

**ANTHONY**  
LIFTGATES, INC.®

**ETU**



## MAINTENANCE MANUAL

### MODELS

ETU-20-44

ETU-25-50



For Serial Number 123751 and Greater

**QUALITY, RELIABILITY, CUSTOMER SERVICE**

**MADE IN THE USA** 



# Contents

1. General Information . . . . .	4
1.1 Introduction . . . . .	4
1.2 General Safety . . . . .	4
1.3 State and Federal Regulations . . . . .	4
1.3.1 Lighting . . . . .	4
1.3.2 Rear Impact Guards . . . . .	4
1.4 If Maintenance Help is Required . . . . .	4
1.4.1 Maintenance (Dealer) . . . . .	4
1.4.2 Customer Service and Parts (End User) . . . . .	4
1.5 Warranty . . . . .	5
2. Safety . . . . .	5
2.1 Safety is Your Responsibility . . . . .	5
2.2 Safety Icons Nomenclature . . . . .	6
2.3 Safety Rules . . . . .	6
2.3.1 Personal Protection . . . . .	6
2.2.1 Personal Protection/Important Information . . . . .	6
2.2.2 Prohibited Actions . . . . .	6
2.2.3 Hazard Avoidance . . . . .	6
2.3.2 Equipment / Tools / Parts . . . . .	7
2.3.3 Battery / Fuel Tank Safety . . . . .	7
3. Maintenance . . . . .	8
3.1 Monthly Inspection . . . . .	8
3.2 Semi-Annual Inspection . . . . .	8
3.3 Mechanical Platform Adjustment . . . . .	8
3.4 Hydraulic System Maintenance . . . . .	9
3.4.1 Adding Fluid to Power Unit Reservoir . . . . .	9
3.4.2 Checking Lowering Valve Cartridge and Solenoid . . . . .	9
3.4.3 Solenoid Valve Screen . . . . .	10
3.4.4 Replacing Solenoid Valve . . . . .	10
3.4.5 Checking Cylinder Piston Seals for Drift . . . . .	10
3.4.6 Checking System Pressure . . . . .	10
3.4.7 Checking Flow Control Valve . . . . .	10
3.5 Electrical System Maintenance . . . . .	11
3.5.1 Checking 10 Amp Control Switch Fuse . . . . .	11
3.5.2 Control Switch Wiring . . . . .	11
3.5.3 Checking the 175 Amp Power Cable Fuse . . . . .	11
3.5.4 Checking Motor Start Solenoid . . . . .	12
3.5.5 Checking the Power Cable . . . . .	12
4. Decals . . . . .	13
4.1 Installing Decals . . . . .	13
5. Troubleshooting Chart . . . . .	16

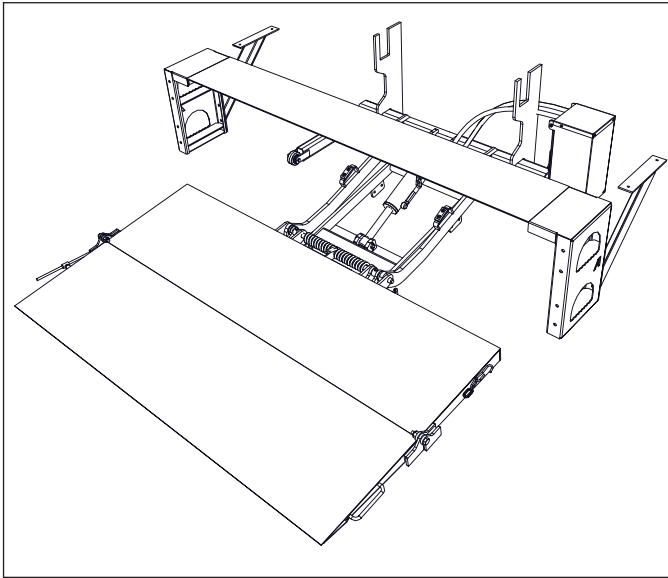
# 1. General Information

## 1.1 Introduction

Congratulations on selecting an Anthony Liftgates TuckUnder™ liftgate.

All Anthony tuckunder model liftgates are factory assembled, energized, and tested to ensure the highest quality performance standards. ETU liftgates ship completely assembled for fast, clean, and easy installation.

To ensure your liftgate will perform to your expectations, we have provided this Installation Manual, which is designed to provide you with the necessary installation instructions and safety precautions for the installation of the ETU TuckUnder™ liftgates.



Typical Anthony Liftgates ETU Tuckunder Model.

## 1.2 General Safety



Read, Understand, and Follow the Manual

**The success or failure of this liftgate to properly and efficiently operate depends on an ongoing preventative maintenance program. Failure to read, understand, and follow the maintenance instructions and safety recommendations in this manual can result in serious injury or death.**

Also, read and understand the operating instructions in the separate Operation Manual before performing any maintenance.

## 1.3 State and Federal Regulations

### 1.3.1 Lighting



If any lighting is installed or changed, it must not alter or prevent vehicle compliance with any existing State or Federal standards such as FMVSS 108 – Lamps, Reflective Devices, and Associated Equipment.

### 1.3.2 Rear Impact Guards



When stored in the transport position, this liftgate must provide protection against rear impact and comply with State and Federal standards in your area. Anthony Liftgates offers a bolt-on bumper, which meets the requirements of this standard.

## 1.4 If Maintenance Help is Required

### 1.4.1 Maintenance (Dealer)

For additional information on installation, refer to the ETU TuckUnder™ liftgate website [www.anthonyliftgates.com](http://www.anthonyliftgates.com). To find the most current version of the reference material, choose LIFTGATES, TUCKUNDER™, ETU, and then DOWNLOADS.

If you have any doubts or questions about installation, call us. Before doing so, have the serial number, model number, and lift capacity of your liftgate available.

**Anthony Liftgates, Inc.**  
1037 West Howard Street  
Pontiac, Illinois 61764  
(815) 842-3383 or 800-482-0003

### 1.4.2 Customer Service and Parts (End User)

For service or ordering replacement parts, contact an authorized dealer by going to [www.anthonyliftgates.com](http://www.anthonyliftgates.com) and selecting the FIND A DEALER tab. Enter your zip code to find the nearest authorized service location.

