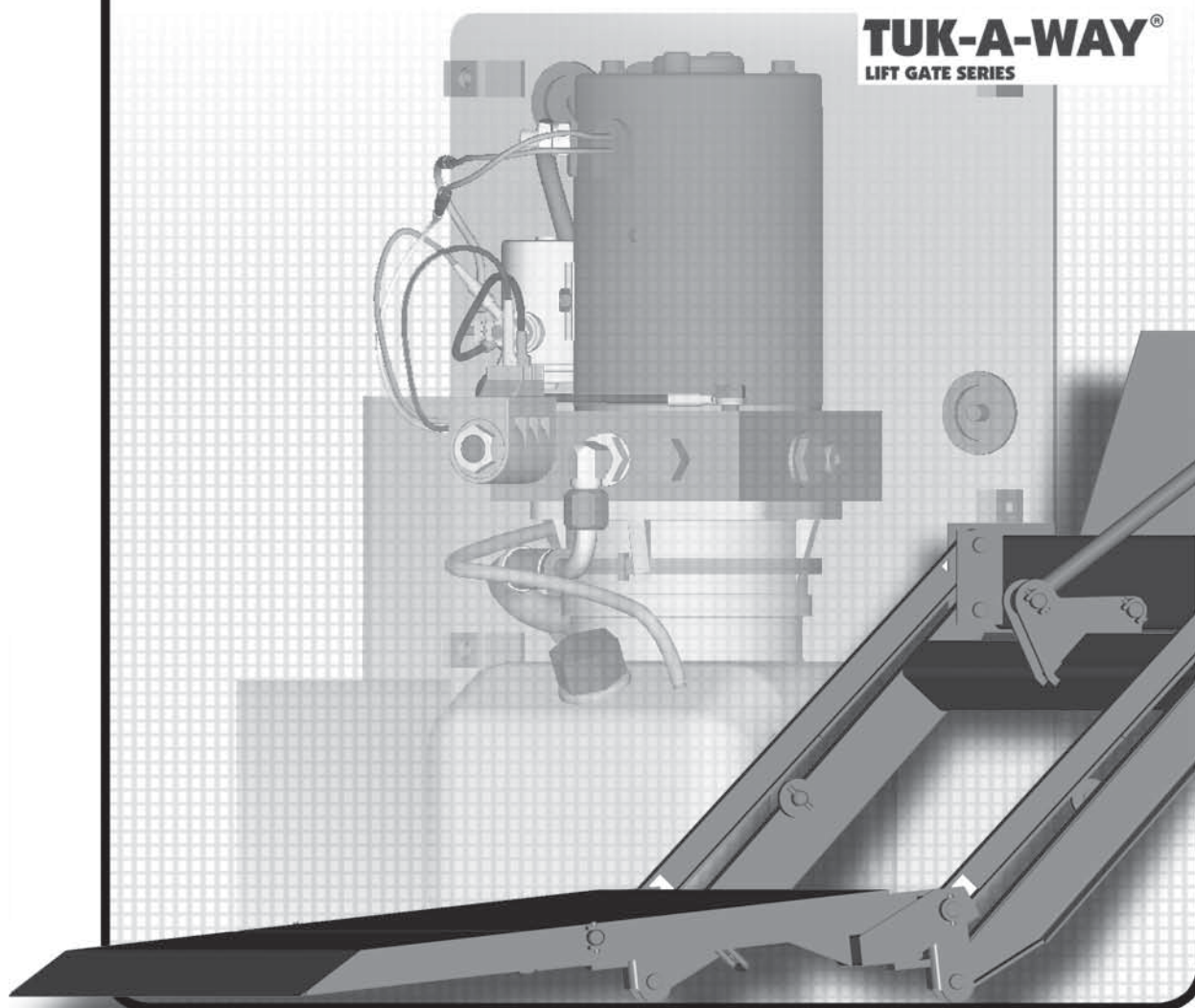


M-03-05
REV. J
SEPTEMBER 2015

MAXON®

INSTALLATION MANUAL

72-25 & 72-30



To find **maintenance & parts** information for your **72-25 & 72-30 Liftgate**, go to **www.maxonlift.com**. Click the **PRODUCTS, TUK-A-WAY, 72-25/30** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

TABLE OF CONTENTS

SUMMARY OF CHANGES: M-03-05, REVISION J	4
WARNINGS.....	5
SAFETY INSTRUCTIONS	6
NOTICE	6
72-25 & 72-30 LIFTGATE COMPONENTS	7
PARTS BOX FOR 72-25 & 72-30 GRAVITY DOWN	8
PARTS BOX FOR 72-25 & 72-30 GRAVITY DOWN (WITH ALUMINUM RETENTION RAMP).....	9
PARTS BOX FOR 72-25 & 72-30 POWER DOWN	10
PARTS BOX FOR 72-25 & 72-30 POWER DOWN (WITH ALUMINUM RETENTION RAMP).....	11
VEHICLE REQUIREMENTS	12
STEP 1 - WELD EXTENSION PLATE TO VEHICLE	14
STEP 2 - WELD LIFTGATE TO VEHICLE	16
STEP 3 - ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED)	21
STEP 4 - ADD HYDRAULIC FLUID TO RESERVOIR	28
STEP 5 - RUN POWER CABLE	30
STEP 6 - CONNECT POWER CABLE	32
STEP 7 - CONNECT GROUND CABLE (RECOMMENDED)	33
STEP 8 - INSTALL CONTROL SWITCH	34
STEP 9 - CONNECT POWER CABLE TO BATTERY	37
STEP 10 - REMOVE LOCKING STRAP	38
STEP 11 - FINISH WELDING LIFTGATE TO VEHICLE	39
STEP 12 - FLIPOVER INSTALLATION	41
STEP 13 - ADJUST PLATFORM (IF REQUIRED)	43
STEP 14 - ADJUST SAFETY HOOK (IF REQUIRED)	45
STEP 15 - WELD ON LOCK BRACKET (IF REQUIRED)	46
STEP 16 - VEHICLE TAILLIGHT POSITIONING (IF REQUIRED).....	47
ATTACH DECALS	48
TOUCHUP PAINT PRECAUTION.....	50
HYDRAULIC SYSTEM DIAGRAMS	51
HYDRAULIC SCHEMATIC (GRAVITY DOWN).....	51
HYDRAULIC SCHEMATIC (POWER DOWN)	52

ELECTRICAL SYSTEM DIAGRAMS	53
ELECTRICAL SCHEMATIC (GRAVITY DOWN)	53
ELECTRICAL SCHEMATIC (POWER DOWN)	54
OPTIONS	55
RUBBER DOCK BUMPER KIT	56

SUMMARY OF CHANGES: M-03-05, REVISION J

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

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.
- Welding on galvanized parts gives off especially hazardous fumes. Comply with WARNING decal on the galvanized part (**FIG. 5-1**). To minimize hazard remove galvanizing from weld area, provide adequate ventilation, and wear suitable respirator.

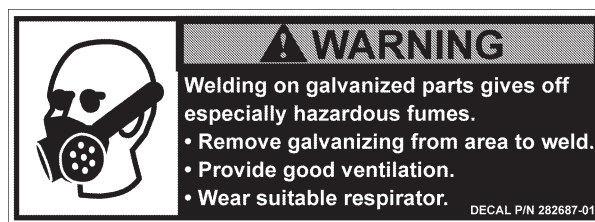


FIG. 5-1

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.
- Installers of the liftgate should ensure that all trucks and trailers are equipped with grab handles as needed.

72-25 & 72-30 LIFTGATE COMPONENTS

CAUTION

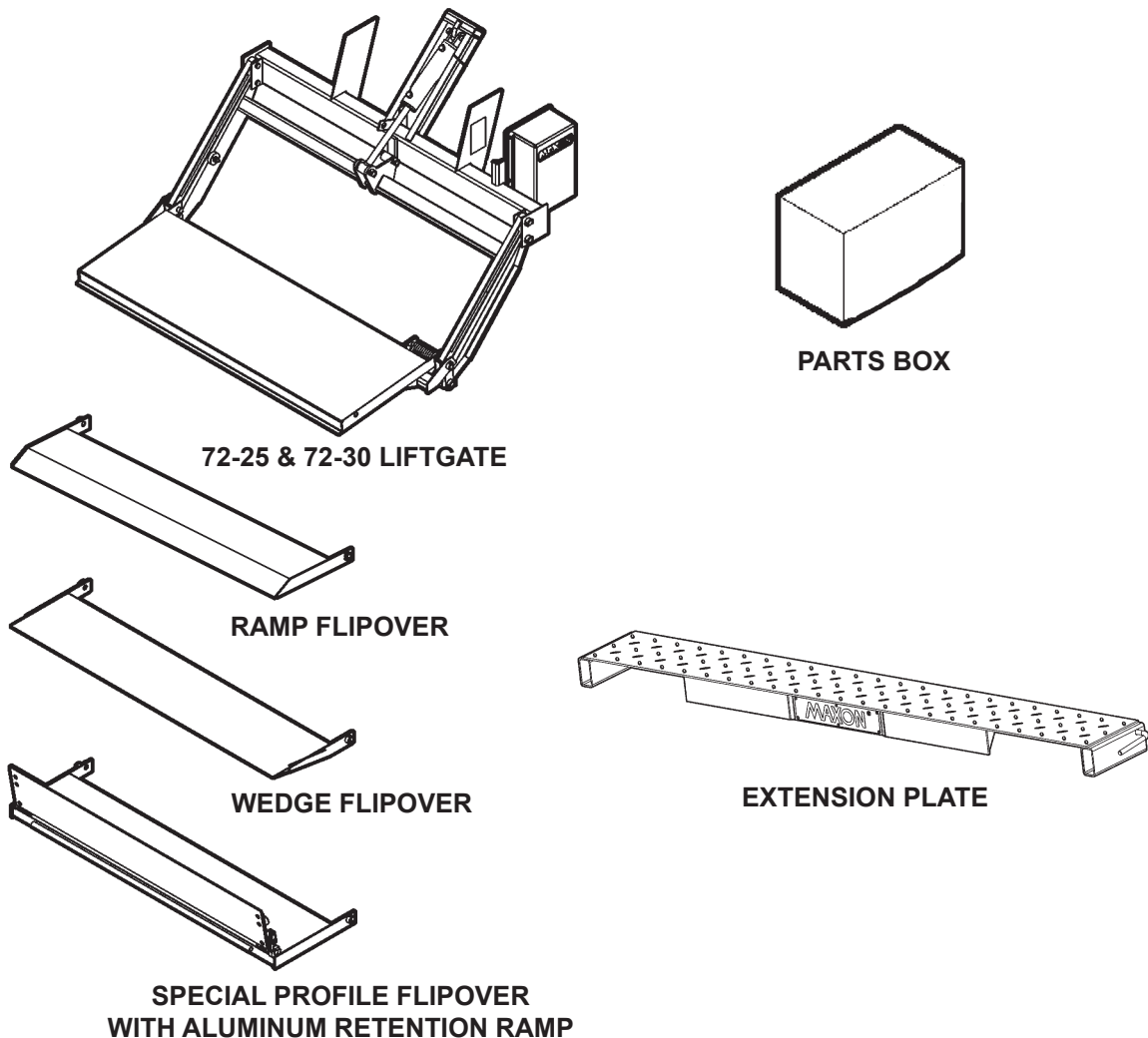
Prevent injuries and equipment damage. Before cutting the shipping straps from the Liftgate, put Liftgate on level ground that will support at least 1500 pounds. Be careful lifting and moving components (such as extension plate) after shipping straps are removed.

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



72-25 & 72-30 COMPONENTS

FIG. 7-1

PARTS BOX FOR 72-25 & 72-30 GRAVITY DOWN

NOTE: To find **maintenance & parts** information for your **72-25 & 72-30 Liftgate**, go to **www.maxonlift.com**. Click the **PRODUCTS, TUK-A-WAY 72-25/30** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

	PARTS BOX COMPONENT	QTY.	PART NUMBER
REF	PARTS BOX, 72-25, GRAVITY DOWN	1	266403-01
	PARTS BOX, 72-30, GRAVITY DOWN		266403-02
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	PIN, 3-1/4" LG.	2	203405-05
6	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
7	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
8	TIE, PLASTIC 7"	10	205780
9	TIE, PLASTIC 12"-14"	8	206864
10	CLAMP, #8 RUBBER LOOM	3	214663
11	SPRING, EXTENSION	1	215345
12	PIN, ROLL 3/8" X 2" LG.	2	904717-06
13	LUG, 2 GA COPPER	1	906497-02
14	SHIM, 1/8" X 2" X 2"	2	251333
15	MOLDED SWITCH ASSEMBLY	1	267959-01
16	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
17	KIT, MANUAL & DECAL	1	266404-01 (72-25) 266404-02 (72-30)
	A. MANUAL, INSTALLATION	1	M-03-05
	B. MANUAL, OPERATION	1	M-03-06
	C. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
18	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5

TABLE 8-1

PARTS BOX FOR 72-25 & 72-30 GRAVITY DOWN (WITH ALUMINUM RETENTION RAMP)

NOTE: To find **maintenance & parts** information for your **72-25 & 72-30 Liftgate**, go to **www.maxonlift.com**. Click the **PRODUCTS, TUK-A-WAY 72-25/30** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

	PARTS BOX COMPONENT	QTY.	PART NUMBER
REF	PARTS BOX, 72-25, GRAVITY DOWN, (FLIPOVER WITH ARR)	1	266403-03
	PARTS BOX, 72-30, GRAVITY DOWN (FLIPOVER WITH ARR)		266403-04
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	PIN, 3-1/4" LG.	2	203405-05
6	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
7	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
8	TIE, PLASTIC 7"	10	205780
9	TIE, PLASTIC 12"-14"	8	206864
10	CLAMP, #8 RUBBER LOOM	3	214663
11	SPRING, EXTENSION	1	215345
12	PIN, ROLL 3/8" X 2" LG.	2	904717-06
13	LUG, 2 GA COPPER	1	906497-02
14	SHIM, 1/8" X 2" X 2"	2	251333
15	MOLDED SWITCH ASSEMBLY	1	267959-01
16	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
17	KIT, MANUAL & DECAL	1	266404-01 (72-25) 266404-02 (72-30)
	A. MANUAL, INSTALLATION	1	M-03-05
	B. MANUAL, OPERATION	1	M-03-06
	C. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
18	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5
19	ROLL PIN	1	905033-1
20	PIN, TORSION BAR	1	253805
21	SPACER, BUSHING, 1/4"	1	253808

TABLE 9-1

PARTS BOX FOR 72-25 & 72-30 POWER DOWN

NOTE: To find **maintenance & parts** information for your **72-25 & 72-30 Liftgate**, go to **www.maxonlift.com**. Click the **PRODUCTS, TUK-A-WAY 72-25/30** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

	PARTS BOX COMPONENT	QTY.	PART NUMBER
REF	PARTS BOX, 72-25, POWER DOWN	1	266403-51
	PARTS BOX, 72-30, POWER DOWN		266403-52
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	PIN, 3-1/4" LG.	2	203405-05
6	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
7	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
8	TIE, PLASTIC 7"	10	205780
9	TIE, PLASTIC 12"-14"	8	206864
10	CLAMP, #8 RUBBER LOOM	3	214663
11	SPRING, EXTENSION	1	215345
12	PIN, ROLL 3/8" X 2" LG.	2	904717-06
13	LUG, 2 GA COPPER	1	906497-02
14	SHIM, 1/8" X 2" X 2"	2	251333
15	MOLDED SWITCH & CABLE ASSEMBLY	1	264951-04
16	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
17	KIT, MANUAL & DECAL	1	266404-01 (72-25) 266404-02 (72-30)
	A. MANUAL, INSTALLATION	1	M-03-05
	B. MANUAL, OPERATION	1	M-03-06
	C. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
18	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5

TABLE 10-1

PARTS BOX FOR 72-25 & 72-30 POWER DOWN (WITH ALUMINUM RETENTION RAMP)

NOTE: To find **maintenance & parts** information for your **72-25 & 72-30 Liftgate**, go to **www.maxonlift.com**. Click the **PRODUCTS, TUK-A-WAY 72-25/30** buttons. Open the **Maintenance Manual** in the **PRODUCT DOCUMENTATION** window.

	PARTS BOX COMPONENT	QTY.	PART NUMBER
REF	PARTS BOX, 72-25, POWER DOWN, (FLIPOVER WITH ARR)	1	266403-53
	PARTS BOX, 72-30, POWER DOWN (FLIPOVER WITH ARR)		266403-54
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	PIN, 3-1/4" LG.	2	203405-05
6	RENTAL LOCK BRACKET (OPTIONAL)	1	203417
7	INNER BRACKET, RENTAL LOCK (OPTIONAL)	1	203570
8	TIE, PLASTIC 7"	10	205780
9	TIE, PLASTIC 12"-14"	8	206864
10	CLAMP, #8 RUBBER LOOM	3	214663
11	SPRING, EXTENSION	1	215345
12	PIN, ROLL 3/8" X 2" LG.	2	904717-06
13	LUG, 2 GA COPPER	1	906497-02
14	SHIM, 1/8" X 2" X 2"	2	251333
15	MOLDED SWITCH & CABLE ASSEMBLY	1	264951-04
16	CABLE ASSY, 175 AMPS, 38' LG.	1	264422
17	KIT, MANUAL & DECAL	1	266404-01 (72-25) 266404-02 (72-30)
	A. MANUAL, INSTALLATION	1	M-03-05
	B. MANUAL, OPERATION	1	M-03-06
	C. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
18	SCREW, SELF TAPPING, #10-24 X 1" LG.	2	900057-5
19	ROLL PIN	1	905033-1
20	PIN, TORSION BAR	1	253805
21	SPACER, BUSHING, 1/4"	1	253808

TABLE 11-1

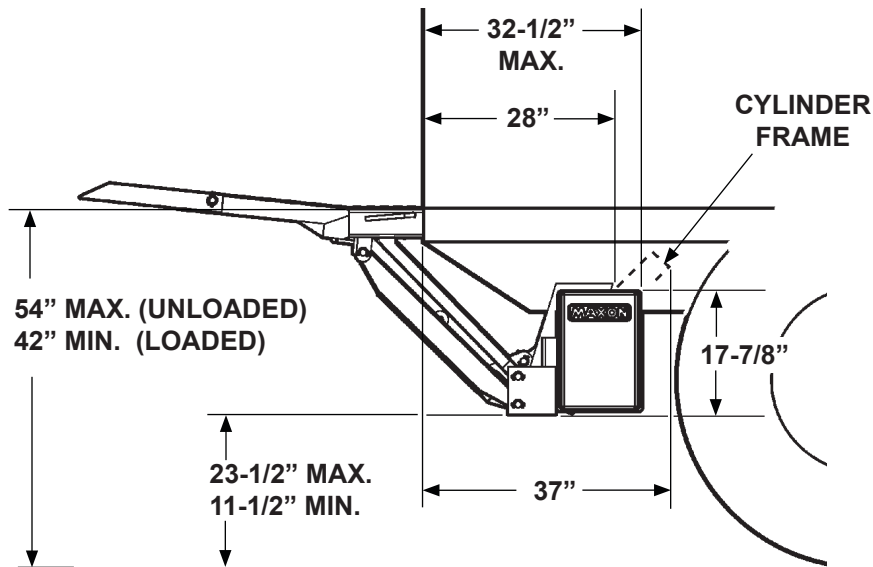
VEHICLE REQUIREMENTS

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

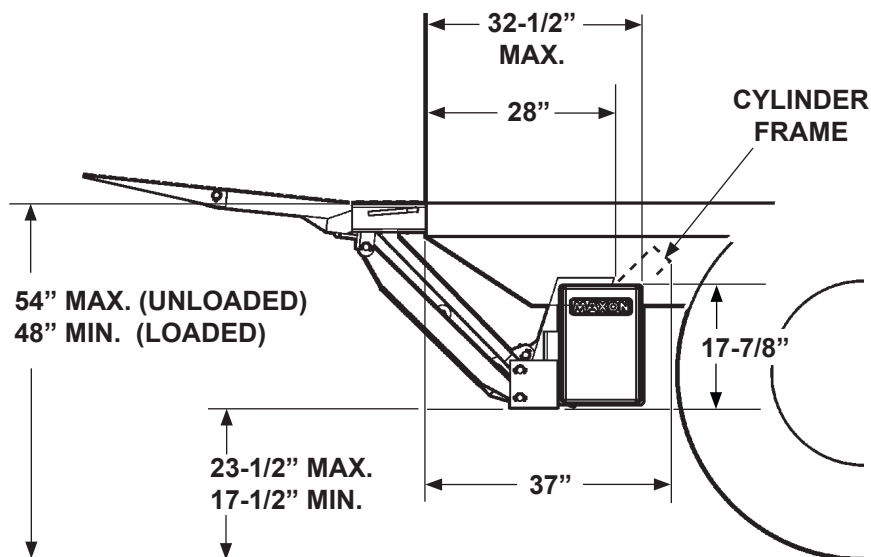
NOTE: Dimensions are provided as a reference only for fitting Liftgate to vehicle body.

1. Check for correct clearances (**FIGS. 12-1 & 12-2**) on vehicle to prevent interference between vehicle and Liftgate.

NOTE: A clearance area 8" wide is required for the cylinder frame at center of vehicle (lengthwise).



