

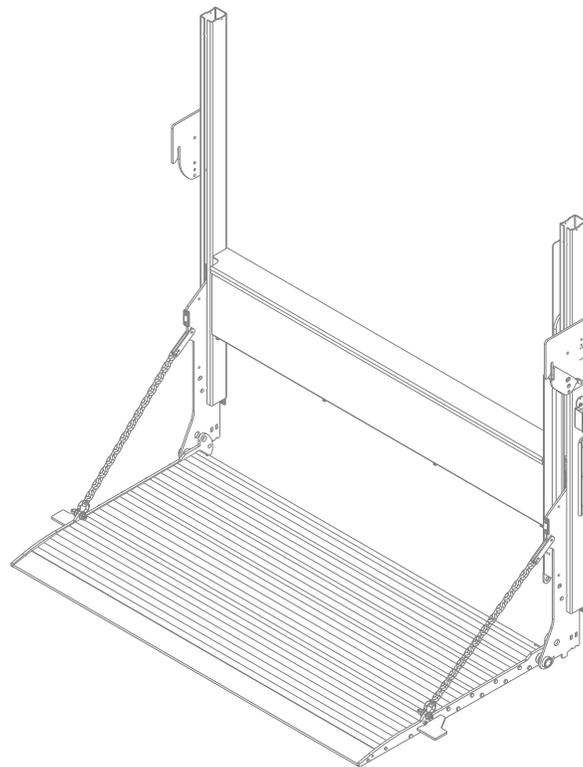
PALFINGER



LIFTGATES

ILM *plus*

OWNER'S MANUAL



ILM PLUS Owner's Manual

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**If you received this product with damaged or missing parts,
contact Palfinger Liftgates at (888)-774-5844**

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Introduction

Thank you for purchasing a Palfinger Liftgate. Your ILM series liftgate is an example of the latest engineering technology in the industry. With proper care and operation your liftgate will provide you with reliable, dependable service for years to come.

Palfinger Liftgates is ready to provide you with fast action when you need sales, parts, or technical assistance. You can call the customer service department Monday to Friday 7 am to 5 pm Pacific Time or reach Palfinger Liftgates 24 hours a day, 7 days a week through the internet home page www.palfinger.com or voice message system. Providing quality, value and service to the customers is what our business is all about.

Read this manual carefully to learn how to operate and how to take care of your liftgate properly. Maintenance (other than the simple routine maintenance we ask you to perform within this manual, inspections, and repairs) must be completed by an **Authorized Service Center Only**. If you do not know who the **Authorized Service Center** in your area is, please contact Palfinger Liftgates

Table of Contents

1	Manual Updates for v1.6.....	2
2	Safety Information	- 1 -
3	Important Information.....	- 2 -
	3.1 Important notes	- 2 -
4	General Information.....	- 5 -
	4.1 Before Operation.....	- 5 -
	4.2 Liftgate Function and Useage Information	- 5 -
	4.3 Improper Useage	- 6 -
5	General View of Liftgate	- 7 -
6	Maximum Load and Placing of Load on Platform.....	- 8 -
	6.1 Loading and Unloading	- 9 -
7	Operation of Liftgate.....	- 9 -
	7.1 Liftgate Operation – Manual Close	- 10 -
	7.2 Liftgate Operation – Power Close.....	- 12 -
	7.3 Pad Lock (Optional).....	- 14 -
	7.4 Cart Stops (Optional).....	- 15 -
8	Preventative Maintenance and Quick Check	- 17 -
	8.1 Quick Check List	- 17 -
	8.2 Maintenance and Care	- 18 -
	8.3 Lubrication	- 19 -
	8.4 Checking and Changing the Oil.....	- 21 -
	8.5 Decal Placement and inspection	- 23 -
9	Troubleshooting.....	- 25 -
	9.1 Wiring Diagram (Main battery wiring)	- 27 -
	9.2 Cross Test on Single Pole Plug Charge System.....	- 28 -
	9.3 Wiring Diagram (Manual Closing).....	- 29 -
	9.4 Wiring Diagram (Power down).....	- 30 -
	9.5 Hydraulic Schematic (Manual Closing)	- 31 -
	9.6 Hydraulic Schematic (Power Closing).....	- 32 -
10	Spare/Replacement Parts and Repairs.....	- 33 -
	10.1 Ordering Spare/Replacement Parts.....	- 33 -
	10.2 Repairs.....	- 33 -
11	Waranty	- 33 -
12	Contact address.....	- 34 -

1 **Manual Updates for v1.7**

- Updated Section 7.1-7.4.
- Revised hydraulic and electrical chematics
- Updated lineart

2 Safety Information

This manual follows the Guidelines set forth in "ANSI Z535.4-2007" for alerting you to possible hazards and their potential severity.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

! **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

! **WARNING** indicates potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

! **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result minor or moderate injury.

CAUTION

CAUTION without the safety alert symbol is used to address practices not related to personal injury. (*In this manual we use it to alert you to potentially hazardous situation which, if not avoided, may result in property damage.*)

NOTICE

NOTICE without the safety alert symbol is used to address practices not related to personal injury. (*In this manual we use it to alert you to special instructions, steps, or procedures.*)

3 **Important Information**

Before Getting Started

“READ FIRST”

NOTICE

Before starting any operations of the liftgate, please read and understand this Owner's Manual. The intention of this manual is to provide the user a guide for the operation as well as preventive maintenance. Do not attempt to modify or repair the liftgate unless performed by qualified personnel. Please contact your nearest PALFINGER Liftgates distributor or PALFINGER Liftgates in California or New Jersey for assistance if you have any questions regarding installation, operation or maintenance at 888-774-5844.

This owner's manual applies to the following models: **ILM Plus 16, 20, 25, 30**

Maximum Capacity for liftgate models are as follows:

- ILM Plus 16 - capacity: 1600 lbs.
- ILM Plus 20 - capacity: 2000 lbs.
- ILM Plus 25 - capacity: 2500 lbs.
- ILM Plus 30 - capacity: 3000 lbs.

3.1 Important notes

The electric supply is taken from the vehicle battery. If the vehicle battery is not sufficient, an auxiliary battery kit needs to be installed. The electric control power is secured via a 10 Amp fuse and an on-off switch located inside the cab.

You can purchase the ILM plus liftgate equipped with manual closing as well as power closing.

- a) The manual closing option is equipped with a 2-button outside mounted control.
- b) The power closing option is equipped with a 3-button outside mounted control.

In addition both options can be outfitted with a 2-button hand held remote control.

Depending on what type of ILM plus series liftgate you have, it may or may not lift above the floor of your vehicle. Models that will lift above the vehicle floor will have a suffix at the end of the model number AF.

The ILM plus series liftgate is a 100% level-ride, rail style vertical lift liftgate.

- Rail style liftgates have two rails mounted to the rear of your vehicle, either by welding or bolting. These rails support a platform which raises and lowers cargo. Lifting actions are carried out by a hydraulic cylinder which is equipped with a solenoid operated valve located at the port of the cylinder and prevents the platform from lowering accidentally unless the operator is activating the controls.
- The hydraulic power unit is easily accessible for service and exchange. The ILM Plus has a Power Pack in the traverse behind a steel cover in the back of the truck or trailer body.
- The piston rods are treated against corrosion. The Hydraulic Power Unit is equipped with a built-in pressure relief valve, which prevents overloading when lifting and tilting up.



The valves do not prevent overloading of the platform when lowering or tilting down.

Additional safety features are:

- Pressure compensated flow control valve.
- Tread plate platform.
- Toe Guard in cross beam.
- Platform safety lock.
- Warning decals and manuals.

⚠ WARNING

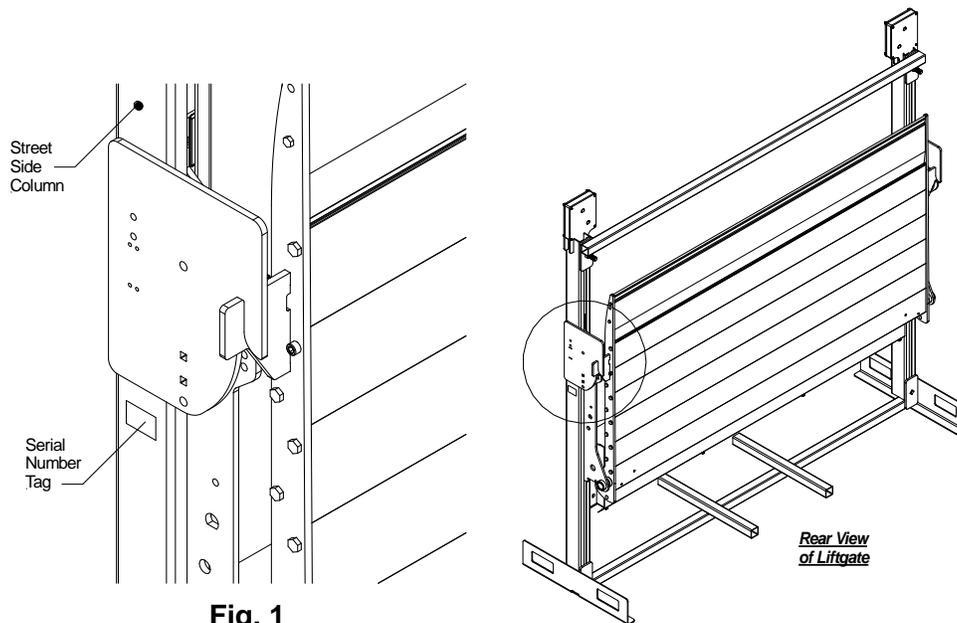
Improper operation of this liftgate may result in severe personal injury or death. **DO NOT** operate unless you have been properly instructed, have read and are familiar with the procedures in this manual. This manual has been designed to illustrate the steps needed for the basic operation of the ILM liftgate. It also provides safety information and simple preventive maintenance tips.

NOTICE

This manual is not intended for use as a repair or troubleshooting guide. Repairs should be performed by a PALFINGER Liftgates Authorized Service Center.

This Manual has been designed for use in conjunction with the ILM series liftgates only which are designed for different capacities. There are four options available to determine the model and serial number of the installed liftgate:

- 1) Refer to the serial number tag on the liftgate, located on driver side column, **Fig. 1**.



- 2) Ask your employer or lessor.
- 3) Call your PALFINGER Liftgates Authorized Service Center for assistance.
- 4) Call PALFINGER Liftgates for assistance in the USA at 888-774-5844. You can also contact PALFINGER Liftgates by fax (562) 924-8318 or on the internet- www.palfinger.com

For technical support, contact PALFINGER Liftgates or an authorized PALFINGER service center. www.palfinger.com

Replacement manuals are available at no charge by contacting Customer service at 888-774-5844

4 General Information

4.1 Before Operation

REMEMBER:

It is the fleet manager's responsibility to educate the operator on the liftgate and its intended use. The operator's attention should be drawn to the permitted load limits and an understanding of the operation to ensure the safety throughout the operation.

ONE-MAN OPERATION:

Never let an "outsider" operate the liftgate while you are handling the cargo.

A "misunderstanding" can result in serious personal injury.

In the interest of safety it is important that all operating personnel properly understand the functions of the liftgate, possible hazards, dangers, the load limits and load positioning for that specific unit.

4.2 Liftgate Function and Usage Information



Before the operator uses the liftgate, they should be thoroughly familiar with the liftgate functions and usage according to the following:

1. Improper operation of this lift can result in serious personal injury. Do not operate unless you have been properly instructed, have read and are familiar with the operation instructions. If you do not have a copy of the instructions please obtain them from your employer, distributor, or lessor as appropriate before you attempt to operate the lift.
2. Be certain the vehicle is properly and securely stopped before using the lift.
3. Always inspect this lift for maintenance or damage before using it. If there are signs of improper maintenance, damage to vital parts or slippery platform surface, do not use the lift. Do not attempt your own repairs unless you are specifically trained.
4. Do not overload. See the Rating Label on the unit for the rated load. Remember that this limit applies to both raising and lowering operations.
5. Each load should be placed in a stable position as near as possible to the body of the truck/trailer.
6. Never stand in, move through or allow anyone else to stand in or move through the area in which the lift operates, including that area in which a load might fall.
7. This Lift gate is intended for loading and unloading of cargo only. **DO NOT** use this Liftgate for anything but its intended use. This is not a passenger lift. Do not ride the lift with unstable loads or in such a manner that a failure would endanger you. The lift is not equipped with a back-up system to prevent falling cargo in the event of a failure.



The maximum loads must be observed and followed!

