

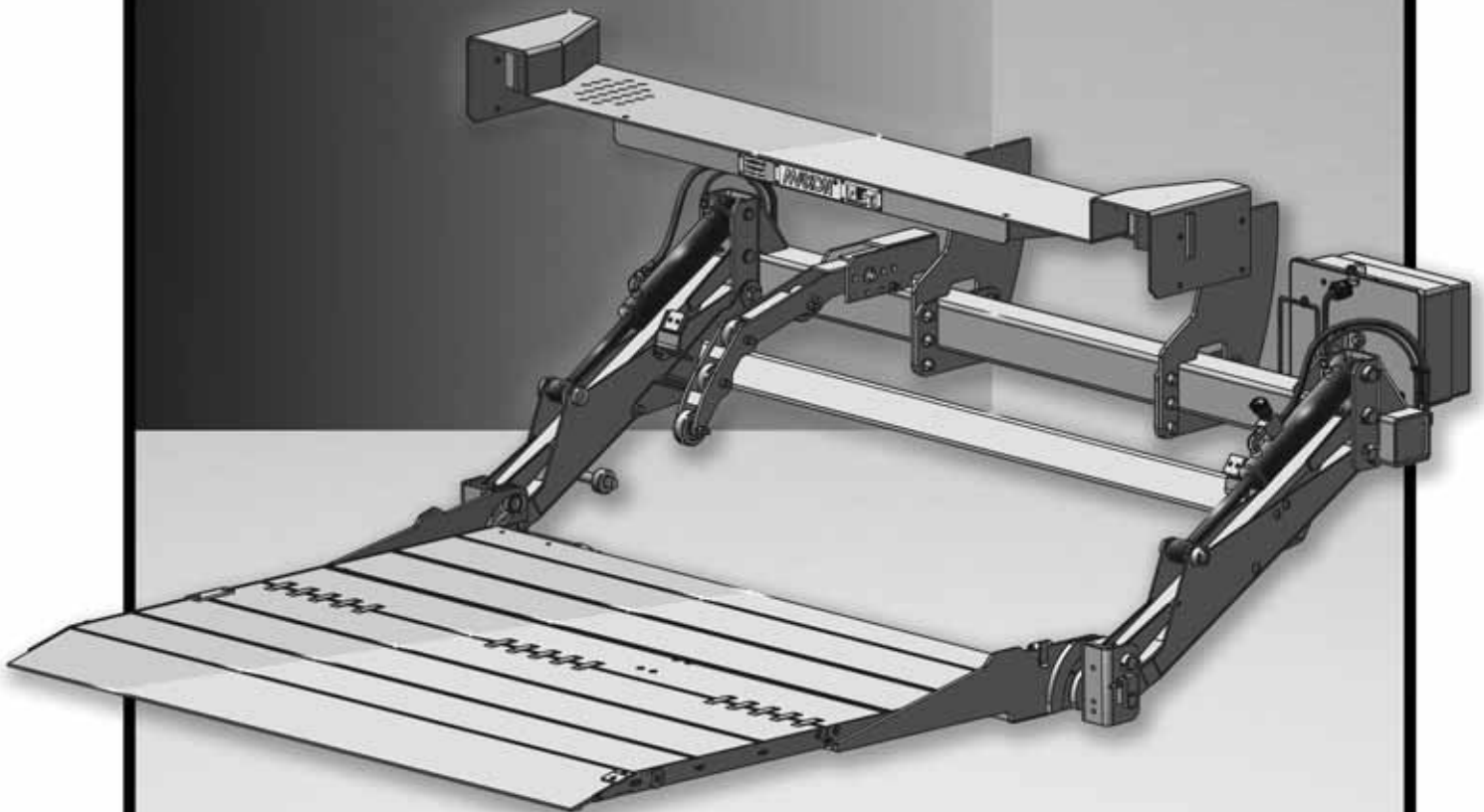
M-18-16  
REV. B  
DECEMBER 2023

# MAXON<sup>®</sup>

## GPTLR Series

### MAINTENANCE MANUAL

GPTLR-25, GPTLR-33, GPTLR-44, & GPTLR-55





# MAXON<sup>®</sup>

## LIFT CORP.

11921 Slauson Ave.  
Santa Fe Springs, CA. 90670

### CUSTOMER SERVICE:

TELEPHONE (562) 464-0099 TOLL FREE (800) 227-4116

FAX: (888) 771-7713

NOTE: For latest version of all Manuals (and replacements), download the Manuals from Maxon's website at [www.maxonlift.com](http://www.maxonlift.com).

## WARRANTY/ RMA POLICY & PROCEDURE

### LIFTGATE WARRANTY

Type of Warranty: Full Parts and Labor

Term of Warranty: Standard Liftgates - 2 years from ship date or 6,000 cycles  
Premium Liftgates - 2 years from ship date or 10,000 cycles

This warranty shall not apply unless the product is installed, operated and maintained in accordance with MAXON Lift's specifications as set forth in MAXON Lift's Installation, Operation and Maintenance manuals. This warranty does not cover normal wear, maintenance or adjustments, damage or malfunction caused by improper handling, installation, abuse, misuse, negligence, or carelessness of operation. In addition, this warranty does not cover equipment that has had unauthorized modifications or alterations made to the product.

MAXON agrees to replace any components which are found to be defective during the first 2 years of service, and will reimburse for labor based on MAXON's Liftgate Warranty Flat Rate Schedule. (Copy of the Flat Rate is available at [www.maxonlift.com](http://www.maxonlift.com).)

All warranty repairs must be performed by an authorized MAXON warranty facility. For any repairs that may exceed \$500, including parts and labor, MAXON's Technical Service Department must be notified and an "Authorization Number" obtained.

All claims for warranty must be received within 30 Days of the repair date, and include the following information:

1. Liftgate Model Number and Serial Number
2. The End User must be referenced on the claim
3. Detailed Description of Problem
4. Corrective Action Taken, and Date of Repair
5. Parts used for Repair, Including MAXON Part Number(s)
6. MAXON R.M.A. # and/or Authorization # if applicable (see below)
7. Person contacted at MAXON if applicable
8. Claim must show detailed information i.e. Labor rate and hours of work performed

Warranty claims can also be placed online at [www.maxonlift.com](http://www.maxonlift.com). Online claims will be given priority processing.

All claims for warranty will be denied if paperwork has not been received or claim submitted via Maxon website for processing by MAXON's Warranty Department within 30 days of repair date.

All components may be subject to return for inspection, prior to the claim being processed. MAXON products may not be returned without prior written approval from MAXON's Technical Service Department. Returns must be accompanied by a copy of the original invoice or reference with original invoice number and are subject to a credit deduction to cover handling charges and any necessary reconditioning costs. **Unauthorized returns will be refused and will become the responsibility of the returnee.**

Any goods being returned to MAXON Lift must be pre-approved for return, and have the R.M.A. number written on the outside of the package in plain view, and returned freight prepaid. All returns are subject to a 15% handling charge if not accompanied by a detailed packing list. Returned parts are subject to no credit and returned back to the customer. Defective parts requested for return must be returned within 30 days of the claim date for consideration to:

MAXON Lift Corp.  
10321 Greenleaf Ave., Santa Fe Springs, CA 90670  
Attn: RMA# \_\_\_\_\_

MAXON's warranty policy does not include the reimbursement for travel time, towing, vehicle rental, service calls, oil, batteries or loss of income due to downtime. Fabrication or use of non Maxon parts, which are available from MAXON, are also not covered.

MAXON's Flat Rate Labor Schedule takes into consideration the time required for diagnosis of a problem.

All Liftgates returned are subject to inspection and a 15% restocking fee. Any returned Liftgates or components that have been installed or not returned in new condition will be subject to an additional reworking charge, which will be based upon the labor and material cost required to return the Liftgate or component to new condition.

### PURCHASE PART WARRANTY

Term of Warranty: 1 Year from Date of Purchase.

Type of Warranty: Part replacement only. MAXON will guarantee all returned genuine MAXON replacement parts upon receipt and inspection of parts and original invoice.

All warranty replacements parts will be sent out via ground freight. If a rush shipment is requested, all freight charges will be billed to the requesting party.

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## SUMMARY OF CHANGES: M-18-16 REV B

<b>PAGE</b>	<b>DESCRIPTION OF CHANGE</b>
Cover	Updated cover image, REV. and date of release.
10, 11	Updated illustrations for GPTLR main assembly (pump mounting bracket and power unit).
17, 20	Updated hydraulic fluid level check.
18	Updated recommended brands ISO 15 & ISO 32 hydraulic oil, TABLES 18-1 & 18-2.
29	Updated Operating Instructions decal.
32	Updated illustration of gravity down power unit showing direction of flow control, C1 port and S1 valve. Updated motor and solenoid operation.
33	Updated illustration of power down power unit showing direction of flow control, C1 and C2 ports and S1 valve. Updated motor and solenoid operation.
34	Updated gravity down hydraulic schematic.
35	Updated power down hydraulic schematic.
36	Updated gravity down electrical schematic.
37	Updated power down electrical schematic.
38	Updated solenoid valve current for 12V and 24V systems.

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Comply with the following **WARNINGS** and **SAFETY INSTRUCTIONS** while maintaining Liftgates. See Operation Manual for operating safety requirements.

## **WARNING**

Installing and maintaining a liftgate can expose you to chemicals, including lead, which are knowto the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, install and maintain liftgate in a well-ventilated area and wear **proper Personal protective equipment (PPE)**. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## **WARNING**

- Do not stand, or allow obstructions, under the platform when lowering the Liftgate. **Be sure your feet are clear of the Liftgate.**
- **Keep fingers, hands, arms, legs, and feet clear of moving Liftgate parts (and platform edges) when operating the Liftgate.**
- **Correctly stow platform when not in use. Extended platforms could create a hazard for people and vehicles passing by.**
- **Disconnect Liftgate power cable from battery** before repairing or servicing Liftgate.
- If it is necessary to stand on the platform while maintaining the Liftgate, keep your feet and any objects clear of the inboard edge of the platform. Your feet or objects on the platform can become trapped between the platform and the Liftgate extension plate.
- Recommended practices for welding on steel parts are contained in the current **AWS (American Welding Society) D1.1 Structural Welding Code - Steel**. Damage to Liftgate and/or vehicle, and personal injury could result from welds that are done incorrectly.
- Recommended practices for welding on aluminum parts are contained in the current **AWS (American Welding Society) D1.2 Structural Welding Code - Aluminum**. Damage to Liftgate and/or vehicle, and personal injury could result from welds that are done incorrectly.
- Recommended practices for welding galvanized steel are contained in the current **AWS (American Welding Society) D19.0 Welding Zinc-Coated Steel**. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

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# SAFETY INSTRUCTIONS

- Read and understand the instructions in this **Maintenance Manual** before performing maintenance on the Liftgate.
- Before operating the Liftgate, read and understand the operating instructions in **Operation Manual**.
- Comply with all **WARNING** and instruction decals attached to the Liftgate.
- Keep decals clean and legible. If decals are illegible or missing, replace them. Free replacement decals are available from **Maxon Customer Service**.
- Consider the safety and location of bystanders and location of nearby objects when operating the Liftgate. Stand to one side of the platform while operating the Liftgate.
- Do not allow untrained persons to operate the Liftgate.
- Wear appropriate safety equipment such as protective eyeglasses, faceshield and clothing while performing maintenance on the Liftgate and handling the battery. Debris from drilling and contact with battery acid may injure unprotected eyes and skin.
- Be careful working by an automotive type battery. Make sure the work area is well ventilated and there are no flames or sparks near the battery. Never lay objects on the battery that can short the terminals together. If battery acid gets in your eyes, immediately seek first aid. If acid gets on your skin, immediately wash it off with soap and water.
- If an emergency situation arises (vehicle or Liftgate) while operating the Liftgate, release the control switch to stop the Liftgate.
- A correctly installed Liftgate operates smoothly and reasonably quiet. The only noticeable noise during operation comes from the power unit while the platform is raised. Listen for scraping, grating and binding noises and correct the problem before continuing to operate Liftgate.
- Use only **Maxon Authorized Parts** for replacement parts. Provide Liftgate model and serial number information with your parts order. Order replacement parts from:

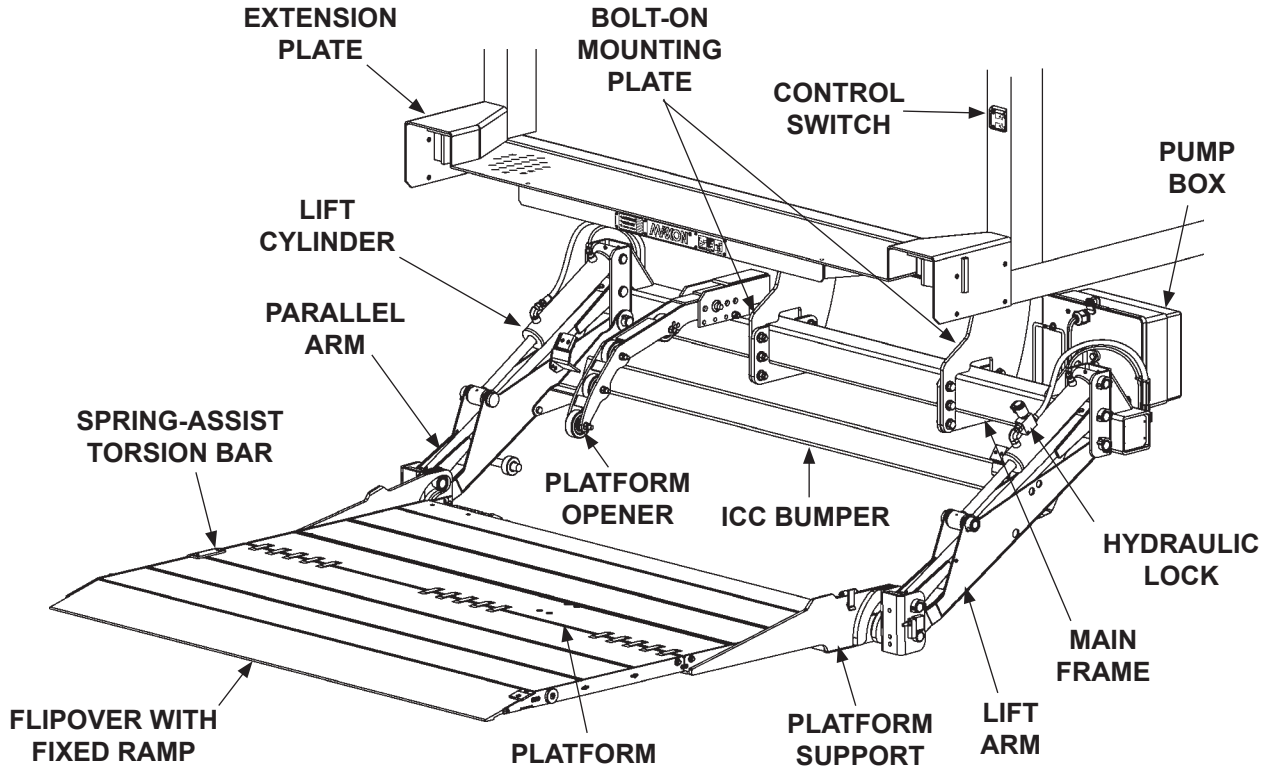
**MAXON LIFT CORP. Customer Service**  
**11921 Slauson Ave., Santa Fe Springs, CA 90670**

**Online: [www.maxonlift.com](http://www.maxonlift.com)**

**Express Parts Ordering: Phone (800) 227-4116 ext. 4345**

**Email: Ask your Customer Service representative**

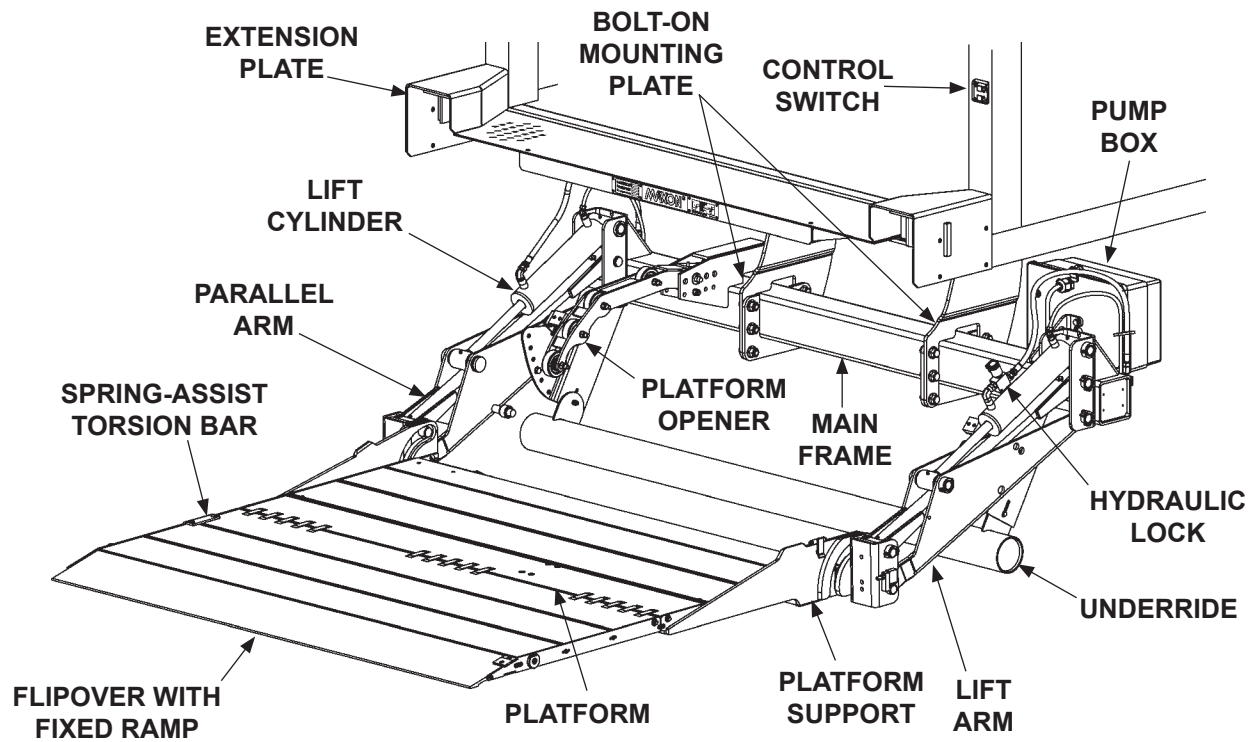
# LIFTGATE TERMINOLOGY



GPTLR 25-33  
FIG. 10-1

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GPTLR 44-55  
FIG. 11-1

## PERIODIC MAINTENANCE PERIODIC MAINTENANCE CHECKS

### **WARNING**

**Never operate the Liftgate if parts are loose or missing.**

**NOTE:** Make sure vehicle is parked on level ground while performing the maintenance checks.

### **Quarterly or 1250 Cycles (whichever occurs first)**

Check the hydraulic fluid level in the pump reservoir. Refer to the **CHECKING HYDRAULIC FLUID** procedure in the **PERIODIC MAINTENANCE** section. If hydraulic fluid appears contaminated, refer to the **CHANGING HYDRAULIC FLUID** procedure in the **PERIODIC MAINTENANCE** section. Keep track of the grade of hydraulic fluid in the pump reservoir. Never mix two different grades of fluid.

