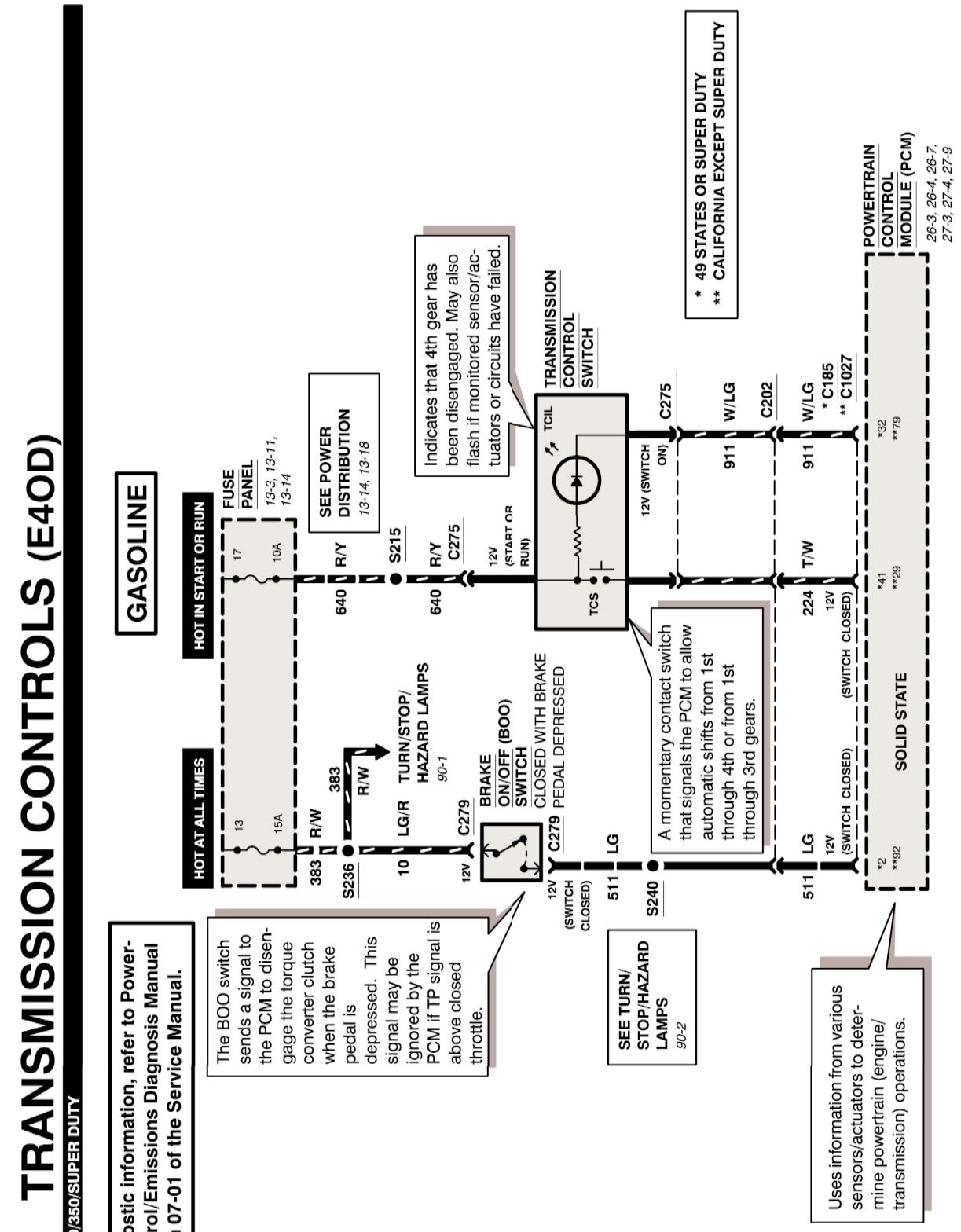
