

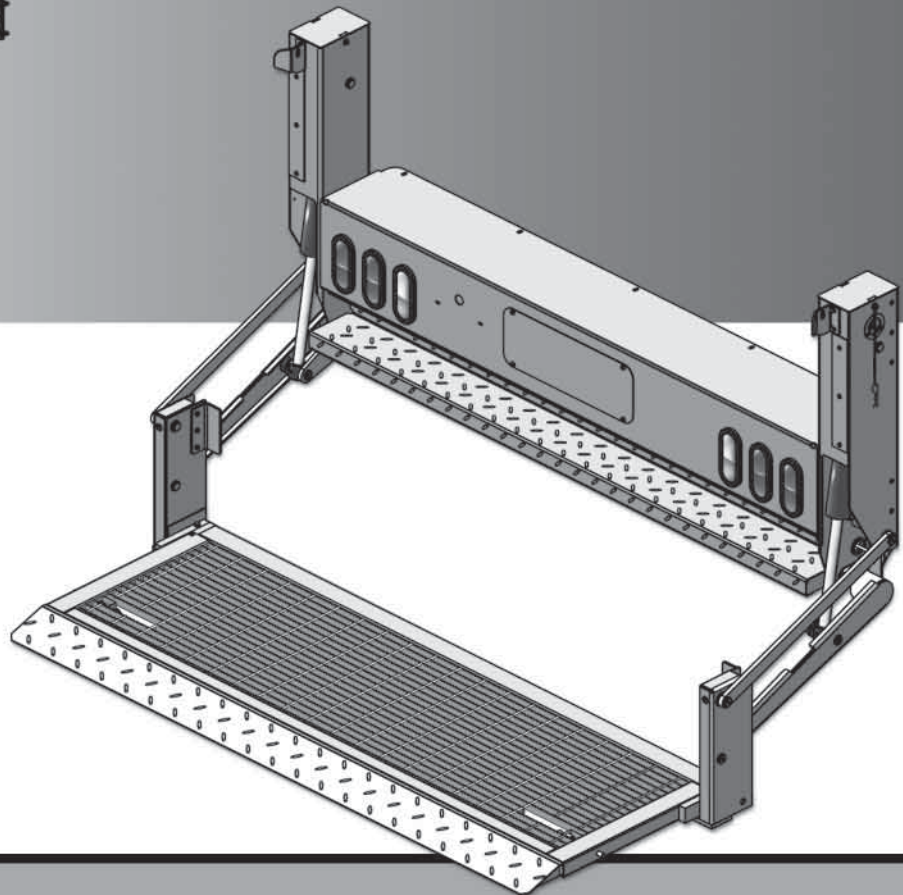
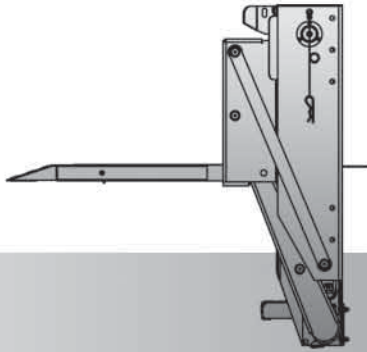
MAXON®

M-22-06
REV. A
JUNE 2025

MAINTENANCE MANUAL

MLA

MLA-66 & MLA-86





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.

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.)

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. 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-22-06 REVISION A

PAGE	DESCRIPTION OF CHANGE
Cover	Updated REV and date of release.
17	Increased quantity (8) of WARNING decal (P/N 212428-01) on WARNINGS, CAUTIONS & INSTRUCTIONS DECAL SHEET (P/N 212428-01).
18	Updated DECALS and PLATES to show SAFETY INSTRUCTIONS DECAL (P/N 212502-01).
20	Deleted solenoid valve check mark from lowering function, TABLE 20-1.

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 known to 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.

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 housing cover.
- 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.

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:

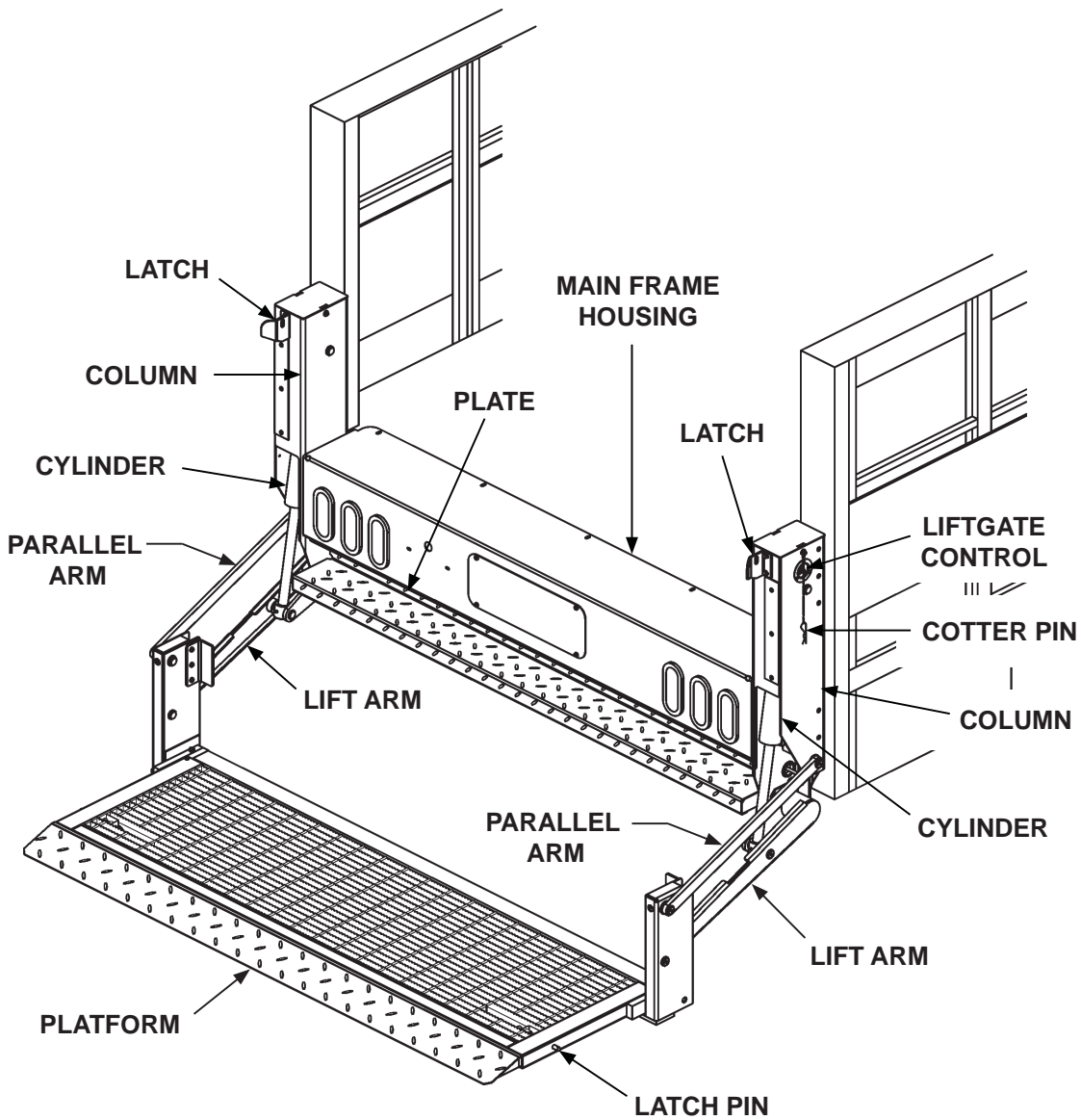
MAXON LIFT CORP. Customer Service
11921 Slauson Ave., Santa Fe Springs, CA 90670

Online: www.maxonlift.com
Express Parts Ordering: Phone (800) 227-4116 ext. 4345
Email: Ask your Customer Service representative

LIFTGATE TERMINOLOGY

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**MLA LIFTGATE
FIG. 8-1**

PERIODIC MAINTENANCE

PERIODIC MAINTENANCE CHECKS

WARNING

Never operate the Liftgate with parts loose or missing.

NOTE: Photocopy the PM CHECKLIST on the next page to help keep track of periodic maintenance on the Liftgate. Keep completed form with maintenance records.

NOTE: When replacing parts, refer to the Parts Portal on the Maxon website for genuine MAXON replacement parts.

Monthly

- Lube all grease fittings with 2 to 3 pumps of grease.
- Check state of charge and condition of batteries and hold-down fasteners.

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, drain the oil and flush the system. Refill the reservoir with recommended **ISO 32** oil. See **TABLE 12-1** for recommended brands **ISO 32** oil. Keep track of the grade of hydraulic fluid in the pump reservoir. Never mix two different grades of fluid.
- Check lines and fittings for chaffing and fluid leaks. Replace if necessary.
- Check electrical wiring for chaffing and make sure wiring connections are tight and free of corrosion, and coated with electrical sealant (EP-03, REV. H).
- Check that all **WARNING** and **instruction decals** are in place and legible.
- Check for loose or missing nuts, bolts, covers, roll pins, screws and pins.
- Check that platform latch pin and pin latch mechanisms work correctly and no parts are missing.

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 the Liftgate, clean it off. If cleaning platform, ensure inside columns, runners and slide pads are free of corrosion, residue, dirt and debris.

