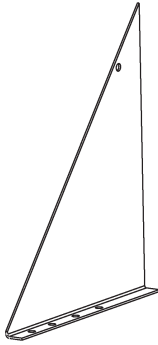
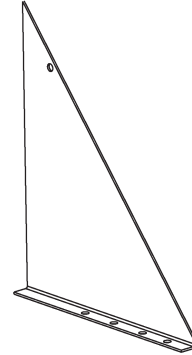


# INSTRUCTIONS, SERVICE BODY INSTALLATION KIT (C2 PICKUP LIFTGATES)

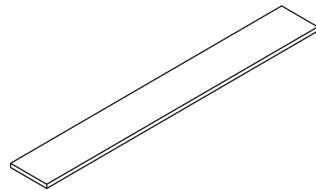
KIT P/N 295757-01



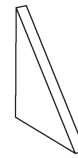
**LH MOUNTING BRACKET**  
P/N 295754-02  
QTY. 1



**RH MOUNTING BRACKET**  
P/N 295754-01  
QTY. 1

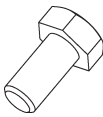


**FLAT,**  
1/4" X 2-1/2" X 18-3/4" LG  
P/N 090144-37  
QTY. 2



**GUSSET, 2-1/2" x 2-1/2" (1/4")**  
P/N 295755-01  
QTY. 2

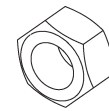
## INCLUDES BOLT KIT, P/N 295756-01



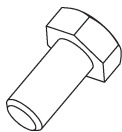
**HEX CAP SCREW**  
3/8"-16 X 1" LG, GR5  
P/N 900778-02  
QTY. 6



**LOCK WASHER, 3/8"**  
P/N 902011-4  
QTY. 6



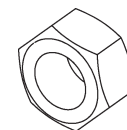
**HEX NUT, 3/8"-16**  
P/N 903161-05  
QTY. 6



**HEX CAP SCREW**  
1/2"-13 X 1" LG, GR5  
P/N 900781-01  
QTY. 6



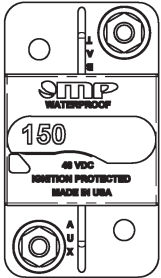
**LOCK WASHER, 1/2"**  
P/N 902011-6  
QTY. 2



**LOCK NUT, 1/2"-13**  
P/N 040066  
QTY. 6

**NOTE:** C2 Liftgates are shipped with the following parts kits for installing the Liftgate.  
The parts are stored in the main frame housing.

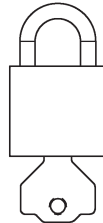
## C2 LIFTGATE SMALL PARTS & MANUAL KIT P/N 289484-01



CIRCUIT BREAKER,  
150 AMP  
P/N 907207-01  
QTY. 1



LICENSE PLATE  
LIGHT  
P/N 907210-01  
QTY. 1



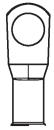
PADLOCK (2 KEYS)  
P/N 908221-01  
QTY. 1

LICENSE  
PLATE LIGHT  
INSTALLATION  
M-14-35

C2  
OPERATION  
MANUAL  
M-14-36



NYLON PLUG, 1/2"  
P/N 908081-01  
QTY. 5



LUG, 4GA  
COPPER, 3/8"  
P/N 907278-01  
QTY. 4



BUTT CONNECTOR,  
14-16 AWG  
P/N 030491  
QTY. 2



SELF-TAPPING SCREW,  
1/4"-20 X 5/8" LG.  
P/N 900705-02  
QTY. 2



PAN HEAD SCREW,  
#10-24 X 3/4" LG.  
P/N 900007-6  
QTY. 2



DROP-AWAY PIN  
P/N 289483-01  
QTY. 1



BREATHER PLUG, 3/8" NPT  
P/N 295049  
QTY. 1



GROMMET NUT, 1/4"  
P/N 901015-03  
QTY. 2

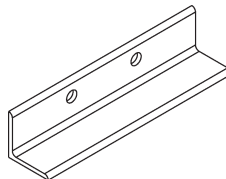


NUT, #10-24  
P/N 903163-02  
QTY. 2



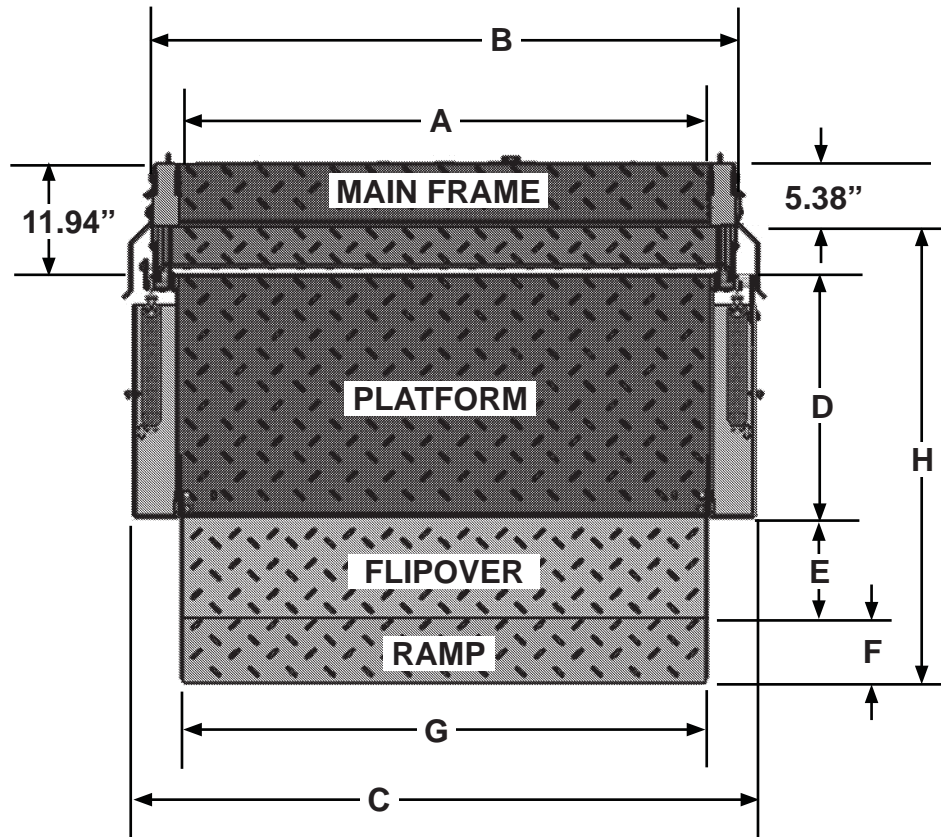
LOCK NUT, 3/8"-16  
P/N 901016-4  
QTY. 1

