

snorkel

S2632E



CE

REPAIR PARTS **MANUAL**

Part Number 1420331
August 2014

Serial number S09000 and after
Replaces November 2012

DANGER

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

Do not go closer than 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 platform, scissors structure, 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 platform, scissors structure, 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.

California

Proposition 65 Warning

Battery posts, terminals and related accessories contain lead and lead components, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

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Contact Information

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General Information

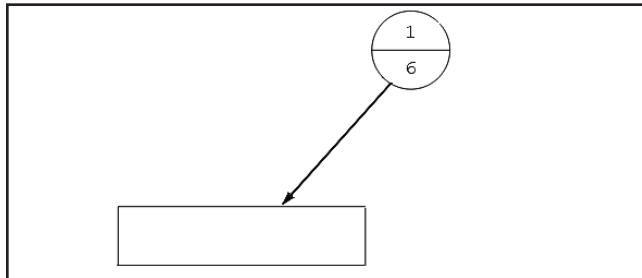
About This Manual

This manual covers S2632E aerial platforms. Information is included for machines that have been manufactured to conform to all applicable requirements of the following organizations:

- American National Standards Institute (ANSI)
- Canadian Standards Association (CSA)
- European Committee for Standardization (CE)
- Australian Standards (AS) certification

Part pages include a drawing and a bill of material. The bill of material lists the item number that is on the drawing, the Snorkel part number, quantity used and a description of the item.

Some callouts in the drawings may have a balloon with two numbers. The top number is the item number and the bottom number is the quantity of the item at that location.



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.

This machine is covered by a limited warranty that specifically identifies items warrantied by Snorkel and those items covered by original manufacturer's warranty. A copy of the Snorkel Limited Warranty is located on the inside of the back cover of this manual.

Repairs and Maintenance

Every person who maintains, inspects, tests or repairs the 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.

Abbreviations

The following abbreviations may be used in this manual.

AC	alternating current
ANSI	American National Standards Institute
AR	as required
CCA	cold cranking amps
cm	centimeter
DC	direct current
ft	feet
GFCI	ground fault circuit interruptor
in	inch
lbs	pounds
mm	millimeter
no	number
NPT	national pipe thread
psi	pounds per square inch
qty	quantity
rpm	revolutions per minute
UL	Underwriters Laboratories Inc.

Additional Information

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

Snorkel North America
P.O. Box 1160
St. Joseph, MO 64502-1160 USA
Phone: 1-800-255-0317

Snorkel Europe
Vigo Centre
Birtley Road
Washington
Tyne & Wear
NE38 9DA
Phone: +44 (0) 845 1550 058

<http://www.snorkellifts.com>

Service and Parts Information

Ordering Parts

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

- Model number
- Serial number
- Snorkel part number
- Description of part
- Quantity of parts required
- Your purchase order number
- Address for order to ship to
- The desired shipment method

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

Snorkel North America
P.O. Box 1160
St. Joseph, MO 64502-1160 USA
Phone: 1-800-255-0317
Parts Fax: 1-785-989-3077

Snorkel Europe
Vigo Centre
Birtley Road
Washington
Tyne & Wear
NE38 9DA
Phone: +44 (0) 845 1550 058
Parts Fax: +44 (0) 1952 607 678

Attention: Parts Department

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

<http://www.snorkellifts.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 A92.6-2006 Self-Propelled Elevating Work Platforms" is available from Snorkel dealers or from the factory upon request.

Copies are also available from:

Scaffold Industry Association, Inc.
P.O. Box 20574
Phoenix, AZ 85036-0574 USA

Manuals

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

The specific manuals for S2632E aerial platforms are as follows:

S1930E/S1932E/S2632E Operator's Manual ANSI
Snorkel part number – 1360460

S1930E/S1932E/S2632E Operator's Manual CE
Snorkel part number – 1360417

S1930E/S1932E/S2632E Operator's Manual AU
Snorkel part number – 1360602

S1930E/S1932E/S2632E Operator's Manual Spanish
Snorkel part number – 0361645

S2632E Repair Parts Manual
Snorkel part number – 1420331

ANSI Manual of Responsibilities
ANSI/SIA A92.6-2006
Snorkel part number – 0361367

Machine Information

Model Number: _____

Serial Number: _____

Date of Purchase: _____

Purchased From: _____

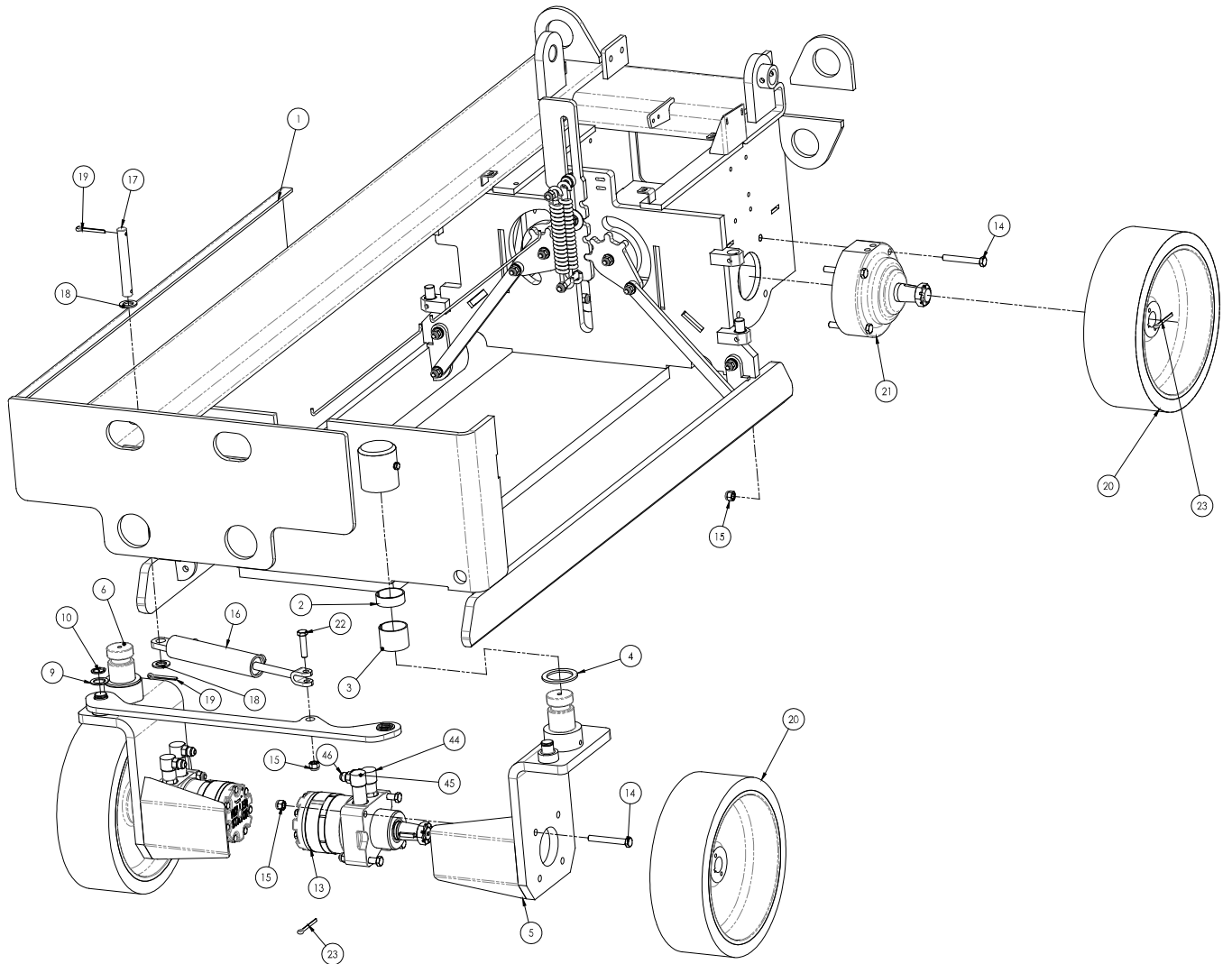
Snorkel Dealer or Distributor: _____

Repair Parts

S2632E



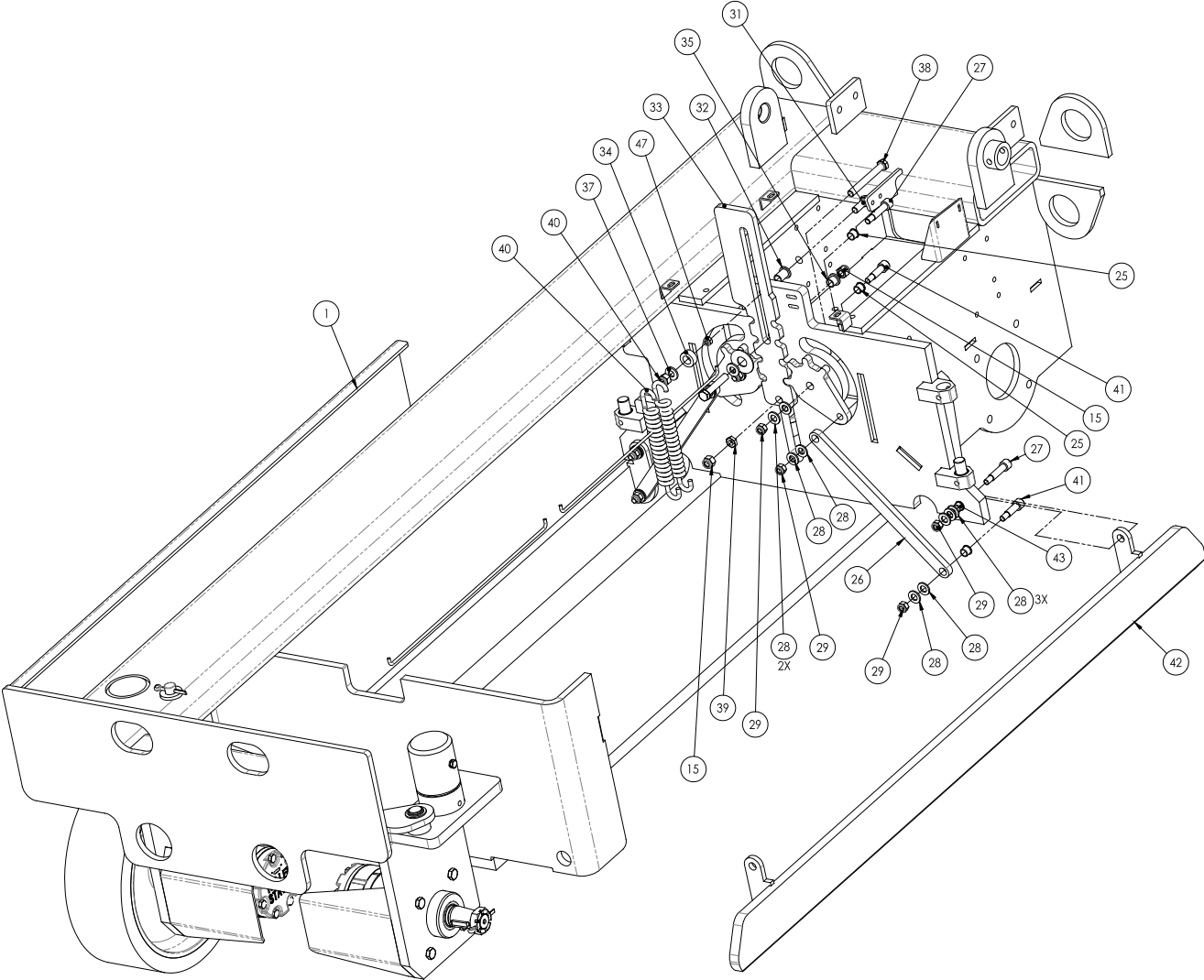
Chassis, Steering and Brakes



Chassis, Steering and Brakes

1420247 1

Pothole Protector



Pothole Protector

1420247 2

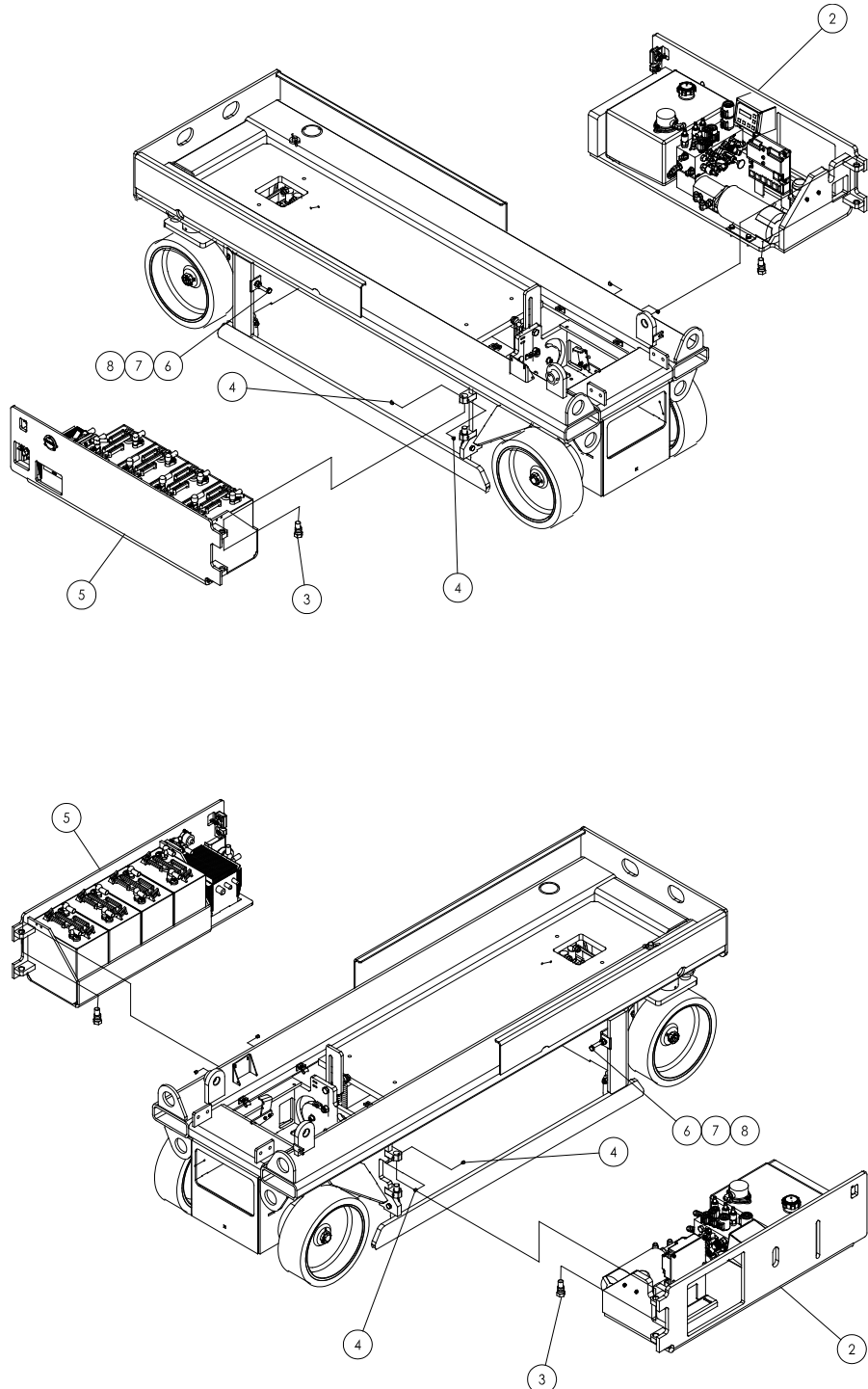
Chassis, Steering and Brakes/Pothole Protector

Item	Part No.	Qty.	Description
1	1420075	1	WLDMT, FRAME S2632M
2	2594908	2	BRG 55MM X 60MM X 20MM
3	2594909	2	BRG 55MM X 60MM X 45MM
4	2580410	2	BRG THR 55MM X 75MM X 4MM
5	1420093	1	WLDMT, LH STEERING
6	1420094	1	WLDMT, RH STEERING
7	1420085	1	PLT, STEERING LINKAGE
8	2570017	2	BRG FLG 25MM X 30MM X 12MM
9	5563147	2	BSHG MACH 25MM X 38MM X 2MM
10	300542	2	SNAP RING 1.00 EXT HD
11	056021-008	2	WSHR LOCK M8
12	058492-016	2	HHCS M8 X 1.25 X 16 G8.8 ISO 4017 DIN 933
13	6031615	2	MOTOR WHL 28.3 CU 1.5 TAPER RC (REFER TO HYDRAULICS – 5)
14	056065-090	16	HHCS M12 X 1.75 X 90 G8.8 DIN 931
15	056066-012	21	NUT HEX M12 X 1.75 GR 8.8 SELF LOCKING DIN 985
16	6047119	1	CYLINDER, STEER (REFER TO HYDRAULICS – 9)
17	1420124	1	STEER CYLINDER PIN
18	5563077	2	WSHR FLAT 20MM
19	5569975	2	PIN, COTTER .25 X 2.5
20	1370248	4	TIRE WHEEL ASSY
21	6091501	2	HYD BRAKE/HUB BK10
22	056065-050	1	HHCS M12 X 1.75 X 50 G8.8 DIN 931
23	5569975	4	PIN COTTER .250 DIA 2.50
24	1420062	2	PLT. POTHOLE CAM
25	2570016	6	BSHG FLG 12MM ID X 12MM LG
26	1420092	2	PLT. POTHOLE LINKAGE
27	5563145	6	BLT SHLDR 12MM X 40MM X M10-1.5
28	5560699	23	WSHR FLAT M12
29	065064-010	8	NUT HEX M10 X 1.50 GR 8.8 SELF LOCKING DIN 985
30	056065-065	1	HHCS M12 X 1.75 X 65 G8.8 DIN 931
31	058494-030	1	HHCS M12 X 1.75 X 30 G8.8 DIN 933
32	2580017	1	BRG FLG .500 ID .630 OD 1.00 OILITE
33	1370007	1	PLT. VERTICAL LINK
34	0372092	1	SPCR .656ID 1.13OD
35	2570012	1	BRG FLG .500 ID .630 OD .630 OILITE
36	592144	1	WHSR SPECIAL
37	2580403	2	BRG THR .500ID 1.00OD .125
38	058494-100	1	HHCS M12 X 1.75 X 100 G8.8 DIN 933
39	056067-512	1	NUT, HEX, THIN, M12 X 1.75 DIN 936
40	5530027	2	SPRG POTHOLE EXTENSION SL-19E
41	5563168	4	BLT SHLDR 12MM X 30MM X M10-1.5
42	1370004	2	WLDMT. POTHOLE SKID
43	2570015	4	BSHG FLG 12MM ID X 15MM OD
44	301442	2	SWIVEL 90 SHORT
45	301443	2	SWIVEL 90 LONG
46	5065728	4	FTG, HYD -6 MB TO -8 MJIC
47	056066-008	1	NUT HEX M8 X1.25 GR 8.8 SELF LOCKING DIN 985
			NOT SHOWN
	1420078	1	PLATE CHASSIS COVER
	0580491-020	4	BOLT
	5560067	4	NUT SPEED U TYPE M6-1.00
	056021-006	4	WASHER LOCK
	056069-006	4	STEEL FLAT WASHER M6 DIN125A ZP
	056021-006	4	SPRING WASHER M6 DIN127B GR8.8 ZP

Chassis, Steering and Brakes/Pothole Protector

Tray Installation

Item	Part No.	Qty.	Description
2	1420289	1	HYDRAULIC TRAY ASSEMBLY (REFER TO REPAIR PARTS – 11)
3	1360052	2	PIN, SMALL CAM
4	5563152	4	SETSCR M10-1.25 X 12MM CONE PT
5	1420111	1	BATTERY TRAY ASSEMBLY (REFER TO REPAIR PARTS – 9)
6	056065-09	2	HHCS M12 X 1.75 X 90 G8.8 DIN 931
7	056066-01	4	NUT HEX M12 X 1.75 GR8.8 SELF LOCKING
8	5560699	4	WASHER FLAT M12

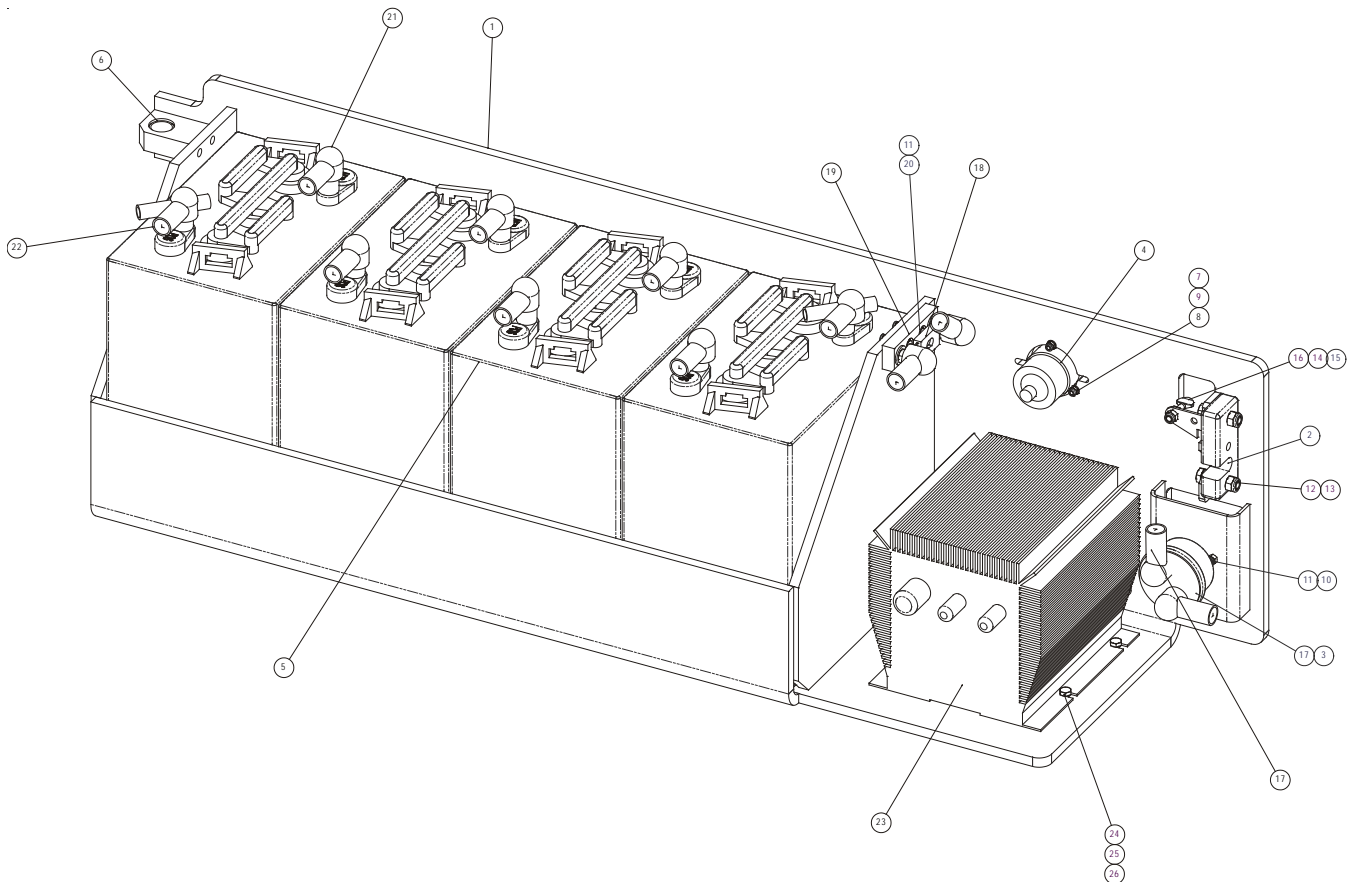


Tray Installation

TRAYINSTALL

Battery Tray – Signet Charger

Item	Part No.	Qty.	Description
1	1420099	1	WELDMENT, BATTERY TRAY
2	300491	1	LATCH RH TRAY ROTARY LOCK
3	300840	1	LOCKOUT LEVER ASSEMBLY
4	3069521	1	FLANGE INLET 15A 125V NEMA 5-15
5	3050027	4	BATTERY 6 VOLT TYPE T-145
6	2509705	2	BRG FLG TRAY DOORS
7	512459-020	7	HHCS M4 X 0.7 X 20 GR8.8 ISO 4017 DIN 933
8	056069-004	7	M4 FLAT WASHER DIN 125
9	056066-004	7	NUT HEX M4 X 0.7 GR8.8 SELF LOCKING DIN 985
10	058490-012	2	HHCS M5 X 0.8 X 12 GR8.8 ISO 4017 DIN 933
11	056066-005	4	NUT HEX M5 X 0.8 GR8.8 SELF LOCKING DIN 985
12	5560632	2	BOLT HEXHD M8-1.2535MM
13	056066-008	2	NUT HEX M8 X 1.25 GR8.8 SELF LOCKING DIN 985
14	056064-006	1	NUT HEX M6 X 1.0 GR10.9 SELF LOCKING DIN 985
15	056067-006	1	NUT HEX M6 X 1.0 DIN 934
16	5560046	1	SCR THUMB M6-1.0 X 25MM
17	3020049	2	SWITCH
18	446076	1	FUSE
19	446086	1	FUSE BLOCK
20	5563164	2	FSHCS M5-0.8 X 30
21	3040269	10	BOOT BATTERY CABLE END BLK 1/0
22	3040270	2	BOOT BATTERY CABLE END Y-TYPE
23	1450029	1	SIGNET CHARGER GLOBAL INPUT 25A
	1450303	1	AC POWER CORD NOT SHOWN
24	056058-030	4	HHCS M6 X 1 X 30 GR8.8 ISO 4014 DIN 931
25	056069-006	4	M6 FLAT WASHER DIN 125
26	056066-006	4	NUT HEX M6 X 1 GR8.8 SELF LOCKING DIN 985



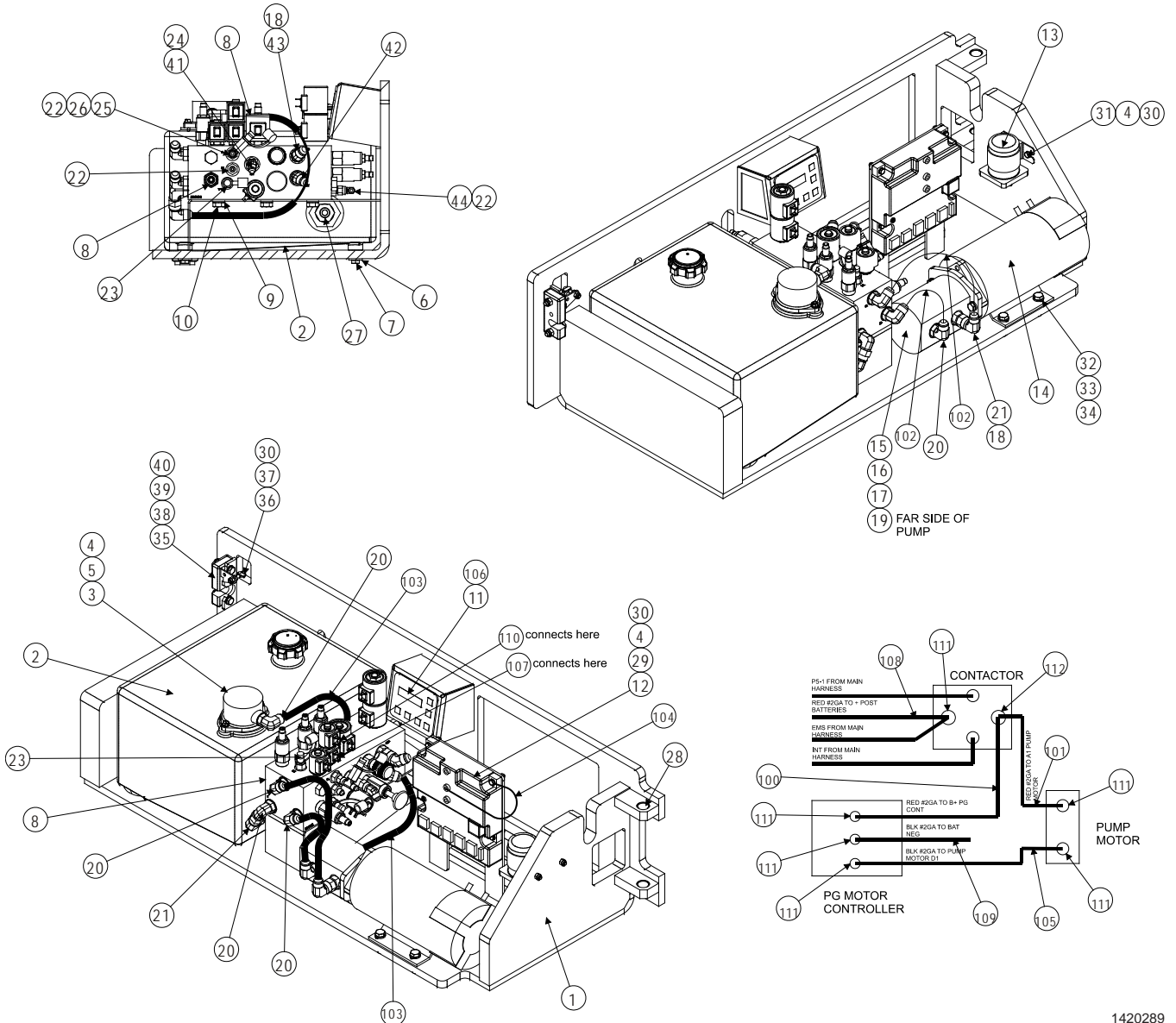
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Battery Tray – Signet Charger

Hydraulic Tray

Item	Part No.	Qty.	Description
1	1420102	1	WLDMT. HYDRAULIC TRAY
2	1420057	1	RESERVOIR HYDRAULIC
	8113671	1	CAP
3	114067-000	1	FILTER RETURN IN TANK
4	056069-006	8	M6 FLAT WASHER DIN 125
5	5563199	2	SLOTTED HEX WSHR HD SHT MTL SCR #14 X 1.00
6	986299	3	WASHER, FLAT, .375 STANDARD, PLATED
7	970469	3	BLT HEXHD .375-16 1.00 GR5
8	6019056	1	SCISSORS MANIFOLD (REFER TO HYDRAULICS - 7)
9	987139	3	WSHR LOCK .500 SPLIT TYPE
10	970889	3	BLT HEXHD .500-13 1.00 GR 5
11	3087803	1	LCD SCREEN PG TRIONIC
12	3087800	1	PG TRIONICS EZLIFT 230 CONTROLLER
13	3087787	1	CONTACTOR, 24V SEALED
14	3087790	1	MOTOR 24V PUMP MOUNT
15	6029667	1	PUMP 2 SEC 6CC/4CC FLUIDTECH

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Hydraulic Tray

Hydraulic Tray

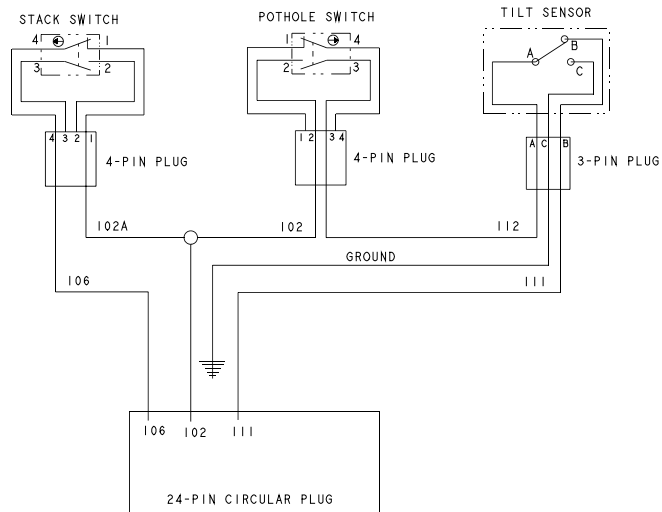
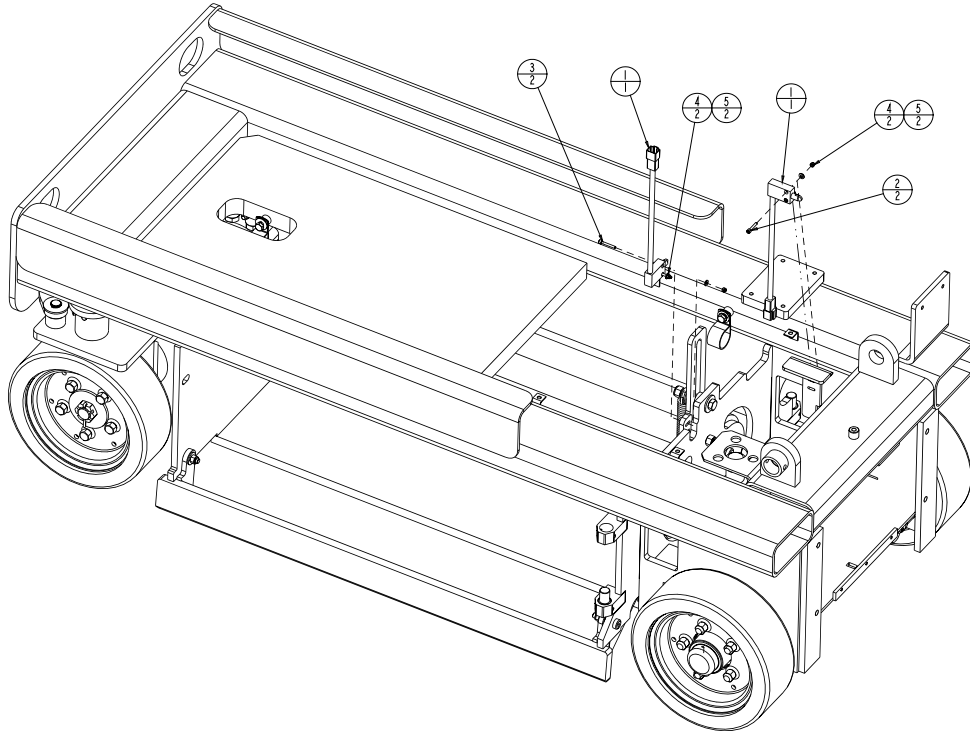
Item	Part No.	Qty.	Description
16	987119	2	WSHR LOCK .375 SPLIT TYPE
17	970389	2	BLT HEXHD .375-16 1.25 GR5
18	5065709	2	FTG, HYD -8 MB TO -8 MJIC
19	5065711	1	FTG, HYD -10 MB TO -8 MJIC
20	5035306	5	ADAPTER 90 DEG ELBOW -8 SAE TO -8 JIC
21	5037006	2	ADAPTER 90 DEG ELBOW SWIVEL -8 JIC
22	5065705	3	FTG, HYD -6 MB TO -4 MJIC
23	5070006	2	NIPPLE DIAGNOSTIC -4 SAE
24	5065815	1	FTG, HYD -8 MB TO -6 MJIC LONG
25	5036703	1	ADAPTER TEE SWIVEL -4 JIC TO -4 JIC FEMALE TO -4 JIC
26	5070005	1	NIPPLE DIAGNOSTIC -4JIC FEMALE
27	5065711	1	FTG, HYD -12 MB TO -8 MJIC
28	2509705	2	BRG. FLG. TRAY DOORS
29	056058--030	4	HHCS M6 X 1 X 30 G8.8 ISO 4014_DIN 931
30	056066-006	7	NUT, HEX M6 X 1.0 GR 8.8 SELF LOCKING DIN 985
31	056058--040	2	HHCS M6 X 1 X 40 G8.8 ISO 4014_DIN 931
32	056069-010	4	M10 FLAT WASHER DIN 125
33	056060-040	4	HHCS M10 X 1.5 X 40 G8.8 DIN 933
34	056066-010	4	NUT HEX M10 X1.50 GR 8.8 SELF LOCKING DIN 985
35	300492	1	LATCH LH TRAY ROTARY LOCK
36	5560046	1	SCR THUMB M6-1.0 X 25MM
37	056067-006	1	NUT, HEX, M6 X 1.0 DIN 934
38	056066-008	2	NUT HEX M8 X1.25 GR 8.8 SELF LOCKING DIN 985
39	056069-008	2	M8 FLAT WASHER DIN 125
40	056059-040	2	HHCS M8 X 1.25 X 40 G8.8 ISO 4014_DIN 931
41	5036905	1	ADAPTER 45 DEG ELBOW SWIVEL -6 JIC
42	5035706	1	ADAPTER 45 DEG ELBOW -8 SAE -8 JIC
43	5036906	1	ADAPTER 45 DEG ELBOW SWIVEL -8 JIC
44	5037003	1	ADAPTER 90 DEG ELBOW SWIVEL -4 JIC
100	0162244	1	WIRE 2 R312 R37520 RED
101	0150459	1	WIRE 2 R313I R313I 12 SP-28/28
102	0071213	2	HOSE -8-8S-8S 16 100R2
103	0070791	2	HOSE -8-8S-8S 20.5 100R2
104	3049850	1	WIRE 12 R313I R313I 12 SP
105	1420310	1	WIRE 2 R375 R313 10 BLACK
106	1370382	1	HARNESS ONBOARD DIAGNOSTIC
107	0371889	1	DIODE WIRE ASSEMBLY
108	300189	1	WIRE 2 R375I R312I 102 RED
109	1420296	1	WIRE 2 R375 R313 100 BLACK
110	0371888	1	DIODE WIRE ASSEMBLY
111	3040269	6	BOOT BATTERY CABLE END BLACK 1/0GA
112	3040270	1	BOOT BATTERY CABLE END Y TYPE

1420289

Hydraulic Tray

Pothole and Scissor Stack Switch Mounting/Standard Installation — Before April 11, 2012

Item	Part No.	Qty.	Description
1	3028795	2	SWITCH ASSEMBLY (REFER TO ELECTRICAL 47)
2	5563009	2	BLT, SKTHD M4 7 X 25MM
3	5563010	2	BLT, SKTHD M4 7 X 30MM
4	5563011	4	NUT LKG M4 0.7
5	5569887	4	WSHR FLAT M4

