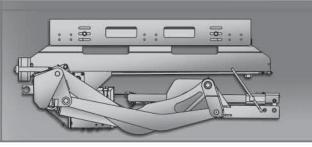
M-08-14 REV. H APRIL 2020



MAXON® GPSLR Series

MAINTENANCE MANUAL

GPSLR-33 & GPSLR-44; GPSTLR-33 & GPSTLR-44

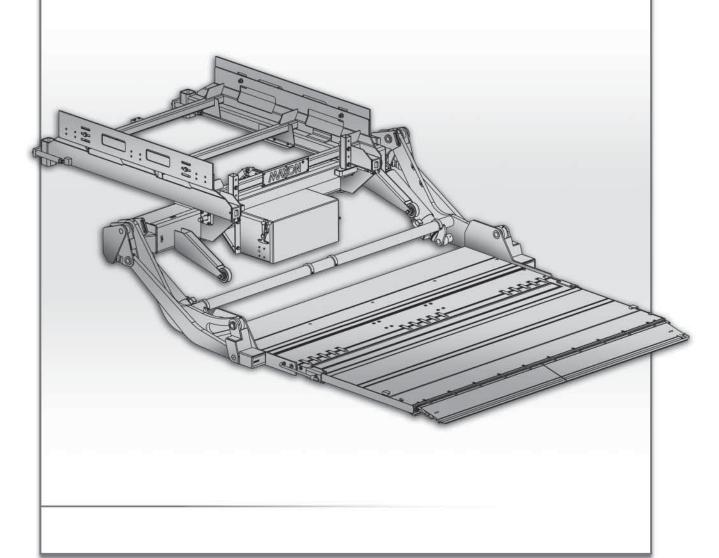


TABLE OF CONTENTS

SUMMARY OF CHANGES: M-08-14, REVISION H	4
WARNINGS	5
SAFETY INSTRUCTIONS	6
LIFTGATE TERMINOLOGY	7
PERIODIC MAINTENANCE	9
PERIODIC MAINTENANCE CHECKS	9
PERIODIC MAINTENANCE CHECKLIST	10
CHECKING HYDRAULIC FLUID	12
CHANGING HYDRAULIC FLUID	14
PLATFORM ADJUSTMENT	16
DRIVE CHAIN ADJUSTMENT	18
DECALS	20
SYSTEM DIAGRAMS	24
PUMP & MOTOR SOLENOID OPERATION	24
HYDRAULIC SCHEMATIC	25
ELECTRICAL SCHEMATIC	26
TROUBI FSHOOTING	27

SUMMARY OF CHANGES: M-08-14, REVISION H

PAGE	DESCRIPTION OF CHANGE
COVER	Updated REV, date of release and cover image.
-	Cover image and applicable Illustrations throughout manual are updated to show new impact-absorbing tubes on the back of the slider frame.
-	This contents of this manual applies only to GPSLR liftgates equipped with standard control switches. All information about SmartStow controls was removed.
5	Added California Proposition 65 warning.
7	Updated terminology to show standard external control switches.
13	Added Phillips 66 Arctic Low Pour oil to table of recommended ISO-15 oils.
20	Changed Operation decal to latest decal with QR code and added decal with parts QR code.
22	Added MAXGRIP decal for platforms with knurled surface.
23	Decal H updated to show new retention ramp.
23	Changed PRV setting to 1500 PSI on Hydraulic Schematic.

AAXON

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

A 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**.

A 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.