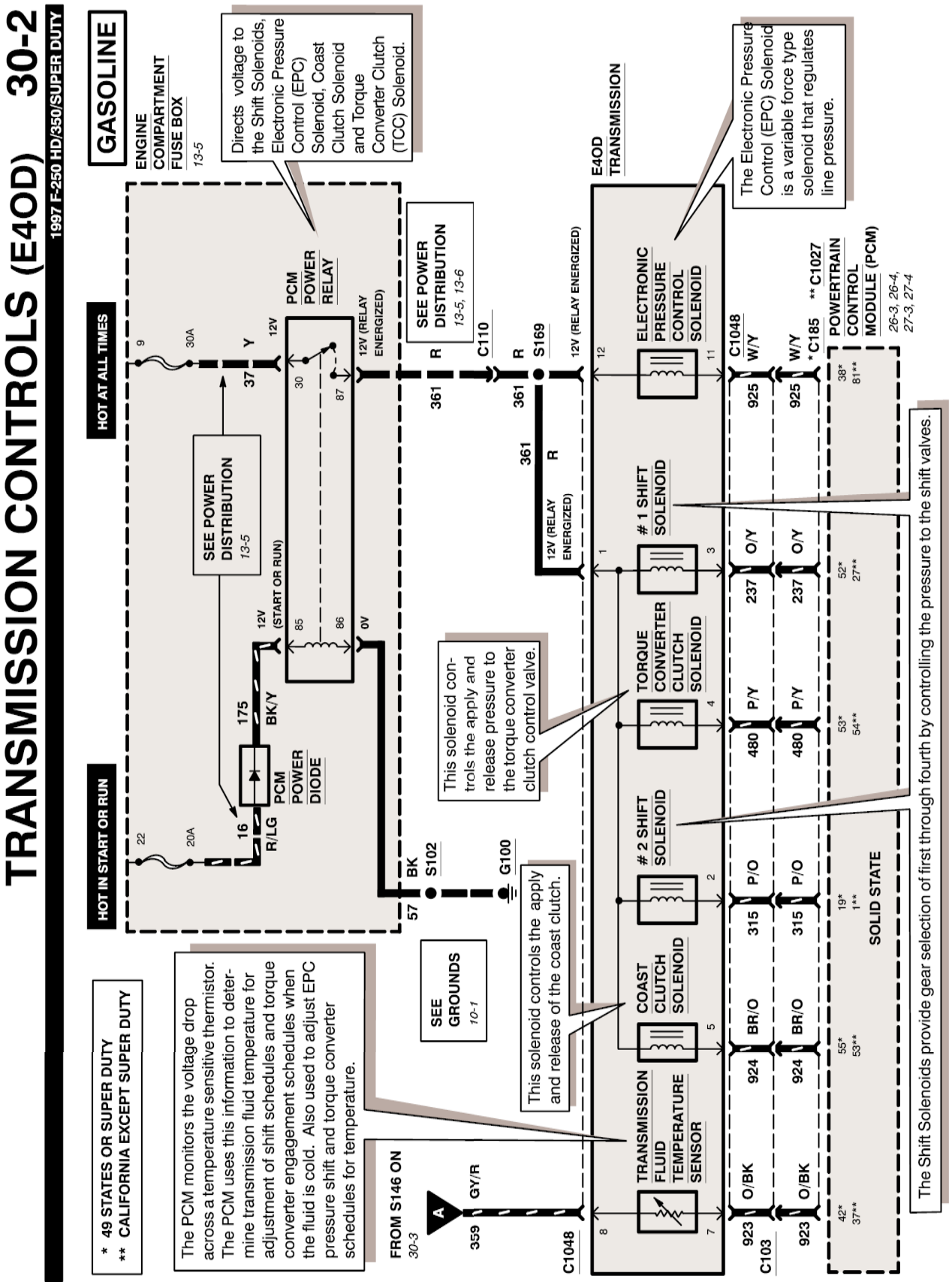
