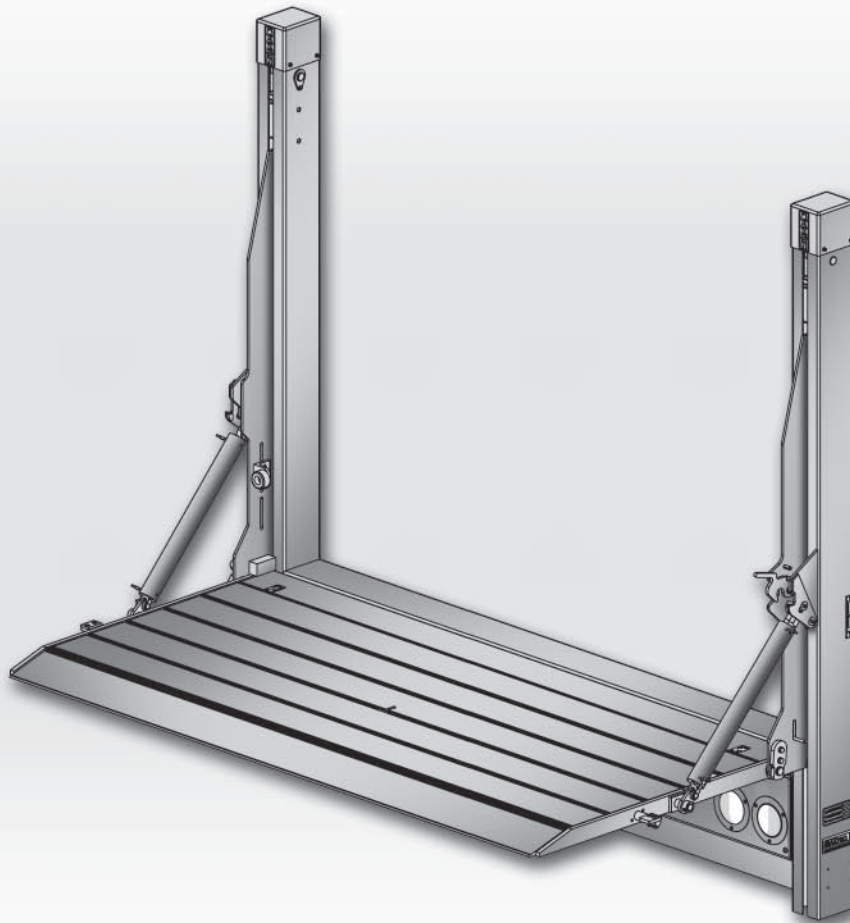


M-12-20  
REV. E  
JULY 2016



# MAXON<sup>®</sup> DMD Series

## INSTALLATION MANUAL DMD-22 & DMD-33



To find **maintenance & parts** information for your **DMD Liftgate**, go to **[www.maxonlift.com](http://www.maxonlift.com)**. Click the **PRODUCTS, RAILIFT & DMD** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

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## SUMMARY OF CHANGES: M-12-20, REVISION E

PAGE	DESCRIPTION OF CHANGE
COVER	Updated REV and date of release.
22	Removed instructions for installing copper lug on fused power cable. Copper lug is now factory-installed.
41	Removed (1) 10amp fuse from standard electrical schematic.

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

## **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.
- 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.

## **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.

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# VEHICLE REQUIREMENTS

**NOTE:** Installer is responsible for ensuring vehicle meets Federal, State, and Local standards and regulations.

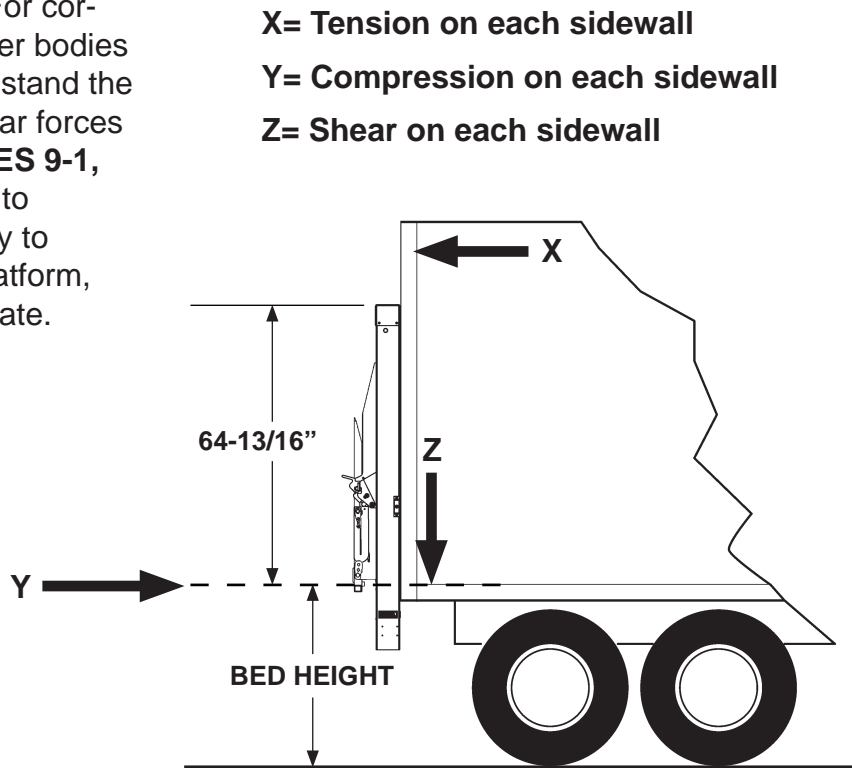
## BODY STRENGTH

### **⚠ WARNING**

**Consult truck body manufacturer for truck body strength data. Make sure the forces created by the Liftgate are within the limits prescribed by the truck body manufacturer.**

**NOTE:** Maximum Operating Bed Height for body is **54" (Unloaded)**. Minimum is **30" (Loaded)**. Do not install this Liftgate on vehicle bodies equipped with swing open doors.

The DMD is a body-mounted Liftgate that puts forces on the side walls of truck and trailer bodies (**FIG. 8-1**). For correct installation, truck and trailer bodies must be strong enough to withstand the tension, compression and shear forces shown in **FIG. 8-1**. Use **TABLES 9-1**, and **9-2** on the following page to determine the forces that apply to the type of platform, size of platform, and load capacity of your Liftgate.



**FIG. 8-1**



## VEHICLE REQUIREMENTS - Continued BODY STRENGTH - Continued

### DMD-22 FORCES

MODEL CAPACITY		96" WIDE		102" WIDE	
		P/F SIZE	(X) (Y) LBS.	(Z) LBS.	(X) (Y) LBS.
2200 LBS.	30	527	2936	531	2959
	36	606	2958	610	2982
	42	685	2980	692	3009
	48	767	3005	774	3032
	54	848	3026	857	3056
	60	932	3051	942	3083
	72	1103	3098	1117	3136

**TABLE 9-1**

### DMD-33 FORCES

MODEL CAPACITY		96" WIDE		102" WIDE	
		P/F SIZE	(X) (Y) LBS.	(Z) LBS.	(X) (Y) LBS.
3300 LBS.	30	724	4036	724	4015
	36	831	4058	831	4037
	42	938	4080	938	4058
	48	1047	4105	1047	4081
	54	1157	4126	1157	4096
	60	1269	4151	1269	4121
	72	1495	4198	1495	4168

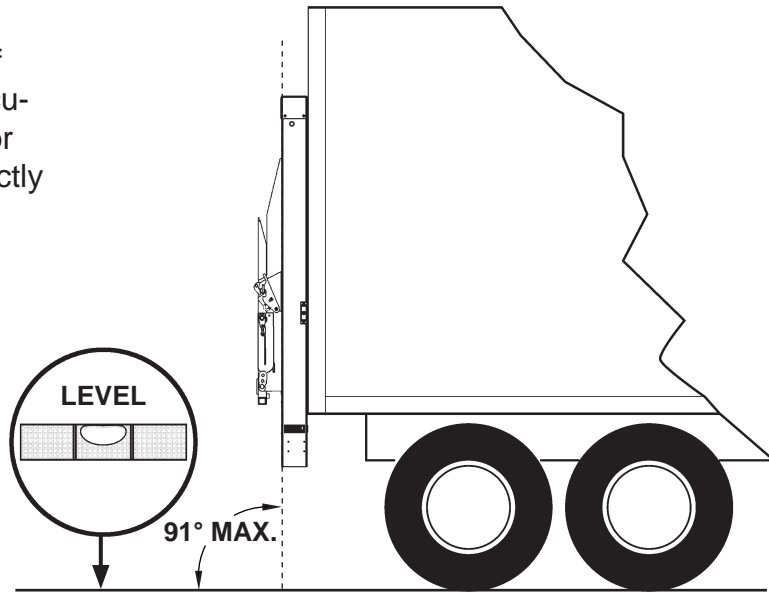
**TABLE 9-2**

# VEHICLE REQUIREMENTS - Continued

## INSTALLED LIFTGATE

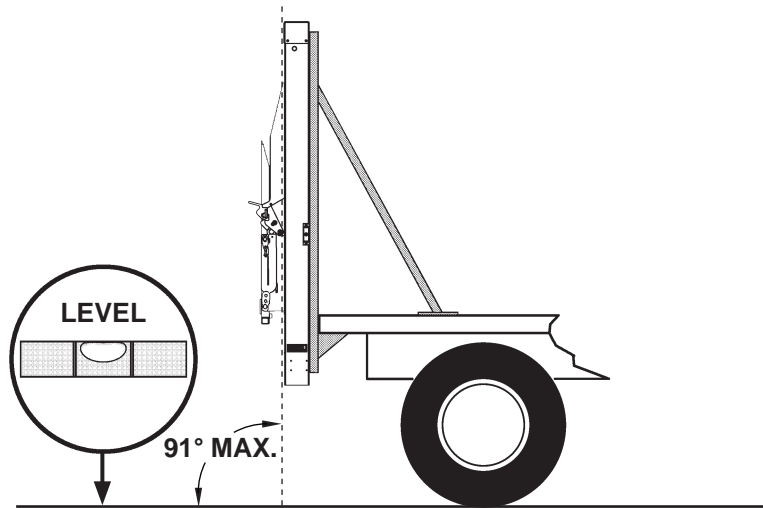
**NOTE:** If Liftgate columns exceed a 91 degree angle from level ground when installed on body, or if columns cannot be mounted flush against rear of vehicle, a steel filler may be used to bridge gap between vehicle body and Liftgate columns. Make sure the added materials and welds meet the **BODY STRENGTH** requirements shown on the previous pages.

1. With the vehicle parked on level ground, the columns of the DMD must be perpendicular to the ground (vertical) for the Liftgate to operate correctly (FIGS. 10-1 and 10-2).



LIFTGATE INSTALLED ON VAN BODY (COLUMNS SHOWN PERPENDICULAR TO LEVEL GROUND)

FIG. 10-1



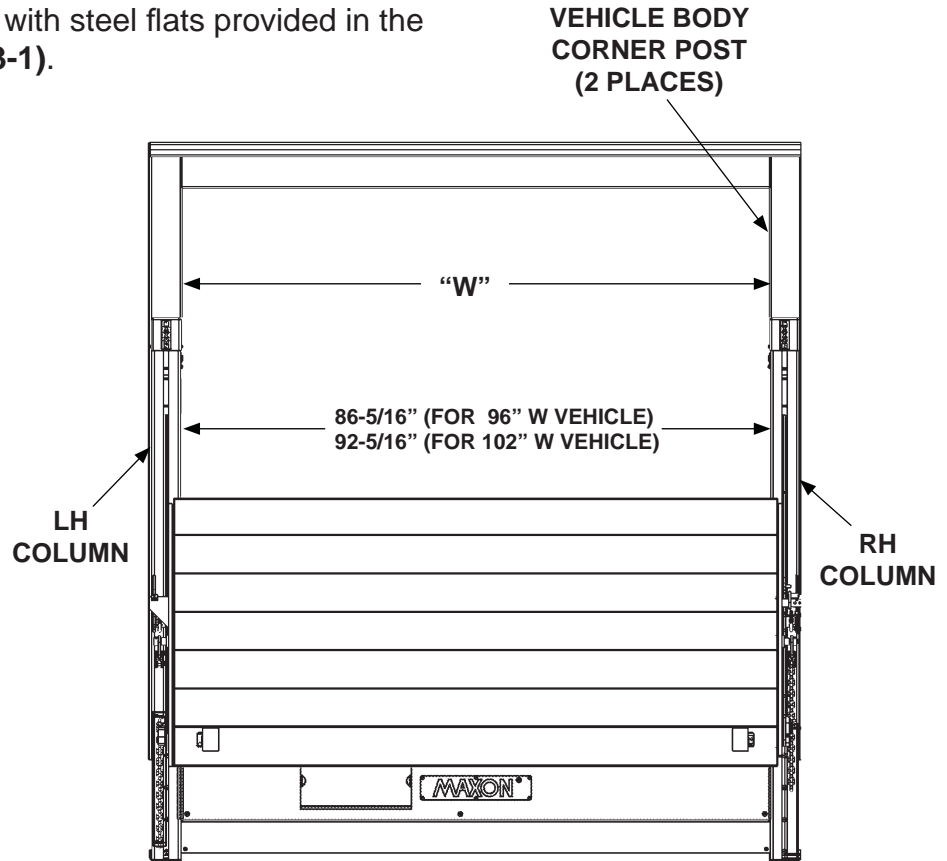
LIFTGATE INSTALLED ON FLAT BED (COLUMNS & SUPPORTS SHOWN PERPENDICULAR TO LEVEL GROUND)

FIG. 10-2

## VEHICLE REQUIREMENTS - Continued

**NOTE:** If the width of vehicle cargo door opening is greater than the distance between the Liftgate columns, the columns will require additional steel filler at the inboard edge of the column. If necessary, parts box contains 4" long steel flats for this purpose. Refer to **STEP 1** for instructions.

2. With Liftgate centered on vehicle body, each column should fit on the corner posts of vehicle body with little or no offset (**FIG. 11-1**). Some offset from corner posts is allowed on the inboard side of the columns if Liftgate is installed with steel flats provided in the parts box (**TABLE 13-1**).



LIFTGATE COLUMNS FITTED TO BODY CORNER POSTS WITH LITTLE OR NO OFFSET  
FIG. 11-1

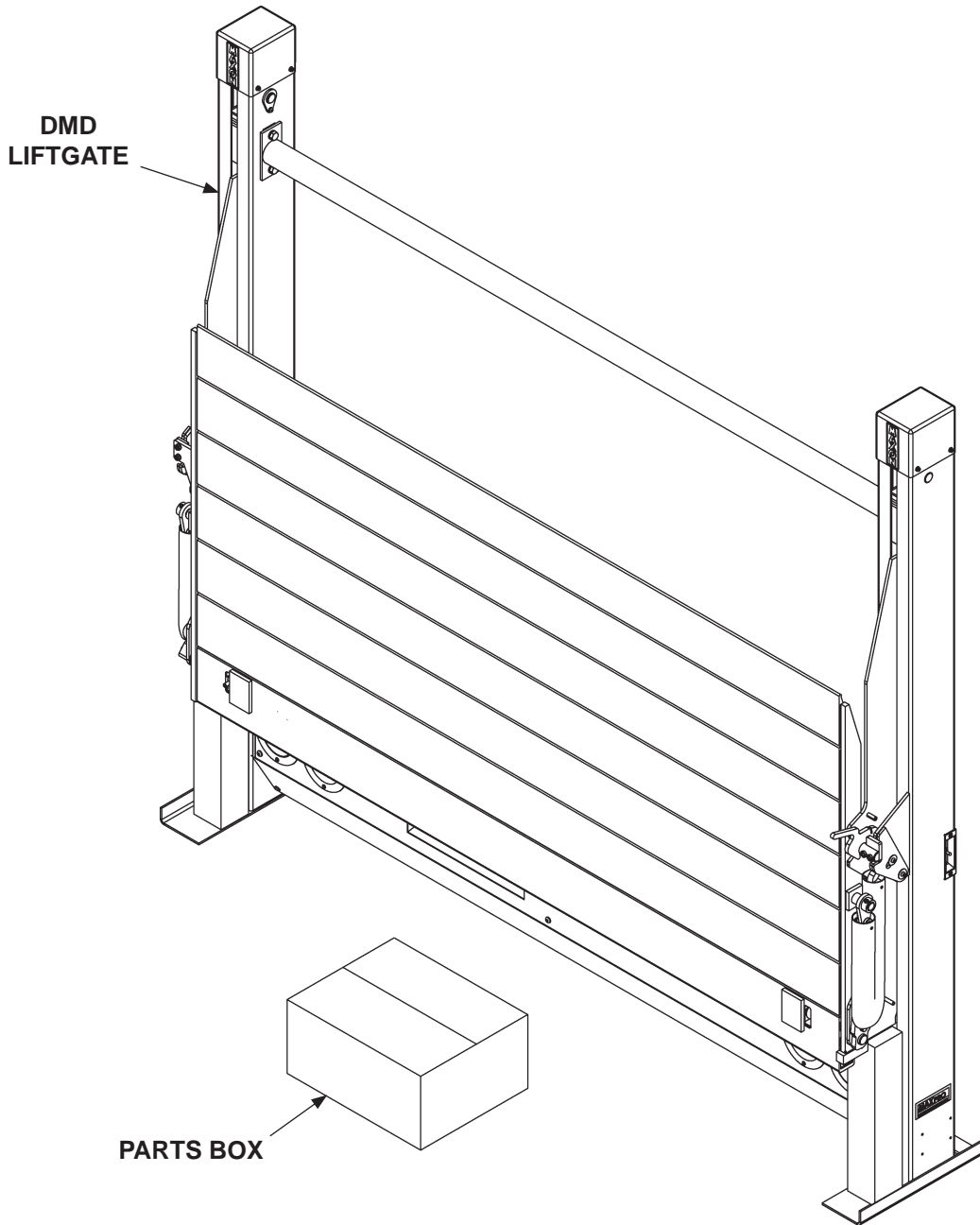
# LIFTGATE INSTALLATION COMPONENTS

**NOTE:** Make sure you have 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](mailto:cservice@maxonlift.com)**



**FIG. 12-1**

# INSTALLATION PARTS BOX

**NOTE:** To find **maintenance & parts** information for your **DMD Liftgate**, go to [www.maxonlift.com](http://www.maxonlift.com). Click the **PRODUCTS, RAILIFT & DMD** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

