



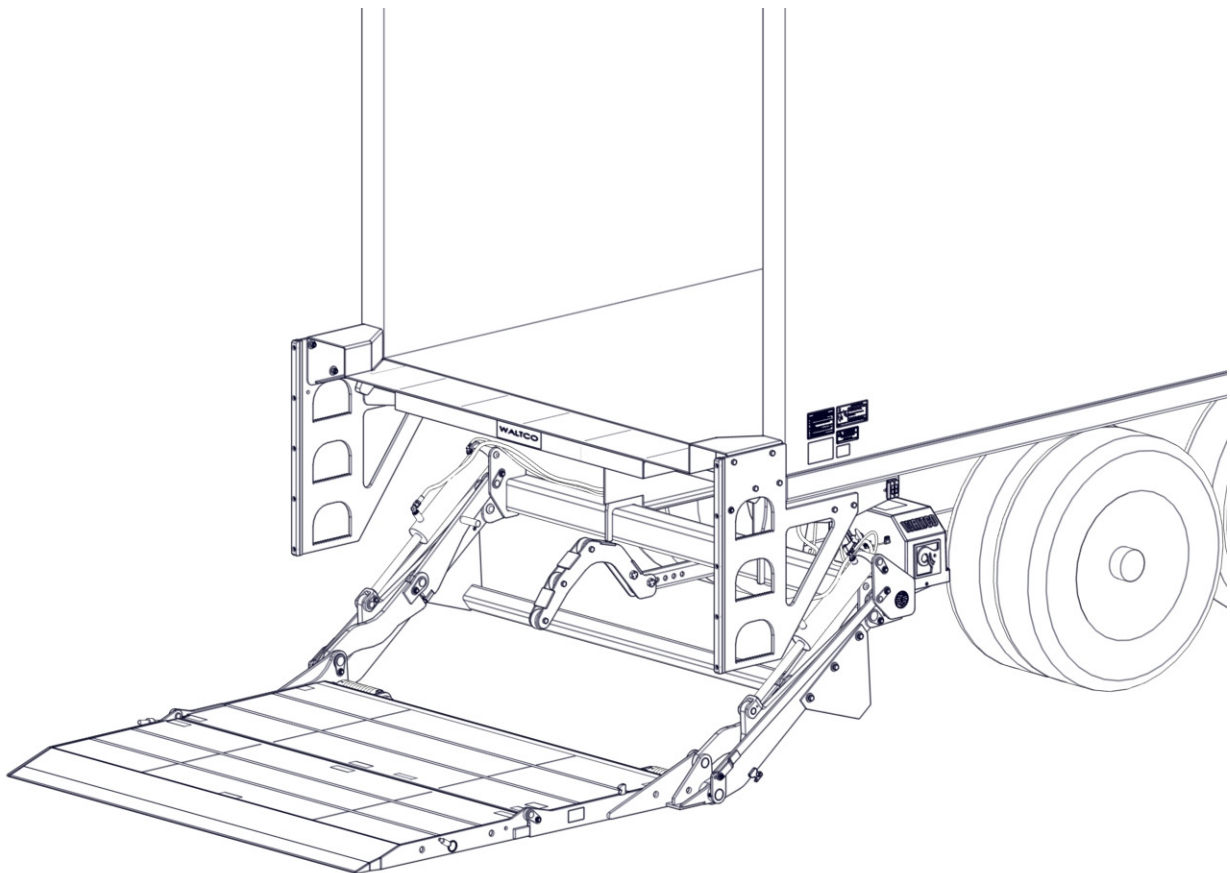
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Installation Manual

WFL-25, 33

2500, 3300 lb. Capacity Flipaway Liftgates



Last Change

<i>Date</i>	<i>Page(s)</i>	<i>Description</i>
05-2019	All	ADDED GALVANIZED FRAME AND ALUM PLATFORM

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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.

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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

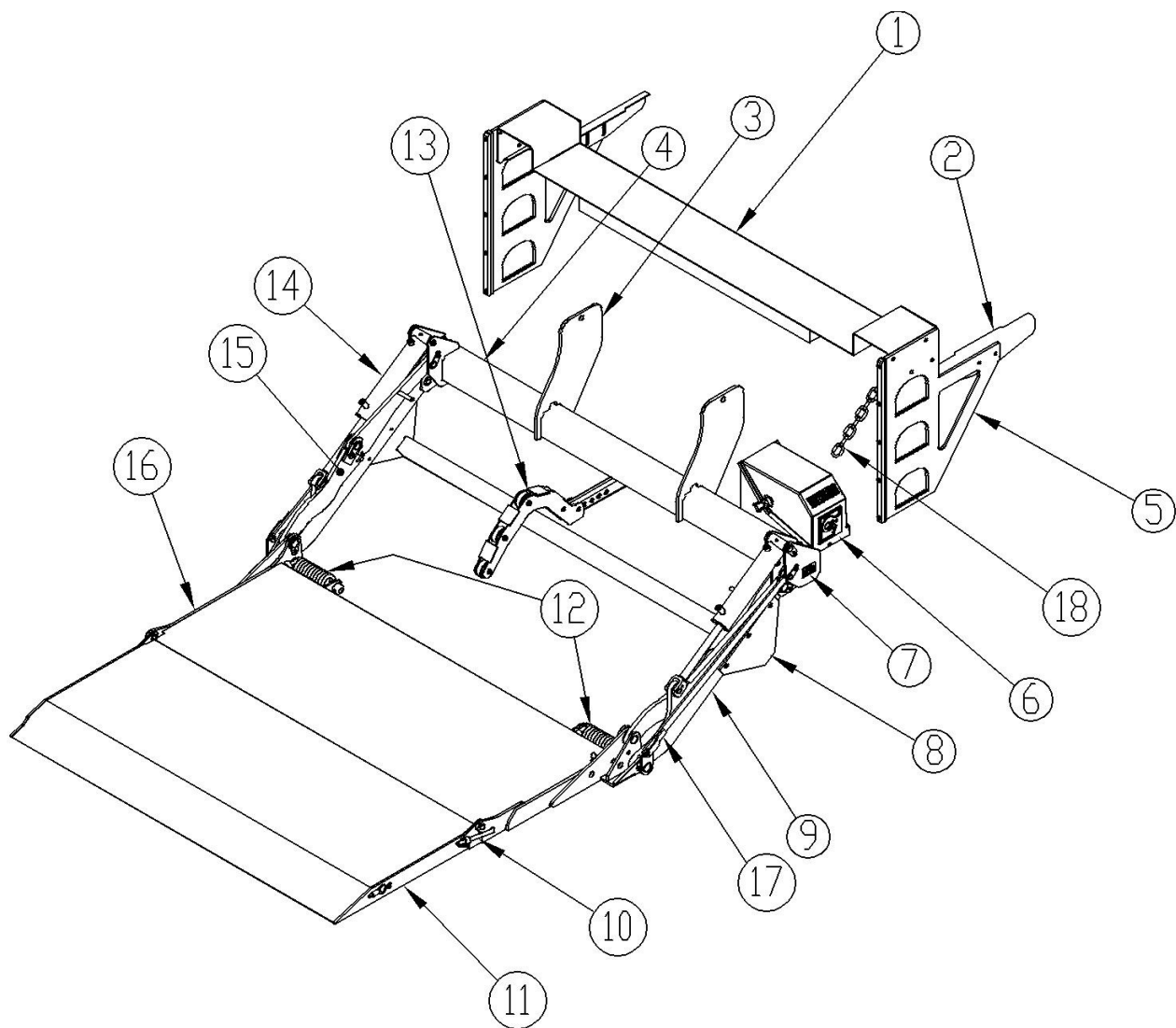
Indicates a potentially hazardous situation, which if not avoided, may result in property damage.

 **WARNING** **CAUTION*****NOTICE***

Chapter 2 Liftgate Terminology

1. Bed Extension Assembly
2. Dock Bumper Brace
3. Mount Plate
4. Mount Tube Assembly
5. Dock Bumper Assembly
6. Pump box
7. Specification Tag
8. Bolt On Underride Bumper
9. Lift Arm

10. Torsion bar
11. Deck Extension Assembly
12. Folding Assist Springs
13. Parting bar Assembly
14. Hydraulic Cylinder
15. Parallel Arm Assembly
16. Deck Assembly
17. Folding Assist Spring Arm
18. Transit Chain



GR10072

Chapter 2 Liftgate Terminology

Explanation of Specification Tag

Model Name	Description	Capacity
WFL25	Twin Cylinder	2500 lb.
WFL33	Twin Cylinder	3300 lb.

MODEL NAME

RATED CAPACITY

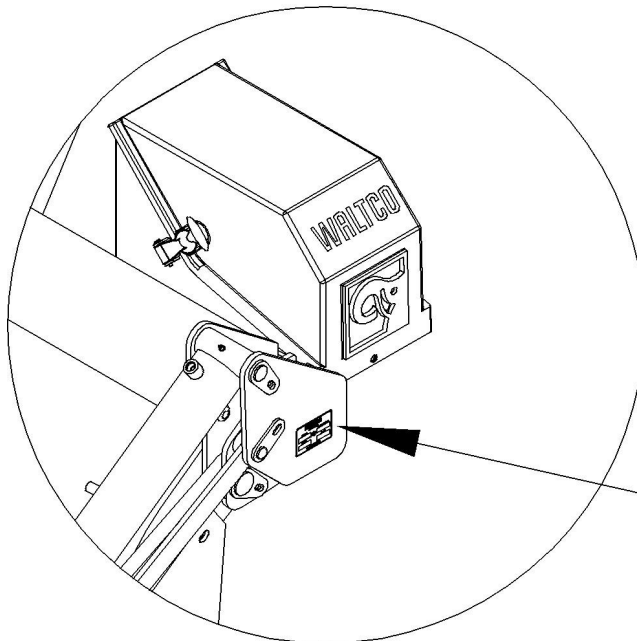
Based on an evenly distributed load on the platform flat surface.

SERIAL NUMBER

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

DATE OF MANUFACTURE
Month / Year

GR10071



Specification
Tag

GR10073

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.

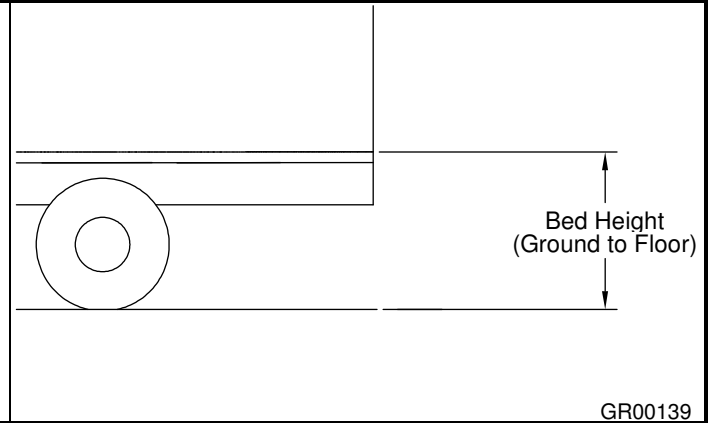
NOTE:

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.