4.3 Improper Useage

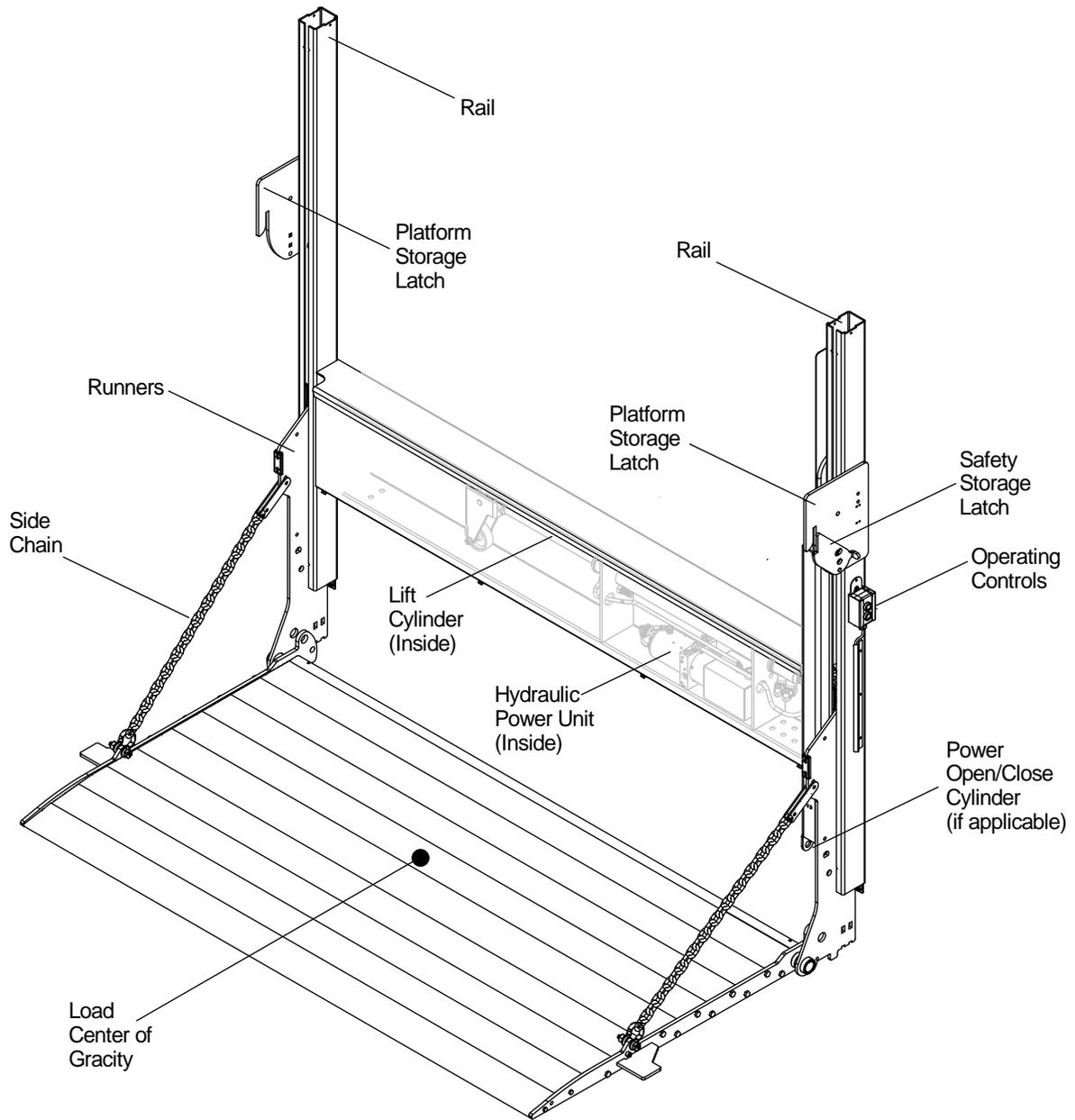
Some examples of improper use of the liftgate may include, but are not limited to:

- Using the liftgate as an elevating work platform
- Using the liftgate to push, pull, or low loads or other objects.
- Using the liftgate to carry people (Only the operator may travel on the platform)
- Using the liftgate to clear snow
- Trying to use the liftgate as a “launching pad”.
- Using force of the hydraulic system to bend, shear, or break objects.
- Driving a forklift over the liftgate.
- Driving the truck or trailer with the platform open.
- Driving the truck or trailer with platform unsecured in the travel position.
- “Plowing” with the platform.

Please read through the operational and technical description of the PALFINGER Liftgate.

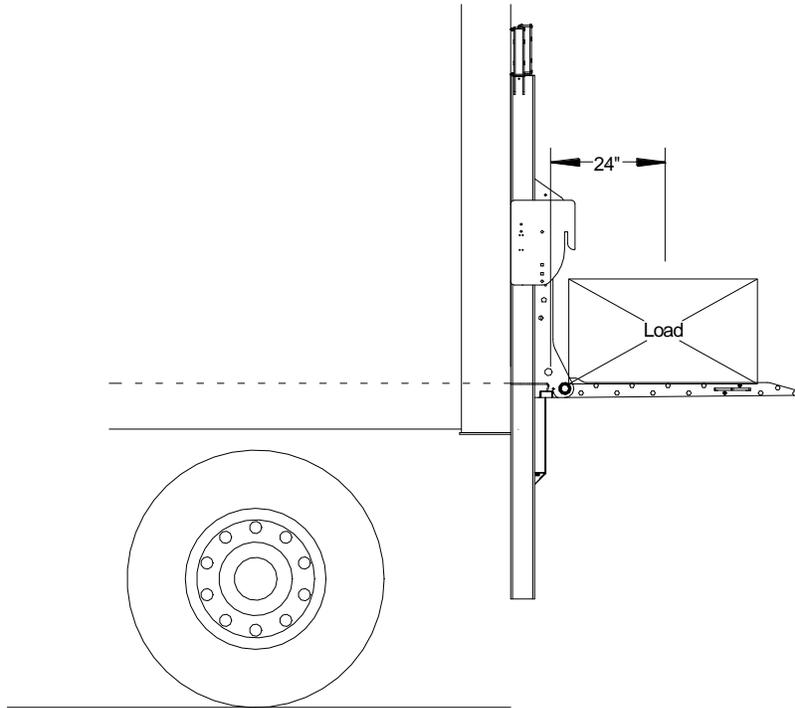
Thank you for choosing PALFINGER Liftgates!

5 General View of Liftgate



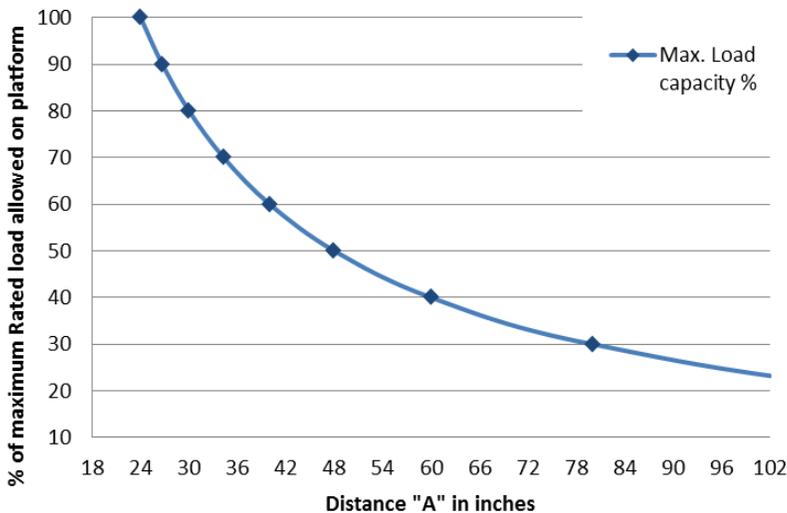
6 Maximum Load and Placing of Load on Platform

Every Palifinger Liftgate is rated up to a maximum load. The point of maximum load is rated at a defined distance. The center point of maximum load is 24" from the front of the platform.



By increasing this distance "A" the maximum load of the lift gate is decreasing. Make sure not to overload the liftgate. Place the cargo in the middle of the platform. Operating a gate with a misplaced load may cause serious damages or even injuries to the operator.

Load Capacity vs Distance "A"



- Note that Maximum capacity is rated at 24" from the truck. As the load is placed further away from the truck, the overall capacity of the liftgate decreases.
- Never apply a load that exceeds your liftgate's maximum load rating.

6.1 Loading and Unloading



When backing up vehicle to loading dock

DO NOT hit the dock. Have a second person outside the truck directing you. Hitting the dock may cause hidden damage to liftgate components. Be sure to inspect the liftgate thoroughly for damage.



Make sure to operate liftgate on a level surface. Always place the load on the platform as close as possible to the body of the truck / trailer. People must stay clear of area in which platform will open or close.

7 Operation of Liftgate

Theory of operation

The rail-type liftgate is designed to transport cargo vertically from the vehicle bed to the ground and vice versa. A hydraulic power unit provides power to a horizontal mounted cylinder that pulls a heavy duty roller chain over sprockets and raises and lowers the platform. The gate power is supplied by the truck battery or an auxiliary battery kit. By pushing the switches the determined function will be activated.

The hydraulic power unit supplies hydraulic fluid to the hydraulic cylinder, causing its extraction. Retraction is caused by operating actions, whenever the hydraulic fluid flows through the open valves back into the reservoir in the Hydraulic Power Unit.

The platform opens and closes manually or hydraulically. Manual open/close units have dual gas springs to assist in open and close functions. Hydraulic open/close units have a two way cylinder, powered by a hydraulic unit, which is controlled by the control switches.

7.1 Liftgate Operation – Manual Close

Steps:

1. Turn Power Switch On (If applicable): To activate power to the liftgate, turn the cab shutoff switch, **Fig.2**.

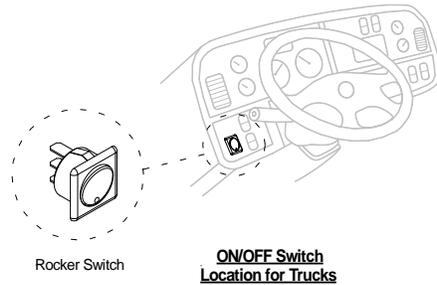


Fig. 2

2. Clear the platform sliding path by moving the storage safety latch manually. Hold the safety latch down manually with one hand and press the **Down** button on the control with the other hand until the platform locking ears clear the safety latch, **Fig. 3**. Release the safety latch back to its original place.

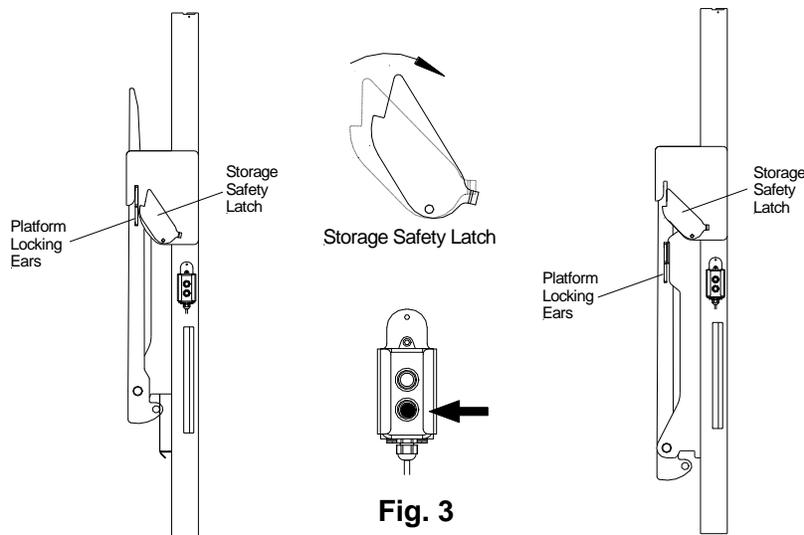


Fig. 3

3. Open the platform manually, **Fig. 4**. Never stand directly under the platform. Press the **Down** button to lower the platform completely to the ground, **Fig. 5**.

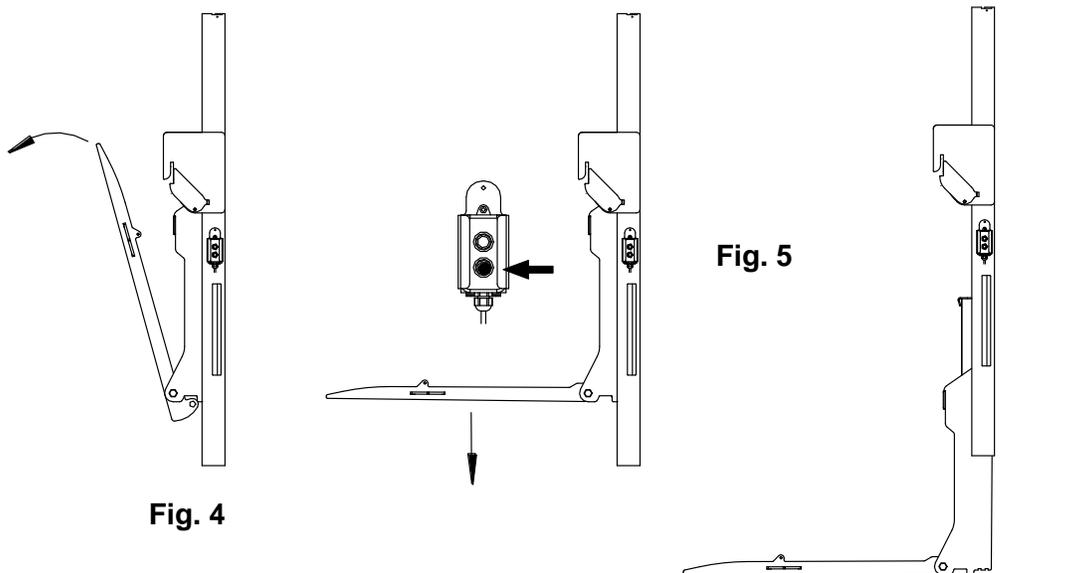
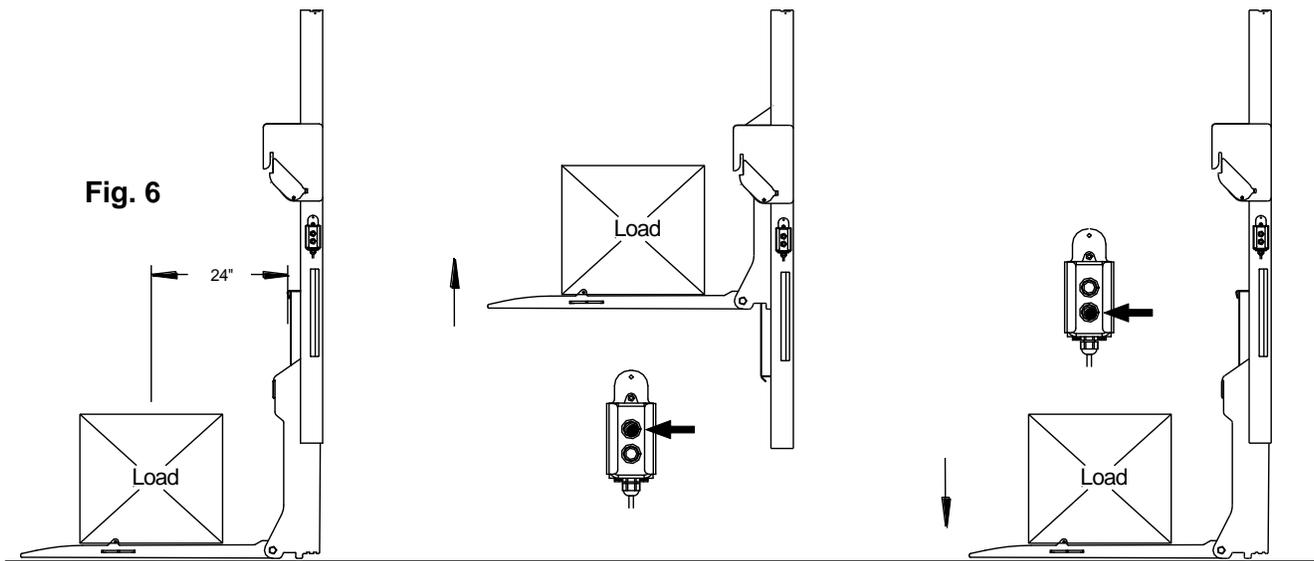


