



# Installation Instructions

## *Power Switch*

### *for GM Lockup Torque Converters*

*(All TH200C, TH250C, TH350C, TH200-4R  
and 1982 thru 1989 TH700-R4)*

**Part Number 80217**

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This kit will enable the driver to control the operation of the torque converter lockup clutch. The driver can select between the converter's normal function and having it unlocked in all gears with a three speed automatic transmission and in all gears but overdrive (fourth) on four speed overdrive transmission. Keeping the converter out of lockup mode during city driving saves wear and tear on the converter clutch in addition to making the vehicle more pleasurable to drive, as you will no longer have the constant bump of apply and release during stop and go driving. The switch will not stop the converter from locking up in fourth (overdrive) gear of overdrive four speed transmissions. GM four speed transmissions should always be in lockup mode in fourth gear due to the increased possibility of overheating the torque converter.

This kit will work on all TH200C, TH250C and TH350C three speed automatic transmissions. It will also work with 1981-86 TH200-4R overdrive automatic transmissions and on 1982 through 1989 TH700-R4 overdrive automatic transmissions. (On 1990 and later TH700-R4 transmissions the fourth gear oil pressure tap has been

removed.)

Between 1979 and 1981 the TH200, TH250 and TH350 three speed automatic transmissions were made in both lockup and non-lockup converter versions. After 1981, only lockup converter versions were manufactured. A lockup torque converter transmission can be identified by one or more wires leading to a connector on the driver's side of the transmission.

The power switch is simple to operate and easy to install. You will need a minimum of tools and mechanical experience to install this kit. The tool list and parts lists are on the last page. Carefully read these instructions and take your time with each step.

#### **INSTALLATION TH200C, TH250C AND TH350C THREE SPEED TRANSMISSIONS**

**STEP 1.** Raise and support the vehicle high enough to give yourself plenty of room to work. Use jackstands or ramps to support the vehicle safely. Do not use a jack alone.

**STEP 2.** Locate the plastic electrical connector on the driver's side of the transmission. **See Fig. 1.** The connector will have from one to three wires connected to it. If there is more than one wire, select the wire going to the terminal marked "A" on either the plug or the socket. Cut the selected wire about 3-4" away from the plug.

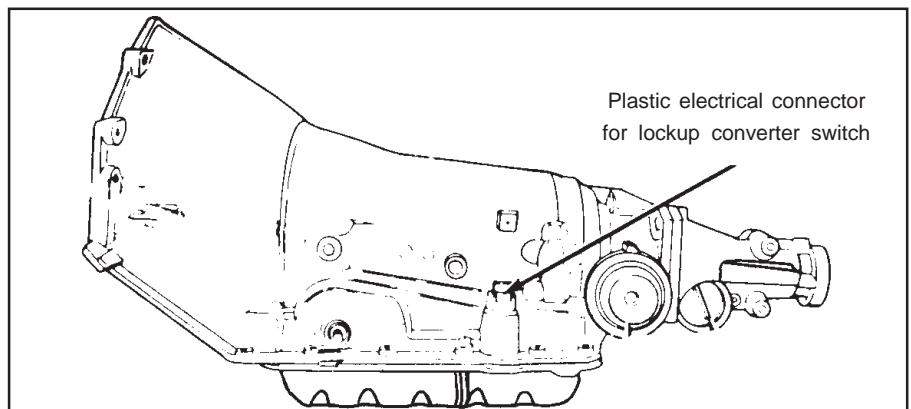


Figure 1

Strip both ends of the wire back about 1/8" and crimp a butt connector onto each end.

**STEP 3.** Decide on a mounting position for the toggle switch, some place where the driver has easy access to the switch and the indicator light is not visually obstructed. The most common mounting locations are under the dashboard or to the console (if equipped). When choosing a mounting location for the power switch keep in mind a route for the wires from the switch to the transmission. Keep in mind the following cautions:

1. Do not route wires near the engine or exhaust system. The wire's insulation may melt or burn off, causing a short circuit.
2. Keep the wires from dangling beneath the car or the dashboard as they may become tangled with selector linkage or other moving parts. Do not secure wires to any moving parts. Secure wires to frame members or other supports using en-

closed wire ties.

3. The wires should be kept out of the way of the driver's and passenger's hand and foot movement to avoid snagging and possible disconnection.