## LOWER MOUNTING ANGLE



SHIPPING LEG  
P/N 289543-02  
QTY. 2

**C2 LIFTGATE CLEARANCE DIMENSIONS**

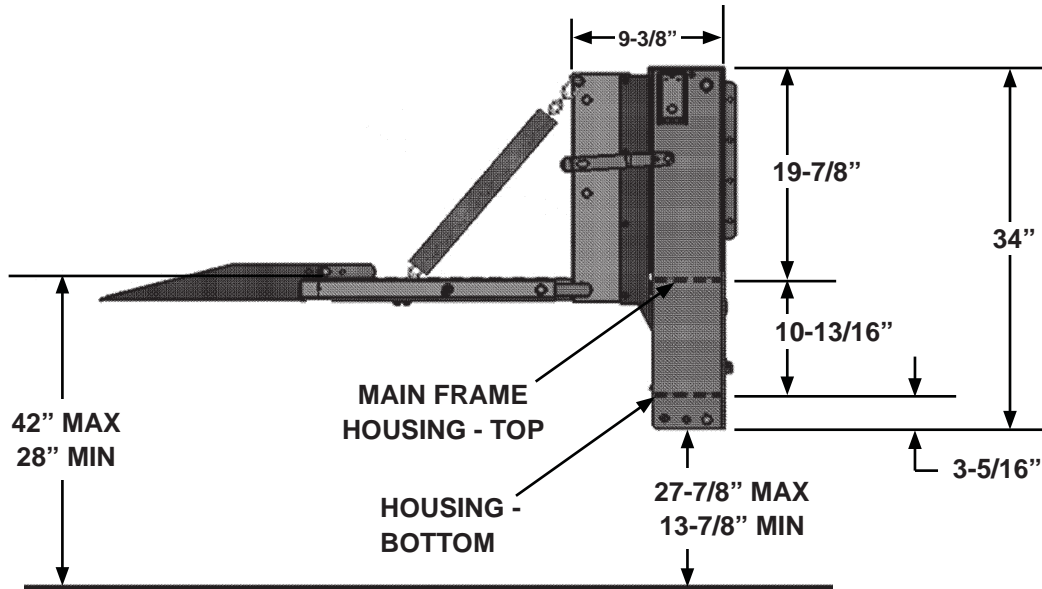


**C2 PICKUP LIFTGATE WITH PLATFORM UNFOLDED, TOP VIEW  
FIG. 3-1**

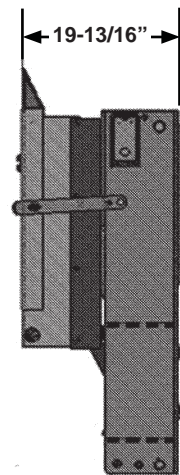
MODEL	PART NUMBER	A OPENING BETWEEN COLUMNS	B MAIN FRAME OVERALL WIDTH	C PLATFORM OVERALL WIDTH	D PLATFORM DEPTH	E FLIPOVER DEPTH	F RAMP DEPTH	G LOADABLE PLATFORM WIDTH	H LOADABLE PLATFORM DEPTH
C2	289500-81	49-5/8"	55.1"	59.25"	21.88"	11"	4.1"	48.75"	38.17"
	289500-84	49-5/8"	55.1"	59.31"	22	11	6"	48.2"	38.2
	289500-31	49-5/8"	55.1"	59.25"	21.88"	11"	4.1"	48.75"	38.17"
	289500-34	49-5/8"	55.1"	59.31"	22	11	6"	48.2"	38.2

**C2 PICKUP LIFTGATE DIMENSIONS  
TABLE 3-1**

**C2 LIFTGATE CLEARANCE DIMENSIONS - Continued**



**C2 PICKUP LIFTGATE WITH PLATFORM UNFOLDED, SIDE VIEW  
FIG. 4-1**



**C2 PICKUP LIFTGATE WITH PLATFORM STOWED, SIDE VIEW  
FIG. 4-2**

**NOTE:** Installer is responsible for ensuring vehicle meets Federal, State, and Local standards and regulations.

## BODY STRENGTH

### **⚠ WARNING**

**Consult vehicle body manufacturer for vehicle body strength data. Make sure the forces created by the Liftgate are within the limits prescribed by the vehicle body manufacturer.**

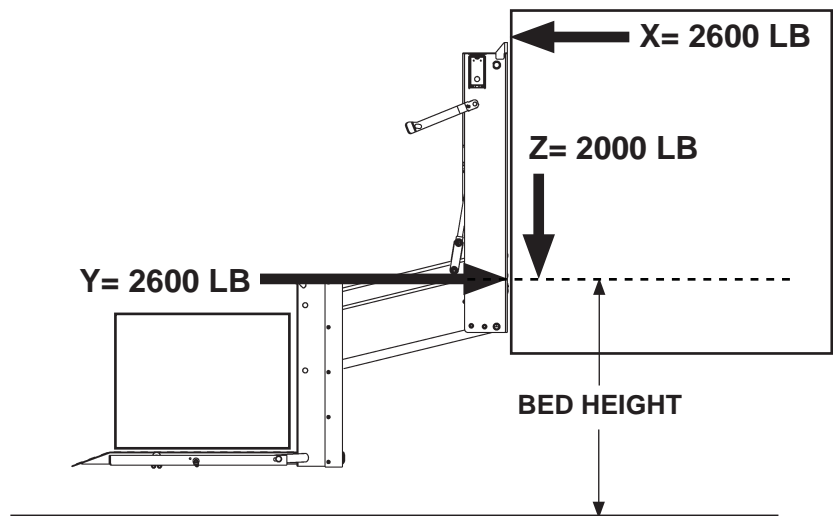
**NOTE:** Maximum operating bed height for **C2** mounted on service body is **42" (Unloaded)**. Minimum bed height is **28" (Loaded)**. Do not install this liftgate on service bodies equipped with rear-mounted swing-open doors.

The **C2** is a body-mounted liftgate that put forces on the side walls of truck bodies (**FIG. 5-1**). For correct installation, truck bodies must be strong enough to withstand the tension, compression and shear forces shown in **FIG. 5-1**.

**X= Tension on each sidewall**

**Y= Compression on each sidewall**

**Z= Shear on each sidewall**



**C2 LIFTGATE SHOWN ON TRUCK  
WITH SERVICE BODY**

**FIG. 5-1**

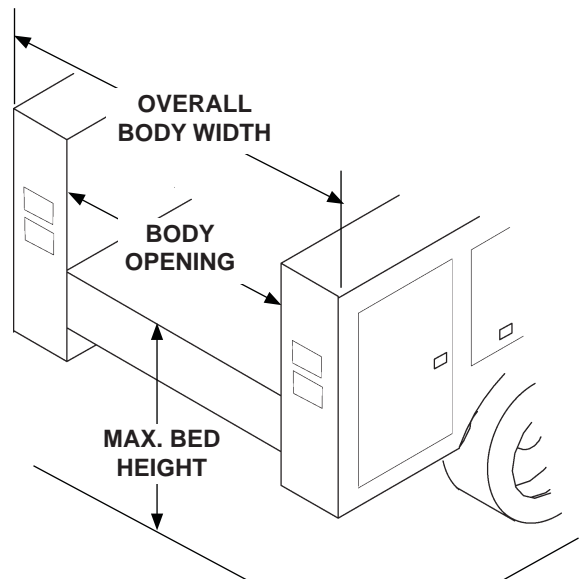
**PREPARING LIFTGATE**

**1. Measure the service body (FIG. 6-1).**

- Overall body width
- Width of body opening
- Maximum bed height (truck unloaded)

**2. Compare measurements with the dimensions for your liftgate shown on Sheets 3 and 4.**

**3. Remove Liftgate installation kit shipped with Liftgate. Then verify the correct parts, shown on sheet 1, were shipped with Liftgate.**

