



Repair Parts Manual

ATB 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 warrantied 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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Service and parts information

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 ATB 60 are as follows:

- ✓ Operator's Manual
Snorkel part number - 0181696
- ✓ Repair Parts Manual
Snorkel part number - 0181697
- ✓ Troubleshooting Guide
Snorkel part number - 0182148
- ✓ 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



Parts order form

Fill out completely and fax to (816)-364-6312 attention: Parts Worldwide

Date _____	Model _____
Company _____	Serial number _____
Address _____	Optional equipment _____
_____	Purchase order number _____
Contact name _____	Ship to _____
Phone number _____	_____
Fax number _____	_____
Account number _____	_____
Purchase order number _____	Ship by _____

Part number	Description	Quantity	Price

Note: Backordered parts will be shipped as soon as available by the same shipping method as the original order unless indicated below:

- ☐ Ship complete order only - do not backorder parts.
- ☐ Ship all available parts and supply information of disposition of backordered parts.
- ☐ Other instructions as specified _____



Section 1. - Repair parts

ATB
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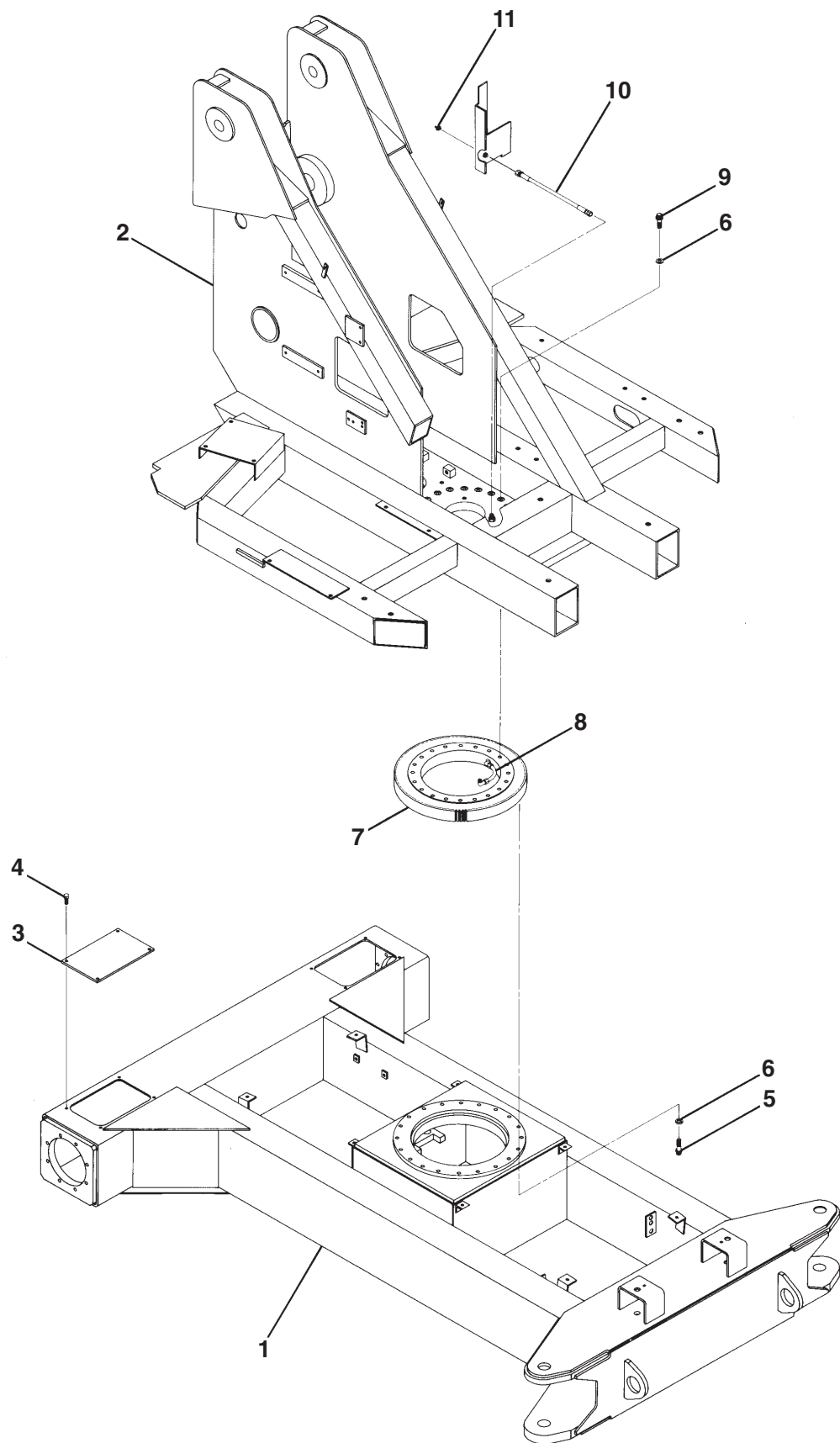


Chassis/turntable mounting

item	part no	qty	description
1		1	Chassis - (consult factory)
2		1	Turntable - (consult factory)
3	0070224	2	Access cover, drive
4	970449	8	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
5	5560216	20	Capscrew 5/8-11 self locking
6	5560169	40	Washer 5/8 hard flat ASTM-F436
7	0070021	1	Rotation bearing gear
8	0070553	1	Lubrication tube, 1/4 inch copper tube
9	5560204	18	Capscrew 5/8-11 self locking
	5560205	2	Capscrew 5/8-11 self locking
10	0070772	1	1/4 inch hydraulic hose
11	5570001	1	Grease fitting, 1/8 NPT straight



Chassis/turntable mounting



AWM00284

**Drive, rear**

item	part no	qty	description
1	0180961	2	Gear hub - (see page 1-74 for parts breakdown)
2	6030035	1	Hydraulic drive motor, rear right hand - (see page 2-76 for parts breakdown)
3	7200018	2	Hydraulic drive motor brake - (before 8-10-98)
	0181257	1	Seal repair kit
	7200024	2	Hydraulic drive motor brake - (after 8-10-98)
	0153065	1	Lining repair kit
	0153066	1	O-ring repair kit
	0153067	1	Bearing repair kit
4	5035303	4	Straight thread 90° elbow
5	5035307	4	Straight thread 90° elbow
6	5037007	4	Swivel nut 90° elbow
7	5035305	2	Straight thread 90° elbow
8	5036705	1	Swivel nut run tee
9	5037005	1	Swivel nut 90° elbow
10	6030042	1	Hydraulic drive motor, rear left hand - (see page 2-76 for parts breakdown)
11	0070224	2	Access cover, drive
12	7110155	4	O-ring
13	5560208	4	Capscrew 1/2-13 x 5-1/2 inch long hex head grade 5 - (for 7200018 brake)
	5560343	4	Capscrew 1/2-13 x 5 inch long hex head grade 8 - (for 7200024 brake)
14	5560168	4	Washer 1/2 hard flat ASTM-F436
15	5569895	16	Capscrew 5/8-11 x 3-1/4 inch long hex head grade 5
16	5560169	16	Washer 5/8 hard flat ASTM-F436
17	5560131	16	Nut 5/8-11 self locking
18	5075203	2	Hex head plug
19	970449	8	Capscrew 3/8-16 x 3/4 inch long hex head grade 5



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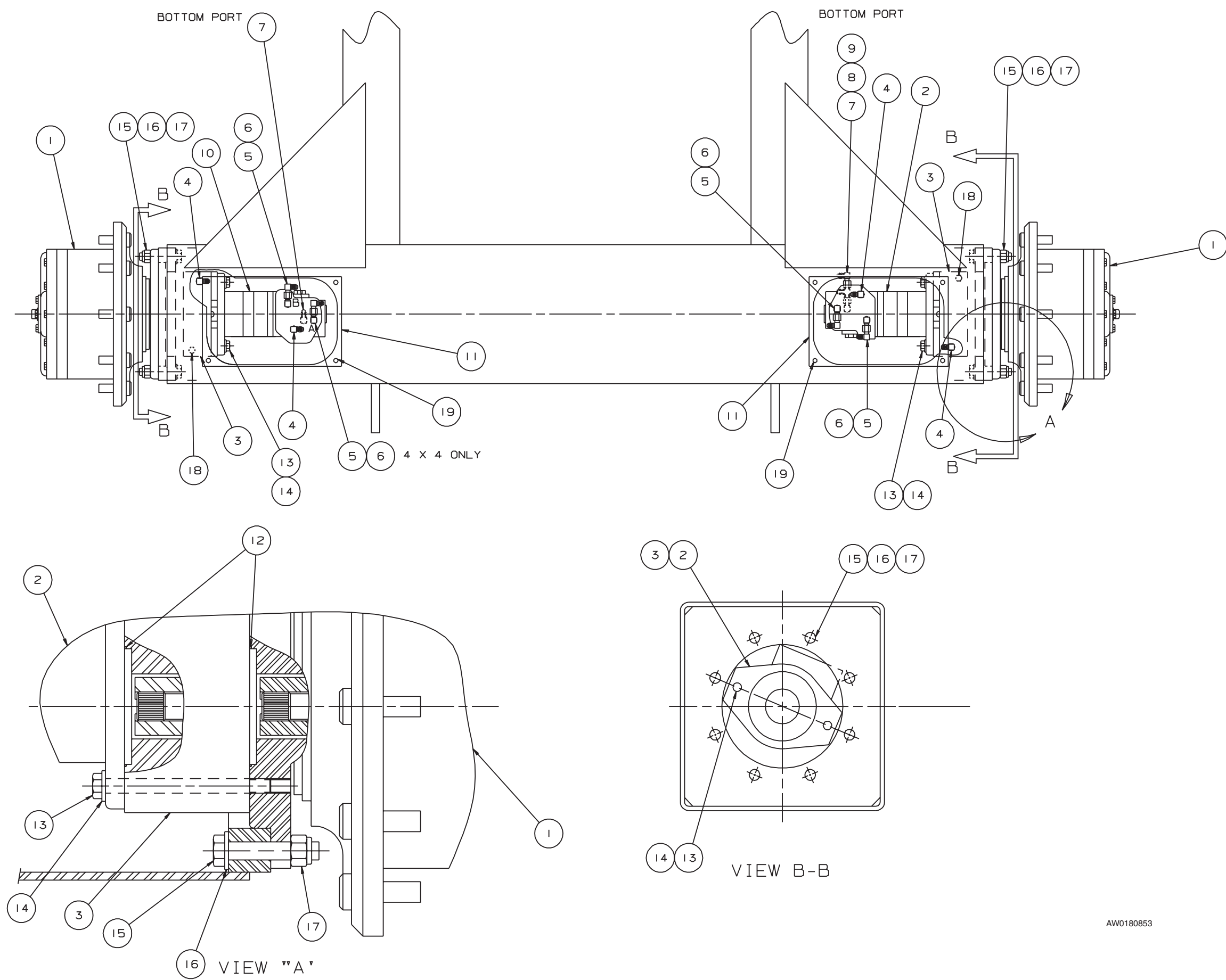
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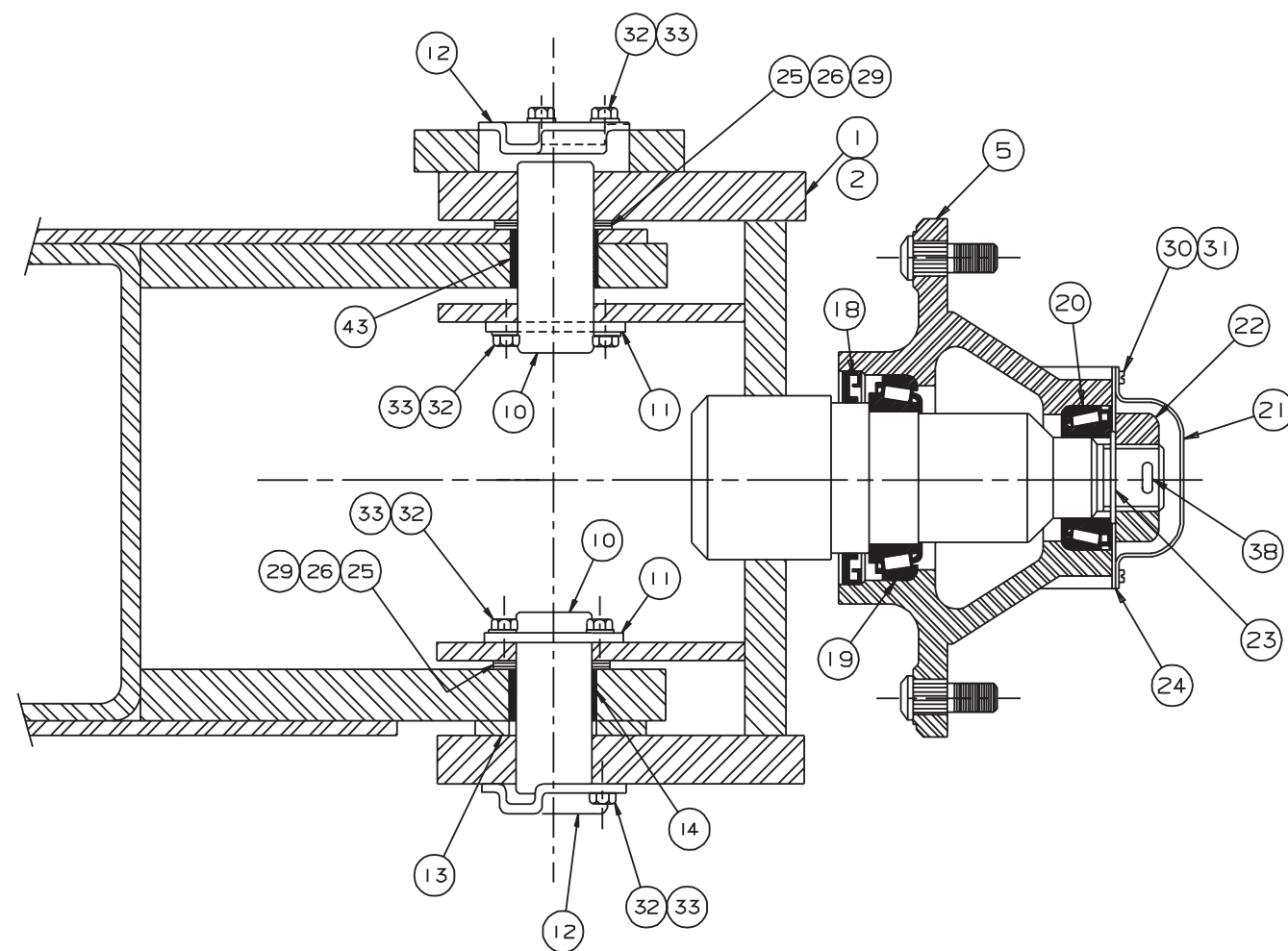
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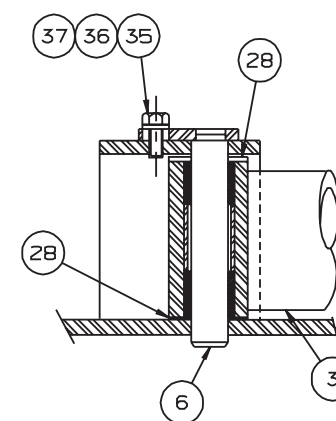
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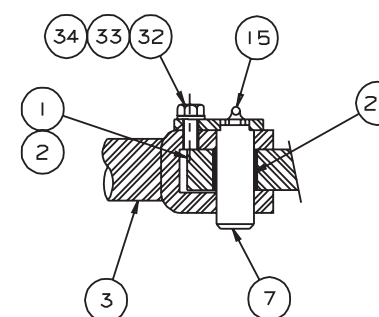
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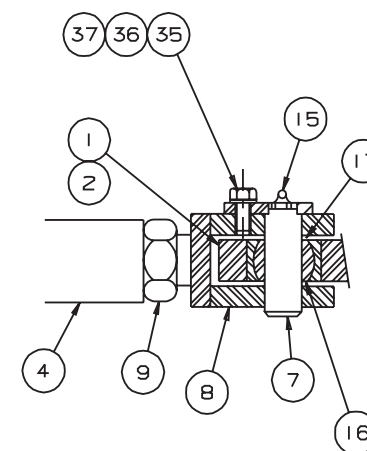
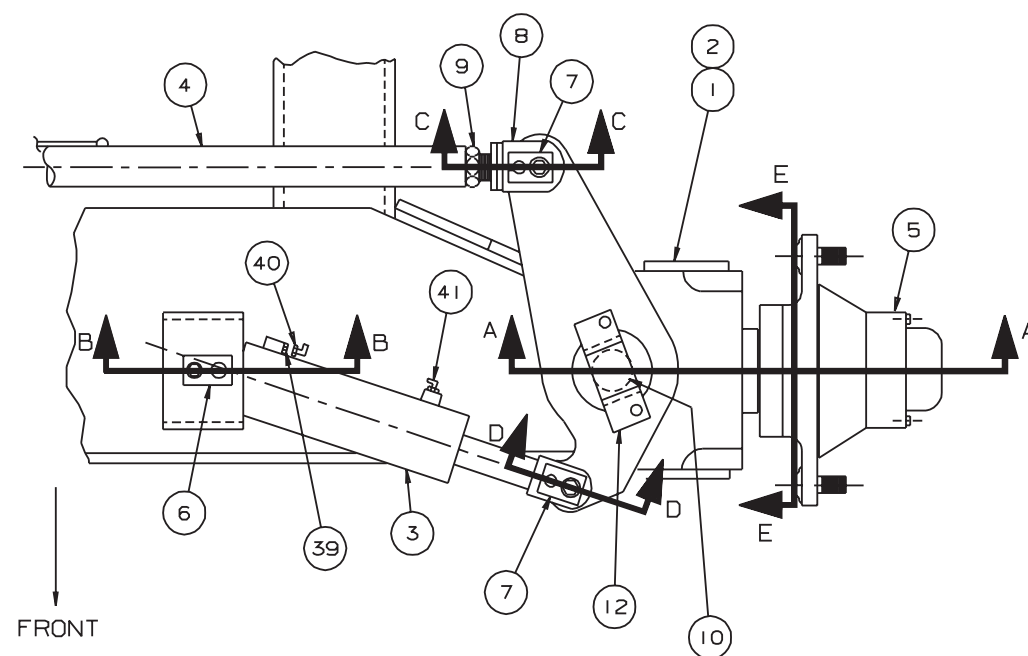
SECTION A-A



SECTION B-B



SECTION D-D



SECTION C-C

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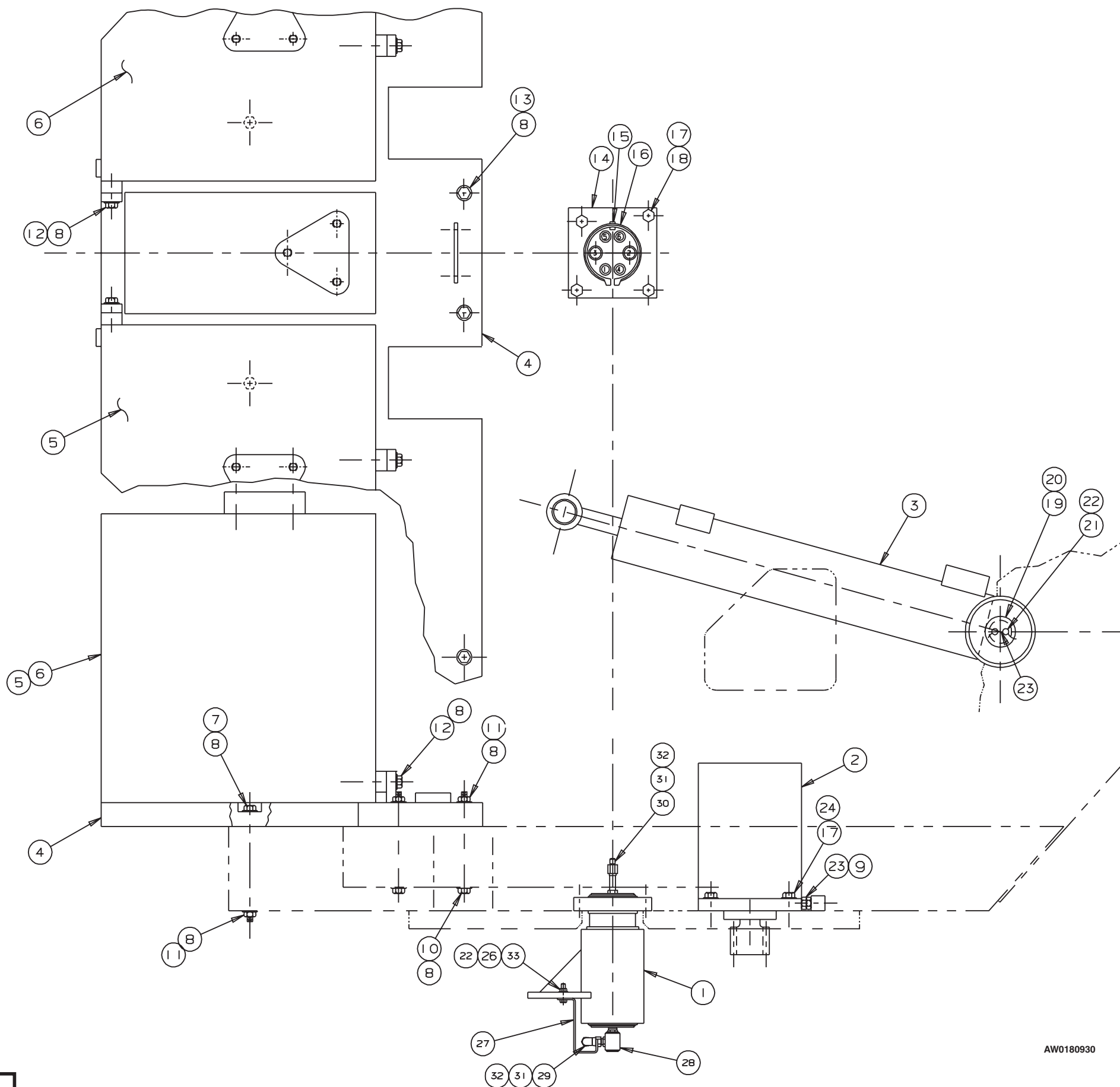
**Steering, 2 wheel drive**

item	part no	qty	description
1	0180917	1	Steering yoke, right hand
2	0180918	1	Steering yoke, left hand
3		1	Cylinder, steering
		1	(see page 2-62 for GBI cylinder)
		1	(see page 2-63 for Green cylinder)
		1	(see page 2-64 for Prince cylinder)
		1	(see page 2-65 for Rosenboom cylinder)
		1	(see page 2-66 for Ward cylinder)
4	0180699	1	Tie rod
5	0081023	1	Hub, complete
	0080181	1	Hub
	7280024	8	Replacement wheel bolt
	2540005	1	Inner bearing cup
	2540006	1	Outer bearing cup
6	0180704	2	Pin
7	0110320	4	Lock pin
8	0180702	1	Tie rod end
9	5560202	1	Tie rod hex jam nut for adjustable tie rod
10	0180679	4	Pin
11	0180678	4	Retainer
12	0180680	4	Pin guard
13	2580001	2	Thrust bearing
14	2500040	4	Bearing
15	5570001	1	Grease fitting, 1/8 NPT straight
16	2690001	2	Bearing, self aligning
17	0080348	2	Spacer, tie rod mounting
18	7150003	2	Grease seal
19	2560006	2	Inner bearing cone
20	2560005	2	Outer bearing cone
21	0080186	2	Hub cap
22	5560026	2	Spindle nut
23	5560025	2	Key washer
24	0080185	2	Gasket, hub cap
25	25560089	8	Shim, .031 inch thick
26	5560091	8	Shim, .015 inch thick
27	2501616	2	Bearing
28	5560713	6	Machine bushing 2 inch OD x 1 inch ID x 14 gauge thick
29	5560660	4	Machine bushing 3 inch OD x 2 inch ID x 14 gauge thick
30	970009	8	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
31	987099	8	Washer 1/4 medium lock
32	970449	18	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
33	987119	18	Washer 3/8 medium lock
34	986299	2	Washer 3/8 medium flat
35	970219	4	Capscrew 5/16-18 x 1/2 inch long hex head grade 5
36	987109	4	Washer 5/16 medium lock
37	986269	4	Washer 5/16 medium flat
38	5560661	2	Cotter pin 3/8 inch diameter x 2-1/2 inch long
39	5065707	2	Straight thread adapter
40	5037005	2	Swivel nut 90° elbow
41	5035305	2	Straight thread 90° elbow

**Steering, 4 wheel drive**

item	part no	qty	description
1	0180963	1	Steering yoke, right hand
2	0180962	1	Steering yoke, left hand
3		1	Cylinder, steering
		1	(see page 2-62 for GBI cylinder)
		1	(see page 2-63 for Green cylinder)
		1	(see page 2-64 for Prince cylinder)
		1	(see page 2-65 for Rosenboom cylinder)
		1	(see page 2-66 for Ward cylinder)
4	0180699	1	Tie rod
5	0180961	2	Gear hub - (see page 1-74 for parts breakdown)
6	0180704	2	Pin
7	0110320	4	Lock pin
8	0180702	1	Tie rod end
9	5560202	1	Tie rod hex jam nut for adjustable tie rod
10	0180679	4	Pin
11	0180678	4	Retainer
12	0180680	4	Pin guard
13	2580001	2	Thrust bearing
14	5037006	2	Swivel nut 90° elbow
15	5570001	4	Grease fitting, 1/8 NPT straight
16	2690001	1	Bearing, self aligning
17	0080348	2	Spacer, tie rod mounting
18	6030034	2	Hydraulic drive motor, 4 wheel drive - (see page 2-74 for parts breakdown)
19	7110155	2	O-ring
20	5560131	16	Nut 5/8-11 self locking
21	5560078	4	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 8
22	5560168	4	Washer 1/2 hard flat ASTM-F436
23	5560169	16	Washer 5/8 hard flat ASTM-F436
24	5569896	16	Capscrew 5/8-11 x 2-3/4 inch long hex head grade 5
25	25560089	8	Shim, .031 inch thick
26	5560091	8	Shim, .015 inch thick
27	2501616	2	Bearing
28	5560713	6	Machine bushing 2 inch OD x 1 inch ID x 14 gauge thick
29	5560660	4	Machine bushing 3 inch OD x 2 inch ID x 14 gauge thick
30	5560090	8	Shim, .006 inch thick
31	5035303	2	Straight thread 90° elbow
32	970449	18	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
33	987119	18	Washer 3/8 medium lock
34	986299	2	Washer 3/8 medium flat
35	970219	4	Capscrew 5/16-18 x 1/2 inch long hex head grade 5
36	987109	4	Washer 5/16 medium lock
37	986269	4	Washer 5/16 medium flat
38	5035316	4	Straight thread 90° elbow
39	5065707	2	Straight thread adapter
40	5037005	2	Swivel nut 90° elbow
41	5036905	4	Swivel nut 45° elbow
42	5035305	4	Straight thread 90° elbow
43	2500040	4	Bearing
44	5036906	2	Swivel nut 45° elbow





AW0180930



TITLE Lift and swing

**Lift and swing**

item	part no	qty	description
1	0180935	1	Centerpost and fittings - (see page 2-35 for parts breakdown)
2	0073026	1	Swing drive - (see page 1-12 for parts breakdown)
3	0180936	1	Riser boom lift cylinder - (see page 2-53 for parts breakdown)
4	0180485	1	Lower counterweight - (before 3-24-97)
	0181699	1	Lower counterweight - (after 3-24-97)
5	0180495	1	Counterweight, upper left hand
6	0180494	1	Counterweight, upper right hand
7	5560211	2	Capscrew 3/4-10 x 10 inch long hex head grade 8
8	5560170	20	Washer 3/4 hard flat ASTM-F436
9	984449	4	Nut 5/8-11 hex jam
10	5560210	6	Capscrew 3/4-10 x 8-1/2 inch long hex head grade 8
11	5560193	6	Nut 3/4-10 high strength
12	5560209	2	Capscrew 3/4-10 x 1-3/4 inch long hex head grade 8
13	5560676	2	Capscrew 3/4-10 x 3-1/2 inch long hex head grade 8
14	0070256	1	Adapter plate, centerpost
15	0070472	2	Key
16	5590003	8	Retaining ring
17	5560051	4	Capscrew 5/8-11 self locking
18	987159	1	Washer 5/8 medium lock
19	0090866	1	Pin
20	0070132	2	Pin lock
21	0070473	3	Capscrew 5/16-18 drilled head
22	987109	1	Washer 5/16 medium lock
23	9980012	4	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
24	5560169	6	Washer 5/8 hard flat ASTM-F436
25	5560022	6	Adjustment bolt
26	970269	1	Capscrew 5/16-18 x 1-1/4 inch long hex head grade 5
27	0111084	1	Bracket, centerpost port #7
28	5020001	1	Elbow, special swivel
29	5037005	1	Swivel nut 90° elbow
30	5065805	1	Long straight thread adapter
31	5064001	1	Tube end reducer
32	5063905	1	Fitting nut
33	5560031	1	Nut 5/16-18 self locking

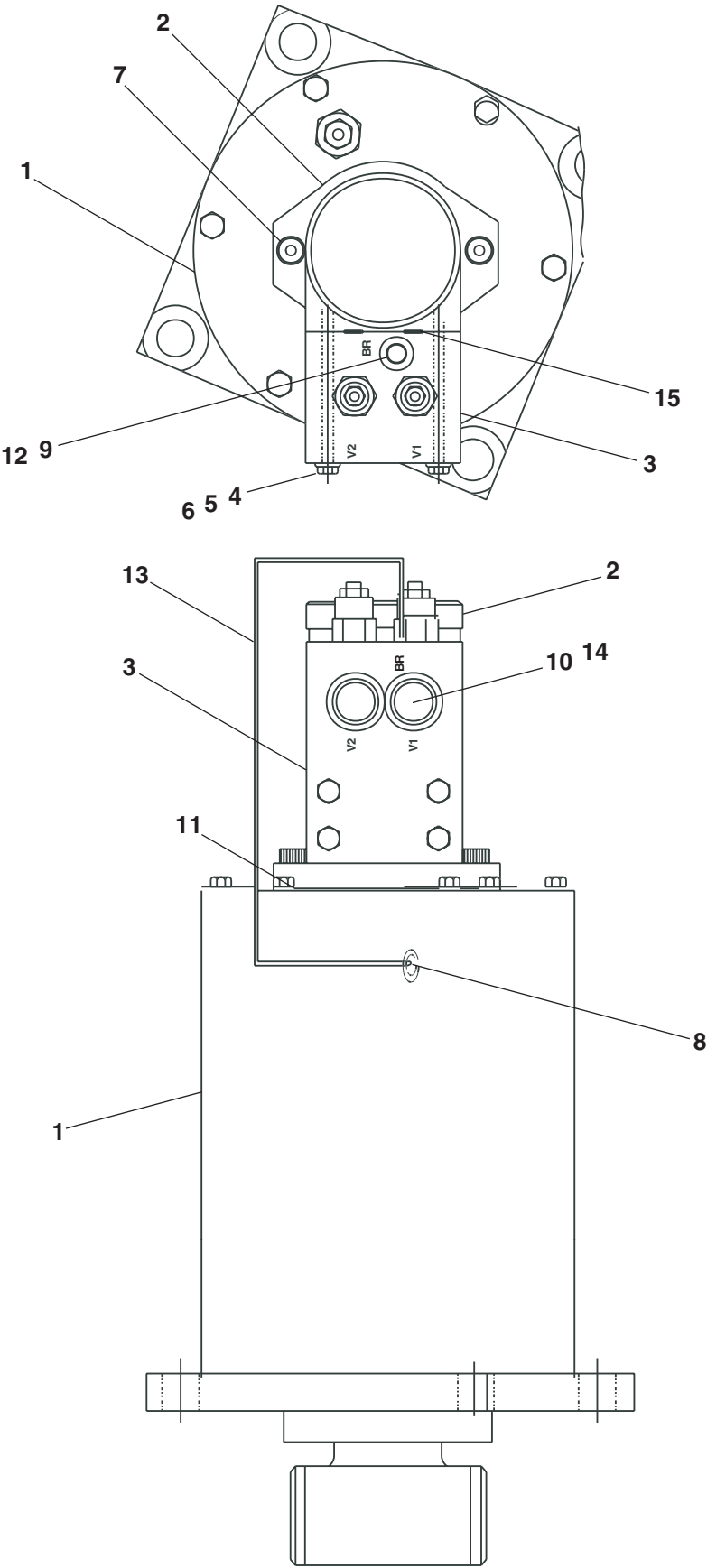


Swing drive

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 1-82 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 2-82 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



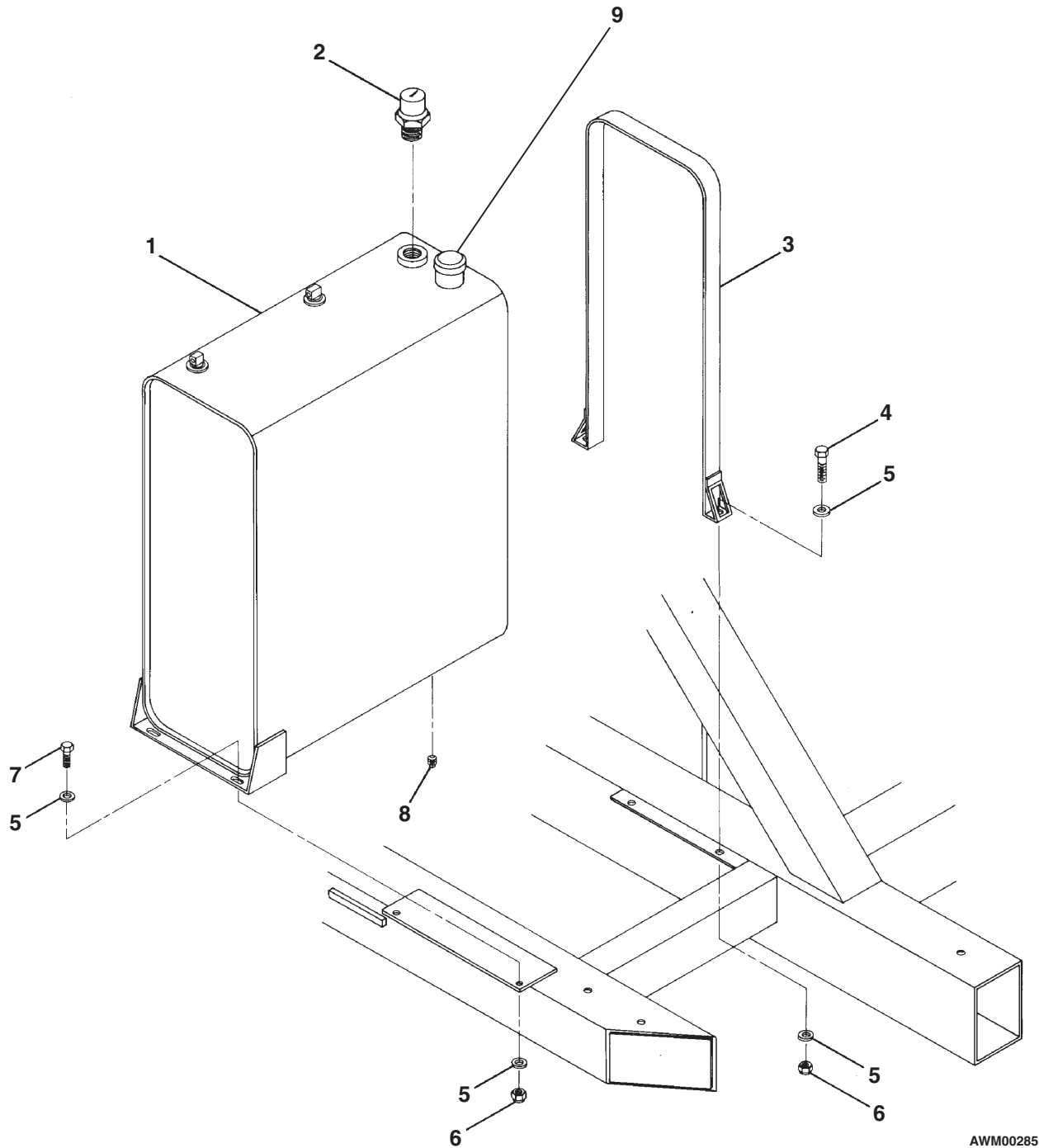
Swing drive





Fuel tank

item	part no	qty	description
1	0180440	1	Fuel tank, 40 gallon capacity
2	0180520	1	Fuel gauge
3	0180519	1	Fuel tank strap
4	970519	2	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
5	986299	8	Washer 3/8 medium flat
6	5560033	6	Nut 3/8-16 self locking
7	970419	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
8	7714202	1	Pipe plug 1/4 NPT square head
9	9940001	1	Fuel tank cap

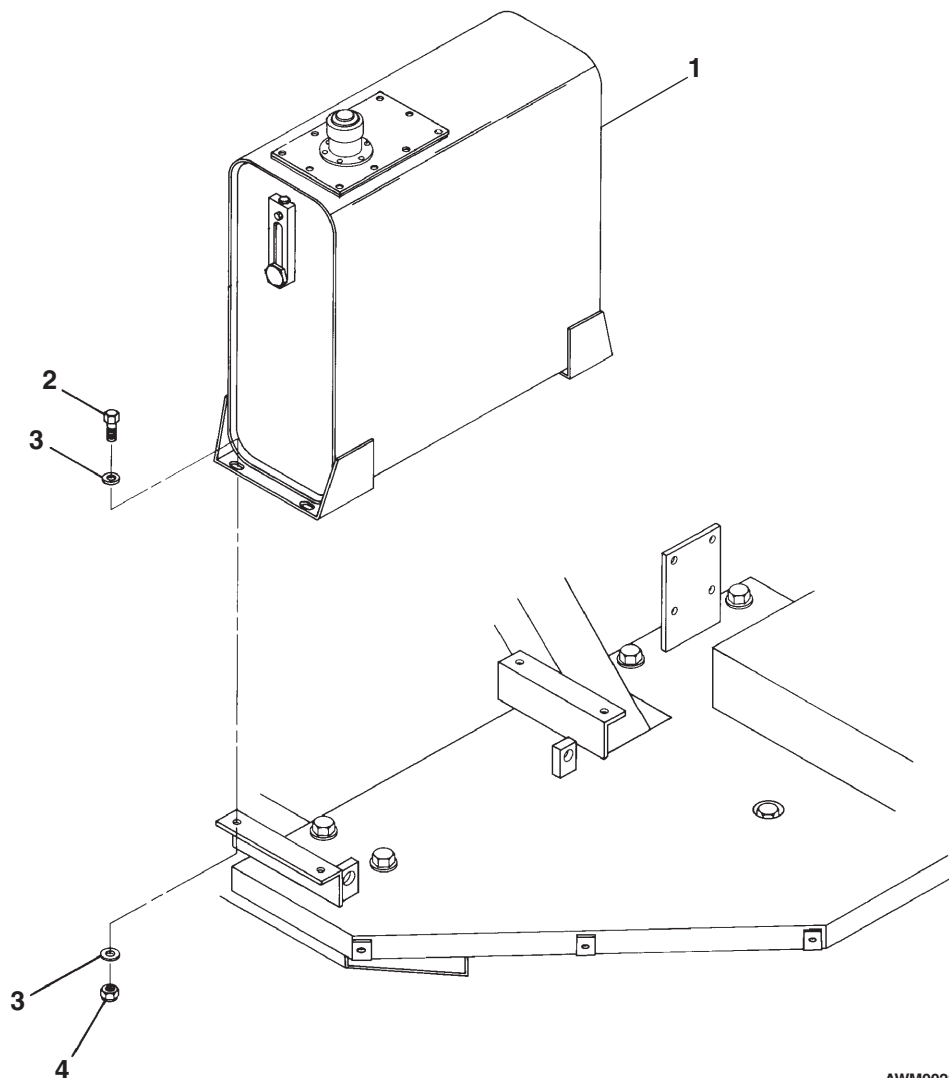


AWM00285



Hydraulic oil reservoir mounting

item	part no	qty	description
1	0180517	1	Hydraulic oil reservoir - (see page 2-79 for parts breakdown)
2	970419	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
3	986299	8	Washer 3/8 medium flat
4	5560033	4	Nut 3/8-16 self locking



AWM00286

**Riser boom and turret**

item	part no	qty	description
1	0180677	1	Riser boom
2	0180549	1	Turret
3	0180685	2	Follower arm
4	0180913	1	Main boom lift cylinder (see page 2-44 for cylinder before 12-26-2000) (see page 2-45 for cylinder after 12-26-2000)
5	0180914	1	Master level cylinder - (see page 2-49 for parts breakdown)
6	0180911	3	Clamp
7	0180880	4	5/16 inch hydraulic hose
8	0180882	2	1/2 inch hydraulic hose
9	0180881	1	3/8 inch hydraulic hose
10	0180879	2	3/16 inch hydraulic hose
11	0180628	2	Pin
12	0180626	1	Pin
13	0180616	1	Pin
14	0180624	1	Pin
15	0180629	1	Pin
16	0180630	1	Pin
17	0180620	1	Pin
18	5560039	5	Nut 1/2-13 self locking
19	0110235	3	Pin lock
20	0070132	2	Pin lock
21	0080023	1	Pin lock
22	0150179	2	Pin lock
23	2500042	4	Bearing
24	2500043	4	Bearing
25	0180767	2	Bearing spacer
26	5569898	6	Machine bushing 4 inch OD x 2-3/4 inch ID x 14 gauge thick
27	0110681	6	Capscrew 5/8-11 drilled head
28	987159	6	Washer 5/8 medium lock
29	5569897	9	Capscrew 5/16-18 x 2-1/4 inch long hex head grade 5
30	987109	15	Washer 5/16 medium lock
31	0070473	6	Capscrew 5/16-18 drilled head
32	5560138	2	Capscrew 1/2-13 x 1 inch long hex head self locking
33	5093014	3	Clamp
34	0070769	2	1/4 inch hydraulic hose
35	0070639	2	Slide pad
36	0180922	2	Brace
37	0180599	2	Retainer bar
38	5560215	4	Capscrew 3/8-16 x 3/4 inch long drilled head
39	987119	6	Washer 3/8 medium lock
40	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
41	5560679	10	Capscrew 3/8-16 x 5/8 inch long socket flat head
42	970929	4	Capscrew 1/2-13 x 2 inch long hex head grade 5
43	970949	1	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 5
44	5560168	10	Washer 1/2 hard flat ASTM-F436
45	986299	2	Washer 3/8 medium flat
46	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
47	970059	2	Capscrew 1/4-20 x 1-1/2 inch long hex head grade 5
48	986019	2	Washer 1/4 medium flat
49	5560004	2	Nut 1/4-20 self locking
50	5093012	1	Clamp

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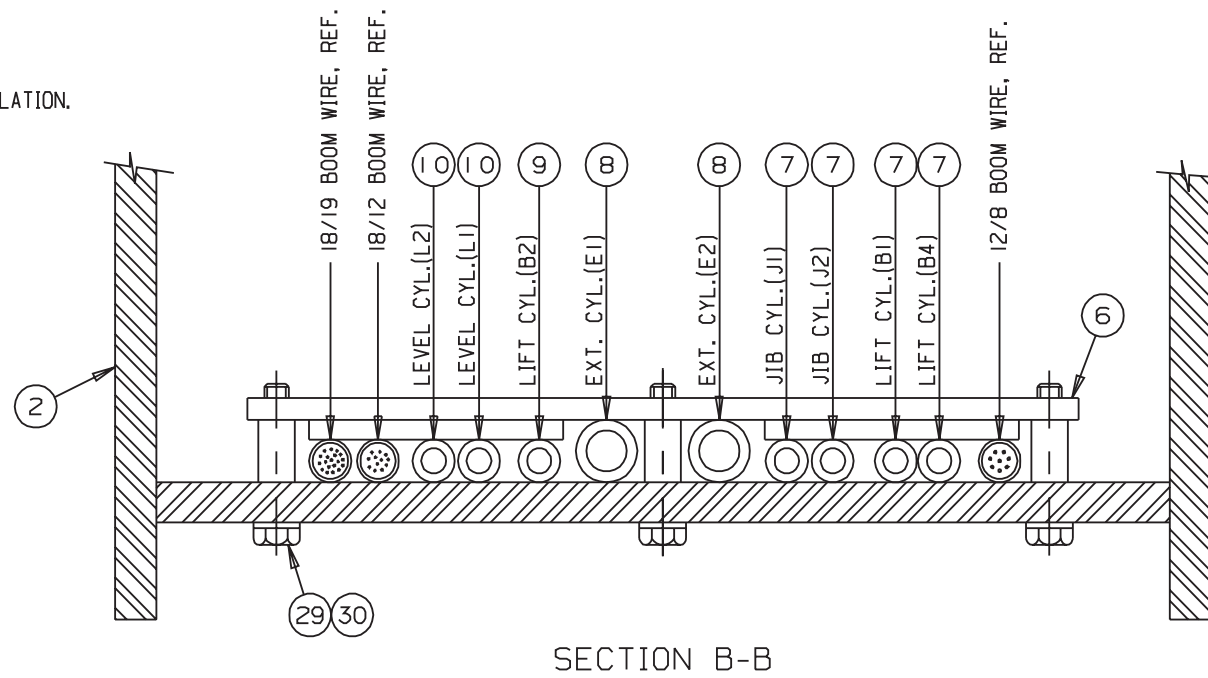
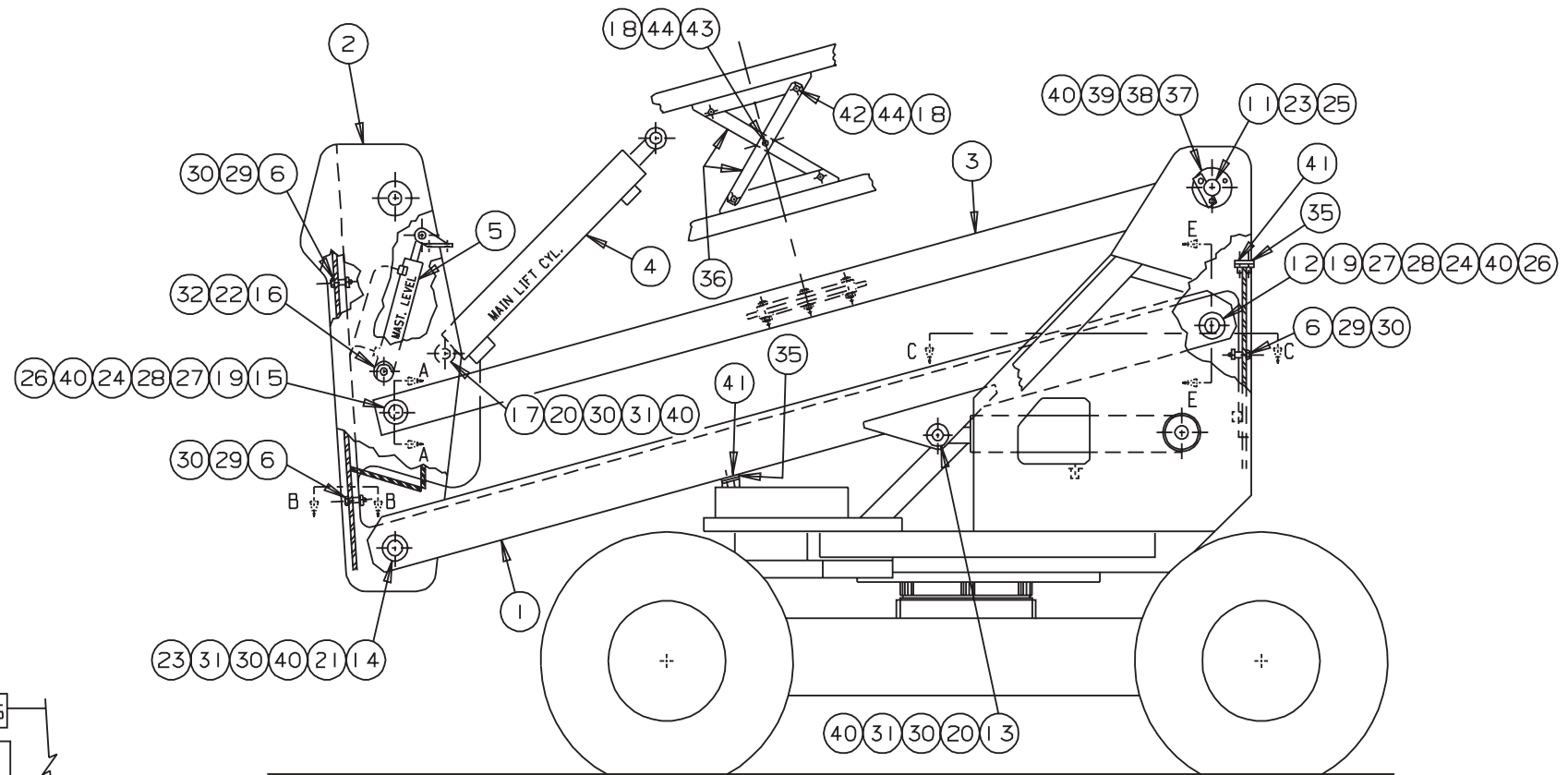
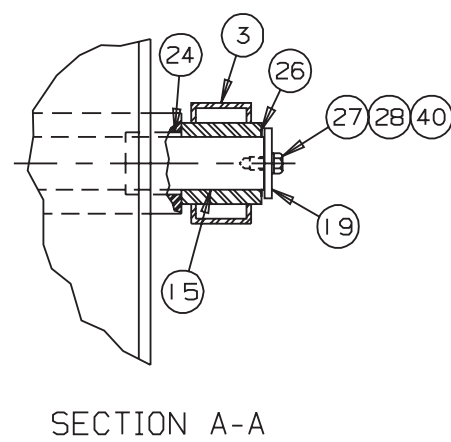
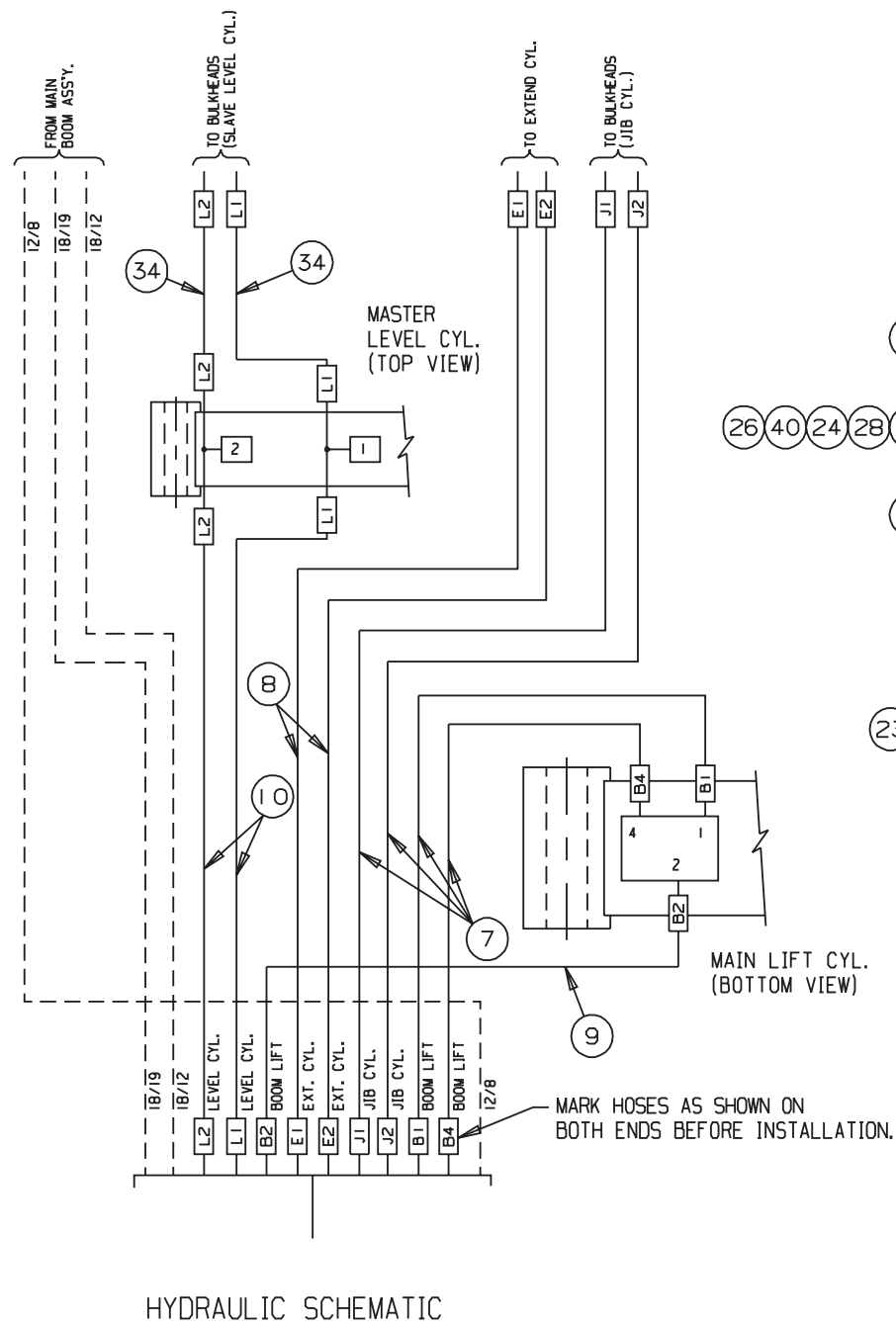
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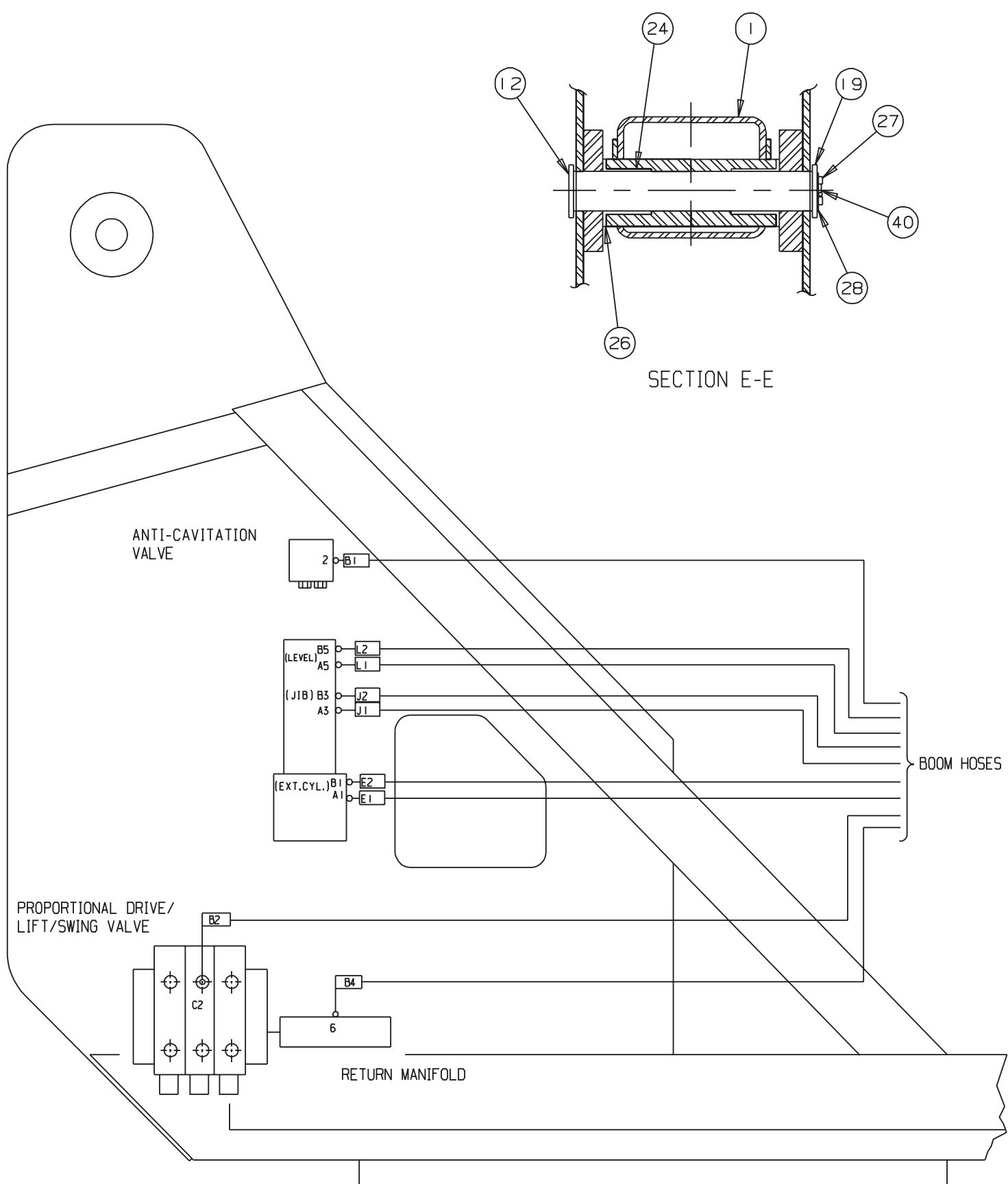
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sheet 1
Snorkel model ATB 60



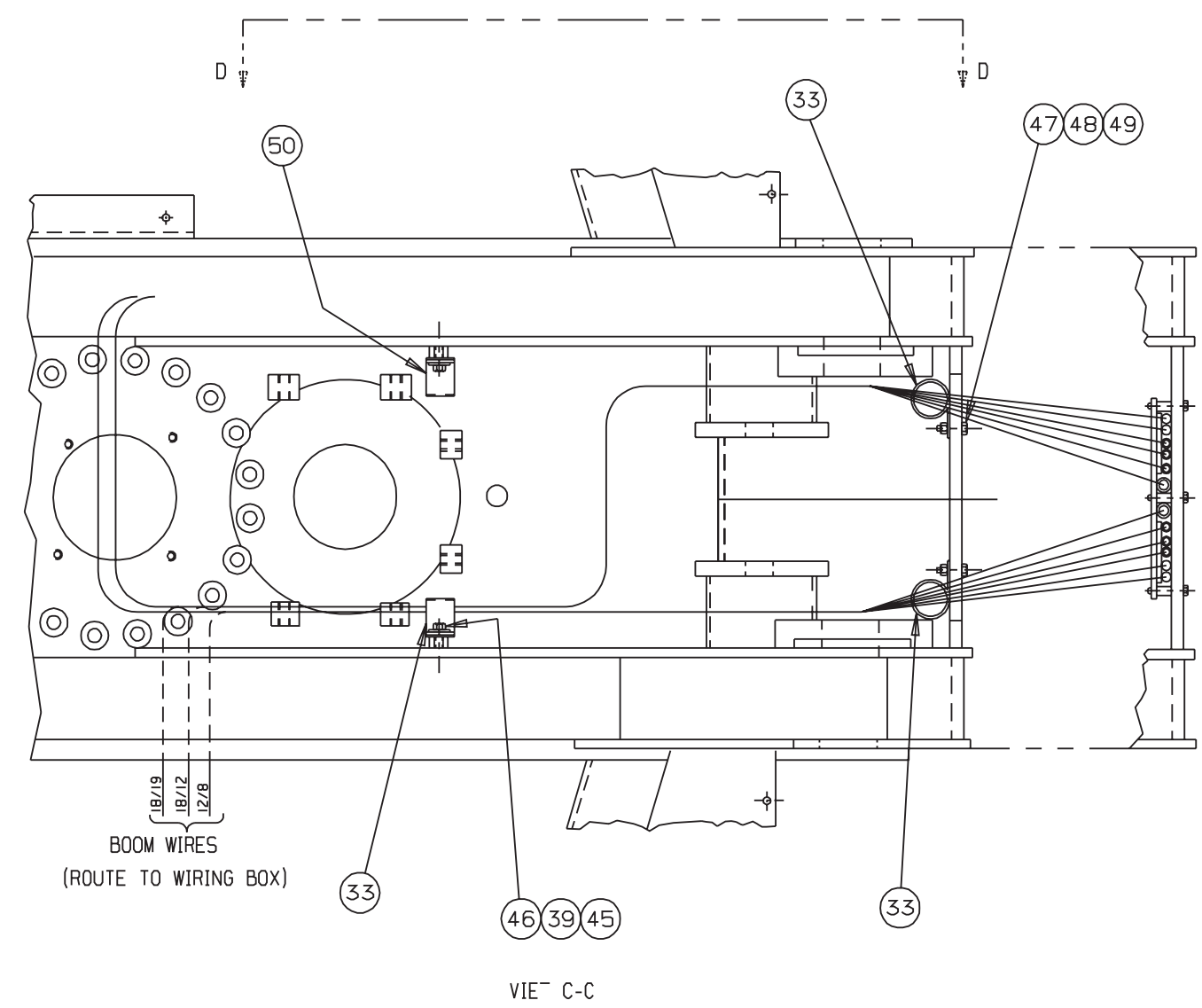
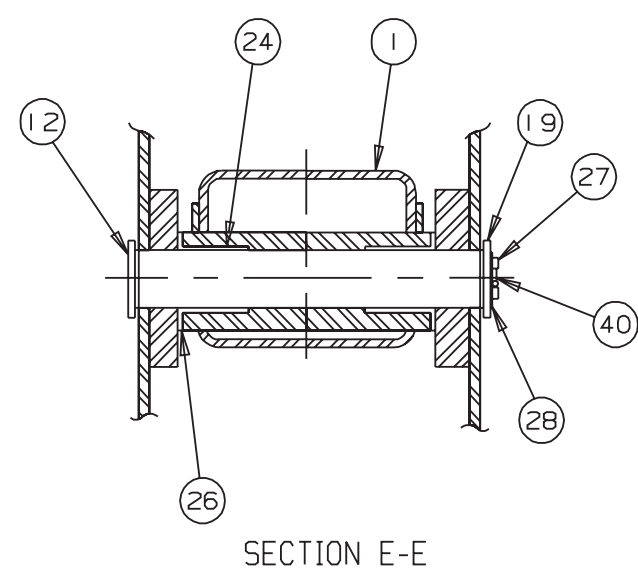
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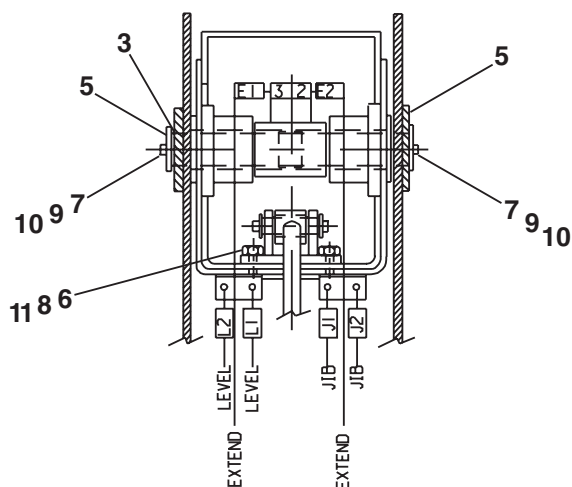
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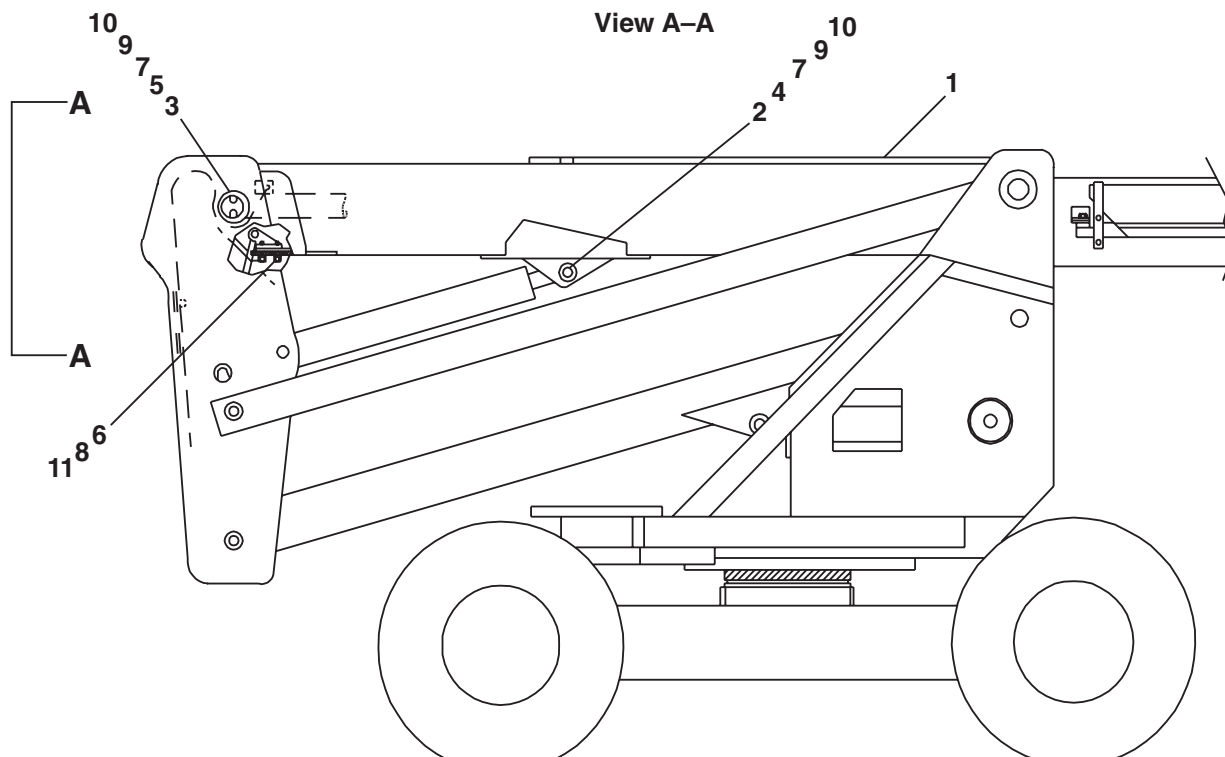


Booms mounting

item	part no	qty	description
1		1	Boom and jib boom - (see page 1-20 for parts breakdown)
2	0180618	1	Pin
3	0181450	1	Pin
4	0070132	1	Pin lock
5	0080023	2	Pin lock
6	5560039	4	Nut 1/2-13 self locking
7	0070473	6	Capscrew 5/16-18 drilled head
8	5560249	4	Capscrew 1/2-13 x 2-1/2 inch long hex head grade 8
9	987109	6	Washer 5/16 medium lock
10	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
11	5560168	4	Washer 1/2 hard flat ASTM-F436



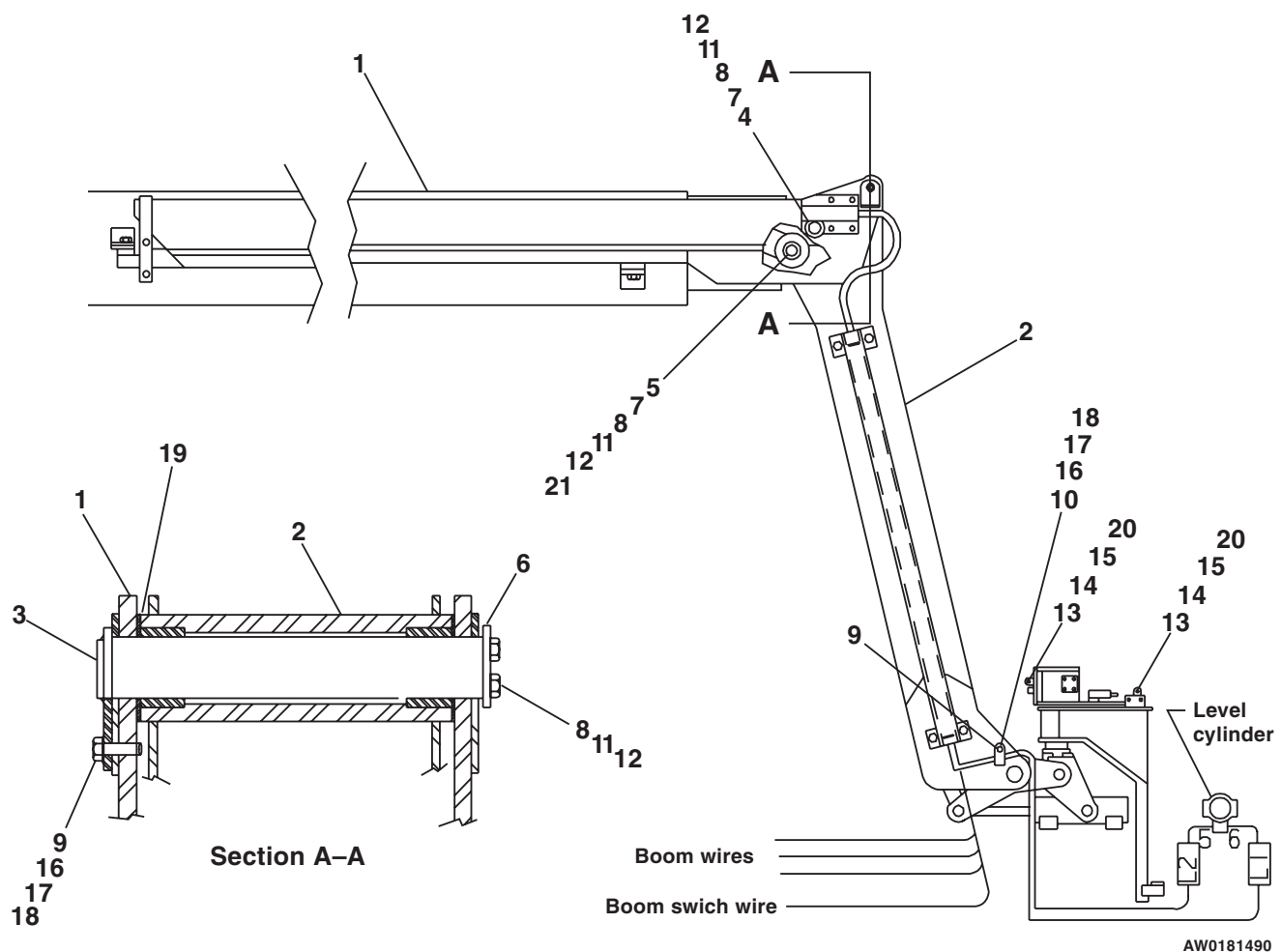
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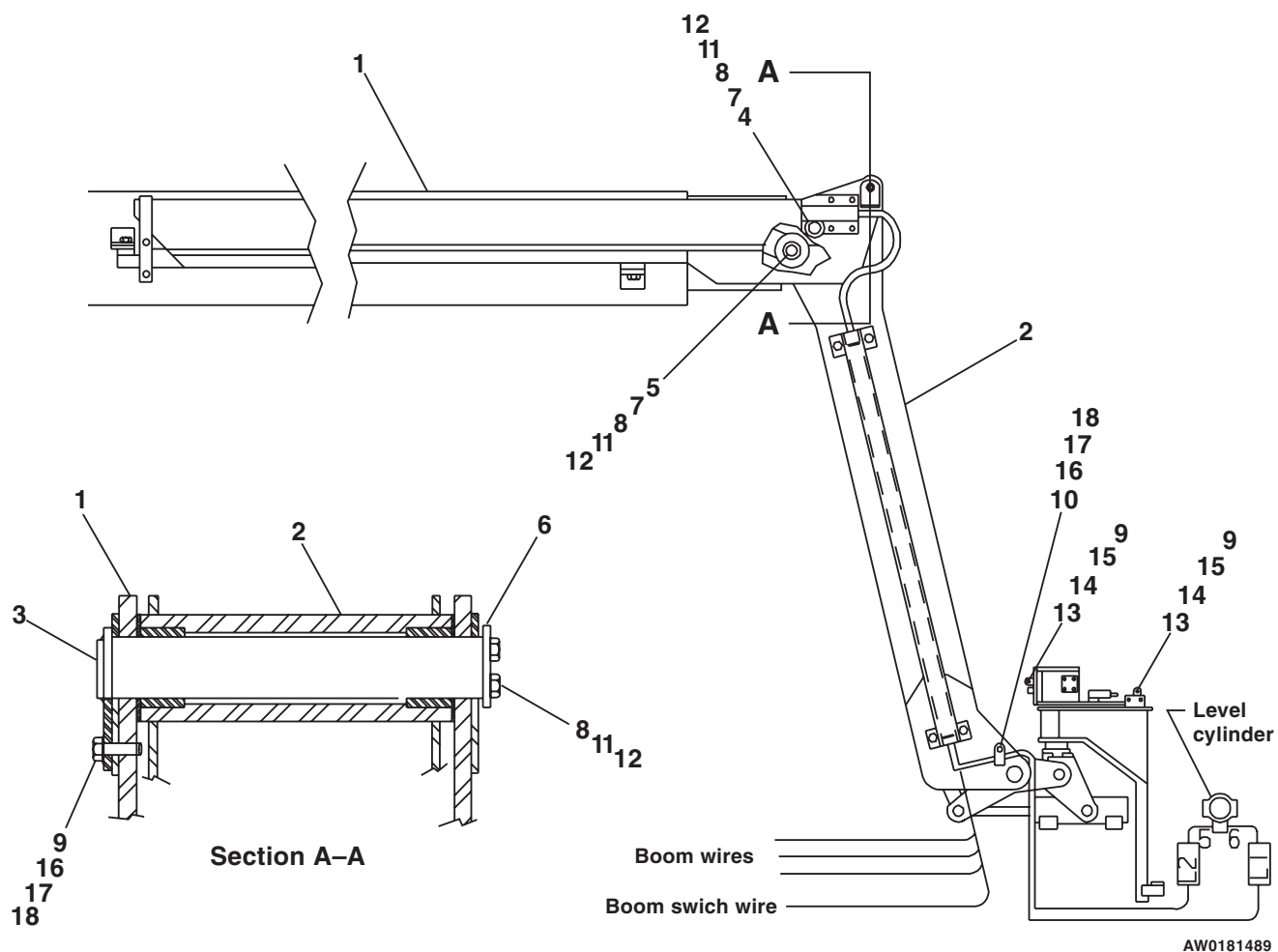
**Boom and jib boom, aluminum booms**

item	part no	qty	description
	0181490	1	Boom and jib boom, aluminum booms
1	0181220	1	Boom and hose carrier, aluminum booms - (see page 1-23 for parts breakdown)
2	0181221	1	Jib boom, aluminum booms - (see page 1-30 for parts breakdown)
3	0181264	1	Pin
4	0150685	1	Pin
5	0180612	1	Pin
6	0070132	1	Pin lock
7	0070033	2	Pin lock
8	0070473	6	Capscrew 5/16-18 drilled head
9	5560015	2	Thread insert 3/8-16
10	5093004	1	Clamp
11	987109	6	Washer 5/16 medium lock
12	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
13	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
14	987099	2	Washer 1/4 medium lock
15	986019	2	Washer 1/4 medium flat
16	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
17	987119	2	Washer 3/8 medium lock
18	986299	2	Washer 3/8 medium flat
19	5569853	2	Machine bushing 3-1/4 inch OD x 1-3/4 inch ID x 14 gauge thick
20	5093009	2	Clamp
21	5560252	2	Machine bushing 2-1/4 inch OD x 1-1/4 inch ID x 14 gauge thick



**Boom and jib boom, steel booms**

item	part no	qty	description
	0181489	1	Boom and jib boom, steel booms
1	0180879	1	Boom and hose carrier, steel booms - (see page 1-23 for parts breakdown)
2	0180872	1	Jib boom, steel booms - (see page 1-30 for parts breakdown)
3	0180614	1	Pin
4	0180608	1	Pin
5	0180612	1	Pin
6	0070132	1	Pin lock
7	0070033	2	Pin lock
8	0070473	6	Capscrew 5/16-18 drilled head
9	5093009	2	Clamp
10	5093004	1	Clamp
11	987109	6	Washer 5/16 medium lock
12	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
13	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
14	987099	2	Washer 1/4 medium lock
15	986019	2	Washer 1/4 medium flat
16	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
17	987119	2	Washer 3/8 medium lock
18	986299	2	Washer 3/8 medium flat





**Boom and hose carrier**

item	part no	qty	description
	0180897	1	Boom and hose carrier, steel booms
	0181220		Boom and hose carrier, aluminum booms
1	0180642	1	Base boom
2	0180658	1	Tip boom, steel
	0181138	1	Tip boom, aluminum
3	0180900	1	Extension cylinder (see page 1-27 for cylinder before 12-1-2000) (see page 1-28 for cylinder after 12-1-2000)
4	0180901	1	Jib boom lift cylinder (see page 2-40 for cylinder before 10-23-2000) (see page 2-41 for cylinder after 10-23-2000)
5	0180874	1	Switch actuator angle
6	9920016	1	Mounting bracket
7	5560649	2	Machine screw #10-24 x 1 inch long truss head
8	986009	2	Washer #10 medium flat
9	5560034	2	Nut #10-24 self locking
10	0180716	1	Hose track end
11	0180763	1	Hose carrier - (see page 1-32 for parts breakdown)
12	0170045	1	Slide pad
13	5569900	1	Capscrew 1/2-13 x 6-1/2 inch long hex head grade 5
14	986359	6	Washer 1/2 medium flat
15	5560039	3	Nut 1/2-13 self locking
16	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
17	0080293	7	Slide pad
18	970489	12	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
19	986299	30	Washer 3/8 medium flat
20	5560033	20	Nut 3/8-16 self locking
21	0180610	1	Pin
22	0070033	2	Pin lock
23	0070473	4	Capscrew 5/16-18 drilled head
24	987109	6	Washer 5/16 medium lock
25	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
26	0070442	1	Pin, steel booms
	0180612	1	Pin, aluminum booms
27	0080294	4	Slide pad
28	0073340	4	Slide pad spacer, 1/4 inch thick
29	5560679	12	Capscrew 3/8-16 x 5/8 inch long socket flat head
30	970429	10	Capscrew 3/8-16 x 1/2 inch long hex head grade 5
31	987119	33	Washer 3/8 medium lock
32	0180924	1	Spacer tube, steel booms
	5569899	5	Machine bushing, 2-1/4 inch OD x 2 inch ID x 14 gauge thick, aluminum booms
33	0070485	2	Slide pad spacer. steel booms
	0070486	2	Slide pad spacer. aluminum booms
	0070486	2	Spacer
34	970449	17	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
35	0072691	1	Slide pad
36	0072689	1	Pad plate, steel booms
	0181180	1	Pad plate, aluminum booms
37	970469	6	Capscrew 3/8-16 x 1 inch long hex head grade 5
38	0150586	2	Spacer
39	0181177	1	Clamp bar
40	970259	2	Capscrew 5/16-18 x 1 inch long hex head grade 5
			Parts list continued on next page

**Boom and hose carrier**

item	part no	qty	description
41	5034502	3	Bulkhead straight thread 90° elbow
42	0073342	4	Slide pad shim, .063 inch thick
43	0180878	2	Bulkhead mount angle
44	5034403	4	Bulkhead union
45	0180833	4	3/8 inch hydraulic tube
46	5034203	1	Union 90° elbow
47	5063905	4	Fitting nut
48	5064001	4	Tube end reducer
49	5093000	10	Clamp
50	0180940	2	3/4 inch conduit tube
51	5093006	10	Clamp
52	0180947	2	3/8 inch hydraulic tube
53	5036905	6	Swivel nut 45° elbow
54	0020267	2	3/8 inch hydraulic hose
55	0180939	2	3/4 inch conduit tube
56	0110547	1	Conduit
57	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
58	5560004	6	Nut 1/4-20 self locking
59	986019	6	Washer 1/4 medium flat
60	970479	2	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
61	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
62	970489	4	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
63	5074403	6	Bulkhead locknut
64	0073343	4	Slide pad shim, .090 inch thick
65	0070043	4	Slide pad shim, .030 inch thick
66	0070030	7	Slide pad shim, .030 inch thick
67	0072567	7	Slide pad shim, .063 inch thick
68	0090141	7	Slide pad shim, .090 inch thick
69	984089	2	Nut 5/16-18 hex
70	972509	3	Capscrew 3/8-16 x 2 inch long socket flat head
71	2500041	2	Bearing
72	0181023	1	Cover
73	5560136	6	Capscrew 1/2-13 self locking drilled head
74	0110842	1	Slide pad
75	5560680	1	Capscrew 3/8-16 x 1-3/4 inch long socket flat head
76	5560015	1	Thread insert 3/8-16



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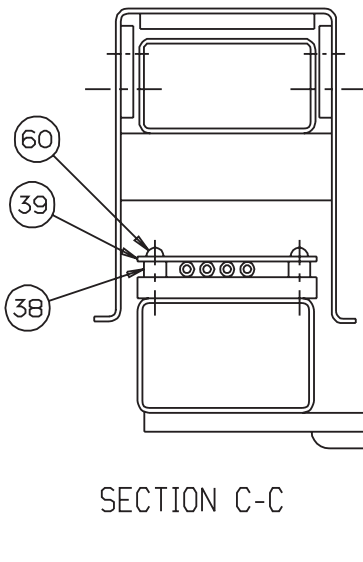
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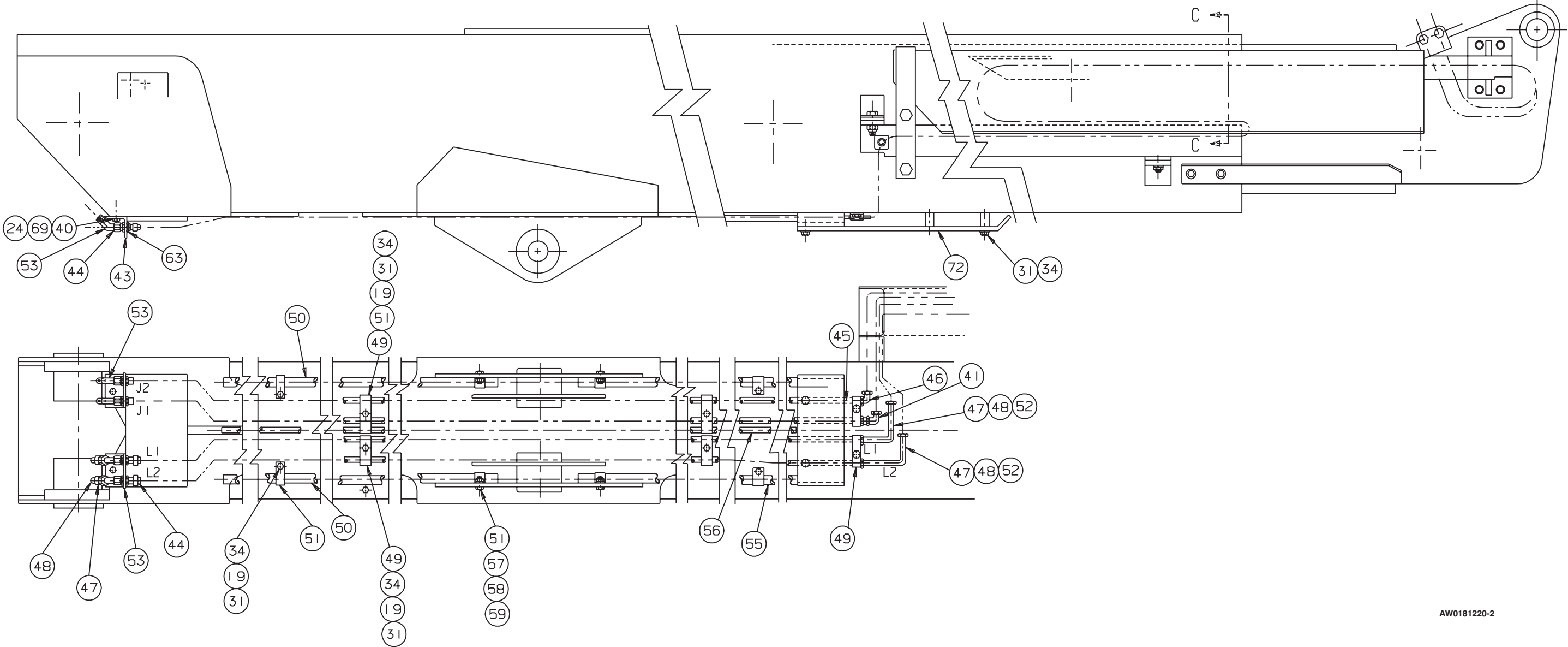
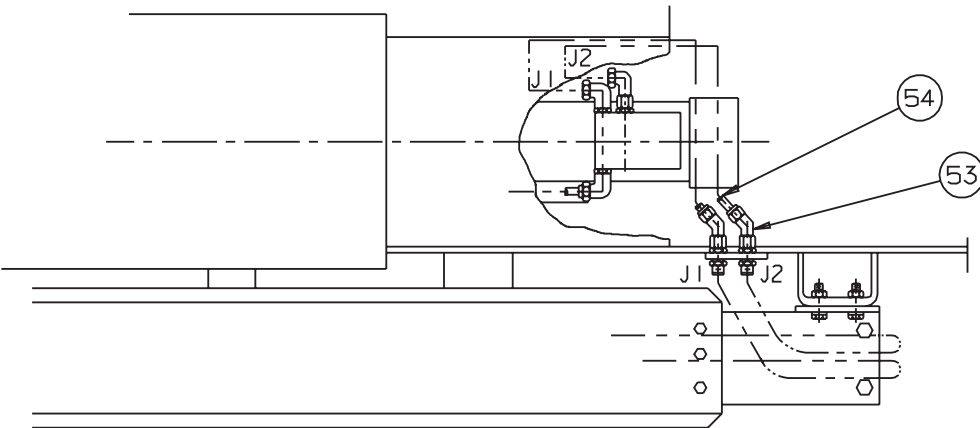
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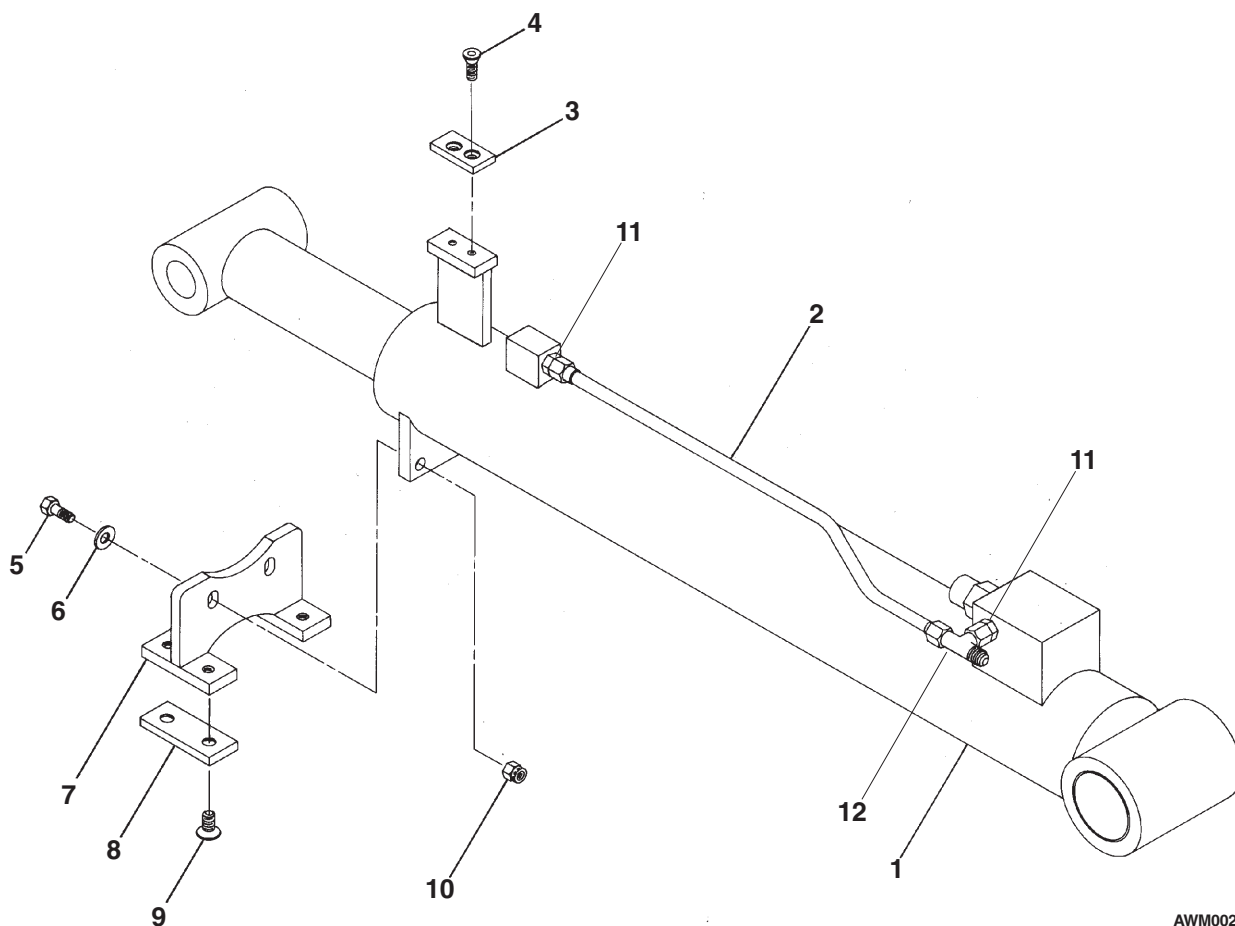
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Extension cylinder, before 12-01-2000

item	part no	qty	description
1	0180900	1	Extension cylinder
	0180523	1	Cylinder, extension (see page 2-37 for GBI cylinder) (see page 2-39 for Seabee cylinder)
2	0180795	1	1/2 inch hydraulic tube
3	0060089	1	Slide pad
4	5569901	2	Capscrew 1/4-20 x 5/8 inch long socket flat head
5	5560644	2	Capscrew 3/8-16 x 1-1/4 inch long socket flat head
6	986299	2	Washer 3/8 medium flat
7	0180525	1	Extension cylinder support
8	0070141	2	Slide pad
9	972449	4	Capscrew 3/8-16 x 3/4 inch long socket flat head
10	5560033	2	Nut 3/8-16 self locking
11	5065709	3	Straight thread adapter
12	5036806	1	Swivel nut branch tee

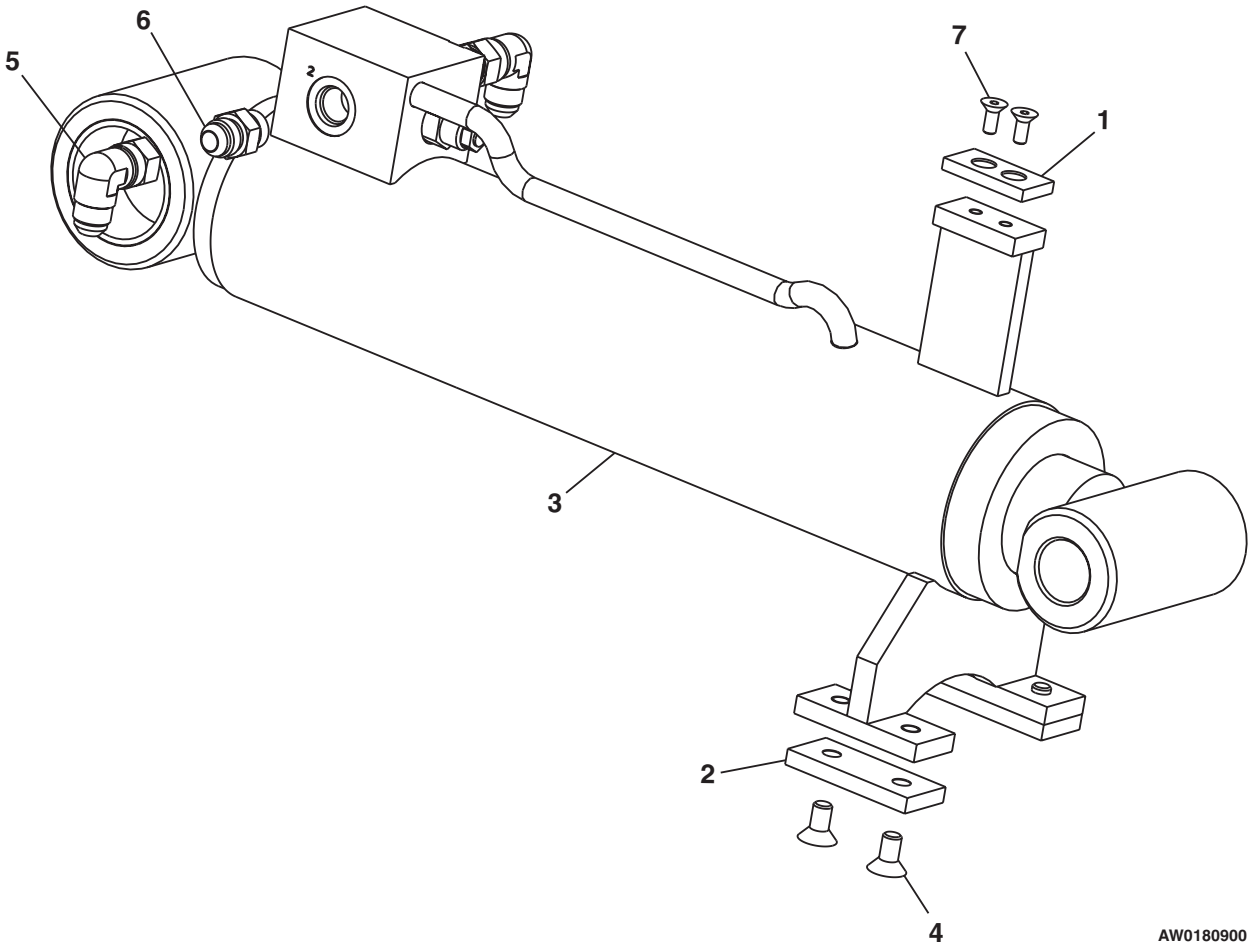


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Extension cylinder, after 12-01-2000

item	part no	qty	description
	0180900	1	Extension cylinder
1	0060089	1	Slide pad
2	0070141	2	Slide pad
3	0181912	1	Cylinder, extension - (see page 2-38 for parts breakdown)
4	972449	4	Capscrew 3/8-16 x 3/4 inch long socket flat head
5	5037006	2	Swivel nut 90° elbow
6	5065709	2	Straight thread adapter
7	5569901	2	Capscrew 1/4-20 x 5/8 inch long socket flat head



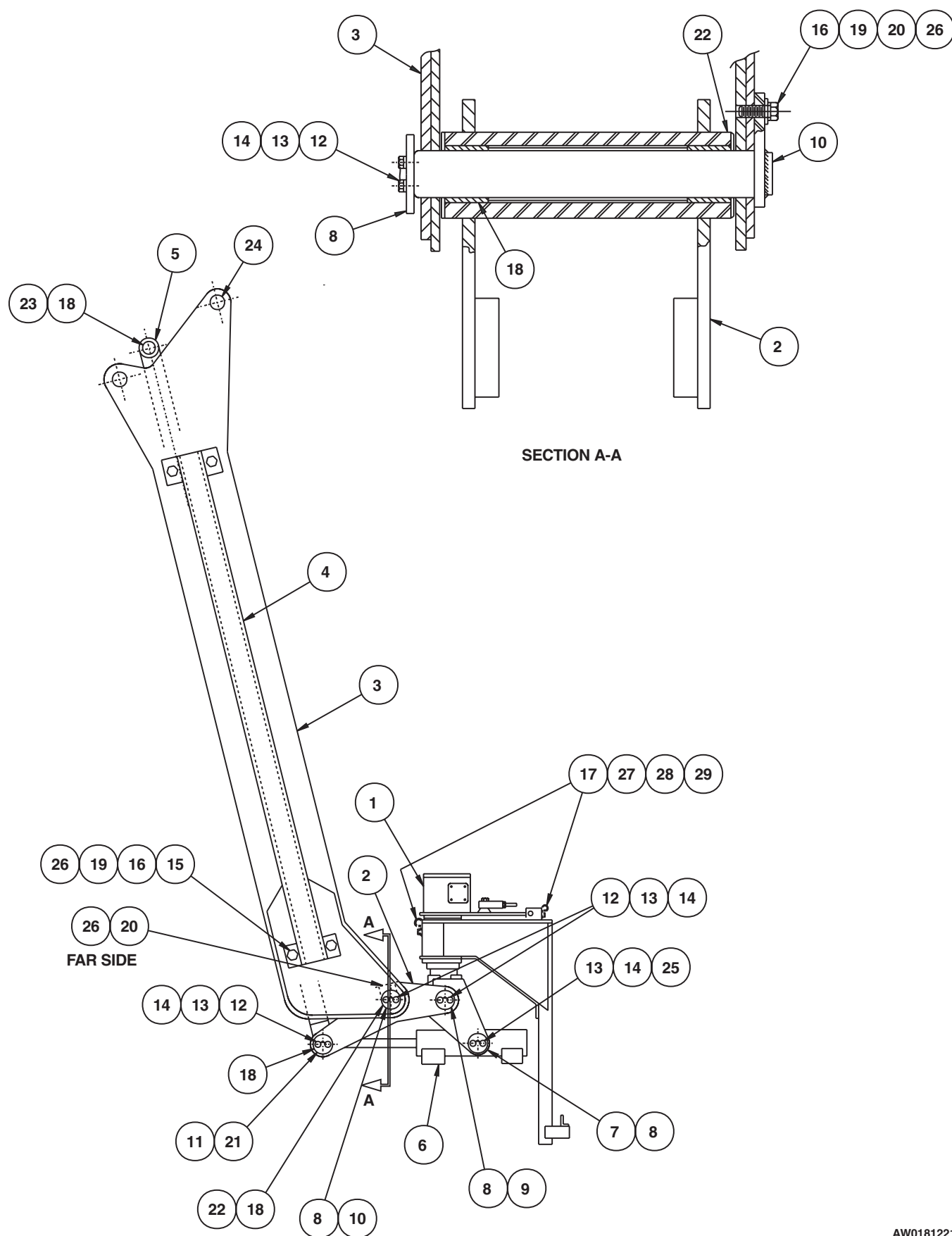
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**Jib boom**

item	part no	qty	description
	0180872	1	Jib boom, steel booms
	0181221	1	Jib boom, aluminum booms
1	0180873	1	Platform rotator - (see page 1-38 for parts breakdown)
2	0180596	1	Bell crank
3	0181126	1	Jib boom, aluminum booms
	0180695	1	Jib boom, steel booms
4	0191324	1	Hose carrier tube
5	0180640	1	Leveling link
6	0180906	1	Slave level cylinder - (see page 2-58 for parts breakdown)
7	0180521	2	Pin
8	0070033	4	Pin lock
9	0180597	1	Pin
10	0181263	1	Pin, aluminum booms
	0180604	1	Pin, steel booms
11	0180606	1	Pin
12	0070473	6	Capscrew 5/16-18 drilled head
13	987109	10	Washer 5/16 medium lock
14	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
15	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
16	986299	5	Washer 3/8 medium flat
17	986019	2	Washer 1/4 medium flat
18	2500035	4	Bearing
19	5560015	5	Thread insert 3/8-16
20	970449	1	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
21	0180635	1	Pin lock
22	5560252	1	Machine bushing 2-1/4 inch OD x 1-1/4 inch ID x 14 gauge thick
23	0180941	1	Spacer
24	2500039	1	Bushing
25	5560213	4	Capscrew 5/16-18 drilled head
26	987119	5	Washer 3/8 medium lock
27	987099	2	Washer 1/4 medium lock
28	5093027	2	Clamp
29	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5

Jib boom

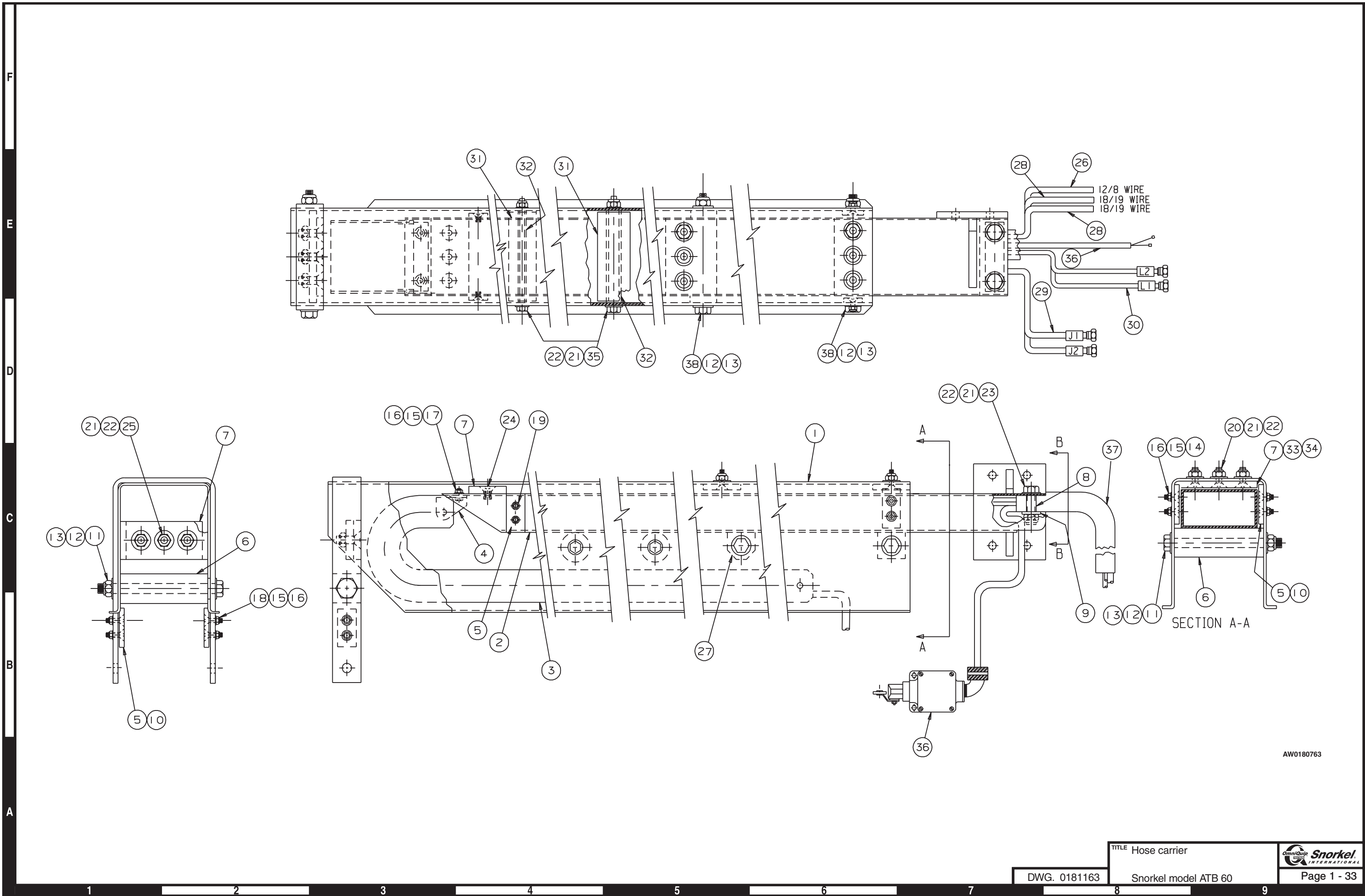


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Hose carrier

item	part no	qty	description
	0180763	1	Hose carrier
1	0180718	1	Cover
2	0180717	1	Tube
3	9920014	1	Plastic track link
4	9920015	1	Mounting bracket
5	0060089	6	Slide pad
6	0170045	2	Slide pad
7	0070029	4	Slide pad
8	0071510	2	Spacer, air cleaner
9	0180764	1	Clamp bar
10	0071342	8	Shim
11	5569900	1	Capscrew 1/2-13 x 6-1/2 inch long hex head grade 5
12	5560039	3	Nut 1/2-13 self locking
13	986359	8	Washer 1/2 medium flat
14	5560330	4	Capscrew 1/4-20 x 3/4 inch long socket flat head
15	5560004	10	Nut 1/4-20 self locking
16	986019	10	Washer 1/4 medium flat
17	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
18	5560331	4	Capscrew 1/4-20 x 1 inch long socket flat head
19	5560329	4	Capscrew 1/4-20 x 1/2 inch long socket flat head
20	972559	6	Capscrew 3/8-16 x 1 inch long socket flat head
21	5560033	13	Nut 3/8-16 self locking
22	986299	17	Washer 3/8 medium flat
23	970509	2	Capscrew 3/8-16 x 2 inch long hex head grade 5
24	5560679	3	Capscrew 3/8-16 x 5/8 inch long socket flat head
25	978409	3	Capscrew 3/8-16 x 1-1/2 inch long socket flat head
26	3010006	1	Power wire, 12 gauge/8 conductor x 87 feet long - (terminals not included)
	3044854	1	Replacement terminal
27	0181487	1	Slide pad, chamfered
28	3010005	2	Control wire #2, 18 gauge/19 conductor x 87 feet long - (terminals not included)
	3046972	1	Replacement terminal
29	0180765	2	5/16 inch hydraulic hose
30	0180766	2	3/16 inch hydraulic hose
31	0180848	2	Slide pad
32	0170044	2	Spacer
33	0071272	2	Slide pad shim, .063 inch thick
34	0070838	2	Slide pad shim, .030 inch thick
35	5560686	2	Capscrew 3/8-16 x 6 inch long hex head grade 5
36	0180923	1	Boom extend switch - (see page 3-57 for parts breakdown)
37	5090034	1	Hose guard x 36 inch long
38	488276	2	Capscrew 1/2-13 x 6 inch long hex head grade 5



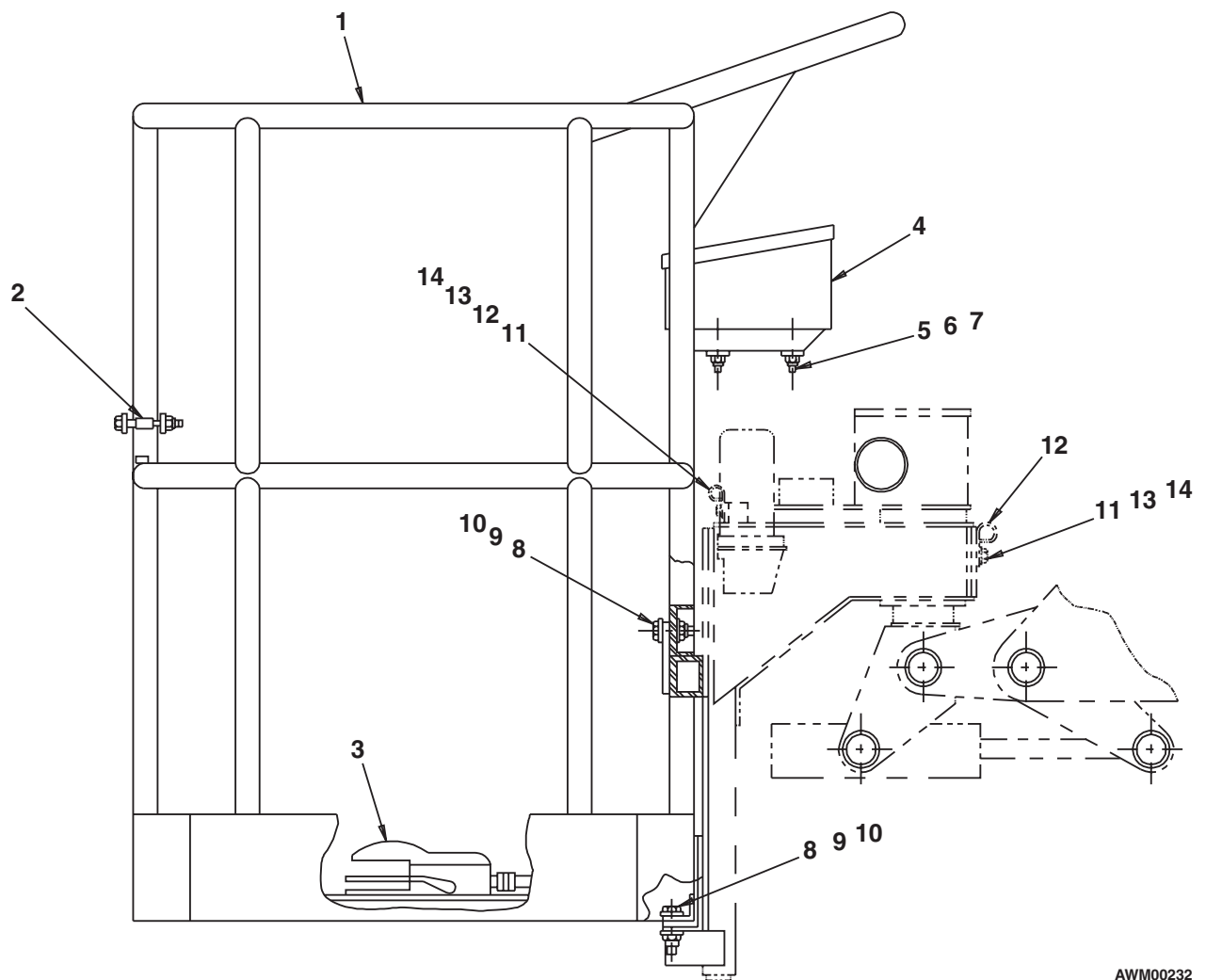


Platform mounting

item	part no	qty	description
1		1	Platform weldment - (consult factory)
2		1	Platform gate - (see page 1-36 for proper platform gate)
3	0071800	1	Platform foot switch - (see page 3-59 for parts breakdown)
4		1	Upper control box
	0181609	1	2 wheel drive- (see page 3-41 for parts breakdown)
	0181075	1	Hatz 2 wheel drive before 11-24-97 - (see page 3-45 for parts breakdown)
	0181610	1	4 wheel drive - (see page 3-49 for parts breakdown)
	0180849	1	Hatz 4 wheel drive before 11-24-97 - (see page 3-53 for parts breakdown)
5	970529	4	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
6	986299	8	Washer 3/8 medium flat
7	5560033	4	Nut 3/8-16 self locking
8	970909	4	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
9	986359	8	Washer 1/2 medium flat
10	5560039	4	Nut 1/2-13 self locking
11	987099	2	Washer 1/4 medium lock
12	5093027	2	Clamp
13	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
14	986019	2	Washer 1/4 medium flat



Platform mounting



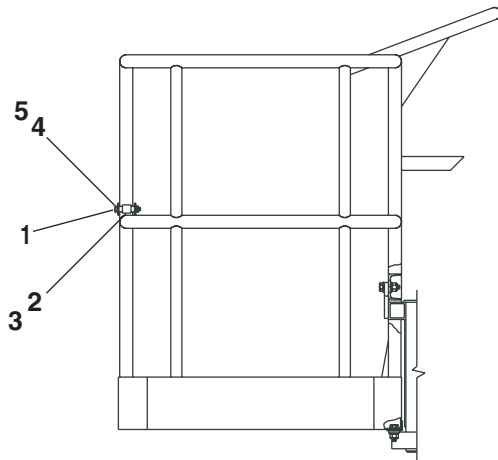
AWM00232

**Platform gate**

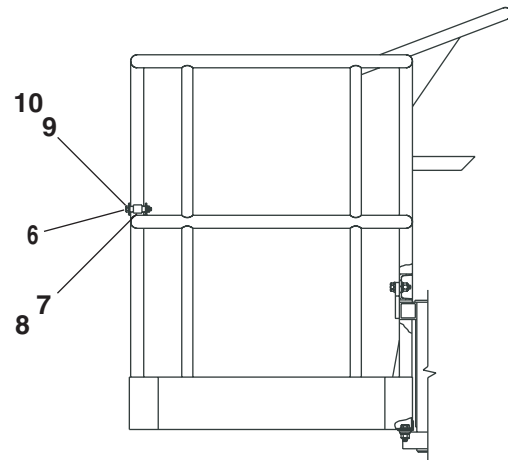
item	part no	qty	description
			Gravity gate for 5 ft and 8 ft steel platforms
1	0071951	1	Gravity gate, steel platform
2	0150509	2	Roller, steel gravity gate
3	0071953	2	Roller spacer, steel gravity gate
4	970529	2	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
5	5560033	2	Nut 3/8-16 self locking
			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 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 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



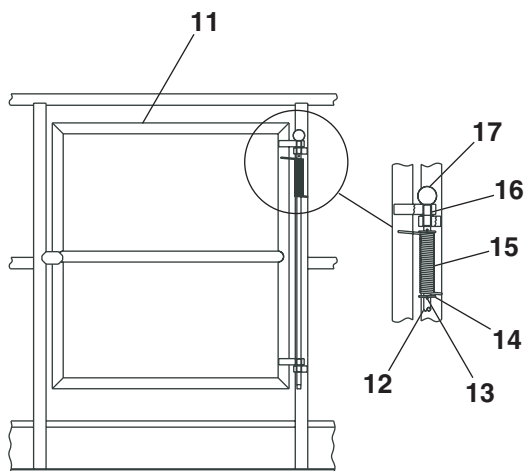
Platform gate



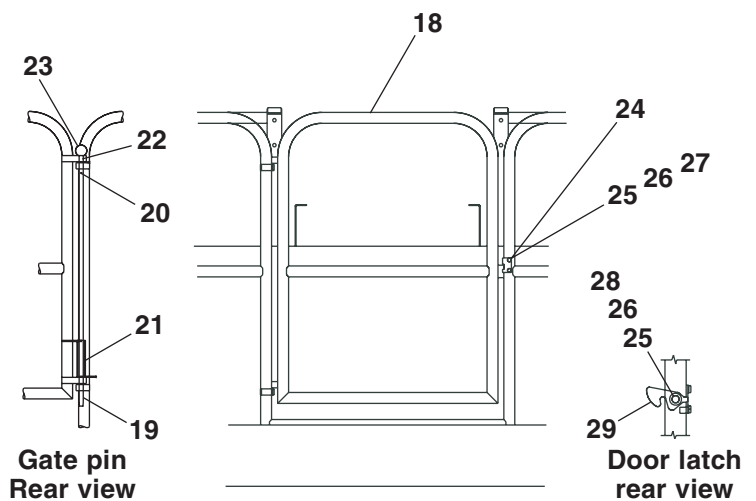
Gravity gate, steel platform



Gravity gate, aluminum platform



Swinging gate, steel platform



Swinging gate, aluminum platform

AWM00223

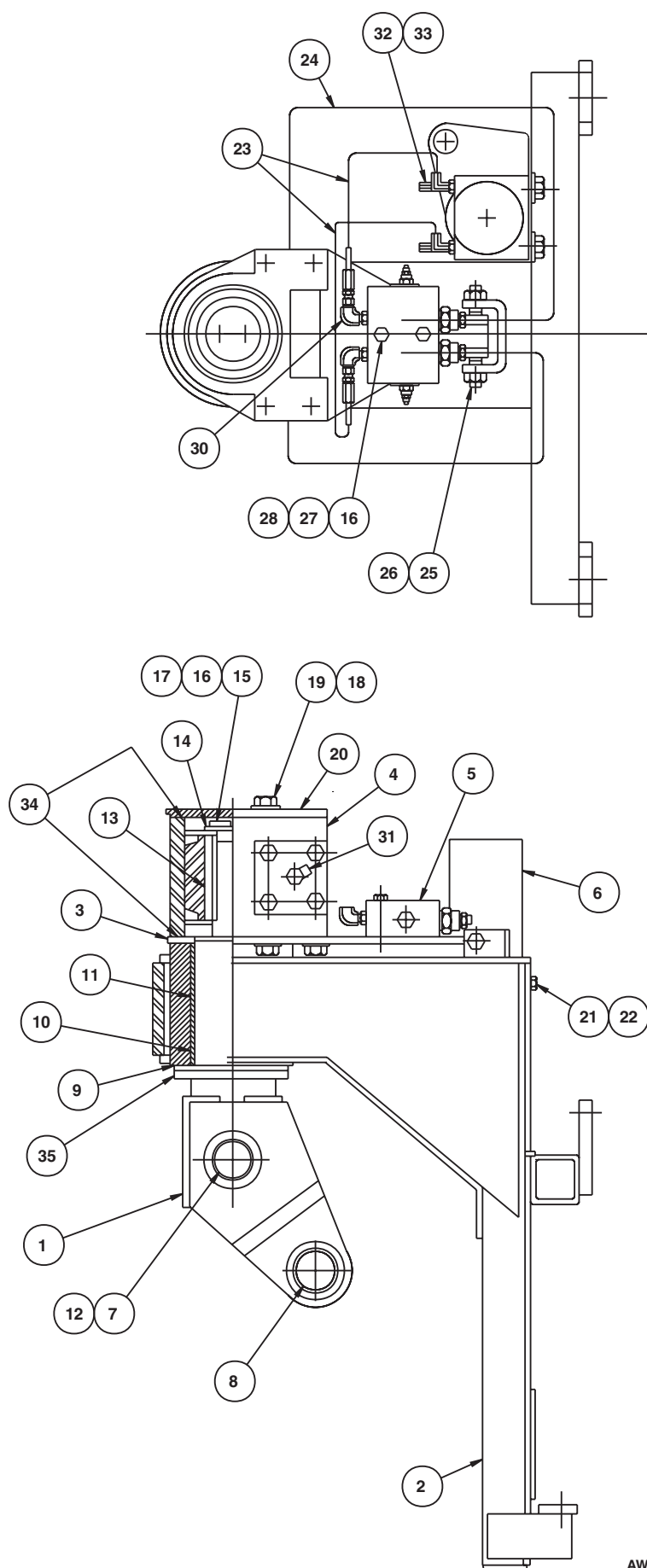


Platform rotator

item	part no	qty	description
	0180873	1	Platform rotator
1	0180516	1	Pylon
2	0180509	1	Rotator frame
3	0072818	1	Torque plate, platform rotator
4	0070570	1	Platform rotator, Helac - (see page 2-83 for parts breakdown)
	0110771	1	Platform rotator, Parker - (see page 2-84 for parts breakdown)
5	6010541	1	Dual crossover relief valve - (see page 2-67 for parts breakdown)
6	6029631	1	Hydraulic power unit
	6091504	1	Reservoir with cap
	8150066	1	Replacement motor
7	2502032	2	Bearing
8	2500038	2	Bearing
9	0072561	1	Thrust bearing
10	2504856	2	Bearing
11	0072562	1	Bearing spacer
12	0180768	1	Spacer
13	0070916	1	Key
14	0070132	1	Pin lock
15	0070473	2	Capscrew 5/16-18 drilled head
16	987109	4	Washer 5/16 medium lock
17	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
18	970889	6	Capscrew 1/2-13 x 1 inch long hex head grade 5
19	987139	6	Washer 1/2 medium lock
20	0072508	1	Cover plate, platform rotator
21	970449	2	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
22	987119	2	Washer 3/8 medium lock
23	0070908	2	1/4 inch hydraulic hose
24	0020283	2	1/4 inch hydraulic hose
25	5560217	2	Capscrew 1/2-13 x 1-3/4 inch long hex head grade 5
26	984409	2	Nut 1/2-13 hex jam drilled
27	970509	2	Capscrew 3/8-16 x 2 inch long hex head grade 5
28	986269	2	Washer 5/16 medium flat
29		1	Grease, Conoco Super Sta - (consult factory)
30	5035318	4	Straight thread 90° elbow
31	5035303	2	Straight thread 90° elbow
32	5036103	2	Straight thread run tee
33	5063701	2	Cap
34	7110157	1	O-ring - (used on Helac rotator only)
	7110348	1	O-ring - (used on Parker rotator only)
35	0072555	1	Collar



