



WALTCO

www.waltco.com
parts@waltco.com

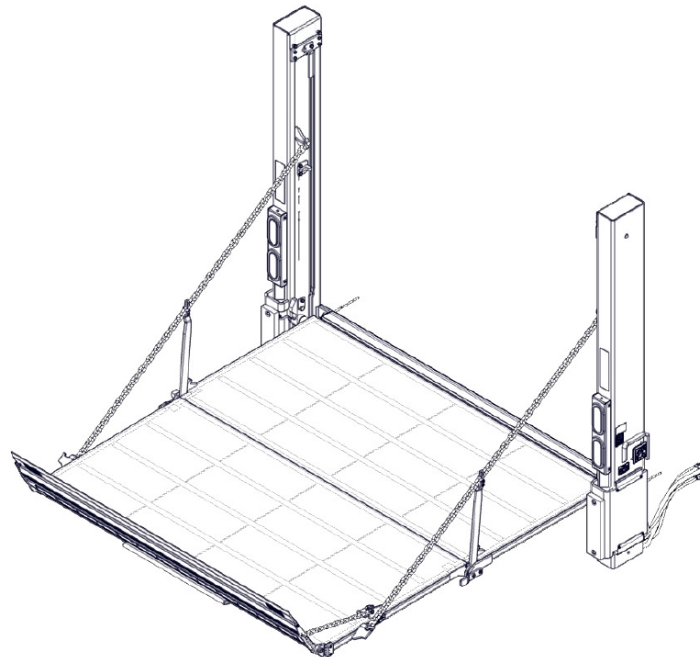
Phone: 800.411.5685
Fax: 800.411.5684

Install Manual

WDV, WDVBG

Gen 2

3500, 4500, 5500, 6600 lb. Capacity Rail-Type Liftgates



Last Change(s)

Date	Page(s)	Description
12-2020	All	Converted to Online Format
	4	Added HiConnect as standard feature
	Chapter 3	Clarified Mounting Requirements
	Chapter 4	Clarified mounting instructions. Separated the three mounting methods.
	25 - 28	Revised schematics and added SPPD schematic 80101715
	33	Motor oil no longer recommended as hydraulic fluid
	45	HiConnect harness connections noted

Waltco Lift Corp.
Corporate Office United States
1777 Miller Parkway
Streetsboro, OH 44241
P: 330.633.9191
F: 330.633.1418

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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.

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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 list, and an outline of things that should be checked but may not be obvious to those not technically qualified. The 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 for 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 warnings listed below.

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

- * Read and understand the Owner's Manual, all decals and warnings 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 failing.
- * This liftgate is designed for loading and unloading cargo. If personnel are required to ride the 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 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 and 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 up or down 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 Walco approved Roller Chain.
- * Never transfer loads which exceed lifting capacity on or over any part of the Platform or Bed Extension unless the liftgate is equipped with a special reinforced Platform and Platform Support Bars for use when the Platform is used as a 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.

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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 (5) five 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 Upstop Pins when in transit.
- * Inspect cables every (3) three 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 (5) five years or 10,000 cycles, whichever comes first.

MDL Series Liftgates

- * Make certain Platform Brake mechanisms are operating properly.
- * The Platform Retaining Bar should be lowered into H-Frame Storage Plate when in transit.
- * Inspect Roller Chains every (3) three months or 750 cycles, whichever comes first. Roller Chains must be measured and checked for signs of stretching. If the chain is stretched by more than 3% they should be replaced.
- * Replace Roller Chains every (5) five years or 15,000 cycles whichever comes first. Replace only with WALTCO APPROVED Roller Chain.
- * Check that all connecting links at each end of Roller Chain are properly secured with proper cotter pins monthly.



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.

!

WARNING

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 an yellow background.

!

CAUTION

NOTICE

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

NOTICE

HIAB HICONNECT TELEMATICS UNIT

The HiConnect unit is a factory installed telematics unit that provides real time telemetry of liftgate operation. This telemetry is invaluable to users seeking to gather data on vehicle routes and gain greater liftgate uptime through enhanced preventative maintenance.

You may go to <http://hiab.com/en-US/pages/hiab-hiconnect/registration/hiconnect-registration> to register the unit, or use the QR code below:



The liftgate serial number is required for setup.

After registration is complete, call Waltco Service at 1-800-211-3074. One of our team members will finalize the setup and guide you through HiConnect's features.

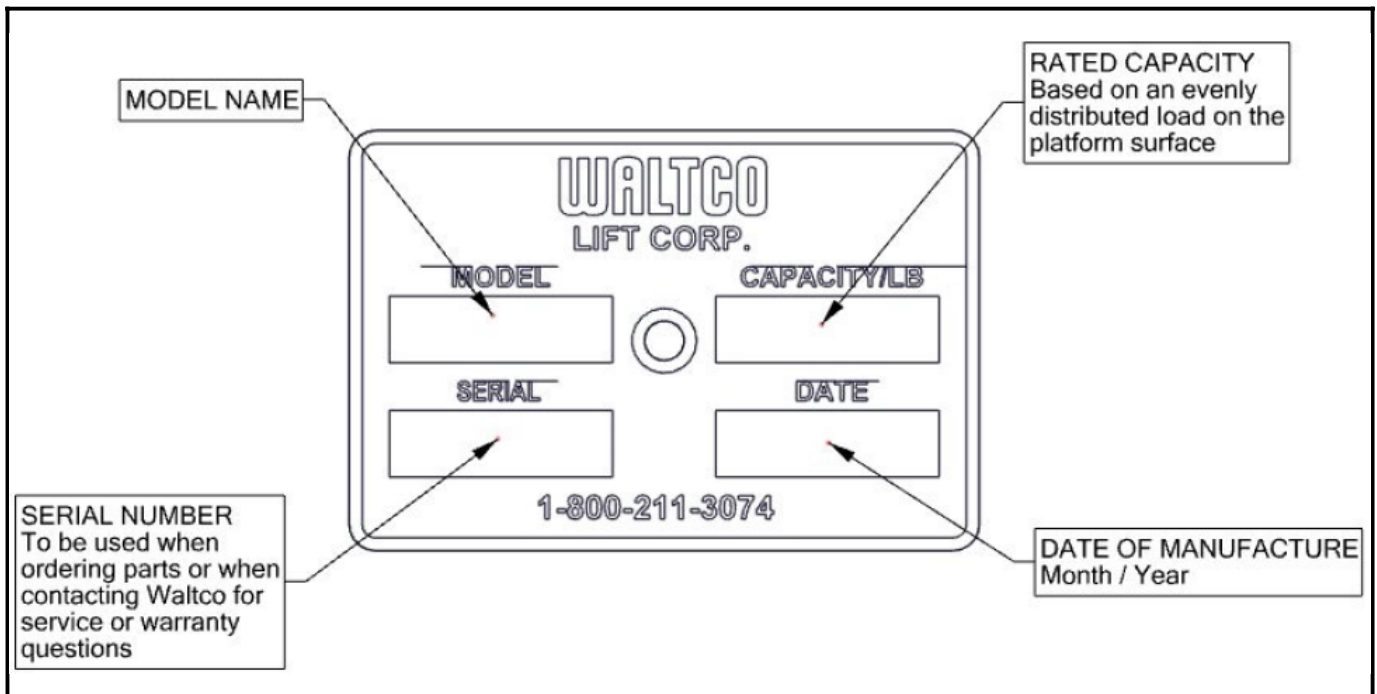
Legal Statement:

Hiab shall at all times have the right to (i) install, maintain and dismantle remote diagnostics tools or similar sensor-based connectivity capabilities ("Connectivity") in and from the Equipment; and (ii) access, send, receive, collect, store and use any and all information and data gathered through the Connectivity, including but not limited to, information concerning efficiency, availability, downtime, operation, operating environment, movement, condition, logon, location and similar information relating to the Equipment (the "Information"). Such Information may be used for optimizing the Equipment, or any related equipment or services as well as for Hiab's internal business and/or operating purposes. Hiab shall be responsible for complying with applicable laws and regulations related to such Information

Customer/user shall not in any way remove, disable, or interfere with the Connectivity or the Information. Any intellectual property rights or other right and title in and to the Connectivity features and the Information and all their further developments shall at all times be and remain the exclusive property of Hiab.

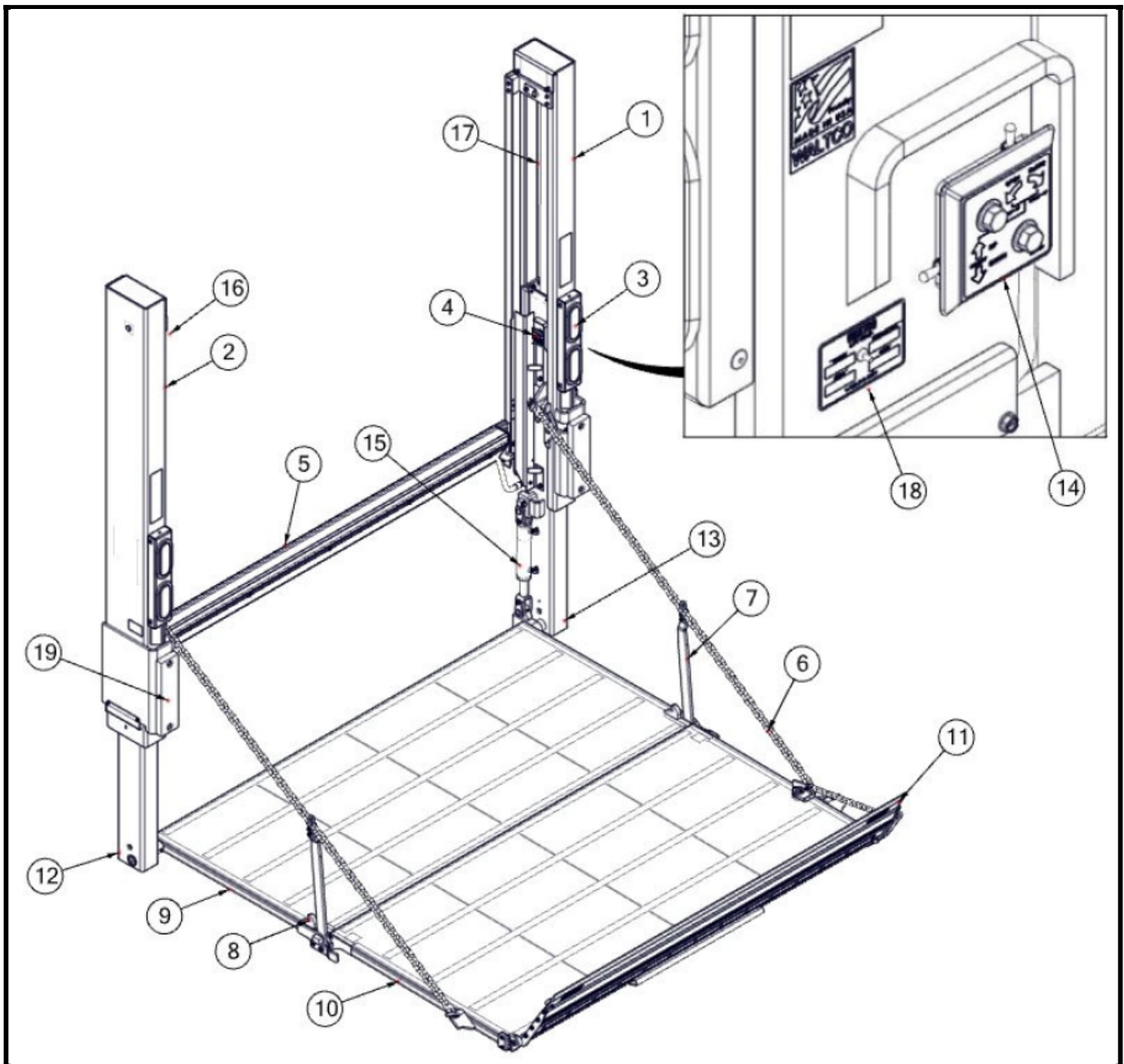
Chapter 2 Liftgate Terminology

MODEL NAME	DESCRIPTION	CAPACITY
WDVBG35	WDVBG-35 Series	3500 lb.
WDVBG45	WDVBG-45 Series	4500 lb.
WDV35	WDV-35 Series	3500 lb.
WDV45	WDV-45 Series	4500 lb.
WDV55	WDV-55 Series	5500 lb.
WDV66	WDV-66 Series	6600 lb.



Chapter 2 Liftgate Terminology

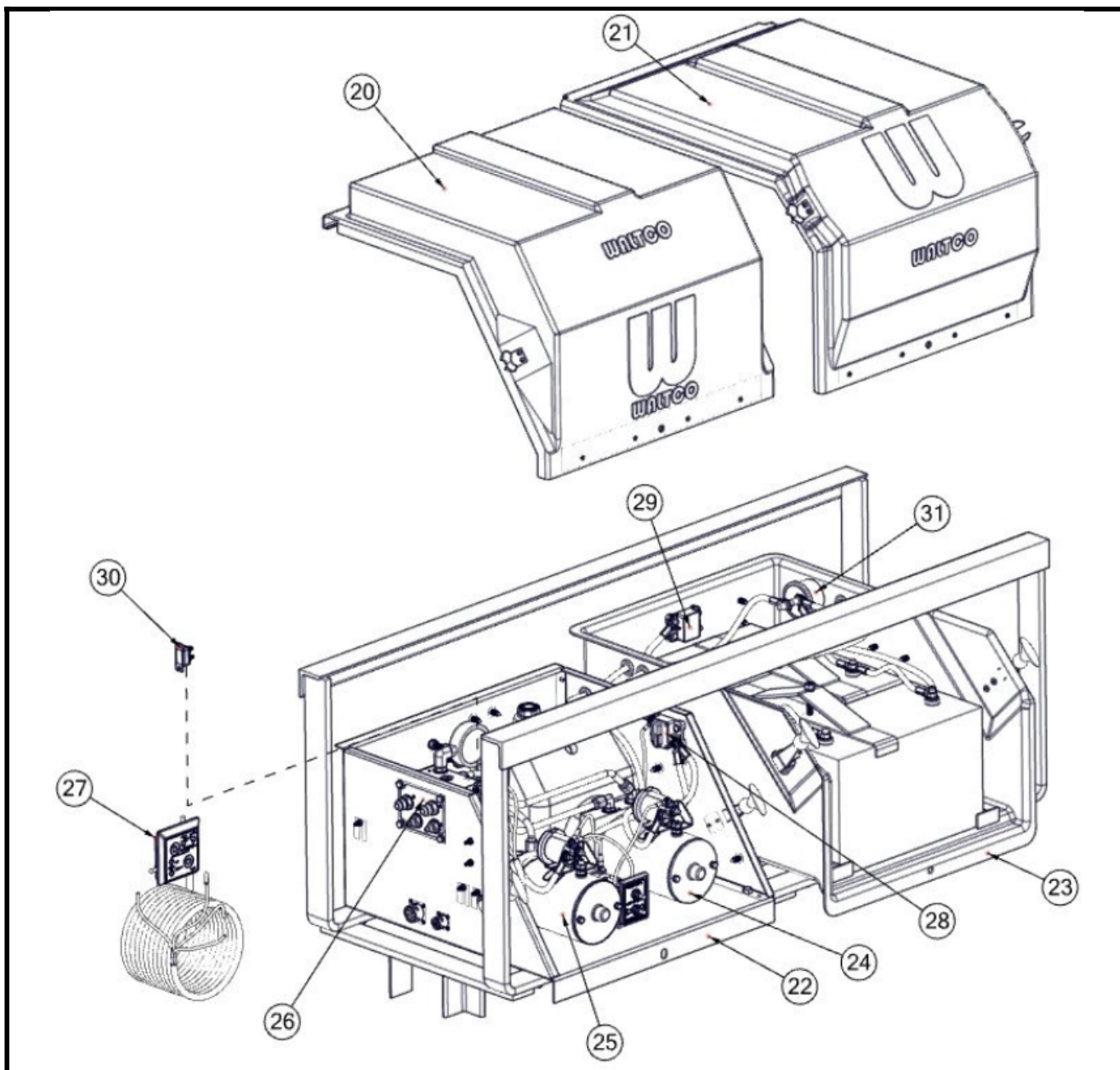
- | | | |
|------------------------|---------------------------|--------------------------------|
| 1. Curb Side Column | 8. Bottom Stop Catch | 15. Closing Cylinder |
| 2. Drivers Side Column | 9. Deck | 16. Drivers Side Lift Cylinder |
| 3. Lights | 10. Deck Extension | 17. Curb Side Lift Cylinder |
| 4. Inside Switch | 11. Flip Ramp Assembly | 18. Specification tag |
| 5. Sill Extension | 12. Drivers Side Runner | 19. Dock Bumper |
| 6. Support Chain | 13. Curb Side Runner | |
| 7. Swing Arm | 14. Outside Column Switch | |



Chapter 2 Liftgate Terminology

- | | |
|--------------------------------------|----------------------------------|
| 20. Pump Box Lid | 27. Backup Controls |
| 21. Battery Box Lid | 28. 150 Amp Manual-Reset Breaker |
| 22. Pump Box Base | 29. 150 Amp Auto-Reset Breaker |
| 23. Battery Box Base | 30. 15 Amp Auto-Reset Breaker |
| 24. Primary Motor and Pump | 31. Master Disconnect Switch |
| 25. Backup Motor and Pump (Optional) | 32. HiConnect Unit (not shown) |
| 26. Manifold Block Assembly | |

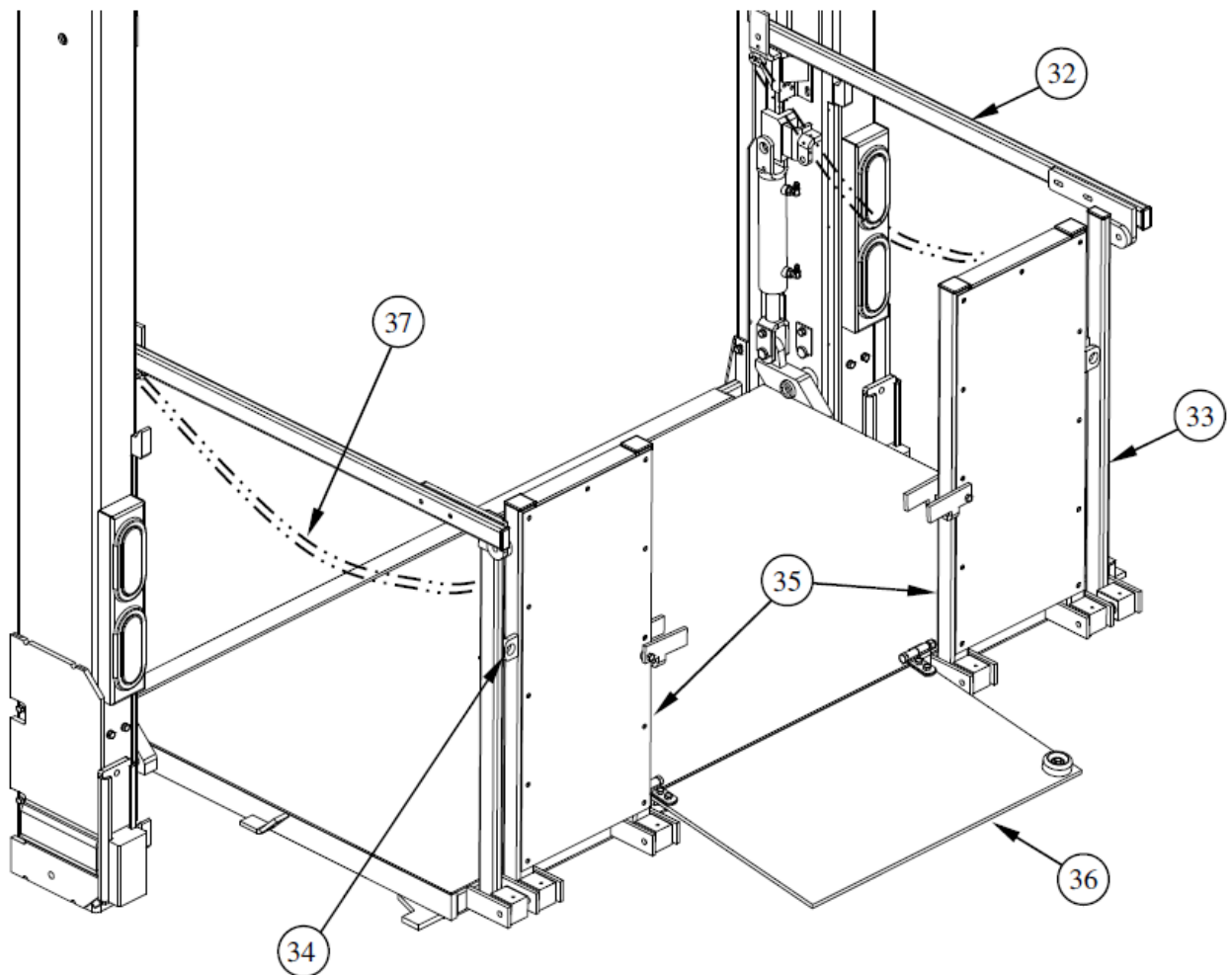
Note: Dual motor power box is shown



Chapter 2 Liftgate Terminology

- 32. Side Rail Assembly
- 33. Outer Guard Rail Assembly
- 34. Guard Rail Latch Assembly
- 35. Inner Guard Rail Assembly
- 36. Ramp Assembly
- 37. Gas Bottle Retention Chain

WDVBG



Chapter 3 Basic Mounting Requirements



NOTE: It is the requirement of the installer to:

Verify the vehicle is compatible with the mounting and strength requirements of the liftgate.

Ensure the vehicle meets all Federal, State and Local standards and regulations after installation.

MOUNTING DIMENSIONS

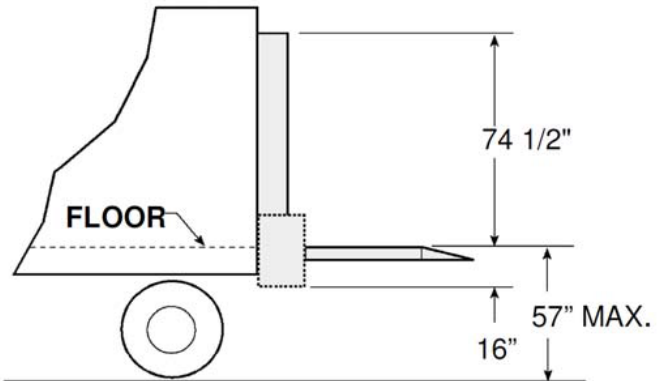
Determine bed height by taking the measurement from the ground to the floor level of the vehicle.

The maximum unloaded bed height is 57"

The minimum bed height depends on

- Liftgate Platform Size
- Whether dock loading capability is required

The table below details the allowable bed height ranges per platform size.