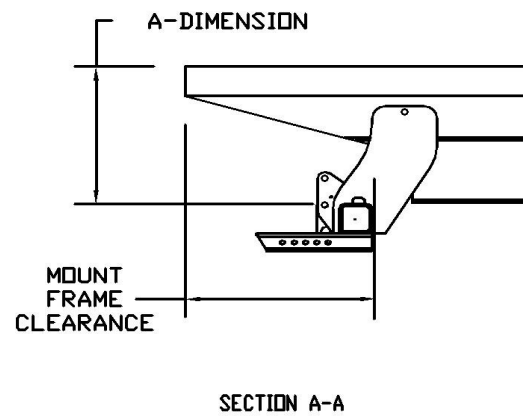
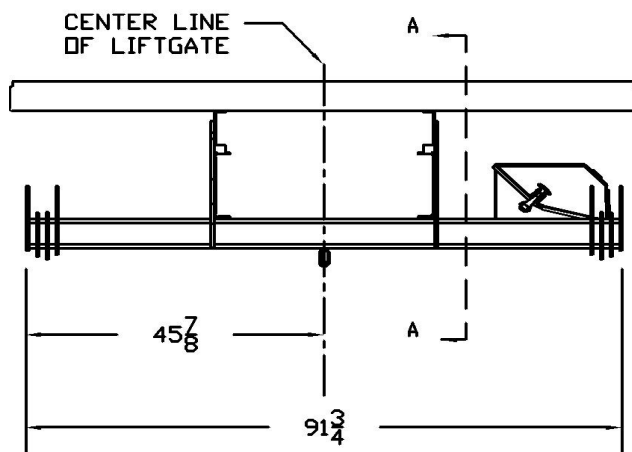


GR00139

STANDARD BED HEIGHT MODELS

MOUNTING CHART

Bed Height	"A" Dimension	Mount Frame Clearance	Chassis Frame Width for Galvanized Bolt On
46"-56"	23-3/16"	28-7/8"	34"



GR10074

Chapter 4

Installation

PREPARATION OF BODY SILL

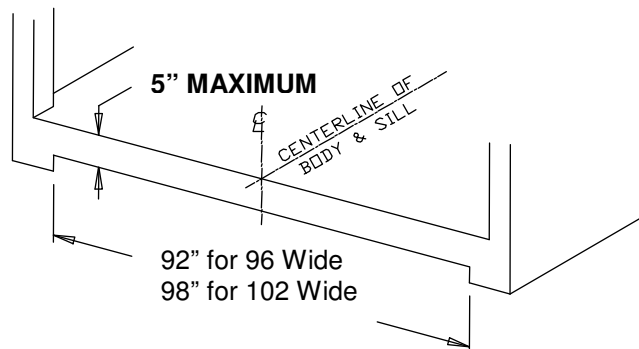
Remove all obstructions that would interfere with operation of Liftgate; such as dock bumpers, trailer hitches, projections, etc.

Locate and mark the center of body sill.

NOTE:

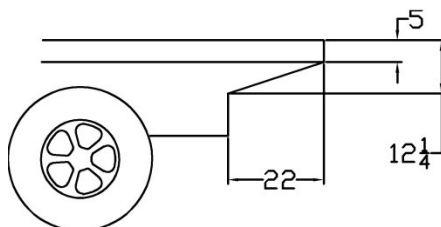
All mounting measurements for centering liftgate will come from centerline mark.

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



GR02184

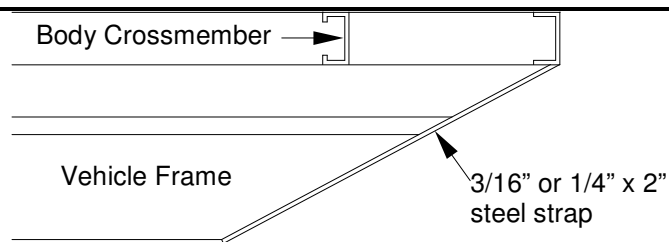
Cut away vehicle frame as required to obtain the minimum clearance indicated.



46" TO 56"
BED HEIGHT

GR10075

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



GR00625

Chapter 4

Installation

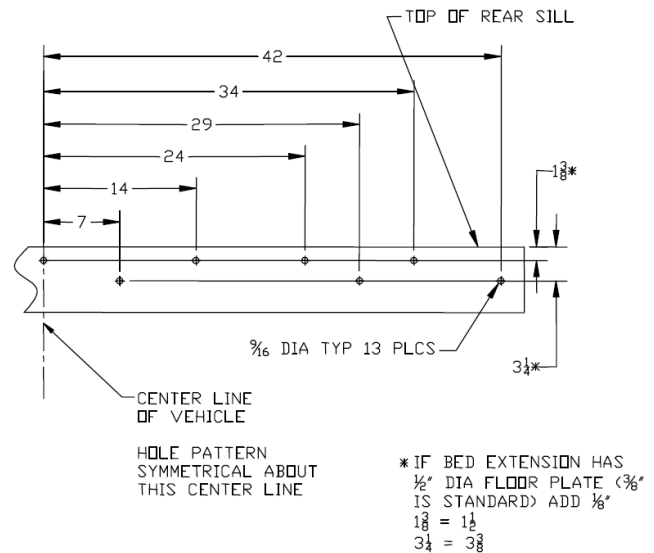
INSTALLATION OF BED EXTENSION

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

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

NOTE:

This requires an optional bolt-on style bed extension with mounting holes.



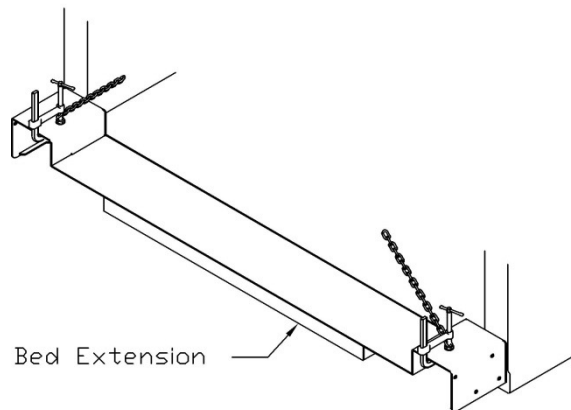
GR00625

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.



GR10076

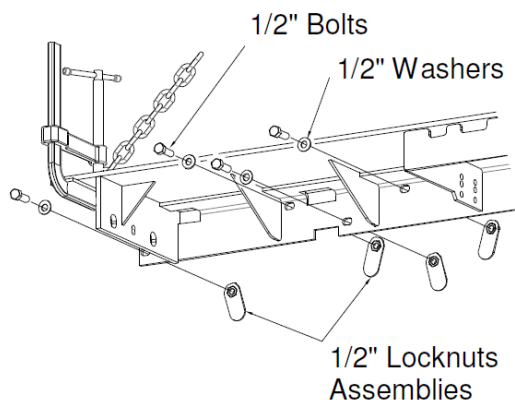
Chapter 4

Installation

BOLT ON BED EXTENSION

To bolt bed extension to sill, use (13) 1/2" bolts, nuts and washers provided with kit.

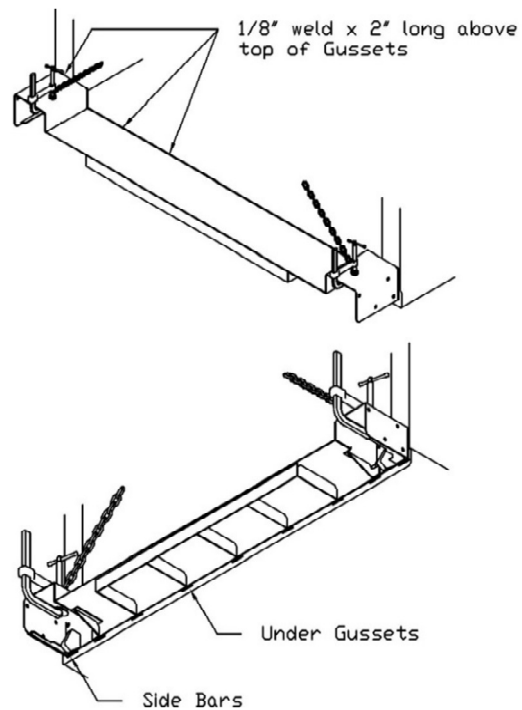
Torque bolts to 90 ft. lbs.



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.



GR10077

Chapter 4

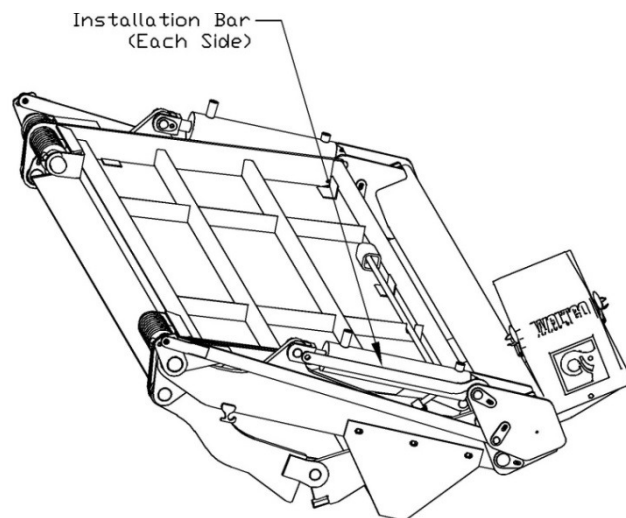
Installation

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

Installation Bars are set for 23-3/16" A-Dimension when shipped from factory.

Do not remove Mounting Bars until instructed to do so.

Unfold platform to open position.



GR10078

Position liftgate up under vehicle.

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

Ensure 1/4" spacer angles 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.

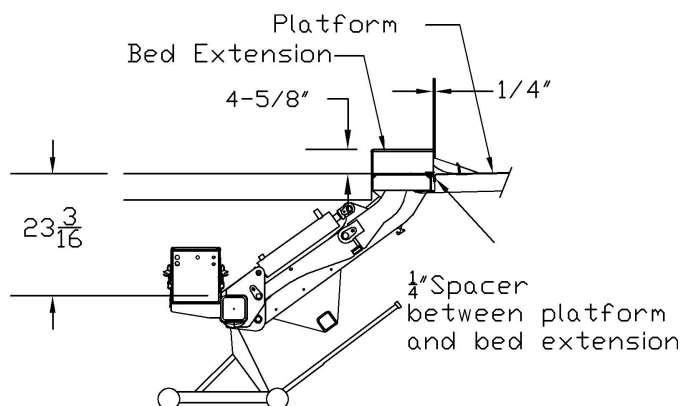
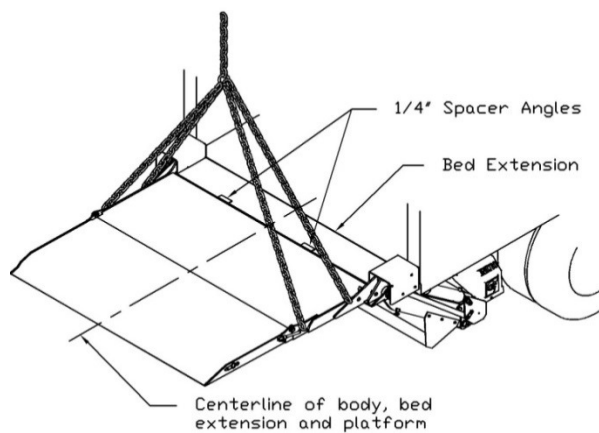


Other means may be used to support Liftgate in position. ALWAYS verify the safety of your supporting method before proceeding.

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

NOTE:

If unable to obtain correct 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.



GR10079 & GR10080

Chapter 4

Installation

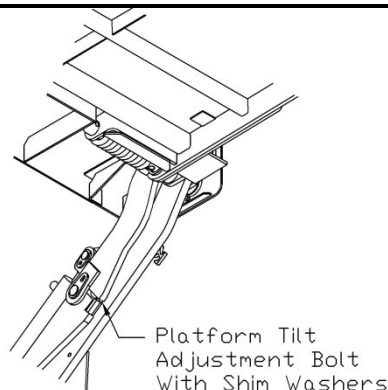
Bolts heads should be contacting arm, if they are not, ensure the platform and mount tube are parallel prior to adjusting.

NOTE:

Platform springs are engaged and under tension.



Take care when adjusting liftgate.



GR10081

Use two 3" channels (tubes, or similar), lay on top of 1" spacers as shown on vehicle floor and clamp to bed extension and platform as shown.

