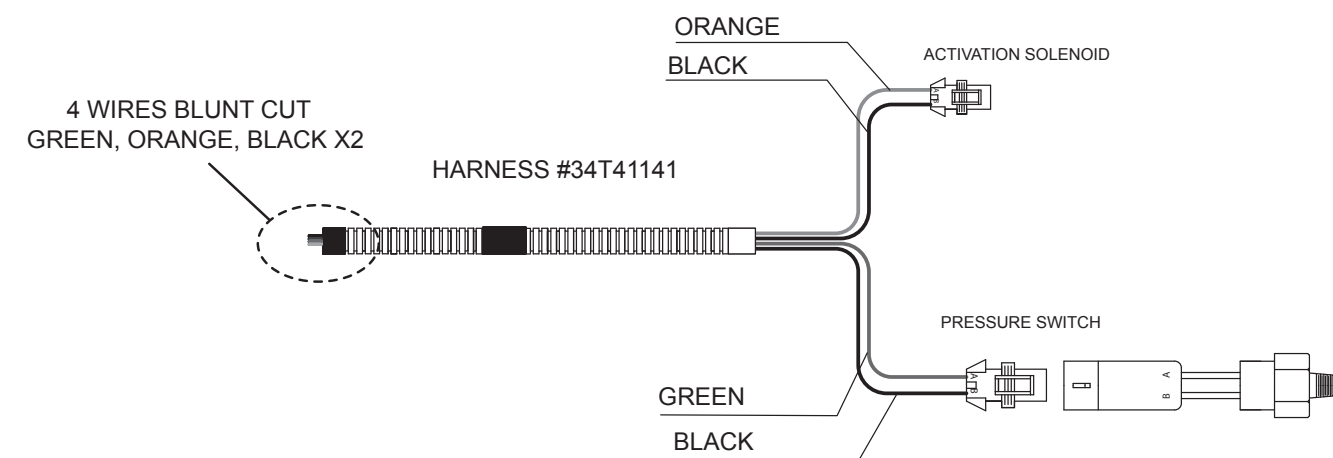
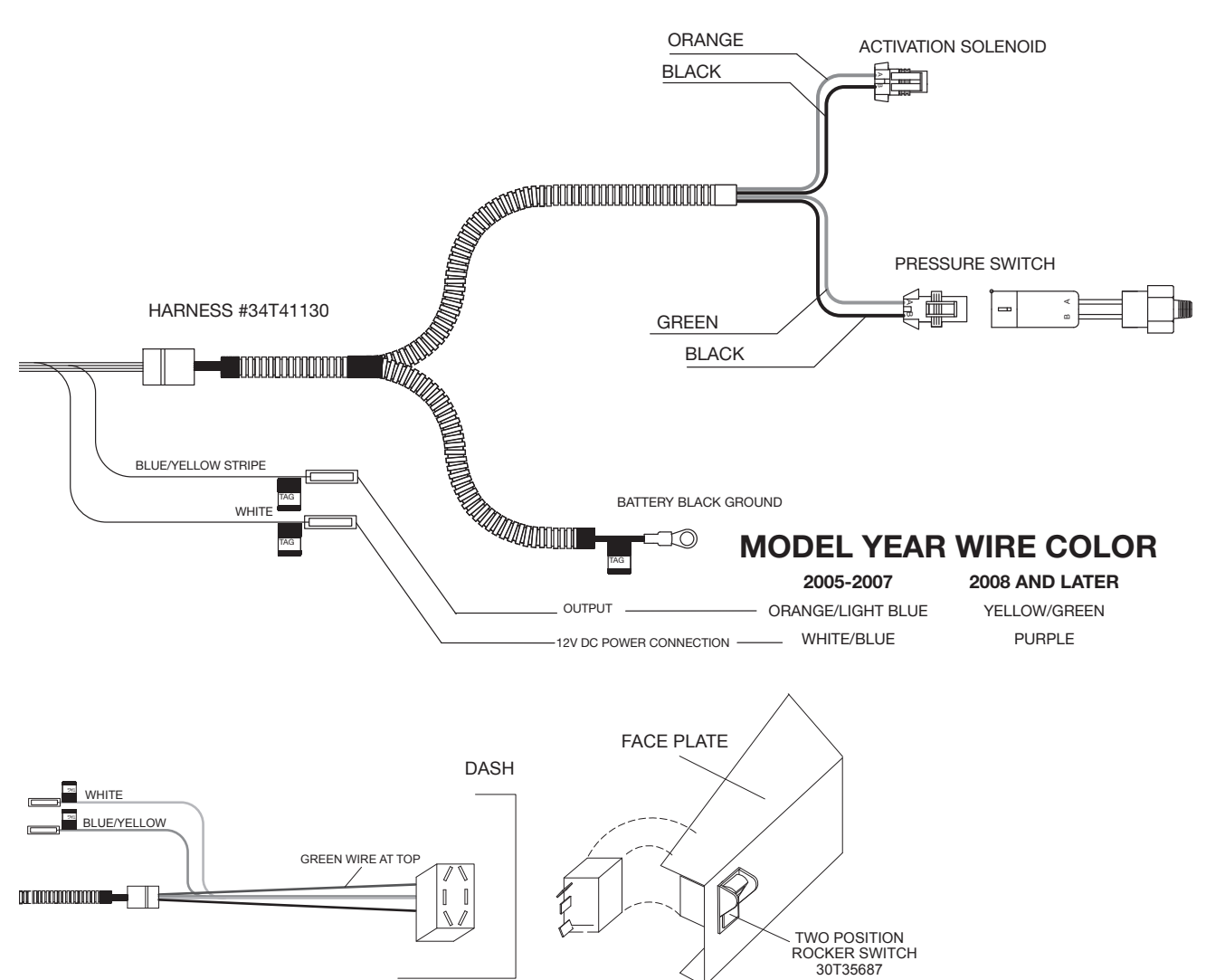