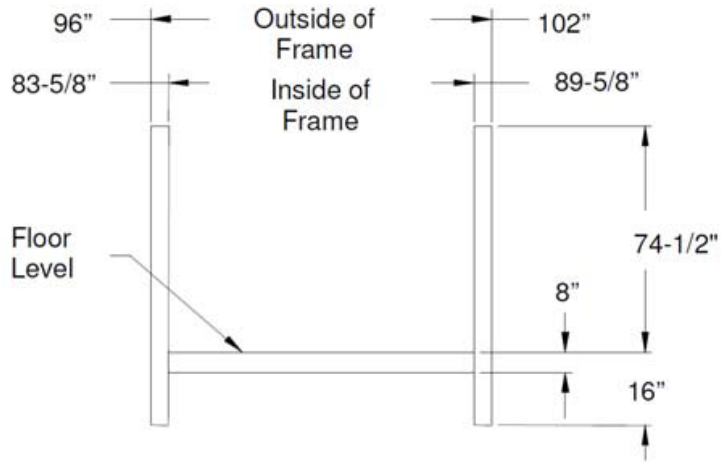
Platform Depth	Bed Height			
	Bed Height Range Without Dock Loading Capability		Bed Height Range With Dock Loading Capability	
	Minimum (loaded)	Maximum (unloaded)	Minimum (loaded)	Maximum (unloaded)
36" + 16" Flip Ramp (WDVBG)	34"	57"	40"	57"
42" + 16" Flip Ramp (WDVBG)	34"	57"	46"	57"
60" + 16" Flip Ramp	34"	57"	34"	57"
60" + 12" Fixed Ramp	34"	57"	42"	57"
72" + 16" Flip Ramp	34"	57"	42"	57"
72" + 12" Ramp	34"	57"	47"	57"
84" + 16" Flip Ramp	34"	57"	47"	57"

Chapter 3 Basic Mounting Requirements

MOUNTING DIMENSIONS (CONTINUED)

The WDV is offered in two widths:

- 96" over all width for 82" wide platforms
- 102" over all width for 88" wide platforms.

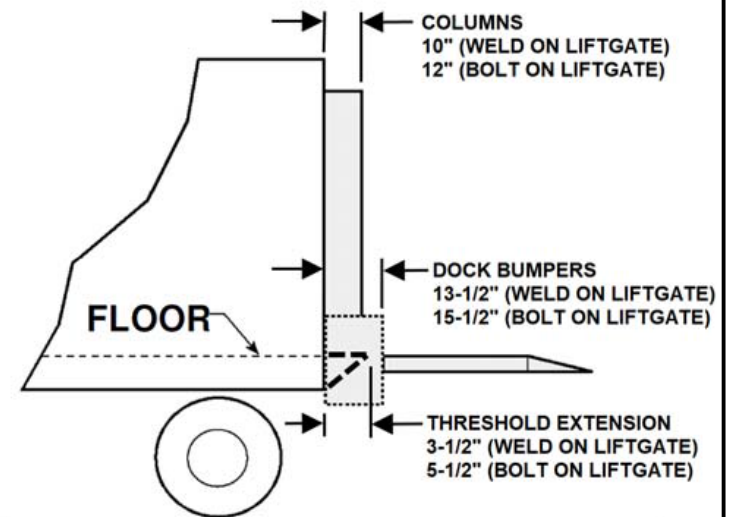


MOUNTING OPTIONS

The WDV is offered with two mounting options:

- Welded directly to the vehicle
- By brackets welded to the vehicle, which the liftgate is then bolted to

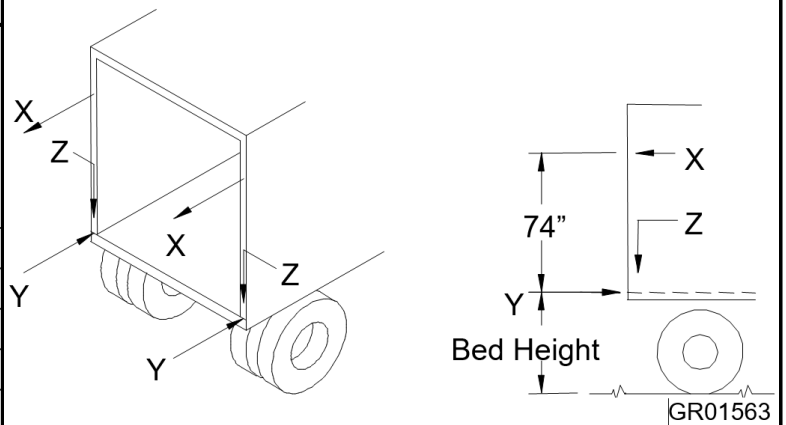
The dimensions off the rear of the vehicle are shown to the right:



! Vehicles must be capable of supporting forces shown.

X = Each side wall tension
Y = Each side wall compression
Z = Each side wall shear

Model	X & Y lbs.	Z lbs.
WDV35, WDVBG35	2250	3500
WDV45, WDVBG45	2500	4500
WDV55	3000	5500
WDV66	3500	6600



Chapter 3 Basic Mounting Requirements

Installation of Optional Pre-Shipped Bolt On Brackets

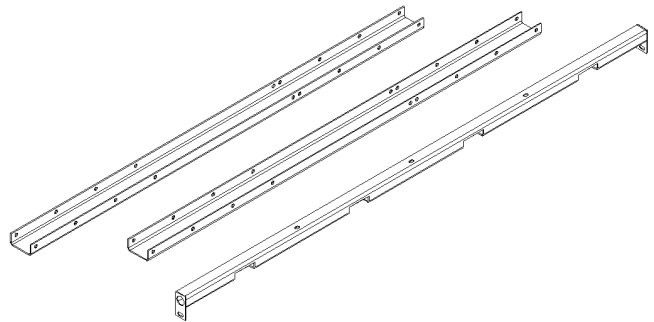
The bracket kit for bolting a WDV liftgate to a vehicle is shown on the right. The kit includes:

- 2 x vertical channel brackets
- 1 x threshold support bracket

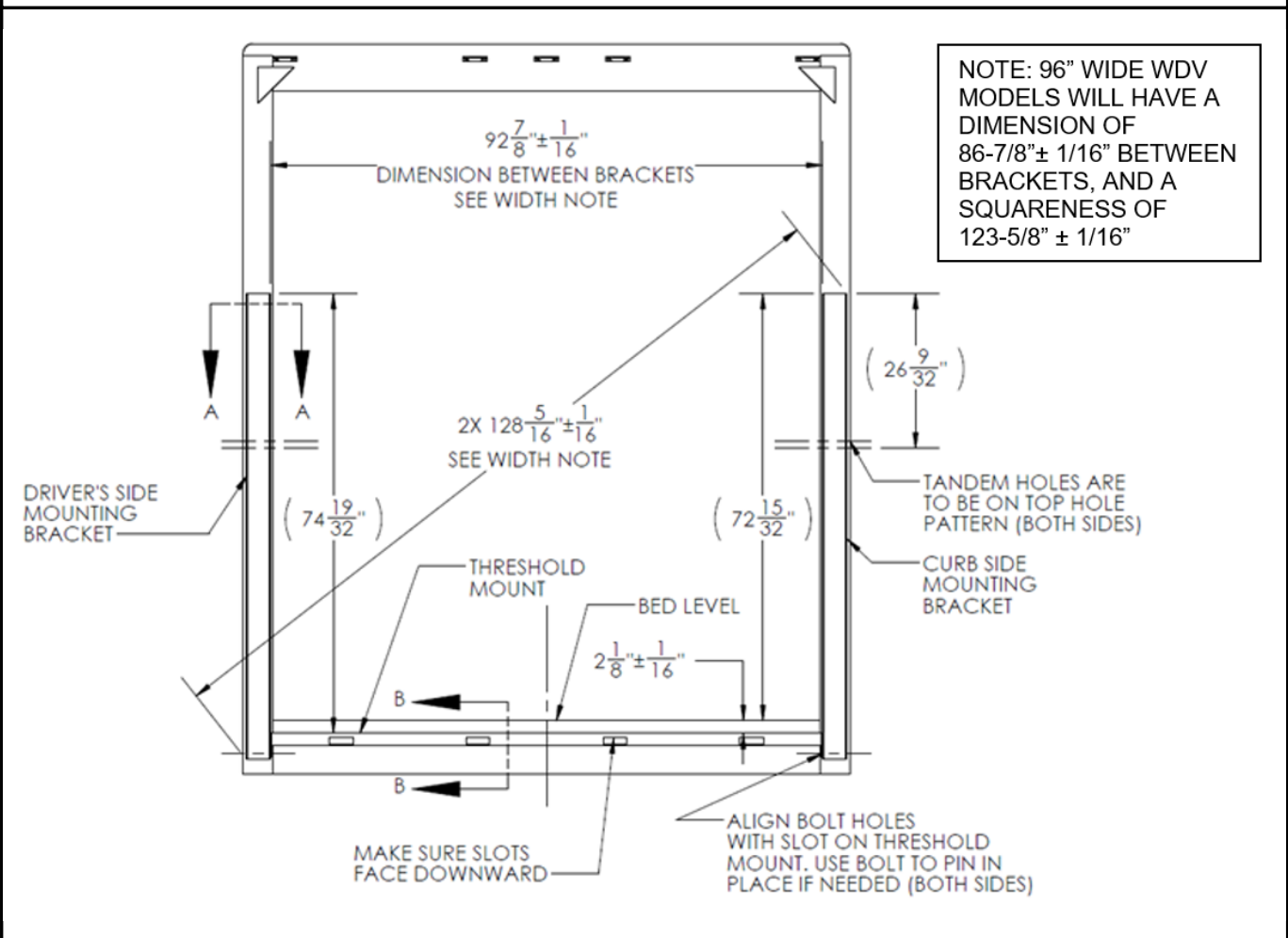
The brackets are first welded to the vehicle. The liftgate is then bolted to the brackets at a later time.

Note: if your liftgate has these brackets already installed, you do not need to remove them; they can be welded as-is to complete the install. See chapter 4.

Note: if your liftgate will be welded directly to the vehicle (no brackets), go to chapter 4.



BOLT ON BRACKET LAYOUT DRAWING



Chapter 3 Basic Mounting Requirements

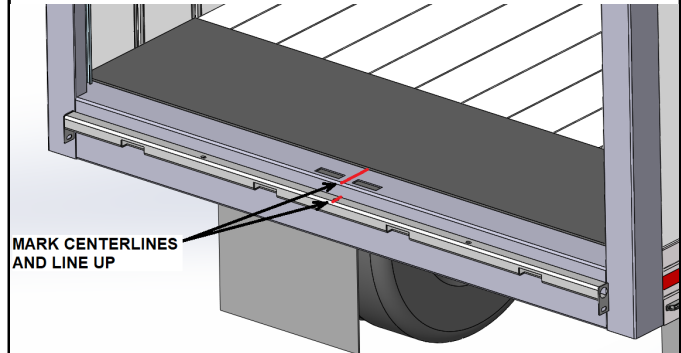
Installation of Optional Pre-Shipped Bolt On Brackets

STEP 1: Place Threshold Support Bracket

- 1.) Mark centerline of rear sill.
- 2.) Mark centerline of Threshold Support Bracket.
- 3.) Position bracket as shown in layout drawing on previous page.

Note: tabs and cutouts should be on the bottom.

- 4.) Align center marks and clamp. Recheck measurements.
- 5.) Tack weld bracket in place.



STEP 2: Place the vertical Mounting Brackets

- 1.) Place Mounting Brackets against the outside of the Threshold Support Bracket.

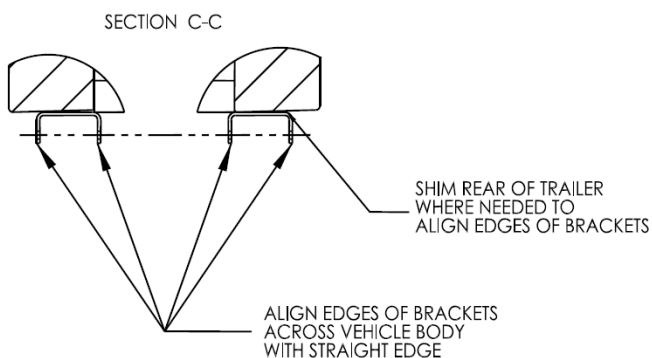
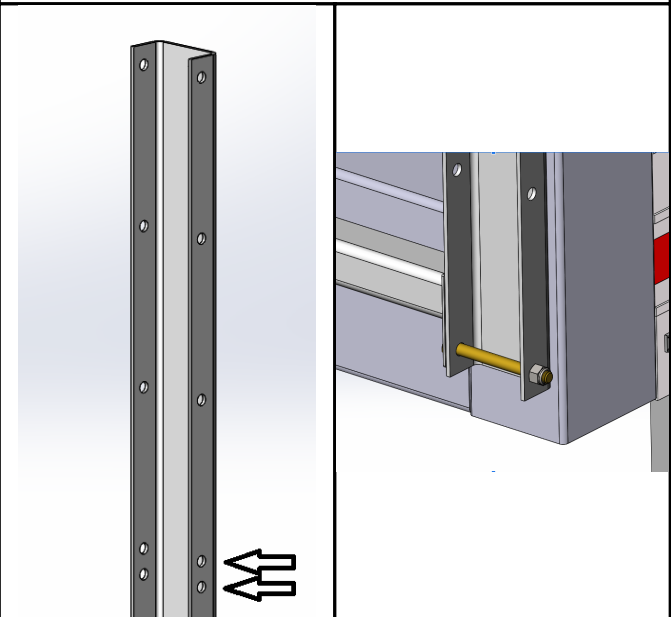
Note: Orient bracket so that Tandem Holes are on the upper half of the Mounting Bracket.

- 2.) Align bottom bolt holes with slot on Threshold Support Bracket. Secure loosely with nut and bolt from hardware kit.
- 3.) Clamp Mounting Brackets to vehicle and position as shown in layout drawing on previous page.

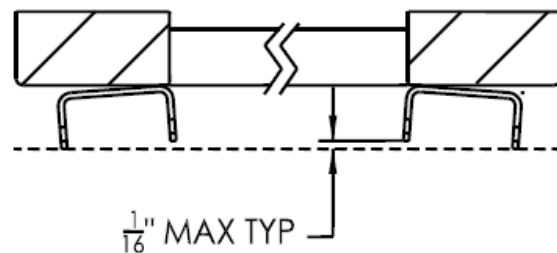
- 4.) After measuring spacing, check squareness by measuring corner to corner, as shown on layout drawing.

Note: If brackets are not square, liftgate may not function properly!

- 5.) Check bracket alignment and shim as needed (see below)



INSIDE EDGES OF EACH BRACKET MAY ROTATE INWARD AS SHOWN 1/16" MAX

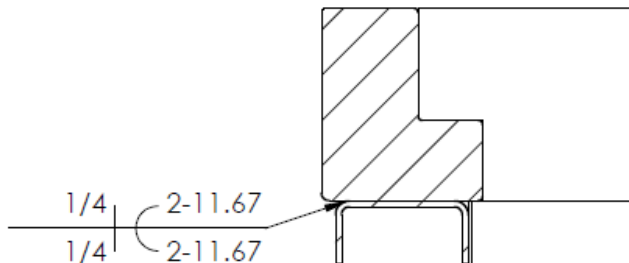


Chapter 3 Basic Mounting Requirements

Installation of Optional Pre-Shipped Bolt On Brackets

STEP 4: Weld the vertical Mounting Brackets

- 1.) Tack weld both sides of brackets to prevent weld draw.
- 2.) Weld brackets to the vehicle using the weld callout on the right



SECTION A-A
SCALE 1 : 8

STEP 5: Add gussets if needed

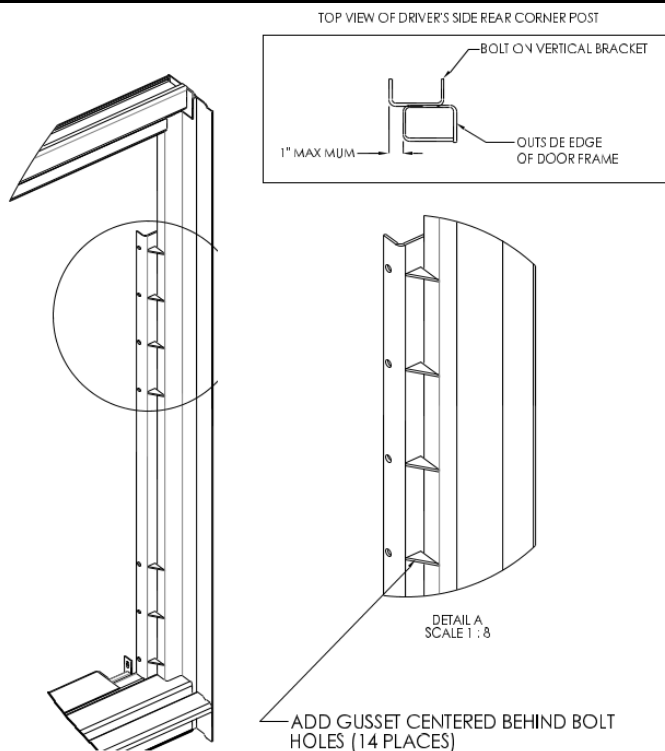
If bolt on bracket extends inward of door frame more than 1", add gussets as shown on right:

Note: Gussets not provided.

Gussets to be 3/16" minimum thick steel, (14) total.

Each bolt hole must have a gusset behind it as shown.

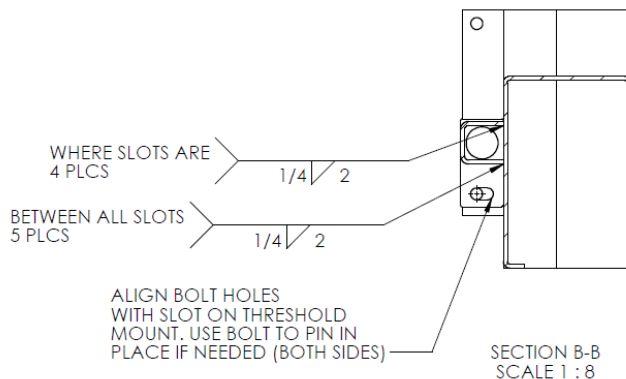
Each gusset must be sized to cover the exposed flat portion of the Mounting Bracket, and the flat portion of the door frame



STEP 6: Weld the Threshold Support Bracket

Weld the Threshold Support Bracket as shown on right

NOTICE: Welds alternate between inside and outside of bracket. Both sets of welds are required, or the bracket may separate from the vehicle and cause an unsafe condition!



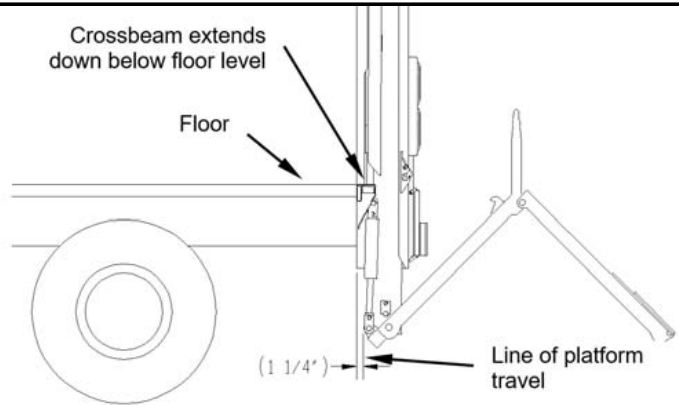
Chapter 4 Liftgate Installation

PREPARATION OF VEHICLE BODY

NOTICE: review Chapter 3 for liftgate mounting requirements.

Remove all obstructions that will interfere with Liftgate mounting or operation such as dock bumpers, lights, projections, etc.

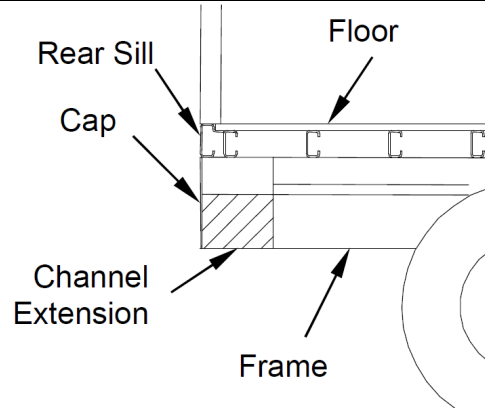
NOTICE: Trailer hitches are not to extend beyond the rear body sill or be attached to any part of the Liftgate.



On vehicles with a short frame (frame does not extend back to rear sill), frame must be extended as shown.

Add channel to vehicle frame & cap so frame extension is flush with rear sill.

Construct a cap from 1/4" x 2" strap or larger to tie sill and frame together.



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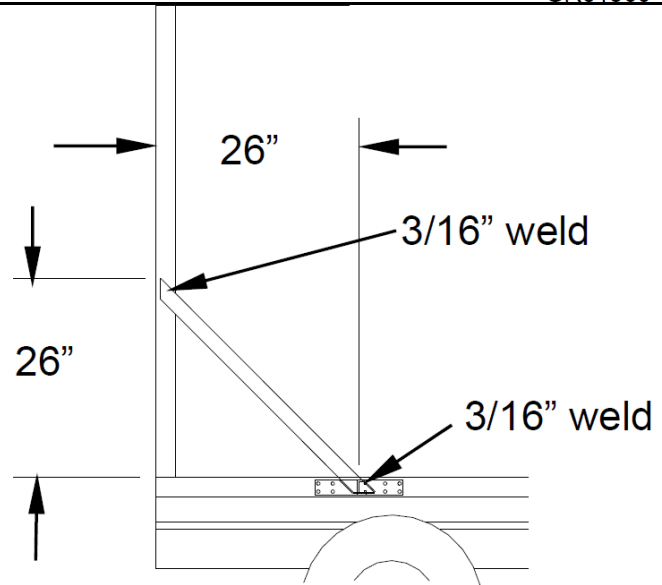
If side walls of vehicle do not meet minimum strength requirements add support straps from corner posts down to side rails as shown.

Locate strap in line with a cross member on side rail

1/4" x 3" bar or heavier material to be used for straps

Reinforce side rail with 1/4" thick steel plate if necessary.

Use 3/16" welds 100% at side rail and corner posts.

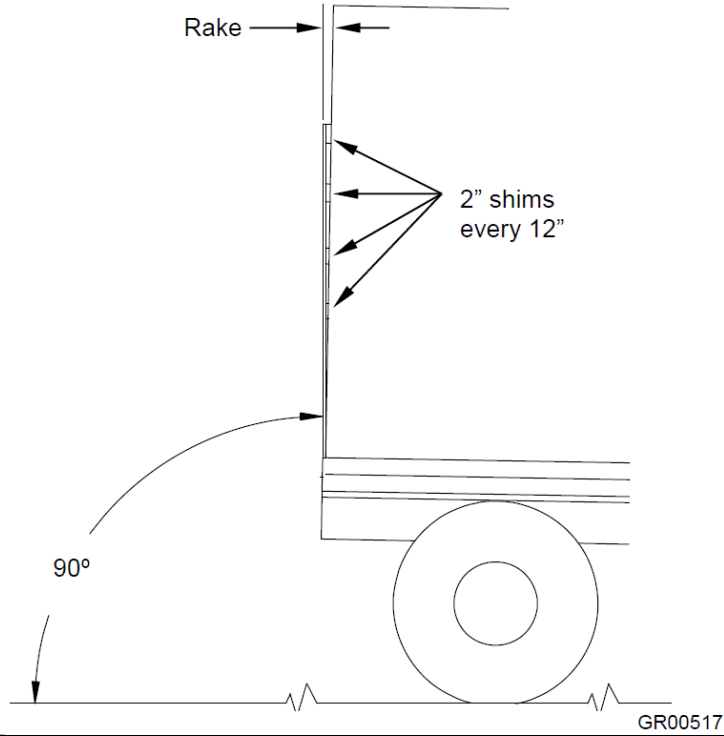


Chapter 4 Liftgate Installation

PREPARATION OF VEHICLE BODY

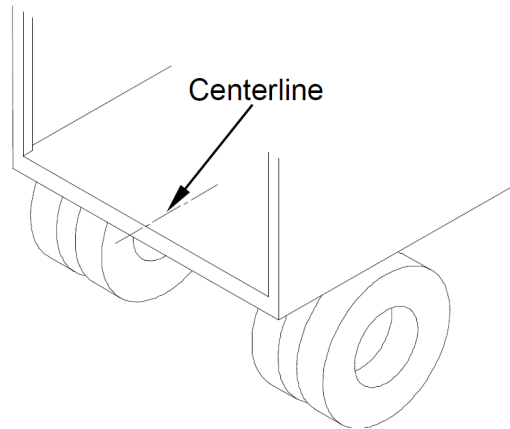
If corner posts are not 90° to the ground, shims will have to be added as shown to compensate for vehicle rake.

