

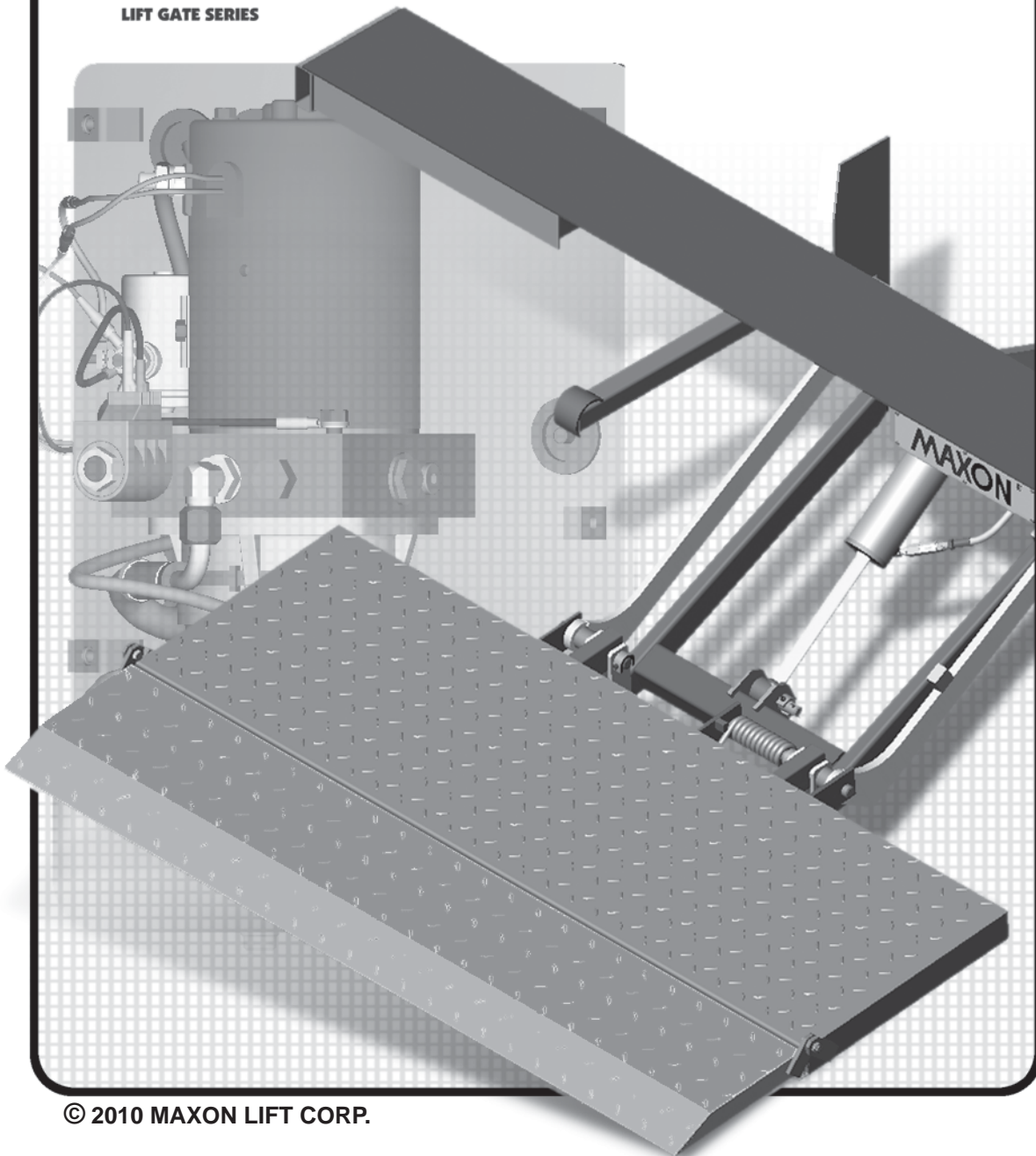
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APRIL 2010

MAXON®

INSTALLATION MANUAL

72-150 & TE-20

TUK-A-WAY®
LIFT GATE SERIES



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

WARNING

- 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.
- 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.
- 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.
- 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 could be 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 could result from welds that are done incorrectly.

72-150 & TE-20 LIFTGATE COMPONENTS

⚠ CAUTION

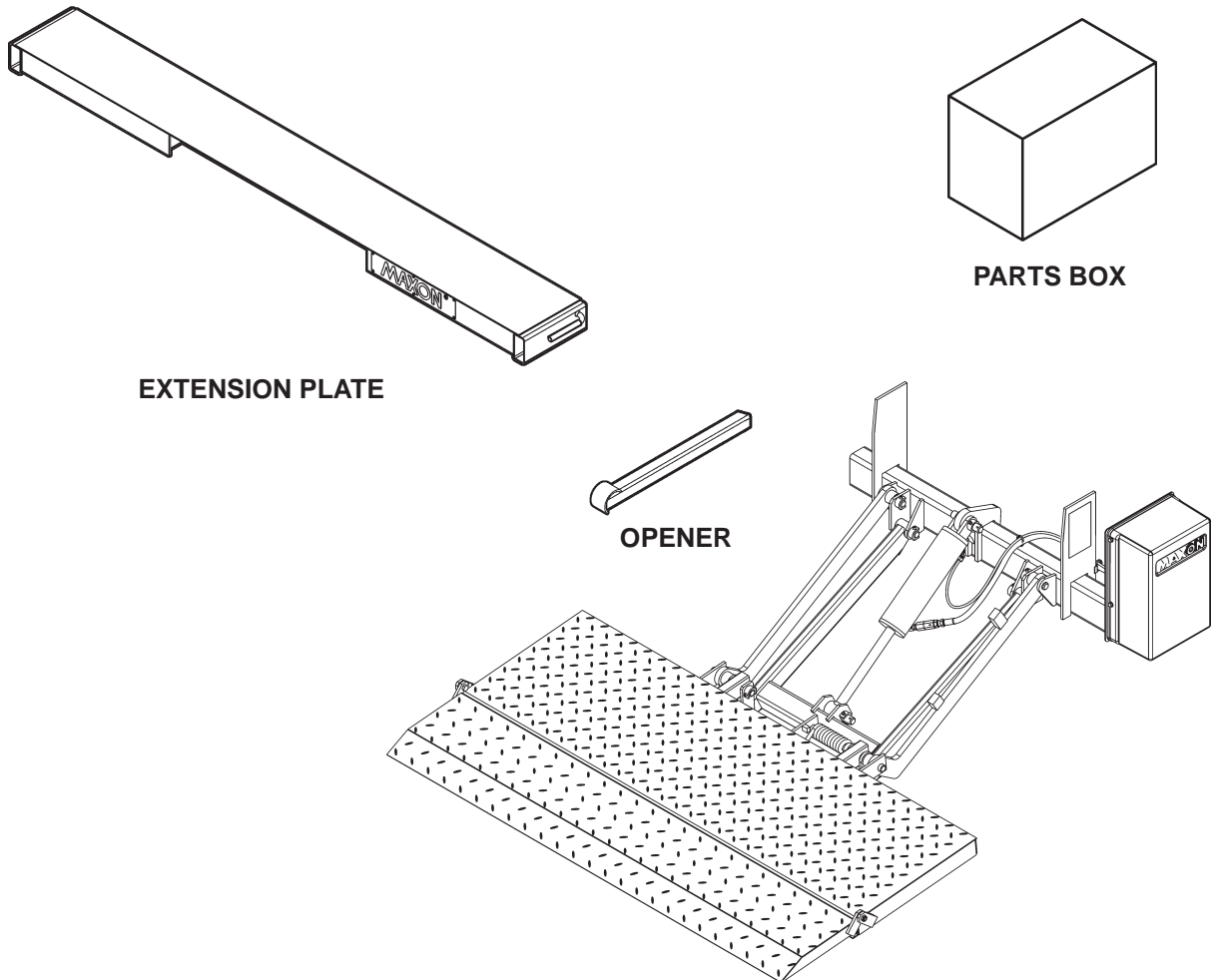
Prevent injuries and equipment damage. Before cutting the shipping straps from the Liftgate, put Liftgate on level ground that will support at least 1500 pounds. Be careful lifting and moving components (such as extension plate) after shipping straps are removed.

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 customersupport@maxonlift.com



EXTENSION PLATE

PARTS BOX

OPENER

72-150 & TE-20 LIFTGATES
(STEEL PLATFORM WITH RAMP FLIPOVER IS SHOWN)

72-150 & TE-20 COMPONENTS

FIG. 5-1

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

MAXON

PARTS BOX FOR 72-150 & TE-20 GRAVITY DOWN

	PARTS BOX COMPONENT	QTY.	PART NUMBER
1	SCREW, TAPPING #10 X 1/2" LG.	4	030458
2	CLIP, FRAME	7	050079
3	HANDLE, RUBBER	1	055011
4	CLAMP, JIFFY #130	1	125674
5	ELBOW, BRASS 1/4" X 1/4"	1	202406
6	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
7	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
8	TIE, PLASTIC 7" LG.	10	205780
9	TIE, PLASTIC 12-14" LG.	10	206864
10	CLAMP, #8 RUBBER LOOM	3	214663
11	SPRING, EXTENSION	1	215345
12	HOSE, 1/4" I.D. PLASTIC, 60-1/2" LG.	1	224370-07
13	LUG, 2 GA COPPER	1	906497-02
14	ADAPTER, 9/16"-18 M - 1/4 F, STRAIGHT	1	228012
15	FLAT 1/8" X 2" X 2"	2	251333
16	MOLDED SWITCH ASSEMBLY	1	267959-01
17	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
18	KIT, MANUAL & DECAL	1	266404-03 (72-150) 266404-04 (TE-20)
	A. MANUAL, INSTALLATION	1	M-03-13
	B. MANUAL, OPERATION	1	M-03-14
	C. MANUAL, MAINTENANCE	1	M-03-15
	D. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
19	HOSE, 3/8" HP, SAE O-RING #6M-JIC#6, 54" LG.	1	280635-01
20	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5
21	VALVE, FLOW REGULATOR, #6 SAE, 2 GPM	1	906709-02
22	ELBOW, 90 DEG NPSC, O-RING #6M-M	1	906722-01

TABLE 6-1

PARTS BOX FOR 72-150 & TE-20 POWER DOWN

	PARTS BOX COMPONENT	QTY.	PART NUMBER
1	SCREW, TAPPING #10 X 1/2" LG.	4	030458
2	CLIP, FRAME	7	050079
3	HANDLE, RUBBER	1	055011
4	CLAMP, JIFFY #130	1	125674
5	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
6	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
7	TIE, PLASTIC 7" LG.	10	205780
8	TIE, PLASTIC 12-14" LG.	10	206864
9	CLAMP, #8 RUBBER LOOM	3	214663
10	SPRING, EXTENSION	1	215345
11	LUG, 2 GA COPPER	1	906497-02
12	FLAT 1/8" X 2" X 2"	2	251333
13	MOLDED SWITCH ASSEMBLY	1	264951-04
14	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
15	KIT, MANUAL & DECAL	1	266404-03 (72-150) 266404-04 (TE-20)
	A. MANUAL, INSTALLATION	1	M-03-13
	B. MANUAL, OPERATION	1	M-03-14
	C. MANUAL, MAINTENANCE	1	M-03-15
	D. DECALS		REFER TO DECAL PAGES IN THIS MANUAL
16	HOSE, 3/8" HP, JIC#6F-JIC#6, 50" LG.	1	280634-01
17	HOSE, 3/8" HP, SAE O-RING #6M-JIC#6, 54" LG.	1	280635-01
18	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5
19	ELBOW, 90 DEG, O-RING, SAE #6-JIC37 #6	1	905152
20	VALVE, FLOW REGUL.SAE #6, 2 GPM	1	906709-02
21	ELBOW, 90 NPSC O-RING #6M-M	1	906722-01

TABLE 7-1

VEHICLE REQUIREMENTS

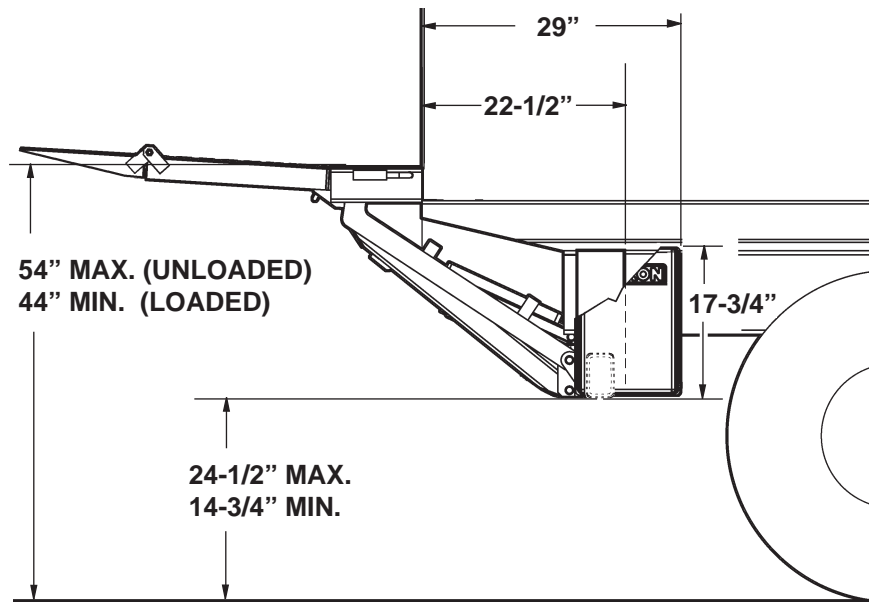
NOTE: The **maximum (unloaded)** operating vehicle body bed height for the 72-150 & TE-20 Liftgates equipped **with wedge flipover is 54"**. The **minimum height is 44" (loaded)**. **Do not install this Liftgate on vehicle bodies equipped with swing open doors.**

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

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

NOTE: Measure the width of the Liftgate and the width of the vehicle body before you start doing this procedure. Ensure the Liftgate is the correct width for vehicle.

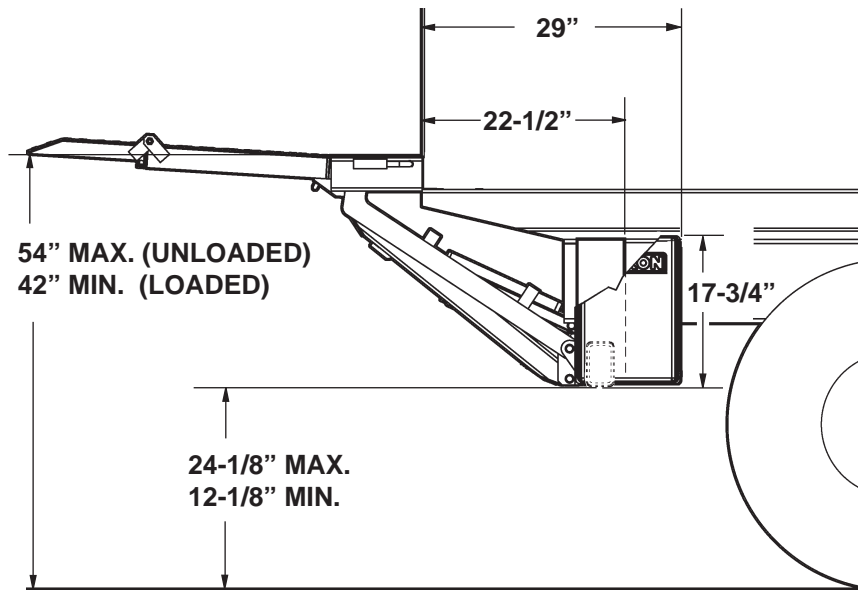
PLATFORM WITH WEDGE FLIPOVER



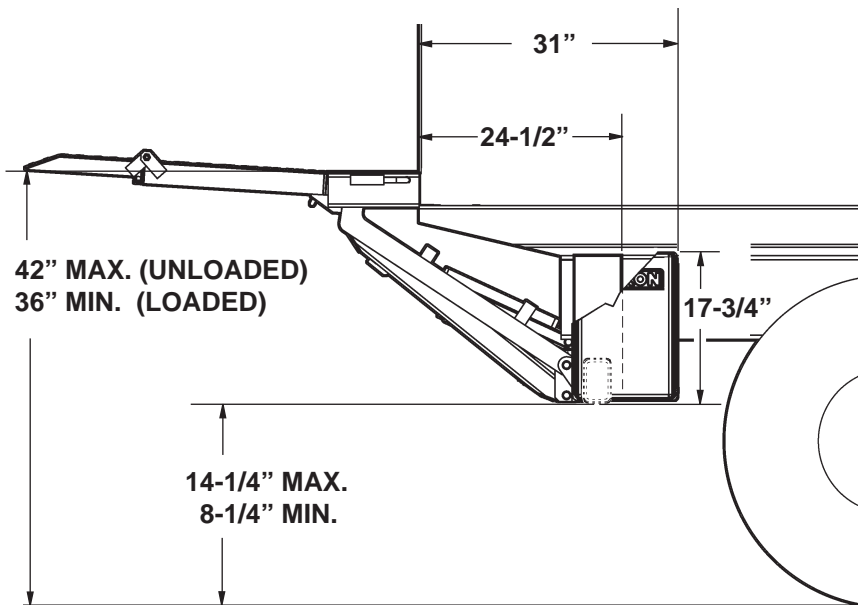
**CLEARANCE DIMENSIONS FOR 44" TO 54" BED HEIGHT
FIG. 8-1**