Install counter weight on channels as required.

Position deck centrally to and shimmed to 1/4" away from bed extension, centered with vehicle body. Make sure adjustment bolts are touching upper parallel arm.

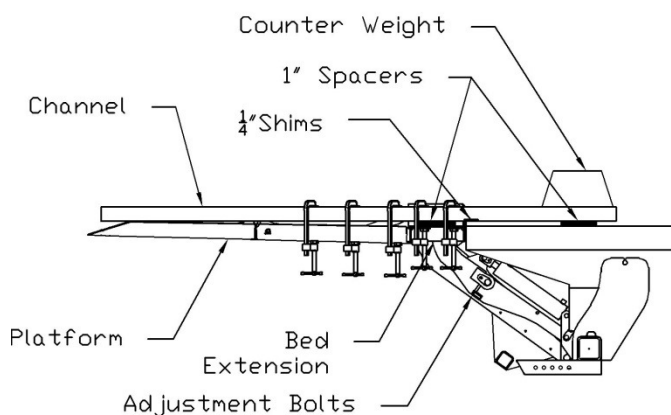


Other means may be used to support Liftgate in position. ALWAYS verify the safety of your supporting method before proceeding.

IMPORTANT:

Verify mount tube is at correct dimension before proceeding to next step:

- Correct dimension for bed height



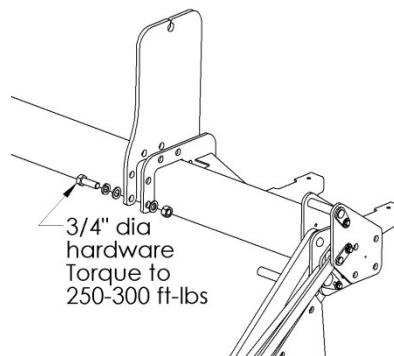
GR10082

FOR GALVANIZED BOLT-ON MOUNT PLATES

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

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

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



GR03043

Chapter 4

Installation

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

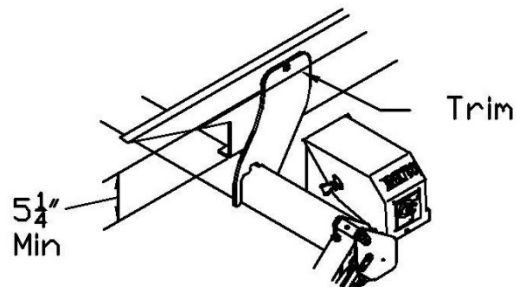
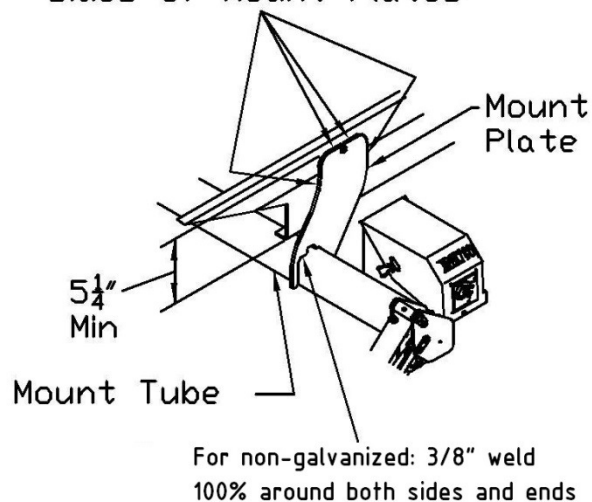


To avoid injury or property damage, do not remove clamps from deck. Use forklift, crane, or other safe means to support deck and then remove clamps.

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



GR03041

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.

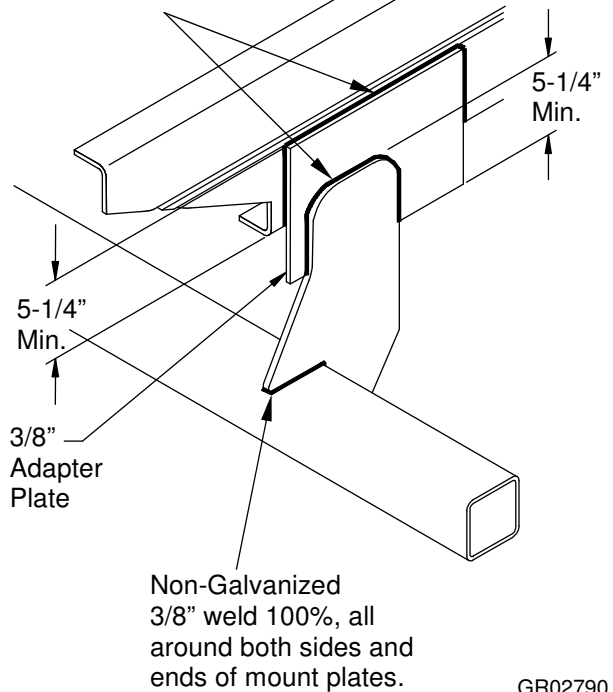
For Non-Galvanized units:

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.

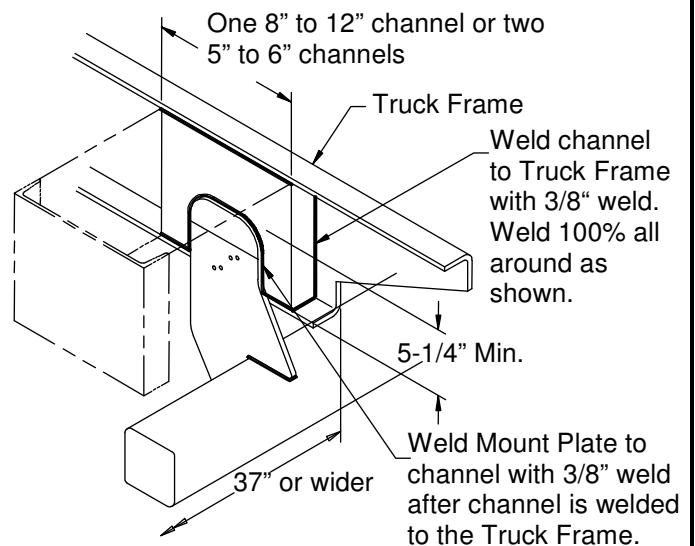
3/8" weld 100%, three sides of mount plate and adapter plates as shown.



GR02790

NOTE:

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



GR02791

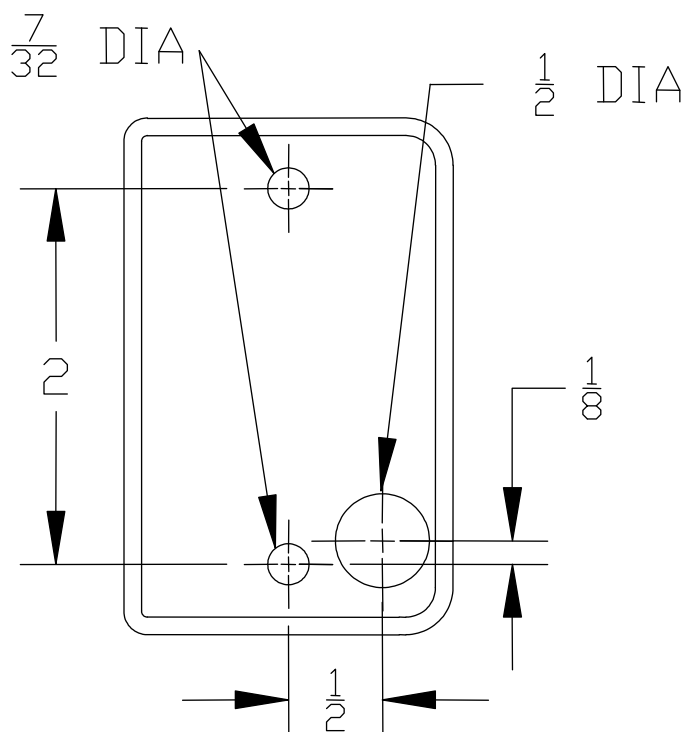
Chapter 4

Installation

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.

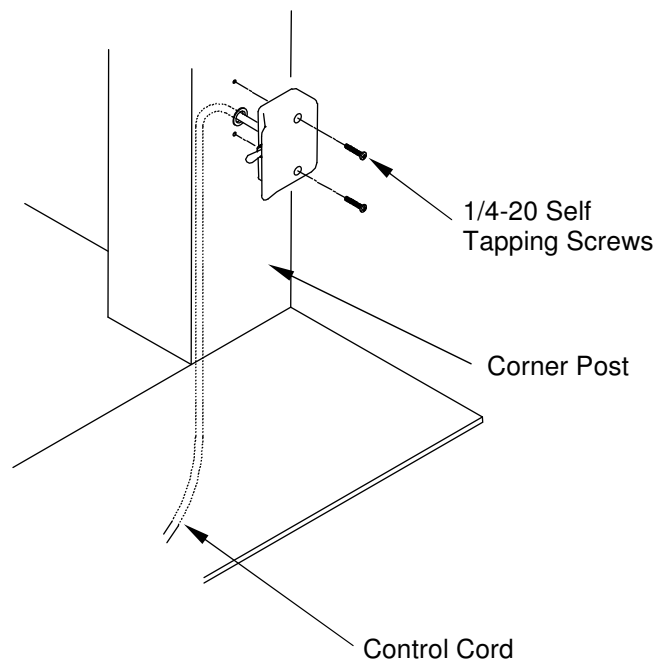
Use this template to locate screw holes, and hole for control cord.



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

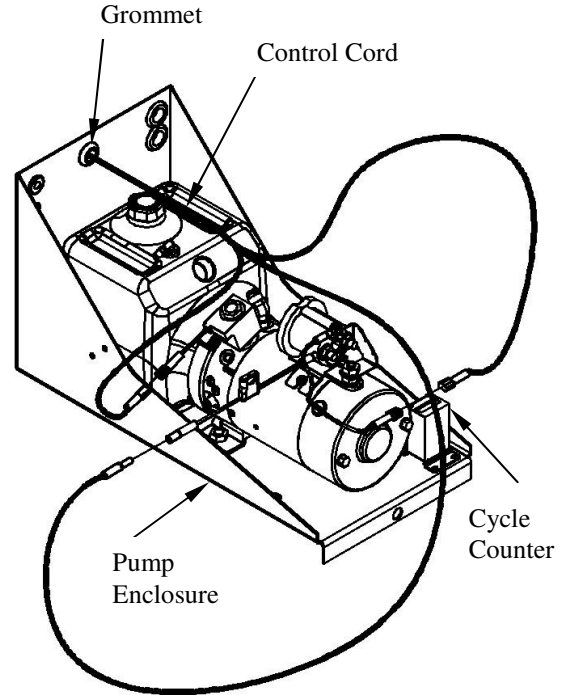
Route control cord into pump enclosure, using grommet supplied.

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.

GR10100

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.

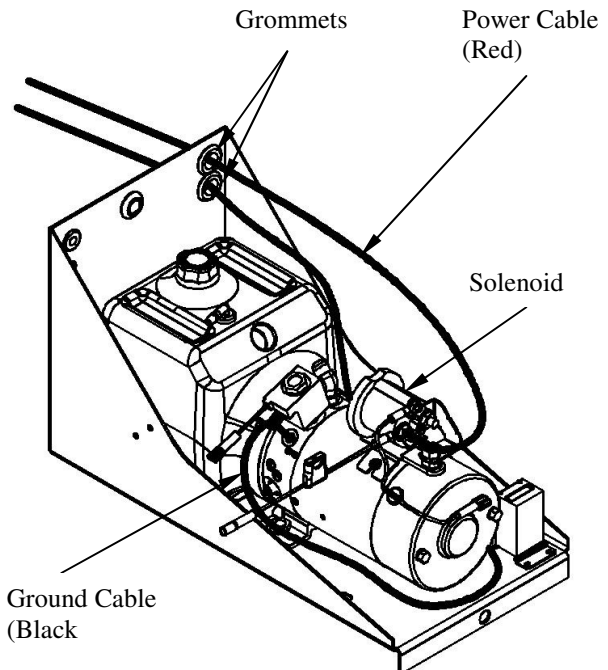
Ground cable is bolted to pump unit side, with Lock Valve ground wire.