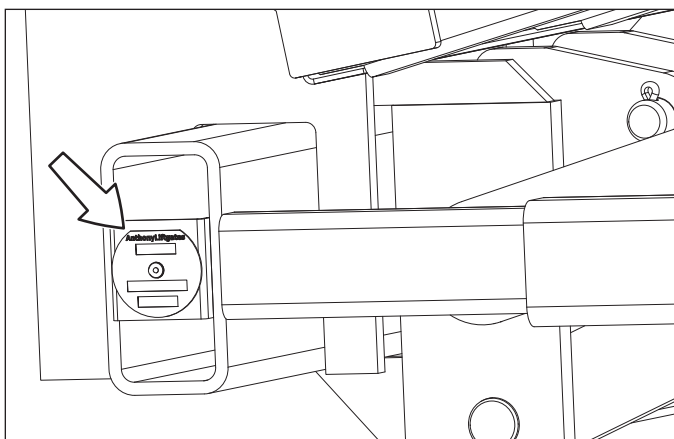


Being unaware of safety recommendations can lead to personal injury. The user must make sure all decals are attached to the liftgate and truck and are legible.

## 1.5 Warranty

For a detailed copy of the Warranty Statement, refer to the Operation Manual. To make an online warranty claim go to **www.anthonyliftgates.com** and select CUSTOMER SERVICE and then select WARRANTY CLAIM.

Before calling with questions or other product information requests, have the serial number, model number, and lift capacity of the liftgate available. This information is stamped into the identification plate on the side of the adapter frame tube.



## NOTICE

*Maintain the liftgate according to these instructions or the warranty will be void.*

1. Unauthorized modifications may cause improper operation or other unforeseen problems or dangers. If any deviation is deemed necessary, obtain written permission from Anthony Liftgates.
2. Verify that all decals are attached and legible, or all warranties are void.

## 2. Safety

### 2.1 Safety is Your Responsibility

It is the responsibility of the user to understand and properly use this liftgate. Be aware of the inherent dangers in the use of this product. Read, understand, and follow all Warnings, Cautions, Notices, and Safety Instructions in this manual, on the liftgate, or the truck.

Accidents can often be avoided by being alert and recognizing potentially hazardous situations. Anyone operating the liftgate must have the necessary training required to use the liftgate safely. The safety information in this manual serves as an essential guide in an attempt to prevent injury or even death.

Anthony Liftgates cannot anticipate every possible circumstance that might involve a potential hazard. The identification of hazardous situations in this manual and on the product itself is, therefore, not all-inclusive. If you use procedures, work methods, or operating techniques not specifically mentioned by Anthony Liftgates, you must satisfy yourself that they are safe for you and bystanders. Make sure the liftgate or truck is not damaged or made unsafe by any operating method you choose.

DO NOT proceed if any doubt arises about the correct or safe method of following any instructions found in this or other related equipment manuals. If in doubt, seek out expert assistance from your authorized dealer before continuing.

### Safety Signal Words



The "Safety Alert Symbol" identifies personal injury hazards and is followed by a signal word such as WARNING or CAUTION to indicate the severity of the danger.



This safety alert icon surrounds an image showing a specific type of injury to avoid. These icons are shown in "2.2.3 Hazard Avoidance" on page 6.



**Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**



**Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.**

## NOTICE

*Indicates that equipment or property damage can result if instructions are not followed.*

## SAFETY INSTRUCTIONS

**Indicates specific safety-related instructions or procedures.**



**Note:** *Contains additional information important to a procedure.*

## 2.2 Safety Icons Nomenclature

This manual and the equipment have numerous safety icons. These safety icons alert you to potential personal injury hazards and draw attention to essential user instructions.

### 2.2.1 Personal Protection/ Important Information

-  Read the manual
-  Eye protection
-  Face shield / welding helmet
-  Breathing protection
-  Head protection
-  Protective shoes
-  Hand protection
-  Use two people when lifting heavy objects
-  Use proper tools
-  Weight rating
-  Set parking brake
-  Remove key
-  Lockout / prevent use












-  OEM parts
-  Damaged safety sign

### 2.2.2 Prohibited Actions

-  Do not alter or modify
-  Do not weld
-  No smoking
-  No open flame
-  No alcohol
-  No drugs

### 2.2.3 Hazard Avoidance

-  Safety alert symbol
-  Slipping injury
-  Tripping injury
-  Pinch point hazard
-  Pinch hazard (foot)
-  Dangerous fumes

-  Adequate ventilation
-  Crush hazard
-  Crush hazard
-  Crush hazard (chock wheels)
-  Chock wheels /rollover hazard
-  Fall hazard (truck)
-  Fall hazard (platform)
-  Damaged parts hazard
-  Fire hazard
-  Sparks / fire hazard
-  Battery gas hazard

## 2.3 Safety Rules

### 2.3.1 Personal Protection

 **WARNING**  Do not work under the liftgate while it is in a raised position. Unintentional lowering of the liftgate can cause severe crushing injuries.

 **CAUTION**



When servicing this unit, wear appropriate personal protective equipment. This list may include, but is not limited to:

- A hard hat.
- Protective shoes with slip-resistant soles.
- Protective goggles, glasses, or face shield.
- Protective clothing.





Anthony Liftgates recommends not riding the liftgate;

however, if the operation requires it, make sure your footing is stable before raising or lowering the platform. Always stand away from the edge. When on the ground, always stand clear of the liftgate when it is operating.



Do not attempt to maintain the liftgate under the influence of drugs or alcohol. Consult your doctor before using the liftgate while taking prescription medications.



To prevent personal injury, clean up any spilled fluids immediately. To avoid tripping, do not leave tools or components laying around in the work area.



Failure to prevent the truck from moving during the maintenance of the liftgate could result in a severe crushing injury.



Always apply the truck's parking brake and remove the ignition key before operating the liftgate. Failure to follow this recommendation can result in injury.



Do not place hands or feet into pinch points areas, between the platform and the platform extension, or under the edge of the platform.



Maintenance of the liftgate and its related components must be performed by qualified personnel.



To prevent possible injuries due to improper operation, make sure all decals are attached to the liftgate and truck and are legible at all times.

### 2.3.2 Equipment / Tools / Parts



Do not operate this unit if it is damaged. If you believe the unit has a defect, which could cause it to work improperly, immediately stop operation and remedy the problem before continuing.



Make sure the liftgate or truck is not damaged or made unsafe by the maintenance procedures used for this liftgate.



Never secure the power cable to anything which allows it to contact sharp edges, other wiring, the fuel tank, fuel lines, brake lines, air lines, exhaust system, or any other object that could cause the power cable to wear or be damaged. A cut battery cable can cause sparks causing component damage resulting in loss of vehicle control, serious injury, or even death.



If replacement parts are necessary, genuine factory OEM replacement parts must be used to restore the liftgate to the original specifications. Anthony Liftgates will not accept responsibility for damages as a result of using unapproved parts. Using non-OEM replacement parts voids the warranty.

### 2.3.3 Battery / Fuel Tank Safety



Keep sparks, lighted matches, and

open flames away from the top of the battery because battery gas can explode. Always follow all the manufacturers' safety recommendations when working around the truck's battery.