VEHICLE REQUIREMENTS - Continued

PLATFORM WITH RAMP FLIPOVER

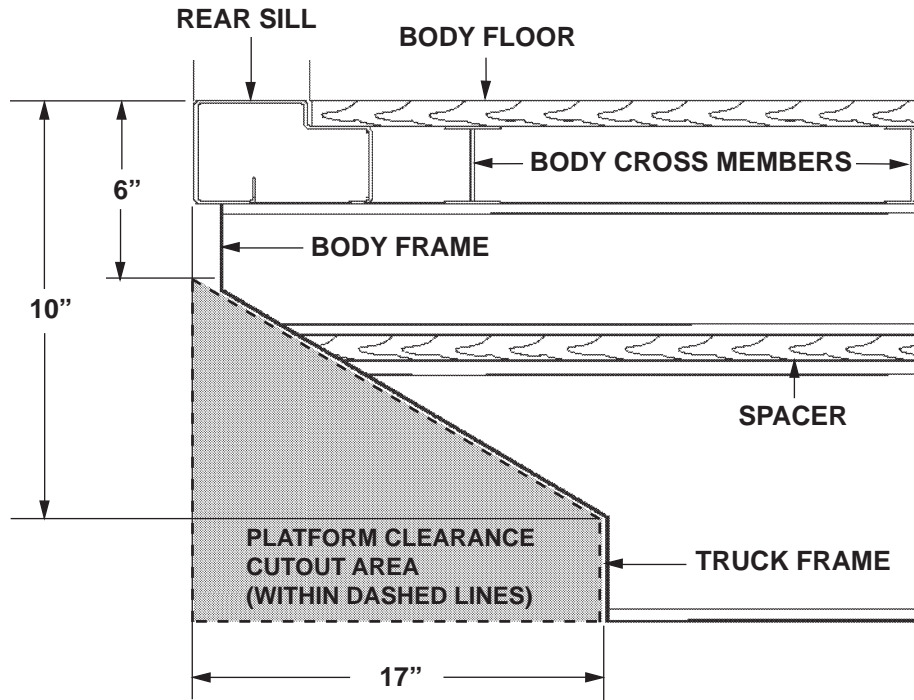


CLEARANCE DIMENSIONS FOR 42" TO 54" BED HEIGHT
FIG. 9-1

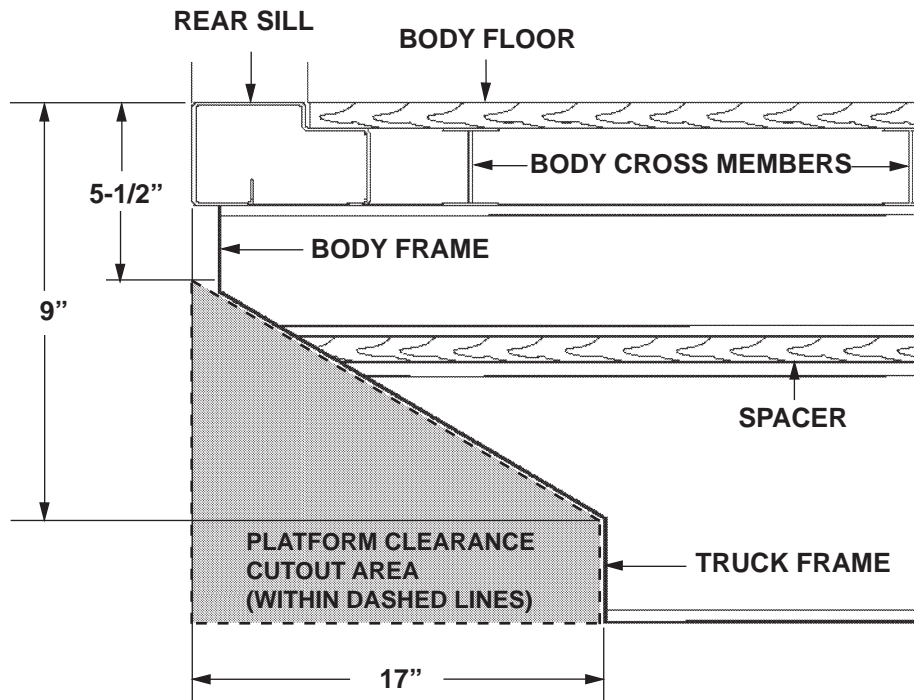


CLEARANCE DIMENSIONS FOR 36" TO 42" BED HEIGHT
FIG. 9-2

VEHICLE REQUIREMENTS - Continued



VEHICLE FRAME CUT FOR 72-150/TE-20 (42" TO 54" BED HEIGHT)
FIG. 10-1



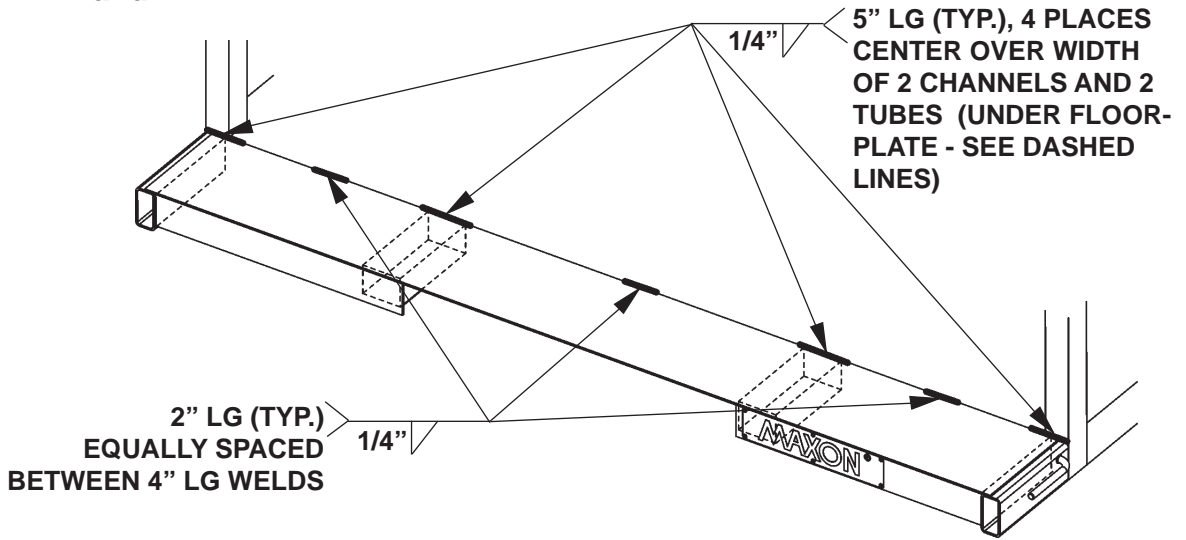
VEHICLE FRAME CUT FOR 72-150/TE-20 (LOW BED 36" TO 42" BED HEIGHT)
FIG. 10-2

STEP 1 - WELD EXTENSION PLATE TO VEHICLE

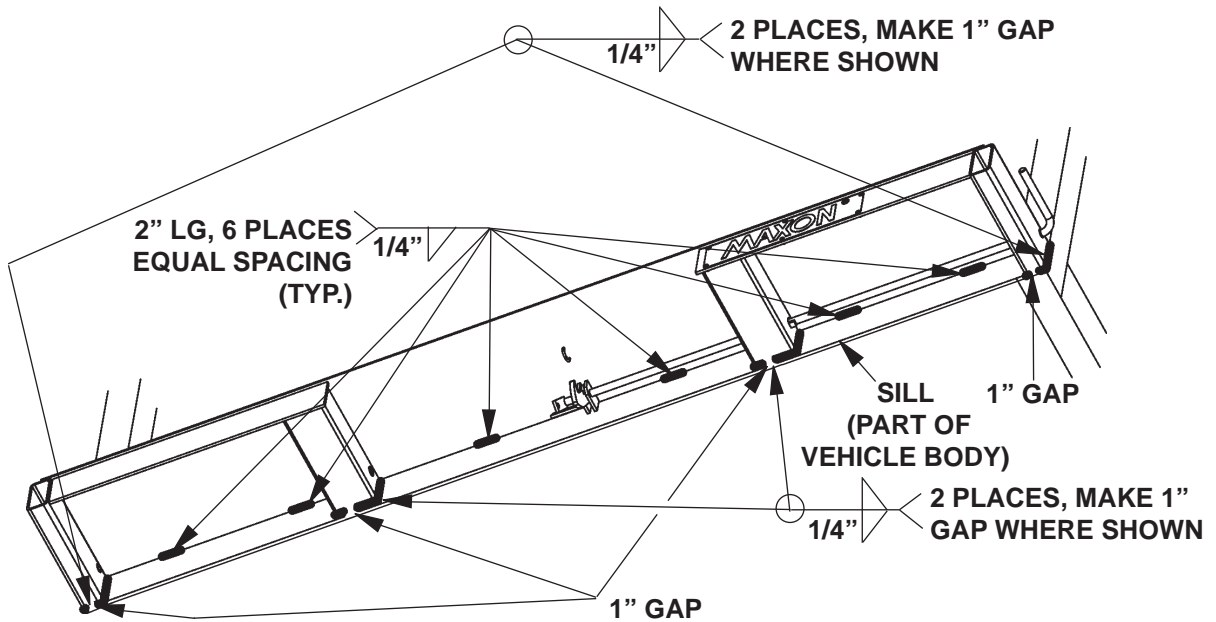
NOTE: Before welding extension plate to vehicle body, make sure:

- Inboard edge of extension plate is flush with the top of sill on vehicle body.
- Top surface of extension plate is level with the ground.

1. Center the extension plate on vehicle body. Weld the extension plate to vehicle body sill as shown in FIGS. 11-1 and 11-2.



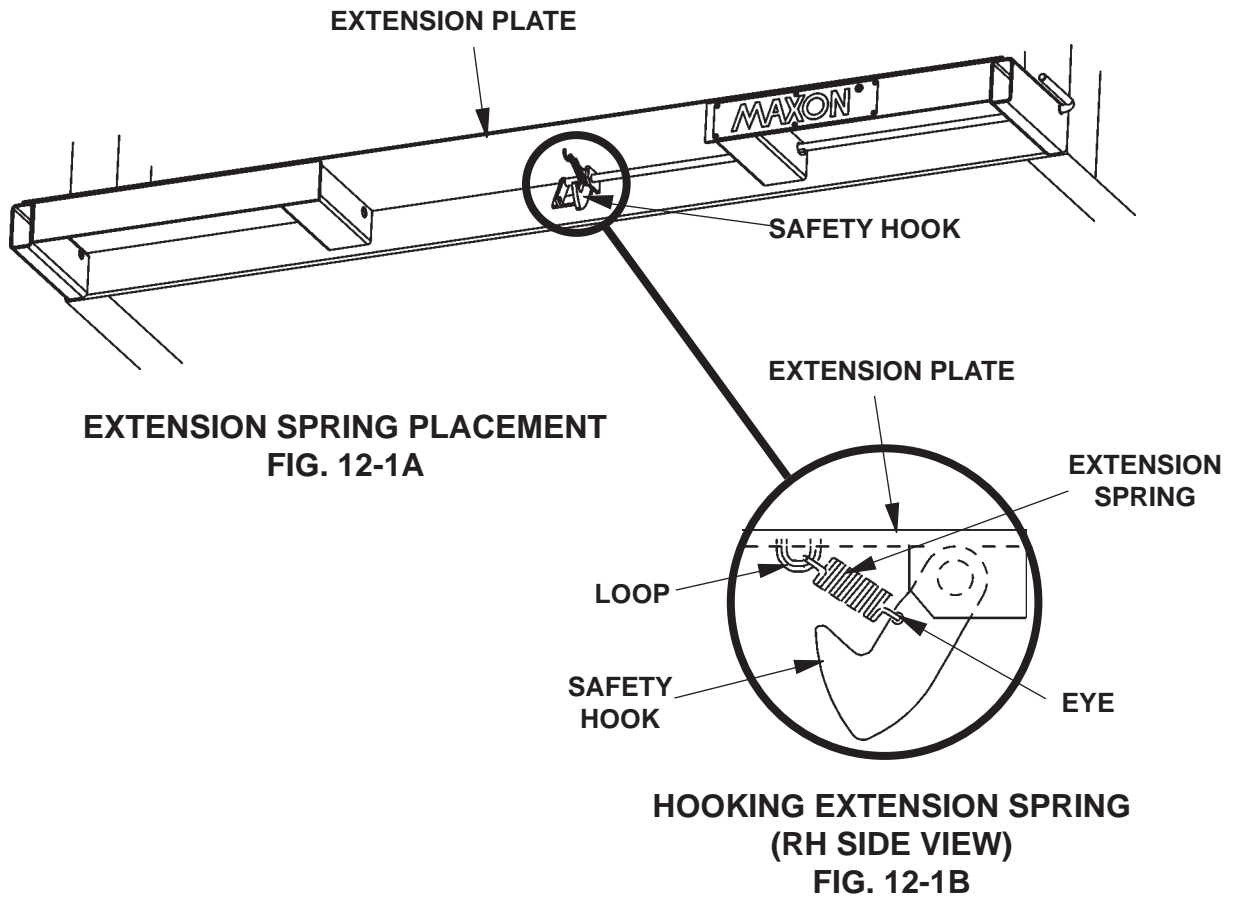
EXTENSION PLATE WELDS - VIEWED FROM ABOVE
FIG. 11-1



EXTENSION PLATE WELDS - VIEWED FROM UNDERNEATH
FIG. 11-2

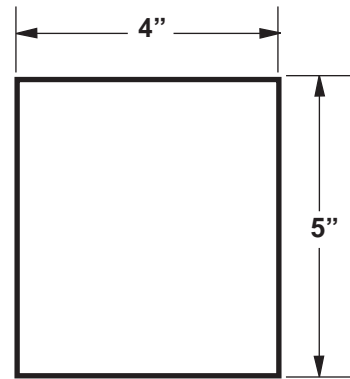
STEP 1 - WELD EXTENSION PLATE TO VEHICLE - Continued

2. Get the extension spring (**FIG. 12-1B**) from parts box. Hook one end of spring in loop (**FIG. 12-1B**) under extension plate (**FIG. 12-1A**). Next, hook opposite end of spring in eye of the safety hook (**FIG. 12-1B**).



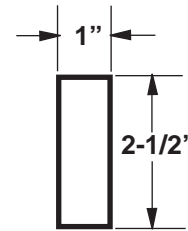
STEP 2 - WELD LIFTGATE TO VEHICLE

1. Make 2 support straps (**FIG. 13-1**) and 2 spacers (**FIG. 13-2**) to keep Liftgate in proper position. While welding Liftgate to vehicle, support straps keep platform level with extension plate and spacers keep 1/8" between platform and extension plate.



SUPPORT STRAP
(3/8" X 4" STEEL FLAT)
FIG. 13-1

2. Place 2 temporary support straps (**FIG. 13-3A**) on the extension plate as shown in **FIG. 13-3A**. Also, put 2 temporary spacers (**FIG. 13-3B**) between platform and extension plate as shown in **FIG. 13-3B**. Weld the straps and spacers to extension plate (**FIG. 13-3B**).



SPACER
(1/8" X 1" STEEL FLAT)
FIG. 13-2

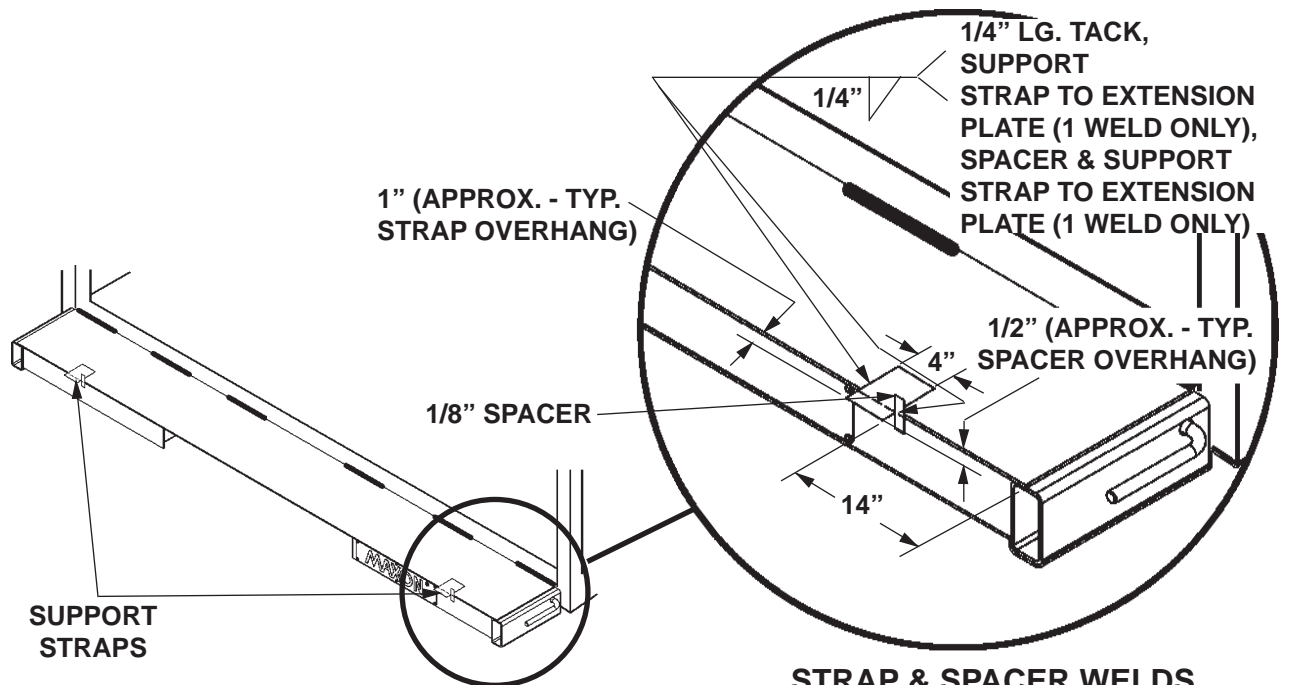


FIG. 13-3A

STRAP & SPACER WELDS
(TYPICAL - STRAP & SPACER AT BOTH ENDS OF EXTENSION PLATE)
FIG. 13-3B

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

⚠ WARNING

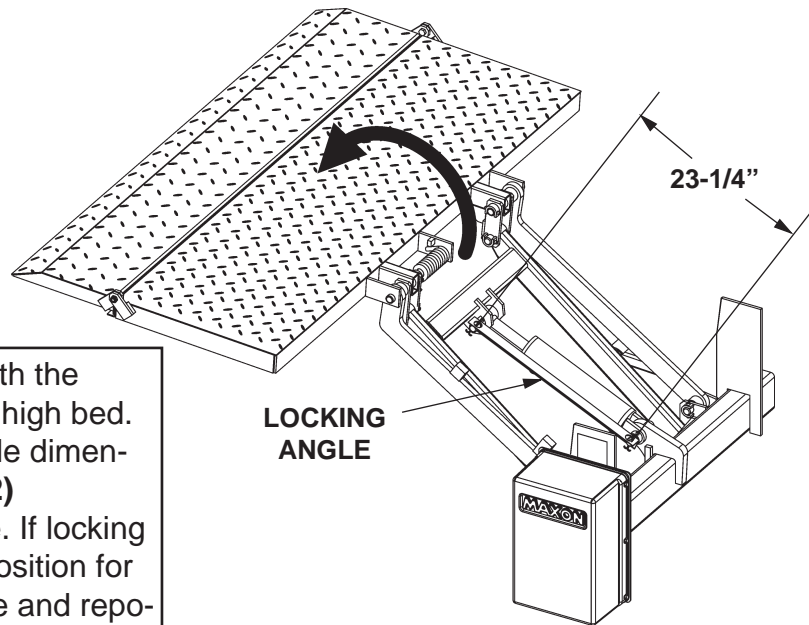
Do not remove lock angle until instructed to do so in this manual.

3. Unfold the platform as shown in FIGS. 14-1 and 14-2.

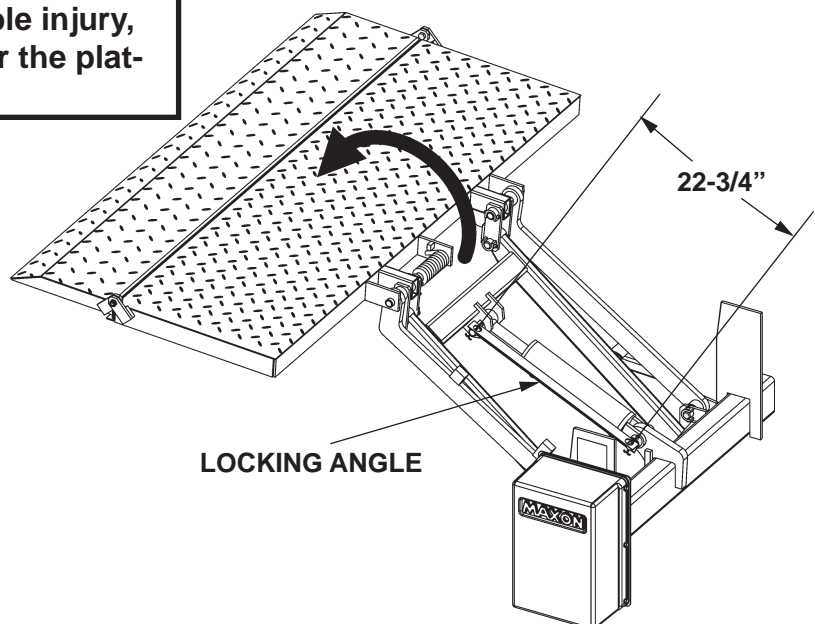
NOTE: Liftgates are shipped with the locking angle set up for high bed. Check your locking angle dimension (FIGS. 14-1 & 14-2) before installing Liftgate. If locking angle is not in correct position for your bed height, remove and reposition locking angle (FIGS. 14-1 & 14-2).

⚠ WARNING

Support Liftgate before removing locking angle. To prevent possible injury, never work in the area under the platform.



UNFOLDED PLATFORM WITH RAMP FLIPOVER, ONLY
(LOW BED 36" - 42" HEIGHT)
FIG. 14-1



UNFOLDED PLATFORM WITH RAMP OR WEDGE FLIPOVER, RAMP IS SHOWN
(HIGH BED 42" - 54" HEIGHT)
FIG. 14-2

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

⚠ WARNING

To prevent injury, support Liftgate to keep it from tipping over. Stay clear of place under the platform where Liftgate could fall on you.

NOTE: To prevent misalignment when hoisting Liftgate by the platform, each platform stop must be tack welded to shackle.