PERIODIC MAINTENANCE - Continued

Annually or 5000 Cycles (whichever occurs first)

- Visually check the entire Liftgate for excessively worn parts and broken welds, especially check the platform hinge pins for excessive wear and broken welds.
- Perform all **Monthly and Quarterly Maintenance** checks.

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PREVENTATIVE MAINTENANCE (PM) CHECKLIST

PM Interval: 3 Months

Date: ____ / ____ / ____

Equipment: _____

W/O # _____

Location: _____

Mechanic: _____

Serial # _____

Model # _____

Check Appropriate Box. "□"

MAXON Monthly Liftgate Preventative Maintenance (PM) Procedures				
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	1	Add 2-3 pumps grease to grease fittings monthly.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	2	Check batteries: fully charged, load test, corrosion, cables, and hold downs.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	3	Check hydraulic fluid level.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	4	Inspect entire Liftgate for worn parts or broken welds.
MAXON Quarterly / 1250 Cycles Liftgate Preventative Maintenance (PM) Procedures				
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	1	Verify if the Monthly, Quarterly or Annual PM is due by checking the PM sticker on the curb side Liftgate column.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	2	Check for oil leaks at: cylinders, valves, and fittings.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	3	Check for damage: platform, column, runners and hydraulic tubes.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	4	Check for loose or missing nuts, bolts, covers, roll pins, screws and pins.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	5	Check for cracked welds at: columns, platform, main housing and vehicle door frame.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	7	Check platform pins and couplers.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	9	Check that platform unlatches, unfolds & folds smoothly & latches securely.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	10	Check switches and wiring connections on Liftgate as well as pump inside main housing. Also check ground straps.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	11	Check the gear pump for unusual noise, i.e. squealing or extreme RPM output.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	12	Checking Oil Level: With the platform unfolded and on the ground, oil level should be as shown in Installation Manual, " CHECKING HYDRAULIC FLUID ". Check for contamination, change if needed.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	13	Check batteries: fully charged, load test, corrosion, cables, and hold downs.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	14	Check all charging and ground cable connections.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	15	Complete a new PM sticker and install it on the curb side column of the Liftgate. The next PM date is 3 months from the completed PM date. Indicate on the PM sticker if 1 st , 2 nd , 3 rd or 4 th PM.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	16	Check that platform pin latch and platform latch pin work correctly and no parts are missing.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	18	Check clearance between main housing & platform. Check platform for cracks, holes, and bends on the load carrying surfaces and side plates. Also, make sure carts stops (if equipped) are undamaged and operate smoothly.
MAXON Annual / 5000 Cycles Liftgate Preventative Maintenance (PM) Procedures				
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	18	Change hydraulic fluid.
<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Repair required	<input type="checkbox"/> Corrected	19	Inspect entire Liftgate for worn parts or broken welds.

For more detailed information, refer to the Parts Portal on the Maxon website for genuine **MAXON** replacement parts.

PERIODIC MAINTENANCE - Continued

CHECKING HYDRAULIC FLUID

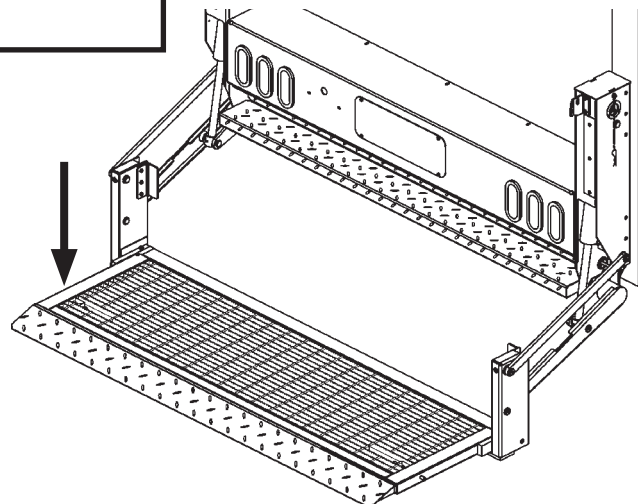
CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir breather cap and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination. Never mix synthetic fluids with conventional hydraulic fluids. Hydraulic system must be purged if the fluids are mixed.

CAUTION

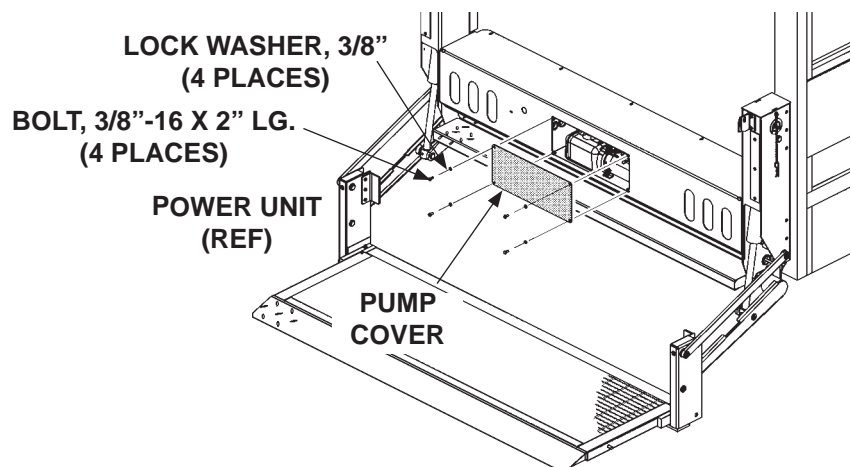
Hydraulic system is filled at the factory with correct amount of oil. It is unnecessary to add more oil except as required for periodic maintenance of the Liftgate. See TABLE 12-1 for recommended brands ISO 32 oil.

1. Unfold and lower platform to the ground (**FIG. 12-1**). Refer to **Operation Manual** for detailed operating instructions.



PLATFORM OPEN ON THE GROUND
FIG. 12-1

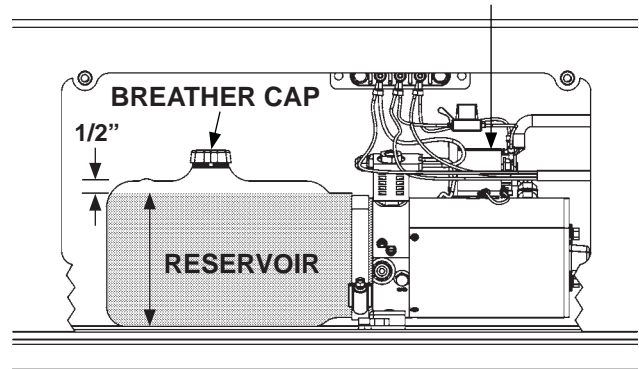
2. Unbolt and remove pump cover from main housing as shown in **FIG. 12-2**.



REMOVE PUMP COVER
FIG. 12-2

CHECKING HYDRAULIC FLUID - Continued

3. Check the hydraulic fluid level in reservoir as follows. With platform on the ground, level should be as shown in **FIG. 13-1**.



**POWER UNIT FLUID LEVEL
(FIG. 13-1)**

4. If needed, add fluid to the reservoir as follows. Remove breather cap (**FIG. 13-1**). Fill the reservoir with hydraulic fluid to level shown in **FIG. 13-1**. Reinstall breather cap.

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

TABLE 13-1

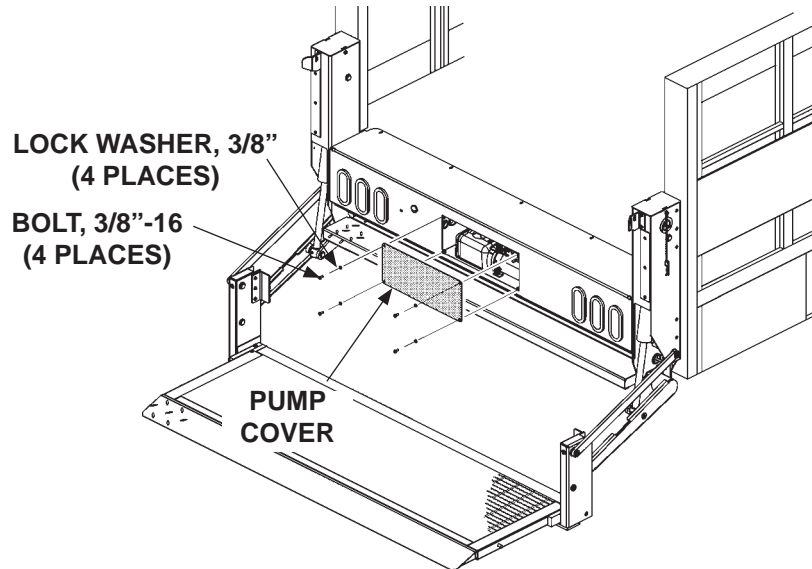
PERIODIC MAINTENANCE - Continued

CHECKING HYDRAULIC FLUID - Continued

CAUTION

Main housing pump cover must be secured correctly to prevent it from becoming a hazard.

