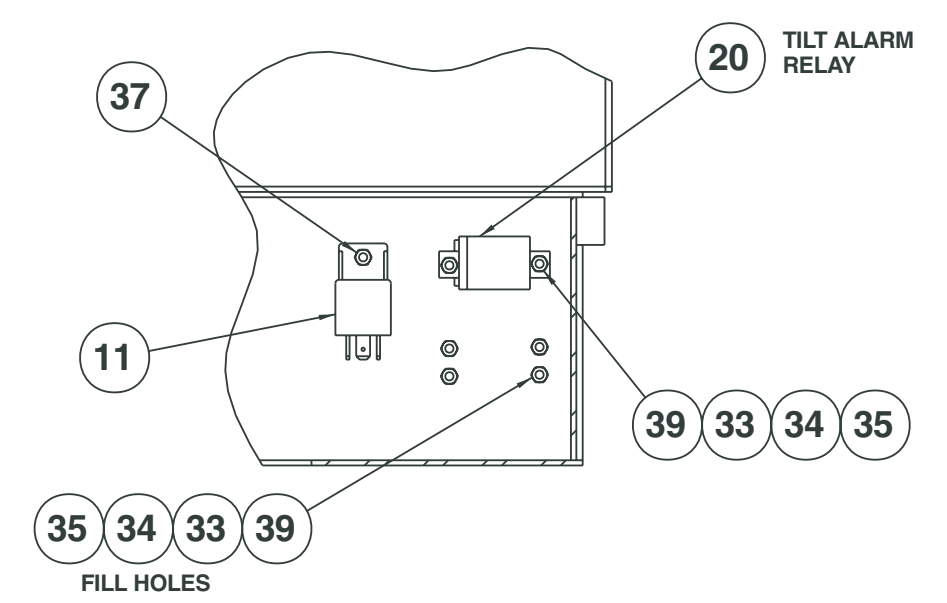
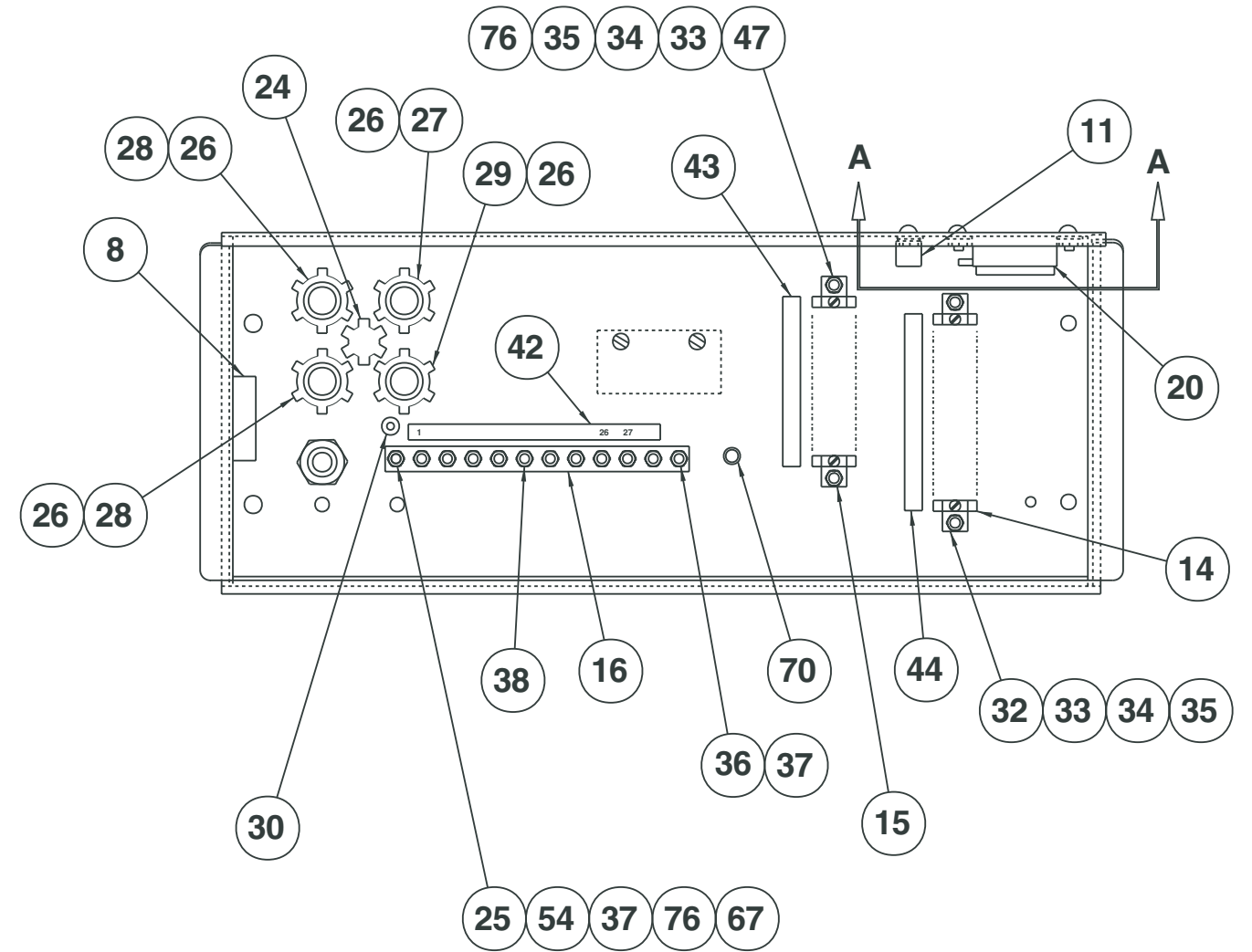
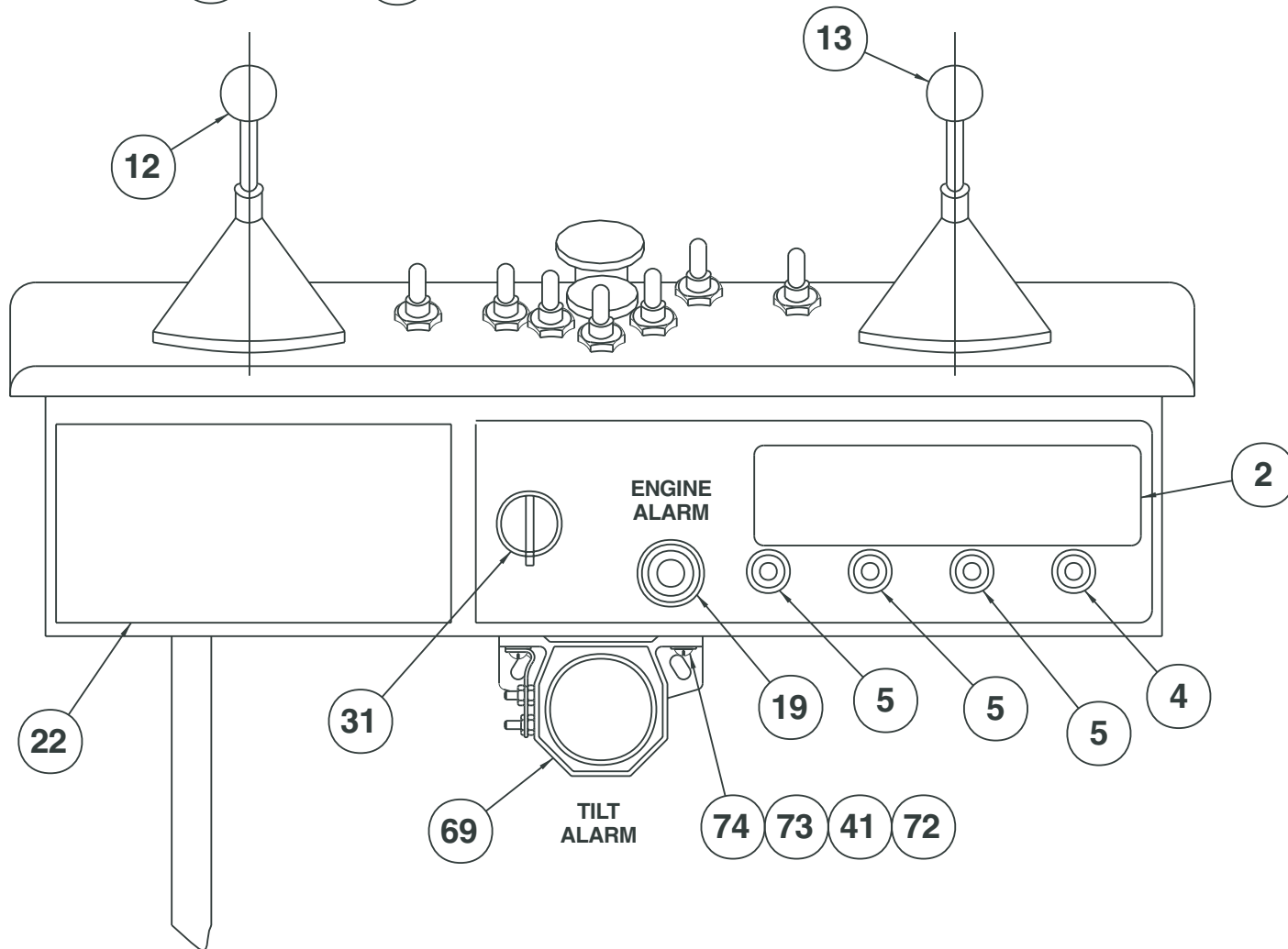
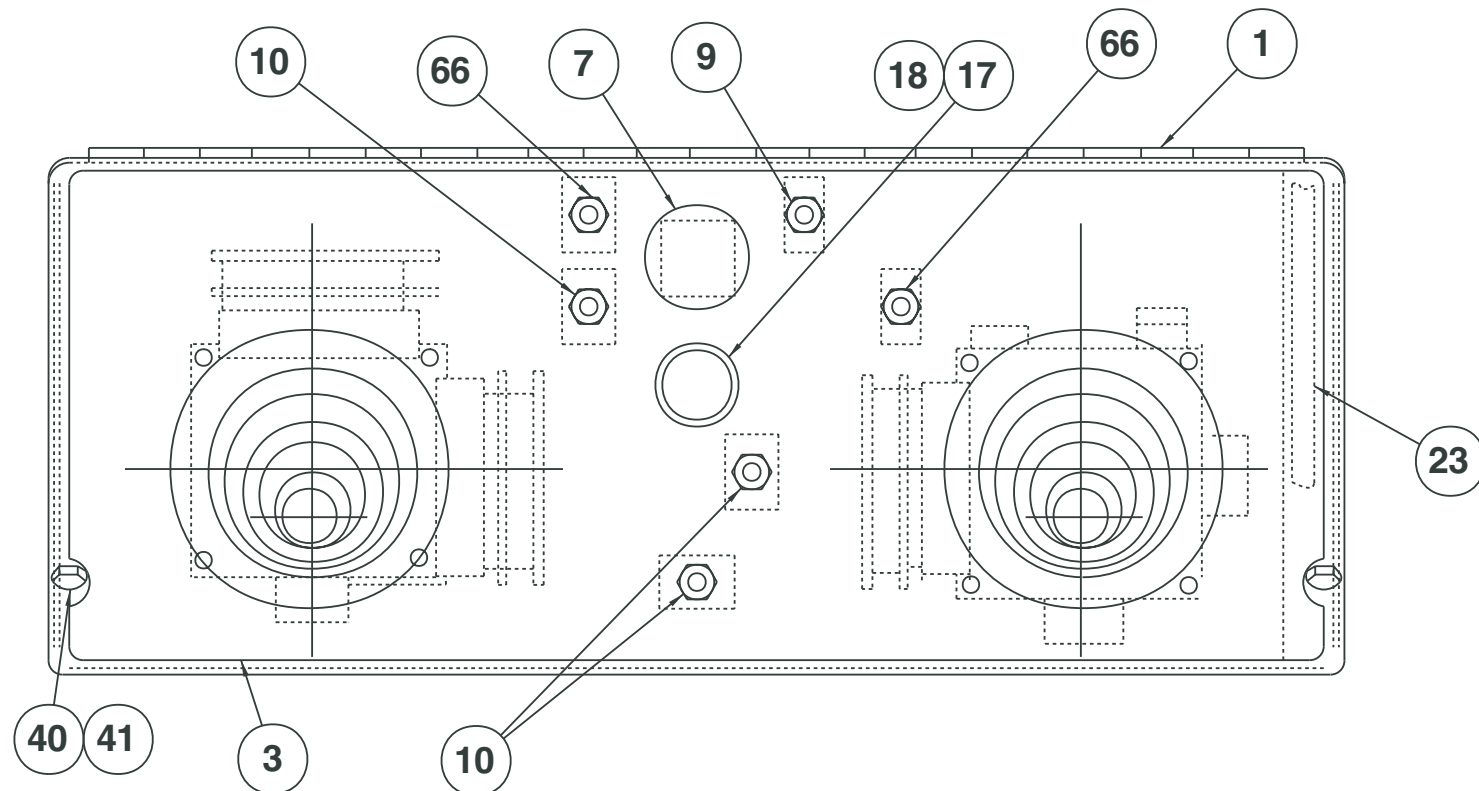
Upper control box

item	part no	qty	description
	0081986	1	Upper control box
1	0180842	1	Control box
2	0180846	1	Placard, upper control box front
3	0082014	1	Placard, upper control box top
4	3040068	1	Circuit breaker, 20 amp capacity
5	3040535	3	Circuit breaker, 3 amp capacity
6	0073295	1	Jumper wire
7	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
8	0070967	1	Corrosion inhibitor
9	3020080	1	Switch, toggle
10	3020018	3	Switch, toggle
11	3040469	1	Relay, 12 volt DC
12	3040493	1	Controller, lift/swing - (see page 3-54 for parts breakdown)
13	3040492	1	Controller, drive/steer - (see page 3-52 for parts breakdown)
14	3040057	1	Terminal strip, 18 circuit .188 tab slip-on
15	3040433	1	Terminal strip, 12 circuit .188 tab slip-on
16	3044710	1	Terminal strip, 10 circuit #10 stud
17	0180949	1	Speed control switch
	3040497	1	Replacement switch
18	3040348	1	Switch knob
19	3040411	1	Mini siren, engine alarm
20	3040188	1	Relay, 12 volt DC
21	0071557	1	Jumper wire
22	0072530	1	Decal, danger electrical hazard
23	7190001	1	Gasket, weatherproof x 72 inch long
24	3040031	1	Hole plug, 3/4 inch diameter
25	5560649	1	Machine screw #10-24 x 1 inch long truss head
26	3040110	4	Locknut
27	3040285	1	Connector
28	3040116	3	Connector
29	3040295	1	Connector
30	5569003	1	Grommet - (before 4-11-00)
31	3020090	1	Switch, anti-restart ignition
32	974279	3	Machine screw #6-32 x 3/4 inch long round head
33	987349	10	Washer #6 medium lock
34	986159	14	Washer #6 medium flat
35	984009	10	Nut #6-32 hex
36	974689	1	Machine screw #10-24 x 3/4 inch long round head
37	5560034	3	Nut #10-24 self locking
38	5560038	14	Nut #10-32 self locking
39	974239	6	Machine screw #6-32 x 1/2 inch long round head
40	5560086	2	Capscrew 1/4-20 x 1 inch long hex plated with sems
41	5560004	4	Nut 1/4-20 self locking
42	0180886	1	Decal, power wire
43	0180887	1	Decal, control wire #1
44	0180888	1	Decal, control wire #2
45	0180850	1	Wire harness, upper control box power
46	0082007	1	Wire harness, upper control box control
47	974269	1	Machine screw #6-32 x 1 inch long round head
48	0060373	3	Jumper strap
49	0070747	5	Jumper wire
50	0151910	2	Jumper wire
			Parts list continued on next page

Upper control box

item	part no	qty	description
51	0070730	3	Jumper wire
52	0070711	1	Jumper wire
53	0070712	3	Jumper wire
54	5560654	1	Washer #10 star tooth lock
55	0240483	1	Jumper wire
56	0181074	1	Jumper wire
57	0071511	1	Jumper wire
58	0071534	1	Jumper wire
59	0090622	2	Jumper wire
60	3044161	1	Terminal #10 stud insulated 16/14 wire
61	0181028	2	Jumper wire
62	0110468	1	Jumper wire
63	0151816	1	Jumper wire
64	0070713	1	Jumper wire
65	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
66	3020013	2	Switch, toggle
67	0181030	1	Jumper wire
68	0181029	1	Jumper wire
69	480652	1	Alarm, tilt sensor
70	5569711	1	Grommet
71	0070746	3	Jumper wire
72	986019	2	Washer 1/4 medium flat
73	5560341	1	Washer 1/4 star tooth lock
74	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
75	984049	2	Nut #10-24 hex
76	5560663	1	Washer #6 star tooth lock

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Section A-A

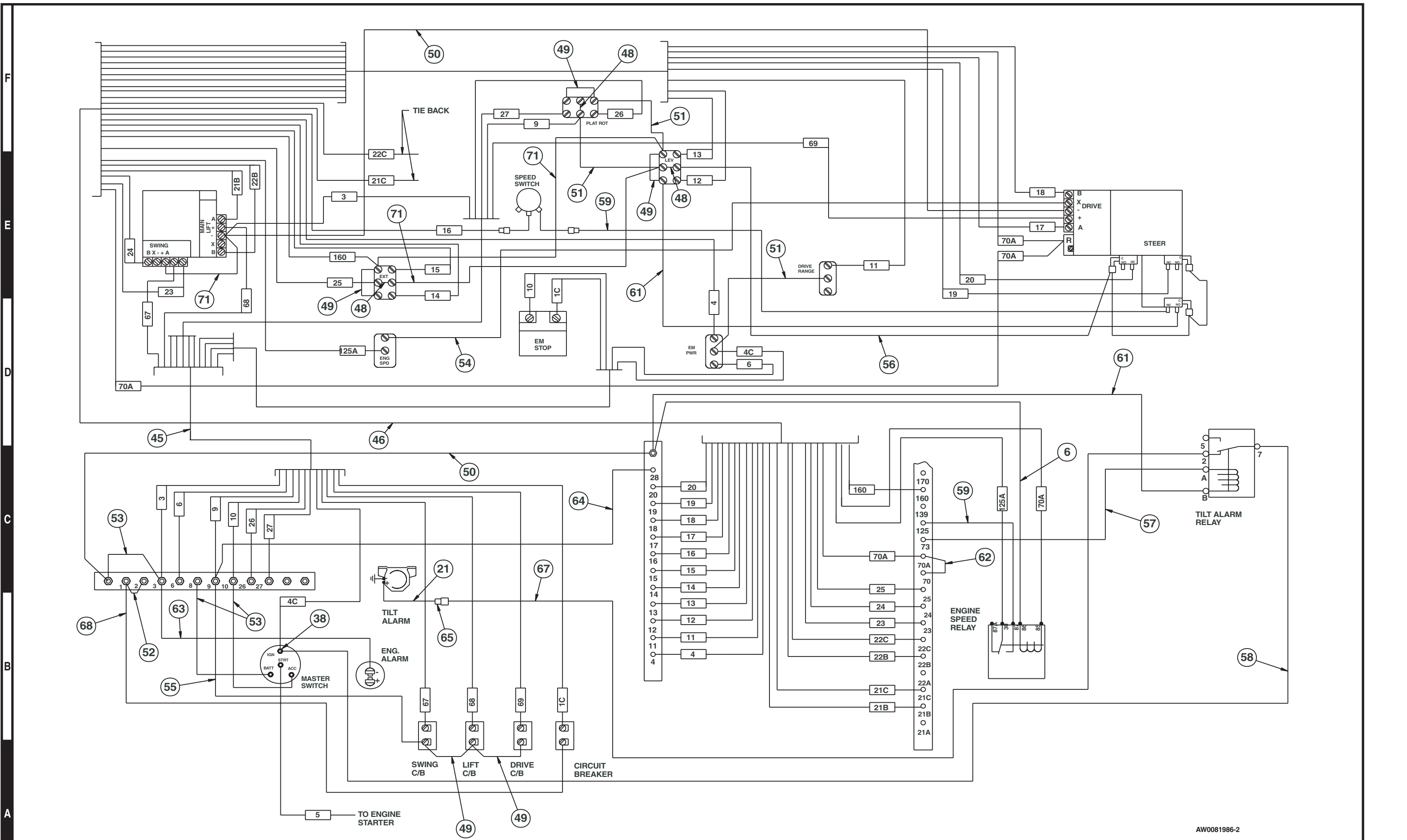
AW0081986-1

DWG. 0020420

TITLE Upper control box
sheet 1
Snorkel model TB 60

Snorkel
INTERNATIONAL
Page 3 - 49

1 2 3 4 5 6 7 8 9



AW0081986-2

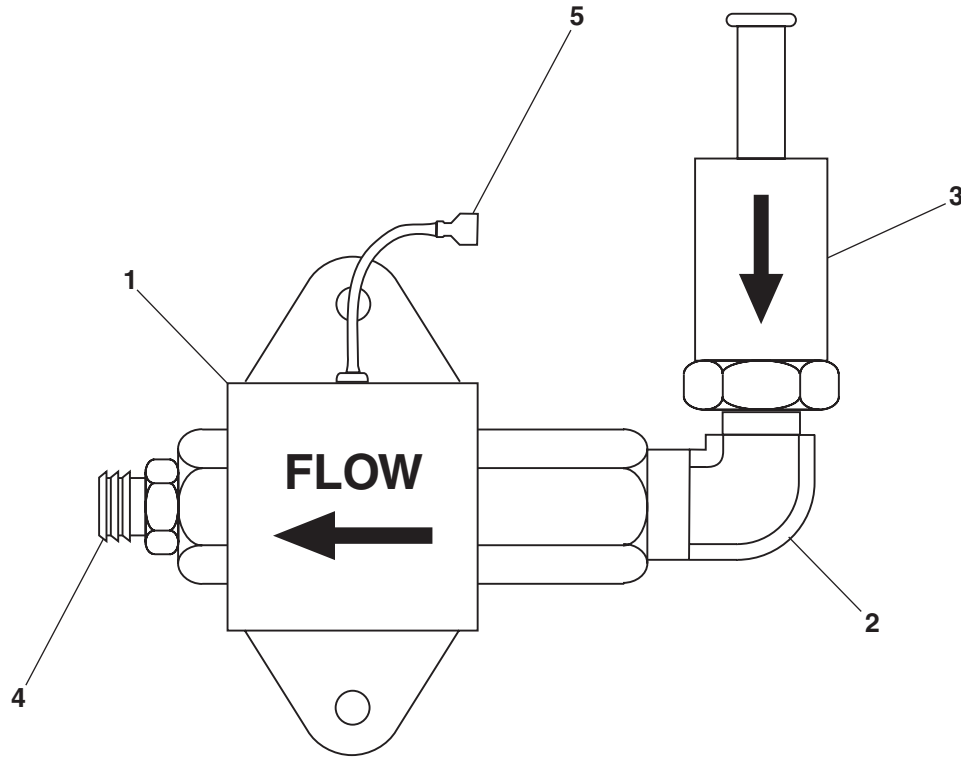


TITLE Upper control box
 Sheet 2
 Snorkel model TB 60

DWG. 0081986-2

Electric fuel pump

item	part no	qty	description
	0111868	1	Electric fuel pump complete
1	7630085	1	Electric fuel pump
2	5090006	1	Street 90° elbow, brass
3	7630153	1	Fuel filter
4	5090035	1	Vacuum fitting
5	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire

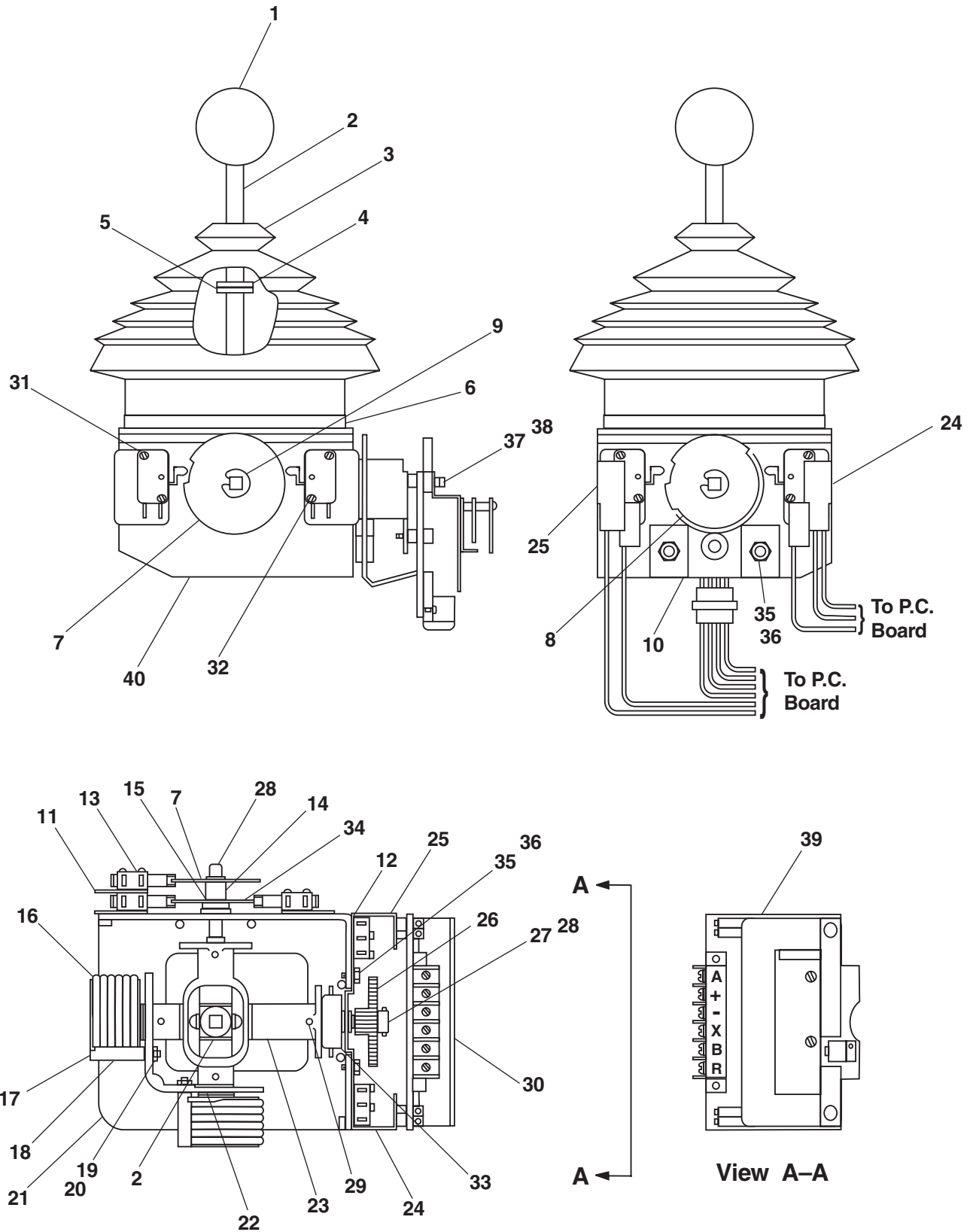


AW011868

Controller, drive/steer

item	part no	qty	description
	3040492	1	Controller, drive/steer
1	2660002	1	Knob
2	3040086	1	Shaft
3	3040146	1	Boot
4	8150145	1	Ring
5	8150146	1	Tension clip
6	3040169	1	Boot clamp ring
7	8150147	2	Cam
8	8150009	1	Fixed cam
9	8150135	4	"E" clip
10	8150148	1	Modified bracket
11	8150138	4	Insulator
12	8150139	2	Insulator
13	3020033	6	Microswitch
14	8150136	2	Cam spacer
15	8150149	1	Brass washer
16	8150005	2	Spring return with housing
17	8150004	2	Spring return bolt
18	8150150	2	Washer
19	8150144	2	Washer split 5M black
20	8150143	2	Nut 5M hex
21	8150003	1	Casting, modified
22	3040271	4	Bushing
23	8150094	1	Second axis
24	8150151	1	Bracket, right side
25	8150152	1	Bracket, left side
26	3040073	1	Drive gear
27	3040072	1	Slave gear
28	8150082	2	Blank cam shaft
29	8150013	4	Tension pin
30	8150153	1	Heat sink
31	8150140	4	Screw #4-40 x 1-1/4 inch long
32	8150137	4	Screw #4-40 x 3/4 inch long
33	3040392	1	Pot with bracket and connector
34	8150084	2	Fixed cam
35	8150154	2	Screw metric M4 x 6mm long din 85
36	8150155	2	Washer metric M4
37	8150141	2	Washer metric M3.5 x 16mm long din 85
38	8150156	4	Washer
39	8150142	1	Gate for drive/steer controller
40	3040518	1	Circuit board, 33 Hertz - (trim pots not preset, controller adjustment required)