4. Tack weld platform stops to shackles, on LH and RH side of platform, as shown in **FIGS. 15-1A and 15-1B**.

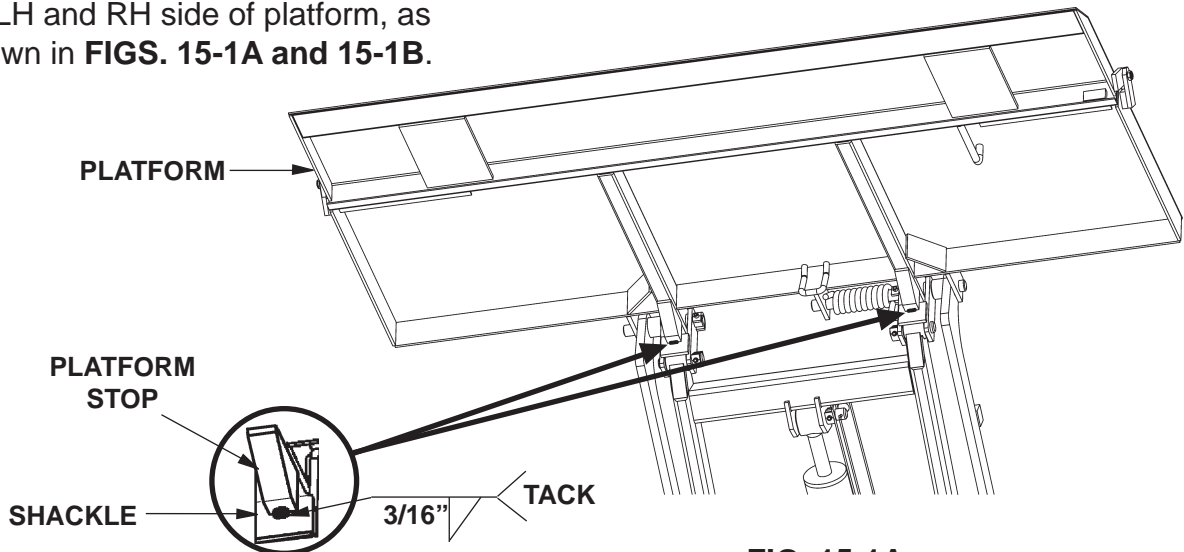


FIG. 15-1A

**TACK WELDING
PLATFORM STOPS
FIG. 15-1B**

5. Attach chain and hoist on each side of platform at position shown in **FIG. 15-2**. (Place chain all around platform.) Hoist the Liftgate, and then place floor jack under main frame (**FIG. 15-2**). Jack the Liftgate into position. Make sure vehicle floor is horizontal and pins are lined up as shown in **FIG. 15-2**.

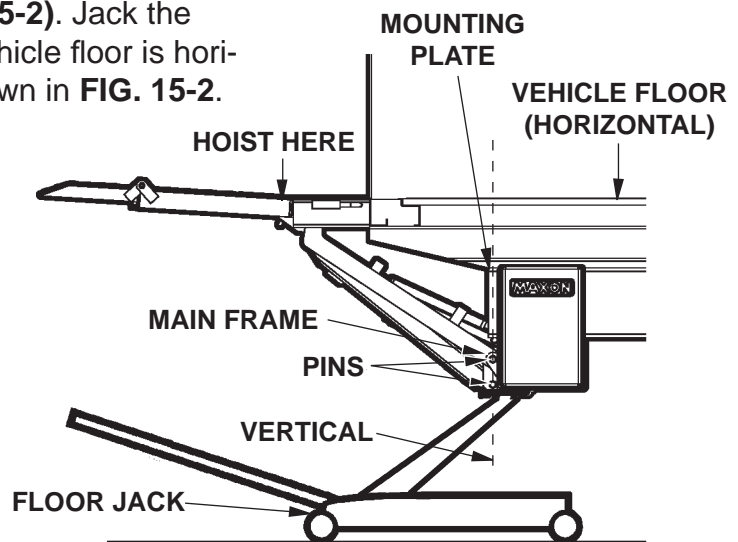


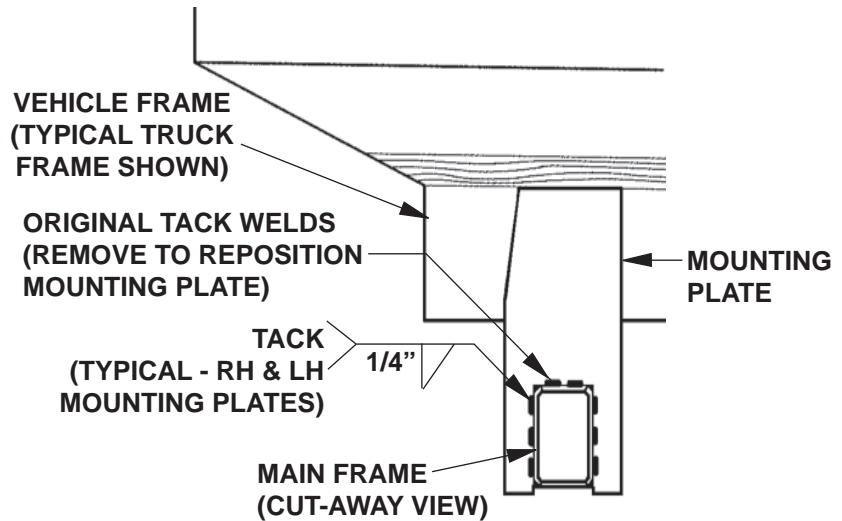
FIG. 15-2

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

⚠ WARNING

Liftgate is shipped from factory with mounting plates that are only tack welded to main frame. Weld as shown in illustration before operating Liftgate.

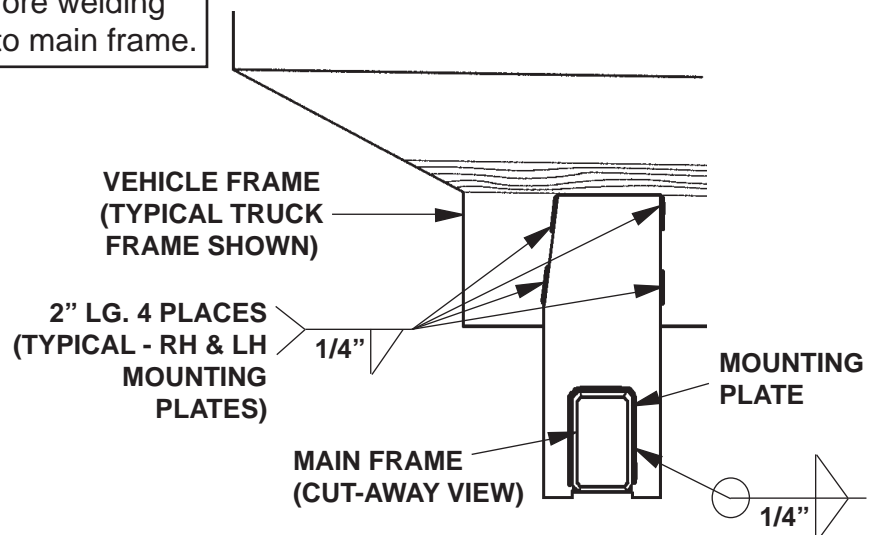
6. Check if both mounting plates line up with the vehicle frame. If the mounting plates do not line up, remove the tack welds from one mounting plate (**FIG. 16-1**). Make sure Liftgate stays centered on vehicle. Reposition the mounting plate against vehicle frame. Tack weld as shown in **FIG. 16-1**. Repeat for second mounting plate (reposition and tack weld).



**REPOSITIONING MOUNTING PLATE
(RH SIDE SHOWN)
FIG. 16-1**

NOTE: Weld both mounting plates to vehicle frame before welding mounting plates to main frame.

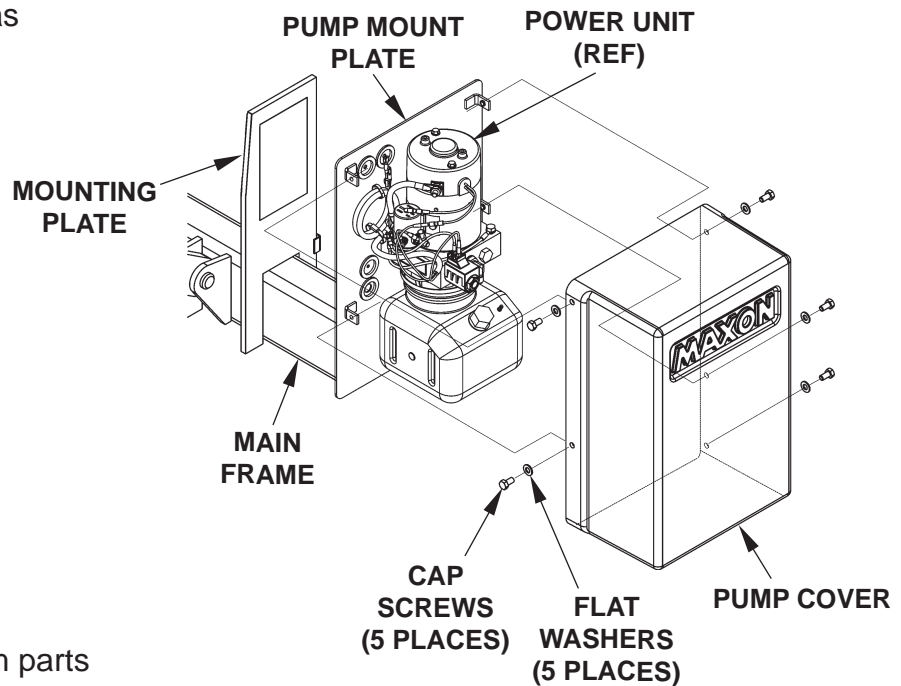
7. Clamp both mounting plates to vehicle frame. Weld the mounting plates to vehicle frame as shown in **FIG. 16-2**. Next, weld both mounting plates to main frame (**FIG. 16-2**). Remove clamps.



**WELD TO VEHICLE FRAME AND MAIN FRAME
(RH SIDE SHOWN)
FIG. 16-2**

STEP 3 - RUN HYDRAULIC LINES (GRAVITY DOWN)

1. Unbolt the pump cover as shown in FIG. 17-1.



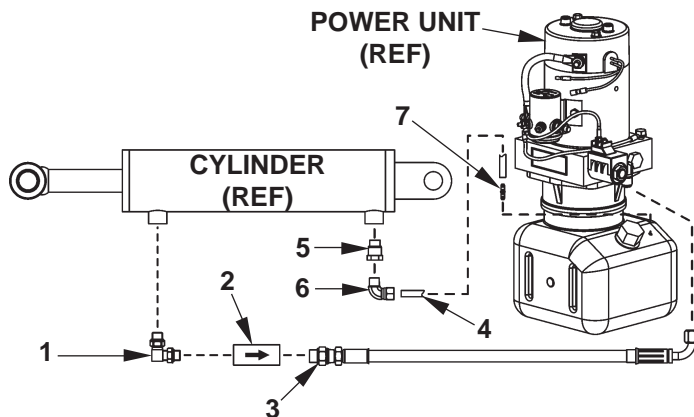
UNBOLTING PUMP COVER
FIG. 17-1

2. Get the hydraulic system parts (FIG. 17-2 and TABLE 17-1) from parts box.

⚠ CAUTION

Always route hydraulic hoses clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in hoses. 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.

3. Run hose (FIG. 17-2, ITEM 3) and plastic hose (FIG. 17-2, ITEM 4) from power unit to cylinder as follows.



HYDRAULIC SYSTEM PARTS
FIG. 17-2

NOTE: Make sure arrow on flow control valve points toward the pump (FIG. 17-2, ITEM 2).

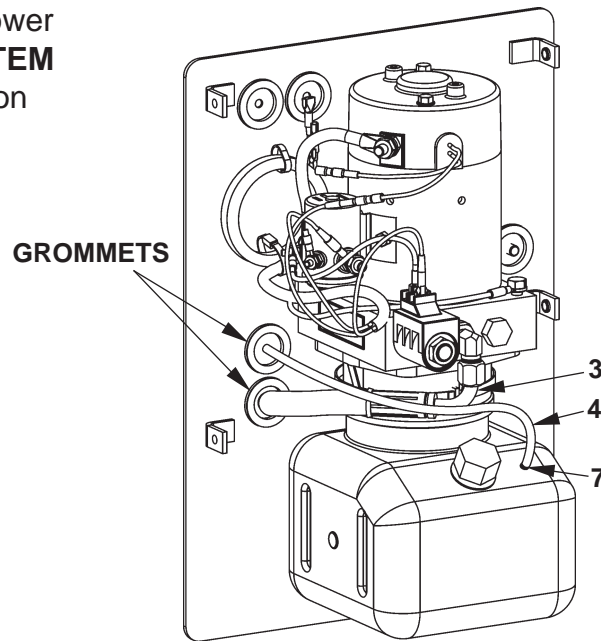
ITEM	P/N	QTY.	DESCRIPTION
1	906722-01	1	ELBOW, 90 DEG, O-RING, #6 M-M
2	906709-02	1	FLOW REGULATOR VALVE, 2 GPM
3	280635-01	1	HOSE ASSY, 3/8"HP, 54" LG
4	224370-07	1	PLASTIC HOSE, 60-1/2" LG
5	228012	1	ADAPTER, 9/16"-18"M - 1/4"F
6	202406	1	ELBOW, BRASS 1/4" X 1/4"
7	906728-01	REF	DUAL BARBED FITTING, 1/64" I.D.

HYDRAULIC SYSTEM PARTS
TABLE 17-1

STEP 3 - RUN HYDRAULIC LINES (GRAVITY DOWN) - Continued

NOTE: Hydraulic lines and electrical lines must be run into pump box through sealing grommets (**FIG. 18-1**). To ensure a good seal on hydraulic & electrical lines, never cut the sealing grommets.

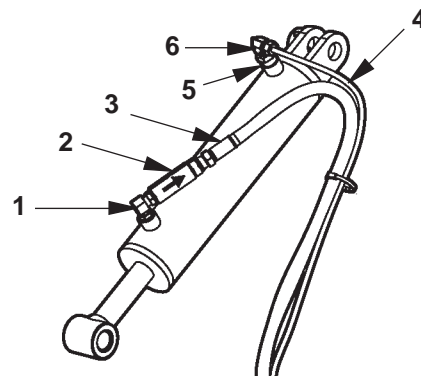
4. Connect hose (**FIG. 18-1, ITEM 3**) to power unit. Connect plastic hose (**FIG. 18-1, ITEM 4**) to barbed fitting (**FIG. 18-1, ITEM 7**) on pump reservoir.



**HOSES RUN FROM
POWER UNIT
FIG. 18-1**

NOTE: Make sure arrow on flow control valve points toward the pump (**FIG. 18-2, ITEM 2**).

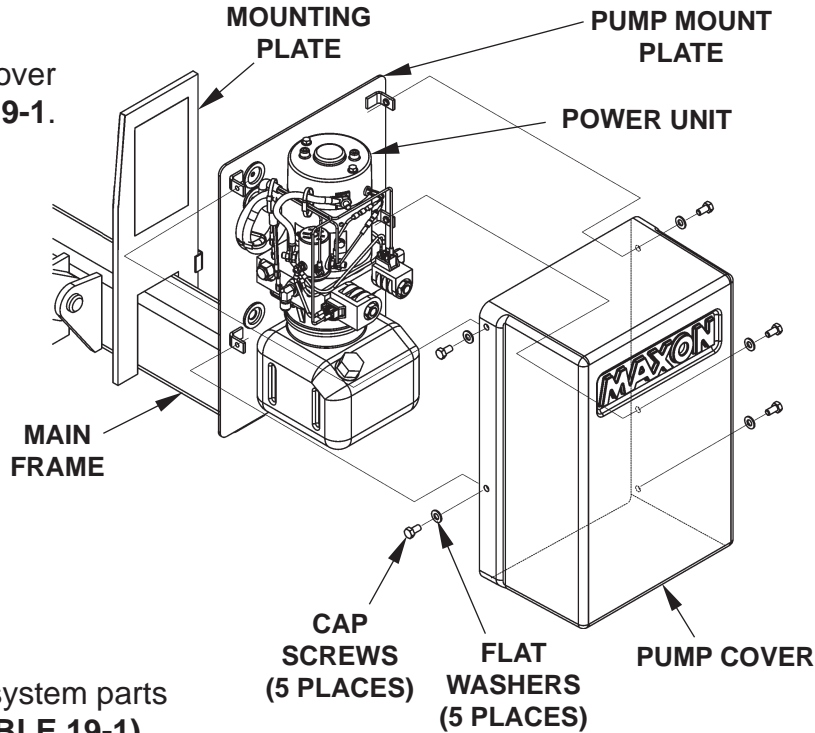
5. Connect elbow, flow control valve, and hose (**FIG. 18-2, ITEMS 1, 2 & 3**) to cylinder. Also, connect fittings and plastic hose (**FIG. 18-2, ITEMS 4, 5, & 6**) to cylinder. To prevent kinking, position plastic hose (**FIG. 18-2, ITEM 4**) as shown in **FIG. 18-2**.



**HOSES RUN TO
HYDRAULIC CYLINDER
FIG. 18-2**

STEP 3 - RUN HYDRAULIC LINES (POWER DOWN)

1. Unbolt the pump cover as shown in FIG. 19-1.



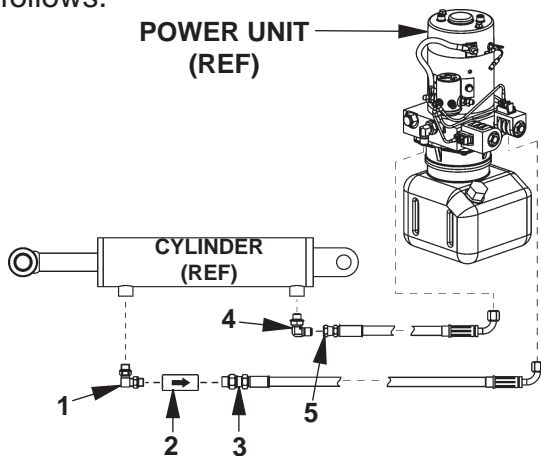
2. Get the hydraulic system parts (FIG. 19-2 and TABLE 19-1) from parts box.

UNBOLTING PUMP BOX COVER
FIG. 19-1

⚠ CAUTION

Always route hydraulic hoses clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in hoses. 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.

3. Run hoses (FIG. 19-2 and TABLE 19-1, ITEMS 3 & 5) from power unit to cylinder as follows.



HYDRAULIC SYSTEM PARTS
FIG. 19-2

NOTE: Make sure arrow on flow control valve points toward the pump (FIG. 19-2, ITEM 2).

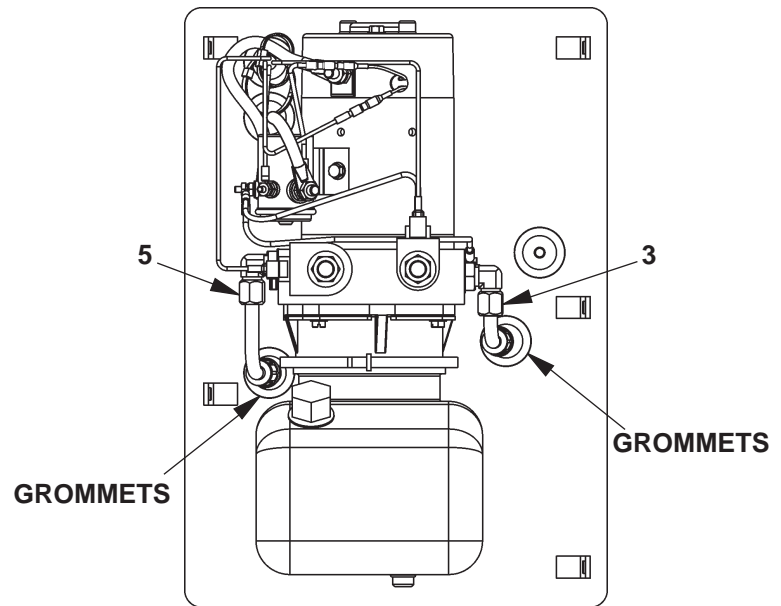
ITEM	QTY.	P/N	DESCRIPTION
1	1	906722-01	ELBOW, 90 DEG, O-RING, #6 M-M
2	1	906709-02	FLOW REGULATOR VALVE, 2 GPM
3	1	280635-01	HOSE ASSEMBLY, 3/8"HP, 54"LG
4	1	905152	ELBOW, 90 DEG SAE #6-JIC37 #6
5	1	280634-01	HOSE ASSEMBLY, 3/8"HP, 50"LG.

HYDRAULIC SYSTEM PARTS
TABLE 19-1

STEP 3 - RUN HYDRAULIC LINES (POWER DOWN) - Continued

NOTE: Hydraulic lines and electrical lines must run into pump box through sealing grommets (**FIG. 20-1**). To ensure a good seal on hydraulic & electrical lines, never cut the sealing grommets.