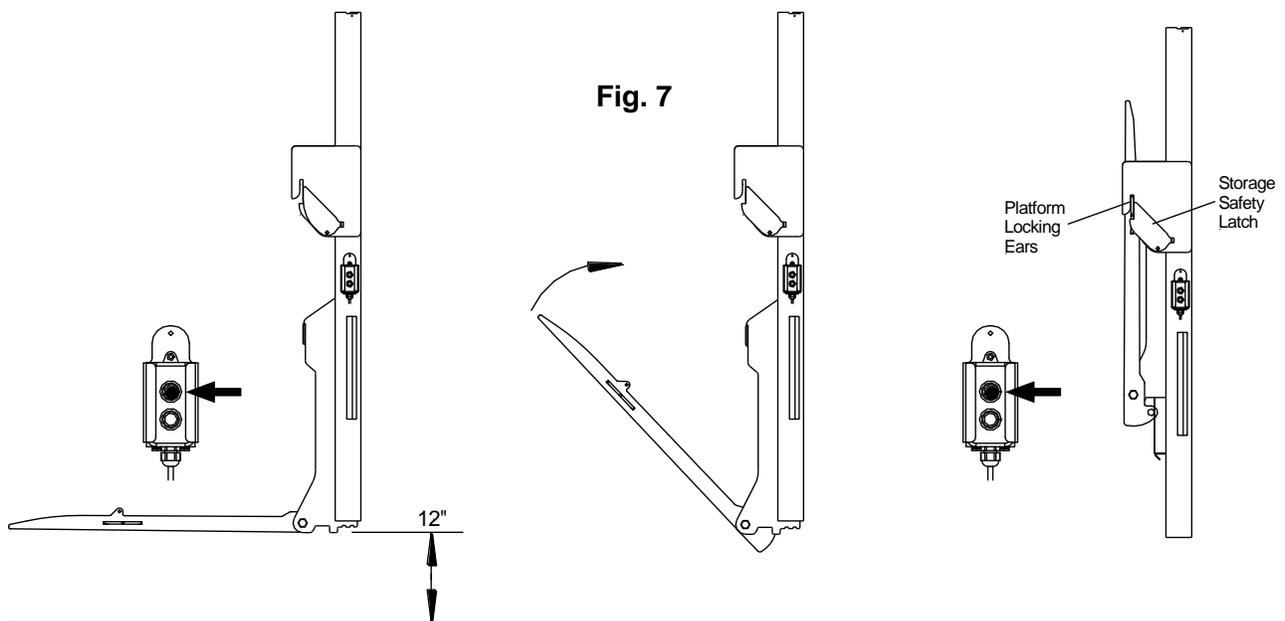
Fig. 4

Fig. 5

4. Center the load 24" from the front of the platform outward, **Fig. 6**. Use the **Up** button to raise the platform to bed level and the **Down** button to lower the platform down to ground level.



5. To store the platform, Press the **Up** button to raise the platform approximately 12" from the ground. Manually push the platform up parallel to the columns, **Fig. 7**. Press and hold the **Up** button to raise the platform until the platform locking ears are positioned in the locking plate and the storage safety lock is engaged.



7.2 Liftgate Operation – Power Close

Steps:

1. Turn Power Switch On (If applicable): To activate power to the liftgate, turn the cab shutoff switch, **Fig.8**.

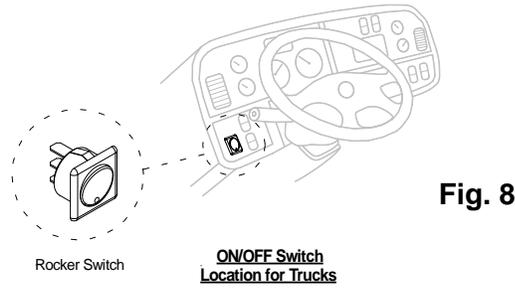


Fig. 8

2. Clear the platform sliding path by moving the storage safety latch manually. Hold the safety latch down manually with one hand and press the **Down** button on the control with the other hand until the platform locking ears clear the storage safety latch, **Fig. 9**. Release the safety latch back to its original place.

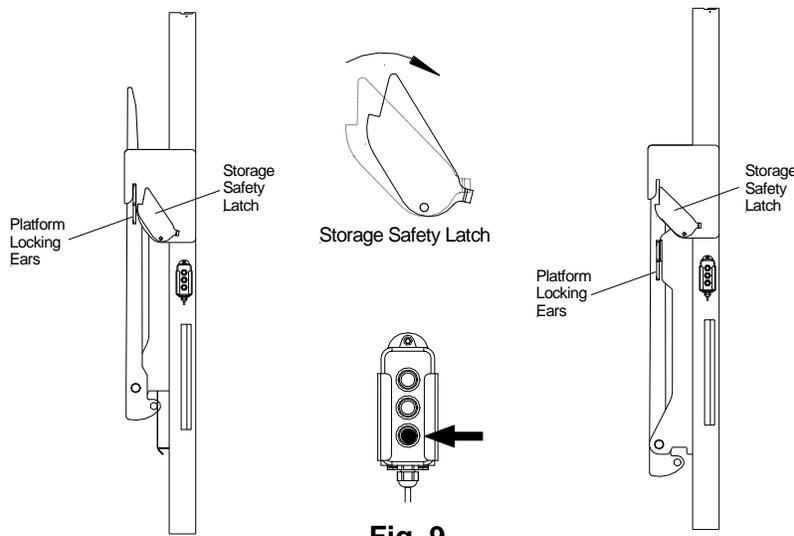


Fig. 9

3. Open the platform by pressing and holding the **Shift** and **Down** buttons simultaneously, **Fig.10**. Never stand directly under the platform. Press and hold the **Down** button to lower the platform completely to the ground, **Fig. 11**.

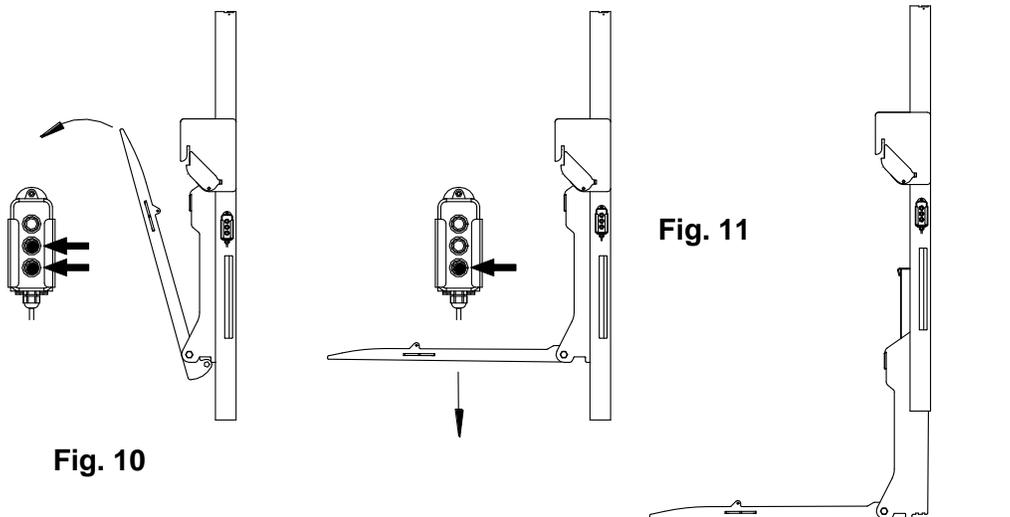
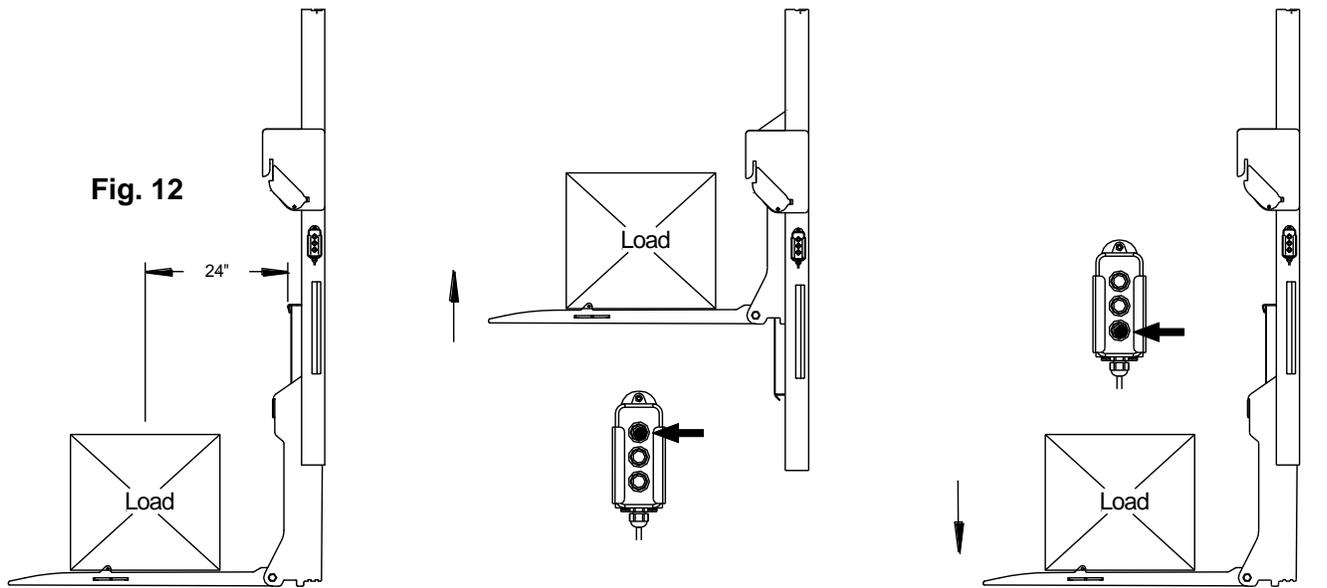


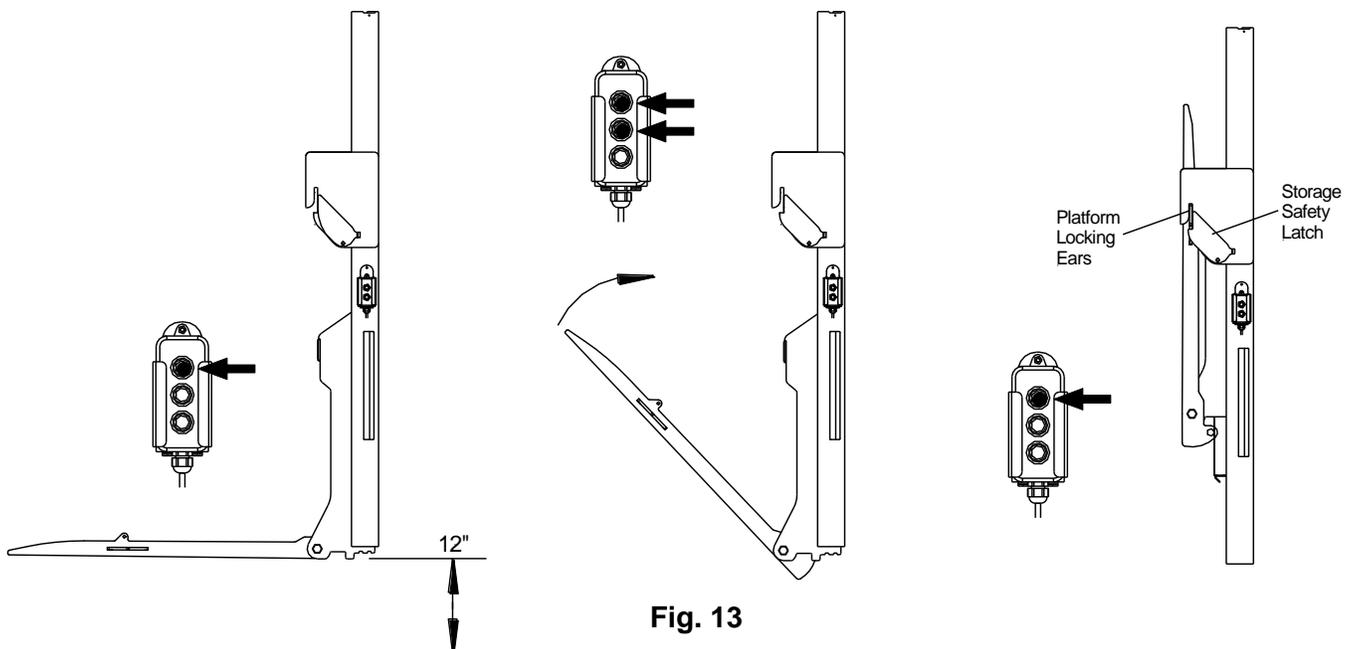
Fig. 10

Fig. 11

4.Center the load 24" from the front of the platform outward, **Fig. 12**. Use the **Up** button to raise the platform to bed level and the **Down** button to lower the platform down to ground.