Take precautions to avoid sparks coming into contact with the truck's fuel tank, brake lines, or other flammable components. Sparks can cause an explosion of combustible materials, resulting in serious injury or death.

### Cutting Torch / Welding Safety



Take precautions to avoid sparks from contacting the truck's fuel tank, brake lines, or other flammable components. Sparks can ignite combustible materials, resulting in serious injury or death.



Always weld or use a cutting torch in a well-ventilated area and, if in an enclosed area, vent the fumes to the outside. Breathing welding smoke and paint fumes can cause serious injury.



Always follow all State and Federal health and safety laws and local regulations when using an arc welder, mig welder, or cutting torch. Also, follow all manufacturers' safety guidelines. If other people are present when welding on the liftgate, shield the assembly area from their view.



To avoid eye injury during welding, always wear a welding helmet with the proper lens to protect your eyes.



To avoid eye injury while using a cutting torch, always use eye protection with the proper lens to protect your eyes.



Do not modify safety devices. Do not weld on the liftgate assembly, except the adapter frame tube. Unauthorized modifications may impair its function and safety.



Make sure all parts are in good working condition and properly installed. Replace any damaged parts immediately.

## 3. Maintenance

### 3.1 Monthly Inspection

All Anthony Tuckunder Liftgates are "Service-Free" which means they have lubrication-free bushings at the major pivot points.

#### Mechanical Components

1. Make sure the liftgate operates freely and smoothly throughout its entire range of movement.
2. Check for damage to the liftgate, such as bent or distorted parts. Check for excessively worn parts.
3. Check for cracked welds which may have resulted from overload or abuse.
4. Check all pins and pivot points. Secure all pins with proper retainers. Replace worn bushings and pins.
5. Oil the roller of the wheel arm and make sure it spins freely.
6. Make sure platform is angled upward from truck bed 1/2 to 3/4 inch when raised to bed height. See Platform Adjustment for shimming procedure, "3.3 Mechanical Platform Adjustment" on page 8.

#### Power Unit

7. Check for oil leaks in the following areas:
  - a. Hydraulic lift cylinder.
  - b. Hydraulic hoses. Replace any hose that shows signs of leakage or excessive abrasion of the covering.
  - c. Check all hydraulic fittings for damage or leakage. Tighten fittings to stop leaks or replace if damaged.
8. Check reservoir oil level and fill as required with Dexron VI, Dexron III or Hyken Glacial Blu.

#### Electrical Components

9. Make sure all electrical wires, switches, and connections are in good working condition and operate properly.
10. Proper wire connection is crucial to the life and dependability of the liftgate's electrical components. A poor connection can result in low Voltage, causing the liftgate to work incorrectly.
11. Check the fluid level of the vehicle battery. Fill as required.

#### Safety Signs and Informational Decals

12. Examine all warning, capacity, and operational decals. If they are not readable, replace them. Decals may be obtained free of charge your authorized dealer.

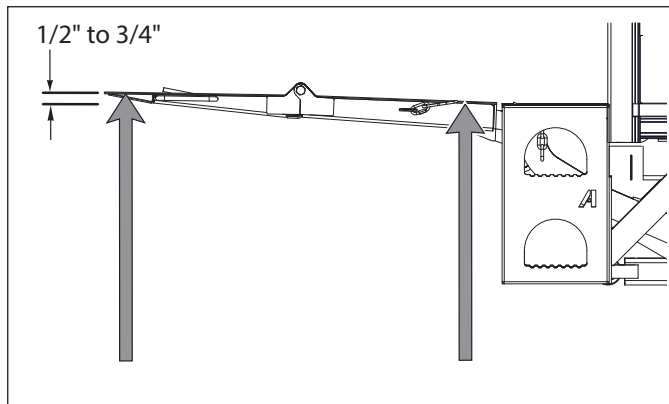
### 3.2 Semi-Annual Inspection

In addition to the items requiring monthly inspection, also inspect the condition of the hydraulic fluid.

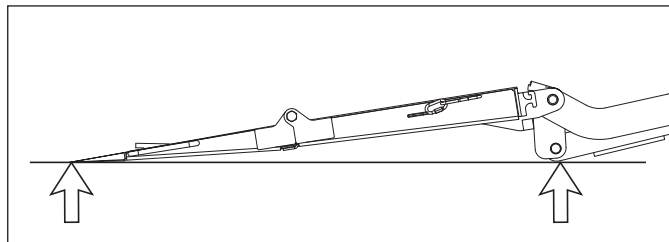
If the oil in the hydraulic tank is dirty, drain the oil and flush the entire system. Refill the system with the recommended oil outlined in Step 8 of the "Monthly Inspection" section.

### 3.3 Mechanical Platform Adjustment

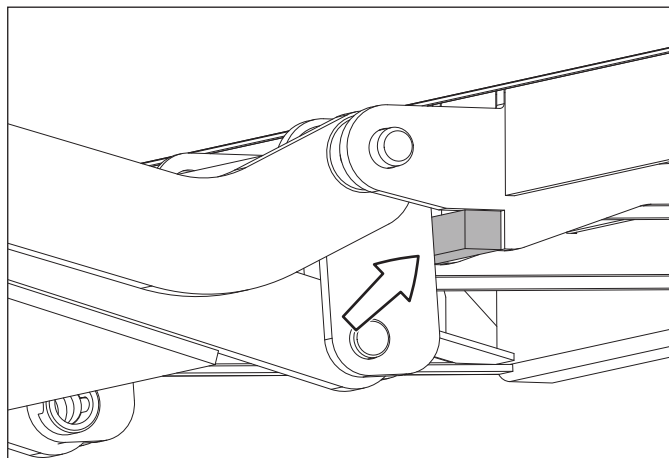
The ramp (outboard) end of the platform should be 1/2 to 3/4 inches higher than the truck floor when in the raised position. If the outboard end of the platform is sagging, add shims as described below. Shimming is a routine procedure as the liftgate ages, and the parts become worn.



1. Lower the platform to the ground, it should touch at the lift arm end and the ramp end (arrows).



2. To lower the ramp end:
  - a. Temporarily position a shim plate in the contact area (arrows), between the cam plates and platform, with tape.