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

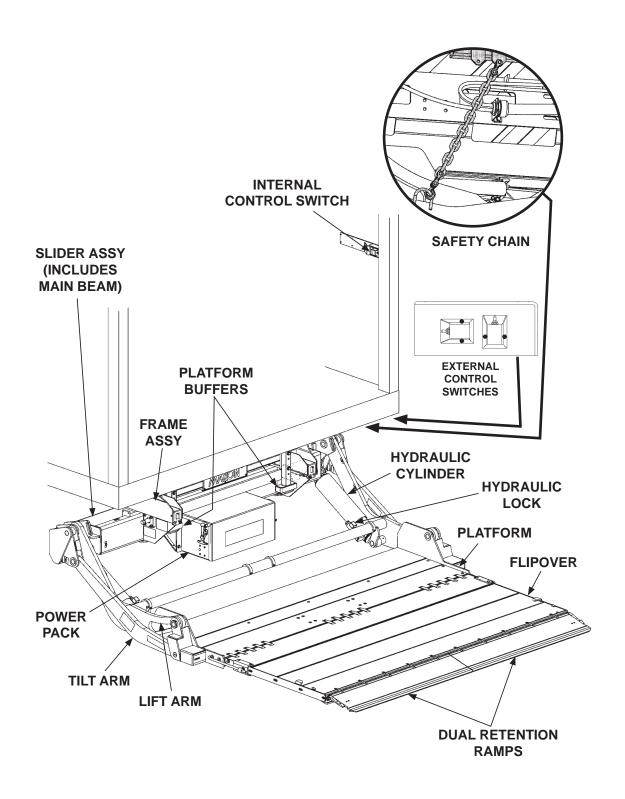
Online: www.maxonlift.com

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

Email: Ask your Customer Service representative

(888) 771-7713 FAX (800) 227-4116 02906 CA. Springs, Santa Fe Ave. Slauson 11921

LIFTGATE TERMINOLOGY



THIS PAGE INTENTIONALLY LEFT BLANK

PERIODIC MAINTENANCE PERIODIC MAINTENANCE CHECKS

A 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. Keep track of the grade of hydraulic fluid in the pump reservoir and never mix two different grades of fluid.

If hydraulic fluid appears contaminated, refer to the **CHANGING HYDRAULIC FLUID** procedure in the **PERIODIC MAINTENANCE** section.

Check all hoses and fittings for chafing and fluid leaks. Tighten loose fittings or replace parts as required.

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

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

Check that all bolts, nuts, and roll pins are in place. Make sure roll pins protrude evenly from both sides of hinge pin collar. Replace fasteners and roll pins if necessary.

Check for debris and dirt buildup on the slider rollers and rails. Clean out any buildup of dirt and debris.

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. Touch up the paint, where bare metal is showing, with aluminum primer touchup paint.

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 MAINTE-NANCE CHECKLIST SHEET** shows where to find the lube fittings. Wipe off excess grease with a clean lint-free cloth.

Check that safety chain and snap hook are in place on models with no controller.

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.



PERIODIC MAINTENANCE CHECKLIST

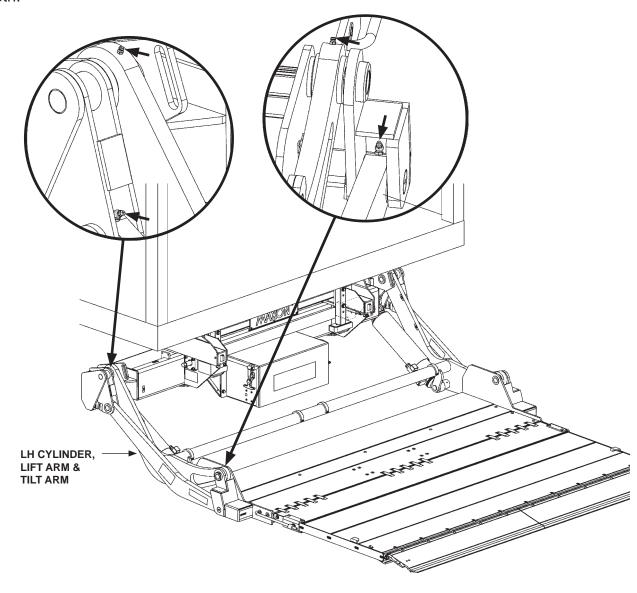
NOTE: Make sure vehicle is parked on level ground while performing maintenance checks. **Quarterly or 1250 Cycles (whichever occurs first)** ☐ Check the level and condition of the hydraulic fluid. ☐ Visually check all hoses and fittings for chafing and fluid leaks. Tighten loose fittings or replace parts as required. ☐ Check electrical wiring for chafing and make sure wiring connections are tight and free of corrosion. Use dielectric grease to protect electrical connections. ☐ Check that all **WARNING and instruction decals** are in place. Also, make sure decals are legible, clean, and undamaged. ☐ Check that all bolts, nuts, and roll pins are in place. Make sure roll pins protrude evenly from both sides of hinge pin collar. Replace fasteners and roll pins if necessary. ☐ Check for debris and dirt buildup on the slider rollers and rails. Clean out any buildup of dirt and debris. ☐ 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 paint where bare metal is showing. Refer to the paint system **CAUTION** and recommended touchup paint on the preceding page. ☐ 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. ☐ Check that safety chain and snap hook are in place on models with no controller. 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.