Controller, drive/steer

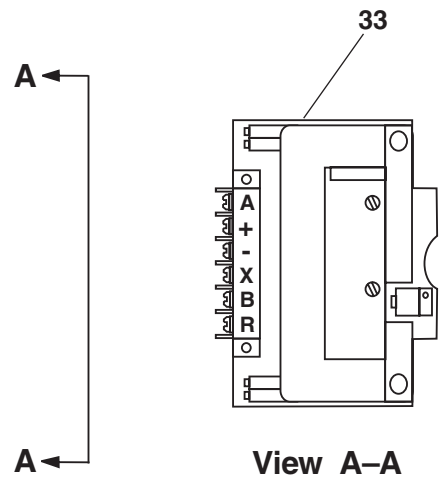
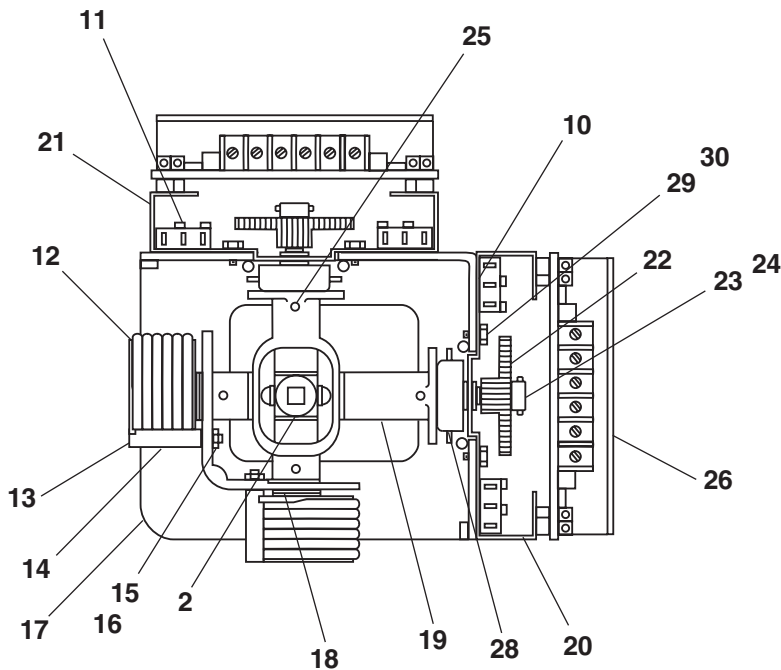
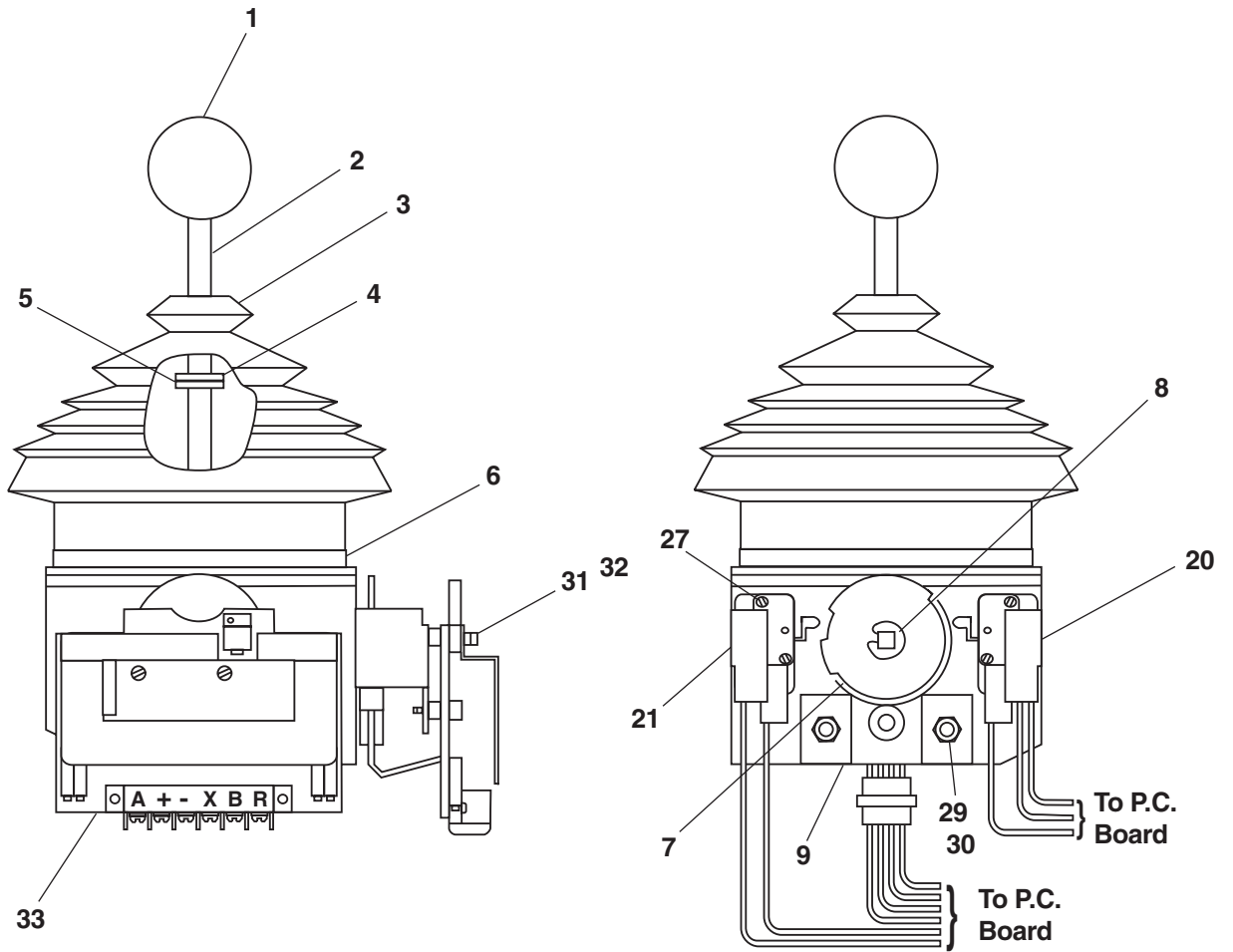


AW3040492

Controller, lift/swing

item	part no	qty	description
	3040493	1	Controller, lift/swing
1	2660002	1	Knob
2	3040086	1	Shaft
3	3040146	1	Boot
4	8150145	1	Ring
5	8150146	1	Tension clip
6	3040169	1	Boot clamp ring
7	8150009	1	Fixed cam
8	8150135	4	"E" clip
9	8150148	2	Modified bracket
10	8150138	4	Insulator
11	3020033	4	Microswitch
12	8150005	2	Spring return with housing
13	8150004	2	Spring return bolt
14	8150150	2	Washer
15	8150144	2	Washer split 5M black
16	8150143	2	Nut 5M hex
17	8150003	1	Casting, modified
18	3040271	4	Bushing
19	8150094	1	Second axis
20	8150151	2	Bracket, right side
21	8150152	2	Bracket, left side
22	3040073	2	Drive gear
23	3040072	2	Slave gear
24	8150082	4	Blank cam shaft
25	8150013	4	Tension pin
26	8150153	2	Heat sink
27	8150140	8	Screw #4-40 x 1-1/4 inch long
28	3040392	2	Pot with bracket and connector
29	8150154	4	Screw metric M4 x 6mm long din 85
30	8150155	4	Washer metric M4
31	8150141	4	Screw metric M3.5 x 16mm long din 85
32	8150156	8	Washer
33	3040518	1	Circuit board, 33 Hertz - (trim pots not preset, controller adjustment required)

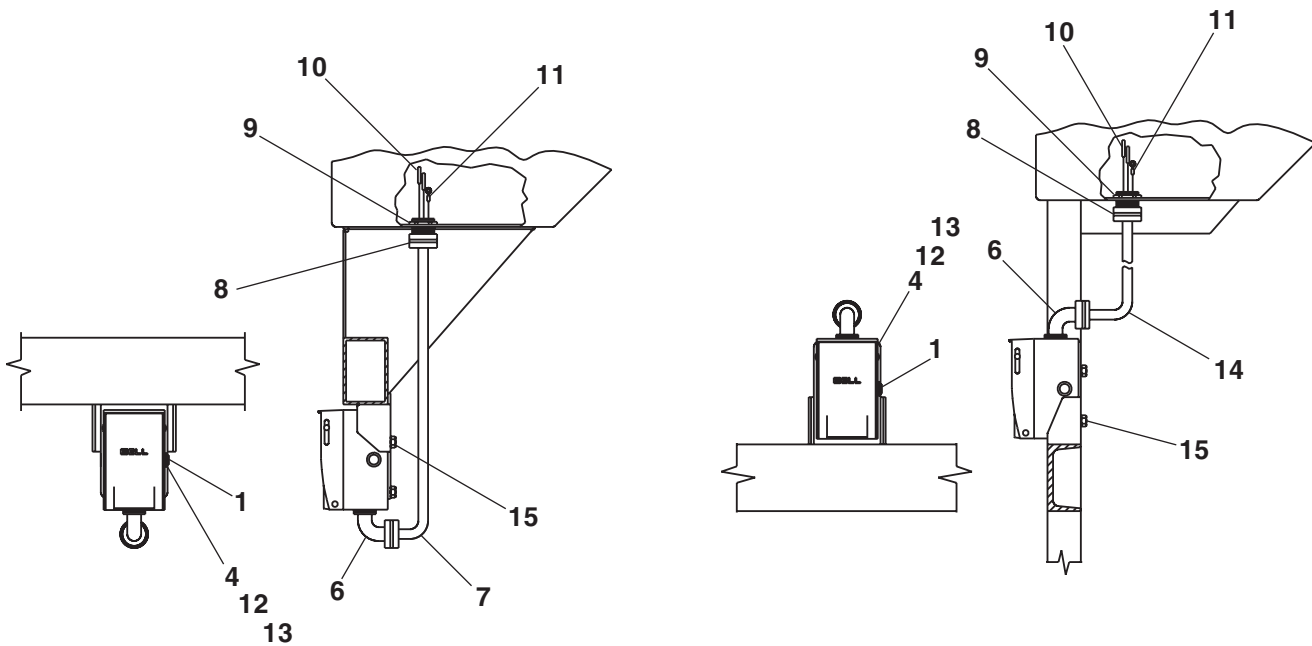
Controller, lift/swing



AW3040493

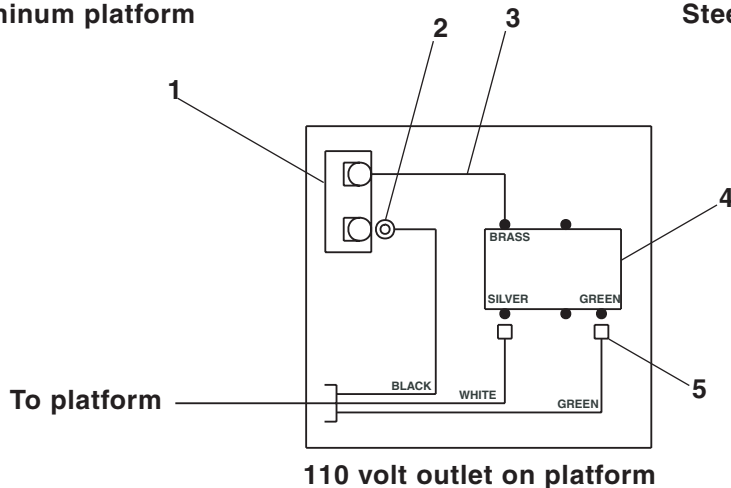
GFCI 110 volt power

item	part no	qty	description
1	3040252	1	Circuit breaker, 15 amp capacity
2	3044854	1	Terminal ring tongue insulated 12/10 wire
3	0071582	1	Jumper wire
4	3040624	1	Receptacle, GFCI outlet - 20 amp
5	3040397	2	Terminal #8 spade 12/10 wire
6	3040691	1	Connector
7	0074368	1	Cable, 110 volt power to platform - (used on aluminum platforms only)
8	3040116	1	Connector
9	3040110	1	Locknut
10	3044072	2	Terminal butt connector insulated 12/10 wire
11	3044836	1	Terminal ring tongue insulated 12/10 wire
12	0074379	1	Electrical box, drilled
13	3040625	1	Cover, GFCI outlet
14	0074369	1	Cable, 110 volt power to platform - (used on steel platforms only)
15	978629	2	Capscrew 1/4-20 x 1/2 inch long hex head self tapping



Aluminum platform

Steel platform



110 volt outlet on platform

AWA07034

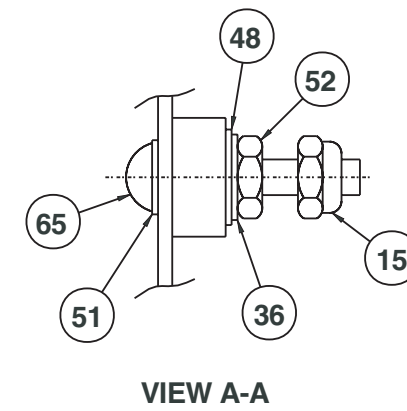
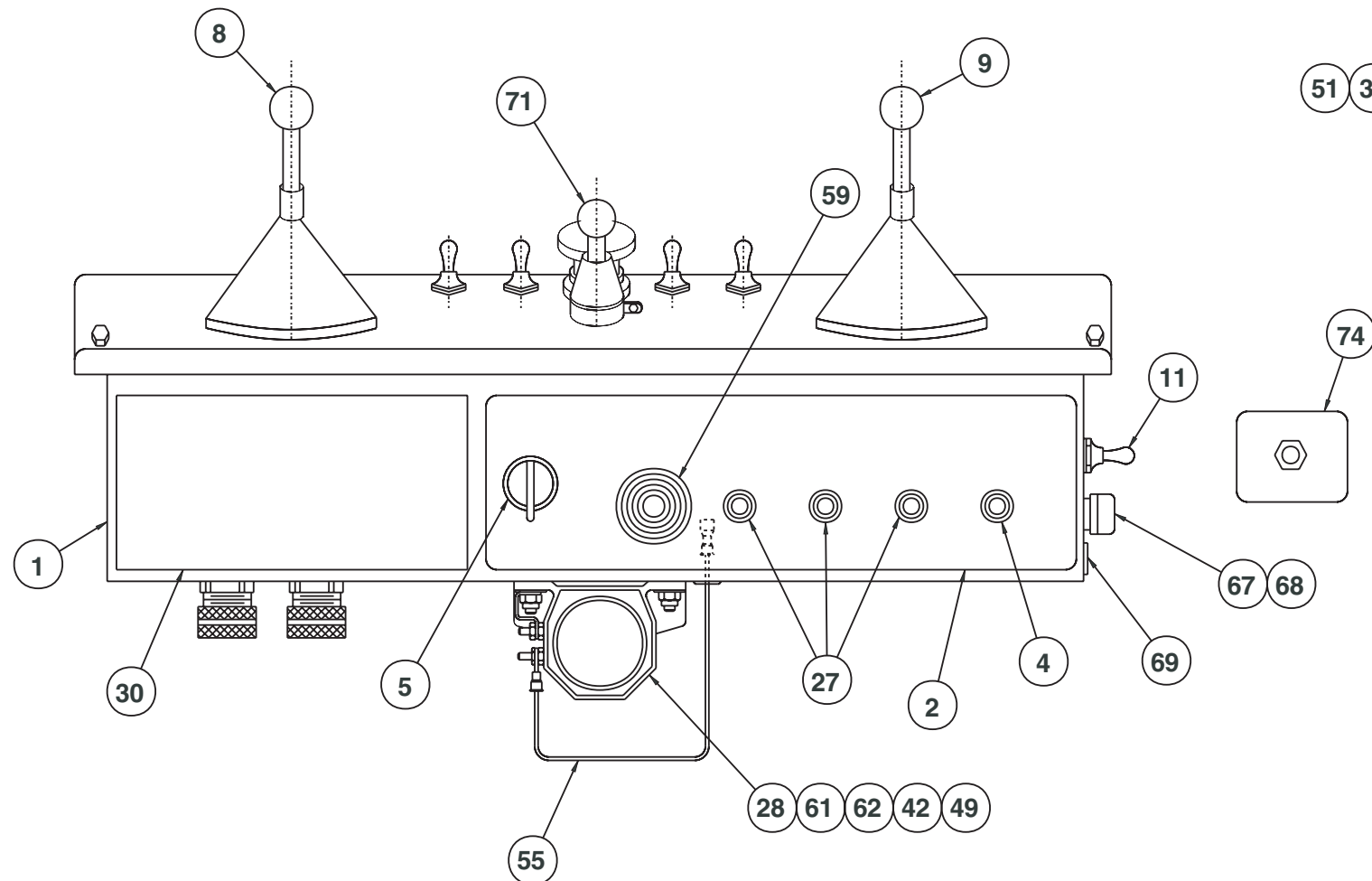
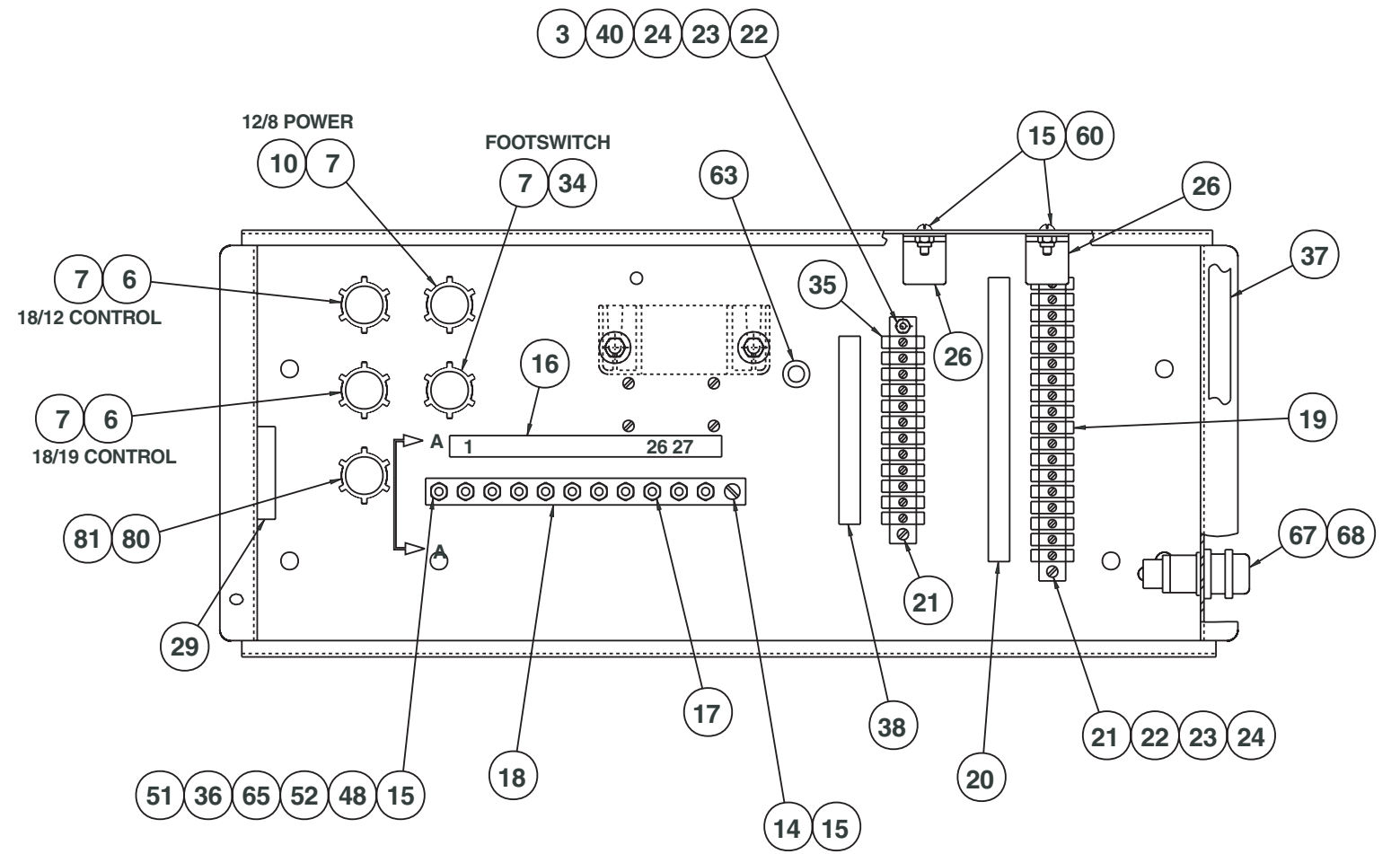
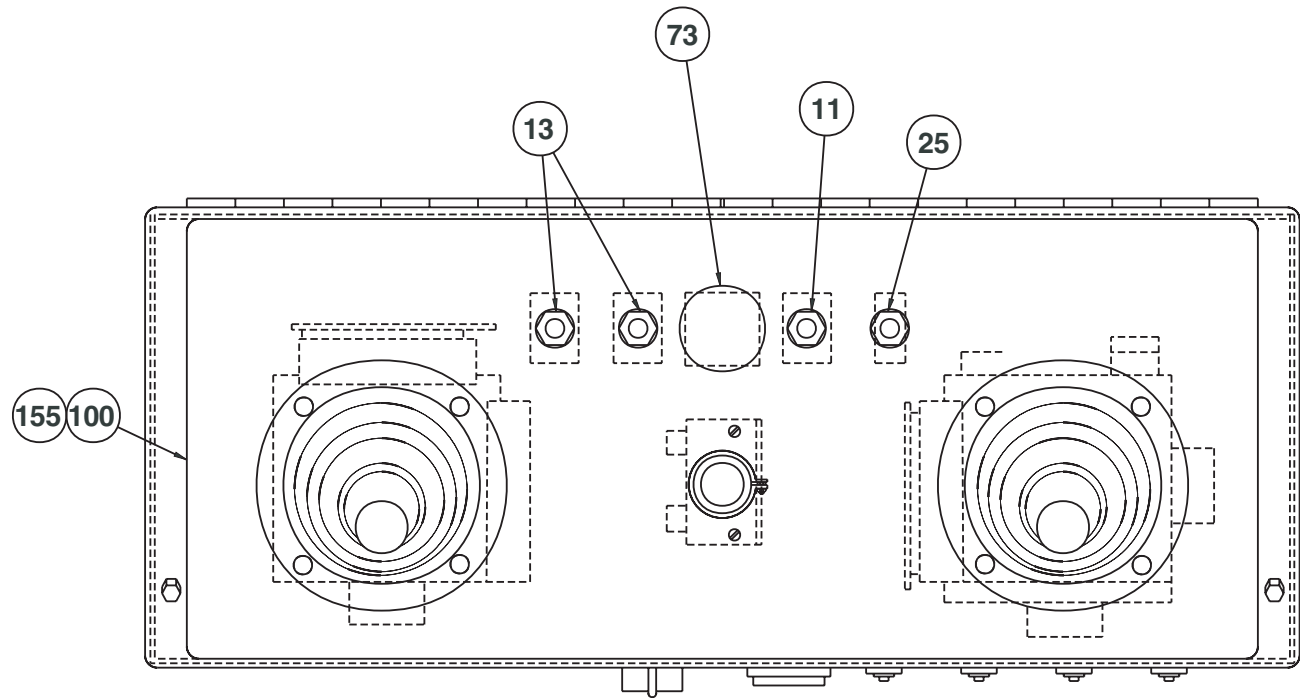
Upper control box, proportional

item	part no	qty	description
	0111893	1	Upper control box, proportional
1	0111928	1	Control box
2	0180846	1	Placard, upper control box front
3	5560663	1	Washer #6 star tooth lock
4	3040068	1	Circuit breaker, 20 amp capacity
5	3020080	1	Switch, toggle
6	3040116	2	Connector
7	3040110	5	Connector locknut
8	3040493	1	Controller, lift/swing - (see page 3-54 for parts breakdown)
9	3040492	1	Controller, drive/steer - (see page 3-52 for parts breakdown)
10	3040285	1	Connector
11	3020018	2	Switch, toggle
12	0101878	1	Jumper wire
13	3020013	2	Switch, toggle
14	5560648	1	Machine screw #10-24 x 3/4 inch long truss head
15	5560034	4	Nut #10-24 self locking
16	0180886	1	Decal, power wire
17	5560038	10	Nut #10-32 self locking
18	3044710	1	Terminal strip, 10 circuit #10 stud
19	3040057	1	Terminal strip, 18 circuit .188 tab slip-on
20	0180887	1	Decal, control wire #1
21	974279	3	Machine screw #6-32 x 3/4 inch
22	986159	4	Washer #6 medium flat
23	987349	4	Washer #6 medium lock
24	984009	4	Nut #6-32 hex
25	3020080	1	Switch, toggle
26	3040469	2	Relay, 12 volt DC
27	3040535	3	Circuit breaker, 3 amp capacity
28	480652	1	Siren, tilt alarm
29	0070967	1	Corrosion inhibitor
30	0072530	1	Decal, danger electrical hazard
31	0151910	1	Jumper wire
32	0180850	1	Wire harness, upper control box power
33	0082007	1	Wire harness, upper control box control
34	3040295	1	Connector
35	3040433	1	Terminal strip, 12 circuit .188 tab slip-on
36	987089	1	Washer #10 medium lock
37	7190001	1	Gasket, weatherproof x 72 inch long
38	0180888	1	Decal, control wire #2
39	0070713	1	Jumper wire
40	974269	1	Machine screw #6-32 x 1 inch long round head
41	0072388	1	Jumper wire
42	986019	2	Washer 1/4 medium flat
43	0070746	2	Jumper wire
44	0070753	1	Jumper wire
45	0060373	2	Jumper strap
46	0070712	3	Jumper wire
47	0181029	1	Jumper wire
48	986009	1	Washer #10 medium flat
49	984069	2	Nut 1/4-20 hex
50	0070711	1	Jumper wire
			Parts list continued on next page

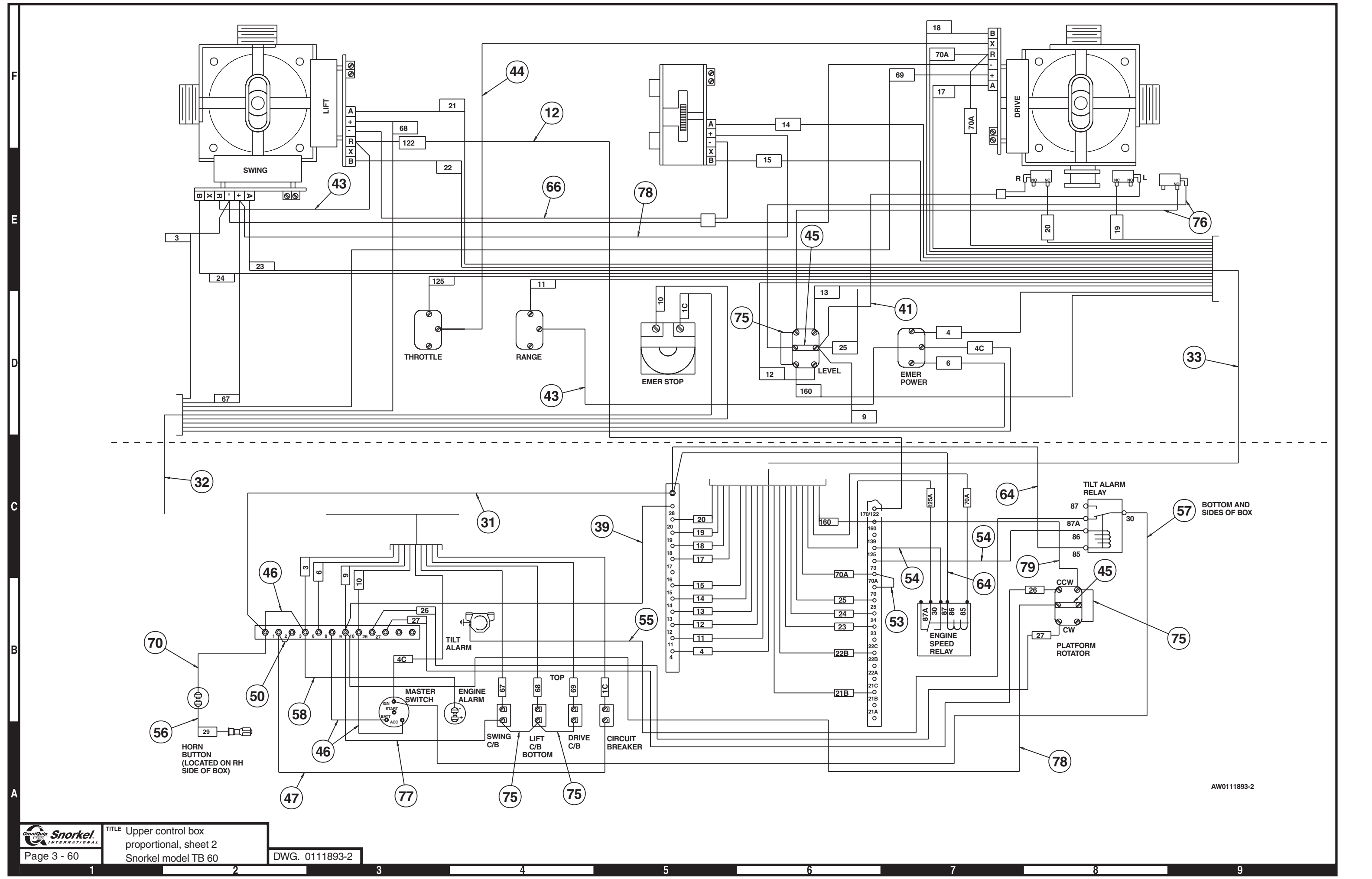
Upper control box, proportional

item	part no	qty	description
51	5560703	1	Washer #10 star tooth lock
52	984049	1	Nut #10-24 hex
53	0110468	1	Jumper wire
54	0090622	2	Jumper wire
55	0181103	1	Jumper wire
56	0071557	1	Jumper wire
57	0071812	1	Jumper wire
58	0151816	1	Jumper wire
59	3040411	1	Mini siren, engine alarm
60	5560609	2	Machine screw #10-24 x 1/2 inch long truss head
61	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
62	5560004	2	Nut 1/4-20 self locking
63	5569711	1	Grommet
64	0073295	2	Jumper wire
65	5560649	2	Machine screw #10-24 x 1 inch long truss head
66	0110598	1	Jumper wire
67	3026027	1	Switch, push button
68	7140092	1	Switch seal
69	0071269	1	Placard, horn
70	0070733	1	Jumper wire
71	3040525	1	Controller, extend/retract
72	0110959	1	Placard, upper control box top
73	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
74	0070922	1	Placard, platform rotation
75	0070747	4	Jumper wire
76	0181028	1	Jumper wire
77	0240483	1	Jumper wire
78	0070758	2	Jumper wire
79	0151556	1	Jumper wire
80	3040116	1	Connector
81	3040110	1	Connector locknut

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AW011893-1



AW0111893-2

**TB
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AC generator mounting

item	part no	qty	description
1	0151471	1	AC generator - (see page 4-5 for parts breakdown)
2	0073543	1	Shield
3	3020048	1	Switch, toggle
4	0151459	1	Placard, AC generator
5	0073544	1	Cable, 110 volt power AC generator
6	5093008	2	Clamp
7	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
8	3040064	1	Terminal .250 tab male slip-on fully insulated 12/10 wire
9	0090757	2	Jumper wire
10	0070747	3	Jumper wire
11	0071517	3	Jumper wire
12	0071541	1	Jumper wire
13	0181187	1	Jumper wire
14	0101247	1	1/2 inch hydraulic hose
15	0100422	1	3/8 inch hydraulic hose
16	3011801	1	Wire 18 gauge single conductor x 15 feet long
17	3090019	1	Flexgard tube, 15 feet long
18	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
19	3044146	1	Terminal #10 stud insulated 22/18 wire
20	0151583	1	Set-up and start procedure drawing
21	0111287	1	1/4 inch hydraulic hose
22	3040452	1	Insulator boot
23	5064001	1	Tube end reducer
24	5063905	1	Fitting nut
25	5036505	1	Straight thread branch tee
26	0100271	1	1/4 inch hydraulic hose
27	5036706	1	Swivel nut run tee
28	970909	2	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
29	5560039	2	Nut 1/2-13 self locking
30	970009	2	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
31	986019	2	Washer 1/4 medium flat
32	987099	2	Washer 1/4 medium lock
33	3044158	1	Terminal #6 stud insulated 16/14 wire

