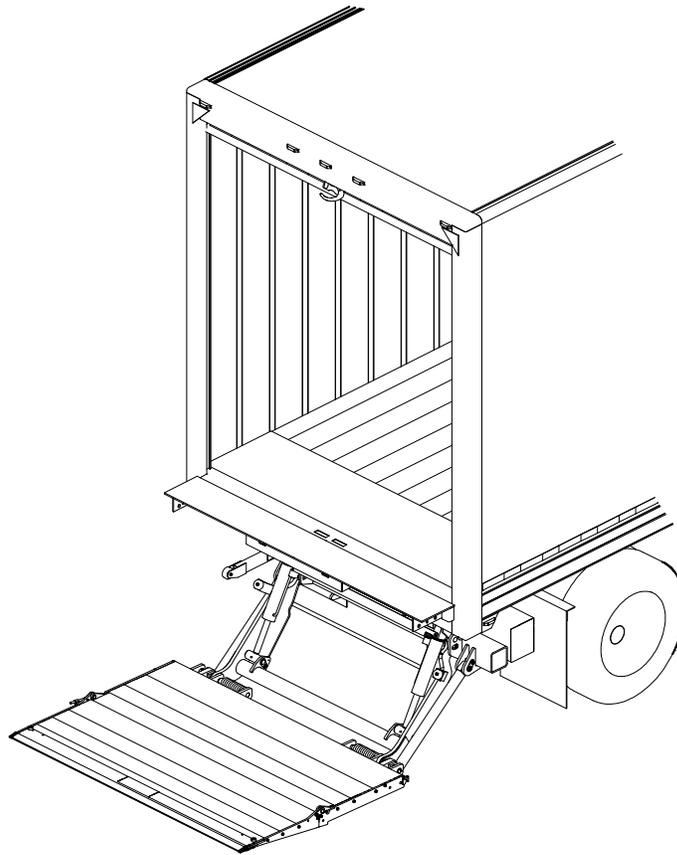


# Installation Manual

## HLF-25, 30, 40, & 50

2500, 3000, 4000, & 5000 lb. Capacity Flipaway Liftgates



### Last Change

Date	Page(s)	Description
5-2016	16, 22, 40, 43, 47, 48	<i>P16 – Added note about trimming top of mount plates if necessary P22 – Clarified electrical schematics, added schematic for cab shut-off P40 – Clarified routing of battery cables P43 – Added page for tractor wiring P47-48 – Revised, kit now partially pre-welded</i>

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# Table of Contents



**Improper installation of this liftgate could result in severe personal injury or death.**

**Read and understand the contents of these instructions before proceeding.**

**When installed, this liftgate must not alter or prevent vehicle compliance to any existing state or federal standards.**

**Each chassis manufacturer's recommendations should be consulted for compliance.**

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# INTRODUCTION

If anyone observes improper installation, improper operation, or damage, they should immediately contact a qualified person for assistance and correction. We strongly urge anyone that has any questions or doubts as to the installation, condition, use, operation, maintenance or repair of the liftgate to contact us at Waltco where we have qualified personnel that will be happy to assist you. Telephone numbers and addresses of these locations are listed in the Owner's Manual and Installation Instructions.

## INSTALLATION

Waltco liftgates should only be installed by those with sufficient basic skills to understand the installation and operation of the liftgate, along with the equipment on which the liftgate is being installed. Waltco's installation instructions are not intended to give rationale for all the instructions that are given; however, it is the intent of these instructions to give the installer both the operations and what we believe to be the most desirable sequence of implementing these operations. These instructions can in no way expand into an area where they will replace a qualified person, or clear thinking and a basic knowledge that must be possessed by the installer.

It has been our experience that a knowledgeable journeyman following these instructions and observing the operation of the liftgate will have a sufficient comprehension of the liftgate to enable this person to troubleshoot and correct all normal problems that may be encountered.

Failure to follow the installation instructions, adjustments and mounting dimensions may result in improper and unsafe operation of the liftgate. Unauthorized alterations of the liftgate can cause an undesirable and dangerous condition.

## OWNER'S MANUAL

The Waltco Owner's Manual is intended to act as a guide for operation and routine maintenance but is no way intended to encourage usage or repair of the liftgate by those who are not qualified to do so.

The contents of the owner's manual include, but are not limited to general operation instructions, routine lubrication, parts lists, and an outline of things that should be checked but may not be obvious to those not technically qualified. This manual assumes the liftgate is properly installed, undamaged and operates correctly. Improper installation, improper operation, or damage should be immediately corrected by a qualified person.

## INSPECTION

As part of the regular inspection of a liftgate and after damage or suspicion of an overload, inspect for wear or structural damage and make necessary repairs or replacements. Check all structural components and their attachment to the liftgate for cracked welds, loose fasteners, wear and part deformation. Check cylinder and hose for leaks. Inspections and repairs should be made by a qualified mechanic.

## REPLACEMENT PARTS

Use only Waltco original equipment replacement parts. Components of other liftgate manufacturers may outwardly appear to be the same but are not interchangeable with Waltco products. Waltco components are specifically designed for safety requirements, reliability and compatibility with our products. Refer to your Waltco parts manual when ordering parts. NOTE: When ordering, give model and serial number of liftgate.

## DECALS

It is important that every vehicle that has a WALTCO Liftgate have legible DECALS clearly posted on the vehicle and an OWNER'S MANUAL in the vehicle at all times as a guide for proper operation and maintenance.

Additional DECALS and OWNER'S MANUALS can be obtained from WALTCO LIFT CORP.

80101388 Rev 03 EO 7820

# Chapter 1 Safety Information

## WARNING

**Read, understand, and follow all of the warning listed below.**

**Failure to follow these warning could result in severe personal injury or death.**

- Read and understand the Owner's Manual, all decals and warning on liftgate before operating liftgate.
- Do not operate liftgate without a thorough knowledge and understanding of the operation of the liftgate.
- Liftgate hazards can result in crushing or falling.
- This liftgate is designed for loading and unloading of cargo. If personnel are required to ride liftgate, observe and familiarize yourself with the liftgate operation, decals and manuals. Ensure stable footing at all times.
- Do not ride liftgate with unstable loads.
- Wheeled loads must be properly retained from rolling.
- Tall, high center of gravity loads must be retained from falling over.
- Never overload liftgate:  
Load platform as close to the vehicle, and towards the middle of the platform as possible. Refer to owner's manual and capacity decal of liftgate for maximum load and load placement.
- Keep hands and feet clear of all potential pinch points.
- Never use liftgate if it makes any unusual noise, has unusual vibration, raises or lowers unevenly, or fails to operate smoothly.
- Never use liftgate if it shows any signs of structural damage such as cracked welds, bent or distorted members.
- Do not attempt any repairs unless you are qualified to do so. Care should be taken when work is performed on a disabled liftgate located near moving traffic. When possible the vehicle should be moved away from traffic areas for repair. Precautionary measures should be taken to ensure personal safety including those recommended in Federal Motor Vehicle Safety Standards 571.125.
- When welding to liftgate, or liftgate components, take all necessary safety precautions, including using respiratory protection and other pertinent personal protective gear when welding harmful materials.
- All protective covers, guards, and safety devices must be in place and access doors closed before operating liftgate.
- Do not allow anyone to stand in, or near area, in which Platform will open and close before opening or closing Platform.
- Do not allow anyone to stand near the Platform where a falling load could land on them.
- Platform is always to be properly stored and secured for transit. See the Owner's Manual for details.
- Take care to retain cargo during transit for liftgate Platforms which function as the tailgate or door of the cargo area. Small objects can fall through the space between the vehicle and the folded Platform.
- A Lock-Out device or Shut-Off Switch should always be used to prevent unauthorized use of liftgate.
- For liftgates with Runners, never use liftgate if Runners do not travel freely and smoothly.
- For liftgates with Roller Lifting Chain, the Chain should be replaced every (5) five years or 15,000 cycles, whichever comes first. Replace only with Waltco approved Roller Chain.
- Never transfer loads which exceed lifting capacity on or over any part of the Platform unless the liftgate is equipped with a special reinforced Platform and Platform Support Bars for use when the Platform is used as loading ramp (dock board). Refer to the "Using Platform as a loading ramp" Chapter in the Operation Instructions of the BZ/RZ series Owner's Manual.
- For liftgates equipped with Trailer Hitches, never exceed the rated capacity of the hitch. Do not exceed the vehicle's weight rating. Refer to the vehicle's Owner's Manual.
- Vehicle must comply with all state and federal standards.
- Follow the "Maintenance Guide" chapter in the Owner's Manual.

# Chapter 1 Safety Information

## Liftgates with Tilt Function

- Proper use of the Control Switches is of extreme importance.
- Improper use of Tilt Switch could cause load to fall from the Platform or damage the liftgate.
- Platform should be in a generally horizontal position when raising or lowering with a load.
- In any tilt position, the Platform may vary from level while raising or lowering the Platform.

## Liftgates equipped with spring operated Cam Closer

- Replace Cam Release Spring every five (5) years or 15,000 cycles, whichever comes first.

## RGL-Series Liftgates

- Make certain Platform Brake mechanisms are operating properly.
- The Runners are always to remain powered up against the Upstops Pins when in transit.
- Inspect Cables every three (3) months or 750 cycles, whichever comes first. Cables must be replaced if they show signs of wear, distortion, kinking or if any broken wires are visible
- Replace cables every five (5) years or 10,000 cycles, whichever comes first.



This is the safety alert symbol. This manual uses this symbol to alert you to potential personal injury hazards.

Obey all safety messages that follow this symbol to avoid personal injury or death.

## SIGNAL WORDS

### WARNING

Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.

Black letters on an orange background

### CAUTION

Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. May also be used to alert against unsafe practices.

Black letters on a yellow background.

### NOTICE

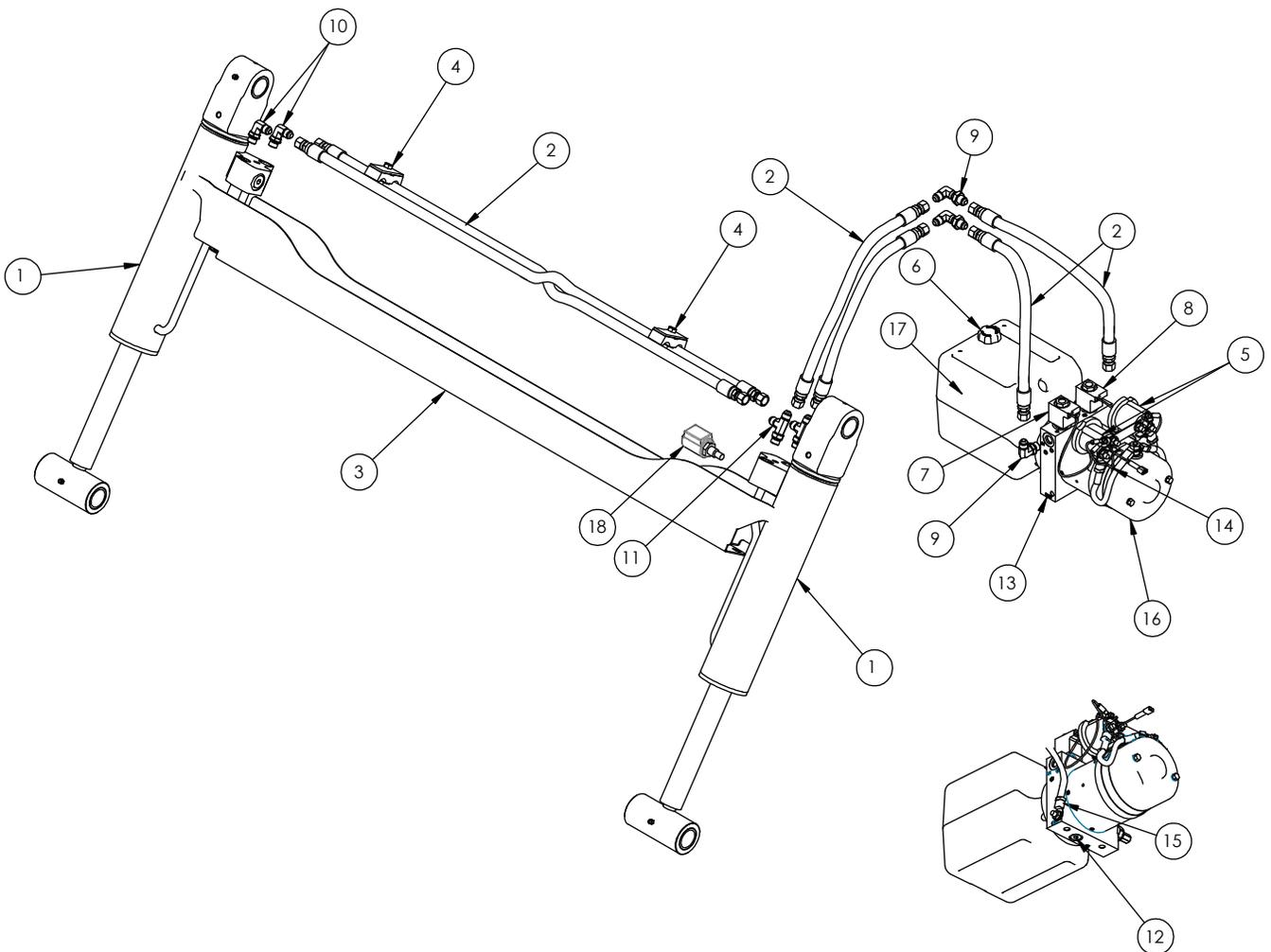
Indicates a potentially hazardous situation, which if not avoided, may result in property damage.



# Chapter 2 Liftgate Terminology

1. Hydraulic Cylinder
2. Hose Assembly
3. Hose Guard
4. Dual Hose Clamp
5. Pump Unit Starter Solenoid
6. Breather Cap
7. Lowering Valve Coil
8. Raise Valve Coil
9. Bulkhead Elbow, 90 Deg.

10. 90 Deg. Hose Fitting
11. Tee, Hose Fitting
12. Drain Plug
13. Pump
14. Thermal Switch (Inside Motor)
15. Ground Cable
16. Pump Unit Motor
17. Pump Unit Reservoir
18. Lock Valve

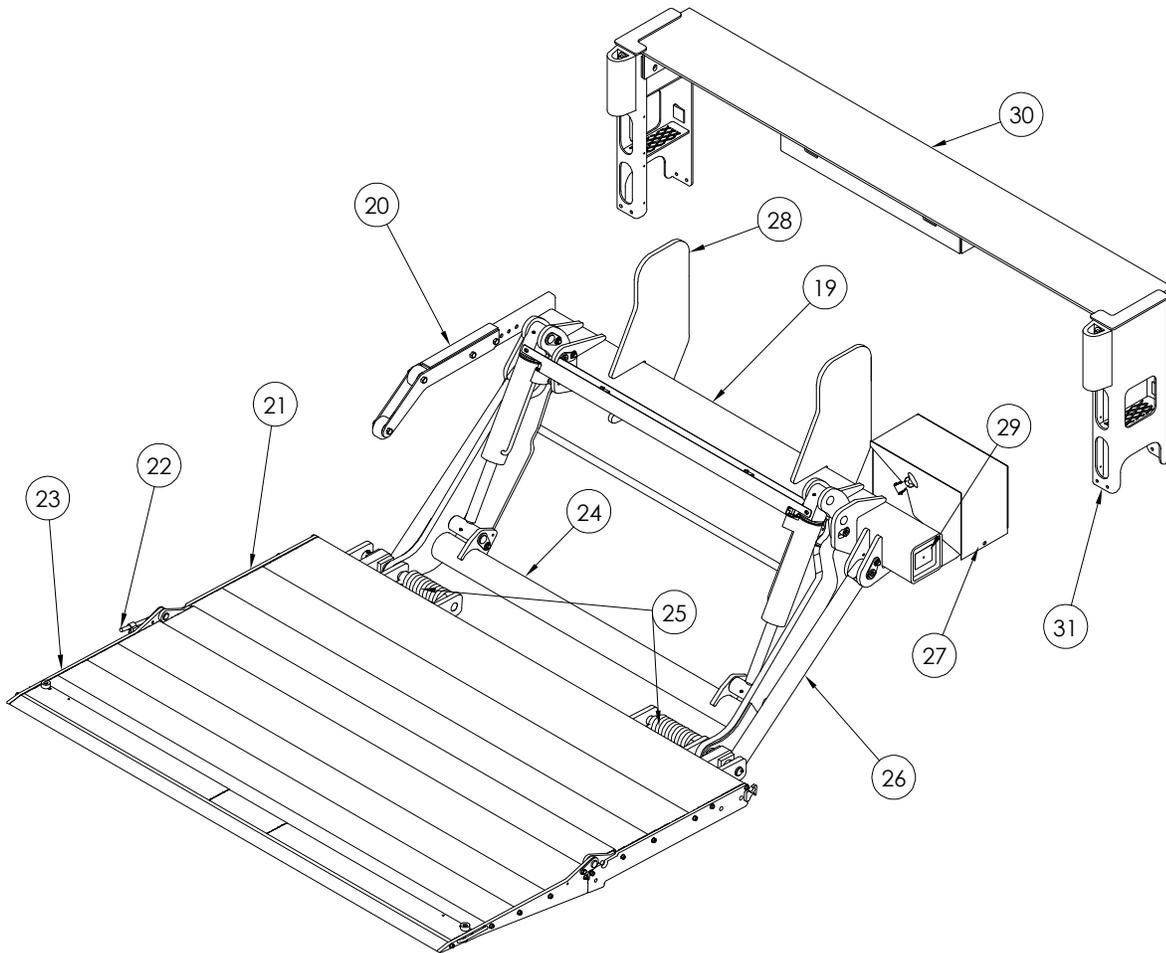


GR02778

# Chapter 2 Liftgate Terminology

- 19. Mount Tube Assembly
- 20. Parting Bar Assembly
- 21. Deck Assembly
- 22. Torsion Bar
- 23. Deck Extension Assembly
- 24. Lift Arm Assembly
- 25. Folding Assist Springs
- 26. Parallel Arm

- 27. Pump Box
- 28. Mount Plate
- 29. Spec Tag
- 30. Bed Extension
- 31. Dock Bumper



GR02779A

# Chapter 2 Liftgate Terminology

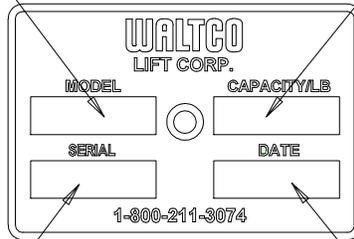
## Explanation of Specification Tag

Model Name	Description	Capacity
HLF25	Twin Cylinder	2500 lb.
HLF30	Twin Cylinder	3000 lb.
HLF40	Twin Cylinder	4000 lb.
HLF50	Twin Cylinder	5000 lb.

**MODEL NAME**

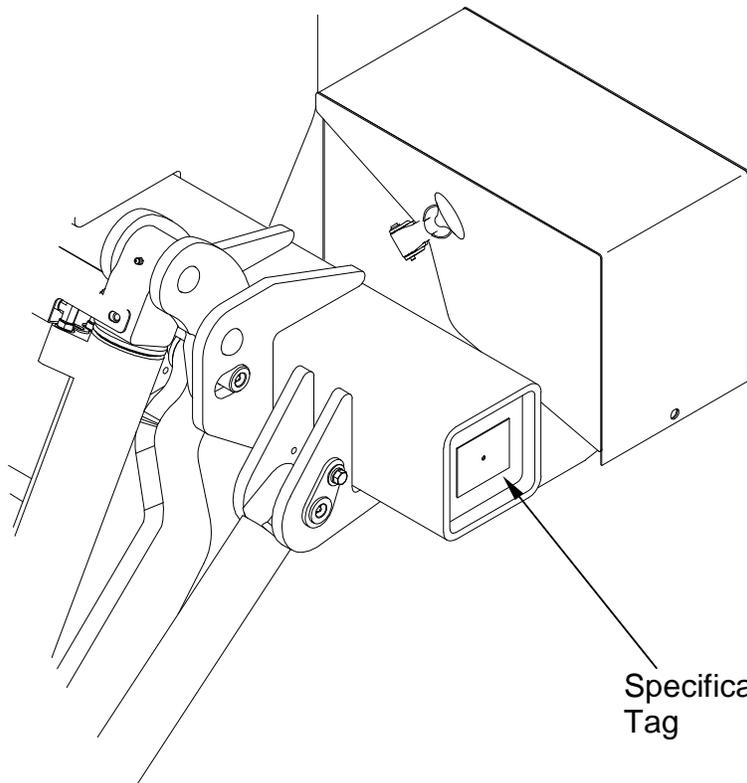
**RATED CAPACITY**  
Based on an evenly distributed load on the platform flat surface.

**SERIAL NUMBER**  
of liftgate. To be used when ordering parts or when contacting Waltco for service or warranty questions



**DATE OF MANUFACTURE**  
Month / Year

GR00241



Specification Tag

GR02837

# Chapter 3 Determine Basic Mounting Requirements

Measure distance from ground to floor level. This is the bed height.

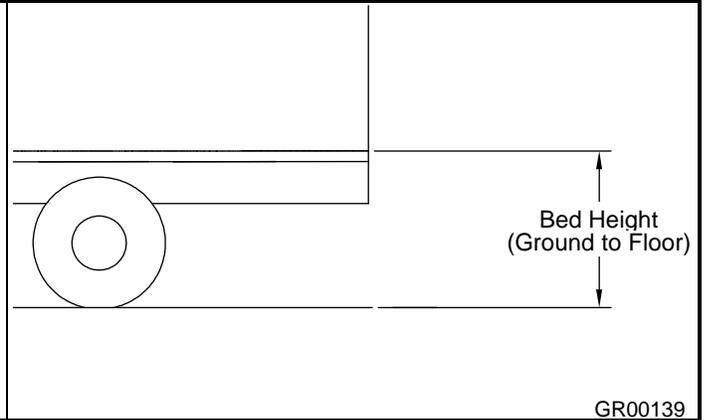
Refer to bed height dimension on mounting chart to determine basic mounting dimension "A" and minimum mount frame clearance required.

