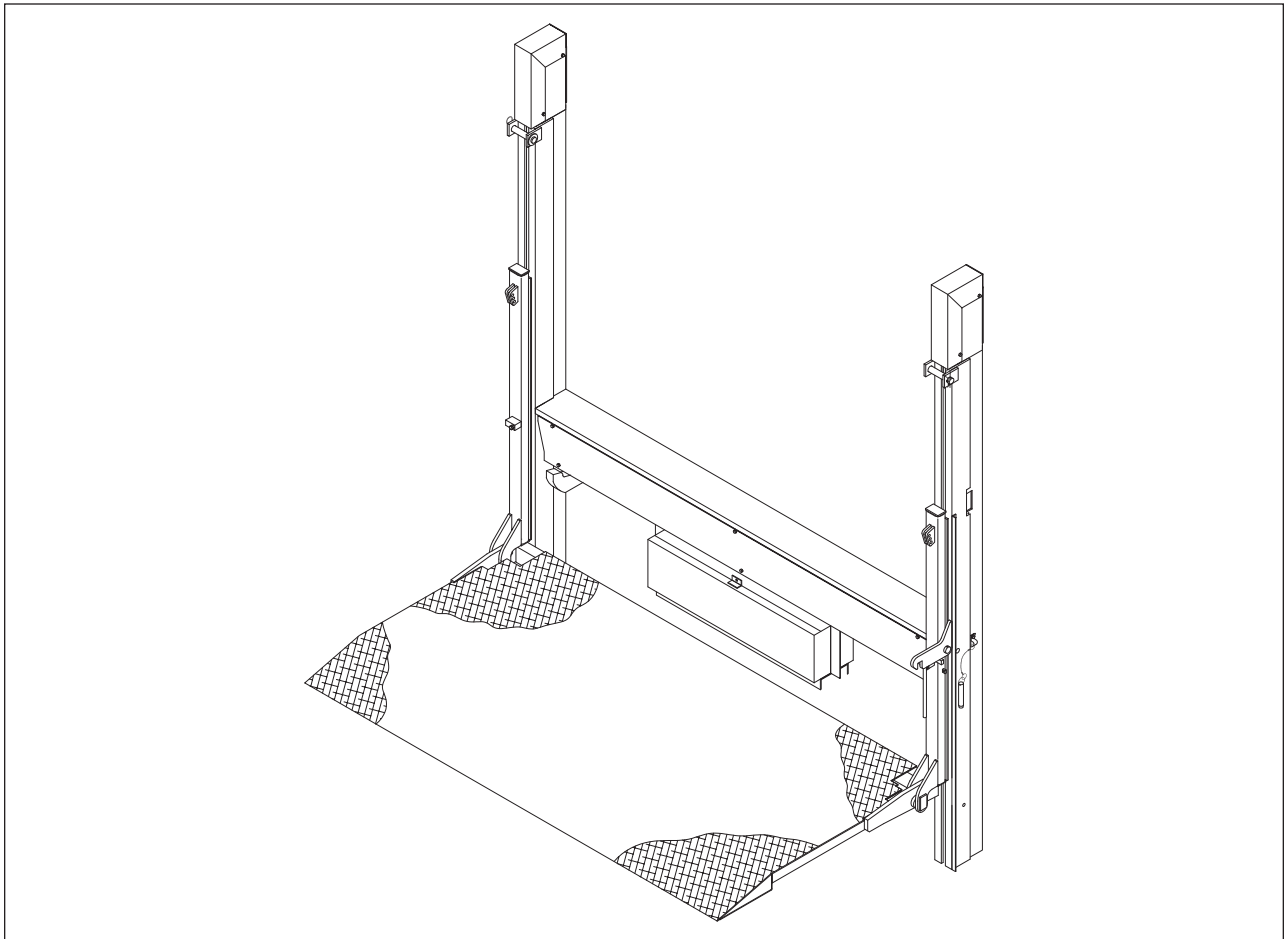


# **VL** SERIES

**Railgates By THIEMAN**

## **VL-30, 40, 50 INSTALLATION INSTRUCTIONS**



**IMPORTANT! KEEP IN VEHICLE!