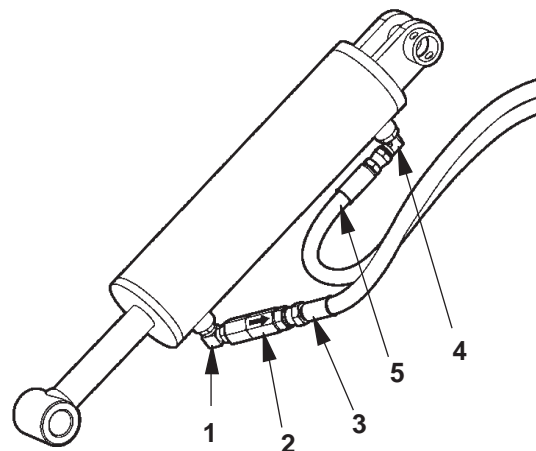
4. Connect hoses (**FIG. 20-1, ITEMS 3 & 5**) to power unit.



**HOSES CONNECTIONS ON
POWER UNIT
FIG. 20-1**

NOTE: Make sure arrow on flow control valve points toward the pump (**FIG. 20-2, ITEM 2**).

5. Connect elbow, flow control valve, and hose (**FIG. 20-2, ITEMS 1, 2 & 3**) to cylinder. Also, connect second elbow and hose (**FIG. 20-2, ITEMS 4 & 5**) to cylinder. To prevent kinking, position hoses (**FIG. 20-2, Items 3 & 5**) as shown in **FIG. 20-2**.



**HOSES RUN TO
HYDRAULIC CYLINDER
FIG. 20-2**

STEP 4 - ADD HYDRAULIC FLUID TO RESERVOIR

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.

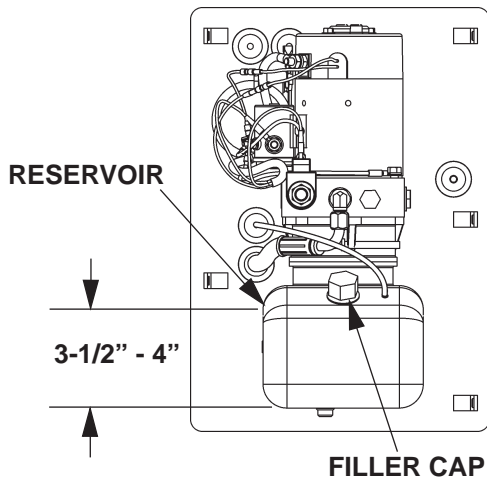
NOTE: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32

Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606

See **TABLES 21-1 and 21-2** for recommended brands.

1. Pull out filler cap (no threads) shown in **FIG. 21-1**. Fill the reservoir (**FIG. 21-1**) with hydraulic fluid to 4" above the bottom (**FIG. 21-1**).



**PUMP RESERVOIR
(GRAVITY DOWN POWER UNIT SHOWN)
FIG. 21-1**

2. Reinstall filler cap (**FIG. 21-1**).

ISO 32 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
AMSOIL	AWH-05
CHEVRON	HIPERSYN 32
KENDALL	GOLDEN MV
SHELL	TELLUS S2 V32
EXXON	UNIVIS N-32
MOBIL	DTE-13M, DTE-24, HYDRAULIC OIL-13

TABLE 21-1

ISO 15 OR MIL-H-5606 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
AMSOIL	AWF-05
CHEVRON	FLUID A, AW-MV-15
KENDALL	GLACIAL BLU
SHELL	TELLUS S2 V15
EXXON	UNIVIS HVI-13
MOBIL	DTE-11M
ROSEMEAD	THS FLUID 17111

TABLE 21-2

STEP 5 - 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.

Clip fused power cable to vehicle chassis with fuse nearest the vehicle battery, as shown in **FIG. 22-1**. Keep enough cable near the battery to reach the positive terminal without straining cable (after connection). Run cable to pump box on Liftgate.

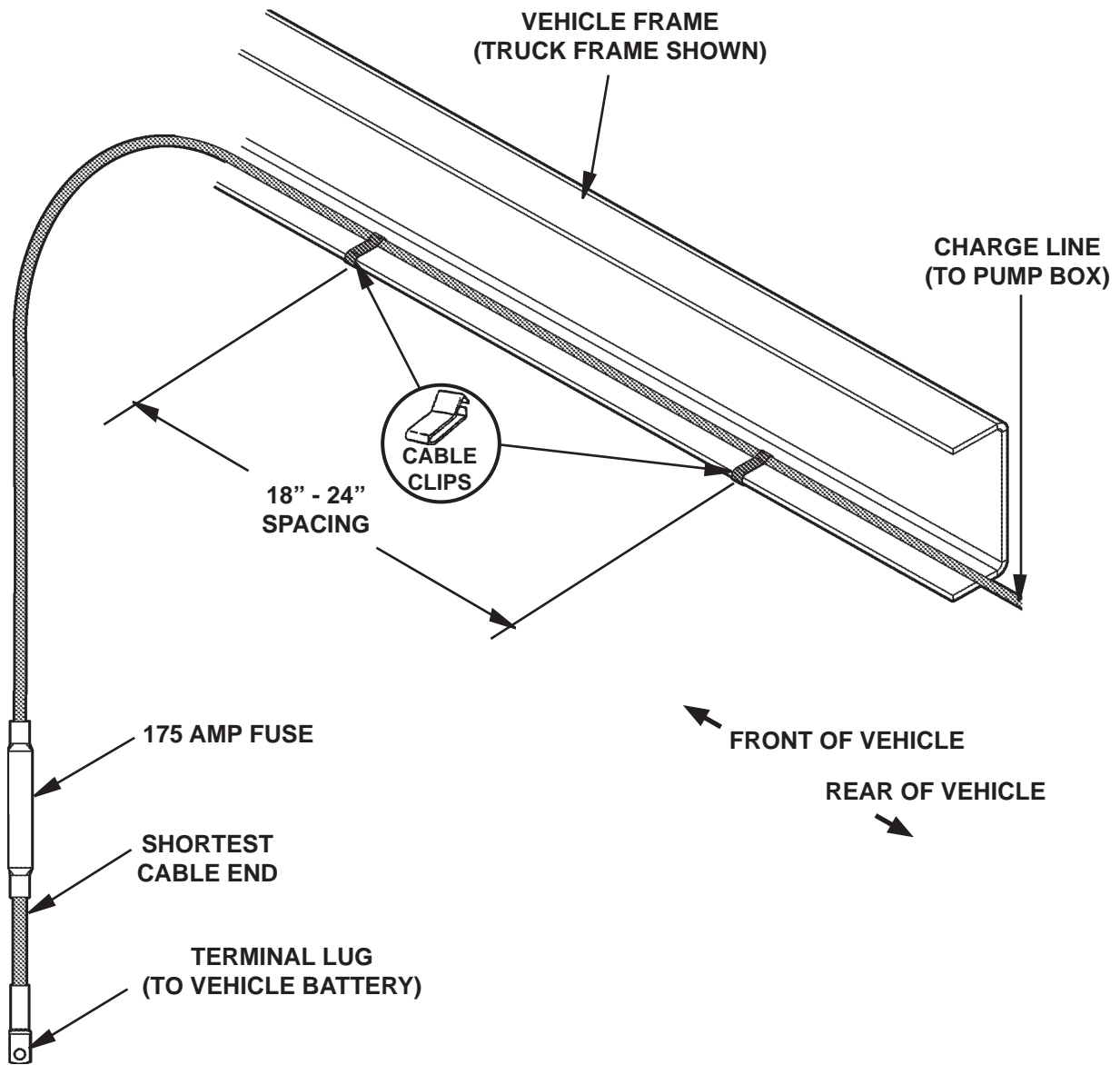
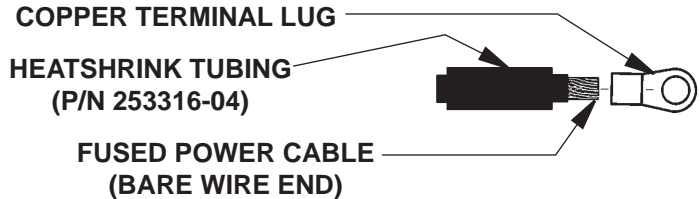


FIG. 22-1

STEP 6 - CONNECT POWER CABLE

NOTE: Hydraulic lines and electrical lines must be run into pump box through sealing grommets (**FIG. 23-3**). To ensure a good seal on hydraulic & electrical lines, never cut the sealing grommets.

1. On the bare wire end of fused power cable, keep enough length to attach copper terminal lug and reach motor solenoid without putting tension on cable (after connection) (**FIG. 23-1**). Measure (if needed) and then cut excess cable from bare wire end of cable. Put heatshrink tubing (parts box) (**FIG. 23-1**) on the end of the cable (leave room for terminal lug). Crimp copper terminal lug (from parts box) on the fused power cable and shrink the heatshrink tubing (**FIG. 23-2**).



PLACING TERMINAL LUG & HEATSHRINK TUBING ON FUSED POWER CABLE
FIG. 23-1



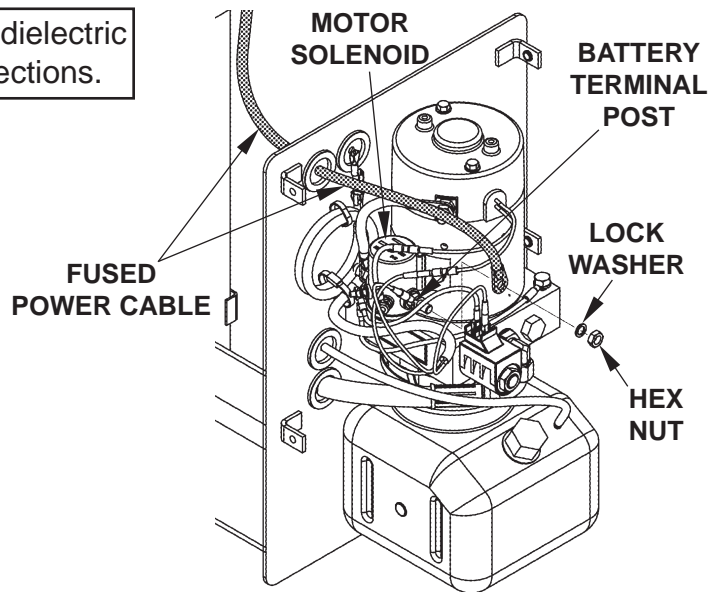
TYPICAL FUSED POWER CABLE WITH TERMINAL LUG INSTALLED
FIG. 23-2

CAUTION

To prevent damage to metal case starter solenoid, hold bottom terminal nut securely when loosening and tightening top terminal nut. Do not over-tighten the terminal nuts. For the 5/16" load terminals, torque nuts 35-40 lbs.-in. Torque the nuts on #10-32 control terminals 15-20 lbs.-in.

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

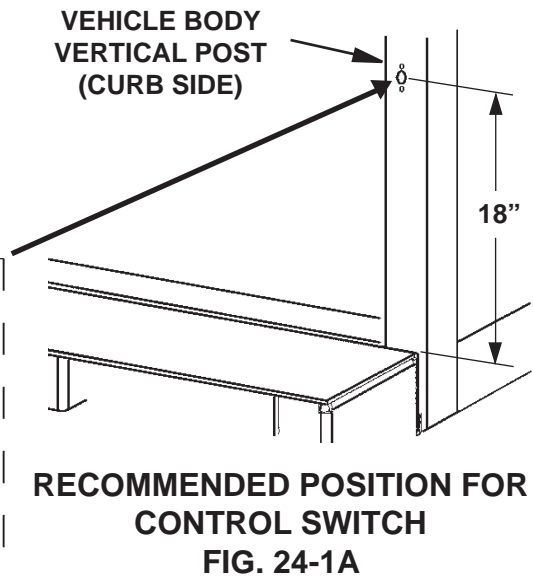
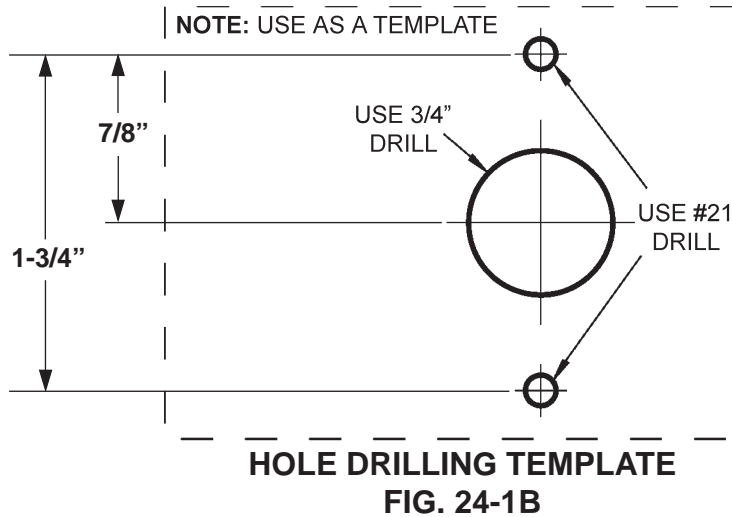
2. Remove hex nut and lock washer from battery terminal post on the motor solenoid. Connect the fused power cable to the motor solenoid as shown in **FIG. 23-3**. Reinstall and tighten lock washer and hex nut.



TYPICAL FUSED POWER CABLE CONNECTION (GRAVITY DOWN PUMP SHOWN)
FIG. 23-3

STEP 7 - INSTALL CONTROL SWITCH

1. Drill one 3/4" hole and two #21-size holes in the vertical post on curb side of vehicle body as shown in **FIG. 24-1A**. Use template shown in **FIG. 24-1B**.



NOTE: Hydraulic lines and electrical lines must run into pump box through sealing grommets (**FIG. 24-2**). To ensure a good seal on hydraulic & electrical lines, never cut the sealing grommets.

2. Cut tie strap on coiled wiring harness (**FIG. 24-2**). Pull the wiring harness through grommet on the pump mounting plate (**FIG. 24-2**).

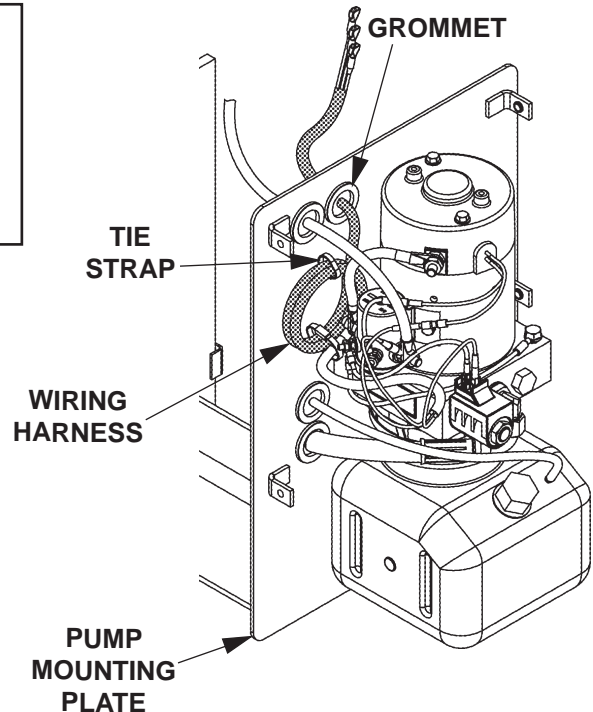
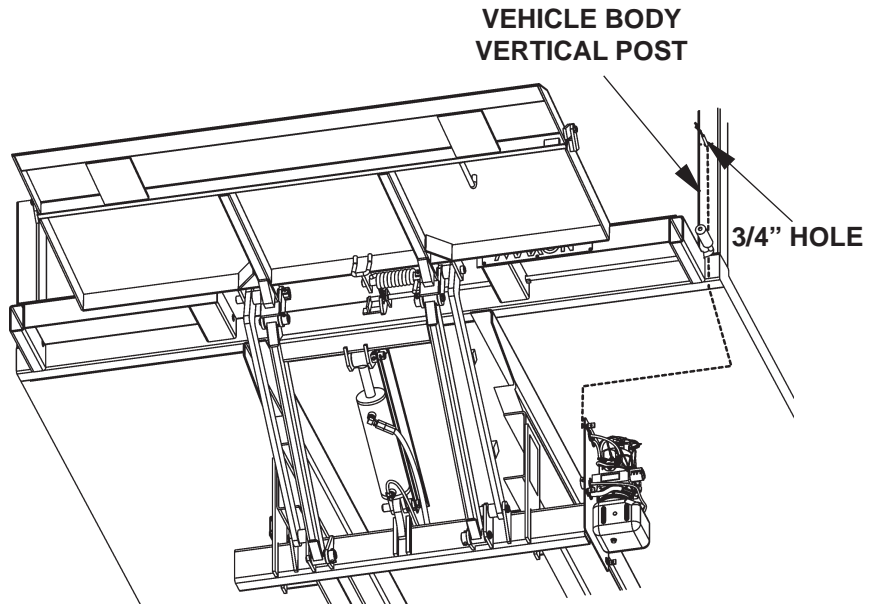


FIG. 24-2

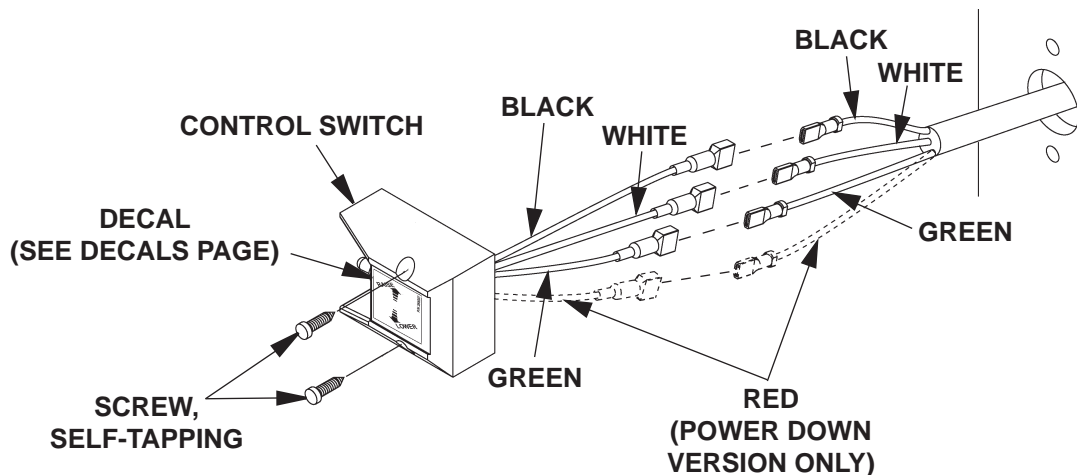
STEP 7 - INSTALLING CONTROL SWITCH - Continued

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

3. Run wiring harness under vehicle body (see dashed line - FIG. 25-1) and up through inside of vertical post. Then pull control switch wiring harness out the 3/4" hole drilled in vertical post (FIG. 25-1). Connect the control switch wiring to the wiring harness as shown in FIG. 25-2. Push extended wiring back into the 3/4" hole in the vertical post until control switch touches the post. Attach control switch to vertical post with 2 self-tapping screws (FIG. 25-2).



ROUTING CONTROL SWITCH WIRING
FIG. 25-1

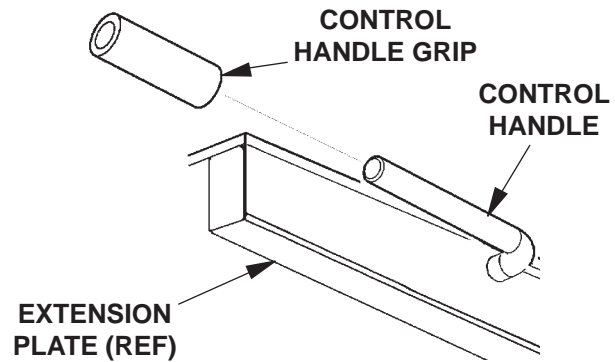


CONTROL SWITCH WIRING CONNECTIONS
FIG. 25-2

STEP 7 - INSTALLING CONTROL SWITCH - Continued

NOTE: If you plan to install **rental lock** (see **STEP 14**), wait until **STEP 14** to install the control handle grip.

4. Get the control handle grip (**FIG. 26-1**) from parts box. Install the handle grip on control handle as shown in **FIG. 26-1**.