4. Two long wires will route to the butt end connectors installed in Step 2. This may mean drilling a 5/16 inch diameter hole in the floor or firewall for the wires to pass through. Be careful there are no obstructions on the other side of the surface to be drilled as they may become damaged. Check for a suitable existing hole first before drilling a new hole.

**STEP 4.** Drill two 1/16" diameter holes in the switch mounting surface, using the bracket as a template for the mounting hole spacing. From the wire supplied in the kit, install a female spade connector. Place this onto terminal #3 of the switch. Route this wire to a good ground. The ground **MUST** be metal and should not have

any paint in between the connector and the metal. Cut ground wire to length and install the tongue spade connector on the end. Install spade connector to ground.

**STEP 5.** Onto the remaining wire install two spade connectors. Attach these connectors to the terminals marked #1 and #2 on the switch. If there is no existing hole in the firewall or floorboard of the vehicle, drill a 5/16" hole. Feed the two long wires through the supplied rubber grommet then through the 5/16" hole. Press the rubber grommet into place. Route wires to the transmission electrical connector. Cut the wires to length and connect them to the two butt connectors on the wire cut in step 2. **See Figure 3.** Make sure all wires are secured and properly connected.

### INSTALLATION TH200-4R AND TH700-R4 FOUR SPEED TRANSMISSIONS

**STEP 1.** Raise and support the vehicle high enough to give yourself plenty of room to work. Use jackstands or ramps to support the vehicle safely. Do not use a jack alone.

Locate the plastic electrical connector on the driver's side of the transmission. **See Fig. 1.** Locate the fourth gear oil pressure tap on the transmission case. **See Figure 2A** for the TH700-R4 location and **Figure 2B** for the TH200-4R tap location.

**STEP 2.** Remove the fourth gear oil pressure tap plug. Install the supplied pressure switch. On most applications you will require a 45 degree elbow so the switch will clear the exhaust pipe or floor pan. Make sure that the switch is not overtightened or cross threaded.

**STEP 3.** Install two female spade connectors on the supplied wire. Install them on the pressure switch terminals. Run the wires over the top of the transmission. Unplug the plastic electrical connector from the case. Locate pin "A". Cut the wire going to pin "A" about 3-4" from the connector. Strip the wires and place a butt end connector on each end of the cut wire. Connect the two pressure switch wires to the other sides of the butt connectors. (Polarity is not important.)