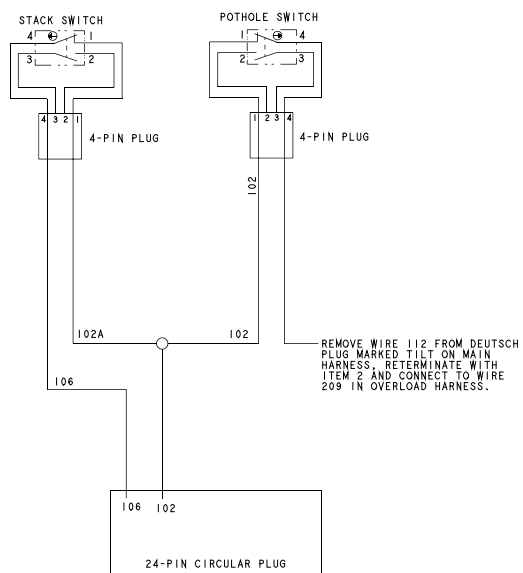
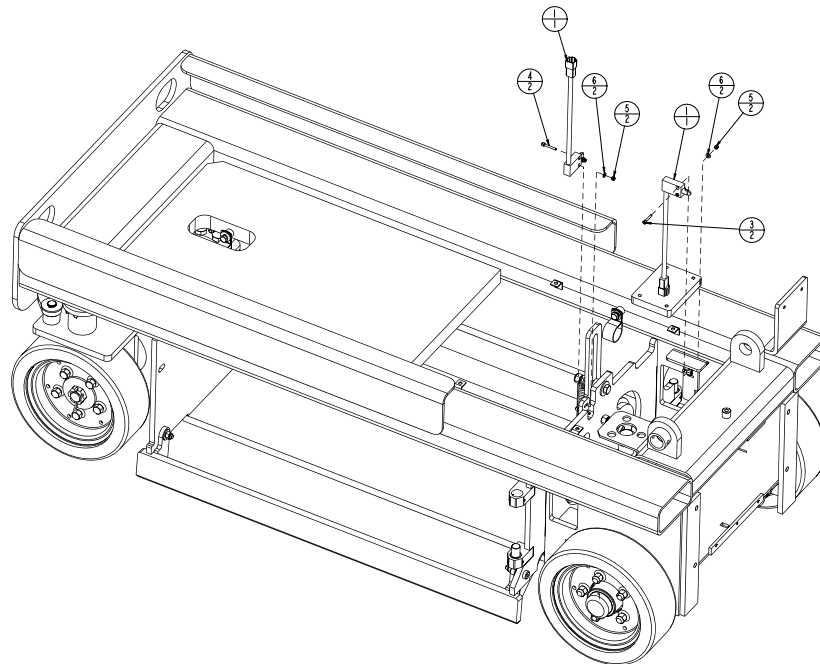


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Pothole and Scissor Stack Switch Mounting/Standard Installation — Before April 11, 2012

Pothole and Scissor Stack Switch Mounting/CE Installation — Before April 11, 2012

Item	Part No.	Qty.	Description
1	3028795	2	SWITCH ASSEMBLY (REFER TO ELECTRICAL 47)
2	3040082	1	TERM MALE 250FI 16/14
3	5563009	2	BLT, SKTHD M4 7 X 25MM
4	5563010	2	BLT, SKTHD M4 7 X 30MM
5	5563011	4	NUT LKG NUT LKG M4 0.7
6	5569887	4	WSHR FLAT M4

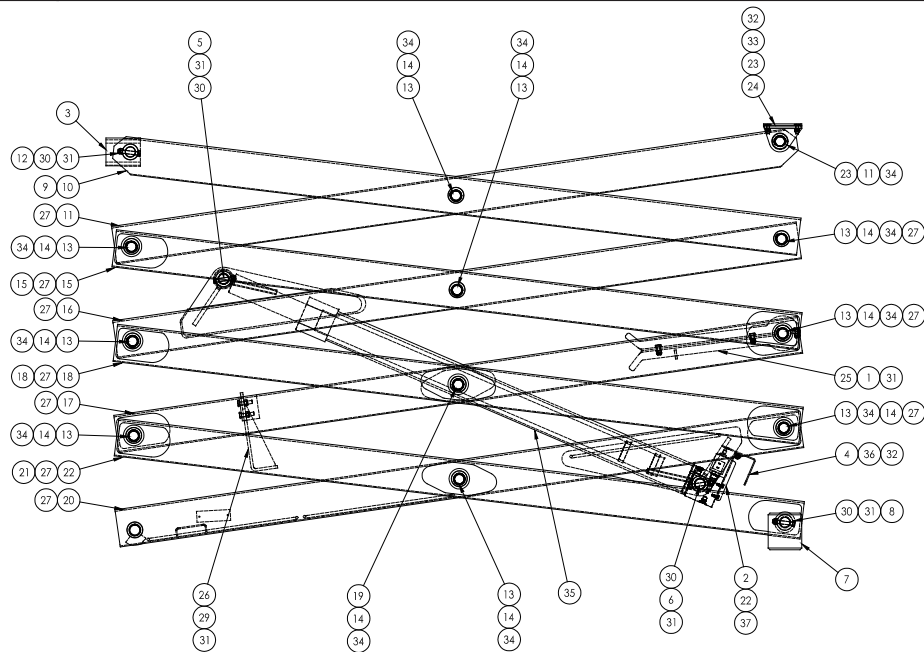


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Pothole and Scissor Stack Switch Mounting/CE Installation — Before April 11, 2012

Scissor Stack

Item	Part No.	Qty.	Description
1	058493-025	3	HHCS M10 X 1.5 X 25 G8.8 DIN 933
2	1370205	1	WELDMENT, PIVOT ARM
3	1370233	2	SLIDE BLOCK
4	1370244	1	WLDMT, EMER BLEED DOWN
5	1420007	1	PIN, LIFT CYLINDER
6	1420038	1	PIN, LIFT CYLINDER
7	1420083	2	SLIDE BLOCK, CHASSIS
8	1420084	2	PIN, SLIDE BLOCK CHASSIS
9	1420140	1	WLDMT. 4TH OUTER ARM, LH
10	1420141	1	WLDMT. 4TH OUTER ARM, RH
11	1420142	1	WLDMT. 4TH INNER ARM
12	1420145	1	PIN, PLATFORM MOUNT, REAR
13	1420146	9	PIN STACK CENTER
14	1420147	22	32MM SHAFT BRG RETAINER
15	1420150	2	WLDMT, 3RD OUTER ARM
16	1420151	1	WLDMNT. 3RD INNER ARM
17	1420154	1	WLDMNT. 2ND INNER ARM
18	1420157	2	WLDMNT, 2ND OUTER ARM
19	1420158	2	PIN STACK SHORT
20	1420159	1	WLDMNT. 1ST INNER ARM
21	1420161	1	WLDMNT, 1ST OUTER ARM RH
22	1420163	1	WLDMNT, 1ST OUTER ARM RH
23	1420168	2	WLDMNT, PLATFORM SLIDE
24	1420169	2	SLIDE PAD
25	1420171	2	SAFETY PROP S2632M
26	1420176	1	WLDMT. POTHOLE ACTIVATOR BKT.
27	2509709	66	BRG 32MM X 36MM X 40MM LG
28	058491-012	2	HHCS M6 X 1 X 12 G8.8 ISO 4017_DIN 933
29	056060-040	4	HHCS M10 X 1.5 X 40 G8.8 DIN 933
30	056060-065	5	HHCS M10 X 1.5 X 65 G8.8 DIN 931
31	056066-010	12	NUT HEX M10 X1.50 GR 8.8 SELF LOCKING DIN 985
32	056066-008	5	NUT HEX M8 X1.25 GR 8.8 SELF LOCKING DIN 985
33	510568-030	4	FSHCS M8 X 1.25 X 30 CLASS 8.8 DIN7991
34	5592005	23	SNAP RING, EXTERNAL 32MM
35	6047075	1	LIFT CYLINDER 26/32 (REFER TO HYDRAULICS – 11)
36	056059-065	1	HHCS M8 X 1.25 X 65 G8.8 ISO 4014_DIN 931
37	056021-006	2	WSHR LOCK M6 DIN 127

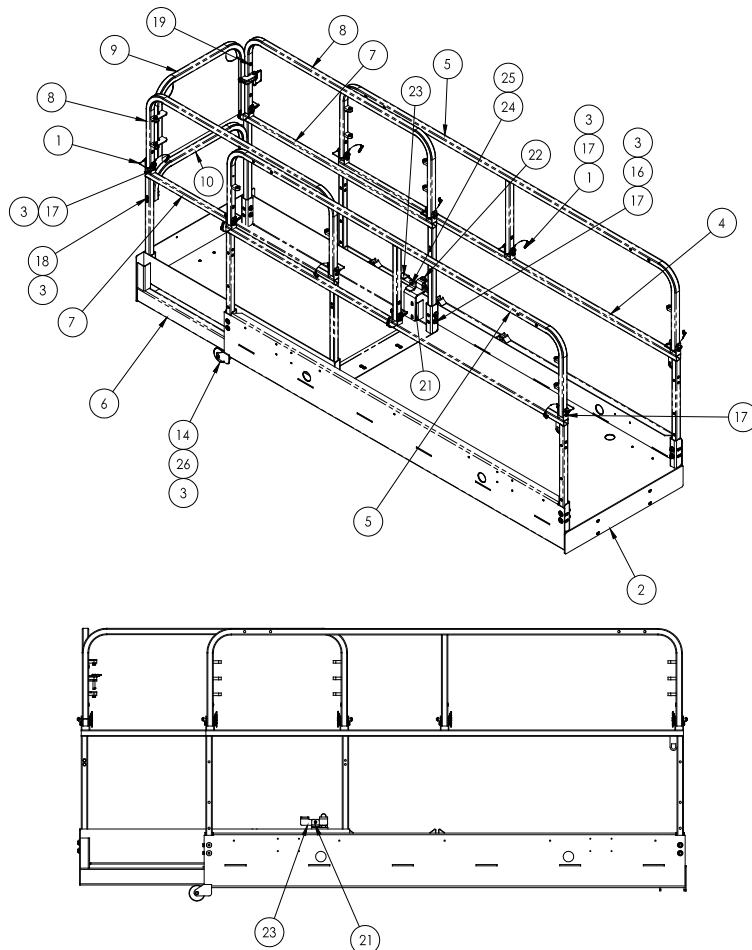


Scissor Stack

1420290

Platform – Before August 14, 2011

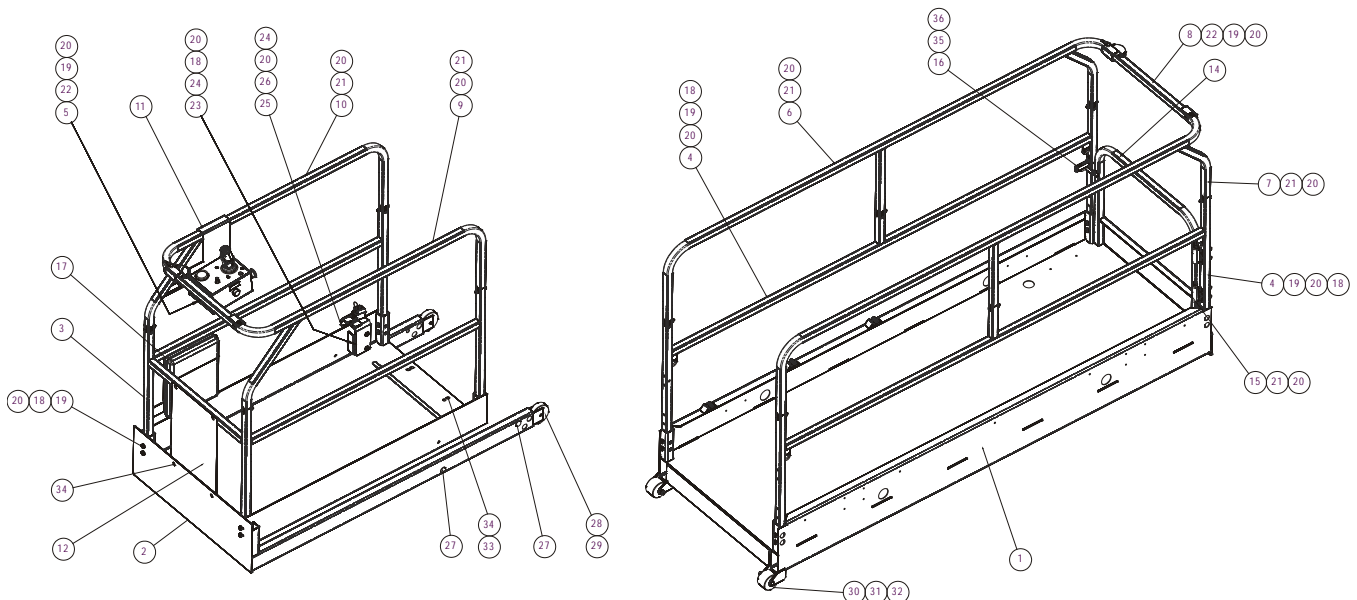
Item	Part No.	Qty.	Description
1	302544	11	SNAP PIN W/LANYARD
2	1420051	1	WELDMENT NARROW
3	056066-008	34	NUT HEX M8 X 1.25 GR8.8 SELF LOCKING DIN 985
4	1420208	2	WELDMENT HANDRAIL MAIN
5	1420211	2	WELDMENT HANDRAIL
6	1420214	1	WELDMENT EXTENSION
7	1360433	2	WELDMENT HANDRAIL
8	1360436	2	WELDMENT HANDRAIL EXTENSION
9	1420222	1	WELDMENT FRONT
10	1420225	1	TUBE MID HANDRAIL
11	1360320	2	ROLLER PLATFORM EXTENSION DECK LOWER
12	5560023	2	PIN ROLL M8 40
13	5563088	4	SLIDE PAD 25MM 6MM THICK
14	1360318	2	ROLLER PLATFORM
15	058492-100	4	HHCS M8 X 1.25 X 100 GR8.8 ISO 4017 DIN 931
16	056069-012	32	M12 FLAT WASHER DIN 125
17	056059-050	26	HHCS M8 X 1.25 X 50 GR8.8 ISO 4014 DIN 931
18	056059-070	4	HHCS M8 X 1.25 X 70 GR8.8 ISO 4014 DIN 931
19	5563193	15	ALUMINUM POP RIVET LGHD 4.8 X 9.2 STEEL MANDREL
20	1360444	2	SLIDE PAD
21	502145-000	1	LEVER PIVOT BRACKET WELDMENT
22	003570-003	1	SPRING LATCH
23	502141-000	1	LEVER BRACKET
24	058491-020	1	HHCS M6 X 1 X 20 GR8.8 ISO 4017 DIN 933
25	056066-006	1	NUT HEX M6 X 1 GR8.8 SELF LOCKING DIN 985
26	056059-080	2	HHCS M8 X 1.25 X 80 GR8.8 ISO 4014 DIN 931



Platform – Before August 14, 2011

Platform – After August 13, 2011

Item	Part No.	Qty.	Description
1	1420051	1	WELDMENT NARROW
2	1420214	1	WELDMENT EXTENSION
3	512331-000	1	EXTENSION DECK LOWER RAILS
4	512336-000	2	MAIN DECK LOWER SIDE RAIL
5	512334-000	1	EXTENSION DECK UPPER HINGED RAIL
6	512339-000	1	WELDMENT HANDRAIL TOP
7	512340-000	1	WELDMENT HANDRAIL TOP
8	512343-000	1	MAIN DECK END HANDRAIL
9	512379-000	1	WELDMENT HANDRAIL EXTENSION
10	512382-000	1	WELDMENT HANDRAIL EXTENSION
11	1420307	1	ASSEMBLY UPPER CONTROL BOX ANSI (REFER TO ELECTRICAL 25 TO 31)
	1420305	1	ASSEMBLY UPPER CONTROL BOX CE/AU (REFER TO ELECTRICAL 33 TO 39)
12	1420320	1	PLATFORM EXTENSION DECK END
14	512387-000	1	WELDMENT SWING
15	479824	2	SPRING HINGE DRILLED
16	11691-10	1	LATCH STRIKER SET
17	562386	1	COMPARTMENT LITERATURE
18	056069-008	18	M8 FLAT WASHER DIN 125
19	056059-050	18	HHCS M8 X 1.25 X 50 GR8.8 ISO 4014 DIN 931
20	056066-008	35	NUT HEX M8 X 1.25 GR8.8 SELF LOCKING DIN 985
21	056059-045	14	HHCS M8 X 1.25 X 45 GR8.8 ISO 4014 DIN 931
22	302544	2	SNAP PIN W/LANYARD
23	502145-000	1	LEVER PIVOT BRACKET WELDMENT
24	056059-025	3	HHCS M8 X 1.25 X 25 GR8.8 ISO 4014 DIN 931
25	502141-000	1	LEVER BRACKET
26	0090442-003	1	SPRING LATCH
27	5563088	4	SLIDE PAD
28	1360320	2	ROLLER PLATFORM EXTENSION DECK LOWER
29	989599	2	PIN ROLL .375 DIA 1.50
30	1360318	2	ROLLER PLATFORM
31	056060-080	2	HHCS M10 X 1.5 X 80 GR8.8 DIN 931
32	056066-010	2	NUT HEX M10 X 1.5 GR8.8 SELF LOCKING DIN 985
33	1360444	2	SLIDE PAD
34	5563193	8	ALUMINUM POP RIVET LGHD 4.8 X 9.2 STEEL MANDREL
35	056058-045	2	HHCS M6 X 1 X 45 GR8.8 ISO 4014 DIN 931
36	056066-006	2	NUT HEX M6 X 1 GR8.8 SELF LOCKING DIN 985

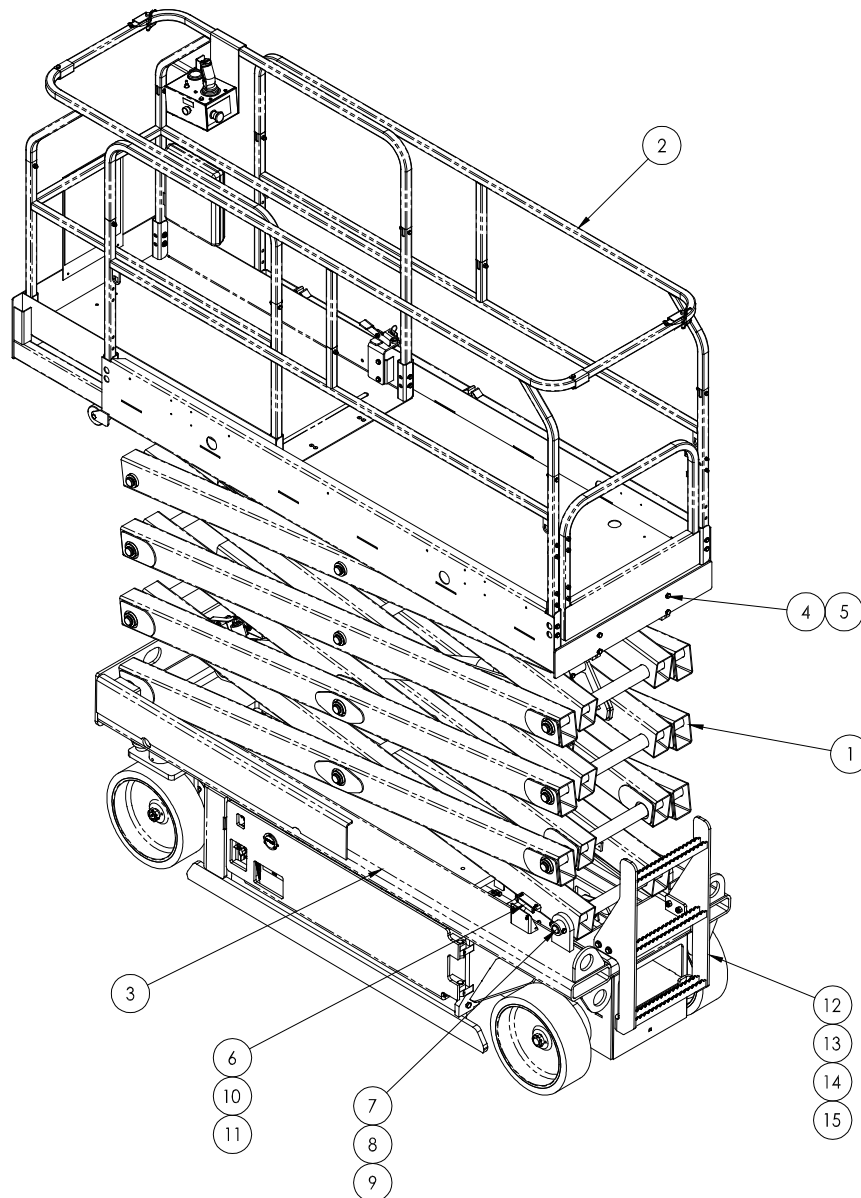


1420282 A

Platform – After August 13, 2011

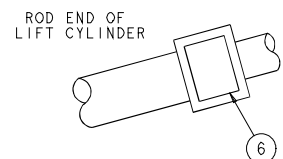
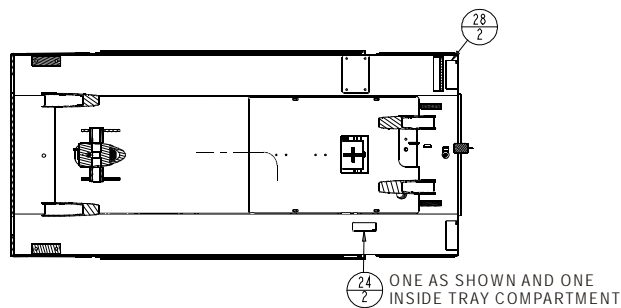
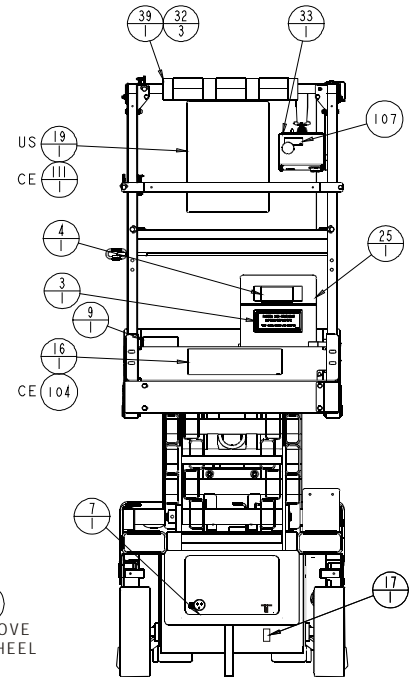
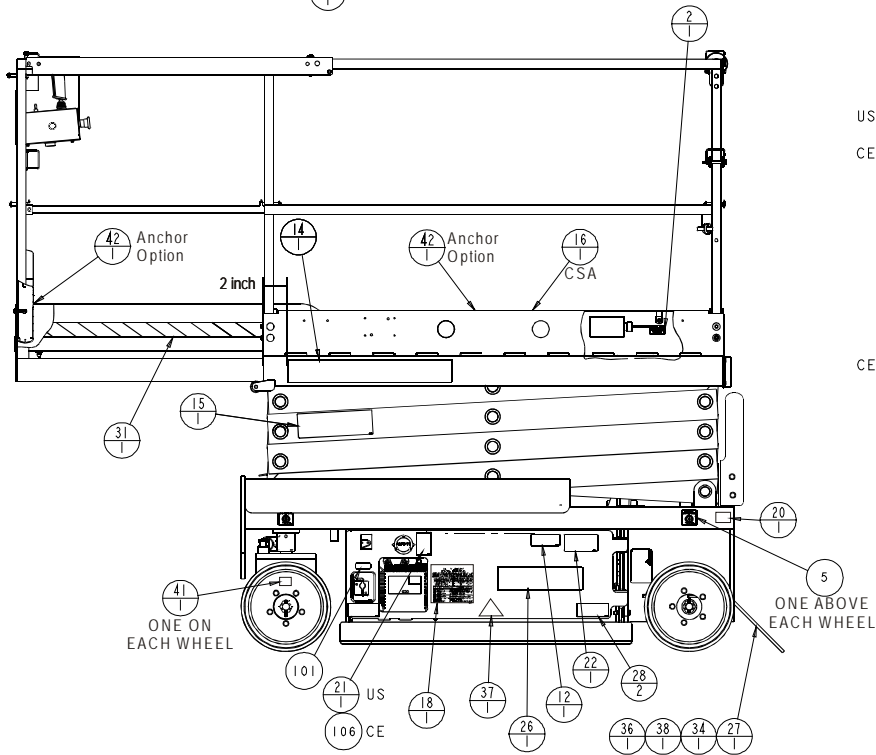
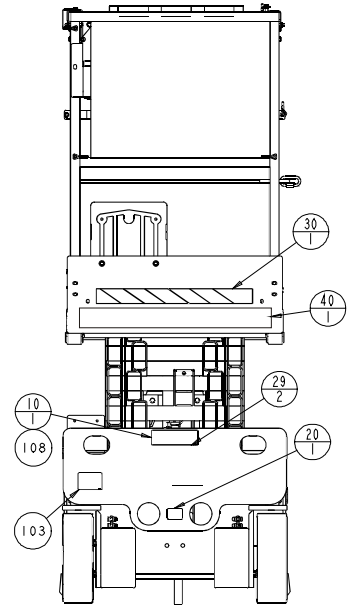
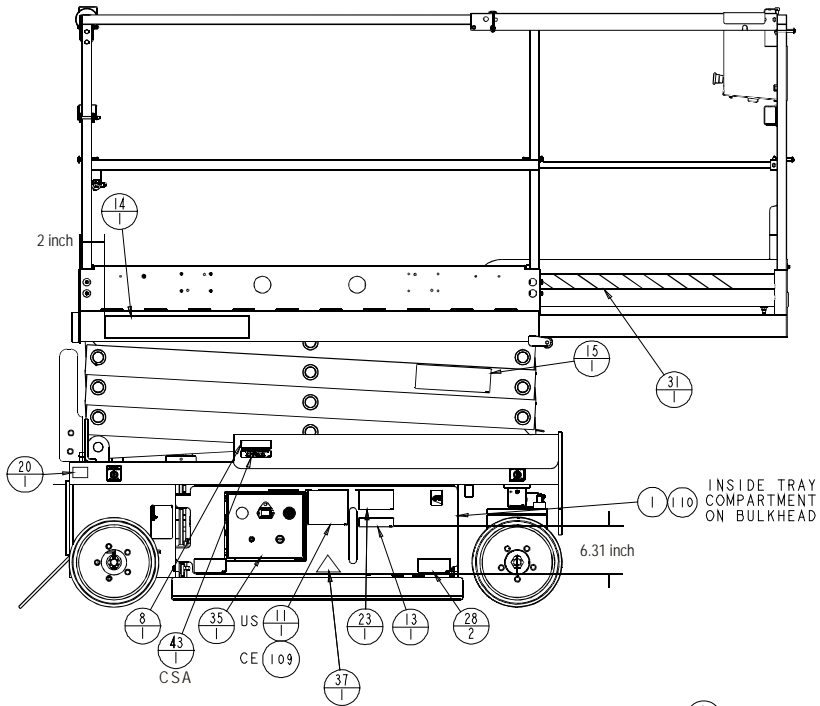
Stack/Platform Installation

Item	Part No.	Qty.	Description
1	1420290	1	STACK ASSEMBLY S2632E
2	1420282	1	PLATF ASSY
3	1420114	1	INSTALL TRAYS
4	056060-150	4	HHCS M10 X 1.5 X 150 G8.8 DIN 931
5	056064-012	4	NUT HEX M12 X 1.75 GR 10.9 SELF LOCKING DIN 985
6	1420311	1	SENSOR MAGNETIC (REFER TO ELECTRICAL – 49)
7	1420172	1	PIN, STACK PIVOT
8	056060-065	1	HHCS M10 X 1.5 X 65 G8.8 DIN 931
9	056066-010	1	NUT HEX M10 X1.50 GR 8.8 SELF LOCKING DIN 985
10	512459-016	4	HHCS M4 X 0.7 X 16 G8.8 ISO 4017 DIN 931
11	056066-004	4	NUT HEX M4 X 0.70 GR 8.8 SELF LOCKING DIN 985
12	1420332	1	WLDMT, STEP
13	056069-012	4	M12 FLAT WASHER DIN 125
14	058494-040	4	HHCS M12 X 1.75 X 40 G8.8 DIN 933
15	056066-012	4	NUT HEX M12 X 1.75 GR 8.8 SELF LOCKING DIN 985



Stack/Platform Installation

Placards and Decals



Placards and Decals

0361146

Placards and Decals

Item	Part No.	Qty.	Description
1	0070901	1	Placard caution serial number – ANSI only
	7030141	1	Placard caution serial number – AU only
2	0070921	1	Decal 125 volt 15 amp – US only
3	0073043	1	Decal manual holder
4	0073224	1	Decal notice manual re-order
5	1420269	4	Decal wheel load S2632E
6	0074311	1	Decal cylinder failure–1 per cylinder
7	0150606	1	Decal power to platform – US only
8	0181562	1	Decal machine complies with ANSI
9	300699	1	Placard operators checklist
10	300700	1	Decal danger shearing – US only
11	1360551	1	Decal danger towing – US only
12	300760	1	Decal danger tipover hazard
13	302950	1	Decal hydraulic oil level
14	511076-000	2	Decal Snorkel S2632E
15	0361259	2	Decal danger safety prop
16	0361514	A/R	Decal platform capacity 500#
17	0372064	1	Decal emergency bleed down S2632E
18	1360550	1	Placard battery charger information Lester charger – Before August 8, 2012
	0361562	1	Placard battery charger information Signet charger – After August 7, 2012
19	0372000	1	Decal danger tipover/electrical hzrd
20	0083426	3	Decal tie down
21	416836	1	Decal battery charger plug – US only
22	451726	1	Decal check battery before charging
23	451776	1	Decal hydraulic fluid level
24	451986	2	Decal do not alter switch
25	562386	1	Compartment literature
26	511101-000	1	Decal Snorkel logo S2632E
	512224-000	2	Decal Snorkel logo S1930E/S1932E
27	595944	1	Ground strap
28	621486	6	Decal fork lift
29-32	969249	A/R	Decal warning stripe – sold by roll
33	1370375	1	Placard upper controls S2632E – ANSI
	1420254	1	Placard upper controls S2632E – CE/AU
34	972439	1	Bolt .375-16 1.25
35	0361163	1	Placard lower controls S1930E/S1932E/S2632E ANSI – Before December 16, 2011
	1360522	1	Placard lower controls S1930E/S1932E/S2632E All – After December 15, 2011
36	986299	1	Washer flat .38
38	5560033	1	Nut locking .375-16
39	9980003	1	Cushion tube 18 inch – US only
40	7030140	1	Decal Snorkellift.com
41	0370550	1	Decal lug nut torque – 5 lug wheels only
42	0150448	2	Decal attach fall restraint – option only
43	0361528	1	Decal CSA compliant – CSA only
			CE ONLY
101	0073089	1	Placard battery disconnect switch
102	501453-000	2	Decal foot crushing hazard
103	0162311	1	Decal CE logo
104	1360596		Decal platform capacity 500# No wind rating S1930E/S2632E Only
106	0372063	1	Decal battery charger plug
107	560272	1	Decal emergency stop
108	0190989E	1	Decal do not reach symbol CE
109	1360544	1	Decal danger towing – CE
110	0075680	1	Placard caution serial number – CE
111	0361258	1	Decal danger tipover/electrical hzrd – CE/AU

0361146

Placards and Decals

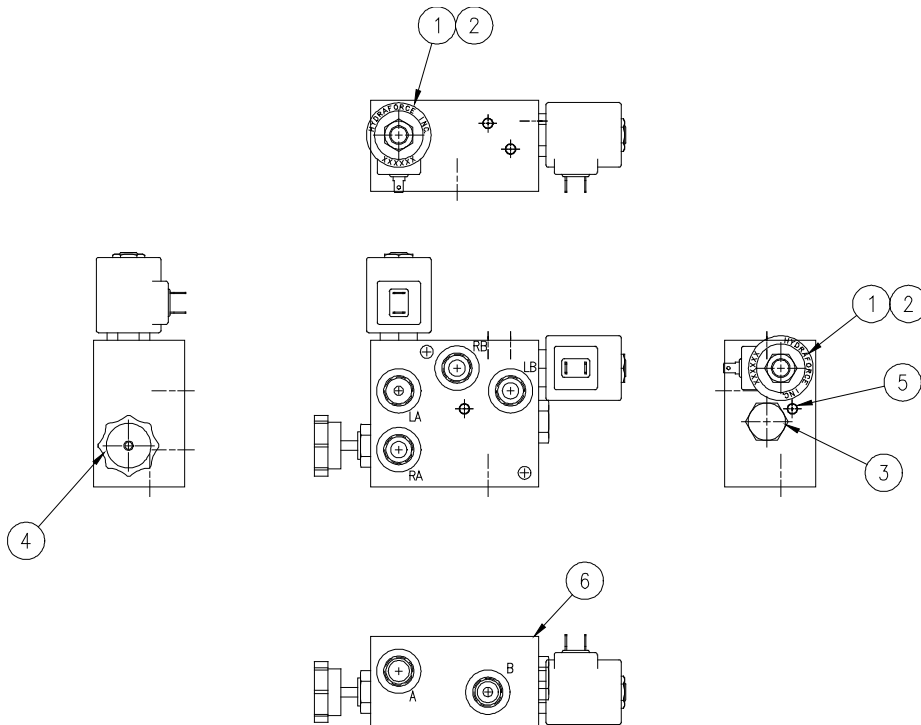
Hydraulics

S2632E



Drive Speed Manifold

Item	Part No.	Qty.	Description
1	6019062	1	MANIFOLD DRIVE SPEED
2	6019076	2	SOLENOID VALVE
2	6019078	2	DUAL SPADE COIL 20 VDC
3	6019086	1	FLOW DIVIDER
4	6018944	1	NEEDLE VALVE
5		4	7MM PERMANENT PLUG – NON-SERVICEABLE PART
6	6019087	1	VALVE BODY, DRIVE SPEED

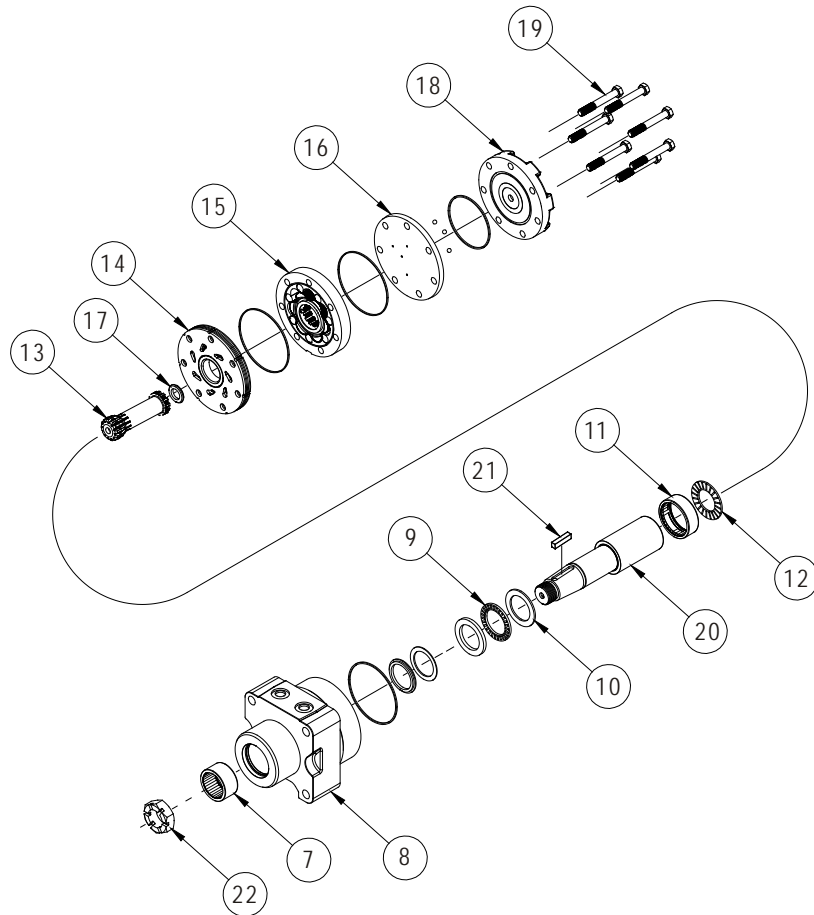


6019062 A

Drive Speed Manifold

Hydraulic Drive Motor

Item	Part No.	Qty.	Description
	6031615	1	HYDRAULIC DRIVE MOTOR
	0372050	1	SEAL REPAIR KIT
7	8230176	1	FRONT HOUSING BEARING
8	0372051	1	HOUSING
9	8230177	1	FRONT THRUST WASHER
10	8230178	1	FRONT THRUST BEARING
11	8230179	1	THRUST WASHER
12	8230180	1	REAR THRUST BEARING
13	0372052	1	DRIVE LINK
14	0372054	1	MANIFOLD
15	0372055	1	ROTOR ASSEMBLY
16	0372056	1	BALANCE PLATE WITH 3 BALLS
17	0372053	1	DRIVE LINK SPACER
18	0372057	1	END COVER
19	8230181	7	ASSEMBLY BOLTS
20	0372058	1	SHAFT
21	8230182	1	SHAFT KEY
22	8230183	1	SHAFT NUT

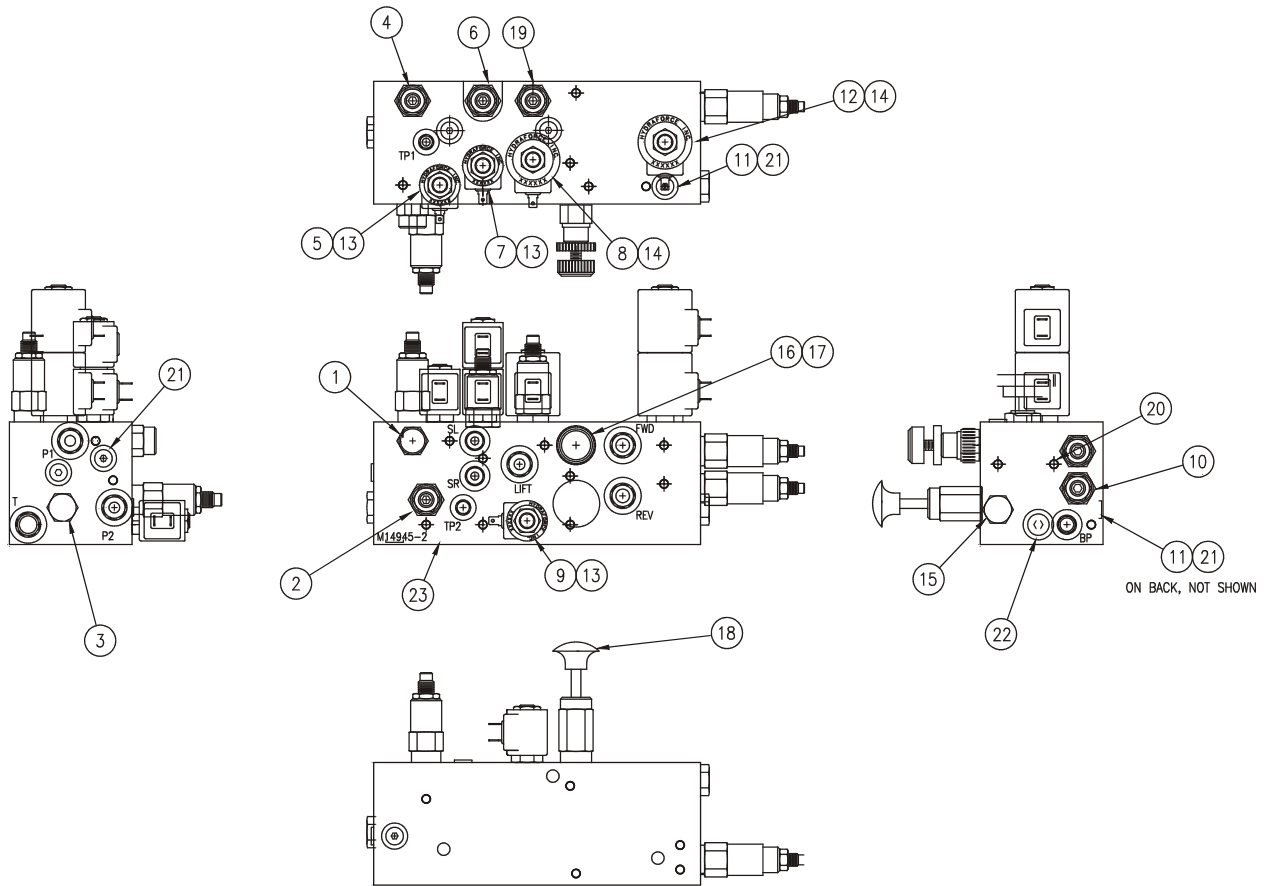


Hydraulic Drive Motor

6031615 A

Manifold Valve

Item	Part No.	Qty.	Description
	6019056	1	MAIN MANIFOLD VALVE
1	6019070	1	FLOW DIVIDER
2	6019071	1	SEQUENCE VALVE
3	561176	1	CHECK VALVE
4	6019072	2	RELIEF VALVE
5	6019073	1	SOLENOID VALVE
6	6019074	1	RELIEF VALVE
7	6019075	1	SOLENOID VALVE
8	6019076	1	SOLENOID VALVE
9	6018943	1	SOLENOID VALVE
10	6019069	2	VALVE COUNTER BALANCE
11	6019041	2	SHUTTLE VALVE
12	6019077	1	SOLENOID VALVE
13	583956	4	COIL,20VDC
14	6019078	3	DUAL SPADE COIL 20 VDC
15	6019043	1	ORIFICE CHECK VALVE
16	6019079	1	PILOT CHECK (MAN O/R)
17	6010808	1	KNOB & LOCK RING KIT
18	6029632	1	HAND PUMP PUSH RELEASE
21	5076505	7	-4 SAE O-RING PLUG FLUSH HEAD
22	5076506	1	-6 O-RING PLUG FLUSH HEAD
23	6019080	1	VALVE BODY