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.

GR10101

Chapter 4

Installation

INSTALLATION OF TERMINAL LUG

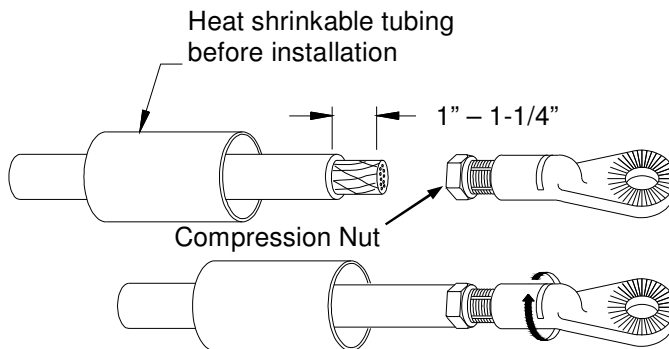
Strip 1" to 1-1/4" of insulation from end of cable.

Slide heat shrinkable tubing onto cable.

Insert bare wire into compression nut until it seats.

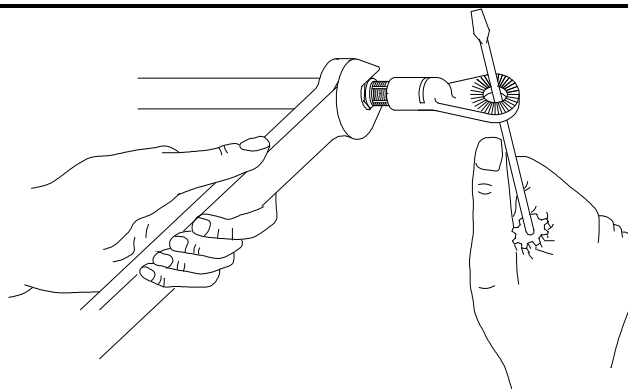
IMPORTANT: Be sure to use correct compression nut, use 1&2 gauge nut for 1 or 2 gauge cable, use 0 gauge nut for 0 gauge cable.

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



GR00299

Grip nut with wrench and turn terminal until nut seats



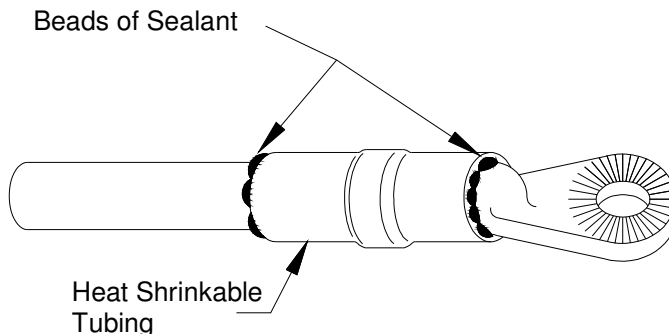
GR00300

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

Chapter 4

Installation

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.



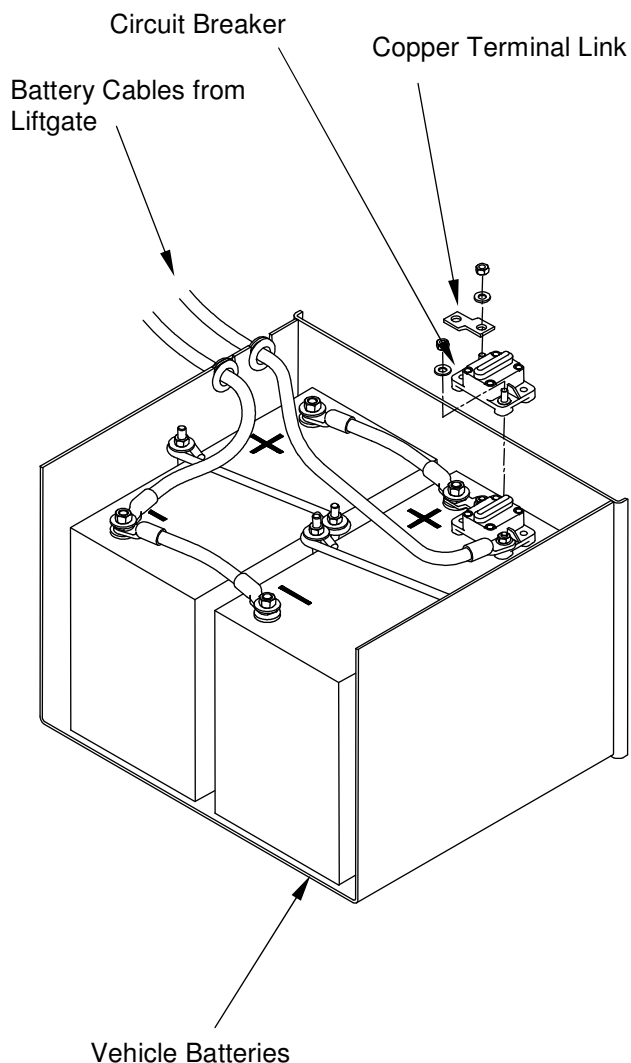
Protect wires from any sharp edges or holes that may abrade insulated covering of wires.



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.

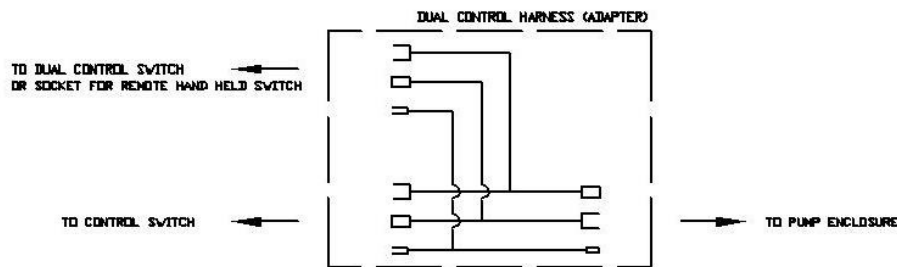
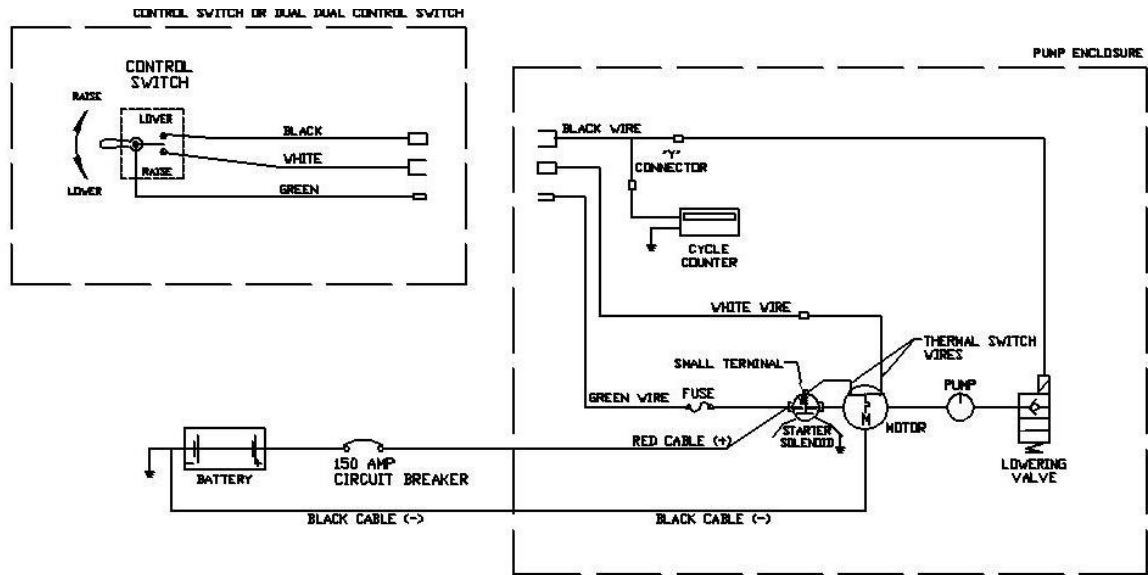


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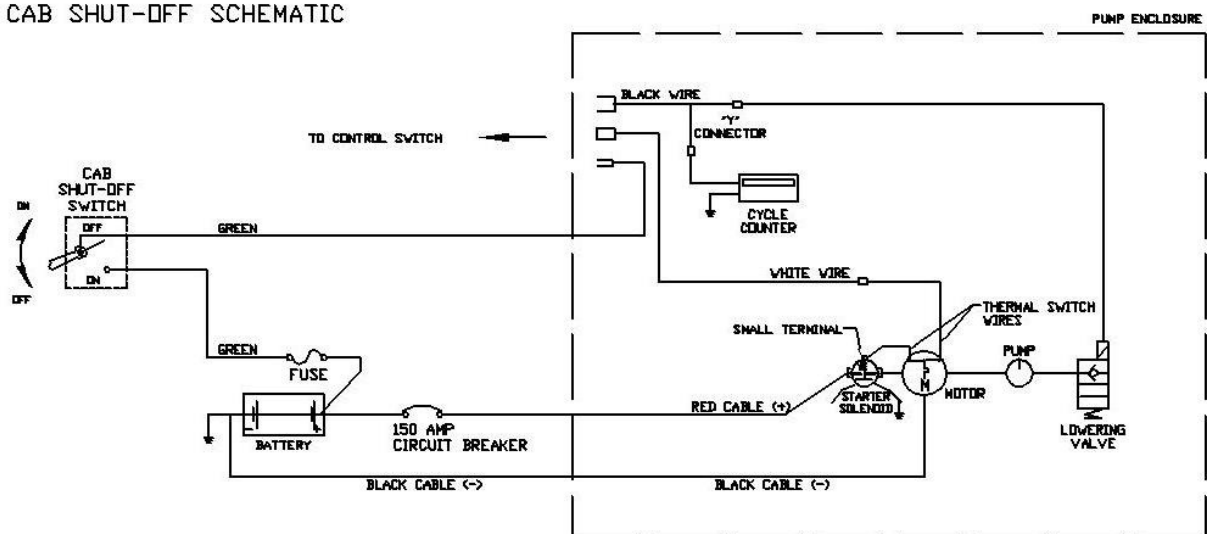
Chapter 4