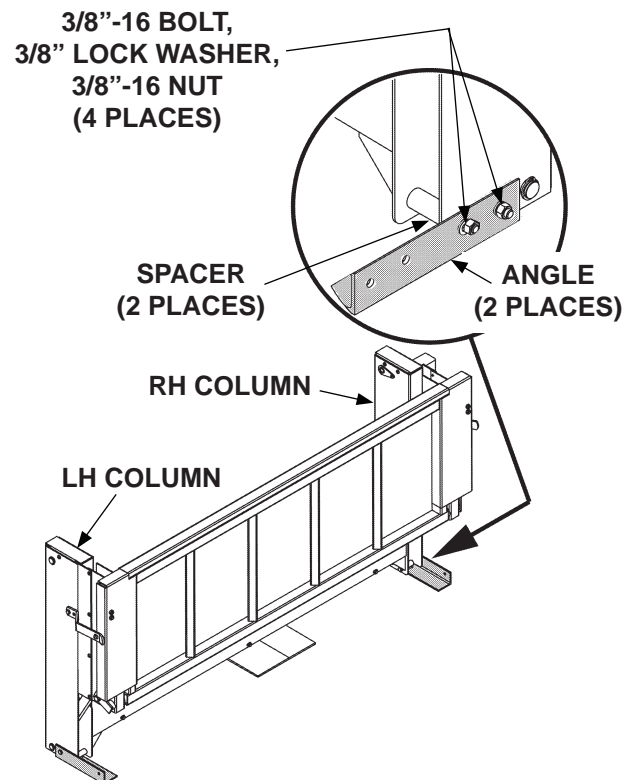


**FIG. 6-1**

**⚠ CAUTION**

Liftgate will not stand upright without the shipping angles. Before removing the angles, make sure Liftgate is supported with forklift or pallet jack. Injury & property damage could result if Liftgate falls over.

**4. Support Liftgate on shipping pallet with forklift or pallet jack. Then, unbolt shipping angle from each column on the Liftgate (FIG. 6-1). Save shipping angles to use for lower mounting brackets.**



**REMOVING SHIPPING ANGLES BOLTED TO COLUMNS OF C2 LIFTGATE**

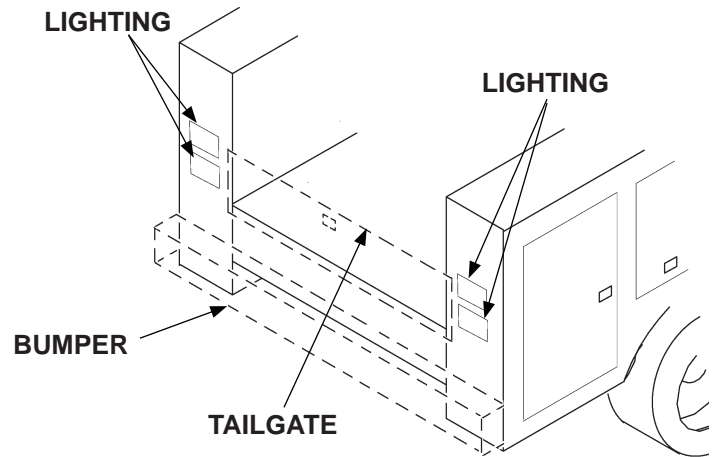
**FIG. 6-2**

## PREPARING TRUCK

**NOTE:** If liftgate obstructs the original equipment lighting on the rear of the body, the lighting should be moved or replaced with a rear lights kit that is compatible with Liftgate.

1. Check for obstructions at rear of truck frame and body (**FIG. 7-1**), that interfere with:

- Installation of liftgate.
- Interfere with visibility of rear lighting
- Obstruct access to spare tire



**TRUCK WITH SERVICE BODY  
FIG. 7-1**

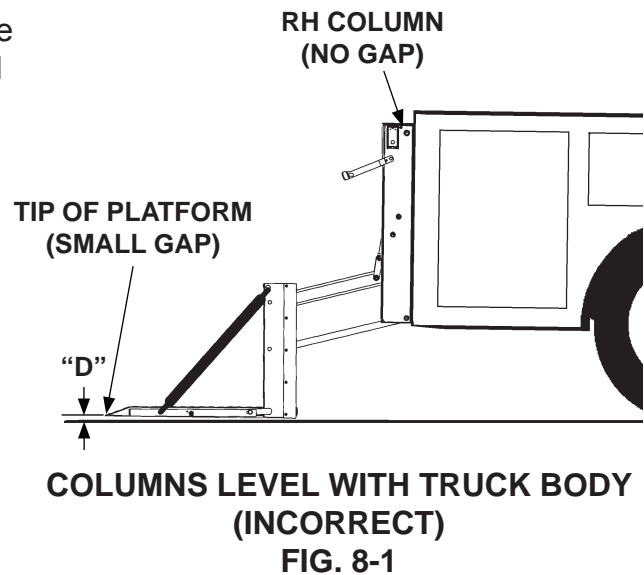
2. If equipped, remove tailgate and mounting, and rear bumper and mounting (**FIG. 7-1**).
3. If necessary, modify truck spare tire crank, and/or access hole in the Liftgate that gives access to spare tire winch.

## POSITIONING LIFTGATE ON TRUCK BODY

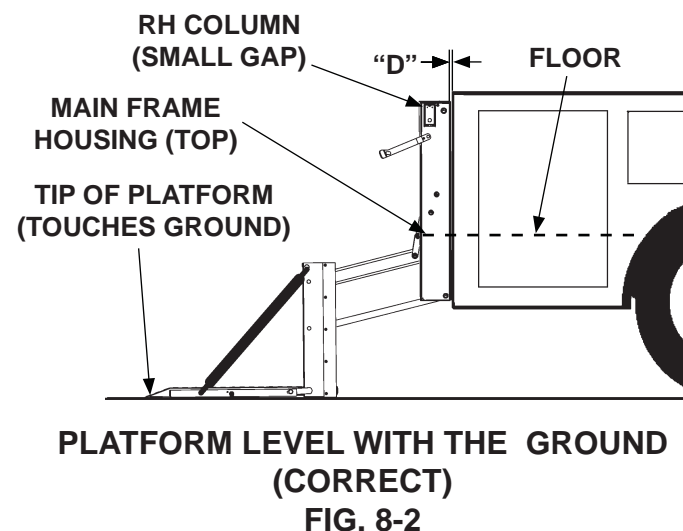
**NOTE:** Ensure vehicle is parked on level ground and parking brake is set before installing liftgate.

1. While mounting Liftgate on vehicle body, ensure Liftgate is positioned so platform will land **level** to the ground.

- If mounting position is incorrect (**FIG. 8-1**), tip of platform may not touch the ground.
- If mounting position is correct (**FIG. 8-2**), tip of platform will touch the ground when platform rests on the ground. There may be a small gap between top of the columns and truck body.



2. Center Liftgate on the rear opening in the vehicle body. Ensure top of the main frame housing is flush with floor of the vehicle body (**FIG. 8-2**).