NOTE: Lube fittings are shown for the LH cylinder, lift arm, and tilt arm. There are also lube fittings at the same places on the RH cylinder, lift arm, and tilt arm.

Refer to lubrication diagram (FIG. 11-1) to find the lube fittings on cylinders and arms. Pump EP chassis grease in each lube fitting on the cylinders and arms until grease starts oozing from ends of the bearings. Then, wipe off excess grease with a clean lint-free cloth.



GPSLR LUBRICATION DIAGRAM FIG. 11-1

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: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32 Below +70 Degrees F - Grade ISO 15 or MIL-H-5606

See TABLES 13-1 & 13-2 for recommended brands.

- 1. Unstow and lower Liftgate to ground.
- 2. Unlatch and open pump cover (FIG. 12-1).
- Check the hydraulic fluid level in reservoir as follows. With Liftgate on ground, level should be as shown in FIG. 12-2.

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

CAUTION

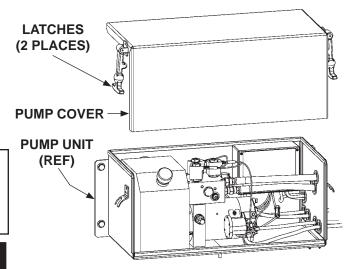
Do not fill reservoir to the FULL mark on the dipstick. Hydraulic fluid can overflow from the reservoir.

4. If needed, add hydraulic fluid to the reservoir as follows. Remove filler cap (FIG. 12-2). Fill the reservoir with hydraulic fluid to 3/4" above bottom of dipstick (FIG. 12-2). Reinstall filler cap (FIG. 12-2).

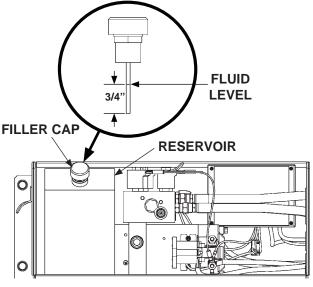
CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. Ensure pump cover is latched to pump box.

5. Close and latch the pump cover as shown in **FIG. 12-1**.



UNLATCH/LATCH PUMP COVER FIG. 12-1



POWER UNIT FLUID LEVEL FIG. 12-2

ISO 32 HYDRAULIC OIL			
RECOMMENDED BRANDS	PART NUMBER		
CHEVRON	HIPERSYN 32		
KENDALL	GOLDEN MV		
SHELL	TELLUS S2 VX 32		
EXXONMOBIL	UNIVIS N-32, DTE-24		

TABLE 13-1

ISO 15 OR MIL-H-5606 HYDRAULIC OIL			
RECOMMENDED BRANDS	PART NUMBER		
CHEVRON	FLUID A, AW-MV-15		
KENDALL	GLACIAL BLU		
SHELL	TELLUS S2 VX 15		
EXXONMOBIL	UNIVIS HVI-13		
PHILLIPS 66	ARCTIC LOW POUR		
ROSEMEAD	THS FLUID 17111		

TABLE 13-2

CHANGING HYDRAULIC FLUID

CAUTION

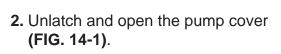
Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

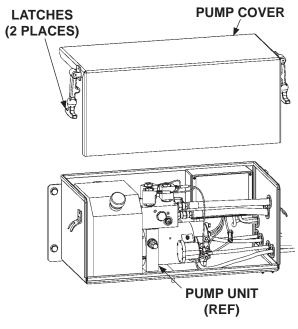
NOTE: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32 Below +70 Degrees F - Grade ISO 15 or MIL-H-5606

See TABLES 13-1 & 13-2 for recommended brands.

1. Unstow and lower Liftgate to ground.





UNLATCH PUMP COVER FIG. 14-1

 Place empty 5 gallon bucket under drain plug (FIG. 14-2). Remove drain plug (FIG. 14-2). Drain hydraulic fluid. Reinstall drain plug (FIG. 14-2).

