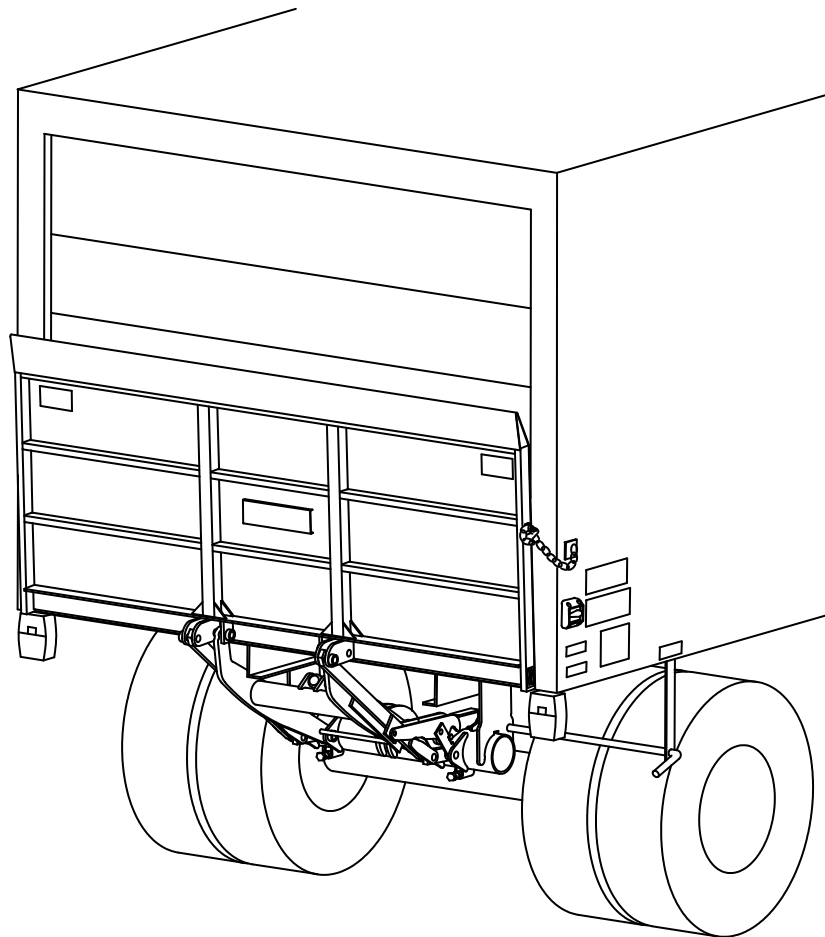

Owner's Manual

K-20

2000 lb. Capacity Conventional Liftgate



GR00239

Waltco Lift Corp.
Corporate Office United States
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

Table of Contents



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.

Introduction	
Safety Information.....	1
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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 Safety Information



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.

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 Up-stops 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.



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

285 Northeast Ave, Box 354, Tallmadge, OH 44278

1-800-211-3074, 330-633-9191

Please visit our websites: <http://www.waltco.com> or <http://www.hiab.com>

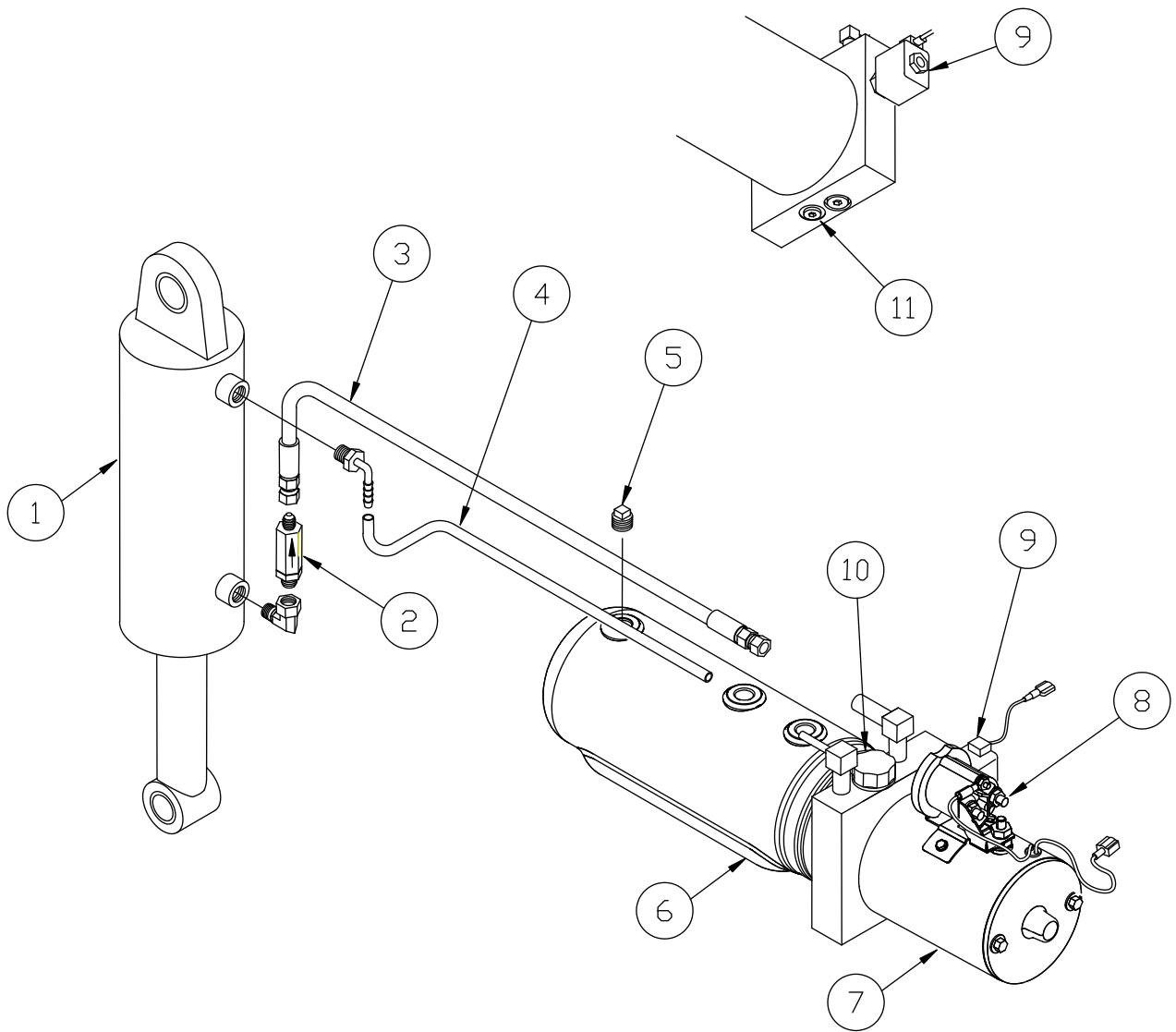
We're behind you all the way!