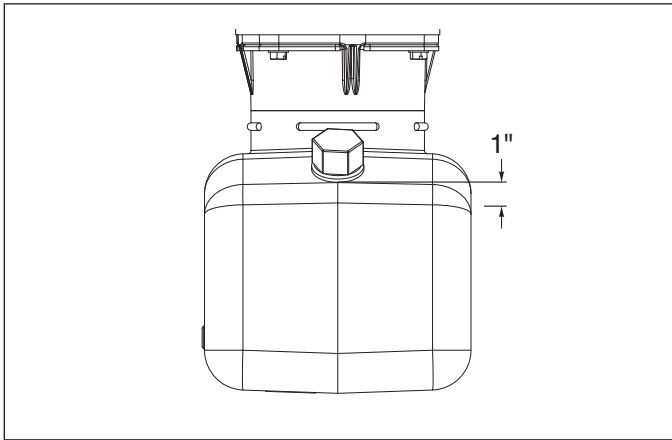
**Note:** One shim can move the ramp end of the platform as much as 1/2 inch.

- b. Raise and lower the platform to recheck its position.
  - c. Weld the steel shim plates to the blocks on the platform.
3. To raise the ramp end, remove material from the contact area (arrows shown in Step 2) between the cam plates and platform.
  4. If the platform does not align with the floor extension, contact Anthony Liftgates for a solution to correct the problem.

### 3.4 Hydraulic System Maintenance

#### 3.4.1 Adding Fluid to Power Unit Reservoir

1. Check the oil level.
2. With the platform on the ground, the oil level should be within one inch of the top of the fill plug opening.



3. Pull the fill plug straight out. Add oil to fill the reservoir to the appropriate fill level.

#### NOTICE

*To prevent damage to the pump, use only the recommended Hyken Glacial Blu anti-wear, low-viscosity, hydraulic fluid in the power unit reservoir.*

*In an emergency, use any anti-wear hydraulic fluid, but flush the system and replace it with our recommended fluid soon as reasonably possible. Do not mix hydraulic oil and automatic transmission fluid due to possible compatibility problems.*

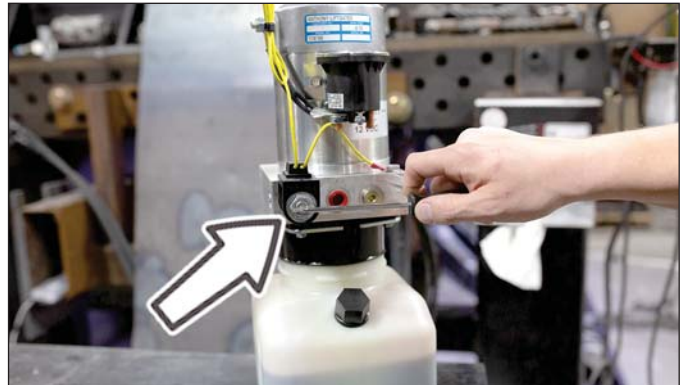
*Use the appropriate viscosity of fluid based on the surrounding climate conditions. Viscosity is important because the pump will not cause a temperature increase to the oil in the reservoir, like a typical closed-loop hydraulic system.*

*DO NOT use brake fluid in place of our recommended fluids.*

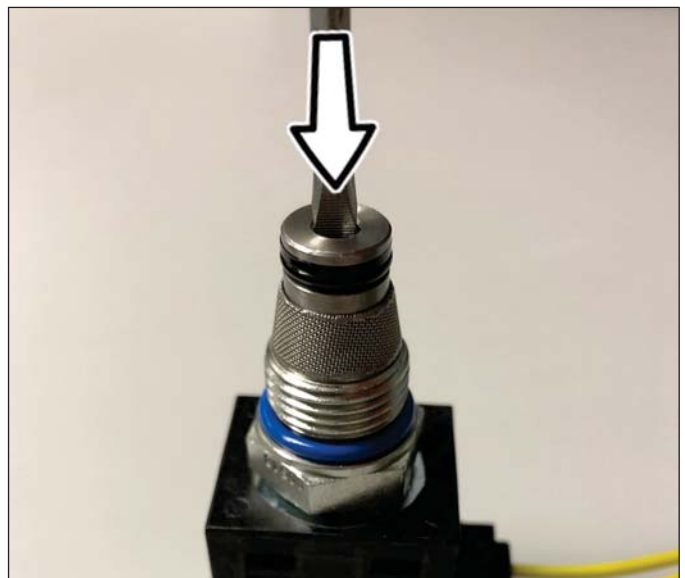
4. Change the fluid if it is contaminated or dirty, or every 12 to 24 months, depending on use.

#### 3.4.2 Checking Lowering Valve Cartridge and Solenoid

1. Place the liftgate on the ground in the open position.
2. Place a steel screwdriver over the top of the valve solenoid.



3. Momentarily activate the control switch in the UP position. The screwdriver should be attracted to the magnetic field created by the solenoid.
4. If no magnetic pull is produced, the solenoid is defective and should be replaced. If the solenoid is activated, check the cartridge valve.
5. Remove the solenoid from the valve assembly.
6. Remove the valve cartridge from the pump body.
7. Clean the cartridge and blow it dry with compressed air (not greater than 30 psi). Also, blow out the pump body.
8. Use a small screwdriver and carefully press on the spool inside the cartridge. If the spool moves freely, the cartridge is good. If it does not move, replace the cartridge, as the spool could be bent, pitted, or damaged in some other way.

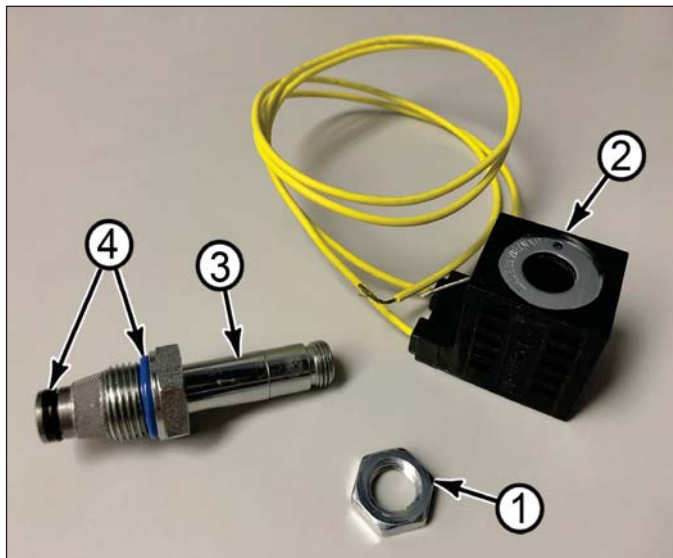
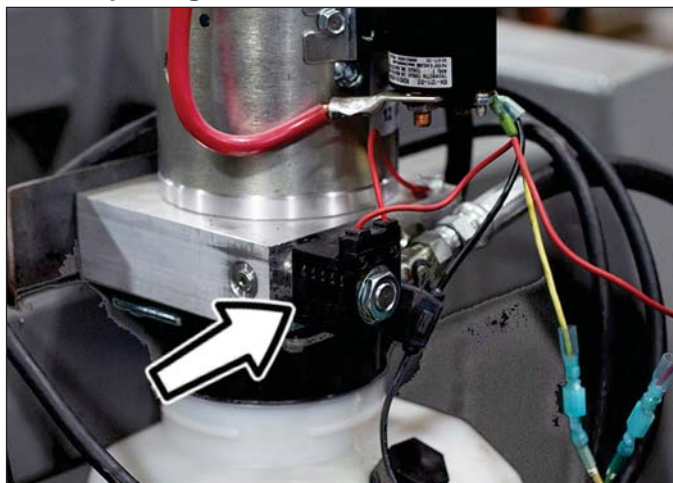


### 3.4.3 Solenoid Valve Screen



If the solenoid is working electrically, check the debris screen and clean if dirty.