5. Bolt on pump cover (FIG. 14-1).
Torque the 3/8"-16 cover bolts from
16 to 24 lb-ft.



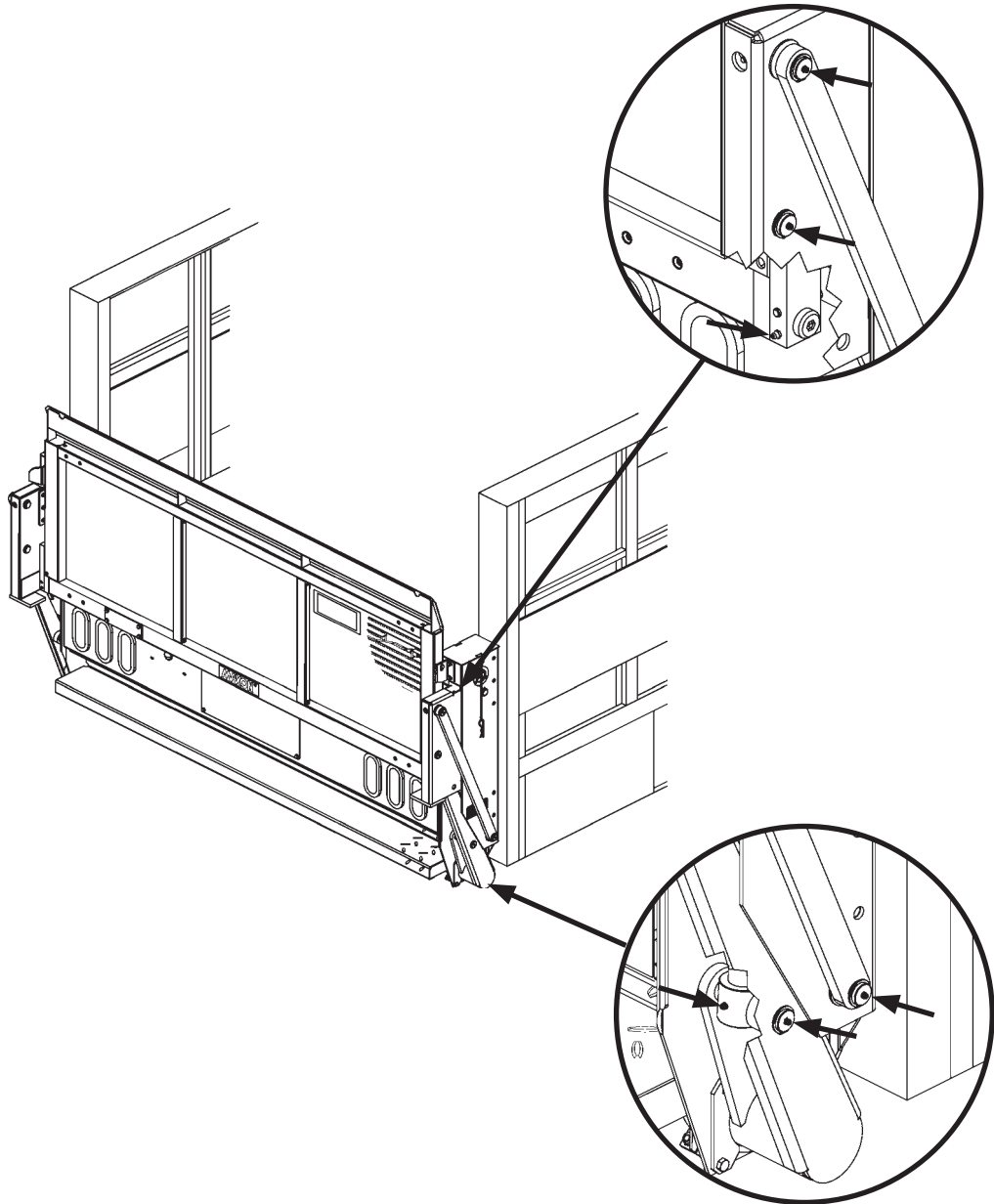
BOLT ON PUMP COVER
FIG. 14-1

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MLA LUBRICATION DIAGRAM

NOTE: Lube fittings are shown for the lift arms, bottom side of the platform and hydraulic cylinders. There are four lube fittings on the RH lift arm and four on the LH lift arm. Two lube fittings are located on the bottom of the platform. Additionally, one lube fitting is located on the cylinder mount for each hydraulic cylinder. Refer to the **PERIODIC MAINTENANCE CHECKS** and **PREVENTIVE MAINTENANCE CHECKLIST** for the recommended grease and maintenance interval.

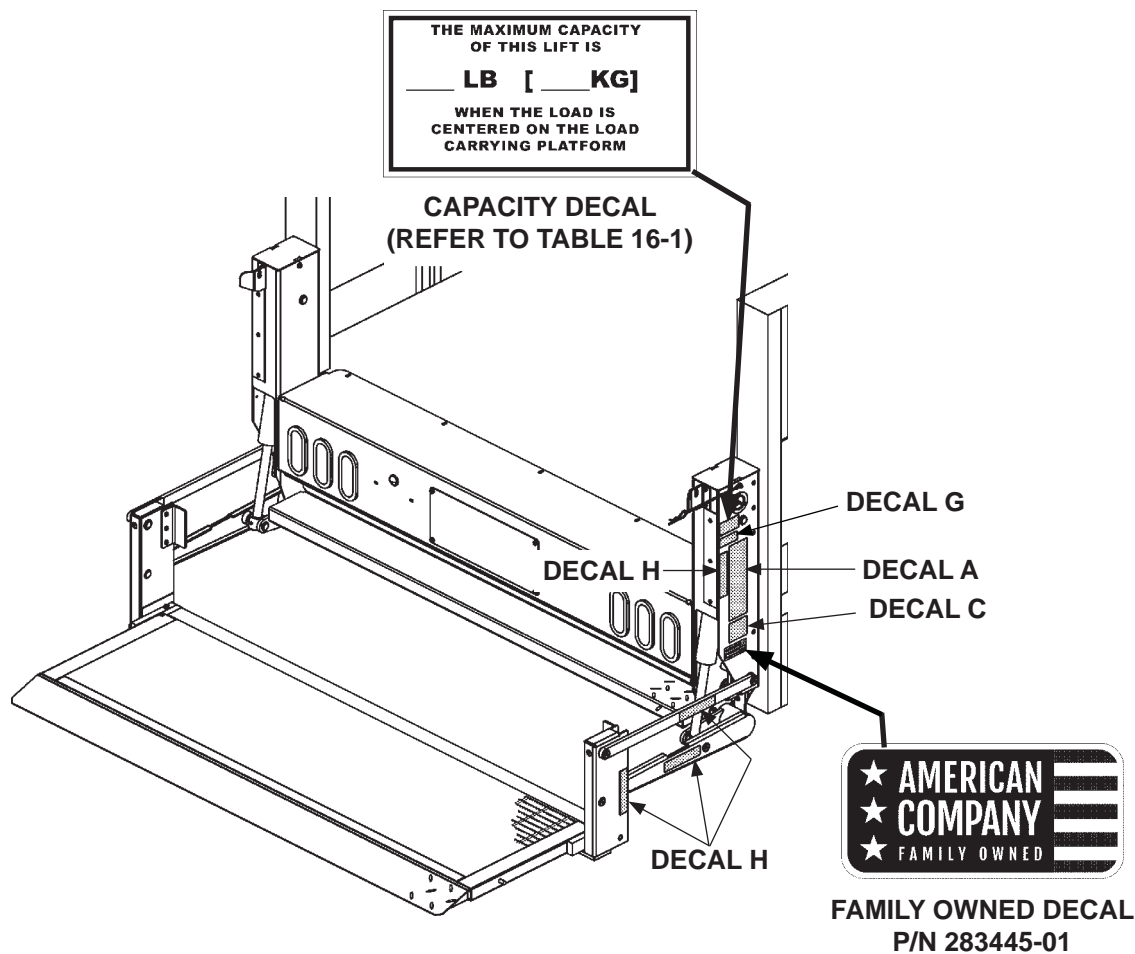


**LUBE FITTINGS
(RH SIDE SHOWN)
FIG. 15-1**

DECALS

NOTE: Decals are preinstalled at factory.
Decal location shown for reference.