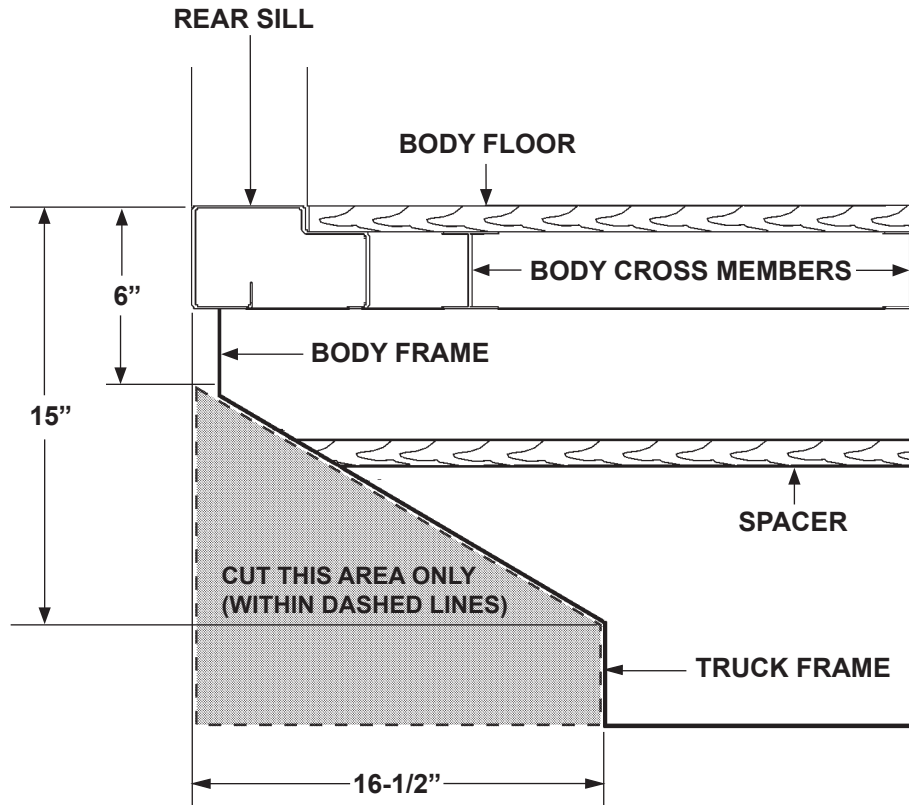
**CLEARANCE FOR 35" x 72" + 5" RAMP PLATFORM & 35" x 72" + 10" A.R.R. SPECIAL PROFILE PLATFORM
FIG. 12-1**



**CLEARANCE FOR 40" x 72" WEDGE PLATFORM
FIG. 12-2**

VEHICLE REQUIREMENTS - Continued

2. Fit Liftgate to truck body by cutting frame as shown in FIG. 13-1.



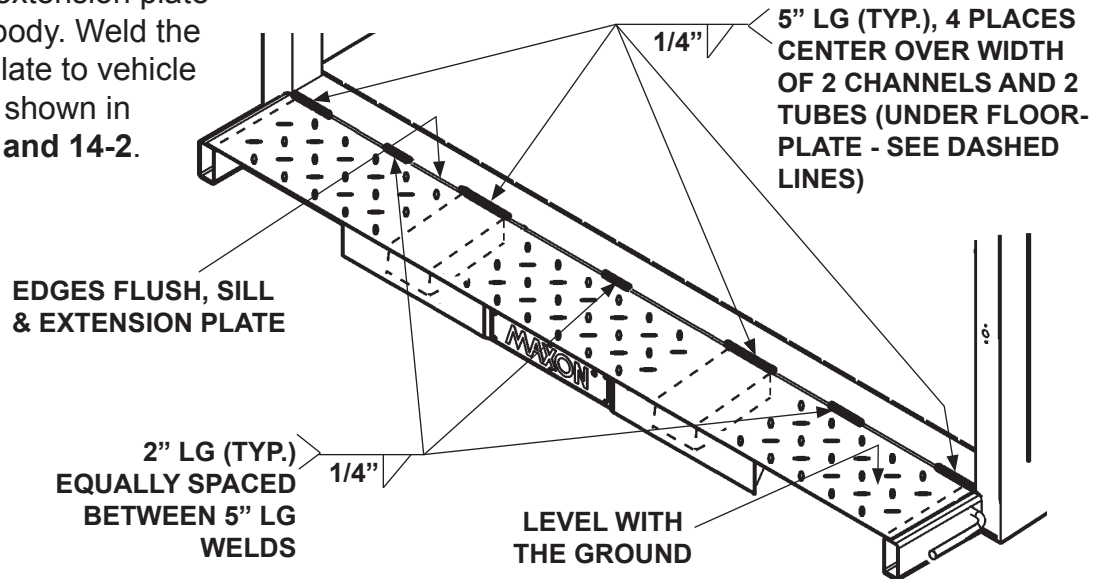
VEHICLE FRAME CUT FOR 72-25 & 72-30
FIG. 13-1

STEP 1 - WELD EXTENSION PLATE TO VEHICLE

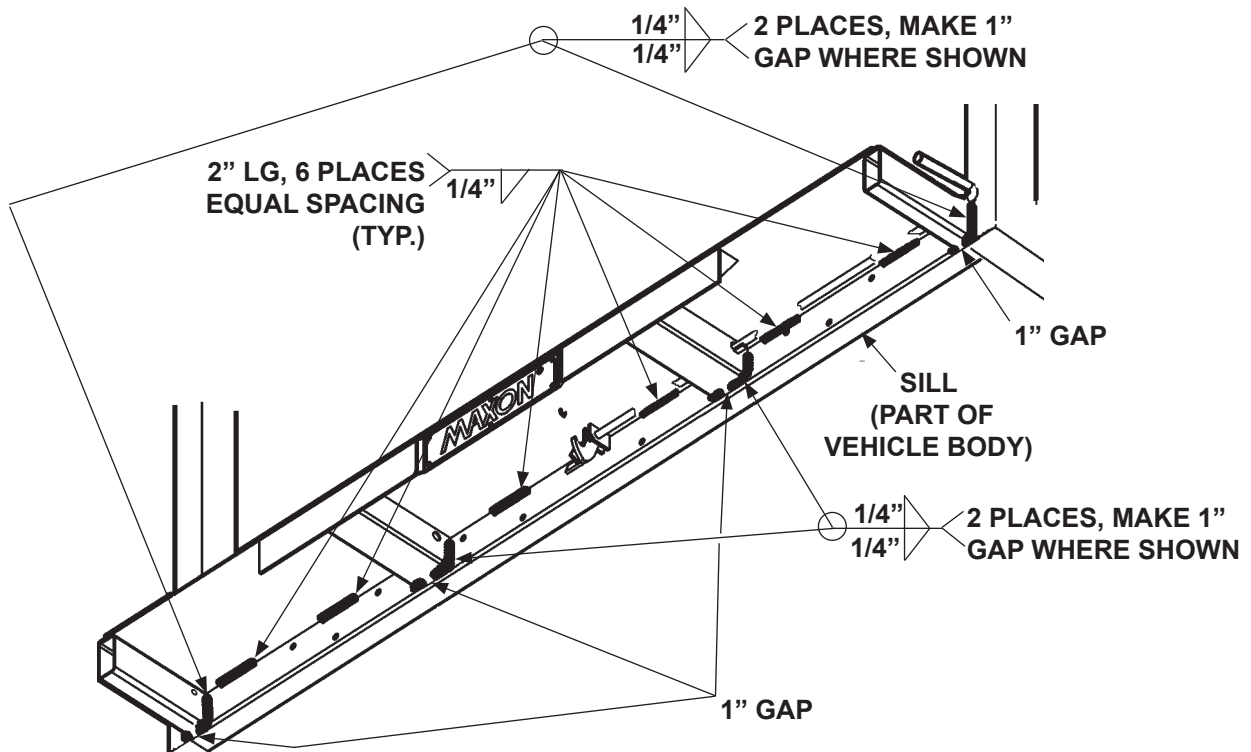
NOTE: Before welding extension plate to vehicle body, make sure:

- 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. 14-1 and 14-2.**



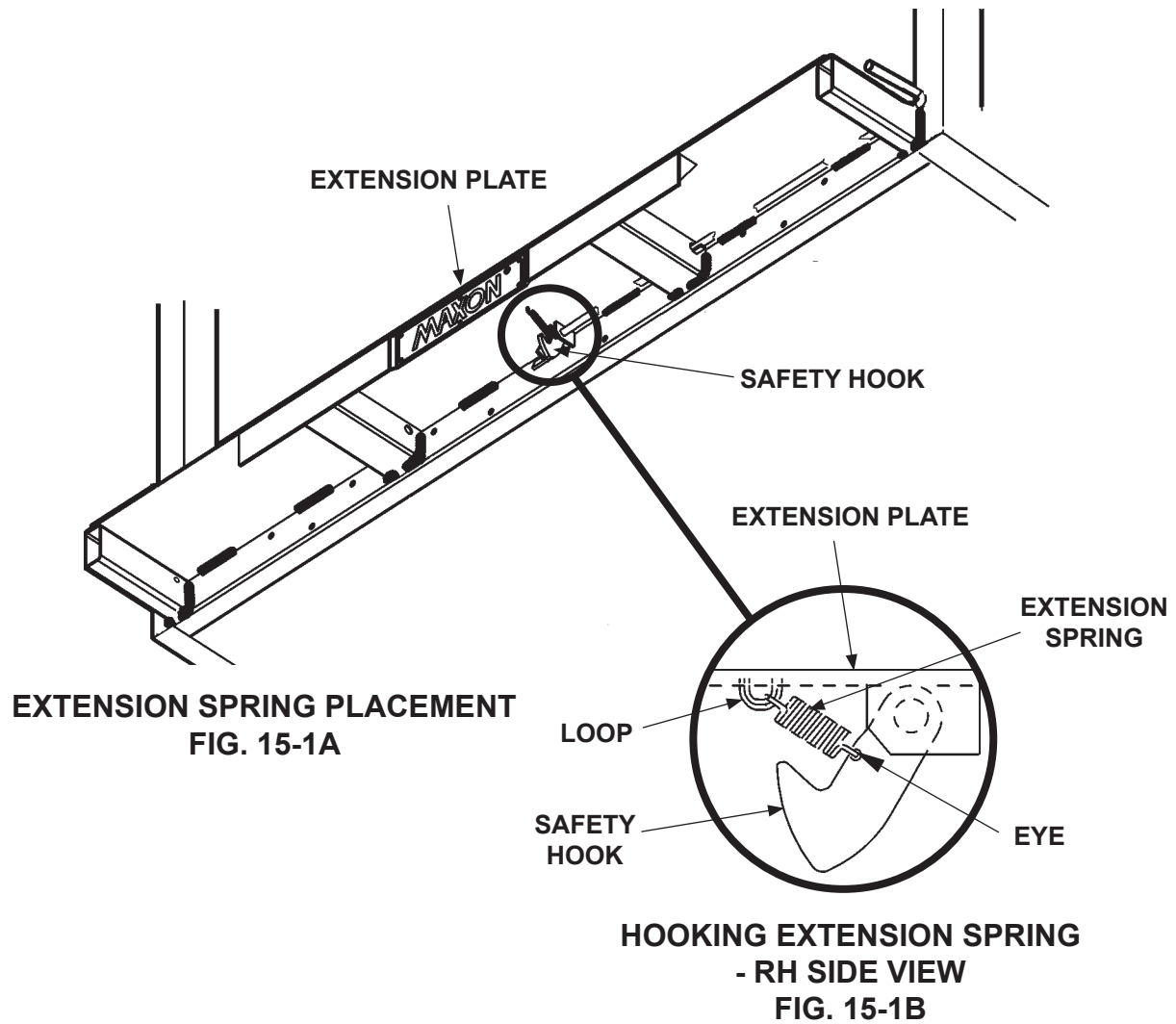
EXTENSION PLATE WELDS - VIEWED FROM ABOVE
FIG. 14-1



EXTENSION PLATE WELDS - VIEWED FROM UNDERNEATH
FIG. 14-2

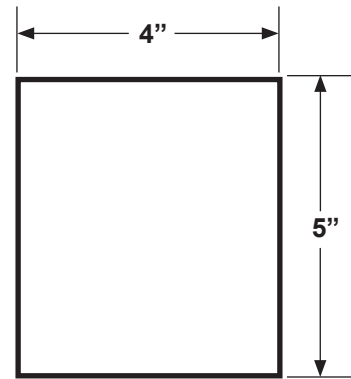
STEP 1 - WELD EXTENSION PLATE TO VEHICLE - Continued

2. Get the extension spring (**FIG. 15-1B**) from parts box. Hook one end of spring in loop (**FIG. 15-1B**) under extension plate (**FIG. 15-1A**). Next, hook opposite end of spring in eye of the safety hook (**FIG. 15-1B**).

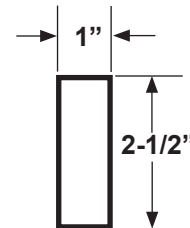


STEP 2 - WELD LIFTGATE TO VEHICLE

1. Make 2 support straps (**FIG. 16-1**) and 2 spacers (**FIG. 16-2**) 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. 16-1



SPACER
(1/8" X 1" STEEL FLAT)
FIG. 16-2

2. Place 2 temporary support straps (**FIG. 16-3A**) on the extension plate as shown in **FIG. 16-3A**. Also, put 2 temporary spacers (**FIG. 16-3B**) between platform and extension plate as shown in **FIG. 16-3B**. Weld the straps and spacers to extension plate (**FIG. 16-3B**).

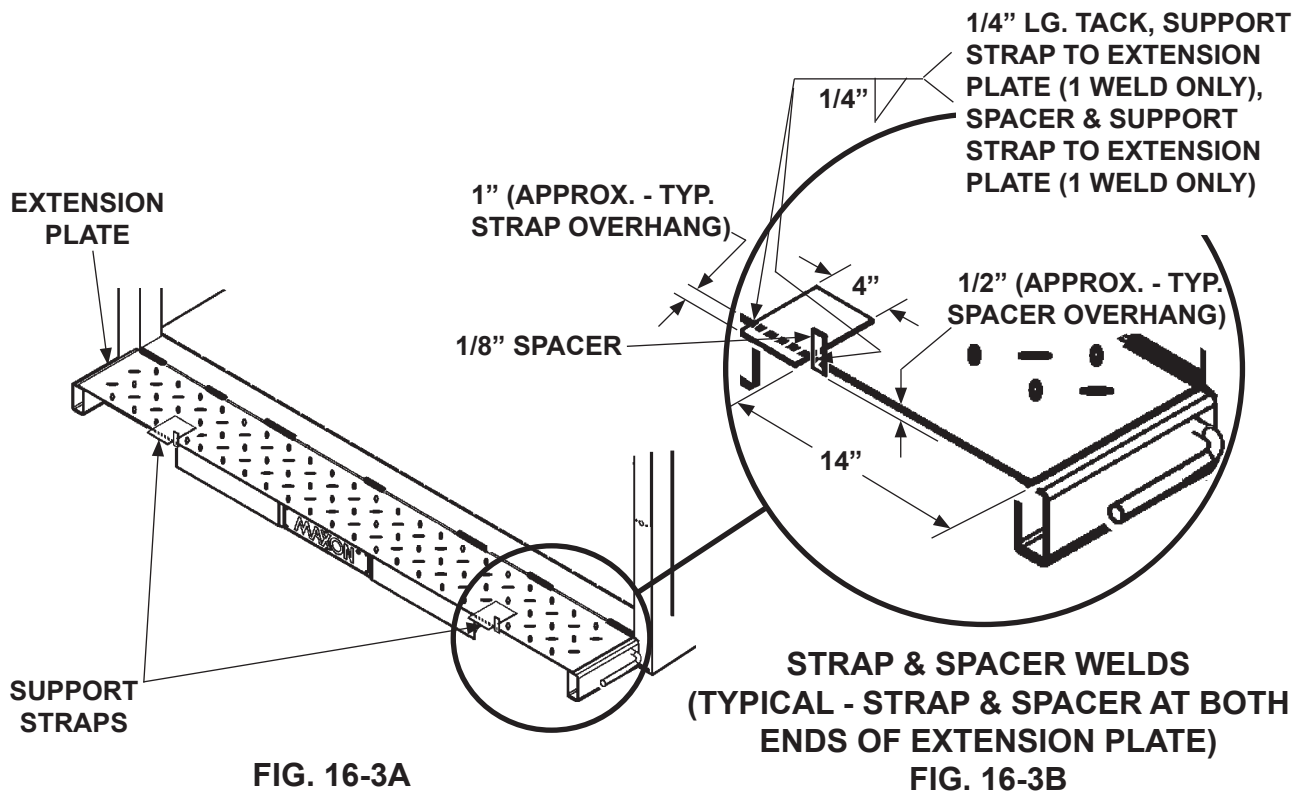


FIG. 16-3A

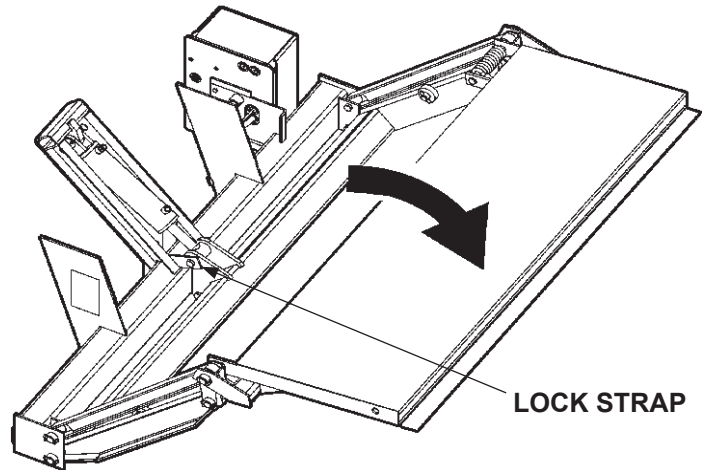
STRAP & SPACER WELDS
(TYPICAL - STRAP & SPACER AT BOTH
ENDS OF EXTENSION PLATE)
FIG. 16-3B

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

WARNING

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

3. Unfold the platform as shown in FIG. 17-1.



UNFOLDED PLATFORM
FIG. 17-1

4. Attach chain and hoist on each side of platform at positions shown in FIG. 17-2. (Place chain all around platform.) Hoist the Liftgate and then place floor jack under main frame (FIG. 17-2). Jack the Liftgate in position. Make sure vehicle floor is horizontal and pins are lined up as shown in FIG. 17-2.

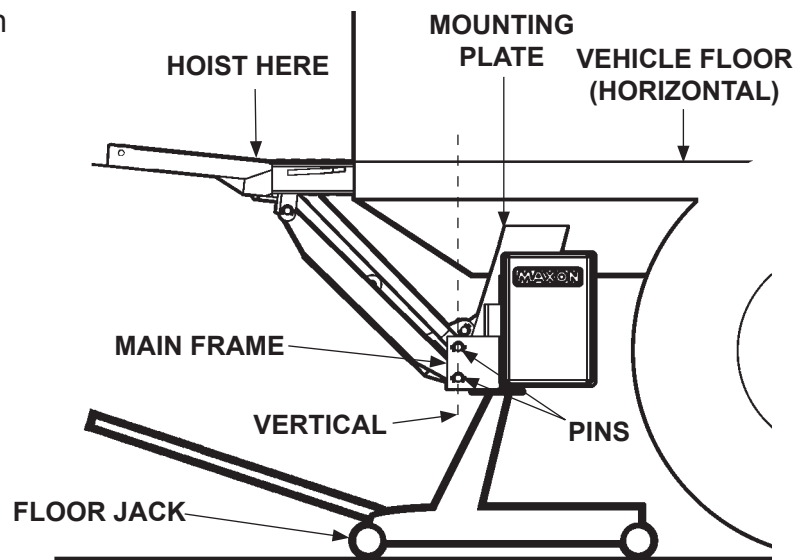


FIG. 17-2

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

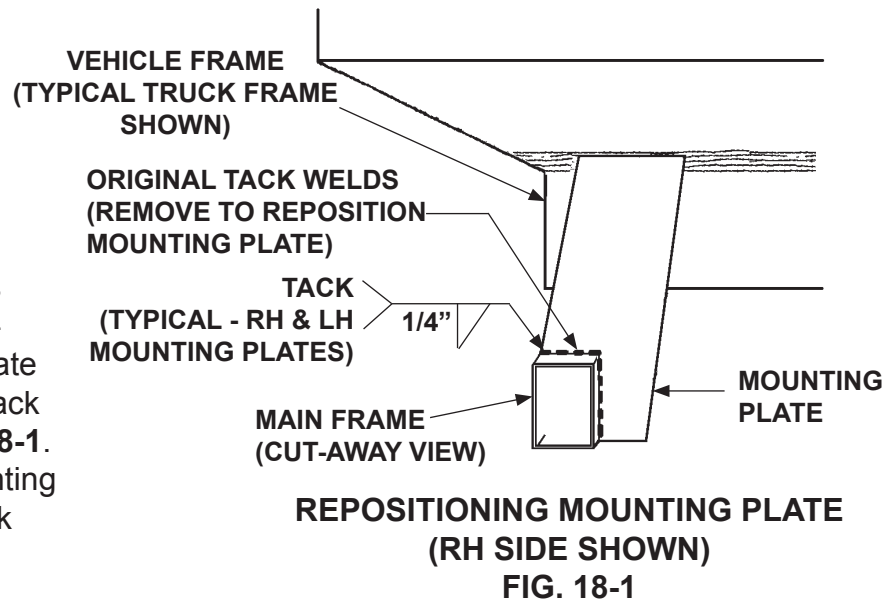
⚠ WARNING

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

CAUTION

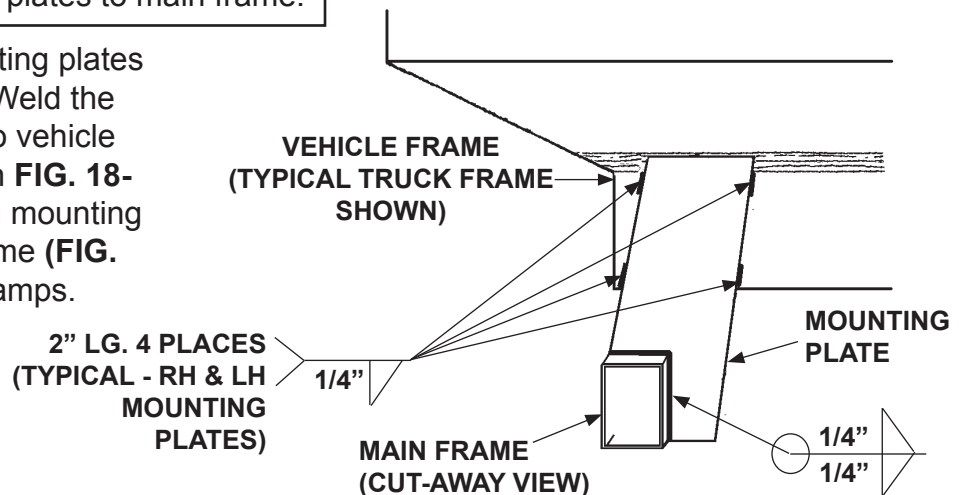
Prevent damaged hydraulic hoses. If welding next to hydraulic hoses, use a protective cover such as a welding blanket to cover the hoses.

