



Installation Instructions for Part # 19444 & 19445 Push Button Limit Switch Kits

19444 Kit Includes:

2 #19441 switch	1 #16323 2-hole Wire gland	1 #16325 Locknut for wire gland
2 #19448 mounting bracket	2 #16118 18 ga. terminal	1 #16121 10 ga. terminal
4 #18110 Self Drilling Bolt		

19445 Kit Includes:

4 #19441 switch	1 #16324 4-hole Wire gland	1 #16325 Locknut for wire gland
4 #19448 mounting bracket	4 #16118 18 ga. terminal	1 #16121 10 ga. terminal
8 #18110 Self Drilling Bolt		

You will need:

- 1) You will need to provide or fabricate a bracket to trip each limit switch. This will vary depending upon where the switches are installed and what type of device they are controlling.

Mounting the limit switch:

- 1) Determine where you will mount the limit switches. There are two options:
 - Option 1 is to mount the limit switches side-by-side facing in opposite directions to a stationary bracket near the end of the opening. With this method, a bracket must be mounted to each end of the door to trip the switches. See Figures 1 & 2 below.
 - Option 2 is to mount the limit switches to a stationary bracket at each end of the door, one at full open and one at full close. With this method, a single bracket must be mounted to the door to trip each switch. See Figures 3 & 4 below.

