



# WALTCO

[www.waltco.com](http://www.waltco.com)  
parts@waltco.com

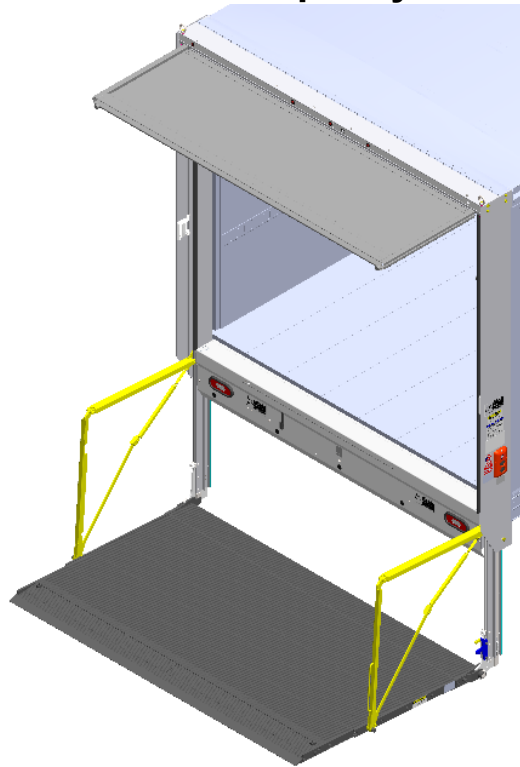
Phone: 800.411.5685

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# Owner's Manual

## FM SERIES

### 1000 lb. - 1650 lb. Capacity Rail Liftgates



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**Improper operation and/or maintenance of this liftgate could result in severe  
Read and understand the contents of this manual and all warnings and**

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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



**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 Waltco 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.



### 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, could result in property damage.



WALTCO warrants its products free of defects in materials and workmanship.

WALTCO will replace components found defective during the warranty period. Labor will be reimbursed according to our flat rate labor schedule at the prevailing shop rate.

Contact our Sales or Warranty departments for the warranty period of your model or for information regarding our flat rate labor schedule.

### **WALTCO Warranty Claim Procedure**

For consideration, all claims must be received within 30 days of repair and include the following information:

- Liftgate Serial Number
- Description of problem and corrective actions
- Itemization of the labor charge to include the number of hours and labor rate

**Replacement warranty parts can be obtained by contacting Waltco's Parts Department. Parts must be returned for inspection when requested.**

Exclusions:

Waltco's warranty does not include reimbursement for service calls, vehicle rental, towing, travel time, fabrication of parts available from WALTCO, damage from misuse or abuse, negligence, accidents, alteration, loss of income or overtime expense, oil, or normal wear.

Diagnosis and troubleshooting time are included in the flat rate labor times.

Warranty and technical information is available from WALTCO's toll free customer service lines from 8:00 a.m. to 5:00 p.m. EST.