Check all hoses and fittings for chafing and fluid leaks. Make sure hydraulic lock is in place and undamaged. Replace if necessary.

Check electrical wiring for chafing and make sure wiring connections are tight and free of corrosion.

Check that all **WARNING and instruction decals, nonskid stickers, and safety striping** are in place. Also, make sure decals are legible and decals, nonskid, and safety striping are clean and undamaged.

Check that all roll pins are in place and protrude evenly from both sides of hinge pin collar. Replace roll pins if necessary.

Check both platform torsion springs to make sure there is grease between the coils. If grease is not visible in the valley between each coil, apply spray-on white lithium grease. Unfold & fold platform. If platform feels heavy while starting to fold, do **PLATFORM TORSION SPRING ADJUSTMENT** in the **PERIODIC MAINTENANCE** section of this manual.

Pump EP chassis grease in each lube fitting on the cylinders and arms until grease starts oozing from ends of the bearings. The lubrication diagram on the **PERIODIC MAINTENANCE CHECKLIST SHEET** shows where to find the lube fittings. Wipe off excess grease with a clean lint-free cloth.

### **CAUTION**

**Damaged cylinder seals and contaminated hydraulic fluid can result from painting the polished portion of the cylinder rod. To prevent damage, protect the exposed polished portion of the cylinder rod while painting.**

Check for rust and oily surfaces on Liftgate. If there is rust or oil on Liftgate, clean it off. If bare metal is exposed on galvanized portions of the Liftgate, touch up the galvanized finish. To maintain original galvanized finish, MAXON recommends cold galvanize spray.

### **Semi-annually or 2500 Cycles (whichever occurs first)**

Visually check the platform hinge pins for excessive wear and broken welds. See **PARTS BREAKDOWN** section for replacement parts. Also, do the **Quarterly or 1250 Cycles** maintenance checks.

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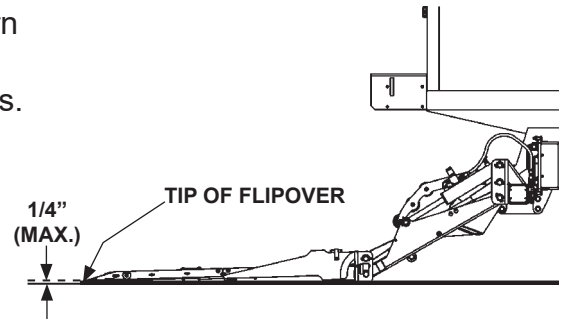
## Annually or 5000 Cycles (whichever occurs first)

Visually check the entire Liftgate for excessively worn parts and broken welds, especially hinge pins. See **PARTS BREAKDOWN** section for replacement parts.

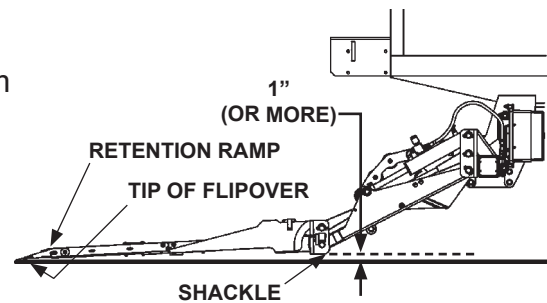
Check the platform and flipover as follows. Unfold the platform and flipover. Raise the platform to vehicle bed height and then lower it to the ground. Check if the shackles and tip of flipover touch the ground at the same time (**FIG. 13-1**). With the shackles touching, tip of a ramp-style flipover may be no more than 1/4" above the ground. A flipover equipped with retention ramp may have a maximum 2" of ground clearance at the tip of the flipover.

If the shackles are 1" or more above the ground when the tip of the flipover is touching the ground (**FIG. 13-2**), perform the **ADJUST PLATFORM** procedure in the **Installation Manual (M-18-14)**. If the adjustment does not correct the problem, check pins and bearings at the pivot points on both sides of the Liftgate (see **FIG. 13-3**).

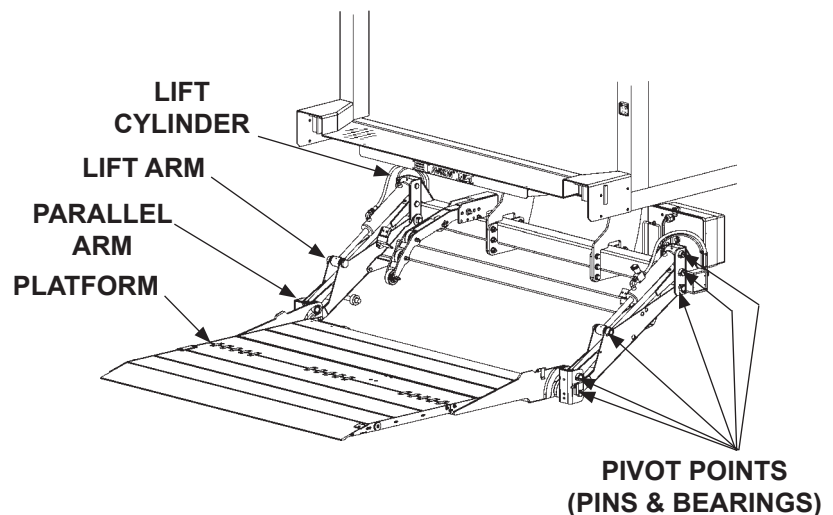
Also, for aluminum flipovers equipped with single retention ramp and for steel flipovers, ensure latch is in place, undamaged, and working correctly. See **PARTS BREAKDOWN** section for replacement parts.



**PLATFORM & SHACKLES TOUCH GROUND**  
**FIG. 13-1**



**SHACKLES NOT TOUCHING THE GROUND**  
**FIG. 13-2**



**PIVOT POINTS TO CHECK**  
**FIG. 13-3**

# PERIODIC MAINTENANCE - Continued

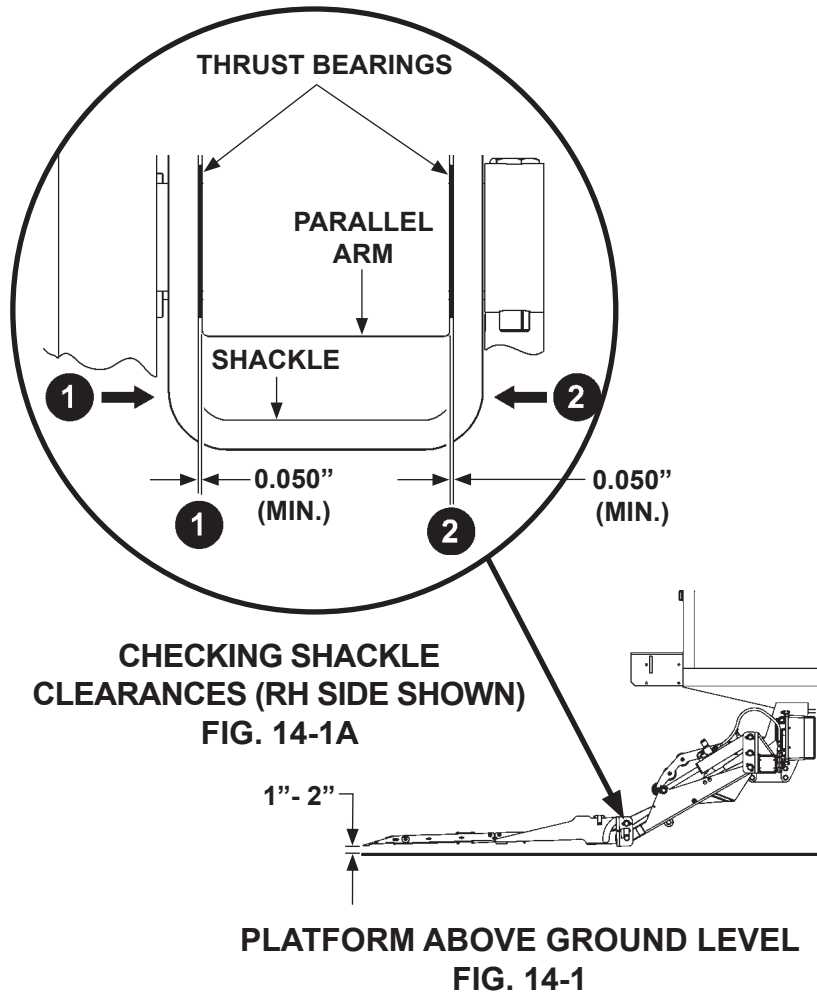
## PERIODIC MAINTENANCE CHECKS - Continued

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To prevent unnecessary wear on parallel arms, check for worn thrust bearings as follows. Position the platform 1"-2" above ground (**FIG. 14-1**). Push against the shackle (**Item 1, FIG. 14-1A**) and measure clearance (**Item 1, FIG. 14-1A**). Then, push against other side of shackle (**Item 2, FIG. 14-1A**) and measure clearance (**Item 2, FIG. 14-1A**). Repeat for LH side shackle. If clearance is less than 0.050", replace thrust bearing. See **PARTS BREAKDOWN** section for replacement parts.

Also, do the **Semi-annual or 2500 Cycles** and **Quarterly or 1250 Cycles** checks.



## PERIODIC MAINTENANCE CHECKLIST

**NOTE:** Make sure vehicle is parked on level ground while performing maintenance checks.

### Quarterly or 1250 Cycles (whichever occurs first)

- Check the level and condition of the hydraulic fluid.
  - Visually check all hoses and fittings for chafing and fluid leaks, and check hydraulic lock.
- Check electrical wiring for chafing and make sure wiring connections are tight and free of corrosion.
- Check that all **WARNING and instruction decals, nonskid stickers, and safety striping** are in place. Also, make sure decals are legible and decals, nonskid, and safety striping are clean and undamaged.
- Check that all roll pins are in place and protrude evenly from both sides of hinge pin collar. Replace roll pins if necessary.
- Check for rust and oily surfaces on Liftgate. If there is rust or oil on Liftgate or if the Liftgate is dirty, clean it off. Touch up the galvanized finish where bare metal is showing.
- Check both platform torsion springs to make sure there is grease in the valley between each coil. If grease is not visible, apply spray-on white lithium grease to the valley between each coil. Unfold & fold platform. If platform feels heavy while starting to fold, do **PLATFORM TORSION SPRING ADJUSTMENT** in the **PERIODIC MAINTENANCE** section of this manual.
- Pump EP chassis grease in each lube fitting on the cylinders and arms until grease starts oozing from ends of the bearings. Refer to lubrication diagram on the next page. Wipe off excess grease with a clean lint-free cloth.

### Semi-annually or 2500 Cycles (whichever occurs first)

- Visually check the platform hinge pins for excessive wear and broken welds.
- Do the **Quarterly or 1250 Cycles Checks** on this checklist.

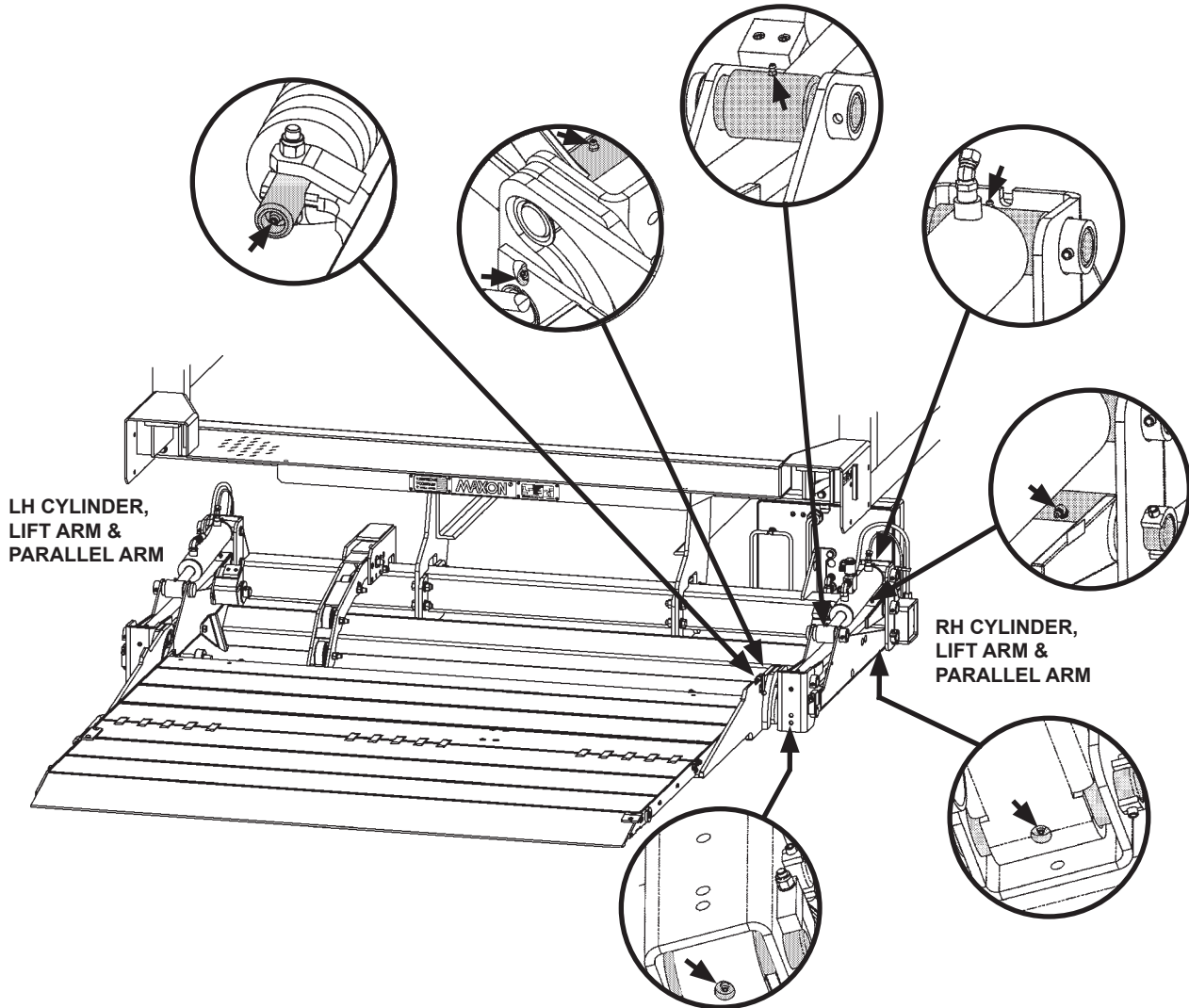
### Annually or 5000 Cycles (whichever occurs first)

- Visually check the entire Liftgate for excessively worn parts and broken welds, especially hinge pins.
- Visually check platform & flipover. (See the **PERIODIC MAINTENANCE CHECKS** topic for more information.)
- Visually check the thrust bearings on the shackles.
- Do the **Semi-annual or 2500 Cycles Checks** on this checklist.
- Do the **Quarterly or 1250 Cycles Checks** on this checklist.

For more details pertaining to this checklist, see the **PERIODIC MAINTENANCE CHECKS** section in this Maintenance Manual.

# PERIODIC MAINTENANCE - Continued LUBRICATION

**NOTE:** Lube fittings are shown for the RH cylinder, lift arm, and parallel arm. There are also lube fittings at the same places on the LH cylinder, lift arm, and parallel arm. Refer to the **PERIODIC MAINTENANCE CHECKS** and **PERIODIC MAINTENANCE CHECKLIST** for the recommended grease and maintenance interval.



**GPTLR LUBRICATION DIAGRAM  
FIG. 16-1**

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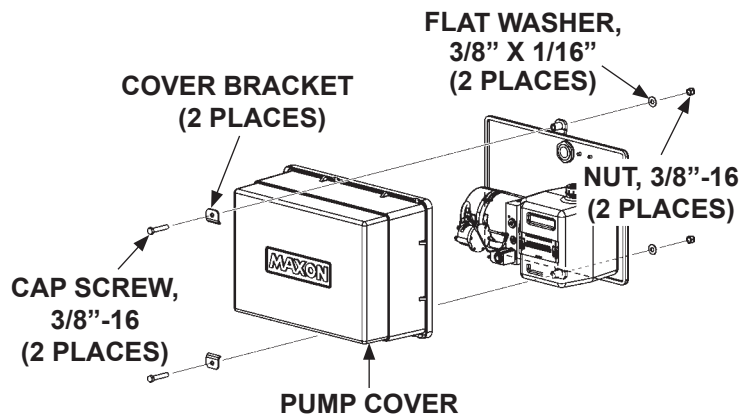
## CHECKING HYDRAULIC FLUID

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

**NOTE:** Liftgate is shipped with **ISO 32** oil. Use correct oil for climate conditions.  
**+50 to +120 Degrees F - Grade ISO 32**  
**Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606**  
 See **TABLES 18-1 & 18-2** for recommended brands of **ISO 32 & ISO 15** oils.