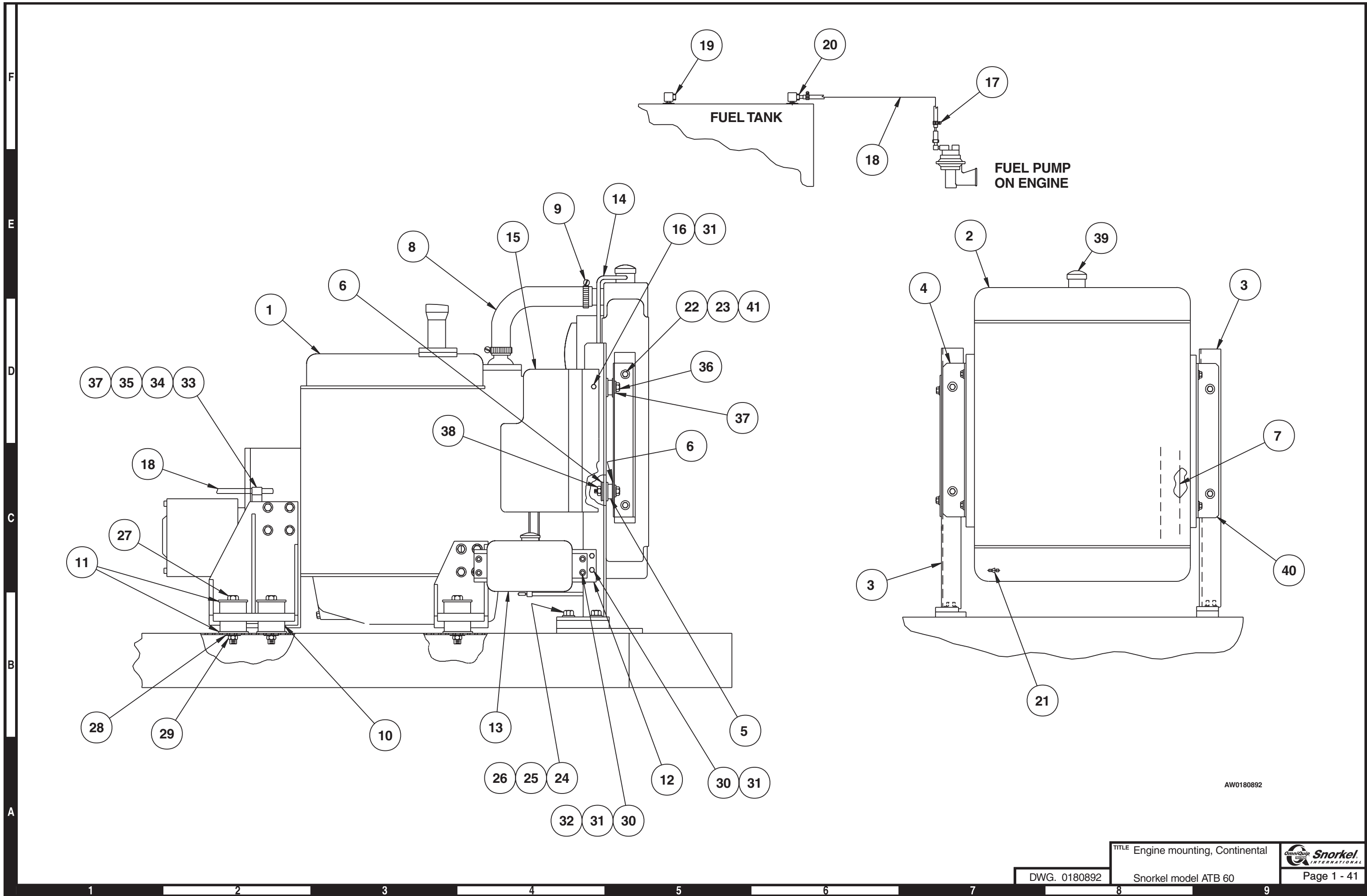
Platform rotator



AW0180873

**Engine mounting, Continental**

item	part no	qty	description
1	0180986	1	Engine, Continental - (see page 1-43 for parts breakdown)
2	7630292	1	Radiator
3	0180441	2	Bracket, radiator support
4	0180997	1	Angle, radiator mounting
5	7630180	4	Radiator cushion
6	5560179	8	Washer, snubbing
7	7630080	1	Radiator hose
8	7630136	1	Radiator hose
9	5550038	4	Clamp
10	7630117	6	Engine mount
11	0071599	12	Engine mount washer
12	0180832	1	Mount plate, overflow reservoir
13	7630227	1	Overflow reservoir
14	5010012	1	Radiator overflow hose 5/16 inch diameter x 48 inch long
15	0181154	1	Shield
16	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
17	5550020	2	Clamp
18	5010011	1	Fuel hose 5/16 inch diameter x 96 inch long
19	7714202	1	Pipe plug 1/4 NPT square head
20	5090032	1	Fitting, straight barbed
21	7630181	1	Drain cock - (included with item 2)
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	6	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
28	5560169	6	Washer 5/8 hard flat ASTM-F436
29	5560131	6	Nut 5/8-11 self locking
30	970049	6	Capscrew 1/4-20 x 1 inch long hex head grade 5
31	5560004	8	Nut 1/4-20 self locking
32	986019	4	Washer 1/4 medium flat
33	5093002	1	Clamp
34	970449	1	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
35	987119	1	Washer 3/8 medium lock
36	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
37	986299	5	Washer 3/8 medium flat
38	5560033	4	Nut 3/8-16 self locking
39	7630259	1	Radiator cap - 15 PSI
40	0180998	1	Angle, radiator mounting
41	986269	4	Washer 5/16 medium flat



AW0180892

TITLE Engine mounting, Continental

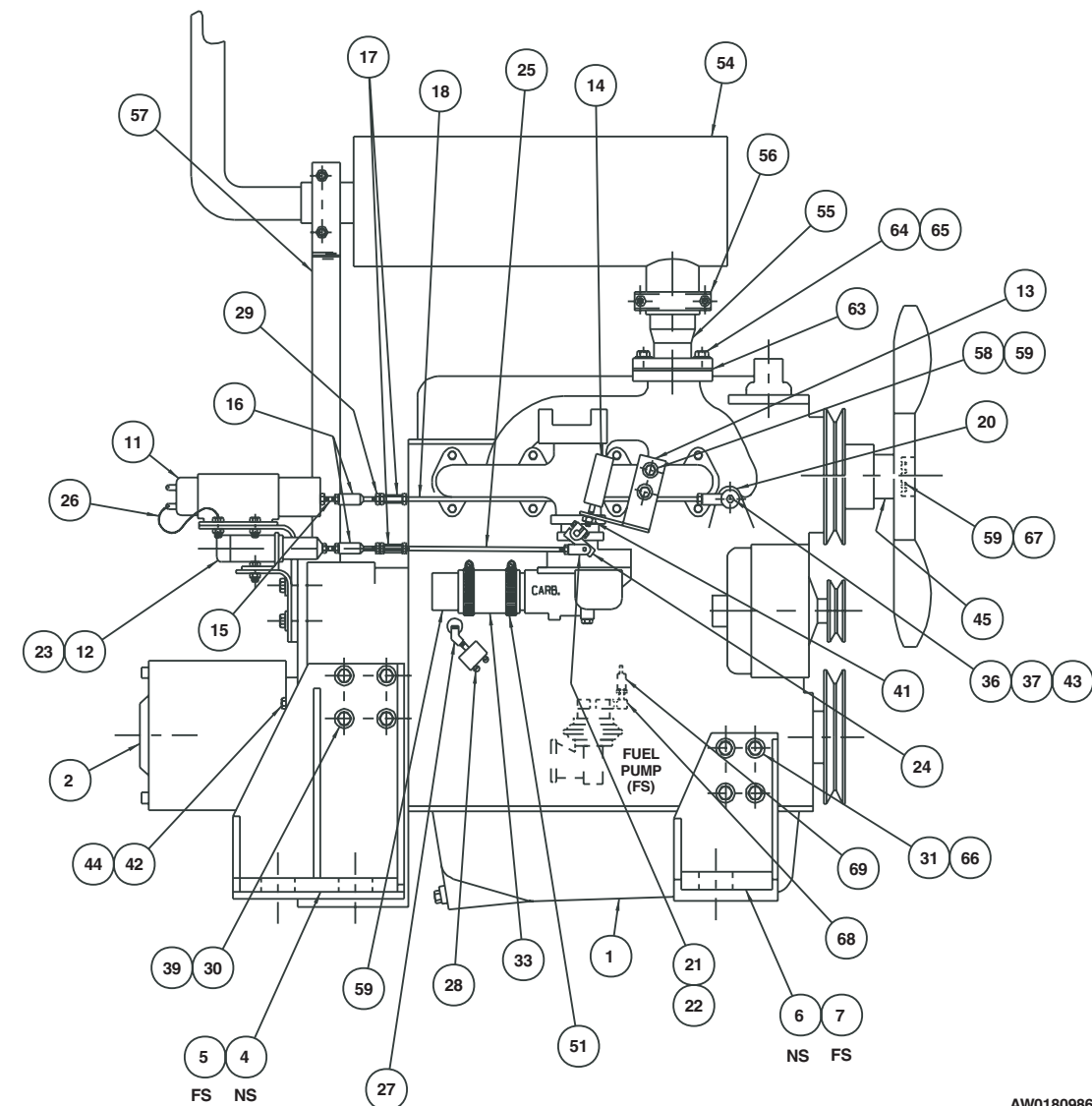
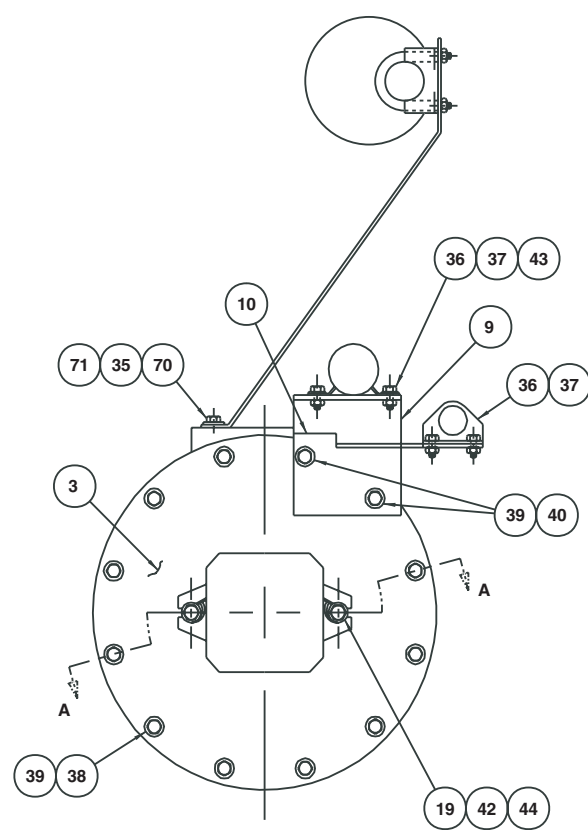
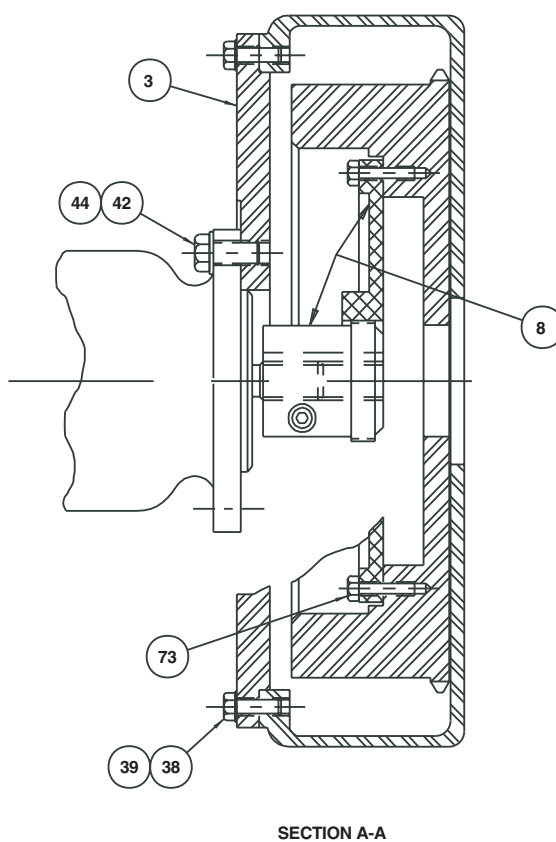
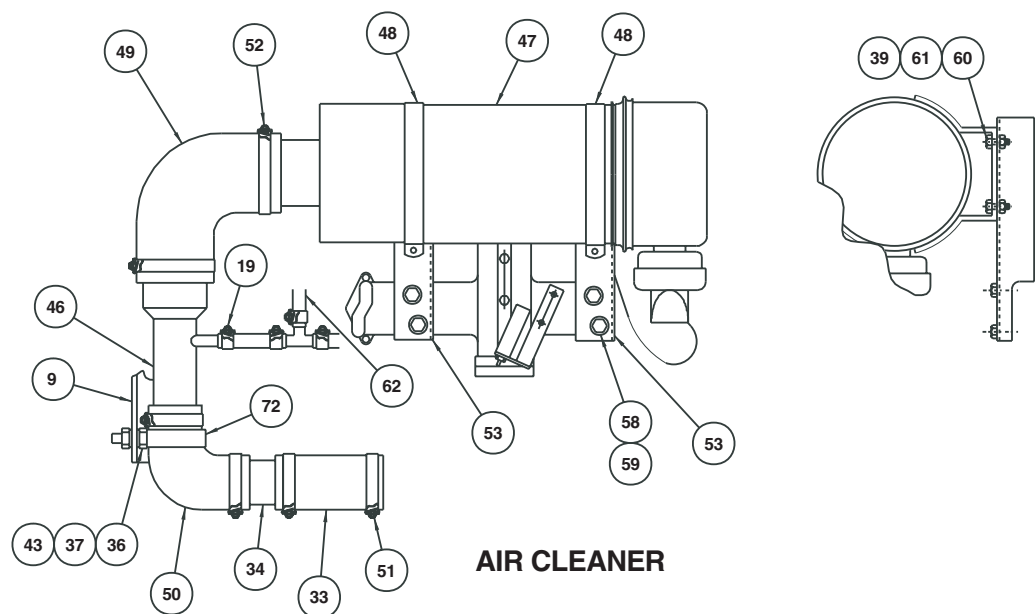
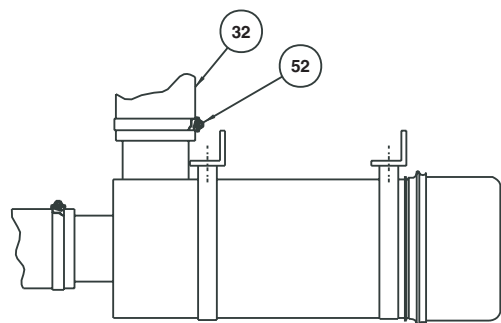
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Snorkel model ATB 60



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AW0180986

**Engine, Continental**

item	part no	qty	description
	0180986	1	Engine, Continental complete
1	7620025	1	Engine, Continental TM-27
2	0181426	1	Hydraulic pump and fittings - (see page 2-80 for parts breakdown)
3	0081226	1	Engine adapter
4	0180451	1	Motor mount, rear right hand
5	0180452	1	Motor mount, rear left hand
6	0180445	1	Motor mount, front right hand
7	0180446	1	Motor mount, front left hand
8	7630249	1	Flexible coupling
9	0111452	1	Mount angle
10	0111509	1	Mounting bracket
11	3040488	1	Solenoid
12	3040063	1	Solenoid
13	0111454	1	Bracket
14	3040494	1	Solenoid, anti-diesel
15	0073638	1	Stud, jump size
16	2650001	2	Swivel, in-line
17	5560094	2	Coupler nut
18	0111484	1	Rod
19	5550006	6	Clamp
20	2690004	1	Rod end
21	2610001	1	Yoke
22	2620001	1	Clevis pin
23	3040466	1	Return spring
24	0111995	1	Throttle arm
25	0151353	1	Control rod
26	0071959	1	Jumper wire
27	5090031	1	Street elbow 45°, 1/8 NPT
28	3020095	1	Switch, oil pressure
29	982129	8	Nut 1/4-28 hex
30	970509	8	Capscrew 3/8-16 x 2 inch long hex head grade 5
31	5560207	8	Capscrew metric M14-2.00 x 30mm long hex head
32	0081053	1	Air intake hose
33	0181162	1	Air intake hose
34	0081365	1	Air intake tube
35	986269	1	Washer 5/16 medium flat
36	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
37	5560004	8	Nut 1/4-20 self locking
38	970479	10	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
39	987119	24	Washer 3/8 medium lock
40	970499	2	Capscrew 3/8-16 x 1-3/4 inch long hex head grade 5
41	5560697	1	Nut 3/8-24 hex jam
42	5560136	2	Capscrew 1/2-13 self locking drilled head
43	986019	11	Washer 1/4 medium flat
44	5560168	2	Washer 1/2 hard flat ASTM-F436
45	7630260	1	Spacer
46	0181027	1	Air intake tube
47	7630003	1	Air cleaner - (see page 1-70 for parts breakdown)
48	7630005	2	Air cleaner mounting band
49	7630016	1	Elbow, 3 inch 90° rubber
50	7630197	1	Elbow, 2 inch 90° rubber
			Parts list continued on next page

**Engine, Continental**

item	part no	qty	description
51	5550030	4	Clamp
52	5550050	4	Clamp
53	0180985	2	Air cleaner mount angle
54	7630255	1	Muffler
55	0180983	1	Exhaust pipe
56	5550014	1	Clamp
57	0180982	1	Brace
58	5560357	6	Capscrew metric M8-1.25 x 25mm long hex head
59	5560355	10	Washer metric M8 lock
60	970449	4	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
61	984109	4	Nut 3/8-16 hex
62	5010002	1	Hose x 24 inch long
63	7630256	1	Exhaust gasket
64	5560625	2	Capscrew metric M10-1.5 x 20mm long hex head
65	5560356	2	Washer metric M10 lock
66	5560377	8	Washer metric M14 lock
67	5560634	4	Capscrew metric M8-1.25 x 45mm long hex head
68	5090006	1	Street 90° elbow, 1/8 NPT
69	7630153	1	Fuel filter
70	970259	1	Capscrew 5/16-18 x 1 inch long hex head grade 5
71	987109	1	Washer 5/16 medium lock
72	5093014	1	Clamp
73	970469	6	Capscrew 3/8-16 x 1 inch long hex head grade 5
74	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)



**Engine mounting, Cummins before 3-12-98**

item	part no	qty	description
1	0181618	1	Engine, Cummins - (see page 1-49 for parts breakdown)
2	7630262	1	Radiator hose, lower
3	5550030	2	Clamp
4	7630259	1	Radiator cap - 15 PSI
5	7630247	1	Radiator
6	5560179	8	Washer, snubbing
7	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
8	5560033	4	Nut 3/8-16 self locking
9	7630180	4	Radiator cushion
10	0180444	2	Angle, radiator
11	0180441	2	Bracket, radiator support
12	7630181	1	Drain cock - (included with item 1)
13	970449	4	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
14	987109	4	Washer 5/16 medium lock
15	970049	6	Capscrew 1/4-20 x 1 inch long hex head grade 5
16	5560004	8	Nut 1/4-20 self locking
17	986019	4	Washer 1/4 medium flat
18	0180832	1	Mount plate, overflow reservoir
19	970889	4	Capscrew 1/2-13 x 1 inch long hex head grade 5
20	987139	4	Washer 1/2 medium lock
21	7630227	1	Overflow reservoir
22	7630263	1	Radiator hose, upper
23	5550040	2	Clamp
24	5560639	6	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
25	0071599	12	Engine mount washer
26	5560169	6	Washer 5/8 hard flat ASTM-F436
27	5560131	6	Nut 5/8-11 self locking
28	7630117	6	Engine mount
29	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
30	0181032	1	Fuel hose 3/8 inch diameter x 70 inch long
31	5090032	1	Fitting, straight barbed
32	5033608	4	Male adapter
33	986359	4	Washer 1/2 medium flat
34	986269	4	Washer 5/16 medium flat
35	986299	1	Washer 3/8 medium flat
36	5010011	1	Fuel hose 5/16 inch diameter x 90 inch long
37	5550028	3	Clamp
38	5010012	1	Radiator overflow hose 5/16 inch diameter x 49 inch long
39	0181154	2	Shield

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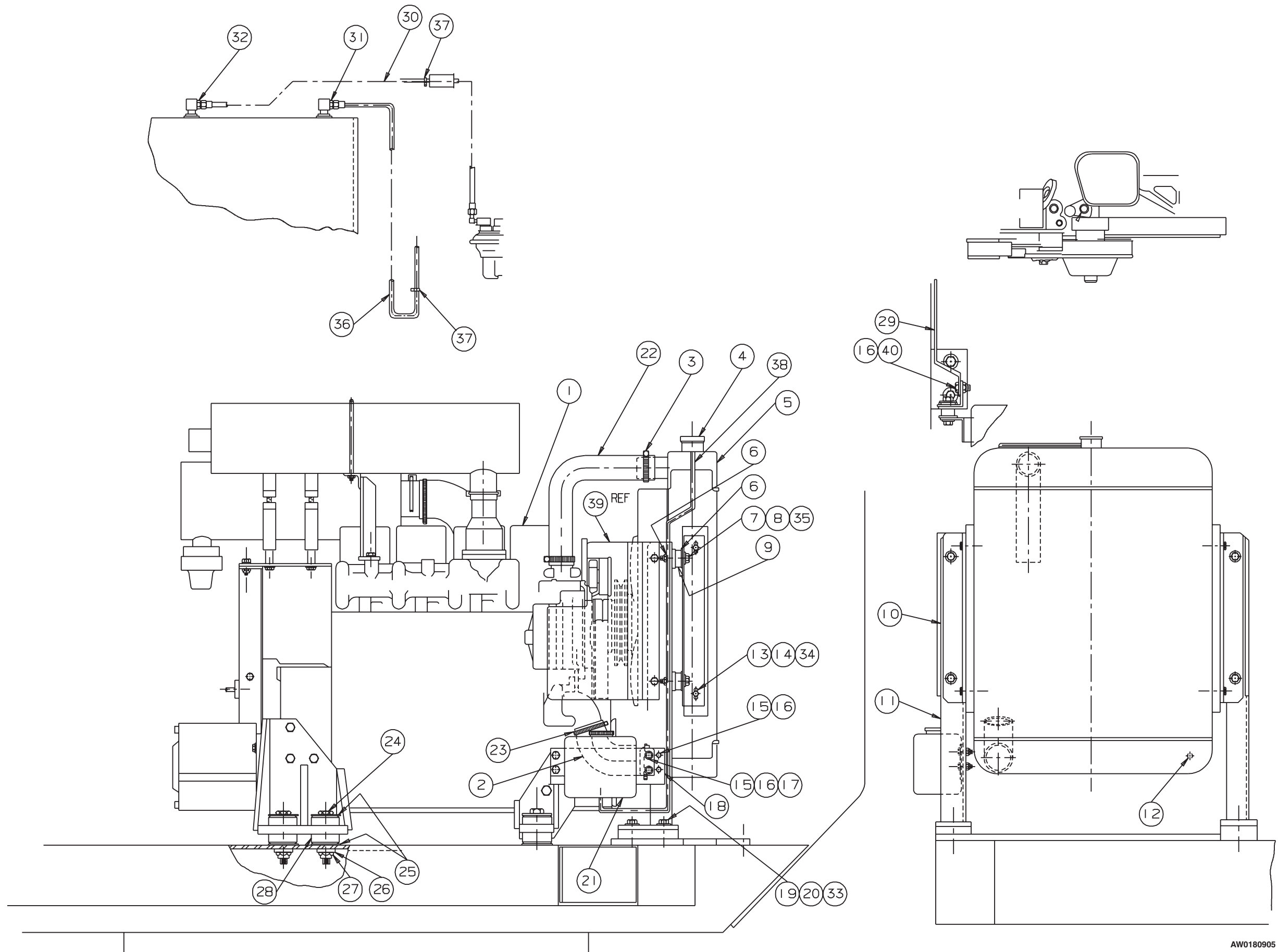
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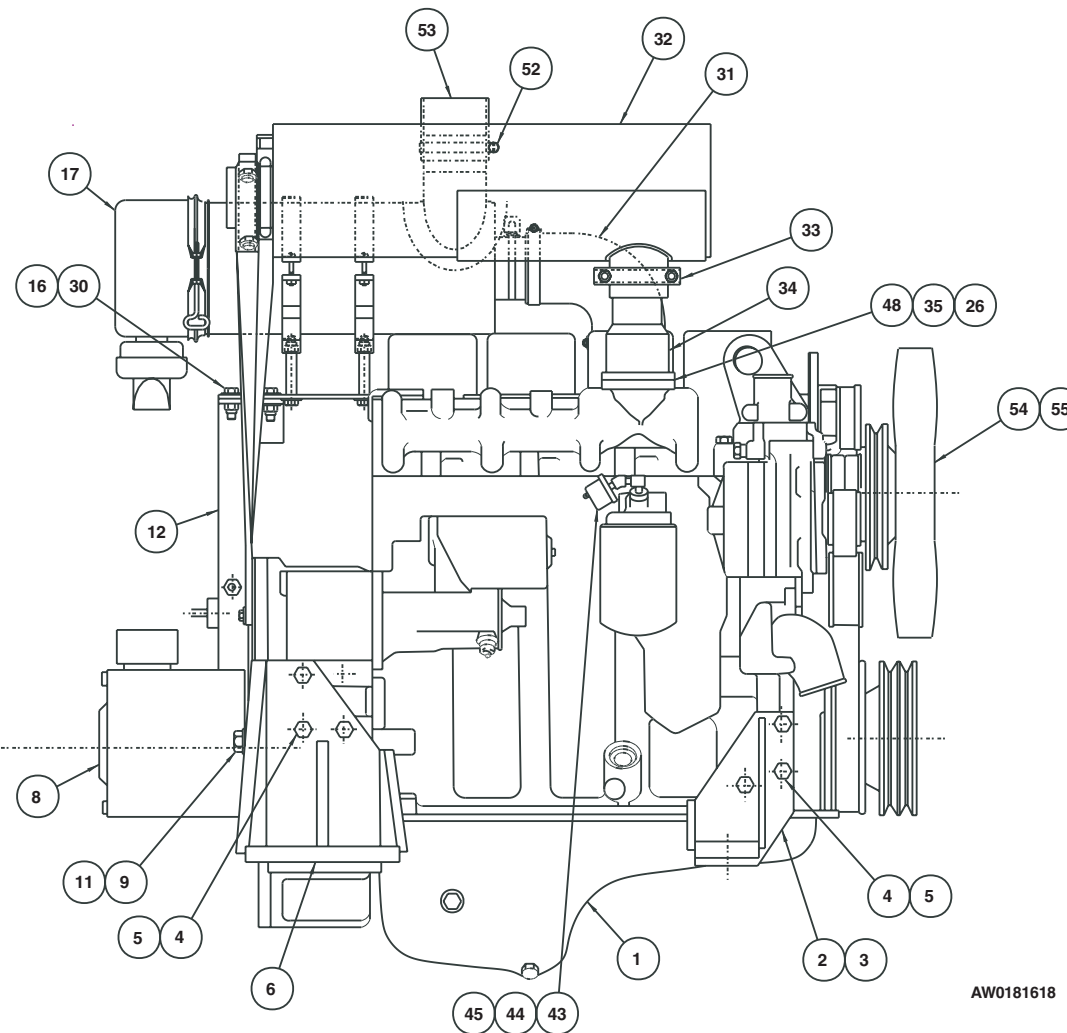
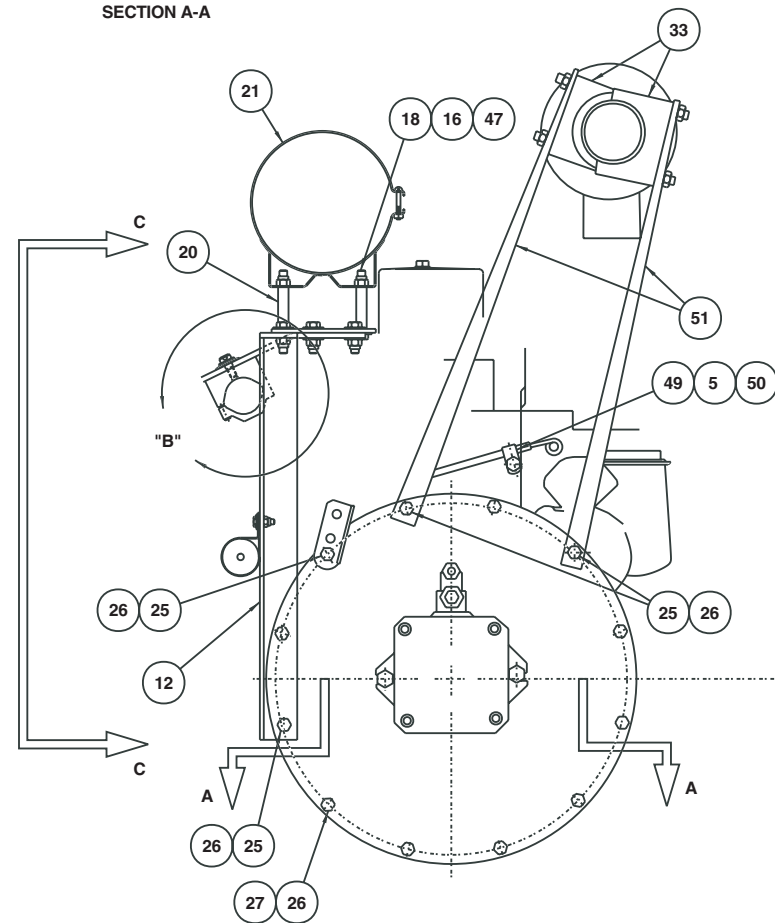
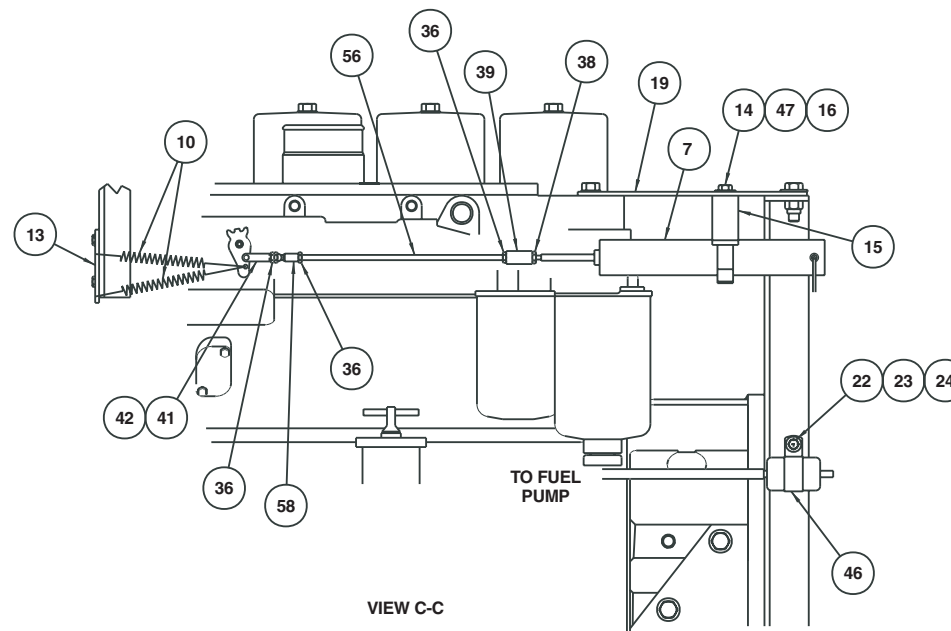
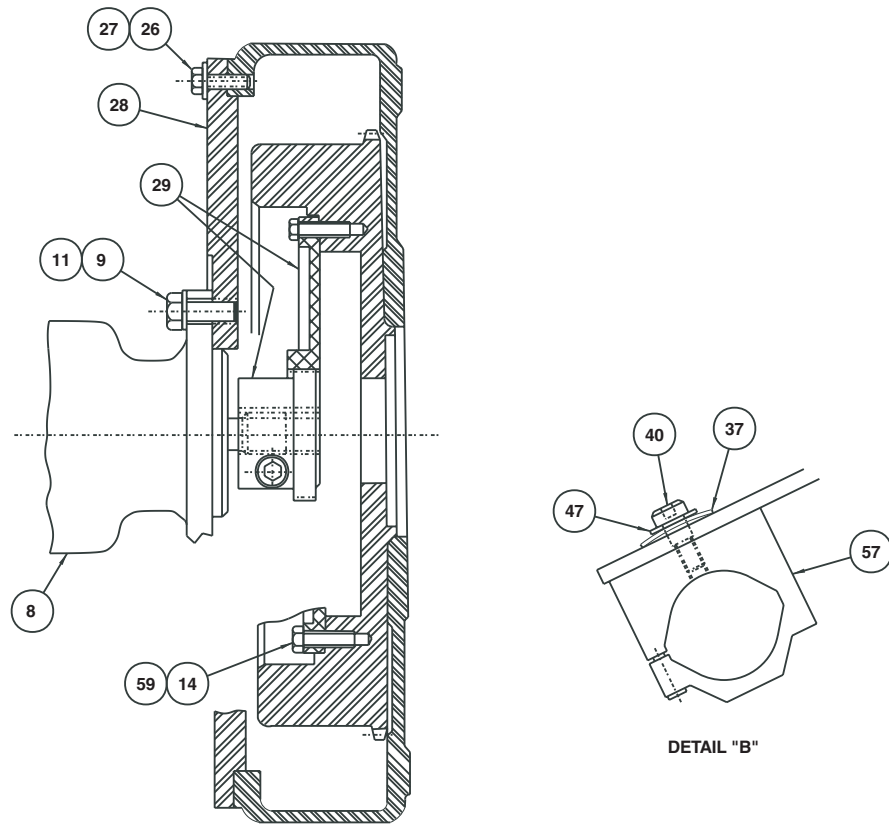


AW0180905

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TITLE Engine mounting, Cummins
before 3-12-98
Snorkel model ATB 60

Snorkel
INTERNATIONAL
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**Engine, Cummins before 3-12-98**

item	part no	qty	description
	0181618	1	Engine, Cummins before 3-12-98
1	7620026	1	Engine, Cummins 4B
2	0180458	1	Engine mount, front right hand
3	0180459	1	Engine mount, front left hand
4	5560694	12	Capscrew metric M12-1.75 x 35mm long hex head
5	5560614	13	Washer metric M12 lock
6	0180467	2	Engine mount, rear
7	20082045	1	Throttle actuator
8	0181426	1	Hydraulic pump and fittings - (see page 2-80 for parts breakdown)
9	5560136	2	Capscrew 1/2-13 self locking drilled head
10	0080825	2	Spring - (included with actuator)
11	5560168	2	Washer 1/2 hard flat ASTM-F436
12	0180791	1	Bracket, throttle solenoid
13	0181684	1	Spring retaining bracket
14	970479	8	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
15	0191205	1	Bracket
16	5560033	7	Nut 3/8-16 self locking
17	7630003	1	Air cleaner - (see page 1-70 for parts breakdown)
18	970549	4	Capscrew 3/8-16 x 3 inch long hex head grade 5
19	0180793	1	Plate, air cleaner mounting
20	0181033	4	Spacer
21	7630005	2	Air cleaner mounting band
22	970049	1	Capscrew 1/4-20 x 1 inch long hex head grade 5
23	986019	1	Washer 1/4 medium flat
24	5560004	1	Nut 1/4-20 self locking
25	972049	5	Capscrew metric M10-1.5 x 40mm long hex head
26	5560356	18	Washer metric M10 lock
27	5560617	7	Capscrew metric M10-1.5 x 35mm long hex head
28	0080691	1	Plate, engine adapter
29	7630248	1	Flexible coupling
30	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
31	7630016	1	Elbow, 3 inch 90° rubber
32	7630334	1	Muffler, standard
33	5550026	3	Clamp
34	0181287	1	Exhaust flange
35	971999	4	Capscrew metric M10-1.5 x 25mm long hex head
36	982129	3	Nut 1/4-28 hex
37	5530017	1	Washer 3/8 curved spring
38	5560697	1	Nut 3/8-24 hex jam
39	0181619	1	Actuator coupling
40	5560618	1	Shoulder bolt 3/8 x 3/8 inch long
41	2610001	1	Yoke
42	2620001	1	Clevis pin
43	5090006	1	Street 90° elbow, 1/8 NPT
44	5090031	1	Street elbow 45°, 1/8 NPT
45	3020095	1	Switch, oil pressure
46	5093012	1	Clamp
47	986299	7	Washer 3/8 medium flat
48	7630264	1	Gasket
49	5093002	1	Clamp
50	5569905	1	Capscrew metric M12-1.75 x 25mm long hex head
			Parts list continued on next page



Engine, Cummins before 3-12-98

item	part no	qty	description
51	0192694	2	Bracket, muffler support
52	5550050	3	Clamp
53	0081053	1	Air intake hose
54	5560634	4	Capscrew metric M8-1.25 x 45mm long hex head
55	5560355	4	Washer metric M8 lock
56	0111485	1	Throttle rod
57	7630353	1	Actuator clamp
58	2650001	1	Swivel, in-line
59	987119	8	Washer 3/8 medium lock



**Engine mounting, Cummins after 3-12-98**

item	part no	qty	description
1	0181836	1	Engine, Cummins - (see page 1-55 for parts breakdown)
2	7630262	1	Radiator hose, lower
3	5550038	2	Clamp
4	7630239	1	Radiator cap - 13 psi
5	7630247	1	Radiator
6	5560179	8	Washer, snubbing
7	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
8	5560033	4	Nut 3/8-16 self locking
9	7630180	4	Radiator cushion
10	0180998	1	Angle, radiator mounting
11	0180441	2	Bracket, radiator support
12	7630181	1	Drain cock - (included with item 5)
13	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
14	987109	4	Washer 5/16 medium lock
15	970049	6	Capscrew 1/4-20 x 1 inch long hex head grade 5
16	5560004	8	Nut 1/4-20 self locking
17	986019	4	Washer 1/4 medium flat
18	0180832	1	Mount plate, overflow reservoir
19	970889	4	Capscrew 1/2-13 x 1 inch long hex head grade 5
20	987139	4	Washer 1/2 medium lock
21	7630227	1	Overflow reservoir
22	7630263	1	Radiator hose, upper
23	5550040	2	Clamp
24	5560639	6	Capscrew 5/8-11 x 4-1/2 inch long hex head grade 5
25	0071599	10	Engine mount washer
26	5560169	6	Washer 5/8 hard flat ASTM-F436
27	5560131	6	Nut 5/8-11 self locking
28	7630117	6	Engine mount
29	0180997	1	Angle, radiator mounting
30	0181032	1	Fuel hose 3/8 inch diameter x 70 inch long
31	5090032	1	Fitting, straight barbed
32	5033608	1	Male adapter
33	986359	4	Washer 1/2 medium flat
34	986269	4	Washer 5/16 medium flat
35	986299	4	Washer 3/8 medium flat
36	5010011	1	Fuel hose 5/16 inch diameter x 89 inch long
37	5550028	3	Clamp
38	5010012	1	Radiator overflow hose 5/16 inch diameter x 48 inch long
39	0181154	1	Shield
40	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
41	5569254	2	Washer flat 2-1/4 inch OD x 5/8 inch ID



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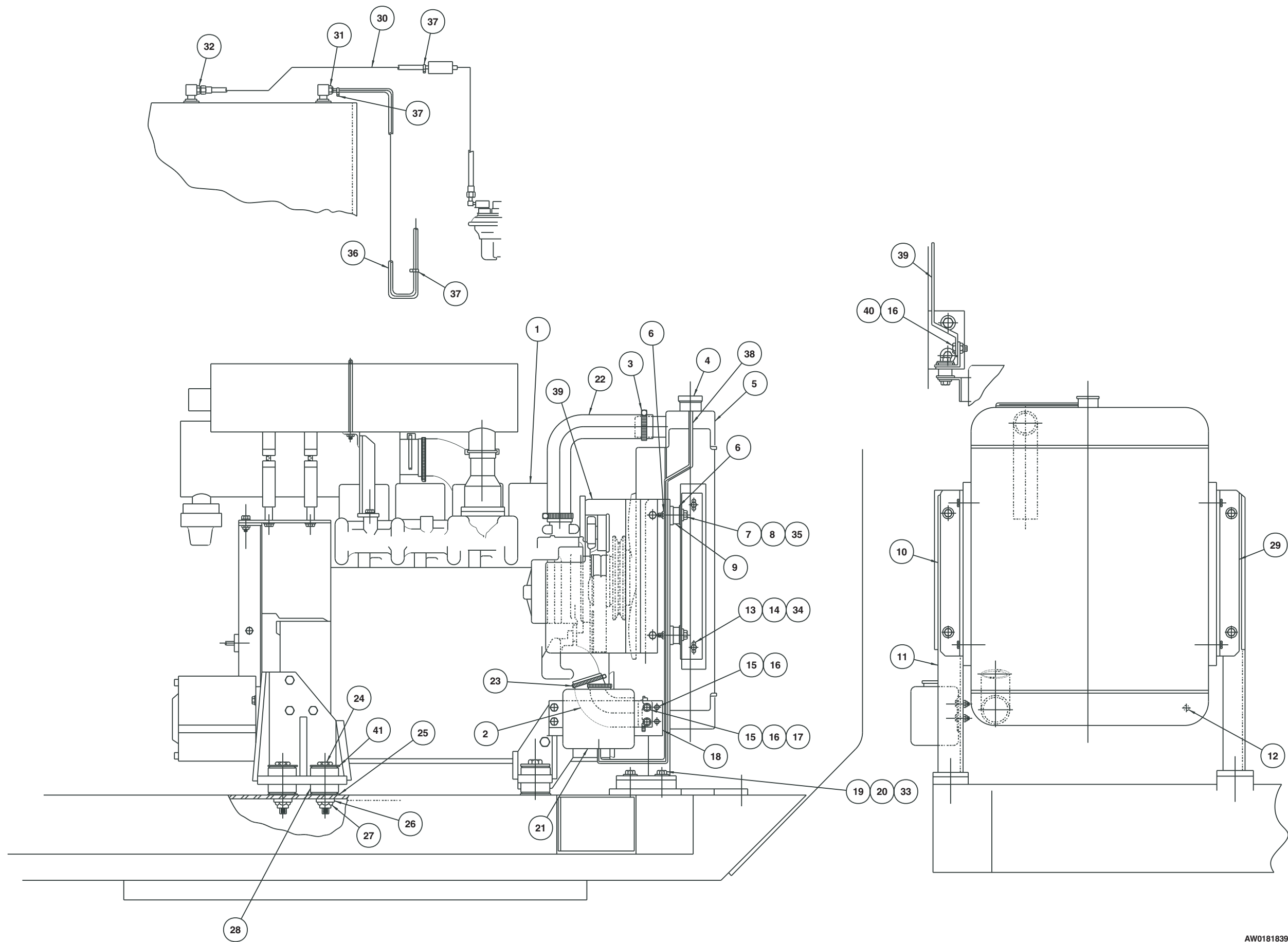
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AW0181839

TITLE Engine mounting, Cummins
after 3-12-98
Snorkel model ATB 60

DWG. 0181839



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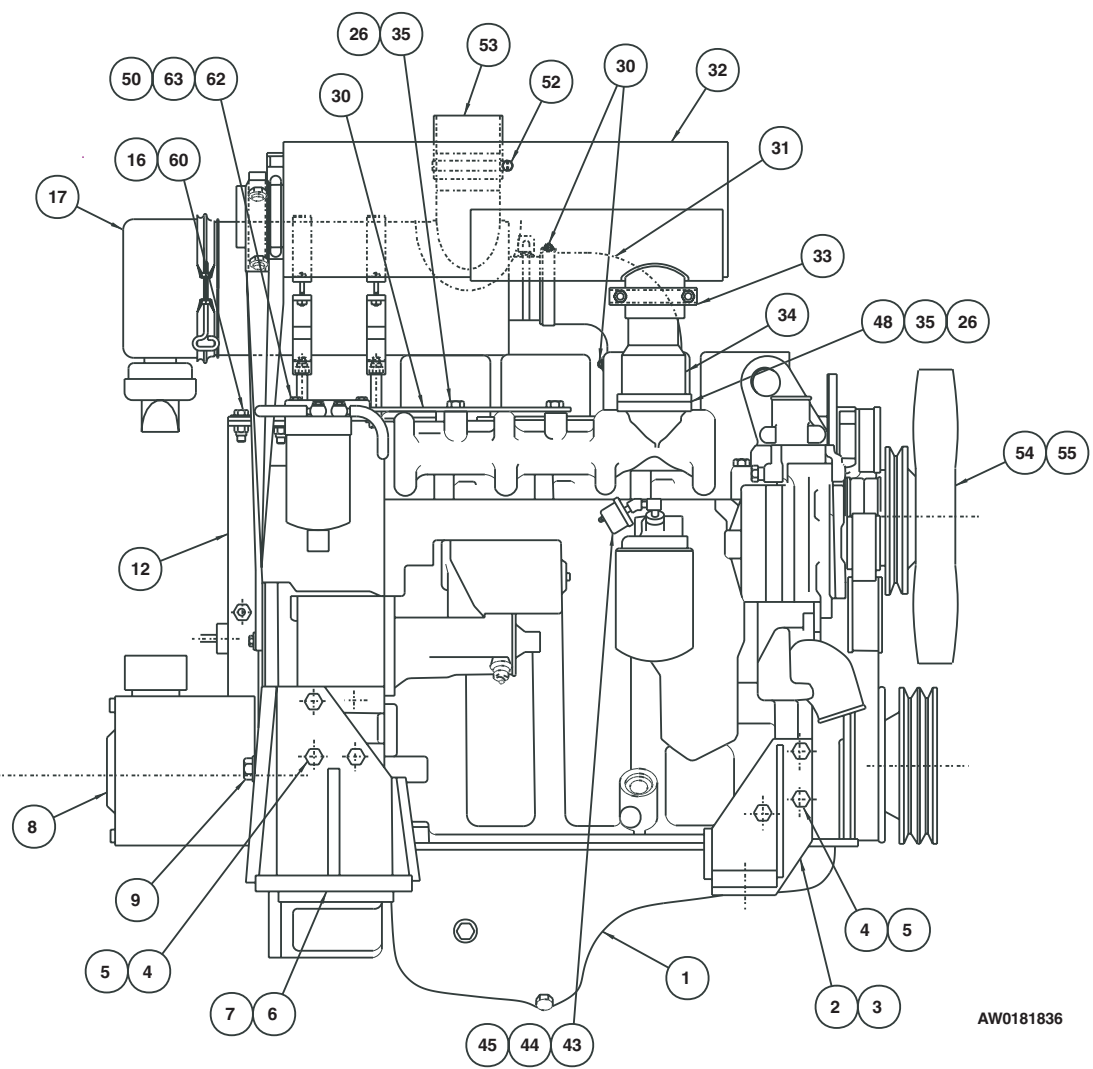
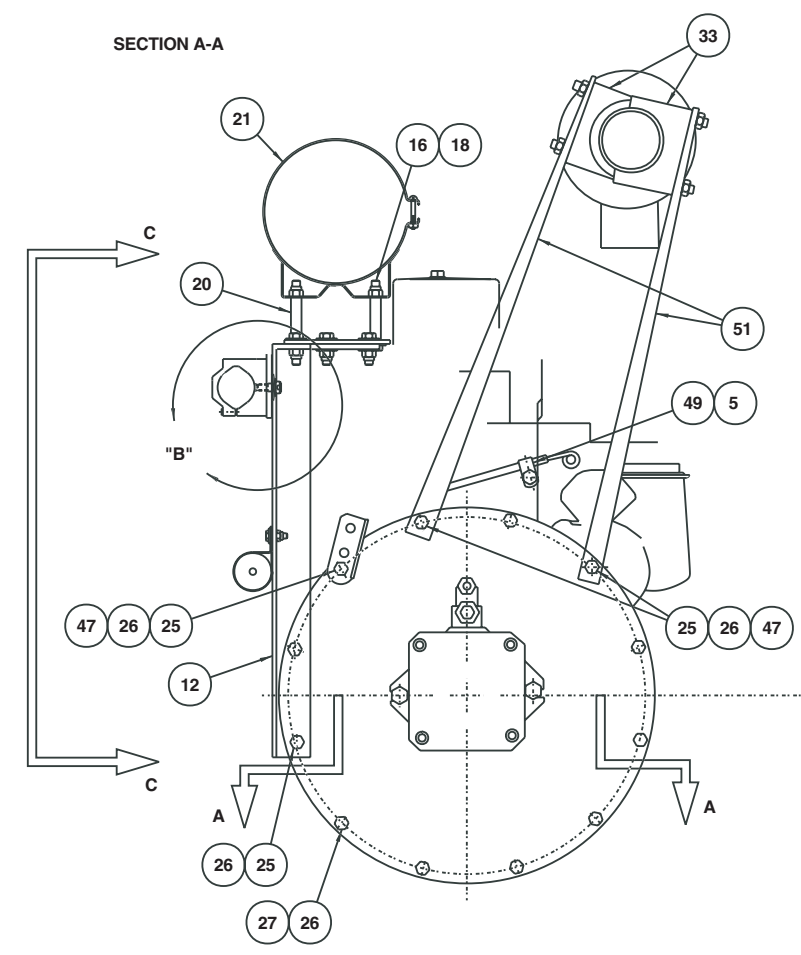
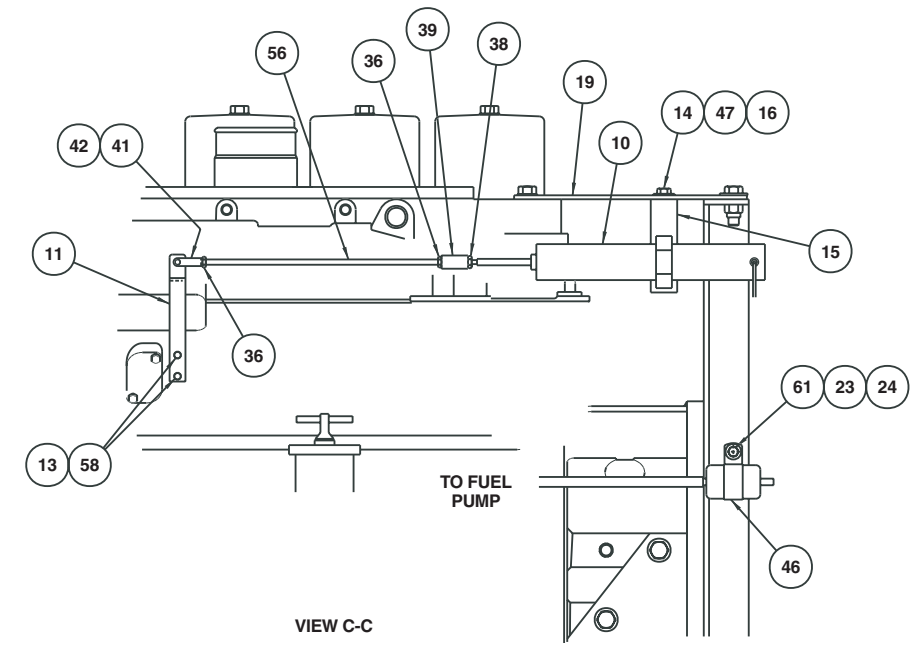
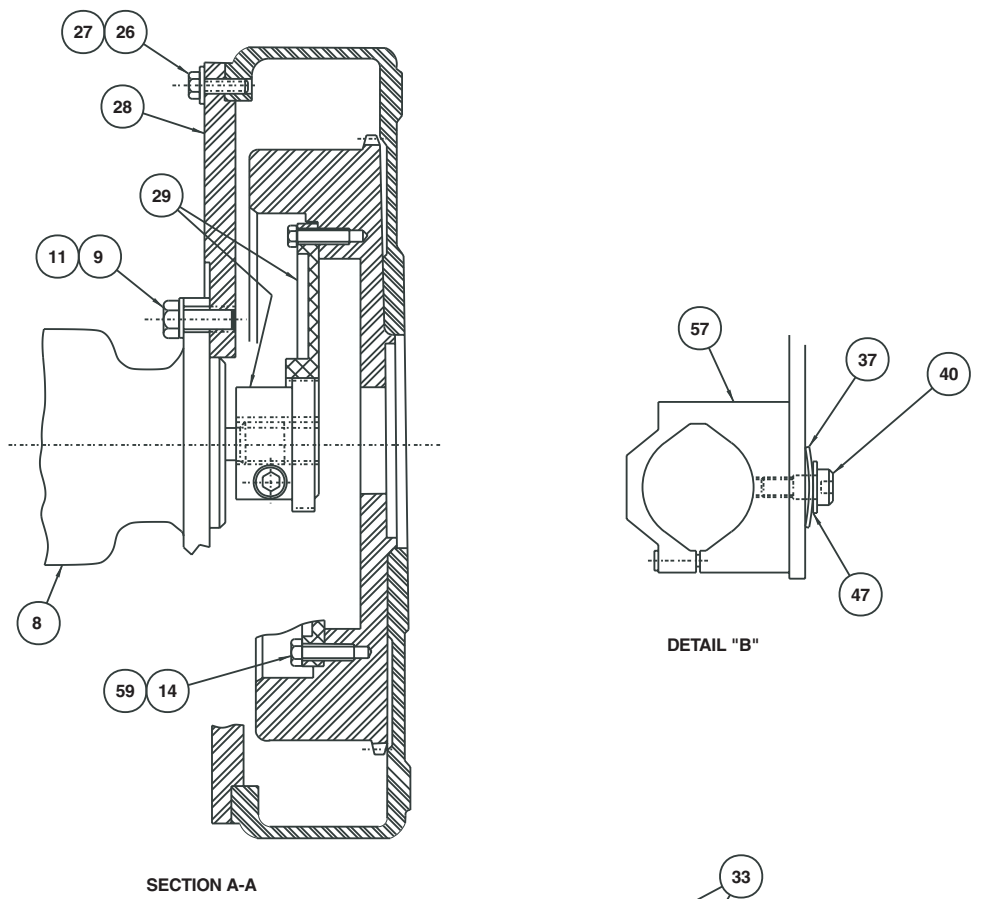
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AW0181836

**Engine, Cummins after 3-12-98**

item	part no	qty	description
	0181836	1	Engine, Cummins after 3-12-98
1	7624745	1	Engine, Cummins 4B
2	0181822	1	Engine mount, front right hand
3	0181824	1	Engine mount, front left hand
4	5560694	12	Capscrew metric M12-1.75 x 35mm long hex head
5	5560614	2	Washer metric M12 lock
6	0181823	1	Engine mount, rear right hand
7	0181825	1	Engine mount, rear left hand
8	0181426	1	Hydraulic pump and fittings - (see page 2-80 for parts breakdown)
9	5560136	2	Capscrew 1/2-13 self locking drilled head
10	20082045	1	Throttle actuator
11	0181834	1	Throttle lever
12	0180791	1	Bracket, throttle solenoid
13	5560664	2	Washer metric M6 lock
14	970479	10	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
15	0181835	1	Bracket, actuator mounting
16	5560033	7	Nut 3/8-16 self locking
17	7630003	1	Air cleaner - (see page 1-70 for parts breakdown)
18	970549	4	Capscrew 3/8-16 x 3 inch long hex head grade 5
19	0180793	1	Plate, air cleaner mounting
20	0181033	4	Spacer
21	7630005	2	Air cleaner mounting band
22	970049	3	Capscrew 1/4-20 x 1 inch long hex head grade 5
23	986019	3	Washer 1/4 medium flat
24	5560004	3	Nut 1/4-20 self locking
25	972049	5	Capscrew metric M10-1.5 x 40mm long hex head
26	5560356	18	Washer metric M10 lock
27	5560617	7	Capscrew metric M10-1.5 x 35mm long hex head
28	0080691	1	Plate, engine adapter
29	7630248	1	Flexible coupling
30	0181837	1	Fuel filter bracket
31	7630016	1	Elbow, 3 inch 90° rubber
32	7630334	1	Muffler, standard
33	5550026	3	Clamp
34	0181287	1	Exhaust flange
35	971999	6	Capscrew metric M10-1.5 x 25mm long hex head
36	982129	2	Nut 1/4-28 hex
37	5530017	1	Washer 3/8 curved spring
38	5560697	1	Nut 3/8-24 hex jam
39	0181619	1	Actuator coupling
40	5560618	1	Shoulder bolt 3/8 x 3/8 inch long
41	2610001	1	Yoke
42	2620001	1	Clevis pin
43	5090006	1	Street 90° elbow, 1/8 NPT
44	5090031	1	Street elbow 45°, 1/8 NPT
45	3020095	1	Switch, oil pressure
46	5093012	1	Clamp
47	986299	7	Washer 3/8 medium flat
48	7630264	1	Gasket
49	5093002	1	Clamp
50	986269	2	Washer 5/16 medium flat
			Parts list continued on next page



Engine, Cummins after 3-12-98

item	part no	qty	description
51	0190694	2	Muffler support bracket
52	5550050	3	Clamp
53	0081053	1	Air intake hose
54	5560634	4	Capscrew metric M8-1.25 x 45mm long hex head
55	5560355	4	Washer metric M8 lock
56	0111485	1	Throttle rod
57	7630323	1	Mounting block
58	5569904	2	Capscrew metric M6-1.00 x 12mm long hex head
59	987119	8	Washer 3/8 medium lock
60	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
61	970029	1	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
62	970269	2	Capscrew 5/16-18 x 1-1/4 inch long hex head grade 5
63	5560031	2	Nut 5/16-18 self locking



**Engine mounting, Ford LRG-425**

item	part no	qty	description
1	0181801	1	Engine, Ford LRG-425 - (see page 1-61 for parts breakdown)
2	7630677	1	Radiator
3	0180441	2	Bracket, radiator support
4	0180997	1	Angle, radiator mounting
5	7630180	4	Radiator cushion
6	5560179	8	Washer, snubbing
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
14	5010012	1	Radiator overflow hose 5/16 inch diameter x 60 inch long
15	970029	4	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
16	987099	2	Washer 1/4 medium lock
17	5550028	4	Clamp
18	5010011	1	Fuel hose 5/16 inch diameter x 192 inch long
19	0181154	1	Shield
20	5090032	2	Fitting, straight barbed
21	7630181	1	Drain cock - (included with item 2)
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	5560149	4	Capscrew special 5/8-11 self locking
29	5560036	4	Nut 5/8-11 self locking
30	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
31	5560004	9	Nut 1/4-20 self locking
32	986019	7	Washer 1/4 medium flat
33	0181499	1	Motor mount, front
34	0181500	1	Motor mount, rear
35	970489	8	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
36	970519	4	Capscrew 3/8-16 x 2-1/4 inch long hex head grade 5
37	986299	12	Washer 3/8 medium flat
38	5560033	12	Nut 3/8-16 self locking
39	7630239	1	Radiator cap - 13 psi
40	0180998	1	Angle, radiator mounting
41	986269	4	Washer 5/16 medium flat
42	5093013	1	Clamp
43	970069	1	Capscrew 1/4-20 x 1-1/4 inch long hex head grade 5
44	0181786	1	Bracket, fuel pump
45	7630691	1	High pressure fuel clamp - (included with engine)
46	7630678	1	Fuel line connector - (included with engine)
47	7630679	1	Fuel line connector - (included with engine)
48	7630680	1	Fuel line connector - (included with engine)
49	7630681	1	Pressure regulator - (included with engine)
50	7630682	1	Fuel pump - (included with engine)
51	7630683	1	Fuel filter - (included with engine)
52	7630686	1	High pressure hose - (included with engine)
53	7630685	1	Pressure regulator clamp - (included with engine)

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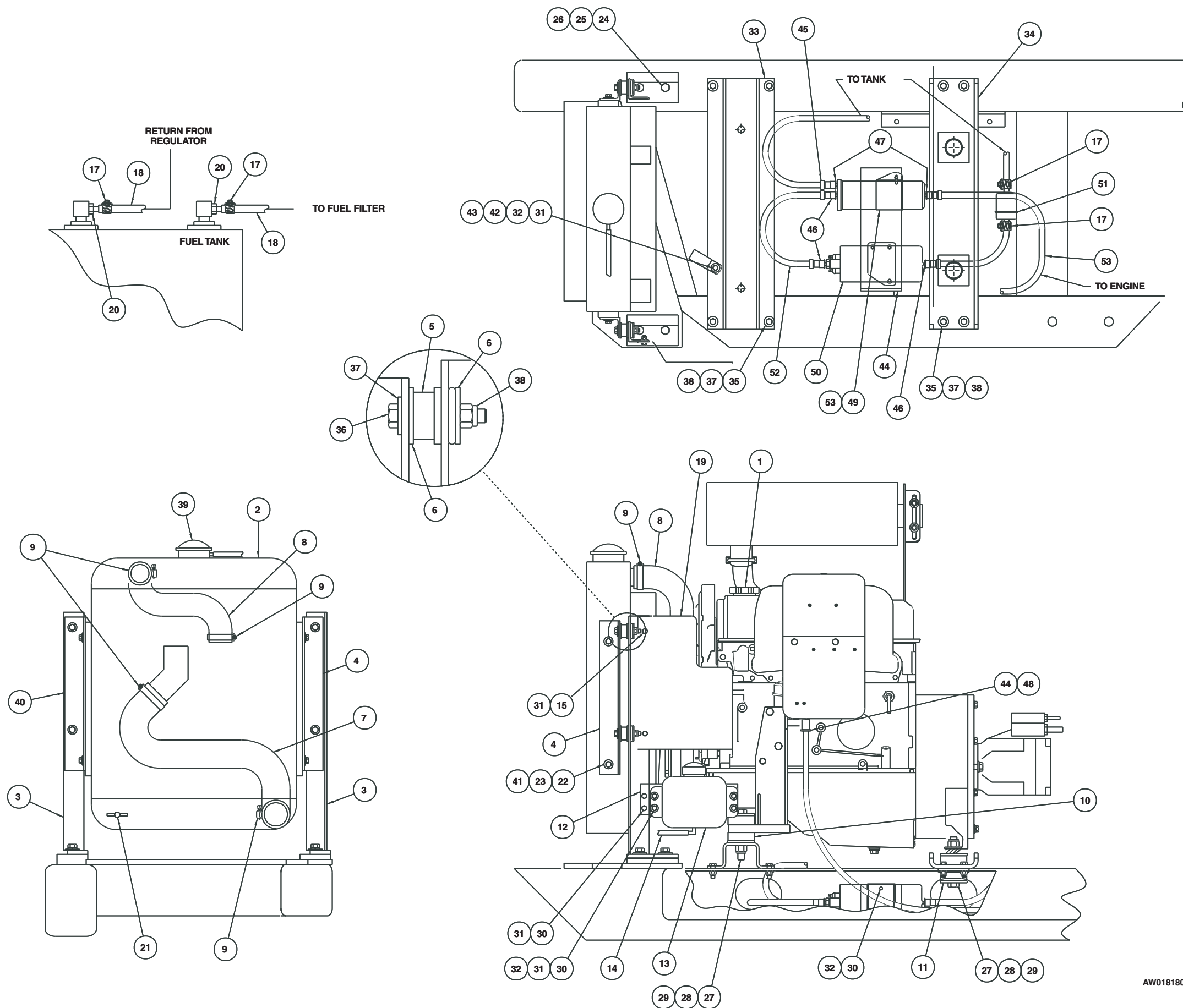
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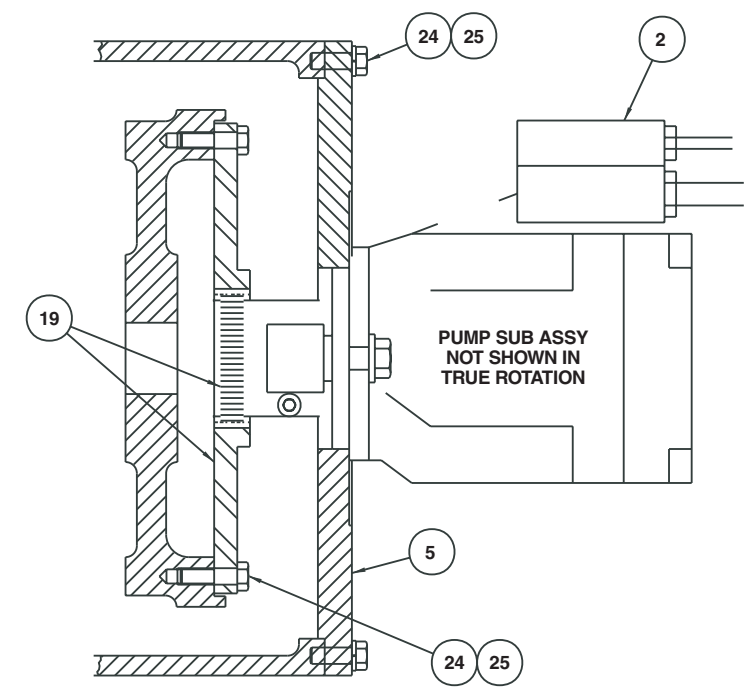
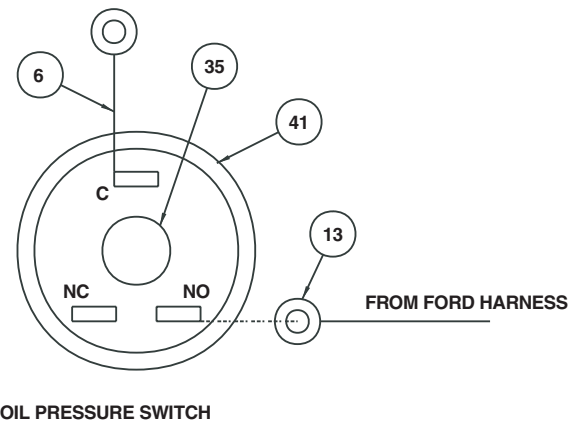
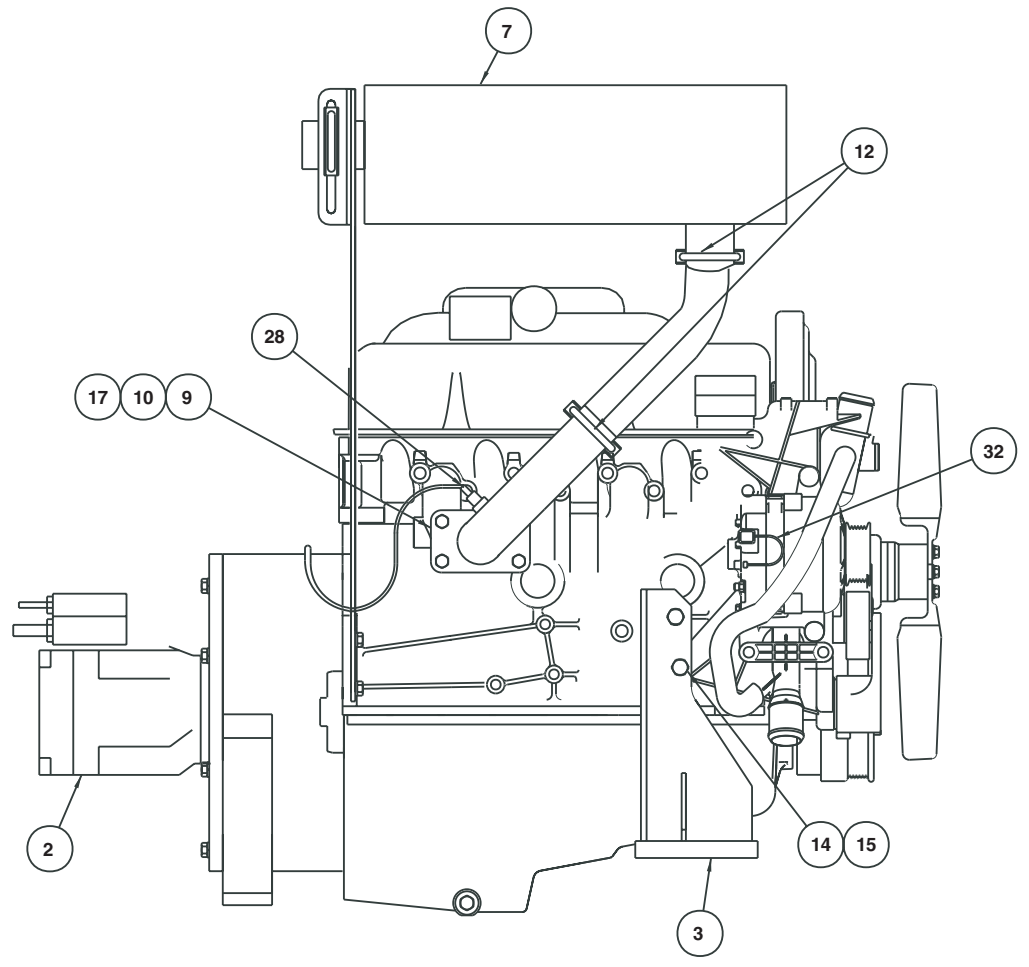
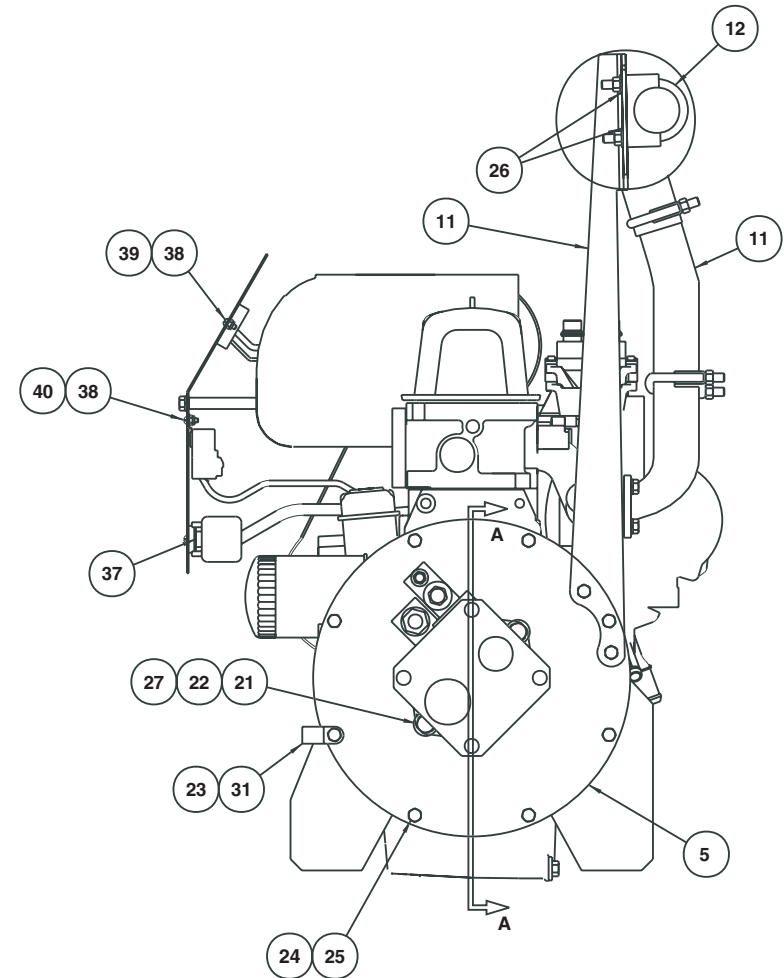
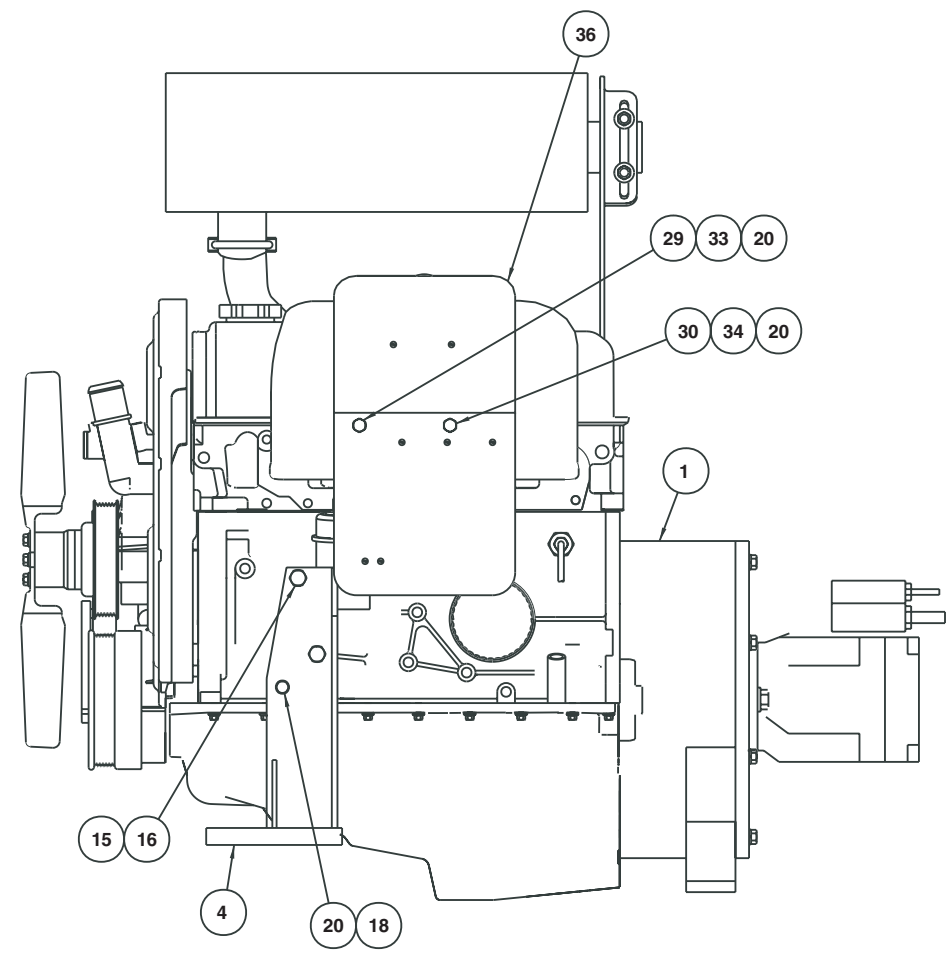
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TITLE Engine mounting
Ford LRG-425
Snorkel model ATB 60

 **Snorkel**
INTERNATIONAL
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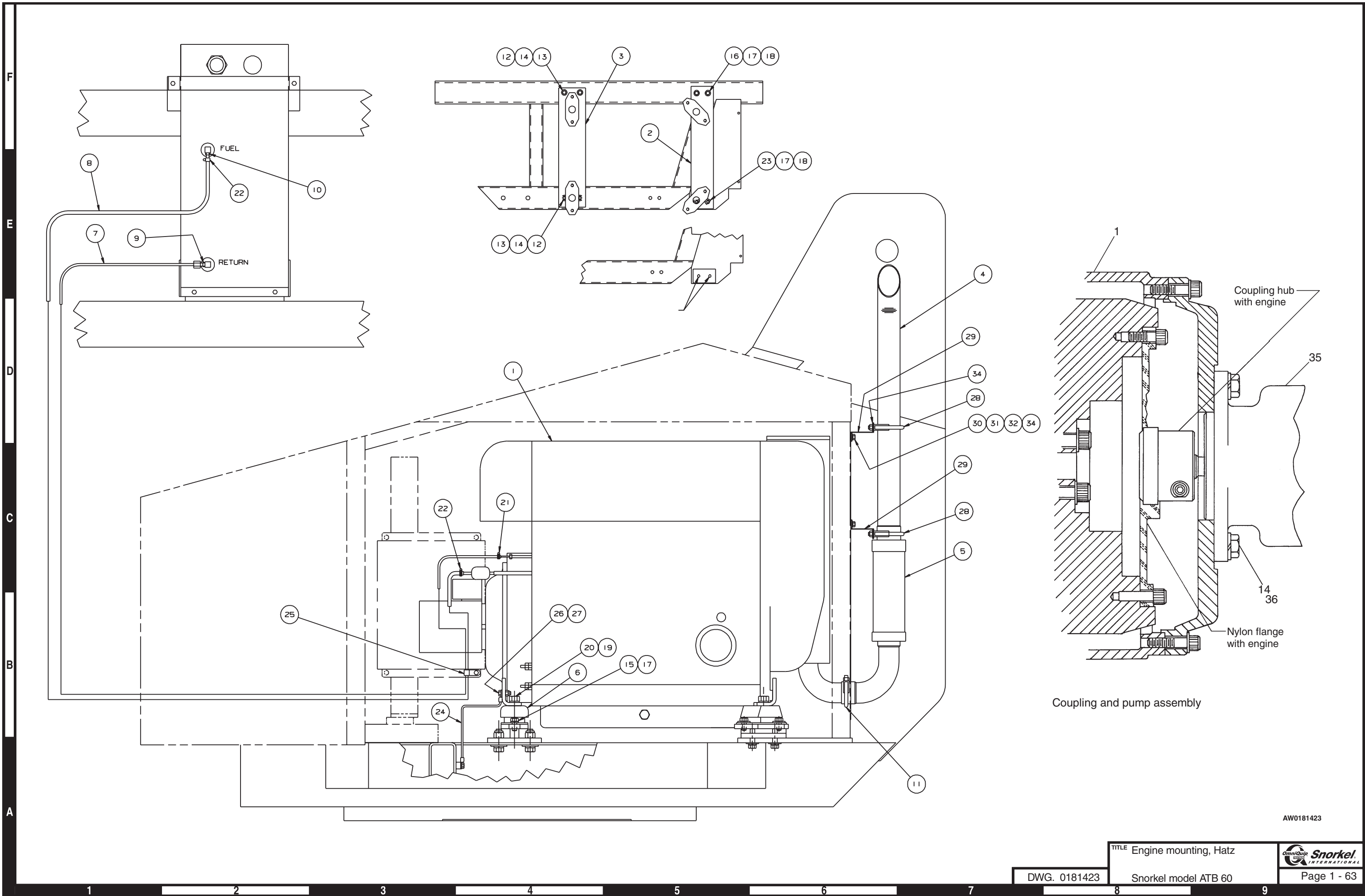
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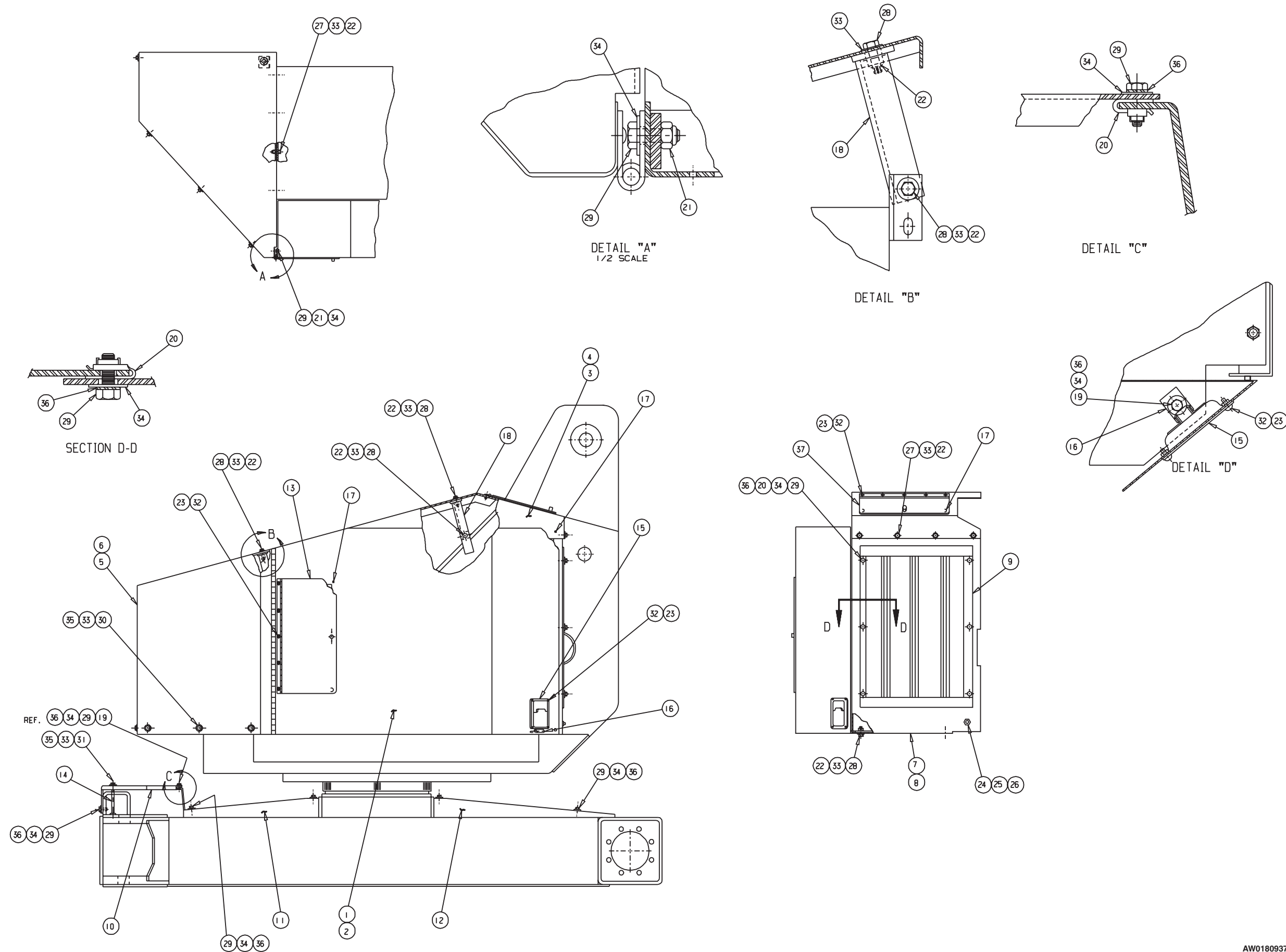
**Engine, Ford LRG-425**

item	part no	qty	description
	0181801	1	Engine, Ford LRG-425
1	7620055	1	Engine, Ford LRG-425 gasoline
2	0181525	1	Hydraulic pump - (see page 2-80 for parts breakdown)
3	0111838	1	Motor mount, right hand
4	0111839	1	Motor mount, left hand
5	7630777	1	Engine pump mount
6	0071563	1	Jumper wire
7	7630255	1	Muffler, standard
	7630307	1	Muffler, spark arrestor
8	0181793	1	Pipe
9	0181794	1	Exhaust flange
10	7630256	1	Exhaust gasket - (included with engine)
11	0181789	1	Bracket, upper exhaust
12	5550014	3	Clamp
13	3044145	1	Terminal #8 stud insulated 22/18 wire
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	5560625	1	Capscrew metric M10-1.5 x 20mm long hex head
18	5560357	1	Capscrew metric M8-1.25 x 25mm long hex head
19	7630779	1	Coupler kit
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	9980012	1	.040 inch diameter stainless steel safety lockwire - (sold in one pound can)
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	7720201	1	Reducer bushing
36	0112086	1	Engine harness cover plate
37	0112087	1	Connector bracket, 42 pin
38	5560034	7	Nut #10-24 self locking
39	5560610	2	Machine screw #10-24 x 1-1/4 inch long truss head
40	5560609	5	Machine screw #10-24 x 1/2 inch long truss head
41	3020095	1	Switch, oil pressure

**Engine mounting, Hatz**

item	part no	qty	description
1	7620034	1	Engine, Hatz diesel
2	0181413	1	Motor mount, front
3	0181414	1	Motor mount, rear
4	0181474	1	Tail pipe
5	0181700	1	Exhaust pipe
6	7630279	4	Motor mount cushion
7	0071722	1	3/16 inch hydraulic hose
8	5010011	1	Fuel hose 5/16 inch diameter x 96 inch long
9	5033604	1	Male adapter
10	5054601	1	Adapter 1/4 NPT x 3/8 hose
11	5550027	1	Clamp
12	5560131	4	Nut 5/8-11 self locking
13	5560022	4	Adjustment bolt
14	5560169	6	Washer 5/8 hard flat ASTM-F436
15	5560138	8	Capscrew 1/2-13 x 1 inch long hex head self locking
16	5560078	2	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 8
17	986359	12	Washer 1/2 medium flat
18	987139	4	Washer 1/2 medium lock
19	987159	4	Washer 5/8 medium lock
20	5569903	4	Capscrew metric M16-2.25 x 30mm long hex head
21	5550028	1	Clamp
22	5550010	2	Clamp
23	5560154	2	Capscrew 1/2-13 x 1-3/4 inch long hex head grade 8
24	0080483	1	Jumper wire
25	5093008	1	Clamp
26	970449	1	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
27	5560033	1	Nut 3/8-16 self locking
28	5550026	2	Clamp
29	0181472	2	Bracket, exhaust support
30	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
31	987109	4	Washer 5/16 medium lock
32	986269	4	Washer 5/16 medium flat
33	984089	4	Nut 5/16-18 hex
34	986299	4	Washer 3/8 medium flat
35	0181426	1	Hydraulic pump and fittings - (see page 2-80 for parts breakdown)
36	5560694	2	Capscrew metric M12-1.75 x 35mm long hex head





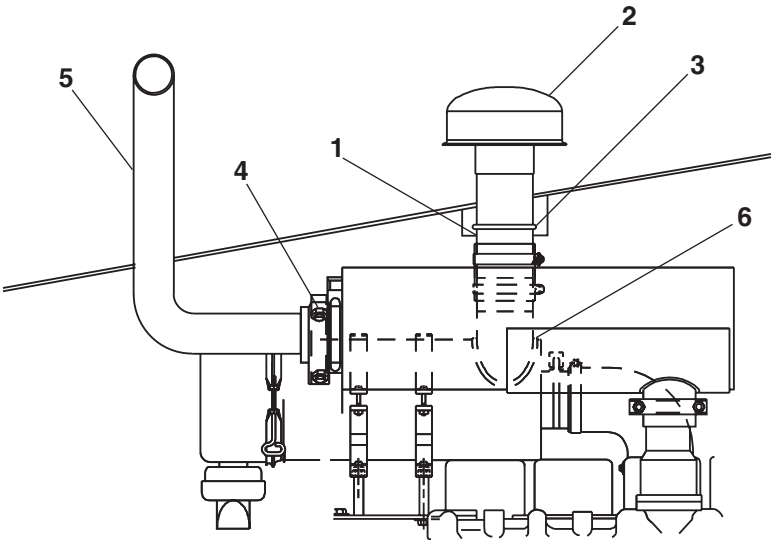
**Cowling**

item	part no	qty	description
1	0180736	1	Door, right hand
2	0180737	1	Door, left hand
3	0180747	1	Top rail, right hand
4	0180748	1	Top rail, left hand - (Continental)
	0181679	1	Top rail, left hand - (Cummins and Ford)
	0181476	1	Top rail, left hand - (Hatz)
5	0180749	1	Counterweight cover, right hand
6	0180750	1	Counterweight cover, left hand
7	0180773	1	Rear cowling, right hand
8	0180774	1	Rear cowling, left hand
	0181477	1	Rear cowling, left hand - (Hatz only)
9	0180735	2	Shroud
	0181471	2	Shroud - (Hatz only)
10	0180824	1	Chassis cover, front
11	0180825	1	Chassis cover, center
12	0180826	1	Chassis cover, rear
13	0180746	1	Lower controls door
	5510003	1	Replacement latch and knob
14	0180823	2	Support tube
15	0070539	2	Door latch
16	0150896	2	Striker plate
17	5569012	12	Rubber bumper
18	0180761	4	Support bracket
19	970239	1	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
20	5560137	15	Speed nut 5/16-18 with captive nut
21	5560031	14	Nut 5/16-18 self locking
22	5560033	28	Nut 3/8-16 self locking
23	5560034	28	Nut #10-24 self locking
24	5037102	1	Bulkhead connector
25	5074401	1	Bulkhead locknut
26	5570001	1	Grease fitting, 1/8 NPT straight
27	970469	16	Capscrew 3/8-16 x 1 inch long hex head grade 5
28	970479	12	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
29	970259	39	Capscrew 5/16-18 x 1 inch long hex head grade 5
30	5560683	8	Capscrew 3/8-16 x 5/8 inch long hex head grade 5
31	5569902	2	Capscrew 3/8-16 x 5-1/4 inch long hex head grade 5
32	5560609	28	Machine screw #10-24 x 1/2 inch long truss head
33	986299	58	Washer 3/8 medium flat
34	986269	41	Washer 5/16 medium flat
35	987119	10	Washer 3/8 medium lock
36	987109	27	Washer 5/16 medium lock
37	0181078	2	Access door
	5510003	1	Replacement latch and knob



Exhaust and air cleaner, Continental

item	part no	qty	description
1	0180980	1	Air inlet tube
2	7630004	1	Air inlet hood
3	5550039	1	Clamp
4	5550014	1	Clamp
5	0180979	1	Exhaust pipe
6	5550050	1	Clamp

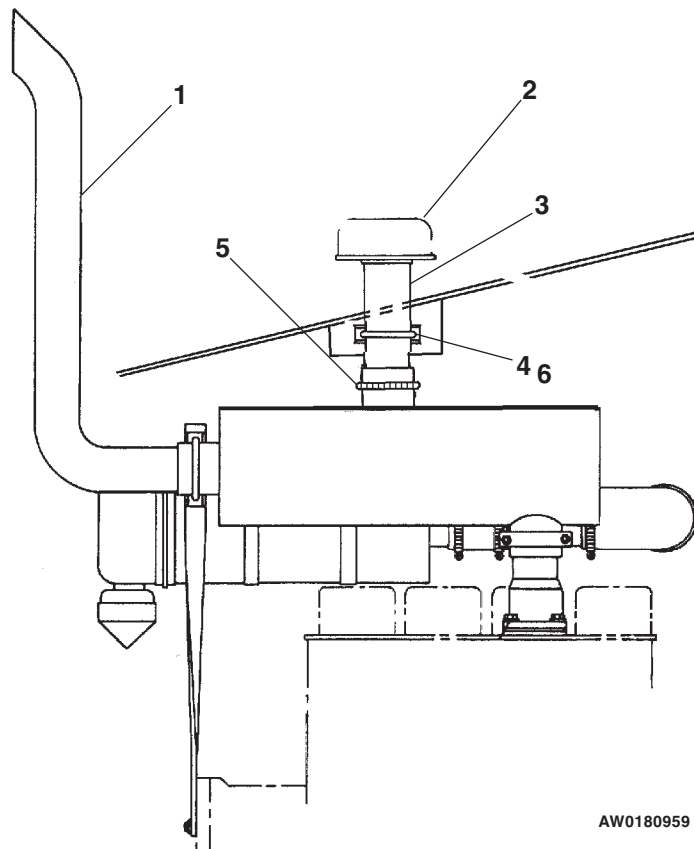


AW0180958



Exhaust and air cleaner, Cummins

item	part no	qty	description
1	0181663	1	Tail pipe
2	7630004	1	Air inlet hood
3	0170611	1	Air inlet tube
4	5550039	1	Clamp
5	5550050	1	Clamp
6	986299	1	Washer 3/8 medium flat



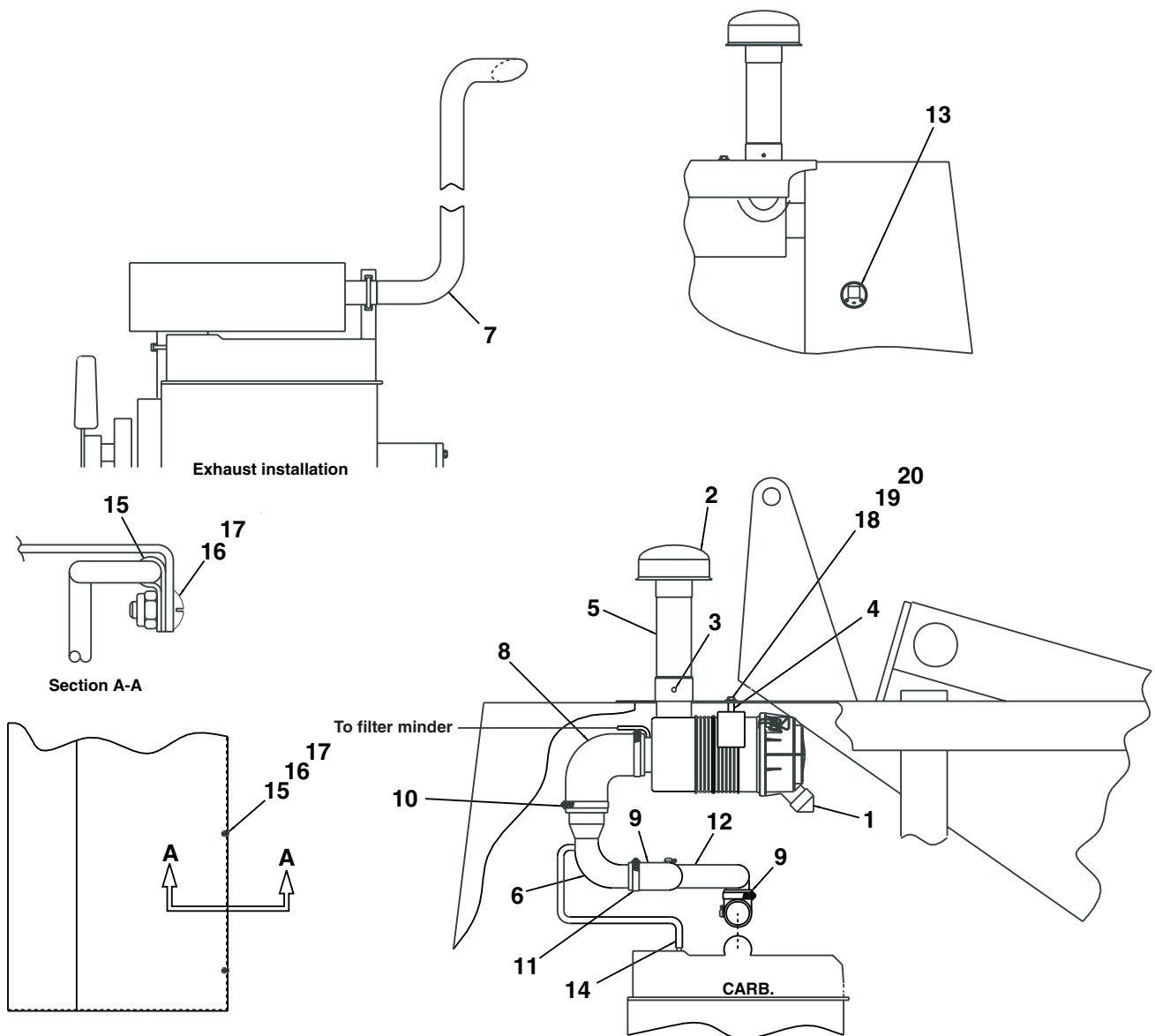
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**Exhaust and air cleaner, Ford**

item	part no	qty	description
1	7630689	1	Air cleaner, Ford LRG-425
	8140006	1	Replacement primary filter element
2	7630004	1	Air inlet hood
3	5560658	3	Pop rivet #AD36-ABS
4	0071510-99	2	Spacer, air cleaner
5	0080679-99	1	Air inlet tube
6	0082123-99	1	Air cleaner elbow
7	0111959	1	Tail pipe
8	7630016	1	Elbow, 3 inch 90° rubber
9	7630197	2	Elbow, 2 inch 90° rubber
10	5550050	2	Clamp
11	5550040	4	Clamp
12	0082694-99	1	Tube elbow
13	7630140	1	Filter condition indicator
14	5010020	1	Emission control hose 5/8 inch diameter
15	5090302	1	Tube clamp
16	5560609	4	Machine screw #10-24 x 1/2 inch long truss head
17	5560034	4	Nut #10-24 self locking
18	5560357	2	Capscrew metric 8M-1.25 x 25mm long hex head)
19	986299	8	Washer 3/8 medium flat
20	5560033	4	Nut 3/8-16 self locking



Exhaust and air cleaner, Ford

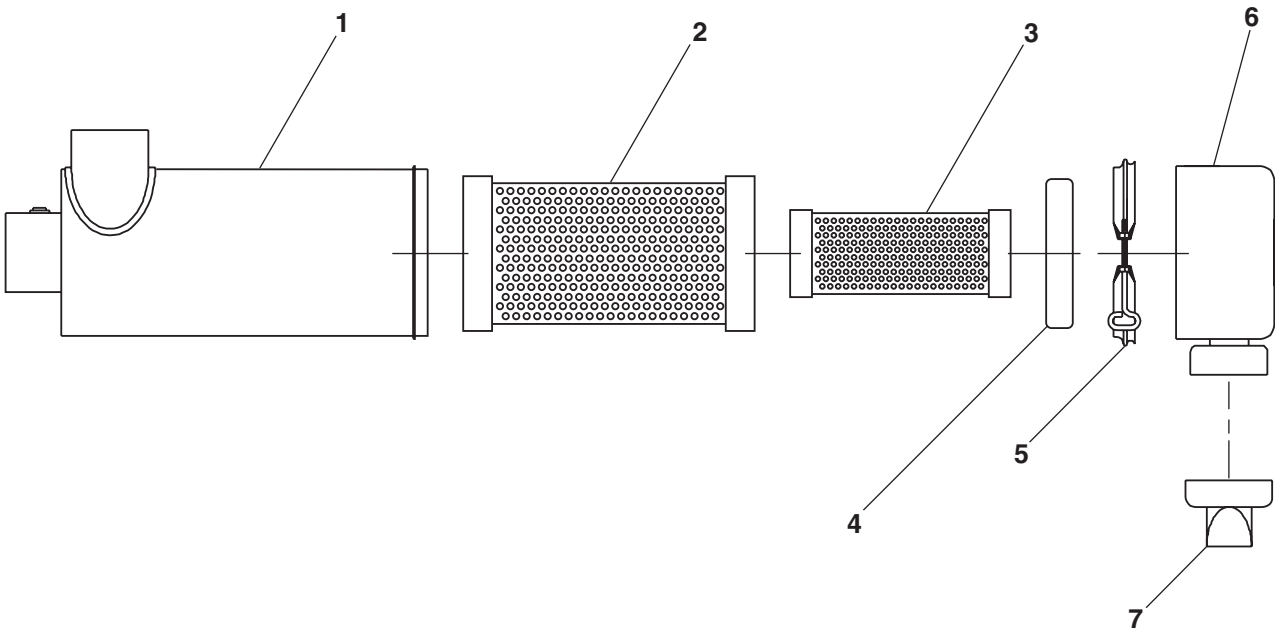


AW0082695



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

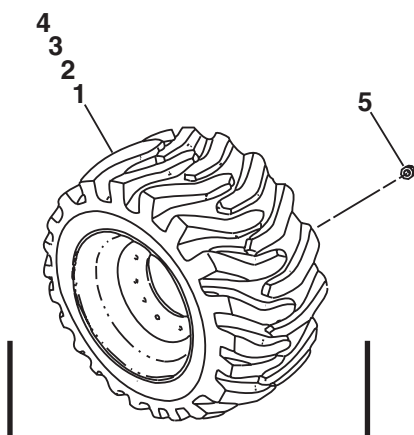


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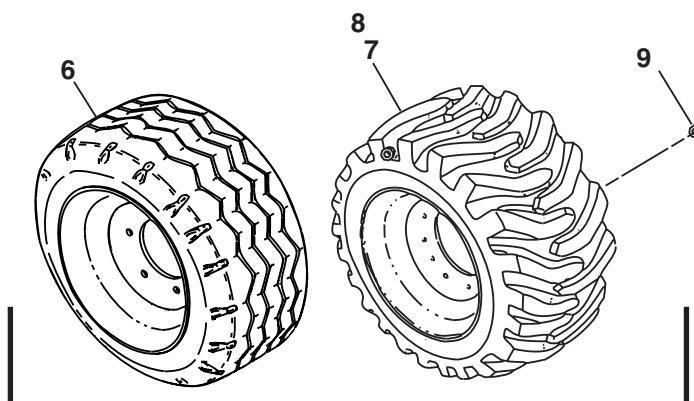


Tires and wheels

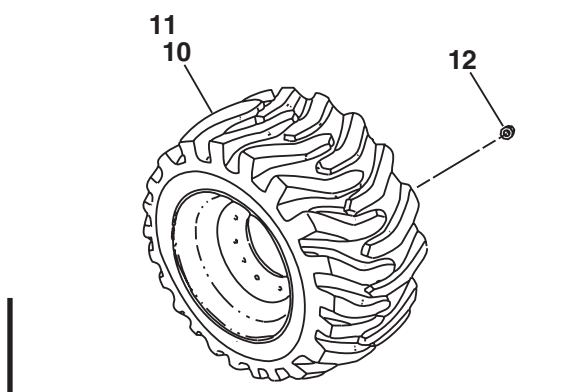
item	part no	qty	description
Standard on 4x2, foam filled lugged tires			
1	0080365	1	Tire and wheel, foam filled right hand 15-19.5 14 ply steer
2	0181013	1	Tire and wheel, foam filled right hand 15-19.5 12 ply drive
3	0082185	1	Tire and wheel, foam filled left hand 15-19.5 14 ply steer
4	0181014	1	Tire and wheel, foam filled left hand 15-19.5 12 ply drive
5	7280010	40	Wheel nut
Optional on 4x2, foam filled non-lugged tires			
6	0082205	2	Tire and wheel, foam filled 15-19.5 14 ply highway tread
7	0181013	1	Tire and wheel, foam filled right hand 15-19.5 12 ply drive
8	0181014	1	Tire and wheel, foam filled right hand 15-19.5 12 ply drive
9	7280010	40	Wheel nut
Standard on 4x4, foam filled lugged tires			
10	0181013	2	Tire and wheel, foam filled right hand 15-19.5 12 ply drive
11	0181014	2	Tire and wheel, foam filled right hand 15-19.5 12 ply drive
12	7280010	40	Wheel nut
Optional on 4x4, foam filled highway tread tires			
13	0181311	3	Tire and wheel, foam filled 15-19.5 14 ply highway tread
14	7280010	40	Wheel nut



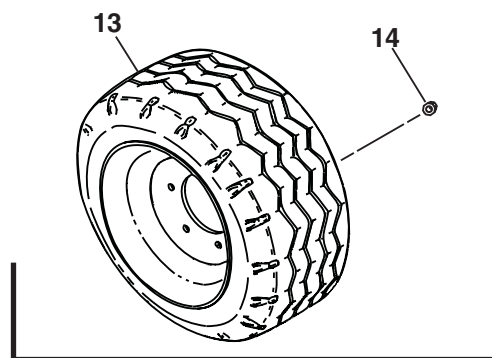
Standard 4x2 lugged tires



Optional 4x2 non-lugged tires



Standard 4x4 lugged tires



Optional highway tread tires

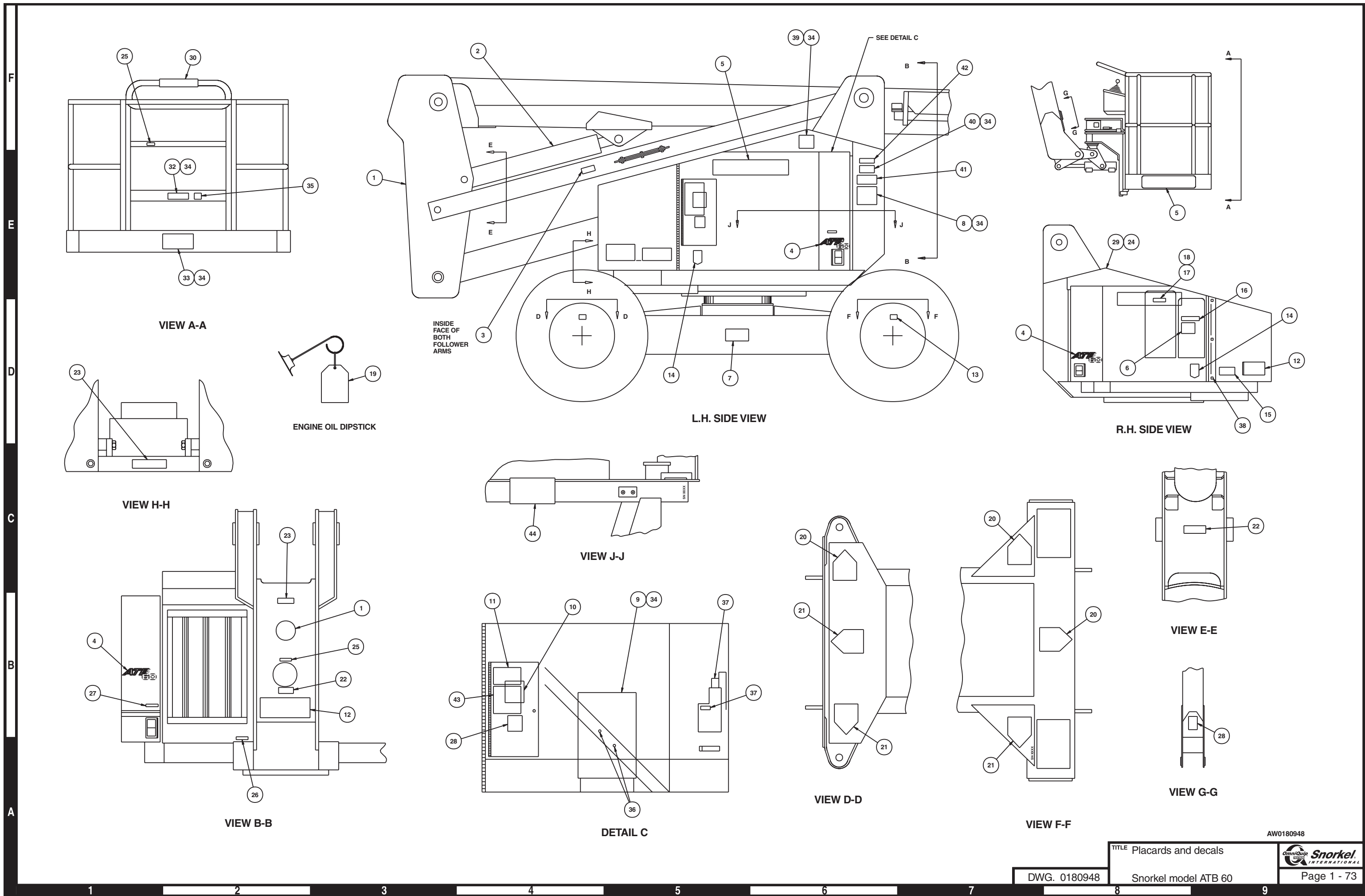
Do not mix tire sizes or brands on any one machine.

AWM00291



Placards and decals

item	part no	qty	description
1	7030004	2	Decal, OmniQuip logo
2	0074311	8	Decal, danger cylinder failure - (1 per cylinder)
3	0181041	2	Decal, caution secure crossbars
4	0181685	2	Decal, ATB 60 logo
5	560239	4	Decal, Snorkel brand logo
6	7030003	1	Decal, lube recommendations
7	0073298	2	Placard, danger foam filled tires
8	0070901	1	Placard, caution serial number
9	0073623	1	Record box
10	0323897	1	Decal, danger you must not operate
11	0074209	1	Placard, pre-start instructions
12	0323896	3	Decal, danger electrical hazard
13	0072276	4	Placard, lug nut torque
14	0073585	2	Decal, made in USA
15	0111390	2	Decal, 4 x 4 logo - (4 wheel drive machine)
16	0071927	1	Decal, hydraulic oil
17	0071925	1	Decal, gasoline fuel
18	0071926	1	Decal, diesel fuel
19	0073139	1	Crankcase oil tag - (used for shipping only)
20	0070540	3	Decal, yellow arrow
21	0070541	3	Decal, blue arrow
22	0100164	1	Placard, emergency bleed down valve
23	0150602	2	Decal, danger descending boom
24	9980022	1	Plug 4 inch diameter
25	0070921	2	Placard, 125 volts 15 amps
26	0073492	1	Decal, rotate while greasing
27	0073491	1	Decal, safe operation information
28	0323899	2	Decal, danger electrical hazard
29	9980021	2	Plug 3-1/2 inch diameter
30	0072531	1	Decal, danger electrical hazard
31	7050004	1	Record pouch
32	0071425	1	Placard, platform identification
33		1	Placard, platform capacity - (consult factory)
34	5560655	12	Pop rivet #AD32-ABS
35	0150448	1	Decal, attach fall restraint
36	5569876	2	Pop rivet #AD34-ABS
37	0151410	2	Decal, danger rotating engine parts
38	5560080	6	Bumper
39	0081377	2	Decal, LPS logo - (LP fuel only)
40	0181371	1	Decal, FM approved
41	0181562	1	Placard, ANSI standard
42	0181593	1	Placard, Ford LPS
43	0074210	1	Decal, danger electrical/tipping hazard

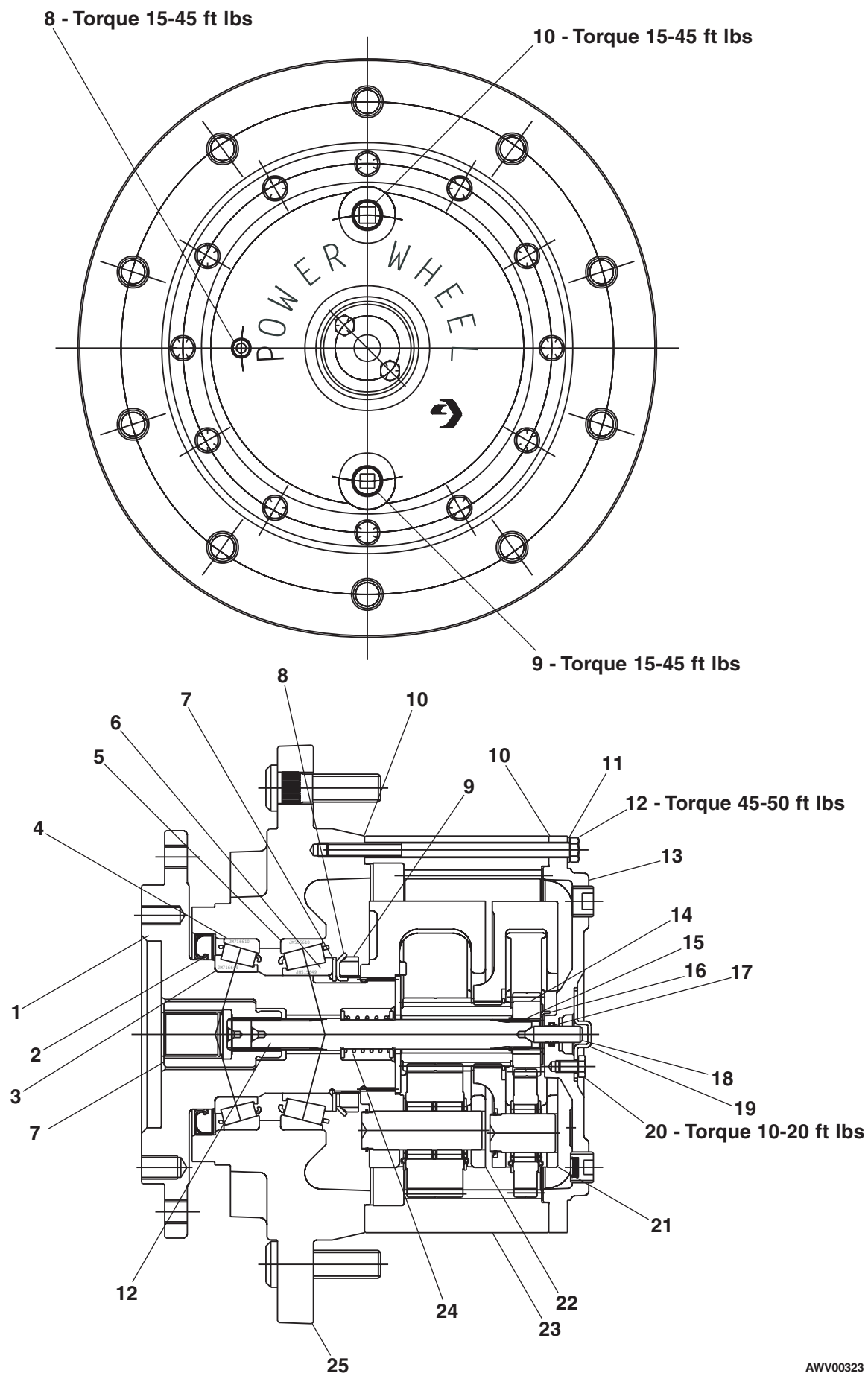


**Gear hub, Auburn Gear**

item	part no	qty	description
	0180961	1	Gear hub. Auburn Gear
1	0181890	1	Spindle
2	8010027	1	Oil seal
3	8010030	1	Bearing cone
4	8010029	1	Bearing cup
5	0112217	1	Bearing cup
6	0112218	1	Bearing cone
7	0181891	1	Coupling
8	0112227	1	Pipe plug
9	8010028	1	Magnetic plug
10	8010021	1	Pipe plug
11	8010105	12	Flat washer
12	0112226	1	Input shaft
13	0112219	1	Cover
14	0112220	1	Sun gear
15	8010145	2	Retaining ring
16	8010075	1	Thrust washer
17	8010149	1	O-ring
18	8010143	1	Plunger
19	8010080	1	Disengage cover
20	8010168	2	Capscrew hex head
21	0112221	1	Carrier
22	0112222	1	Carrier
23	0112223	1	Gear ring
24	0112224	1	Disengage spring
25	0112225	1	Hub



Gear hub, Auburn Gear



AWV00323

**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)

31 - torque 60-70 ft lb

32 - torque 15-45 ft lb

30 - torque 4-8 ft lb

29 - torque 15-45 ft lb

Technical drawing of a circular mechanical component, likely a valve or flange, showing various bolt circles and torque specifications. The drawing includes a central circular area with a crosshair and a small arrow pointing upwards. The outermost circle is labeled with torque specifications: 31 - torque 60-70 ft lb (top-left), 32 - torque 15-45 ft lb (top-right), 30 - torque 4-8 ft lb (bottom-right), and 29 - torque 15-45 ft lb (bottom-left). The drawing also shows a series of concentric circles and lines indicating the positions of bolts and other components.