NOTICE: Not adding shims may result in the tip of the platform ramp not touching the ground when the liftgate is lowered.



Locate and mark center of vehicle floor and rear sill.

Note: if vehicle has bolt on mounting brackets already welded to it, skip this step.



Chapter 4 Liftgate Installation

PREPARATION OF LIFTGATE FOR INSTALLATION

PREPARATION OF LIFTGATE

Remove the Hydraulic/Battery enclosure and any other boxes from the Liftgate.



Support hydraulic enclosure with forklift or suitable heavy lifting device before removing shipping straps. Enclosure may be unbalanced!

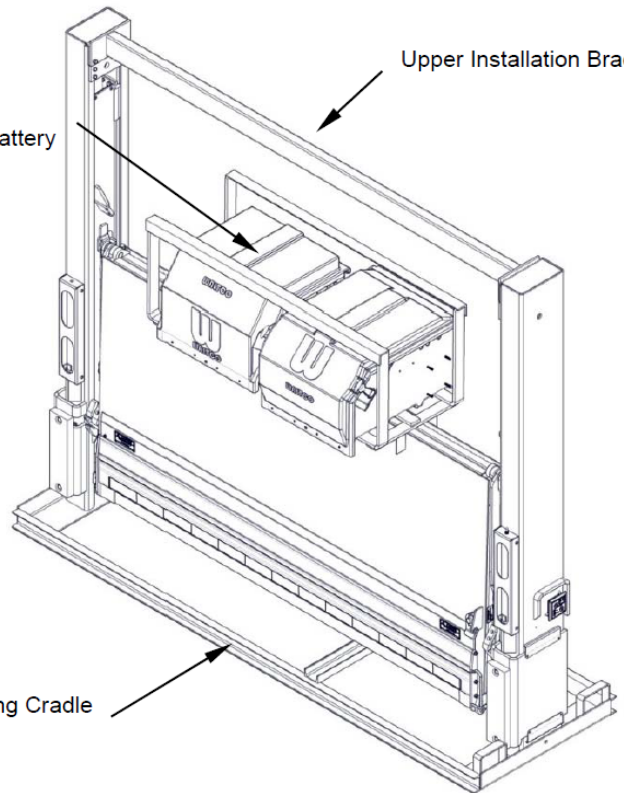


Do not remove any other shipping straps, supports, or braces from liftgate until instructed to do so.

Remove Hydraulic/Battery enclosure

Upper Installation Brace

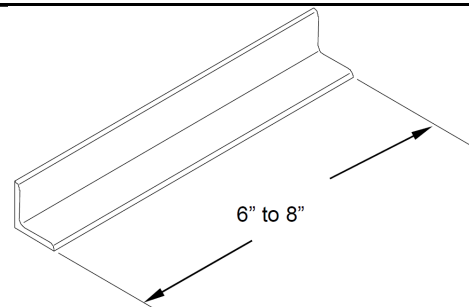
Shipping Cradle



Cut two temporary mounting supports out of angle or channel.

Mounting support should be 6" to 8" long.

Note: if vehicle has bolt on mounting brackets already welded to it, skip this step.



Locate and mark the centerline of Liftgate on top of the Sill Extension.

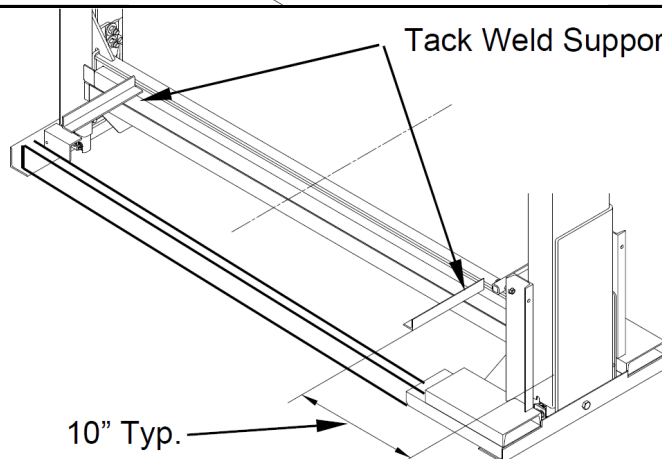
NOTICE: The columns are NOT the same width. The centerline must be determined as the midpoint between the OUTSIDE of the columns.

Tack weld supports on Sill Extension as shown.

Note: if vehicle has bolt on mounting brackets already welded to it, skip this step.

Tack Weld Supports

10" Typ.



GR02391

Chapter 4 Liftgate Installation

Use forklift to raise Liftgate by Installation Brace as shown.

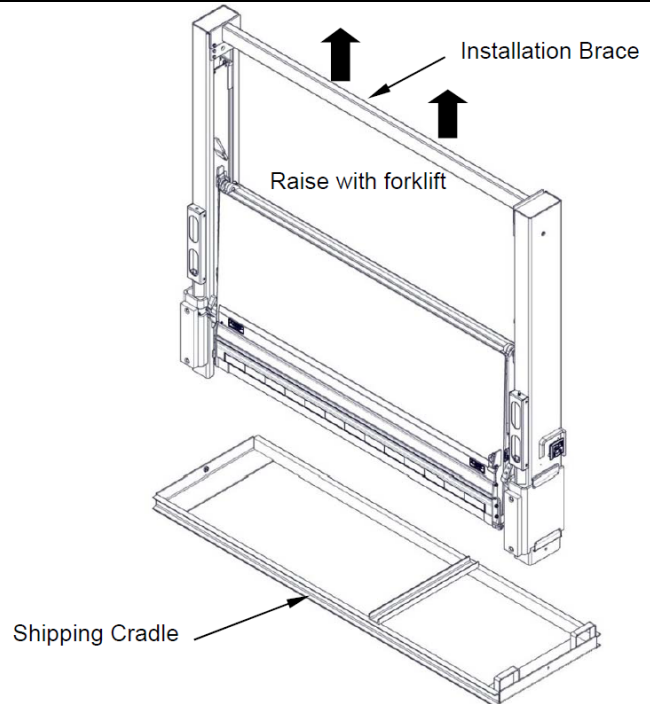
Remove bolts securing liftgate to the shipping cradle. Remove shipping cradle and discard.



Do not remove Installation Brace until Liftgate is fully welded to vehicle.



Do not remove any other components besides the Shipping Cradle.



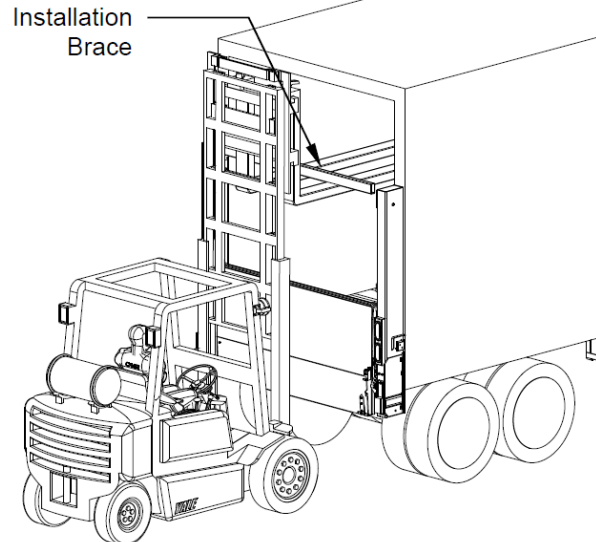
Use forklift to raise Liftgate by Installation Brace as shown.

Position Liftgate at rear of vehicle so temporary supports rest on the floor of the vehicle. Align center marks of liftgate and vehicle.



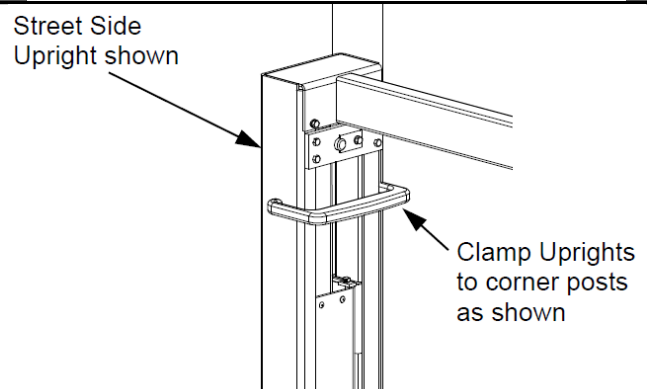
STAND CLEAR of installation area while positioning Liftgate.

Note: if vehicle has bolt on mounting brackets already welded to it, take care to align the liftgate with the brackets.



Clamp top of both curb and street side columns to the corner posts using large clamps as shown

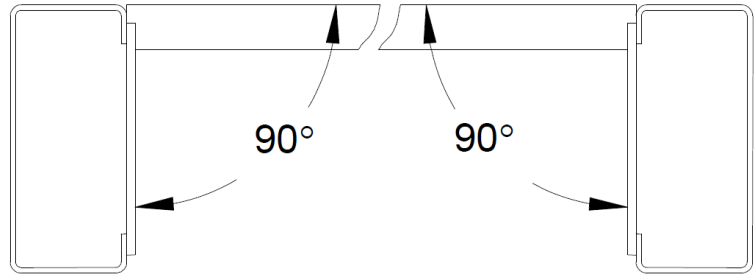
NOTICE: Be careful not to overtighten the clamps. Damage to liftgate columns or vehicle corner posts may occur!



Chapter 4 Liftgate Installation

NOTE: IF YOUR VEHICLE HAS PRE-WELDED BRACKETS, SKIP THIS PAGE

Be sure columns are square to back of vehicle. Check that they are 90° at the top and bottom of each up-right. Adjust and reclamp if needed.



Adjust the squareness of the liftgate based on the method below:

Measure across the top and bottom of the liftgate.

D1 to be within $\pm 1/8$ " from D2

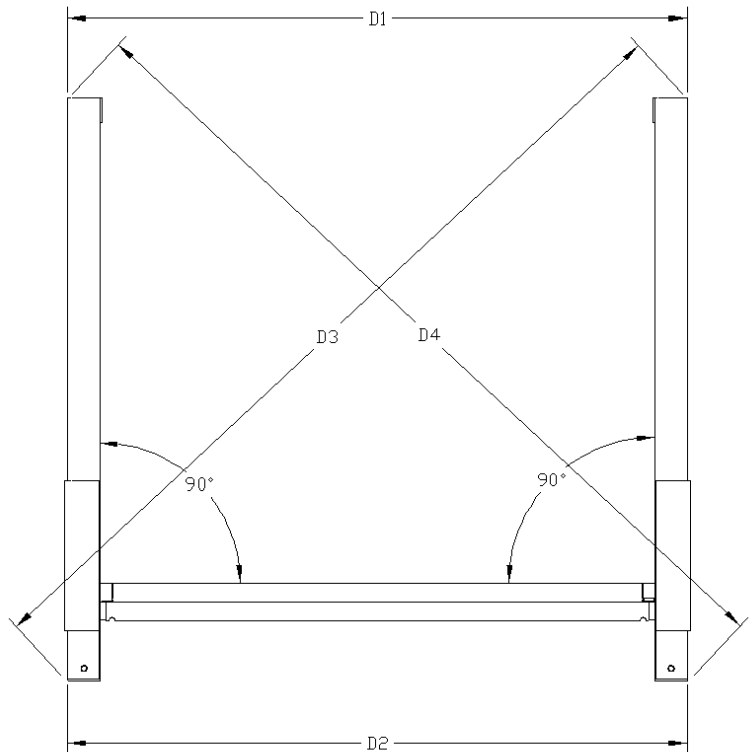
D2 to be within $\pm 1/8$ " from D1

Measure across the corners of the liftgate.

D3 to be within $\pm 1/4$ " from D4

D4 to be within $\pm 1/4$ " from D3

NOTICE: If the above dimensions do not meet the above requirements, the liftgate may not function correctly. This may require the liftgate to be removed and reinstalled!



Double check position of Liftgate on the vehicle. Check the following:

- Sill Extension is flush with truck floor
- Liftgate is centered on vehicle
- Column assemblies are vertical and tight against corner posts
- Columns are parallel and square to each other.

Chapter 4 Liftgate Installation

NOTE: IF YOUR VEHICLE HAS PRE-WELDED BRACKETS, SKIP THIS PAGE

After verifying the gate is correctly located on the vehicle, weld the **inside** of the columns to the vehicle corner posts with six (6) ¼" x 2" welds per side as shown.

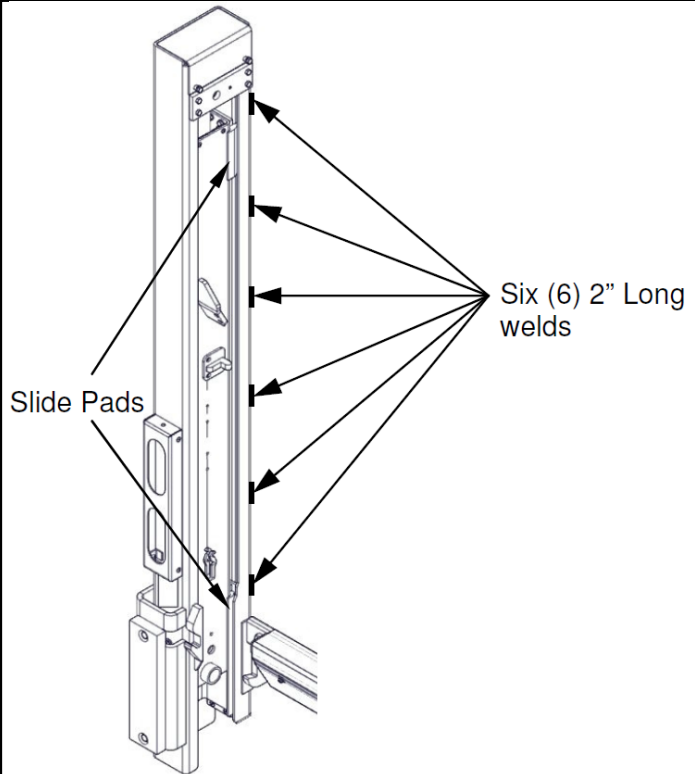
NOTICE: Weld the insides of the columns first, and **only** the inside at this time.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



WELD INSIDE OF BOTH CURB AND DRIVERS SIDE (DRIVERS SIDE SHOWN)

If your **liftgate has pre-installed bolt-on brackets**, it can be welded directly to the vehicle without removing the brackets:

Torque all nuts on pre-installed brackets to 90 ft-lbs.

Remove liftgate from shipping stand and place against vehicle. Clamp liftgate to vehicle.

Follow the procedure on previous page to measure and check squareness on the liftgate.

Weld the inside of the columns to the vehicle corner posts with six (6) ¼" x 2" welds per side as shown.

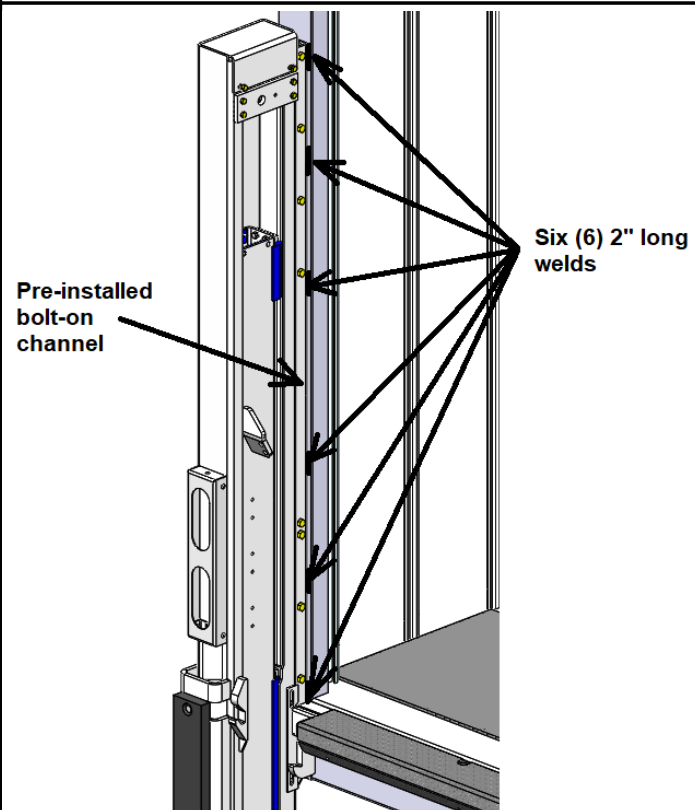
NOTICE: Weld the insides of the columns first, and **only** the inside at this time.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



WELD INSIDE OF BOTH CURB AND DRIVERS SIDE (DRIVERS SIDE SHOWN)

Chapter 4 Liftgate Installation

INSTALLATION ONTO PRE-WELDED BOLT ON BRACKETS IF YOUR VEHICLE DOES NOT HAVE PRE-WELDED BRACKETS, SKIP THIS PAGE

Insert a ½-13 X 5" Grade 8 bolt in the tandem holes on each mount channel as shown. Tighten locknut down until nut is snug against channel.

NOTICE: Do not bend the channel!

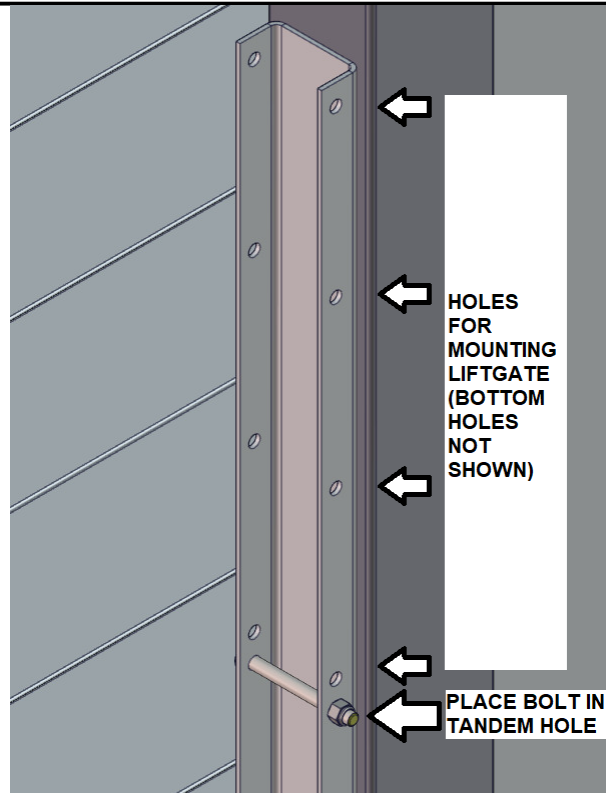
Place the gate into the channels, and set on the bolts to match up mounting holes.

Mount liftgate to channels using the remaining (16) ½-13 x 5" Grade 8 bolts and locknuts.

NOTICE: Locknuts should be on outside of liftgate.

NOTICE: If the bolt holes are significantly misaligned on one or both sides, check that bolt on brackets are correctly installed per Chapter 3.

If brackets are misaligned, liftgate may be installed out of square. Damage to liftgate may result!

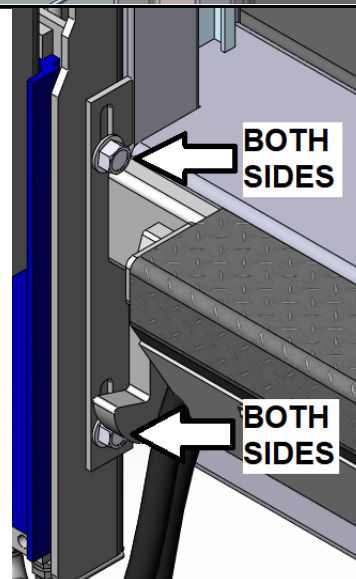


Verify that the height of the threshold between the columns is within 1/8" of the bed of the vehicle.

NOTICE: If threshold and bed height are not aligned, the liftgate platform may not come level with vehicle bed.

If this happens, recheck bracket installation from Chapter 3.

If bracket installation is correct, you may adjust the threshold height by loosening the bolts holding it to the column, (or cutting welds in same area on models without bolts).



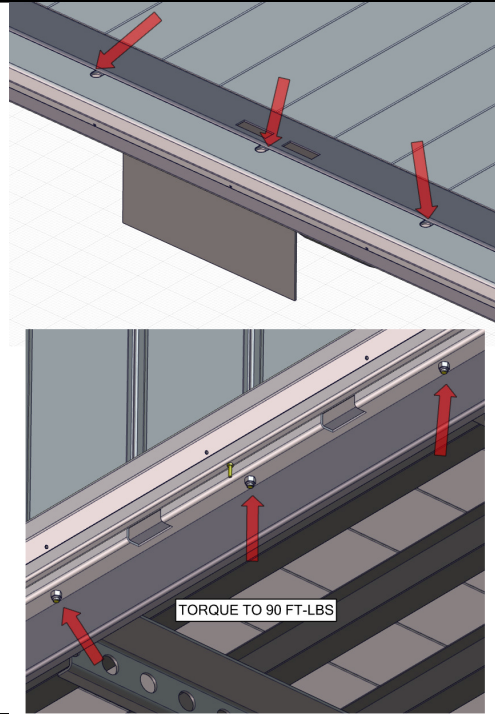
Chapter 4 Liftgate Installation

INSTALLATION ONTO PRE-WELDED BOLT ON BRACKETS
IF YOUR VEHICLE DOES NOT HAVE PRE-WELDED BRACKETS, SKIP THIS PAGE

Install (3) 1/2"-13 x 5" long bolts through top of threshold as shown.

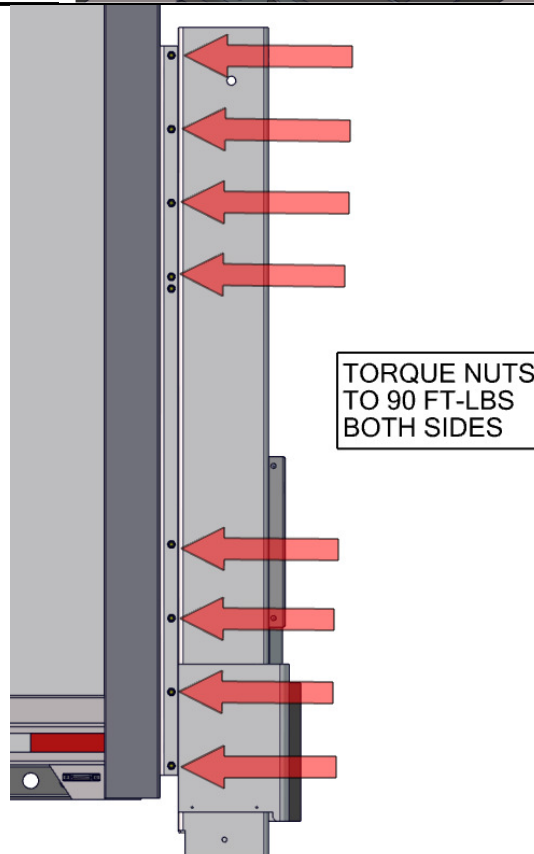
Secure with locknuts under the threshold support bracket and torque to 90 ft-lbs

NOTICE: Torque the nut, not the bolt! The bolt shaft can produce a false resistance to torque.



