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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 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 could result from welds that are done incorrectly.

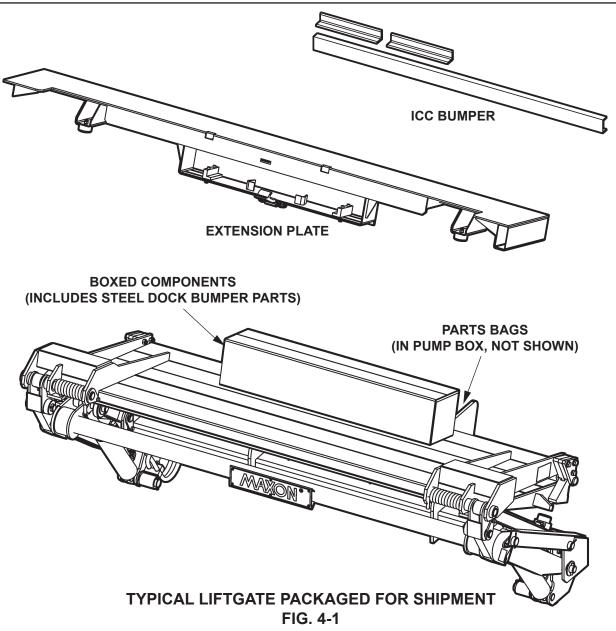
STANDARD LIFTGATE COMPONENTS

A CAUTION

Unpacking the Liftgate on unlevel surface may allow heavy components to slide off when shipping bands are cut. Injury and equipment damage could result. Before the shipping bands are cut, put Liftgate on level surface that will support 1500 lbs. When unpacking the Liftgate, remove heavy components carefully to avoid injury and damage.

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

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



GPTWR-3 SERIES INSTALLATION PARTS BAGS

	NOMENCLATURE OR DESCRIPTION	QTY.	PART NUMBER
1	PUMP ASSY, POWER DOWN	1	267490-01
2	HEAT SHRINK TUBING, 3/4" X 1-1/2" LG.	1	253316-04
3	MOLDED SWITCH ASSEMBLY	1	264951-01
4	SHIM, 3-1/2" X 1-3/4" X 1/4"	2	264731
5	SHIM, 2-1/2" X 1" X 1/16"	2	264732
6	FLAT, 2-1/2" 1" X 1/8"	2	201999
7	FLAT, 5" X 4" X 3/8"	2	229295
8	COPPER LUG, 5/16" RING (2 GA)	1	906497-02
9	SELF-TAPPING SCREW, #10-24 X 1" LG.	4	900057-5
10	CLAMP, #10 RUBBER LOOM	2	801681
11	FRAME CLIP, 1/2" X 1-3/8"	7	050079
12	DECAL & MANUAL KIT	1	265331-01
	A. OPERATION MANUAL	1	M-06-15
	B. INSTALLATION MANUAL	1	M-06-14
	C. MAINTENANCE MANUAL	1	M-06-16
	D. WARRANTY CARD	1	M-78-78
	E. CUSTOMER SURVEY CARD	1	M-94-04
	F. DECALS	-	REFER TO DECAL PAGES IN THIS MANUAL
13	FUSED POWER CABLE, 200 AMP, 38' LG.	1	264422
14	RUBBER DOCK BUMPER KIT	1	203410

TABLE 5-1

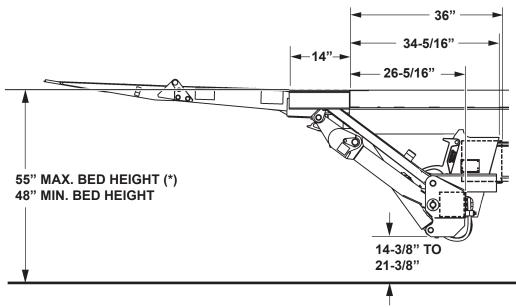
NOTE: BODY maximum and minimum operating bed height: For GPTWR-3 with standard platform:

Maximum height is **55**" (Unloaded) **(FIG. 6-1)**. Minimum height is **48**" (Loaded). On vehicle bodies equipped with swing open doors, the extension plate and vehicle body must be modified to install this Liftgate.

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

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

1. Check for correct clearances (FIG. 6-1) on vehicle to prevent interference between vehicle and Liftgate.



(*) FOR 53 TO 55" BED HEIGHT, INSTALL KNUCKLE DOWN KIT P/N 268134-01.

GPTWR-3 LIFTGATE CLEARANCE DIMENSIONS FIG. 6-1

VEHICLE REQUIREMENTS - Continued

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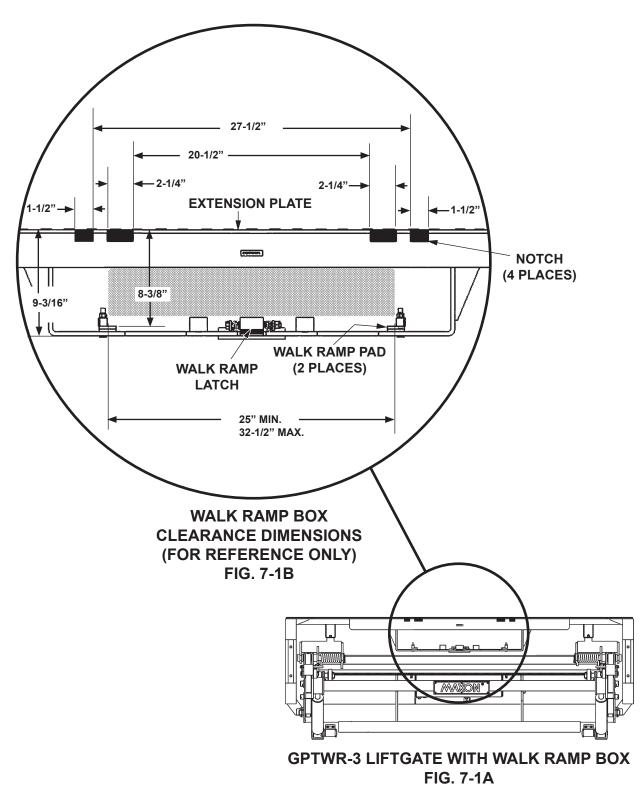
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2. Check for correct clearances between walk ramp, walk ramp box, and the extension plate (FIGS. 7-1A and 7-1B) to prevent interference.



7

VEHICLE REQUIREMENTS - Continued

CAUTION

- To prevent aluminum platform from being damaged, make sure vehicle frame is cut correctly and rear sills are modified if over 4" in height. If the cutouts are incorrect, platform may hit vehicle frame or underbody when stowing the Liftgate. If the rear sill is over 4" in height, bottom of the platform may hit the sill.
- Installer is responsible for ensuring that vehicle body and frame modifications do not adversely affect the integrity of the body and frame.

NOTE: The dimensions, shown in the illustration below, are maximums except as indicated.

NOTE: The platform cutout area shown below applies to trucks and trailers.