#### ***Waltco Lift Corp***

1777 Miller Parkway

Streetsboro OH, 44241

Sales Direct Line: 1-800-211-3074

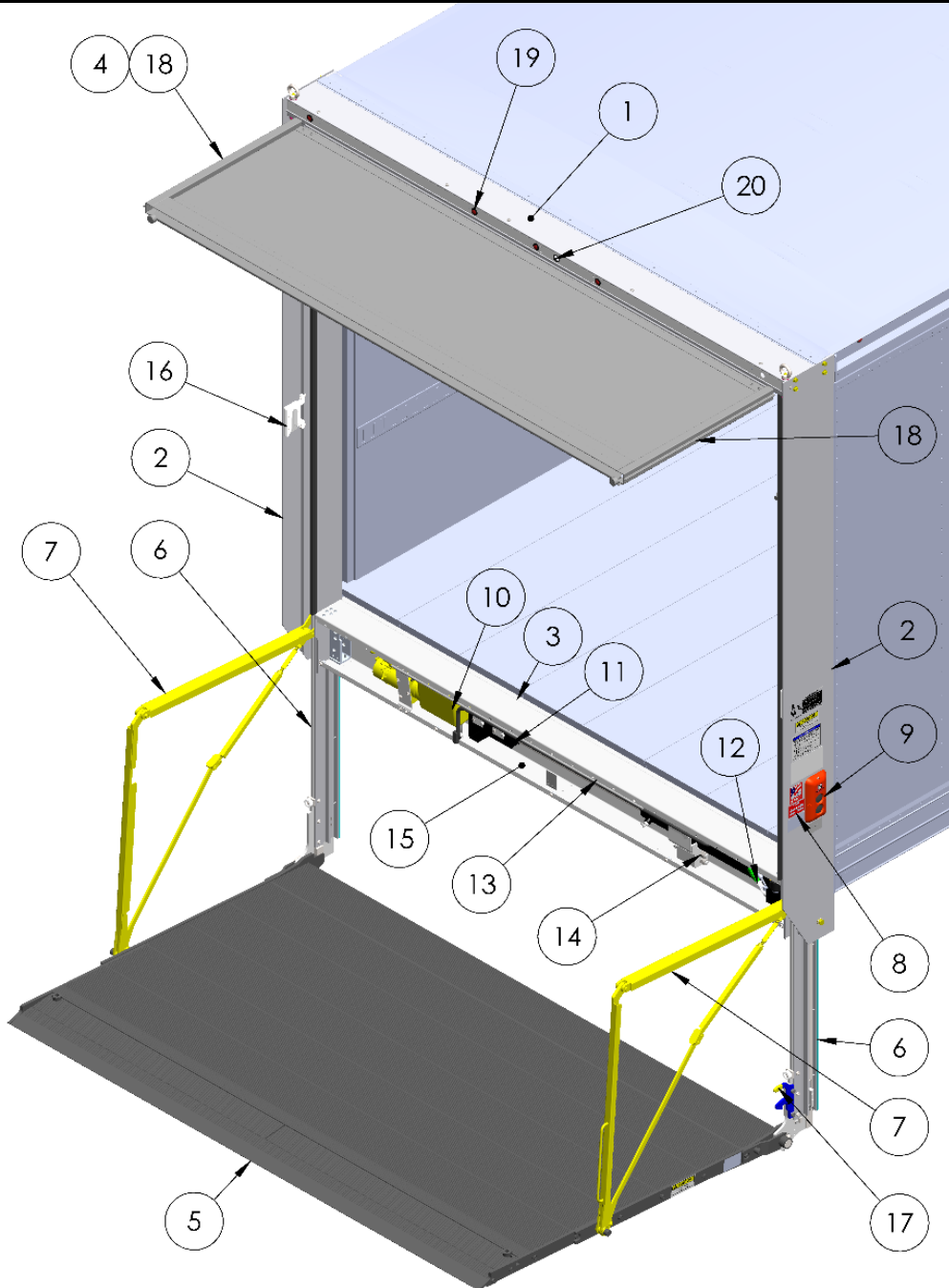
Parts Direct Line: 1-800-411-5685

[www.waltco.com](http://www.waltco.com)

***We're behind you all the way!***

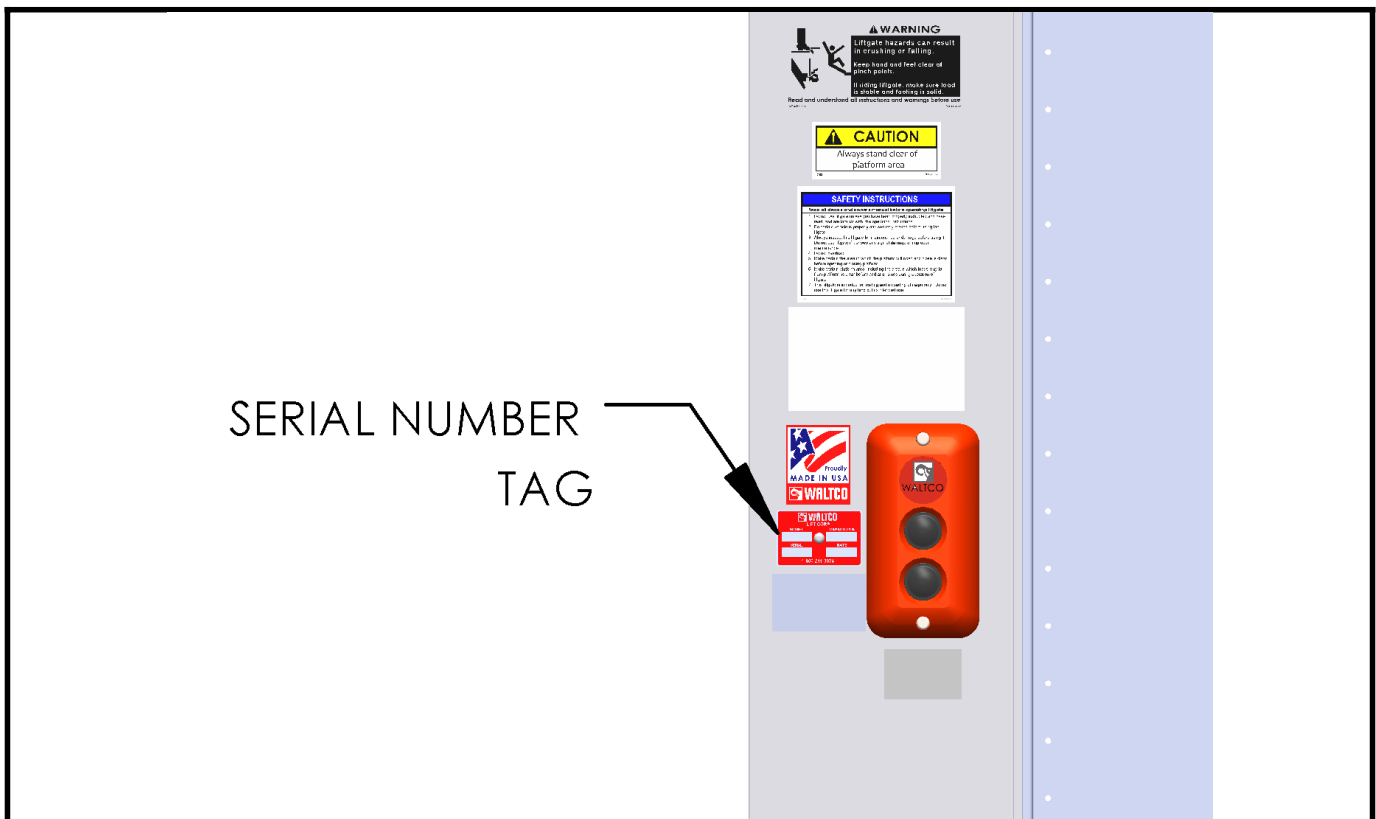
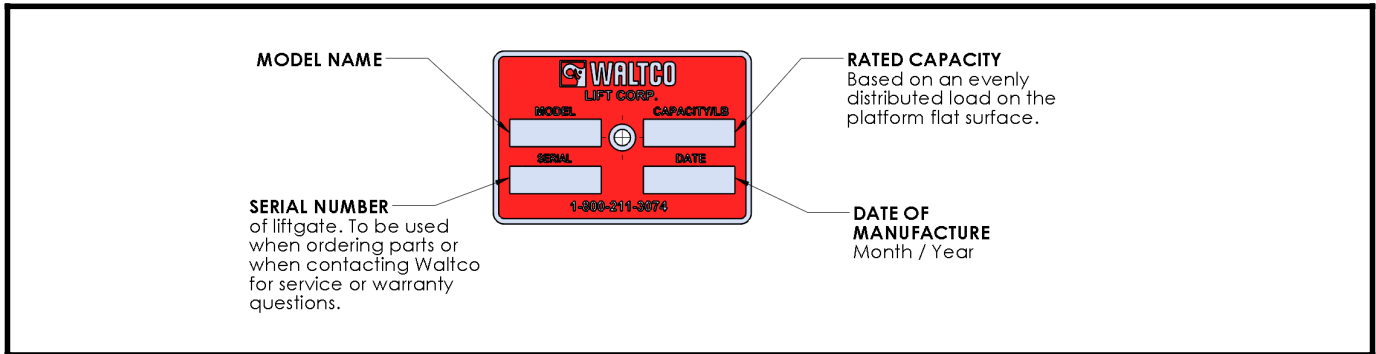
# Chapter 2 Liftgate Terminology