**NOTE:**

**Max bed height dimensions for unloaded vehicle.  
Min bed height dimensions for fully loaded vehicle**

**NOTE:**

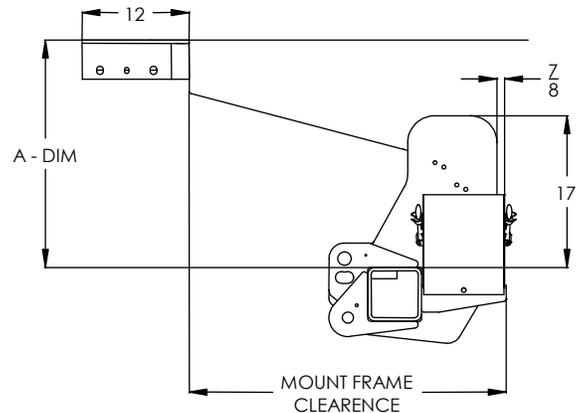
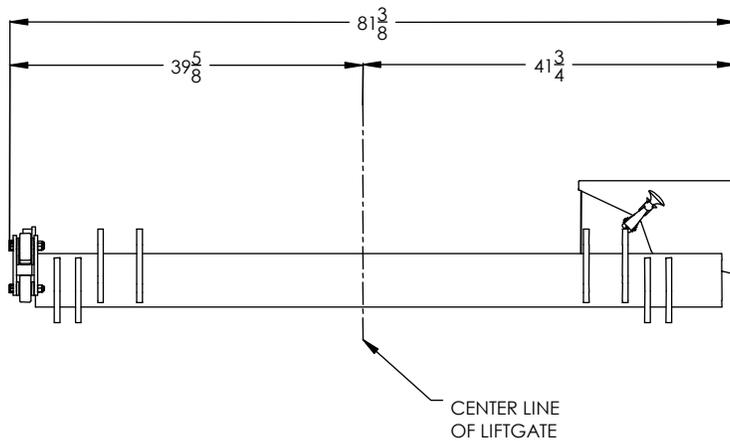
**Tire clearance should be 6" minimum between tire and mount frame.**



GR00139

**STANDARD BED HEIGHT MODELS  
MOUNTING CHART**

Bed Height	"A" Dimension	Mount Frame Clearance
46"-57"	25-1/2"	35-1/2"
57"-60"	26-1/2"	34-1/4"



GR02781

# Chapter 4

# Installation

## PREPARATION OF BODY SILL

Remove all obstructions that would interfere with operation of Liftgate; such as dock bumpers, trailer hitches, projections, etc.

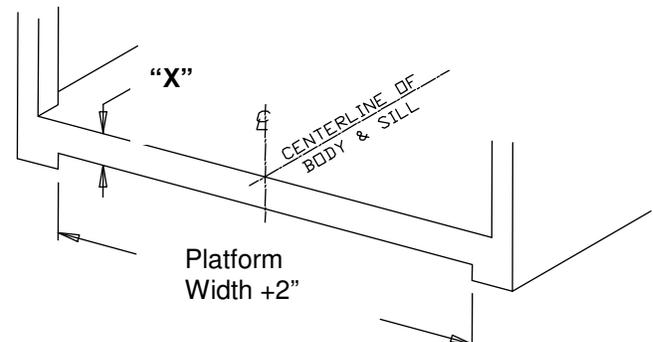
Locate and mark the center of body sill.

### NOTE:

**All mounting measurements for centering liftgate will come from centerline mark.**

Body sill must have clearances indicated. Cut or notch Rear Sill to obtain these clearances.

Refer to chart p. 3-1



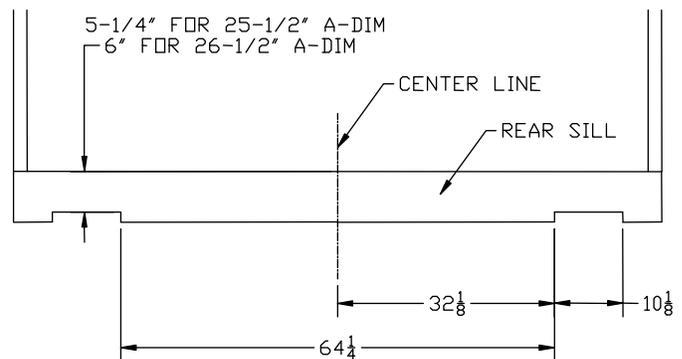
Hold "X" as follows:

"A" Dimension	"X" Max.
25-1/2"	6"
26-1/2"	7"

GR02184

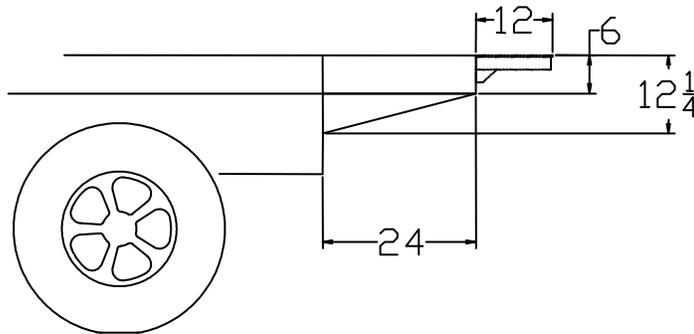
## Additional Notching.

Additional notching of the rear sill may be necessary on units with larger sills.



GR02782

Cut away vehicle frame as required to obtain the minimum clearance indicated.



46" TO 57"  
BED HEIGHT

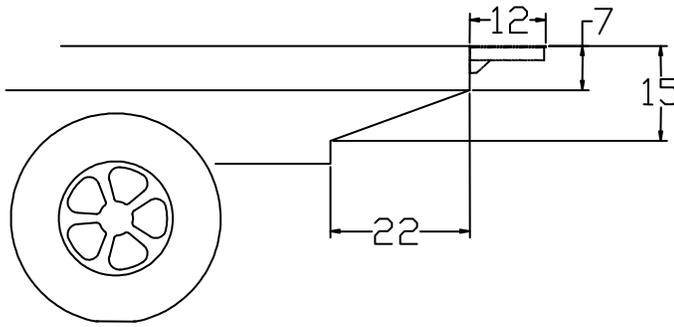
25-1/2"  
"A" Dimension

GR02783

# Chapter 4

# Installation

Cut away vehicle frame as required to obtain the minimum clearance indicated.

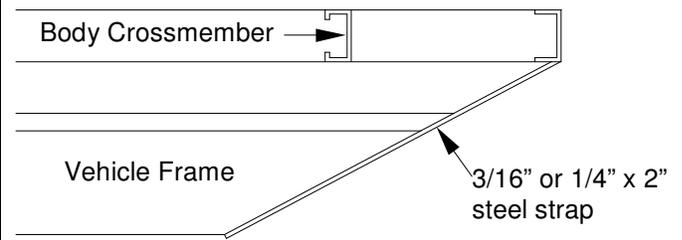


57" TO 60"  
BED HEIGHT

26-1/2"  
"A" Dimensions

GR02784

Cap Vehicle Frame, using a 3/16" or 1/4" X 2" steel strap.

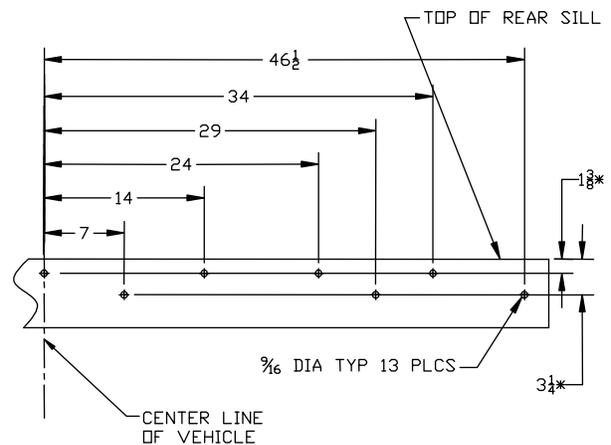


GR00625

## INSTALLATION OF BED EXTENSION

If bed extension is to be bolted on, use pattern at right for drilling holes.

Thirteen (13) 9/16" diameter holes required.



HOLE PATTERN  
SYMMETRICAL ABOUT  
THIS CENTER LINE

\* IF BED EXTENSION HAS  
1/2" DIA FLOOR PLATE (3/8"  
IS STANDARD) ADD 1/8"  
1 3/8 = 1 1/2  
3 1/4 = 3 3/8

GR02905

# Chapter 4

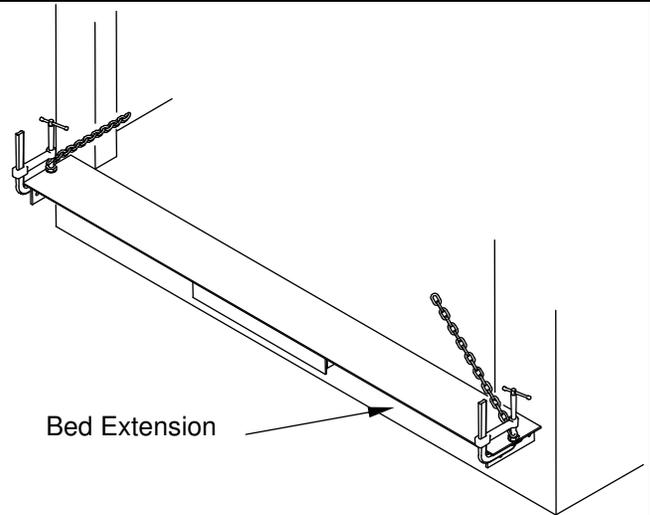
# Installation

Position Bed Extension up to rear sill using a forklift or crane.

Make certain bed extension is centered on vehicle body and level with bed



**Other means may be used to support Bed Extension in position. ALWAYS verify the safety of your supporting method before proceeding.**



GR02647

## IF BOLTING:

Bed extension to sill, use thirteen (13) 1/2" bolts, nuts and washers provided with kit. Torque bolts to 90 ft. lbs.

## IF WELDING:

### NOTE:

To help protect vehicle paint, notches have been provided so top of bed extension does not have to be welded.

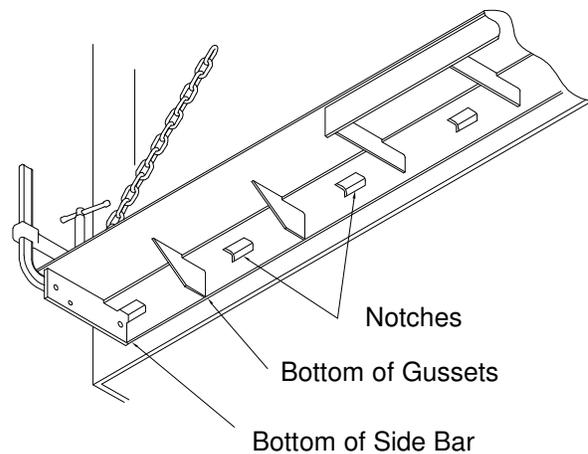
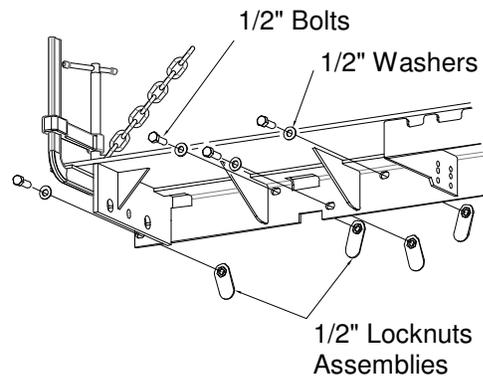
### NOTE:

If corner posts of vehicle body extend beyond rear sill of body, shims may be added behind bed extension to prevent bowing of bed extension.

Weld underside of Bed Extension.

Weld all Notches 100% with 1/8" weld to rear sill of vehicle body.

Weld under the side bars and all gussets with 1/8" weld x 2" long.



GR02648A

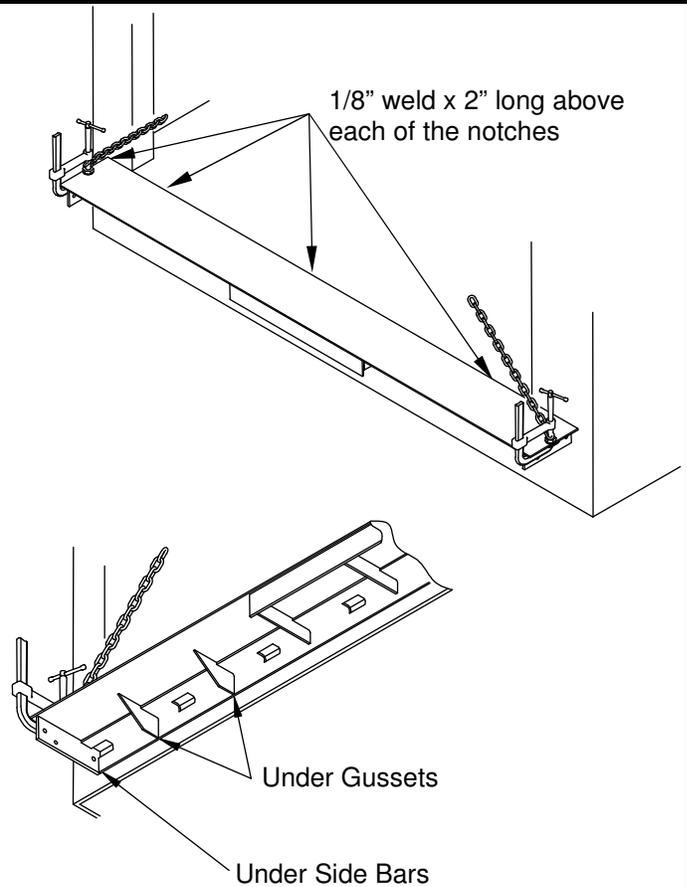
# Chapter 4

# Installation

## ALTERNATIVE WELDING OF BED EXTENSION

Weld top side of bed extension, 1/8" x 2" welds over each of the notches on underside of extension.

Weld under the side bars and all gussets with 1/8" weld x 2" long.



GR02647 & 48

Remove liftgate from shipping pallet, and all banding. Do not unfold platform until instructed to do so.

**STOP** Before proceeding; verify vehicle bed height and A-dimension to be used!

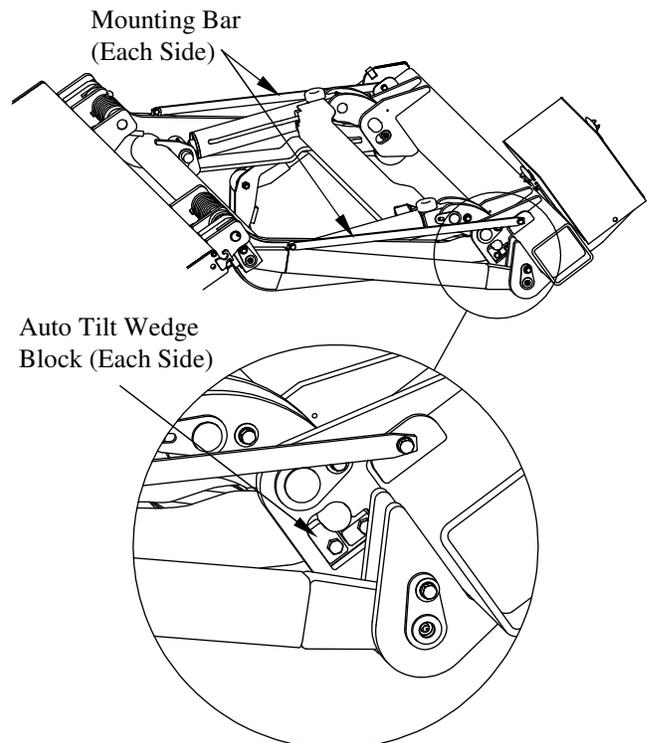
Refer to Chapter 3 of this manual.

**NOTE:**  
If mounting to 26-1/2" A-Dimension, the Mounting Bars will need to be removed before proceeding. Do not remove the Auto Tilt Wedge Blocks.

Mount Bars are set for 25-1/2" A-Dimension when shipped from factory.

Do not remove Mounting Bars until instructed to do so.

Unfold platform to open position.



GR02785

# Chapter 4

# Installation

Position liftgate up under vehicle.

Using a forklift or crane, raise platform up to bed extension.

Ensure 3/16" coil pins are between platform and bed extension skins.

Platform to be centered on vehicle, and level with floor (bed) of vehicle.

A jack can be used to help position mount tube to proper A-Dimension.

Be sure platform is centered on vehicle body and bed extension.

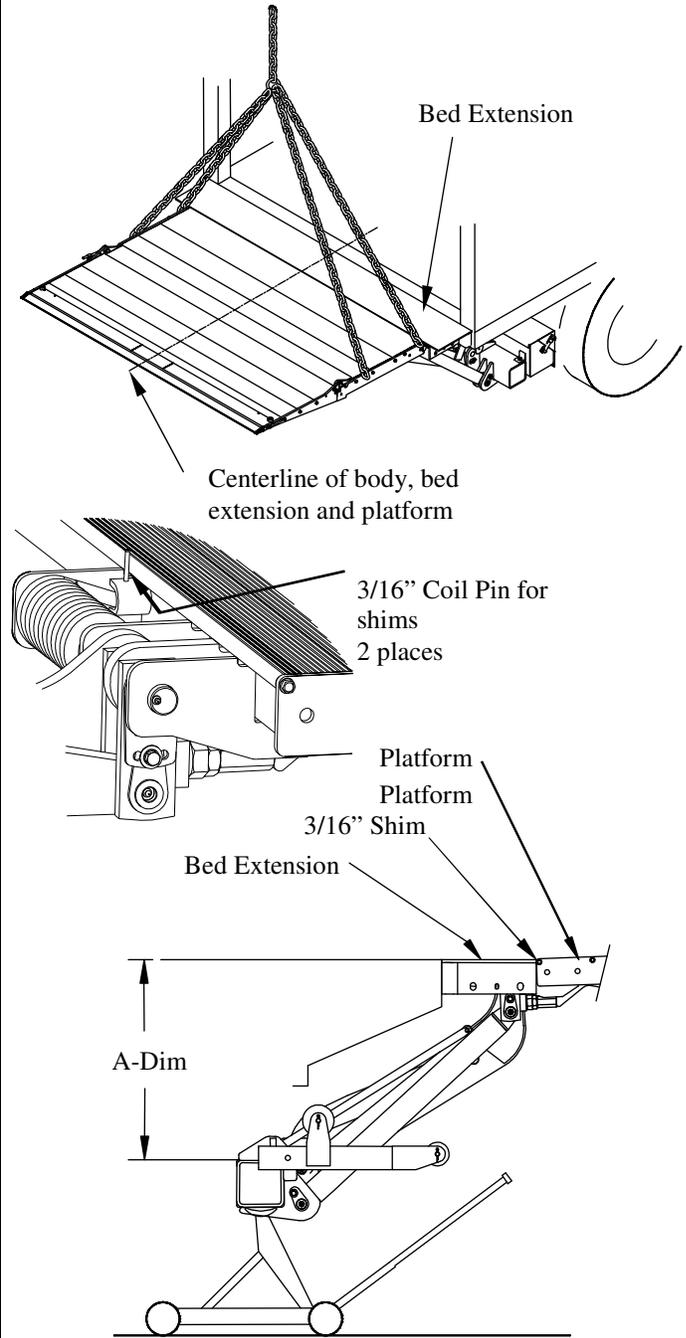


**Other means may be used to support Liftgate in position. ALWAYS verify the safety of your supporting method before proceeding.**

Position platform so it is level with vehicle body, and verify proper A-Dimension.

**NOTE:**

**If unable to obtain correct A-Dimension with platform level, it may be necessary to screw in the Platform Adjustment Bolts as shown below. Platform and Mount Tube should be level.**



GR02786 & GR02787 & GR02937

# Chapter 4

# Installation

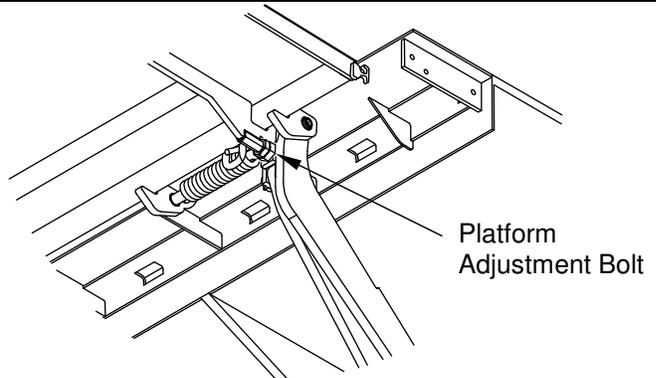
Bolts heads should be contacting platform hinges, if they are not, ensure the platform and mount tube are parallel prior to adjusting.

**NOTE:**

**Platform springs are engaged and under tension.**



**Take care when adjusting liftgate.**



GR02660

Use two 3" channels (tubes, or similar), lay on vehicle floor and clamp to bed extension and platform as shown.

Install counter weight on channels as required.

Platform is to be held parallel with vehicle floor, and is to shimmed 3/16" away from bed extension, centered with vehicle body.

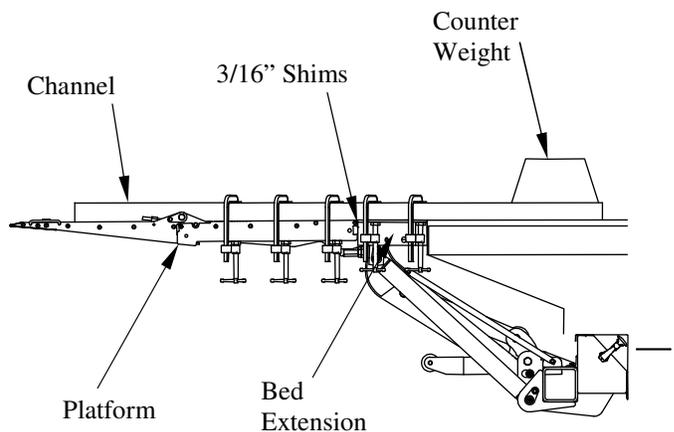


**Other means may be used to support Liftgate in position. ALWAYS verify the safety of your supporting method before proceeding.**

**IMPORTANT:**

**Verify mount tube is at correct A-Dimension before proceeding to next step:**

- Correct A-Dimension for bed height
- If using 26-1/2" A-Dimension and no mounting bar, square up mount tube with ground by temporarily powering the gate to obtain the correct A-Dimension.