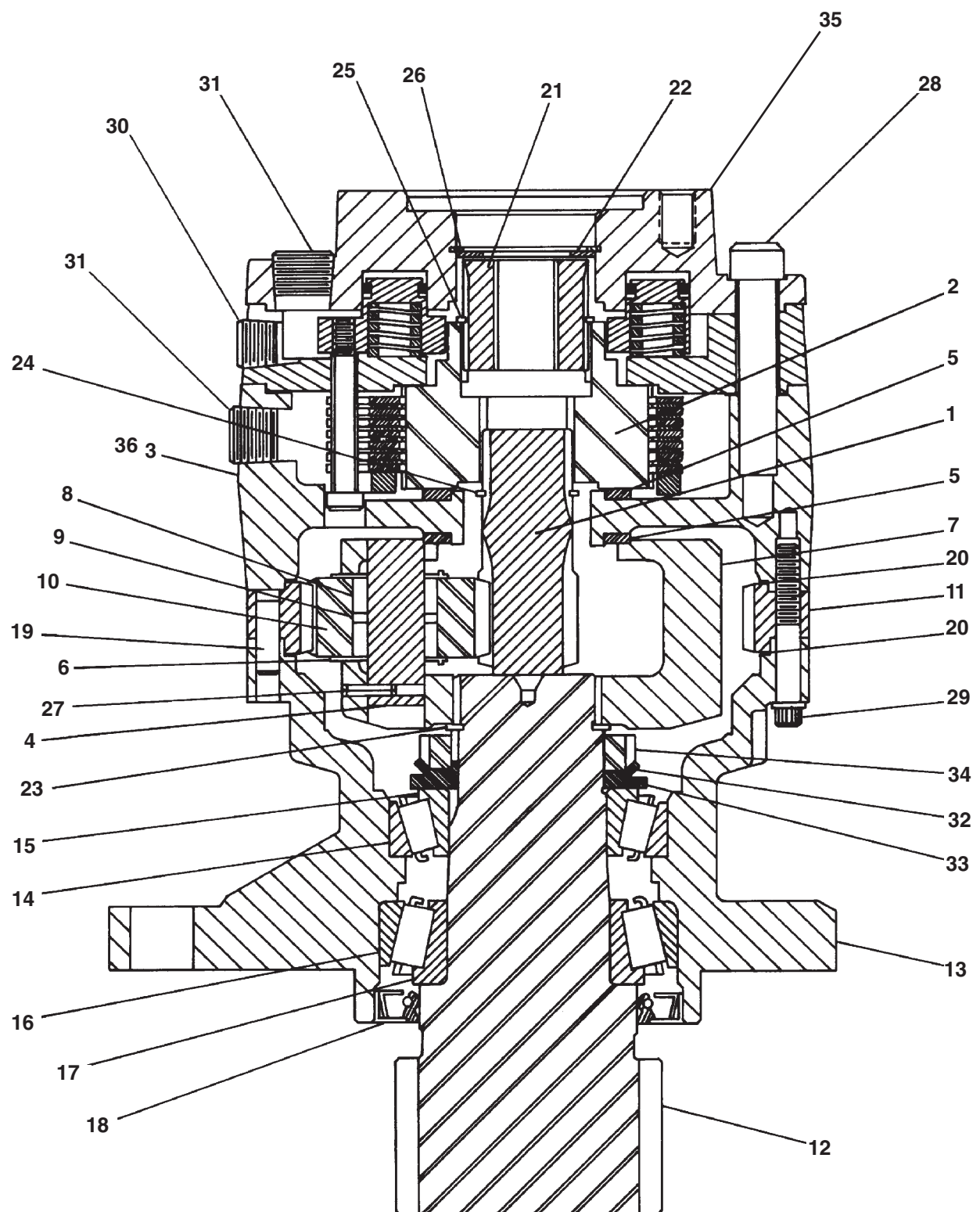


**Swing drive, Fairfield**

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



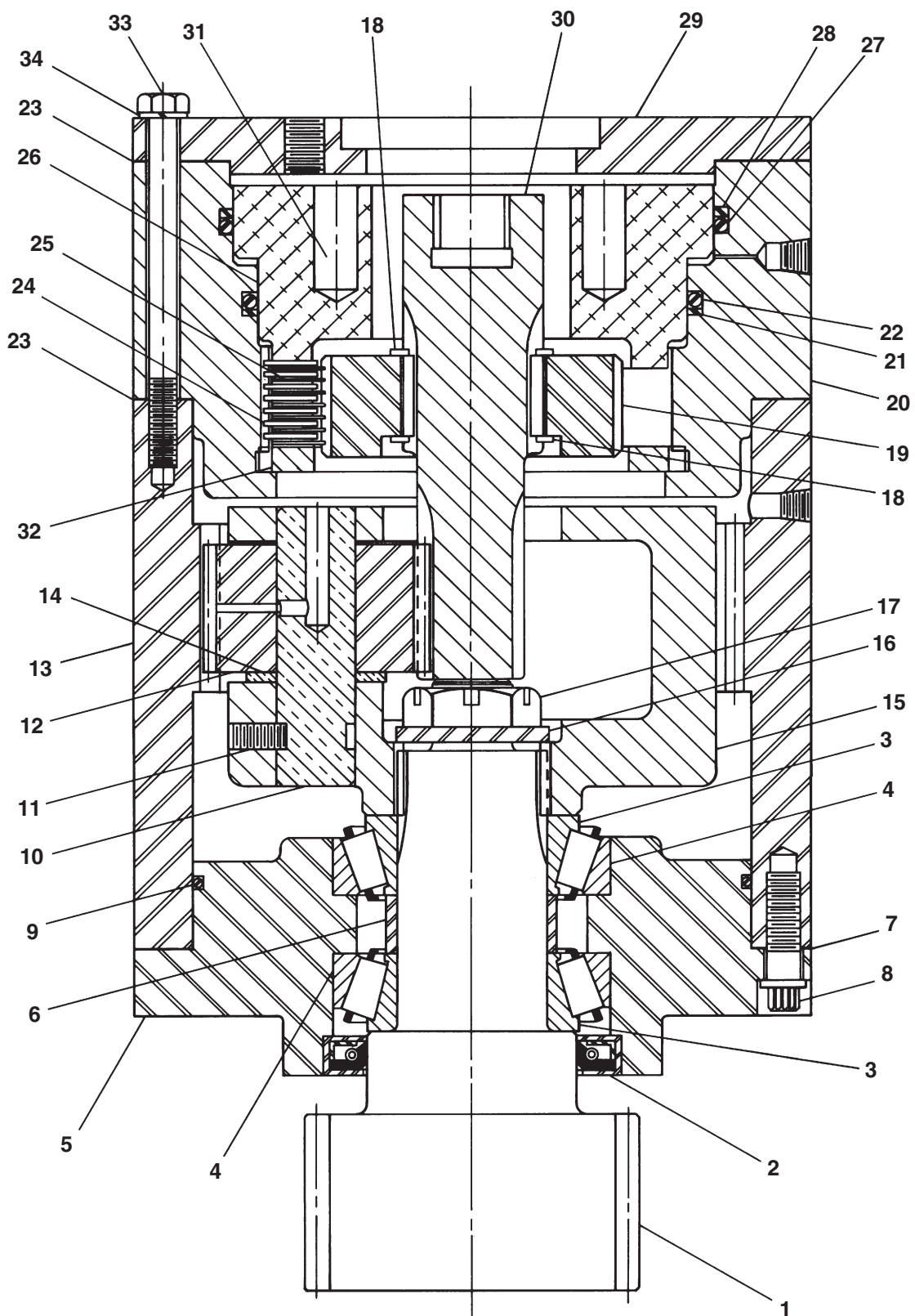
AWV00201

**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)
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



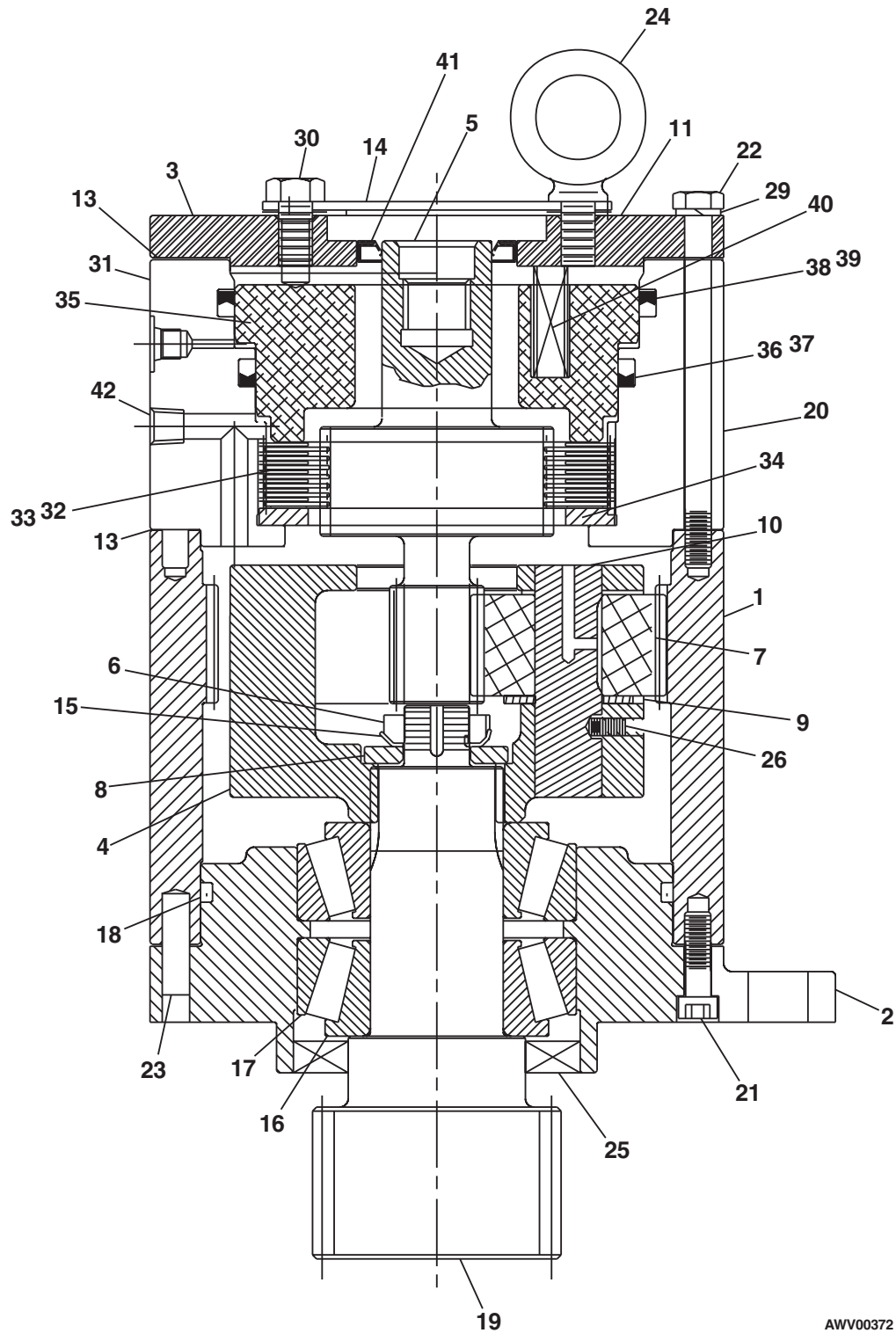
AWV00202

**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



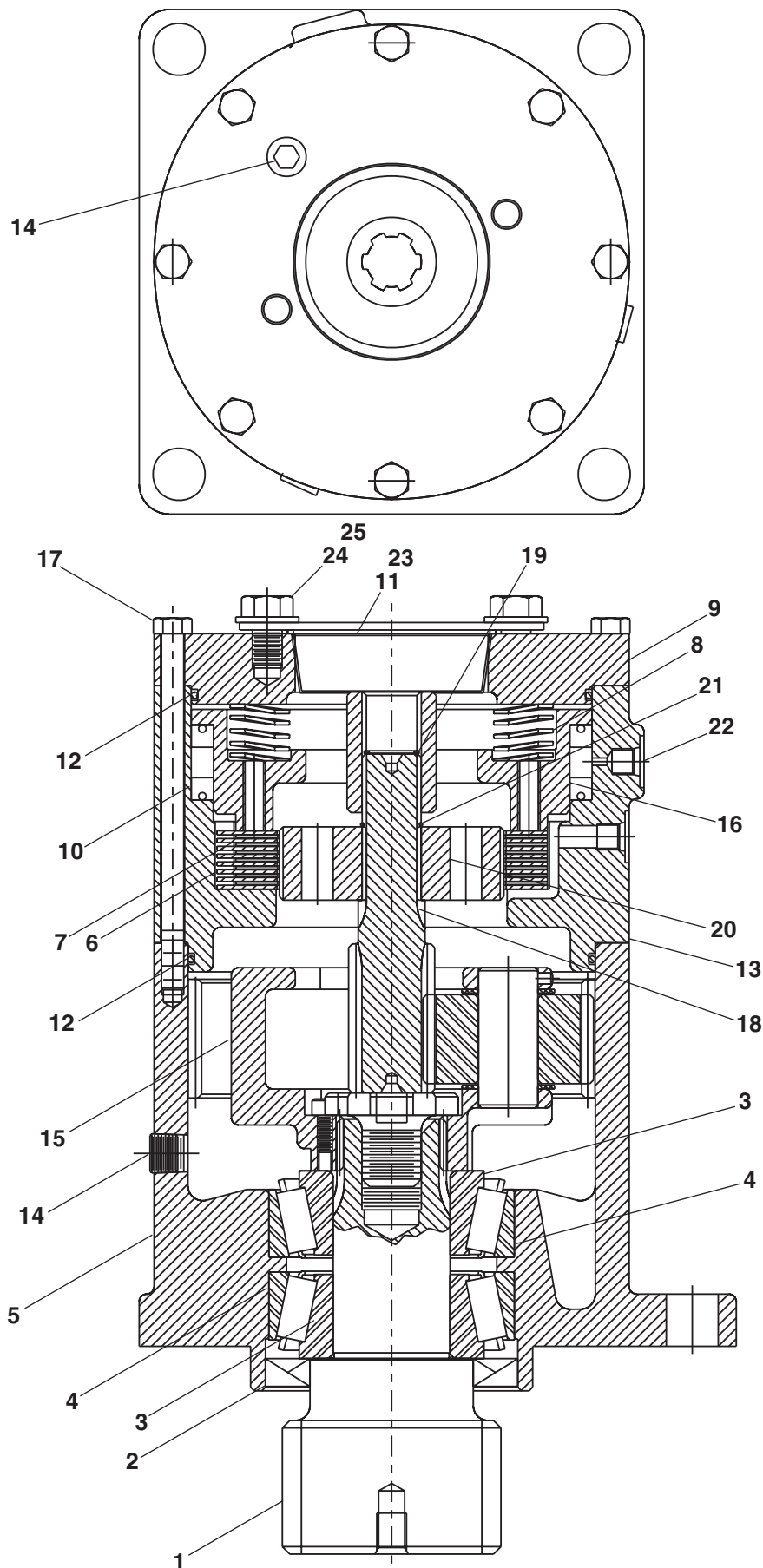
AWV00372

**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



AWV00203





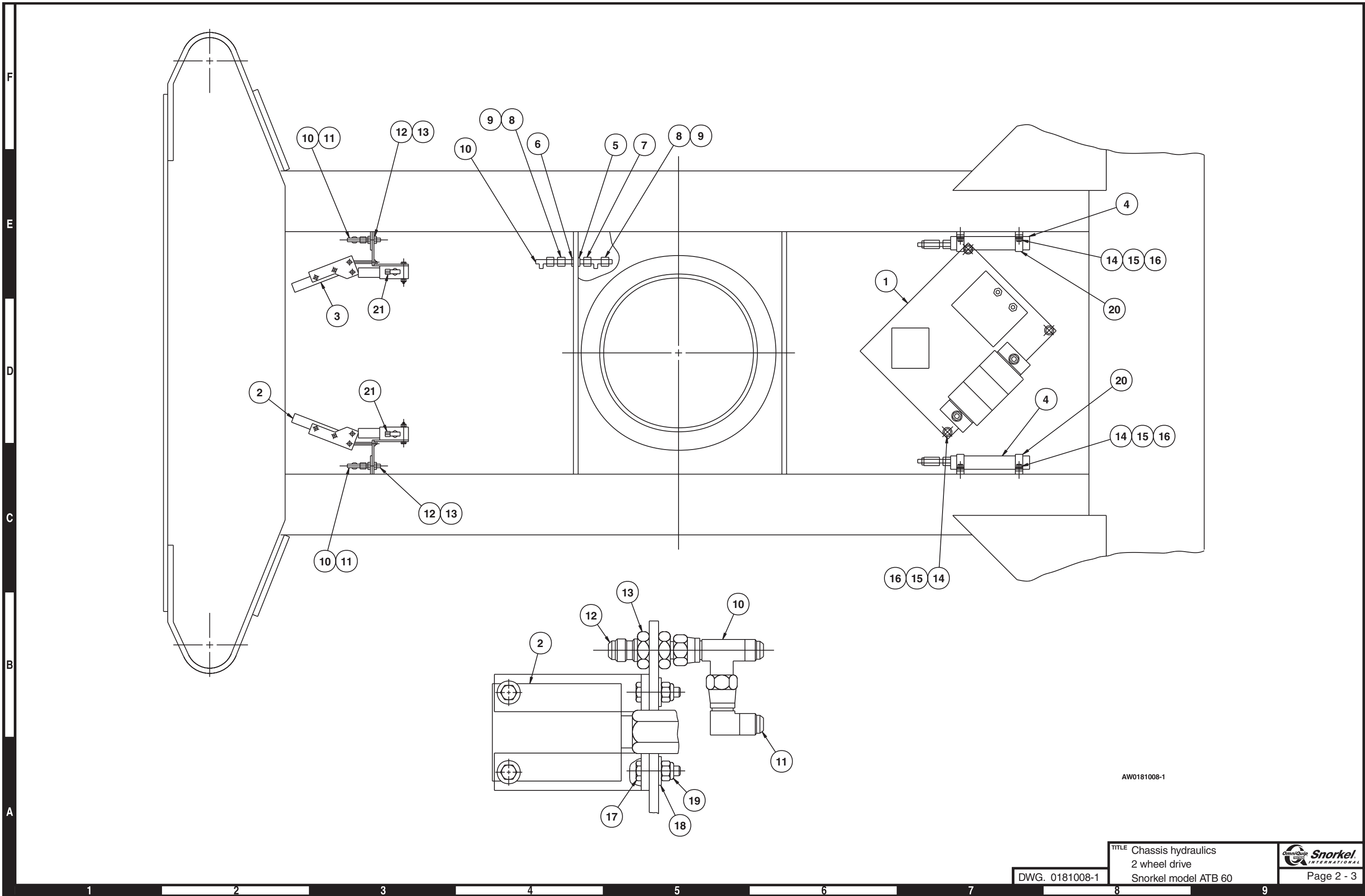
Section 2. - Hydraulics

ATB **60**



**Chassis hydraulics, 2 wheel drive**

item	part no	qty	description
1	0181084	1	Motion control valve, 2 wheel drive - (see page 2-18 for parts breakdown)
2	0180817	1	Steer switch valve, left hand - (see page 2-89 for parts breakdown)
3	0180816	1	Steer switch valve, right hand - (see page 2-90 for parts breakdown)
4	0181083	2	Accumulator, chassis - (see page 2-33 for parts breakdown)
5	5034404	1	Bulkhead union
6	5074404	1	Bulkhead locknut
7	5036706	1	Swivel nut run tee
8	5064003	2	Tube end reducer
9	5063906	2	Fitting nut
10	5036705	2	Swivel nut run tee
11	5037005	2	Swivel nut 90° elbow
12	5034403	2	Bulkhead union
13	5074403	2	Bulkhead locknut
14	970449	7	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
15	986299	7	Washer 3/8 medium flat
16	987119	7	Washer 3/8 medium lock
17	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
18	986019	4	Washer 1/4 medium flat
19	5560004	4	Nut 1/4-20 self locking
20	5093014	4	Clamp
21	5063701	2	Cap



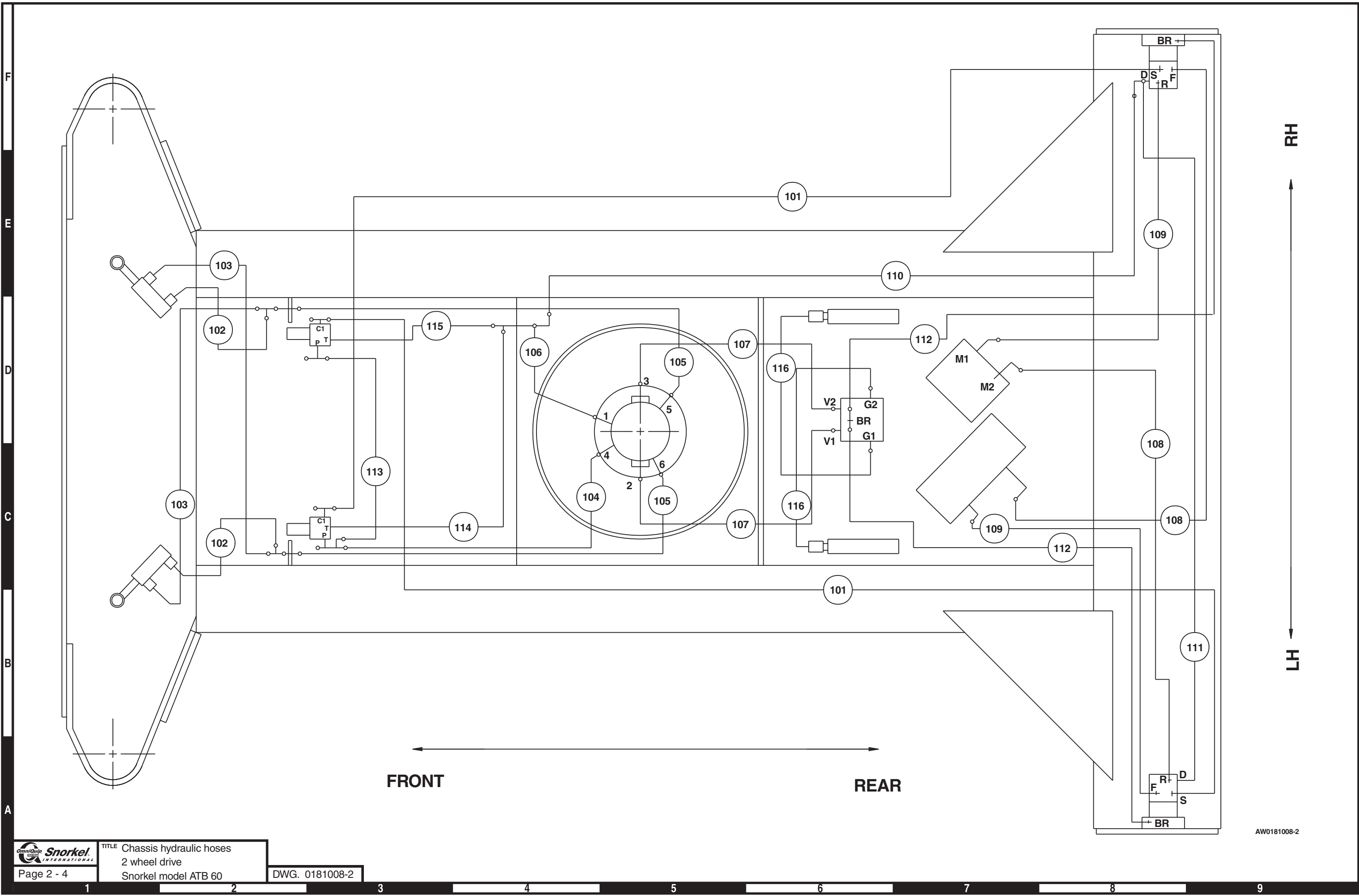
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TITLE Chassis hydraulics
2 wheel drive
Snorkel model ATB 60



Page 2 - 3





Chassis hydraulic hoses, 2 wheel drive

item	part no	qty	description
1	0181163	2	1/4 inch hydraulic hose
2	0070774	2	1/4 inch hydraulic hose
3	0090299	2	1/4 inch hydraulic hose
4	0070910	1	1/4 inch hydraulic hose
5	0020279	2	3/8 inch hydraulic hose
6	0151213	1	1/2 inch hydraulic hose
7	0180781	2	1/4 inch hydraulic hose
8	0180778	2	5/8 inch hydraulic hose
9	0180777	2	5/8 inch hydraulic hose
10	0070789	1	3/8 inch hydraulic hose
11	0070764	1	3/8 inch hydraulic hose
12	0070772	2	1/4 inch hydraulic hose
13	0020280	1	1/4 inch hydraulic hose
14	0070779	1	1/4 inch hydraulic hose
15	0070777	1	1/4 inch hydraulic hose
16	0070792	2	1/2 inch hydraulic hose

**Chassis hydraulics, 4 wheel drive**

item	part no	qty	description
1	0180807	1	Motion control valve, 4 wheel drive - (see page 2-18 for parts breakdown)
2	0180855	1	Front transmission valve - (see page 2-73 for parts breakdown)
3	0180856	1	Rear transmission valve - (see page 2-85 for parts breakdown)
4	0180817	1	Steer switch valve, left hand - (see page 2-89 for parts breakdown)
5	0180816	1	Steer switch valve, right hand - (see page 2-90 for parts breakdown)
6	5034404	1	Bulkhead union
7	5074404	1	Bulkhead locknut
8	5036706	1	Swivel nut run tee
9	5064003	2	Tube end reducer
10	5063906	2	Fitting nut
11	5090034	1	Hose guard x 102 inch long
12	5036705	2	Swivel nut run tee
13	5037005	2	Swivel nut 90° elbow
14	5035405	2	Bulkhead run tee
15	5074403	2	Bulkhead locknut
16	970449	5	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
17	986299	13	Washer 3/8 medium flat
18	987119	13	Washer 3/8 medium lock
19	970619	4	Capscrew 3/8-16 x 4-3/4 inch long hex head grade 5
20	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
21	986019	4	Washer 1/4 medium flat
22	5560004	4	Nut 1/4-20 self locking
23	0181083	2	Accumulator, chassis - (see page 2-33 for parts breakdown)
24	5093012	6	Clamp



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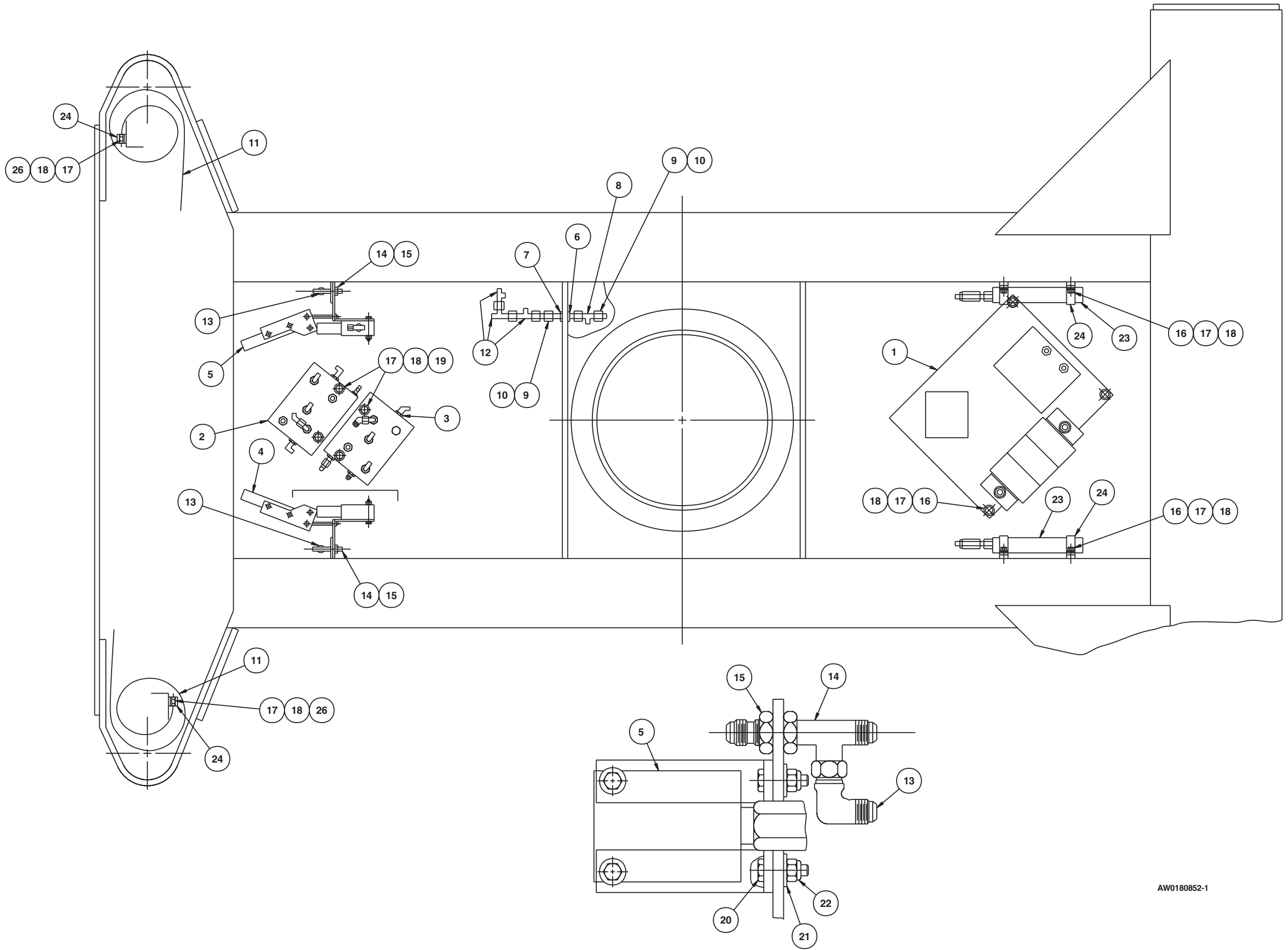
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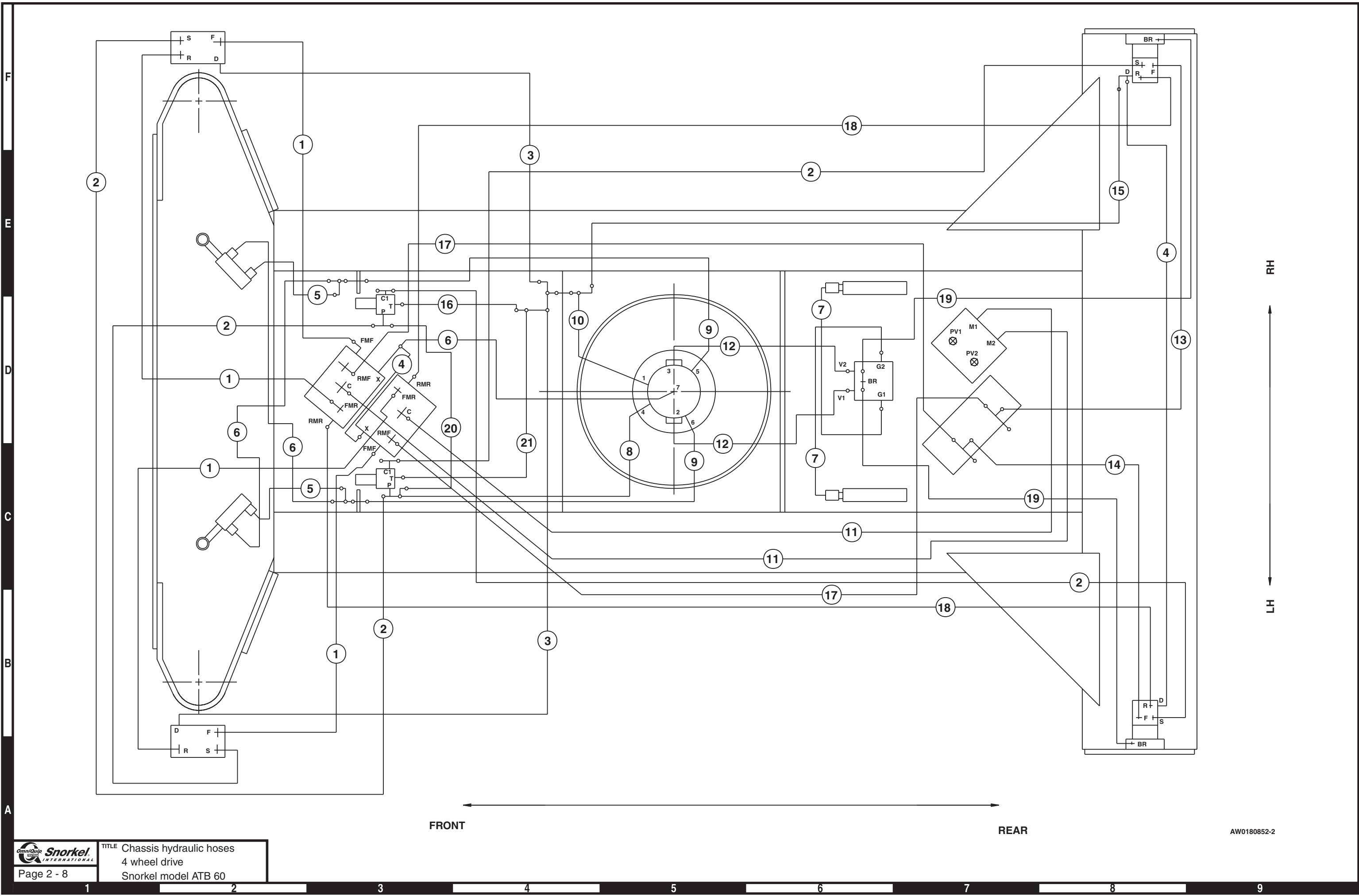
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TITLE Chassis hydraulics
4 wheel drive
Snorkel model ATB 60



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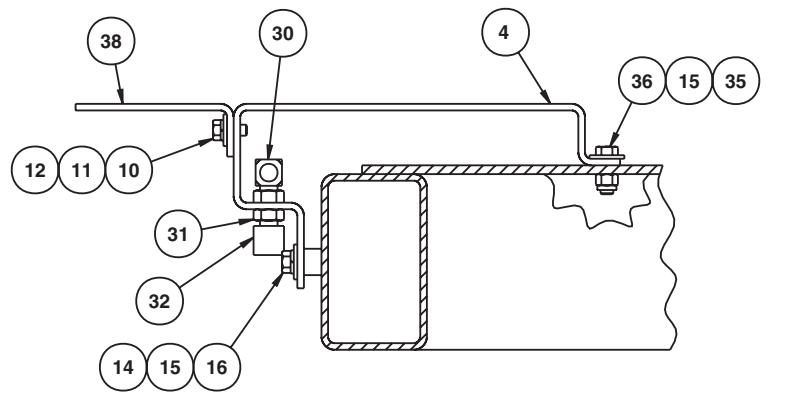
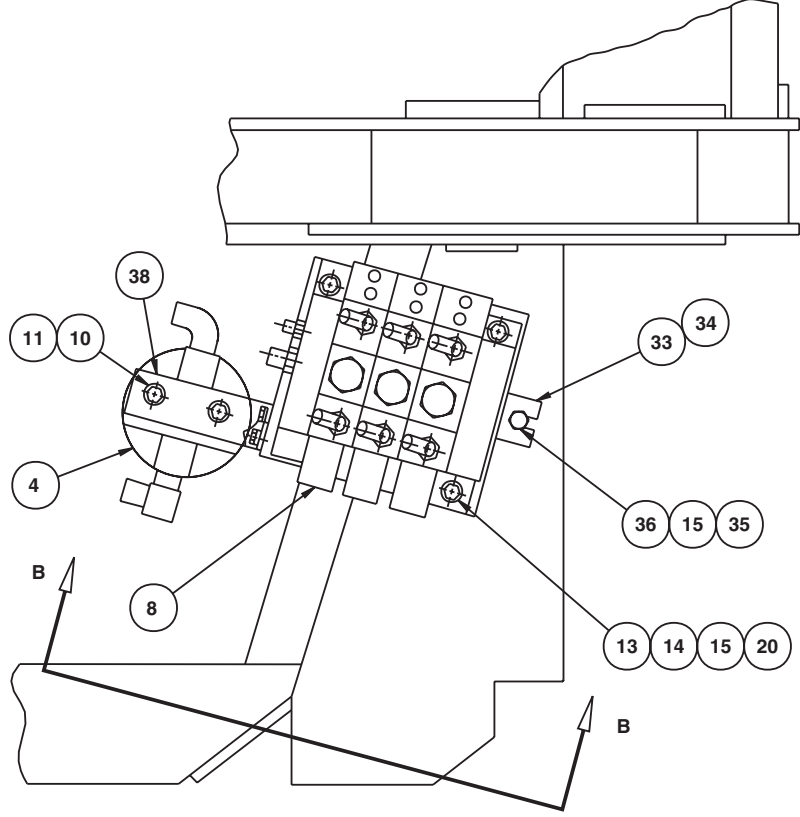
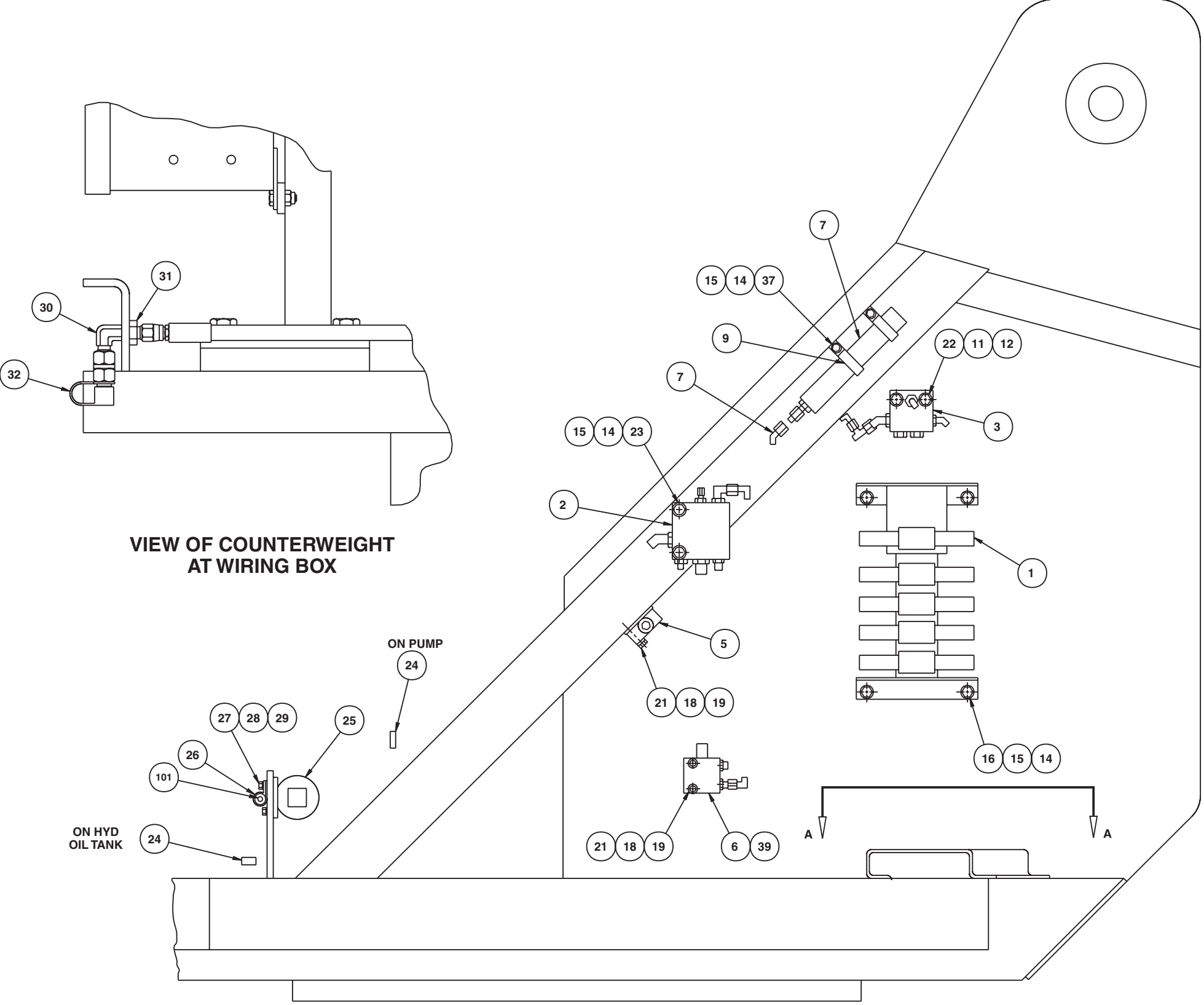
**Chassis hydraulic hoses, 4 wheel drive**

item	part no	qty	description
1	0180784	4	1/2 inch hydraulic hose
2	0181163	4	1/4 inch hydraulic hose
3	0080360	2	1/4 inch hydraulic hose
4	0070764	2	3/8 inch hydraulic hose
5	0070774	2	1/4 inch hydraulic hose
6	0090299	3	1/4 inch hydraulic hose
7	0070792	2	1/2 inch hydraulic hose
8	0070910	1	1/4 inch hydraulic hose
9	0020279	2	3/8 inch hydraulic hose
10	0151213	1	1/2 inch hydraulic hose
11	0180779	2	5/8 inch hydraulic hose
12	0180781	2	1/4 inch hydraulic hose
13	0180778	1	5/8 inch hydraulic hose
14	0180777	1	5/8 inch hydraulic hose
15	0070789	1	3/8 inch hydraulic hose
16	0070777	1	1/4 inch hydraulic hose
17	0180776	2	1/2 inch hydraulic hose
18	0180780	2	1/4 inch hydraulic hose
19	0070772	2	1/4 inch hydraulic hose
20	0020280	1	1/4 inch hydraulic hose
21	0070779	1	1/4 inch hydraulic hose

**Turntable hydraulics, 2 wheel drive**

item	part no	qty	description
1	0180863	1	Control valve and fittings, Vickers - (see page 2-20 for parts breakdown)
	0181538	1	Control valve and fittings, Weco - (see page 2-23 for parts breakdown)
2	0180864	1	Check valve - (see page 2-36 for parts breakdown)
3	0181539	1	Dual relief/anti-cavitation valve - (Ford only, see page 2-68 for parts breakdown)
	0180865	1	Dual relief/anti-cavitation valve - (all other machines, see page 2-68 for parts breakdown)
4	0181671	1	Hydraulic oil filter - (Ford only, see page 2-78 for parts breakdown)
	0181672	1	Hydraulic oil filter - (all other machines, see page 2-78 for parts breakdown)
5	0181541	1	Sense line dump valve - (see page 2-86 for parts breakdown)
6	0180890	1	Speed shift valve, 2 wheel drive - (see page 2-87 for parts breakdown)
7	0082055	1	Accumulator, turntable - (see page 2-34 for parts breakdown)
8	0180869	1	Control valve and fittings, drive/lift/swing - (see page 2-28 for parts breakdown)
9	5093014	2	Clamp
10	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
11	987109	6	Washer 5/16 medium lock
12	986269	4	Washer 5/16 medium flat
13	970499	3	Capscrew 3/8-16 x 1-3/4 inch long hex head grade 5
14	987119	13	Washer 3/8 medium lock
15	986299	17	Washer 3/8 medium flat
16	970449	6	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
17	5036903	1	Swivel nut 45° elbow
18	987099	4	Washer 1/4 medium lock
19	986019	4	Washer 1/4 medium flat
20	984109	3	Nut 3/8-16 hex
21	5569886	4	Capscrew 1/4-20 x 1-3/4 inch long hex head grade 5
22	5560641	2	Capscrew 5/16-18 x 3-1/2 inch long hex head grade 5
23	970529	2	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
24	5058824	2	Clamp, suction hose
25	0072940	1	Emergency power unit - (see page 2-69 for parts breakdown)
26	5093013	1	Clamp
27	970479	2	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
28	986299	2	Washer 3/8 medium flat
29	987119	2	Washer 3/8 medium lock
30	5034501	1	Bulkhead straight thread 90° elbow
31	5074401	1	Bulkhead locknut
32	5070005	1	Diagnostic nipple
33	5560082	1	Trim lock, 1/4 inch x 6 inch long
34	0181531	1	Valve mounting plate
35	5560033	1	Nut 3/8-16 self locking
36	970489	1	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
37	5560683	2	Capscrew 3/8-16 x 5/8 inch long hex head grade 5
38	0180836	1	Mounting bracket
39	0090403	1	Spacer

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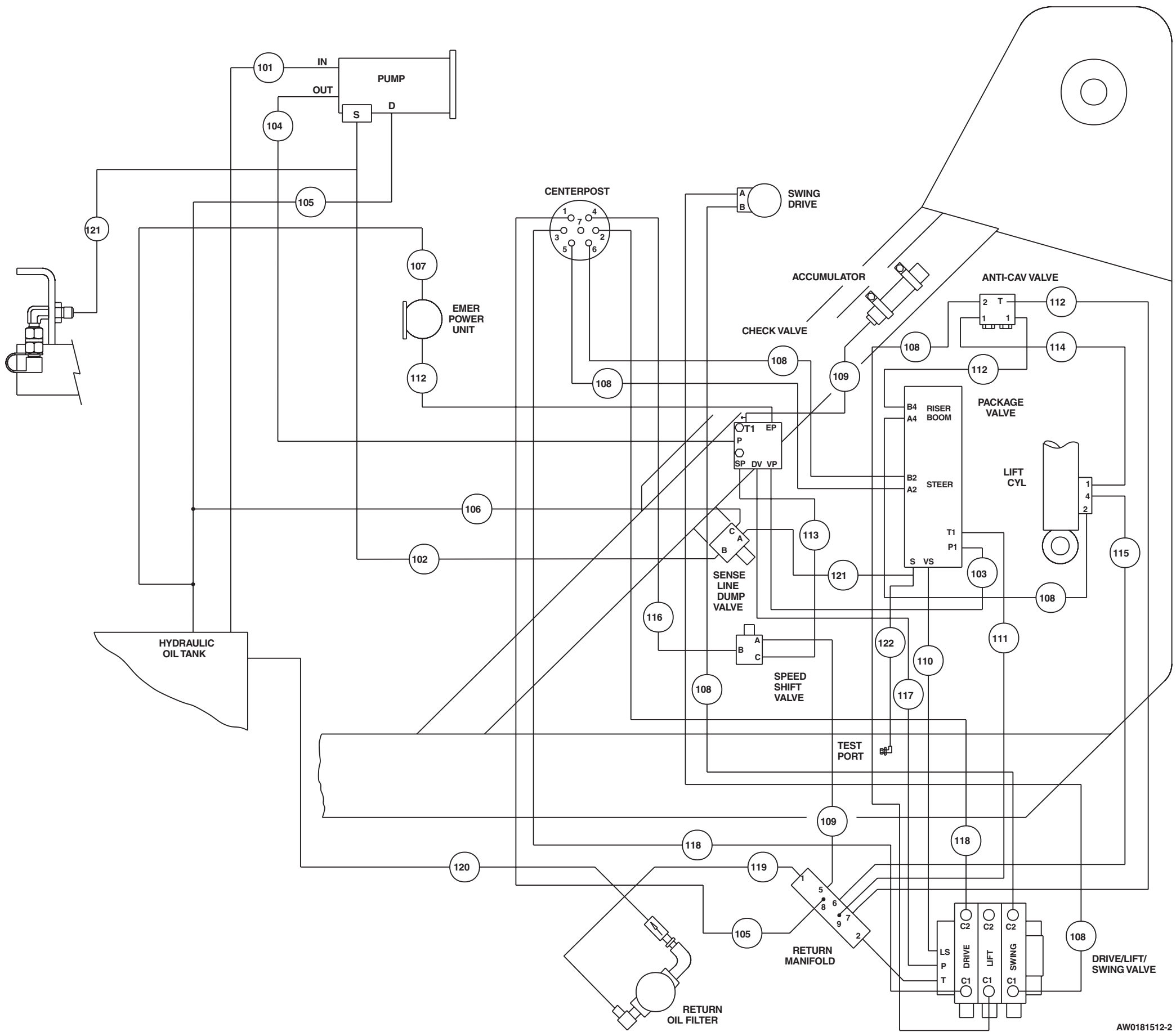
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TITLE Turntable hydraulic hoses
2 wheel drive
Snorkel model ATB 60

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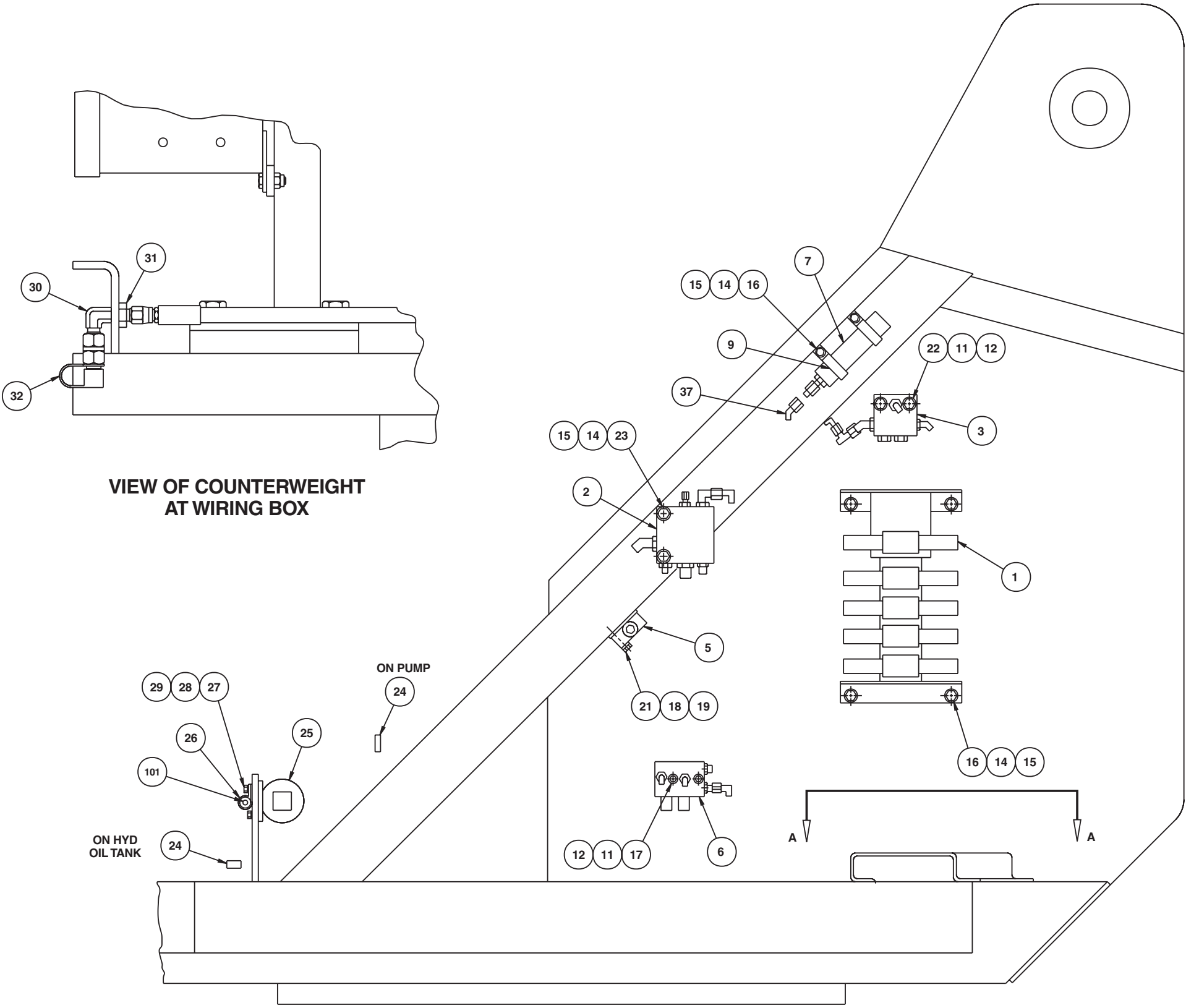
**Turntable hydraulic hoses, 2 wheel drive**

item	part no	qty	description
1	0080843	1	1-1/2 inch suction hose
2	0180945	1	1/4 inch hydraulic hose
3	0070792	1	1/2 inch hydraulic hose - (Continental, Cummins, Hatz)
	0080522	1	1/2 inch hydraulic hose - (Ford only)
4	0180806	1	1 inch hydraulic hose
5	0080522	2	1/2 inch hydraulic hose
6	0020276	1	3/8 inch hydraulic hose
7	0151213	1	1/2 inch hydraulic hose
8	0020279	6	3/8 inch hydraulic hose
9	0020283	2	1/4 inch hydraulic hose
10	0180946	1	1/4 inch hydraulic hose - (Continental, Cummins, Hatz)
	0100278	1	1/4 inch hydraulic hose - (Ford only)
11	0070926	1	1/2 inch hydraulic hose
12	0050401	3	3/8 inch hydraulic hose
13	0020270	1	3/8 inch hydraulic hose
14	0060305	1	3/8 inch hydraulic hose
15	0070772	2	1/4 inch hydraulic hose
16	0020281	1	1/4 inch hydraulic hose
17	0180781	1	1/4 inch hydraulic hose
18	0180805	2	1 inch hydraulic hose
19	0180943	1	1-1/4 inch hydraulic hose
20	0180944	1	1/4 inch hydraulic hose
21	0020280	2	1/4 inch hydraulic hose

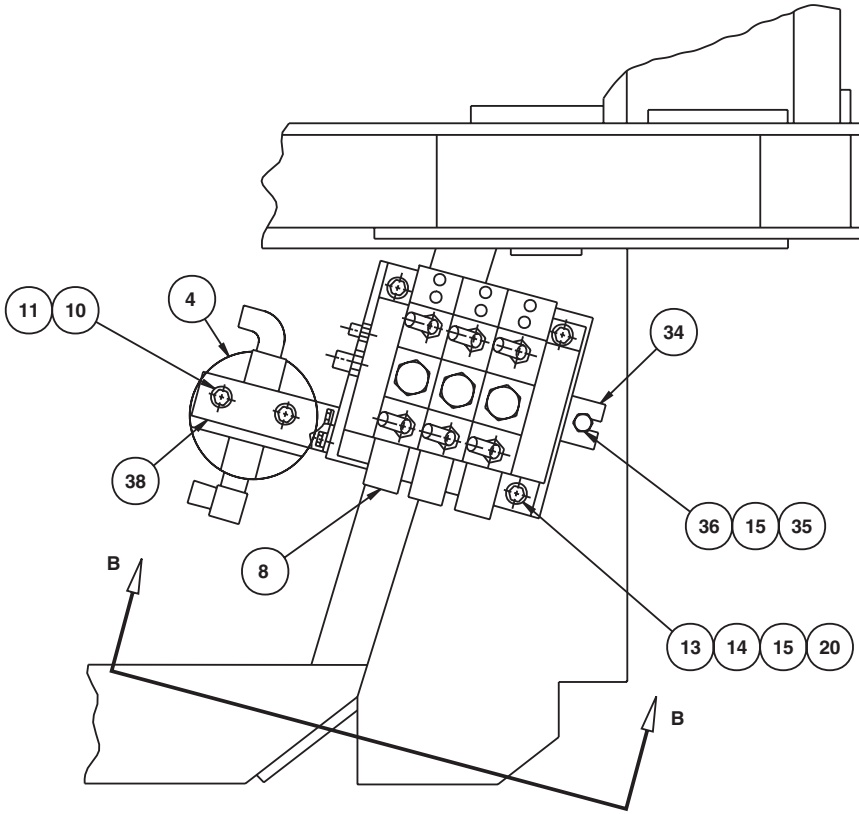
**Turntable hydraulics, 4 wheel drive**

item	part no	qty	description
1	0180863	1	Control valve and fittings, Vickers - (see page 2-20 for parts breakdown)
	0181538	1	Control valve and fittings, Weco - (see page 2-23 for parts breakdown)
2	0180864	1	Check valve - (see page 2-36 for parts breakdown)
3	0181539	1	Dual relief/anti-cavitation valve - (Ford only, see page 2-68 for parts breakdown)
	0180865	1	Dual relief/anti-cavitation valve - (all other machines, see page 2-68 for parts breakdown)
4	0181671	1	Hydraulic oil filter - (Ford only, see page 2-78 for parts breakdown)
	0181672	1	Hydraulic oil filter - (all other machines, see page 2-78 for parts breakdown)
5	0181541	1	Sense line dump valve - (see page 2-86 for parts breakdown)
6	0180866	1	Speed shift valve, 4 wheel drive - (see page 2-88 for parts breakdown)
7	0082055	1	Accumulator, turntable - (see page 2-34 for parts breakdown)
8	0180869	1	Control valve and fittings, drive/lift/swing - (see page 2-28 for parts breakdown)
9	5093014	2	Clamp
10	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
11	987109	8	Washer 5/16 medium lock
12	986269	6	Washer 5/16 medium flat
13	970499	3	Capscrew 3/8-16 x 1-3/4 inch long hex head grade 5
14	987119	13	Washer 3/8 medium lock
15	986299	17	Washer 3/8 medium flat
16	970449	8	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
17	970319	2	Capscrew 5/16-18 x 2-1/2 inch long hex head grade 5
18	987099	2	Washer 1/4 medium lock
19	986019	2	Washer 1/4 medium flat
20	984109	3	Nut 3/8-16 hex
21	5569886	2	Capscrew 1/4-20 x 1-3/4 inch long hex head grade 5
22	5560641	2	Capscrew 5/16-18 x 3-1/2 inch long hex head grade 5
23	970529	2	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
24	5058824	2	Clamp, suction hose
25	0072940	1	Emergency power unit - (see page 2-69 for parts breakdown)
26	5093013	1	Clamp
27	970719	2	Capscrew 7/16-14 x 1-1/4 inch long hex head grade 5
28	986179	2	Washer 7/16 medium flat
29	987129	2	Washer 7/16 medium lock
30	5034501	2	Bulkhead straight thread 90° elbow
31	5074401	2	Bulkhead locknut
32	5070005	2	Diagnostic nipple
33	5560082	1	Trim lock, 1/4 inch x 60 inch long
34	0181531	1	Valve mounting plate
35	5560033	1	Nut 3/8-16 self locking
36	970479	1	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
37	5036903	1	Swivel nut 45° elbow - (Ford only)
38	0180836	1	Mounting bracket

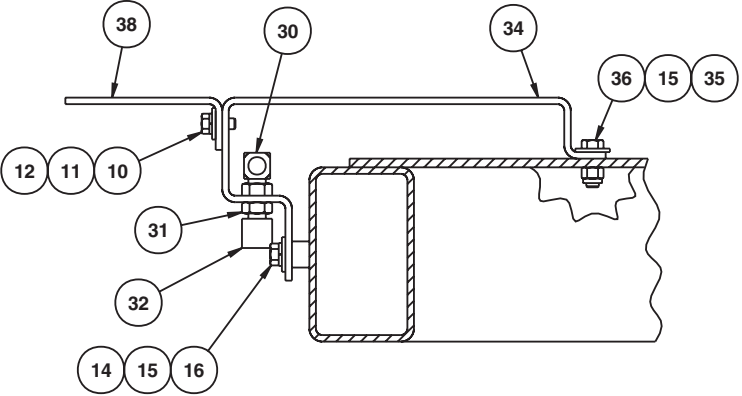
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VIEW OF COUNTERWEIGHT
AT WIRING BOX



VIEW A-A



VIEW B-B

AW0181511-1

DWG. 0181511-1

TITLE Turntable hydraulics
4 wheel drive
Snorkel model ATB 60

Snorkel
INTERNATIONAL
Page 2 - 15



F

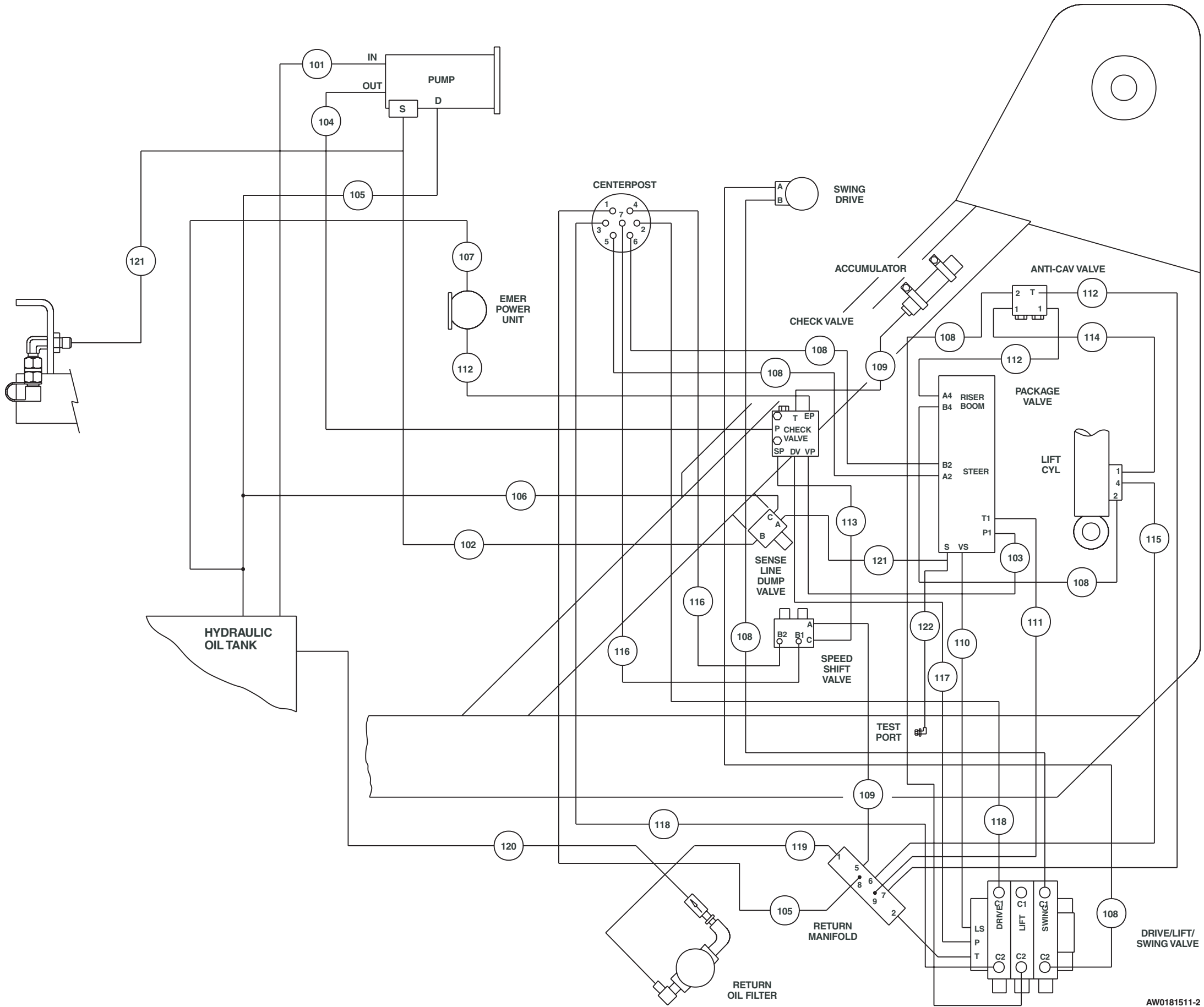
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TITLE Turntable hydraulic hoses
4 wheel drive
Snorkel model ATB 60

DWG. 0181511-2

AW0181511-2

**Turntable hydraulic hoses, 4 wheel drive**

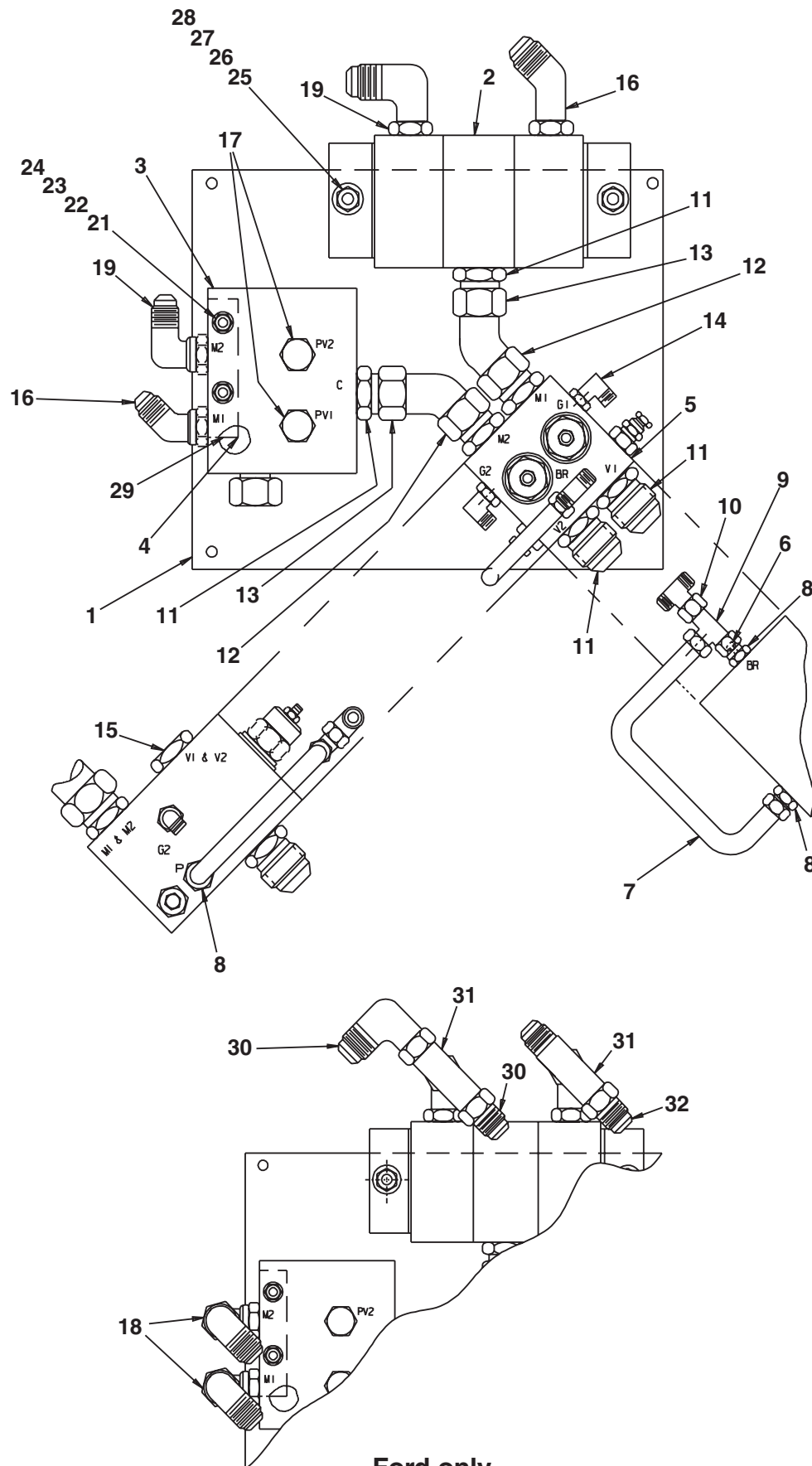
item	part no	qty	description
1	0080843	1	1-1/2 inch suction hose
2	0180945	1	1/4 inch hydraulic hose
3	0070792	1	1/2 inch hydraulic hose - (Continental, Cummins, Hatz)
	0080522	1	1/2 inch hydraulic hose - (Ford only)
4	0180806	1	1 inch hydraulic hose
5	0080522	2	1/2 inch hydraulic hose
6	0020276	1	3/8 inch hydraulic hose
7	0151213	1	1/2 inch hydraulic hose
8	0020279	6	3/8 inch hydraulic hose
9	0020283	2	1/4 inch hydraulic hose
10	0180946	1	1/4 inch hydraulic hose - (Continental, Cummins, Hatz)
	0100278	1	1/4 inch hydraulic hose
11	0070926	1	1/2 inch hydraulic hose
12	0050401	3	3/8 inch hydraulic hose
13	0020270	1	3/8 inch hydraulic hose
14	0060305	1	3/8 inch hydraulic hose
15	0070772	1	1/4 inch hydraulic hose
16	0020281	1	1/4 inch hydraulic hose
17	0180781	1	1/4 inch hydraulic hose
18	0180805	2	1 inch hydraulic hose
19	0180943	1	1-1/4 inch hydraulic hose
20	0180944	1	1/4 inch hydraulic hose
21	0020280	3	1/4 inch hydraulic hose

**Motion control valve**

item	part no	qty	description
	0181084	1	Motion control valve, 2 wheel drive
	0180807	1	Motion control valve, 4 wheel drive
1	0151728	1	Mounting plate
2	6030036	1	Flow divider, gear type
	6010657	1	Replacement relief valve cartridge
3	6010639	1	Flow divider, 2 wheel drive - (see page 2-70 for parts breakdown)
	6010570	1	Flow divider, 4 wheel drive (see page 2-71 for Fluid Tech flow divider) (see page 2-72 for Weco flow divider)
4	0180809	1	Mounting bar
5	6010634	1	Motion control valve, drive - (see page 2-81 for parts breakdown)
6	0181077	1	Orifice, .062 inch diameter
7	0181161	1	1/4 inch hydraulic hose
8	5065703	2	Straight thread adapter
9	5036703	1	Swivel nut run tee
10	5036803	1	Swivel nut branch tee
11	5065718	4	Straight thread adapter
12	5025002	2	Straight thread 37° female swivel adapter
13	5036910	2	Swivel nut 45° elbow
14	5035315	2	Straight thread 90° elbow
15	5075210	2	Hex head plug
16	5035707	2	Straight thread 45° elbow - (2 wheel drive only)
17	5075206	2	Hex head plug - (2 wheel drive only)
18	0181092	1	Spacer
19	5035307	2	Straight thread 90° elbow
	5035307	4	Straight thread 90° elbow - (4 wheel drive only)
20	984149	2	Nut 1/2-13 hex
21	5569907	2	Carriage bolt 3/8-16 x 4-1/2 inch long
22	987119	2	Washer 3/8 medium lock
23	986299	2	Washer 3/8 medium flat
24	984109	2	Nut 3/8-16 hex
25	5569908	2	Carriage bolt 1/2-13 x 1-1/4 inch long
26	987139	2	Washer 1/2 medium lock
27	986359	2	Washer 1/2 medium flat
28	5037007	4	Swivel nut 90° elbow - (4 wheel drive only)
29	5036807	2	Swivel nut branch tee - (4 wheel drive only)
30	5064005	2	Tube end reducer - (4 wheel drive only)



Motion control valve



AW0181084

**Control valve and fittings, Vickers**

item	part no	qty	description
	0180863	1	Control valve and fittings, Vickers
1	6010577	1	Control valve, Vickers - (see page 2-24 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	8	Long straight thread adapter
5	5065806	2	Long straight thread adapter
6	5065703	2	Straight thread adapter
7	5065807	2	Long straight thread adapter
8	5075205	2	Hex head plug
9	5037003	1	Swivel nut 90° elbow
10	5037007	1	Swivel nut 90° elbow
11	5036803	1	Swivel nut branch tee
12	0082010	1	Decal set, non-proportional control valve
13	987109	4	Washer 5/16 medium lock
14	5064001	2	Tube end reducer
15	5063905	2	Fitting nut
16	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
17	986269	4	Washer 5/16 medium flat
18	5037006	1	Swivel nut 90° elbow
19	5064005	1	Tube end reducer



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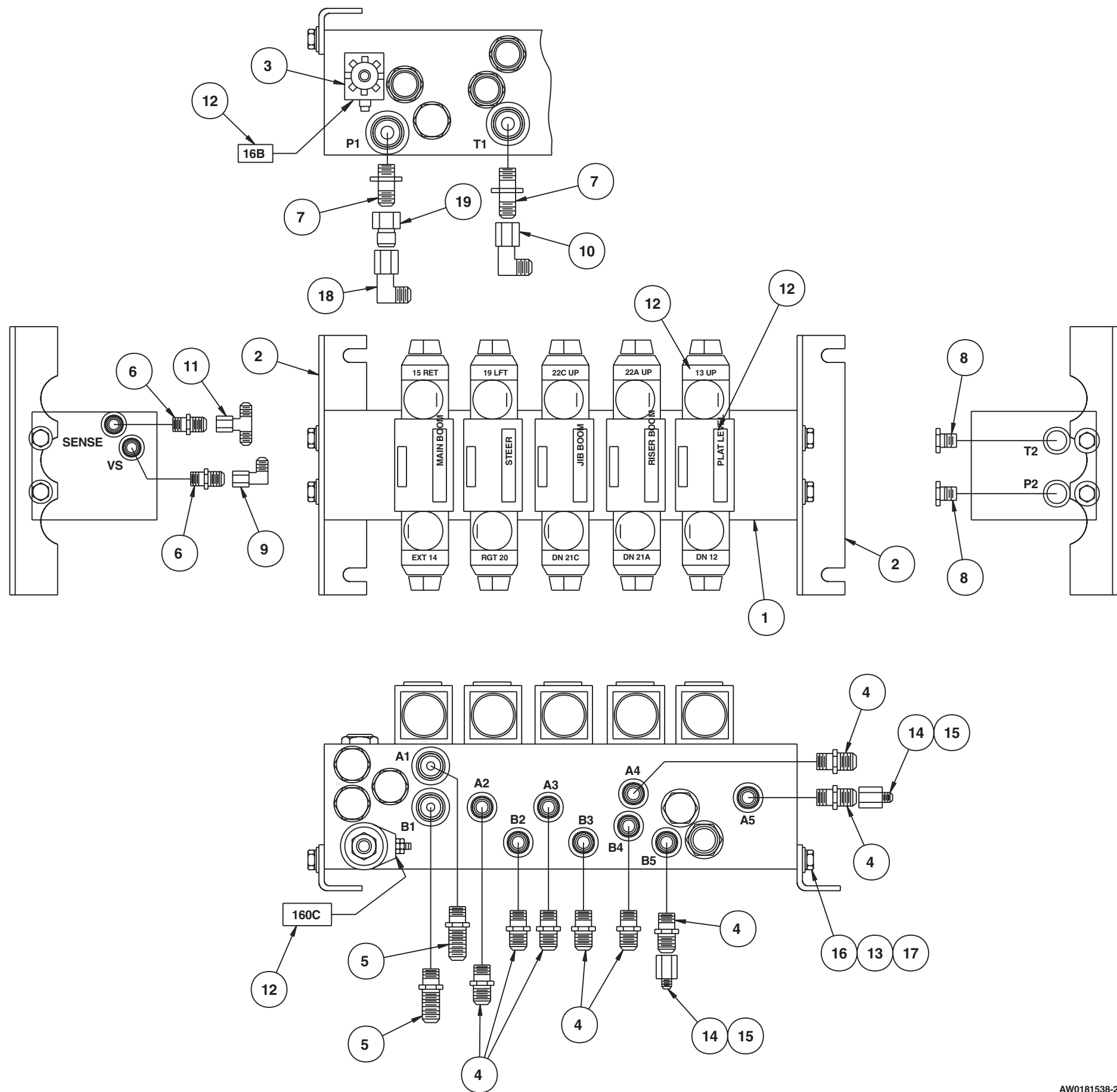
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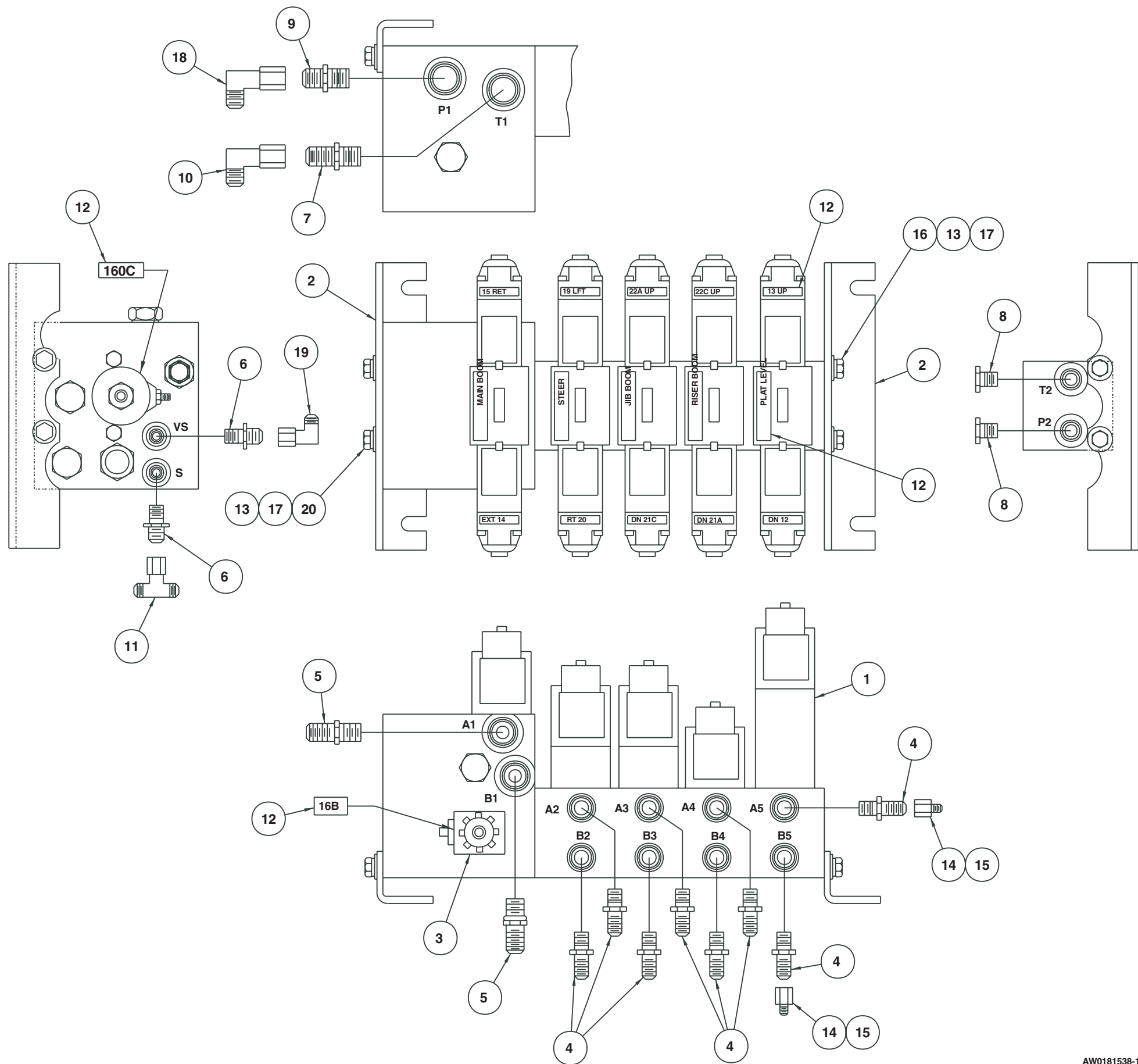
AW0181538-2

DWG. 0181538-2

TITLE Control valve and fittings
Vickers
Snorkel model ATB 60



Page 2 - 21



AW0181538-1



TITLE Control valve and fittings
Weco
Snorkel model ATB 60

DWG. 0181538-1

Page 2 - 22

**Control valve and fittings, Weco**

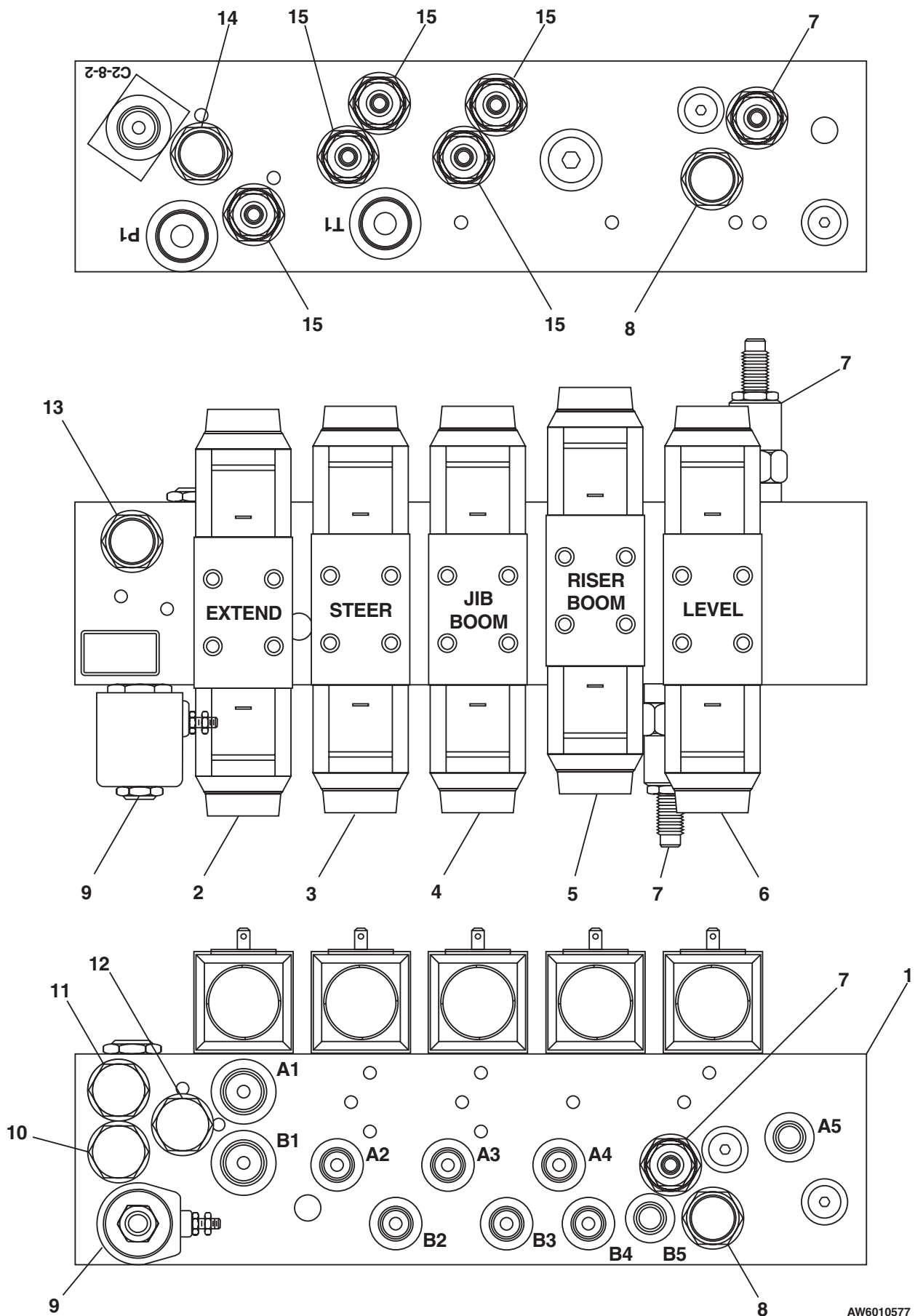
item	part no	qty	description
	0181538	1	Control valve and fittings, Weco
1	6010577	1	Control valve, Weco - (see page 2-26 for parts breakdown)
2	0181449	2	Valve mount angle
3	6010591	1	Solenoid valve and coil
	0180802	1	Seal repair kit
	6010392	1	Replacement cartridge
	3040496	1	Replacement coil, 12 volt DC
4	5065805	8	Long straight thread adapter
5	5065806	2	Long straight thread adapter
6	5065703	2	Straight thread adapter
7	5065807	1	Long straight thread adapter - (before 2-23-98)
8	5075205	2	Hex head plug
9	5065710	1	Straight thread adapter - (before 2-23-98)
10	5037007	1	Swivel nut 90° elbow
11	5036803	1	Swivel nut branch tee
12	0082010	1	Decal set, non-proportional control valve
13	987109	4	Washer 5/16 medium lock
14	5064001	2	Tube end reducer
15	5063905	2	Fitting nut
16	970239	2	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
17	986269	4	Washer 5/16 medium flat
18	5037006	1	Swivel nut 90° elbow
19	5037003	1	Swivel nut 90° elbow
20	5569906	2	Capscrew 5/16-18 x 5-1/4 inch long hex head grade 5

**Control valve, Vickers**

item	part no	qty	description
	6010577	1	Control valve, Vickers
1	6010694	1	Manifold body
2	6010697	1	Extend control valve
	6091144	1	Seal repair kit
	6091145	2	Replacement solenoid, 12 volt DC
3	6010697	1	Steer control valve
	6091144	1	Seal repair kit
	6091145	2	Replacement solenoid, 12 volt DC
4	6010697	1	Jib boom control valve
	6091144	1	Seal repair kit
	6091145	2	Replacement solenoid, 12 volt DC
5	6010697	1	Riser boom 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	Cartridge valve, 3-way inlet
	6018019	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	Cartridge, 3-way pilot operated atmosphere vented
	6010551	1	Seal repair kit
13	6010704	1	Shuttle valve cartridge
	6018019	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



Control valve, Vickers



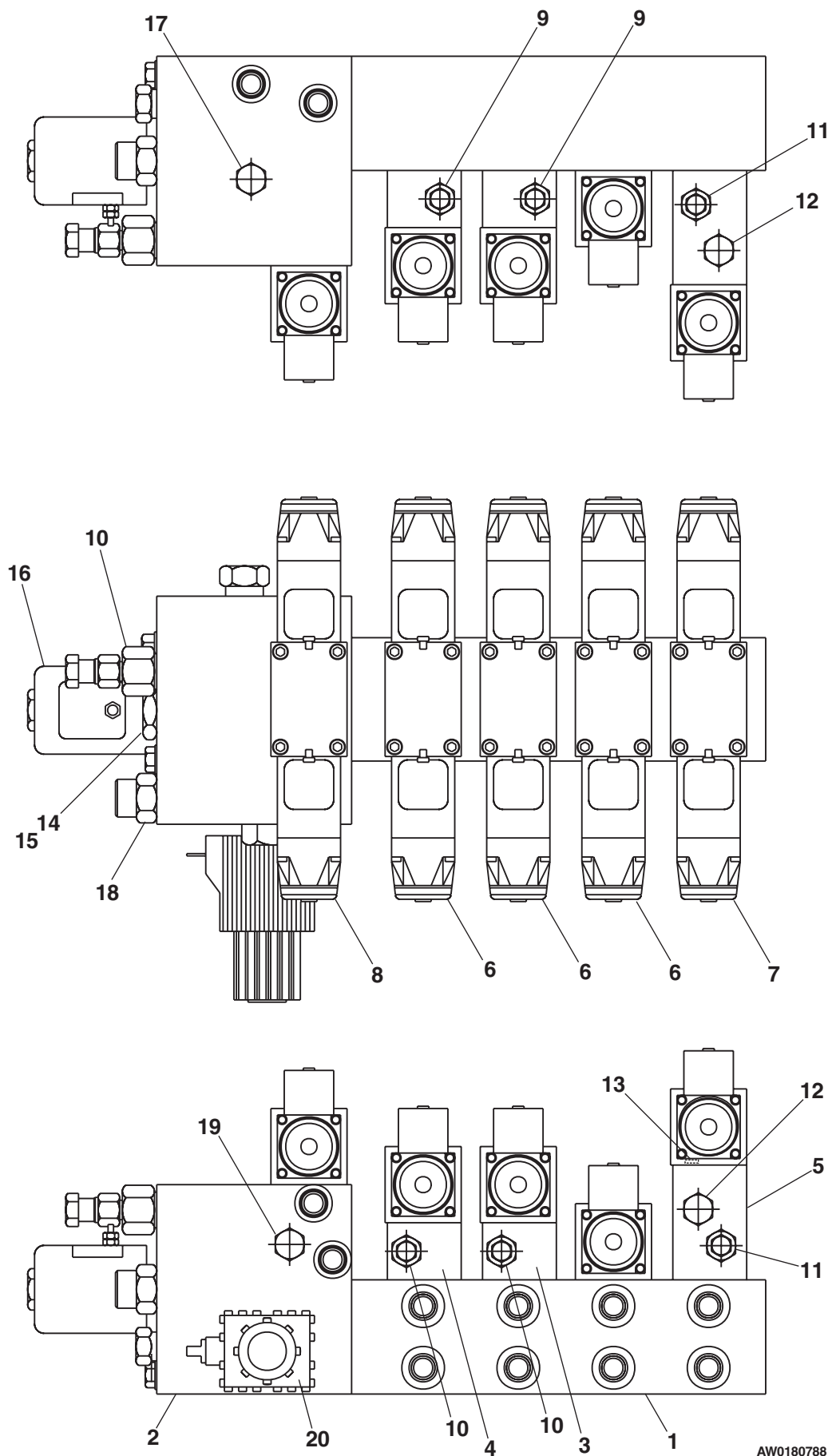
AW6010577

**Control valve, Weco**

item	part no	qty	description
	6010577	1	Control valve, Weco
1	6010580	1	Manifold body
2	6010581	1	Inlet body
3	6010621	1	Sandwich relief valve
	6010582	1	Replacement valve body
	6010322	1	Replacement cartridge relief valve
	6010328	1	Replacement cartridge relief valve
	0150562	1	Seal repair kit
4	6010409	1	Sandwich relief valve
	6010582	1	Replacement valve body
	6010322	2	Replacement cartridge relief valve
5	6010584	1	Sandwich level protection valve
	6010452	1	Replacement valve body
	6010426	2	Replacement check valve
	0150563	1	Seal repair kit
	6010620	2	Replacement relief valve
	0150562	1	Seal repair kit
	7110012	4	Replacement o-ring
6	6010448	3	Directional control valve
	3040430	1	Replacement solenoid coil
7	6010447	1	Directional control valve
	3040430	1	Replacement solenoid coil
8	6010590	1	Directional control valve
	3040430	1	Replacement solenoid coil
9	6010322	3	Pressure relief cartridge - (factory preset, do not reset)
	0150563	1	Seal repair kit
10	6010328	1	Pressure relief cartridge - (factory preset, do not reset)
	0180801	1	Seal repair kit
11	6010620	2	Pressure relief cartridge - (factory preset, do not reset)
	0150562	1	Seal repair kit
12	6010426	2	Check valve
	0150563	1	Seal repair kit
13	6010593	1	Orifice, .032 inch diameter
14	6010419	1	Flow control cartridge valve
	0180801	1	Seal repair kit
15	6010585	1	Flow control cartridge valve
	0180801	1	Seal repair kit
16	6010460	1	Solenoid valve
	6010445	1	Valve cartridge
	3040457	1	Solenoid coil, 12 volt DC
17	6010586	1	Check valve
	0150563	1	Seal repair kit
18	6010592	1	Cartridge valve
	6010551	1	Seal repair kit
19	6010587	1	Shuttle valve
	0150563	1	Seal repair kit
20	6010591	1	Solenoid valve and coil
	0180802	1	Seal repair kit
	6010392	1	Replacement cartridge
	3040496	1	Replacement coil, 12 volt DC



Control valve, Weco



AW0180788

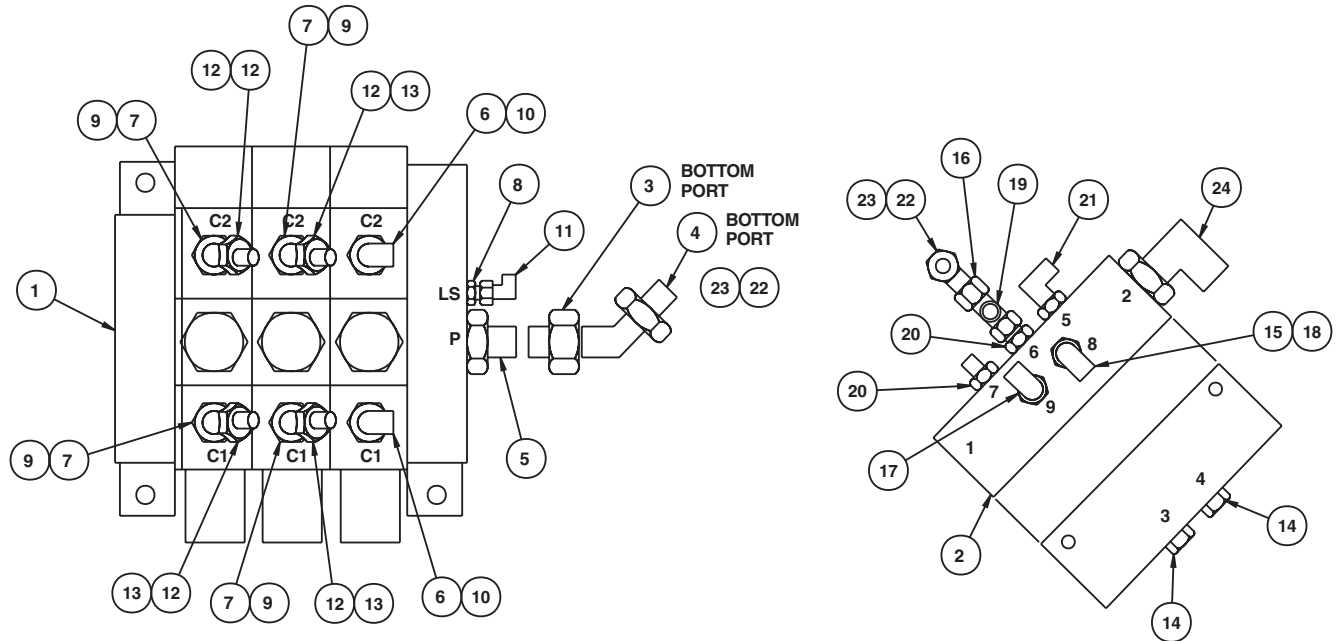
**Control valve and fittings, drive/lift/swing**

item	part no	qty	description
	0180869	1	Control valve and fittings, drive/lift/swing
1	6010576	1	Control valve, drive/lift/swing - (see page 2-30 for parts breakdown)
2	0110156	1	Pressure manifold
3	5025002	1	Straight thread 37° female swivel adapter
4	5035710	1	Straight thread 45° elbow
5	5065718	1	Straight thread adapter
6	5065719	2	Straight thread adapter
7	5065711	4	Straight thread adapter
8	5065703	1	Straight thread adapter
9	5036906	4	Swivel nut 45° elbow
10	5037010	2	Swivel nut 90° elbow
11	5037003	1	Swivel nut 90° elbow
12	5064003	4	Tube end reducer
13	5063906	4	Fitting nut
14	5075205	2	Hex head plug
15	5065709	1	Straight thread adapter
16	5037005	1	Swivel nut 90° elbow
17	5035322	1	Straight thread 90° elbow
18	5037006	1	Swivel nut 90° elbow
19	5036705	1	Swivel nut run tee
20	5065707	2	Straight thread adapter
21	5035318	1	Straight thread 90° elbow
22	5064001	1	Tube end reducer
23	5063905	1	Fitting nut
24	5035324	1	Straight thread 90° elbow

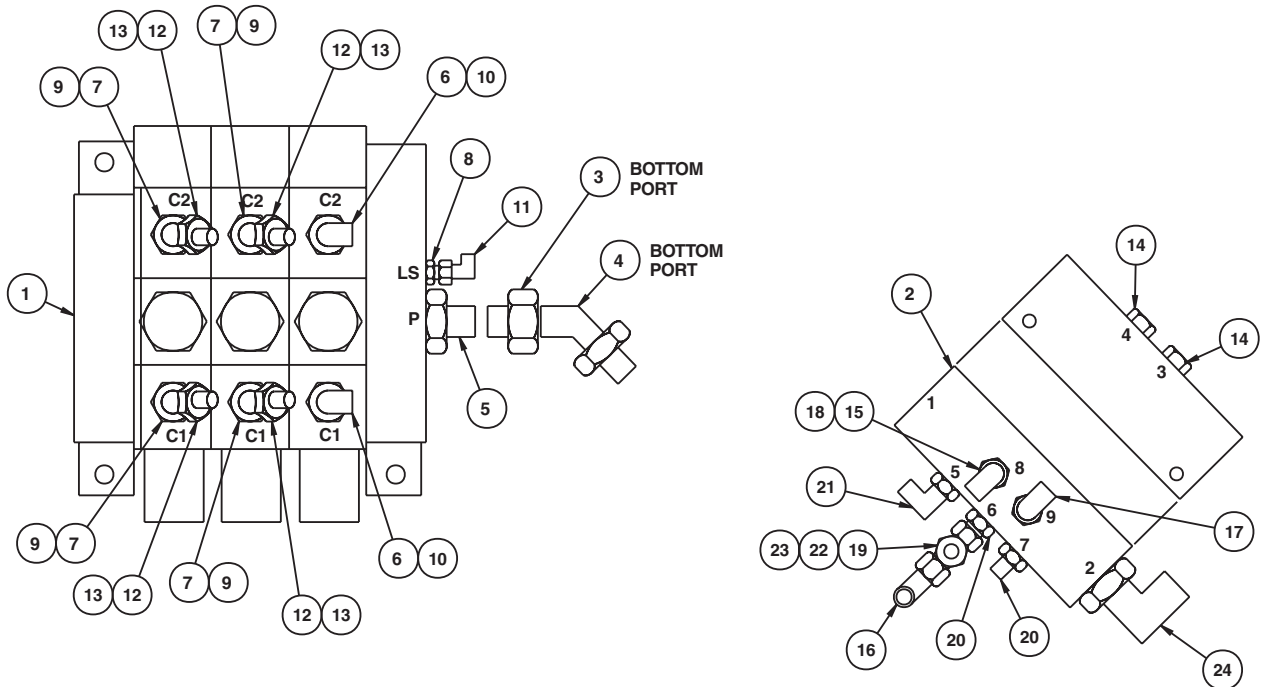


Control valve and fittings, drive/lift/swing

ALL OTHER ENGINES



FORD ENGINES



AW0180869

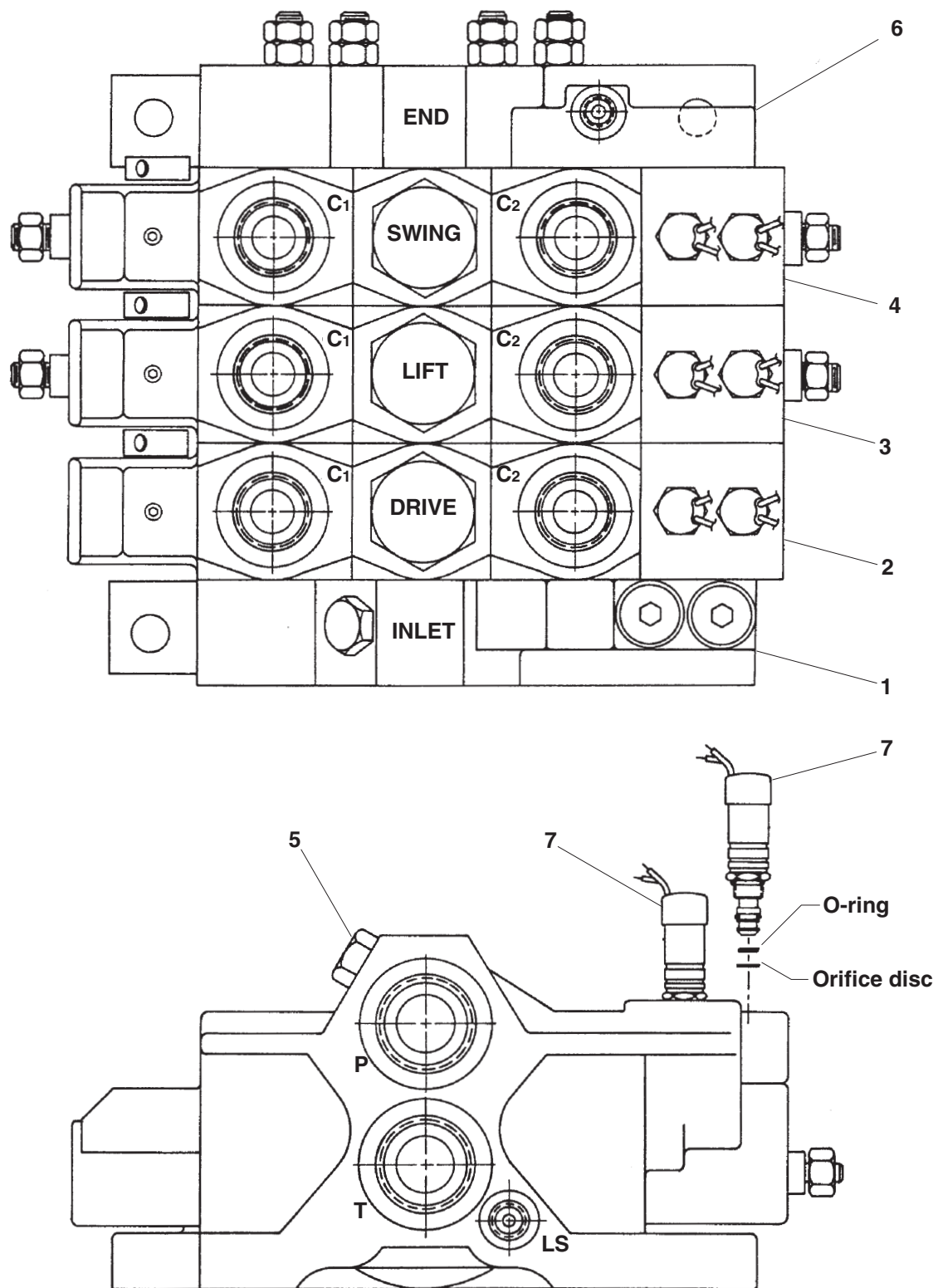


Control valve, drive/lift/swing

item	part no	qty	description
1	6010576	1	Control valve, drive/lift/swing
	0181171	4	Valve section seal repair kit
	0181253	3	Control section o-ring seal kit
	6010648	1	Inlet section
	0190920	1	Seal kit for inlet section to drive section
2	6010649	1	Drive control valve section
3	6010650	1	Lift control valve section
4	6010651	1	Swing control valve section
5	6010652	1	Inlet pilot filter
6	6010654	1	End section
7	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

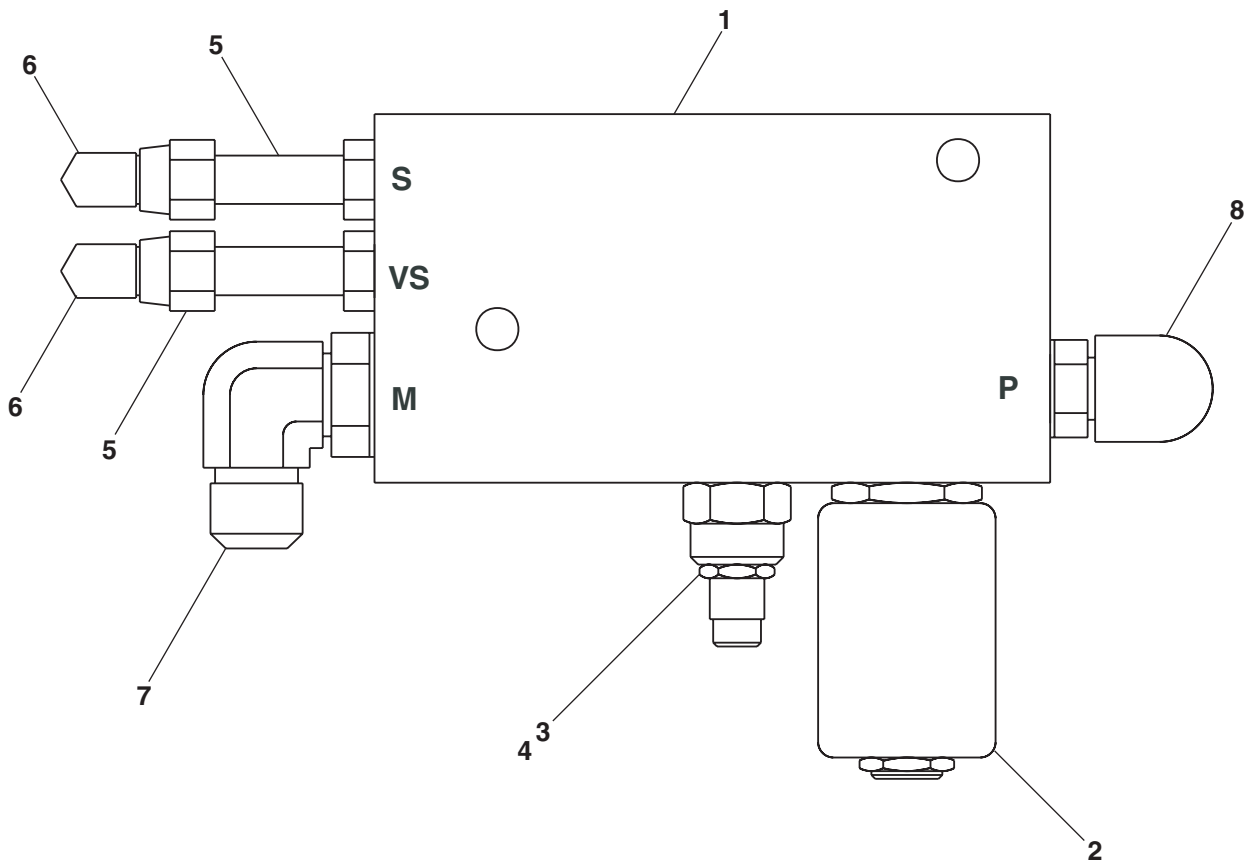


AWM00290



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

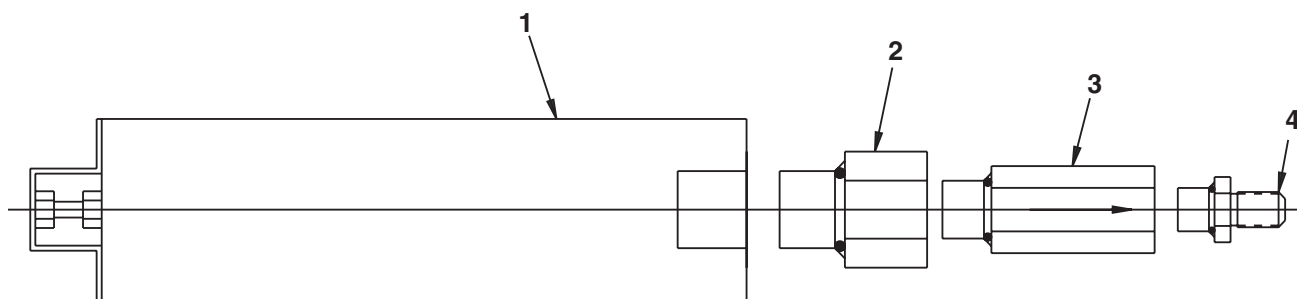


AW0152831



Accumulator, chassis

item	part no	qty	description
1	0181083	1	Accumulator - (shipped charged)
2	6070005	1	Accumulator - (shipped uncharged, charge to 300 psi with dry nitrogen before use)
3	5076003	1	Reducer-expander
4	6010635	1	Check valve, orificed
4	5065709	1	Straight thread adapter

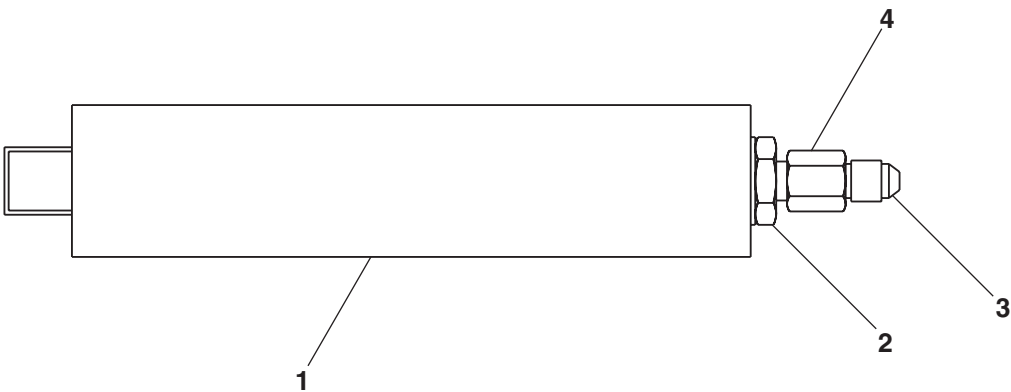


AW0181083



Accumulator, turntable

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	6063906	1	Fitting nut

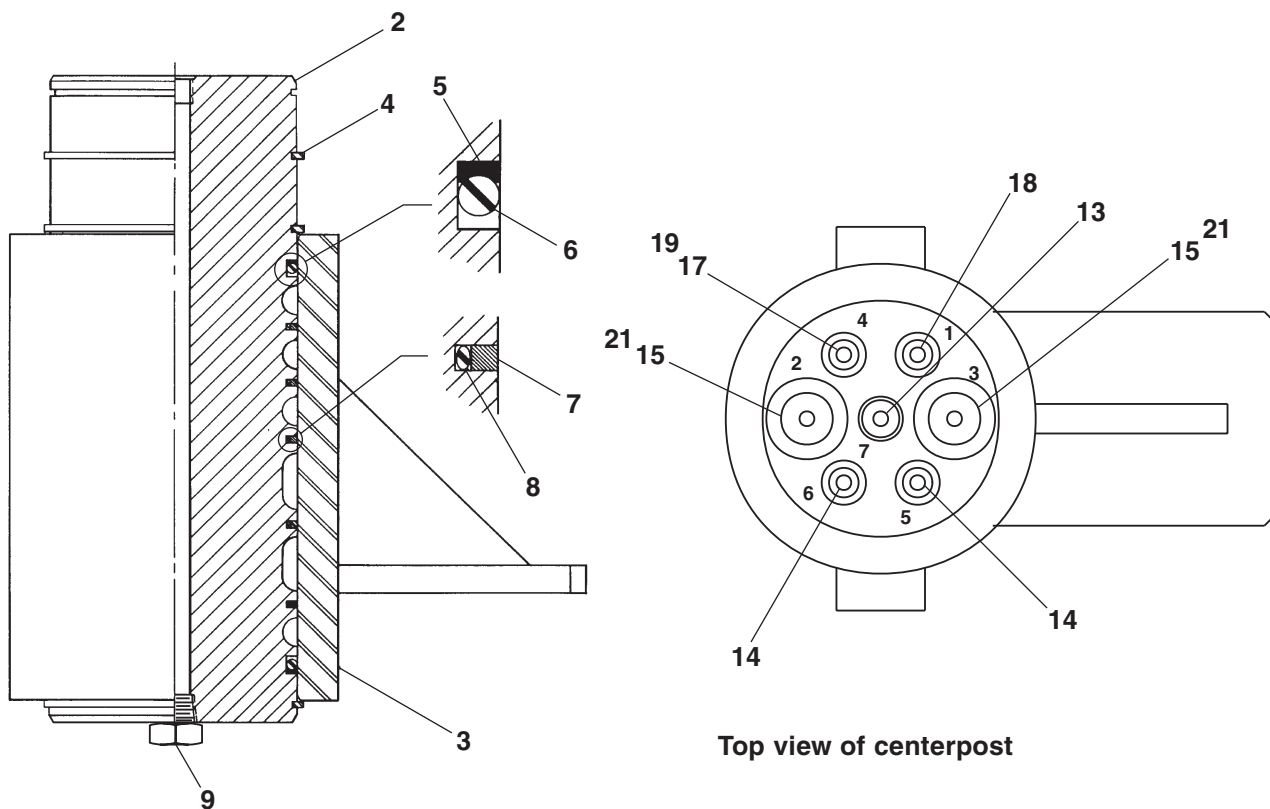


AW0082055



Centerpost and fittings

item	part no	qty	description
1	0180935	1	Centerpost and fittings
	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	5075205	1	Hex head plug
Centerpost and manifold port fittings - (fittings not shown, ports marked on parts)			
10	5035311	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	5065705	2	Straight thread adapter - (centerpost ports no 5 and no 6)
15	5065719	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)
19	5036903	1	Swivel nut 45° elbow - (centerpost port no 4)
20	5036906	1	Swivel nut 45° elbow - (centerpost port no 5)
21	5036910	2	Swivel nut 45° elbow - (centerpost ports no 2 and no 3)

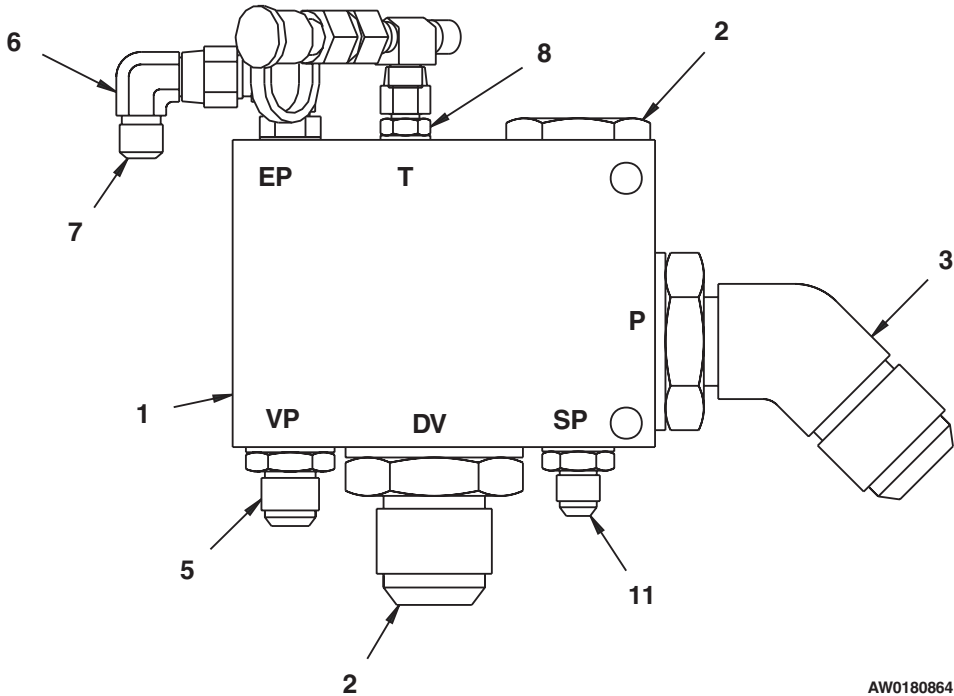
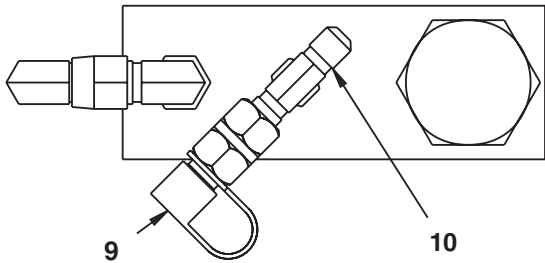


AWM00283



Check valve

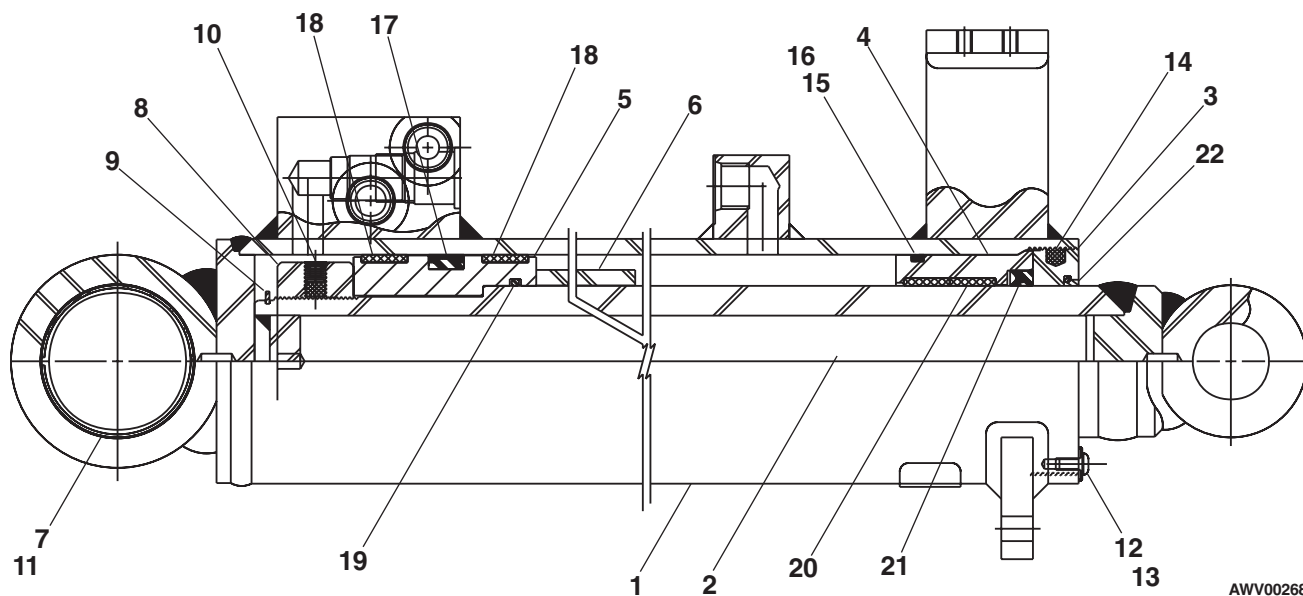
item	part no	qty	description
1	0180864	1	Check valve
	6010579	1	Pressure manifold valve
	6010605	1	Seal repair kit
	6010565	1	Check valve cartridge
2	6010656	1	Check valve
	6010605	1	Seal repair kit
3	5035710	1	Straight thread 45° elbow
4	5065707	1	Straight thread adapter
5	5065709	1	Straight thread adapter
6	5035305	1	Straight thread 90° elbow
7	5037005	1	Swivel nut 90° elbow
8	5065703	1	Straight thread adapter
9	5070005	1	Diagnostic nipple
10	5036803	1	Swivel nut branch tee
11	5065718	1	Straight thread adapter



AW0180864

**Cylinder, extension - GBI**

item	part no	qty	description
	0180523	1	Cylinder, extension - GBI
	8070256	1	Seal repair kit - (kit includes items 14 through 22)
1		1	Tube - (not sold separately)
2	8070736	1	Rod
3	8070292	1	Retainer
4	8070735	1	Bearing
5	8070734	1	Piston
6	8070733	1	Spacer
7	8070732	1	Spacer
8	8070731	1	Nut
9	8070730	1	Retaining ring
10	8070729	1	Set screw
11	8070728	2	Bushing
12	8070300	1	Lock washer
13	8070301	1	Capscrew
14	Kit item	2	Nylon plug - (not sold separately)
15	Kit item	1	Back-up - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	1	Quad seal - (not sold separately)
18	Kit item	2	Wear ring - (not sold separately)
19	Kit item	1	O-ring - (not sold separately)
20	Kit item	2	Wear ring - (not sold separately)
21	Kit item	1	U-ring - (not sold separately)
22	Kit item	1	Wiper - (not sold separately)