Chapter 2

Liftgate Terminology

- 1. Hydraulic Cylinder
- 2. Pressure Compensated Flow Valve
- 3. Hydraulic Pressure Hose
- 4. Return Hose
- 5. Reservoir Plug
- 6. Pump Reservoir
- 7. Pump Unit Motor

- 8. Pump Unit Starter Solenoid
- 9. Lowering Valve
- 10. Breather
- 11. Drain Plug



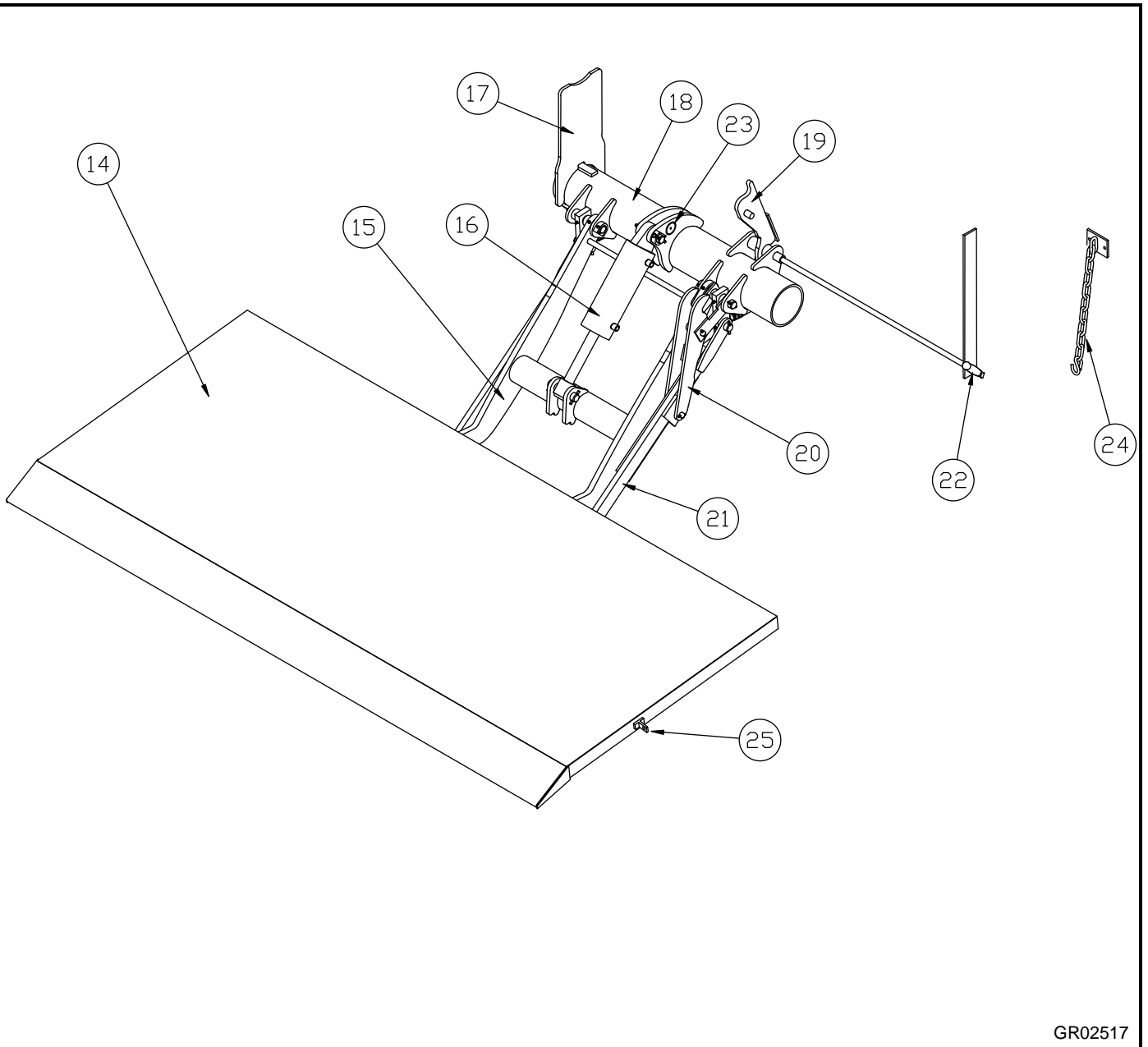
GR02719

Chapter 2

Liftgate Terminology

- 14. Platform
- 15. Lift Arm Assembly
- 16. Hydraulic Cylinder
- 17. Mount Plate
- 18. Mount Tube Assembly
- 19. Cam Assembly
- 20. Closer Linkage Assembly