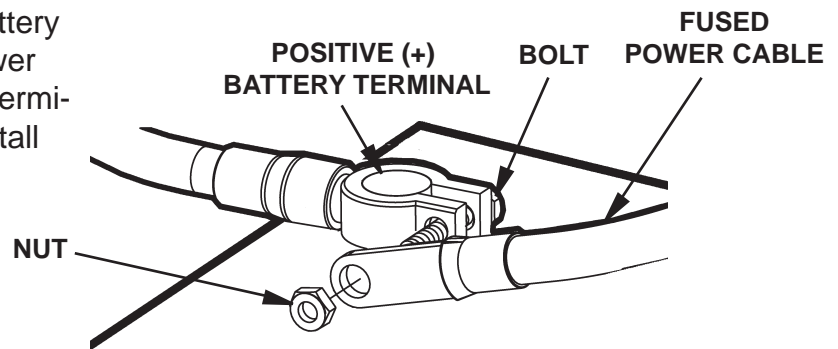


**INSTALLING CONTROL HANDLE GRIP
FIG. 26-1**

STEP 8 - CONNECT POWER CABLE TO BATTERY

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

Remove nut from positive (+) battery terminal connector. Connect power cable to the positive (+) battery terminal connector (**FIG. 27-1**). Reinstall and tighten nut.



**CONNECTING FUSED POWER CABLE
FIG. 27-1**

STEP 9 - REMOVE LOCKING STRAP

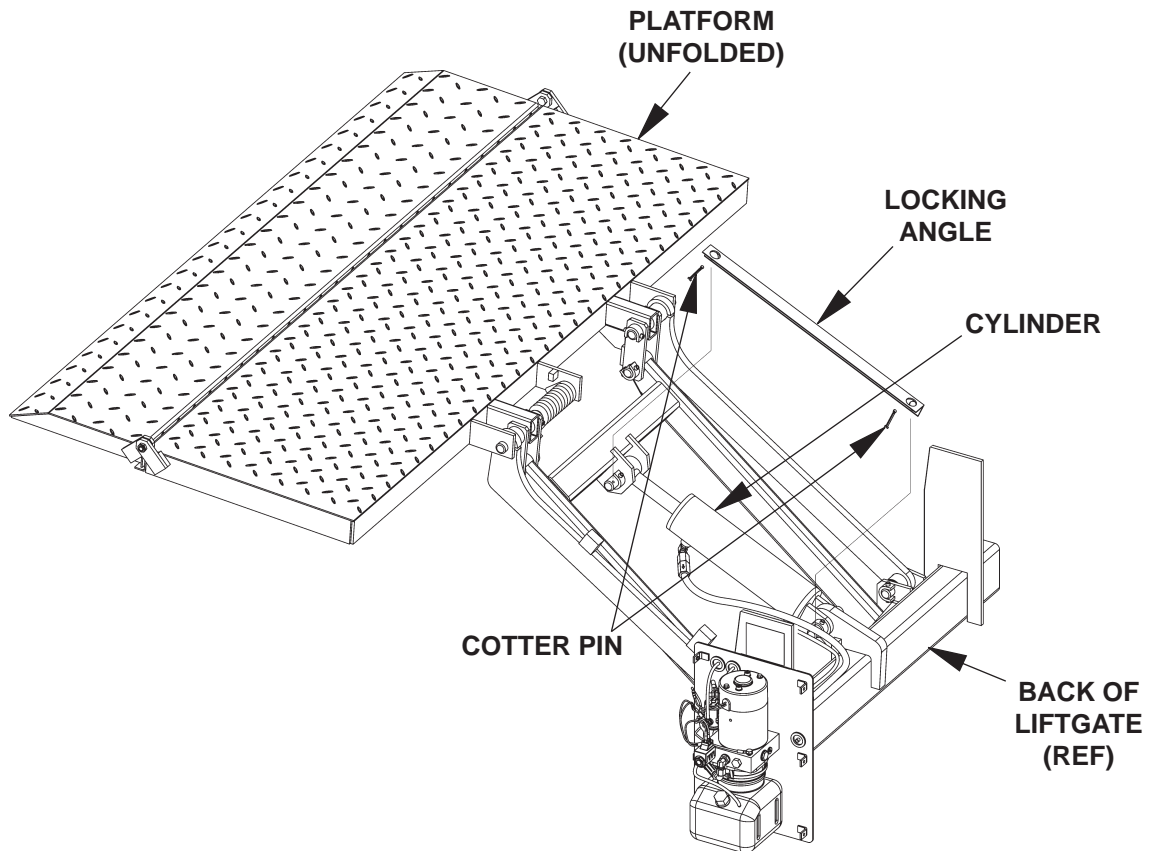
1. Push control switch to **RAISE** position for 3 - 4 seconds to pressurize hydraulic system.

⚠ WARNING

To prevent possible injury, never work in the area under the platform. Get access to the locking angle from the back of the Liftgate.

NOTE: To operate Liftgate, locking angle must be removed from hydraulic cylinder.

2. Remove locking angle from cylinder (**FIG. 28-1**).



**REMOVING LOCKING STRAP
FIG. 28-1**

STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE

1. Remove floor jack and hoist supporting Liftgate (**FIG. 29-1**).

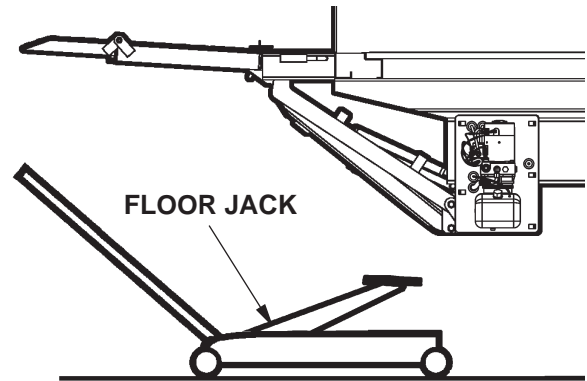
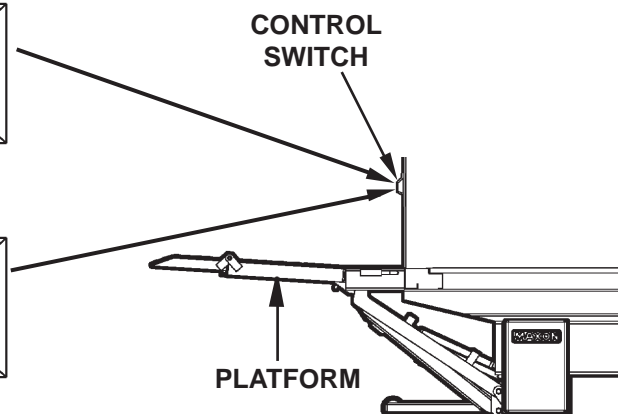
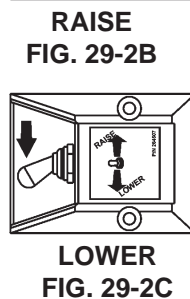
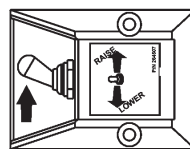


FIG. 29-1

NOTE: The remaining steps for installing the Liftgate may require the platform be raised and lowered. Platform can be raised and lowered as follows. More detailed operation instructions are available in the **Operation Manual**.

NOTE: While operating the Liftgate, release toggle switch to stop the platform.

2. To lower the platform, push the toggle switch to the **LOWER** position (**FIG. 29-2C**). To raise the platform (**FIG. 29-2A**), push the toggle switch to the **RAISE** position (**FIG. 29-2B**). Wait a second before releasing the toggle switch, after platform reaches bed height.



RAISING & LOWERING PLATFORM
FIG. 29-2A

STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

3. **LOWER** the platform to the ground. Remove both support straps and both spacers from extension plate (**FIG. 30-1**).

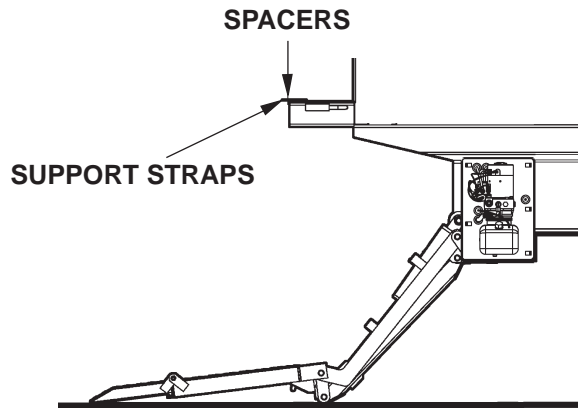


FIG. 30-1

CAUTION

Prevent damaged hydraulic hoses. Before welding next to hydraulic hoses, protect the hoses with a heat-resistant cover such as a welding blanket.

4. Weld each of the two mounting plates to vehicle frame (**FIG. 30-2**).

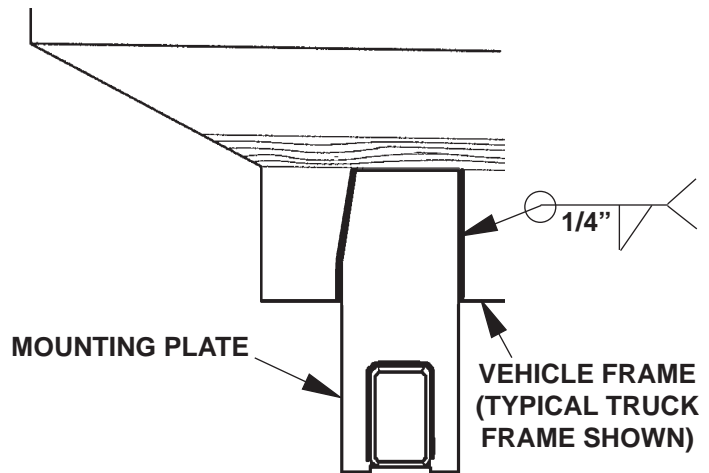
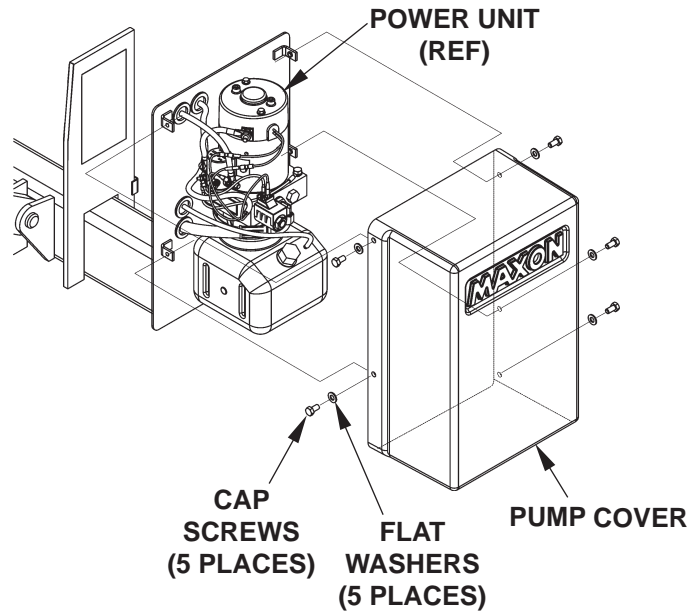


FIG. 30-2

STEP 10 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

5. Bolt on the pump cover as shown in **FIG. 31-1**. Torque the bolts (cap screws) to **10 - 14 lbs.- in.**

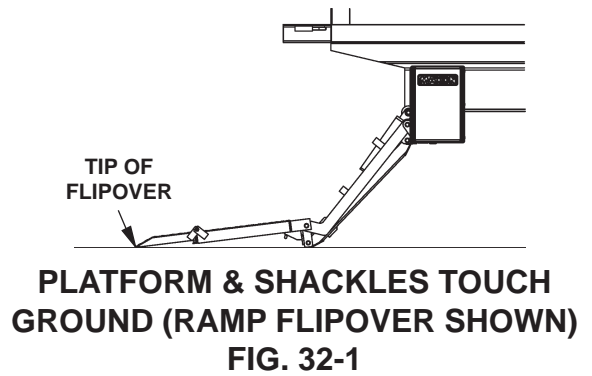


**BOLTING ON PUMP COVER
FIG. 31-1**

STEP 11 - ADJUST PLATFORM (IF REQUIRED)

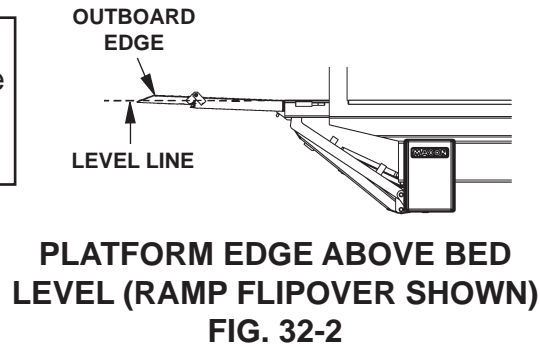
NOTE: Before doing the following procedure, make sure vehicle is parked on level ground.

1. Make sure platform is at ground level. Unfold the platform and flipover. As the platform first touches the ground, shackles and tip of flipover must touch the ground at the same time (**FIG. 32-1**). If the shackles and the tip of flipover touch the ground at the same time, **RAISE** platform to bed height. Outboard edge on top of flipover should be above bed level (**FIG. 32-2**). If indications are correct in both cases (**FIGS. 32-1 & 32-2**), Liftgate is installed correctly and no adjustment is needed. If indications are incorrect, continue with instruction 2.



NOTE: If tip of flipover touches first (**FIG. 32-3**), do instructions 2 and 3. If the shackle touches first (**see FIG. 34-1**), skip 2 and 3 and do instructions 4 and 5.

2. Make sure platform is still at ground level. If the shackle is not touching the ground, measure and compare distance "A" (**FIG. 32-3A**) with **TABLE 32-1** or **TABLE 32-2** to determine the correct shim. Next, mark position on shackle (**FIG. 32-3B**).

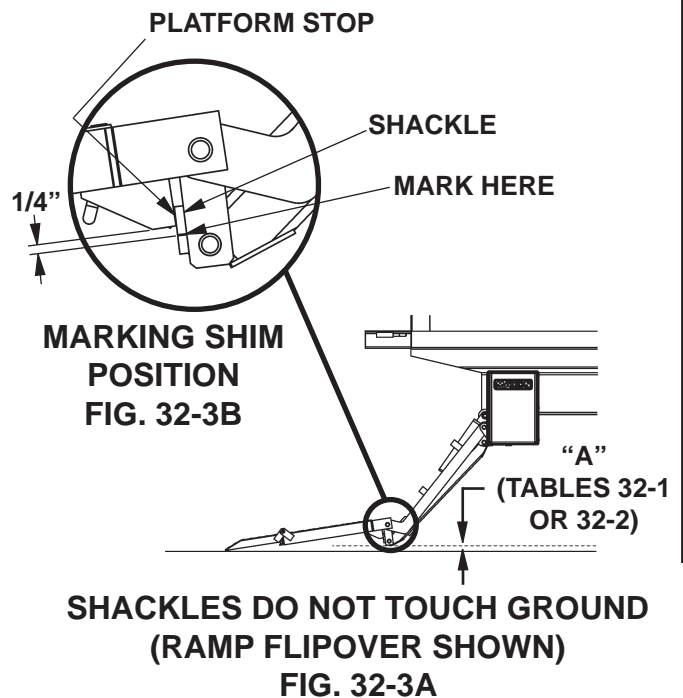


RAISE TIP OF RAMP FLIPOVER THIS DISTANCE "A"	REQUIRED SHIM THICKNESS	WELD SIZE "W"
11/16"	1/16"	1/16"
1-3/8"	1/8"	1/8"
2-1/16"	3/16"	3/16"
2-3/4"	1/4"	1/4"

**SHIMS TO RAISE RAMP FLIPOVER
TABLE 32-1**

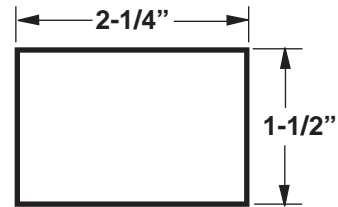
RAISE TIP OF RAMP FLIPOVER THIS DISTANCE "A"	REQUIRED SHIM THICKNESS	WELD SIZE "W"
9/16"	1/16"	1/16"
1-1/4"	1/8"	1/8"
1-15/16"	3/16"	3/16"
2-5/8"	1/4"	1/4"

**SHIMS TO RAISE WEDGE FLIPOVER
TABLE 32-2**

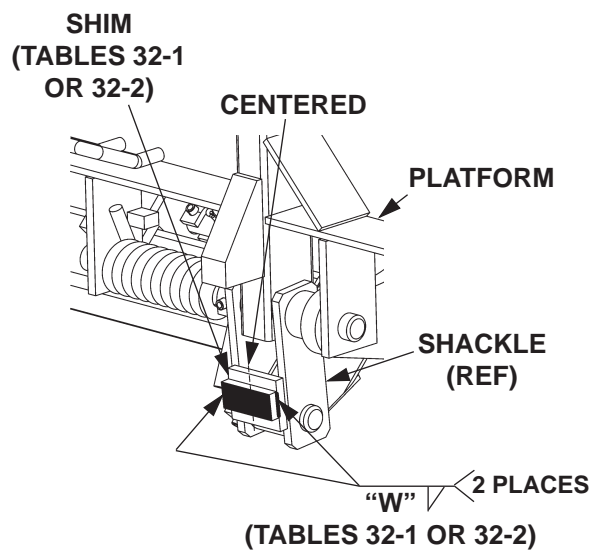


STEP 11 - ADJUST PLATFORM (IF REQUIRED) -Continued

3. Make shims as needed (**FIG. 33-1**). Position bottom edge of shim to line up with mark on shackle (**see FIG. 32-3B**). Next, weld the shim to shackle as shown in **FIG. 33-2**.



**SHIM (1/16", 1/8", 3/16", or 1/4")
MADE FROM STEEL FLAT
FIG. 33-1**



**WELDING SHIMS (RH SHACKLE SHOWN)
FIG. 33-2**

STEP 11 - ADJUST PLATFORM (IF REQUIRED) -Continued

4. Make sure platform is still at ground level. If the tip of flipover is not touching the ground, measure and compare distance "B" (FIG. 34-1) with TABLE 34-1 or TABLE 34-2 to determine how much to grind from the platform stops (FIG. 34-2).

LOWER TIP OF RAMP FLIPOVER THIS DISTANCE "B"	GRIND METAL FROM PLATFORM STOP
11/16"	1/16"
1-3/8"	1/8"
2-1/16"	3/16"
2-3/4"	1/4"

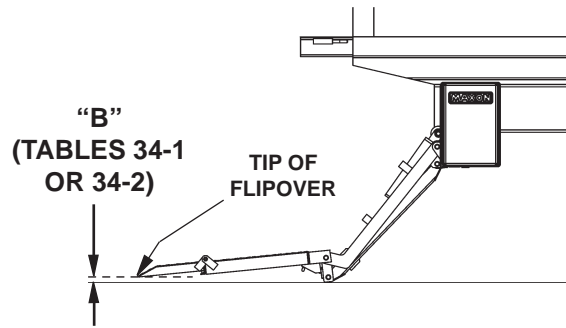
**SHIMS TO LOWER RAMP FLIPOVER
TABLE 34-1**

LOWER TIP OF WEDGE FLIPOVER THIS DISTANCE "B"	GRIND METAL FROM PLATFORM STOP
9/16"	1/16"
1-1/4"	1/8"
1-15/16"	3/16"
2-5/8"	1/4"

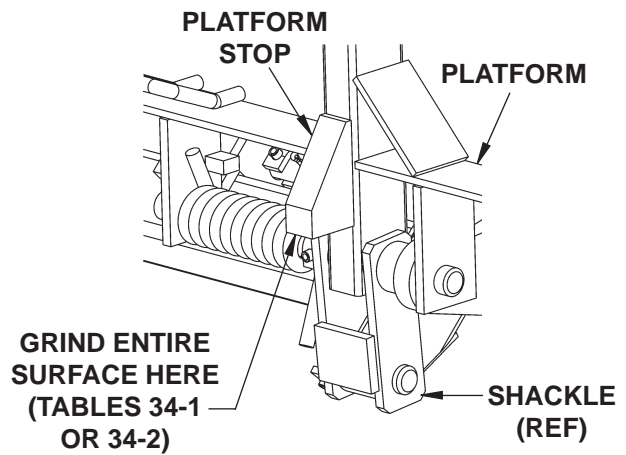
**SHIMS TO LOWER WEDGE FLIPOVER
TABLE 34-2**

5. Grind correct amount of metal (TABLE 34-1 or 34-2) from platform stop as shown in FIG. 34-2.

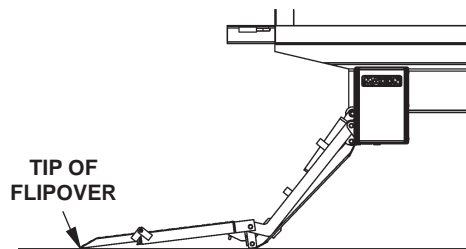
6. RAISE the platform, then LOWER it to the ground. As the platform first touches the ground, the tip of flipover and shackle should touch at the same time as shown in FIG. 34-3.