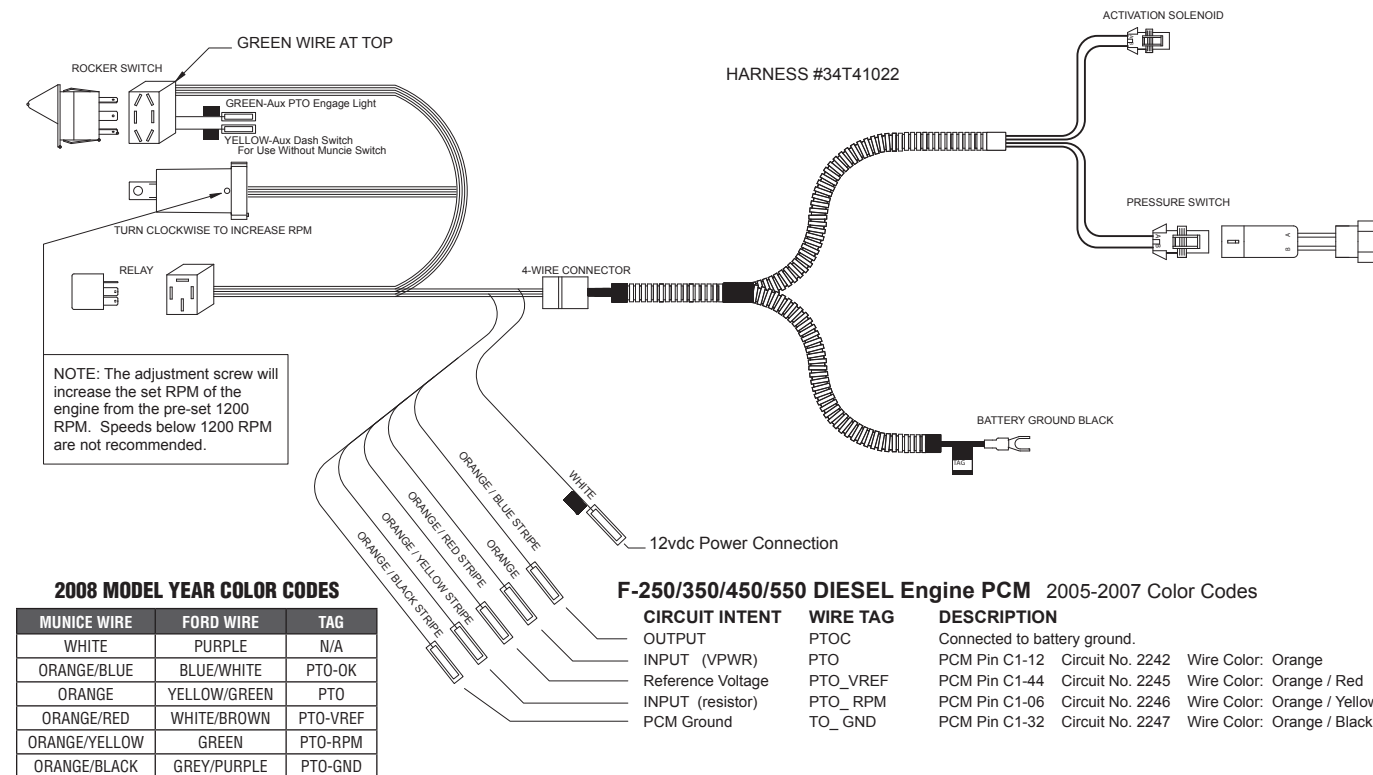
**FORD 2008 AND LATER**  
FR67 "R" SHIFT OPTION HARNESS