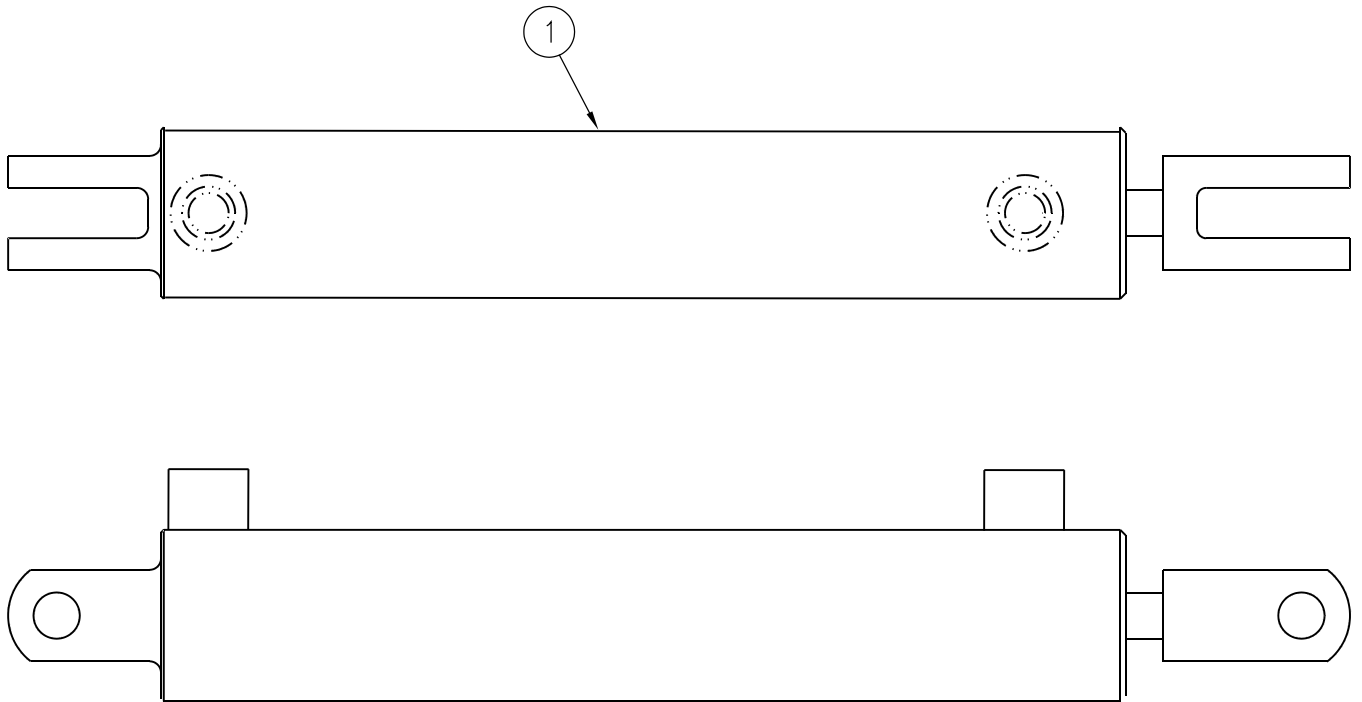


Manifold Valve

6019056 A

Steering Cylinder

Item	Part No.	Qty.	Description
1	6047119	1	CYLINDER, STEERING – EM.C – SEAL KIT IS NOT AVAILABLE FOR EM.C CYLINDER –

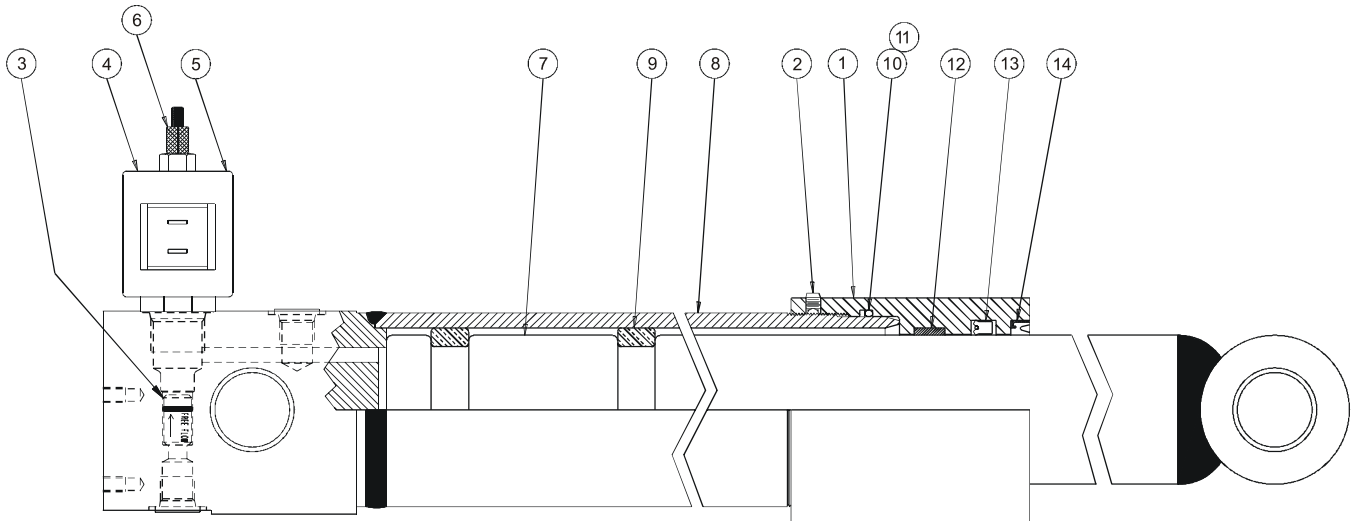


Steering Cylinder

6047119 D

Lift Cylinder

Item	Part No.	Qty.	Description
	6047075	1	CYLINDER, LIFT – GREEN
	8071009	1	SEAL KIT – GREEN (INCLUDES ITEMS 9 THROUGH 14)
1	6091509	1	GLAND,CYL
2	5560339	1	SET SCREW .250
3	6091516	1	CHECK VALVE, LIFT CYL .032
4	6019084	1	SOLENOID VALVE ASSY 20V DC (INCLUDES ITEMS 5 AND 6)
5	6019034	1	SOLENOID 20V DC
6	6018024	1	CARTRIDGE VALVE
7	8180040	1	ROD ASSEMBLY
8	8180042	1	BARREL ASSEMBLY
9	KIT ITEM	2	SPLIT BRONZE RING – NOT SOLD SEPARATELY
10	KIT ITEM	1	O-RING 27-1003-0 – NOT SOLD SEPARATELY
11	KIT ITEM	1	BACK-UP 28-1003-1 – NOT SOLD SEPARATELY
12	KIT ITEM	1	WEAR RING 31-6294 – NOT SOLD SEPARATELY
13	KIT ITEM	1	ROD SEAL 29-905-UR – NOT SOLD SEPARATELY
14	KIT ITEM	1	ROD WIPER 30-12075 – NOT SOLD SEPARATELY



Lift Cylinder

6047075 B

Electrical

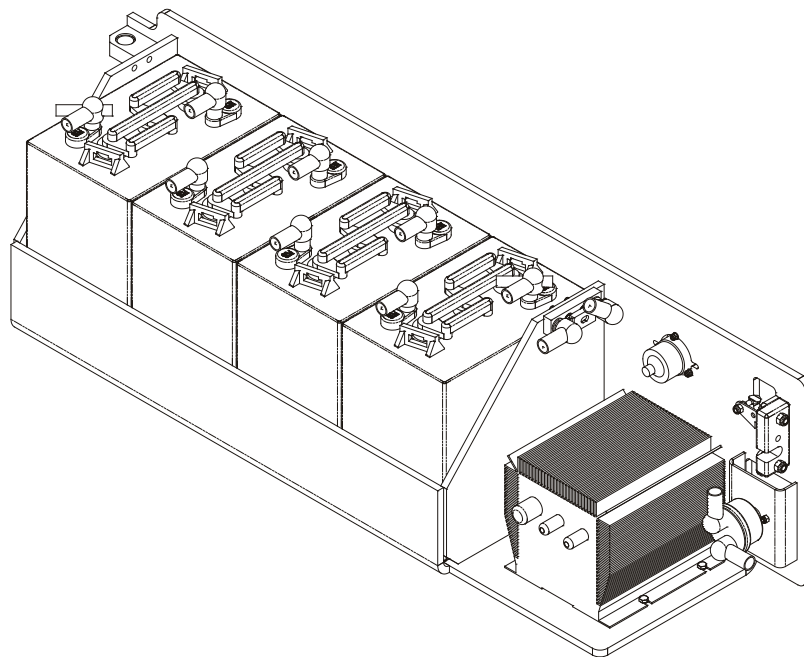
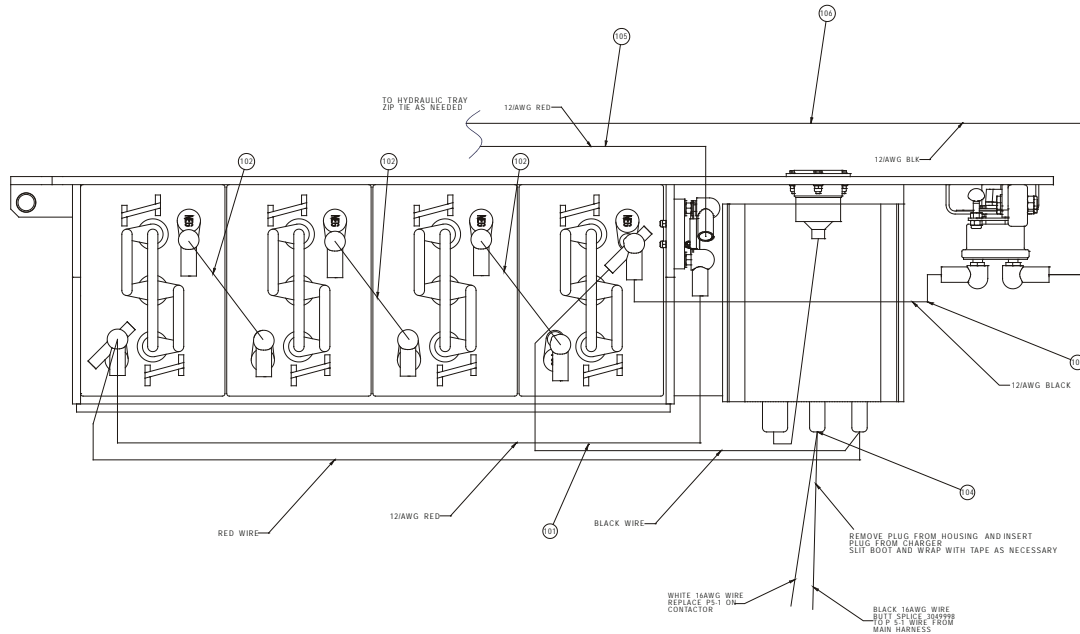
S2632E



snorkel

Battery Tray Wiring – Signet Charger

Item	Part No.	Qty.	Description
101	0162244	1	WIRE 2 R312 R375 20 RED
102	584926	3	WIRE 2 R375 R375 9 BLACK
103	0161404	1	WIRE 2 R312 R375 20 BLACK
104	3014729	1	IED C14 TO US PLUG
105	300189	1	WIRE 2 R375 IR .312 I102 RED
106	1420296	1	WIRE 2 R375 IR .312 I100 BLACK

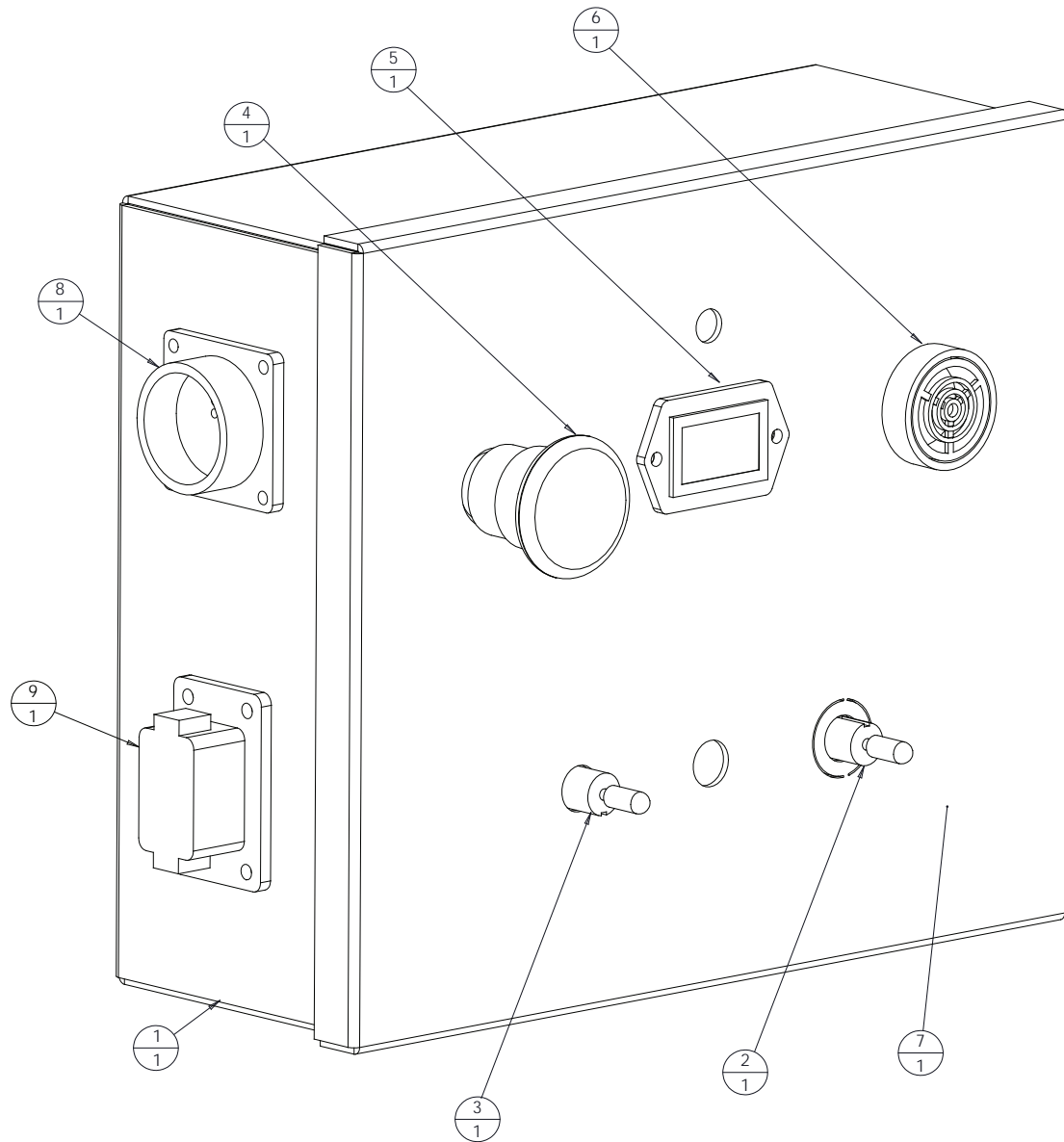


Battery Tray Wiring – Signet Charger

1420288 A

Lower Control Box ANSI – Before September 2011

Item	Part No.	Qty.	Description
1	1370349	1	WLDMT, LOWER CONTROL BOX
2	3020047	1	SW TGL SPDT (ON/NONE/ON)
3	3020016	1	SW TGL SPDT (ON) OFF (ON)
4	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
5	455186	1	HOURMETER, 12 TO 60 VDC, SQUARE
6	3049978	1	ALARM, ECCO BEEPING 6-28VDC
7	0361163	1	PLAC GROUND CONT BOX
8	1370372	1	LWR HARNESS CONN
9	1370373	1	LWR HARNESS DUETSCH CONN



Lower Control Box ANSI – Before September 2011

1370350 C

Lower Control Box Connector Pin ID ANSI – Before September 2011

Item 8 – 1370372 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	VALVE SUPPLY	P3-2
6	DRIVE SELECT SWITCH	P3-6
7	LIFT SELECT SWITCH	P3-7
8	STEER RIGHT SWITCH	P3-8
9	STEER LEFT SWITCH	P3-9
10	TRIGGER SWITCH	P3-12
11	EMS GROUND	P4-1
12	LIFT DOWN SWITCH	P4-4
13	LIFT UP SWITCH	P4-5
14	GROUND ALARM OUTPUT	P5-10
15	GROUND	3
16	HOUR METER CONTROL	HOUR
17	EMERGENCY STOP SWITCH	EMS
18	TORQUE/TRACTION SWITCH	P3-3
19	OVERLOAD LAMP	P1-8
20	SPARE	
21	SPARE	
22	SPARE	
23	SPARE	
24	SPARE	

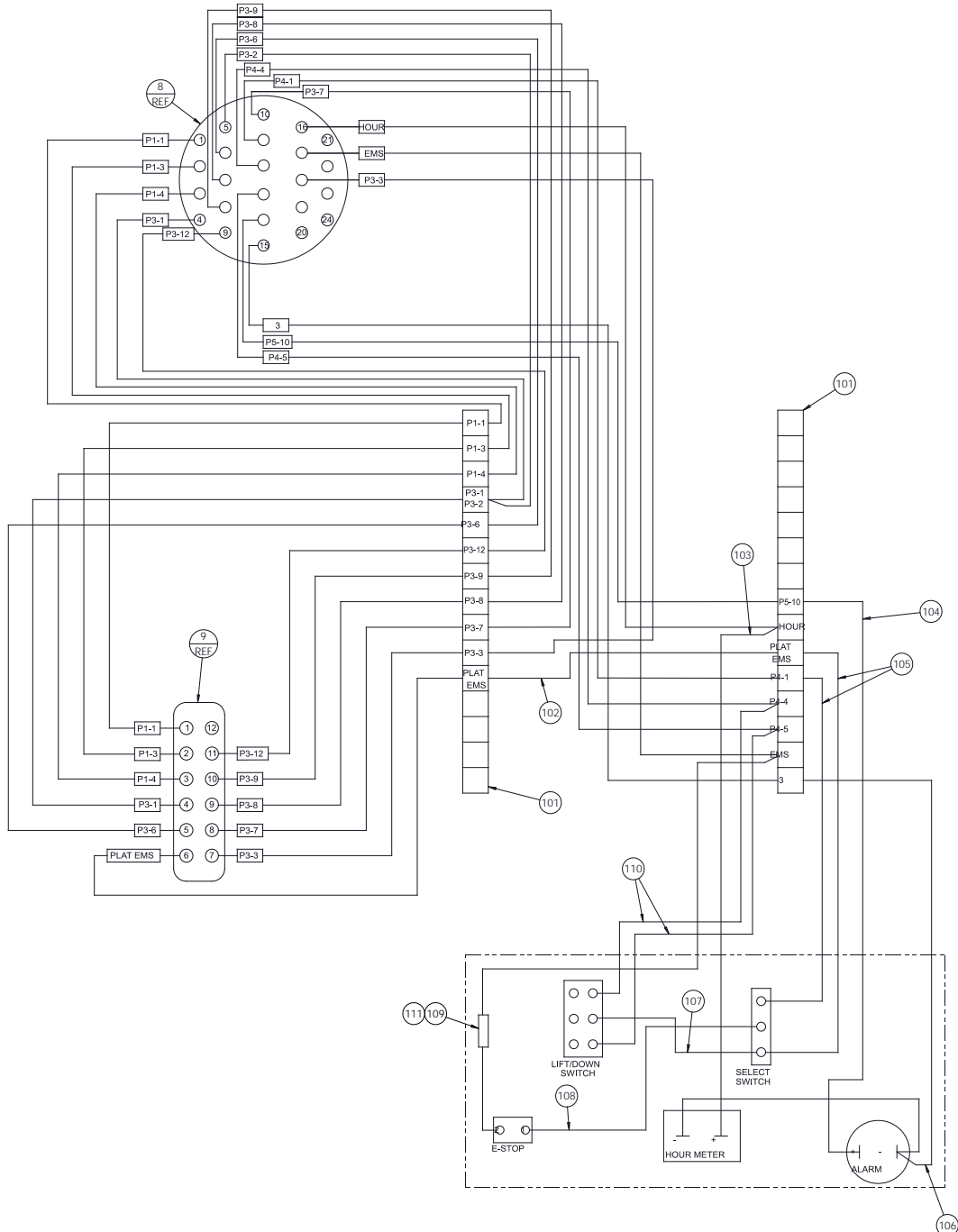
Item 9 – 1370373 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	DRIVE SELECT SWITCH	P3-6
6	PLATFORM EMS	PLAT EMS
7	TORQUE/TRACTION SWITCH	P3-3
8	LIFT SELECT SWITCH	P3-7
9	STEER RIGHT SWITCH	P3-8
10	STEER LEFT SWITCH	P3-9
11	TRIGGER SWITCH	P3-12
12	SPARE	

Lower Control Box Connector Pin ID ANSI – Before September 2011

Lower Control Box Internal Wiring Harness ANSI – Before September 2011

Item	Part No.	Qty.	Description
101	3043807	2	TERM STRIP (14) 45/90 DEG .188
102	0100522	1	WIRE 18 FEM 188I FEM 188I 6
103	1370363	1	WIRE 18 FEM 188I FEM 250FI 14
104	0071518	1	WIRE 18 R6I FEM 188I 15
105	300612	2	WIRE 18 R6I FEM 188I 9
106	1370365	1	WIRE 18 SPECIAL
107	0071515	1	WIRE 18 R6I R6I 5
108	1370366	1	WIRE 18 R6I SPADE8I 8
109	1360527	1	WIRE FUSE HOLDER
110	0071517	2	WIRE 18 R6I FEM 188I 13
111	3040156	1	FUSE 15 AMP

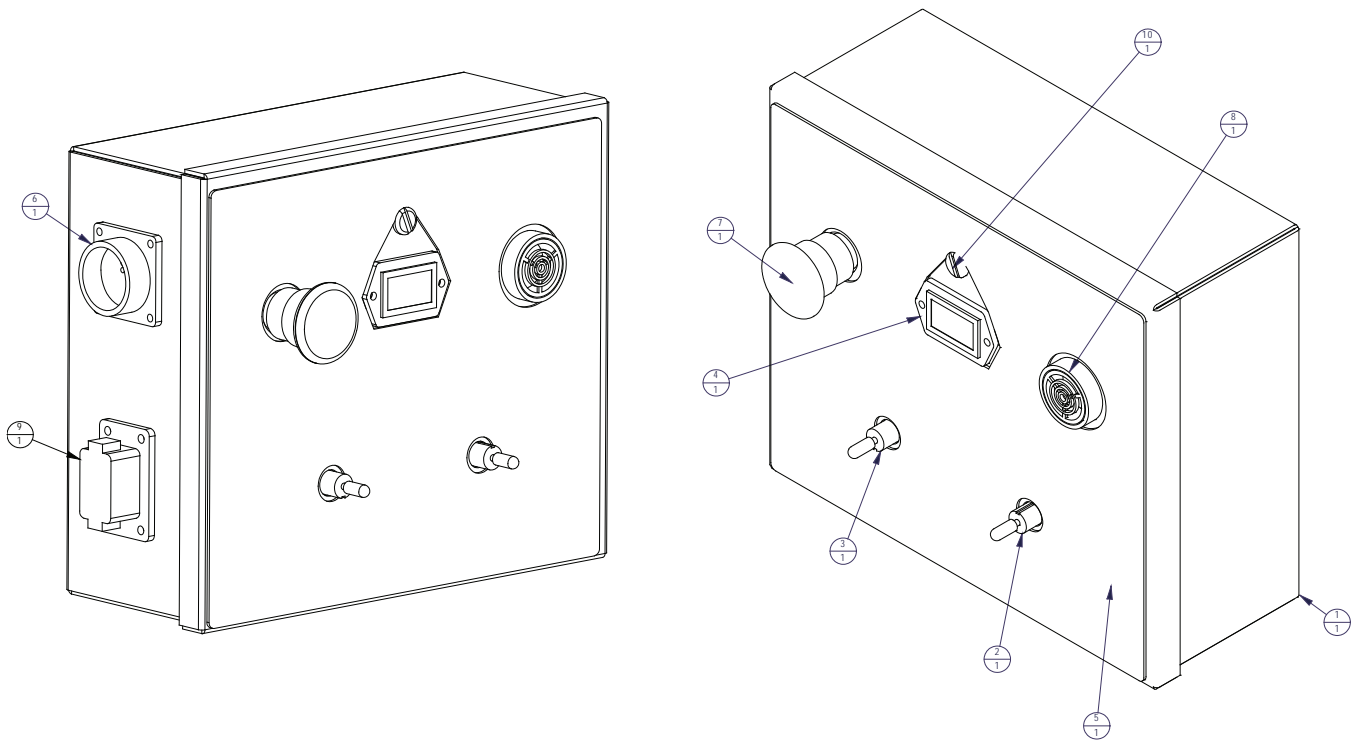


1370350 C

Lower Control Box Internal Wiring Harness ANSI – Before September 2011

Lower Control Box ANSI – After August 2011

Item	Part No.	Qty.	Description
1	1370349	1	WLDMT, LOWER CONTROL
2	3020047	1	SW TGL SPDT (ON/NONE/ON)
3	3020016	1	SW TGL SPDT (ON) OFF (ON)
4	455186	1	HOURMETER, 12 TO 60 VDC, SQUARE
5	0361163	1	PLAC GROUND CONT BOX
6	1370372	1	LWR HARNESS CONN
7	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
8	502588-000	1	ALARM, ECCO BEEPING 6-28VDC
9	1360523	1	LWR HARNESS DUETSCH CONN
10	5516330	1	LATCH



Lower Control Box ANSI – After August 2011

1370350 D

Lower Control Box Connector Pin ID ANSI – After August 2011

Item 6 – 1370372 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	VALVE SUPPLY	P3-2
6	DRIVE SELECT SWITCH	P3-6
7	LIFT SELECT SWITCH	P3-7
8	STEER RIGHT SWITCH	P3-8
9	STEER LEFT SWITCH	P3-9
10	TRIGGER SWITCH	P3-12
11	EMS GROUND	P4-1
12	LIFT DOWN SWITCH	P4-4
13	LIFT UP SWITCH	P4-5
14	GROUND ALARM OUTPUT	P5-10
15	GROUND	3
16	HOUR METER CONTROL	HOUR
17	EMERGENCY STOP SWITCH	EMS
18	TORQUE/TRACTION SWITCH	P3-3
19	OVERLOAD LAMP	P1-8
20	SPARE	
21	SPARE	
22	SPARE	
23	SPARE	
24	SPARE	

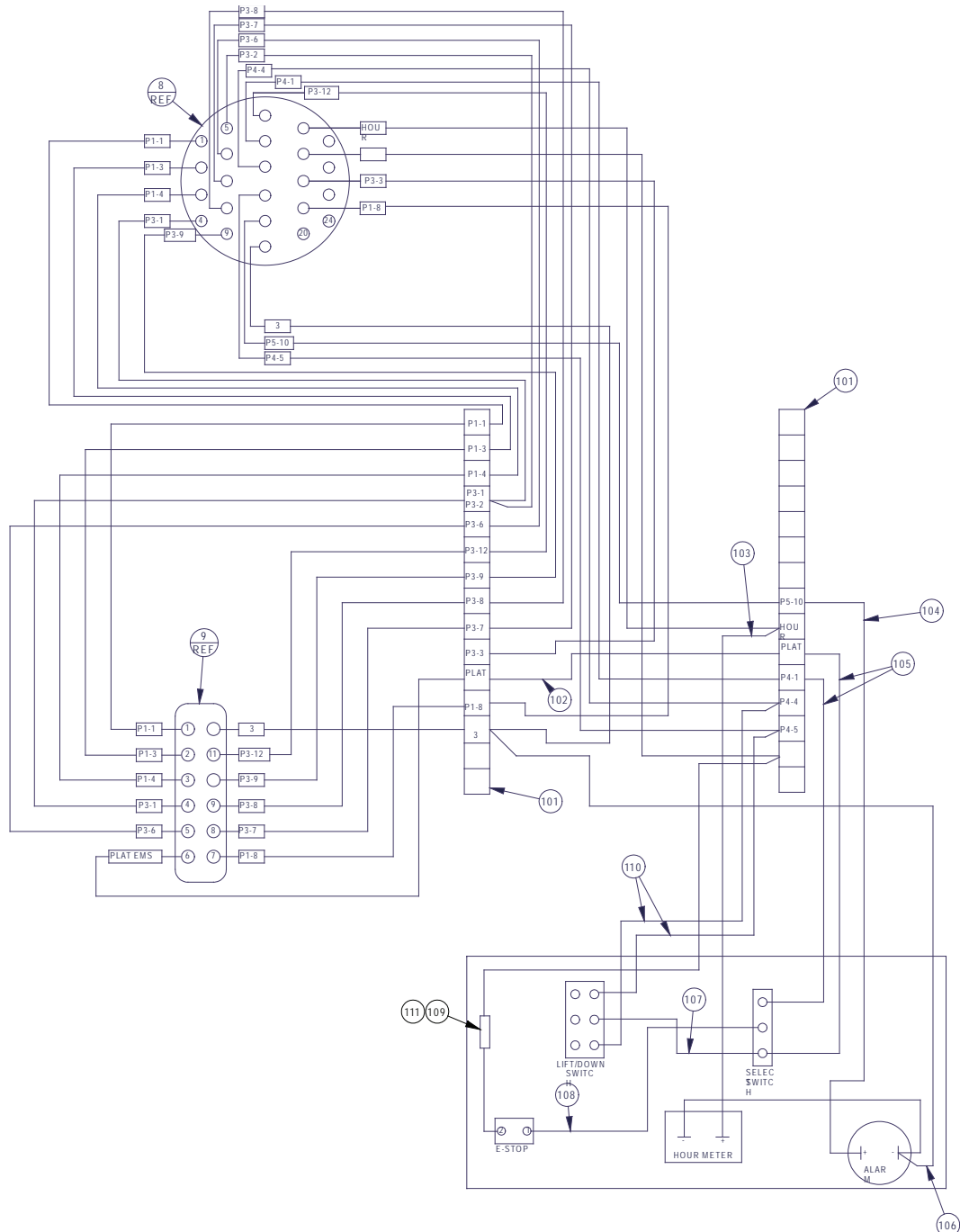
Item 9 – 1360523 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	DRIVE SELECT SWITCH	P3-6
6	PLATFORM EMS	PLAT EMS
7	OVERLOAD LAMP	P1-8
8	LIFT SELECT SWITCH	P3-7
9	STEER RIGHT SWITCH	P3-8
10	STEER LEFT SWITCH	P3-9
11	TRIGGER SWITCH	P3-12
12	GROUND	3

Lower Control Box Connector Pin ID ANSI – After August 2011

Lower Control Box Internal Wiring Harness ANSI – After August 2011

Item	Part No.	Qty.	Description
101	3043807	2	TERM STRIP (14) 45/90 DEG .188
102	100522	1	WIRE 18 FEM188I FEM188I 6
103	1370363	1	WIRE 18 FEM188I FEM250FI 14
104	71518	1	WIRE 18 R6I FEM188I 15
105	300612	2	WIRE 18 R6I FEM188I 9
106	1370365	1	WIRE 18 SPECIAL
107	71515	1	WIRE 18 R6I R6I 5
108	1370366	1	WIRE 18 R6I SPADE8I 8
109	1360527	1	WIRE FUSE HOLDER
110	71517	2	WIRE 18 R6I FEM188I 13
111	3040156	1	FUSE 15 AMP

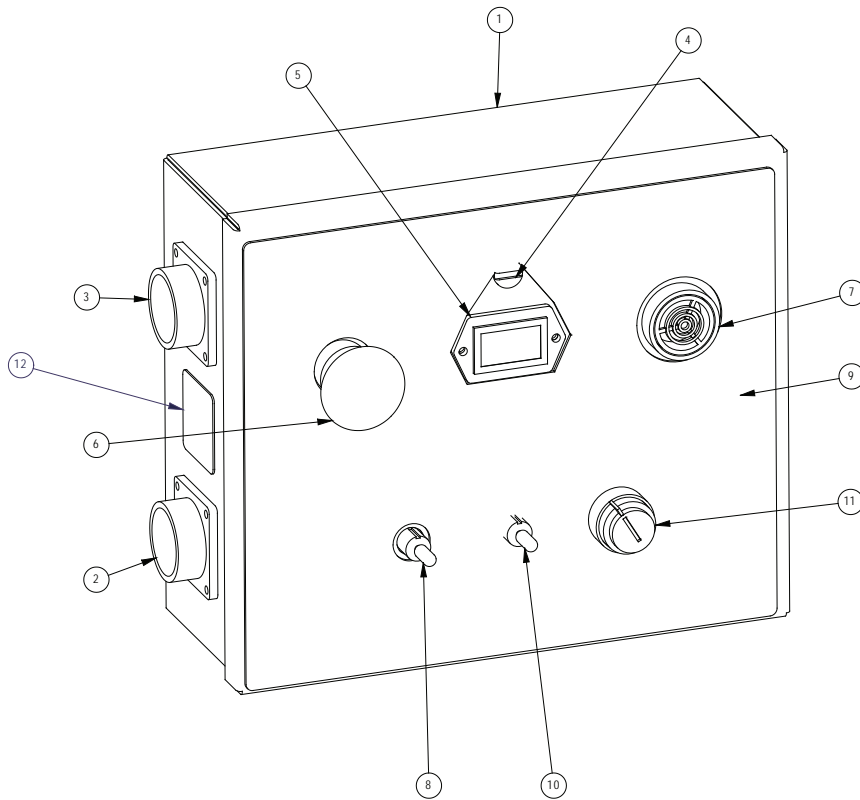


1370350 D

Lower Control Box Internal Wiring Harness ANSI – After August 2011

Lower Control Box ANSI/AU – After December 15, 2011

Item	Part No.	Qty.	Description
1	1420241	1	WLDMT, LOWER CONTROL
2	1420243	1	LWR HARNESS CONN
3	1370372	1	LWR HARNESS CONN
4	5516330	1	LATCH
5	455186	1	HOURMETER, 12 TO 60 VDC, SQUARE
6	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
7	3049978	1	ALARM, ECCO BEEPING 6-28VDC
8	3020047	1	SW TGL SPDT (ON/NONE/ON)
9	1360522	1	PLAC GROUND CONT BOX
10	3020015	1	SW TGL SPDT (ON) OFF
11	3028832	1	SELECTOR SWITCH
	8080210	1	SPARE KEY SOLD IN PAIRS QTY 1
12	1360623	1	DECAL, LOWER CONTROL



Lower Control Box ANSI/AU – After December 15, 2011

1420303 B

Lower Control Box Connector Pin ID ANSI/AU – After December 15, 2011

Item 3 – 1370372 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	VALVE SUPPLY	P3-2
6	DRIVE SELECT SWITCH	P3-6
7	LIFT SELECT SWITCH	P3-7
8	STEER RIGHT SWITCH	P3-8
9	STEER LEFT SWITCH	P3-9
10	TRIGGER SWITCH	P3-12
11	EMS GROUND	P4-1
12	LIFT DOWN SWITCH	P4-4
13	LIFT UP SWITCH	P4-5
14	GROUND ALARM OUTPUT	P5-10
15	GROUND	3
16	HOUR METER CONTROL	HOUR
17	EMERGENCY STOP SWITCH	EMS
18	TORQUE/TRACTION SWITCH	P3-3
19	OVERLOAD LAMP	P1-8
20	SPARE	
21	SPARE	
22	SPARE	
23	SPARE	
24	SPARE	