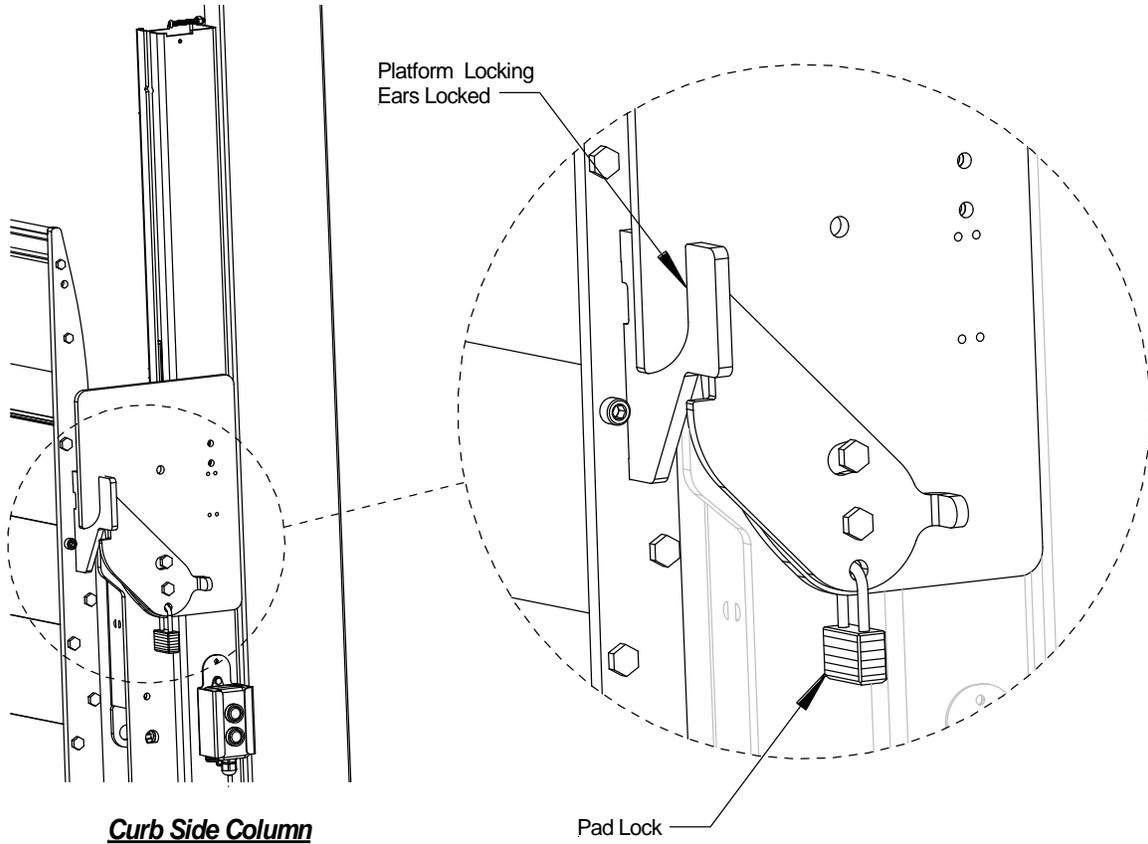


5.To store the platform, Press the **Up** button to raise the platform approximately 12" from the ground. Press and hold the **Shift** and **Up** buttons simultaneously until the platform is parallel to the columns, **Fig. 13**. Press the **Up** button to raise the platform until the platform locking ears are positioned in the locking plate and the storage safety lock is engaged.



7.3 Pad Lock (Optional)

The safety storage latch has an optional hole for the use a pad lock to prevent any unauthorized usage of the liftgate. Make sure the the liftgate platform is stored away properly and the safety storage latch is engaged prior to applying the pad lock. *Pad lock not supplied by Palfinger Liftgates.*



7.4 Cart Stops (Optional)

Aluminum Platform Cart Stops

1. Push the cart stop latch out toward the curb side, **Fig. 14**. The cart stop will spring open automatically once the latch has been moved from its original position, **Fig. 15**.
2. To close the cart stops, push the cart stop latch inward towards the street side, **Fig.16**. After the latch is in place close each cart stop by pushing each stop

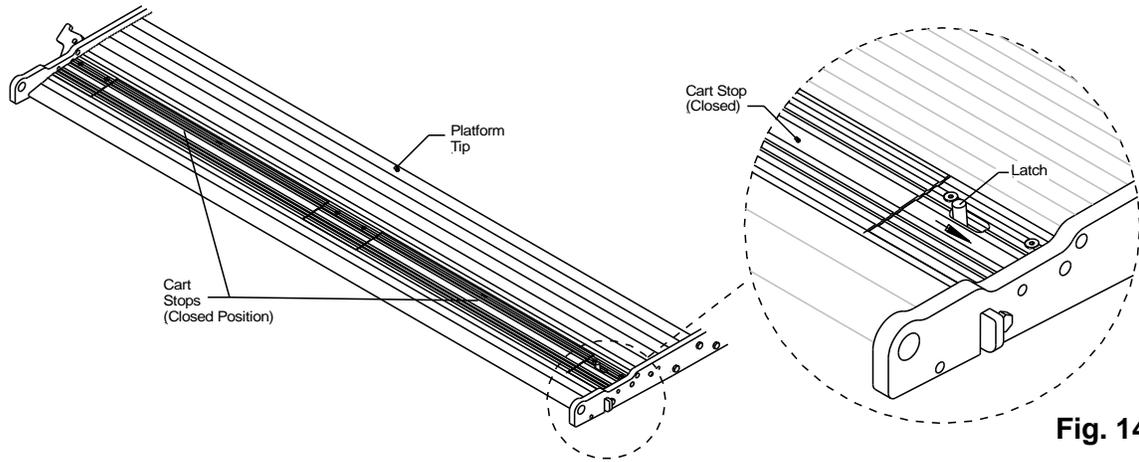


Fig. 14

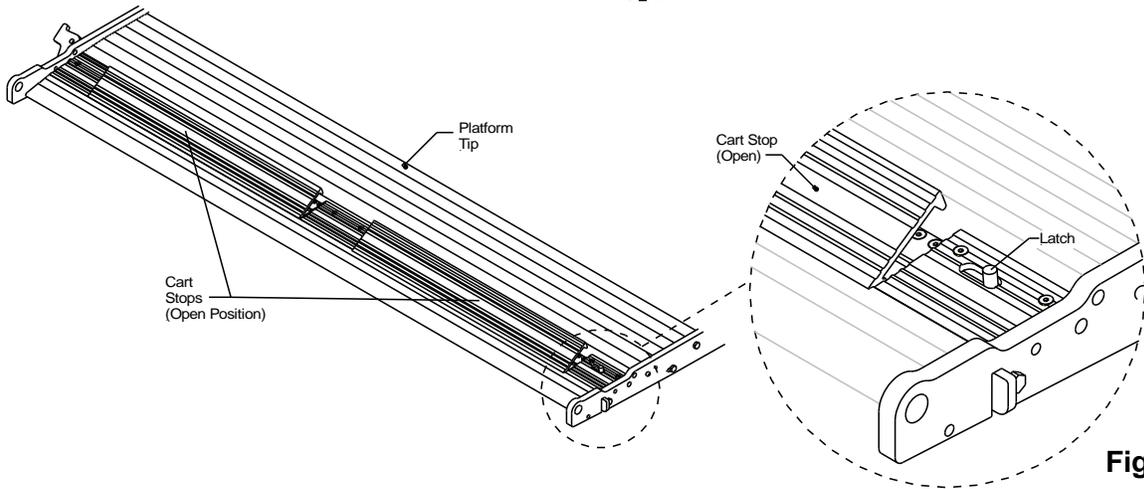


Fig. 15

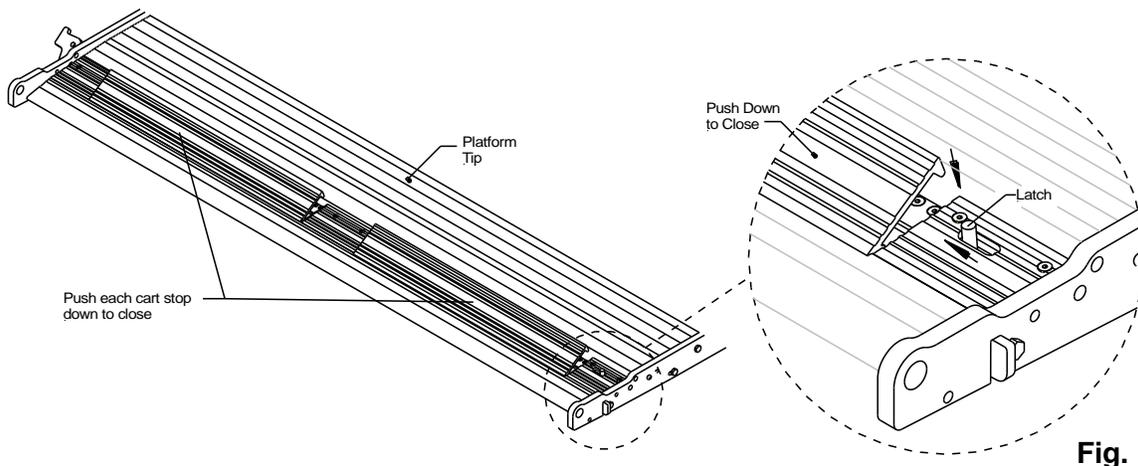


Fig. 16

Steel Platform Cart Stops

1. Each cart stop is equipped with a retaining latch. Push each latch inward to open the cart stop, **Fig. 17**. The cart stop will automatically spring open once the latch has been pushed, **Fig. 18**.
2. To close the cart stop, push and hold each cart stop down in close position and lock each cart stop with the retaining latch, **Fig. 19**.

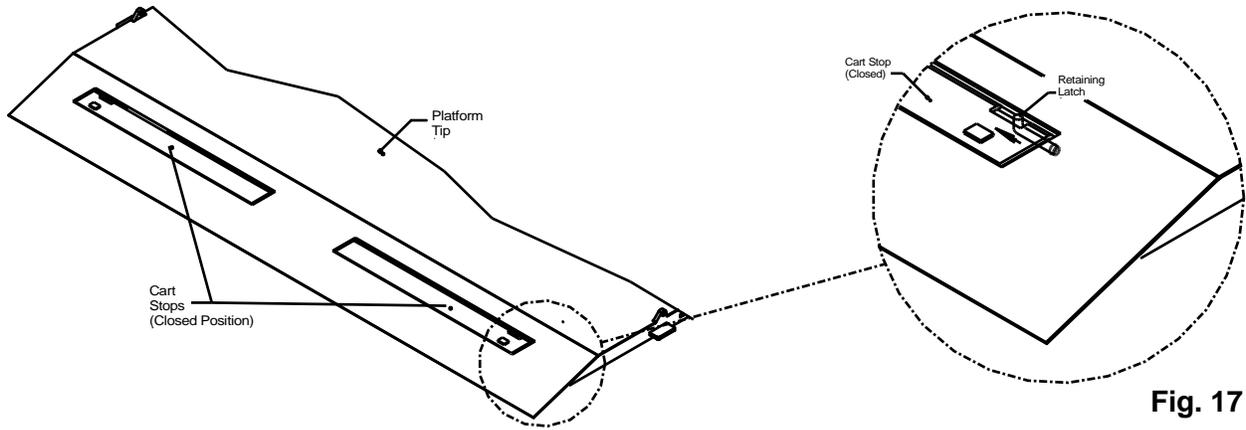


Fig. 17

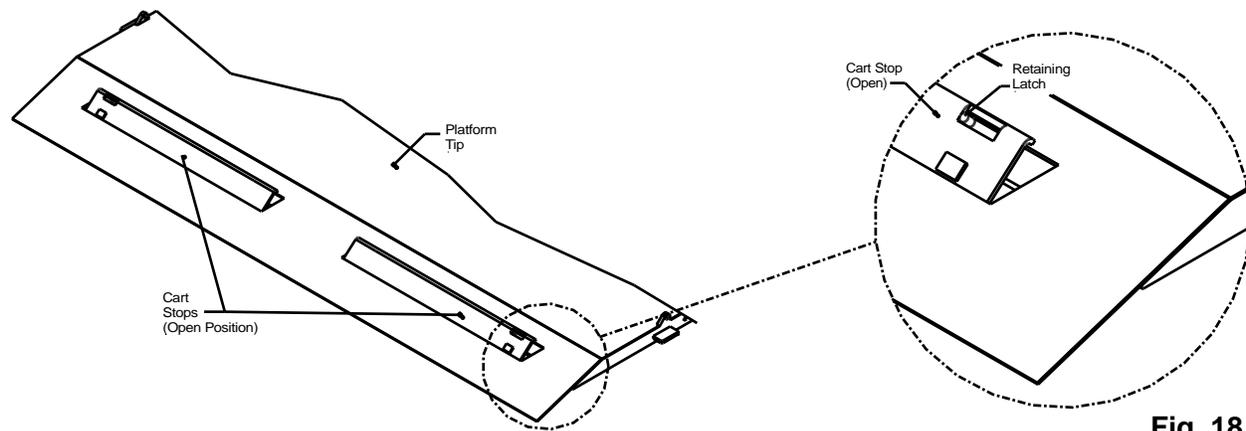


Fig. 18

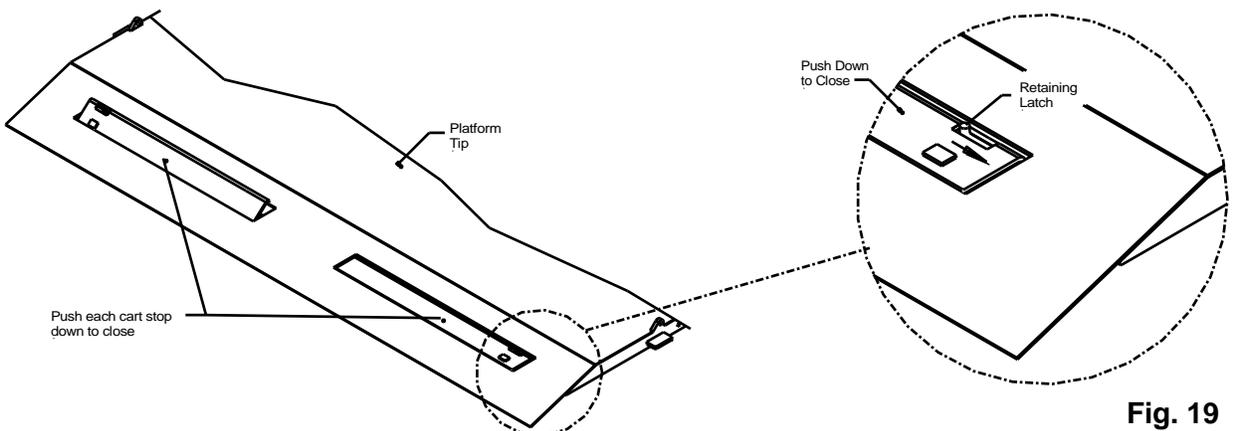


Fig. 19

8 Preventative Maintenance and Quick Check

The ILM needs preventive maintenance in order to achieve maximum performance. Lubricate and inspect regularly. Also, check that there are no damaged components such as hoses, cables, controls, etc.