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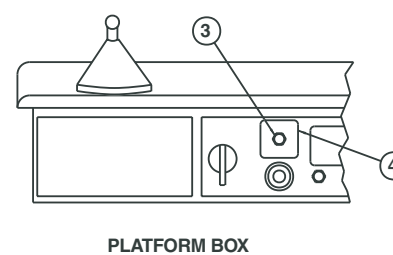
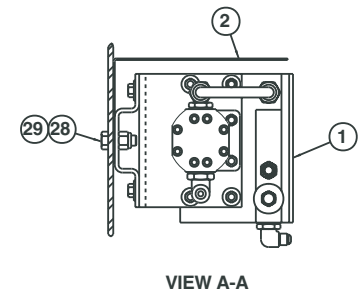
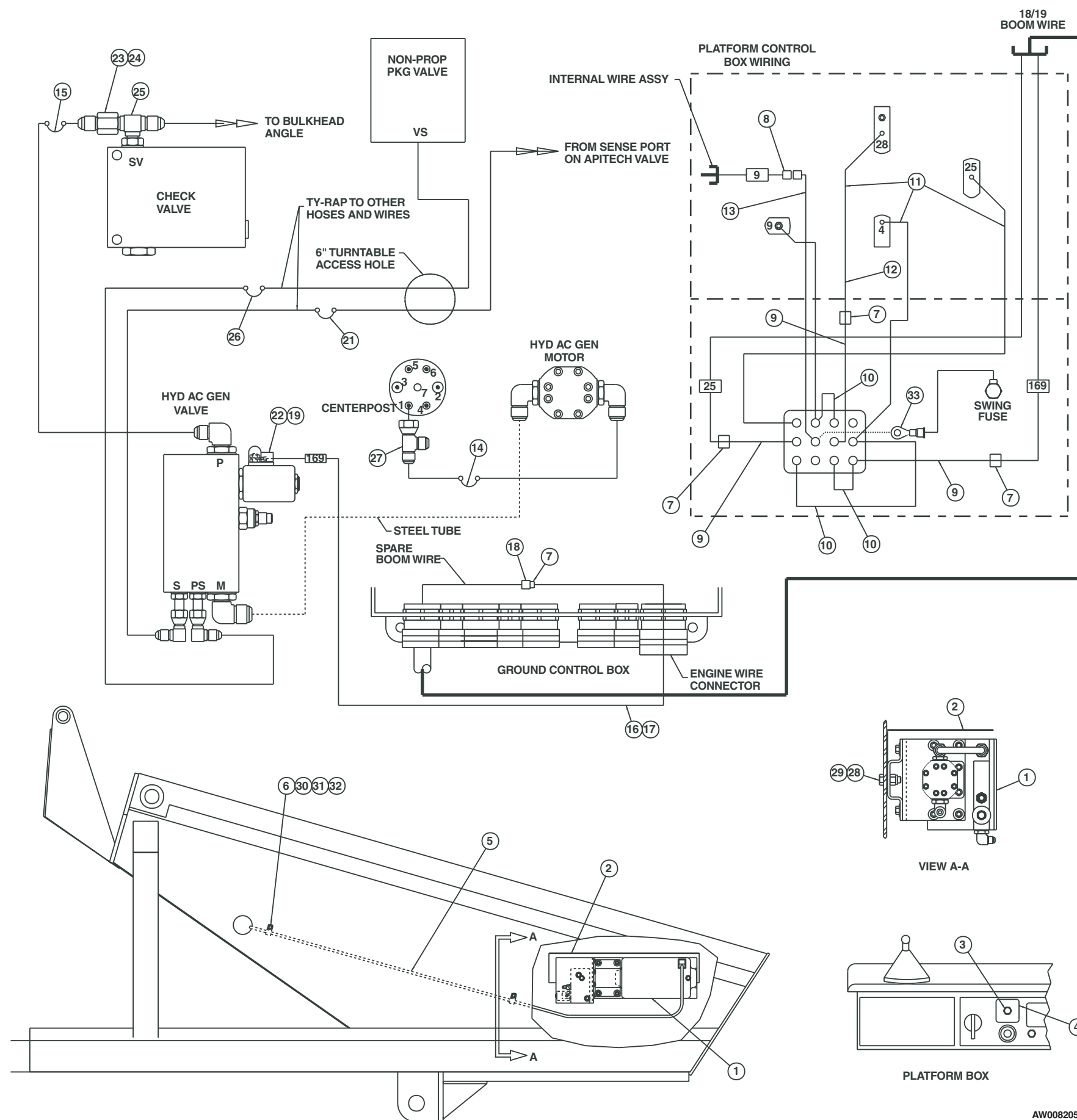
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AW0082051

TITLE AC generator mounting

DWG. 0082051

Snorkel model TB 60



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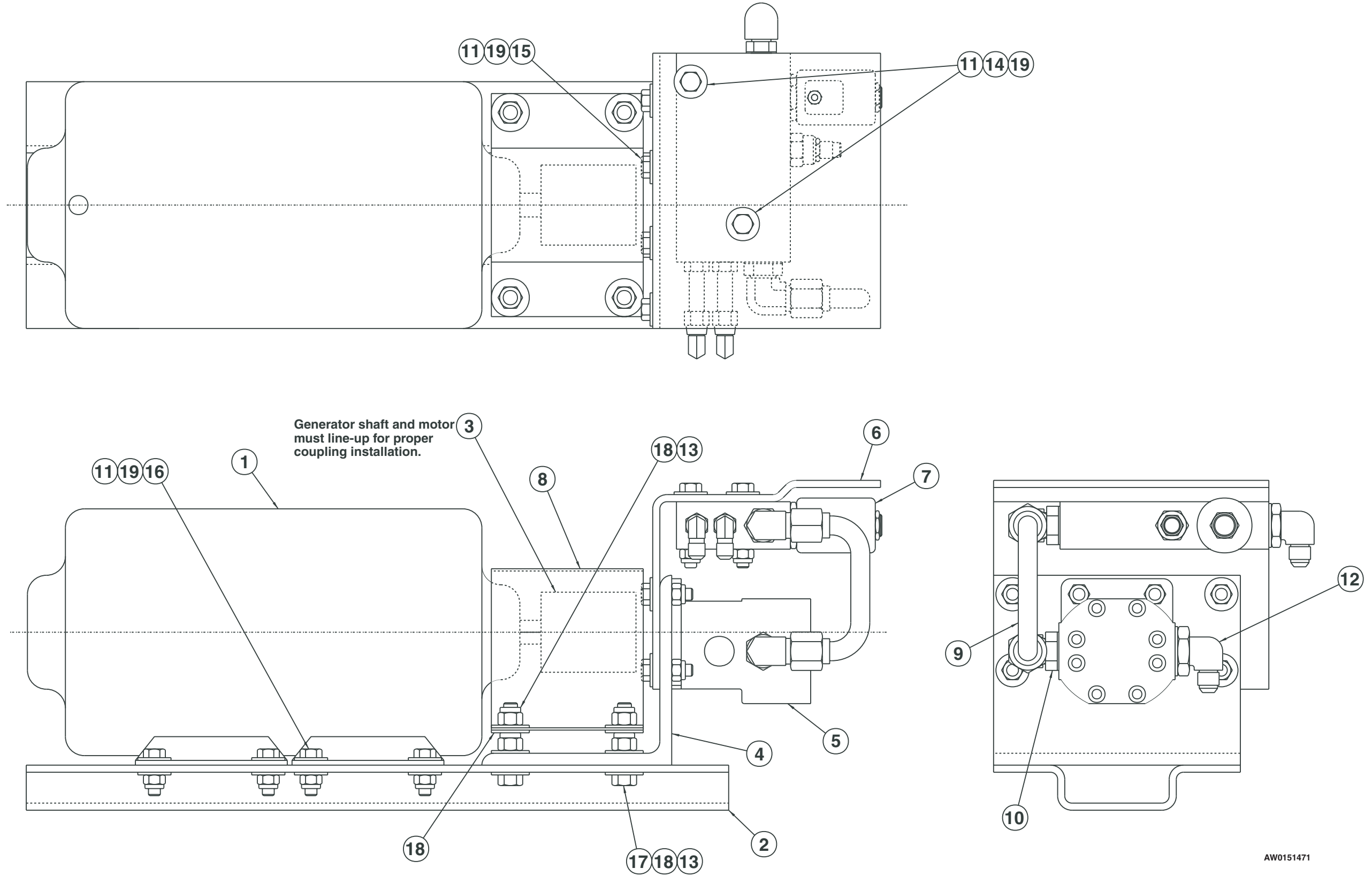
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AW0151471



TITLE AC generator

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Snorkel model TB 60

DWG. 0151471



AC generator

item	part no	qty	description
	0151471	1	AC generator
1	3080001	1	Generator, AC hydraulic powered
2	0151457	1	Mount plate
3	7240012	1	Coupling
4	0151458	1	Motor mounting angle
5	6030029	1	Hydraulic motor, AC generator
	8020018	1	Seal repair kit
6	0151469	1	Bracket, valve mounting
7	0152831	1	AC generator valve - (see page 2-23 for parts breakdown)
8	0151484	1	Coupling cover
9	0151470	1	1/2 inch hydraulic tube
10	5035306	1	Straight thread 90° elbow
11	5560031	18	Nut 5/16-18 self locking
12	5035320	1	Straight thread 90° elbow
13	5560033	8	Nut 3/8-16 self locking
14	970299	2	Capscrew 5/16-18 x 2 inch long hex head grade 5
15	970269	8	Capscrew 5/16-18 x 1-1/4 inch long hex head grade 5
16	970369	8	Capscrew 5/16-18 x 1 inch long hex head grade 5
17	970499	4	Capscrew 3/8-16 x 1-3/4 inch long hex head grade 5
18	986299	12	Washer 3/8 medium flat
19	986269	30	Washer 5/16 medium flat

Air line to platform

item	part no	qty	description
1	5240002	1	Hose reel
2	0081104	1	Air hose, 54 feet - 6 inch long
3	5550021	1	Cable guide, 4 roller
4	0080749	3	Cable guide bracket, base boom
5	0080752	1	Cable guide bracket, intermediate boom
6	5093006	2	Hose clamp
7	0080754	2	Mounting bar
8	0080762	2	Hose bracket
9	0080759	1	Angle
10	970849	2	Capscrew 1/2-13 x 1-1/4 inch long hex head grade 5
11	970426	10	Capscrew 3/8-16 x 7/8 inch long hex head grade 5
12	986359	4	Washer 1/2 medium flat
13	987119	14	Washer 3/8 medium lock
14	5093012	1	Hose clamp
15	5560039	4	Nut 1/2-13 self locking
16	970909	2	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
17	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
18	972489	4	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
19	986019	3	Washer 1/4 medium flat
20	5560004	6	Nut 1/4-20 self locking
21	5093010	2	Hose clamp
22	5560082	1	Trim lock, 1/4 inch x 4 inch long - (used on hydraulic rotator machines only)
23	7714202	2	Pipe plug 1/4 NPT square head

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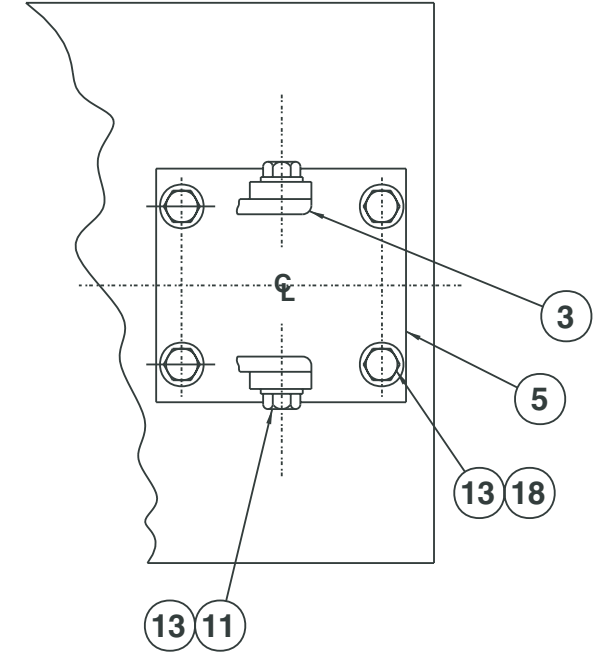
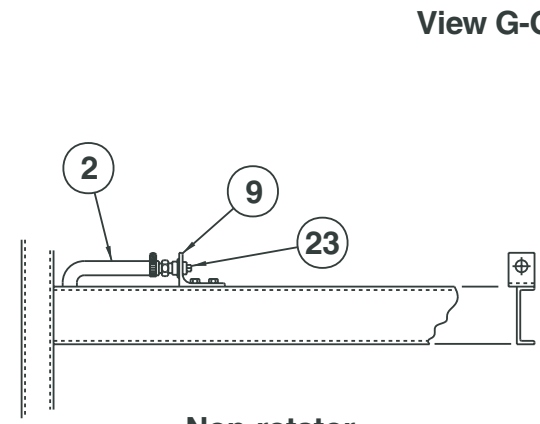
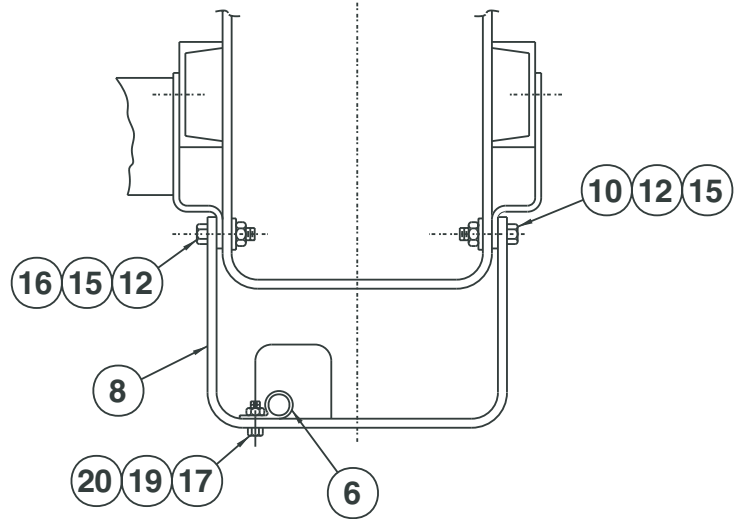
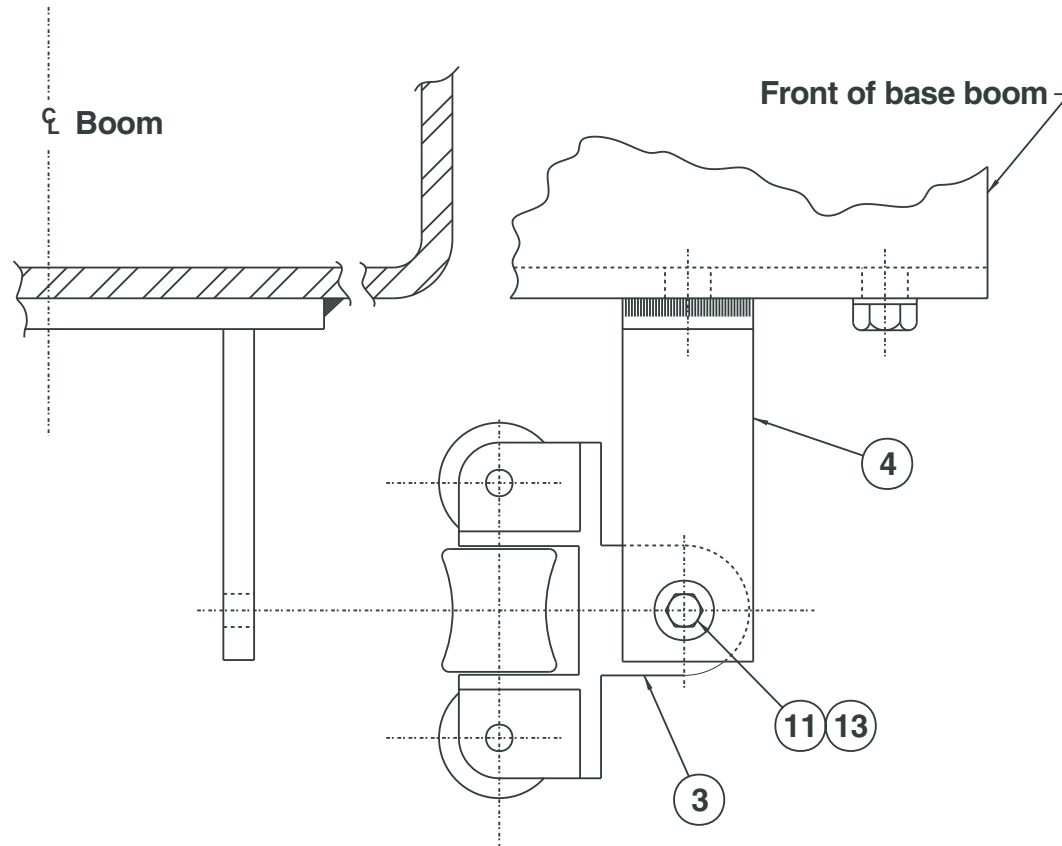
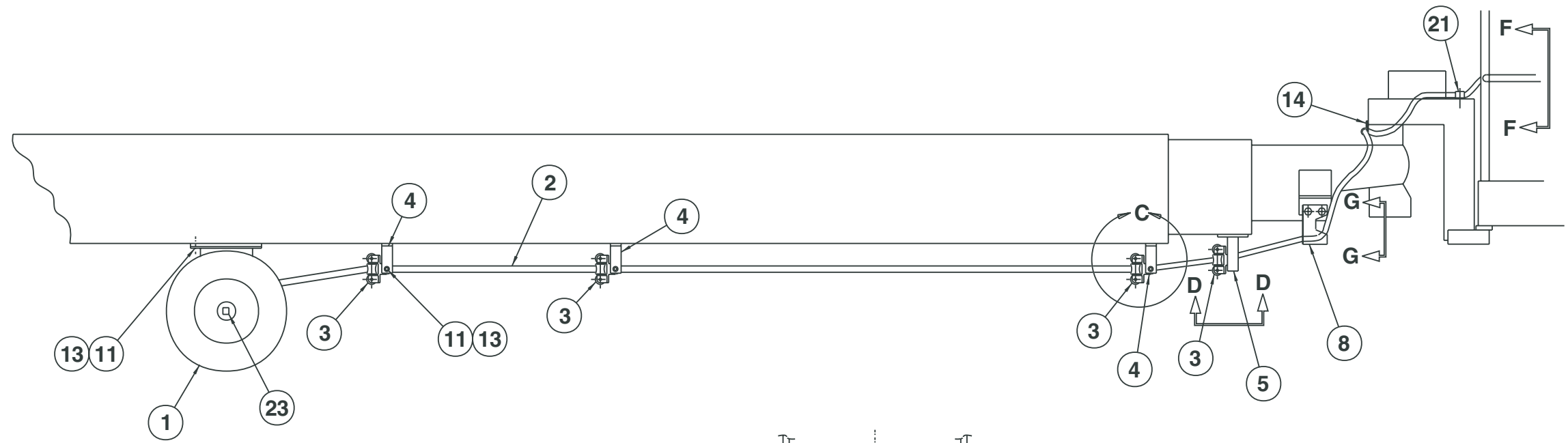
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Detail C

View G-G

Non-rotator

Hydraulic rotator

View F-F

View D-D

AW0080699

DWG. 0080699

TITLE Air line to platform
 Snorkel model TB 60



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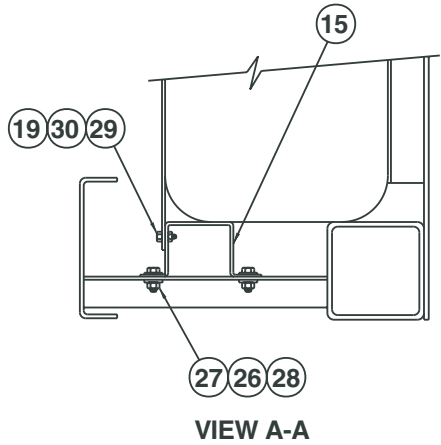
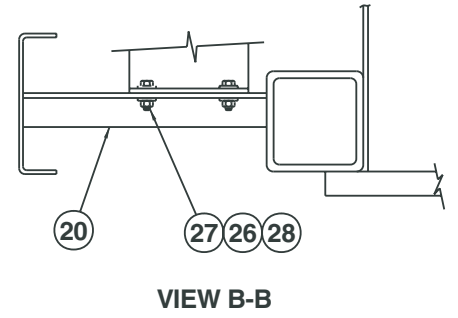
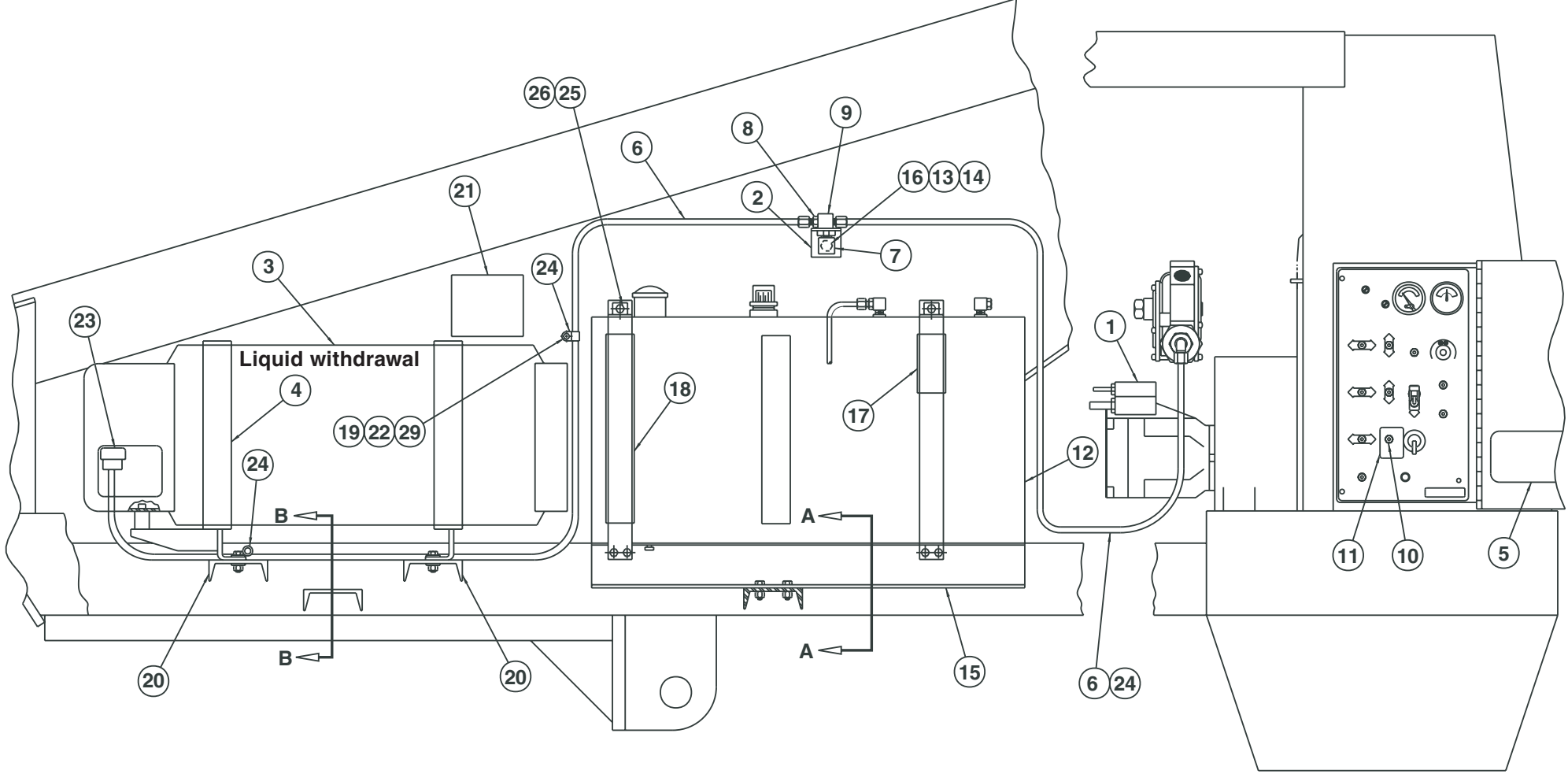
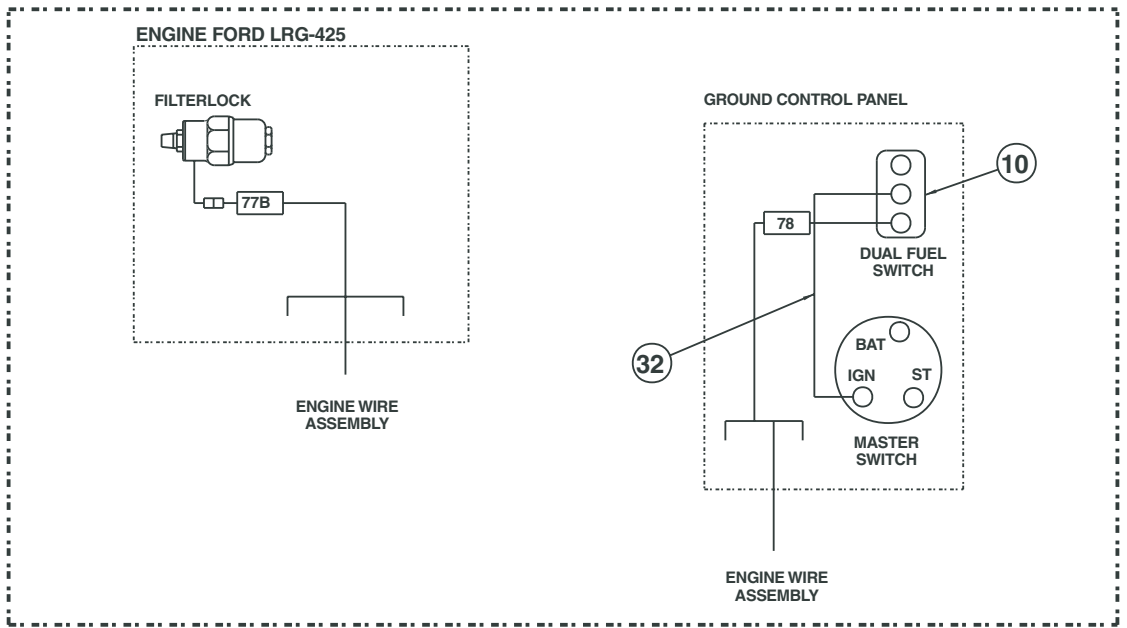
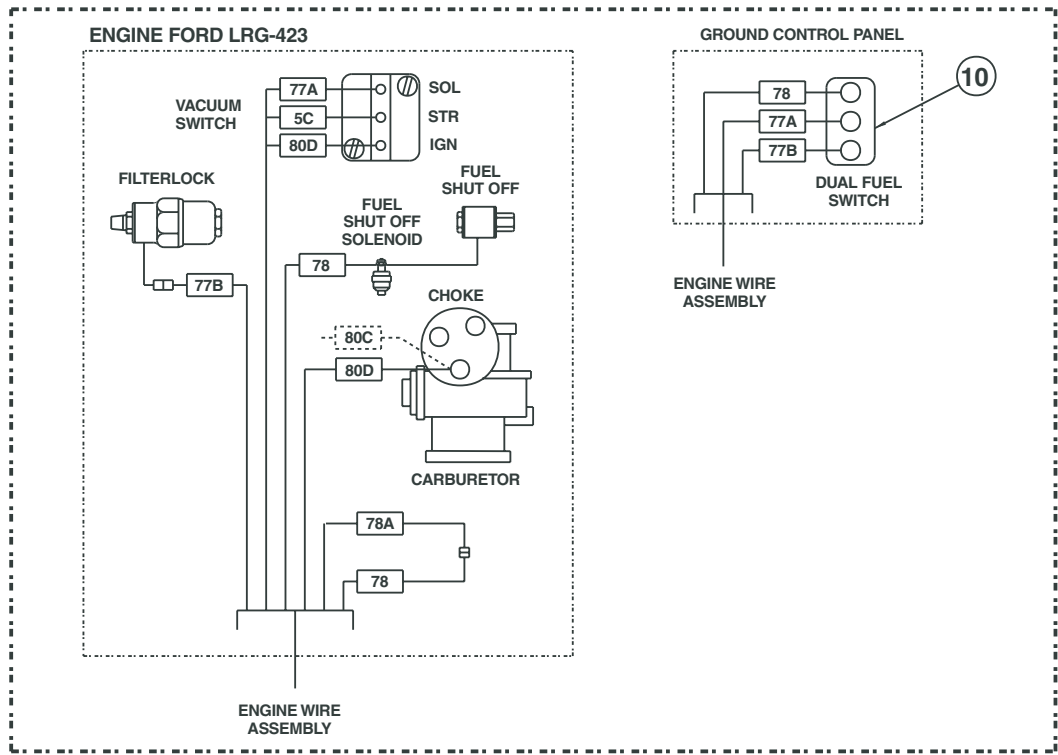
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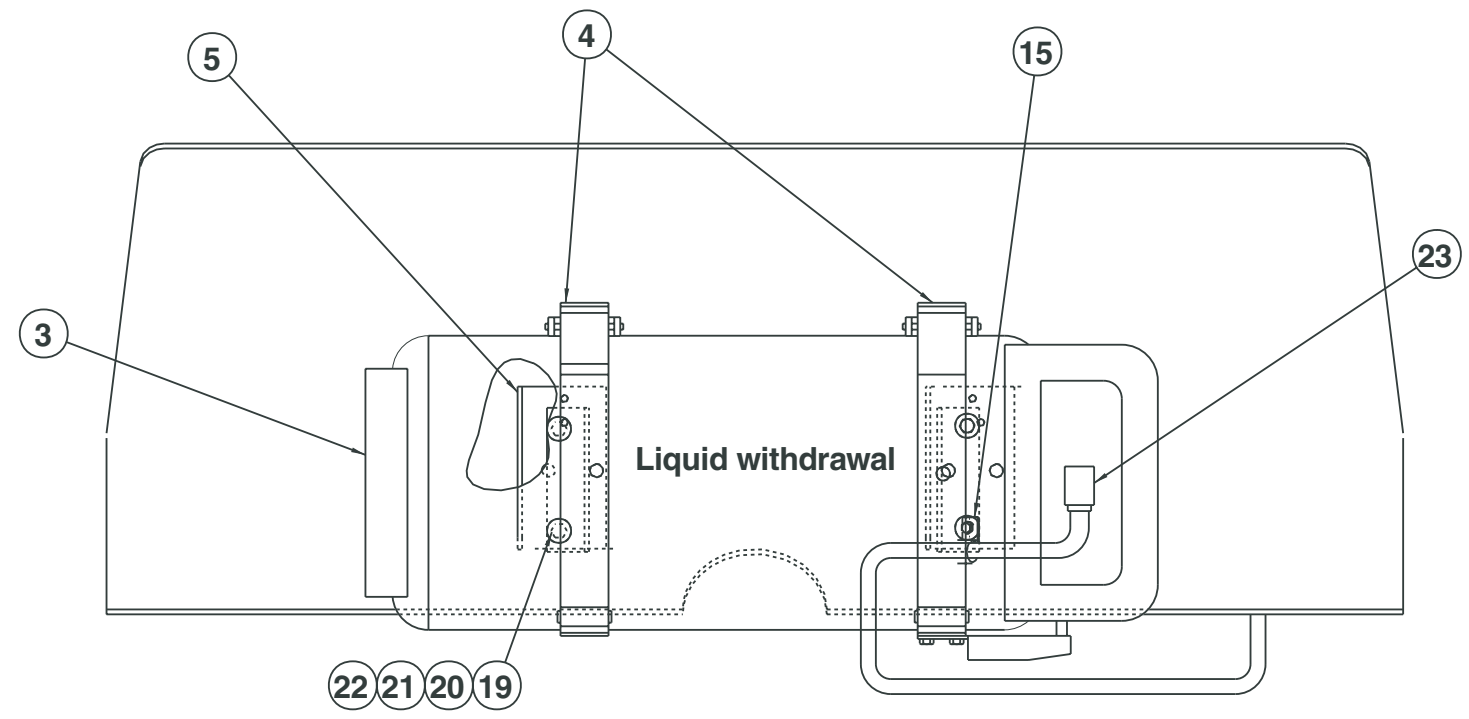
AW0082685