- |                             |                               |                                   |
|-----------------------------|-------------------------------|-----------------------------------|
| 1. Header Extrusion         | 8. Serial Number Tag          | 15. Access Door Panel (not shown) |
| 2. Column Extrusion         | 9. Switch Assembly            | 16. Storage Latch                 |
| 3. Crossbeam Box (Housing)  | 10. Pump Unit                 | 17. Platform Latch                |
| 4. Door Assembly            | 11. Lift Cylinder             | 18. Gas Shock (not shown)         |
| 5. Platform Assembly        | 12. Lock Valve                | 19. Header Lights                 |
| 6. Runner (Slider) Assembly | 13. Lifting Chain (not shown) | 20. Camera Mount                  |
| 7. Platform Side Rails      | 14. Chain Anchor Bolt         |                                   |



# Chapter 2 Liftgate Terminology

EXPLANATION OF SERIAL NUMBER TAG		
MODEL NAME	DESCRIPTION	CAPACITY
FM1000	Final Mile Lift	1000 lbs.
FM1650	Final Mile Lift	1650 lbs.



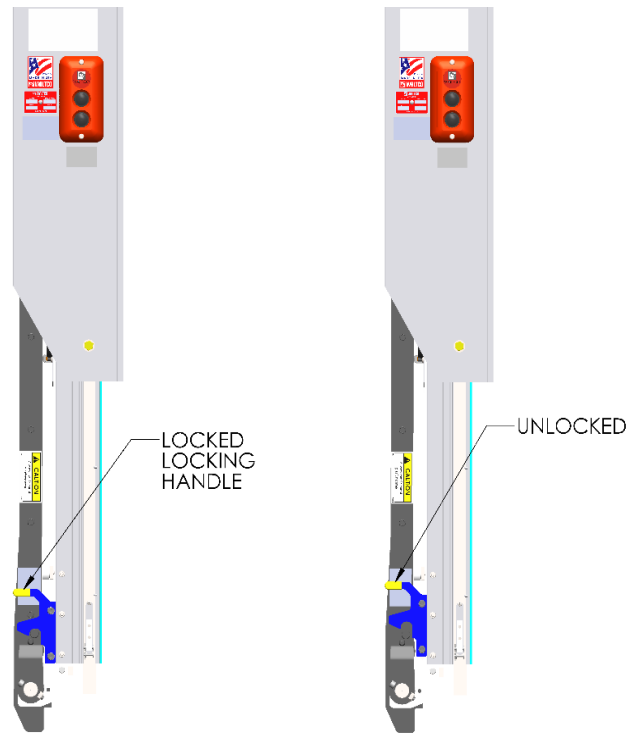


# Chapter 3 Operation Instructions

## TO OPEN PLATORM

### Manual Close

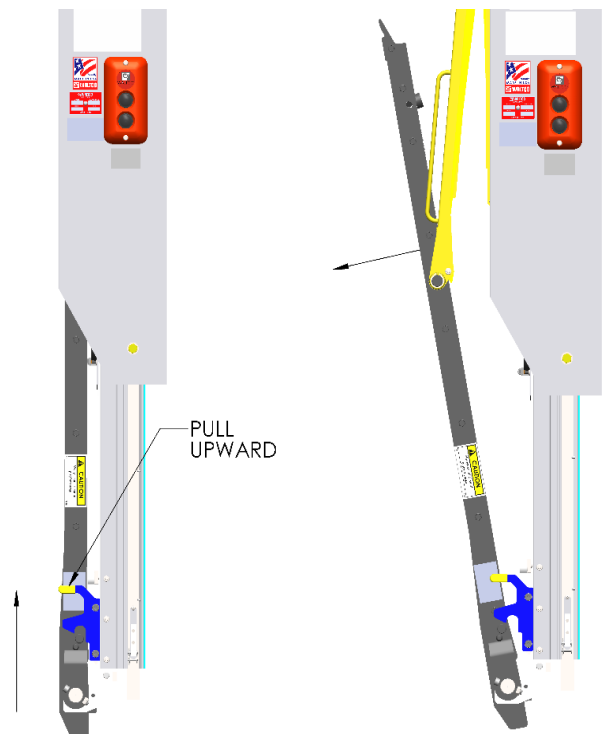
Pull upward locking handle on control side to "UNLOCKED" position as shown.



