

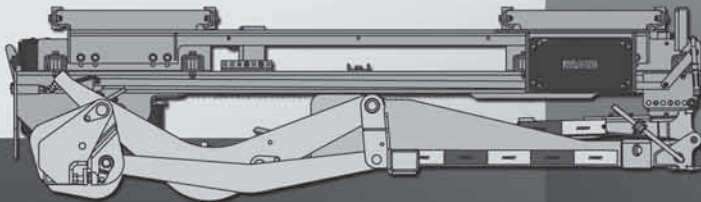
MAXON[®]

M-18-11
REV C
OCTOBER 2024

RA Series

INSTALLATION MANUAL

RA-35 & RA-45



To find **maintenance & parts** information for your **RA Liftgates**, go to www.maxonlift.com. Click the **PRODUCTS**, **SLIDELIFT** and **RA** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window. For parts, click on the **PARTS PORTAL**, **SLIDE-LIFT** and **RA** buttons.

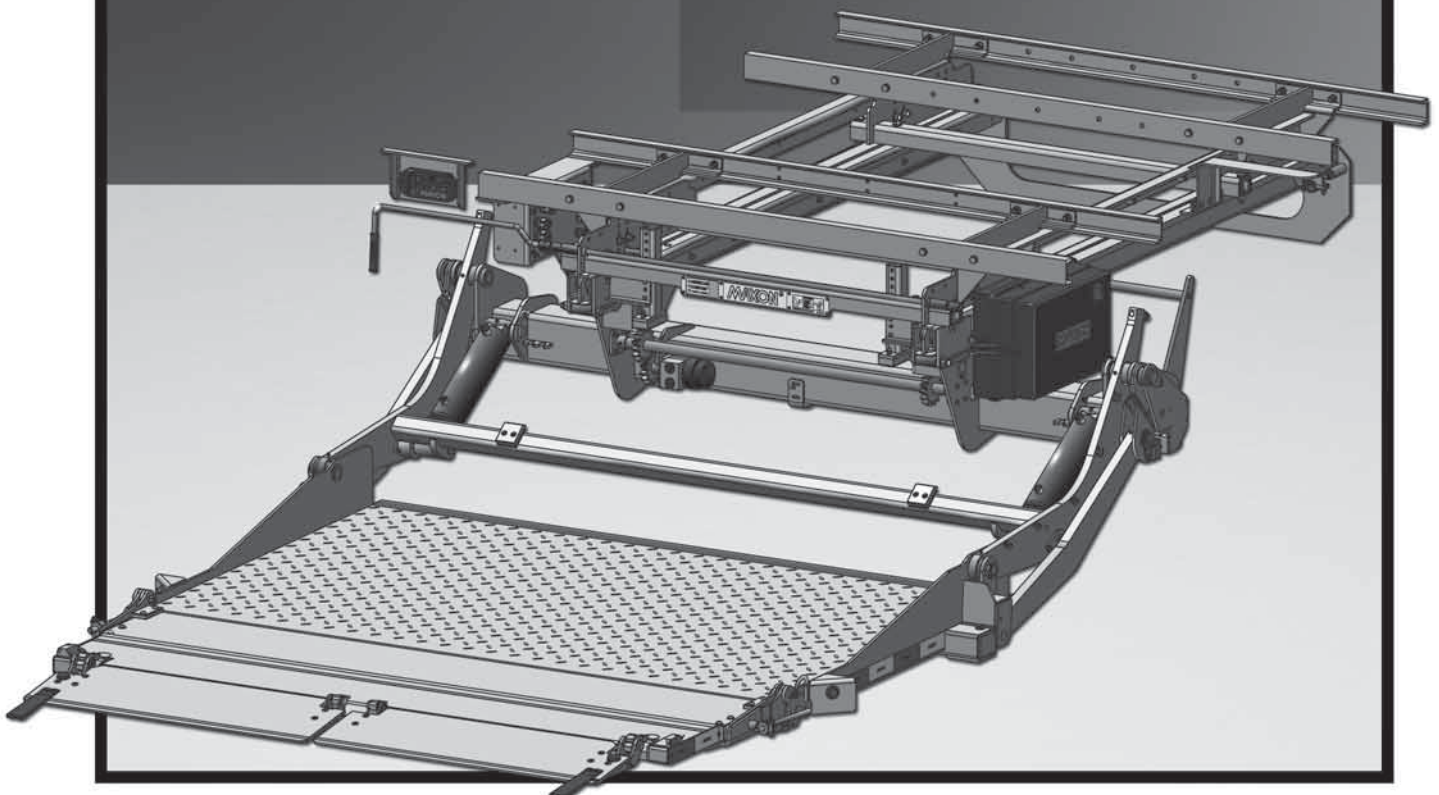


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SUMMARY OF CHANGES: M-18-11, REVISION C

PAGE	DESCRIPTION OF CHANGE
COVER	Updated REV. and date.
8	Added Notice for J-box installation position.
8, 9	Added details for cutting vertical channels on the installation jig.
15	Updated Vehicle Requirements dimensions for "A" & "B" on FIG. 15-1.
17	Added measurements for dimensions "A", "H", "H2", and "BH" to FIG. 17-3.
18	Added instruction that Liftgate is shipped with installation mounting frame bolted in Hole #1.
19	Added Note: Standard location for switches, stow mechanism, latch release handle and platform latch is on the left side of the Liftgate.
19	Added Note: An RA Liftgate installed on a refrigerated trailer may require additional crossmembers to secure liftgate to vehicle.
19	Added Note: Edge of platform to be positioned 1" inboard of door opening. Revised Note: Standard location for switches, stow mechanism, latch release handle and platform latch is on the left side of the Liftgate.
21	Added instruction to correctly position the Liftgate, on a 5-5/16" indented line on the flange of the crossmembers.
25	Added instruction to ensure handle rod is parallel to bottom surface of vehicle crossmembers before cutting extra length of handle support angle.
27-29	Added instructions for installing optional battery box.
29	Updated J-box welding instructions to weld along vehicle crossmembers.
33	Updated instructions and images to show wall switch control cables run through holes in trailer wall before attaching wall switches.
38-39	Updated images and instructions for routing power and ground cables for liftgate-mounted and remote-mounted battery boxes.
41-44	Added instructions for 2 and 4 battery connections in the battery box.
45-46	Updated power (+) and ground (-) cable connections to J-box to form drip loops in cables.
50-56	Updated adjustment instruction for tilting platform tip up and down.
53	Updated initial platform in/out adjustment to provide a gap of 1" between platform and trailer wall.
55	Updated procedure to include 5/8" gap between platform heel and recessed edge of the floor.
60-62	Added STEP 13 with instructions to install safety chain.
70-72	Hydraulic schematics updated with common and unique details of the primary and auxiliary pumps. Updated fluid passages and connections for G and G2.
74, 75, 76, 80	Updated electrical schematics to show battery power and ground cables connections on J-box. Corrected Limit Switch contacts to be shown in stowed position.
82	Updated hydraulic oil inspection on the Pre-Delivery Inspection form.

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Comply with the following **WARNINGS** and **SAFETY INSTRUCTIONS** while installing Liftgates. See **Operation Manual** for operating safety requirements.

WARNING

Installing and maintaining a liftgate can expose you to chemicals, including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, install and maintain liftgate in a well-ventilated area and wear **proper Personal protective equipment (PPE)**. For more information go to www.P65Warnings.ca.gov.

WARNING

- Do not stand, or allow obstructions, under the platform when lowering the Liftgate. **Be sure your feet are clear of the Liftgate.**
- **Keep fingers, hands, arms, legs, and feet clear of moving Liftgate parts (and platform edges) when operating the Liftgate.**
- **Correctly stow platform when not in use. Extended platforms could create a hazard for people and vehicles passing by.**
- **Make sure vehicle battery power is disconnected** while installing Liftgate. Connect vehicle battery power to the Liftgate only when installation is complete or as required in the installation instructions.
- **Remove all rings, watches and jewelry before doing any electrical work.**
- If it is necessary to stand on the platform while operating the Liftgate, keep your feet and any objects clear of the inboard edge of the platform. Your feet or objects on the platform can become trapped between the platform and the Liftgate extension plate.
- Never perform unauthorized modifications on the Liftgate. Modifications may result in early failure of the Liftgate and may create hazards for Liftgate operators and maintainers.
- Recommended practices for welding on steel parts are contained in the current **AWS (American Welding Society) D1.1 Structural Welding Code - Steel**. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.
- Recommended practices for welding galvanized steel are contained in the current **AWS (American Welding Society) D19.0 Welding Zinc-Coated Steel**. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

SAFETY INSTRUCTIONS

- Read and understand the instructions in this **Installation Manual** before installing Liftgate.
- Before operating the Liftgate, read and understand the operating instructions in **Operation Manual**.
- Comply with all **WARNING** and instruction decals attached to the Liftgate.
- Keep decals clean and legible. If decals are illegible or missing, replace them. Free replacement decals are available from **Maxon Customer Service**.
- Consider the safety and location of bystanders and location of nearby objects when operating the Liftgate. Stand to one side of the platform while operating the Liftgate.
- Do not allow untrained persons to operate the Liftgate.
- Wear appropriate safety equipment such as protective eyeglasses, faceshield and clothing while performing maintenance on the Liftgate and handling the battery. Debris from drilling and contact with battery acid may injure unprotected eyes and skin.
- Be careful working by an automotive type battery. Make sure the work area is well ventilated and there are no flames or sparks near the battery. Never lay objects on the battery that can short the terminals together. If battery acid gets in your eyes, immediately seek first aid. If acid gets on your skin, immediately wash it off with soap and water.
- If an emergency situation arises (vehicle or Liftgate) while operating the Liftgate, release the control switch to stop the Liftgate.
- A correctly installed Liftgate operates smoothly and reasonably quiet. The only noticeable noise during operation comes from the power unit while the platform is raised and lowered. Listen for scraping, grating and binding noises and correct the problem before continuing to operate Liftgate.

NOTICE

- Maxon Lift is responsible for the instructions to correctly install **MAXON** Liftgates on trucks or trailers only.
- Liftgate installers, not Maxon Lift, are responsible for reviewing and complying with all applicable Federal, State, and Local regulations pertaining to the trailer or truck.

STANDARD LIFTGATE COMPONENTS

⚠ CAUTION

Unpacking the Liftgate on unlevel surface may allow heavy components to slide off when shipping bands are cut. Injury and equipment damage could result. Before the shipping bands are cut, put Liftgate on level surface that will support 1750 lbs. When unpacking the Liftgate, remove heavy components carefully to avoid injury and damage.

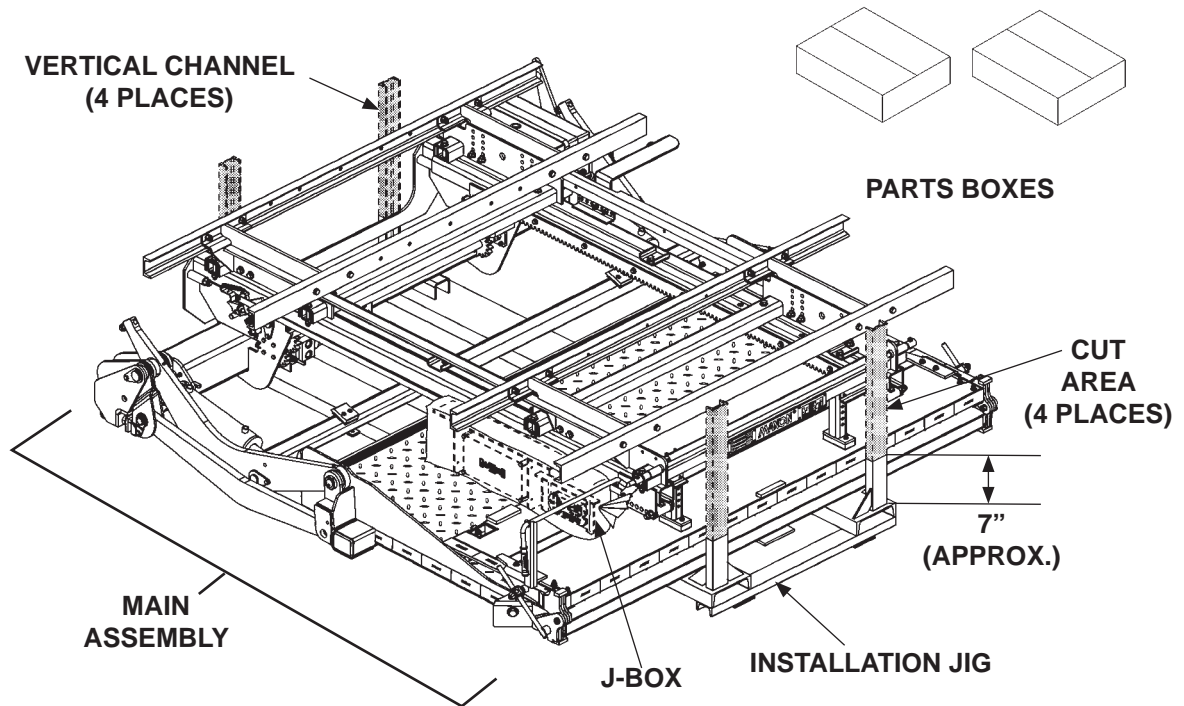
NOTICE

J-box must be installed on lefthand side of Liftgate as shown.

NOTE: Make sure you have all components and parts before you start installing Liftgate. Compare parts in the part box and each kit box with packing list enclosed in each box. If parts and components are missing or incorrect, call:

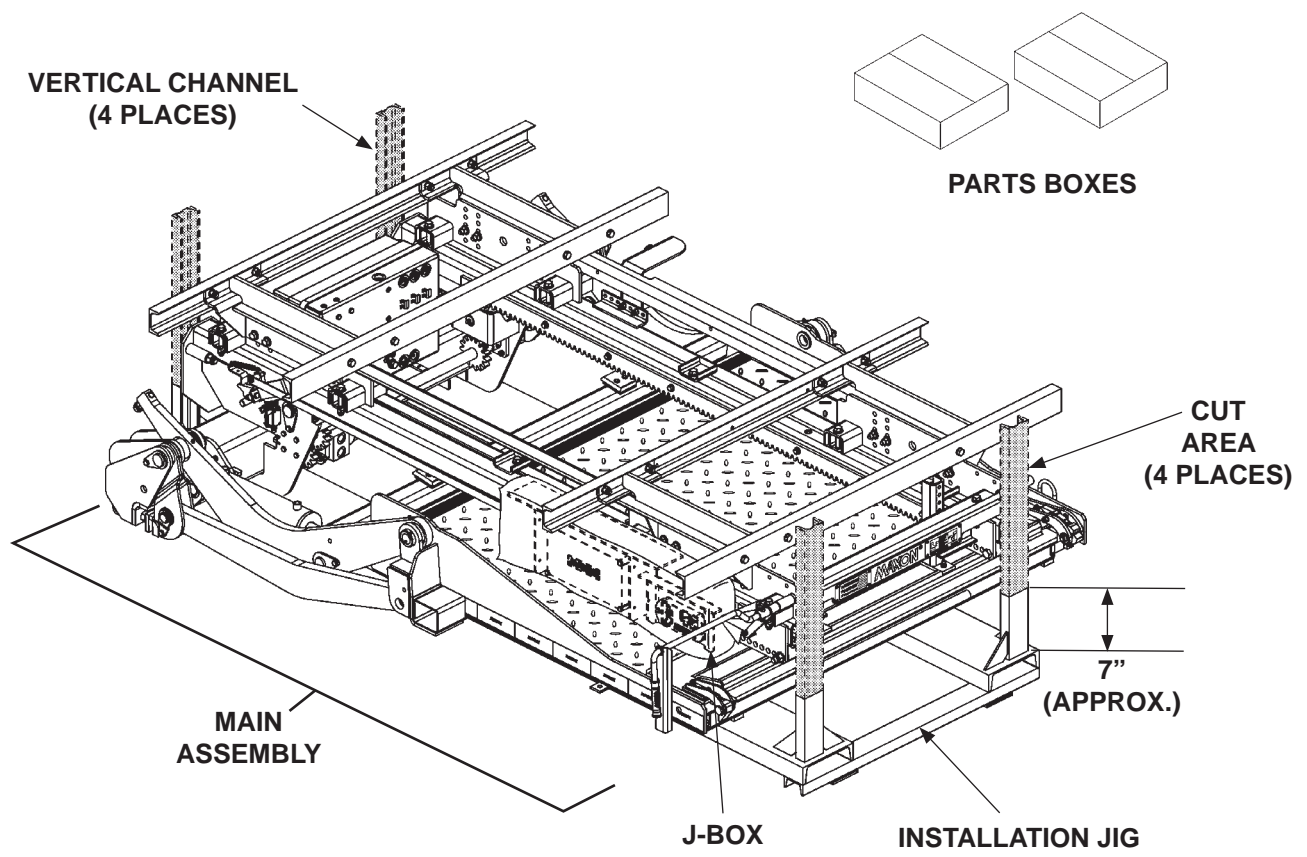
Maxon Customer Service
Call (800) 227-4116 or
Send e-mail to cservice@maxonlift.com

NOTE: Vertical channels on Liftgate installation jig may need to be cut shorter to prevent interference with underbody of vehicle. Before installation, keep Liftgate with the installation jig on the ground and covered with a welding blanket. Cut the channels only when Liftgate is protected from debris.



RA (SIDE MOUNT PUMP) LIFTGATE COMPONENTS FOR SHIPMENT
(OPTIONAL COMPONENTS NOT SHOWN)

FIG. 8-1



**RA (CENTER MOUNT PUMP) LIFTGATE COMPONENTS FOR SHIPMENT
(OPTIONAL COMPONENTS NOT SHOWN)
FIG. 9-1**

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PARTS BOX, RA (TRAILER SIDE MOUNT)

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
REF	PARTS BOX, RA	1	289101-03
1	CONTROL SWITCH ASSEMBLY, WALL MOUNT	2	287903-01
2	DECAL SHEET, UP/DOWN	2	299038-01
3	SELF-TAPPING SCREW, 10-24 X 1/2" LG.	6	900766-02
4	FLAT WASHER, #10	6	903444-01
5	SCREW MOUNT CABLE TIE, 1-1/2" DIA.	5	905398-01
6	SELF-DRILLING SCREW, #6-20, PHILLIPS HEAD	5	900818-01
7	STOW FLASHING LIGHT KIT, 55'	1	289355-01
8	SAFETY STOW CHAIN, GPSLR	1	287132-01
9	FUSE HOLDER ASSEMBLY, 10 AMP, 3/8"	1	285013-04
10	CIRCUIT BREAKER KIT, 175 AMPS, 30VDC	1	289723-01
11	PLASTIC TIE, 7"	20	205780
12	RUBBER LOOM CLAMP, #12	10	214675
13	SELF-TAPPING SCREW, 1/4"-20 X 5/8" LG.	10	900705-02

TABLE 10-1

ELECTRICAL ASSEMBLY KIT (TRAILER SIDE MOUNT)

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
REF	ELECTRICAL ASSEMBLY, 12V, GRAVITY DOWN, 22' LG.	1	287890-03
1	CABLE ASSEMBLY, FLEXIBLE LOOP, 22' LG.	1	211141-03
2	CABLE ASSEMBLY, LOCK VALVE, 16/2, 65" LG.	1	282625-26
3	CABLE ASSEMBLY, LOCK VALVE, 16/2, 120" LG.	1	282625-27
4	CABLE ASSEMBLY, LOCK VALVE, 16/2, 56" LG.	1	282625-07
5	PLASTIC TIE, 8" LG.	20	905322-01
6	LIMIT SWITCH ASSEMBLY, GPSLR/RA	1	211165-01
7	J-BOX & MAIN SWITCH ASSEMBLY, 12V, GRAVITY DOWN, 6' LG.	1	288660-01
8	PLATFORM STOW LIGHTS HARNESS	1	289363-01
9	EMERGENCY WARNING LIGHT, AMBER	2	907111-01
10	HEAT SHRINK TUBING, 4" LG.	4	268041-02
11	NYLON SPLIT LOOM, 1/4" X 78" LG.	1	907011-10
12	NYLON SPLIT LOOM, 1/4" X 36" LG.	2	907011-11

**RA ELECTRICAL ASSEMBLY, 12V GRAVITY DOWN
TABLE 11-1**

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
REF	ELECTRICAL ASSEMBLY, 24V, GRAVITY DOWN, 22' LG.	1	287890-03-24
1	CABLE ASSEMBLY, FLEXIBLE LOOP, 22' LG.	1	211141-03
2	CABLE ASSEMBLY, LOCK VALVE, 16/2, 65" LG.	1	282625-26
3	CABLE ASSEMBLY, LOCK VALVE, 16/2, 120" LG.	1	282625-27
4	CABLE ASSEMBLY, LOCK VALVE, 16/2, 56" LG.	1	282625-07
5	PLASTIC TIE, 8" LG.	20	905322-01
6	LIMIT SWITCH ASSEMBLY, GPSLR/RA	1	211165-01
7	J-BOX & MAIN SWITCH ASSEMBLY, 24V, GRAVITY DOWN, 6' LG.	1	288660-01-24
8	PLATFORM STOW LIGHTS HARNESS	1	289363-01
9	EMERGENCY WARNING LIGHT, AMBER	2	907111-01
10	HEAT SHRINK TUBING, 4" LG.	4	268041-02
11	NYLON SPLIT LOOM, 1/4" X 78" LG.	1	907011-10
12	NYLON SPLIT LOOM, 1/4" X 36" LG.	2	907011-11

**RA ELECTRICAL ASSEMBLY, 24V GRAVITY DOWN
TABLE 11-2**

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ELECTRICAL ASSEMBLY KIT - Continued (TRAILER SIDE MOUNT)

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
REF	ELECTRICAL ASSEMBLY, 12V, POWER DOWN, 22' LG.	1	287890-04
1	CABLE ASSEMBLY, FLEXIBLE LOOP, 22' LG.	1	211141-03
2	CABLE ASSEMBLY, LOCK VALVE, 16/2, 65" LG.	1	282625-26
3	CABLE ASSEMBLY, LOCK VALVE, 16/2, 120" LG.	1	282625-27
4	CABLE ASSEMBLY, LOCK VALVE, 16/2, 56" LG.	1	282625-07
5	PLASTIC TIE, 8" LG.	20	905322-01
6	LIMIT SWITCH ASSEMBLY, GPSLR/RA	1	211165-01
7	J-BOX & MAIN SWITCH ASSEMBLY, 12V, POWER DOWN, 6' LG.	1	288660-02
8	PLATFORM STOW LIGHTS HARNESS	1	289363-01
9	EMERGENCY WARNING LIGHT, AMBER	2	907111-01
10	HEAT SHRINK TUBING, 4" LG.	4	268041-02
11	NYLON SPLIT LOOM, 1/4" X 78" LG.	1	907011-10
12	NYLON SPLIT LOOM, 1/4" X 36" LG.	2	907011-11

**RA ELECTRICAL ASSEMBLY, 12V POWER DOWN
TABLE 12-1**

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
REF	ELECTRICAL ASSEMBLY, 24V, POWER DOWN, 22' LG.	1	287890-04-24
1	CABLE ASSEMBLY, FLEXIBLE LOOP, 22' LG.	1	211141-03
2	CABLE ASSEMBLY, LOCK VALVE, 16/2, 65" LG.	1	282625-26
3	CABLE ASSEMBLY, LOCK VALVE, 16/2, 120" LG.	1	282625-27
4	CABLE ASSEMBLY, LOCK VALVE, 16/2, 56" LG.	1	282625-07
5	PLASTIC TIE, 8" LG.	20	905322-01
6	LIMIT SWITCH ASSEMBLY, GPSLR/RA	1	211165-01
7	J-BOX & MAIN SWITCH ASSEMBLY, 24V, POWER DOWN, 6' LG.	1	288660-02-24
8	PLATFORM STOW LIGHTS HARNESS	1	289363-01
9	EMERGENCY WARNING LIGHT, AMBER	2	907111-01
10	HEAT SHRINK TUBING, 4" LG.	4	268041-02
11	NYLON SPLIT LOOM, 1/4" X 78" LG.	1	907011-10
12	NYLON SPLIT LOOM, 1/4" X 36" LG.	2	907011-11

**RA ELECTRICAL ASSEMBLY, 24V POWER DOWN
TABLE 12-2**

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VEHICLE REQUIREMENTS

CAUTION

To prevent damage to Liftgate and trailer, install stops on the slide rails to keep the sliding axles from hitting Liftgate. Refer to Liftgate clearance dimensions in this section of the manual.

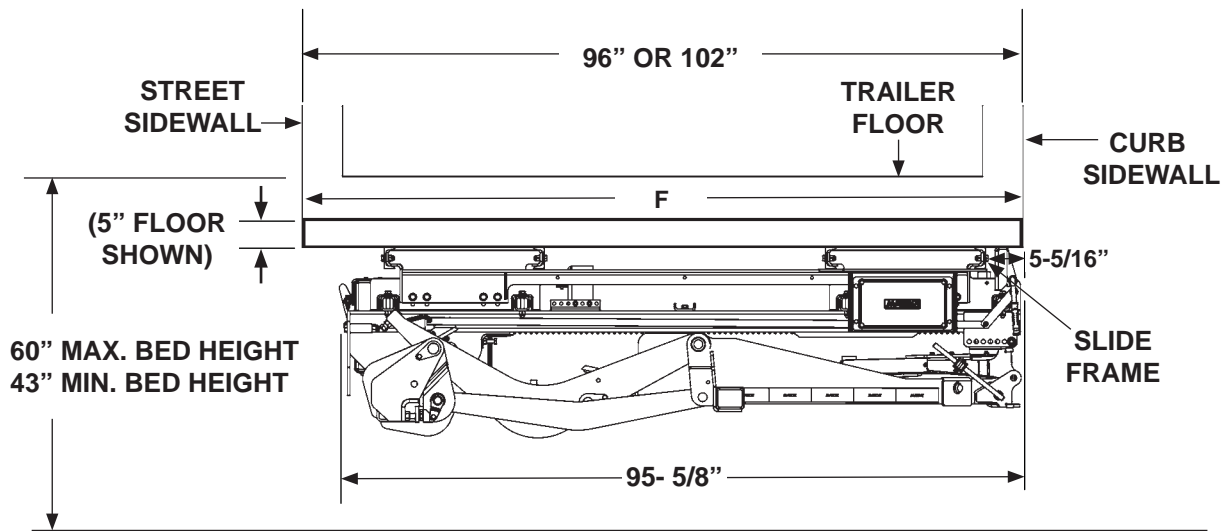
NOTE: BODY maximum and minimum operating bed height:
 Maximum height is **60"** (Unloaded). Minimum height is **43"** (Loaded).
 On vehicle bodies equipped with swing-open doors, the heel of platform may have to be notched to prevent interference from trailer.

NOTE: Make sure vehicle is parked on level ground while preparing vehicle and installing Liftgate.

NOTE: Dimensions are provided as reference for fitting Liftgate to vehicle body.

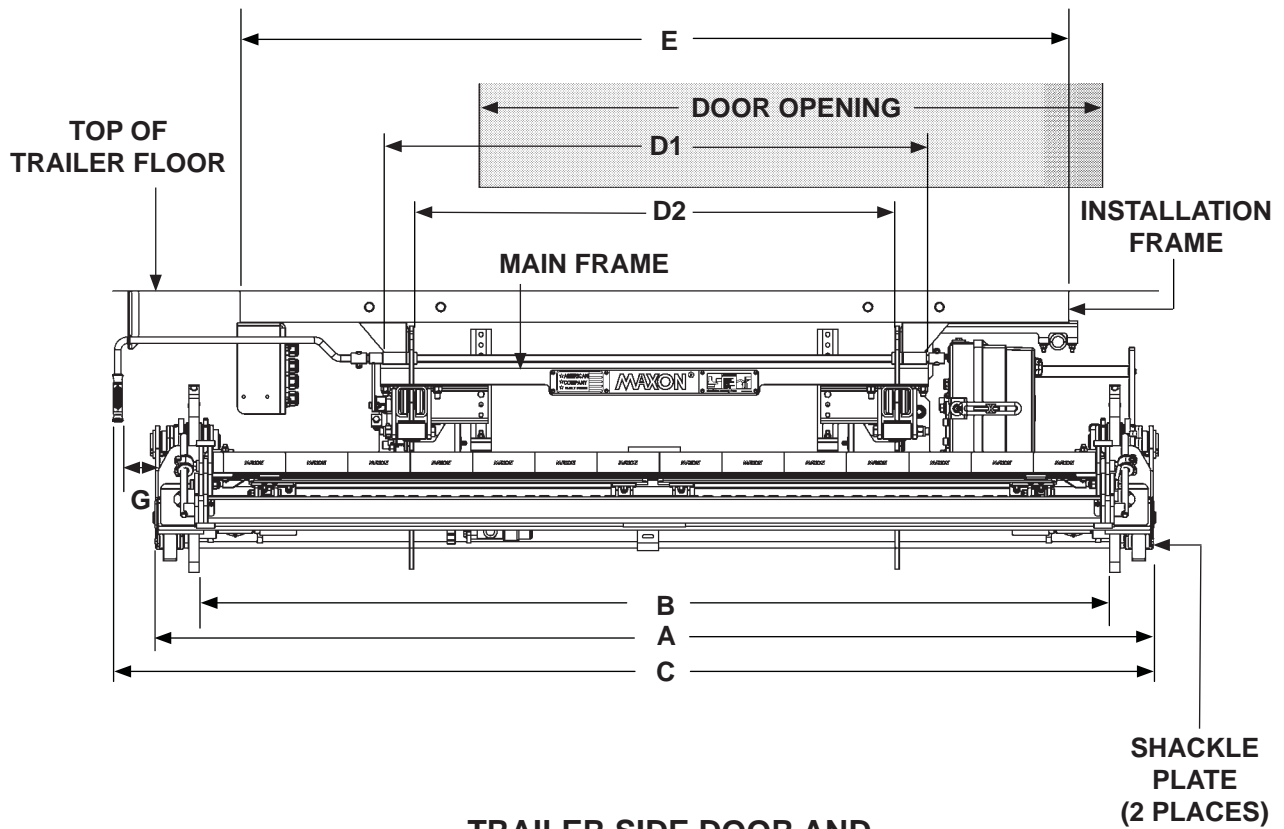
NOTE: Offset Liftgate 5-5/16" from the trailer curb side wall to the outer edge of the slide frame (**FIG. 14-1**).

Check for correct clearances (**FIGS. 14-1 and FIG. 15-1**) on vehicle to prevent interference between vehicle and Liftgate. Refer to **Table 15-1**.



SIDE VIEW OF LIFTGATE AS SEEN FROM REAR OF TRAILER
FIG. 14-1

VEHICLE REQUIREMENTS - Continued



TRAILER SIDE DOOR AND LIFTGATE IN STOWED POSITION (FRONT VIEW)
FIG. 15-1

A	B		C	D1	D2	E	F	G
LIFTGATE WIDTH (SLIDER WIDTH)	PF WIDTH	F/O WIDTH	OVER-ALL WIDTH	SLIDER FRAME WIDTH	SLIDER FRAME WIDTH	INSTALLATION FRAME WIDTH (FRONT)	INSTALLATION FRAME LENGTH	HANDLE CLEARANCE
96"	86"	85"	100"	47-1/8"	53-5/16"	71-13/16"	86-1/8"	4"
70"	60"	59"	73"	33-3/8"	39-1/2"	58"		3"
62"	52"	51"	69"	33-3/8"	33-3/8"	58"		7"

MOUNTING SPACE REQUIREMENTS
TABLE 15-1

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INSTALLATION PARAMETERS

Ensure correct installation parameters (**FIGS. 17-1, 17-2, 17-3 and 18-1**) on vehicle to prevent interference between vehicle and Liftgate. Refer to **Table 16-1**.