**TIP OF FLIPOVER DOES NOT TOUCH GROUND (RAMP FLIPOVER SHOWN)
FIG. 34-1**



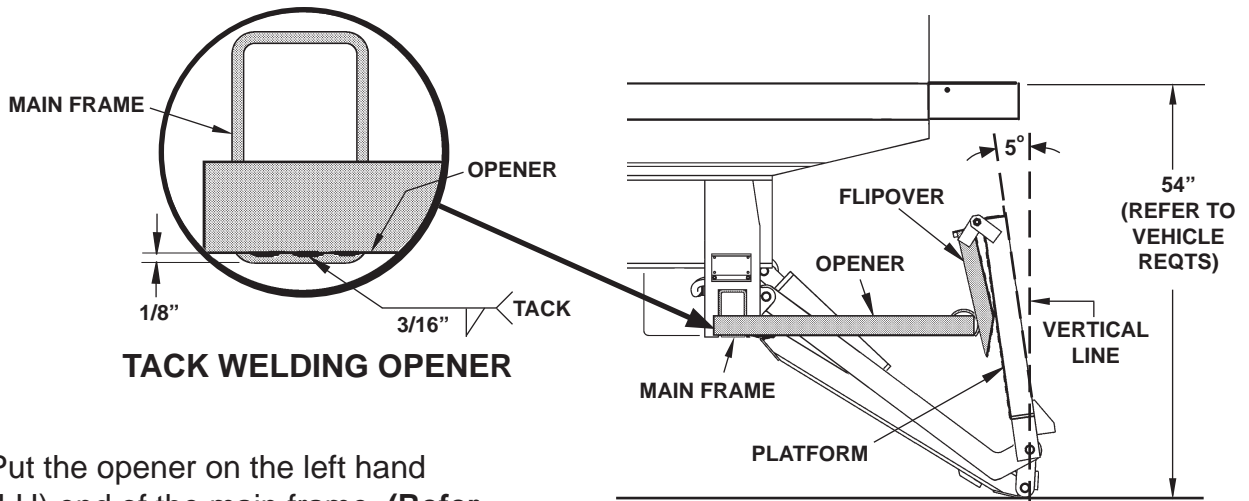
**GRINDING PLATFORM STOPS
(RH SHACKLE SHOWN)
FIG. 34-2**



**PLATFORM & SHACKLES TOUCH GROUND (RAMP FLIPOVER SHOWN)
FIG. 34-3**

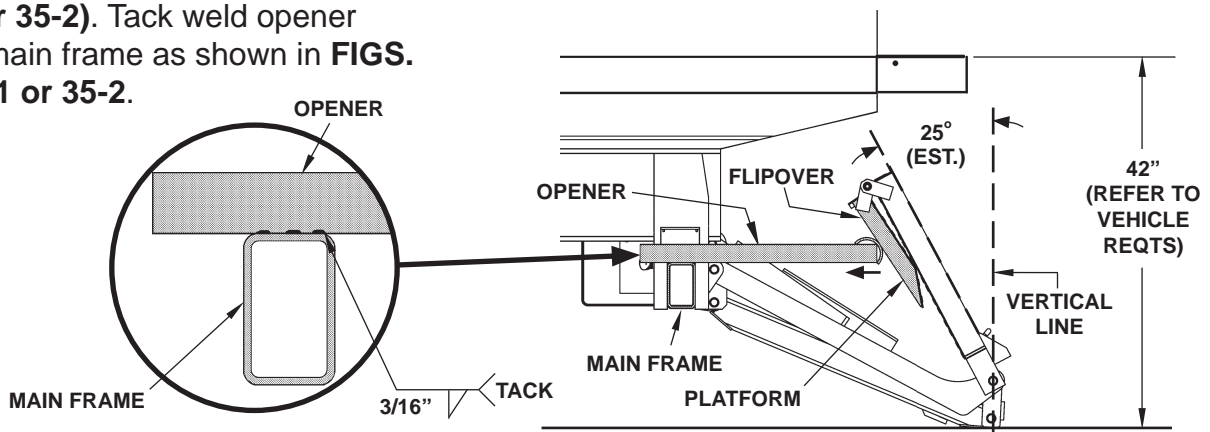
STEP 12 - WELD PLATFORM OPENER TO LIFTGATE

NOTE: The following instructions illustrate recommended and alternate positions of the opener for correctly unstowing and stowing the platform. In most cases, the recommended position will keep the opener in contact with the bottom of the flipover for unstowing and stowing the platform. With the platform on the ground, the near-vertical position will require the least amount of force to unfold or fold the platform. In some cases, it may be necessary to reposition the opener so it remains in contact with the bottom of the flipover while the platform is being stowed or unstowed. If necessary, opener may be positioned as high as the top of the main frame and farther from the rear of the vehicle. Then, the platform could lean closer to the main frame than the recommended angle shown. If platform stows and unstows correctly, the new position is acceptable; however, it requires more force to unfold and fold.



INITIAL POSITION OF OPENER FOR HIGH RANGE OF BED HEIGHTS (LH SIDE SHOWN), FIG. 35-1

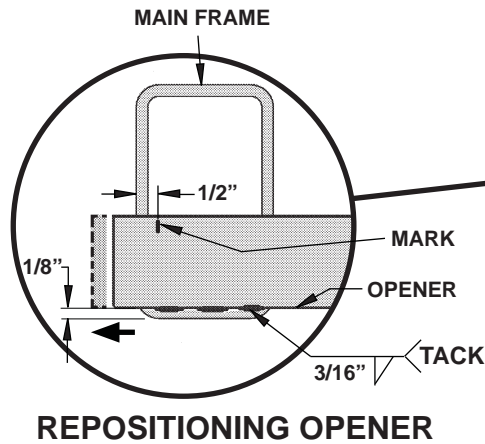
1. Put the opener on the left hand (LH) end of the main frame. (Refer to FIGS. 35-1 or 35-2). Then, position the opener, platform, and flipover so platform and flipover lean against opener (FIGS. 35-1 or 35-2). Tack weld opener to main frame as shown in FIGS. 35-1 or 35-2.



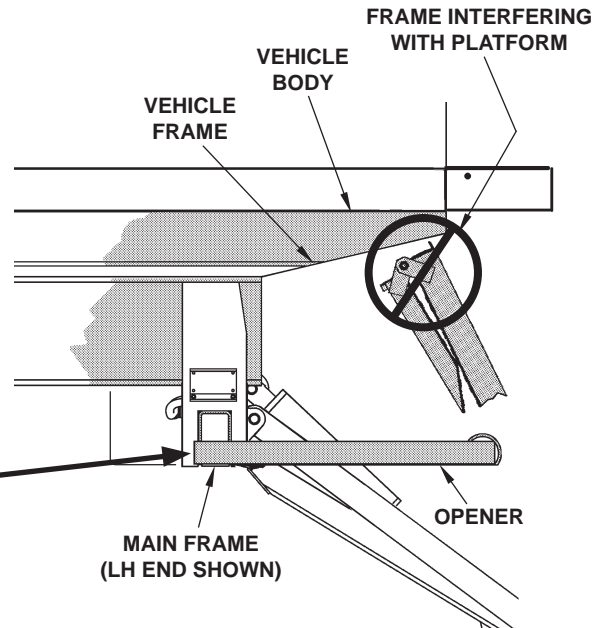
INITIAL POSITION OF OPENER FOR LOW RANGE OF BED HEIGHTS (LH SIDE SHOWN), FIG. 35-2

STEP 12 - WELD PLATFORM OPENER TO LIFTGATE - Continued

2. Stow and unstow platform several times to check for interference between platform and the vehicle frame and body (FIGS. 36-1 or 36-2). If there is interference, follow instruction 3 and 4 to move opener. If there is no interference, continue with instruction 5.

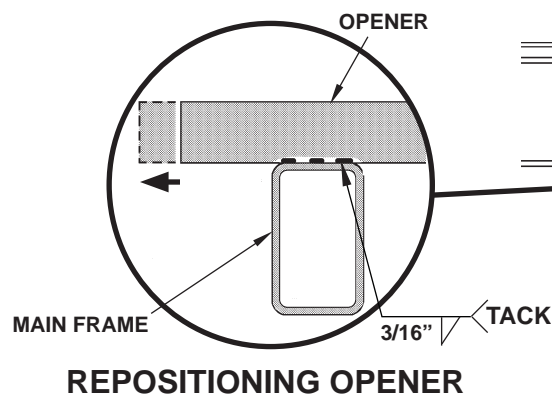


REPOSITIONING OPENER

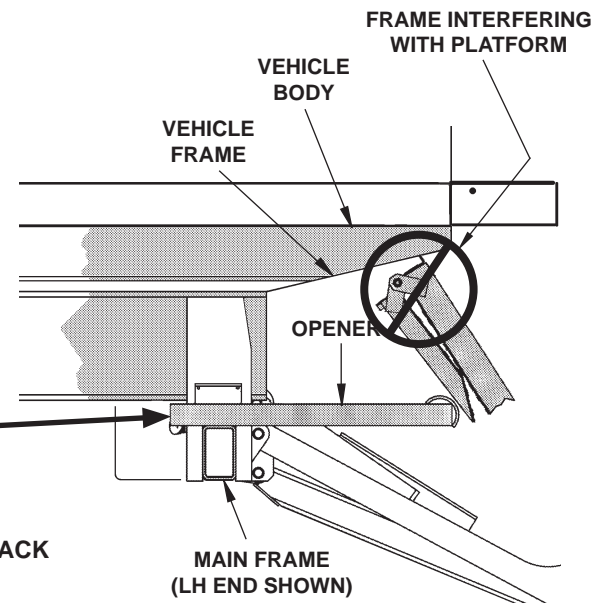


OPENER TACK WELDED TO MAIN FRAME
(HIGH RANGE OF BED HEIGHTS)
FIG. 36-1

3. To reposition opener, measure and mark as necessary (FIGS. 36-1 or 36-2). Remove tack welds. Next, move opener to new position and tack weld (FIGS. 36-1 or 36-2).



REPOSITIONING OPENER

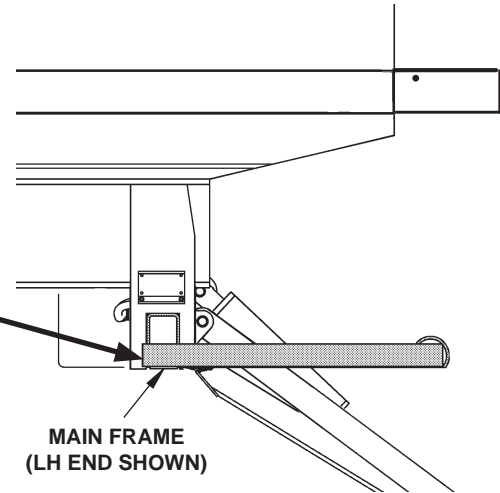
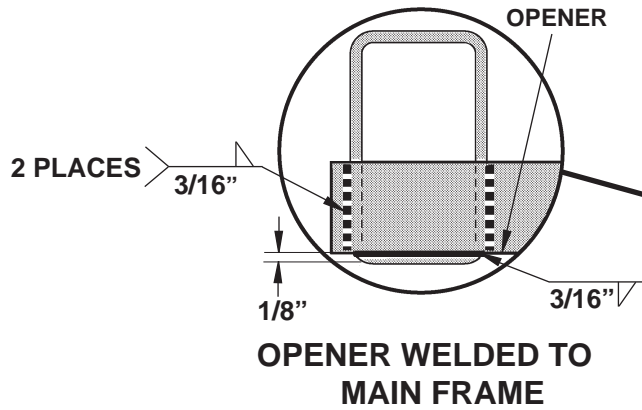


OPENER TACK WELDED TO MAIN FRAME
(LOW RANGE OF BED HEIGHTS)
FIG. 36-2

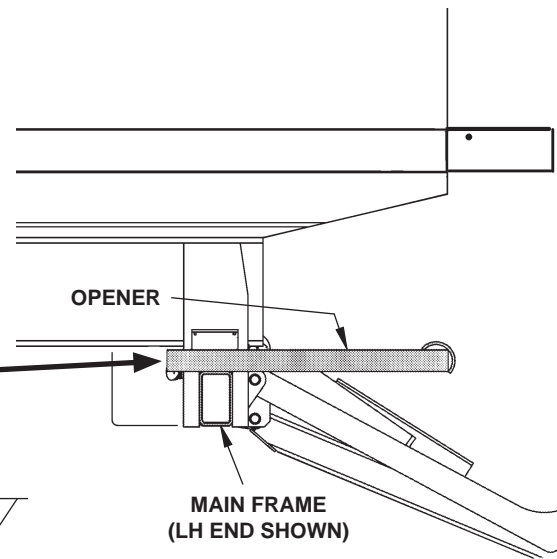
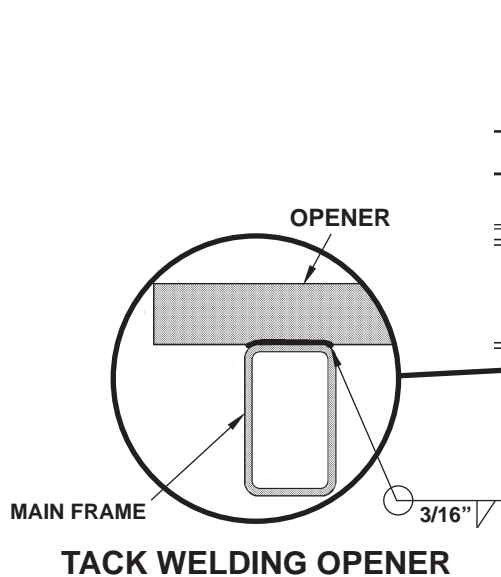
4. Repeat instructions 2 and 3 until there is no interference between platform and the vehicle frame and body.

STEP 12 - WELD PLATFORM OPENER TO LIFTGATE - Continued

5. Weld opener as shown in
FIGS. 37-1 or 37-2.



**OPENER IN DESIRED POSITION,
HIGH RANGE OF BED HEIGHTS
FIG. 37-1**



**OPENER IN DESIRED POSITION,
LOW RANGE OF BED HEIGHTS
FIG. 37-2**

STEP 13 - ADJUST SAFETY HOOK (IF REQUIRED)

CHECK SAFETY HOOK FUNCTION

1. When raising platform to stowed position, listen for sound of **safety hook** engaging **platform loop**.
2. When the Liftgate is stowed, see if **platform loop** is positioned above the **safety hook** as shown in **FIG. 38-1**.

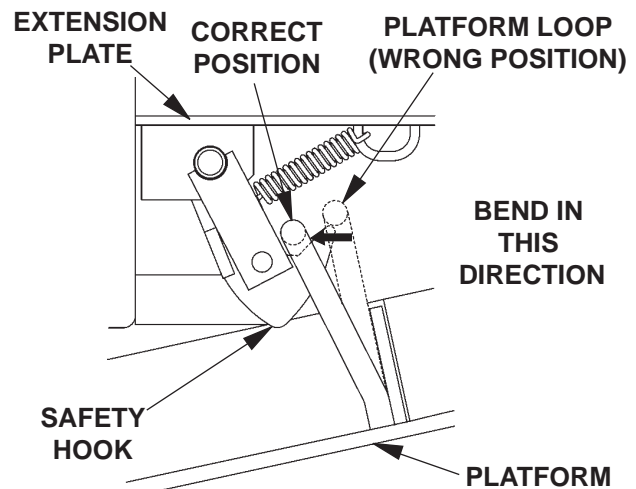


FIG. 38-1

LOOP ADJUSTMENT

1. If the safety hook is not positioned correctly, **LOWER** platform to ground level (**see Operation Manual**).
2. Adjust by bending the platform loop as shown in **FIG. 38-1**.
3. Stow the platform and check for correct safety hook position. Repeat adjustment if required.

LUBRICATION (IF REQUIRED)

1. Make sure front surface of safety hook (**FIG. 38-2**) is lubricated with automotive grease. Apply grease if required.
2. Make sure control handle rod (**FIG. 38-2**) is lubricated where it has contact with brackets. Apply automotive grease if required.

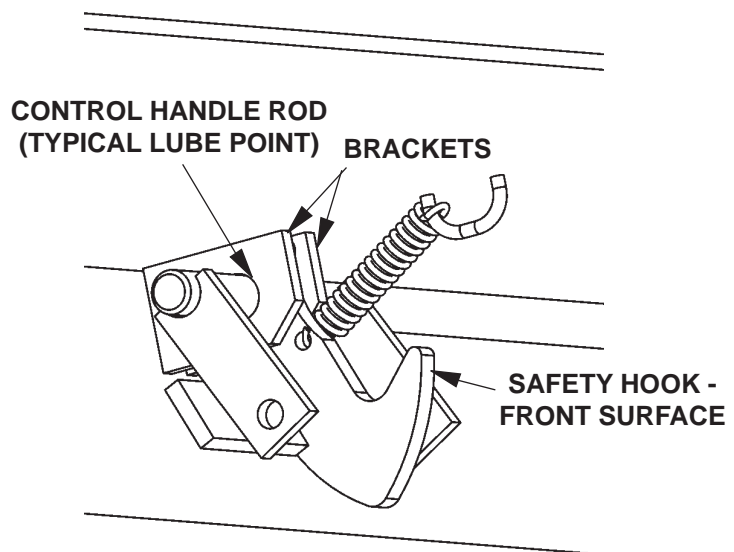


FIG. 38-2

STEP 14 - WELD ON LOCK BRACKET (IF REQUIRED)

CAUTION

Prevent damaging grip. Finish welding rental lock before installing control handle grip.

NOTE: Before positioning the locking bracket, make sure safety hook is hooked correctly to platform loop.

1. From the parts box, get the 6-1/2" lock bracket (P/N 203417), 1" inner bracket (P/N 203570), 3/8"-16 x 1" bolt (P/N 900014-4), and 3/8"-16 nut (P/N 901011-5) shown in FIG. 39-2. Bolt the inner bracket to the lock bracket with 3/8"-16 bolt and 3/8"-16 nut. Keep the nut loose so bracket can rotate.

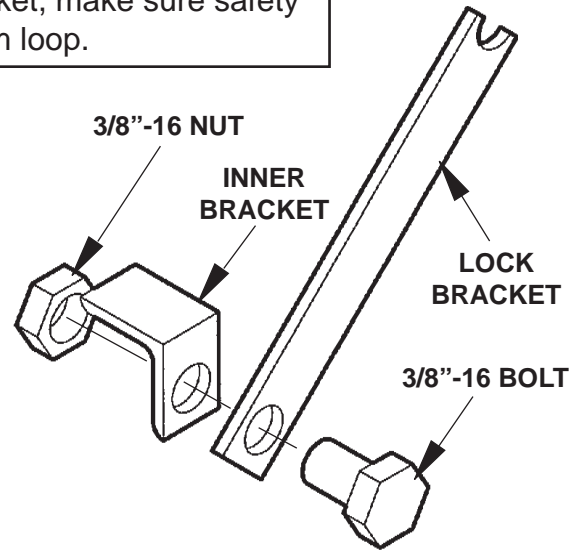


FIG. 39-1

2. Fit the half-round cut-out end of lock bracket to control handle as shown in FIG. 39-2. Butt the top face of the inner bracket against the bottom of extension plate.

3. Position the right hand (RH) side face of the inner bracket flush with RH side of extension plate (FIG. 39-2). Weld top face of inner bracket to bottom of extension plate (FIG. 39-2). Make sure there is a 1/16" gap between inner bracket and lock bracket (FIG. 39-2). Next, weld lock bracket to control handle (FIG. 39-2). Remove nut and bolt (FIG. 39-2). (If required, a padlock or freight car-type seal can be used to lock the control handle.)