Hold locking handle, Use left hand to open the platform by grabing the end of platform.



**Never force platform open.  
Keep hands away from pinch points.**



# Chapter 3 Operation Instructions

## TO STORE PLATORM

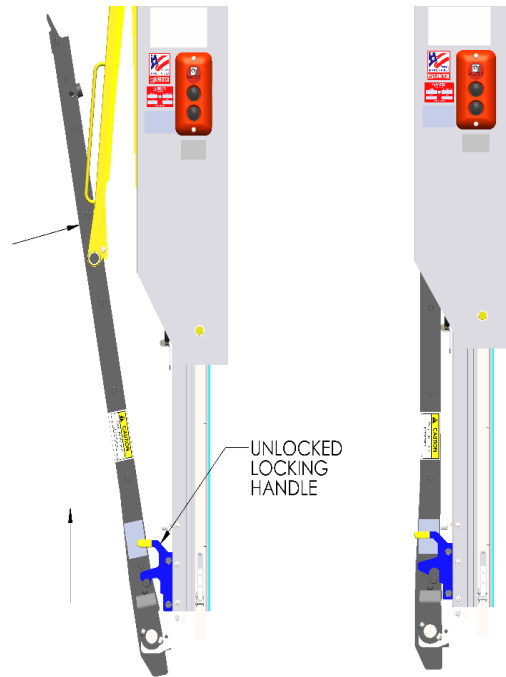
### Manual Close

Lift the locking handle in the "UNLOCKED" position, while holding the locking handle.

Lift close the platform with your left hand by grabbing the end of the platform side bar.



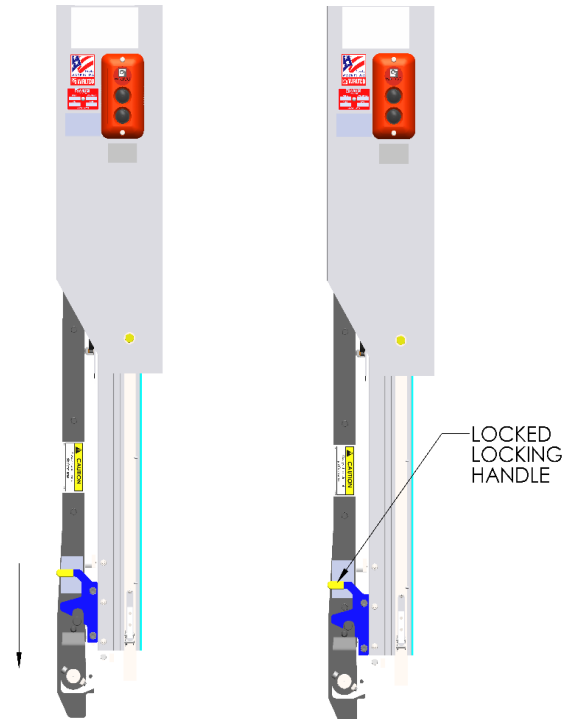
**Keep hands away from pinch points.**



Release locking handle into "LOCKED" position.



**Inspect latch to confirm platform is locked.**



## Chapter 3 Operation Instructions

### LOADING OF PLATFORM

Load and unload from rear of platform and not side of platform. Never remove hand rail to load or unload platform.

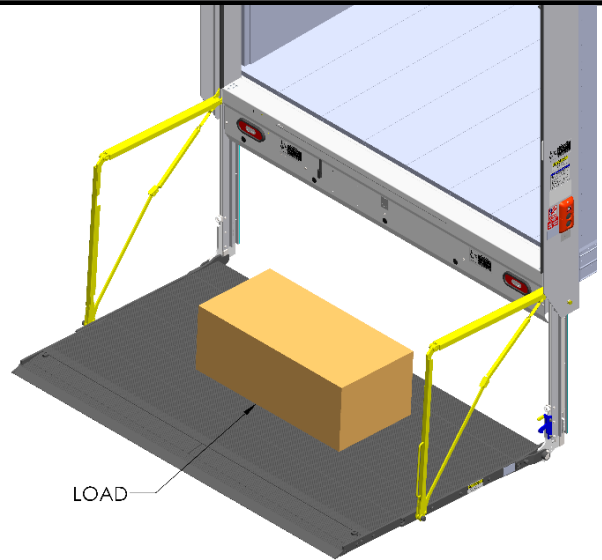
Always load as close to center of platform and as close to truck as possible.