Torque each of the (16) locknuts on the mount channels to 90 ft-lbs.

NOTICE: Torque the nut, not the bolt! The bolt shaft can produce a false resistance to torque.



Chapter 4 Liftgate Installation

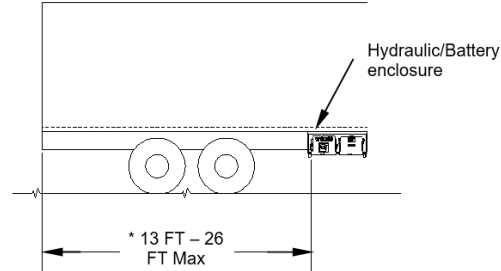
INSTALLATION OF PUMP AND BATTERY BOXES

Locate a position for hydraulic/battery enclosure. This position should be set for the best use of the length hoses supplied with the Liftgate to avoid having to coil up extra hose length.

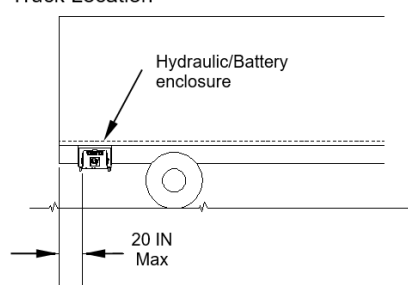
In choosing the mounting position, you must ensure that:

- Pump Box cover opens toward curb-side of vehicle.
- Hydraulic Hoses from liftgate reach Pump Box without strain.
 - *13 ft. hoses are standard for short trailers (33 ft. and under)
 - **17 ft. hoses are standard for trailers 33 - 42 ft. long.
 - **26 ft. hoses are standard for long trailer (Over 42 ft.)
- Charge line(s) from front of vehicle reaches pump / battery box without strain.

Trailer Location

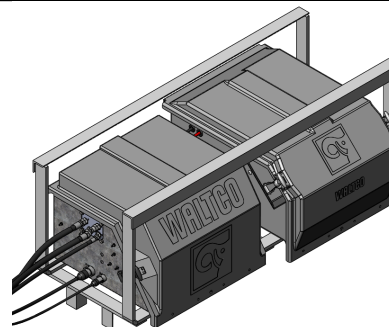


Truck Location



TRAILER APPLICATIONS

For trailer applications a combination pump and battery box in separate enclosures is supplied. The frame must be welded to the trailer cross members.

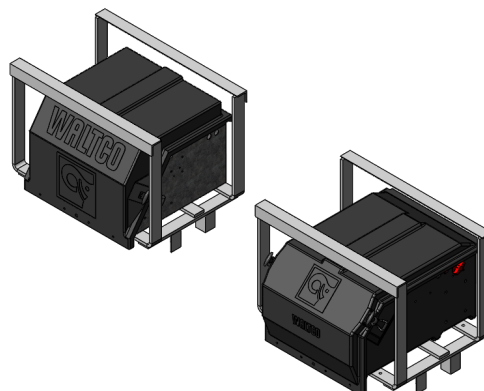


TRUCK APPLICATIONS

For truck applications only the pump box is supplied as standard. An optional auxiliary battery box is available to provide space for up to (3) batteries to supplement the truck battery.

Each box frame must be welded to the vehicle. The boxes may be located independently based on the space available.

(The combination pump / battery box shown above is suitable for truck use if desired, provided there is sufficient space to mount it.)



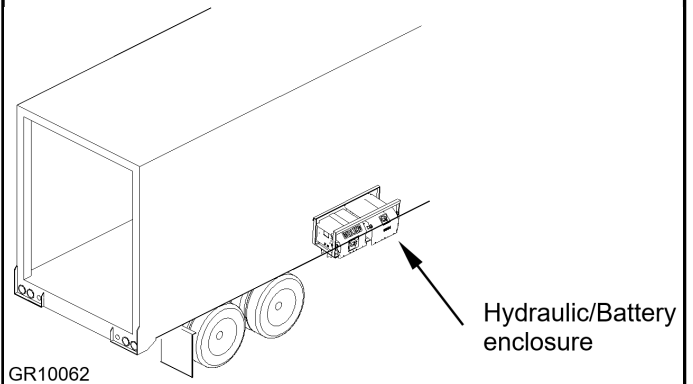
Optional auxiliary battery box shown on left

Chapter 4 Liftgate Installation

INSTALLATION OF PUMP AND BATTERY BOXES

Use floor jack or other lifting device to raise Hydraulic/Battery enclosure to vehicle cross members.

Position the box inboard 8-12 inches from outside edge of vehicle.



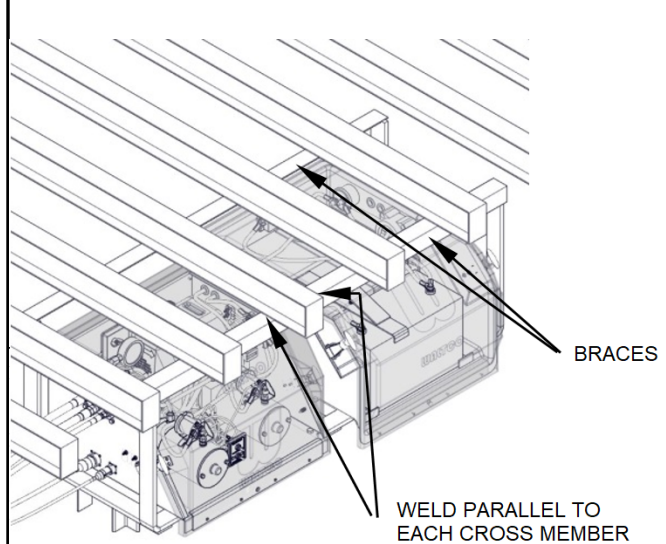
Position top of frame as shown, so that they butt against vehicle cross members.

For Combination Hydraulic / Battery Box: Using a 1/8" minimum weld size, weld both channels of hydraulic/battery enclosure to each body cross member. Weld to a minimum of three (3) crossmembers / six (6) total welds. Overall total length of weld must be 12" or greater.

For Hydraulic Enclosure only: Using a 1/8" minimum weld size, weld both channels of enclosure frame to each body cross member. Weld to a minimum of two (2) crossmembers / four (4) total welds. Overall total length of weld must be 6" or greater.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



Chapter 4 Liftgate Installation

HYDRAULIC HOSE ROUTING AND CONNECTIONS

HYDRAULICS HOSES & LINES

Familiarize yourself with key components using this diagram.

Refer back to this diagram as needed during hydraulic hookup.



Keep hydraulic hoses, fittings, and other components free from contamination and debris. Contamination of the Hydraulic System will cause the Liftgate to operate unevenly and can lead to damage of hydraulic components.



Take care to avoid cross threading hydraulic fittings, and use proper tightening practices to avoid over or under tightening each connection. Overtightening JIC fittings will damage the fitting, and can lead to leakage.

NOTICE: The 1/4" and 1/2" hydraulic hoses have been connected together to prevent oil from draining from the cylinders and to minimize the amount of bleeding needed when installation is complete.

Disconnect the 1/2" hydraulic hoses at the liftgate.

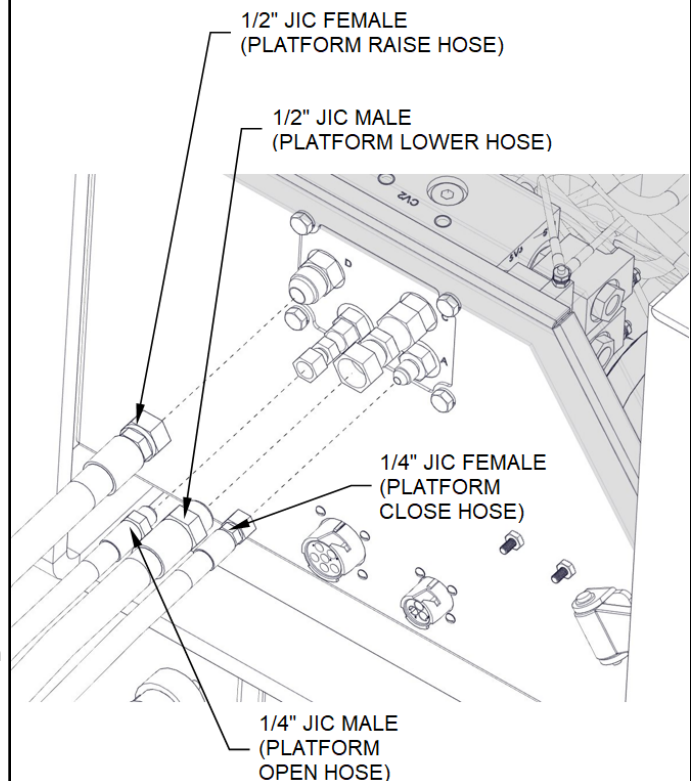
Connect hose with 1/2" female swivel to the male 1/2" fitting on the pump box (Port "D"). This port **raises** the platform.

Connect hose with 1/2" male fitting to the 1/2" female swivel fitting on the pump box (Port "C"). This port **lowers** the platform.

Disconnect the 1/4" hydraulic hoses at the liftgate.

Connect hose with 1/4" female swivel to the male 1/4" fitting on the pump box (Port "A"). This port **closes** the platform.

Connect hose with 1/4" male swivel to the 1/4" female swivel fitting on the pump box (Port "B"). This port **opens** the platform.



Chapter 4 Liftgate Installation

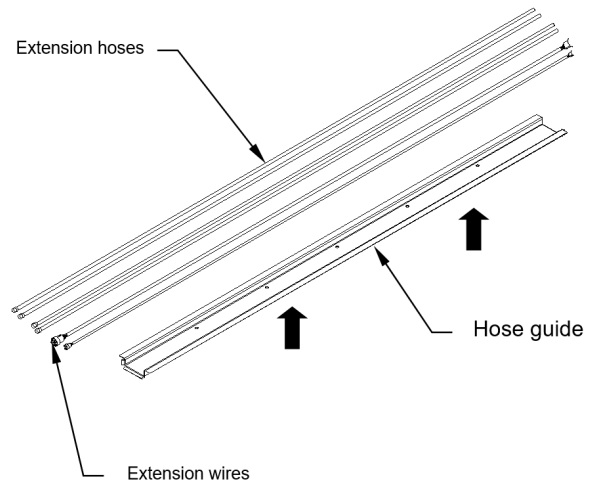
HYDRAULIC HOSE ROUTING AND CONNECTIONS

Use the hose guide(s) provided in the trailer installation kits to protect the hoses and wires between liftgate and hydraulic/battery boxes.

Hose guide should be positioned so electrical connectors are accessible where they exit the hose guide near rear of trailer.

NOTICE: On air ride equipped vehicles, be sure to locate hose guides where they cannot contact the tires.

Hose guides are not required for pump box installs behind the rear axle.



Take care when routing hoses to avoid situations that will damage or shorten the life of hydraulic hoses. Damage to liftgate and / or serious injury or death may result from improper hose routing.

The following are a list of best practices to follow when routing hydraulic hoses:

Avoid twisting of hoses. Observe the lay line on the hose to ensure it remains straight.

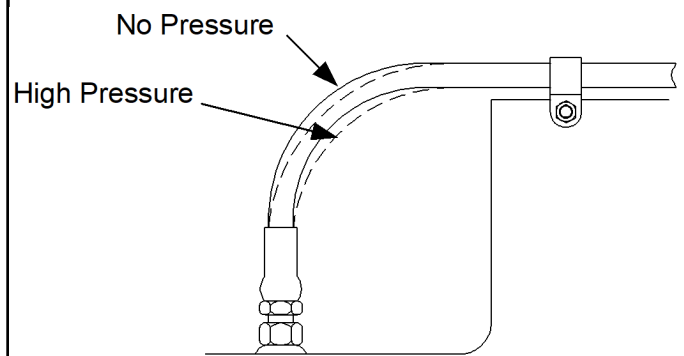
Avoid sharp bends when routing hoses. Observe the following minimum bend radii:

3-3/4" for 1/2" hoses

2" for 1/4" hoses

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

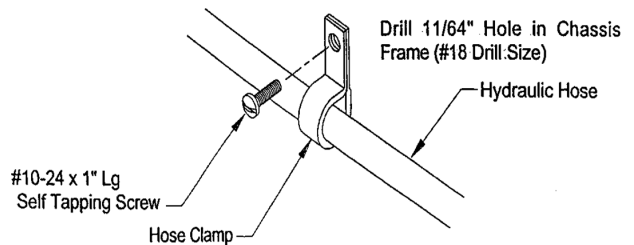
Do not clamp hoses at bends to allow for length changes when hose is pressurized.



GR00717

NOTICE: Secure hoses to vehicle every 24" or less to prevent chafing from road vibration.

Do not allow hoses to contact sharp or abrasive surfaces.



GR00265

Chapter 4 Liftgate Installation

BATTERY CABLE ROUTING AND CONNECTIONS

Verify vehicle ignition switch is off.

If installing a battery box with the liftgate, turn the master disconnect on battery box to the "OFF" position, otherwise disconnect vehicle battery ground cable.

Refer to installation instructions provided with wiring kit when connecting battery cable(s) and circuit breaker(s).



Original equipment ground cable on vehicle must be at least a #2 gage to ensure proper operation of pump unit.

If engine is not adequately grounded to vehicle frame, an auxiliary ground cable must be added between engine block and vehicle frame.



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.

Reconnect battery ground cable(s). DO NOT operate pump unit at this time.

BATTERY SELECTION

A minimum of two **Group 31 Dual Purpose, 700 CCA, minimum 180 minute RC (reserve capacity) batteries** are required.

NOTICE: The number of batteries required may vary by the application. Solar charging kits are available to extend battery life.

NOTICE: Batteries must be the same size and type.

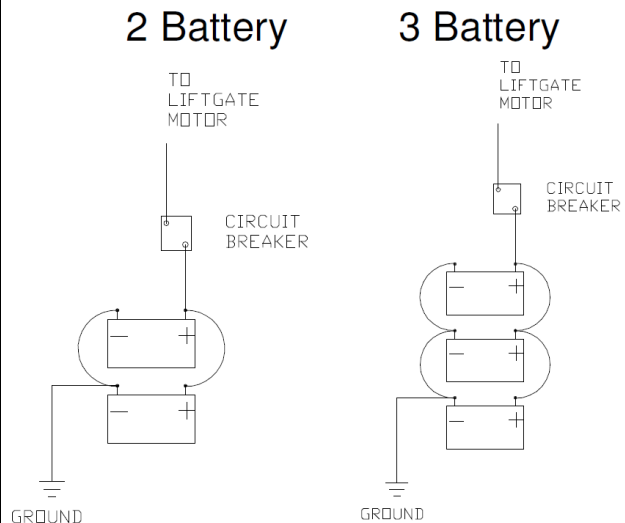
Install batteries in the battery box next to the pump (or in the optional auxiliary battery box for truck applications). A battery clamp is provided to secure the batteries.

For applications requiring high number of cycles or repeated lifting of heavy loads, additional batteries linked in parallel are recommended.

When batteries are in parallel, ensure the type of battery matches. Follow all battery manufacturer's recommendations.

NOTICE: When connecting batteries in parallel, use the diagram to the right. **Do not connect positive and ground wires to same battery!** Uneven battery life will result.

A trail charger or other liftgate charging system is highly recommended for all applications to extend battery life and vehicle uptime.

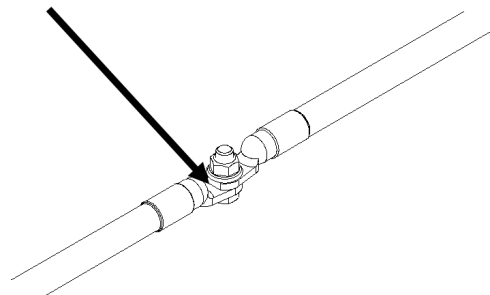


**GROUP 31 DUAL PURPOSE BATTERIES, 700 CCA OR MORE
MINIMUM RESERVE CAPACITY: 180 RESERVE MINUTES
BATTERIES IN PARALLEL MUST BE SAME SIZE / TYPE**

**FOR APPLICATIONS WITH SHORT TRAVEL BETWEEN STOPS,
MORE RESERVE CAPACITY AND / OR SOLAR CHARGING MAY
BE REQUIRED**

DIELECTRIC GREASE

Add dielectric grease generously to ALL electrical connections.



Chapter 4 Liftgate Installation

TRAILER WIRING INSTRUCTIONS

CHOOSE CHARGING TYPE

Dual Pole Socket. **(Preferred for trailers)**

Single Pole Socket. **(Requires additional ground wiring)**

Cables supplied with liftgate must be cut to length as required.



DUAL POLE SOCKET

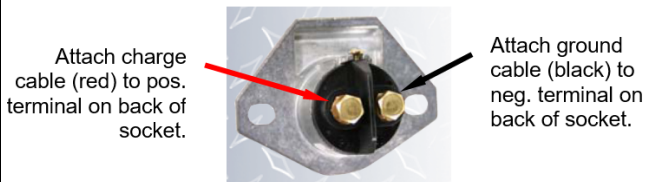
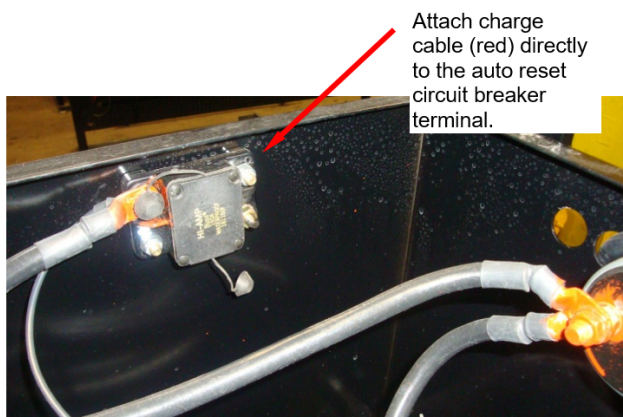


SINGLE POLE SOCKET

CHARGE LINE: TRAILER - DUAL POLE SOCKET



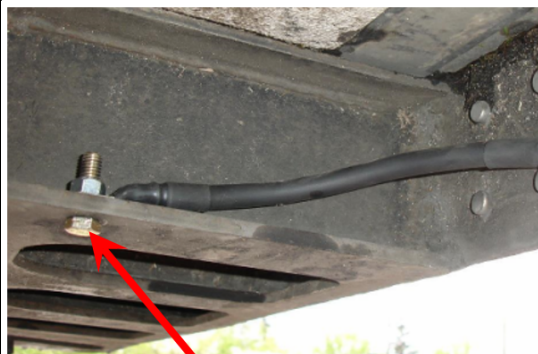
- Route charge and ground cable along trailer securing cables every 24". Be certain cables are protected with grommets when passing through metal holes or over sharp edges.
- Attach positive end of charge cable (red) to positive terminal on dual pole socket.
- Attach negative end of ground cable (black) to ground terminal on dual pole socket.
- In liftgate battery box, attach ground cable (black) directly to the negative terminal on the liftgate battery.
- In liftgate battery box, attach charge cable (red) directly to the auto reset circuit breaker terminal.
- Apply dielectric grease to all bolted connections.



CHARGE LINE: TRAILER - SINGLE POLE SOCKET



- Route cable along trailer per Dual Pole section above.
- Drill 3/8" hole in fifth wheel plate as shown (Approx. 4" in from side rail). Grind or sand area around hole to bare steel. Make sure hole location will not interfere with movement of the fifth wheel.
- Run ground cable to fifth wheel plate and bolt in place. Be certain to clean corrosion from fifth wheel plate before bolting.
- Using excess ground cable (size #2 or larger), run a separate ground cable from fifth wheel plate ground bolt to a mount bolt on the single pole socket.
- Apply dielectric grease to all bolted connections.



Bolted to Fifth Wheel plate

Chapter 4 Liftgate Installation

TRUCK WIRING INSTRUCTIONS

Liftgate running off truck batteries only:

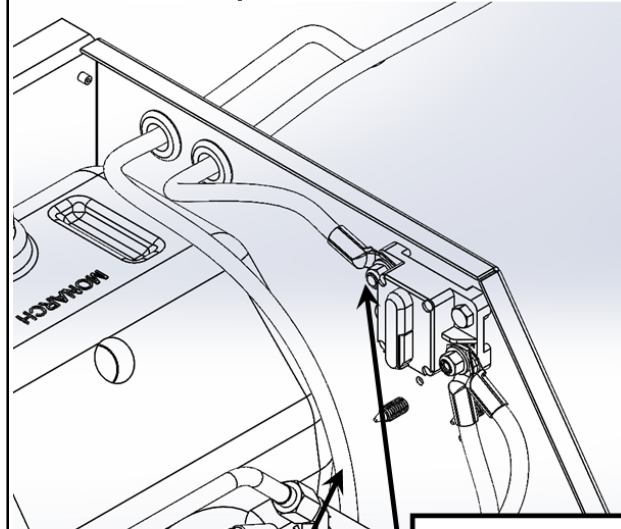
- In liftgate pump box, attach ground cable (black) directly to right side of the power unit valve manifold with 3/8" bolt.
- In liftgate pump box, attach power cable (red) directly to the 150A circuit breaker BAT terminal.
- Route power cable and ground cable along truck chassis, securing them every 24". Be certain cables are protected with grommets when passing through metal holes or over sharp edges.
- Mount the 150A circuit breaker in the truck battery box.



Failure to securely mount and connect 150A circuit breaker may result in an unsafe condition.

- Attach positive end of power cable to AUX terminal on 150A circuit breaker.
- Attach a cable from the positive terminal of the vehicle starter battery to BAT terminal on 150A circuit breaker.
- Attach negative end of ground cable to ground terminal on vehicle starting battery.
- Apply dielectric grease to all bolted connections.

Pump Box Enclosure



Connect ground to right side of pump manifold.

Connect red charge line from vehicle battery to BAT terminal.

Liftgate running off auxiliary battery box:

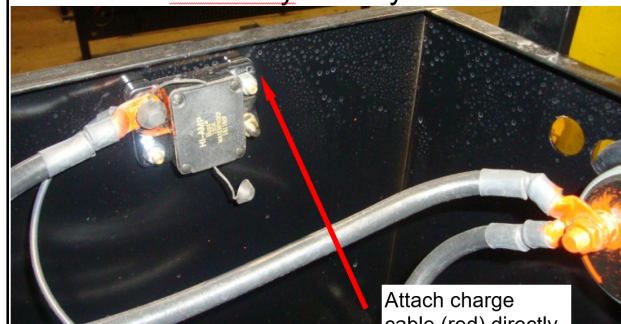
- In liftgate battery box, attach ground cable (black) directly to the negative terminal on the liftgate battery.
- In liftgate battery box, attach charge cable (red) directly to the auto reset circuit breaker BAT terminal.
- Route power cable and ground cable from auxiliary battery box to truck starting batteries, securing them every 24". Be certain cables are protected with grommets when passing through metal holes or over sharp edges.
- In truck starting battery box, mount the 150A auto reset circuit breaker.