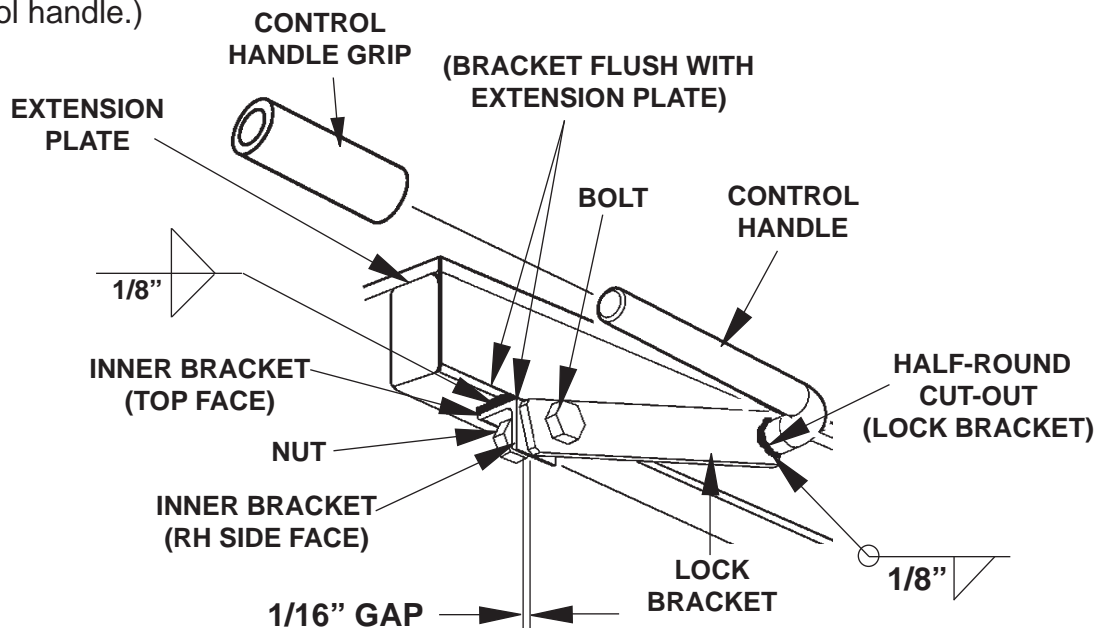
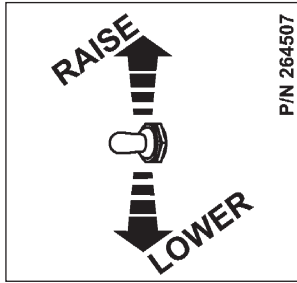


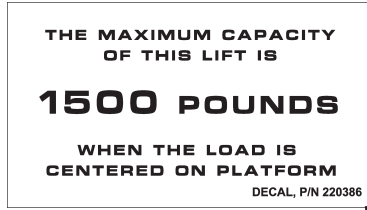
FIG. 39-2

4. Install the control handle grip (from parts box) on control handle as shown in FIG. 39-2.

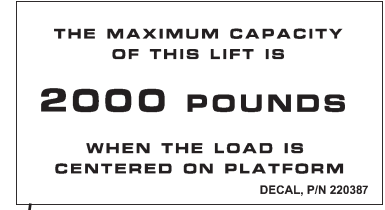
STEP 15 - DECALS



RAISE/LOWER DECAL
P/N 264507



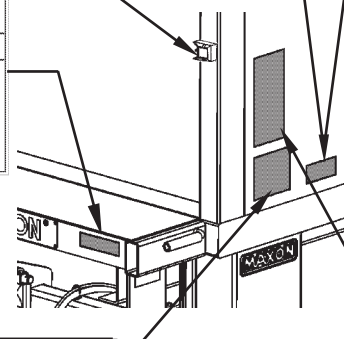
CAPACITY DECAL (72-150 ONLY)
P/N 220386



CAPACITY DECAL (TE-20 ONLY)
P/N 220387



WARNING DECAL (2 PLACES, LH SIDE NOT SHOWN)
P/N 265736-03



WARNING

READ THIS INFORMATION CAREFULLY

- Improper operation of this Liftgate can result in serious personal injury. Do not operate unless you have been properly instructed and have read, and are familiar with the operating instructions. If you do not have a copy of the instructions, please obtain them from your employer, distributor, or lessor before you attempt to operate Liftgate.
- Be certain that the vehicle is properly and securely braked before using the Liftgate.
 - Always inspect this Liftgate for maintenance or damage before using it. 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.
 - Do not overload the Liftgate. The load limit is based on evenly distributed cargo over the entire Platform surface. If you are using a pallet jack, be sure it can be maneuvered safely. Do not operate a forklift on the Platform or travel with the platform in an open position at any time.
- Load should be placed in a stable position close to the edge of the Platform nearest the truck. The heaviest portion of the load should never be placed beyond the center of the Platform away from the truck.
- Never allow yourself, a helper, or bystander to stand in a position where a falling load could land on either of you. Also 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.

MAXON LIFT CORP.PART NO. 264081

WARNING DECAL
P/N 264081

OPERATING INSTRUCTIONS

A. DEPRESS CONTROL HANDLE
B. PUSH CONTROL SWITCH

1 MUST TOUCH GROUND

USE HANDLE UNDER PLATFORM TO OPEN THE PLATFORM.

2

UNFOLD FLIPOVER.

3

4

5 TO TUCK UNIT AWAY REVERSE STEPS 1, 2, 3, & 4. STOW LIFTGATE UNDER HYDRAULIC PRESSURE.

DECAL, P/N 251867-06

INSTRUCTION DECAL
P/N 251867-06

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

FIG. 40-1

STEP 16 - VEHICLE TAILLIGHT POSITIONING (IF REQUIRED)

NOTE: Positions are based on using taillights of 6-3/4" height by 5-3/4" width. Larger taillights may interfere with Liftgate. Taillights and attaching hardware are not provided with the Liftgate.

Position taillights as shown (FIGS. 41-1, 41-2 & 41-3).

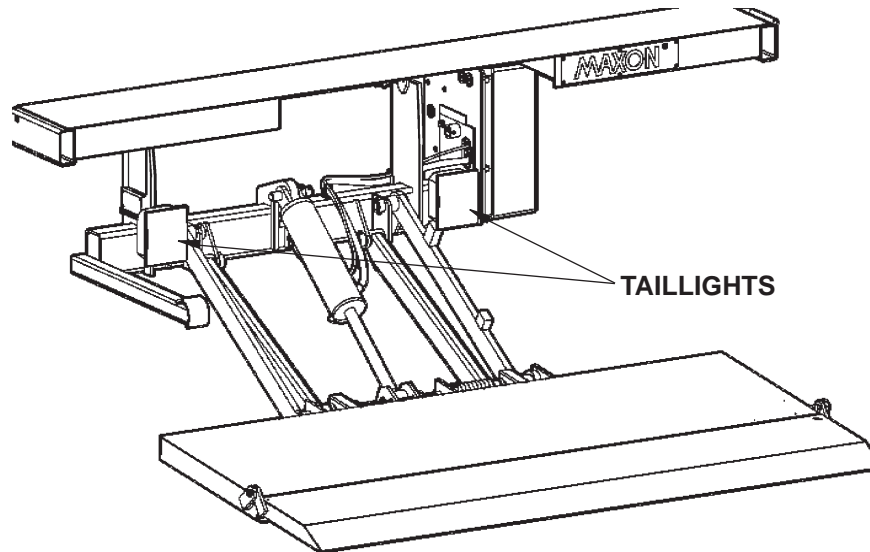
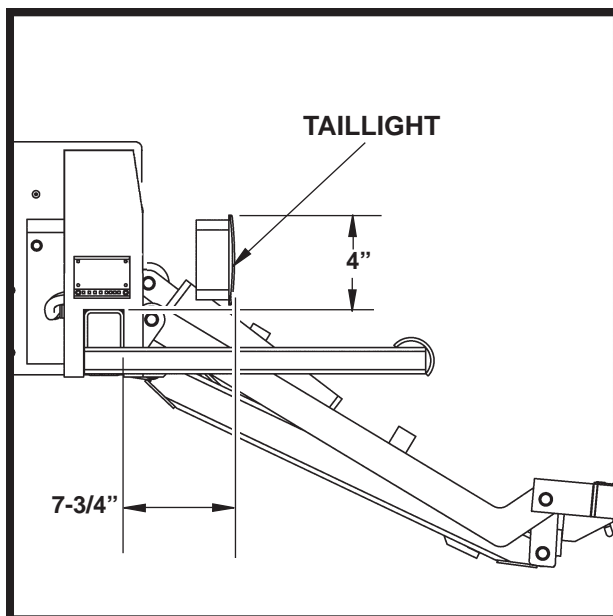
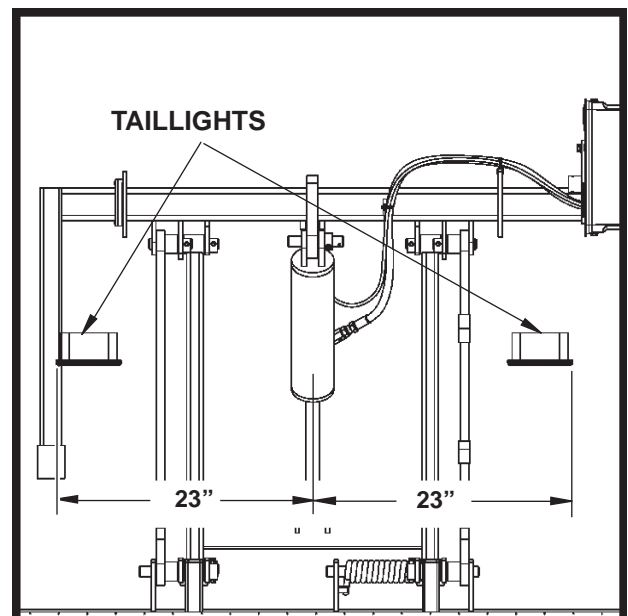


FIG. 41-1



TAILLIGHT POSITIONS
(LEFT HAND SIDE VIEW)

FIG. 41-2



TAILLIGHT HORIZONTAL SPACING,
TOP VIEW

FIG. 41-3

TOUCHUP PAINT PRECAUTION

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

HYDRAULIC SYSTEM DIAGRAMS

HYDRAULIC SCHEMATIC (GRAVITY DOWN)

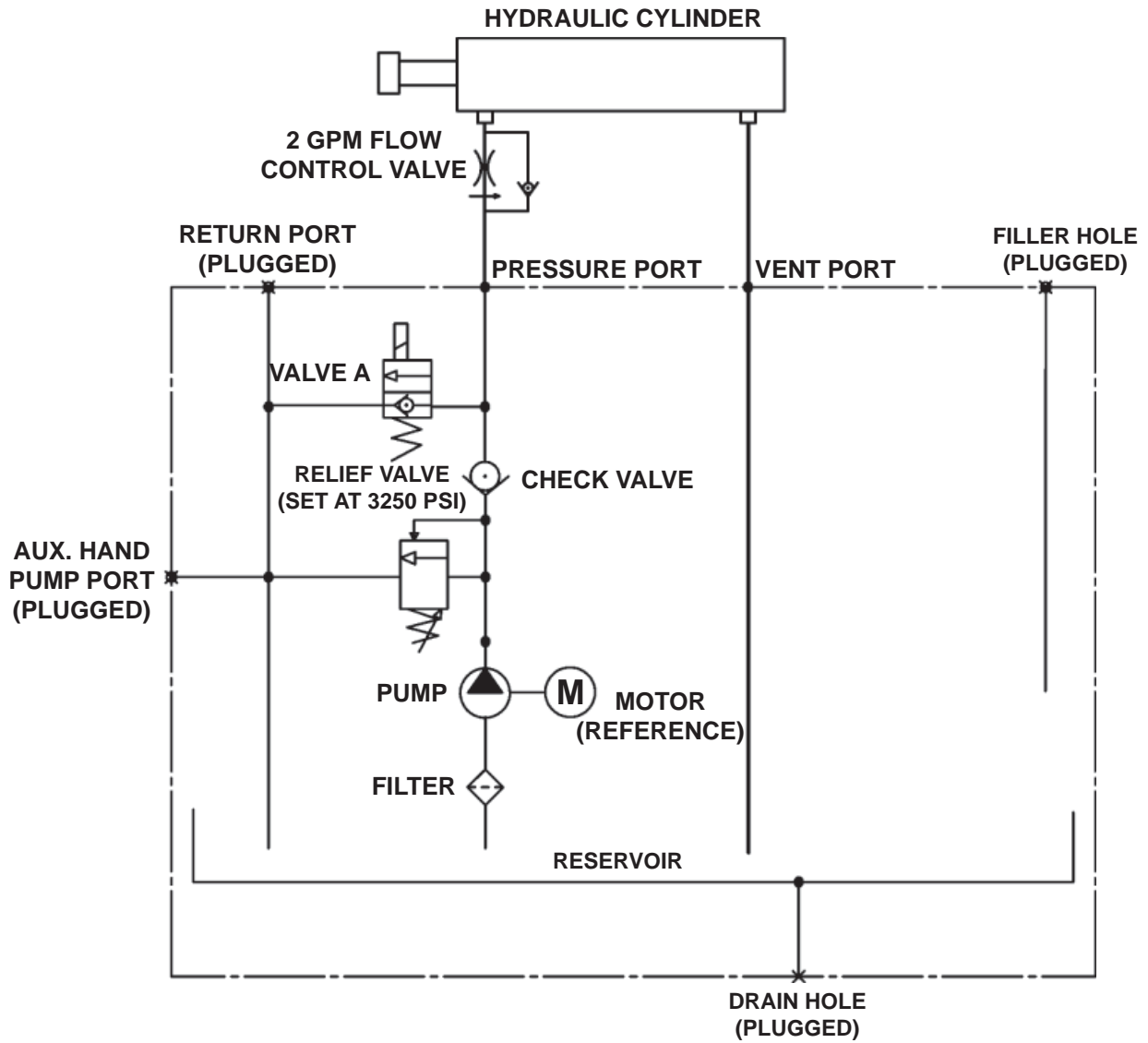


FIG. 43-1

HYDRAULIC SYSTEM DIAGRAMS

HYDRAULIC SCHEMATIC (POWER DOWN)

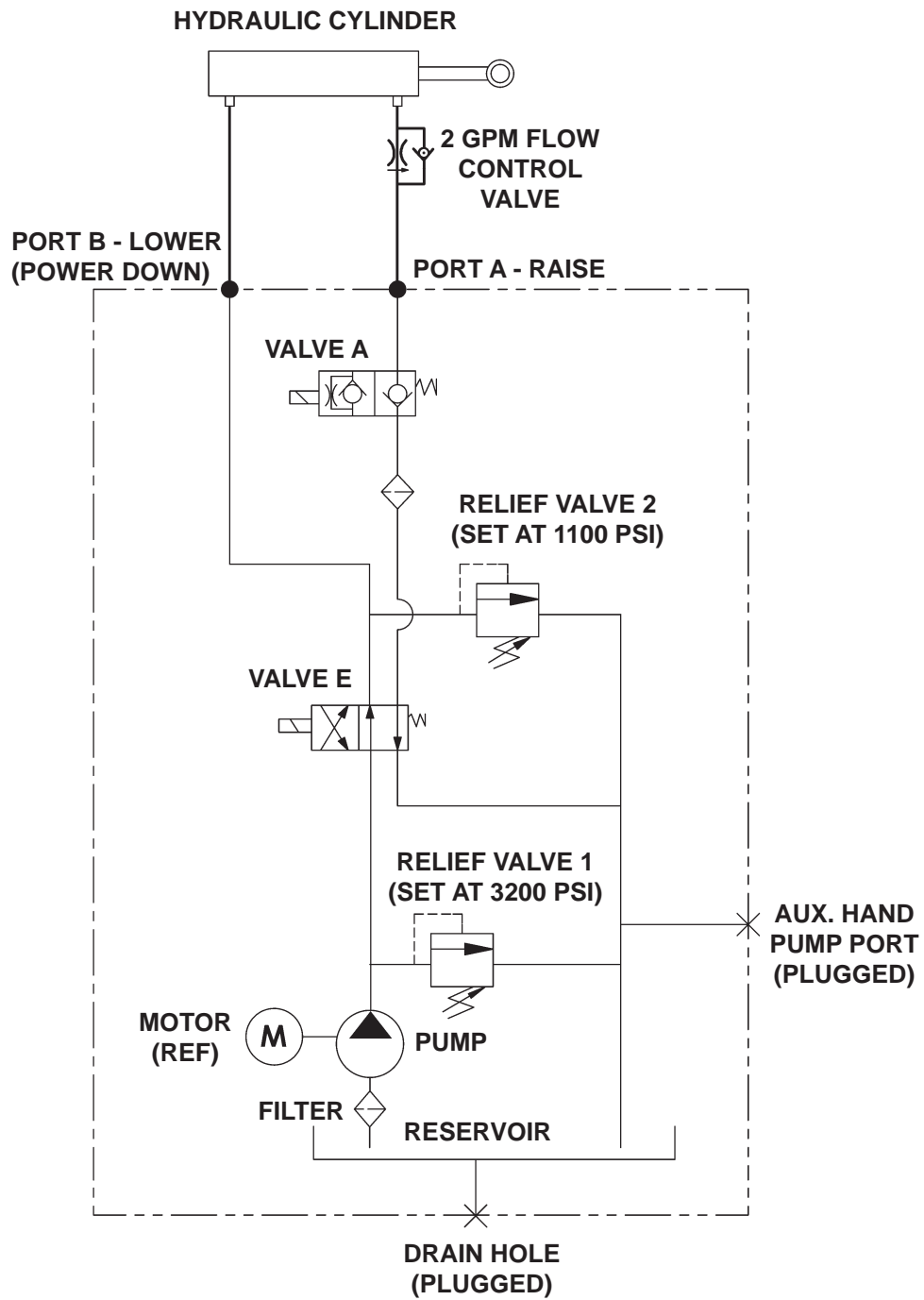


FIG. 44-1

ELECTRICAL SYSTEM DIAGRAMS

ELECTRICAL SCHEMATIC (GRAVITY DOWN)

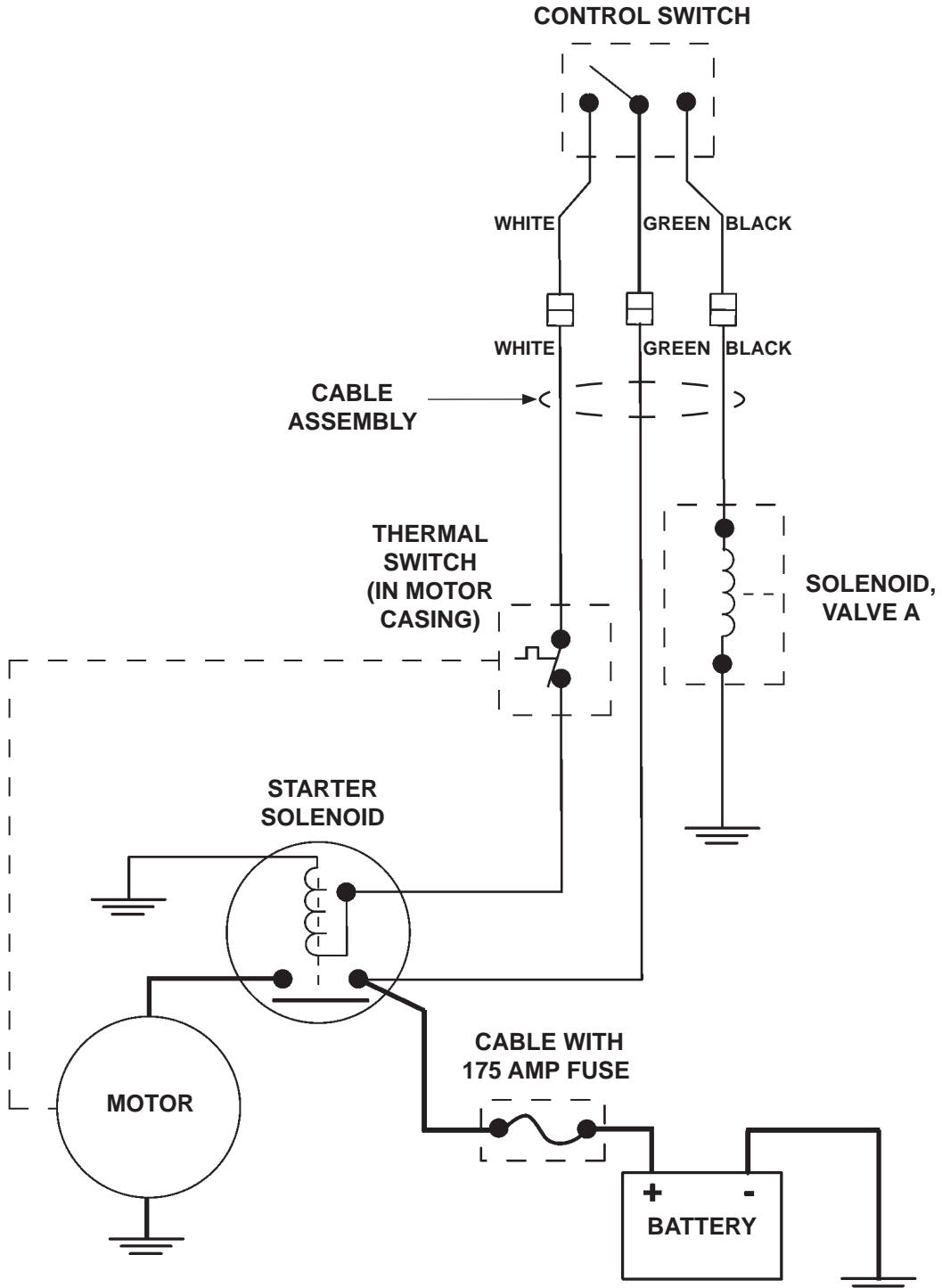


FIG. 45-1

ELECTRICAL SYSTEM DIAGRAMS

ELECTRICAL SCHEMATIC (POWER DOWN)