VEHICLE INFORMATION		INSTALLATION POSITION		GROUND CLEARANCE			ADJUST.	REF.
H	B/H	A	MOUNT HOLE	C1	C2	C3	G	H2
10-3/4"	60-49"	5-5/16"	1	25.7-14.7"	23.1-12.1"	27.4-16.4"	5/8"	28.3"
9-3/4"	60-48"		1	26.7-14.7"	24.1-12.1"	28.4-16.4"		27.3"
8-3/4"	60"		2	26.7"	24.5"	29.4"		27.3"
	59-47"		1	26.7-14.7"	24.1-12.1"	28.4-16.4"		26.3"
7-3/4"	59"		3	26.7"	24.5"	29.4"		27.3"
	60"		2					26.3"
	58-46"		1	26.7-14.7"	24.1-12.1"	28.4-16.4"		25.3"
6-3/4"	60"		4	26.7"	24.5"	29.4"		27.3"
	59"		3					26.3"
	58"		2					25.3"
	57-45"		1					26.7-14.7"
5-3/4"	60"		5	26.7"	24.5"	29.4"		27.3"
	59"		4					26.3"
	58"		3					25.3"
	57"		2					24.3"
	56-44"		1					26.7-14.7"
4-3/4"	59"		5	26.7"	24.5"	29.4"		26.3"
	58"		4					25.3"
	57"		3					24.3"
	56"		2					23.3"
	55-43"	1	26.7-14.7"				24.1-12.1"	28.4-16.4"

**INSTALLATION PARAMETERS
TABLE 16-1**

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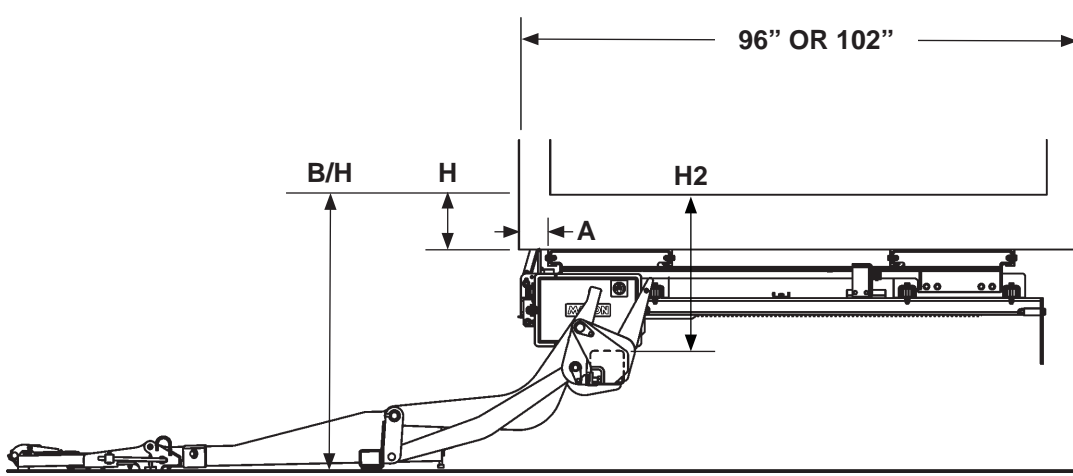


FIG. 17-1

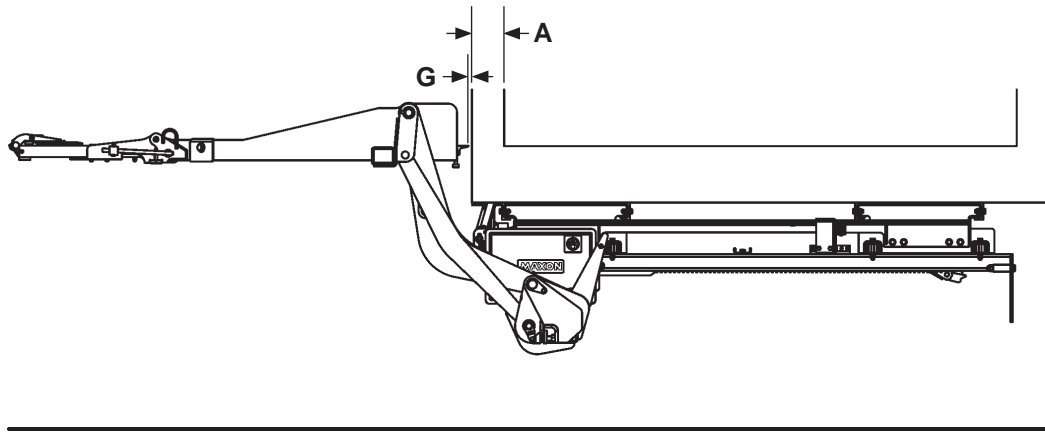


FIG. 17-2

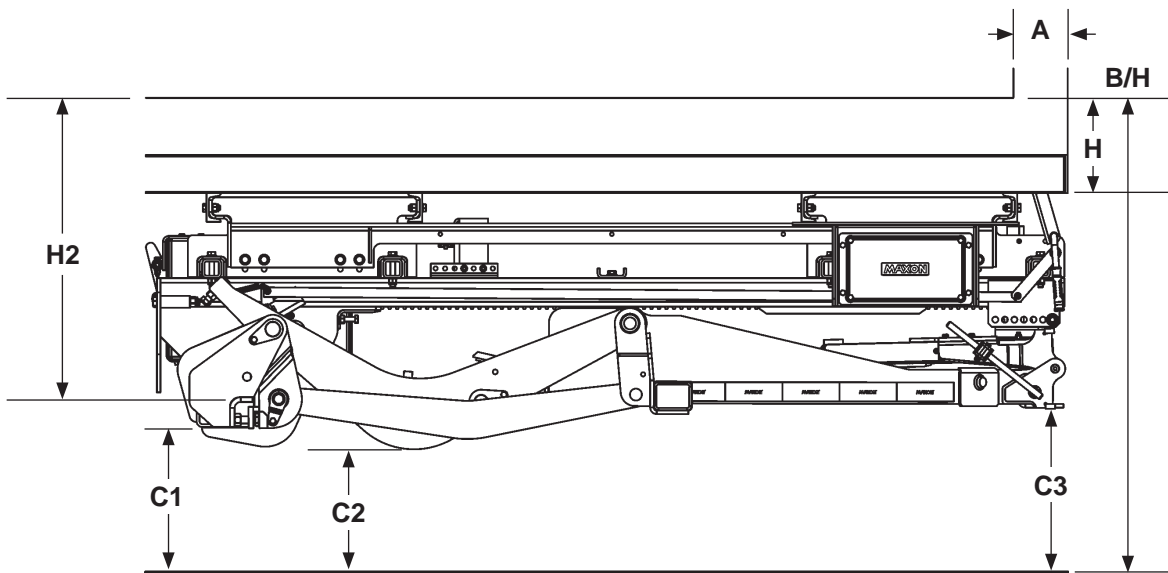
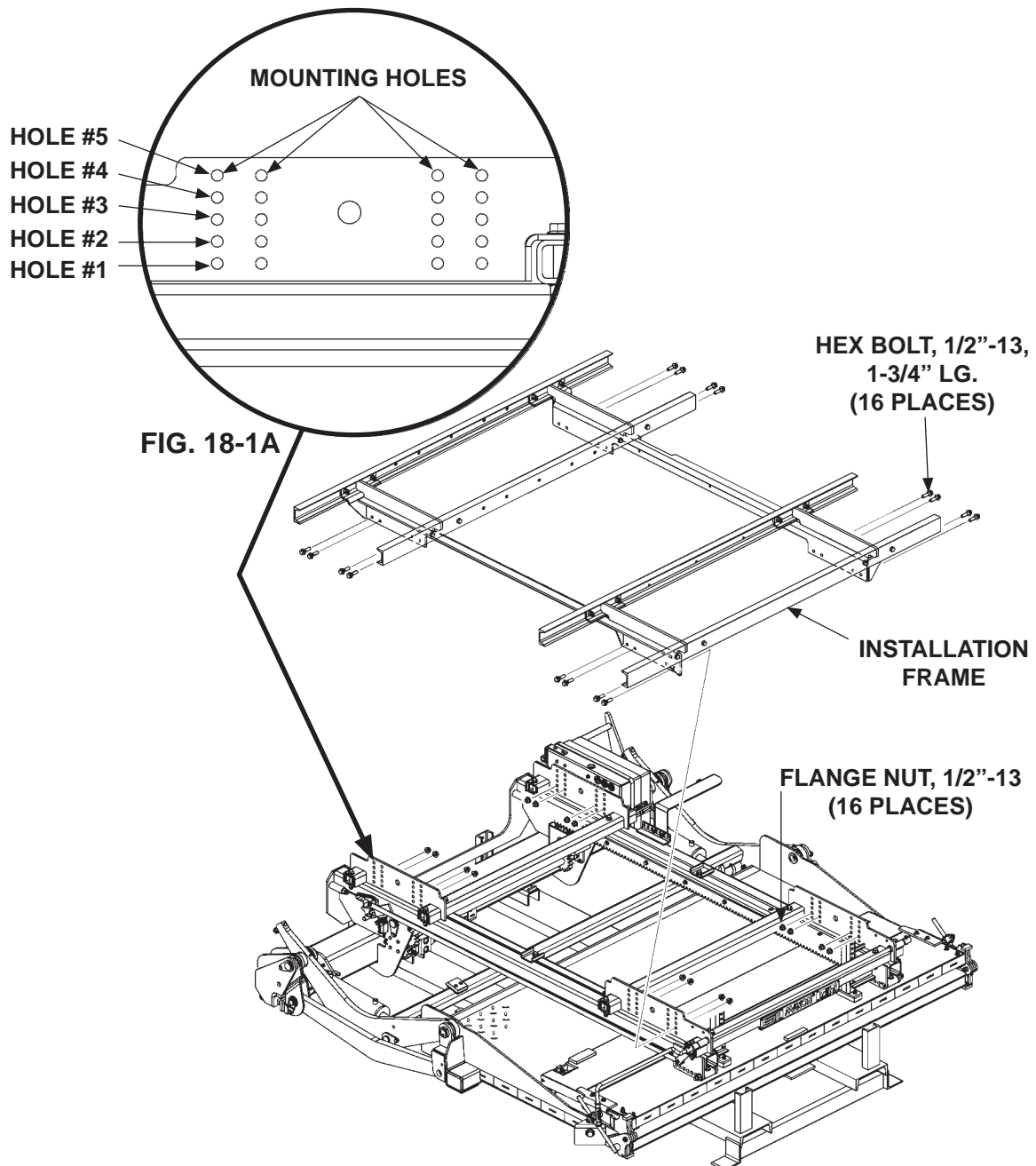


FIG. 17-3

STEP 1 - INITIAL BED HEIGHT ADJUSTMENT

NOTE: Installation frame (4 places) located on both sides of Liftgate.

1. Liftgate is shipped with installation mounting frame bolted in Hole #1 (**FIGS. 18-1 and 18-1A**). Measure and record trailer floor height ("**BH**"), and floor thickness ("**H**"). Refer to **Table 16-1**.
2. If installation frame needs to be repositioned on Liftgate (**FIGS. 18-1 and 18-1A**) use mounting holes shown in **Table 16-1**, according to dimensions recorded in **Instruction 1** for "**BH**" and "**H**". In this case, unbolt installation frame and reposition. Tighten mounting bolts to **100 lb-ft**.



STEP 2 - WELD LIFTGATE ON TRAILER

WARNING

Use weld blankets to protect lines and tubes from weld splatter.

WARNING

Welding on galvanized parts gives off especially hazardous fumes. To minimize hazard remove galvanizing from weld area, provide adequate ventilation, and wear suitable respirator.

CAUTION

To avoid personal injury, use at least 2 people to position Liftgate.

NOTE: For installation of this Liftgate, the maximum distance from bottom of trailer cross members to top of trailer floor is 10-3/4”.

NOTE: Liftgate must be welded to fixed trailer crossmembers.

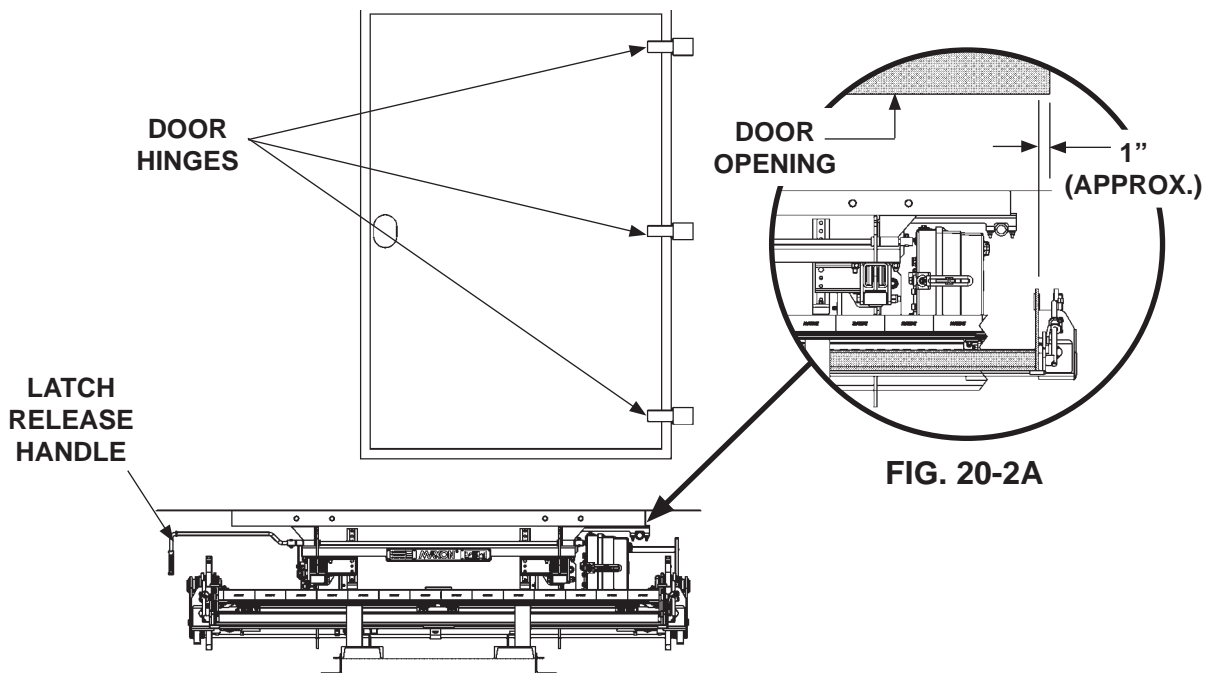
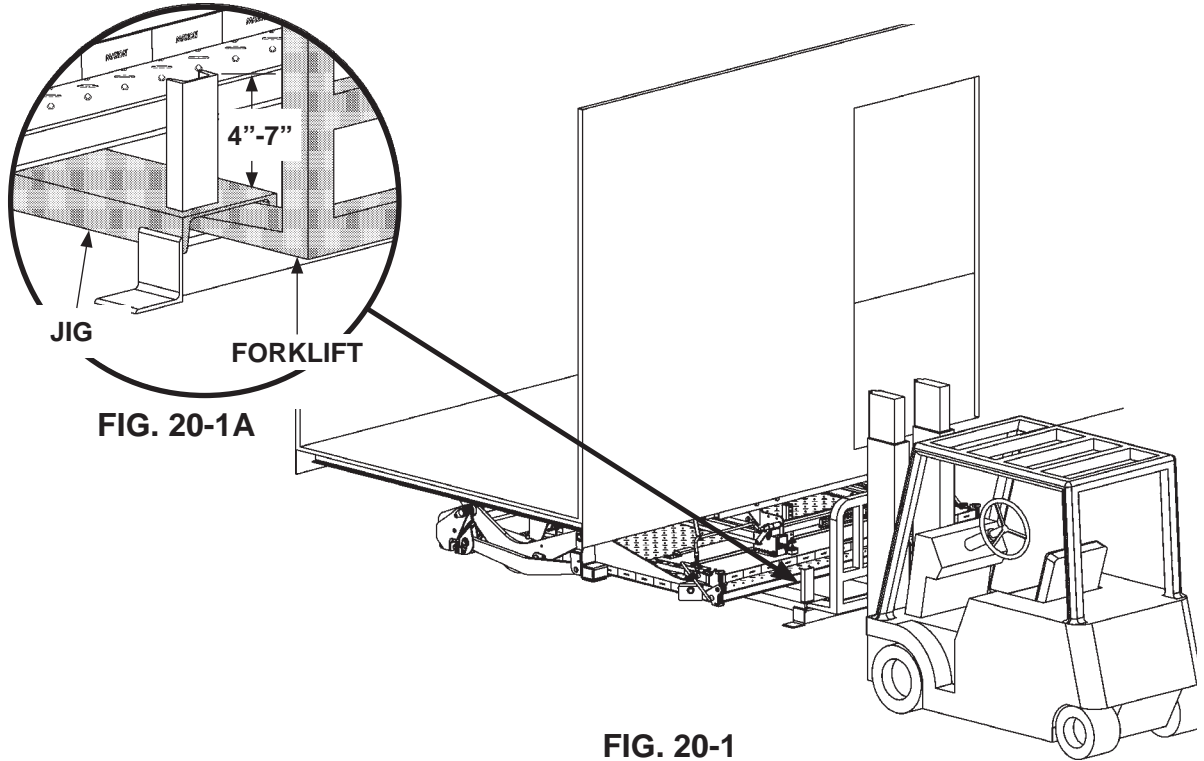
NOTE: An RA Liftgate installed on a refrigerated trailer may require additional crossmembers to secure liftgate to vehicle and handle the maximum load of cargo on the platform. Consult trailer manufacturer for best method and materials for adding floating crossmembers to the trailer chassis. Ensure the crossmembers do not interfere with insulation on the underbody.

NOTE: Ideal installation is for edge of platform to be positioned 1” inboard of door opening (**FIGS. 20-2 & 20-2A**).

NOTE: Standard location for switches, stow mechanism, latch release handle and platform latch is on the left side of the Liftgate.

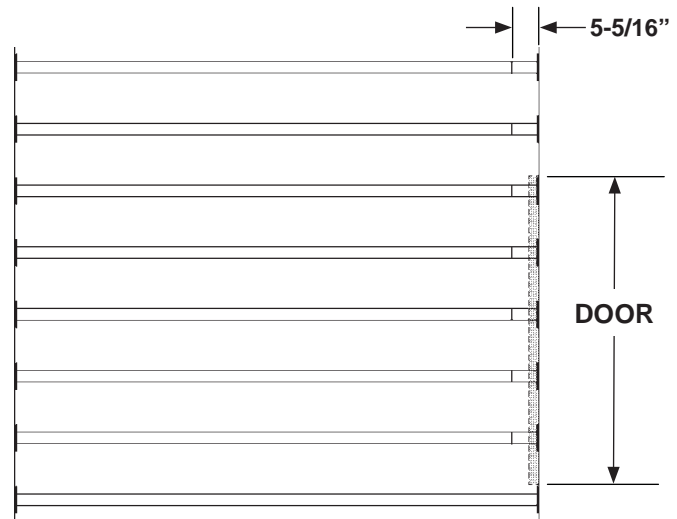
STEP 2 - WELD LIFTGATE ON TRAILER - Continued

1. With forklift, position the Liftgate perpendicular to the side of trailer (**FIGS. 20-1 & 20-1A**), with latch release handle opposite of door hinges (**FIGS. 20-2 & 20-2A**).



STEP 2 - WELD LIFTGATE ON TRAILER - Continued

- To correctly position the Liftgate, measure and mark a 5-5/16" line on the flange of the crossmembers as shown in **FIG. 21-1**.



MARK LIFTGATE MOUNTING POSITION ON TRAILER CROSSMEMBERS (TRAILER BOTTOM VIEW SHOWN)

FIG. 21-1

- Position Liftgate to trailer by butting the installation frame against the bottom of trailer cross members as shown in **FIGS. 21-2 and 21-2A**.

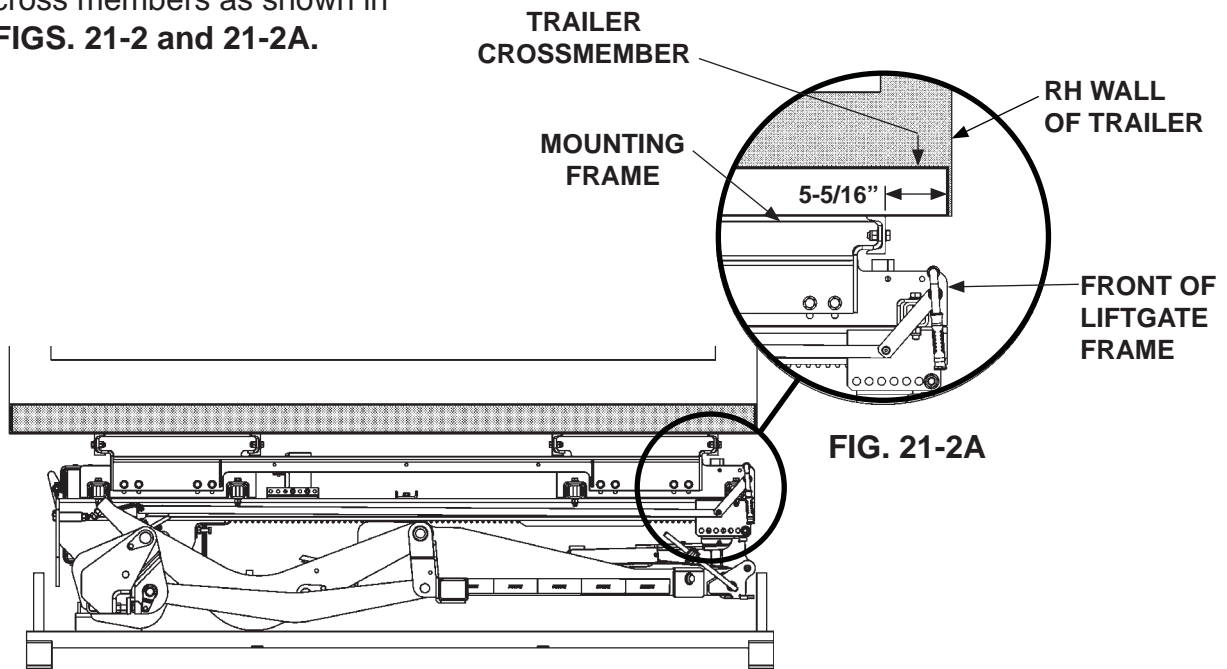


FIG. 21-2A

SIDE VIEW OF LIFTGATE AS SEEN FROM REAR OF TRAILER

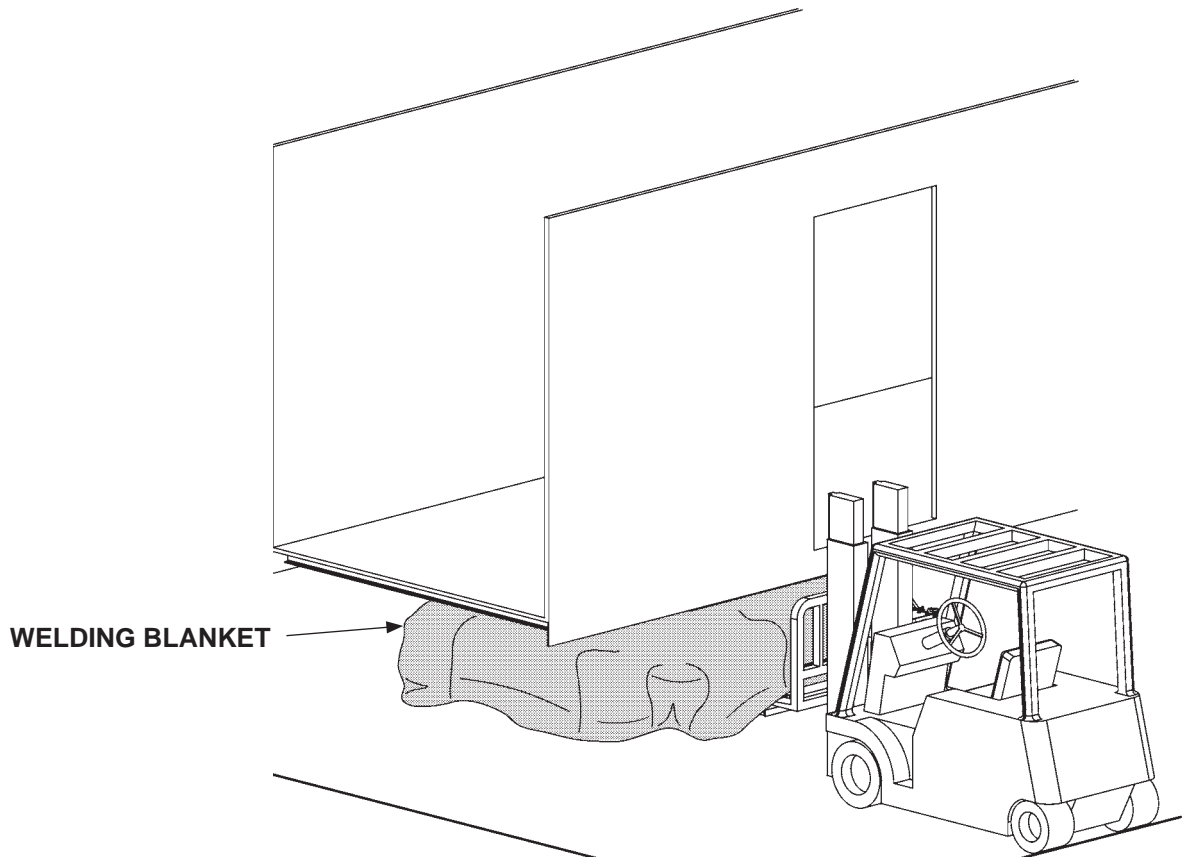
FIG. 21-2

STEP 2 - WELD LIFTGATE ON TRAILER - Continued

CAUTION

Prevent damage to switches and harness by using a protective cover such as a welding blanket to cover switches and harness.

4. Cover Liftgate with welding blanket (**FIG. 22-1**).



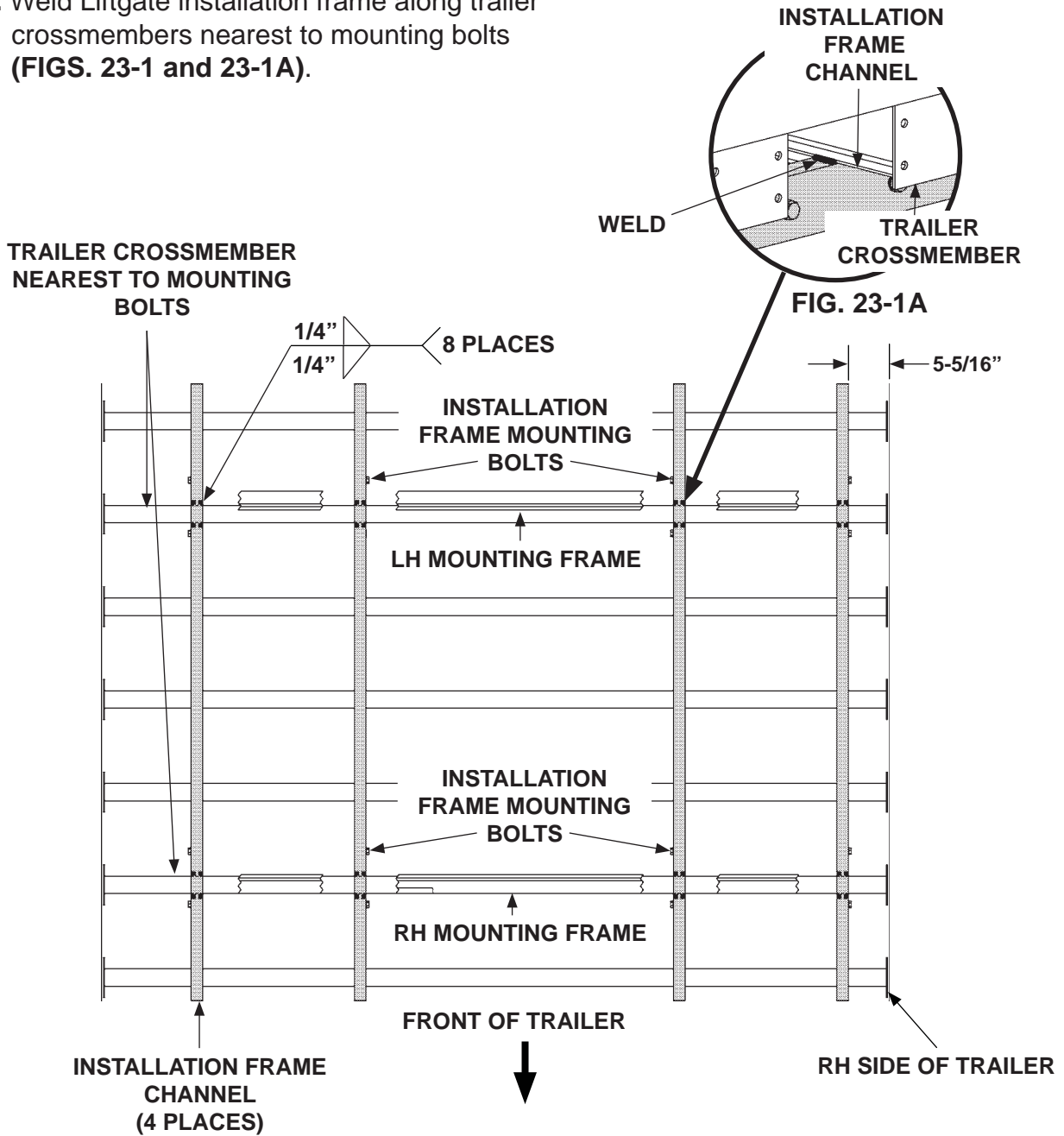
COVERING LIFTGATE WITH WEDLING BLANKET
FIG. 22-1

STEP 2 - WELD LIFTGATE ON TRAILER - Continued

NOTE: For preferred welding method, refer to instruction 5. For alternate welding method, refer to instruction 6. If preferred welding method is not possible, do the alternate method.