**

**PLEASE READ AND UNDERSTAND THE CONTENTS OF THIS  
MANUAL BEFORE OPERATING THE EQUIPMENT.**



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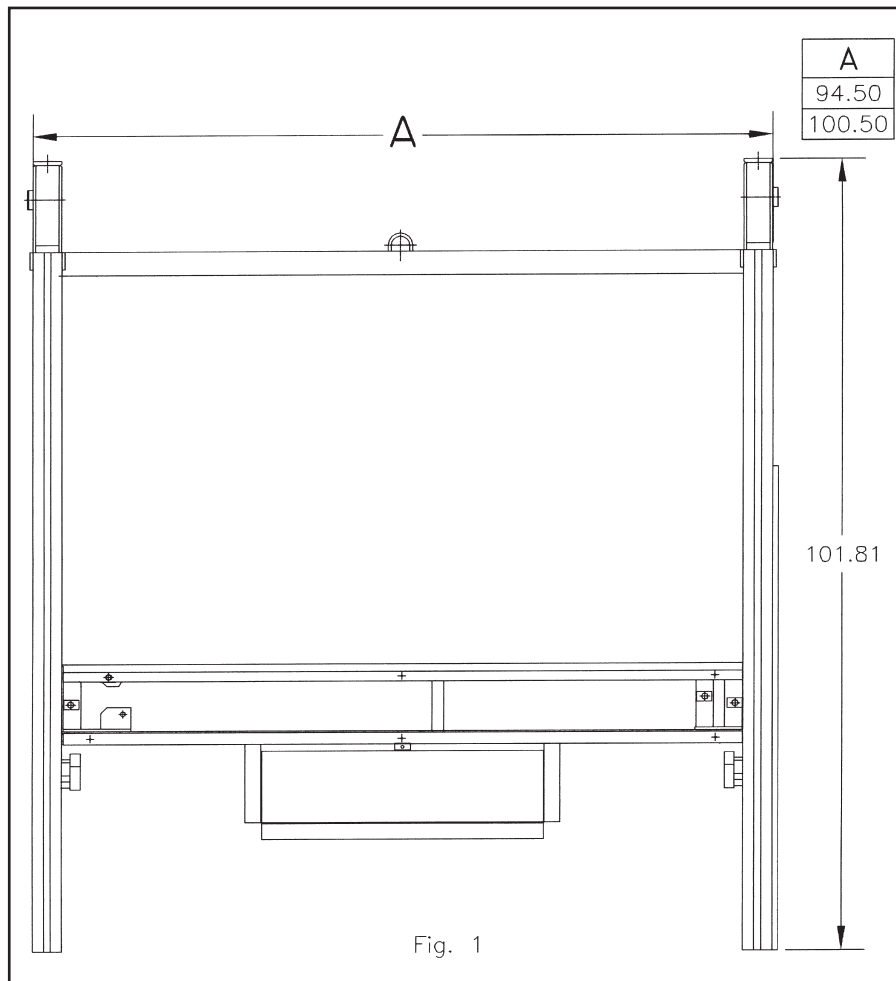
## VL30, 40, 50