5. 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. 18-1**). Make sure Liftgate stays centered on vehicle. Reposition the mounting plate against vehicle frame. Tack weld as shown in **FIG. 18-1**. Repeat for second mounting plate (reposition and tack weld).



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

6. Clamp both mounting plates to vehicle frame. Weld the mounting plates to vehicle frame as shown in **FIG. 18-2**. Next, weld both mounting plates to main frame (**FIG. 18-2**). Remove clamps.



WELD TO VEHICLE FRAME AND MAIN FRAME
(RH SIDE SHOWN)
FIG. 18-2

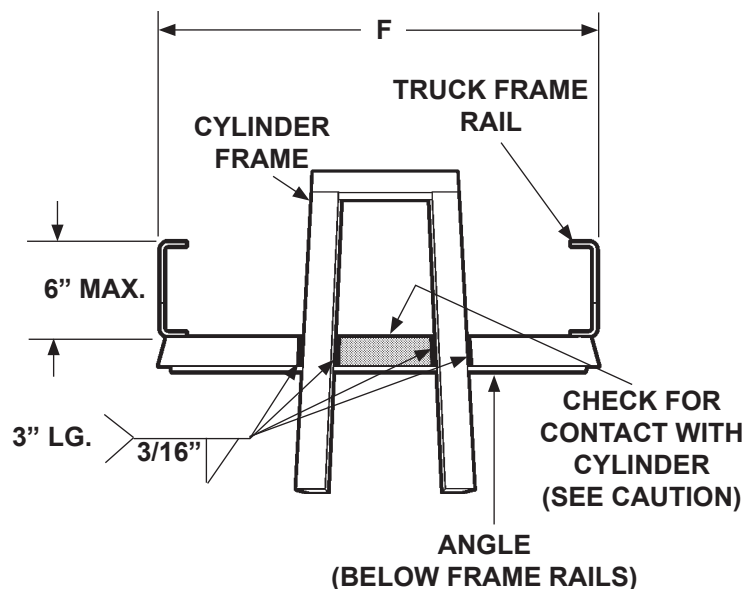
STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

CAUTION

Prevent damage to cylinder on some installations. If top of cylinder touches supporting angle (FIGS. 19-1 and 19-2), weld spacer (A-36 steel flat) between cylinder frame and support angle. Spacer thickness is as required to create clearance between cylinder and support angle.

NOTE: In the following instructions, there are 3 ways to weld a support to cylinder frame. If you use the angle support, do instructions 7 and 8, or do 9 and 10. If you use the strap support, only do instruction 11.

7. Measure height of truck frame rails as shown in **FIG. 19-1**. If the frame is over 6" in height, skip this instruction and go to instruction **9**. If the frame is 6" maximum in height, make a support as follows. Measure distance "**F**" between outer edges of truck frame (FIG. 19-1). Cut a support the same length as "**F**" (FIG. 19-1) from the 2-1/2" x 2-1/2" x 3/4" long steel angle supplied with the Liftgate.

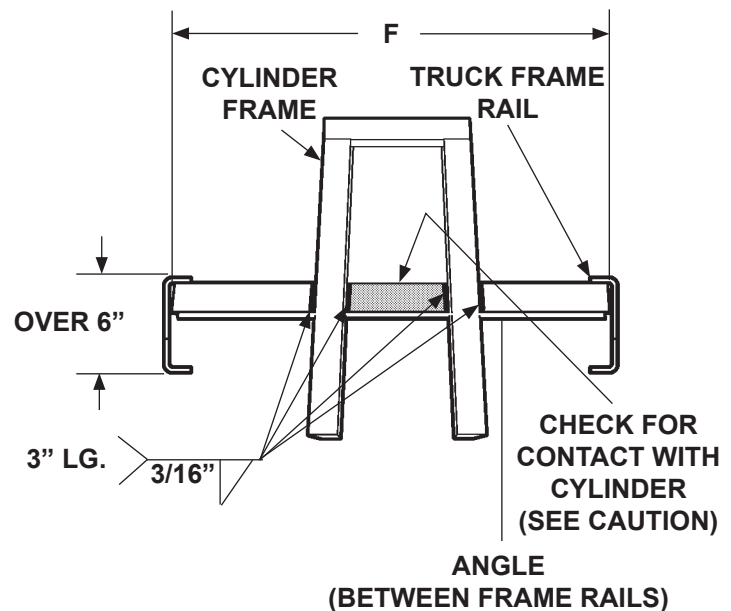


**CYLINDER FRAME SUPPORT -
TRUCK FRAME WITH 6" MAX. RAIL
(LIFTGATE & TRUCK BODY NOT SHOWN)
FIG. 19-1**

8. Position the angle flat against the cylinder frame and tight against the bottom flange of the truck frame rails (FIG. 19-1). Weld the angle to the cylinder frame only (FIG. 19-1). Skip instructions **9** through **11**.

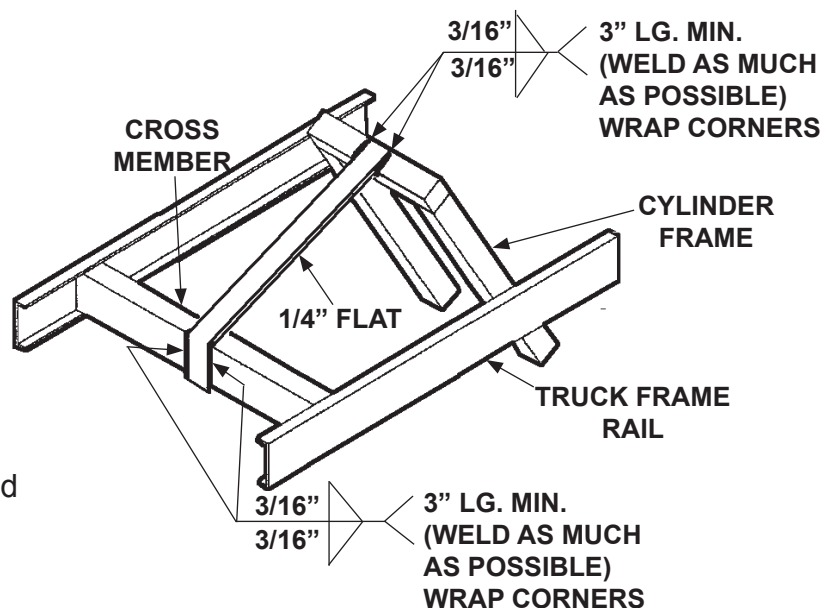
STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

9. If the frame is over 6" in height (**FIG. 20-1**), make a support as follows. Measure distance "F" between inside of truck frame rails (**FIG. 20-1**). Cut a support, 1/2" shorter than "F" (**FIG. 20-1**), from the 2-1/2" x 2-1/2" x 34" long steel angle supplied with the Liftgate.



**CYLINDER FRAME SUPPORT -
TRUCK FRAME WITH OVER 6" RAIL
(LIFTGATE & TRUCK BODY NOT SHOWN)
FIG. 20-1**

10. Position the angle between the truck frame rails and flat against the cylinder frame (**FIG. 20-1**). Make sure angle fits tight against the top flange of the truck frame rails. Weld the angle to the cylinder frame only (**FIG. 20-1**). Skip instruction 11.



**CYLINDER FRAME SUPPORT STRAP
FIG. 20-2**

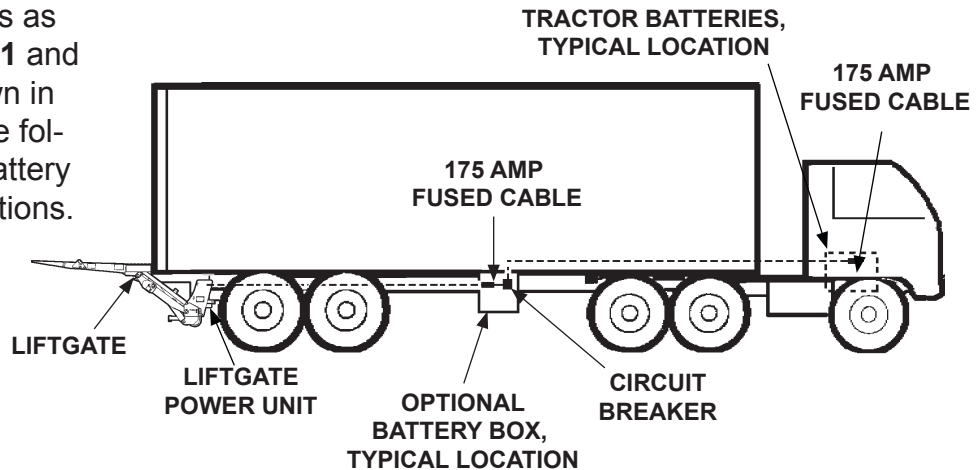
11. Make a support strap as follows. Cut a 36" long support from A-36 general purpose 1/4" x 2" flat steel. (Flat is not supplied by **MAXON**.) Fit the strap to the cylinder frame and cross member (**FIG. 20-2**). Weld the strap as shown in **FIG. 20-2**.

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

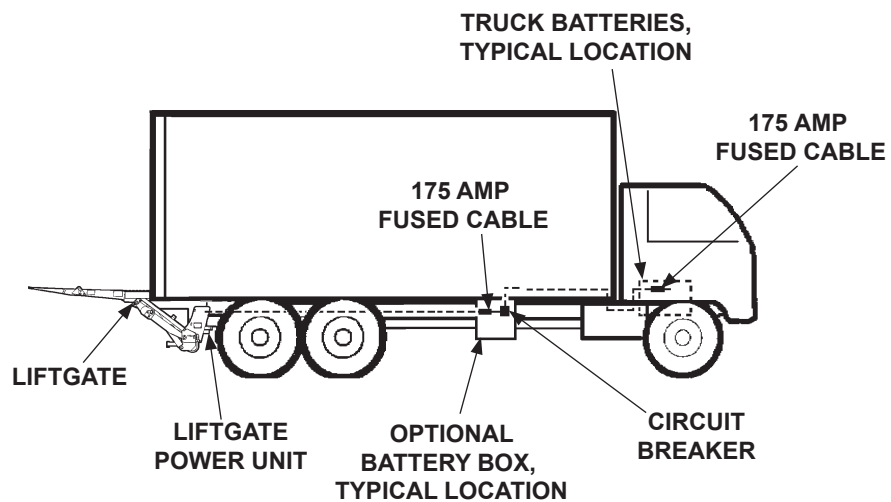
RECOMMENDED CONFIGURATION

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

1. Liftgate and optional battery box are typically installed on trailers as shown in **FIG. 21-1** and on trucks as shown in **FIG. 21-2**. See the following page for battery and cable connections.



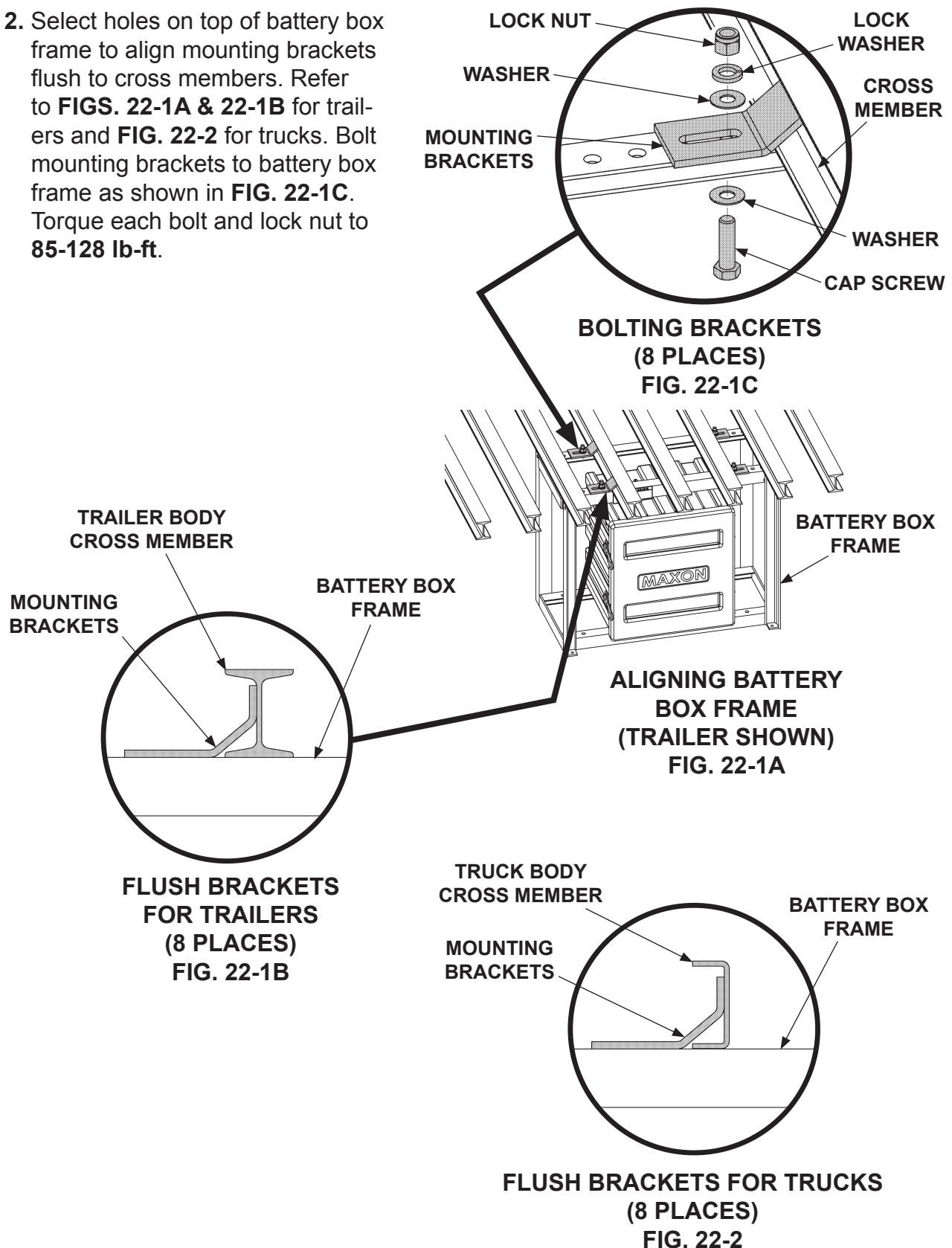
**RECOMMENDED LIFTGATE & OPTIONAL BATTERY BOX
INSTALLATION ON TRAILER
FIG. 21-1**



**RECOMMENDED LIFTGATE & BATTERY BOX
INSTALLATION ON TRUCK
FIG. 21-2**

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

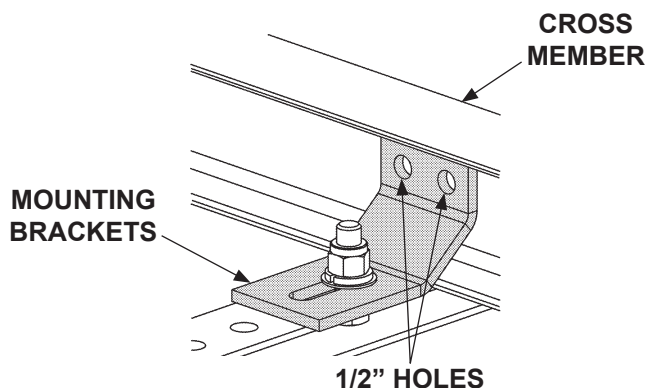
2. Select holes on top of battery box frame to align mounting brackets flush to cross members. Refer to **FIGS. 22-1A & 22-1B** for trailers and **FIG. 22-2** for trucks. Bolt mounting brackets to battery box frame as shown in **FIG. 22-1C**. Torque each bolt and lock nut to **85-128 lb-ft.**



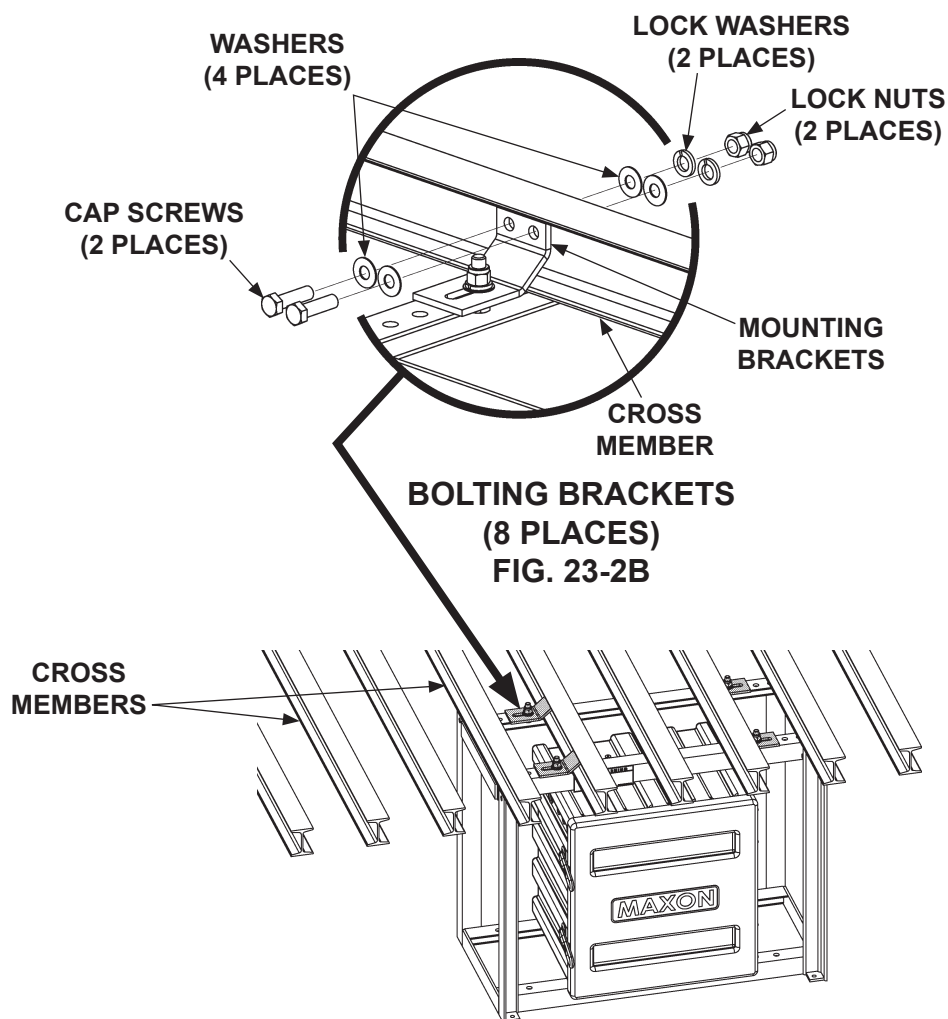
STEP 3 - ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

NOTE: If welding mounting brackets to cross members, skip instruction 3.

- Using mounting brackets as a template mark and drill holes through cross members (**FIG. 23-1**). Bolt mounting brackets to cross members as shown in **FIGS. 23-2A and 23-2B**. Torque bolts and lock nuts to **85-128 lb-ft**.