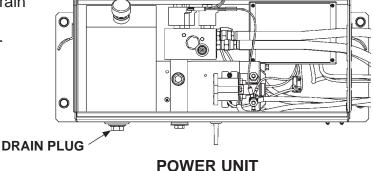


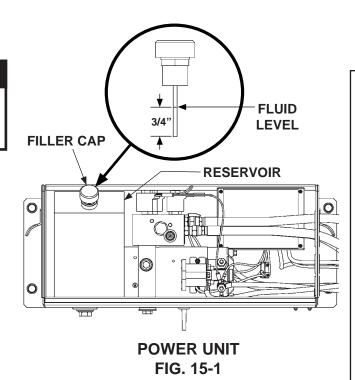
FIG. 14-2

MAXON

CAUTION

Do not fill reservoir to the FULL mark on the dipstick. Hydraulic fluid can overflow from the reservoir.

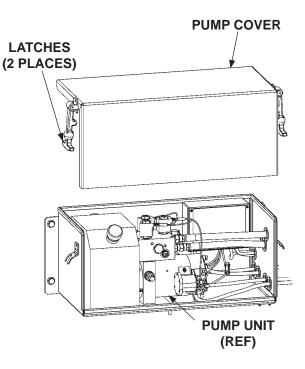
- **4.** Remove filler cap **(FIG. 15-1)**. Add 1 gallon of hydraulic fluid to the reservoir. Hydraulic fluid level should be 3/4" above bottom of dipstick **(FIG. 15-1)**. Reinstall filler cap **(FIG. 15-1)**.
- 5. Stow the lift and do the CHECKING HYDRAULIC FLUID procedure in this section of the manual.



CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. Ensure pump cover is latched to pump box.

6. Close and latch the pump cover as shown in **FIG. 15-2**.

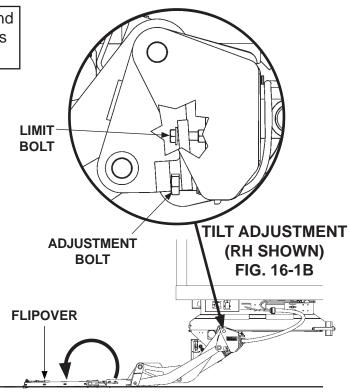


UNLATCH PUMP COVER FIG. 15-2

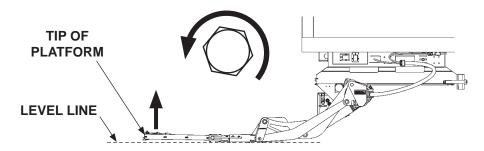
PLATFORM ADJUSTMENT

NOTE: Park vehicle on level ground and unload vehicle before doing this procedure.

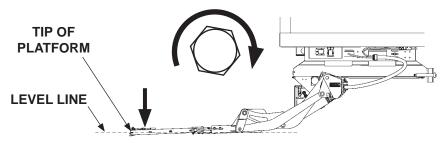
- **1.** Lower platform to ground and unfold flipover **(FIG. 16-1A)**.
- 2. Loosen adjustment and limit bolts on both sides of platform (FIG. 16-1B).
- 3. Turn adjustment bolts counterclockwise to tilt the tip of platform up (FIG. 16-2), or turn clockwise to tilt down (FIG. 16-3).
- Once platform is adjusted, tighten limit bolts securely on both sides of platform (FIG. 16-1B).



PLATFORM LOWERED TO GROUND FIG. 16-1A



RAISE TIP OF PLATFORM FIG. 16-2



LOWER TIP OF PLATFORM FIG. 16-3

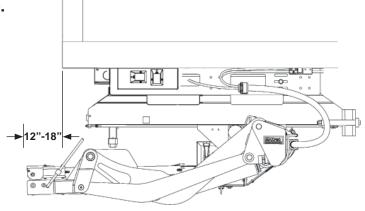
CA. Santa Fe Springs, MAXON® 11921 Slauson Ave.

THIS PAGE INTENTIONALLY LEFT BLANK

DRIVE CHAIN ADJUSTMENT

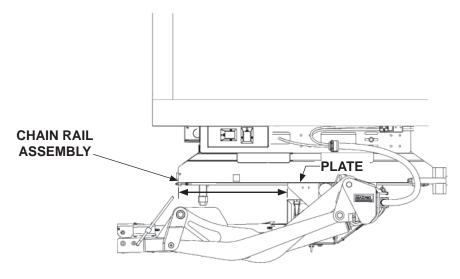
NOTE: Improperly adjusted drive chains cause slide frame binding. Normal slide frame runout speed is from 5-8 seconds.

- Lower the slide frame so it can be moved out. See GPSLR/GPSTLR Operations Manual (M-08-13).
- 2. Move the slide frame out (FIG. 18-1). See GPSLR/GPSTLR Operations Manual (M-08-13).