**FORD 2005 AND LATER**  
FR67 "Z" SHIFT OPTION HARNESS



**FORD 2005 AND LATER — DIESEL ENGINE (Standard Harness)**  
FR67 "D" SHIFT OPTION HARNESS



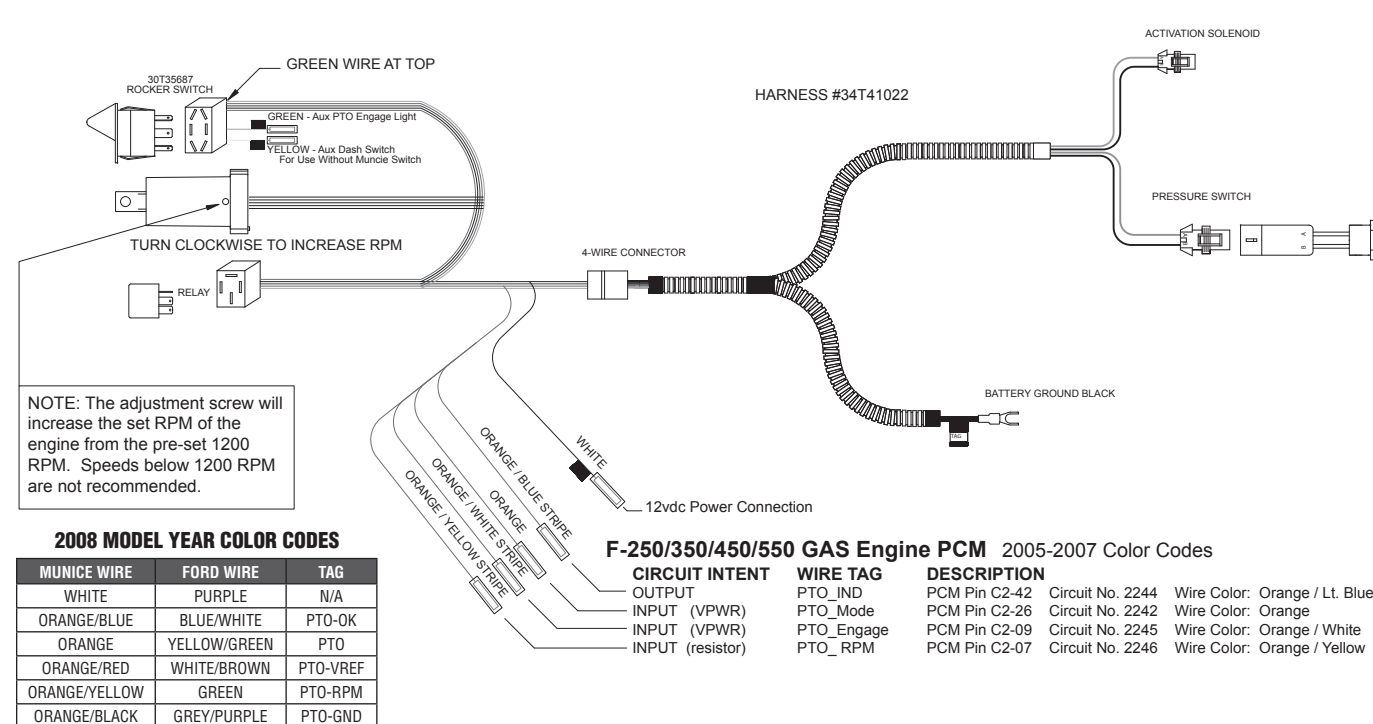
**2008 MODEL YEAR COLOR CODES**

MUNCIE WIRE	FORD WIRE	TAG
WHITE	PURPLE	N/A
ORANGE/BLUE	BLUE/WHITE	PTO-OK
ORANGE	YELLOW/GREEN	PTO
ORANGE/RED	WHITE/BROWN	PTO-VREF
ORANGE/YELLOW	GREEN	PTO-RPM
ORANGE/BLACK	GREY/PURPLE	PTO-GND

**F-250/350/450/550 DIESEL Engine PCM 2005-2007 Color Codes**

CIRCUIT INTENT	WIRE TAG	DESCRIPTION	Circuit No.	Wire Color
OUTPUT	PTOC	Connected to battery ground.	2242	Orange
INPUT (VPWR)	PTO	PCM Pin C1-12	2245	Orange / Red
Reference Voltage	PTO_VREF	PCM Pin C1-44	2246	Orange / Yellow
INPUT (resistor)	PTO_RPM	PCM Pin C1-06	2247	Orange / Black
PCM Ground	TO_GND	PCM Pin C1-32		

**FORD 2005 AND LATER — GAS ENGINE (Standard Harness)**  
FR67 "G" SHIFT OPTION HARNESS



**2008 MODEL YEAR COLOR CODES**

MUNCIE WIRE	FORD WIRE	TAG
WHITE	PURPLE	N/A
ORANGE/BLUE	BLUE/WHITE	PTO-OK
ORANGE	YELLOW/GREEN	PTO
ORANGE/RED	WHITE/BROWN	PTO-VREF
ORANGE/YELLOW	GREEN	PTO-RPM
ORANGE/BLACK	GREY/PURPLE	PTO-GND

**F-250/350/450/550 GAS Engine PCM 2005-2007 Color Codes**

CIRCUIT INTENT	WIRE TAG	DESCRIPTION	Circuit No.	Wire Color
