

www.waltco.com parts@waltco.com Phone: 800.411.5685 Fax: 800.411.5684

Installation Manual

PTN

1250 lb. and 1600 lb. Capacity Rail Liftgate



Last Change

Date	Page(s)	Description
03-2017	11, 14, 15, 17, 23, 28, 29	 P13 – Added installation of Support Bracket P14 – Information on additional knockout holes in Floor Mounting Bracket P15 – Showing three Backing Plates, was two plates P17 – Added Cycle Counter to schematic P23 – Added item 11, Cycle Counter P28 & P29 – Added Cycle Counter to schematics

Waltco Lift Corp. Corporate Office United State 285 Northeast Ave. Tallmadge, OH 44278 P: 330.633.9191 F: 330.633.1418

Waltco Lift Corp. United States 620 S Hambledon Ave. City of Industry, CA 91744 P: 626.964.0990 F: 626.964.0149

Waltco Lift Inc. Canada 90 North Queen St. Etobicoke, ON M8Z 2C5 P: 888-343.4550

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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.

Chapter 1 **A** 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 **A** 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.



NOTICE

Chapter 2 Liftgate Terminology

- 1. Mount Plate
- 2. Flow Valve (on cylinder)
- 3. Hydraulic Cylinder
- 4. Anchor Bolt
- 5. Lifting Chain
- 6. Crossbeam Box (Housing)
- 7. Rail (Track)
- 7A. Rail for Above Floor Unit
- 8. Control Switch
- 9. Spec Tag
- 10. Slider (Runner)
- 11. Ramp Assembly

- 12. Deck Assembly
- 13. Platform Adjustment
- 14. Housing Cover
- 15. Pump Unit
- 16. Travel Plate







Chapter 3 Mounting Requirements

IMPORTANT

• PTN lifts are manufactured to fit specific model trucks. Check that the lift you are about to install is the correct model for your vehicle.

Bed height range for PTN:

Min = 25" Max = 38"

For above floor units, factory setting is for 9" above floor travel.

NOTE:

Check with Waltco Technical Services for information on setting for additional above floor travel.

UNPACK/PREPARATION OF VEHICLE

- Remove the pickup truck bumper and tailgate.
- Remove screws and complete taillight assembly. Set this aside to be reinstalled later.
- If truck is equipped with a bed liner, cut out the bed liner as shown.
- Remove electrical component kit, set aside for later installation
- Remove metal strap securing the liftgate in the closed position.



Position the Liftgate

• Remove the knockout on the back of the liftgate housing that aligns with the truck's spare tire access tube.



 Install angle brackets as shown, and secure with 5/16-18 locknuts and washers. Do not fully tighten nuts at this time.

NOTE:

Driver's side bracket shown, curbside bracket is opposite.



 Use lifting means to position liftgate at rear of truck for mounting. Fit tracks into tailgate opening. Make certain the liftgate is flush with truck floor and centered in the opening.



- Hold liftgate tight against rear sill. Using Cclamps, pull tracks back until they are parallel with the stake pocket of the pick-up truck.
- Having the tracks parallel to the stake pocket is critical to ensure liftgate platform clears receiver hitch (if so equipped).
- This will also prevent movement until the liftgate is bolted to the truck.



 Position support brackets, without holes, between stake pockets and angle brackets previously installed, as shown. If necessary trim bracket to fit.

NOTE:

These support brackets must be used on all Ford aluminum bodies.



- Before drilling, verify:
 - Support brackets are tight against forward side of stake pockets
 - Liftgate housing is flush with truck floor
 - Liftgate is centered on truck
 - Liftgate is tight against truck sill
 - Tracks are parallel with stake pockets
- Drill 6 3/8" holes through support brackets and truck stake pockets using the holes provided in the angle brackets as guides.



• Position Floor Mounting Brackets as shown based on truck layout.





- Bolt the Floor Mounting Bracket, Support Bracket and the Angle Bracket to the stake pocket using the 3/8" x 1-1/4" or 3/8" x 2-1/2" bolts provided.
- Use the opening of the taillight lenses to access the bolts to fasten the nuts to the bolts.
 - 1. Insert the bolt provided
 - 2. Place a washer between the truck pocket and the nut
 - 3. Secure bolt
- Hold the Floor Mounting Brackets to the floor of the truck and using the Bracket as a guide, drill three (3) 3/8" holes through the truck floor for each bracket.