1. Unbolt and remove pump cover (FIG. 17-1).
2. Check the hydraulic fluid level in reservoir as follows. With Liftgate stowed, or platform at vehicle bed height, level should be as shown in FIG. 17-2.



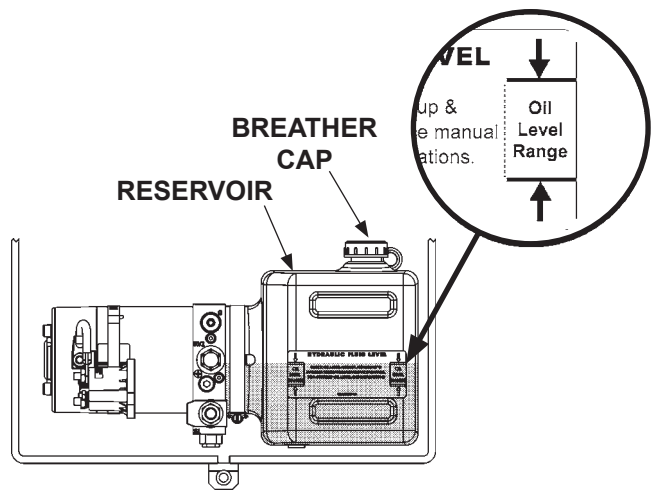
**UNBOLTING/BOLTING PUMP COVER**  
FIG. 17-1

**NOTE:** If the hydraulic fluid in the reservoir is contaminated, do the **CHANGING HYDRAULIC FLUID** procedure in this section.

3. If needed, add fluid to the reservoir as follows. Unscrew breather cap (FIG. 17-2). Fill the reservoir with hydraulic fluid to level shown in FIG. 17-2. Reinstall breather cap (FIG. 17-2).

### CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. To secure pump cover, the long side of the holder flats must butt against pump cover as shown in the illustration.



**POWER UNIT FLUID LEVEL**  
FIG. 17-2

4. Bolt on the pump cover as shown in FIG. 17-1. Apply anti-seize to threads of fasteners.

## PERIODIC MAINTENANCE - Continued

ISO 32 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
ROSEMEAD	ROSEMEAD MV150
EXXONMOBIL	MOBIL DTE 10 EXCEL 32
CHEVRON	CHEVRON AV MV32
U.S. PRESTIGE	PRESTIGE AW HVI 32

**TABLE 18-1**

ISO 15 OR MIL-H-5606 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
EXXONMOBIL	UNIVIS HVI-13
PHILLIPS 66	ARCTIC LOW POUR

**TABLE 18-2**

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## CHANGING HYDRAULIC FLUID

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

**NOTE:** Liftgate is shipped with **ISO 32** oil. Use correct oil for climate conditions.

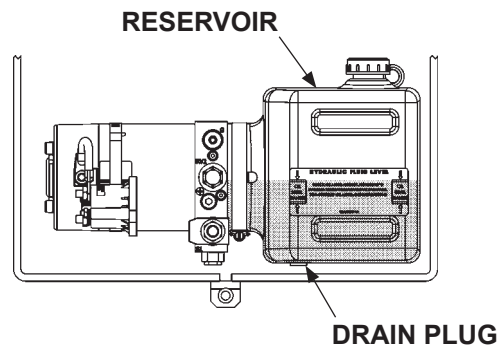
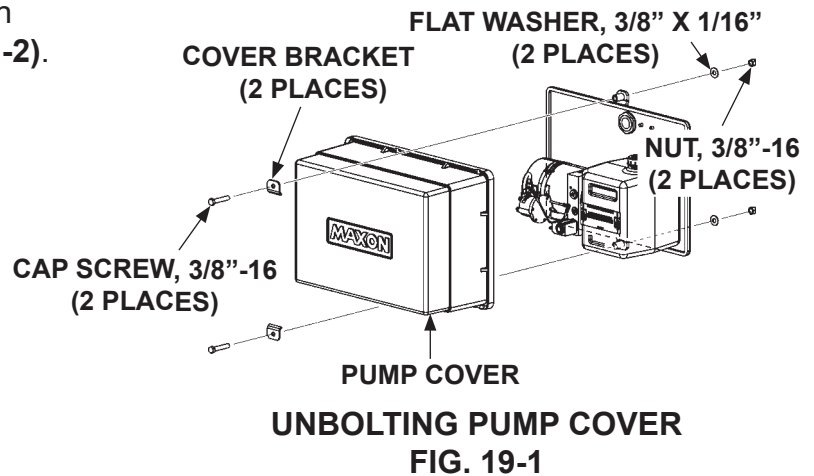
**+50 to +120 Degrees F - Grade ISO 32**

**Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606**

See **TABLES 18-1 & 18-2** for recommended brands of **ISO 32 & ISO 15 OILS.**

### GRAVITY DOWN & POWER DOWN LIFTGATES

1. Unbolt and remove pump cover (**FIG. 19-1**). Place empty 5 gallon bucket under drain plug (**FIG. 19-2**).

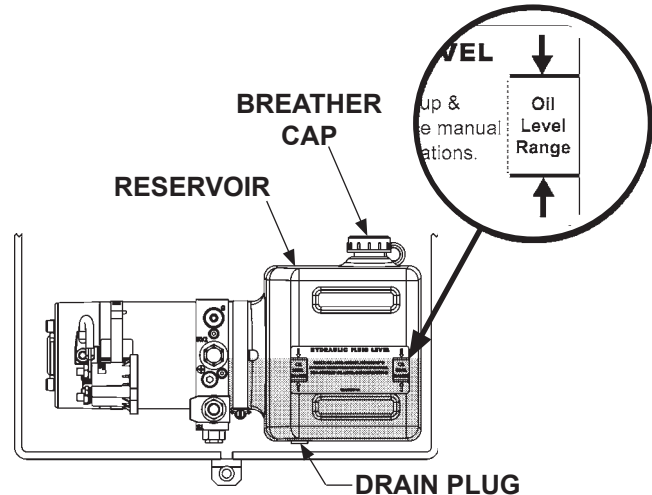


# PERIODIC MAINTENANCE - Continued

## CHANGING HYDRAULIC FLUID - Continued

### GRAVITY DOWN LIFTGATES

1. Lower platform to ground. Remove drain plug (**FIG. 20-1**). Drain hydraulic fluid from system. Reinstall drain plug.

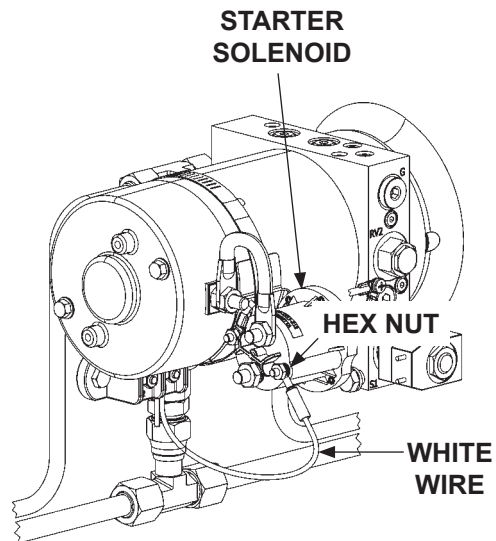


**GRAVITY DOWN PUMP & MOTOR**  
**FIG. 20-1**

2. Unscrew breather cap (**FIG. 20-1**) and refill reservoir with hydraulic fluid to level shown in **FIG. 20-1**. Reinstall breather cap (**FIG. 20-1**).
3. Stow the Lift and do the **CHECKING HYDRAULIC FLUID** procedure in this section of the manual.

### POWER DOWN LIFTGATES

1. Open and raise platform to vehicle bed height. Remove drain plug (**FIG. 20-1**). Drain hydraulic fluid.
2. Disconnect the white wire (**FIG. 20-2**) from starter solenoid. Lower the platform while draining the remaining hydraulic fluid from system. Reinstall drain plug. Reconnect the white wire to starter solenoid.
3. Remove breather cap (**FIG. 20-1**) and refill reservoir with hydraulic fluid to level shown in **FIG. 20-1**. Reinstall breather cap (**FIG. 20-1**).



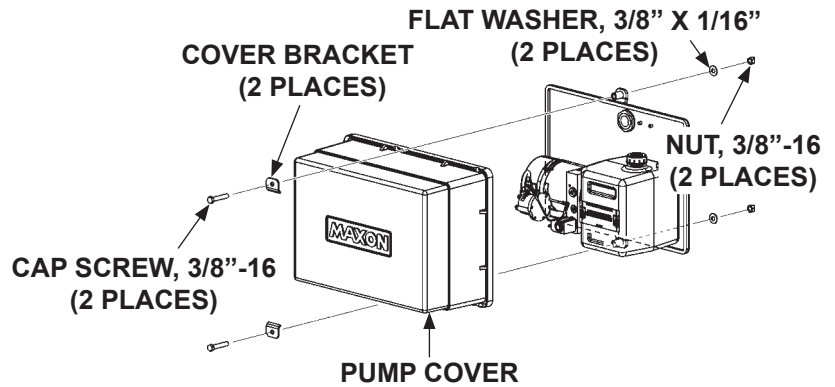
**POWER DOWN PUMP**  
**FIG. 20-2**

4. Stow the Lift and do the **CHECKING HYDRAULIC FLUID** procedure in this section of the manual.

## CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. To secure pump cover, the long side of the holder flats must butt against pump cover as shown in the illustration.

Bolt on the pump cover as shown in **FIG. 21-1**. Apply anti-seize to threads of fasteners.



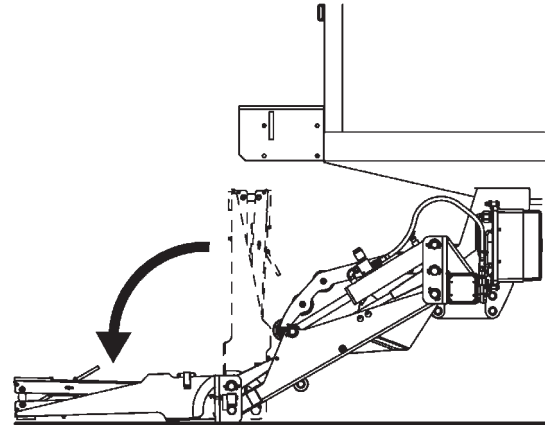
**BOLTING PUMP COVER**  
**FIG. 21-1**

## PERIODIC MAINTENANCE - Continued

### PLATFORM TORSION SPRING ADJUSTMENT

**NOTE:** Perform the following adjustment if platform feels heavy as you start to fold it for stowing. If adjusted as follows, the torsion springs will reduce the amount of effort you need to start folding the platform.

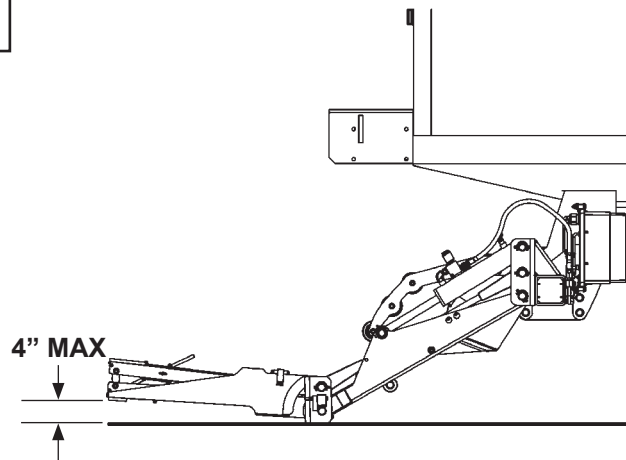
1. Make sure vehicle is parked on level ground. **LOWER** the Liftgate to the ground and unfold platform only (**FIG. 22-1**).



**UNFOLDING PLATFORM**  
**FIG. 22-1**

**NOTE:** A properly adjusted platform will stay in position with the bottom 4" or less above the ground while flipover is being folded. If distance is more than 4", and platform can be folded and unfolded with ease, the greater distance is allowed and no adjustment is necessary. Acceptable force to fold the platform is 40 lb maximum.

2. Measure the distance between the bottom block of the platform and the ground (**FIG. 22-2**).



**PLATFORM 4" MAX ABOVE GROUND**  
**FIG. 22-2**

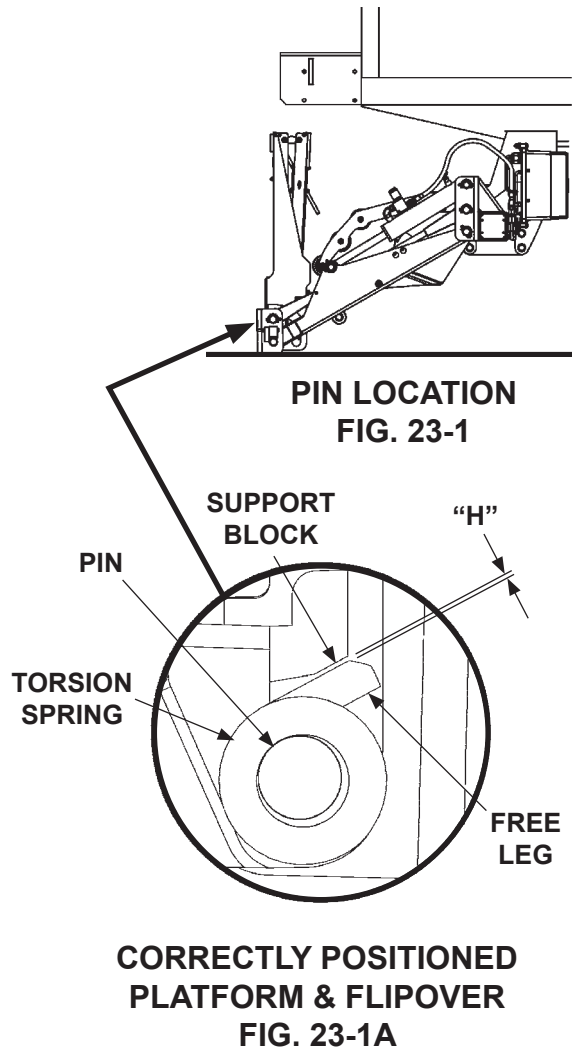
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## **⚠ WARNING**

To prevent possible injury and damage to Liftgate, have another qualified person hold platform in position to keep it from falling open.

3. Position platform and flipover to 90 degrees, +2 / -0 degrees (**FIG. 23-1**). Get a second person to hold the platform in place while you take measurements.
4. On RH side of platform, position the torsion spring so it rests on pin (**FIGS. 23-1 and 23-1A**). Make sure free leg of torsion spring is parallel to chamfered surface on support block (**FIG. 23-1A**). Measure gap "H" between leg of the torsion spring and support block (**FIG. 23-1A**). Get enough 1/16" shim washers (Kit items), to equal measured gap.



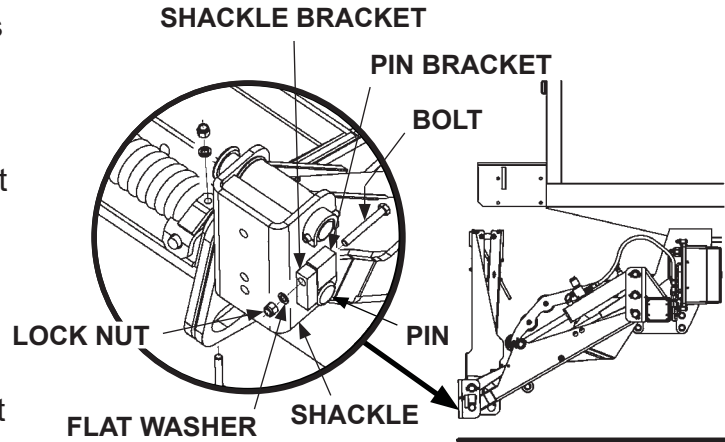
# PERIODIC MAINTENANCE - Continued

## PLATFORM TORSION SPRING ADJUSTMENT - Continued

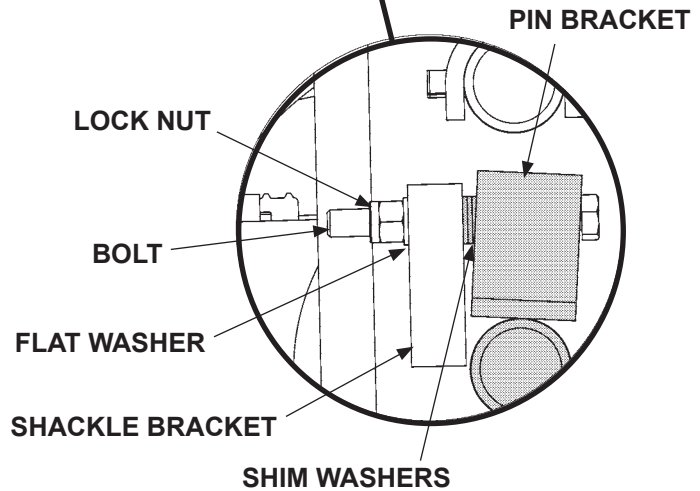
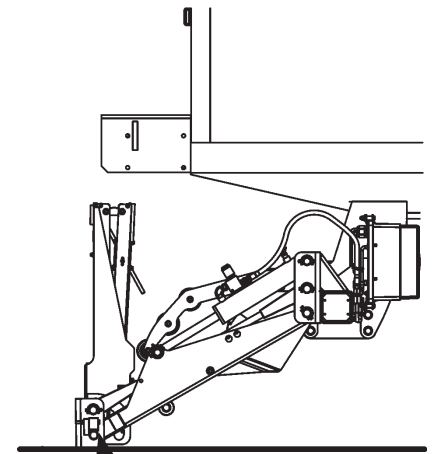
5. If necessary, adjust the torsion springs to lower the platform to 4" or less above the ground. Unbolt pin bracket (FIG. 24-1). Then, rotate the pin bracket away from the shackle bracket until the free leg of the torsion spring makes contact with the new block welded to the platform support. Then, using shim washers that equal the gap "H" measured in step 14, insert the shim washers between pin bracket and shackle bracket (FIGS. 24-1 and 24-2). Bolt shim washers in place between pin bracket and shackle bracket (FIG. 24-2). Tighten bolt and lock nut.