3. Fit the Liftgate to vehicle body by cutting vehicle frame as shown in **FIG. 8-1**.

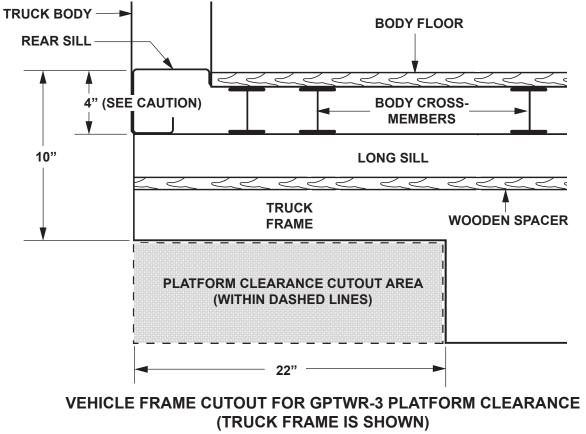


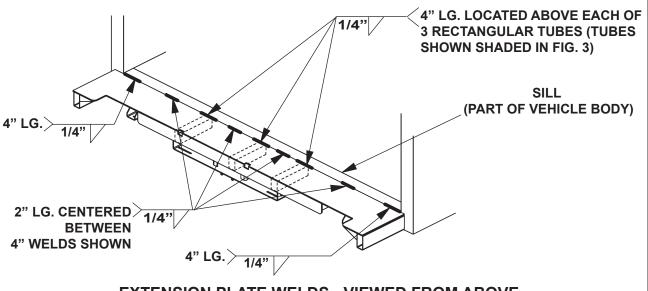
FIG. 8-1

STEP 1 - WELD EXTENSION PLATE TO VEHICLE

CAUTION

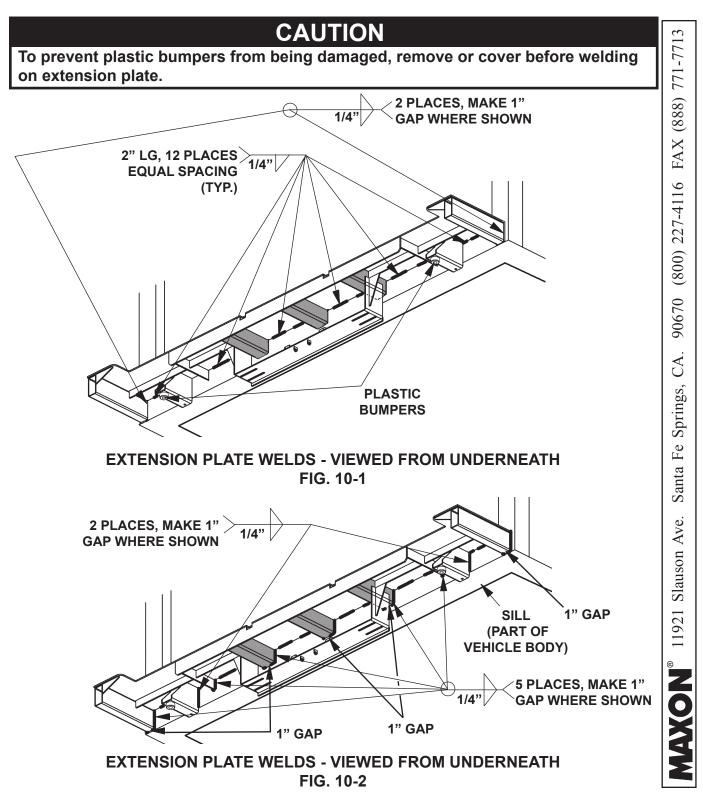
To protect the original paint system, a 3" wide area of paint must be removed from all sides of the weld area before welding.

1. Center the extension plate on vehicle body. Before welding extension plate to vehicle body, make sure top surface of extension plate is flush with floor of vehicle body. Weld the extension plate to vehicle body sill as shown in **FIGS. 9-1**, **FIG. 10-1**, **and 10-2**.



EXTENSION PLATE WELDS - VIEWED FROM ABOVE FIG. 9-1

STEP 1 - WELD EXTENSION PLATE TO VEHICLE -Continued



STEP 1 - WELD EXTENSION PLATE TO VEHICLE -Continued

1/4" LG. TACK, SUP-2. Place 2 temporary support straps (5" x 4" x 3/8" PORT flats from parts box) on the extension plate as 1/4" STRAP TO EXTENSION shown in FIG. 11-1A. Also, put 2 temporary PLATE (1 WELD ONLY), spacers (2" x 1" x 1/8" flats from parts box) be-**SPACER & SUPPORT** tween platform and extension plate as shown in STRAP TO EXTENSION FIG. 11-1B. (Spacers keep 1/8" between plat-PLATE (1 WELD ONLY) form and extension plate while welding Liftgate to vehicle frame.) Weld the straps and spacers 1/2" (APPROX. to extension plate (FIG. 11-1B). **TYP. SPACER** OVERHANG) 1" (APPROX. - TYP. STRAP OVERHANG) **EXTENSION 1/8" SPACER** PLATE 17-1/2" **STRAP & SPACER WELDS**