Figure 1 – Two brackets, 2 switches mounted side-by-side, door closed

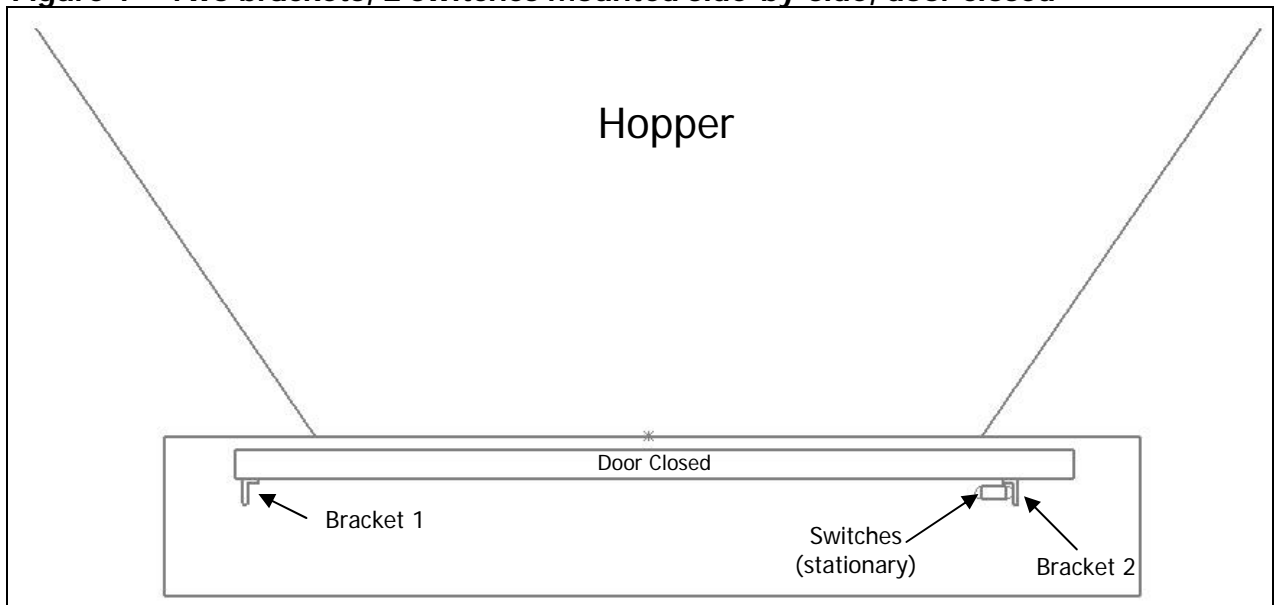


Figure 2 – Two brackets, 2 switches mounted side-by-side, door open

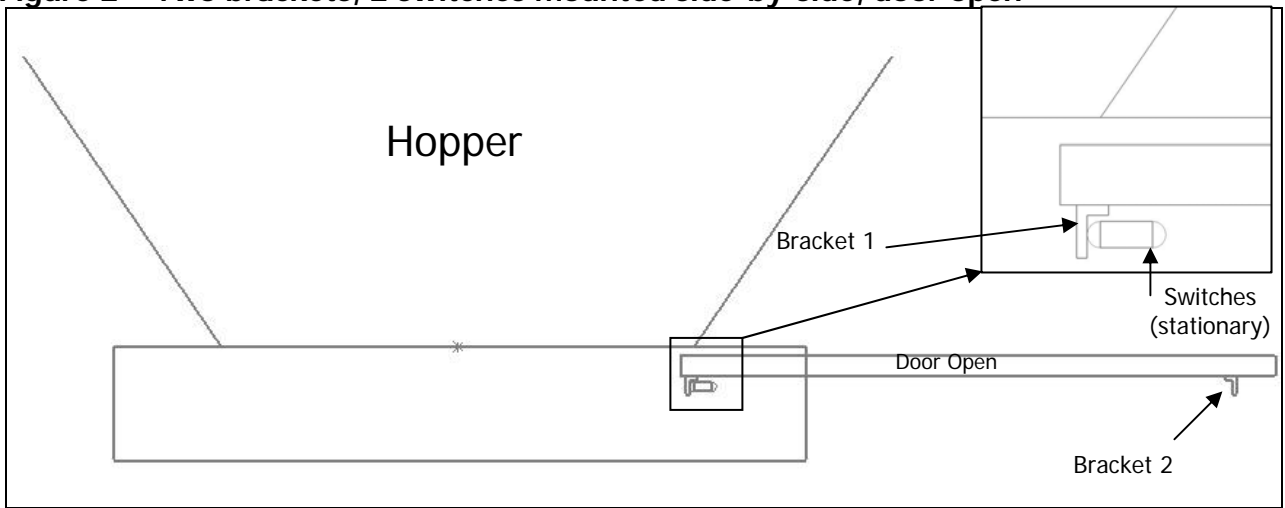


Figure 3 – One bracket, switches mounted at opposite ends, door closed

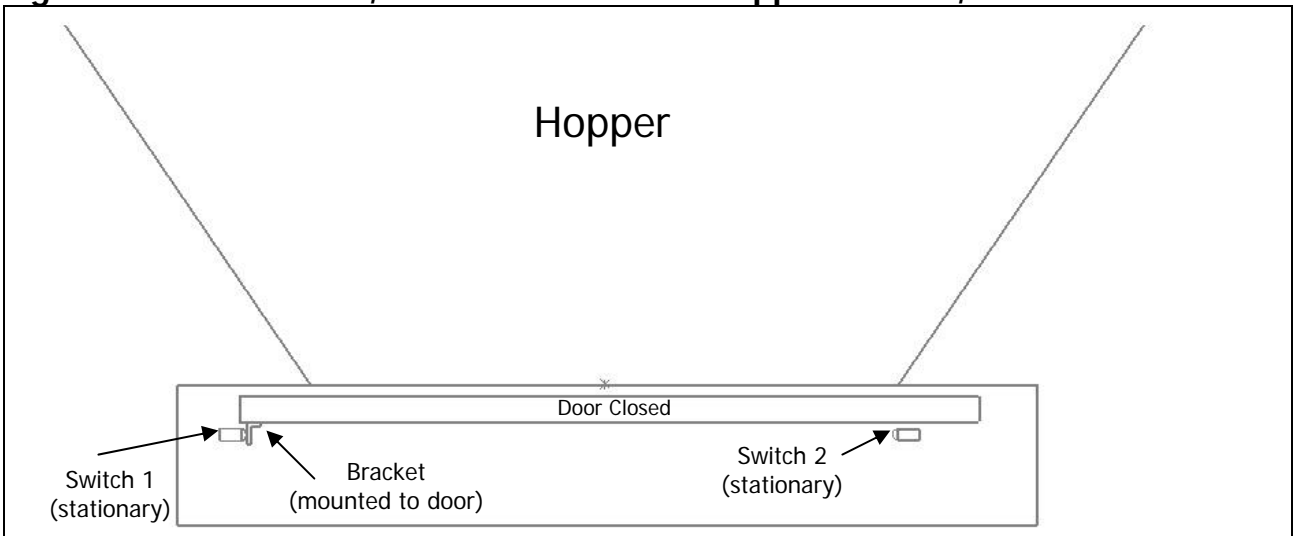


Figure 4 – One bracket, switches mounted at opposite ends, door open