Dual fuel, Ford engine

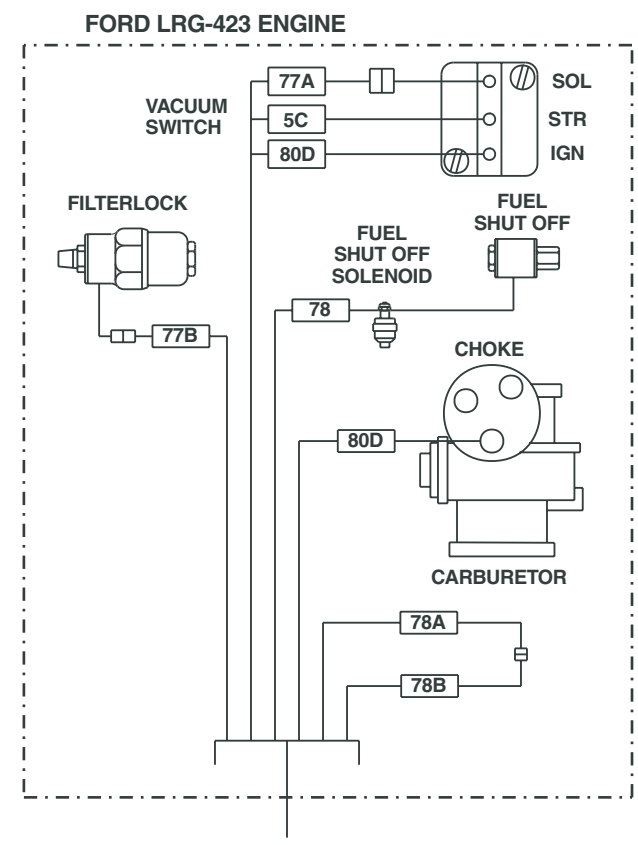
item	part no	qty	description
1	0111927	1	Dual fuel engine, Ford LRG-423 - (see page 4-14 for parts breakdown)
	0112100	1	Dual fuel engine, Ford LRG-425 - (see page 4-18 for parts breakdown)
2	0080668	1	Relief valve mount bracket
3	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity
4	0070969	1	Bracket, LP gas cylinder - (includes left and right hand brackets)
5	0090493	1	Decal, dual fuel instructions
6	0090483	2	LP gas fuel hose
7	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
8	Kit item	1	Straight thread adapter 1/4 NPT brass - (included in dual fuel kit 0073444)
9	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
10	3020017	1	Switch, toggle - (used on Ford LRG-423)
	3020013	1	Switch, toggle - (used on Ford LRG-425)
11	0090492	1	Placard, dual fuel switch
12	0070331	1	Fuel tank, gasoline 20 gallon capacity
	9940001	1	Replacement fuel tank cap
13	986269	1	Washer 5/16 medium flat
14	5560031	1	Nut 5/16-18 self locking
15	0080767	1	Fuel tank support
16	970369	1	Capscrew 5/16-18 x 1 inch long hex head grade 5
17	0080766	1	Spacer tube
18	0080326	1	Spacer tube
19	987099	5	Washer 1/4 medium lock
20	0072135	3	Channel support - (before 3-20-00)
	0083507	3	Channel support, LP gas cylinder - (after 3-20-00)
21	0081441	1	Decal, caution liquid withdrawal
22	984069	5	Nut 1/4-20 hex
23	0070974	1	Coupler, female LPG
24	5093002	4	Hose clamp
25	970569	2	Capscrew 3/8-16 x 3-1/2 inch long hex head grade 5
26	984109	10	Nut 3/8-16 hex
27	972489	8	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
28	986299	8	Washer 3/8 medium flat
29	970029	5	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
30	0151815	1	Jumper wire - (used on Ford LRG-425 engine only)

Dual fuel, Ford with 40 gallon gasoline tank

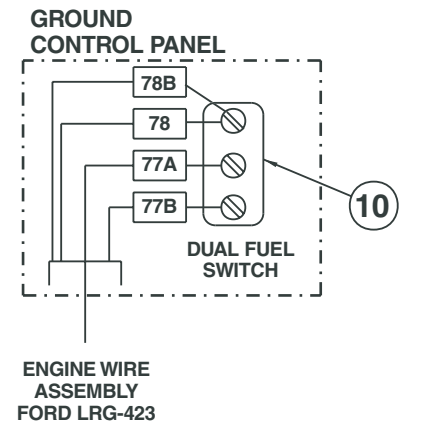
item	part no	qty	description
1	0111927	1	Dual fuel engine, Ford LRG-423 - (see page 4-14 for parts breakdown)
2	0080668	1	Relief valve mount bracket
3	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity
4	0070969	1	Bracket, LP gas cylinder - (includes left and right hand brackets)
5	0081553	2	Mounting bracket
6	0090483	1	LP gas fuel hose
7	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
8	Kit item	1	Straight thread adapter 1/4 NPT brass - (included in dual fuel kit 0073444)
9	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
10	3020017	1	Switch, toggle
11	0090492	1	Placard, dual fuel switch
12	970369	1	Capscrew 5/16-18 x 1 inch long hex head grade 5
13	986269	1	Washer 5/16 medium flat
14	5560031	1	Nut 5/16-18 self locking
15	5093002	2	Clamp
16	0081441	1	Decal, caution liquid withdrawal
17	0090493	1	Decal, dual fuel instructions
18	0152108	1	LP gas fuel hose
19	970569	4	Capscrew 3/8-16 x 3-1/2 inch long hex head grade 5
20	986299	4	Washer 3/8 medium flat
21	5560033	4	Nut 3/8-16 self locking
22	987119	4	Washer 3/8 medium lock
23	0070974	1	Coupler, female LPG



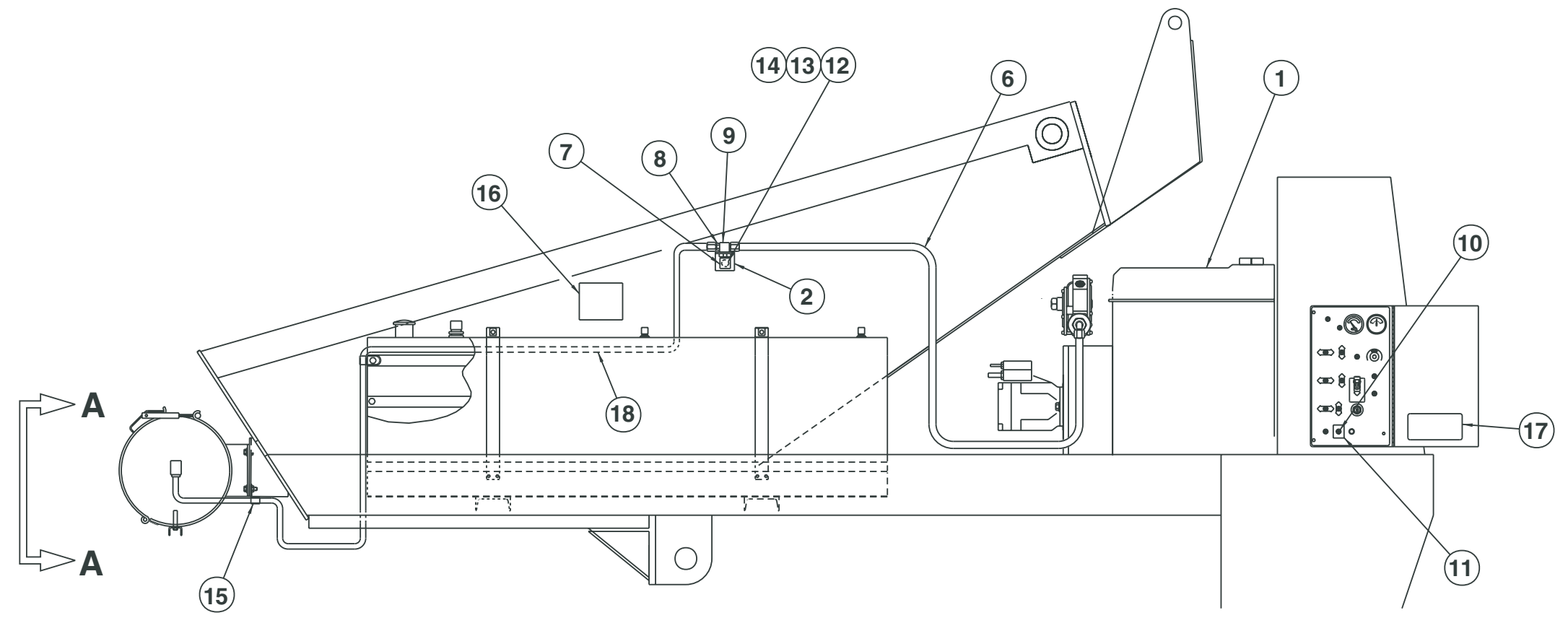
VIEW A-A



ENGINE WIRE ASSEMBLY FORD LRG-423



ENGINE WIRE ASSEMBLY FORD LRG-423



AW0082117

TITLE Dual fuel
Ford with 40 gallon gas tank
Snorkel model TB 60

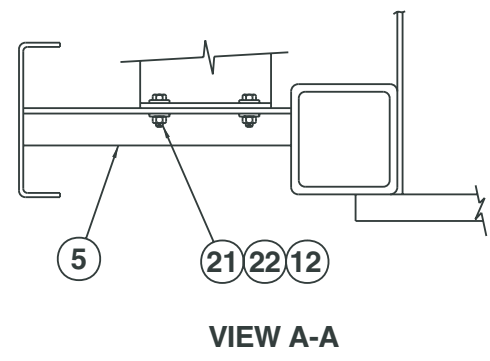
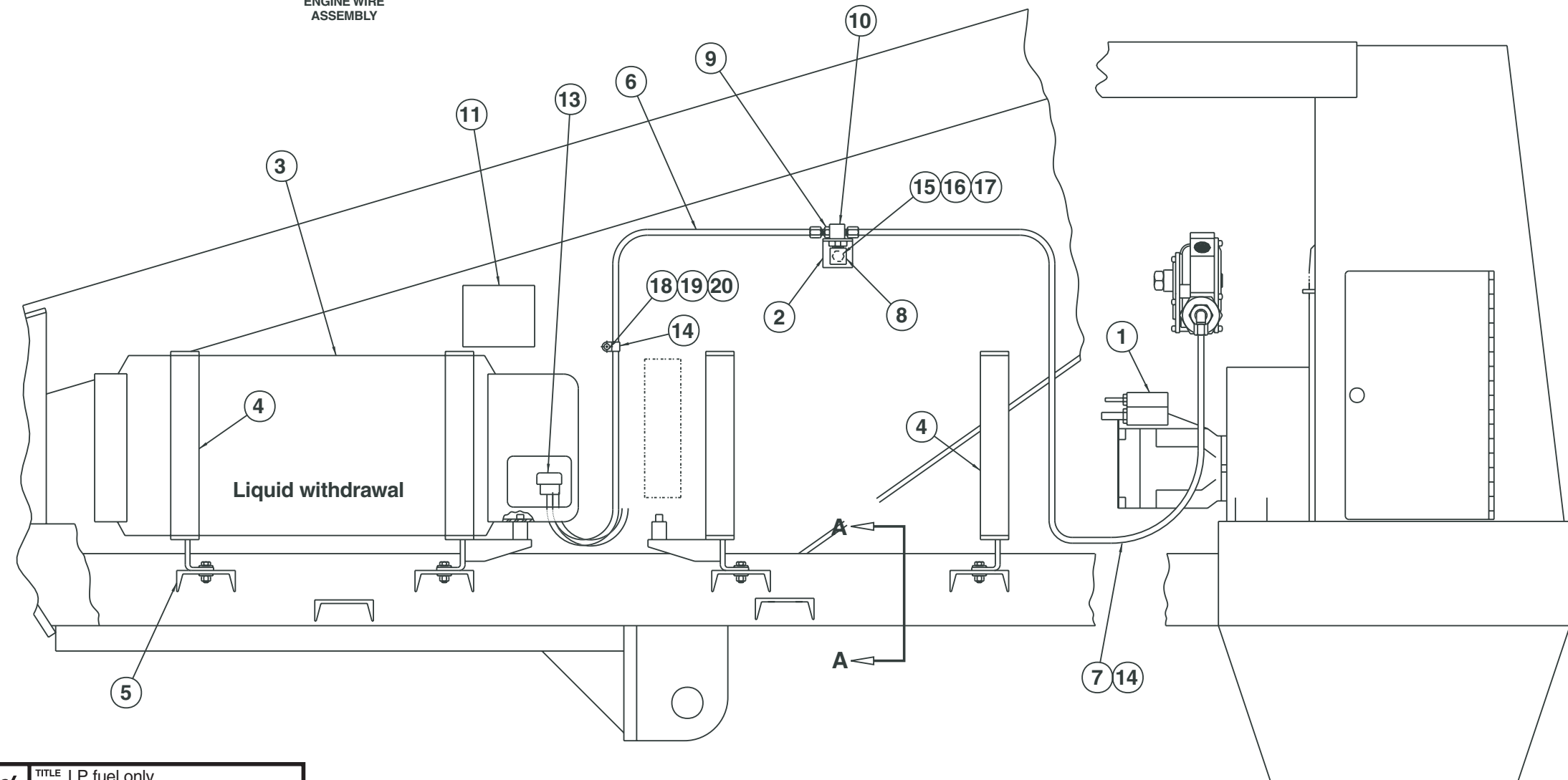
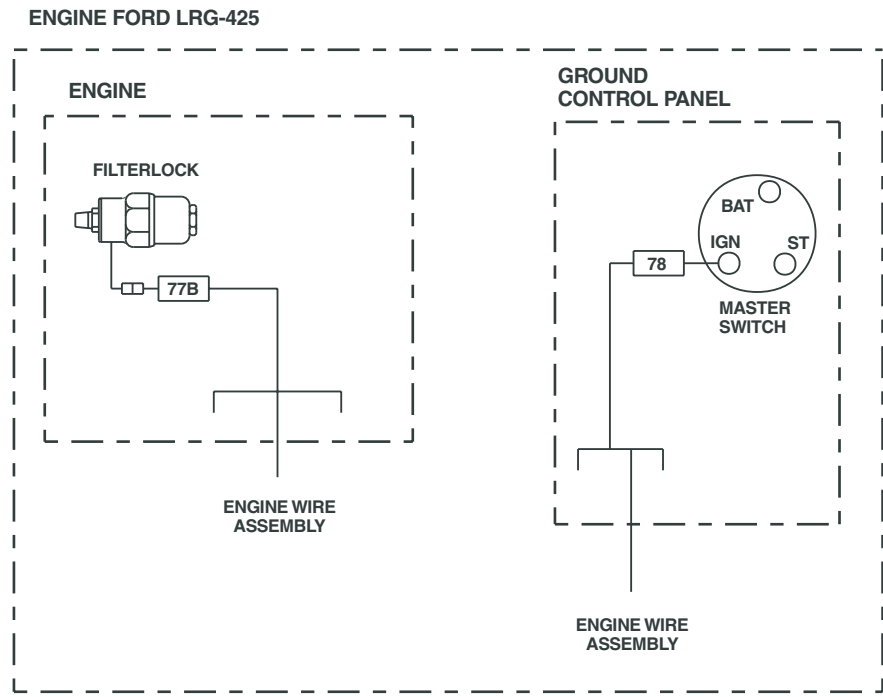
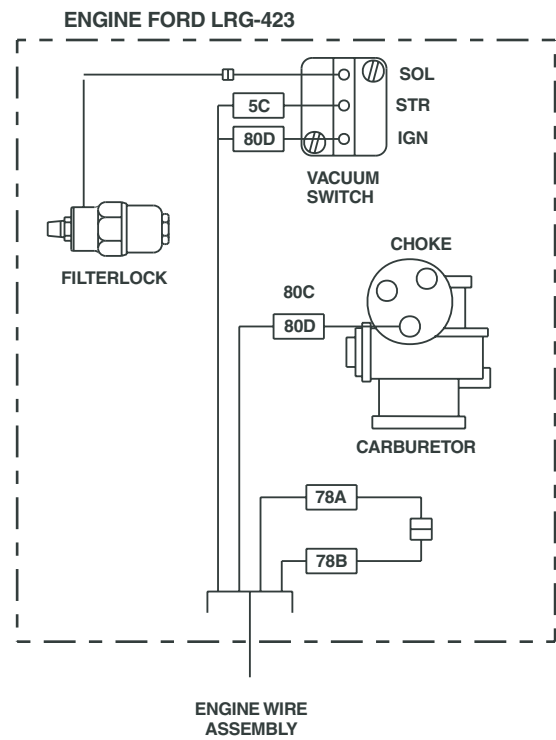


DWG. 0082117

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AW0082686

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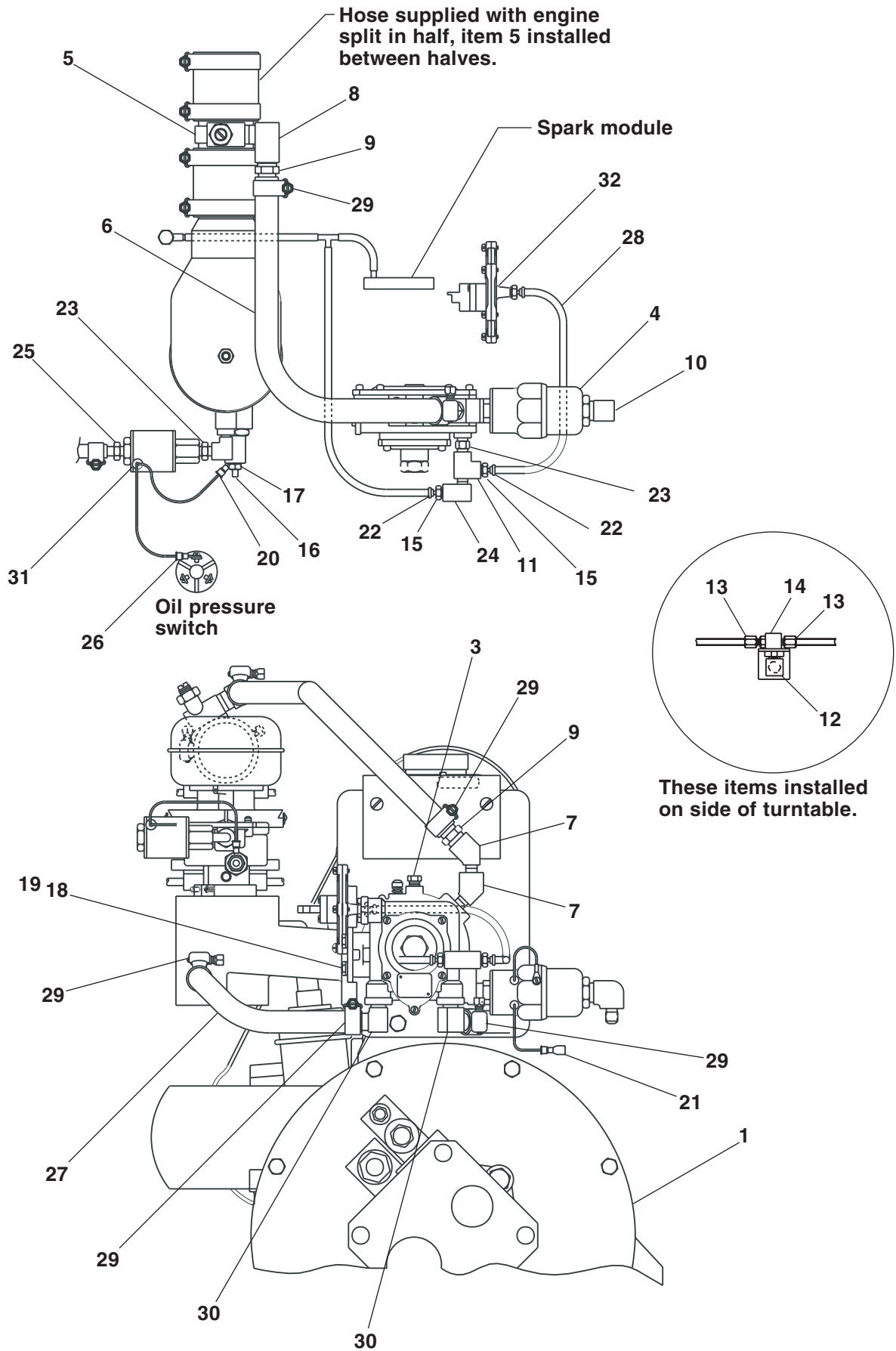
LP fuel only, Ford engine

item	part no	qty	description
1	0111937	1	LP fuel engine, Ford LRG-423 - (see page 4-16 for parts breakdown)
	0112100	1	Dual fuel engine, Ford LRG-425 - (see page 4-18 for parts breakdown)
2	0080668	1	Relief valve mount bracket
3	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity
4	0070969	1	Bracket, LP gas cylinder - (includes left and right hand brackets)
5	0072135	4	Channel support, LP gas cylinder - (before 3-20-00)
	0083507	4	Channel support, LP gas cylinder - (after 3-20-00)
6	0080676	1	LP gas fuel hose
7	0072117	1	LP gas fuel hose - (before 11-11-99)
	0090483	1	LP gas fuel hose - (after 11-11-99)
8	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
9	Kit item	1	Straight thread adapter 1/4 NPT brass - (included in dual fuel kit 0073444)
10	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
11	0081441	1	Decal, caution liquid withdrawal
12	986299	8	Washer 3/8 medium flat
13	0070974	1	Coupler, female LPG
14	5093004	4	Hose clamp
15	970369	1	Capscrew 5/16-18 x 1 inch long hex head grade 5
16	5560031	1	Nut 5/16-18 self locking
17	986269	1	Washer 5/16 medium flat
18	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
19	984069	1	Nut 1/4-20 hex
20	987099	1	Washer 1/4 medium lock
21	972489	8	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
22	5560033	8	Nut 3/8-16 self locking
23	986299	8	Washer 3/8 medium flat

Dual fuel engine, Ford LRG-423

item	part no	qty	description
	0111927	1	Dual fuel engine, Ford LRG-423
1	0111845	1	Engine, Ford LRG-423
2	0073444	1	Dual fuel kit, liquid cooled - (kit includes items 3 through 14)
3	8020009	1	Regulator
4	8020036	1	Filter lock
5	Kit item	1	Hose adapter - (not sold separately)
6	Kit item	1	LP hose, 5/8 inch diameter x 24 inch long - (not sold separately)
7	Kit item	2	Street 3/8 NPT 90° elbow, brass - (not sold separately)
8	Kit item	2	Street 1/4 NPT 90° elbow, brass - (not sold separately)
9	Kit item	2	Connector 3/8 NPT to 5/8 inch hose, brass - (not sold separately)
10	Kit item	1	Male 1/4 NPT to -6 SAE 90° elbow, brass - (not sold separately)
11	Kit item	1	Street tee 1/8 NPT brass - (not sold separately)
12	Kit item	1	Hydrostatic relief valve - (not sold separately)
13	Kit item	2	Straight thread adapter 1/4 NPT brass - (not sold separately)
14	Kit item	1	Bulkhead tee - (not sold separately)
15	5090024	1	Vacuum fitting
16	7630335	1	Shut-off solenoid
17	5560038	1	Nut #10-32 self locking
18	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
19	987099	2	Washer 1/4 medium lock
20	3044146	1	Terminal #10 stud insulated 22/18 wire
21	3040083	1	Terminal .250 tab male fully insulated 16/14 wire
22	5090026	2	Hose clamp
23	5090011	1	Nipple 1/8 NPT brass
24	5090027	1	Street 90° elbow 1/8 NPT brass
25	5090035	1	Straight fitting 5/16 barb to 1/8 NPT
26	3044145	1	Terminal #8 stud insulated 22/18 wire
27	5010020	1	Fuel hose, 5/8 inch diameter x 18 inch long
28	5010007	1	Vacuum hose, 3/16 inch diameter x 6 inch long
29	5550010	5	Clamp
30	5039501	2	Beaded 90° elbow
31	5230005	1	Gasoline fuel shut-off valve
32	3020054	1	Vacuum switch - (included with engine, item 1)
	8130005	1	Replacement switch

Dual fuel engine, Ford LRG-423

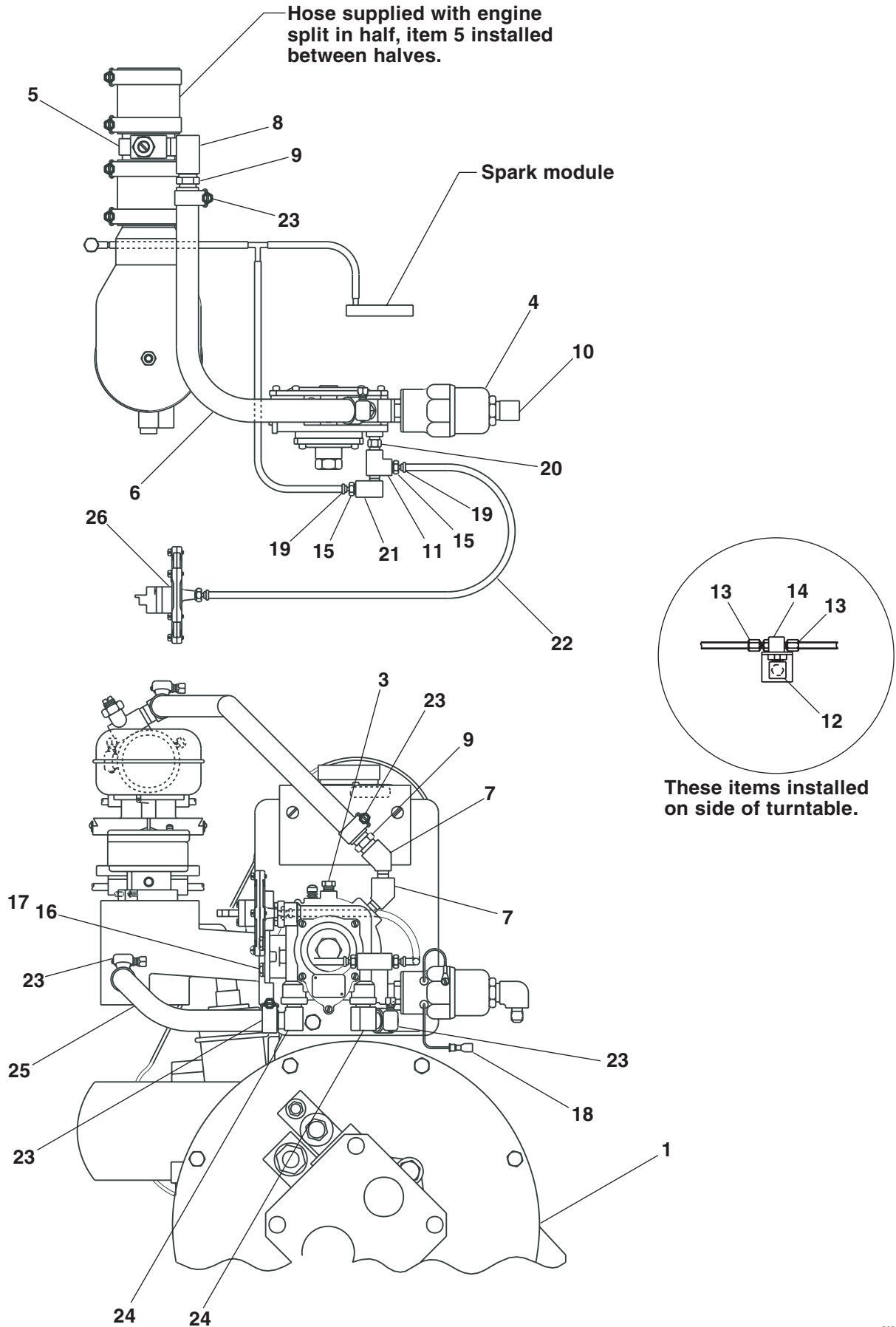


AW0111927

LP fuel only engine, Ford LRG-423

item	part no	qty	description
	0111937	1	Engine - LP fuel only, Ford LRG-423
1	0111845	1	Engine, Ford LRG-423 - (see page 4-14 for parts breakdown)
2	0073444	1	Dual fuel kit, liquid cooled - (kit includes items 3 through 14)
3	8020009	1	Regulator
4	8020036	1	Filter lock
5	Kit item	1	Hose adapter - (not sold separately)
6	Kit item	1	LP hose, 5/8 inch diameter x 24 inch long - (not sold separately)
7	Kit item	2	Street 3/8 NPT 90° elbow, brass - (not sold separately)
8	Kit item	2	Street 1/4 NPT 90° elbow, brass - (not sold separately)
9	Kit item	2	Connector 3/8 NPT to 5/8 inch hose, brass - (not sold separately)
10	Kit item	1	Male 1/4 NPT to -6 SAE 90° elbow, brass - (not sold separately)
11	Kit item	1	Street tee 1/8 NPT brass - (not sold separately)
12	Kit item	1	Hydrostatic relief valve - (not sold separately)
13	Kit item	2	Straight thread adapter 1/4 NPT brass - (not sold separately)
14	Kit item	1	Bulkhead tee - (not sold separately)
15	5090024	1	Vacuum fitting
16	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
17	987099	2	Washer 1/4 medium lock
18	3040083	1	Terminal .250 tab male fully insulated 16/14 wire
19	5090026	2	Hose clamp
20	5090011	1	Nipple 1/8 NPT brass
21	5090027	1	Street 90° elbow 1/8 NPT brass
22	5010007	1	Vacuum hose, 3/16 inch diameter x 6 inch long
23	5550010	5	Clamp
24	5039501	2	Beaded 90° elbow
25	5010020	1	Fuel hose, 5/8 inch diameter x 18 inch long
26	3020054	1	Vacuum switch - (included with engine, item 1)
	8130005	1	Replacement switch

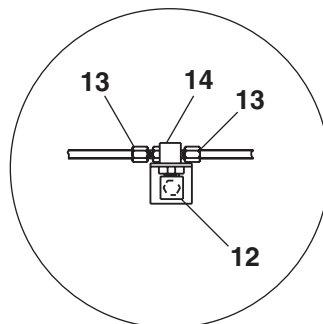
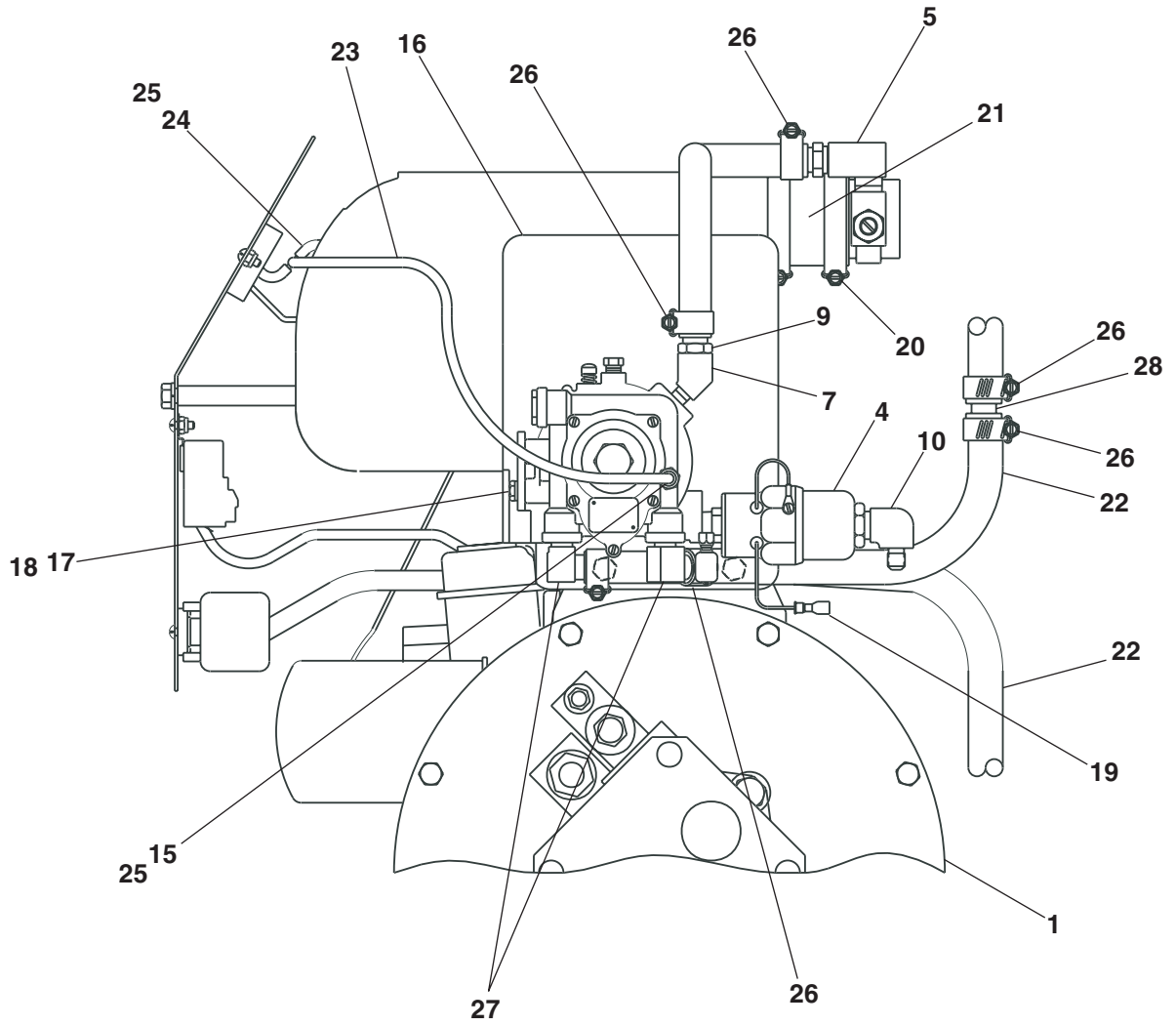
LP fuel only engine, Ford LRG-423