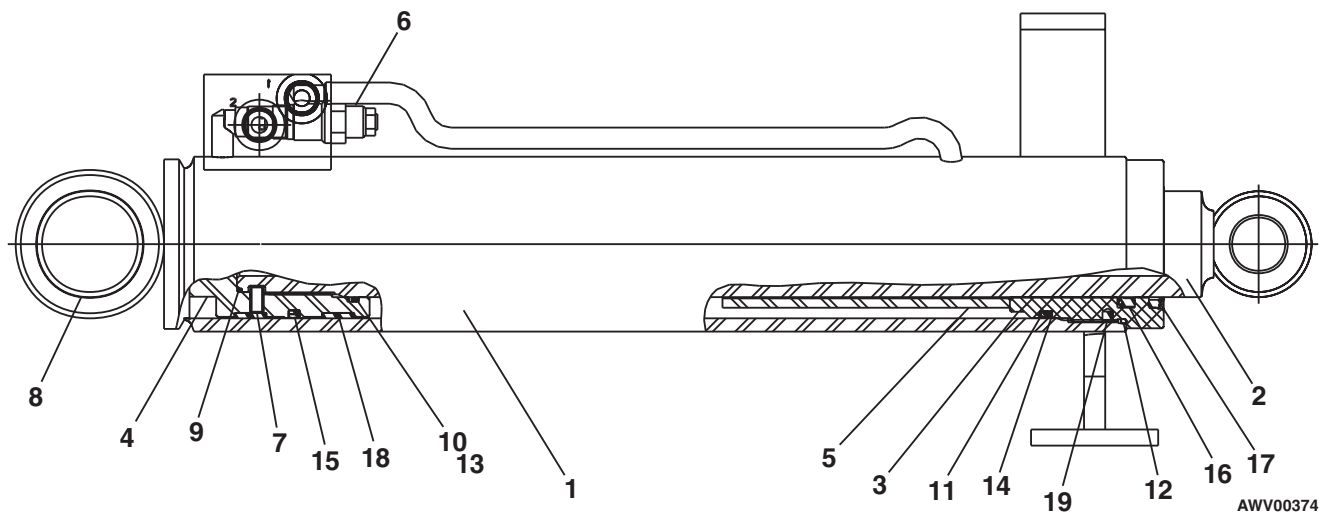


AWV00268



Cylinder, extension - Rosenboom

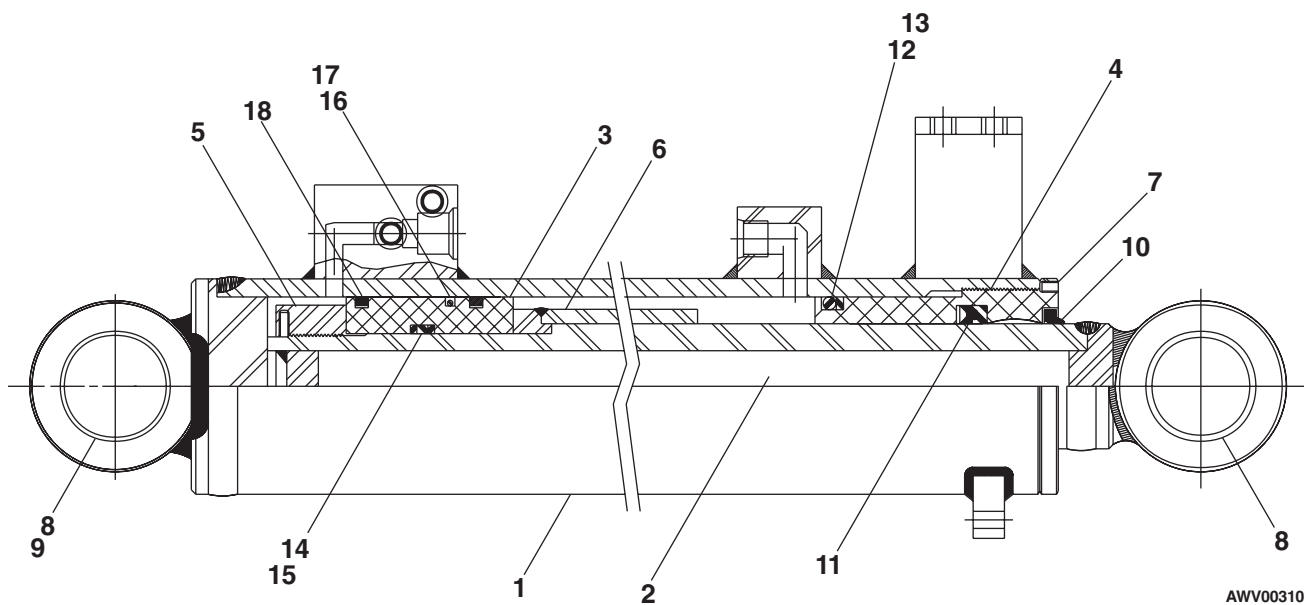
item	part no	qty	description
	0181912	1	Cylinder, extension - Rosenboom
	6091320	1	Seal repair kit - (kit includes items 9 through 19)
1		1	Tube - (not sold separately)
2	6091316	1	Rod
3	6091317	1	Head gland
4	6091318	1	Piston
5	6091319	1	Rod spacer
6	6010794	1	Cartridge holding valve - (factory preset, do not reset)
	0150563	1	Seal repair kit
7	975690	1	Set screw 5/16-18 x 5/8 inch long hex socket head
8	2500069	2	Bearing
9	Kit item	1	O-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	O-ring - (not sold separately)
13	Kit item	2	Back-up - (not sold separately)
14	Kit item	1	Back-up - (not sold separately)
15	Kit item	1	Diso-pac - (not sold separately)
16	Kit item	1	U-cup - (not sold separately)
17	Kit item	1	Rod wiper - (not sold separately)
18	Kit item	2	Wearband - (not sold separately)
19	Kit item	1	Locking insert - (not sold separately)





Cylinder, extension - Seabee

item	part no	qty	description
	0180523	1	Cylinder, extension - Seabee
	8190203	1	Seal repair kit - (kit includes items 10 through 18)
1		1	Case - (not sold separately)
2	8190216	1	Rod
3	8190215	1	Piston
4	8190214	1	Head gland
5	8190213	1	Buttress ring nut
6	8190212	1	Spacer
7	8190129	3	Setscrew
8	8190205	2	Bushing
9	8190204	1	Bushing spacer
10	Kit item	1	Wiper - (not sold separately)
11	Kit item	1	U-cup - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	1	Back-up - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	2	Back-up - (not sold separately)
16	Kit item	1	Piston seal - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	2	Piston ring - (not sold separately)

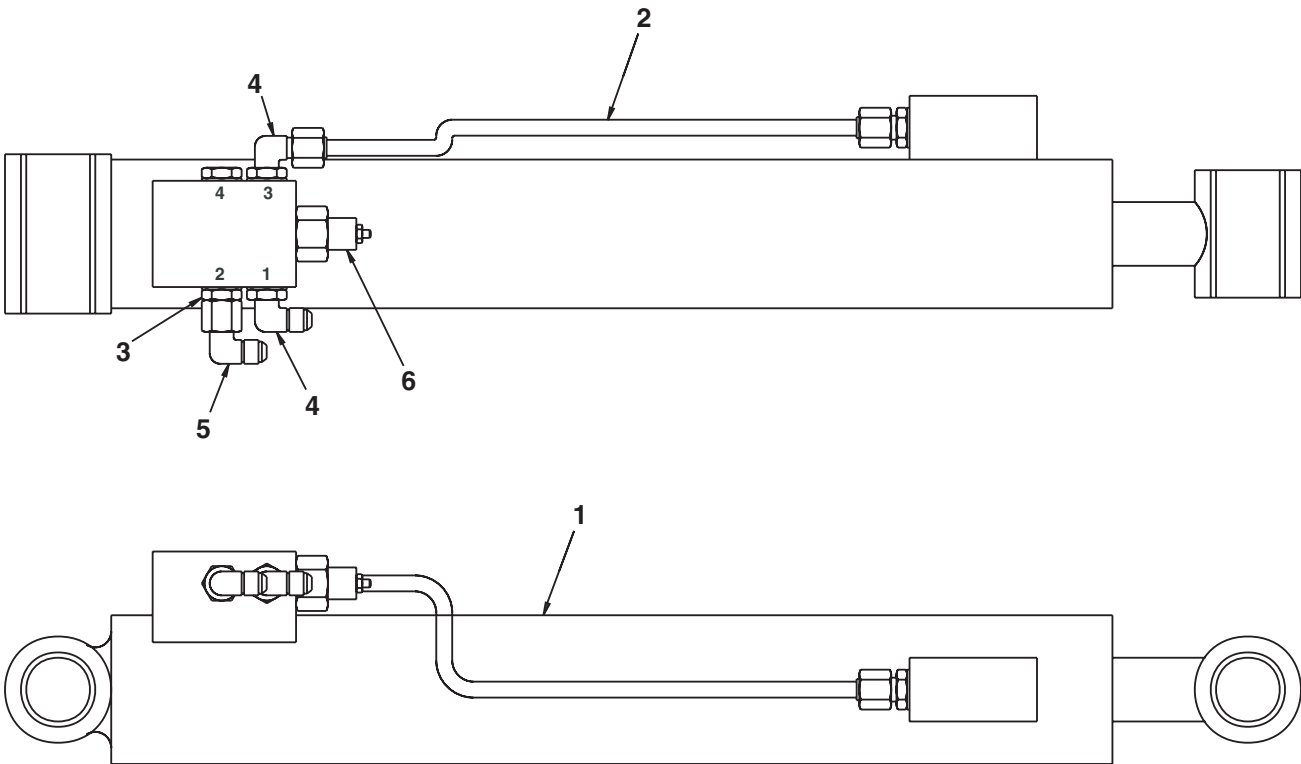


AWV00310



Jib boom lift cylinder before 10-20-2000

item	part no	qty	description
	0180901	1	Jib boom lift cylinder
1	0191129	1	Cylinder, jib boom lift - (see page 2-42 for GBI cylinder parts breakdown)
2	0191261	1	3/8 inch hydraulic tube
3	5065707	2	Straight thread adapter
4	5035305	2	Straight thread 90° elbow
5	5037005	1	Swivel nut 90° elbow
6	6010794	1	Cartridge holding valve - (factory preset, do not reset)

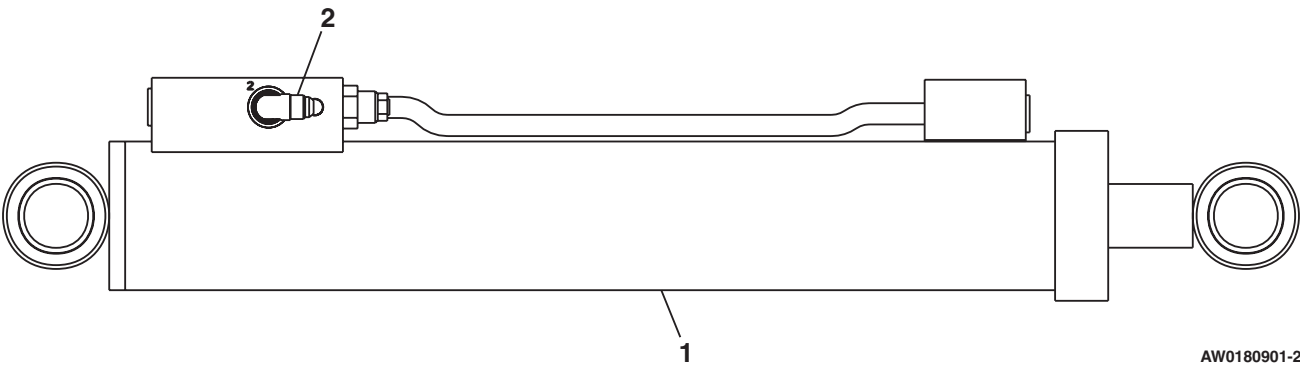


AW0180901



Jib boom lift cylinder after 10-20-2000

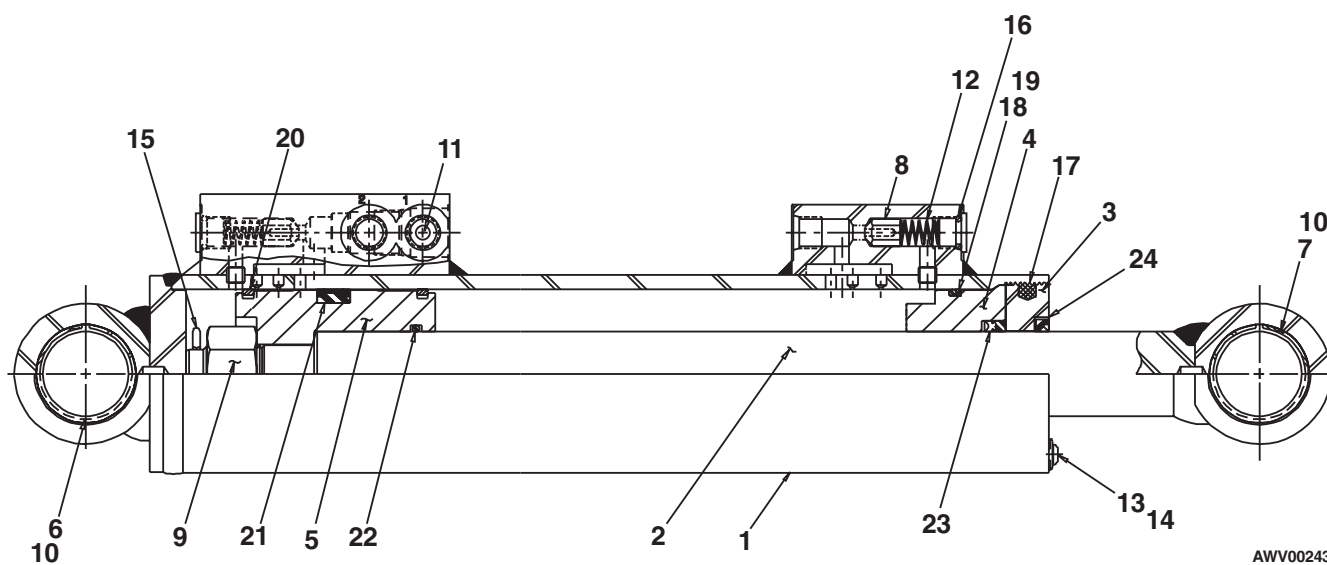
item	part no	qty	description
1	0180901	1	Jib boom lift cylinder
1	0191811	1	Cylinder, jib boom lift - (see page 2-43 for parts breakdown)
2	5035305	2	Straight thread 90° elbow



AW0180901-2

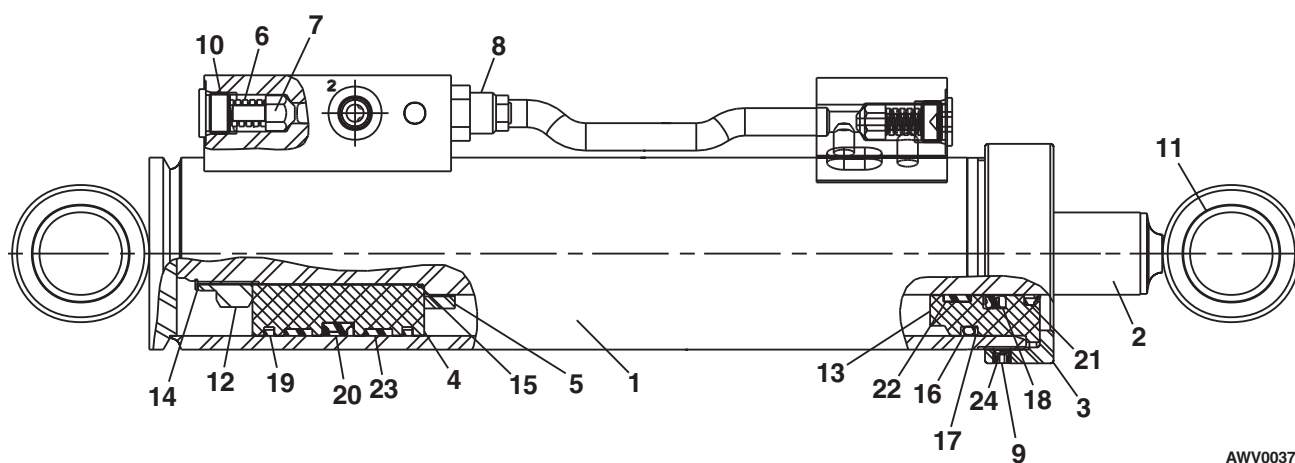
**Cylinder, jib boom lift - GBI**

item	part no	qty	description
	0191129	1	Cylinder, jib boom lift - GBI
	0191262	1	Seal repair kit - (kit includes items 15 through 24)
1		1	Case - (not sold separately)
2	8070755	1	Rod
3	8070225	1	Thread ring
4	8070754	1	Head gland
5	8070753	1	Piston
6	8070752	1	Bushing spacer
7	8070751	1	Bushing spacer
8	8070012	2	Poppet
9	8070543	1	Nut
10	8070750	4	Bushing
11	8070368	2	Port plug
12	8070369	2	Spring
13	8070362	1	Lock washer
14	8070363	1	Capscrew
15	Kit item	1	Cotter pin - (not sold separately)
16	Kit item	2	O-ring - (not sold separately)
17	Kit item	1	Nylon plug - (not sold separately)
18	Kit item	1	Back-up - (not sold separately)
19	Kit item	1	O-ring - (not sold separately)
20	Kit item	2	C. I. ring - (not sold separately)
21	Kit item	1	CST ring - (not sold separately)
22	Kit item	1	O-ring - (not sold separately)
23	Kit item	1	U-cup - (not sold separately)
24	Kit item	1	Wiper - (not sold separately)



**Cylinder, jib boom lift - Rosenboom**

item	part no	qty	description
	0191811	1	Cylinder, jib boom lift - Rosenboom
	6091294	1	Seal repair kit - (kit includes items 14 through 24)
1		1	Tube - (not sold separately)
2	6091292	1	Rod
3	6091288	1	Head gland cap
4	6091289	1	Piston
5	6091291	1	Rod spacer
6	6091246	2	Spring
7	6091241	2	Poppet
8	6010794	1	Cartridge holding valve - (factory preset, do not reset
	0150563	1	Seal repair kit
9	5569835	1	Set screw 5/16-18 x 1/4 inch long
10	5075306	2	Hex plug
11	2502229	4	Bearing
12	6091293	1	Locking nut 1-1/4-12
13	6091311	1	Head gland
14	Kit item	1	Snap ring - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	1	Back-up - (not sold separately)
18	Kit item	1	Deep Z-seal - (not sold separately)
19	Kit item	2	Cast iron ring - (not sold separately)
20	Kit item	1	Capped T-seal - (not sold separately)
21	Kit item	1	Rod wiper - (not sold separately)
22	Kit item	1	Wearband - (not sold separately)
23	Kit item	2	Wearband - (not sold separately)
24	Kit item	1	Locking insert - (not sold separately)

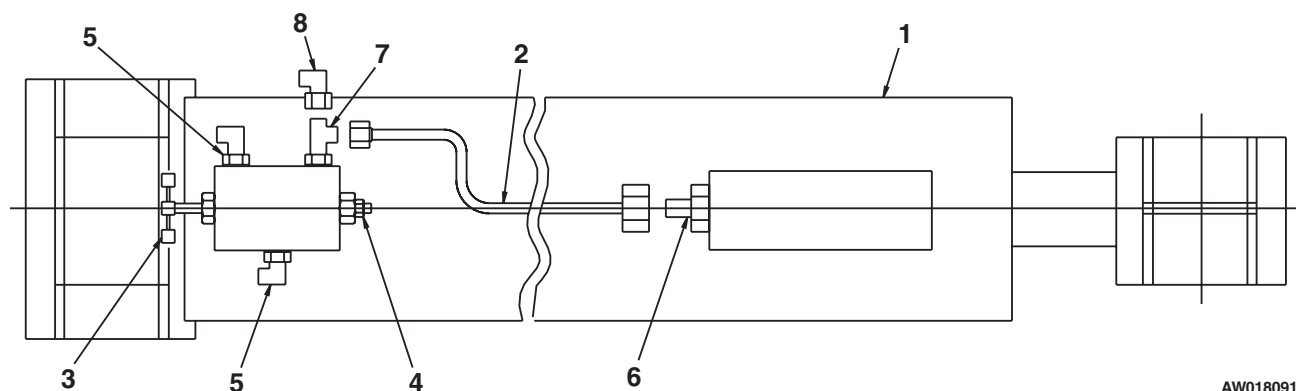


AWV00370



Main boom lift cylinder before 12-26-2000

item	part no	qty	description
1	0180913	1	Main boom lift cylinder
	0180666	1	Cylinder, main boom lift (see page 2-46 for GBI cylinder) (see page 2-48 for Seabee cylinder)
2	0180782	1	3/8 inch hydraulic tube
3	6010115	1	Cartridge needle valve
	0071845	1	Seal repair kit
4	6010606	2	Cartridge holding valve - (factory preset, do not reset)
5	5035305	2	Straight thread 90° elbow
6	5065707	1	Straight thread adapter
7	5036105	1	Straight thread run tee
8	5037005	1	Swivel nut 90° elbow

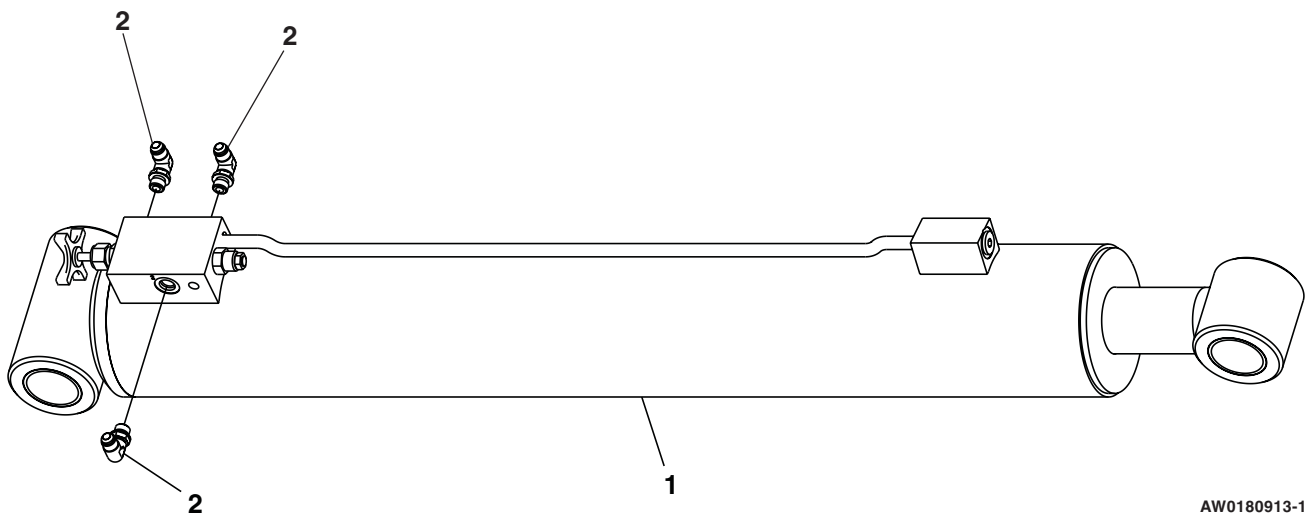


AW0180913



Main boom lift cylinder after 12-26-2000

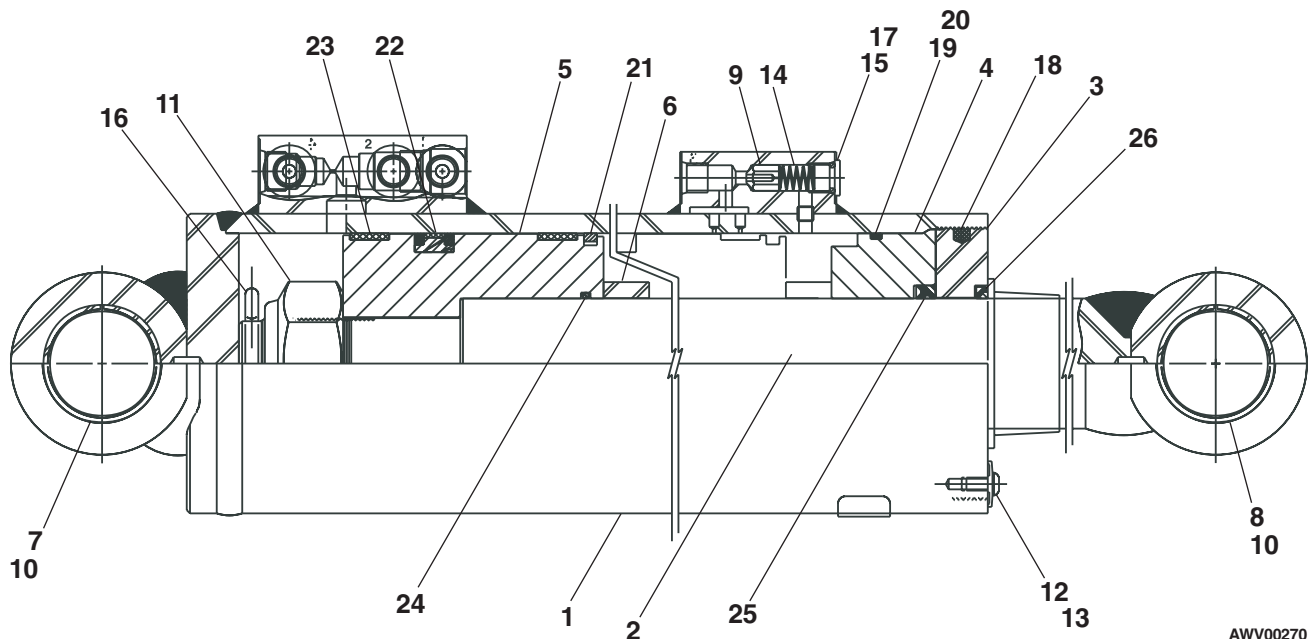
item	part no	qty	description
1	0180913	1	Main boom lift cylinder
2	0181915	1	Cylinder main boom lift - (see page 2-47 for parts breakdown)
2	5035305	3	Straight thread 90° elbow



AW0180913-1

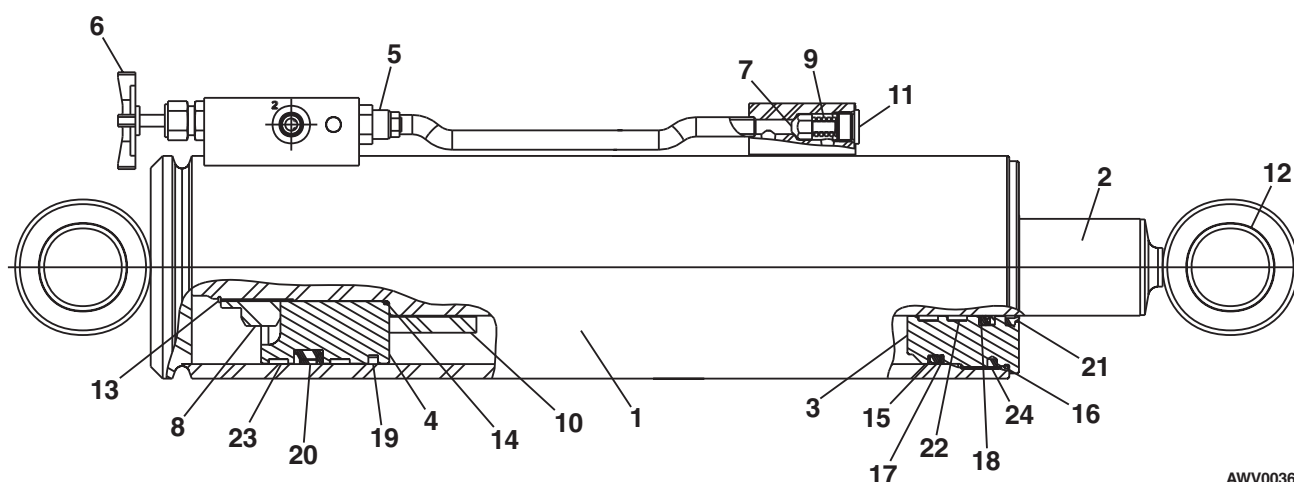
**Cylinder, main boom lift - GBI**

item	part no	qty	description
	0180666	1	Cylinder, main boom lift - GBI
	8070758	1	Seal repair kit - (kit includes items 16 through 26)
1		1	Tube - (not sold separately)
2	8070770	1	Rod
3	8070769	1	Retainer
4	8070768	1	Bearing
5	8070767	1	Piston
6	8070766	1	Spacer
7	8070294	1	Spacer
8	8070765	1	Spacer
9	8070012	1	Poppet
10	8070764	2	Bushing
11	8070130	1	Nut
12	8070763	1	Lock washer
13	8070762	1	Capscrew
14	8070017	1	Spring
15	8070015	1	Port plug
16	Kit item	1	Cotter pin
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	Nylon plug - (not sold separately)
19	Kit item	1	Back-up - (not sold separately)
20	Kit item	1	O-ring - (not sold separately)
21	Kit item	1	C. I. ring - (not sold separately)
22	Kit item	1	Quad seal - (not sold separately)
23	Kit item	2	Wear ring - (not sold separately)
24	Kit item	1	O-ring - (not sold separately)
25	Kit item	1	U-ring - (not sold separately)
26	Kit item	1	Wiper - (not sold separately)



**Cylinder, main boom lift - Rosenboom**

item	part no	qty	description
	0181915	1	Cylinder, main boom lift - Rosenboom
	6091247	1	Seal repair kit - (kit includes items 13 through 24)
1		1	Tube - (not sold separately)
2	6091328	1	Rod
3	6091243	1	Head gland
4	6091242	1	Piston
5	6010606	1	Cartridge holding valve - (factory preset, do not reset)
6	6010115	1	Cartridge needle valve
	0071845	1	Seal repair kit
7	6091241	1	Poppet
8	6091245	1	Locking nut 1-3/4-12
9	6091246	1	Spring
10	6091325	1	Rod spacer
11	5075306	1	Hex plug
12	2500040	4	Bearing
13	Kit item	1	Snap 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	O-ring - (not sold separately)
17	Kit item	1	Back-up - (not sold separately)
18	Kit item	1	Deep Z-seal - (not sold separately)
19	Kit item	1	Cast iron ring - (not sold separately)
20	Kit item	1	Capped T-seal - (not sold separately)
21	Kit item	1	Rod wiper - (not sold separately)
22	Kit item	2	Wearband - (not sold separately)
23	Kit item	2	Wearband - (not sold separately)
24	Kit item	2	Locking insert - (not sold separately)

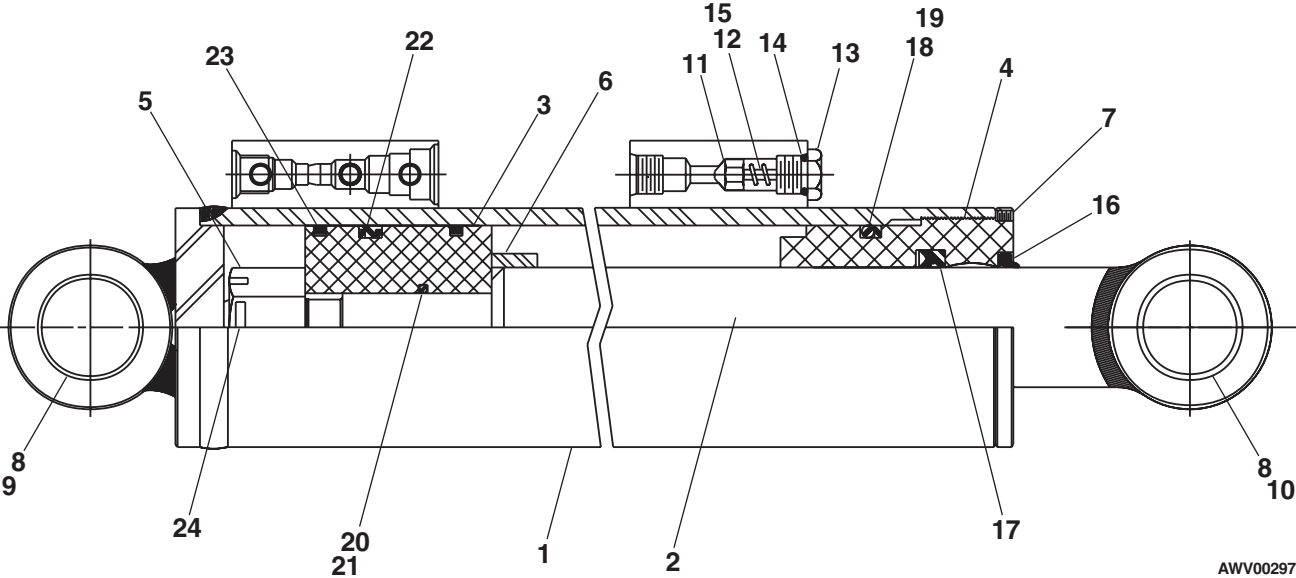


AWV00369



Cylinder, main boom lift - Seabee

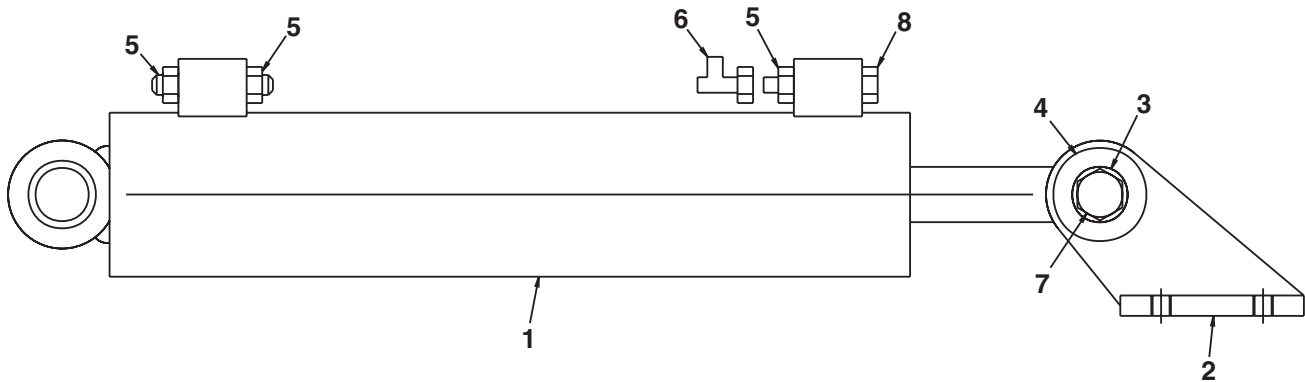
item	part no	qty	description
	0180666	1	Cylinder, main boom lift - Seabee
	8190190	1	Seal repair kit - (kit includes items 16 through 24)
1		1	Case - (not sold separately)
2	8190200	1	Shaft
3	8190199	1	Piston
4	8190104	1	Head gland
5	8190055	1	Piston nut
6	8190198	1	Spacer
7	8190129	1	Set screw
8	8190193	4	Bushing
9	8190192	1	Bushing spacer
10	8190191	1	Bushing spacer
11	8190088	1	Poppet
12	8190089	1	Spring
13	8190145	1	Plug
14	8190171	1	O-ring plug
15	8190170	1	Dowel pin
16	Kit item	1	Wiper - (not sold separately)
17	Kit item	1	U-cup - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	1	Back-up - (not sold separately)
20	Kit item	1	O-ring - (not sold separately)
21	Kit item	2	Back-up - (not sold separately)
22	Kit item	1	Piston T seal - (not sold separately)
23	Kit item	2	Piston ring - (not sold separately)
24	Kit item	1	Cotter key - (not sold separately)





Master level cylinder

item	part no	qty	description
1	0180914	1	Master level cylinder
	0180664	1	Cylinder, master level (see page 2-50 for GBI cylinder) (see page 2-51 for Prince cylinder) (see page 2-52 for Texas cylinder)
2	0180645	1	Bracket
3	0180631	1	Pin
4	0150179	2	Pin lock
5	5065703	3	Straight thread adapter
6	5036703	1	Swivel nut run tee
7	5560138	2	Capscrew 1/2-13 x 1 inch long hex head self locking
8	5075203	1	Hex head plug

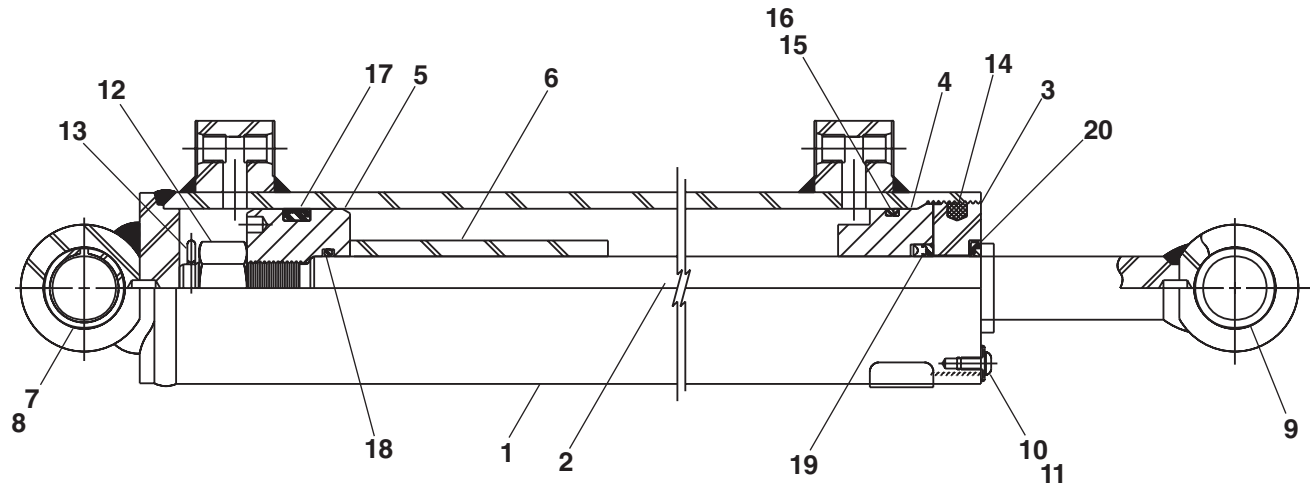


AW0180914



Cylinder, master level - GBI

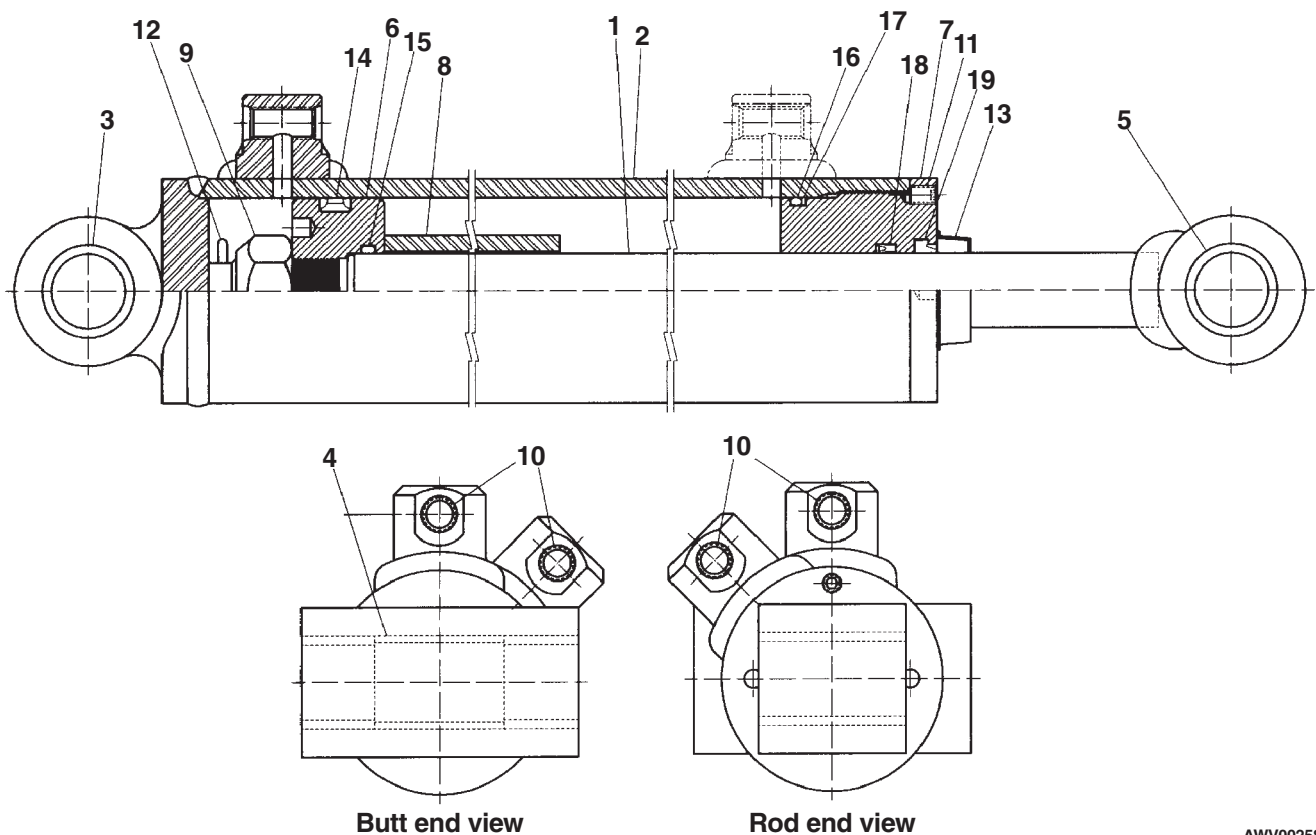
item	part no	qty	description
	0180664	1	Cylinder, master level - GBI
	8070222	1	Seal repair kit - (kit includes items 13 through 20)
1		1	Tube - (not sold separately)
2	8070776	1	Rod
3	8070238	1	Retainer
4	8070587	1	Bearing
5	8070667	1	Piston
6	8070775	1	Spacer
7	8070774	1	Spacer
8	8070663	2	Bushing
9	8070773	1	Bushing
10	8070300	1	Lock washer
11	8070301	1	Capscrew
12	8070649	1	Nut
13	Kit item	1	Cotter pin - (not sold separately)
14	Kit item	1	Nylon plug - (not sold separately)
15	Kit item	1	Back-up - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	1	Quad seal - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	1	O-ring - (not sold separately)
20	Kit item	1	Wiper - (not sold separately)



AWV00267

**Cylinder, master level - Prince**

item	part no	qty	description
	0180664	1	Cylinder, master level - Prince
	8160061	1	Seal repair kit - (kit includes items 14 through 19)
1	8160258	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	8160188	2	Bushing
4	8160260	1	Spacer
5	8160261	1	Spacer
6	6091102	1	Piston
7	8160262	1	Gland
8	8160263	1	Spacer
9	6091104	1	Locknut
10	8160171	4	Port plug
11	6091083	1	Set screw
12	8160174	1	Cotter pin
13	8160175	1	Wiper cover
14	Kit item	1	Capped T-seal - (not sold separately)
15	Kit item	1	O-ring - (not sold separately)
16	Kit item	1	O-ring - (not sold separately)
17	Kit item	1	BU-washer - (not sold separately)
18	Kit item	1	U-cup - (not sold separately)
19	Kit item	1	Wiper - (not sold separately)

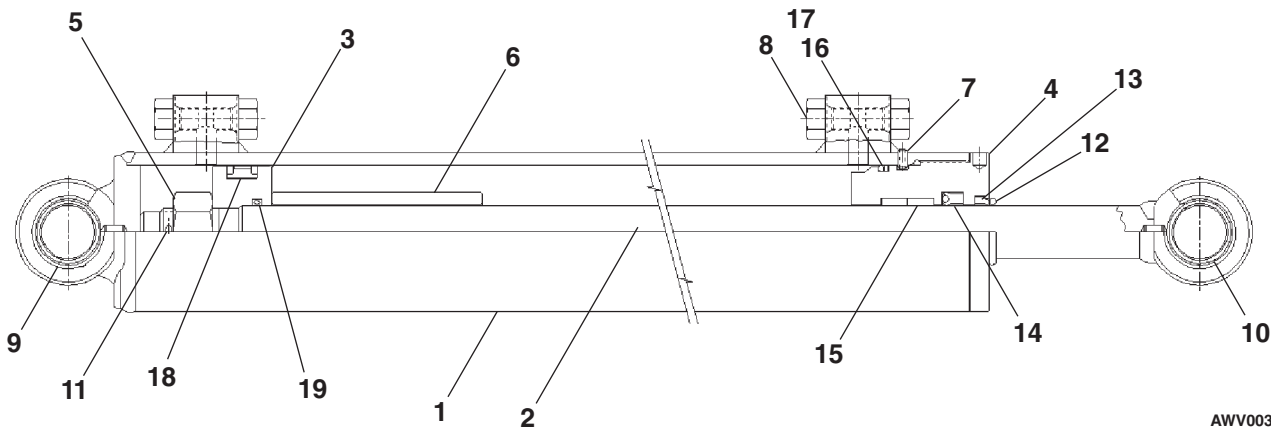


AWV00258



Cylinder, master level - Texas

item	part no	qty	description
	0180664	1	Cylinder, master level - Texas
	8200164	1	Seal repair kit - (kit includes items 13 through 19)
1		1	Cylinder tube - (not sold separately)
2	8200119	1	Rod
3	8200118	1	Piston
4	8200168	1	Head
5	8200110	1	Lock nut
6	8200167	1	Spacer
7	8200149	1	Set screw
8	8200112	4	Port plug
9	8200114	2	Bushing
10	8200166	1	Bushing
11	8200113	1	Cotter pin
12	8200115	1	O-ring
13	Kit item	1	Wiper - (not sold separately)
14	Kit item	1	U-cup - (not sold separately)
15	Kit item	2	Wear ring - (not sold separately)
16	Kit item	1	Back-up - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	CST seal - (not sold separately)
19	Kit item	1	O-ring - (not sold separately)

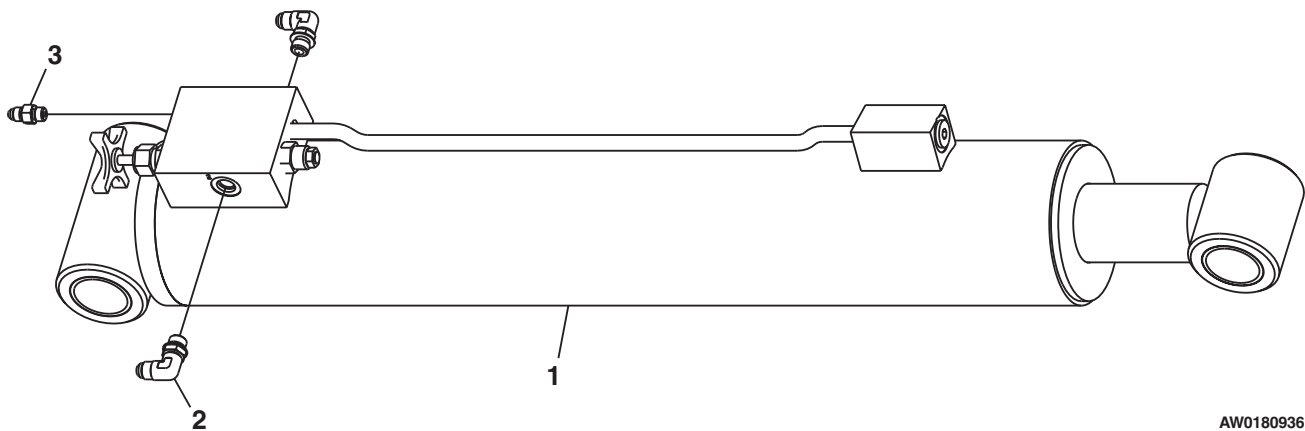


AWV00324



Riser boom lift cylinder

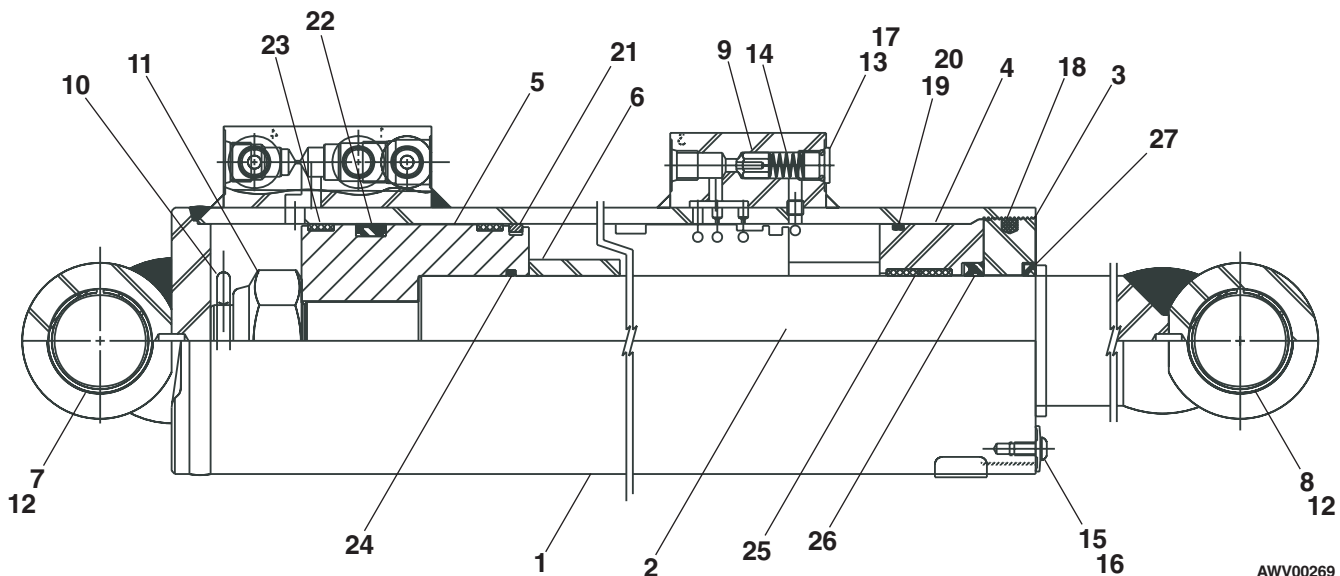
item	part no	qty	description
1	0180936	1	Riser boom lift cylinder
		1	Cylinder, riser boom lift
			(see page 2-54 for GBI cylinder)
			(see page 2-55 for Prince cylinder)
			(see page 2-56 for Rosenboom cylinder)
2	5035305	2	Straight thread 90° elbow
3	5065703	1	Straight thread adapter



AW0180936

**Cylinder, riser boom lift - GBI**

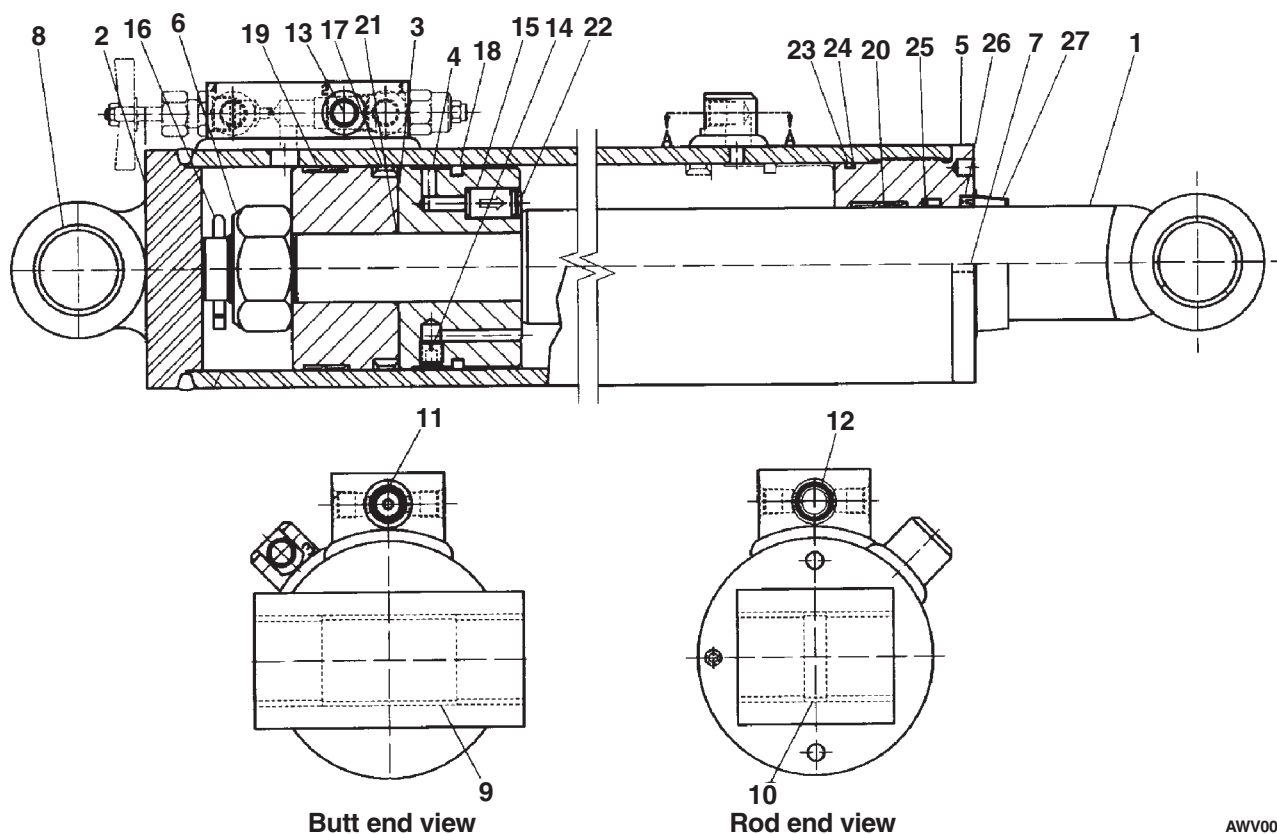
item	part no	qty	description
	0180665	1	Cylinder, riser boom lift - GBI
	8070779	1	Seal repair kit - (kit includes items 17 through 27)
1		1	Tube - (not sold separately)
2	8070791	1	Rod
3	8070790	1	Retainer
4	8070789	1	Bearing
5	8070788	1	Piston
6	8070787	1	Spacer
7	8070786	1	Spacer
8	8070785	1	Spacer
9	8070012	1	Poppet
10	8070210	1	Cotter pin
11	8070209	1	Nut
12	8070784	4	Bushing
13	8070015	1	Port plug
14	8070017	1	Spring
15	8070763	1	Lock washer
16	8070762	1	Capscrew
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	Nylon plug - (not sold separately)
19	Kit item	1	Back-up - (not sold separately)
20	Kit item	1	O-ring - (not sold separately)
21	Kit item	1	C. I. ring - (not sold separately)
22	Kit item	1	Quad seal - (not sold separately)
23	Kit item	2	Wear ring - (not sold separately)
24	Kit item	1	O-ring - (not sold separately)
25	Kit item	2	Wear ring - (not sold separately)
26	Kit item	1	U-ring - (not sold separately)
27	Kit item	1	Wiper - (not sold separately)



AWV00269

**Cylinder, riser boom lift - Prince**

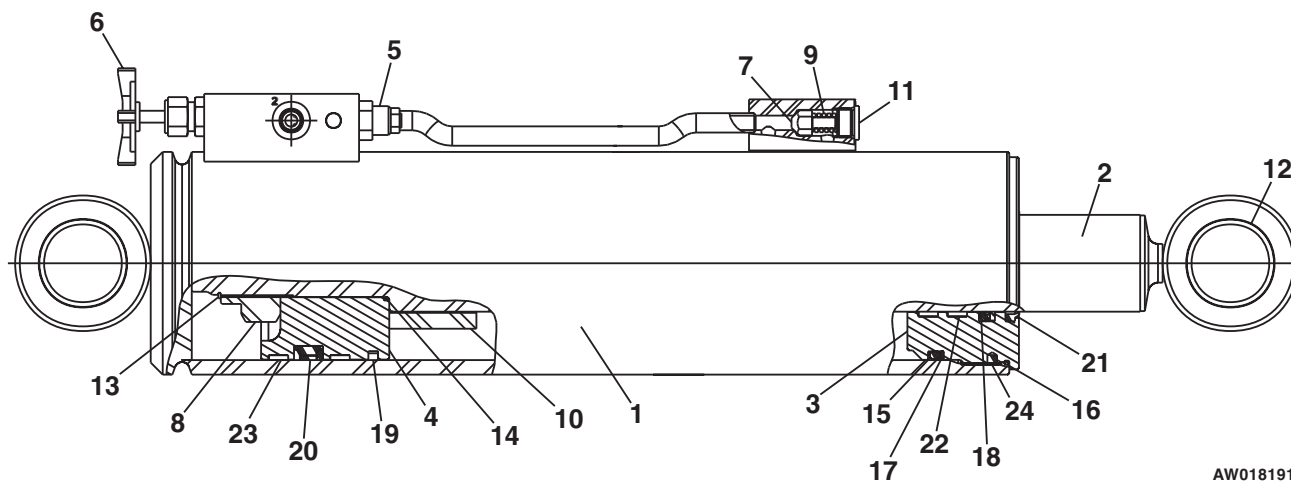
item	part no	qty	description
	0180665	1	Cylinder, riser boom lift - Prince
	8160062	1	Seal repair kit - (kit includes items
1	8160294	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	8160296	1	Piston
4	8160297	1	Piston
5	8160298	1	Gland
6	8160299	1	Locknut
7	6091083	1	Set screw
8	8160300	4	Bushing
9	8160301	1	Spacer
10	8160302	1	Spacer
11	8160132	1	Port plug
12	8160172	1	Port plug
13	8160131	4	Port plug
14	8160303	1	Orifice
15	8160085	1	Check valve
16	8160304	1	Cotter pin
17	Kit item	1	Capped T-seal - (not sold separately)
18	Kit item	1	Piston ring - (not sold separately)
19	Kit item	2	Bearing ring - (not sold separately)
20	Kit item	2	Bearing ring - (not sold separately)
21	Kit item	1	O-ring - (not sold separately)
22	Kit item	1	O-ring - (not sold separately)
23	Kit item	1	O-ring - (not sold separately)
24	Kit item	1	BU-washer - (not sold separately)
25	Kit item	1	U-cup - (not sold separately)
26	Kit item	1	Wiper - (not sold separately)
27	8160315	1	Rod and wiper cover



AWV00259

**Cylinder, riser boom lift - Rosenboom**

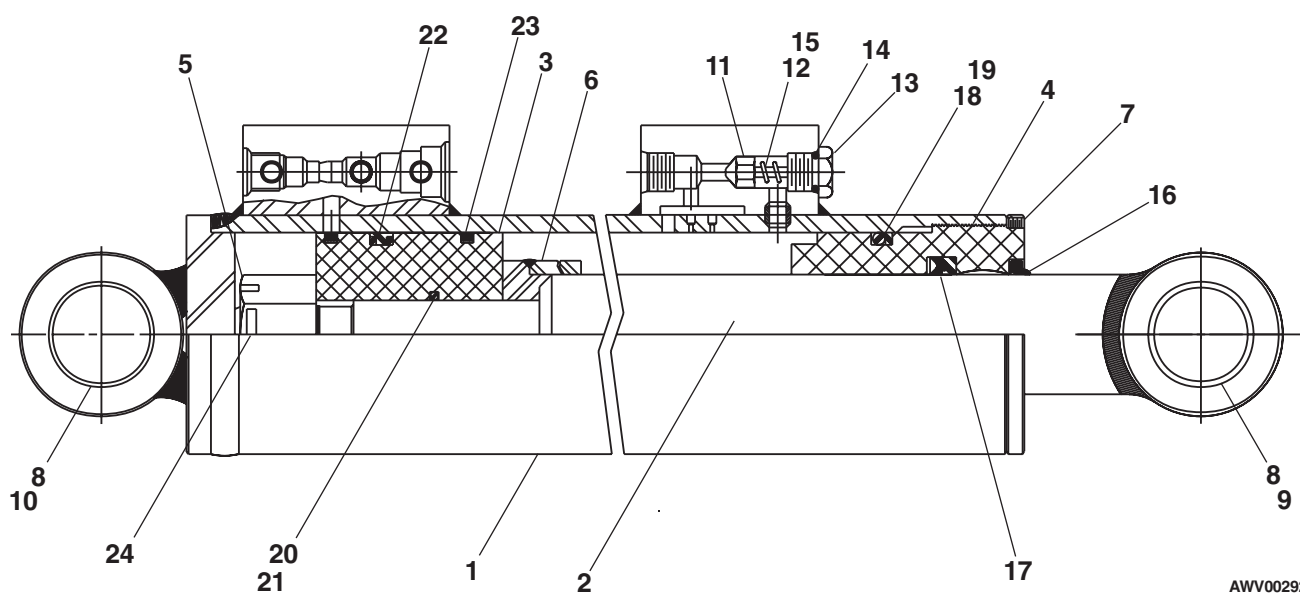
item	part no	qty	description
	0181913	1	Cylinder, riser boom lift - Rosenboom
	6091326	1	Seal repair kit - (kit includes items 13 through 24)
1		1	Tube - (not sold separately)
2	6091322	1	Rod
3	6091324	1	Head gland
4	6091323	1	Piston
5	6010606	1	Cartridge holding valve - (factory preset, do not reset)
6	6010115	1	Cartridge needle valve
	0071845	1	Seal repair kit
7	6091241	1	Poppet
8	6091272	1	Locknut
9	6091246	1	Spring
10	6091325	1	Rod spacer
11	5075306	1	Hex plug
12	2500049	4	Bearing
13	Kit item	1	Snap 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	O-ring - (not sold separately)
17	Kit item	1	Back-up - (not sold separately)
18	Kit item	1	Deep Z-seal - (not sold separately)
19	Kit item	1	Cast iron ring - (not sold separately)
20	Kit item	1	Capped T-seal - (not sold separately)
21	Kit item	1	Rod wiper - (not sold separately)
22	Kit item	2	Wearband - (not sold separately)
23	Kit item	2	Wearband - (not sold separately)
24	Kit item	2	Locking insert - (not sold separately)



AW0181913

**Cylinder, riser boom lift - Seabee**

item	part no	qty	description
	0180665	1	Cylinder, riser boom lift - Seabee
	8190188	1	Seal repair kit - (kit includes items 16 through 24)
1		1	Case - (not sold separately)
2	8190186	1	Shaft
3	8190185	1	Piston
4	8190184	1	Head gland
5	8190055	1	Piston nut
6	8190183	1	Spacer
7	8190129	1	Set screw
8	8190174	4	Bushing
9	8190173	1	Bushing spacer
10	8190172	1	Bushing spacer
11	8190088	1	Poppet
12	8190089	1	Spring
13	8190145	1	Plug
14	8190171	1	O-ring plug
15	8190170	1	Dowel pin
16	Kit item	1	Wiper - (not sold separately)
17	Kit item	1	U-cup - (not sold separately)
18	Kit item	1	O-ring - (not sold separately)
19	Kit item	1	Back-up - (not sold separately)
20	Kit item	1	O-ring - (not sold separately)
21	Kit item	2	Back-up - (not sold separately)
22	Kit item	1	Piston T seal - (not sold separately)
23	Kit item	2	Piston ring - (not sold separately)
24	Kit item	1	Cotter key - (not sold separately)

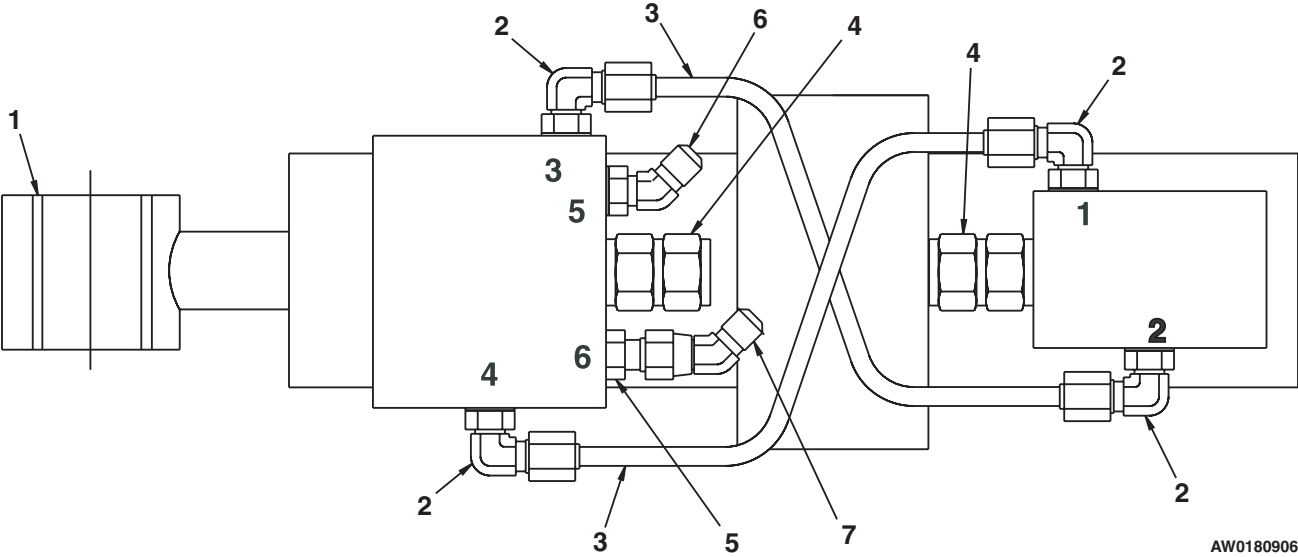


AWV00292



Slave level cylinder

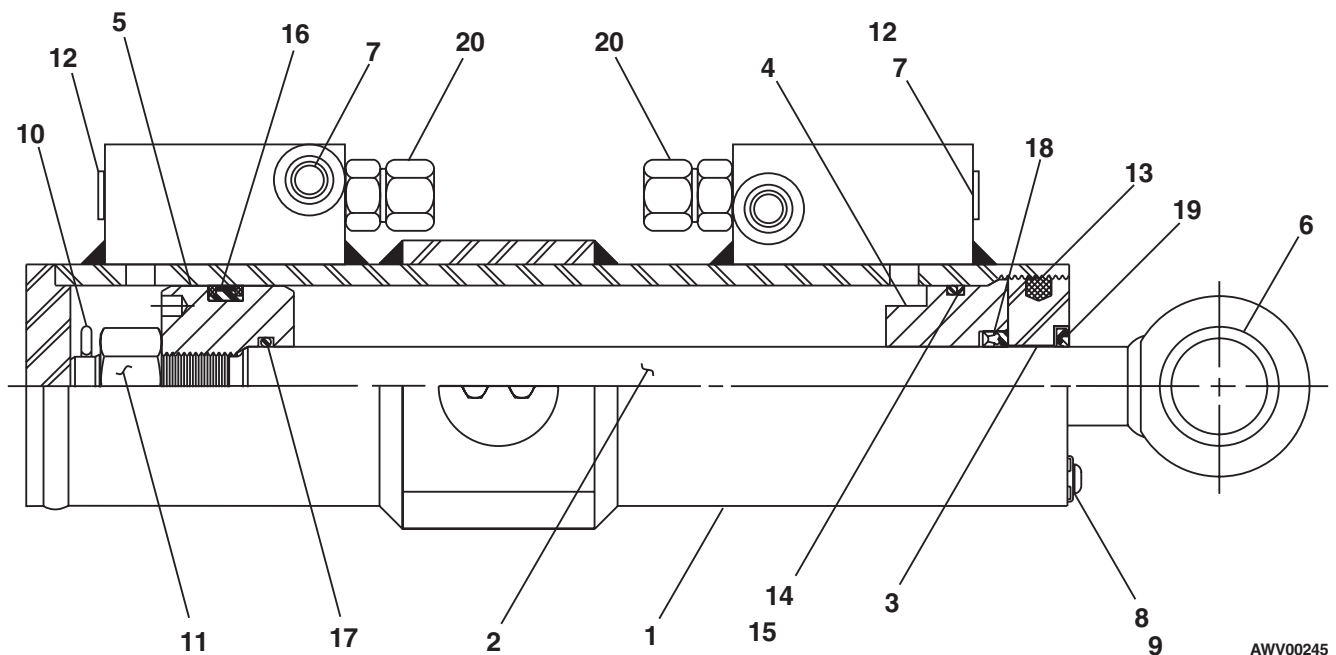
item	part no	qty	description
1	0180906	1	Slave level cylinder
	0180522	1	Cylinder, slave level (see page 2-59 for GBI cylinder) (see page 2-60 for Prince cylinder) (see page 2-61 for Rosenboom cylinder)
2	5035303	4	Straight thread 90° elbow - (GBI and Prince cylinder)
	5035303	2	Straight thread 90° elbow - (Rosenboom cylinder)
			Following parts for GBI and Prince cylinders only
3	0181072	2	1/4 inch hydraulic tube
4	6010686	2	Cartridge holding valve - (factory preset, do not reset)
	0150562	1	Seal repair kit
5	5065703	1	Straight thread adapter
6	5035703	1	Straight thread 45° elbow
7	5036903	1	Swivel nut 45° elbow



AW0180906

**Cylinder, slave level - GBI**

item	part no	qty	description
	0180522	1	Cylinder, slave level - GBI
	0181086	1	Seal repair kit - (kit includes items 12-19)
1		1	Case - (not sold separately)
2	8070239	1	Rod
3	8070238	1	Thread ring
4	8070587	1	Head gland
5	8070667	1	Piston
6	8070801	1	Bushing
7	8070542	2	Port plug
8	8070362	1	Lock washer
9	8070363	1	Capscrew
10	8070800	1	Snap ring
11	8070799	1	Nut
12	Kit item	2	O-ring - (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	1	CST ring - (not sold separately)
17	Kit item	1	O-ring - (not sold separately)
18	Kit item	1	U-cup - (not sold separately)
19	Kit item	1	Wiper - (not sold separately)
20	6010686	1	Cartridge holding valve - (factory preset, do not reset)
	0150562	1	Seal repair kit

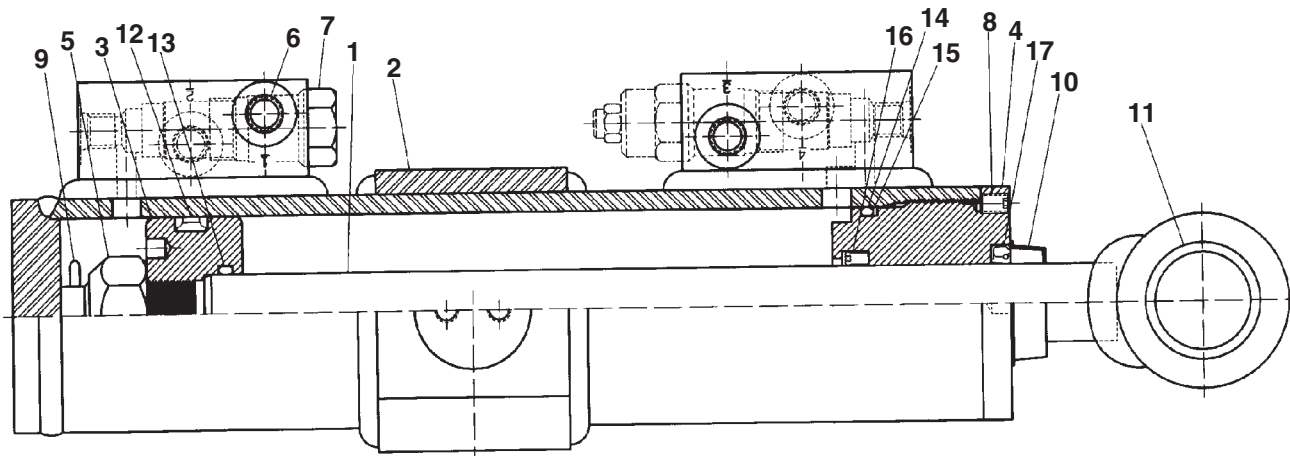


AWV00245



Cylinder, slave level - Prince

item	part no	qty	description
	0180522	1	Cylinder, slave level - Prince
	8160060	1	Seal repair kit - (kit includes items 12 through 17)
1	28160079	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	6091102	1	Piston
4	28160080	1	Gland
5	6091104	1	Locknut
6	8160171	8	Port plug
7	8160172	2	Counterbalance cavity plug
8	6091083	1	Set screw
9	8160174	1	Cotter pin
10	8160175	1	Wiper cover
11	8160176	1	Bushing
12	Kit item	1	Capped T-seal - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	1	O-ring - (not sold separately)
15	Kit item	1	BU-washer - (not sold separately)
16	Kit item	1	U-cup - (not sold separately)
17	Kit item	1	Wiper - (not sold separately)

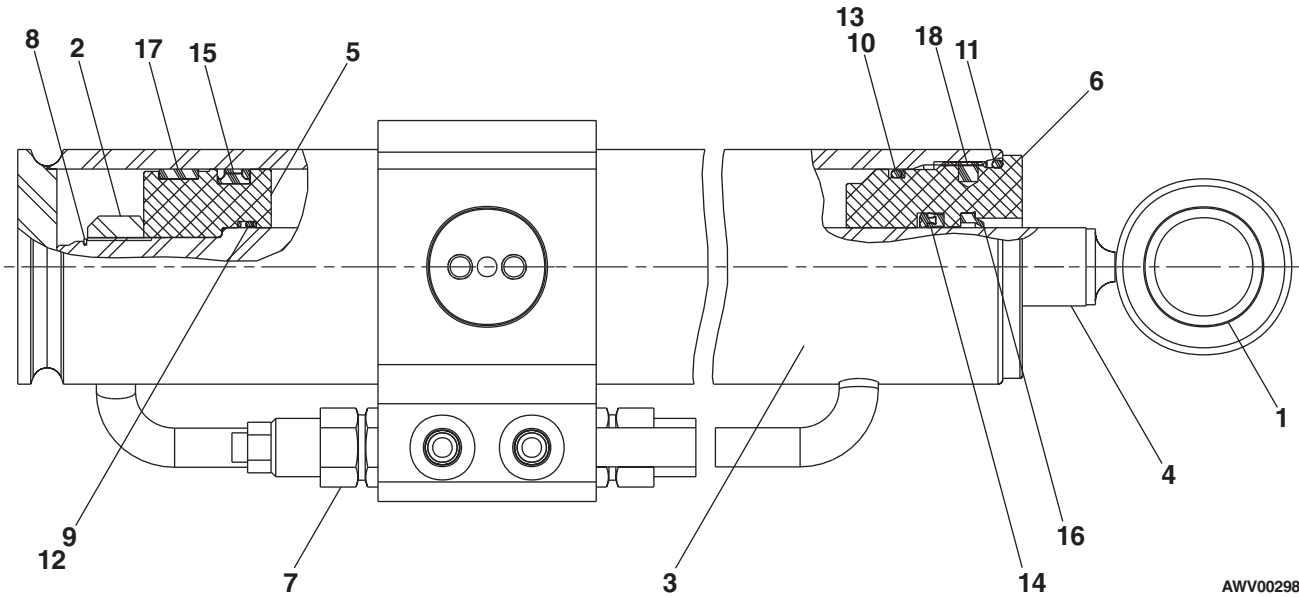


AWV00257



Cylinder, slave level - Rosenboom

item	part no	qty	description
	0181914	1	Cylinder, slave level - Rosenboom
	6091333	1	Seal repair kit - (kit includes items 8 through 18)
1	2500026	2	Bearing
2	6091282	1	Locknut
3		1	Tube - (not sold separately)
4	6091330	1	Rod
5	6091331	1	Piston
6	6091332	1	Head gland
7	6091335	2	Counterbalance holding valve - (preset by factory, do not reset)
8	Kit item	1	Snap ring - (not sold separately)
9	Kit item	1	O-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	2	Backup ring - (not sold separately)
13	Kit item	1	Backup ring - (not sold separately)
14	Kit item	1	Deep Z-seal - (not sold separately)
15	Kit item	1	Capped T-seal - (not sold separately)
16	Kit item	1	Rod wiper - (not sold separately)
17	Kit item	1	Wearband - (not sold separately)
18	Kit item	1	Locking insert - (not sold separately)

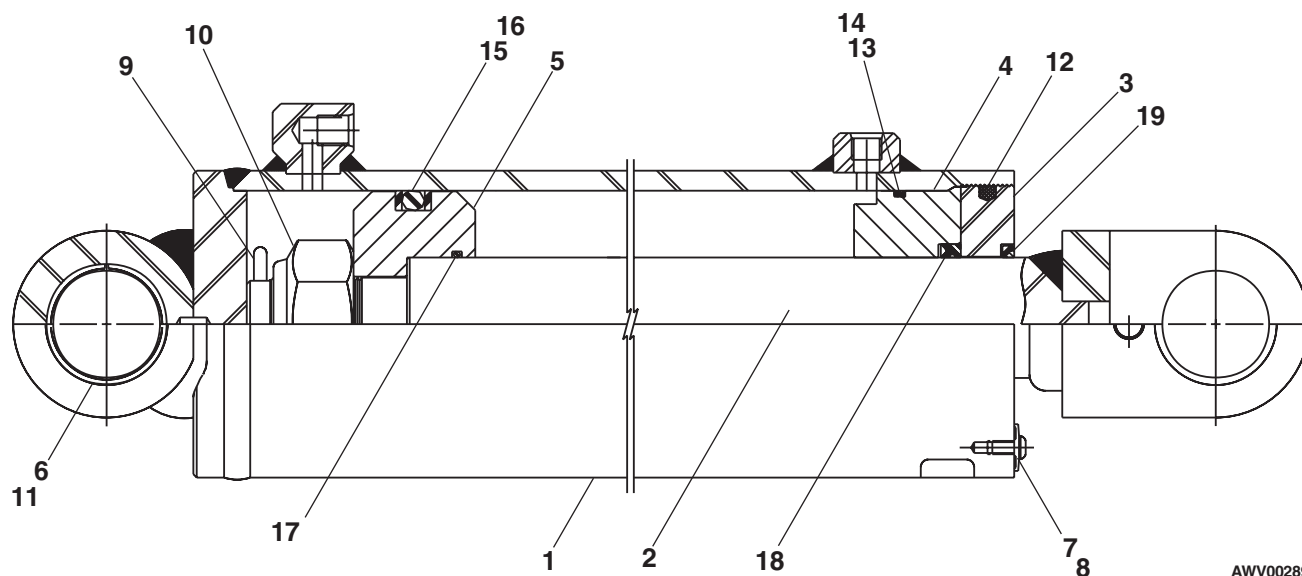


AWV00298



Cylinder, steering - GBI

item	part no	qty	description
	0070239	1	Cylinder, steering - GBI
	0070832	1	Seal repair kit - (kit includes items 12 through 19)
1	8070530	1	Rod
2		1	Tube - (not sold separately)
3	8070225	1	Retainer
4	8070527	1	Bearing
5	8070526	1	Piston
6	8070525	1	Spacer
7	8070300	1	Lock washer
8	8070301	1	Capscrew
9	8070502	1	Cotter pin
10	8070033	1	Nut
11	8070518	2	Bushing
12	Kit item	1	Nylon plug - (not sold separately)
13	Kit item	1	Back-up - (not sold separately)
14	Kit item	1	O-ring - (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	O-ring - (not sold separately)
18	Kit item	1	U-ring - (not sold separately)
19	Kit item	1	Wiper - (not sold separately)

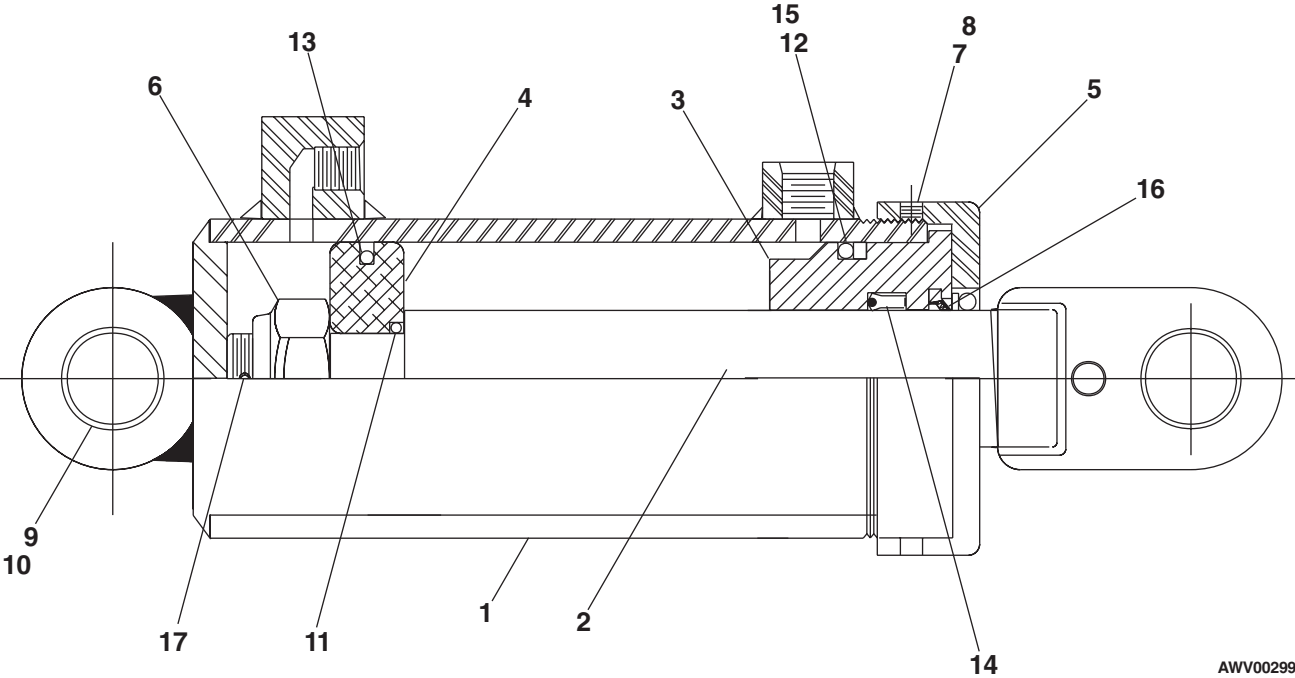


AWV00289



Cylinder, steering - Green

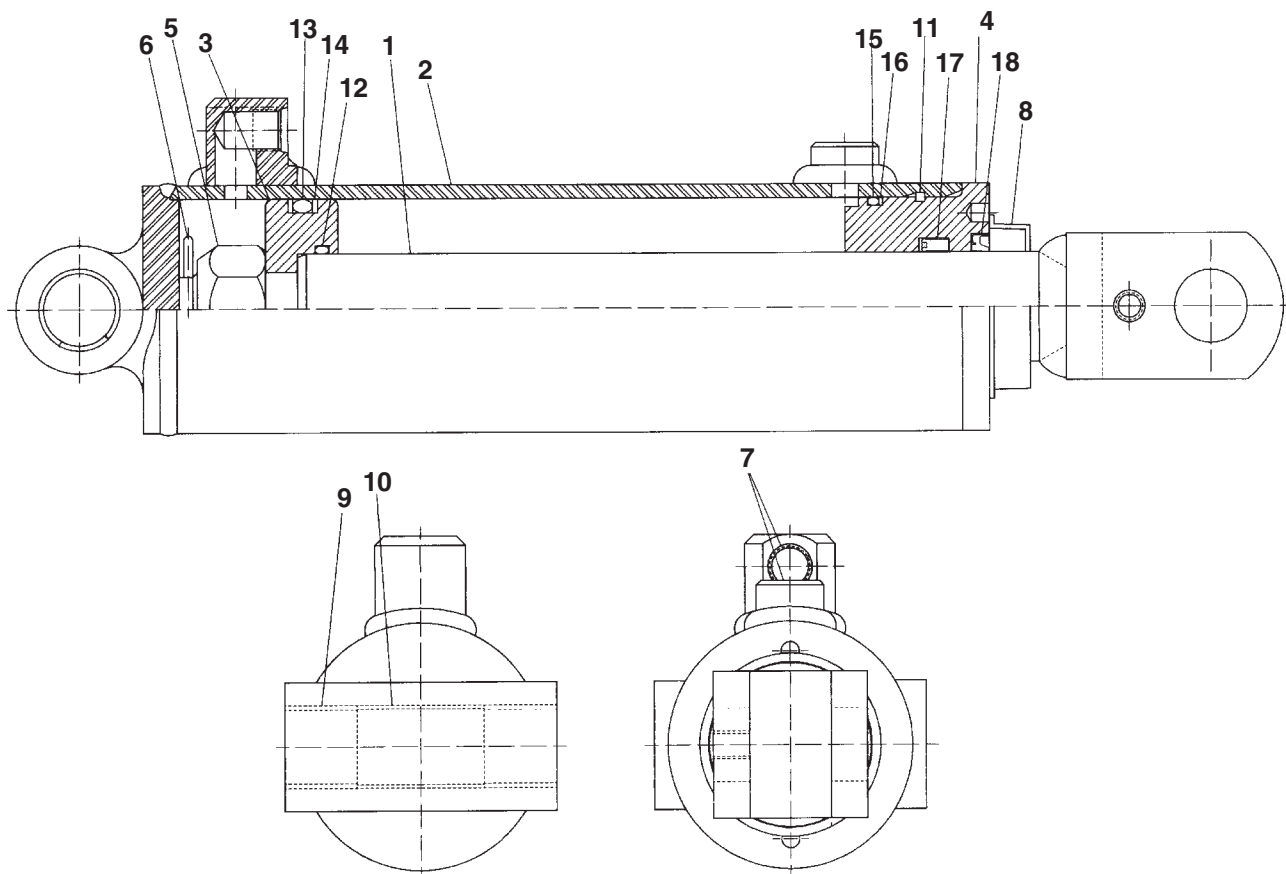
item	part no	qty	description
	0070239	1	Cylinder, steering - Green
	8070425	1	Seal repair kit - (kit includes items 11 through 17)
1		1	Cylinder barrel - (not sold separately)
2	8070421	1	Rod
3	8070420	1	Gland
4	8070419	1	Piston
5	8070280	1	Cap
6	6091066	1	Full lock nut
7	6091071	2	Set screw
8	6091058	2	Nylon ball
9	8070473	2	Bearing
10	8070833	1	Bearing spacer
11	Kit item	1	Oil seal - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	2	Piston seal - (not sold separately)
14	Kit item	1	Rod seal - (not sold separately)
15	Kit item	1	Back-up - (not sold separately)
16	Kit item	1	Rod wiper - (not sold separately)
17	Kit item	1	Cotter pin - (not sold separately)



AWV00299

**Cylinder, steering - Prince**

item	part no	qty	description
	0070239	1	Cylinder, steering - Prince
	8160094	1	Seal repair kit - (kit includes items 11 through 18)
1	8160265	1	Piston rod
2		1	Butt and tube - (not sold separately)
3	8160267	1	Piston
4	8160268	1	Gland
5	8160095	1	Locknut
6	8160174	1	Cotter pin
7	8160131	2	Port plug
8	8160269	1	Rod and wiper cover
9	8160270	2	Bushing
10	8160271	1	Spacer
11	Kit item	1	Square wire retainer - (not sold separately)
12	Kit item	1	O-ring - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	2	BU-washer - (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)

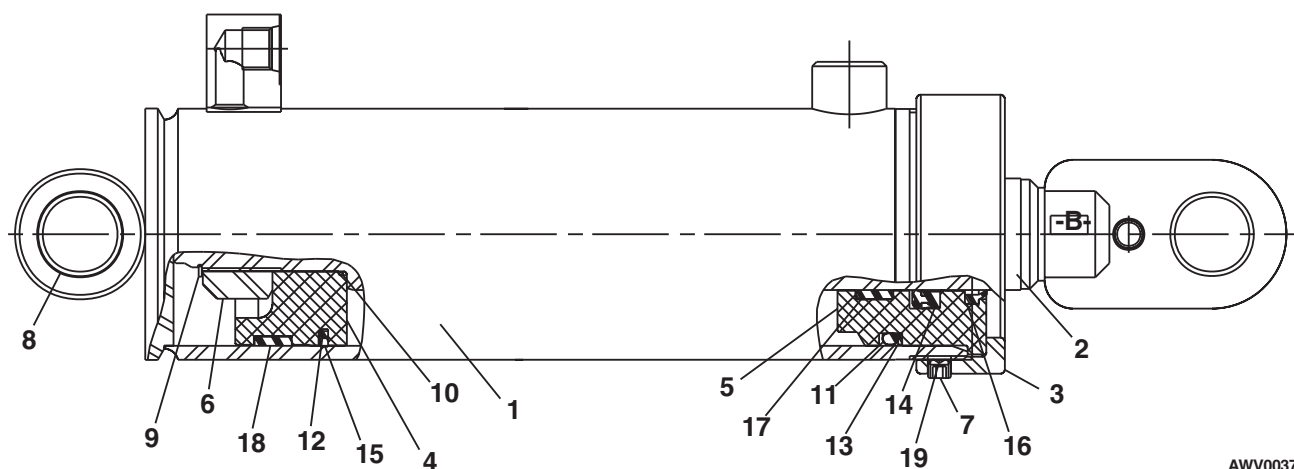


AWV00247



Cylinder, steering - Rosenboom

item	part no	qty	description
	0074732	1	Cylinder, steering - Rosenboom
	6091313	1	Seal repair kit - (kit includes items 9 through 19)
1		1	Tube - (not sold separately)
2	6091309	1	Rod
3	6091312	1	Head gland cap
4	6091310	1	Piston
5	6091290	1	Head gland
6	6091237	1	Locking nut
7	5569835	1	Set screw 5/16-18 x 1/4 inch long
8	2501616	2	Bushing
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	Square ring - (not sold separately)
13	Kit item	1	Back-up - (not sold separately)
14	Kit item	1	Deep Z-seal - (not sold separately)
15	Kit item	1	Piston seal - (not sold separately)
16	Kit item	1	Rod wiper - (not sold separately)
17	Kit item	1	Wearband - (not sold separately)
18	Kit item	1	Wearband - (not sold separately)
19	Kit item	1	Locking insert - (not sold separately)

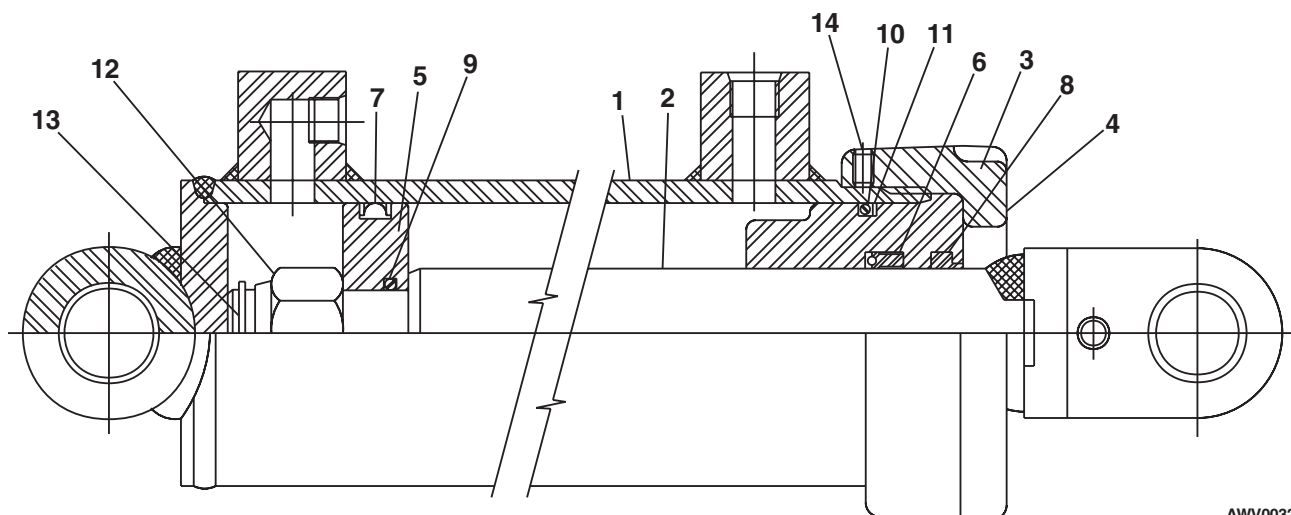


AWV00371



Cylinder, steering - Ward

item	part no	qty	description
	0070239	1	Cylinder, steering - Ward
	0071161	1	Seal repair kit - (kit includes items 6 through 14)
1		1	Cylinder body - (not sold separately)
2	8230116	1	Rod
3	8230115	1	Stuffing box
4	8230114	1	Cart nut
5	8230113	1	Piston
6	Kit item	1	Rod seal - (not sold separately)
7	Kit item	1	Piston seal - (not sold separately)
8	Kit item	1	Wiper - (not sold separately)
9	Kit item	1	O-ring - (not sold separately)
10	Kit item	1	O-ring - (not sold separately)
11	Kit item	1	Back-up ring - (not sold separately)
12	Kit item	1	Self locking nut - (not sold separately)
13	Kit item	1	Snap ring - (not sold separately)
14	Kit item	1	Set screw - (not sold separately)

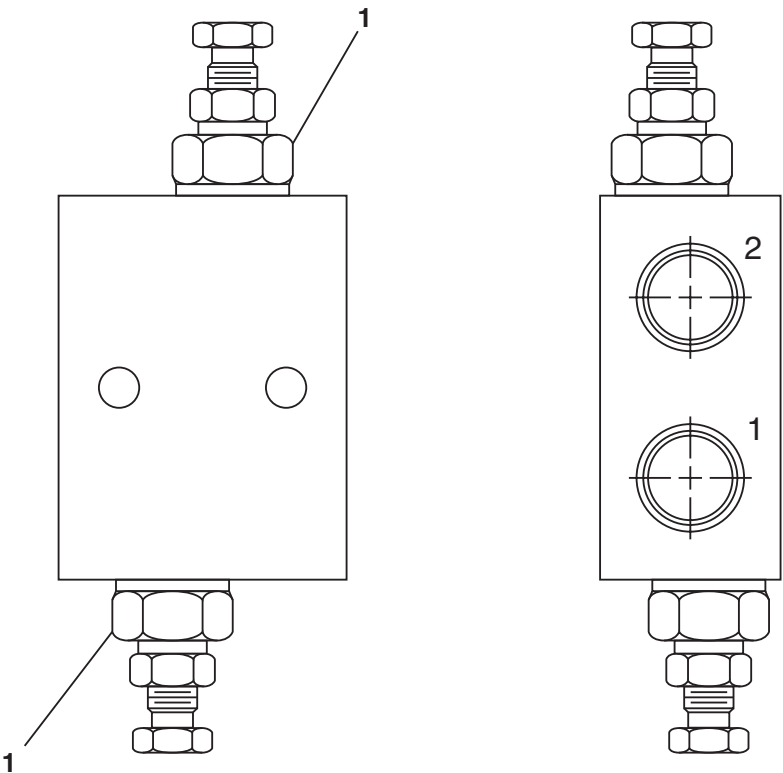


AWV00322



Dual crossover relief valve

item	part no	qty	description
1	6010541 6010578	2	Dual crossover relief valve Crossover relief cartridge - (factory preset, do not reset)

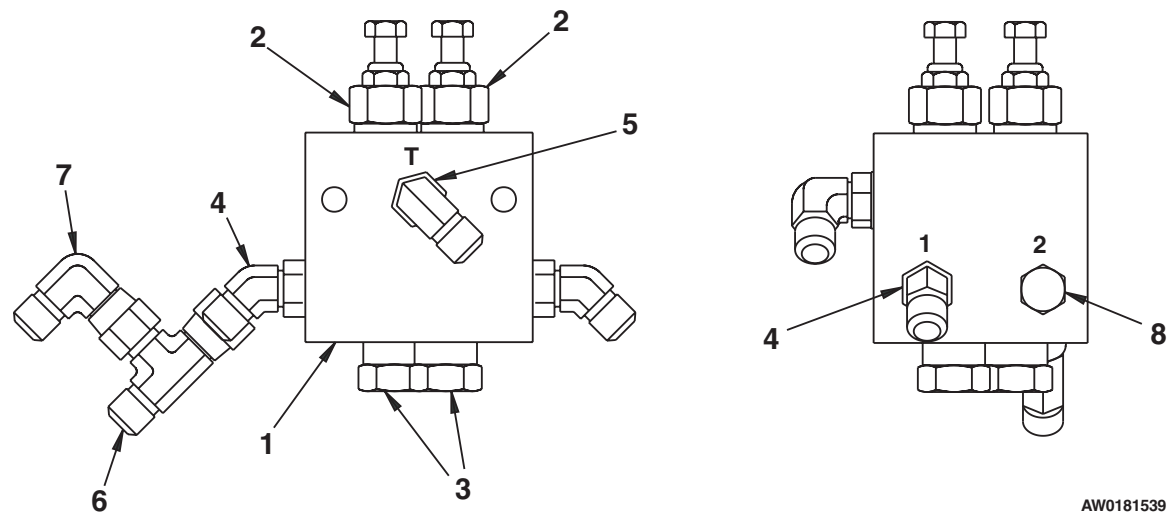


AW6010541



Dual relief/anti-cavitation valve

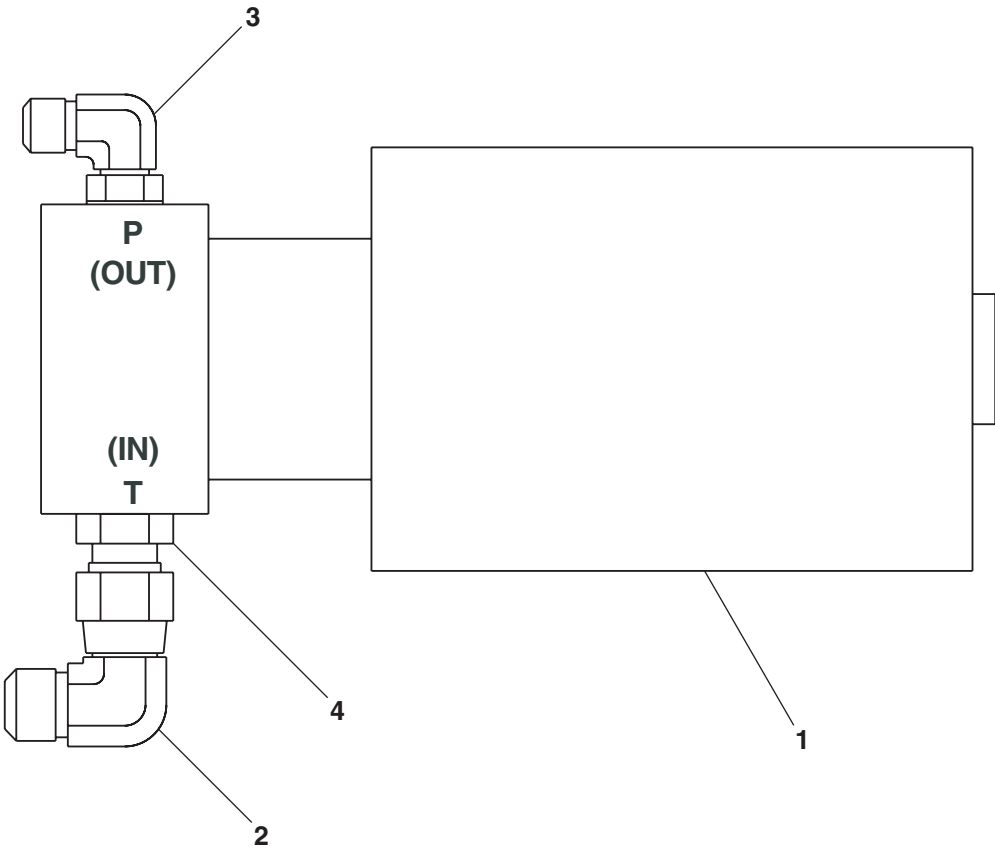
item	part no	qty	description
	0181539	1	Dual relief/anti-cavitation valve - (used on Ford only)
	0180865	1	Dual relief/anti-cavitation valve - (all other machines)
1	6010598	1	Valve, dual relief/anti-cavitation - (includes items 2 and 3)
2	6010328	2	Cartridge relief valve
	0180801	1	Seal repair kit
3	6010307	1	Check valve cartridge
4	5035705	3	Straight thread 45° elbow
5	5035305	1	Straight thread 90° elbow
6	5036705	1	Swivel nut run tee
7	5037005	1	Swivel nut 90° elbow
8	5075205	1	Hex head plug





Emergency power unit

item	part no	qty	description
1	0072940	1	Emergency power unit
2	6020058	1	Emergency power motor/pump
3	5037006	1	Swivel nut 90° elbow
4	5035305	1	Straight thread 90° elbow
5	5065709	1	Straight thread adapter

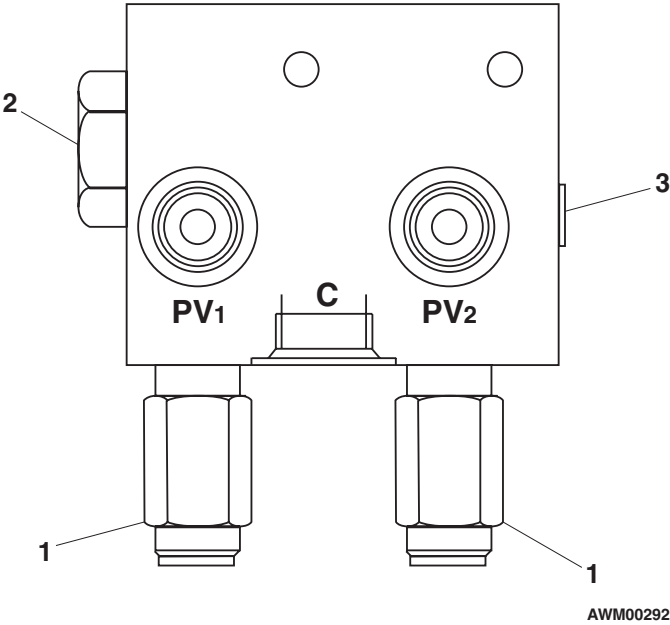


AW0072940



Flow divider, 2 wheel drive

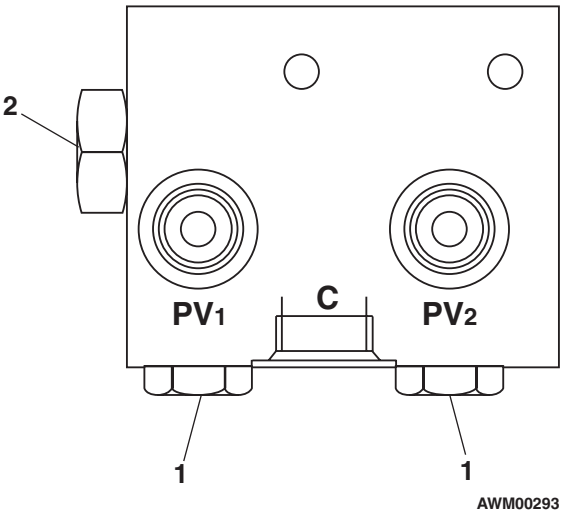
item	part no	qty	description
1	6010639	1	Flow divider, 2 wheel drive
	6010561	1	Seal repair kit
	6010655	2	Relief valve cartridge
	6010551	1	Seal repair kit
2	6010626	1	Flow divider/combiner
	0150561	1	Seal repair kit
3	8060281	1	Pipe plug with .060 inch diameter orifice





Flow divider, 4 wheel drive - Fluid Tech

item	part no	qty	description
1	6010570	1	Flow divider, 4 wheel drive - Fluid Tech
	6010560	2	Cartridge check valve
	6010533	1	Seal repair kit
2	6010604	1	Flow divider/combiner
	6010561	1	Seal repair kit
3	8060281	1	Pipe plug with .060 inch diameter orifice

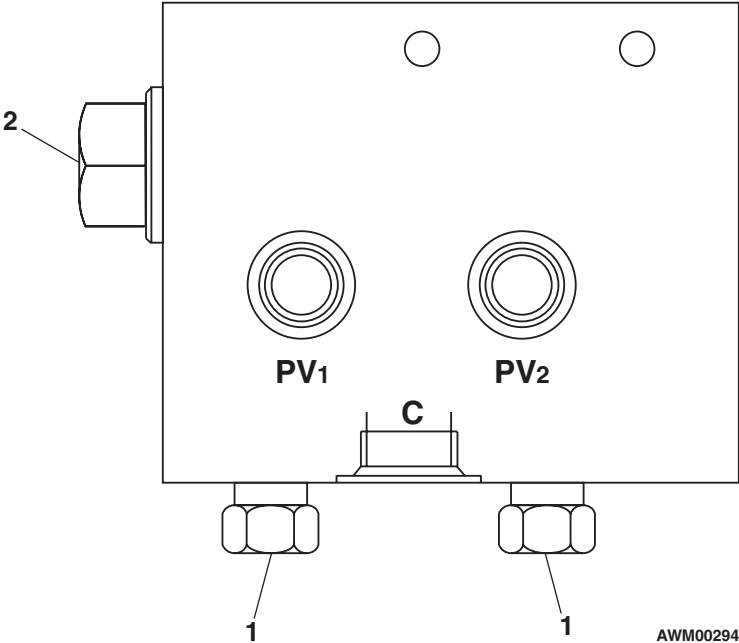


AWM00293



Flow divider, 4 wheel drive - Weco

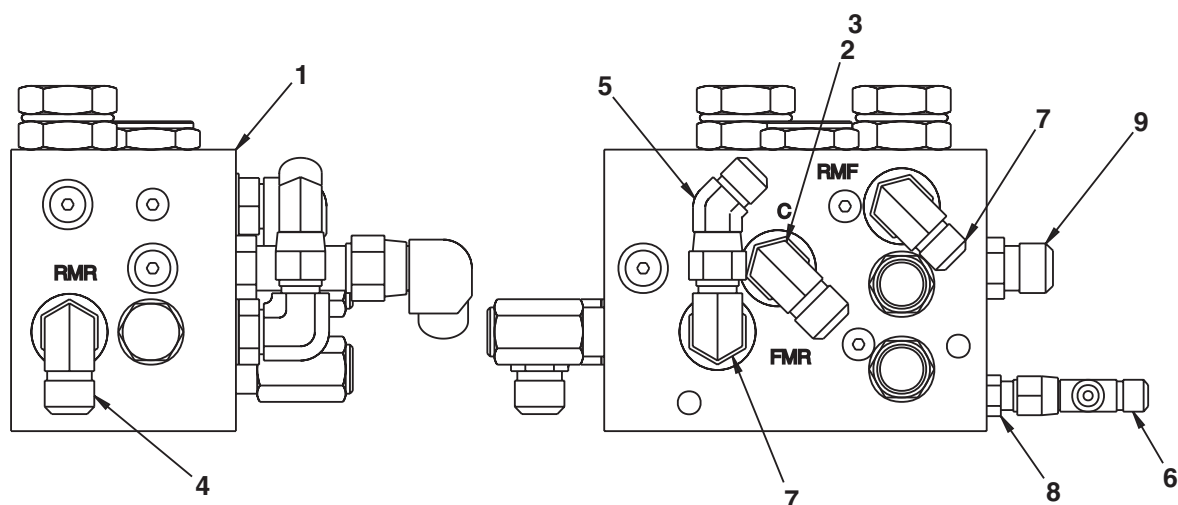
item	part no	qty	description
1	6010570	1	Flow divider, 4 wheel drive - Weco
	6010575	2	Cartridge check valve
	6091190	1	Seal repair kit
2	6010601	1	Flow divider/combiner
3	8060281	1	Pipe plug with .060 inch diameter orifice





Front transmission valve

item	part no	qty	description
	0180855	1	Front transmission valve
1	6010569	1	Transmission valve - (see page 2-91 for parts breakdown)
2	5065807	1	Long straight thread adapter
3	5037007	1	Swivel nut 90° elbow
4	5035307	1	Straight thread 90° elbow
5	5036906	1	Swivel nut 45° elbow
6	5036705	1	Swivel nut run tee
7	5035316	2	Straight thread 90° elbow
8	5065734	1	Straight thread adapter
9	5065710	1	Straight thread adapter



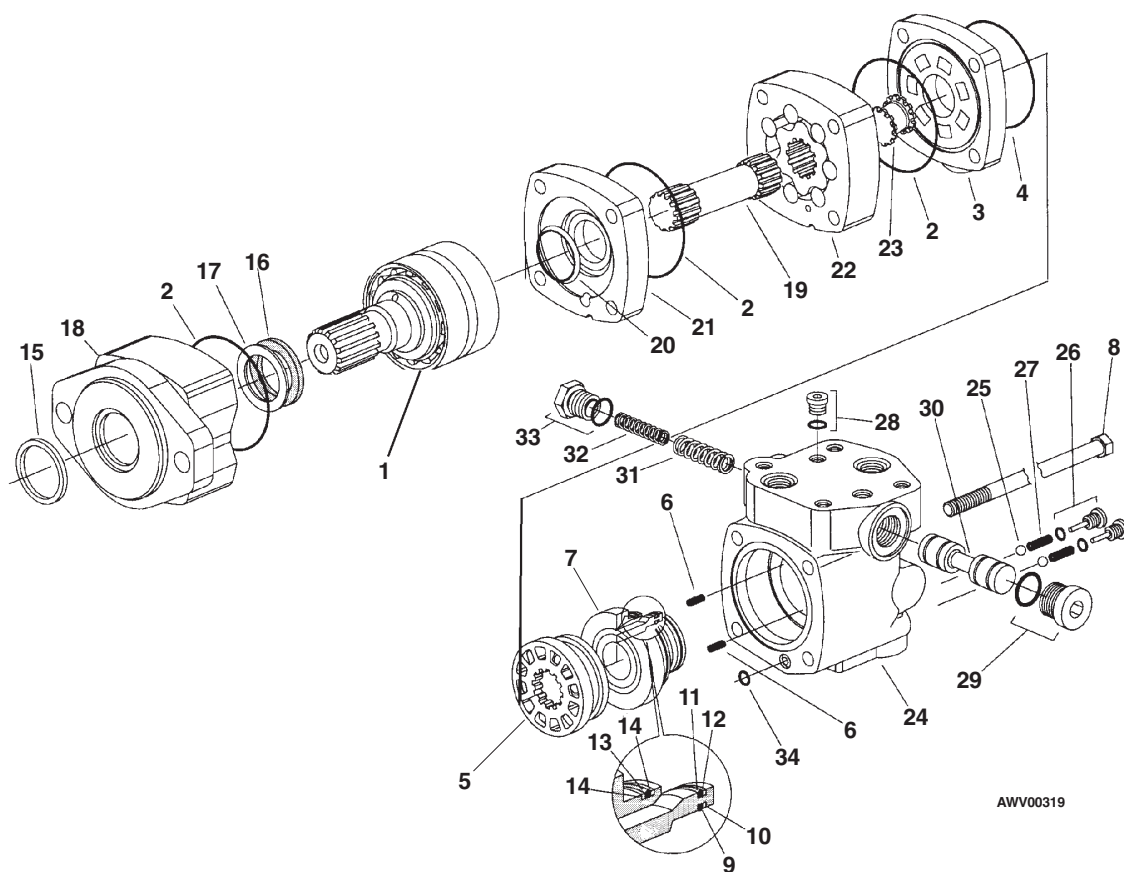
AW0180855

**Hydraulic drive motor, 4 wheel drive**

item	part no	qty	description
	6030034	1	Hydraulic drive motor, 4 wheel drive
	0152189	1	Seal repair kit
1	8050058	1	Shaft and bearing, splined
2	Kit item	1	Seal - (not sold separately)
3	8050059	3	Valve plate
4	Kit item	1	Seal - (not sold separately)
5	8050060	1	Valve
6	8050061	2	Spring
7	8050062	1	Balance ring S/A with 2 pins
8	8050040	4	Bolt
9	Kit item	1	O-ring - (not sold separately)
10	Kit item	1	Back-up ring - (not sold separately)
11	Kit item	1	O-ring - (not sold separately)
12	Kit item	1	Back-up ring - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	2	Back-up ring - (not sold separately)
15	Kit item	1	Dust seal - (not sold separately)
16	Kit item	1	Shaft seal - (not sold separately)
17	Kit item	1	Back-up ring - (not sold separately)
18	8050063	1	Bearing housing, SAE B 2 bolt
19	8050064	1	Drive
20	Kit item	1	Face seal - (not sold separately)
21	8050065	1	Wear plate
22	8050066	1	Geroler
23	8050067	1	Main drive
24	8050068	1	Valve housing
25	8050069	2	Steel ball
26	8050070	2	Plug with o-ring
	Kit item	2	Replacement o-ring - (not sold separately)
27	8050071	2	Compression spring
28	8050072	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
29	8050073	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
30	8050074	1	Control spool
31	8050033	1	Compression spring
32	8050032	1	Compression spring
33	8050077	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
34	Kit item	1	O-ring - (not sold separately)



Hydraulic drive motor, 4 wheel drive

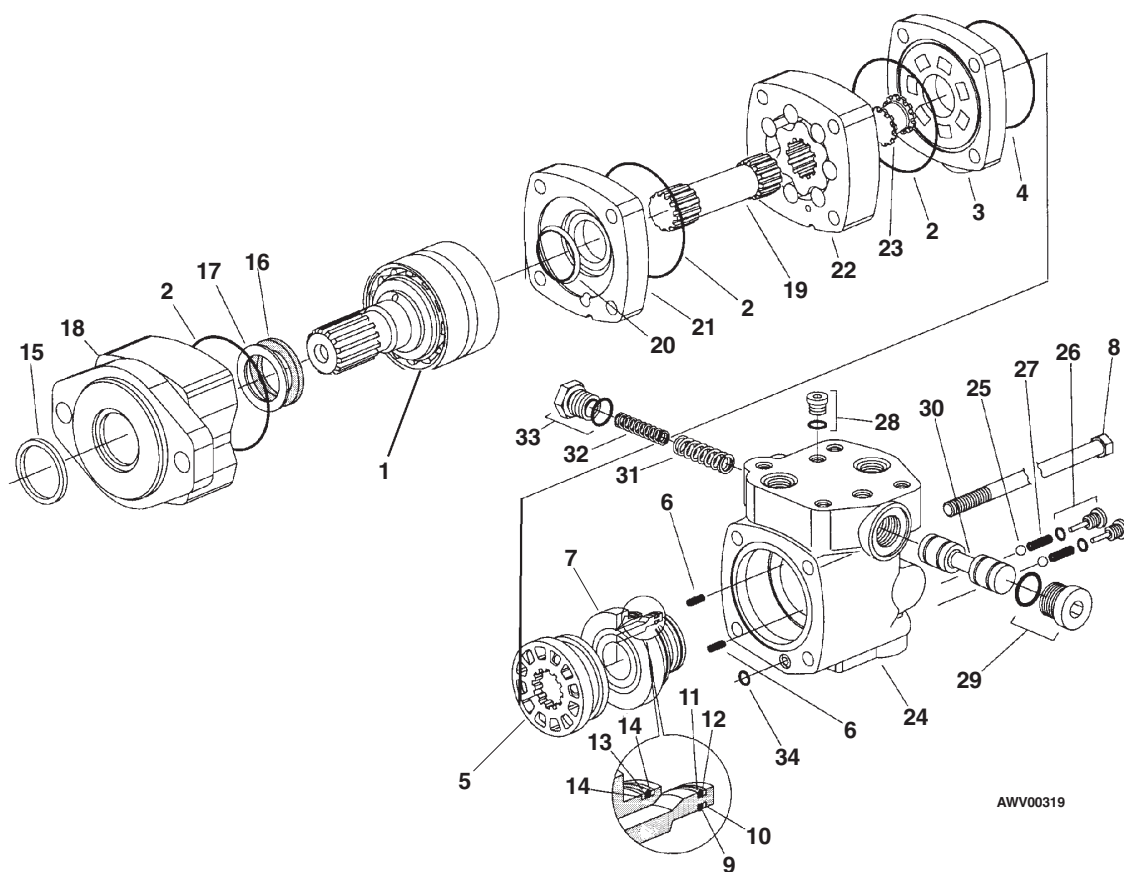


**Hydraulic drive motor, rear**

item	part no	qty	description
	6030035	1	Hydraulic drive motor, rear right hand
	6030042	1	Hydraulic drive motor, rear left hand
	0152189	1	Seal repair kit
1	8050058	1	Shaft and bearing, splined
2	Kit item	3	Seal - (not sold separately)
3	8050059	1	Valve plate
4	Kit item	1	Seal - (not sold separately)
5	8050060	1	Valve
6	8050061	2	Spring
7	8050062	2	Balance ring S/A with 2 pins
8	8050076	4	Bolt
9	Kit item	1	O-ring - (not sold separately)
10	Kit item	1	Back-up ring - (not sold separately)
11	Kit item	1	O-ring - (not sold separately)
12	Kit item	1	Back-up ring - (not sold separately)
13	Kit item	1	O-ring - (not sold separately)
14	Kit item	2	Back-up ring - (not sold separately)
15	Kit item	1	Dust seal - (not sold separately)
16	Kit item	1	Shaft seal - (not sold separately)
17	Kit item	1	Back-up ring - (not sold separately)
18	8050063	1	Bearing housing, SAE B 2 bolt
19	8050056	1	Drive
20	Kit item	1	Face seal - (not sold separately)
21	8050065	1	Wear plate
22	8050075	1	Geroler
23	8050067	1	Main drive
24	8050068	1	Valve housing
25	8050069	2	Steel ball
26	8050070	2	Plug with o-ring
	Kit item	2	Replacement o-ring - (not sold separately)
27	8050071	2	Compression spring
28	8050072	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
29	8050073	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
30	8050074	1	Control spool
31	8050032	1	Compression spring
32	8050033	1	Compression spring
33	8050077	1	Plug with o-ring
	Kit item	1	Replacement o-ring - (not sold separately)
34	Kit item	1	O-ring - (not sold separately)



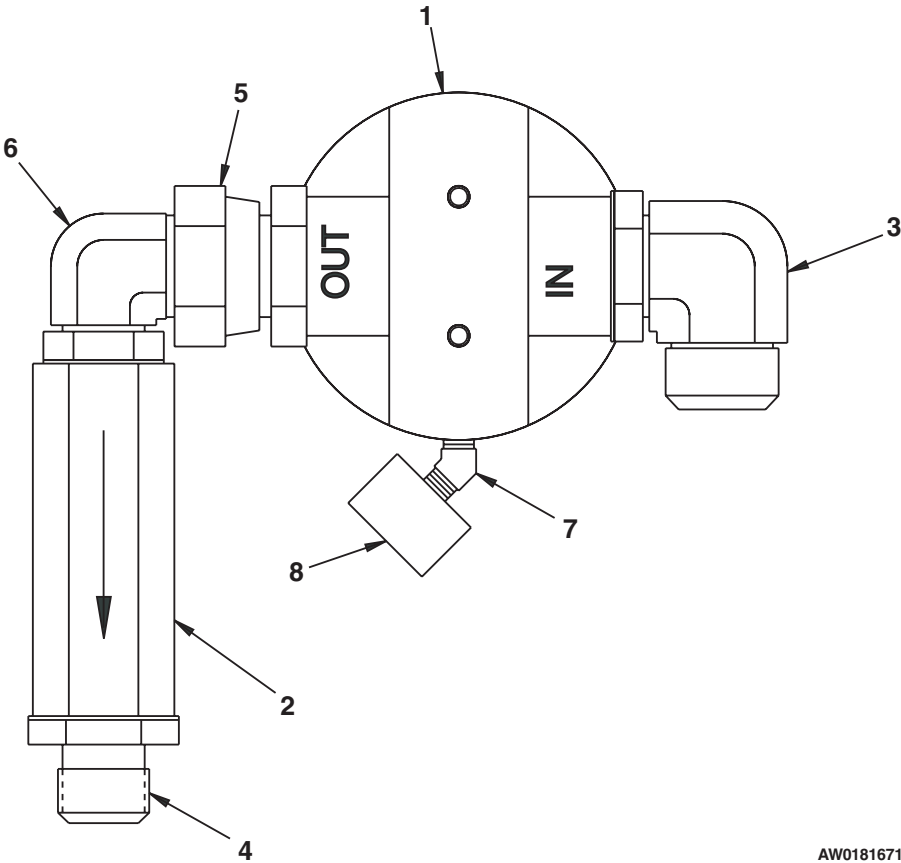
Hydraulic drive motor, rear





Hydraulic oil filter

item	part no	qty	description
	0181671	1	Hydraulic oil filter - (Ford only)
	0181672	1	Hydraulic oil filter - (all other machines)
1	5080044	1	Filter - (includes gauge)
2	6010080	1	Check valve
3	5035312	1	Straight thread 90° elbow
4	5065737	1	Straight thread adapter
5	5025006	1	Swivel adapter
6	5035324	1	Straight thread 90° elbow
7	5090031	1	Street elbow 45°, 1/8 NPT
8	7630140	1	Filter condition indicator