PREFERRED WELDING METHOD

5. Weld Liftgate installation frame along trailer crossmembers nearest to mounting bolts (FIGS. 23-1 and 23-1A).



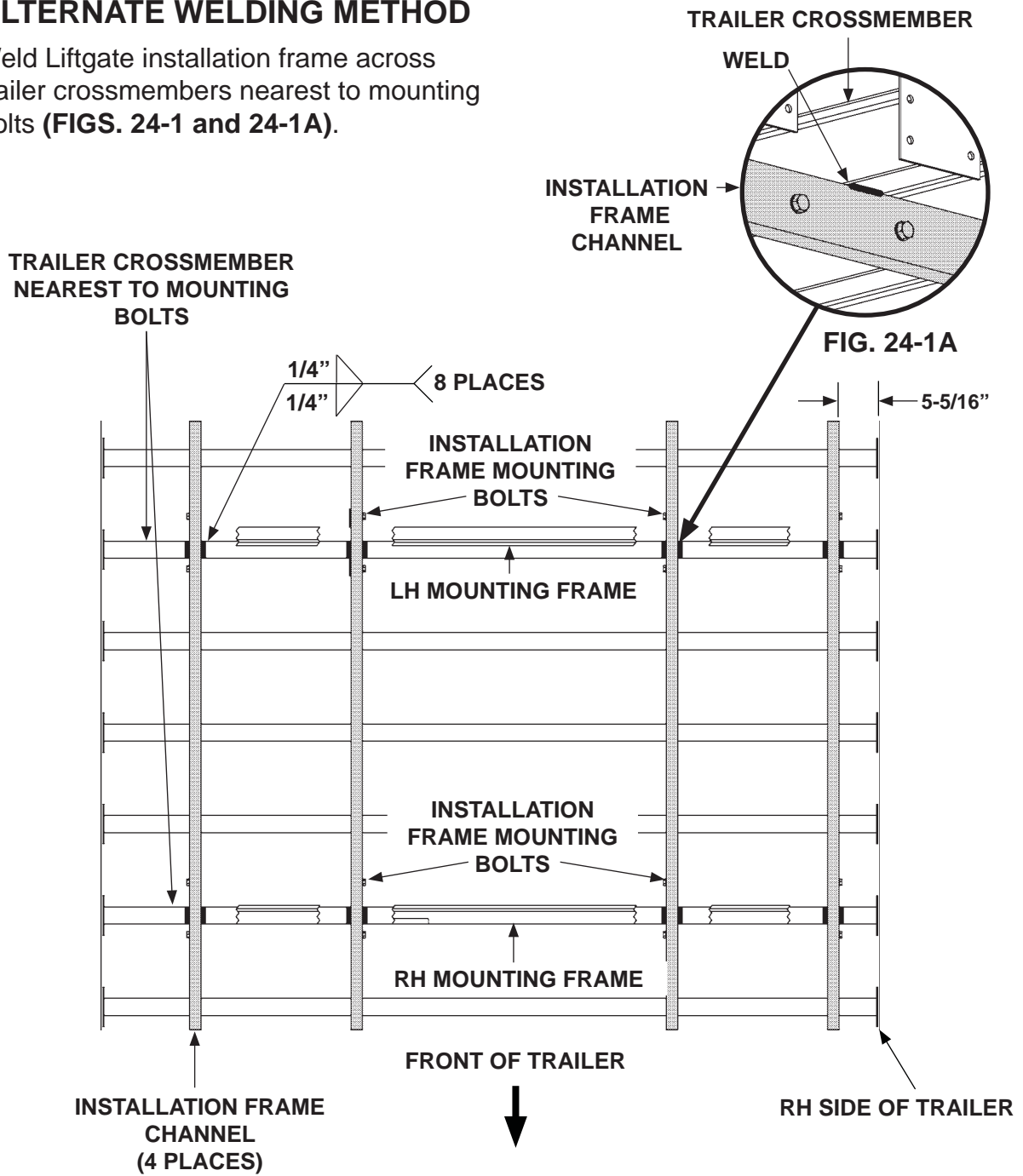
BOTTOM VIEW OF TRAILER WITH LIFTGATE INSTALLATION FRAME POSITIONED ON CROSSMEMBERS (SLIDE ASSEMBLY AND PARTS OF LIFTGATE NOT SHOWN)

FIG. 23-1

STEP 2 - WELD LIFTGATE ON TRAILER - Continued

ALTERNATE WELDING METHOD

6. Weld Liftgate installation frame across trailer crossmembers nearest to mounting bolts (FIGS. 24-1 and 24-1A).

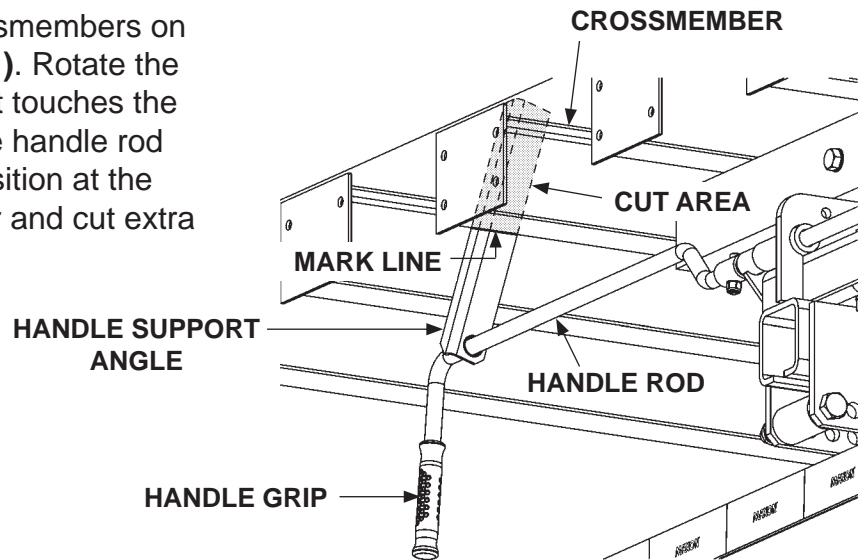


BOTTOM VIEW OF TRAILER WITH LIFTGATE INSTALLATION FRAME POSITIONED ON CROSSMEMBERS (SLIDE ASSEMBLY AND PARTS OF LIFTGATE NOT SHOWN) FIG. 24-1

STEP 2 - WELD LIFTGATE ON TRAILER - Continued

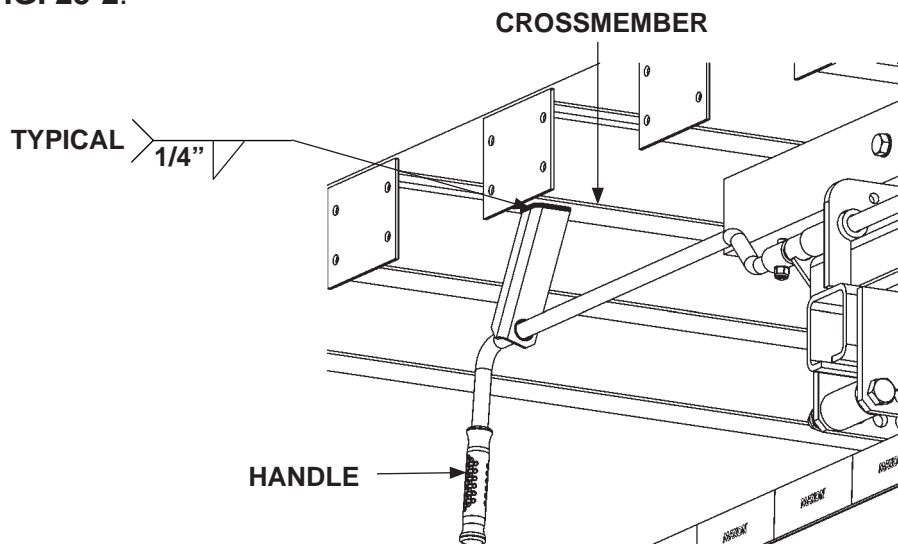
NOTE: If handle support angle is longer than the space between handle rod and bottom of crossmember, the excess length should be cut off before welding support angle to crossmember.

7. Ensure handle rod is parallel to the bottom surface of vehicle crossmembers on the side of trailer (**FIG. 25-1**). Rotate the handle support angle until it touches the crossmember closest to the handle rod (**FIG. 25-1**). Mark angle position at the bottom of the crossmember and cut extra length of angle (**FIG. 25-1**).



ATTACHING LATCH RELEASE HANDLE SUPPORT ANGLE
FIG. 25-1

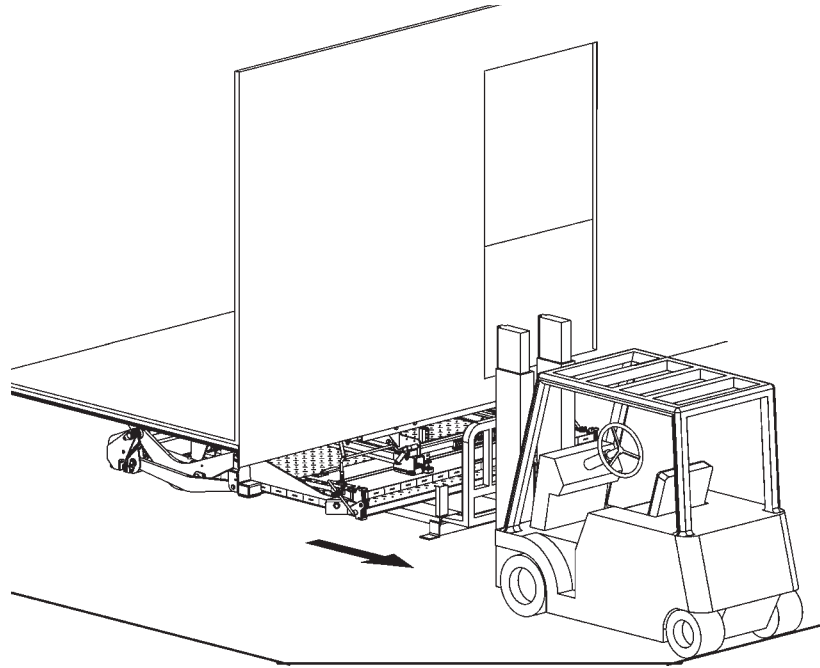
8. Weld handle support angle to crossmember as shown in **FIG. 25-2**.



WELDING SUPPORT ANGLE FOR
LATCH RELEASE HANDLE
FIG. 25-2

STEP 2 - WELD LIFTGATE ON TRAILER - Continued

9. Remove jig from Liftgate (FIG. 26-1).



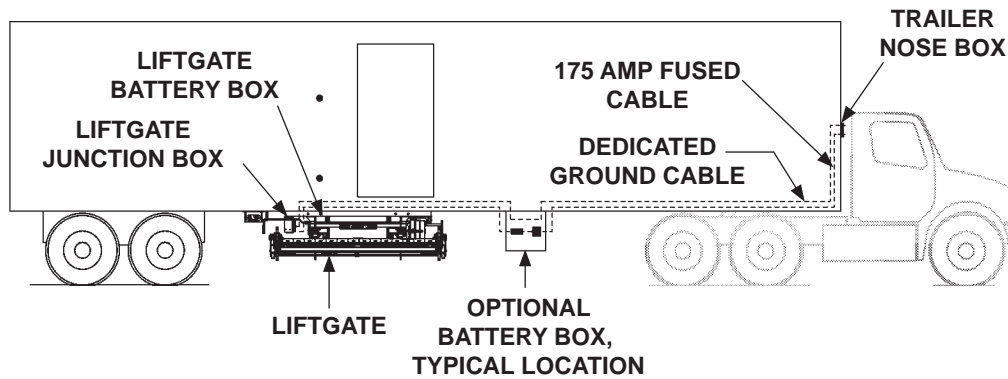
REMOVING JIG
FIG. 26-1

STEP 3 - ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED)

RECOMMENDED CONFIGURATION

NOTE: Make sure the Liftgate power unit, and all batteries on the vehicle for the power unit, are connected correctly to a common chassis ground.

1. Liftgate powered from remote mounted battery box is typically installed as shown in **FIG. 27-1**. Optional battery box installation and battery connection instructions are included in the battery box kit.



**RECOMMENDED LIFTGATE & OPTIONAL BATTERY BOX
INSTALLATION ON TRAILER
FIG. 27-1**

STEP 3 - ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

⚠ WARNING

Recommended practices for welding on steel parts are contained in the current AWS (American Welding Society) D1.1 Structural Welding Code - Steel. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

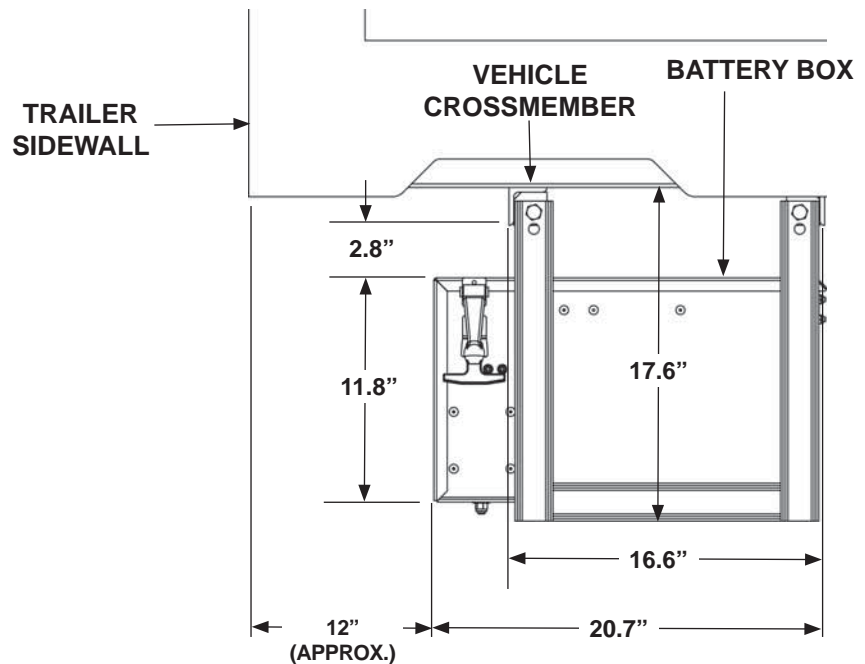
CAUTION

To prevent pump box components from being damaged by electric current from welding, connect welder grounding cable to the part being welded.

CAUTION

Cover pump box with flame-resistant covering before welding battery box frame to vehicle.

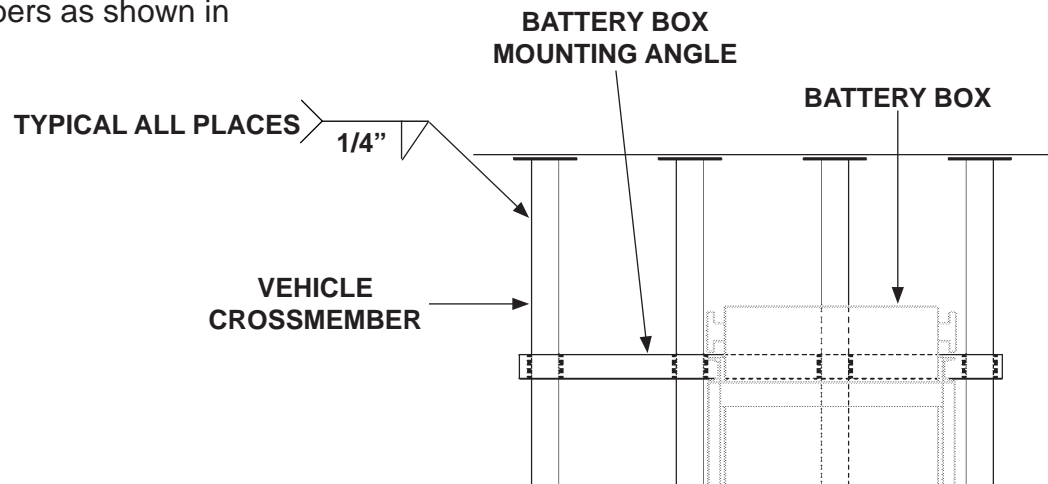
2. Measure and mark position for mounting remote battery box to vehicle crossmembers. Refer to **FIG. 28-1** for clearance dimensions.



CLEARANCE DIMENSIONS FOR REMOTELY MOUNTED BATTERY BOX
FIG. 28-1

STEP 3 - ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

3. Weld battery box along vehicle crossmembers as shown in FIG. 29-1.



**WELDING BATTERY BOX TO VEHICLE
CROSS MEMBERS
(2-BATTERY BOX SHOWN)
FIG. 29-1**

STEP 4 - WELD JUNCTION BOX TO INSTALLATION FRAME

1. For 60" or 72" wide platforms, weld junction box outside of Liftgate installation frame to vehicle crossmember (FIGS. 30-1 and 30-1A).

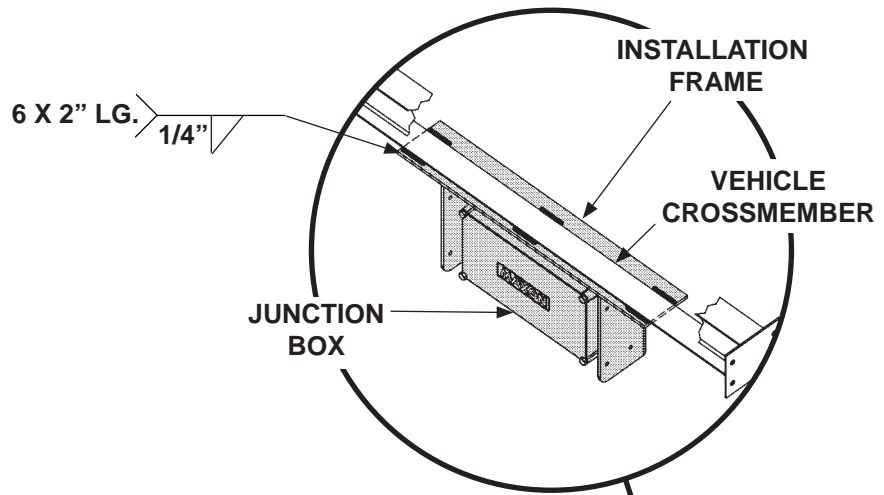
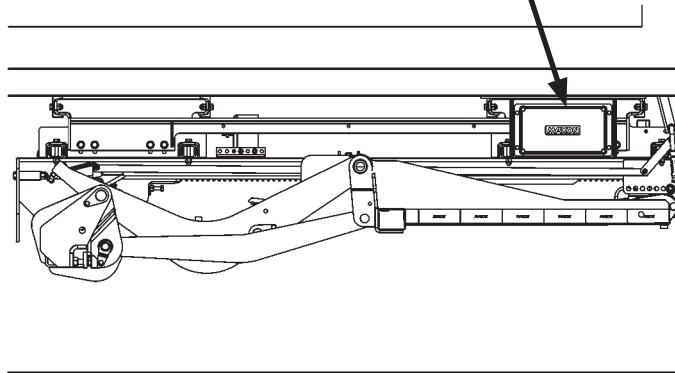


FIG. 30-1A

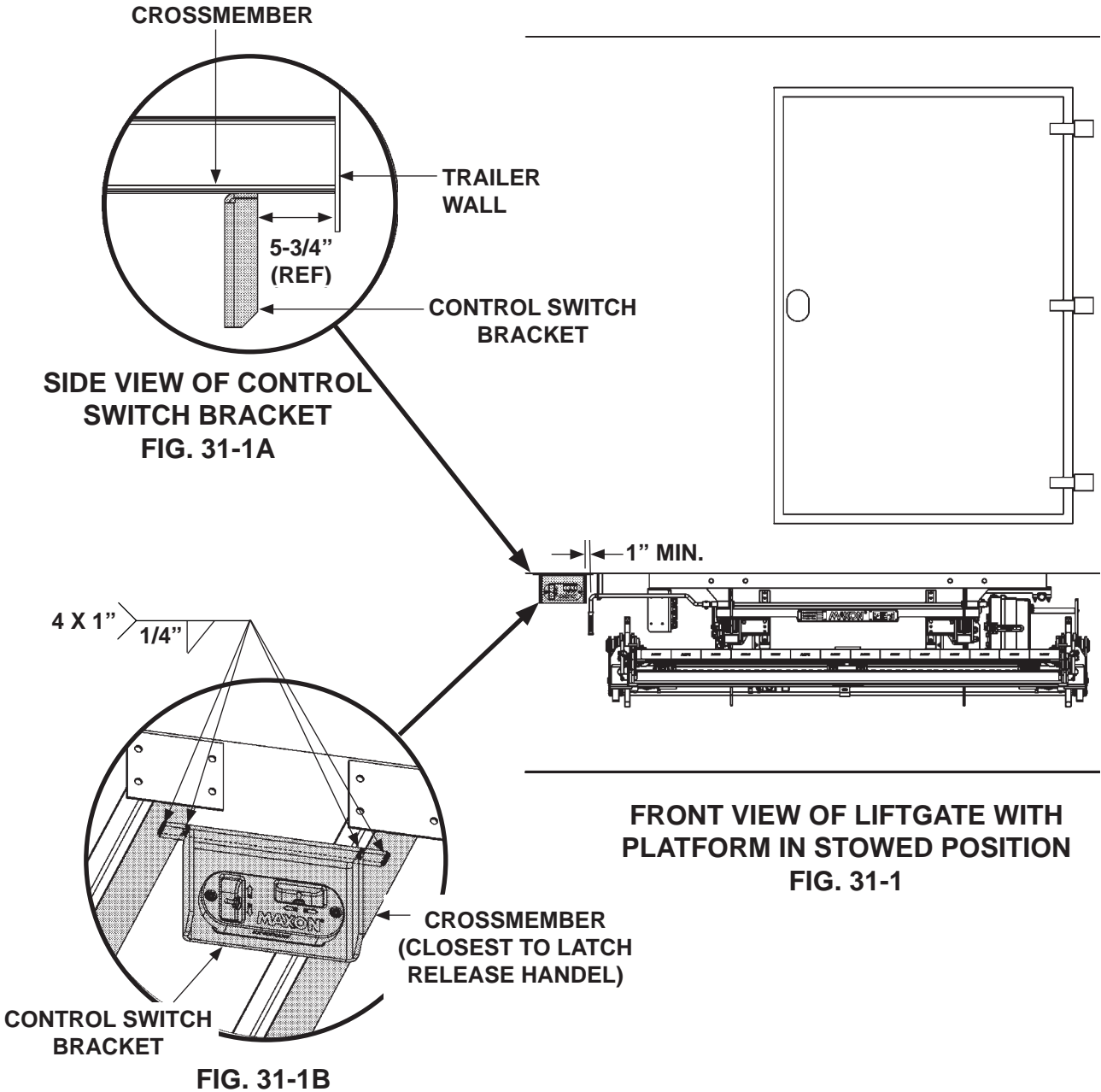


SIDE VIEW OF LIFTGATE WITH PLATFORM IN STOWED POSITION
(LIFTGATE WITH 60" or 72" WIDE PLATFORM SHOWN)

FIG. 30-1

STEP 5 - WELD CONTROL SWITCH BRACKET TO TRAILER CROSSMEMBERS

1. Weld control switch bracket (Kit item) to crossmembers (FIGS. 31-1, 31-1A, and 31-1B).

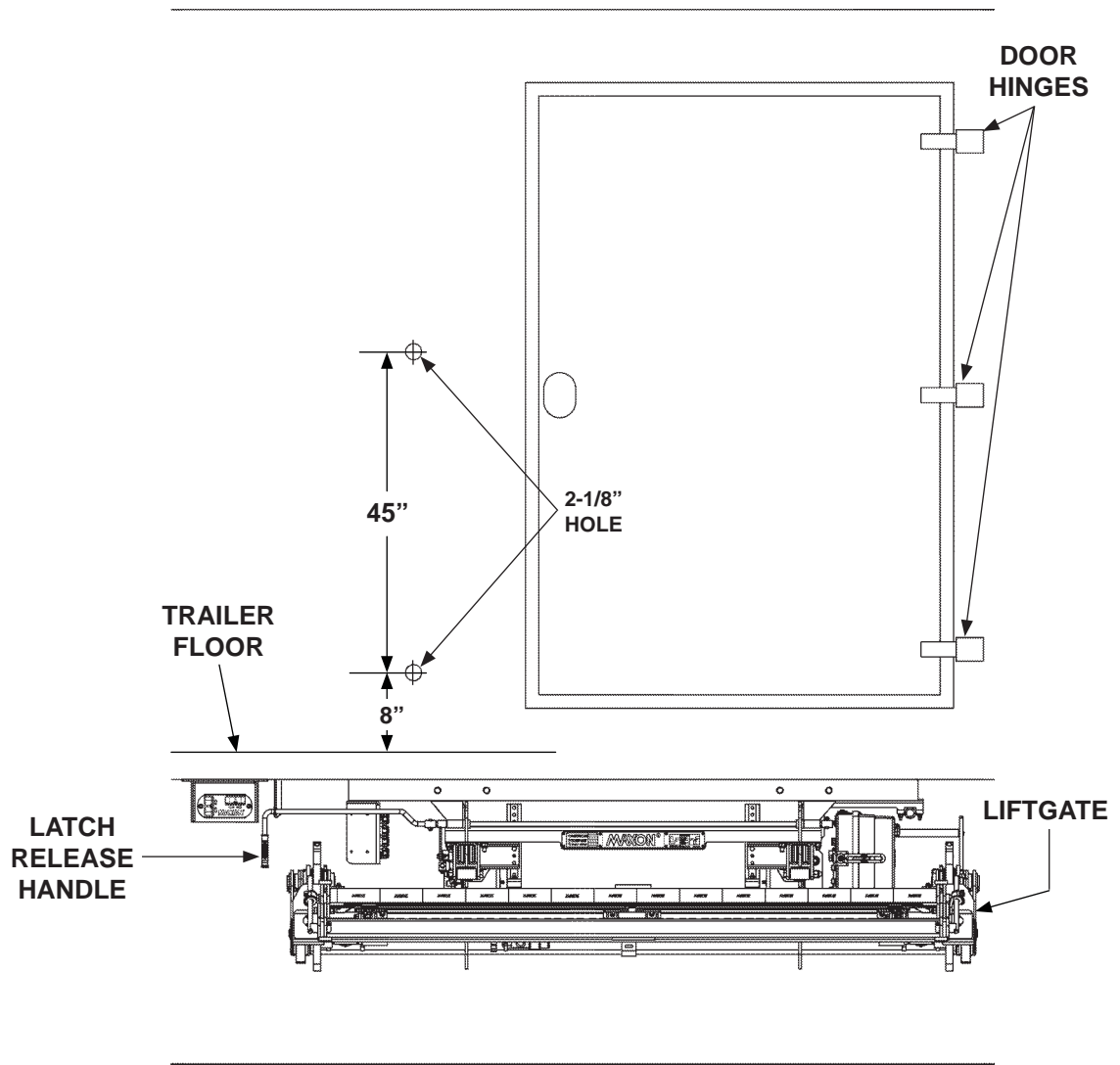


STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER

NOTE: Wall switches, control switches, latch release handle, latch and proximity sensor may be located on either side of the Liftgate during installation, depending on location of trailer door hinges. Components can be located on LH side of Liftgate as shown in **FIG. 32-1**, or repositioned to the RH side of side door.

NOTE: Mount control switches on outside wall opposite hinges and on same side as latch release handle.

1. Measure, mark, and drill 2-1/8" hole, in 2 places, on the trailer side wall near door opening, as shown in **FIG. 32-1**.

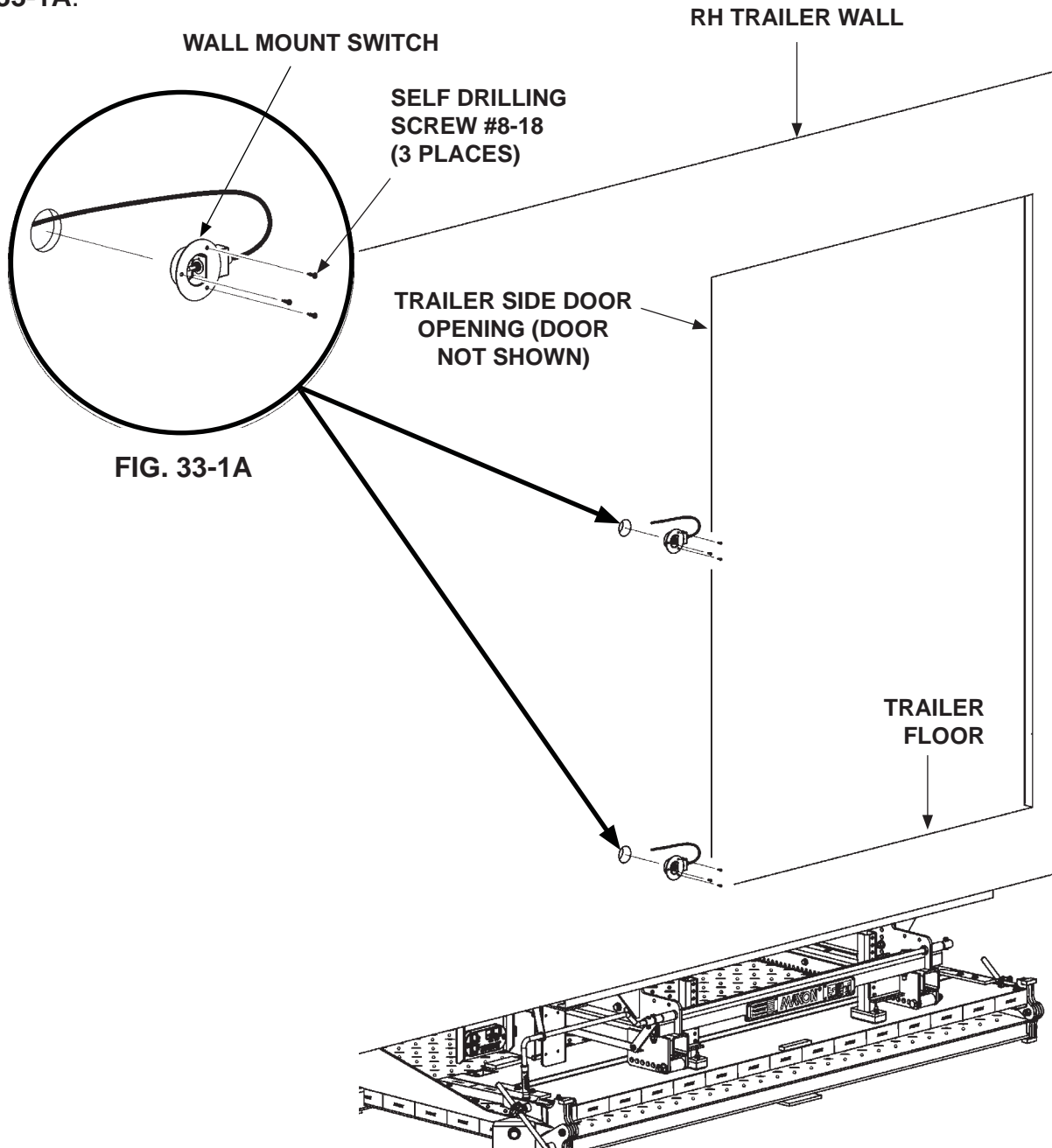


**MARKING AND DRILLING HOLES FOR
WALL-MOUNTED SWITCHES
(LH SWITCH MOUNTING SHOWN)**

FIG. 32-1

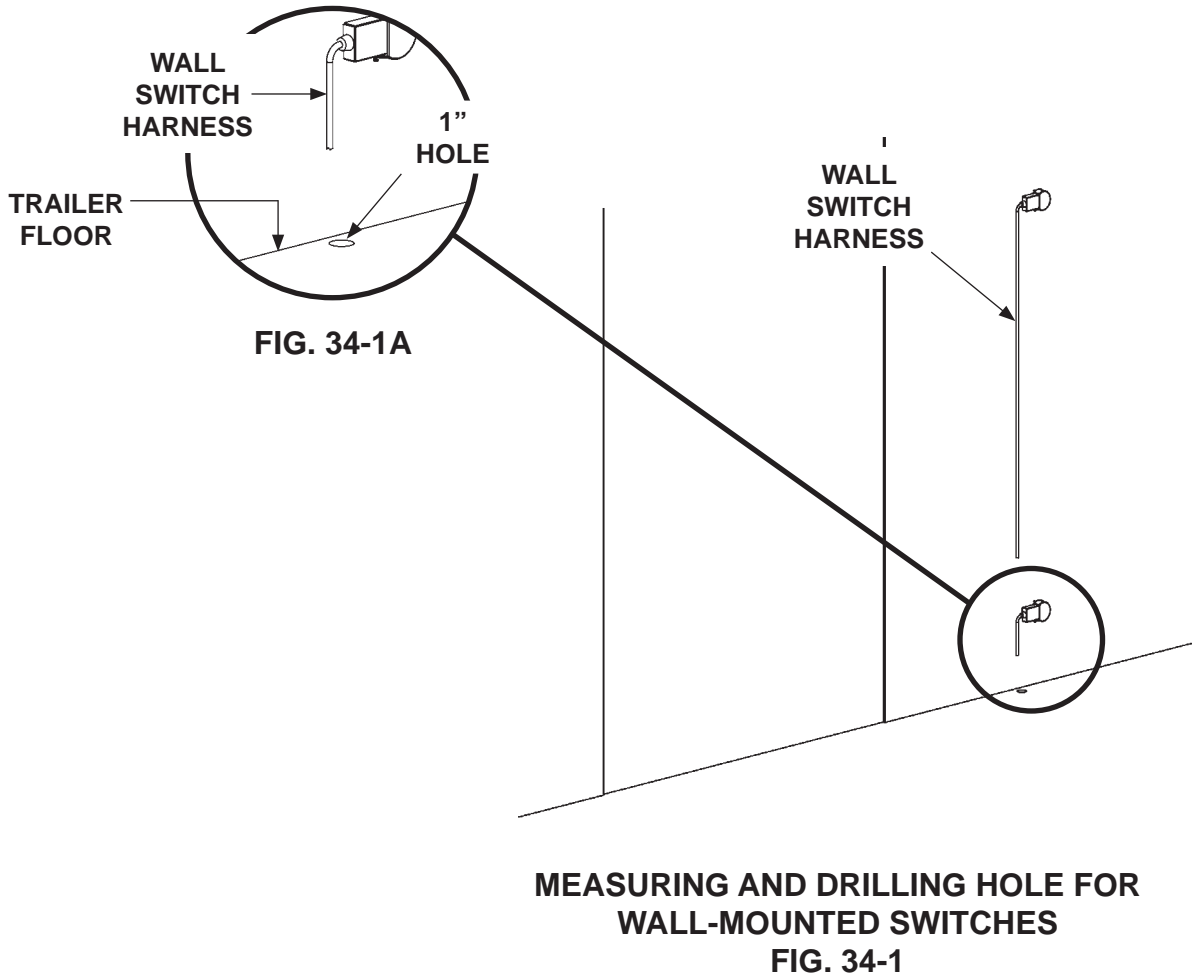
STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER - Continued

2. Route wall switch harnesses through holes, and fasten wall switches to trailer wall with self drilling screws (Kit items), as shown in **FIGS. 33-1 and 33-1A**.