### 3.4.4 Replacing Solenoid Valve



1. While installed in the pump, remove nut (1).
2. Remove coil (2) from cartridge (3).
3. Remove cartridge (3) from pump body.
4. Replace O-rings (4).

5. Replace all the parts and attach the new solenoid wires. Either solenoid wire can be connected to the ground screw on pump body and the other wire connected to the control cable.

### 3.4.5 Checking Cylinder Piston Seals for Drift

1. Remove the breather hose from the cylinder and place a temporary hose from this port into a container to catch the fluid as the cylinder is retracted.
2. Slowly raise the liftgate allowing the oil to be expelled from the cylinder into an appropriate container.
3. Once entirely raised, continue to hold the switch in the "UP" position.
4. If a continuous flow of oil comes out of the breather port, then the piston seals are leaking. Replace the cylinder.

### 3.4.6 Checking System Pressure

To check the "power up" pressure setting:

1. Place the liftgate on the ground and remove the pressure hose from the power up port of the pump.
2. Install a T-fitting (customer supplied) into the power up port.
3. Connect a pressure gauge and reconnect the hydraulic hose.

The pressure gauge must be rated above the maximum pressure of the liftgate. For example, use a 4000 psi pressure gauge on a 3000 psi maximum capacity liftgate.

4. Raise the liftgate and check the pressure on the gauge.

Low Pressure Threshold Chart	
Model	Power Up
2000	3000 psi
2500	1850 psi



**WARNING**

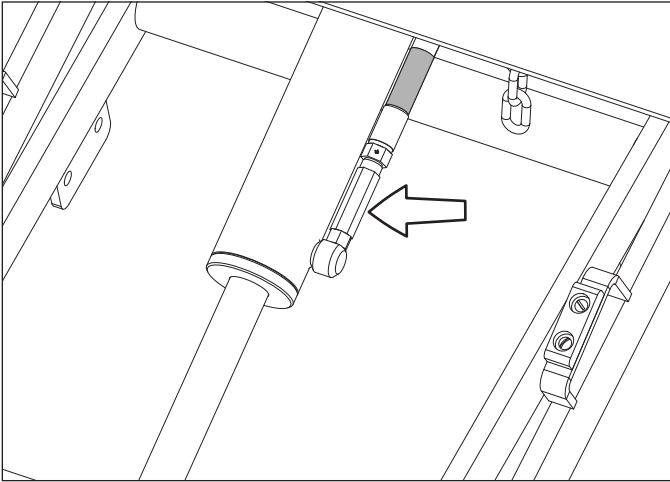


**Do not stand or work in the platform's work area while operating the liftgate.**

**Place the pressure gauge so it can be read while operating the liftgate from a safe location. Serious injury or death could result if this action is not followed.**

5. Check the power down relief valve pressure in the same way as the gravity down system by installing a T-fitting and pressure gauge.

### 3.4.7 Checking Flow Control Valve



If the cylinder does not operate or operates slower than usual, remove the flow control valve and hook the hydraulic hose directly to the cylinder. If the cylinder operates properly, replace the flow control valve.



**WARNING** Do not operate the liftgate without the flow control valve. Serious injury or death could result if this action is not followed.

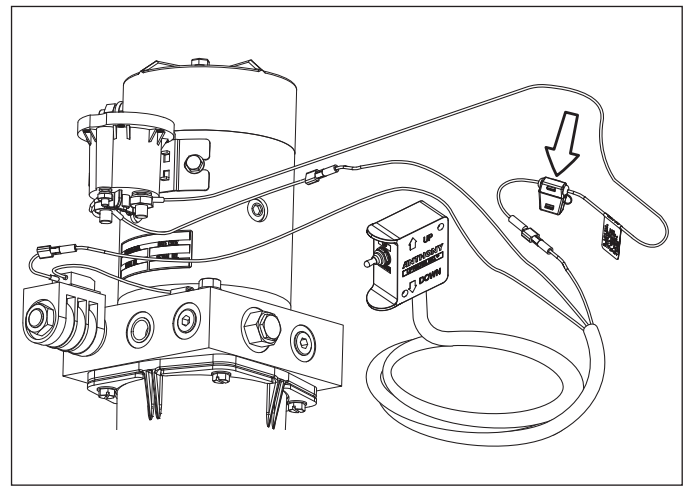
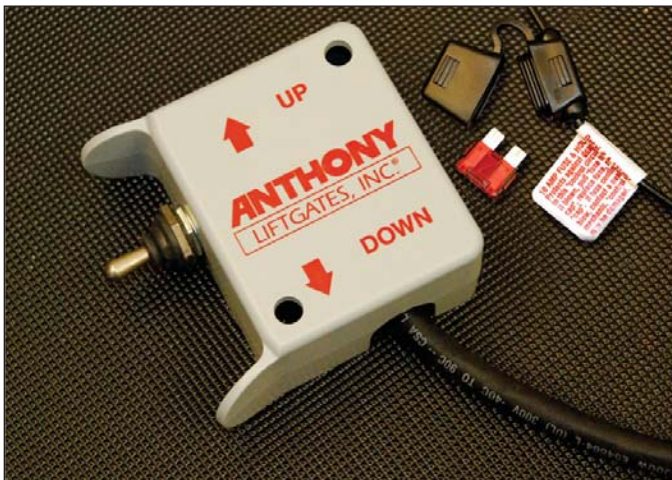