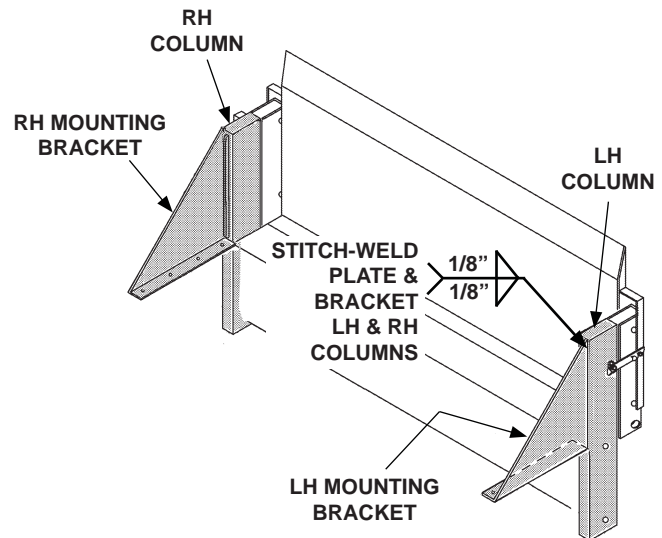


## MOUNTING LIFTGATE ON TRUCK BODY

**NOTE:** Support Liftgate in correct position on the rear opening of the truck body before beginning this step.

### WELD UPPER MOUNT BRACKETS

1. Position the RH mounting bracket (Kit item) on the RH column and floor of the truck body (**FIG. 9-1**). Repeat for LH mounting bracket on LH column.
  - Outer distance between LH and RH brackets will be a little less than the width of the opening of truck body. There will be a small clearance between each bracket and inside wall of truck body.
  - Each mounting bracket flange must face inboard to be bolted to the floor.
  - Bottom of flange, for each bracket must be flush with top of Liftgate main frame housing.



**MOUNTING LIFTGATE WITH BRACKETS  
WELDED TO COLUMNS  
FIG. 9-1**

### CAUTION

To prevent damage, ensure truck battery cables are disconnected before using electrical welder. Put welder ground lead as close as possible to part being welded.

### CAUTION

Use protective cover on Liftgate and truck body to protect from welding heat and spatter.

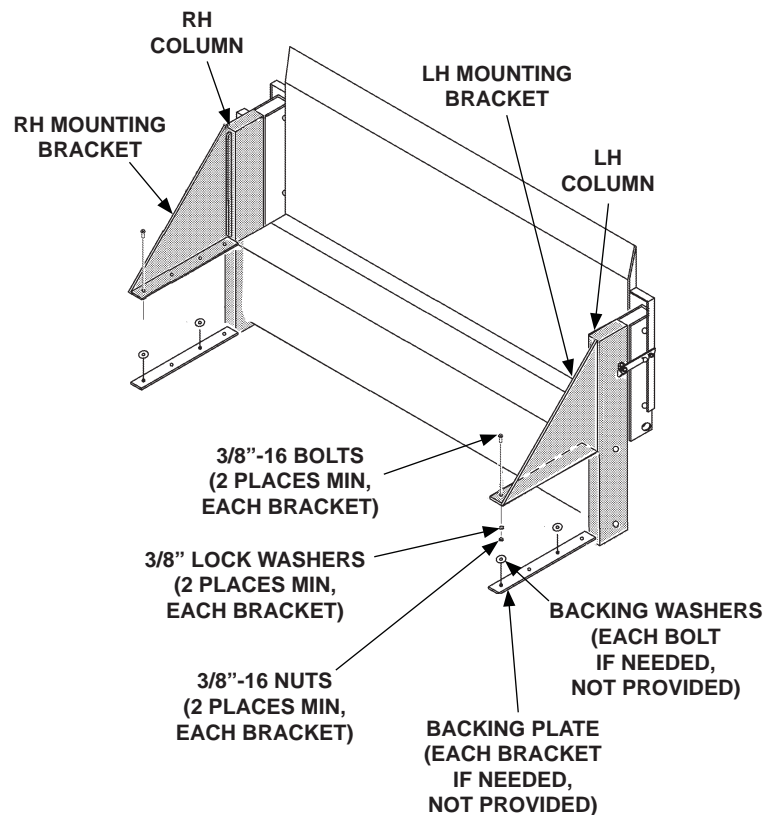
2. Stitch-weld RH bracket to RH column (**FIG. 9-1**). Repeat for LH bracket on LH column.

## WELD UPPER MOUNT BRACKETS - Continued

### CAUTION

At least 2 bolts per bracket, must be used to secure upper mount brackets to floor of truck body. Use backing plate and washers under floor if bolts are likely to pull through.

3. If possible, use 3 bolts per bracket to bolt LH bracket to floor of truck body (**FIG. 10-1**). Repeat for RH bracket.



**BOLTING LIFTGATE TO FLOOR  
OF TRUCK BODY  
FIG. 10-1**

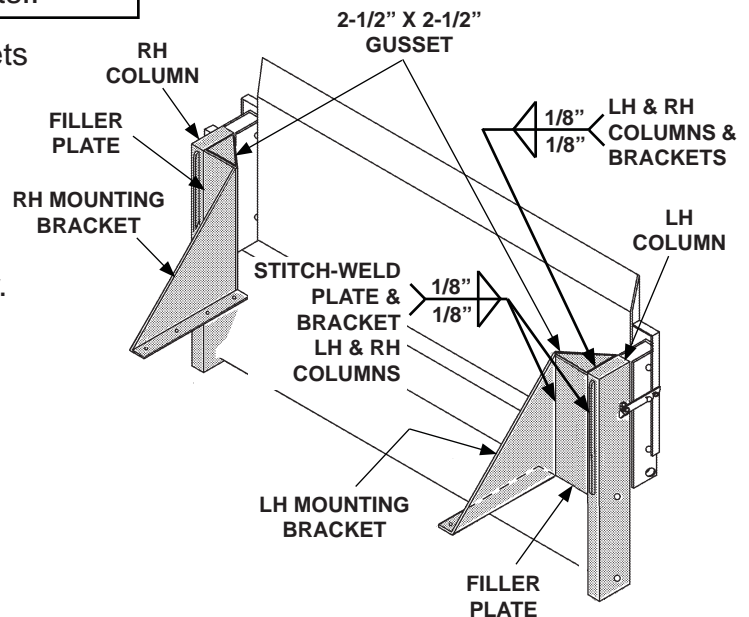
## MOUNTING LIFTGATE ON TRUCK BODY - Continued

### FABRICATED UPPER MOUNTING BRACKETS

**NOTE:** Floor and walls of the truck body must be straight & square to use filler plates with the upper mounting brackets..

1. Position the RH and LH mounting brackets (Kit items) inside the truck body, on the floor (**FIG. 11-1**).

- Outer distance between LH and RH brackets will be a little less than the width of the rear opening of truck body. There will be a small clearance between each bracket and wall of truck body.
- Each mounting bracket flange must face inboard to be bolted to the floor.
- Bottom of flange, for each bracket must be flush with top of Liftgate main frame housing.



**MOUNTING LIFTGATE WITH FILLER PLATES & BRACKETS WELDED TO COLUMNS**

**FIG. 11-1**

### CAUTION

To prevent damage, ensure truck battery cables are disconnected before using electrical welder. Put welder ground lead as close as possible to part being welded.

### CAUTION

Use protective cover on Liftgate and truck body to protect from welding heat and spatter.