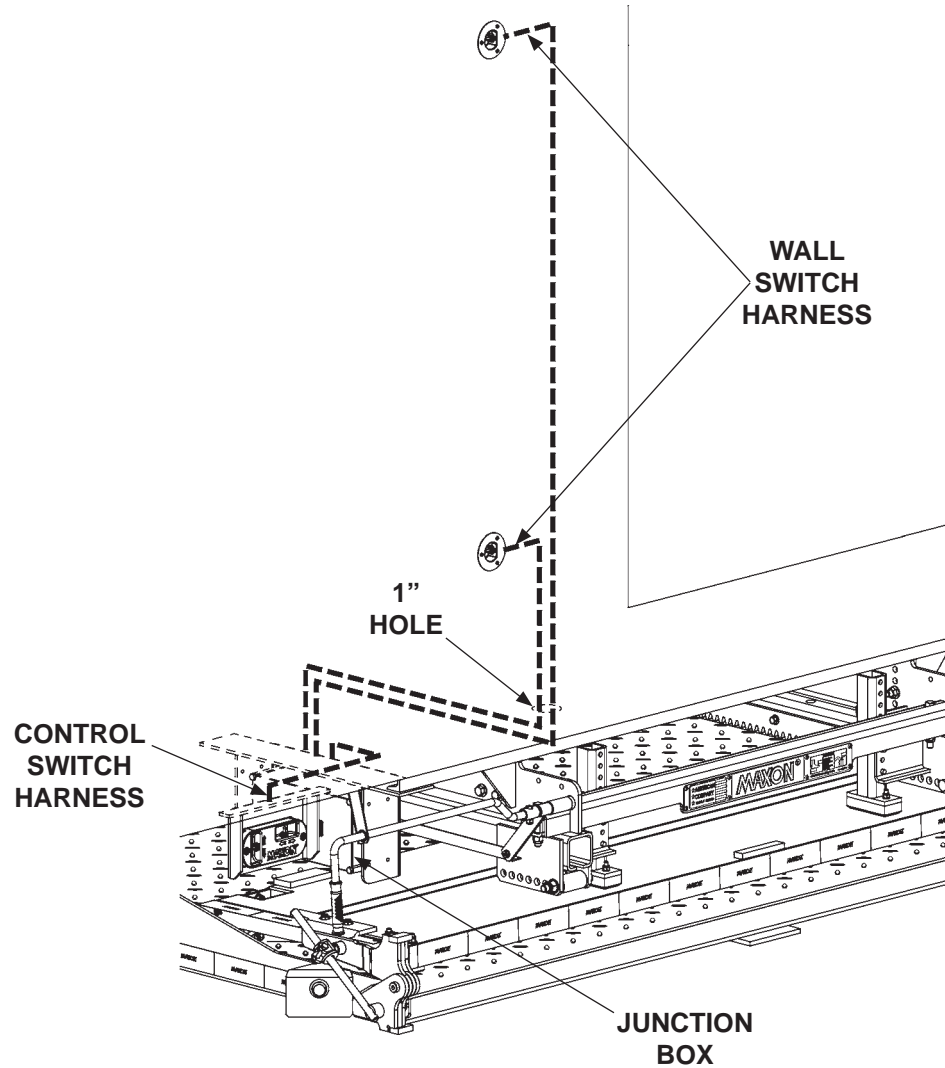
STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER - Continued

3. Mark and drill 1" hole through vehicle floor as shown in **FIGS. 34-1 and 34-1A**. Ensure hole does not interfere with vehicle crossmembers.



STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER - Continued

4. Route wall switch harnesses through hole as shown in FIG. 35-1.

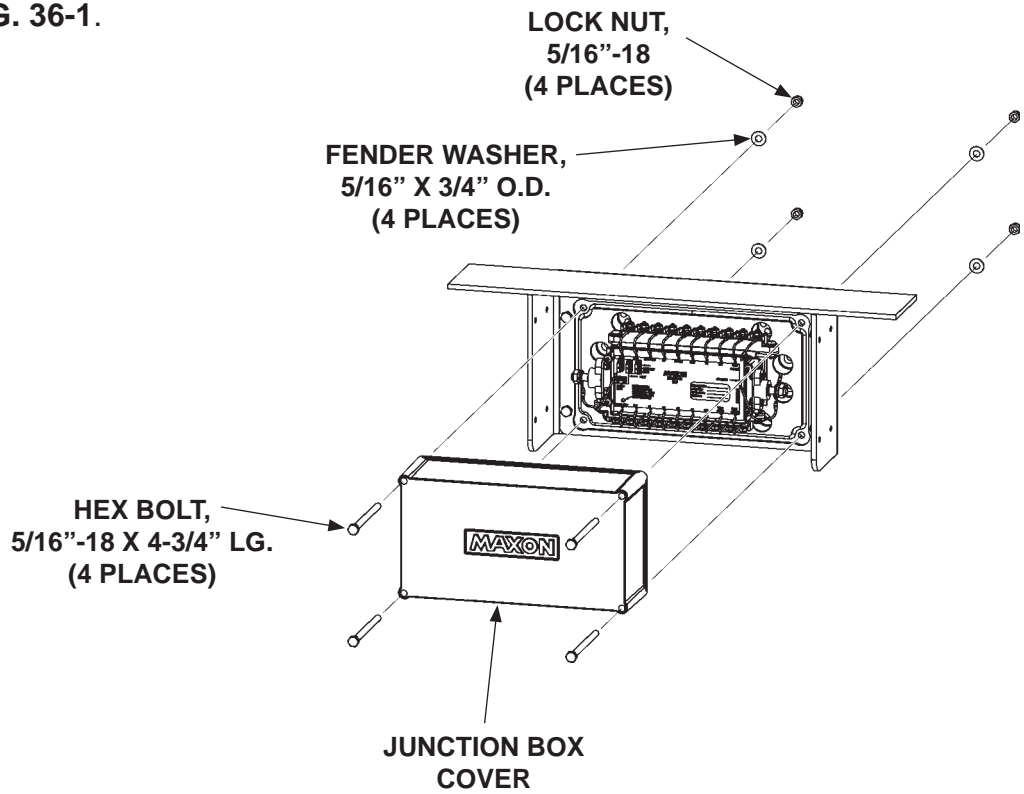


**CONTROL SWITCH & WALL SWITCH HARNESSES ROUTING
FIG. 35-1**

5. Route control switch harness and wall switch harnesses to liftgate-mounted junction box (FIG. 35-1).

STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER - Continued

6. Remove junction box cover as shown in **FIG. 36-1**.



REMOVING JUNCTION BOX COVER
FIG. 36-1

STEP 6 - ATTACH CONTROL SWITCHES TO TRAILER - Continued

NOTE: After assembly, MAXON recommends to seal all connections with NCP-2 corrosion preventive sealer from NOCO or equivalent.

- Knock out two plastic plugs from the cable gland as shown in **FIG. 37-1A**. Next, connect wall switches (Kit items) to junction box as shown in **FIGS. 37-1 and 37-1B**.

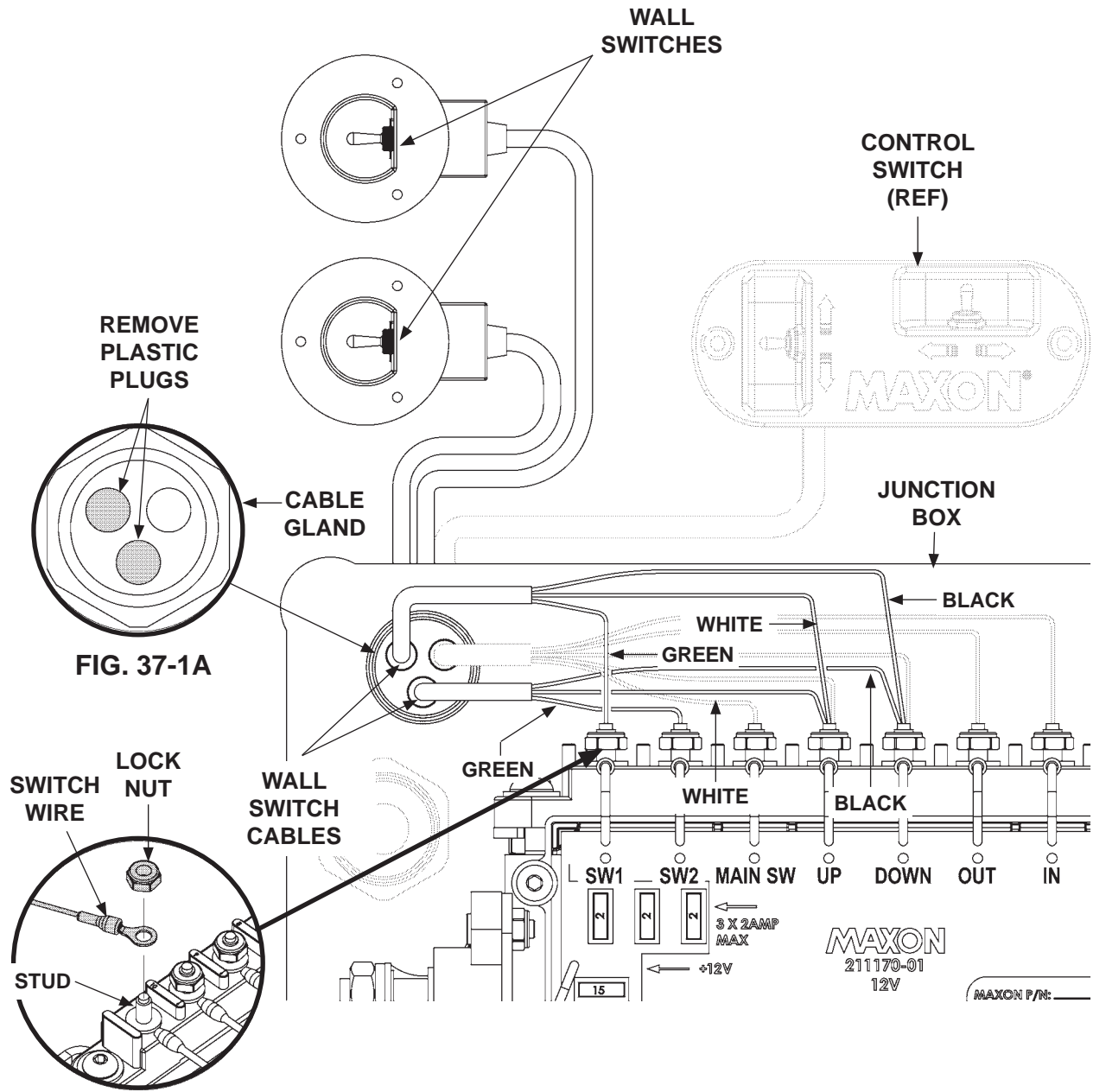


FIG. 37-1A

FIG. 37-1B

**WALL SWITCH HARNESS CONNECTIONS AT JUNCTION BOX
FIG. 37-1**

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

STEP 7 - RUN POWER CABLE

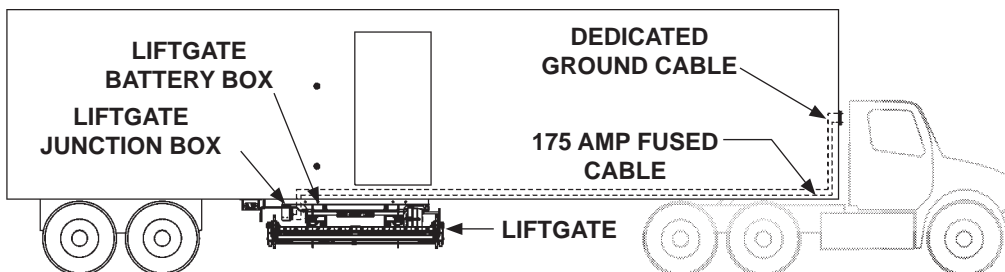
⚠ CAUTION

Never route an energized wire. Make sure the vehicle battery is disconnected. Always route electrical wires clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in wiring. Attach securely. If drilling is necessary, first check behind the drilling surface so you do not damage any fuel lines, vent lines, brake lines or wires.

NOTE: Make sure the Liftgate power unit, and all batteries on the vehicle for the power unit, are connected correctly to a common chassis ground.

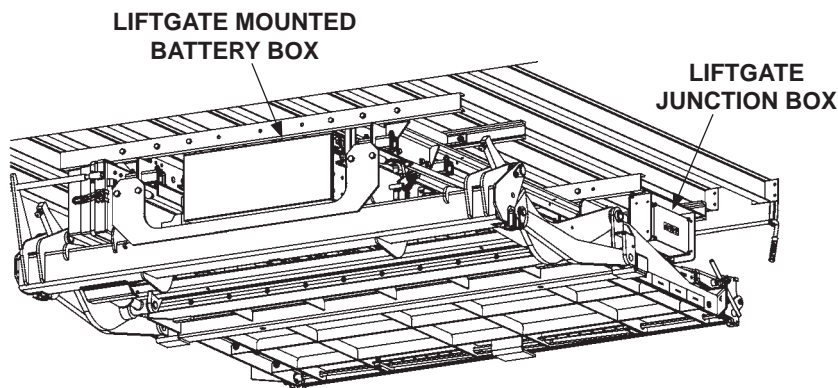
RECOMMENDED CONFIGURATION

1. Liftgate powered from Liftgate mounted battery box is typically installed on units with 86" platforms as shown in **FIGS. 38-1 and 38-2**. In this configuration, the junction box, main control switch and power harness from the Liftgate frame mounted battery box are fully connected from the factory.



RUNNING POWER AND GROUND CABLES FROM LIFTGATE MOUNTED BATTERY BOX (86" PLATFORM ONLY)

FIG. 38-1

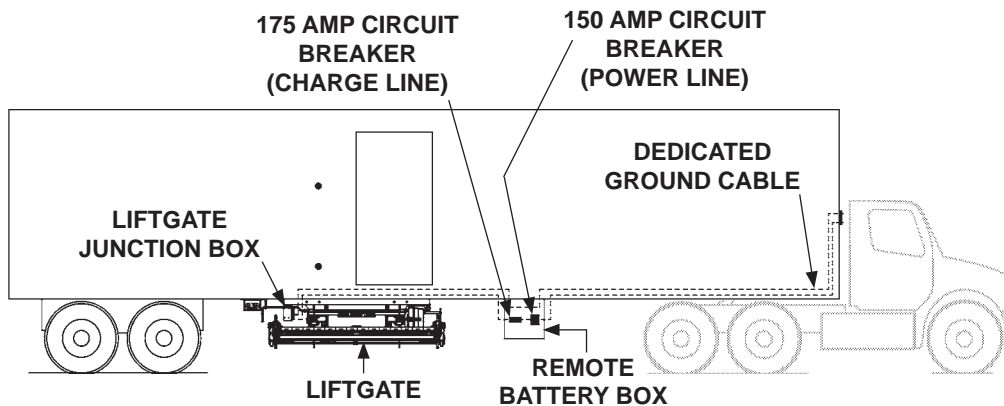


RUNNING POWER AND GROUND CABLES FROM LIFTGATE MOUNTED BATTERY BOX - REAR VIEW (86" PLATFORM ONLY)

FIG. 38-2

STEP 7 - RUN POWER CABLE - Continued

2. Position fuse end of red (+) cable with fuse to connector on trailer nose box, as shown in **FIG. 39-1**. Run black (-) cable from Liftgate battery box, to trailer nose box connector as shown in **FIG. 39-1**. Keep enough cable near battery box to reach the positive (+) and (-) trailer nose box connector without straining cables (after connection). Secure power cable to trailer chassis.
3. Liftgate powered from remote mounted battery box is typically installed as shown in **FIG. 39-1**. Keep enough cable near battery box to reach the positive (+) and (-) trailer nose box connector without straining cables (after connection). Connect cables from remote battery to junction box. Secure power cable to trailer chassis.

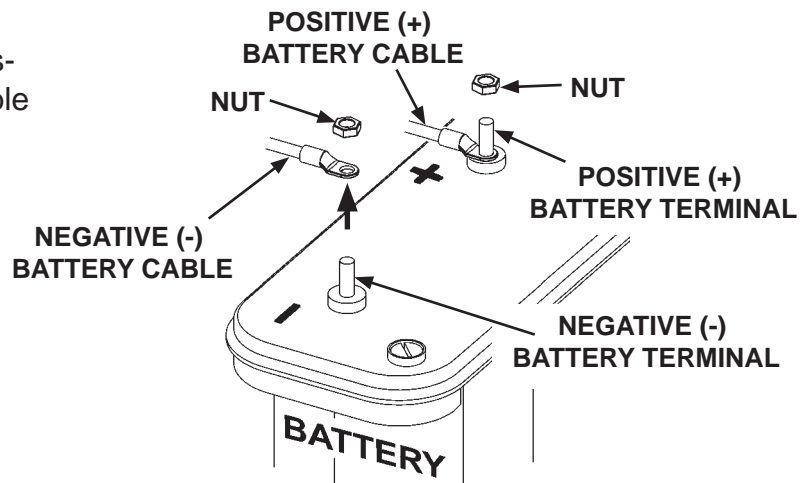


RUNNING POWER AND GROUND CABLES FROM REMOTE MOUNTED BATTERY BOX
FIG. 39-1

4. Position fuse-end of red (+) cable with fuse to connector on trailer nose box, as shown in **FIG. 39-1**. Run black (-) cable from Liftgate battery box, to trailer nose box connector as shown in **FIG. 39-1**. Keep enough cable near battery box to reach the positive (+) and (-) trailer nose box connector without straining cables (after connection). Secure power cable to trailer chassis.

STEP 7 - RUN POWER CABLE - Continued

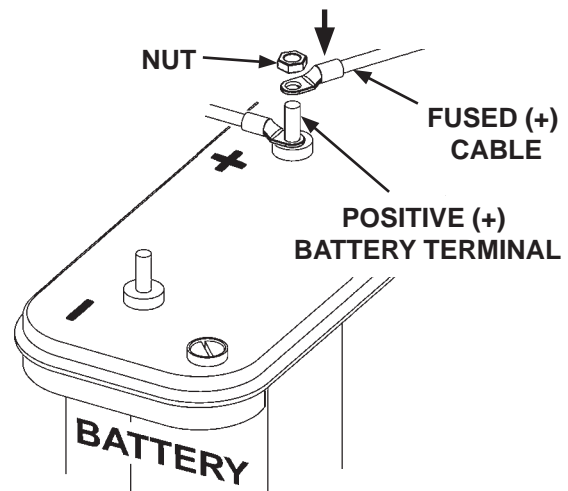
5. Remove nut from negative (-) battery terminal (FIG. 40-1). Disconnect negative (-) battery cable (FIG. 40-1).



DISCONNECTING (-) BATTERY CABLE
FIG. 40-1

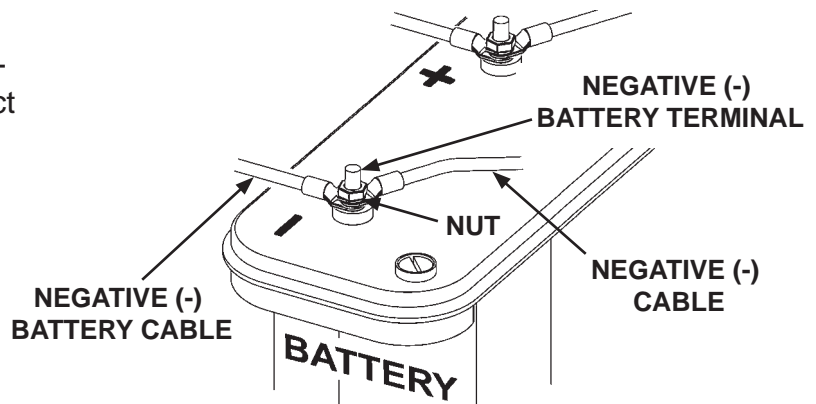
6. Remove nut from positive (+) battery terminal (FIG. 40-1).

7. Connect fused positive (+) cable to positive (+) battery terminal (FIG. 40-2). Then, reinstall nut on positive (+) battery terminal (FIG. 40-2).



CONNECTING FUSED (+) CABLE
FIG. 40-2

8. Reconnect negative (-) battery cable to negative (-) battery terminal (FIG. 40-3). Next, connect negative (-) cable to negative (-) battery terminal (FIG. 40-3). Then, reinstall nut on negative (-) battery terminal (FIG. 40-3).



RECONNECTED BATTERY CABLES
FIG. 40-3

STEP 8 - RECOMMENDED POWER CONNECTION IN THE BATTERY BOX

NOTE: Make sure Liftgate power unit, and all batteries on the vehicle for power unit, are connected correctly to a common chassis ground. Always use circuit protection on positive battery cables. Circuit protection should be as close as possible to the battery connection. Use 150 Amp circuit breaker kit provided to connect the positive (+) 2 gauge cable (charge line kit) to the Liftgate batteries.

CONNECTIONS FOR 2-BATTERY BOX

1. Connect jumper to “BAT” terminal of 175 Amp circuit breaker using the 1/4” hole (FIG. 41-1). Tighten circuit breaker nut to **50 in-lb** max.
2. Connect 5/16” hole of jumper to the positive (+) battery terminal (FIGS. 41-1 and 41-2). Tighten battery terminal nut to **25 ft-lb** max.
3. Cut power line to needed length. Crimp lug and heat shrink (FIG. 41-2).
4. Connect the positive (+) cable to J-box to the “AUX” terminal of the circuit breaker (opposite side from jumper). See FIGS. 41-1 and 41-2.
5. Connect power (+) and ground (-) cables as shown in FIGS. 41-2 or 42-1.

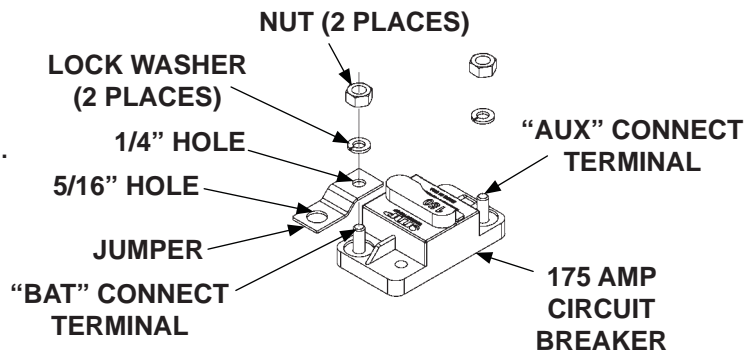
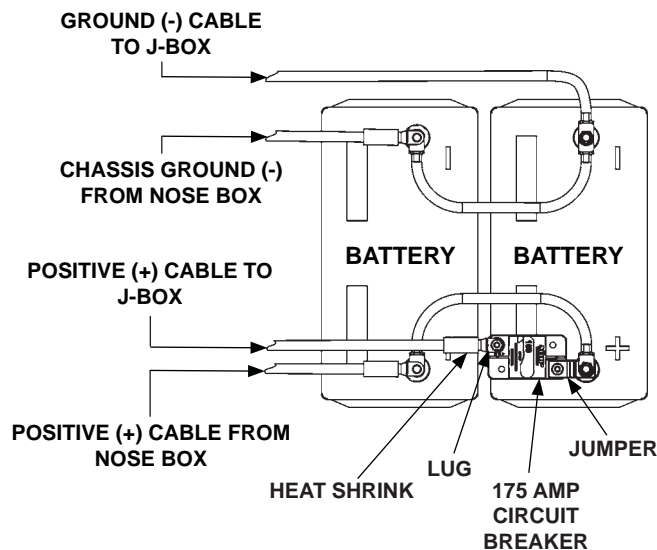


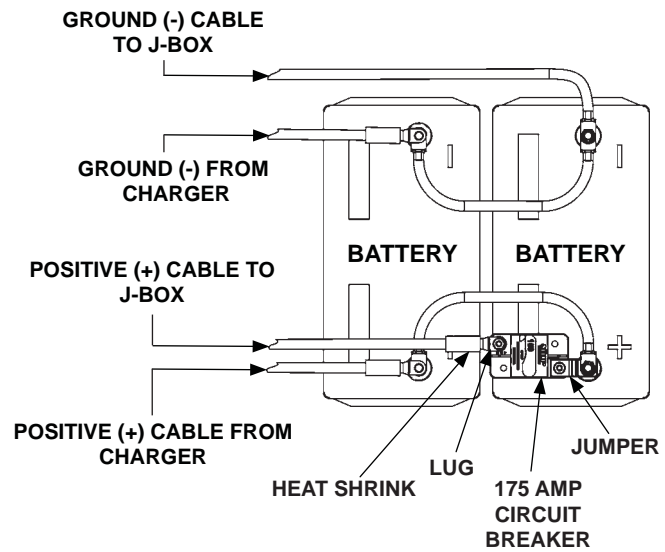
FIG. 41-1



2-BATTERY BOX POWER CONNECTIONS (DIRECT CHARGING)

FIG. 41-2

STEP 8 - RECOMMENDED POWER CONNECTION IN THE BATTERY BOX - Continued



**2-BATTERY BOX POWER CONNECTIONS
(WITH CHARGER)
FIG. 42-1**

STEP 8 - RECOMMENDED POWER CONNECTION IN THE BATTERY BOX - Continued

CONNECTIONS FOR 4-BATTERY BOX

1. Connect jumper to “BAT” terminal of 175 Amp circuit breaker using the 1/4” hole (FIG. 43-1). Tighten circuit breaker nut to **50 in-lb** max.
2. Connect 5/16” hole of jumper to the positive (+) battery terminal (FIGS. 43-1 and 43-2). Tighten battery terminal nut to **25 ft-lb** max.
3. Cut power line to needed length. Crimp lug and heat shrink (FIG. 43-2).
4. Connect the positive (+) cable from J-box to the “AUX” terminal of the circuit breaker (opposite side from jumper). See FIGS. 43-1 and 43-2.
5. Connect power (+) and ground (-) cables as shown in FIGS. 43-2, 44-1 or 44-2.

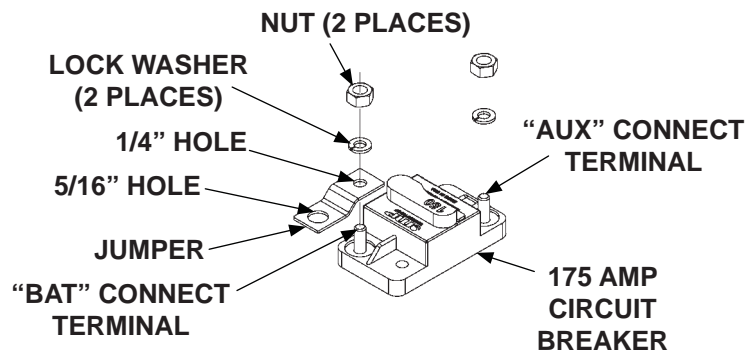
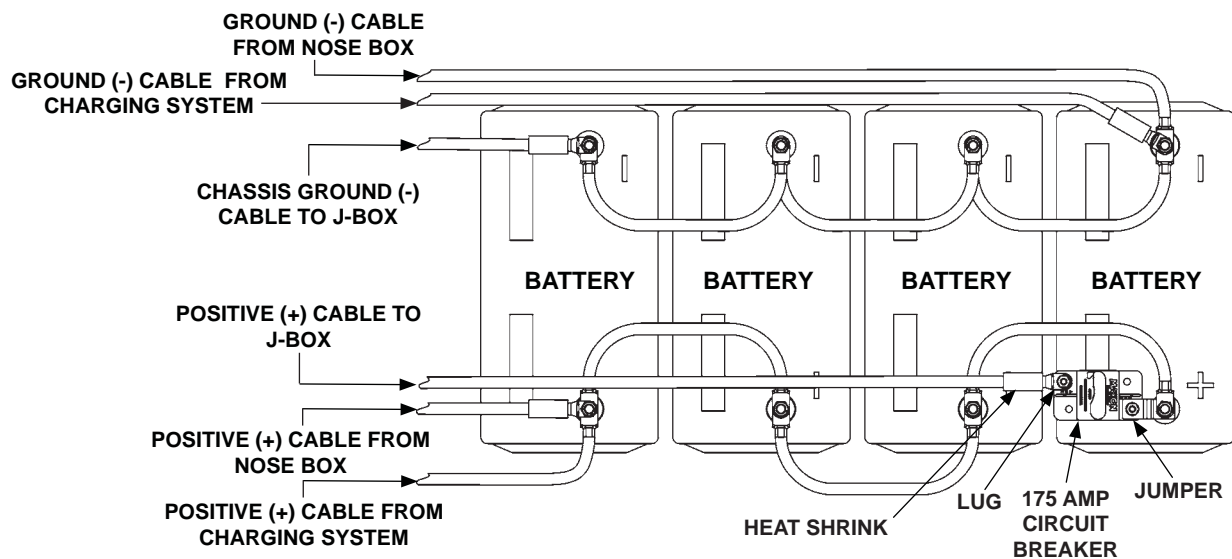
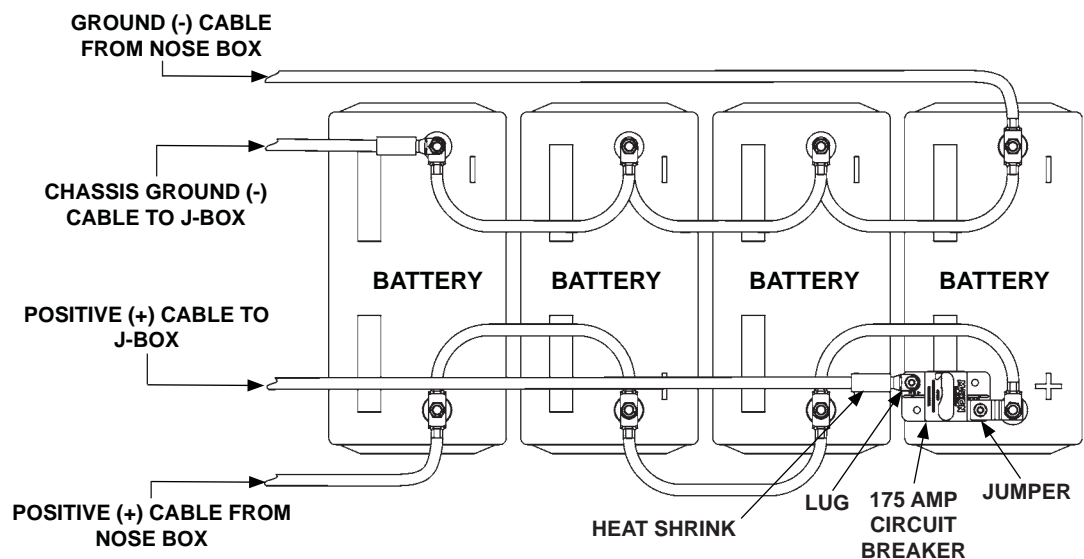


FIG. 43-1

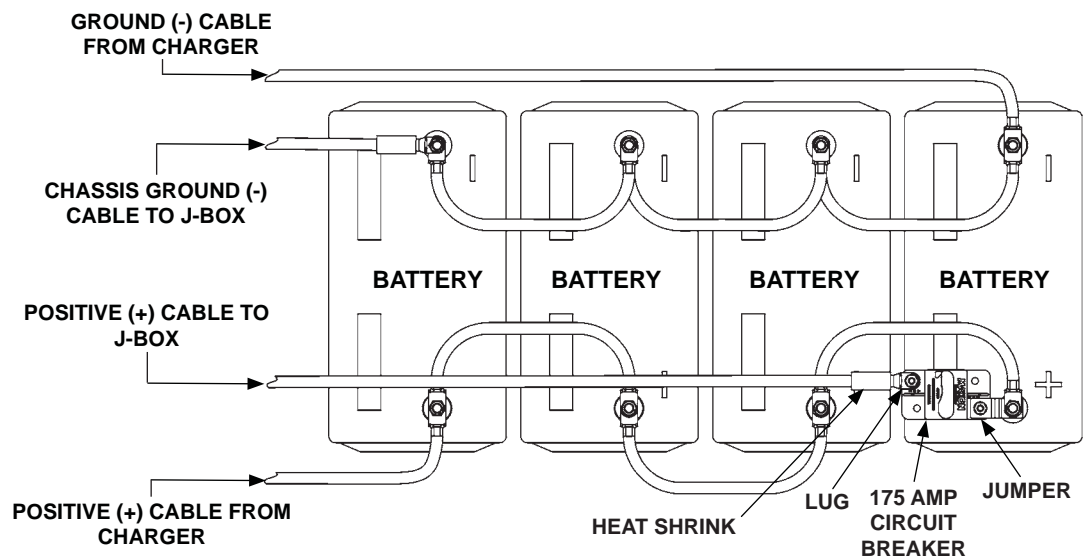


4-BATTERY BOX POWER CONNECTIONS
(WITH DIRECT CHARGING & CHARGER)
FIG. 43-2

STEP 8 - RECOMMENDED POWER CONNECTION IN THE BATTERY BOX - Continued



**4-BATTERY BOX POWER CONNECTIONS
(WITH DIRECT CHARGING)
FIG. 44-1**



**4-BATTERY BOX POWER CONNECTIONS
(WITH CHARGER)
FIG. 44-2**

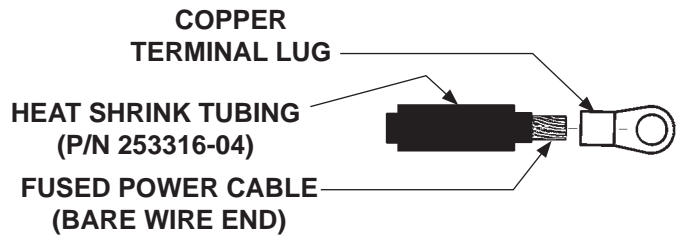
STEP 9 - CONNECT POWER & GROUND CABLES TO J-BOX

NOTICE

Protect electrical connections on the J-box with a clear corrosion preventative spray. It must be clear to read the labels for the connections.