## 3.5 Electrical System Maintenance

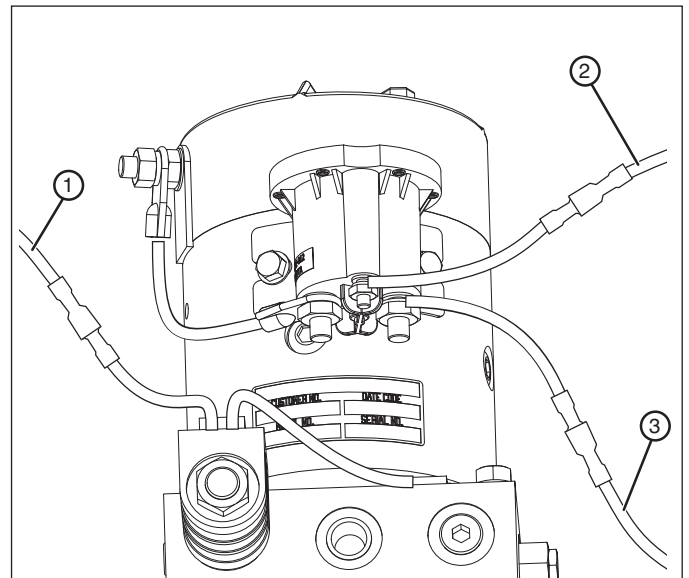
### 3.5.1 Checking 10 Amp Control Switch Fuse

If the control switch is not operating the liftgate, check the in-line fuse located on the control cable inside the power unit box.

Replace the fuse with part number A-150438, 10 Amp Fuse.



### 3.5.2 Control Switch Wiring



1. Yellow solenoid wire to green control cable wire.
2. Black 10 Amp fuse wire to black control cable wire.
3. Red motor start solenoid wire to white control cable wire.

**Note:** The two yellow solenoid wire are interchangeable and can be connected to either the control cable or the ground bolt on the pump.

### 3.5.3 Checking the 175 Amp Power Cable Fuse

If the liftgate is not operating after checking the control box fuse, the main power cable fuse could be blown. Check for continuity of the power cable and replace the fuse if needed.



**WARNING** Electrical Arc Hazard. Disconnect the power cable from the vehicle battery or batteries before replacing the fuse. An electric arc can cause personal injury or damage the trucks electronics.

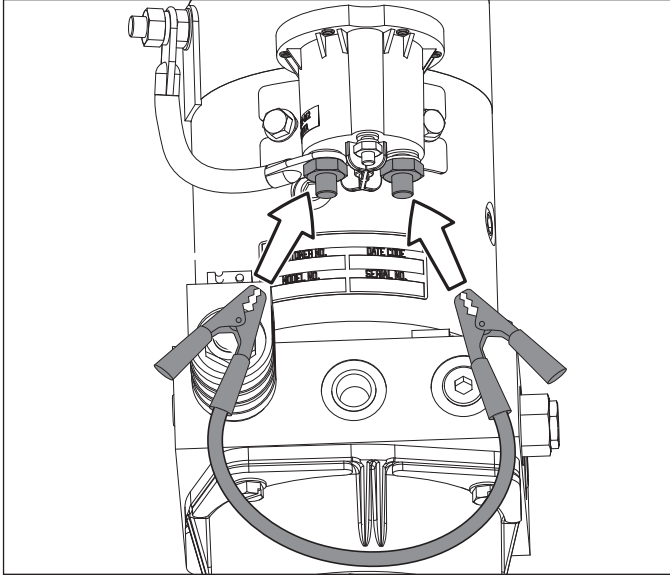


1. Disconnect the power cable from the battery.
2. Cut and remove the heat shrink tubing covering the fuse.



### 3.5.4 Checking Motor Start Solenoid

Check the motor start solenoid by bypassing the two terminals.

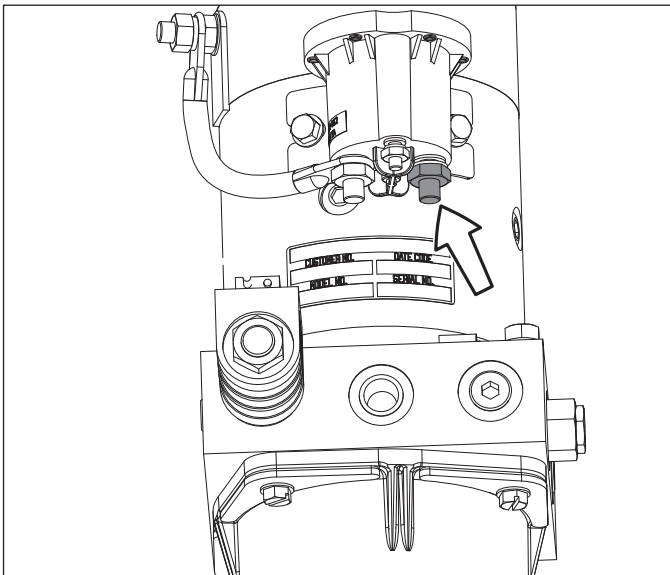


1. Use automotive jumper cables for this test.
2. Connect one jumper cable to battery side (1) of the solenoid. Connect the other cable to motor side (2) of the solenoid.
3. If the liftgate is activated, the solenoid is defective and should be replaced.

### 3.5.5 Checking the Power Cable

To check for a defective power cable, run the motor directly from a spare battery using jumper cables.

1. Remove the battery connection to the motor.
2. Connect the negative jumper cable (ground) directly to the liftgate. Connect the positive cable to the terminal on the motor start solenoid.
3. If the motor operates, the battery cable or fuse is defective and should be replaced.

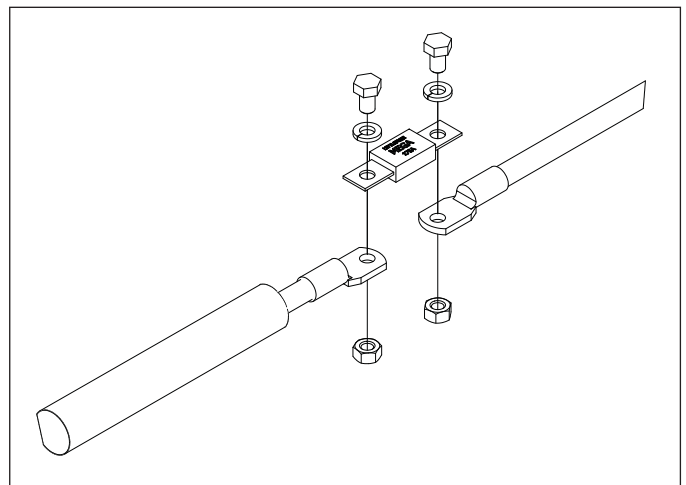


### 3.5.6 175 Amp Fuse Replacement



To avoid injury or property damage, disconnect the liftgate's power cable from the battery before starting to replace the fuse. An "arc" can occur resulting in personal injury or property damage if the power cable is connected to the battery.