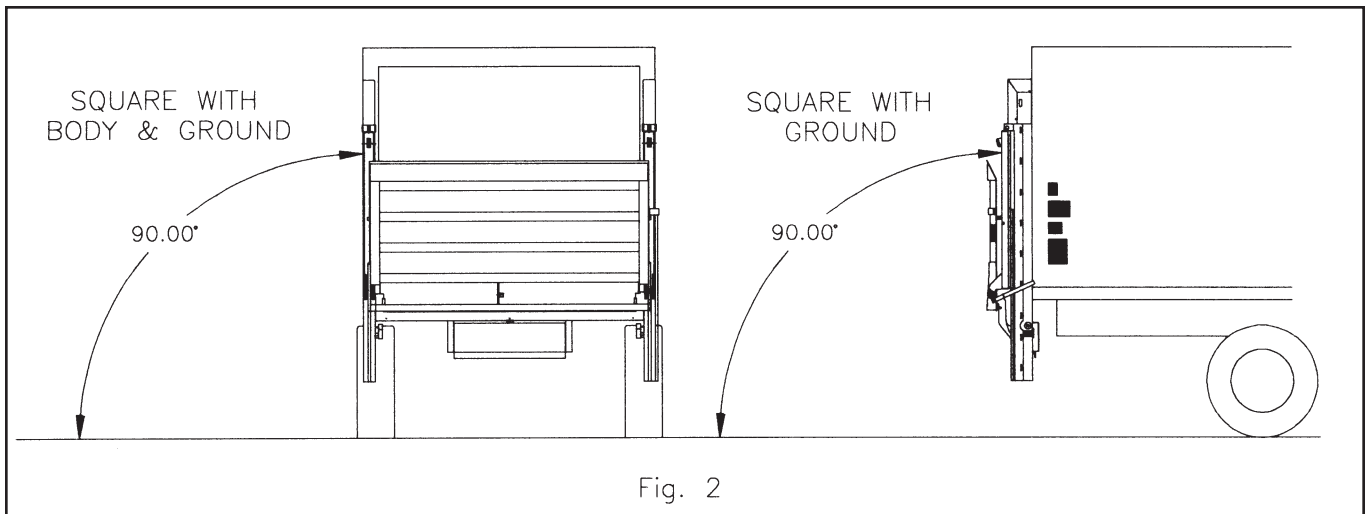
### **ATTENTION INSTALLERS:**

Changes are made periodically to the installation procedure to comply with engineering changes. To ensure proper liftgate operation, it is **VERY IMPORTANT** to read and understand the installation instructions before attempting an installation. Installers also **MUST** read and understand the liftgate's Owner's Manual before installing the liftgate, so they can operate the liftgate safely as required during different stages of the installation process. **NEVER** perform a modification on the liftgate, which is not specifically covered in this manual or which is unauthorized by Thieman. Modifications may result in failure of the liftgate and may create hazards for liftgate installers, operators, or maintainers. Serious damage, equipment failure, or operator injury could result from improper installation. This equipment **MUST** have all decals applied properly. **FAILURE** to apply all decals properly will **VOID** all warranties! Any installer with questions or doubts should contact Thieman before proceeding.

### **NOTES:**

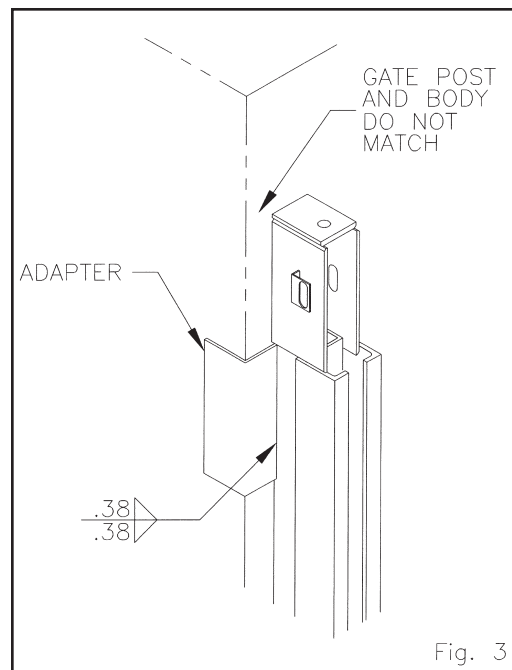
1. All maximum mounting dimensions are shown with the vehicle empty; all minimum mounting dimensions are shown with the vehicle loaded.
2. Check the bed height when vehicle is parked on a level surface.
3. The bed height range for the VL model is 44 to 55 inches.
4. Refer to figure 1 for overall dimensions of liftgate.
5. The VL series railgates are all level ride, which means when the vehicle is located on a level surface, the rails should be perpendicular to the ground. When mounting, consideration should be given to the platform position with the truck both empty and loaded. See figure 2.