NOTE: Bare wires must not be visible after the heatshrink tubing shrinks on terminal lug.

1. Measure (if needed) and then cut excess cable from bare wire end of power (+) and ground (-) cables. Keep enough length to form a drip loop in the cables. Put heat shrink tubing (parts box) (FIG. 45-1) on the end of the cable (leave room for terminal lug). Using a proper crimping tool, crimp copper terminal lug (from parts box), on the power (+) and ground (-) cables and shrink the heat shrink tubing (FIG. 45-2).

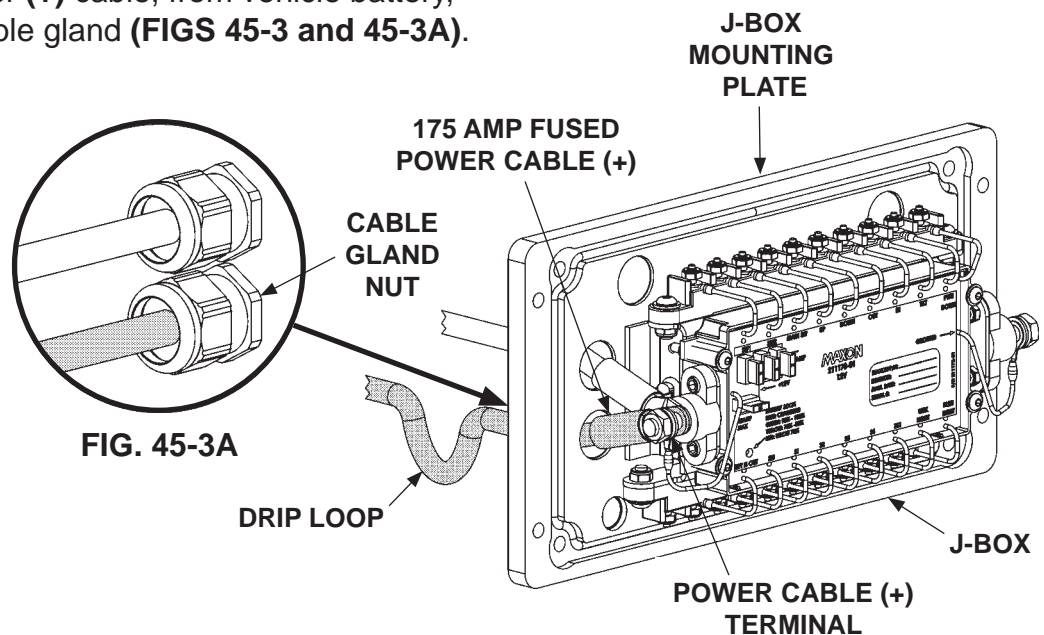


PLACING TERMINAL LUG & HEAT SHRINK TUBING ON FUSED POWER CABLE
FIG. 45-1



TYPICAL FUSED POWER CABLE WITH TERMINAL LUG INSTALLED
FIG. 45-2

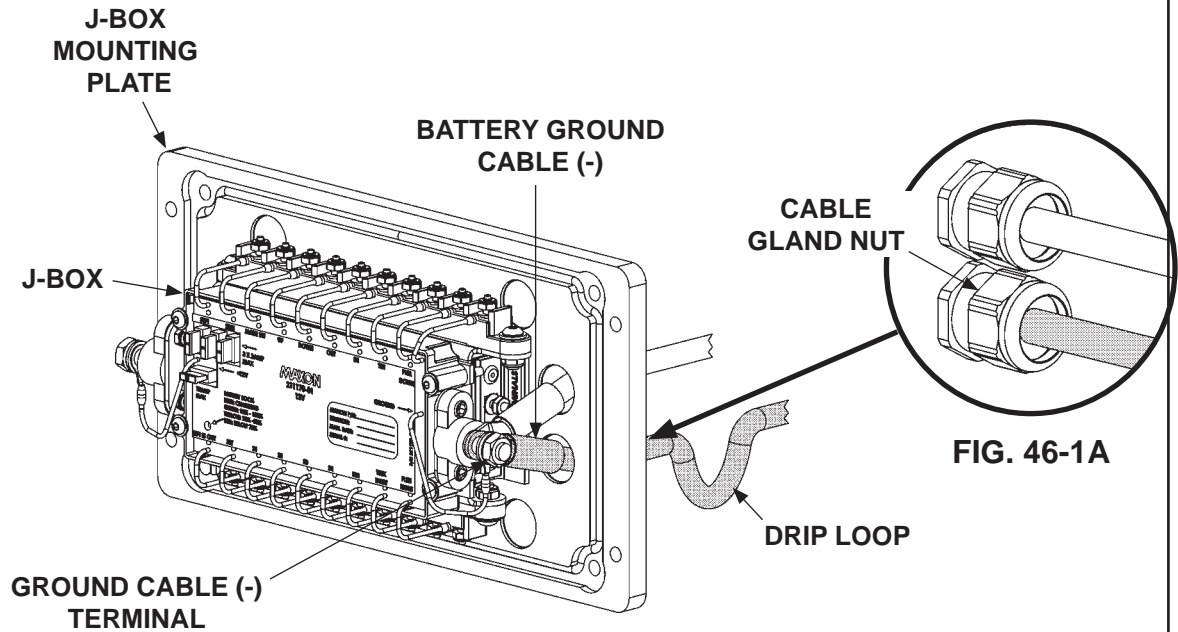
2. Form a drip loop on the fused power cable where it enters the cable gland from outside the J-box mounting plate (FIG. 45-3).
3. Insert power (+) cable, from vehicle battery, through cable gland (FIGS 45-3 and 45-3A).



CONNECTING FUSED BATTERY POWER CABLE (+) AT J-BOX
FIG. 45-3

STEP 9 - CONNECT POWER & GROUND CABLES TO J-BOX - Continued

4. Form a drip loop on the ground (-) cable where it enters the cable gland from outside the J-box mounting plate (FIG. 46-1).
5. Insert ground (-) cable, from vehicle battery, through cable gland (FIGS 46-1 and 46-1A).



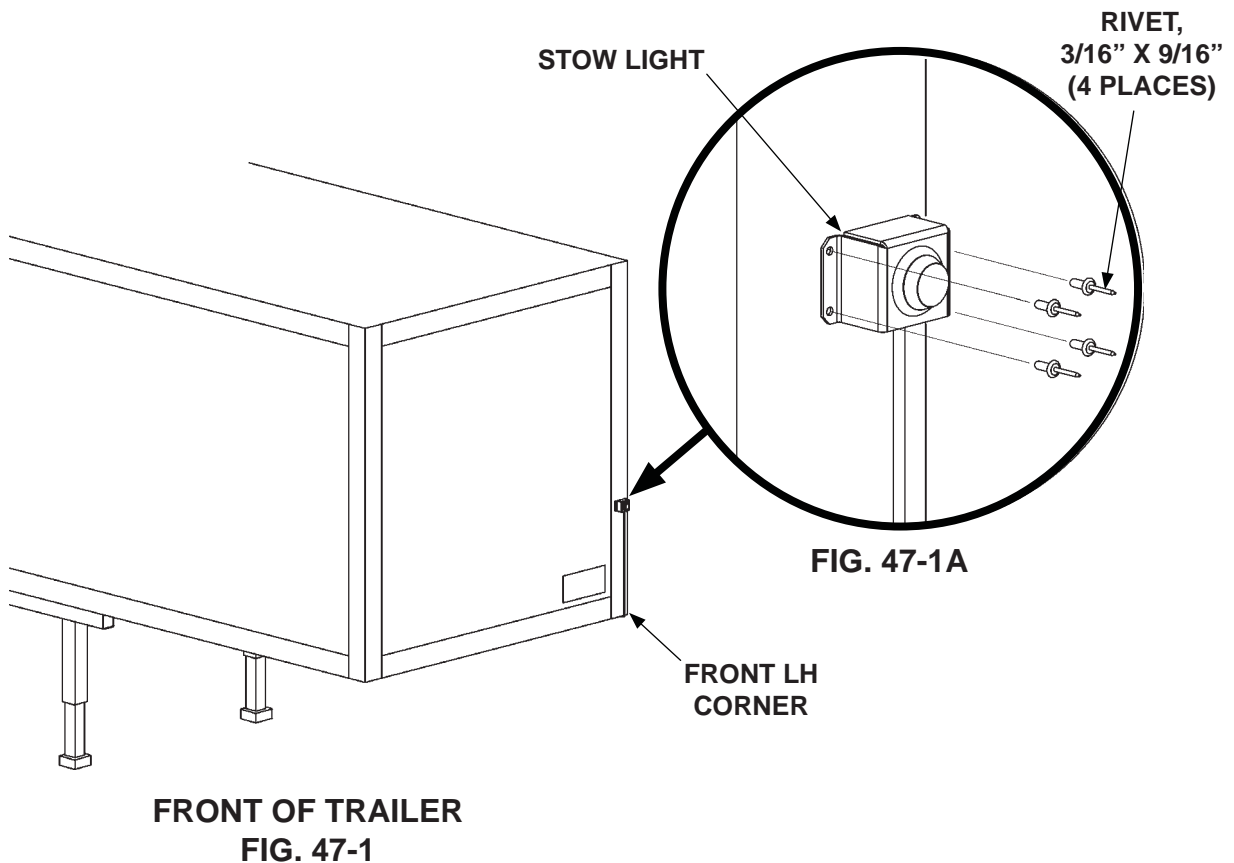
CONNECTING BATTERY GROUND CABLE (-) AT J-BOX
FIG. 46-1

6. Connect power (+) and ground (-) cables to J-box as shown in FIGS. 45-3 and 46-1. Torque power (+) and ground (-) cable nuts to **20 lb-ft**. Tighten each cable gland nut until the seal has a secure grip on the cable jacket. Ensure the electrical connections are clean, tight, and protected from corrosion.

STEP 10 - ATTACH STOW LIGHT TO TRAILER

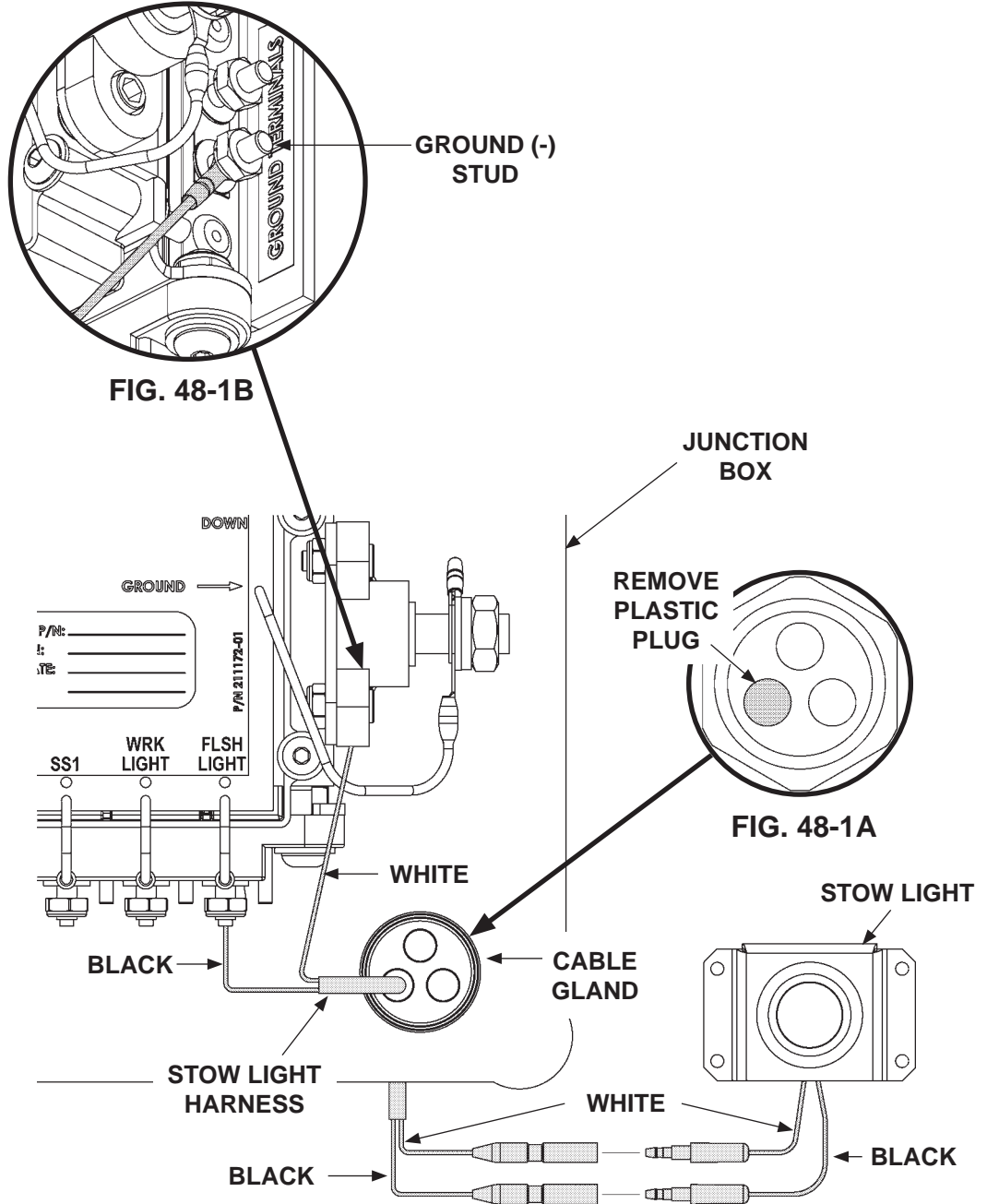
NOTE: Stow light will warn vehicle driver if the Liftgate is not stowed. Light must be positioned so the driver can see the light from the LH sideview mirror.

1. Position stow light on trailer as shown in **FIGS. 47-1 and 47-1A**. Fasten stow light on front LH corner of trailer with rivets (Kit items) (**FIG. 47-1A**).



STEP 10 - ATTACH STOW LIGHT TO TRAILER - Continued

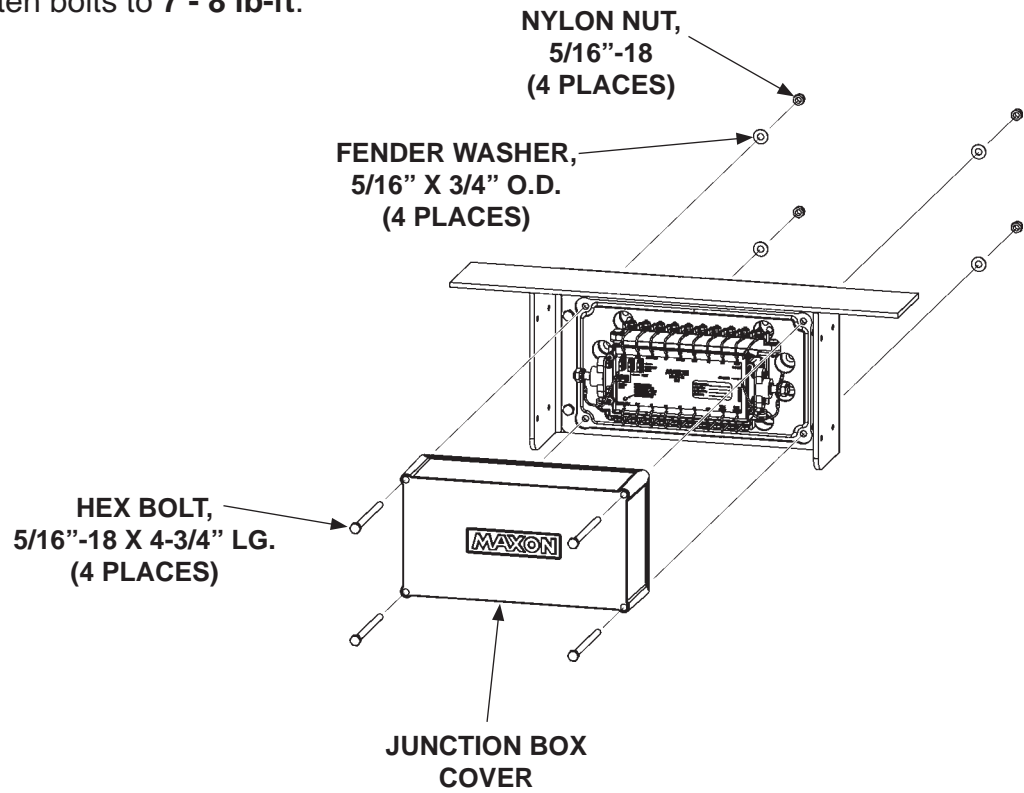
- Knock out plastic plug from the cable gland as shown in **FIG. 48-1A**. Connect stow light to stow light harness at Junction Box as shown in **FIGS. 48-1 and 48-1B**.



**STOW WARNING LIGHT CONNECTIONS AT JUNCTION BOX
FIG. 48-1**

STEP 10 - ATTACH STOW LIGHT TO TRAILER - Continued

3. Reinstall junction box cover as shown in FIG. 49-1. Tighten bolts to 7 - 8 lb-ft.



REINSTALLING JUNCTION BOX COVER
FIG. 49-1

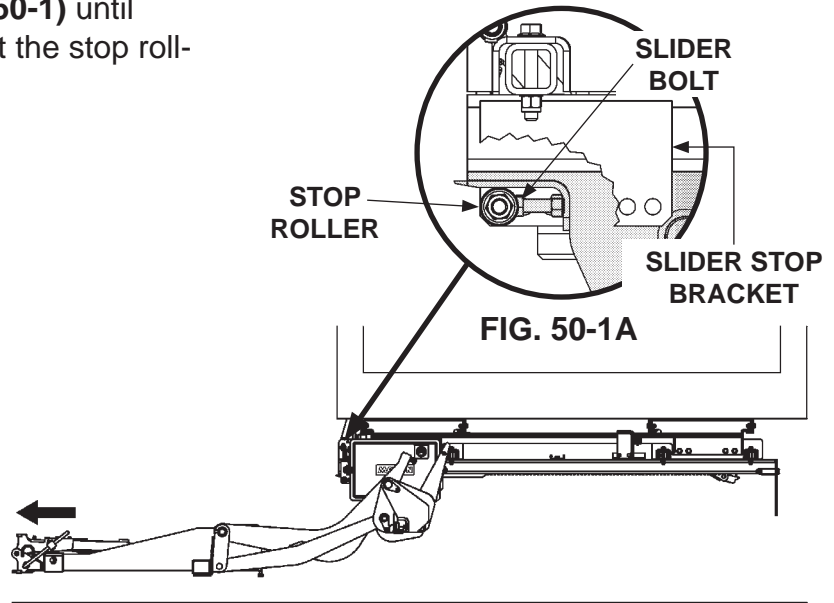
STEP 11 - PLATFORM ADJUSTMENT

CAUTION

Operate Liftgate with caution and no load until installation is complete.

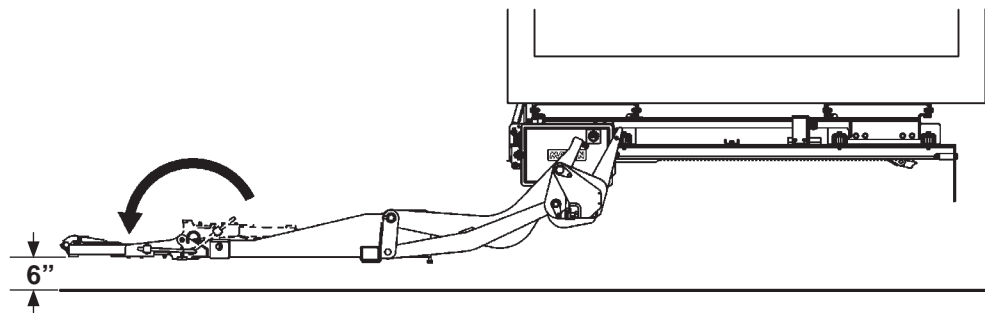
NOTE: Refer to **Operating Instructions** decal and applicable **WARNING & CAUTION** decals.

1. Move the platform out (**FIG. 50-1**) until slider mounting plate bolts hit the stop rollers (**FIG. 50-1A**).



LIFTGATE TRAVELS TO OUTBOARD STOPS
FIG. 50-1

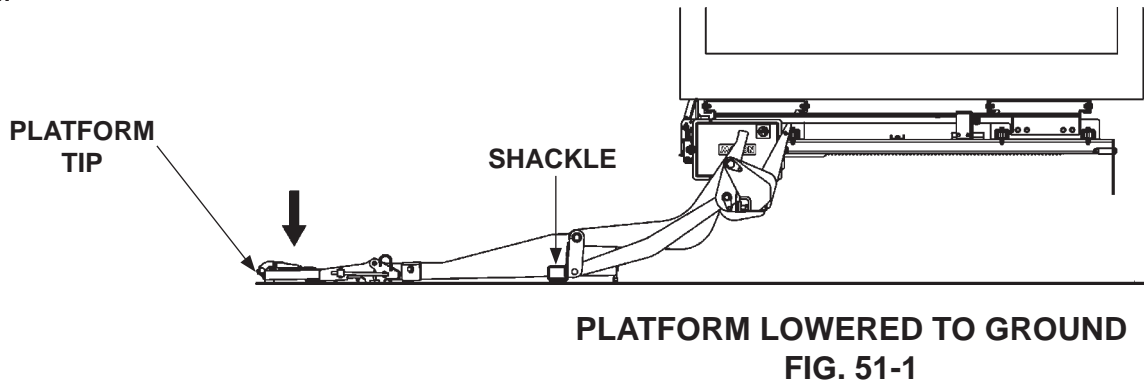
2. Lower platform to 6" above ground level and unfold flipover (**FIG. 50-2**).



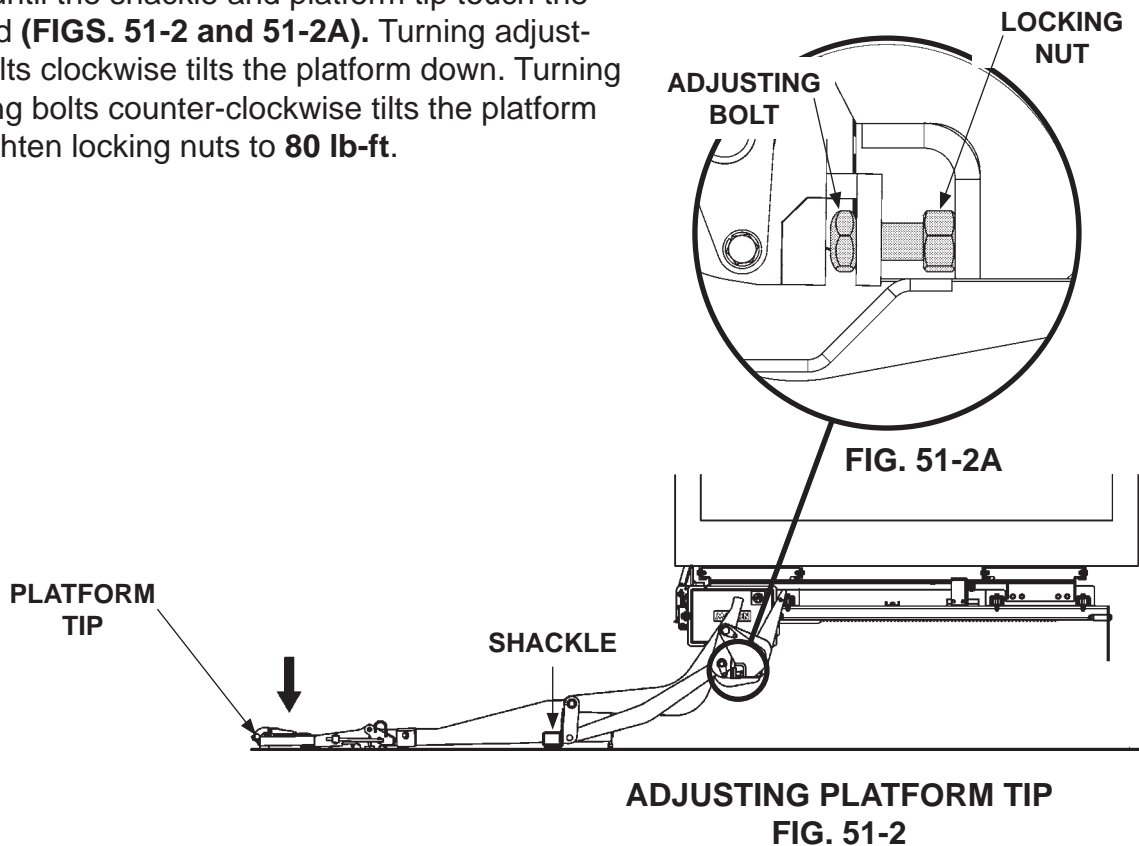
UNFOLD FLIPOVER
FIG. 50-2

STEP 11 - PLATFORM ADJUSTMENT- Continued

3. Lower platform to ground level (**FIG. 51-1**). Ensure platform tip and shackle touch ground.

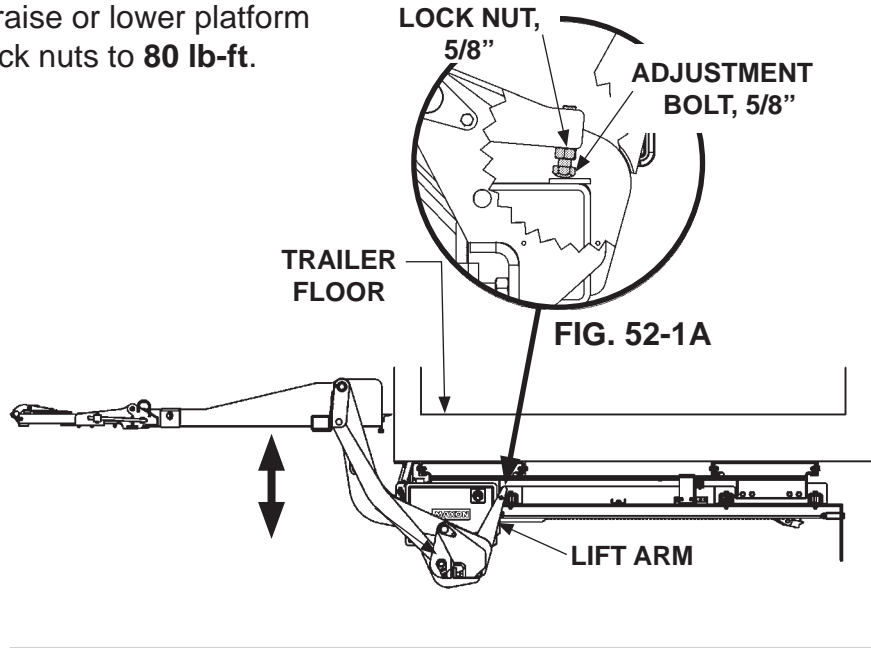


4. If platform tip and shackle aren't touching the ground, loosen locking nuts on both sides of Lift-gate (**FIGS. 51-2 and 51-2A**). Turn the adjusting bolts until the shackle and platform tip touch the ground (**FIGS. 51-2 and 51-2A**). Turning adjusting bolts clockwise tilts the platform down. Turning adjusting bolts counter-clockwise tilts the platform up. Tighten locking nuts to **80 lb-ft**.



STEP 11 - PLATFORM ADJUSTMENT- Continued

5. Loosen lock nut (both sides) (**FIG. 52-1**). Raise platform to trailer floor height and level it with trailer floor (**FIG. 52-1**) using adjustment bolts on lift arms (both sides) to raise or lower platform (**FIG. 52-1A**). Tighten lock nuts to **80 lb-ft**.



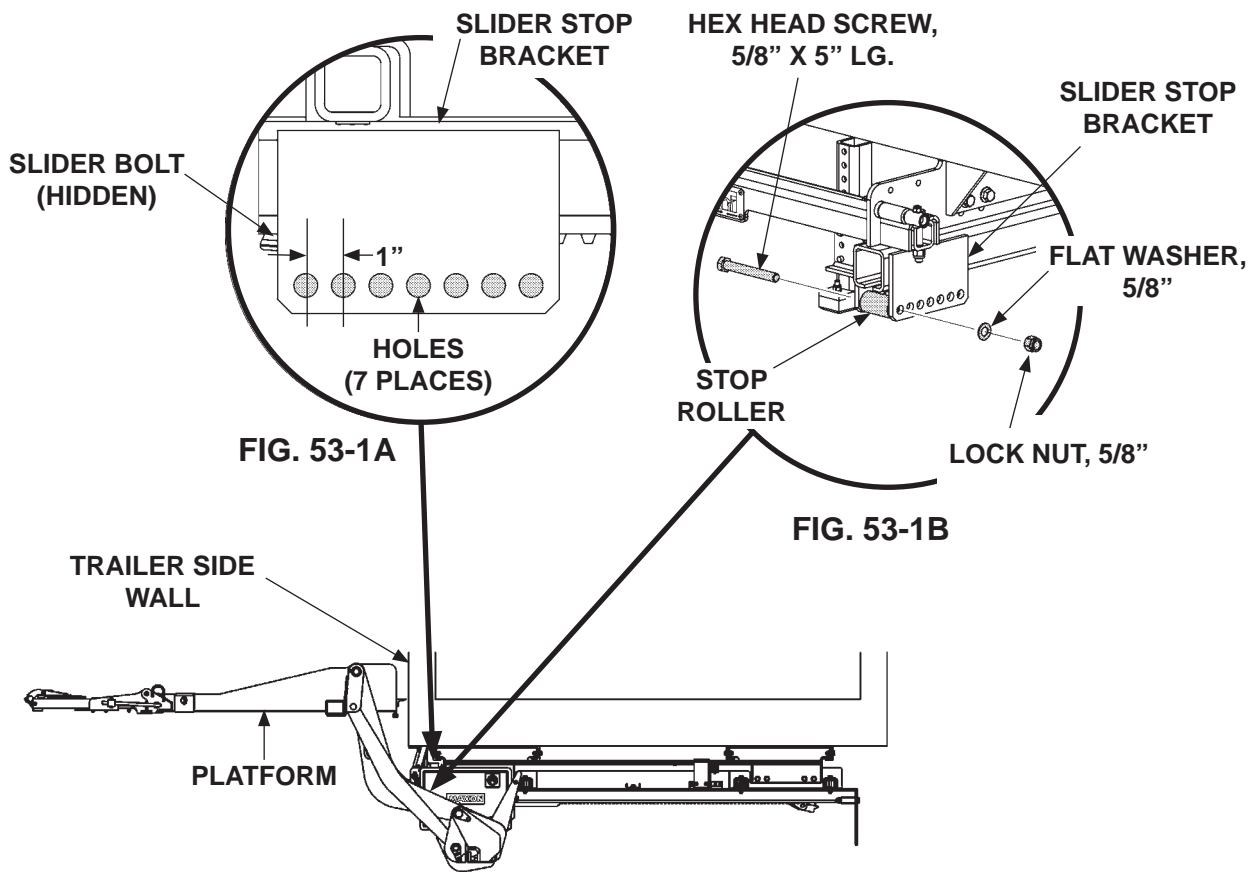
ADJUSTING PLATFORM TO FLOOR LEVEL
FIG. 52-1

STEP 11 - PLATFORM ADJUSTMENT- Continued

CAUTION

To prevent stop roller from binding, Do not overtighten hex bolts on stop roller. Allow 1/16" gap on each side of stop roller.