6. Repeat steps 2, 3, 4, and 5 for the LH torsion spring.

7. Repeat step 1 to check clearance of bottom of platform above the ground.



**ADJUST PLATFORM**  
**FIG. 24-1**



**SHIMMING TORSION SPRING**  
**FIG. 24-2**

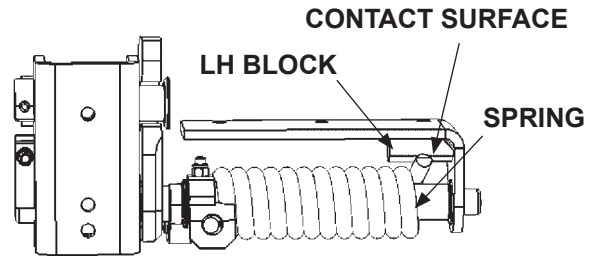
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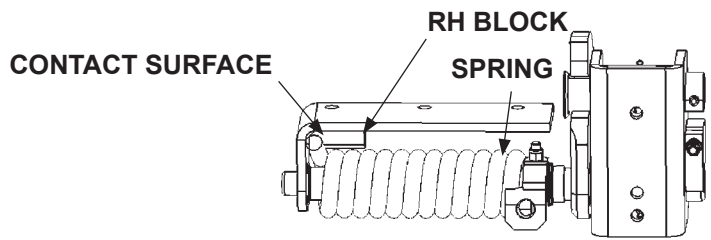


**NOTE:** If shimming is not possible, the spring contact surface on the new stops may be ground in small 1/16" increments to lower the platform closer to the ground.

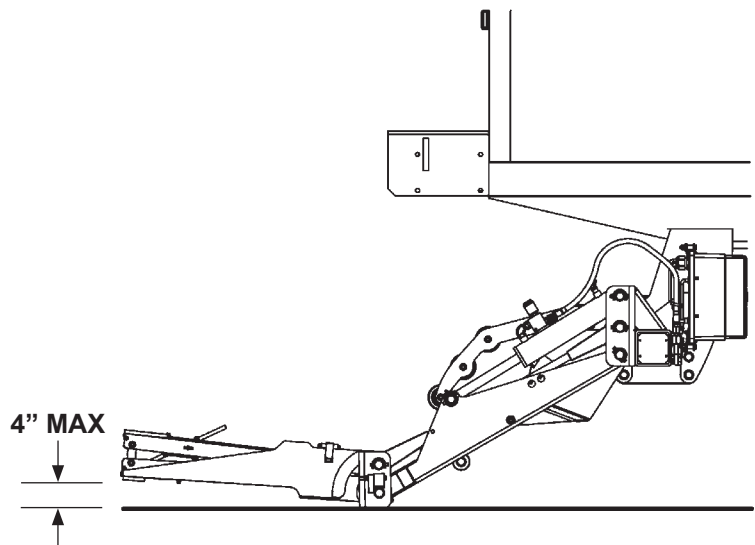
8. If shimming is not possible, grind the contact surface on the support blocks (FIGS. 25-1 and 25-2) in small 1/16" increments to lower the platform to 4" or less, between bottom block and the ground (FIG. 25-3).



**GRINDING LH BLOCK  
FIG. 25-1**



**GRINDING RH BLOCK  
FIG. 25-2**



**PLATFORM 4" ABOVE GROUND  
FIG. 25-3**

# PERIODIC MAINTENANCE - Continued

## PLATFORM TORSION SPRING ADJUSTMENT - Continued

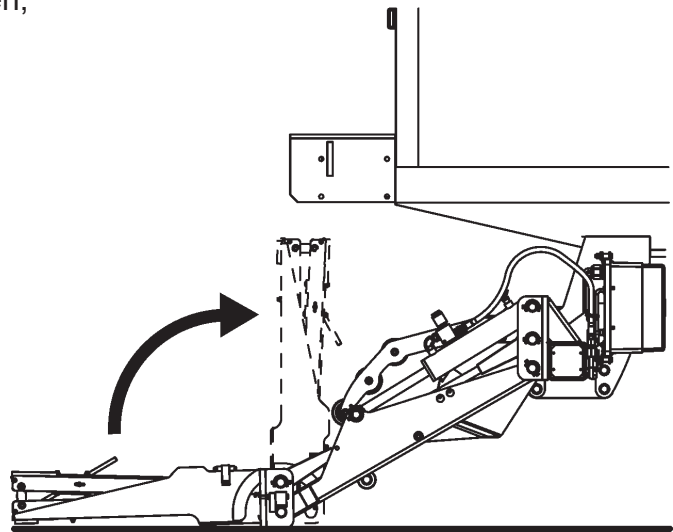
### ⚠ WARNING

Keep hands clear of the extension plate when folding the platform under the extension plate.

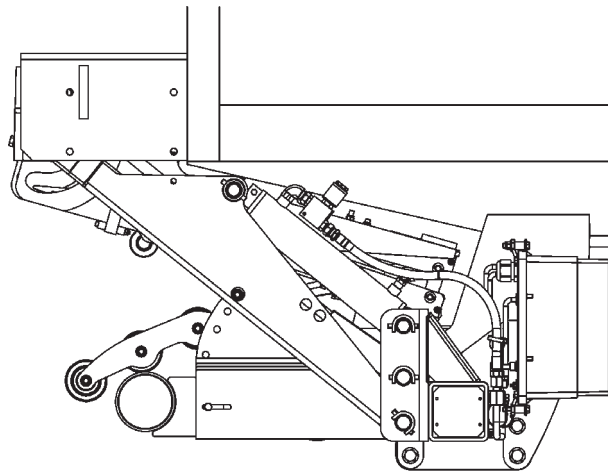
### ⚠ CAUTION

Stow Liftgate under hydraulic pressure.

9. Fold platform as shown in **FIG. 26-1**. Then, stow Liftgate as shown in **FIG. 26-2**. See **Operation Manual** for instructions.



**FOLDING PLATFORM**  
**FIG. 26-1**



**LIFTGATE STOWED**  
**FIG. 26-2**

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## REPLACING PLATFORM TORSION SPRING

**NOTE:** The following procedure shows how to replace torsion spring on RH side of platform. Use this procedure for replacing torsion spring on the LH side.

1. Fold flipover onto platform.
2. Fold platform.
3. Raise platform to a convenient work height to gain access and release tension on the torsion spring.

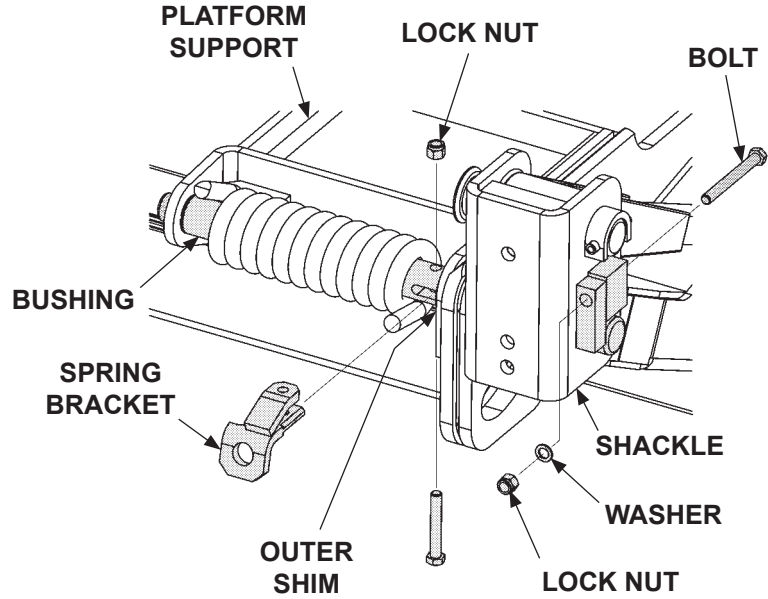


FIG. 27-1

### CAUTION

To prevent injury and equipment damage, make sure there is no tension on torsion spring before removing hinge pin.

4. Unbolt hinge pin from shackle and spring bracket (FIG. 27-1). Remove bolts, washers, and lock nuts. Drive the hinge pin out board toward the shackle just enough to free the torsion spring and bushing (FIG. 27-2). Remove the torsion spring.

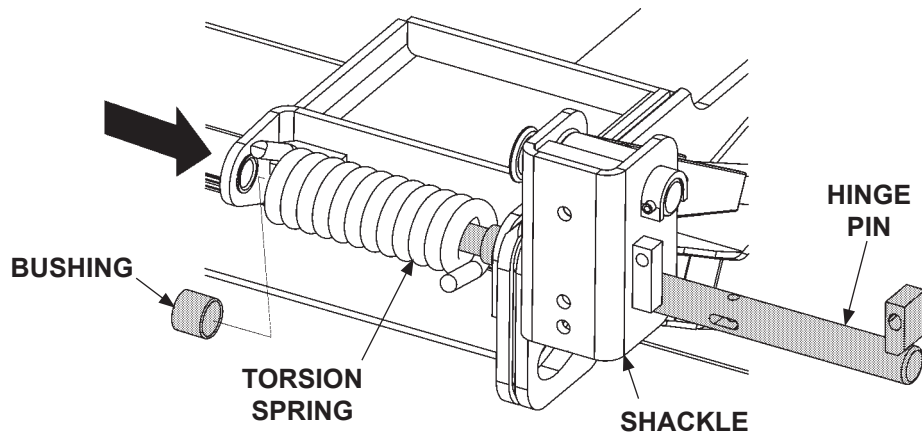


FIG. 27-2

## PERIODIC MAINTENANCE - Continued

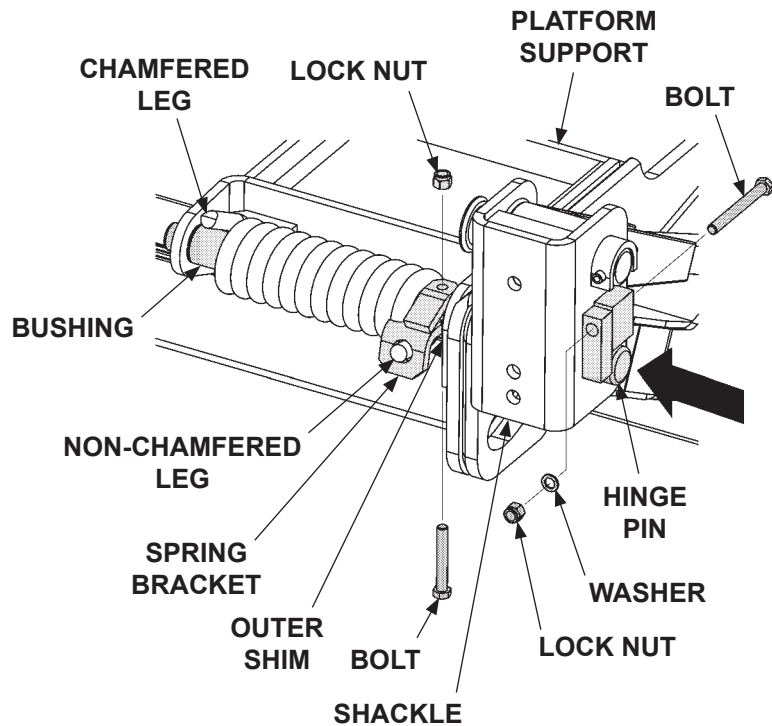
### REPLACING PLATFORM TORSION SPRING - Continued

5. Install the new torsion spring and bushing as shown in **FIG. 28-1**. Make sure non-chamfered leg of the spring is inserted in the spring bracket (**FIG. 28-1**). Make sure chamfered leg of the spring is visible and resting against the platform support (**FIG. 28-1**).

6. Drive the hinge pin into correct position through the platform support as shown in **FIG. 28-1**. Line up the bolt hole in the hinge pin with the hole in the shackle and spring bracket. Bolt the hinge pin to platform support and spring bracket with bolts, washers, lock nuts (**FIG. 28-1**). Torque the 3/8"-16 spring pin bolt and 3/8"-16 spring bracket bolt **35 to 52 lb-ft**.

7. Do the **PLATFORM TORSION SPRING ADJUSTMENT** in this manual.

8. Operate the Liftgate according to instructions in **Operation Manual** to make sure it operates correctly.



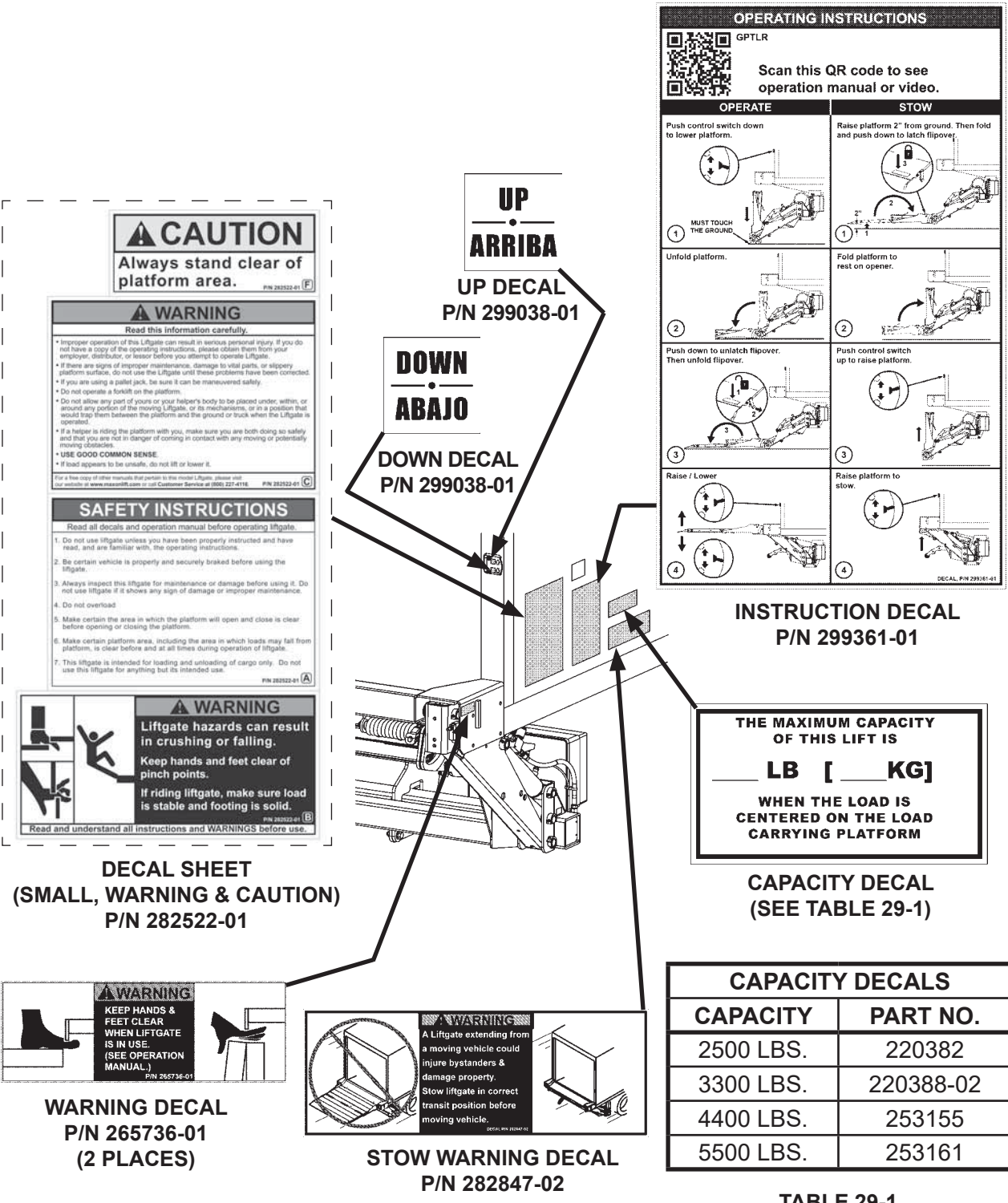
**FIG. 28-1**

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# DECALS

**NOTE:** Ensure there is no residue, dirt or corrosion where decals are attached. If necessary, clean surface before attaching decals.