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



MLA LIFTGATE (CURB SIDE)
FIG. 16-1

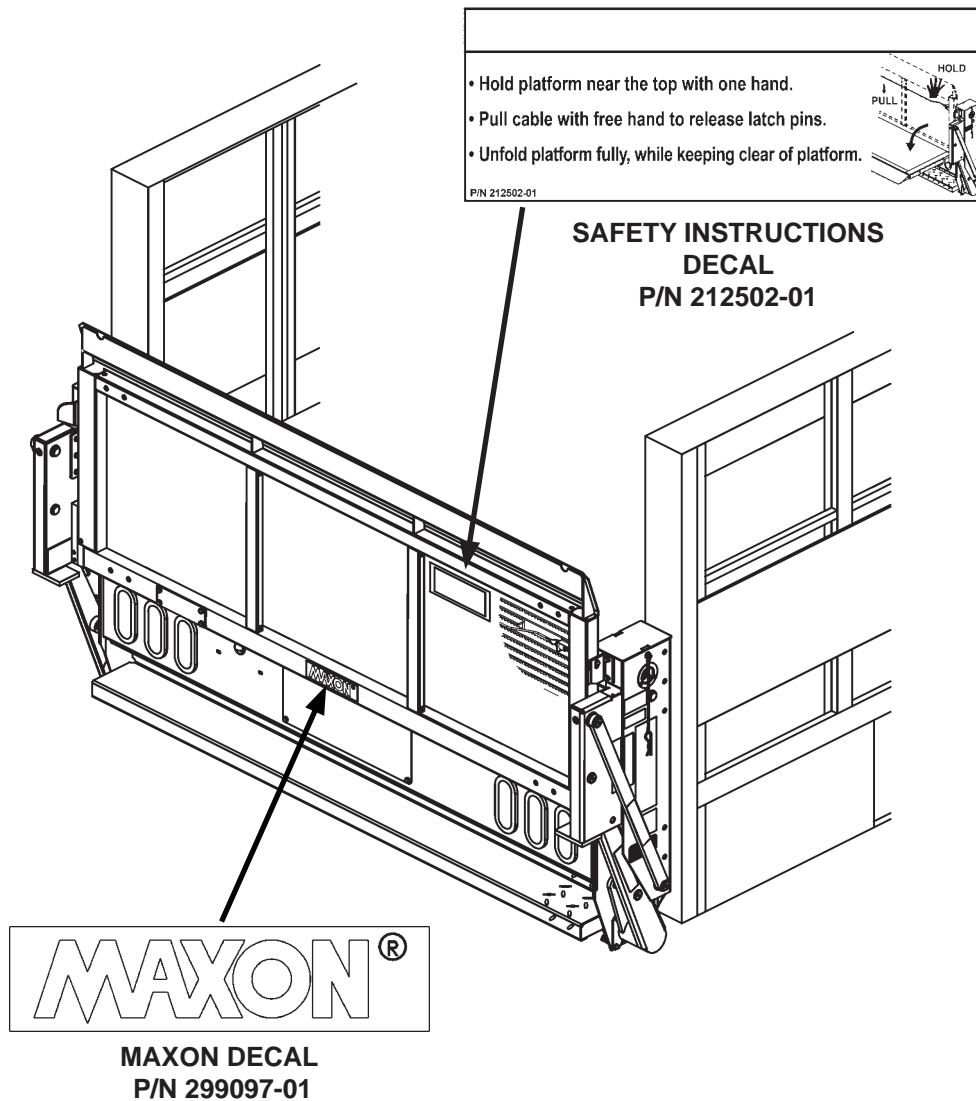
MODEL	ORDER P/N	DECAL "CAPACITY"
MLA-66	224751	1600 LBS. (725 KG)
MLA-86	220387	2000 LBS. (907 KG)

CAPACITY DECAL PART NUMBERS
TABLE 16-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

DECALS & PLATES

NOTE: Preferred decal layout is shown. Decals on the Liftgate are attached at the factory, except for the 24/7 SUPPORT decal. The 24/7 SUPPORT decal is placed at customer's or installer's preference.

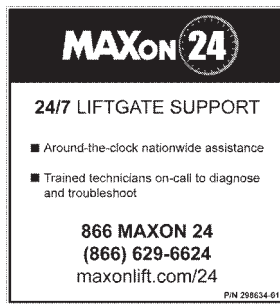


**MLA LIFTGATE
FIG. 18-1**

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DECALS & PLATES - Continued



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

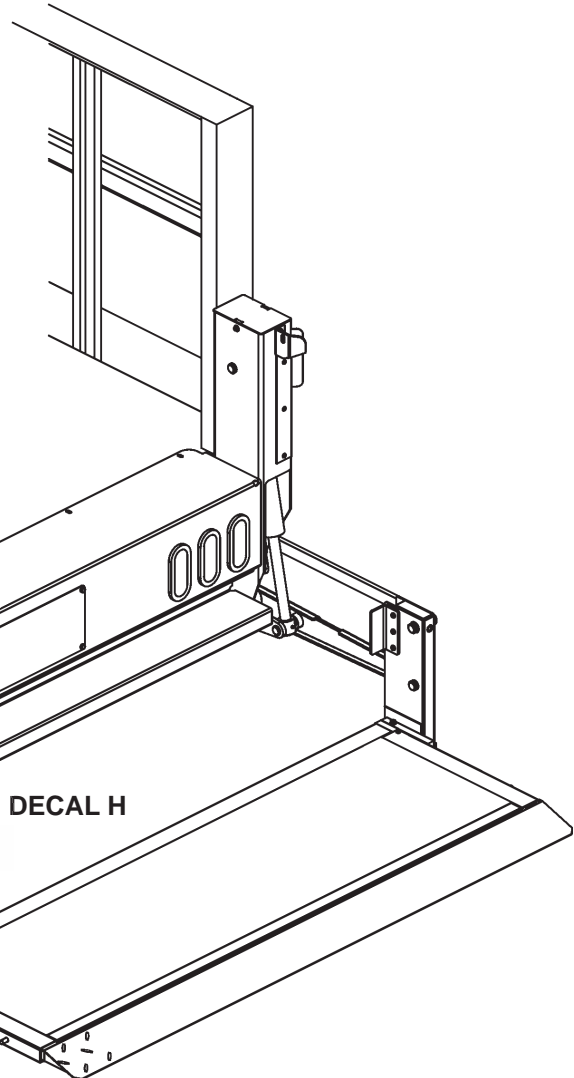
DECAL F
DECAL E
DECAL D
DECAL B



**QR PARTS DECAL
P/N 212431-01**



**SERIAL PLATE
(REF)**

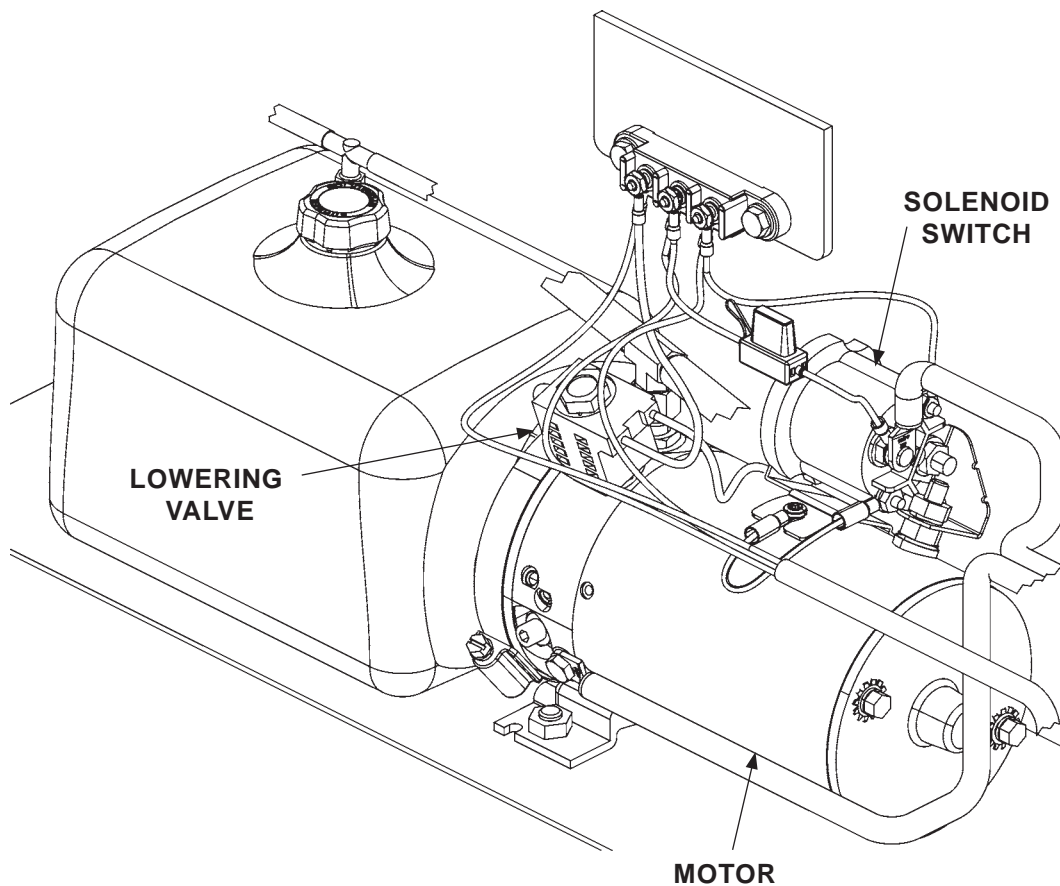


**MLA LIFTGATE (STREET SIDE)
FIG. 19-1**

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

SYSTEM DIAGRAMS

PUMP MOTOR & VALVE OPERATION



POWER UNIT
FIG. 20-1

POWER UNIT MOTOR & VALVE OPERATION			
LIFTGATE FUNCTION	REMOTE VALVE OPERATION (✓ MEANS ENERGIZED)		
	MOTOR	LOWERING VALVE	SOLENOID SWITCH
RAISE	✓		
LOWER		✓	
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC			