Installation

Electrical Schematics



CAB SHUT-OFF SCHEMATIC

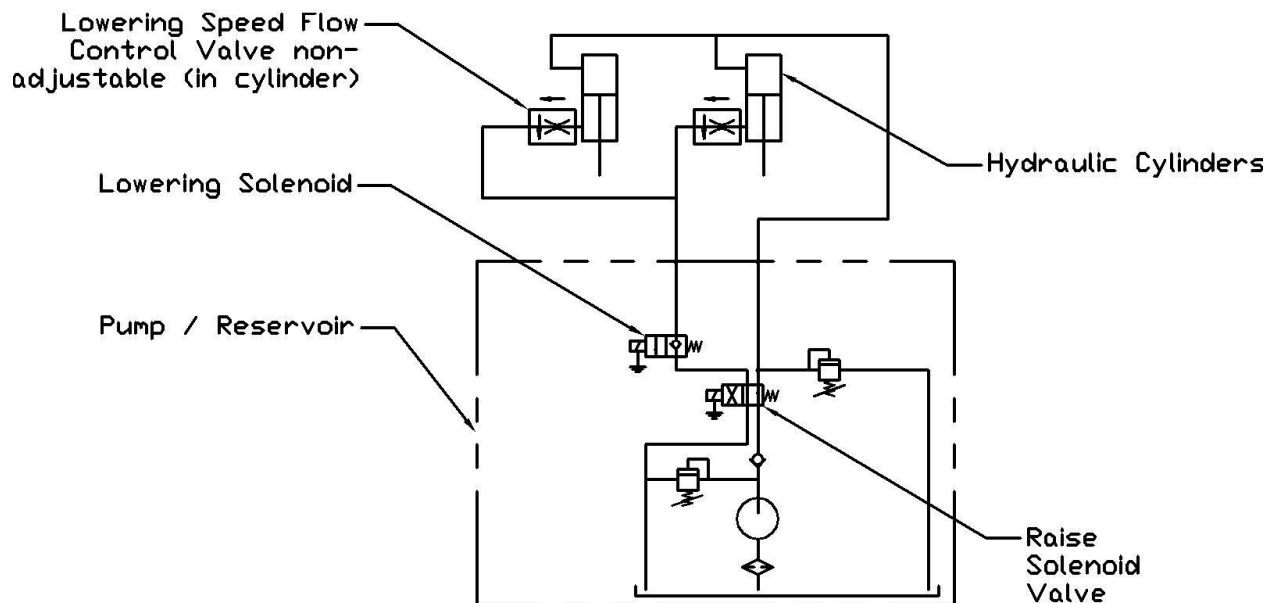


GR10084

Chapter 4

Installation

Hydraulic Schematic

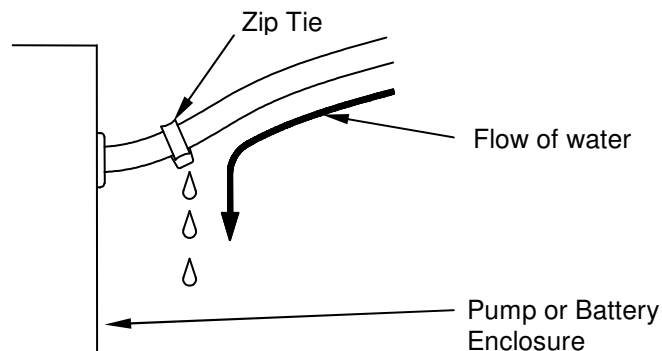


GR10085

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

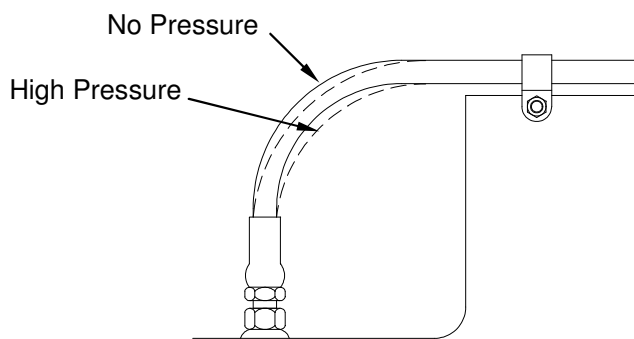
HOSE INSTALLATION

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

Chapter 4

Installation

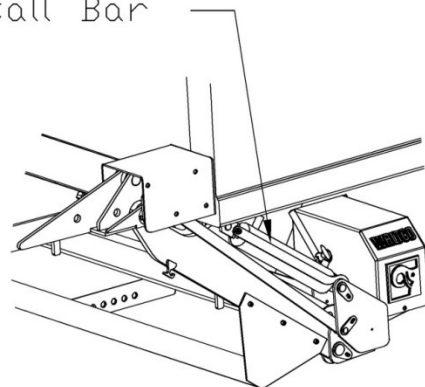
REMOVE INSTALL BAR

Insure platform is properly supported before disconnecting the Install Bars.



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

Install Bar



GR10087

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.

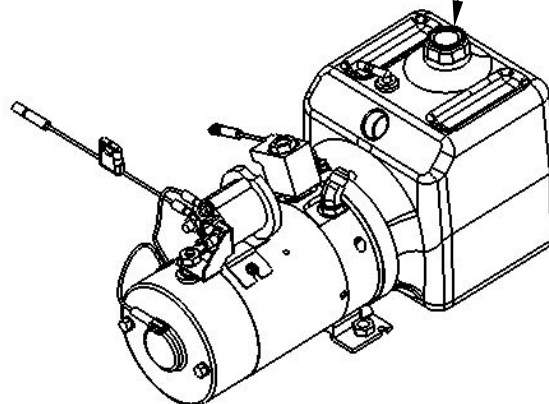
Replace Plug with Breather.

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.

Replace cap with Breather



GR10066

Chapter 4

Installation

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

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

NOTE:

Do not use the following fluids:

Brake Fluid

Power steering fluid

Automatic Transmission Fluid (ATF)

Rev 06

There is no speed adjustment on this liftgate.

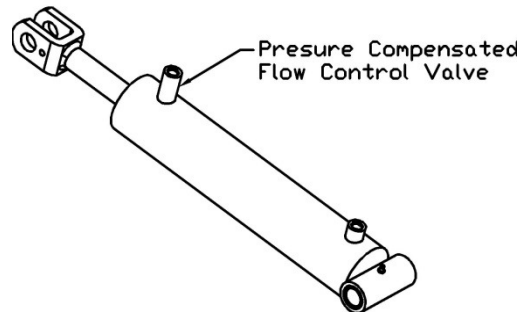
Lowering speed is controlled by the pressure compensative valve located in the cylinder.

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 correct pressure compensative valve installed in the cylinder.



GR10088

INSTALLATION OF PARTING BAR

The parting bar assists in opening the platform.

Determine position of parting bar:

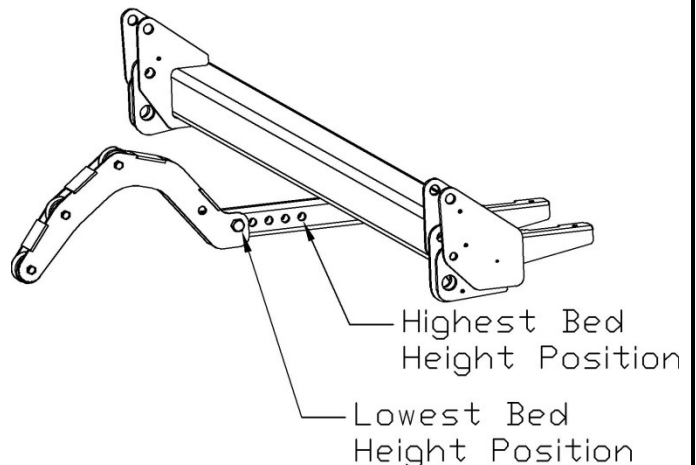
The lowest position is for 46" – 48" bed heights.

The highest position is for 54" – 56" bed heights.

So each hole position represents a 2" change in bed height.

Install parting bar using one 3/4-10x3" Grade 8 hex bolt provided.

Tighten nuts and bolts to 50 ft lbs.



GR10089

Chapter 4

Installation

ADJUST PLATFORM TILT

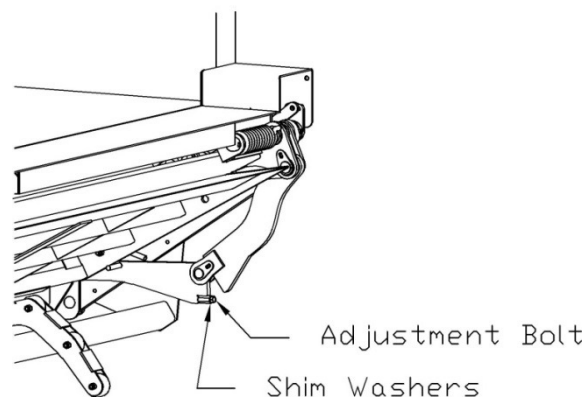
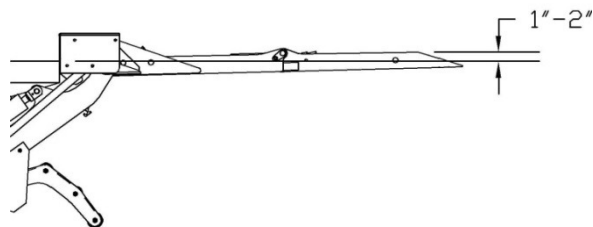
Adjust bolts on the Parallel Arm to achieve 1" - 2" tilt up of platform as shown. A greater tilt up is recommended for higher capacities.

NOTE:

Adjust both Parallel Arm bolts evenly and Shim Washers MUST be used.



No threads on the bolt can be visible.



GR10090, GR10091

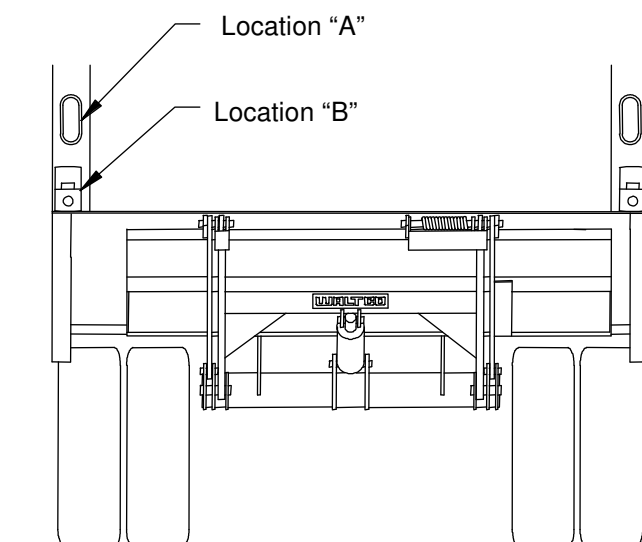
Waltco offers three suggestions for the installation of the vehicle taillights. We believe these suggested locations meet D.O.T. regulations but do not warrant that they do. Your installation of the vehicle taillights should meet all applicable regulations and requirements. This is in no way to infer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

IMPORTANT:

All lights must be installed in accordance with all applicable D.O.T. and F.M.V.S.S. regulations.



GR02762

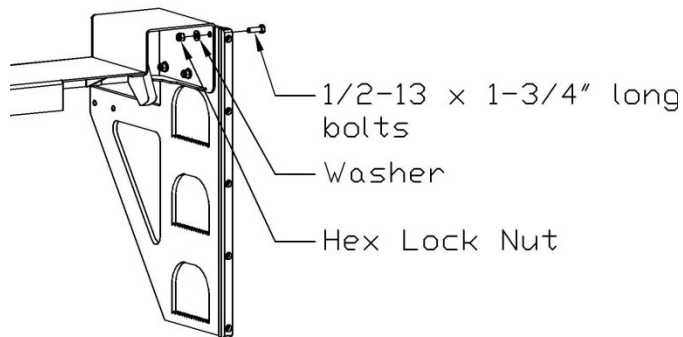
Chapter 4

Installation

INSTALL DOCK BUMPERS

Hold dock bumpers to bed extension.

Bolt bumpers to bed extension using four 1/2" bolts, nuts and washers.



GR10092

INSTALL BRACES

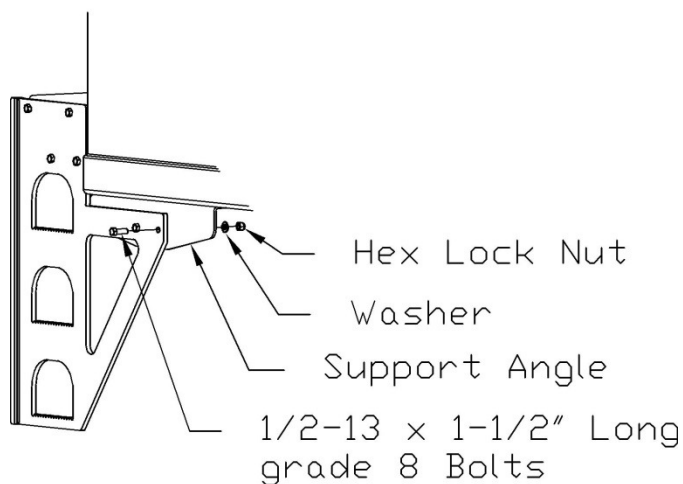
Bolt support angle and dock bumpers as shown with two 1/2" bolts.