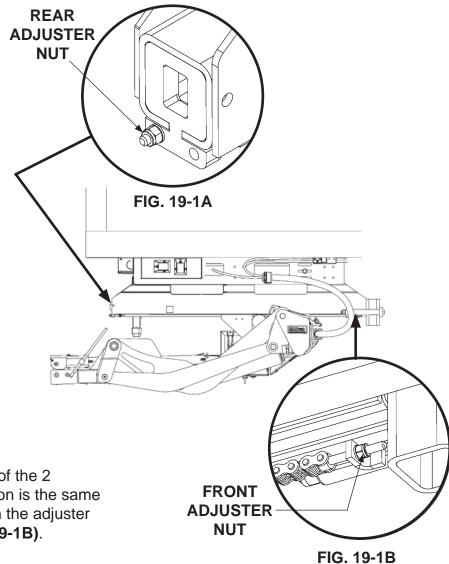
3. Measure and record the distance from the front edge of the plate below the chain roller wheels, to the end of the chain rail assembly (FIG. 18-2). Repeat measurement for both chains.

POSITION SLIDE FRAME FIG. 18-1



MEASURE DRIVE CHAIN DIMENSIONS FIG. 18-2

4. Adjust the chain with smallest measured dimension, to match the chain with longest measured dimension, as follows. Loosen chain adjuster nut at the rear of the chain rail assembly. Then, turn the front adjuster nut clockwise to extend the shortest chain to match the longest chain dimension (FIGS. 19-1A & 19-1B).



 Measure the distance of the 2 chains. When dimension is the same for both chains, tighten the adjuster nuts (FIGS. 19-1A & 19-1B).

> ADJUST DRIVE CHAINS FIG. 19-1

6. Move the slide frame in and out a few inches and re-measure to make sure the roller plates are even.



OPERATION DECAL P/N 282681-01

DECALS CAUTION CAUTION DAMAGE WILL OCCUR IF SLIDE MECHANISM NOT OPERATED LATCHED CORRECTLY. ENSURE LIFTGATE IS FULLY EXTENDED & LATCHED BEFORE RAISING OR LOWERING. ENSURE LIFTGATE IS FULLY RETRACTED, LATCHED & OUT (FULL TRAVEL) (FULL TRAVEL) IN -> STOWED BEFORE MOVING Prevent personal injury & equipment damage Ensure Liftgate is stowed & chained before VEHICLE. you move vehicle. Ensure Liftgate is unchained before you **CAUTION DECAL** deploy Liftgate for operation. P/N 282682-01 **CAUTION DECAL** P/N 283989-01 CAUTION OPERATING INSTRUCTIONS DAMAGE WILL OCCUR IF LIFTGATE GPSLR & GPSTLR Scan this QR code to see operation manual or video. IS NOT IN CORRECT POSITION WHEN OPERATING SLIDE FUNC-TION. ENSURE PLATFORM & ARMS HAVE 6" GROUND CLEARANCE AT LOWEST POINT BEFORE LIFTGATE IS RUN IN OR OUT FROM VEHICLE. (1) Unchain Liftarm. See CAUTION Decal. **CAUTION DECAL** P/N 282683-01 (2) **↓ DECAL "A"** DECAL "C" 3 ←■ Slide All The Wayout To Unstow **DECAL "B"** DECAL "F" Manually Unfold Using Strap (5) Raise **DECAL "E"** 6 Lower **PARTS QR CODE** (7) **DECAL** Manually Fold Using Strap CC C P/N 299349-02 8 1=4 9 → **T** SLIDELIFT * Slide In All The Way 1000 SERIAL# Raise Platform Against Buffer SANTA FE SPRINGS, CA 800-227-4116 MADE IN MEXICO (11) CAPACITY MODEL Chain Liftarm, See MAY BE COVERED BY ONE OR MORE OF THE FOLLOWING PATENTS: CAUTION Decal

FIG. 20-1

SERIAL PLATE (REF)

SAFETY INSTRUCTIONS

Read all decals and operation manual before operating liftgate.

- . Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.
- Be certain vehicle is properly and securely braked before using the liftgate.
- 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.
- 5. Make certain the area in which the platform will open and close is clear before opening or closing the platform
- 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.
- This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.

A 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 lessor before you attempt to operate 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
- 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 or call Customer Service at (800) 227-4116.

E





Always stand clear of platform area.