OUTPUT	PTO_IND	PCM Pin C2-42	2244	Orange / Lt. Blue
INPUT (VPWR)	PTO_Mode	PCM Pin C2-26	2242	Orange
INPUT (resistor)	PTO_Engage	PCM Pin C2-09	2245	Orange / White
	PTO_RPM	PCM Pin C2-07	2246	Orange / Yellow



**FR67 PTO**  
INSTALLATION SUPPLEMENT TO IN03-01

**NOTE:** Please read the installation & owner's manual and this supplement before beginning the installation process. Once you have read through both of these documents, this installation will begin with step 4 in the IN03-01 Installation & Owner's Manual. Once step 10 has been completed, begin with step 1 from this supplement.

Please locate the activation kit that is supplied with the FR67 Series PTO. This kit should include: (3) step studs with (3) whiz-lock nuts, (2) shoulder studs with (2) spirallock nuts, (1) hex head capscrew with washer and o-ring, (1) pressure switch, (1) wiring harness, (1) JIC 45° Elbow, (2) NPT 90° elbow's and (1) 28" hose assembly (NPT-JIC).

**NOTE:** The diesel "D" activation kit will only include (1) NPT 90° elbow.

1. The three (3) step studs should be placed in locations B, E, F as indicated in Figure 1. The (3) whiz-lock nuts included are to be used in these same locations once the PTO has been mounted.