- 21. Parallel Arm
- 22. Closer Handle
- 23. Spec Tag
- 24. Latch Chain
- 25. Latch Chain Clip



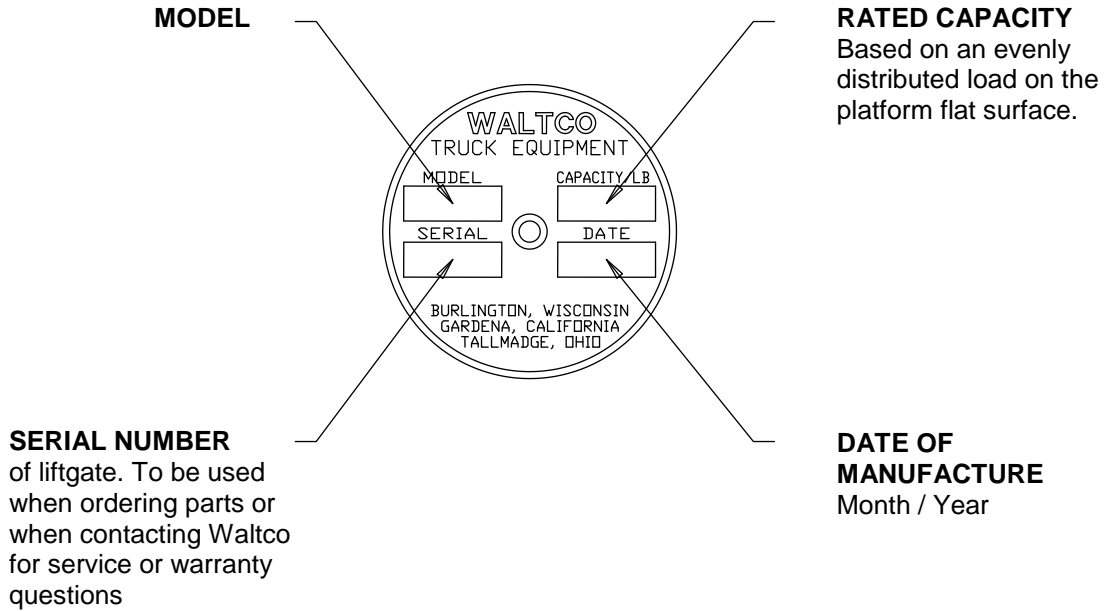
GR02517

Chapter 2

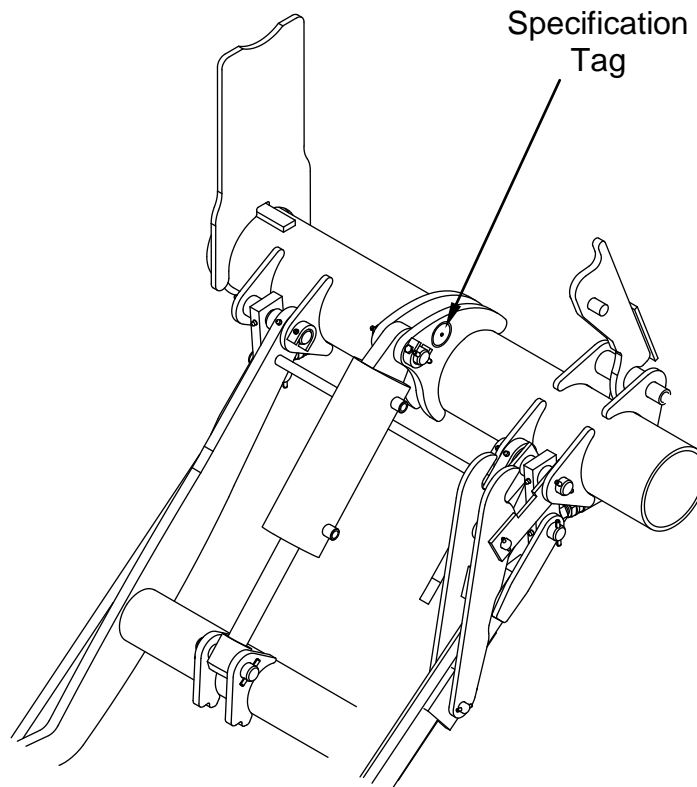
Liftgate Terminology

Explanation of Specification Tag

Model	Description	Capacity
K-20RM	Flipaway	2000 lbs.



GR00241



GR02517

Chapter 3 Operation Instructions

TO OPEN PLATFORM

Remove latch chain from platform.

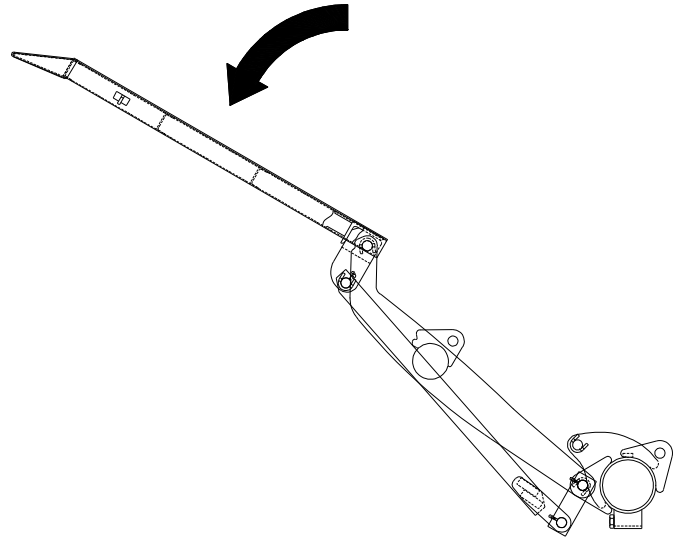


Never remove chain if it is tight. Push raise switch to release tension on chain.