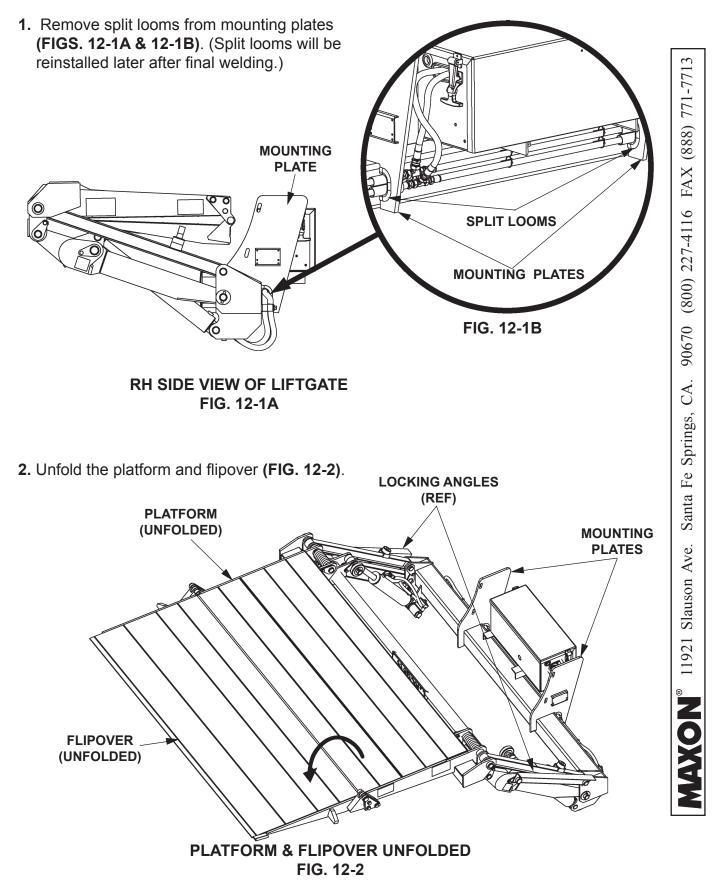
FIG. 11-1A

STRAP & SPACER WELDS (TYPICAL - BOTH ENDS OF EXTENSION PLATE) FIG. 11-1B

SUPPORT STRAPS

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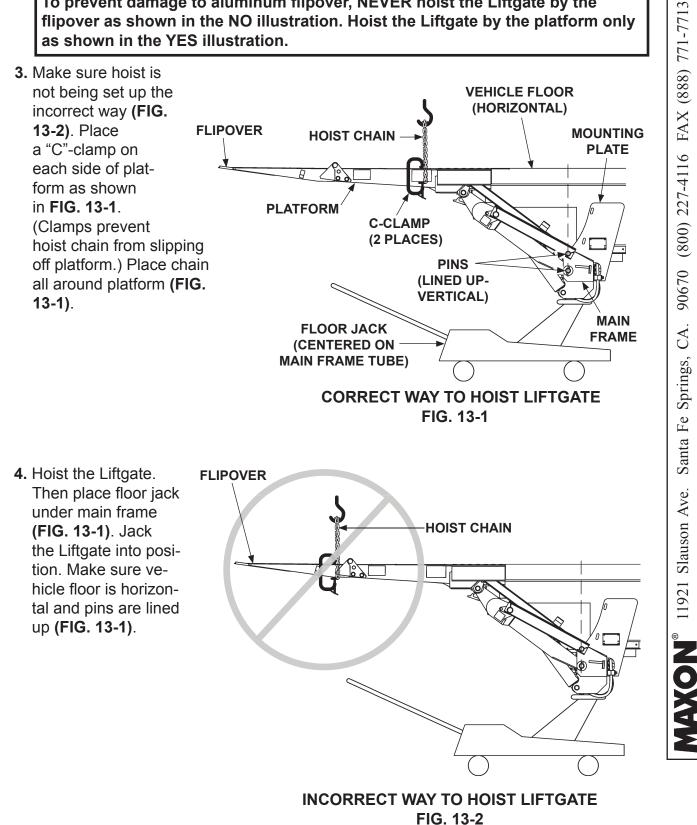
STEP 2 - WELD LIFTGATE TO VEHICLE



STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

ACAUTION

To prevent damage to aluminum flipover, NEVER hoist the Liftgate by the flipover as shown in the NO illustration. Hoist the Liftgate by the platform only as shown in the YES illustration.



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STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

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

CAUTION

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

5. Check if both mounting plates line up **VEHICLE FRAME CUTOUT** (TYPICAL TRUCK FRAME SHOWN) with the vehicle frame. If the mounting plates do not line up, remove the tack welds from one mounting plate (FIG. 14-1). Make sure Liftgate stays ORIGINAL TACK WELDS (REMOVE TO REPOSITION centered on vehicle. **MOUNTING PLATE)** Reposition the mount-TACK ing plate against vehicle (TYPICAL - RH & LH 5/16" frame. Tack weld as **MOUNTING PLATES)** MOUNTING shown in FIG. 14-MAIN FRAME PLATE 1. Repeat for second (CUT-AWAY VIEW) mounting plate (reposi-**REPOSITIONING MOUNTING PLATE** tion and tack weld). (RH SIDE SHOWN) FIG. 14-1

STEP 2 - WELD LIFTGATE TO VEHICLE - Continued

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

6. Clamp both mounting plates to vehicle frame. Check the distance between bed level and top of main frame. Maintain the 23-7/8" distance shown in FIG. 15-2. Weld the mounting plates to vehicle frame as shown in FIG. 15-2. Next, weld both mounting plates to fain frame (FIG. 15-2). Remove clamps.

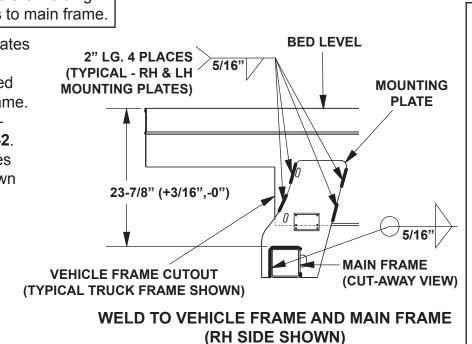


FIG. 15-2

STEP 3 - 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.

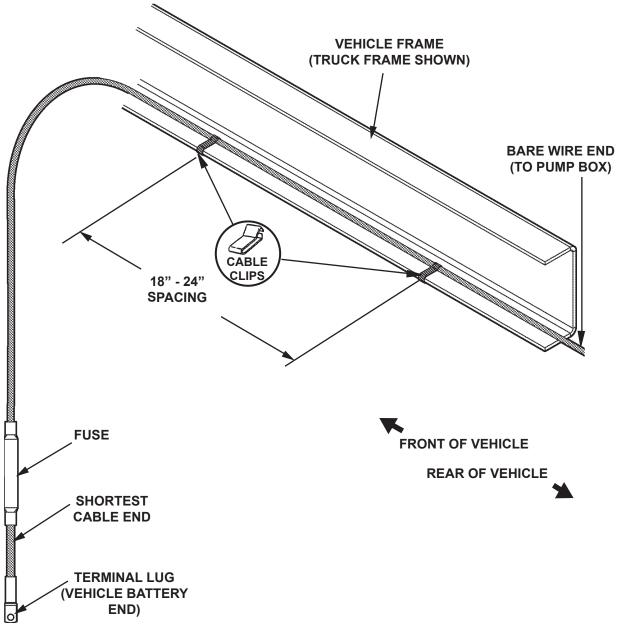
Clip fused power cable to vehicle chassis, with fuse nearest the vehicle battery, as shown in **FIG. 16-1**. Keep enough cable near the battery to reach the positive terminal without putting tension on cable (after connection). Run bare wire end of cable to Liftgate.

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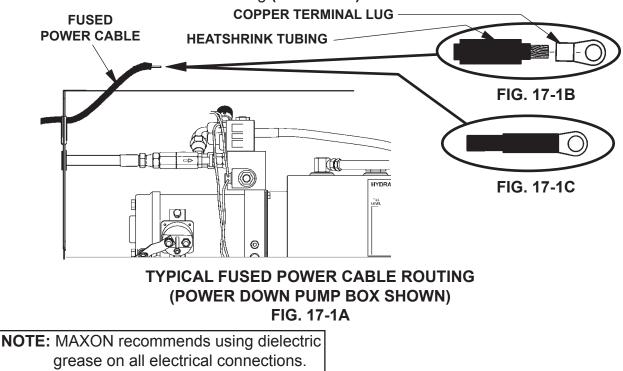
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STEP 4 - CONNECT POWER CABLE

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. 17-1A). Measure (if needed) and then cut excess cable from bare wire end of cable. Put heatshrink tubing (parts box) (FIG. 17-1B) 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. 17-1C).



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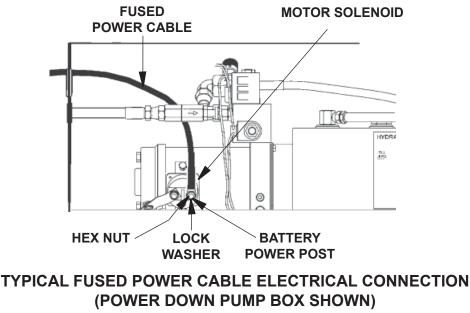
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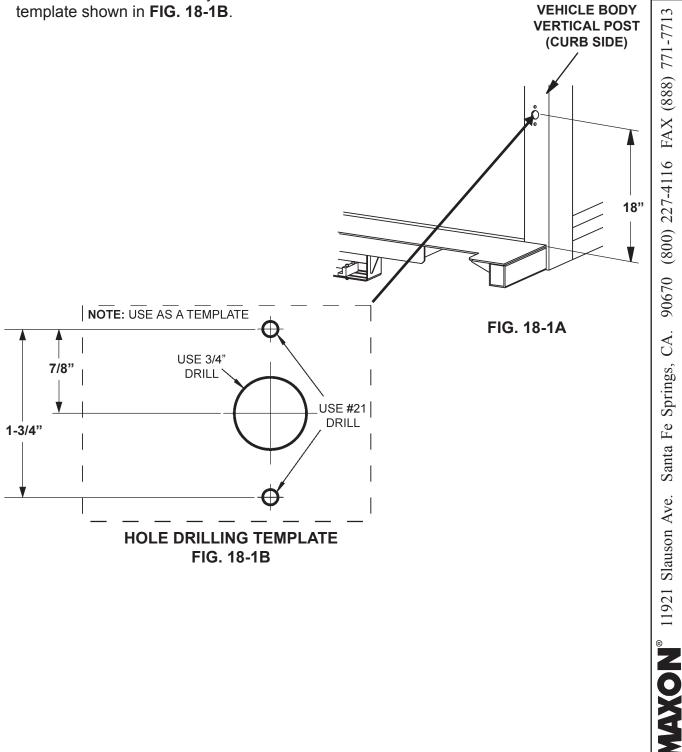
 Remove hex nut and lock washer from battery power post on the RAISE motor solenoid. Connect the fused power cable to the RAISE motor solenoid as shown in FIG. 17-2. Reinstall and tighten lock washer and hex nut.