8.1 Quick Check List

1. Operate the liftgate throughout its entire operation and check for noise and damage such as bent parts, scratches, or cracked welds.
2. Inspect all welds and fasteners that attach the mount frame to the truck.
3. Check all pin lock bolts for tight fit.
4. Visually inspect the hydraulic hoses for damage, scratches, bending or leakage. Also ensure that hoses are not fixed such that rubbing/wear on the hoses will occur- hoses should be securely fastened, not loose.
5. Inspect the cylinders for leakage and make sure the cylinder pins are secured.
6. Check the oil level when platform is down. The level should be approx. 1.5" below the top of the Oil Reservoir. PALFINGER Liftgates recommends replacing oil after the first 500 cycles, and then on a yearly basis in the fall before winter begins.
7. Check for oil leakage around the power pack. Tighten or replace components if needed. If you perform work on any hydraulic components, bleed the air out of the system by operating all functions several times to self-bleed the lift cylinders. Run the gate all the way up and down to remove air from the fluid.
8. Check all electrical connections. Clean the battery terminals.
9. Inspect all terminals on the solenoid-operated valves at the port of the cylinder. Lubricate the terminals for better protection from oxidation if needed.
10. Grease all zerks on the liftgate and make sure that they all accept grease. It helps to operate the liftgate while you do this.
11. Test all liftgates functions, if possible with maximum loads placed according to load diagram.
12. Check the function of the pressure relief valve.
13. If you find any kind of damage that can make the operation of the liftgate dangerous, DO NOT CONTINUE TO USE THE LIFTGATE. It must be completely repaired before using. All repairs must be made by an authorized technician. Use only original spare parts. If in doubt contact your PALFINGER Liftgates distributor or PALFINGER Liftgates directly.



Do not ignore any accidents or damage; it can be dangerous for you and your co-workers.



IMMEDIATELY REPAIR OR REPLACE FAULTY PARTS

8.2 Maintenance and Care

The following “inspection and maintenance” should be performed at the recommended intervals depending on operation and amount of cycles or at the time when the unit shows any signs of damage or abuse. Remember that the secret to a long life of your PALFINGER Liftgate is to maintain it through preventive care.

The **Daily Overall Inspection** should be performed by the operator each day. You should also perform the **Lubrication Plan** according to the following pages. The **Routine Maintenance Schedule** should be performed half-yearly by an Authorized Service Center.

Your first visit to your Authorized Service Center should occur once the liftgate has been in operation for 30 days. The importance of this initial inspection is to make sure that everything is working properly during this break in period. Once this is complete, return half-yearly to your Authorized Service Center.



Do not operate the liftgate if any issues or damages are noticed during its daily inspection. Liftgate malfunction may cause severe personal injury or death. Liftgate should be inspected IMMEDIATELY by an Authorized Service Center.

* Recommended bases for inspection and maintenance	Depending on use	Daily	Monthly	Quarterly
cleaning	x			
general lubrication of pins and bushings				x
oil level inspection				x
oil change	x			
check hydraulic hoses and pipes for leaks				x
check controls and connections				x
check pins and pin retaining bolts			x	
check batteries and connections				x
check warning labels and other safety equipment for effectiveness and visibility		x		
visual check for loose or missing parts and un-usual noise during operation		x		
check lock bolts for tightness				x
check complete function of gate		x		

8.3 Lubrication

When kept properly lubricated, the PALFINGER ILM liftgate will ensure long lasting usage. Therefore, the liftgate should be lubricated once every 3-months. Average ILM plus use is considered 15 cycles per day or 1200 cycles/3-months. Lubricate more frequently if the lift gate is heavily used or whenever the pivot points appear to be dry.

CAUTION

DO NOT GREASE the “Slider Bearings” or “Columns” or “Runners”, as this will VOID your WARRANTY on the slide bearings.

Column Lubrication: The columns are designed to run DRY and this is what Palfinger recommends first. However, in some wet or dirty environments, the columns may require periodic lubrication. The schedule will vary based on cycles, load, and environment. We recommend motor oil, 0W-20, 5W-30, or "bar & chain oil" administered via a machinist style oil can. Don't over do it, a little goes a long way, two or three squirts on to slide surfaces will last months in most cases.

Deck: There are 2 grease fittings to maintain, left and right main pivots. Grease as shown.

Power Closing: There are 2 grease fittings to maintain, upper & lower cylinder pivot points. Grease as shown.

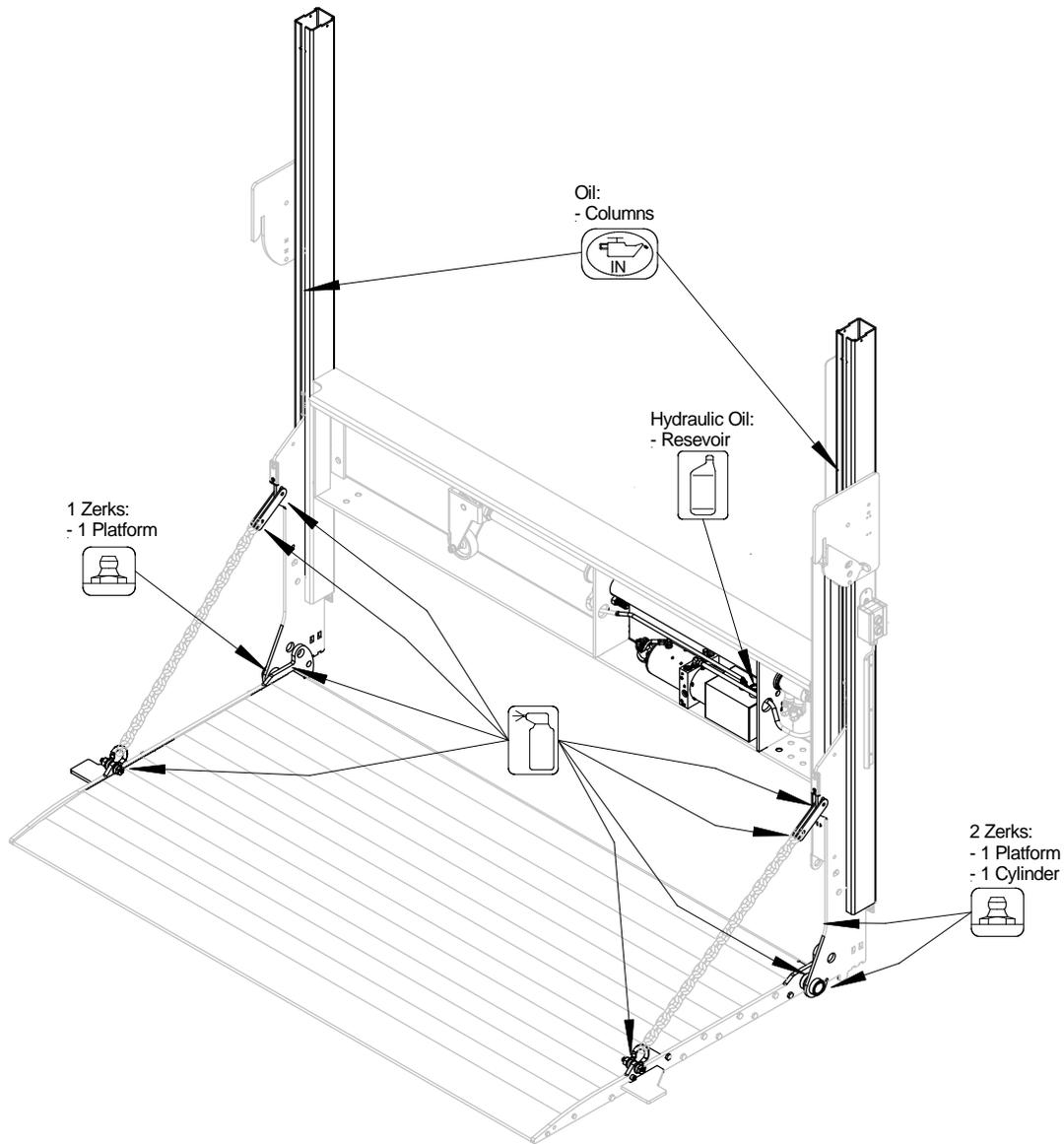
Manual Closing Gates: Use a light penetrating oil on closing aids; left & right side, upper & lower gas spring mounting points.

Deck support chains: Use a light penetrating oil on chain anchors; left & right side.

Lift roller chain: Under normal use and conditions, the lifting roller chain will require minimal lubrication or maintenance as it is impregnated with good quality grease and only makes contact with Polymer sprockets. In extreme wet or dirty environments, should roller chain show signs of drying or rust, lubricate with a good quality motor oil or chain oil listed above for columns.

Lubrication Locations:

All bearing points must be lubricated in accordance with the maintenance schedule.



Grease fitting, 2 for deck, 2 for power closing.



Hydraulic oil level in the power pack tank 2" to the top with deck on the ground. (see chart for recommended oils.)



Deck support chains and optional Cart Stops (use light penetrating oil)

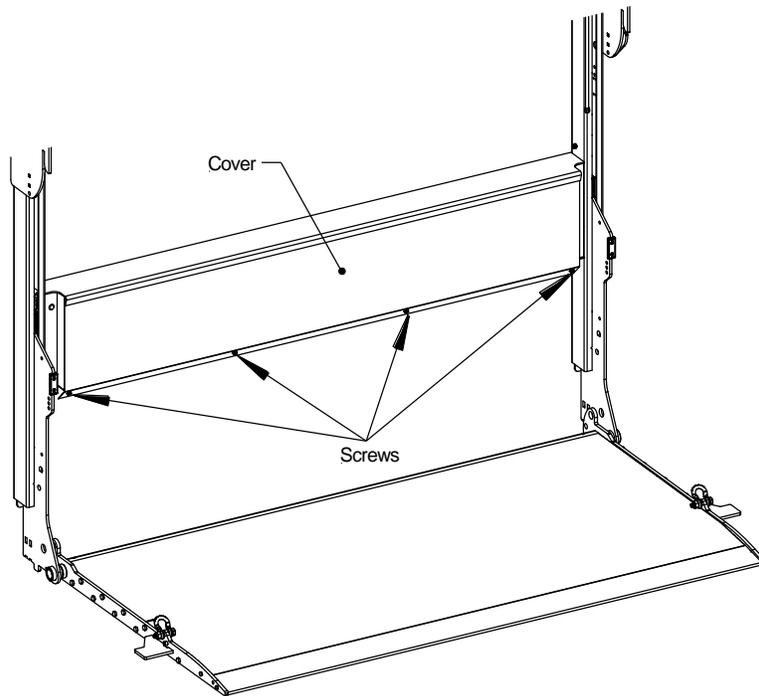


Columns (optional) use motor oil or chain/bar oil. (Never use GREASE of any kind.)

8.4 Checking and Changing the Oil

Step 1: To begin, lower the platform to the ground.

Step 2: Remove the four screws on the cover.



Step 3: Check Oil quality. If bad, follow next steps.

Step 4: Force the lift cylinder all the way in to fill up the Oil Reservoir with the oil left over in the cylinder.

Step 5: Find an approved oil container. Disconnect the hose from the lift cylinder (Hydraulic Connection Hose) by loosening the swivel joint on the hydraulic hose, **Fig. 20**. Empty the oil into the container.