Use lowering switch to open platform.



Lower platform far enough to allow closer handle and cam to rotate upward before raising platform.

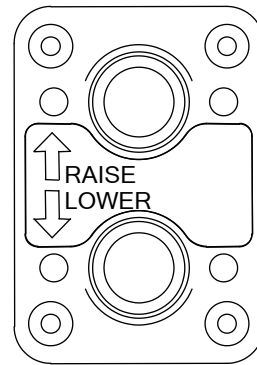


GR00281

TO OPERATE LIFTGATE

Use Raise and Lower Switch to raise and lower platform.

Load platform as close to vehicle and towards middle of platform as possible. Maximum rated capacity is based on an evenly distributed load on platform flat surface.



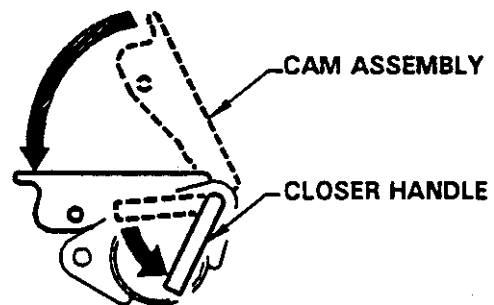
GR02094

TO STORE PLATFORM FOR TRANSIT

Make certain platform is clear of all objects.

Lower platform approximately half way to ground to allow cam assembly to be rotated to horizontal position.

Using the closer handle, rotate and hold the cam assembly in the horizontal position and then raise the platform to transit position using the raise switch.



GR00283

Chapter 3 Operation Instructions

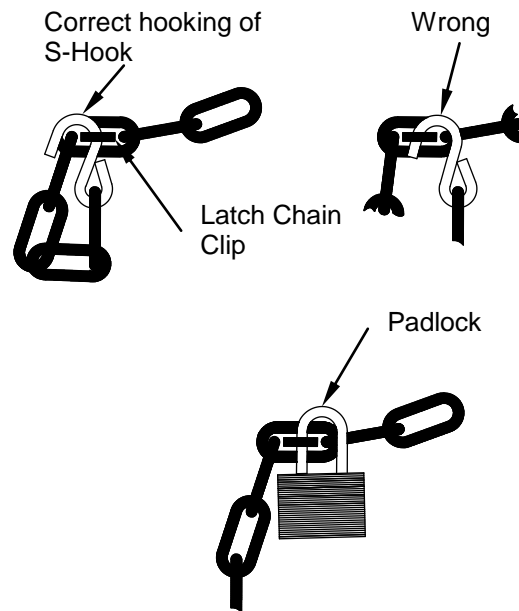
SECURE PLATFORM FOR TRANSIT

Attach Latch Chain to Latch Chain Clip on side of platform as shown.



To prevent unauthorized persons from using liftgate, a padlock may be used in place of "S" Hook.

Turn off cab shut-off switch if so equipped (optional kit).



GR00848

Chapter 4 Preventive Maintenance

Waltco recommends that the K-Series liftgate be inspected at 6 month or 3000 cycle intervals to help assure proper function and operation of the liftgate.

Note: Photocopy the following PM Checklist to help keep track of periodic maintenance on the liftgate. Keep completed form with maintenance records.

For more detailed instructions on the following checklist items, refer to the appropriate sections in this Owner's Manual.



Do not continue to use liftgate if any points of inspection listed at left, or below, may cause you to think the liftgate is unsafe. Repair immediately.

If liftgate is found to be in need of repair or adjustment not covered in this manual, contact your nearest Waltco Distributor.

WALTCO K-SERIES LIFTGATE PREVENTIVE MAINTENANCE CHECKLIST

PM Interval: 6 Months or 3000 Cycles

Date: _____

Vehicle No. _____

Mechanic: _____

Liftgate S/N: _____

Model: _____

Check appropriate box below for each step:

6 Month Liftgate PM Procedures

1	OK	Repair Required	Corrected	Check for apparent damage to the lifting structure, such as bent or distorted members or cracked welds, which may have resulted from overloading or abuse.
2	OK	Repair Required	Corrected	Check that all pins, bolts and fasteners are tight and secure.
3	OK	Repair Required	Corrected	Check for worn or damaged bearings.
4	OK	Repair Required	Corrected	Check that controls operate properly.
5	OK	Repair Required	Corrected	Check all battery cables and connections (both positive and ground cables) to be sure they are tight and free of corrosion.
6	OK	Repair Required	Corrected	Check that transit chain properly hooks onto transit chain lug.
7	OK	Repair Required	Corrected	Check operation of lockout device.
8	OK	Repair Required	Corrected	Check closing mechanism related hardware.
9	OK	Repair Required	Corrected	Check platform tilt is adjusted correctly.
10	OK	Repair Required	Corrected	Check for hydraulic leaks in hydraulic cylinder(s), hoses, fittings, and valves.
11	OK	Repair Required	Corrected	Check oil level in reservoir.
12	OK	Repair Required	Corrected	Check lowering speed of platform.
13	OK	Repair Required	Corrected	Check that all decals are in place and legible.
14	OK	Repair Required	Corrected	Lubricate the liftgate per the "Lubrication Instructions".

12 Month Liftgate PM Procedures (Includes steps 1-14 above)

15	OK	Repair Required	Corrected	Inspect Pump Motor for wear or damage.
16	OK	Repair Required	Corrected	Replace Hydraulic Fluid.

Chapter 4 Preventive Maintenance

MONTHLY INSPECTION

Operate the liftgate throughout its entire operational cycle. Check for:

Damage to lifting structure such as bent or distorted members or cracked welds.