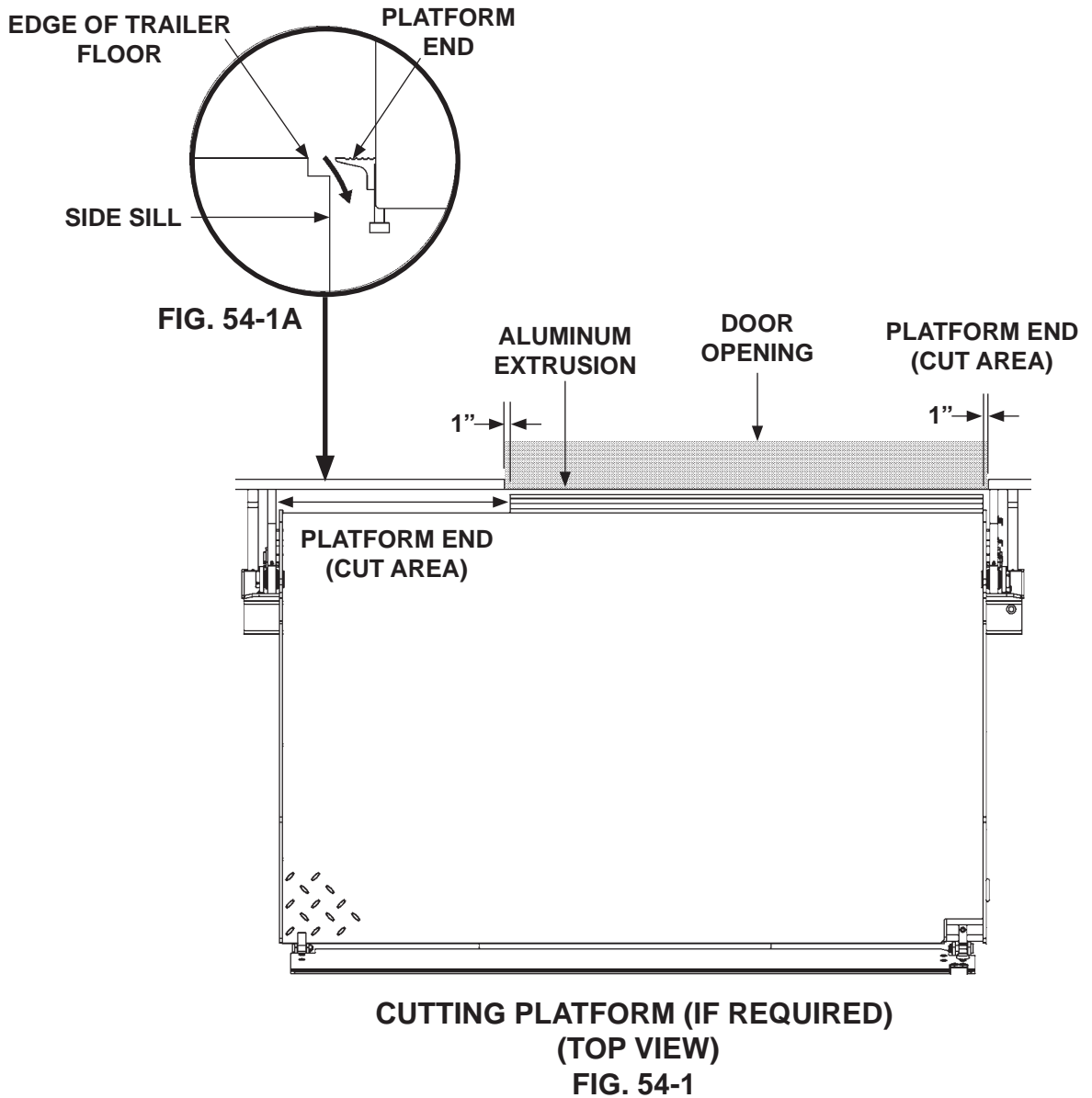
6. For initial platform in/out adjustment, slide the platform in, using the control switch, to a gap of 1" between platform and trailer side wall. If the gap is greater than 1", remove stop roller from initial hole in slider stop bracket (FIGS. 53-1 and 53-1A). Reinstall the stop roller in the hole closest to the slider bolt (FIGS. 53-1, 53-1A and 53-1B). Tighten hex screw to allow 1/16" gap on each side of stop roller.



PLATFORM INITIAL IN/OUT ADJUSTMENT
FIG. 53-1

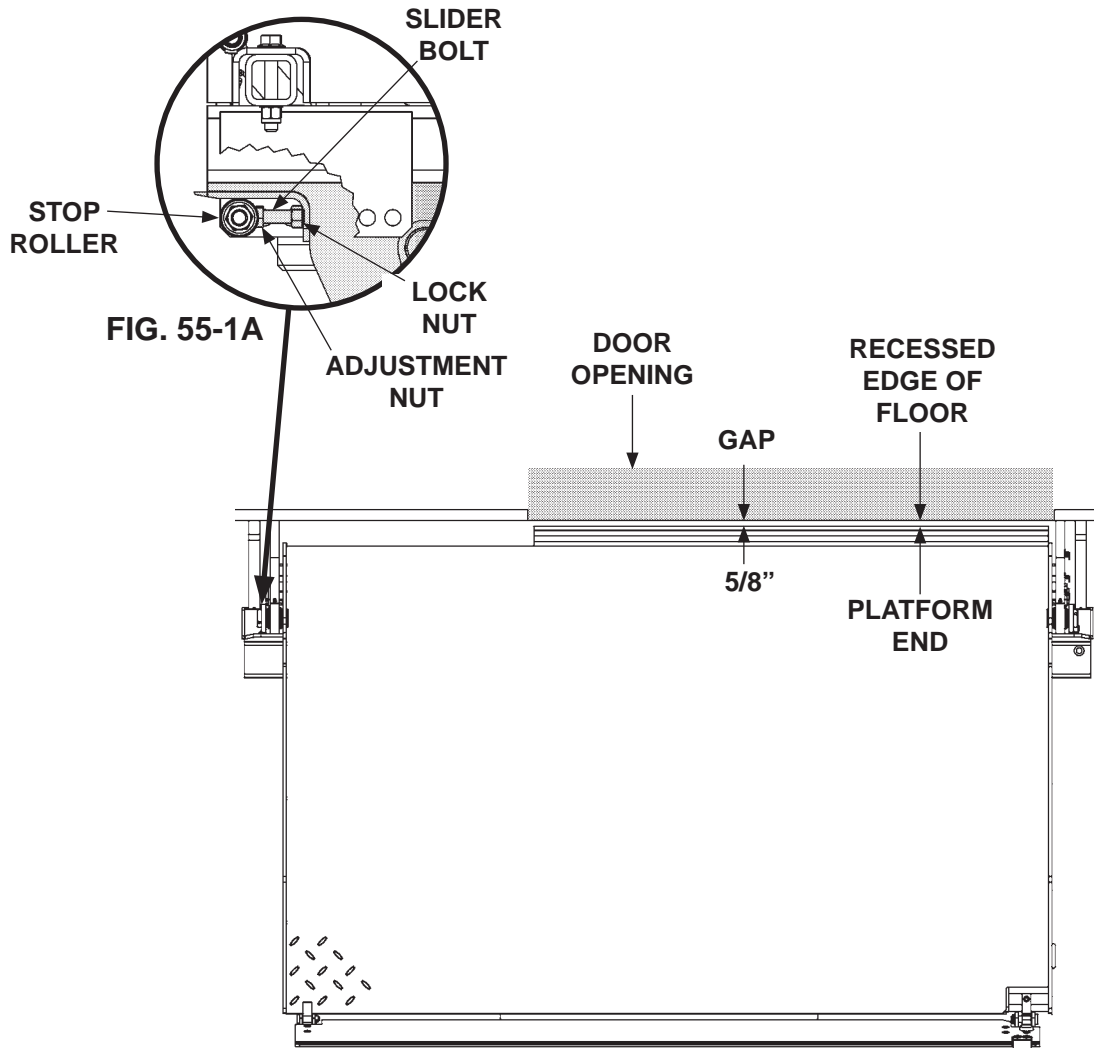
STEP 11 - PLATFORM ADJUSTMENT- Continued

7. If the edge of the trailer floor is recessed, mark the platform end aluminum extrusion and cut 1" off on both sides of doorway (FIGS. 54-1 and 54-1A).



STEP 11 - PLATFORM ADJUSTMENT- Continued

8. Ensure platform is flush with vehicle floor.
If platform gap is 1" or less (**FIG. 55-1**), use adjustment bolts, located at stop rollers, to adjust platform end to approximately 5/8" gap from recessed edge of the floor (**FIGS. 55-1 and 55-1A**). Tighten each bolt to **80 lb-ft**.



PLATFORM FINAL IN/OUT ADJUSTMENT
(TOP VIEW)
FIG. 55-1

STEP 11 - PLATFORM ADJUSTMENT- Continued

CAUTION

Operate Liftgate with caution and no load until installation is complete.

NOTE: Refer to **Operating Instructions** decal and applicable **WARNING & CAUTION** decals.

9. Operate the Liftgate to ensure correct operation without binding or hitting trailer side sill.

STEP 12 - FINAL WELDING

⚠ WARNING

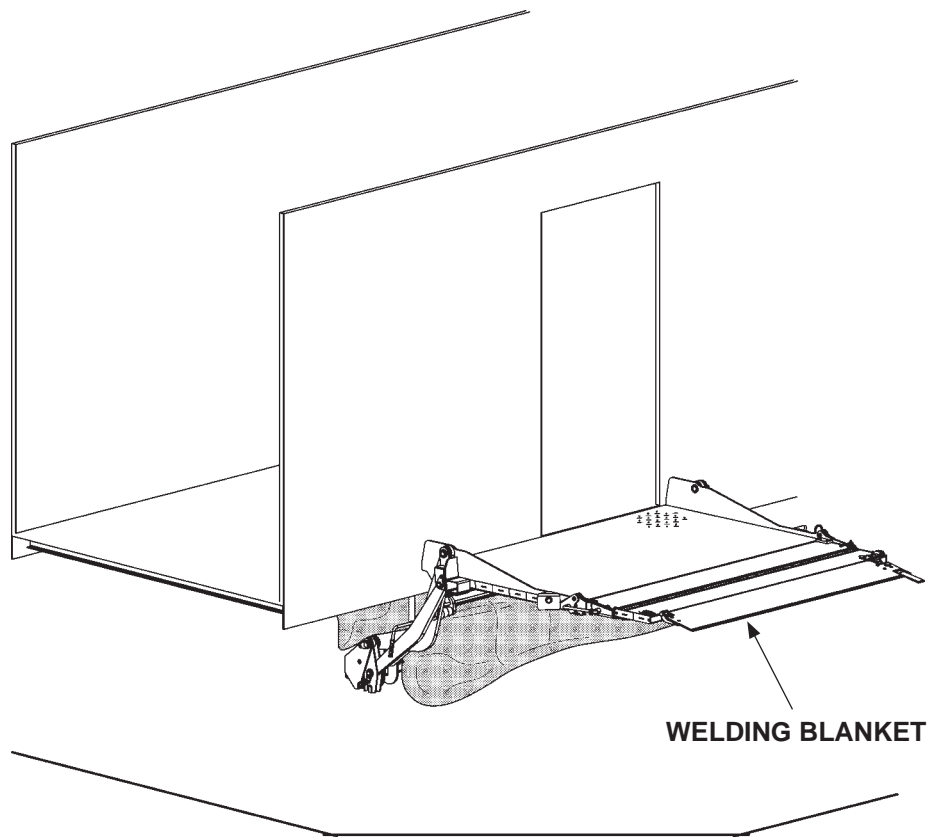
Use weld blankets to protect lines and tubes from weld splatter.

⚠ WARNING

Welding on galvanized parts gives off especially hazardous fumes. To minimize hazard remove galvanizing from weld area, provide adequate ventilation, and wear suitable respirator.

NOTE: Liftgate must be welded to fixed trailer crossmembers that are typically spaced 12" between centers.

Cover Liftgate with welding blanket (**FIG. 57-1**).

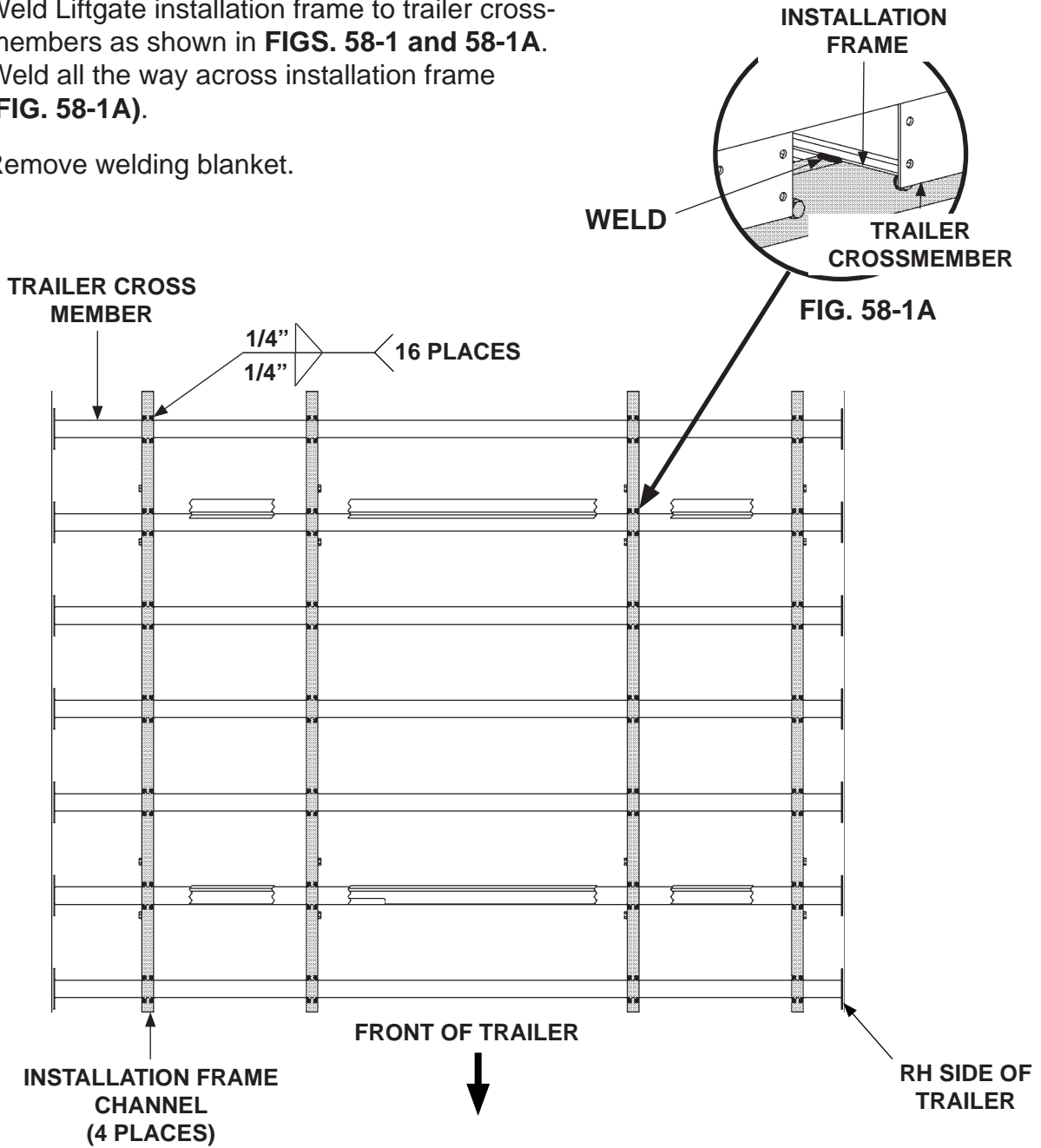


COVERING LIFTGATE WITH WELDING BLANKET
FIG. 57-1

STEP 12 - FINAL WELDING - Continued

PREFERRED WELDING METHOD

1. Weld Liftgate installation frame to trailer crossmembers as shown in **FIGS. 58-1 and 58-1A**. Weld all the way across installation frame (**FIG. 58-1A**).
2. Remove welding blanket.

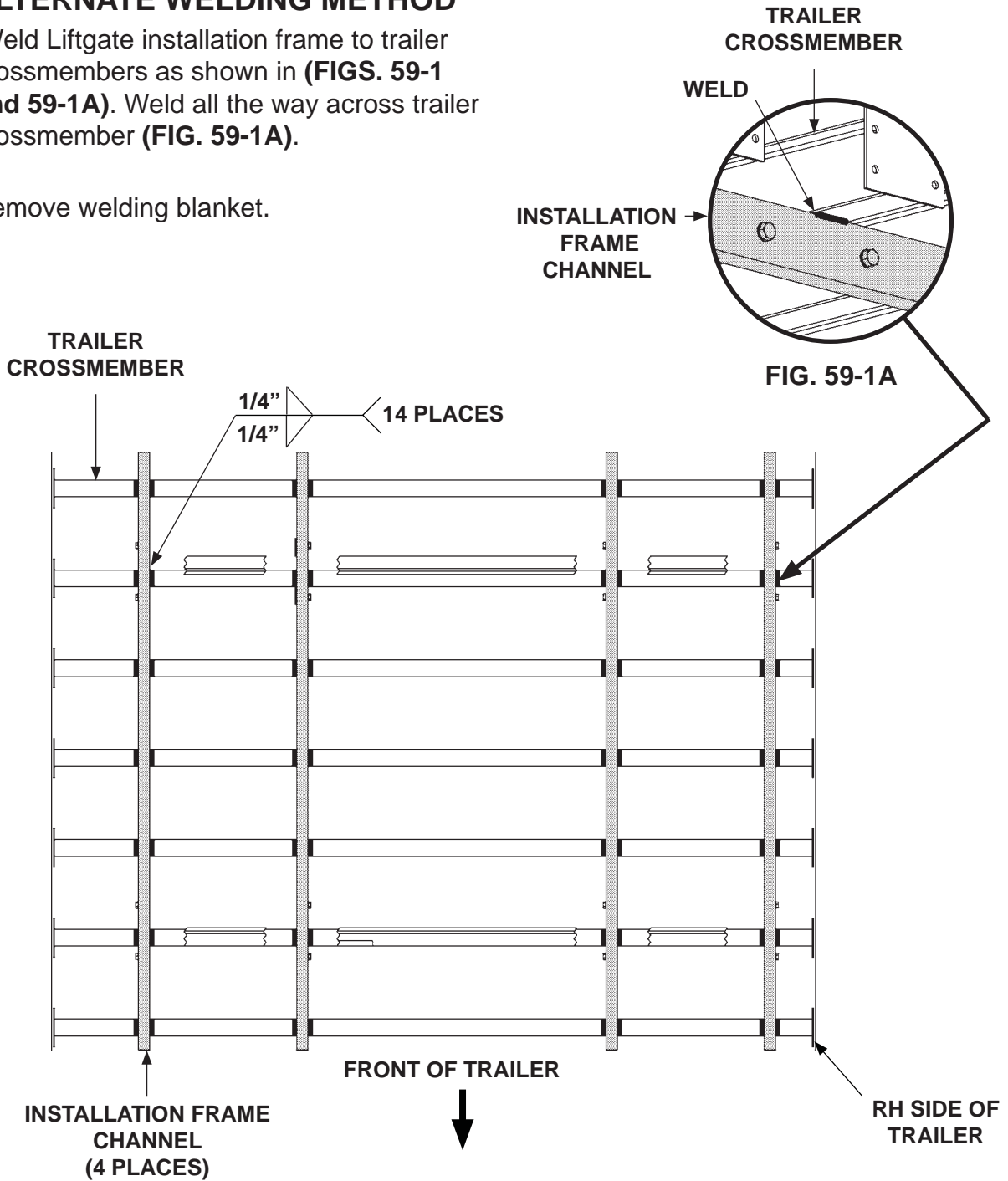


BOTTOM VIEW OF TRAILER WITH LIFTGATE INSTALLATION FRAME POSITIONED ON CROSSMEMBERS (SLIDE ASSEMBLY AND PARTS OF LIFTGATE NOT SHOWN)
FIG. 58-1

STEP 12 - FINAL WELDING - Continued

ALTERNATE WELDING METHOD

1. Weld Liftgate installation frame to trailer crossmembers as shown in (FIGS. 59-1 and 59-1A). Weld all the way across trailer crossmember (FIG. 59-1A).
2. Remove welding blanket.



BOTTOM VIEW OF TRAILER WITH LIFTGATE INSTALLATION FRAME CHANNELS POSITIONED ON CROSSMEMBERS (SLIDE ASSEMBLY AND PARTS OF LIFTGATE NOT SHOWN)
FIG. 59-1

STEP 13 - ATTACH SAFETY CHAIN

1. Stow Liftgate all the way in until slide mechanism hits the rail stops (FIGS. 60-1 and 60-1B).
2. Raise the platform until it presses against the bumper stops (FIGS. 60-1A and 60-1B).

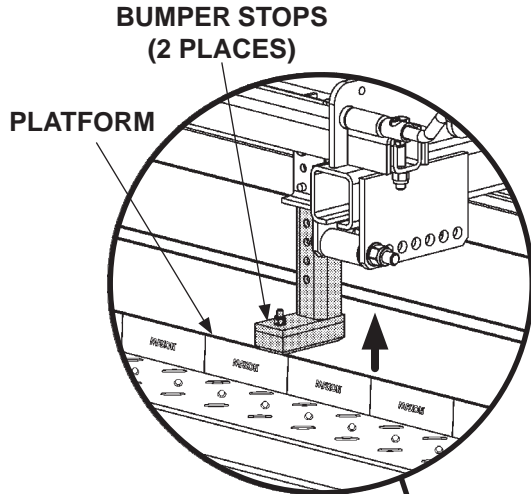


FIG. 60-1A

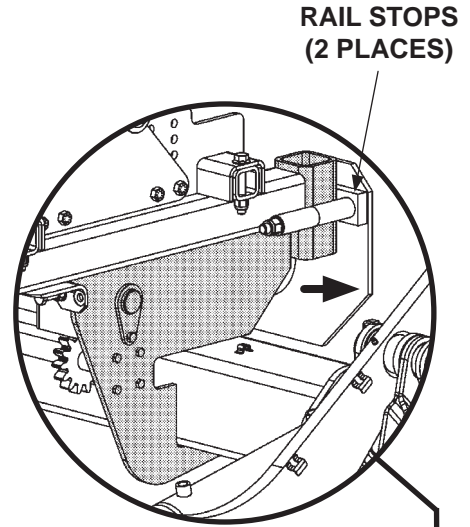
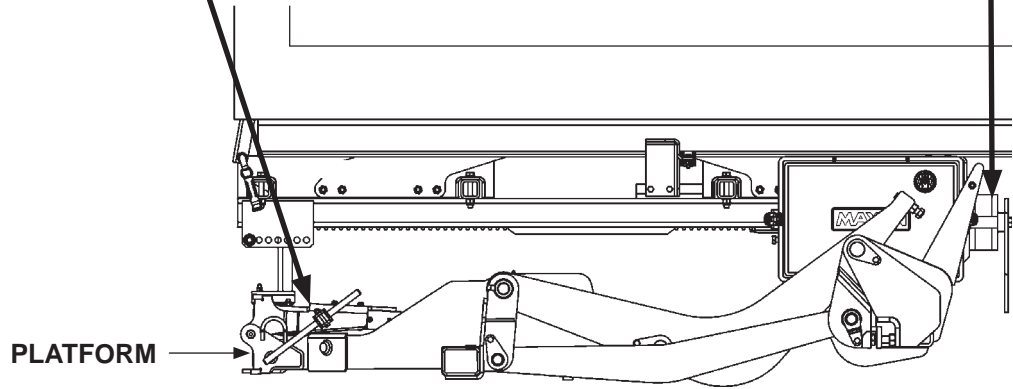


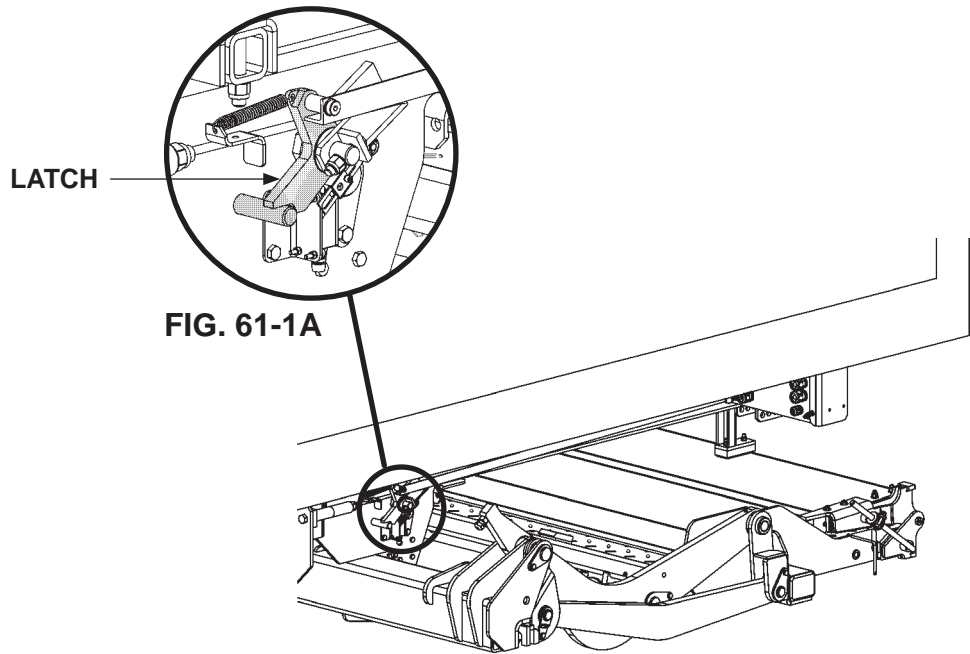
FIG. 60-1B



LIFTGATE IN STOWED POSITION
FIG. 60-1

STEP 13 - ATTACH SAFETY CHAIN - Continued

3. Ensure the latch is in locked position (FIGS. 61-1 and 61-1A).



**LOCKING LIFTGATE IN STOWED POSITION
(LH SIDE SHOWN)
FIG. 61-1**

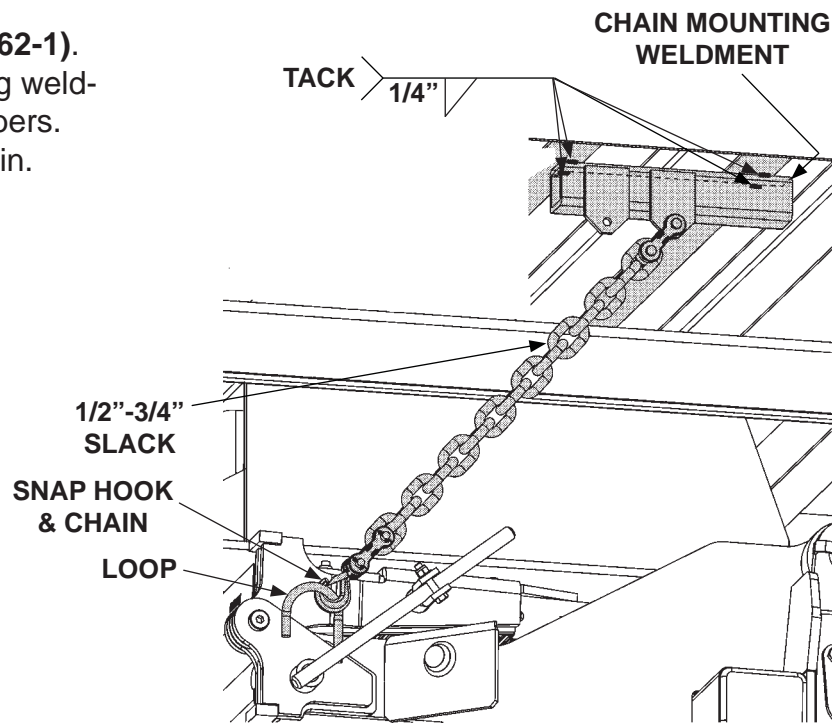
STEP 13 - ATTACH SAFETY CHAIN - Continued

- Hook chain to platform (**FIG. 62-1**).
Then, position chain mounting weldment to bottom of crossmembers.
Keep 1/2" to 3/4" slack in chain.

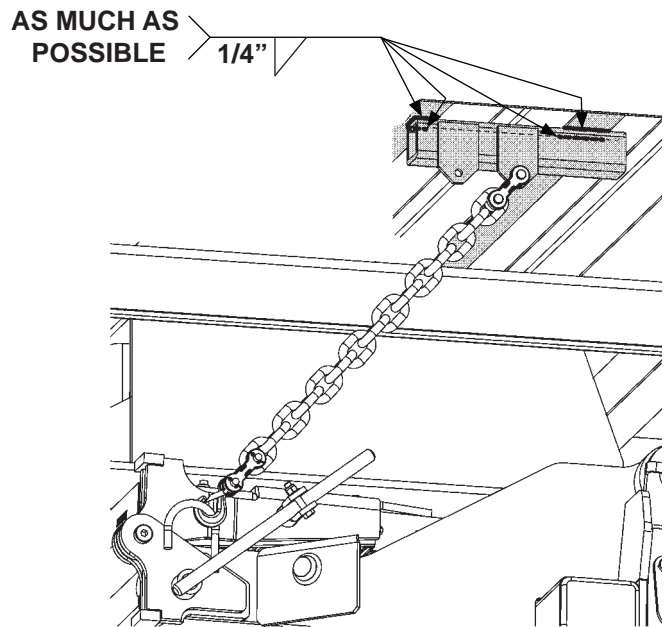
- Tack weld the chain mounting weldment as shown in **FIG. 62-1**.

- Hook and unhook chain from the loop on the platform.
Hook should be easy to disengage from loop (**FIG. 62-1**).

- When chain mounting weldment is in correct position, finish welding to vehicle crossmembers as shown in **FIG. 62-2**.



**POSITIONING & TACK WELDING
CHAIN MOUNTING WELDMENT
FIG. 62-1**

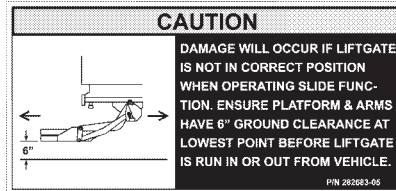


**FINISH WELDING CHAIN MOUNTING
WELDMENT
FIG. 62-2**

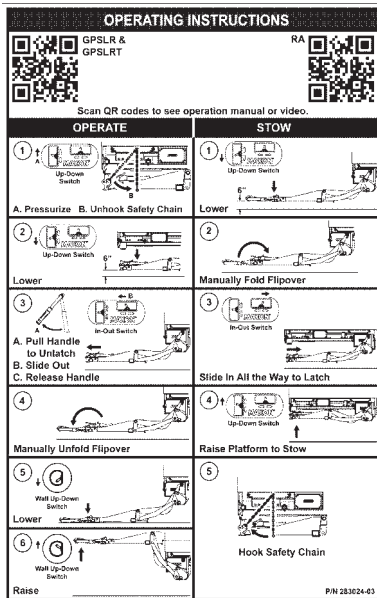
ATTACH DECALS



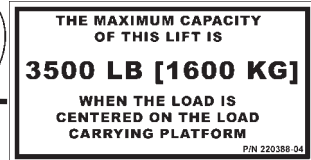
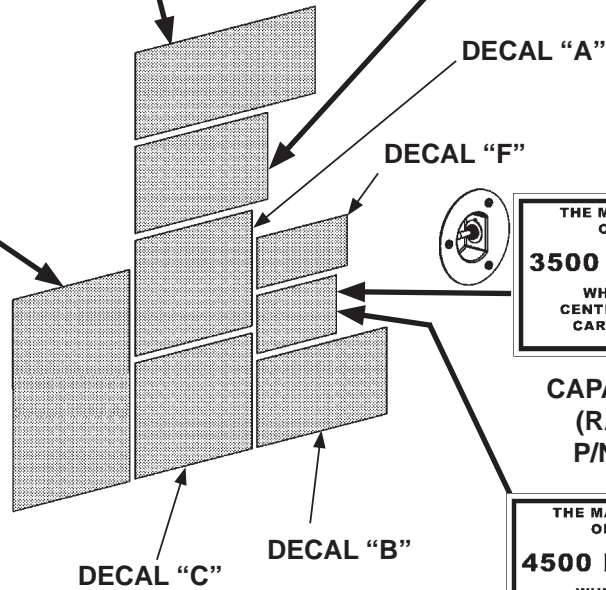
**CAUTION DECAL
P/N 282682-05**



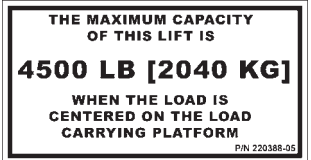
**CAUTION DECAL
P/N 282683-05**



**OPERATION DECAL
P/N 283024-03**



**CAPACITY DECAL
(RA-35 ONLY)
P/N 220388-04**



**CAPACITY DECAL
(RA-45 ONLY)
P/N 220388-05**

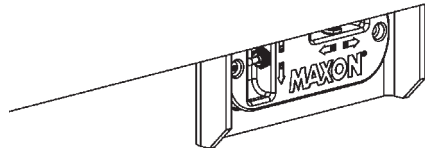


FIG. 63-1

CAUTION
Always stand clear of platform area. P/N 282522-01 (P)

WARNING
Read this information carefully.