GR02788

**CONFIRM PROPER MOUNT PLATE**

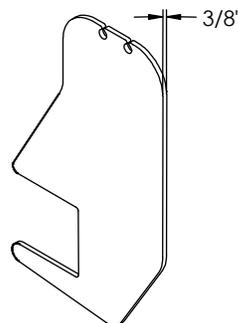


**Higher capacity liftgates (4000# & 5000#) must use 5/8" Mount Plate**

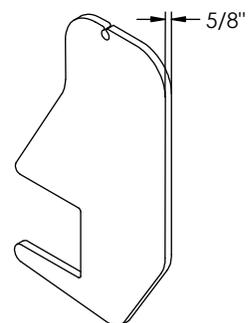
Confirm the capacity and mount plate profiles match the picture to the right.

Contact Waltco immediately if you have a high capacity liftgate with the wrong mount plate.

For 2500# & 3000#  
(2 notches)



For 4000# & 5000#  
(1 notch)



GR02899

# Chapter 4

# Installation

## FOR GALVANIZED, BOLT-ON MOUNT PLATES

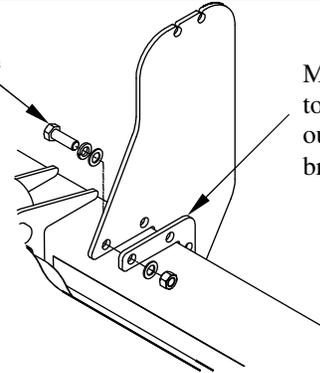
Align mount plates with outside surface of brackets on mount tube. Loosely install all of the  $\frac{3}{4}$ " diameter hardware to hold mount plate in position.

Once aligned, weld mount plates to chasis frame per instructions below.

Tighten hardware after welding to 250-300 ft-lbs.

$\frac{3}{4}$ " dia hardware  
Torque to 250 -  
300 ft-lbs

Mount plate  
to be on  
outside of  
brackets.



GR02907

## MOUNT PLATE INSTALLATION

Locate mount plates on mount tube. Mount plates should be approximately 90° to vehicle frame.

Check that mount plates extend a minimum of 5-1/4" above bottom of vehicle frame. If dimension cannot be held, refer to the optional installation.

 **Shield all wires and hoses from heat and weld splatter.**

Recheck "A" dimension. Weld three sides of mount plates 100% to vehicle frame with 3/8" weld.

For Non-Galvanized units:  
Weld mount tube to the mount plates. Weld all around, both sides of the mount plates, and ends, with 3/8" weld.

 **To avoid injury or property damage, do not remove clamps from deck. Use forklift, crane, or other safe means to support deck and then remove clamps.**

### NOTE:

Top of mount plate may be trimmed off if necessary to weld three (3) sides to vehicle frame. The 5-1/4" minimum dimension must be held.

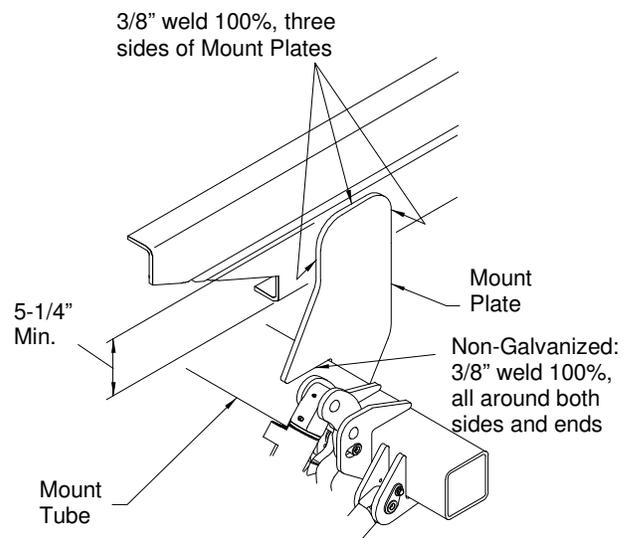
3/8" weld 100%, three  
sides of Mount Plates

5-1/4"  
Min.

Mount  
Plate

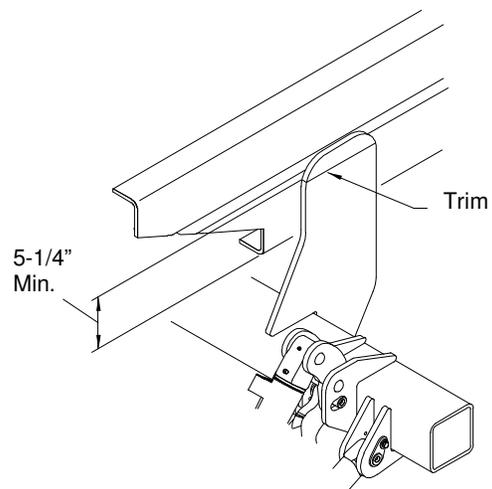
Non-Galvanized:  
3/8" weld 100%,  
all around both  
sides and ends

Mount  
Tube



5-1/4"  
Min.

Trim



GR02789

# Chapter 4

# Installation

## OPTIONAL INSTALLATION

If the 5-1/4" dimension cannot be met a 3/8" thick plate must be added.



**Shield all wires and hoses from heat and weld splatter.**

Recheck "A" dimension. Weld three sides of mount plates and three sides of 3/8" plate 100% with 3/8" weld.

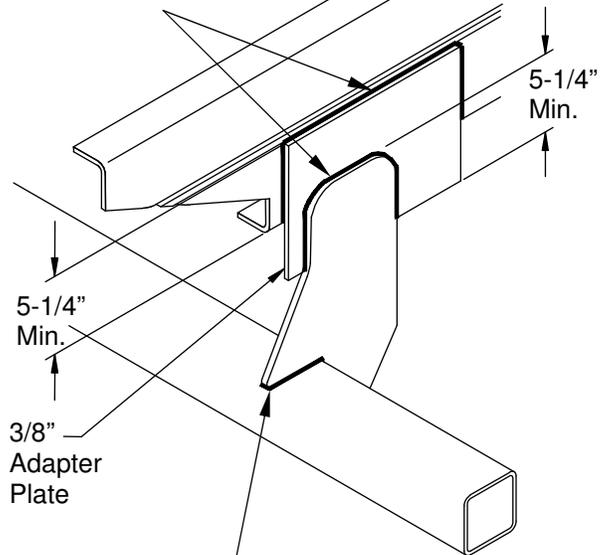
For Non-Galvanized units:

Weld mount tube to mount plates. Weld all around, both sides of mount plates, and ends, with 3/8" weld.



**To avoid injury or property damage, do not remove clamps from deck. Use forklift, crane, or other safe means to support deck and then remove clamps.**

3/8" weld 100%, three sides of mount plate and adapter plates as shown.

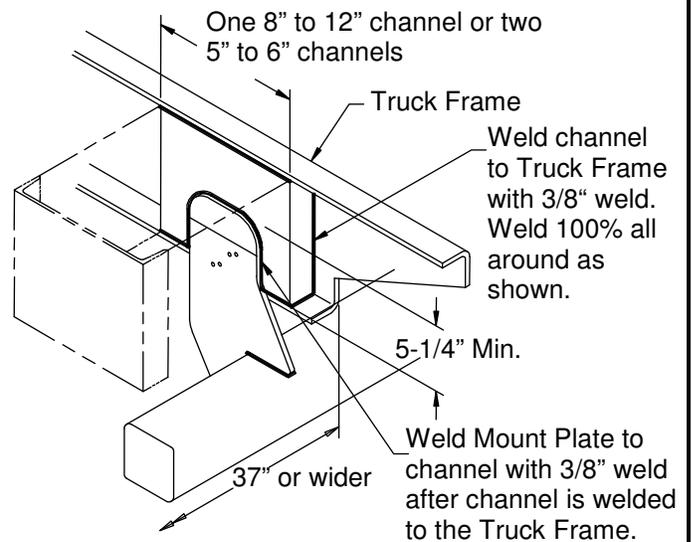


Non-Galvanized  
3/8" weld 100%, all  
around both sides and  
ends of mount plates.

GR02790

## NOTE:

If necessary, liftgate may be mounted to inside of frame as shown.

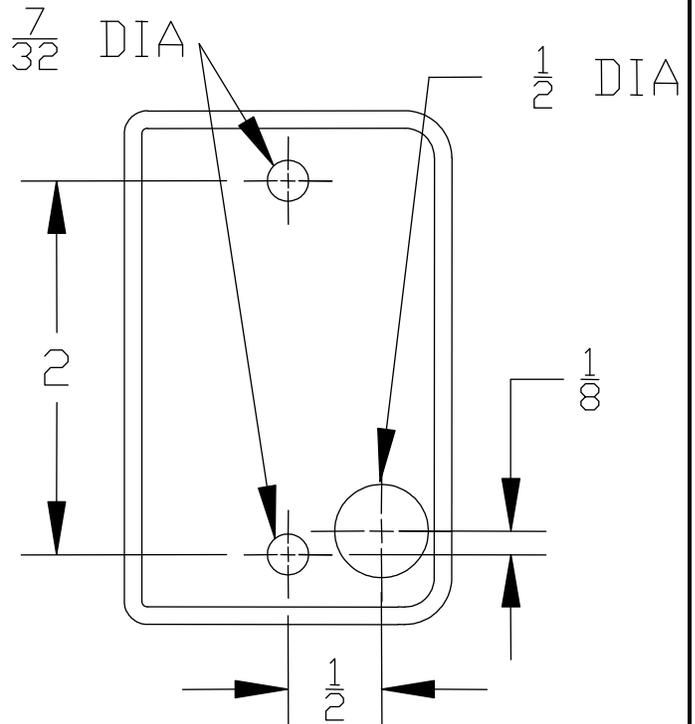


GR02791

## INSTALLATION OF CONTROLS

Locate switch such that, when operating liftgate, operator will have clear view of entire platform area and will not be in area that liftgate will pass through.

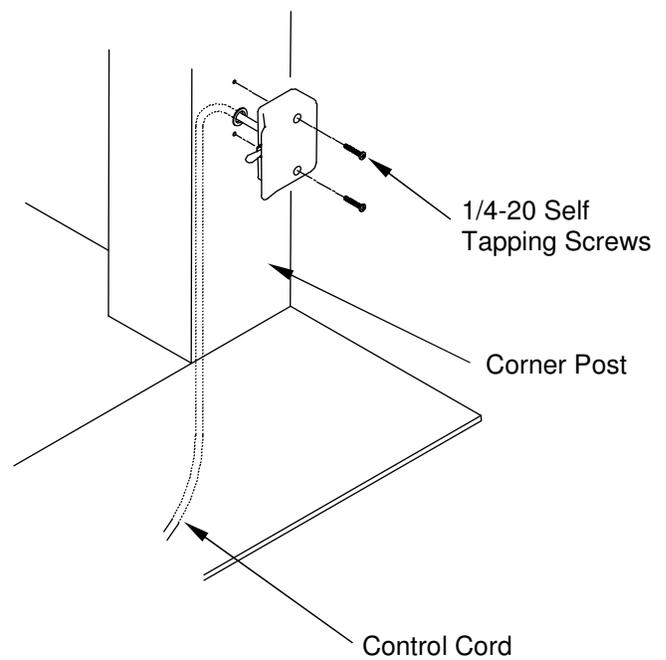
Use this template to locate screw holes, and hole for control cord.



GR02662

If Control Cord will be run through a hole of body, remove all sharp edges from hole.

Use 1/4" Self-tapping Screws to secure switch.



GR02761

# Chapter 4

# Installation

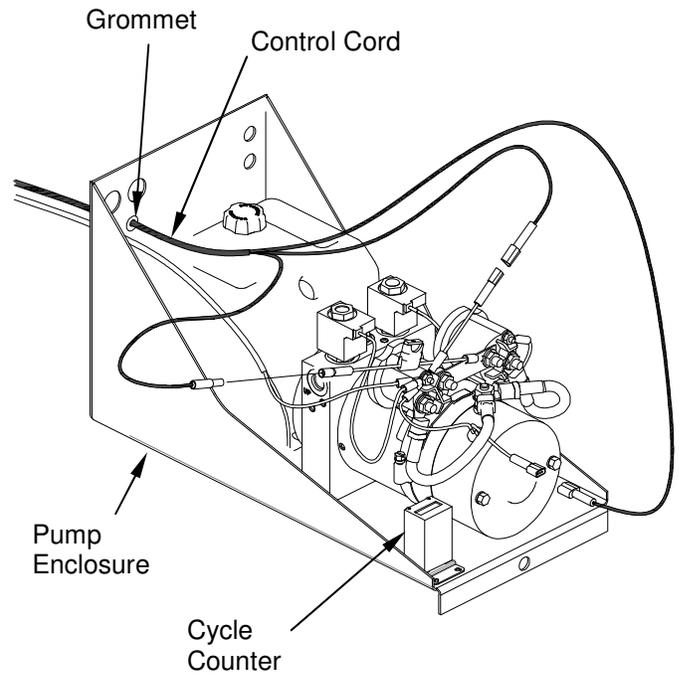
Route control cord into pump enclosure, using grommet supplied.

### Hints:

With grommet loose, insert largest terminal of control cord through the grommet first, then the others.

Apply a drop or two of oil on grommet to help insert terminals through grommet, and to install grommet into pump enclosure.

Connect control cord to pump unit as shown. Terminals are gendered to allow only correct connections. Also see schematic on following pages.



Note: Some components not shown for clarity.

GR02766

### INSTALLING BATTERY CABLES

Route both power and ground cables into pump enclosure using grommets as shown.

Note: The power cable has red ends, ground cable is all black.

Power cable is bolted to either one of the solenoids and copper bus bar.

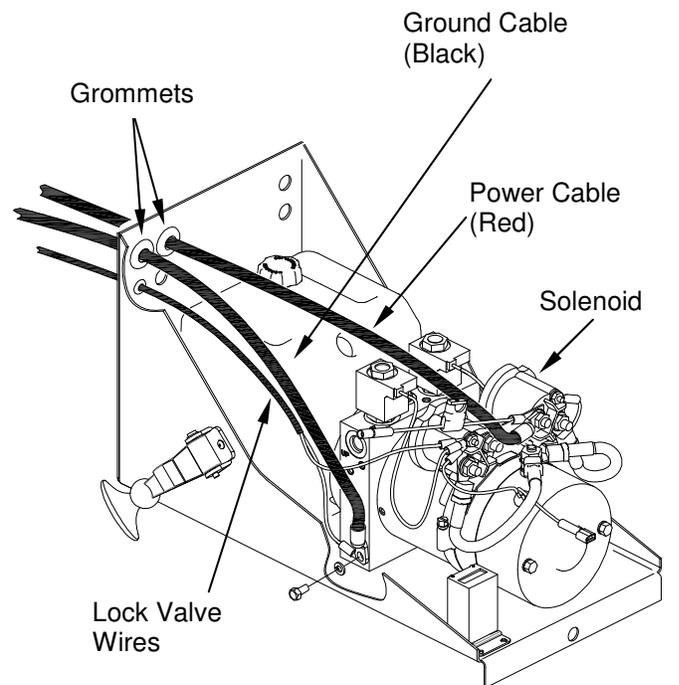
Ground cable is bolted to pump unit side, with Lock Valve ground wire.

Route power and ground cables along truck chassis, towards truck batteries, securing them every 24" with cable ties provided.

Do not connect any cables to batteries at this time.



**Be certain cables are protected with grommets when passing through metal holes or over sharp edges.**



Note: Some components not shown for clarity.

GR02765

# Chapter 4

# Installation

## INSTALLATION OF TERMINAL LUG

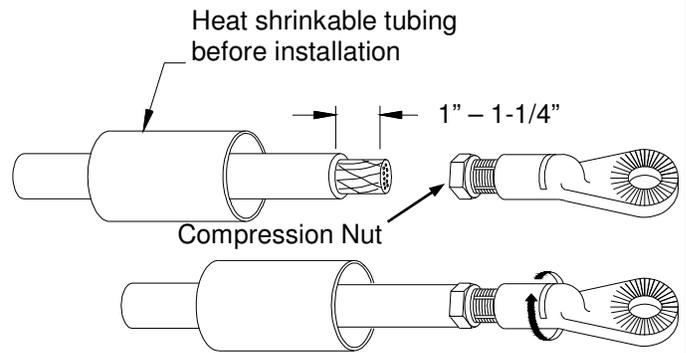
Strip 1" to 1-1/4" of insulation from end of cable.

Slide heat shrinkable tubing onto cable.

Insert bare wire into compression nut until it seats.

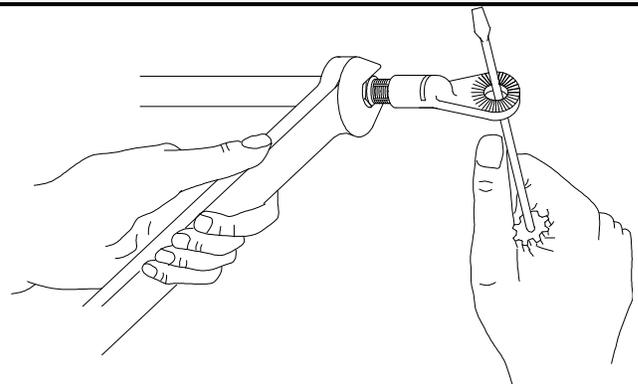
**IMPORTANT: Be sure to use correct compression nut, use 1&2 gauge nut for 1 gauge cable, use 0 gauge nut for 0 gauge cable.**

Note: Copper wire should be flush with, or slightly past nut



GR00299

Grip nut with wrench and turn terminal until nut seats



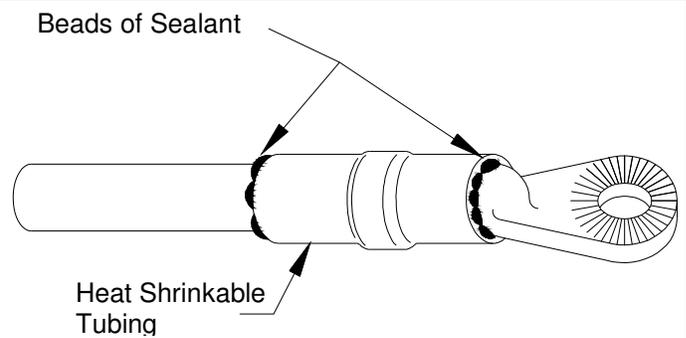
GR00300

Position heat shrinkable tubing over terminal and end of cable

Shrink tubing using electric heat gun or torch.

**Note: To reduce chance of damaging tube and cable, a heat gun is recommended**

Apply sufficient heat to produce thin bead of sealant all around tube edges



GR00301

## INSTALLATION OF POWER CABLES

These instructions are for connecting to truck batteries only. Refer to auxiliary battery instructions in back of this manual.

Locate and mount circuit breaker directly to batteries using copper terminal link supplied.

Circuit breaker must be mounted to give good protection against any objects coming into contact with circuit breaker terminals and causing a short. Position must also be readily accessible to reset breaker.

### NOTE:

**Circuit Breaker is to rest solidly on battery to prevent vibration during transit.**

If unable to connect circuit breaker direct to batteries, an optional jumper cable can be made from excessive length of power cable, see instructions above for installing terminal lugs.

Connect power cable (positive) from liftgate to circuit breaker. Then connect ground cable to negative terminal on batteries.

Apply a generous amount of Dielectric Grease to all Battery terminals and Circuit Breaker terminals.