Dual fuel engine, Ford LRG-425

item	part no	qty	description
	0112100	1	Dual fuel engine, Ford LRG-425
1	0112083	1	Engine, Ford LRG-425
2	0073444	1	Dual fuel kit, liquid cooled - (kit includes items 3 through 14)
3	8020009	1	Regulator
4	8020036	1	Filter lock
5	Kit item	1	Hose adapter - (not sold separately)
6	Kit item	1	LP hose, 5/8 inch diameter x 24 inch long - (not sold separately)
7	Kit item	2	Street 3/8 NPT 90° elbow, brass - (not sold separately)
8	Kit item	2	Street 1/4 NPT 90° elbow, brass - (not sold separately)
9	Kit item	2	Connector 3/8 NPT to 5/8 inch hose, brass - (not sold separately)
10	Kit item	1	Male 1/4 NPT to -6 SAE 90° elbow, brass - (not sold separately)
11	Kit item	1	Street tee 1/8 NPT brass - (not sold separately)
12	Kit item	1	Hydrostatic relief valve - (not sold separately)
13	Kit item	2	Straight thread adapter 1/4 NPT brass - (not sold separately)
14	Kit item	1	Bulkhead tee - (not sold separately)
15	5090024	1	Vacuum fitting
16	0111862	1	Mount plate
17	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
18	987099	2	Washer 1/4 medium lock
19	3040083	1	Terminal .250 tab male fully insulated 16/14 wire
20	5550030	2	Clamp
21	7630327	1	Hose 2 inch flame resistant x 2 inch long
22	5010020	1	Fuel hose, 5/8 inch diameter x 48 inch long
23	5010007	1	Vacuum hose, 3/16 inch diameter x 12 inch long
24	5090044	1	Vacuum tee
25	5090026	1	Hose clamp
26	5550010	6	Clamp
27	5039501	2	Beaded 90° elbow
28	5039601	1	Splice
29	3020054	1	Vacuum switch - (included with engine, item 1)
	8130005	1	Replacement switch

Dual fuel engine, Ford LRG-425



**These items installed
on side of turntable.**

AW0112100

Driving and tail lights

item	part no	qty	description
1	3064414	2	Light, flood with round base
2	3040038	1	Fuse holder, in-line
3	3040039	1	Fuse, 10 amp capacity
4	3044161	3	Terminal #10 stud insulated 16/14 wire
5	3044158	3	Terminal #6 stud insulated 16/14 wire
6	3040082	2	Terminal .250 tab male fully insulated 16/14 wire
7	3060017	2	Light, turn signal
8	3020013	1	Switch, toggle
9	3040009	1	Switch boot, short
10	0074779	1	Wire harness, tail lights
11	3040113	1	Mounting base
12	5093002	3	Hose clamp
13	3040083	3	Terminal .250 tab female fully insulated 16/14 wire
14	3060019	1	Flasher
15	3060018	1	Flasher base
16	3044071	1	Terminal butt connector insulated 16/14 wire
17	970029	3	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
18	987099	3	Washer 1/4 medium lock
19	5560034	10	Nut #10-24 self locking
20	974679	2	Machine screw #10-24 x 5/8 inch long round head
21	974709	8	Machine screw #10-24 x 1 inch long round head
22	3090006	1	Flexgard tube, 120 inch long
23	986009	8	Washer #10 medium flat
24	3011601	1	Wire, 16 gauge single conductor x 120 inch long
25	0181376	1	Placard, light switch
26	3040469	1	Relay, 12 volt DC
27	0072418	2	Jumper wire
28	0073250	2	Jumper wire
29	0070758	1	Jumper wire

F

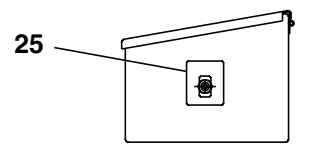
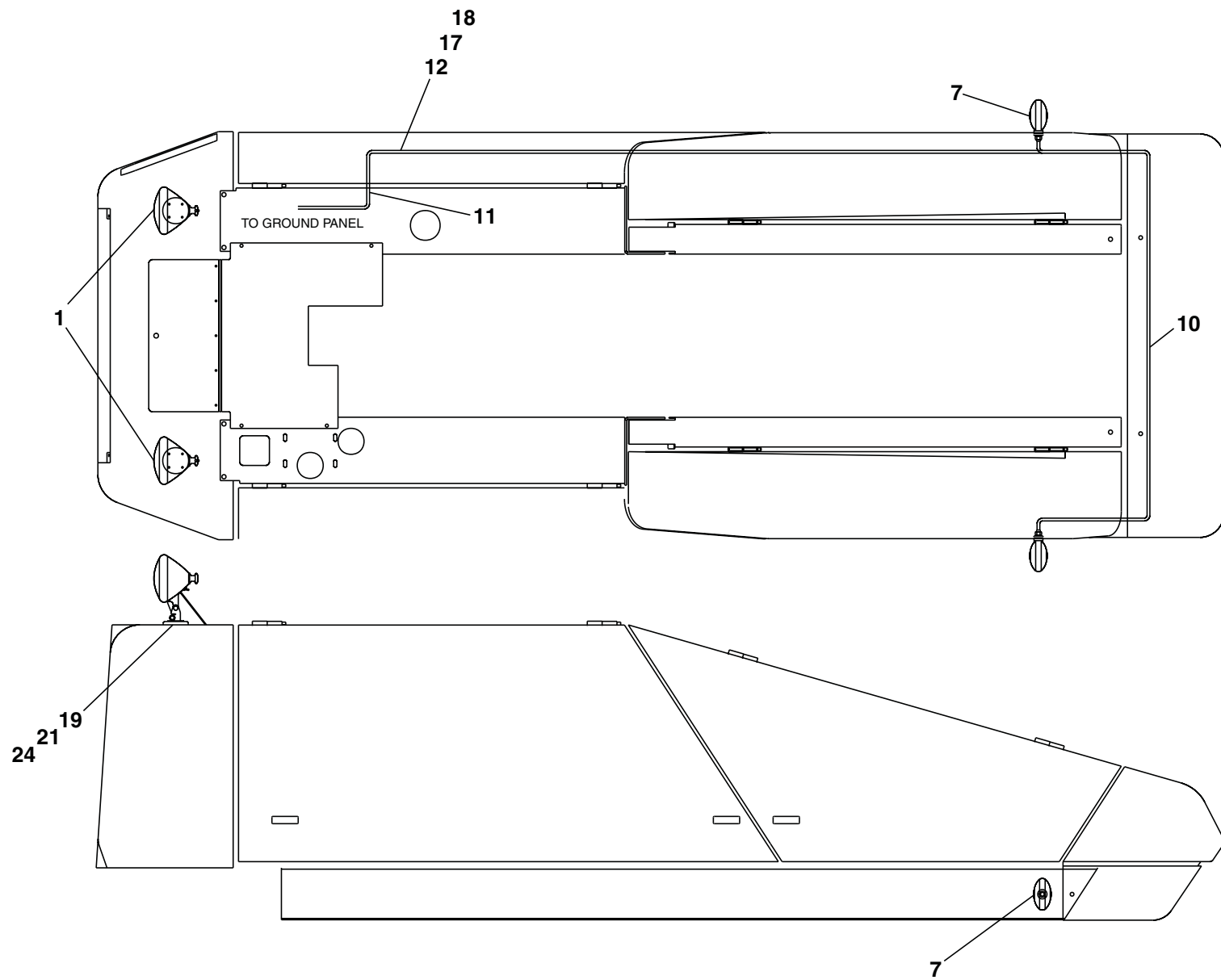
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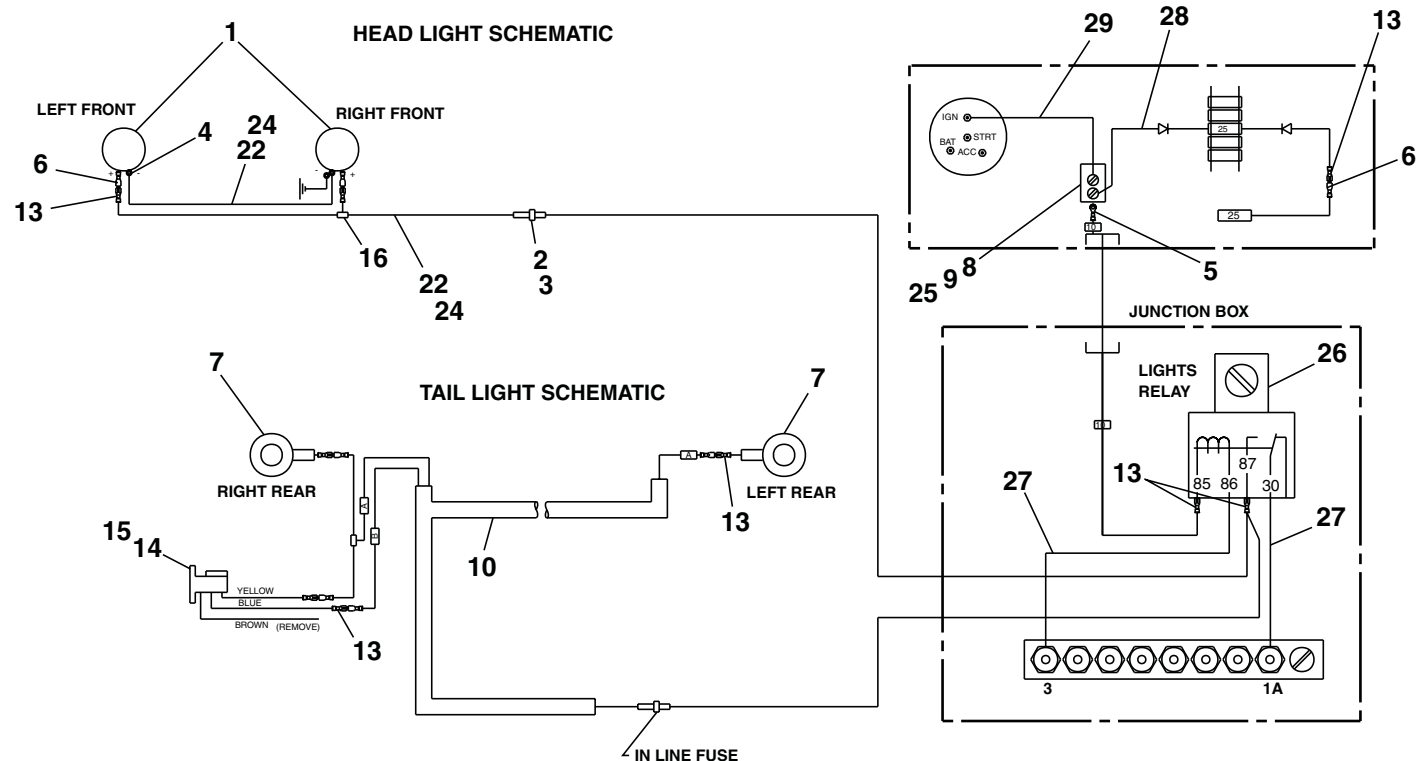
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LOCATION OF LIGHTS SWITCH ON PLATFORM



AWA08067

F

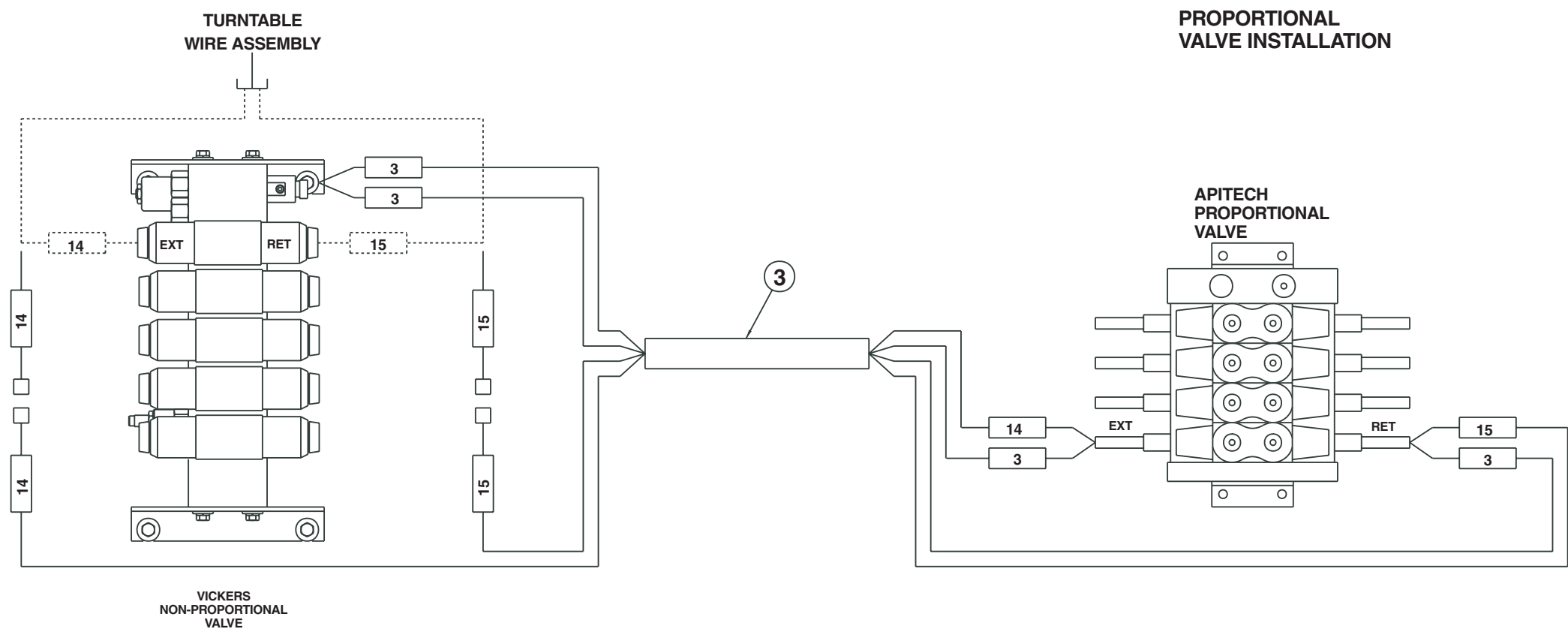
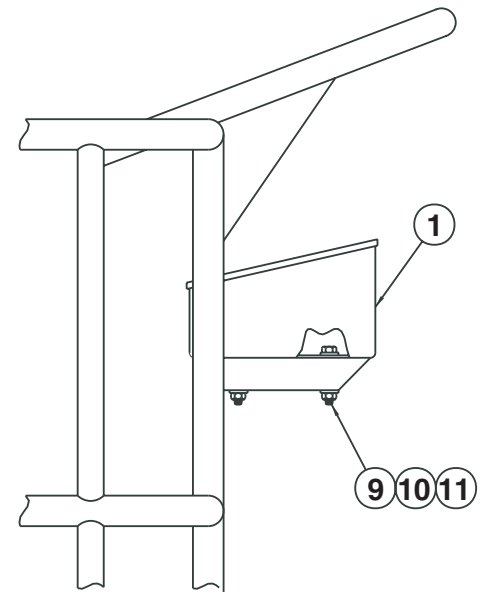
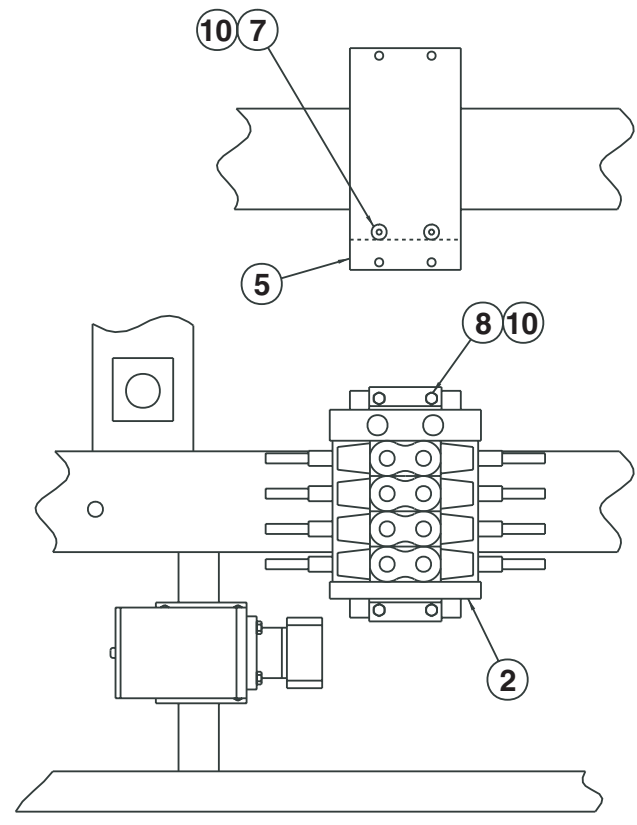
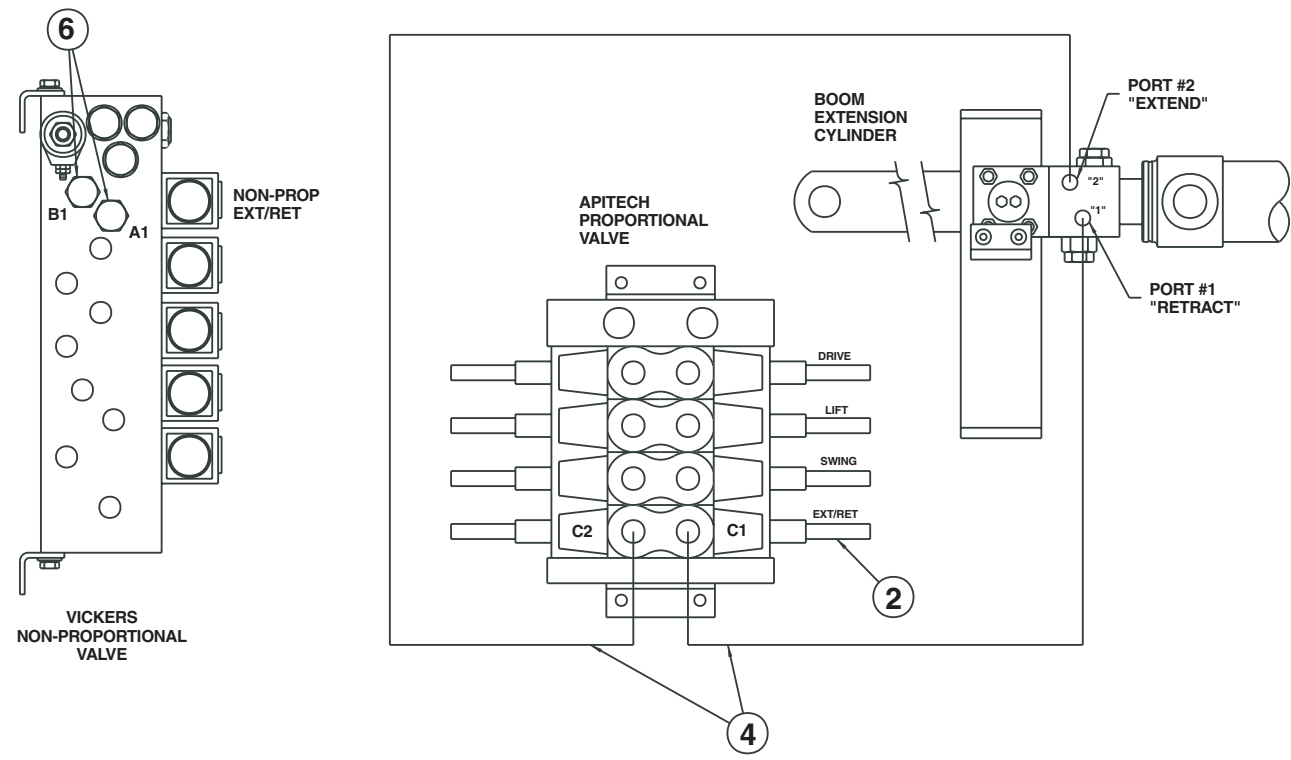
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PLATFORM BOX INSTALLATION

PROPORTIONAL VALVE INSTALLATION

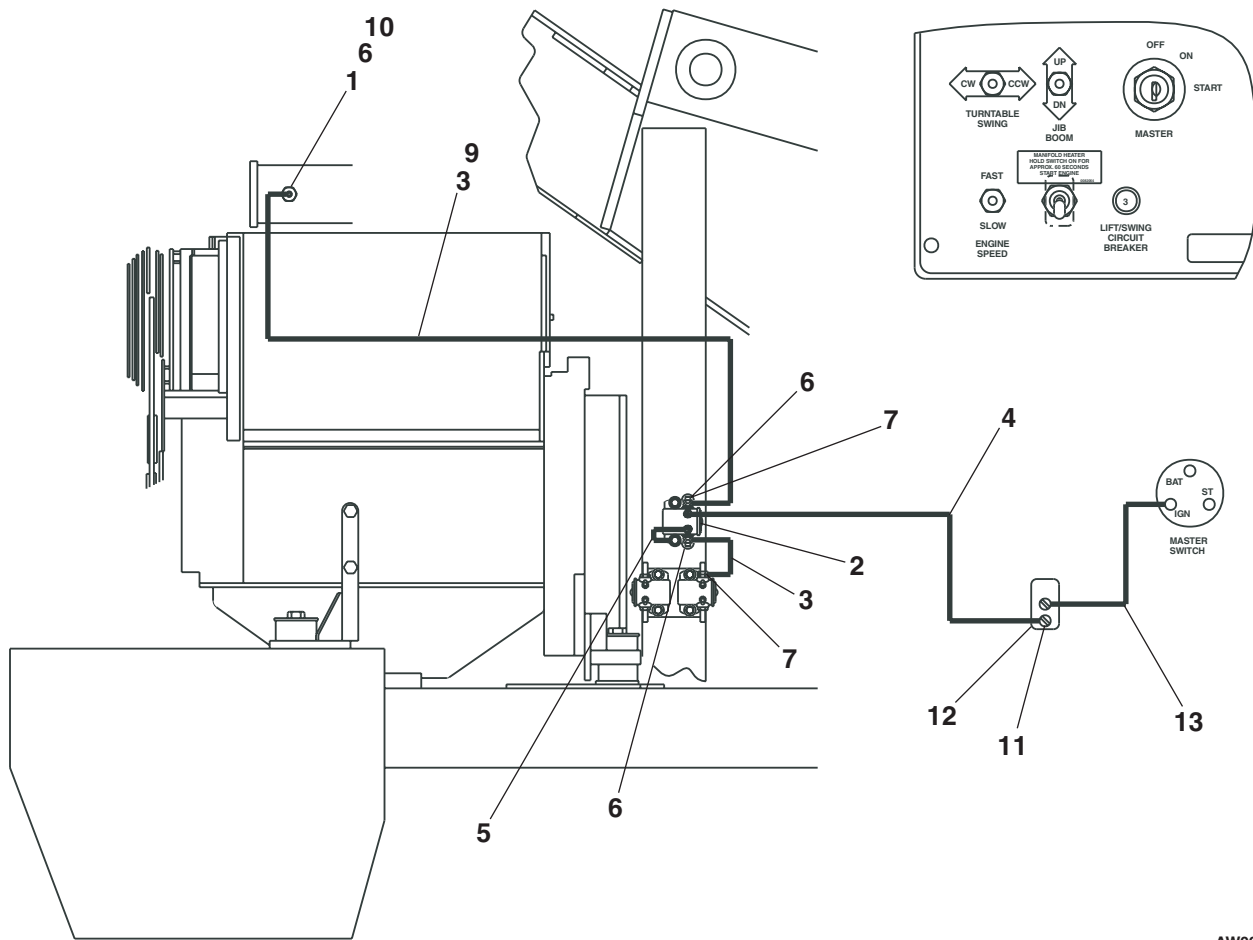
AW0082182

Proportional extend/retract

item	part no	qty	description
1	0111893	1	Upper control box, proportional - (see page 3-57 for parts breakdown)
2	0082181	1	Proportional control valve, Apitech
3	0082179	1	Wire harness, proportional extend/retract
4	0080362	2	3/8 inch hydraulic hose
5	0082180	1	Mount plate
6	5075206	2	Hex head plug
7	978409	2	Capscrew 3/8-16 x 1-1/2 inch long socket head
8	5560665	4	Capscrew 3/8-16 x 1-3/4 inch long socket head
9	970529	4	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
10	5560033	10	Nut 3/8-16 self locking
11	986299	8	Washer 3/8 medium flat

Air inlet heater, Deutz

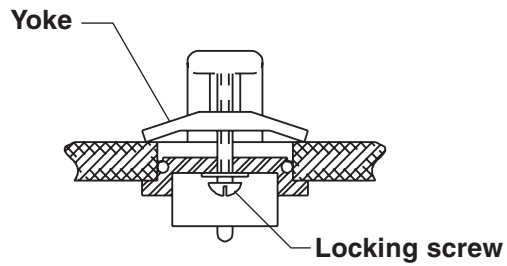
item	part no	qty	description
1	7630215	1	Air inlet heater kit
	8040135	1	Replacement glow plug
2	3040506	1	Solenoid, 12 volt DC
3	3011001	1	Wire, 10 gauge single conductor x 144 inch long
4	3011601	1	Wire, 16 gauge single conductor x 72 inch long
5	0071568	1	Jumper wire
6	3040268	3	Insulator boot
7	3040161	3	Terminal 5/16 stud insulated 8 gauge wire
8	0082064	1	Placard, heater instructions
9	3090006	1	Flexgard tube, 84 inch long
10	3042263	1	Terminal #10 stud insulated 8 gauge wire
11	3044142	1	Terminal #6 stud insulated 22/18 wire
12	3020080	1	Switch, toggle
13	0073781	1	Jumper wire



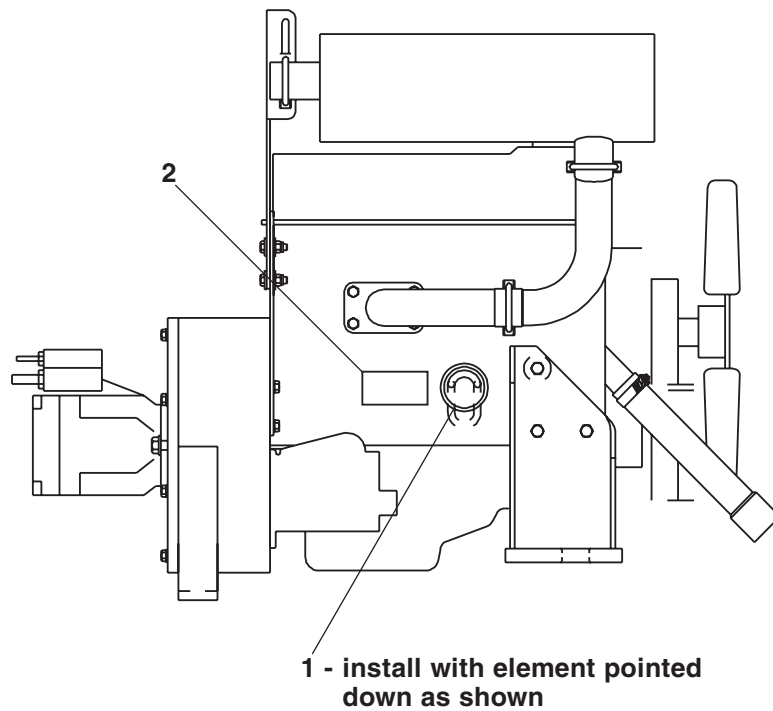
AW0082058

Engine block heater

item	part no	qty	description
1	7630325	1	Engine block heater with cord, Ford LRG-423 engine
2	0181634	1	Decal, engine block heater



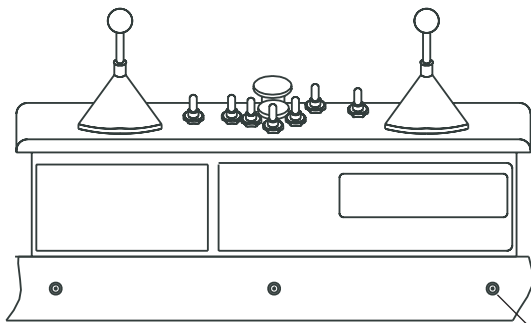
Heater installation position



AW011997

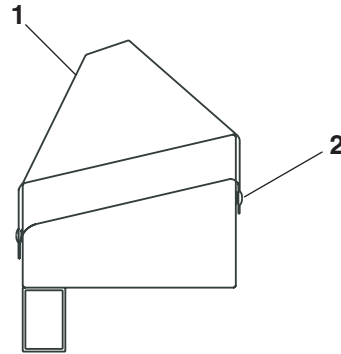
Upper control box cover

item	part no	qty	description
1	0073076	1	Upper control box cover, standard
	0074782	1	Upper control box cover, fire resistant
2	5560657	3	Pop rivet 1/8 inch aluminum #RVT-AD48 ABS
3	5560656	3	Pop rivet 1/8 inch aluminum #RVT-AD46 ABS