1. Cut the heat shrink tube to expose the fuse, mounting hardware, and lugs.
2. Remove the bolt, washer, and lock washer from each end of the fuse.
3. Use the A-133607, 175 Hi-Amp Fuse Replacement Kit for the replacement parts.
4. Slide the new heat shrink tube over one side of the wiring.
5. Bolt the new fuse to the cable lugs using the bolts, washers, and lock washer, as shown.



6. Slide the heat shrink tube over the fuse, hardware, and lugs. Using a heat gun apply heat evenly to shrink the tubing.
7. Reconnect the power cable to the battery after you are certain liftgate area is clear.

**Note:** If the fuse continues to blow, contact your authorized dealer.

## 4. Decals

## 4.1 Installing Decals

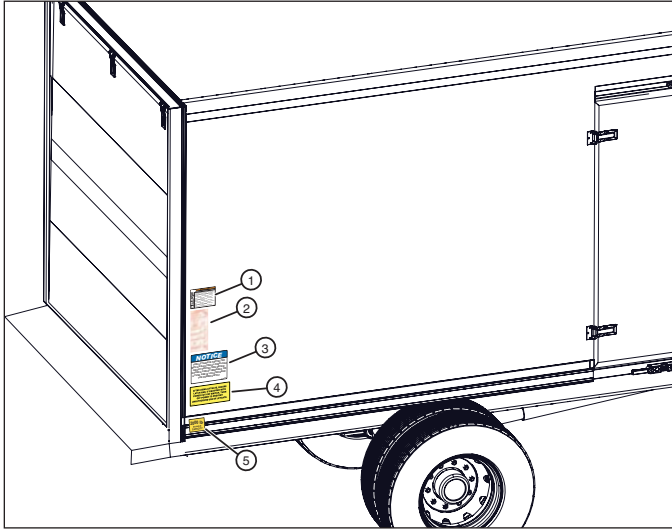
### SAFETY INSTRUCTIONS



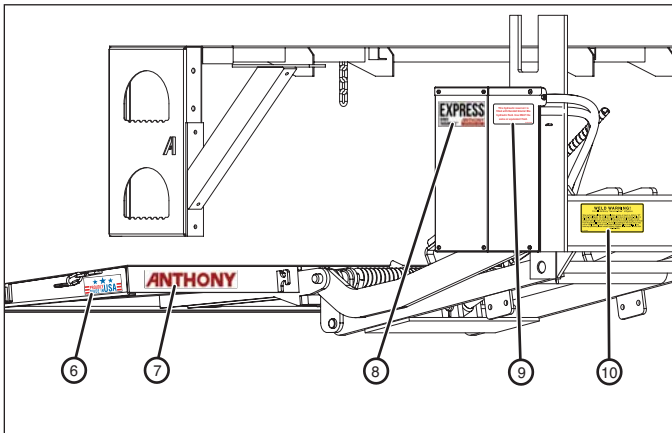
To prevent possible injuries due to improper operation, make sure all

decals are attached to the liftgate and truck and are legible.

1. Attach decals to the truck body, as shown.



2. Make sure factory-installed decals are attached.



Item	Part Number	Description	Qty.
1	A-131115	DECAL: WARNING, PERSONAL INJURY	1
2	ATU-423	DECAL: OPERATING INSTRUCTIONS	1
3	A-150238	DECAL: NOTICE - PROTECTED WITH ELECTRICAL OVERLOAD CIRCUIT BREAKER	1
4	ATU-141	DECAL: POWER CUT-OFF SWITCH	1
5	A-131020 ATU-174	DECAL: 2000 LB. MAXIMUM CAPACITY DECAL: 2500 LB. MAXIMUM CAPACITY	1
6	A-150601	DECAL: MADE IN THE USA	1
7	A-131147	DECAL: ANTHONY LABEL	1
8	A-131148	DECAL: EXPRESS SERIES	1
9	A-131133	DECAL: HYDRAULIC TANK FLUID	1
10	A-131028	DECAL: WELD WARNING	1
--	A-131001	DECAL: 10 AMP FUSE CHANGING PROCEDURE (attached to control wiring in pump box)	1

### 1 — A-131115

**ANTHONY**  
LIFTGATES, INC.™
**WARNING**

**PERSONAL INJURY HAZARD**

Operation may require user to stand on platform. To prevent injury or death of operators or bystanders:

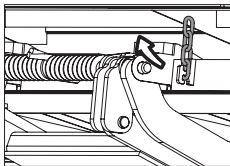
- Read and follow operator/owner manual for safety, operation, inspection, and maintenance instructions.
- Do not place unstable or unsafe loads on platform.
- Do not allow loads to extend over edge of platform.
- Do not exceed capacity or use liftgate for anything other than intended purpose.
- Be aware of surroundings when operating liftgate.
- Do not allow body parts to contact moving components.
- Ensure footing is stable and stand away from edge before raising or lowering platform.
- Owner/operators must properly maintain liftgate.

A-131115

### ANTHONY TUCKUNDER LIFTGATES OPERATING INSTRUCTIONS

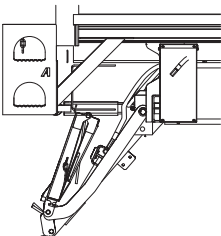
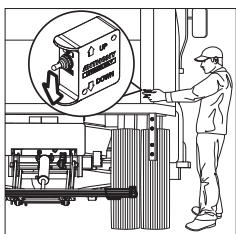
#### 1. Release latch chain.

Liftgate may need to be slightly raised to release pressure on latch chain.



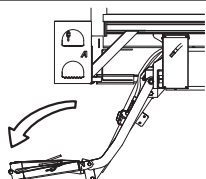
#### 2. Press control switch DOWN until folded platform rests on ground.

Always stand on curbside of truck when raising or lowering platform with control switch.



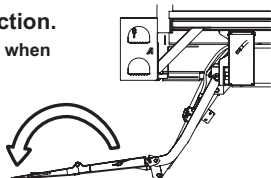
#### 3. Manually unfold main platform.

Always stand on curbside of truck when unfolding platform.

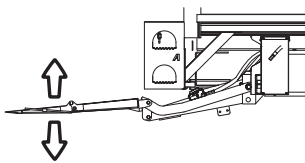
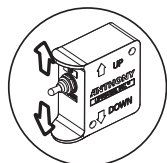


#### 4. Manually unfold flipover section.

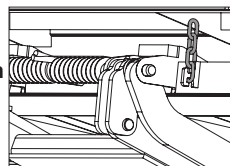
Always stand on curbside of truck when unfolding flipover section.