**CAUTION**  
Always stand clear of platform area.  
P/N 282522-01

**WARNING**  
Read this information carefully.  
Improper operation of this Liftgate can result in serious personal injury. If you do not have a copy of the operating instructions, please obtain them from your employer, distributor, or dealer before you attempt to operate the Liftgate.  
If there are signs of improper maintenance, damage to vital parts, or slippery platform surface, do not use the Liftgate until these problems have been corrected.  
If you are using a pallet jack, be sure it can be maneuvered safely.  
Do not operate a forklift on the platform.  
Do not allow any part of yours or your helper's body to be placed under, within, or around any portion of the moving Liftgate, or its mechanisms, or in a position that would trap them between the platform and the ground or truck when the Liftgate is operated.  
If a helper is riding the platform with you, make sure you are both doing so safely and that you are not in danger of coming in contact with any moving or potentially moving obstacles.  
USE GOOD COMMON SENSE.  
If load appears to be unsafe, do not lift or lower it.  
For a free copy of other manuals that pertain to this model Liftgate, please visit our website at [www.maxonlift.com](http://www.maxonlift.com) or call Customer Service at (888) 227-4116. P/N 282522-01

**SAFETY INSTRUCTIONS**  
Read all decals and operation manual before operating liftgate.  
1. Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.  
2. Be certain vehicle is properly and securely braked before using the liftgate.  
3. Always inspect this liftgate for maintenance or damage before using it. Do not use liftgate if it shows any sign of damage or improper maintenance.  
4. Do not overload.  
5. Make certain the area in which the platform will open and close is clear before opening or closing the platform.  
6. Make certain platform area, including the area in which loads may fall from platform, is clear before and at all times during operation of liftgate.  
7. This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use. P/N 282522-01

**WARNING**  
Liftgate hazards can result in crushing or falling.  
Keep hands and feet clear of pinch points.  
If riding liftgate, make sure load is stable and footing is solid.  
P/N 282522-01  
Read and understand all instructions and WARNINGS before use.

**DECAL SHEET (SMALL, WARNING & CAUTION) P/N 282522-01**

**WARNING**  
KEEP HANDS & FEET CLEAR WHEN LIFTGATE IS IN USE. (SEE OPERATION MANUAL.) P/N 265736-01

**WARNING DECAL P/N 265736-01 (2 PLACES)**

**WARNING**  
A Liftgate extending from a moving vehicle could injure bystanders & damage property. Stow liftgate in correct transit position before moving vehicle. P/N 282847-02

**STOW WARNING DECAL P/N 282847-02**

**OPERATING INSTRUCTIONS**  
GPTLR  
Scan this QR code to see operation manual or video.

OPERATE	STOW
<p>Push control switch down to lower platform.</p> <p>1</p>	<p>Raise platform 2" from ground. Then fold and push down to latch flipover.</p> <p>1</p>
<p>Unfold platform.</p> <p>2</p>	<p>Fold platform to rest on opener.</p> <p>2</p>
<p>Push down to unlatch flipover. Then unfold flipover.</p> <p>3</p>	<p>Push control switch up to raise platform.</p> <p>3</p>
<p>Raise / Lower</p> <p>4</p>	<p>Raise platform to stow.</p> <p>4</p>

DECAL P/N 299361-01

**INSTRUCTION DECAL P/N 299361-01**

**THE MAXIMUM CAPACITY OF THIS LIFT IS**  
**\_\_\_ LB [ \_\_\_ KG]**  
**WHEN THE LOAD IS CENTERED ON THE LOAD CARRYING PLATFORM**

**CAPACITY DECAL (SEE TABLE 29-1)**

CAPACITY DECALS	
CAPACITY	PART NO.
2500 LBS.	220382
3300 LBS.	220388-02
4400 LBS.	253155
5500 LBS.	253161

TABLE 29-1

FIG. 29-1

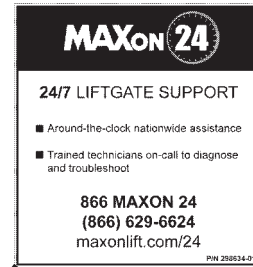
# DECALS & PLATES

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**WARNING DECAL**  
P/N 265736-03



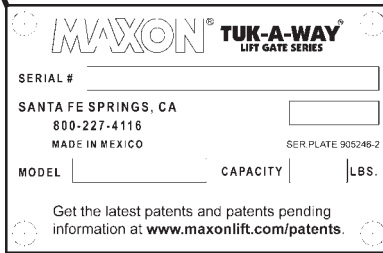
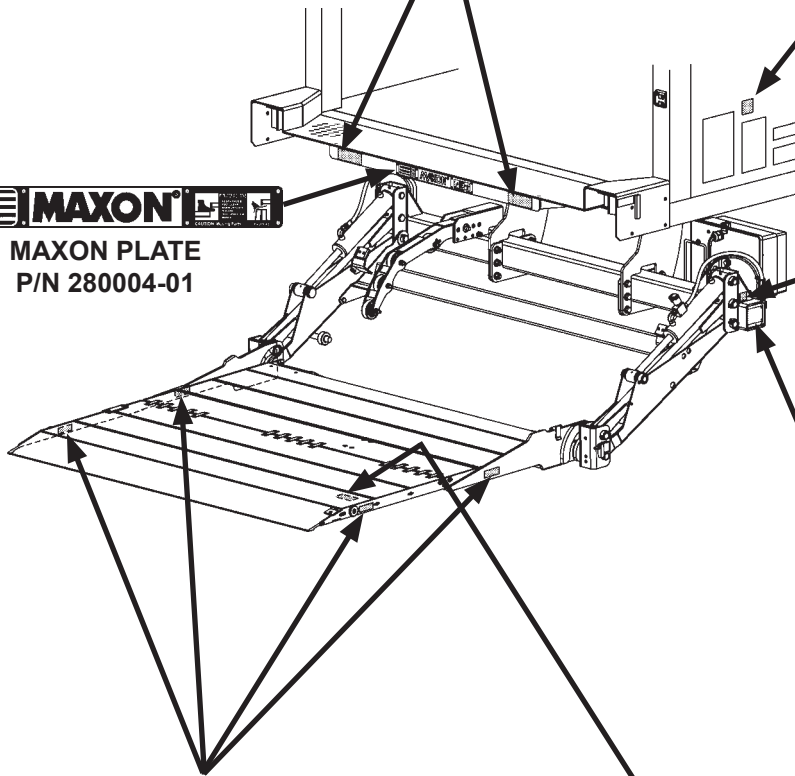
**MAXON 24/7 SUPPORT DECAL**  
P/N 298634-01



**MAXON PLATE**  
P/N 280004-01



**PARTS QR CODE DECAL**  
P/N 299348-08



**SERIAL PLATE (REF)**



**WARNING DECAL**  
P/N 265736-02



**CAUTION DECAL**  
(FLIPOVER EQUIPPED WITH LATCH ONLY)  
P/N 267694-01

**NOTE: MAXON 24/7 LIFTGATE SUPPORT** service is only available in the Continental U.S.

**FIG. 30-1**

# NONSKID & SAFETY STRIPING

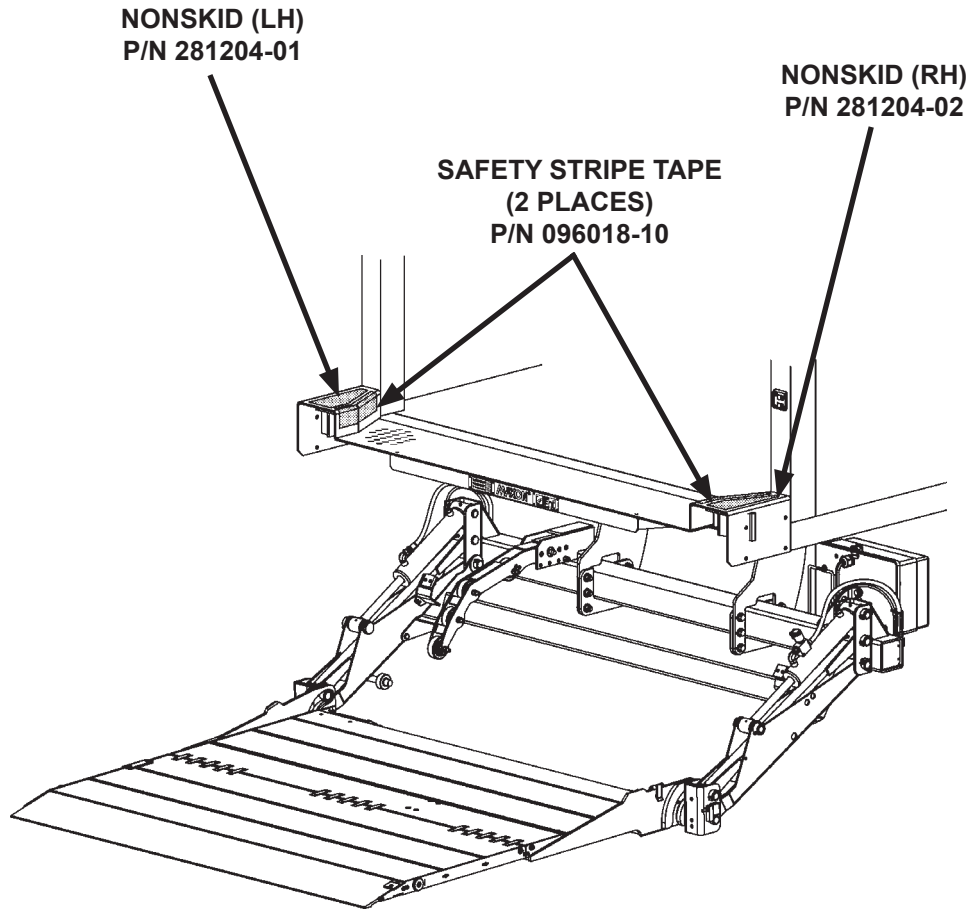
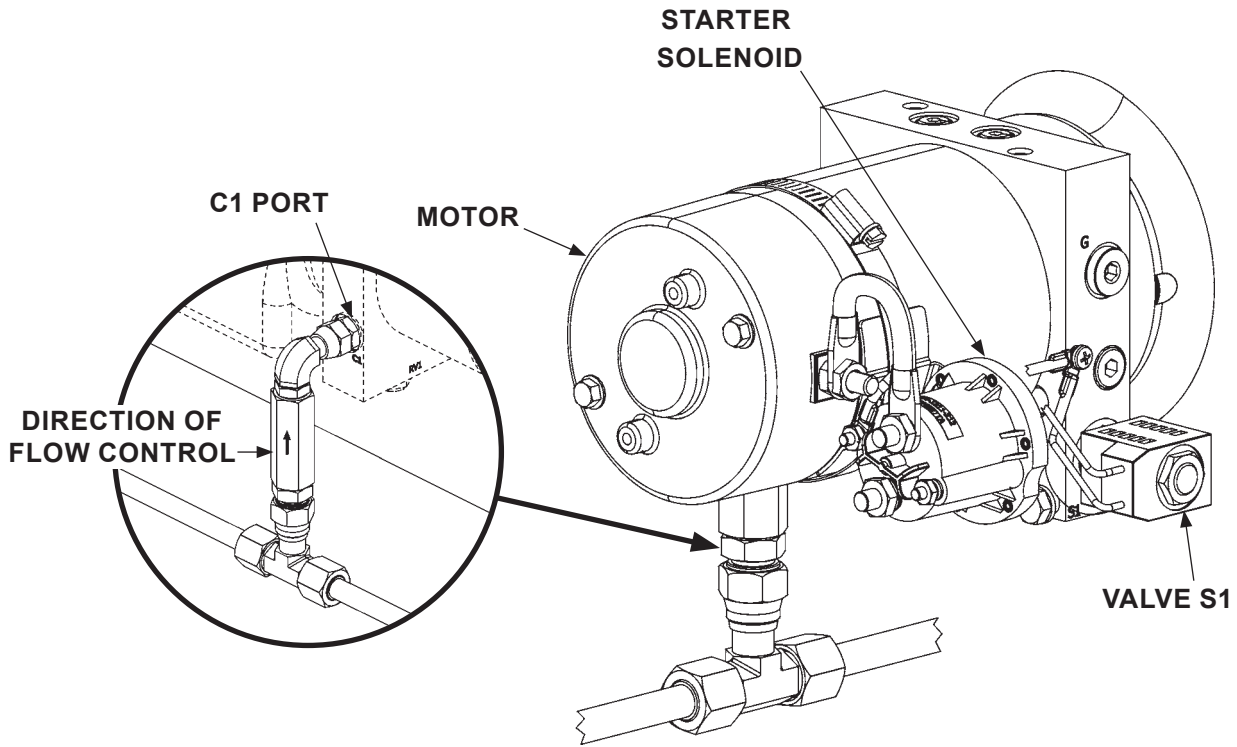


FIG. 31-1

# SYSTEM DIAGRAMS

## PUMP & MOTOR SOLENOID OPERATION (GRAVITY DOWN)



**GRAVITY DOWN POWER UNIT  
FIG. 32-1**

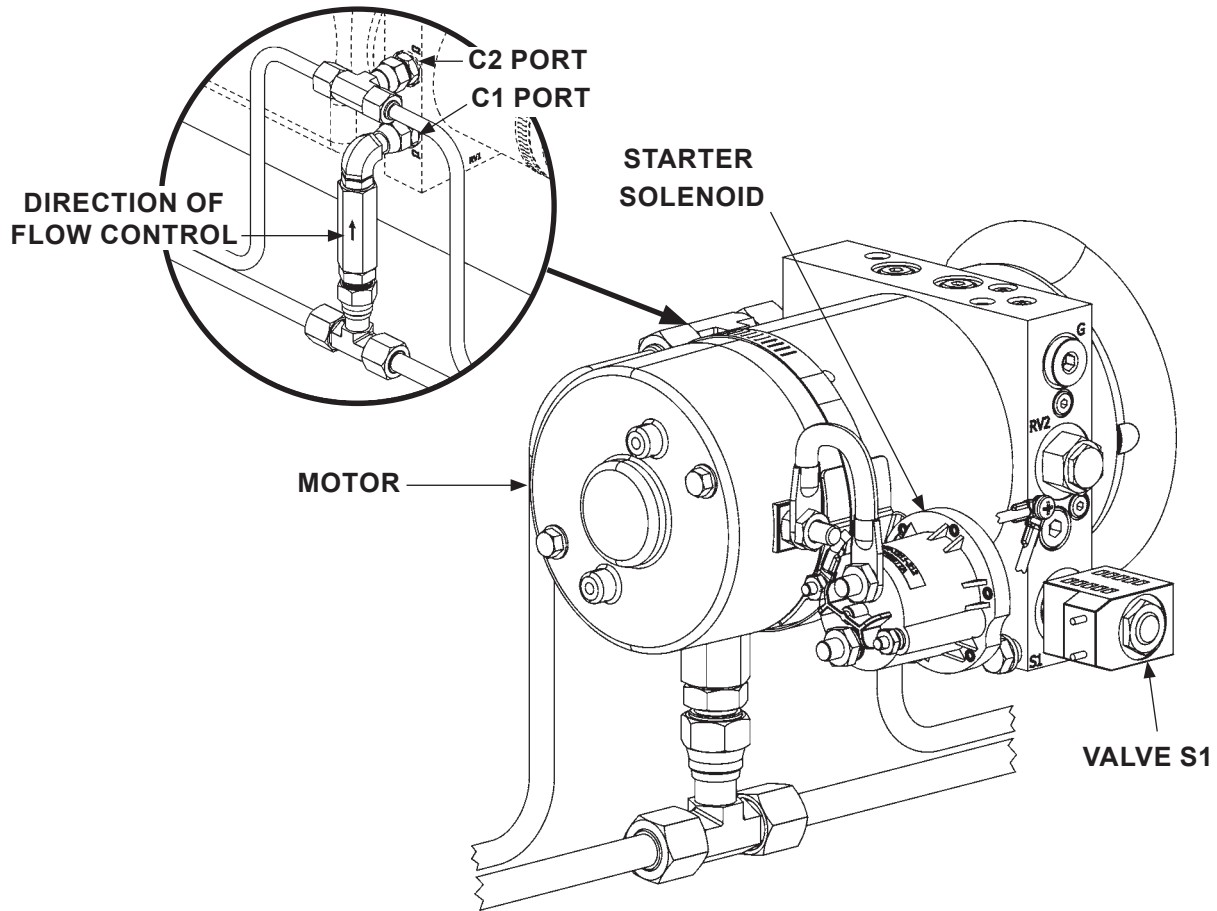
POWER UNIT MOTOR & SOLENOID OPERATION				
LIFTGATE FUNCTION	PORT	SOLENOID OPERATION (✓ MEANS ENERGIZED)		
		MOTOR	VALVE S1	LOCK VALVE*
RAISE	C1	✓		
LOWER			✓	✓
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC				

\* Lock valve located on RH hydraulic cylinder.

**TABLE 32-1**



## PUMP & MOTOR SOLENOID OPERATION (POWER DOWN)



**POWER DOWN POWER UNIT  
FIG. 33-1**

POWER UNIT MOTOR & SOLENOID OPERATION					
LIFTGATE FUNCTION	PORT	SOLENOID OPERATION (✓ MEANS ENERGIZED)			
		MOTOR	VALVE S1	LH LOCK VALVE*	RH LOCK VALVE*
RAISE	C1	✓		✓	✓
LOWER	C2	✓	✓	✓	✓
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC					

\* Lock valves located on hydraulic cylinders.

