V2 PUMP BOX RELOCATION KIT

Provides the option to relocate the pump box up to 6 feet
V2 Pump Box Relocation Kit: Part No. 15903

This kit will allow upfitters to relocate the V2 pump box up to 6 feet from the original location; providing flexibility if the original location prohibits or interferes with additional equipment installation.

*The above kit is compatible on all V2 model liftgates. For latest installation instructions go to www.tommygate.com
These instructions will aid you in relocating the pump box on a Tommy Gate V2 series liftgate.

Note: The pump box must remain in a vertical position after remounting (Figure 1).

Figure 1: V2 Pump Box Relocation
Preparing for the Relocation

1. Verify repair kit (Figure 2 and Table 1).

![Figure 2: V2 Pump Box Relocation Part Identification](image)

Table 1: Part List

<table>
<thead>
<tr>
<th>QTY</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>015891</td>
<td>V2 PUMP BOX RELOCATION BRACKET COMP</td>
</tr>
<tr>
<td>1</td>
<td>015892</td>
<td>V2 MANIFOLD BRACKET</td>
</tr>
<tr>
<td>2</td>
<td>010576</td>
<td>04MJIC-04MJIC BULKHEAD FITTING</td>
</tr>
<tr>
<td>2</td>
<td>013042</td>
<td>1/4&quot;x91.75&quot; HYD HOSE</td>
</tr>
<tr>
<td>6</td>
<td>009089</td>
<td>16-14 HEAT SHRINK BUTT CONNECTOR</td>
</tr>
<tr>
<td>1</td>
<td>015894</td>
<td>16GA. YELLOW 96&quot; WIRE W/ (1) 5/16 EYELET</td>
</tr>
<tr>
<td>1</td>
<td>015899</td>
<td>16GA. BLACK 96&quot; WIRE W/ (1) 5/16 EYELET</td>
</tr>
<tr>
<td>1</td>
<td>015896</td>
<td>16GA. RED 116&quot; WIRE W/ #10 EYELETS</td>
</tr>
<tr>
<td>1</td>
<td>015897</td>
<td>16GA. BROWN 96&quot; WIRE W/ (1) #10 EYELET</td>
</tr>
<tr>
<td>1</td>
<td>015898</td>
<td>16GA. RD 116&quot; WIRE W/ (1) FULL INS QD PLUG</td>
</tr>
<tr>
<td>4</td>
<td>000543</td>
<td>5/16-18x5/8&quot; HHCS GR5</td>
</tr>
<tr>
<td>4</td>
<td>000584</td>
<td>5/16&quot; SPRING LOCK WASHER</td>
</tr>
<tr>
<td>4</td>
<td>000554</td>
<td>5/16-18 GR5 NUT (ZINC)</td>
</tr>
<tr>
<td>8FT</td>
<td>015904</td>
<td>1&quot; ID SPLIT CORRUGATED LOOM</td>
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<td>8FT</td>
<td>015905</td>
<td>1/2&quot; ID SPLIT CORRUGATED LOOM</td>
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<td>5</td>
<td>009077</td>
<td>3/16&quot;x7-1/2&quot; CABLE TIE</td>
</tr>
<tr>
<td>3</td>
<td>004199</td>
<td>7/8&quot; ID GROMMET</td>
</tr>
</tbody>
</table>
Preparing the Gate

1. **Open** the van's rear doors.

2. **Lower** the liftgate to the ground.

3. **Disconnect** the 4 GA. power cable from the positive side of the battery (Customer Connection Point on the driver seat pedestal on Ford Transit) or manually **Trip** the circuit breaker (Figure 3).

![Figure 3: Manually trip circuit breaker.]

Relocating the Pump Box

1. **Remove** the pump box cover by removing five (5) thumb screws (Figure 4).

![Figure 4: Pump Box.](image)

2. **Remove** and **Save** limit switch cover (Figure 4).

3. **Disconnect** all wires from limit switch (Figure 8).

4. **Remove** brown wire from lower solenoid contactor (Figure 8).

5. **Remove** yellow wire from lower solenoid contactor (Figure 8).

6. **Remove** red wire from small post on raise solenoid (Figure 8).

7. **Disconnect** red wire from inline fuse wire (Figure 8).

8. **Remove** and **Save** ground bolt from power unit (Figure 8).

9. **Loosen** control cord strain relief in bottom of pump box.

10. **Remove** control wires and yellow wires from pump box.

11. **Mark** the hoses and flow divider for driver and passenger side. The driver side hose is closer to the driver side of the van.

Note: Have rags available for next step to clean up any oil spills.
Relocating the Pump Box (Continued)

12. **Disconnect** hoses from flow divider and **Remove** from pump box.

13. **Position** and **Mount** the pump box relocation bracket to van wall or floor as desired (hardware not included). The pump box must remain in a vertical position after remounting (Figure 5).

Note: If the power cable is not long enough for pump box to reach desired location, reroute or replace with new power cable from Tommy Gate. **Do Not** splice power cable.

14. **Support** the pump box to keep it from falling in next step.

15. **Remove** and **Save** four (4) 5/16" bolts with lock washers and nuts attaching pump box to support brackets (Figure 4).

16. **Install** pump box in pump box relocation bracket using bolts removed in previous step (Figure 5).

![Figure 5: Pump Box Mounted in Vertical Position on Relocation Bracket.](image)

17. **Install** manifold bracket on the pump box support brackets with provided 5/16" bolts, lock washers and nuts (Figure 6).