> THE MAXIMUM CAPACITY OF THIS LIFT IS

3300 POUNDS

WHEN THE LOAD IS CENTERED ON THE LOAD **CARRYING PLATFORM**

GPSLR-33 & GPSTLR-33 ONLY

THE MAXIMUM CAPACITY OF THIS LIFT IS

4400 POUNDS

WHEN THE LOAD IS CENTERED ON THE LOAD **CARRYING PLATFORM**

GPSLR-44 & GPSTLR-44 ONLY

MODEL	DECAL SHEET P/N	DECAL "B"
GPSLR-33	267431-01	3300 POUNDS
GPSLR-44	267431-02	4400 POUNDS
GPSTLR-33	267431-01	3300 POUNDS
GPSTLR-44	267431-02	4400 POUNDS

TABLE 21-1

DECALS - Continued

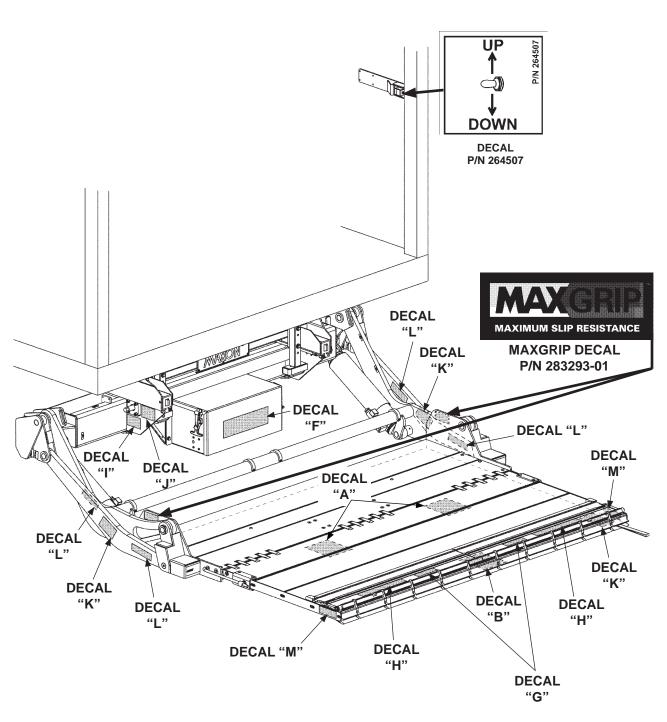


FIG. 22-1









Avoid possible injury & damage to equipment if slider moves under power. Ensure battery is disconnected from liftgate before operating the slider manually. P/N 267432-01 J







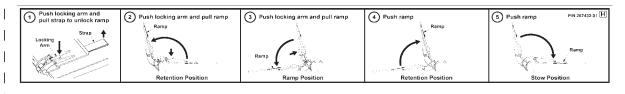


A WARNING

To avoid possible injury and damage to equipment, never stand on lift arms, parallel arms, or bottom side of platform.

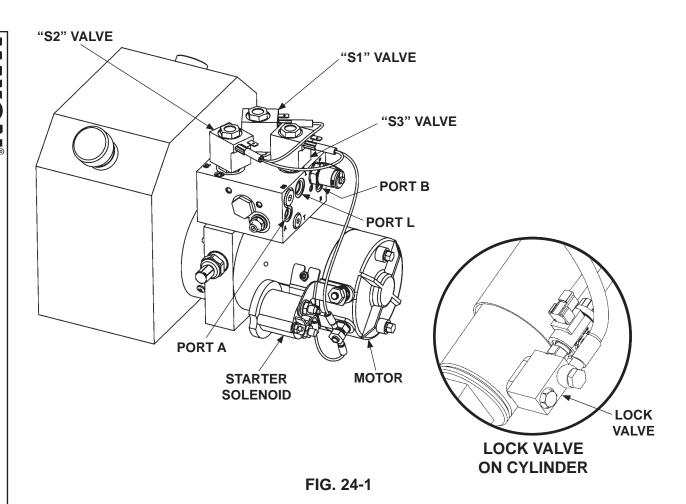






DECAL SHEET P/N 267432-01 FIG. 23-1

SYSTEM DIAGRAMS PUMP & MOTOR SOLENOID OPERATION



POWER UNIT MOTOR & SOLENOID OPERATION						
TAIL LIFT		SOLENOID OPERATION (✓ MEANS ENERGIZED)				
FUNCTION	PORT	MOTOR	VALVE "S1"	VALVE "S2"	VALVE "S3"	LOCK VALVE
RAISE	L	\checkmark	-	-	-	✓
LOWER	L	-	-	-	✓	✓
SLIDE OPEN	Α	✓	-	\checkmark	-	-
SLIDE CLOSED*	В	✓	✓	-	-	-
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC						