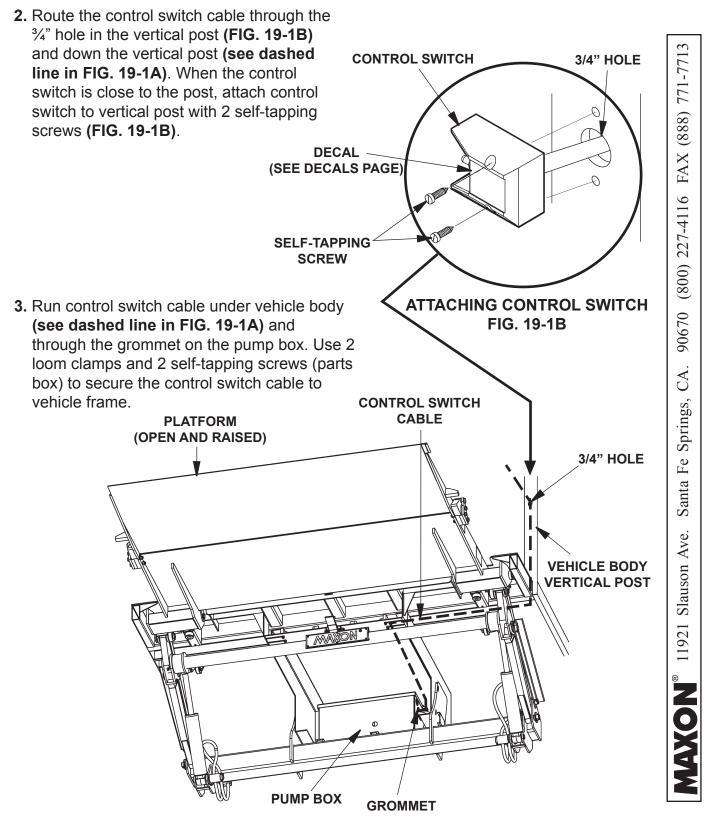
17

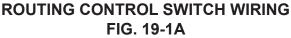
STEP 5 - INSTALL CONTROL SWITCH

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. 18-1A**. Use template shown in **FIG. 18-1B**.

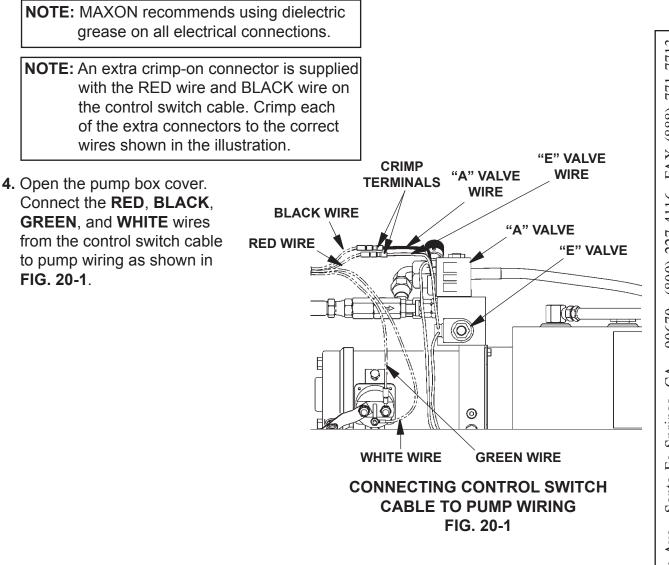


STEP 5 - INSTALL CONTROL SWITCH - Continued





STEP 5 - INSTALL CONTROL SWITCH - Continued



STEP 6 - 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. 21-1). Reinstall and tighten nut.

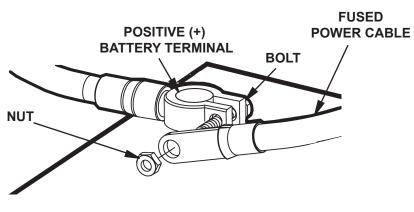


FIG. 21-1

STEP 7 - REMOVE LOCKING ANGLES & KNUCKLE BOLTS

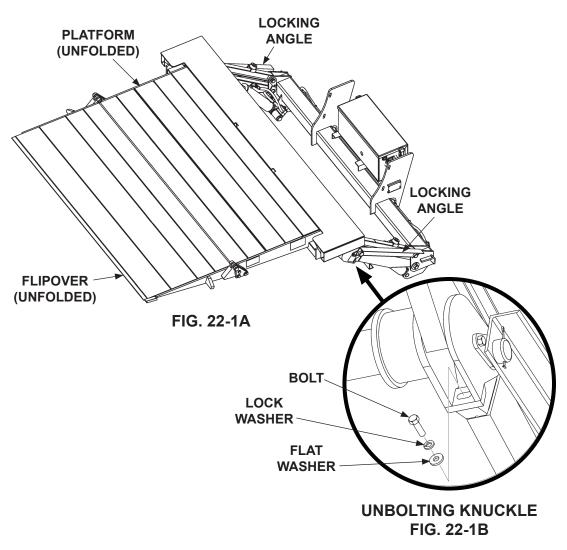
CAUTION

Check for leaking hydraulic fluid as the system is being pressurized. If there is leakage, stop & correct the problem before fully pressurizing the system.

1. Push control switch to **UP** position to pressurize hydraulic system. Listen for hydraulic fluid flowing through the system. Check for fluid leaks. When the sound of flowing fluid stops, release control switch. Hydraulic system is ready.

NOTE: To operate Liftgate, locking angles must be removed from the hydraulic cylinders and shipping bolt must be removed from both knuckles.

- 2. Remove locking angles from hydraulic cylinders (FIG. 22-1A).
- 3. With platform open (FIG. 22-1A), unbolt each knuckle as shown in FIGS. 22-1B.