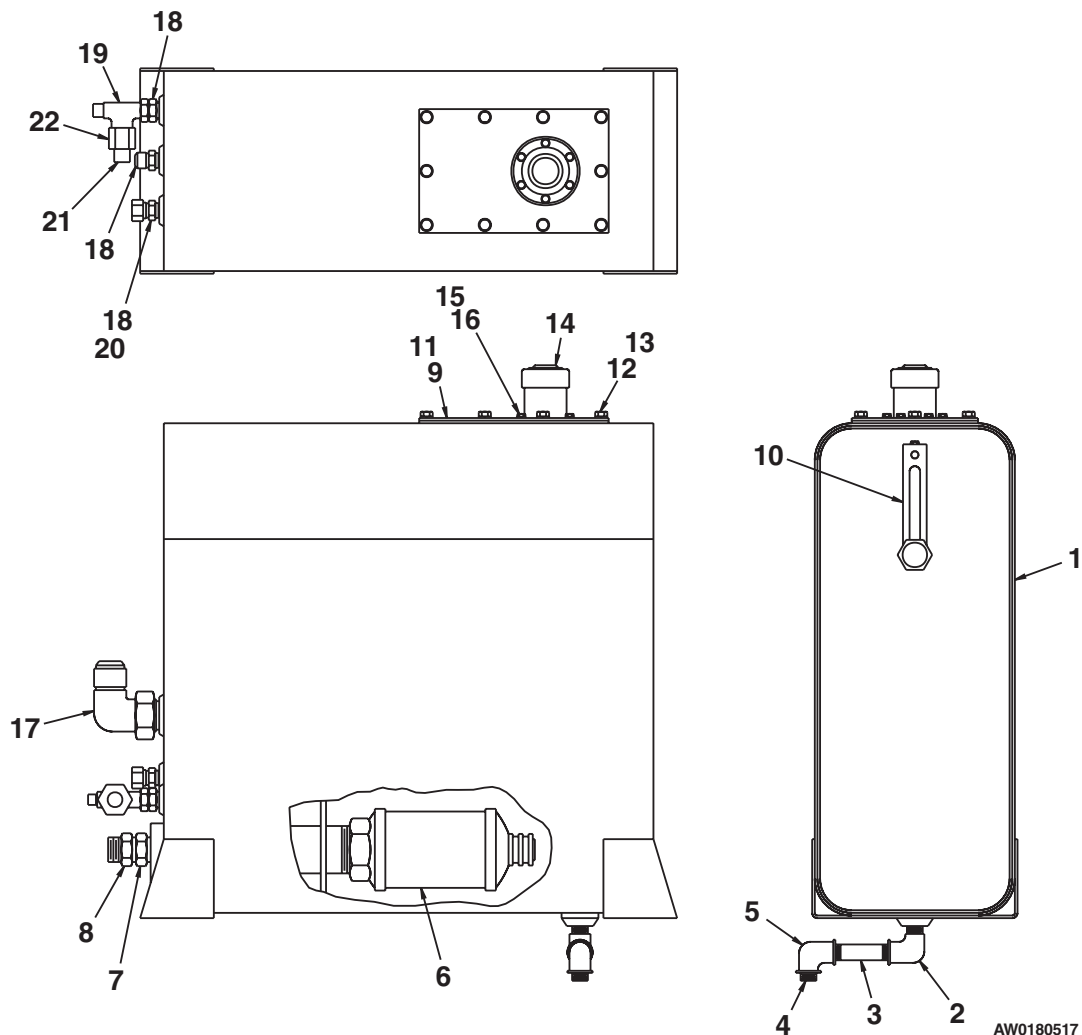


AW0181671



Hydraulic oil reservoir

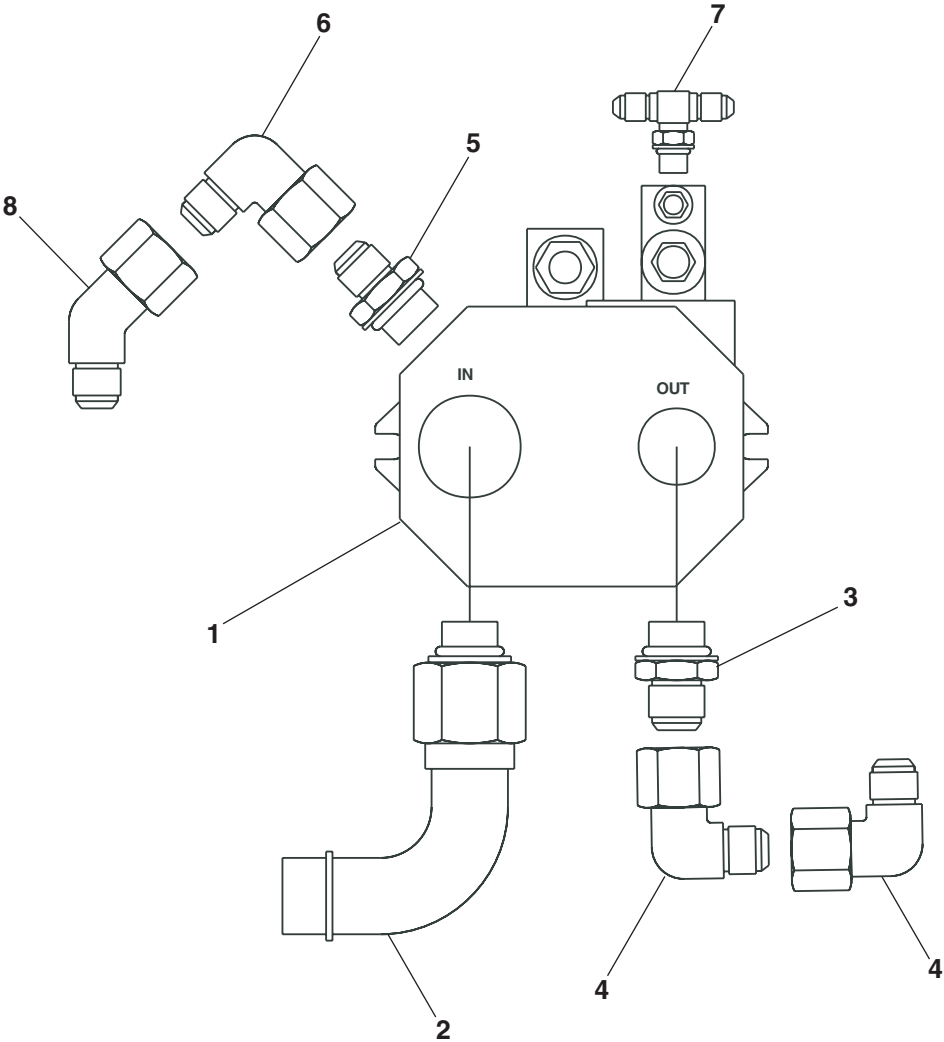
item	part no	qty	description
	0180517	1	Hydraulic oil reservoir, complete
1	0180439	1	Reservoir with cover
2	7734704	1	Street elbow 90° 1/2 NPT
3	7740424	1	Nipple, 1/8 NPT x 3 inch long
4	7714304	1	Plug, 1/2 inch NPT hollow hex
5	7734504	1	Pipe 90° elbow, 1/2 inch NPT
6	5080018	1	Filter, sump strainer
7	7721612	1	Reducer bushing
8	5037305	1	Straight connector
9	0110367	1	Cover plate
10	5090007	1	Liquid level gauge with thermometer
11	0110368	1	Cover gasket
12	970259	10	Capscrew 5/16-18 x 1 inch long hex head grade 5
13	987109	10	Washer 5/16 medium lock
14	5090008	1	Filler/breather cap
15	5560691	6	Machine screw #10-24 x 1/2 inch long hex head
16	987089	6	Washer #10 medium lock
17	5035312	1	Straight thread 90° elbow
18	5033614	3	Male adapter
19	5036706	1	Swivel nut run tee
20	5063704	1	Cap
21	5064003	1	Tube end reducer
22	5063906	1	Fitting nut





Hydraulic pump and fittings

item	part no	qty	description
1	0181426	1	Hydraulic pump and fittings - (all engines except Ford)
	0181525	1	Hydraulic pump and fittings - (used on Ford engine only)
	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	2	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

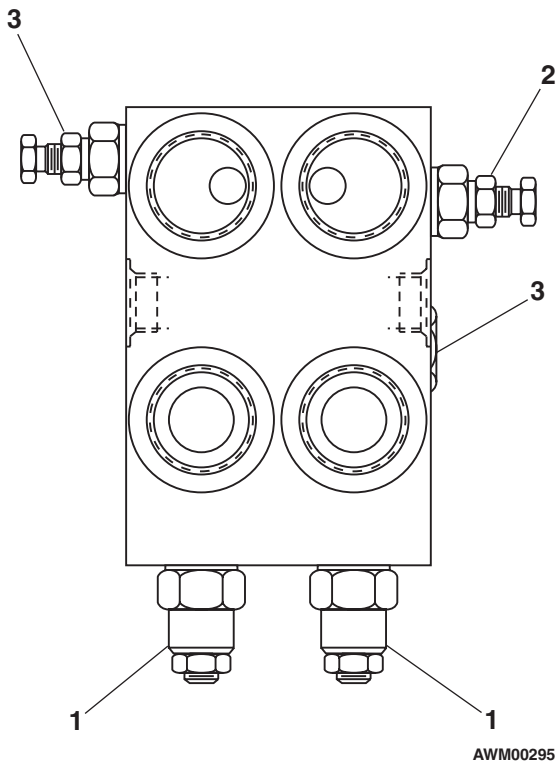


AW0181426



Motion control valve, drive

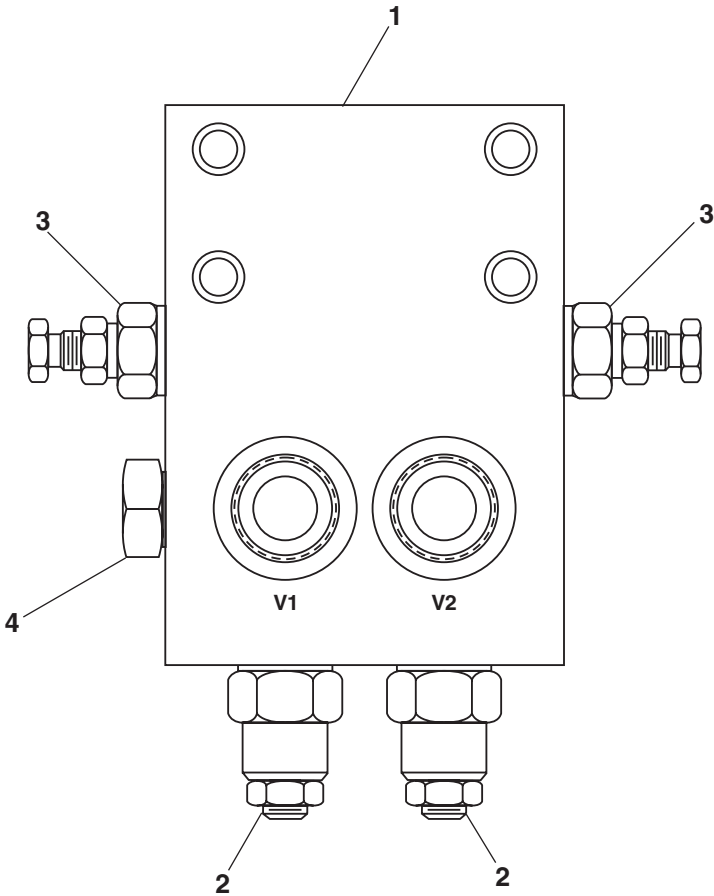
item	part no	qty	description
	6010634	1	Motion control valve, drive
	0110683	1	Seal repair kit
1	6010836	2	Counterbalance valve cartridge - (factory preset, do not reset)
2	6010269	2	Sequence valve cartridge - (factory preset, do not reset)
3	6010531	1	Shuttle valve
	0150562	1	Seal repair kit





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

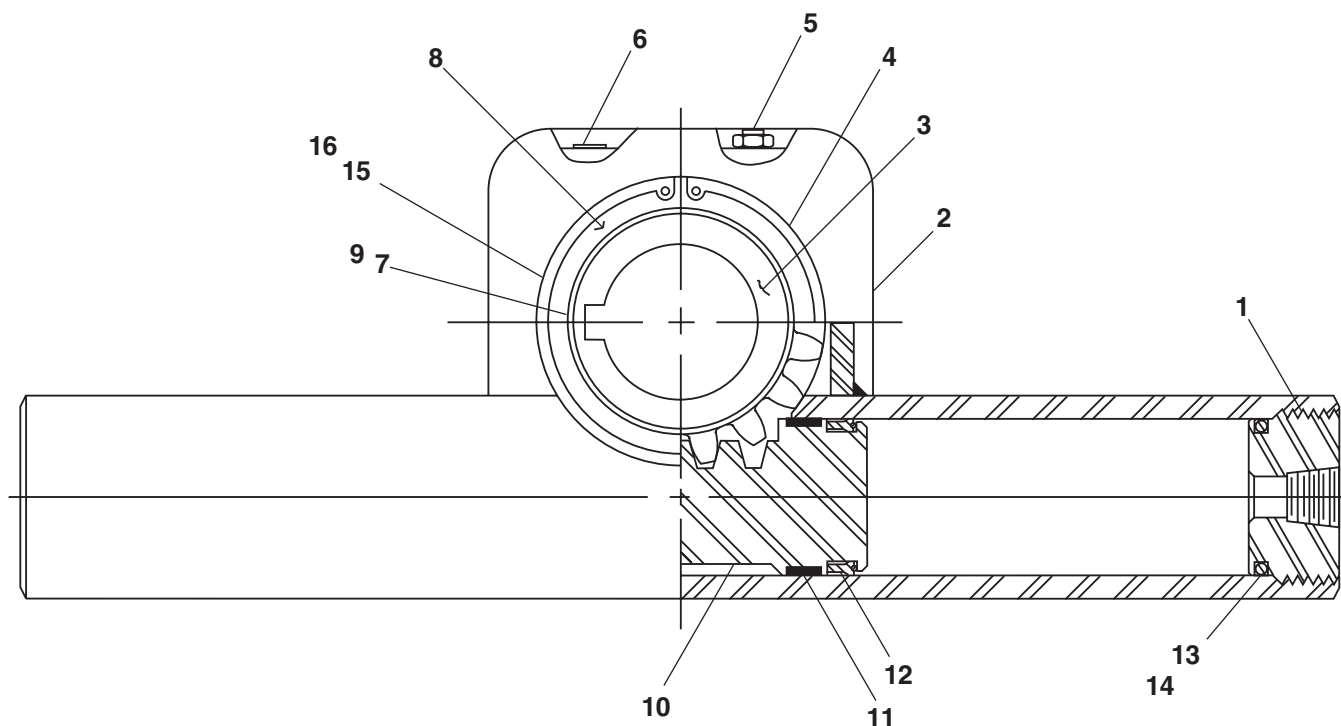


AW6010250



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

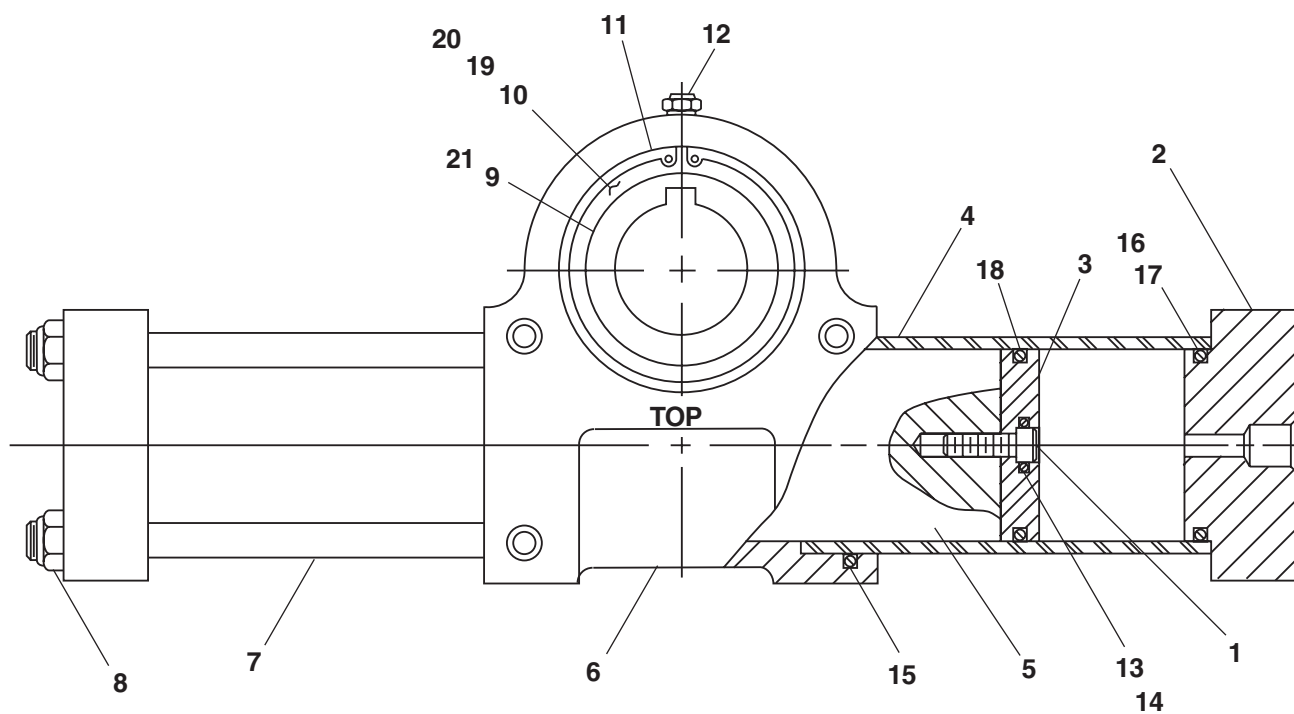


AWV00213



Platform rotator, Parker

item	part no	qty	description
	0110771	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
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)

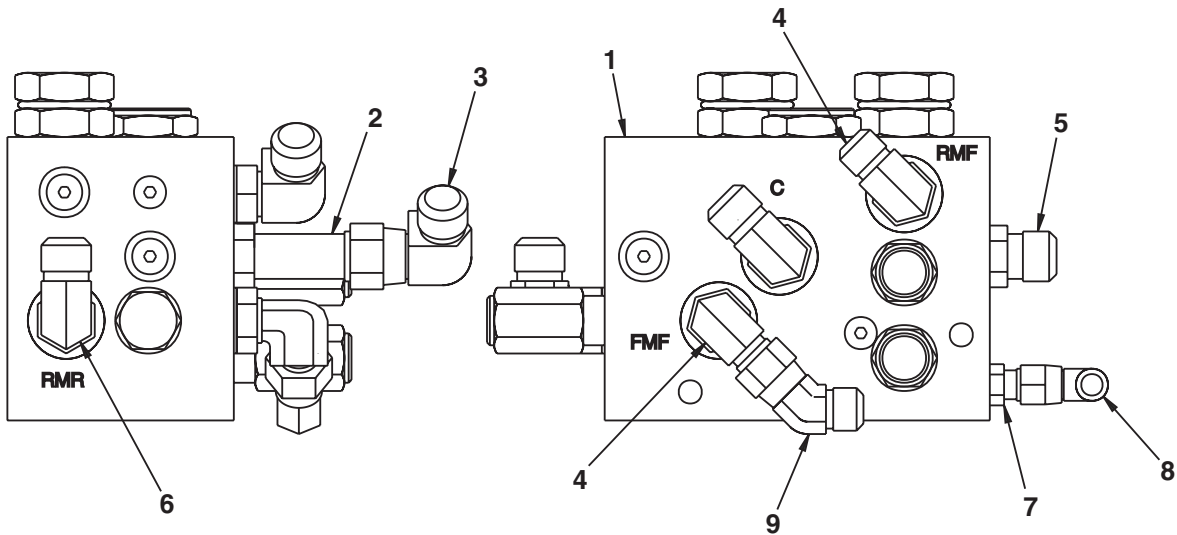


AWV00214



Rear transmission valve

item	part no	qty	description
	0180856	1	Rear transmission valve
1	6010569	1	Transmission valve - (see page 2-91 for parts breakdown)
2	5065807	1	Long straight thread adapter
3	5037007	1	Swivel nut 90° elbow
4	5035316	2	Straight thread 90° elbow
5	5065710	1	Straight thread adapter
6	5035307	1	Straight thread 90° elbow
7	5065734	1	Straight thread adapter
8	5037005	1	Swivel nut 90° elbow
9	5036906	1	Swivel nut 45° elbow

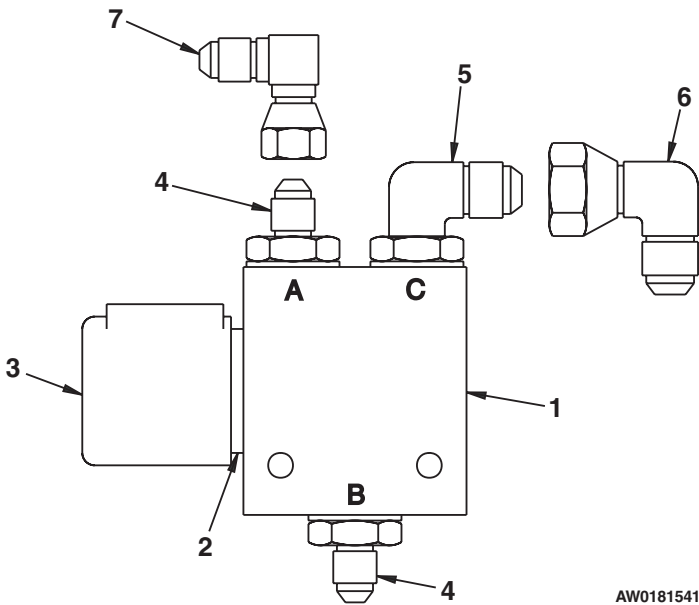


AW0180856



Sense line dump valve

item	part no	qty	description
1	0181541	1	Sense line dump valve
	6010499	1	Solenoid valve - (includes items 2 and 3)
	0073620	1	Seal repair kit
2	6010472	1	3-way solenoid valve
3	3040473	1	Solenoid coil, 10 volt DC
4	5065705	2	Straight thread adapter
5	5035305	1	Straight thread 90° elbow
6	5037005	1	Swivel nut 90° elbow
7	5037003	1	Swivel nut 90° elbow

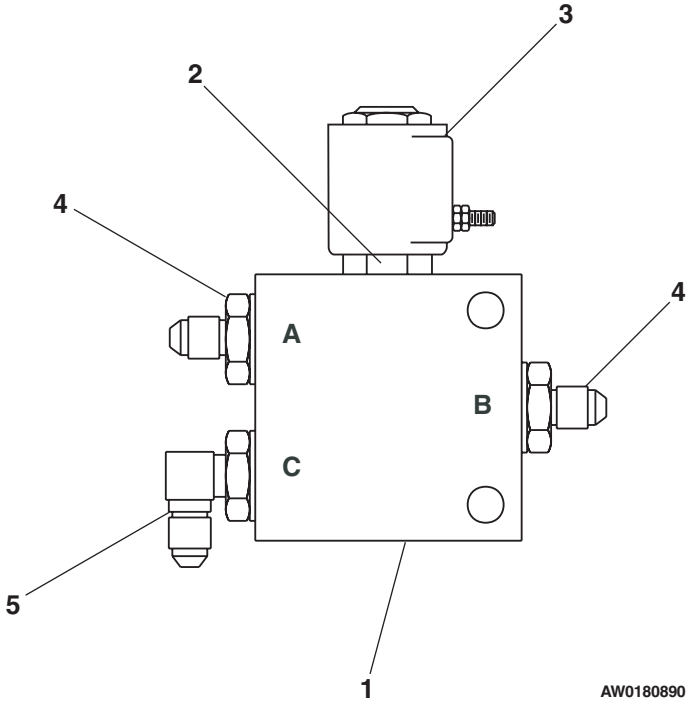


AW0181541



Speed shift valve, 2 wheel drive

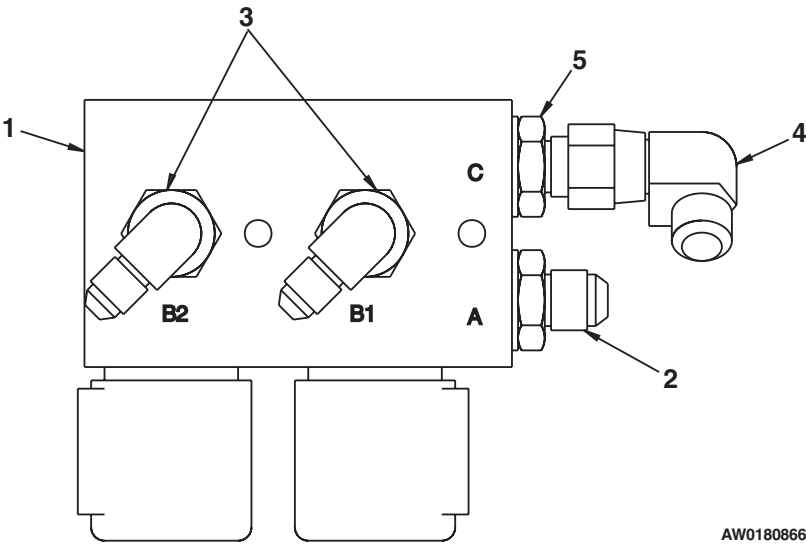
item	part no	qty	description
1	0180890	1	Speed shift valve, 2 wheel drive
	6010499	1	Solenoid valve - (includes items 2 and 3)
	0073620	1	Seal repair kit
2	6010472	1	3-way solenoid valve
3	3040473	1	Solenoid coil, 10 volt DC
4	5065705	2	Straight thread adapter
5	5035305	1	Straight thread 90° elbow





Speed shift valve, 4 wheel drive

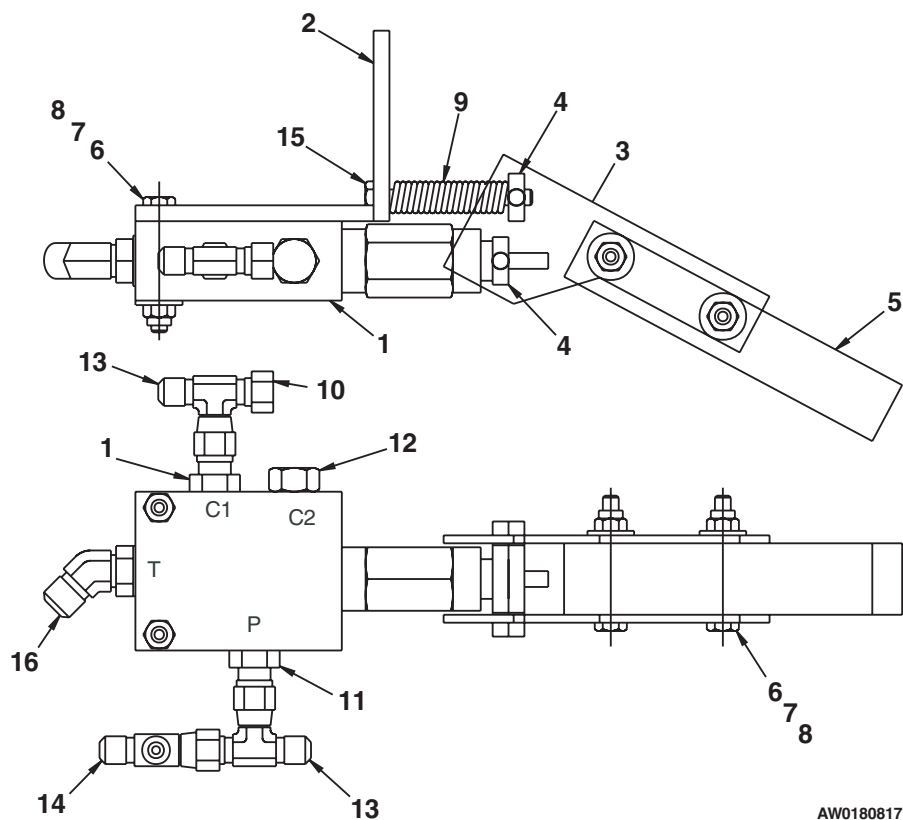
item	part no	qty	description
1	0180866	1	Speed shift valve, 4 wheel drive
	6010610	1	Solenoid valve
	6010500	2	Replacement cartridge
	3040473	1	Replacement solenoid, 10 volt DC
	0073620	1	Seal repair kit
2	5065705	1	Straight thread adapter
3	5035318	2	Straight thread 90° elbow
4	5037005	1	Swivel nut 90° elbow
5	5065707	1	Straight thread adapter



AW0180866

**Steer switch valve, left hand**

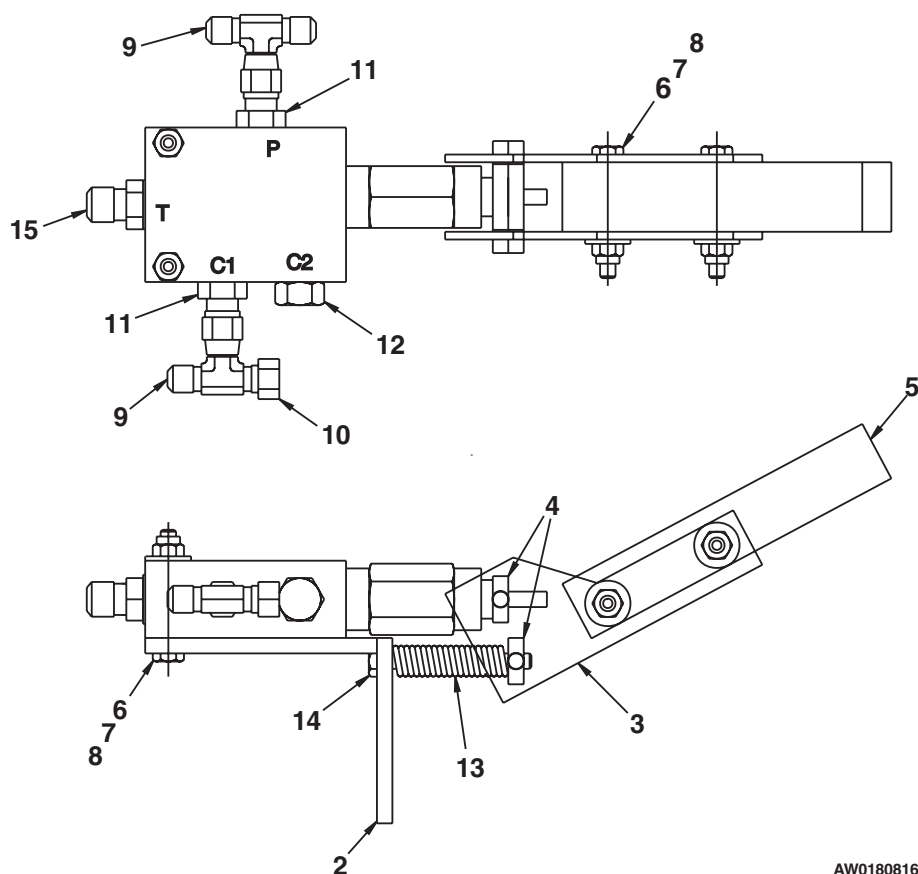
item	part no	qty	description
1	0180817	1	Steer switch valve, left hand
	6010611	1	Steer shift valve
	6010551	1	Seal repair kit
2	0180811	1	Mount bracket
3	0180814	2	Mount plate
4	0180769	2	Trunnion
5	0180815	1	Bar
6	970169	4	Capscrew 1/4-20 x 2 inch long hex head grade 5
7	986019	4	Washer 1/4 medium flat
8	5560004	4	Nut 1/4-20 self locking
9	5530010	1	Compression spring
10	5063701	1	Cap
11	5065705	2	Straight thread adapter
12	5075205	1	Hex head plug
13	5036803	2	Swivel nut branch tee
14	5036703	2	Swivel nut run tee
15	5569909	1	Capscrew 1/4-20 x 2-1/2 inch long hex head grade 5
16	5035705	1	Straight thread 45° elbow



AW0180817

**Steer switch valve, right hand**

item	part no	qty	description
1	0180816	1	Steer switch valve, right hand
	6010611	1	Steer shift valve
	6010551	1	Seal repair kit
2	0180811	1	Mount bracket
3	0180814	2	Mount plate
4	0180769	2	Trunnion
5	0180815	1	Bar
6	970169	4	Capscrew 1/4-20 x 2 inch long hex head grade 5
7	986019	4	Washer 1/4 medium flat
8	5560004	4	Nut 1/4-20 self locking
9	5036803	2	Swivel nut branch tee
10	5063701	1	Cap
11	5065705	2	Straight thread adapter
12	5075205	1	Hex head plug
13	5530010	1	Compression spring
14	5569909	1	Capscrew 1/4-20 x 2-1/2 inch long hex head grade 5
15	5065707	1	Straight thread adapter

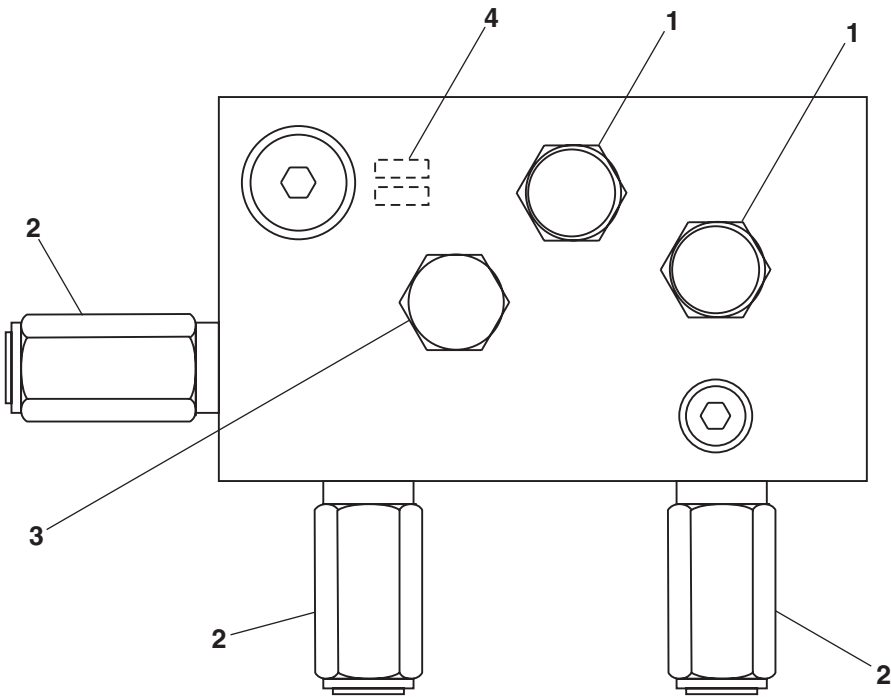


AW0180816



Transmission valve

item	part no	qty	description
	6010569	1	Transmission valve
			Following parts for Fluid Tech valve
1	6010595	1	Cartridge valve with atmospheric vent
	6010561	1	Seal repair kit
2	6010596	3	Cartridge relief valve
	6010602	1	Seal repair kit
3	6010599	1	Flow divider
	6010561	1	Seal repair kit
4	6090055	1	Passage plug with .052 inch diameter orifice
			Following parts for Vickers valve
1	6018903	1	Cartridge valve
2	6018904	3	Cartridge relief valve
3	6018905	1	Flow divider
4	6018906	1	Passage plug with .052 inch diameter orifice



AWM00296





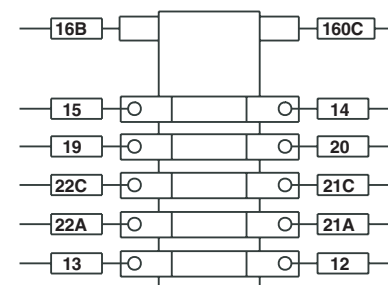
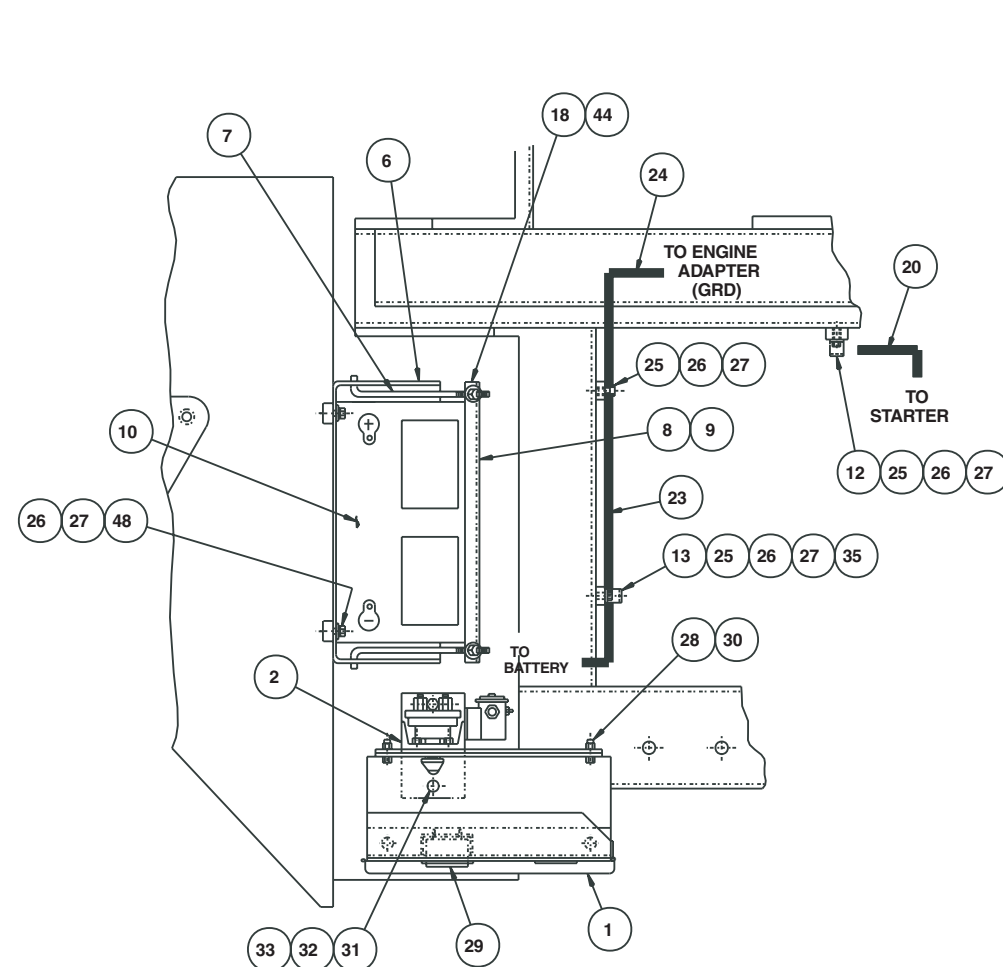
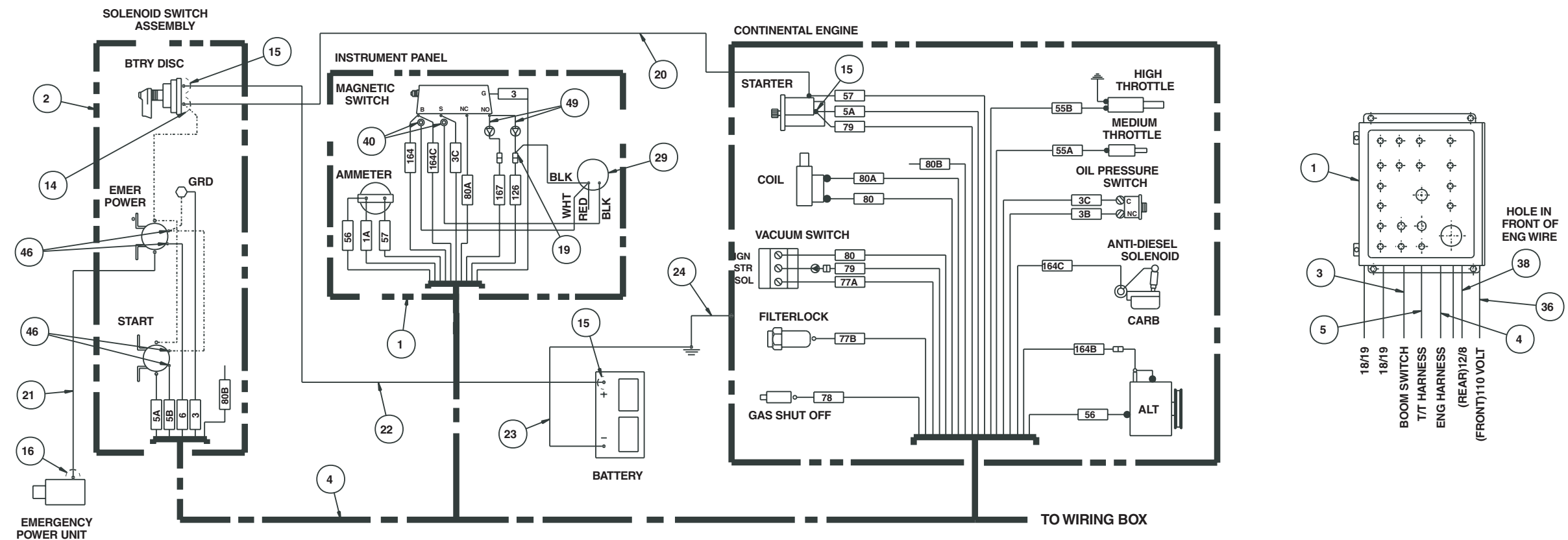
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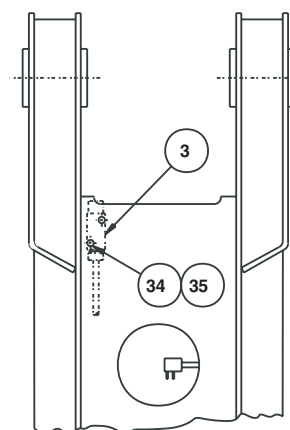
Snorkel®
INTERNATIONAL

**Turntable electrical, Continental**

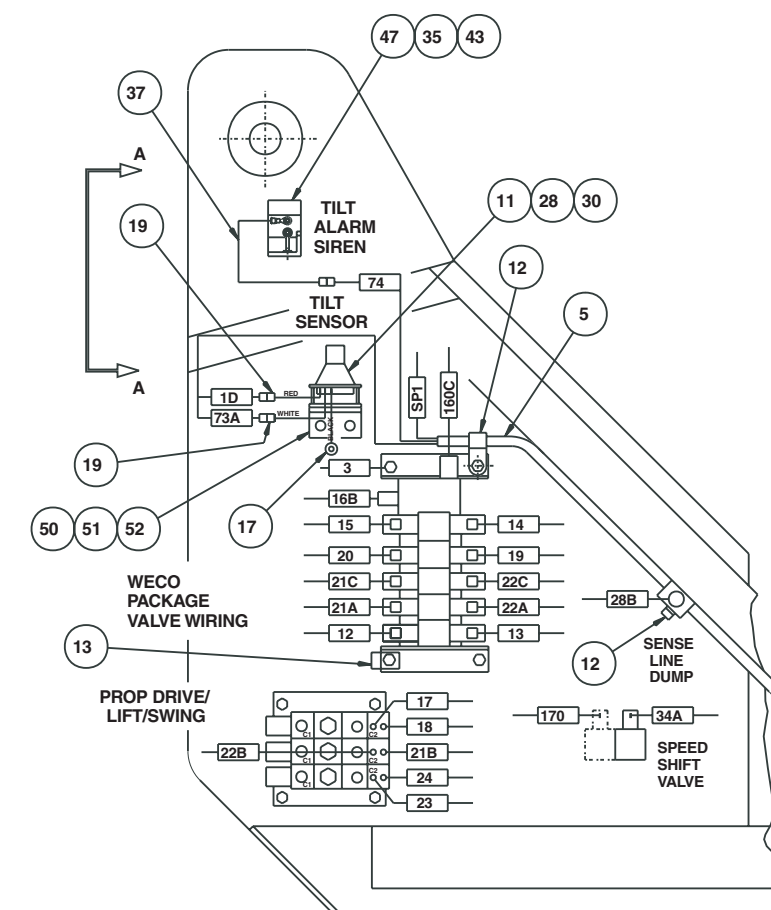
item	part no	qty	description
1	0181536	1	Wiring box - (see page 3-22 for parts breakdown)
2	0180993	1	Solenoid switch - (see page 3-60 for parts breakdown)
3	0180994	1	Boom lift switch - (see page 3-58 for parts breakdown)
4	0181612	1	Wire harness, Continental engine
5	0181550	1	Wire harness, turntable
6	0150810	1	Battery box
7	0150910	2	Battery hold down bolt
8	0150811	1	Insulator angle
9	0150813	1	Battery hold down angle
10	3050002	1	Battery, 12 volt DC - 550 CCA
11	3020040	1	Tilt alarm sensor 5°
12	5093004	3	Clamp
13	5093002	2	Clamp
14	3040270	1	Insulator boot
15	3040269	3	Insulator boot
16	3040268	3	Insulator boot
17	3044163	1	Terminal ring tongue insulated 16/14 wire
18	5560031	2	Nut 5/16-18 self locking
19	3040082	3	Terminal .250 tab male slip-on fully insulated 16/14 wire
20	0091265	1	Battery wire
21	0090959	1	Jumper wire
22	0080519	1	Jumper wire
23	0101566	1	Jumper wire
24	0080484	1	Jumper wire
25	970449	3	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
26	986299	5	Washer 3/8 medium flat
27	987119	5	Washer 3/8 medium lock
28	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
29	3070016	1	Temperature gauge
30	5560004	8	Nut 1/4-20 self locking
31	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
32	987139	2	Washer 1/2 medium lock
33	986359	2	Washer 1/2 medium flat
34	5569910	2	Machine screw #10-24 x 2-1/2 inch long round head
35	5560034	4	Nut #10-24 self locking
36	0181188	1	Wire harness, 110 volt power
37	0071557	1	Jumper wire
38	3040301	1	Hole plug 7/8 inch diameter
39	0091202	1	Jumper wire
40	3044160	2	Terminal #10 stud insulated 16/14 wire
41	0181503	1	Bracket, tilt alarm
42	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
43	974709	2	Machine screw #10-24 x 1 inch long round head
44	986269	2	Washer 5/16 medium flat
45	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
46	5560038	4	Nut #10-32 self locking
47	480652	1	Siren, tilt alarm
48	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
49	0151813	2	Diode wire
50	5560033	2	Nut 3/8-16 self locking
51	3044854	6	Terminal ring tongue insulated 12/10 wire
52	3046972	27	Terminal .188 tab female slip-on insulated 22/18 wire



VICKERS PACKAGE VALVE WIRING



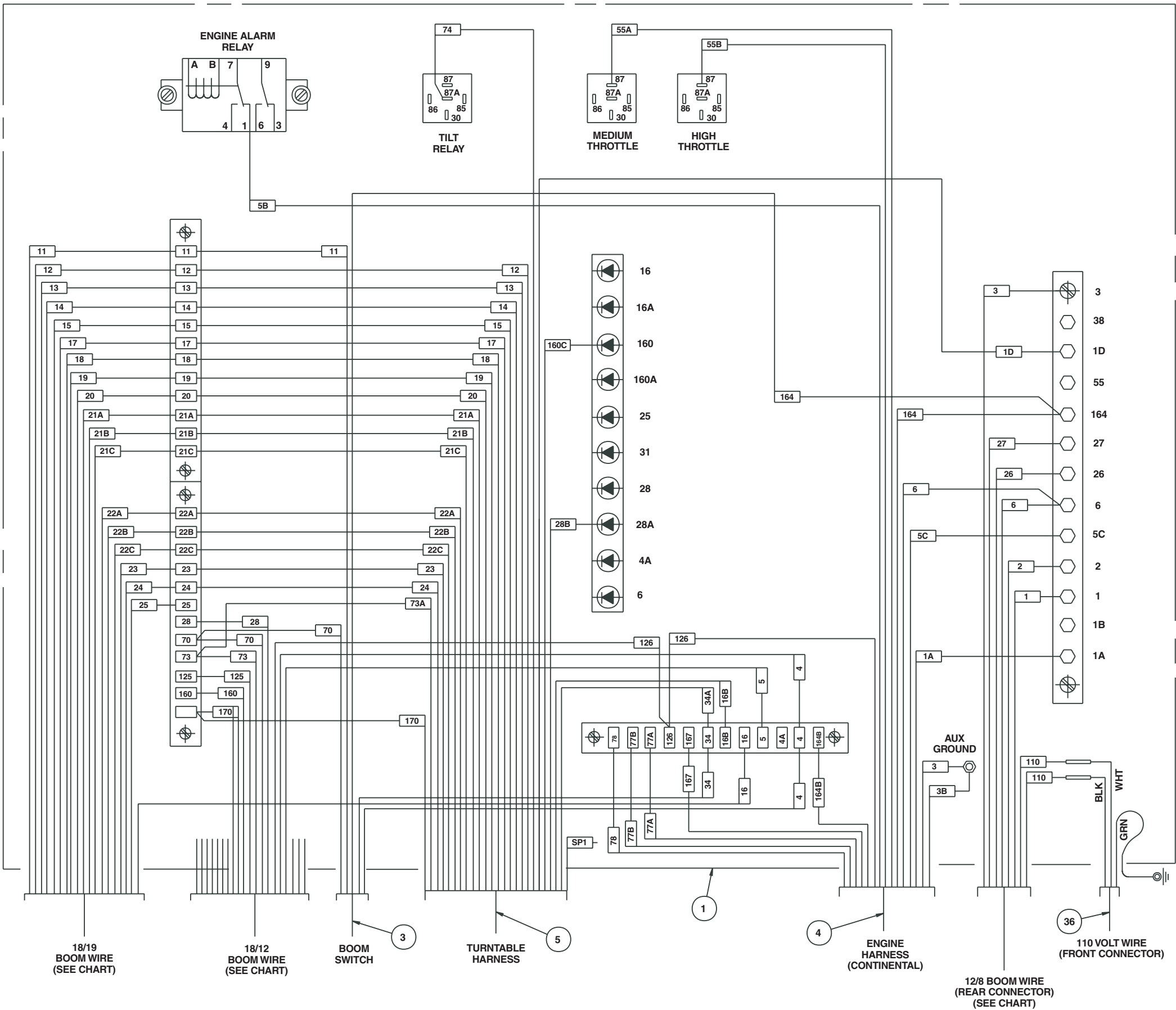
VIEW A-A



AW0181614-1

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WIRING BOX



12/8 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
1	POWER TO PLATFORM	2	RED	ITEM 53
2	POWER TO PLATFORM	7	RED/BLACK	ITEM 53
3	GROUND	1	BLACK	ITEM 53
6	EMERGENCY POWER	4	ORANGE	ITEM 53
26	PLATFORM ROTATION - CW	5	YELLOW	ITEM 53
27	PLATFORM ROTATION - CCW	8	BLUE/BLACK	ITEM 53
110	110 VOLT - POWER	3	BLUE	-
110	110 VOLT - NEUTRAL	6	BROWN	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
4	RUN - FROM PLATFORM	1	BLACK	ITEM 54
5	START - FROM PLATFORM	11	BROWN/BLACK	ITEM 54
28	SENSE LINE DUMP	12	BLACK/RED	ITEM 54
70	BOOM SPEED SIGNAL	2	RED	ITEM 54
73	LEVEL SENSOR SIGNAL	8	BLUE/BLACK	ITEM 54
125	HIGH THROTTLE SIGNAL	7	RED/BLACK	ITEM 54
160	HYDRAULIC VALVE SIGNAL	9	ORANGE/BLACK	ITEM 54
126	ENGINE KILL GROUND SIGNAL	4	ORANGE	ITEM 54
170	2-WHEEL DRIVE SIGNAL	6	BROWN	ITEM 54
-	SPARE	10	YELLOW/BLACK	-
-	SPARE	3	BLUE	-
-	SPARE	5	YELLOW	-
-	SPARE	13	BLUE/RED	-
-	SPARE	14	ORANGE/RED	-
-	SPARE	15	YELLOW/RED	-
-	SPARE	16	BROWN/RED	-
-	SPARE	17	BLACK/BLUE	-
-	SPARE	18	RED/BLUE	-
-	SPARE	19	ORANGE/BLUE	-

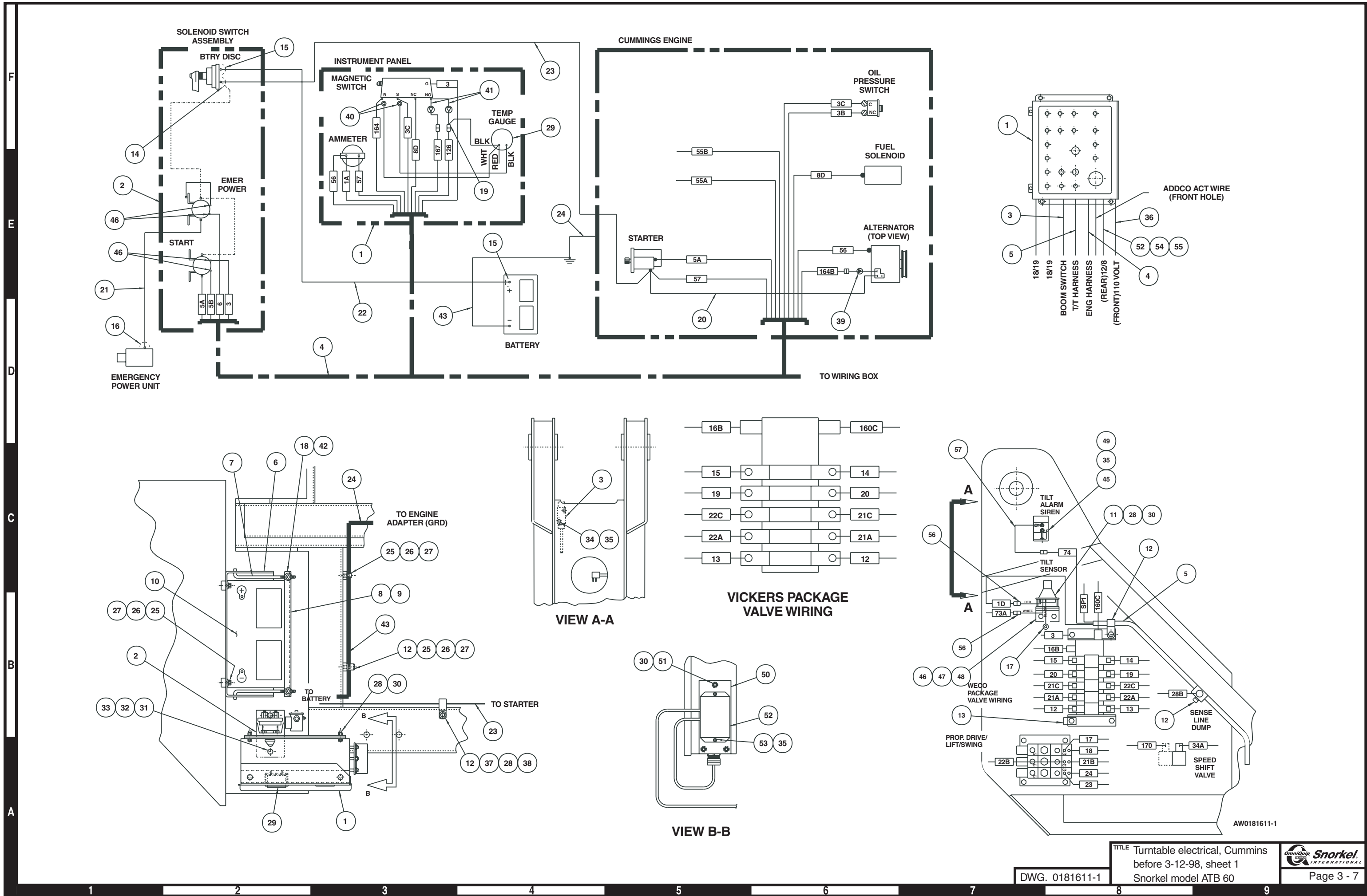
18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
11	MOTOR LOW RANGE SIGNAL	12	BLACK/RED	ITEM 54
12	LEVEL - DOWN	13	BLUE/RED	ITEM 54
13	LEVEL - UP	14	ORANGE/RED	ITEM 54
14	BOOM - EXTEND	15	YELLOW/RED	ITEM 54
15	BOOM - RETRACT	6	BROWN	ITEM 54
16	HYDRAULIC SPEED	3	BLUE	ITEM 54
17	DRIVE - FORWARD	4	ORANGE	ITEM 54
18	DRIVE - REVERSE	10	YELLOW/BLACK	ITEM 54
19	STEER - LEFT	16	BROWN/RED	ITEM 54
20	STEER - RIGHT	8	BLUE/BLACK	ITEM 54
21A	RISE - DOWN	5	YELLOW	ITEM 54
21B	MAIN BOOM - DOWN	19	ORANGE/BLUE	ITEM 54
21C	JIB - DOWN	18	RED/BLUE	ITEM 54
22A	RISE - UP	2	RED	ITEM 54
22B	MAIN BOOM - UP	7	RED/BLACK	ITEM 54
22C	JIB - UP	9	ORANGE/BLACK	ITEM 54
23	SWING - CCW	17	BLACK/BLUE	ITEM 54
24	SWING - CW	11	BROWN/BLACK	ITEM 54
25	MED THROTTLE SIGNAL	1	BLACK	ITEM 54

AW0181614-2

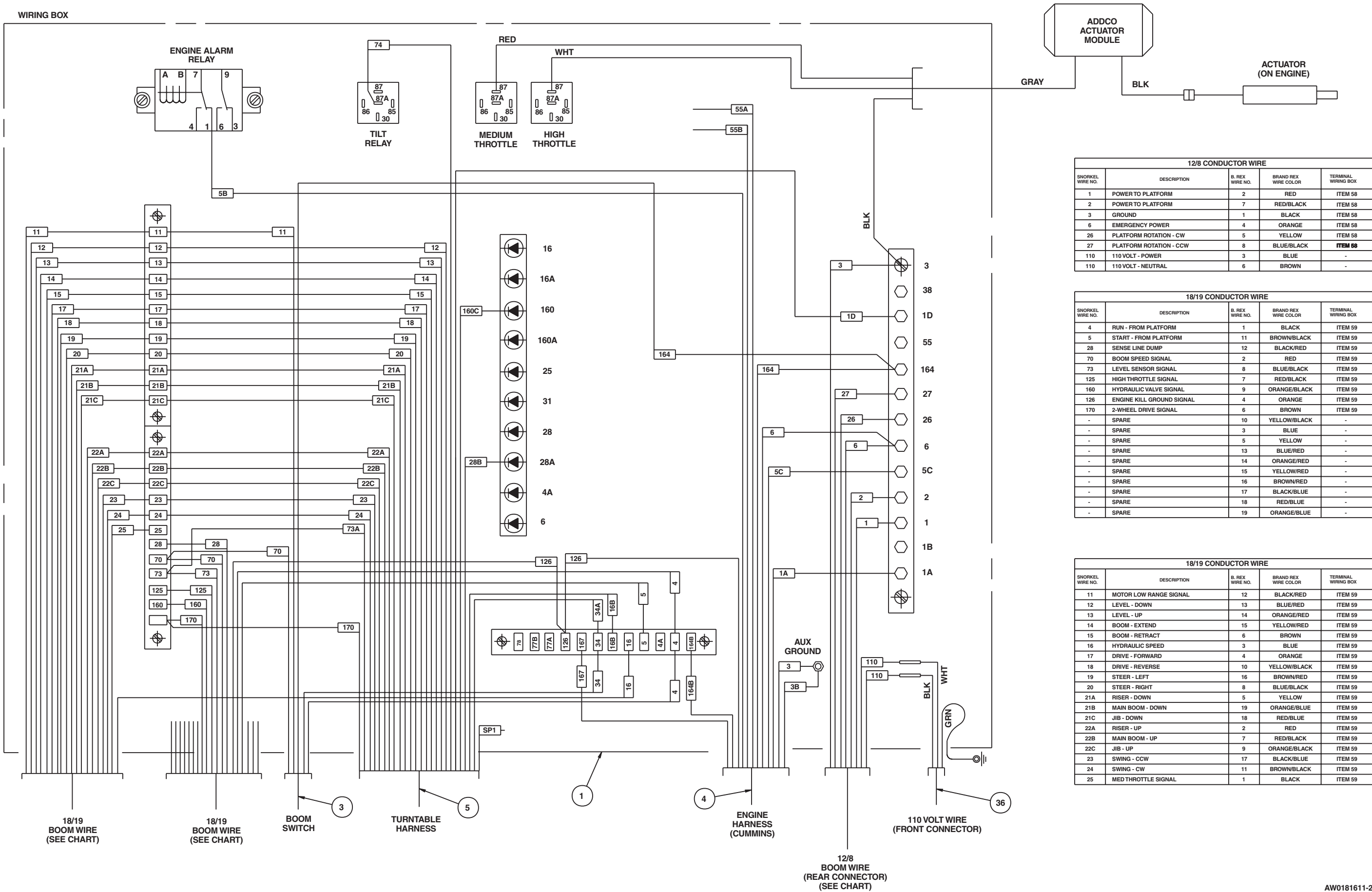


**Turntable electrical, Cummins before 3-12-98**

item	part no	qty	description
1	0181536	1	Wiring box - (see page 3-22 for parts breakdown)
2	0180993	1	Solenoid switch - (see page 3-60 for parts breakdown)
3	0180994	1	Boom lift switch - (see page 3-58 for parts breakdown)
4	0181613	1	Wire harness, Cummins engine
5	0181550	1	Wire harness, turntable
6	0150810	1	Battery box
7	0150910	2	Battery hold down bolt
8	0150811	1	Insulator angle
9	0150813	1	Battery hold down angle
10	3050002	1	Battery, 12 volt DC - 550 CCA
11	3020040	1	Tilt alarm sensor 5°
12	5093004	4	Clamp
13	5093002	1	Clamp
14	3040270	1	Insulator boot
15	3040269	3	Insulator boot
16	3040268	3	Insulator boot
17	3044163	1	Terminal ring tongue insulated 16/14 wire
18	5560031	2	Nut 5/16-18 self locking
19	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire
20	0181025	1	Jumper wire
21	0090959	1	Jumper wire
22	0080519	1	Jumper wire
23	0101566	1	Jumper wire
24	0080484	1	Jumper wire
25	970449	3	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
26	986299	5	Washer 3/8 medium flat
27	987119	5	Washer 3/8 medium lock
28	970049	9	Capscrew 1/4-20 x 1 inch long hex head grade 5
29	3070016	1	Temperature gauge
30	5560004	11	Nut 1/4-20 self locking
31	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
32	987139	2	Washer 1/2 medium lock
33	986359	2	Washer 1/2 medium flat
34	5569910	2	Machine screw #10-24 x 2-1/2 inch long round head
35	5560034	6	Nut #10-24 self locking
36	0181188	1	Wire harness, 110 volt power
37	986019	1	Washer 1/4 medium flat
38	987099	1	Washer 1/4 medium lock
39	0181026	1	Diode wire
40	3044160	2	Terminal #10 stud insulated 16/14 wire
41	0151813	2	Diode wire
42	986269	2	Washer 5/16 medium flat
43	0101565	1	Battery ground wire
44	5560038	4	Nut #10-32 self locking
45	480652	1	Siren, tilt alarm
46	5560033	2	Nut 3/8-16 self locking
47	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
48	0181503	1	Bracket, tilt alarm
49	974709	2	Machine screw #10-24 x 1 inch long round head
50	0082029	1	Mount plate, actuator module
51	7630230	3	Sandwich mount
52	20082046	1	Actuator module - (included with engine)
53	974659	2	Machine screw #10-24 x 1/2 inch long round head
54	3040187	1	Connector
55	3040070	1	Connector locknut
56	3040046	2	Terminal .250 tab male slip-on fully insulated 22/18 wire
57	0071557	1	Jumper wire
58	3044854	6	Terminal ring tongue insulated 12/10 wire
59	3046972	28	Terminal .188 tab female slip-on insulated 22/18 wire



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12/8 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
1	POWER TO PLATFORM	2	RED	ITEM 58
2	POWER TO PLATFORM	7	RED/BLACK	ITEM 58
3	GROUND	1	BLACK	ITEM 58
6	EMERGENCY POWER	4	ORANGE	ITEM 58
26	PLATFORM ROTATION - CW	5	YELLOW	ITEM 58
27	PLATFORM ROTATION - CCW	8	BLUE/BLACK	ITEM 58
110	110 VOLT - POWER	3	BLUE	-
110	110 VOLT - NEUTRAL	6	BROWN	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
4	RUN - FROM PLATFORM	1	BLACK	ITEM 59
5	START - FROM PLATFORM	11	BROWN/BLACK	ITEM 59
28	SENSE LINE DUMP	12	BLACK/RED	ITEM 59
70	BOOM SPEED SIGNAL	2	RED	ITEM 59
73	LEVEL SENSOR SIGNAL	8	BLUE/BLACK	ITEM 59
125	HIGH THROTTLE SIGNAL	7	RED/BLACK	ITEM 59
160	HYDRAULIC VALVE SIGNAL	9	ORANGE/BLACK	ITEM 59
126	ENGINE KILL GROUND SIGNAL	4	ORANGE	ITEM 59
170	2-WHEEL DRIVE SIGNAL	6	BROWN	ITEM 59
-	SPARE	10	YELLOW/BLACK	-
-	SPARE	3	BLUE	-
-	SPARE	5	YELLOW	-
-	SPARE	13	BLUE/RED	-
-	SPARE	14	ORANGE/RED	-
-	SPARE	15	YELLOW/RED	-
-	SPARE	16	BROWN/RED	-
-	SPARE	17	BLACK/BLUE	-
-	SPARE	18	RED/BLUE	-
-	SPARE	19	ORANGE/BLUE	-

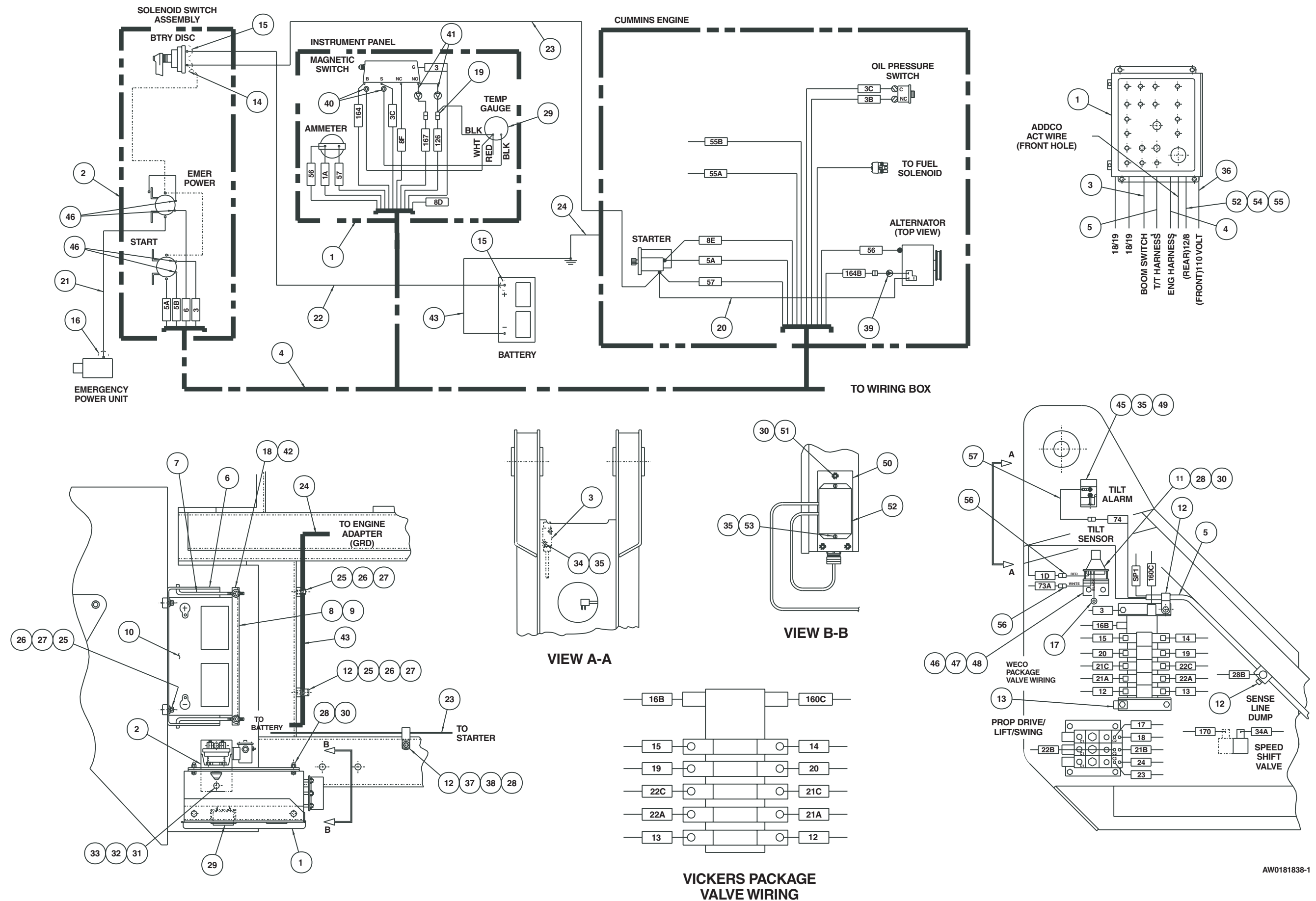
18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
11	MOTOR LOW RANGE SIGNAL	12	BLACK/RED	ITEM 59
12	LEVEL - DOWN	13	BLUE/RED	ITEM 59
13	LEVEL - UP	14	ORANGE/RED	ITEM 59
14	BOOM - EXTEND	15	YELLOW/RED	ITEM 59
15	BOOM - RETRACT	6	BROWN	ITEM 59
16	HYDRAULIC SPEED	3	BLUE	ITEM 59
17	DRIVE - FORWARD	4	ORANGE	ITEM 59
18	DRIVE - REVERSE	10	YELLOW/BLACK	ITEM 59
19	STEER - LEFT	16	BROWN/RED	ITEM 59
20	STEER - RIGHT	8	BLUE/BLACK	ITEM 59
21A	RISER - DOWN	5	YELLOW	ITEM 59
21B	MAIN BOOM - DOWN	19	ORANGE/BLUE	ITEM 59
21C	JIB - DOWN	18	RED/BLUE	ITEM 59
22A	RISER - UP	2	RED	ITEM 59
22B	MAIN BOOM - UP	7	RED/BLACK	ITEM 59
22C	JIB - UP	9	ORANGE/BLACK	ITEM 59
23	SWING - CCW	17	BLACK/BLUE	ITEM 59
24	SWING - CW	11	BROWN/BLACK	ITEM 59
25	MED THROTTLE SIGNAL	1	BLACK	ITEM 59

AW0181611-2



**Turntable electrical, Cummins after 3-12-98**

item	part no	qty	description
1	0181536	1	Wiring box - (see page 3-22 for parts breakdown)
2	0180993	1	Solenoid switch - (see page 3-60 for parts breakdown)
3	0180994	1	Boom lift switch - (see page 3-58 for parts breakdown)
4	0181613	1	Wire harness, Cummins engine
5	0181550	1	Wire harness, turntable
6	0150810	1	Battery box
7	0150910	2	Battery hold down bolt
8	0150811	1	Insulator angle
9	0150813	1	Battery hold down angle
10	3050002	1	Battery, 12 volt DC - 550 CCA
11	3020040	1	Tilt alarm sensor 5°
12	5093004	4	Clamp
13	5093002	1	Clamp
14	3040270	1	Insulator boot
15	3040269	3	Insulator boot
16	3040268	3	Insulator boot
17	3044163	1	Terminal ring tongue insulated 16/14 wire
18	5560031	2	Nut 5/16-18 self locking
19	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire
20	0181025	1	Jumper wire
21	0090959	1	Jumper wire
22	0080519	1	Jumper wire
23	0101566	1	Jumper wire
24	0080484	1	Jumper wire
25	970449	3	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
26	986299	5	Washer 3/8 medium flat
27	987119	5	Washer 3/8 medium lock
28	970049	9	Capscrew 1/4-20 x 1 inch long hex head grade 5
29	3070016	1	Temperature gauge
30	5560004	11	Nut 1/4-20 self locking
31	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
32	987139	2	Washer 1/2 medium lock
33	986359	2	Washer 1/2 medium flat
34	5569910	2	Machine screw #10-24 x 2-1/2 inch long round head
35	5560034	6	Nut #10-24 self locking
36	0181188	1	Wire harness, 110 volt power
37	986019	1	Washer 1/4 medium flat
38	987099	1	Washer 1/4 medium lock
39	0181026	1	Diode wire
40	3044160	2	Terminal #10 stud insulated 16/14 wire
41	0151813	2	Diode wire
42	986269	2	Washer 5/16 medium flat
43	0101565	1	Battery ground wire
44	5560038	4	Nut #10-32 self locking
45	480652	1	Siren, tilt alarm
46	5560033	2	Nut 3/8-16 self locking
47	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
48	0181503	1	Bracket, tilt alarm
49	974709	2	Machine screw #10-24 x 1 inch long round head
50	0082029	1	Mount plate, actuator module
51	7630230	3	Sandwich mount
52	20082046	1	Actuator module - (included with engine)
53	974659	2	Machine screw #10-24 x 1/2 inch long round head
54	3040187	1	Connector
55	3040070	1	Connector locknut
56	3040046	2	Terminal .250 tab male slip-on fully insulated 22/18 wire
57	0071557	1	Jumper wire
58	3044854	6	Terminal ring tongue insulated 12/10 wire
59	3046972	28	Terminal .188 tab female slip-on insulated 22/18 wire



AW0181838-1

DWG. 0181838-1

TITLE Turntable electrical, Cummins
after 3-12-98, sheet 1
Snorkel model ATB 60

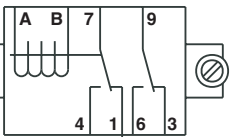
Snorkel
INTERNATIONAL

Page 3 - 11

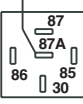
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WIRING BOX

ENGINE ALARM
RELAY

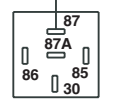


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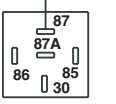
TILT
RELAY

RED



MEDIUM
THROTTLE

WHITE



HIGH
THROTTLE



GRAY

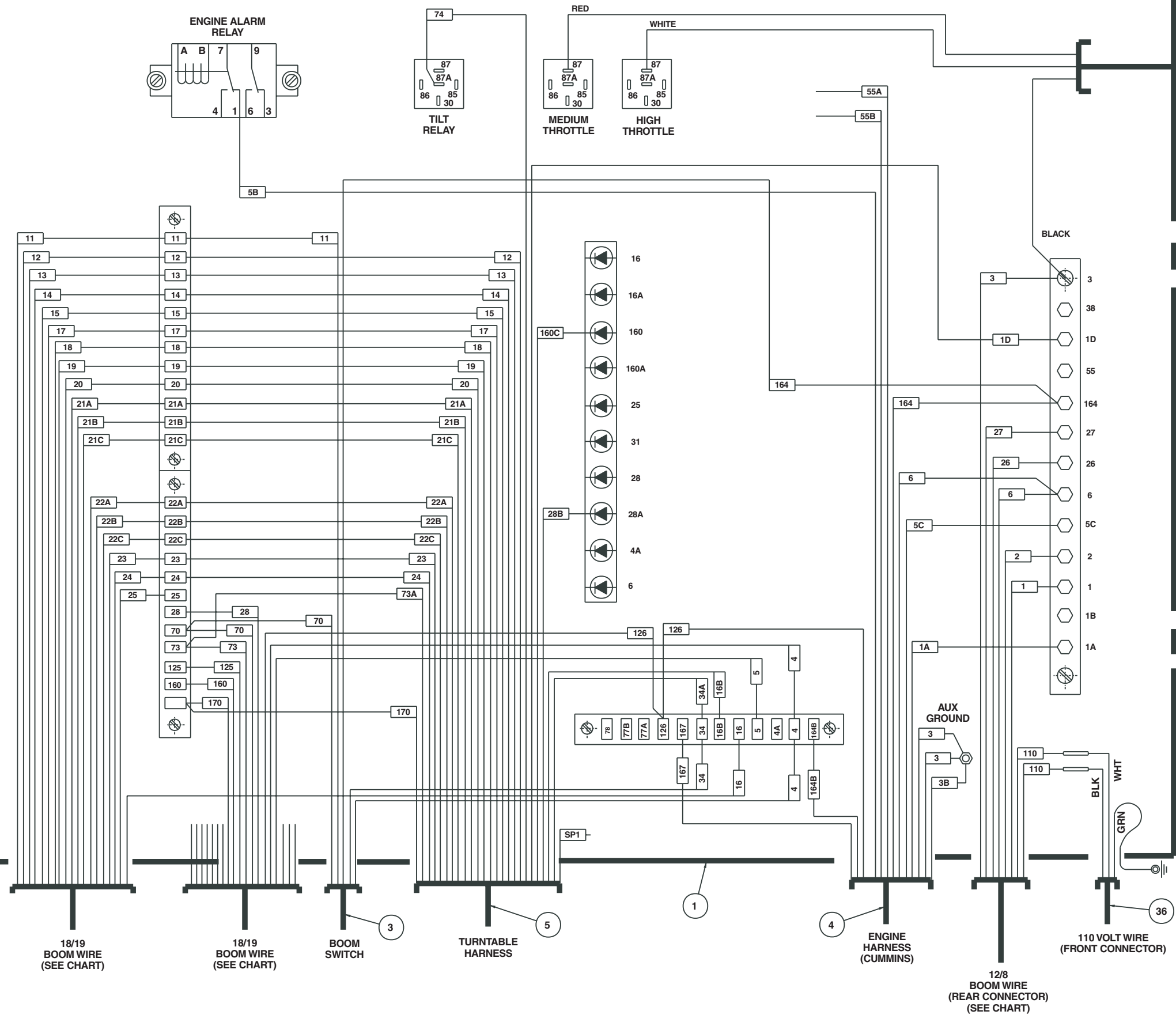
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ACTUATOR
(ON ENGINE)

12/8 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
1	POWER TO PLATFORM	2	RED	ITEM 58
2	POWER TO PLATFORM	7	RED/BLACK	ITEM 58
3	GROUND	1	BLACK	ITEM 58
6	EMERGENCY POWER	4	ORANGE	ITEM 58
26	PLATFORM ROTATION - CW	5	YELLOW	ITEM 58
27	PLATFORM ROTATION - CCW	8	BLUE/BLACK	ITEM 58
110	110 VOLT - POWER	3	BLUE	-
110	110 VOLT - NEUTRAL	6	BROWN	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
4	RUN - FROM PLATFORM	1	BLACK	ITEM 59
5	START - FROM PLATFORM	11	BROWN/BLACK	ITEM 59
28	SENSE LINE DUMP	12	BLACK/RED	ITEM 59
70	BOOM SPEED SIGNAL	2	RED	ITEM 59
73	LEVEL SENSOR SIGNAL	8	BLUE/BLACK	ITEM 59
125	HIGH THROTTLE SIGNAL	7	RED/BLACK	ITEM 59
160	HYDRAULIC VALVE SIGNAL	9	ORANGE/BLACK	ITEM 59
126	ENGINE KILL GROUND SIGNAL	4	ORANGE	ITEM 59
170	2-WHEEL DRIVE SIGNAL	6	BROWN	ITEM 59
-	SPARE	10	YELLOW/BLACK	-
-	SPARE	3	BLUE	-
-	SPARE	5	YELLOW	-
-	SPARE	13	BLUE/RED	-
-	SPARE	14	ORANGE/RED	-
-	SPARE	15	YELLOW/RED	-
-	SPARE	16	BROWN/RED	-
-	SPARE	17	BLACK/BLUE	-
-	SPARE	18	RED/BLUE	-
-	SPARE	19	ORANGE/BLUE	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
11	MOTOR LOW RANGE SIGNAL	12	BLACK/RED	ITEM 59
12	LEVEL - DOWN	13	BLUE/RED	ITEM 59
13	LEVEL - UP	14	ORANGE/RED	ITEM 59
14	BOOM - EXTEND	15	YELLOW/RED	ITEM 59
15	BOOM - RETRACT	6	BROWN	ITEM 59
16	HYDRAULIC SPEED	3	BLUE	ITEM 59
17	DRIVE - FORWARD	4	ORANGE	ITEM 59
18	DRIVE - REVERSE	10	YELLOW/BLACK	ITEM 59
19	STEER - LEFT	16	BROWN/RED	ITEM 59
20	STEER - RIGHT	8	BLUE/BLACK	ITEM 59
21A	RISER - DOWN	5	YELLOW	ITEM 59
21B	MAIN BOOM - DOWN	19	ORANGE/BLUE	ITEM 59
21C	JIB - DOWN	18	RED/BLUE	ITEM 59
22A	RISER - UP	2	RED	ITEM 59
22B	MAIN BOOM - UP	7	RED/BLACK	ITEM 59
22C	JIB - UP	9	ORANGE/BLACK	ITEM 59
23	SWING - CCW	17	BLACK/BLUE	ITEM 59
24	SWING - CW	11	BROWN/BLACK	ITEM 59
25	MED THROTTLE SIGNAL	1	BLACK	ITEM 59



18/19
BOOM WIRE
(SEE CHART)

18/19
BOOM WIRE
(SEE CHART)

BOOM
SWITCH

TURNTABLE
HARNESS

ENGINE
HARNESS
(CUMMINS)

12/8
BOOM WIRE
(REAR CONNECTOR)
(SEE CHART)

110 VOLT WIRE
(FRONT CONNECTOR)



TITLE Turntable electrical, Cummins
after 3-12-98, sheet 2
Snorkel model ATB 60

DWG. 0181838-2

AW0181838-2

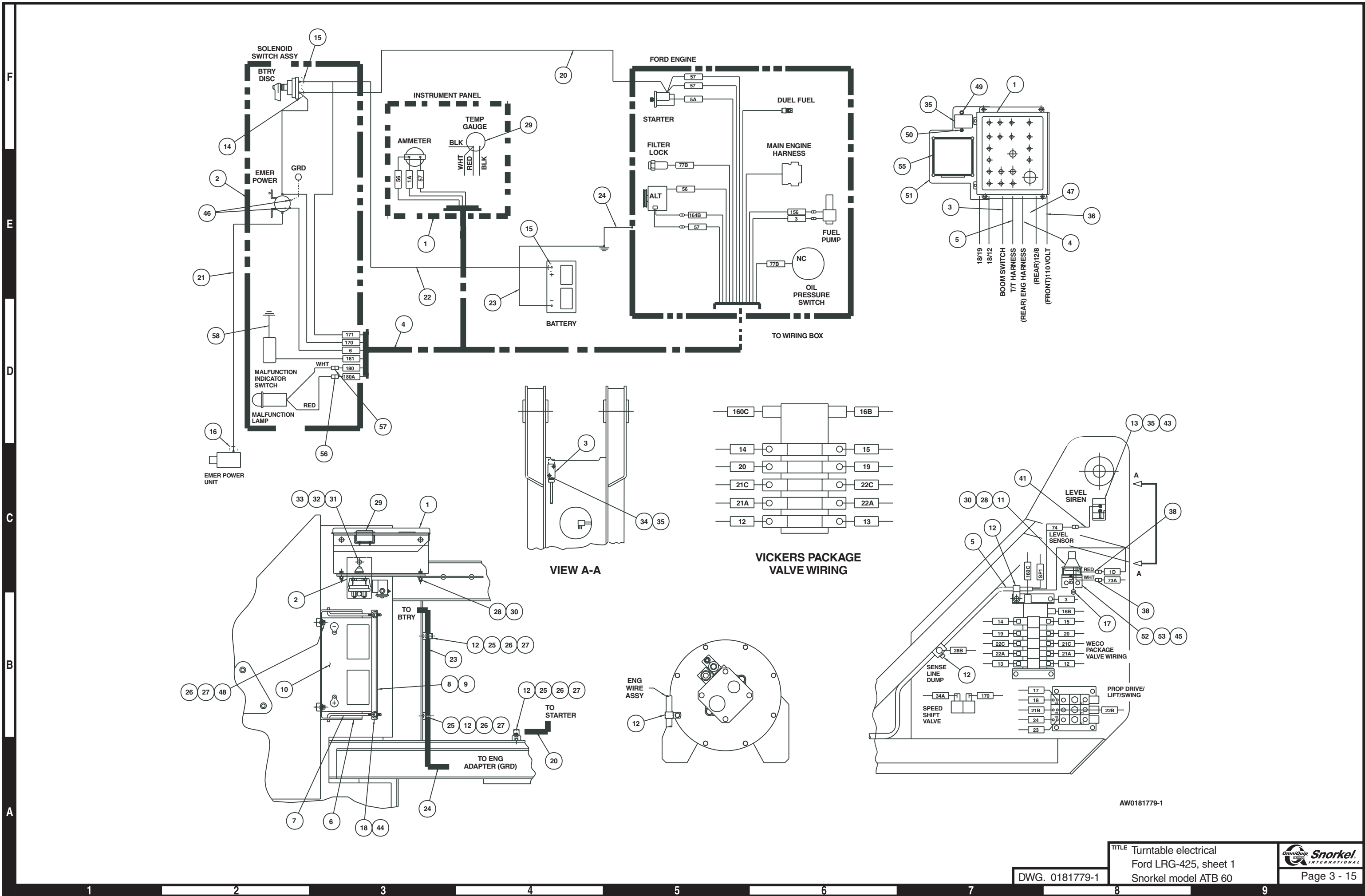
**Turntable electrical, Ford LRG-425**

item	part no	qty	description
1	0181783	1	Wiring box, Ford LRG-425 - (see page 3-26 for parts breakdown)
2	0180992	1	Solenoid switch, Ford LRG-425 - (see page 3-61 for parts breakdown)
3	0180994	1	Boom lift switch - (see page 3-58 for parts breakdown)
4	0181785	1	Wire harness, Ford LRG-425 engine
5	0181550	1	Wire harness, turntable
6	0150810	1	Battery box
7	0150910	2	Battery hold down bolt
8	0150811	1	Insulator angle
9	0150813	1	Battery hold down angle
10	3050002	1	Battery, 12 volt DC - 550 CCA
11	3020040	1	Tilt alarm sensor 5°
12	5093004	5	Clamp
13	480652	1	Siren, tilt alarm
14	3040270	1	Insulator boot
15	3040269	3	Insulator boot
16	3040268	3	Insulator boot
17	3044163	1	Terminal ring tongue insulated 16/14 wire
18	5560031	2	Nut 5/16-18 self locking
19	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire
20	0091265	1	Battery wire
21	0090959	1	Jumper wire
22	0080519	1	Jumper wire
23	0101566	1	Jumper wire
24	0080484	1	Jumper wire
25	970449	3	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
26	986299	5	Washer 3/8 medium flat
27	987119	5	Washer 3/8 medium lock
28	970049	8	Capscrew 1/4-20 x 1 inch long hex head grade 5
29	3070021	1	Temperature gauge
30	5560004	8	Nut 1/4-20 self locking
31	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
32	987139	2	Washer 1/2 medium lock
33	986359	2	Washer 1/2 medium flat
34		2	Machine screw #10-24 x 2-1/2 inch round head
35	0112092	1	Decal, engine control module
36	0181188	1	Wire harness, 110 volt power
37	0151813	2	Diode wire
38	3040046	3	Terminal .250 tab male slip-on fully insulated 22/18 wire
39	3040452	1	Insulator boot
40	3044145	2	Terminal #8 stud insulated 22/18 wire
41	0071557	1	Jumper wire
42	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
43	974709	5	Machine screw #10-24 x 1 inch long round head
44	986269	2	Washer 5/16 medium flat
45	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
46	5560038	4	Nut #10-32 self locking
47	3040301	1	Hole plug 7/8 inch diameter
48	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
49	7630688	1	Indicator lamp
50	3020081	1	Switch, toggle
			Parts list continued on next page



Turntable electrical, Ford LRG-425

item	part no	qty	description
51	0112093	1	Bracket, ECM mounting
52	0181503	1	Bracket, tilt alarm
53	5560033	2	Nut 3/8-16 self locking
54	0081558	1	Jumper wire
55	7630687	1	Engine control module - (included with engine)
56	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
57	0071563	1	Jumper wire
58	3044854	6	Terminal ring tongue insulated 12/10 wire
59	3046972	27	Terminal .188 tab female slip-on insulated 22/18 wire
60	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire

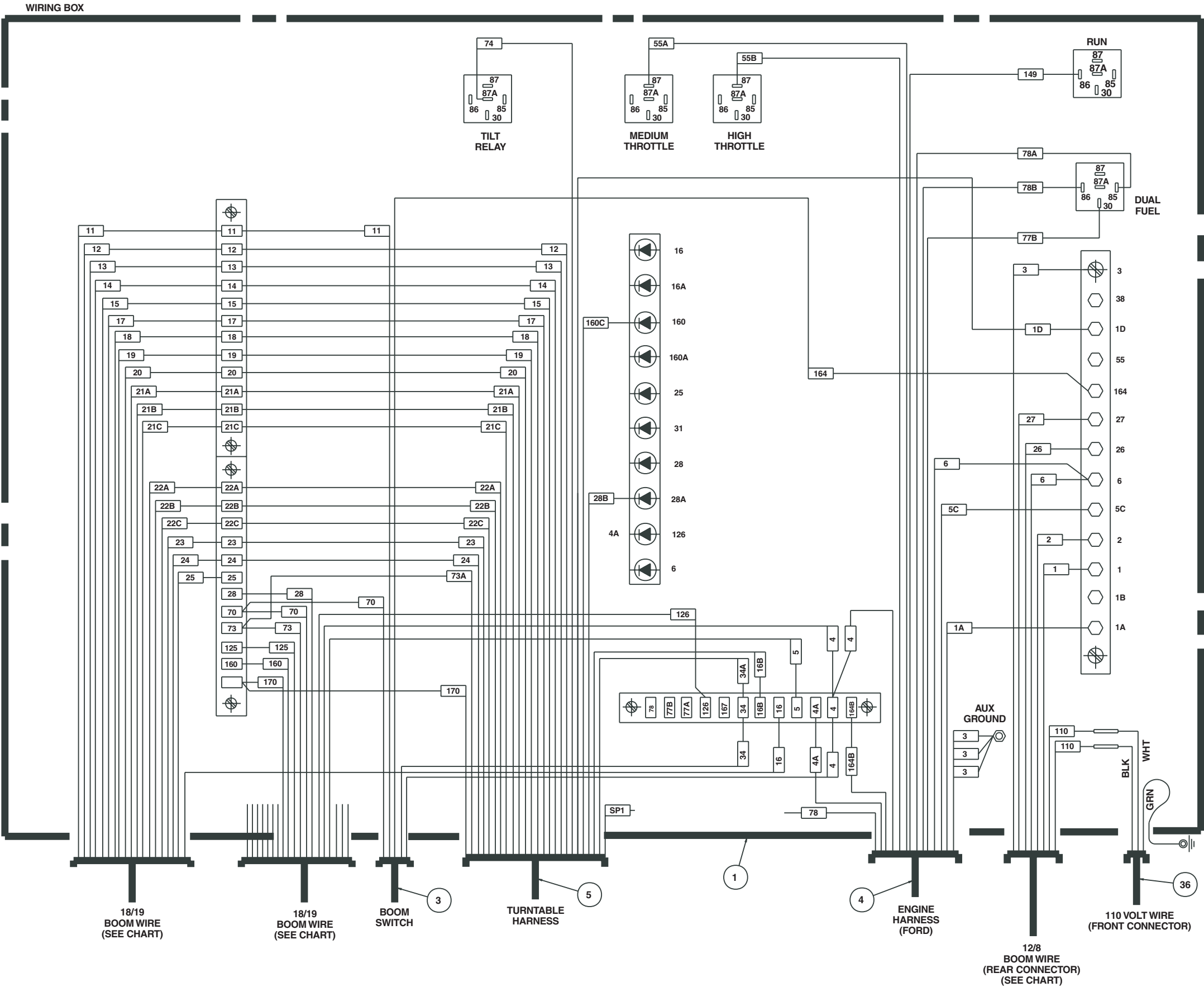


DWG. 0181779-1

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



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12/8 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
1	POWER TO PLATFORM	2	RED	ITEM 58
2	POWER TO PLATFORM	7	RED/BLACK	ITEM 58
3	GROUND	1	BLACK	ITEM 58
6	EMERGENCY POWER	4	ORANGE	ITEM 58
26	PLATFORM ROTATION - CW	5	YELLOW	ITEM 58
27	PLATFORM ROTATION - CCW	8	BLUE/BLACK	ITEM 58
110	110 VOLT - POWER	3	BLUE	-
110	110 VOLT - NEUTRAL	6	BROWN	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
4	RUN - FROM PLATFORM	1	BLACK	ITEM 59
5	START - FROM PLATFORM	11	BROWN/BLACK	ITEM 59
28	SENSE LINE DUMP	12	BLACK/RED	ITEM 59
70	BOOM SPEED SIGNAL	2	RED	ITEM 59
73	LEVEL SENSOR SIGNAL	8	BLUE/BLACK	ITEM 59
125	HIGH THROTTLE SIGNAL	7	RED/BLACK	ITEM 59
160	HYDRAULIC VALVE SIGNAL	9	ORANGE/BLACK	ITEM 59
126	ENGINE KILL GROUND SIGNAL	4	ORANGE	ITEM 59
170	2-WHEEL DRIVE SIGNAL	6	BROWN	ITEM 59
-	SPARE	10	YELLOW/BLACK	-
-	SPARE	3	BLUE	-
-	SPARE	5	YELLOW	-
-	SPARE	13	BLUE/RED	-
-	SPARE	14	ORANGE/RED	-
-	SPARE	15	YELLOW/RED	-
-	SPARE	16	BROWN/RED	-
-	SPARE	17	BLACK/BLUE	-
-	SPARE	18	RED/BLUE	-
-	SPARE	19	ORANGE/BLUE	-

18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
11	MOTOR LOW RANGE SIGNAL	12	BLACK/RED	ITEM 59
12	LEVEL - DOWN	13	BLUE/RED	ITEM 59
13	LEVEL - UP	14	ORANGE/RED	ITEM 59
14	BOOM - EXTEND	15	YELLOW/RED	ITEM 59
15	BOOM - RETRACT	6	BROWN	ITEM 59
16	HYDRAULIC SPEED	3	BLUE	ITEM 59
17	DRIVE - FORWARD	4	ORANGE	ITEM 59
18	DRIVE - REVERSE	10	YELLOW/BLACK	ITEM 59
19	STEER - LEFT	16	BROWN/RED	ITEM 59
20	STEER - RIGHT	8	BLUE/BLACK	ITEM 59
21A	RISER - DOWN	5	YELLOW	ITEM 59
21B	MAIN BOOM - DOWN	19	ORANGE/BLUE	ITEM 59
21C	JIB - DOWN	18	RED/BLUE	ITEM 59
22A	RISER - UP	2	RED	ITEM 59
22B	MAIN BOOM - UP	7	RED/BLACK	ITEM 59
22C	JIB - UP	9	ORANGE/BLACK	ITEM 59
23	SWING - CCW	17	BLACK/BLUE	ITEM 59
24	SWING - CW	11	BROWN/BLACK	ITEM 59
25	MED THROTTLE SIGNAL	1	BLACK	ITEM 59

AW0181779-2



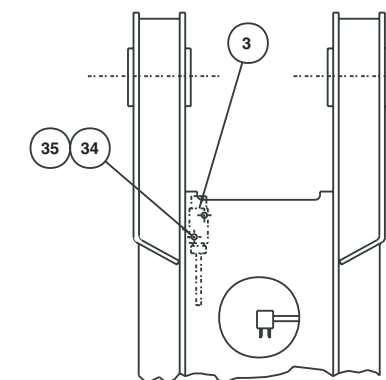
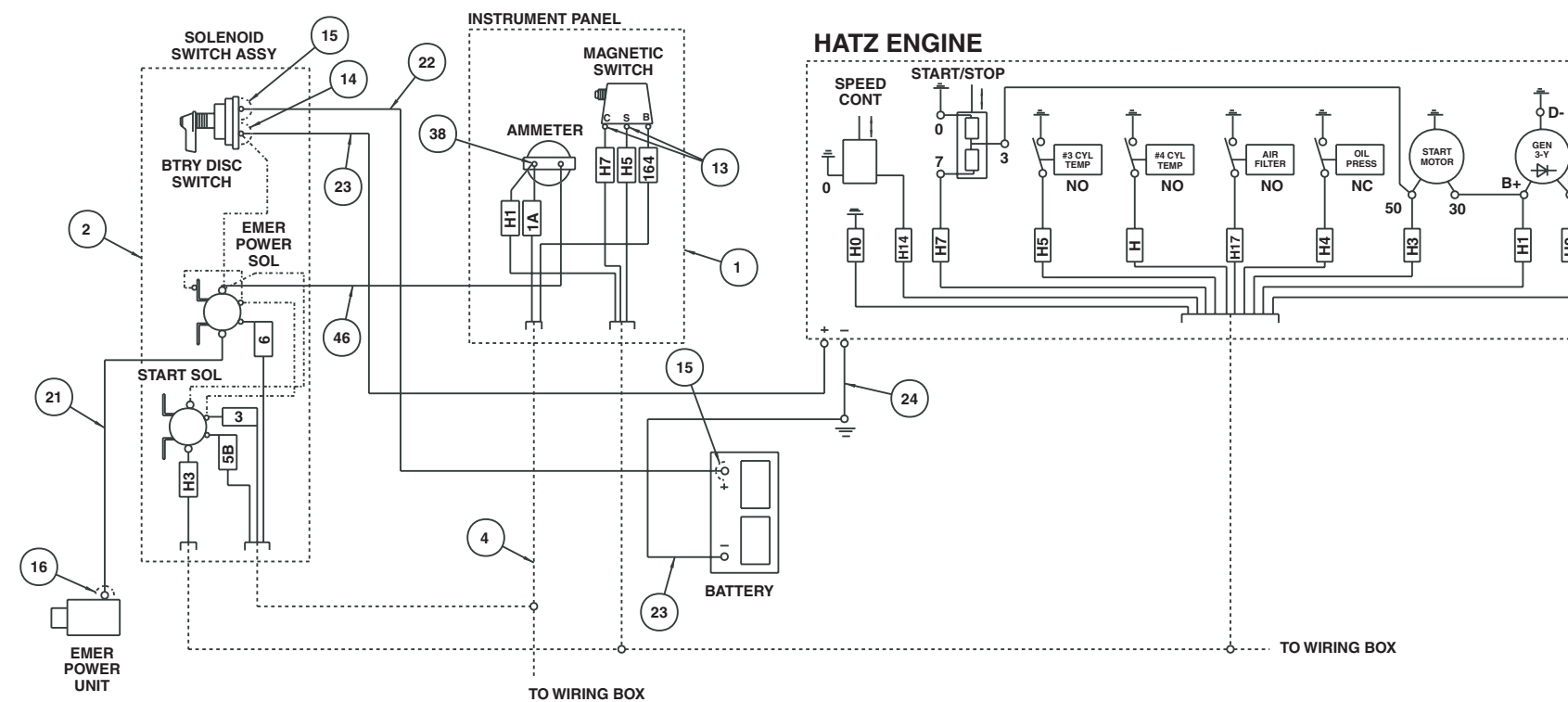
TITLE Turntable electrical
Ford LRG-425, sheet 2
Snorkel model ATB 60

DWG. 0181779-2



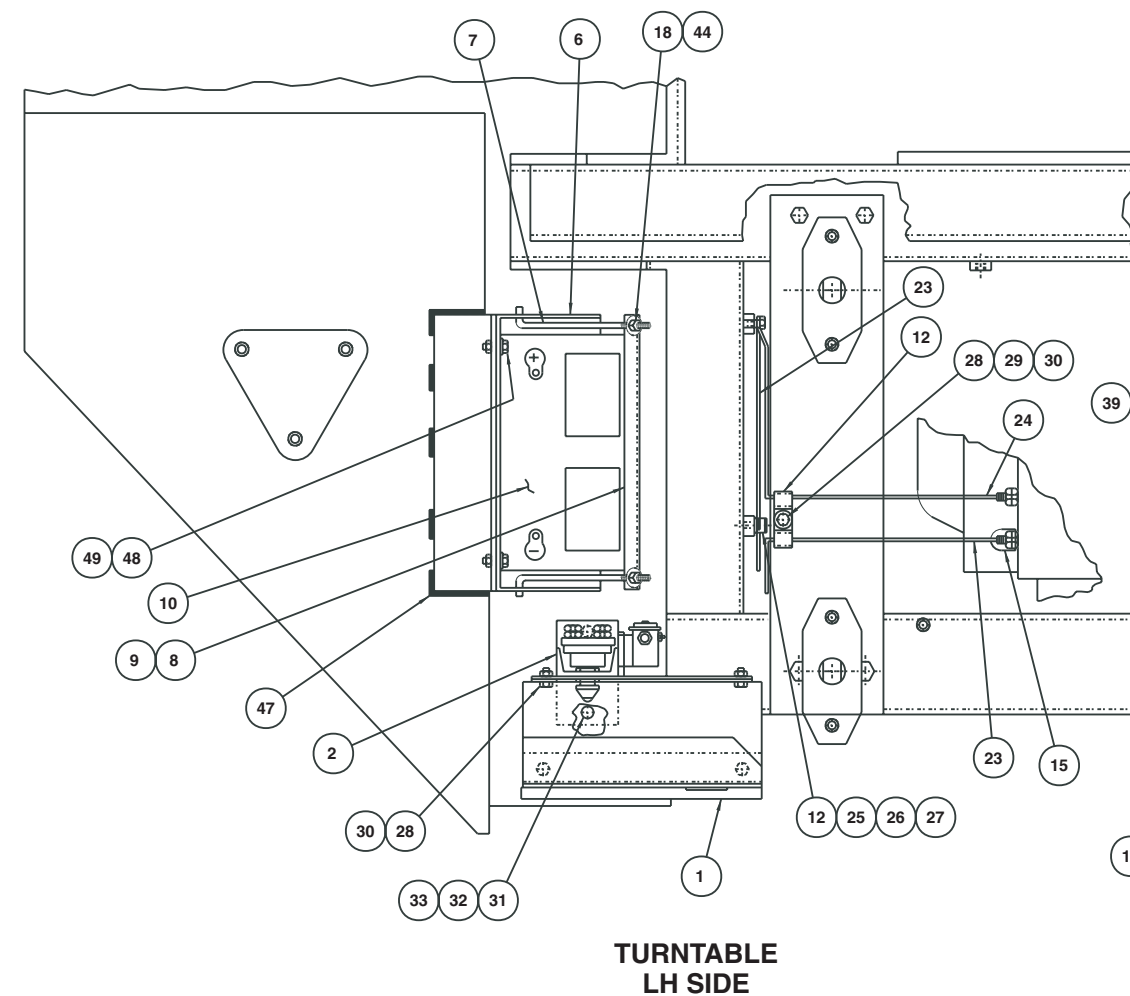
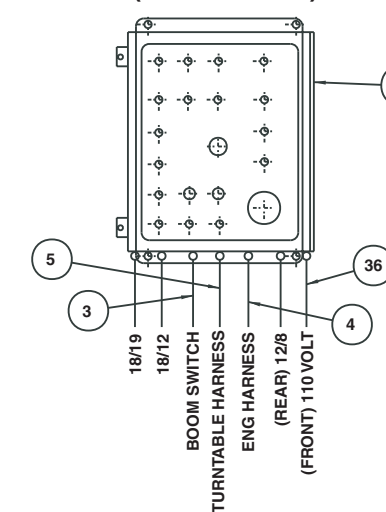
**Turntable electrical, Hatz**

item	part no	qty	description
1	0181429	1	Wiring box, Hatz - (see page 3-30 for parts breakdown)
2	0180993	1	Solenoid switch - (see page 3-60 for parts breakdown)
3	0180994	1	Boom lift switch - (see page 3-58 for parts breakdown)
4	0181435	1	Wire harness, Hatz engine
5	0181550	1	Wire harness, turntable
6	0150810	1	Battery box
7	0150910	2	Battery hold down bolt
8	0150811	1	Insulator angle
9	0150813	1	Battery hold down angle
10	3050002	1	Battery, 12 volt DC - 550 CCA
11	3020040	1	Tilt alarm sensor 5°
12	5093004	5	Clamp
13	3044161	3	Terminal #10 stud insulated 16/14 wire
14	3040270	1	Insulator boot
15	3040269	3	Insulator boot
16	3040268	1	Insulator boot
17	3044162	1	Terminal 1/4 stud insulated 16/14 wire
18	5560031	2	Nut 5/16-18 self locking
19	3040082	2	Terminal .250 tab male slip-on fully insulated 16/14 wire
20	984069	2	Nut 1/4-20 hex
21	0090959	1	Jumper wire
22	0080519	1	Jumper wire
23	0101565	2	Battery ground wire
24	0080483	1	Jumper wire
25	970449	3	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
26	986299	3	Washer 3/8 medium flat
27	987119	3	Washer 3/8 medium lock
28	970049	9	Capscrew 1/4-20 x 1 inch long hex head grade 5
29	986019	5	Washer 1/4 medium flat
30	5560004	9	Nut 1/4-20 self locking
31	970889	2	Capscrew 1/2-13 x 1 inch long hex head grade 5
32	987139	2	Washer 1/2 medium lock
33	986359	2	Washer 1/2 medium flat
34	5569910	2	Machine screw #10-24 x 2-1/2 inch long round head
35	5560034	4	Nut #10-24 self locking
36	0181188	1	Wire harness, 110 volt power
37	0071557	1	Jumper wire
38	3044854	7	Terminal ring tongue insulated 12/10 wire
39	0181503	1	Bracket, tilt alarm
40	480652	1	Siren, tilt alarm
41	970529	2	Capscrew 3/8-16 x 2-1/2 inch long hex head grade 5
42	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
43	5093002	1	Clamp
44	986269	2	Washer 5/16 medium flat
45	974709	2	Machine screw #10-24 x 1 inch long round head
46	0090623	1	Jumper wire
47	0181433	1	Angle
48	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
49	5560033	4	Nut 3/8-16 self locking
50	3046972	27	Terminal .188 tab female slip-on insulated 22/18 wire
51	3046697	4	Terminal .188 tab female slip-on insulated 16/14 wire
52	3044332	1	Terminal .250 tab female slip-on insulated 16/14 wire

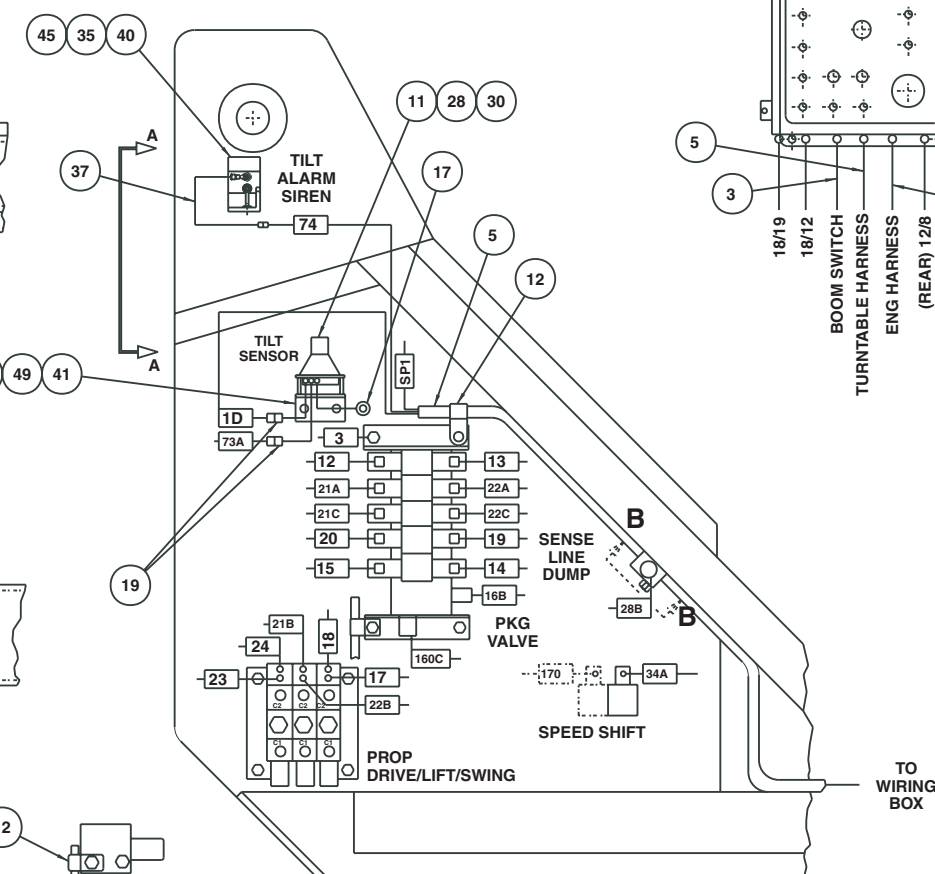


VIEW A-A

WIRING BOX (FRONT VIEW)



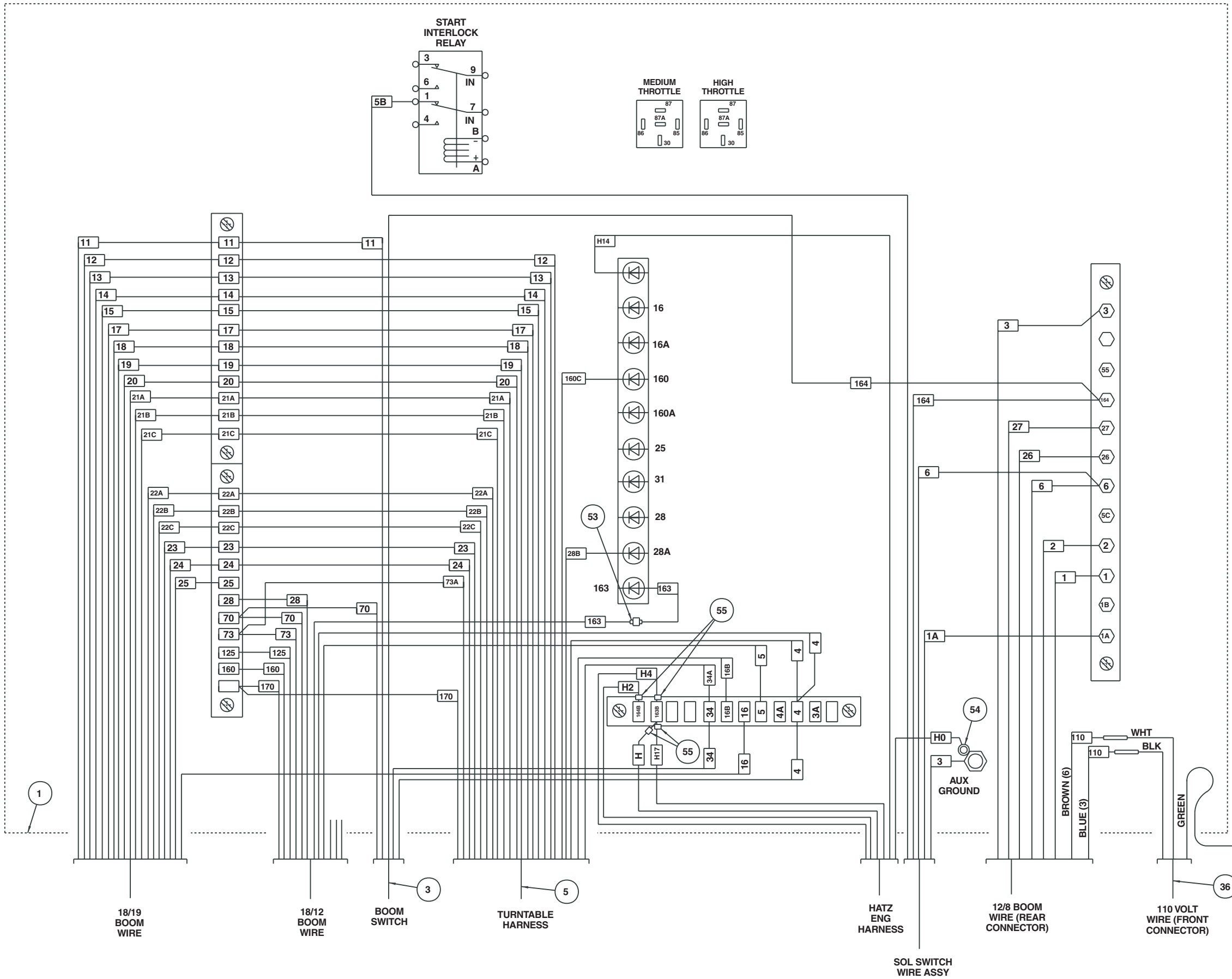
VIEW B-B



**TURNTABLE
RH SIDE**

AW0181425-1

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12/8 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
1	POWER TO PLAT.	2	RED	ITEM 51
2	POWER TO PLAT.	7	RED/BLACK	ITEM 51
3	GROUND	1	BLACK	ITEM 51
6	EMER. POWER	4	ORANGE	ITEM 51
26	PLAT. ROT. - CW	5	YELLOW	ITEM 51
27	PLAT. ROT. - CCW	8	BLUE/BLACK	ITEM 51
110	110 VOLT-POWER	3	BLUE	-
110	110 VOLT-NEUTRAL	6	BROWN	-

18/12 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
4	RUN-FROM PLAT.	1	BLACK	ITEM 52
5	START-FROM PLAT.	11	BROWN/BLACK	ITEM 52
28	SENSE LINE DUMP	12	BLACK/RED	ITEM 52
70	BOOM SPEED SIGNAL	2	RED	ITEM 52
73	LEVEL SENSOR SIGNAL	8	BLUE/BLACK	ITEM 52
125	HIGH THROTTLE SIGNAL	7	RED/BLACK	ITEM 52
160	HYD. VALVE SIGNAL	9	ORANGE/BLACK	ITEM 52
163	ENGINE KILL. GRD. SIGNAL	4	ORANGE	ITEM 53
170	2-WHEEL DRIVE SIGNAL (4X4 ONLY)	6	BROWN	ITEM 52
-	SPARE	10	YELLOW/BLACK	-
-	SPARE	3	BLUE	-
-	SPARE	5	YELLOW	-