ITEM	NOMENCLATURE OR DESCRIPTION	QTY	PART NUMBER
<b>REF</b>	DMD-22 PARTS BOX	1	285382-01
	DMD-33 PARTS BOX		285382-02
	DMD-22 (POWER CLOSER) PARTS BOX		285382-03
	DMD-33 (POWER CLOSER) PARTS BOX		285382-04
<b>1</b>	SPRING CLIP, 1/2" X 1-3/8"	7	050079
<b>2</b>	TAPPING SCREW, #10 x 1/2" LG.	4	030458
<b>3</b>	FUSED POWER CABLE, 175 AMP, 38' LG.	1	264422
<b>4</b>	JIFFY CLAMP, #130	1	125674
<b>5</b>	CLAMP, #8 RUBBER LOOM	3	214663
<b>6</b>	CABLE ASSEMBLY, 2GA, 6' LG.	1	251871-19
<b>7</b>	BUTT SPLICE, 10GA	1	263348
<b>8</b>	HEX BOLT, 5/16-18 X 3/4" LG, GR8	1	900009-3
<b>9</b>	FLAT WASHER, 5/16" X 1/32" THICK	1	902000-8
<b>10</b>	EXTERNAL TOOTH WASHER, 5/16" X 1/32" THICK	1	903429-01
<b>11</b>	HEX NUT, 5/16"-18	1	901011-3
<b>12</b>	FLAT (STEEL), 3/16" THK X 3/4" W X 4" LG.	10	286183-01
<b>13</b>	DECAL & MANUAL KIT (DMD-22 ONLY)	1	285381-01
	DECAL & MANUAL KIT (DMD-33 ONLY)		285381-02
	DECAL & MANUAL KIT (DMD-22 POWER CLOSER)		285381-03
	DECAL & MANUAL KIT (DMD-33 POWER CLOSER)		285381-04
	A. INSTALLATION MANUAL	1	M-12-20
	B. OPERATION MANUAL	1	M-12-21
	D. DECALS (SEE DECAL PAGES IN THIS MANUAL)	1	220388-02 (DMD-33 ONLY)
		1	220388-03 (DMD-22 ONLY)
		1	282934-01
		1	282934-03 (POWER CLOSER ONLY)
		1	282847-01
		1	282897-02 (DMD-33 ONLY)
1		282897-01 (DMD-22 ONLY)	
1	284216-01		
1	289845-01 (POWER CLOSER ONLY)		

**TABLE 13-1**

# STEP 1 - PREPARE VEHICLE IF REQUIRED

**NOTE:** Perform the following step for flatbed vehicle body only. If vehicle body is not a flatbed, skip this step.

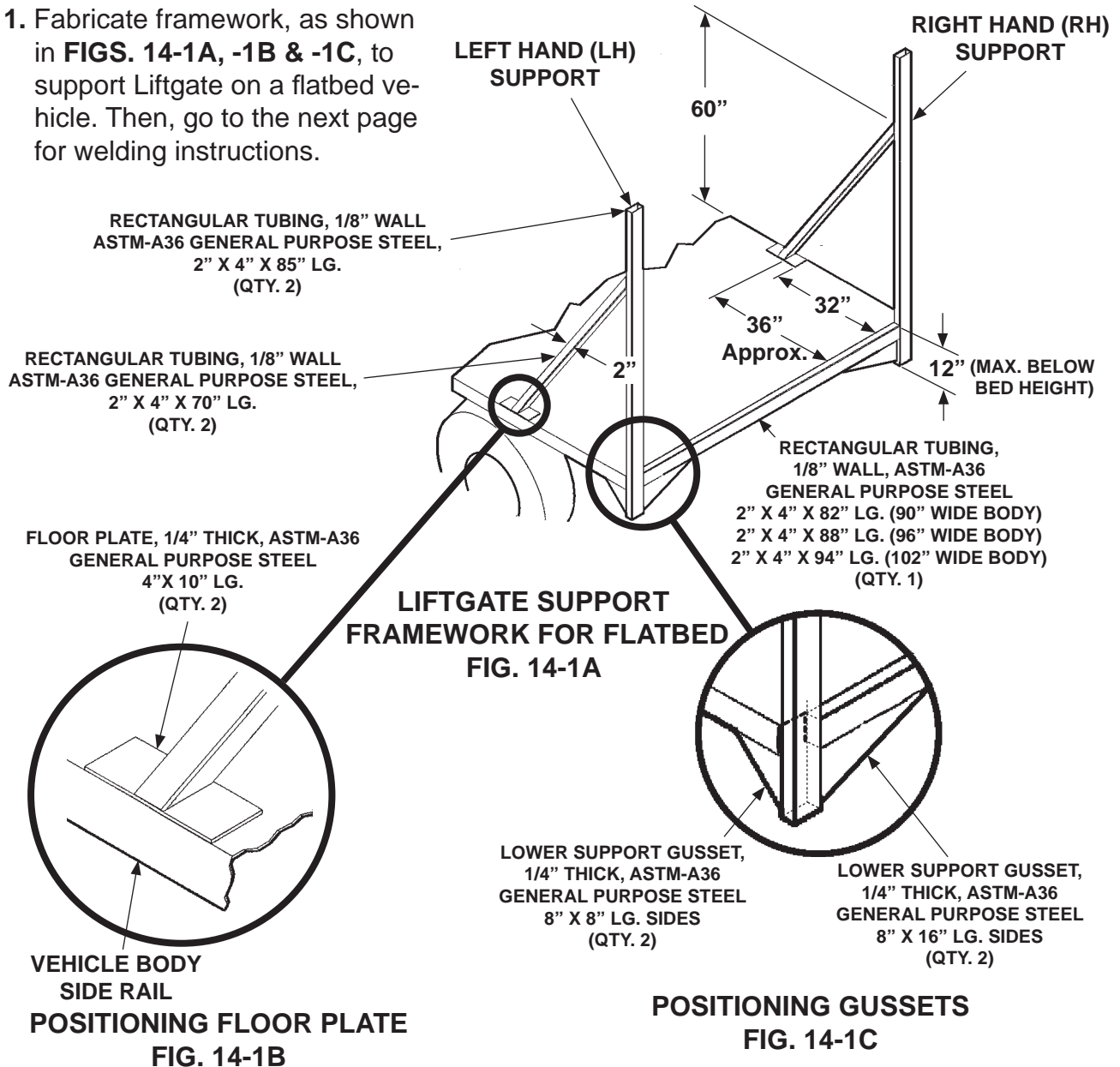
**NOTE:** LH and RH supports must be perpendicular to level ground. See **VEHICLE REQUIREMENTS, INSTALLED LIFTGATE.**

**NOTE:** Materials for support framework are not provided with Liftgate.

## ⚠ 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.

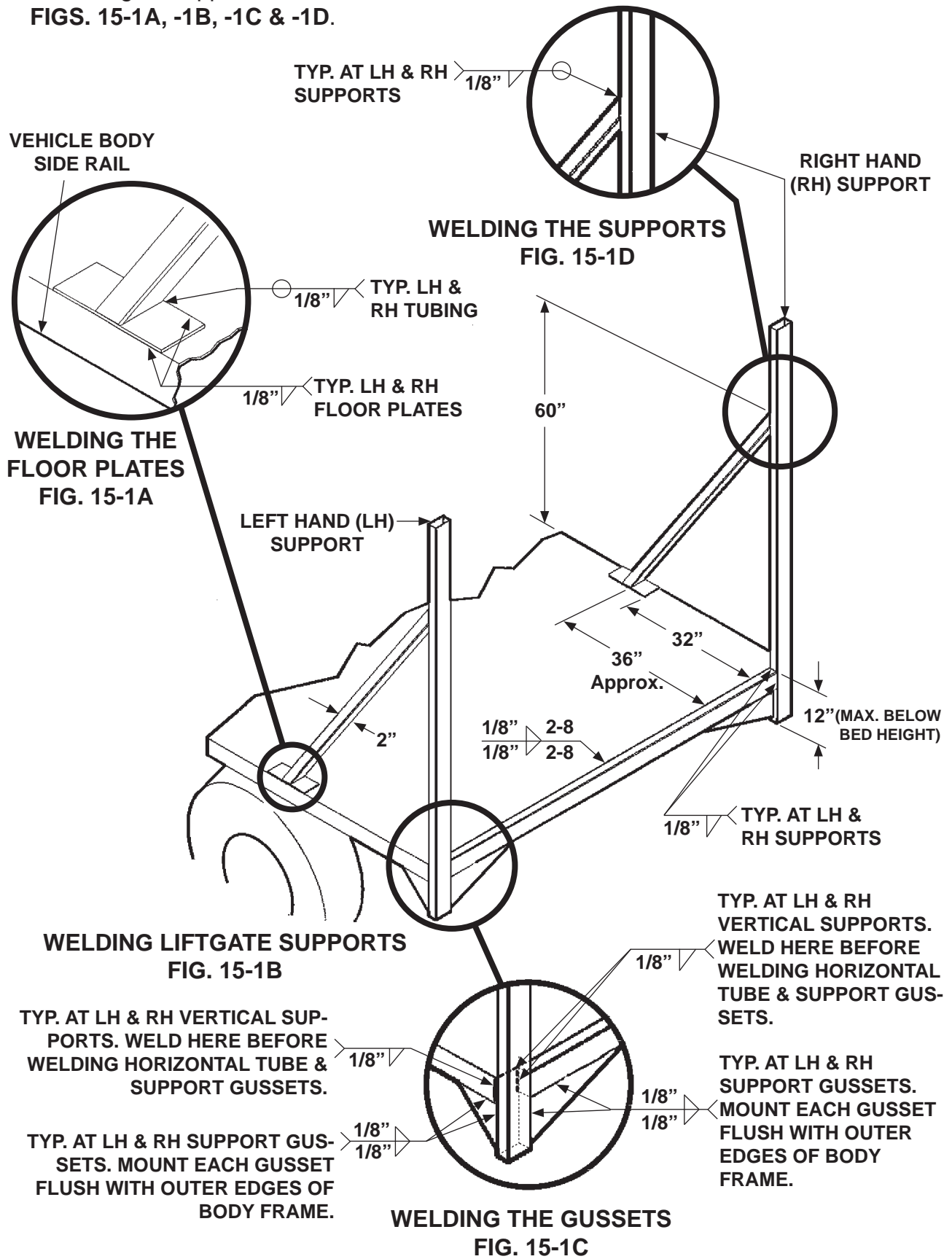
1. Fabricate framework, as shown in **FIGS. 14-1A, -1B & -1C**, to support Liftgate on a flatbed vehicle. Then, go to the next page for welding instructions.



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# STEP 1 - PREPARE VEHICLE IF REQUIRED - Continued

2. Weld Liftgate supports, as shown in FIGS. 15-1A, -1B, -1C & -1D.



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## STEP 2 - POSITION LIFTGATE WELDING LIFTGATE TO BODY

### ⚠ 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.

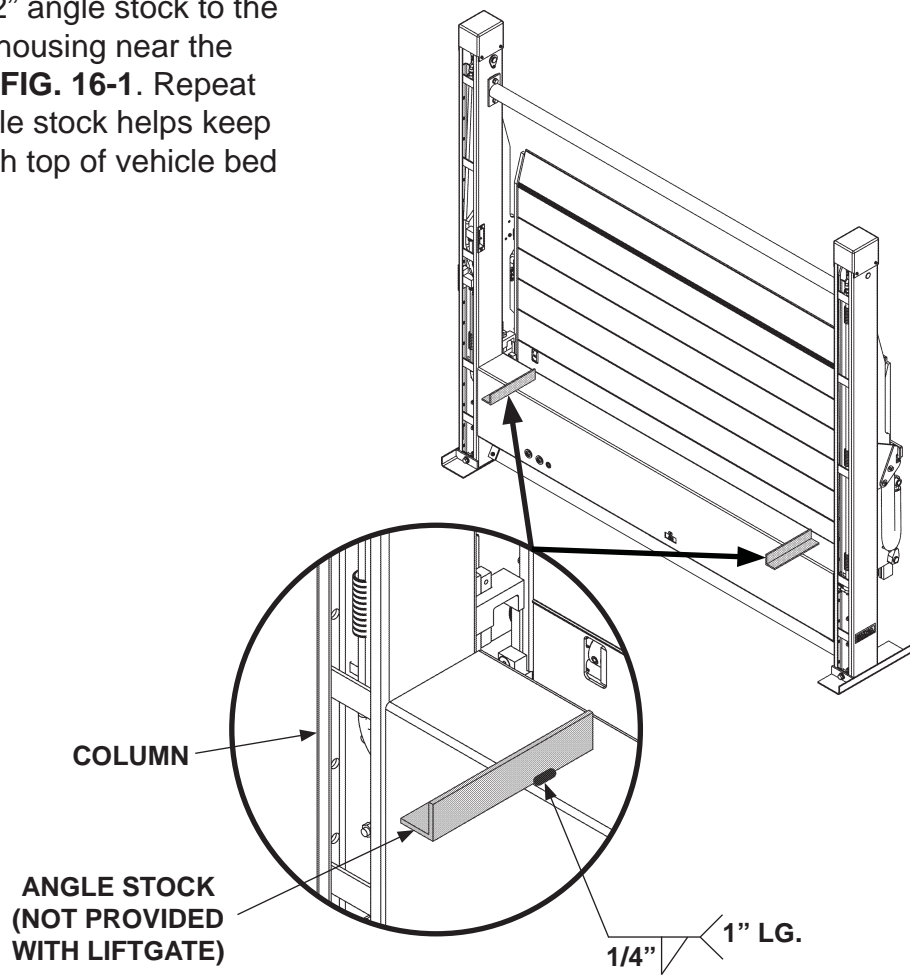
### CAUTION

To protect the original paint system, a 3" wide area of paint must be removed from all sides of the weld area before welding.

**NOTE:** Before welding main housing to vehicle body, make sure:

- Inboard edge at top of main housing is flush with the top of the rear sill on vehicle body.
- Top surface of main housing is level with the ground.

1. Weld 2 pieces of 10" X 2" angle stock to the top surface of the main housing near the LH column as shown in **FIG. 16-1**. Repeat for RH column. The angle stock helps keep extension plate flush with top of vehicle bed while installing Liftgate.

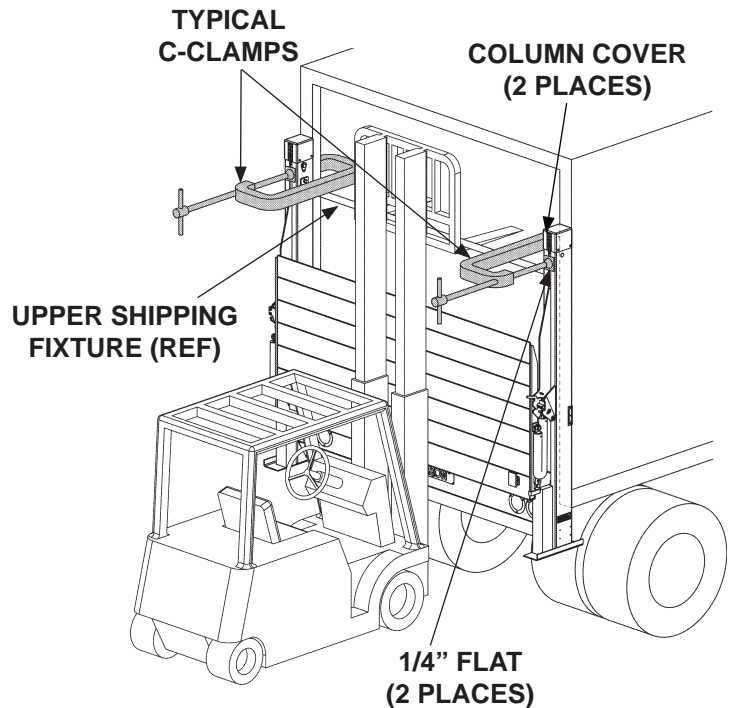




## STEP 2 - POSITION LIFTGATE - Continued

### WELDING LIFTGATE TO BODY - Continued

2. Use overhead hoist or forklift to center Lift-gate against the vehicle (FIG. 17-1). Let angle stock, welded to top of main housing, rest on the top surface of the vehicle bed.