Bent or distorted cylinder pins or damaged cylinder.

All pivot and cylinder pins are securely in place, undamaged and retained by their proper fasteners (refer to parts drawings in "PMs and Schematics").

Damaged or worn bearings that pivot and cylinder pins rest in.

Controls operate correctly (refer to "Operations Instructions")

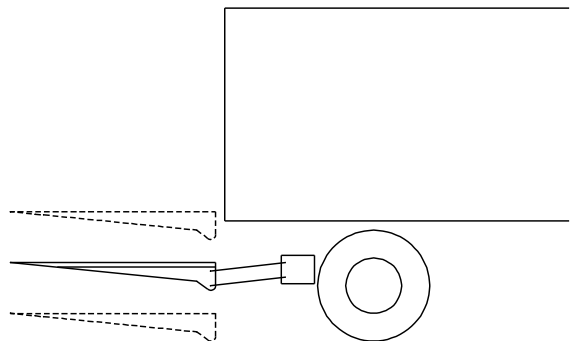
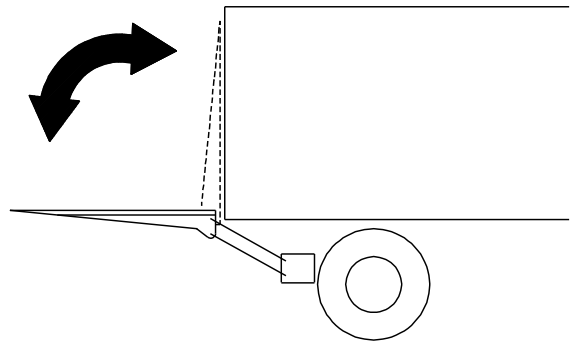
Check all power cables, ground cables, and connections

Clean and tighten all loose connections. Replace any damaged or corroded wires or connectors



Do not continue to use liftgate if any points of inspection listed above, or below, may cause you to think the liftgate is unsafe. Repair immediately.

If liftgate is found to be in need of repair or adjustment not covered in this manual, contact your nearest Waltco distributor.

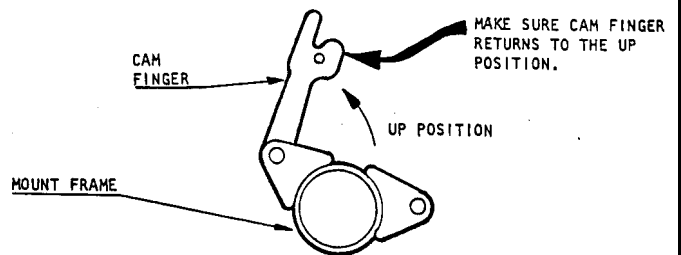


GR00849

CHECK POWER CLOSER CAM

Check that the power closer cam, levers, pins, and arm are not bent or distorted.

Check that closer cam returns to free position when closer handle is released.



GR00285

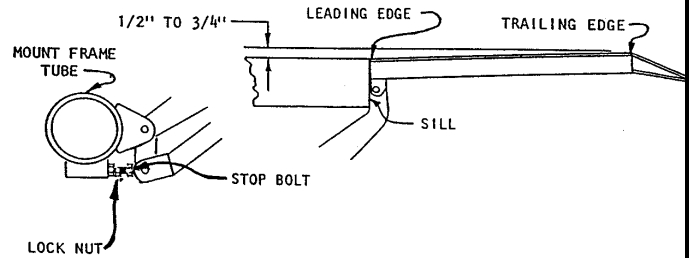
Chapter 4 Preventive Maintenance

CHECK PLATFORM INCLINE

Raise Platform to bed level and inspect.
Trailing edge of platform should be kicked up as shown.
Inspect all liftgate components for wear or damage.
Replace any damaged or worn components as needed.

To adjust:

Loosen locknut on stop bolt assembly.
Adjust stop bolts equally until platform is adjusted correctly and retighten locknuts.



GR00266

HYDRAULICS

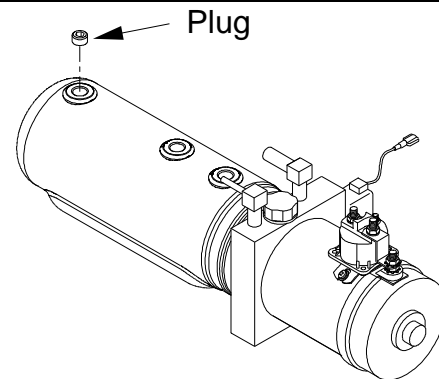
Inspect for oil leaks in:

- Hydraulic cylinder(s).
- 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.

FILLING HYDRAULIC RESERVOIR

Lower platform to ground
Remove Reservoir Plug.
Oil level should be 1/2" from top of reservoir.
If low, fill as required. Use appropriate fluid per chart.
Replace Plug.
Run liftgate full cycle several times to release trapped air from system.



GR01001

Recommended Fluids

Temperature Range	Acceptable Fluids
0° to 120° F	Waltco Biodegradable Liftlube™ part #85803860 Shell Tellus S2 V 32 Chevron AW32
-20° to 90° F	Waltco Biodegradable LiftLube Arctic part #85803866 Shell Tellus S2 V 15 Mobil DTE 13 MIL – H - 5606

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

Fill reservoir

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

NOTE:

Do not use the following fluids:

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

Chapter 4 Preventive Maintenance

There is no speed adjustment on this liftgate.