Failure to securely mount and connect 150A circuit breaker may result in an unsafe condition.

- In truck starting battery box, attach positive end of charge cable (red) to AUX terminal on 150A circuit breaker.
- In truck starting battery box, attach a jumper cable from the positive battery terminal to BAT terminal on 150A circuit breaker.
- In truck starting battery box, attach negative end of ground cable (black) to ground terminal on truck starting battery.
- Apply dielectric grease to all bolted connections.

Auxiliary Battery Box



Attach charge cable (red) directly to the auto reset circuit breaker BAT terminal.

Chapter 4 Liftgate Installation

NOTE: IF YOUR VEHICLE HAS PRE-WELDED BRACKETS, SKIP THIS PAGE

FOR WELD ON GATES:

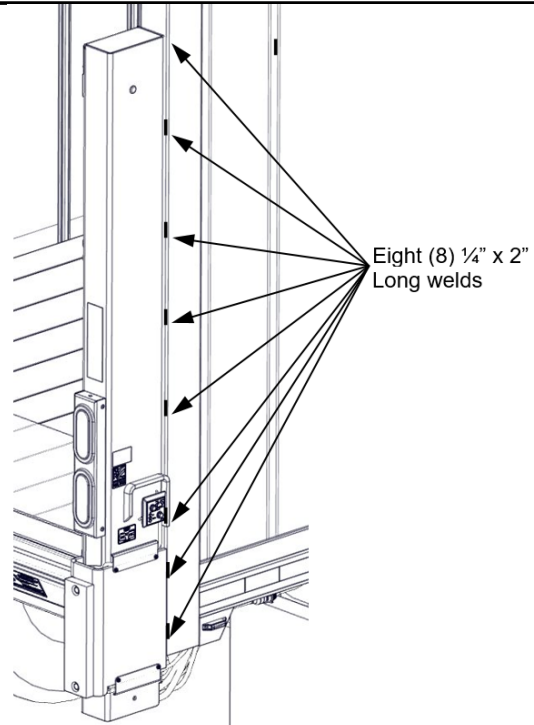
Weld the outside of the columns to the vehicle corner posts with eight (8) 1/4" x 2" minimum welds equally spaced as shown.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



WELD OUTSIDE OF BOTH CURB AND DRIVERS SIDE (CURB SIDE SHOWN)

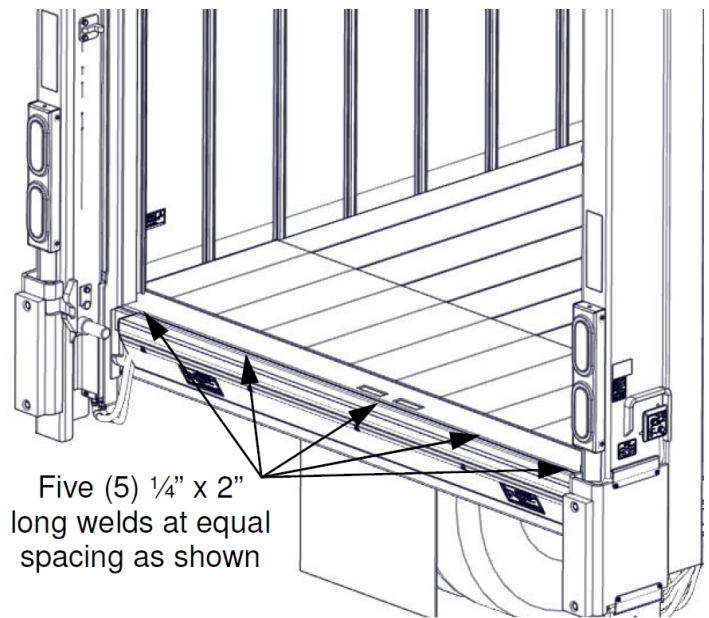
Weld the Crossbeam of the Liftgate to the vehicle sill with five (5) 1/4" x 2" long welds as shown.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



NOTICE: After welding liftgate to vehicle, there should be six (6) total welds on the inside of each column, eight (8) total welds on the outside of each column, and five (5) welds on the threshold.

Chapter 4 Liftgate Installation

NOTE: IF YOUR VEHICLE HAS PRE-WELDED BRACKETS, SKIP THIS PAGE

FOR LIFTGATES WITH PRE-INSTALLED BOLT ON BRACKETS:

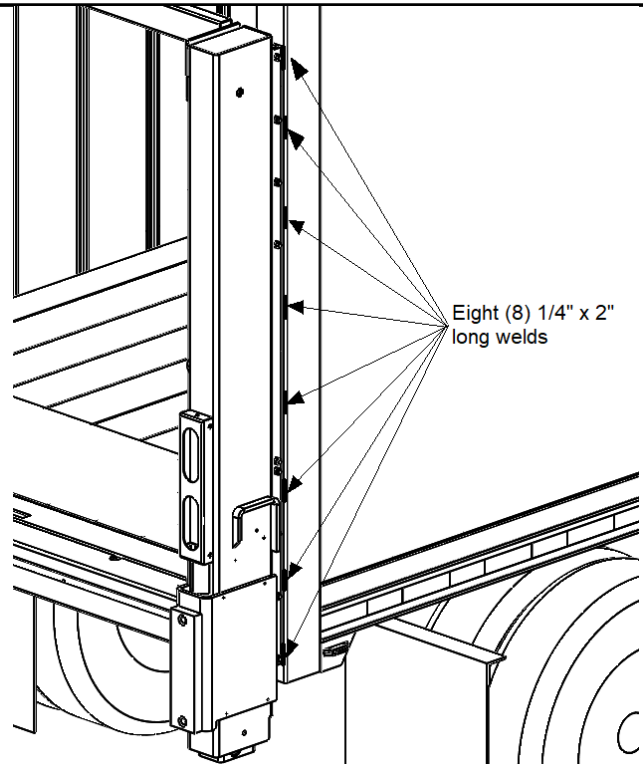
Weld the outside of the mount channels to the vehicle corner posts with eight (8) 1/4" x 2" minimum welds equally spaced as shown.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



WELD OUTSIDE OF BOTH CURB AND DRIVERS SIDE (CURB SIDE SHOWN)

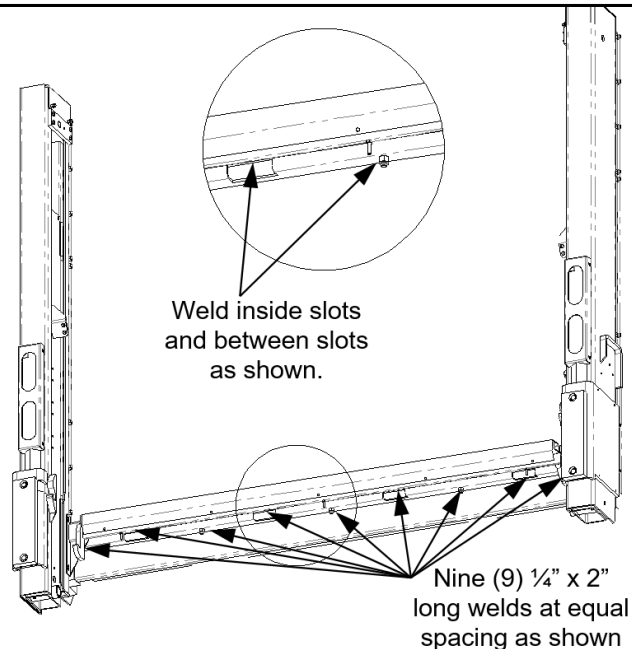
Weld the Threshold Support Bracket of the Liftgate to the vehicle sill with nine (9) 1/4" x 2" long welds as shown. Weld inside slots and between slots as shown.



Excessive heat from welding can cause damage to the hydraulic hoses, slide pads, and wiring harness inside up-rights. Do not weld in area around control switches. Shield all wires and hoses from heat and weld spatter.



When welding, be sure to ground the Welder to the component being welded to prevent potential damage to the hydraulic and electrical systems during welding.



NOTICE: After welding brackets to vehicle, there should be six (6) total welds on the inside of each column bracket, eight (8) total welds on the outside of each column bracket, and nine (9) welds on the threshold support bracket.

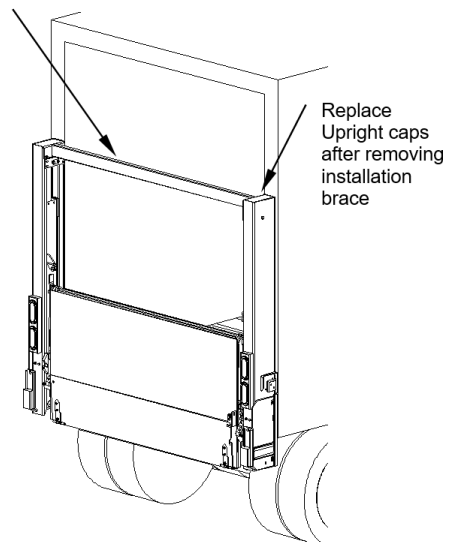
Chapter 4 Liftgate Installation

Remove all remaining Installation Fixture Components

Remove upper Installation Brace.

NOTICE: Replace upright caps using the bolts from the installation brace.

Remove upper Installation Brace.



CHECK OIL LEVEL

For liftgates with gravity down option:

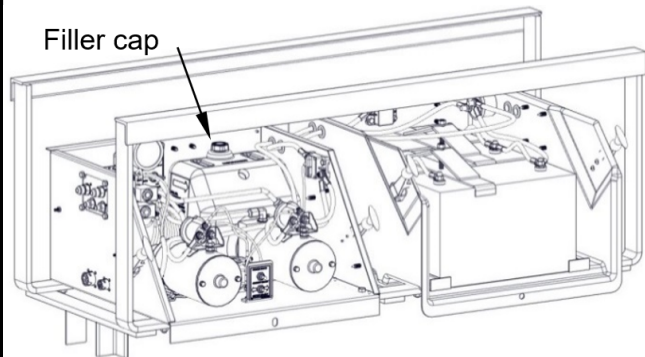
Switch to power down operation using switch on pumpbox. (If your pump box does not have this switch, it is a power down only liftgate).


Open platform and raise to bed height.

The pump reservoir is pre-filled by Waltco at the factory. Check oil level in hydraulic reservoir. Add oil, if required, to fill it to within 2" of top of reservoir.

NOTICE: Do **NOT** fill reservoir to top. Oil may overflow into pump box while bleeding hydraulic system.

Filler cap



	
Purchase in 1 gallon containers from Waltco Parts Hotline 1-800-411-5685 www.waltco.com	
Hydraulic Fluid Chart	
Temp Range °F	Waltco Fluid Part #s and Acceptable Fluids
0 ⁰ to 120 ⁰	Waltco Biodegradable LiftLube Part # 85803860 Shell Tellus S2 VX 32 Chevron Rando HDZ 32
-20 ⁰ to 90 ⁰	Waltco Biodegradable LiftLube Arctic Part # 85803866 Waltco All Season Hyd Oil Part # 85803867 Shell Tellus S2 VX 15 Mobil DTE 10 Excel 15 Chevron Rando HDZ 15

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Fill reservoir

- Fill with recommended fluid or equivalent.
- Fill the reservoir to within 2" from the top. (Oil level instructions above)
- 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)
- Motor Oil

Chapter 4 Liftgate Installation

BLEEDING OF HYDRAULIC SYSTEM



**Stand clear of sides and end of platform while bleeding hydraulic system.
Do not place anything on the platform until bleeding is complete!**

Bleeding the lift cylinders

- a. Turn on power to liftgate.
- b. Raise platform to bedheight (platform will stop moving upwards). Keep switch held down continually for 60 seconds.
- c. Let power unit rest for 2-5 minutes to allow heat to dissipate or switch to the Auxiliary Pump if available.
- d. From bed height, run platform upwards again for another 60 seconds.
- e. Check up and down motion for even motion. If liftgate moves erratically or unevenly, repeat above steps.

Bleeding the Power Open-Close (POC) cylinder

- a. Open platform and lower to ground.
- b. Locate POC cylinder. Remove lower pin and disconnect from platform.
- c. Using the "open" switch, fully retract the cylinder.
- d. Remove the hose from the upper fitting of POC cylinder, and use a bucket to capture any spilled fluid.
- e. Hold down the "close" switch to purge the line of air. Stop when the fluid is running clear from the hose.
- f. Reinstall hose to upper cylinder fitting.
- g. Fully extend cylinder by holding down the "close" switch
- h. Remove the hose from the lower fitting of POC cylinder, and use a bucket to capture any spilled fluid.
- i. Hold down the "open" switch to purge the line of air. Stop when the fluid is running clear from the hose.
- j. Reinstall hose to lower cylinder fitting.
- k. Extend / retract cylinder to align cylinder clevis with platform. Reinstall the platform cylinder pin.
- l. Raise platform to bed height and open and close it several times. If platform moves erratically, repeat above steps.

NOTICE: Check hydraulic fluid level at reservoir after bleeding is complete. Top off as needed.

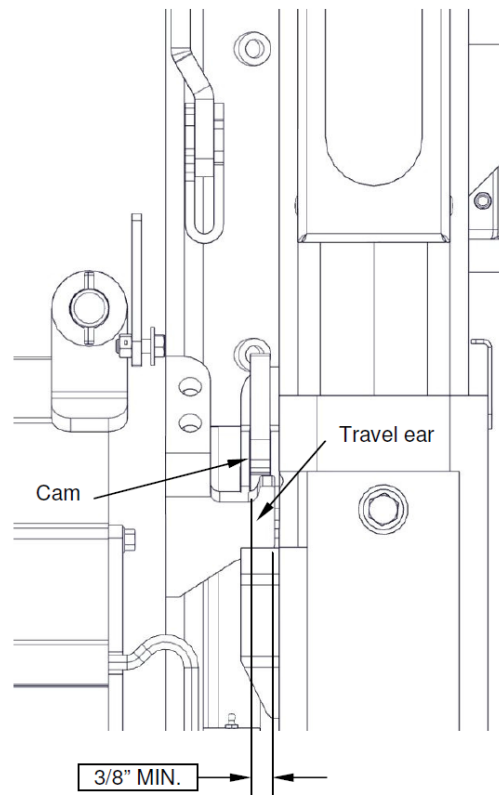
Chapter 4 Liftgate Installation

CHECK TRAVEL LATCH ENGAGEMENT

Store platform in travel latch. (Reference Owners Manual)

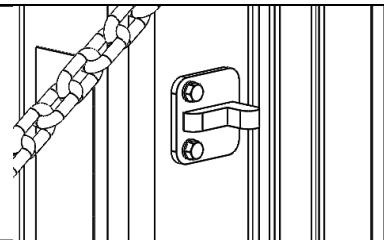
Check that travel ear engages the cam by 3/8" minimum (see picture).

If travel ear engages cam less than 3/8" add a retaining ring to drivers side hinge pin between platform and runner hinge tube (see instructions below).



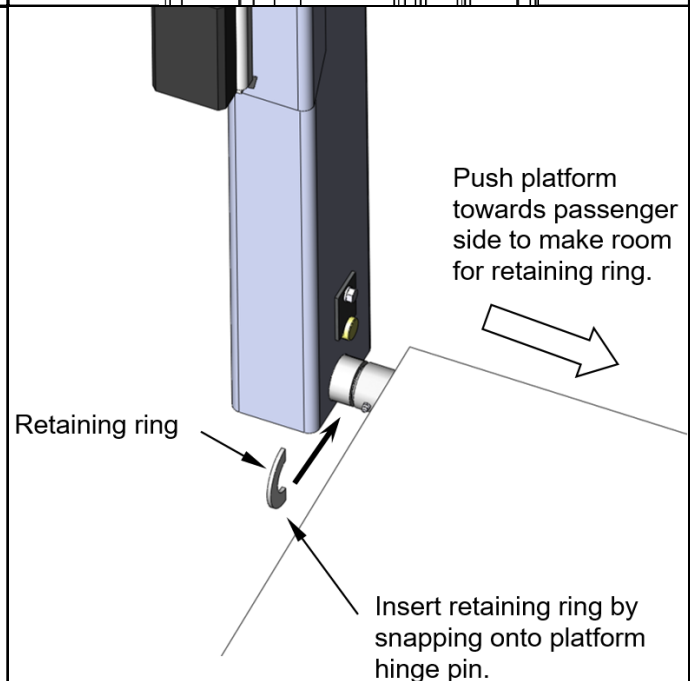
DRIVERS SIDE LATCHING

If DS of platform has trouble latching, the platform stop assembly on the runner has slots for adjustment. If more adjustment inwards is required, the face of the tab may be ground back until the platform latches reliably.



INSTALLING PLATFORM RETAINING RING

- Retaining rings are zip tied to one of the hydraulic lines inside the pumpbox. Two are included if needed after install.
- Lower platform to 20" above ground.
- Push platform towards passenger side to make room for retaining ring.
- Insert retaining ring between platform and runner hinge tube by snapping onto platform hinge pin.
- If travel ear engagement distance is still less than 3/8" add second retaining ring if platform can be moved towards curb side to make a gap greater than 1/8".



Chapter 4 Liftgate Installation

VERIFY LIFTGATE OPERATION



Do not allow anyone to stand in, or near area in which platform will open and lower.



Keep hands and fingers clear of liftgate while it is in motion.

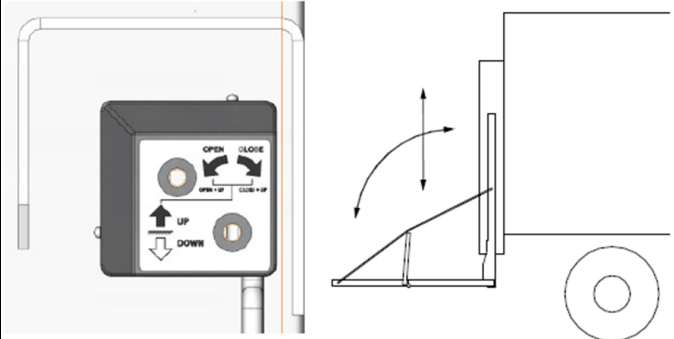
CHECK OPERATION OF LIFTGATE

Check that all controls operate correctly per following instructions
Check both Inside Raise/Lower switches and Outside column switches as follows.

Check that Liftgate operates freely and smoothly through operational cycle without unusual noise or vibration.

Check that platform opens in 7 to 9 seconds and closes in 8 to 10 seconds.

Check that platform raises and lowers within 20 seconds (for 56" bed height).

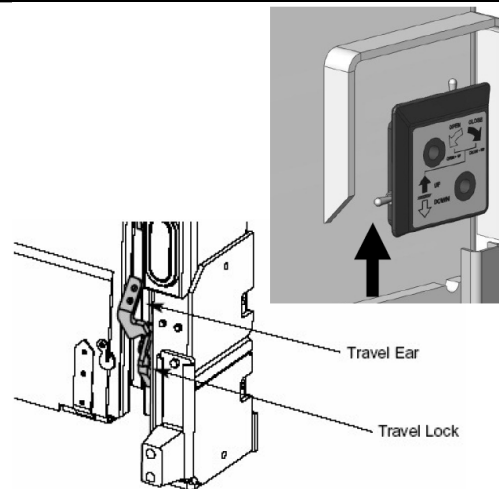


OPENING PLATFORM FROM STORED POSITION

a. Turn on power to liftgate by turning the master disconnect switch, located on pump box, to the "ON" position.

b. Be certain operating area around platform is clear before opening platform.

c. Using the "UP" toggle switch, power platform up so that it is completely out of the travel locks.



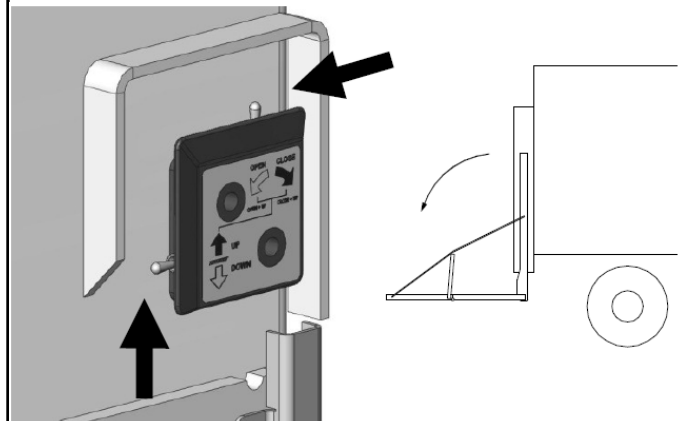
OPENING PLATFORM FOR LOADING

a. Raise the platform up to bed level or until travel stops. (Fully raised)

b. Using the "UP" toggle switch and "OPEN" toggle switch simultaneously, power open platform.



Ensure area behind vehicle is clear before opening platform.



Chapter 4 Liftgate Installation

VERIFY LIFTGATE OPERATION



Do not allow anyone to stand in, or near area in which platform will open and lower.



Keep hands and fingers clear of liftgate while it is in motion.

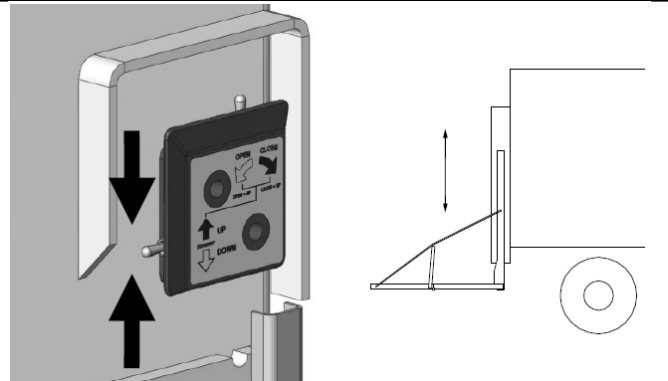
RAISING AND LOWERING PLATFORM

a. Using the “DOWN” toggle switch, lower platform for use.

b. Use the “UP” toggle switch to raise platform.



Ensure platform and flip ramp are fully lowered when loading and unloading platform at ground level.



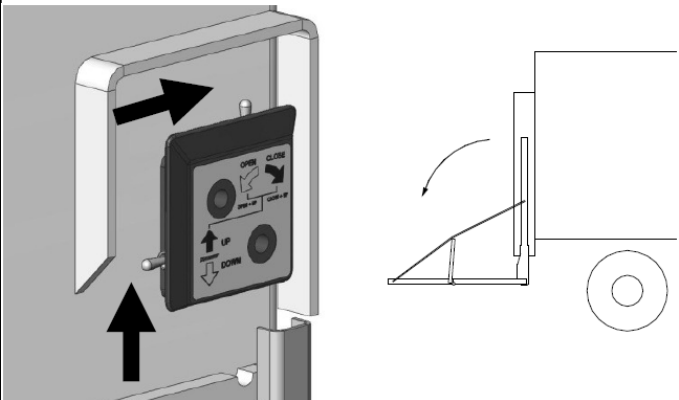
CLOSING PLATFORM

a. With the platform open, power platform all the way up.

b. Using the “UP” toggle switch and “CLOSE” toggle switch simultaneously, power close platform.



Ensure flip ramp is stowed and platform is clear of loose items before closing.



STORING PLATFORM FOR TRAVEL

a. Using the “DOWN” toggle switch, power platform down past the Travel Lock.

b. Using the “UP” toggle switch, power platform up to lift the Lock Catch.