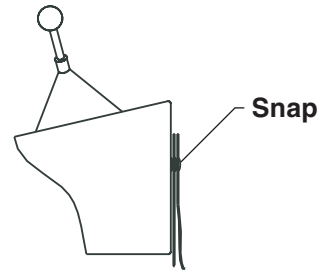


Front view - Upper control box

3



Side view - cover installed

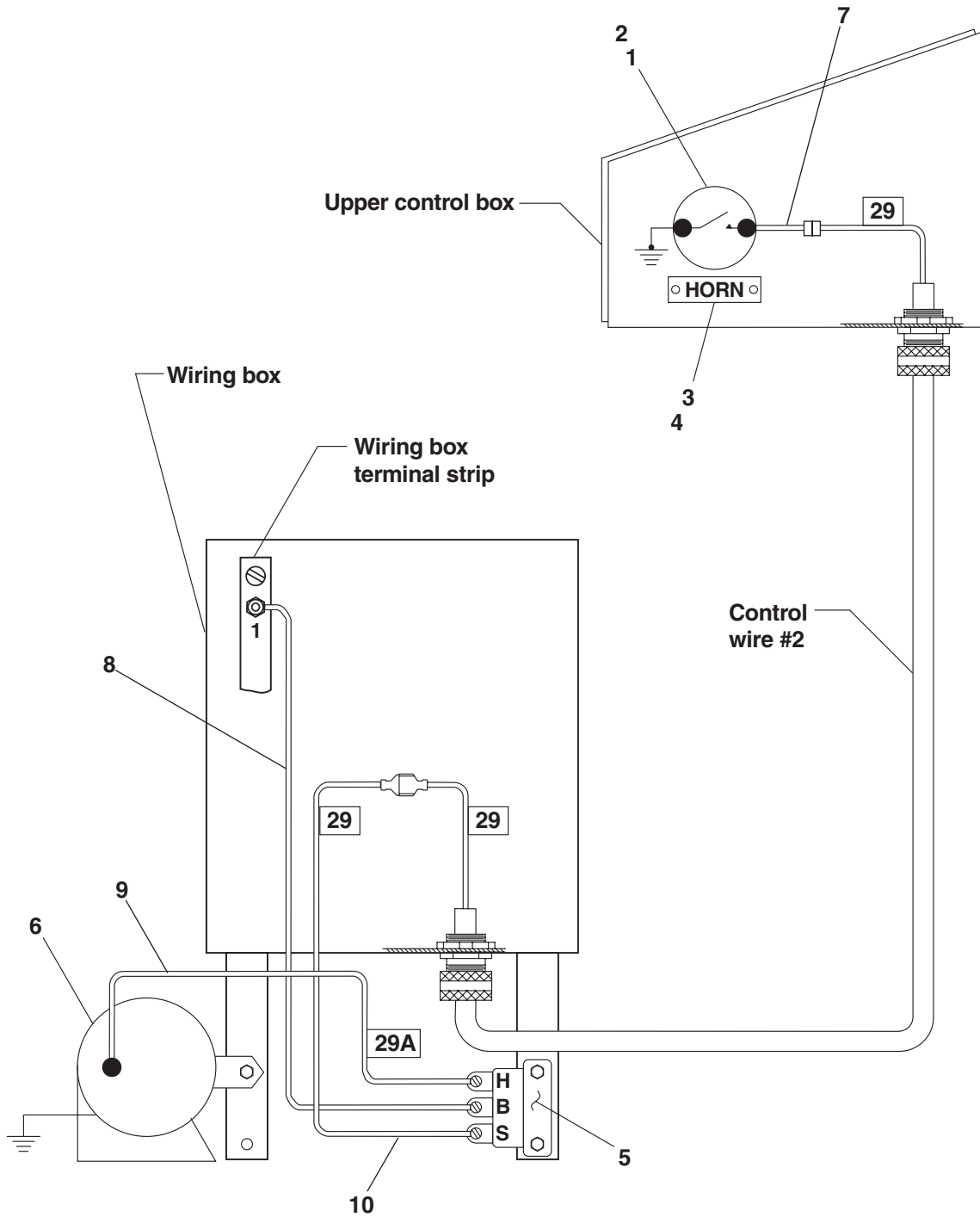


Side view
cover shown
in stowed position

AW0071654

Horn

item	part no	qty	description
1	3026027	1	Switch, push button
2	7140092	1	Switch seal
3	0071269	1	Placard, horn
4	5560655	2	Pop rivet #AD32-ABS
5	3040128	1	Horn relay, 12 volt DC
6	3040127	1	Horn, 12 volt DC
7	0071557	1	Jumper wire
8	0070733	2	Jumper wire
9	0070759	1	Jumper wire
10	0070760	1	Jumper wire

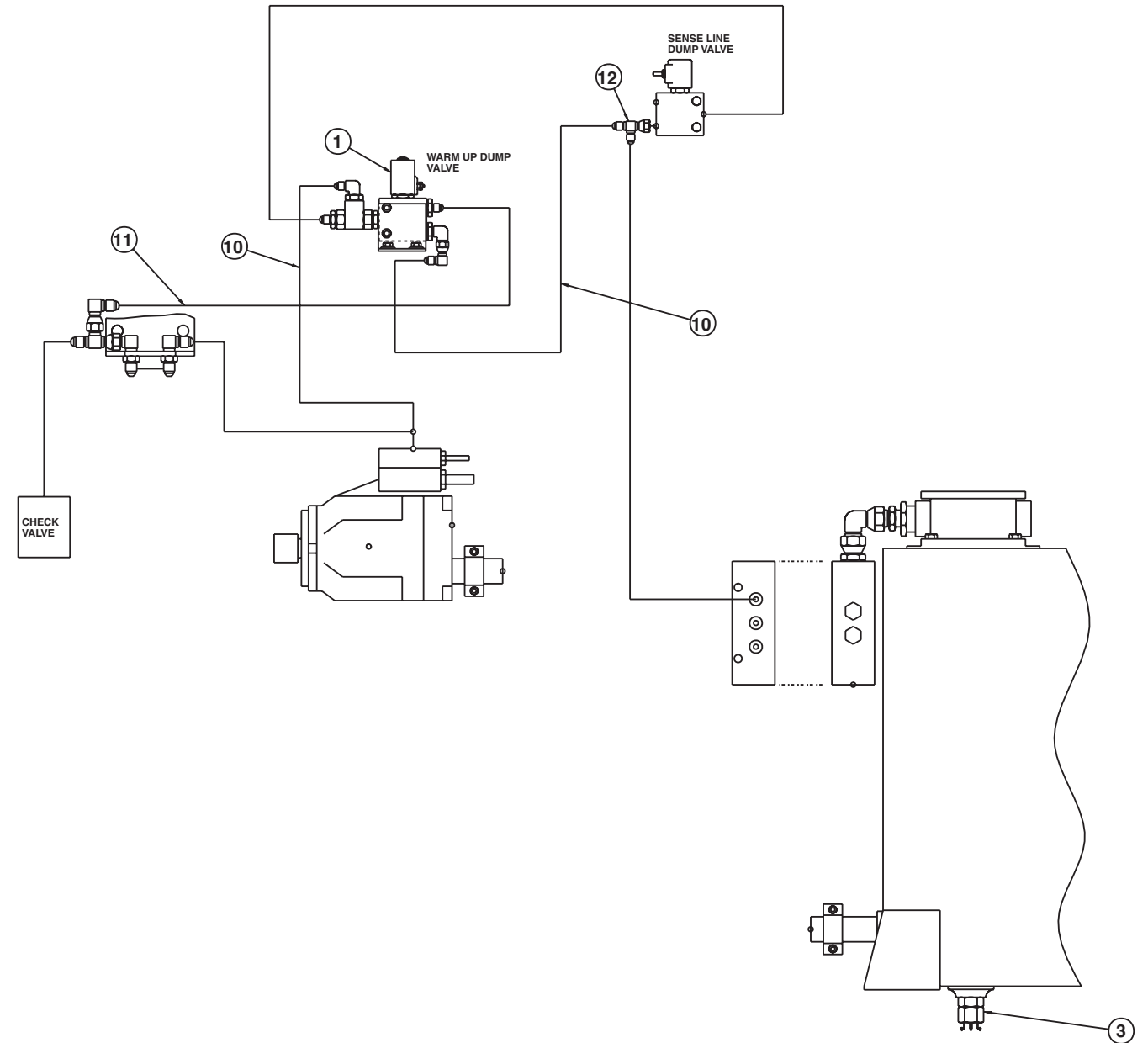
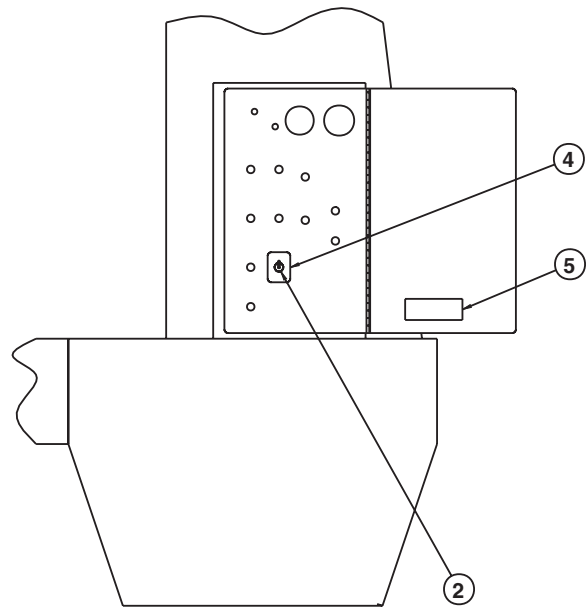
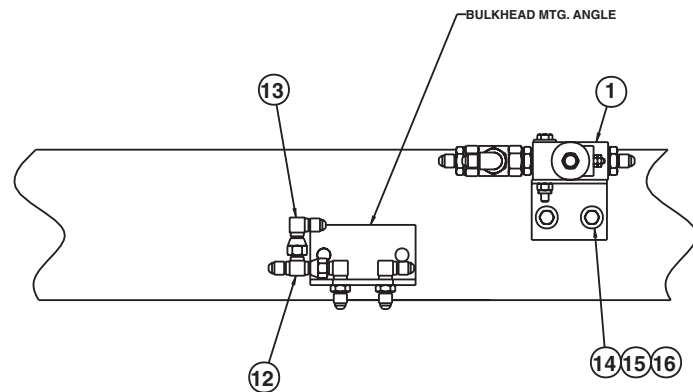
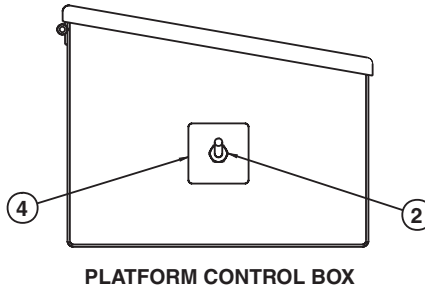
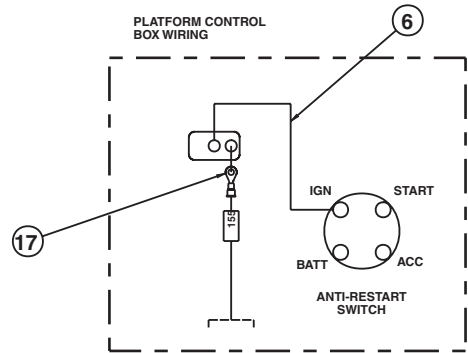
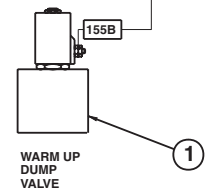
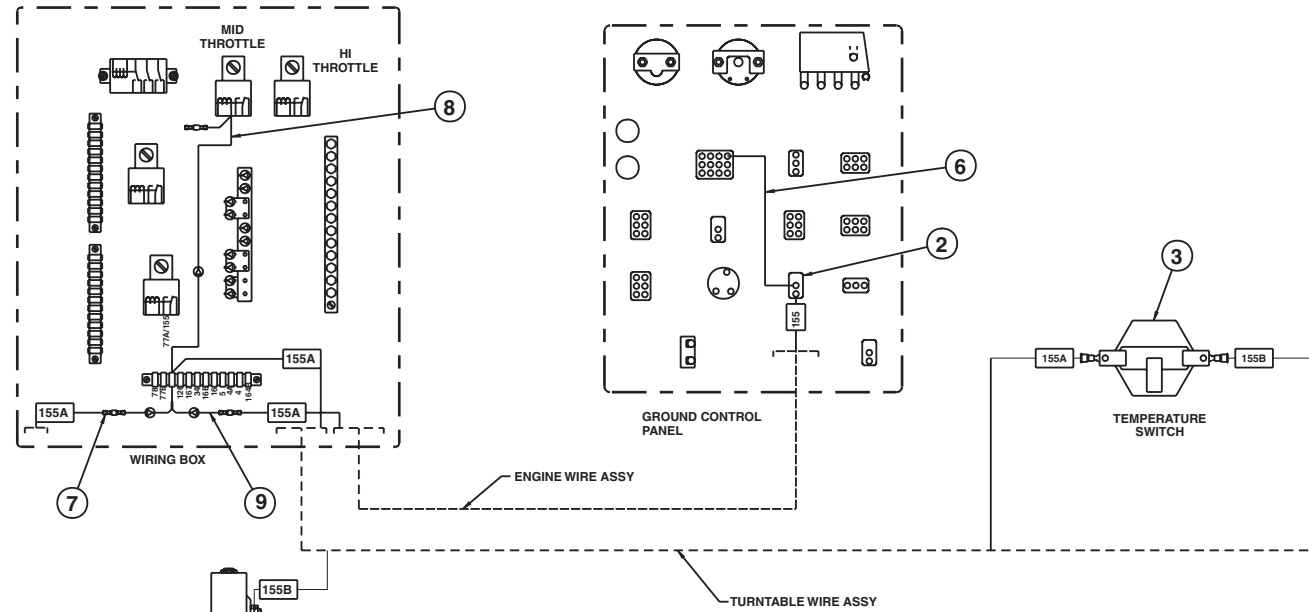


AW0071270

Hydraulic warm-up

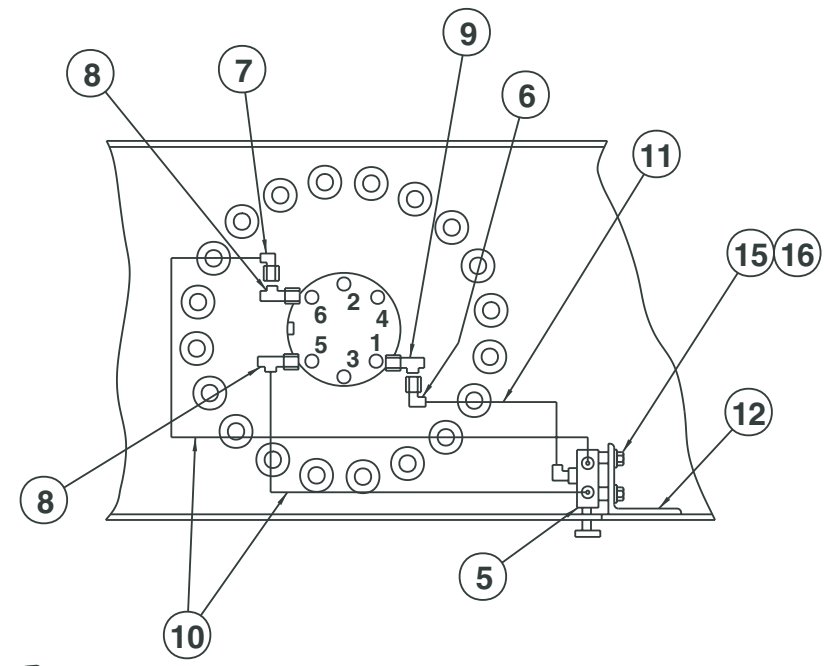
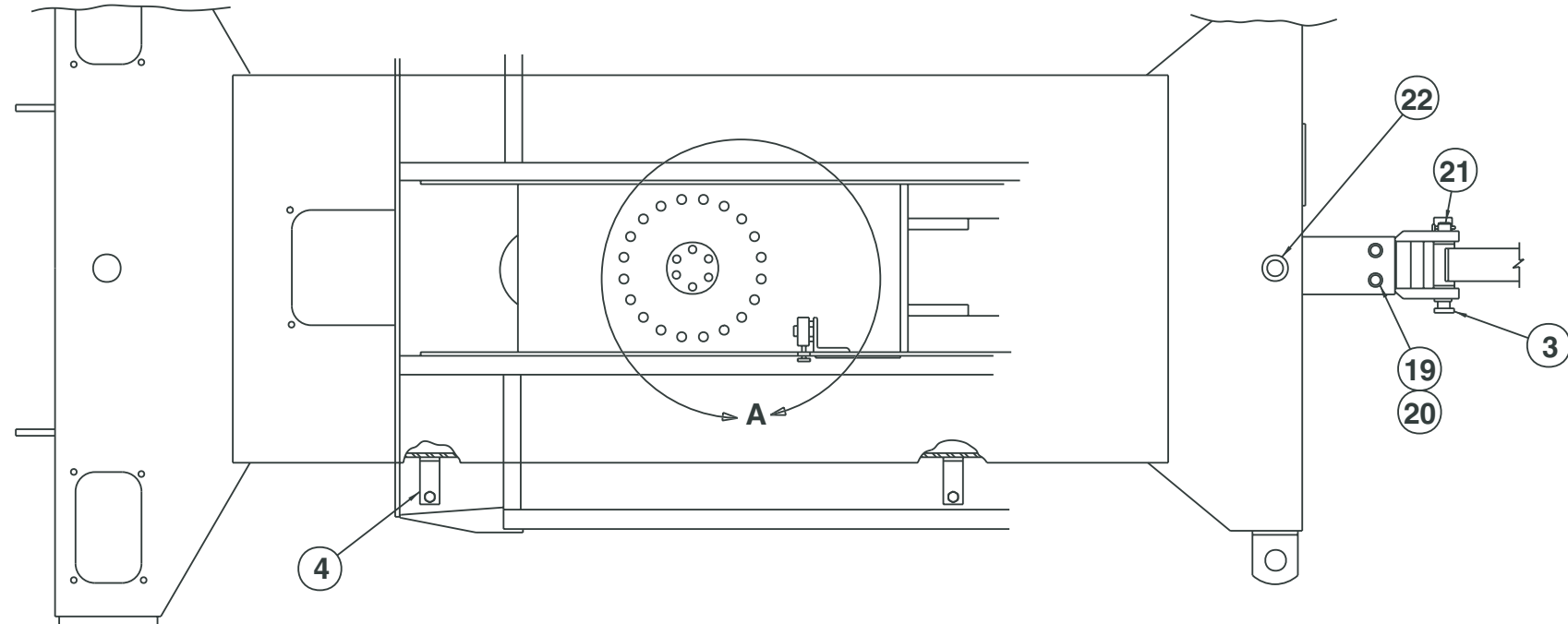
item	part no	qty	description
1	0082053	1	Hydraulic warm-up valve - (see page 2-53 for parts breakdown)
2	3020013	1	Switch, toggle
3	3020078	1	Temperature switch
4	0071792	1	Placard, warm-up switch
5	0071793	1	Decal, hydraulic warm-up instructions
6	0071844	2	Jumper wire
7	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
8	0181398	1	Diode jumper wire
9	0181285	1	Diode jumper wire
10	0050137	1	1/4 inch hydraulic hose
11	0020283	2	1/4 inch hydraulic hose
12	5036703	2	Swivel nut run tee
13	5037003	1	Swivel nut 90° elbow
14	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
15	987099	2	Washer 1/4 medium lock
16	986019	2	Washer 1/4 medium flat
17	3044142	1	Terminal #6 stud insulated 22/18 wire

F
E
D
C
B
A

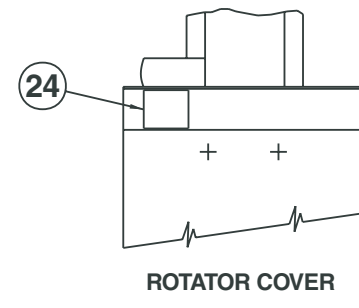


AWA08116

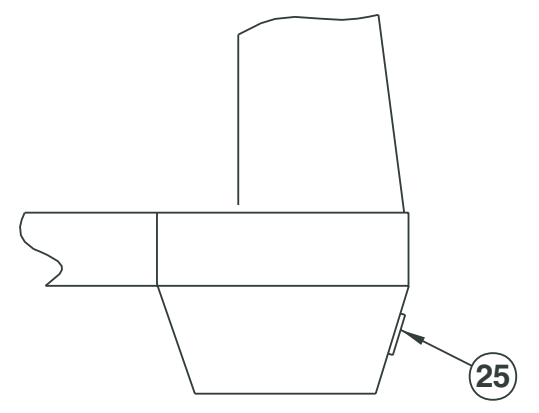
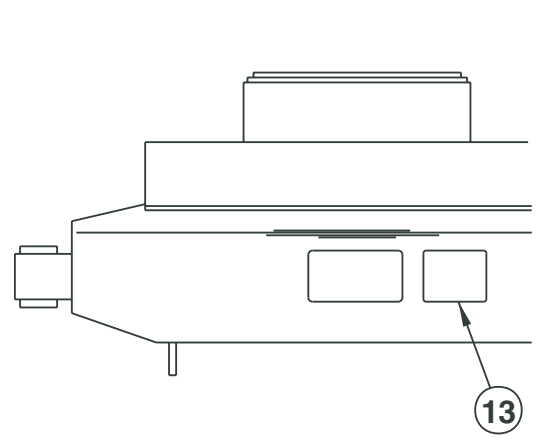
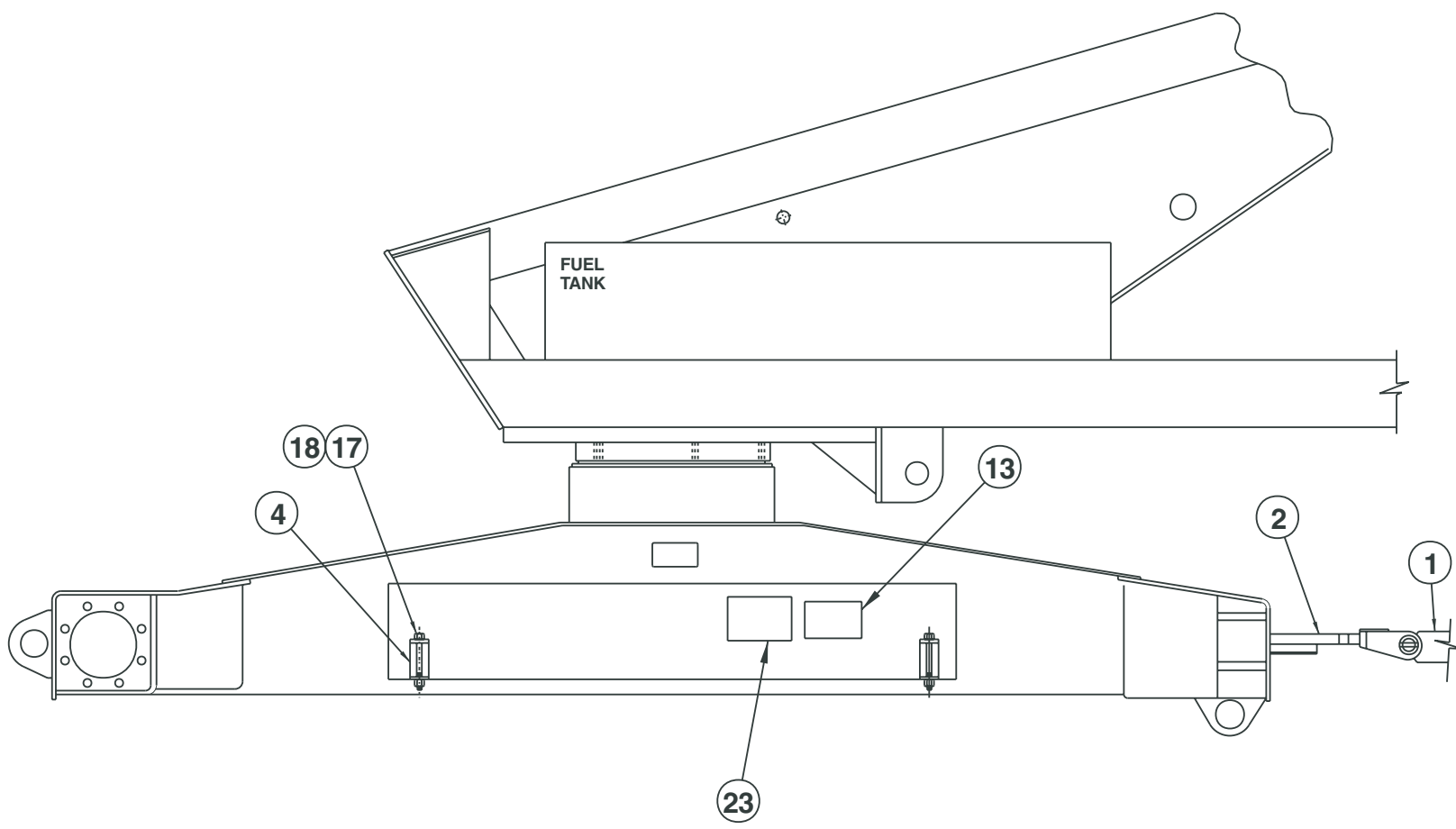
1 2 3 4 5 6 7 8 9



DETAIL "A"



ROTATOR COVER



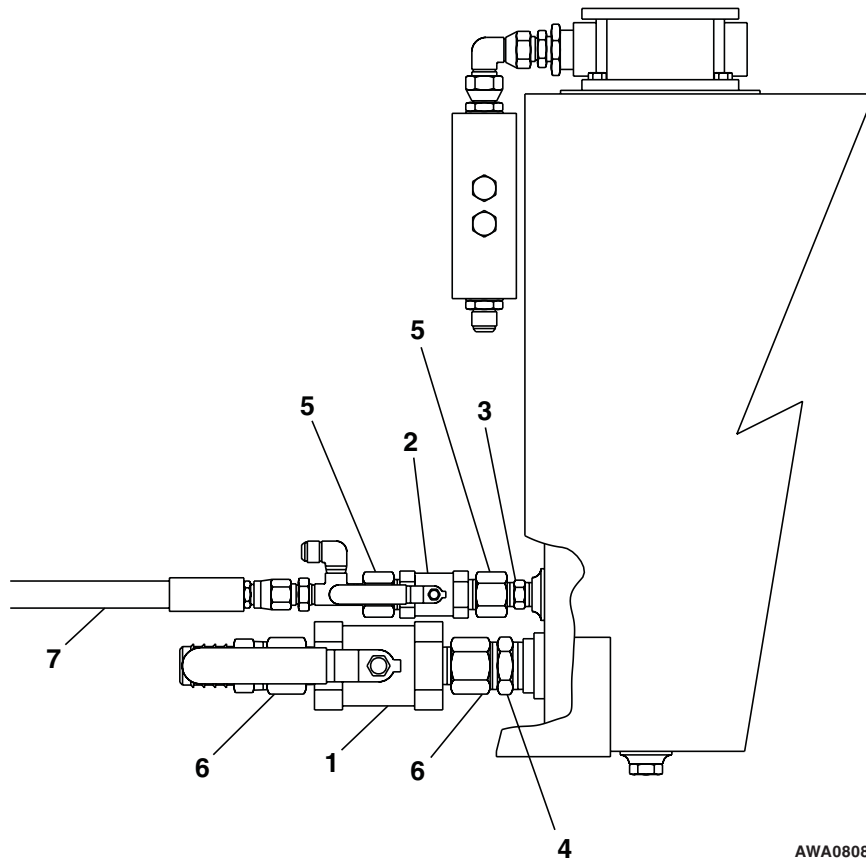
AW0080663

Tow package

item	part no	qty	description
1	0072214	1	Tow bar
2	0081063	1	Steering arm, tow package
3	0072216	1	Towing pin
4	0072224	2	Tow bar storage cradle
5	0072225	1	Float valve
6	5037006	1	Swivel nut 90° elbow
7	5037005	1	Swivel nut 90° elbow
8	5036705	2	Swivel nut run tee
9	5036706	1	Swivel nut run tee
10	0070766	1	1/4 inch hydraulic hose
11	0070927	1	1/2 inch hydraulic hose
12	0072226	1	Bracket, float valve
13	0072203	1	Decal, towing instructions
14	5560662	12	Drive screw #4 x 1/4 inch long PK type U
15	970239	2	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
16	987109	2	Washer 5/16 medium lock
17	5560647	2	Capscrew 1/2-13 x 5 inch long hex head grade 5
18	5560039	2	Nut 1/2-13 self locking
19	2690001	2	Bearing, self aligning
20	5570003	2	Grease fitting
21	5580002	1	Snapper pin
22	2502416	2	Bearing
23	0082160	1	Decal, danger tow package
24	0082164	1	Decal, danger do not ride
25	0082203	1	Decal, danger crushing hazard

Isolation valve

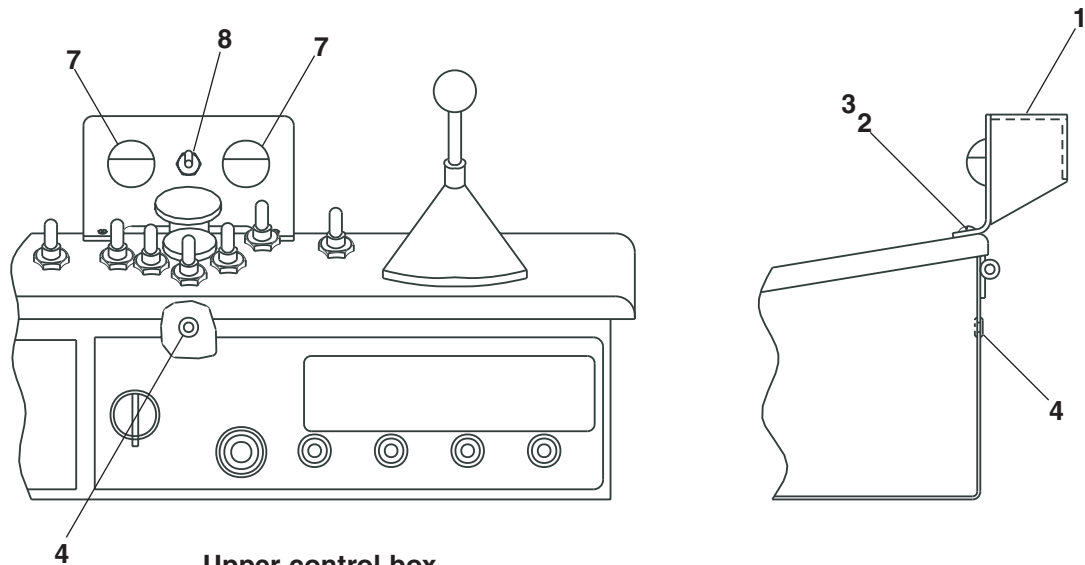
item	part no	qty	description
1	6010495	1	Ball valve
2	6010498	1	Ball valve
3	7740014	1	Close nipple 1/2 NPT
4	7740110	1	Close nipple 1-1/4 NPT
5	7720604	2	Reducer bushing 3/4 x 1/2
6	7721210	2	Reducer bushing 1-1/2 x 1-1/4
7	0070792	1	1/2 inch hydraulic hose - (Deutz machines only)



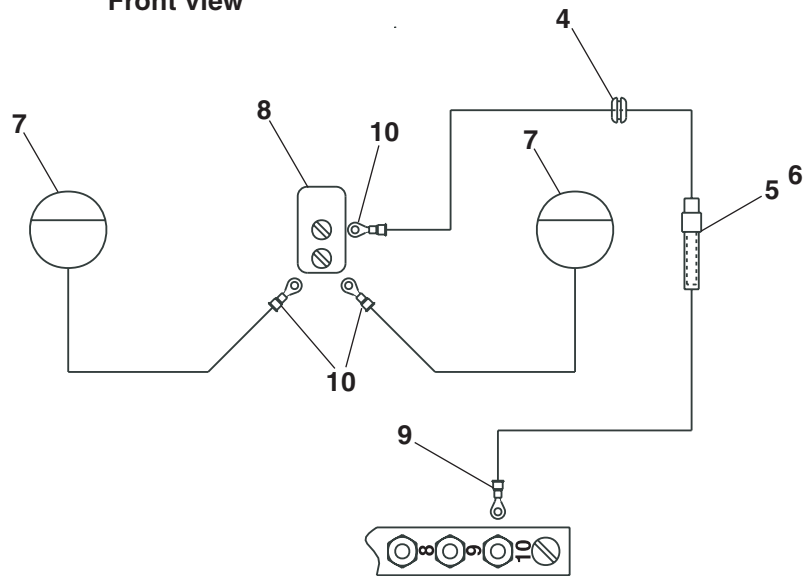
AWA08081

Platform lights

item	part no	qty	description
1	0072004	1	Light bracket
2	5560648	2	Machine screw #10-24 x 3/4 inch long truss head
3	5560034	2	Nut #10-24 self locking
4	5569003	1	Grommet
5	3040038	1	Fuse holder, in-line
6	3040039	1	Fuse, 10 amp capacity
7	3060008	2	Light, platform
8	3020013	1	Switch, toggle
9	3044161	1	Terminal #10 stud insulated 16/14 wire
10	3044158	3	Terminal #6 stud insulated 16/14 wire