**MARK AND DRILL
FIG. 23-1**



**BOLTING BATTERY BOX FRAME
FIG. 23-2A**

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

⚠ WARNING

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

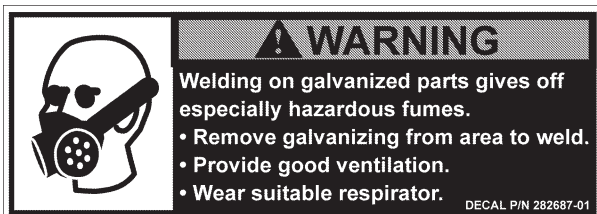
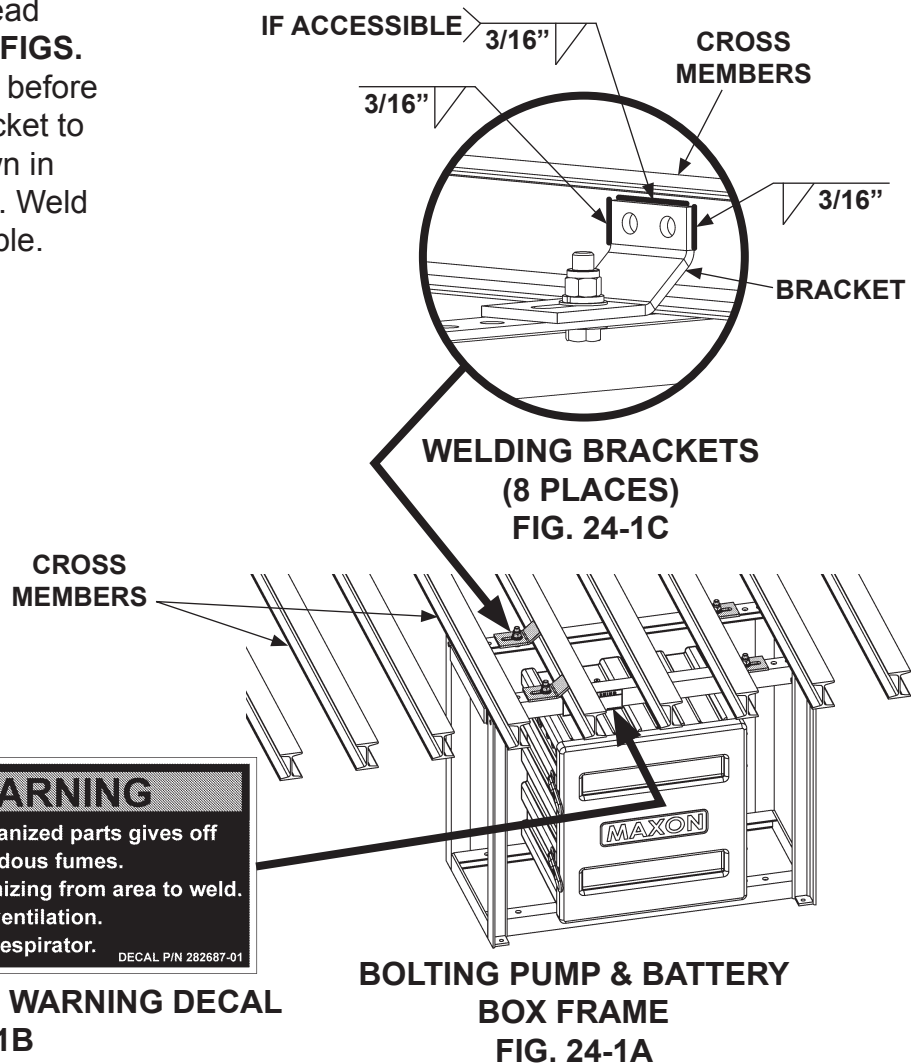
CAUTION

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

CAUTION

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

4. For galvanized frame, read warning decal shown in **FIGS. 24-1A and FIGS. 24-1B** before welding. Weld each bracket to cross members as shown in **FIGS. 24-1A and 24-1C**. Weld top of bracket if accessible.



WELDING GALVANIZED, WARNING DECAL
FIG. 24-1B

BOLTING PUMP & BATTERY
BOX FRAME
FIG. 24-1A

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

⚠ WARNING

Remove all rings, watches and jewelry before doing any electrical work.

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

NOTE: To connect charge lines, refer to instructions provided with each charge line kit.

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

5. Connect battery cables, fused cables, and ground cables as shown in **FIG. 25-1**.

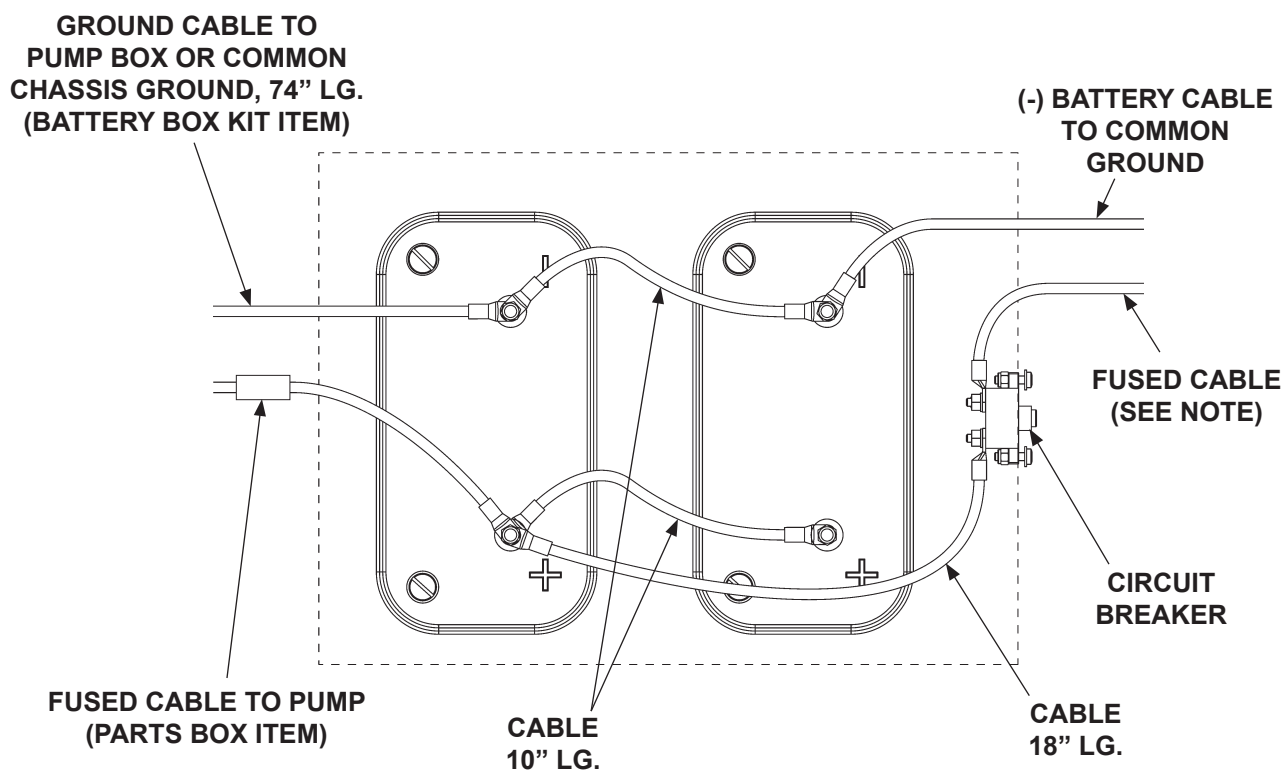
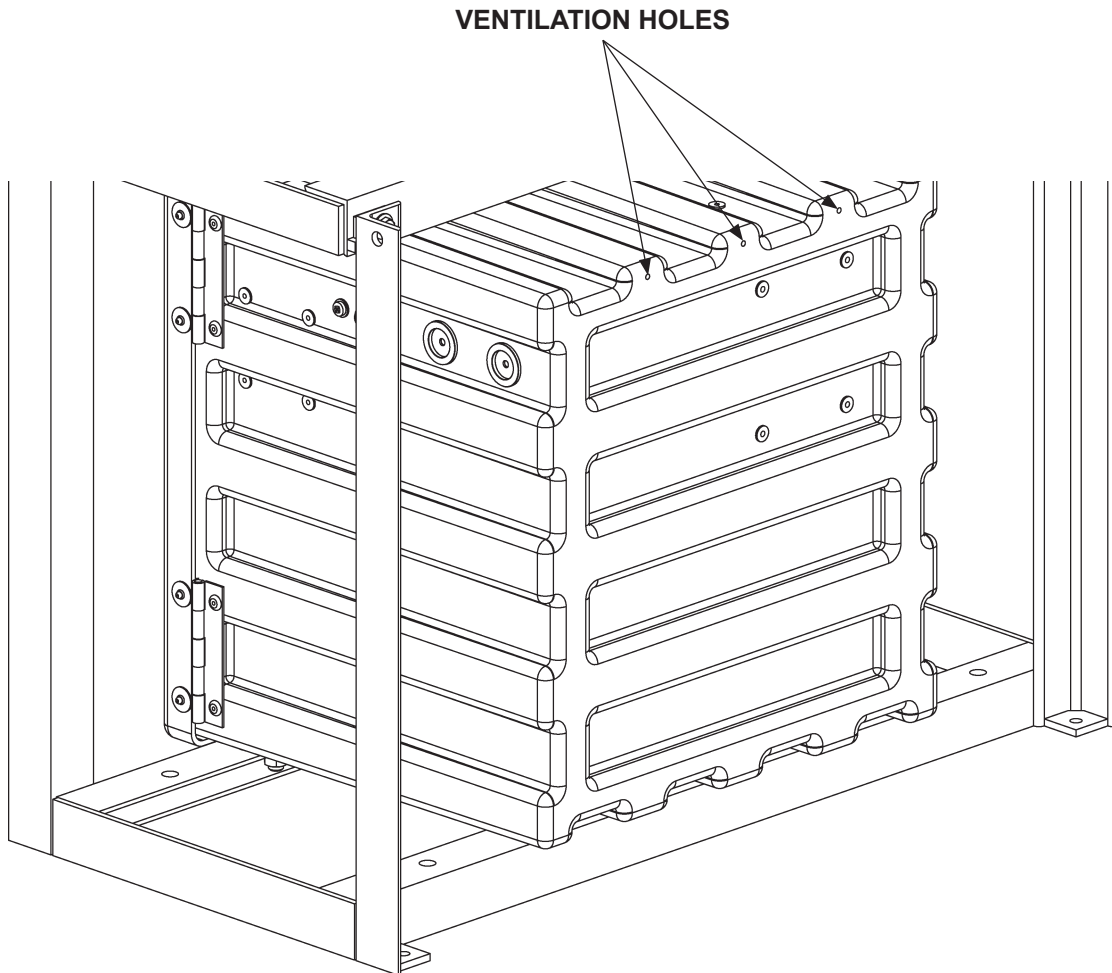


FIG. 25-1

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

⚠ WARNING

Explosive hydrogen gas from charging batteries can accumulate in battery box if not vented from the box. To prevent hydrogen gas from accumulating, ensure the 3 ventilation holes in battery box are not plugged or covered.



**BATTERY BOX ASSEMBLY (REAR VIEW SHOWN)
FIG. 26-1**

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

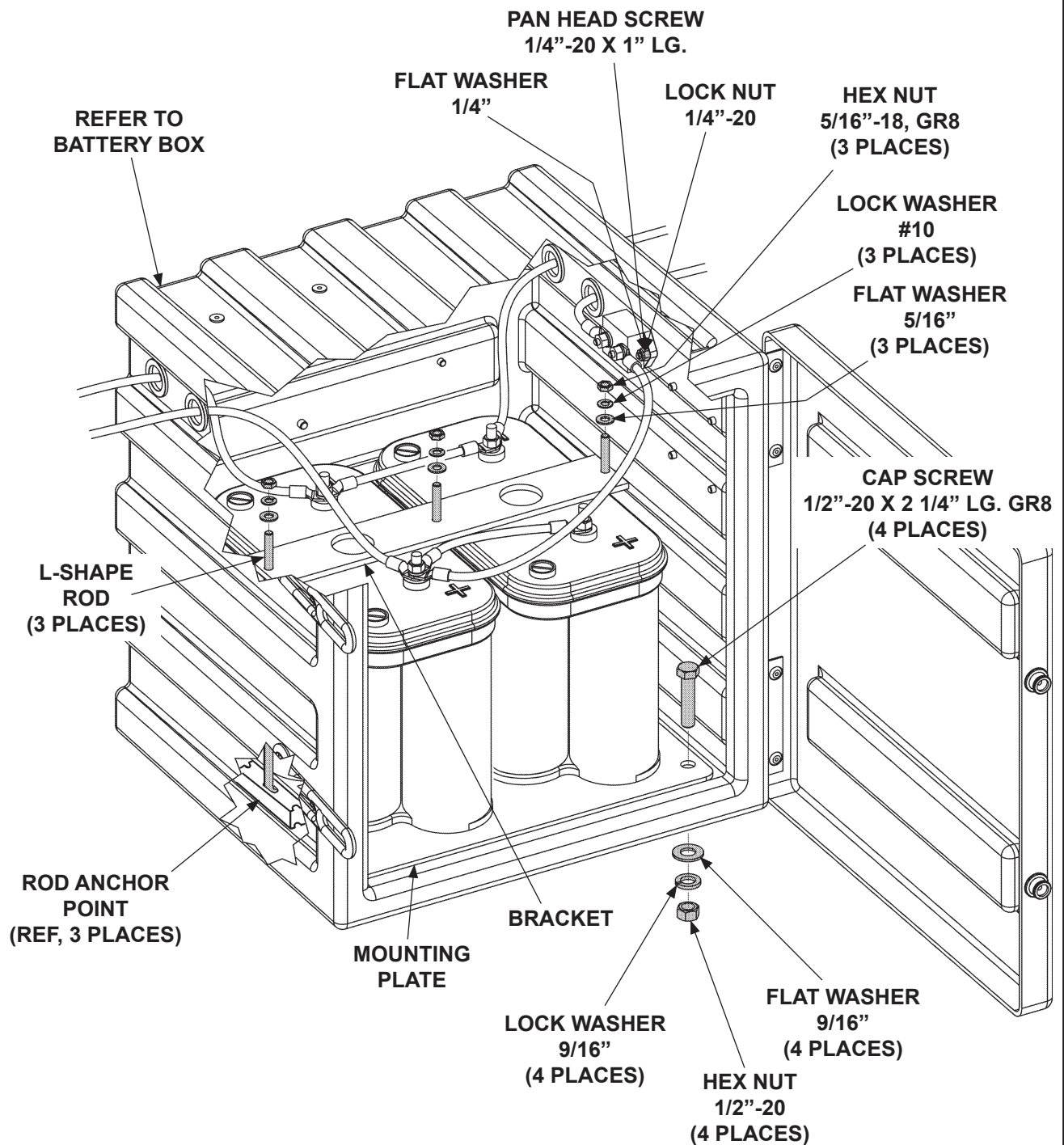
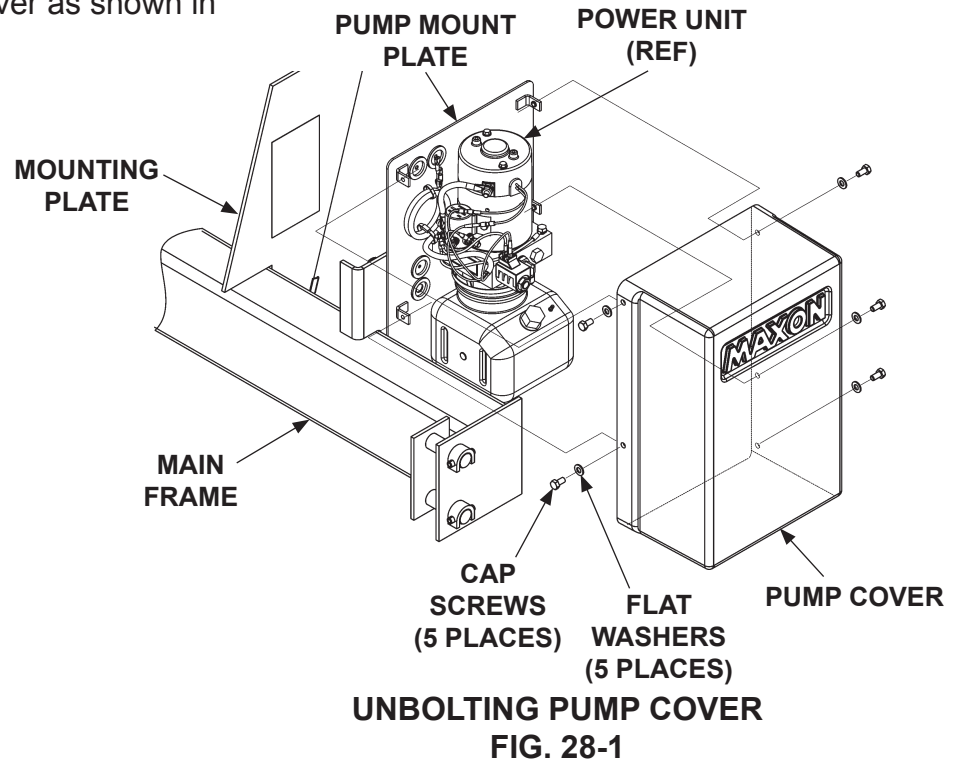


FIG. 27-1

STEP 4 - ADD HYDRAULIC FLUID TO RESERVOIR

1. Unbolt the pump cover as shown in FIG. 28-1.



STEP 4 - ADD HYDRAULIC FLUID TO RESERVOIR - Continued

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.

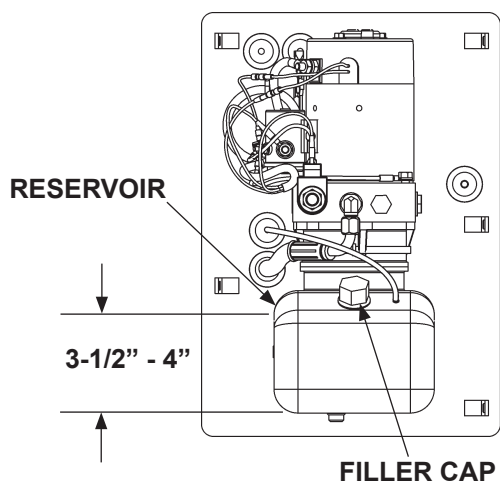
NOTE: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32

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

See **TABLES 29-1 and 29-2** for recommended brands.

2. Pull out filler cap (no threads) shown in **FIG. 29-1**. Fill the reservoir (**FIG. 29-1**) with hydraulic fluid to 4" above the bottom (**FIG. 29-1**).



**PUMP RESERVOIR
(GRAVITY DOWN POWER UNIT SHOWN)
FIG. 29-1**

3. Reinstall filler cap (**FIG. 29-1**).

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

TABLE 29-1

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

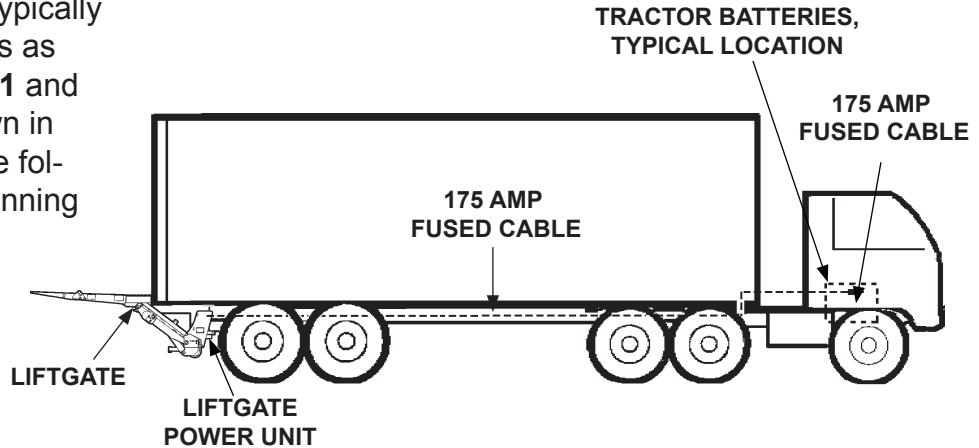
TABLE 29-2

STEP 5 - RUN POWER CABLE

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

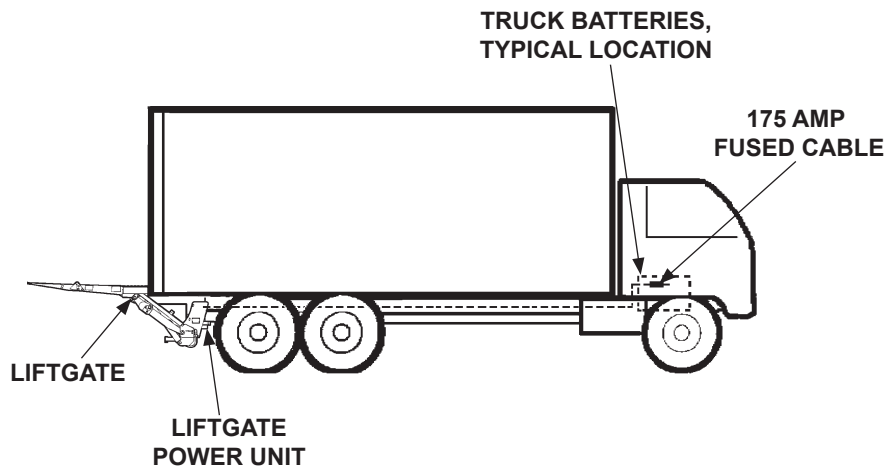
RECOMMENDED CONFIGURATION

1. Liftgate powered from truck batteries is typically installed on trailers as shown in **FIG. 30-1** and on trucks as shown in **FIG. 30-2**. See the following page for running the battery cable.



RECOMMENDED LIFTGATE & OPTIONAL BATTERY BOX INSTALLATION ON TRAILER

FIG. 30-1



RECOMMENDED LIFTGATE & BATTERY BOX INSTALLATION ON TRUCK

FIG. 30-2

STEP 5 - RUN POWER CABLE - Continued

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.

2. Clip fused power cable to vehicle chassis with fuse nearest the vehicle battery, as shown in **FIG. 31-1**. Keep enough cable near the battery to reach the positive terminal without straining cable (after connection). Run cable to pump box on Liftgate.