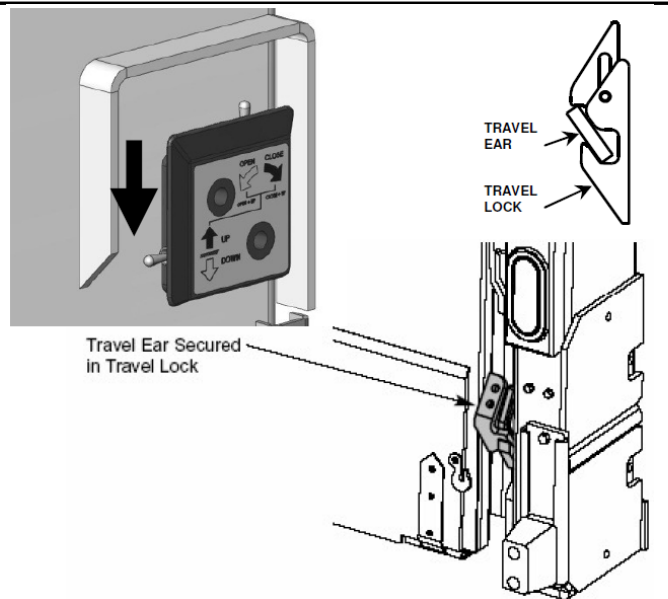
c. Power platform up until Travel Ear clears the Travel Lock slot.

d. Use the “DOWN” toggle switch to lower Travel Ear into the Travel Lock slot.

e. Turn off power to liftgate by turning the master disconnect switch, located on battery box, to the “OFF” position.



Failure to properly stow and latch the platform may result in damage to the liftgate.



Chapter 4 Liftgate Installation

VERIFY LIFTGATE OPERATION



Do not allow anyone to stand in, or near area in which platform will open and lower.

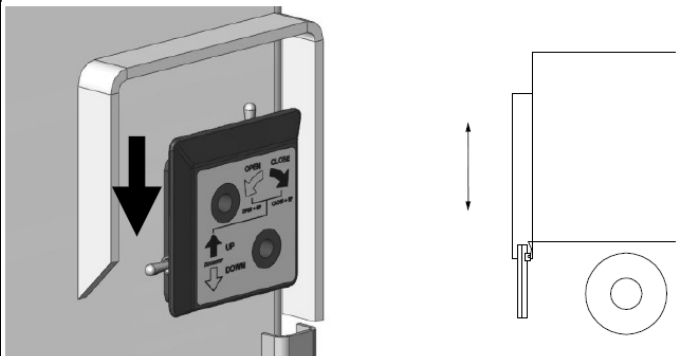


Keep hands and fingers clear of liftgate while it is in motion.

LOWERING PLATFORM FOR DOCK LOADING

- Turn on power to Liftgate by turning the master disconnect switch, located on battery box, to the "ON" position.
- Using the "UP" toggle switch, power platform up so that it is completely out of the travel locks.
- Using the "DOWN" toggle switch, power platform down until the platform is level with the truck floor and hit the Dock Stops.
- When finished Dock Loading be certain to raise platform to travel position before pulling truck away from dock.

NOTICE: Dock storage position should not be used when driving outside of loading area. Return gate to transit latch before leaving dock area.

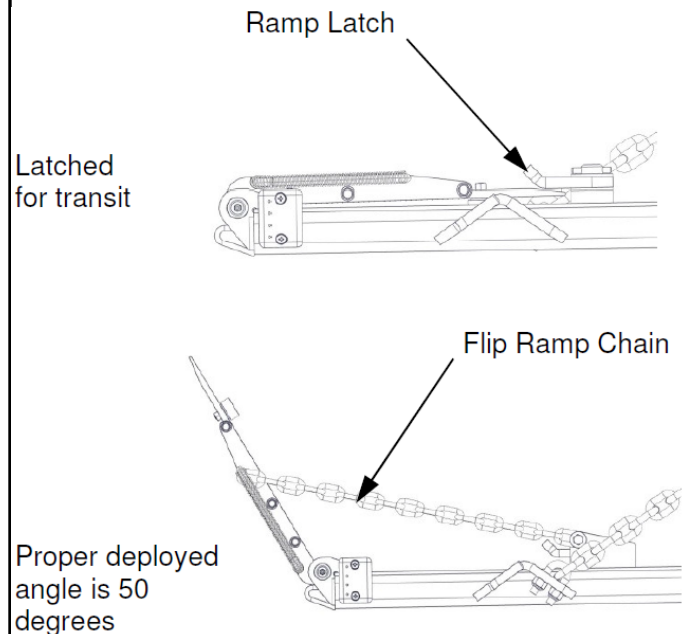


FOLDING RAMP OPTION OPERATION INSTRUCTIONS

- Unlatch ramp and unfold to loading position.
- Use flip ramp chain for cart stop application.
- Verify ramp is latched when in transit position.



Ensure platform and flip ramp are fully lowered when loading and unloading platform at ground level.



Chapter 4 Liftgate Installation

VERIFY LIFTGATE OPERATION

DUAL PUMP OPERATION INSTRUCTIONS

(STANDARD ON WDV55 AND WDV66)

The liftgate may be equipped with an optional Dual Pump Unit. The purpose of the Auxiliary Pump unit is to provide a backup in the event of a malfunction of the Primary Pump, Motor or Motor Solenoid.

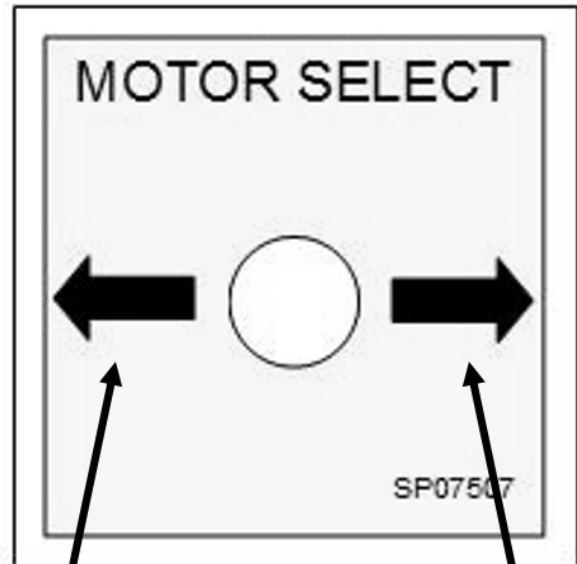
The Auxiliary Pump is **NOT INTENDED FOR NORMAL OPERATION** of the liftgate. Liftgate must be repaired as soon as possible after a malfunction of the Primary Pump unit occurs.

TO OPERATE THE PRIMARY PUMP:

- Move toggle switch on the pump to the "Primary Position".
- Operate liftgate with controls on columns as usual.

TO OPERATE THE AUXILIARY PUMP:

- Move toggle switch on the pump to the "Auxiliary Position".
- Operate liftgate with controls on columns as usual. **AN ALARM WILL SOUND** reminding the operator that the Auxiliary Pump is in use.



Auxiliary
Position

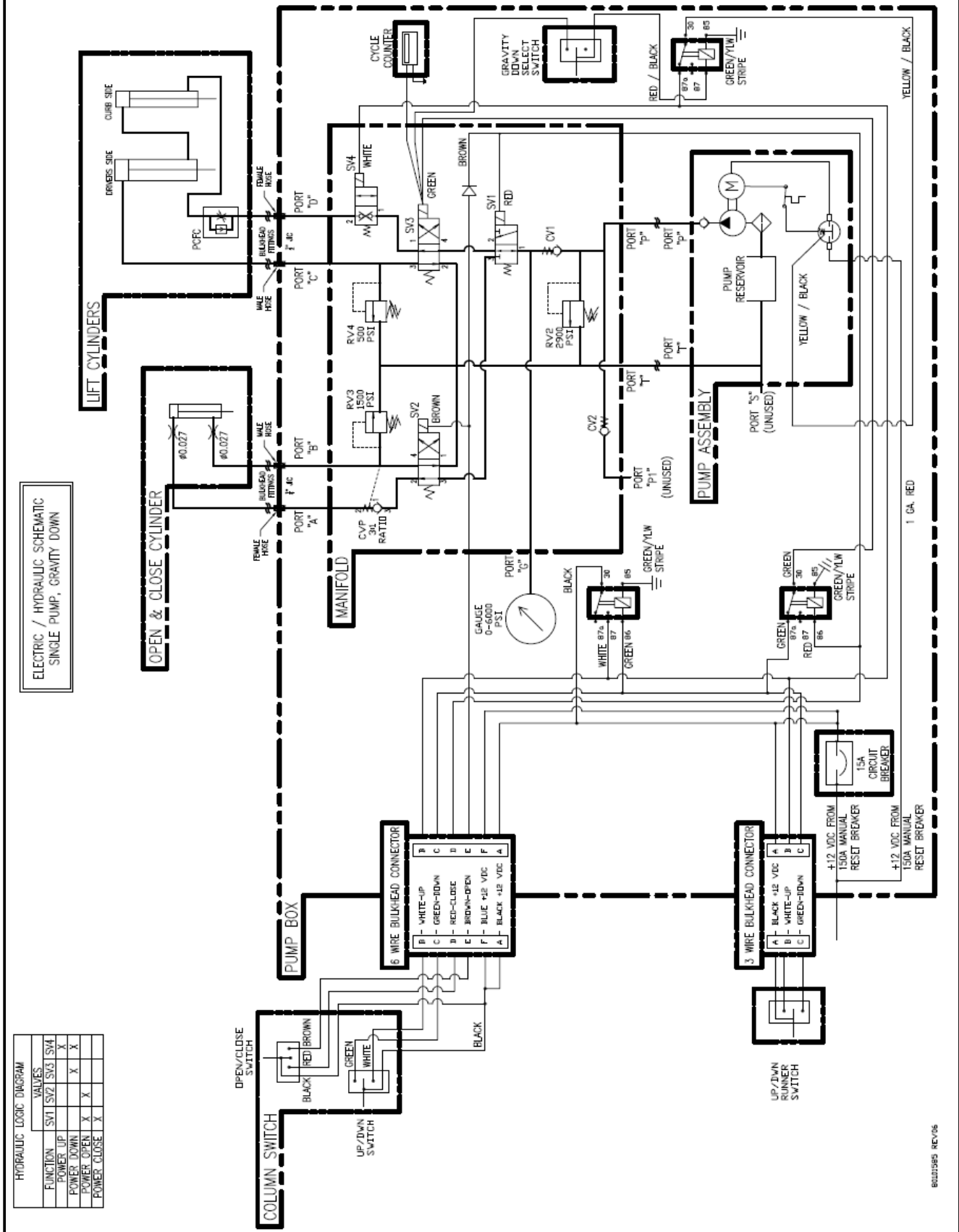
Primary
Position

PERFORM FINAL CHECK OF LIFTGATE AND VEHICLE

- Double check that all hoses, wires and cables are secured and protected under vehicle.
- Clean up areas where the Liftgate was welded to the vehicle. Galvanizing may be touched up with spray galvanizing. Paint may be touched up with a similar color.
- It is recommended (not required) that caulking be applied between uprights, crossbeam and vehicle body in all areas not welded to reduce corrosion between the Liftgate and the vehicle.

Chapter 7 PM's & Schematics

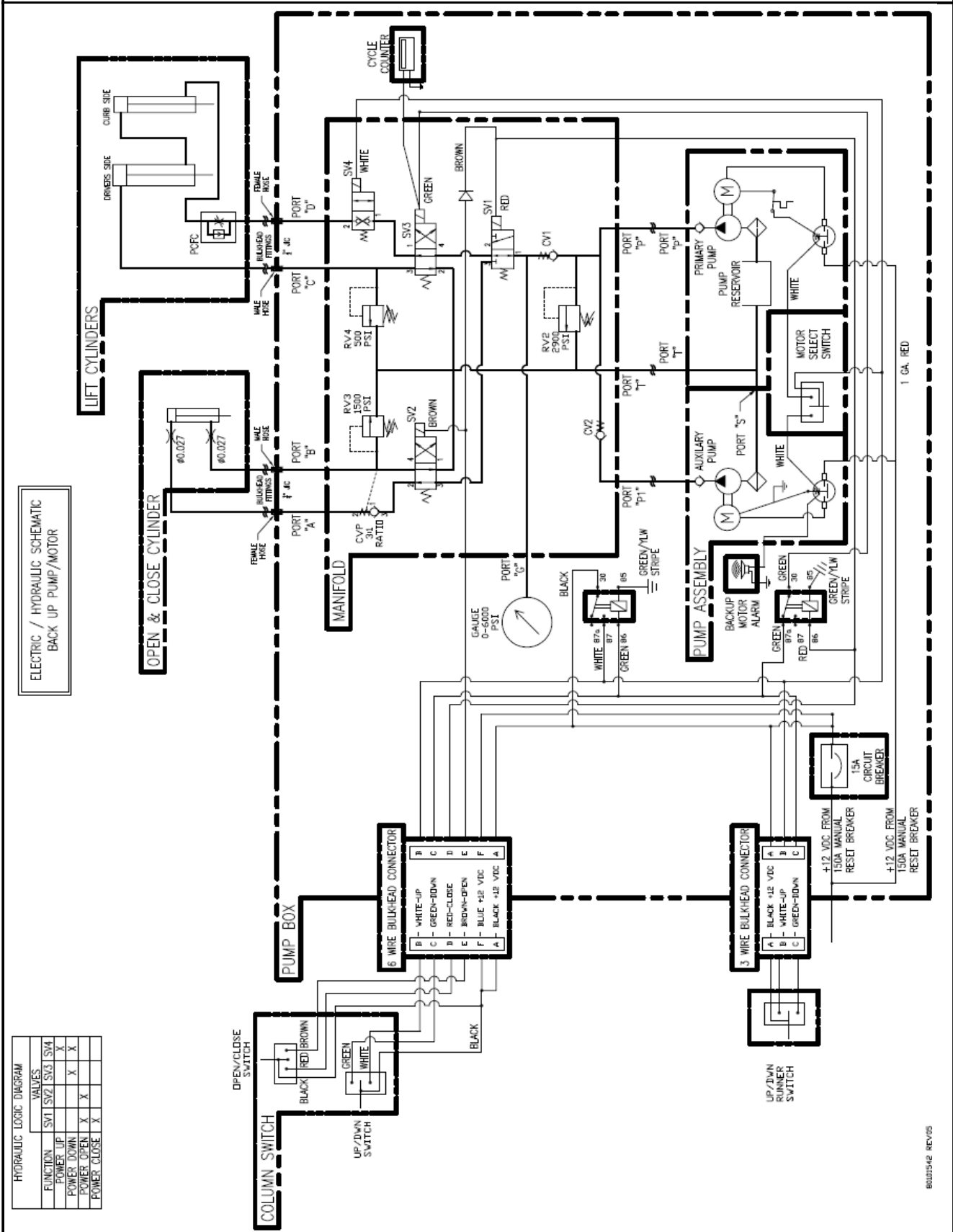
POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC, SINGLE POWER UNIT – GRAVITY DOWN ON DEMAND



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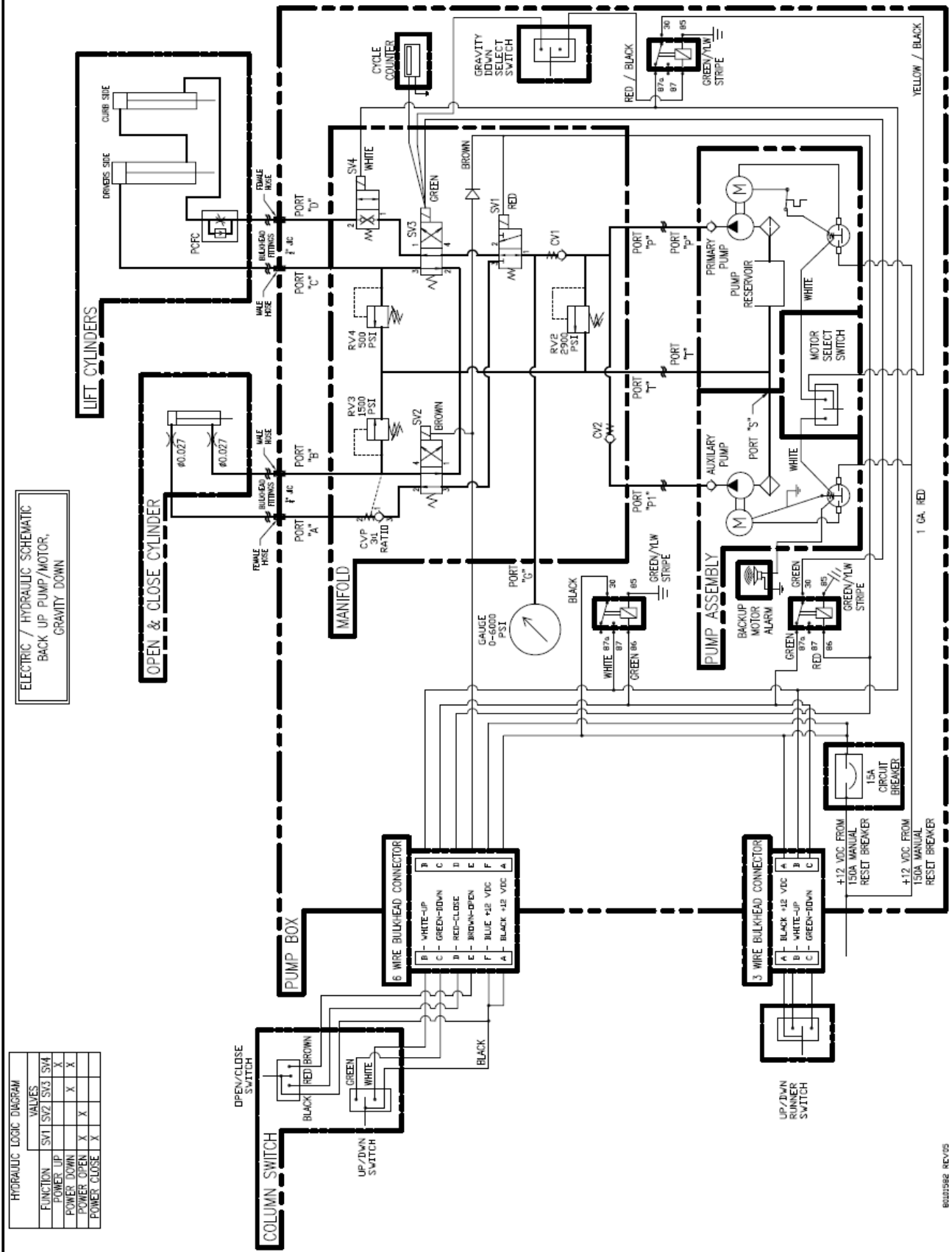
Chapter 7 PM's & Schematics

POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC, DUAL PUMP MOTOR WITH BACKUP/AUXILLARY – POWER DOWN



Chapter 7 PM's & Schematics

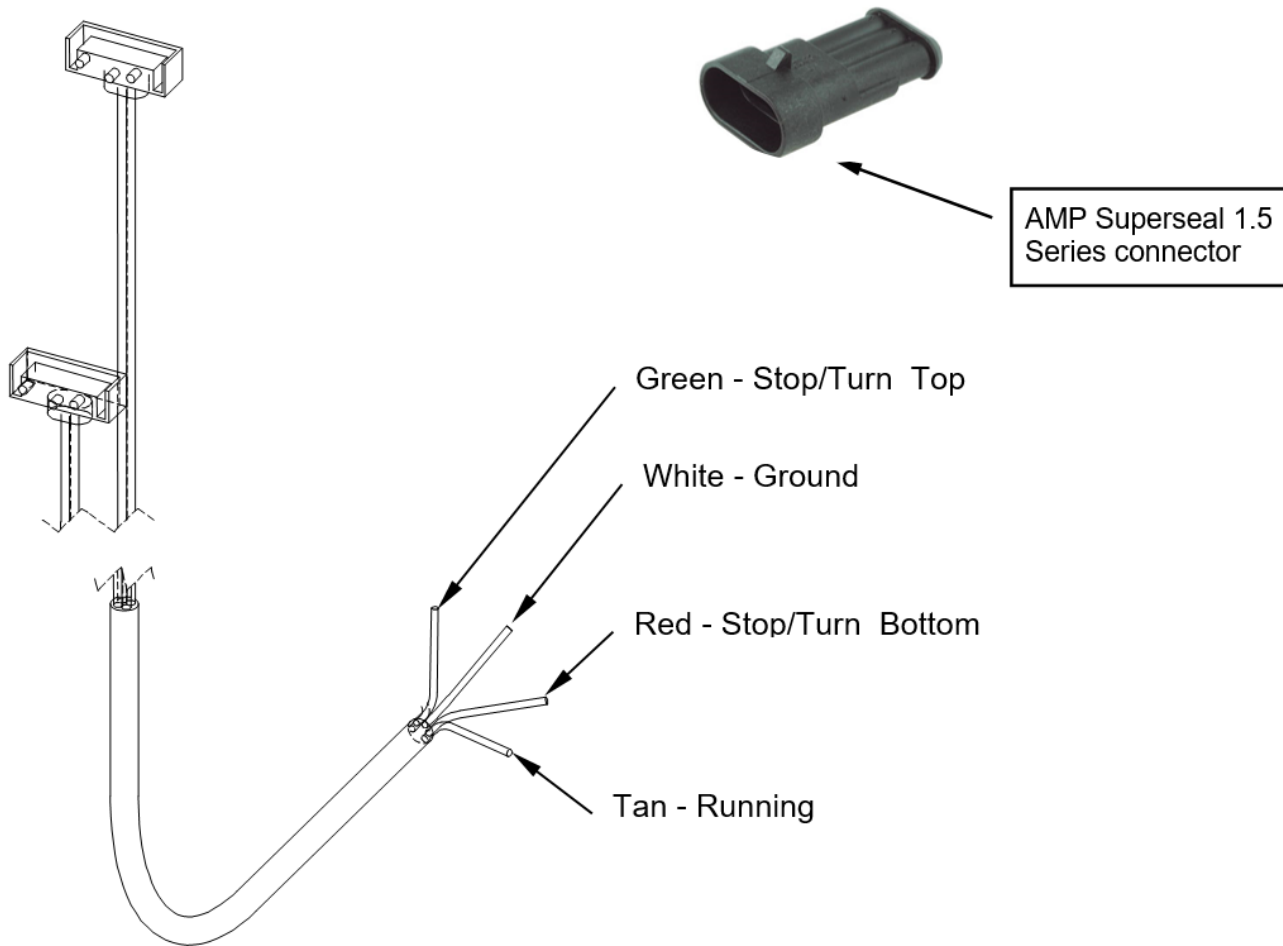
POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC, DUAL PUMP MOTOR WITH BACKUP/AUXILLARY – GRAVITY DOWN ON DEMAND



Chapter 4 Liftgate Installation

TRUCK AND TRAILER LIGHT HARNESS

The standard light harness comes with AMP Superseal 1.5 series connector that plugs directly into many O.E.M. light harnesses. Adapters are available for different harness connectors.