**TABLE 33-1**

# SYSTEM DIAGRAMS-Continued

## HYDRAULIC SCHEMATIC (GRAVITY DOWN)

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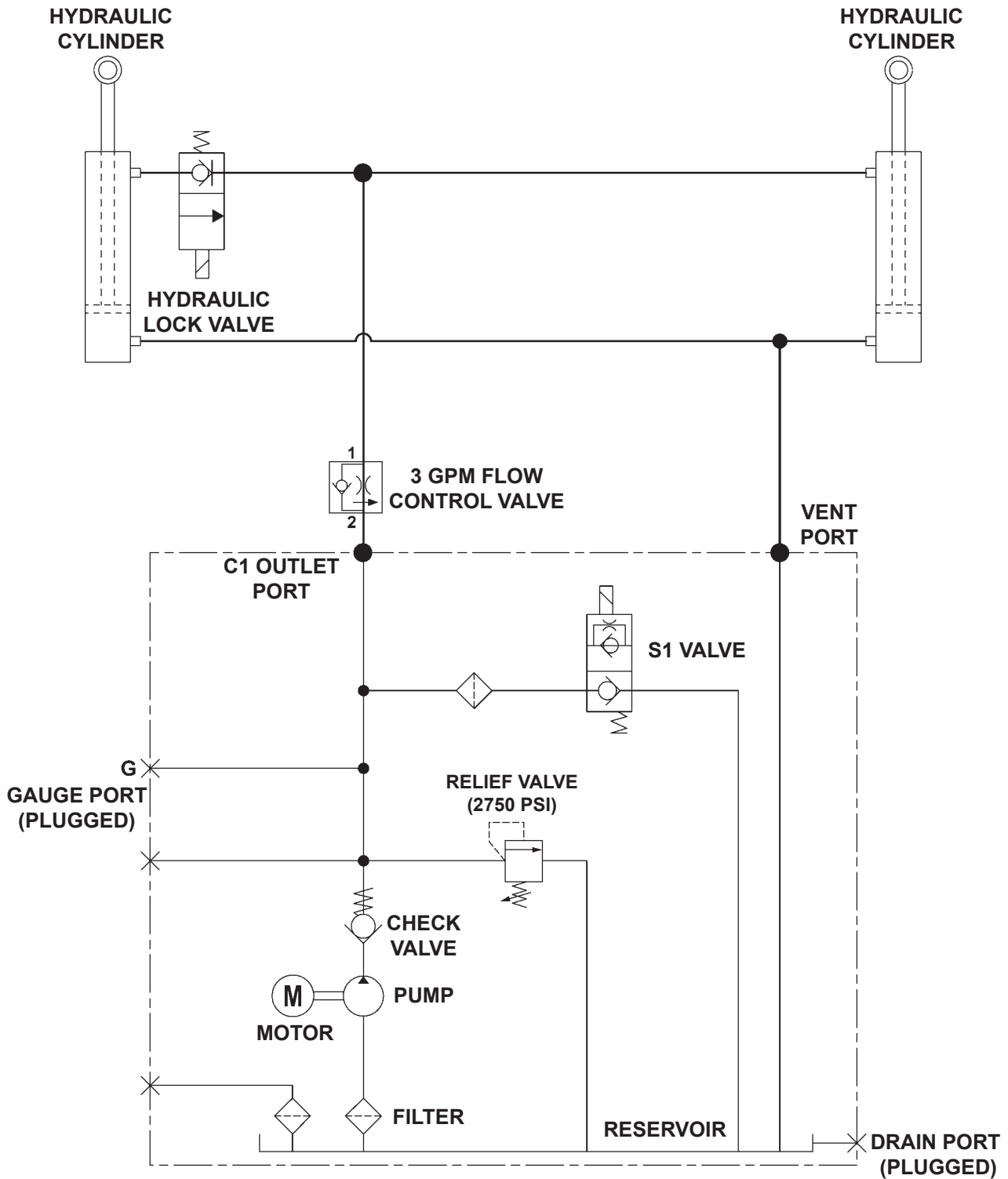


FIG. 34-1

# HYDRAULIC SCHEMATIC (POWER DOWN)

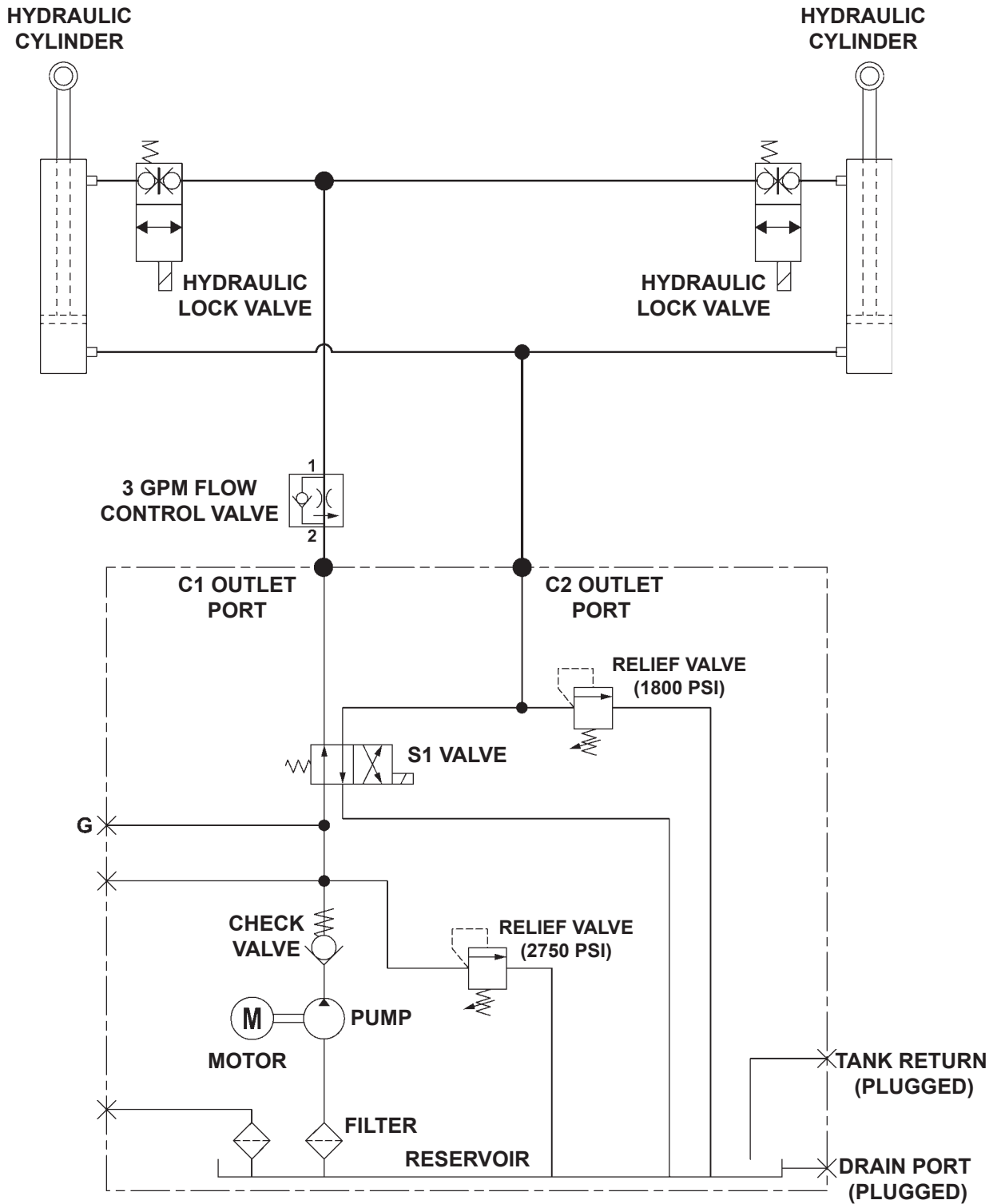
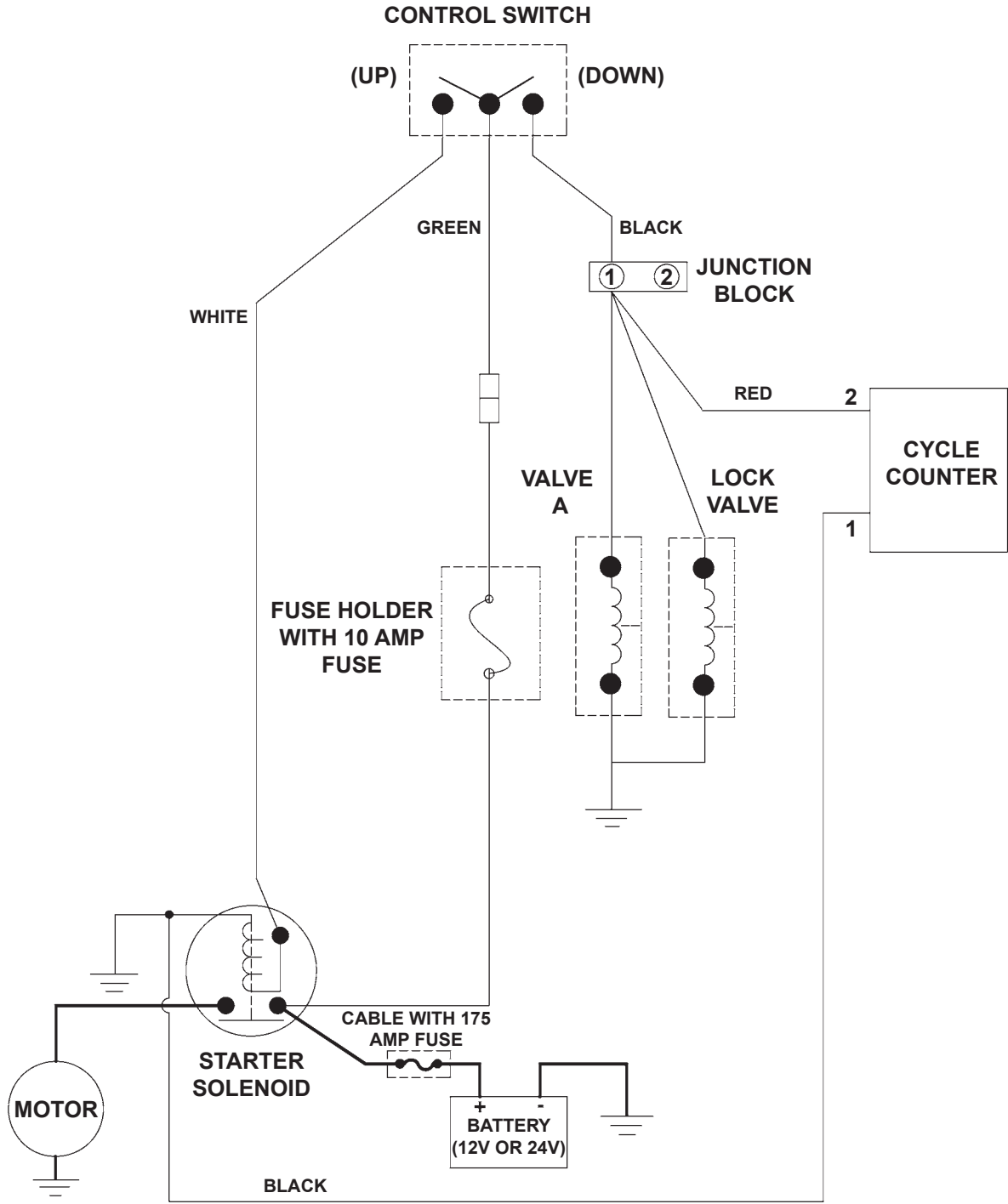


FIG. 35-1

# SYSTEM DIAGRAMS - Continued

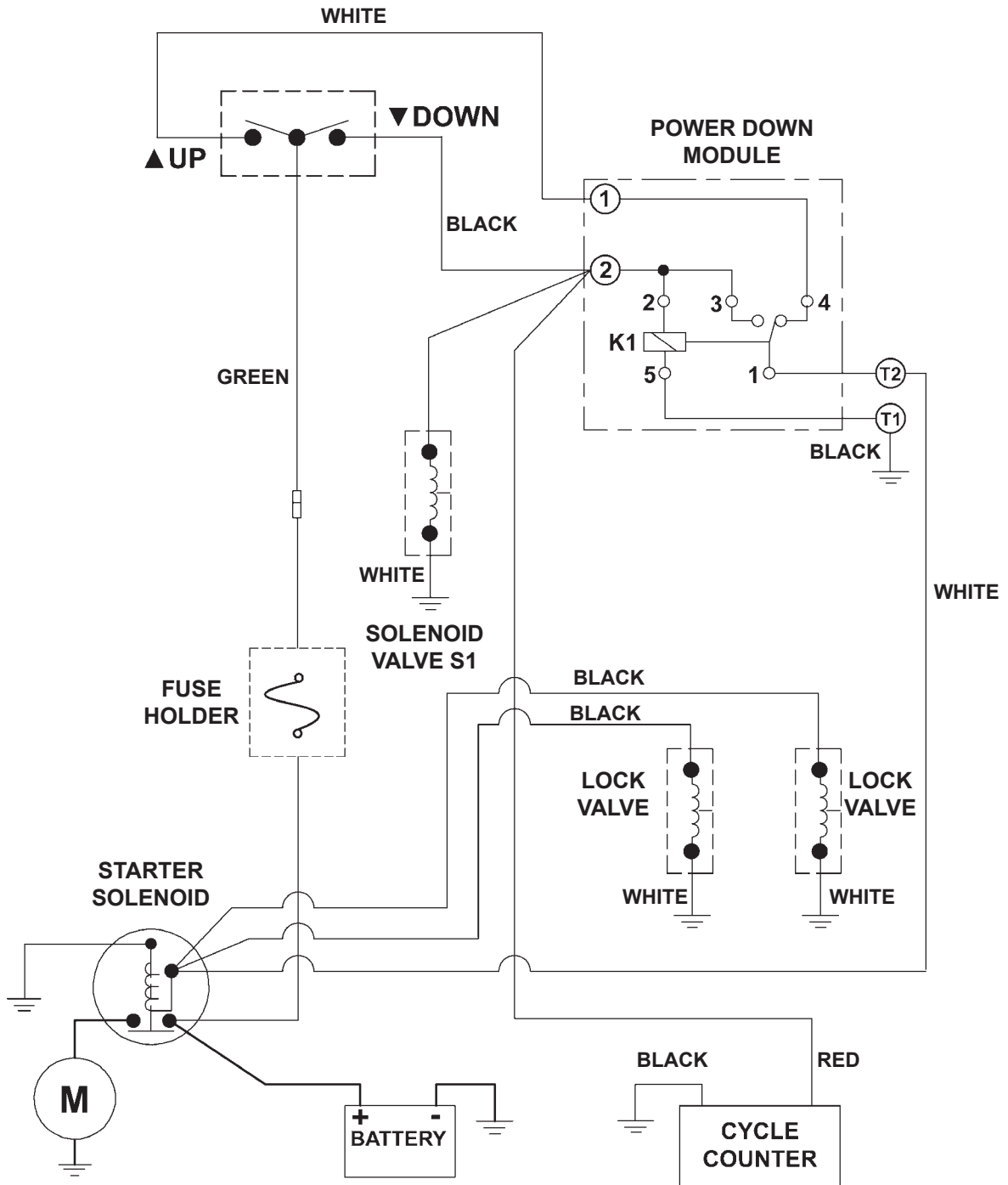
## ELECTRICAL SCHEMATIC (GRAVITY DOWN)

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**FIG. 36-1**

# ELECTRICAL SCHEMATIC (POWER DOWN)



**NOTE:** One cycle is counted when the down switch is activated for 5-7 continuous seconds.

FIG. 37-1

## SYSTEM DIAGRAMS-Continued

### GPTLR ELECTRICAL VALUES & TORQUE SPECIFICATIONS

Solenoid Switch	12V	24V
Coil resistance:	5.4Ω @70°F. ±15%	20.1Ω @70°F. ±15%
Ampere:	2.2A	1.2A
Coil terminal torque: <b>10-15 lb-in</b> max.		
Contact terminal torque: <b>30-35 lb-in</b> max.		
<b>Solenoid Valves (A, S1, &amp; S2)</b>		
Coil resistance:	4Ω @ 70°F. ±15%	26.7Ω @ 70°F. ±15%
Ampere:	3A @ 12V (2.5A @10V)	.9A
Coil terminal torque: <b>15-45 lb-in</b> max.		
Valve cartridge torque: <b>25-30 lb-ft</b> max.		
Coil nut torque: <b>15-45 lb-in</b>		
<b>Solenoid Lock Valve</b>		
Coil resistance:	8Ω @ 70°F. ±15%	30Ω @ 70°F. ±15%
Ampere:	1.5A	0.8A
Coil nut torque: <b>3-4.5 lb-ft</b> max.		
Valve cartridge torque: <b>18.5-22 lb-ft</b> max.		
<b>Digital Cycle Counter</b>		
Input voltage	4V - 30V	4V - 30V
Ampere	<2mA	
<b>Ground Cable</b>		
Cap screw torque: <b>24 lb-ft</b> max.		

**TABLE 38-1**

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# BOLT TORQUES

## CAUTION

The torque values in the following table are provided for torquing grade 8 bolts on Liftgate mechanical parts. To prevent damage, never use the information in this table for torquing electrical or hydraulic hose connections on the pump assembly.

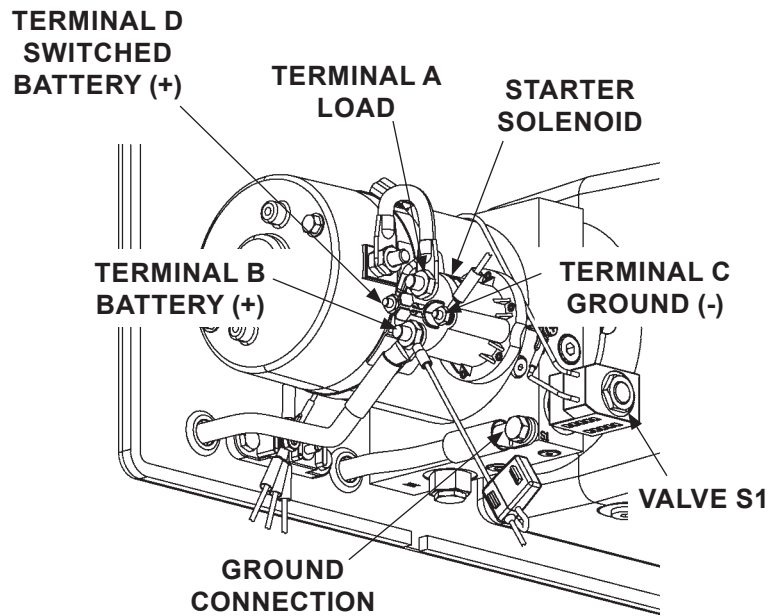
GRADE 8 BOLT TIGHTENING TORQUE	
DIAMETER & THREAD PITCH	TORQUE
1/4"-20	10-14 LB-FT
1/4"-28	11-16 LB-FT
5/16"-18	20-29 LB-FT
5/16"-24	22-33 LB-FT
3/8"-16	35-52 LB-FT
3/8"-24	40-59 LB-FT
7/16"-14	56-84 LB-FT
7/16"-20	62-93 LB-FT
1/2"-13	85-128 LB-FT
1/2"-20	96-144 LB-FT
9/16"-12	123-184 LB-FT
9/16"-18	137-206 LB-FT
5/8"-11	170-254 LB-FT
5/8"-18	192-288 LB-FT
3/4"-10	301-451 LB-FT
3/4"-18	336-504 LB-FT

TABLE 39-1

# TROUBLESHOOTING

## MOTOR WILL NOT RUN

1. Connect voltmeter between starter solenoid terminal **B** and ground connection on pump (**FIG. 40-1**). Verify that full battery voltage is at **B**. Recharge the batteries if voltmeter indicates less than 12.6 volts DC, or 25.2 volts DC for a 24 volt system.