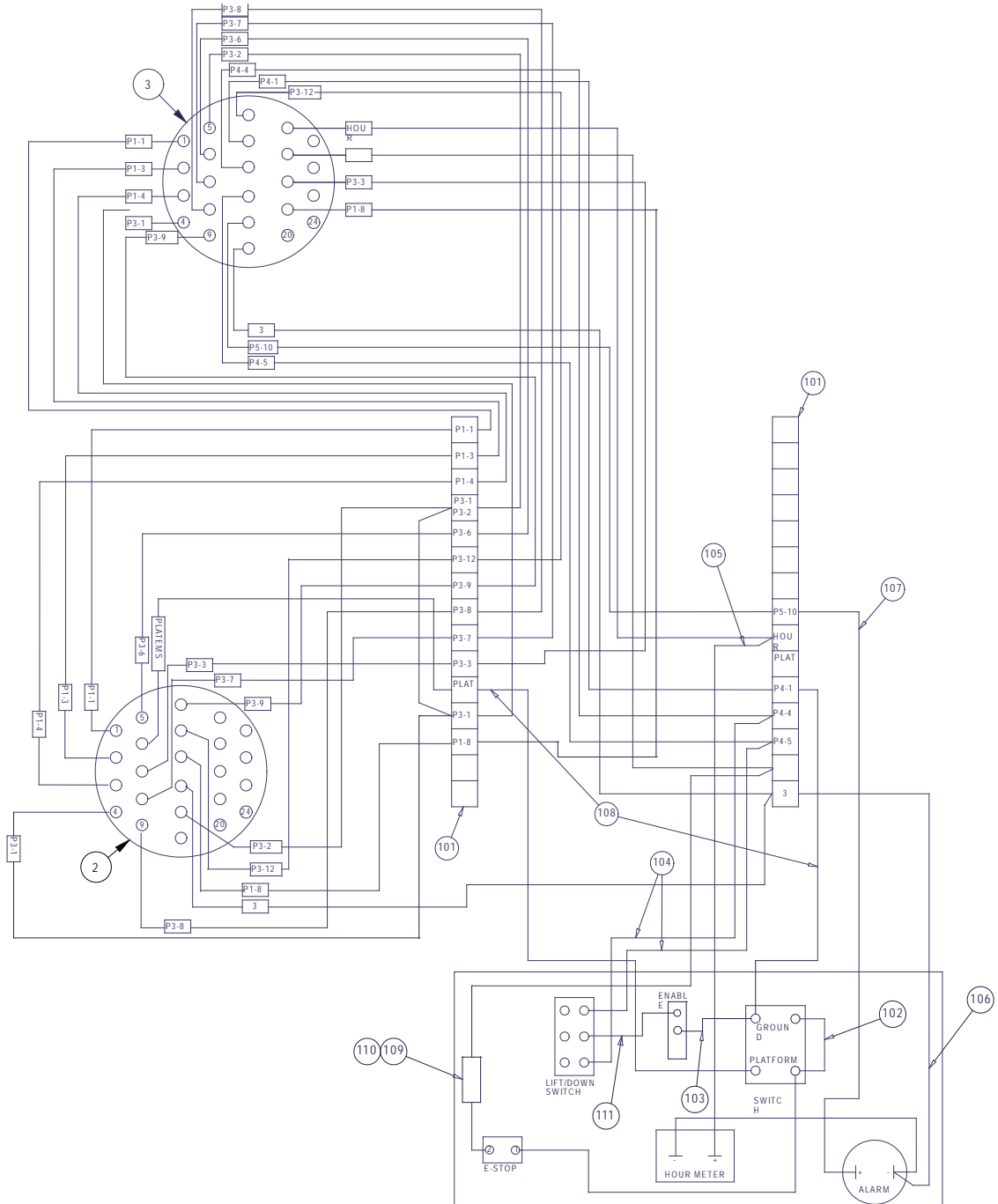
Item 2 – 1420243 Pin ID

Connector Position	Description	Wire
1		P1-1
2		P1-3
3		P1-4
4		P3-1
5		P3-6
6		PLAT EMS
7		P3-3
8		P3-7
9		P3-8
10		P3-9
11		P3-12
12		P1-8
13		3
14		P3-2
15-22	SPARE	

Lower Control Box Connector Pin ID ANSI/AU – After December 15, 2011

Lower Control Box Internal Wiring Harness ANSI/AU – After December 15, 2011

Item	Part No.	Qty.	Description
101	3043807	2	TERM STIP (14) 45/90 DEG. 188
102	1360524	1	WIRE SPADE8I SPADE8I 3
103	1360525	1	WIRE SPADE8I R6I 5
104	0071517	2	WIRE R6I FEM188I 13
105	1370363	1	WIRE FEM188I FEM250FI
106	1370365	1	WIRE SPECIAL
107	0071518	1	WIRE 18 R6I FEM188I 15
108	1370364	2	WIRE FEM188I SPADE8I
109	1360527	1	WIRE FUSE HOLDER
110	3040156	1	FUSE 15 AMP
111	0071515	1	WIRE 18 R6I R6I 5

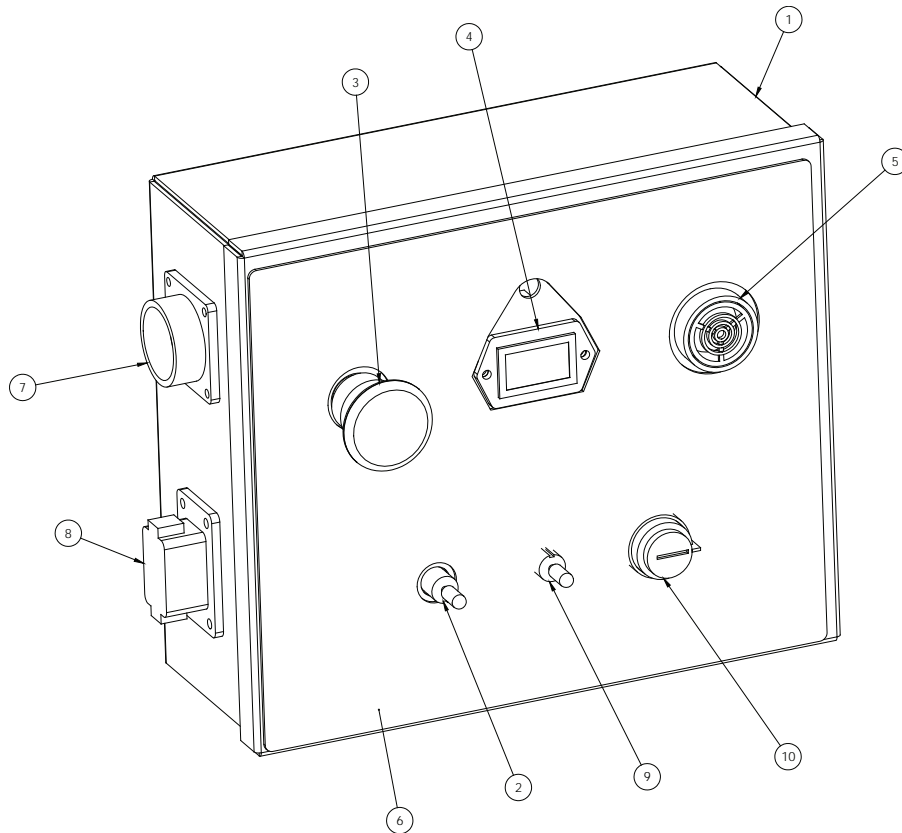


1420303 B

Lower Control Box Internal Wiring Harness ANSI/AU – After December 15, 2011

Lower Control Box CE – Before December 16, 2011

Item	Part No.	Qty.	Description
1	1370349	1	WLDMT, LOWER CONTROL BOX
2	3020016	1	SW TGL SPDT (ON) OFF (ON)
3	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
4	455186	1	HOURMETER, 12 TO 60 VDC, SQUARE
5	502588-00	1	ALARM, ECCO BEEPING 6-28VDC
6	1360522	1	PLAC GROUND CONT BOX
7	1370372	1	LWR HARNESS CONN
8	1360523	1	LWR HARNESS DUETSCH CONN
9	3020015	1	SW TGL SPDT (ON) OFF
10	3028813	1	SELECTOR SWITCH
	8080210	1	SPARE KEY SOLD IN PAIRS QTY 1



Lower Control Box CE – Before December 16, 2011

1360517 C

Lower Control Box Connector Pin ID CE – Before December 16, 2011

Item 7 – 1370372 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	VALVE SUPPLY	P3-2
6	DRIVE SELECT SWITCH	P3-6
7	LIFT SELECT SWITCH	P3-7
8	STEER RIGHT SWITCH	P3-8
9	STEER LEFT SWITCH	P3-9
10	TRIGGER SWITCH	P3-12
11	EMS GROUND	P4-1
12	LIFT DOWN SWITCH	P4-4
13	LIFT UP SWITCH	P4-5
14	GROUND ALARM OUTPUT	P5-10
15	GROUND	3
16	HOUR METER CONTROL	HOUR
17	EMERGENCY STOP SWITCH	EMS
18	TORQUE/TRACTION SWITCH	P3-3
19	OVERLOAD LAMP	P1-8
20	SPARE	
21	SPARE	
22	SPARE	
23	SPARE	
24	SPARE	

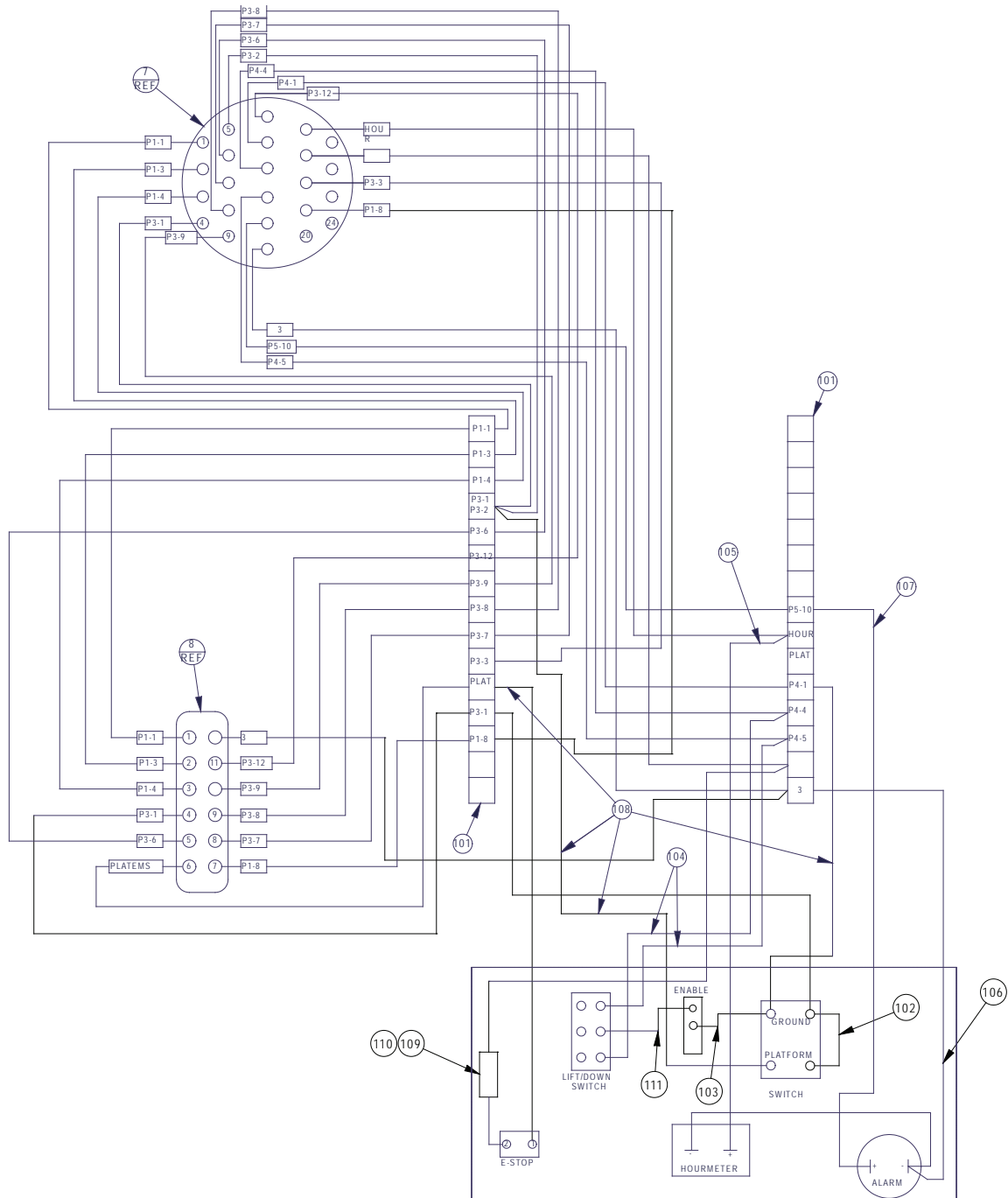
Item 8 – 1360523 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	DRIVE SELECT SWITCH	P3-6
6	PLATFORM EMS	PLAT EMS
7	OVERLOAD LAMP	P1-8
8	LIFT SELECT SWITCH	P3-7
9	STEER RIGHT SWITCH	P3-8
10	STEER LEFT SWITCH	P3-9
11	TRIGGER SWITCH	P3-12
12	GROUND	3

Lower Control Box Connector Pin ID CE – Before December 16, 2011

Lower Control Box Internal Wiring Harness CE – Before December 16, 2011

Item	Part No.	Qty.	Description
101	3043807	2	TERM STRIP (14) 45/90 DEG .188
102	1360524	1	WIRE SPADE8I SPADE8I 3
103	1360525	1	WIRE SPADE8I R6I 5
104	0071517	2	WIRE R6I FEM 188I 13
105	1370363	1	WIRE FEM 188I FEM250FI
106	1370365	1	WIRE 18 SPECIAL
107	0071518	1	WIRE 18 R6I FEM 188I 15
108	1370364	4	WIRE FEM 188I SPADE8I
109	1360527	1	WIRE FUSE HOLDER
110	3040156	1	FUSE 15 AMP
111	0071515	1	WIRE 18 R6I R6I 5

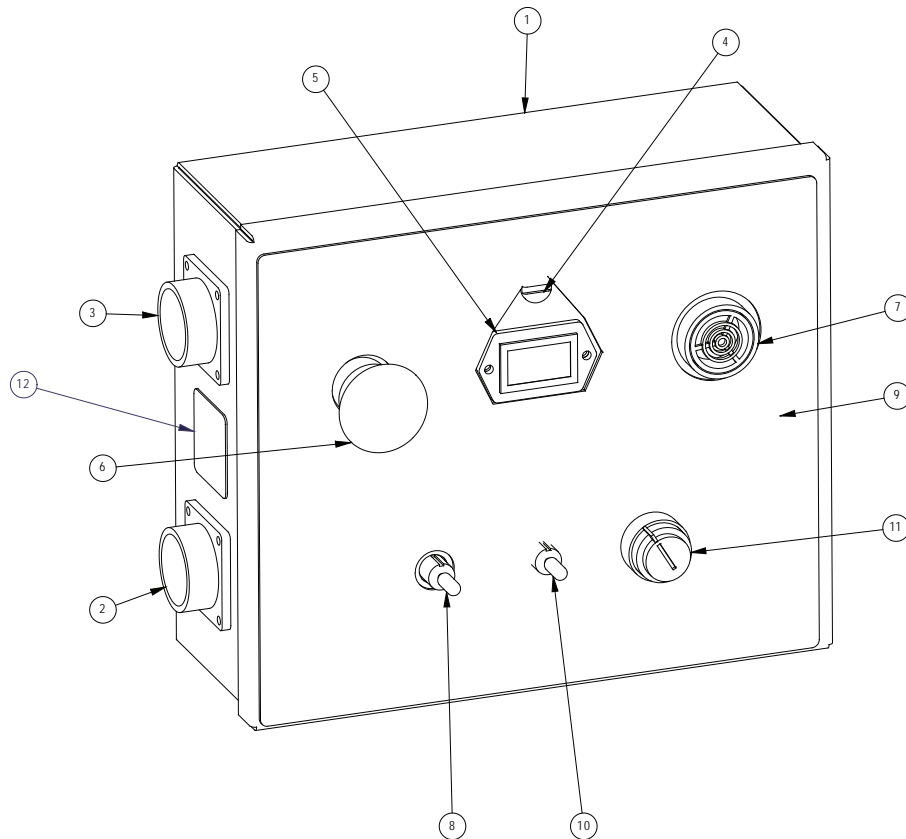


1360517 C

Lower Control Box Internal Wiring Harness CE – Before December 16, 2011

Lower Control Box CE – After December 15, 2011

Item	Part No.	Qty.	Description
1	1420241	1	WLDMT, LOWER CONTROL
2	1420243	1	LWR HARNESS CONN
3	1370372	1	LWR HARNESS CONN
4	5516330	1	LATCH
5	455186	1	HOURMETER, 12 TO 60 VDC, SQUARE
6	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
7	3049978	1	ALARM, ECCO BEEPING 6-28VDC
8	3020047	1	SW TGL SPDT (ON/NONE/ON)
9	1360522	1	PLAC GROUND CONT BOX
10	3020015	1	SW TGL SPDT (ON) OFF
11	3028832	1	SELECTOR SWITCH
	8080210	1	SPARE KEY SOLD IN PAIRS QTY 1
12	1360623	1	DECAL, LOWER CONTROL



Lower Control Box CE – After December 15, 2011

1420237 D

Lower Control Box Connector Pin ID C – After December 15, 2011

Item 3 – 1370372 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	JOYSTICK ANALOG INPUT	P1-4
4	EMS PLATFORM	P3-1
5	VALVE SUPPLY	P3-2
6	DRIVE SELECT SWITCH	P3-6
7	LIFT SELECT SWITCH	P3-7
8	STEER RIGHT SWITCH	P3-8
9	STEER LEFT SWITCH	P3-9
10	TRIGGER SWITCH	P3-12
11	EMS GROUND	P4-1
12	LIFT DOWN SWITCH	P4-4
13	LIFT UP SWITCH	P4-5
14	GROUND ALARM OUTPUT	P5-10
15	GROUND	3
16	HOUR METER CONTROL	HOUR
17	EMERGENCY STOP SWITCH	EMS
18	TORQUE/TRACTION SWITCH	P3-3
19	OVERLOAD LAMP	P1-8
20	SPARE	
21	SPARE	
22	SPARE	
23	SPARE	
24	SPARE	

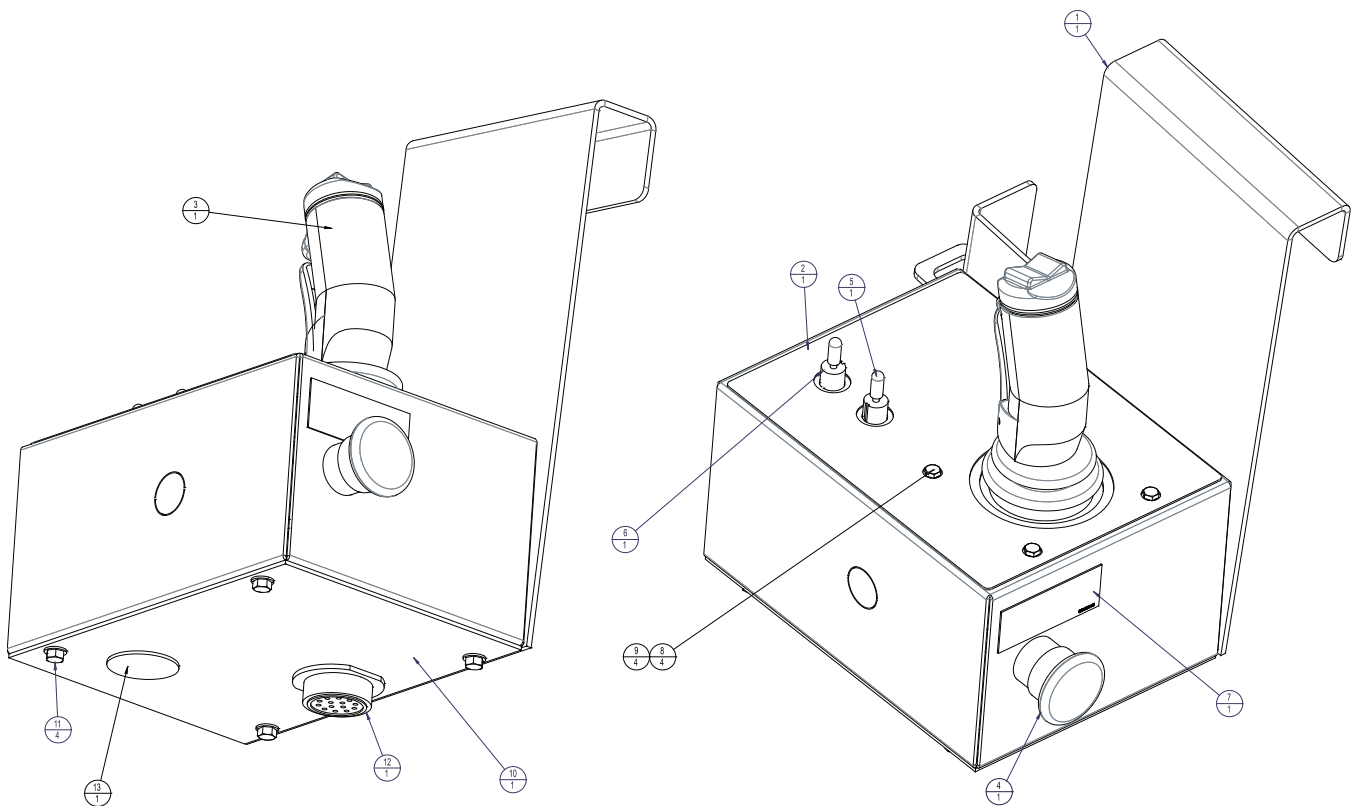
Item 2 – 1420243 Pin ID

Connector Position	Description	Wire
1		P1-1
2		P1-3
3		P1-4
4		P3-1
5		P3-6
6		PLAT EMS
7		P3-3
8		P3-7
9		P3-8
10		P3-9
11		P3-12
12		P1-8
13		3
14		P3-2
15-22	SPARE	

Lower Control Box Connector Pin ID CE – After December 15, 2011

Upper Control Box ANSI – Before December 16, 2011

Item	Part No.	Qty.	Description
1	1370352	1	WLDMT, UPPER CONTROL BOX
2	1370375	1	PLAC, UPPER CONTROL
3	3087801	1	JOYSTICK (REFER TO ELECTRICAL – 40.1)
4	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
5	3020047	1	SW TGL SPDT (ON/NONE/ON)
6	3020013	1	SW TGL SPST ON OFF
7	0072545	1	DECAL, EMERGENCY STOP
8	512459-025	4	HHCS M4 X 0.7 x 25 G8.8 ISO 4017 DIN 933
9	056066-004	4	NUT LKG M4-0.70
10	1370353	1	PLT, PLAT CONT
11	5563175	4	SCR SLFTPG M6 X 1 5LG
12	1420253	1	HARNESS PLATF CONTROL
13	3040410	1	HOLE PLUG 1.125



Upper Control Box ANSI – Before December 16, 2011

1370351 C

Upper Control Box Connector Pin ID ANSI – Before December 16, 2011

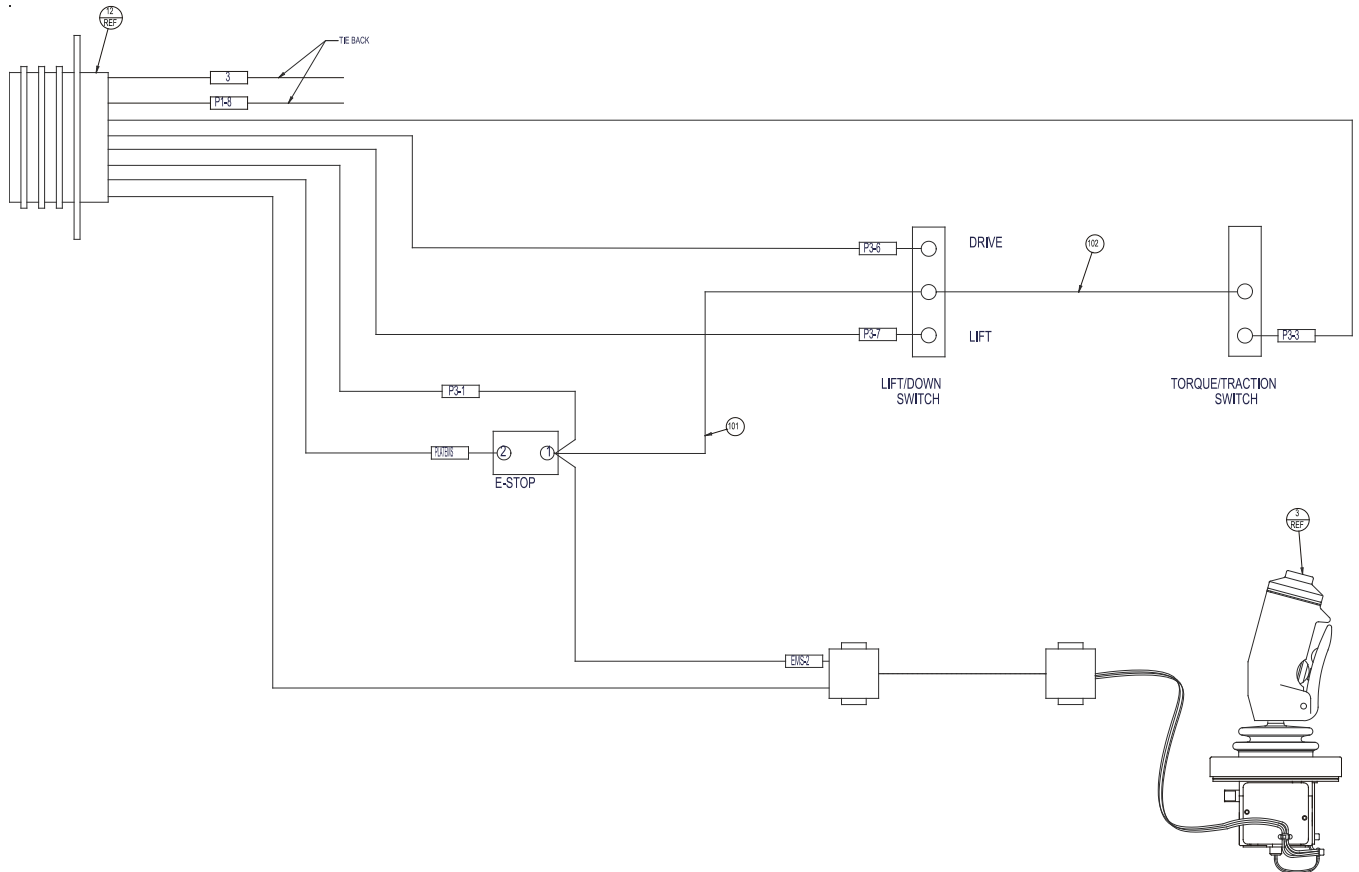
Item 12 – 1420253 Pin ID

Connector Position	Description	Wire
A	5V TO JOYSTICK	P1-1
B	0V TO JOYSTICK	P1-3
C	JOYSTICK ANALOG INPUT	P1-4
D	EMS PLATFORM	P3-1
E	DRIVE SELECT SWITCH	P3-6
F	PLATFORM EMS	PLAT EMS
G	TORQUE/TRACTION SWITCH	P3-3
H	LIFT SELECT SWITCH	P3-7
J	STEER RIGHT SWITCH	P3-8
K	STEER LEFT SWITCH	P3-9
L	TRIGGER SWITCH	P3-12
M	OVERLOAD LAMP	P1-8
N	GROUND	3
P	SPARE	

Upper Control Box Connector Pin ID ANSI – Before December 16, 2011

Controller Upper Control Box ANSI – Before December 16, 2011

Item	Part No.	Qty.	Description
101	1370366	1	WIRE 18 R6I SPADE8I 8
102	0071515	1	WIRE 18 R6I R6I5
	3220182	1	NOT SHOWN HARNESS DIODE FOR JOYSTICK

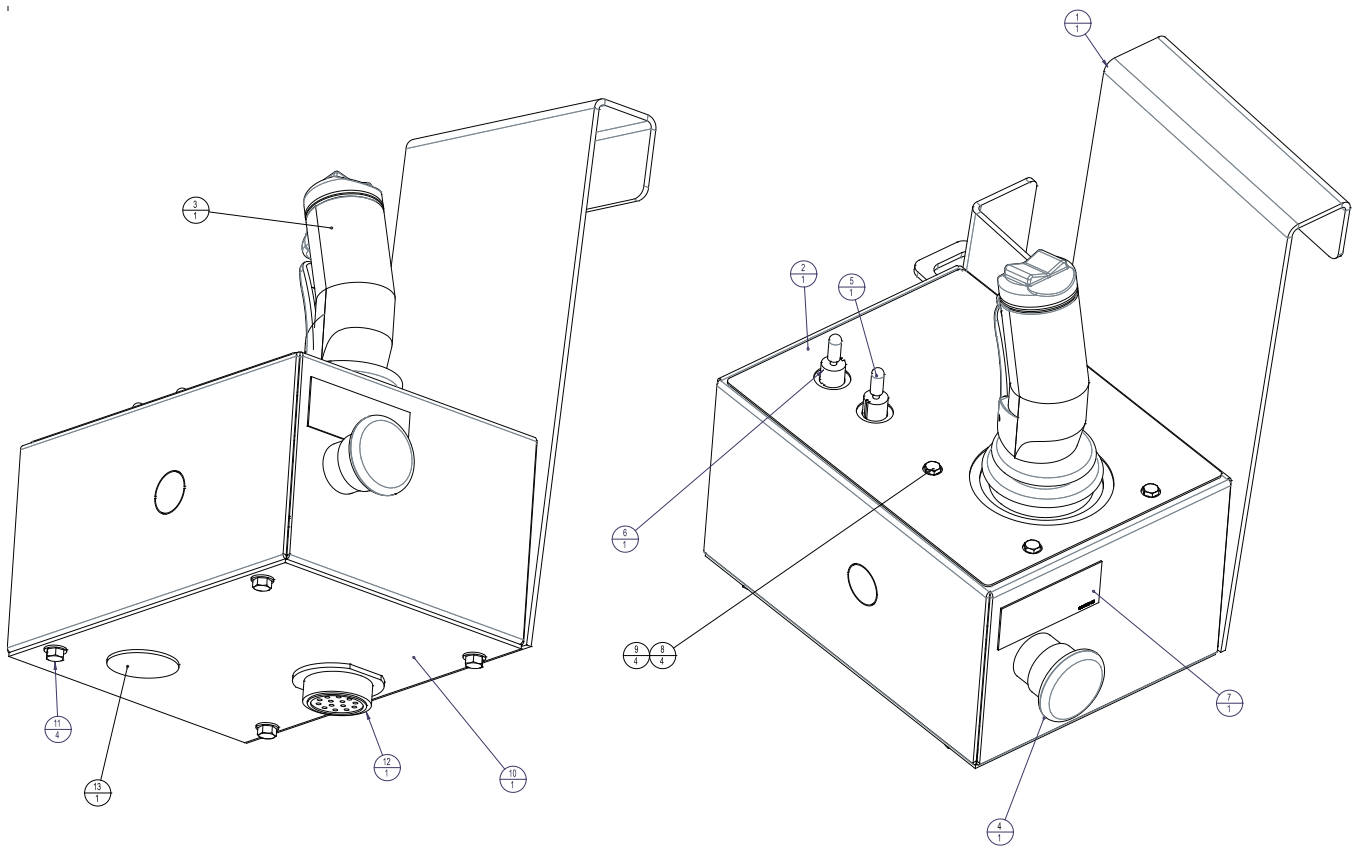


Controller Upper Control Box ANSI – Before December 16, 2011

1370351 C

Upper Control Box ANSI – After December 15, 2011

Item	Part No.	Qty.	Description
1	1370352	1	WLDMT, PLATFORM
2	1370375	1	PLAC, PLATFORM CONTROL BOX
3	3087801	1	JOYSTICK (REFER TO ELECTRICAL – 40.1)
4	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
5	3020047	1	SW TGL SPDT (ON/NONE/ON)
6	3020013	1	SW TGL SPST ON OFF
7	0072545	1	DECAL, EMERGENCY STOP
8	512459-025	4	HHCS M4 X 0.7 x 25 G8.8 ISO 4017 DIN 933
9	056066-004	4	NUT HEX M4 X 0.70 GR 8.8 SELF LOCKING DIN 985
10	1370353	1	PLT, PLAT CONT
11	5563175	4	SCR SLFTPG M6 X 1 5LG
12	1420308	1	UPPER HARNESS PLATF CONTROL
13	3040410	1	HOLE PLUG 1.125



Upper Control Box ANSI – After December 15, 2011

1420307 A

Upper Control Box Connector Pin ID ANSI – After December 15, 2011

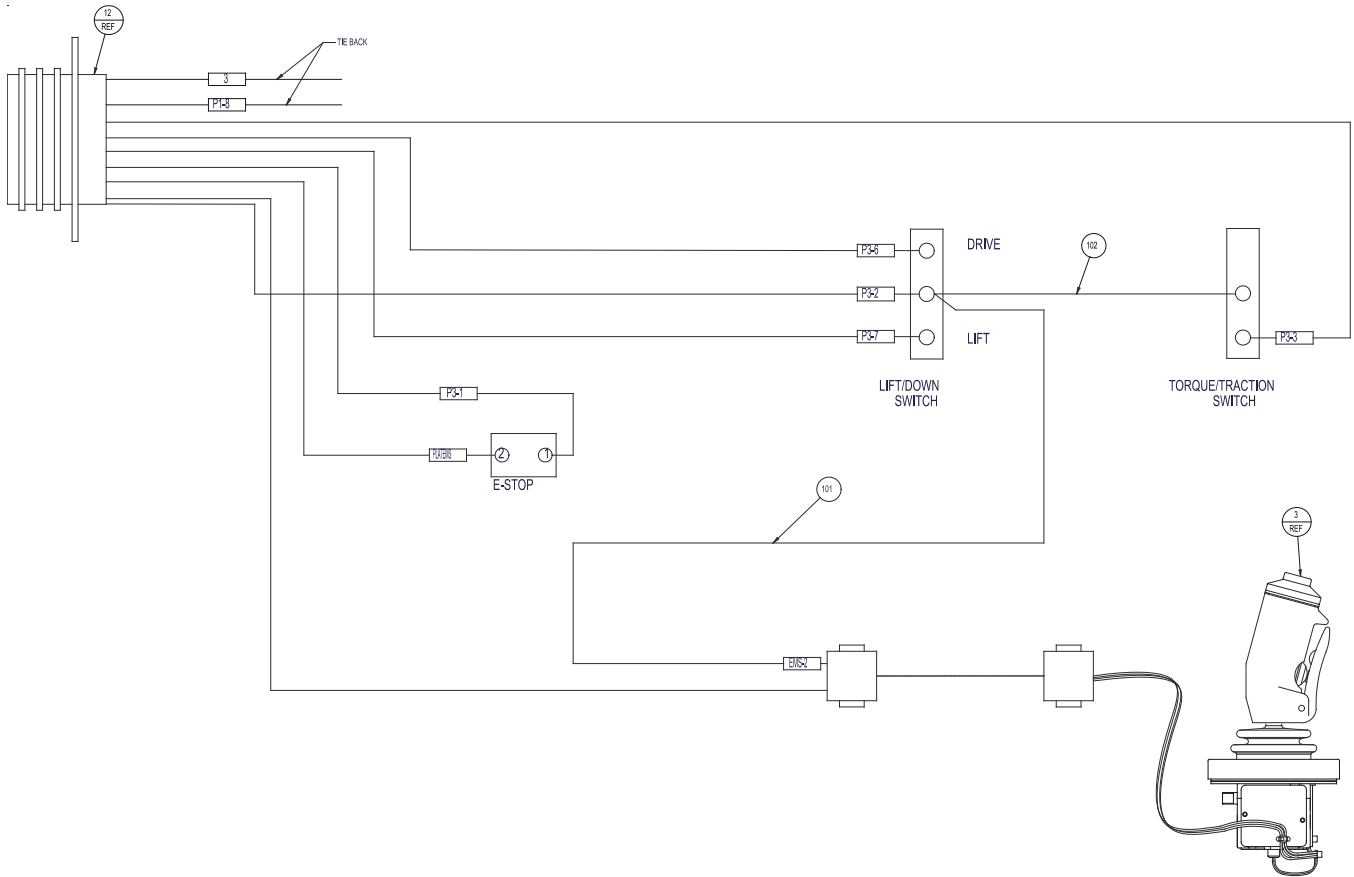
Item 12 – 1420308 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	GROUND	3
4	JOYSTICK ANALOG INPUT	P1-4
5	EMS PLATFORM	P3-1
6	POWER FROM LCB	P3-2
7	DRIVE SELECT SWITCH	P3-6
8	PLATFORM EMS	PLAT EMS
9	TORQUE/TRACTION SWITCH	P3-3
10	LIFT SELECT SWITCH	P3-7
11	STEER RIGHT SWITCH	P3-8
12	STEER LEFT SWITCH	P3-9
13	TRIGGER SWITCH	P3-12
14	OVERLOAD LAMP	P1-8
15	SPARE	
16	SPARE	
17	SPARE	
18	SPARE	
19	SPARE	
20	SPARE	
21	SPARE	

Upper Control Box Connector Pin ID ANSI – After December 15, 2011

Controller Upper Control Box ANSI – After December 15, 2011

Item	Part No.	Qty.	Description
101	1370366	1	WIRE 18 R6I SPADE8I 8
102	0071515	1	WIRE 18 R6I R6I5
	3220182	1	NOT SHOWN HARNESS DIODE FOR JOYSTICK

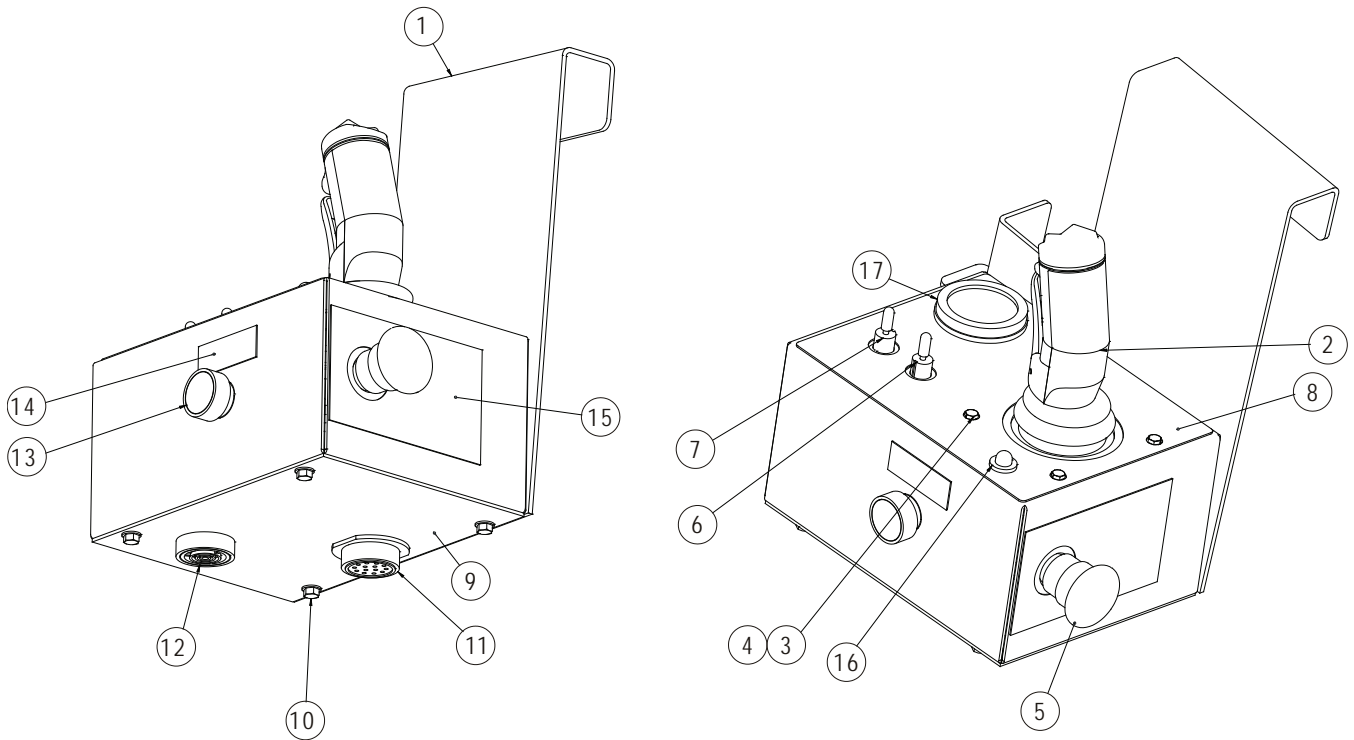


Controller Upper Control Box ANSI – After December 15, 2011

1420307 A

Upper Control Box CE – Before December 16, 2011

Item	Part No.	Qty.	Description
1	1370352	1	WLDMT, UPPER CONTROL BOX
2	3087801	1	JOYSTICK (REFER TO ELECTRICAL – 40.1)
3	512459-025	4	HHCS M4 X 0.7 x 25 G8.8 ISO 4017 DIN 933
4	056066-004	4	NUT LKG M4-0.70
5	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
6	3020047	1	SW TGL SPDT (ON/NONE/ON)
7	3020013	1	SW TGL SPST ON OFF
8	1420254	1	PLAC, UPPER CONTROL
9	1370353	1	PLT, PLAT CONT
10	5563175	4	SCR SLFTPG M6 X 1 5LG
11	1420253	1	HARNESS PLATF CONT
12	3040411	1	ALARM MINI SIREN
13	510542-000	1	SW PUSH BUTTON
14	0071269	1	DECAL, HORN
15	560272	1	DECAL, EMERGENCY STOP
16	510528-000	1	LIGHT RED 24 VDC
17	487696	1	BATTERY GAUGE



