THM 3L80 (400)
COMPUTER CONTROLLED KICKDOWN

Beginning in the 1987 model year, on light duty trucks equipped with the THM 400 transmission, the detent or kickdown, solenoid is activated by the ECM instead of the familiar switch on the accelerator pedal. Refer to Figure 1 for the new circuit wiring schematics.

There are three relays mounted on one panel, under a plastic cover, and located by the right hand fender well. One of these relays will be the Downshift Control Relay, and is energized with a ground signal from the ECM. The ground signal from the ECM is based upon Throttle Position Sensor, Vehicle Speed Sensor, and MAP (Manifold Absolute Pressure) Sensor information. Remember that the signal to the detent solenoid is a 12-Volt lead. That is why the Downshift Control Relay is needed in this circuit, as the relay allows 12-Volts to go to the detent solenoid, causing a hydraulic downshift. Identification of the Downshift Control Relay is best done by checking the color code of the wire going down to the transmission, as the location of the relay on the panel will fry from model to model. Refer to Figure 1 for the wiring schematics.

NOTE: Some THM 400 equipped vehicles, mistakenly had THM 700 computers installed in them straight from the factory. This will create a complaint of, "Falls Out of 3rd gear, - After Warm". This occurs because the temperature sensor signals the ECM that the engine is up to operating temperature. Then when it is time for converter clutch application (700 Computer) the ECM sends a ground signal to the Down shift Relay and creates a 3-2 downshift.

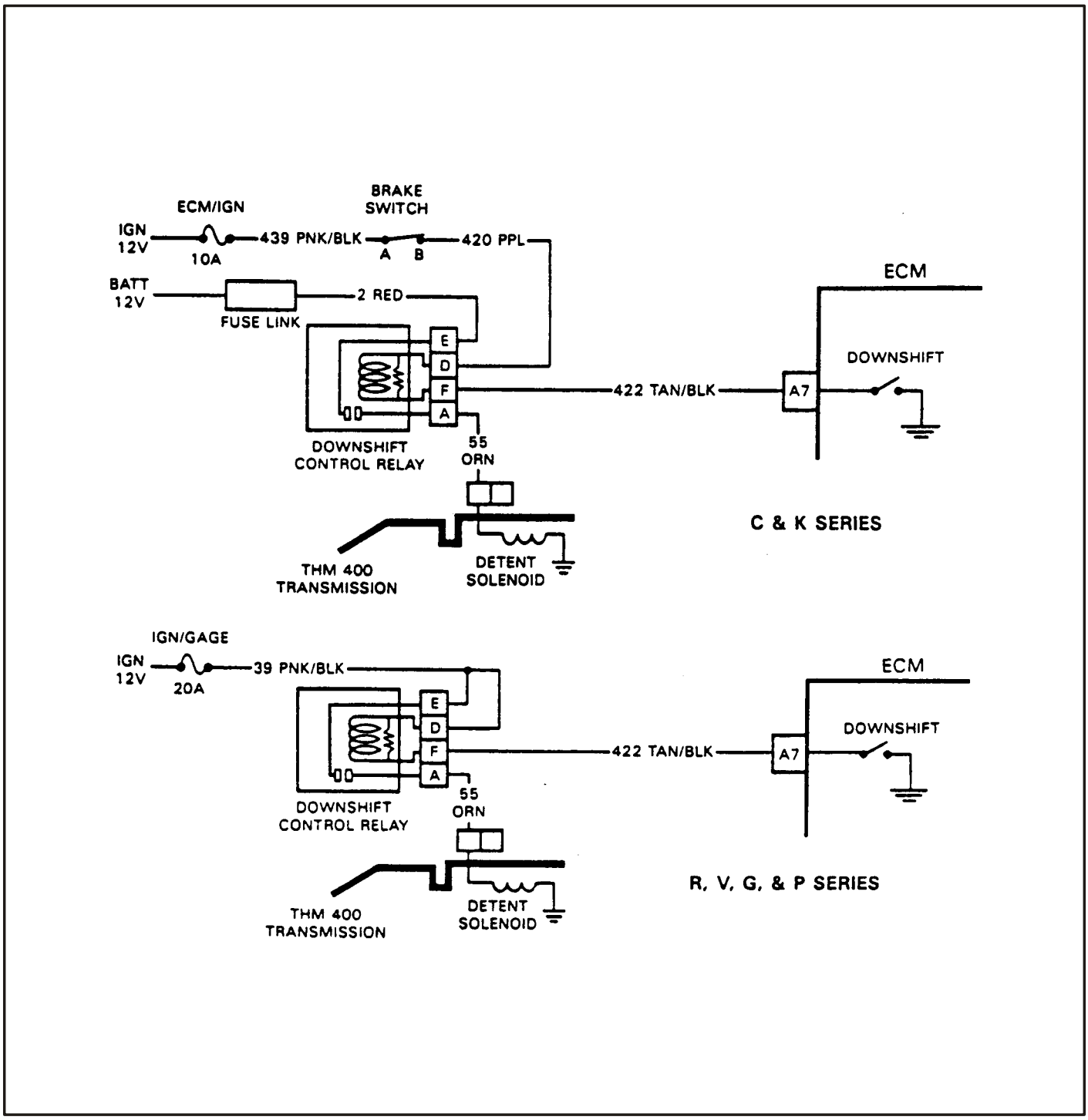
ECM/IGN
BRAKE SWITCH
IGN 12V
10A
439 PNK/BLK
A
B
420 PPL
BATT 12V
FUSE LINK
2 RED
E
D
F
A
DOWNSHIFT CONTROL RELAY
55 ORN
422 TAN/BLK
ECM
DOWNSHIFT
A7
THM 400 TRANSMISSION
DETENT SOLENOID
C & K SERIES
IGN/GAGE
IGN 12V
20A
39 PNK/BLK
E
D
F
A
DOWNSHIFT CONTROL RELAY
55 ORN
422 TAN/BLK
ECM
DOWNSHIFT
A7
THM 400 TRANSMISSION
DETENT SOLENOID
R, V, G, & P SERIES

Figure 1