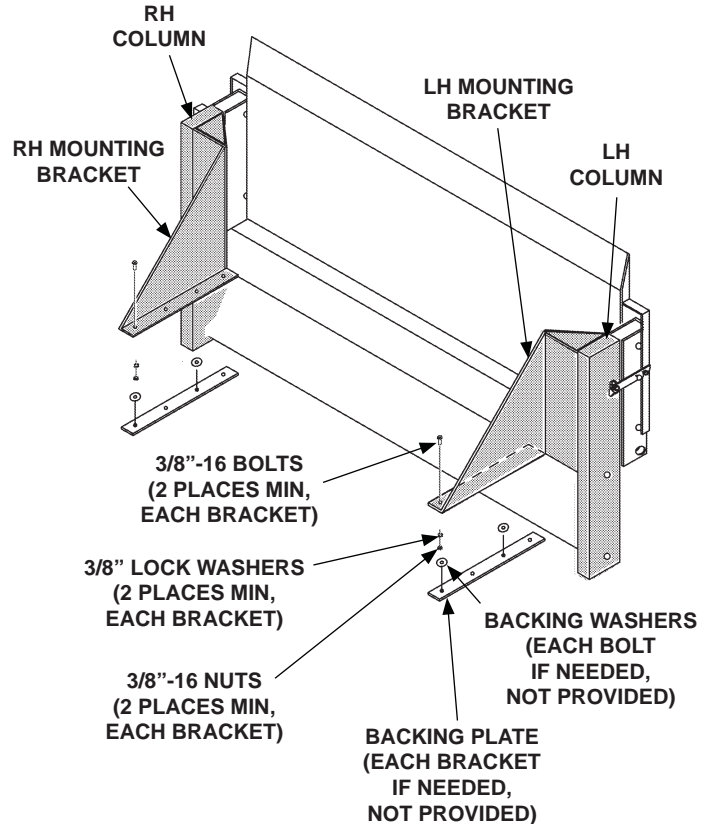
2. Position 1/4" filler plate between LH mounting bracket and LH column (**FIG. 11-1**). Then, stitch-weld filler plate to LH column and LH bracket (**FIG. 11-1**). Repeat for RH bracket and RH column.
3. Fit gusset (Kit item) at top of LH column and filler plate (**FIG. 11-1**). Then, weld gusset to LH column and filler plate (**FIG. 11-1**). Repeat for RH column.

## FABRICATED UPPER MOUNTING BRACKETS - Continued

### CAUTION

At least 2 bolts per bracket, must be used to secure upper mount brackets to floor of truck body. Use backing plate and washers under floor if bolts are likely to pull through.

3. If possible, use 3 bolts per bracket to bolt LH bracket to floor of truck body (**FIG. 12-1**). Repeat for RH bracket.



**BOLTING LIFTGATE TO FLOOR  
OF TRUCK BODY  
FIG. 12-1**

## PREPARE LIFTGATE FOR WIRING

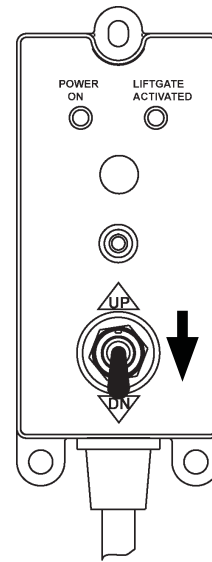
### CAUTION

Do not use a battery charger for connecting power to Liftgate power cables.

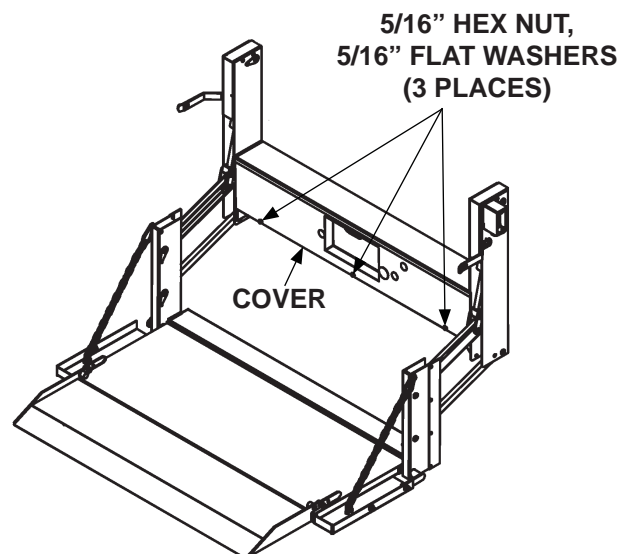
1. Connect power from a 12 volt truck battery to the Liftgate power cables extending from the back of main frame housing.
2. Refer to operating instructions, in **C2 Operation Manual**, to unfold platform and activate the Liftgate.

**NOTE:** With the **POWER ON** and **LIFTGATE ACTIVATED** lights on, the Liftgate can be raised or lowered. If the Liftgate is not used for 90 seconds, the control will automatically deactivate.

3. Use the control switch to lower (**DN**) the platform to the ground (**FIG. 13-1**).
4. Unbolt and remove main frame housing cover (**FIG. 13-2**).
5. Remove the small parts and manual kit from the housing. Refer to **Sheet 2** for contents of the kits.



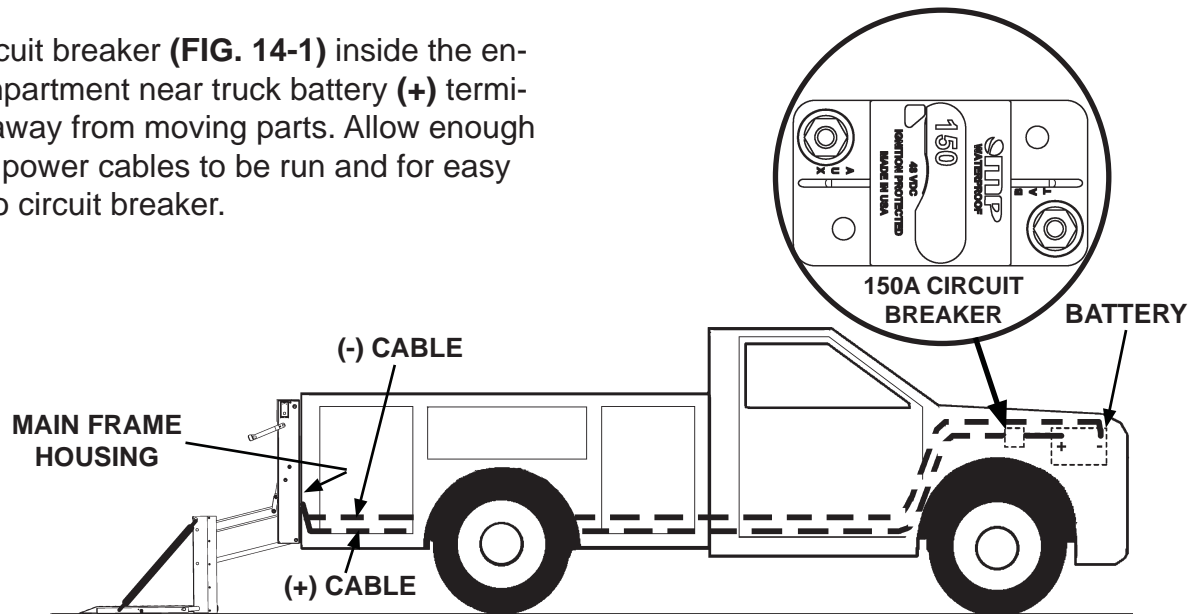
**USING CONTROL SWITCH TO LOWER LIFTGATE**  
**FIG. 13-1**