TABLE 24-1

HYDRAULIC SCHEMATIC

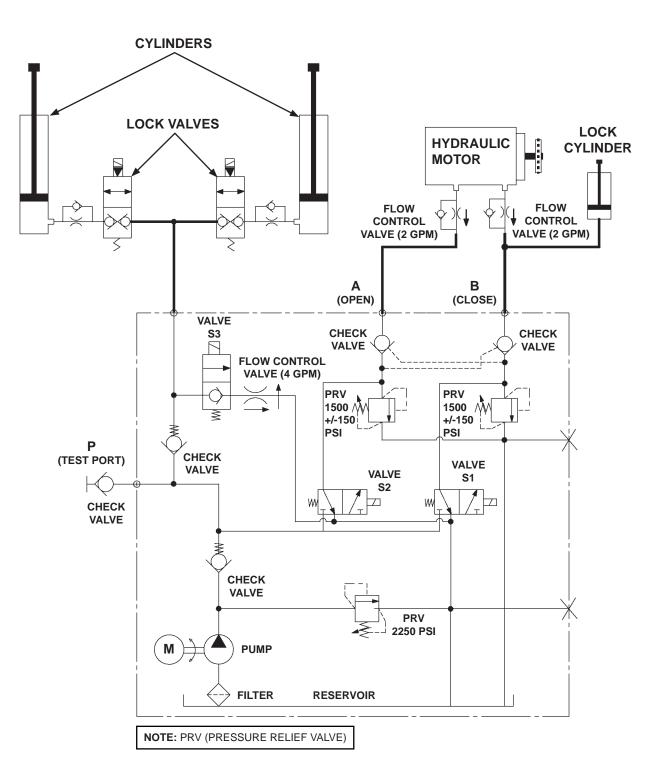


FIG. 25-1

ELECTRICAL SCHEMATIC

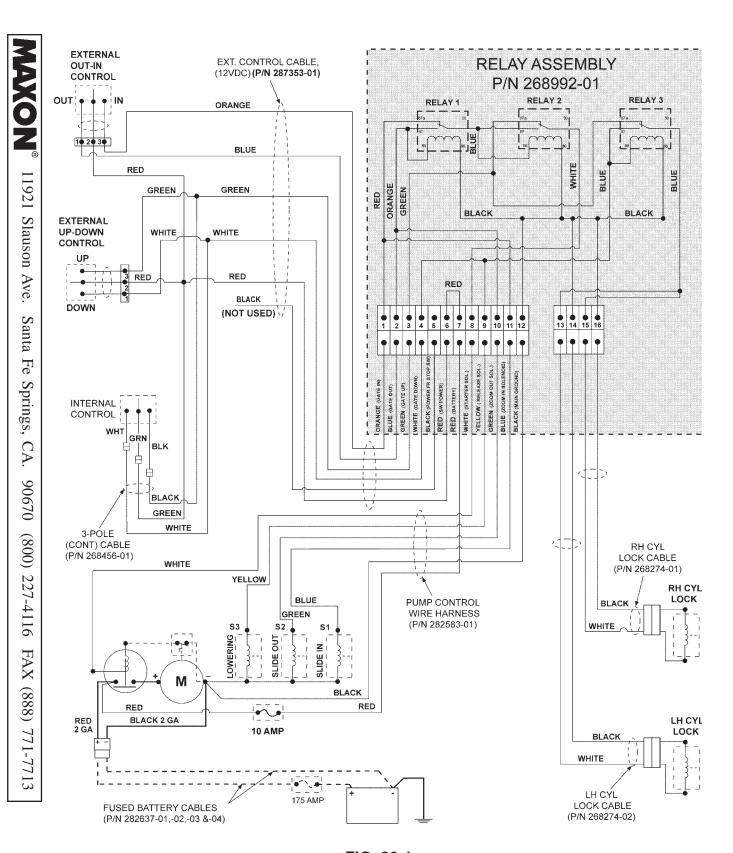


FIG. 26-1

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

TROUBLESHOOTING

TO BE PROVIDED IN FUTURE UPDATE