Upper Control Box CE – Before December 16, 2011

1420238 A

Upper Control Box Connector Pin ID ANSI – Before December 16, 2011

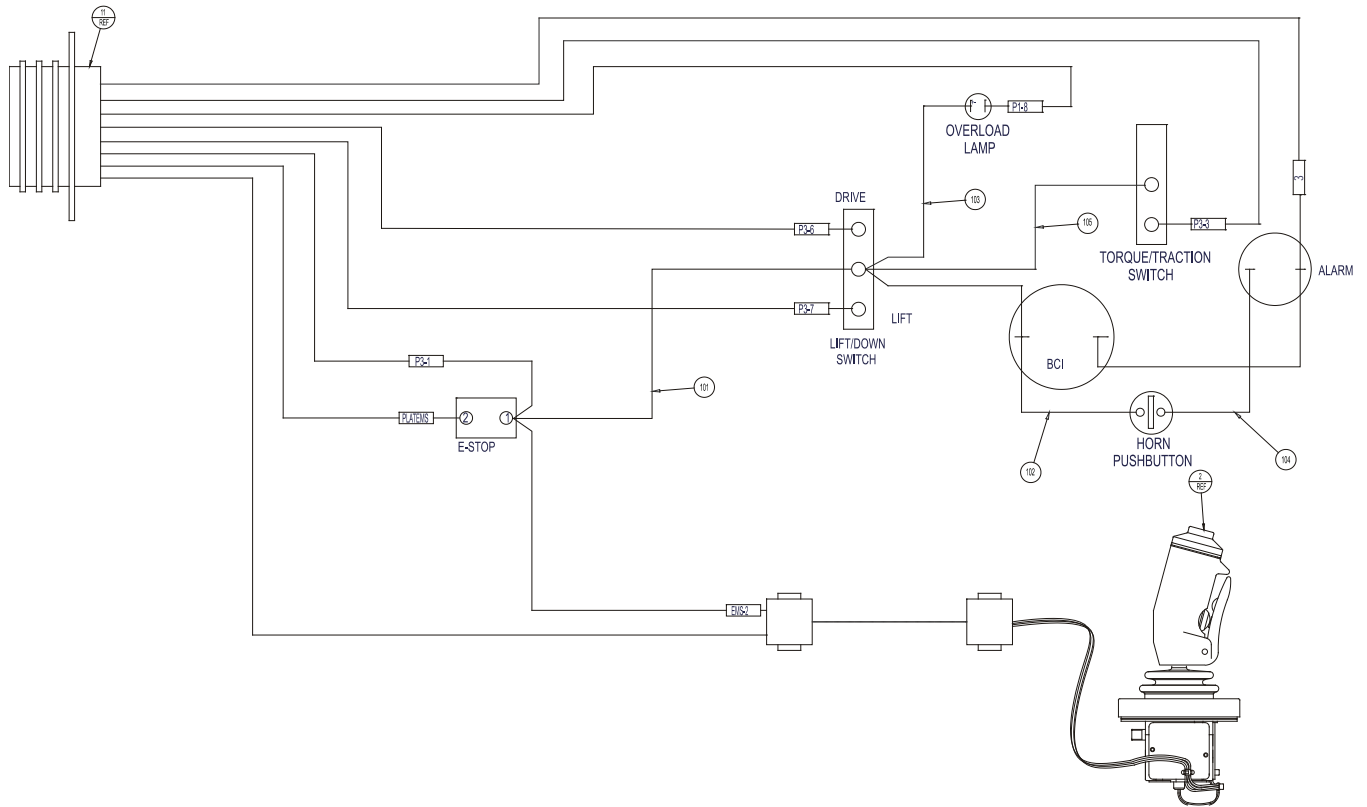
Item 11 – 1420253 Pin ID

Connector Position	Description	Wire
A	5V TO JOYSTICK	P1-1
B	0V TO JOYSTICK	P1-3
C	JOYSTICK ANALOG INPUT	P1-4
D	EMS PLATFORM	P3-1
E	DRIVE SELECT SWITCH	P3-6
F	PLATFORM EMS	PLAT EMS
G	TORQUE/TRACTION SWITCH	P3-3
H	LIFT SELECT SWITCH	P3-7
J	STEER RIGHT SWITCH	P3-8
K	STEER LEFT SWITCH	P3-9
L	TRIGGER SWITCH	P3-12
M	OVERLOAD LAMP	P1-8
N	GROUND	3
P	SPARE	

Upper Control Box Connector Pin ID ANSI – Before December 16, 2011

Controller Upper Control Box CE – Before December 16, 2011

Item	Part No.	Qty.	Description
101	1370366	1	WIRE 18 R6I SPADE8I 8
102	1360521	1	WIRE SPECIAL
103	0071546	1	WIRE R6I FEM188I 8
104	300804	1	WIRE 18 FEM250FI R8 6
105	0071515	1	WIRE 18 R6I R6I 5

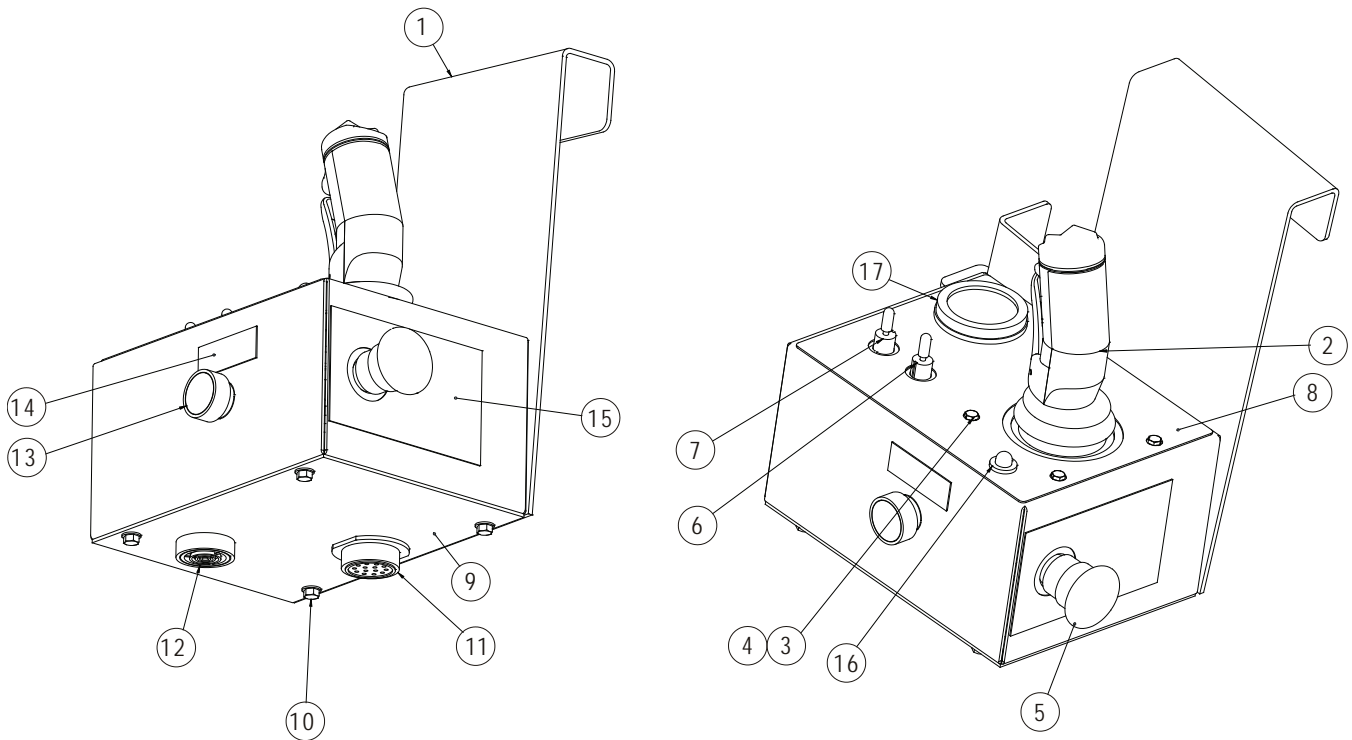


Controller Upper Control Box CE – Before December 16, 2011

1420238 A

Upper Control Box CE/AU – After December 15, 2011

Item	Part No.	Qty.	Description
1	1370352	1	WLDMT, PLATFORM
2	3087801	1	JOYSTICK (REFER TO ELECTRICAL – 40.1)
3	512459-025	4	HHCS M4 X 0.7 x 25 G8.8 ISO 4014_DIN 933
4	056066-004	4	NUT HEX M4 X 0.70 GR 8.8 SELF LOCKING DIN 985
5	3028810	1	PUSH/PULL SW ASSY W/NC CONTACT
6	3020047	1	SW TGL SPDT (ON/NONE/ON)
7	3020013	1	SW TGL SPST ON OFF
8	1420254	1	PLAC, PLAT CONT BOX
9	1370353	1	PLT, PLAT CONT
10	5563175	4	SCR SLFTPG M6 X 1 5LG
11	1420308	1	HARNESS PLATF CONT
12	3040411	1	ALARM MINI SIREN
13	510542-000	1	SW PUSH BUTTON
14	0071269	1	DECAL, HORN
15	560272	1	DECAL, EMERGENCY STOP
16	510528-000	1	LIGHT RED 24VDC
17	487696	1	BATTERY GAUGE



Upper Control Box CE/AU – After December 15, 2011

1420305 A

Upper Control Box Connector Pin ID ANSI – After December 15, 2011

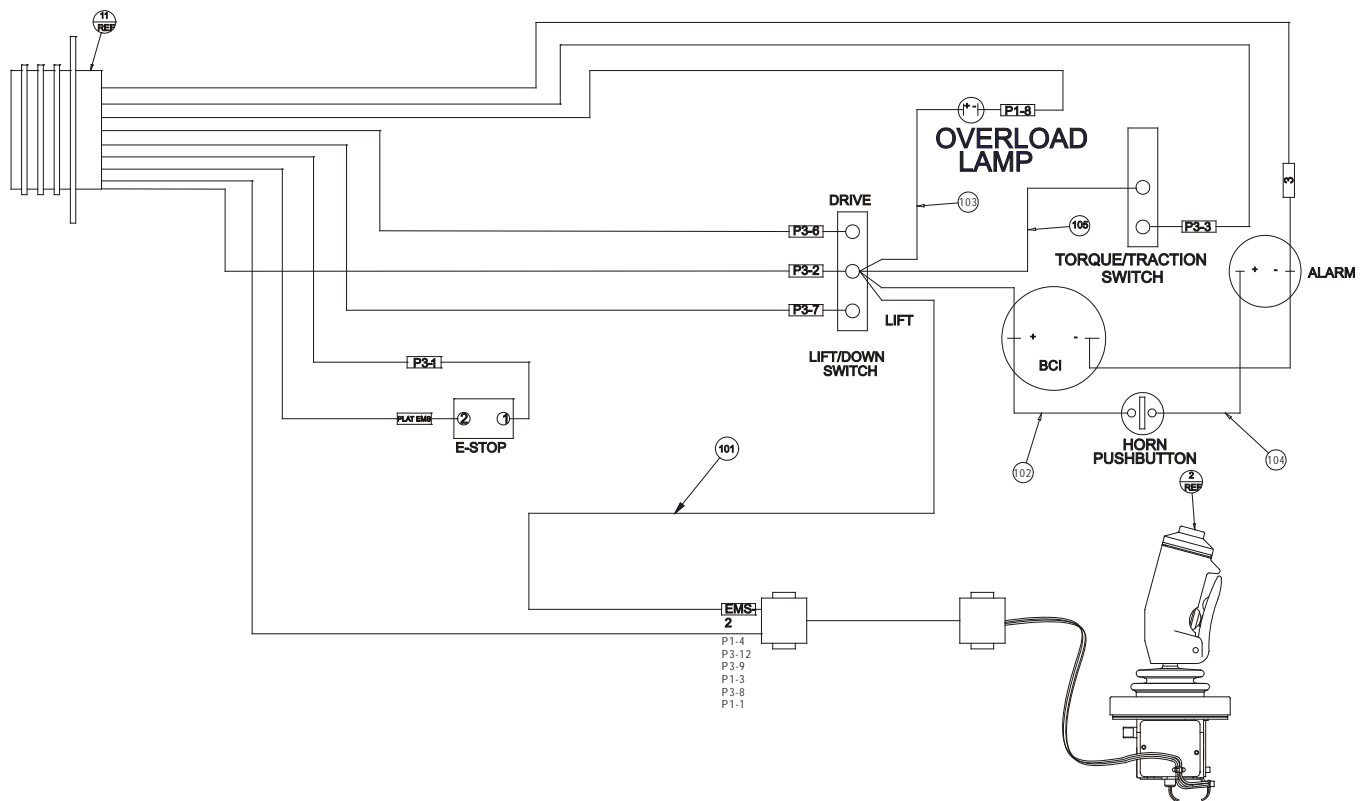
Item 11 – 1420308 Pin ID

Connector Position	Description	Wire
1	5V TO JOYSTICK	P1-1
2	0V TO JOYSTICK	P1-3
3	GROUND	3
4	JOYSTICK ANALOG INPUT	P1-4
5	EMS PLATFORM	P3-1
6	POWER FROM LCB	P3-2
7	DRIVE SELECT SWITCH	P3-6
8	PLATFORM EMS	PLAT EMS
9	TORQUE/TRACTION SWITCH	P3-3
10	LIFT SELECT SWITCH	P3-7
11	STEER RIGHT SWITCH	P3-8
12	STEER LEFT SWITCH	P3-9
13	TRIGGER SWITCH	P3-12
14	OVERLOAD LAMP	P1-8
15	SPARE	
16	SPARE	
17	SPARE	
18	SPARE	
19	SPARE	
20	SPARE	
21	SPARE	

Upper Control Box Connector Pin ID ANSI – After December 15, 2011

Controller Upper Control Box CE/AU – After December 15, 2011

Item	Part No.	Qty.	Description
101	1370366	1	WIRE 18 R6I SPADE8I 8
102	1360521	1	WIRE SPECIAL
103	0071546	1	WIRE R6I FEM188I 8
104	300804	1	WIRE 18 FEM250FI R8 6
105	0071515	1	WIRE 18 R6I R6I 5
	3220182	1	NOT SHOWN HARNESS DIODE FOR JOYSTICK

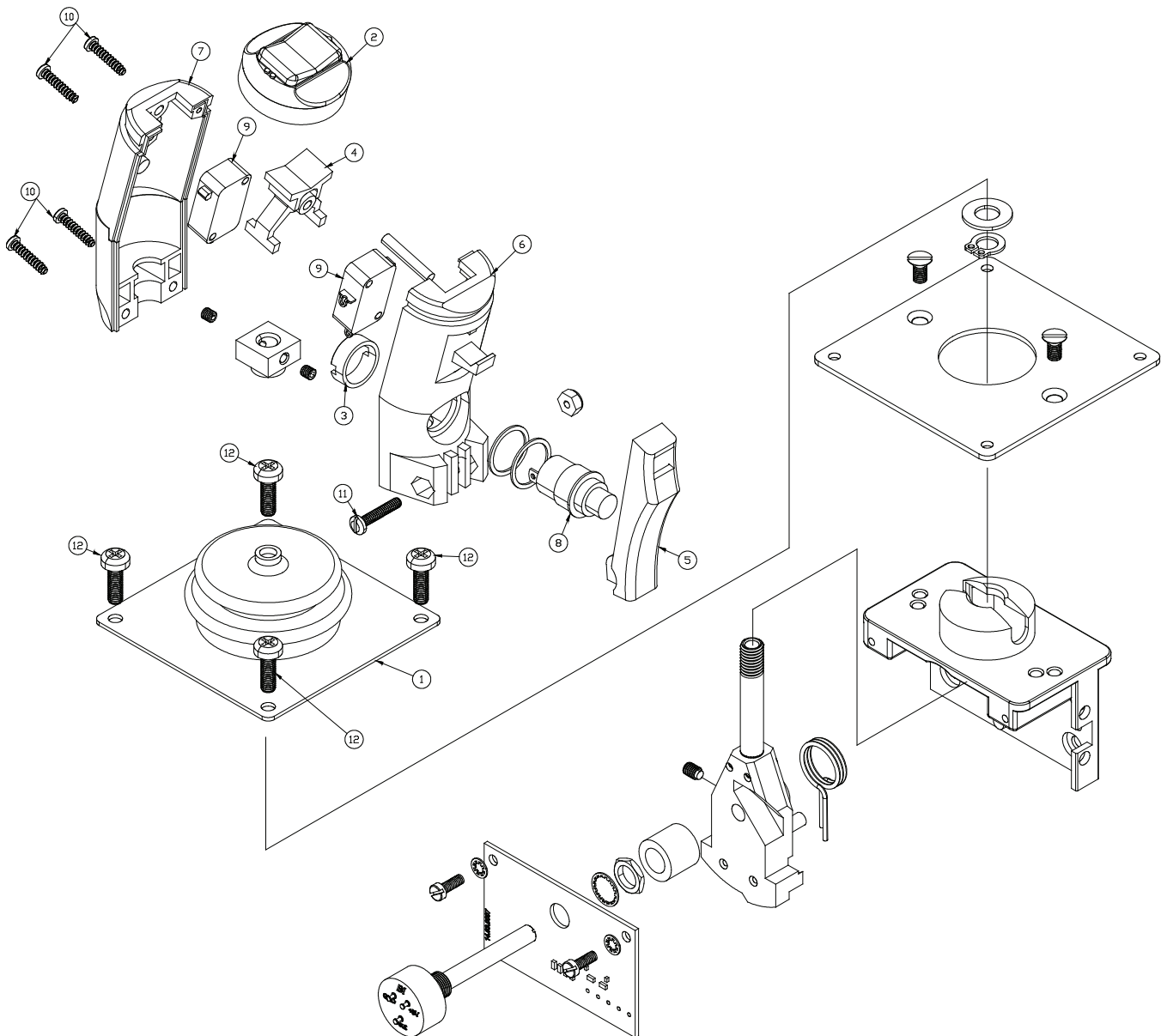


Controller Upper Control Box CE/AU – After December 15, 2011

1420305 A

Joystick

Item	Part No.	Qty.	Description
	3087801	1	JOYSTICK – INCLUDES ITEMS 1 THROUGH 12
1	3087816	1	RING, RETAINING, BOOT
2	3087807	1	BOOT, BH HANDLE
3	3087814	1	SPACER, PLASTIC
4	3087808	1	ACTUATOR, BH HANDLE
5	3087811	1	LEVER, ENABLER, BH HANDLE
6	3087819	1	GASKET, BH HANDLE
7	3087820	1	GASKET, BH HANDLE
8	3087810	1	PUSHBUTTON, MOMENTARY (BLACK)
9	3087806	2	MICROSWITCH, BH HANDLE
10	3087815	4	SCREW, BH HANDLE
11	3087813	1	SCREW, BH HANDLE
12	5563176	4	MACHINE SCREW M5 X 16 PAN H

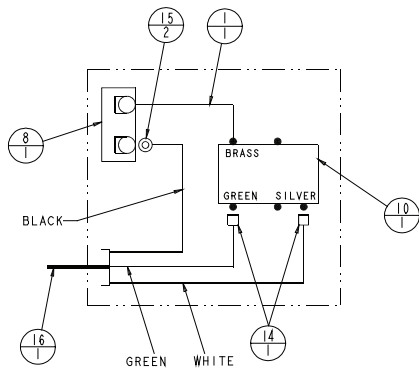


Joystick

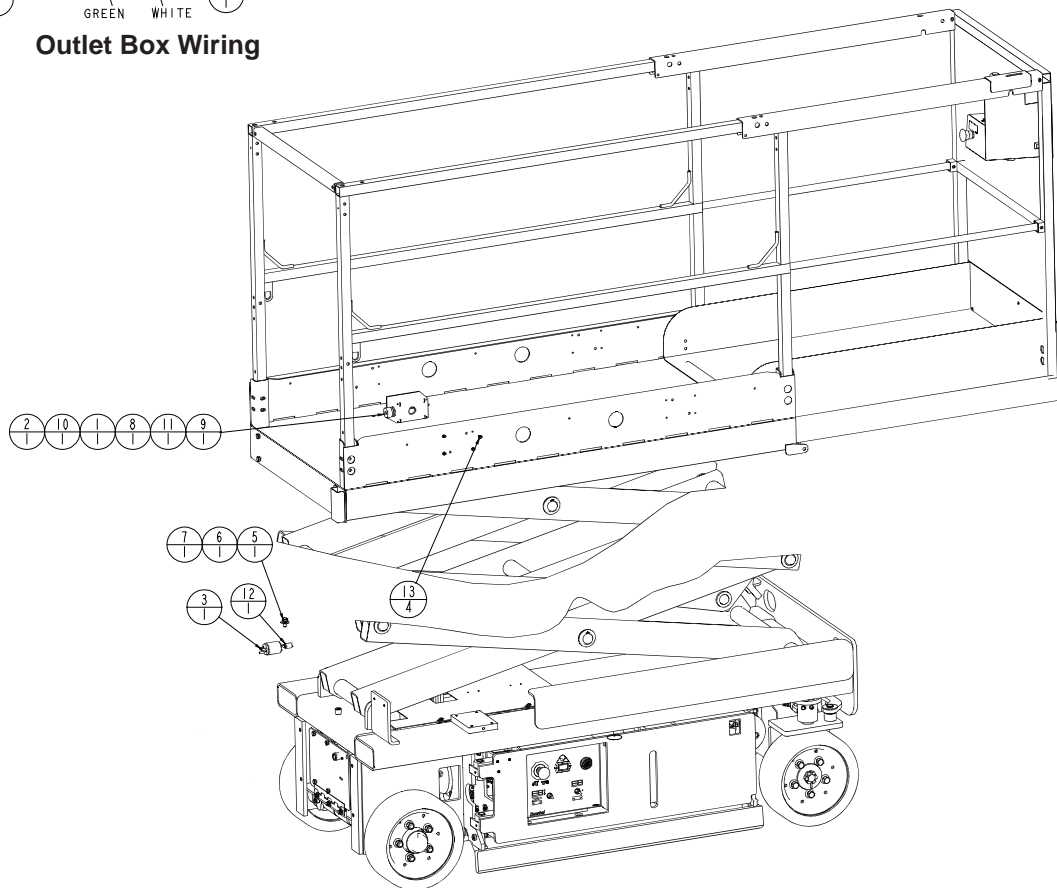
3087801 B

GFCI Electrical Outlet

Item	Part No.	Qty.	Description
1	0071582	1	JUMPER WIRE 4 1/2 LG
2	0074979	1	ELECTRICAL BOX DRILLED
3	238396	1	PLUG MALE STR
5	970449	1	BLT .375-16 .750 GR5
6	986299	1	WASHER FLAT .38
7	987119	1	WASHER LOCK .375
8	3040252	1	CIRCUIT BREAKER 15 AMP
9	3040116	1	CONN .75 .500-.625
10	3040624	1	RECEPTACLE GFCI OUTLET 20 AMP
11	3040625	1	COVER GFCI OUTLET WEATHERPROOF
12	5093001	1	CUSHION CLAMP #8 1/2"
13	5569978	4	SCR SLFTPG 8 .375 THREAD CUTTING
14	3040397	2	TERM SPADE 8I 12/10
15	3044853	1	TERM R8I 12/10
16	3011403	1	CABLE 14 GAUGE/3 CONDUCTOR X 38 FEET LONG



Outlet Box Wiring

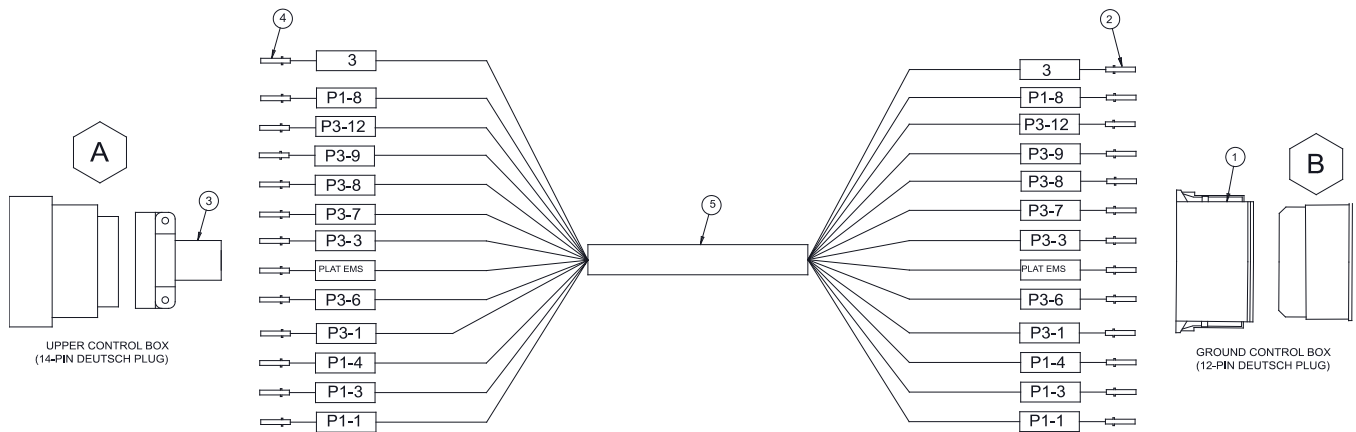


GFCI Electrical Outlet

0361352 D

Platform Control Cable – Before December 16, 2011

Item	Part No.	Qty.	Description
1	3049973	1	CONN AMP 24 PIN PLUG
2	3049976	13	AMP SOCKETS CONTACTS -16
3	3049861	13	CONN 14-PIN DEUTSCH PLUG
4	3040342	24	SOCKET CONTACT SIZE 16 16/18GA
5	300647	A/R	CABLE 18GA/14 CONDUCTOR WIRE



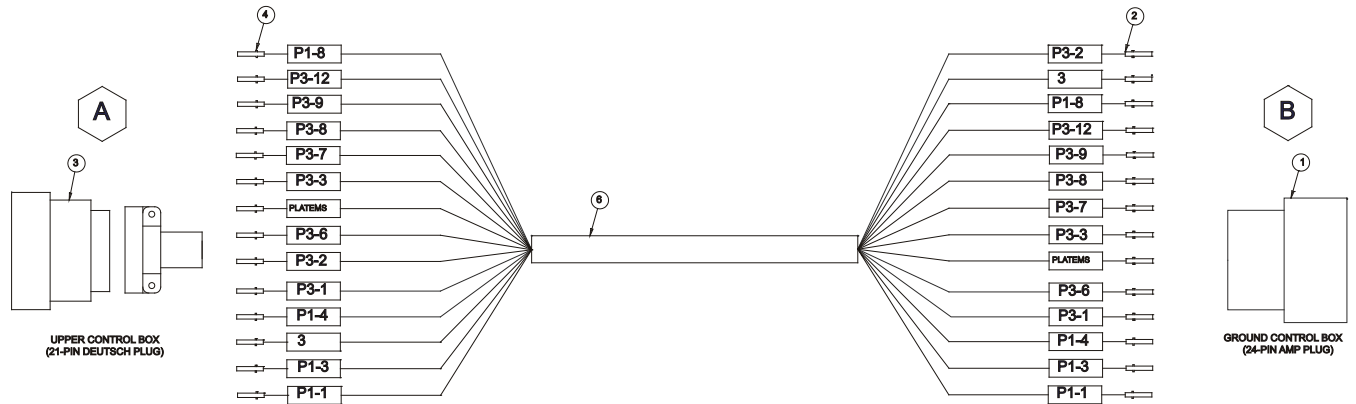
SPARE	P	SPARE	WHITE
3	N	13	WHITE
P1-8	M	12	WHITE
P3-12	L	11	WHITE
P3-9	K	10	WHITE
P3-8	J	9	WHITE
P3-7	H	8	WHITE
P3-3	G	7	WHITE
PLAT EMS	F	6	WHITE
P3-6	E	5	WHITE
P3-1	D	4	WHITE
P1-4	C	3	WHITE
P1-3	B	2	WHITE
P1-1	A	1	WHITE
WIRE NUMBERS	LOCATION "A" CONNECTOR LETTERS, REF	LOCATION "B" CONNECTOR NUMBERS, REF	WIRE COLOR

Platform Control Cable – Before December 16, 2011

1420181 B

Platform Control Cable – After December 15, 2011

Item	Part No.	Qty.	Description
1	3049973	1	CONN AMP 24 PIN PLUG
2	3049976	18	AMP SOCKETS CONTACTS-16
3	3220175	1	DEUTSCH PLUG HD36-18-21SN-059
4	3220178	18	SOCKET CONTACT #20 16/18AWG
5	3220176	3	SEALING PLUG-20 DEUTCH
6	3049834	A/R	CABLE 18GA/18 CONDUCTOR WIRE



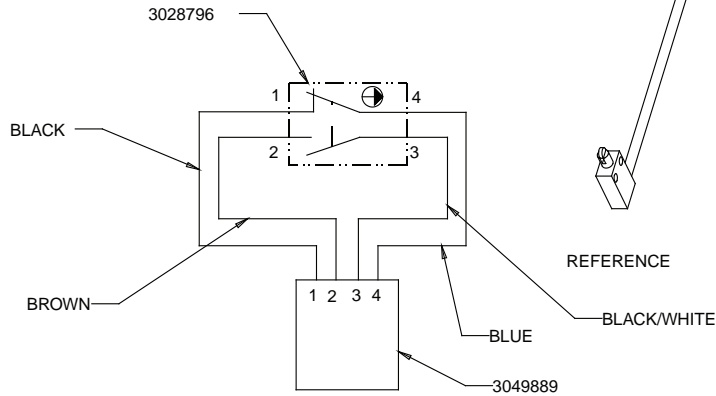
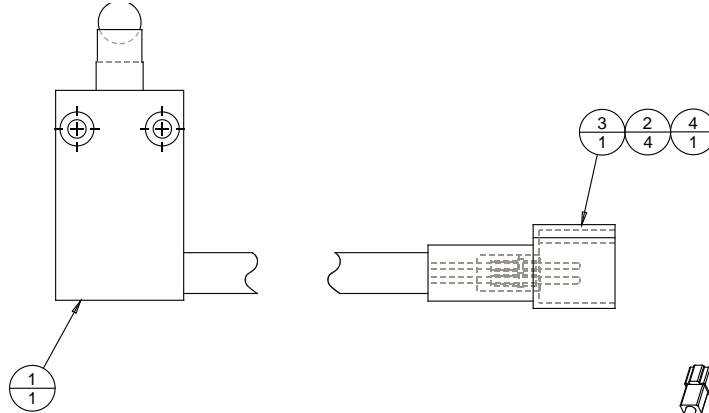
PLUG	21	–	WHITE
PLUG	20	–	WHITE
PLUG	19	–	WHITE
SPARE 4	18	18	WHITE
SPARE 3	17	17	WHITE
SPARE 2	16	16	WHITE
SPARE 1	15	15	WHITE
P1-8	14	12	WHITE
P3-12	13	11	WHITE
P3-9	12	10	WHITE
P3-8	11	9	WHITE
P3-7	10	8	WHITE
P3-3	9	7	WHITE
PLAT EMS	8	6	WHITE
P3-6	7	5	WHITE
P3-2	6	14	WHITE
P3-1	5	4	WHITE
P1-4	4	3	WHITE
3	3	13	WHITE
P1-3	2	2	WHITE
P1-1	1	1	WHITE
WIRE NUMBERS	LOCATION CONNECTOR "A"	LOCATION CONNECTOR "B"	WIRE COLOR

Platform Control Cable – After December 15, 2011

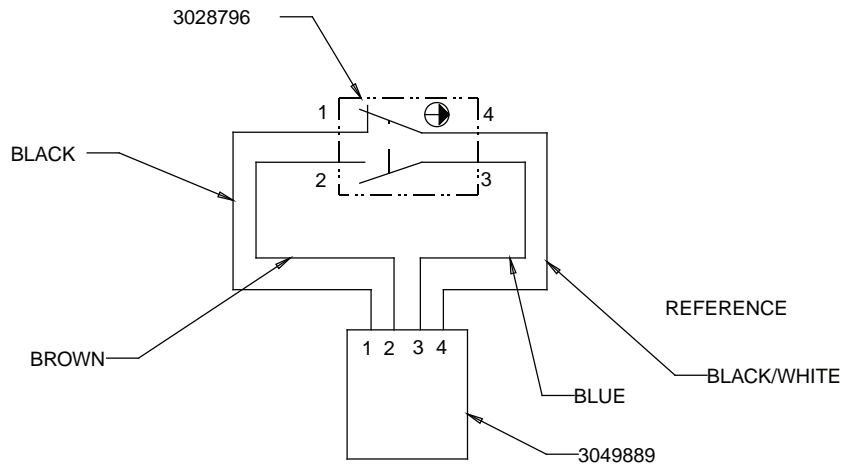
1420309 A

Limit Switch – Before April 11, 2012

Item	Part No.	Qty.	Description
1	3028796	1	SWITCH LIMIT MUST BREAK
2	3040341	4	PIN, CONTACT (-16) DEUTSCH
3	3049889	1	CONNECTOR, 4-PIN DEUTSCH RECEP
4	3049891	1	LOCKWEDGE, W4P 4-PIN DEUTSCH PLUG



SCHEMATIC BEFORE MAY 13, 2012



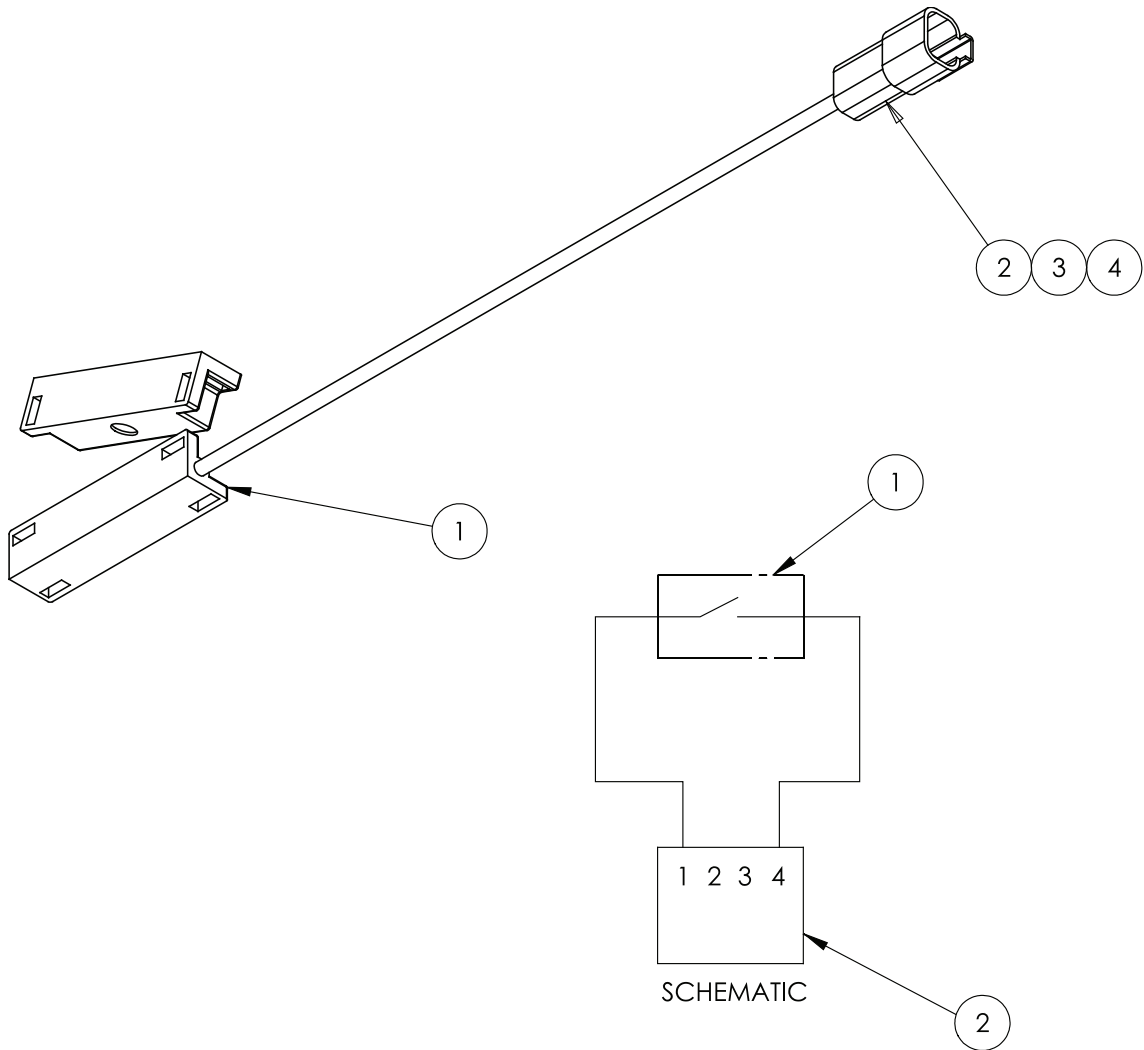
SCHEMATIC AFTER MAY 12, 2011

Limit Switch – Before April 11, 2012

3028795 F

Magnetic Sensor – After April 10, 2012

Item	Part No.	Qty.	Description
1	501425-000	1	SENSOR MAGNETIC
2	3049889	1	CONNECTOR, 4-PIN DEUTSCH RECEP
3	3049891	1	LOCKWEDGE, W4P 4-PIN DEUTSCH PLUG
4	3040341	4	PIN, CONTACT (-16) DEUTSCH