TABLE 20-1

SYSTEM DIAGRAMS - Continued **ELECTRICAL & HYDRAULIC SCHEMATIC**

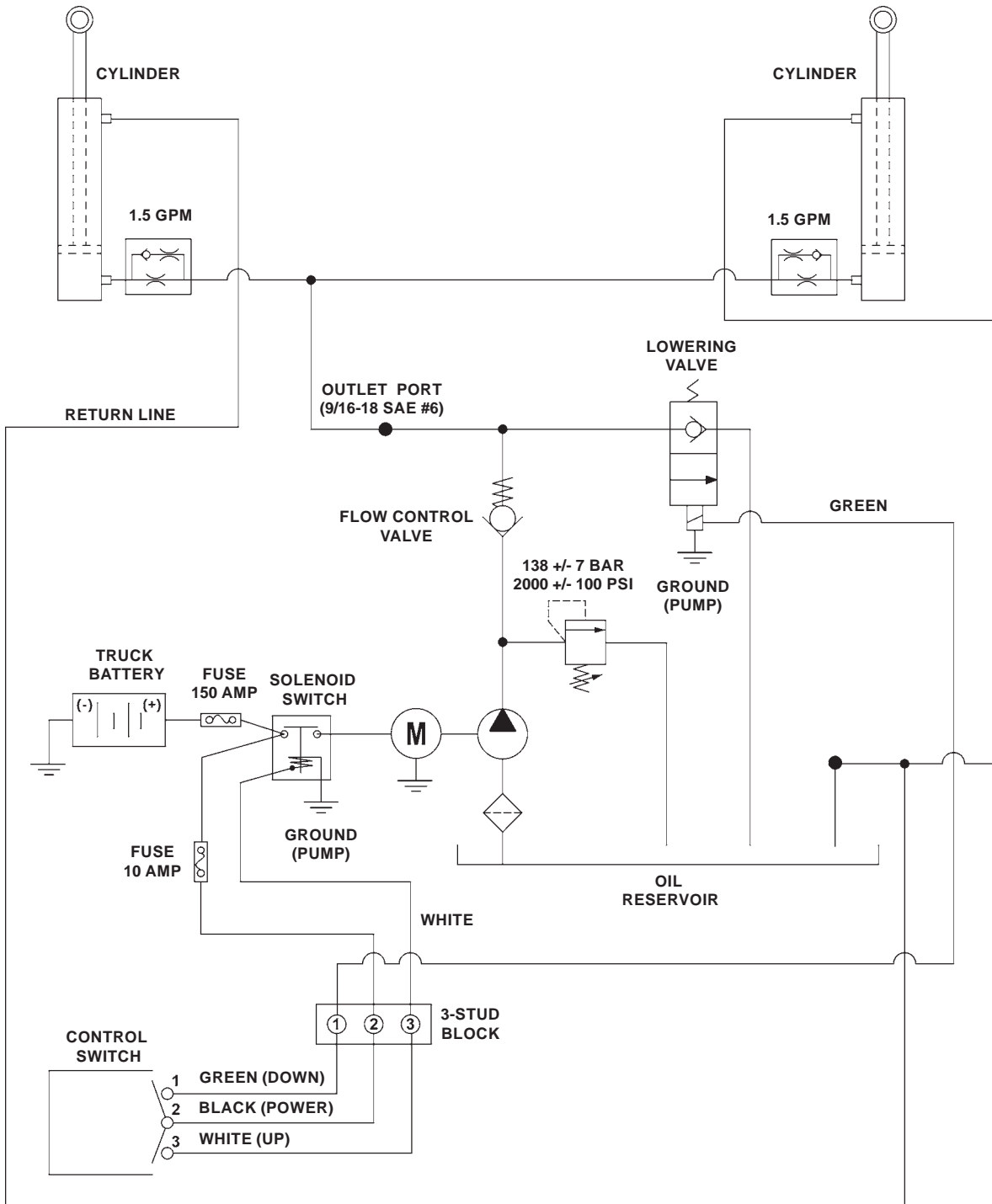


FIG. 21-1

TROUBLESHOOTING

TROUBLESHOOTING CHART

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CONDITION	POSSIBLE CAUSE	POSSIBLE SOLUTION
PLATFORM WILL NOT RAISE OR LOWER, MOTOR DOES NOT RUN	DEAD BATTERY, LOW VOLTAGE	ENSURE BATTERY IS CHARGED. CHECK BATTERY CONNECTIONS. REPLACE OR RECHARGE BATTERY.
	CORRODED OR LOOSE WIRE CONNECTIONS	CHECK BATTERY CONNECTIONS. REPLACE DEFECTIVE TERMINALS.
	BLOWN FUSES	REPLACE FUSES (10 AMP & 150 AMP).
	DEFECTIVE CONTROL SWITCH	REPLACE CONTROL SWITCH.
	STARTER SOLENOID SWITCH	REPLACE COIL. REPLACE CARTRIDGE.
	DEFECTIVE MOTOR	CHECK BATTERY VOLTAGE. CHECK FOR LOOSE CONNECTIONS.
MOTOR RUNS, PLATFORM WILL NOT LOWER	STRUCTURAL DAMAGE	REPLACE DEFECTIVE PARTS.
	DEFECTIVE CONTROL SWITCH	REPLACE CONTROL SWITCH.
	DEFECTIVE LOWERING VALVE COIL/CARTRIDGE	REPLACE COIL. REPLACE CARTRIDGE.
	DEFECTIVE FLOW CONTROL VALVE	REPLACE FLOW CONTROL VALVE.
	LOW BATTERY VOLTAGE	ENSURE BATTERY IS CHARGED. CHECK BATTERY CONNECTIONS. REPLACE OR RECHARGE BATTERY.
	DEFECTIVE PUMP AND MOTOR	REPLACE POWER UNIT.
FOAMING OIL	AIR IN HYDRAULIC HOSES	CHECK & ADJUST HYDRAULIC LEVEL.
	DEFECTIVE OR LOOSE FLUID RETURN TUBE	REMOVE RESERVOIR AND CHECK TUBE POSITION. RESET TUBE OR REPLACE IF DEFECTIVE.
	LOW HYDRAULIC FLUID LEVEL	FILL RESERVOIR.
PLATFORM RAISES PARTIALLY & STOPS	LOAD CAPACITY EXCEEDED	VERIFY LOAD CAPACITY ADJUST LOAD
	STRUCTURAL DAMAGE	REPLACE DEFECTIVE PARTS
	LOW BATTERY VOLTAGE	ENSURE BATTERY IS CHARGED CHECK BATTERY CONNECTIONS REPLACE OR RECHARGE BATTERY
	LOW HYDRAULIC PRESSURE	FILL RESERVOIR CHECK PUMP & MOTOR

TABLE 22-1

TROUBLESHOOTING - Continued

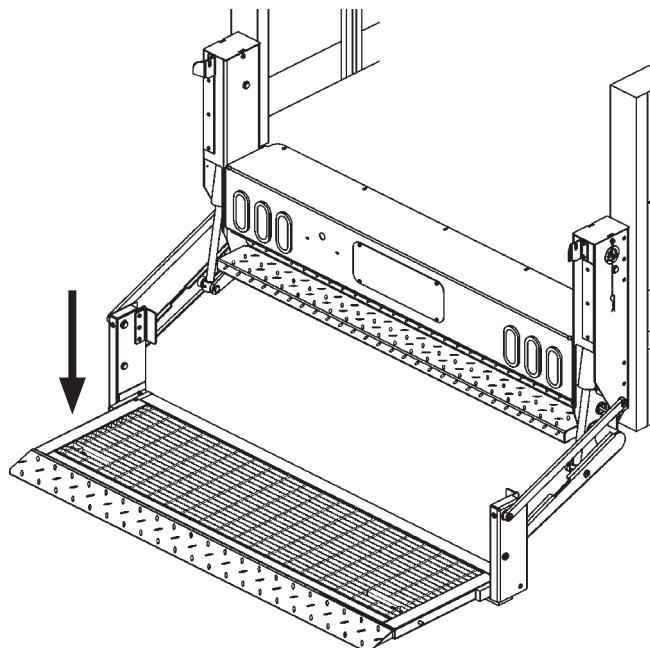
CONDITION	POSSIBLE CAUSE	POSSIBLE SOLUTION
PLATFORM WILL NOT OPEN	PLATFORM IS LATCHED	UNLATCH PLATFORM
MOTOR RUNS, PLATFORM WILL NOT RAISE OR LIFT RATED CAPACITY, OR LEAKS DOWN WHEN CONTROL SWITCH RELEASED	LOAD CAPACITY EXCEEDED	VERIFY LOAD CAPACITY. ADJUST LOAD.
	STRUCTURAL DAMAGE	REPLACE DEFECTIVE PARTS.
	LOW HYDRAULIC FLUID LEVEL	FILL RESERVOIR.
	LOW BATTERY VOLTAGE	ENSURE BATTERY IS CHARGED. CHECK BATTERY CONNECTIONS. REPLACE OR RECHARGE BATTERY.
	DIRTY OR DEFECTIVE LOWERING VALVE	CLEAN COIL & CARTRIDGE. REPLACE COIL. REPLACE CARTRIDGE.
	DEFECTIVE CYLINDER PISTON SEALS	INSPECT & REPLACE WORN PISTON SEALS. REPLACE CYLINDER.
	LOWERING VALVE STUCK OPEN OR PARTIALLY OPEN	WITH PLATFORM ON GROUND, REMOVE AND INSPECT LOWERING VALVE. CLEAN, OR REPLACE COIL OR CARTRIDGE, IF DEFECTIVE.
	COLD WEATHER CONDITIONS	REPLACE HYDRAULIC FLUID WITH APPROPRIATE COLD WEATHER FLUID. SEE TABLE 12-1.
	INCORRECT HYDRAULIC OIL	REPLACE HYDRAULIC OIL. SEE TABLE 12-1.
PLATFORM LOWERS SLOWER THAN NORMAL	DAMAGED OR KINKED HYDRAULIC HOSE	REPAIR OR REPLACE HOSE.
	CYLINDER ROD IS SCORED, PITTED OR BENT	REPLACE CYLINDER.
	DEFECTIVE FLOW CONTROL VALVE	REPLACE FLOW CONTROL VALVE.
	LIFT ARMS DIRTY, DAMAGED OR NEED GREASE	CLEAN LIFT ARMS & GREASE. REPLACE LIFT ARMS IF DEFECTIVE.