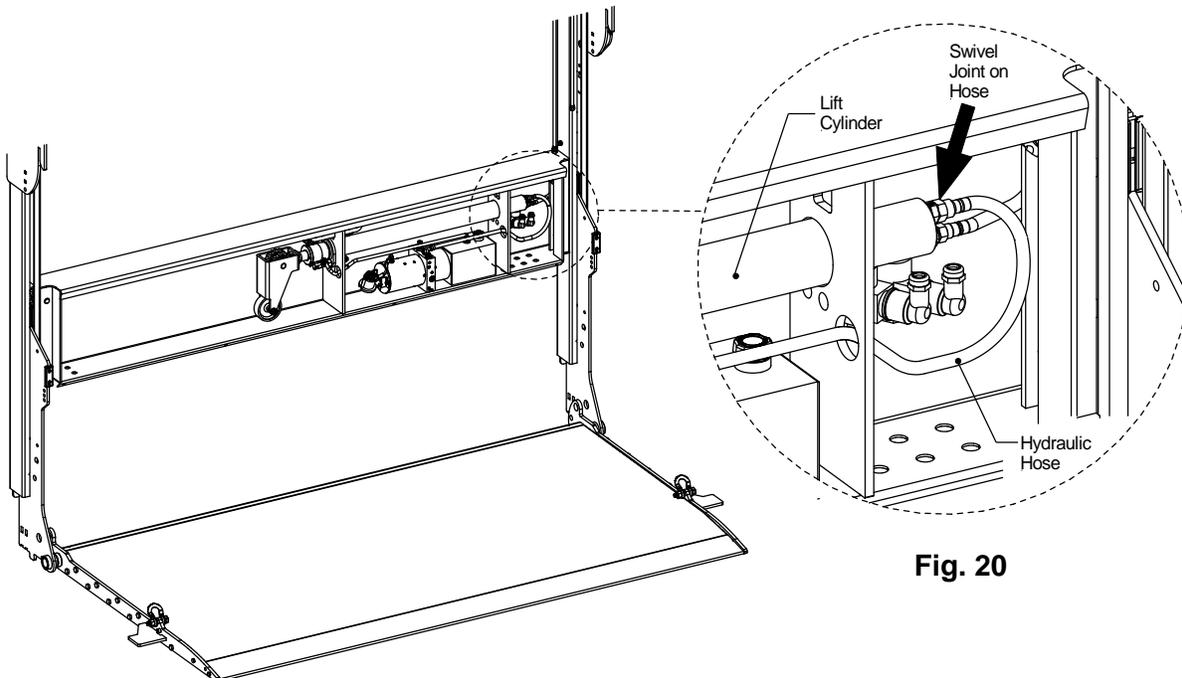
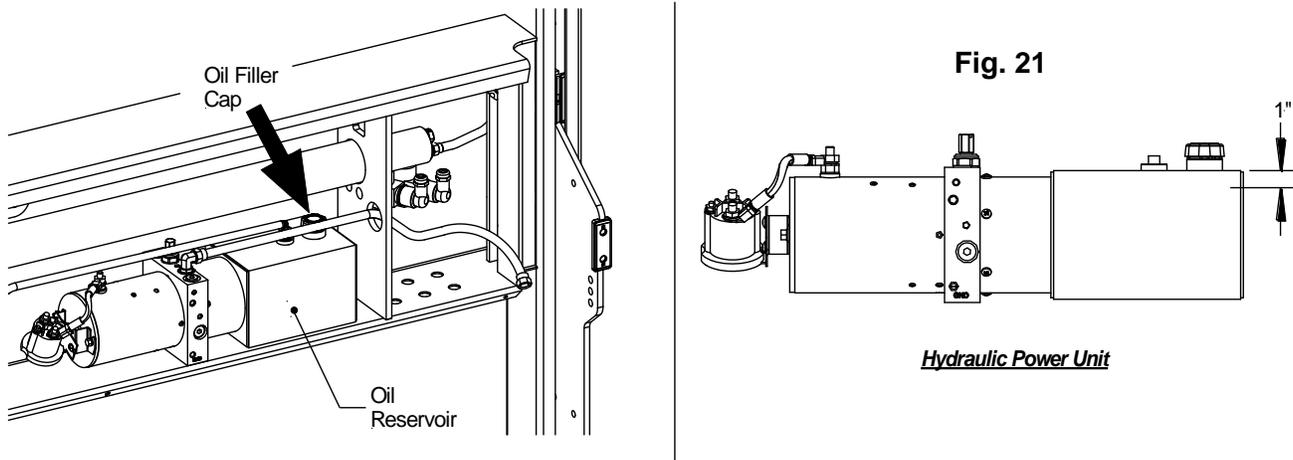


Fig. 20

- Step 6: Push up-button to start the pump and make sure to catch all the used oil in the container.
- Step 7: Fill up the Oil Reservoir with approved oil (approximately up to a level which is about 1" below its top (2.2 Liter or 0.58 Gallons), **Fig. 21**).



All ILM liftgates come with Hydrex MV Arctic 15 hydraulic fluid.

Hydraulic Fluid Installed From Factory	
Property	HYDREX MV ARCTIC 15
<i>Start Up Temperature</i>	<50°C / -58°F
<i>Operating Temperature</i>	-45°C to +23°C / -49°F to 73°F
<i>Pour Point</i>	-57°C / -71°F
<i>Flash Point</i>	128°C / 262°F
<i>Density 15°C (59°F). kg/L</i>	0.834
<i>Viscosity:</i> <i>cSt @ 40°C/SUV @ 100°F</i> <i>cSt @ 100°C/SUV @ 210°F</i> <i>cP @ -50°C (-58°F)</i>	13.0 / 69.7 4.95 / 42.5 1,310

When changing fluids, it is highly recommended to use Hydrex MV Arctic 15 fluid, however, the alternatives fluid brands listed below can be used.

Alternative Fluids	
Temperature Range	Fluid Brand
30° TO 150°F	EXXON UNIVIS J26
	MOBIL DTE 13M
	CHEVRON AW MV32
	ROSEMEAD MV 150 (32)
-50° TO 150°	MOBILE DTE 11
	SHELL AERO FLUID 4/41
	SHELL TELLUS 15
Extreme Cold Temperature	MIL H5606 (Military Spec.)

- Step 8: Re-install the hydraulic hose to the liftgate cylinder. Cycle the liftgate several times to disperse the oil in all parts. Inspect hose connection for leaks.
- Step 9: If the gate operation as intended, reinstall the cover.

8.5 Decal Placement and inspection



For operator's safety, all decals appearing in "Decal Kit" must be placed visibly on control side of liftgate to be read by operator. This is typically a combination of decals on the liftgate and vehicle body. Please make sure to place the maximum capacity decal (C) on driver and curb side.

Decal Kit			
Decal	Qty.	Part No.	Description
A	1	ATG-OPERILM-MC	Operating Instructions Manual Close
AA	1	ATG-OPERILM-PC	Operating Instructions Power Close
B	1	ATG-SWILM-MC	Main Operating Switch Manual Close
BB	1	ATG-SWILM-PC	Main Operating Switch Power Close
C	2	ATG-XXXX	Max. Capacity
D	1	ATG-URGWA	Urgent warning: Elevating gate instructions
E	2	ATG-WLH	Warning: Liftgate can crush
F	2	ATG-PLAT	Warning: Always stand clear of platform area
G	1	ATG-RESET	Circuit Breaker Protection.
H	1	ATG-BKR	Circuit Breaker Reset (must be located at the circuit breaker)
I	1	ATG-ILMSTORAGE	Notice: Storage Latch
J	2	ATG-ILMGRNCLR	Notice: Ground Clearance
K	2	85-0713-100	Do Not Grease Columns
L	1	ATG-CAB	Liftgate Shut-Off (Place next to the Shut-Off switch, if applicable)
M	1	ATG-UD	Toggle Switch Decal, Up-Down (if applicable)
N	Roll		Conspicuity Tape (if applicable)

NOTICE

It is the installer's responsibility to determine the proper application of the Conspicuity tape, and to ensure that the vehicle or trailer meets DOT and federal lighting regulations. The following diagram is a guideline for placement on trailers over 80" wide and GVWR of 10,000 lbs or more. This document is not intended to replace published agency regulations, and it is strongly recommended that the installer refer to the Code of Federal Regulations (CFR) which can be viewed at <http://ECFR.gpoaccess.gov>.

OPERATING INSTRUCTIONS
Read all Decals and Owner's Manual before operating liftgate.

ILM POWER CLOSING

SWITCH OPERATIONS:

- "UP" switch raises platform from ground to load.
- "DOWN" switch lowers platform from load to ground.
- "SMPT" - "UP" raises platform from loading position to stored position.
- "SMPT" - "DOWN" lowers platform from stored position to loading position.

STORAGE AND TRAVEL POSITION:

- Platform is closed and stored UP tight into the storage latch with hydraulic power.
- Pad lock is used on safety latch to prevent unauthorized use.
- Never release platform on to safety latch. This latch is for EMERGENCY situations ONLY.

PLATFORM FROM STORED POSITION TO LOADING POSITION:

- Be certain all pinch points and areas around platform are clear before operating liftgate.
- Hold safety latch to the open position and push "DOWN" button until platform clears storage latching system.
- With platform clear of latching system, hold "SMPT" button & push "DOWN" button to open platform to loading position.

PLATFORM FROM LOADING POSITION TO STORED POSITION:

- Be certain all pinch points and areas around platform are clear before operating liftgate.
- With platform in the loading position, hold "SMPT" button & push "UP" button until platform latches into storage latch.
- With platform latched up and latching system pads, push "UP" button until platform is stored tight into storage latch.
- Never release platform on to safety latch. This latch is for EMERGENCY situations ONLY.

Decal - A

OPERATING INSTRUCTIONS
Read all Decals and Owner's Manual before operating liftgate.

ILM MANUAL CLOSING

SWITCH OPERATIONS:

- "UP" switch raises platform from ground to load.
- "DOWN" switch lowers platform from load to ground.

STORAGE AND TRAVEL POSITION:

- Platform is closed and stored tight into the storage latch with hydraulic power.
- Pad lock is used on safety latch to prevent unauthorized use.
- Never release platform on to safety latch. This latch is for EMERGENCY situations ONLY.

PLATFORM FROM STORED POSITION TO LOADING POSITION:

- Be certain all pinch points and areas around platform are clear before operating liftgate.
- Hold safety latch to the open position and push "DOWN" button until platform clears storage latching system.
- With platform clear of latching system, and positioned to firmly grasp next, pull platform towards ground.

PLATFORM FROM LOADING POSITION TO STORED POSITION:

- Be certain all pinch points and areas around platform are clear before operating liftgate.
- With platform in the loading position, and platform just above knee height, three grasp step and just on closing until platform latches into storage pads.
- With platform latched up and latching system pads, push "UP" button until platform is stored tight into storage latch.
- Never release platform on to safety latch. This latch is for EMERGENCY situations ONLY.

Decal- AA

OPERATING INSTRUCTIONS
Read all Decals and Owner's Manual before operating liftgate.

FOR POWER DOWN PUSH THE DOWN BUTTON TWICE WITHIN 3 SECONDS

Decal - B

OPERATING INSTRUCTIONS
Read all Decals and Owner's Manual before operating liftgate.

Decal- BB

CAUTION
Maximum Load Capacity
XXXX pounds.
Center load on platform to avoid personal or property damage.

Decal - C

WARNING
ALWAYS STAND CLEAR OF PLATFORM AREA

Decal - F

NOTICE
ELECTRICAL SYSTEM IS PROTECTED BY A RESETTABLE CIRCUIT BREAKER. SEE OWNER'S MANUAL AND DECAL LOCATED AT THE BATTERY.

Decal - G

URGENT WARNING

BEFORE OPERATING LIFT, BE SURE YOU UNDERSTAND:

- Improper operation of this lift gate can result in serious personal injury. Do not operate unless you have been properly instructed, have read, and are familiar with, the operating instructions. If you do not have a copy of the instructions please obtain them from your employer, distributor or dealer, as appropriate, before you attempt to operate the lift gate.
- Be certain the vehicle is properly and securely braked before using the liftgate.
- Always inspect this lift gate for maintenance or damage before using it. If there are signs of improper maintenance, damage to vital part, or a slippery platform surface, do not use the lift gate. Do not attempt your own repairs, unless you are specifically trained.
- Do not overload. See the Mtg. Literature and/or Rating Label on the unit for the rated load. Remember that this limit applies to both raising and lowering operations.
- Each load should be placed in a stable position as near as possible to the center of the platform.
- Never allow yourself, a helper, or a bystander to stand in a position where an unstable load might fall on them. Do not allow any part of your or your helper's body to be placed under, through, or around any portion of the moving lift gate, or in a position that would trap them between any parts when the lift gate is operated.
- This lift gate is intended for loading and unloading of cargo only. Do not use this lift gate for anything but it's intended use. The lift gate is not equipped with a back up system to prevent falling in the event of a failure.

Decal - D

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

Decal - E

NOTICE
ELECTRICAL SYSTEM PROTECTED BY RESETTABLE CIRCUIT BREAKER
TO RESET - PUSH RESET TAB IN

Decal - H

NOTICE
Storage Latch Power UP Tight for Storage & Transit

Decal - I

NOTICE
UP
DOWN

Decal - M

NOTICE
Cutting of RAILS for GROUND CLEARANCE
Cut bottom of RAILS for 18" of ground clearance.
INSIDE surfaces to be chamfered to not cause DAMAGE to slide bearings as they extend below bottom of cut Rail.
See ILM plus Installation Manual for details.

Decal - J

NOTICE
DO NOT apply grease to columns
Refer to the Owner's Manual for proper lubrication procedures, or contact Customer Support at 888-774-5844
P/N 85-0713-100

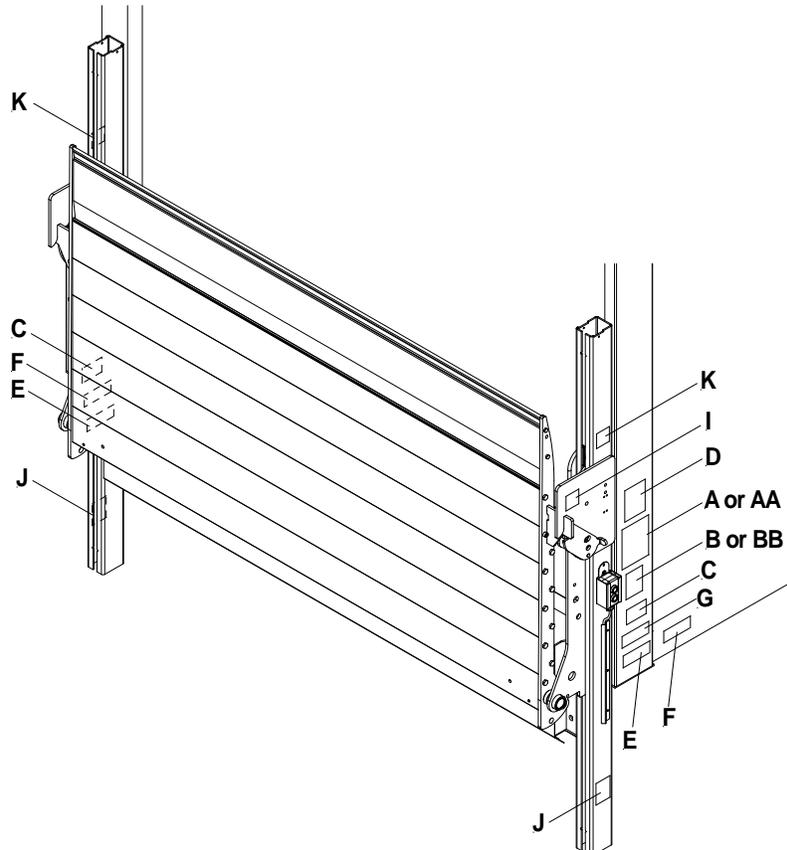
Decal - K

NOTICE
LIFT GATE SHUT-OFF TO BE TURNED OFF WHEN LIFT IS NOT IN USE

Decal - L



Decal - N



9 Troubleshooting

⚠ WARNING

Dangerous injuries are possible from objects such as tools short circuiting main battery connections. Be sure that you are working in a safe environment.