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.

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



GR10093

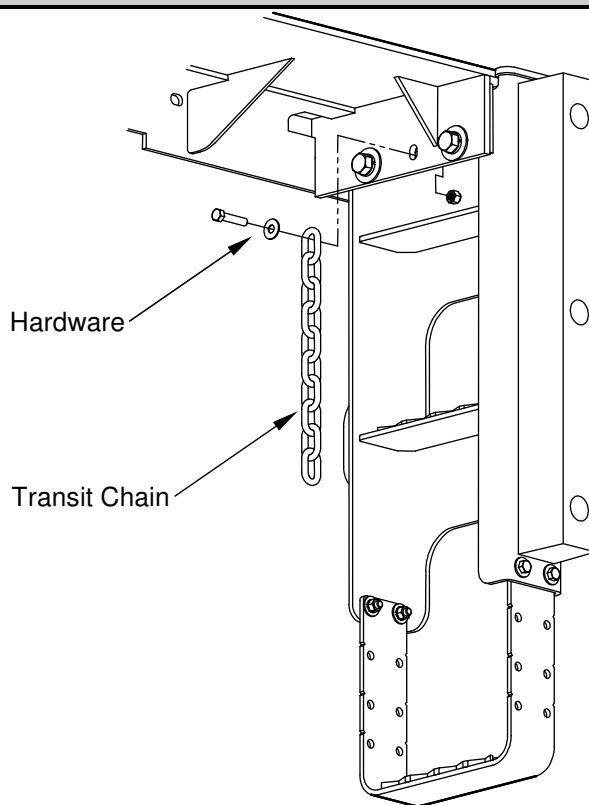
Chapter 4

Installation

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

BLEEDING HYDRAULIC SYSTEM

GRAVITY and POWER DOWN LIFTGATES

Note: Fluid level in reservoir will need to be checked before and after bleeding system.

Check fluid level, to be 1/2" from top of reservoir with platform at ground for gravity down units, platform at bed height for power down units.

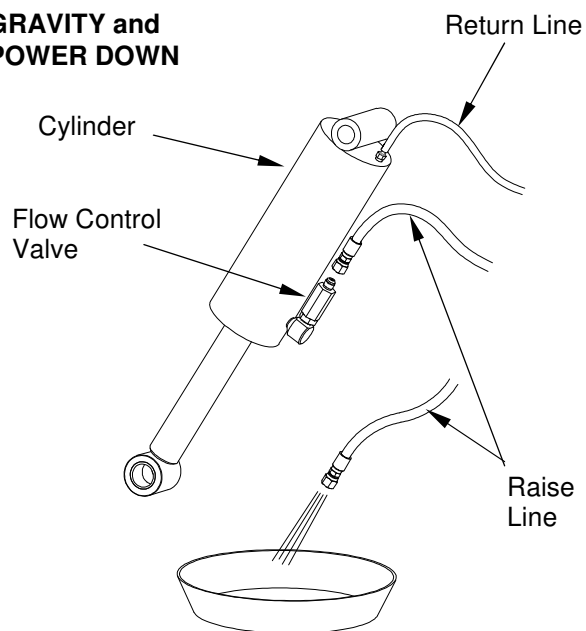
Lower platform to ground, place a bucket or pan under the raise line and cylinder to catch hydraulic fluid.

Disconnect raise line at the flow control valve.

With someone holding the raise line in the bucket/pan, press the raise switch and activate the pump. Do this until a steady, air free, stream of fluid flows from the hose.

Reconnect hose to cylinder. Again, check fluid level of reservoir and fill as may be required.

GRAVITY and POWER DOWN




GR10058

Chapter 5 Placement of Decals

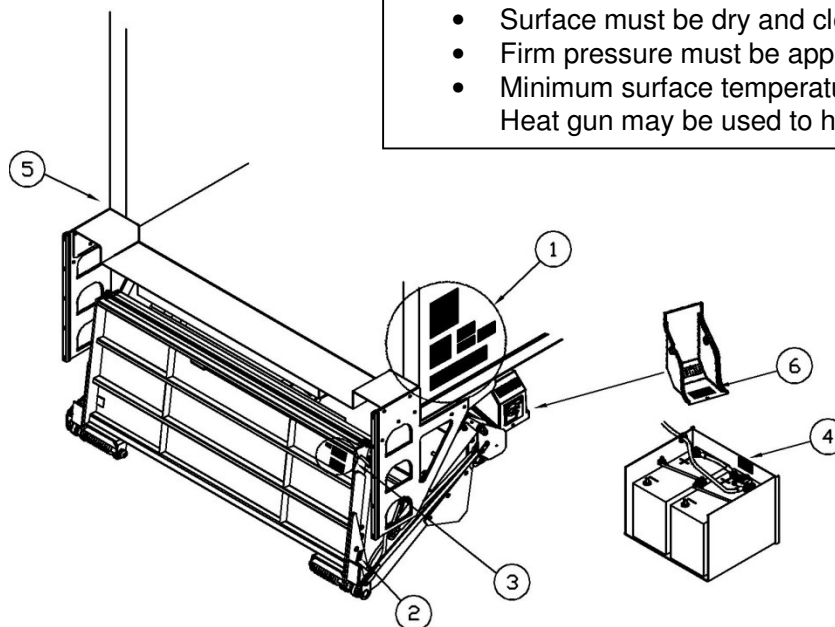


All decals must be in place and legible or all warranties are void.

ITEM	DECAL	QTY	PART NO.	LOCATION
1	Safety Instructions	1	80100850	Locate in a conspicuous place near controls.  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. 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	Locate on curbside of platform (Position so as to be read when platform is open)
	Capacity Decal-3300lb	1	80100585	
3	Use Handle Decal	1	75089295	Locate near platform handle (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	Locate next to liftgate circuit breaker. In applications where more than one circuit breaker is used, this decal must be placed in both locations
5	Stand Clear Decal	1	75089296	Locate on driver's side of vehicle body near liftgate
6	Schematics Decal	1	80101622	Locate inside of pump box cover

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



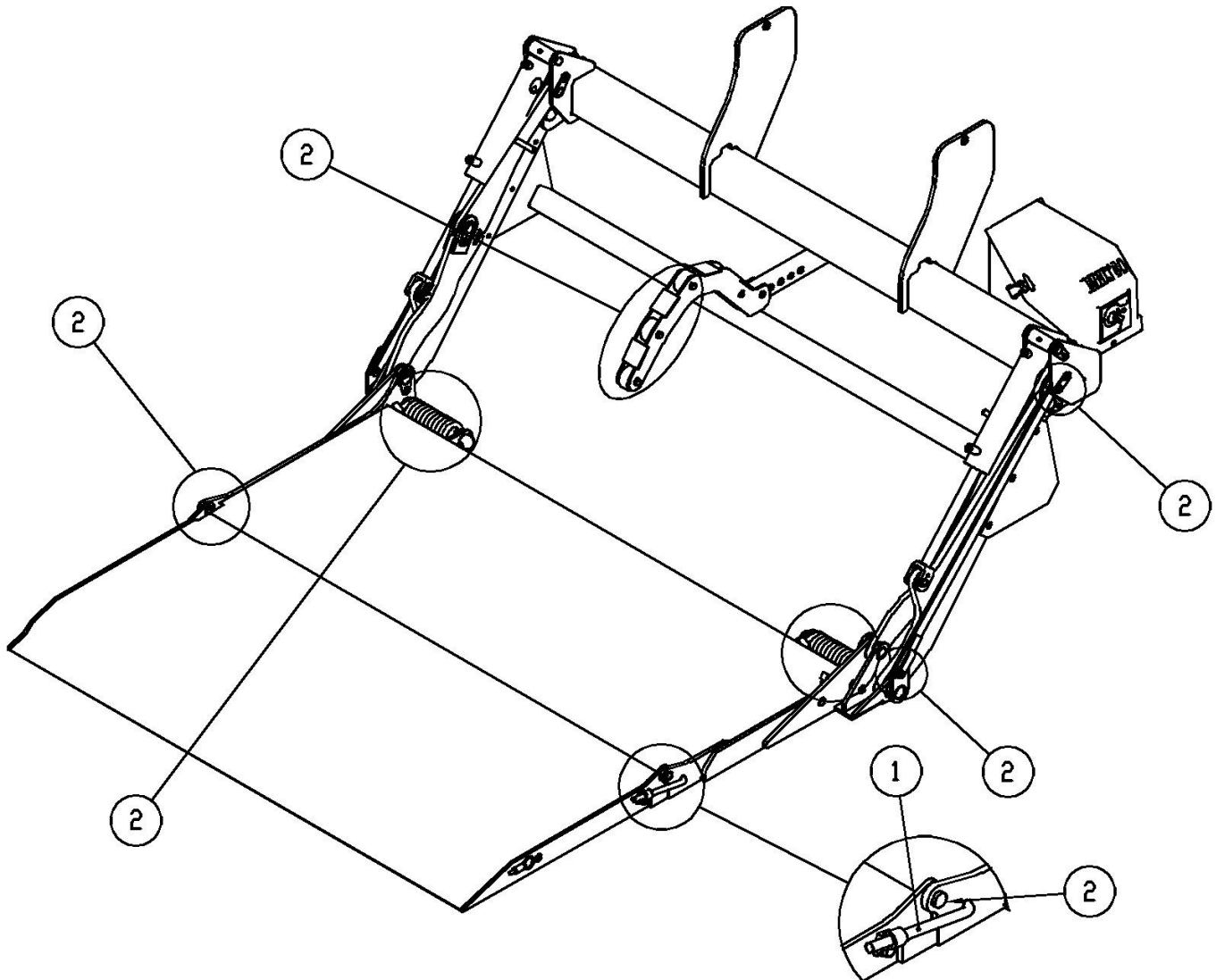
GR10094

Chapter 6 Lubrication Instructions

The liftgate should be lubricated every 120 days.

#1 – Apply grease to torsion bar.

#2 – Grease Zerk fitted pins with grease gun. Oil all others with a light weight machine oil (do not use on bearings in platform).



GR10097

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 the install blocks and install braces removed?
- ☐ **T.** Does cycle counter add a cycle each time lower switch is activated and held on for 4 seconds or longer?

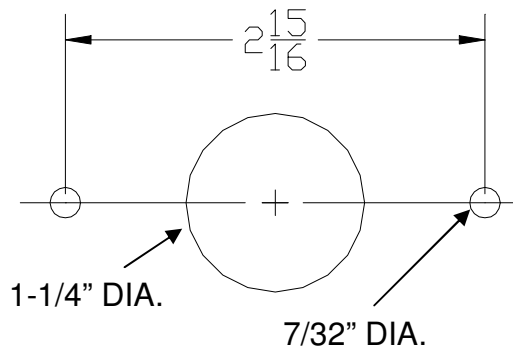
WARNING:

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

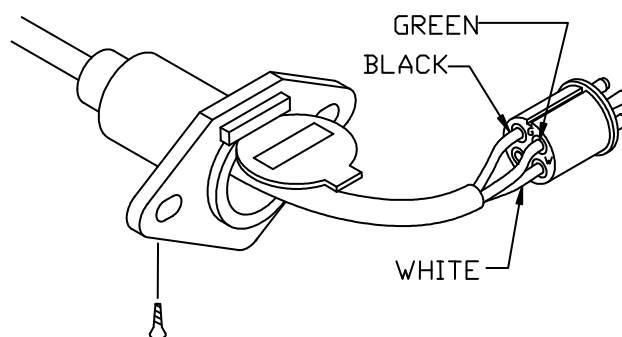
Assemble socket as shown.