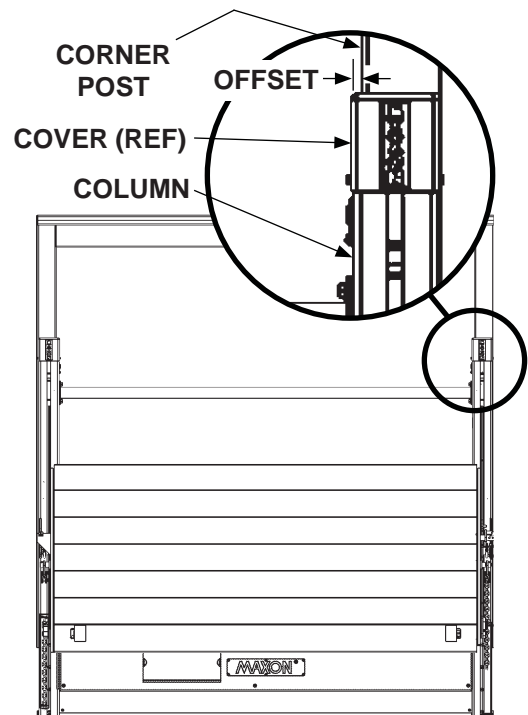
POSITIONING LIFTGATE ON  
VEHICLE BODY  
FIG. 17-1

3. Check for offset distance between body corner posts and the inboard edge of LH and RH columns (FIG. 17-2).

### CAUTION

Clamping columns to vehicle at top covers can damage the covers and will not securely clamp the columns. Clamp each column to body corner post below top covers and above upper shipping fixture. Place 1/4" steel flat (not provided by MAXON) between clamp and clamping surface.

4. Clamp top of each column to vehicle body to prevent gap (FIG. 17-2).



CHECKING OFFSET ON RH COLUMN  
FIG. 17-2

## STEP 2 - POSITION LIFTGATE - Continued

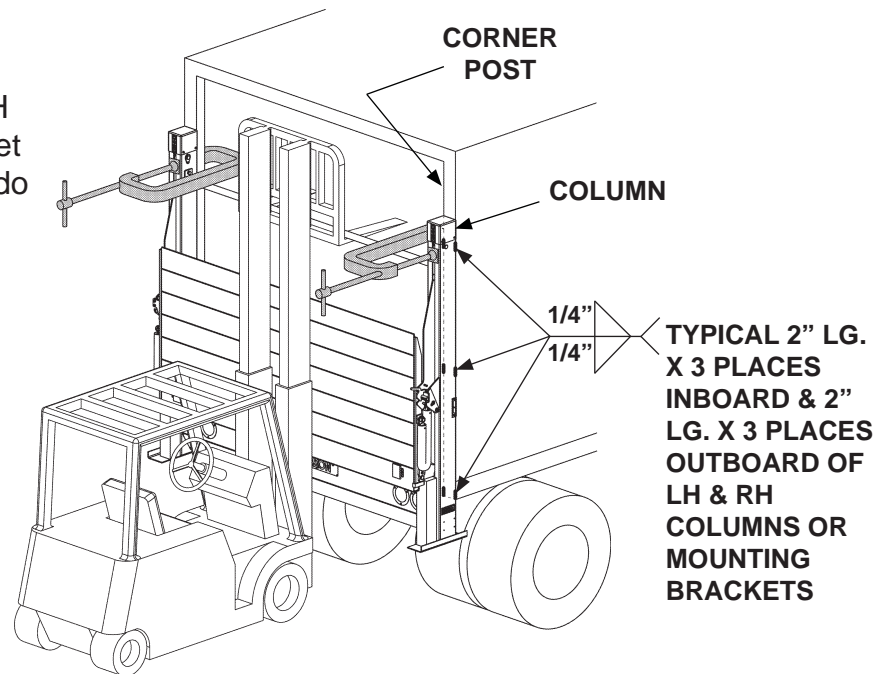
### WELDING LIFTGATE TO BODY - Continued

#### CAUTION

To protect the original paint system, a 3" wide area of paint must be removed from all sides of the weld area before welding.

**NOTE:** If there is measurable offset between body corner posts and the inboard side of each Liftgate column, weld two 4" long flats, between inboard side of each column and corner post.

5. Weld the RH and LH columns to vehicle body as shown in **FIG. 18-1**. If RH and LH columns are offset from body corner posts, do instruction 6.

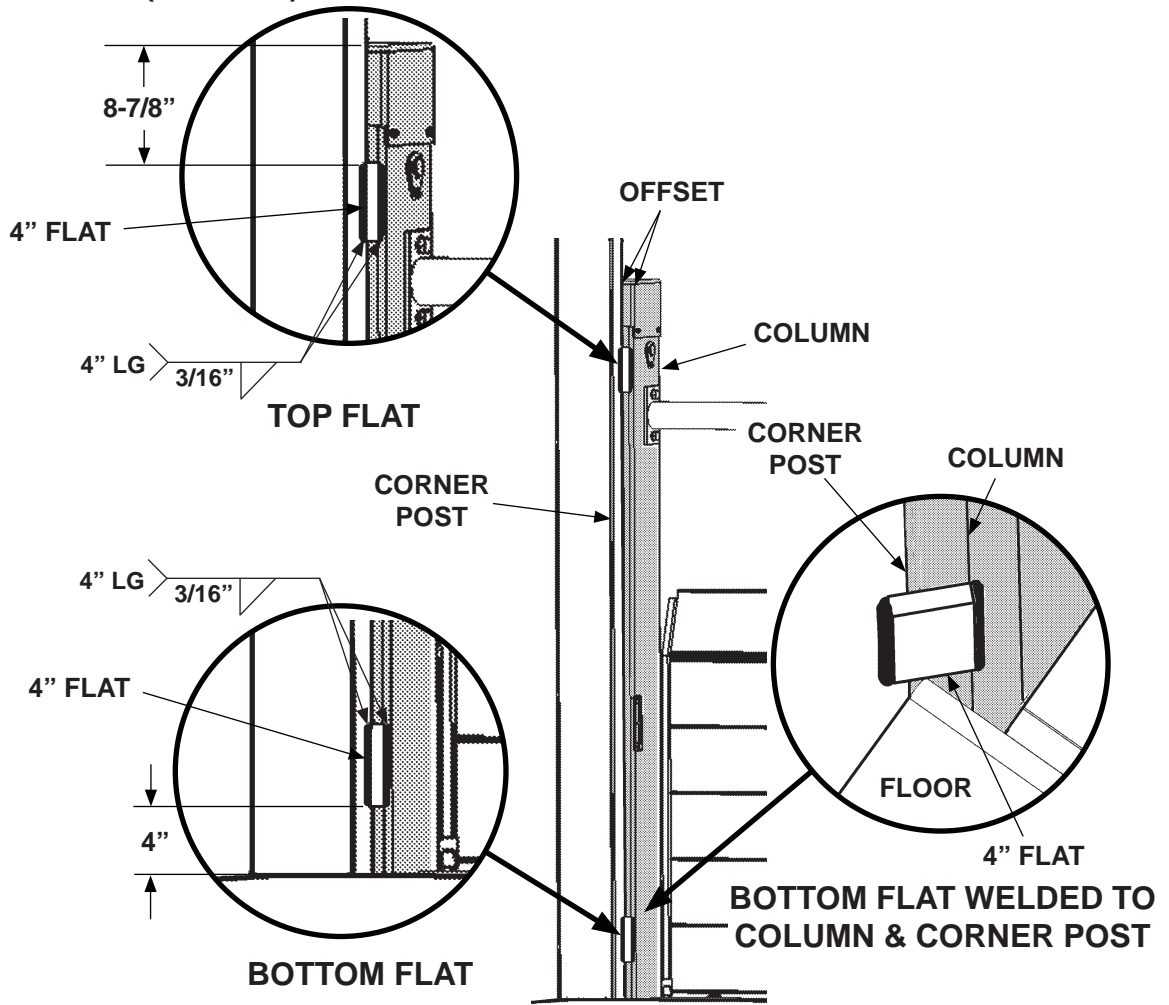


**WELDING LIFTGATE TO VEHICLE BODY  
(NO OFFSET INBOARD SIDE OF COLUMNS)  
FIG. 18-1**

## STEP 2 - POSITION LIFTGATE - Continued

### WELDING LIFTGATE TO BODY - Continued

6. If inboard sides of RH and LH columns are offset from body corner posts, weld two 4" flats to column and corner post (**FIG. 19-1**). Position one flat near top of the column and one flat near bottom of column, at the inboard side of each column (**FIG. 19-1**).



**WELDING FLATS BETWEEN OFFSET COLUMN & CORNER POST  
(RH COLUMN SHOWN FROM INSIDE VEHICLE)**

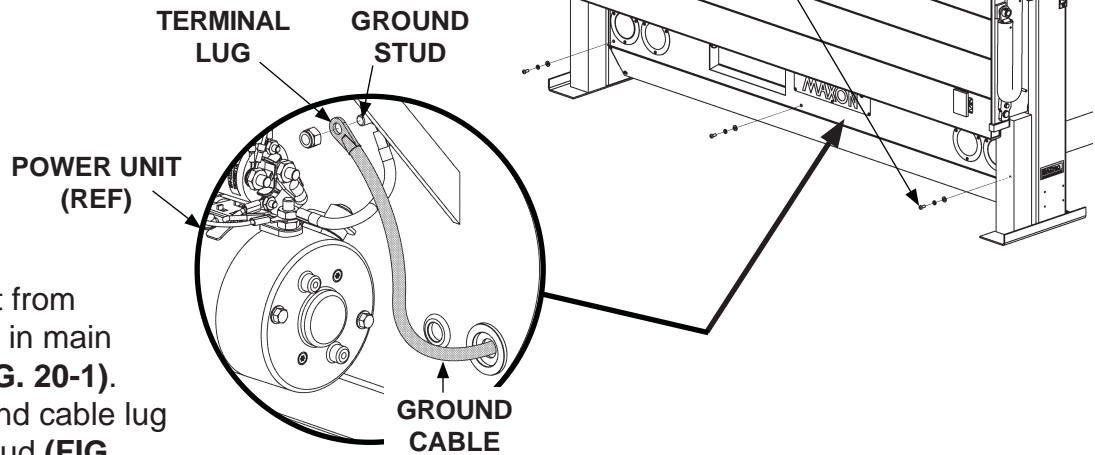
**FIG. 19-1**

## STEP 3 - CONNECT GROUND CABLE

**NOTE:** To ensure power unit is correctly grounded, MAXON recommends connecting a 2 gauge ground cable (Parts Box item) from grounding stud on main frame housing to a grounding point on the frame.

**NOTE:** MAXON recommends using dielectric grease on all electrical connections.

1. Unbolt and remove main frame cover for access to power unit (**FIG. 20-1**).
2. Run ground cable (**FIG. 20-1**) through grommet on back wall of main housing.



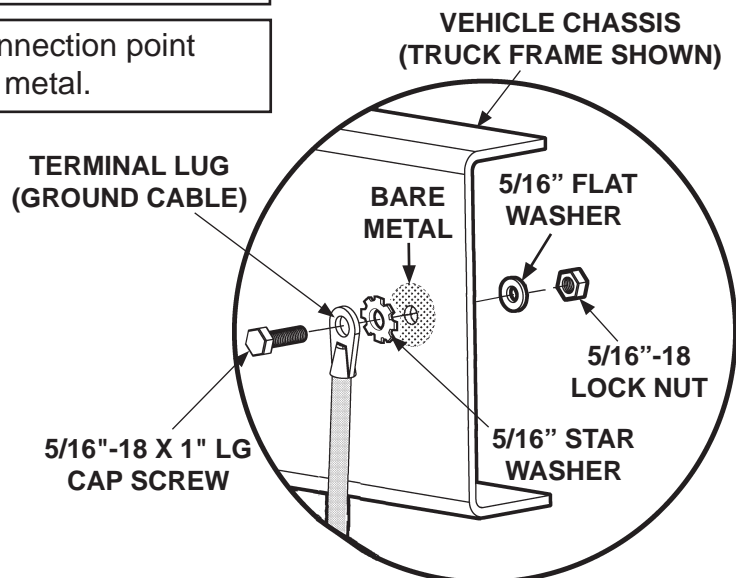
3. Remove nut from ground stud in main housing (**FIG. 20-1**). Attach ground cable lug to ground stud (**FIG. 20-1**). Tighten nut.

**CONNECTING GROUND CABLE TO GROUND STUD**  
**FIG. 20-1**

**NOTE:** If there is a grounding point on the frame, use it to connect ground cable. Then, skip the step for drilling a hole.

**NOTE:** Clean the ground cable connection point on the frame down to bare metal.

4. Extend the ground cable to reach vehicle frame (**FIG. 20-2**) without putting tension on cable (after connection). Connect to existing grounding point if available.
5. If necessary, drill a  $11/32$ " (0.343") hole in vehicle frame for bolting the ground cable terminal lug (**FIG. 20-2**).
6. Bolt the ground cable terminal lug to vehicle frame as shown in **FIG. 20-2**.



**FIG. 20-2**

## STEP 4 - 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 to prevent damage to any fuel lines, vent lines, brake lines or wires.

**NOTE:** Make sure cable is long enough to reach positive terminal on Liftgate pump box without putting tension on the cable.

Install vehicle charge line by running the line along the inside of vehicle frame (**FIG. 21-1**). Make sure **175 amp fuse (FIG. 21-1)** end of cable is by the battery. Run the charge line from vehicle battery to Liftgate pump box positive terminal. Use frame clips (parts box item) and plastic ties (as required) from charge line kit to secure cable.

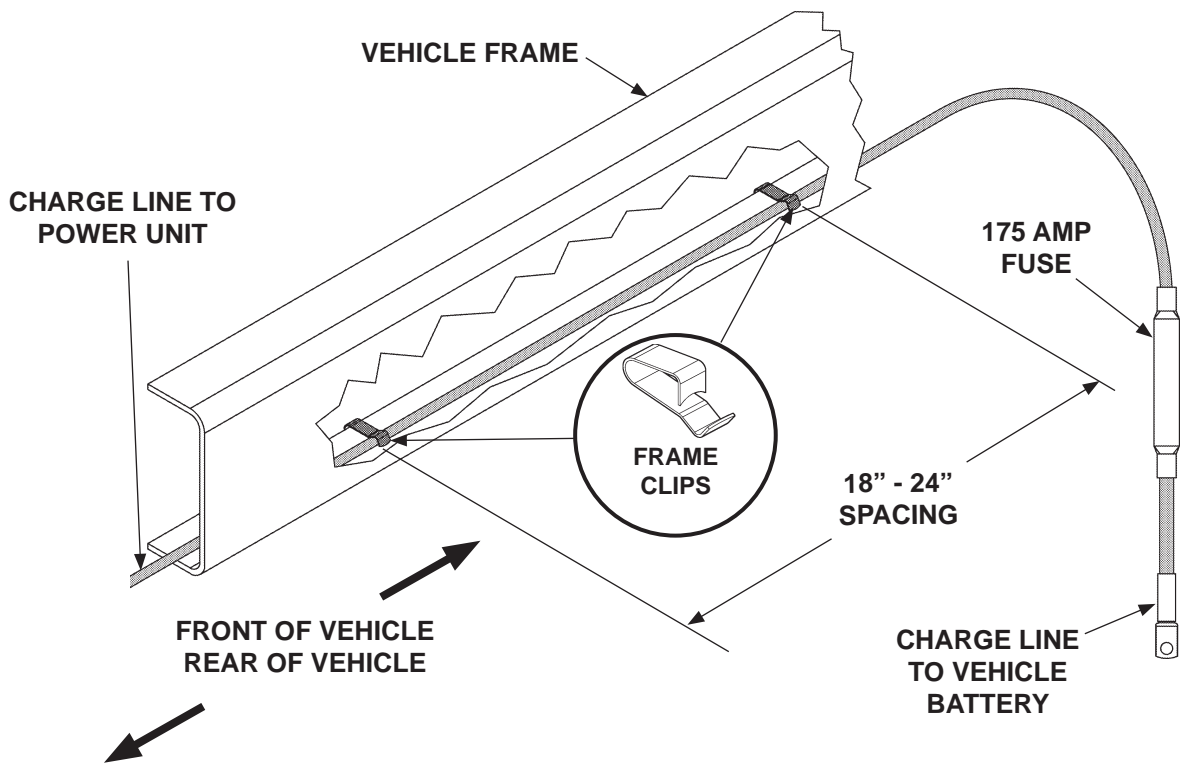


FIG. 21-1

## STEP 5 - CONNECT POWER CABLE

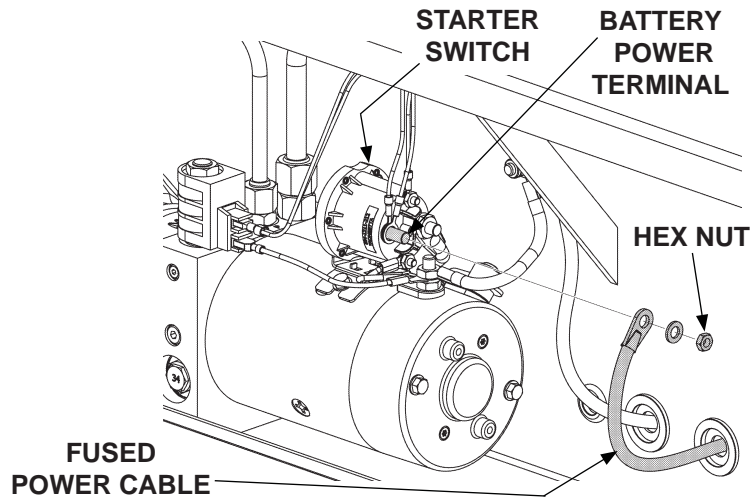
### CAUTION

Do not over-tighten the terminal nuts on starter solenoid. For the load terminals, torque nuts to 40 lb.-in. max. Torque the nuts on #10-32 control terminals 15-20 lb.-in.