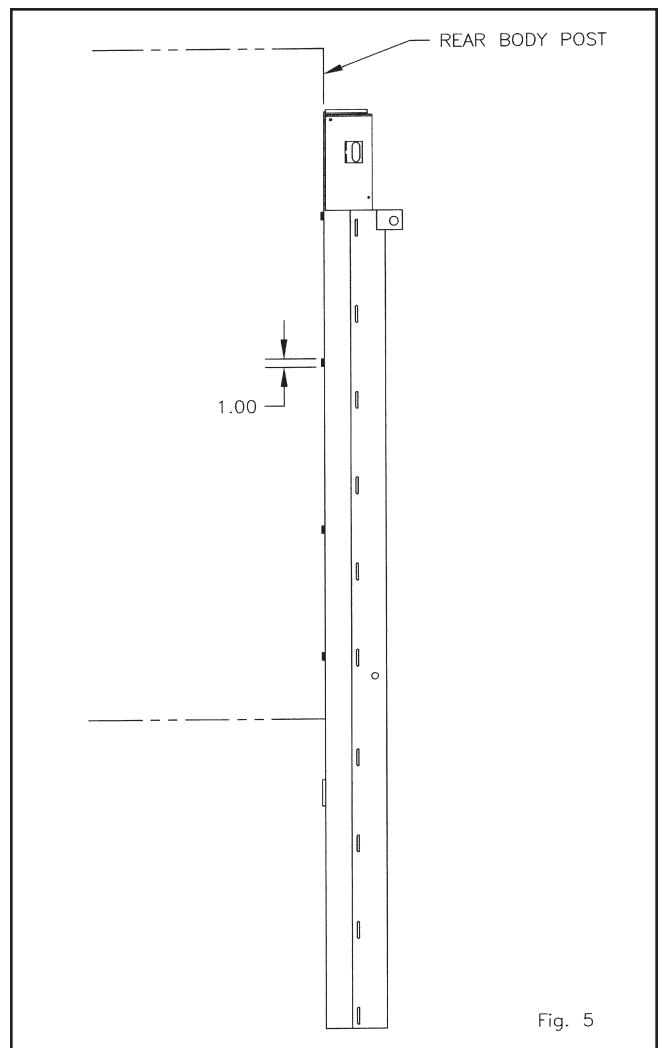
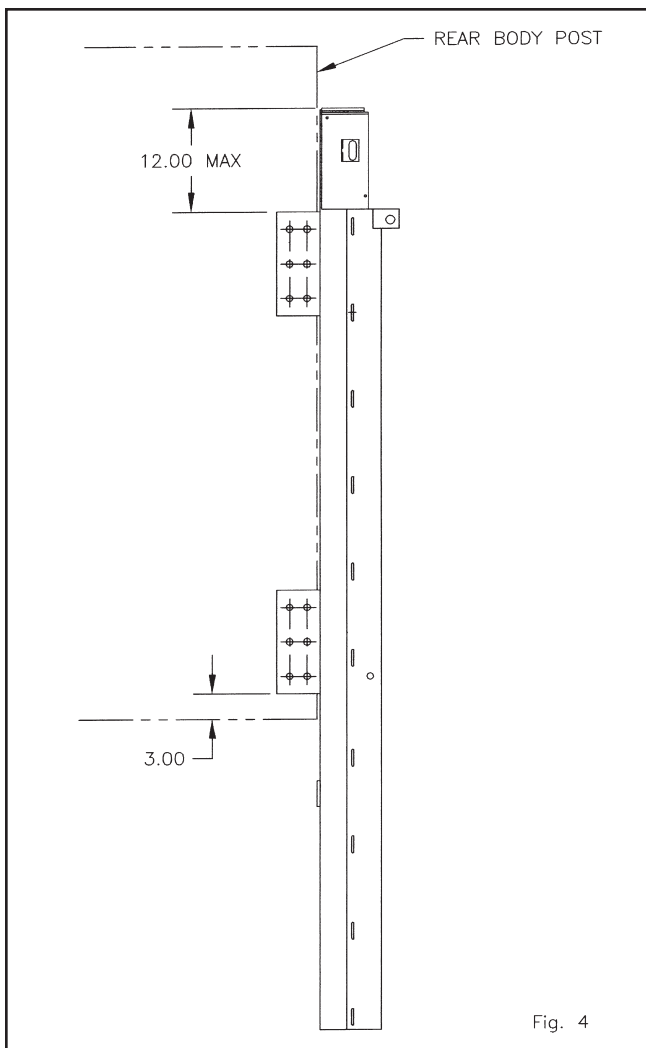