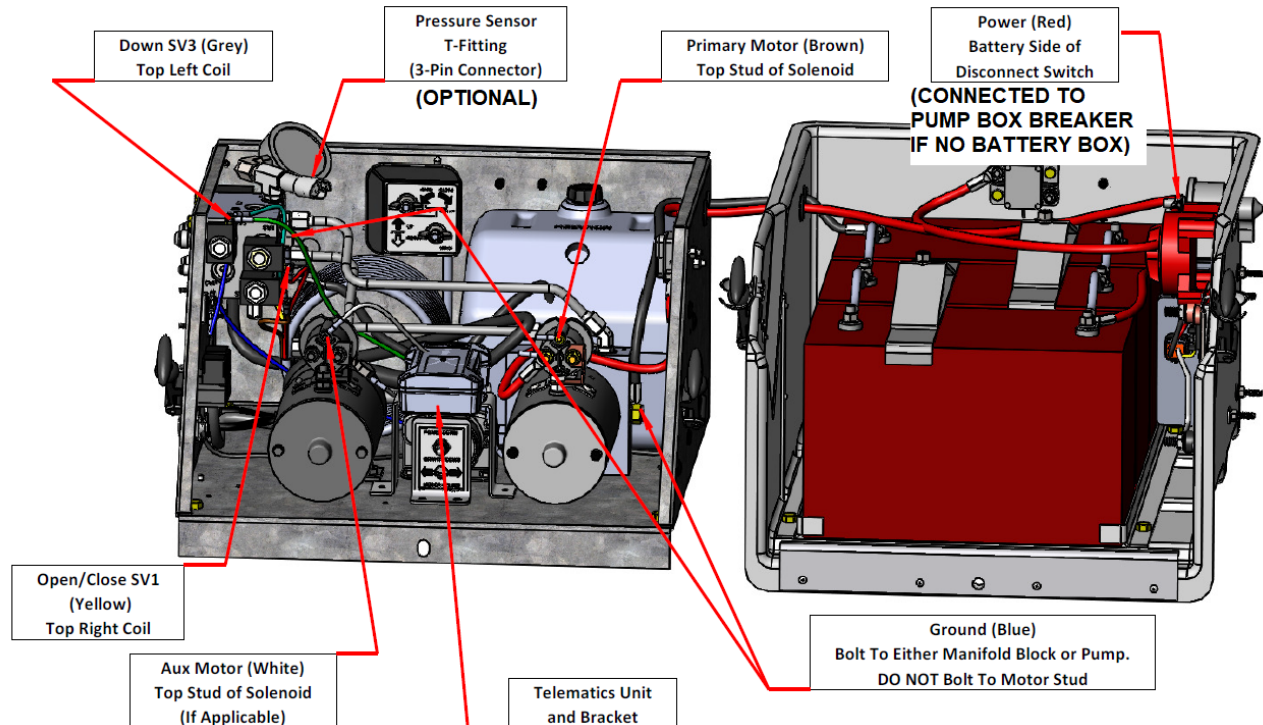


Chapter 4 Liftgate Installation

HICONNECT HARNESS

The picture below shows where to connect the HiConnect harness in case a connection is lost during liftgate installation. The harness is installed by Waltco during the pump box assembly, and should not require work by the installer.

The HiConnect unit is located in the center of the pump box as shown below. The harness attached to it has multiple wires for sensing the performance of the liftgate, which are attached to different components inside the pump box. Power is supplied to the unit by a red wire with an automotive style fuse included.



ROUTING OF STORAGE SENSOR HARNESS (Premium HiConnect Package)

If the WDV you are installing was purchased with the Premium HiConnect package it can be identified by whether it has a sensor on the drivers side column. After installing the liftgate and pump box, the sensor on the liftgate must be connected to the HiConnect unit. A long harness is supplied that must be routed alongside the extension hoses and wires.

<p>Storage Sensor (on drivers side column)</p>	<p>Sensor Harness (routed by installer)</p>	<p>HiConnect Unit (located in pump box)</p>

Chapter 5 - Placement of Decals



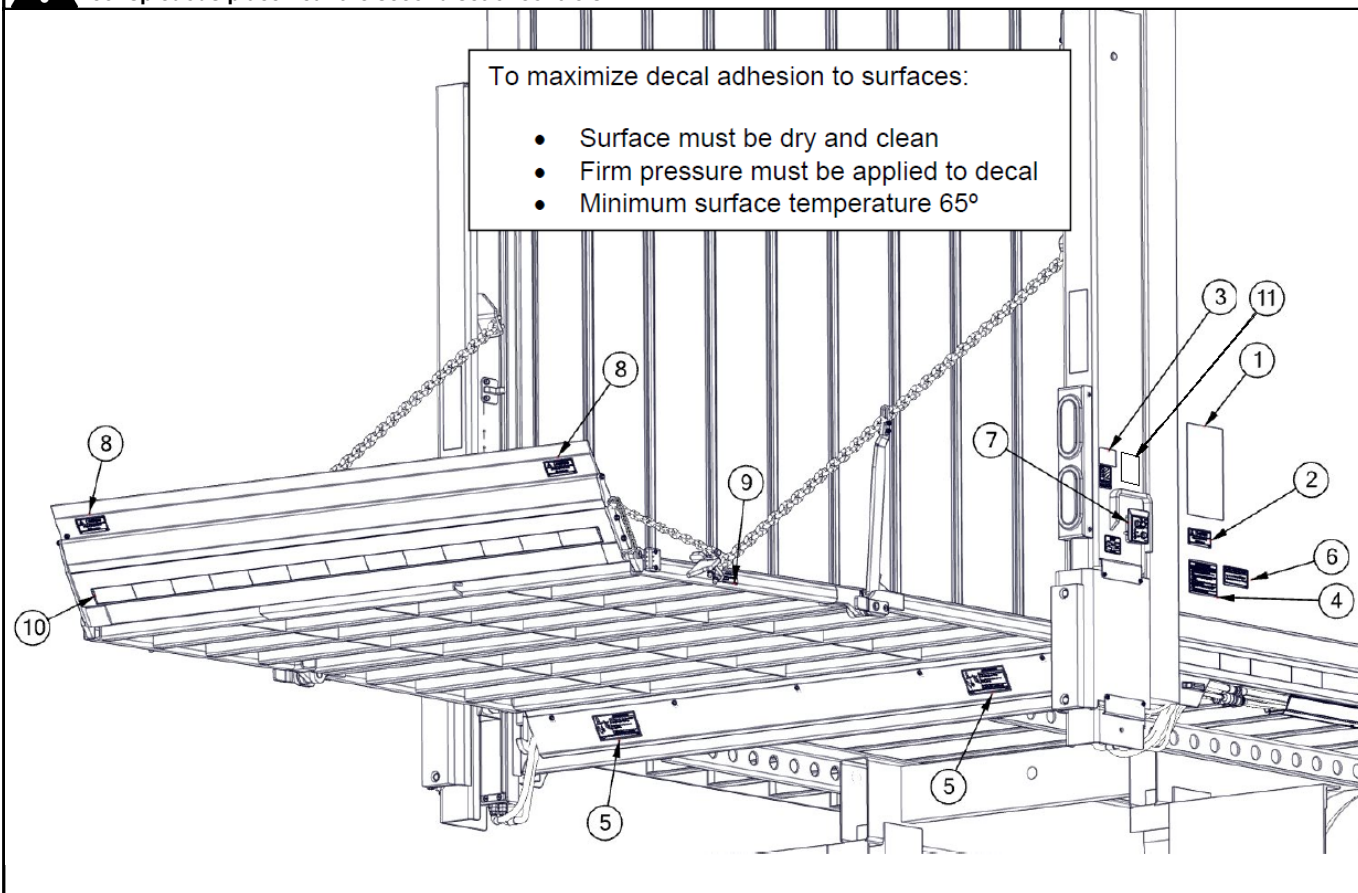
All decals must be in place and legible or all warranties are void.

Properly placed warning decals are an essential part of your safety program. Check that all safety decals are in place and are legible. Any missing decals **MUST** be replaced immediately. Replacement decals may be obtained **FREE** of charge from your distributor or by contacting Waltco Part Sales:

Phone: (800) 411-5685, Email: parts@waltco.com



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.



ITEM	DECAL	WDV35	WDV45	WDV55	WDV66	WDV w/ +16 FLIP RAMP	QTY
1	OPERATING INSTRUCTIONS			80101538			1
2	WARNING, KEEP CLEAR			75089296			2
3	WARNING, MAX CAPACITY	80100586	8010261	80101308	80101309		2
4	URGENT WARNING			80101308			1
5	DANGER, LIFTGATE CAN CRUSH			80101370			2
6	SAFETY, OPEN AND CLOSE			80101537			1
7	OPEN AND CLOSE DECAL			80101539			1
8	WARNING, KEEP CLEAR					75089296	2
9	FLIP RAMP STORAGE					80100482	1
10	CONSPICUITY TAPE FOR 96" WIDE WDV					82021067 (73.5")	1
	CONSPICUITY TAPE FOR 102" WIDE WDV					82021067 (78.5")	1
11	HICONNECT DECAL			80101003			1

Chapter 5 - Alternate Placement of Decals

ALTERNATE PLACEMENT OF DECALS ON LIFTGATE ONLY



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

Properly placed warning decals are an essential part of your safety program. Check that all safety decals are in place and are legible. Any missing decals **MUST** be replaced immediately. Replacement decals may be obtained **FREE** of charge from your distributor or by contacting Waltco Part Sales:

Phone: (800) 411-5685, Email: parts@waltco.com

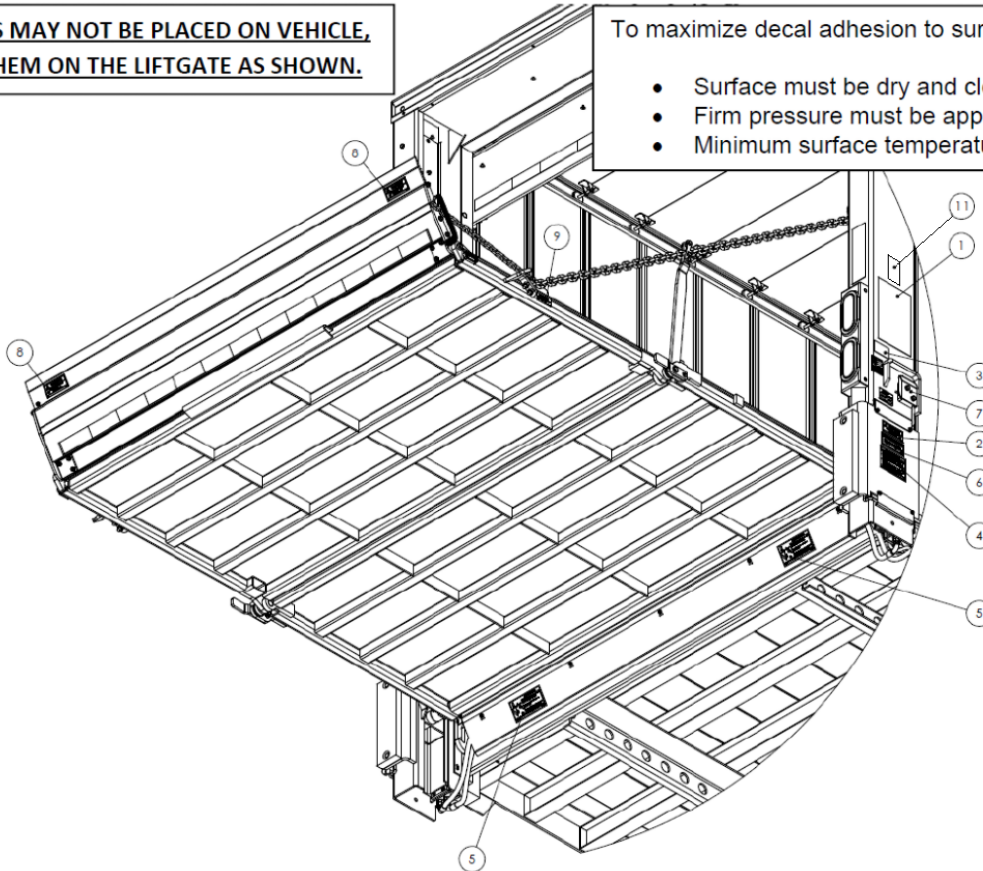


If your liftgate is equipped with dual controls, an additional Safety Instruction decal (80100850) is to be placed in a conspicuous place near the second set of controls.

**IF DECALS MAY NOT BE PLACED ON VEHICLE,
PLACE THEM ON THE LIFTGATE AS SHOWN.**

To maximize decal adhesion to surfaces:

- Surface must be dry and clean
- Firm pressure must be applied to decal
- Minimum surface temperature 65°



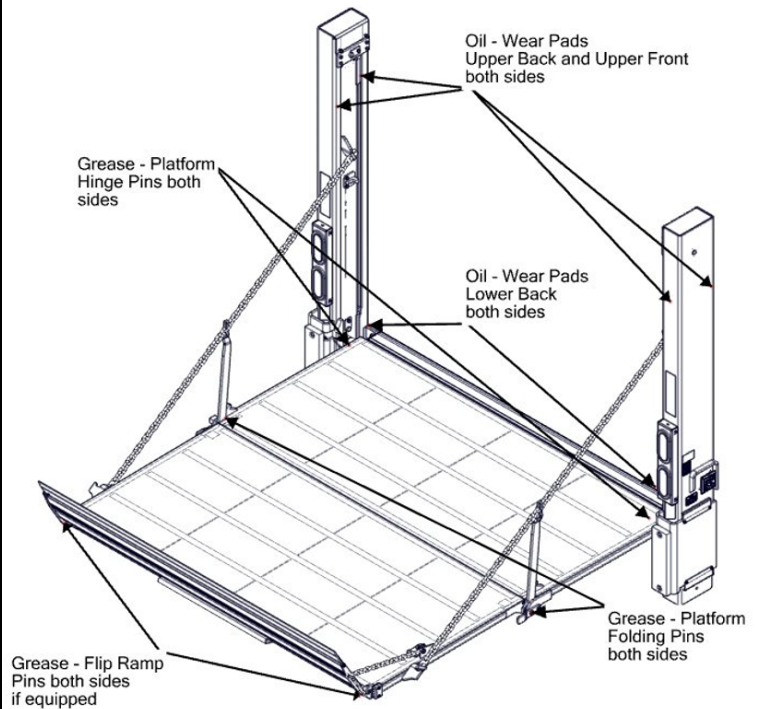
ITEM	DECAL	WDV35	WDV45	WDV55	WDV66	WDV w/ +16 FLIP RAMP	QTY
1	OPERATING INSTRUCTIONS			80101538			1
2	WARNING, KEEP CLEAR			75089296			2
3	WARNING, MAX CAPACITY	80100586	8010261	80101308	80101309		2
4	URGENT WARNING			80101308			1
5	DANGER, LIFTGATE CAN CRUSH			80101370			2
6	SAFETY, OPEN AND CLOSE			80101537			1
7	OPEN AND CLOSE DECAL			80101539			1
8	WARNING, KEEP CLEAR					75089296	2
9	FLIP RAMP STORAGE					80100482	1
10	CONSPICUITY TAPE FOR 96" WIDE WDV					82021067 (73.5")	1
	CONSPICUITY TAPE FOR 102" WIDE WDV					82021067 (78.5")	1
11	HICONNECT DECAL			80101003			1

Chapter 6 - Lubrication

LUBRICATION INSTRUCTIONS

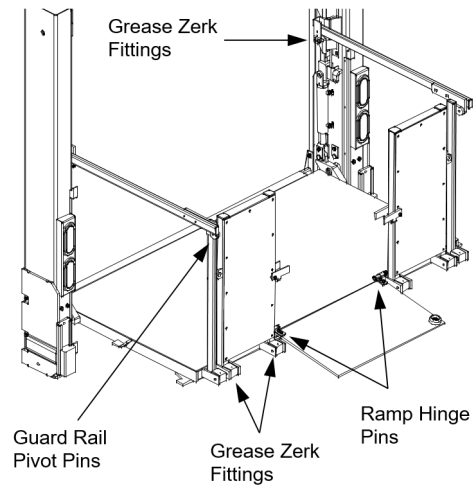
The following areas ONLY should be lubricated approximately once a month, or as outlined in the lubrication scheduled for heavier usage. If not sure of duty or cycles, always lubricate more frequently.

(For all wear pads use a low viscosity lubricant such as machine oil or equivalent. For pins with grease fittings, use grease gun and appropriate high viscosity grease)



If the liftgate is a WDVBG, the additional points on the liftgate that require lubrication are the points indicated in the graphic to the right. These should be lubricated approximately once every three (3) months.

- Use a light weight machine oil to lubricate all Ramp and Guard Rail Pivot Pin areas as shown to the right.
- Grease Guard Rail Pivot Pins where zerk fittings are provided.



Chapter 7 - Final Inspection List

IMPORTANT

All of the following items are to be checked and verified before installation is complete and liftgate is ready for service.

- 1. Does liftgate fold and unfold freely and properly?
- 2. Check that body side walls are strong enough to support WDV/WDVBG Series liftgate forces.
- 3. Check that uprights are square, parallel and travel ear engages 3/8" of passenger side cam.
- 4. Check to be certain that all hydraulic fittings are tight and leak free.
- 5. Check that platform comes up level with the vehicle floor.
- 6. Chain attachment bolts and linkage bolts are in place and secured with locknuts.
- 7. Check all welds to see that they are done properly. Check that columns are welded inside and out.
- 8. Check all switches to see that they work properly and in the proper sequence.
- 9. Check that platform opens and closes properly and at the proper rate of speed.
- 10. Check to be sure hinge pins between the platform and the deck extension are retained with proper fasteners.
- 11. Check that dock storage hooks function properly.
- 12. Check that all electrical connections are done properly and that battery cable is properly secured to frame.
- 13. Check that batteries are fully charged and grounded per instructions.
- 14. Check that liftgate is properly lubricated.
- 15. Check to see that all decals are in place and legible.
- 16. Check that all nuts and bolts are tightened properly.
- 17. Check that hydraulic reservoir is properly filled.
- 18. Check that vehicle meets all state and federal standards.
- 19. Check that owner's manual is in vehicle.
- 20. Operate the liftgate throughout its entire operational cycle several times. Check that the liftgate operates freely and smoothly throughout the entire operating cycle and that there are no unusual noises while operating the liftgate.



**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.**

How To Order Parts

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

When ordering repair or replacement parts, please include all of 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.
1777 Miller Parkway
Streetsboro, OH 44241
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 after careful inspection of the returned assemblies.

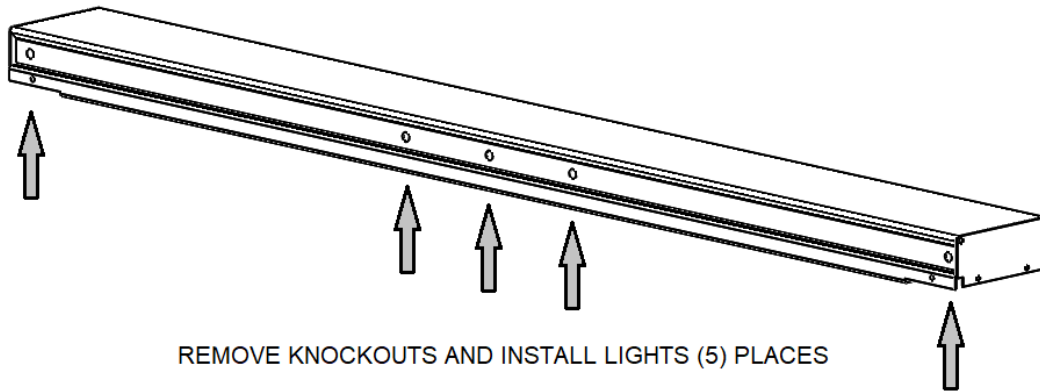
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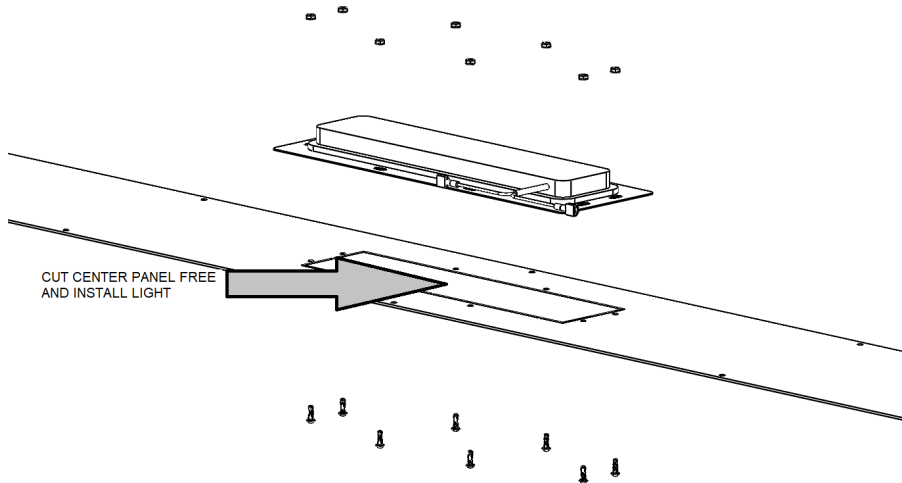
REV 03

Dock Seal Header Kit Installation Instructions

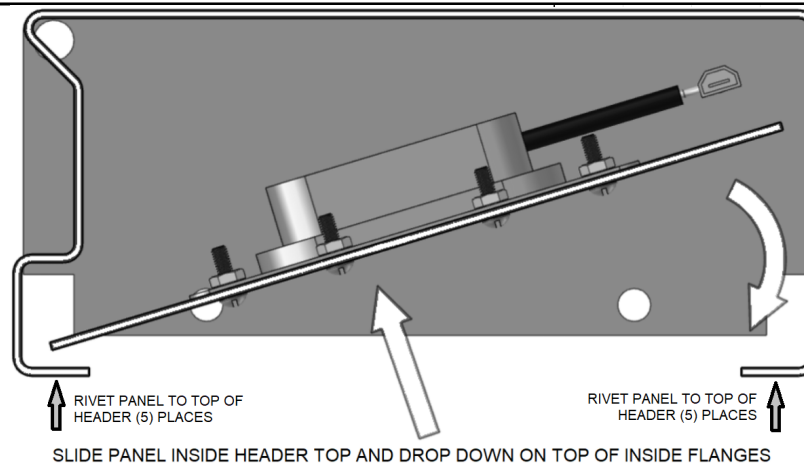
- 1.) Assemble the (optional) marker lights into the Header Top and route wires.
(If no marker lights to be installed, leave knockouts intact).



- 2.) Install (optional) porch light into Top Plate and route wires.
(If no porch light will be installed, leave center panel intact).



- 3.) Insert Top Plate into Header Top and rivet into place.



NOTE: ROUTE ALL WIRES AND CONNECTIONS BEFORE MOVING ON TO HEADER INSTALLATION!