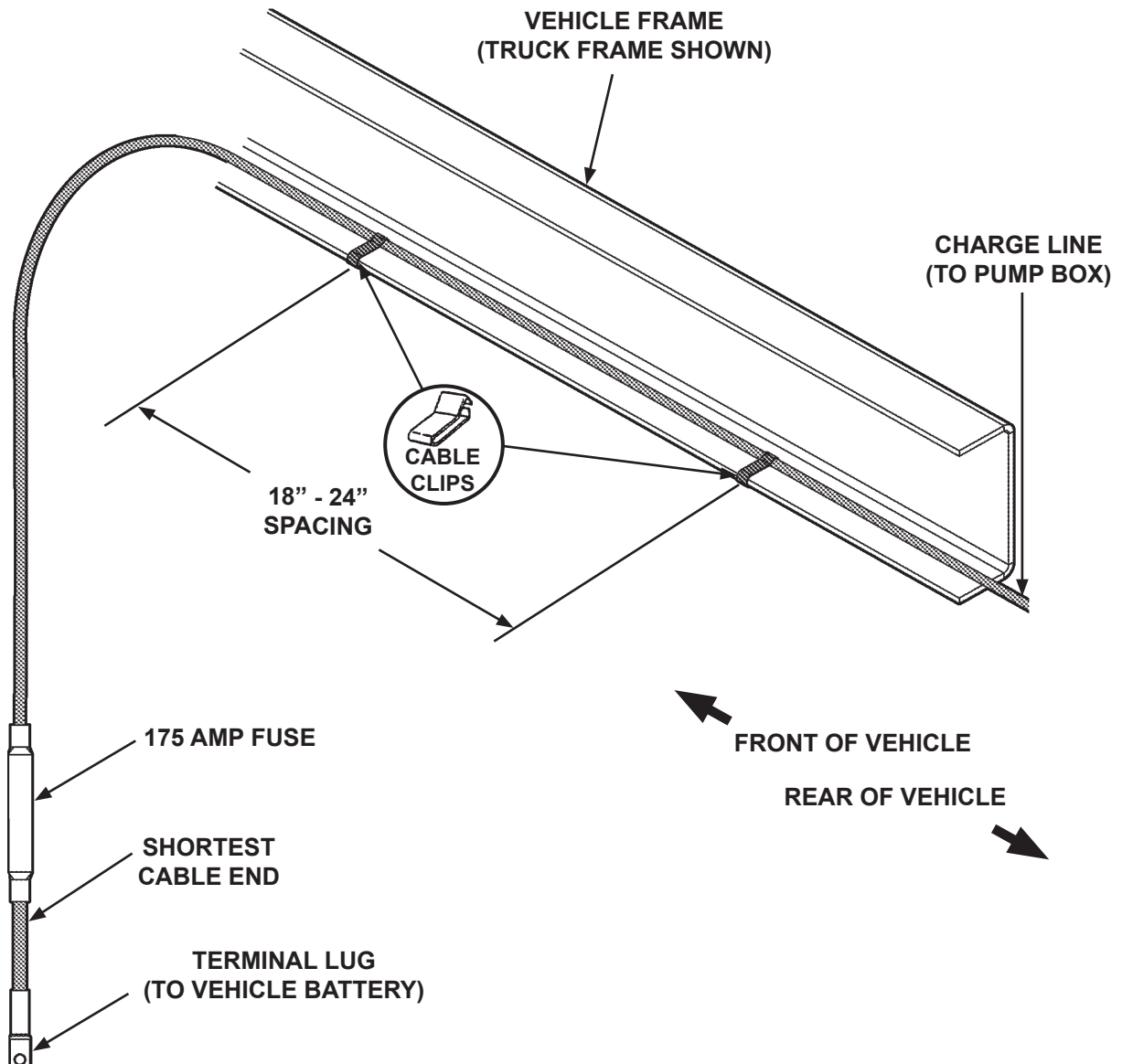
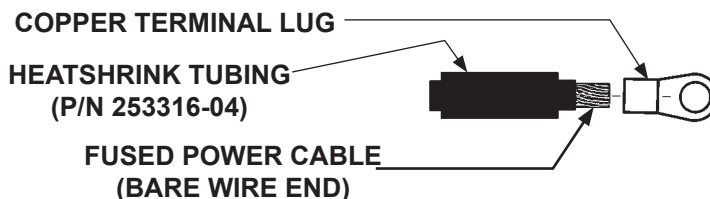


FIG. 31-1

STEP 6 - CONNECT POWER CABLE

NOTE: Hydraulic lines and electrical lines must be run into pump box through sealing grommets (**FIG. 32-3**). 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. 32-1**). Measure (if needed) and then cut excess cable from bare wire end of cable. Put heatshrink tubing (parts box) (**FIG. 32-1**) 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. 32-2**).



PLACING TERMINAL LUG & HEATSHRINK TUBING ON FUSED POWER CABLE
FIG. 32-1



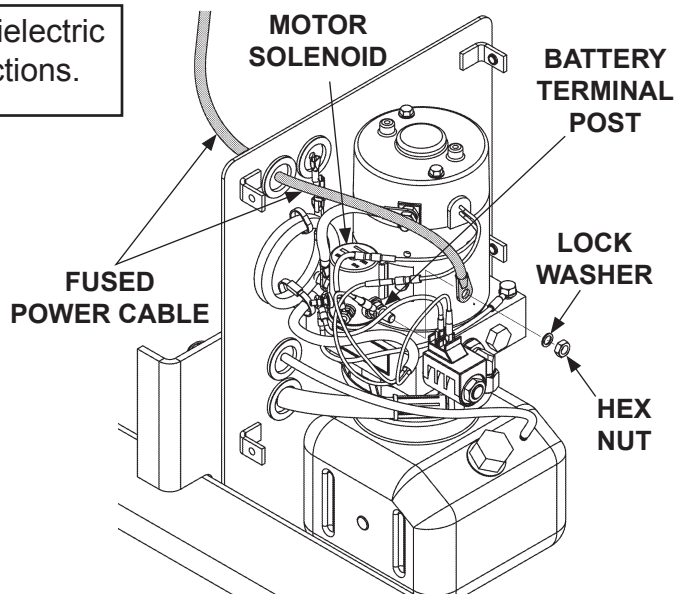
TYPICAL FUSED POWER CABLE WITH TERMINAL LUG INSTALLED
FIG. 32-2

CAUTION

To prevent damage to metal case starter solenoid, hold bottom terminal nut securely with wrench when loosening and tightening top terminal nut. Do not over-tighten the terminal nuts. For the 5/16" load terminals, torque nuts to 35 lbs.-in. Torque the nuts on #10-32 control terminals to 15 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. 32-3**. Reinstall and tighten lock washer and hex nut.



TYPICAL FUSED POWER CABLE CONNECTION (GRAVITY DOWN PUMP SHOWN)
FIG. 32-3

STEP 7 - CONNECT GROUND CABLE (RECOMMENDED)

NOTE: To ensure power unit is correctly grounded, MAXON recommends connecting an optional 2 gauge ground cable from grounding stud on pump assembly to a grounding point on the frame, or negative battery terminal in the optional battery box

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

1. Use lock nut to attach ground cable lug to ground stud on the pump assembly (FIGS. 33-1A and 33-1B).

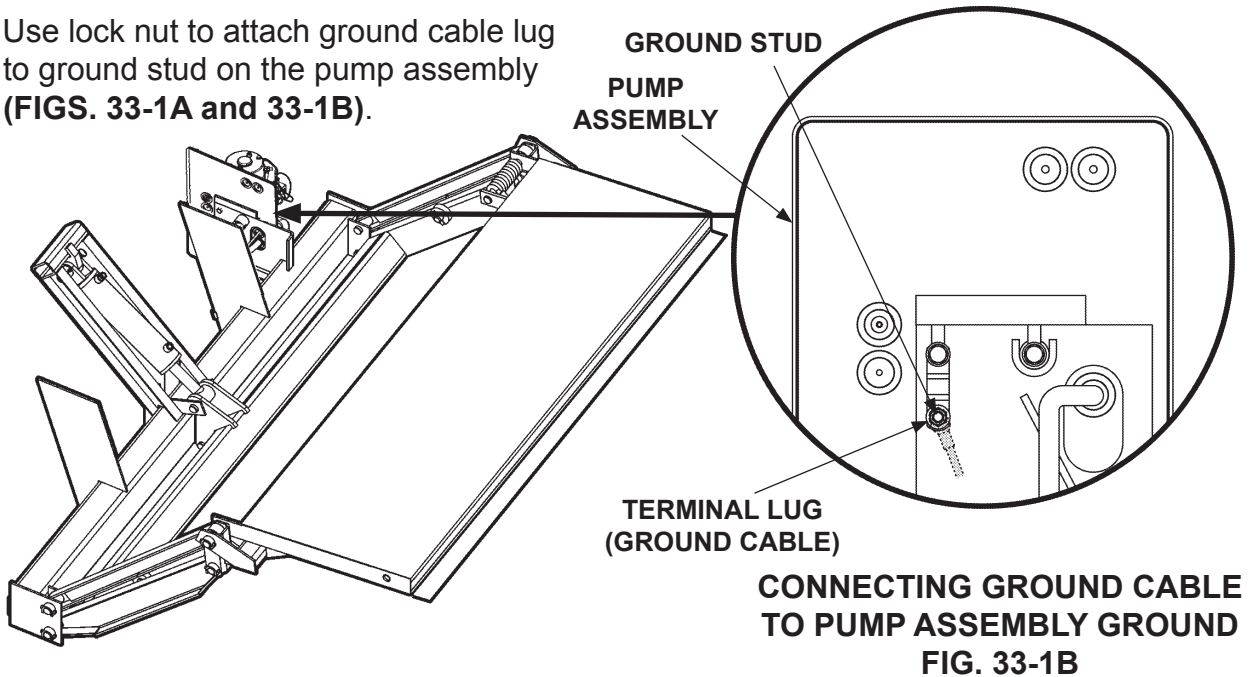


FIG. 33-1A

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.

2. Extend the ground cable to reach vehicle frame (FIG. 33-2) without putting tension on cable (after connection). Connect to an existing grounding point if available.
3. If necessary, drill a $11/32"$ (0.343") hole in vehicle frame for bolting the ground cable terminal lug (FIG. 33-2).
4. Bolt the ground cable terminal lug to vehicle frame as shown in FIG. 33-2.

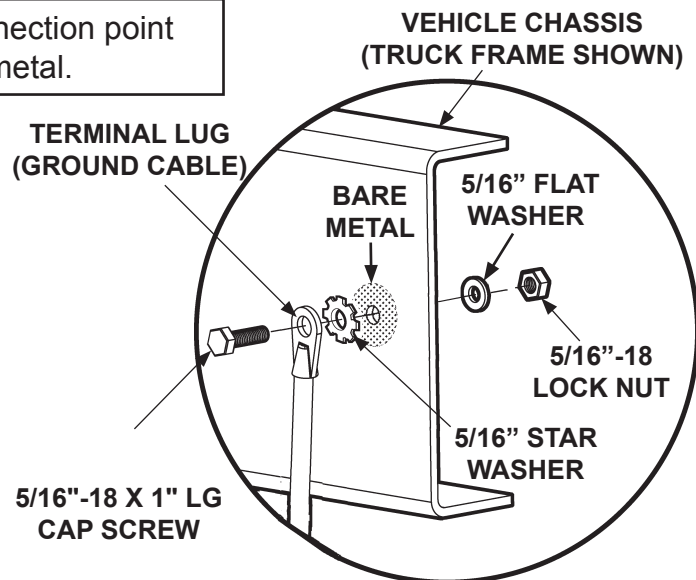
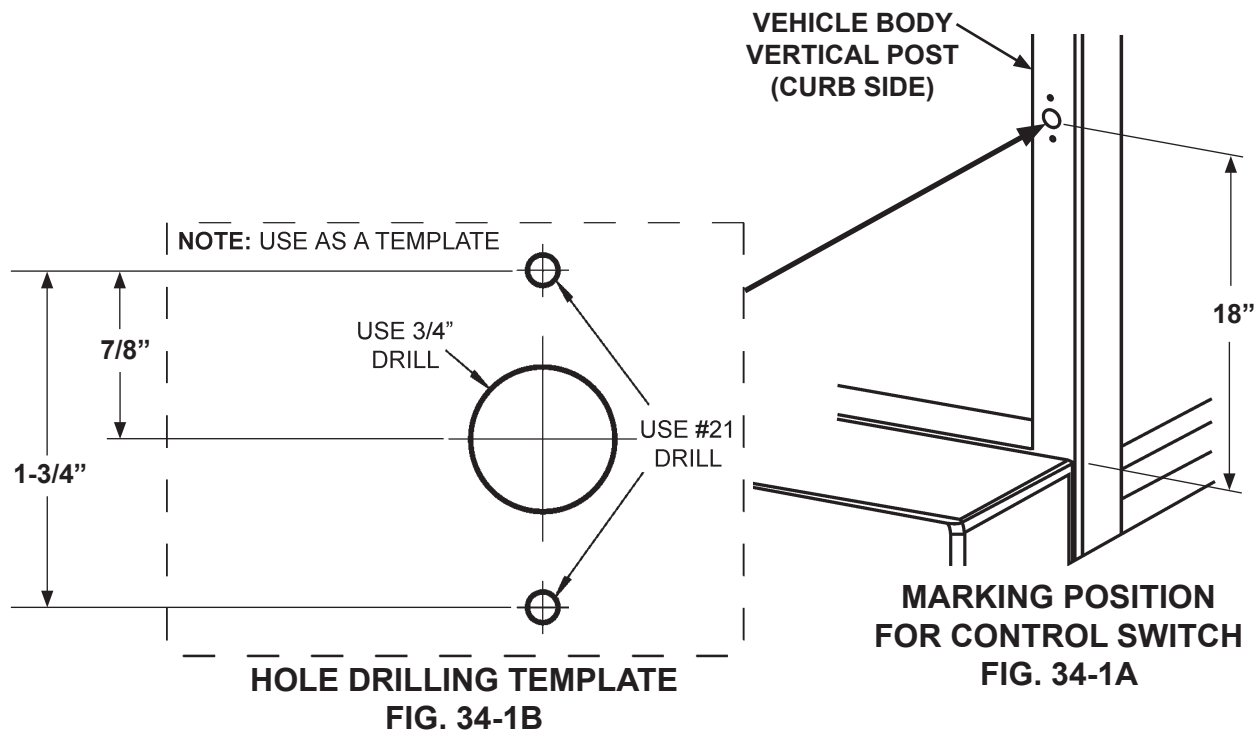


FIG. 33-2

STEP 8 - 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. 34-1A**. Use template shown in **FIG. 34-1B**.



NOTE: Hydraulic lines and electrical lines must run into pump box through sealing grommets (**FIG. 34-2**). To ensure a good seal on hydraulic & electrical lines, never cut the sealing grommets.

2. Cut tie strap on coiled wiring harness (**FIG. 34-2**). Pull the wiring harness through grommet on the pump mounting plate (**FIG. 34-2**).

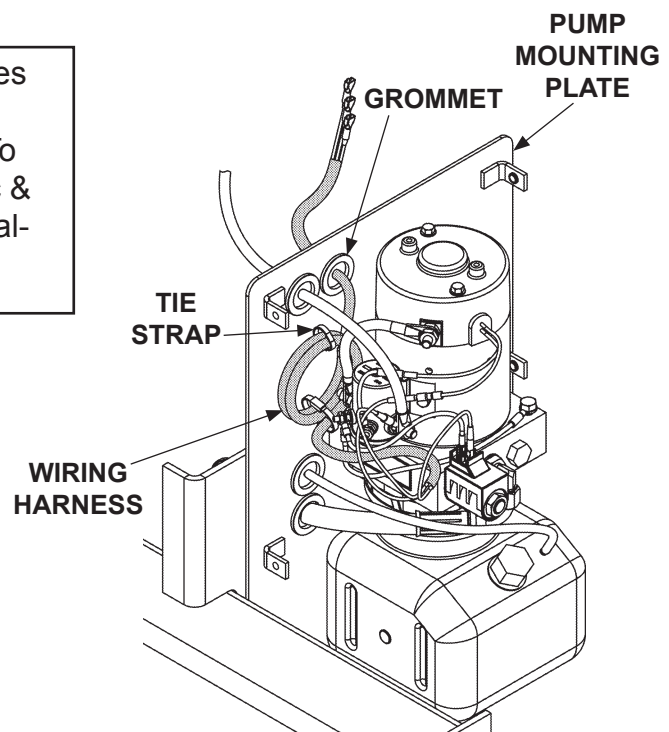
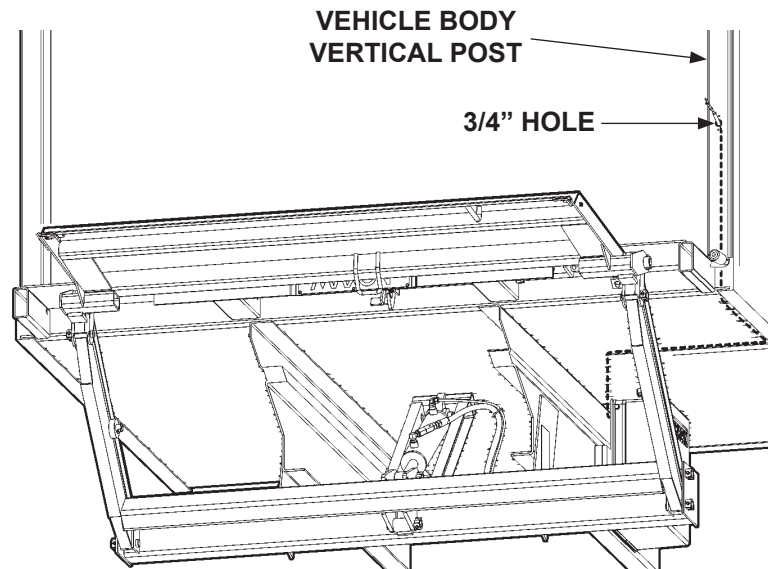


FIG. 34-2

STEP 8 - INSTALL CONTROL SWITCH - Continued

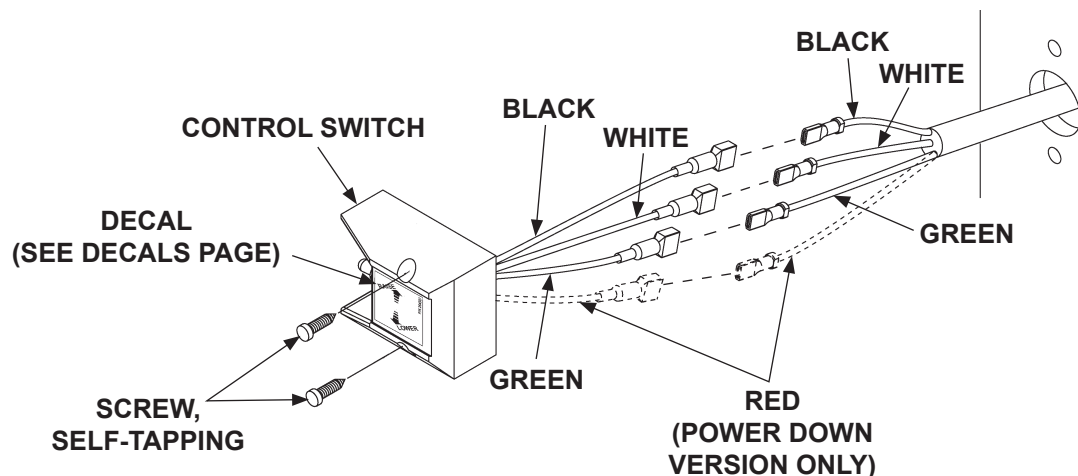
NOTE: MAXON recommends using dielectric grease on all electrical connections.

- Run wiring harness under vehicle body (**see dashed line - FIG. 35-1**) and up through inside of vertical post. Next, pull control switch wiring harness out the 3/4" hole drilled in vertical post (**FIG. 35-1**). Connect the control switch wiring to the wiring harness as shown in **FIG. 35-2**. 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. 35-2**).



ROUTING CONTROL SWITCH WIRING
FIG. 35-1

- If necessary, use clamps and tapping screws, from installation parts bag, to secure switch wiring harness to vehicle (**FIG. 35-1**).

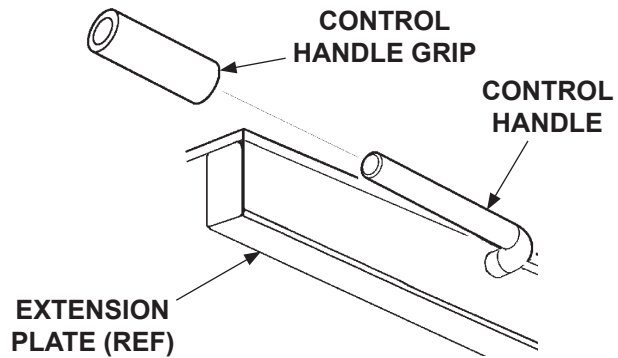


CONTROL SWITCH WIRING CONNECTIONS
FIG. 35-2

STEP 8 - INSTALL CONTROL SWITCH - Continued

NOTE: If you plan to install **rental lock** (see **STEP 16**), wait until **STEP 16** to install the control handle grip.

5. Get the control handle grip (**FIG. 36-1**) from parts box. Install the handle grip on control handle as shown in **FIG. 36-1**.