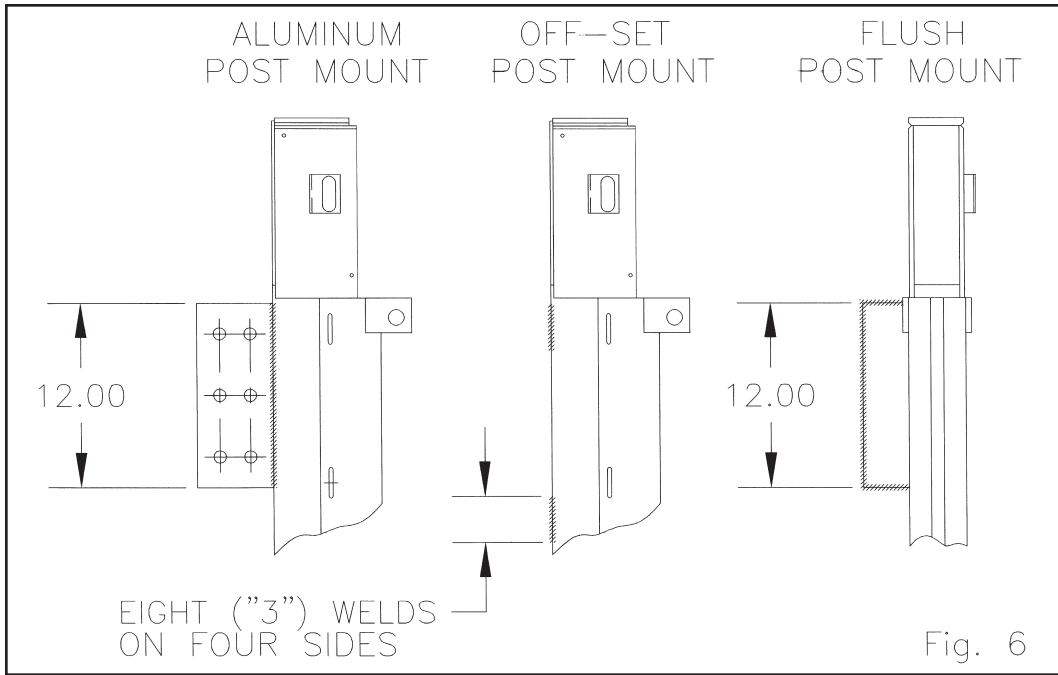
## INSTALLATION INSTRUCTIONS

- Step 1** Inspect entire package of your new liftgate for obvious damage. Report any damage to the freight line who delivered your liftgate.
- Step 2** Locate the vehicle on which the liftgate is to be mounted on a dry and level floor and open rear door on the vehicle.
- Step 3** Raise gate and place it against the rear of the vehicle and remove any obstructions where possible. If obstruction can not be removed use 4 spacers 12" long x 3" wide x .25" thick by depth of interference and weld to top and bottom of rails. The thickness of the spacers may vary from top to bottom to allow for a perpendicular mounting to the ground.
- Step 4** If the gate width does not match the width of the vehicle body, fabricate 4 adapters .25" thick x 12" long and install as shown in figure 3. Weld the adapters to liftgate rails to match location of body rear corner post.