2. The two (2) shoulder studs should be placed in the locations A and C as indicated in Figure 1. The two (2) spirallock nuts included are to be used in these same locations once the PTO has been mounted.

**NOTE:** The long hex head capscrew will screw into the D location.

3. Reinstall the transmission gasket that was removed in Step 4 of the IN03-01 Installation & Owner's Manual back onto the transmission, making sure the larger holes in the gasket/shim are located directly over the two shoulder studs (A & C). (See Figure 2)

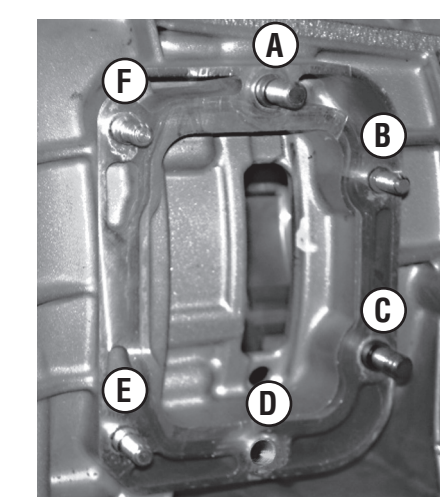
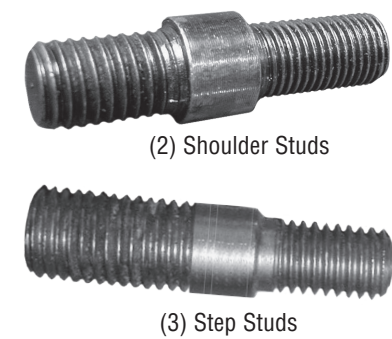


Figure 1. Locations of all bolt holes.

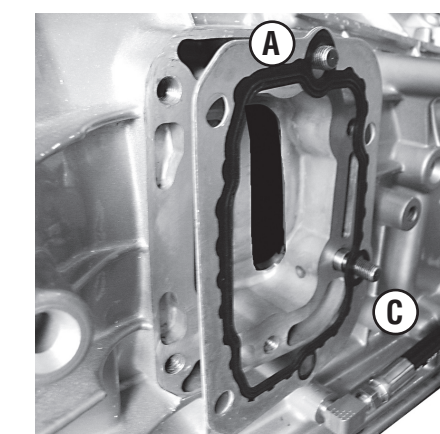


Figure 2. Shoulder bolt locations.

**NOTE:** Refer to step 19 in the IN03-01 Installation & Owner's Manual, to locate the long hex-head capscrew, washer and o-ring (See Figure 3). Once they have been located, continue to step 4 of this supplement.

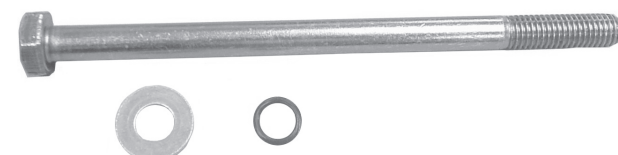


Figure 3. Capscrew, washer and o-ring.

**NOTE:** Place the washer onto the long capscrew before inserting into the housing. There is an o-ring groove located inside this hole near the mounting pad. Be sure that the o-ring remains in position as the capscrew is inserted. (See Figure 4)

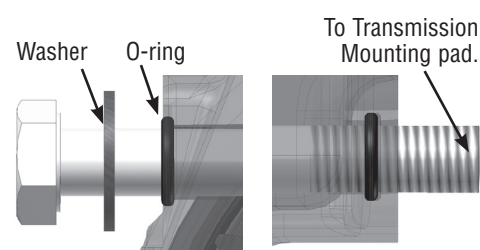


Figure 4. Capscrew, washer and o-ring inserted into PTO mounting pad.