STEP 8 - FINISH WELDING LIFTGATE TO VEHICLE

CAUTION

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

CAUTION

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

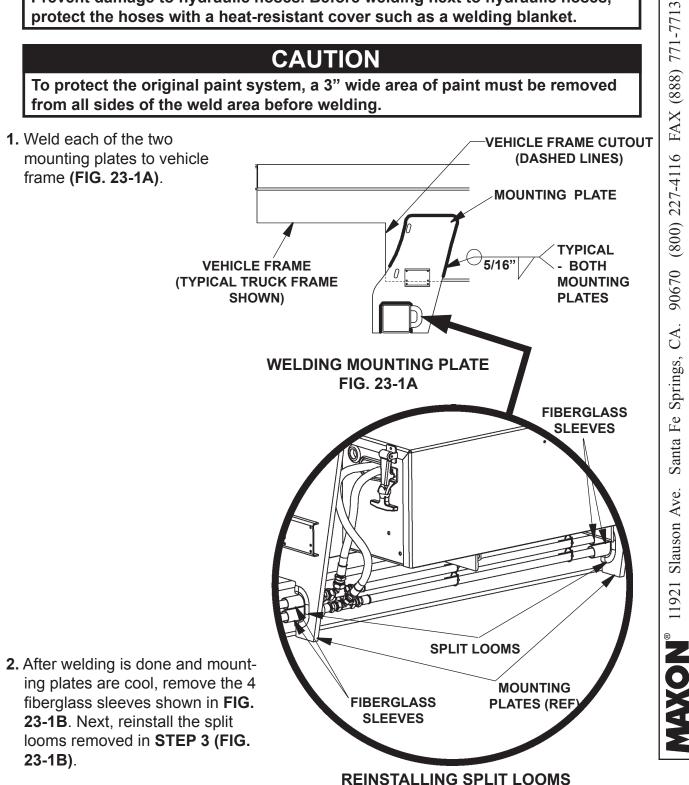


FIG. 23-1B

STEP 9 - ADJUST PLATFORM (IF REQUIRED)

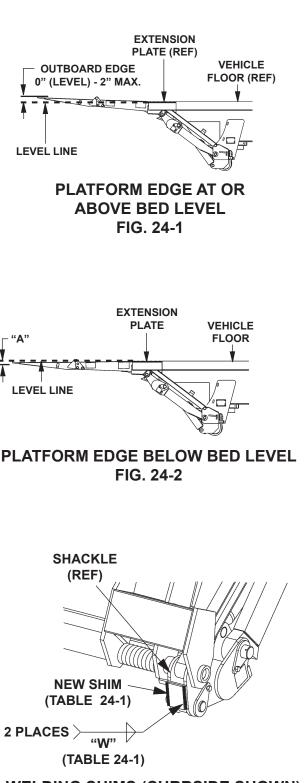
NOTE: Before doing the following procedure, make sure vehicle is parked on level ground.

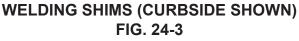
- With the platform and flipover unfolded, RAISE platform to bed level (FIG. 24-1). Measure how much the outboard edge of platform rises above bed level (FIG. 24-1). The outboard edge must be level or a maximum of 2" above bed level (FIG. 24-1). If indication is correct, Liftgate is installed correctly and no adjustment is needed. If the outboard edge is below bed level, do instructions 2, 3, and 6. If outboard edge is higher than 2", do instructions 4 through 6.
- Compare measurement "A" (FIG. 24-2) with the distances and shims in TABLE 24-1. For example: If measurement "A" (FIG. 24-2) is 1" below level and you want to raise outboard edge of platform 1" above bed level, use 1/8" shim to raise 2" (TABLE 24-1).

RAISE PLATFORM EDGE (OUTBOARD) THIS DISTANCE ("A")	REQUIRED SHIM THICKNESS	WELD SIZE "W"
1"	1/16"	1/16"
2"	1/8"	1/8"
3"	3/16"	3/16"
4"	1/4"	1/4"

TABLE 24-1

3. Weld shims (parts bag item) on both platform stops **(FIG. 24-3)** to raise outboard edge of platform to correct position.





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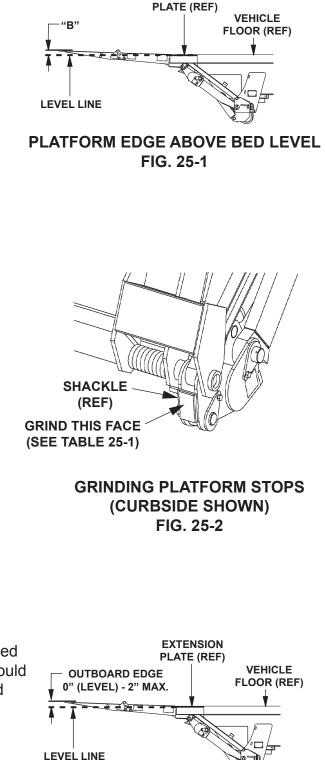
STEP 9 - ADJUST PLATFORM - Continued

 Compare measurement "B" (FIG. 25-1) with distances and grinding depths in TABLE 25-1. For example: if measurement "B" (FIG. 25-1) is 3" above bed level and you want to lower the outboard edge of platform to 1" above bed level, grind 1/8" from each platform stop (TABLE 25-1).

LOWER PLATFORM	GRIND METAL
EDGE (OUTBOARD)	FROM PLATFORM
THIS DISTANCE("B")	STOP
1"	1/16"
2"	1/8"
3"	3/16"
4"	1/4"

TABLE 25-1

 Grind metal from platform stops (FIG. 25-2) to lower outboard edge of platform to correct position.



EXTENSION

- PLATFORM EDGE ABOVE BED LEVEL FIG. 25-3
- 6. LOWER the platform, then RAISE it to bed level. The outboard edge of platform should be level or up to 2" maximum above bed level (FIG. 25-3).

STEP 10 - CHECKING HYDRAULIC FLUID

CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

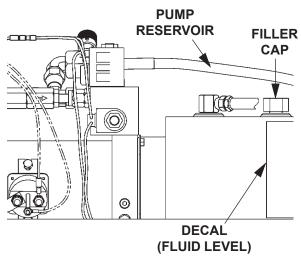
NOTE: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32

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

See **TABLES 26-1 & 26-2** for recommended brands.

- **1.** Lower the platform to ground level and make sure platform is unfolded.
- 2. Remove the filler cap (FIG. 26-1).



CHECKING HYDRAULIC FLUID LEVEL FIG. 26-1

 Check the hydraulic fluid level in the pump reservoir (FIG. 26-1). If fluid is below FILL LEVEL shown on decal on the pump reservoir (FIG. 26-1), add fluid to the FILL LEVEL.

4. Reinstall the filler cap	(FIG. 26-1).
-----------------------------	--------------

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

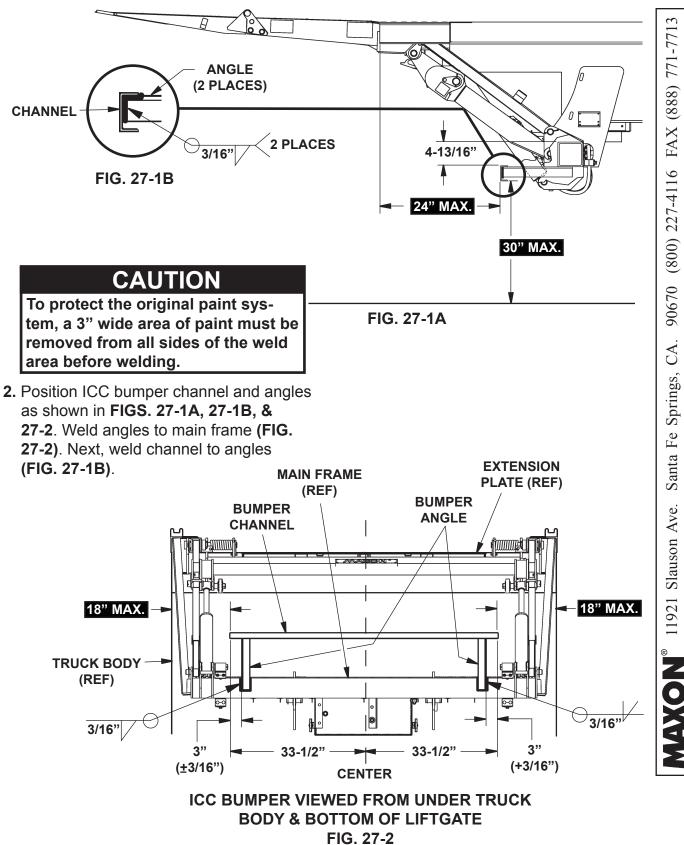
TABLE 26-1

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 T-15	
EXXON	UNIVIS HVI-13	
MOBIL	DTE-11M	
ROSEMEAD	THS FLUID 17111	

TABLE 26-2

STEP 11 - WELD ON ICC BUMPER (IF EQUIPPED)