NOTE:

Each bracket has three (3) square holes, and three (3) knockouts. If possible, use the three holes. If there are obstructions under the body, use knockouts as maybe required. Always use knockouts furthest forward when possible.





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• Using 3/8 carriage screws, attach the Floor Mounting Bracket to the truck floor. Use the Backing Plates provided to reinforce the truck floor as shown.



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- When finished, double check that all bolts in stake pockets and the truck floor are securely tightened.
- Remove shipping feet and shipping reinforcement channels.

IMPORTANT:

Do not lower platform if tracks (rails) have been cut short, and have not been properly ground down to prevent damage to slider (runner) bearing. See end of this chapter.

- Use the control switch to raise the platform slightly to release the travel lock, then unfold it and lower it to the ground. If liftgate does not work, check to make sure it is properly grounded to the truck.
- Install the taillights using the screws and clips provided as shown. (Do not reinstall with factory screws so lights cannot be replaced without having to remove the liftgate).



INSTALLATION OF POWER CABLE

Locate and mount 150 Amp 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 24", maximum length, 2 Ga. battery cable may be used.

Connect end of battery cable from liftgate to Terminal Link attached to circuit breaker.



By connecting battery cable from liftgate to battery(s), the liftgate controls become operational.

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

Secure all battery cables to chassis frame with cable ties provided.



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.



Original equipment ground cable furnished on vehicle should be at least a number 2 ga. to insure proper operation of pump unit. An auxiliary ground cable should be added between engine block and chassis frame if engine is not adequately grounded to chassis frame. When there are two or more batteries, all cables connecting batteries together must be 2 ga. or heavier. This includes all original equipment batteries on vehicle.

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INSTALLATION OF GROUND CABLE

Route ground cable, located under the crossbeam box of liftgate, to the vehicle chassis frame.

Drill 7/16" hole in chassis frame to attach ground cable.

IMPORTANT: Grind area around hole to insure good electrical ground.

Bolt cable in place with 3/8" bolt and nut provided.







ABOVE FLOOR TRAVEL

If above floor travel is to be reduced, additional links will need to be added to the lifting chains.

If additional above floor travel is desired, contact Waltco for assistance. Ability to increase travel varies with each specific model of liftgate and bed height of vehicle.

FILLING HYDRAULIC RESERVOIR

- Lower platform to ground and remove access cover.
- Remove breather & fill reservoir with hydraulic fluid until 1/2" from top.
- Cycle liftgate several times to release trapped air from system.



Recom	mended Fluids	Fill reservoir		
Temperature Range Acceptable Fluids		• Fill with recommended fluid or equivalent.		
0° to 120° F	Waltco Biodegradable Liftlube [™] part #85803860	 Fill the reservoir to within 1/2" from the top. Fluids are available from the Waltco parts 		
	Shell Tellus S2 VX 32	Dept. 1-800-411-5685 www.waltco.com		
	Chevron Rando HDZ 32			
-20° to 90° F	Waltco Biodegradable LiftLube Arctic part #85803866	NOTE: Do not use the following fluids:		
	Waltco All Season Hyd Oil Part 85803867	Brake Fluid Power steering fluid		
	Shell Tellus S2 VX 15 Mobil DTE 10 Excell 15 Chevron Rando HDZ 15	Automatic Transmission Fluid (ATF)		
A good quality SAE 10W	motor oil may also be used in			
temperatures above 32°	F	Rev 09		



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	Important Decal	1	80100828	As shown on curbside slider (runner)			
2	Hazard Decal	1	80101370	As shown on curbside slider (runner)			
3	Safety Instructions	1	80100850	As shown on curbside slider (runner)			
4	Switch Decal	1	80101532	As shown on switch			
5	PTN-12, 1250 lbs.		80100266	One as shown on curbside slider (runner)			
	PTN-16, 1600 lbs.	2	80100252	One on side of platform (read w/platform open)			
6	Operation Decal	1	80101577	As shown on curbside slider (runner)			
7	Stand Clear Decal	4	75089296	One on each slider (runner) as shown Two on bottom of platform as shown			
8	Protective Cover	2	75089282	One as shown inside crossbeam box (housing) One on cylinder			
9	Warning Decal	1	80100829	As shown near circuit breaker			
10	Cab Shut-Off Decal (Optional)	1	75089267	As shown near cab shut-off switch			
To max	kimize decal adhesion to surfaces		If your liftgate is equipped with dual				

- 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



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.