**NOTE:** MAXON recommends using dielectric grease on all electrical connections.

**NOTE:** Do not remove flat washer from the battery power terminal.

Remove hex nut from battery power terminal on the starter switch. Connect the fused power cable to the starter switch as shown in **FIG. 22-1**. Reinstall and tighten hex nut.

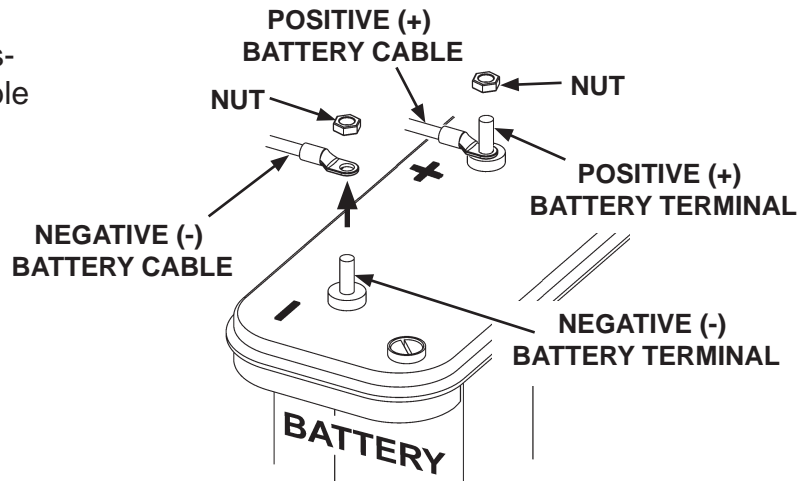


**CONNECTING FUSED POWER  
CABLE TO POWER UNIT  
(STANDARD POWER UNIT SHOWN)  
FIG. 22-1**

## STEP 6 - CONNECT POWER CABLE TO BATTERY

**NOTE:** MAXON recommends using dielectric grease on all electrical connections.

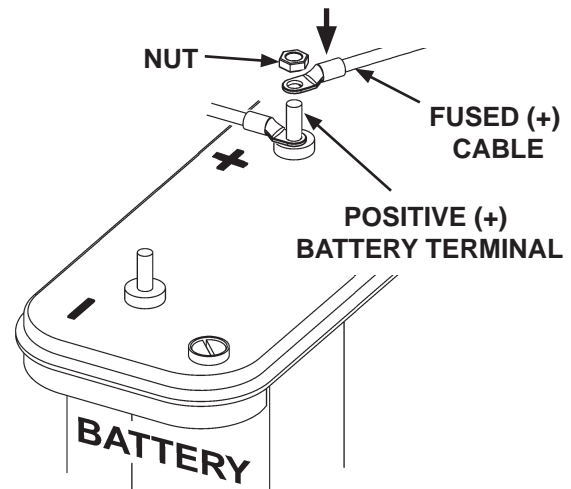
1. Remove nut from negative (-) battery terminal (**FIG. 23-1**). Disconnect negative (-) battery cable (**FIG. 23-1**).



DISCONNECTING (-) BATTERY CABLE  
FIG. 23-1

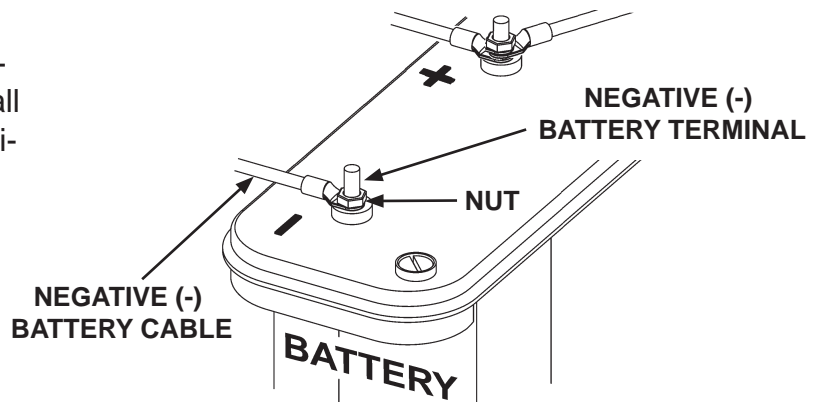
2. Remove nut from positive (+) battery terminal (**FIG. 23-1**).

3. Connect fused positive (+) cable to positive (+) battery terminal (**FIG. 23-2**). Then, reinstall nut on positive (+) battery terminal (**FIG. 23-2**).



CONNECTING FUSED (+) CABLE  
FIG. 23-2

4. Reconnect negative (-) battery cable to negative (-) battery terminal (**FIG. 23-3**). Then, reinstall nut on negative (-) battery terminal (**FIG. 23-3**).



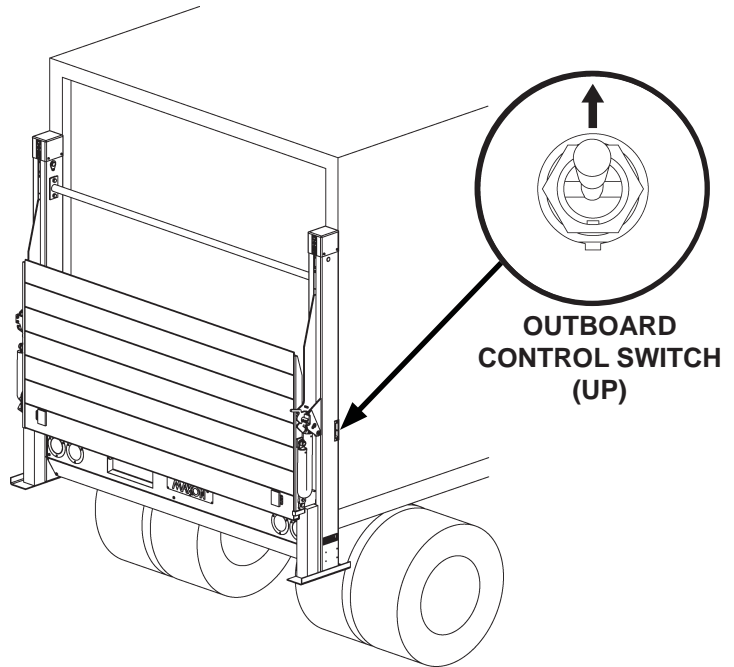
RECONNECTED BATTERY CABLES  
FIG. 23-3

## STEP 7 - PRESSURIZE HYDRAULIC SYSTEM

### **WARNING**

To prevent injury and equipment damage, pressurize hydraulic system before removing lower support fixtures and operating Liftgate.

To pressurize lifting cylinders, hold outboard control switch in **UP** position rate for 30 - 60 seconds (**FIG. 24-1**). Then, release toggle switch.

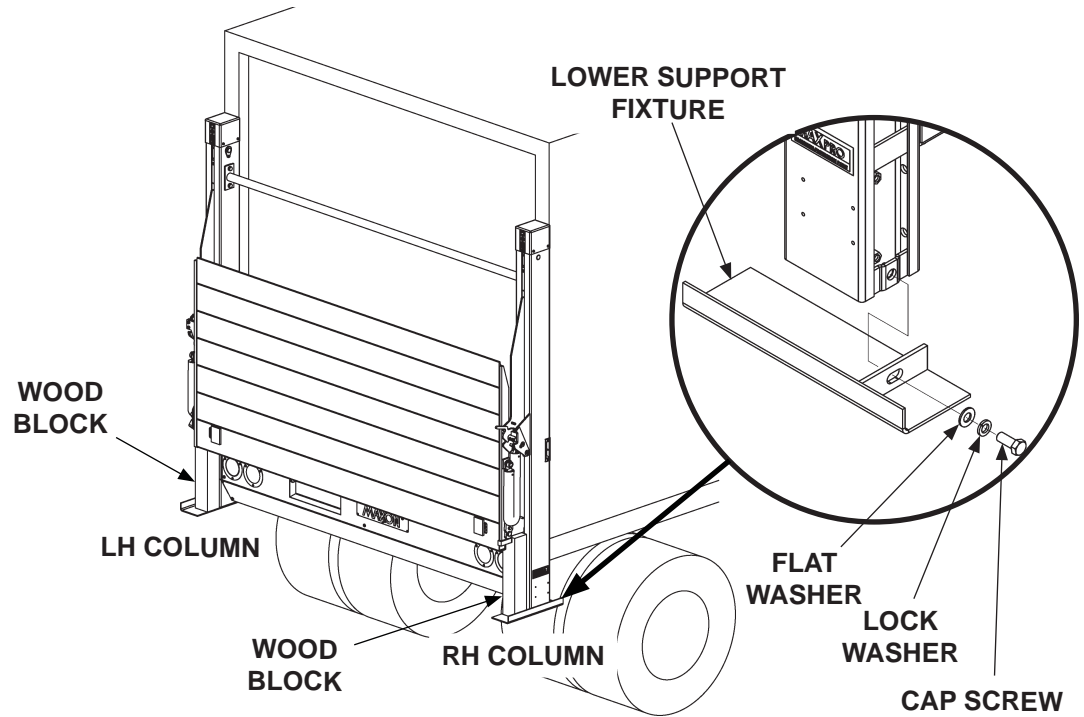


**PRESSURIZING LIFTING CYLINDERS**  
**FIG. 24-1**



## STEP 8 - REMOVING LOWER SUPPORT FIXTURES

1. Unbolt support fixture from bottom of RH column (**FIG. 25-1**). Repeat for LH column.



**UNBOLTING LOWER SUPPORT FIXTURE FROM COLUMN  
(REAR VIEW OF RH COLUMN & FIXTURE SHOWN)  
FIG. 25-1**

2. Remove and discard wood shipping blocks (**FIG. 25-1**).

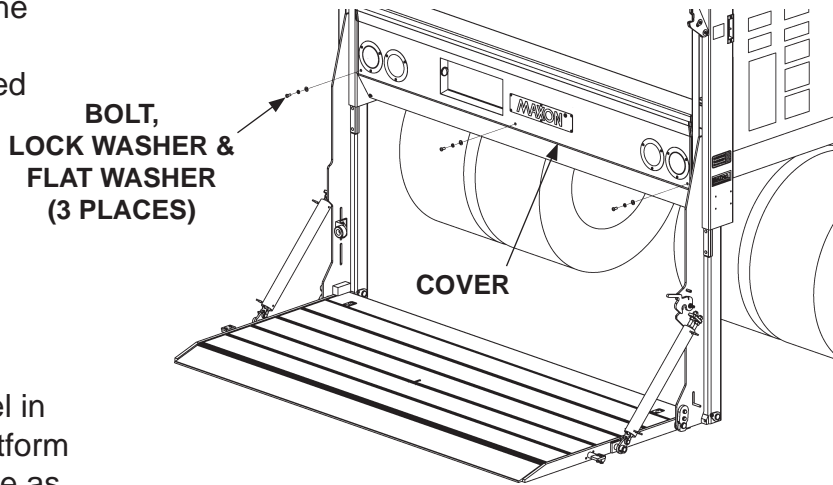
# STEP 9 - CHECKING HYDRAULIC FLUID

## CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination. Never mix synthetic fluids with conventional hydraulic fluids. Hydraulic system must be purged if the fluids are mixed.

**NOTE:** Liftgate is shipped with **Exxon Univis HVI-13** hydraulic fluid in the hydraulic cylinders. **Exxon Univis HVI-13** hydraulic fluid is recommended for operating temperatures of **-40 to +120° F**. Refer to decal in pump box. Under certain conditions, other brands and grades of oil may be used as substitutes for the recommended oil. Refer to **Maintenance Manual**.

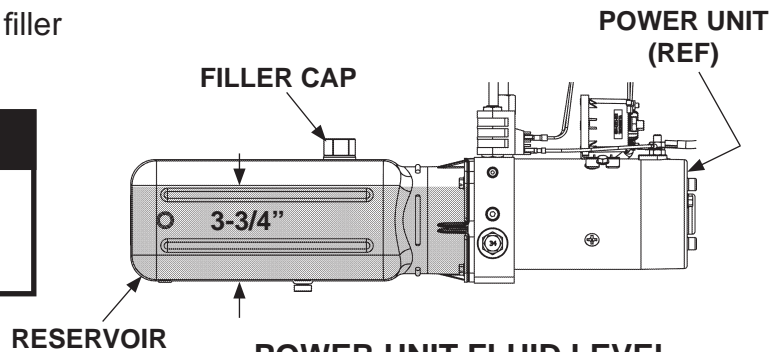
1. Open and lower platform to the ground (**FIG. 26-1**). Refer to **Operation Manual** for detailed operating instructions.
2. Unbolt main housing cover as shown in **FIG. 26-1**. Remove cover.
3. Check the hydraulic fluid level in reservoir as follows. With platform on the ground, level should be as shown in **FIG. 26-2**.



**UNBOLTING/ BOLTING COVER  
(PLATFORM ON THE GROUND)  
FIG. 26-1**

4. If needed, add fluid to the reservoir as follows. Remove filler cap (**FIG. 26-2**). Fill the reservoir with hydraulic fluid to level shown in **FIG. 26-2**. Reinstall filler cap.

**CAUTION**  
Main housing cover must be correctly secured to prevent it from becoming a hazard.



**POWER UNIT FLUID LEVEL  
(STANDARD POWER UNIT SHOWN)  
FIG. 26-2**

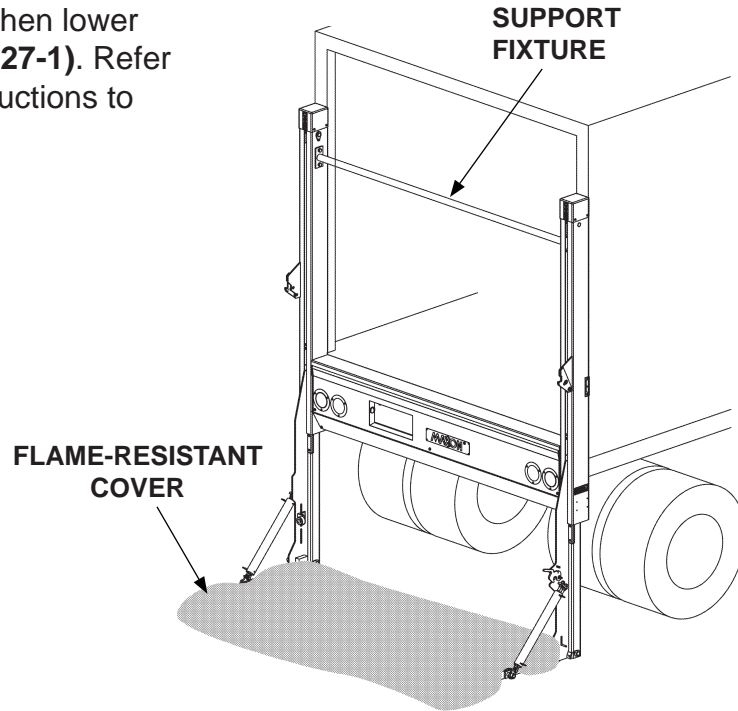
5. Bolt on the main housing cover as shown in **FIG. 26-1**. Torque the 5/16"-18 cover bolts from **10 to 14 lb-ft**.

## STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE

### ⚠ WARNING

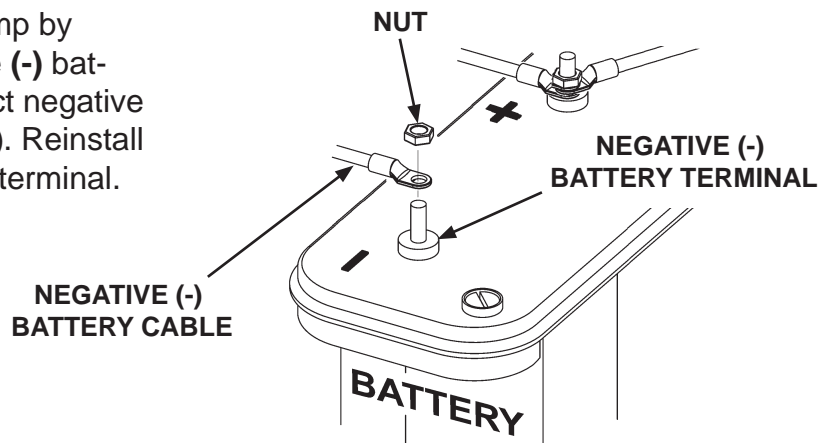
Remove support fixture from Liftgate only after the columns and housing are welded to vehicle body according to this procedure.