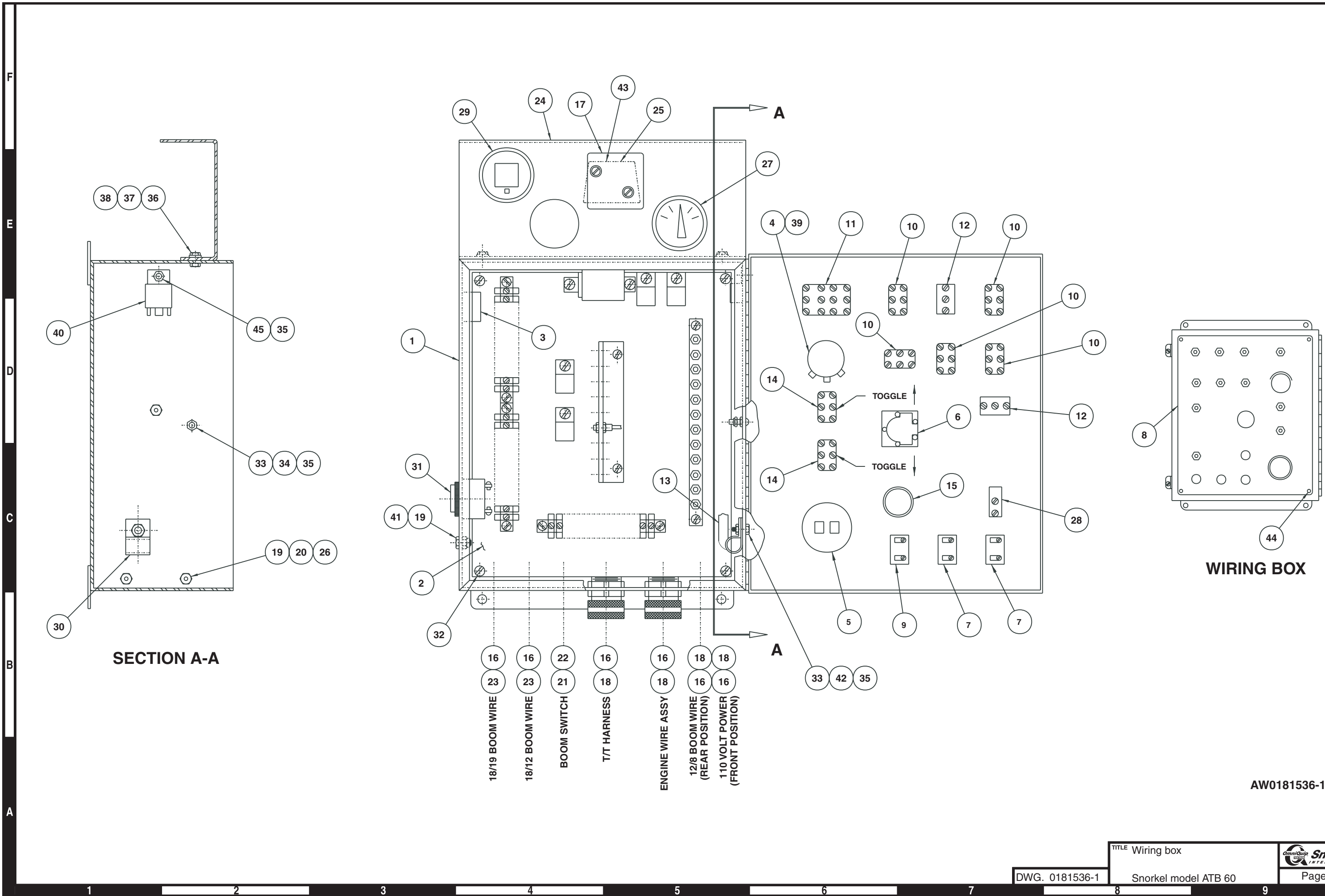
18/19 CONDUCTOR WIRE				
SNORKEL WIRE NO.	DESCRIPTION	B. REX WIRE NO.	BRAND REX WIRE COLOR	TERMINAL WIRING BOX
11	MOTOR LO RANGE SIGNAL	12	BLACK/RED	ITEM 52
12	LEVEL-DOWN	13	BLUE/RED	ITEM 52
13	LEVEL-UP	14	ORANGE/RED	ITEM 52
14	BOOM-EXTEND	15	YELLOW/RED	ITEM 52
15	BOOM-RETRACT	6	BROWN	ITEM 52
16	HYDRAULIC SPEED	3	BLUE	ITEM 52
17	DRIVE-FORWARD	4	ORANGE	ITEM 52
18	DRIVE-REVERSE	10	YELLOW/BLACK	ITEM 52
19	STEER-LEFT	16	BROWN/RED	ITEM 52
20	STEER-RIGHT	8	BLUE/BLACK	ITEM 52
21A	RISER-DOWN	5	YELLOW	ITEM 52
21B	MAIN BOOM-DOWN	19	ORANGE/BLUE	ITEM 52
21C	JIB-DOWN	18	RED/BLUE	ITEM 52
22A	RISER-UP	2	RED	ITEM 52
22B	MAIN BOOM-UP	7	RED/BLACK	ITEM 52
22C	JIB-UP	9	ORANGE/BLACK	ITEM 52
23	SWING-CCW	17	BLACK/BLUE	ITEM 52
24	SWING-CW	11	BROWN/BLACK	ITEM 52
25	MED. THROTTLE SIGNAL	1	BLACK	ITEM 52

AW0181425-2

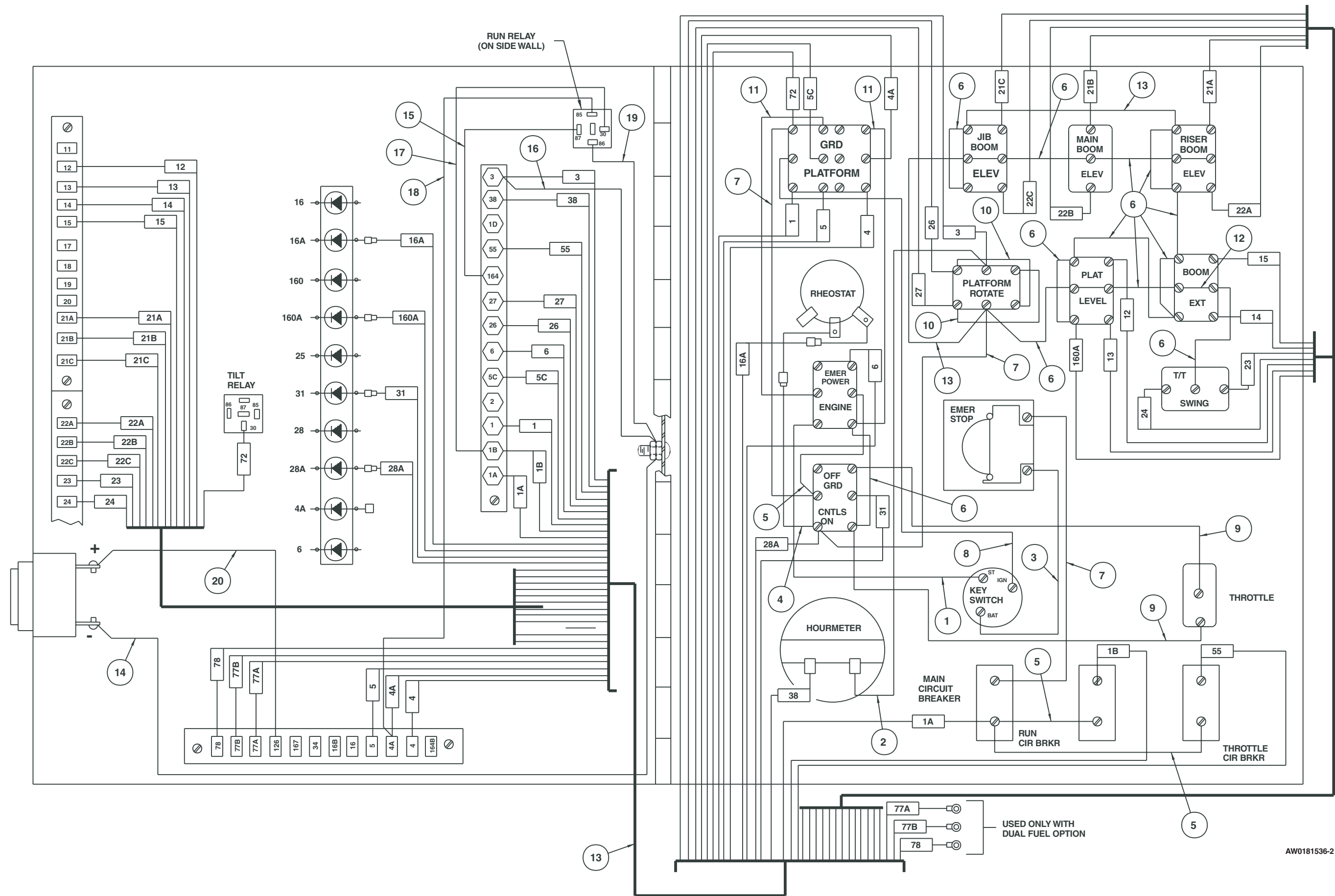


**Wiring box**

item	part no	qty	description
	0181536	1	Wiring box, complete
1	0180885	1	Wiring box
2	0181555	1	Wiring box panel - (see page 3-34 for parts breakdown)
3	0070967	1	Corrosion inhibitor
4	0180949	1	Speed control switch
	3040497	1	Replacement switch
5	3070001	1	Hour meter
6	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
7	3040252	2	Circuit breaker, 15 amp capacity
8	0180916	1	Placard, wiring box front
9	3040069	1	Circuit breaker, 25 amp capacity
10	3020018	5	Switch, toggle
11	3020048	1	Switch, toggle
12	3020016	2	Switch, toggle
13	0181549	1	Wire harness, wiring box internal
14	3020081	2	Switch, toggle
15	3020087	1	Switch, keyed start
	8030044	1	Replacement key
16	3040110	6	Connector locknut
17	0111623	1	Placard, engine protection system
18	3040295	4	Connector
19	970009	5	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
20	987099	3	Washer 1/4 medium lock
21	3040115	1	Connector
22	3040070	1	Connector locknut - (before 4-14-97)
23	3040116	2	Connector
24	0180787	1	Instrument panel
25	3020093	1	Switch, magnetic
26	984069	3	Nut 1/4-20 hex
27	3070003	1	Ammeter
28	3020013	1	Switch, toggle
29	7630140	1	Filter condition indicator
30	5093004	1	Clamp
31	3040411	1	Mini siren, engine alarm
32	5560667	4	Machine screw #10-24 x 3/8 inch long pan head
33	974709	2	Machine screw #10-24 x 1 inch long round head
34	984049	1	Nut #10-24 hex
35	5560034	3	Nut #10-24 self locking
36	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
37	986299	2	Washer 3/8 medium flat
38	5560033	2	Nut 3/8-16 self locking
39	3040348	1	Switch knob
40	3040469	1	Relay, 12 volt DC
41	5560004	2	Nut 1/4-20 self locking
42	986009	1	Washer #10 medium flat
43	0111512	1	Jumper bar
44	5560655	4	Pop rivet #AD32-ABS
45	5560609	2	Machine screw #10-24 x 1/2 inch long truss head



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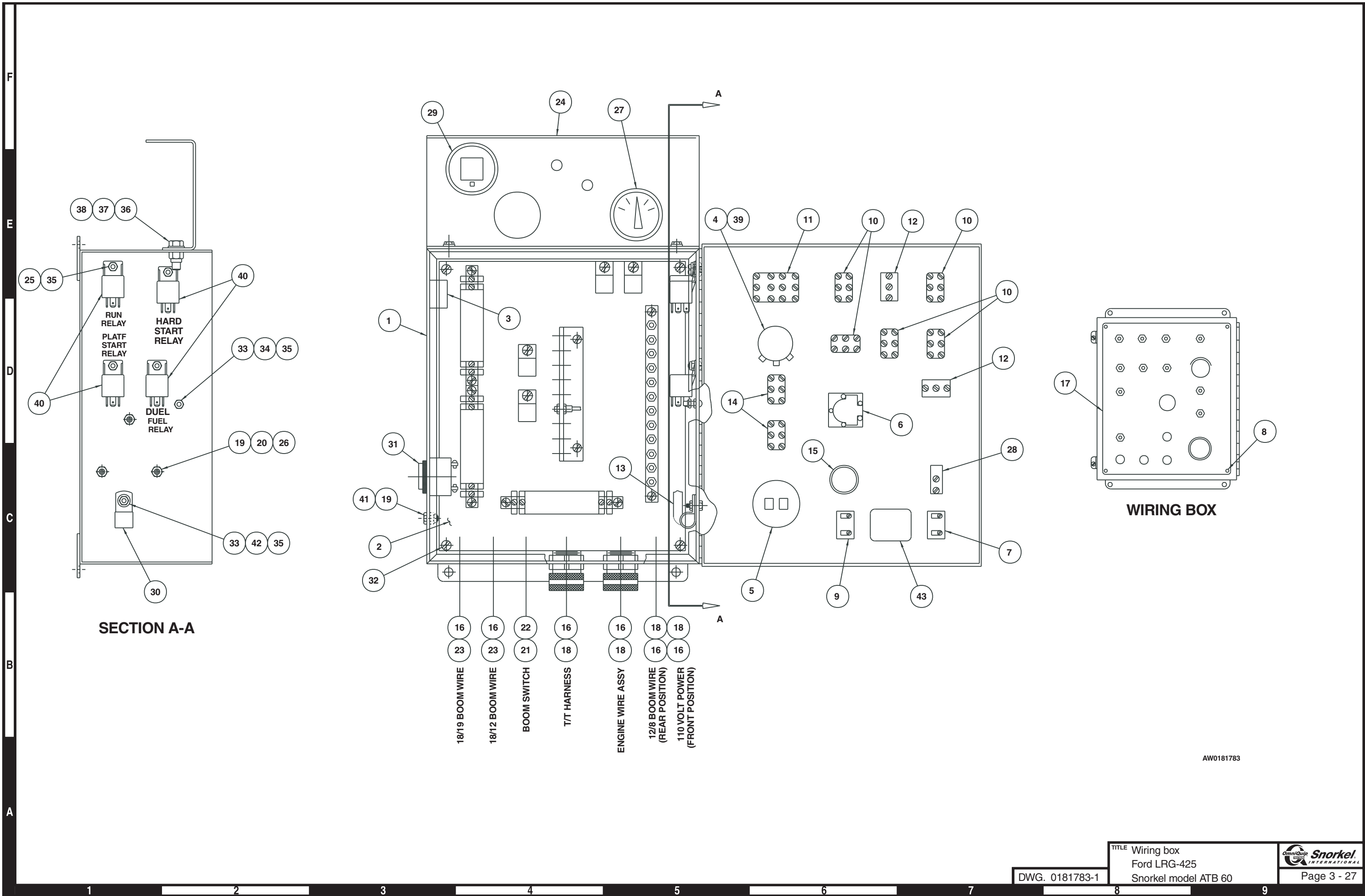
TITLE Wiring box wiring

**Wiring box wiring**

item	part no	qty	description
1	0240483	1	Jumper wire
2	0070760	1	Jumper wire
3	0071589	1	Jumper wire
4	0090757	1	Jumper wire
5	0181104	3	Jumper wire
6	0070747	12	Jumper wire
7	0070742	3	Jumper wire
8	0071541	1	Jumper wire
9	0070753	2	Jumper wire
10	0071583	2	Jumper wire
11	0070746	2	Jumper wire
12	0060373	4	Jumper strap
13	0070730	2	Jumper wire
14	0110557	1	Jumper wire
15	0073057	1	Jumper wire
16	0070732	1	Jumper wire
17	0151818	1	Jumper wire
18	0071528	1	Jumper wire
19	0081559	1	Jumper wire
20	0070713	1	Jumper wire

**Wiring box, Ford LRG-425**

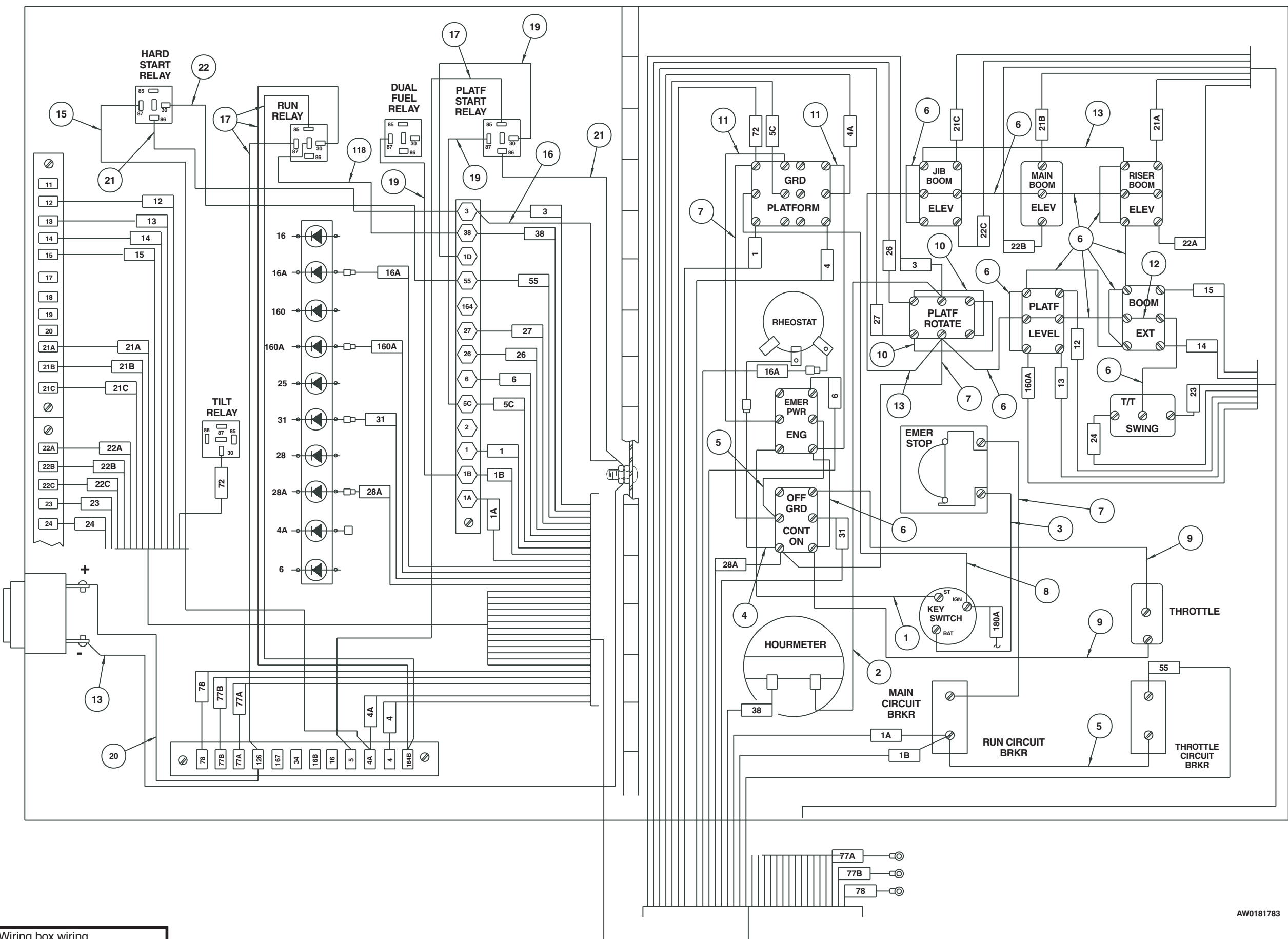
item	part no	qty	description
	0181783	1	Wiring box, Ford LRG-425
1	0180885	1	Wiring box
2	0181784	1	Wiring box panel, Ford LRG-425 - (see page 3-37 for parts breakdown)
3	0070967	1	Corrosion inhibitor
4	0180949	1	Speed control switch
	3040497	1	Replacement switch
5	3070001	1	Hour meter
6	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
7	3040252	1	Circuit breaker, 15 amp capacity
8	5560655	4	Pop rivet #AD32-ABS
9	3040069	1	Circuit breaker, 25 amp capacity
10	3020018	5	Switch, toggle
11	3020048	1	Switch, toggle
12	3020016	2	Switch, toggle
13	0181549	1	Wire harness, wiring box internal - (before 5-29-00)
	0181916	1	Wire harness, wiring box internal - (after 5-29-00)
14	3020081	2	Switch, toggle
15	3020087	1	Switch, keyed start
	8030044	1	Replacement key
16	3040110	6	Connector locknut
17	0180916	1	Placard, wiring box front
18	3040295	4	Connector
19	970009	5	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
20	987099	3	Washer 1/4 medium lock
21	3040115	1	Connector
22	3040070	1	Connector locknut
23	3040116	2	Connector
24	0180787	1	Instrument panel
25	5560609	5	Machine screw #10-24 x 1/2 inch long truss head
26	984069	3	Nut 1/4-20 hex
27	3070003	1	Ammeter
28	3020013	1	Switch, toggle
29	7630140	1	Filter condition indicator
30	5093004	1	Clamp
31	3040411	1	Mini siren, engine alarm
32	5560667	4	Machine screw #10-24 x 3/8 inch long pan head
33	974709	2	Machine screw #10-24 x 1 inch long round head
34	984049	1	Nut #10-24 hex
35	5560034	6	Nut #10-24 self locking
36	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
37	986299	2	Washer 3/8 medium flat
38	5560033	2	Nut 3/8-16 self locking
39	3040348	1	Switch knob
40	3040469	4	Relay, 12 volt DC
41	5560004	2	Nut 1/4-20 self locking
42	986009	1	Washer #10 medium flat
43	0191287	1	Placard, blank



AW0181783

DWG. 0181783-1

TITLE Wiring box
Ford LRG-425
Snorkel model ATB 60



AW0181783

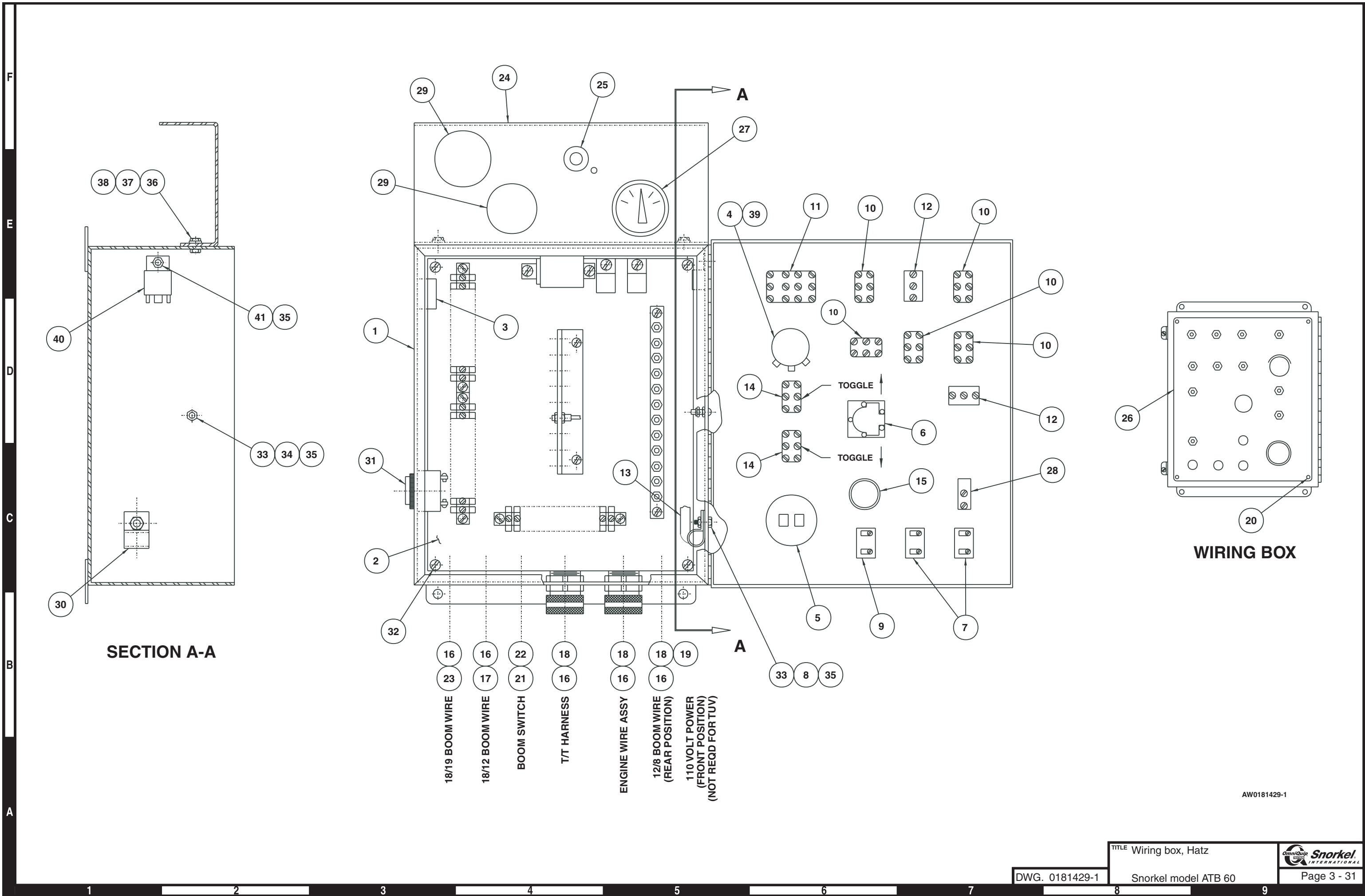


Wiring box wiring, Ford LRG-425

item	part no	qty	description
1	0240483	1	Jumper wire
2	0070760	1	Jumper wire
3	0071589	1	Jumper wire
4	0090757	1	Jumper wire
5	0181104	2	Jumper wire
6	0070747	12	Jumper wire
7	0070742	3	Jumper wire
8	0071541	1	Jumper wire
9	0070753	2	Jumper wire
10	0071583	2	Jumper wire
11	0070746	2	Jumper wire
12	0060373	4	Jumper strap
13	0070730	2	Jumper wire
14	0110557	1	Jumper wire
15	0112231	1	Jumper wire
16	0070732	1	Jumper wire
17	0071528	4	Jumper wire
18	0073057	1	Jumper wire
19	0071555	3	Jumper wire
20	0070713	1	Jumper wire
21	0081559	2	Jumper wire
22	0181031	1	Jumper wire

**Wiring box, Hatz**

item	part no	qty	description
	0181429	1	Wiring box, Hatz
1	0180885	1	Wiring box
2	0181430	1	Wiring box panel, Hatz - (see page 3-38 for parts breakdown)
3	0070967	1	Corrosion inhibitor
4	0180949	1	Speed control switch
	3040497	1	Replacement switch
5	3070001	1	Hour meter
6	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
7	3040252	2	Circuit breaker, 15 amp capacity
8	986009	1	Washer #10 medium flat
9	3040069	1	Circuit breaker, 25 amp capacity
10	3020018	5	Switch, toggle
11	3020048	1	Switch, toggle
12	3020016	2	Switch, toggle
13	0181114	1	Wire harness, wiring box internal
14	3020081	2	Switch, toggle
15	3020087	1	Switch, keyed start
	8030044	1	Replacement key
16	3040110	5	Connector locknut
17	3040285	1	Connector
18	3040295	3	Connector
19	3040410	1	Hole plug
20	5560655	4	Pop rivet #AD32-ABS
21	3040115	1	Connector
22	3040070	1	Connector locknut
23	3040116	1	Connector
24	0180787	1	Instrument panel
25	3020076	1	Switch, magnetic
26	0180916	1	Placard, wiring box front
27	3070003	1	Ammeter
28	3020013	1	Switch, toggle
29	3040286	1	Plug
30	5093004	1	Clamp
31	3040411	1	Mini siren, engine alarm
32	5560667	4	Machine screw #10-24 x 3/8 inch long pan head
33	974709	2	Machine screw #10-24 x 1 inch long round head
34	984049	1	Nut #10-24 hex
35	5560034	4	Nut #10-24 self locking
36	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
37	986299	2	Washer 3/8 medium flat
38	5560033	2	Nut 3/8-16 self locking
39	3040348	1	Switch knob
40	3040469	1	Relay, 12 volt DC
41	5560609	1	Machine screw #10-24 x 1/2 inch long truss head



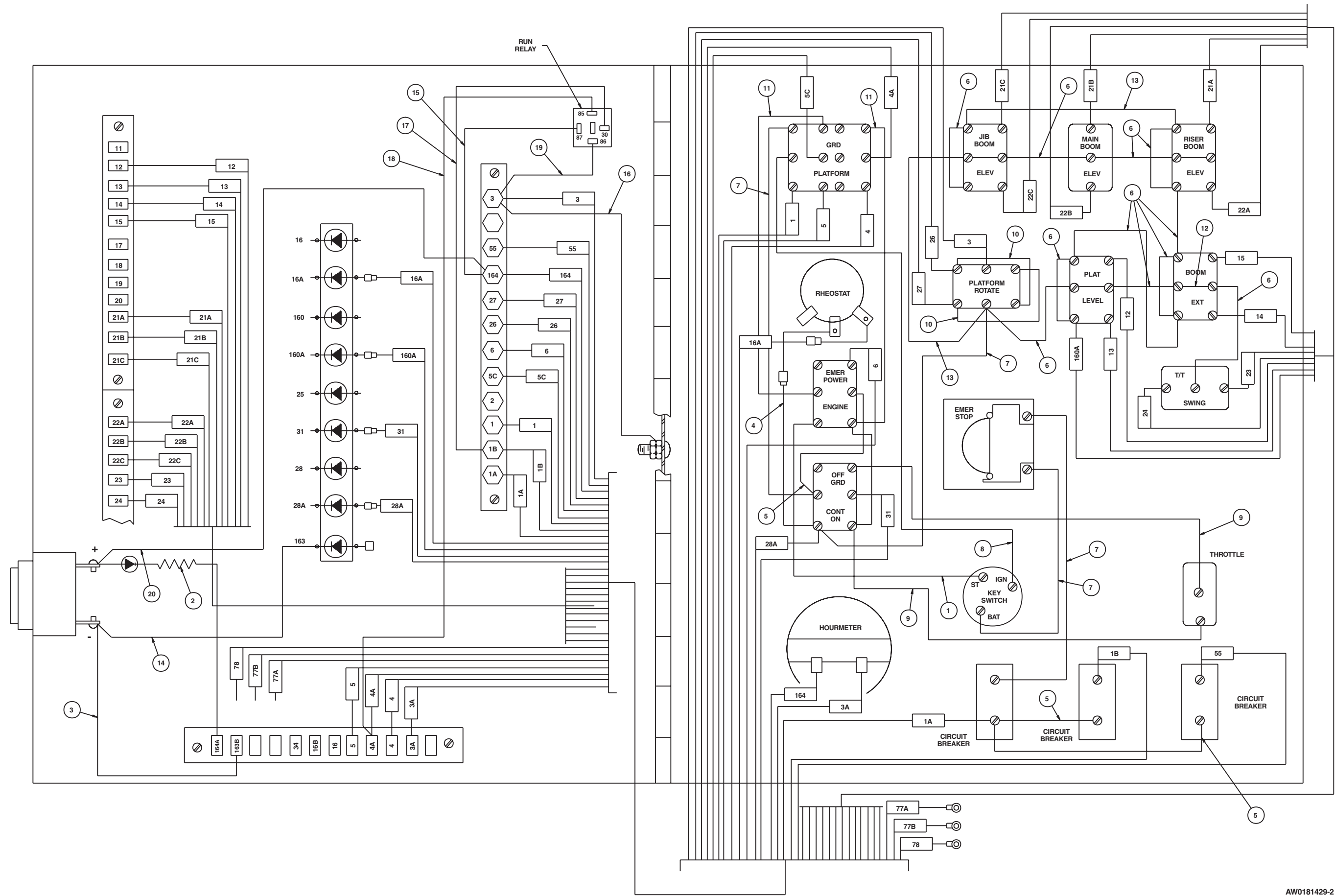
AW0181429-1

DWG. 0181429-1

TITLE Wiring box, Hatz
Snorkel model ATB 60

Snorkel
INTERNATIONAL
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AW0181429-2

**Wiring box wiring, Hatz**

item	part no	qty	description
1	0240483	1	Jumper wire
2	0181434	1	Diode wire - (used on machines before 11-09-1999)
3	0071546	1	Jumper wire
4	0090757	1	Jumper wire
5	0181104	3	Jumper wire
6	0070747	12	Jumper wire
7	0070742	4	Jumper wire
8	0071541	1	Jumper wire
9	0070753	2	Jumper wire
10	0071583	2	Jumper wire
11	0070746	2	Jumper wire
12	0060373	2	Jumper strap
13	0070730	4	Jumper wire
14	0071844	2	Jumper wire
15	0073057	1	Jumper wire
16	0070732	1	Jumper wire
17	0181031	1	Jumper wire
18	0071528	1	Jumper wire
19	0071555	1	Jumper wire
20	0070758	1	Jumper wire

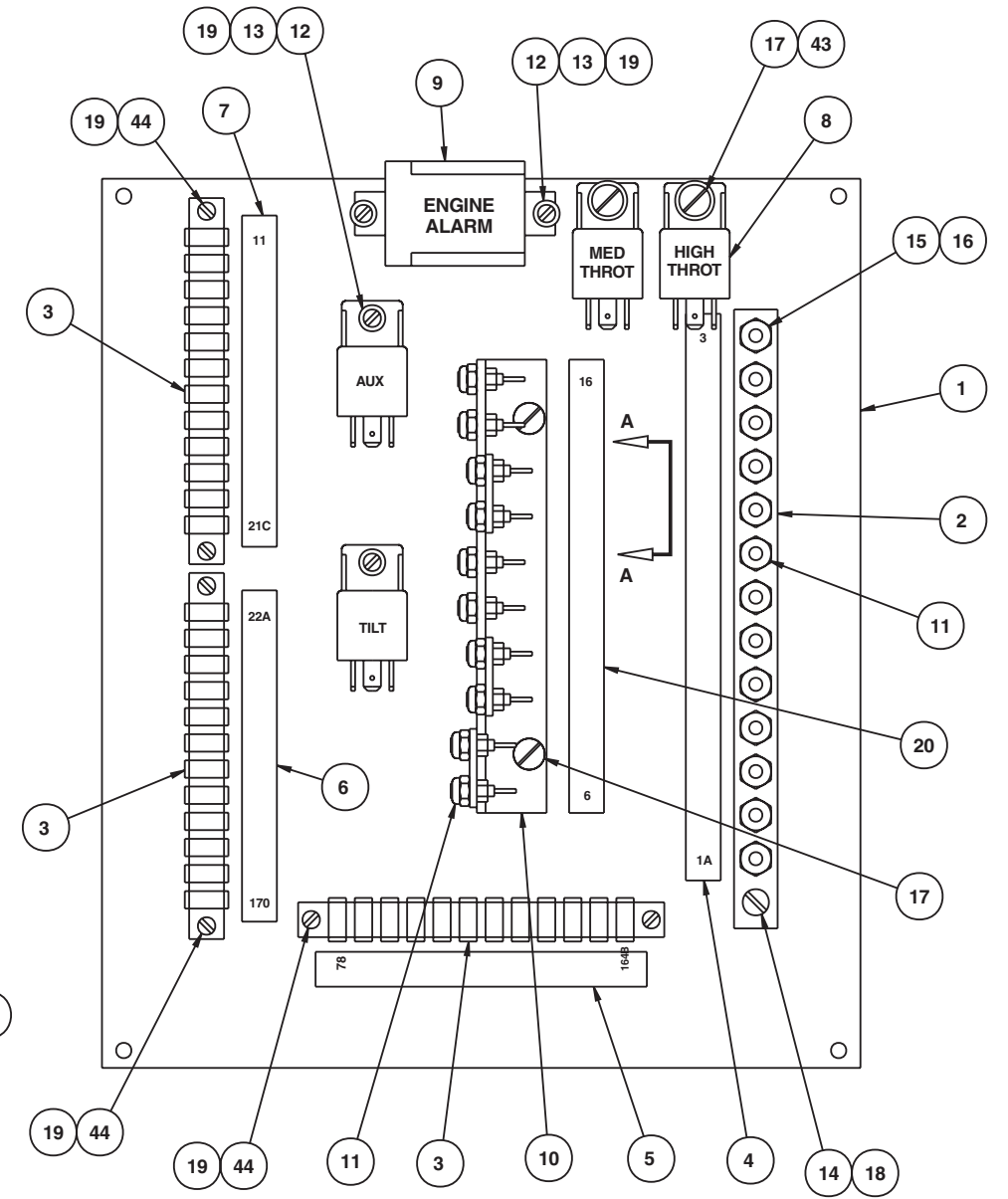
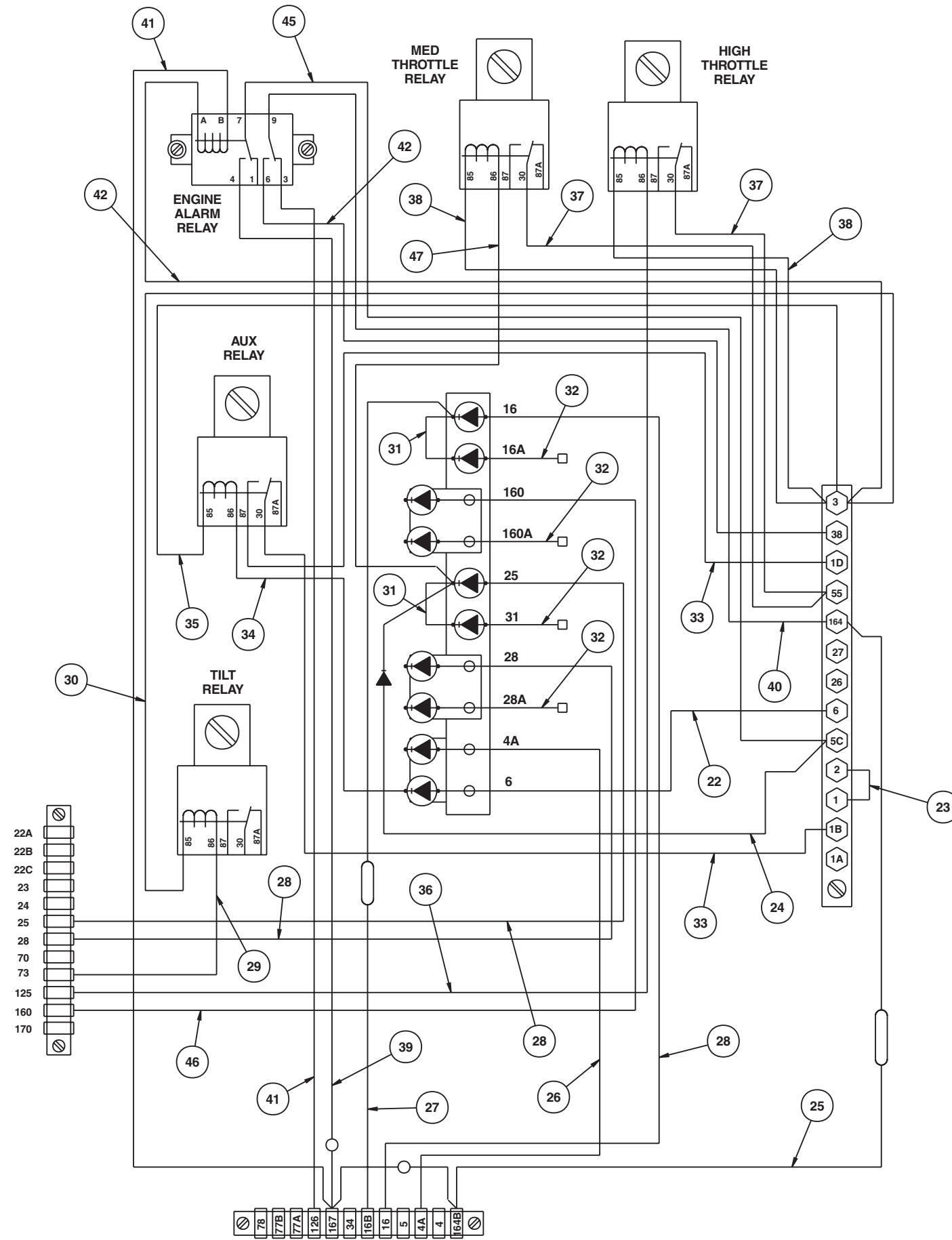


Wiring box panel

item	part no	qty	description
	0181555	1	Wiring box panel
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	3040214	1	Relay, 12 volt DC
10	0150488	1	Diode holder
	3040108		Replacement diode
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	1	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	0073253	1	Jumper wire
25	0181434	1	Diode wire - (used on machines before 11-09-1999)
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	0181110	4	Diode wire - (includes 3040108 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
40	0070713	1	Jumper wire
41	0140323	2	Jumper wire
42	0140332	2	Jumper wire
43	986009	2	Washer #10 medium flat
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	0181113	1	Jumper wire



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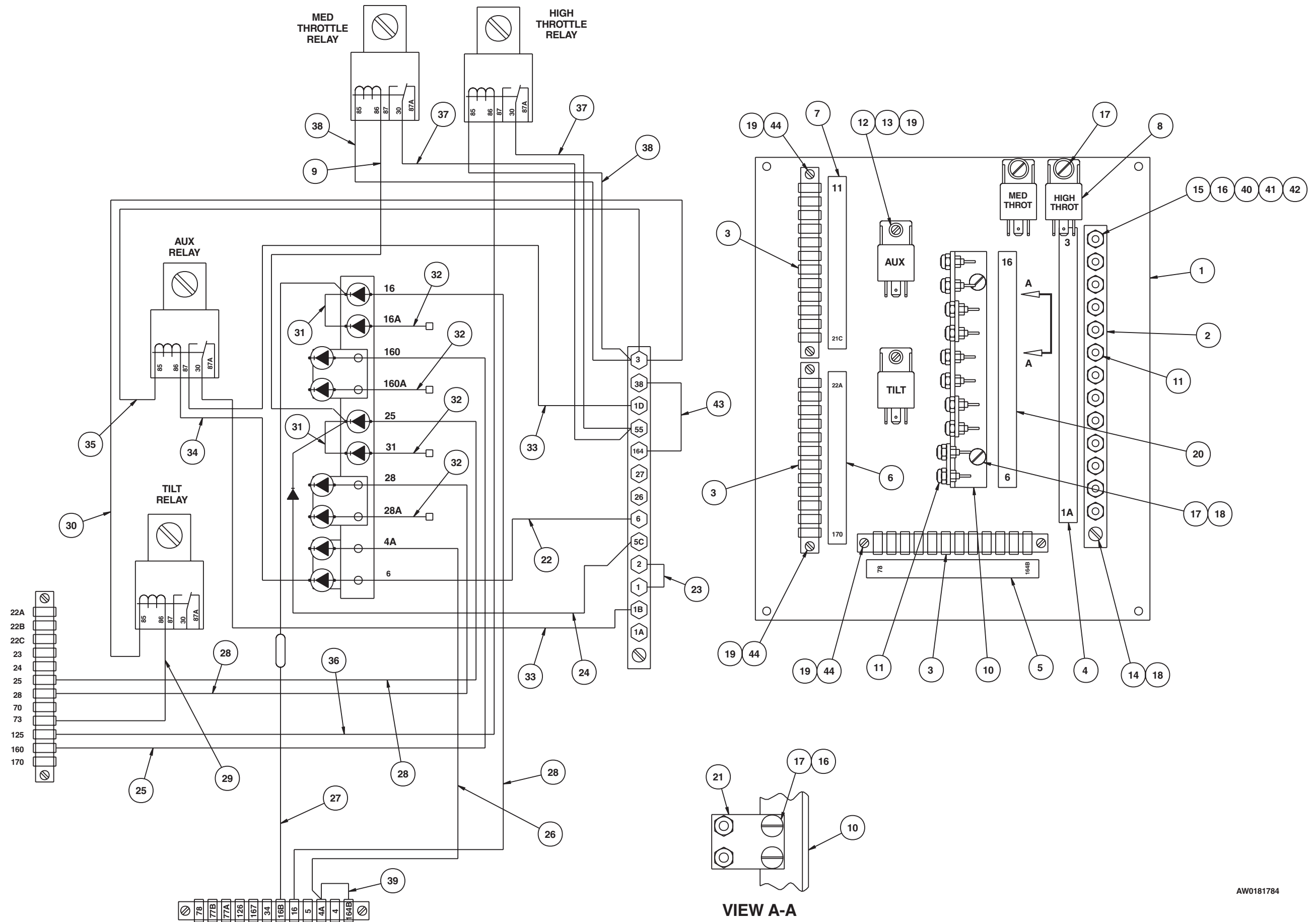


VIEW A-A

AW0181555



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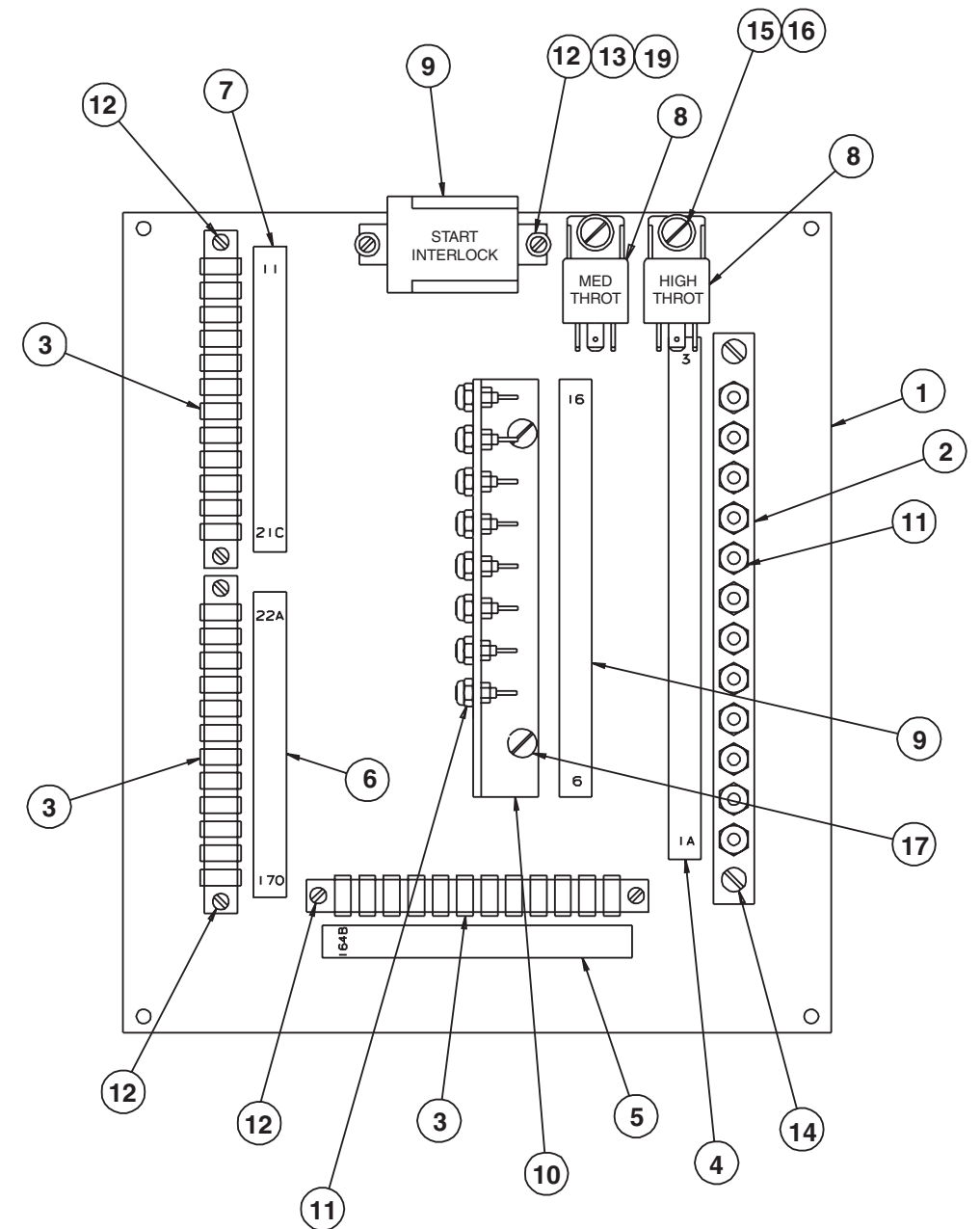
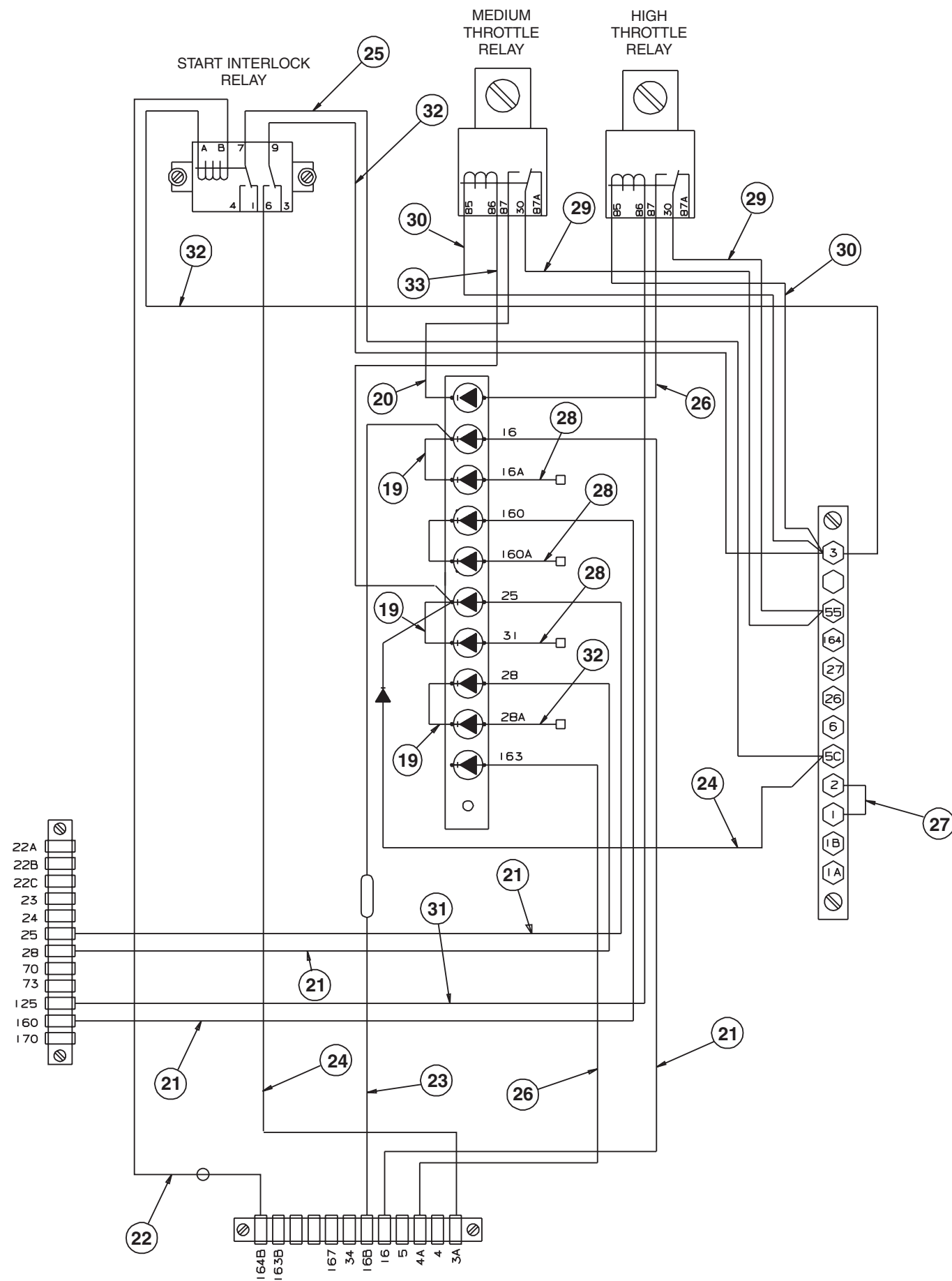
AW0181784

**Wiring box panel, Ford LRG-425**

item	part no	qty	description
	0181784	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 .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	0181113	1	Jumper wire
10	0150488	1	Diode holder
	3040108		Replacement diode
11	5560038	22	Nut #10-32 self locking
12	974239	2	Machine screw #6-32 x 1/2 inch long round head
13	986159	2	Washer #6 medium flat
14	974689	1	Machine screw #10-24 x 3/4 inch long round head
15	5560610	1	Machine screw #10-24 x 1-1/4 inch long truss 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	8	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	0073253	1	Jumper wire
25	0110471	1	Diode 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	0181110	4	Diode wire - (includes 3040108 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	0110468	1	Jumper wire
40	5560703	1	Washer #10 star tooth lock
41	987089	1	Washer #10 medium lock
42	984049	1	Nut #10-24 hex
43	0070712	1	Jumper wire
44	974279	6	Machine screw #6-32 x 3/4 inch long round head

**Wiring box panel, Hatz**

item	part no	qty	description
	0181430	1	Wiring box panel, Hatz
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	0181108	1	Decal, terminal strip
5	0181431	1	Decal, terminal strip
6	0181107	1	Decal, control wire #2
7	0181106	1	Decal, control wire #1
8	3040469	2	Relay, 12 volt DC
9	3040214	1	Relay, 12 volt DC
10	015048	1	Diode holder
	3040108		Replacement diode
11	5560038	21	Nut #10-32 self locking
12	974239	8	Machine screw #6-32 x 1/2 inch long round head
13	986159	2	Washer #6 medium flat
14	974689	2	Machine screw #10-24 x 3/4 inch long round head
15	974639	2	Machine screw #10-24 x 3/8 inch long round head
16	986009	2	Washer #10 medium flat
17	5560609	2	Machine screw #10-24 x 1/2 inch long truss head
18	0181105	1	Decal, diode holder
19	0070724	4	Jumper wire
20	0071555	1	Jumper wire
21	0140317	4	Diode wire
22	0181432	1	Diode wire
23	0181073	1	Resister wire - (5 ohm)
24	0181112	1	Jumper wire
25	0090621	1	Jumper wire
26	0070681	1	Jumper wire
27	0070711	1	Jumper wire
28	0181110	5	Diode wire - (includes 3040108 diode)
29	0181136	2	Jumper wire
30	0181111	2	Jumper wire
31	0181030	1	Diode wire
32	0140332	2	Jumper wire
33	0181113	1	Jumper wire



AW0181430

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TITLE Wiring box panel, Hatz
Snorkel model ATB 60

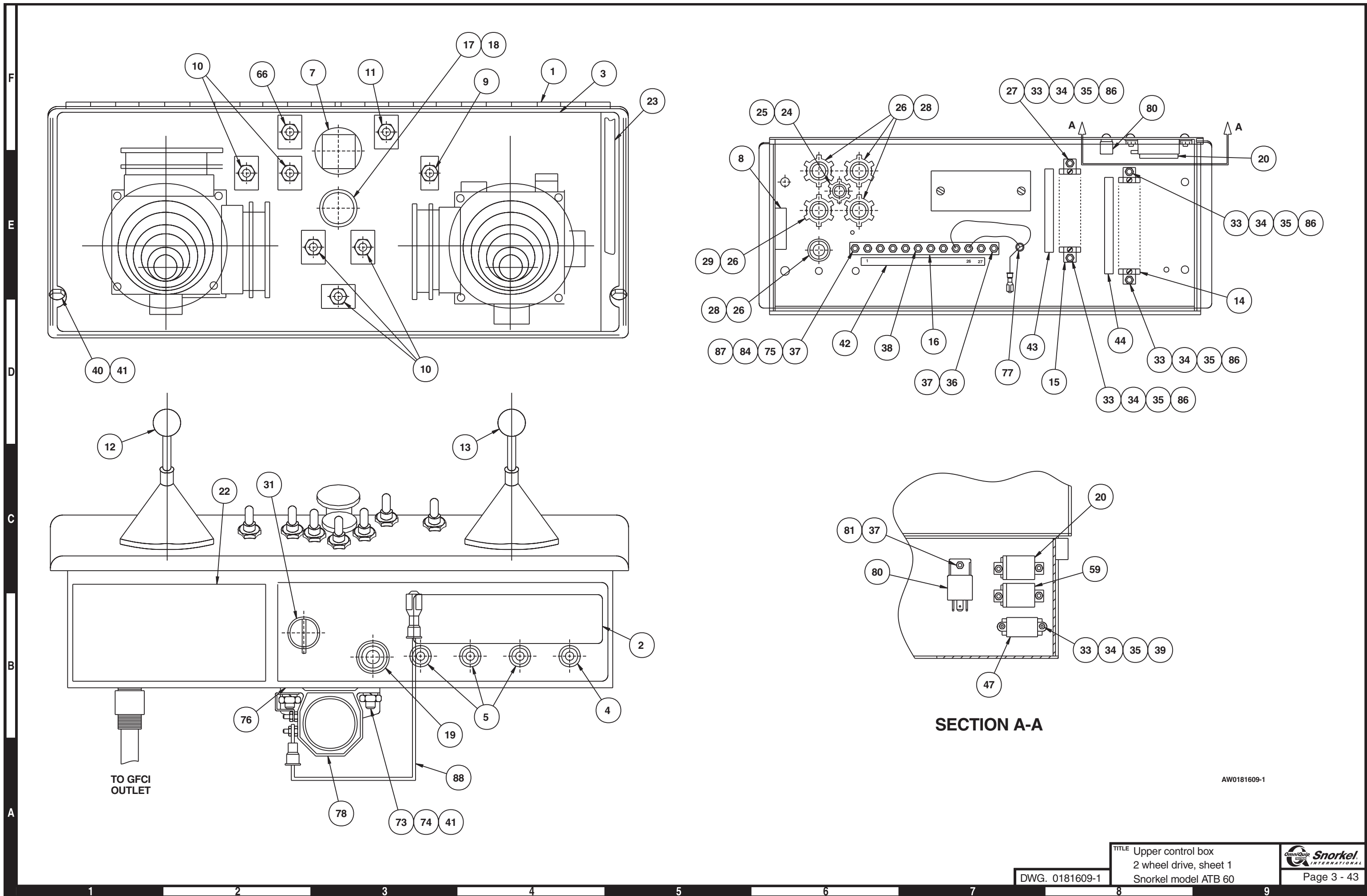


**Upper control box, 2 wheel drive**

item	part no	qty	description
	0181609	1	Upper control box, 2 wheel drive
1	0180842	1	Upper control box
2	0180846	1	Placard, upper control box front
3	0180845	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/pul
	3040194	1	Replacement switch knob
8	0070967	1	Corrosion inhibitor
9	3020089	1	Switch, toggle
10	3020018	5	Switch, toggle
11	3020080	1	Switch, toggle
12	3040493	1	Controller, lift/swing - (see page 3-64 for parts breakdown)
13	3040492	1	Controller, drive/steer - (see page 3-62 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	0181878	1	Jumper wire
22	0072530	1	Decal, danger electrical hazard
23	7190001	1	Gasket, weatherproof x 72 inch long
24	3040187	1	Connector
25	3040070	1	Connector locknut
26	3040110	5	Connector locknut
27	5560663	1	Washer #6 star tooth lock
28	3040116	4	Connector
29	3040295	1	Connector
30	5569003	1	Grommet - (before 4-20-2000)
31	3020090	1	Switch, anti-restart
32	974279	3	Machine screw #6-32 x 3/4 inch long round head
33	987349	10	Washer #6 medium lock
34	986159	10	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	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
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	0180851	1	Wire harness, upper control box internal
47	3040508	1	Time delay module
48	0060373	4	Jumper strap
49	0070747	11	Jumper wire
50	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
			Parts list continued on next page

**Upper control box, 2 wheel drive**

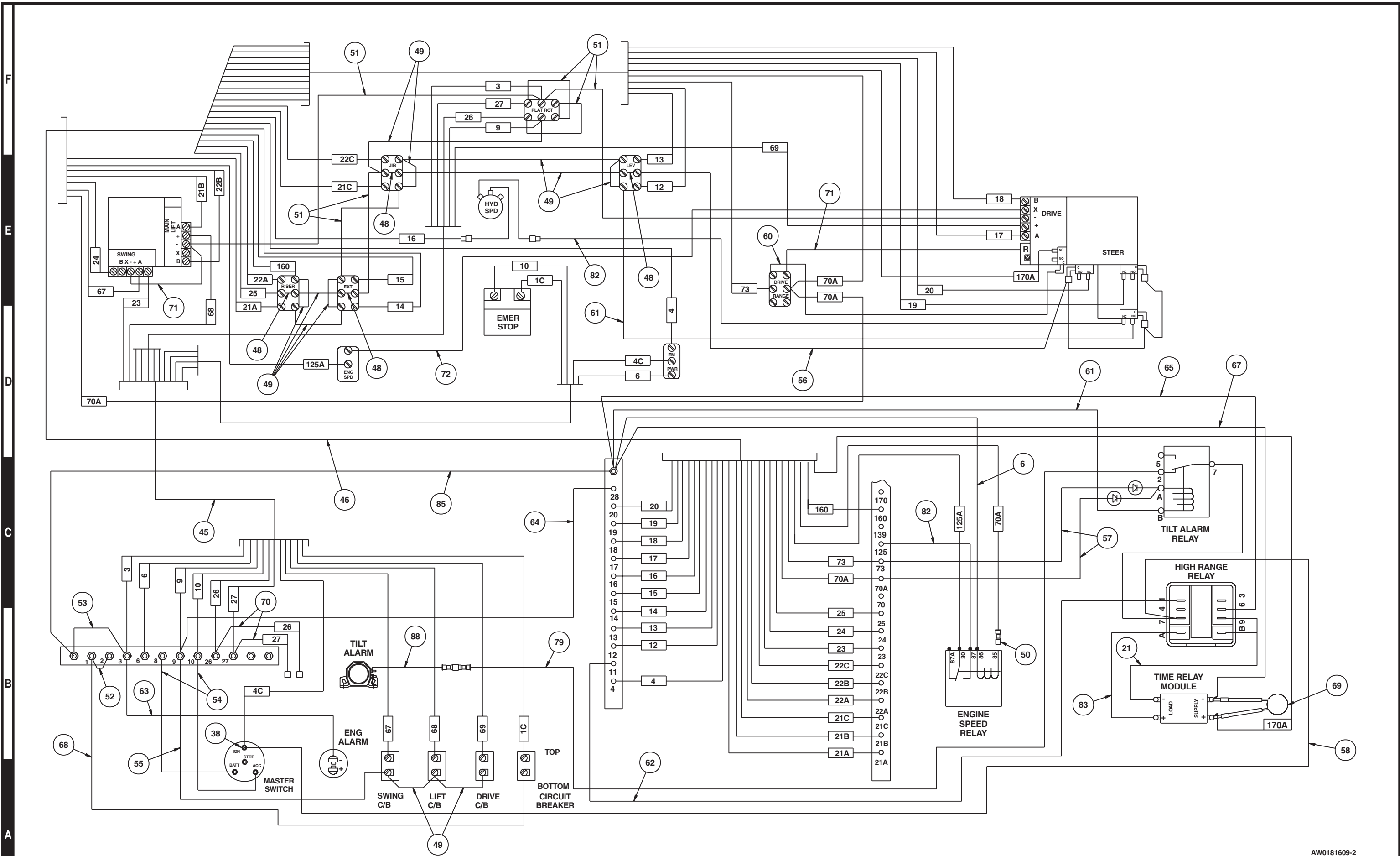
item	part no	qty	description
51	0070730	6	Jumper wire
52	0070711	1	Jumper wire
53	0070712	1	Jumper wire
54	0070732	2	Jumper wire
55	0240483	1	Jumper wire
56	0181074	1	Jumper wire
57	0180889	1	Jumper wire
58	0181551	1	Jumper wire
59	3040214	1	Relay, 12 volt DC
60	0151556	1	Jumper wire
61	0181028	2	Jumper wire
62	0071840	1	Jumper wire
63	0151816	1	Jumper wire
64	0070713	1	Jumper wire
65	0071546	1	Jumper wire
66	3020013	1	Switch, toggle
67	0071575	1	Jumper wire
68	0181029	1	Jumper wire
69	0181877	1	Capacitor
70	0181031	2	Jumper wire
71	0070746	2	Jumper wire
72	0070753	1	Jumper wire
73	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
74	986009	2	Washer #10 medium flat
75	986019	2	Washer 1/4 medium flat
76	5560341	1	Washer 1/4 star tooth lock
77	5569711	1	Grommet
78	480652	1	Siren, tilt alarm
79	0181030	1	Diode wire
80	3040469	1	Relay, 12 volt DC
81	5560609	1	Machine screw #10-24 x 1/2 inch long truss head
82	0090622	2	Jumper wire
83	0151205	1	Jumper wire
84	5560703	1	Washer #10 star tooth lock
85	0151910	1	Jumper wire
86	974269	1	Machine screw #6-32 x 1 inch long round head
87	974709	1	Machine screw #10-24 x 1 inch long round head
88	0071557	1	Jumper wire



AW0181609-1

DWG. 0181609-1

TITLE Upper control box
2 wheel drive, sheet 1
Snorkel model ATB 60



AW0181609-2



**Upper control box, Hatz 2 wheel drive**

item	part no	qty	description
	0181075	1	Upper control box, Hatz 2 wheel drive
1	0180842	1	Upper control box
2	0180846	1	Placard, upper control box front
3	0180845	1	Placard, upper control box top
4	3040068	1	Circuit breaker, 20 amp capacity
5	3040071	3	Butt connector insulated 16/14 wire
6	3040111	3	Fuse, 3 amp capacity
7	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
8	0070967	1	Corrosion inhibitor
9	3020081	1	Switch, toggle
10	3020018	5	Switch, toggle
11	3020089	1	Switch, toggle
12	3040493	1	Controller, lift/swing - (see page 3-64 for parts breakdown)
13	3040492	1	Controller, drive/steer - (see page 3-62 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	2	Relay, 12 volt DC
21	0181654	1	Decal, danger inspect unit - (before 12-28-98)
22	0072530	1	Decal, danger electrical hazard
23	7190001	1	Gasket, weatherproof x 72 inch long
24	3040187	1	Connector
25	3040070	1	Connector locknut
26	3040110	5	Connector locknut
27	3040285	1	Connector
28	3040116	3	Connector
29	3040295	1	Connector
30	0181655	1	Decal, caution move control handle slowly - (before 12-28-98)
31	3020090	1	Switch, anti-restart
32	974279	3	Machine screw #6-32 x 3/4 inch long round head
33	987349	10	Washer #6 medium lock
34	986159	10	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	2	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	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
41	5560004	2	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	0180851	1	Wire harness, upper control box internal
47	3040508	1	Time delay module
48	0060373	4	Jumper strap
49	0070747	9	Jumper wire
50	0071582	1	Jumper wire
			Parts list continued on next page

**Upper control box, Hatz 2 wheel drive**

item	part no	qty	description
51	0070730	7	Jumper wire
52	0070711	1	Jumper wire
53	0070712	1	Jumper wire
54	0070732	2	Jumper wire
55	0181102	1	Jumper wire
56	0181074	1	Jumper wire
57	0180889	1	Jumper wire
58	0180891	1	Jumper wire
59	0071557	1	Jumper wire
60	0151556	1	Jumper wire
61	0181028	2	Jumper wire
62	0071840	1	Jumper wire
63	0151816	1	Jumper wire
64	0070713	1	Jumper wire
65	0071555	1	Jumper wire
66	3020013	1	Switch, toggle
67	0071575	1	Jumper wire
68	0181029	1	Jumper wire
69	984049	2	Nut #10-24 hex
70	0181031	2	Jumper wire
71	0070746	1	Jumper wire
72	0070753	1	Jumper wire
73	987089	2	Washer #10 medium lock
74	974679	2	Machine screw #10-24 x 5/8 inch long round head
75	974709	1	Machine screw #10-24 x 1 inch long round head
76	974269	1	Machine screw #6-32 x 1 inch long round head
77	5569711	1	Grommet
78	480652	1	Siren, tilt alarm
79	0151910	1	Jumper wire
80	3040082	1	Terminal .250 tab male slip-on fully insulated 16/14 wire
81	3044161	1	Terminal #10 stud insulated 16/14 wire
82	0090622	1	Jumper wire
83	0151205	2	Jumper wire
84	5560703	1	Washer #10 star tooth lock



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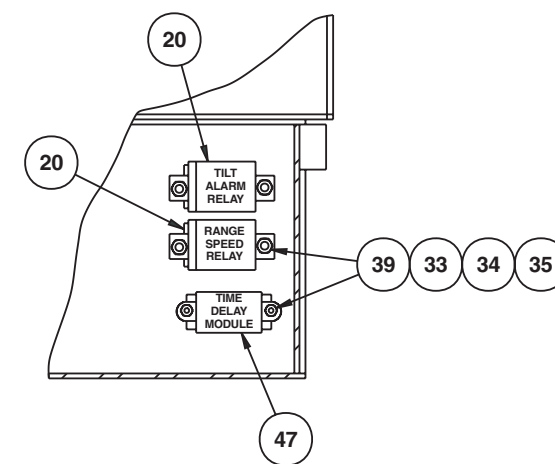
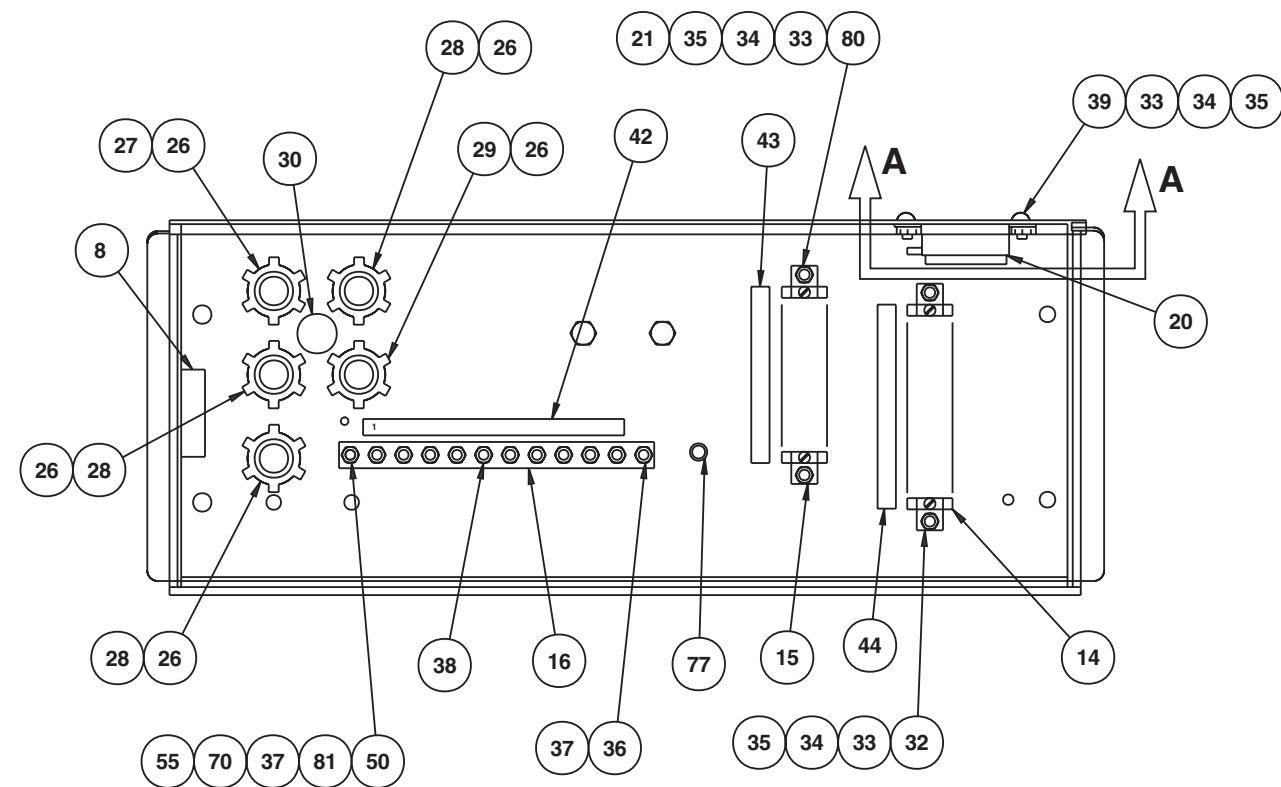
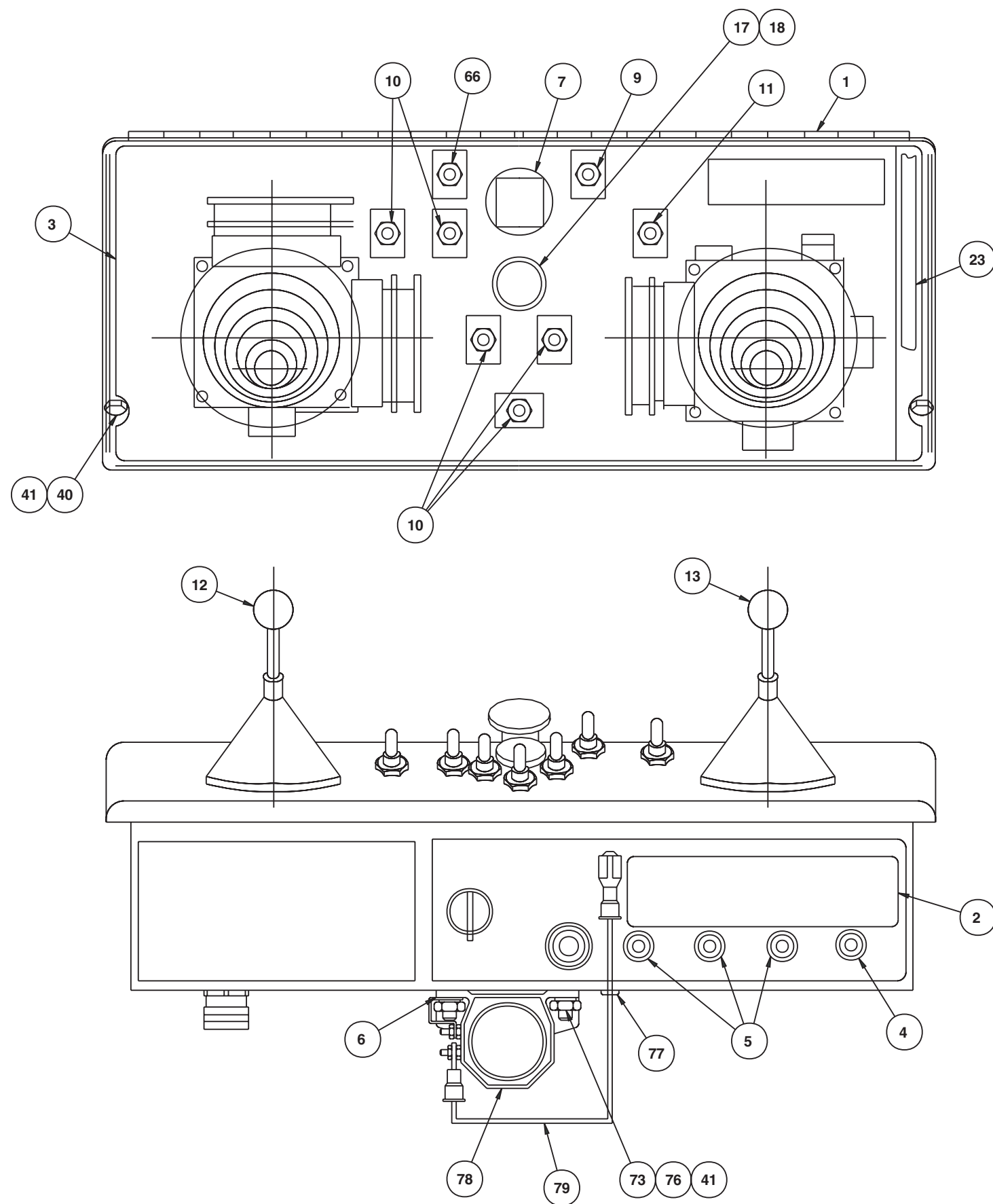
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SECTION A-A

AW0181075-1

DWG. 0181075-1

TITLE Upper control box, Hatz
2 wheel drive, sheet 1
Snorkel model ATB 60



Page 3 - 47



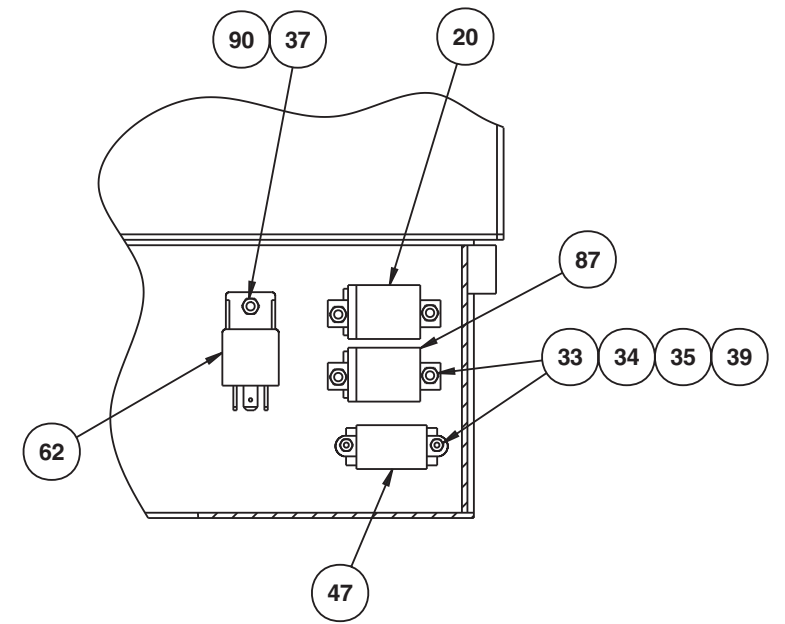
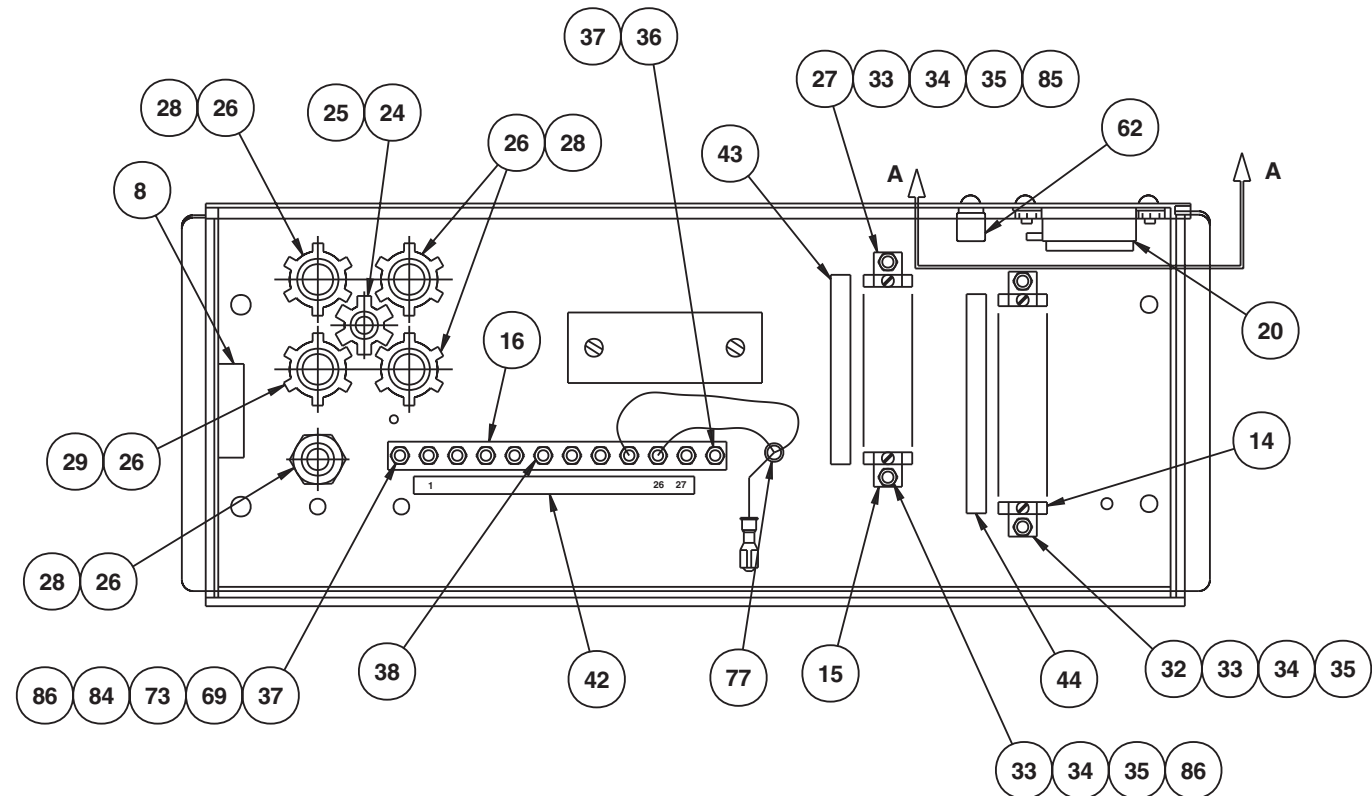
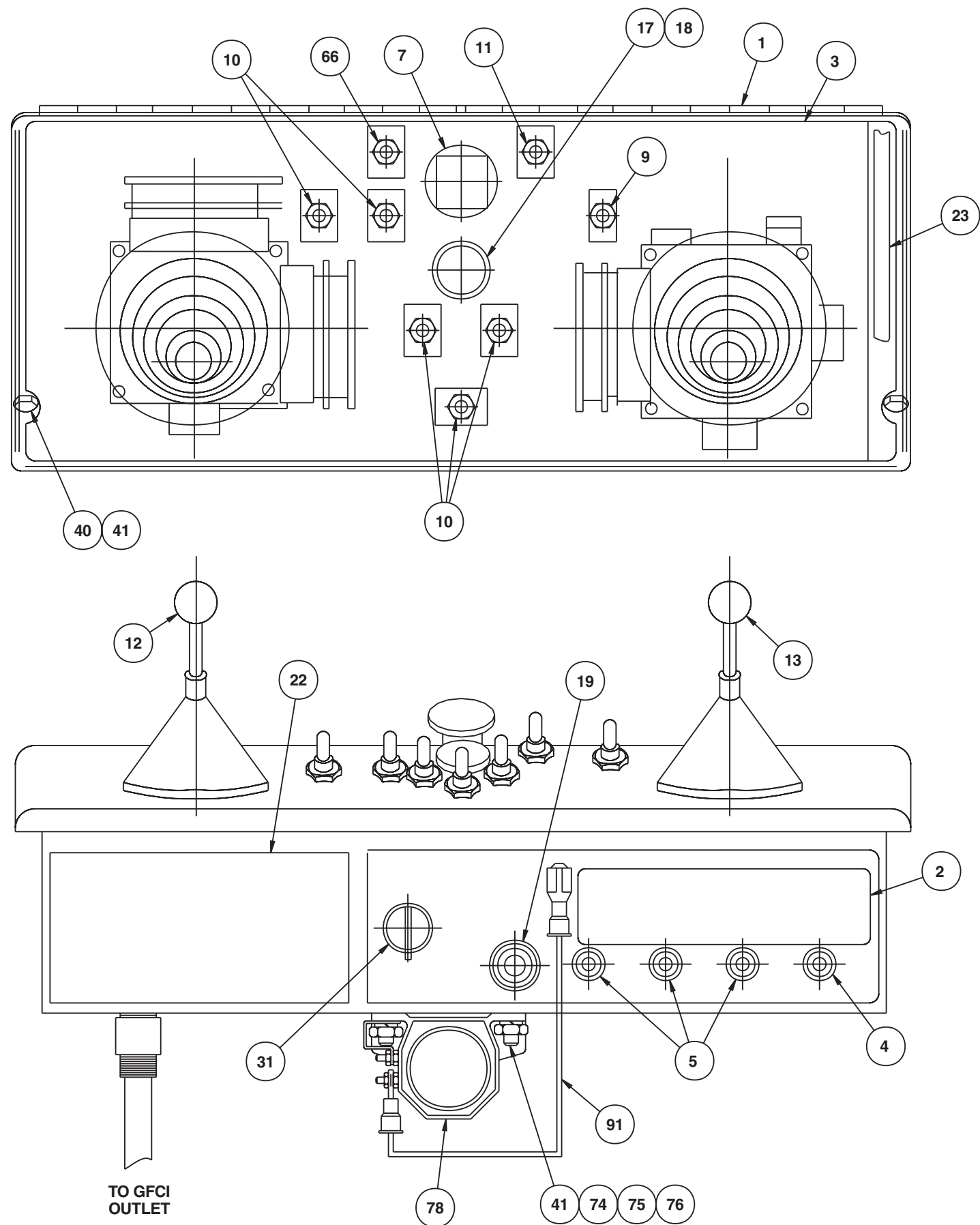
**Upper control box, 4 wheel drive**

item	part no	qty	description
	0181610	1	Upper control box, 4 wheel drive
1	0180842	1	Upper control box
2	0180846	1	Placard, upper control box front
3	0180845	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	3020017	1	Switch, toggle
10	3020018	5	Switch, toggle
11	3020080	1	Switch, toggle
12	3040493	1	Controller, lift/swing - (see page 3-64 for parts breakdown)
13	3040492	1	Controller, drive/steer - (see page 3-62 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	0181878	1	Jumper wire
22	0072530	1	Decal, danger electrical hazard
23	7190001	1	Gasket, weatherproof x 72 inch long
24	3040187	1	Connector
25	3040070	1	Connector locknut
26	3040110	5	Connector locknut
27	5560663	1	Washer #6 star tooth lock
28	3040116	4	Connector
29	3040295	1	Connector
30	5569003	1	Grommet - (before 4-20-2000)
31	3020090	1	Switch, anti-restart
32	974279	3	Machine screw #6-32 x 3/4 inch long round head
33	987349	10	Washer #6 medium lock
34	986159	10	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	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
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	0180851	1	Wire harness, upper control box internal
47	3040508	1	Time delay module
48	0060373	4	Jumper strap
49	0070747	11	Jumper wire
50	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
			Parts list continued on next page

**Upper control box, 4 wheel drive**

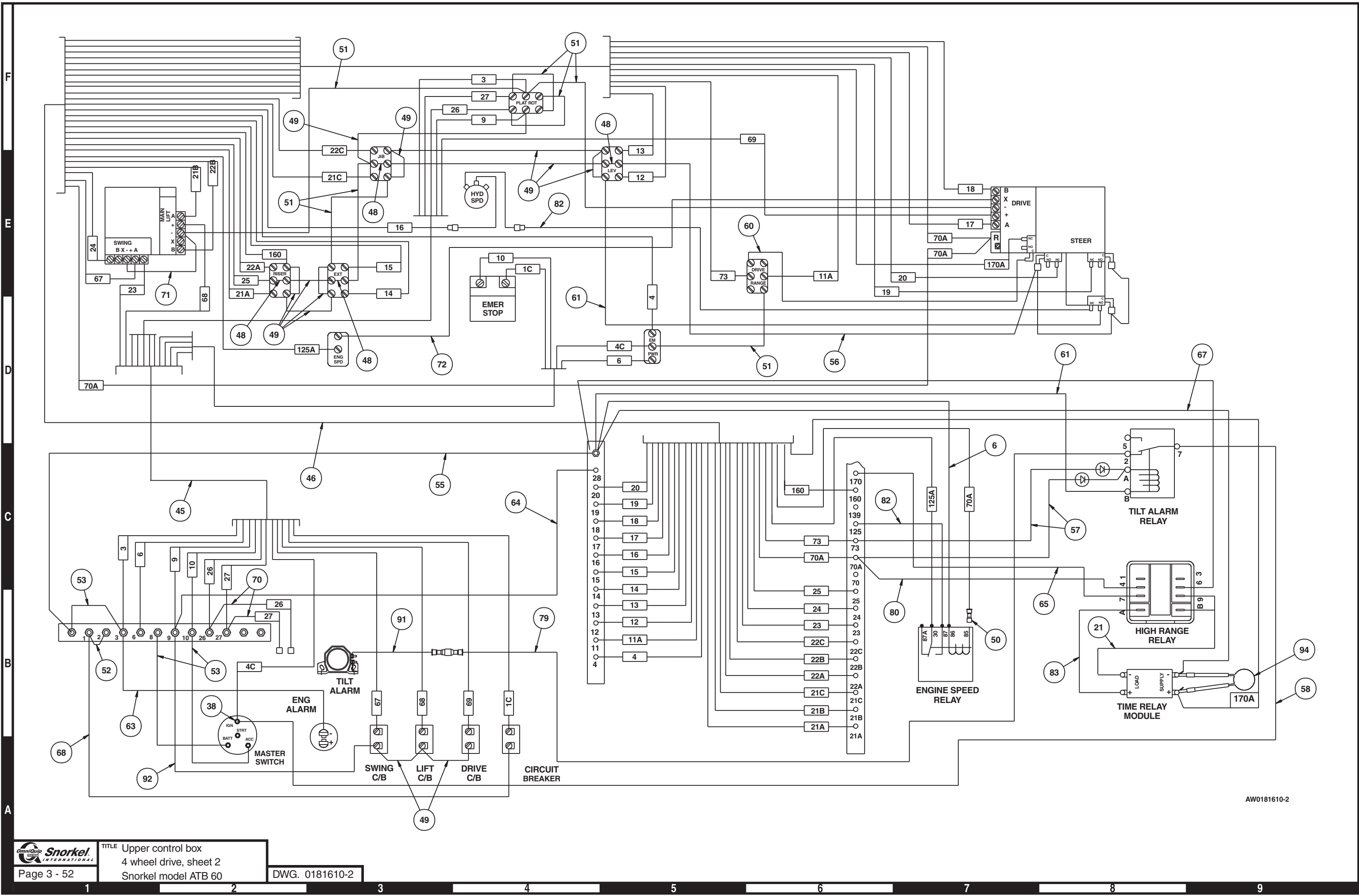
item	part no	qty	description
51	0070730	7	Jumper wire
52	0070711	1	Jumper wire
53	0070712	3	Jumper wire
54	0071546	1	Jumper wire
55	0151910	1	Jumper wire
56	0181074	1	Jumper wire
57	0180889	1	Jumper wire
58	0071534	1	Jumper wire
59	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
60	0151556	1	Jumper wire
61	0181028	2	Jumper wire
62	3040469	1	Relay, 12 volt DC
63	0151816	1	Jumper wire
64	0070713	1	Jumper wire
65	0071530	1	Jumper wire
66	3020013	1	Switch, toggle
67	0071575	1	Jumper wire
68	0181029	1	Jumper wire
69	987089	1	Washer #10 medium lock
70	0181031	2	Jumper wire
71	0070746	2	Jumper wire
72	0070753	1	Jumper wire
73	986009	2	Washer #10 medium flat
74	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
75	986019	2	Washer 1/4 medium flat
76	5560341	1	Washer 1/4 star tooth lock
77	5569711	1	Grommet
78	480652	1	Siren, tilt alarm
79	0181030	1	Diode wire
80	0071511	1	Jumper wire
81	3044161	1	Terminal #10 stud insulated 16/14 wire
82	0090622	2	Jumper wire
83	0151205	1	Jumper wire
84	5560703	1	Washer #10 star tooth lock
85	974269	1	Machine screw #6-32 x 1 inch long round head
86	5560649	1	Machine screw #10-24 x 1 inch long truss head
87	3040214	1	Relay, 12 volt DC
88	987089	2	Washer #10 medium lock
89	984049	2	Nut #10-24 hex
90	5560609	1	Machine screw #10-24 x 1/2 inch long truss head
91	0071557	1	Jumper wire
92	0240483	1	Jumper wire
93	0181076	1	Jumper wire
94	0181877	1	Capacitor

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SECTION A-A

AW0181610-1



AW0181610-2

**Upper control box, Hatz 4 wheel drive**

item	part no	qty	description
	0180849	1	Upper control box, Hatz 4 wheel drive
1	0180842	1	Upper control box
2	0180846	1	Placard, upper control box front
3	0180845	1	Placard, upper control box top
4	3040068	1	Circuit breaker, 20 amp capacity
5	3040535	3	Circuit breaker, 3 amp capacity
6	5560341	1	Washer 1/4 star tooth lock
7	3020020	1	Switch, emergency stop push/pull
	3040194	1	Replacement switch knob
8	0070967	1	Corrosion inhibitor
9	3020081	1	Switch, toggle
10	3020018	5	Switch, toggle
11	3020017	1	Switch, toggle
12	3040493	1	Controller, lift/swing - (see page 3-64 for parts breakdown)
13	3040492	1	Controller, drive/steer - (see page 3-62 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	2	Relay, 12 volt DC
21	5560663	1	Washer #6 star tooth lock
22	0072530	1	Decal, danger electrical hazard
23	7190001	1	Gasket, weatherproof x 72 inch long
24	3040187	1	Connector
25	3040070	1	Connector locknut
26	3040110	5	Connector locknut
27	3040285	1	Connector
28	3040116	3	Connector
29	3040295	1	Connector
30	3040031	1	Hole plug, 3/4 inch diameter
31	3020090	1	Switch, anti-restart
32	974279	3	Machine screw #6-32 x 3/4 inch long round head
33	987349	10	Washer #6 medium lock
34	986159	10	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	2	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	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
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	0180851	1	Wire harness, upper control box internal
47	3040508	1	Time delay module
48	0060373	4	Jumper strap
49	0070747	11	Jumper wire
50	5560673	1	Machine screw #10-24 x 1 inch long truss head
			Parts list continued on next page

**Upper control box, Hatz 4 wheel drive**

item	part no	qty	description
51	0070730	8	Jumper wire
52	0070711	1	Jumper wire
53	0070712	1	Jumper wire
54	0070732	2	Jumper wire
55	984049	2	Nut #10-24 hex
56	0181074	1	Jumper wire
57	0180889	2	Jumper wire
58	0140323	1	Jumper wire
59	0071530	1	Jumper wire
60	0151556	1	Jumper wire
61	0181028	2	Jumper wire
62	0070753	2	Jumper wire
63	0152537	1	Jumper wire
64	0070713	1	Jumper wire
65	0181030	1	Diode wire
66	3020013	1	Switch, toggle
67	0071575	1	Jumper wire
68	0181029	1	Jumper wire
69	0151910	1	Jumper wire
70	987089	2	Washer #10 medium lock
71	0070745	1	Jumper wire
72	0151910	1	Jumper wire
73	970029	2	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
74	0240483	1	Jumper wire
75	0071511	1	Jumper wire
76	986019	2	Washer 1/4 medium flat
77	5569711	1	Grommet
78	480652	1	Siren, tilt alarm
79	0071557	1	Jumper wire
80	974269	1	Machine screw #6-32 x 1 inch long round head
81	5560703	1	Washer #10 star tooth lock
82	0151205	1	Jumper wire



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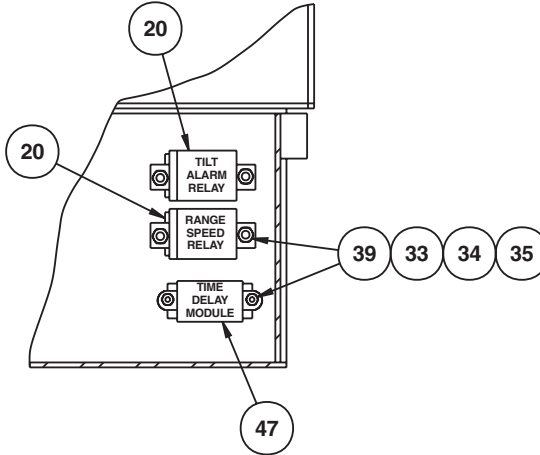
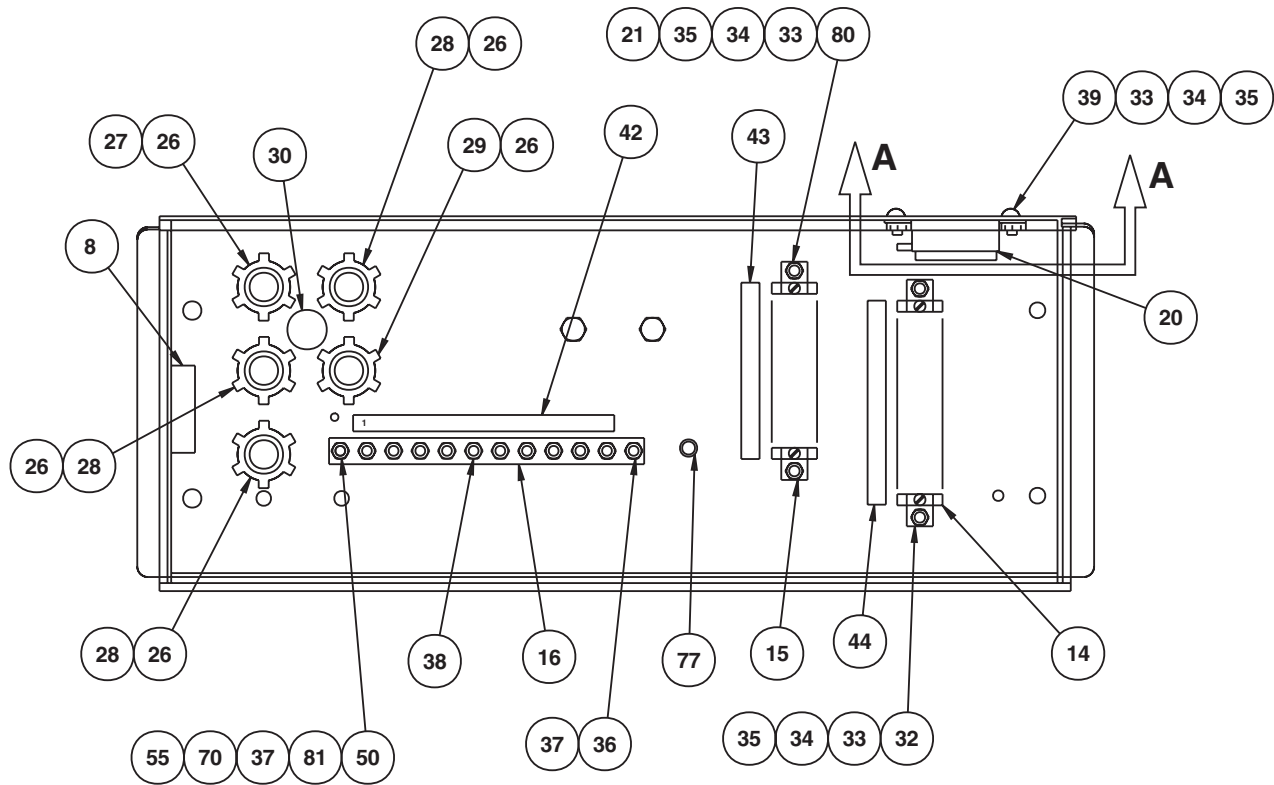
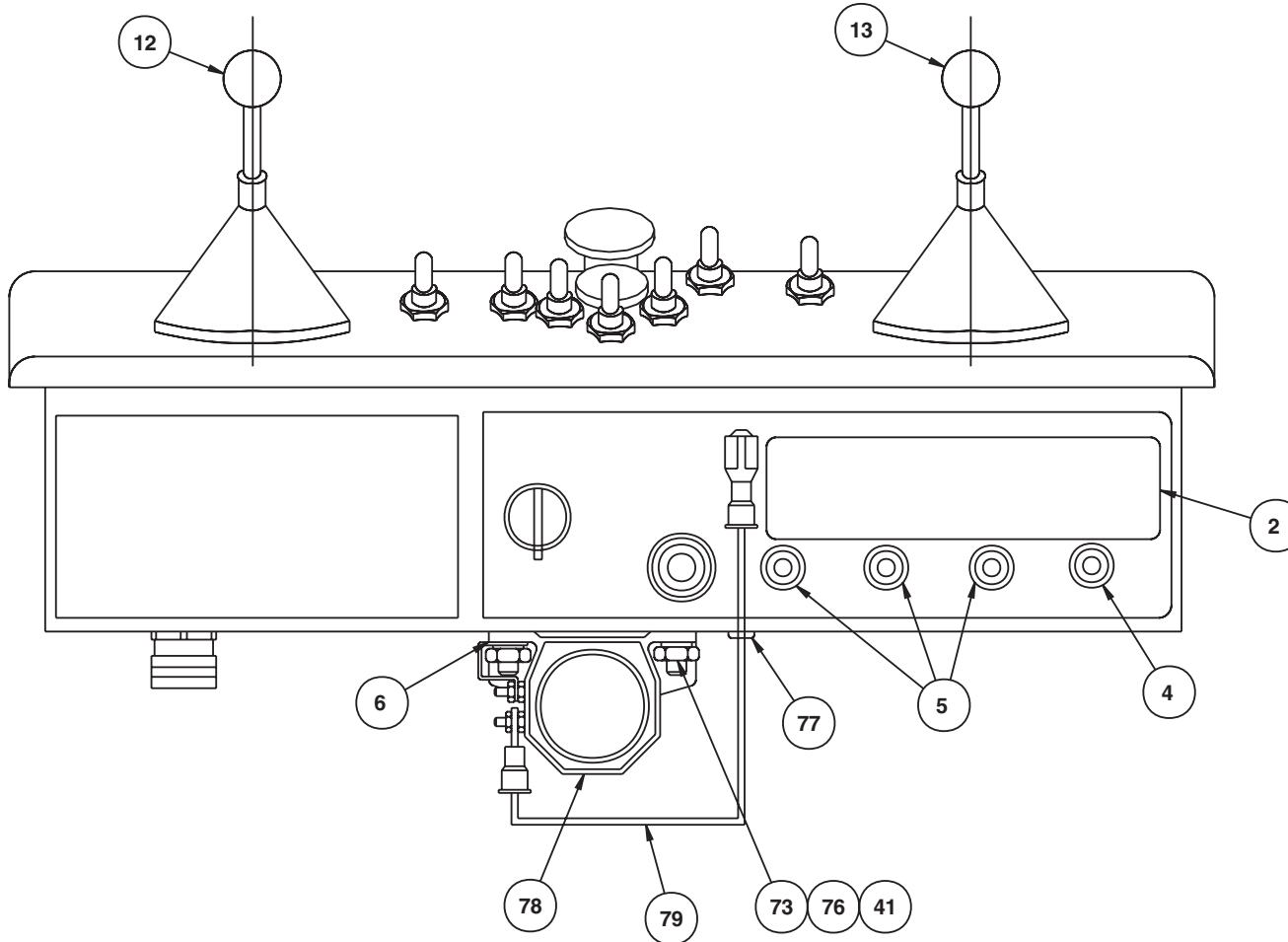
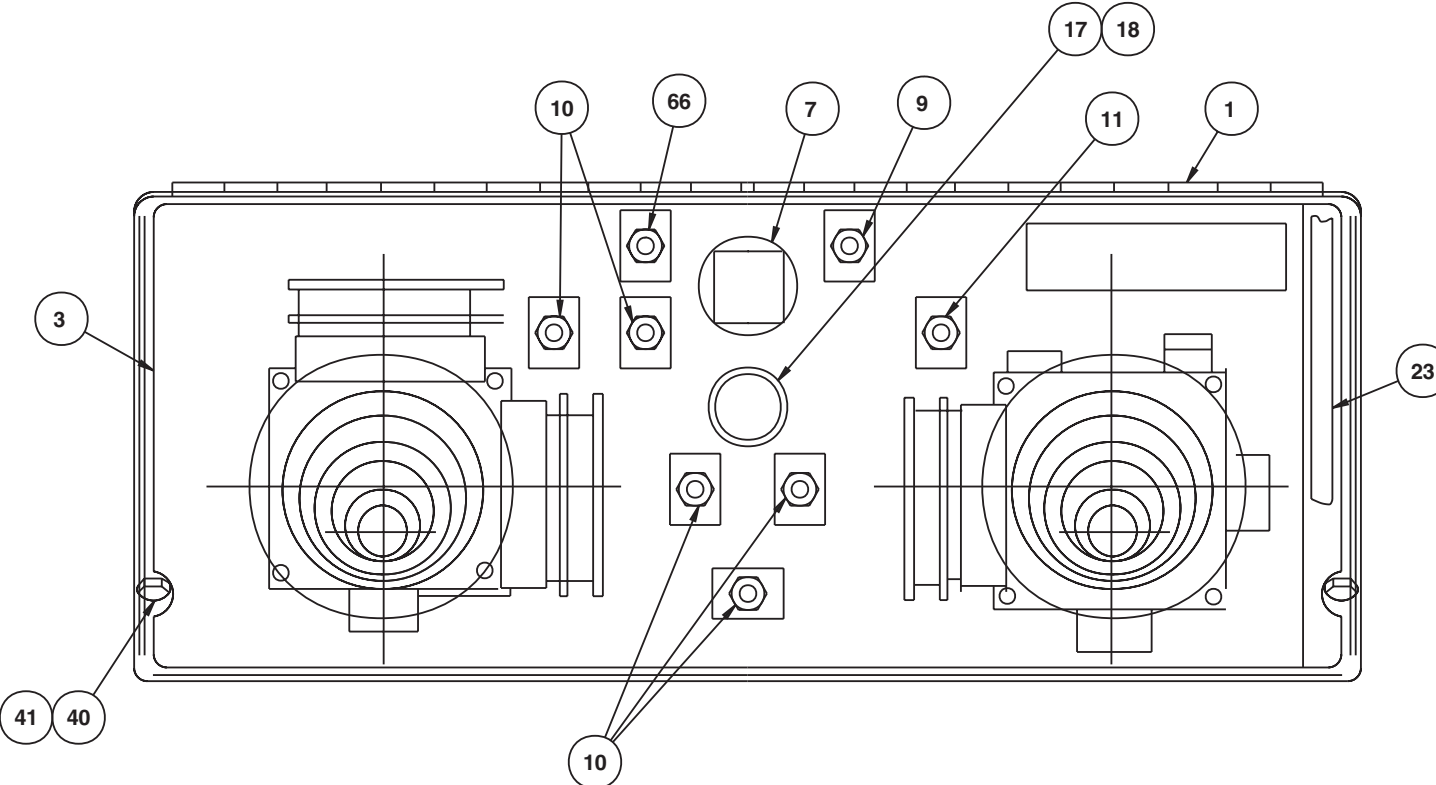
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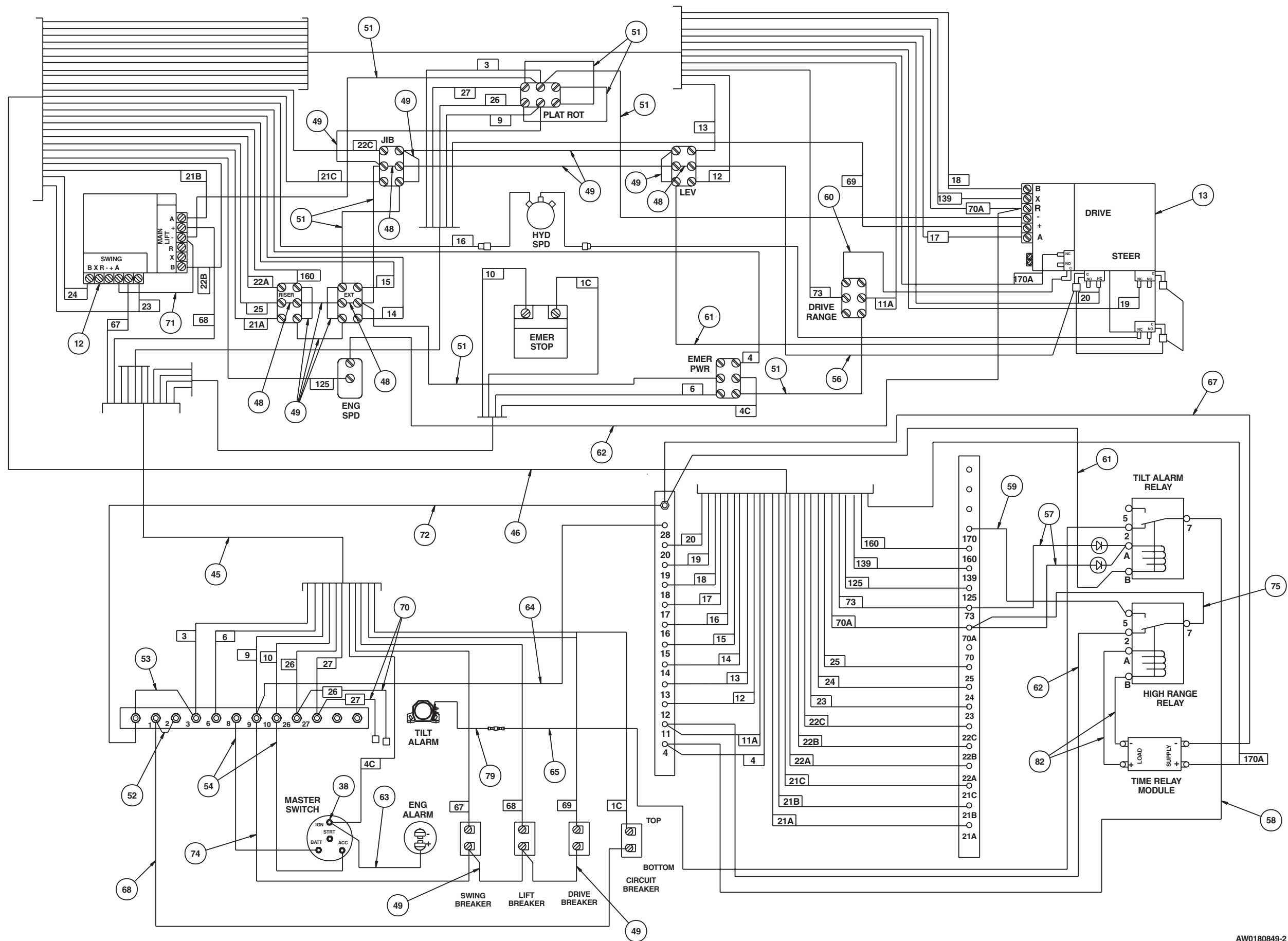
SECTION A-A

AW0180849-1

DWG. 0180849-1

TITLE Upper control box, Hatz
4 wheel drive, sheet 1
Snorkel model ATB 60

Snorkel
Page 3 - 55



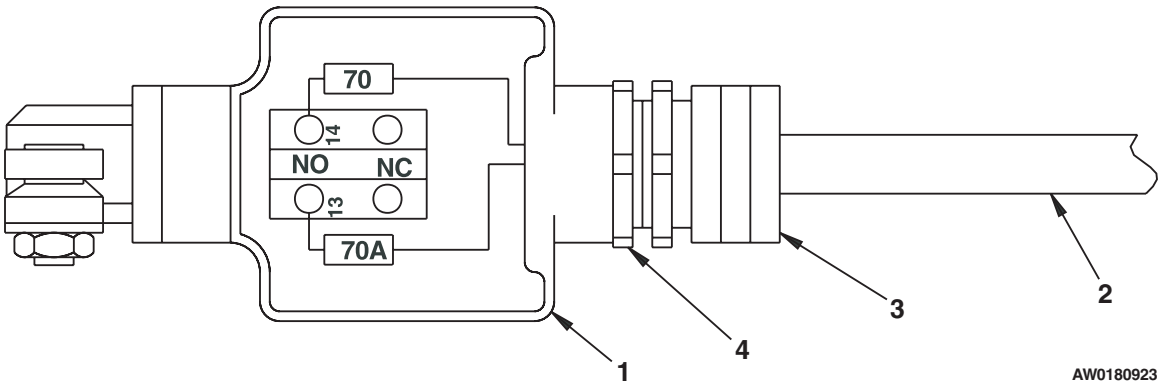
AW0180849-2





Boom extend switch

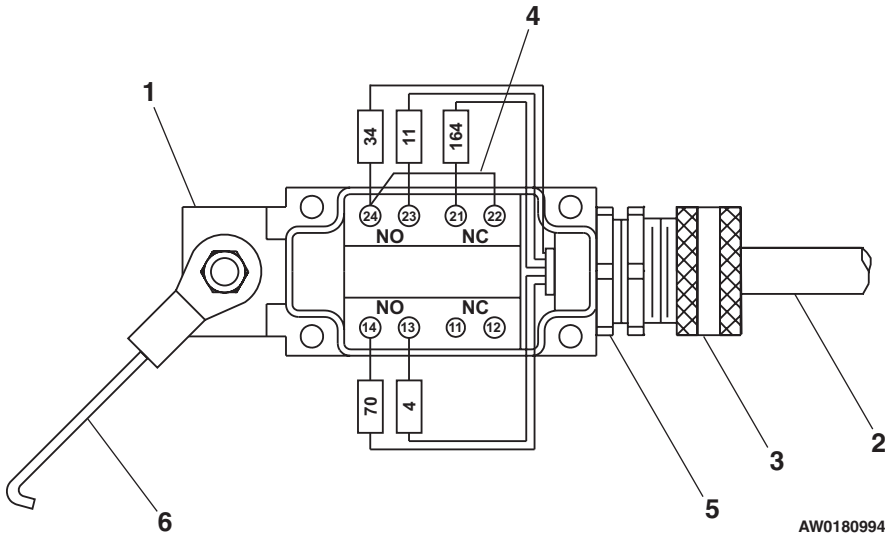
item	part no	qty	description
1	0180923	1	Boom extend switch
2	3020079	1	Switch
3	0180927	1	Wire harness, boom extend switch
4	3040187	1	Connector
5	3040070	1	Connector locknut





Boom lift switch

item	part no	qty	description
	0180994	1	Boom lift switch
1	0180995	1	Wire harness, boom lift switch
2	3020059	1	Switch
3	3040115	1	Connector
4	3011601	1	Wire, 16 gauge single conductor x 2 inch long
5	3040070	1	Connector locknut
6	0151684	1	Limit switch lever

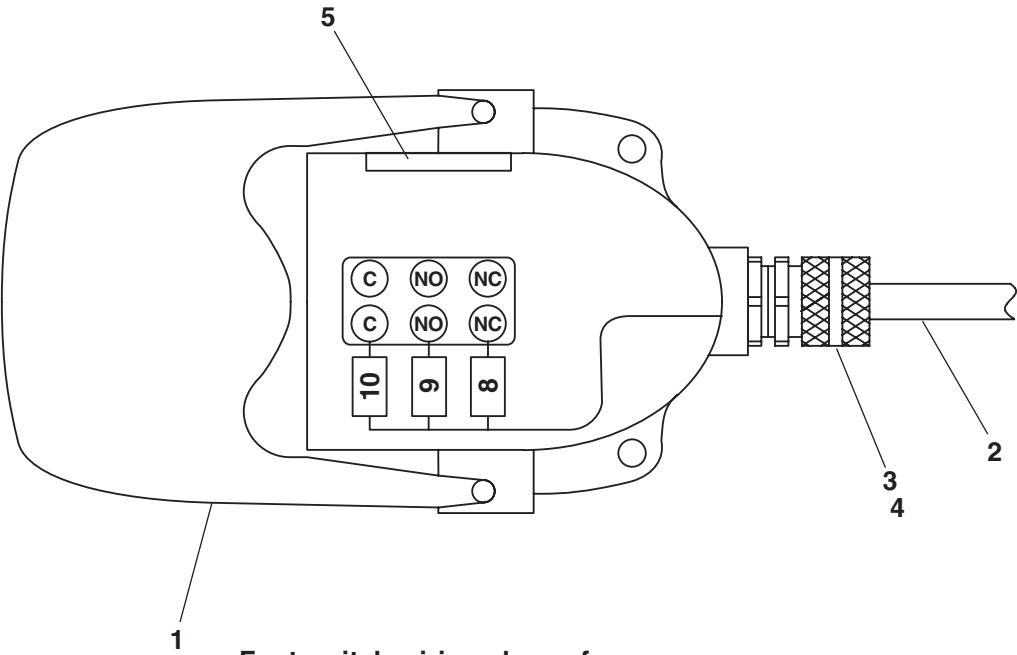


AW0180994

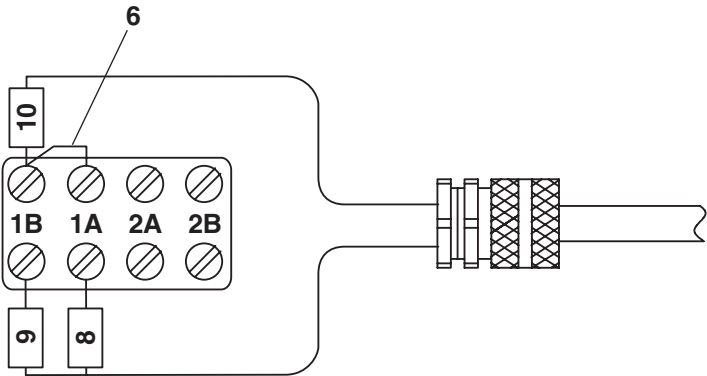


Platform foot switch

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



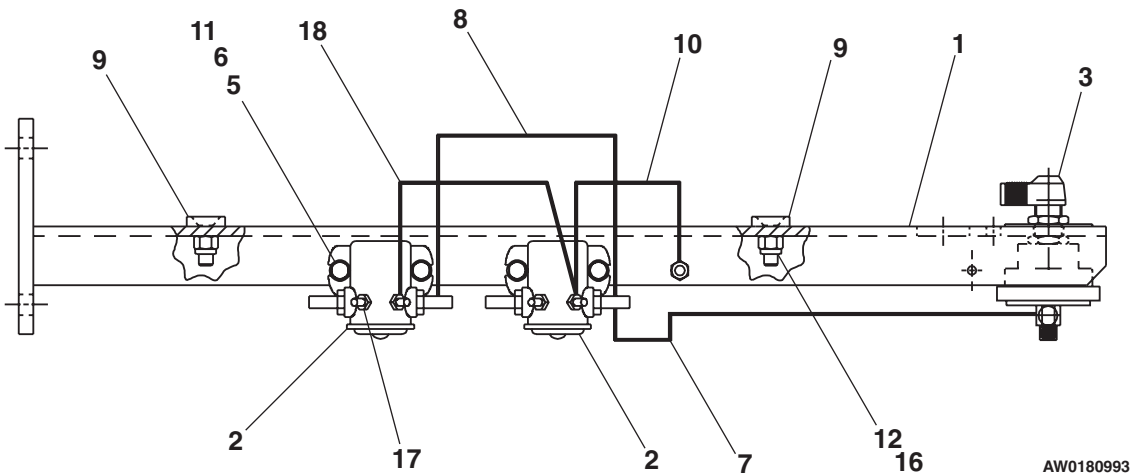
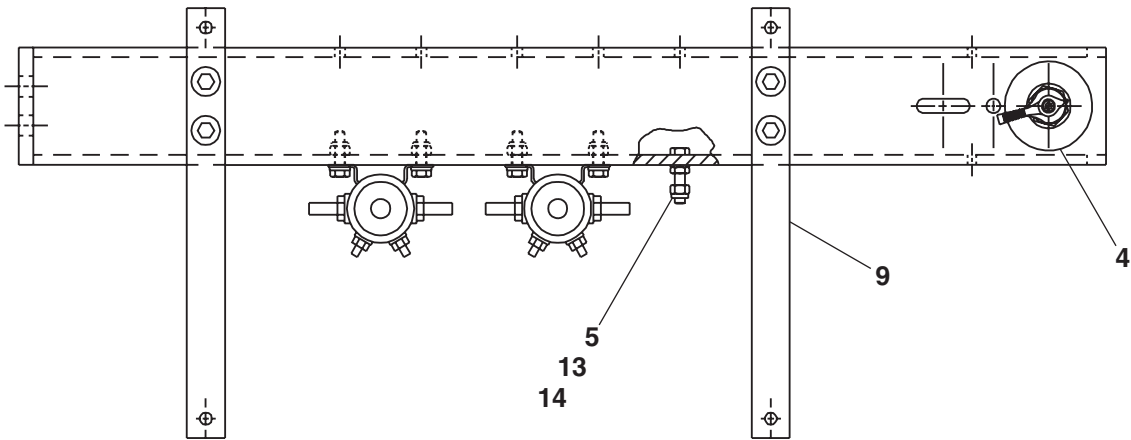
Foot switch wiring shown for
Square D switch