Upper control box
Front view

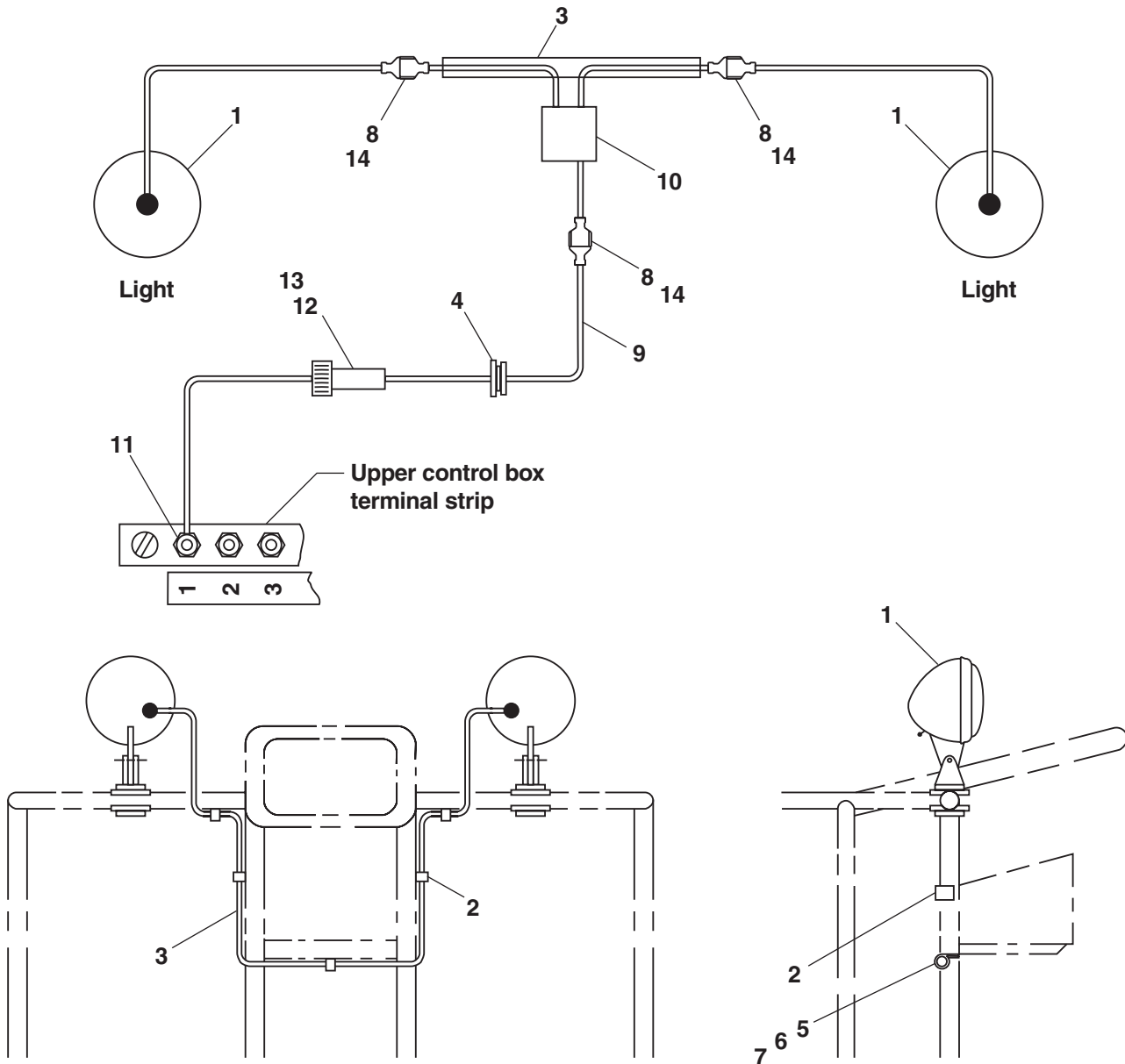


Upper control box
terminal strip

AW0072012

Work lights

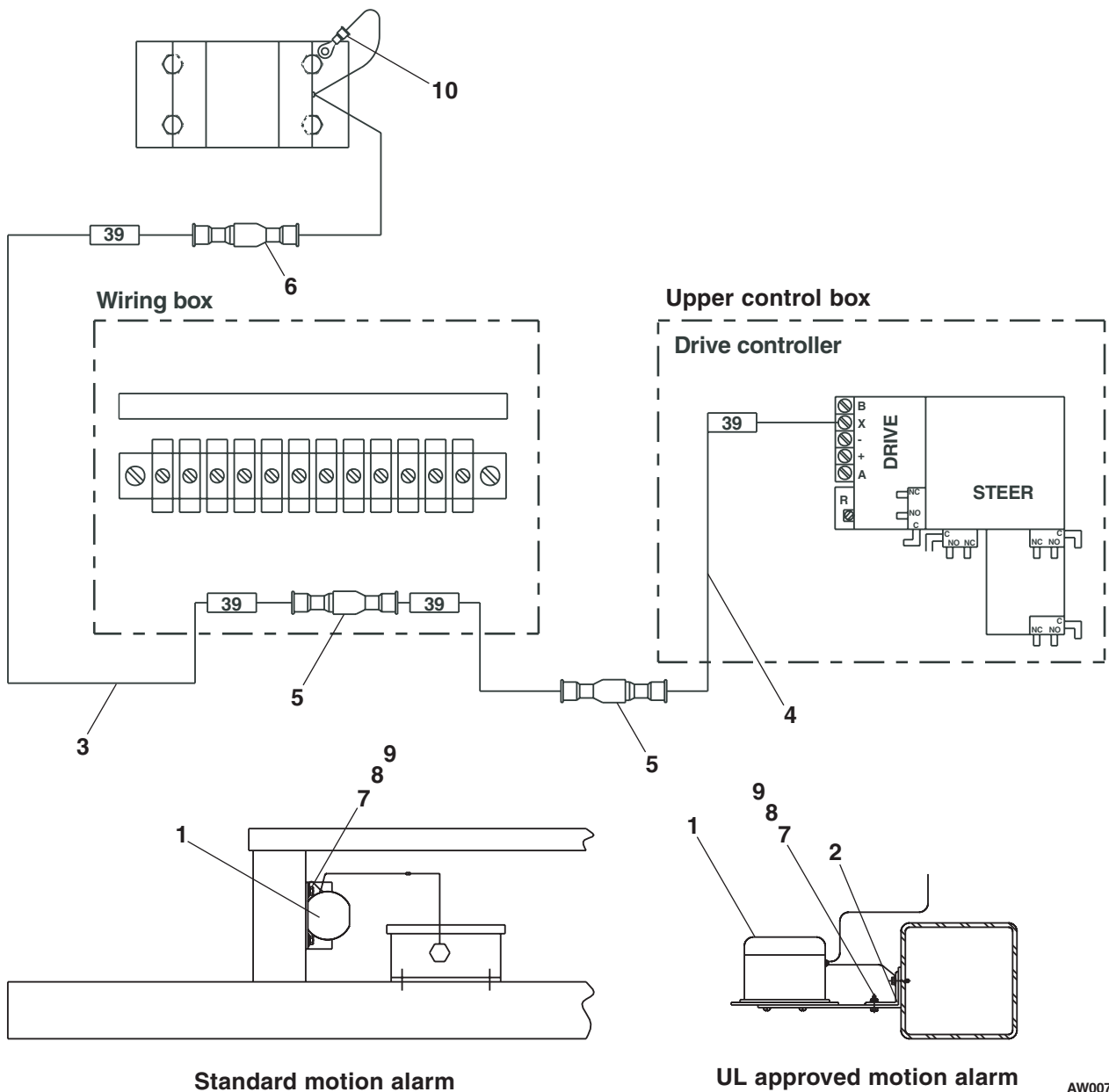
item	part no	qty	description
1	3064413	2	Light, incandescent with clamp bracket
	3067620	2	Light, halogen with clamp bracket
2	5093019	7	Hose clamp
3	3090019	1	Flexgard tube, 80 inch long
4	5569003	1	Grommet
5	970029	7	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
6	986019	7	Washer 1/4 medium flat
7	987099	7	Washer 1/4 medium lock
8	3040082	3	Terminal .250 tab male slip-on fully insulated 16/14 wire
9	3011601	1	Wire, 16 gauge single conductor x 80 inch long
10	3040114	1	Connector, in-line 16/14 wire
11	3044161	1	Terminal #10 stud insulated 16/14 wire
12	3040038	1	Fuse holder, in-line
13	3040039	1	Fuse, 10 amp capacity
14	3040083	3	Terminal .250 tab female slip-on fully insulated 16/14 wire



AW0080768

Motion alarm, drive

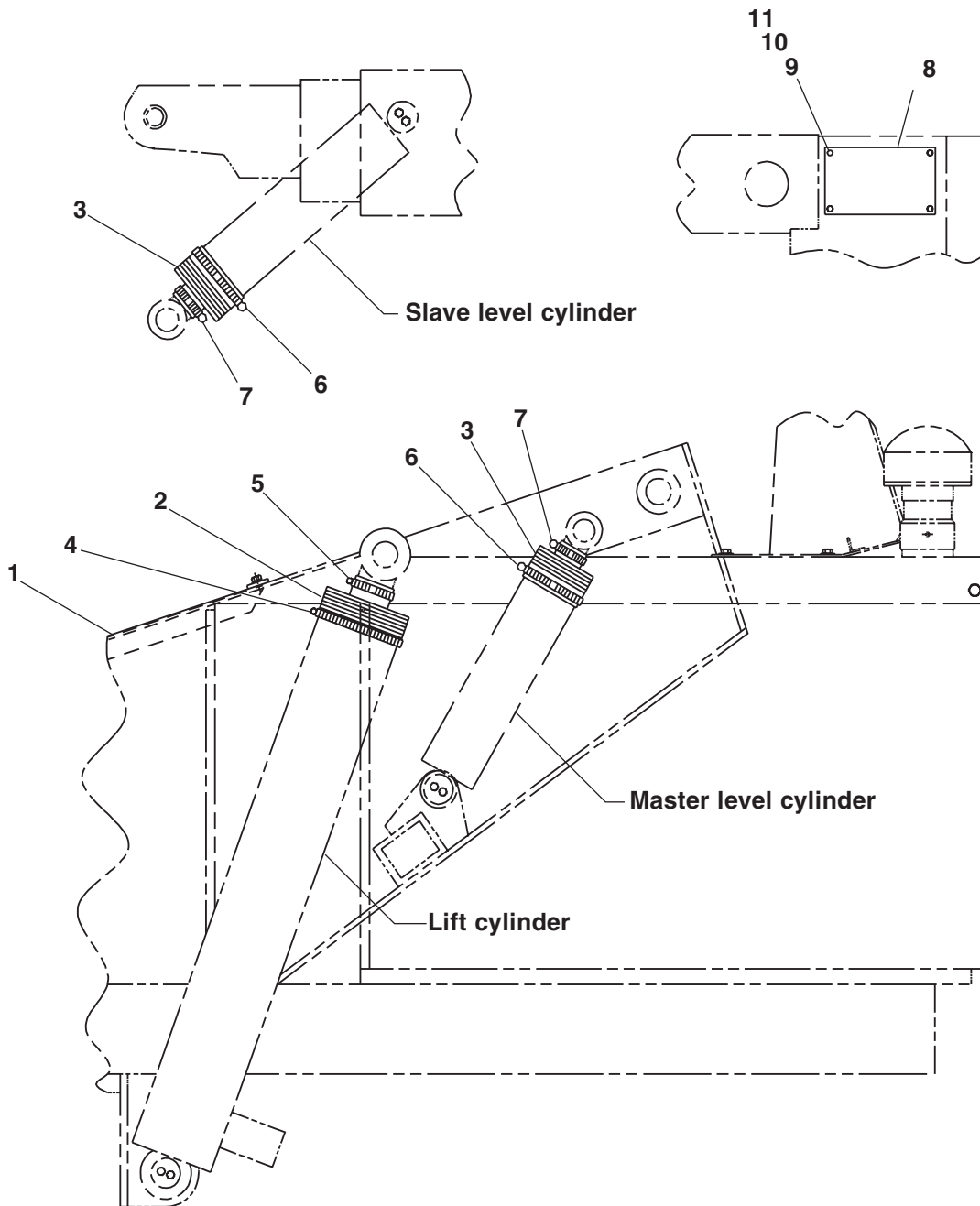
item	part no	qty	description
1	3040129	1	Motion warning alarm, standard
	3040462	1	Motion warning alarm, UL approved
2	0081422	1	Mount angle - (used with UL approved warning alarm only)
3	0073642	1	Jumper wire
4	0073071	1	Jumper wire
5	3040046	2	Terminal .250 tab male slip-on fully insulated 22/18 wire
6	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire
7	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
8	987099	4	Washer 1/4 medium lock
9	986019	4	Washer 1/4 medium flat
10	3044162	1	Terminal 1/4 stud insulated 16/14 wire



AW0073066

Sandblast kit for metal cowling

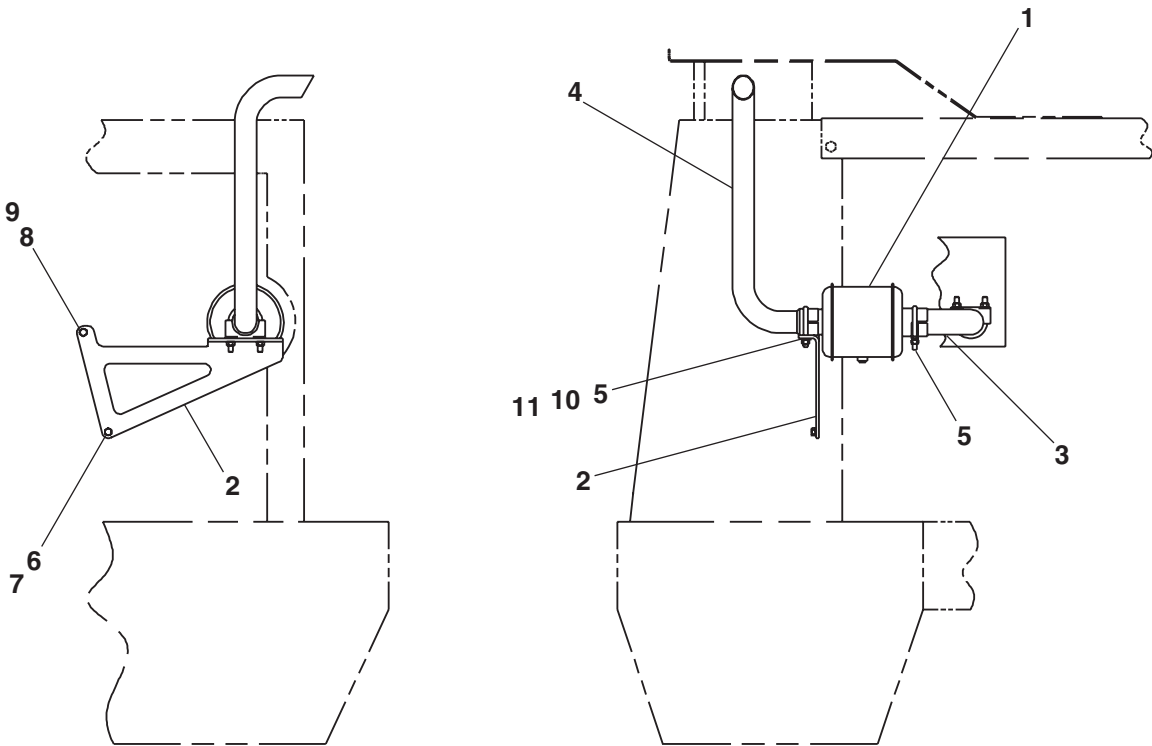
item	part no	qty	description
1	0080642	1	Turntable cover
2	0080621	1	Bellows, Lift cylinder
3		1	Bellows, master and slave level cylinders - (use 1 per cylinder)
	0071982		Level cylinders by GBI or Seabee
	0071998		Level cylinders by Prince or Texas
4	5550050	2	Clamp
5	5550040	1	Clamp
6	5550060	2	Clamp
7	5550037	2	Clamp
8	0081106	1	Cover - (diesel machines only)
9	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
10	987119	4	Washer 3/8 medium lock
11	984109	4	Nut 3/8-16 hex



AW0081815

Spark arrestor muffler, Deutz

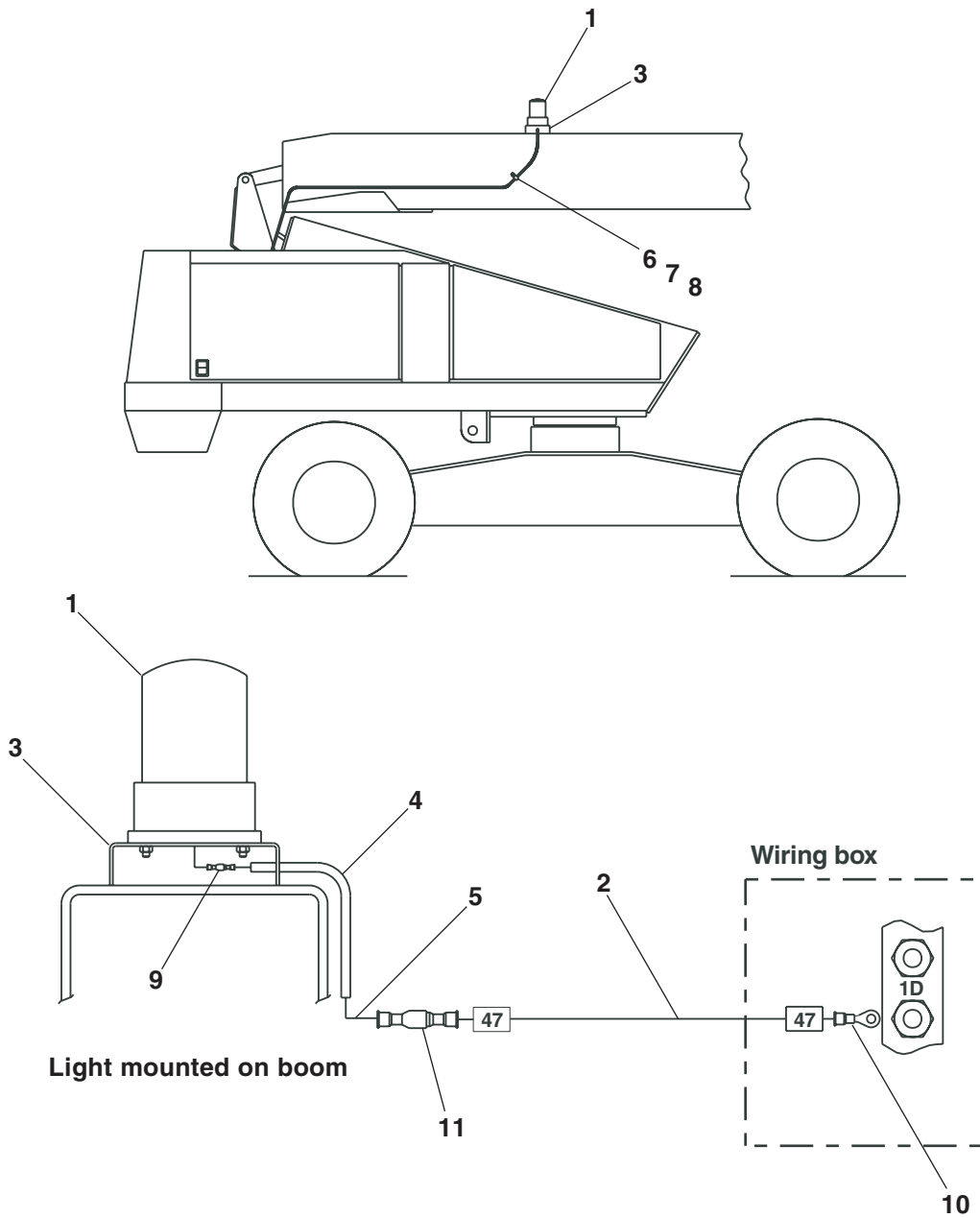
item	part no	qty	description
1	7630243	1	Muffler, spark arrestor
2	0082096	1	Tail pipe brace
3	0082097	1	Exhaust pipe
4	0082098	1	Tail pipe
5	5550014	2	Exhaust clamp
6	5560625	1	Capscrew metric M10-1.5 x 20mm long hex head
7	5560356	1	Washer metric M10 lock
8	972029	1	Capscrew metric M8-1.25 x 20mm long hex head
9	5560355	1	Washer metric M8 lock
10	987109	2	Washer 5/16 medium lock
11	986269	2	Washer 5/16 medium flat



AW0082095

Warning light, single beacon

item	part no	qty	description
1	3060083	1	Warning light, amber lens
	3060084	1	Warning light, red lens
	8160047	1	Replacement bulb
2	3011601	1	Wire, 16 gauge single conductor x 144 inch long
3	0071395	1	Light mount bracket
4	3090006	1	Flexgard tube, 144 inch long
5	0072209	1	Jumper wire
6	5090305	1	Hose clamp
7	974659	1	Machine screw #10-24 x 1/2 inch long round head
8	987089	1	Washer #10 medium lock
9	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
10	3044146	1	Terminal #10 stud insulated 22/18 wire
11	3040083	1	Terminal .250 tab male fully insulated 16/14 wire



AW0082042

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LIMITED WARRANTY

Snorkel warrants each new machine manufactured and sold by it to be free from defects in material and workmanship for a period of one (1) year from date of delivery to a Customer or for one year after the machine has been placed in first service in a Dealer rental fleet, whichever comes first. Any part or parts which, upon examination by the Snorkel Service Department, are found to be defective, will be replaced or repaired, at the sole discretion of Snorkel, through its local Authorized Dealer at no charge.

Snorkel further warrants the structural components; specifically, the mainframe chassis, turntable, booms and scissor arms, of each new machine manufactured by it to be free from defects in material and workmanship for an additional period of four (4) years. Any such part or parts which, upon examination by the Snorkel Service Department, are found to be defective will be replaced or repaired by Snorkel through its local Authorized Dealer at no charge; however, any labor charges incurred as a result of such replacement or repair will be the responsibility of the Customer or Dealer.

The Snorkel Service Department must be notified within forty-eight (48) hours of any possible warranty situation during the applicable warranty period. Personnel performing warranty repair or replacement must obtain specific approval by Snorkel Service Department prior to performing any warranty repair or replacement.

Customer and Dealer shall not be entitled to the benefits of this warranty and Snorkel shall have no obligations hereunder unless the "Pre-Delivery and Inspection Report" has been properly completed and returned to the Snorkel Service Department within ten (10) days after delivery of the Snorkel product to Customer or Dealer's rental fleet. Snorkel must be notified, in writing, within ten (10) days, of any machine sold to a Customer from a Dealer's rental fleet during the warranty period.

At the direction of the Snorkel Service Department, any component part(s) of Snorkel products to be replaced or repaired under this warranty program must be returned freight prepaid to the Snorkel Service Department for inspection. All warranty replacement parts will be shipped freight prepaid (standard ground) from the Snorkel Service Department or from Snorkel's Vendor to Dealer or Customer.

REPLACEMENT PARTS WARRANTY

Any replacement or service part made or sold by Snorkel is not subject to the preceding **Limited Warranty** beyond the normal warranty period of the machine upon which the part was installed.

THIS WARRANTY EXCLUDES AND SNORKEL DOES NOT WARRANT:

1. Engines, motors, tires and batteries which are manufactured by suppliers to Snorkel, who furnish their own warranty. Snorkel will, however, to the extent permitted, pass through any such warranty protection to the Customer or Dealer.
2. Any Snorkel product which has been modified or altered outside Snorkel's factory without Snorkel's written approval, if such modification or alteration, in the sole judgment of Snorkel's Engineering and/or Service Departments, adversely affects the stability, reliability or service life of the Snorkel product or any component thereof.
3. Any Snorkel product which has been subject to misuse, improper maintenance or accident. "Misuse" includes but is not limited to operation beyond the factory-rated load capacity and speeds. "Improper maintenance" includes but is not limited to failure to follow the recommendations contained in the Snorkel Operation, Maintenance, Repair Parts Manuals. Snorkel is not responsible for normal maintenance, service adjustments and replacements, including but not limited to hydraulic fluid, filters and lubrication.
4. Normal wear of any Snorkel component part(s). Normal wear of component parts may vary with the type application or type of environment in which the machine may be used; such as, but not limited to sandblasting applications.
5. Any Snorkel product that has come in direct contact with any chemical or abrasive material.
6. Incidental or consequential expenses, losses, or damages related to any part or equipment failure, including but not limited to freight cost to transport the machine to a repair facility, downtime of the machine, lost time for workers, lost orders, lost rental revenue, lost profits or increased cost.

This warranty is expressly in lieu of all other warranties, representations or liabilities of Snorkel, either expressed or implied, unless otherwise amended in writing by Snorkel's President, Vice President-Engineering, Vice President-Sales or Vice President-Marketing.

SNORKEL MAKES NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THIS LIMITED WARRANTY. SNORKEL MAKES NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND DISCLAIMS ALL LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO INJURY TO PERSONS OR PROPERTY.

The Customer shall make all warranty claims through its local Authorized Dealer and should contact the Dealer from whom the Snorkel product was purchased for warranty service. Or, if unable to contact the Dealer, contact the Snorkel Service Department for further assistance.

Effective July 1995

Maintenance information

The parts drawings located in the repair parts sections, are designed for use as a guide for proper disassembly of the machine and components as well as for parts replacement. Always refer to the hydraulic system installation drawings and the electrical wiring diagram before removing or disassembling associated parts.

▲CAUTION

Do not attempt to disconnect or remove any hydraulic line before reading and understanding all text concerning the system hydraulics. In most cases, disassembly of the machine will be obvious from the illustration.

When disassembling or reassembling components, complete the procedural steps in sequence. Do not partially disassemble or assemble one part, then start on another. Always check your work to assure that nothing has been overlooked.

The following list is a gentle reminder when disassembling or assembling the machine.

- ✔ Always be conscious of weight.
- ✔ Never attempt to lift heavy objects without the aid of a mechanical device.
- ✔ Do not allow heavy objects to rest in an unstable condition.
- ✔ Always make sure work platform is in stowed position - blocked or the weight removed by a suitable lifting device before disconnecting the hydraulic hose from the motor/pump unit to the lift cylinder.
- ✔ When raising a portion of the machine, be sure that adequate blocking is properly positioned - Do not depend on lifting device to hold and secure weight.
- ✔ If a part resists removal, check to see if all fasteners, electrical wiring, hydraulic lines, etc., have been removed or that other parts are not interfering.

Parts should be thoroughly inspected before restoring to service at the time of reassembly. Burrs, nicks or scratches may be removed from machined surfaces by honing or polishing with #600 crocus cloth, followed by a thorough cleaning in an approved cleaning solvent, and blown dry with compressed air. Do not alter the contour of any part. If this operation does not restore the part to a serviceable condition, replace the part. Replace all O-rings, seals, and gaskets at reassembly. Use new roll pins or cotter pins. Dip all packing rings and seals in hydraulic oil before reassembling in cylinder and manifold installations. Replace any part having imperfect threads. In general, units that have been disassembled can be reassembled by reversing the order of disassembly.

Remember that the service life of a machine can be increased by keeping dirt and foreign materials out of the vital components. Precautions have been taken to safeguard against this; shields, covers, seals and filters are provided to keep air and oil supplies clean; however, these items must be maintained on a scheduled basis in order to function properly.

At any time air or oil lines are disconnected, clean surrounding areas as well as the opening and fittings themselves. As soon as a line or component is disconnected, cap or cover all openings to prevent the entry of dirt or foreign materials.

New parts should remain in their container until they are ready to be used.

Clearly mark or tag hydraulic lines and electrical wiring connections when disconnecting or removing them from unit. This will assure that they are correctly reinstalled.

Proper assembly is critical to the successful rebuilding of any unit. Carefully inspect any parts which are to be reused. If in doubt, replace.

“**SAFETY FIRST**” is a good slogan.

Replace any guards and protective devices that have been removed to carry out maintenance and repair work.

Maintenance schedules

Snorkel has established a Preventive Maintenance Schedule that includes Daily Maintenance (Operator's Inspection), 90 Day or 150 Hour (frequent) Maintenance and Yearly or 500 Hour (annual) Maintenance, to detect any defective, damaged or improperly secured parts and provide information regarding lubrication and other minor maintenance items.

The Maintenance Schedule following, outlines the requirements of these maintenance checks for each time interval. The Operator's Daily Maintenance and inspection must be performed by a trained operator. All other maintenance and inspections must be performed by a trained service technician only.

Note that the 90 Day or 150 hour (frequent) and yearly or 500 hour (annual) Maintenance, require use of the Preventive Inspection Maintenance Checklist to pinpoint all inspection items. Retain a copy of these forms for your records.

They also require that all placards and decals on the unit are to be inspected.

All placards and decals must be in place and legible. Use the placards installation drawing and parts listing in the repair parts section 1 of this manual to check these placards and decals.

Snorkel recommends that you make additional copies of the Preventive Inspection Maintenance Checklist forms for your use in performing these inspections.

▲ DANGER

Failure to perform the Preventive Maintenance at the intervals outlined in the Maintenance Schedule may result in a unit being operated with a defect that could result in INJURY or DEATH of the unit operator. Do not allow a unit to be operated that has been found to be defective. Repair all defects before returning the unit to service.