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.

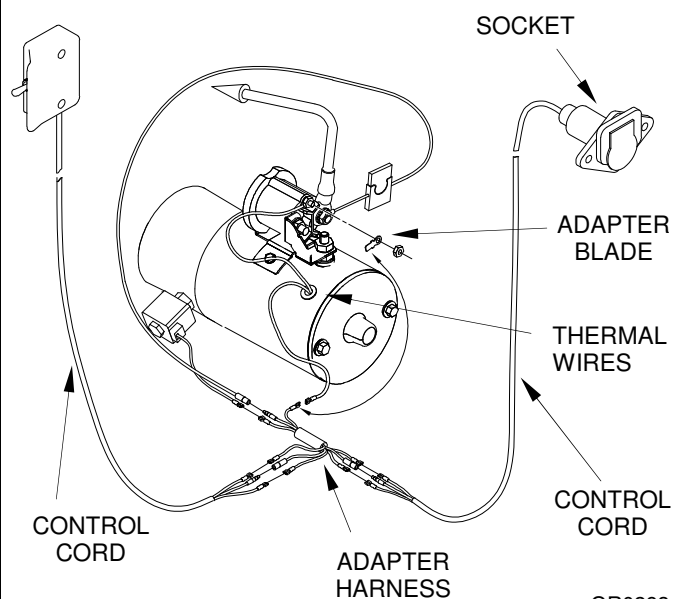
First connect Pump wires to Dual Control Adapter Harness as shown.

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

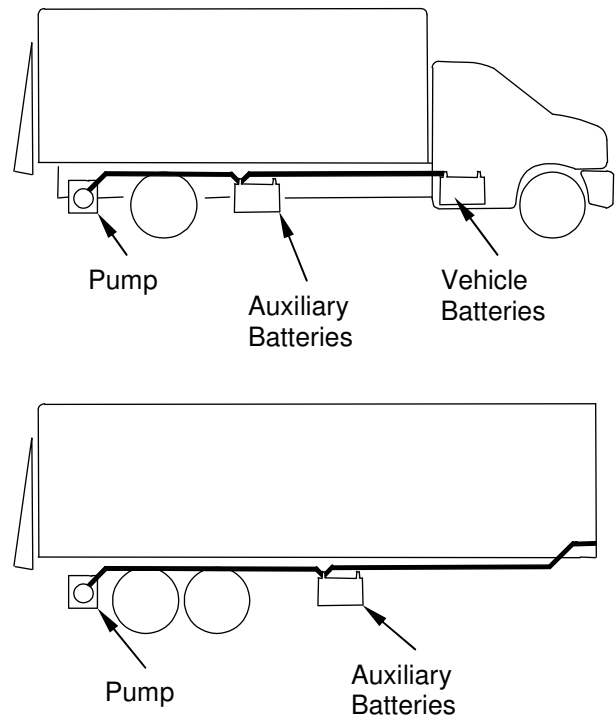
80101569

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.

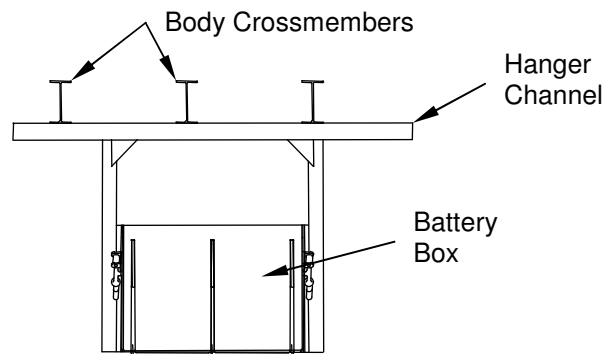


GR02768

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.

Auxiliary Battery Kit w/Dual Cables

80101569

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.

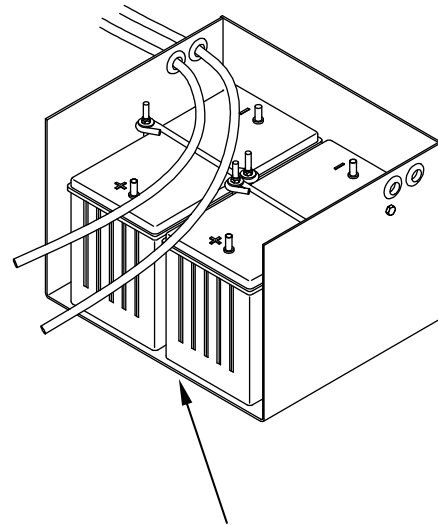


Protect wires from any sharp edges or holes that may abrade insulated covering of wires.



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

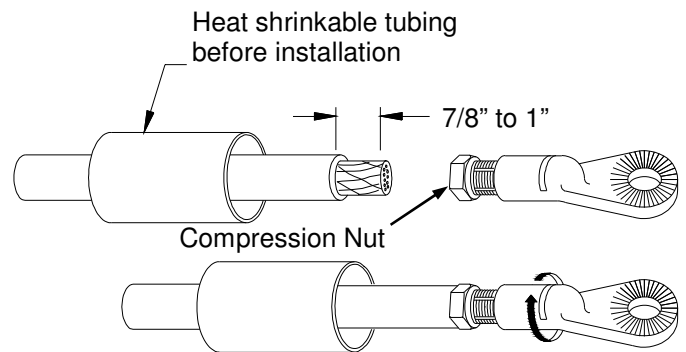
Strip 7/8" to 1" of insulation from end of cable.

Slide heat shrinkable tubing onto cable.

Insert bare wire into compression nut until it seats.

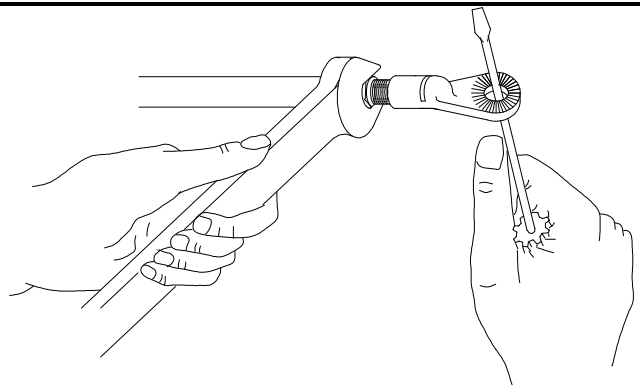
IMPORTANT: Be sure to use correct compression nut, use 1&2 gauge nut for 1 gauge cable, use 0 gauge nut for 0 gauge cable.

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



GR00299

Grip nut with wrench and turn terminal until nut seats



GR00300

Auxiliary Battery Kit w/Dual Cables

80101569

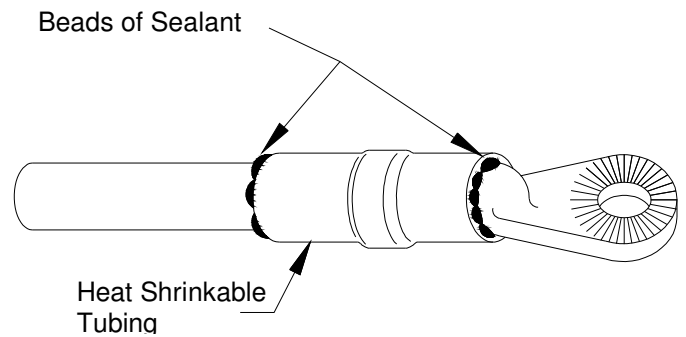
Position heat shrinkable tubing over terminal and end of cable.

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.

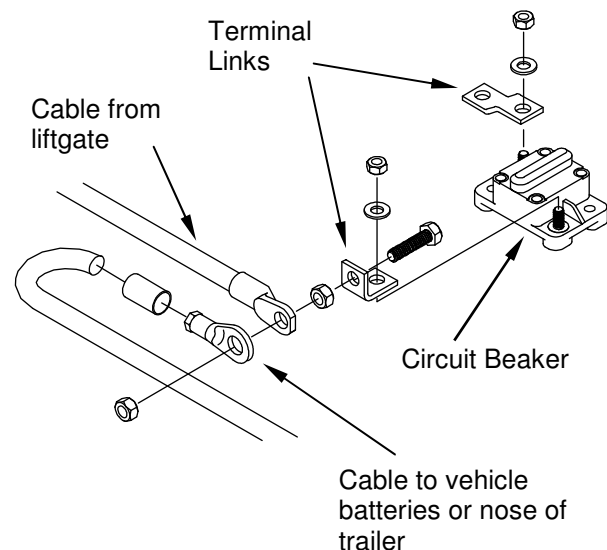
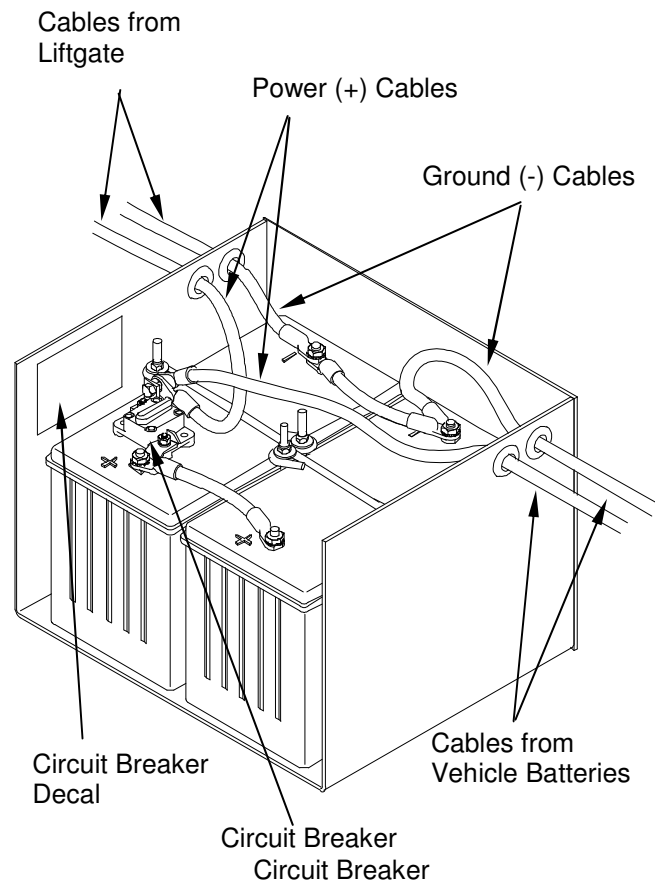


Secure battery cable so it does not come near, or in contact with, other vehicle wiring, fuel lines, brake lines, air hoses, exhaust system, etc.

IMPORTANT:

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

See below for trailer applications.



GR01962

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.

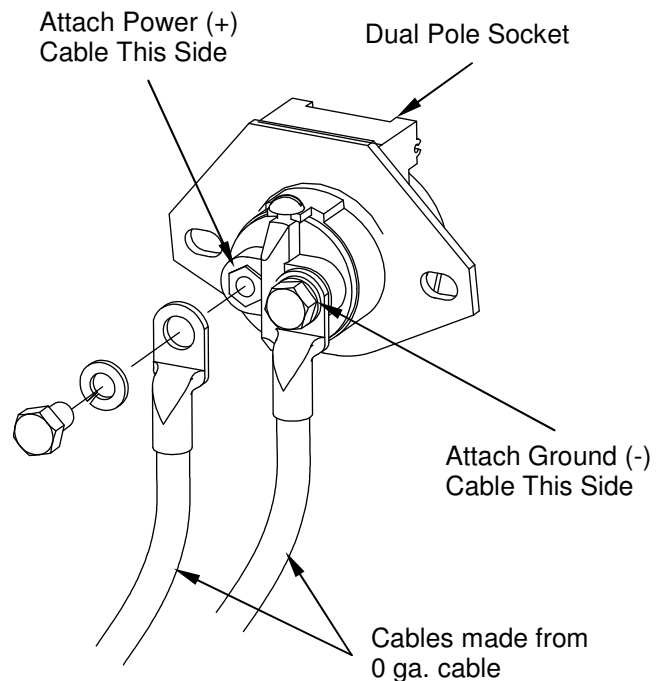
Install cables to socket as shown.