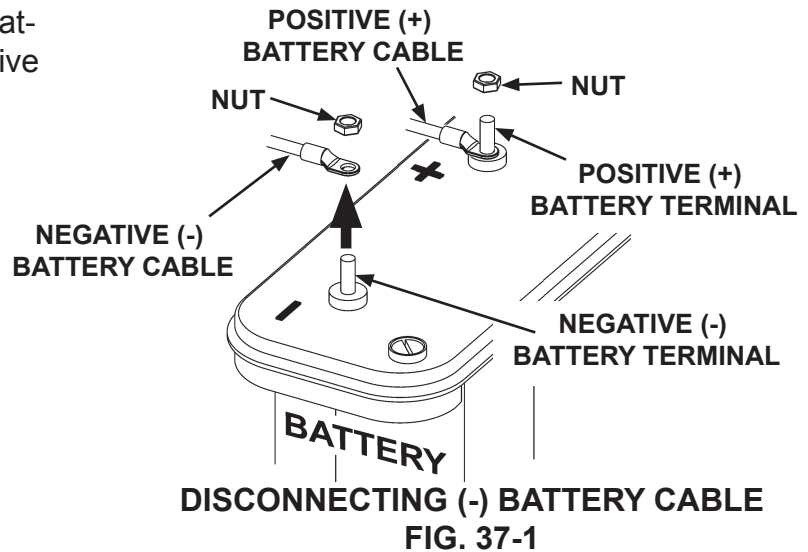


**INSTALLING CONTROL HANDLE GRIP
FIG. 36-1**

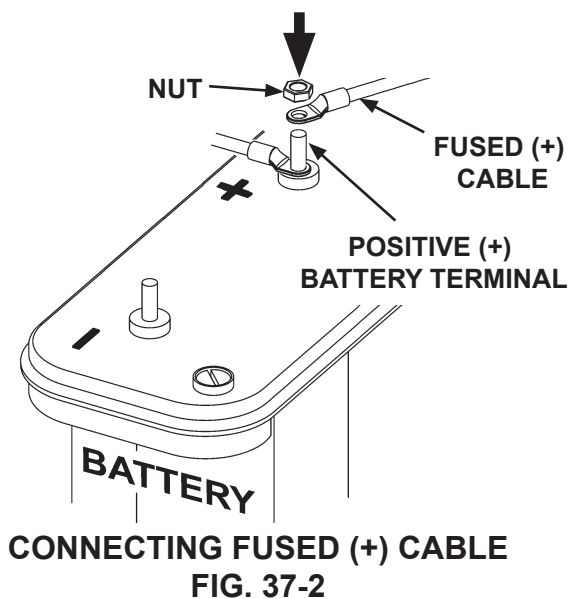
STEP 9 - CONNECT POWER CABLE TO BATTERY

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

1. Remove nut from negative (-) battery terminal. Disconnect negative (-) battery cable (**FIG. 37-1**).

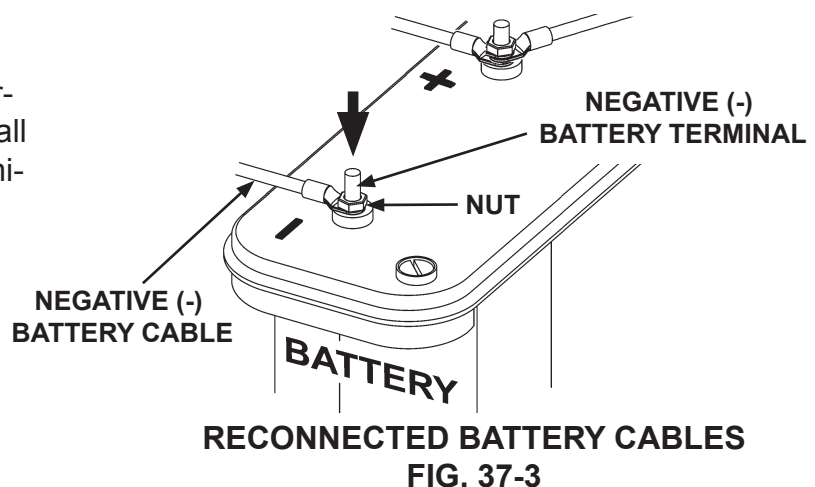


2. Remove nut from positive (+) battery terminal (**FIG. 37-2**).



3. Connect fused positive (+) cable to positive (+) battery terminal (**FIG. 37-2**). Then, reinstall nut on positive (+) battery terminal (**FIG. 37-2**).

4. Reconnect negative (-) battery cable to negative (-) battery terminal (**FIG. 37-3**). Then, reinstall nut on negative (-) battery terminal (**FIG. 37-3**).



STEP 10 - REMOVE LOCKING STRAP

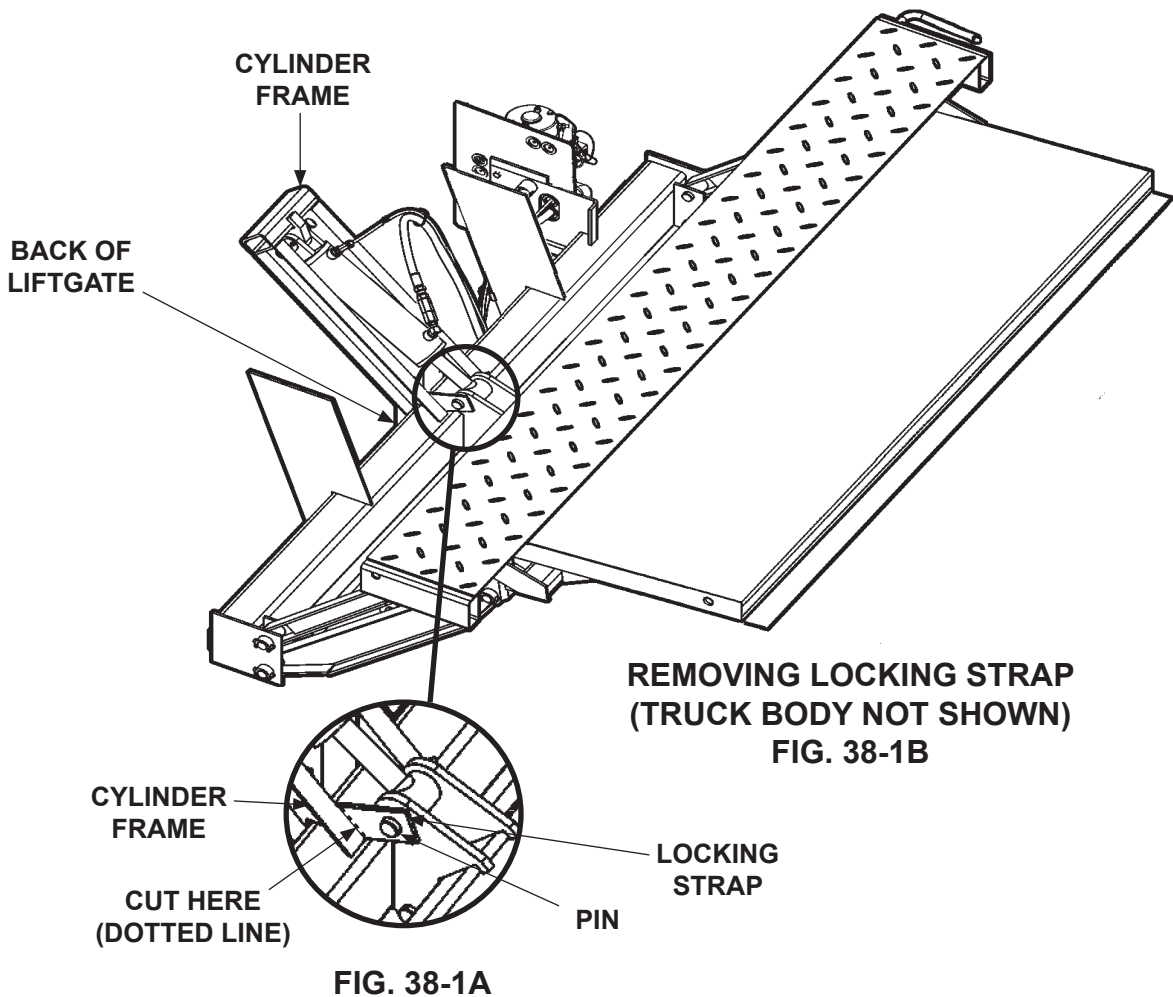
1. Push control switch to raise position for 3 - 4 seconds to pressurize hydraulic system.

WARNING

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

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

2. Cut off locking strap (**FIG. 38-1A**) from cylinder frame (**FIGS. 38-1A & 38-1B**). Remove locking strap from pin (**FIG. 38-1B**).



STEP 11 - FINISH WELDING LIFTGATE TO VEHICLE

1. Remove floor jack and hoist supporting Liftgate (FIG. 39-1).

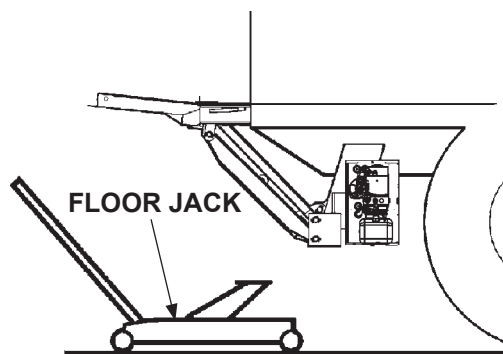


FIG. 39-1

2. Lower the platform to the ground. Remove both support straps and both spacers from extension plate (FIG. 39-2).

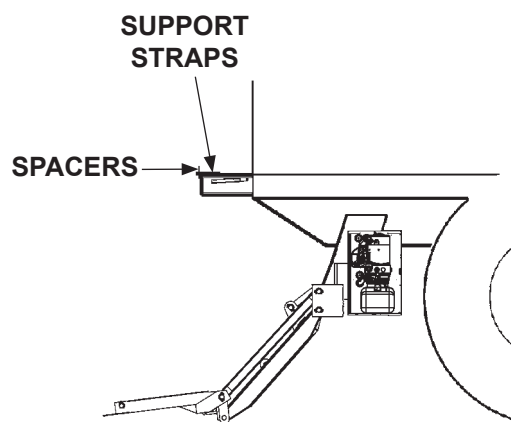


FIG. 39-2

CAUTION

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

3. Weld each of the two mounting plates to vehicle frame (FIG. 39-3).

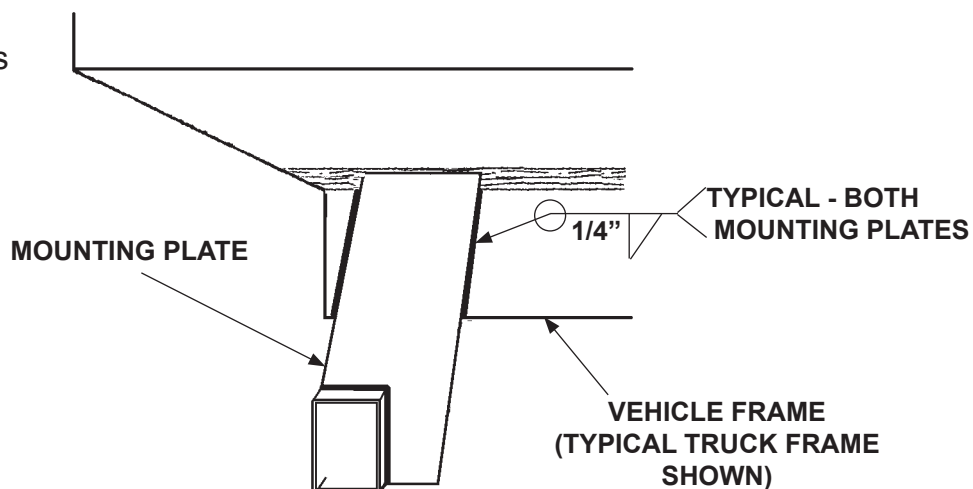
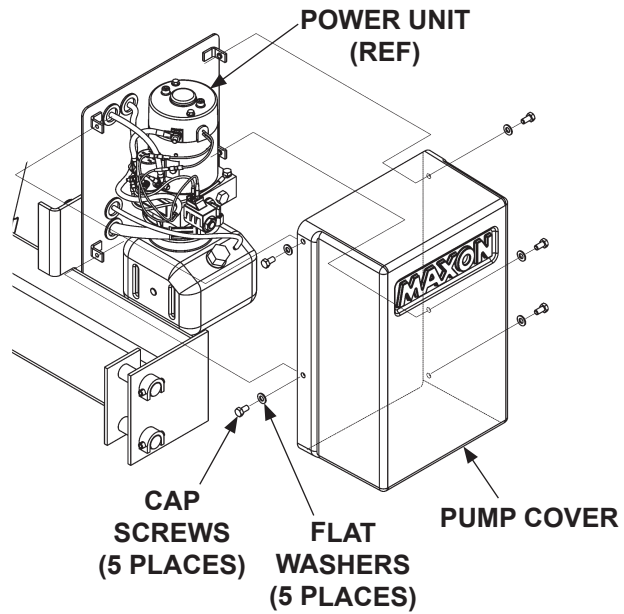


FIG. 39-3

STEP 11 - FINISH WELDING LIFTGATE TO VEHICLE - Continued

4. Bolt on the pump cover as shown in **FIG. 40-1**. Torque the bolts (cap screws) to **10 - 14 lbs.- in.**

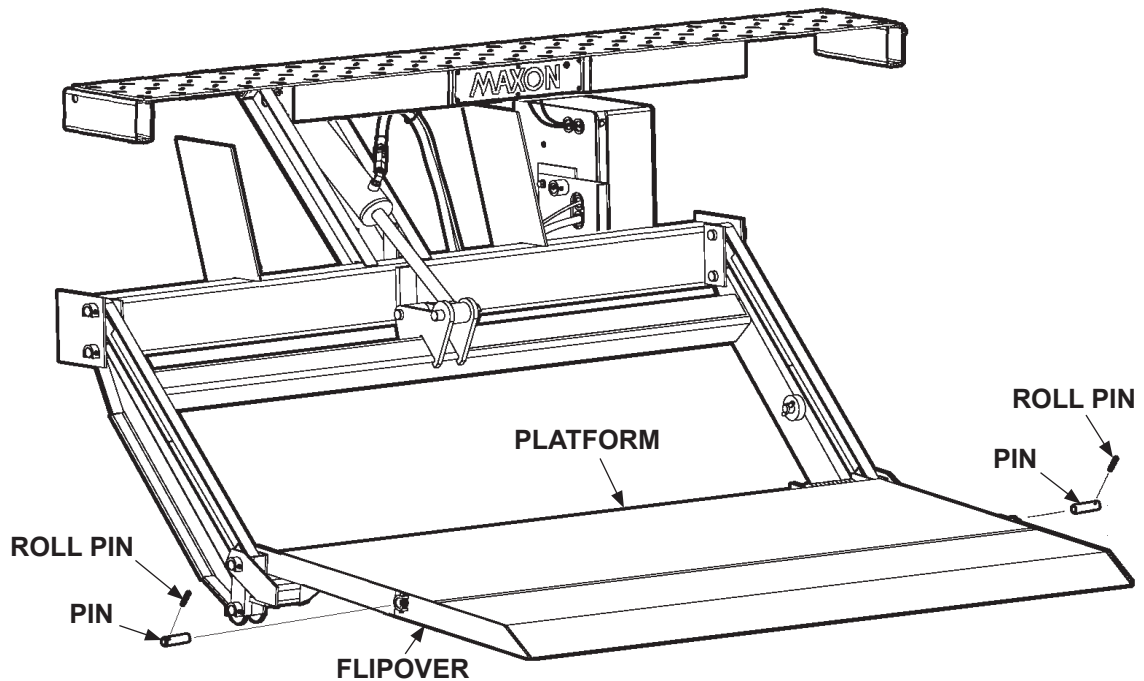


**BOLTING ON PUMP COVER
FIG. 40-1**

STEP 12 - FLIPOVER INSTALLATION

NOTE: To install a special profile flipover with aluminum retention ramp, skip instruction 2. Go to instruction 3.

1. Raise the platform about 20" above ground level (**FIG. 41-1**). Support the platform with jack stands. Use pallet jack or forklift to put flipover in position (**FIG. 41-1**).



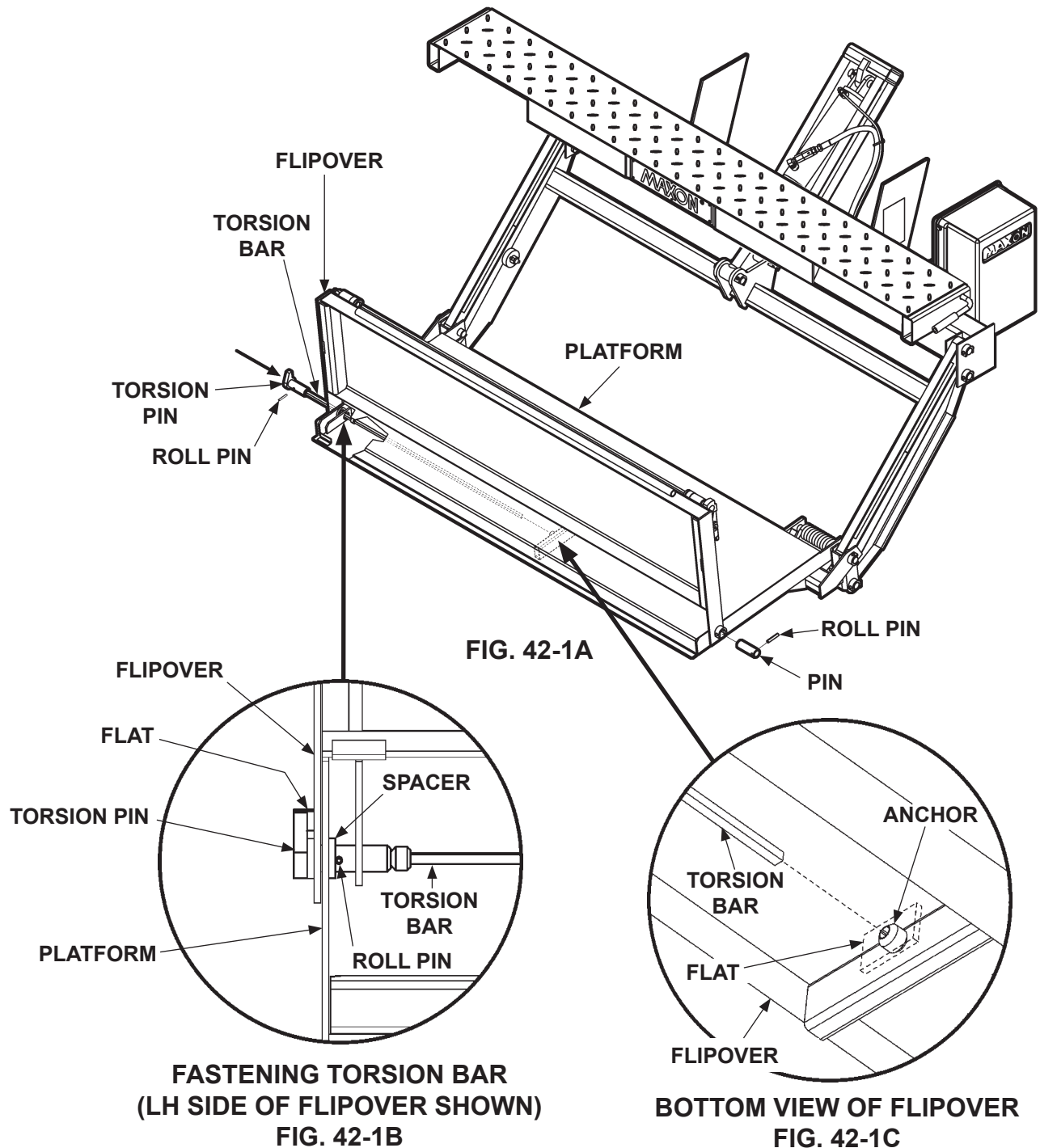
INSTALLING FLIPOVER (RAMP SHOWN)
FIG. 41-1

2. Install ramp or wedge flipover (**FIG. 41-1**) on platform with 2 pins and 2 roll pins from parts box. Pin the flipover (**FIG. 41-1**) to platform. Secure each of the 2 pins with a 3/8" roll pin.

STEP 12 - FLIPOVER INSTALLATION - Continued

NOTE: If you installed ramp or wedge flipover, skip instruction 3.

- First, remove the flat that covers anchor (**FIG. 42-1C**). Next, rotate the flipover to vertical position (**FIG. 42-1A**). Insert the torsion bar and torsion pin through left hand (LH) side of flipover, platform, and spacer as shown in **FIGS. 42-1A & 42-1B**. Position the head of torsion pin under the flat on the flipover (**FIG. 42-1B**). Insert end of torsion bar in the anchor (**FIG. 42-1C**). Use the roll pin to fasten torsion bar to torsion pin. Unfold the flipover.