#### 5. Raise and lower platform using UP and DOWN functions of control switch.



#### 6. Reverse steps to fold and store platform. Make sure platform is locked in transport position with latch chain.



A131150

## NOTICE

**THIS LIFTGATE IS PROTECTED WITH AN ELECTRICAL OVERLOAD CIRCUIT PROTECTION DEVICE, EITHER A CIRCUIT BREAKER, OR A FUSE, AND IS LOCATED NEAR THE POWER SUPPLY**

A-150238

**AFTER USING LIFTGATE, SECURE LATCH AND, IF EQUIPPED WITH POWER CUT OFF SWITCH, TURN OFF POWER TO PREVENT UNAUTHORIZED USE OF LIFTGATE.**

ATU-141

**2000 lb.**  
MAXIMUM  
CAPACITY

A-131020

**2500 lb.**  
MAXIMUM  
CAPACITY

ATU-174



CAUTION



Make sure the proper "MAXIMUM CAPACITY" decal is

placed on the truck for the appropriate lifting capacity of the liftgate being installed. Do not put a higher rated decal on a liftgate with a lower capacity; this could result in liftgate damage or possibly personal injury.



6 — A-150601



— A-131001 (attached to control cable)

**10 AMP FUSE & HOLDER**  
Protects against dead shorts  
in this "control circuit".  
If blown, pull "fuse holder  
cap", replace fuse, replace  
"cap". If fuse continues to  
blow, contact a qualified  
mechanic, "control circuit"  
may be damaged.

A-131001

**10 AMP FUSE & HOLDER**  
Protects against dead shorts  
in this "control circuit".  
If blown, pull "fuse holder  
cap", replace fuse, replace  
"cap". If fuse continues to  
blow, contact a qualified  
mechanic, "control circuit"  
may be damaged.

7 — A-131147

# ANTHONY

8 — A-131148



9 — A-131133

**This hydraulic reservoir is  
filled with Kendall Glacial Blu  
hydraulic fluid. Use ONLY the  
same or equivalent fluid.**

A-131133

10 — A-131028

## WELD WARNING!

For all Anthony "Service-Free" Liftgates

When performing welding during installation, service, or repair on Anthony "SF" Service-Free liftgates, the actual part being welded must be grounded. Failure to follow this instruction can cause the welding ground to travel through the high pressure hydraulic hose as the source of ground, thus causing damage to the hose from the powerful electric current. The resulting damage to the hose may or may not be visible and can cause unexpected catastrophic failure of the lift. If you have any questions, please contact Anthony Liftgates, Inc., Pontiac, Illinois, USA (800-482-0003).

A-131028

## 5. Troubleshooting Chart

Troubleshooting Chart		
Problem	Possible Causes	Possible Solution
Motor does not run when control switch is activated.	Cab cut-off switch.	Turn switch to ON position.
	Truck battery.	Make sure battery is fully charged. Check for loose or corroded battery connections. Replace or recharge battery.
	Circuit protection fuse in power cable.	Replace fuse. Check the power cable fuse. "3.5.3 Checking the 175 Amp Power Cable Fuse" on page 11
	Control box switch.	If the control switch does not work:  Check the 10 Amp fuse. Replace, if fuse is blown. If problem continues, check for shorts in the electrical system. "3.5.1 Checking 10 Amp Control Switch Fuse" on page 11  Check the power cable fuse. "3.5.3 Checking the 175 Amp Power Cable Fuse" on page 11
	Motor start solenoid.	Check solenoid. "3.5.4 Checking Motor Start Solenoid" on page 12
	Power cable.	Connect motor directly to a spare battery. "3.5.5 Checking the Power Cable" on page 12
	Motor.	If the motor is determined to be defective, it should be replaced. Defective motors are typically caused by weak batteries (low Voltage), loose connections, corrosion, or a poor ground.
	If the motor does not operate in freezing conditions, make sure the motor housing does not contain water.	
Sagging platform.	Normal wear.	Add shims to platform. "3.3 Mechanical Platform Adjustment" on page 8.
	Bushing wear where lift arms connect to platform.	Replace bushings.
	Structural damage.	Replace damaged parts.
Foaming oil.	Air in the hydraulic hose.	Check oil level in reservoir. "3.4.1 Adding Fluid to Power Unit Reservoir" on page 9.
	Broken or loose fluid return tube.	Remove the oil reservoir and make sure the return tube is below the oil level. If the tube has turned or fallen out, reinstall it into the pump housing. Use a center punch to "stake" the tube into position.

Troubleshooting Chart		
Problem	Possible Causes	Possible Solution
Motor runs, but liftgate will not open or lower to the ground.	Structural damage. Check clearance between platform and dock bumpers.	Fix damage. Replace worn parts.
	Flow control valve.	Remove flow control valve and hook hydraulic hose directly to the cylinder. If the cylinder operates properly, replace the valve. "3.4.7 Checking Flow Control Valve" on page 11.
Motor runs, but platform will not raise, will not raise rated capacity, or raises but drifts down when control switch is released.	Load capacity has been exceeded.	Verify load capacity and adjust load weight.
	Structural damage.	Replace damaged parts.
	Low fluid level.	Fill reservoir. "3.4.1 Adding Fluid to Power Unit Reservoir" on page 9.
	Low Voltage.	Inspect the battery connection terminals and check the battery's Voltage (9 Volts minimum).
	Defective piston seals.	See Maintenance section for Checking Cylinder for Leakage. "3.4.5 Checking Cylinder Piston Seals for Drift" on page 10.
	Hydraulic pump is worn.	Replace hydraulic pump.
Liftgate will not open.	Platform operating area is not clear.	Clear platform operating area.
	Latch chain is connected.	Activate the "UP" switch and release the latch chain.
Platform lowers extremely slow.	Improper oil in hydraulic reservoir.	See Monthly Inspection. "3.1 Monthly Inspection" on page 8.
	Bushing wear where lift arms connect to platform.	Replace bushings.
	Damaged or kinked hydraulic hose.	Repair or replace.
	Cylinder rod is scored, pitted, or bent.	Replace cylinder.
	Flow control valve.	Remove flow control valve and hook hydraulic hose directly to the cylinder. If the cylinder operates properly, replace the valve. "3.4.7 Checking Flow Control Valve" on page 11.
Platform raises partially and stops.	Load capacity has been exceeded.	Verify load capacity and adjust load weight.
	Structural damage.	Replace damaged parts.
	Low Voltage.	Recharge battery (if less than 9 Volts).
	Low pressure.	Refill reservoir. Check pump and motor. "3.1 Monthly Inspection" on page 8.
Platform will not lower.	Platform operating area is not clear.	Clear area.
	Structural damage.	Replace damaged parts.
	Low Voltage.	Recharge battery (if less than 9 Volts).
	Hydraulic pump and motor.	Replace power unit.

# NOTES



**ANTHONY**  
LIFTGATES, INC.®

**ETU**



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