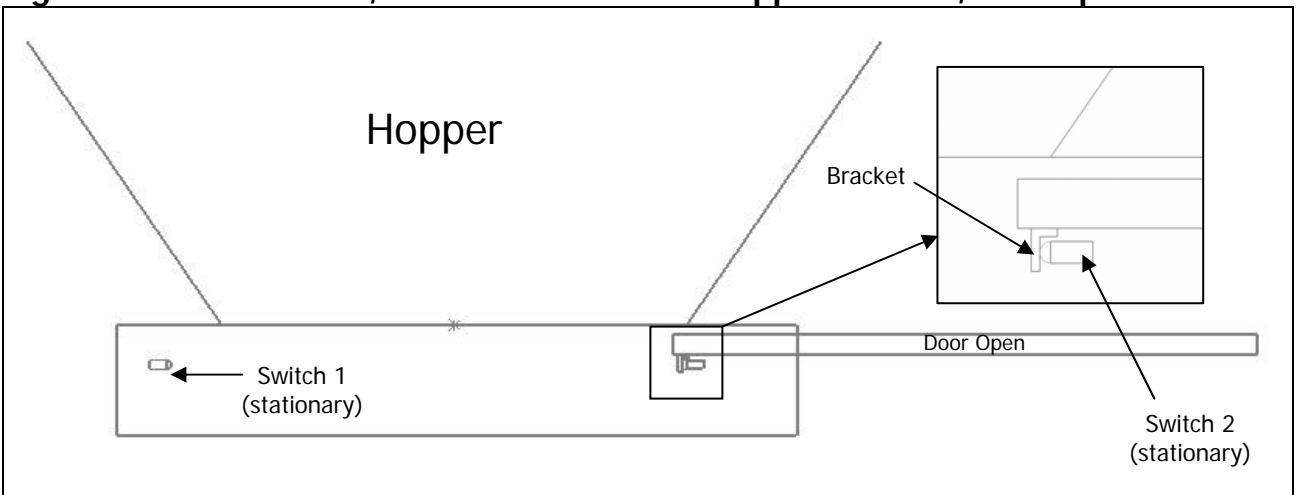
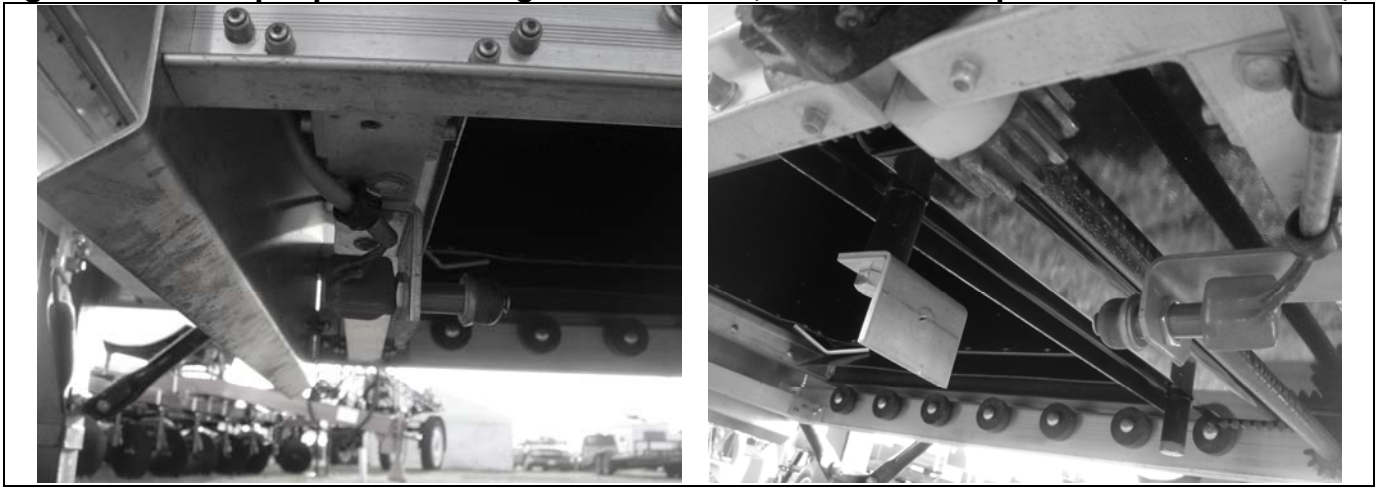


Figure 5 – Example pictures of fig 4 & 5 above (one bracket trips switch at each end)



- 2) After mounting the switch, make sure that the rubber boot is packed with dielectric grease and seated correctly on the limit switch. Figure 6 below illustrates a boot that is fully seated, and Figure 7 illustrates in incorrectly seated boot.