**Never operate fork lift trucks on or over any part of liftgate.**



**This unit is intended for loading and unloading of cargo only. Do not use for anything but its intended use.**



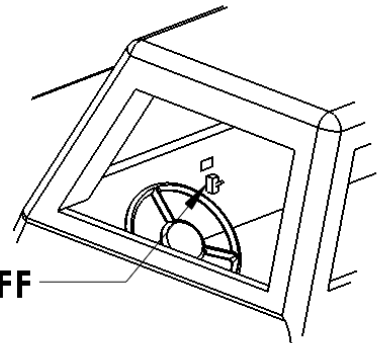
### POWER OFF TO LIFTGATE (OPTIONAL SWITCH)

Turn power off to liftgate by turning off the Cab Shut-Off



**Turn power off to liftgate to prevent unauthorized use of liftgate.**

CAB SHUT-OFF SWITCH



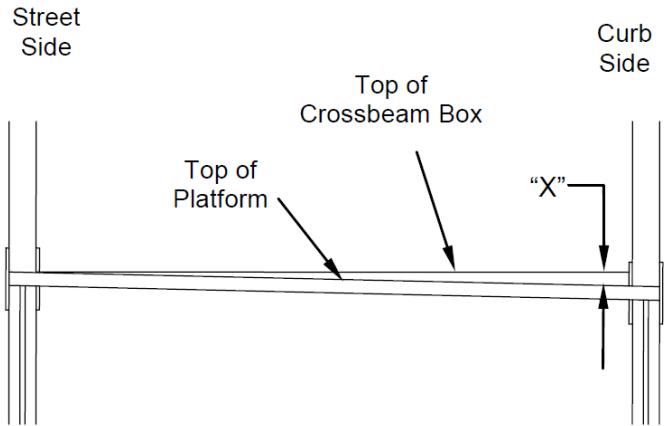
# Chapter 4 Preventive Maintenance

## PLATFORM ADJUSTMENT

Unfold and raise platform to bed level and check for:

- 1.) If platform travels more than 1/4" above the top of the crossbeam box, see below for adjustment.
- 2.) If platform is uneven see below for adjustment.

Lower platform to ground. Remove access door from



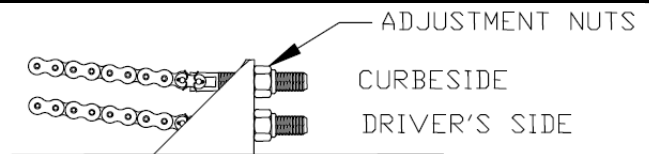
Adjust platform so it is level with top of crossbeam box.

**! Never adjust platform to travel more than 1/4" above the crossbeam box.**

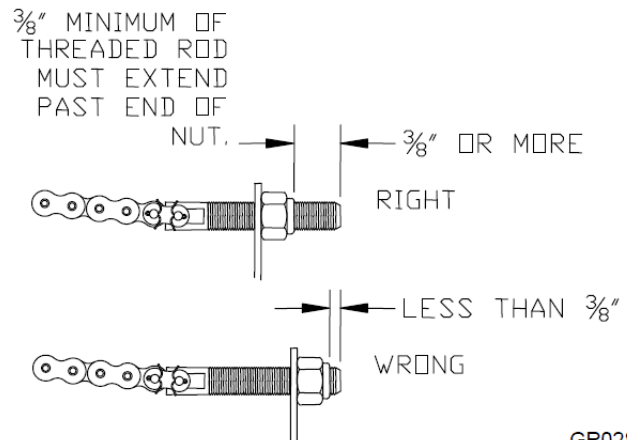
**! Never adjust nut out less than 3/8" from end of anchor bolt.**

**! Never have any part of your body underneath the platform while making adjustments.**

- 1.) Lower platform to the ground
- 2.) Adjust the chains and check level
- 3.) Repeat above until platform is flush with the cross beam box



LOWER ← → RAISE  
ANCHOR DIRECTION



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# Chapter 4 Preventative Maintenance

## HYDRAULICS

Inspect for oil leaks in:

- Hydraulic Cylinder
- Hydraulic hoses - Replace hoses if they show signs of excessive abrasion.
- Hydraulic fittings and valves
- Tighten or replace all hydraulic components as may be required to stop oil leakage.

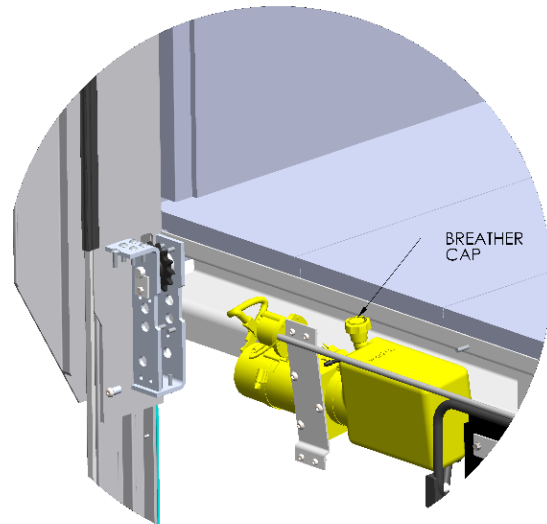
## CHECK AND FILL HYDRAULIC RESERVOIR

Lower platform to ground and remove access door.

Remove breather and fill reservoir with hydraulic fluid until 1/2" from top. (See recommended fluids below)

Cycle liftgate several times to release trapped air from

Replace breather cap.