TABLE 23-1

TROUBLESHOOTING - Continued

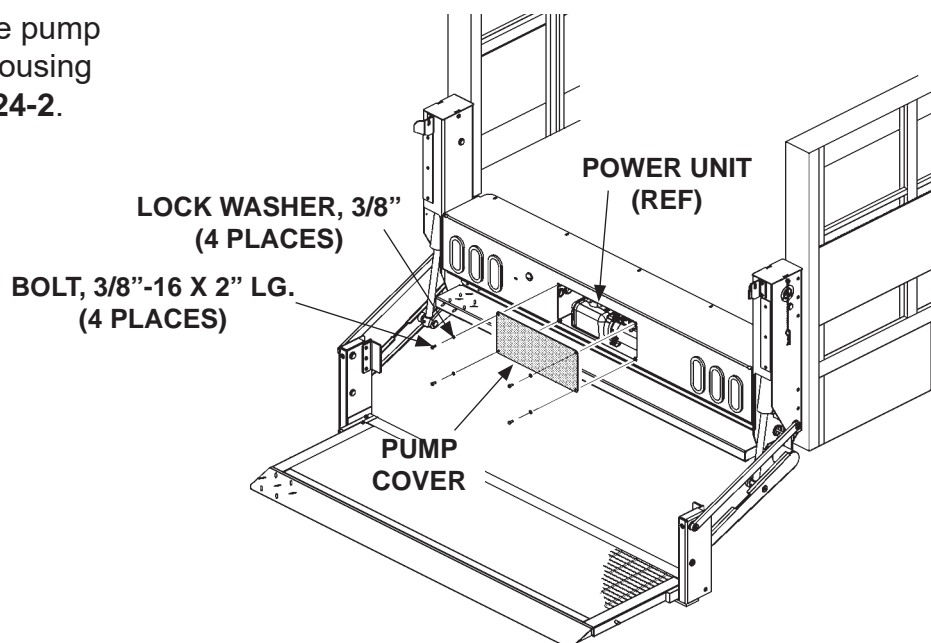
HOW TO CHECK LOWERING VALVE

1. Unfold and lower platform to the ground (**FIG. 24-1**). Refer to **Operation Manual** for detailed operating instructions.



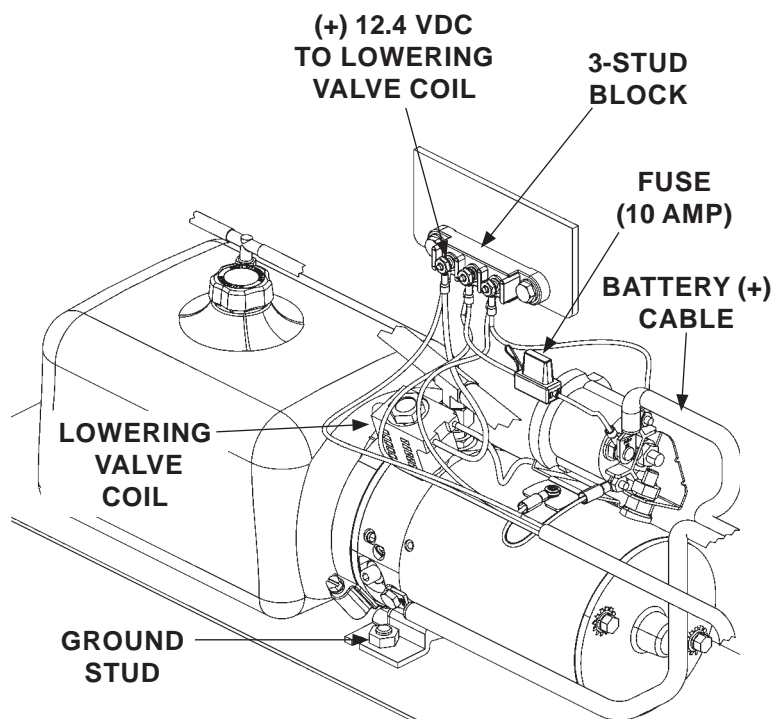
PLATFORM OPEN ON THE GROUND
FIG. 24-1

2. Unbolt and remove pump cover from main housing as shown in **FIG. 24-2**.



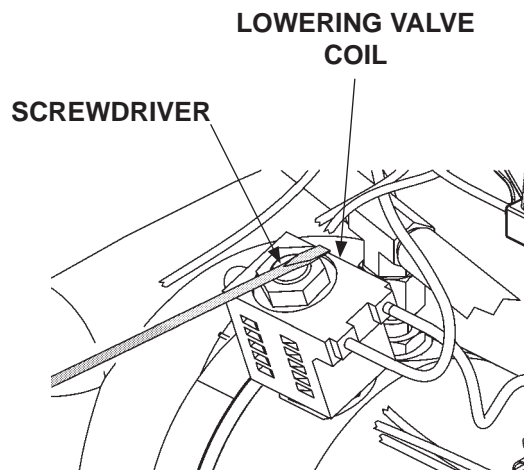
REMOVE PUMP COVER
FIG. 24-2

3. Place a multimeter (+) lead on the 3-stud block, and the (-) lead to ground stud, as shown in **FIG. 25-1**. Next, hold the control switch in the **DOWN** position. Refer to **Operation Manual** for detailed operating instructions. If +12.4 volts DC input to coil is not present, ensure 10 AMP fuse is not blown (**FIG. 25-1**). Next, check cable connections, 150 AMP fuse, and vehicle battery. Ensure vehicle battery is fully charged.



CHECKING VOLTAGE TO LOWERING VALVE
FIG. 25-1

4. Place a steel screwdriver over the top of the lowering valve cartridge coil (**FIG. 25-2**). Next, activate the control switch in the **DOWN** position. Refer to **Operation Manual** for detailed operating instructions. If there is power to the coil and the screwdriver is not attracted to the coil, replace the coil.

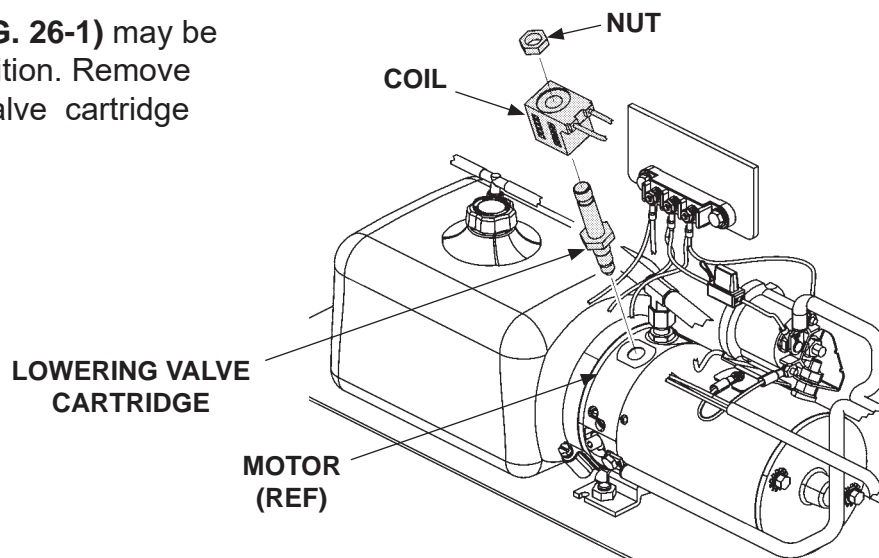


CHECKING LOWERING VALVE COIL
FIG. 25-2

TROUBLESHOOTING - Continued

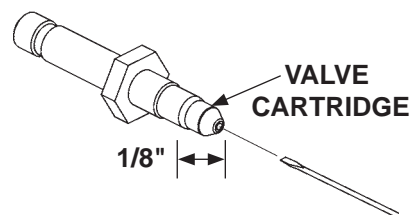
HOW TO CHECK LOWERING VALVE - Continued

5. The lowering valve (**FIG. 26-1**) may be stuck in the "open" position. Remove the coil and lowering valve cartridge (**FIG. 26-1**).



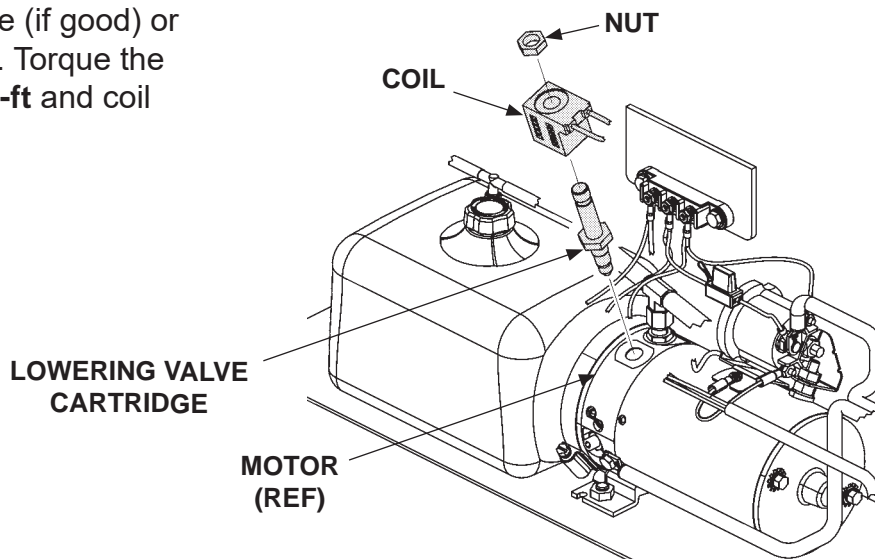
**REMOVE LOWERING VALVE CARTRIDGE
FIG. 26-1**

6. Next, check the valve cartridge as follows. Push on the plunger in the valve by inserting a small screwdriver in the open end (**FIG. 26-2**). If the plunger does not move with a smooth, spring-loaded action (approximately 1/8") (**FIG. 26-1**), replace the valve cartridge.