AW0071800



Solenoid switch

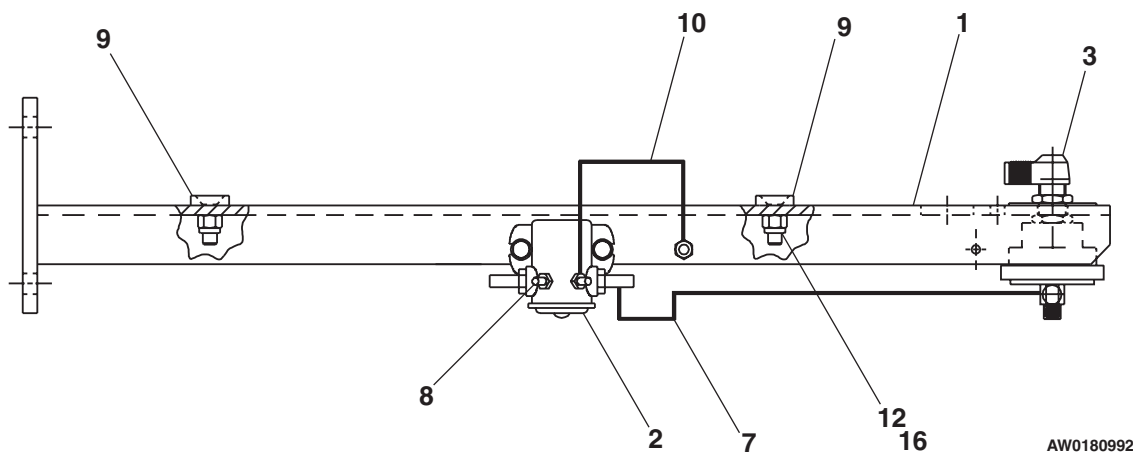
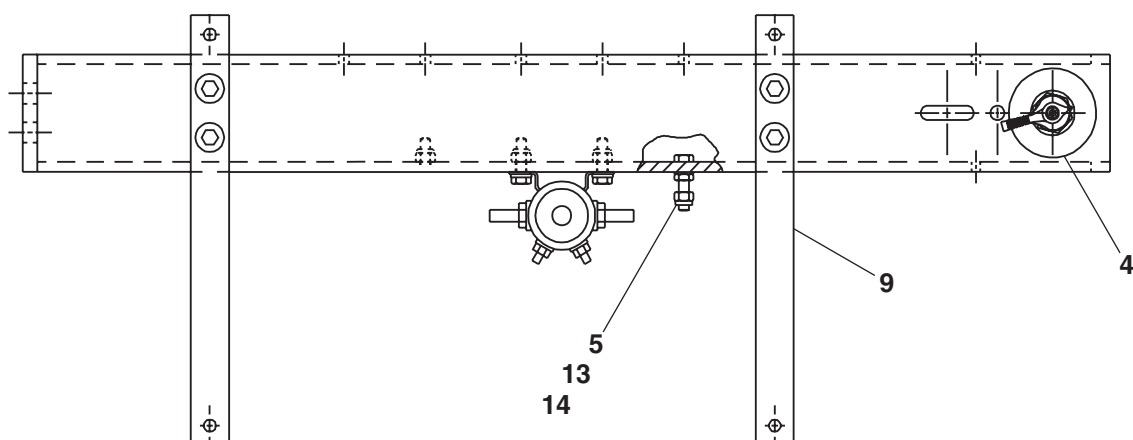
item	part no	qty	description
	0180993	1	Solenoid switch
1	0181589	1	Support bracket
2	3040506	2	Solenoid, 12 volt DC
3	3020049	1	Switch, battery disconnect
4	0073089	1	Placard, battery disconnect switch
5	5560004	5	Nut 1/4-20 self locking
6	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
7	0090430	1	Emergency power unit wire
8	0151919	1	Jumper wire
9	0110441	2	Bracket
10	0071568	1	Jumper wire
11	986019	4	Washer 1/4 medium flat
12	970479	4	Capscrew 3/8-16 x 1-1/4 inch long hex head grade 5
13	987099	1	Washer 1/4 medium lock
14	970069	1	Capscrew 1/4-20 x 1-1/4 inch long hex head grade 5
15	984069	1	Nut 1/4-20 hex
16	5560033	4	Nut 3/8-16 self locking
17	5560038	1	Nut #10-32 self locking
18	0070712	4	Jumper wire



AW0180993

**Solenoid switch, Ford LRG-425**

item	part no	qty	description
	0180992	1	Solenoid switch, Ford LRG-425
1	0181589	1	Support bracket
2	3040506	1	Solenoid, 12 volt DC
3	3020049	1	Switch, battery disconnect
4	0073089	1	Placard, battery disconnect switch
5	5560004	3	Nut 1/4-20 self locking
6	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
7	0090430	1	Emergency power unit wire
8	5560038	2	Nut #10-32 self locking
9	0110441	2	Bracket
10	0071568	1	Jumper wire
11	986019	2	Washer 1/4 medium flat
12	5560644	4	Capscrew 3/8-16 x 1-1/4 inch long socket flat head
13	987099	1	Washer 1/4 medium lock
14	970069	1	Capscrew 1/4-20 x 1-1/4 inch long hex head grade 5
15	984069	1	Nut 1/4-20 hex
16	5560033	4	Nut 3/8-16 self locking



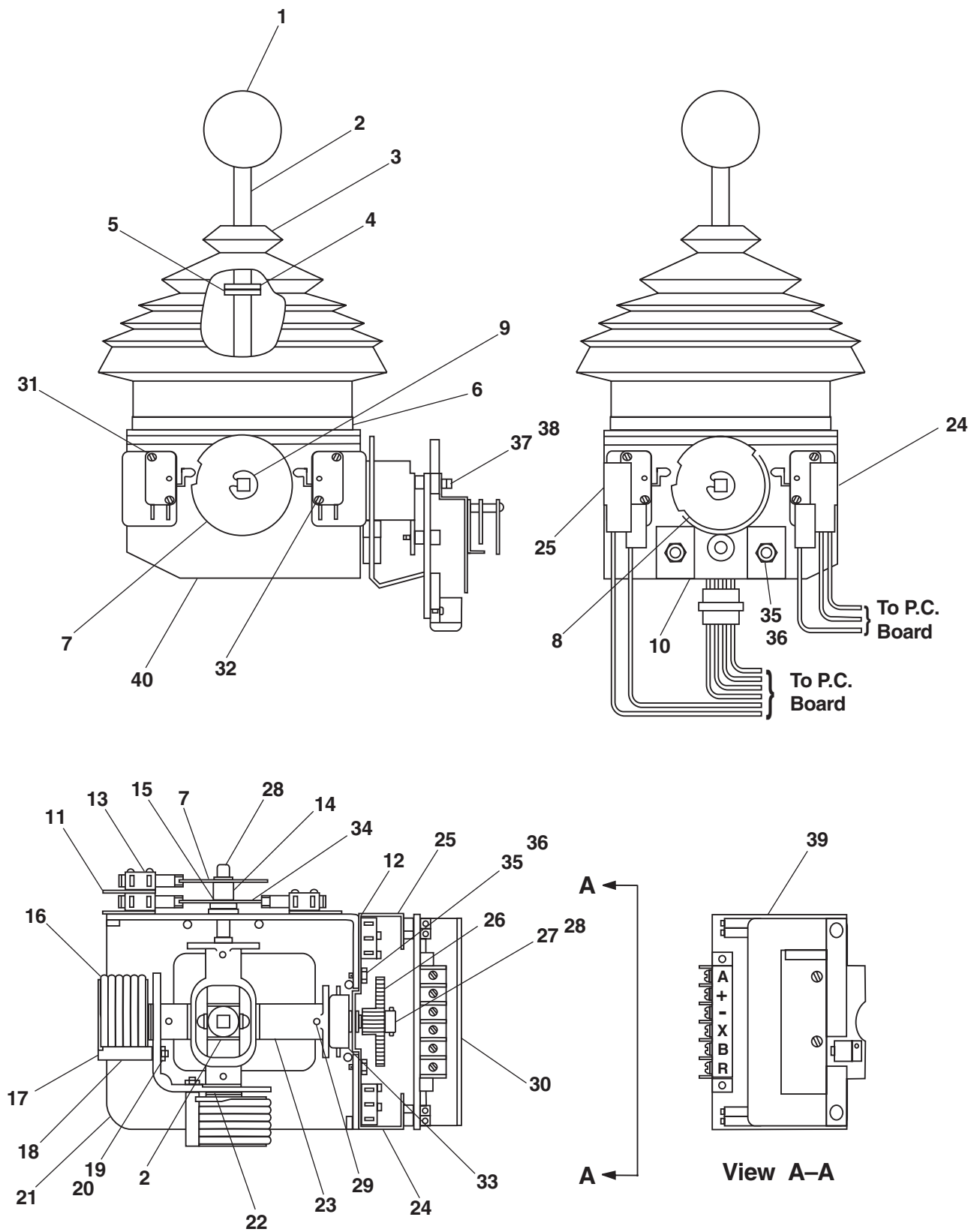
AW0180992

**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



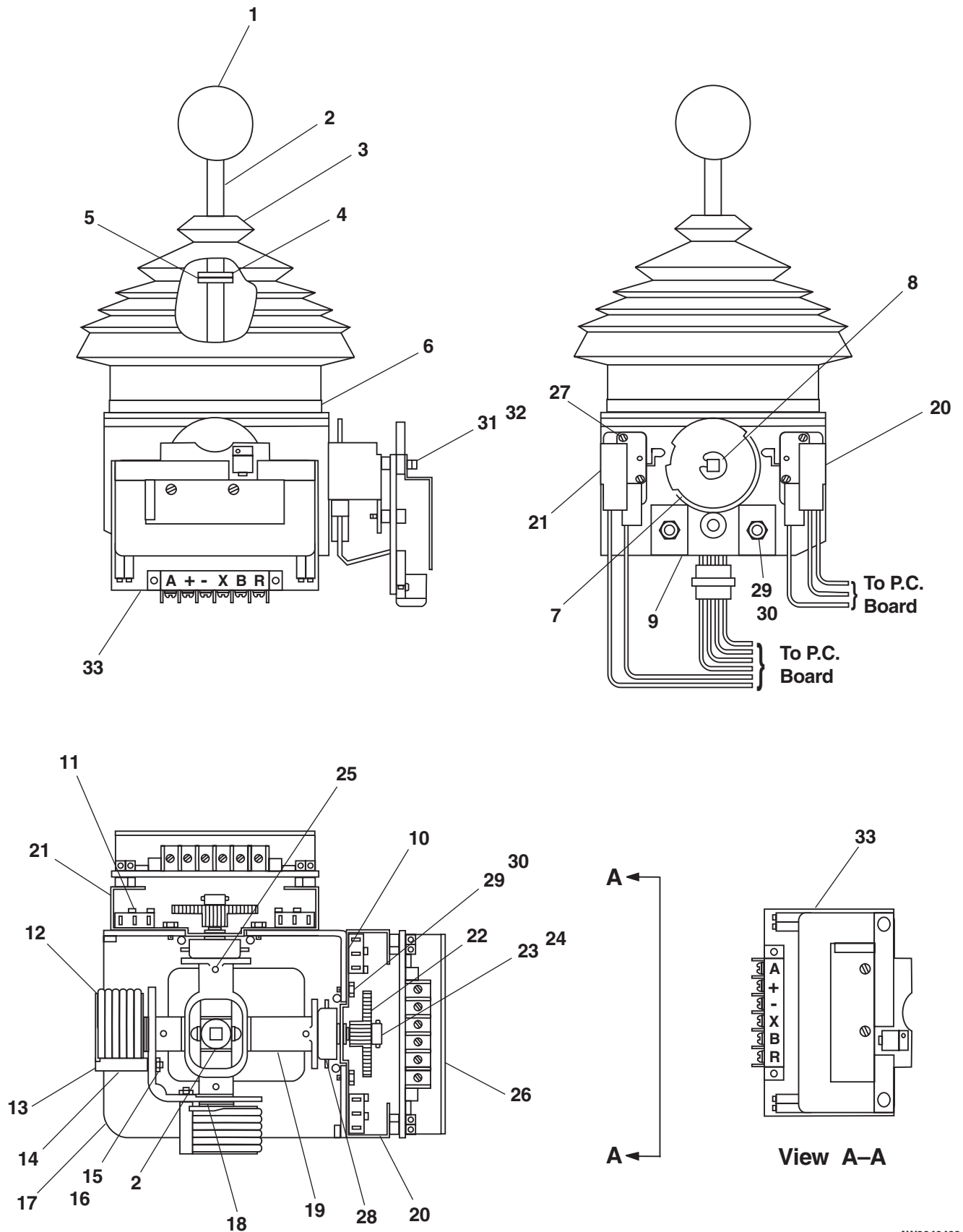
AW3040492

**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

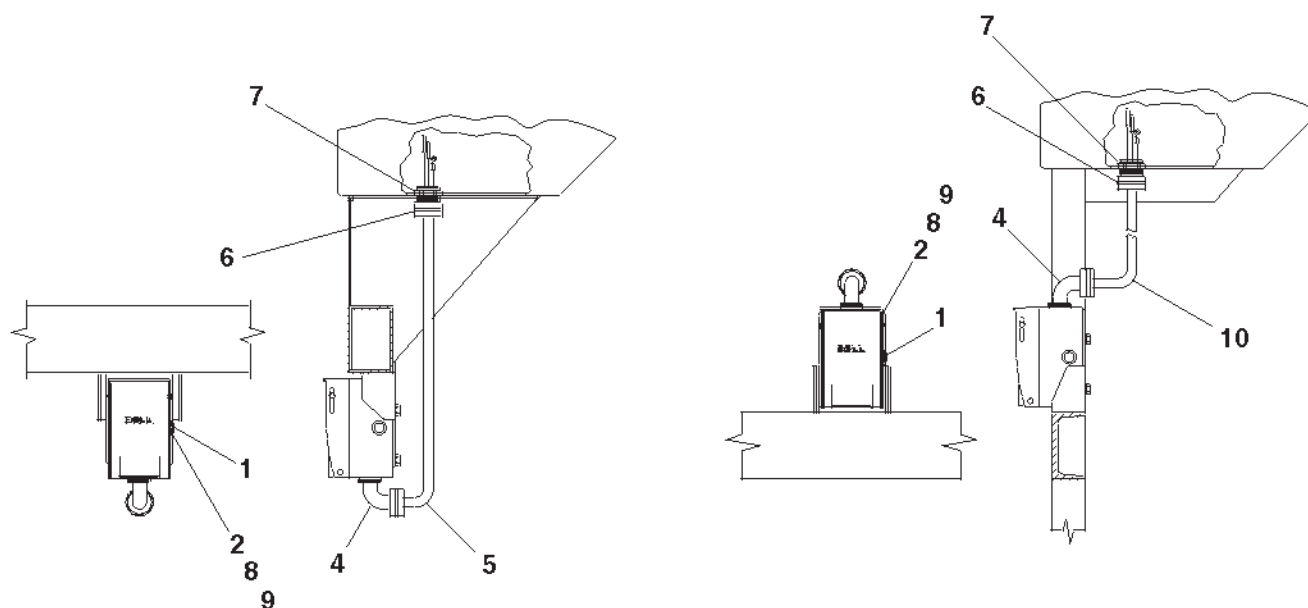


AW3040493



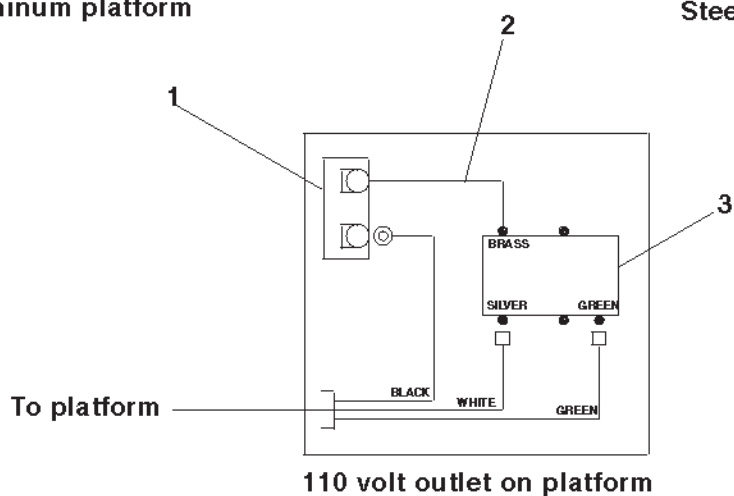
GFCI 110 volt power

item	part no	qty	description
1	3040252	1	Circuit breaker, 15 amp capacity
2	0071582	1	Jumper wire
3	3040624	1	Receptacle, GFCI outlet - 20 amp
4	3040691	1	Connector
5	0074368	1	Cable, 110 volt power to platform - (used on aluminum platforms only)
6	3040116	1	Connector
7	3040110	1	Connector locknut
8	0074379	1	Electrical box, drilled
9	3040625	1	Cover, GFCI outlet
10	0074369	1	Cable, 110 volt power to platform - (used on steel platforms only)



Aluminum platform

Steel platform



AW007034



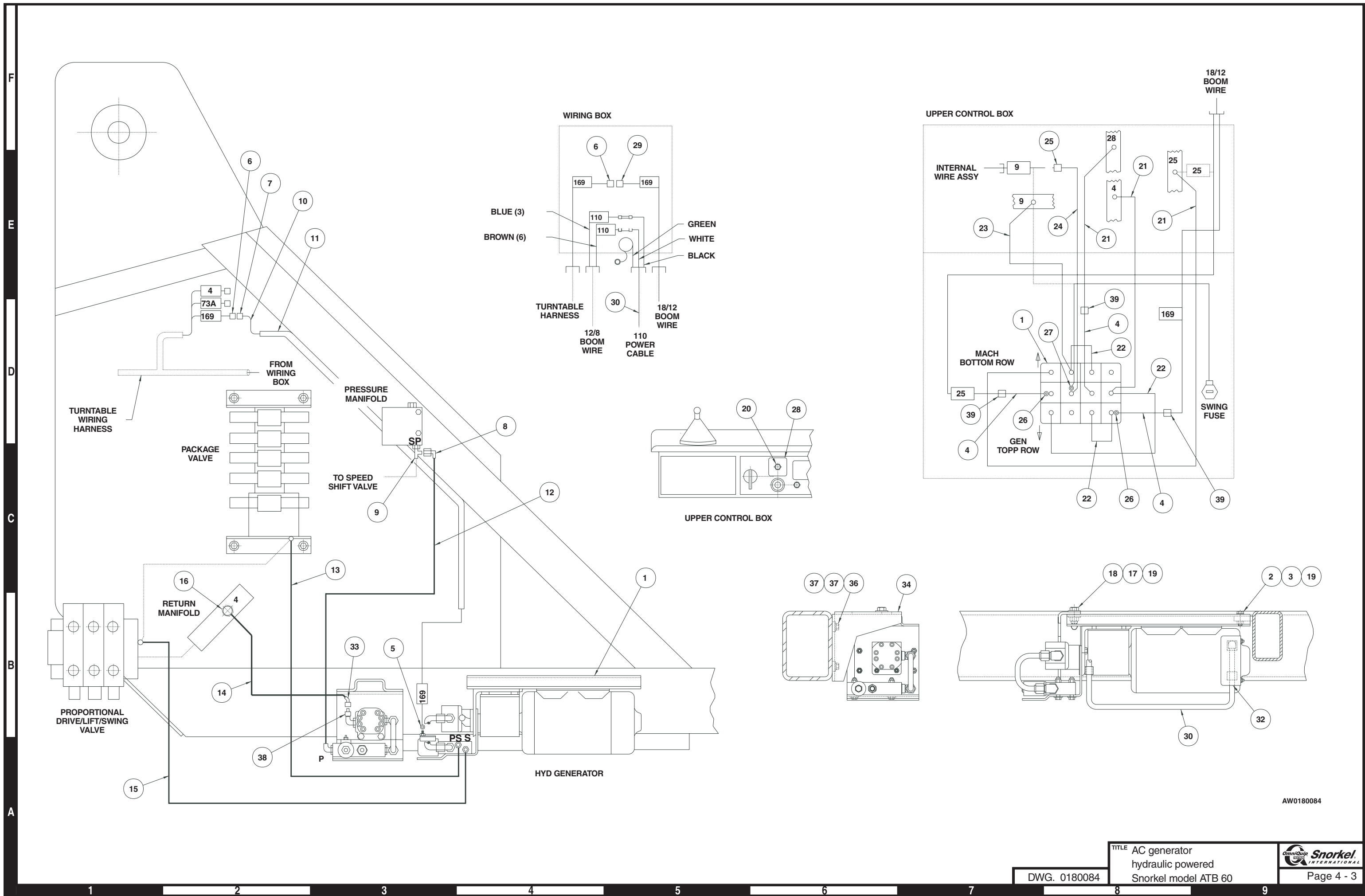
Section 4. - Factory installed options

ATB **60**



**AC generator, hydraulic powered**

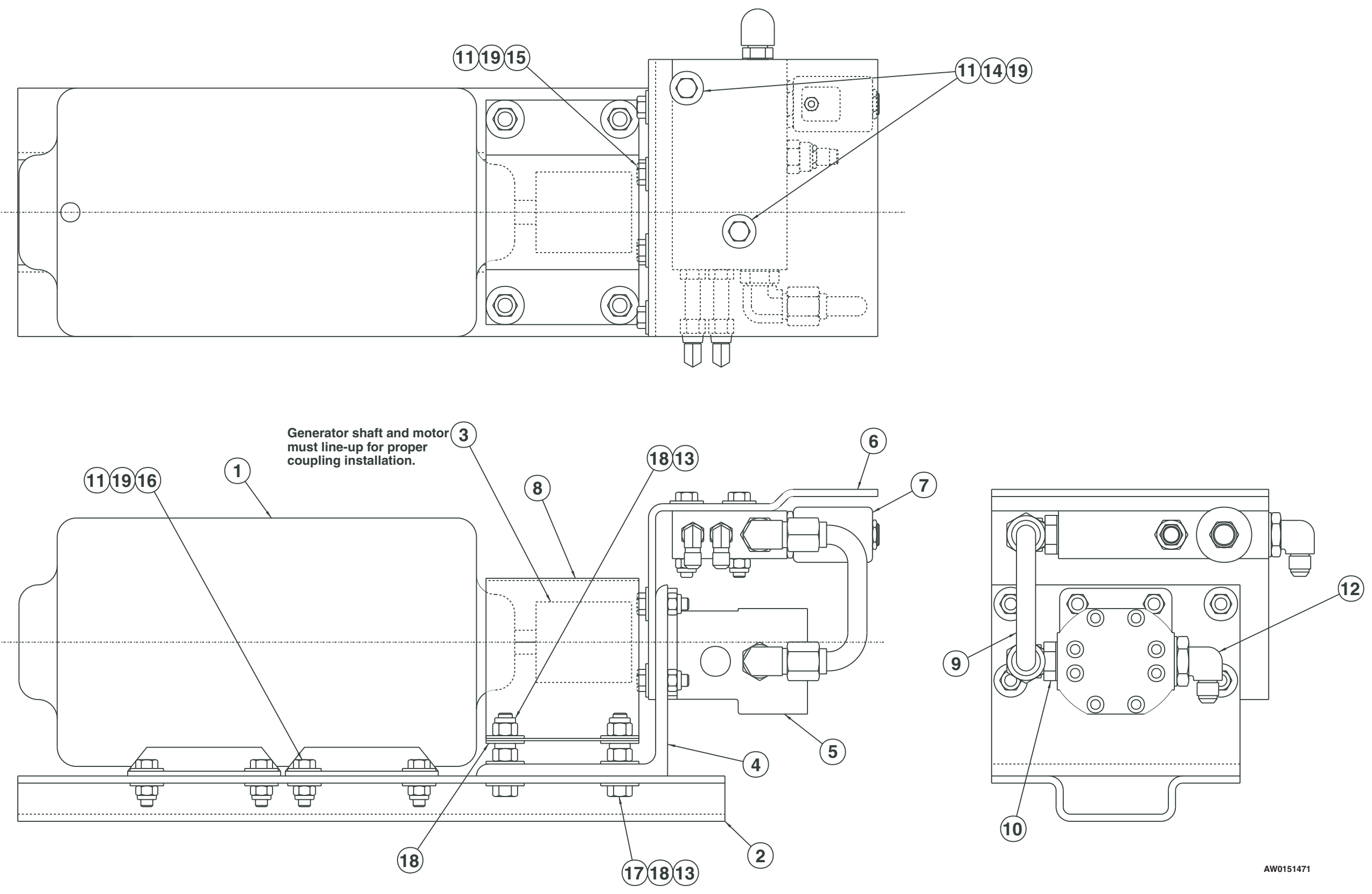
item	part no	qty	description
1	0151471	1	AC generator - (see page 4-5 for parts breakdown)
2	970909	1	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
3	5560039	1	Nut 1/2-13 self locking
4	0090757	3	Jumper wire
5	3044161	1	Terminal #10 stud insulated 16/14 wire
6	3040082	2	Terminal .250 tab male slip-on fully insulated 16/14 wire
7	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
8	5037005	1	Swivel nut 90° elbow
9	5036105	1	Straight thread run tee
10	3011601	5	Wire, 16 gauge single conductor x 60 inch long
11	3090006	5	Flexgard tube, 60 inch long
12	0020273	1	3/8 inch hydraulic hose
13	0070772	1	1/4 inch hydraulic hose
14	0151213	1	1/2 inch hydraulic hose
15	0020280	1	1/4 inch hydraulic hose
16	5065728	1	Straight thread adapter
17	5560039	2	Nut 1/2-13 self locking
18	970909	1	Capscrew 1/2-13 x 1-1/2 inch long hex head grade 5
19	986359	2	Washer 1/2 medium flat
20	3020048	1	Switch, toggle
21	0071517	3	Jumper wire
22	0070747	3	Jumper wire
23	0071541	1	Jumper wire
24	0181187	1	Jumper wire
25	3040064	1	Terminal .250 tab male slip-on fully insulated 12/10 wire
26	3044142	2	Terminal #6 stud insulated 22/18 wire
27	3044158	1	Terminal #6 stud insulated 16/14 wire
28	0151459	1	Placard, AC generator
29	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
30	0181188	1	Wire harness, 110 volt power
31	5093004	1	Clamp
32	0073163	1	Guard, cable retention
33	5036906	1	Swivel nut 45° elbow
34	0181635	1	Bracket, AC generator mounting
35	970469	2	Capscrew 3/8-16 x 1 inch long hex head grade 5
36	987119	2	Washer 3/8 medium lock
37	986299	2	Washer 3/8 medium flat
38	5064005	1	Tube end reducer
39	3040046	3	Terminal .250 tab male slip-on fully insulated 22/18 wire



AW0180084

DWG. 0180084

TITLE AC generator
hydraulic powered
Snorkel model ATB 60



AW0151471

**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 2-32 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	5240004	1	Hose reel
2	0181282	1	Air hose, lower
3	0181281	1	Air hose, upper
4	5550021	3	Cable guide, 4 roller
5	0181266	2	Bar
6	0181273	2	Cable guide bracket
7	0080749	1	Cable guide bracket, base boom
8	0180821	9	Bolting plate
9	0181267	2	Roller mounting bracket
10	0181276	2	Angle
11	0181265	1	Hose reel bracket
12	0181270	2	Roller
13	0181271	2	Spacer
14	5550010	5	Clamp
15	7714204	2	Pipe plug 1/2 NPT square head
16	5093004	12	Clamp
17	5093012	1	Clamp
18	5260012	2	Pipe fitting, 1/2 inch diameter x 3/8 inch NPT
19	5260013	2	Hose end 1/2 NPT - 1/2 barbed
20	5560033	4	Nut 3/8-16 self locking
21	5090021	1	Elbow 90° street 3/8 NPT brass
22	970426	10	Capscrew 3/8-16 x 7/8 inch long hex head grade 5
23	970489	2	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
24	970589	2	Capscrew 3/8-16 x 4-1/2 inch long hex head grade 5
25	970469	9	Capscrew 3/8-16 x 1 inch long hex head grade 5
26	987119	19	Washer 3/8 medium lock
27	986299	13	Washer 3/8 medium flat
28	0150759	1	Gusset
29	583466	4	Clamp
30	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
31	986019	4	Washer 1/4 medium flat
32	5560004	4	Nut 1/4-20 self locking



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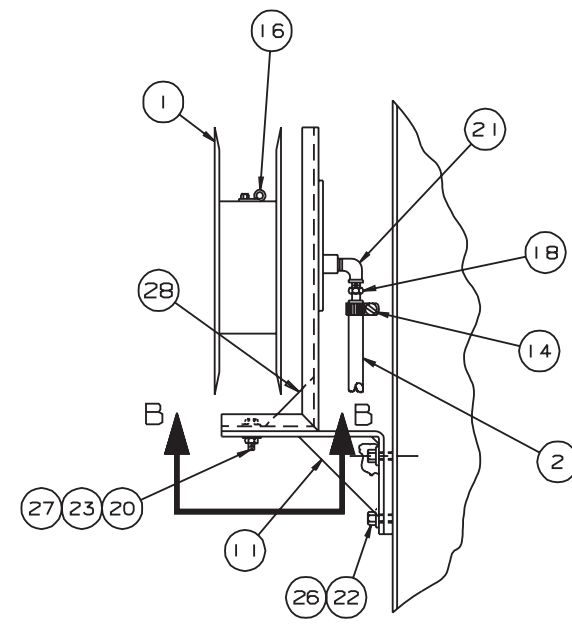
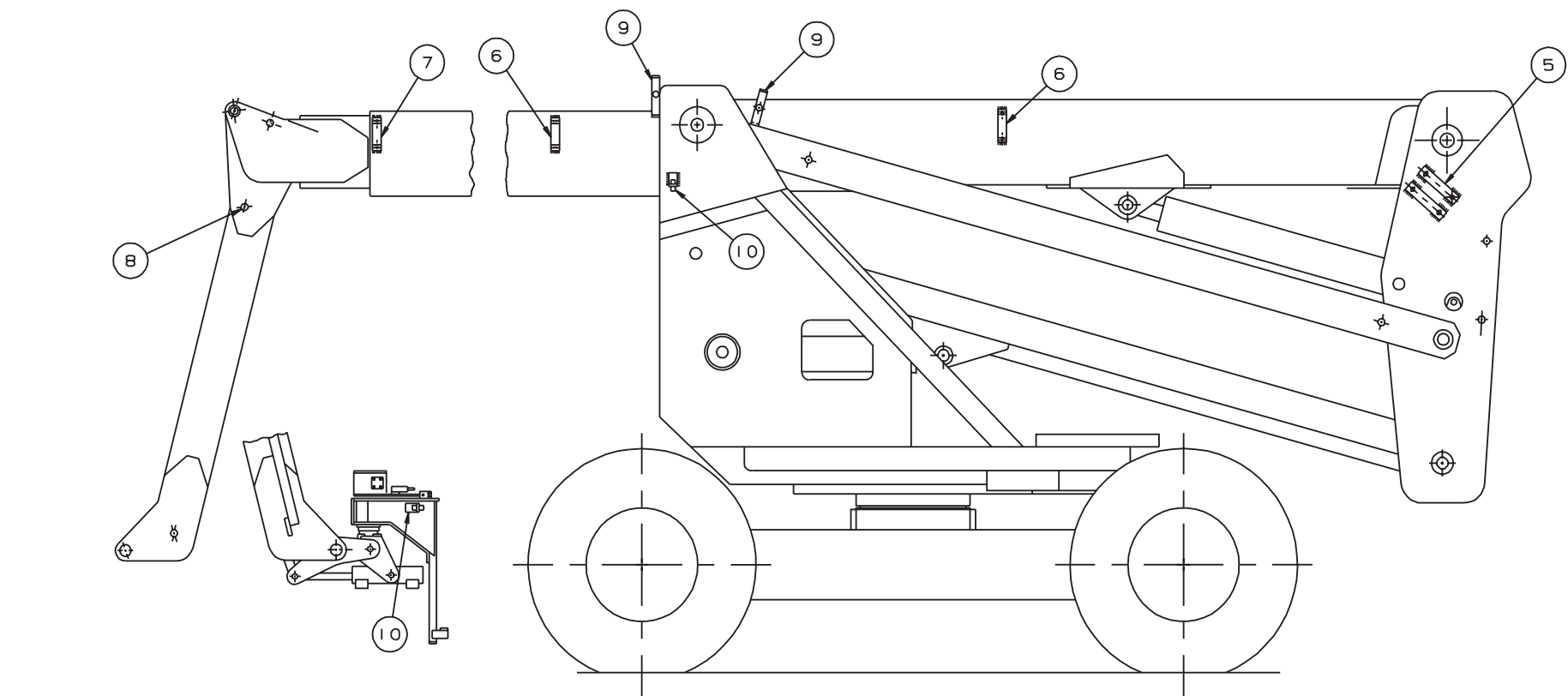
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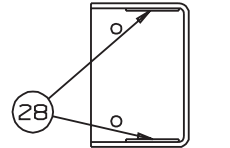
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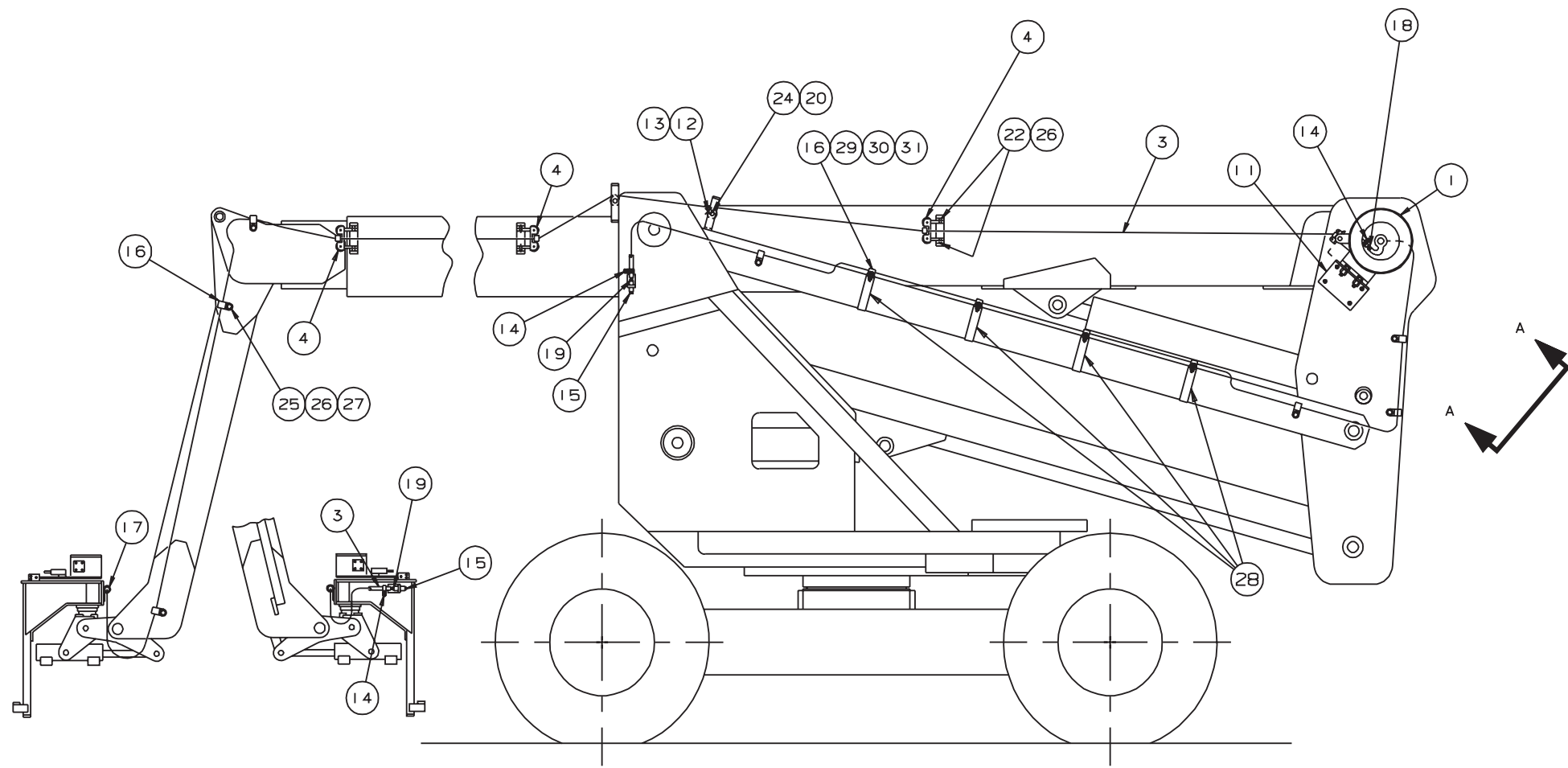
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VIEW A-A



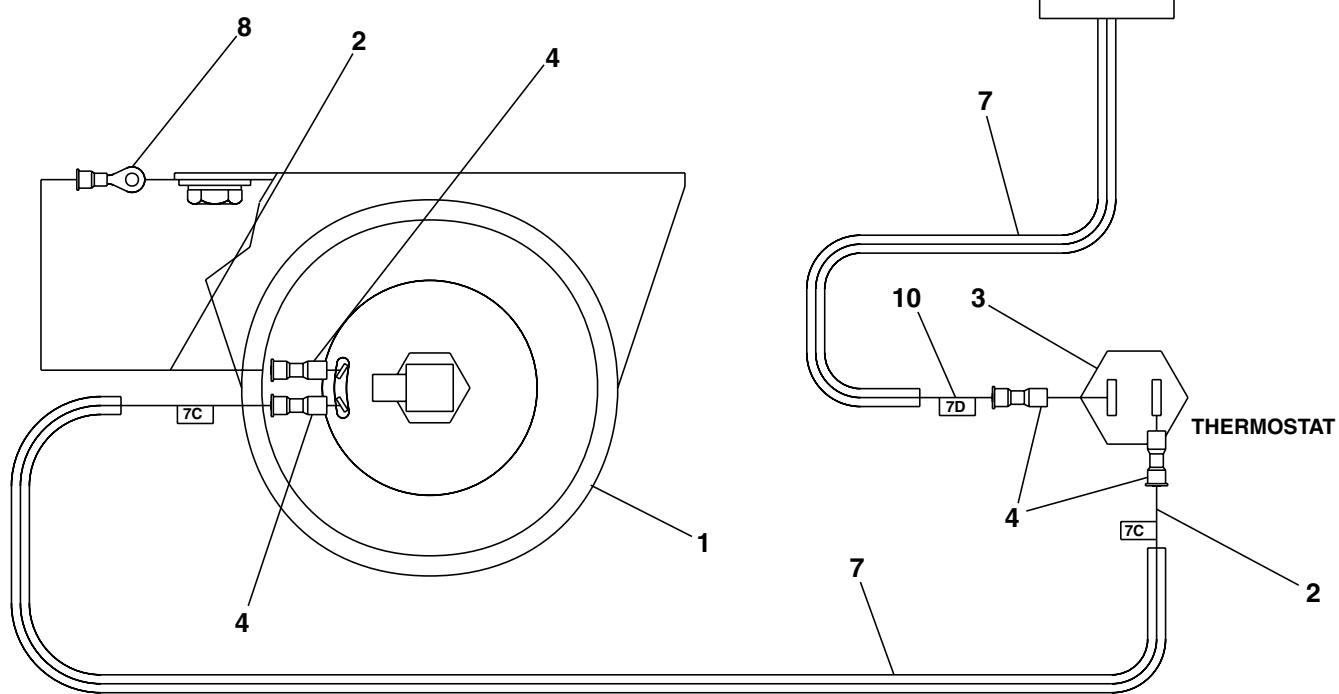
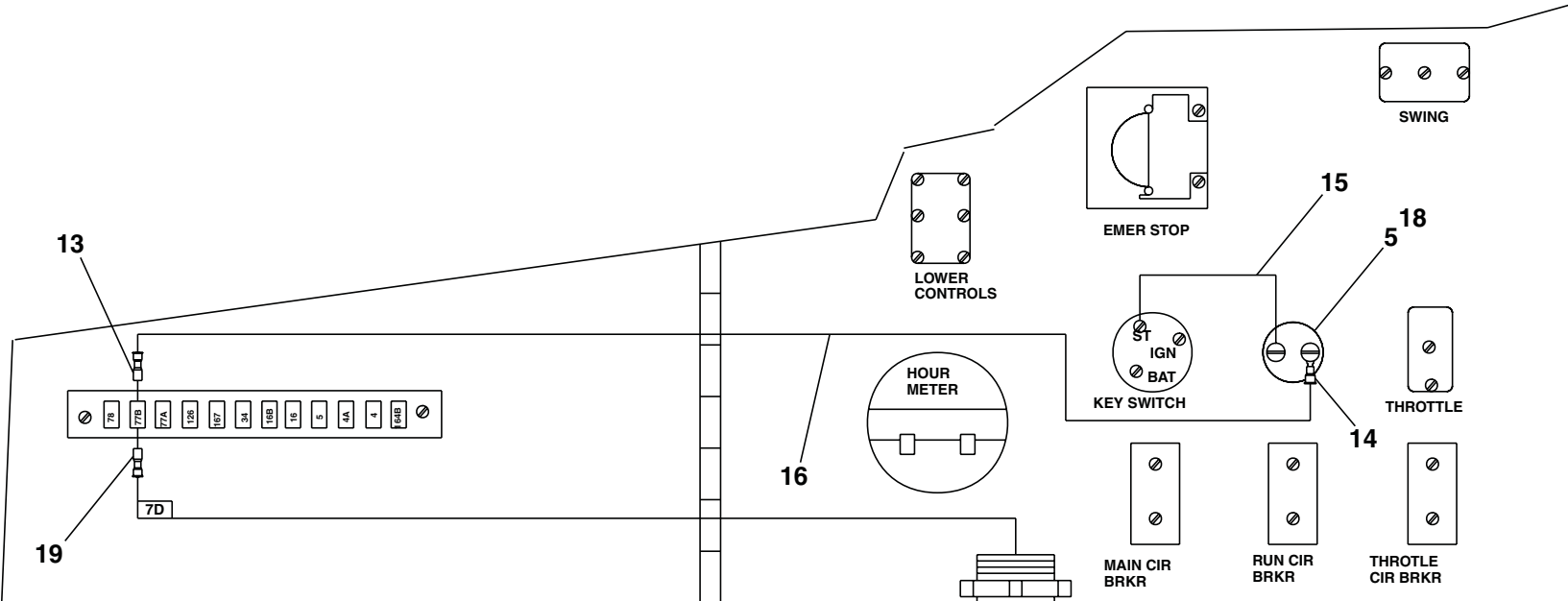
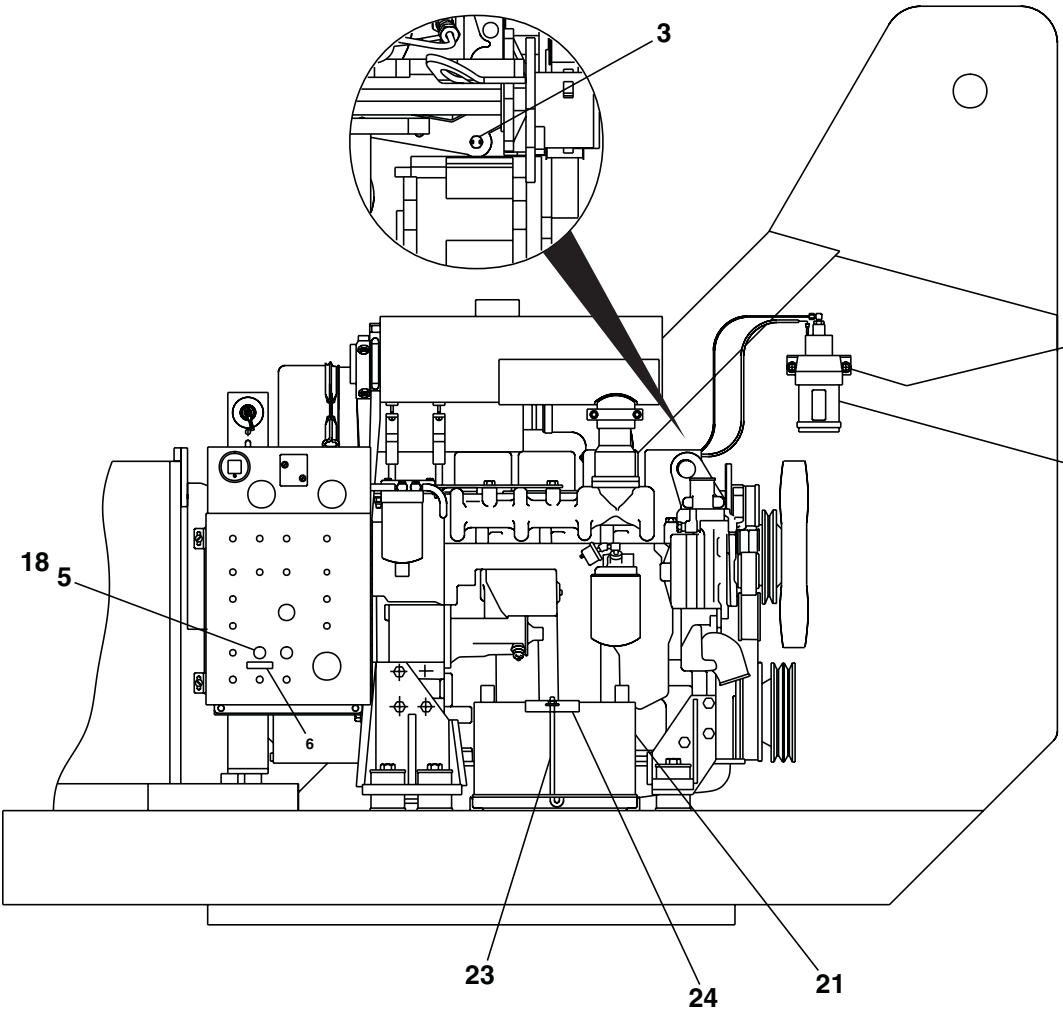
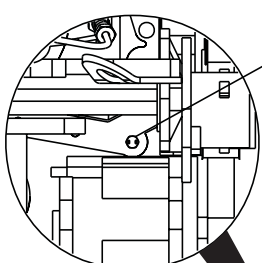
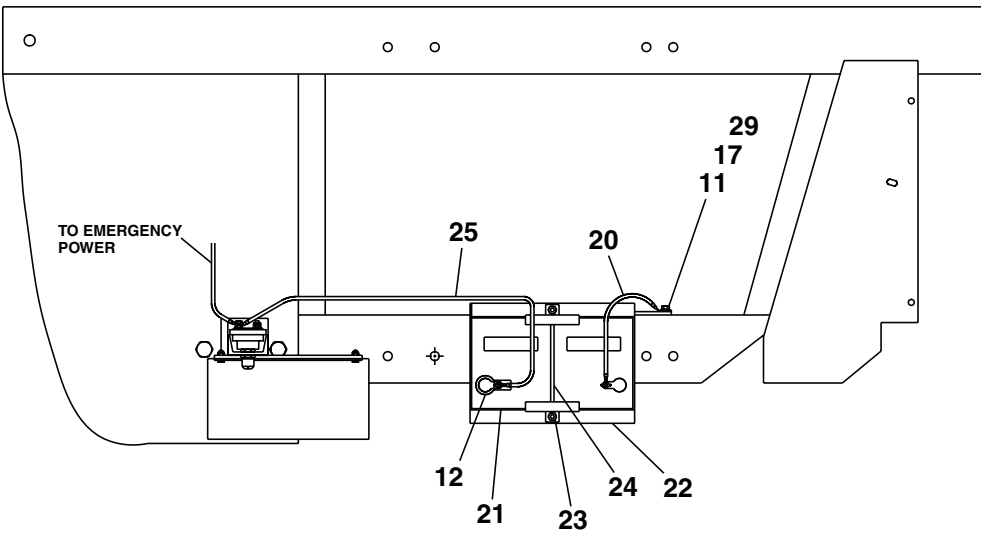
VIEW B-B



AW0180092



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AW0180096

**Cold start with battery, Cummins & Hatz**

item	part no	qty	description
1	7630014	1	Cold start kit -(kit includes all fittings, nylon tubing and atomizer nozzle - not sold separately)
2	3011601	1	Wire, 16 gauge single conductor x 72 inch long
3	7630270	1	Thermostat
4	3040083	3	Terminal .250 tab female fully insulated 16/14 wire
5	3026027	1	Switch, push button
6	0073080	1	Decal, cold start
7	3090006	1	Flexgard tube, 72 inch long
8	3044163	1	Terminal ring tongue insulated 16/14 wire
9	970259	2	Capscrew 5/16-18 x 1 inch long hex head grade 5
10	9940020	1	Ether cannister
11	986269	3	Washer 5/16 medium flat
12	3040269	1	Insulator boot
13	3046972	1	Terminal .188 tab female slip-on insulated 22/18 wire
14	3044145	1	Terminal #8 stud insulated 22/18 wire
15	0070724	1	Jumper wire
16	3011801	1	Wire 18 gauge single conductor x 36 inch long
17	987109	3	Washer 5/16 medium lock
18	7140092	1	Switch seal
19	3046697	1	Terminal .188 tab female slip-on insulated 16/14 wire
20	0080519	1	Jumper wire
21	3050002	1	Battery, 12 volt DC - 550 CCA
22	0090125-99	1	Battery bracket
23	3050004	2	Battery hold down bolt
24	3050008	1	Battery hold down
25	0101566	1	Jumper wire

**Dual fuel, Continental**

item	part no	qty	description
1	0180999	1	Dual fuel engine, Continental - (see page 4-13 for parts breakdown)
2	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
3	9940011	1	Tank bracket
4	0181035	2	Angle
5	0080668	1	Relief valve mount bracket
6	3020017	1	Switch, toggle
7	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
8	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
9	Kit item	2	Straight thread adapter 1/4 NPT brass - (included in dual fuel kit 0073444)
10	5560031	4	Nut 5/16-18 self locking
11	5090033	1	Street elbow 90° 1/4 NPT brass
12	0073649	1	Diode wire
13	0090492	1	Placard, dual fuel switch
14	986019	1	Washer 1/4 medium flat
15	0101724	1	LP gas fuel hose
16	0101430	1	LP gas fuel hose
17	0070974	1	Coupler, female LPG
18	0081441	1	Placard, caution liquid withdrawal
19	0090493	1	Decal, dual fuel instructions
20	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
21	970259	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
22	986269	4	Washer 5/16 medium flat
23	987109	4	Washer 5/16 medium lock
24	5093004	1	Clamp
25	970009	1	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
26	987099	1	Washer 1/4 medium lock



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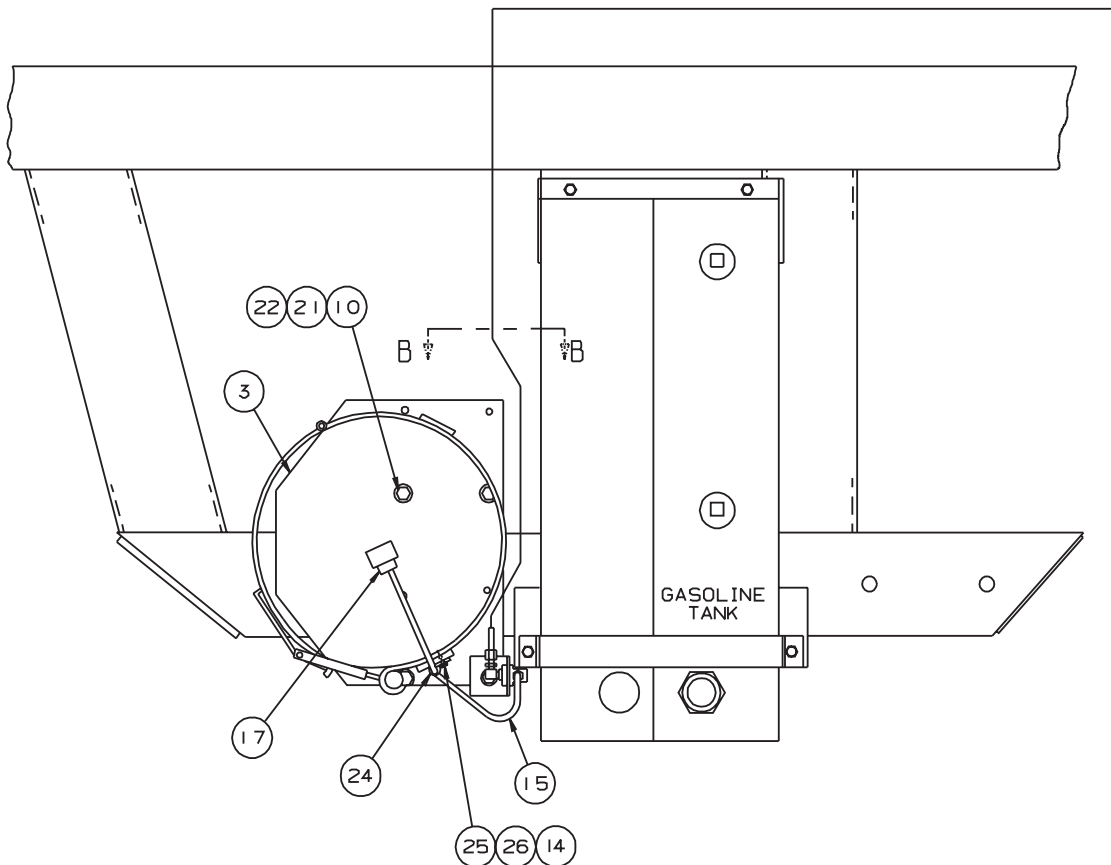
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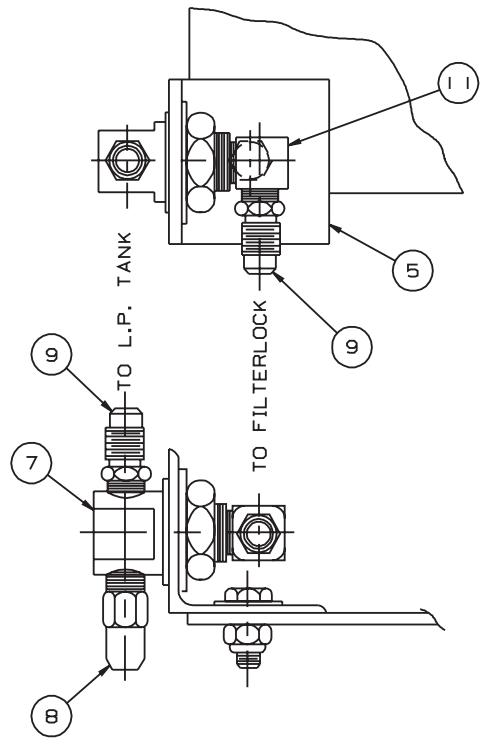
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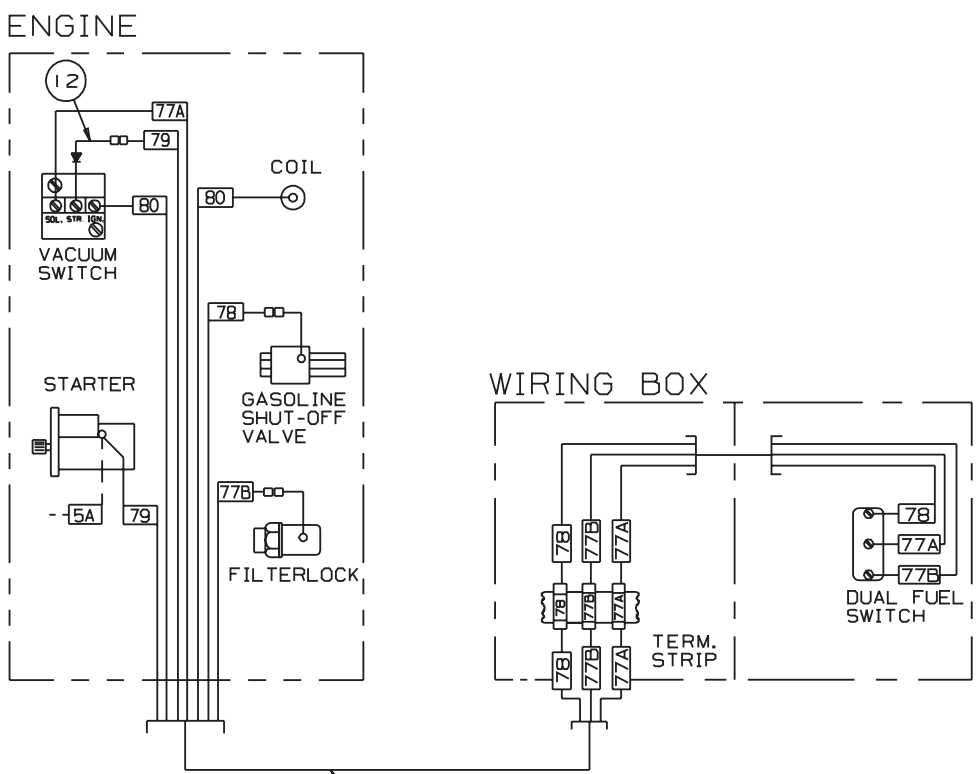
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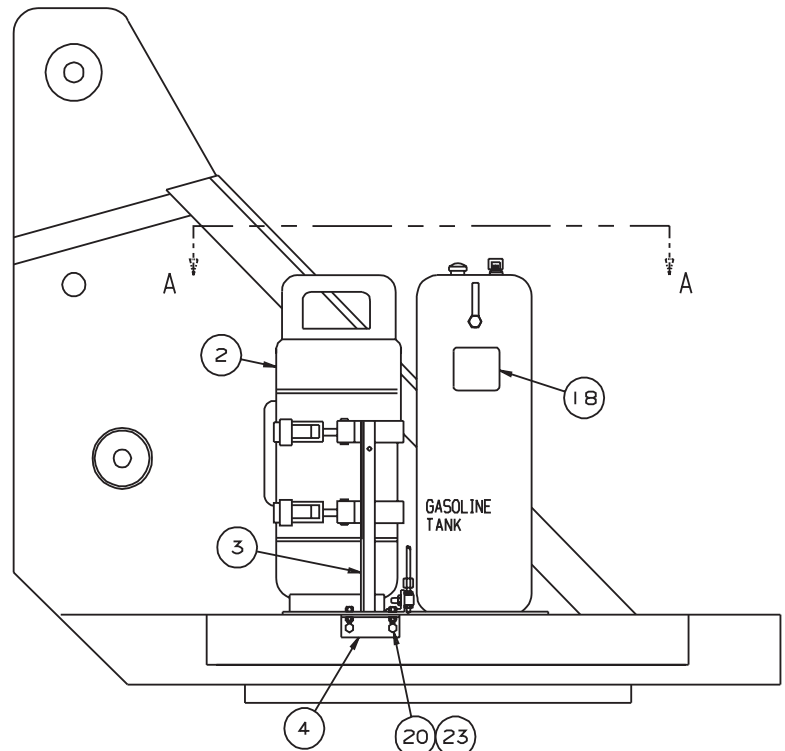
VIEW A-A



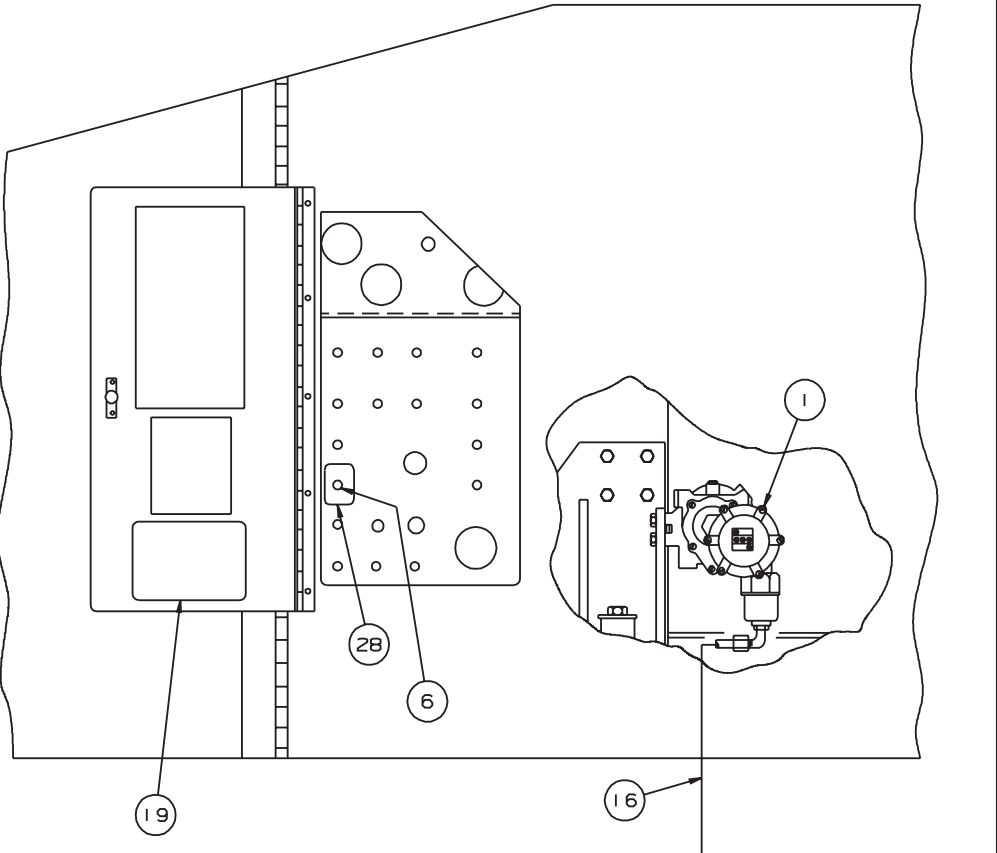
VIEW B-B



ENGINE HARNESS



TURNABLE-R.H.SIDE

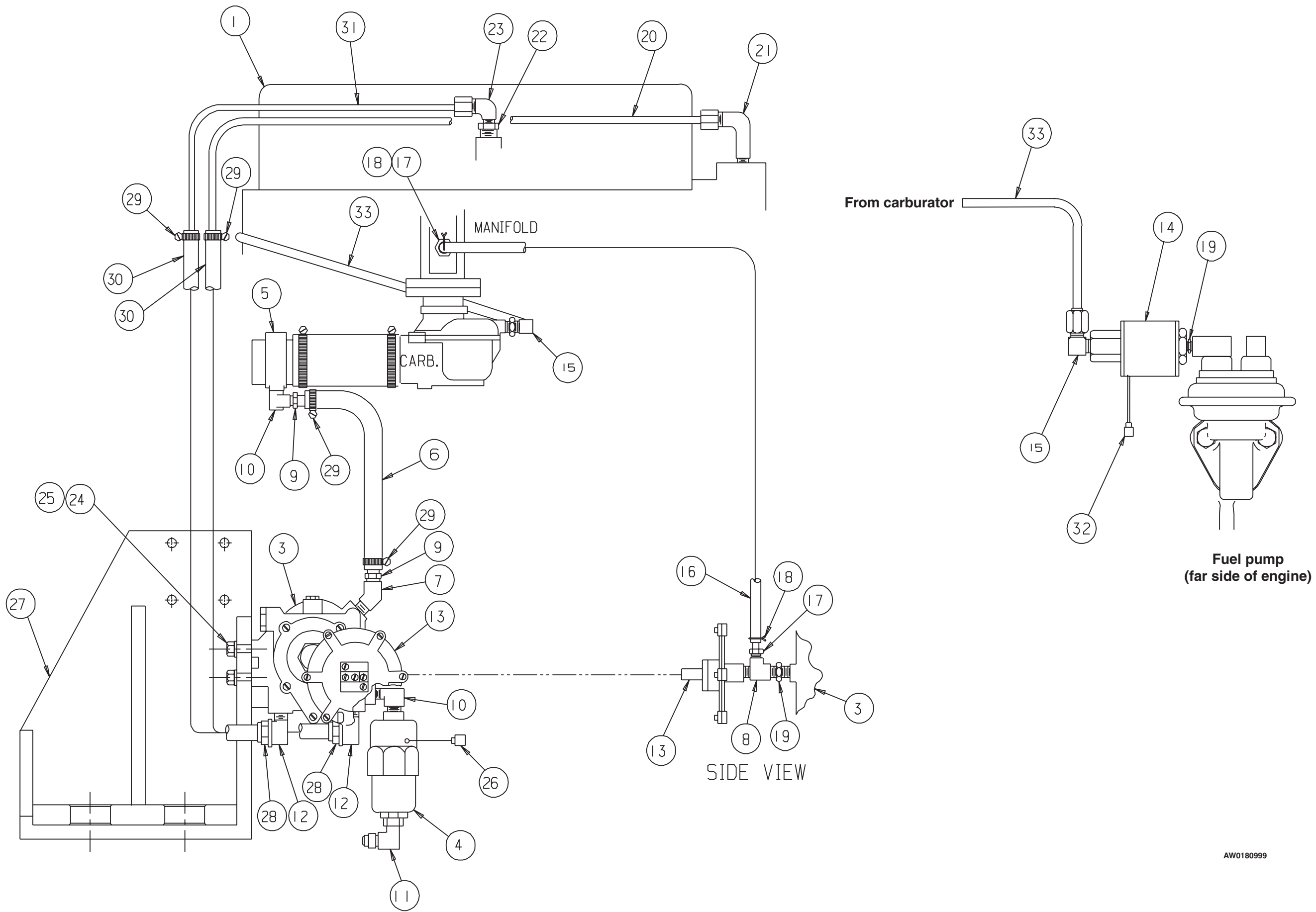


TURNABLE L.H. SIDE

AW0180081



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AW0180999



TITLE Dual fuel engine, Continental

**Dual fuel engine, Continental**

item	part no	qty	description
	0180999	1	Dual fuel engine, Continental
1	0180986	1	Engine, Continental - (see page 1-43 for parts breakdown)
2	0073444	1	Dual fuel kit, liquid cooled - (kit includes items 3 through 11)
3	802009	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 12 inch long - (not sold separately)
7	Kit item	1	Street 3/8 NPT 90° elbow, brass - (not sold separately)
8	Kit item	1	Street tee 1/8 NPT brass - (not sold separately)
9	Kit item	1	Connector 3/8 NPT to 5/8 inch hose, brass - (not sold separately)
10	Kit item	1	Street 1/4 NPT 90° elbow, brass - (not sold separately)
11	Kit item	1	Male 1/4 NPT to -6 SAE 90° elbow, brass - (not sold separately)
12	5090021	2	Elbow 90° street 3/8 NPT brass
13	3020054	1	Vacuum switch - (included with engine)
	8130005	1	Replacement switch
14	5230005	1	Gasoline fuel shut-off valve
15	5090013	2	Elbow 90° male 1/8 NPT brass
16	5010006	1	Vacuum hose, 1/4 inch diameter x 13 inch long
17	5090024	2	Vacuum fitting 1/8 NPT brass straight
18	5090026	2	Clamp
19	5090011	1	Nipple 1/8 NPT brass
20	0111514	1	Coolant line 3/8 inch diameter
21	5031815	1	Elbow 90° male 3/8 NPT
22	7720403	1	Reducer bushing 1/2NPT x 3/8 NPT
23	5033709	1	Male 90° elbow
24	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
25	987099	2	Washer 1/4 medium lock
26	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
27	0181070	1	Motor mount, rear right hand
28	5054601	2	Adapter 1/4 NPT x 3/8 hose
29	5550010	4	Clamp
30	5010005	1	Hose 3/8 inch diameter x 22 inch long
31	0111515	1	Coolant line 3/8 inch diameter
32	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
33	0111513	1	Fuel line 1/4 inch diameter

**LP fuel only, Continental**

item	part no	qty	description
1	0181249	1	LP fuel engine, Continental - (see page 4-17 for parts breakdown)
2	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
3	9940011	2	Tank bracket
4	0181035	2	Angle
5	0180668	1	Angle
6	5560031	7	Nut 5/16-18 self locking
7	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
8	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
9	Kit item	1	Connector - (included in dual fuel kit 0073444)
10	0070974	1	Coupler, female LPG
11	0101724	1	LP gas fuel hose
12	0072177	1	LP gas fuel hose
13	0073649	1	Diode wire
14	0081441	1	Placard, caution liquid withdrawal
15	5093004	1	Clamp
16	0181236	1	Angle
17	970009	1	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
18	987099	1	Washer 1/4 medium lock
19	986019	1	Washer 1/4 medium flat
20	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
21	970259	7	Capscrew 5/16-18 x 1 inch long hex head grade 5
22	986269	7	Washer 5/16 medium flat
23	987109	4	Washer 5/16 medium lock
24	0071530	1	Jumper wire



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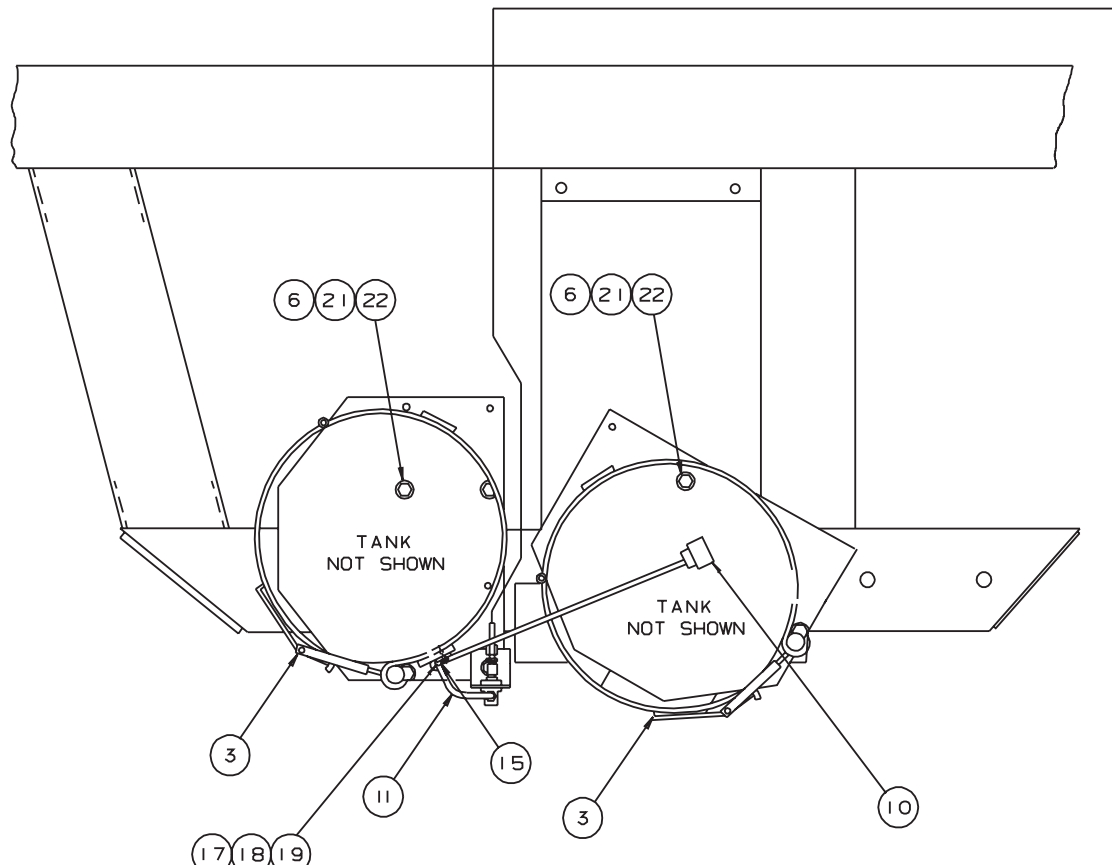
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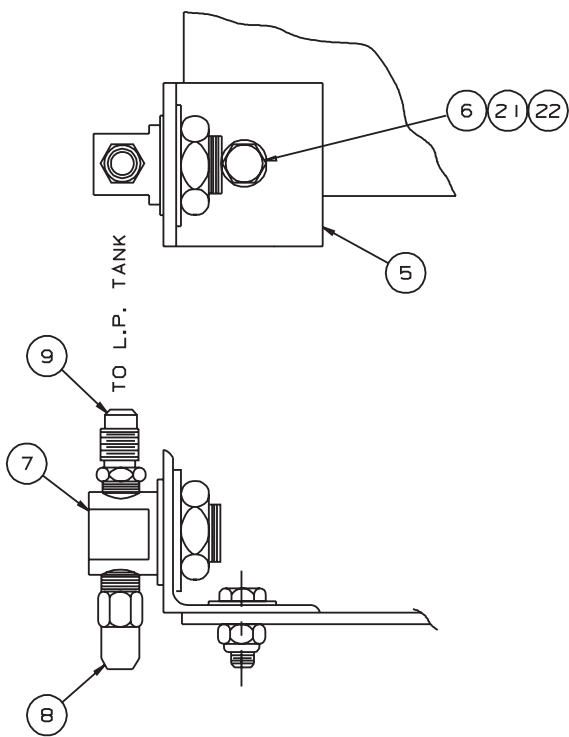
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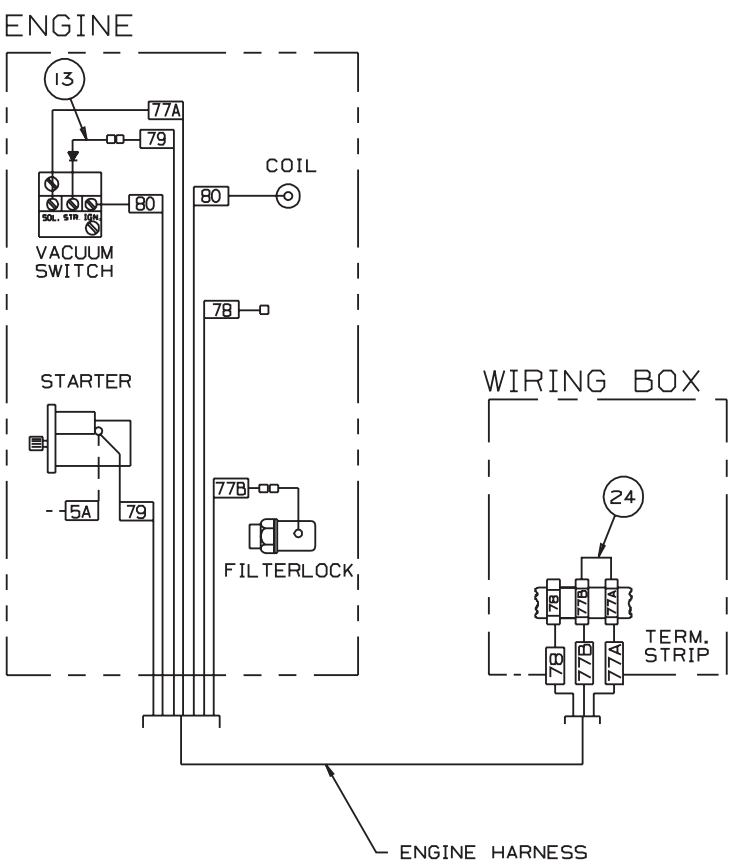
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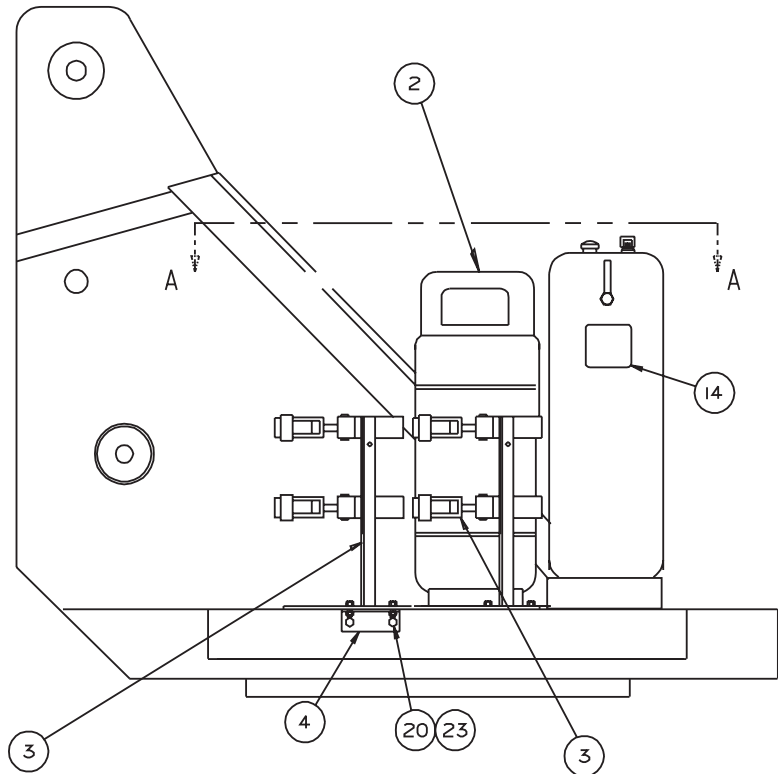
VIEW A-A



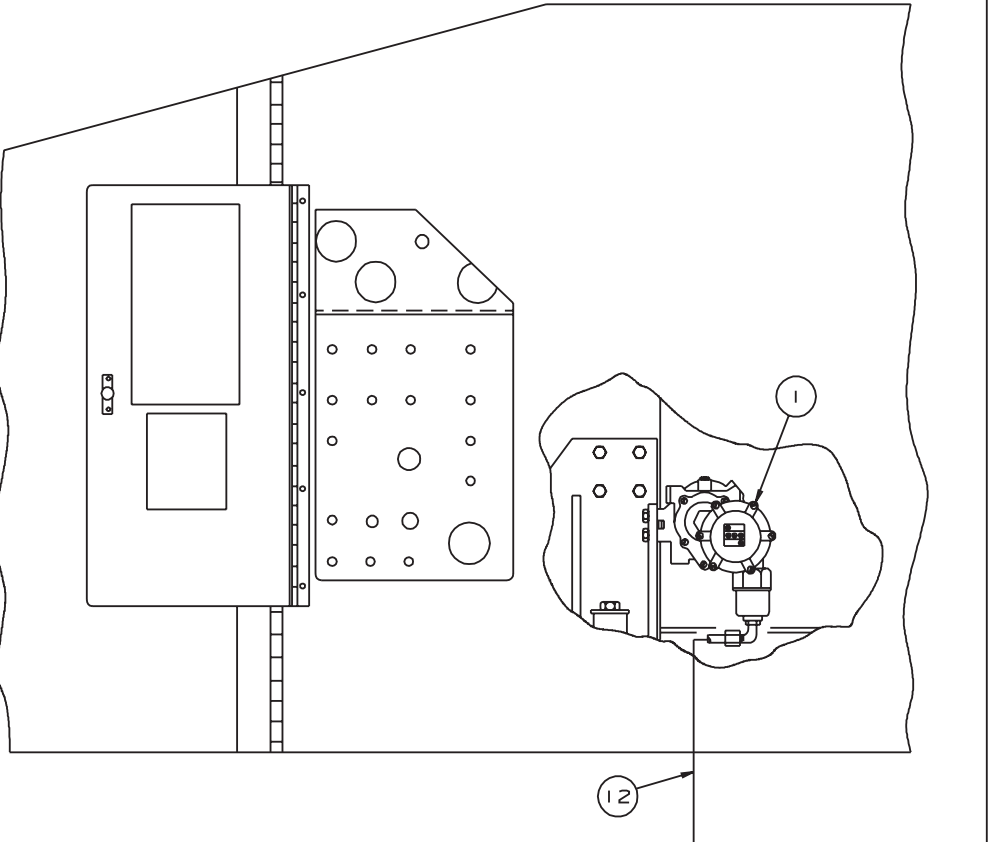
VIEW B-B



ENGINE HARNESS



TURNABLE-R.H.SIDE



TURNABLE L.H. SIDE

AW0180087



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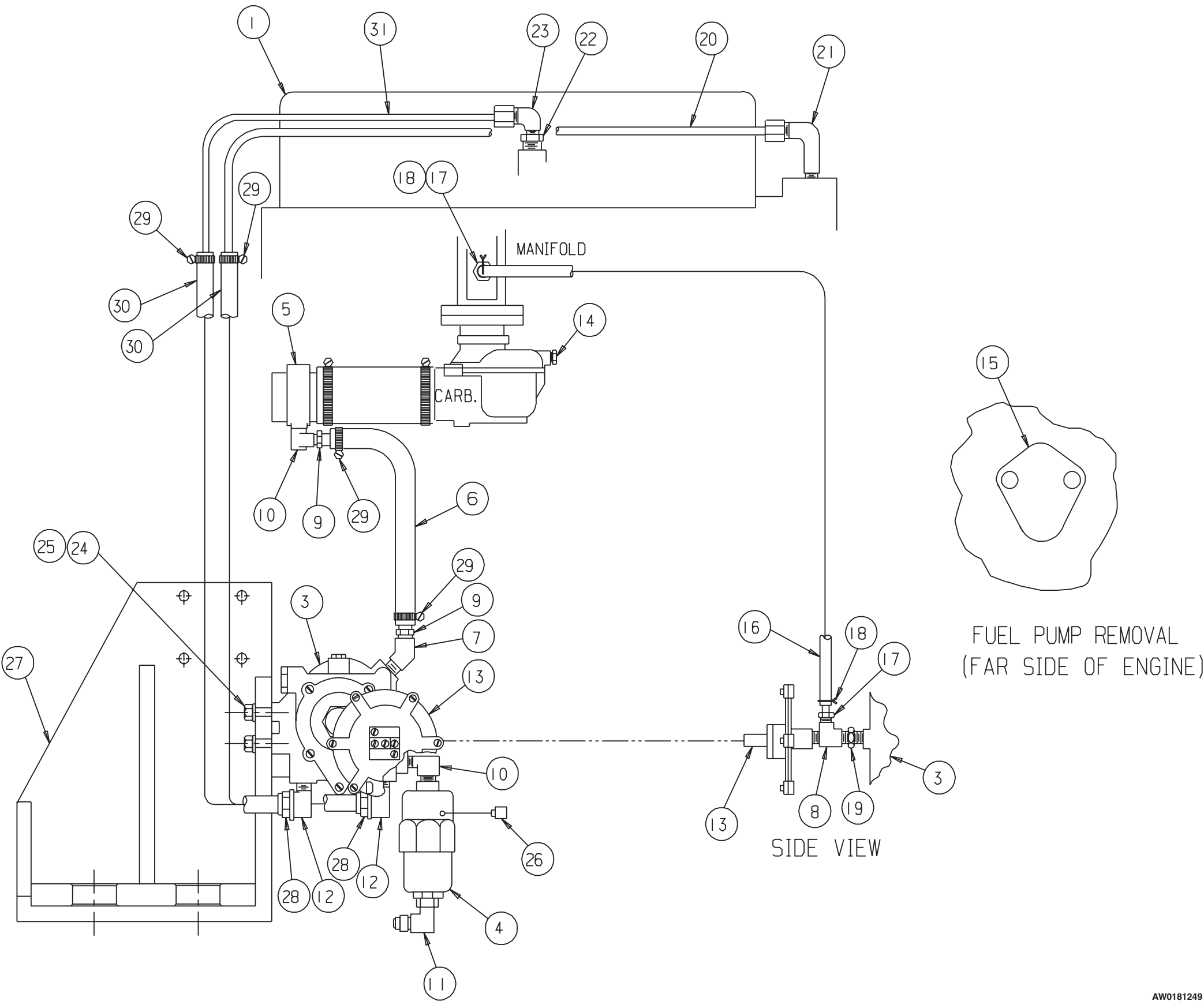
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AW0181249



TITLE LP fuel engine, Continental

Page 4 - 16

Snorkel model ATB 60

DWG. 0181249

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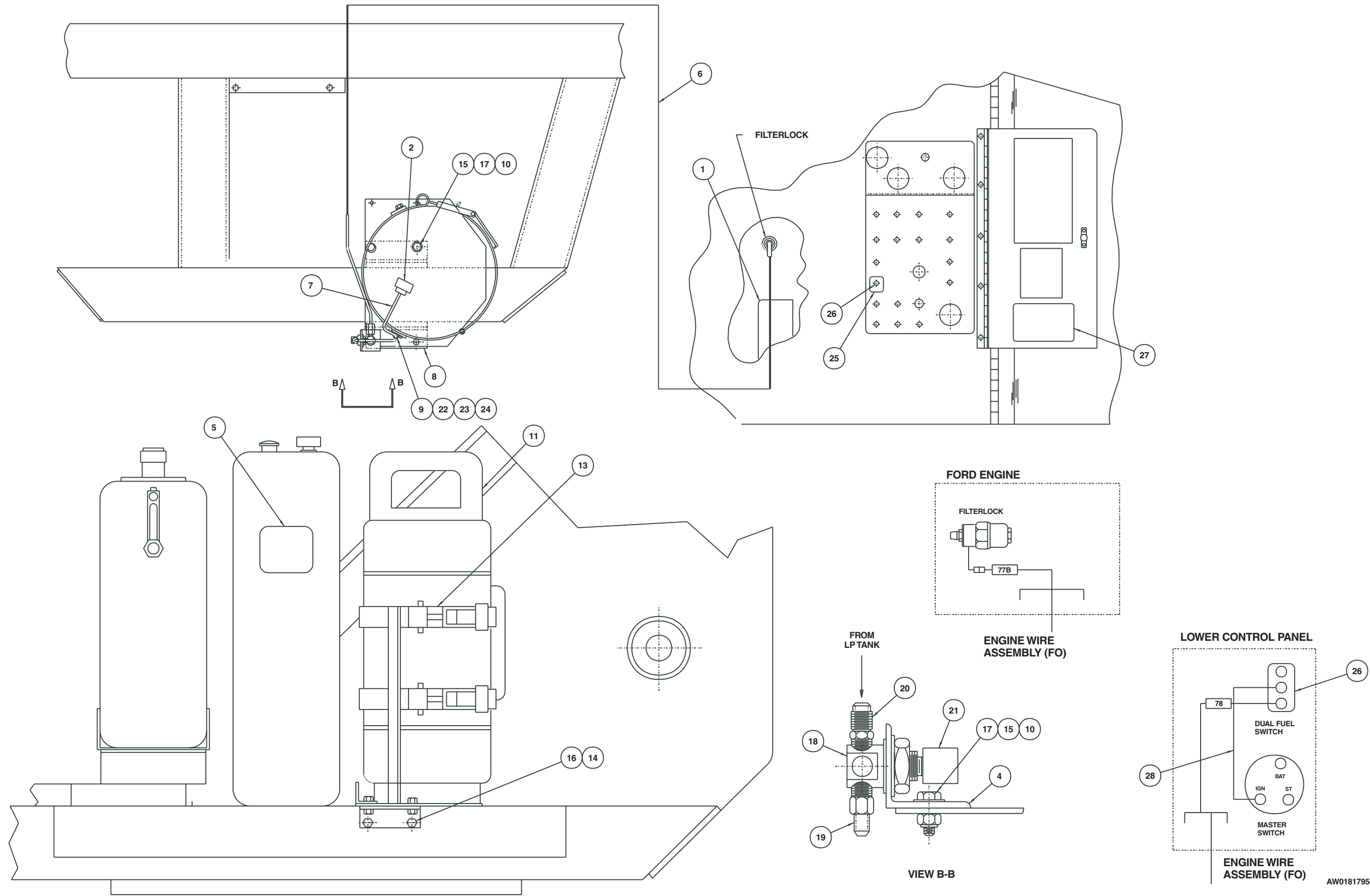
**LP fuel engine, Continental**

item	part no	qty	description
	0181249	1	LP fuel engine, Continental
1	0190986	1	Engine, Continental TM-27
2	0073444	1	Dual fuel kit, liquid cooled - (kit includes items 3 through 11)
3	802009	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 12 inch long - (not sold separately)
7	Kit item	1	Street 3/8 NPT 90° elbow, brass - (not sold separately)
8	Kit item	1	Street tee 1/8 NPT brass - (not sold separately)
9	Kit item	1	Connector 3/8 NPT to 5/8 inch hose, brass - (not sold separately)
10	Kit item	1	Street 1/4 NPT 90° elbow, brass - (not sold separately)
11	Kit item	1	Male 1/4 NPT to -6 SAE 90° elbow, brass - (not sold separately)
12	5090021	2	Elbow 90° street 3/8 NPT brass
13	3020054	1	Vacuum switch - (included with engine)
	8130005	1	Replacement switch
14	7714201	1	Pipe plug 1/8 NPT square head
15	0181250	1	Cover
16	5010006	1	Vacuum hose, 1/4 inch diameter x 13 inch long
17	5090024	2	Vacuum fitting 1/8 NPT brass straight
18	5090026	2	Clamp
19	5090011	1	Nipple 1/8 NPT brass
20	0111514	1	Coolant line 3/8 inch diameter
21	5031815	1	Elbow 90° male 3/8 NPT
22	7720403	1	Reducer bushing 1/2NPT x 3/8 NPT
23	5033709	1	Male 90° elbow
24	970049	2	Capscrew 1/4-20 x 1 inch long hex head grade 5
25	987099	2	Washer 1/4 medium lock
26	3040083	1	Terminal .250 tab female slip-on fully insulated 16/14 wire
27	0181070	1	Motor mount, rear right hand
28	5054601	2	Adapter 1/4 NPT x 3/8 hose
29	5550010	4	Clamp
30	5010005	1	Hose 3/8 inch diameter x 22 inch long
31	0111515	1	Coolant line 3/8 inch diameter

**Dual fuel, Ford LRG-425**

item	part no	qty	description
1	0112100	1	Dual fuel engine, Ford LRG-425 - (see page 4-22 for parts breakdown)
2	0070974	1	Coupler, female LPG
3	0151815	1	Jumper wire
4	0080668	1	Relief valve mount bracket
5	0081441	1	Placard, caution liquid withdrawal
6	0101430	1	LP gas fuel hose
7	0101724	1	LP gas fuel hose
8	0181035	2	Angle
9	5093004	1	Clamp
10	5560031	5	Nut 5/16-18 self locking
11	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
12	0090493	1	Decal, dual fuel instructions
13	9940011	1	Tank bracket
14	987109	4	Washer 5/16 medium lock
15	986269	5	Washer 5/16 medium flat
16	970239	4	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
17	970259	5	Capscrew 5/16-18 x 1 inch long hex head grade 5
18	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
19	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
20	Kit item	1	Connector - (included in dual fuel kit 0073444)
21	5090033	1	Street elbow 90° 1/4 NPT brass
22	970009	1	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
23	987099	1	Washer 1/4 medium lock
24	986019	1	Washer 1/4 medium flat
25	0090492	1	Placard, dual fuel switch
26	3020013	1	Switch, toggle

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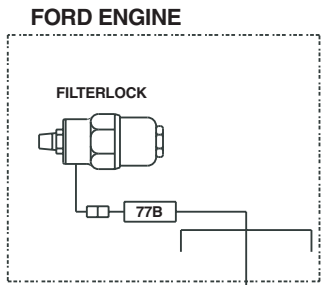
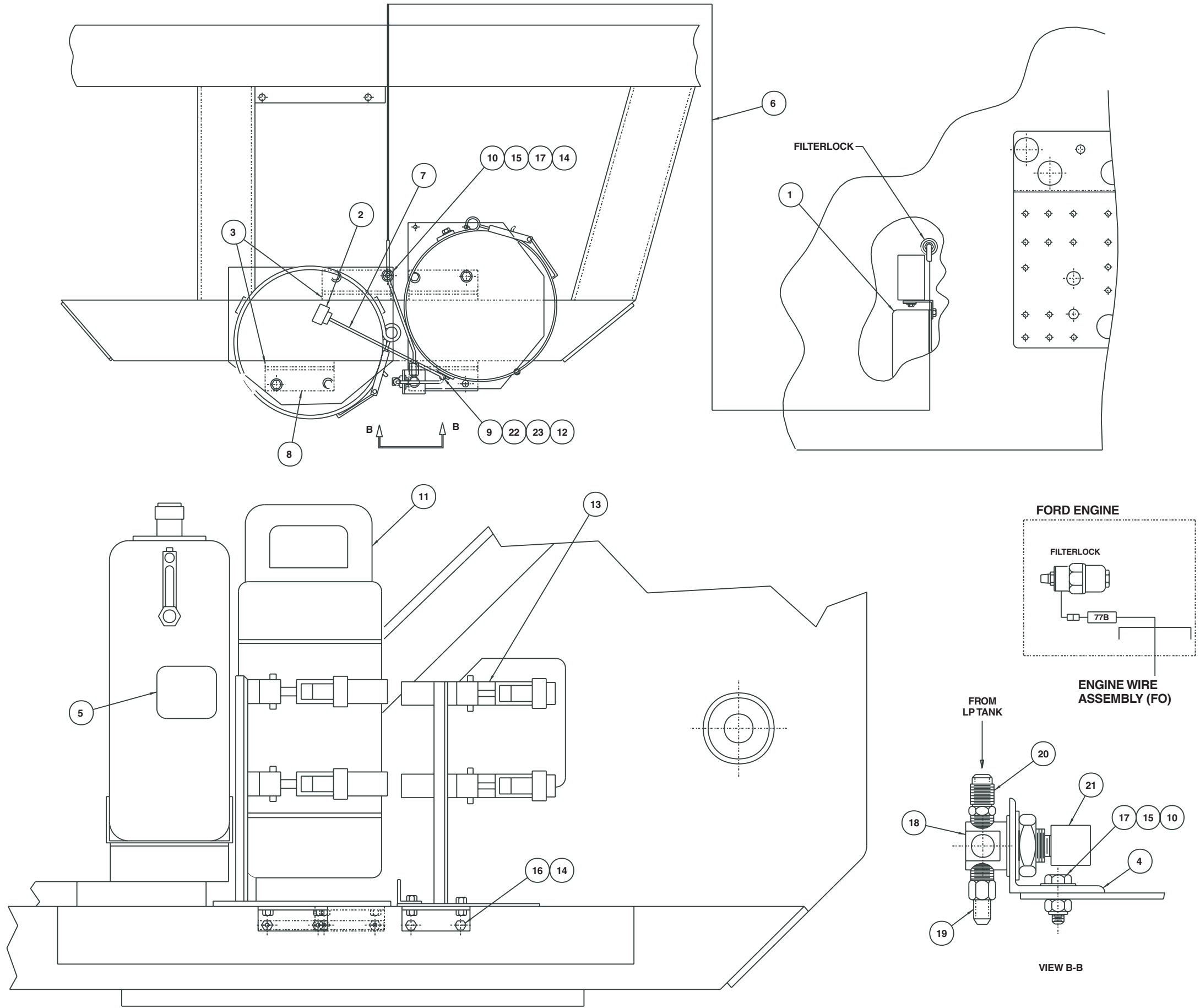
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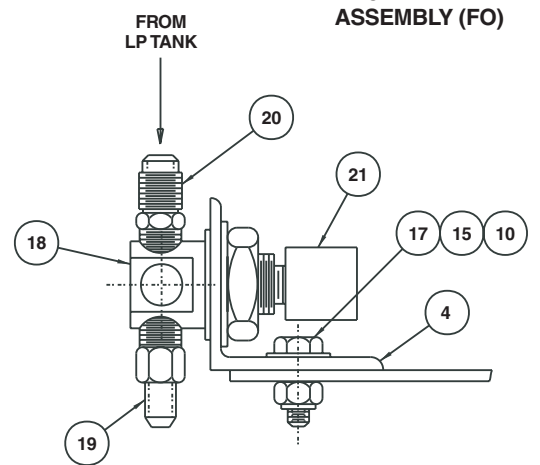
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Ford LRG-425
Snorkel model ATB 60



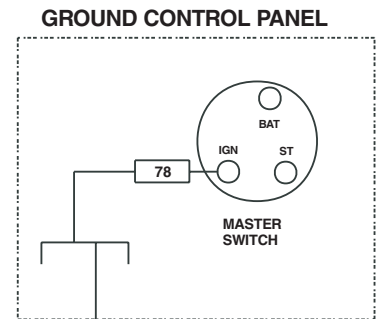
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ENGINE WIRE ASSEMBLY (FO)



VIEW B-B



ENGINE WIRE ASSEMBLY (FO)

AW0181804



TITLE LP fuel only
Ford LRG-425
Snorkel model ATB 60

DWG. 0181804

**LP fuel only, Ford LRG-425**

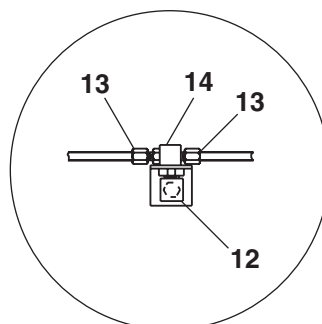
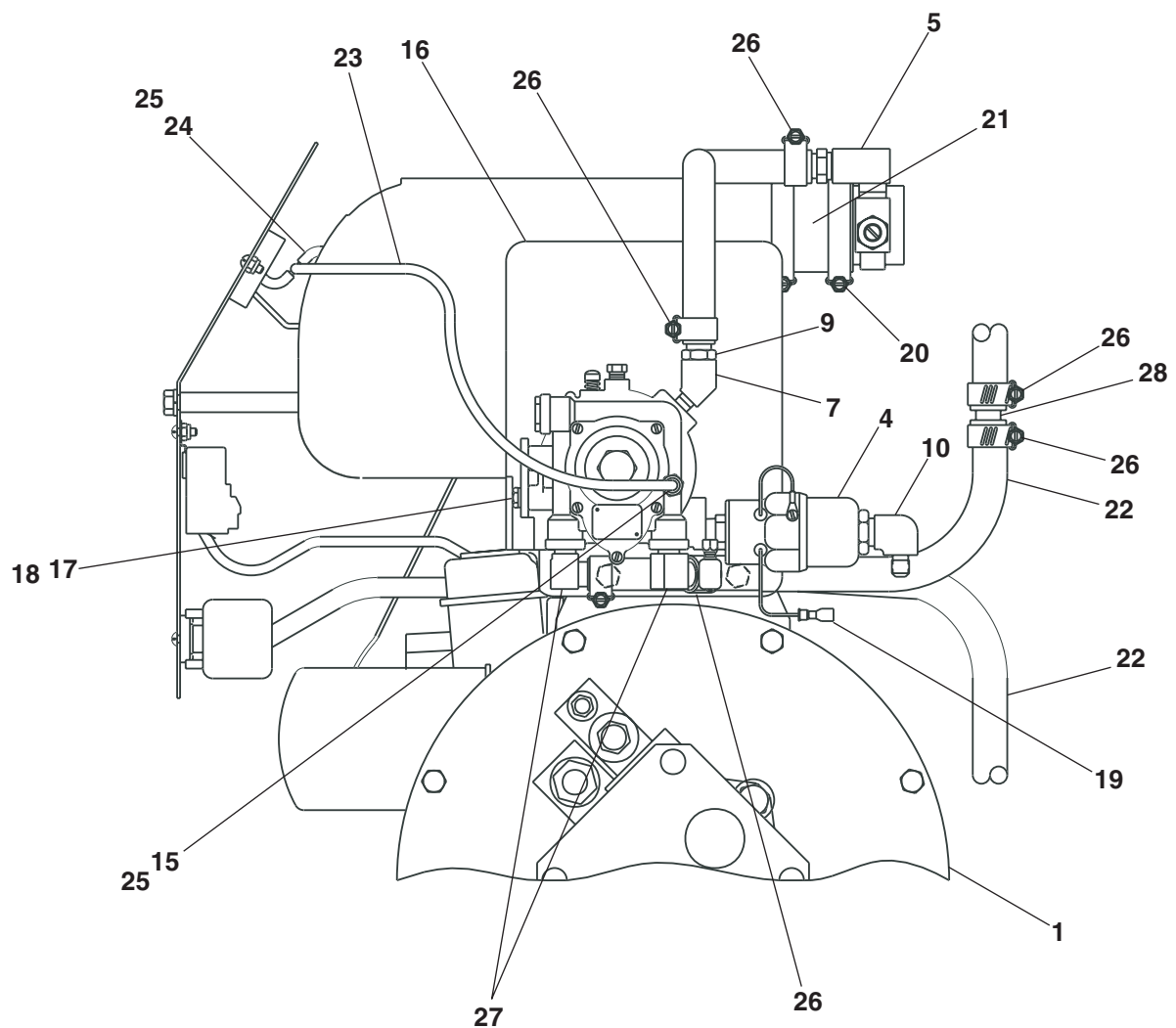
item	part no	qty	description
1	0112100	1	Dual fuel engine, Ford LRG-425 - (see page 4-22 for parts breakdown)
2	0070974	1	Coupler, female LPG
3	0181034	2	Mount bar
4	0080668	1	Relief valve mount bracket
5	0081441	1	Placard, caution liquid withdrawal
6	0101430	1	LP gas fuel hose
7	0101724	1	LP gas fuel hose
8	0181035	4	Angle
9	5093004	1	Clamp
10	5560031	9	Nut 5/16-18 self locking
11	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
12	986019	1	Washer 1/4 medium flat
13	9940011	2	Tank bracket
14	987109	16	Washer 5/16 medium lock
15	986269	9	Washer 5/16 medium flat
16	970239	8	Capscrew 5/16-18 x 3/4 inch long hex head grade 5
17	970259	9	Capscrew 5/16-18 x 1 inch long hex head grade 5
18	Kit item	1	Bulkhead tee - (included in dual fuel kit 0073444)
19	Kit item	1	Hydrostatic relief valve - (included in dual fuel kit 0073444)
20	Kit item	1	Connector - (included in dual fuel kit 0073444)
21	5090033	1	Street elbow 90° 1/4 NPT brass
22	970009	1	Capscrew 1/4-20 x 1/2 inch long hex head grade 5
23	987099	1	Washer 1/4 medium lock

**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 lights, 4 flood**

item	part no	qty	description
1	3067619	4	Headlight, halogen flood
	3064414	4	Light, incandescent flood with round base
2	5569003	4	Grommet
3	5093019	16	Clamp - (halogen flood light only)
4	3044142	1	Terminal #6 stud insulated 22/18 wire - (incandescent flood only)
5	3040068	1	Circuit breaker, 20 amp capacity
6	3040469	1	Relay, 12 volt DC
7	3020013	1	Switch, toggle
8	3040083	4	Terminal .250 tab female slip-on fully insulated 16/14 wire
9	3040082	4	Terminal .250 tab male slip-on fully insulated 16/14 wire
10	3011601	1	Wire, 16 gauge single conductor x 34 inch long
11	3090019	1	Flexgard tube, 28 foot long - (halogen flood light only)
	3090006	1	Flexgard tube, 28 foot long - (incandescent flood only)
12	5560034	17	Nut #10-24 self locking
13	3044161	4	Terminal #10 stud insulated 16/14 wire
14	0181376	1	Placard, light switch
15	0181031	1	Jumper wire
16	0181187	1	Jumper wire
17	0073057	2	Jumper wire
18	0073781	1	Jumper wire
19	0073250	2	Jumper wire
20	3044599	2	Terminal .250 tab female slip-on insulated 22/18 wire
21	5560692	16	Machine screw #10-24 x 1 inch long pan head
22	5569911	1	Machine screw #10-24 x 1-1/2 inch long truss head
23	970029	16	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
24	986019	16	Washer 1/4 medium flat
25	5560004	16	Nut 1/4-20 self locking



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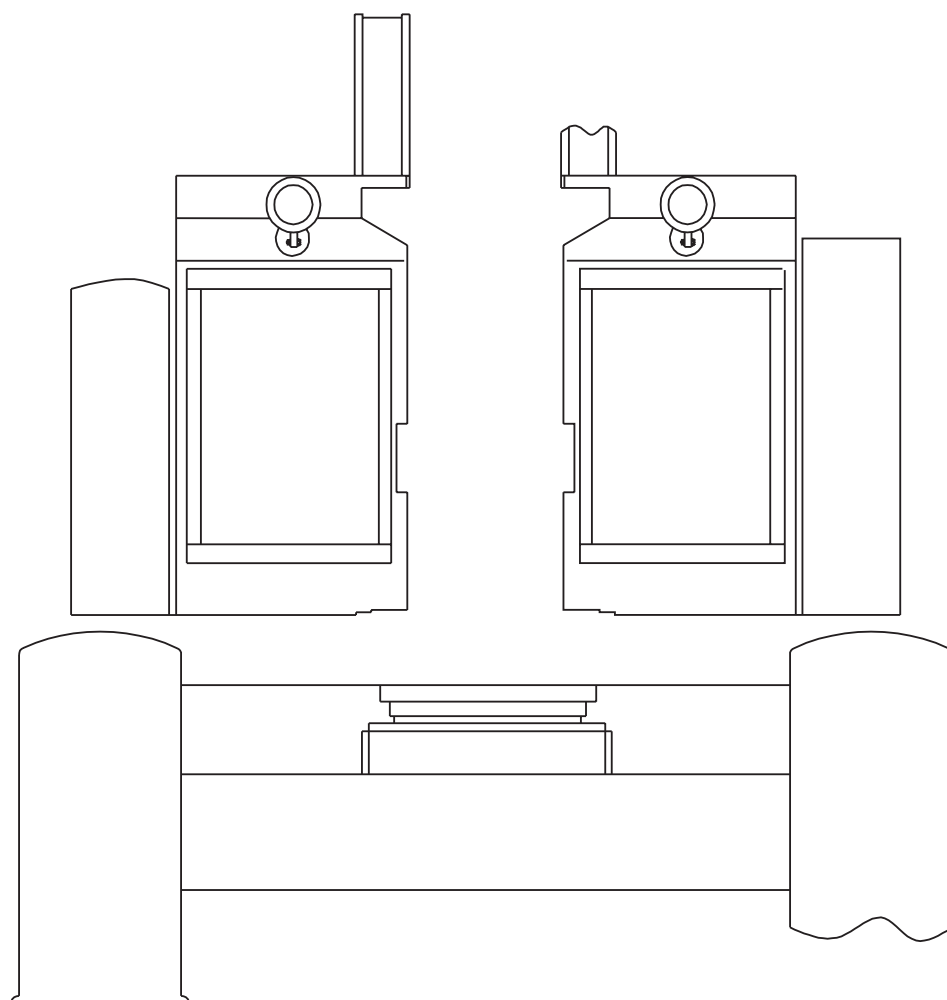
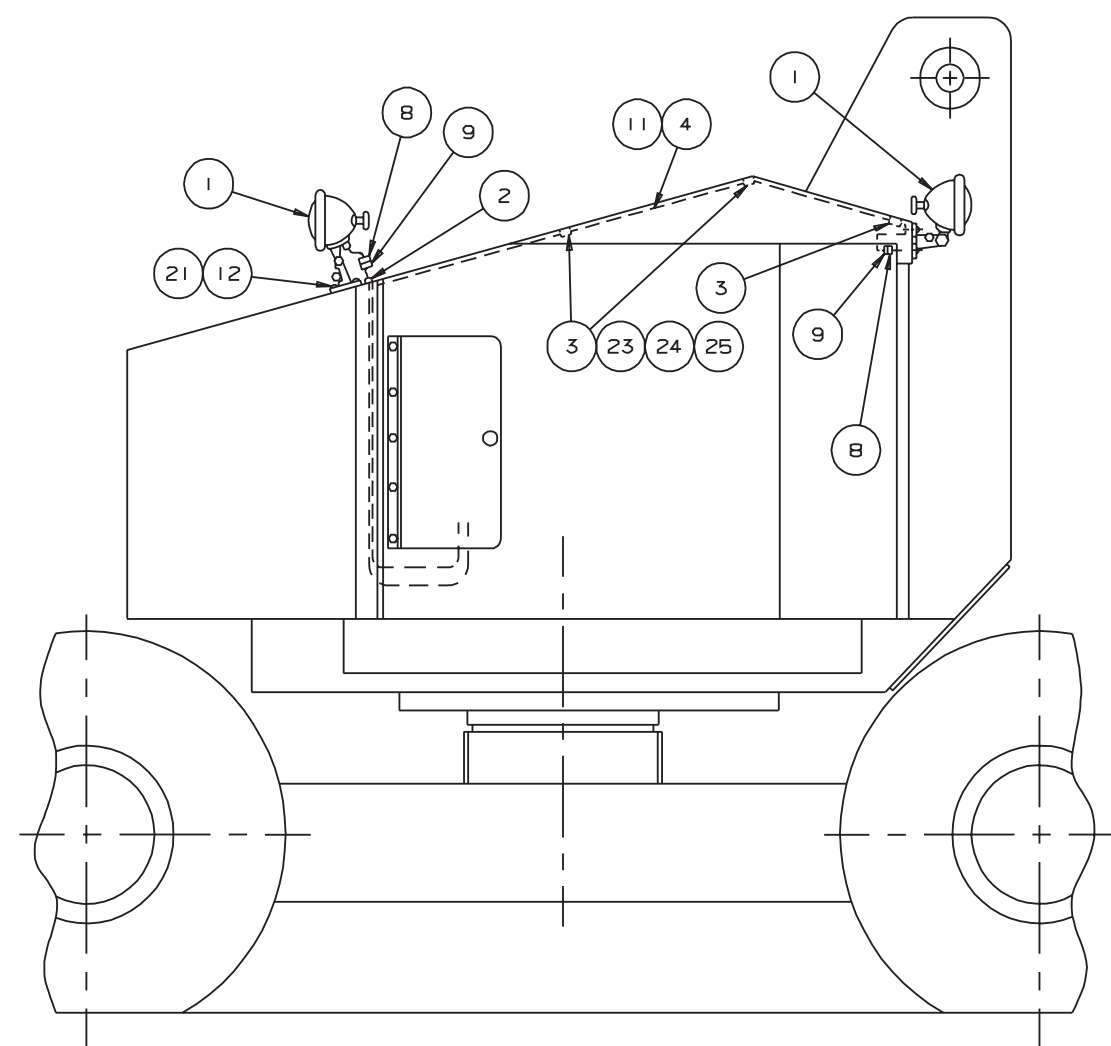
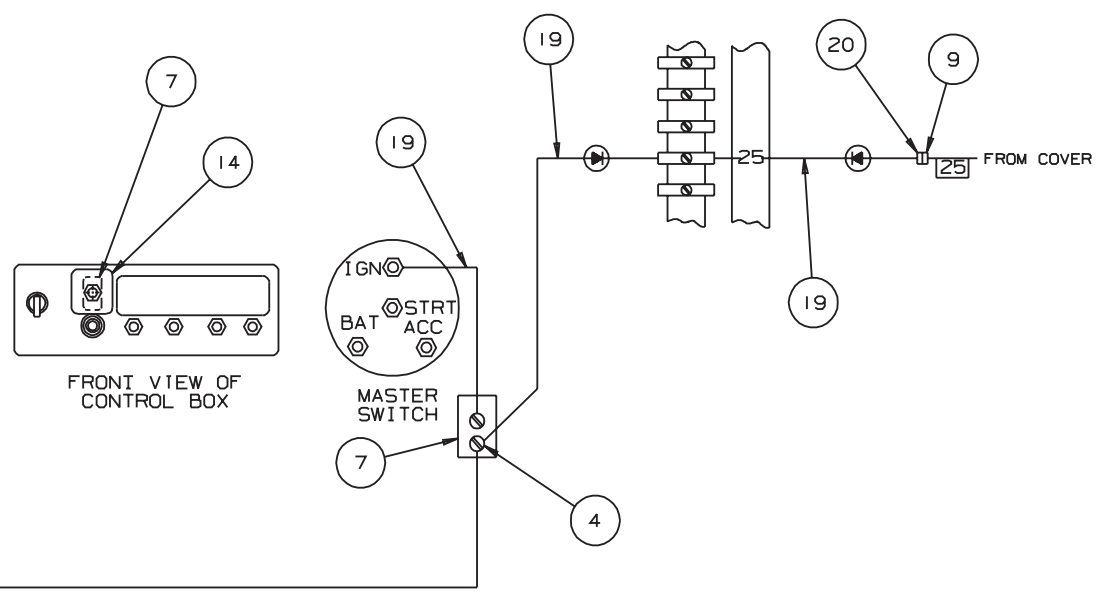
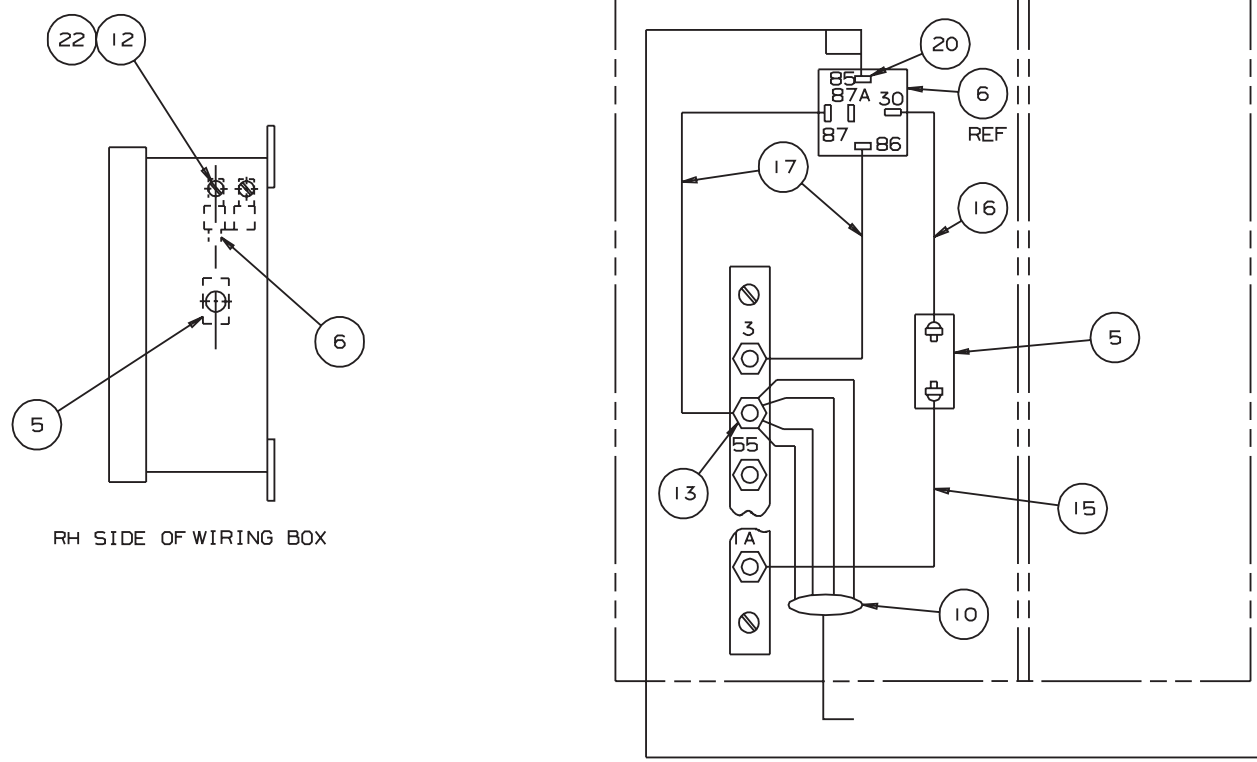
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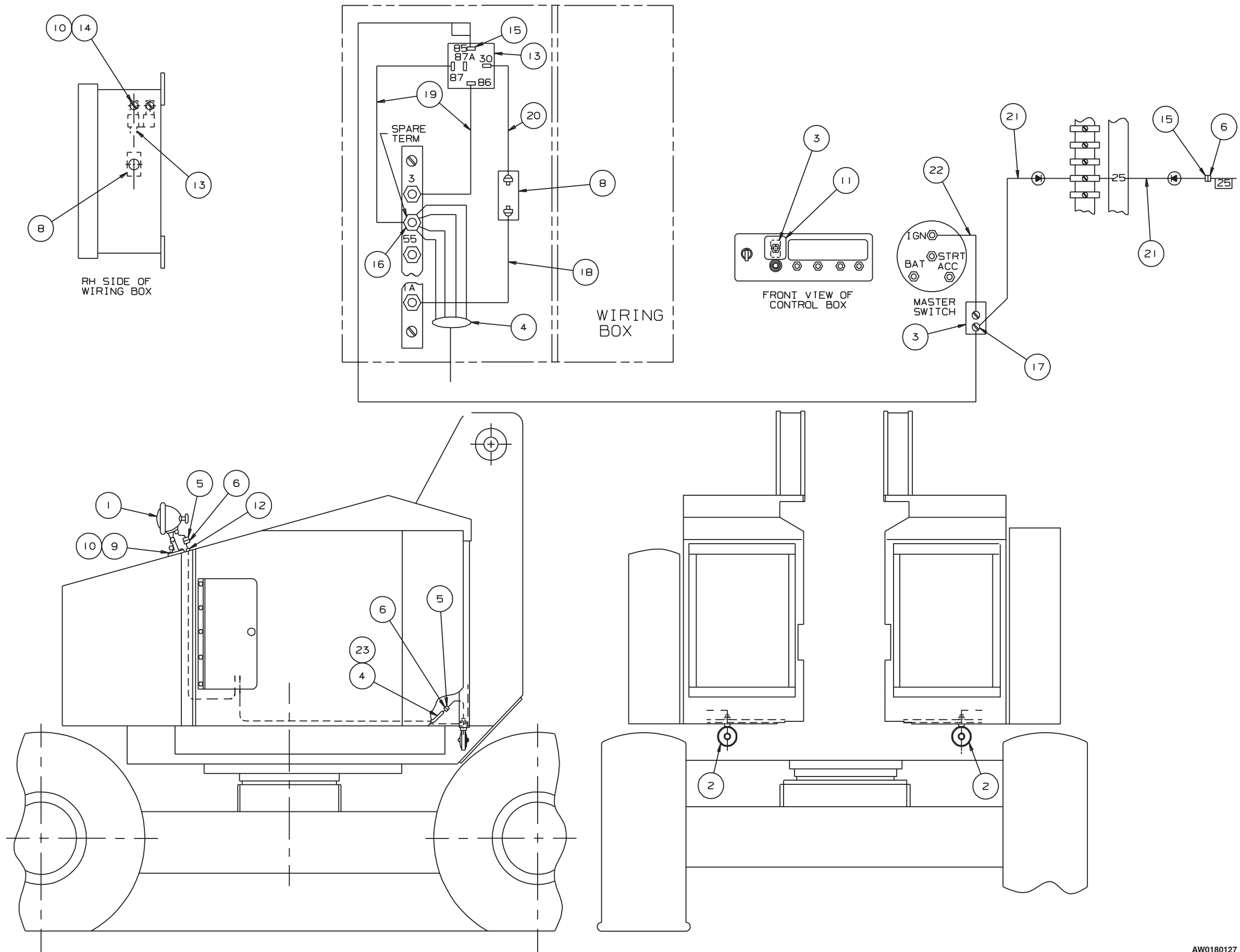