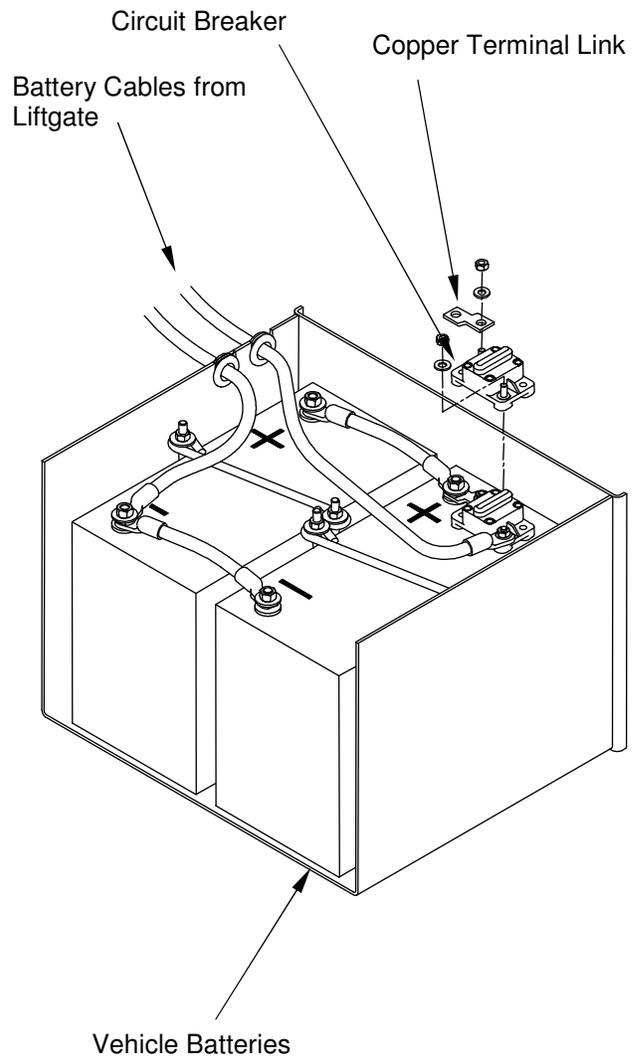
**Protect wires from any sharp edges or holes that may abrade insulated covering of wires.**



**Secure battery cable so it does not come near, or in contact with, other vehicle wiring, fuel lines, brake lines, air hoses, exhaust system, etc.**

### IMPORTANT:

**DO NOT operate liftgate until Mounting Bar has been removed.**

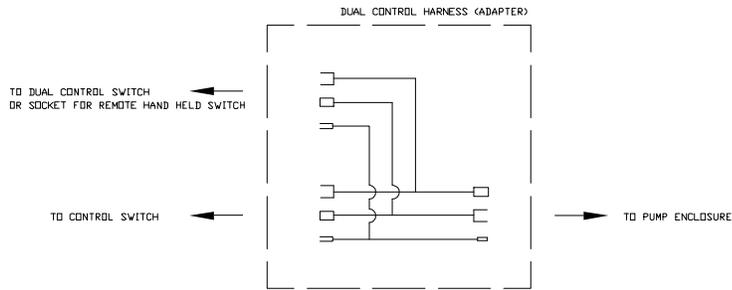
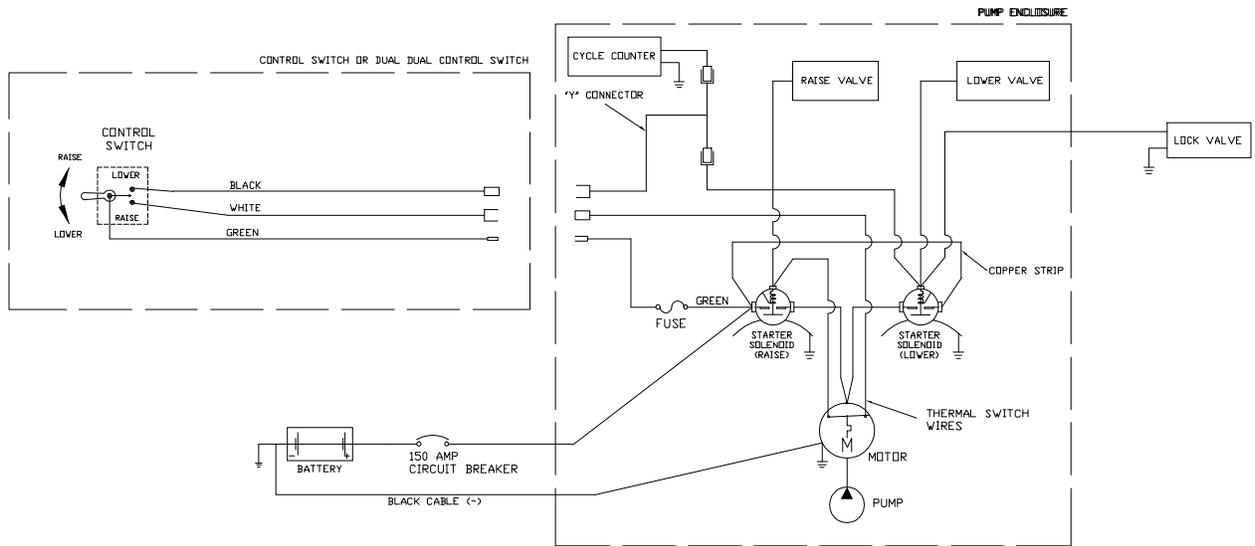


GR02764

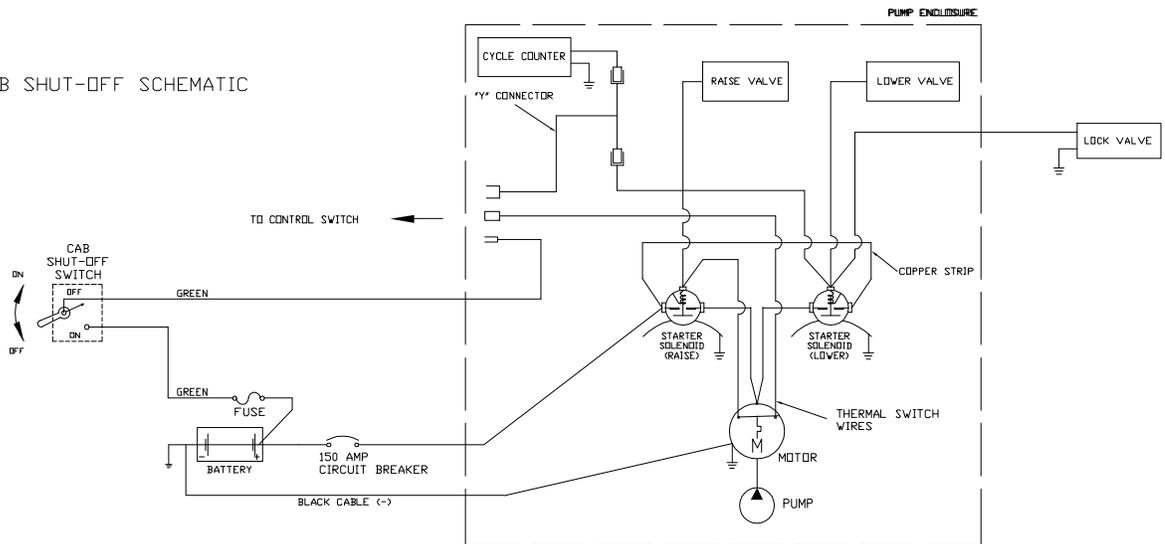
# Chapter 4

# Installation

## Electrical Schematics



### CAB SHUT-OFF SCHEMATIC

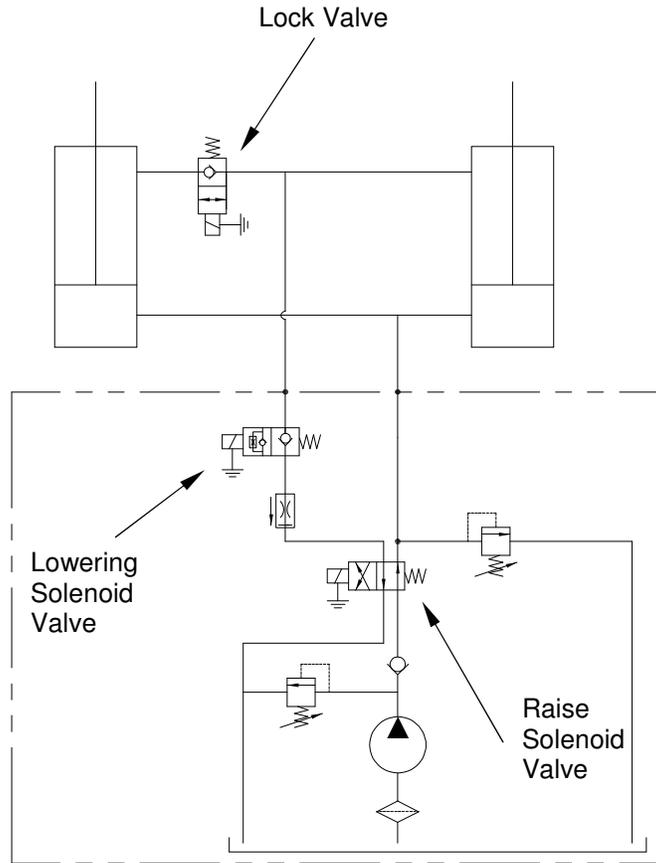


GR02798

# Chapter 4

# Installation

## Hydraulic Schematic

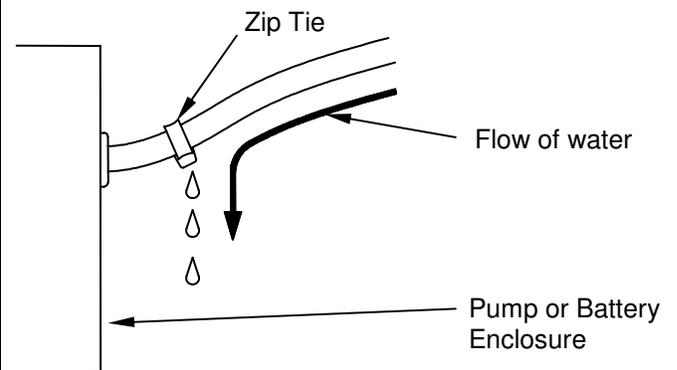


GR02797

## DIVERT WATER FROM ENCLOSURE

To help prevent channeling water into pump or battery enclosures:

- Secure hoses, cables and cords downward as they exit the enclosure.
- If a downward exit is impractical, a Zip Tie can be installed around hose or cable to help interrupt the flow of water as shown.



GR02460

# Chapter 4

# Installation

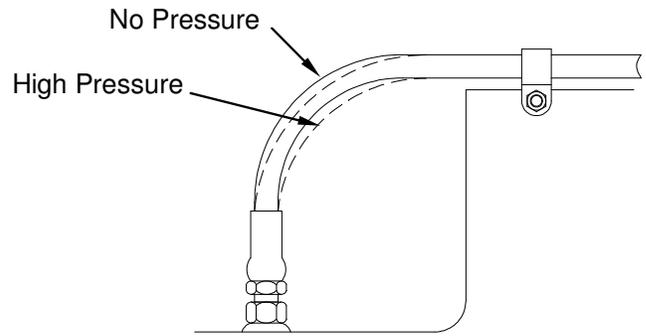
## HOSE INSTALLATION

Avoid twisting of hoses.

Avoid sharp bends when routing hoses

Hoses will contract under pressure. Allow plenty of slack between connecting points.

Do not clamp hoses at bends to allow for length changes when hose is pressurized.



GR00717

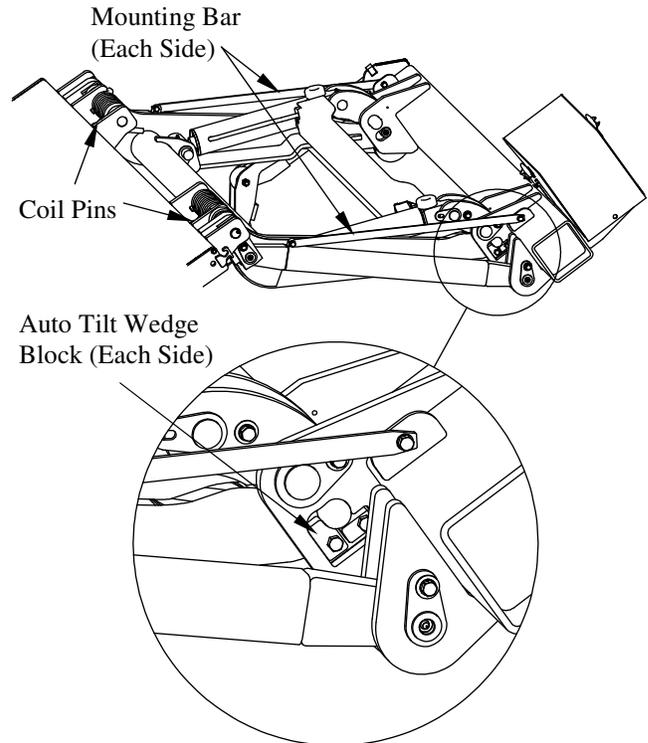
## REMOVE MOUNTING BAR, WEDGE BLOCKS, AND 3/16" COIL PIN SHIMS

Insure platform is properly supported before disconnecting the Mounting Bars and Wedge Blocks.



**Do not be under platform or lift arms when disconnecting the Mounting Bar. Access bar from forward side of mount tube.**

Remove two 3/16" coil pins from platform at spring retainer.



GR02785

# Chapter 4

# Installation

## FILLING HYDRAULIC RESERVOIR

Position liftgate deck into raise position (use forklift, crane, or other safe device if necessary).

Remove Reservoir Plug.

Oil level should be 1/2" from top of reservoir in raised position.

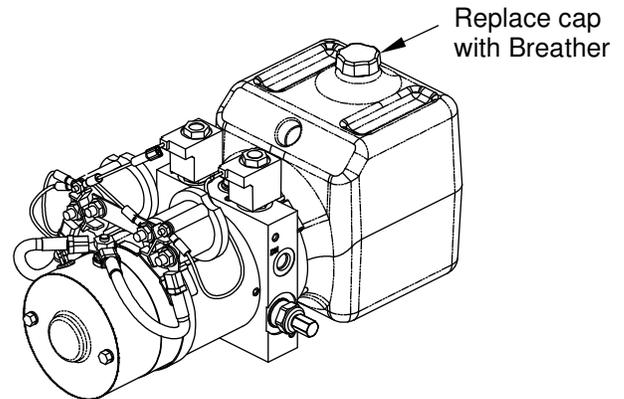
If low, fill as required.

### Replace Plug with Breather.

Run liftgate full cycle several times to release trapped air from system.

### NOTE:

The hydraulic system was bled of air at the factory. If however any hydraulic components, such as hoses, fittings, cylinders or pump were removed and replaced or disconnected during installation, or you suspect there is air in the system, the system should be bled per the instructions at the end of this section.



GR02792

### Recommended Fluids

Temperature Range	Acceptable Fluids
0° to 120° F	Waltco Biodegradable Liftlube™ part #85803860
	Shell Tellus S2 V 32
	Chevron Rando HDZ 32
-20° to 90° F	Waltco Biodegradable LiftLube Arctic part #85803866
	Waltco All Season Hyd Oil Part 85803867
	Shell Tellus S2 V 15
	Mobil DTE 10 Excell 15

A good quality SAE 10W motor oil may also be used in temperatures above 32° F.

### Fill reservoir

- Fill with recommended fluid or equivalent.
- Fill the reservoir to within 1/2" from the top.
- Fluids are available from the Waltco parts Dept. 1-800-411-5685 [www.waltco.com](http://www.waltco.com)

### NOTE:

Do not use the following fluids:

- Brake Fluid**
- Power steering fluid**
- Automatic Transmission Fluid (ATF)**

Rev 06

# Chapter 4

# Installation

## There is no speed adjustment on this liftgate.

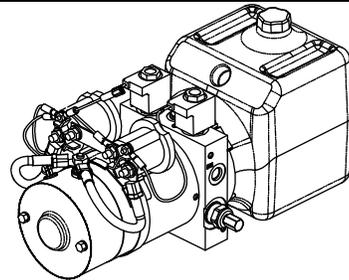
Lowering speed is controlled by the pressure compensative valve plumbed into the pump.

Regardless of weight on platform, liftgate should lower at approximately six (6) inches per second.

$$\frac{\text{Bed Height (inches)}}{6} = \text{Lowering Time (seconds)}$$



**This liftgate must have the pressure compensative valve installed in the pump.**



Pressure Compensative Flow Control Valve inside Pump

GR02792

## INSTALLATION OF PARTING BAR

The parting bar assists in opening the platform.

Determine position of parting bar:

### Without walk ramp:

Position parting bar so it holds the platform leaning in 2 to 18 degrees as shown.

### With a walk ramp :

If vehicle has a walk ramp, position parting bar all the way forward as shown.

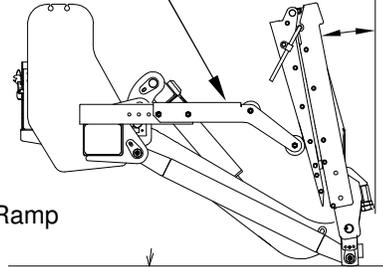
Install parting bar using two 1/2-13x2-3/4" hex bolts provided.

Tighten nuts and bolts to 50 ft lbs.



**Platform is to lean in towards parting bar when at ground. It is not to fall open to ground.**

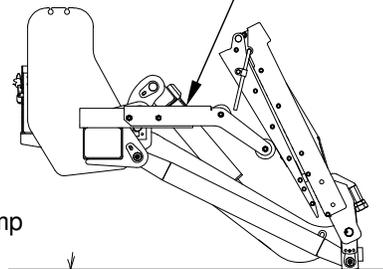
Parting Bar positioned as needed



No Walk Ramp

2 to 18 Degrees of Lean

Parting Bar positioned All way forward



Walk Ramp

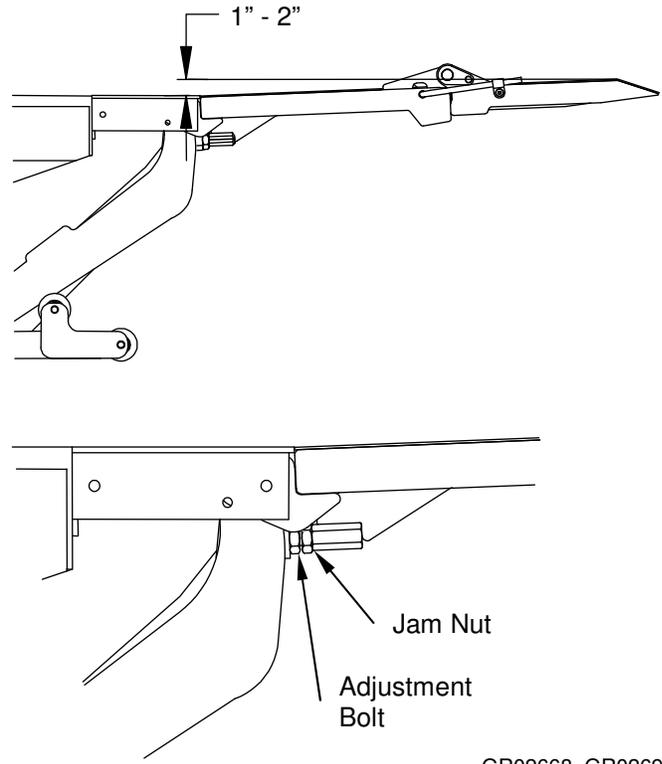
GR02900

## ADJUST PLATFORM TILT

Adjust bolts between Stop Block and Platform Hinge to achieve 1" - 2" tilt up of platform as shown. A greater tilt up is recommended for higher capacities.

### NOTE:

Adjust both Stop Block Bolts evenly.  
Tighten Jam Nuts.



GR02668, GR02690

# Chapter 4

# Installation

## INSTALLATION OF RUBBER SNUBBERS

Rubber snubbers are important for holding the platform tight in stored position. If platform, deck and deck extension are not tight excessive wear can occur.

Raise platform up 1-1/2" below the bed extension as shown.

**Note:**  
**Take care not to fully raise platform so as to contact chassis frame and damage paint on platform.**

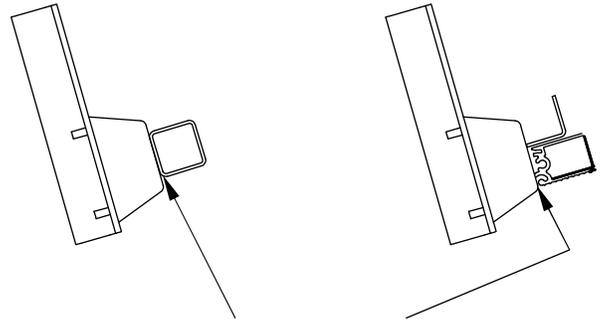
Locate Rubber Snubber flat against deck tube or against the aluminum extrusion as shown.

Weld one Snubber in place and check operation:  
Check that snubber holds platform tight.  
Check that platform clears snubber while opening.

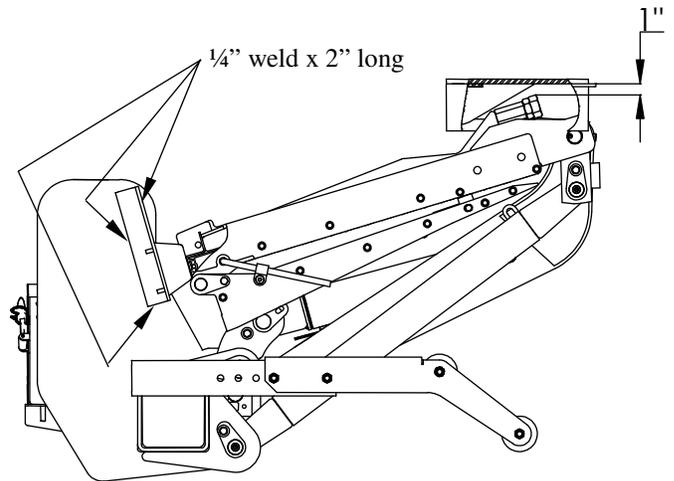
Weld second snubber on opposite side of chassis frame.

**Note:**  
**Weld snubbers to mount plate or chassis frame as required. Steel angle of snubber may be trimmed as needed.**

After installing parting bar and snubbers, carefully run liftgate up to stored position and verify platform clears the chassis frame cutout (see beginning of this chapter).



Locate snubber flat against platform cross tube or against the aluminum extrusion as shown



GR02793

# Chapter 4

# Installation

Waltco offers three suggestions for the installation of the vehicle taillights. We believe these suggested locations meet D.O.T. regulations but do not warrant that they do. Your installation of the vehicle taillights should meet all applicable regulations and requirements. This is in no way to infer that these suggestions are the only correct method of installing taillights.

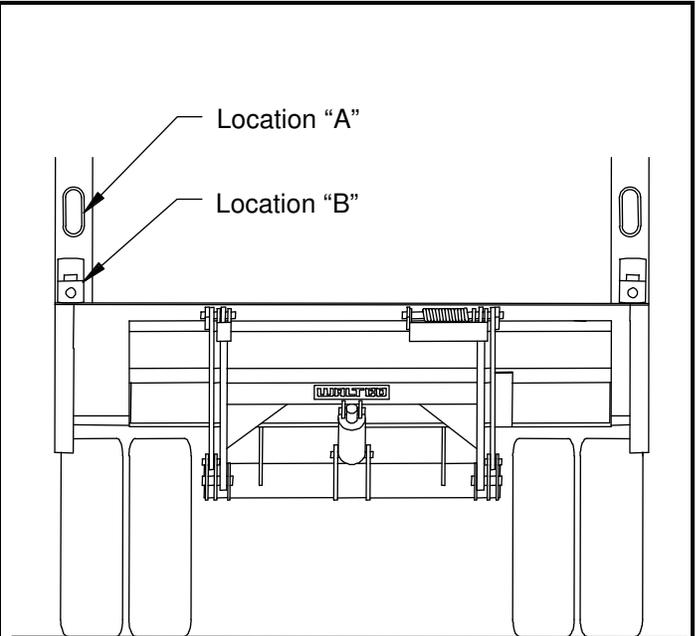
Location "A": Mount lights above bed extension and to the rear of the body rear corner posts.

Location "B": Mount lights into the rear corner posts.