**CHECKING VALVE CARTRIDGE
FIG. 26-2**

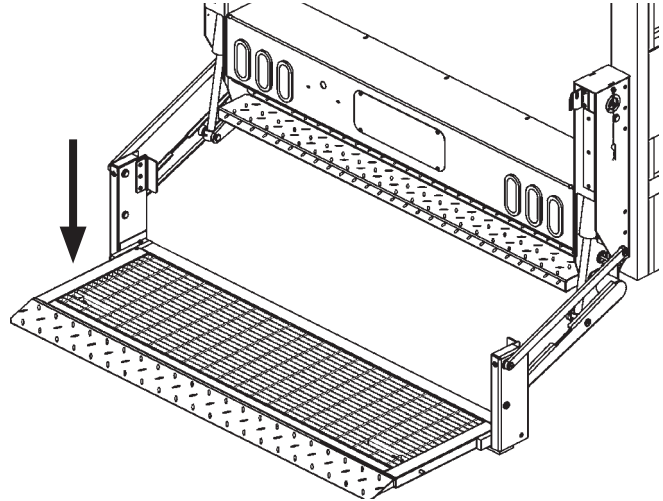
7. Reinstall the lowering valve (if good) or a replacement (**FIG. 26-3**). Torque the valve cartridge to **25-30 lb-ft** and coil nut to **15-45 lb-in.**



**REINSTALL LOWERING VALVE
FIG. 26-3**

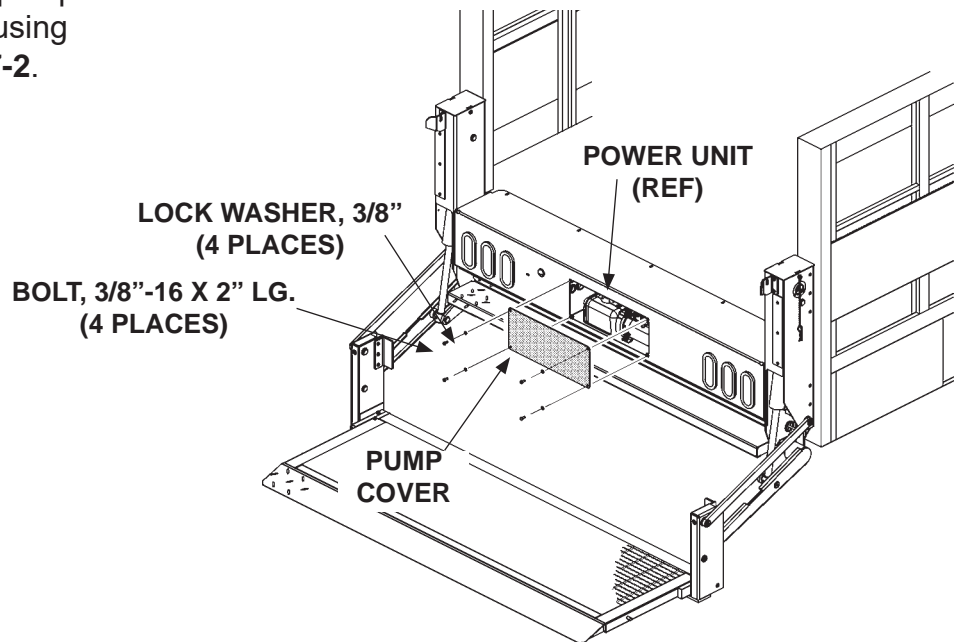
HOW TO CHECK STARTER SOLENOID

1. Unfold and lower platform to the ground (**FIG. 27-1**). Refer to **Operation Manual** for detailed operating instructions.



PLATFORM OPEN ON THE GROUND
FIG. 27-1

2. Unbolt and remove pump cover from main housing as shown in **FIG. 27-2**.

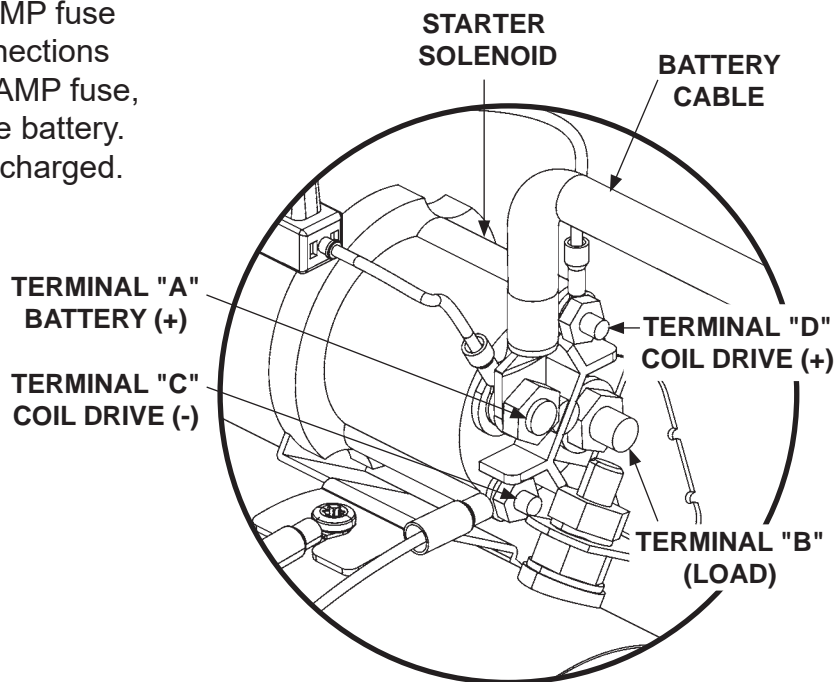


REMOVE PUMP COVER
FIG. 27-2

TROUBLESHOOTING - Continued

HOW TO CHECK STARTER SOLENOID - Continued

3. Check for +12.4 volts DC input to solenoid switch by using voltmeter between terminal "A" (**FIG. 28-1**) and ground. If there is no power to the solenoid switch, ensure 150 AMP fuse is not blown. Next, check connections between solenoid switch, 150 AMP fuse, cable connections, and vehicle battery. Ensure vehicle battery is fully charged.

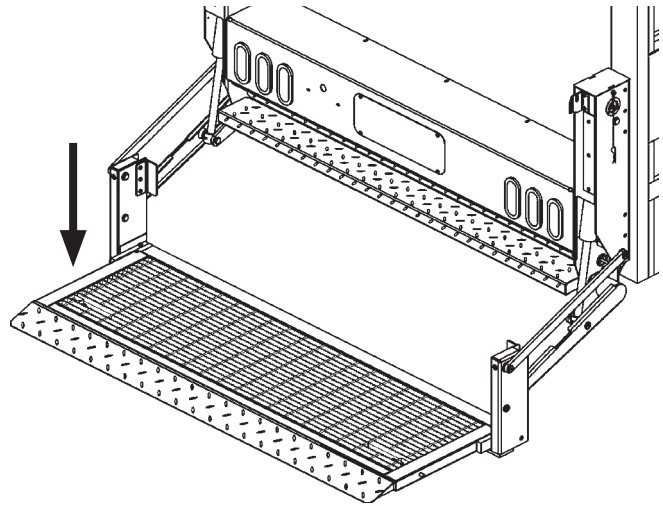


CHECKING STARTER SOLENOID
FIG. 28-1

4. Use a 6" long, 10 gauge insulated wire as a jumper to connect starter solenoid terminal "A" and terminal "D". Check for +12.4 volts DC output from starter solenoid by using voltmeter between terminal "B" (**FIG. 28-1**) and ground. If 0 volts is indicated on terminal "B", replace solenoid switch. With jumper wire connected between terminals "A" and "D", check between terminal "D" (**FIG. 28-1**) and ground. If +11 to +12.4 volts is indicated on terminal "D", check ground circuit wire continuity. If circuit is open, repair as needed. Also, check electrical cable to motor for damage, dirty connections, or loose connections. Replace damaged electrical cable to motor, clean dirty connections, and tighten loose connections. If necessary, use multimeter and applicable electrical schematics in this manual to check switch controls and interconnecting wiring.

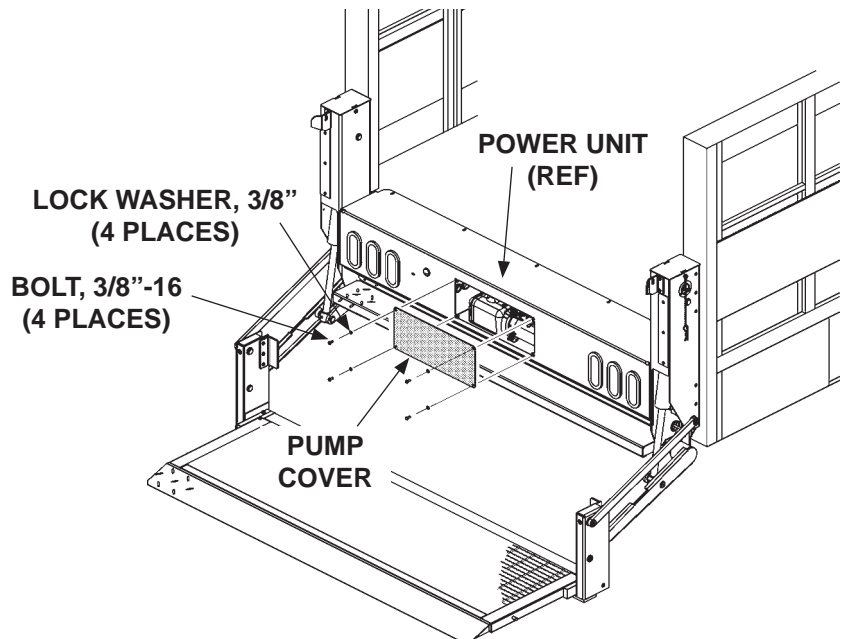
HOW TO TEST PRESSURE RELIEF VALVE

1. Unfold and lower platform to the ground (**FIG. 29-1**). Refer to **Operation Manual** for detailed operating instructions.