**Note:** If your transmission has a wire

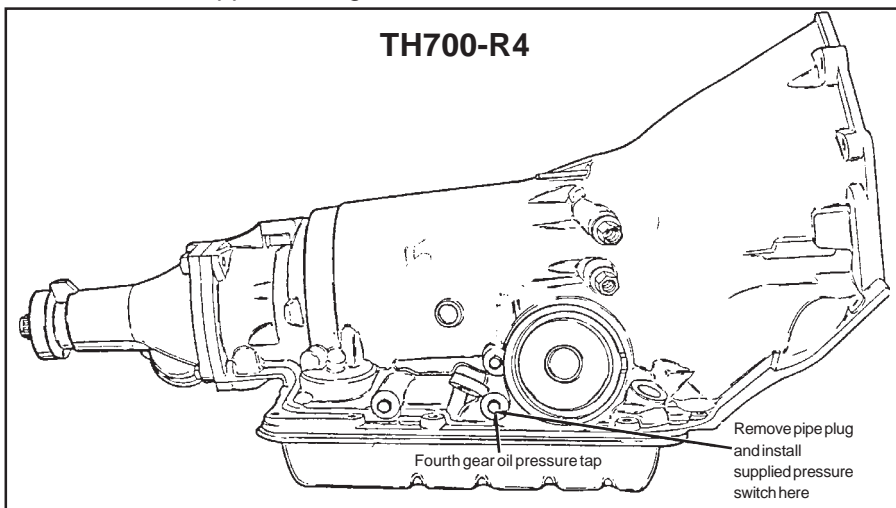


Figure 2A

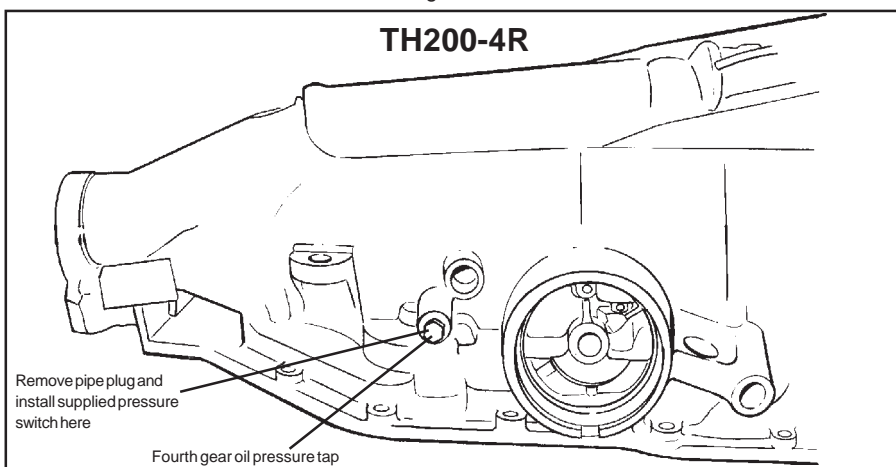


Figure 2B

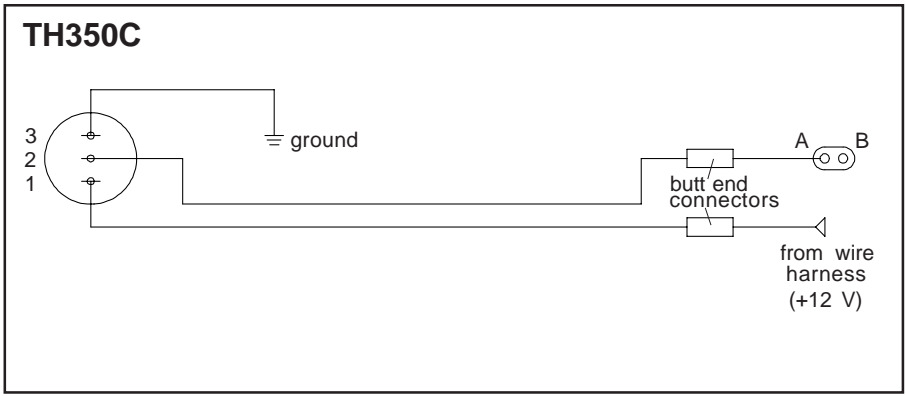


Figure 3

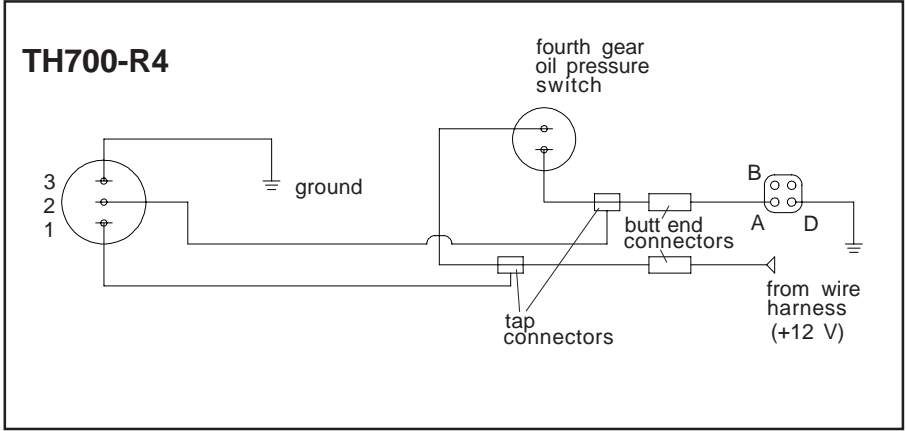


Figure 4

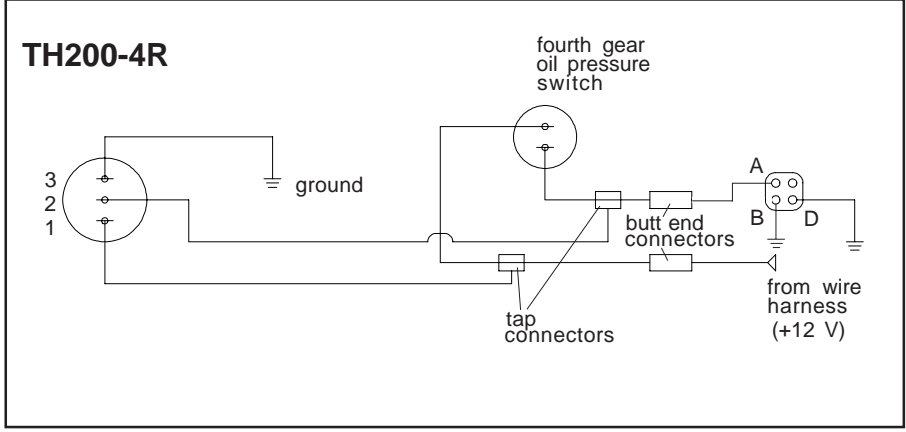


Figure 5

on pin "D", cut the wire and ground the end of the wire that goes to the plug. Tape off the other end of the wire.

**STEP 4.** Decide on a mounting position for the toggle switch, some place where the driver has easy access to the switch and the indicator light is not visually obstructed. The most common mounting locations are under the dashboard or to the console (if equipped). When choosing a mounting location for the power switch keep in mind a route for the wires from the switch to the transmission. Keep in mind the following cautions:

1. Do not route wires near the engine or exhaust system. The wire's insulation may melt or burn off, causing a short circuit.
2. Keep the wires from dangling beneath the car or the dashboard as they may become tangled with selector linkage or other moving parts. Do not secure wires to any moving parts. Secure wires to frame members or other supports using enclosed wire ties.
3. The wires should be kept out of the way of the driver's and passenger's hand and foot movement to avoid snagging and possible disconnection.
4. Two long wires will route to the wires installed in Step 3. This may mean drilling a 5/16 inch diameter hole in the floor or firewall for the wires to pass through. Be careful there are no obstructions on the other side of the surface to be drilled as they may become damaged. Check for a suitable existing hole first before drilling a new hole.

**STEP 5.** Drill two 1/16" diameter holes in the switch mounting surface, using the bracket as a template for the mounting hole spacing. From the wire supplied in the kit, install a female



Butt tap wire against stop

Install run wire

Fold and squeeze with pliers until latch locks

Figure 6

spade connector. Place this onto terminal #3 of the switch. Route this wire to a good ground. The ground MUST be metal and should not have any paint in between the connector and the metal. Cut ground wire to length and install the tongue spade connector on the end. Install spade connector to ground.