1. Unfold platform and flipover. Then lower platform to ground level (**FIG. 27-1**). Refer to **Operation Manual** for instructions to operate Liftgate.
2. Cover platform as shown in **FIG. 27-1**.



PLATFORM COVERED BEFORE WELDING  
FIG. 27-1

3. Disconnect power from pump by removing nut from negative (-) battery terminal and disconnect negative (-) battery cable (**FIG. 27-2**). Reinstall nut on negative (-) battery terminal.



DISCONNECTING POWER  
FIG. 27-2

# STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

## ⚠ WARNING

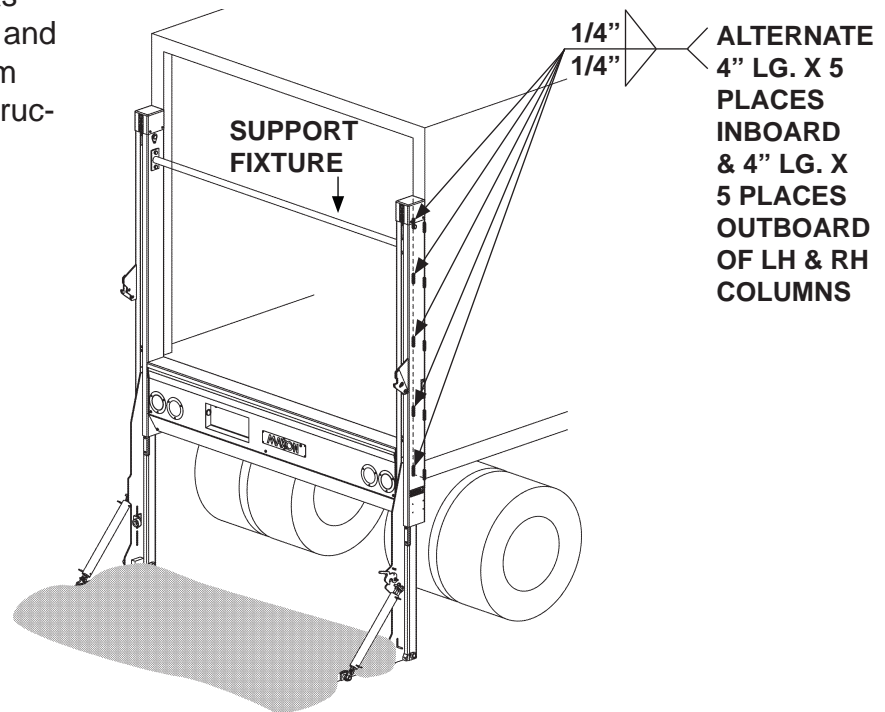
Recommended practices for welding on steel parts are contained in the current AWS (American Welding Society) D1.1 Structural Welding Code - Steel. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

## CAUTION

To prevent damage to Liftgate, connect welder ground to vehicle body.

**NOTE:** If Liftgate columns cannot be mounted flush against rear of vehicle, a filler such as tubing, channel, or plate stock may be used to bridge gap between vehicle body and Liftgate columns. Make sure the added materials and welds meet the **BODY STRENGTH REQUIREMENTS** indicated in this manual.

4. Weld the Liftgate RH and LH columns to vehicle body as shown in **FIG. 28-1**. If RH and LH columns are offset from body corner posts, do instruction 5.

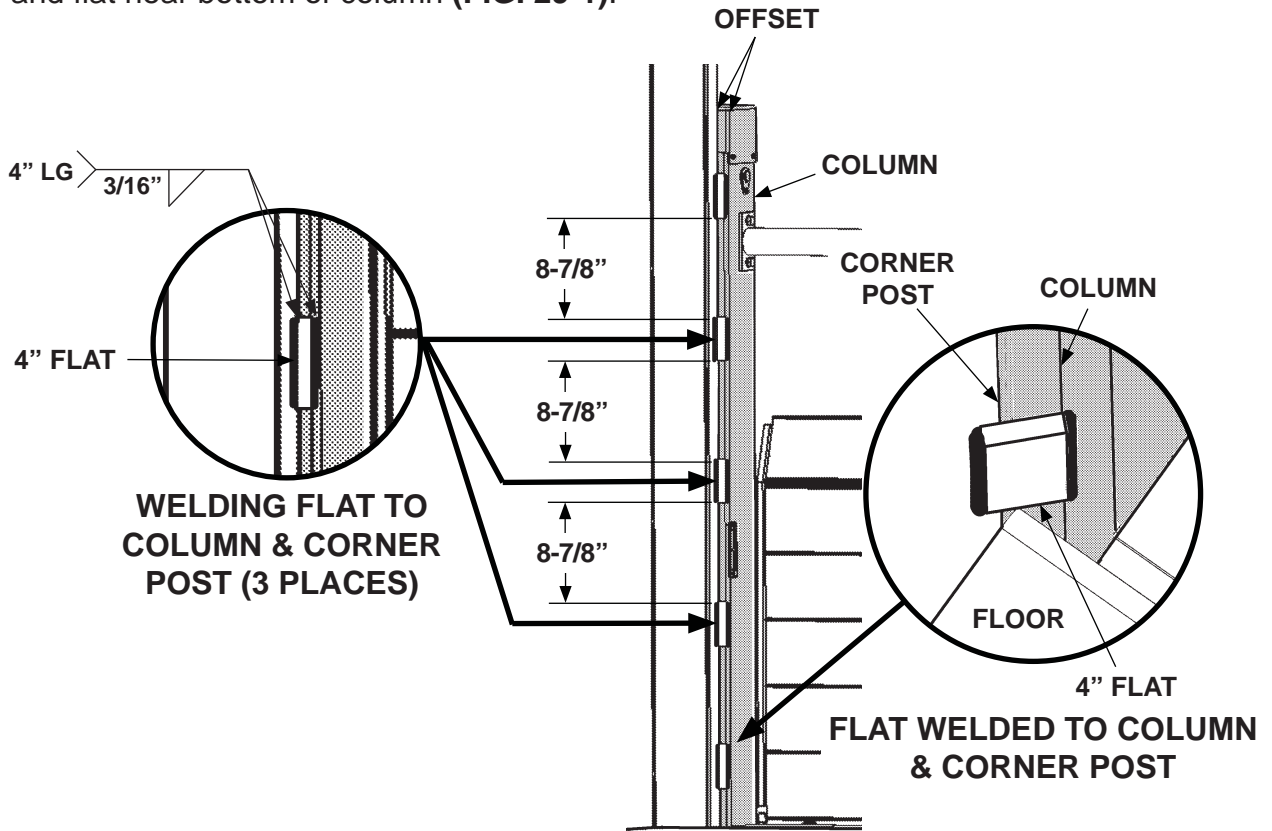


**WELDING COLUMNS TO VEHICLE BODY  
(NO OFFSET INBOARD SIDE OF COLUMNS)**

**FIG. 28-1**

# STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

5. If inboard sides of RH and LH columns are offset from body corner posts, weld three more 4" flats to column and corner post. Position 4" flats between the flat near top of the column and flat near bottom of column (**FIG. 29-1**).



**WELDING FLATS BETWEEN OFFSET COLUMN & CORNER POST  
(RH COLUMN SHOWN FROM INSIDE VEHICLE)**

**FIG. 29-1**

# STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

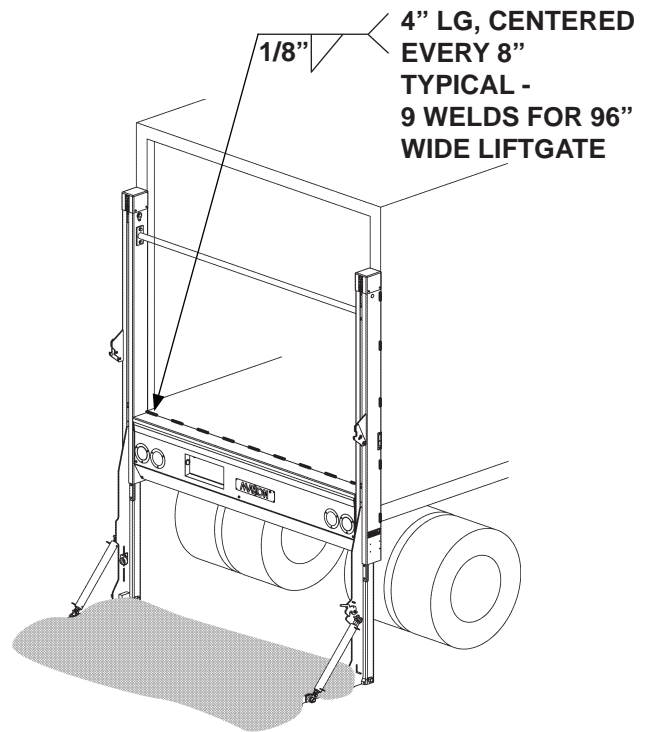
## CAUTION

To prevent damage to Liftgate components, welder ground must be connected to Liftgate extension plate.

6. Make sure platform remains at ground level to provide access to top of housing.

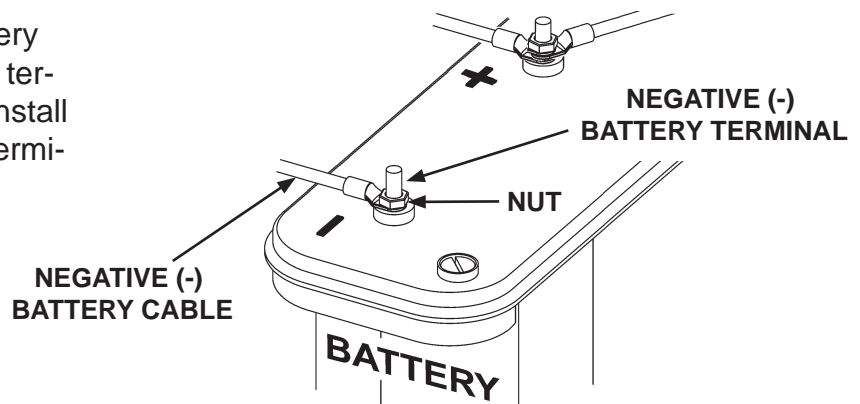
**NOTE:** After welding top of extension plate, if you see a gap between bottom of extension plate & vehicle body sill, fill the gap. To fill the gap, use A-36 General Purpose steel and the same welds shown in **FIG. 30-1**.

7. Weld the top of extension plate (**FIG. 30-1**) to vehicle body sill with 2" long welds centered every 8".



WELDING TOP OF EXTENSION PLATE  
FIG. 30-1

8. Reconnect negative (-) battery cable to negative (-) battery terminal (**FIG. 30-2**). Then, reinstall nut on negative (-) battery terminal (**FIG. 30-2**).



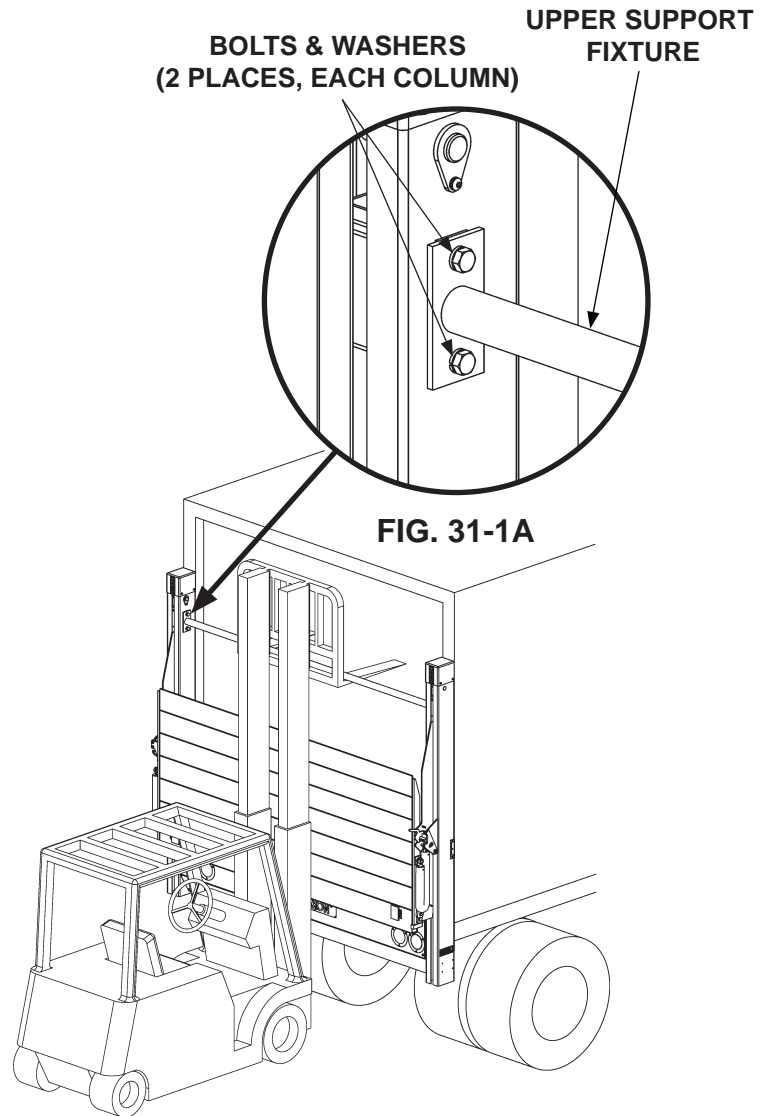
RECONNECTED BATTERY CABLES  
FIG. 30-2

# STEP 11 - REMOVE UPPER SUPPORT FIXTURE

## ⚠ CAUTION

Upper support fixture is heavy. To prevent injury to installer and damage to Liftgate, use forklift or hoist to hold support fixture during removal.

1. Stow the platform as shown in **FIG. 31-1**.
2. Position forklift or hoist to hold upper support fixture as shown in **FIG. 31-1**.
3. Unbolt the upper support fixture from the LH column (**FIG. 31-1A**). Repeat for RH column. Remove upper support fixture from work area.

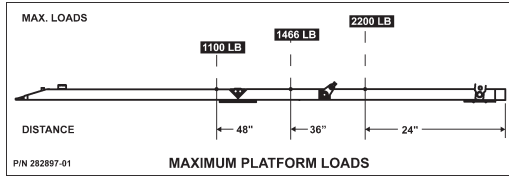


**UNBOLTING UPPER SUPPORT FIXTURE  
(VIEW OF LH COLUMN AND SUPPORT FIXTURE)**

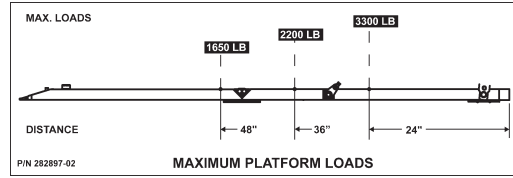
**FIG. 31-1**



# ATTACH DECALS (STANDARD)



**PLATFORM LOAD DECAL  
(DMD-22 ONLY)  
P/N 282897-01**



**PLATFORM LOAD DECAL  
(DMD-33 ONLY)  
P/N 282897-02**

**THE MAXIMUM CAPACITY  
OF THIS LIFT IS  
2200 LB [1000 KG]  
WHEN THE LOAD IS  
CENTERED ON THE LOAD  
CARRYING PLATFORM**  
P/N 220388-03