GRAVITY DOWN POWER UNIT  
FIG. 40-1

2. Touch a jumper wire to terminals **B & D (FIG. 40-1)**. If motor runs, check control switch, the switch connections, and white wire. Check and correct wiring connections or replace the control switch.
3. Touch heavy jumper cables to terminals **A & B (FIG. 40-1)**.
  - a. If motor runs, replace the starter solenoid.
  - b. If motor does not run, repair or replace the pump motor.

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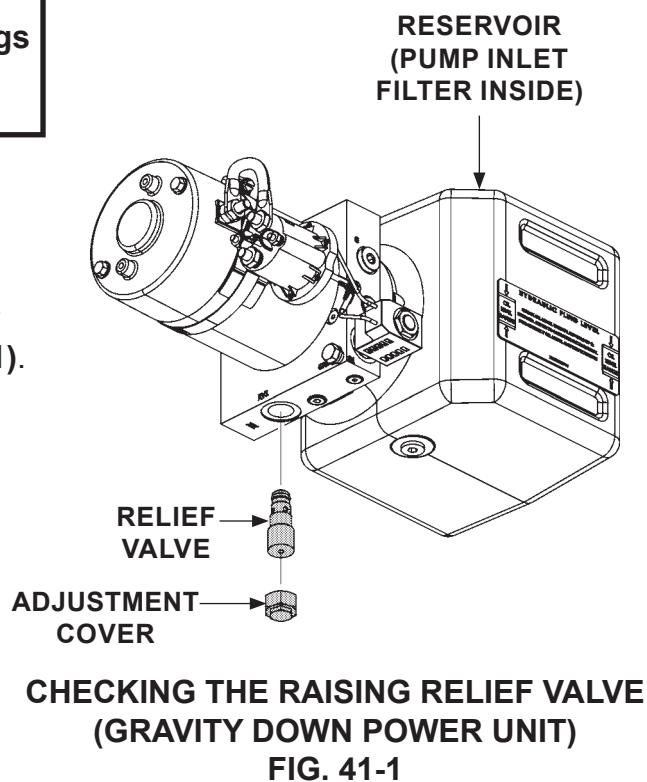
## PLATFORM WILL NOT RAISE, BUT MOTOR RUNS

1. Do the **CHECKING HYDRAULIC FLUID** procedure in this manual. If necessary, add hydraulic fluid.
2. Check for structural damage and replace worn parts.

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

3. Check pump inlet filter in the reservoir (**FIGS. 41-1**). Clean or replace filter, if necessary.
4. Check if pump relief valve is dirty. Clean or replace relief valve, if necessary (**FIG. 41-1**).

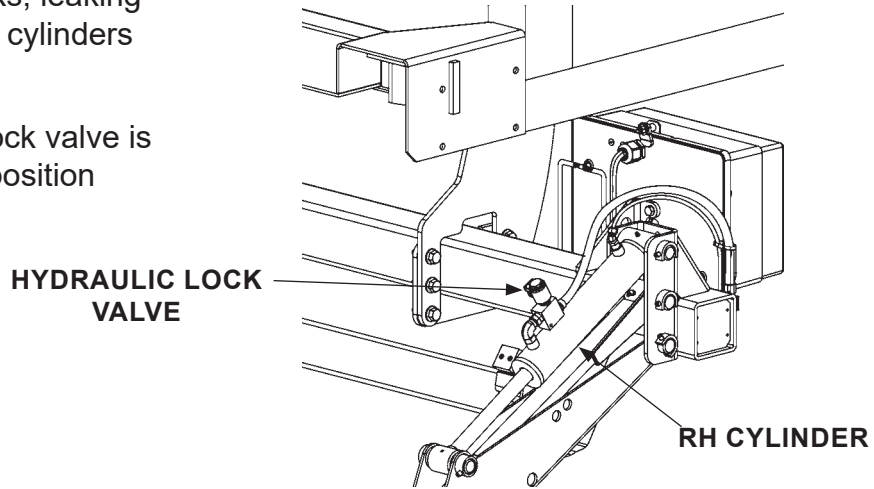


5. After replacing or reinstalling the pump relief valve, reset the valve to 2750 psi. See **Relief Valve Pressure Adjustment** in this manual.

## TROUBLESHOOTING - Continued

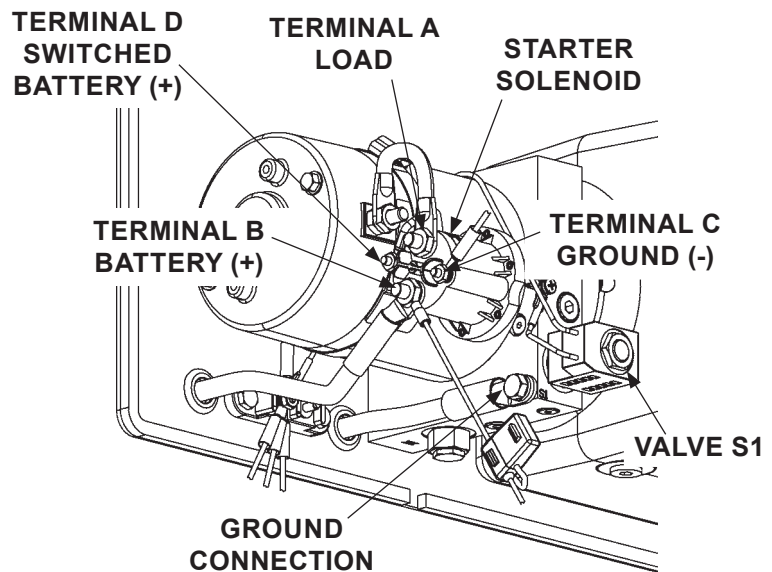
### PLATFORM RAISES BUT LEAKS DOWN

1. Check for external leaks, leaking lines and fittings at the cylinders and pump assembly.
2. Check that hydraulic lock valve is not stuck in the open position (**FIG. 42-1**).



**CHECKING HYDRAULIC LOCK VALVE**  
**FIG. 42-1**

3. Check if solenoid valve is constantly energized. Connect voltmeter negative (-) lead to ground (-) connection on pump and positive (+) lead to (+) terminal on valve A (**FIG. 42-2**). If voltmeter reads battery voltage, check for faulty wiring or toggle switch.



**GRAVITY DOWN POWER UNIT**  
**FIG. 42-2**

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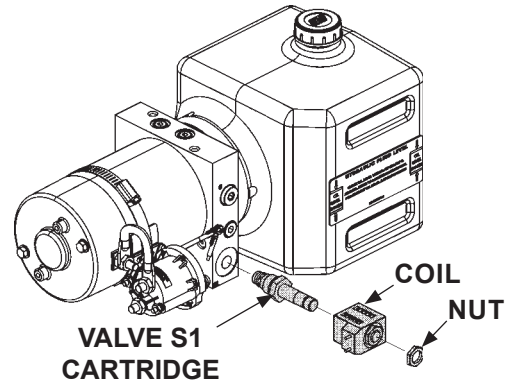
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## CAUTION

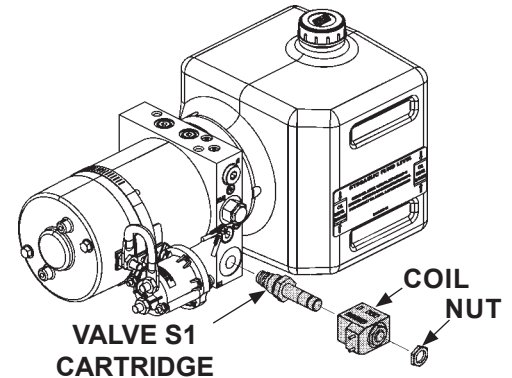
Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

4. Make sure platform is on the ground. Remove cartridge for solenoid valve S1 (FIGS. 43-1 and 43-2). Push on the plunger in the valve by inserting small screwdriver in the open end (FIG. 43-3). If the plunger does not move with a smooth, spring-loaded action (approximately 1/8"), replace the valve cartridge. **Reinstall cartridge and coil for valve S1. Torque valve cartridge to 25 - 30 lb-in and coil nut to 15 - 45 lb-in.**

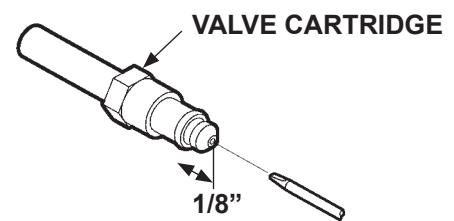
5. Check the hydraulic cylinders. With the platform at vehicle floor level, remove the line from the **LOWER** port on the cylinder (FIG. 43-4). Hold the control switch in the "UP" position for two seconds while you watch for hydraulic fluid at the **LOWER** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn. Replace seals or cylinders.



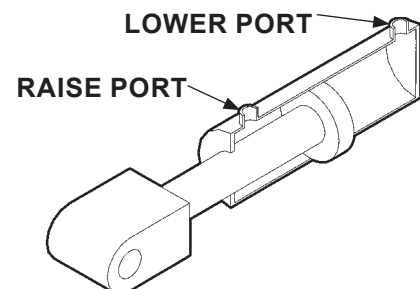
**REMOVING SOLENOID VALVE  
(GRAVITY DOWN POWER UNIT)  
FIG. 43-1**



**REMOVING SOLENOID VALVE  
(POWER DOWN POWER UNIT)  
FIG. 43-2**



**CHECKING SOLENOID VALVE  
FIG. 43-3**

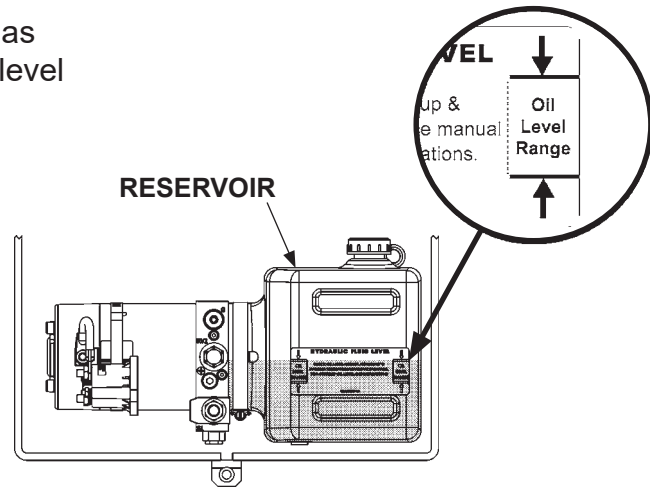


**FIG. 43-4**

## TROUBLESHOOTING - Continued

### PLATFORM RAISES PARTIALLY AND STOPS

1. Lower platform to the ground. See **OPERATION MANUAL**.
2. Use voltmeter to verify the battery voltage is a minimum 10.5 volts DC, or 21 volts DC for a 24 volt system, under load from pump motor.
3. Check the hydraulic fluid level in reservoir as follows. With platform on the ground, fluid level should be as shown in **FIGS. 44-1**.

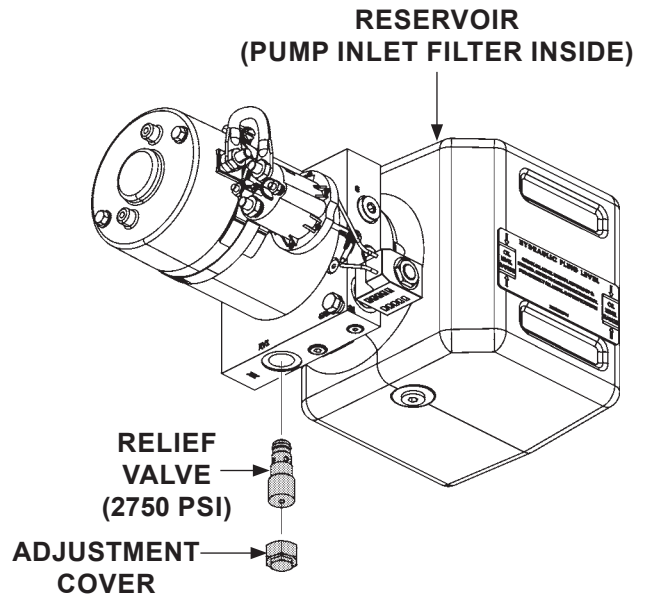


**POWER UNIT FLUID LEVEL**  
**FIG. 44-1**

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4. Check for structural damage and poor lubrication. Replace worn parts.
5. Check pump inlet filter in the reservoir (FIGS. 45-1 and 45-2). Clean or replace filter, if necessary.

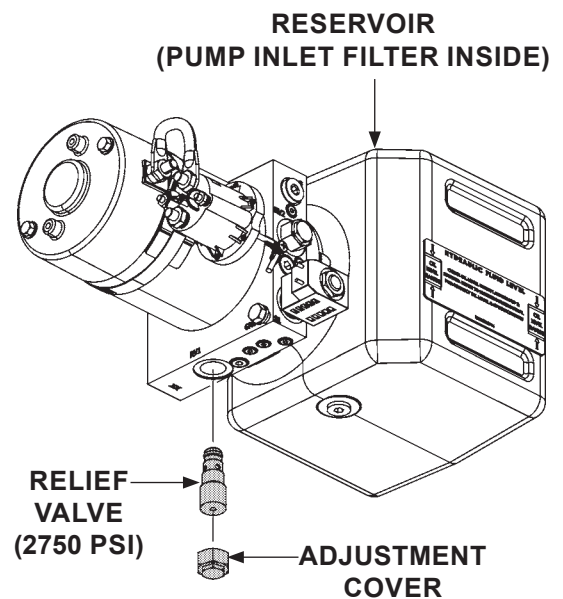


**CHECKING THE RAISING RELIEF VALVE  
(GRAVITY DOWN POWER UNIT)**  
FIG. 45-1

## CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

6. Check for dirty relief valve (FIGS. 45-1 and 45-2). Clean or replace relief valve, if necessary.
7. After replacing or reinstalling the relief valve, reset the valve to factory pressure settings as shown in FIGS. 45-1 and 45-2. See **Relief Valve Pressure Adjustment** in this manual.

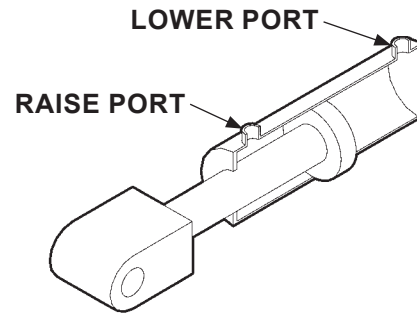


**CHECKING THE RAISING RELIEF VALVE  
(POWER DOWN POWER UNIT)**  
FIG. 45-2

## TROUBLESHOOTING - Continued

### PLATFORM RAISES PARTIALLY AND STOPS - Continued

8. Check the hydraulic cylinders. With the platform at vehicle floor level, remove the hydraulic line from the **LOWER** port on the cylinder (**FIG. 46-1**). Hold the control switch in the “**UP**” position for two seconds while you watch for hydraulic fluid at the **LOWER** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn. Replace seals.



**FIG. 46-1**

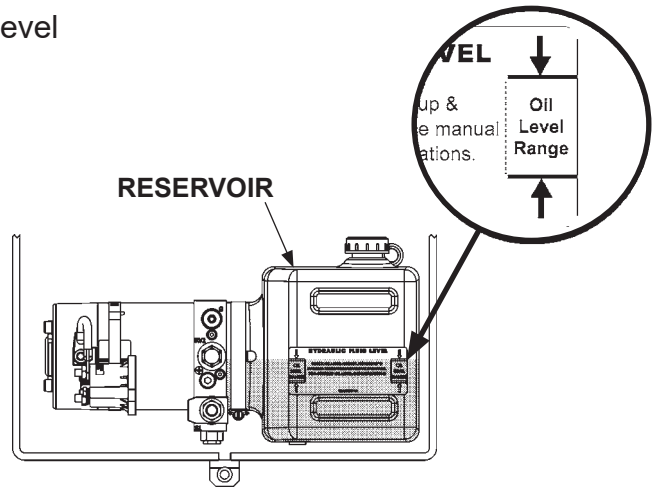
9. If pump cannot produce 2750 psi or lift the load capacity with a minimum of 12.6 volts available, or 25.2 volts DC for 24 volt system, the pump is worn and needs to be replaced.

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## LIFTGATE WILL NOT LIFT RATED CAPACITY

1. Lower platform to the ground. See **OPERATION MANUAL**.
2. Use voltmeter to verify the battery voltage is a minimum 10.5 volts DC, or 21 volts DC for a 24 volt system, under load from pump motor.
3. Check the hydraulic fluid level in reservoir as follows. With platform on the ground, fluid level should be as shown in **FIGS. 47-1**.