## HYDRAULIC FLUIDS

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

	
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° to 120°	<b>Waltco Biodegradable LiftLube Part # 85803860</b> Shell Tellus S2 VX 32 Chevron Rando HDZ 32
-20° to 90°	<b>Waltco Biodegradable LiftLube Arctic Part # 85803866</b> <b>Waltco All Season Hyd Oil Part # 85803867</b> Shell Tellus S2 VX 15 Mobil DTE 10 Excel 15 Chevron Rando HDZ 15

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## Chapter 4 Preventative Maintenance

**There is no speed adjustment on this liftgate.**

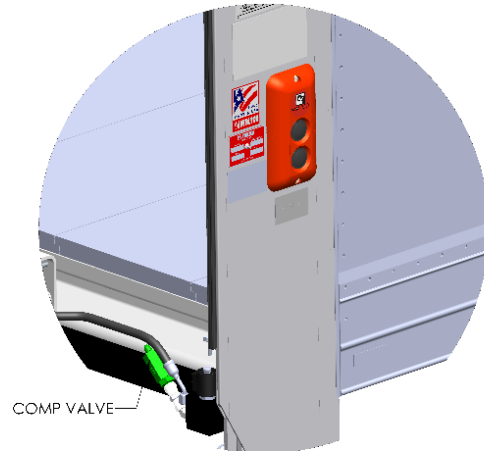
Lowering speed is controlled by the Pressure

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

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



**This liftgate must have correct pressure compensative flow valve installed!**



### INSPECT DECALS AND LUBRICATE LIFTGATE

Inspect all decals per Chapter 5 of this manual.

Replace any that are missing or damaged.

Lubricate liftgate per Chapter 6 of this manual.

### ANNUAL INSPECTION

Drain hydraulic fluid and replace with new fluid per recommended fluids chart.

# Chapter 5 Placement of Decals



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

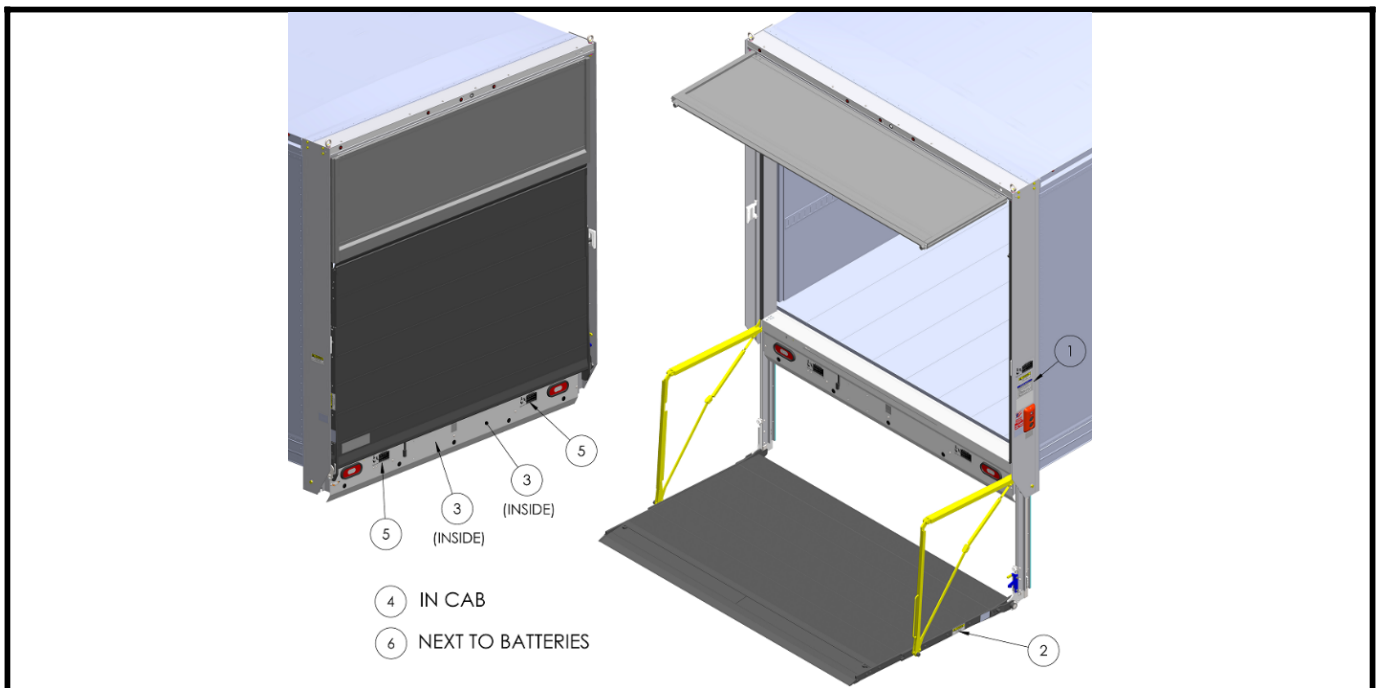
ITEM	DECAL	QTY	PART NO.	LOCATION
1	Safety Instructions	1	80100850	Locate in a conspicuous place near controls.
	Operation Decal	1	80101696	
	Hazard Decal	1	80101370	
	Remote Circuit Breaker Decal	1	80100828	
	1000 lb Capacity Decal	4	80100250	Locate one in a conspicuous place near controls, and one on driver side column. Locate one on both sides of platform.
	1650 lb Capacity Decal		80100268	
2	Platform Caution Decal	4	75089296	Locate one in a conspicuous place near controls. Locate one in a conspicuous place on driver side of vehicle. Locate one on either side of platform
3	Access Door Decal	2	75089282	Locate one on chain anchor bracket. Locate one on back of crossbeam box.
4	Cab Shut off Decal	1	75089267	Locate next to cab shut-off switch inside vehicle
5	Hazard Decal	2	80101370	Locate on access door
6	Warning Decal	1	80100829	Locate next to liftgate circuit breaker. In applications where more than one circuit breaker is used, decal must be placed in both locations.