Chapter 6 Lubrication Instructions

- Lubricate lifting chains including sections in crossbeam box, rails, & runner assemblies with machine oil or motor oil.
- Lubricate inside rails, crossbeam box and platform hinges with machine oil or motor oil.
- Lubricate driver and passenger side tracks.

Suggested Minimum Lubrication Schedule (in days)							
Monthly	Light	Medium	Heavy				
Cycles	Duty	Duty	Duty				
< 250	45	30	21				
250 – 350	30	21	14				
350 – 450	21	14	7				
> 450	Contact Factory						

 Lubricate every 30 days if cycles are unknown.



Chapter 7 Final Inspection List

IMPORTANT

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

- **1.** Platform is level with vehicle bed and ground.
- **2.** All welds are done properly.
- **3.** Tracks (Rails) properly trimmed, and back edge ground smooth.
- **4.** Check all bolts, brackets and braces are in place and tightened.
- **5.** Controls operate properly.
- **6.** Cab Shut-Off switch (optional) properly installed and working.
- **7.** Pump Reservoir filled to proper level.
- **8.** All phases of liftgate operation work properly
- **9.** Platform adjusted properly and chain-anchor lock nuts tight.
- **10.** All sprockets and chain mesh properly and all fasteners properly installed.
- **11.** Cycle Counter operates properly, if so equipped.
- **12.** All doors and covers properly in place and secure.
- **13.** All decals are in place and legible.
- **14.** Lights installed and properly operating. Reflectors re-installed if necessary.
- **15.** Vehicle meets all state and federal standards.
- **16.** Owner's manual in vehicle.
- □ 17. Liftgate has been operated through its entire cycle several times and checked for smooth and even operation throughout entire operating cycle with no unusual noise or vibration.



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 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.

Installation of Cab Shut Off Switch



WALTCO

Dual Control Switch and Remote, Installation Instructions



Connect Wiring

Route cord from Dual Control Switch into pump enclosure.

Disconnect existing switch wires from pump.

Connect one end of Adapter Harness 10098413 (w/3 connectors to pump unit and power wire from battery).

Connect other end of adapter harness (w/6 connectors to the two switches.

For Power Close units, also install Adapter Harness 10098429 to Selector Valve on cylinder, and to Open/Close switches.

Bundle wires inside crossbeam box with small zip ties provided to insure wires do not come into contact with roller chain or other moving mechanisms.

Secure switch cord with large zip ties.

NOTE:

Match wire connections male to female. Color of wire may vary. Also refer to numbers stamped on wires of adapter.

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







Cycle Counter Installation Instructions

- IMPORTANT! Disconnect battery power supply.
- Review these instructions before beginning. Locate a position on your liftgate for the cycle counter. Be certain that location will not interfere with liftgate operation and is in a relatively protected area. Refer to diagrams shown for suggested locations if required.
- Make certain wires will reach connections on pump unit.
- See below for hole size and pattern required for mounting counter, if required.
- Locate and drill two mounting holes as shown, if not already present. Take necessary precautions to prevent metal shavings from contaminating the hydraulic system.
- Mount cycle counter bracket using two #6-32 screws and lock nuts.
- Connect ground wire of cycle counter to ground stud.
- Connect red wire from cycle counter to wire adapter, and connect other ends of wire Adapter between lowering valve coil and control switch wire.
 FOR WDV: Connect red wire from cycle counter to wire adapter, and connect ring terminal end of wire adapter to S3 valve.
- Loosely bundle and wire tie slack wires as needed.
- Re-connect battery power supply and operate liftgate to test.



Cycle Counter Installation Instructions

Models:

MDL, DS, DT, PTBG, PTN, SB, and ACL



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

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

NOTE:

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

IMPORTANT

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

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