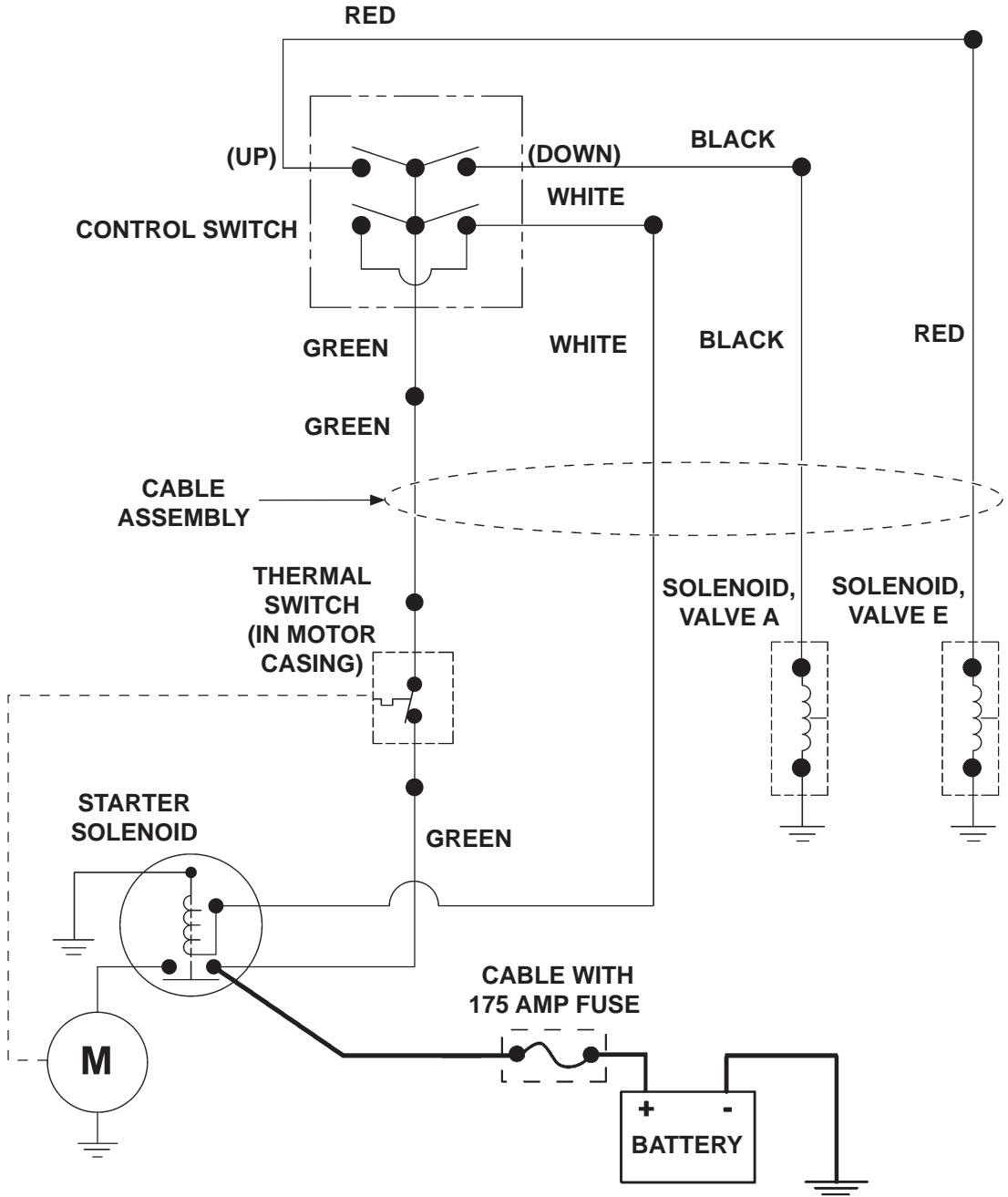


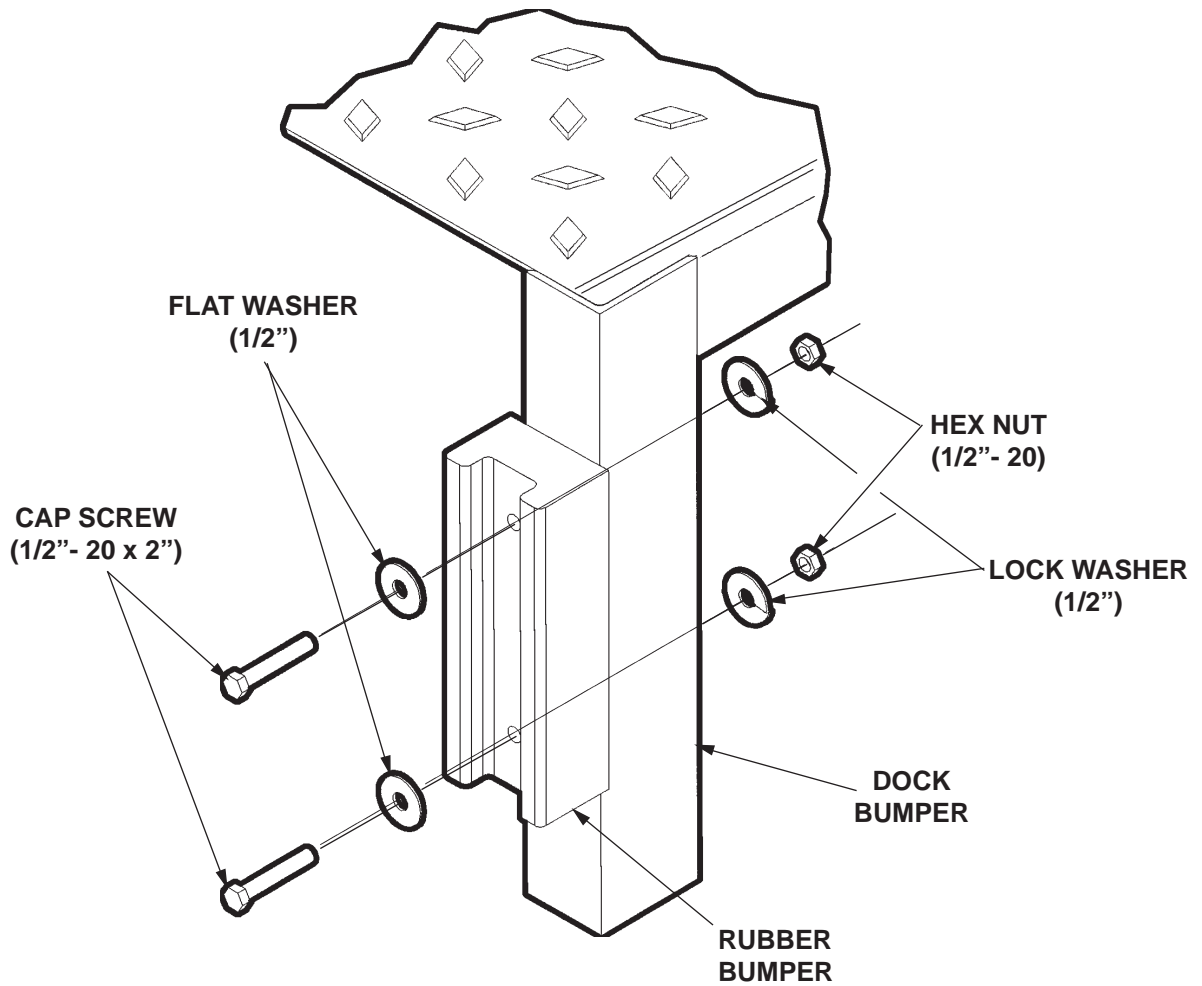
FIG. 46-1

OPTIONS

RUBBER DOCK BUMPER KIT

NOTE: The rubber dock bumpers kit P/N 203410 contains 2 rubber bumpers and 2 sets of fasteners.

Bolt a rubber bumper to each of the 2 dock bumpers (FIG. 47-1).



**BOLTING RUBBER BUMPER TO DOCK BUMPER
(RIGHT HAND SIDE DOCK BUMPER SHOWN)
FIG. 47-1**

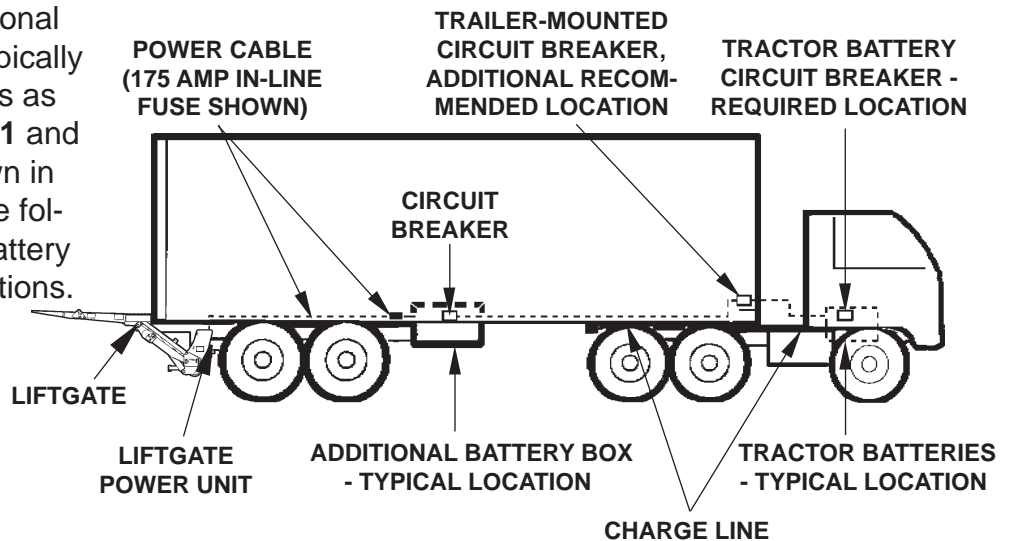
RECOMMENDED LIFTGATE POWER CONFIGURATION

CAUTION

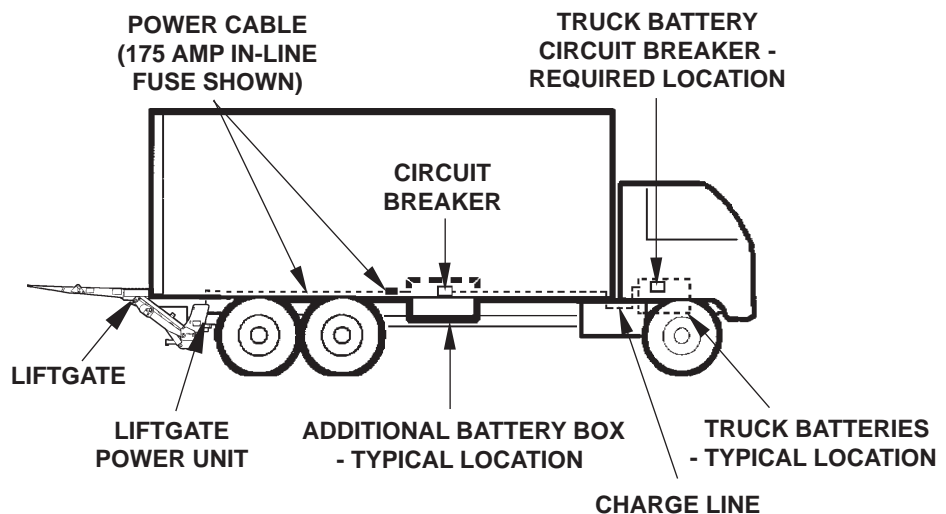
Circuit breaker connected to positive (+) battery terminal must be next to the battery.

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. 48-1** and on trucks as shown in **FIG. 48-2**. See the following page for battery and cable connections.



**RECOMMENDED LIFTGATE & BATTERY BOX
INSTALLATION ON TRAILER
FIG. 48-1**

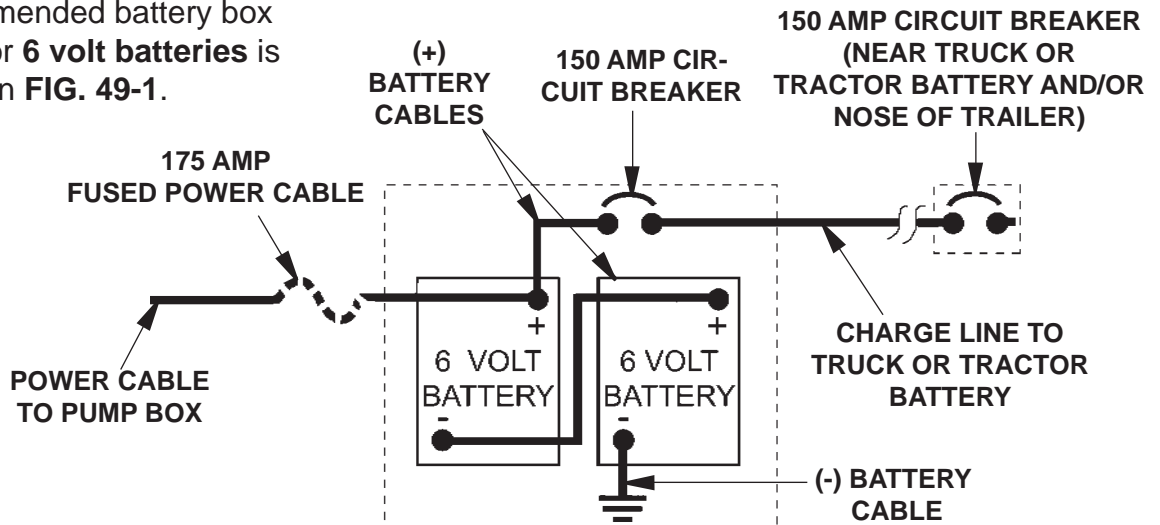


**RECOMMENDED LIFTGATE & BATTERY BOX
INSTALLATION ON TRUCK
FIG. 48-2**

RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

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

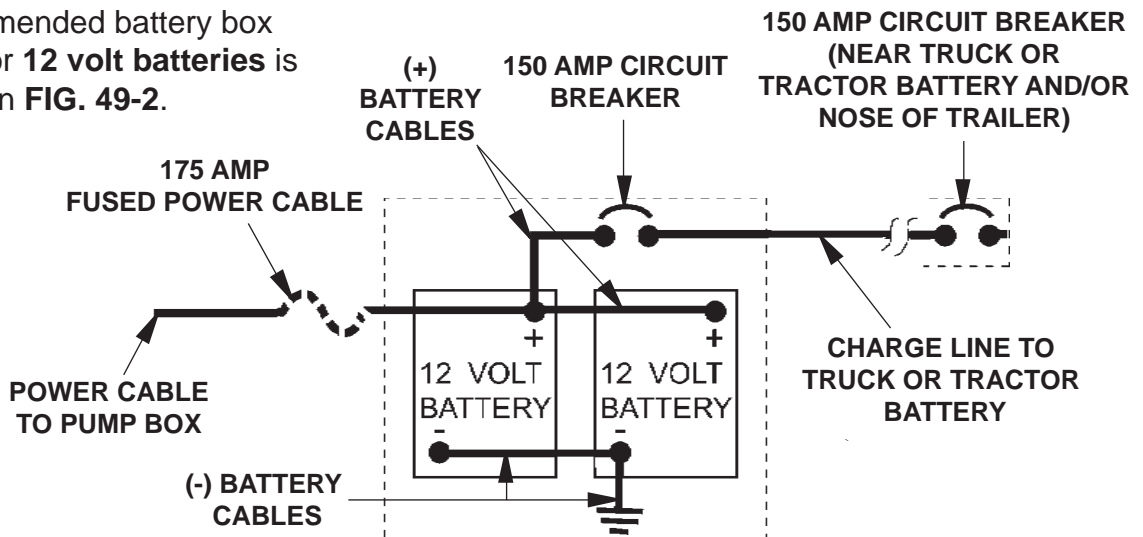
2. Recommended battery box setup for **6 volt batteries** is shown in **FIG. 49-1**.



6 VOLT BATTERY CONNECTIONS
FIG. 49-1

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

3. Recommended battery box setup for **12 volt batteries** is shown in **FIG. 49-2**.

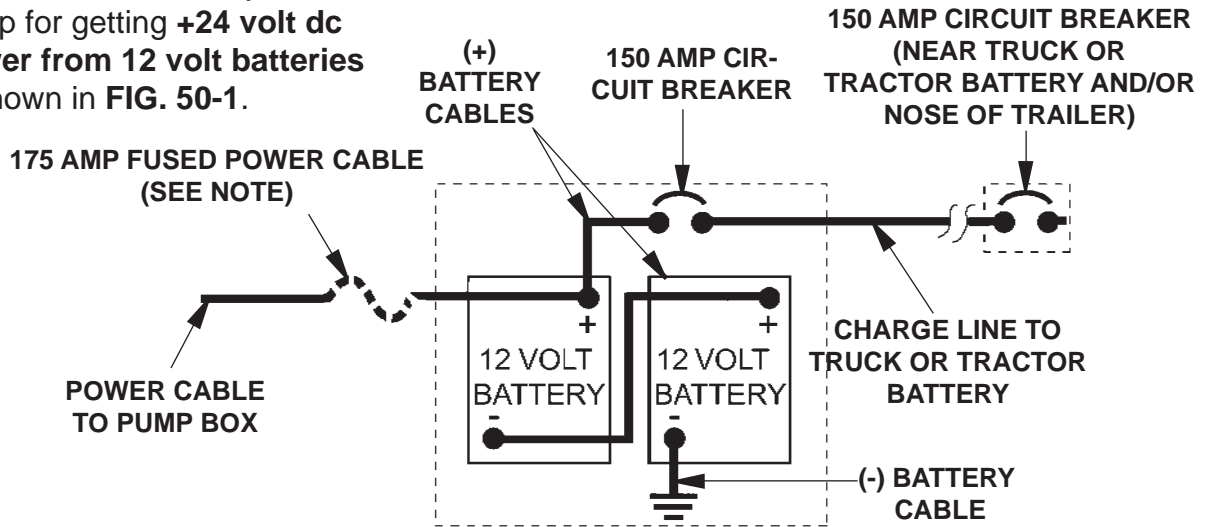


12 VOLT BATTERY CONNECTIONS
FIG. 49-2

RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

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

4. Recommended battery box setup for getting **+24 volt dc power from 12 volt batteries** is shown in **FIG. 50-1**.



12 VOLT BATTERY CONNECTIONS FOR +24 VDC POWER
FIG. 50-1