To maximize decal adhesion to surfaces:

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

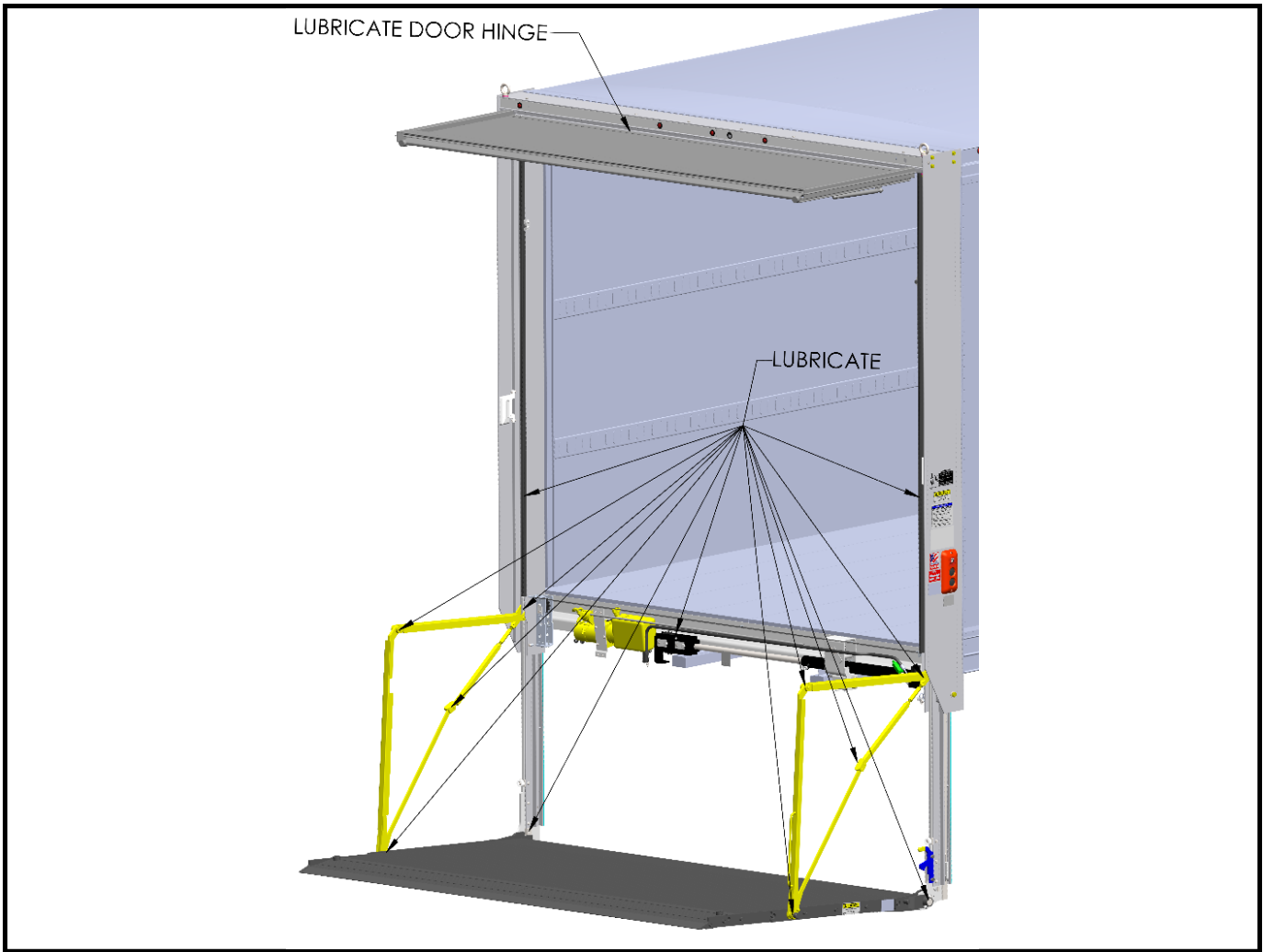


**If your liftgate is equipped with dual controls, an additional Safety Instruction decal (80100850) is to be placed in a conspicuous place near the second set of controls.**