NOTICE

Change oil after working on hydraulic unit (removal of valves, opening of cylinder etc). There is a possibility of injury if somebody other than an authorized technician works on the electrical system.

1. Check the cab shut off switch

Turn on cab switch, located in the cab next to the steering wheel. Location may vary by model and year of truck, **Fig. 22**.

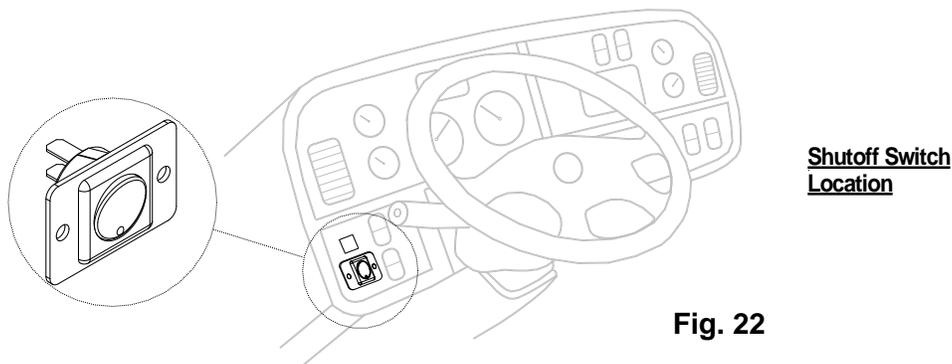


Fig. 22

2. Check the circuit breaker at the main batteries

Every truck has a circuit breaker on top of the main batteries or if you have an auxiliary battery kit as shown in the illustration below, **Fig. 22**.

If circuit breaker reset tab is exposed, push the tab back into the tab chamber as shown, **Fig. 23**.

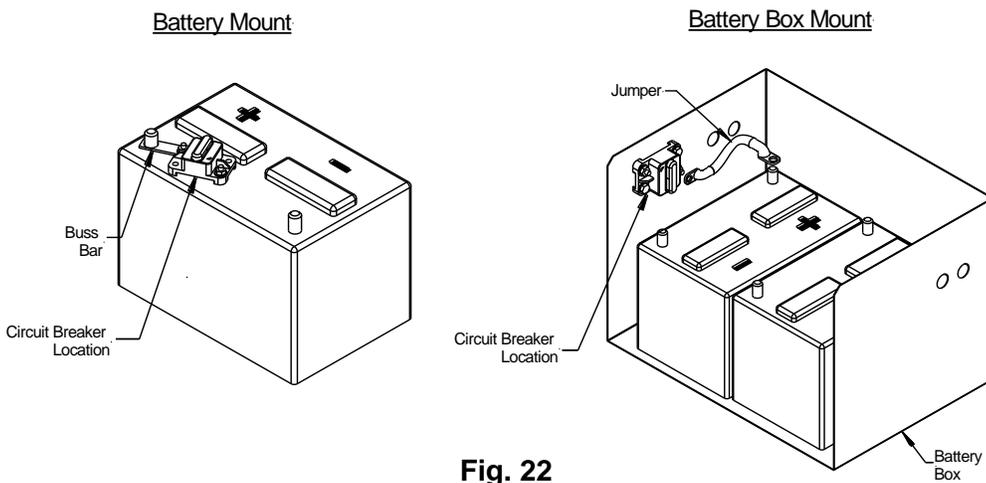


Fig. 22

Fig. 23

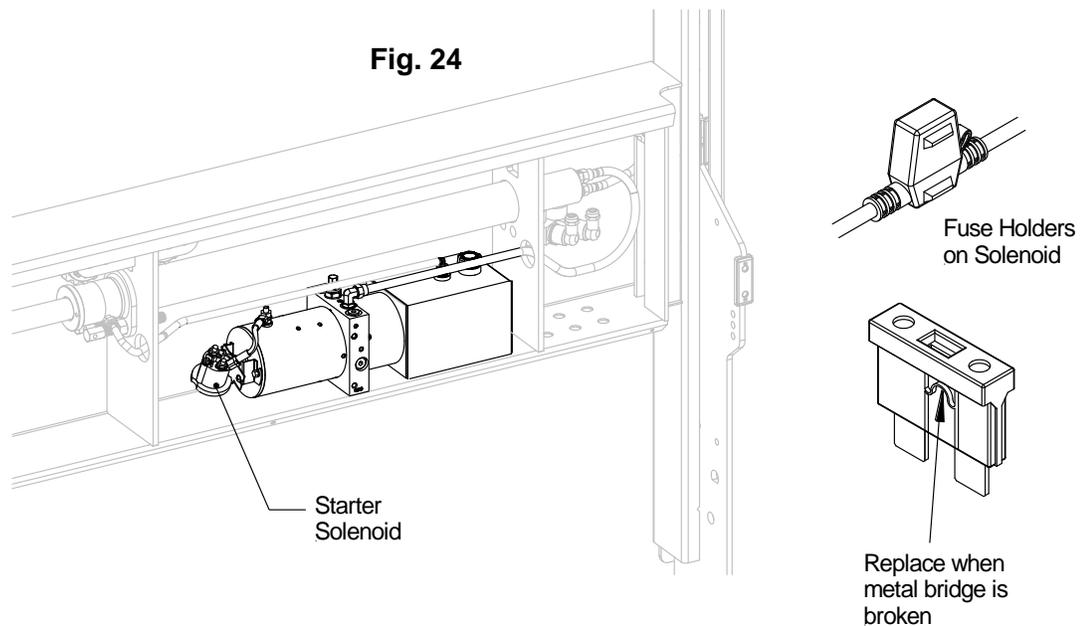
3. **Are the vehicle batteries charged?**

Check batteries and the truck/trailer charging system. Start truck and run engine in fast idle for charging the batteries. If the liftgate starts working, recharge and load test batteries. Measure battery voltages: Flooded Batteries: 12.6V, AMG Batteries = 12.8V.

4. **Check the fuse at the power pack**

The hydraulic power unit has a 15A fuse attached to the started solenoid. Check for burned fuse and replace with the same amperage fuse, if necessary, **Fig. 24**.

 **DO NOT use higher amperage**  **fuse.**



In-Line ATC Fuse 15 Amp at solenoid. Replace with same amperage fuse when necessary.

NOTICE: DO NOT attempt to jump in-line fuse(s) with other objects other than the specified fuse(s).

DO NOT increase the amperage rating of fuse. Serious harm to the liftgate will result when standard practices are not followed.

5. **Is the connection to ground in power pack OK?**

Is the ground connection from the liftgate to vehicle properly grounded?

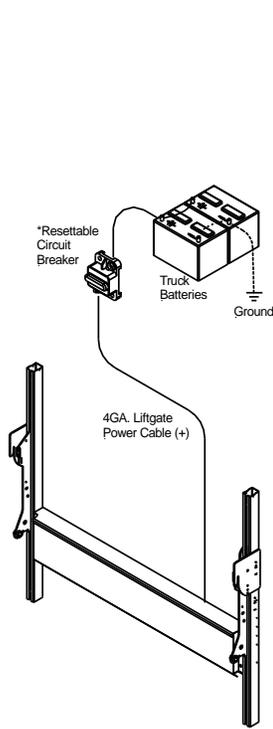
6. **Check the oil level in the power pack reservoir.**

Remove the cover to access the oil reservoir. The oil must be 1" down from the top of the reservoir.

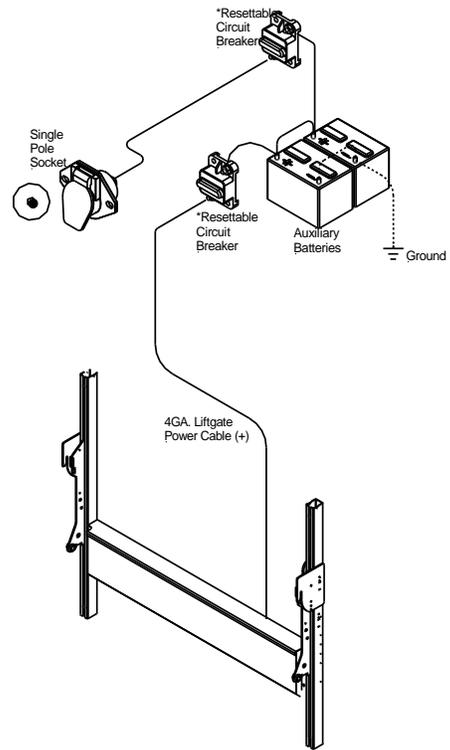
7. **Are there any damages on mechanical or electrical parts (such as damaged cables)?**

Perform a visual inspection of all electrical wiring and mechanical components.

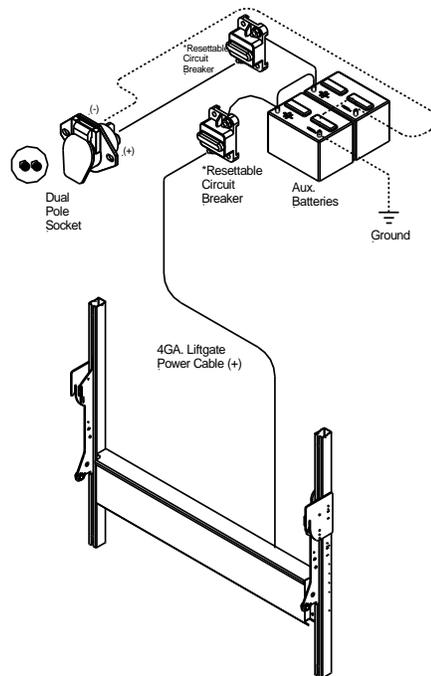
9.1 Wiring Diagram (Main battery wiring)



Battery Wiring - Truck



Battery Wiring - Single Pole - Trailer



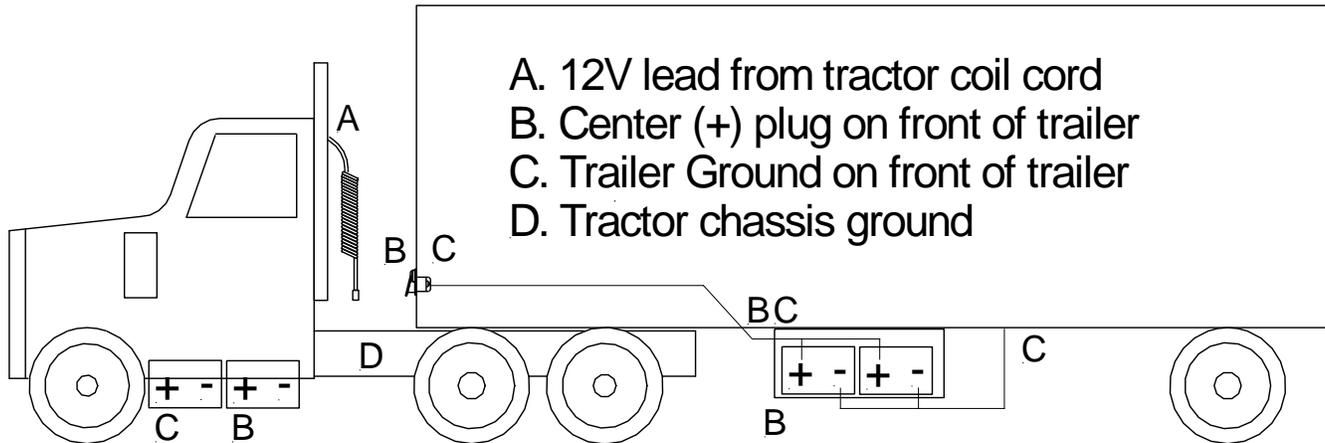
Battery Wiring - Dual Pole - Trailer

*Resettable Circuit Breaker: 150 Amp Min. **Replace with same amperage breaker when necessary.**

Ground: For optimal grounding, ground all batteries and power units to the body side rails of the vehicle.