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

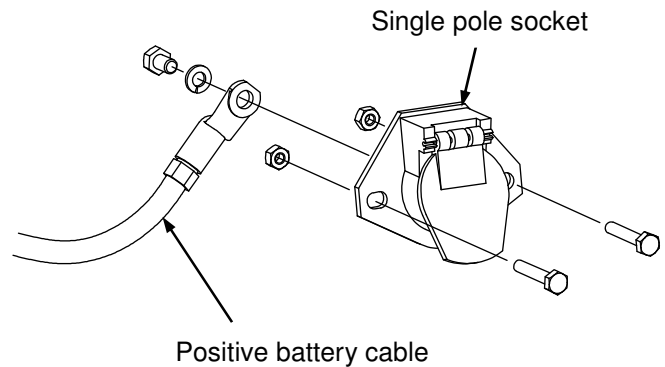
80101569

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.

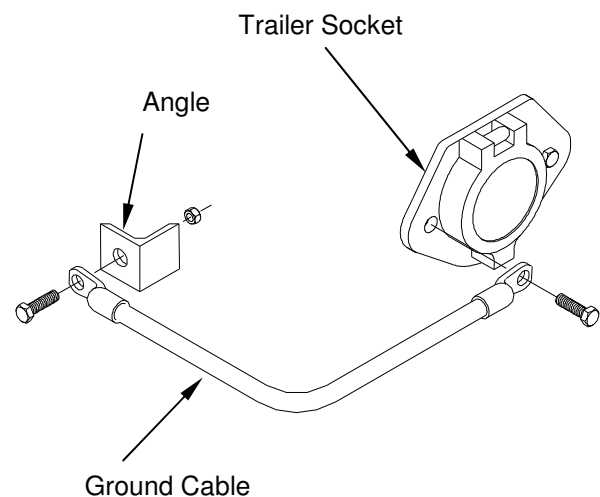


GR02739

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



WALTCO



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.

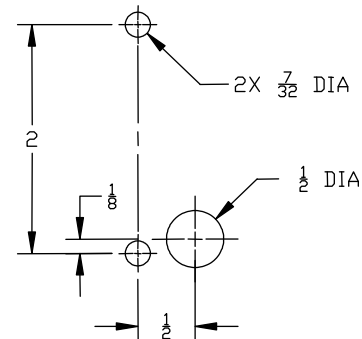
IMPORTANT

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

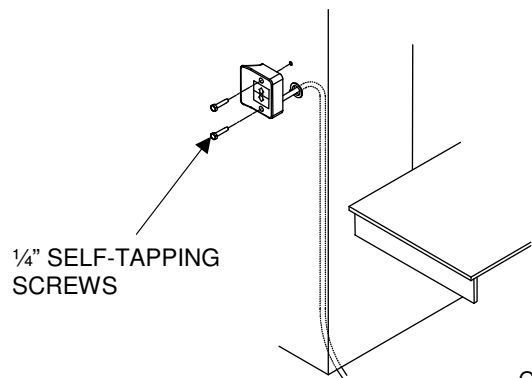
Using Switch Mounting Template or diagram to the right, drill two fastener holes with a $\frac{7}{32}$ " drill bit.

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

Mount Switch with $\frac{1}{4}$ " Self-tapping screws provided.



GR02652



GR02653

Route Control Cord into pump enclosure.

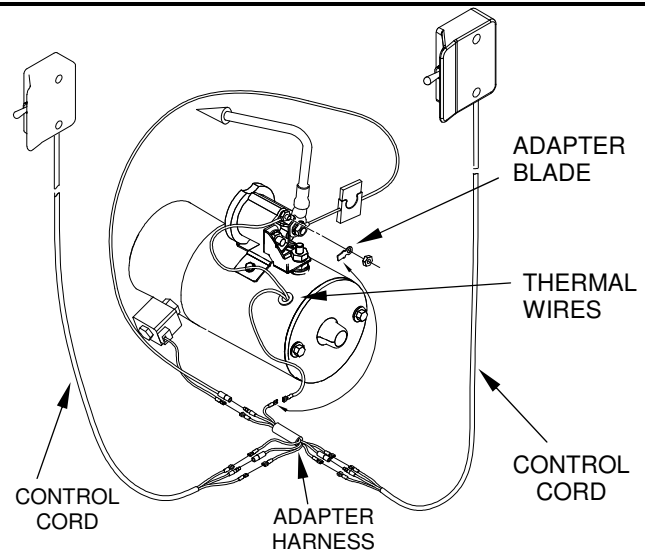
First connect Pump wires to Dual Control Adapter Harness as shown.

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

NOTE:

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

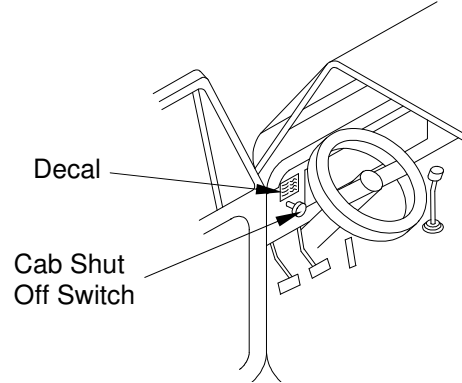
If motor does not have Thermal Wires, plug Adapter Harness into Adapter Blade.



GR02935

Installation of Cab Shut Off Switch

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

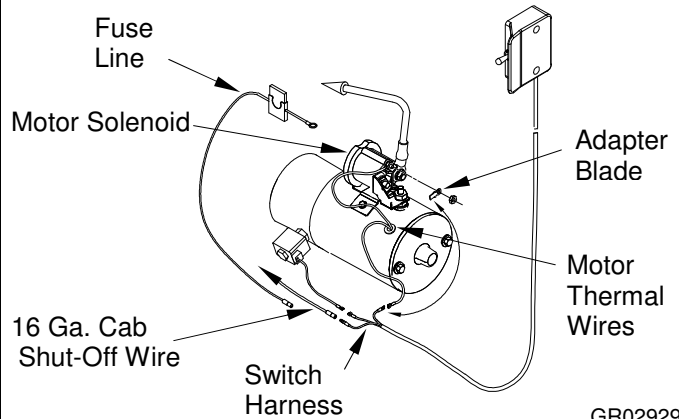


GR00379

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.

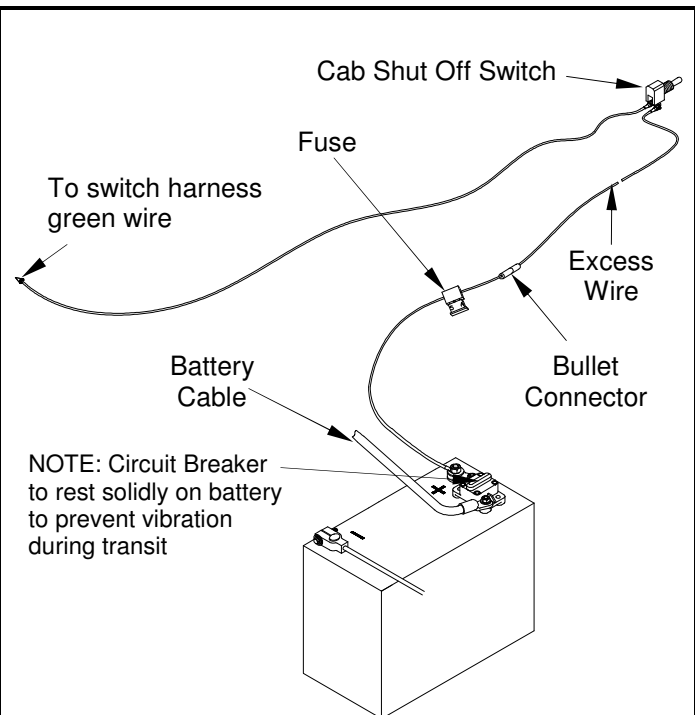
Run excess 16 ga. wire from vehicle battery to cab shut off switch. Fuse end to be toward battery.

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

Chain Anchor Kit Installation Instructions

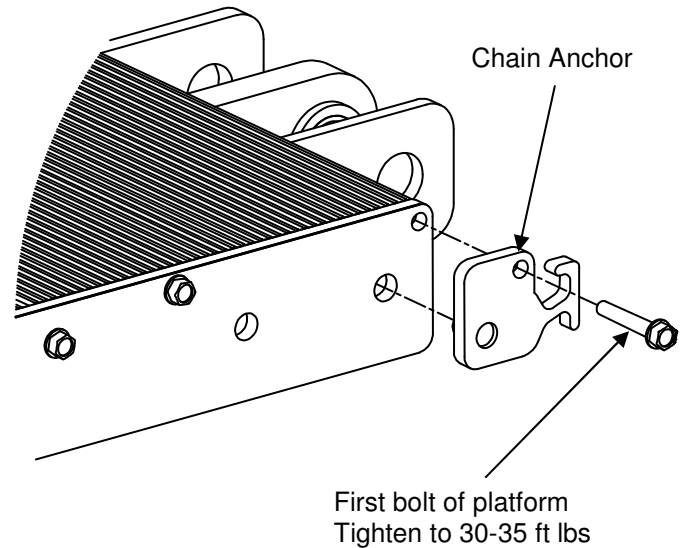
80101620

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.

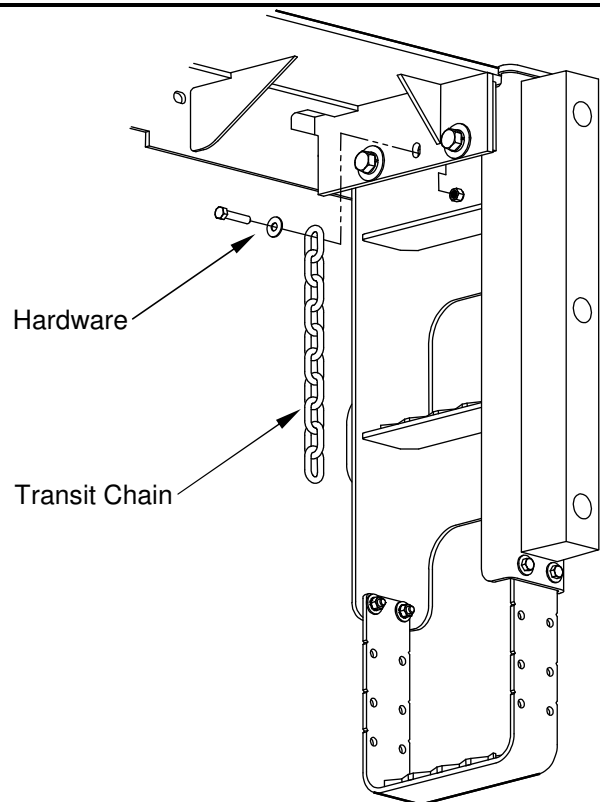


GR02939

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

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.

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

THEN INCLUDE THE FOLLOWING INFORMATION:

4. PART NUMBERS
5. DESCRIPTION
6. QUANTITY REQUIRED

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

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.



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.

NOTE:

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

IMPORTANT

KEEP THIS OWNER'S MANUAL IN THE VEHICLE

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**