**Waltco also offers dock bumpers with lights pre-installed.**

**IMPORTANT:**

**All lights must be installed in accordance with all applicable D.O.T. regulations.**



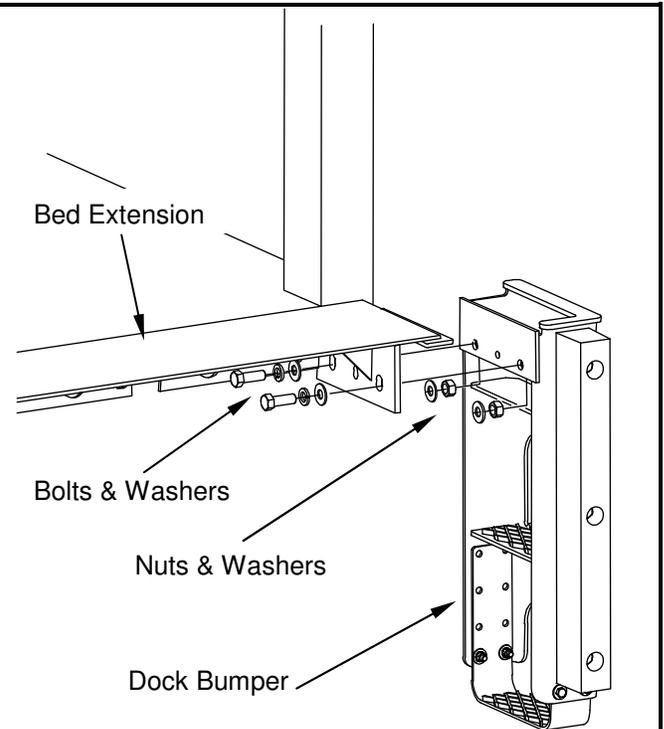
GR02762

## INSTALL DOCK BUMPERS

Slip dock bumpers on to bed extension.

Bolt bumpers to bed extension using four 5/8" bolts, nuts, washers and lock washers.

Torque bolts to 167-179 ft. lbs.



GR02740

# Chapter 4

# Installation

## INSTALL BRACES

Bolt brace and support angles as shown. Brace angle is to contact block welded to dock bumper.

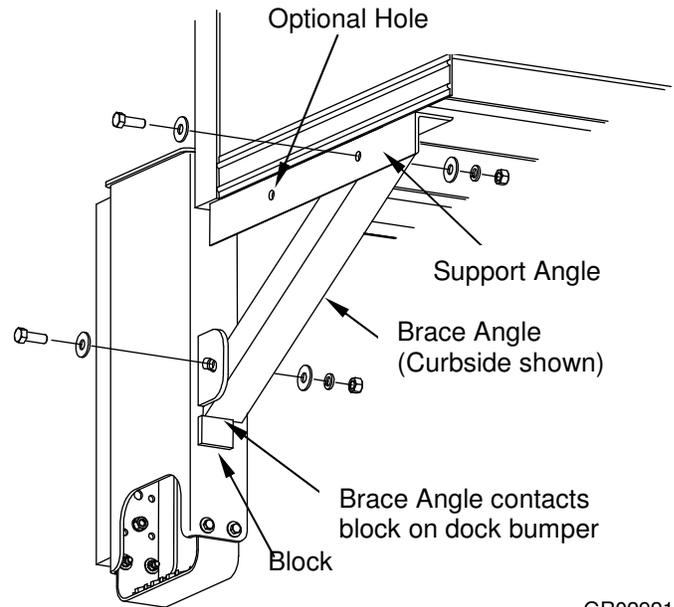
Support angle to span a minimum of 3 or 4 crossmembers.

**Note:**

**It may be necessary to trim rearward end of support angles to clear rear sill and/or dock bumper.**

**Support angles can also be shifted forward under body and use rearward hole to bolt to brace angles.**

Weld support angles to all crossmembers it contacts with minimum four (4) inches of 1/8" weld.



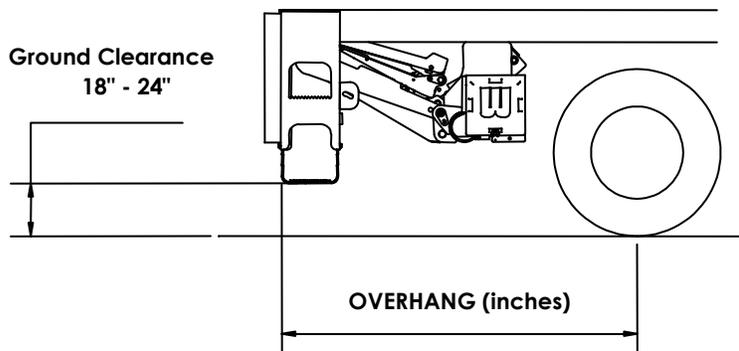
GR02921

After installation of dock bumpers, ground clearance needs to be considered. If dock bumper steps are too low, they may hit the ground when driving in or out of driveways, etc.

Adjust dock bumper steps to achieve recommended ground clearance of 18" – 24" as shown below.

Note: Overhangs greater than 11 feet may need dock bumper steps set higher to maintain a 10° departure angle. Use formula below to calculate ground clearance.

Bed heights below 46" may require the lower step to be completely removed to achieve sufficient ground clearance.



Calculate Ground Clearance for 10° departure angle:  
Ground Clearance = Overhang x .176

GR02896

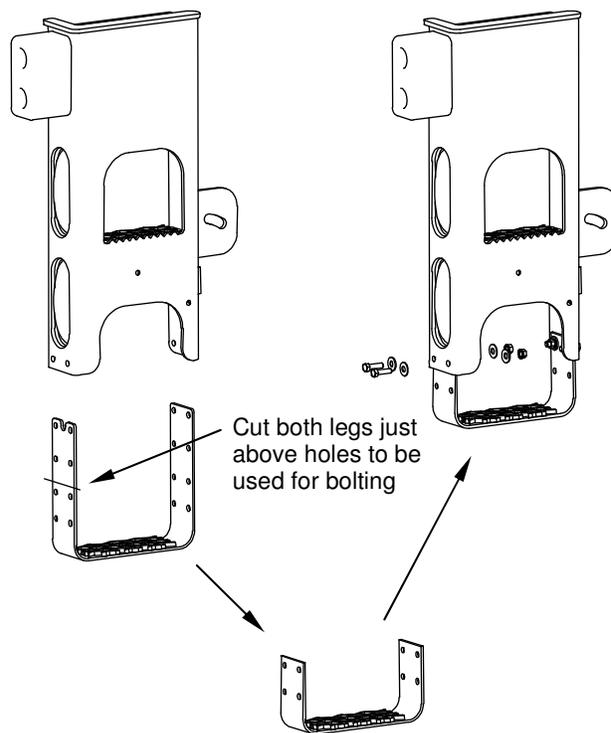
## STEP ADJUSTMENT

Steps for non-light dock bumpers can be lowered by simply unbolting and lowering to desired setting.

For dock bumpers with lights, it will be necessary to install steps.

1. Determine correct step height per above recommendations.
2. Identify hole set required for bolting into position.
3. Cut off step legs just above hole set required.
4. Bolt into position as shown.

Torque bolts to 34-37 ft. lbs.



GR02744

## BLEEDING HYDRAULIC SYSTEM

1. Lower and tilt platform all the way to the ground.
2. Remove the lower cylinder pins.

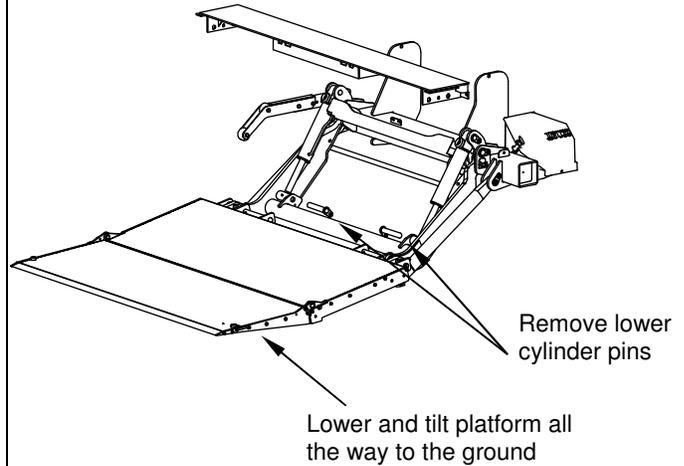


### CAUTION

While removing the pins, the cylinders may suddenly retract a few inches as a result of air in the system.

### NOTE

Take care not to nick or scratch cylinder shafts during this procedure.



GR

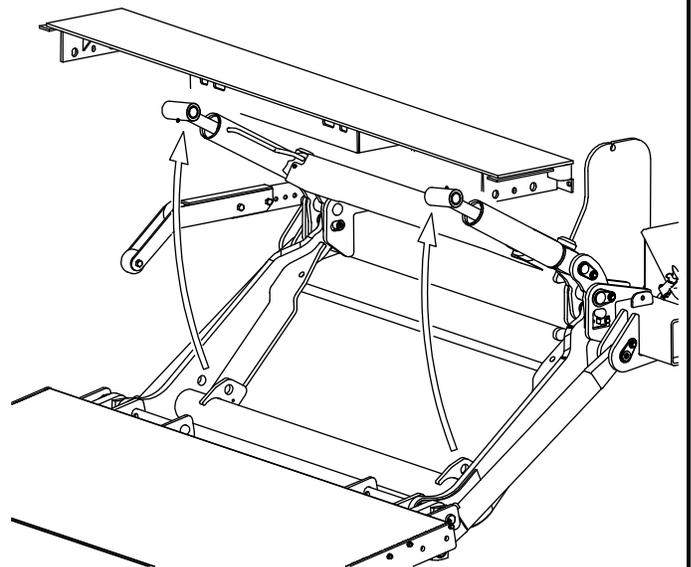
3. Rotate both cylinders, simultaneously above horizontal. Hold cylinders as high as practical, Keep in mind that cylinders will be fully extended. Hold cylinders by the barrel and not the shaft.
4. While cylinders are held above horizontal, press and hold the raise switch to fully retract the cylinders, then press and hold the lower switch to fully extend the cylinders. Do this two or three times.



### WARNING

The hydraulic cylinders will extend with great force, keep hands and all body parts out of way of the cylinder shafts to avoid injury.

5. Reinstall cylinders. Note: Reinstall driver's side cylinder first.
6. Check operation of liftgate and for leaks at fittings, retighten as required.
7. Check fluid level in pump reservoir, fill as may be required.



GR

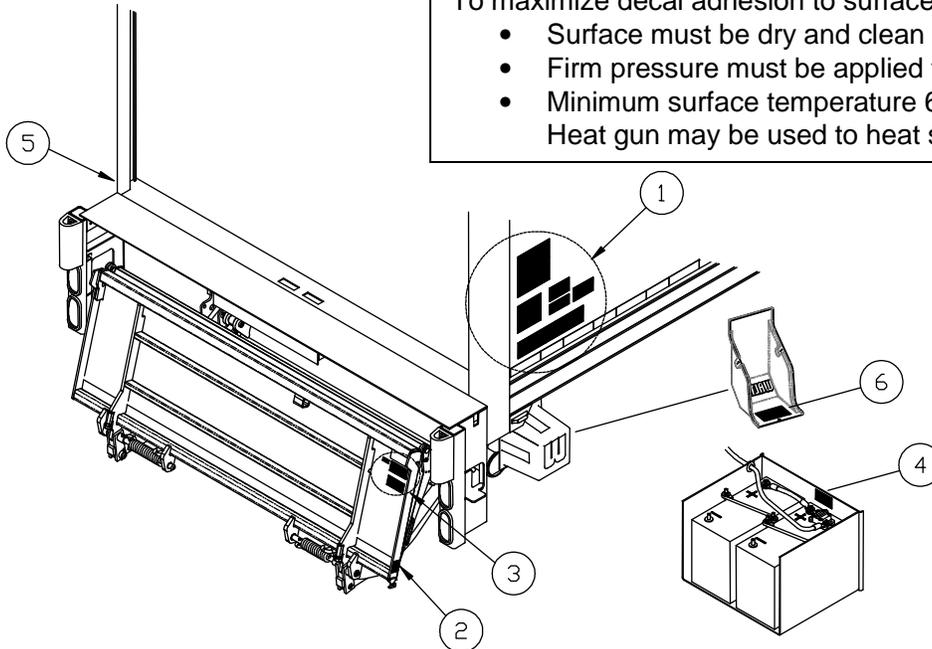
# Chapter 5 Placement of Decals

**⚠** All decals must be in place and legible or all warranties are void.

ITEM	DECAL	QTY	PART NO.	LOCATION
1	Safety Instructions	1	80100850	<b>Locate in a conspicuous place near controls.</b> <b>⚠ If your liftgate is equipped with dual controls, an additional Safety Instruction decal (80100850) is to be placed in a conspicuous place near the second set of controls.</b> Refer to the following diagram showing decal locations.
	Operation	1	80101664	
	Hazard Decal	1	80101370	
	Important Decal	1	80100828	
	Motor Thermal Switch	1	80101480	
	Stand Clear Decal	1	75089296	
2	Capacity Decal-2500lb	1	80100255	<b>Locate on curbside of platform</b> (Position so as to be read when platform is open)
	Capacity Decal-3000lb	1	80100257	
	Capacity Decal-4000lb	1	80100260	
	Capacity Decal-5000lb	1	80100263	
3	Use Handle Decal	1	75089295	<b>Locate near platform handle</b> (Positioned so as to be read when platform is being unfolded into loading position)
	Stand Clear Decal	1	75089296	
	Capacity Decal-2500lb	1	80100255	
	Capacity Decal-3000lb	1	80100257	
	Capacity Decal-4000lb	1	80100260	
	Capacity Decal-5000lb	1	80100263	
4	Circuit Breaker Decal	1	80100829	<b>Locate next to liftgate circuit breaker.</b> In applications where more than one circuit breaker is used, this decal must be placed in both locations
5	Stand Clear Decal	1	75089296	<b>Locate on driver's side of vehicle body near liftgate</b>
6	Schematics Decal	1	80101622	<b>Locate inside of pump box cover</b>

To maximize decal adhesion to surfaces:

- Surface must be dry and clean
- Firm pressure must be applied to decal
- Minimum surface temperature 65°  
Heat gun may be used to heat surface



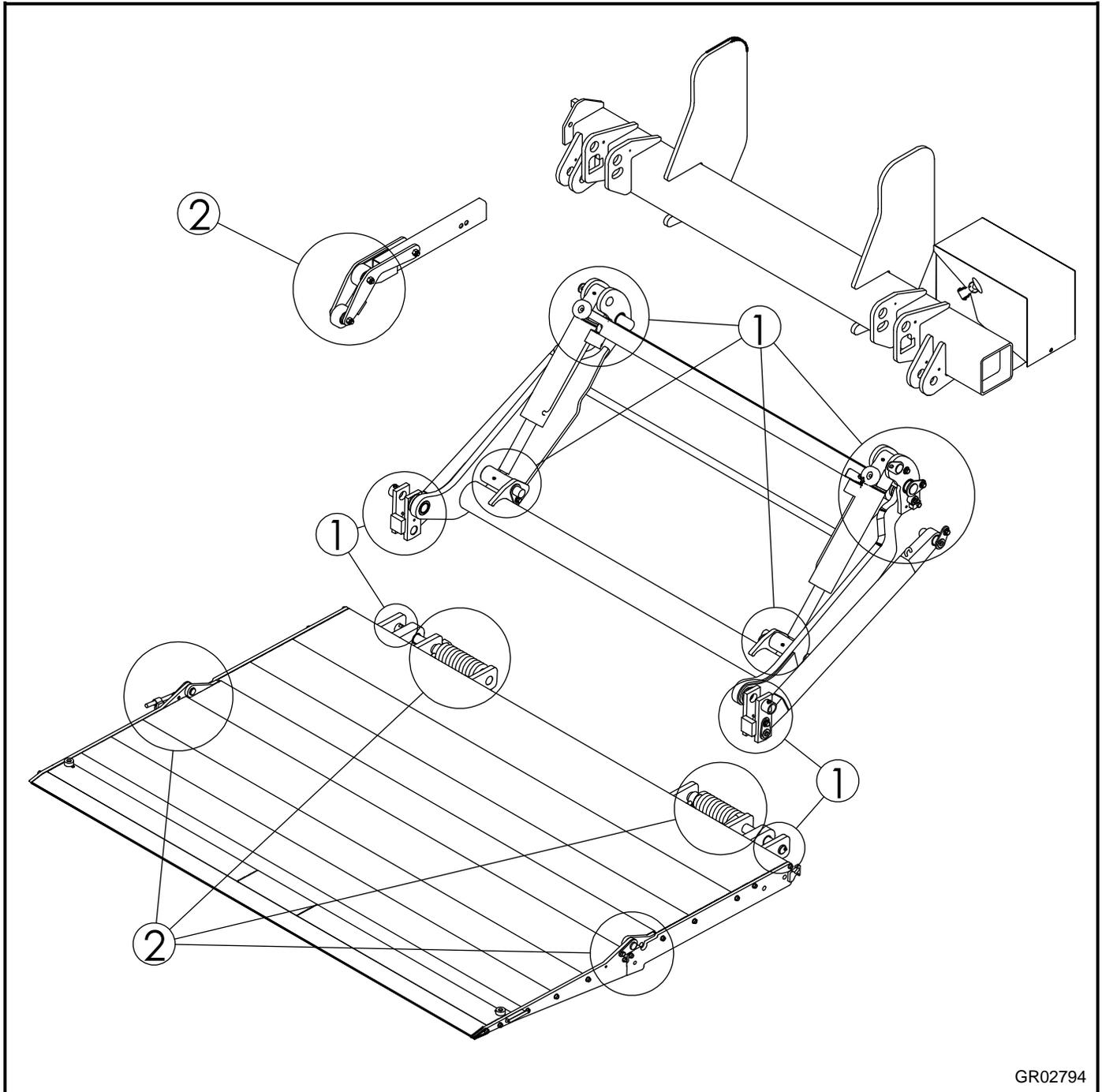
GR03007

# Chapter 6 Lubrication Instructions

The liftgate should be lubricated every 120 days.

#1 – Grease all grease fittings in pins and cylinders with grease gun.

#2 - Oil with a light weight machine oil (do not use on bearings in platform).



GR02794

# Chapter 7 FINAL INSPECTION SHEET

## IMPORTANT:

All of the following are to be checked and verified before installation is complete.

- A. Are all pivot pins secured with retaining bolt and lock washer?
- B. Are all roll pins securely in place?
- C. Does liftgate fold and unfold properly?
- D. Does the platform meet the vehicle properly?
- E. Do controls operate properly?
- F. Are bed extension, mount frame, mount plates, dock bumpers, bumper braces, taillight guards and taillights all finish welded?
- G. Are hydraulic hoses and fittings properly connected with no leaks?
- H. Are battery cables attached and clamped tight?
- I. Is circuit breaker installed at battery?
- J. Are all electrical connections coated with dielectric grease?
- K. Hydraulic system is free of air?
- L. Is pump reservoir full of oil and capped with breather plug?
- M. Are all parts properly lubricated according to the lubrication instructions?
- N. Do lights operate properly  
(Note: Lights must be installed in accordance with all applicable state and federal D.O.T. regulations)
- O. Is license plate properly installed?
- P. Are all decals properly in place and legible according to the decal placement drawings?
- Q. Is pump cover installed and securely latched?
- R. Is the owner's manual in the vehicle?
- S. Are 3/16" coil pin shims removed from platform?
- T. Does cycle counter add a cycle each time lower switch is activated and held on for 4 seconds or longer?

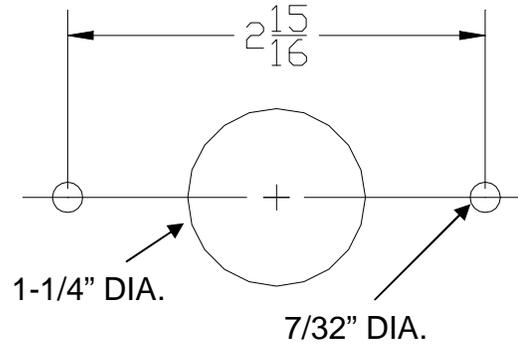
## WARNING:

Do not use liftgate if any of the above are not checked and verified. If you have any questions not covered in this manual, contact your nearest Waltco distributor, or the nearest Waltco factory.

# Hand Held Remote Installation

## DRILL SOCKET HOLES

Using dimension shown, drill mounting holes in desired location for socket.



GR00036

## INSTALL SOCKET

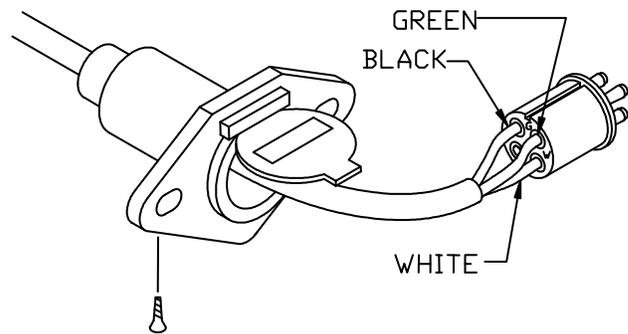
Assemble socket as shown.

Install wires according to colors:

W = White (Raise)

B or BK = Black (Lower)

G = Green (Power)



GR02240

## CONNECT WIRES TO PUMP UNIT

Route Control Cord into pump enclosure.

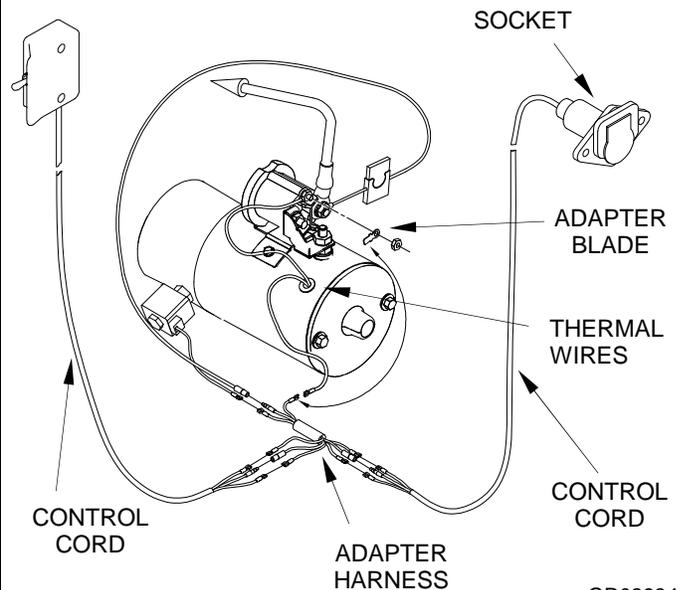
First connect Pump wires to Dual Control Adapter Harness as shown.