4. Insert the capscrew into the PTO housing and through the hole and o-ring in the PTO mounting pad. Place the PTO up onto the transmission opening while aligning the (2) larger mounting holes over the (2) shoulder studs. Screw the long hex head capscrew into the bottom mounting hole in the transmission pad. (See Figure 5)

**CAUTION:** It is important to check the gaps between the PTO and the transmission and make sure the gear teeth are properly meshed before tightening the nuts, regardless of which PTO model you are installing.

5. Hold the PTO in position and install the (3) whiz-lock nuts onto the (3) step studs. Next, position and install the (2) spirallock nuts onto the (2) shoulder studs. Tighten the (3) whiz-lock nuts for the step studs to 17 ft. lb. and the (2) spirallock nuts for the shoulder studs to 40 ft.lb.

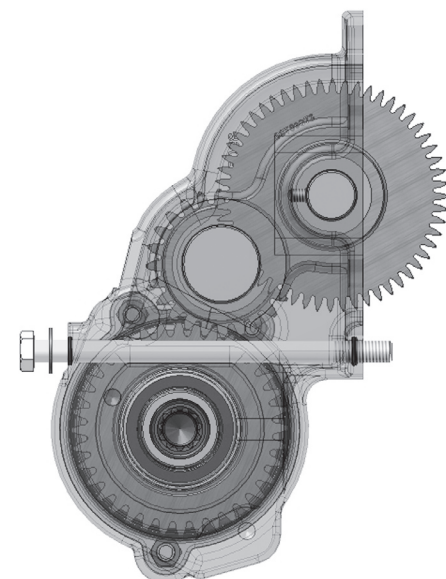


Figure 5. Cross-section of PTO with thru-bolt installed.

6. Checking the backlash is not required when using the approved Ford furnished gasket. Should the gasket be damaged, obtain a Ford original equipment replacement. Muncie part number 13T39089 (Not included with the PTO.)

**NOTE:** Never use silicone type sealant on PTO/transmission mounting surface, as proper backlash cannot be attained.

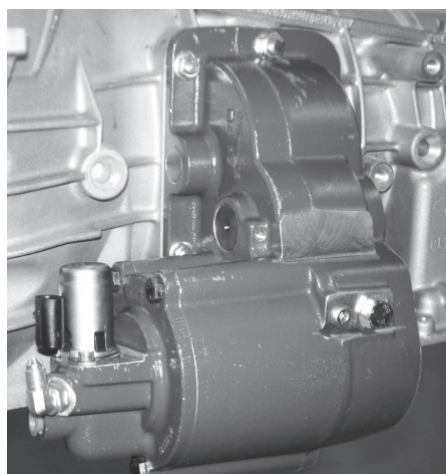


Figure 6. PTO attached to transmission.

7. Remove the red plastic plug and pressure switch. Install and position the pressure switch as shown in Figure 7.

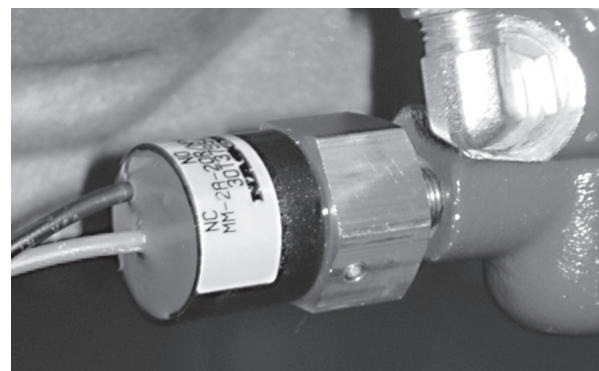


Figure 7. Pressure Switch installed.