STEP 13 - ADJUST PLATFORM (IF REQUIRED)

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

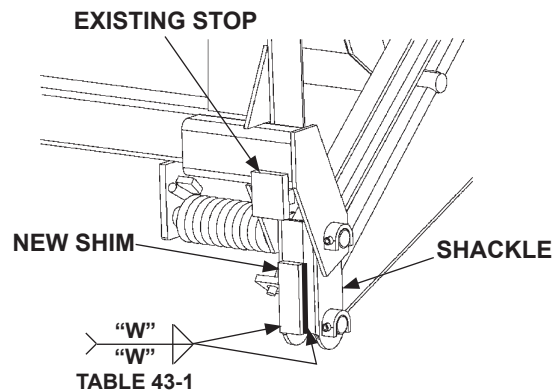
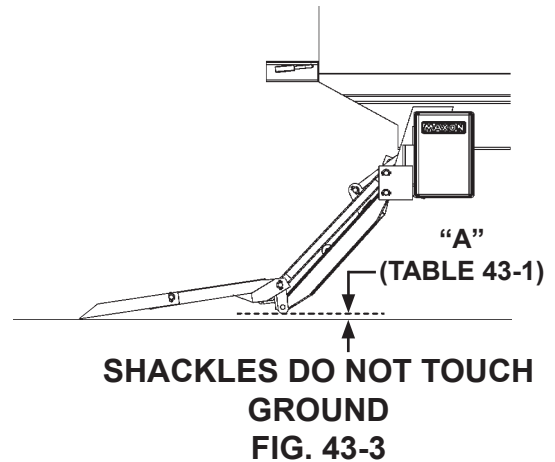
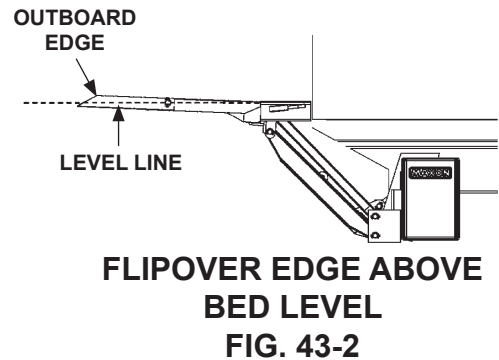
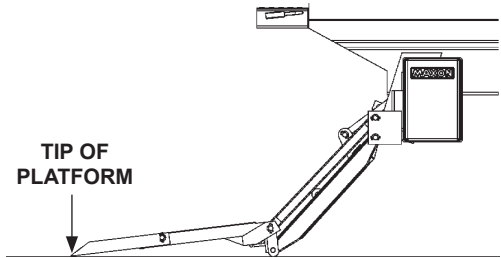
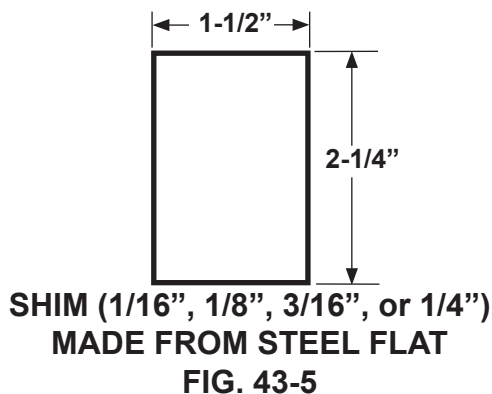
1. Make sure platform is at ground level. Unfold the platform and flipover. As the platform first touches the ground, shackles and tip of flipover must touch the ground at the same time (**FIG. 43-1**). If the shackles and the tip of flipover touch the ground at the same time, raise platform to bed height. Outboard edge on top of flipover should be above bed level (**FIG. 43-2**). If indications are correct in both cases (**FIGS. 43-1 & 43-2**), Liftgate is installed correctly and no adjustment is needed. If indications are incorrect, continue to instruction 2.

NOTE: If tip of flipover touches first (**FIG. 43-3**), go to instruction 2. If the shackle touches first (**FIG. 44-1**), skip instruction 2. Go to instruction 3.

2. Make sure platform is still at ground level. If the shackle is not touching the ground, measure and compare distance "A" (**FIG. 43-3**) with **TABLE 43-1** to determine the correct shim. Make shims as needed (**FIG. 43-5**). Weld shim as shown in **FIG. 43-4**.

RAISE TIP OF FLIPOVER THIS DISTANCE "A"	REQUIRED SHIM THICKNESS	WELD SIZE "W"
7/8"	1/16"	1/16"
1-3/4"	1/8"	1/8"
2-5/8"	3/16"	3/16"
3-1/2"	1/4"	1/4"

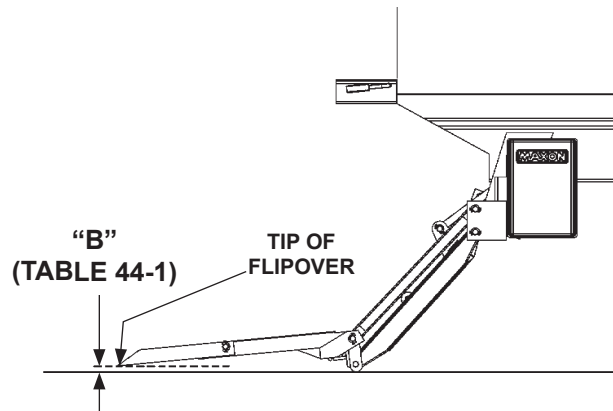
TABLE 43-1



WELDING SHIMS (CURBSIDE SHOWN) FIG. 43-4

STEP 13 - ADJUST PLATFORM (IF REQUIRED) - Continued

3. Make sure platform is still at ground level. If the tip of flipover is not touching the ground, measure and compare distance “B” (FIG. 44-1) with **TABLE 44-1** to determine how much to grind from the platform stops (FIG. 44-2). Grind correct amount of metal (**TABLE 44-1**) from platform stop as shown in **FIG. 44-2**.

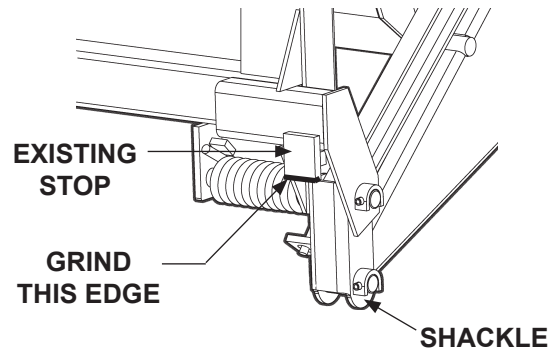


**PLATFORM DOES NOT
TOUCH GROUND
FIG. 44-1**

LOWER TIP OF FLIPOVER THIS DISTANCE “B”	GRIND METAL FROM PLATFORM STOP
7/8”	1/16”
1-3/4”	1/8”
2-5/8”	3/16”
3-1/2”	1/4”

TABLE 44-1

4. 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. 43-1**.



**WELDING SHIMS (CURBSIDE SHOWN)
FIG. 44-2**

STEP 14 - 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. 45-1**.

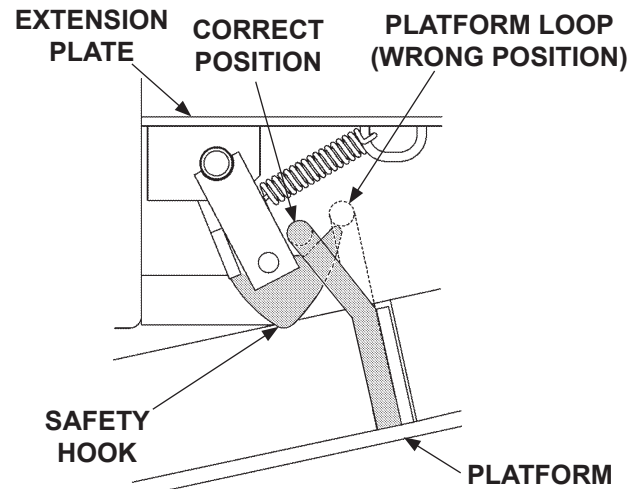


FIG. 45-1

LOOP ADJUSTMENT

1. If the safety hook is not positioned correctly (**FIG. 45-1**), lower platform to ground level (see **Operation Manual**).
2. Adjust by bending the platform loop as shown in **FIG. 45-2**.
3. Stow the platform and check for correct safety hook position. Repeat adjustment if required.

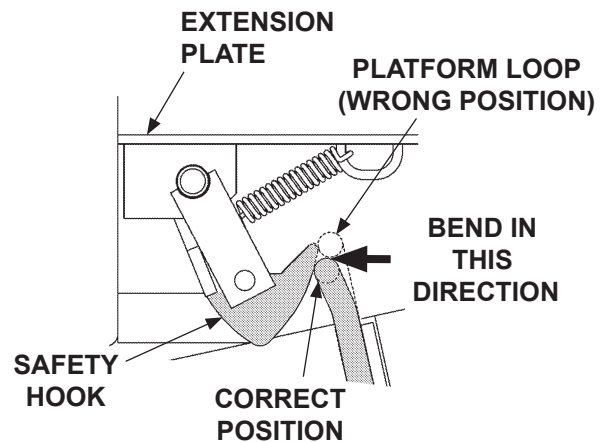


FIG. 45-2

LUBRICATION (IF REQUIRED)

1. Make sure front surface of safety hook (**FIG. 45-3**) is lubricated with automotive grease. Apply grease if required.
2. Make sure control handle rod (**FIG. 45-3**) is lubricated where it has contact with brackets. Apply automotive grease if required.

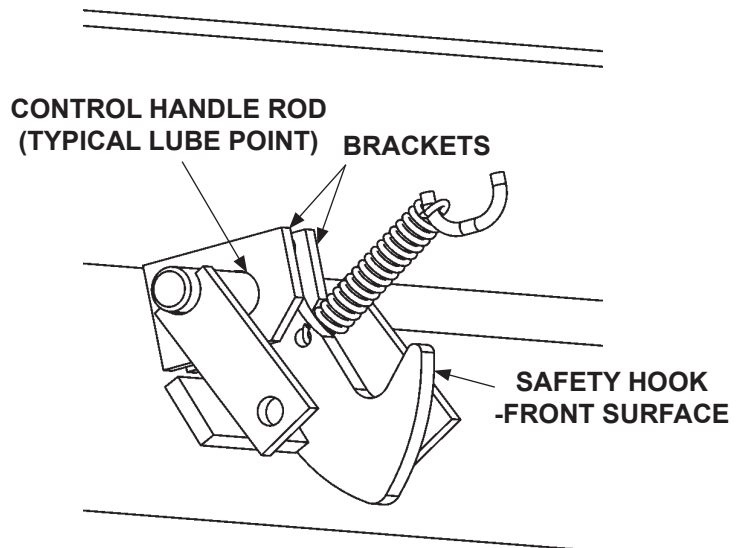


FIG. 45-3

STEP 15 - WELD ON LOCK BRACKET (IF REQUIRED)

CAUTION

Prevent damaged 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 (see **STEP 15**).

1. From the parts box, get the 6-1/2" lock bracket (P/N 203417) and 1" inner bracket (P/N 203570). Next, get a 3/8"-16 x 1" bolt and 3/8"-16 nut (**not supplied**). Bolt the inner bracket to the lock bracket with 3/8"-16 bolt and 3/8"-16 nut as shown in **FIG. 46-1**. Keep the nut loose so bracket can rotate.

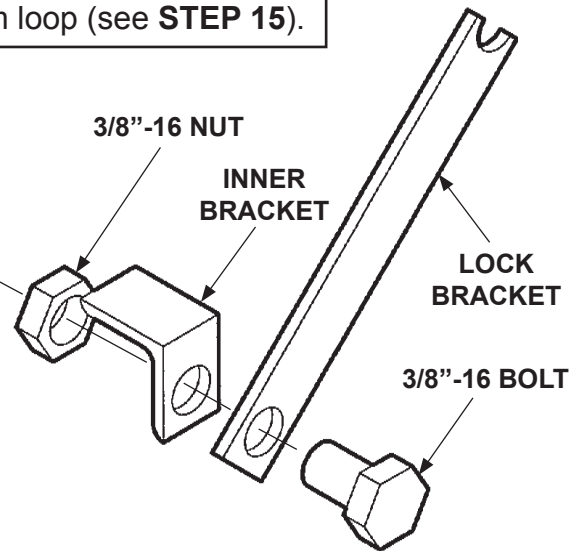


FIG. 46-1

2. Fit the half-round cut-out end of lock bracket to control handle as shown in **FIG. 46-2**. Butt the top face of the inner bracket against the bottom of extension plate. Weld top face of inner bracket to bottom of extension plate (**FIG. 46-2**). Make sure there is a 1/16" gap between inner bracket and lock bracket (**FIG. 46-2**). Weld lock bracket to control handle (**FIG. 46-2**). Remove nut and bolt (**FIG. 46-2**). (If required, a padlock or freight car-type seal can be used to lock the control handle.)

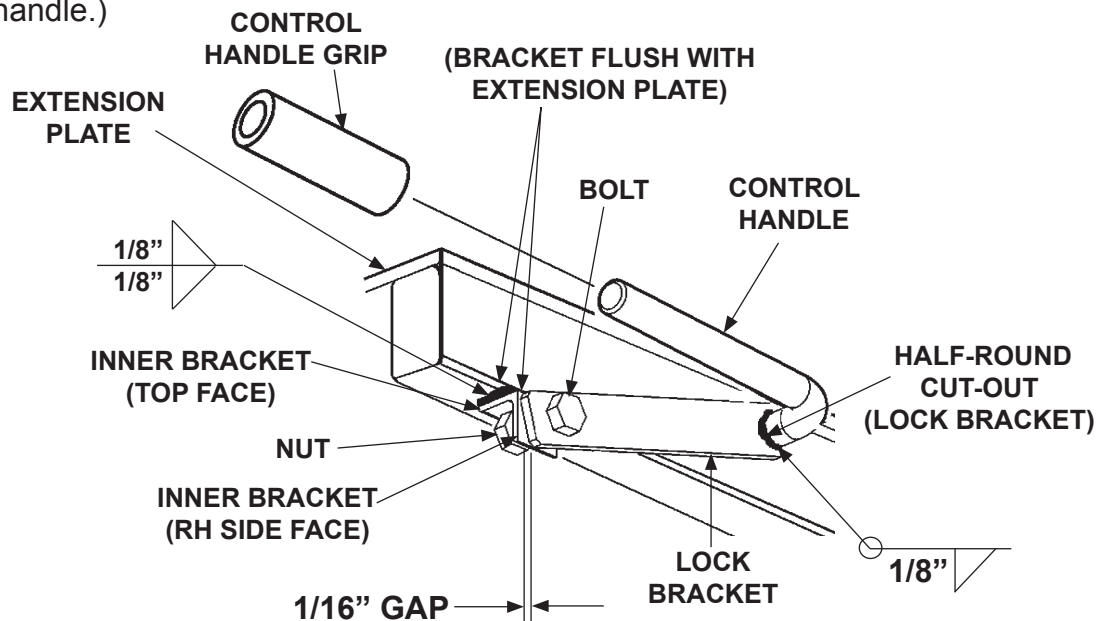


FIG. 46-2

4. Install the control handle grip (from parts box) on control handle as shown in **FIG. 46-2**.

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. 47-1, 47-2 & 47-3).

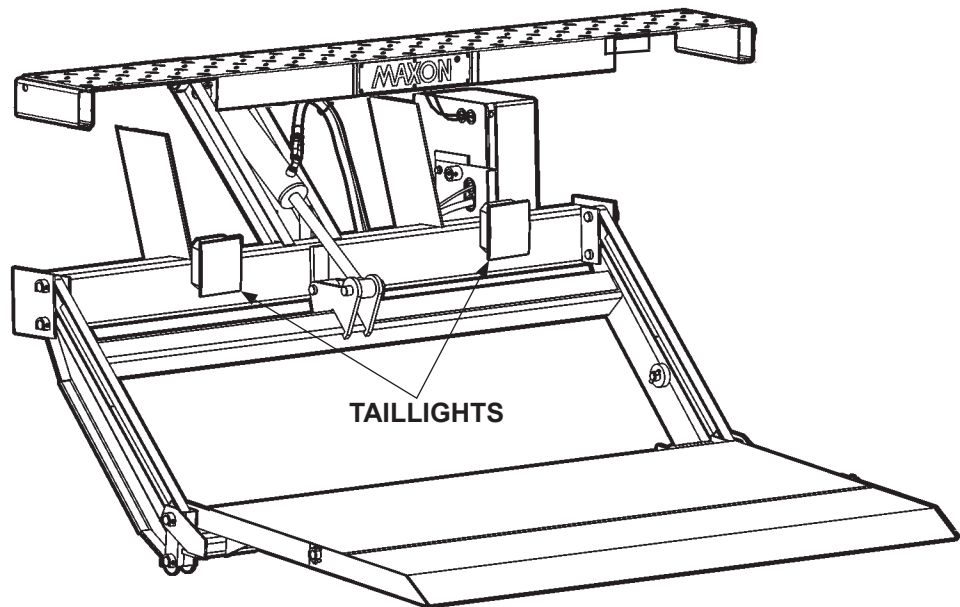
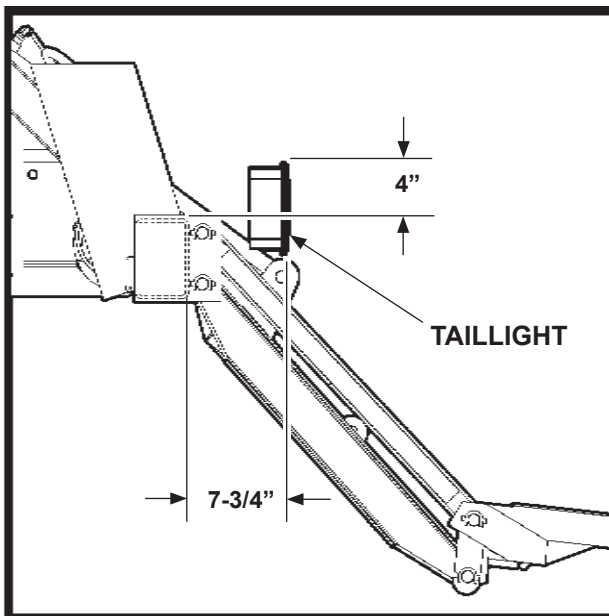
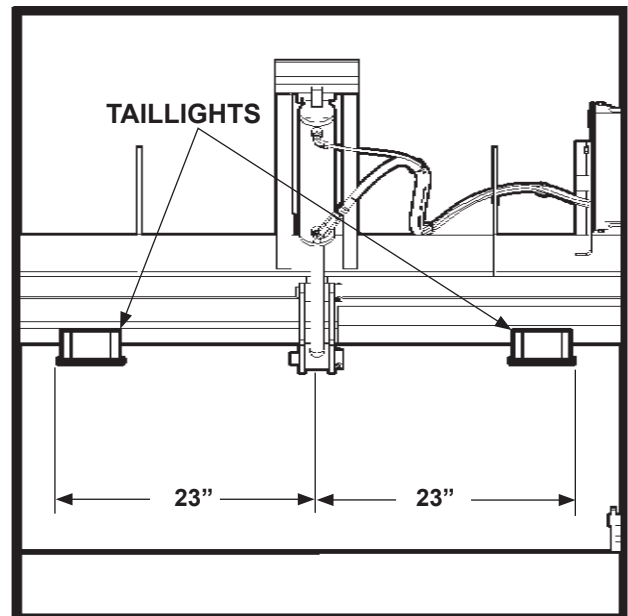