1. Raise the platform to bed level as shown in **FIG. 27-1A**.

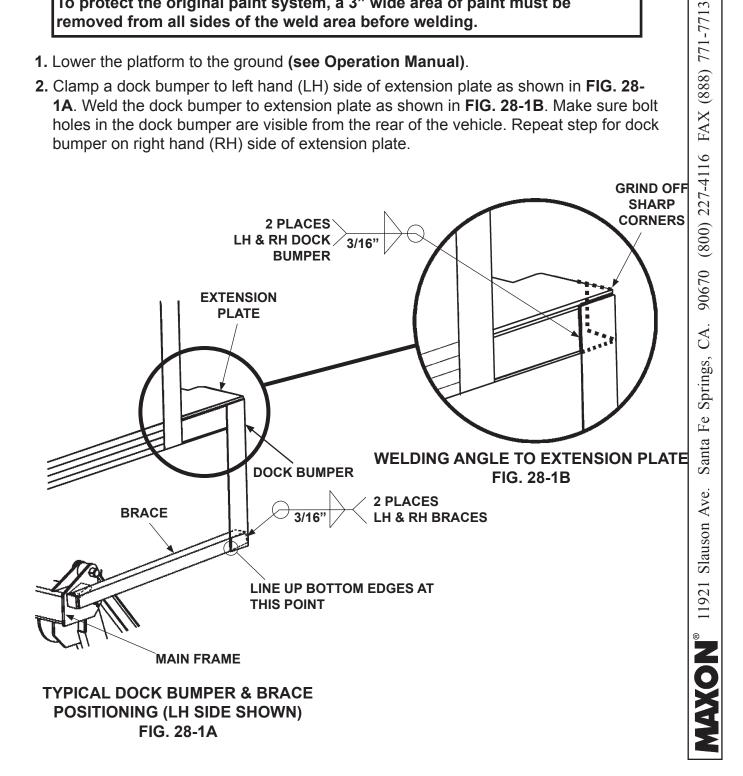


STEP 12 - WELD DOCK BUMPERS TO LIFTGATE

CAUTION

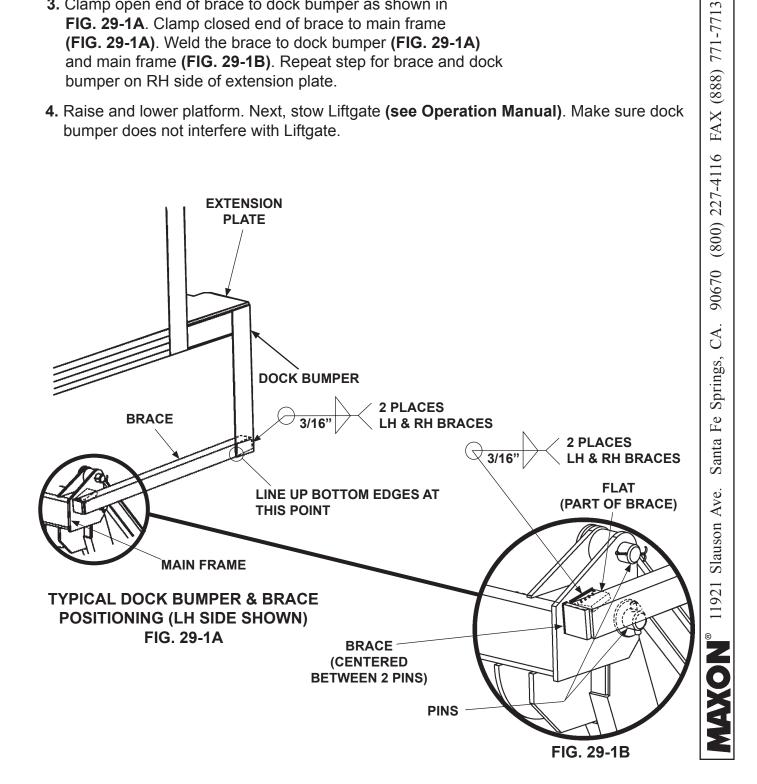
To protect the original paint system, a 3" wide area of paint must be removed from all sides of the weld area before welding.

- 1. Lower the platform to the ground (see Operation Manual).
- 2. Clamp a dock bumper to left hand (LH) side of extension plate as shown in FIG. 28-1A. Weld the dock bumper to extension plate as shown in FIG. 28-1B. Make sure bolt holes in the dock bumper are visible from the rear of the vehicle. Repeat step for dock bumper on right hand (RH) side of extension plate.



STEP 12 - WELD DOCK BUMPERS TO LIFTGATE -Continued

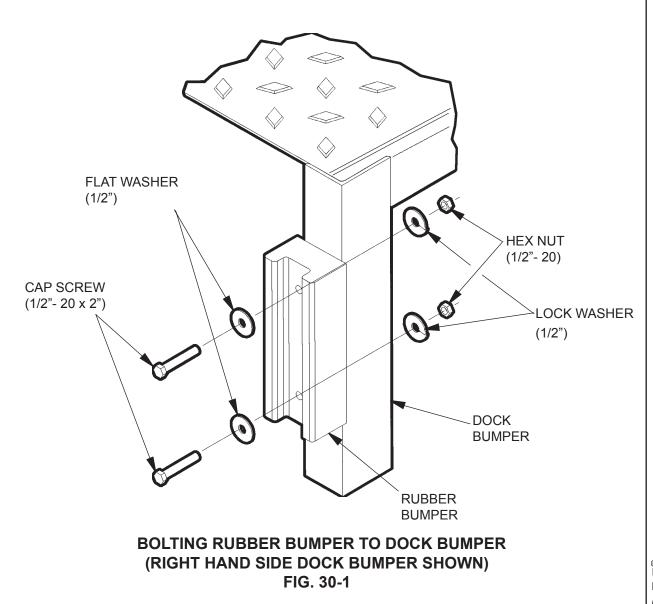
- 3. Clamp open end of brace to dock bumper as shown in FIG. 29-1A. Clamp closed end of brace to main frame (FIG. 29-1A). Weld the brace to dock bumper (FIG. 29-1A) and main frame (FIG. 29-1B). Repeat step for brace and dock bumper on RH side of extension plate.
- 4. Raise and lower platform. Next, stow Liftgate (see Operation Manual). Make sure dock bumper does not interfere with Liftgate.