Connect both Control Cords to other ends of Adapter Harness as shown.

### Note!

Match wire connections male to female. Color of wire may vary.

If motor does not have Thermal Wires, plug Adapter Harness into Adapter Blade.



GR02934

# Auxiliary Battery Kit w/Dual Cables

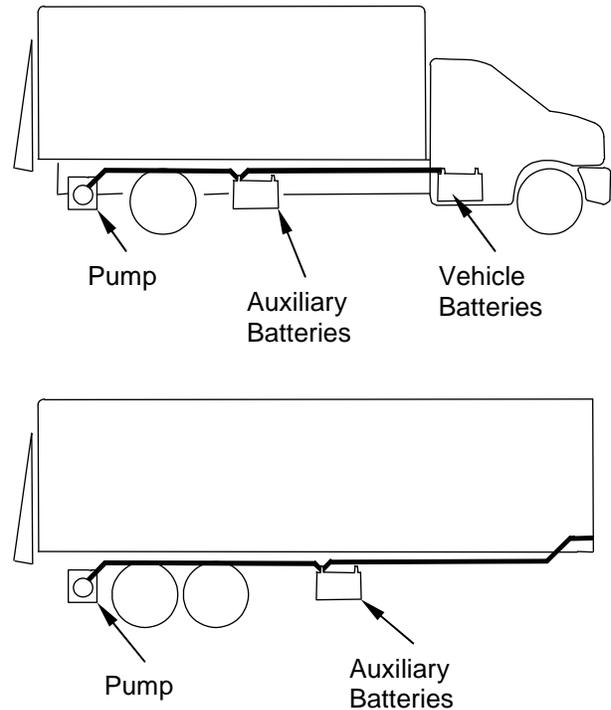
80101569

## DETERMINE BATTERY LOCATION AND CABLE ROUTING

Determine where auxiliary battery box will be mounted on the vehicle.

For trucks your installation will use cables supplied with liftgate.

For trailers additional cables are supplied with the trailer kit.

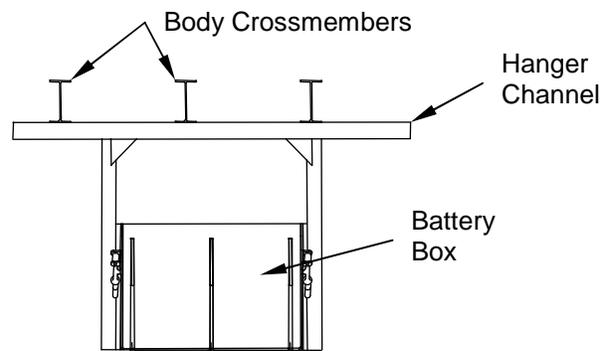


GR02768

Locate battery box in a suitable location under the vehicle body.

Weld hanger channel to body crossmembers.

Install batteries into box.



GR02769

Install #1 ga. power and ground cables to liftgate pump unit per liftgate instructions.

Route cables along chassis frame towards auxiliary battery box, securing them every 24" with cable ties provided.

Do not connect any cables to batteries at this time.



**Be certain cables are protected with grommets when passing through metal holes or over sharp edges.**

Cut cables to required length.

Use remaining length of cables to connect from auxiliary batteries to vehicle batteries (for truck applications only, trailers will use additional 0 ga. cables).

Install terminal lugs on ends of cables as shown below.

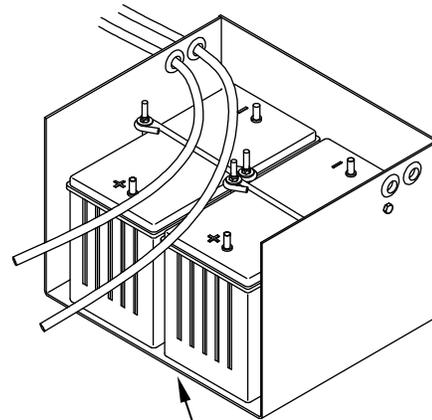


**Protect wires from any sharp edges or holes that may abrade insulated covering of wires.**



**Secure battery cable so it does not come near, or in contact with, other vehicle wiring, fuel lines, brake lines, air hoses, exhaust system, etc.**

Install cable lugs as shown below.



AUXILIARY OR VEHICLE BATTERIES

GR01961

## INSTALLATION OF TERMINAL LUG

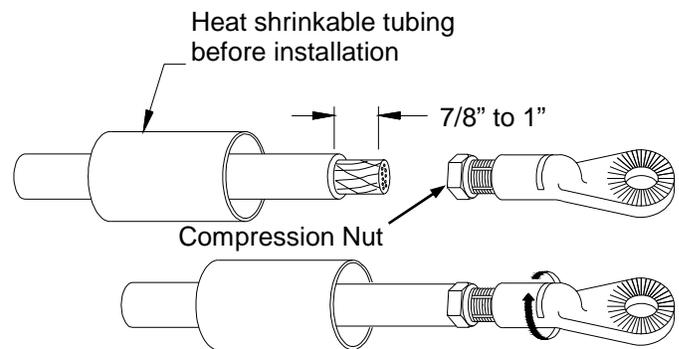
Strip 7/8" to 1" of insulation from end of cable.

Slide heat shrinkable tubing onto cable.

Insert bare wire into compression nut until it seats.

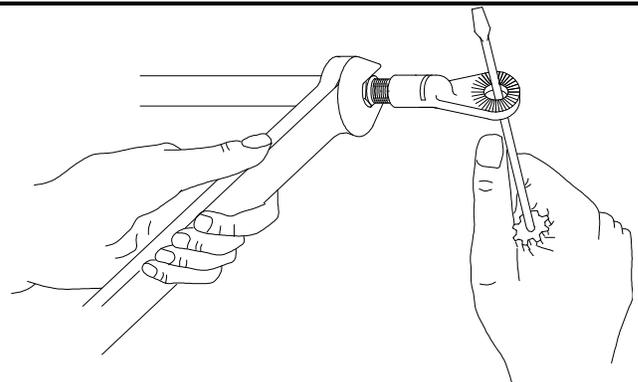
**IMPORTANT: Be sure to use correct compression nut, use 1&2 gauge nut for 1 gauge cable, use 0 gauge nut for 0 gauge cable.**

Note: Copper wire should be flush with, or slightly past nut



GR00299

Grip nut with wrench and turn terminal until nut seats



GR00300

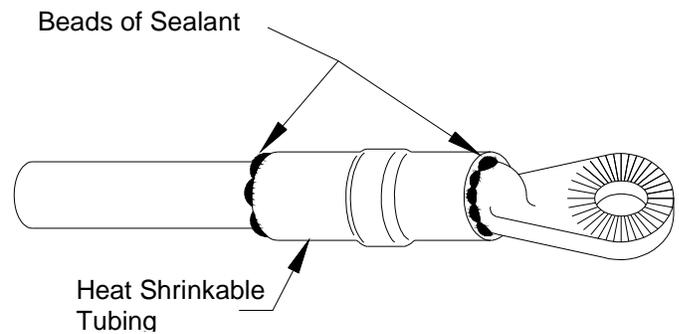
Position heat shrinkable tubing over terminal and end of cable.

**Note: Red heat shrink is applied to power cable and black heat shrink to ground.**

Shrink tubing using electric heat gun or torch.

**Note: To reduce chance of damaging tube and cable, a heat gun is recommended**

Apply sufficient heat to produce thin bead of sealant all around tube edges



GR00301

## INSTALLATION OF CIRCUIT BREAKER(S)

Batteries on a truck will require circuit breakers at both the auxiliary batteries and the vehicle batteries.

Locate and mount circuit breaker directly to batteries using copper terminal link supplied.

Circuit breakers must be mounted to give good protection against any objects coming into contact with circuit breaker terminals and causing a short. Positions must also be readily accessible to reset breakers.

**Note: Circuit Breaker is to rest solidly on battery to prevent vibration during transit.**

If unable to connect circuit breaker direct to batteries, an optional 24", maximum length, 2 Ga. battery cable may be used.

Connect cables as shown.

Apply a generous amount of Dielectric Grease to all Positive (Hot) Battery terminals and Circuit Breaker terminals.

Install circuit breaker decal, 80100829, near the circuit breaker.

For trucks, use remaining length of cables supplied with liftgate, and route from auxiliary batteries to vehicle batteries.

Install terminal lugs on cables as required per previous instructions.

Install circuit breaker and cables to vehicle batteries per previous instructions.



**Protect wires from any sharp edges or holes that may abrade insulated covering of wires.**

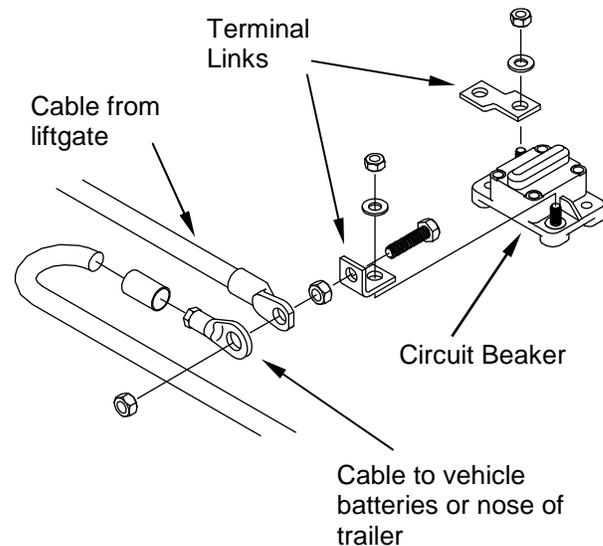
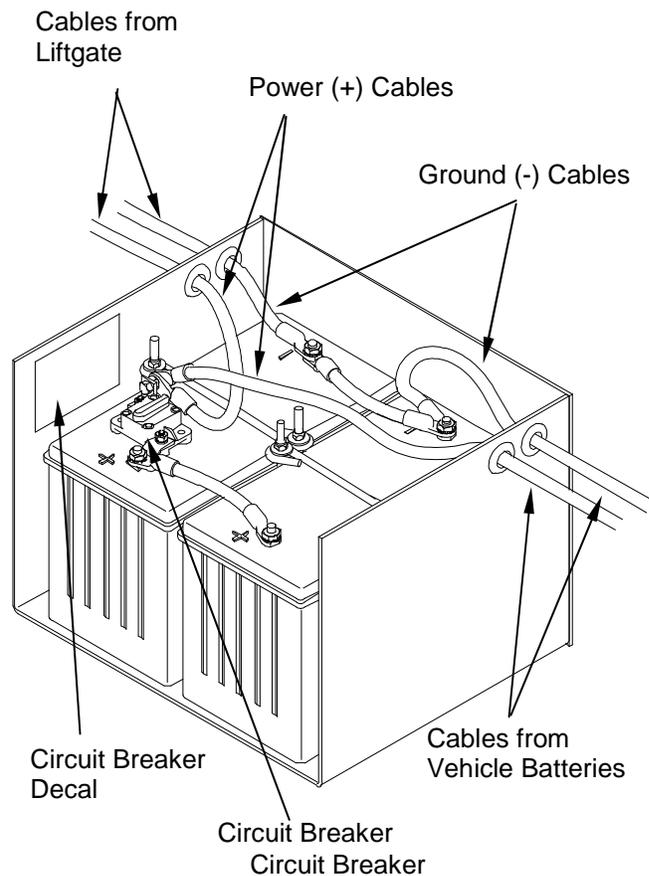


**Secure battery cable so it does not come near, or in contact with, other vehicle wiring, fuel lines, brake lines, air hoses, exhaust system, etc.**

### IMPORTANT:

If liftgate has a Mounting Bar, do not operate liftgate before bar has been removed.

See below for trailer applications.



# Auxiliary Battery Kit w/Dual Cables

80101569

## For trailer applications with dual pole socket:

Using 0 ga. cables, supplied with trailer kit, feed each end through battery-box wall and install a compression terminal on both red and black cables.

### Do not connect any cables to batteries at this time.

Run cables from battery box to trailer nose, securing them every 24" with cable ties.

## For trailer applications with dual pole socket:

Install dual pole socket in nose of trailer. Drill 1-3/4" hole in trailer and mount with hardware provided.

Route cables from auxiliary batteries to nose of trailer.

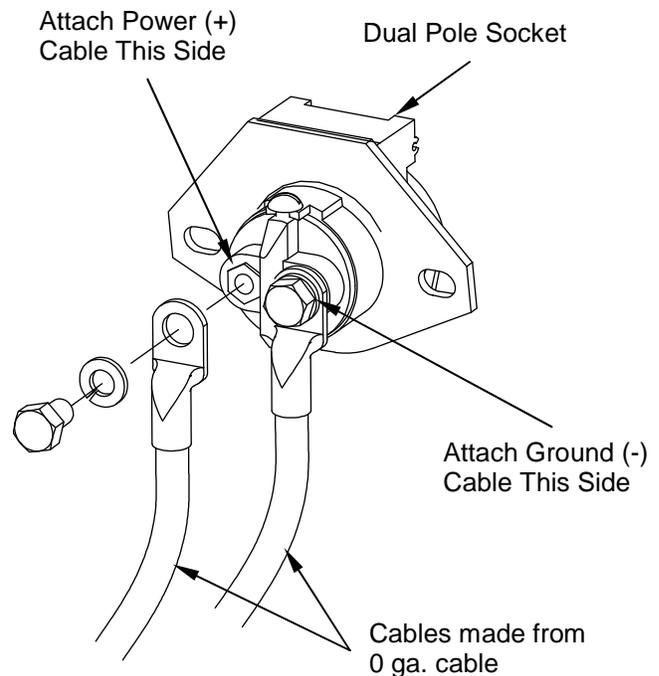
Install cables to socket as shown.

Apply a generous amount of Dielectric Grease over cable terminals.

**IMPORTANT: Be sure to orientate cables as shown, power (+) to the left, ground (-) to the right.**



**Power (charge) cable from tractor batteries to trailer must also be protected with a 150 amp circuit breaker at the tractor batteries.**



GR02770

## Note:

While these instructions can be used for single pole sockets, Waltco recommends dual pole sockets be used for their superior grounding abilities.

## For trailer applications with single pole socket:

Using 0 ga. cable, supplied with trailer kit, feed the end through battery-box wall and install a compression terminal on that end.

### Do not connect any cables to batteries at this time.

Run cable from battery box to trailer nose, securing them every 24" with cable ties.

# Auxiliary Battery Kit w/Dual Cables

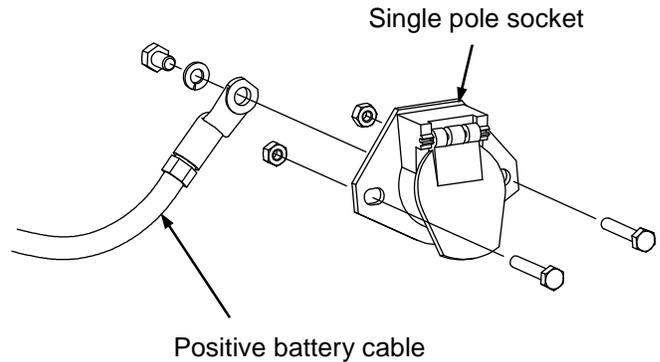
80101569

## For trailer applications with single pole socket:

Drill 1-3/4" hole in nose of trailer for trailer socket.  
Mount socket to trailer with bolts and nuts provided.  
Attach cable to back of socket with bolt provided.  
Apply a generous amount of Dielectric Grease over cable terminal.



**Power (charge) cable from tractor batteries to trailer must also be protected with a 150 amp circuit breaker at the tractor batteries.**

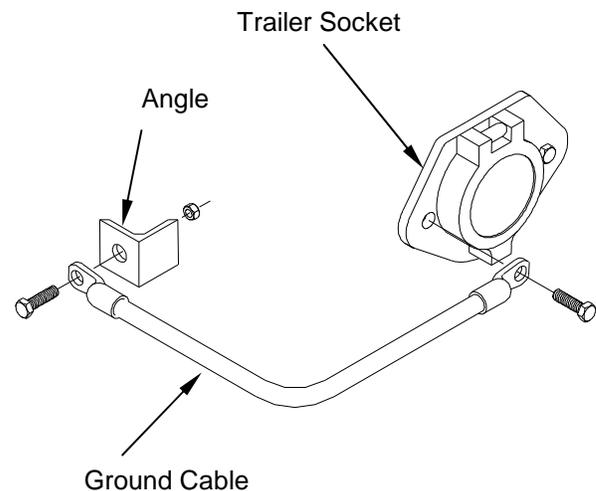


GR02739

Ground trailer socket to main structure of trailer.

Use the 18" ground cable, supplied, and bolt it to the trailer socket and suitable structure on the nose of the trailer.

An angle has been provided, it can be used by welding it to the crash plate, or other suitable structure.



GR01414

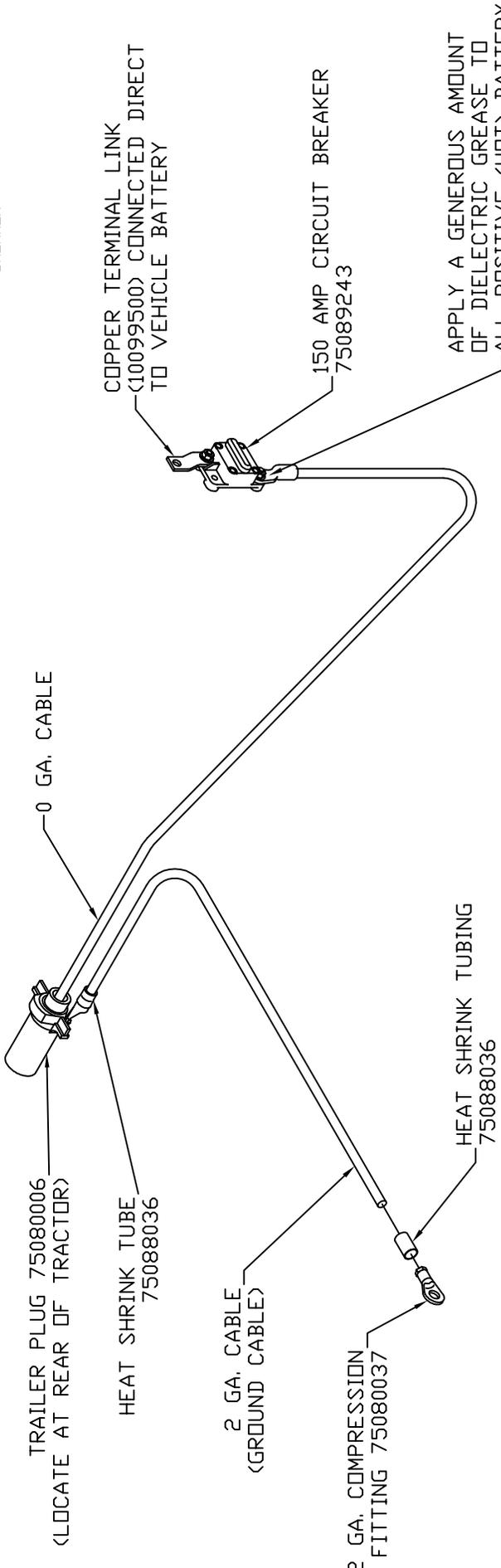
## For all trailer applications:

After single or dual pole socket is installed:

Connect cable(s) to terminals in the battery box as shown previously; using a 150 amp circuit breaker to protect the charge circuit.

EO7903  
Rev 05  
4-2016

E.O. No.	DATE	#	CHANGE	BY
4547	9-14-2001	05	REDRAWN IN AUTOCAD; CHANGED POSITION AND HOOKUP OF CIRCUIT BREAKER	MK



Page 4

INSTRUCTIONS:

THE PURPOSE OF THIS KIT IS TO RUN THE LIFTGATE OFF OF THE TRACTOR BATTERIES.

1. LOCATE CIRCUIT BREAKER DIRECTLY ON VEHICLE BATTERY USING COPPER TERMINAL LINK (10099500). NOTE: IF UNABLE TO CONNECT CIRCUIT BREAKER DIRECT TO BATTERY, USE AN OPTIONAL 24" MAXIMUM LENGTH BATTERY CABLE TO CONNECT CIRCUIT BREAKER TO VEHICLE BATTERIES.
2. CUT CABLES TO LENGTH, INSTALL COMPRESSION TERMINALS, AND APPLY HEAT TO HEAT SHRINK TUBING SUPPLIED WITH KIT (SEE DRAWING 80100823).

THIS DRAWING IS USED FOR POWER KIT NUMBER 80000618

IMPORTANT:

NEVER SECURE BATTERY CABLE IN SUCH A WAY THAT IT COMES INTO CONTACT WITH OTHER WIRING, FUEL LINES, BRAKE LINES, AIR HOSES, OR EXHAUST SYSTEM.....ETC.

PART NO.	QTY.	DESCRIPTION	MATERIAL & SPEC.
		WALTCO TRUCK EQUIPMENT CO. 280 MONTICUT AVENUE FALLSBURG, DL 4478	
INSTALLATION OF TRACTOR WIRING KIT			
DO NOT SCALE DRAWING	PAGE 1 OF 1	DATE 7-17-01	SCALE 1 - 1
DRAWN BY MK		PART NO. 80100822	

NOTES: 1 UNLESS OTHERWISE INDICATED



## Dual Control Switch, Installation Instructions

### For Kit 80000437

**Note:** Kit may include additional parts not used in all installations

#### Locating and Mounting Switch

Locate a position for Switch such that operator has a clear view of entire Platform area and will not be in the area that liftgate passes through.