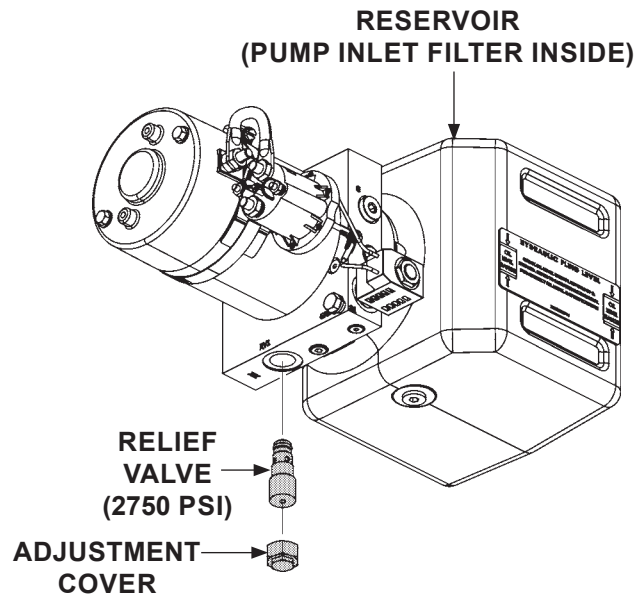


**POWER UNIT FLUID LEVEL  
FIG. 47-1**

# TROUBLESHOOTING - Continued

## LIFTGATE WILL NOT LIFT RATED CAPACITY - Continued

4. Check for structural damage and poor lubrication. Replace worn parts.
5. Check pump inlet filter in the reservoir (FIGS. 48-1 and 48-2). Clean or replace filter, if necessary.

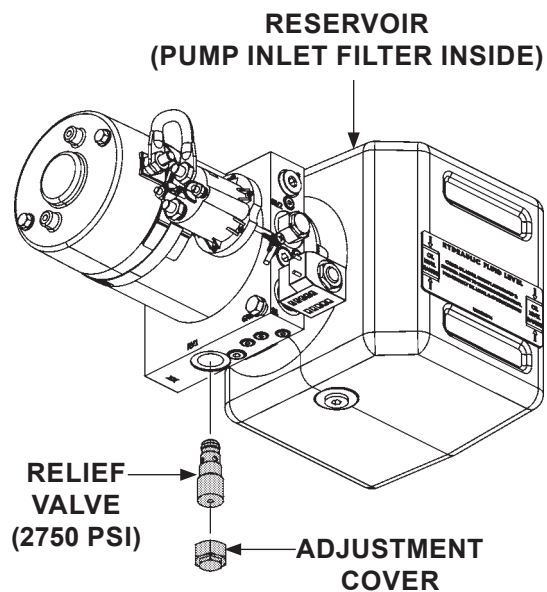


**CHECKING THE RAISING RELIEF VALVE  
(GRAVITY DOWN POWER UNIT)  
FIG. 48-1**

**CAUTION**

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

6. Check for dirty relief valve (FIGS. 48-1 and 48-2). Clean or replace relief valve, if necessary.
7. After replacing or reinstalling the relief valve, reset the valve to factory pressure settings as shown in FIGS. 48-1 and 48-2. See **Relief Valve Pressure Adjustment** in this manual.



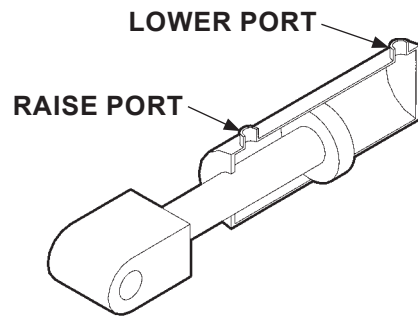
**CHECKING THE RAISING RELIEF VALVE  
(POWER DOWN POWER UNIT)  
FIG. 48-2**

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8. Check the hydraulic cylinder. With the platform at vehicle floor level, remove the hydraulic line from the **LOWER** port on the cylinder (**FIG. 49-1**). Hold the control switch in the “**UP**” position for two seconds while you watch for hydraulic fluid at the **LOWER** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn. Replace seals.



**FIG. 49-1**

9. If pump cannot produce 2750 psi or lift the load capacity with a minimum of 12.6 volts available, or 25.2 volts DC for 24 volt system, the pump is worn and needs to be replaced.

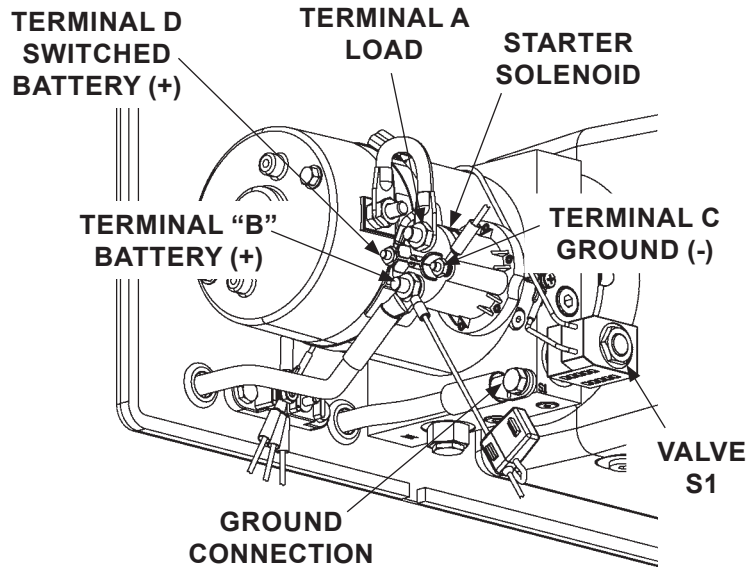
# TROUBLESHOOTING - Continued

## PLATFORM WILL NOT LOWER, LOWERS TOO SLOWLY, OR TOO QUICKLY

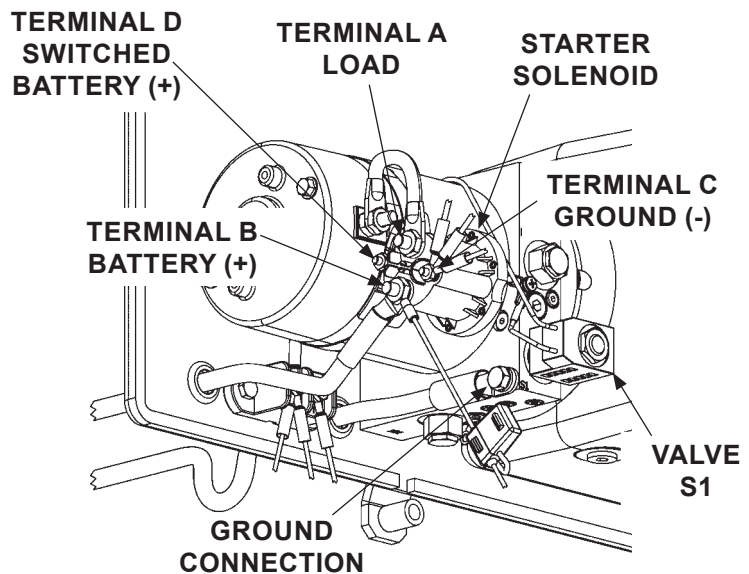
1. Connect voltmeter (+) lead to starter solenoid terminal **B** and the (-) lead to the ground wires connection on pump (**FIG. 50-1**). Verify that full battery voltage is at **B**. Recharge the battery if voltmeter indicates less than 12.6 volts DC, or 25.2 volts DC for 24 volt system.

2. Check for structural damage or poor lubrication. Replace worn parts.

3. Check if the **D** terminal and solenoid valve **S1** are getting battery voltage (**FIG. 50-2**). Connect voltmeter negative (-) lead to ground (-) wires connection on pump and positive (+) lead to the **D** terminal (**FIG. 50-2**). Hold control switch in the "DOWN" position. Then, connect voltmeter (+) lead to (+) terminal on the solenoid valve **S1** (**FIG. 50-2**). If voltmeter shows a much lower reading than +12.6 volts DC, or 25.2 volts DC for 24 volt system, or a reading of 0 volts, check for faulty control switch and wiring. battery cable, ground wire connections in pump assembly, and pump motor.



GRAVITY DOWN POWER UNIT  
FIG. 50-1



POWER DOWN POWER UNIT  
FIG. 50-2

## CAUTION

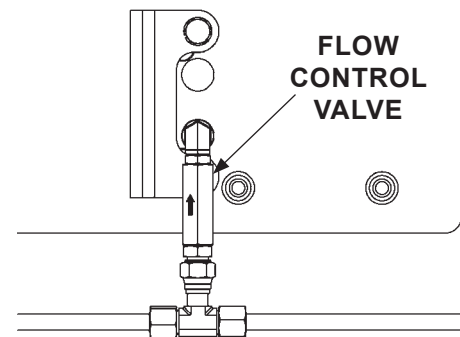
Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

## CAUTION

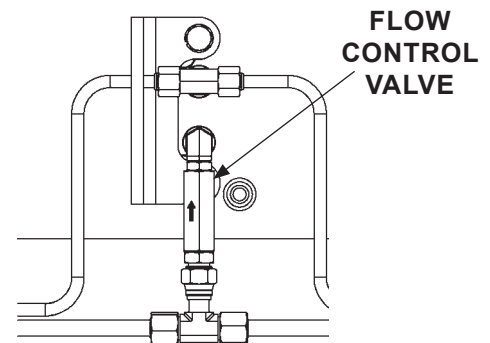
To prevent damage to flow control valve, do not disassemble the valve.

4. Make sure platform is on the ground. Check the flow control valve as follows. Remove flow control valve (**FIGS. 51-1 and 51-2**). Ensure the flow control valve operates with a smooth spring-loaded action. Check for debris inside the valve. Clean or replace the flow control valve, if necessary. Reinstall flow control valve (if good) or install a replacement.

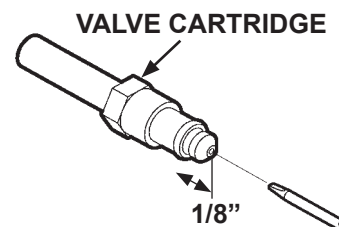
5. Check the lowering solenoid valve as follows. Check if filtering screen is plugged. Clean carefully if required. Push on the plunger in the valve by inserting small screwdriver in the open end (**FIG. 51-3**). If the plunger does not move with a smooth, spring-loaded action (approximately 1/8"), replace the valve cartridge. **Reinstall lowering solenoid valve (if good) or install a replacement. Torque valve cartridge to 25-30 lb-ft and hex nut to 30 lb-in.**



**FLOW CONTROL VALVE ON BACK OF GRAVITY DOWN PUMP ASSEMBLY**  
**FIG. 51-1**



**FLOW CONTROL VALVE ON BACK OF POWER DOWN PUMP ASSEMBLY**  
**FIG. 51-2**



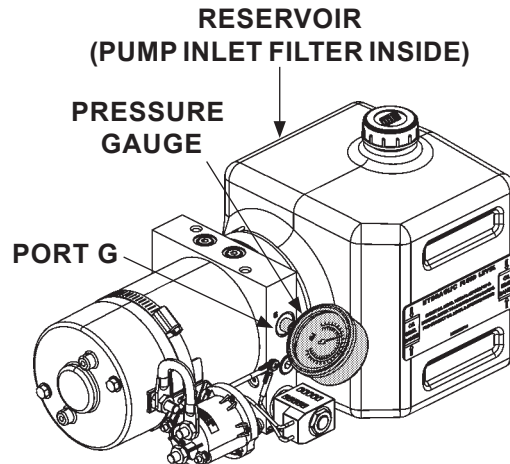
**CHECKING SOLENOID VALVE**  
**FIG. 51-3**

# TROUBLESHOOTING - Continued

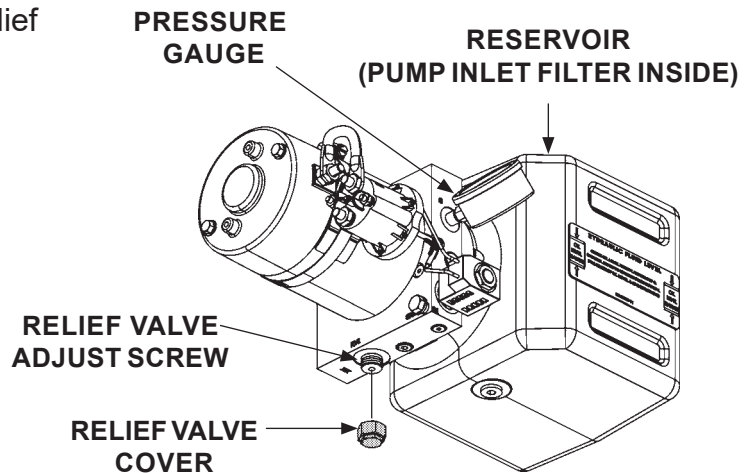
## RELIEF VALVE PRESSURE ADJUSTMENT - GRAVITY DOWN

**NOTE:** The relief valve pressure is set at the factory; however, if a pressure check shows incorrect reading, use the following procedure to set the pressure to the correct reading.

1. Lower platform to the ground.
2. Remove plug from gauge port G (FIG. 52-1). Attach 0-4000 PSI pressure gauge to the gauge port (FIG. 52-1).
3. Remove cover for access to relief valve (FIG. 52-2).
4. Hold the control switch in the **UP** position. Slowly adjust the relief valve until the gauge reads 2750 PSI (FIG. 52-2).
5. After adjustments are complete, remove gauge (FIG. 52-1). Then, reinstall relief valve cover (FIG. 52-2).



**INSTALLING PRESSURE GAUGE  
(GRAVITY DOWN POWER UNIT)  
FIG. 52-1**



**ADJUSTING RAISING RELIEF VALVE  
(GRAVITY DOWN POWER UNIT)  
FIG. 52-2**

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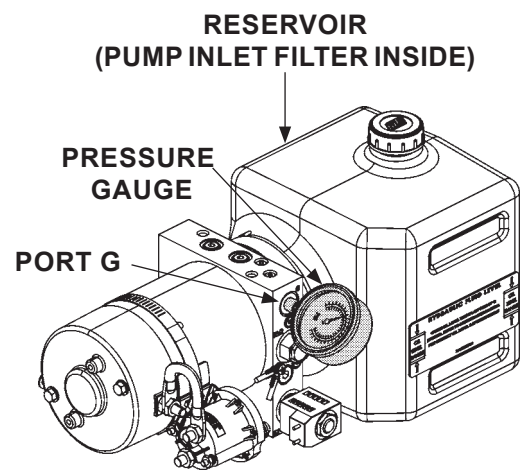
## RELIEF VALVE PRESSURE ADJUSTMENT - POWER DOWN

### CAUTION

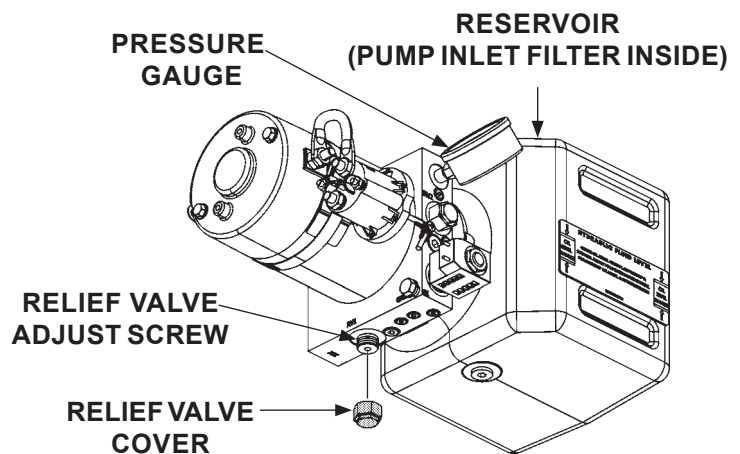
Keep dirt, water and other contaminants from entering the hydraulic system. Before removing hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

**NOTE:** The relief valve pressure is set at the factory; however, if a pressure check shows incorrect reading, use the following procedure to set the pressure to the correct reading.

1. Lower platform to the ground.
2. Remove plug from gauge port (FIG. 53-1). Attach 0-4000 PSI pressure gauge in the gauge port G (FIG. 53-1).
3. Remove cover for access to relief valve (FIG. 53-2).
4. Hold the control switch in the "UP" position. Slowly adjust the relief valve until the gauge reads 2750 PSI (FIG. 53-2).
5. After adjustments are complete, remove gauge (FIG. 53-1). Then, reinstall relief valve cover (FIG. 53-2).



**INSTALLING PRESSURE GAUGE  
(GRAVITY DOWN POWER UNIT)  
FIG. 53-1**



**ADJUSTING RAISING RELIEF VALVE  
(POWER DOWN POWER UNIT)  
FIG. 53-2**

## **TROUBLESHOOTING - Continued**

### **CHECKING THE POWER DOWN MODULE**

#### **PLATFORM WILL NOT RAISE**

1. Set control switch to **UP** position.
2. Check for battery voltage (12.6 volts DC, or 24.8 volts DC for a 24 volt system) on white wire (+) connected to Power Down Module terminal #1. If no voltage, check supply voltage to control switch.
3. Check and verify valve S1 is energized.
4. Check for battery voltage (12.6 volts DC, or 24.8 volts DC for a 24 volt system) on white wire (+) connected to solenoid switch coil positive terminal. If no voltage, check wire connection to solenoid. If connection is good, replace Power Down Module.

#### **POWER DOWN NOT FUNCTIONING, GRAVITY DOWN ONLY, PLATFORM NOT LOWERING, OR LOWERING TOO SLOWLY**

1. Set control switch to **DOWN** position.
2. Check for battery voltage on black wire (+) (12.6 volts DC, or 24.8 volts DC for a 24 volt system) connected to the Power Down Module terminal #2. If no voltage, check supply voltage to control switch.
3. Check and verify valve S2 and lock valve are energized.
4. Check for battery voltage on white wire (+) (12.6 volts DC, or 24.8 volts DC for a 24 volt system) connected to solenoid switch coil positive terminal. If no voltage, check and verify Power Down Module black wire (-) ground connection. Verify solenoid switch black ground wire (-) is secure. If connections are good, replace Power Down Module.

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