STEP 13 - BOLT RUBBER BUMPERS TO LIFTGATE

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

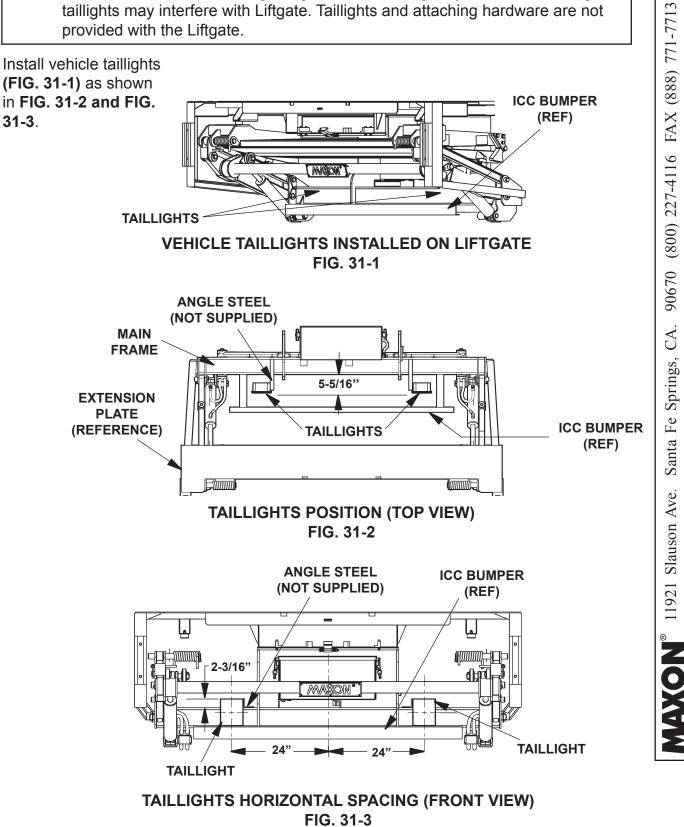
Bolt a rubber bumper to each of the 2 dock bumpers (FIG. 30-1).



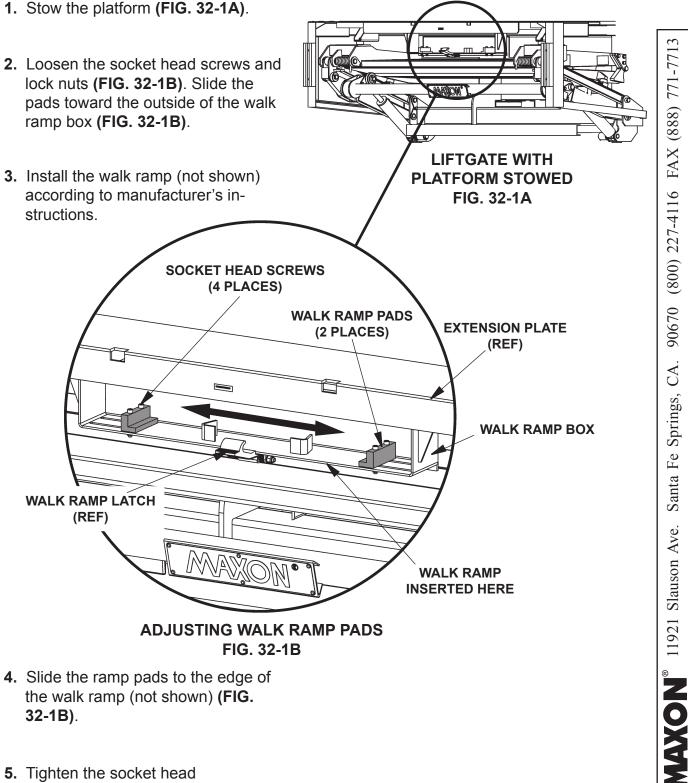
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STEP 14 - VEHICLE TAILLIGHT POSITIONING (IF REQUIRED)

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.

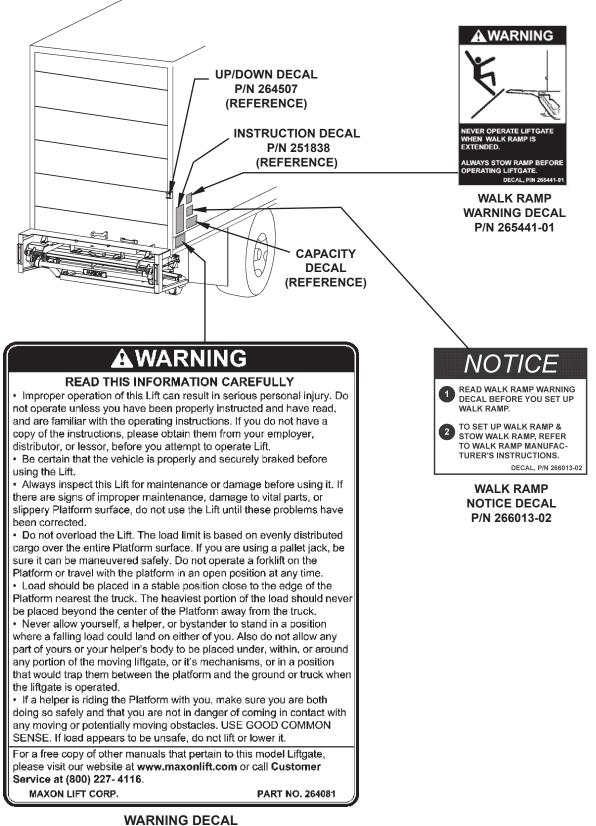


STEP 15 - ADJUST WALK RAMP PADS



- the walk ramp (not shown) (FIG. 32-1B).
- 5. Tighten the socket head screws and lock nuts securely (FIG. 32-1B).