**REMOVING HOUSING COVER FROM C2 LIFTGATE**  
**FIG. 13-2**

**ROUTE POWER CABLES**

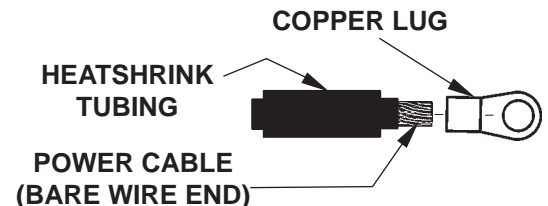
1. Install circuit breaker (**FIG. 14-1**) inside the engine compartment near truck battery (+) terminal and away from moving parts. Allow enough room for power cables to be run and for easy access to circuit breaker.



**RUNNING POWER CABLES FROM LIFTGATE TO BATTERY**  
**FIG. 14-1**

2. Pull the (+) and (-) power cables through the cord grip on back of main frame housing. Leave about 2" of slack, for power cables, inside main frame housing.

3. Route power cables along truck frame to truck battery (**FIG. 14-1**). Pull extra cable beyond the battery terminals. Then, separate positive (+) cable from negative (-) cable.



**PLACING COPPER LUG & HEATSHRINK TUBING ON POWER CABLE**  
**FIG. 14-2**

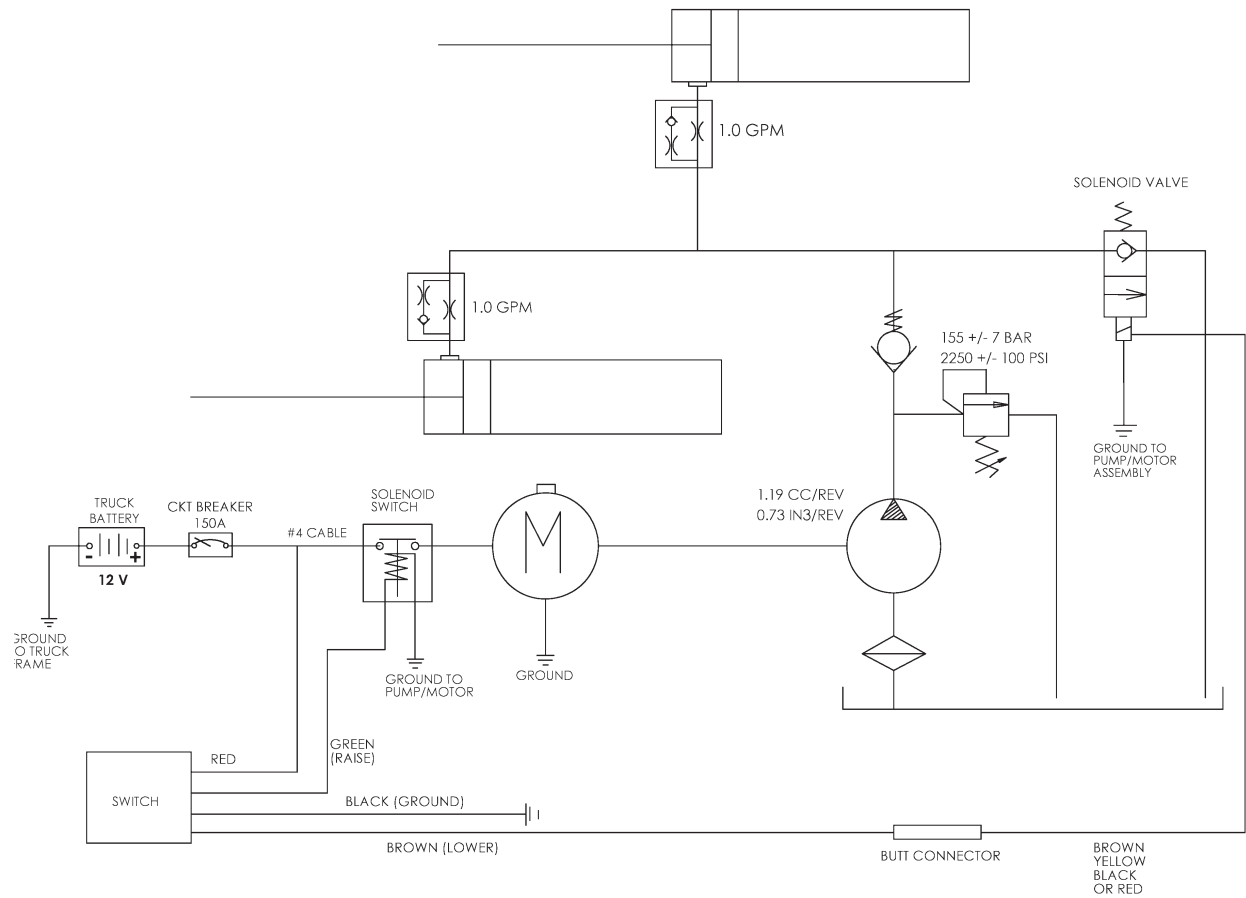
4. Cut positive (+) cable to the length required to reach the **AUX** terminal of the circuit breaker (**FIG. 14-1**), without putting strain on the connection. Install copper lug (Kit item) (**FIGS. 14-2 and 14-3**). Then, connect to **AUX** terminal on 150A circuit breaker.



**TYPICAL POWER CABLE WITH COPPER LUG INSTALLED**  
**FIG. 14-3**

5. Cut remaining positive (+) cable long enough to reach from the circuit breaker **BAT** terminal to the positive (+) battery terminal (**FIG. 14-1**) without putting strain on the connection. Install copper lugs (Kit item) on both ends of cable (**FIGS. 14-2 and 14-3**). Then, connect cable to **BAT** terminal on 150A circuit breaker and positive (+) terminal on battery.

6. Cut negative (-) cable to length required to reach negative (-) battery terminal without putting strain on the connection. Install copper lug (Kit item) (**FIGS. 14-2 and 14-3**). Then, connect cable to negative (-) terminal on battery.