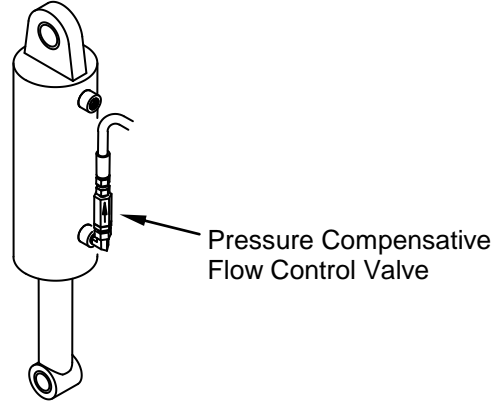
Lowering speed is controlled by the pressure compensative valve plumbed at the cylinder. Regardless of weight on platform, liftgate should lower at approximately six (6) inches per second.

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



This liftgate must have the correct pressure compensative valve install:

K-20 = 7010001-12



GR02597

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.

SEMI ANNUAL INSPECTION

Inspect power motor:

Disconnect battery cable.

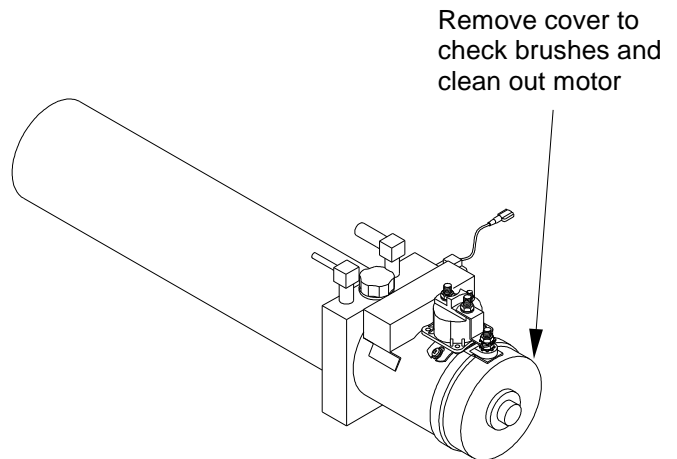
Remove end cover.

Examine armature brushes for wear (Motor should be replaced if less than 1/8" long).

Clean out all residue from inside of motor housing.


Apply several drops of light weight machine oil to armature shaft bearing in motor end cover.

Reassemble motor.




GR00181

Chapter 5 Placement of Decals

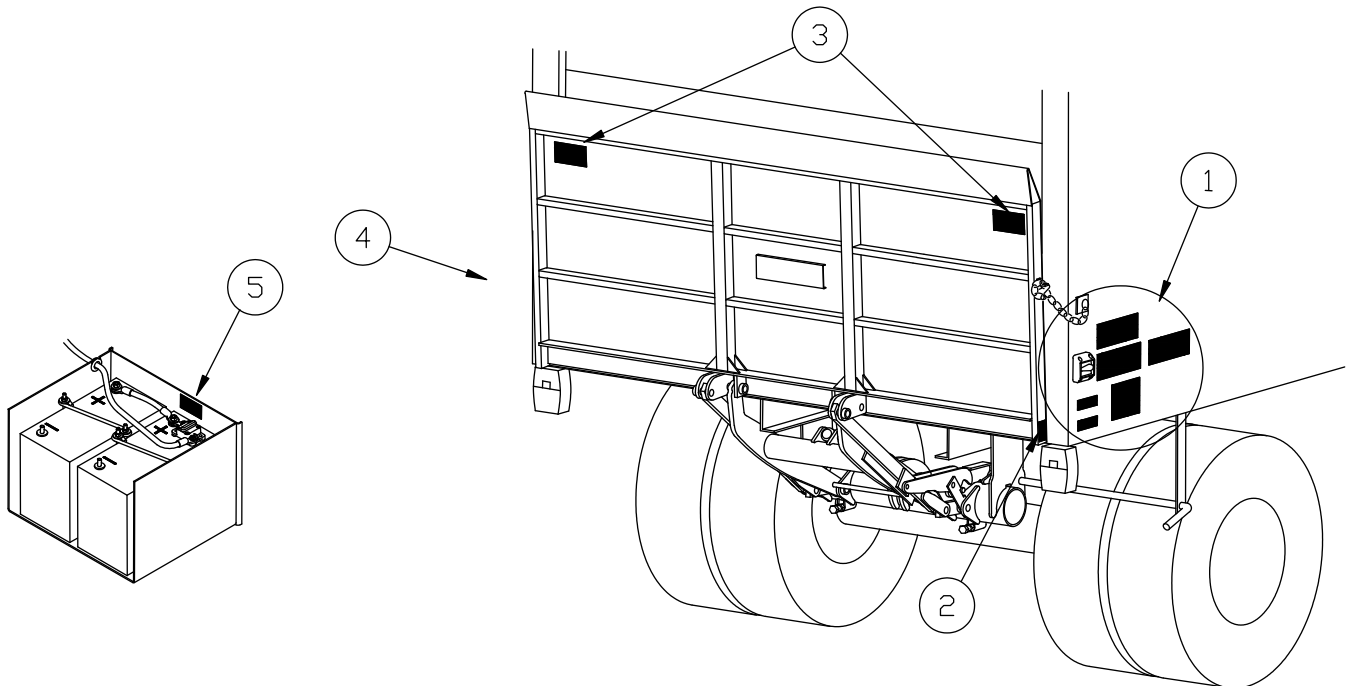
 All decals must be in place and legible or all warranties are void.