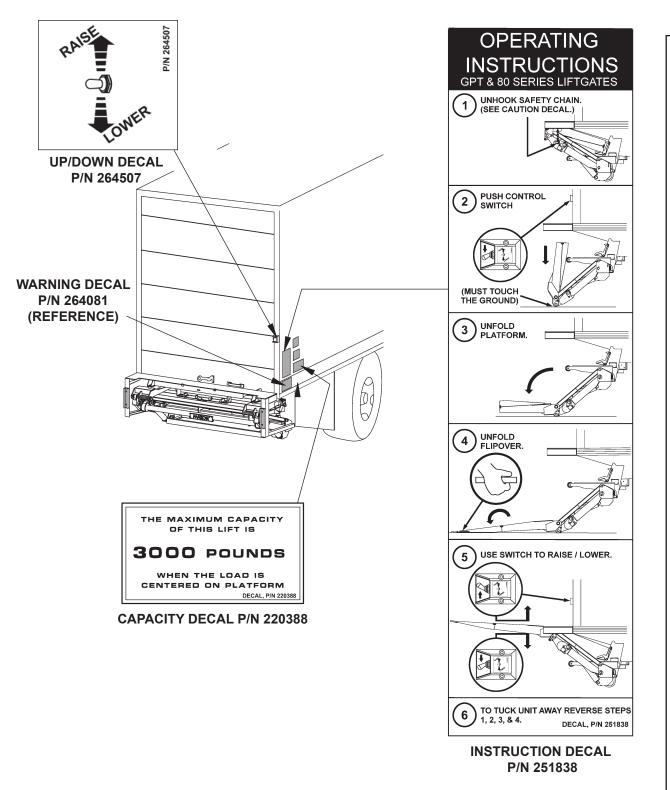
ATTACH DECALS



P/N 264081

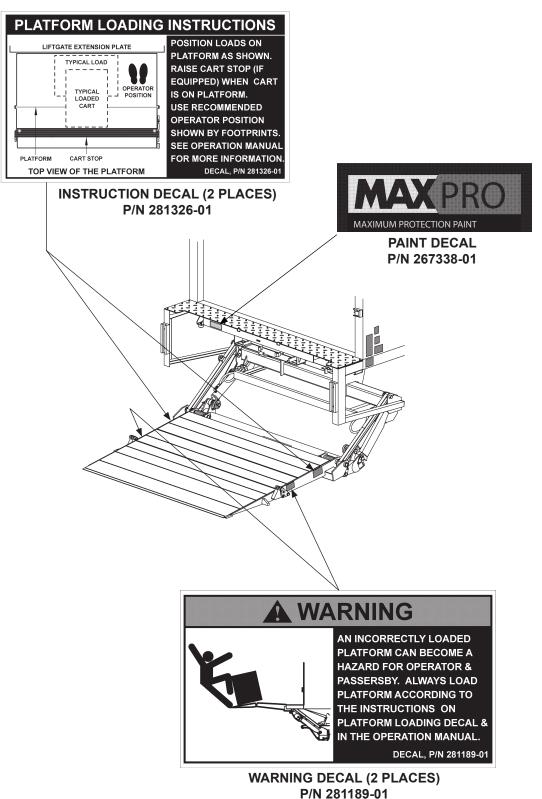
FIG. 33-1

ATTACH DECALS - Continued



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ATTACH DECALS - Continued



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FIG. 35-1

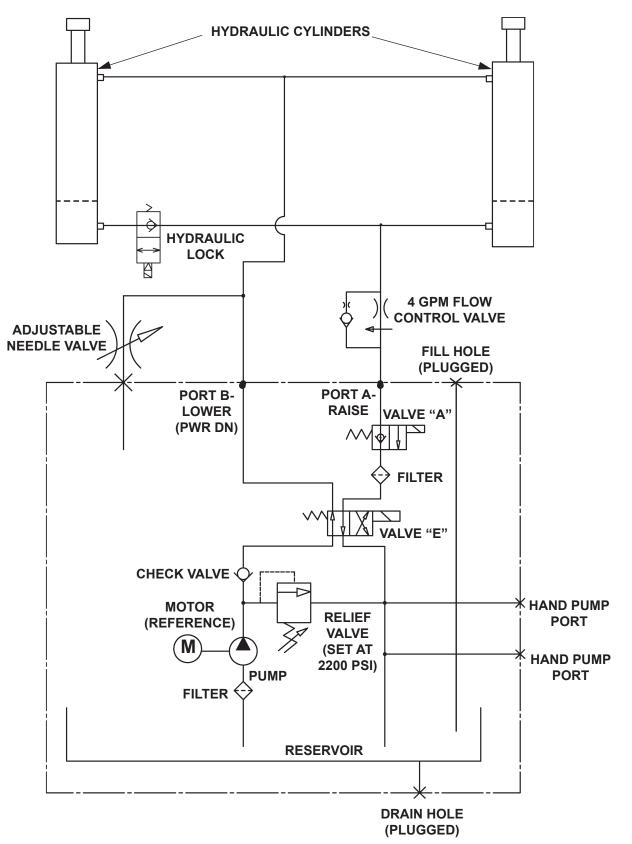
TOUCHUP PAINT

CAUTION

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

If bare metal or primer is exposed on the painted portions of the Liftgate, touch up the paint. To maintain the protection provided by the original paint system, **MAXON** recommends aluminum primer touchup paint kit, P/N 908119-01.

HYDRAULIC SYSTEM DIAGRAM



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FIG. 37-1

ELECTRICAL SYSTEM DIAGRAM

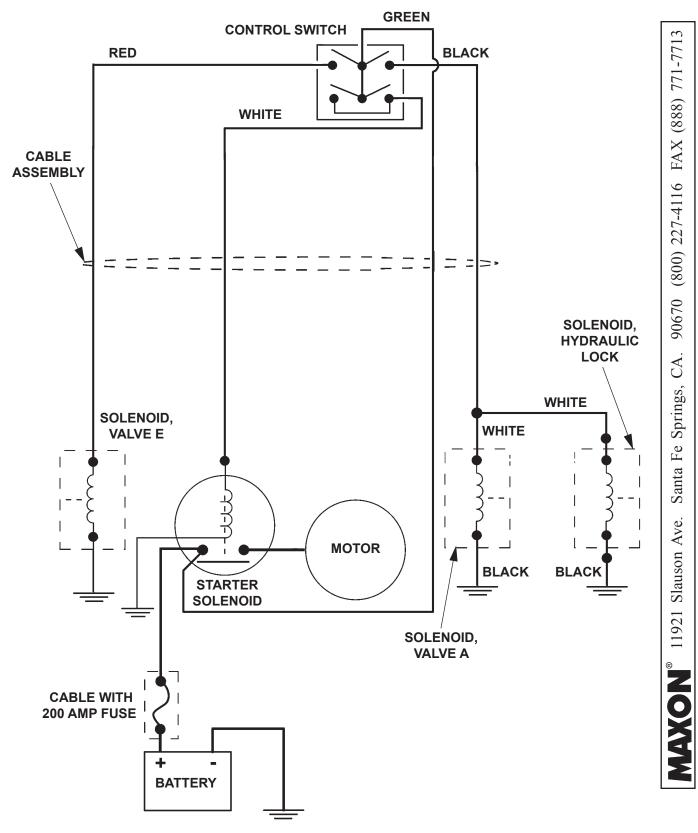
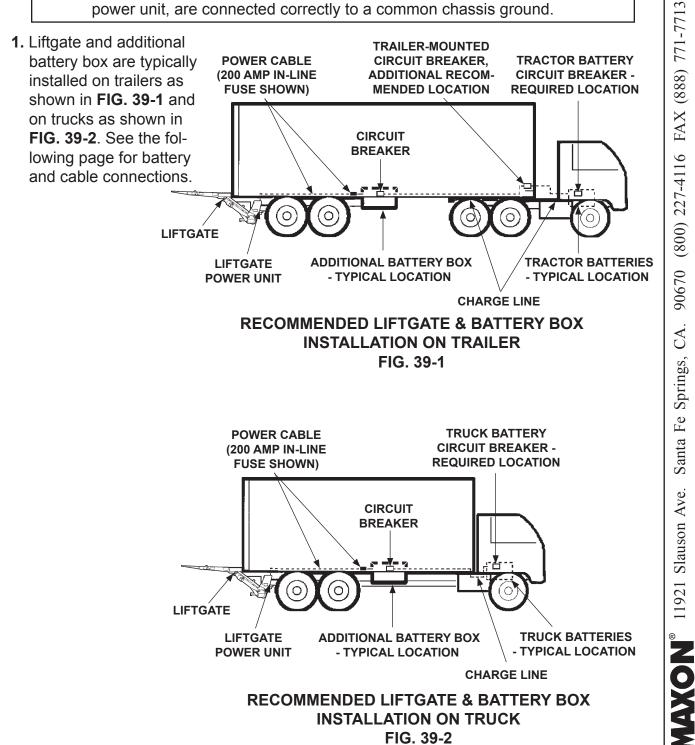


FIG. 38-1

OPTIONS

RECOMMENDED LIFTGATE POWER CONFIGURATION

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



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OPTIONS

RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