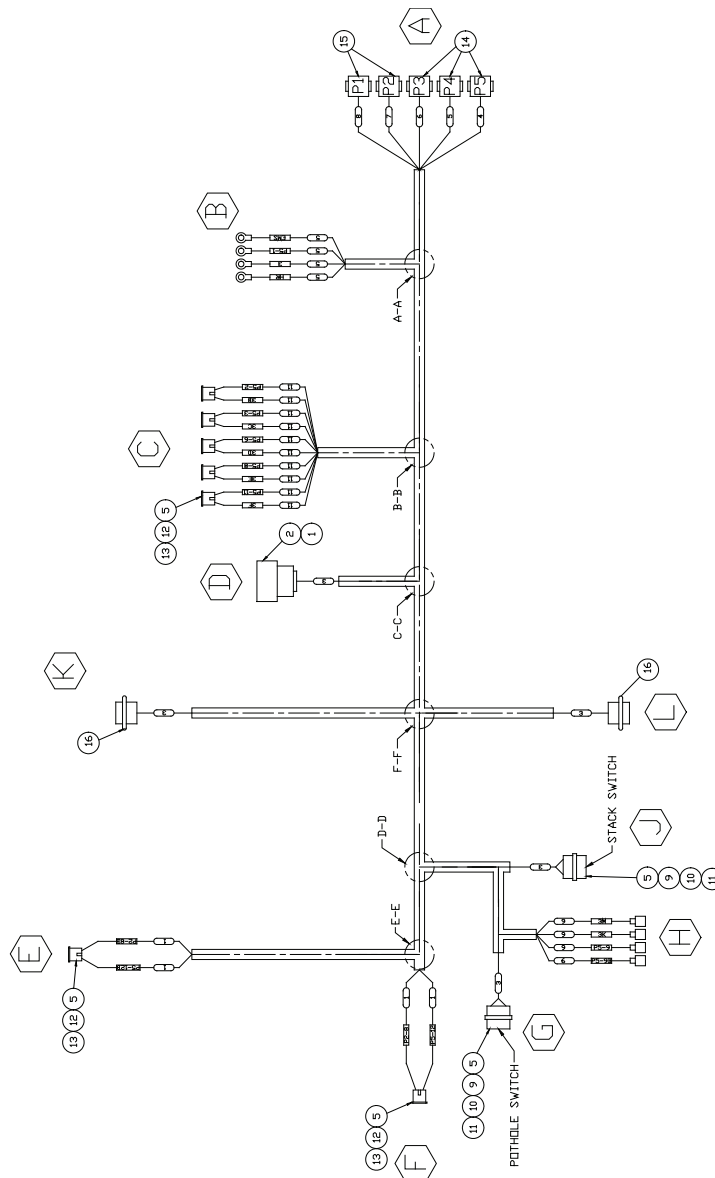


Magnetic Sensor – After April 10, 2012

1420311 B

Main Wiring Harness – Before December 16, 2011

Item	Part No.	Qty.	Description
1	3049973	1	CONN AMP 24 PIN PLUG
2	3049976	19	AMP SOCKET CONTACTS -16
3	3044163	1	TERM R312I 16/14
4	3044161	3	TERM R10I 16/14
5	3040342	18	SOCKET CONTACT -16 DEUTSCH
6	3040083	5	TER FEM250FI 16/14
7	3011651	A/R	WIRE 16GA SINGLE COND BLK
8	3011641	A/R	WIRE 16GA SINGLE COND WHT
9	3049888	2	CONN 4 PIN DEUTSCH PLUG
10	3049890	2	LOCK WEDGE 4 PIN DEUTSCH PLUG
11	3040097	4	SEALING PLUG -16 DEUTSCH
12	3049803	7	CONN 2 PIN DEUTSCH
13	3049807	7	LOCK WEDGE 2 PIN DEUTSCH PLUG
14	3049993	3	CONN AMP 12 PIN PLUG
15	3220132	2	CONN AMP 9 PIN PLUG
16	3049986	31	AMP SOCKET CONTACT 20/14
17	3220622	2	CONN 3 PIN AMP
18	3220026	6	SOCKET 16/18 GA



Main Wiring Harness – Before December 16, 2011

1370360 C

Main Wiring Harness – Before December 16, 2011

PIN OUT FOR VALVE LDC 'C'

PDS	WIRE	DESCRIPTION
1	P5-3	REV VALVE OUTPUT
2	3C	GROUND

PIN OUT FOR VALVE LDC 'C'

PDS	WIRE	DESCRIPTION
1	P5-8	STEER R VALVE OUTPUT
2	3E	GROUND

PIN OUT FOR VALVE LDC 'C'

PDS	WIRE	DESCRIPTION
1	P5-11	UP VALVE OUTPUT
2	3F	GROUND

PIN OUT FOR VALVE LDC 'C'

PDS	WIRE	DESCRIPTION
1	P5-2	FWD VALVE OUTPUT
2	3B	GROUND

PIN OUT FOR VALVE LDC 'C'

PDS	WIRE	DESCRIPTION
1	P5-6	STEER L VALVE OUTPUT
2	3D	GROUND

PIN OUT FOR LIFT CYL LDC 'F'

PDS	WIRE	DESCRIPTION
1	P5-12	DOWN VALVE OUTPUT
2	P2-8	LIFT DWN VALVE RTRN

PIN OUT FOR PRESSURE SENSOR @ LDC 'K'

PDS	WIRE	DESCRIPTION
1	P2-7D	B+ FEED
2	P2-4	PRESSURE SENSOR
3	P2-3B	B- FEED

P5

PDS	WIRE	DESCRIPTION
P5-1	P5-1	LINE CONTACTOR OUTPUT
P5-2	P5-2	FWD VALVE OUTPUT
P5-3	P5-3	REV VALVE OUTPUT
P5-4	P5-4	SPARE
P5-5	SPARE	STEER L VALVE OUTPUT
P5-6	P5-6	STEER R VALVE OUTPUT
P5-7	SPARE	HI SPD VALVE OUTPUT
P5-8	P5-8	GROUND ALARM OUTPUT
P5-9	P5-9	UP VALVE OUTPUT
P5-10	P5-10	DOWN VALVE OUTPUT
P5-11	P5-11	GROUND
P5-12	P5-12	DOWN VALVE OUTPUT

PIN OUT FOR LWR CONTROL BOX @ LDC 'J'

PDS	WIRE	DESCRIPTION
1	P1-1	SV TO JOYSTICK
2	P1-3	OV TO JOYSTICK
3	P1-4	JOYSTICK ANALOG INPUT
4	P3-1	EMS PLATFORM
5	P3-2	VALVE SUPPLY
6	P3-6	DRIVE SELECT SW
7	P3-7	LIFT SELECT SW
8	P3-8	STEER RIGHT SW
9	P3-9	STEER LEFT SW
10	P3-12	TRIGGER SW
11	P4-1	EMS GROUND
12	P4-4	LIFT DWN SW
13	P4-5	LIFT UP SW
14	P5-10	GROUND ALARM OUTPUT
15	3	GROUND
16	HR	EMERGENCY STOP SW
17	EMS	TORQUE/TRACTION SW
18	P3-3	TORQUE/TRACTION SW
19	P1-8	OVERLOAD LAMP
20	PLUG	SPARE
21	PLUG	SPARE
22	PLUG	SPARE
23	PLUG	SPARE
24	PLUG	SPARE

PIN OUT FOR STACK SW @ LDC 'J'

PDS	WIRE	DESCRIPTION
1	P2-7	B+ FEED
2	PLUG	-
3	PLUG	-
4	P4-6	STACK SW

PIN OUT FOR ANGLE TRANS @ LDC 'L'

PDS	WIRE	DESCRIPTION
1	P2-7C	B+ FEED
2	P2-2	ANGLE TRANS
3	P2-3	B- FEED

PIN OUT FOR LIFT CYL LDC 'E'

PDS	WIRE	DESCRIPTION
1	P5-12B	DOWN VALVE OUTPUT
2	P2-8B	LIFT DWN VALVE RTRN

PIN OUT FOR POTHOLE SW @ LDC 'G'

PDS	WIRE	DESCRIPTION
1	PLUG	-
2	P2-7B	B+ FEED
3	P4-7	POTHOLE SW
4	PLUG	-

P4

PDS	WIRE	DESCRIPTION
P4-1	P4-1	EMS GROUND
P4-2	SPARE	-
P4-3	SPARE	-
P4-4	P4-4	LIFT DWN SW
P4-5	P4-5	LIFT UP SW
P4-6	P4-6	STACK SW
P4-7	P4-7	POTHOLE SW
P4-8	SPARE	-
P4-9	SPARE	-
P4-10	SPARE	-
P4-11	SPARE	-
P4-12	SPARE	-

WIRE	DESCRIPTION	WIRE GA	TERM	LDC	TERM	LDC	TERM	WIRE	DESCRIPTION	WIRE GA	TERM	LDC	TERM	LDC	COLOR
3	GROUND	16	ITEM 2	B	ITEM 4	B	ITEM 4	D	BLACK						BLACK
3B	GROUND-FORWARD VALVE	16	SPL-3	B-B	ITEM 5	C	ITEM 5	C	BLACK						BLACK
3C	GROUND-REVERSE VALVE	16	SPL-3	B-B	ITEM 5	C	ITEM 5	C	BLACK						BLACK
3D	GROUND-STEER LEFT VALVE	16	SPL-3	B-B	ITEM 5	C	ITEM 5	C	BLACK						BLACK
3E	GROUND-STEER RIGHT VALVE	16	SPL-3	B-B	ITEM 5	C	ITEM 5	C	BLACK						BLACK
3F	GROUND-LIFT VALVE	16	SPL-3	B-B	ITEM 5	C	ITEM 5	C	BLACK						BLACK
3M	GROUND DRIVE SPEED VALVE	16	SPL-3C	C-C	ITEM 6	H	ITEM 6	H	BLACK						BLACK
P1-1	SV TO JOYSTICK	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P1-3	OV TO JOYSTICK	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P1-4	JOYSTICK ANALOG INPUT	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P1-8	OVERLOAD LAMP	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P2-2	ANGLE TRANSDUCER	16	ITEM 16	A	ITEM 18	L	ITEM 18	L	WHITE						WHITE
P2-3	B- FDR SENSORS	16	ITEM 16	A	ITEM 18	L	ITEM 18	L	WHITE						WHITE
P2-3B	B- FDR SENSORS	16	SPL-P2-3	F-F	ITEM 18	K	ITEM 18	K	WHITE						WHITE
P2-4	PRESSURE SENSOR	16	ITEM 16	A	ITEM 18	K	ITEM 18	K	WHITE						WHITE
P2-7	B+ FEED	16	ITEM 16	A	ITEM 5	J	ITEM 5	J	WHITE						WHITE
P2-7B	B+ FEED	16	SPL-P2-7	E-E	ITEM 5	G	ITEM 5	G	WHITE						WHITE
P2-7C	B+ FEED	16	SPL-P2-7	F-F	ITEM 18	K	ITEM 18	K	WHITE						WHITE
P2-7D	B+ FEED	16	SPL-P2-7	F-F	ITEM 18	K	ITEM 18	K	WHITE						WHITE
P2-8	LIFT DWN VALVE RETURN	16	ITEM 16	A	ITEM 5	F	ITEM 5	F	WHITE						WHITE
P2-8B	LIFT DWN VALVE RETURN	16	SPL-P2-8	E-E	ITEM 5	E	ITEM 5	E	WHITE						WHITE
P3-1	EMS PLATFORM	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-2	VALVE SUPPLY	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-3	TORQUE/TRACTION SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-6	DRIVE SELECT SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-7	LIFT SELECT SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-8	STEER RIGHT SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-9	STEER LEFT SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P3-12	TRIGGER SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P4-1	EMS GROUND	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P4-4	LIFT DWN SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P4-5	LIFT UP SW	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P4-6	STACK SWITCH	16	ITEM 16	A	ITEM 5	J	ITEM 5	J	WHITE						WHITE
P4-7	POTHOLE SW	16	ITEM 16	A	ITEM 5	G	ITEM 5	G	WHITE						WHITE
P5-1	LINE CONTACTOR OUTPUT	16	ITEM 16	A	ITEM 4	B	ITEM 4	B	WHITE						WHITE
P5-2	FWD VALVE OUTPUT	16	ITEM 16	A	ITEM 5	C	ITEM 5	C	WHITE						WHITE
P5-3	REV VALVE OUTPUT	16	ITEM 16	A	ITEM 5	C	ITEM 5	C	WHITE						WHITE
P5-6	STEER L VALVE OUTPUT	16	ITEM 16	A	ITEM 5	C	ITEM 5	C	WHITE						WHITE
P5-8	STEER R VALVE OUTPUT	16	ITEM 16	A	ITEM 5	C	ITEM 5	C	WHITE						WHITE
P5-9	HI SPEED VALVE OUTPUT	16	ITEM 16	G	ITEM 6	H	ITEM 6	H	WHITE						WHITE
P5-9B	HI SPEED VALVE OUTPUT	16	SPL-P5-9	D-D	ITEM 6	H	ITEM 6	H	WHITE						WHITE
P5-10	GROUND ALARM OUTPUT	16	ITEM 16	A	ITEM 2	D	ITEM 2	D	WHITE						WHITE
P5-11	UP VALVE OUTPUT	16	ITEM 16	A	ITEM 5	C	ITEM 5	C	WHITE						WHITE
P5-12	DOWN VALVE OUTPUT	16	ITEM 16	A	ITEM 5	F	ITEM 5	F	WHITE						WHITE
P5-12B	DOWN VALVE OUTPUT	16	SPL-P5-12	E-E	ITEM 5	E	ITEM 5	E	WHITE						WHITE
EMS	EMERGENCY STOP SW	16	ITEM 3	B	ITEM 2	D	ITEM 2	D	WHITE						WHITE
HR	HR HOUR METER CONTROL	16	ITEM 4	B	ITEM 2	D	ITEM 2	D	WHITE						WHITE

PG TRIONIC CONTROLLER @ LDC 'A'

P1

PDS	WIRE	DESCRIPTION
P1-1	P1-1	SV TO JOYSTICK
P1-2	SPARE	-
P1-3	P1-3	OV TO JOYSTICK
P1-4	P1-4	JOYSTICK ANALOG INPUT
P1-5	SPARE	-
P1-6	SPARE	-
P1-7	SPARE	-
P1-8	P1-8	OVERLOAD LAMP
P1-9	SPARE	-

P2

PDS	WIRE	DESCRIPTION
P2-1	SPARE	-
P2-2	P2-2	ANGLE TRANSDUCER
P2-3	P2-3	B- FEED
P2-4	P2-4	PRESSURE SENSOR
P2-5	SPARE	-
P2-6	SPARE	-
P2-7	P2-7	B+ FEED
P2-8	P2-8	LIFT DN VALVE RETURN
P2-9	SPARE	-

P3

PDS	WIRE	DESCRIPTION
P3-1	P3-1	EMS PLATFORM
P3-2	P3-2	VALVE SUPPLY
P3-3	P3-3	TORQUE/TRACTION SW
P3-4	SPARE	-
P3-5	SPARE	-
P3-6	P3-6	DRIVE SELECT SW
P3-7	P3-7	LIFT SELECT SW
P3-8	P3-8	STEER RIGHT SW
P3-9	P3-9	STEER LEFT SW
P3-10	SPARE	-
P3-11	SPARE	-
P3-12	P3-12	TRIGGER SW

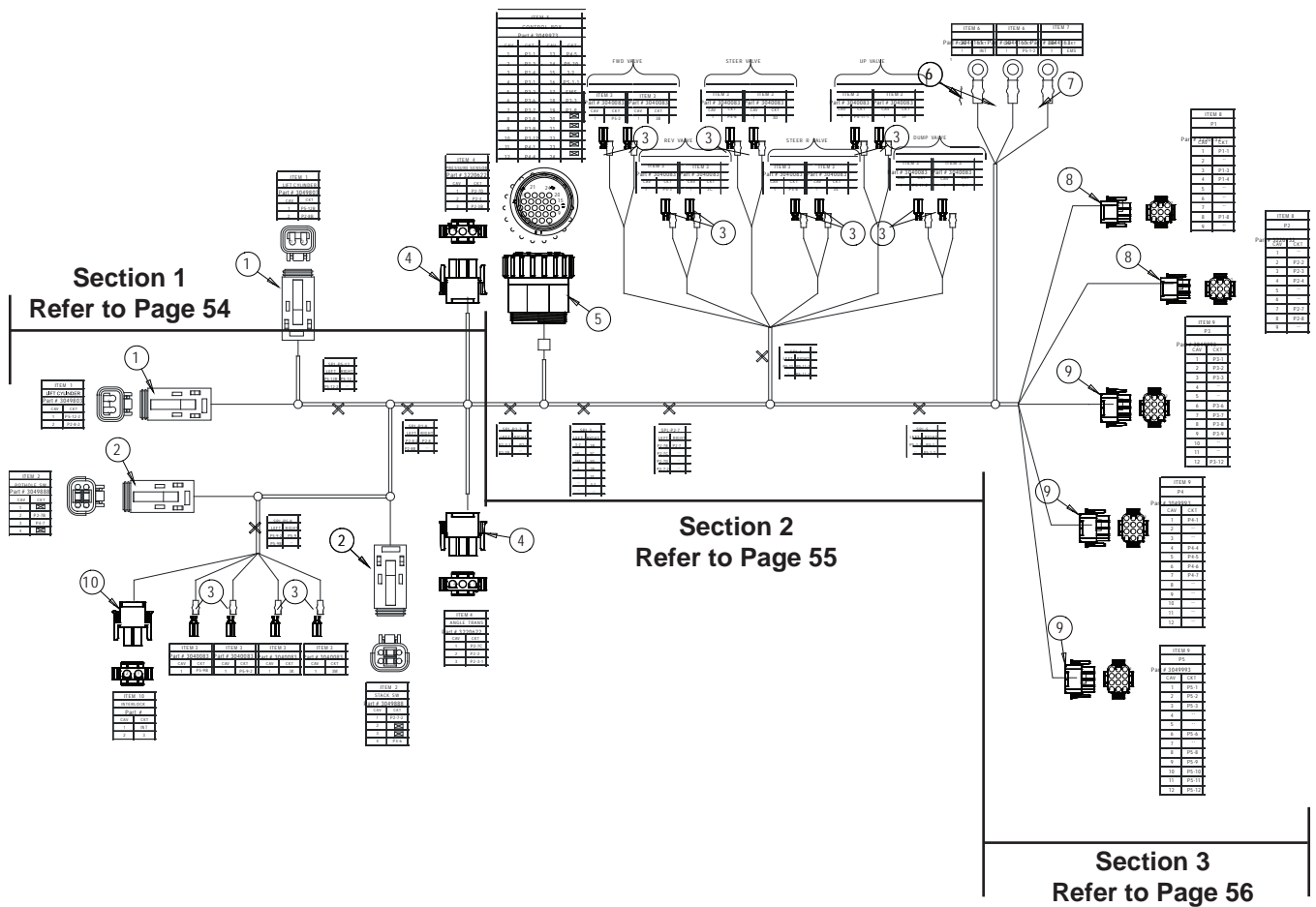
P4

PDS	WIRE	DESCRIPTION
P4-1	P4-1	EMS GROUND
P4-2	SPARE	-
P4-3	SPARE	-
P4-4	P4-4	LIFT DWN SW
P4-5	P4-5	LIFT UP SW
P4-6	P4-6	STACK SW
P4-7	P4-7	POTHOLE SW
P4-8	SPARE	-
P4-9	SPARE	-
P4-10	SPARE	-
P4-11	SPARE	-
P4-12	SPARE	-

Main Wiring Harness – Before December 16, 2011

Main Wiring Harness – After December 15, 2011

Item	Part No.	Qty.	Description
1	3049803	2	CONNECTOR 2-WAY PLUG GRAY
	3049807	2	WEDGELOCK 2-WAY SOCKET
2	3049888	2	CONNECTOR 4-WAY PLUG GRAY
	3049890	2	WEDGELOCK 4-WAY SOCKET
	068764-000	4	PLUG CAVITY SIZE 12 AND 16
3	3040083	16	RECEPTACLE 0.250 BLUE
4	3220199	2	CONNECTOR 3-WAY PLUG NATURAL
5	3049973	1	CONNECTOR PLUG 23-24 SEALED
		5	PLUG CAVITY
6	3044161	2	RING TERMINAL #10 STUD INSULATED BLUE
7	3044163	1	RING TERMINAL 5/16IN STUD INSULATED BLUE
8	3220132	2	CONNECTOR 9-WAY PLUG NATURAL
9	3049993	3	CONNECTOR 12-WAY PLUG NATURAL
10	3220181	1	CONNECTOR 2-WAY PLUG NATURAL

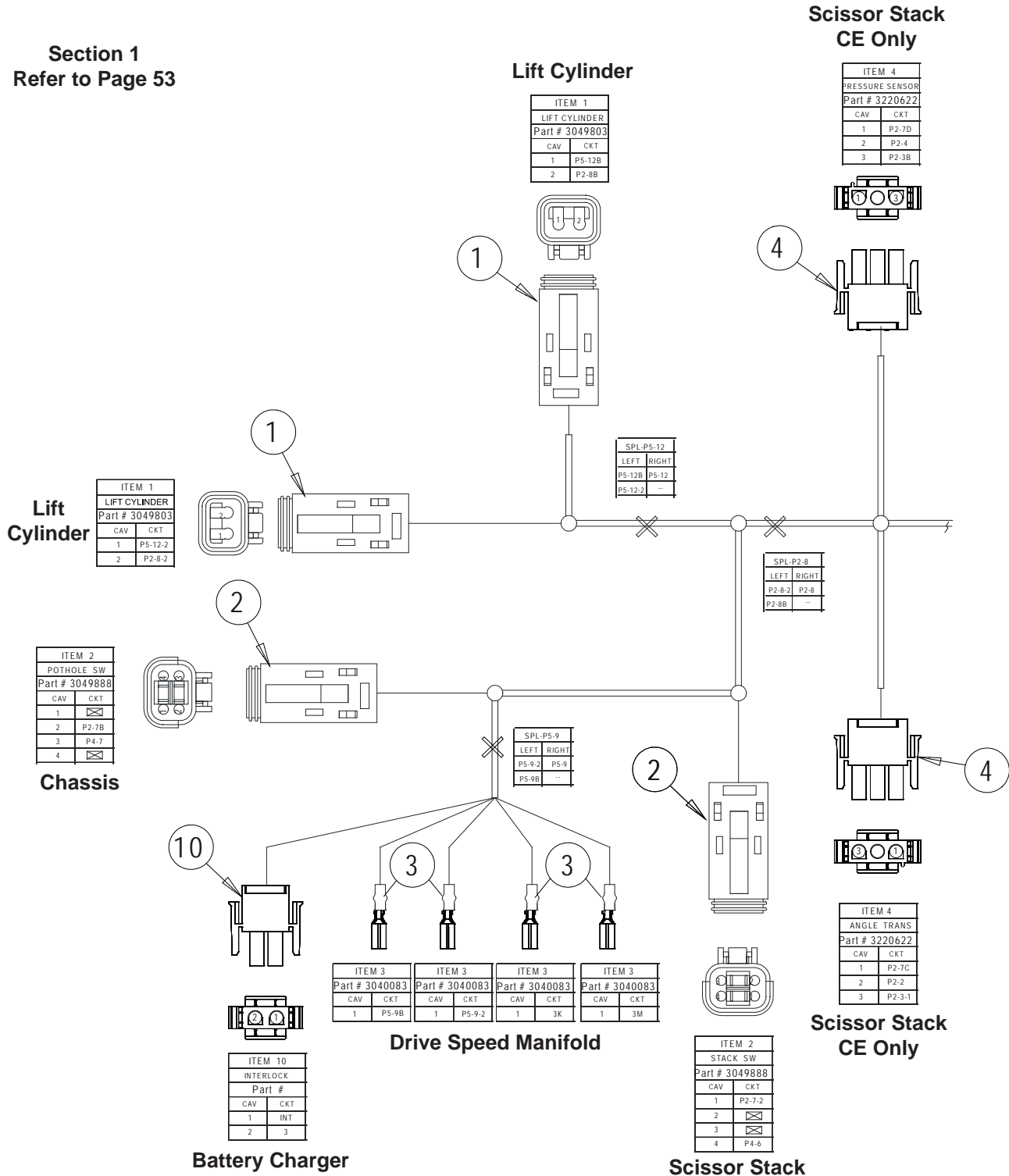


Main Wiring Harness – After December 15, 2011

1420314 B

Main Wiring Harness – After December 15, 2011

Section 1
Refer to Page 53



Main Wiring Harness – After December 15, 2011

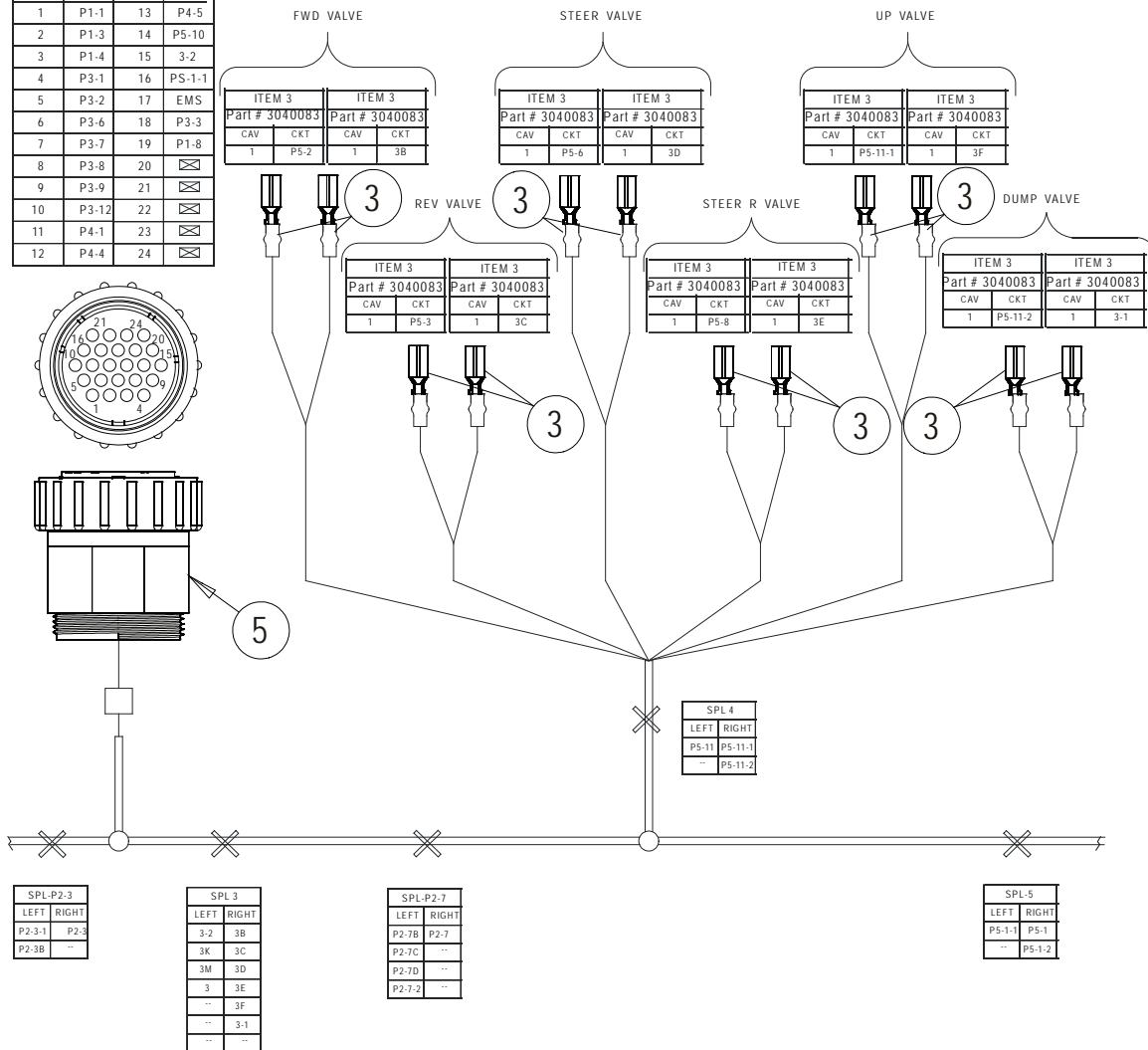
Main Wiring Harness – After December 15, 2011

Section 2
Refer to Page 53

Lower Controls

ITEM 5 CONTROL BOX Part # 3049973			
CAV	CKT	CAV	CKT
1	P1-1	13	P4-5
2	P1-3	14	P5-10
3	P1-4	15	3-2
4	P3-1	16	PS-1-1
5	P3-2	17	EMS
6	P3-6	18	P3-3
7	P3-7	19	P1-8
8	P3-8	20	☒
9	P3-9	21	☒
10	P3-12	22	☒
11	P4-1	23	☒
12	P4-4	24	☒

Manifold Valve

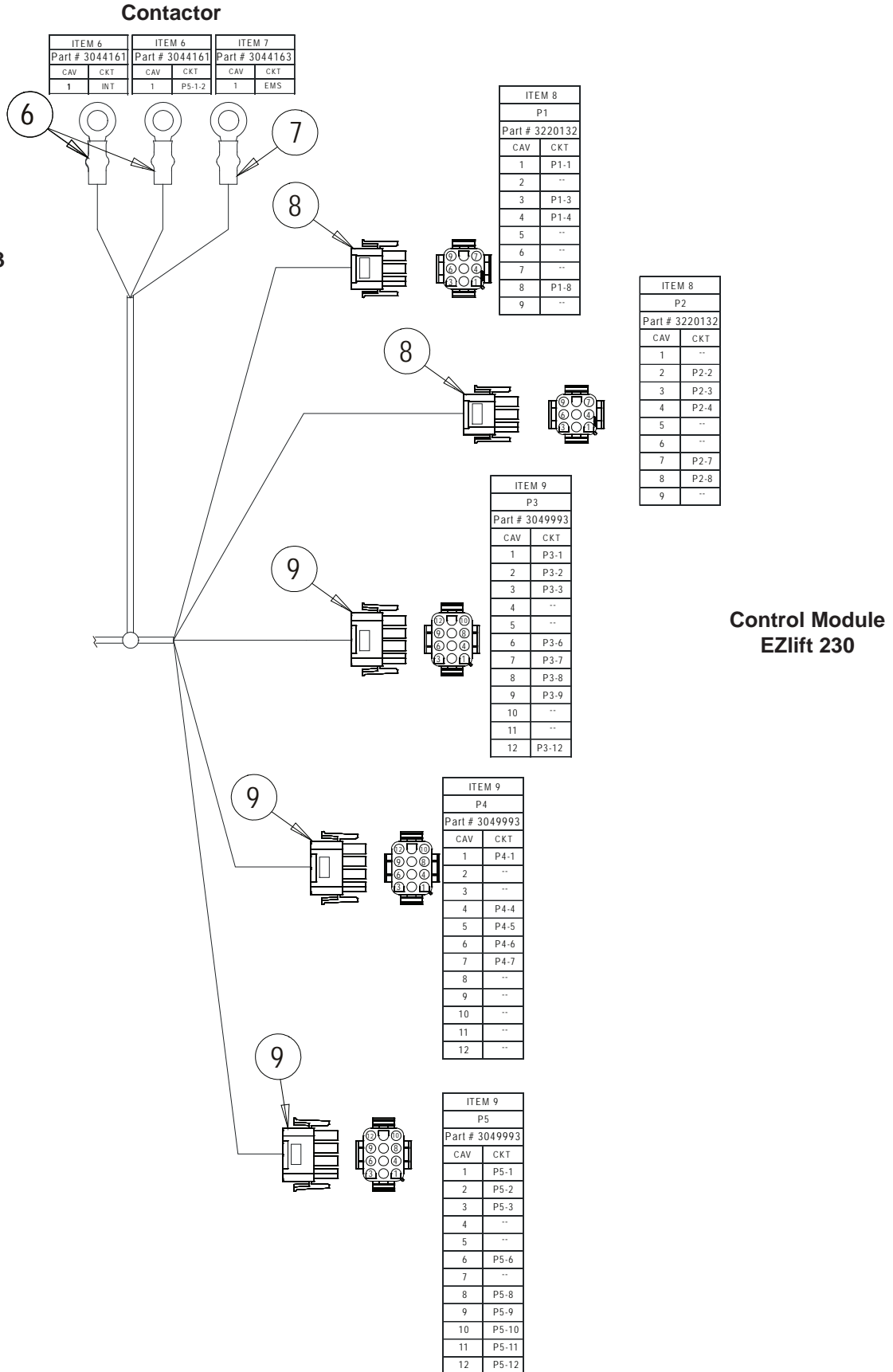


Main Wiring Harness – After December 15, 2011

1420314 B

Main Wiring Harness – After December 15, 2011

Section 3
Refer to Page 53



Main Wiring Harness – After December 15, 2011

1420314 B

Electrical System Pin ID – After December 15, 2011

P1 Output and Analog Input

Wire	Description
P1-1	5V to Joystick (low current)
P1-2	Spare analog input
P1-3	0V to Joystick (low current)
P1-4	Joystick analog input
P1-5	CAN H (optional CANbus)
P1-6	CAN L (optional CANbus)
P1-7	Tilt lamp output (0V=active)
P1-8	Overload lamp output (0V=active)
P1-9	Platform alarm output (0V=active)

P2 Connects to Sensors

Wire	Description
P2-1	5V (low current, for sensors only)
P2-2	EZfit height sensor #1 input
P2-3	0V (low current, for sensors only)
P2-4	Pressure sensor input
P2-5	EZfit height sensor #2 input (optional)
P2-6	Spare analog input
P2-7	B+ feed (low current, for switches only)
P2-8	Lift down valve return (0V=active)
P2-9	Spare lamp output (0V=active)

P3 Upper Controls

Wire	Description
P3-1	EMS Platform (B+ during platform mode)
P3-2	Valve supply (high current B+ during platform mode, supplies all valve outputs)
P3-3	Torque/traction switch (B+=active)
P3-4	Reverse/Down joystick switch (B+=active)
P3-5	Forward/Up joystick switch (B+=active)
P3-6	Drive select switch (B+=active)
P3-7	Lift select switch (B+=active)
P3-8	Steer right switch (B+=active)
P3-9	Steer left switch (B+=active)
P3-10	Spare switch input (B+=active)
P3-11	Spare switch input (B+=active)
P3-12	Trigger switch (B+=active)

Electrical System Pin ID – After December 15, 2011

Electrical System Pin ID – After December 15, 2011

P4 Lower Controls

Wire	Description
P4-1	EMS Ground (B+ during ground mode)
P4-2	Spare switch input
P4-3	Spare switch input
P4-4	Lift down switch (B+=active in ground mode only)
P4-5	Lift up switch (B+=active in ground mode only)
P4-6	Elevation switch (B+=lowered, open=elevated)
P4-7	Spare switch input
P4-8	Spare switch input
P4-9	Spare switch input
P4-10	Spare switch input
P4-11	Spare switch input
P4-12	Spare switch input

P5 Valve Outputs

Wire	Description
P5-1	Line contactor output (B+ when active)
P5-2	Forward valve output (B+ when active)
P5-3	Reverse valve output (B+ when active)
P5-4	Brake Valve output (B+ when active)
P5-5	Motion light output (B+ when active)
P5-6	Steer left valve output (B+ when active)
P5-7	Down valve output (B+ when active)
P5-8	Steer right valve output (B+ when active)
P5-9	Torque valve output (B+ when active)
P5-10	Overload and motion alarm output (B+ when active)
P5-11	Up valve output (B+ when active)
P5-12	Spare valve output

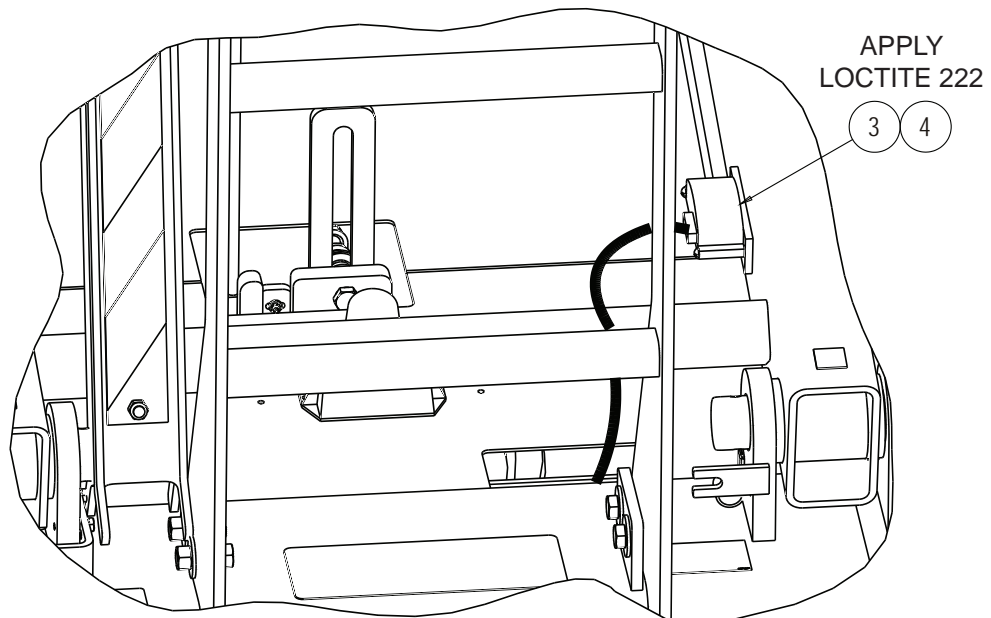
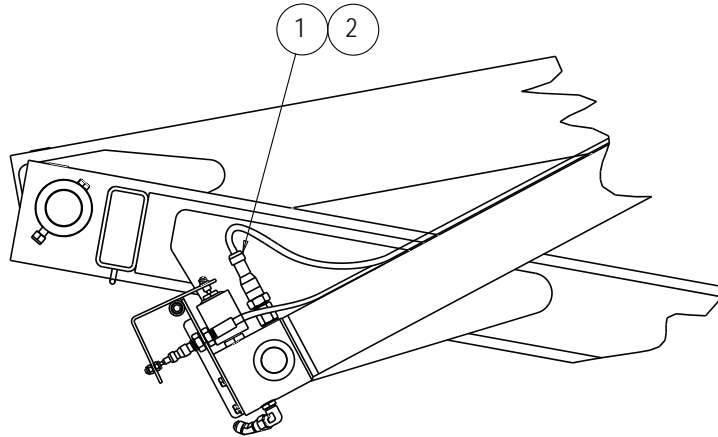
P6 Connects to EZcal Hand-Held Device