AW0180113

TITLE Driving lights
4 flood
Snorkel model ATB 60

DWG. 0180113





AW0180127

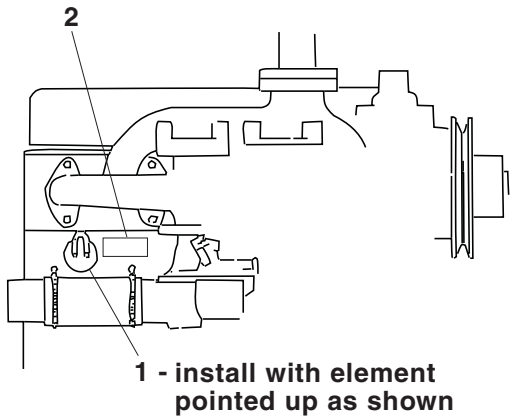
**Driving lights with red rear lights**

item	part no	qty	description
1	3067619	2	Headlight, halogen flood
2	3060017	2	Light, turn signal
3	3020013	1	Switch, toggle
4	3011601	1	Wire, 16 gauge single conductor x 30 feet long
5	3040083	5	Terminal .250 tab female slip-on fully insulated 16/14 wire
6	3040082	4	Terminal .250 tab male slip-on fully insulated 16/14 wire
7	5093019	10	Clamp
8	3040068	1	Circuit breaker, 20 amp capacity
9	5560692	8	Machine screw #10-24 x 1 inch long pan head
10	5560034	8	Nut #10-24 self locking
11	0181376	1	Placard, light switch
12	5569003	2	Grommet
13	3040469	1	Relay, 12 volt DC
14	5560692	1	Machine screw #10-24 x 1 inch long pan head
15	3044599	2	Terminal .250 tab female slip-on insulated 22/18 wire
16	3044161	4	Terminal #10 stud insulated 16/14 wire
17	3044142	1	Terminal #6 stud insulated 22/18 wire
18	0181031	1	Jumper wire
19	0073057	2	Jumper wire
20	0181187	1	Jumper wire
21	0073250	2	Jumper wire
22	0073781	1	Jumper wire
23	3090019	1	Flexgard tube, 360 inch long
24	970029	10	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
25	986019	10	Washer 1/4 medium flat
26	5560004	10	Nut 1/4-20 self locking

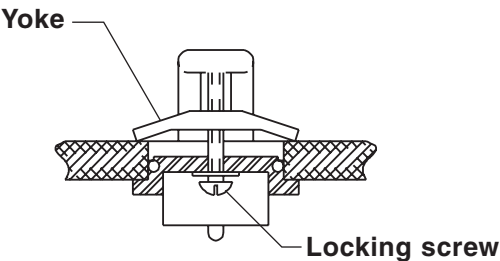


Engine block heater

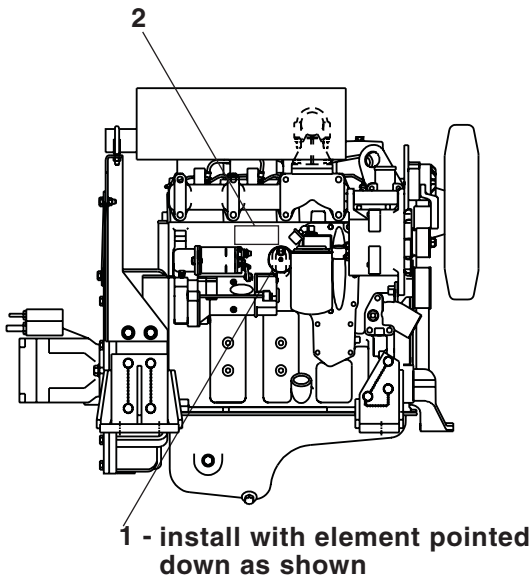
item	part no	qty	description
1	7630343	1	Engine block heater with cord, Ford engine
	7630289	1	Engine block heater with cord, Cummins engine
	7630276	1	Engine block heater with cord, Continental
2	0181634	1	Decal, engine block heater



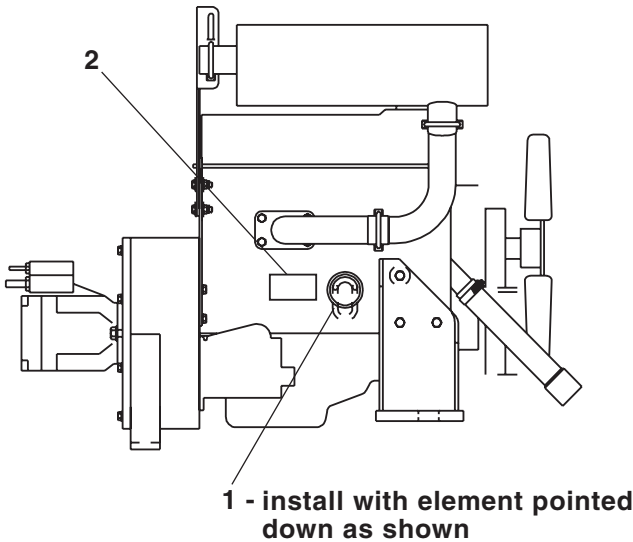
Continental engine



Heater installation position



Cummins 4B engine



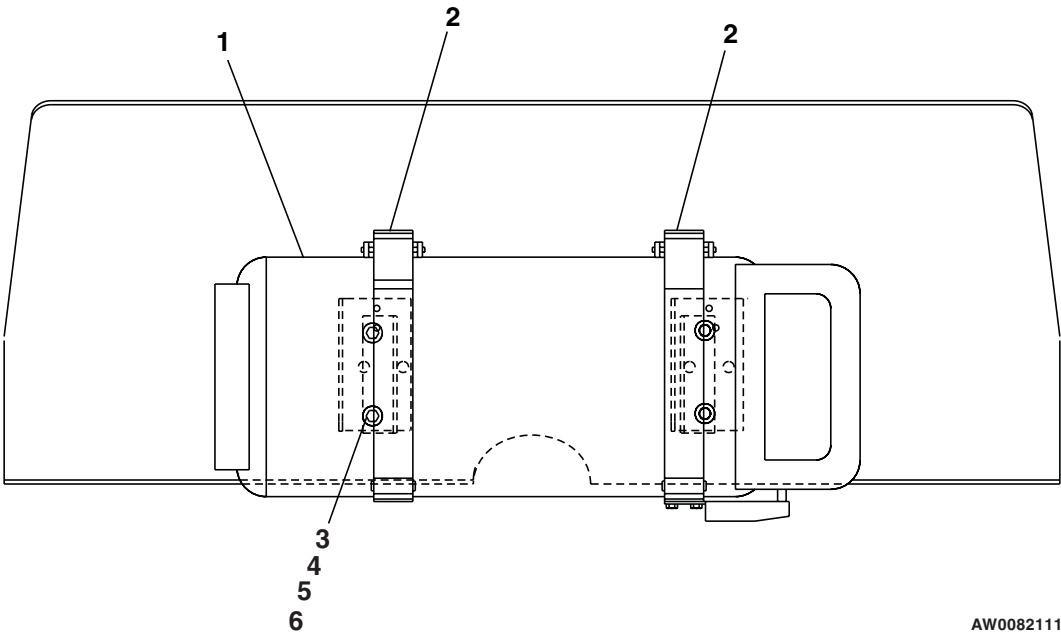
Ford engine

AWM00221



Extra LP fuel tank, Continental

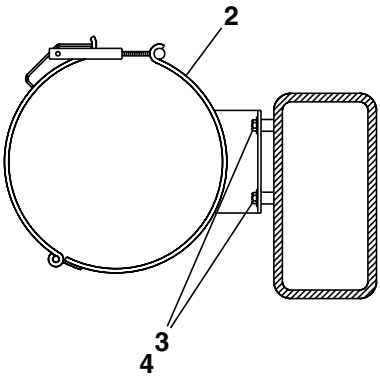
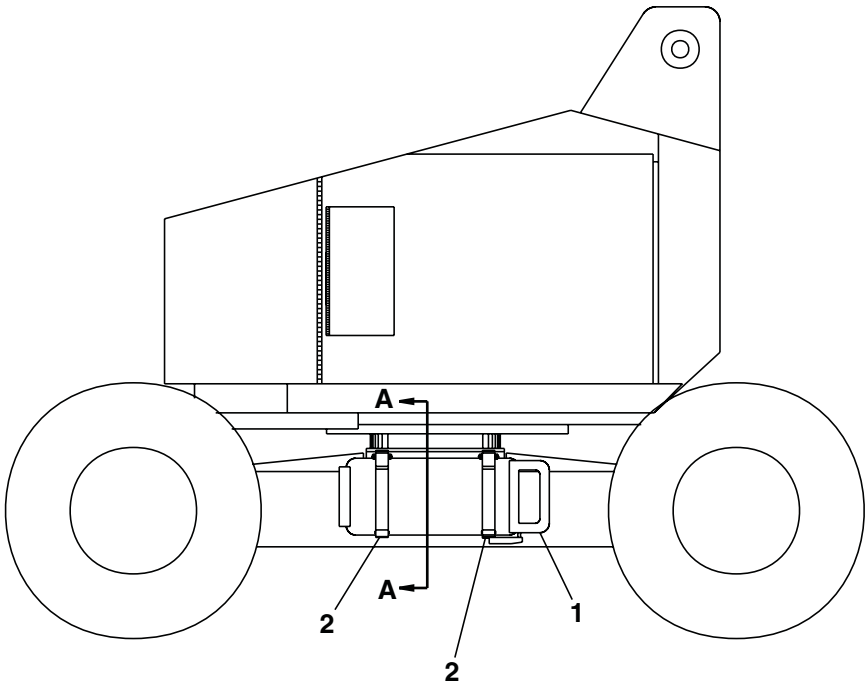
item	part no	qty	description
1	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
2	0070969	1	Bracket, LP gas cylinder - (includes left and right hand brackets)
3	970489	4	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
4	986299	4	Washer 3/8 medium flat
5	987119	4	Washer 3/8 medium lock
6	984109	4	Nut 3/8-16 hex





Extra LP fuel tank, Ford

item	part no	qty	description
1	9940005	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (before 3-23-99)
	9940018	1	LP gas cylinder, liquid withdrawal 43.5 lb capacity - (after 3-23-99)
2	0070969	1	Bracket, LP gas cylinder - (includes left and right hand brackets)
3	970449	4	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
4	986299	4	Washer 3/8 medium flat



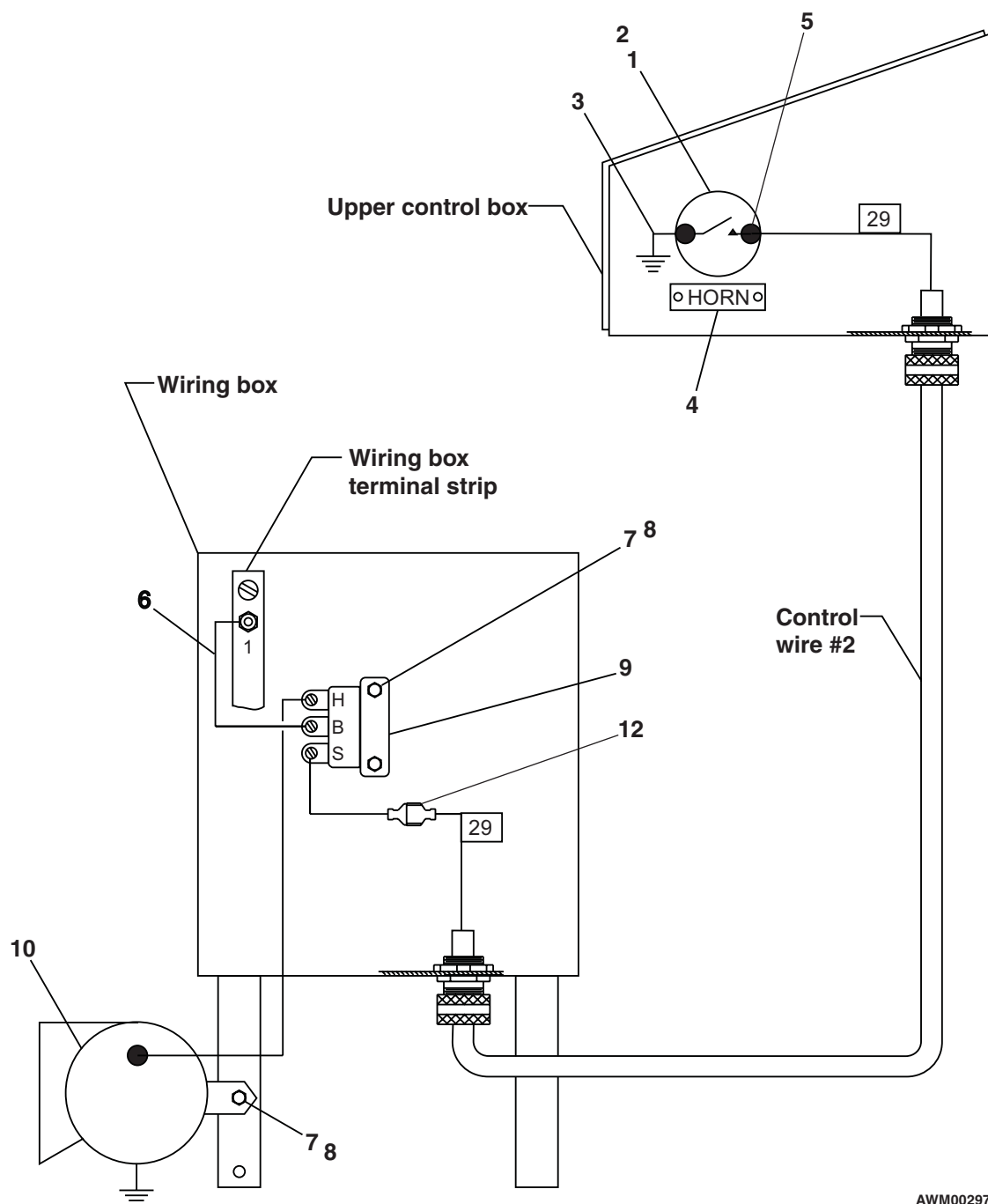
SECTION A-A

AW0181688



Operators horn

item	part no	qty	description
1	3026027	1	Switch, push button
2	7140092	1	Switch seal
3	0070733	1	Jumper wire
4	0071269	1	Placard, horn
5	3044145	1	Terminal #8 stud insulated 22/18 wire
6	0150973	3	Jumper wire
7	970029	3	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
8	5560004	1	Nut 1/4-20 self locking
9	3040128	1	Horn relay, 12 volt DC
10	3040127	1	Horn, 12 volt DC
11	0071557	1	Jumper wire
12	3040083	1	Terminal .250 tab female fully insulated 16/14 wire



AWM00297

**Heat exchanger**

item	part no	qty	description
1	6050001	1	Heat exchanger
2	0181526	2	Mount bracket, heat exchanger
3	6050003	1	Temperature controller
4	0181529	1	Mount plate, temperature controller
5	5033729	1	Male 90° elbow
6	5033720	1	Male 90° elbow
7	5033633	1	Male adapter
8	5037011	1	Swivel nut 90° elbow
9	5033621	1	Male adapter
10	5037010	2	Swivel nut 90° elbow
11	5031810	2	Elbow 90° long male
12	0180943	1	1-1/4 inch hydraulic hose
13	0181528	1	Heat exchanger hose
14	0181527	1	Heat exchanger hose
15	5093010	4	Clamp
16	0080590	4	Neoprene spacer
17	5093014	1	Clamp
18	970219	2	Capscrew 5/16-18 x 1/2 inch long hex head grade 5
19	970259	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
20	986269	14	Washer 5/16 medium flat
21	5560031	4	Nut 5/16-18 self locking
22	970469	4	Capscrew 3/8-16 x 1 inch long hex head grade 5
23	970489	1	Capscrew 3/8-16 x 1-1/2 inch long hex head grade 5
24	986299	10	Washer 3/8 medium flat
25	5560033	5	Nut 3/8-16 self locking
26	970969	2	Capscrew 1/2-13 x 3 inch long hex head grade 5
27	986359	2	Washer 1/2 medium flat
28	5560039	2	Nut 1/2-13 self locking

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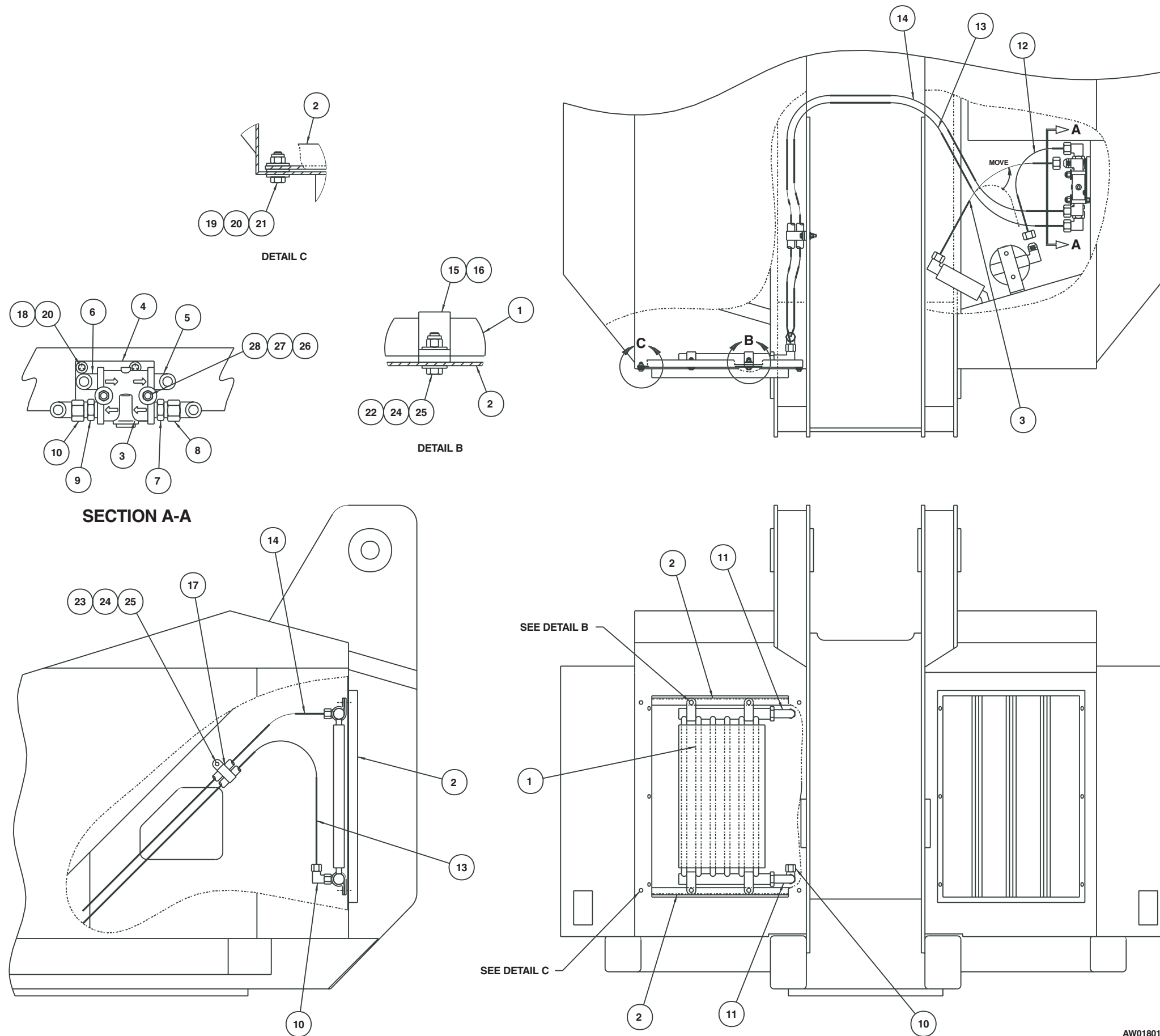
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AW0180148

TITLE Heat exchanger

DWG. 0180148

Snorkel model ATB 60

 **Snorkel**
INTERNATIONAL

Page 4 - 33



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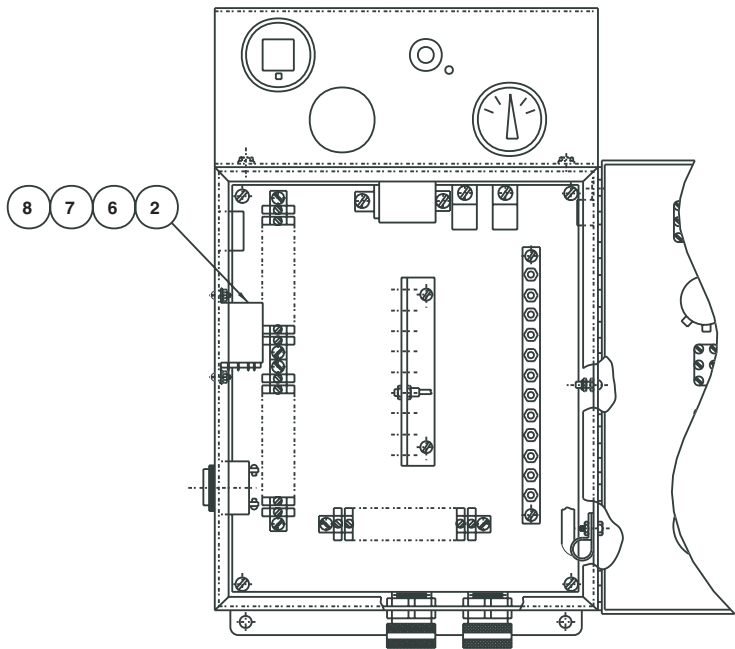
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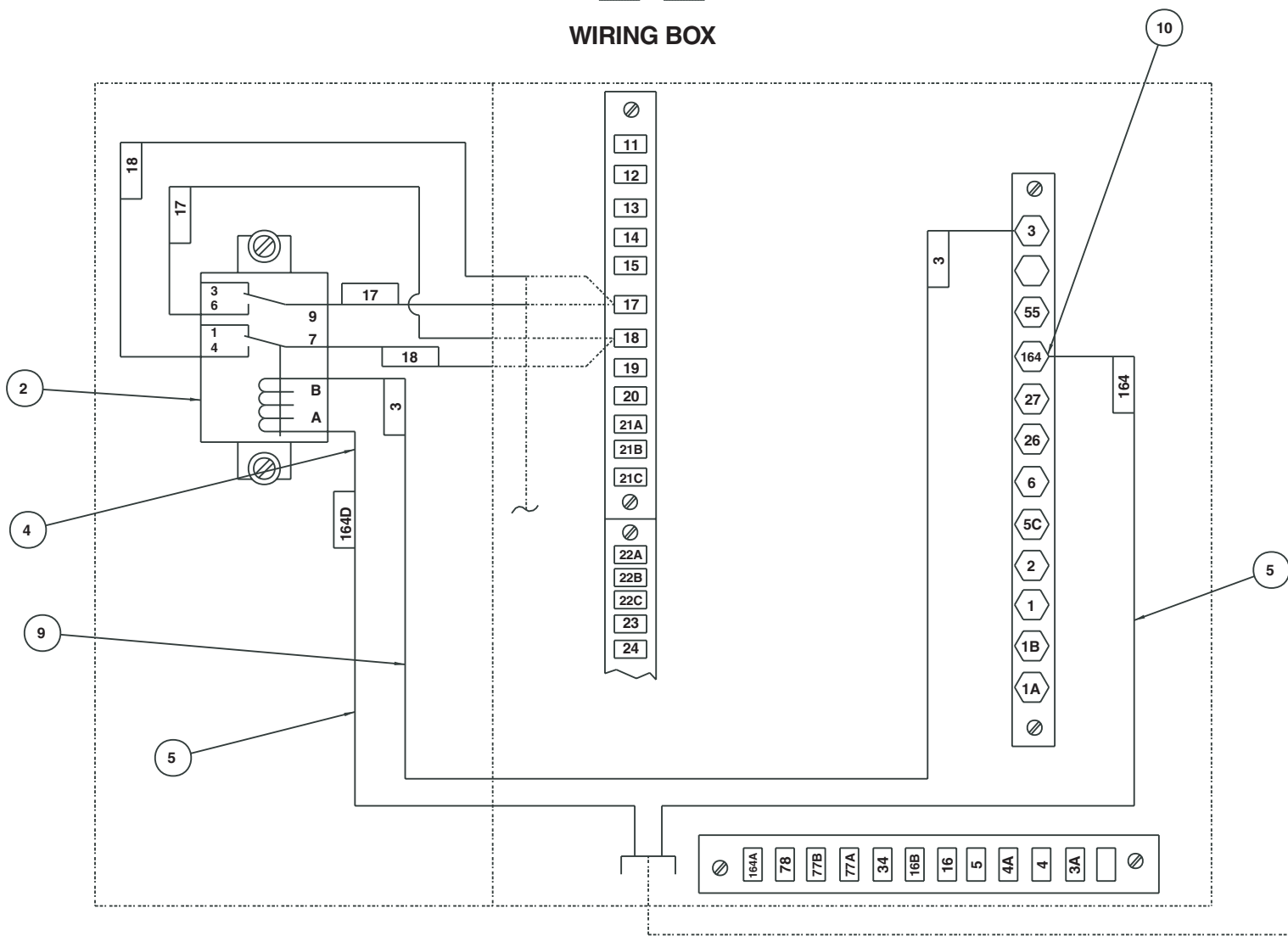
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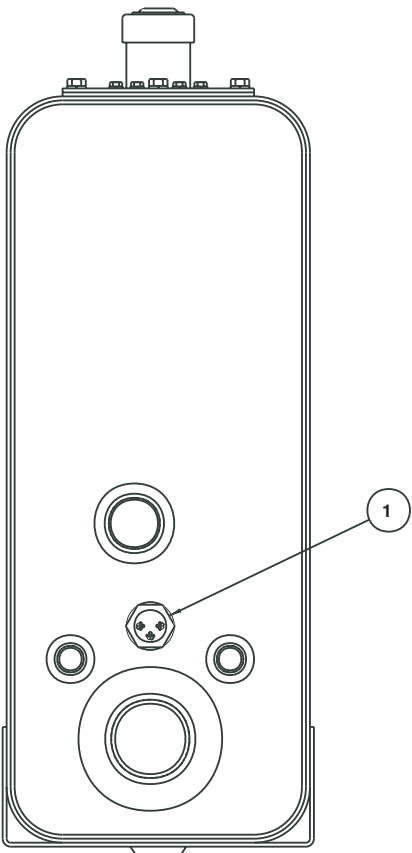
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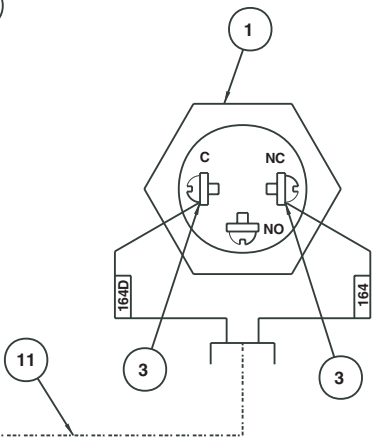
WIRING BOX



ELECTRICAL SCHEMATIC



HYD OIL
RESERVOIR



TITLE Hydraulic oil temperature
shutdown
Snorkel model ATB 60

DWG. 0180164

AW0180164



Hydraulic oil temperature shutdown

item	part no	qty	description
1	3020117	1	Temperature switch
2	3040214	1	Relay, 12 volt DC
3	3044160	2	Terminal #10 stud insulated 16/14 wire
4	3046697	1	Terminal .188 tab female slip-on insulated 16/14 wire
5	3011601	1	Wire, 16 gauge single conductor x 216 inch long
6	974239	2	Machine screw #6-32 x 1/2 inch long round head
7	984009	2	Nut #6-32 hex
8	986159	2	Washer #6 medium flat
9	0073728	1	Jumper wire
10	3044161	1	Terminal #10 stud insulated 16/14 wire
11	3090006	1	Flexgard tube, 96 inch long

**Hydraulic system warm-up**

item	part no	qty	description
1	0181285	1	Diode jumper wire
2	6010499	1	Solenoid valve
	0073620	1	Seal repair kit
	6010472	1	Replacement cartridge
	3040473	1	Replacement solenoid, 12 volt DC
3	6010083	1	Shuttle valve
4	3020078	1	Temperature switch
5	3020013	2	Switch, toggle
6	0071793	1	Decal, hydraulic warm-up instructions
7	0071792	2	Placard, warm-up switch
8	0071844	1	Jumper wire
9	0070753	1	Jumper wire
10	0073071	1	Jumper wire
11	0181161	1	1/4 inch hydraulic hose
12	0070773	1	1/4 inch hydraulic hose
13	0180946	1	1/4 inch hydraulic hose
14	5036703	1	Swivel nut run tee
15	5036903	1	Swivel nut 45° elbow
16	5065705	2	Straight thread adapter
17	5035318	1	Straight thread 90° elbow
18	5076301	1	Union
19	5036805	1	Swivel nut branch tee
20	5035705	1	Straight thread 45° elbow
21	3090006	1	Flexgard tube, 84 inch long
22	3011601	1	Wire, 16 gauge single conductor x 108 inch long
23	3044160	2	Terminal #10 stud insulated 16/14 wire
24	3044161	1	Terminal #10 stud insulated 16/14 wire
25	3044142	1	Terminal #6 stud insulated 22/18 wire
26	3040047	1	Terminal .250 tab female slip-on fully insulated 22/18 wire
27	3046697	1	Terminal .188 tab female slip-on insulated 16/14 wire
28	5569886	2	Capscrew 1/4-20 x 1-3/4 inch long hex head grade 5
29	987099	2	Washer 1/4 medium lock
30	986019	2	Washer 1/4 medium flat
31	0181398	1	Diode jumper wire

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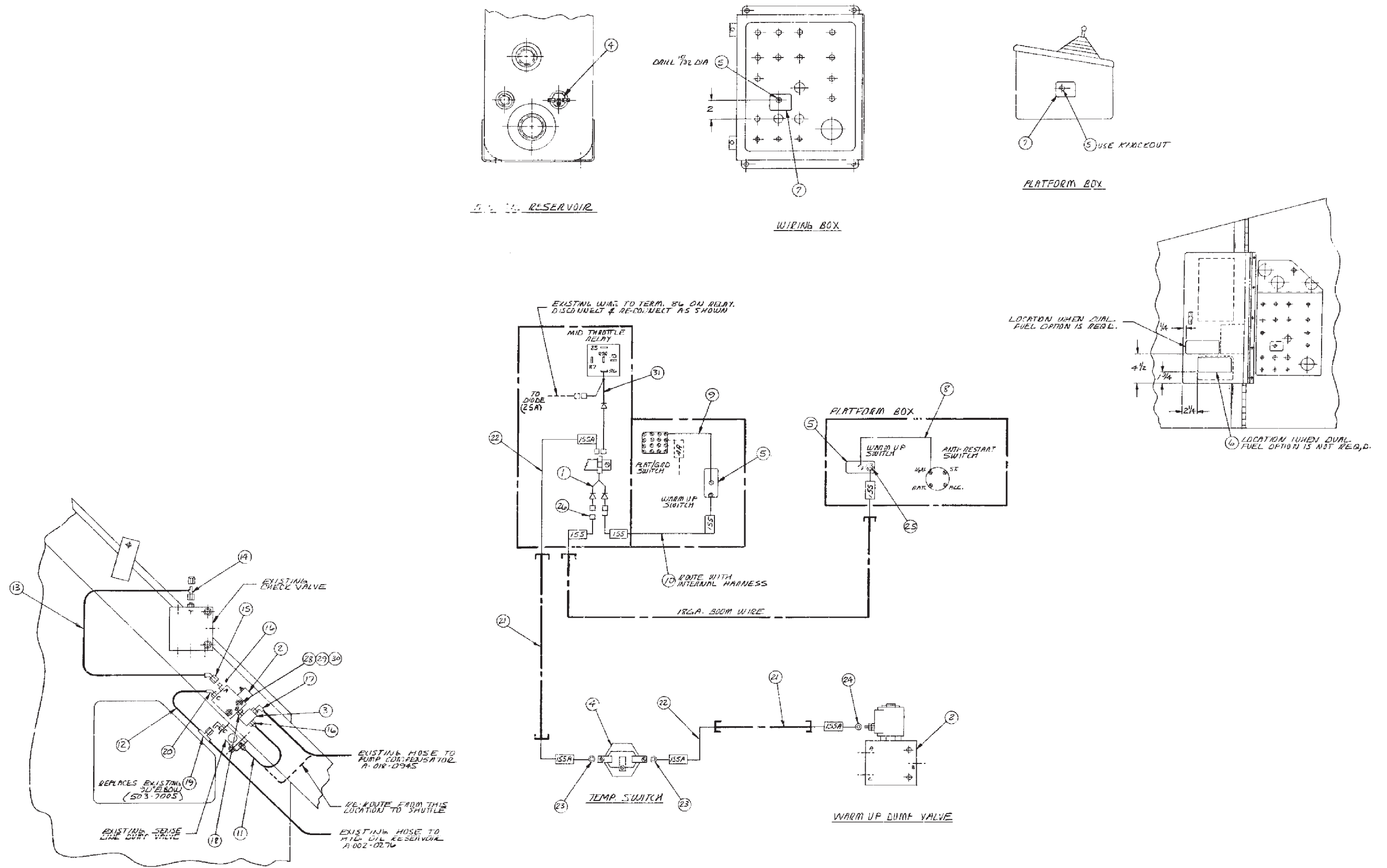
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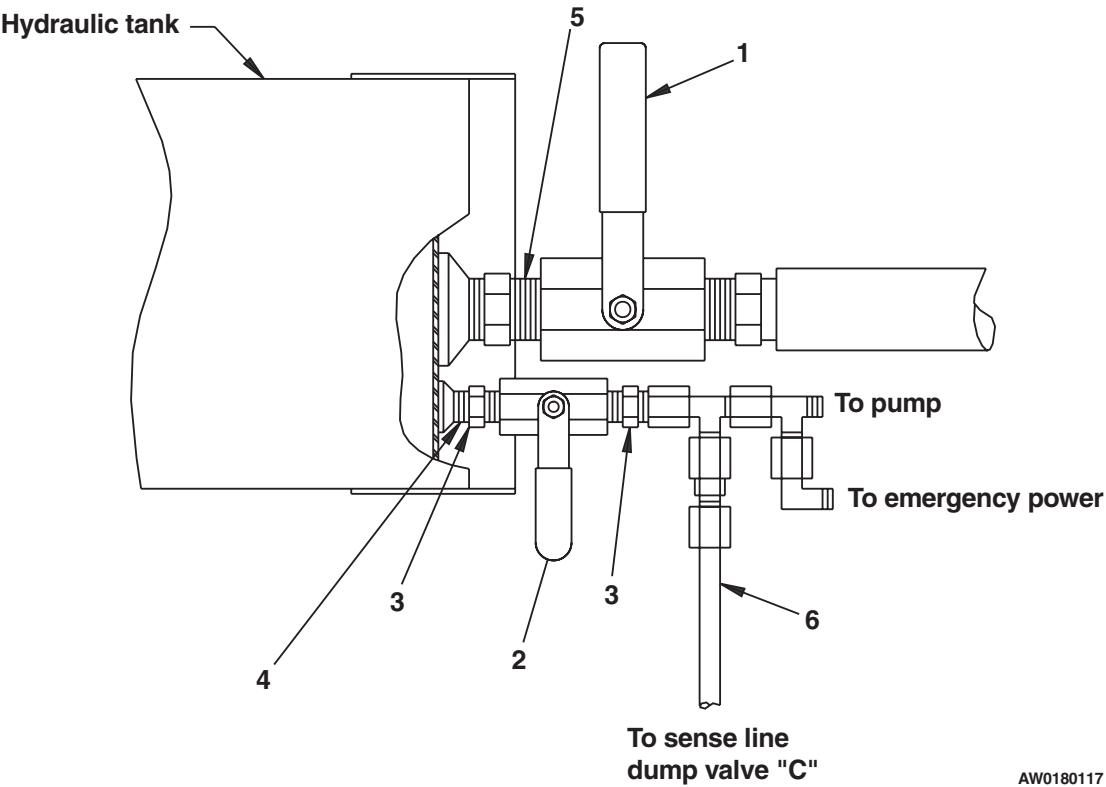


AW0180097



Isolation valve

item	part no	qty	description
1	6010498	1	Ball valve, 1-1/2 NPT
2	6010495	1	Ball valve, 3/4 NPT
3	7720604	2	Reducer bushing 3/4 x 1/2
4	7740014	1	Close nipple 1/2 NPT
5	7741214	1	Close nipple 1-1/2 NPT
6	0020277	1	3/8 inch hydraulic hose

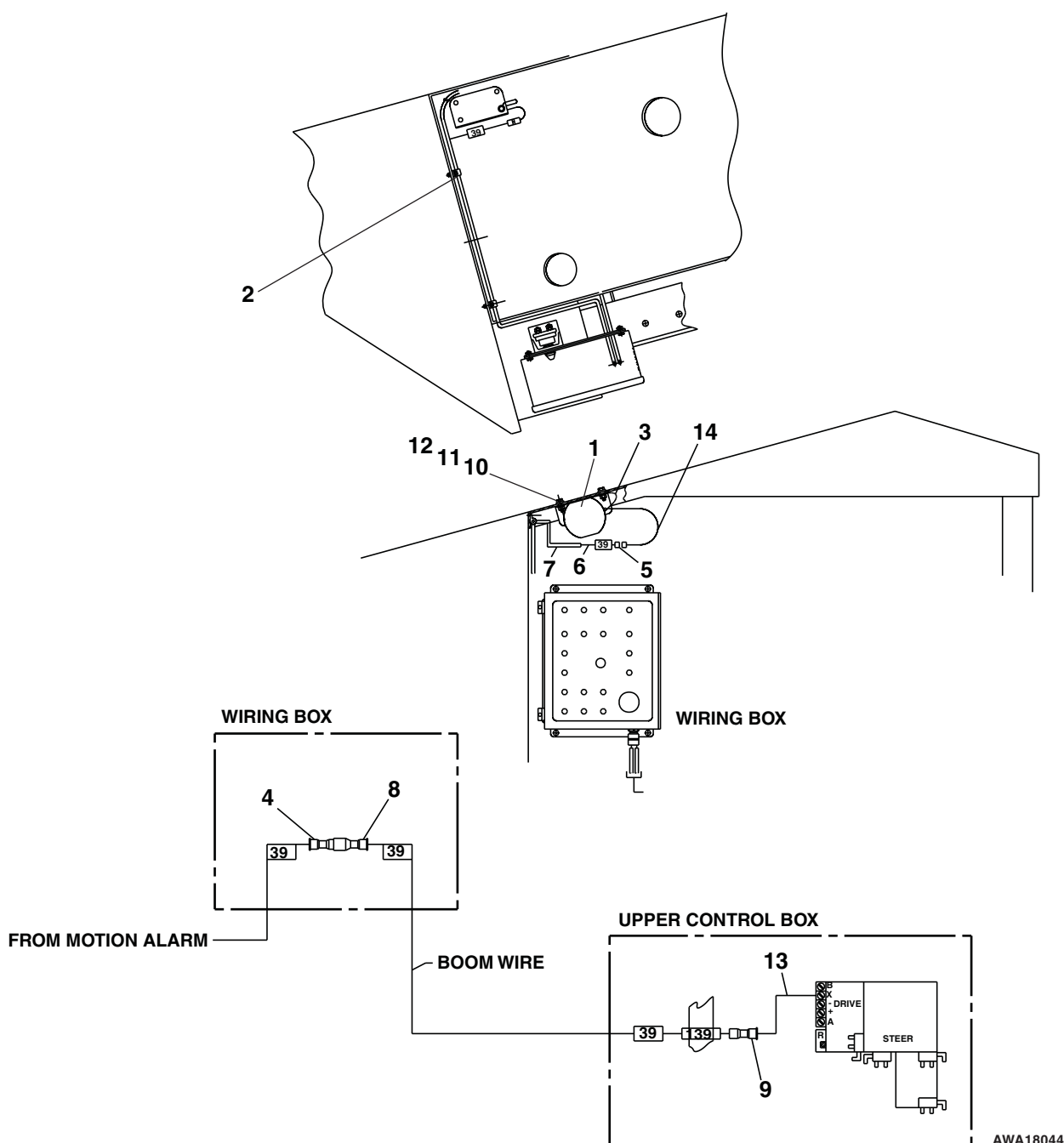


AW0180117



Motion alarm, drive

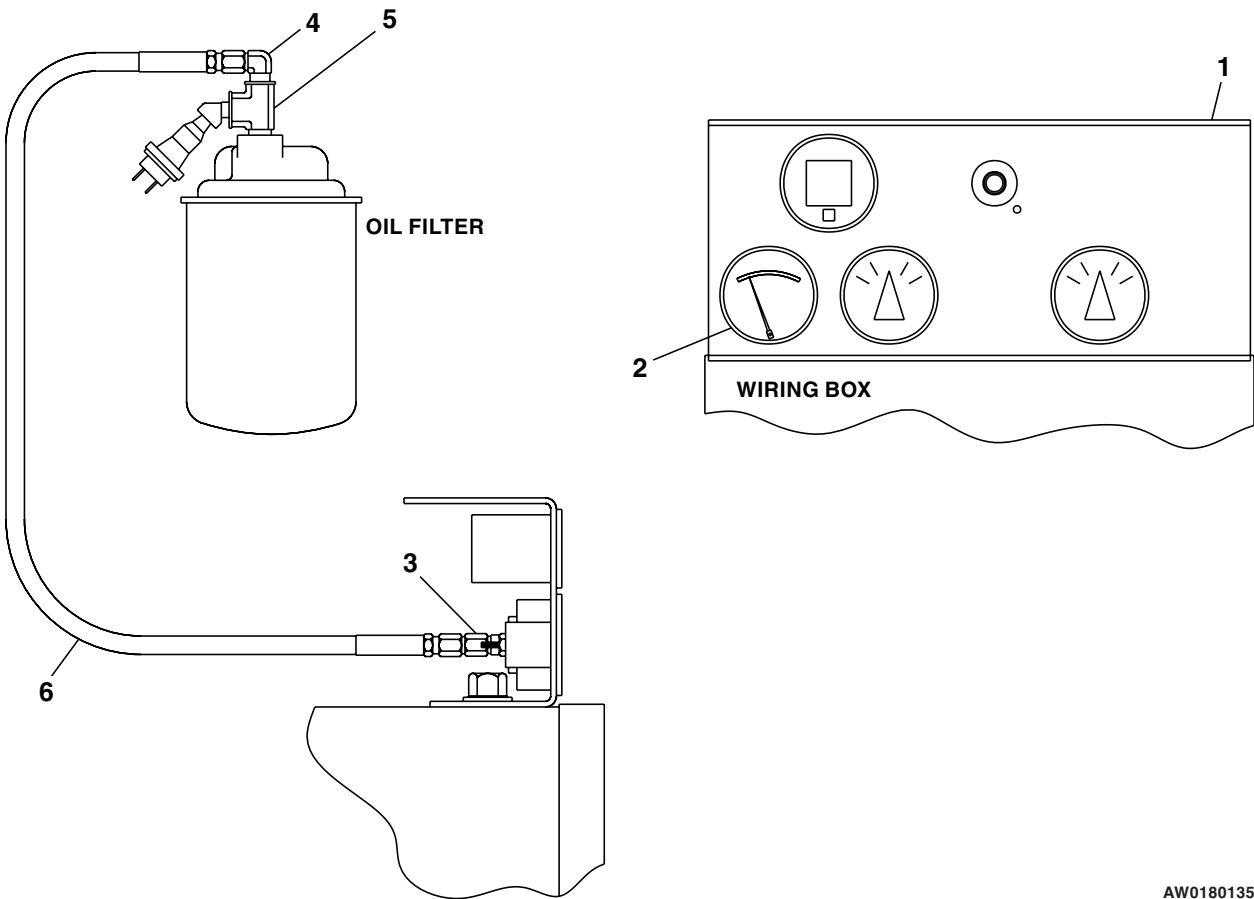
item	part no	qty	description
1	3040129	1	Motion warning alarm, standard
	3040462	1	Motion warning alarm, UL approved
2	5093000	1	Clamp
3	0100570	1	Jumper wire
4	3040083	1	Terminal .250 tab female fully insulated 16/14 wire
5	3040082	1	Terminal .250 tab male fully insulated 16/14 wire
6	3011601	1	Wire, 16 gauge single conductor x 72 inch long
7	3090006	1	Flexgard tube, 60 inch long
8	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
9	3046972	2	Terminal .188 tab female slip-on insulated 22/18 wire
10	970259	4	Capscrew 5/16-18 x 1 inch long hex head grade 5
11	986269	8	Washer 5/16 medium flat
12	5560031	4	Nut 5/16-18 self locking
13	0073071	1	Jumper wire
14	0181113	1	Jumper wire





Oil pressure gauge, Cummins

item	part no	qty	description
1	0181459-99	1	Instrument panel
2	5210009	1	Oil pressure gauge
3	5038801	1	Female adapter
4	5033703	1	Male 90° elbow
5	5090018	1	Pipe tee
6	0070772	1	1/4 inch hydraulic hose

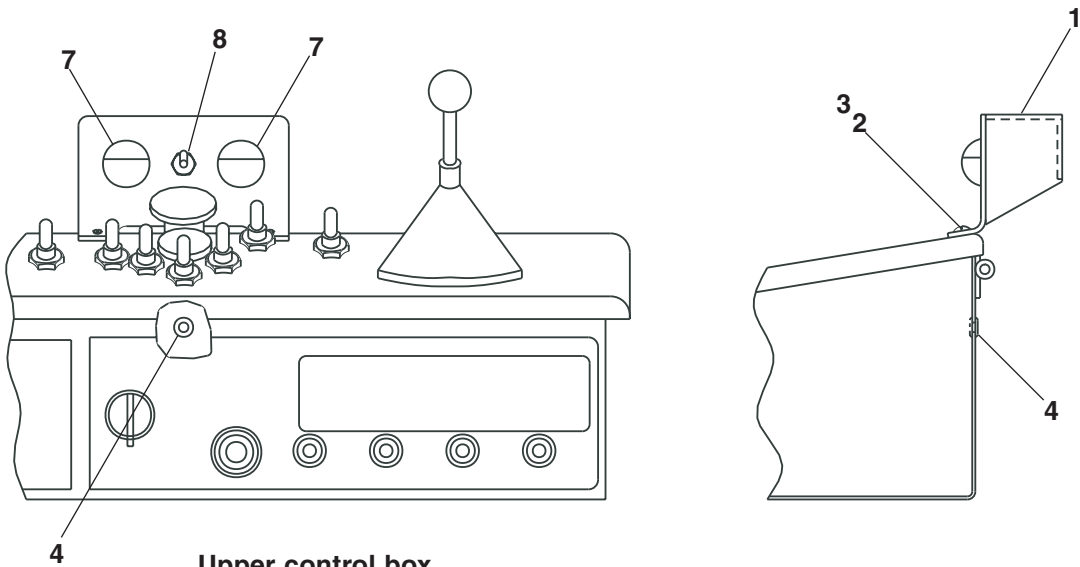


AW0180135

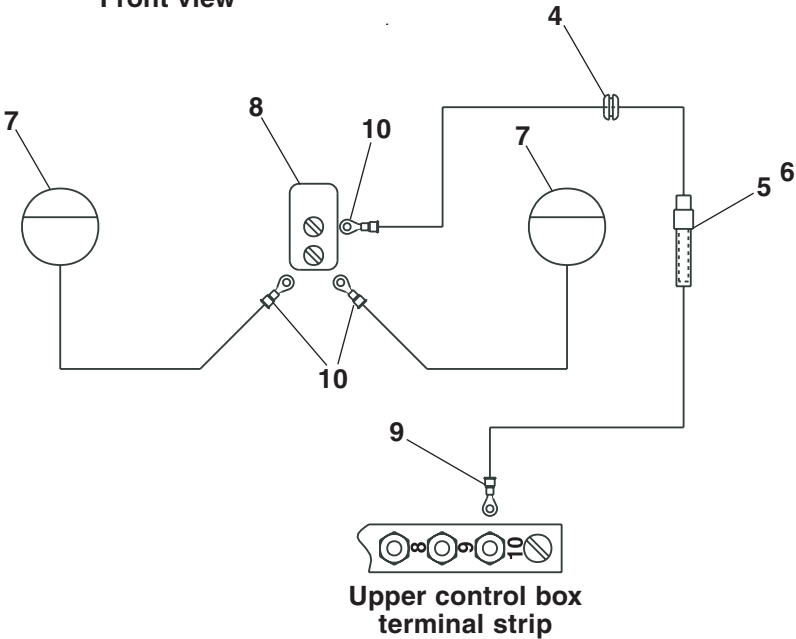


Platform lights

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

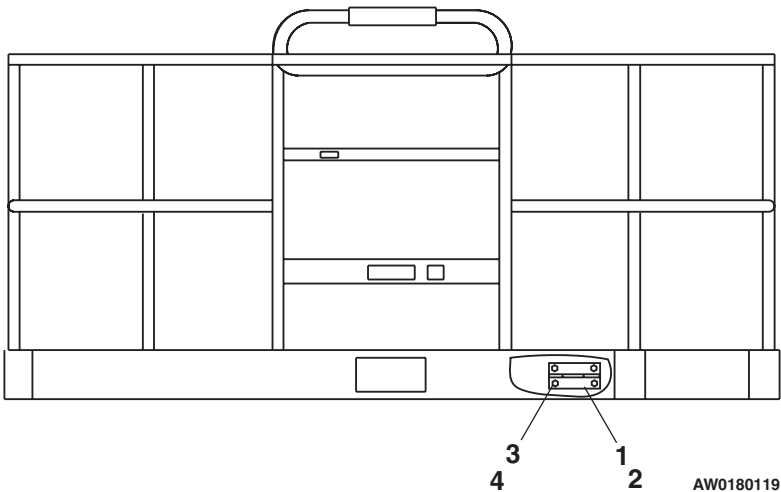


AW0072012



Safety belt anchor

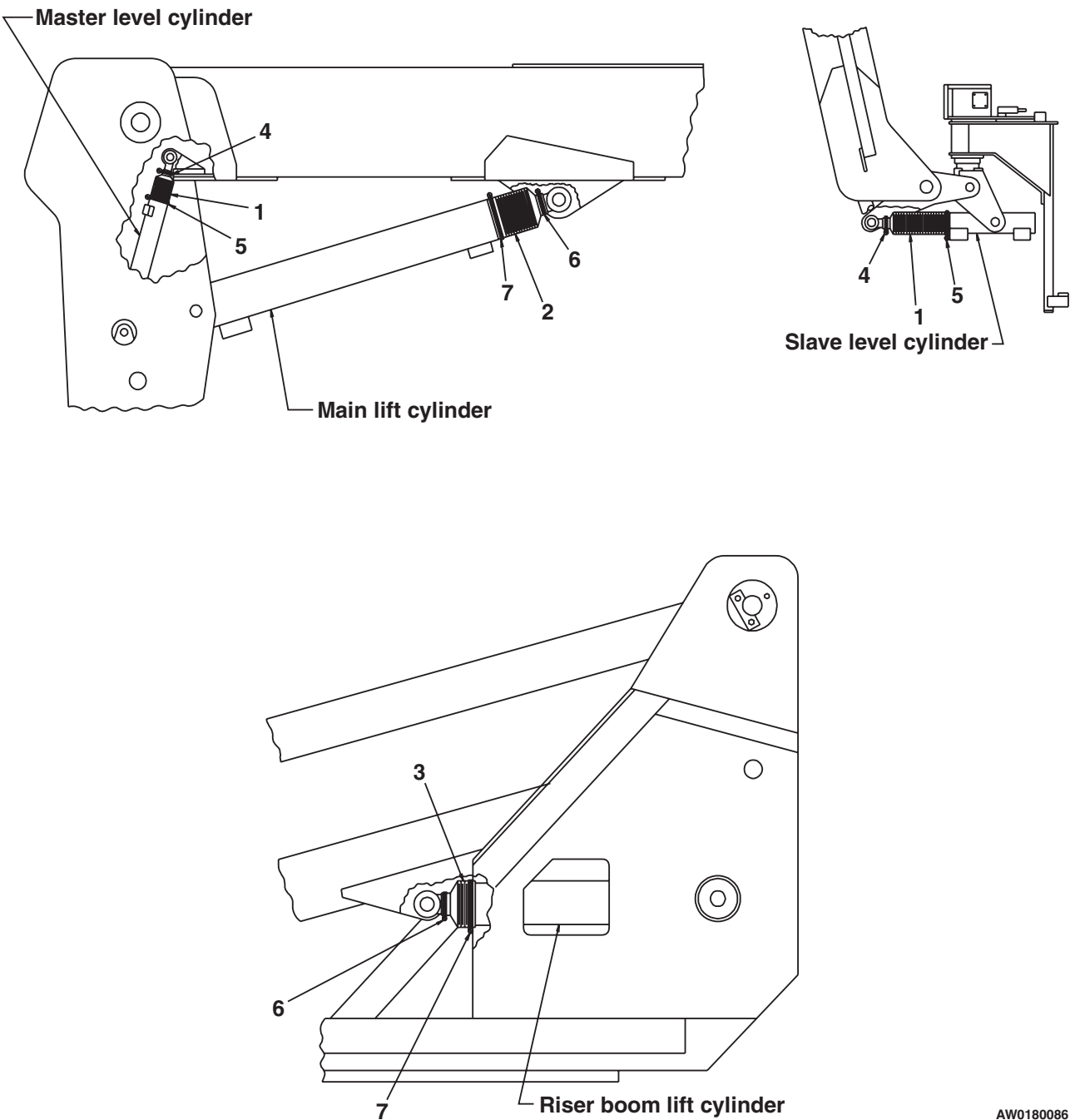
item	part no	qty	description
1	0130088	2	Bracket, safety belt
2	0130090	2	Doubler plate
3	5560674	8	Capscrew 5/16-18 x 1-1/2 inch long hex head grade 5
4	5560031	8	Nut 5/16-18 self locking





Sandblast kit

item	part no	qty	description
1	0181159	2	Bellows, slave level cylinder
2	0181158	1	Bellows, main lift cylinder
3	0181157	1	Bellows, riser boom lift cylinder
4	5550020	2	Clamp
5	5550050	2	Clamp
6	5550040	2	Clamp
7	475036	2	Clamp

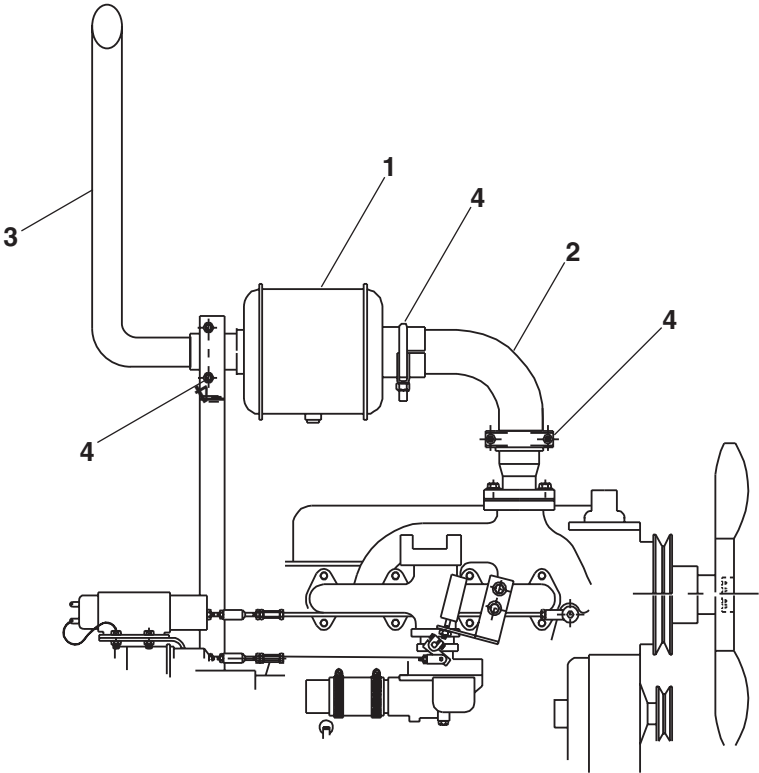


AW0180086



Spark arrestor, muffler Continental

item	part no	qty	description
1	7630243	1	Muffler, spark arrestor
2	0181453	1	Exhaust pipe
3	0181454	1	Tail pipe
4	5550027	3	Clamp



AW0180134



**Proximity sensing system**

item	part no	qty	description
1	0181333	1	Platform, proximity switch
2	0152257	1	Actuator rod
3	0152258	4	Limit switch
4	0181437	4	Limit switch mount plate
5	970049	4	Capscrew 1/4-20 x 1 inch long hex head grade 5
6	986019	16	Washer 1/4 medium flat
7	5560004	10	Nut 1/4-20 self locking
8	970129	4	Capscrew 1/4-20 x 3 inch long hex head grade 5
9	5560034	11	Nut #10-24 self locking
10	974759	8	Machine screw #10-24 x 2 inch long round head
11	986009	11	Washer #10 medium flat
12	0181407	1	Placard, proximity switch override
13	3020080	1	Switch, toggle
14	3090969	1	Relay
15	3044704	1	Terminal strip, 4 circuit #10 stud
16	0181595	1	Diode wire
17	0181594	1	Diode wire
18	0070758	1	Jumper wire
19	0181103	2	Jumper wire
20	0150756	2	Jumper wire
21	3011802	1	Wire 18 gauge, 2 conductor x 45 feet long
22	974689	2	Machine screw #10-24 x 3/4 inch long round head
23	974639	1	Machine screw #10-24 x 3/8 inch long round head
24	3040300	4	Connector
25	3040070	4	Connector locknut
26	0181104	1	Jumper wire
27	9980006	1	Plastic flexible pipe, 3/8 inch diameter x 480 inch long
28	5093003	4	Clamp
29	5093005	8	Clamp
30	987099	12	Washer 1/4 medium lock



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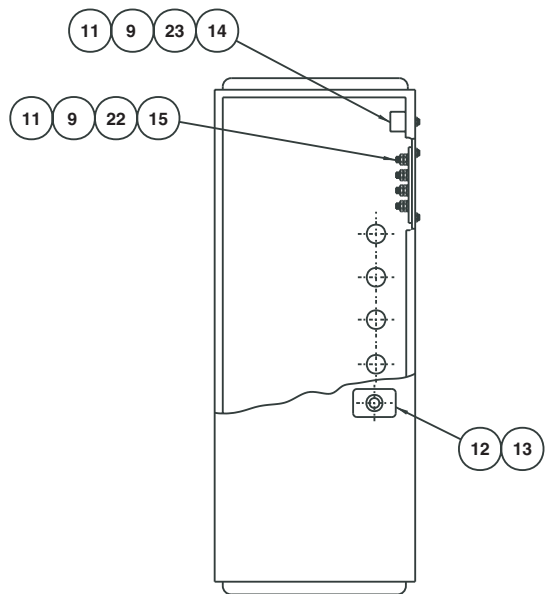
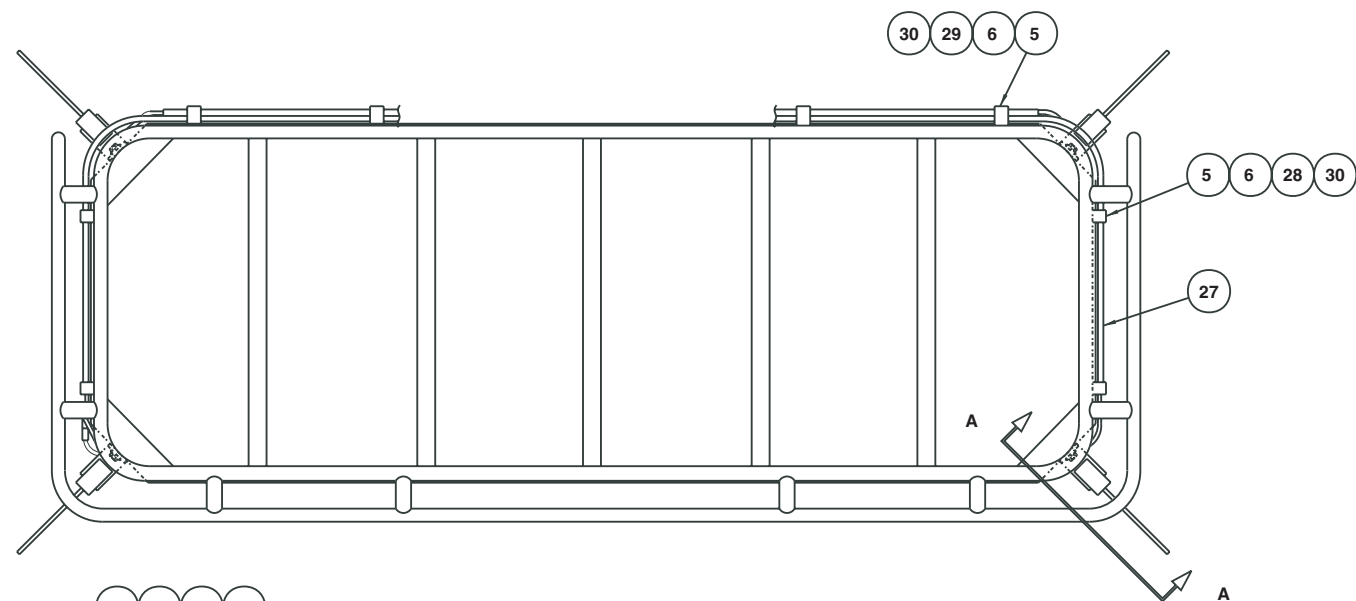
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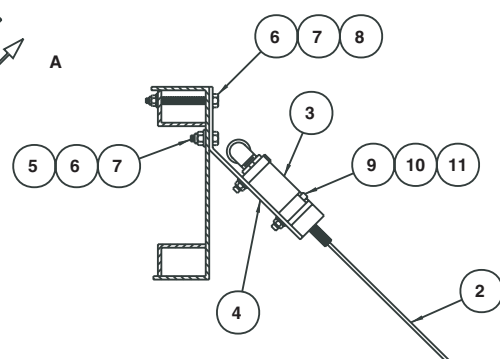
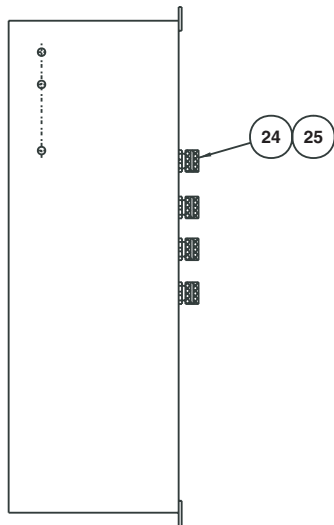
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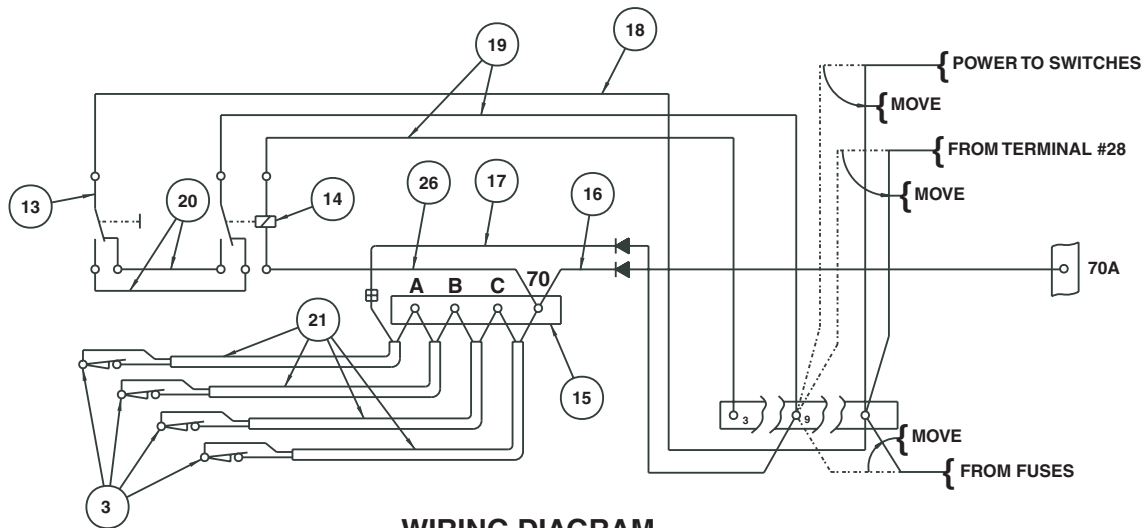
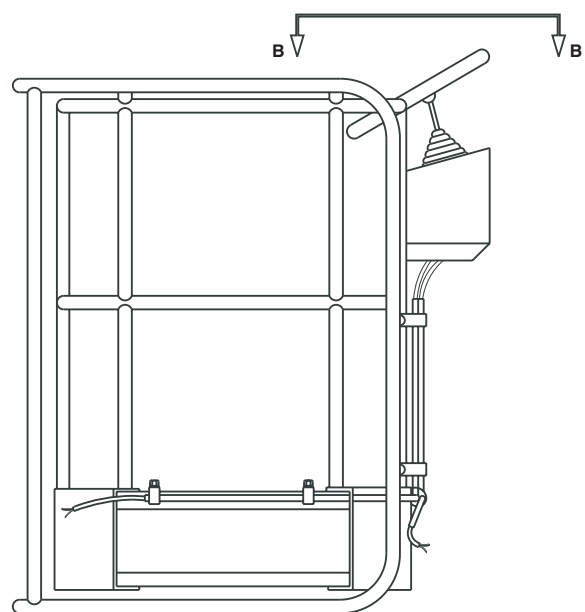
A



VIEW B-B



SECTION A-A



WIRING DIAGRAM

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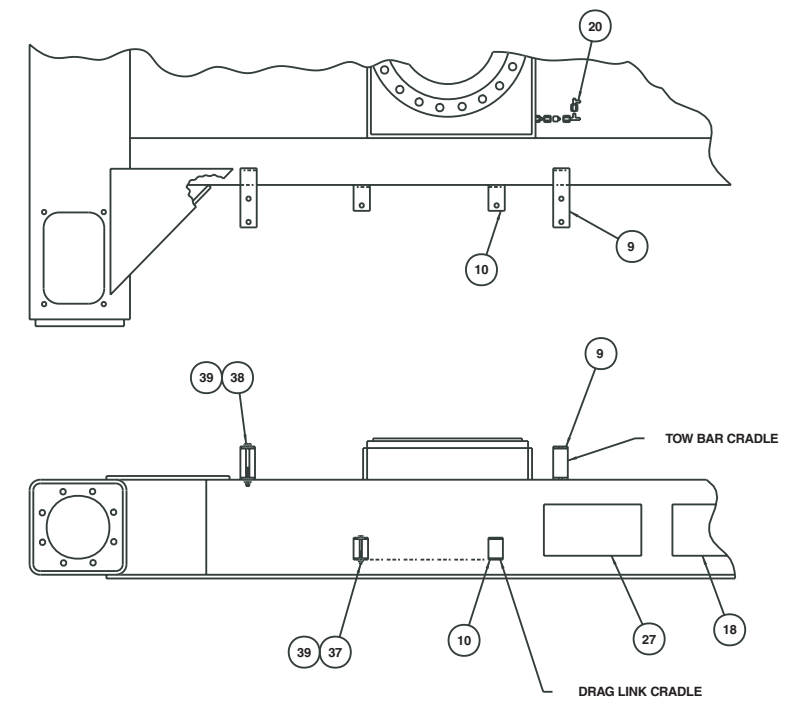
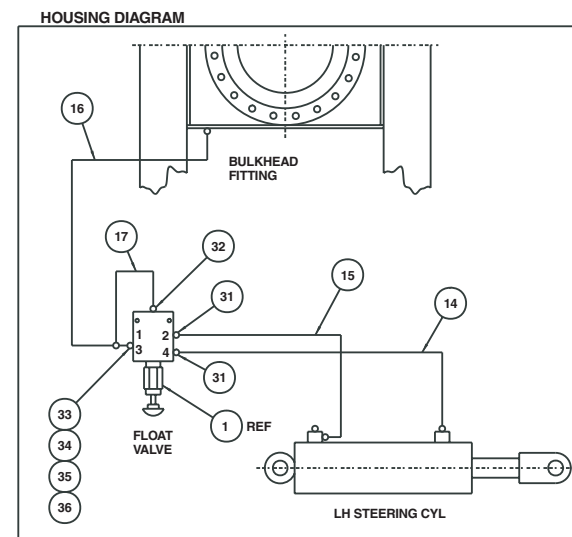
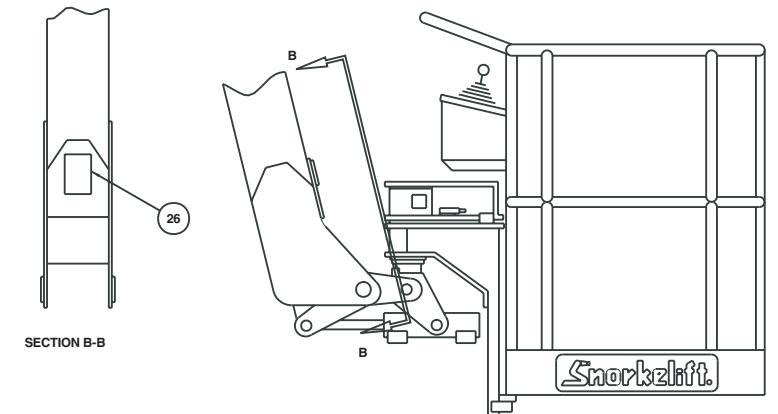
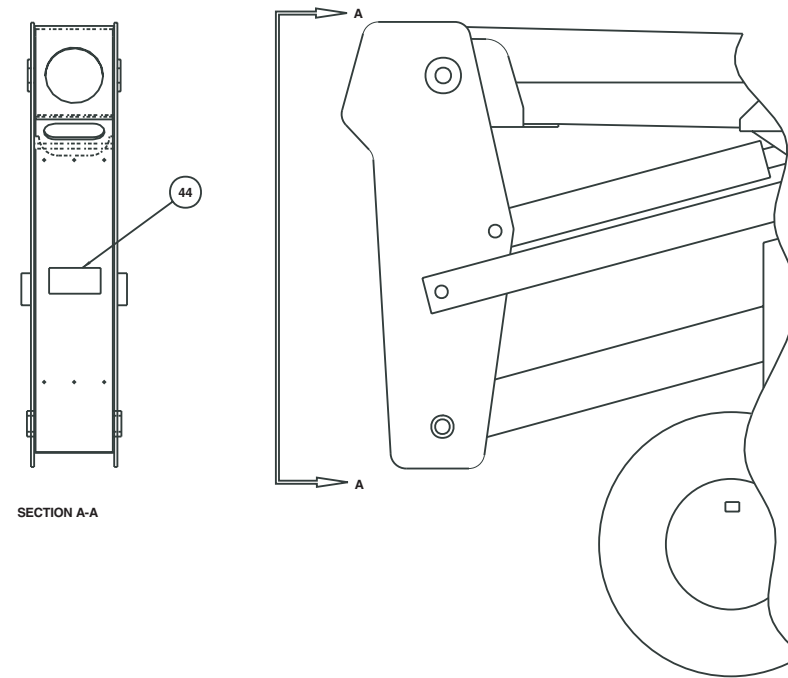
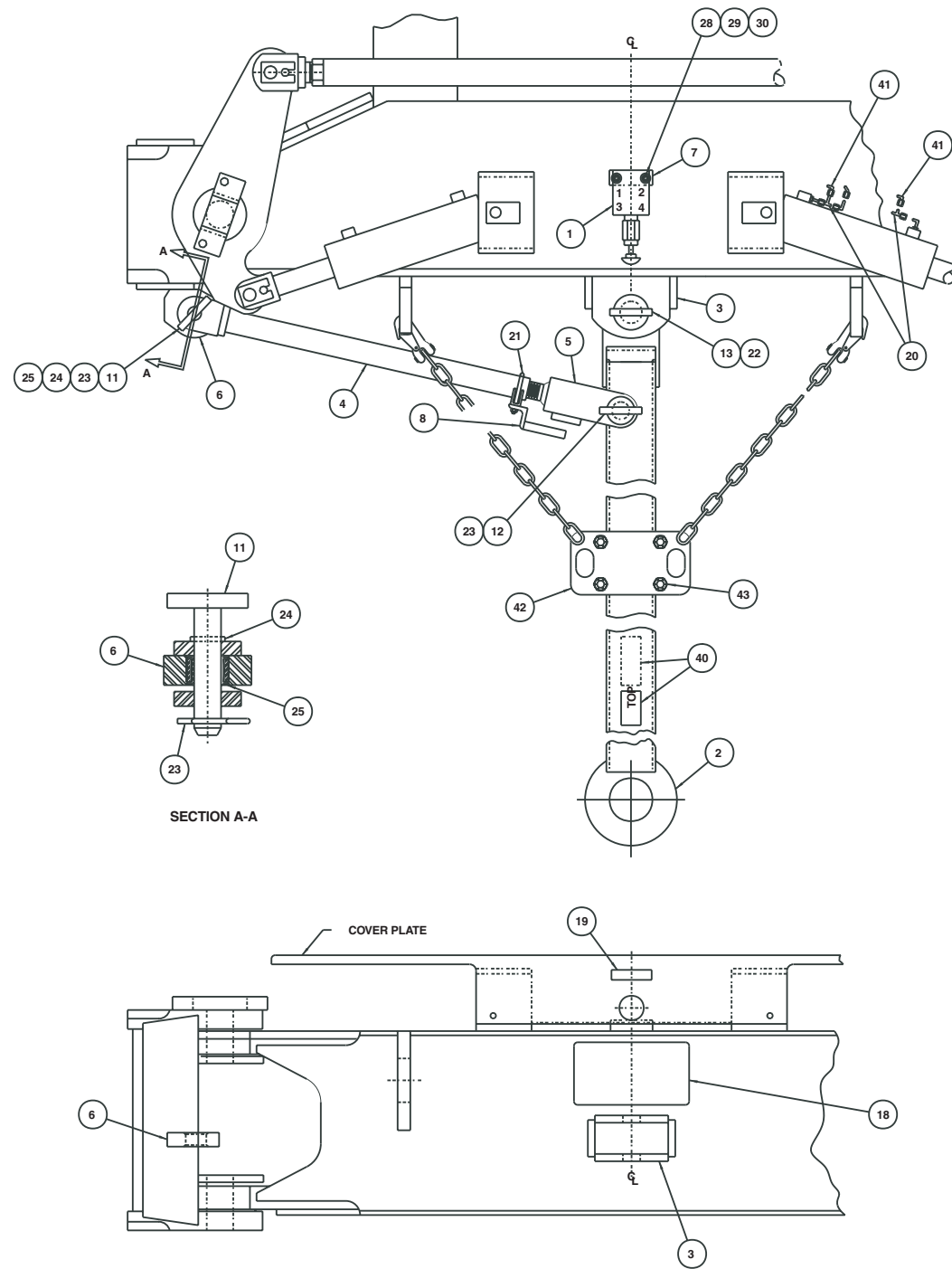
TITLE Proximity sensing system

DWG. 0181436

Snorkel model ATB 60



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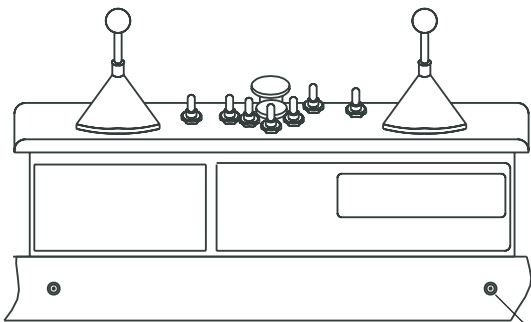
**Tow package**

item	part no	qty	description
1	6010616	1	Steering float valve
2	0110817	1	Tow bar
3	0111464	1	Bracket, chassis
4	0181256	1	Tie rod
5	0111465	1	Tie rod
6	0080884	1	Steering lug
7	0111345	1	Mounting bar
8	0111520	1	Rotator stop
9	0181678	2	Tow bar cradle
10	0110836	2	Drag link storage cradle
11	0110943	1	Pin, drag link
12	0110833	1	Pin, drag link
13	0110831	1	Pin, tow bar
14	0070777	1	1/4 inch hydraulic hose
15	0070774	1	1/4 inch hydraulic hose
16	0090299	1	1/4 inch hydraulic hose
17	0070839	1	1/4 inch hydraulic hose
18	0181712	2	Decal, towing instructions
19	0090760	1	Decal, float valve
20	5036705	3	Swivel nut run tee
21	5550005	1	Clamp
22	5580002	1	Snapper pin
23	5561550	2	Hairpin clip pin
24	989379	1	Roll pin 1/8 inch diameter x 1-1/4 inch long
25	2690001	1	Bearing, self aligning
26	0082164	1	Decal, danger do not ride
27	0082160	1	Decal, danger tow package
28	5569886	2	Capscrew 1/4-20 x 1-3/4 inch long hex head grade 5
29	987099	2	Washer 1/4 medium lock
30	986019	2	Washer 1/4 medium flat
31	5035705	2	Straight thread 45° elbow
32	5065705	1	Straight thread adapter
33	5036105	1	Straight thread run tee
34	5036905	1	Swivel nut 45° elbow
35	5063905	1	Fitting nut
36	5064001	1	Tube end reducer
37	971009	2	Capscrew 1/2-13 x 4 inch long hex head grade 5
38	5560647	4	Capscrew 1/2-13 x 5 inch long hex head grade 5
39	5560039	6	Nut 1/2-13 self locking
40	0181466	1	Decal, top/bottom
41	5037005	2	Swivel nut 90° elbow
42	0181676	1	Chain/plate
43	0181675	2	Carriage bolt, special 3/4-16 x 5-1/2 inch long
44	0181713	1	Decal, danger crushing hazard



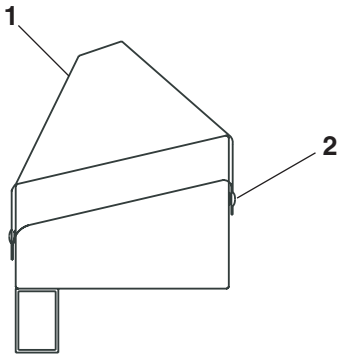
Upper control box cover

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

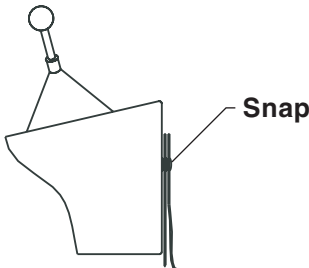


Front view - Upper control box

3



Side view - cover installed



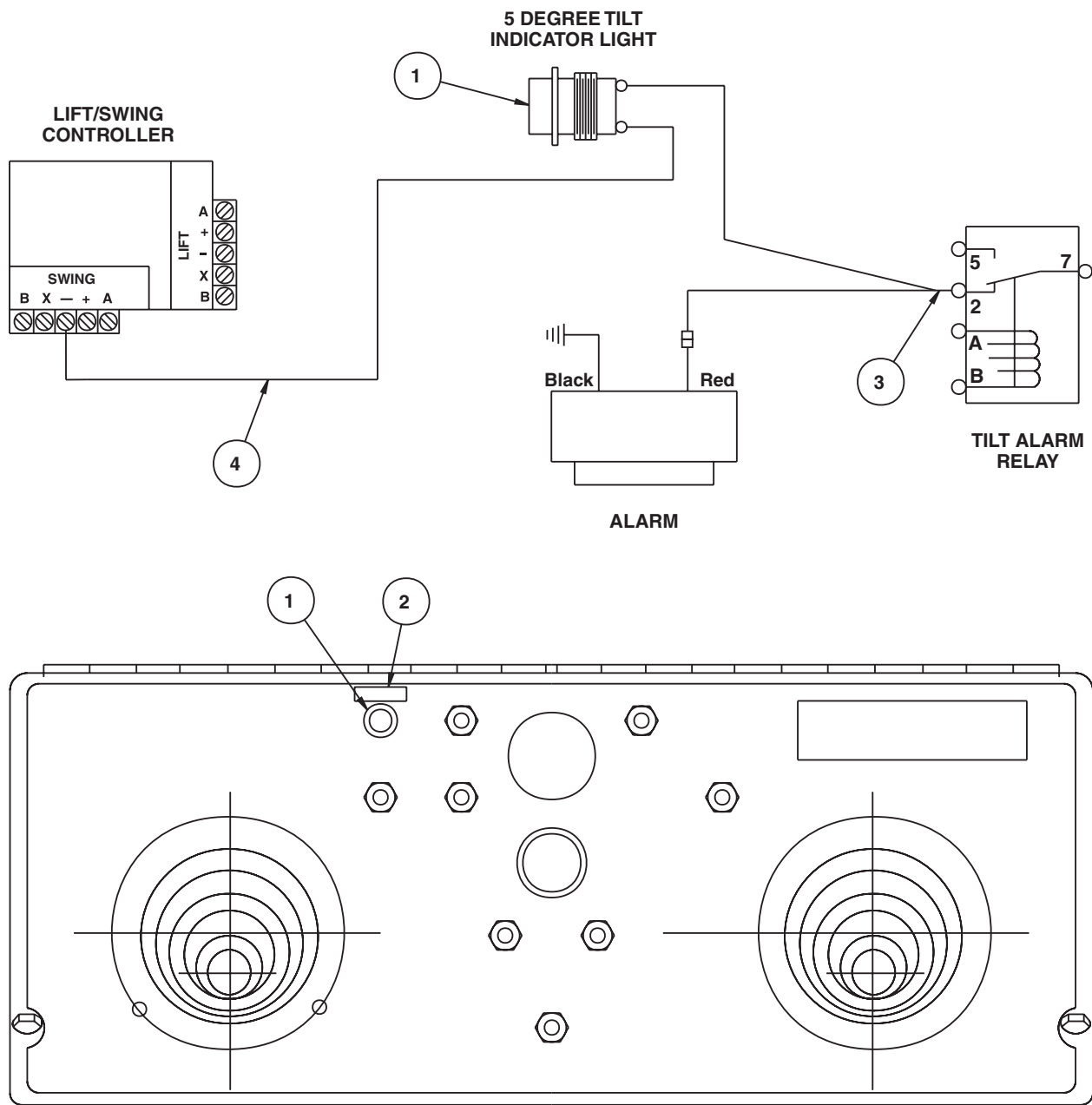
**Side view
cover shown
in stowed position**

AW0071654



Warning light, 5° slope indicator

item	part no	qty	description
1	3065111	1	Warning light, red
2	0081384	1	Decal, 5° tilt indicator
3	0181374	1	Jumper wire
4	0070730	1	Jumper wire

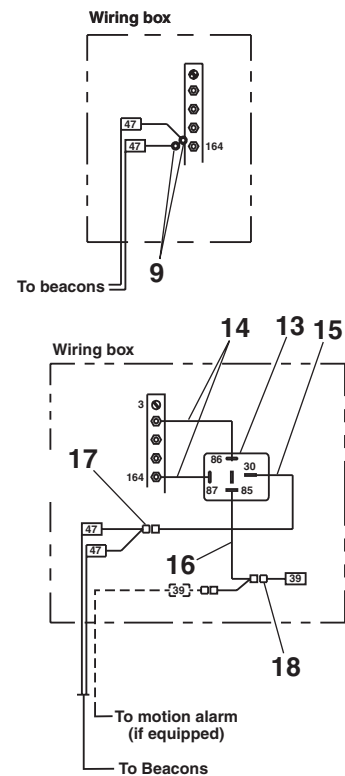
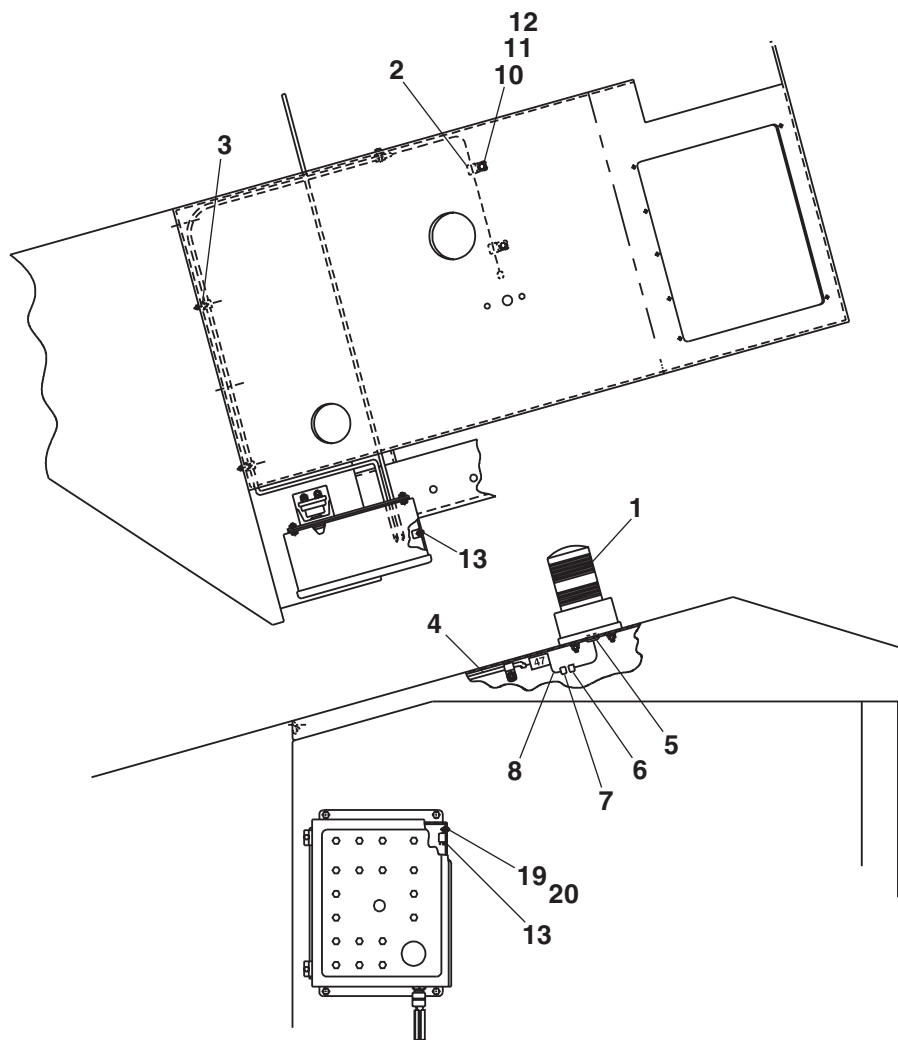


AW0180109



Warning lights, dual amber driving

item	part no	qty	description
1	3060043	2	Warning light, strobe amber lens
	8050034	1	Replacement bulb
2	5093019	8	Clamp
3	5093001	2	Clamp
4	3090019	1	Flexgard tube, 216 inch long
5	5569711	2	Grommet
6	3040082	2	Terminal .250 tab male fully insulated 16/14 wire
7	3040083	2	Terminal .250 tab female fully insulated 16/14 wire
8	3011601	1	Wire, 16 gauge single conductor x 264 inch long
9	3044161	2	Terminal #10 stud insulated 16/14 wire
10	970029	8	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
11	986019	8	Washer 1/4 medium flat
12	5560004	8	Nut 1/4-20 self locking
13	3040469	1	Relay, 12 volt DC
14	0081515	2	Jumper wire
15	0170653	1	Jumper wire
16	0180125	1	Jumper wire
17	3040064	1	Terminal .250 tab male slip-on fully insulated 12/10 wire
18	3040046	1	Terminal .250 tab male slip-on fully insulated 22/18 wire
19	974689	1	Machine screw #10-24 x 3/4 inch long round head
20	5560034	1	Nut #10-24 self locking

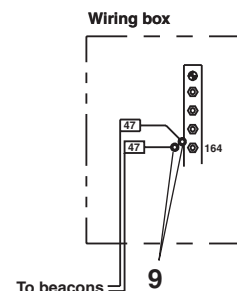
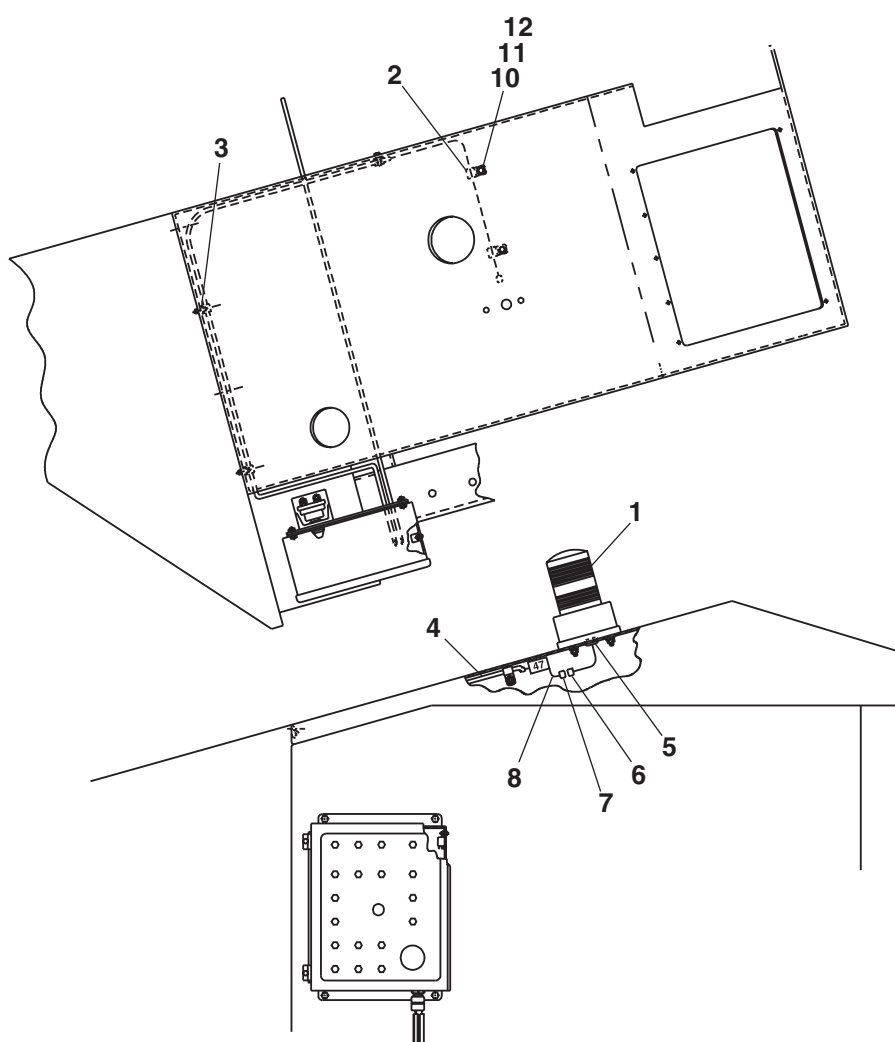


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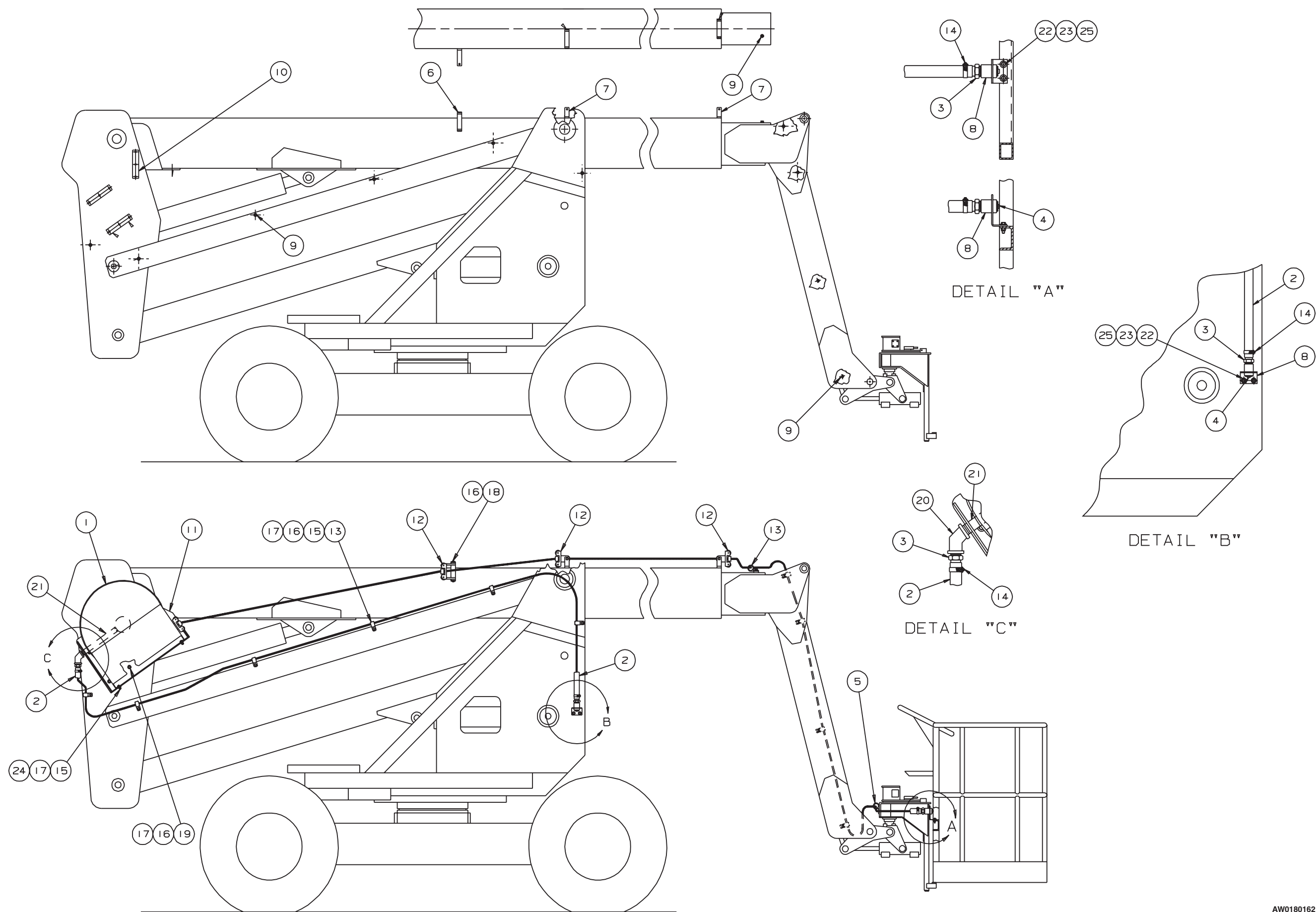
Warning lights, dual beacon

item	part no	qty	description
1	3060083	2	Warning light, strobe amber lens
	3060085	1	Replacement amber lens
	3060087	1	Replacement bulb
	3060084	2	Warning light, strobe red lens
	3060086	1	Replacement red lens
	3060087	1	Replacement bulb
2	5093019	8	Clamp
3	5093001	2	Clamp
4	3090019	1	Flexgard tube, 216 inch long
5	5569711	2	Grommet
6	3040082	2	Terminal .250 tab male fully insulated 16/14 wire
7	3040083	2	Terminal .250 tab female fully insulated 16/14 wire
8	3011601	1	Wire, 16 gauge single conductor x 264 inch long
9	3044161	2	Terminal #10 stud insulated 16/14 wire
10	970029	8	Capscrew 1/4-20 x 3/4 inch long hex head grade 5
11	986019	8	Washer 1/4 medium flat
12	5560004	8	Nut 1/4-20 self locking



AWM00339

F
E
D
C
B
A



AW0180162



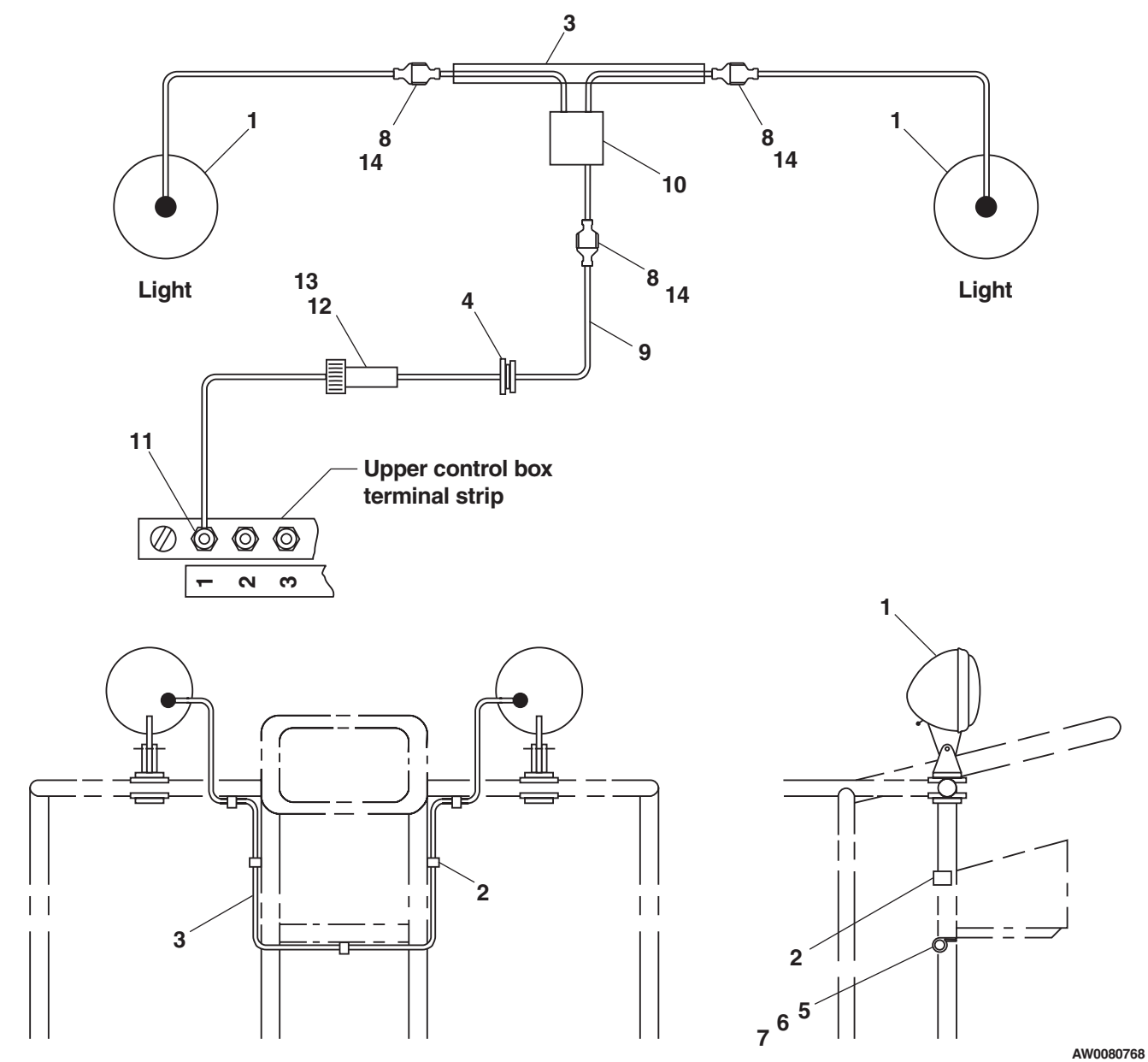
**Water line to platform**

item	part no	qty	description
1	5240010	1	Hose reel with hose
2	5010015	1	Water hose 1 inch diameter x 18 feet long
3	5260014	3	Fitting 1 inch hose to 1 inch NPT
4	7714208	2	Pipe plug 1 NPT square head
5	5093013	1	Clamp
6	0181401	1	Guide bracket, long
7	0181403	2	Guide bracket, short
8	0181596	2	Bulkhead
9	0180821	11	Bolting plate
10	0181397	3	Mounting bar
11	0181597	1	Reel mount
12	5550034	3	Hose roller guide
13	5093010	11	Clamp
14	5550037	3	Clamp
15	970469	15	Capscrew 3/8-16 x 1 inch long hex head grade 5
16	987119	26	Washer 3/8 medium lock
17	986299	24	Washer 3/8 medium flat
18	970426	6	Capscrew 3/8-16 x 7/8 inch long hex head grade 5
19	970449	9	Capscrew 3/8-16 x 3/4 inch long hex head grade 5
20	7734408	1	Pipe 45° elbow, 1 inch NPT
21	0181598	1	Nipple 1 inch NPT x 13 inch long
22	970269	4	Capscrew 5/16-18 x 1-1/4 inch long hex head grade 5
23	986269	4	Washer 5/16 medium flat
24	5560033	4	Nut 3/8-16 self locking
25	5560031	4	Nut 5/16-18 self locking



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	Clamp - (incandescent light only)
	5093002	7	Clamp - (halogen light only)
3	3090019	1	Flexgard tube, 80 inch long - (incandescent light only)
	3090006	1	Flexgard tube, 80 inch long - (halogen light only)
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 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 fully insulated 16/14 wire



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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 and schematics

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 gravity gate	Visually inspect (operation)
Slide pads	Visually inspect (boom wear marks)
Structural damage & 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)
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 lure
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	Check smooth operation	Repair or replace if not working properly
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

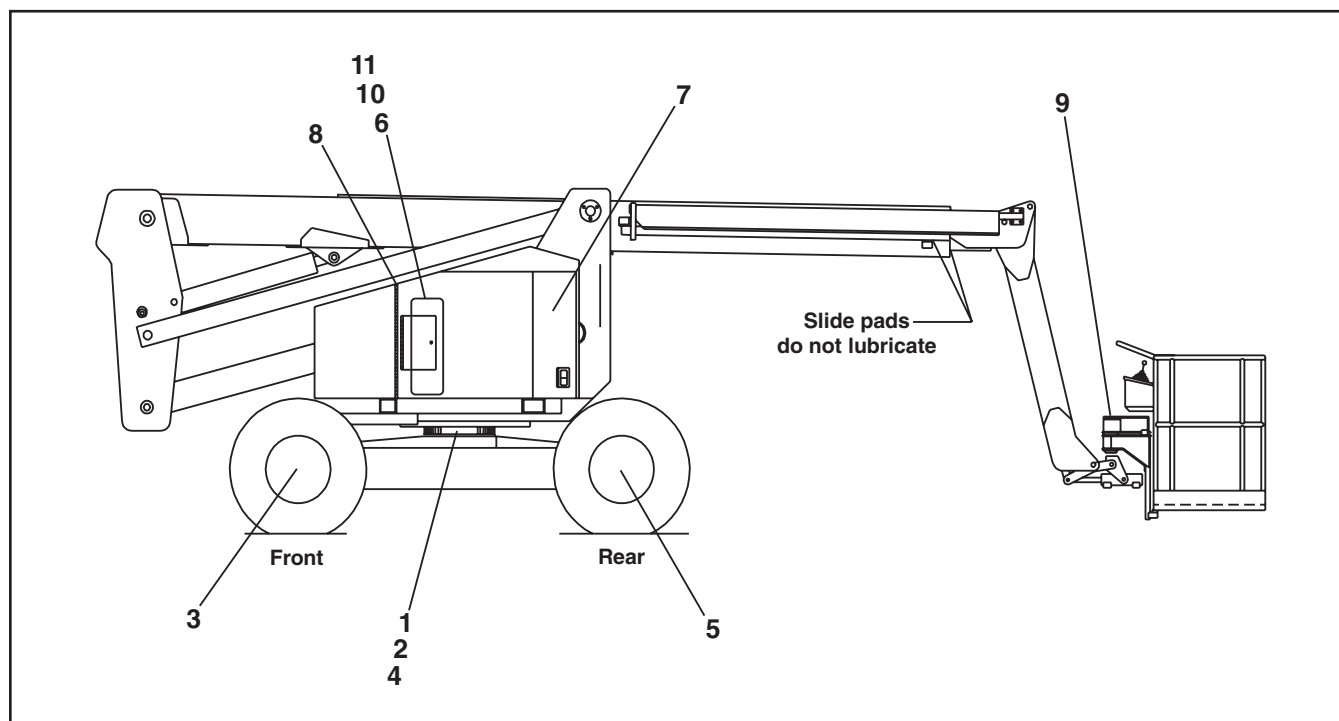
Yearly or 500 hour maintenance (trained service technician)

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 ATB 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

Swing drive (item 4.): To check oil level:

1. Remove check plug located on the front side of the gear box.
2. Unit is full if oil is level with bottom of fill hole or just starts to run out.
3. If low, remove the vent on top of gear box and fill until lubricant flows from port, reinstall plug.

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.



Service information

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

Any time the hydraulic oil is changed or added, it is absolutely necessary that only clean hydraulic oil is used.

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.): Lubricate at recommended interval using specific lubricants as outlined in the maintenance schedule.

After lubricating, remove any excess oil or over spray so it will not collect dirt and debris.

Platform rotator

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

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

Return filter

Return filter (item 10.): On ATB 60 models, the hydraulic oil return filter is located next to the side of the proportional control valve.

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

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 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 indicator is accurate only when the machine is running at maximum RPM and the 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 70 degrees.

⚠CAUTION

Use extreme caution while observing the condition indicator because of the motion of the drive wheels. The condition indicator is best observed from outside the track of the vehicle wheels to avoid a possible unsafe condition.

The return filter hose is equipped with a check valve to limit leakage from the reservoir while the element is being changed.

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

Suction filter

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

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

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

Batteries

Batteries (item 13.): 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.



90 day or 150 hour checklist

Serial Number

Check	OK	✓	X
Chassis			
Structural (1)			
Steering cylinder pin caps and tie wire (2,6)			
Steering linkage (4)			
Tires, foam filled (5)			
Hydraulic tubes and hoses (3,5)			
Decals and placards (2,8)			
Torque drive wheel lug nuts per placard on wheel (6)			
Torque steer wheel lug nuts per placard on wheel (6)			
Right drive motor (3)			
Left drive motor (3)			
Lubrication points			
Turntable			
Structural (1)			
Torque turntable top bolts @ 180 ft. lbs. (6)			
Torque turntable bottom bolts @ 180 ft. lbs. (6)			
Hydraulic tubes and hoses (3,5)			
Riser lift cylinder pin caps and tie wire (2,6)			
Riser lift cylinder and holding valve (2,6)			
Riser boom emergency bleed down valve (4)			
Cowling (5,6)			
Wire harness (2,5)			
Decals and placards (2,8)			
Master level cylinder pin caps (2,6)			
Torque master level cylinder bolts @ 80-100 ft. lbs.			
Rotation backlash (5)			
Correct operators manual in document holder			
System pressure			
Lubrication points			
Rotation brake (4)			
Centerpost (3,6)			
Booms			
Structural (1)			
Main boom pin caps and tie wire (2,6)			
Main boom emergency bleed down valve (4)			
Hydraulic tubes and hoses (3,5)			
Extension cylinder pin caps and tie wire (2,6)			
Extension cylinder and holding valve (3,4)			
Hose carrier tube and support (7)			
Plastic hose track			
Electrical wires (5)			
Extend retract wire ropes and sheaves (2,5,6)			
Main lift cylinder pin caps and tie wire (2,6)			
Main lift cylinder holding valve (3,4)			
Riser boom pin caps and tie wire (2,6)			
Follower arm pin caps and tie wire (2,6)			
Jib cylinder pin caps and tie wire (2,6)			
Jib cylinder holding valve (3,4)			



Check	OK	✓	X
Lower control station			
Station selector switch - ground controls platform controls DO NOT work (4)			
Station selector switch - platform controls ground controls DO NOT work (4)			
Ground control switches (4)			
Turntable rotation (4)			
Riser boom UP-DOWN (4)			
Main boom UP-DOWN (4)			
Jib boom UP-DOWN (4)			
Boom extension IN-OUT (4)			
Platform leveling (4)			
Platform rotation (4)			
Emergency power, all functions (4)			
Emergency stop (4)			
Hydraulic oil reservoir			
Filler/breather cap and tank (6)			
Hydraulic fluid level (5)			
Hydraulic filter (3,4)			
Engine			
Charging system (4)			
Air filter (5)			
Hour meter (4)			

Check	OK	✓	X
Engine (Continued)			
Belts and hoses (5)			
Hydraulic pump (4)			
Engine oil (5)			
Battery terminals (6)			
Battery electrolyte level (5)			
Indicator gauges (4,5)			
Engine START-STOP (4)			
Electric throttle (4)			
Electric choke, if equipped (4)			
Engine coolant level (5)			
Optional Equipment			
Air line to platform (2,4)			
Dual fuel system (2,4)			
Horn (2,4)			
Motion warning alarm (2,4)			
Operation warning light (2,4,6)			
Optional platform (2,4,6)			
Platform work lights (2,4)			
Tool tray (2)			
Tow package (2,4)			
110 volt onboard generator (2,4)			

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All items have been properly checked and tested and found to be operating satisfactory or necessary corrective action has been completed.

Inspected By: _____ Date _____



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.



F

E

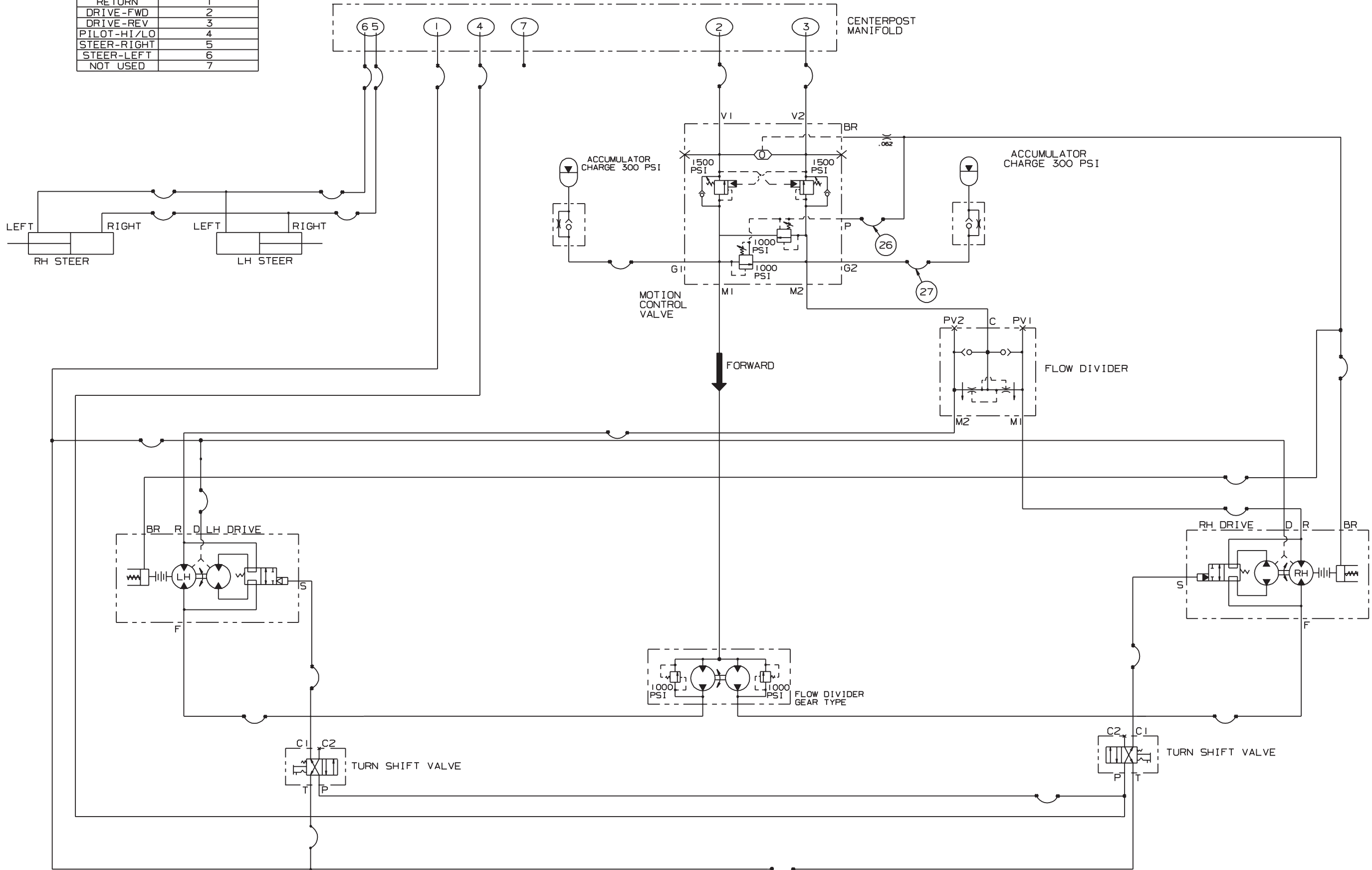
D

C

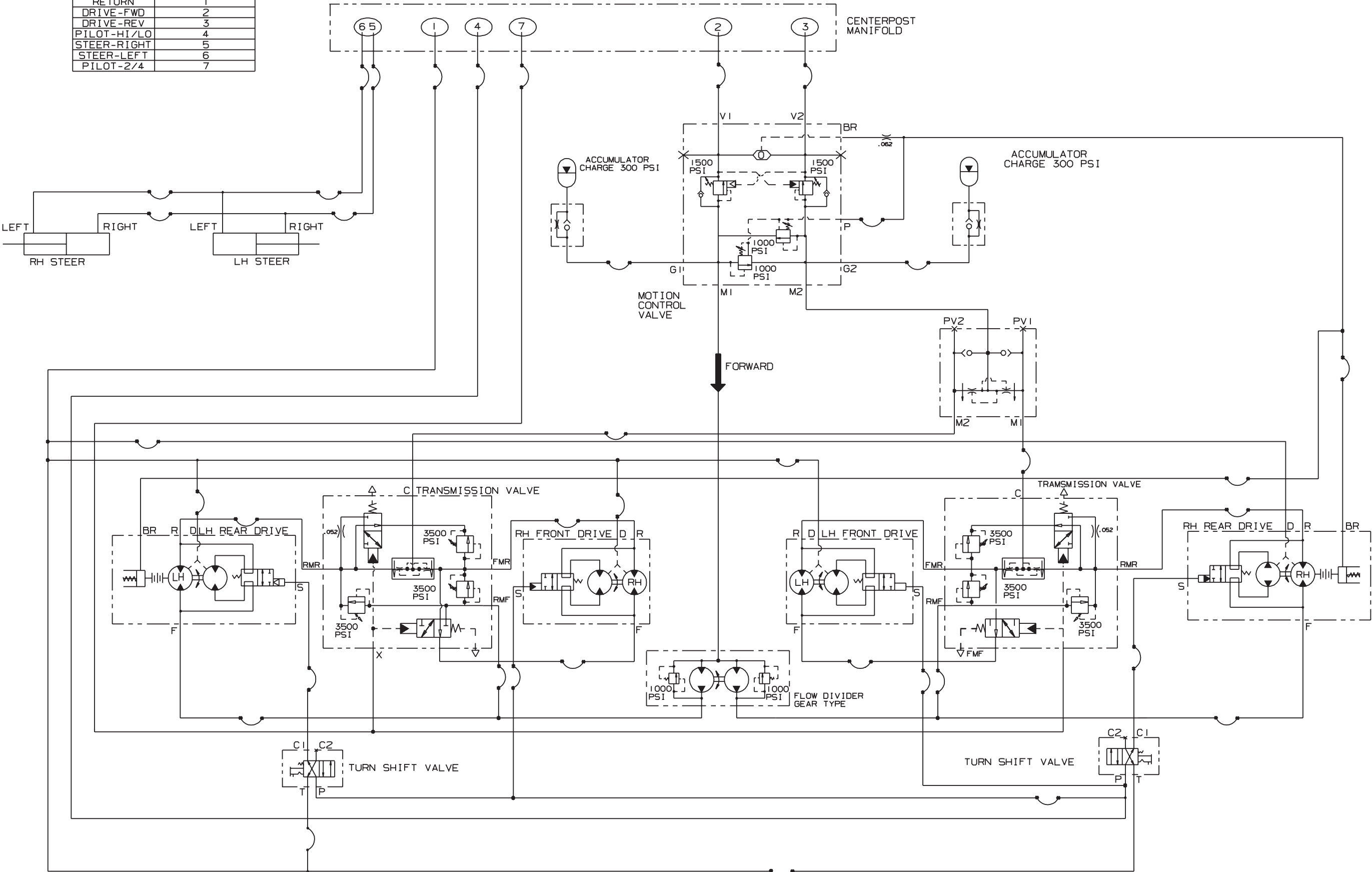
B

A

OIL FLOW CHART	
FUNCTION	CENTERPOST NO.
RETURN	1
DRIVE-FWD	2
DRIVE-REV	3
PILOT-HI/LO	4
STEER-RIGHT	5
STEER-LEFT	6
NOT USED	7



OIL FLOW CHART	
FUNCTION	CENTERPOST NO.
RETURN	1
DRIVE-FWD	2
DRIVE-REV	3
PILOT-HI/LO	4
STEER-RIGHT	5
STEER-LEFT	6
PILOT-2/4	7





F
E
D
C
B
A

OIL FLOW CHART	
FUNCTION	CENTERPOST NO.
RETURN	1
DRIVE-FWD	2
DRIVE-REV	3
PILOT-HI/LO	4
STEER-RIGHT	5
STEER-LEFT	6
PILOT-2/4	7