**DMD-22 ONLY  
CAPACITY DECAL  
P/N 220388-03**

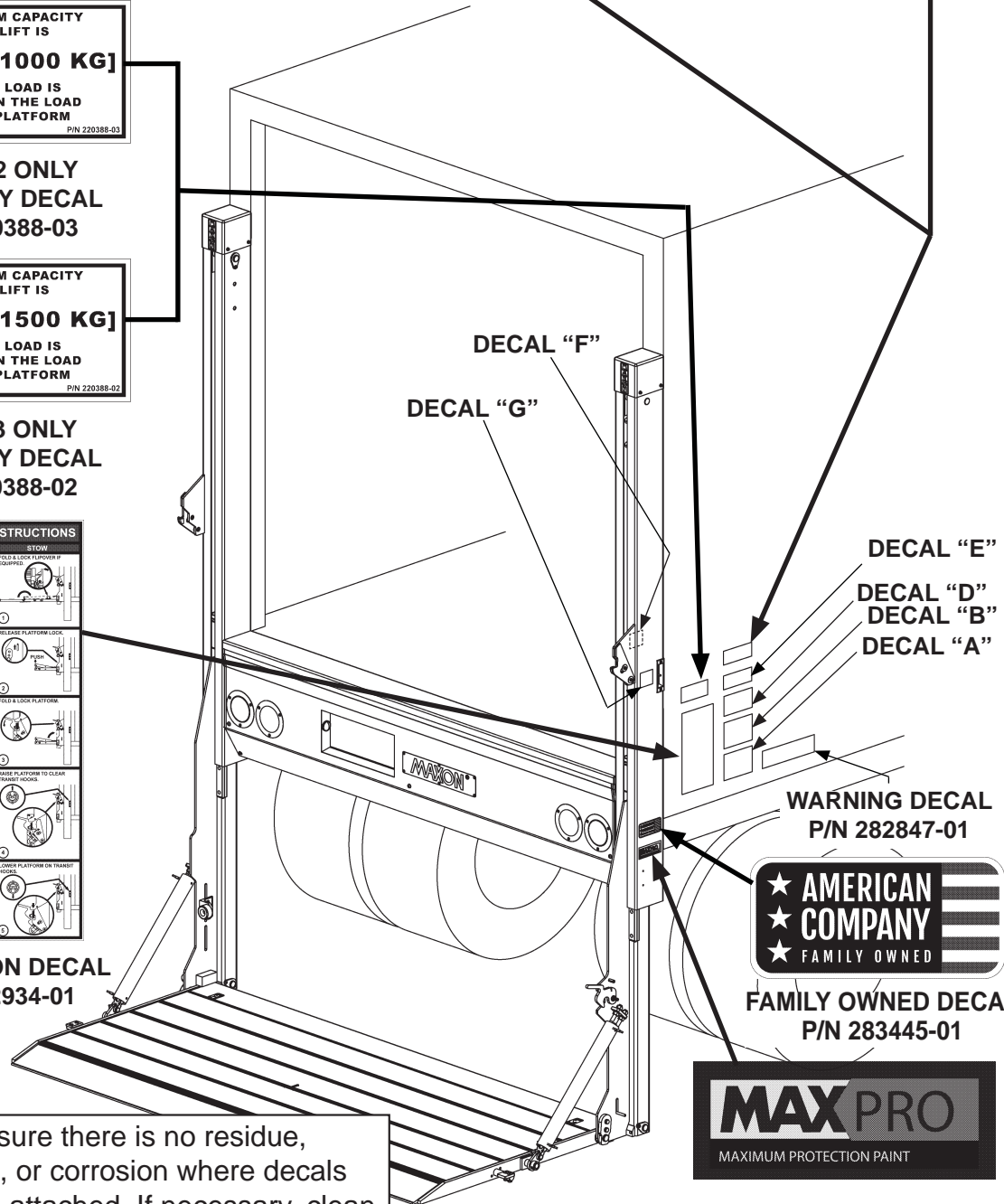
**THE MAXIMUM CAPACITY  
OF THIS LIFT IS  
3300 LB [1500 KG]  
WHEN THE LOAD IS  
CENTERED ON THE LOAD  
CARRYING PLATFORM**  
P/N 220388-02

**DMD-33 ONLY  
CAPACITY DECAL  
P/N 220388-02**

OPERATING INSTRUCTIONS	
<b>OPERATE</b>	<b>STOW</b>
1. RAISE PLATFORM OFF TRANSIT HOOKS	1. FOLD & LOCK PLATFORM IF EQUIPPED
2. UNLOCK & LOWER PLATFORM	2. RELEASE PLATFORM LOCK
3. UNLOCK & LIFT TRANSPORT HOOKS IF EQUIPPED	3. RETRY LOCK PLATFORM
4. RAISE LOWER PLATFORM	4. RAISE PLATFORM TO CLEAR TRANSPORT HOOKS
<b>NOTICE</b>	5. LOWER PLATFORM ON TRANSIT HOOKS
Ensure platform is stowed & resting on transit hooks before moving vehicle.	

**OPERATION DECAL  
P/N 282934-01**

**NOTE:** Ensure there is no residue, dirt, or corrosion where decals are attached. If necessary, clean surface before attaching decals.



**FAMILY OWNED DECAL  
P/N 283445-01**





**PAINT DECAL  
(2 PLACES)  
P/N 267338-01**

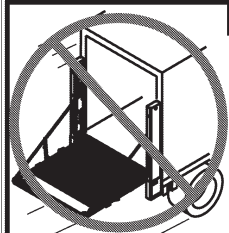
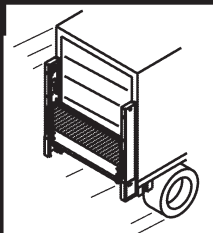
**MAXON**  
 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713



# ATTACH DECALS (STANDARD) - Continued

<p><b>SAFETY INSTRUCTIONS</b></p> <p>Read all decals and operation manual before operating liftgate.</p> <ol style="list-style-type: none"> <li>1. Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.</li> <li>2. Be certain vehicle is properly and securely braked before using the liftgate.</li> <li>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.</li> <li>4. Do not overload</li> <li>5. Make certain the area in which the platform will open and close is clear before opening or closing the platform.</li> <li>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.</li> <li>7. This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.</li> </ol> <p style="text-align: right;">A</p>	<p><b>WARNING</b></p> <p>Read this information carefully.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• If you are using a pallet jack, be sure it can be maneuvered safely.</li> <li>• Do not operate a forklift on the platform.</li> <li>• 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.</li> <li>• 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.</li> <li>• <b>USE GOOD COMMON SENSE.</b></li> <li>• If load appears to be unsafe, do not lift or lower it.</li> </ul> <p><small>For a free copy of other manuals that pertain to this model Liftgate, please visit our website at <a href="http://www.maxonlift.com">www.maxonlift.com</a> or call Customer Service at (800) 227-4116</small></p> <p style="text-align: right;">B</p>
<p><b>CAUTION</b></p> <p><b>Always stand clear of platform area.</b></p> <p style="text-align: right;">E</p>	<p><b>WARNING</b></p> <p>Liftgate hazards can result in crushing or falling.</p> <p>Keep hands and feet clear of pinch points.</p> <p>If riding liftgate, make sure load is stable and footing is solid.</p> <p style="text-align: right;">D</p> <p>Read and understand all instructions and WARNINGS before use.</p>
<p>UP</p>  <p>DOWN</p> <p style="text-align: right;">F</p>	<p>UP</p>  <p>DOWN</p> <p style="text-align: right;">G</p>

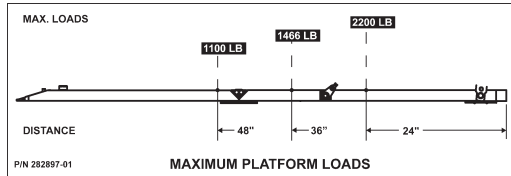
**DECAL SHEET**  
P/N 284216-01

	<p><b>WARNING</b></p> <p>A Liftgate extending from a moving vehicle could injure bystanders &amp; damage property. Stow liftgate in correct transit position before moving vehicle.</p> <p><small>DECAL P/N 282847-01</small></p>	
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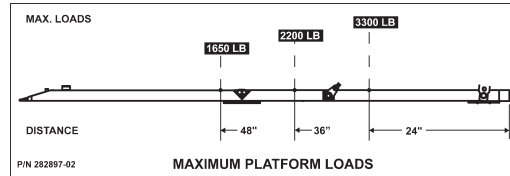
**WARNING DECAL**  
P/N 282847-01

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

# ATTACH DECALS (EQUIPPED WITH POWER CLOSER)



**PLATFORM LOAD DECAL  
(DMD-22 ONLY)  
P/N 282897-01**



**PLATFORM LOAD DECAL  
(DMD-33 ONLY)  
P/N 282897-02**

**THE MAXIMUM CAPACITY  
OF THIS LIFT IS  
2200 LB [1000 KG]  
WHEN THE LOAD IS  
CENTERED ON THE LOAD  
CARRYING PLATFORM  
P/N 220388-03**

**DMD-22 ONLY  
CAPACITY DECAL  
P/N 220388-03**

**THE MAXIMUM CAPACITY  
OF THIS LIFT IS  
3300 LB [1500 KG]  
WHEN THE LOAD IS  
CENTERED ON THE LOAD  
CARRYING PLATFORM  
P/N 220388-02**

**DMD-33 ONLY  
CAPACITY DECAL  
P/N 220388-02**

**OPERATING INSTRUCTIONS**

OPERATE	STOW
<p>1. RAISE PLATFORM OFF TRANSIT HOOKS.</p>	<p>2. FOLD PLATFORM FROM FOLD &amp; LIFT STATE, PLATFORM IS LOCKED.</p>
<p>3. UNLOCK &amp; UNFOLD PLATFORM.</p>	<p>4. RAISE PLATFORM TO CLEAR TRANSIT HOOKS.</p>
<p>5. RAISE LOWER PLATFORM.</p>	<p>6. LOWER PLATFORM ON TRANSIT HOOKS.</p>

**NOTICE**  
Ensure platform is stowed & resting on transit hooks before moving vehicle.  
DECAL P/N 282934-03

**OPERATION DECAL  
P/N 282934-03**

**FOLD**

**UNFOLD**

P/N 289845-01

**FOLD/UNFOLD DECAL  
P/N 289845-01**

**DECAL "E"  
DECAL "D"  
DECAL "B"  
DECAL "A"**

**WARNING DECAL  
P/N 282847-01**



**FAMILY OWNED DECAL  
P/N 283445-01**



**PAINT DECAL  
(2 PLACES)  
P/N 267338-01**

**NOTE:** Ensure there is no residue, dirt, or corrosion where decals are attached. If necessary, clean surface before attaching decals.

# ATTACH DECALS (EQUIPPED WITH POWER CLOSER) - Continued

<p><b>SAFETY INSTRUCTIONS</b></p> <p>Read all decals and operation manual before operating liftgate.</p> <ol style="list-style-type: none"> <li>1. Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.</li> <li>2. Be certain vehicle is properly and securely braked before using the liftgate.</li> <li>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.</li> <li>4. Do not overload</li> <li>5. Make certain the area in which the platform will open and close is clear before opening or closing the platform.</li> <li>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.</li> <li>7. This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.</li> </ol> <p style="text-align: right;">A</p>	<p><b>WARNING</b></p> <p>Read this information carefully.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• If you are using a pallet jack, be sure it can be maneuvered safely.</li> <li>• Do not operate a forklift on the platform.</li> <li>• 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.</li> <li>• 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.</li> <li>• <b>USE GOOD COMMON SENSE.</b></li> <li>• If load appears to be unsafe, do not lift or lower it.</li> </ul> <p><small>For a free copy of other manuals that pertain to this model Liftgate, please visit our website at <a href="http://www.maxonlift.com">www.maxonlift.com</a> or call Customer Service at (800) 227-4116.</small></p> <p style="text-align: right;">B</p>
<p><b>CAUTION</b></p> <p>Always stand clear of platform area.</p> <p style="text-align: right;">E</p>	<p><b>WARNING</b></p> <p>Liftgate hazards can result in crushing or falling.</p> <p>Keep hands and feet clear of pinch points.</p> <p>If riding liftgate, make sure load is stable and footing is solid.</p> <p>Read and understand all instructions and WARNINGS before use.</p> <p style="text-align: right;">D</p>

**DECAL SHEET  
P/N 284216-01**

	<p><b>WARNING</b></p> <p>A Liftgate extending from a moving vehicle could injure bystanders &amp; damage property.</p> <p>Stow liftgate in correct transit position before moving vehicle.</p> <p><small>DECAL P/N 282847-01</small></p>	
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**WARNING DECAL  
P/N 282847-01**

# TOUCHUP PAINT

## CAUTION

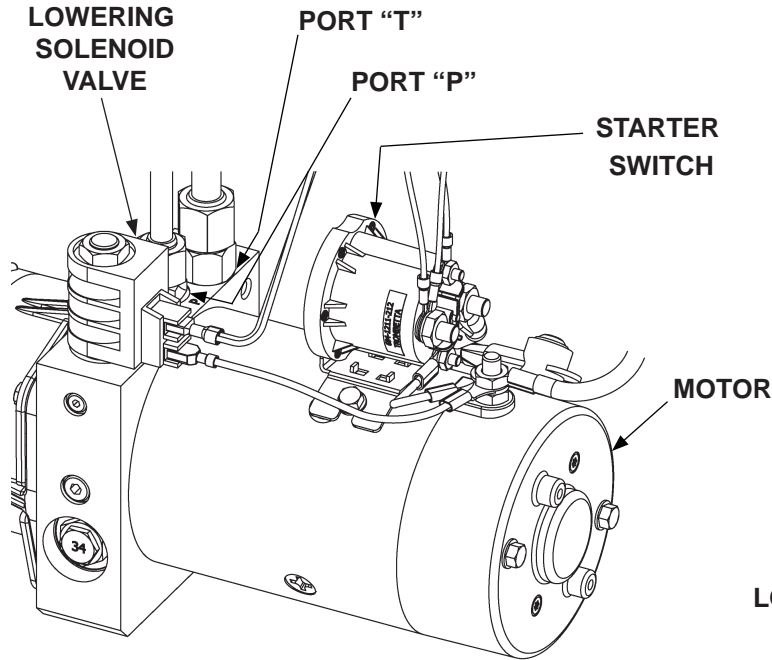
Damaged cylinder seals and contaminated hydraulic fluid can result from painting the polished portion of the cylinder rod. To prevent damage, protect the exposed polished portion of the cylinder rod while painting.

If bare metal or primer is exposed on the painted portions of the Liftgate, touch up the paint. To maintain the protection provided by the original paint system, **MAXON** recommends aluminum primer touchup paint kit, P/N 908134-01.

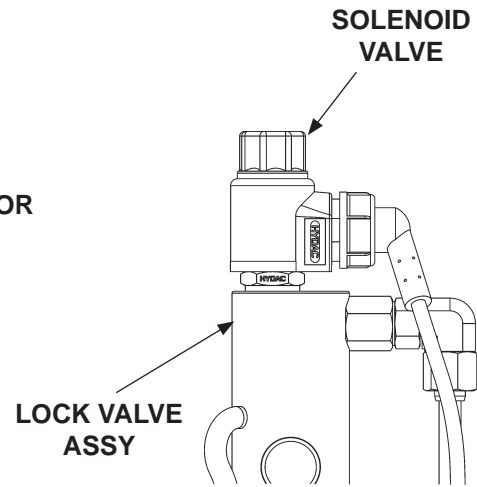
**MAXON**<sup>®</sup> 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

# SYSTEM DIAGRAMS

## PUMP MOTOR & VALVE OPERATION (STANDARD)



**POWER UNIT**  
**FIG. 37-1**



**HYDRAULIC LOCK VALVE**  
**(LH COLUMN CUT-AWAY SHOWING**  
**TOP OF LH CYLINDER)**  
**FIG. 37-2**

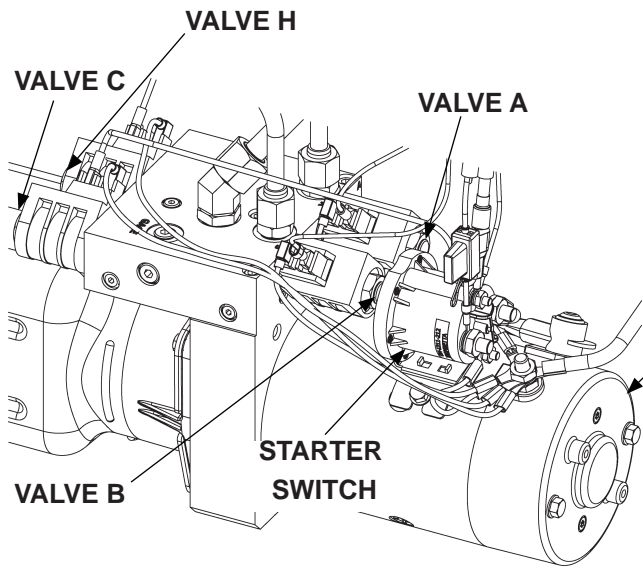
**NOTE:** Hydraulic lock valve located on LH cylinder.