Wire	Description
P6-1	Supply
P6-2	Receive
P6-3	Transmit
P6-4	0 V Return

Electrical System Pin ID – After December 15, 2011

Overload System – CE

Item	Part No.	Qty.	Description
1	3030158	1	PRESSURE TRANSDUCER
2	614986	1	FTG RDCR/EXP -6S-4S STL
3	3030157	1	ANGLE TRANSDUCER
4	974749	2	SCREW RHD MACHINE 10-24 X 1.75



FIRST INNER ARM
LOOKING FORWARD

Overload System – CE

0361496 E

Options

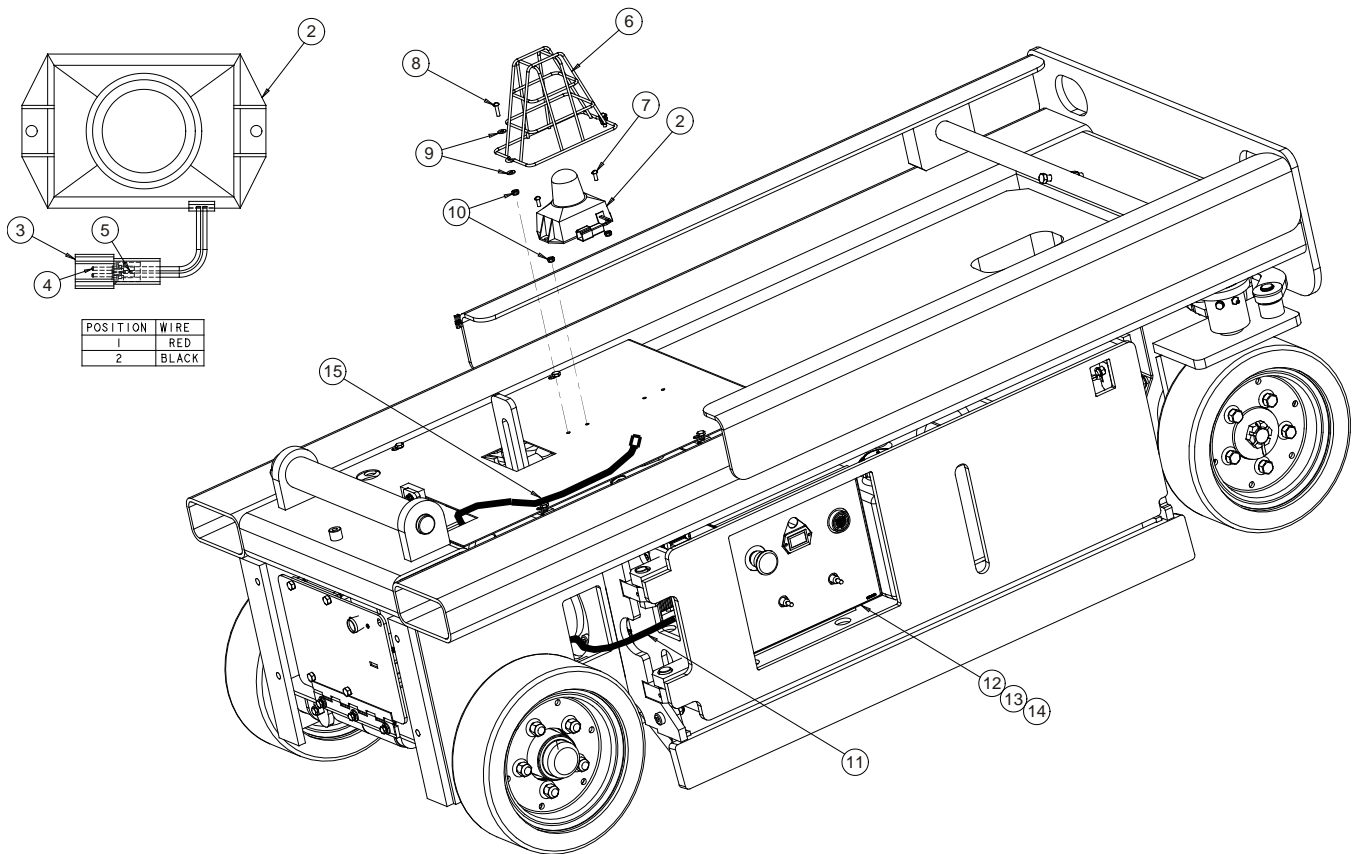
S2632E



snorkel

Flashing Light

Item	Part No.	Qty.	Description
1	0361297	1	FLASHING LIGHT ASSEMBLY – INCLUDES ITEMS 2, 3, 4 AND 5
2	564136	1	FLASHING LIGHT, YELLOW
3	3049804	1	CONNECTOR 2 PIN
4	3040341	2	PIN, CONTACT
5	3049808	1	LOCK WEDGE 2 PIN PLUG
6	487686	1	GUARD, FLASHING LIGHT
7	974659	2	MACHINE SCREW #10-24 X 1/2 INCH LONG ROUND HEAD
8	974689	2	MACHINE SCREW #10-24 X 3/4 INCH LONG ROUND HEAD
9	986009	4	WASHER #10 MEDIUM FLAT
10	5560034	4	NUT #10-24 SELF LOCKING
11	0361295	1	WIRE HARNESS, FLASHING LIGHT
12	0361296	1	WIRE HARNESS, FLASHING LIGHT ADAPTER – INSIDE LOWER CONTROL BOX
13	3049803	1	CONNECTOR 2 PIN – INSIDE LOWER CONTROL BOX
14	3049807	1	LOCK WEDGE 2 PIN PLUG – INSIDE LOWER CONTROL BOX
15	5093019	1	CLAMP

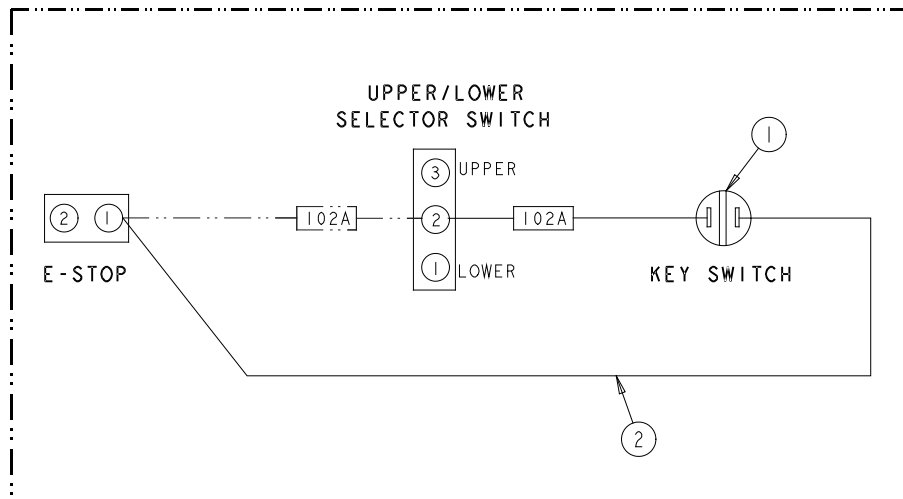
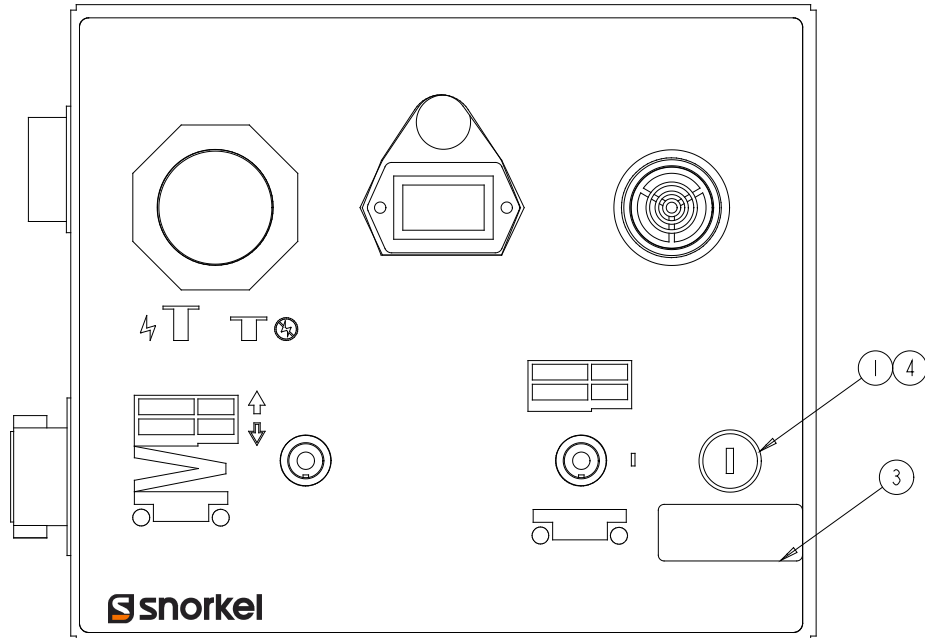


Flashing Light

0361311 A

Key Switch

Item	Part No.	Qty.	Description
1	486756	1	KEY SWITCH
2	302859	1	WIRE 18 R6I R6I 10 BLK
3	583146	1	DECAL, KEY SWITCH ON/OFF
4	480006	1	O-RING



Key Switch

0361451 A

Airline to Platform

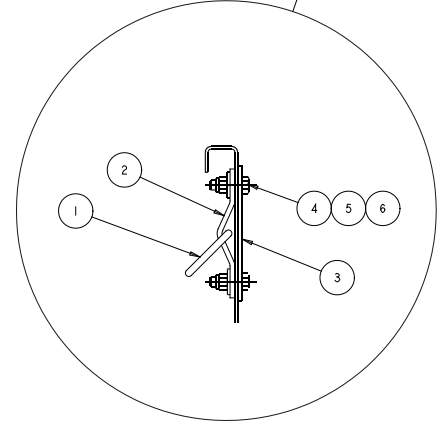
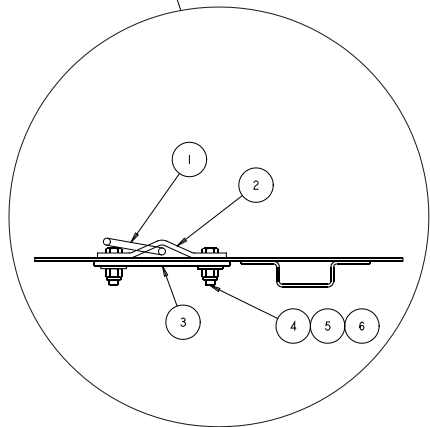
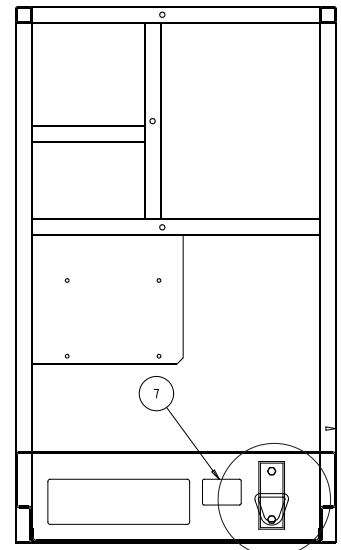
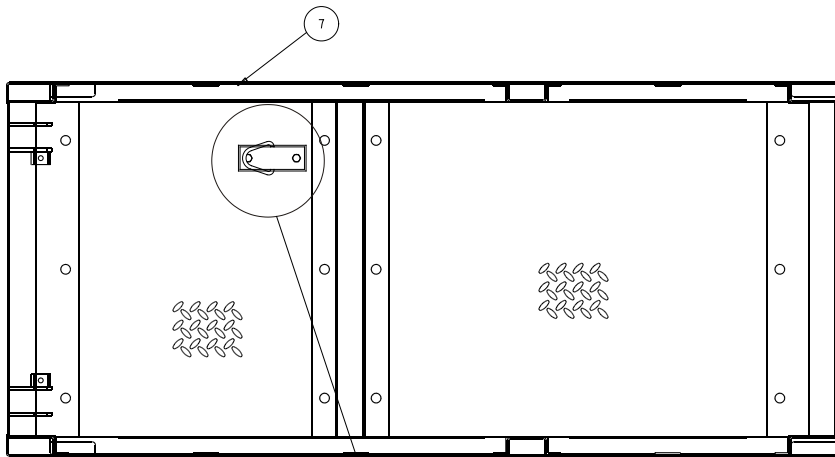
Item	Part No.	Qty.	Description
	0372168		AIRLINE TO PLATFORM OPTION
			NOT SHOWN
1	5260030	1	PARKER AIR LINE QUICK ATTACH
2	5260031	1	PARKER AIR LINE QUICK CONNECT
3	5569998	1	GROMMET 1.25ID 1.75DIAX.094GRV
4	5560004	1	NUT HEX LKG .250-20
5	986019	1	WSHR FLAT .250
6	970029	1	BLT HEXHD .250-20 .75 GR5-Z/P
7	974689	3	SCR RDH MACH 10-24 .75
8	5560034	3	NUT HEX LKG 10-24
9	5093004	4	CLP CUSH .750 VINYL COATED
10	5090048	6	HOSE GUARD-16
11	986009	6	WSHR FLAT 10
12	5010024	38	HOSE .50 ID AIR HOSE

Airline to Platform

0372168

Dual Lanyard Anchorage

Item	Part No.	Qty.	Description
	0360895	1	DUAL LANYARD ANCHORAGE
1	0360892	2	TIE DOWN "D" RING
2	0360891	2	BRACKET, LANYARD ATTACHMENT
3	0360893	2	PLATE, LANYARD ATTACHMENT
4	5560704	4	BOLT HEXHD .375-16 1.25 GRADE 8
5	5563046	4	WASHER FLAT HARD .375
6	5560033	4	NUT HEX LKG .375-16
7	0150448	2	DECAL ATTACH FALL RESTRAINT

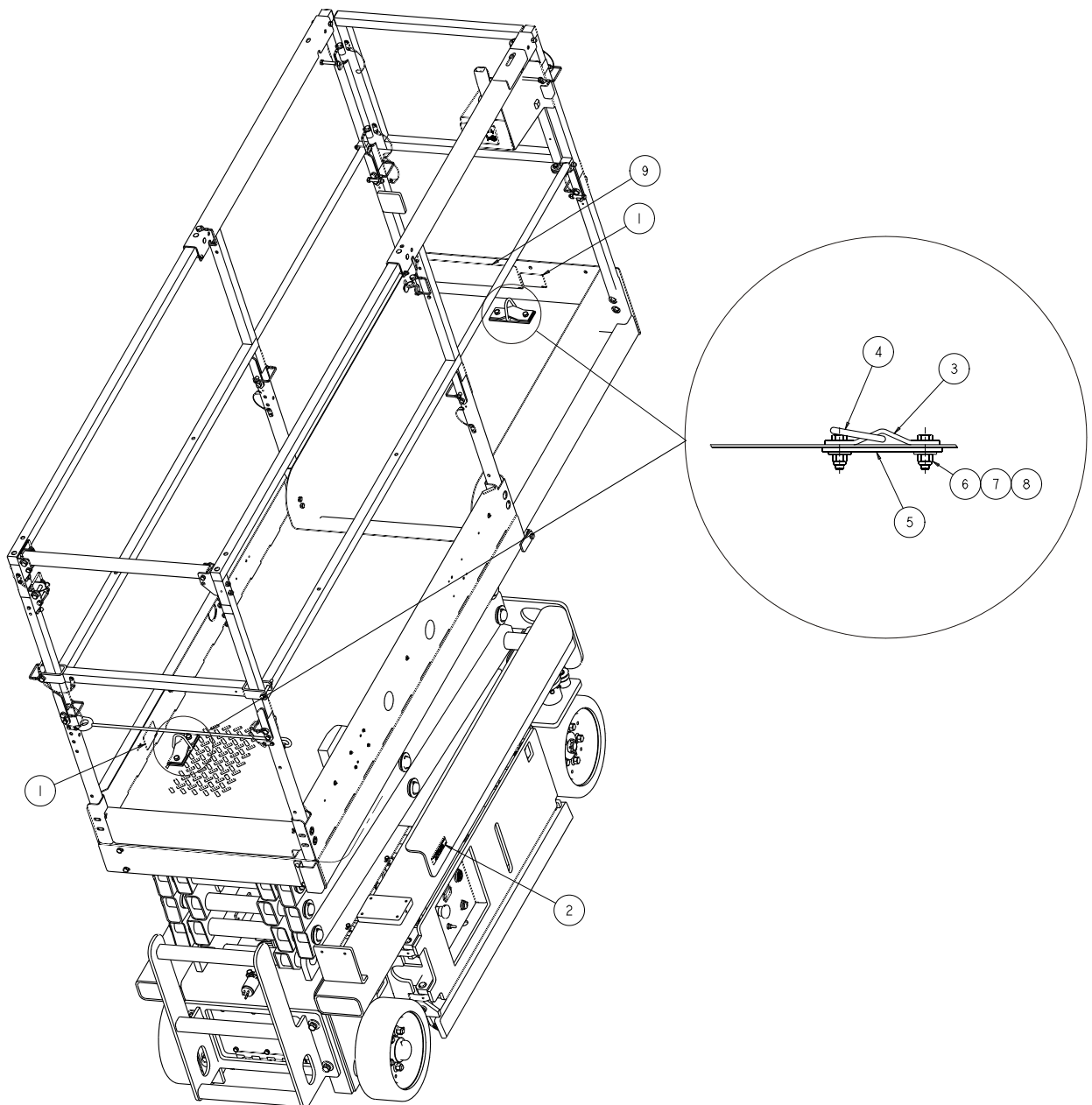


Dual Lanyard Anchorage

A36030A

Canadian Standards Association Package

Item	Part No.	Qty.	Description
1	1420284		CSA OPTION
2	0150448	2	DECAL ATTACH FALL RESTRAINT
3	0361528	1	DECAL, CSA COMPLIANT
4	0360891	2	BRACKET, LANYARD ATTACHMENT
5	0360892	2	TIE DOWN "D" RING
6	0360893	2	PLATE, LANYARD ATTACHMENT
7	5560704	4	BOLT HEXHD .375-16 1.25 GRADE 8
8	5560033	4	NUT HEX LKG .375-16
9	986299	8	WASHER FLAT .375
	0361514	1	DECAL, PLATFORM CAPACITY 500# W/WIND
			NOT SHOWN
	1420331	1	MANUAL, PARTS S2632E
	0361532	1	MANUAL, CSA INSPECTION & MAINTENANCE CHECKLIST

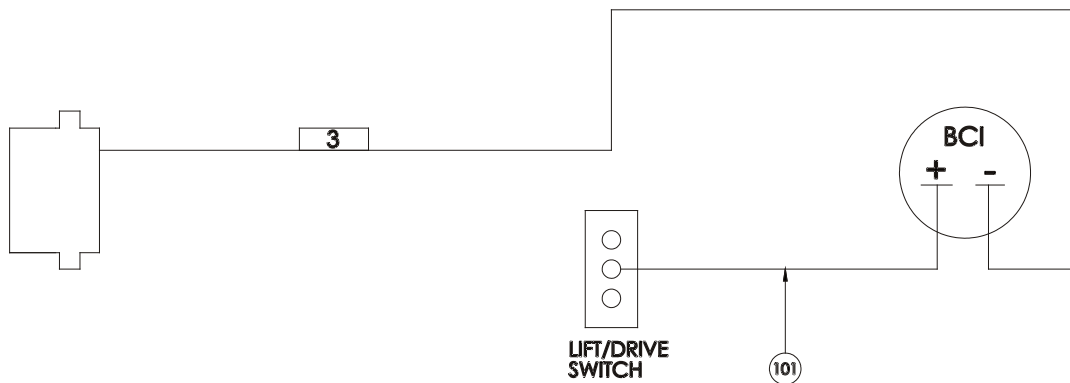
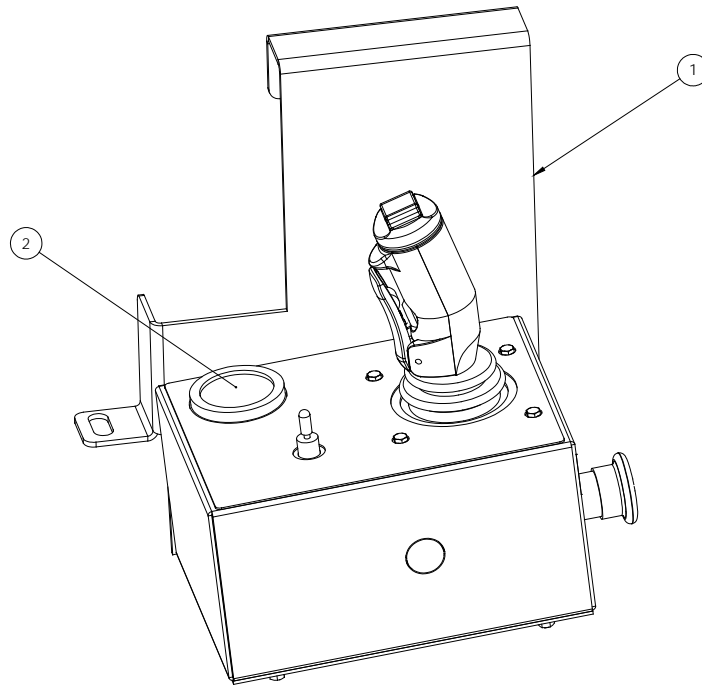


Canadian Standards Association Package

A37025C

Battery Condition Indicator

Item	Part No.	Qty.	Description
1	1360397	1	UPPER CONTROL ASSEMBLY ANSI
2	487696	1	BATTERY CONDITION INDICATOR
101	300804	1	WIRE



1360611 A

Battery Condition Indicator

Maintenance

S2632E



Maintenance

Every person who maintains, inspects, tests, or repairs the aerial platform must be qualified to do so. Maintenance functions must be performed by maintenance personnel who are qualified to work on the aerial platform.

Caution

Welding current can be very intense. Damage to electronic components can result. Connect the ground clamp as close as possible to the area being welded. Disconnect battery cables and any microprocessors and engine control modules before welding on the machine.

If it becomes necessary to weld aerial platform components as a method of repair, take all precautions to prevent damage to electronic circuitry and devices on the machine. This includes, but may not be limited to, disconnecting battery cables and electronic devices.

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

Maintenance Schedules

Snorkel has established a preventive maintenance schedule to detect any defective, damaged or improperly secured parts and provide information regarding lubrication and other minor maintenance items.

This schedule includes the following:

- Daily Prestart Inspection
- Frequent Inspection and Maintenance
Every 90 Days or 150 Hours
- Annual Maintenance – Every 500 Hours

The Daily Prestart Inspection must be performed by a trained operator. All other maintenance and inspections must be performed by a trained service technician only. Retain a copy of these forms for your records.

All placards and decals on the machine must be in place and legible. Use the Placards and Decals parts page in the Repair Parts section 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.

Warning

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury can result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

Repair all defects before returning the machine to service.

General 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.

Danger

Hydraulic fluid escaping under pressure can have enough force to inject fluid into the flesh. Serious infection or reaction will result if medical treatment is not given immediately. In case of injury by escaping hydraulic fluid, seek medical attention at once.

Always refer to the hydraulic system installation drawings and the electrical wiring diagram before removing or disassembling associated parts.

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.

Keep the following in mind 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 the work platform is in the stowed position, blocked or the weight removed by a suitable lifting device before removing any components from the scissor stack.
- When raising a portion of the machine, be sure that adequate blocking is properly positioned. Do not depend solely on the 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 cylinders and manifolds. Replace any part having imperfect threads. In general, machines that have been disassembled can be reassembled by reversing the order of disassembly.

The service life of a machine can be increased by keeping dirt and foreign materials out of the vital components. Shields, covers, seals, and filters help to keep air and oil supplies clean. However, these items must be maintained on a scheduled basis in order to function properly.

Clean surrounding areas as well as the opening and fittings before disconnecting air or oil lines. 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 the machine. This will assure that they are correctly reinstalled.

Proper assembly is critical to the successful rebuilding of any machine. 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.

Daily Prestart Inspection

Item	Inspect For	Ok
Operator's Manual	Proper manual in holder	
Electrical System		
Battery fluid level	Proper level	
Battery terminals	Clean, connectors tight	
Battery charger	Proper operation	
Cables and wiring harness	No wear or physical damage	
Hydraulic System		
Fluid level	Between full and add marks with platform stowed	
Hoses, tubes, and fittings	No leaks, all fittings tight	
Free-wheeling valve	Fully closed	
Tires	Good condition	
Wheels	All wheel lug nuts present and tight	
Ground Strap	In place and securely fastened	
Lower Control Station		
Operating controls	Proper operation	
Emergency stop	Shuts off lower controls	
Lowering alarm	Sounds when platform lowers	
Pothole Protector Interlock	Proper operation	
Emergency Lowering System	Proper operation	
Safety Prop	No damage or deformation	
Flashing Light	Proper operation, no damage or deformation	
Structures		
Weldments – Chassis/scissors/platform/etc.	Welds intact, no damage or deformation	
Slide blocks	In place, no damage or deformation	
Fasteners	In place and tight	
Upper Control Station		
Guardrail system	Welds intact, no damage or deformation	
Platform floor	All fasteners in place, no loose or missing parts	
	No damage or deformation	
Swing-down rails	Fasteners in place, proper operation	
Lanyard anchors	In place, no damage or deformation	
Entry chain/gate	In place, no damage or deformation, proper operation	
Parking brakes	Proper operation	
Operating controls	Proper operation	
Emergency stop	Shuts off upper controls	
Lowering alarm	Sounds when platform lowers	
Drive motion alarm	Sounds when aerial platform moves	
Electrical power outlet	Proper operation	
Battery condition indicator	Proper operation	
Horn	Sounds when activated	
Placards and Decals	In place and readable	

Performed by: _____ Date: _____

Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	Ok
Electrical System			
Batteries	Clean terminals, check electrolyte levels and cable connections	Add distilled water if necessary	
Cables and wiring harness	Check for wear and damage		
Battery charger	Check for proper operation	Ensure batteries are fully charged	
Hydraulic System			
Hydraulic fluid condition	Visually inspect a sample taken from the center of the reservoir. Do a lab test if necessary. Flush system and replace fluid as necessary.	Above 10°F (-13°C) Mobil DTE-13M, ISO VG32 Below 10°F (-13°C) Mobil DTE-11M, ISO VG15	
Fluid reservoir	Check for leaks		
Return filter	Replace after the first 50 hours, every 90 days or 150 hours thereafter Inspect filter for foreign matter that could indicate component wear		
Hoses, tubes, and fittings	Check for leaks, blistering, cracks, etc.		
Fluid level	Fill with proper fluid, between Full and Add marks	See above	
Filler cap	Check for wear and securely fasten		
Free-wheeling valve	Fully closed		
Motor and pump assembly	Check for damage and leaks Check for proper operation		
Structures			
Weldments	Check for damage and cracked welds		
Slide blocks	Check for wear and proper operation	Do not lubricate	
Fasteners	Verify that all fasteners are in place and are tight		
King Pins	Lubricate	Above 32°F (0°C) Conoco Super Sta #2 Mobilgrease CM-P Below 32°F (0°C) Mobilgrease CM-L	
Tie Rod Ends	Lubricate with spray lubricant	Petroleum based such as WD-40	
Wheels and Tires	Check for wear and damage Retorque lug bolts/nuts to 90-100 ft lb		
Steering Cylinder – Fasteners and Linkage	Check for cylinder damage and leaks Check for proper operation Lubricate with spray lubricant	Petroleum based such as WD-40	
Scissor Structure	Check for damage and cracked welds		
Pivot pins, snap rings, bolts and nuts	Check for wear and damage, or missing components		
Lift cylinder and valves	Check for wear/damage/leakage and proper operation		
Emergency lowering system	Check for wear and damage Verify that all fasteners are in place and are tight		
Hoses, tubes, and fittings	Check for leaks, blistering, cracks, etc.		
<i>Continued on next page...</i>			

Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	Ok
Scissor Structure			
Cables and wiring harness	Check for wear and damage		
Safety prop	Check for damage and deformation		
Ground Strap	In place and securely fastened		
Pothole Protectors			
Interlock and alarm	Check for damage and proper operation		
Linkage and skid pivot points	Lubricate with spray lubricant	Petroleum based such as WD-40	
Swing-out Trays			
Hinges and latches	Check for damage and proper operation		
	Lubricate	Powdered graphite	
Placards and Decals	Check for damage and readability Order replacements as necessary	Refer to Parts Manual for part numbers	
Operator's Manual	Proper manual in document holder		
Platform			
Guardrail system	Welds intact, no damage or deformation All fasteners in place, no loose or missing parts		
Platform floor	Check for damage and deformation Clean to prevent slip and fall hazards		
Platform extension	Check for damage and deformation Smooth operation Check for proper operation of locking pins		
Swing-down rails	Verify that all fasteners are in place and that the rails fold down properly.		
Entry chain/gate	Check for damage and deformation Check for proper operation		
Emergency Lowering System	Check for proper operation		
Lower Controls			
Operating controls	Check for smooth operation and proper speed	Refer to Operator's Manual for function speeds	
Emergency stop	Shuts off power to lower controls		
Lowering alarm	Verify that alarm sounds while the platform is lowering		
Lowering interrupt – CE only	Verify that the platform stops lowering when it reaches about 1.5 m (5')		
Control selector switch	Check for proper operation	In the lower controls position, the upper controls should not be functional and in the upper controls position, the lower controls should not be functional.	
Continued on next page...			

Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	Ok
Lower Controls			
Lift capacity	Check lift function at maximum load capacity While the platform is loaded, raise the platform and with a pen, mark the chassis next to the slide pad. Mark on the side of the pad toward the front of the chassis. Wait for 15 minutes to determine if the lift cylinder is drifting. If the slide pad covers the mark, the cylinder or holding valve is leaking.	Maximum Load 500 lb (227 kg) If the cylinder or holding valve leaks, remove the machine from service and correct the cause of the hydraulic leak before further operation.	
Overload system test CE machines only	Check the lift function at 120% maximum load capacity. Start the test with the platform fully lowered. Verify that the lift function cuts out automatically, the alarm sounds and the red light on the control panel flashes before the platform reaches an elevation of approximately 1.8 m (6').	120% Maximum Load 272 kg (600 lb)	
Battery disconnect switch	Shuts off all controls		
Upper Controls			
Operating controls	Check for smooth operation and proper speed		
Parking brakes	Proper operation		
Emergency stop	Shuts off power to upper controls		
Lowering alarm	Verify that alarm sounds while the platform is lowering		
Drive motion alarm	Verify that alarm sounds while chassis is in motion		
Electrical power outlet	Check for proper operation of outlet and GFCI		
Travel speed	Verify proper travel speed Low: 0.4 mph (0.6 km/h) High: 2.0 mph (3.2 km/h)	0.4 mph = 50ft in 65-85 secs (0.6 km/h = 15.2m in 65-85 secs) 2.0 mph = 50ft in 16-20 secs (3.2 km/h = 15.2m in 16-20 secs)	
Options			
Horn	Check for proper operation		
Flashing light	Check for proper operation		
Battery condition indicator	Check for proper operation		
Lanyard anchors	Check for wear and damage Verify that all fasteners are in place and are tight		
Level Sensor Interlock Test			
	A. Park the machine on a level surface. Place a smart level on the chassis in the front-to-back direction. Zero the level. Continued on next page...		

Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	Ok
	<p>B. Elevate the front tires approximately 3 3/8" (86 mm).</p> <p>Verify the chassis inclination is no more than 3.7 degrees. Verify the platform will raise and lower through its full range of motion.</p> <p>C. Elevate the front tires approximately 4 1/8" (105 mm).</p> <p>Verify the chassis inclination is between 4.2 and 4.4 degrees. Verify that the lift function cuts out automatically and the alarm sounds before the platform reaches an elevation of 6' (1.8 m). All drive functions must also cut out.</p> <p>D. Repeat steps B and C elevating the rear tires.</p> <p>E. Place the smart level on the chassis in the side-to-side direction. Zero the level.</p> <p>Elevate the tires on the right side of the machine approximately 3/4" (19mm).</p> <p>Verify the chassis inclination is no more than 1.7 degrees. Verify the platform will raise and lower through its full range of motion.</p> <p>F. Elevate the tires on the right side of the machine approximately 1" (25 mm).</p> <p>Verify the chassis inclination is between 2.2 and 2.4 degrees. Verify that the lift function cuts out automatically and the alarm sounds before the platform reaches an elevation of 6' (1.8 m). All drive functions must also cut out.</p> <p>G. Repeat steps E and F for the left side of machine.</p> <p>H. Adjust/replace the level sensor as required.</p>		

Performed by: _____ Date: _____

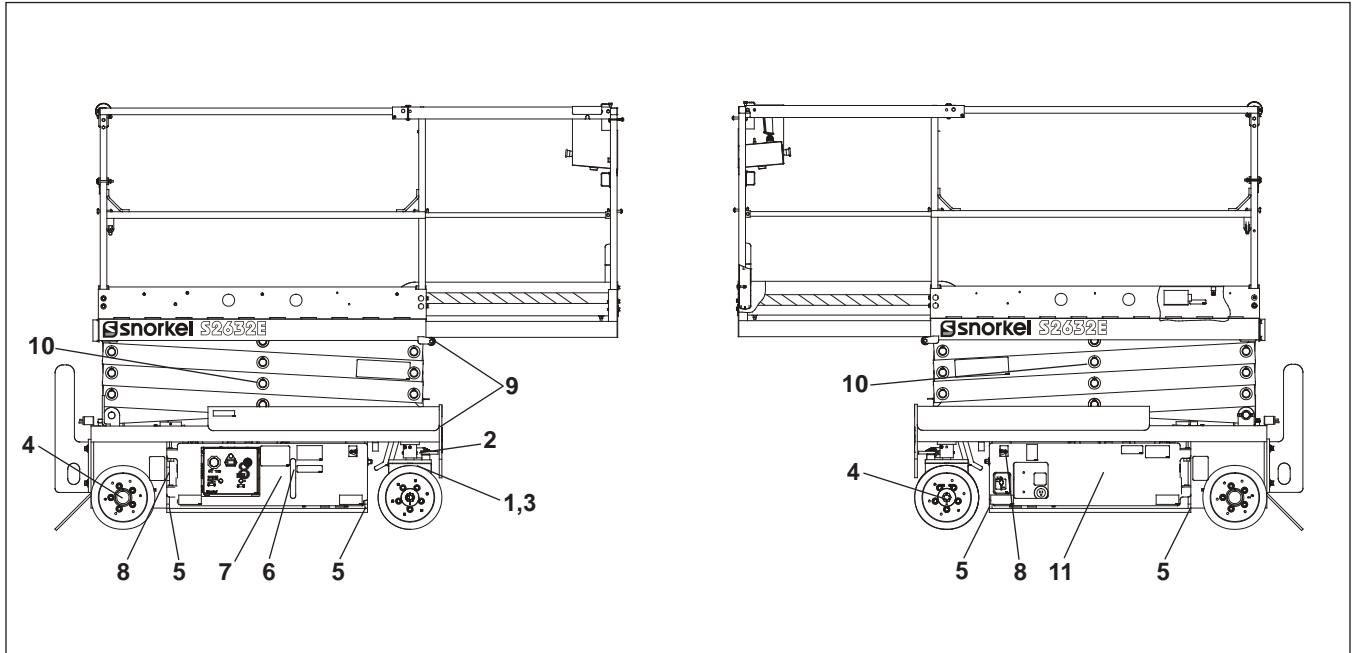
Annual Maintenance – Every 500 Hours

Item	Procedure	Information	Ok
Frequent Maintenance Checklist	Complete Frequent Maintenance		
Hydraulic System			
Hydraulic fluid condition	Drain, flush, and clean hydraulic system. Refill with new fluid.	Above 10°F (-13°C) Mobil DTE-13M, ISO VG32 Below 10°F (-13°C) Mobil DTE-11M, ISO VG15	
Return filter	Replace	Refer to Parts Manual for filter part number	
System pressures	Check steer pressure	1,500 to 1,600 psi (103 to 110 bar)	
	Check system relief pressure	2,850 to 3,000 psi (197 to 207 bar)	
Rear Wheel Bearings (Non-CE Machines)	Clean and repack	Above 32°F (0°C) Conoco Super Sta #2 Mobilgrease CM-P Below 32°F (0°C) Mobilgrease CM-L	

Performed by: _____ Date: _____

Major Repairs

Date	Part Number	Part Description	Repair Performed



Lubrication Points

Lubrication

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

Anytime the aerial platform is elevated to perform maintenance work, properly position the safety prop as outlined on the safety prop decal.

▲ Danger

Pinch points exist on the scissors structure. Death or serious injury will result if the scissors structure drops onto personnel working within the scissors arms or under the raised platform. Properly position the safety prop before reaching through the scissors structure.

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

Service all lubrication points 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.

Tie Rods

Tie rods – Item 1. Lubricate using a petroleum based spray lubricant following the Frequent Inspection and Maintenance schedule.

King Pins

King pins – Item 2. Lubricate using a grease gun with an extreme-pressure multipurpose grease following the Frequent Inspection and Maintenance schedule.

Steer Cylinder Ends

Steer cylinder ends – Item 3. Lubricate using a petroleum based spray lubricant following the Frequent Inspection and Maintenance schedule.

Rear Wheel Bearings

Rear wheel bearings – Item 4. Clean and repack the rear wheel bearings following the Annual Maintenance schedule.

Clean and repack the bearings following normal automotive procedures.

Note

The front or drive wheel bearings are sealed and do not require lubrication.

Pothole Protectors

Pothole protectors – Item 5. Lubricate using a petroleum based spray lubricant following the Frequent Inspection and Maintenance schedule.

After lubricating, remove any excess so it will not collect dirt and debris.

Hydraulic Oil Reservoir

Hydraulic oil reservoir – Item 6. The fluid level should be kept level with the indicator line on the side of the reservoir and should be checked with all cylinders fully retracted.

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 breather cleaned yearly with kerosene, fuel oil, or other solvent.

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 for further information.

Return Filter

Return filter – Item 7. The hydraulic oil return filter is mounted in the right hand tray close to the hydraulic oil reservoir.

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

Check the filter condition during the Frequent Inspection and Maintenance or more frequently under extreme working conditions.

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.

Tray Hinges and Latches

Tray hinges and latches – Item 8. Lubricate using powdered graphite following the Frequent Inspection and Maintenance schedule.

After lubricating, remove any excess so it will not collect dirt and debris.

Slide Pads

Slide pads – Item 9. Check slide pads for excessive wear and replace as required. Slide pads do not require lubrication.

Machines with the platform Overload System – lubricate the slide pads with a spray dry-film lubricant as required for smooth operation before overload calibration.

Scissor Arm Bearings

Scissor arm bearings – Item 10. Scissor arm bearings are self lubricating. Check bearings for signs of damage and excessive wear as outlined in the maintenance schedule. Do not lubricate scissor arm bearings.

Batteries

Batteries – Item 11. The batteries and battery cables should be checked to assure that the connections are tight and free of corrosion. Fluid level should be maintained to assure that the batteries will maintain proper charge.

Check the batteries specific gravity per the maintenance schedule.

The batteries are enclosed within a tray located on the side of the machine. For access to the batteries when the machine is lowered, position the machine on a hard level surface, unlatch and open tray.