DECAL CHART

AREA	DECAL	QTY	PART NUMBER	LOCATION
1	2000 lb Capacity	1	80100253	Locate in a conspicuous place near controls.  If your liftgate is equipped with dual controls, an additional Safety Instruction decal (80100829) must be placed in a conspicuous place near the second set of the controls. Refer to the following diagram showing decal locations.
	Safety Instructions	1	80100850	
	Operation Instructions	1	80100851	
	Important Decal	1	80100828	
	Stand Clear	1	75089296	
	Hazard	1	80101370	
	Motor Thermal Switch	1	80101480	
2	2000 lb Capacity	1	80100253	Locate on curbside of platform
3	Stand Clear	2	75089296	Locate on back of platform
4	Stand Clear	1	75089296	Locate on driver's side of vehicle body near liftgate
5	Circuit Breaker	1	80100829	Locate next to liftgate circuit breaker. In applications where more than one circuit breaker is used, this decal must be placed in both locations.

To maximize decal adhesion to surfaces:

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

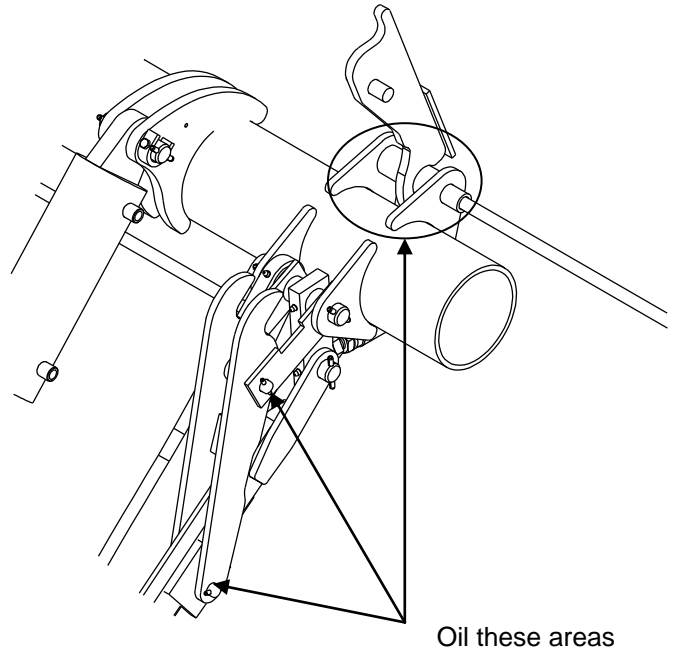


GR00947

Chapter 6 Lubrication Instructions

The liftgate should be lubricated every 120 days. There are no grease fittings provided on this liftgate.

- Power closer linkage, spring, and cam pivot points are to be oiled with machine oil or motor oil, every 90 days or less.
- Lubrication of greaseless bearings is not necessary, however, bearings can be sprayed with a non-petroleum based lubricant such as Zep-45 to retard corrosion of pins, reduce friction, and increase life of bearings.



GR00280

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Chapter 7 Schematics

PM Number

Electric Control Options.....

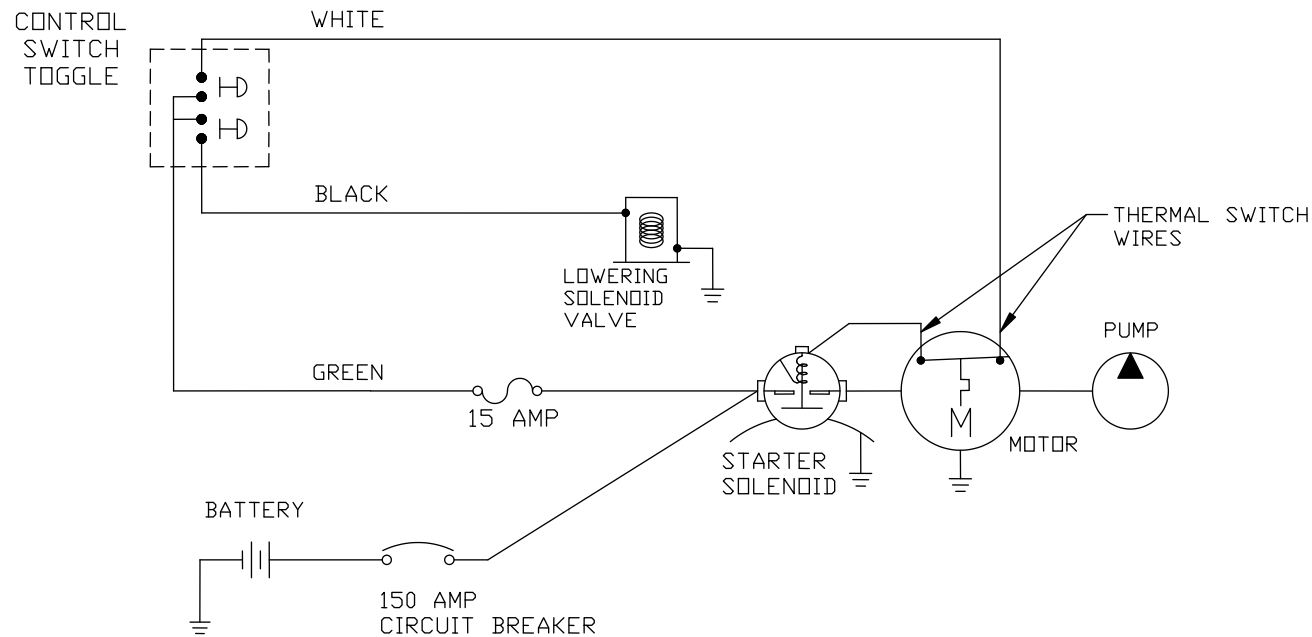
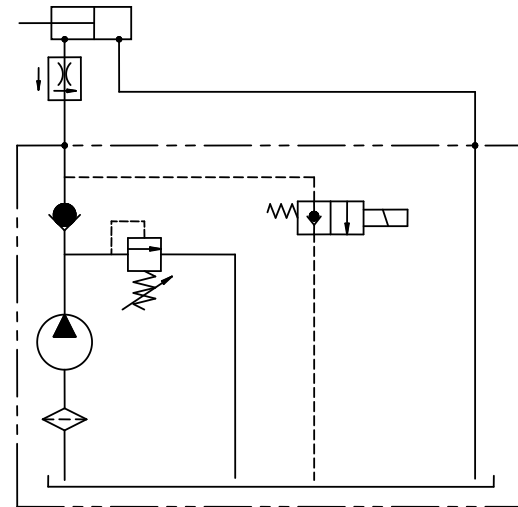
PM-617B