9.2 Cross Test on Single Pole Plug Charge System

Testing of full system using a battery load tester. Start with testing each individual battery on both tractor and trailer before proceeding to check the system:



1. Tractor Test:

- Ground battery load tester on tractor chassis point (D)
- Connect positive load tester cable on positive pole of single pole plug at end of tractor coil cord (A)
- Run load test- This will test entire circuit on tractor including ground

2. Trailer Test:

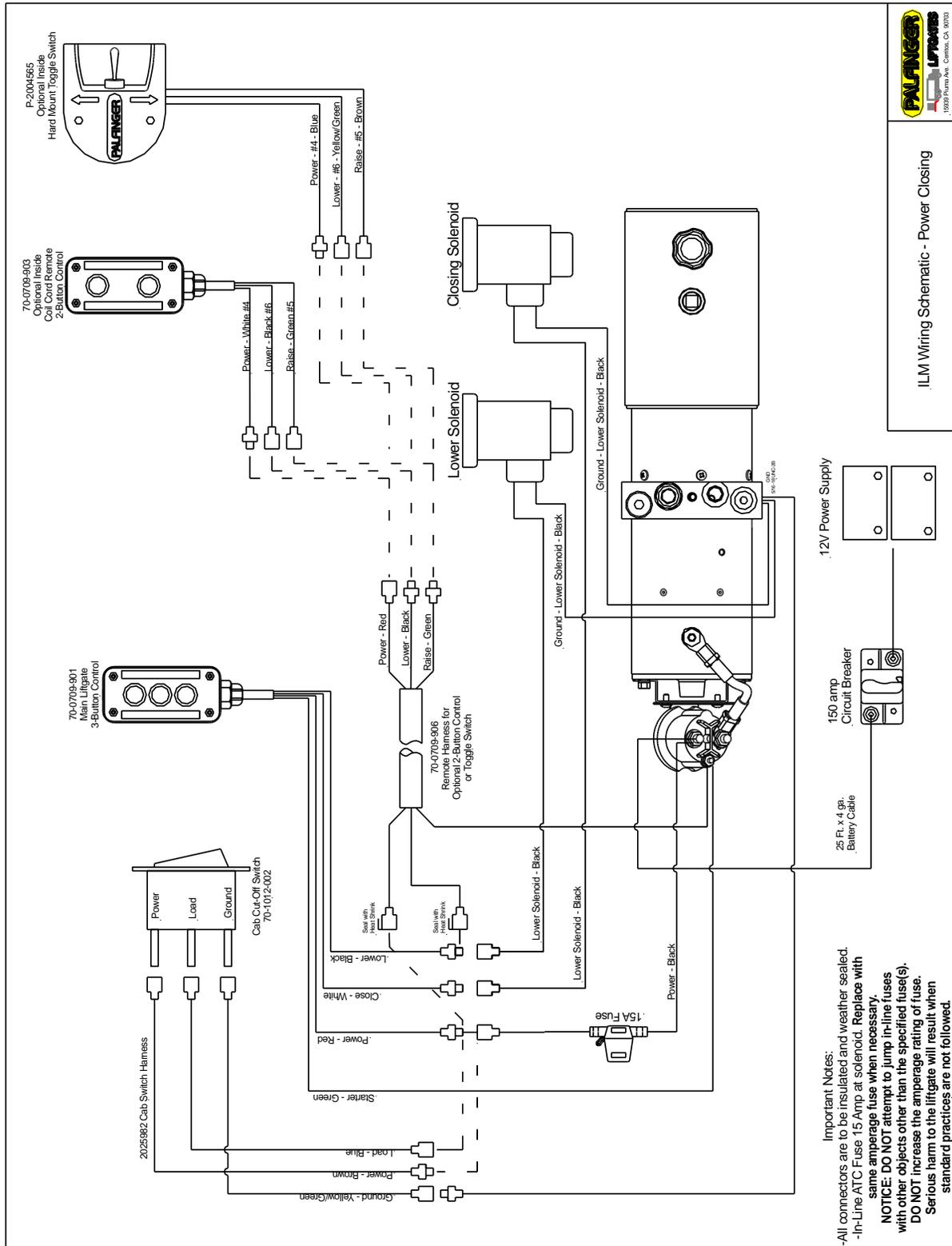
- Ground battery load tester on trailer chassis point (C)
- Connect positive cable on positive pole of single pole plug receptacle on trailer (B).
- Run load test- This will test entire circuit on tractor including circuit breakers and ground between trailer batteries and trailer chassis.

3. Tractor and Trailer Charging system test while connected:

- Ground battery load tester on tractor chassis point (D)
- Connect positive cable on positive pole of single pole plug receptacle on trailer (B).
- Run load test- This will test entire circuit on tractor and trailer including ground between tractor, trailer, and circuit breaker on trailer.

A simple low amp voltage test at the front of the trailer or at the tractor will not show insufficient connections or ground problems.

9.4 Wiring Diagram (Power down)

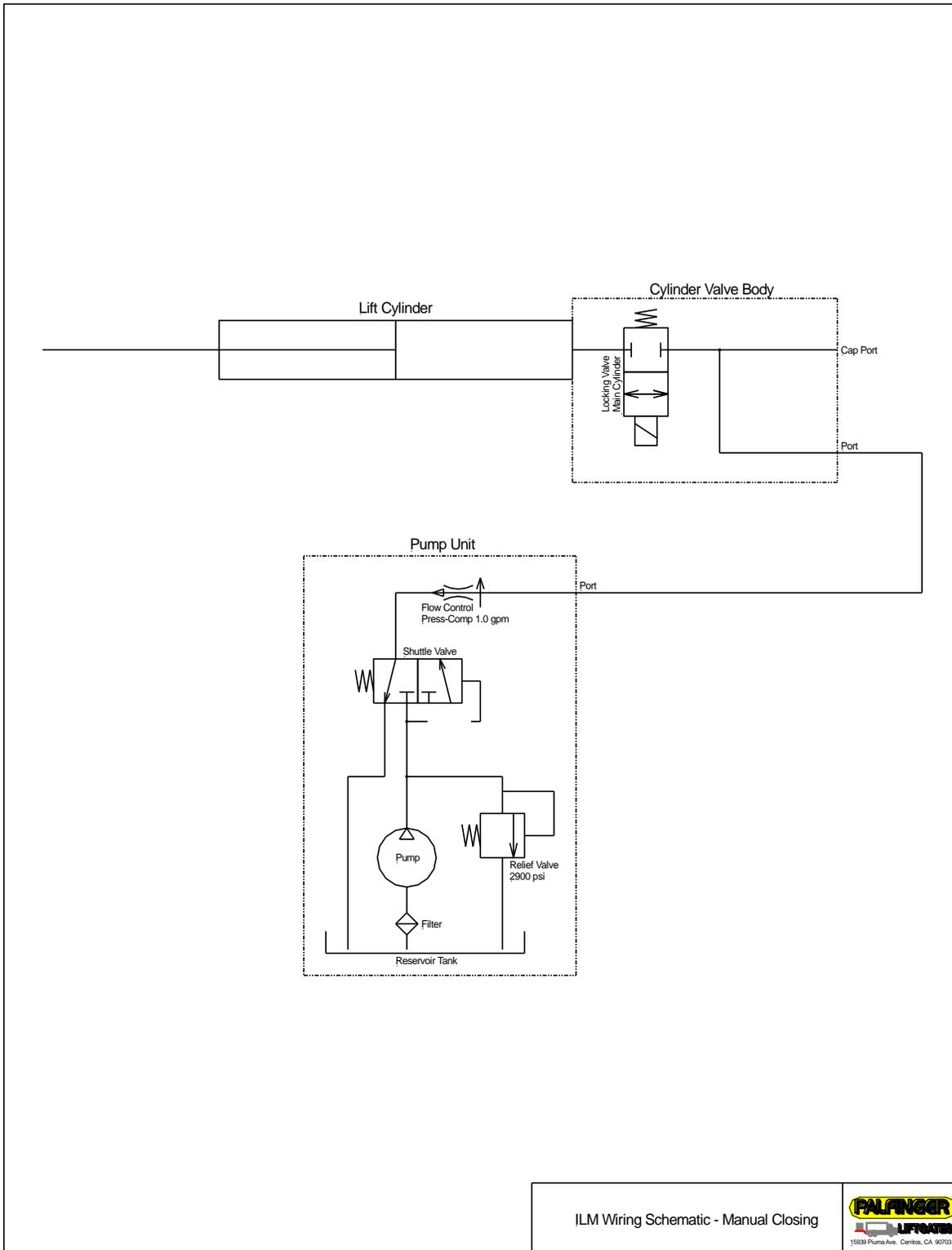


Important Notes:
 -All connectors are to be insulated and weather sealed.
 -In-Line ATC Fuse 15 Amp at solenoid. **Replace with same amperage fuse when necessary.**
NOTICE: DO NOT attempt to jump in-line fuses with other objects other than the specified fuse(s). DO NOT increase the amperage rating of fuse. Serious harm to the liftgate will result when standard practices are not followed.

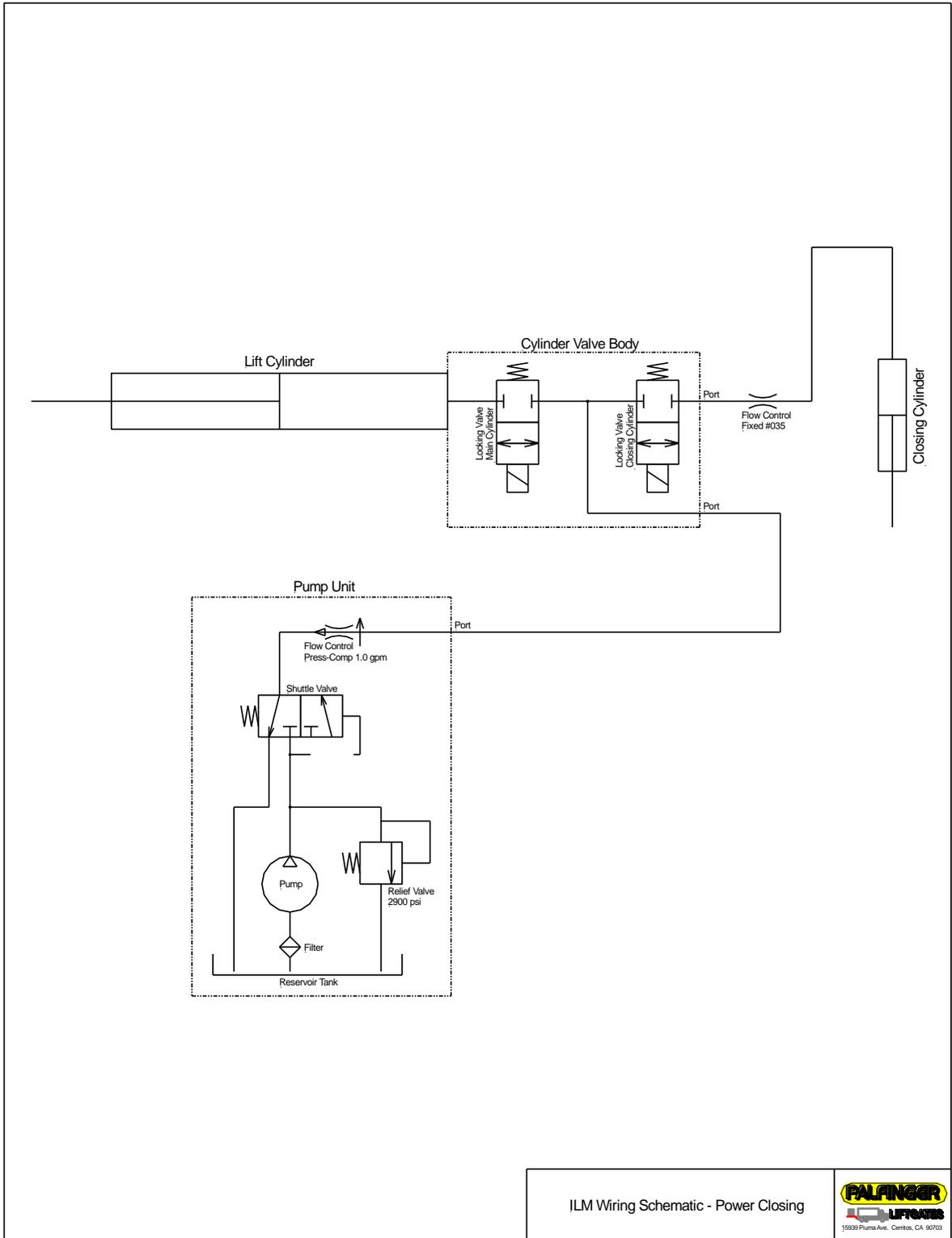


ILM Wiring Schematic - Power Closing

9.5 Hydraulic Schematic (Manual Closing)



9.6 Hydraulic Schematic (Power Closing)



10 Spare/Replacement Parts and Repairs

10.1 Ordering Spare/Replacement Parts

In order to assure quick delivery of replacement parts, always state the following information when making orders:

1. Liftgate model & serial number.
2. Designation and number of the spare part in accordance with the spare parts list.
3. Designation and number marked on the individual component (if available).

10.2 Repairs

Parts sent to Palfinger Liftgates to repair must be accompanied by a letter (in separate cover) giving details and scope of the repairs required.

11 Waranty

PALFINGER Liftgates provides warranty as part of its conditions of delivery.

All part deliveries will initially be billed. Palfinger Liftgates then issues credit for all or part of the invoiced sum, when Palfinger Liftgates has been able to determine that the warranty claim is justified as defined by its warranty conditions. Palfinger Liftgates does this by inspecting the defective parts, which are sent back to Palfinger Liftgates freight-prepaid as well as the written description of the problem which must be filled out in full.

The parts that are sent back to Palfinger Liftgates, marked with serial number and address, become Palfinger Liftgates' property if the warranty claim is accepted.

All warranty claims must be received **within 30 days** of repair or replacement. Including the following information:

1. Liftgate model.
2. Liftgate serial number.
3. Description of problem.
4. Itemized bill of repair with breakdown of number of hours to perform warranty work and labor charges per repair.
5. Parts used for repair with PALFINGER Liftgates part number.
6. RMA#.
7. Contact at PALFINGER Liftgates, if applicable.

Model	Pump and Motor	Cylinders	Hardware	Control System	Hydraulic
ILM+ 16/20/25/30	3 yr	2 yr	2 yr	2 yr	3 yr

Warranty Coverage Schedule1

12 Contact address

15939 Piuma Ave

Cerritos, CA 90703

Phone: (562)-924-8218

Fax: (562)-924-8318

E-mail (parts order):

customerservice@PALFINGER.com

E-mail (technical support):

technicalservice@PALFINGER.com



572 Whitehead Road

Trenton, NJ 08619

Phone: (609)-587-4200

Fax: (609)-587-4201

E-mail (parts order):

customerservice@PALFINGER.com

E-mail (technical support):

technicalservice@PALFINGER.com