Figure 6

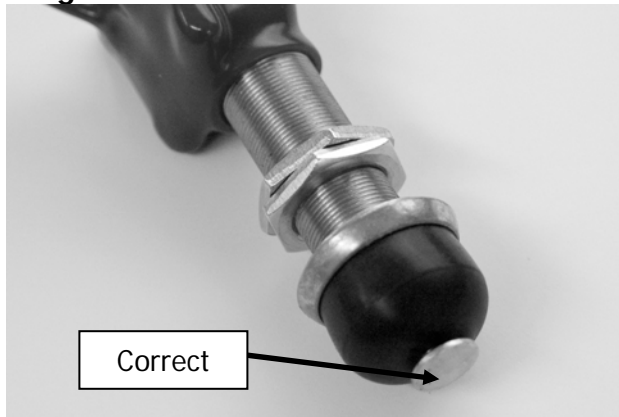
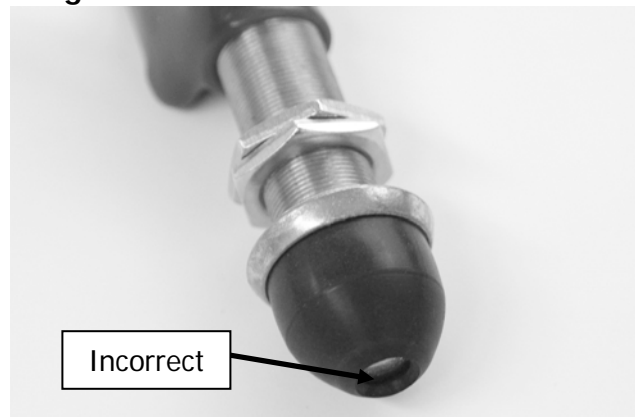


Figure 7



- 3) Securely mount the limit switch wires. To use the included wires, the control box should be mounted within 15' of the limit switches. The optimum location for the control box on a dual hopper door trailer is on the side of the trailer between the two hopper doors.
- 4) Determine which output and channel your motors are connected to by operating the doors with the key fob. The keyfob buttons are labeled I-VI (1-6) and correspond to channels 1 - 6. Write down which channel will correspond to each limit switch.
- Limit switch 1 controls Channel _____
 - Limit switch 2 controls Channel _____
 - Limit switch 3 controls Channel _____
 - Limit switch 4 controls Channel _____

Electrical Installation Instructions:

- 1) Disconnect the battery wires feeding the control box.
- 2) Unscrew and remove the 6 screws securing the control box lid.

- 3) Carefully lift the lid 2"-3". Disconnect the small red plug for the keyed switch and the red, white, and blue plugs for the 3 toggle switches from the circuit board.
- 4) Remove the lid and set it aside.
- 5) Locate the ½" round depression on the side of the box, above the terminals for Output 3.
- 6) Carefully knock out the ½" round disk.
- 7) Install the black wire gland with the nut on the inside of the box.
- 8) Route the 4 limit switch wires (8 wires for double hopper door kit) into the box through the wire gland (2 wires per hole).
- 9) Install the provided terminals to the end of one leg of wire from each limit switch. Twist the remaining legs together (2 legs for single hopper door, 4 legs for dual hopper door) and install one of the provided terminals.
- 10) You must connect the limit switches to the appropriate spade terminals and flip the appropriate DIP switches (blue bank with small white switches) to ensure proper operation of the hopper doors. See the chart and illustrations below:

Output	Remote Button/Channel #	Terminal #	DIP Switch #
1	I (1)	JA2	5
	II (2)	JA3	6
2	III (3)	JA4	7
	IV (4)	JA5	8
3	V (5)	JA6	9
	VI (6)	JA7	10

DIP switch 2 must always be left in the "ON" position.

Example: If your hopper door motor is connected to Output 1 on the black box, buttons I and II on the remote will operate the door. If button I on the remote is wired to open the door, connect the single leg of the limit switch that senses when the door is all of the way open to terminal JA2. For the limit switch that senses door closed, connect the single leg to Terminal JA3 (which corresponds to Button II on the remote). Connect the combined leg to Terminal JA1 (ground). Flip DIP switches 5 and 6 to the "ON" position.

- 11) Push a small amount of extra wire into the box and tighten the wire gland.
- 12) Carefully replace the control box lid, reconnecting the 4 plugs from Step 6 before setting it in place.
- 13) Replace and tighten the 6 screws from Step 5.
- 14) Reconnect the battery wires feeding the control box.