PLATFORM OPEN ON THE GROUND
FIG. 29-1

2. Unbolt and remove pump cover from main housing as shown in **FIG. 29-2**.

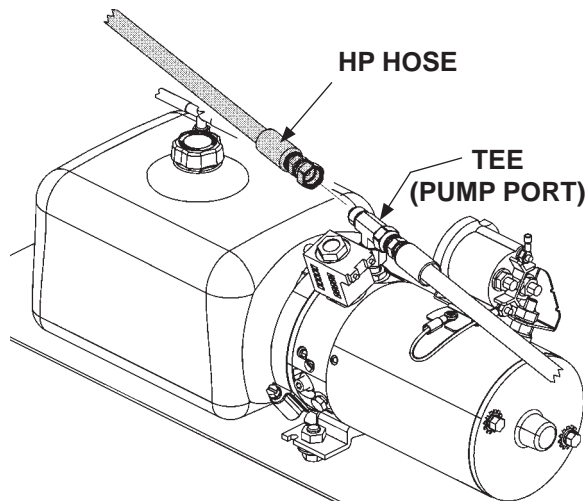


REMOVE PUMP COVER
FIG. 29-2

TROUBLESHOOTING - Continued

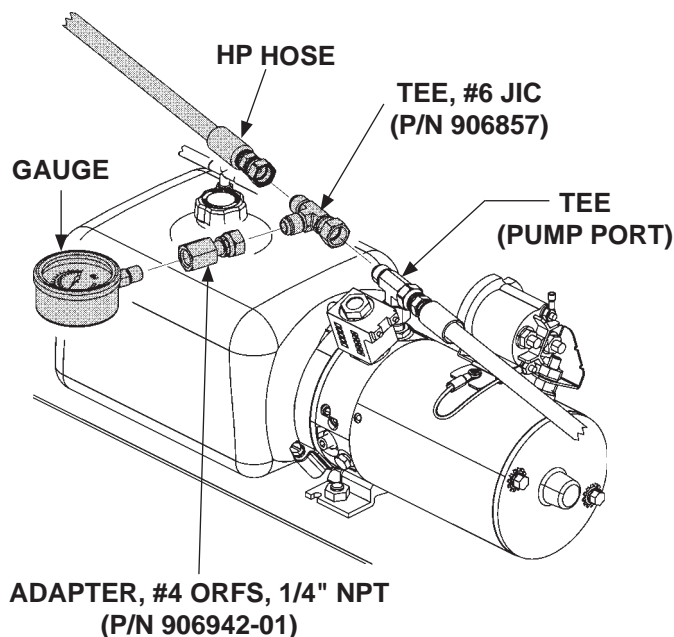
HOW TO TEST PRESSURE RELIEF VALVE - Continued

3. Disconnect high pressure hose from tee on the pump port (**FIG. 30-1**).



REMOVING HIGH PRESSURE HOSE
FIG. 30-1

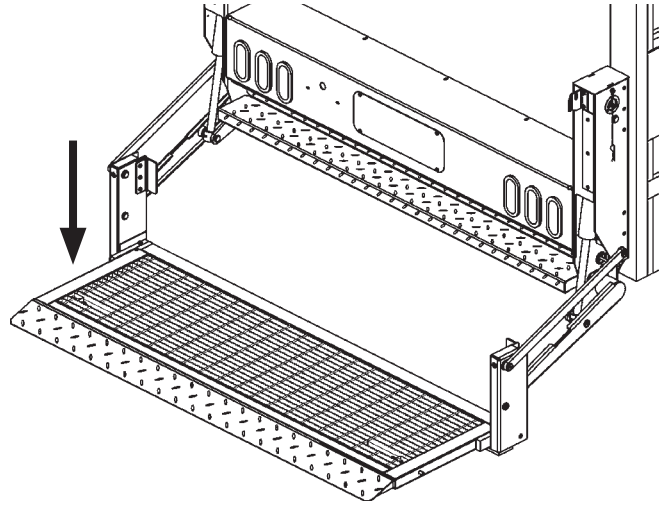
4. Connect a tee and adapter (not supplied) to the tee on pump port, as shown in **FIG. 30-2**. Next, connect a 0-4000 PSI pressure gauge to the adapter, and connect high pressure hose to the tee (**FIG. 30-2**).
5. Raise the platform until the platform stops raising. Continue holding the control switch in the **UP** position while monitoring the pressure gauge (**FIG. 30-2**). If pressure doesn't reach **2300 PSI**, replace the pump.
6. Once readings are taken, remove gauge, adapter and tee, and reconnect high pressure hose to the tee on pump port.



CHECKING RELIEF VALVE PRESSURE
FIG. 30-2

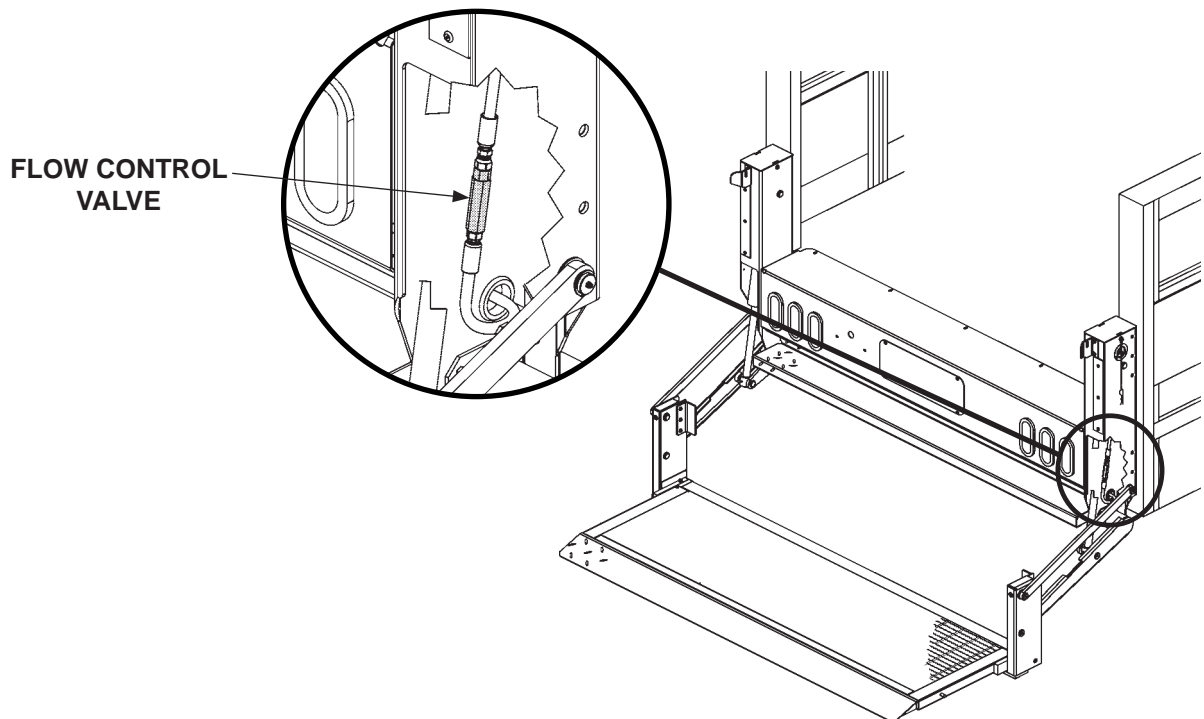
HOW TO TEST FLOW CONTROL VALVE

1. Unfold and lower platform to the ground (**FIG. 31-1**). Refer to **Operation Manual** for detailed operating instructions.



PLATFORM OPEN ON THE GROUND
FIG. 31-1

2. Test the flow control valve by comparing the lowering speed with and without a load. (**FIG. 31-2**). Refer to **Operation Manual** for detailed operating instructions. If lowering speed varies by more than 10%, replace flow control valve and repeat test.



CHECKING FLOW CONTROL VALVE
FIG. 31-2

MLA ELECTRICAL VALUES & TORQUE SPECIFICATIONS

MAXON®

11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

SOLENOID SWITCH	12V
Coil resistance:	5.4Ω @70°F. ±15%
Ampere:	2.2A
Coil terminal torque: 10-15 lb-in max.	
Contact terminal torque: 30-35 lb-in max.	
LOWERING VALVE	
Coil resistance:	6.6Ω @ 70°F. ±15%
Ampere:	1.8A
Coil terminal torque: 15-45 lb-in max.	
Valve cartridge torque: 25-30 lb-ft max.	
Coil nut torque: 15-45 lb-in	
GROUND CABLE	
Cap screw torque: 24 lb-ft max.	
150 AMP CIRCUIT BREAKER	
1/4"-20 nut torque: 50 lb-in max.	

TABLE 32-1

BOLT TORQUE VALUES

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 33-1