FIG. 47-1



TAILLIGHT POSITIONS,
LH SIDE VIEW
FIG. 47-2



TAILLIGHT HORIZONTAL SPACING,
TOP VIEW
FIG. 47-3

ATTACH DECALS

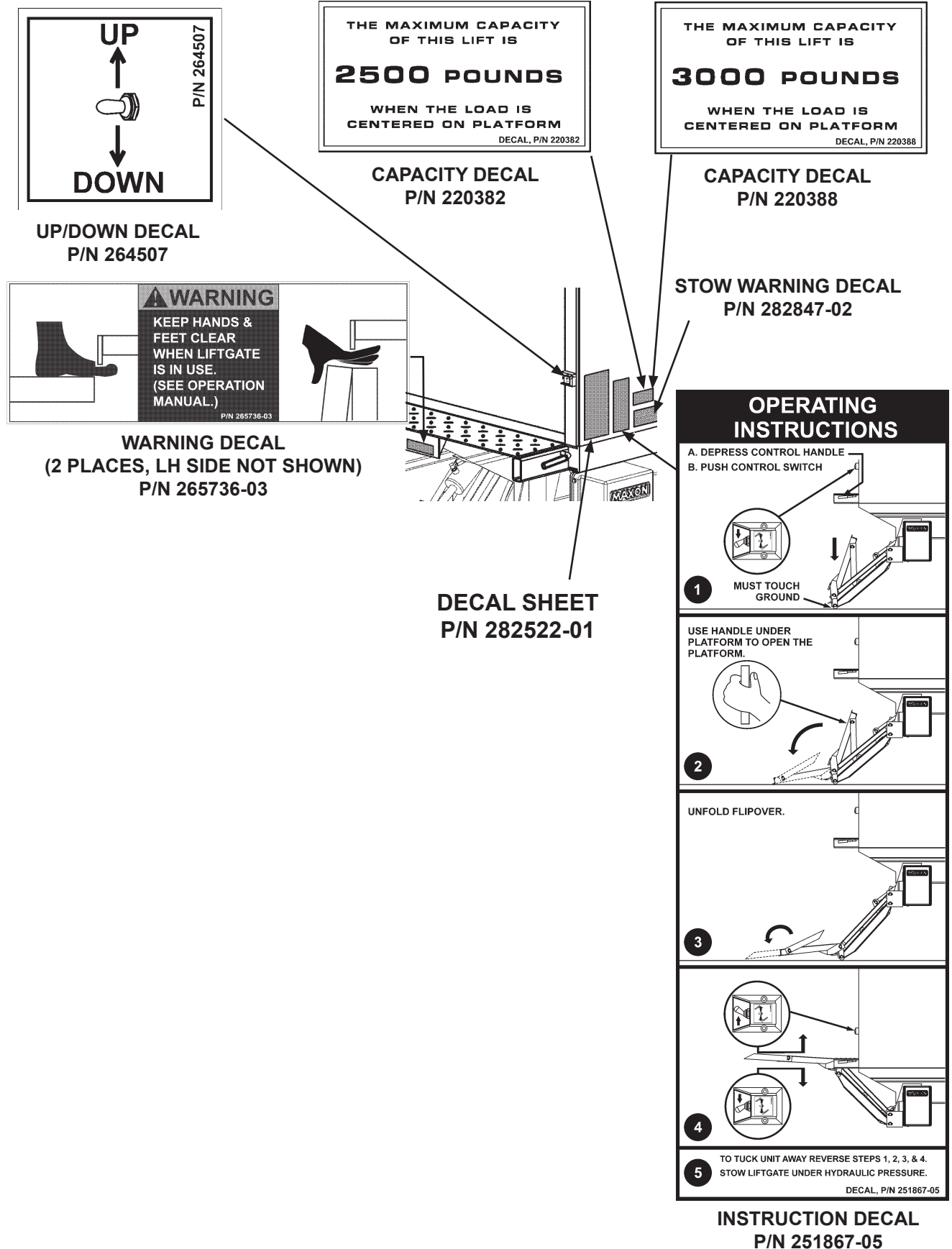
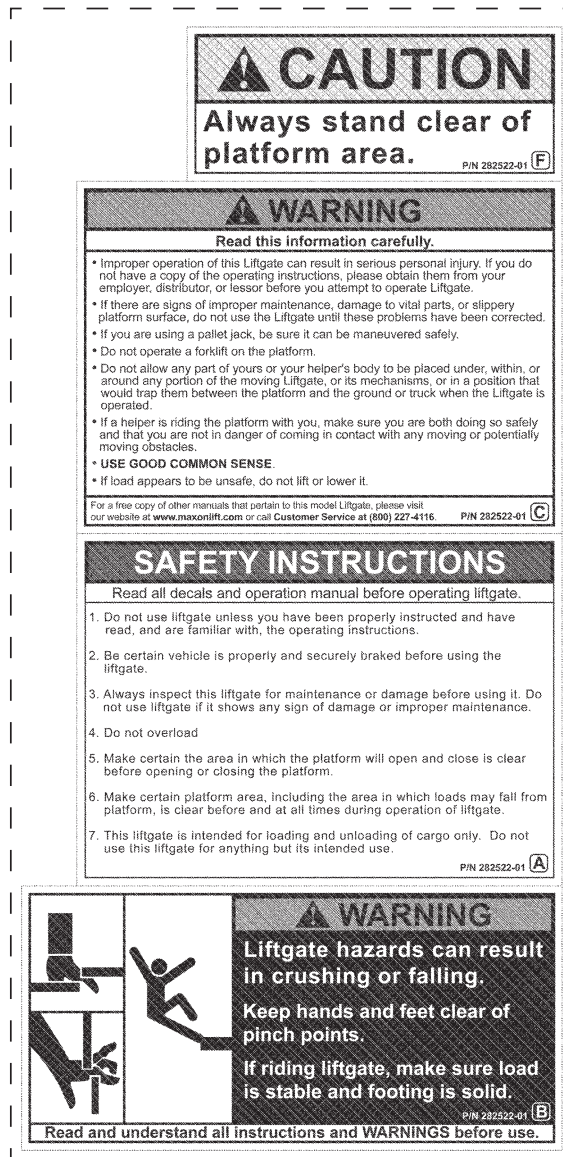


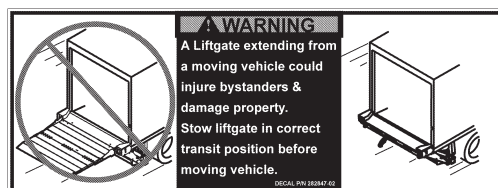
FIG. 48-1

ATTACH DECALS - Continued



DECAL SHEET
P/N 282522-01

FIG. 49-1



WARNING DECAL
P/N 282847-02
FIG. 49-2

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.

HYDRAULIC SYSTEM DIAGRAMS

HYDRAULIC SCHEMATIC (GRAVITY DOWN)

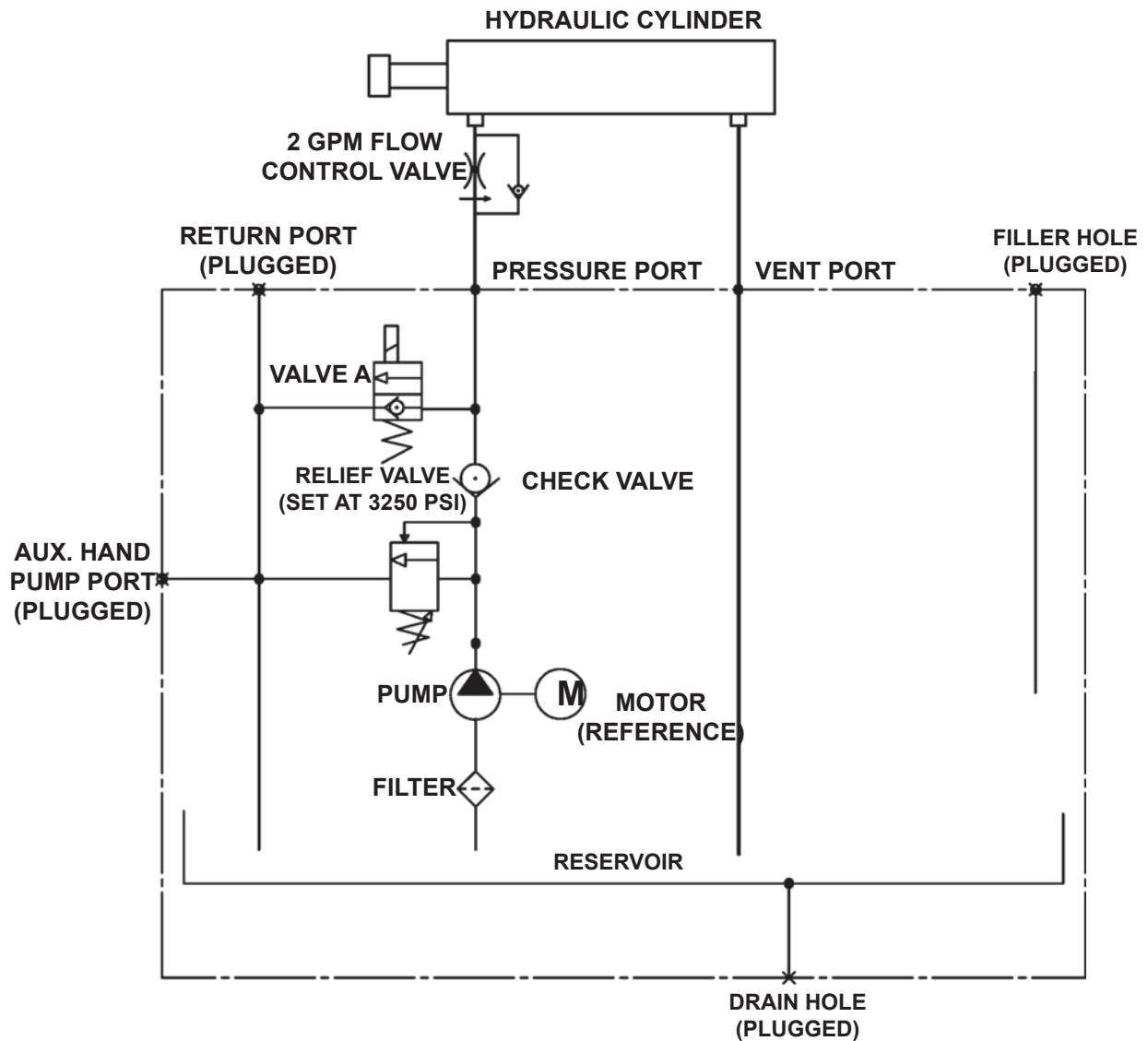


FIG. 51-1

HYDRAULIC SCHEMATIC (POWER DOWN)

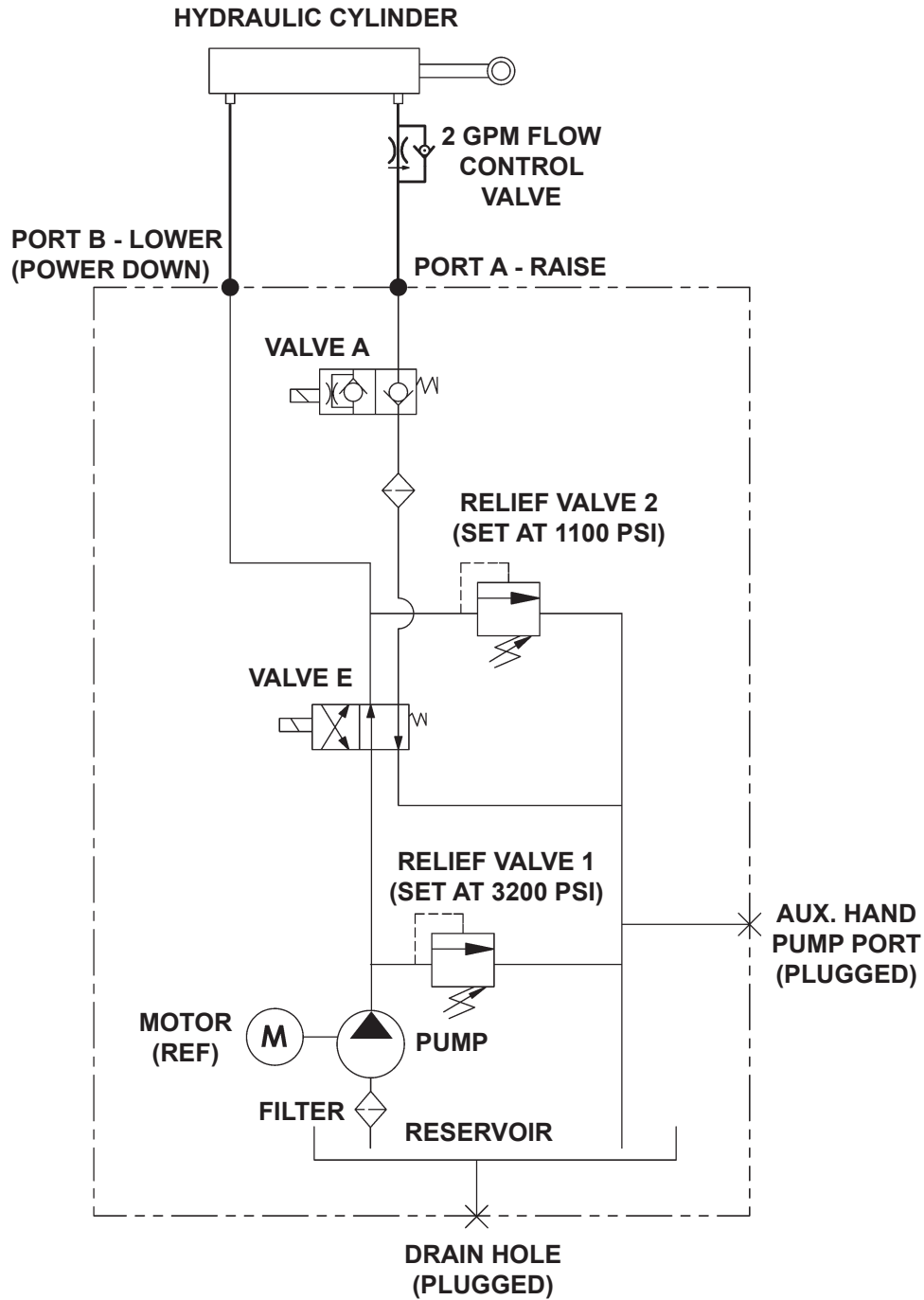


FIG. 52-1

ELECTRICAL SYSTEM DIAGRAMS

ELECTRICAL SCHEMATIC (GRAVITY DOWN)

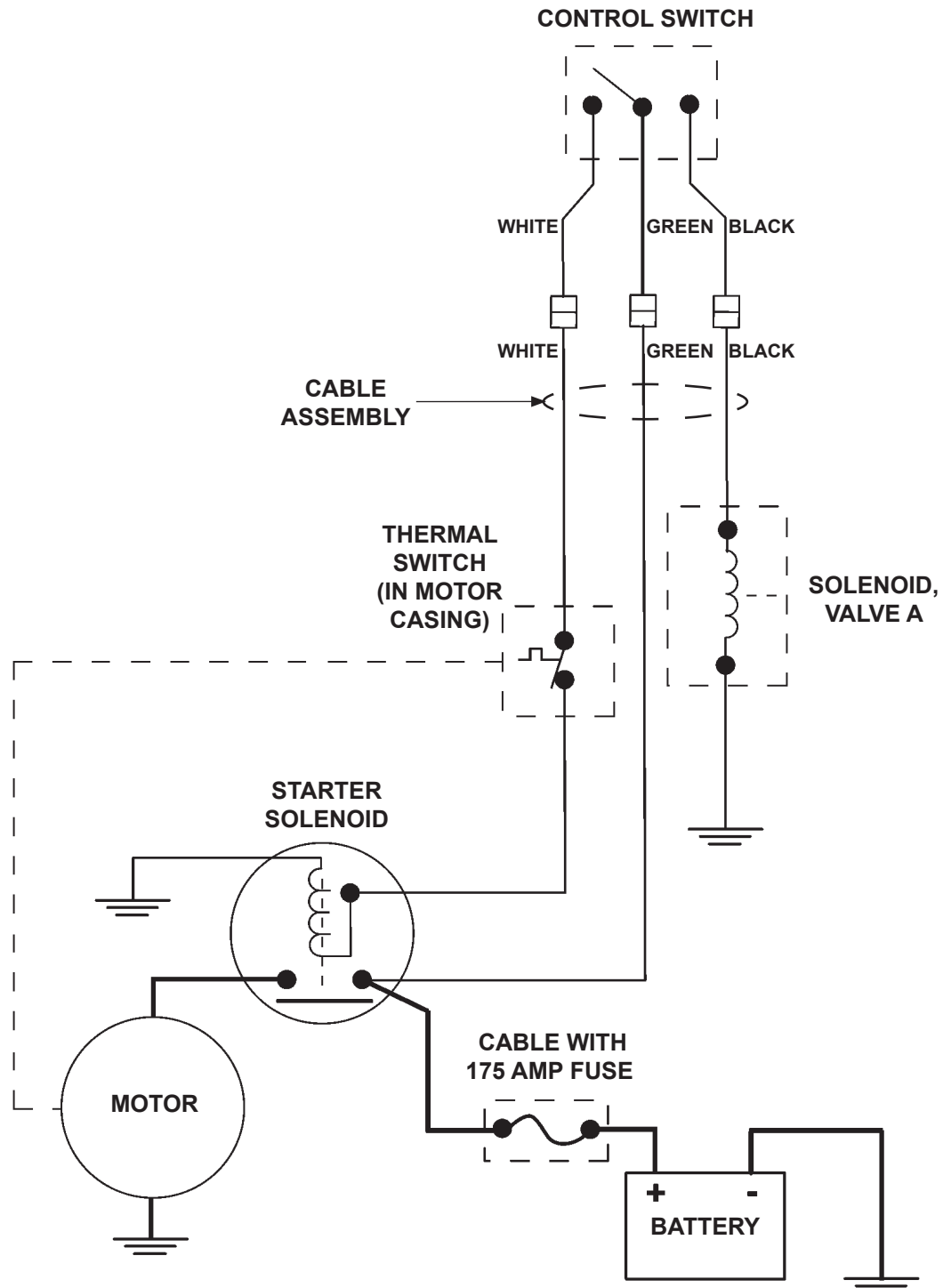


FIG. 53-1

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OPTIONS

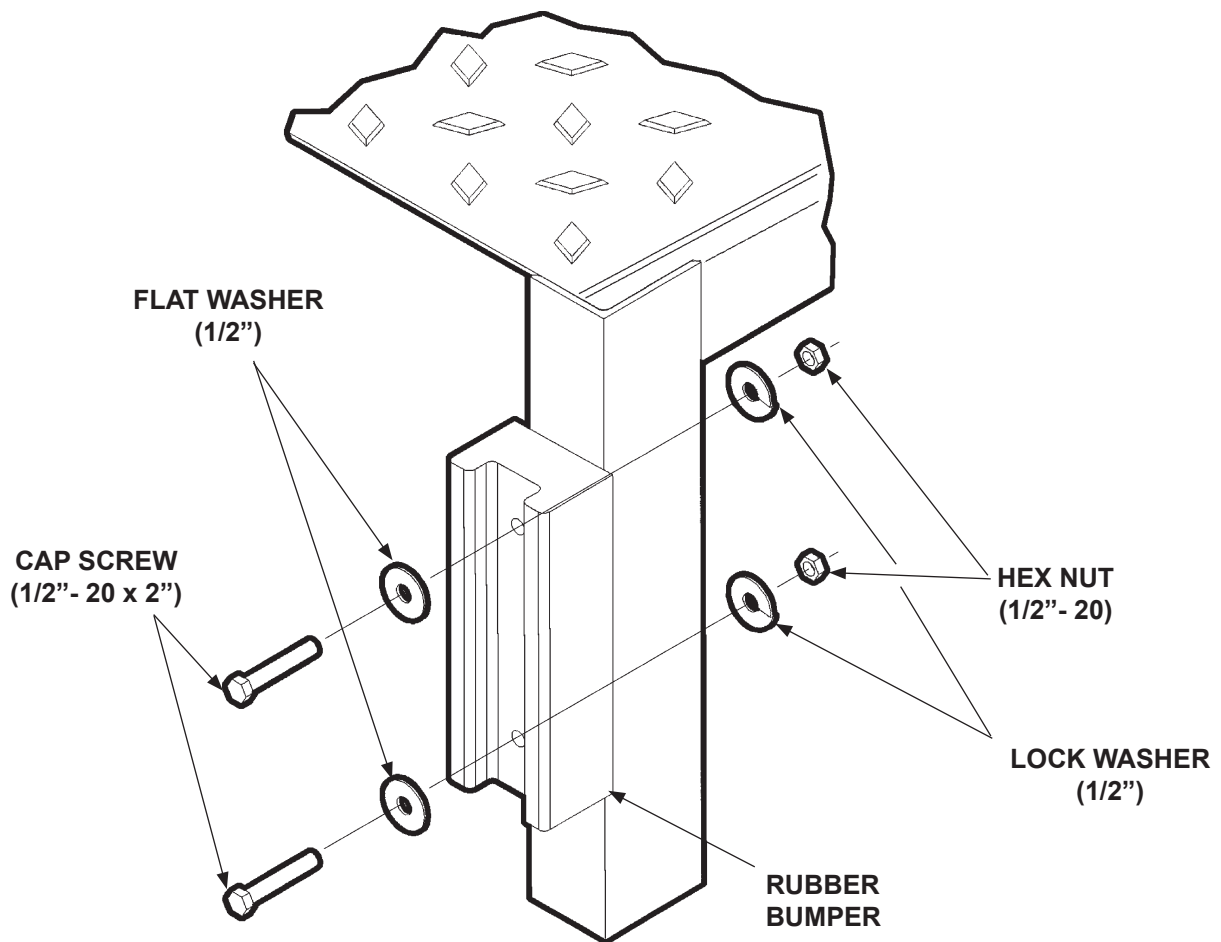
DOCK BUMPER KITS			
RUBBER DOCK BUMPER	203410	X	X
STEEL DOCK BUMPER AND STEP (STANDARD WELD-ON TUK-A-WAYS)	229044	X	X
STEEL DOCK BUMPER (STANDARD WELD-ON TUK-A-WAYS)	229045	X	X
2 STEP HEAVY DUTY BUMPER	251416	X	X
MISCELLANEOUS KITS	PART NO.	GD	PD
TRAFFIC CONES	268893-01	X	X
EXTENSION KIT (102" WIDE VEHICLE)	282815-01	X	X
HAND PUMP, TUK-A-WAY (RECT & SQUARE RESERVOIRS, GRAVITY DOWN)	268075-01	X	
UNDERRIDE INSTALLATION	264391	X	X
MOUNTING BRACKET KIT FOR TUK-A-WAY	280010	X	X
ELECTRICAL KITS			
IN CAB ON-OFF SWITCH	250477	X	X
TUK-A-WAY DUAL CONTROL, GRAVITY DOWN	264845	X	
TUK-A-WAY DUAL CONTROL, POWER DOWN	264845-02		X
OVAL LIGHTS BRACKET (2 LIGHTS)	282372-01	X	X
10 FT POWER CABLE EXTENSION	264849	X	X
STREET SIDE CONTROL KIT, TUK-A-WAY, GRAVITY DOWN	280265-01	X	
STREET SIDE CONTROL KIT, TUK-A-WAY, POWER DOWN	280265-03		X
HAND HELD CONTROL ASSEMBLY (3 COND)	280570-01	X	
HAND HELD CONTROL ASSEMBLY (4 COND)	280570-03		X
CIRCUIT BREAKER (150 AMP)	251576	X	X
CYCLE COUNTER\	280590-01	X	X
GROUND CABLE, 2 GA X 38 FT. LG.	269190-01	X	X
TOUCH-UP PAINT KIT			
TOUCH-UP PAINT (BCG) WITH ALUMINUM PRIMER, SMALL	908134-01	X	X

OPTIONS - Continued

RUBBER DOCK BUMPER KIT

NOTE: The rubber dock bumper kit P/N 203410 contains 2 rubber bumpers and 2 sets of fasteners. One additional rubber dock bumper kit can be installed if needed.

Bolt a rubber dock bumper to the RH side plate (**FIG. 56-1**). Repeat step for the LH side plate.



**BOLTING RUBBER BUMPER TO SIDE PLATE
(RIGHT HAND SIDE PLATE SHOWN)**

FIG. 56-1