Dock Seal Header Kit Installation Instructions

WDV Header kits are available in (2) different configurations and (2) different mounting options:

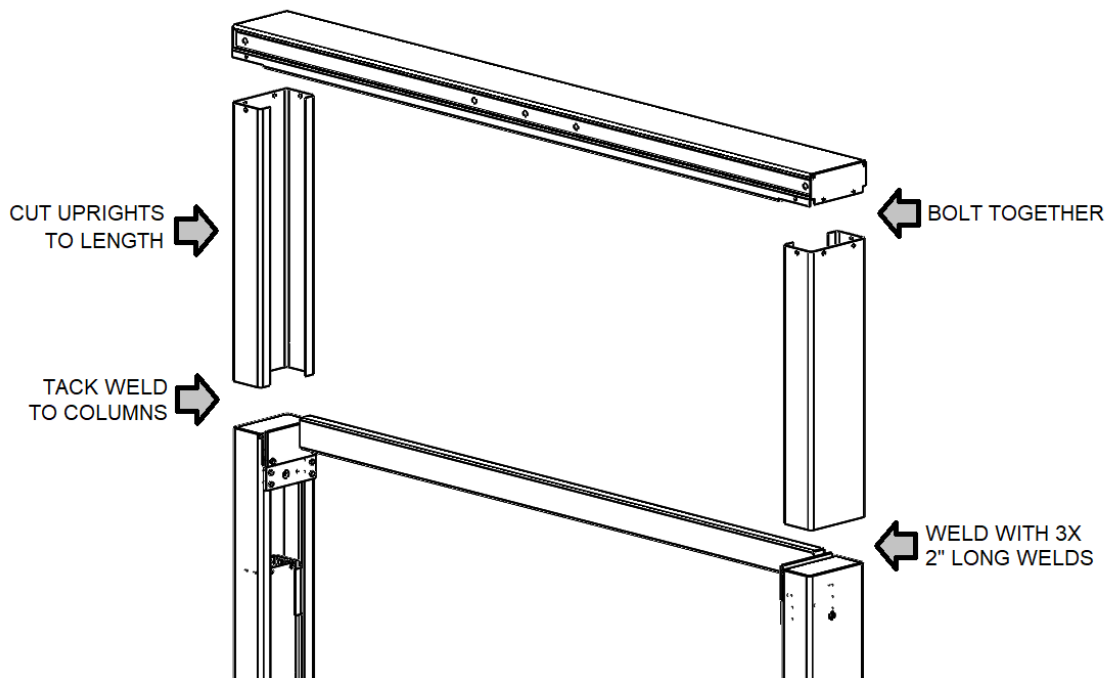
Solid uprights (standard) vs Telescoping
Weld on vs. Bolt On mounting brackets

Solid Uprights, Weld On install

- 1.) Determine how tall the header needs to be, and cut the uprights to the correct length (allow for 1" minimum overlap with outside of the liftgate columns).
- 2.) Position uprights to desired level and clamp in place. Tack weld to the liftgate columns.
- 3.) Assemble Header Top to uprights with bolts and nuts from kit.
- 4.) Weld header to columns with 3X 3/16" x 2" welds
- 5.) Touch up welding with paint or cold galvanizing spray.

Solid Uprights, Bolt On install

- 1.) Determine how tall the header needs to be, and cut the uprights to the correct length (allow for 1" minimum overlap with outside of the liftgate columns).
- 2.) Position uprights to desired level and clamp in place. Tack weld to the liftgate columns.
- 3.) Assemble Header Top to uprights with bolts and nuts from kit.
- 4.) Weld header to columns with 3X 3/16" x 2" welds
- 5.) Touch up welding with paint or cold galvanizing spray.



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11/24/2020 EO10758

Dock Seal Header Kit Installation Instructions

WDV Header kits are available in (2) different configurations and (2) different mounting options:

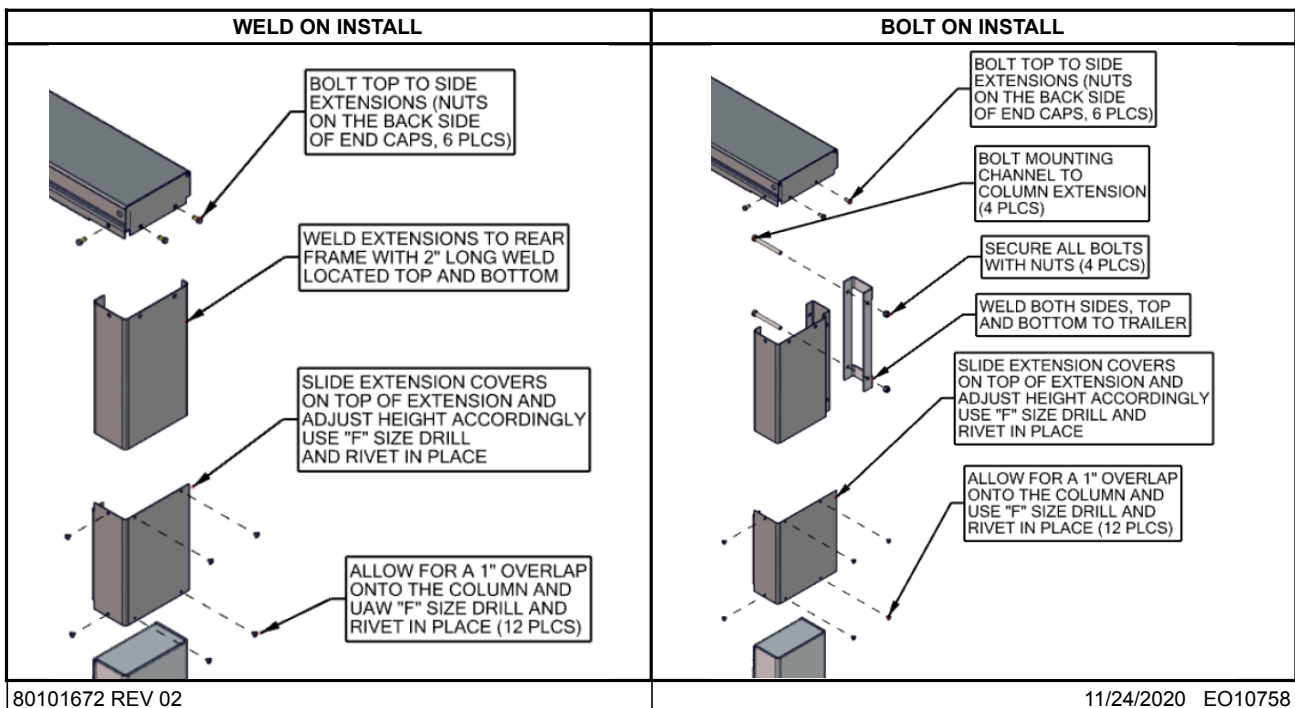
Solid uprights (standard) vs Telescoping
Weld on vs. Bolt On mounting brackets

Telescoping Uprights, Weld On install

- 1.) Assemble Header Top to top sections of uprights with bolts and nuts from kit.
- 2.) Lift Header Top into place. Weld uprights to vehicle rear frame with 2" welds on top and bottom of upright.
- 3.) Slide lower upright sections over both the liftgate columns and the upper section of the uprights. Ensure minimum 1" overlap on top and bottom.
- 4.) Using holes on lower section of upright, use an "F" size drill to drill through all (6) holes on both curb and drivers side.
- 5.) Rivet the lower section in place with rivets from kit.
- 6.) Touch up welding with paint or cold galvanizing spray.

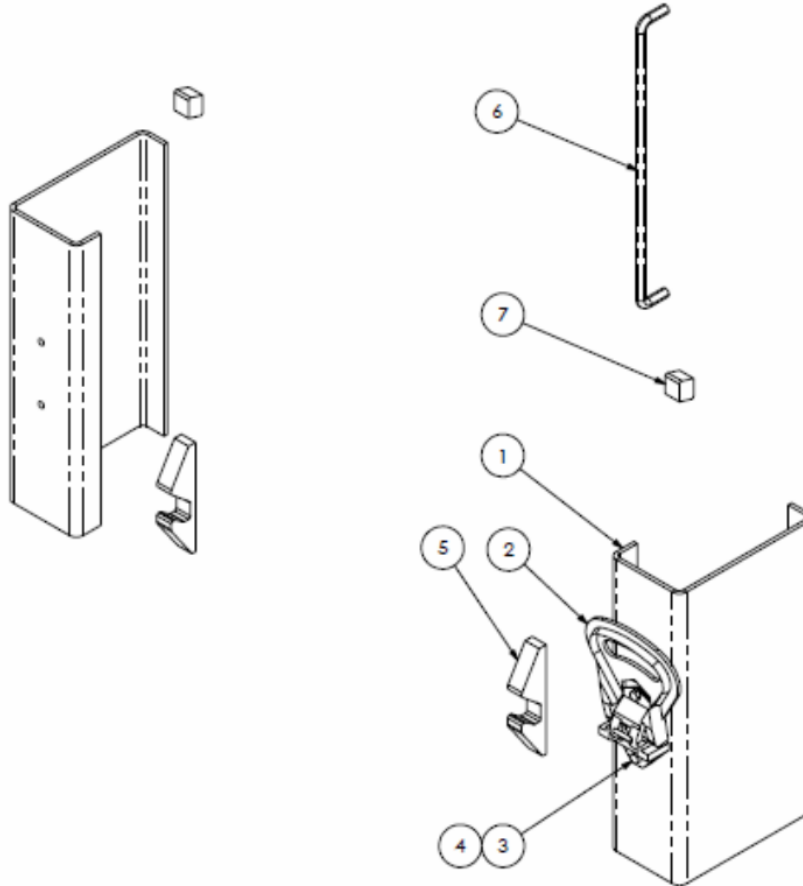
Telescoping Uprights, Bolt On install

- 1.) Assemble Header Top to top sections of uprights with bolts and nuts from kit.
- 2.) Install bolt on brackets to back of header, each side.
- 3.) Lift Header Top into place. Weld bolt on brackets to vehicle rear frame (welds to run full length of bracket legs).
- 4.) Slide lower upright sections over both the liftgate columns and the upper section of the uprights. Ensure minimum 1" overlap on top and bottom.
- 5.) Using holes on lower section of upright, use an "F" size drill to drill through all (6) holes on both curb and drivers side.
- 6.) Rivet the lower section in place with rivets from kit.
- 7.) Touch up welding with paint or cold galvanizing spray.



Store At Bed Level Installation Instructions

- 1.) With the platform closed, lower platform all the way down until it contacts the stops on the threshold.
- 2.) Determine if the height of the platform is acceptable. There are stop blocks included in the kit that can be used to raise the height of the platform 1-1/4" so that the mating surfaces of the platform is closer to the bed height of the trailer.
- 3.) If the higher position is desired then open the platform and weld the blocks, part #7 shown in the diagram below and the picture on the next page, onto the down stops on the threshold.

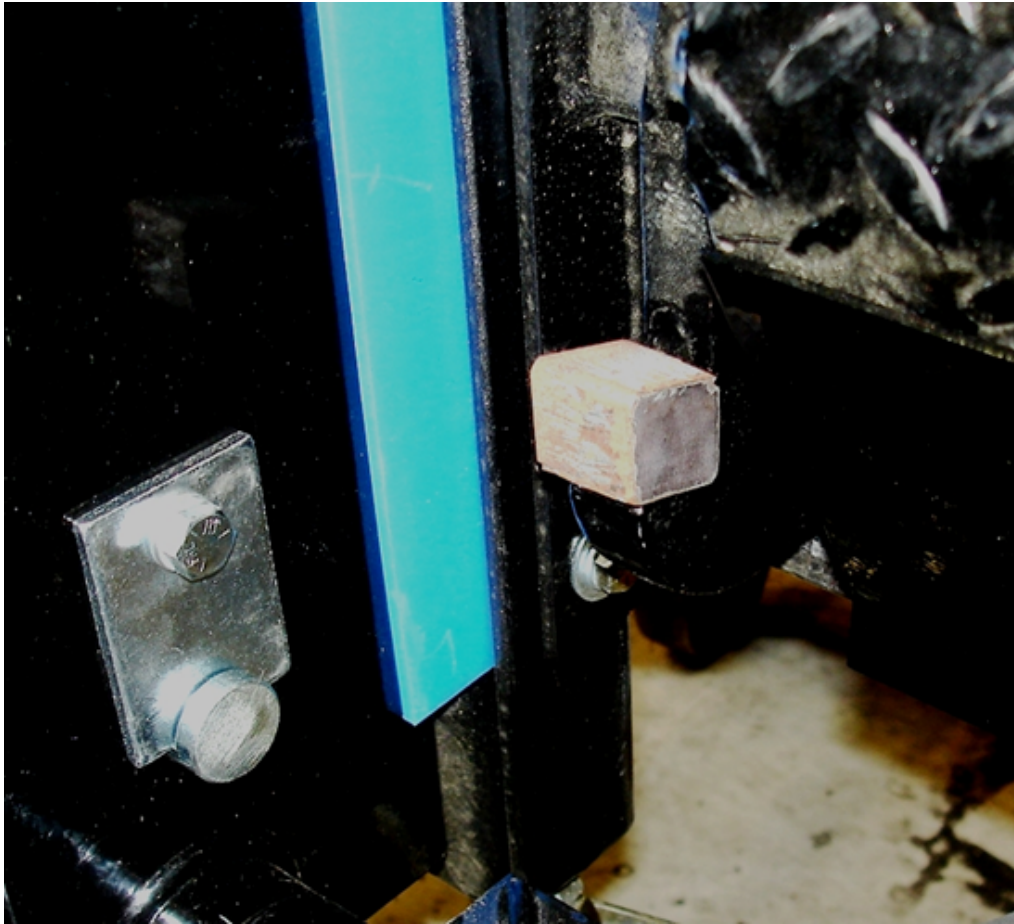


- 4.) Grind enough paint / galv off the bottom of the column for proper welding.
- 5.) Clamp the column extensions onto the bottom of the columns flushing up the outer surfaces of the column and column extensions. Leave a gap between the two pieces to make sure proper weld penetration is achieved.
- 6.) Weld the column extensions onto the bottom of the columns. Grind the welds flush if desired.
- 7.) With the platform in the closed position, lower the platform until it contacts the down stops.

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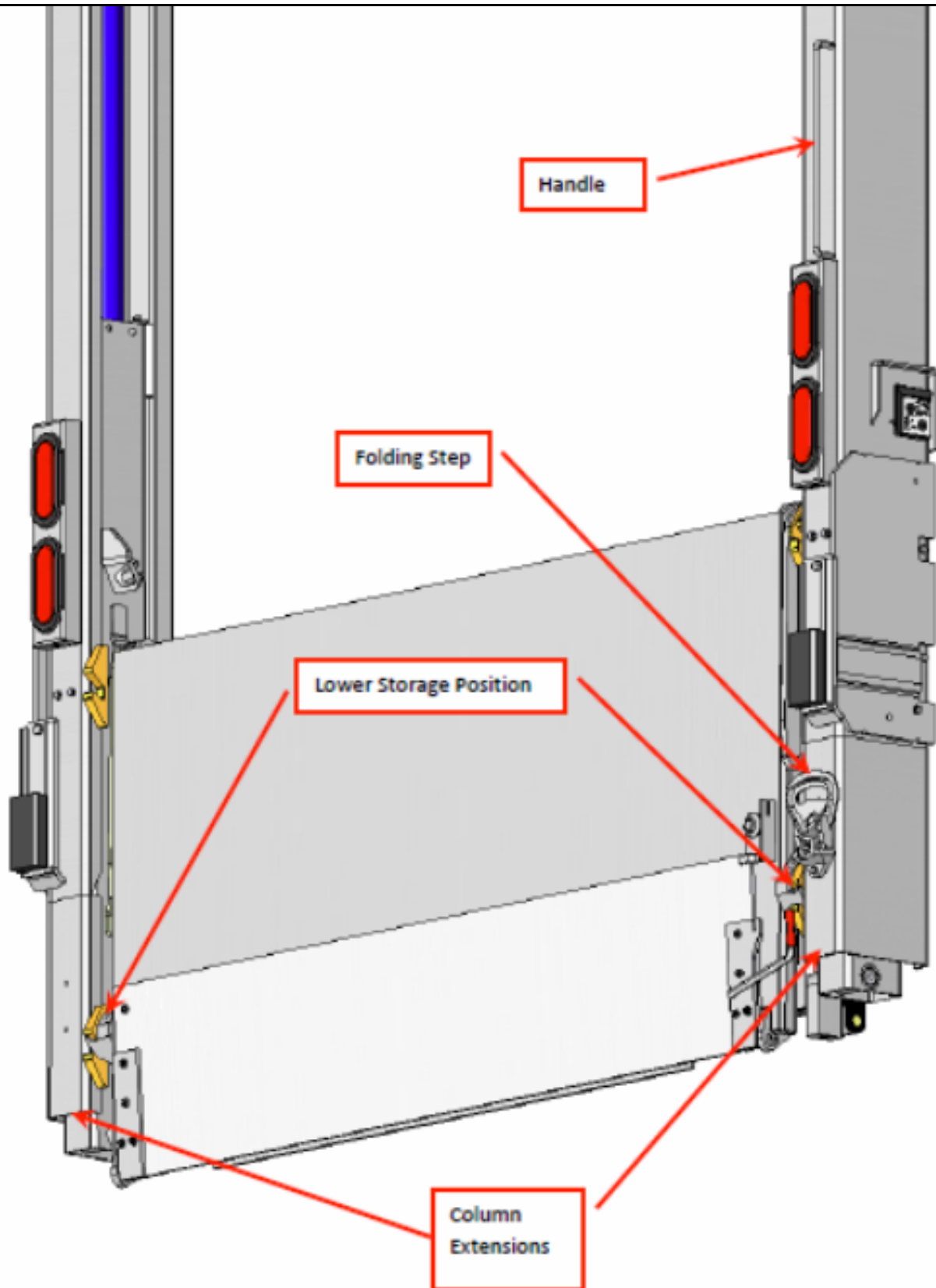
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Store At Bed Level Installation Instructions



- 8.) Position the travel latches, part #5, onto the inside surface of the column extension using the travel ears on the deck extension as a guide. Tack the travel latches in position.
- 9.) Raise and lower the platform to ensure proper motion in and out of the travel latches.
- 10.) If satisfied with the latching motion of the platform weld the travel latches onto the column extensions with a 1/4" fillet weld on both sides of the travel latch.
- 11.) Bolt the folding step onto the curbside column using the hardware supplied.
- 12.) Locate the handle, part #6, onto the curbside column at a convenient height.
- 13.) Touch up the paint on the columns at the weld sites.

Store At Bed Level Installation Instructions



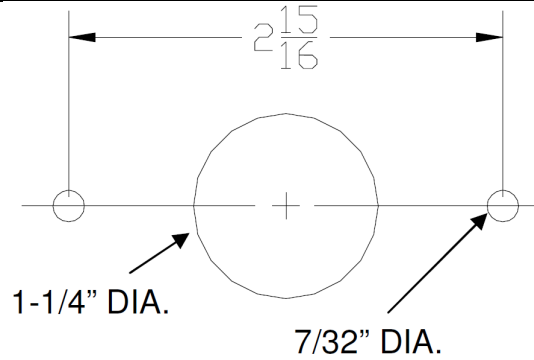
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WDV Hand Held Remote Installation Instructions

DRILL SOCKET HOLES

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



GR00036

INSTALL SOCKET

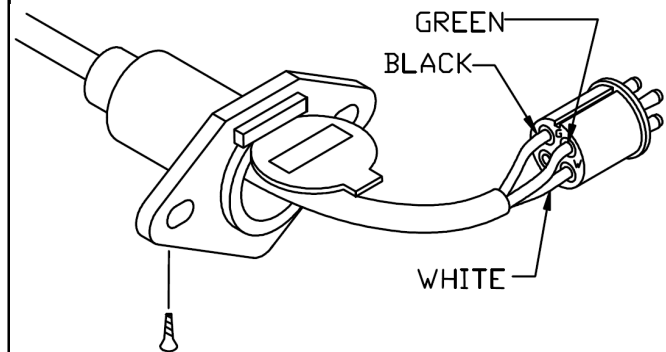
Assemble socket as shown.

Install wires according to colors:

W = White (Raise)

B or BK = Black (Lower)

G = Green (Power)



GR02241

CONNECT WIRES TO PUMP UNIT

Add 7/8" hole in box to route control cord into pump enclosure.

Use hole grommet to prevent damage to cord.

Use W/D shown below to configure control cord in pumpbox.

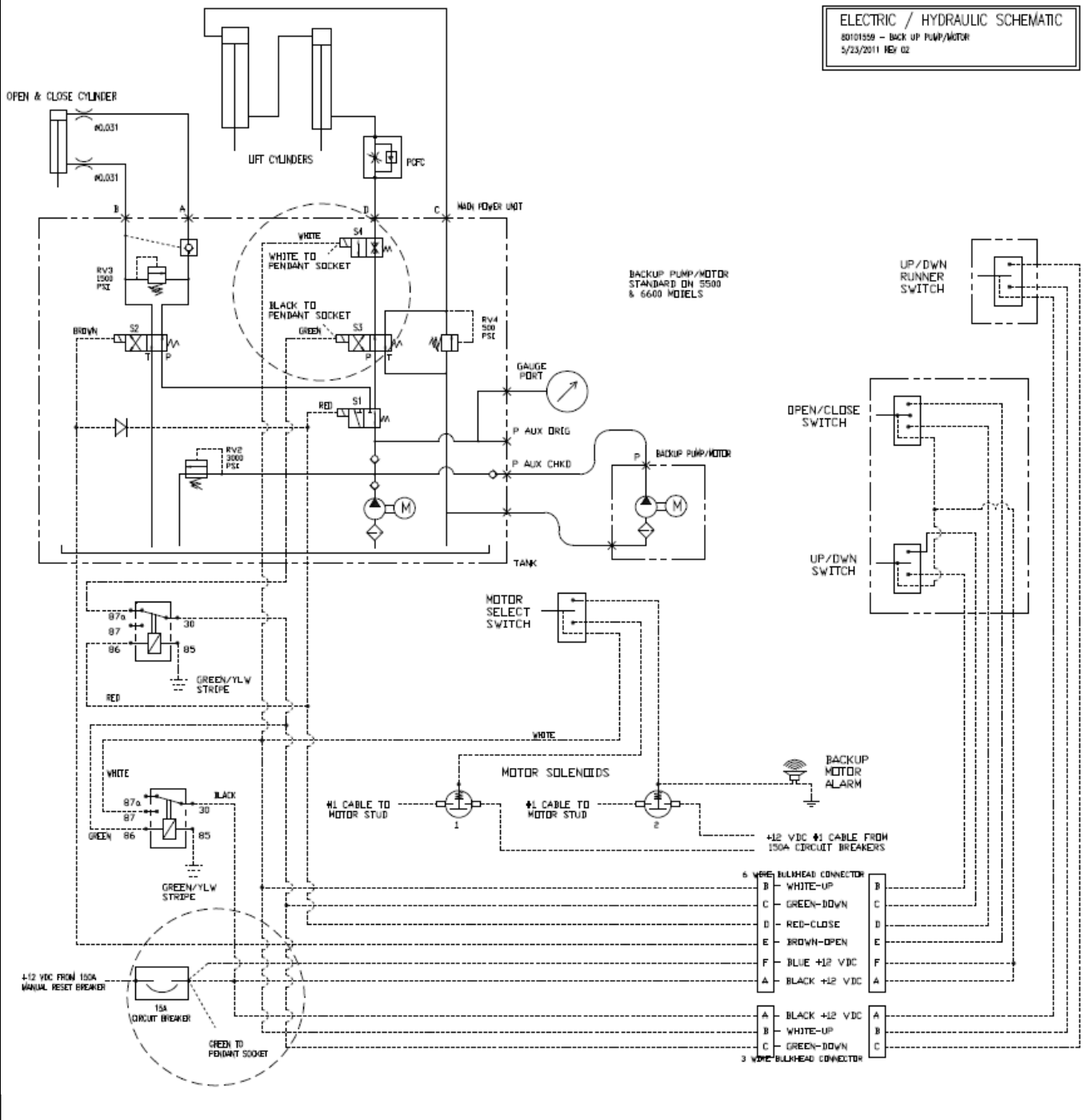
Apply 80101559A schematic decal over existing decal on underside of pumpbox cover

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WDV Hand Held Remote Installation Instructions

ELECTRIC / HYDRAULIC SCHEMATIC
 80101559 - BACK UP PUMP/MOTOR
 5/23/2011 REV 02



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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**