- Improper operation of this Liftgate can result in serious personal injury. If you do not have a copy of the operating instructions, please obtain them from your employer, distributor, or lessor before you attempt to operate Liftgate.
- If there are signs of improper maintenance, damage to vital parts, or slippery platform surface, do not use the Liftgate until these problems have been corrected.
- If you are using a pallet jack, be sure it can be maneuvered safely.
- Do not operate a forklift on the platform.
- Do not allow any part of yours or your helper's body to be placed under, within, or around any portion of the moving Liftgate, or its mechanisms, or in a position that would trap them between the platform and the ground or truck when the Liftgate is operated.
- If a helper is riding the platform with you, make sure you are both doing so safely and that you are not in danger of coming in contact with any moving or potentially moving obstacles.
- **USE GOOD COMMON SENSE**
- If load appears to be unsafe, do not lift or lower it.

For a free copy of other manuals that pertain to this model Liftgate, please visit our website at www.maxonlift.com or call Customer Service at (800) 227-4116. P/N 282522-01 (C)

SAFETY INSTRUCTIONS
Read all decals and operation manual before operating liftgate.

1. Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.
2. Be certain vehicle is properly and securely braked before using the liftgate.
3. Always inspect this liftgate for maintenance or damage before using it. Do not use liftgate if it shows any sign of damage or improper maintenance.
4. Do not overload
5. Make certain the area in which the platform will open and close is clear before opening or closing the platform.
6. Make certain platform area, including the area in which loads may fall from platform, is clear before and at all times during operation of liftgate.
7. This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.

P/N 282522-01 (A)

WARNING
Liftgate hazards can result in crushing or falling.
Keep hands and feet clear of pinch points.
If riding liftgate, make sure load is stable and footing is solid. P/N 282522-01 (B)



Read and understand all instructions and WARNINGS before use.

DECAL SHEET
P/N 282522-01
FIG. 64-1

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DECAL POSITIONS



MAXON PLATE
P/N 280004-01



SERIAL PLATE (REF)

WARNING
Incorrect use of battery power could result in personal injury and equipment damage. Never use the power terminals in this junction box to jump liftgate batteries that are in a low state of charge. Charge liftgate batteries directly at the battery terminals.
P/N 283023-01

BATTERY WARNING DECAL
P/N 283023-01



QR PARTS DECAL
P/N 299349-03

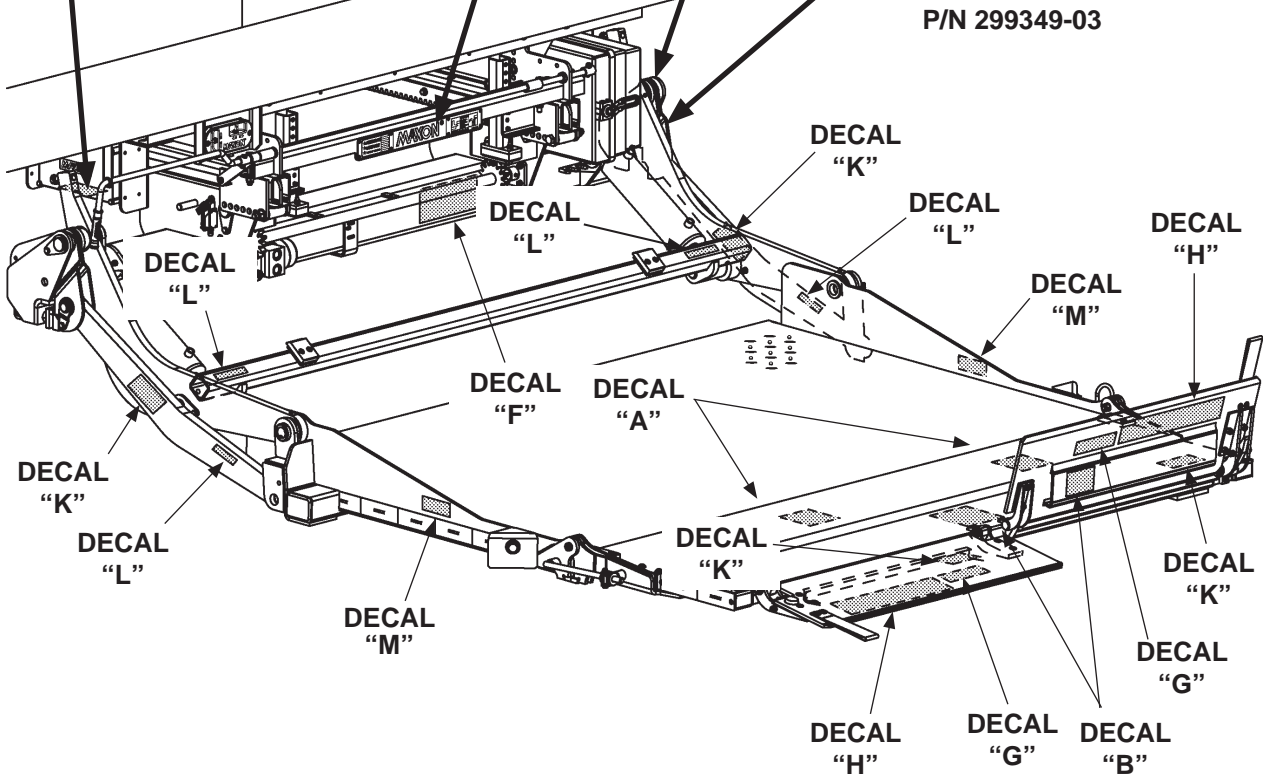
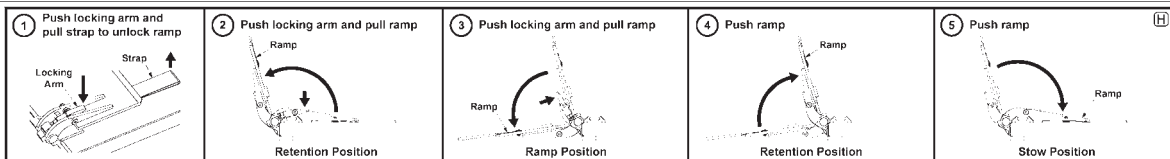
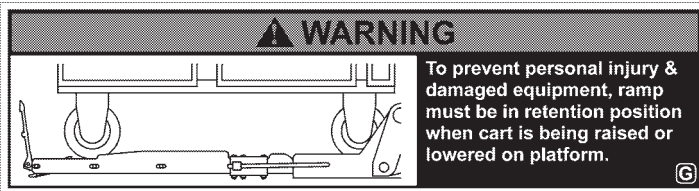
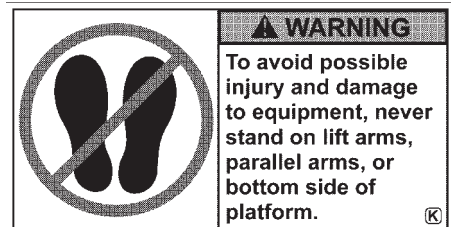


FIG. 65-1

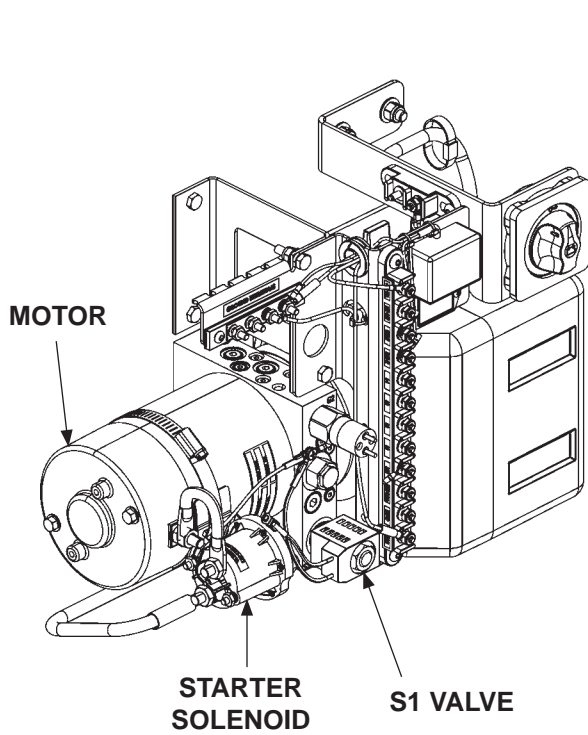
MAXON 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713



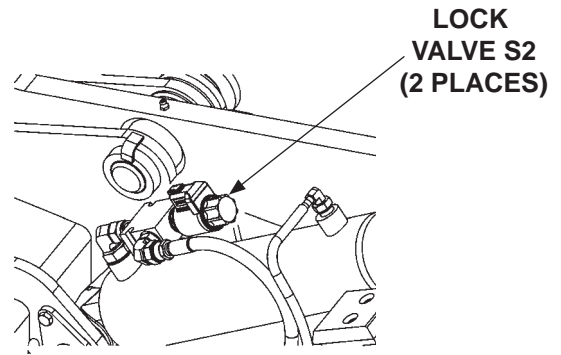
DECAL SHEET
P/N 267432-03
FIG. 66-1

SYSTEM DIAGRAMS

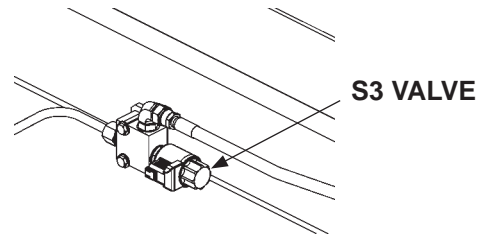
PUMP & MOTOR SOLENOID OPERATION - SINGLE PUMP



POWER UNIT
FIG. 67-1



LOCK VALVE S2
(RH CYLINDER SHOWN)
FIG. 67-2



S3 VALVE
(BI-DIRECTIONAL)
FIG. 67-3

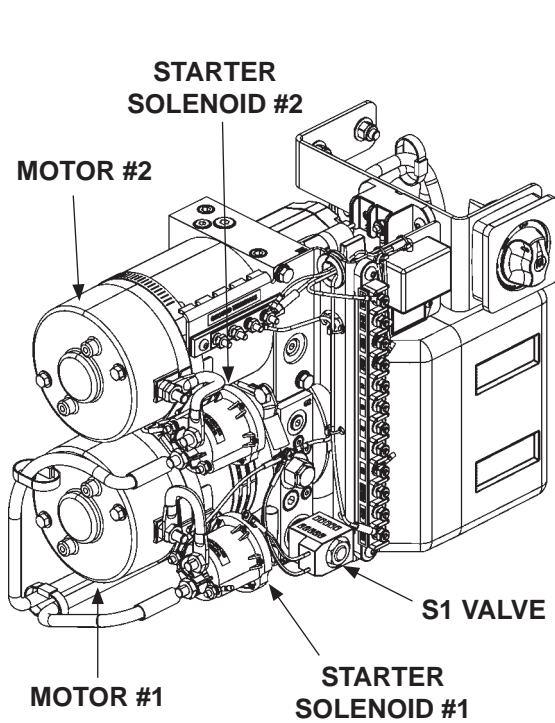
POWER UNIT MOTOR & SOLENOID OPERATION				
LIFTGATE FUNCTION	SOLENOID OPERATION (✓ MEANS ENERGIZED)			
	MOTOR	VALVE S1	VALVE S3	LOCK VALVES S2
RAISE	✓	-	-	✓
LOWER (GD)	-	✓	-	✓
LOWER (PD)	✓	✓	-	✓
SLIDE OUT	✓	-	✓	-
SLIDE IN	✓	✓	✓	-

REFER TO VALVES SHOWN ON
HYDRAULIC SCHEMATIC

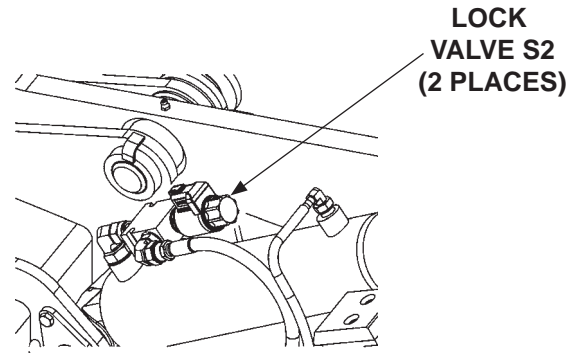
TABLE 67-1

SYSTEM DIAGRAMS - Continued

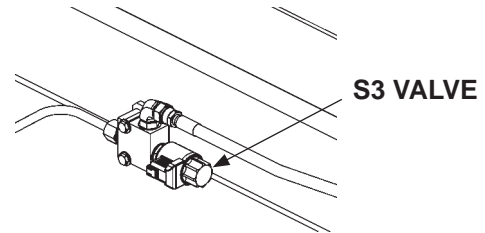
PUMP & MOTOR SOLENOID OPERATION - DUAL PUMPS



**POWER UNIT
FIG. 68-1**



**LOCK VALVE S2
(RH CYLINDER SHOWN)
FIG. 68-2**



**S3 VALVE
(BI-DIRECTIONAL)
FIG. 68-3**

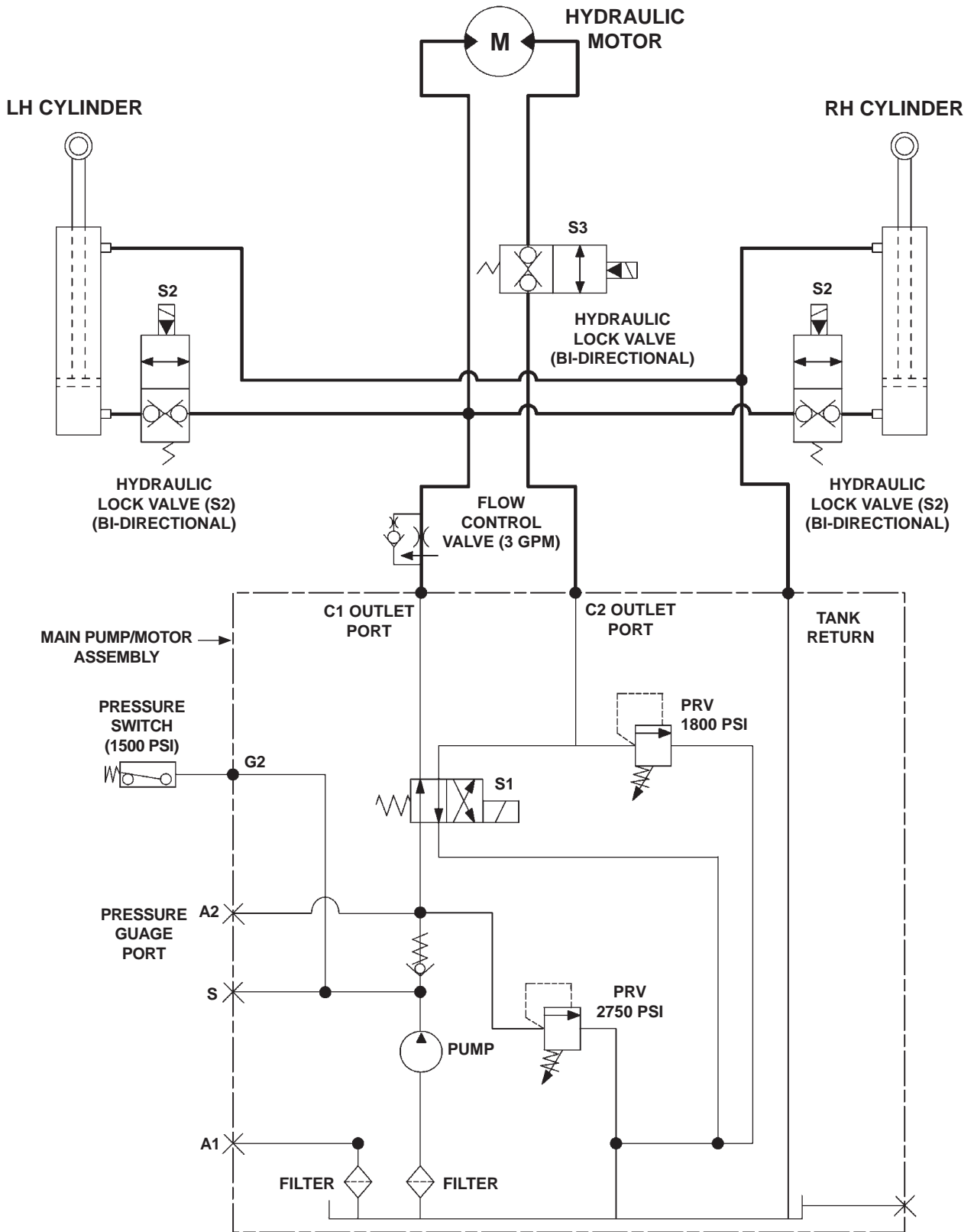
POWER UNIT MOTOR & SOLENOID OPERATION				
LIFTGATE FUNCTION	SOLENOID OPERATION (✓ MEANS ENERGIZED)			
	MOTOR (#1 OR #2)	VALVE S1	VALVE S3	LOCK VALVES S2
RAISE	✓	-	-	✓
LOWER (GD)	-	✓	-	✓
LOWER (PD)	✓	✓	-	✓
SLIDE OUT	✓	-	✓	-
SLIDE IN	✓	✓	✓	-

REFER TO VALVES SHOWN ON
HYDRAULIC SCHEMATIC

TABLE 68-1

SYSTEM DIAGRAMS - Continued

HYDRAULIC SCHEMATIC - SINGLE PUMP GRAVITY DOWN



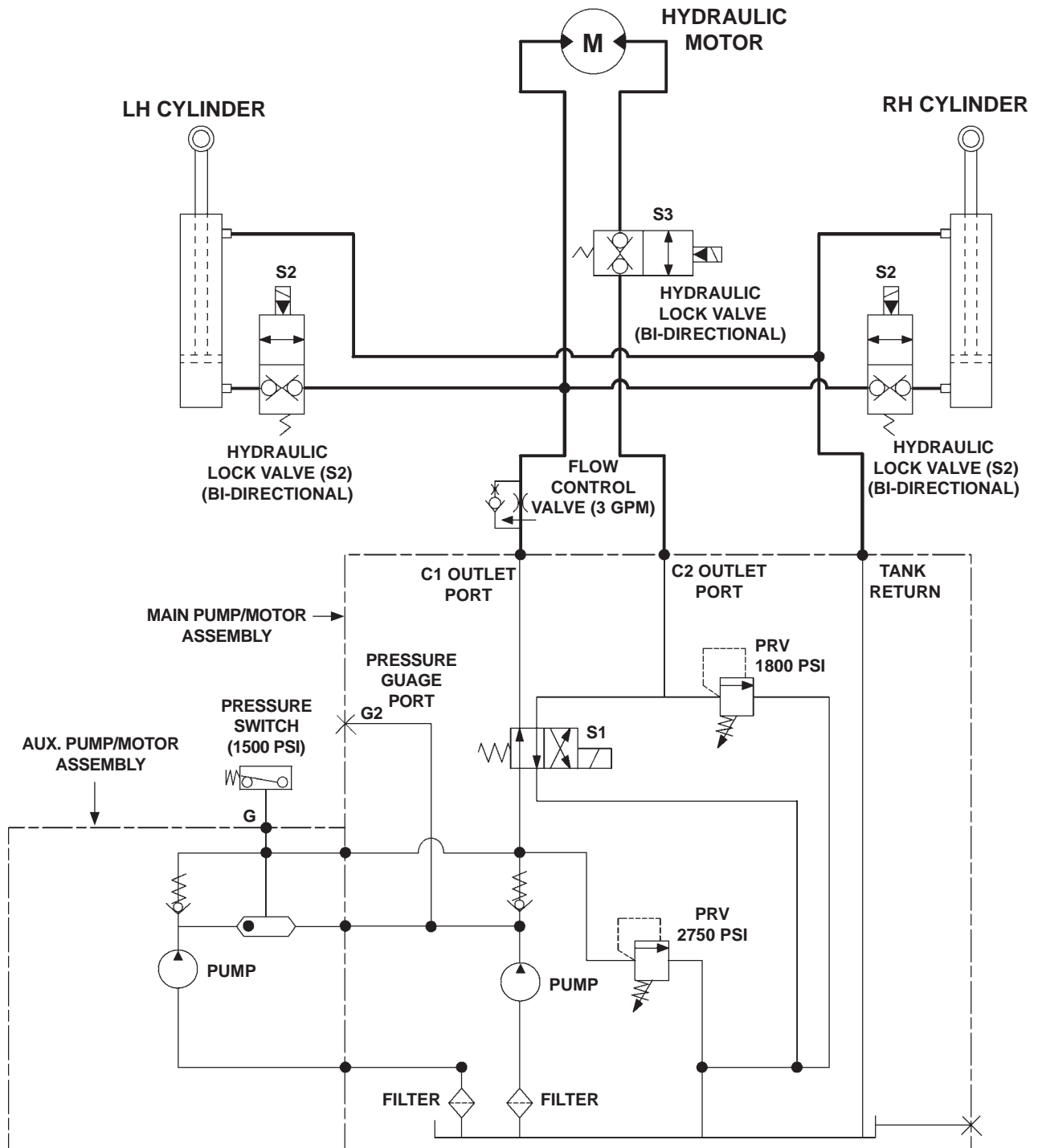
NOTE: PRV (PRESSURE RELIEF VALVE)

FIG. 69-1

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SYSTEM DIAGRAMS - Continued

HYDRAULIC SCHEMATIC - DUAL PUMP GRAVITY DOWN

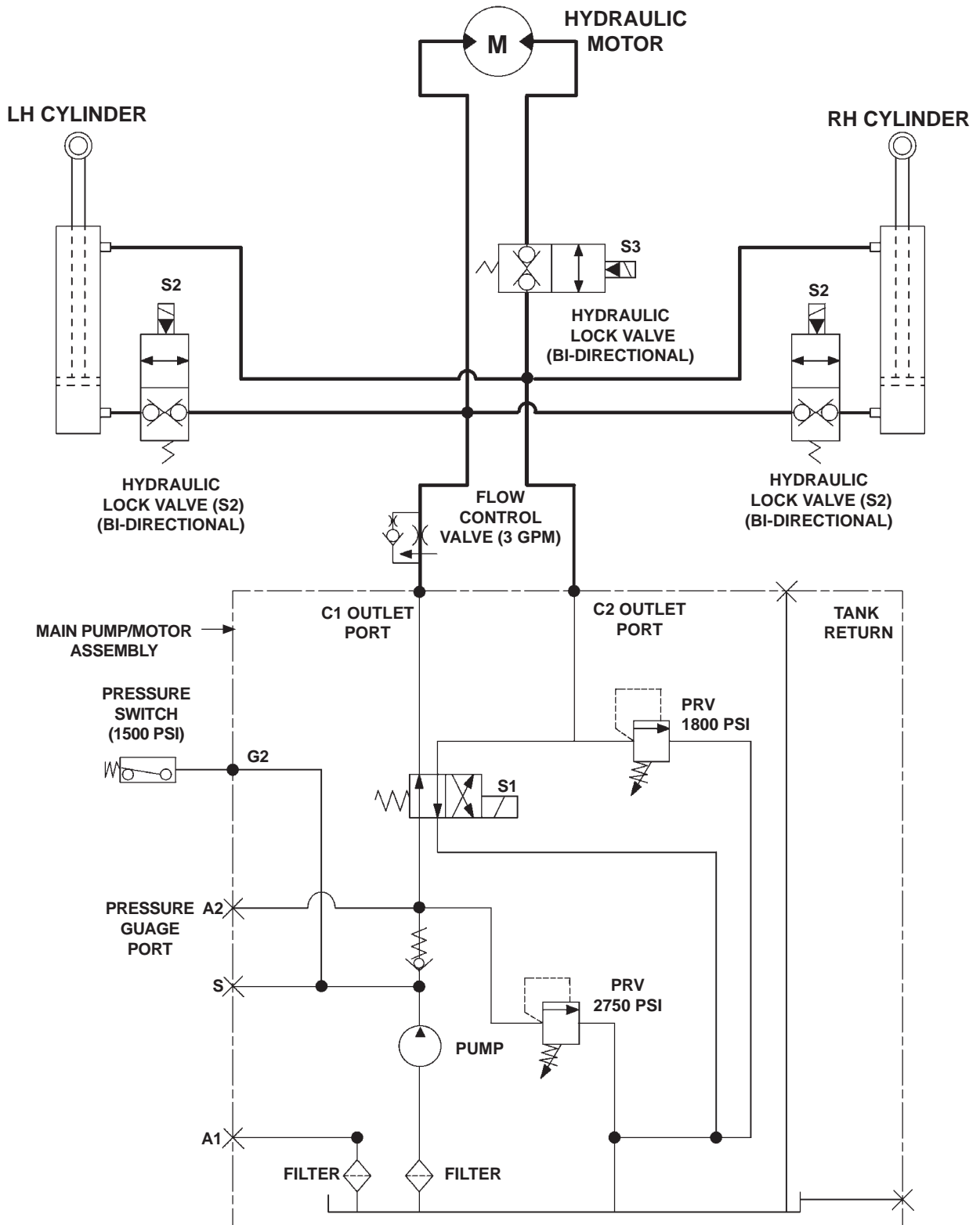


NOTE: PRV (PRESSURE RELIEF VALVE)

FIG. 70-1

SYSTEM DIAGRAMS - Continued

HYDRAULIC SCHEMATIC - SINGLE PUMP POWER DOWN

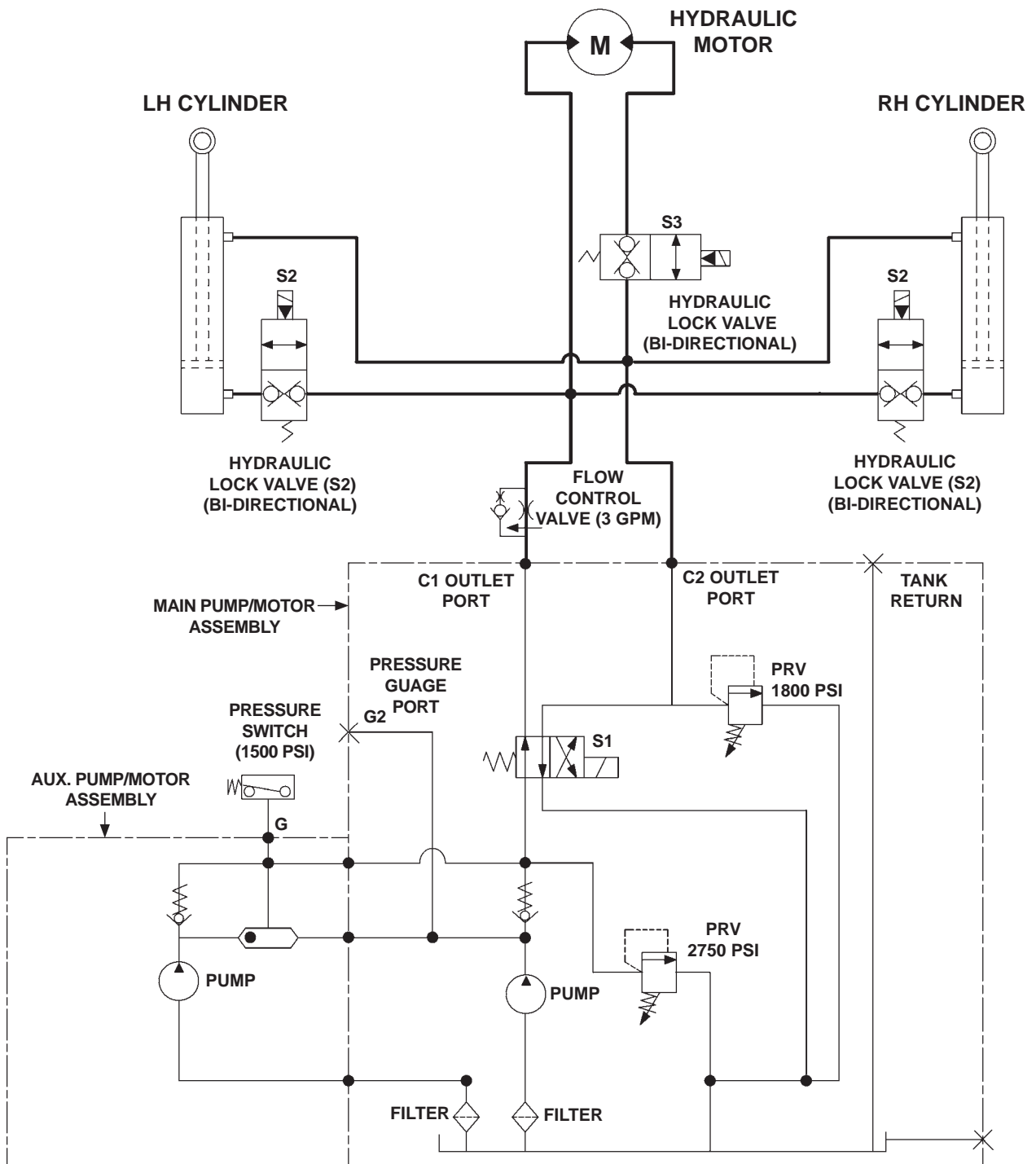


NOTE: PRV (PRESSURE RELIEF VALVE)

FIG. 71-1

SYSTEM DIAGRAMS - Continued

HYDRAULIC SCHEMATIC - DUAL PUMP POWER DOWN



NOTE: PRV (PRESSURE RELIEF VALVE)