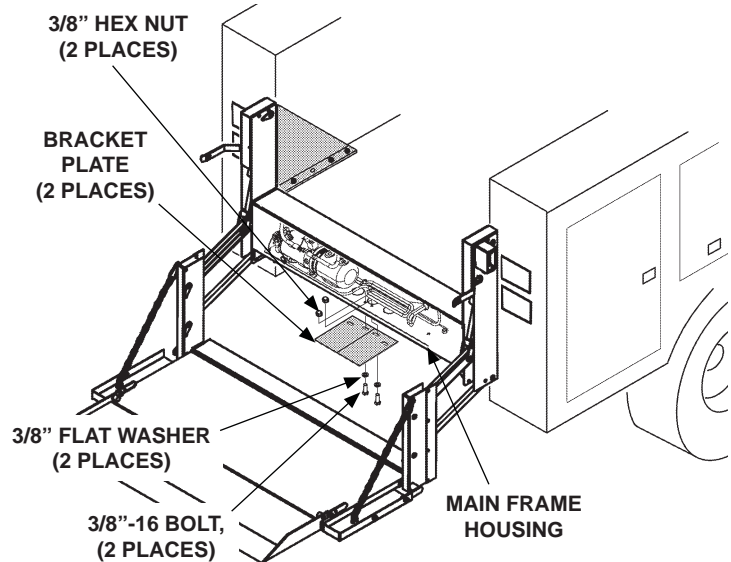


**C2 PICKUP LIFTGATE HYDRAULIC & ELECTRICAL SYSTEMS DIAGRAM**  
**FIG. 15-1**

## INSTALL LOWER MOUNTS

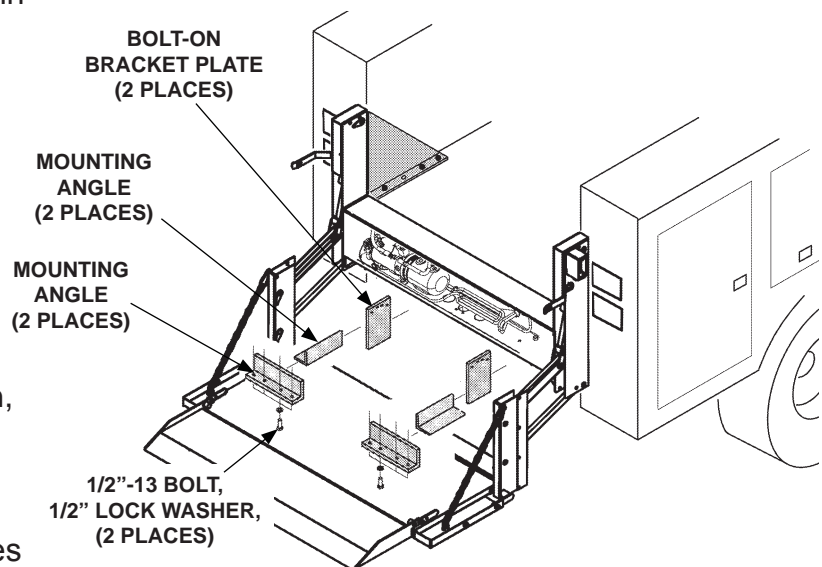
**NOTE:** Lower mounts are essential for Liftgate to be installed correctly. They attach to the truck frame and support the bottom of Liftgate.

1. Unbolt bracket plates from bottom of main frame housing (**FIG. 16-1**).



**REMOVING BRACKET PLATES FROM MAIN FRAME HOUSING (C2 SHOWN)**  
**FIG. 16-1**

2. Position 2 bolt-on mounting angles, nearest to truck frame at bottom of Liftgate main frame housing (**FIG. 16-2**). Then bolt each angle to hole allowing closest fit to truck frame.
3. Position 2 bracket plates (Kit items) on truck frame at bottom of Liftgate main frame housing (**FIG. 16-2**). Bolt to truck frame. If necessary, modify bracket plates for best fit.
4. Clamp 2 short angles (no holes) (Kit items) to bracket plates on truck frame (**FIG. 16-2**). Position the 2 angles to reach the angles bolted on bottom of main frame housing.



**FABRICATING LOWER BRACKETS TO SUPPORT LIFTGATE (C2 SHOWN)**  
**FIG. 16-2**

5. With angles, and bracket plates positioned and clamped together, tack weld the angles and plates in position (**FIG. 16-2**).
6. Unbolt tack-welded lower brackets from truck frame (**FIG. 16-2**). Then, finish weld the bracket plates and angles.
7. Bolt the finish-welded bracket plates and angles back in position on the bottom of the main frame housing and truck frame (**FIG. 16-2**).



**COMPLETE LIFTGATE INSTALLATION**

**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.

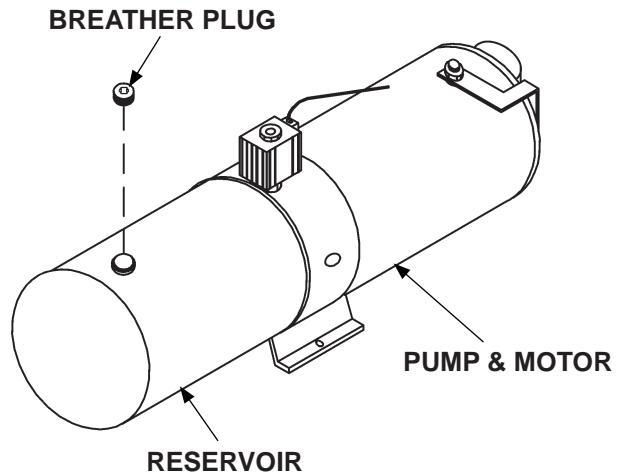
1. Remove the solid plug from the pump reservoir (FIG. 17-1). Install breather plug (Kit item) in pump reservoir.

2. Bolt on main frame cover (FIG. 17-2).

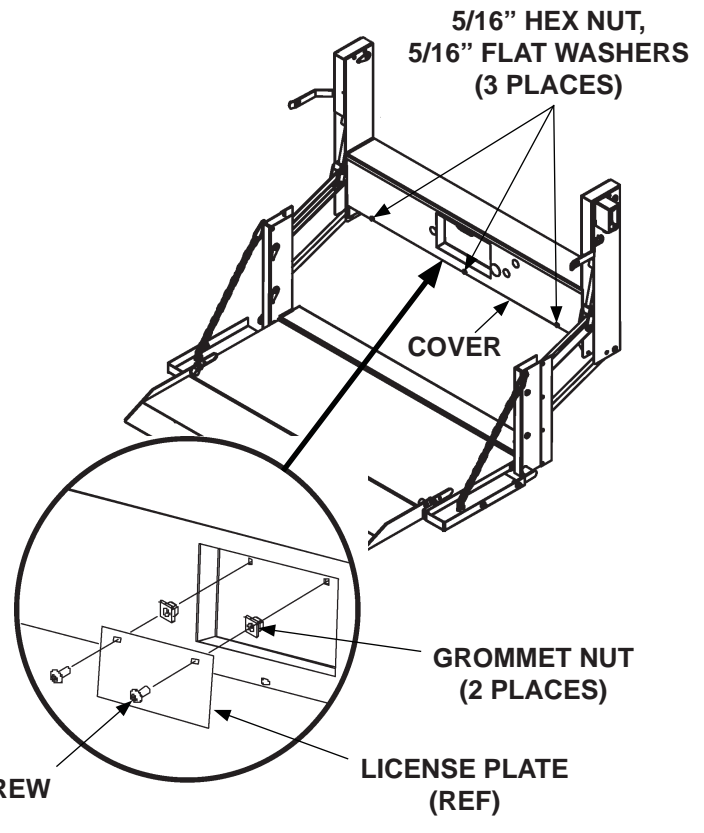
3. Install the two square plastic grommet nuts (Kit item), for the license plate, into the square holes on the Liftgate main frame cover (FIG. 17-2).

4. Install the license plate using two 1/4"-20 self-tapping screws (Kit item) (FIG. 17-2).

5. Install the license plate lights into the holes provided. Refer to instruction sheet M-14-35. Then, connect the license plate lights to the vehicle's wiring.