# Chapter 6 Lubrication Instructions

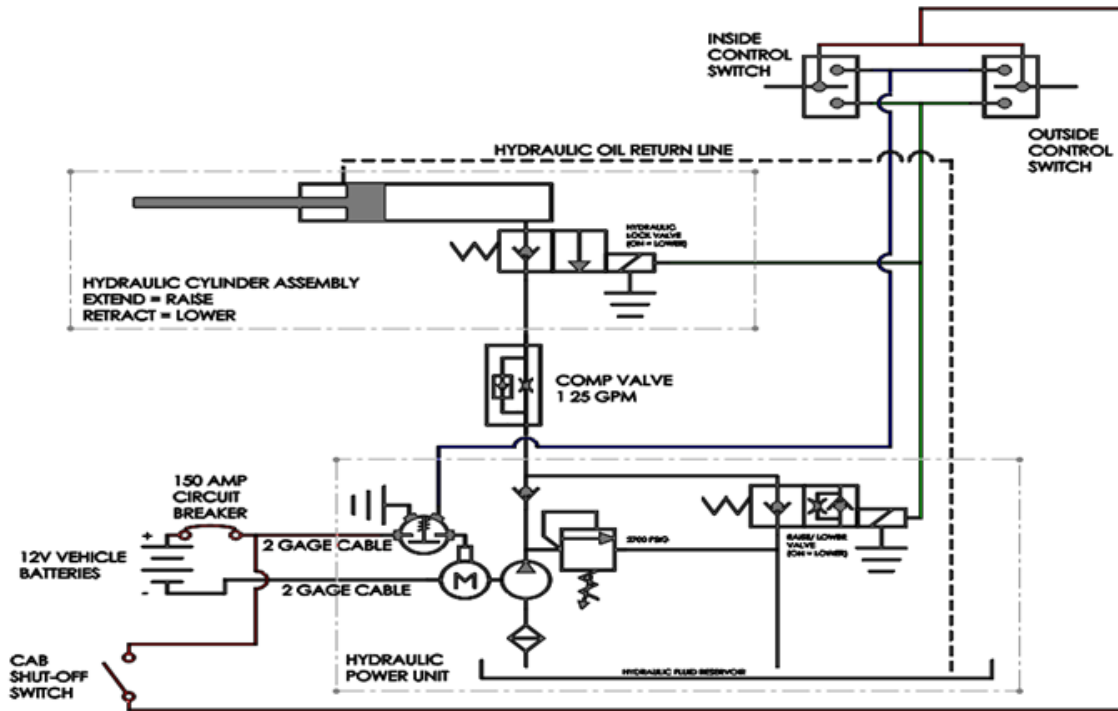
<p>Lubricate lifting chains including sections in crossbeam box, rails &amp; runner assemblies with oil.</p> <p>Lubricate latch, inside rails, crossbeam box and platform hinges with machine oil or motor oil.</p> <p>Lubricate driver and passenger side rails.</p>	Suggested Minimum Lubrication Schedule (in days)			
	Monthly	Light Duty	Medium Duty	Heavy 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.				



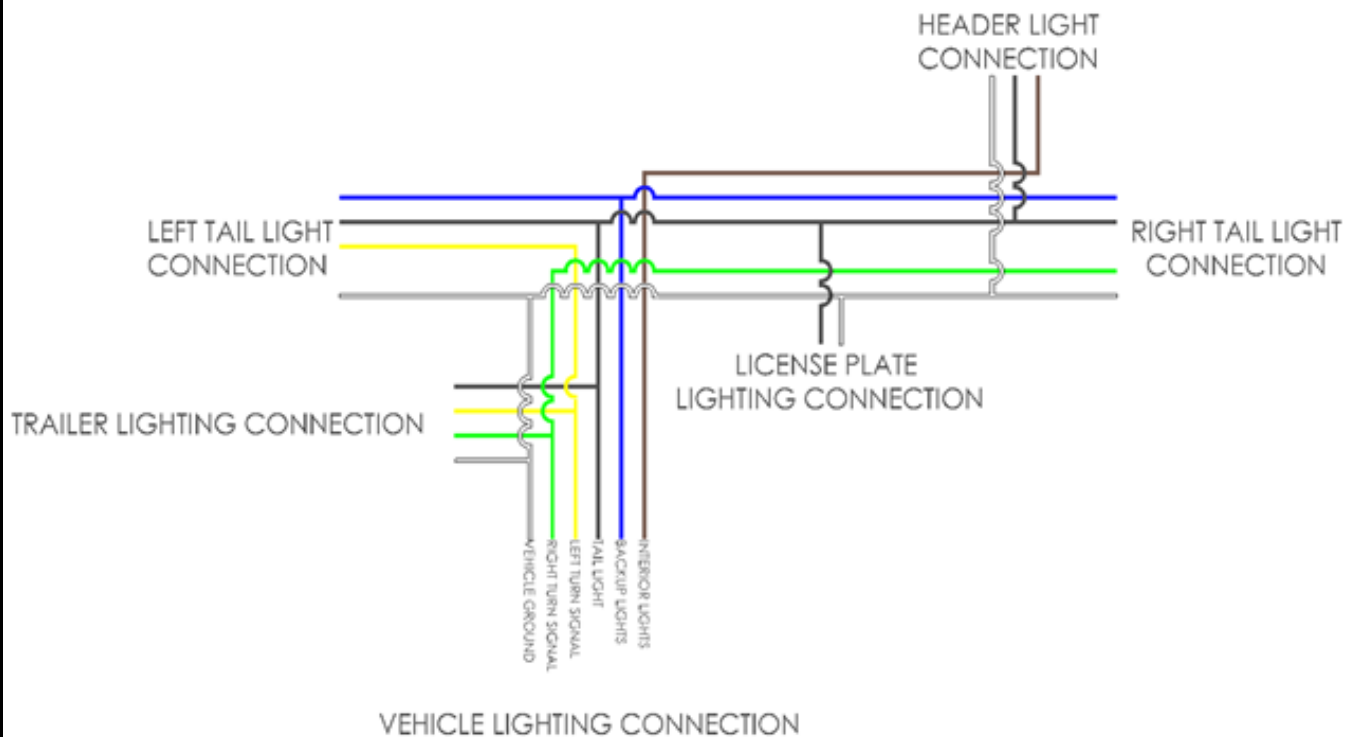


# Chapter 7 SCHEMATICS

## ELECTRICAL / HYDRAULIC SCHEMATIC



## LIGHTING WIRING SCHEMATIC



# 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](mailto: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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**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

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**NOTE:**

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

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# ***IMPORTANT***

**KEEP THIS OWNER'S MANUAL IN THE VEHICLE**



## **WARNING**

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

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

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