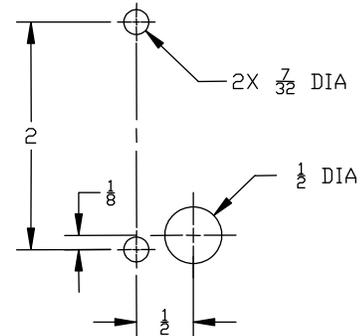
#### **IMPORTANT**

**Verify that Control Cord is long enough to reach pump unit before advancing to the next step.**

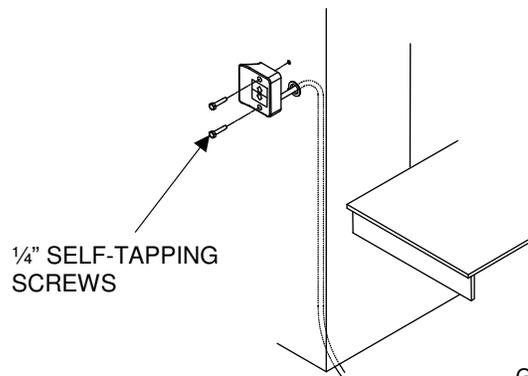
Using Switch Mounting Template or diagram to the right, drill two fastener holes with a 7/32" drill bit.

If Control Cord will be run through a hole in the side of the truck, drill 1/2" dia hole and remove all sharp edges and insert a grommet.

Mount Switch with 1/4" Self-tapping screws provided.



GR02652



GR02653

Route Control Cord into pump enclosure.

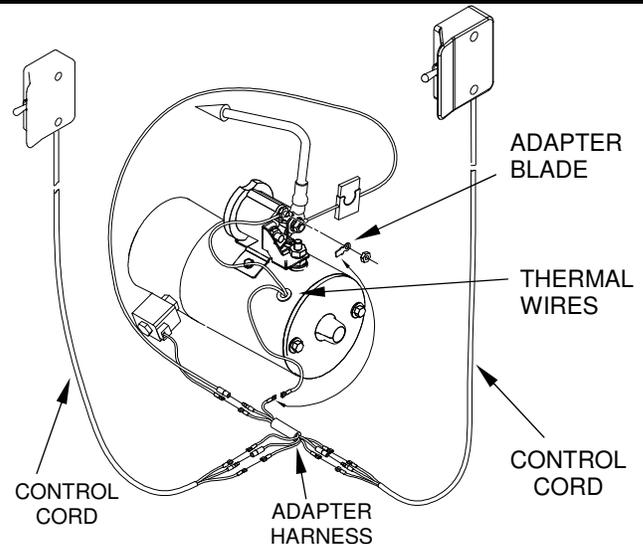
First connect Pump wires to Dual Control Adapter Harness as shown.

Connect both Control Cords to other ends of Adapter Harness as shown.

#### **NOTE:**

Match wire connections male to female. Color of wire may vary.

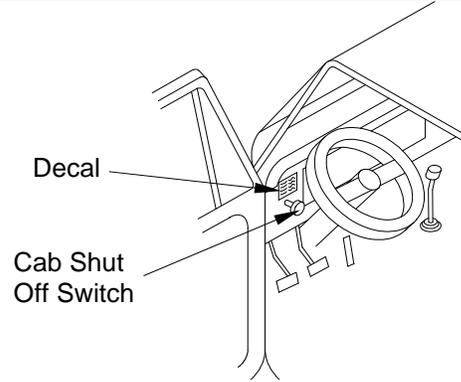
If motor does not have Thermal Wires, plug Adapter Harness into Adapter Blade.



GR02935

# Installation of Cab Shut Off Switch

Install cab shut off switch and shut off switch decal in convenient location in vehicle cab.

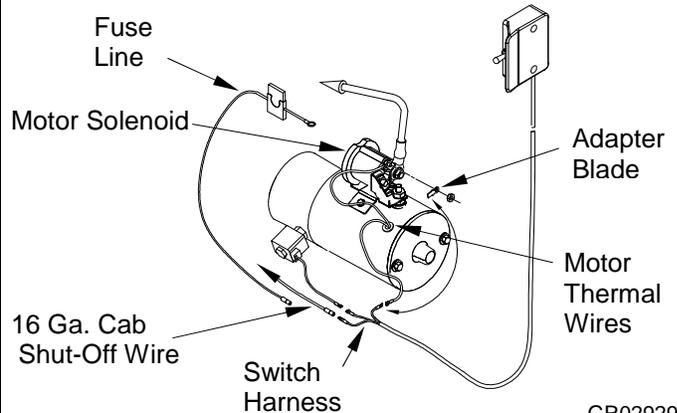


GR00379

Remove fuse line from motor solenoid. Unplug fuse line from switch harness and save for later installation.

Plug green 16 ga. x 40 ft. cab shut-off wire into switch harness.

**Note:**  
If motor does not have Thermal Wires, plug switch wire into Adapter Blade.



GR02929

Run green 16 ga. x 40 ft. cab shut-off wire to cab shut-off switch.

Cut off excess wire and connect to cab shut off switch with supplied #10 ring terminal.

Re-using the fuse line, plug into excess 16 ga. wire.

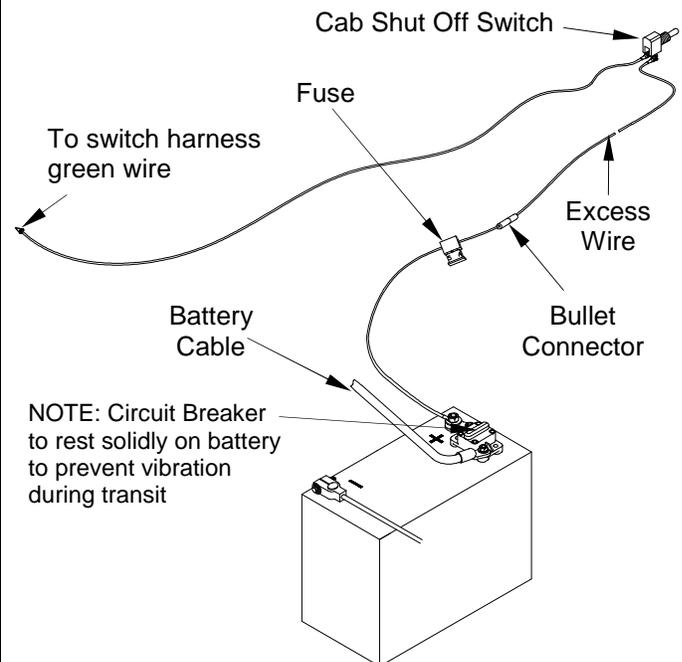
Run excess 16 ga. wire from vehicle battery to cab shut off switch. Fuse end to be toward battery.

**Note: Do not connect to battery at this time.**

Connect 16 ga. wire to cab shut off switch with supplied #10 ring terminal.

Connect fuse line to battery with attached 3/8" ring terminal.

**Important: Heat shrink all connectors.**



GR00716

# EM & HLF UNDER-RIDE INSTALLATION

## INSTALLATION OF UNDER-RIDE BUMPER

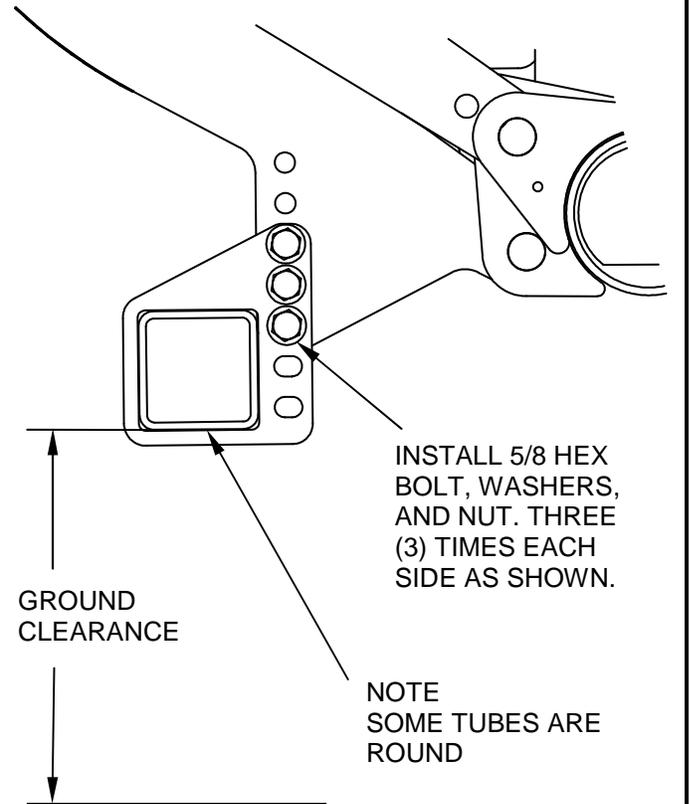
Align slots of under-ride bumper weldment with holes in lift arm at the desired height.

Install supplied 5/8" bolts, washers (2 per instance), and nuts. Three (3) must be used on each side of bumper as shown.

Torque to 100 ft-lbs minimum.

Operate liftgate to ensure proper ground clearances through complete cycle.

**NOTE:** To be compliant with Federal DOT Standard, Part 571.224, bumper must be installed per above directions and cannot exceed 22" of Ground Clearance in stored position.



GR02734

# INSTALLATION INSTRUCTIONS

## HLF CERTIFIED UNDER-RIDE TRAILER INTERFACE KIT

This Interface Kit is for mounting Waltco HLF-40/50 Flipaway to trailers with sliding rear suspensions.



**This kit must be used to meet Canadian Under-ride CMV223 Certification.**

**Interface components also must be welded as shown to meet certification.**

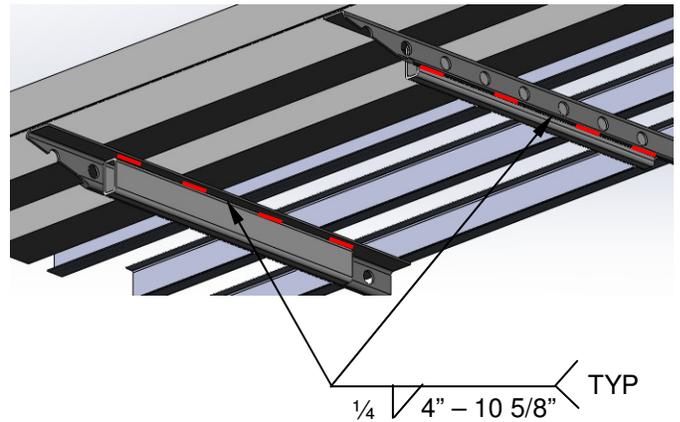
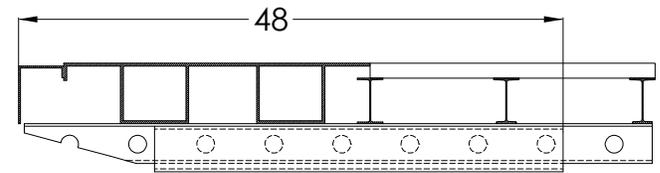


**Ensure “Z” channels are adequately welded to trailer body.**

### Step 1:

Locate the 3x4 rectangular tubing 48” from rear sill as shown and weld to “Z” channels of trailer.

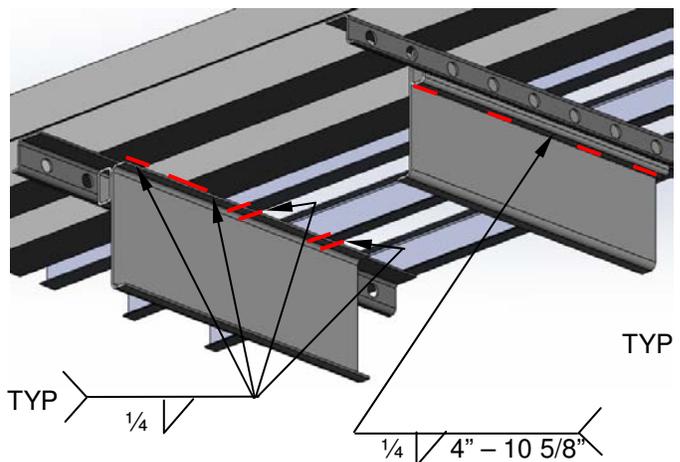
Weld four 4” long  $\frac{1}{4}$ ” fillets on top and bottom of each 3x4 tube to the “Z” channels as shown.



### Step 2:

Locate the formed channels to inside of 3x4 tubing with “C” facing inward and up tight against the crossmembers as shown. Align length flush with ends of 3x4 tubing.

Weld  $\frac{1}{4}$ ” fillets on top of “C” channels to all crossmembers in contact. Weld  $\frac{1}{4}$ ” fillets on top of “C” channel parallel to “I” beam crossmembers on both sides. **DO NOT WELD ACROSS BOTTOM OF “I” BEAMS.** Then on outside of “C” channels, weld four 4” long  $\frac{1}{4}$ ” fillets between “C” channels and 3x4 tubes as shown.



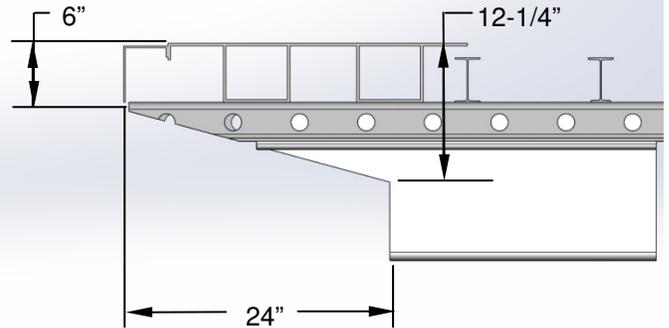
# INSTALLATION INSTRUCTIONS

## HLF CERTIFIED UNDER-RIDE TRAILER INTERFACE KIT

### Step 3:

Cut away trailer frame as required to obtain the minimum clearance indicated.

NOTE: Same cut away as in installation manual 80122701



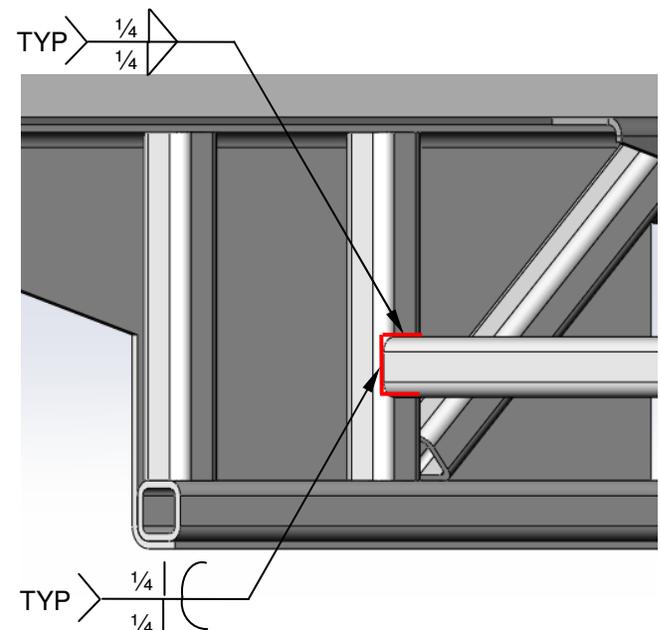
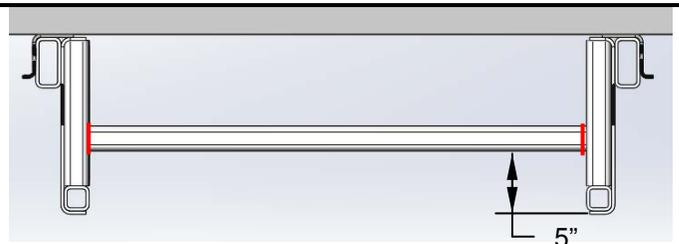
P

### Step 4:

Place long 2x2 tube horizontal between interface plates. Locate on center 2x2 tube approximately 5" from the bottom of the "C" channel as shown.

Ensure interface plates are hanging vertical and spacing between plates is consistent from top to bottom within +/-1/16"

Weld 1/4" fillets and flare bevels all around each end of long 2x2 tube to vertical 2x2 tubes as shown.



# LIFTGATE INTERFACE INSTALLATION

80101257

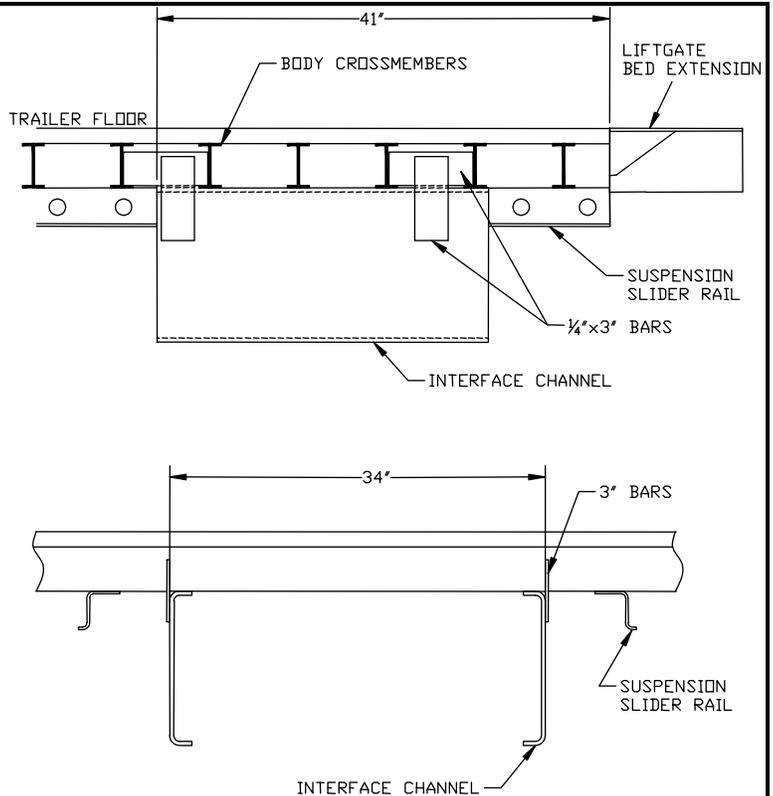
This Interface Kit is for mounting most Waltco Flipaway and Conventional liftgates to trailers with sliding rear suspensions.



This kit is not to be used for any liftgates that have a capacity rating over 4,400 pounds.

Interface channels must be welded to crossmembers as shown for adequate support of liftgate.

- Determine location of interface channels, 41" forward of rear sill, and at 34" spacing (centered on trailer).
- Weld channels to crossmembers as shown below.
- Cut four (4) of the 3" bars to fit between webs of crossmembers.
- Locate bars flush with channels and weld as shown.
- Locate and weld the additional 3" bars to tie channels and bars between crossmembers.



GR02752

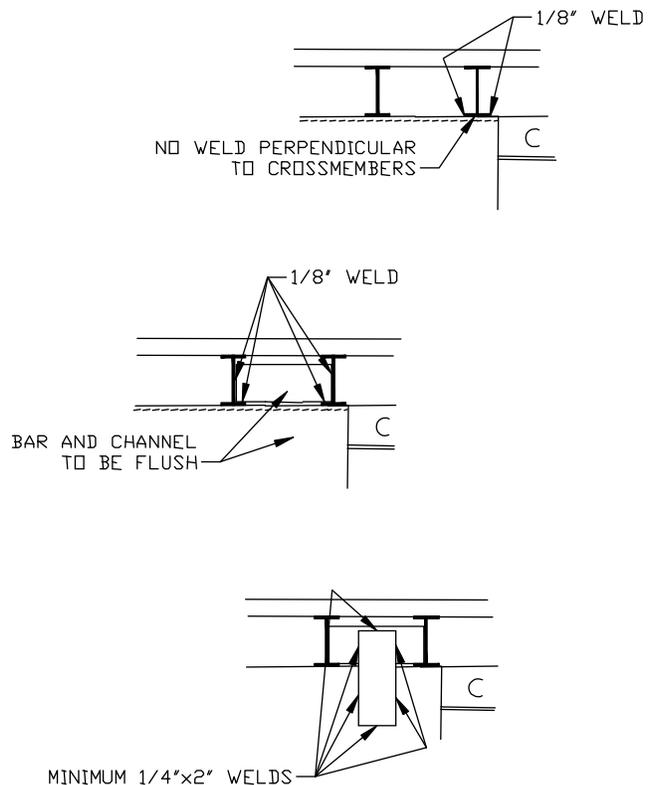
## WELDING

- Weld each interface channel to minimum of four (4) crossmembers as shown above and at right.



Weld parallel to Cross Members, along top of Mounting Angles. **Never** perpendicular to Cross Members, as structural damage to the Trailer could result.

- Weld 3" bars between crossmembers at each end of interface channel as shown.
- Weld vertical 3" bars tying horizontal 3" bars and interface channels together as shown.