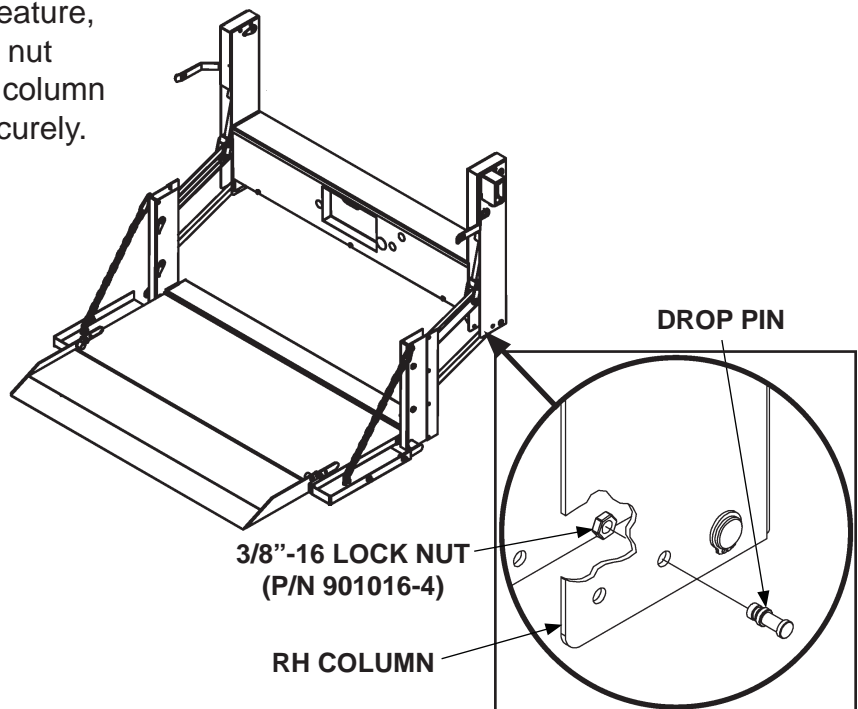
**INSTALLING VENT PLUG ON PUMP RESERVOIR**  
FIG. 17-1



**INSTALLING COVER & LICENSE PLATE (C2 LIFTGATE SHOWN)**  
FIG. 17-2

## COMPLETE LIFTGATE INSTALLATION - Continued

6. To use the drop-away platform feature, install drop pin and 3/8"-16 lock nut (Kit items) on the bottom of RH column (**FIG. 18-1**). Tighten lock nut securely.



**INSTALLING DROP PIN ON  
RH COLUMN (C2 LIFTGATE SHOWN)  
FIG. 18-1**

7. Install the 3/8" round plastic plugs into the empty holes in the bottom of the columns.
8. If previously removed, reinstall spare tire.

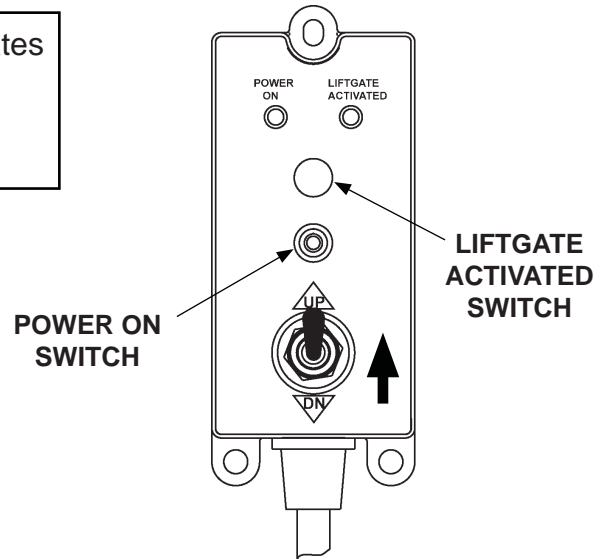
**TEST OPERATION OF LIFTGATE**

**! WARNING**

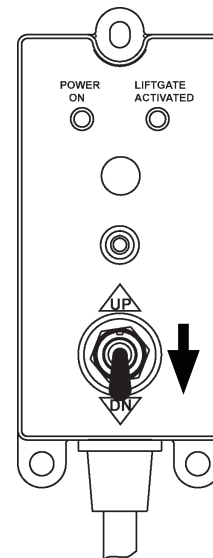
**Keep all foreign objects out of the Liftgate mainframe and away from pinch points at all times when operating Liftgate.**

**NOTE:** The **LIFTGATE ACTIVATED** LED illuminates when Liftgate power is on. Control switch should deactivate after 90 seconds of not being used.

1. Check operation of control switch for proper operation by pressing **POWER ON** button once to activate. Next, press **POWER ON** button again to deactivate Liftgate power. Then, press the **POWER ON** button twice to reset low voltage (**FIG. 19-1**).
2. Press the **LIFTGATE ACTIVATED** switch within 1 second to activate the timer (**FIG. 19-1**).
3. Raise (**UP**) and lower (**DN**) the unloaded platform (**FIGS. 19-1** and **19-2**) on a flat surface. Check for proper operating speed and alignment with the ground.
4. Load the platform with the rated capacity and measure the time to **RAISE** the platform (**FIG. 19-1**). The platform should raise approximately 2" to 3" per second.
5. Examine the platform for any downward creep.
6. Measure the time to **LOWER** the platform still loaded (**FIG. 19-2**). The load should descend approximately 7" to 9" per second.
7. Remove the load from the platform and examine the Liftgate and vehicle for hydraulic oil leaks, loose wiring, and any other problems.
8. Reinstall the main frame housing cover. Then, close and latch platform.



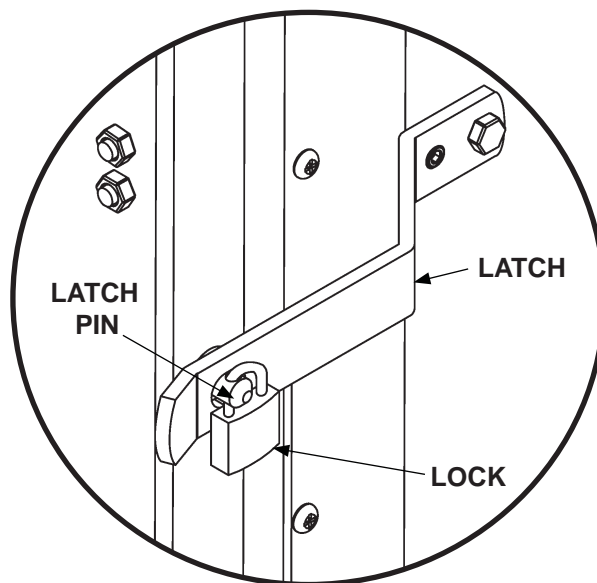
**CHECKING OPERATION OF CONTROL SWITCH AND RAISING PLATFORM  
FIG. 19-1**



**USING CONTROL SWITCH TO LOWER PLATFORM  
FIG. 19-2**

**TEST OPERATION OF LIFTGATE - Continued**

9. Lock the latch on LH side or RH side through the hole in the latch pin (**FIG. 20-1**).



**LOCKING PLATFORM  
(C2 LIFTGATE)  
FIG. 20-1**