FIG. 72-1

SYSTEM DIAGRAMS - Continued

ELECTRICAL SCHEMATIC, 12V, GRAVITY DOWN, WITH MAX ECU

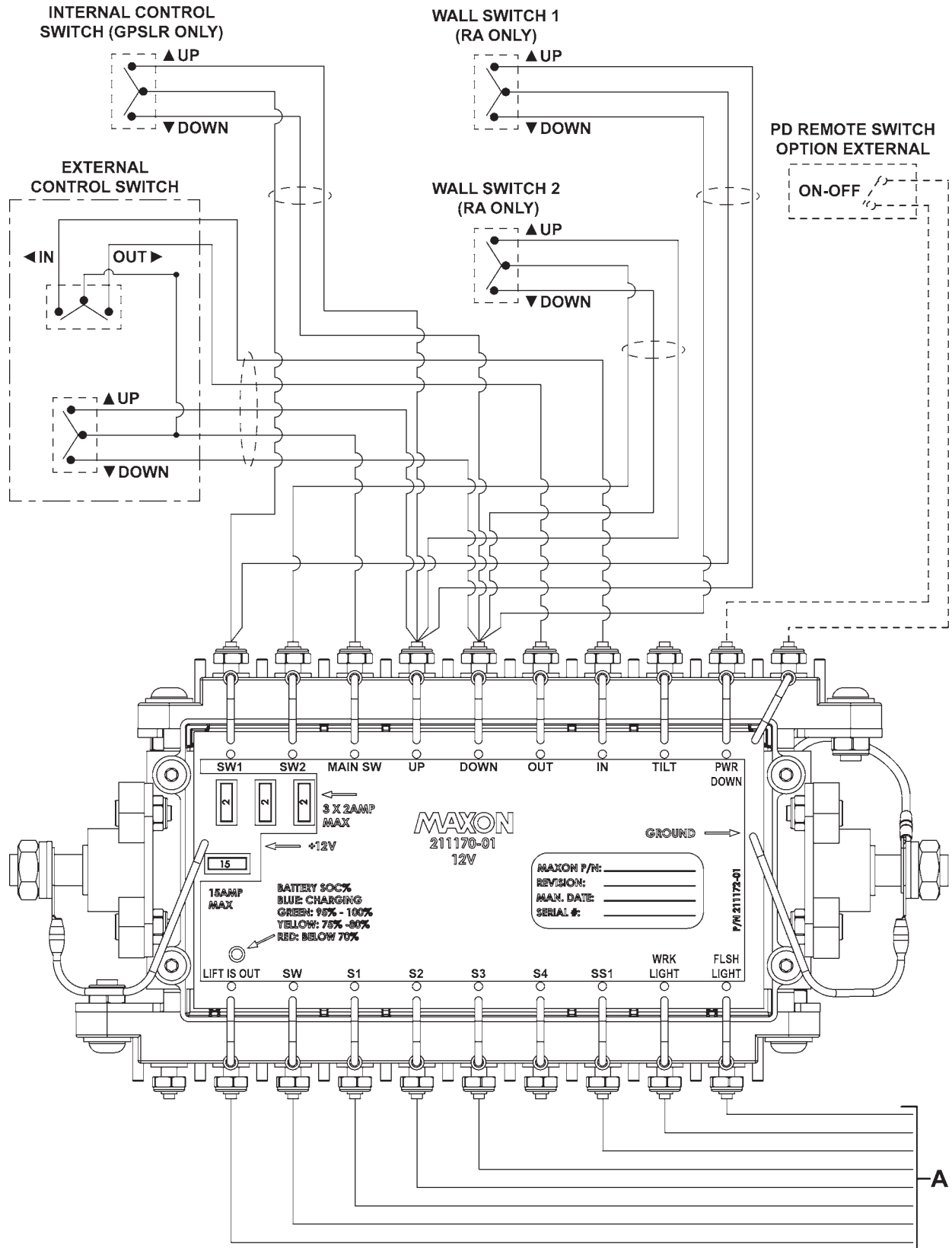


FIG. 73-1

ELECTRICAL SCHEMATIC, 12V, GRAVITY DOWN, WITH MAX ECU - Continued

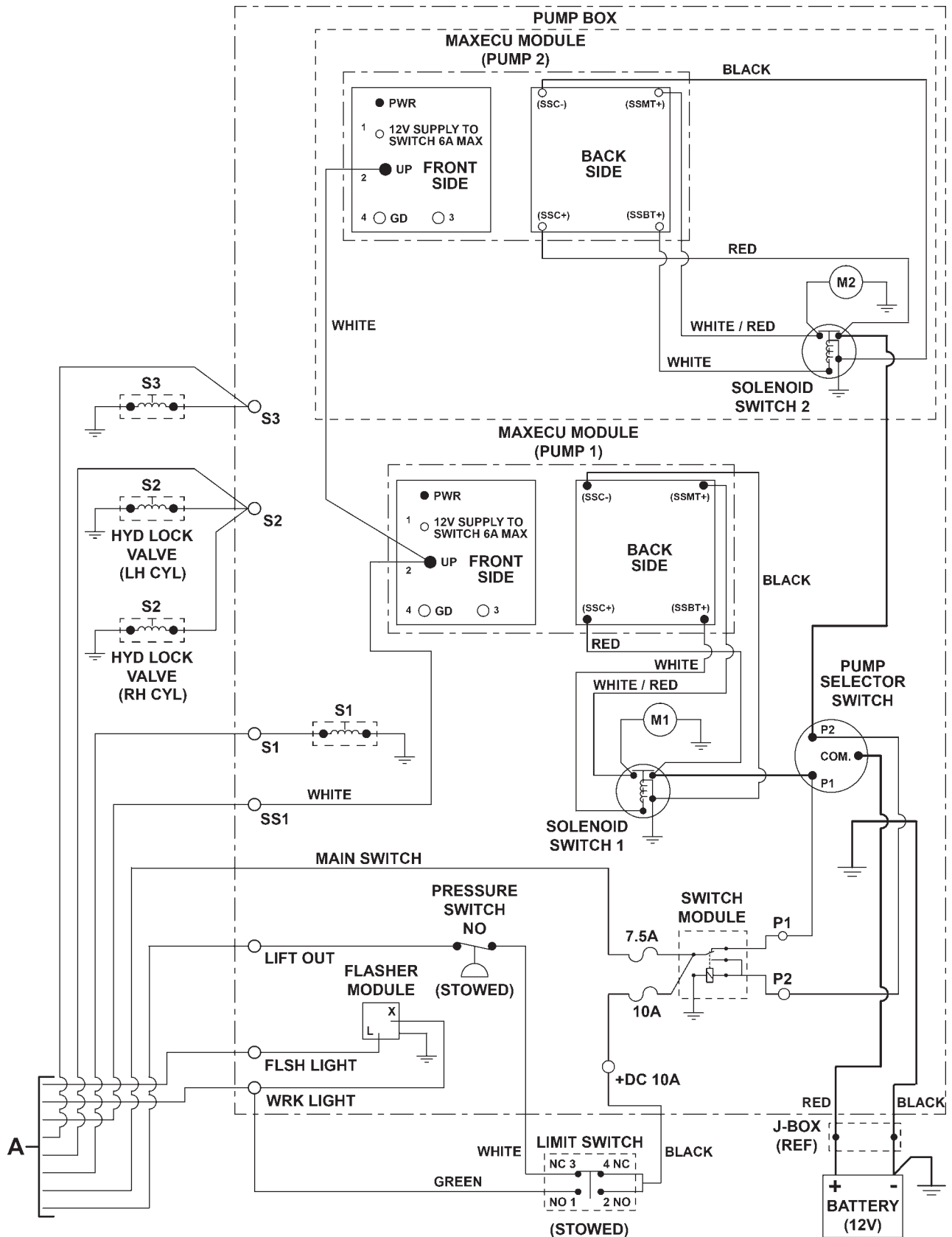


FIG. 74-1

SYSTEM DIAGRAMS - Continued

ELECTRICAL SCHEMATIC, 12V, POWER DOWN, WITH MAX ECU

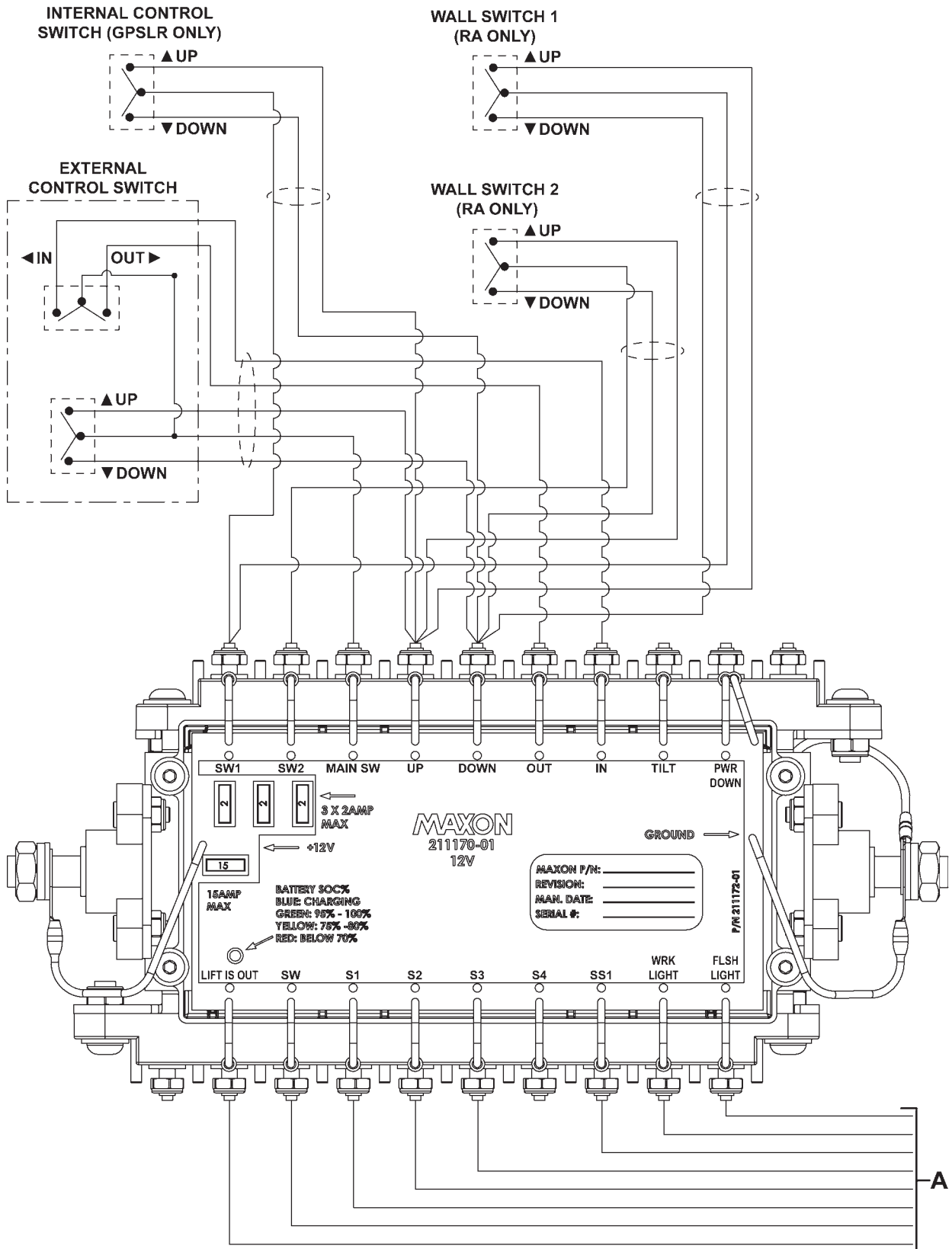


FIG. 75-1

ELECTRICAL SCHEMATIC, 12V, POWER DOWN, WITH MAX ECU - Continued

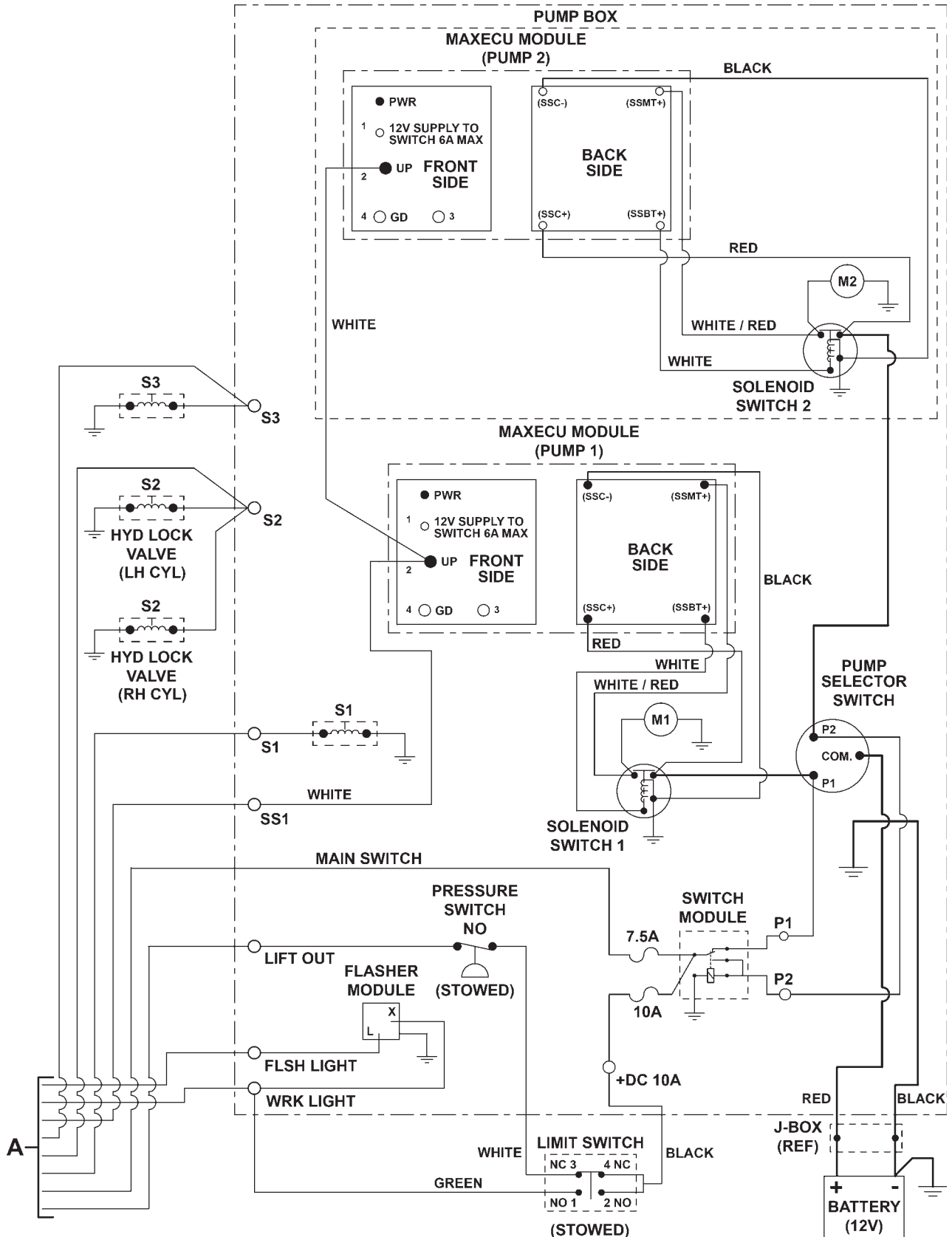
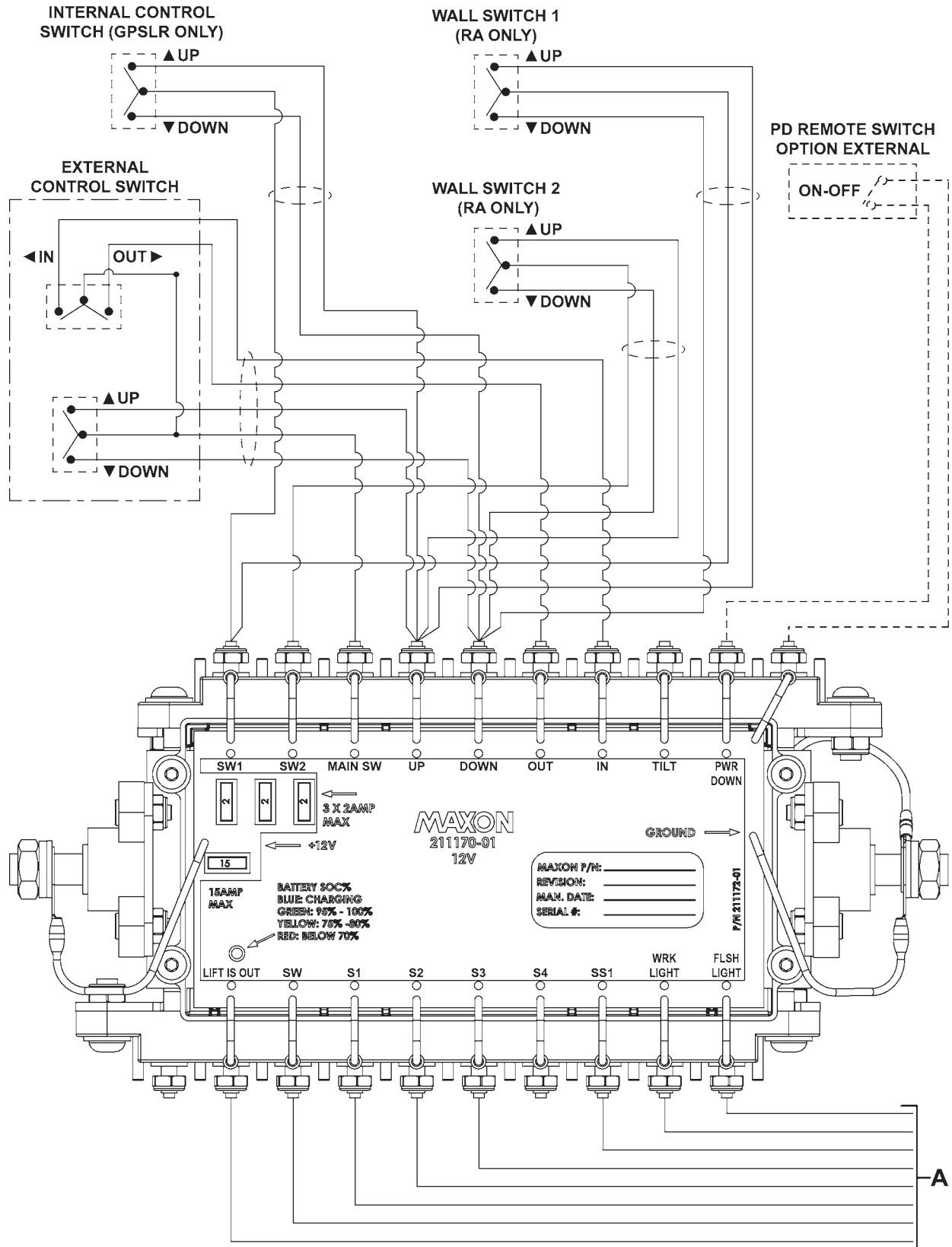


FIG. 76-1

SYSTEM DIAGRAMS - Continued

ELECTRICAL SCHEMATIC 12V/24V, GRAVITY DOWN



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ELECTRICAL SCHEMATIC 12V/24V, GRAVITY DOWN - Continued

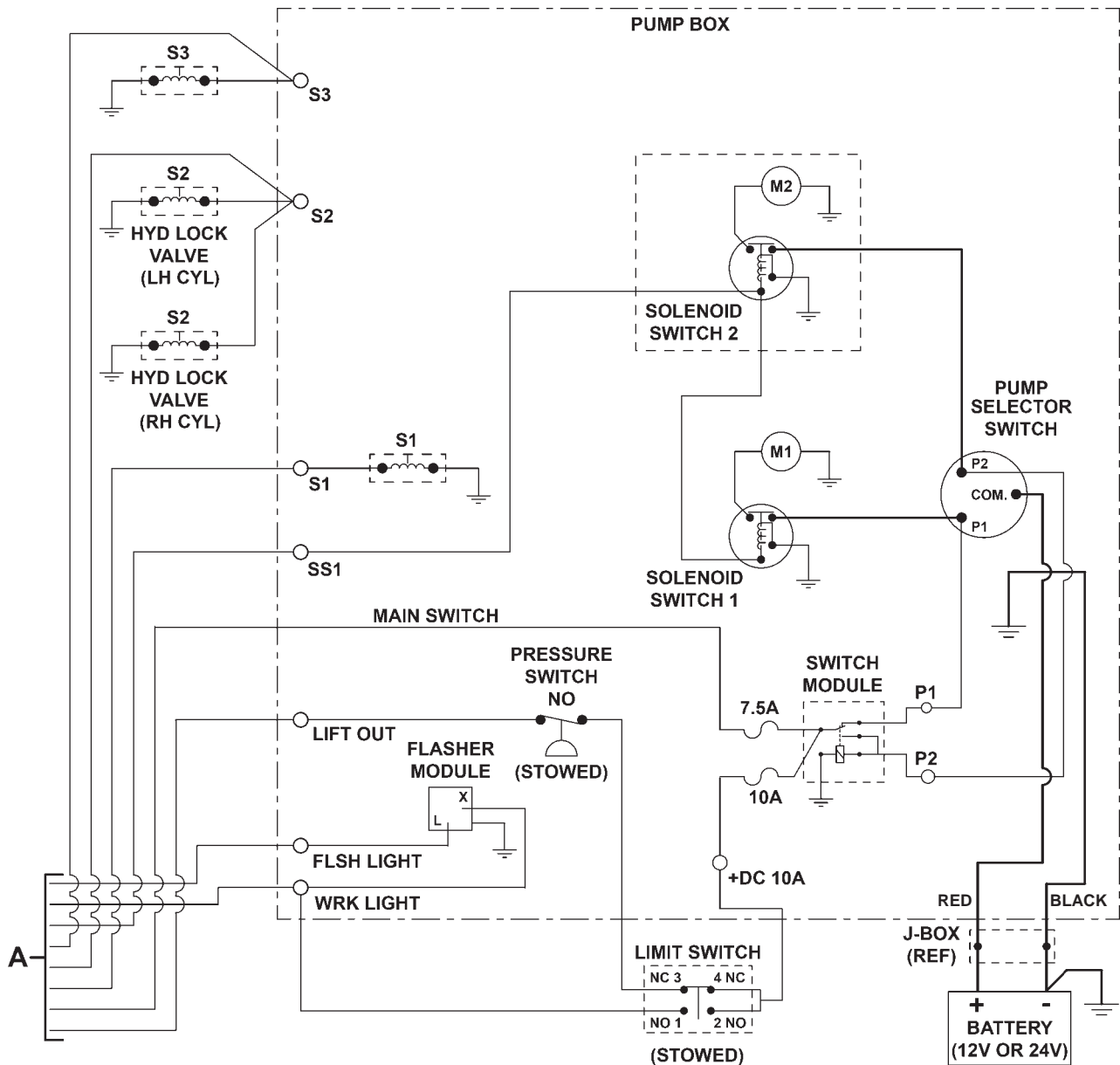


FIG. 78-1

SYSTEM DIAGRAMS - Continued

ELECTRICAL SCHEMATIC, 12V/24V, POWER DOWN

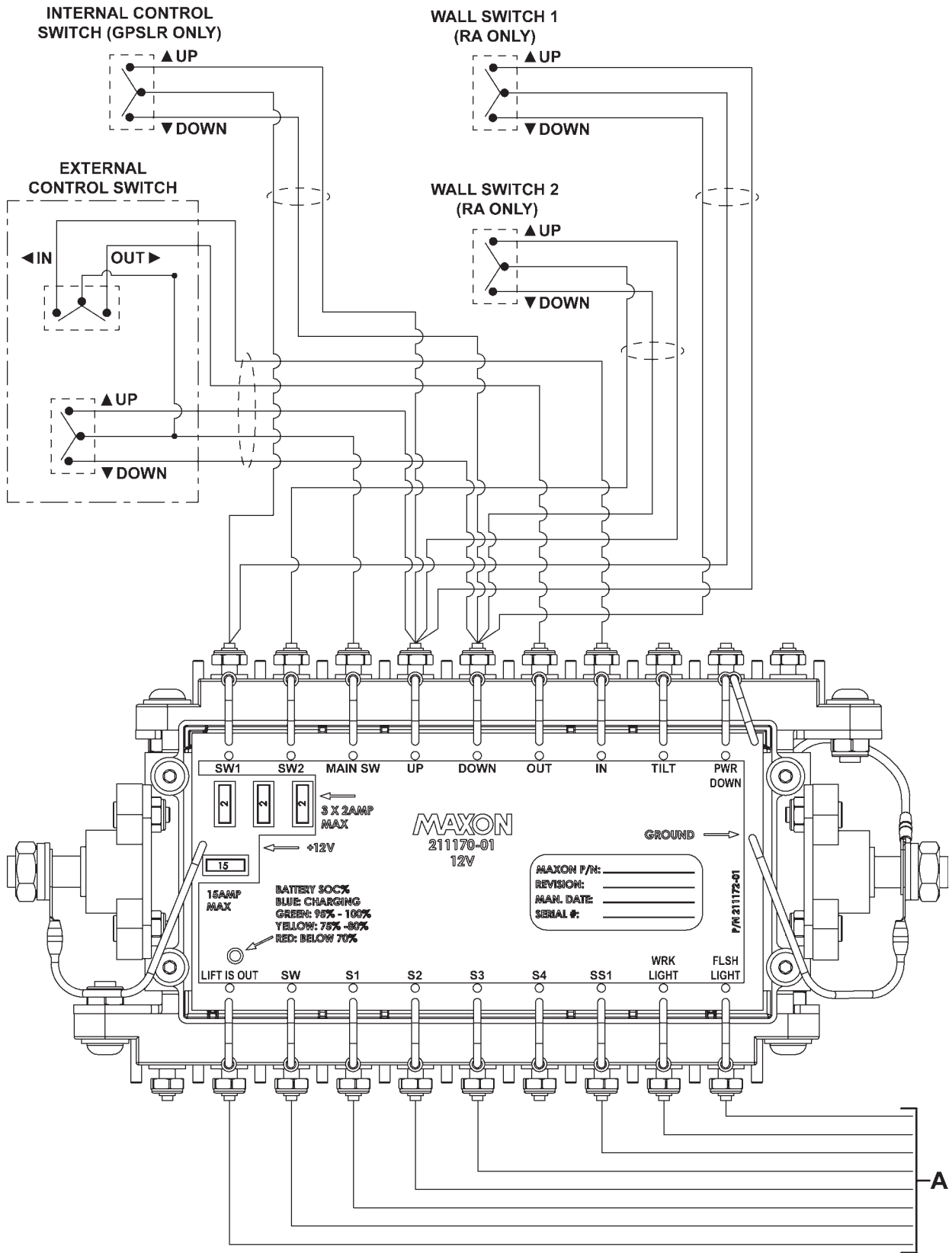


FIG. 79-1

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ELECTRICAL SCHEMATIC 12V/24V, POWER DOWN - Continued

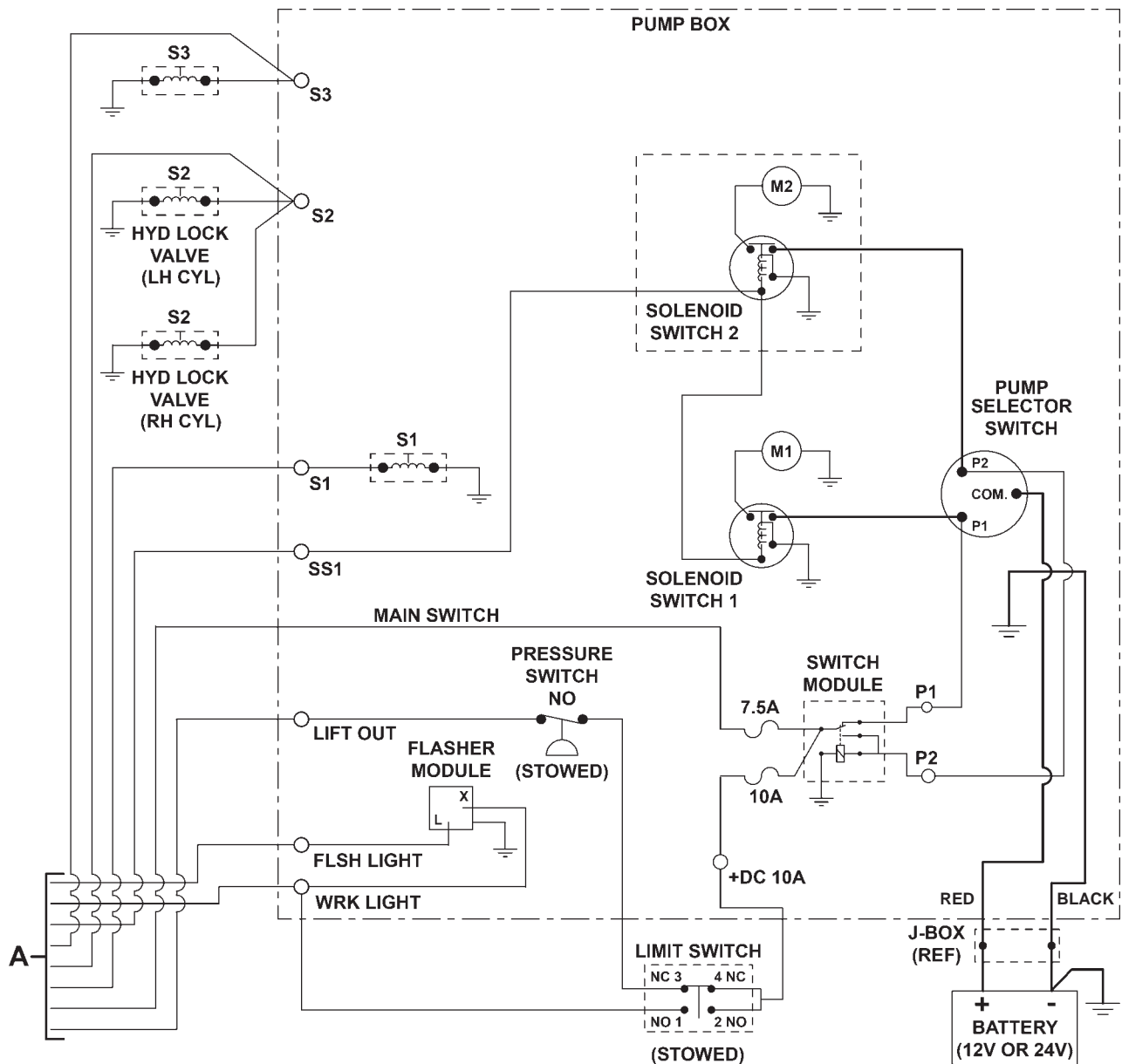


FIG. 80-1

OPTIONS OPTIONAL LIFTGATE COMPONENTS

KITS	PART NO.
POWER CABLE	
POWER CABLE, 20 FT.	289231-02
POWER CABLE, 30 FT.	289231-03
POWER CABLE, 40 FT.	289231-04
POWER CABLE, 50 FT.	289231-05
POWER CABLE, 60 FT.	289231-06
POWER CABLE, 12 FT.	289231-07
ELECTRICAL	
CIRCUIT BREAKER (150 AMP)	296504-150
HAND HELD CONTROL	211185-01
WORK LIGHT	289175-01
SAFETY LIGHT, 12VDC FOR 86" WIDE PLATFORM	289520-01
SAFETY LIGHT, 12VDC FOR 60" WIDE PLATFORM	289520-02
SAFETY LIGHT, 12VDC FOR 52" WIDE PLATFORM	289520-03
BATTERY BOX ASSEMBLY	
2 BATTERIES, FOR DIRECT CHARGING & CHARGER	289690-01
2 BATTERIES, FOR DIRECT CHARGING	289690-02
2 BATTERIES, WITH CHARGER BRACKET	289690-03
4 BATTERIES, FOR DIRECT CHARGING & CHARGER	289690-11
4 BATTERIES, FOR DIRECT CHARGING	289690-12
4 BATTERIES, WITH CHARGER BRACKET	289690-13
BATTERY CHARGER	
PHILLIPS, STA-CHARGE ASSEMBLY WITH FLAT MOUNTING PLATE	298544-03
PURKEY'S SELECT/DIRECT CHARGING PLATE	289986-01
MECHANICAL	
HANDLE, STOW UNLOCK, 17" LG.	289160-01
HANDLE, STOW UNLOCK, 24" LG.	289160-02
RAILING INSTALLATION, GPLSR / RA	299021-01
MUD GUARD ASSEMBLY	225216
STABILIZER LEG POWER UNIT	288833-01
MISCELLANEOUS	
TRAFFIC CONE	268893-01

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MAXON®

PRE-DELIVERY INSPECTION FORM

Model: _____

Date: _____

Serial Number: _____

Technician: _____

Pre-Installation Inspection:

- Correct model
- Correct capacity
- Correct platform size
- Correct options
- Manuals & decals

Structural Inspection:

- Inspect alignment of final assembly.
- Inspect pump box secure mounting.
- Inspect all installation welds.
- Check roll pins, bolts and fasteners.
- Inspect tightness of hardware used to secure liftgate to vehicle.
- Ensure platform ramp touches ground when shackles are 1" above ground, and platform & flipover are level & touching the ground.

Hydraulic Inspection:

- Ensure hydraulic oil is 3-3/8" above bottom of the reservoir, or full mark on the fill decal on reservoir, if equipped.
- Check hydraulic fittings in pump box for leaks.
- Check hydraulic line connections for leaks.

Electrical Inspection:

- Check power/charge plug and terminal.
- Check for tight wire connections.
- Circuit breaker (150A) installed in battery box (if equipped) or by truck/tractor battery.
- Ensure batteries are fully charged, all cable connections are tight & tie-downs are tight.
- Inspect all solenoid connections.
- Check all wiring harness connections.
- Check electrical cable connections are tight & secure.

Operation Inspection:

NOTE: The following times are for 60" bed height, steel platform with aluminum flipover, ISO 32 hydraulic fluid, & temperature at 70°F. Times are for reference only and may vary for larger platforms, smaller platforms, or temperature changes.

- Check operation of all main and optional control switches.

RA-35

- Unloaded platform lowers in **10 sec.**
- Unloaded platform raises in **14 sec.**
- Unloaded platform stows IN in **9-10 sec.**
- Unloaded platform to OUT position in **6-7 sec.**

RA-45

- Unloaded platform lowers in **7 to 11 sec.**
- Unloaded platform raises in **9 to 13 sec.**
- Unloaded platform stows IN in **12 sec.**
- Unloaded platform to OUT position in **8 sec.**
- All RA:** Unloaded platform raises and lowers evenly. At the extension plate, platform must not be more than 1/8" uneven, from side to side.
- All RA:** Platform stores securely under vehicle body.
- Check if cycle counter works.
- Decals in correct location and legible.

Verify all lights are operational

- Platform lights turn **ON** when platform is unfolded, and turn **OFF** when platform is stowed.
- Taillights, stop lights, turn lights, and backup lights turn **ON** and **OFF** correctly.