⚠Warning

Battery acid can damage the skin and eyes. Serious infection or reaction can result if medical treatment is not given immediately. Wear face and eye protection when working near the batteries.

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

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

Battery Care and Maintenance

The following information about battery care and maintenance was supplied by Interstate Batteries and is reprinted here with their permission.

1. New batteries need to be cycled several times before reaching full capacity (20-50 cycles, depending on type). Usage should be limited during this period.
2. Always recharge batteries fully, immediately after use. Batteries perform best when they are fully charged. More capacity and longer life will result from this practice.
3. The deeper the discharge, the fewer number of cycles a lead-acid battery will deliver. Deep discharges deteriorate the battery quicker than lighter shallow cycles.
4. Battery cables should be intact and connectors kept tight at all times. Systematic inspection is recommended.
5. Vent caps should be kept in place and tight during vehicle operation and battery charging.
6. Batteries should be kept clean – free of dirt and corrosion – at all times. Always keep the top of batteries clean. A film on top of the battery can cause the current to migrate between the posts, accelerating self discharge.

-
7. Never let the electrolyte level of a lead-acid battery fall below the plates. Lack of maintaining the electrolyte in a lead-acid battery causes damage to the exposed portion of the plate which reduces capacity.
 8. Always check electrolyte level before charging. Do not add water to individual cells unless plates are exposed. Batteries should be watered after charging unless the plates are exposed before charging. If exposed before charging, the plates should be covered by approximately 1/8" of water. Check water level after charging. Water should be kept 1/4" below the bottom of the fill tube in the cell cover.
 9. Water used to replenish batteries should be distilled or treated to not exceed 200 T.D.S. (total dissolved solids... parts per million). Particular care should be taken to avoid metallic solids (iron).
 10. A fully charged battery will give you the best and longest service. Be sure the batteries are fully charged before testing or using. A fully charged battery, without a drain or load, after the surface charge has dissipated, is 6.35 volts for a 6 volt battery.
 11. Batteries should not be discharged below 20% of capacity (approximately 1.8 volts per cell under normal operating load; 1.98 volts open circuit; 1.145 specific gravity). Proper battery sizing will help avoid excessive discharge.
 12. Battery chargers should be sized to fully charge batteries in an eight hour period. Chargers should be kept in proper operating condition.
 13. Do not use a mismatched charger of any type; i.e., a 12 volt charger on a 24 volt pack or a 24 volt charger on a 12 volt pack. An undersized charger will never get the job done, no matter how long it tries. An oversized charger will cause excess gassing and heat that could possibly result in a battery meltdown and/or explosion.
 14. Never charge a lead-acid battery with a sealed (gel cell) battery charger. The lead-acid battery needs higher voltage to finish its charge. Without it the battery will never come back to 100% and sulfation can occur.
 15. Always allow batteries to cool off after charging. The cooling time is very important because heat is generated during the recharge and discharge cycles. Without the cooling time the heat grows, accelerating grid corrosion which is one of the major causes of battery failure. Charging practice should enable batteries to cool before use.
 16. Deep cycle batteries need to be equalized periodically. Equalizing is an extended, low current charge performed after the normal charge cycle. It helps keep cells in balance. Actively used batteries should be equalized once per week. Manually timed chargers should have the charge time extended approximately 3 hours. Automatically controlled chargers should be unplugged and reconnected after completing a charge cycle.
 17. In situations where multiple batteries are connected in series, parallel or series-parallel, a replacement battery's should be of the same size, age and usage level as the companion batteries. Do not put a new battery in a pack that has 50 or more cycles. Either replace all the batteries with new batteries or install a good used battery's in place of the bad. New batteries should be given a full charge before use.
 18. Periodic battery testing is an important preventative maintenance procedure. Hydrometer readings of each cell (fully charged) give an indication of balance and true charge level. Imbalance could mean the need for equalizing and is often a sign of improper charging or a bad cell. Voltage checks (open circuit, charged and discharged) can locate a bad cell or weak battery. Load testing will pick out a bad cell when other methods fail. The point is to look for the abnormal. A weak cell or battery will cause premature failure of companion cells or batteries respectively.
 19. As batteries age, their maintenance requirements change, Generally their specific gravity is higher and gassing voltage goes up. This means longer charging time and/or higher finish rate (higher amperage at the end of charge). Usually, older batteries need to be watered more often and their capacity decreases.
 20. "Opportunity charging", a short partial charge during an extended duty cycle, is a controversial subject. Generally, the practice is a "crutch" to make up for undersized batteries. The correct approach is to install adequate battery capacity. If this is impossible because of lack of space in the battery compartment or extreme operating conditions (24 hour intermittent use, as an example), "opportunity charging" is better than excessive battery discharging. However, the practice can cause batteries to overheat, require more watering and usually will shorten battery life. "Opportunity charging" is a trade off; something to avoid if possible. One charging cycle per day is preferable.
 21. Extreme temperatures can substantially affect battery performance and charging. Cold reduces battery capacity and retards charging. Heat increases water usage and can result in overcharging. Very high temperature can cause "thermal run away" which may lead to an explosion or fire. If extreme temperature is an unavoidable part of an application, consult a battery/charger specialist about ways to deal with the problem.
 22. An overly discharged battery might need to be cycled a few times before it can recover fully. If a battery begins to heat before coming up to a full charge,

it might be necessary to discharge the battery and recharge it a few times. The charge and discharge cycle might help the current acceptance of the battery and facilitate its recovery to a usable condition.

23. Inactivity can be harmful to deep cycle batteries. If they sit for several months, a “boost” charge should be given – more frequently in warm climate (about once a month) than in cold (every 2-3 months).
24. Never store a battery in a discharged state. The sulfate that forms during discharge can make the battery impossible to recharge fully.

Battery Charger

The aerial platform is equipped with an onboard automatic battery charger. This charger has an electronic circuit that will completely recharge the batteries and automatically turn off after the charge cycle is completed.

The charging cycle may last 1 1/2 to 18 hours depending on the state of charge of the batteries. If the charging cycle should exceed 18 hours without the batteries being fully recharged, the charger should be shut off and the batteries should be checked.

General Charging Cautions





1. Do not recharge batteries unless Electrolyte level has been checked. Operate charger in accordance with the battery charging instructions outline in this manual. Place the battery disconnect switch in the off position before charging batteries.
2. Do not smoke or introduce a flame or spark in the charging area.

Warning

Batteries give off hydrogen and oxygen that can combine explosively. Death or serious injury can result from a chemical explosion. Charge the batteries only in a well ventilated area away from sparks or flame.

3. Use protective face and eye equipment when checking the condition of charging batteries.

Fastener Torque Chart

Bolt Grade	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 Quenched and Tempered	Medium Carbon Alloy Steel Quenched and Tempered
Minimum Tensile Strength	64,000 psi.	105,000 psi	133,000 psi.	150,000 psi
Bolt Size	Recommended Torque Value (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

Torque chart information:

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

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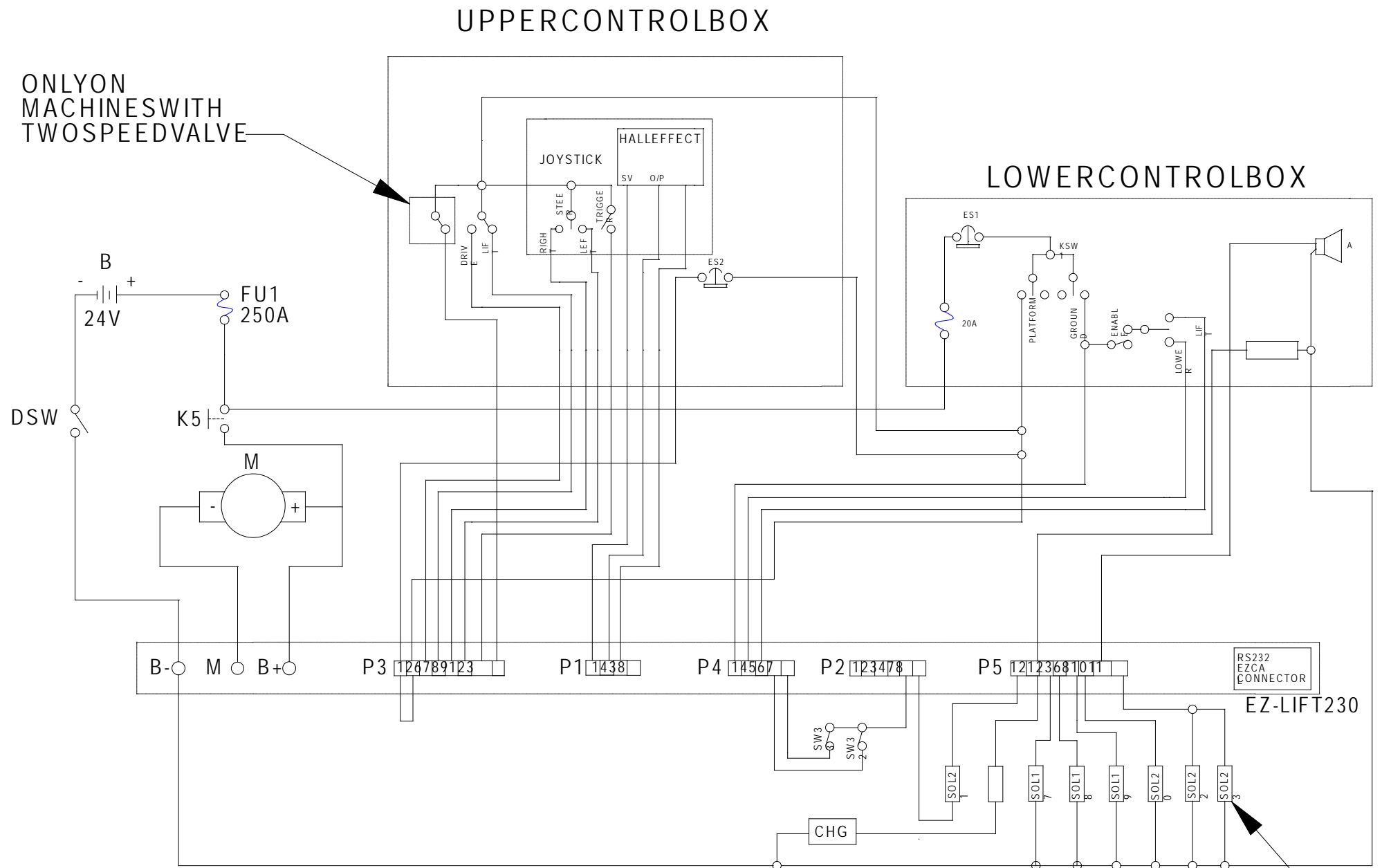
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A

COMPONENT NAME	COMPONENT DESCRIPTION
A	ALARM-MOTION
ATI	ANGLE TRANSDUCER
B	BATTERY
BCI	BATTERY CONDITION INDICATOR
CHG	BATTERY CHARGER
DSW	DISCONNECT SWITCH
ES1	LOWER CONTROL STOP
ES2	UPPER CONTROL STOP
FU1	FUSE-MAIN SYSTEM
FU2	FUSE-CONTROLS
H	HORN
HM	HOURLY METER
KSW1	KEY SWITCH-LOWER CONTROLS/OFF/UPPER CONTROLS
K5	CONTACTOR
L1	LIGHT-PLATFORM OVERLOADED
M	MOTOR
PSW1	PRESSURE TRANSDUCER-LIFT CYLINDER
SOL17	VALVE-DRIVE FORWARD
SOL18	VALVE-DRIVE REVERSED
SOL19	VALVE-STEER LEFT
SOL20	VALVE-STEER RIGHT
SOL21	VALVE-DOWN
SOL22	VALVE-LIFT
SOL23	VALVE-DUMP
SW1	UPPER CONTROL-DRIVE/LIFT SELECTOR SWITCH
SW3	LOWER CONTROL-LIFT/DOWN SWITCH
SW4	LOWER CONTROL BOX ENABLE SWITCH
SW5	DRIVE SPEED SWITCH
SW11	HORN-PUSH BUTTON SWITCH
SW32	STACK SWITCH
SW33	POTHOLE SWITCH

ONLY ON MACHINES WITH TWO SPEED VALVE



2632,2646,3246 ONLY

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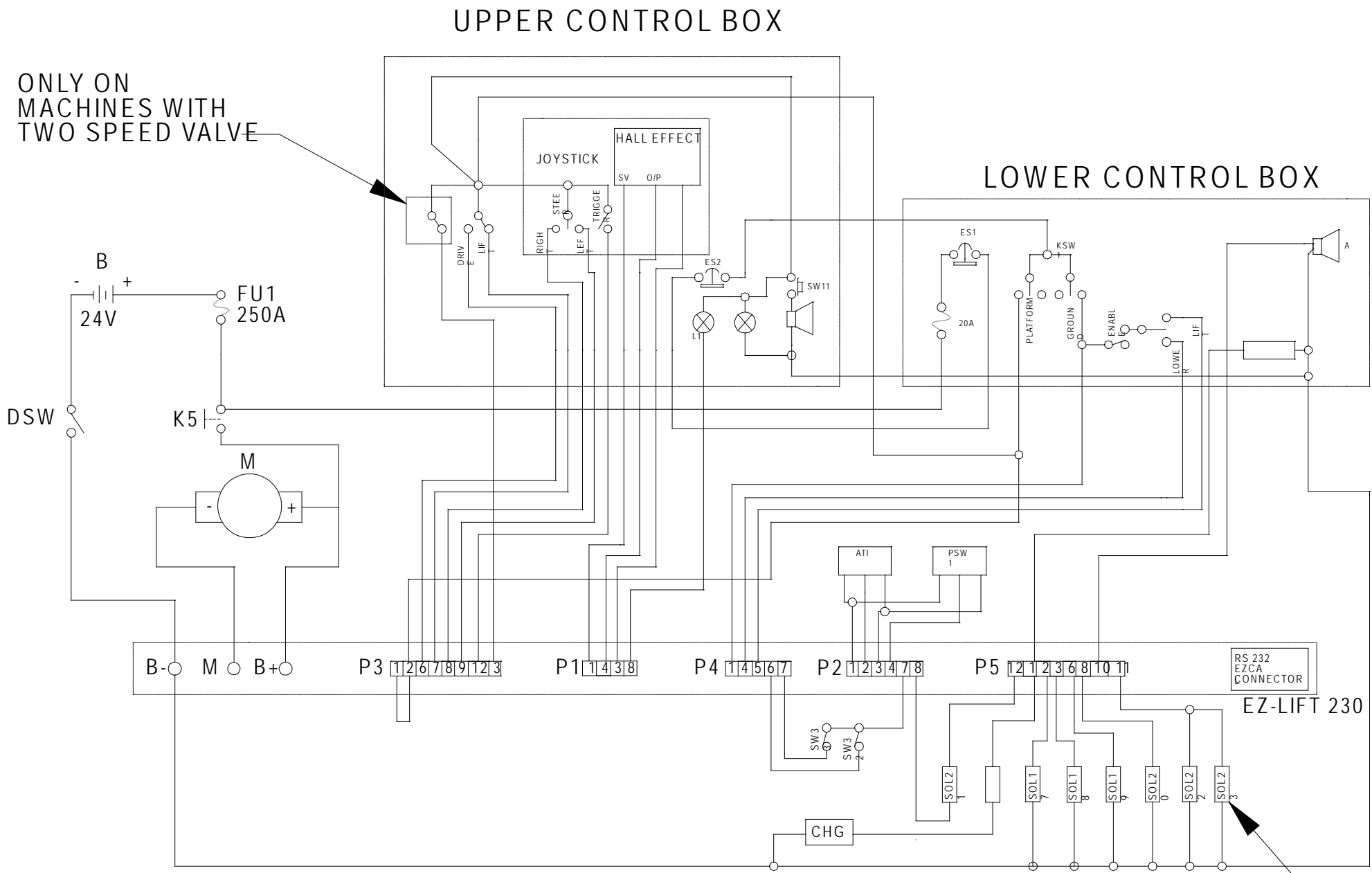
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FU2	FUSE-CONTROLS
H	HORN
HM	HOURMETER
KSW1	KEY SWITCH-LOWER CONTROLS/OFF/UPPER CONTROLS
K5	CONTACTOR
L1	LIGHT - PLATFORM OVERLOADED
M	MOTOR
PSW1	PRESSURE TRANSDUCER - LIFT CYLINDER
SOL17	VALVE - DRIVE FORWARD
SOL18	VALVE - DRIVE REVERSED
SOL19	VALVE - STEER LEFT
SOL20	VALVE - STEER RIGHT
SOL21	VALVE - DOWN
SOL22	VALVE - LIFT
SOL23	VALVE - DUMP
SW1	UPPER CONTROL - DRIVE/LIFT SELECTOR SWITCH
SW3	LOWER CONTROL-LIFT/DOWN SWITCH
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SW5	DRIVE SPEED SWITCH
SW11	HORN-PUSH BUTTON SWITCH
SW32	STACK SWITCH
SW33	POTHOLE SWITCH



2632, 2646, 3246 ONLY

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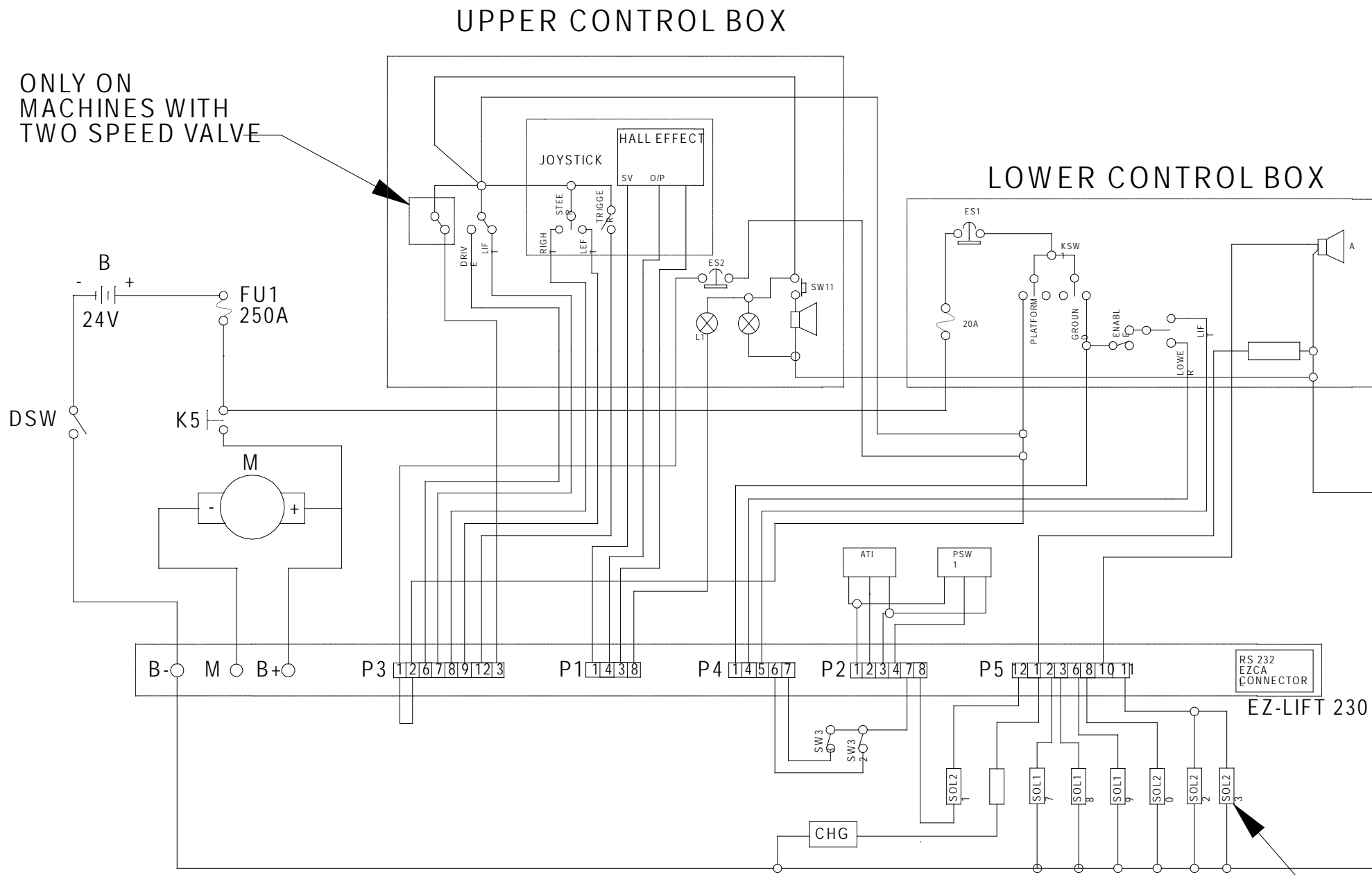
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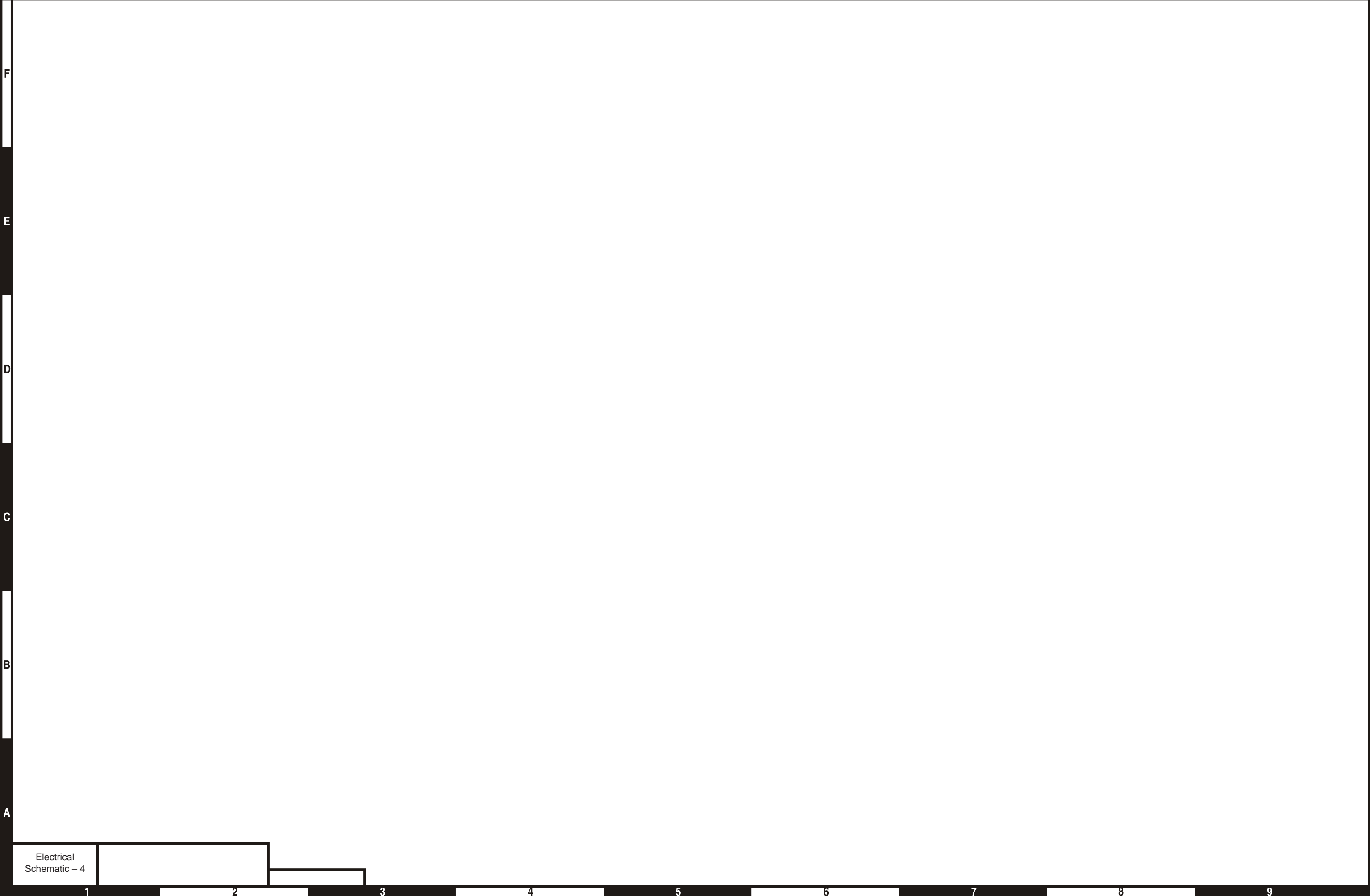
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ONLY ON MACHINES WITH TWO SPEED VALVE



2632, 2646, 3246 ONLY



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Electrical
Schematic - 4

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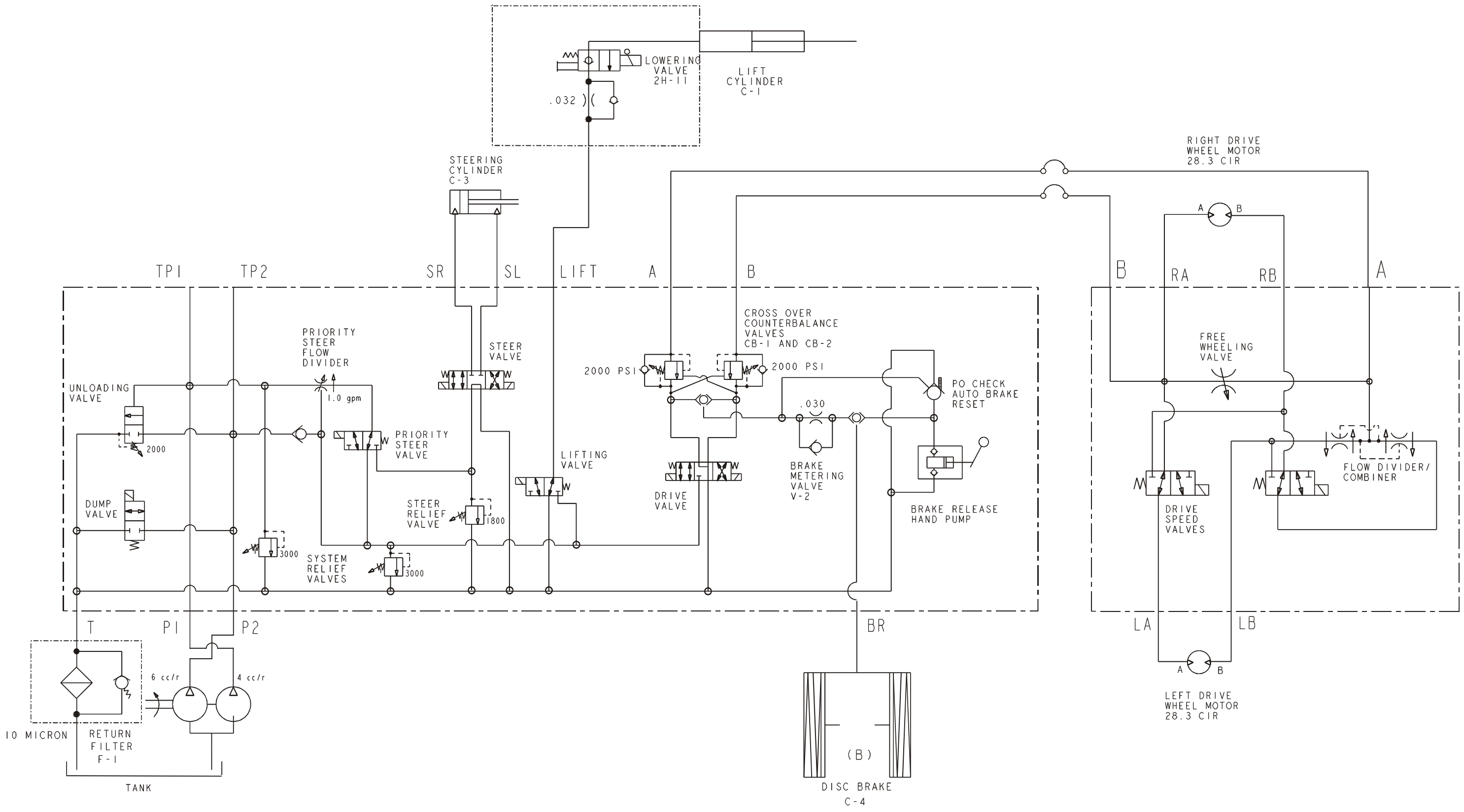
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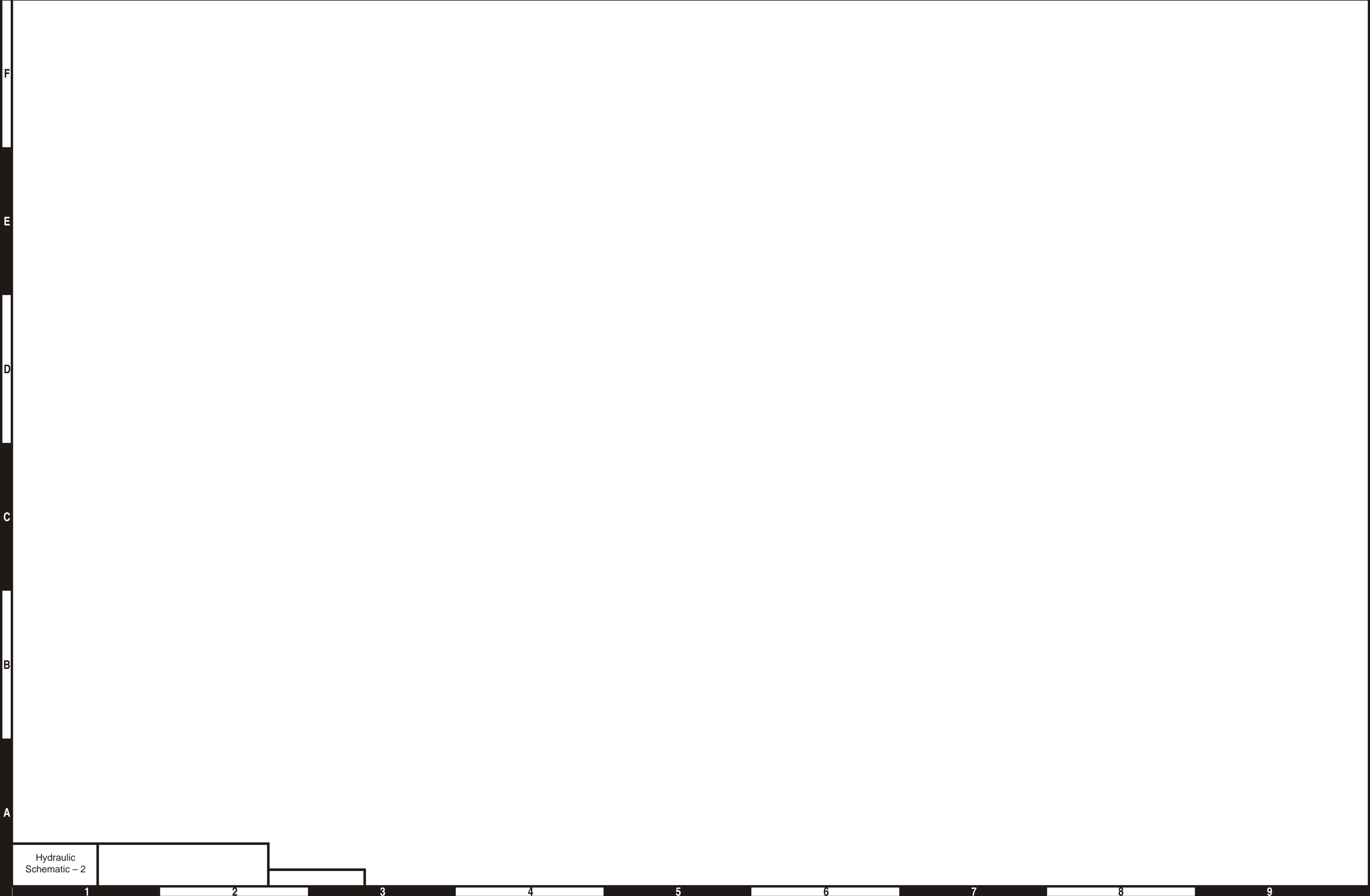
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Hydraulic Schematic - 2

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Product Warranty

1. 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. The warranty will apply subject to the machine being operated in accordance with the rules, precautions, instructions and maintenance requirements outlined in the Snorkel Operator's and Repair Parts Manuals.
2. Snorkel further warrants the structural components, specifically the mainframe chassis, turntable, booms and/or 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 Warranty Department, are found to be defective will be replaced or repaired by Snorkel through its local Authorised Dealer. The structural warranty specifically excludes adverse affects on the machine structure arising from damage, abuse or misuse of the equipment.
3. Machines may be held in an authorised Distributor stock for a maximum of six (6) months from the date of shipment from Snorkel, before the warranty period is automatically initiated.
4. It is the responsibility of the Distributor to complete and return a Predelivery/Warranty registration, before the act of rental/loan/demonstration of the machine or delivery to an end user.
5. The Customer and Dealer shall not be entitled to the benefits of this warranty and Snorkel shall have no obligations here under unless the "Predelivery and Inspection Record" has been properly completed and returned to the Snorkel Warranty department within fifteen (15) days after delivery of the Snorkel product to the Customer or Dealer's demonstration/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.
6. Any part or parts which upon examination by the Snorkel Product Support Department are found to be defective within the specified warranty period, will be replaced or repaired at the sole discretion of Snorkel, through Snorkel directly or an authorised Distributor, at no charge. Any parts replaced under warranty must be original Snorkel parts obtained through Snorkel directly or an authorised Distributor, unless expressly agreed otherwise in writing and in advance by Snorkel's Warranty Department.
7. All parts being claimed under warranty must be held available for return and inspection upon request for a period of 90 days from date of claim submission, it is necessary that all parts are individually tagged or marked with their part number and the warranty claim number. After 90 days all parts replaced under warranty which have not been returned to Snorkel should be destroyed. Failure to produce parts requested by the Warranty Administrator for inspection within a period of 14 days will result in the claim being automatically rejected in full. Materials returned for warranty inspection must have the following procedure:
 - Carefully packaged to prevent additional damage during shipping
 - Drained of all contents and all open ports capped or plugged
 - Shipped in a container tagged or marked with the RMA number
 - Shipped PREPAID. Any item(s) returned for warranty by any other means maybe refused and returned, unless prior approval is agreed with Snorkel.



Product Warranty

8. At the direction of the Snorkel Warranty Department, any component part(s) of Snorkel products to be replaced or repaired under this warranty program must be returned freight prepaid for inspection. An RMA (Returns Material Authorisation) must be requested from Snorkel Warranty Department, a copy to be placed with the returning component part(s).
9. All warranty replacement parts will be shipped freight prepaid (standard charge) from the Snorkel Parts/Service Department or from the Vendor to Dealer or Customer.
10. All warranty claims are subject to approval by Snorkel Service Department. Snorkel reserves the right to limit or adjust claims with regard to defective parts, labor or travel time based on usual and customary guidelines.

REPLACEMENT PARTS WARRANTY

- Any part replaced under this limited warranty is not subject to further warranty cover beyond the normal warranty period of the machine upon which the part was installed.
- Any replacement parts sold (not delivered under a warranty claim) will be subject to a warranty period of (6) six months from the date of invoice.
- Parts held by a Distributor are covered under warranty for a period of (12) twelve months from the date of invoice, provided that those parts have been subject to appropriate storage to prevent damage and deterioration.

CLAIM PROCEDURE

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

When a Distributor/Customer perceive a warranty issue to exist the following steps must be adhered to:

- All warranty claims must be submitted within 30 days of the date of the machine repair
- All correspondence in respect of the claim to be on an official Snorkel warranty claim form as supplied by Snorkel's Warranty Department
- Allocate a warranty claim number to the repair
- Place a purchase order for genuine Snorkel replacement parts
- Snorkel to dispatch parts via the requested method (in line with the required response time)
- Confirmation that a qualified technician is available to replace the part and that this person has been accepted by Snorkel to carry out such work under the warranty of the machine. Failure to do this may nullify the warranty.

FREIGHT DAMAGE

If a machine is received in a damaged condition, then the damage must be noted on the bill of lading and/or delivery documents and if possible photographs taken, prior to signing acceptance of the consignment. The freight company must be contacted by the Distributor and a damage claim registered immediately.

THIS WARRANTY EXCLUDES AND SNORKEL DOES NOT WARRANT:

1. Engines, motors, tires and batteries 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 Distributor/Customer.
2. Any Snorkel product which has been modified or altered outside Snorkel factory without Snorkel written approval, if such modification or alteration, in the sole judgment of Snorkel Engineering and/or Service Departments, adversely affects the stability, reliability or service life of the Snorkel product or any component thereof.



Product Warranty

3. Any Snorkel product which has been subject to misuse and abuse, 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 Operator's and Repair Parts Manuals.
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. Routine maintenance, routine maintenance items and minor adjustments are not covered by this warranty, including but not limited to hydraulic fluid, filters and lubrication, paint and decals.
6. Any Snorkel product that has come into direct contact with any chemical or abrasive material.
7. 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, expenses 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.
8. Snorkel Warranty policy does not cover any duties, taxes, environmental fees including without limitation, disposal or handling of tires, batteries and petrochemical items.
9. Item specifically excluded are, fuel injectors, motor brushes, glow plugs, contactor tips and springs, oil filters, lamp bulbs, lamp lenses, O-rings, coolants, lubricants and cleaning material.
10. Failure of replacement parts due to fault misdiagnosis or incorrect fitting by the Distributor/Customer.

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 Snorkel directly or an Authorised Distributor. If unable to contact the Distributor, contact the Snorkel Service Department for further assistance.



Product Warranty

APPEAL

The buyer may appeal in writing against a rejected or adjusted claim to Snorkel Warranty Department within a period of 21 days of receiving the rejection or adjustment notice. The appeal should be grounded on express reasons and supported by relevant evidence. Appeals received outside of this time limit will not be considered.

WARRANTY SCHEDULE

Limited Warranty Periods

Item	Warranty Period
New machine materials and workmanship	1 year parts replacement
Structural components (Chassis, Turntable, Booms, Scissors)	5 years parts replacement or repair
Parts held in a Distributor's stock	12 months from date of invoice
Parts sold (non warranty)	6 months from date of invoice
Batteries	6 months from date of invoice
Other specifically excluded parts: Fuel injectors Motor brushes Glow plugs Contactor tips and springs Oils Filters Lamp bulbs Lamp lenses O-rings Coolants Lubricants Cleaning materials	Not covered by Warranty

**Local Distributor / Lokaler Vertiebshändler / Distributeur local
El Distribuidor local / Il Distributore locale**

**EUROPE, MIDDLE EAST
AFRICA & ASIA**

PHONE: +44 (0) 845 1550 058
FAX: +44 (0) 845 1557 756

NORTH & SOUTH AMERICA

PHONE: +1 785 989 3000
TOLL FREE: +1 800 255 0317
FAX: +1 785 989 3070

AUSTRALIA

PHONE: +61 1300 700 450
FAX: +61 2 9609 3057

NEW ZEALAND

PHONE: +64 6 3689 168
FAX: +64 6 3689 164



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