ELECTRIC CONTROL OPTIONS – GRAVITY DOWN

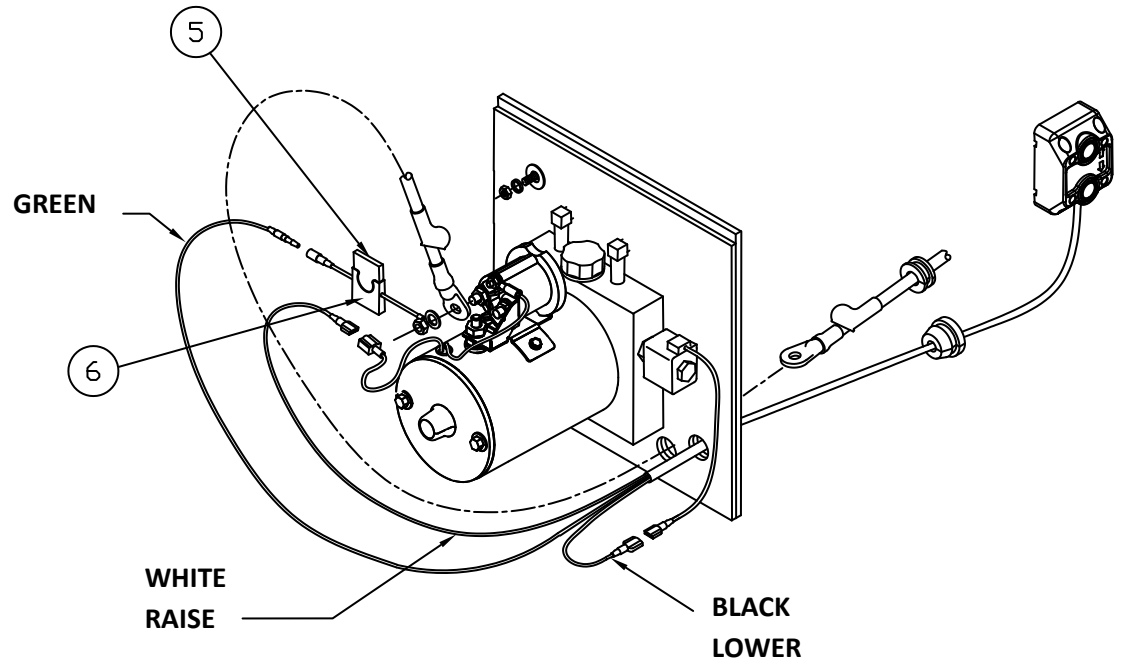
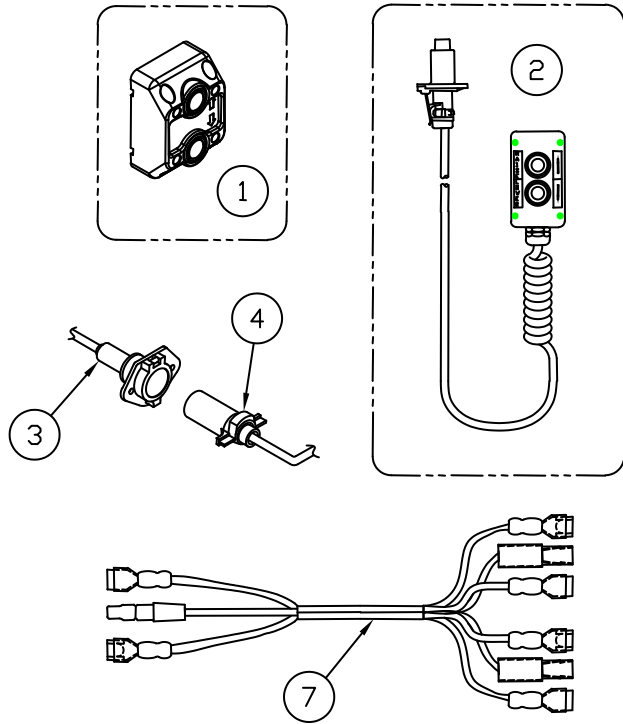
	PART NUMBER	QTY	DESCRIPTION
1	10099322 ^a	1	Switch w/10ft Cord (for curb side)
	10099323 ^b	1	Switch w/15ft Cord (for Dual Control)
2	10099325 ^c	1	Switch (Hand Held Remote)
3	75082038	1	Trailer Socket
4	75082037	1	Trailer Plug
5	75089854	1	15 Amp Fuse
6	75089850	1	Fuse Holder
7	10098413	1	Dual Control Harness

^a Included in Switch Kit 80000428.

^b Included in Switch Dual Control Kit 80000434.



ELECTRIC CONTROL OPTIONS – GRAVITY DOWN



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.]
2. MODEL NUMBER
3. CAPACITY
4. PLATFORM SIZE

THEN INCLUDE THE FOLLOWING INFORMATION:

5. PART NUMBERS
6. DESCRIPTION
7. QUANTITY REQUIRED

MAIL, E-MAIL OR PHONE YOUR REQUEST TO:

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

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

PLEASE NOTE:

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



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

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

NOTE:

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



IMPORTANT

KEEP THIS OWNER'S MANUAL IN THE VEHICLE

WARNING

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

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

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