18. **Install** bulkhead fittings in manifold bracket (Figure 6).

![Figure 6: Manifold Bracket.](image)

19. **Install** liftgate hoses on top of bulkhead fittings. Keep driver side hose closer to driver side of van.

20. **Install** included hoses on bottom of bulkhead fittings.
21. **Route** the free end of the included hoses through the grommets in the bottom of the pump box. Protect hoses from metal edges with grommets (included) or edge seal (not included).

22. **Install** hoses on flow divider. Match up hose sides as previously marked.

23. **Install** blue and green control wires to terminal 1 (common) on limit switch (Figure 8).

24. **Install** orange control wire and provided red wire with eyelets to terminal 2 (normally closed) on limit switch (Figure 8).

25. **Replace** limit switch cover (Figure 4). **Do Not** over tighten bolts and crush the cover.

26. **Install** provided brown wire on lower solenoid contactor where factory brown wire was previously removed (Figure 8).

27. **Install** provided yellow wire with "DN" label to lower solenoid contactor where factory wire was previously removed (Figure 8).

28. **Install** provided red wire with plug onto inline fuse wire (Figure 8).

29. **Install** remaining black and yellow wires on power unit ground bolt with 4 AWG and lower solenoid ground wires (Figure 8).

30. **Route** red wire from limit switch through strain relief in pump box and **Install** on raise solenoid where factory wire was previously removed (Figure 8).

31. **Route** control wires and yellow wires through strain relief out of pump box.

32. **Route** wires along hoses. Protect wires from metal edges with grommet (included) or edge seal (not included).

33. **Match** loose wires up to previously removed wires. **Note:** **Polarity of yellow wires are reversible.**

34. **Trim** and **Strip** wire ends as needed.

35. **Connect** wires with provided heat shrink butt connectors.

36. **Verify** wiring matches diagram (Figure 8).

37. **Install** 1/2" convoluted loom over wiring.

38. **Tighten** strain reliefs.

39. **Install** 1" convoluted loom over hoses.

40. **Secure** excess hose and wire length with provided zip ties.
V2 Pump Box Relocation Instructions

ELECTRICAL WIRING DIAGRAM
Pendant Control

PLEASE READ AND FOLLOW ALL DIRECTIONS BEFORE PROCEEDING

WELDING NOTE !!! DISCONNECT ALL BATTERY CABLES. ALWAYS DISCONNECT THE GROUND CABLE FIRST. ATTACH THE WELDING GROUND TO THE TRUCK RATHER THAN THE LIFTGATE.

NOTE !!! IF GATES ARE NOT WIRED IN ACCORDANCE WITH THIS DIAGRAM YOUR WARRANTY WILL BE VOID.

IMPORTANT
PLEASE READ AND FOLLOW ALL DIRECTIONS BEFORE PROCEEDING

FUNCTION WHEN USED WITH "SHIFT" BUTTON ACTIVATES FOLD TIMER
"POWER ON" AMBER LED- ENABLED WHEN "ON"
"LIFTGATE ACTIVATED" RED LED - ENABLED WHEN "ON"
"LIFTGATE ACTIVATED" HIDDEN SWITCH - PRESS TWICE WITHIN ONE SECOND TO ACTIVATE TIMER
"SHIFT" BUTTON ACTIVATES FOLD FUNCTION WHEN USED WITH TOGGLE SWITCH
"POWER ON" HIDDEN SWITCH - PRESS ONCE TO ARM, PRESS AGAIN TO DISARM

IMPORTANT

Figure 8: Wiring Diagram.

NOTE !!! IF GATES ARE NOT WIRED IN ACCORDANCE WITH THIS DIAGRAM YOUR WARRANTY WILL BE VOID.
V2 Pump Box Relocation Instructions

V2 POWER UNIT CONTROL CIRCUIT

Legend

- Button
  | Solenoid contact
  | Motor
  | Solenoid coil
  | Circuit breaker with manual disconnect and reset
  | Fuse
  | 4awg wire
  | 18awg wire (colored to match most common configuration)
  | Grounded through motor chassis
  | Elements within are part of the control unit
  | Positive 12V
  | Negative battery terminal or frame ground

Red

"Raise" Solenoid

Red

"Lower" Solenoid

Red

"Lower" Solenoid Contactor

Red

Pump Motor

Red

"Lower" Solenoid Valve

Red

"Lower" Solenoid Valve - Cylinders (2x)

Red With Black Stripe

Yellow

"Raise" Solenoid

Orange

"Shift" Button

Blue

Limit Switch

Green

COM.

Brown

"Lower" Solenoid

Violet

"Lower" Solenoid

Red

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Finishing the Install

**Note:** The recommended hydraulic oil for this liftgate is ISO grade 32, Dexron, or equivalent.

1. **Check** if the reservoir is at least 1/2 to 3/4 full with the platform on the ground, if it is, Skip to Step 5.

2. **Remove** the vent plug from the pump reservoir (Figure 9).

3. **Add** enough recommended hydraulic oil to fill the reservoir 1/2 to 3/4 full.
   (The platform should be on the ground at this point or the reservoir will be overfilled.)

4. **Install** the vent plug in the pump reservoir (Figure 9).

5. **Install** the pump box cover and screws.

6. **Connect** the 4ga power cable to the positive side of the battery (Customer Connection Point on the driver seat pedestal on Ford Transit) or manually **Engage** the circuit breaker (Figure 10).

7. **Test** operation of liftgate.

8. **Raise** and **Store** the platform.