POWER UNIT MOTOR & SOLENOID OPERATION				
LIFTGATE FUNCTION	PORT	SOLENOID OPERATION (✓ MEANS ENERGIZED)		
		MOTOR	LOWERING SOLENOID VALVE	LOCK VALVE
RAISE	P	✓	-	✓
LOWER	T	-	✓	✓

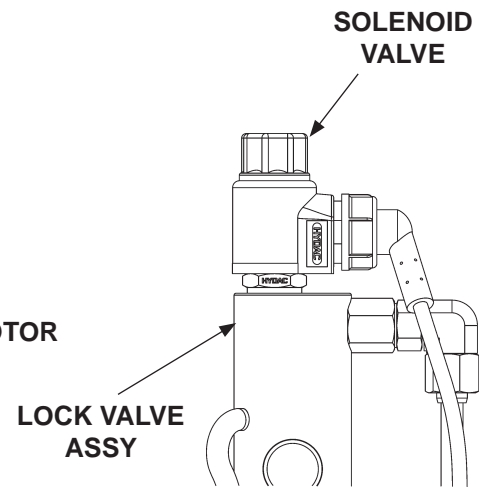
REFER TO VALVES SHOWN ON  
HYDRAULIC SCHEMATIC

**TABLE 37-1**

## PUMP MOTOR & VALVE OPERATION (EQUIPPED WITH POWER CLOSER)



**POWER UNIT  
FIG. 38-1**



**HYDRAULIC LOCK VALVE  
(LH COLUMN CUT-AWAY SHOWING  
TOP OF LH CYLINDER)  
FIG. 38-2**

**NOTE:** Hydraulic lock valve located on LH cylinder.

POWER UNIT MOTOR & VALVE OPERATION						
LIFTGATE FUNCTION	MOTOR & VALVE OPERATION (✓ MEANS ENERGIZED)					
	MOTOR	VALVE A	VALVE B	VALVE C	VALVE H	LOCK VALVE
LIFT	✓			✓		✓
LOWER			✓			✓
OPEN		✓				
CLOSE	✓				✓	
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC						