**NOTE:** For the "G", "R", and "Z" activation installation, the second NPT 90° elbow is included in the activation kit to relocate the pressure switch away from the vehicle exhaust on gas applications. The male end of this elbow should be inserted in the port and tightened so the female end is pointing downward. The pressure switch can then be inserted in the female end of the elbow. (See Figure 8)

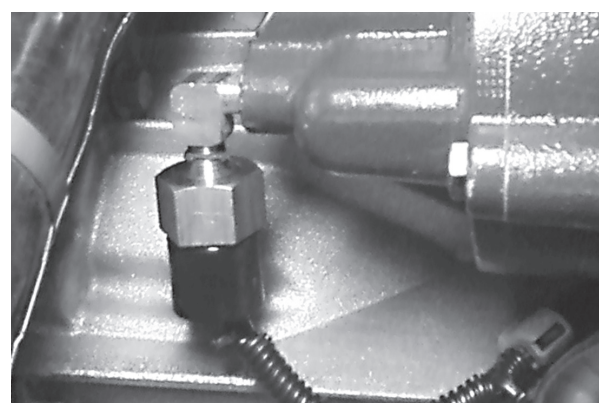


Figure 8. Pressure Switch installed using second NPT 90° elbow for use with G, R, and Z activation installation.

8. Reference steps 7-10 in the IN03-01 Installation and Owner's Manual, with the pressure activation hose installation into the main pressure port of the Ford transmission as shown in Figure 9.

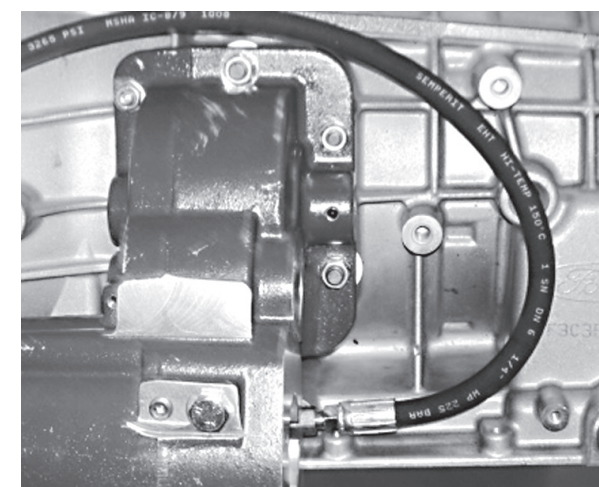


Figure 9. Pressure activation hose connection.

9. Install the female end of the of JIC 45° elbow onto the male end of the JIC 90° elbow (included on the PTO) and position as shown in Figure 9. Install the female JIC swivel end of the nose onto the male end of the JIC 45° elbow (included in the activation kit.)

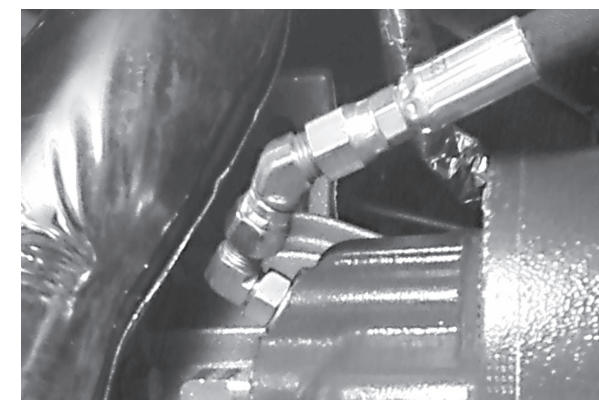


Figure 10. The JIC 45° elbow, JIC 90° elbow and 28" hose in the correct position after installation.

10. Use cable ties to route the hose away from the exhaust and other components. Route the wiring harness from the vehicle front passenger compartment to the solenoid valve.

**NOTE:** The solenoid and pressure switch connectors are Metri-Pack.

11. The gas "G" shift option is supplied with a heat shield kit to be attached to the exhaust directly in front of the FR67 PTO. (See Figure 11)



Figure 11. Proper heat shield installation.

**NOTE:** Use the band clamps provided to attach the shield to the existing exhaust pipe. (See Figure 12)



Figure 12. Heat shield attached with band clamps.

**NOTE:** The heat shield kit (49TK4860) is provided only with the gas "G" activation kit. If desired, it is available for purchase for any activation kit.

For wire installation procedures, refer to the IN03-01 Installation & Owner's Manual. The connection procedure will begin at step 38 and continue through step 47. Also, please pay careful attention to steps 48-50.

See pages 5 and 6 for Wire Harness Installation.