**STEP 6.** Onto the supplied wire install two spade connectors. Attach these connectors to the terminals marked #1 and #2 on the switch. If there is no

existing hole in the firewall or floorboard of the vehicle, drill a 5/16" hole. Feed the two long wires through the supplied rubber grommet then through the 5/16" hole. Press the rubber grommet into place. Route wires to the transmission electrical connector. Connect the wires from driver's control switch to the wires from the oil switch using the remaining tap connectors. **See Figure 4** for the TH700-R4 or **Figure 5** for the TH200-4R. Make sure all wires are secured and properly connected.

## OPERATION

When the toggle switch is lighted the lockup clutch is disabled (except in overdrive). With the light out the lockup clutch functions normally. See the trouble shooting guide below if there are any problems.

### TOOL LIST

Jackstands or wheel ramps  
 Small Punch or scribe  
 Funnel  
 Wirecutting, stripping and crimping tools  
 Pliers or vicegrips  
 3/8" drill motor  
 Needle nose pliers  
 5/16" drill bit  
 Small screwdriver  
 3/8" and 7/16" open end or fitting wrenches

### PARTS LIST

1 Power switch with bracket  
 1 Oil pressure switch  
 2 Switch fittings  
 21' Wire  
 3 Splice connectors  
 2 Butt splices  
 6 Female spade connectors  
 1 Male spade connector  
 4 Wire wraps

## TROUBLE SHOOTING GUIDE

### MALFUNCTION

### PROBABLE CAUSE

No converter clutch apply

Voltage not reaching solenoid. Plug not properly engaged.  
 Connectors not installed on proper terminals  
 Wires for solenoid pinched and grounded  
 Poor or broken electrical connection  
 Wire insulation stripped or bared causing short circuit  
 Faulty or damaged switch

Converter works despite switch

Wrong wire clipped, "A" wire must be clipped

Indicator light does not work

Short circuit or blown fuse in light circuit  
 Poor or broken electrical connections  
 Improper wire chosen to tap into electrical circuit  
 Bulb in switch broken or burned out  
 Wire from #1 switch terminal not properly grounded