Daily maintenance (operator's inspection)

Components	Service Required
Emergency power motor/pump	Check operation
Air filter	Check condition
Engine oil	Check oil level
Fuel leaks	Visually inspect (hoses, connections, etc.)
Fuel tank cap	Visually inspect (installation)
Engine coolant	Check fluid level
Engine fuel level	Check fuel gauge
Bolts and fasteners	Visually inspect (looseness)
Platform gate	Visually inspect (operation)
Slide pads	Visually inspect (boom wear marks)
Structural damage and welds	Visually inspect (weld cracks, dents)
Tires and wheels	Visually inspect (condition)
Battery fluid level	Check fluid level
Battery terminals	Visually inspect (corrosion)
Charging system	Visually inspect (belt, gauge)
Control switches	Visually inspect (operation)
Wiring harnesses	Visually inspect (installation, condition)
Hydraulic leaks	Visually inspect (hoses, tubes, fittings)
Hydraulic oil	Check fluid level
Placards and decals	Visually inspect (installation, condition)

Maintenance schedules

90 day or 150 hour maintenance (trained service technician)

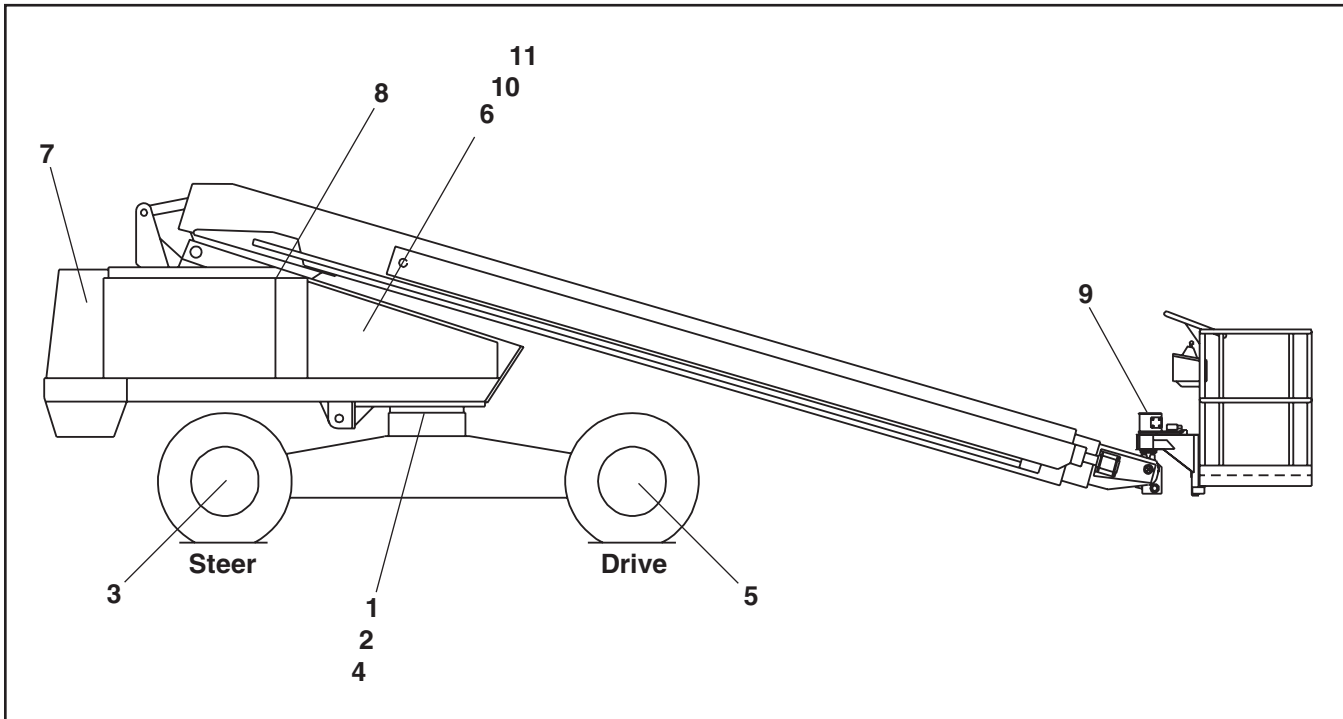
Components	Service Required	Recommended Lubricant or Further Instructions
Daily maintenance	Perform maintenance as per schedule	
Preventive inspection maintenance checklist	Perform inspection, complete form	Retain copy of checklist
Placards and decals inspection	Inspect using drawing and parts listing in section 1 (repair parts)	Replace any missing or unreadable decals/placards
Door hinges and latches	Lubricate	SAE 10W oil or spray lubricant
Rotation bearing	Lubricate	Conoco Super Sta #2 Above 32° Mobilgrease CM-P Below 32° Mobilgrease CM-L
Rotation bearing teeth & pinion	Lubricate	Mobil Mobiltac 375NC
Tie rods	Lubricate	Conoco Super Sta #2 Above 32° Mobilgrease CM-P Below 32° Mobilgrease CM-L
Gear hubs	Check fluid level, fill if low	Mobil Mobilube HD 80W-90
Swing drive	Check fluid level, fill if low	Mobil Mobilube HD 80W-90
Platform rotator	Refill if disassembled for repairs	Consult factory
Platform controller	Check smooth operation & speeds	
Batteries	Check specific gravity	1.260/1.275 at 80° F.
Hydraulic return filter	Check condition	Replace if dirty
Engine RPM	Check for proper engine RPM	See engine manufactures owner's manual
Engine oil and filter	Replace per engine owners manual	
Engine fuel filter	Check condition	Replace every 6 months or if dirty

Yearly or 500 hour maintenance (trained service technician)

Components	Service Required	Recommended Lubricant or Further Instructions
90 day or 150 hour maintenance	Perform maintenance per schedule	
Hydraulic oil reservoir	Clean and replace fluid	Above 10° Mobil DTE-13M Below 10° Mobil DTE-11M
Hydraulic return filter	Replace	After 1st. 50 hours, thereafter at recommended interval
Hydraulic reservoir suction filter	Clean and reinstall	
Hydraulic pressures	Check pressures	
Gear hubs	Replace fluid	Mobil Mobilube HD 80W-90
Swing drive	Replace fluid	Mobil Mobilube HD 80W-90
Engine coolant	Check Condition	See engine manufacturer's owner's manual
Front wheel bearings	Clean and repack	Conoco Super Sta #2 Above 32° Mobilgrease CM-P Below 32° Mobilgrease CM-L

Service information

Lubrication illustration



The illustration locates the lubrication points of the TB 60.

Lubricants

Specific lubricants as recommended by Snorkel, should be used in maintaining your unit. If in doubt regarding the use of lubricants other than those listed, contact Snorkel Customer Service Department, St. Joseph Missouri, for evaluation and recommendation.

Refer to the above lubrication illustration for location of item numbers.

Pressure gun application

Service all fittings as indicated in the Maintenance Schedule and lubrication illustration. Wipe away all excess lubricant from exposed surfaces. Over lubrication can collect dirt and foreign matter which acts as an abrasive. Lubrication of accessory equipment should be in accordance with the manufacturer's recommendations.

Rotation bearing

Rotation bearing (item 1.): Pressure gun lubricate bearing at recommended interval using lubricant as outlined in the maintenance schedule. Rotate while lubricating. Lubrication fitting is located on the front plate of the turntable.

Rotation gear teeth and pinion

Rotation gear teeth and pinion (item 2.): Gear teeth and gear box pinion should be lubricated with a spray-on type open gear lubricant.

Tie rods

Tie rods (item 3.): Lubricate at recommended interval using lubricant as outlined in the maintenance schedule.

Swing drive

To check oil level, remove check plug located on the side of the gear box. Unit is full if oil is level with bottom of fill hole or just starts to run out.

Gear hubs

Gear hubs (item 5.): To check and fill Gear hubs:

1. Rotate wheel until bottom of filler/drain plug is about 1 inch above horizontal centerline.
2. Remove plug with drive ratchet and extension.
3. Fill until lubricant is level with bottom of fill hole.

Note:

Do not overfill gear hubs as they are not vented and need air space for expansion of oil to prevent damage to hubs.

Hydraulic oil reservoir

Hydraulic oil reservoir (item 6.): The fluid level should be kept between the low and full marks on the sight gauge indicator and should be checked with all cylinders fully retracted and the platform in stowed position.

The interior of the reservoir should be wiped out and cleaned each time the hydraulic oil is changed.

Service information

The reservoir filler/breather cap should be removed and the cap strainer cleaned with Kerosene, Fuel Oil, or other solvent at this time.

It is absolutely necessary that only new, clean hydraulic oil is added.

Note:

If it becomes necessary to add or use an oil other than the recommended fluid, it is important that it be compatible and equivalent to the factory fill. Local oil suppliers can generally furnish this information.

If questions still remain, contact Snorkel Customer Service Department, St. Joseph, Missouri, for further information.

Engines

Engine (item 7.): Refer to the engine manufacturer's instruction manual or consult your local engine service representative if engine adjustments or repairs are needed. The engine **MUST** be operated in accordance with manufacturer's instructions and serviced at recommended intervals.

Door hinges and latches

Door hinges and latches (item 8.): After lubricating, remove any excess oil or over spray so it will not collect dirt or debris.

Platform rotator

Platform rotator (item 9.): Platform rotators will require lubrication only if disassembled for repairs.

Consult factory for proper lubricant if replacement of platform rotator is required.

Hydraulic oil return filter

Return filter (item 10.): On TB 60 models, the hydraulic oil return filter is mounted on top of the hydraulic oil reservoir.

The filter element is a throw-away type filter and should be changed after the initial break-in period (approximately 50 hours operation time).

The filter is equipped with a hydraulic pressure gauge to indicate the filter element condition. A by-pass relief within the filter base is provided and is set to by-pass at 25 PSI. If pressure readings are above 25 PSI, the filter should be changed.

The filter condition should be checked at the 90 day or 150 hour Preventive Inspection Maintenance interval or more frequently under extreme working conditions.

The filter condition indicator is accurate only when the engine is running at maximum RPM and pump is discharging maximum flow, which occurs only during full speed driving. This requires that the indicator be observed while the unit is in motion, booms fully retracted

and in stowed position, drive range switch in "LO" position, and drive controller fully forward. Oil temperature should be at least 90 degrees.

Note:

Use extreme caution while observing the condition indicator because of the motion of the drive wheels. The condition indicator is best observed from outside of the tract of the vehicle wheels to avoid possible personal injury or machine damage.

When changing the filter element, the oil inside of the filter element, should be examined for deposits of metal cuttings, which is present, could indicate excessive wear in some of the system components.

Suction strainer

Suction strainer (item 11.): A 100 mesh strainer is located within the hydraulic oil reservoir and filters the pump suction flow.

The strainer is cleanable and should be cleaned at the time interval shown in the maintenance schedule chart, using Kerosene, Fuel oil or other solvent and a soft bristled brush.

Inspect filter for damage to wire cloth. Holes in the filter cloth leak dirt into the pump and other vital hydraulic components. If element is damaged, replace.

When filter has been thoroughly cleaned, reinstall filter on suction line and tighten securely.

Batteries

Batteries (not shown): Batteries will have longer life if the water level is maintained and they are kept charged. The unit will have better starting characteristics with a fully charged battery.

In cold weather the battery should be maintained at full charge to keep from freezing. An extremely low or dead battery can freeze in cold weather. Make sure connections are clean and tight.

Make sure charging equipment is operating properly.

▲ DANGER





Lead-acid batteries produce flammable and explosive gases. Never allow smoking, flames or sparks around batteries.

Lead-acid batteries contain sulfuric acid which will damage eyes or skin on contact. When working around batteries, always wear a face shield to avoid acid in eyes.

If acid contacts eyes, flush immediately with clear water and get medical attention.

Wear rubber gloves and protective clothing to keep acid off skin, if acid contacts skin, wash off immediately with clear water.

Capscrew torque chart

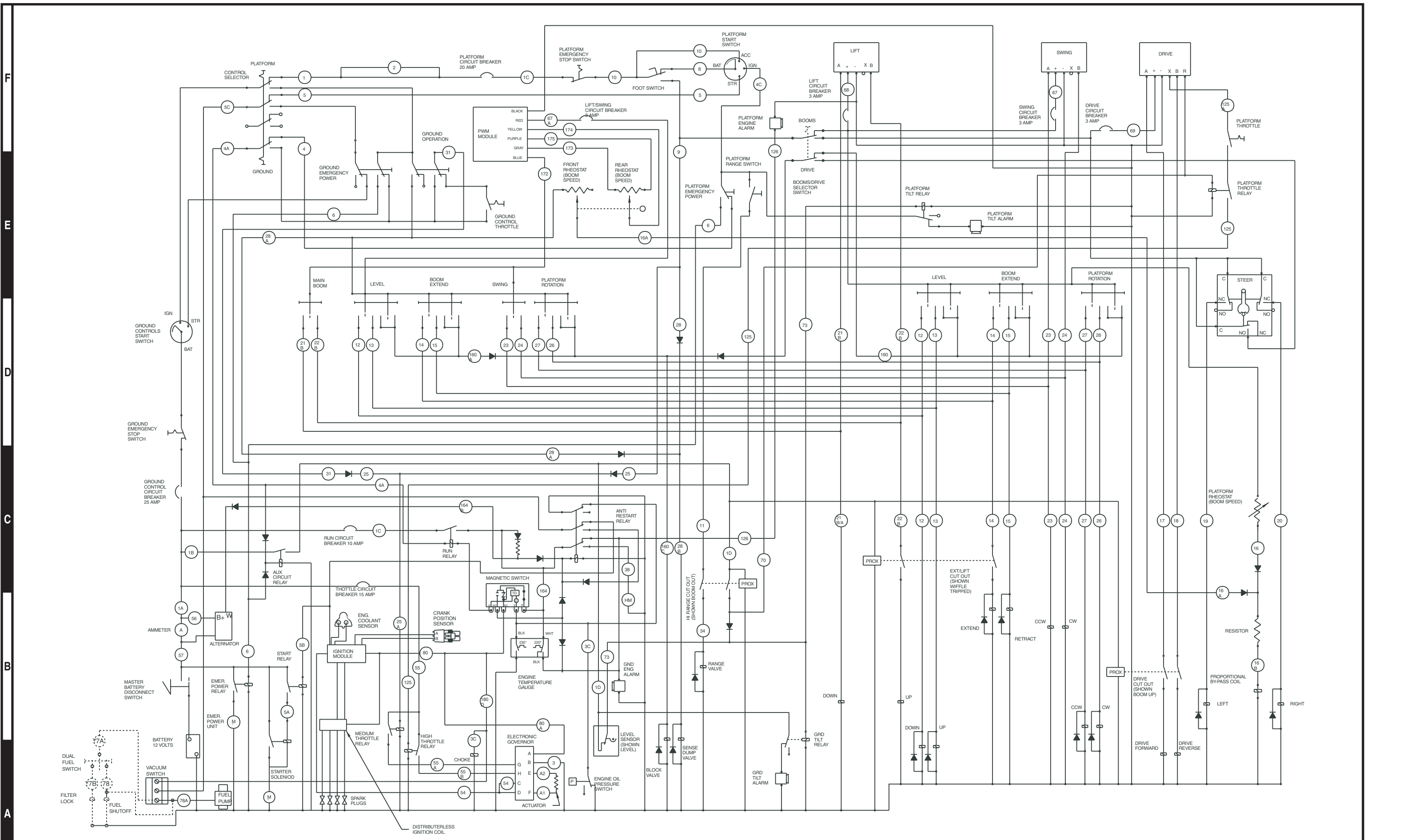
GRADE BOLT	SAE GRADE 1 OR 2	SAE GRADE 5	SAE GRADE 6	SAE GRADE 8
MARKING				
DEFINITION	INDETERMINATE QUALITY	MINIMUM COMMERCIAL QUALITY	MEDIUM COMMERCIAL QUALITY	BEST COMMERCIAL QUALITY
MATERIAL	LOW CARBON STEEL	MEDIUM CARBON STEEL TEMPERED	MEDIUM CARBON STEEL Q & T	MED. CARBON ALLOY STEEL Q & T
MIN. TENSILE STRENGTH	64,000 P.S.I.	105,000 P.S.I.	133,000 P.S.I.	150,000 P.S.I.
BOLT SIZE	RECOMMENDED TORQUE VALUES (FT - LBS)			
1/4	5	7	10	10.5
5/16	9	14	19	22
3/8	15	25	34	37
7/16	24	40	55	60
1/2	37	60	85	92
9/16	53	88	120	132
5/8	74	120	167	180
3/4	120	200	280	296
7/8	190	302	440	473
1	282	466	660	714

The following rules apply to the chart

1. Consult manufacturers' specific recommendations when available.
2. The chart may be used with both course and fine thread fasteners lightly lubricated.
3. Increase torque by 20% when multiple tapered tooth (shake proof) lock washers are used.
4. The torque values are given in foot-pounds.
5. Inch pound equivalent may be obtained by multiplying by 12.

Wire code and function

Wire	Color	Circuit function
1	red	power to platform controls 12 volt DC
1A	red	Power to ground controls 12 volt DC
1B	red	power from circuit breaker to emergency stop switch
1C	red	power to auxiliary circuit
1D	red	starter to ammeter Deutz diesel machine
2	red	power to platform controls 12 volt DC
3	black	ground circuit
3B	black	ground circuit
3C	black	ground circuit, magnetic switch to oil pressure switch
4	red	run from platform
4A	red	ignition signal to run relay
4C	red	power to platform range switch
5	blue	start from platform
5A	white	start signal to engine starter
5B	yellow	start solenoid signal
5C	gray	start signal to start solenoid switch
6	brown	emergency power from platform
6A	green	emergency power solenoid signal
8	red	platform foot switch start
8D	red	run solenoid, Deutz diesel machine
9	white	platform foot switch to controls
10	black	power to platform foot switch
11	pink	motor low range signal
12	blue	level function - down
13	gray	level function - up
14	yellow	boom extend/retract function - extend
15	green	boom extend/retract function - retract
16	blue	hydraulic speed
16A	blue	speed signal at ground
16B	pink	speed signal valve
17	orange	drive function - forward
18	purple	drive function - reverse
19	brown	steer function - left
20	blue	steer function - right
21B	yellow/black	boom raise/lower function - down
22B	yellow/orange	boom raise/lower function - up
23	pink	turntable swing function - counter clockwise rotation
24	purple	turntable swing function - clockwise rotation
25	red	medium throttle signal
26	orange	platform rotation function - clockwise rotation
27	blue	platform rotation function - counter clockwise rotation
28	green	sense line dump
28A	white	ground controls switch to controls
28B	white	sense line dump valve
31	red	throttle from ground controls
34	pink	range from boom switch
54	blue	tachometer pick-up
55A	red	medium throttle power to solenoid



F

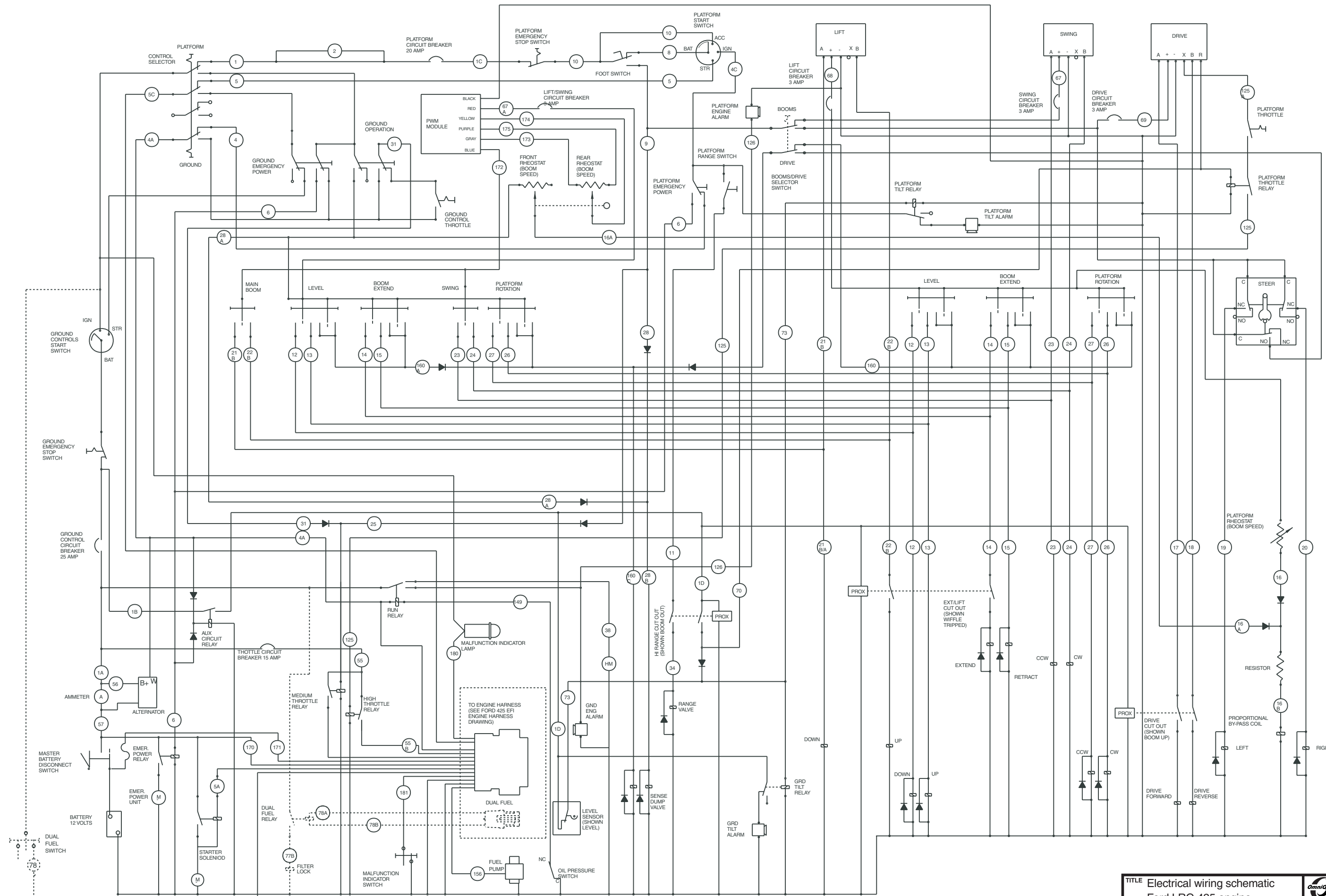
E

D

C

B

A



TITLE Electrical wiring schematic
 Ford LRG 425 engine
 Snorkel model TB 60

DWG. 0082775



F

E

D

C

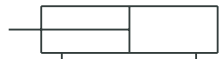
B

A

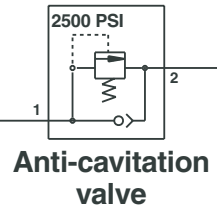
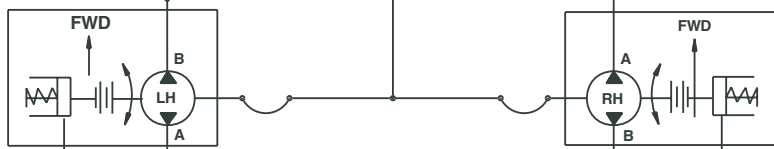


OIL FLOW CHART	
FUNCTION	CENTERPOST NO.
RETURN	1
DRIVE - FORWARD	2
DRIVE - REVERSE	3
PILOT	4
STEER - RIGHT	5
STEER - LEFT	6
NOT USED	7

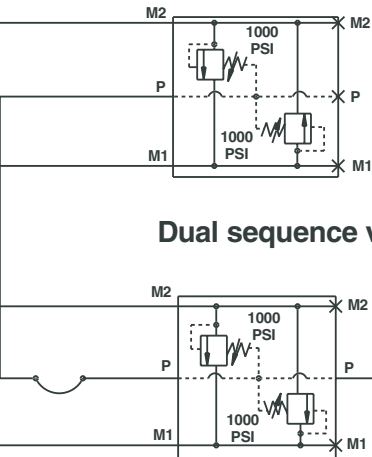
Steering cylinder



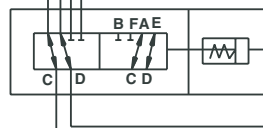
Rear drive



Dual sequence valve



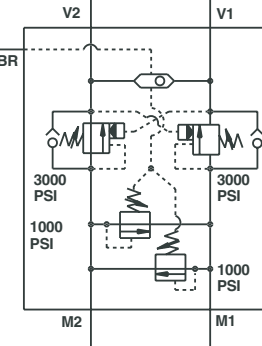
Selector valve

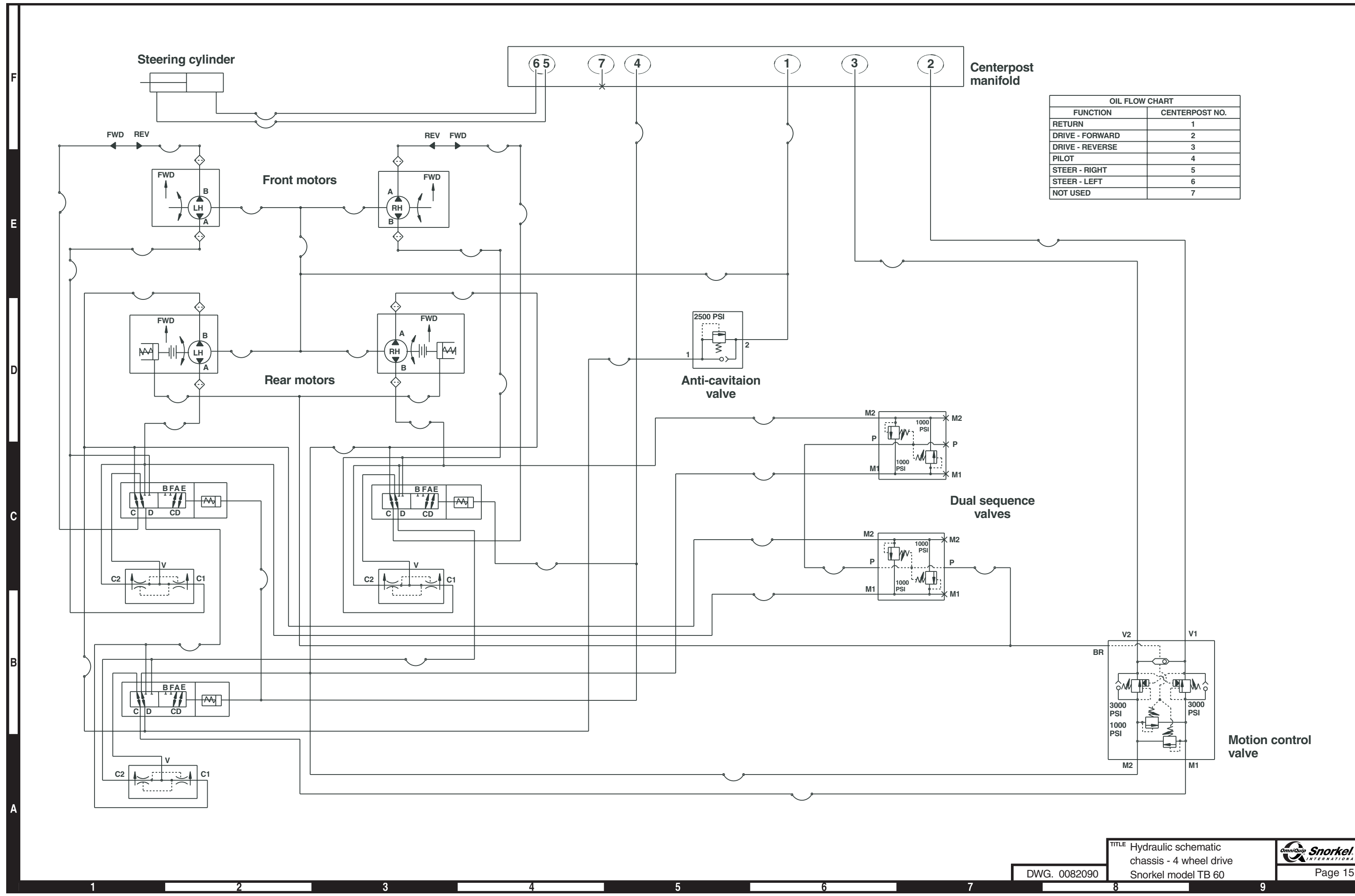


Flow divider/combiner



Motion control valve





OIL FLOW CHART	
FUNCTION	CENTERPOST NO.
RETURN	1
DRIVE - FORWARD	2
DRIVE - REVERSE	3
PILOT	4
STEER - RIGHT	5
STEER - LEFT	6
NOT USED	7

TITLE Hydraulic schematic
 chassis - 4 wheel drive
 Snorkel model TB 60

DWG. 0082090

F

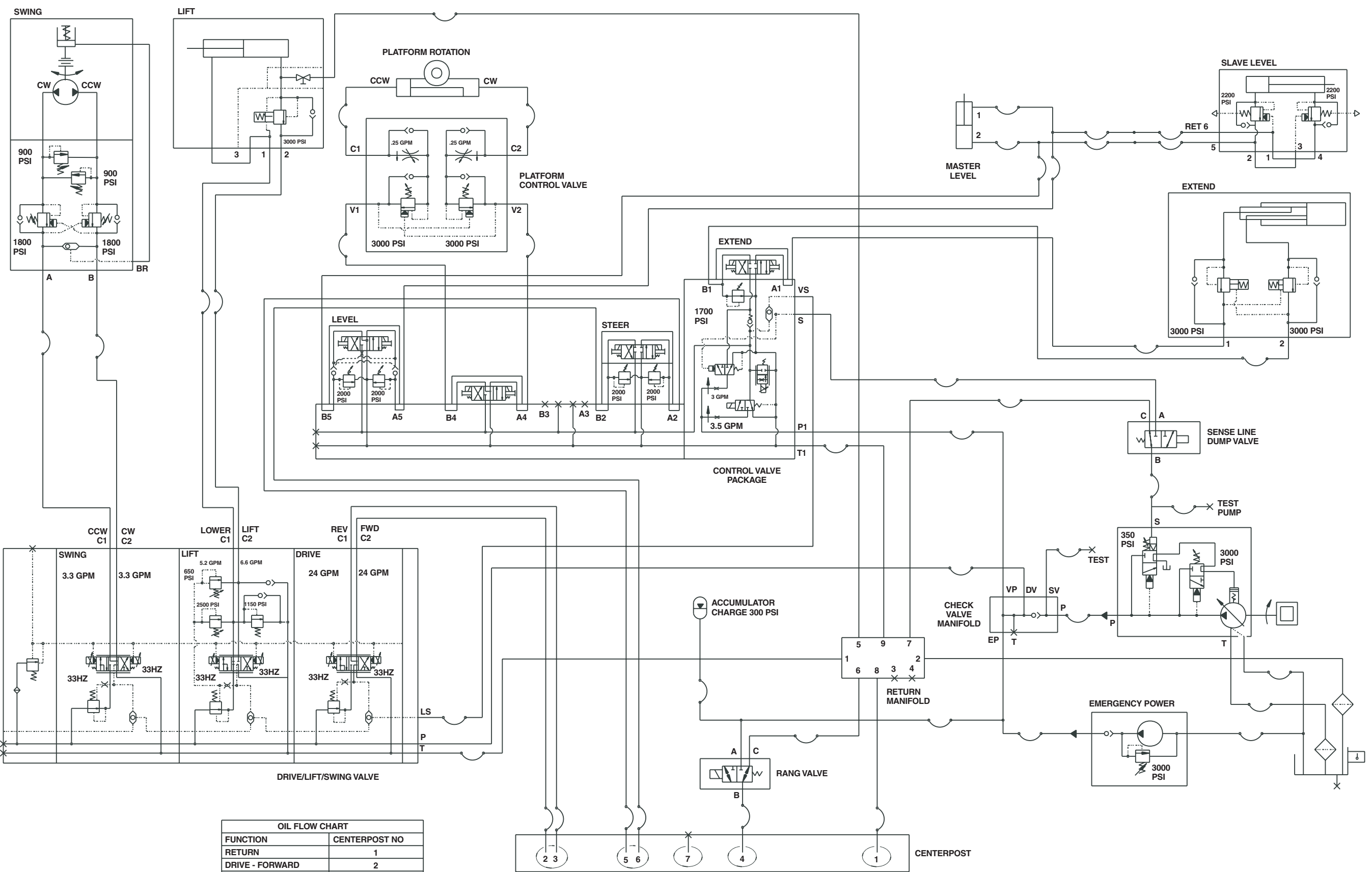
E

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A



OIL FLOW CHART

FUNCTION	CENTERPOST NO
RETURN	1
DRIVE - FORWARD	2
DRIVE - REVERSE	3
PILOT	4
STEER - RIGHT	5
STEER - LEFT	6
NOT USED	7