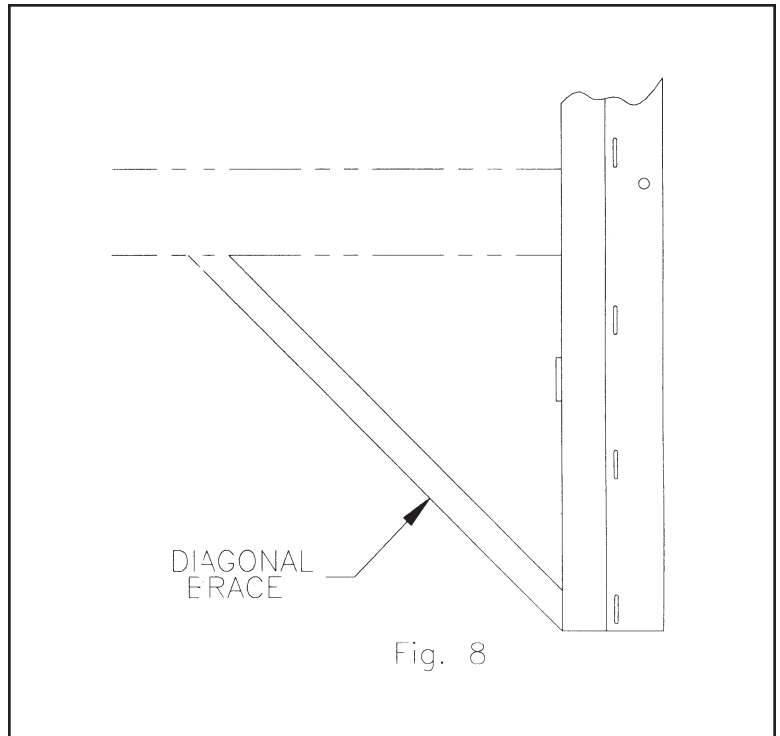
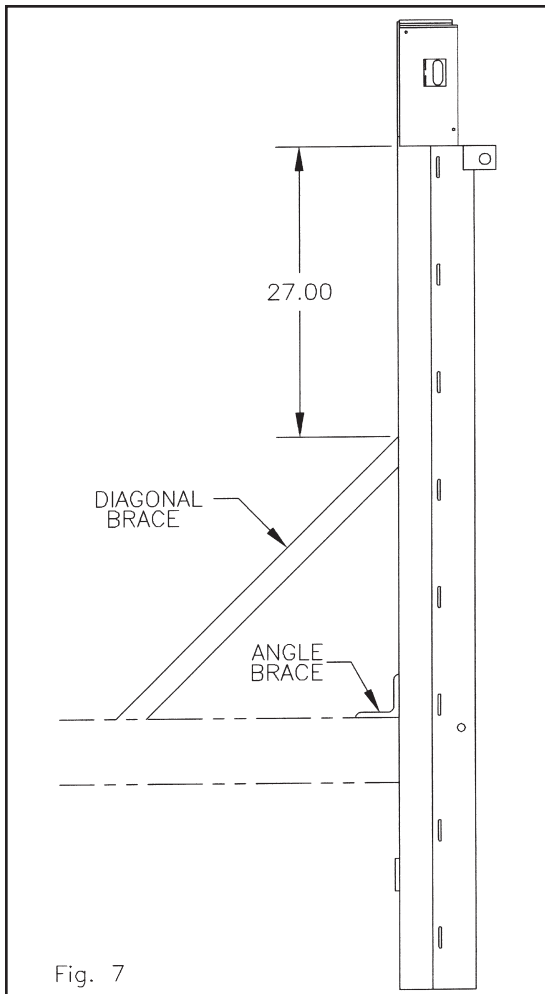
- Step 5** If rear truck corner posts are aluminum, four steel angle brackets .25" x 12" must be fabricated and attached as shown in figure 4. Bolt brackets to rear of vehicle as required to support the load.
- Step 6** Raise lift and square it with the rear sill of vehicle. The liftgate must also be centered with the body.
- Step 7** Tack weld frame of liftgate to rear sill and to the rear post of body as shown in figure 5. **DO NOT REMOVE FORKLIFT OR CRANE UNTIL ALL WELDING IS COMPLETE!**
- Step 8** Review all mounting dimensions and be certain gate is square and centered with respect to the body and rails are perpendicular to the ground.
- Step 9** Weld rails to vehicle body as shown in figure 6 or where gate is attached directly to vehicle use eight welds three inches long on each side of the rail.





**Step 10** If liftgate installation is on a flatbed vehicle, fabricate a load bearing angle and a diagonal brace as shown in Figure 7. After liftgate has been squared with bed, weld braces and angle iron to vehicle body and liftgate.

**Step 11** Weld cylinder housing to rear of body payload area. Recheck all welds and remove forklift or crane from liftgate. Remove lifting crossbar from rails and grind rails smooth.