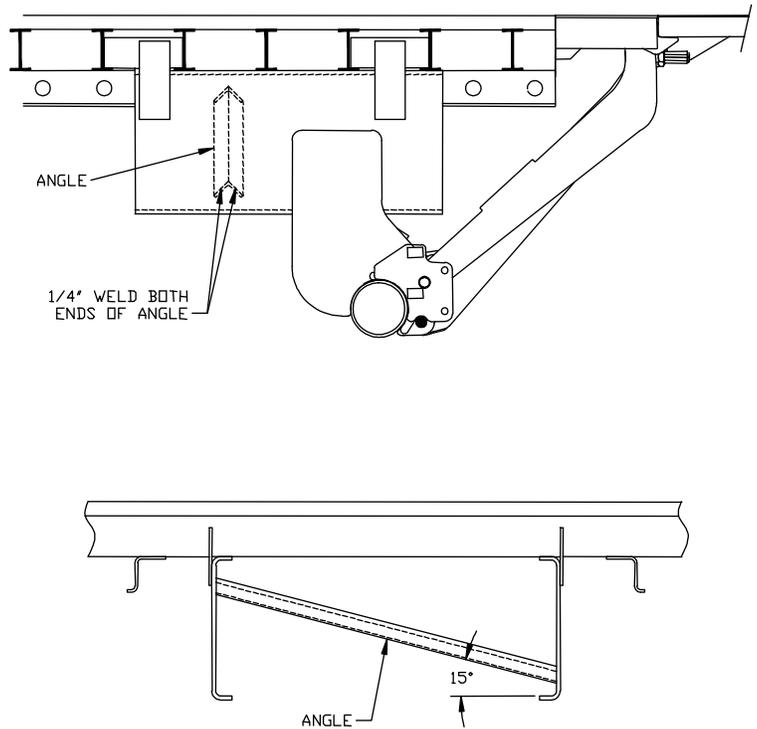
GR02753

# LIFTGATE INTERFACE INSTALLATION

80101257

## ANGLE

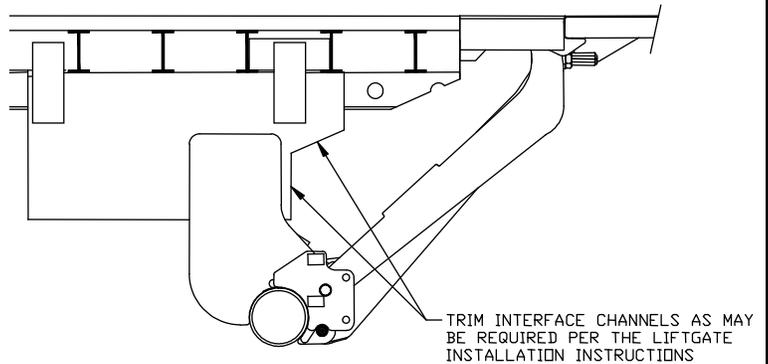
- Cut 2'x2" angle to fit between interface channels at an angle of approximately 15 degrees as shown.
- Position angle approximately as shown, such that it will not interfere with the liftgate. (This step should be done after liftgate is positioned)
- Weld angle into position.



GR02754

## Trim Channels

- Trim interface channels and other trailer components as may be required per the liftgate installation instruction manual.



GR02755

Rev 05  
EO6413  
8-12-10

# HLF WALK RAMP KIT INSTALLATION INSTRUCTIONS

## HLF WALK RAMP KIT

\*This kit is for bed height ranges of 49" fully laden to 60" empty.

\*\*Additional bed height restrictions may apply.

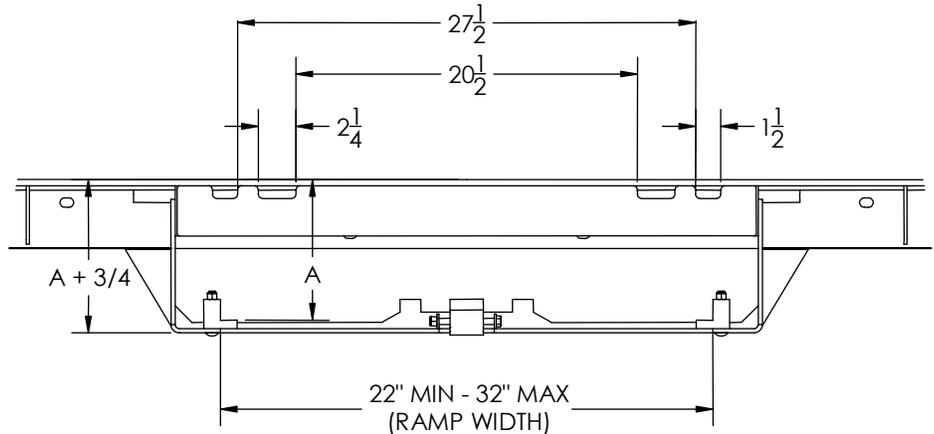
### Walk Ramp Clearances

Check clearances prior to installing walk ramp kit.

Note Walk Ramp "A" Dim

Remove any items that cause interference.

This kit includes Walk Ramp Latch, Up-Stops, and Mounting Bracket.



GR02804

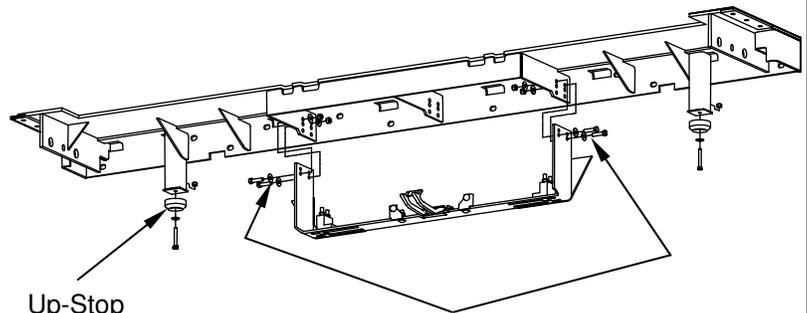
### Assemble Walk Ramp Bracket and Up-Stops to Bed Extension

Bolt Walk Ramp Bracket to Bed Extension, as shown, with supplied 3/8" bolts, nuts, and washers. **See chart on next page.**

**Note: Walk Ramp Bracket goes outside of support bars of Bed Extension.**

Bolt on Up-Stop Pads to Bed Extension, as shown, with supplied 5/16" bolts, nuts, and washers.

**Note: Failure to locate up-stop pads will result in damage to liftgate and walk ramp.**



Up-Stop Pads

Bolt Walk Ramp Bracket to outside of support bars as shown. **See Chart for proper mounting.**

GR02805

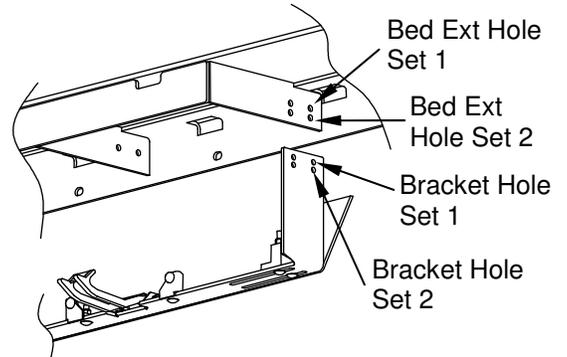
# HLF WALK RAMP KIT INSTALLATION INSTRUCTIONS

## Mounting Chart for Walk Ramp Bracket

Based on the walk ramp "A" dim and type of walk ramp, mounting the walk ramp bracket varies slightly.

Walk Ramp Type	A = 8-1/2"		A = 9"	
	Bracket Hole Set	Bed Ext. Hole Set	Bracket Hole Set	Bed Ext. Hole Set
Standard	2	1	1	1
Spring Assist	2	2	1	2

**IMPORTANT: For every inch the walk ramp is lowered beyond 8-1/2", the equal amount must be added to minimum laden bed height.**



GR02858

## Additional Spacers

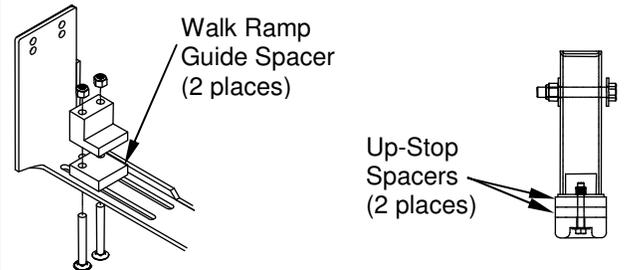
If "A" dim is 8-1/2" with standard walk ramp, no spacers needed.

If "A" dim is 8-1/2" with spring assist walk ramp, add Walk Ramp Guide Spacers and one (1) Up-Stop spacer at each location.

If "A" dim is 9" with standard walk ramp applies, add one (1) Up-Stop Spacer to each location.

If "A" dim is 9" with spring assist walk ramp applies, add Walk Ramp Guide Spacers and two (2) Up-Stop spacers at each location.

**IMPORTANT: For every inch the walk ramp is lowered beyond 8-1/2", the equal amount must be added to minimum laden bed height.**

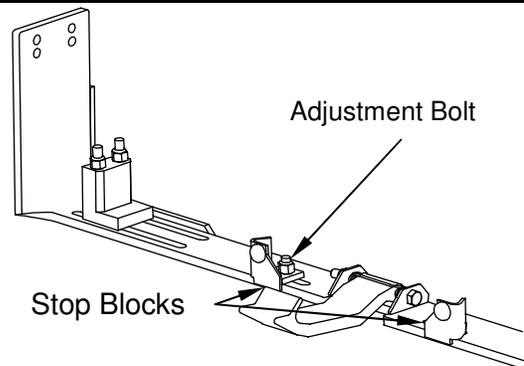


GR02857

## Adjust Stop Blocks

Loosen adjustment bolts and slide stop blocks to proper width for the ramp.

Retighten adjustment bolts.



GR03008

# HLF WALK RAMP KIT INSTALLATION INSTRUCTIONS

## Assemble Platform Brackets to Platform Frame

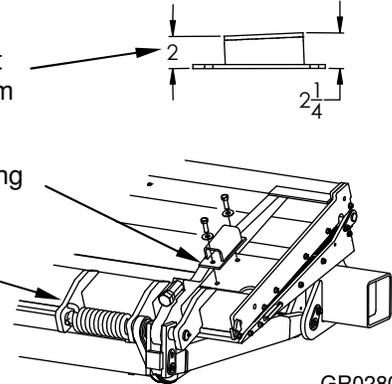
Orientate the Platform Bracket with short leg towards the platform hinge.

Bolt on Platform Brackets with supplied 1/2" self tapping bolts.

Short Leg of  
Platform Bracket  
Towards Platform  
Hinge

Short Leg of  
Platform Bracket  
Towards Platform  
Hinge

Bolt to existing  
frame plate  
Platform  
Hinge



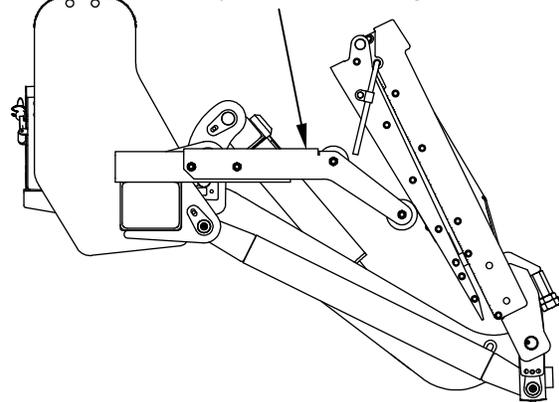
GR02806

## Adjustment of Parting Bar

The Parting Bar must be located in the fully retracted position as show to right.

Tighten nuts and bolts to 50 ft lbs.

Fully retracted Parting Bar



GR02799

## Final Inspection

After all components from Walk Ramp Kit have been installed, carefully run liftgate through a complete cycle to check for interferences.

Check platform storage:

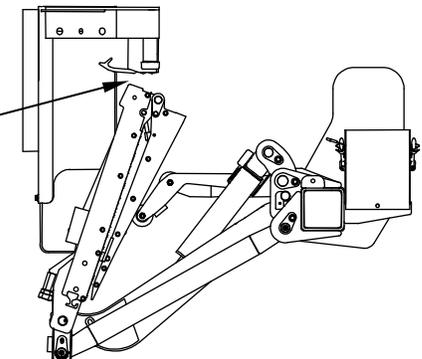
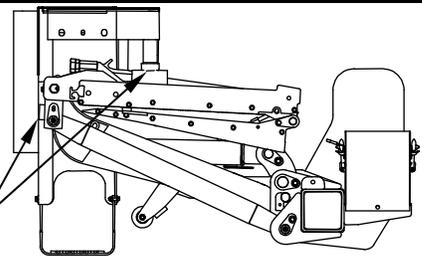
- Ensure Up-Stops contact Platform Brackets
- Ensure liftgate does not extend beyond steel of Dock Bumper

Check platform operation:

- Ensure platform does not contact Walk Ramp Bracket nor Up-Stops when opening and closing.
- If contact does occur, the Parting Bar was not adjusted or the bed height is too low.

Check Up-Stop  
contact &  
liftgate location

Check for  
contact while  
opening and  
closing liftgate



GR02808

# Chain Anchor Kit Installation Instructions

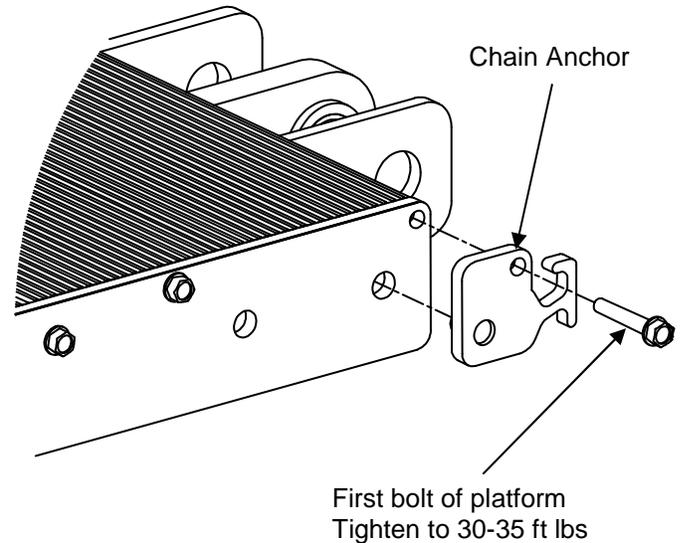
80101620

## CHAIN ANCHOR INSTALLATION

Remove first bolt of platform on curb side of vehicle.

Locate Chain Anchor into side plate hole and align bolt holes as shown.

Re-install first bolt of platform and tighten to 30-35 ft lbs.

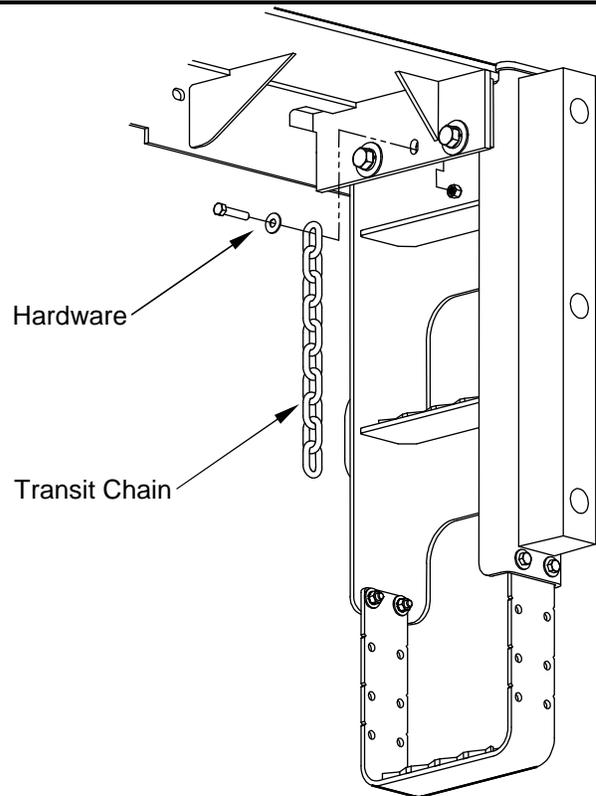


GR02939

## TRANSIT CHAIN INSTALLATION

Bolt Transit Chain to Bed Extension with 3/8-16 x 1-1/4" Gr 8 bolt, Washer and Locknut as shown.

Note: If Dock Bumpers are included, they must be installed prior to installing Transit Chain.



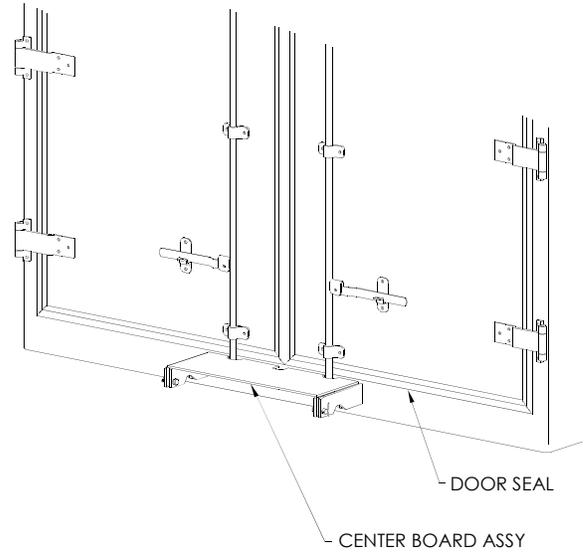
GR02898

EO6903  
Rev 01  
11/5/12

# INSTALLATION OF BED EXTENSION FOR SWING DOORS EM LIFTGATES (WELD-ON)

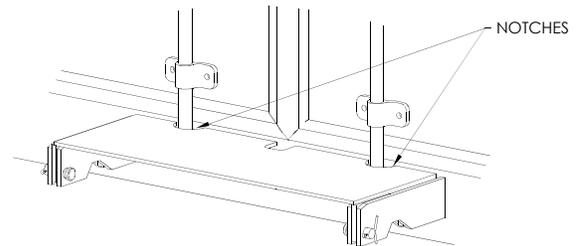
## LOCATE CENTER BOARD

Locate Center Board just below the door seals.  
Center Board to be centered on vehicle body.



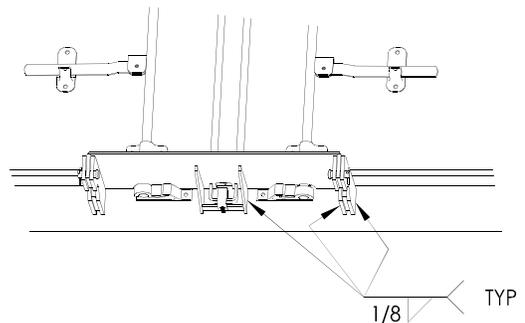
GR02995

Notch Center Board to clear door locking rods and hardware.



GR02996

Weld Center Board to rear sill of body as shown.

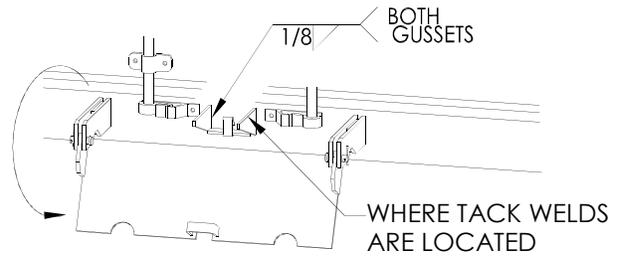


GR02997

# INSTALLATION OF BED EXTENSION FOR SWING DOORS EM LIFTGATES (WELD-ON)

Grind off tack welds from gussets and verify Center Board rotates as shown.

Weld inside of both gussets as shown.



GR02998

## LOCATE OUTER BOARDS

The Outer Boards are to be located at same height as Center Board.

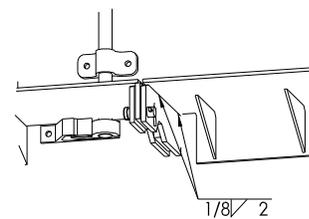
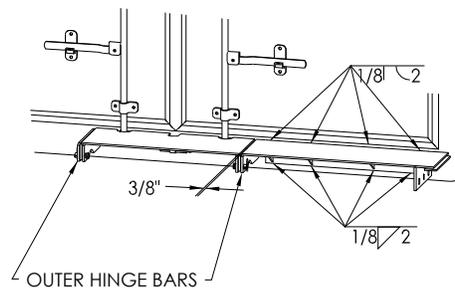
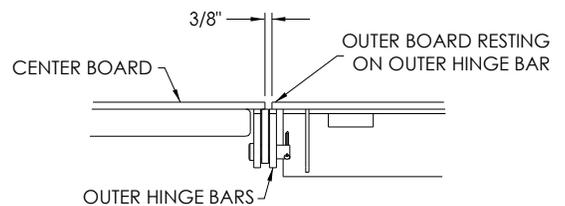
Locate Outer Boards so they are resting on Outer Hinge Bars, with 3/8" gap between boards as shown.

Weld top and bottom of Outer Boards with 2" welds over and under each of the gussets and side bars, as shown.

Weld Outer Boards to Center Board Outer Hinge Bars as shown.

Note:

Only curbside Outer Board shown, weld street side Outer Board the same.



GR02999

# How To Order Parts

**Repairs should be made only by authorized mechanics using WALTCO Replacement parts.**

**When ordering repair or replacement parts, please include all the information asked for below. If this information is not available, a complete written description or sketch of the required part will help WALTCO identify and deliver the needed part to you.**

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## **THE FOLLOWING INFORMATION MUST BE INCLUDED:**

1. SERIAL NUMBER - [WALTCO liftgate serial numbers can be found on the Specification Tag attached to the mount frame. (On older units the Specification Tag is located on the side or bottom of the platform.)]
2. MODEL NUMBER - [Or capacity]
3. PLATFORM SIZE

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## **THEN INCLUDE THE FOLLOWING INFORMATION:**

4. PART NUMBERS
5. DESCRIPTION
6. QUANTITY REQUIRED

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## **MAIL, E-MAIL OR PHONE YOUR REQUEST TO:**

Waltco Lift Corp  
285 Northeast Avenue  
Tallmadge, OH 44278  
1-800-411-5685  
FAX: 1-800-411-5684  
E-MAIL: parts@waltco.com

**ALL PARTS ARE F.O.B. FROM THE SHIPPING FACTORY**

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## **PLEASE NOTE:**

**To assure you of continuing and effective quality control, our warranty policy permits replacement of hydraulic cylinders, valves and motor pump units when their factory seals are intact. Parts under warranty will be exchanged promptly after careful inspection of the returned assemblies.**

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Every vehicle that has a WALTCO Liftgate must have legible **WARNING AND OPERATION DECALS** clearly posted on the vehicle and an **OWNER'S MANUAL** in the vehicle at all times as a guide for proper operation and maintenance.

Additional **WARNING DECALS**, **OPERATION DECALS** and **OWNER'S MANUALS** can be obtained from **WALTCO LIFT CORP.**

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**NOTE:**

**When ordering, give model  
and serial number of the liftgate.**

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# ***IMPORTANT***

## **WARNING**

**Improper operation and maintenance of this liftgate could result in severe personal injury or death.**

**Read and understand the contents of this manual and all warning and operation decals before operating and/or performing maintenance on this liftgate.**

**For SAFETY information on this liftgate see Chapter 1 of this manual**