**TABLE 38-1**

# HYDRAULIC SCHEMATIC (STANDARD)

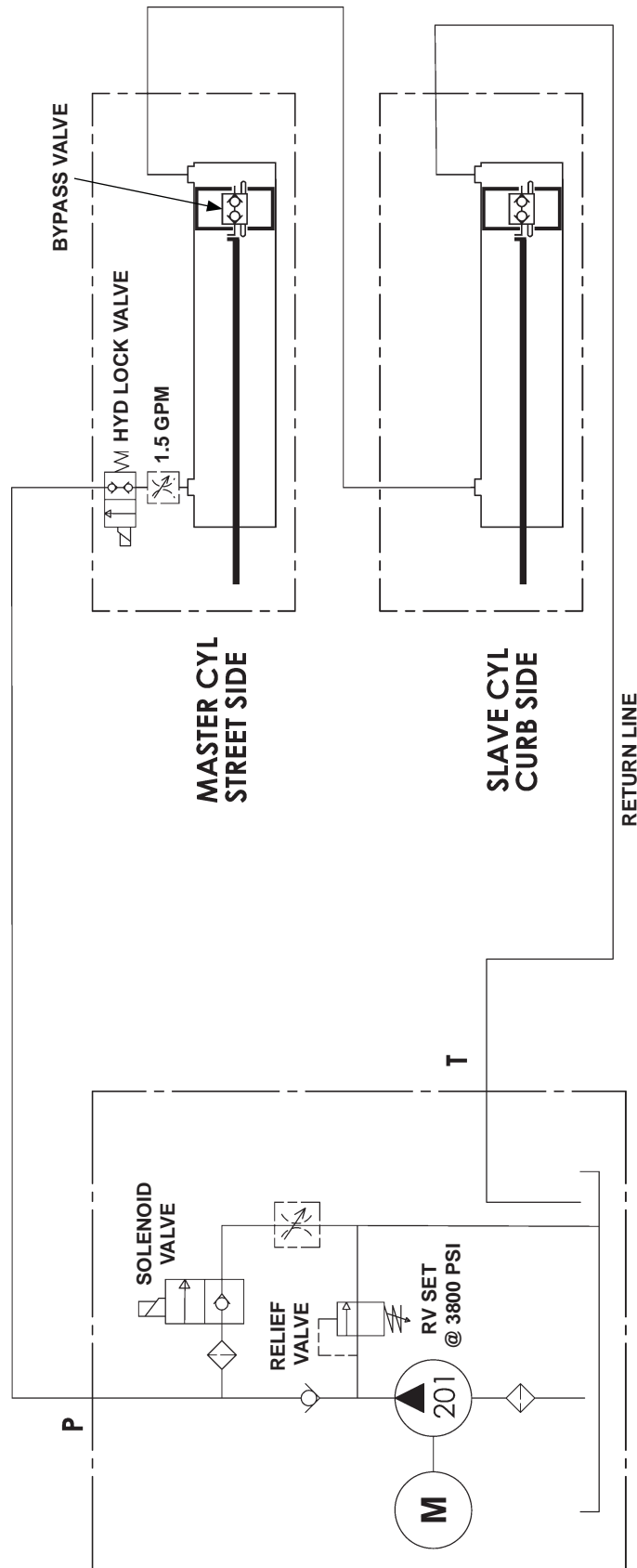


FIG. 39-1

# HYDRAULIC SCHEMATIC (EQUIPPED WITH POWER CLOSER)

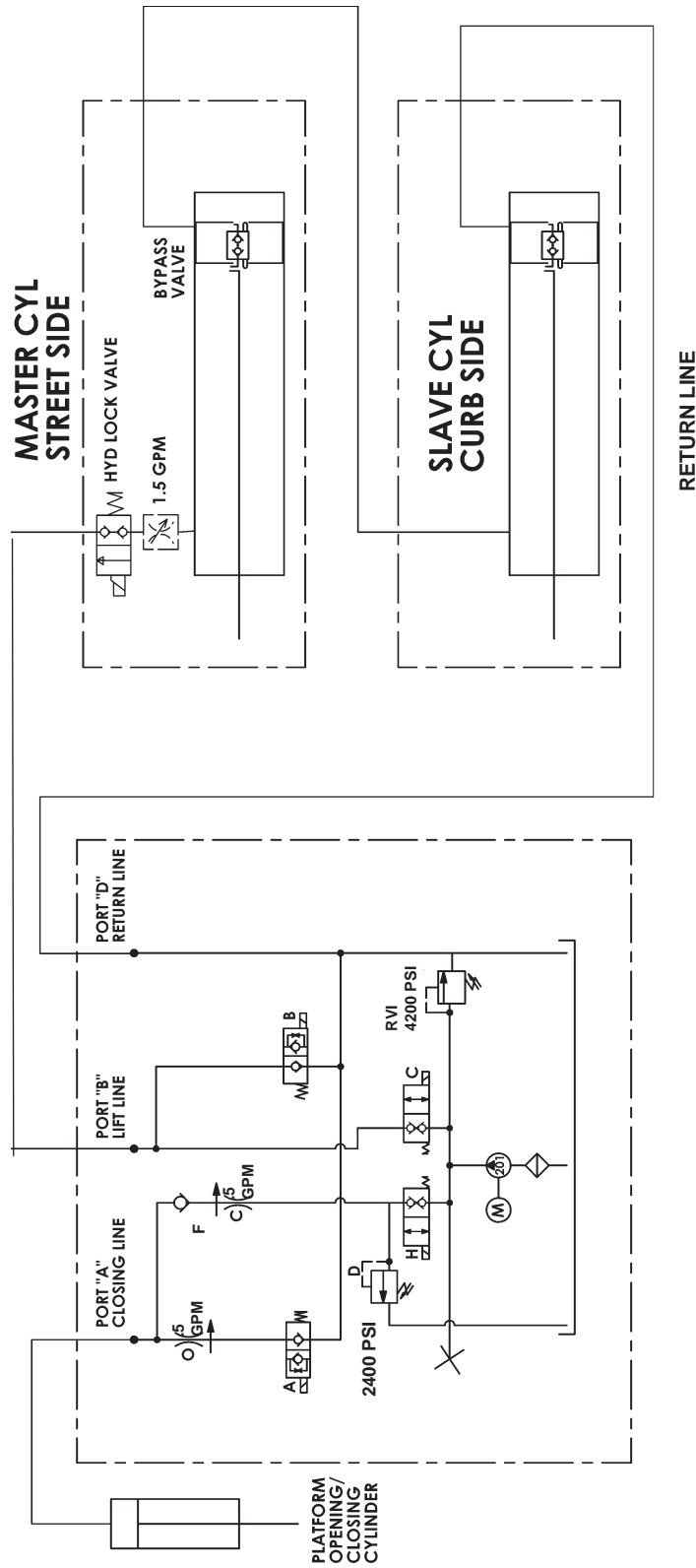


FIG. 40-1



# ELECTRICAL SCHEMATIC (STANDARD)

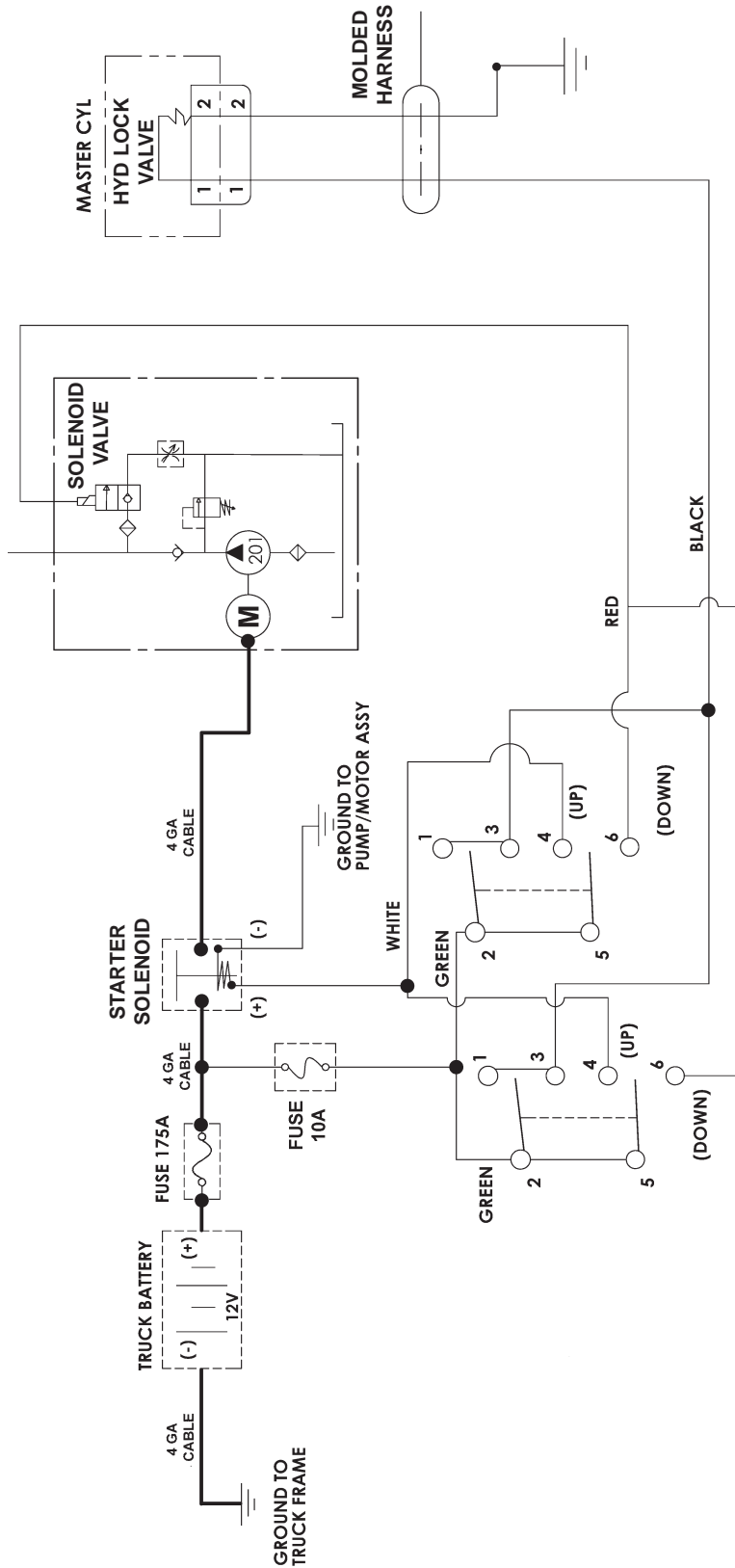


FIG. 41-1

# ELECTRICAL SCHEMATIC (EQUIPPED WITH POWER CLOSER)

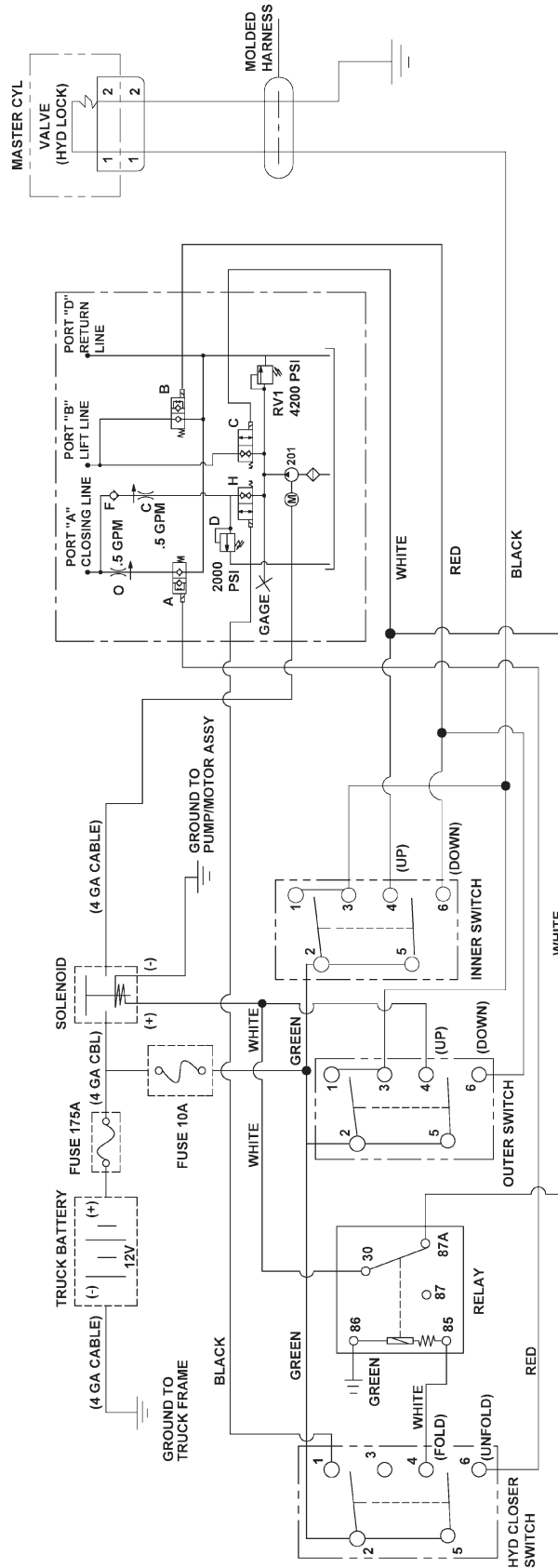


FIG. 42-1

# ELECTRICAL SCHEMATIC - JUMPER HARNESS ASSEMBLY

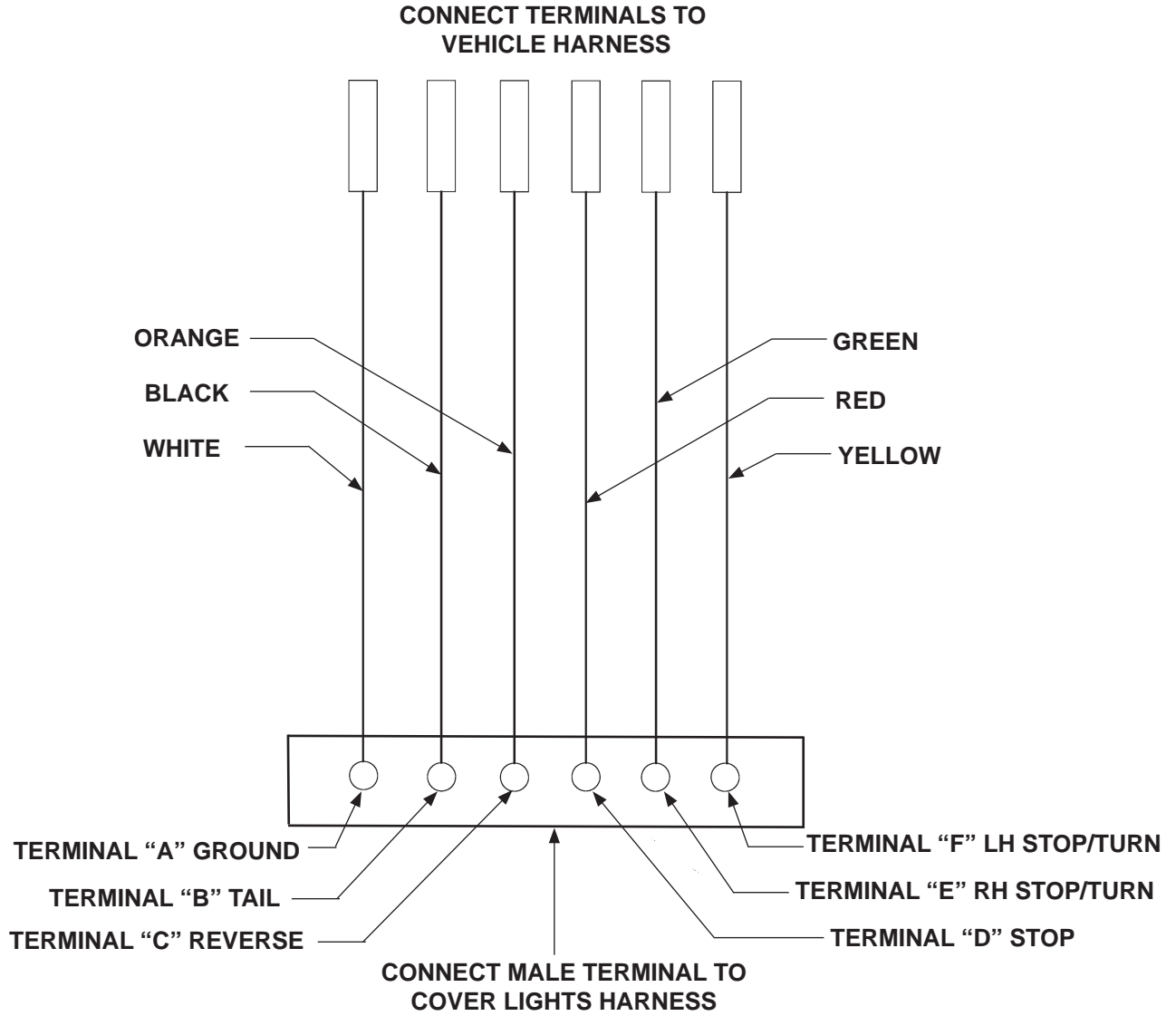


FIG. 43-1

# SYSTEM DIAGRAMS

## ELECTRICAL SCHEMATIC - HOUSING COVER ASSEMBLY (WITHOUT LIGHTS)

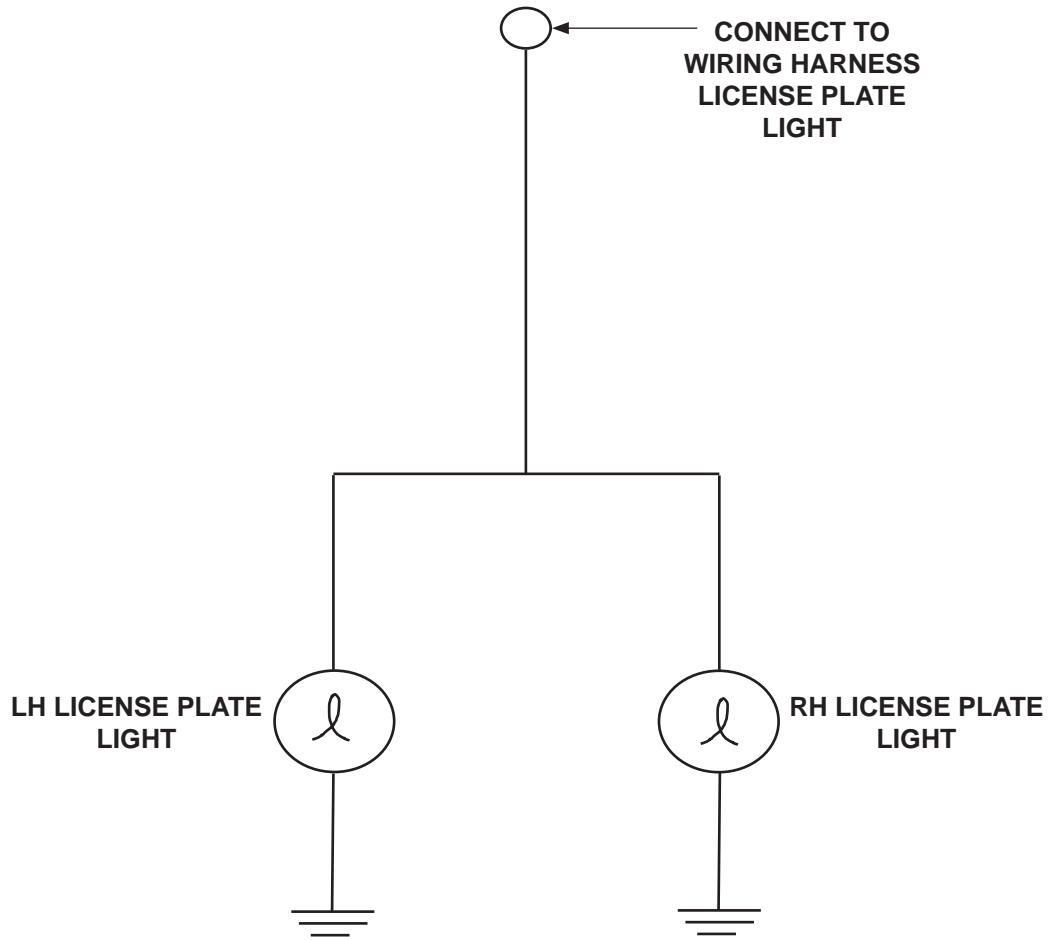


FIG. 44-1

# ELECTRICAL SCHEMATIC - HOUSING COVER ASSEMBLY (WITH FOUR LIGHTS)

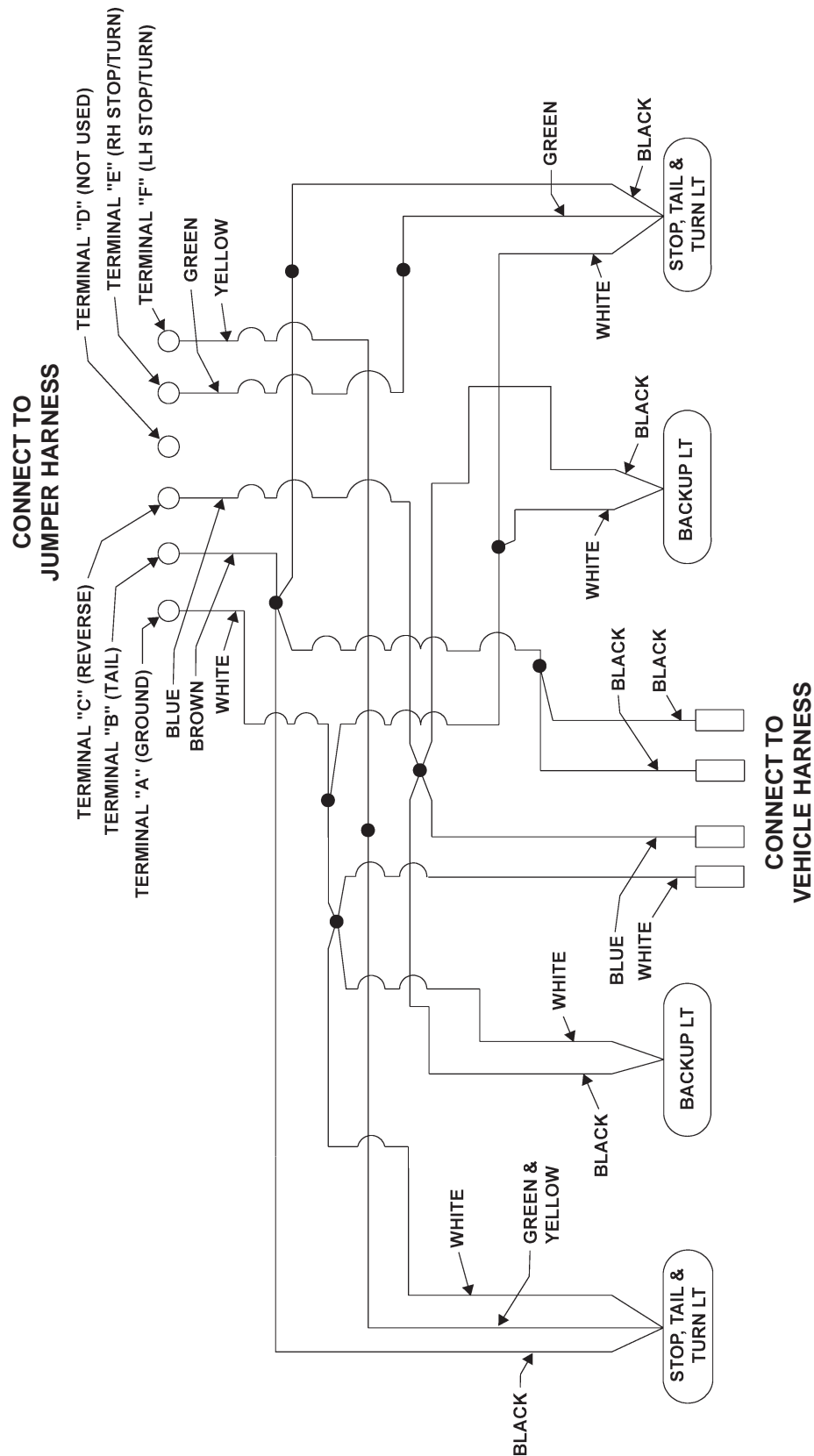


FIG. 45-1

# SYSTEM DIAGRAMS

## ELECTRICAL SCHEMATIC - HOUSING COVER ASSEMBLY, FOREIGN VEHICLE (WITH SIX LIGHTS)

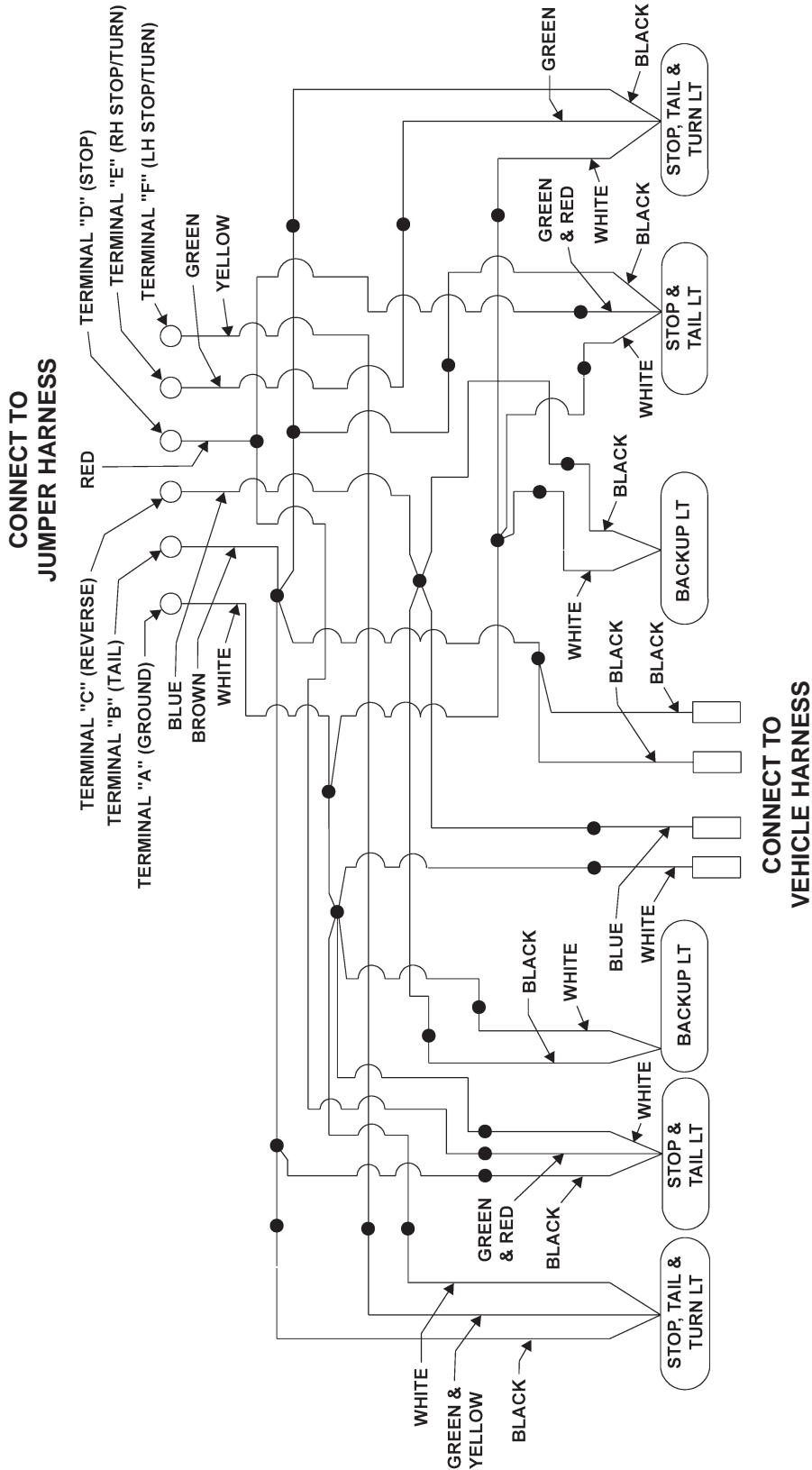


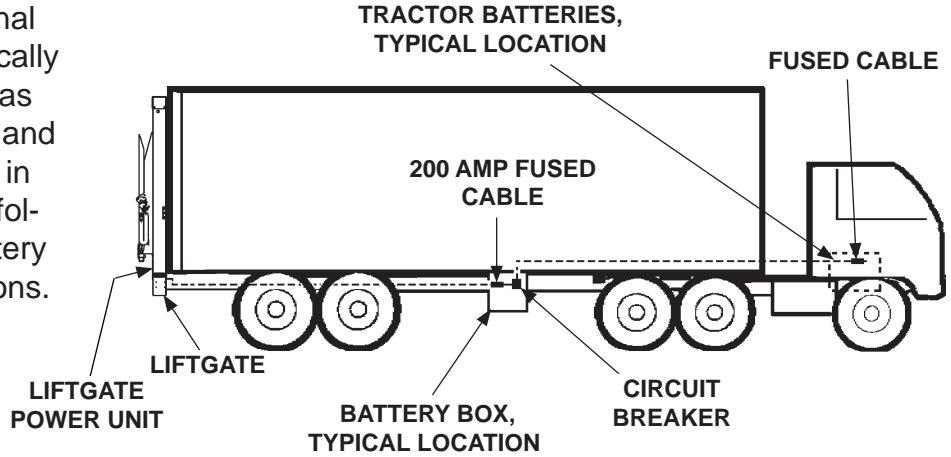
FIG. 46-1

# OPTIONS

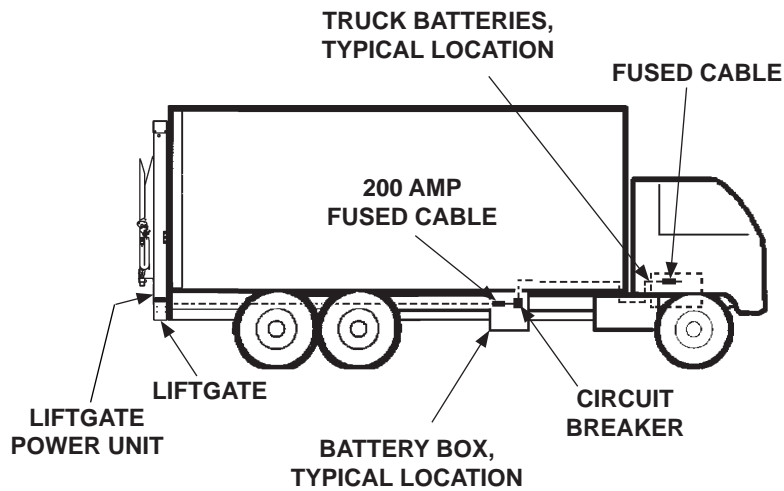
## RECOMMENDED LIFTGATE POWER CONFIGURATION

**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 and additional battery box are typically installed on trailers as shown in **FIG. 47-1** and on trucks as shown in **FIG. 47-2**. See the following page for battery and cable connections.



**RECOMMENDED BATTERY BOX  
INSTALLATION ON TRAILER  
FIG. 47-1**



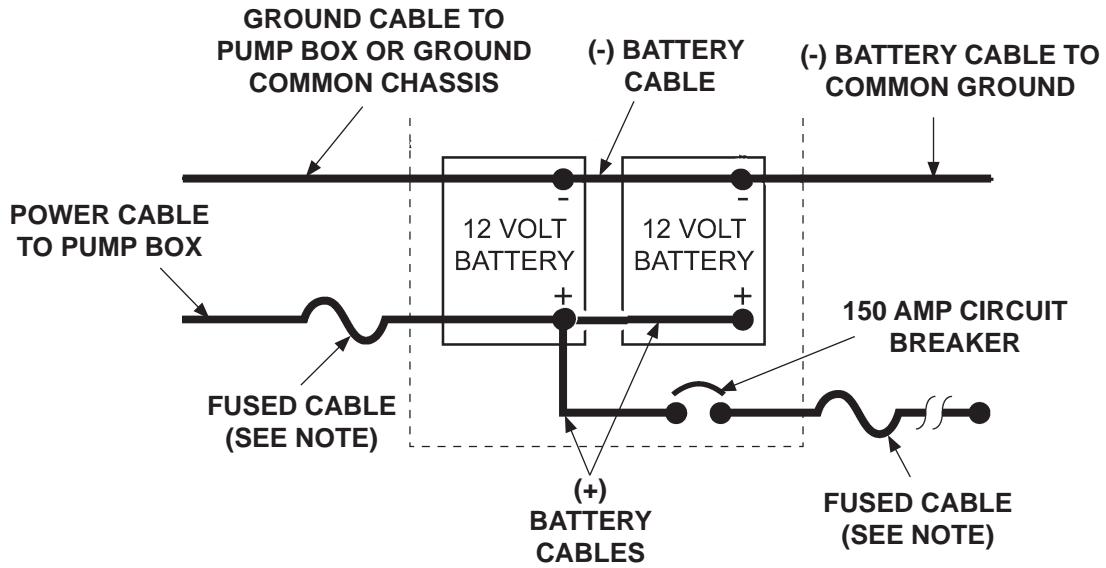
**RECOMMENDED BATTERY BOX  
INSTALLATION ON TRUCK  
FIG. 47-2**

# OPTIONS

## RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

**NOTE:** Always connect fused end of power cable to battery positive (+) terminal.

2. Recommended battery box setup for **12 volt batteries** is shown in **FIG. 48-1**.



**12 VOLT BATTERY CONNECTIONS**  
**FIG. 48-1**