**Step 12** Install diagonal brace from lower part of the rail to the vehicle body as shown in Figure 8.

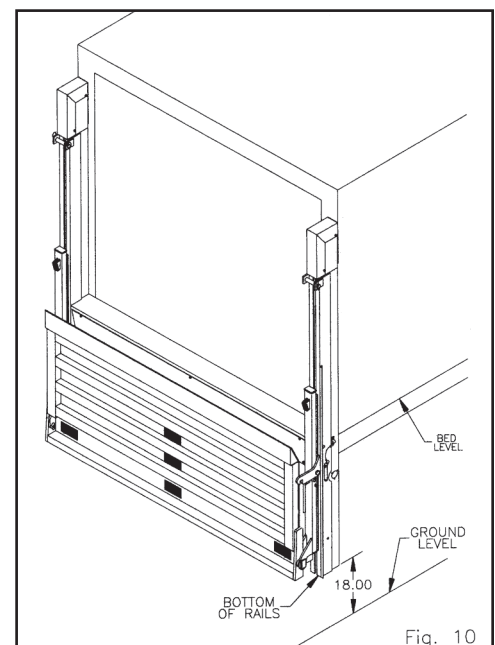
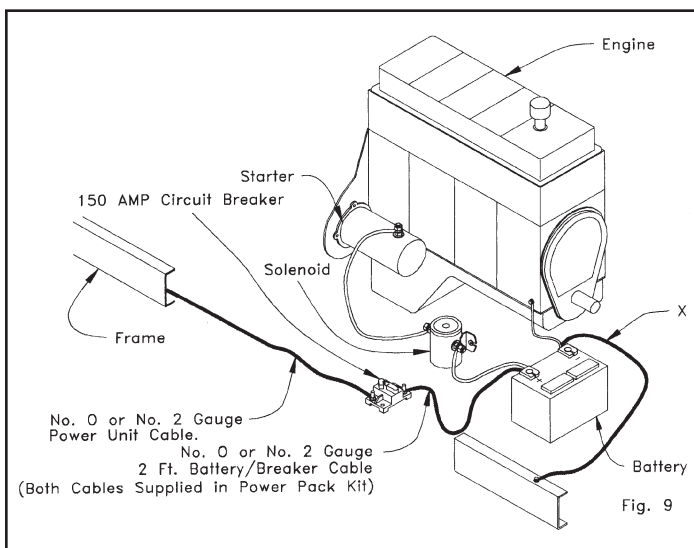
**Step 13** Fasten the 150 AMP circuit breaker provided within 2 ft. of the truck battery. Route the battery cable from the liftgate toward the 150 AMP breaker. **AVOID SHARP CORNERS AND HIGH HEAT AREAS.** Use cable clips provided to secure the cable to the truck frame every 2 feet. Cut the cable to the desired length and strip .88" of insulation from the end. Slide the pre-cut heat shrink over the end of the cable. Secure the cable lug in a vise and apply heat to the connector and insert the cable as the solder melts. Allow connector to cool and install the heat shrink. Attach this end to one terminal on the 150 amp circuit breaker. Install heavy ground cable from negative battery terminal to the frame. Wire the breaker to the truck battery using 2 ft. cable provided. Attach the ground cable from the pump to the truck frame. See figure 9.

**Step 14** Many late model trucks have battery connections as shown in Figure 9. The ground cable from the battery may be directly connected to the engine block with only a light braided ground strap connecting the block to the chassis. Where this is the case, the factory installed cable usually does not provide an adequate ground circuit for operating battery powered liftgates. We recommend that the cable labeled with an "X" be not less than #2 gauge cable. Also because of the high current draw (Approximately 200A) we recommend that the alternator be a heavy duty type and the battery must have a 150 AMP minimum reserve capacity.

**Step 15** On lower bed heights it may be desirable to trim the rails to maintain adequate ground clearance. When doing this never trim the rails more than 18 inches from the ground. See Figure 10.

**Step 16** Thieman recommends that the installer perform a weight test of the liftgate to check the welds or mounting bolts and the structural integrity of the body or frame of the truck or trailer. The load used should be the maximum weight rating of the particular liftgate with the weight centrally located on the platform. A minimum of 20 cycles should be made to insure the integrity of the mounting.

**Step 17** Finish paint as required and remove the pre-mask on decals already applied by Thieman. Apply the remaining decals in the appropriate locations as shown. When painting, carefully grease or mask fittings and exposed portion of the piston rod. The decals **MUST** be applied properly or all warranties are **VOID!**



**Step 18** Any lights that were removed or obstructed must be replaced or relocated in such a manner that the completed vehicle is in compliance with FMVSS 108 (49 CFR 571.108).

### INSPECTION AND LOCATION OF DECALS

**Inspect all decals listed below to be certain they are in the proper location and they are legible.**

**ALL DECALS MUST BE IN PLACE AND LEGIBLE OR ALL WARRANTIES ARE VOID!**

Item	Part Name	Part Number
1	Warning Decal-off center	4671050
2	PTO Decal	4650140
2	Fast Idle Decal	4650150
3	No Riding Decal	4609
4	Operating Decal	4650720
5	Capacity Decal 3000#	4650120
5	Capacity Decal 4000#	4650130
5	Capacity Decal 5000#	4607-031
6	Danger Decal-pinch point	4650790
7	Warning Decal-cover	4650760
8	Caution Decal-working area	4650770
9	Toggle Switch Decal (1)	4650820
10	Reflector (3)	5705
11	Thieman Nameplate	4650801
12	Wiring Decal	4616
13	Warning Decal	4620
14	Urgent Warning Decal	4650530