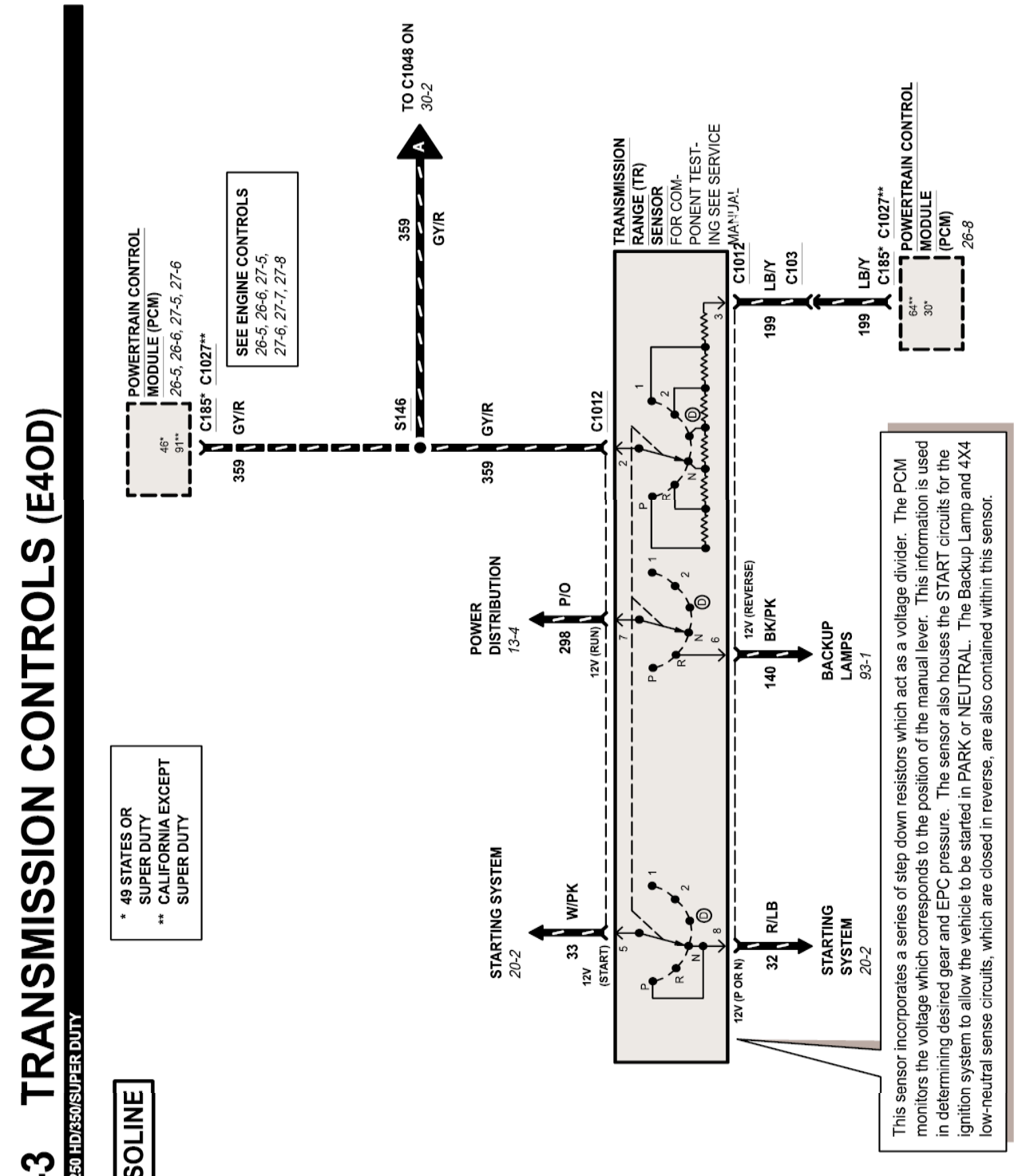
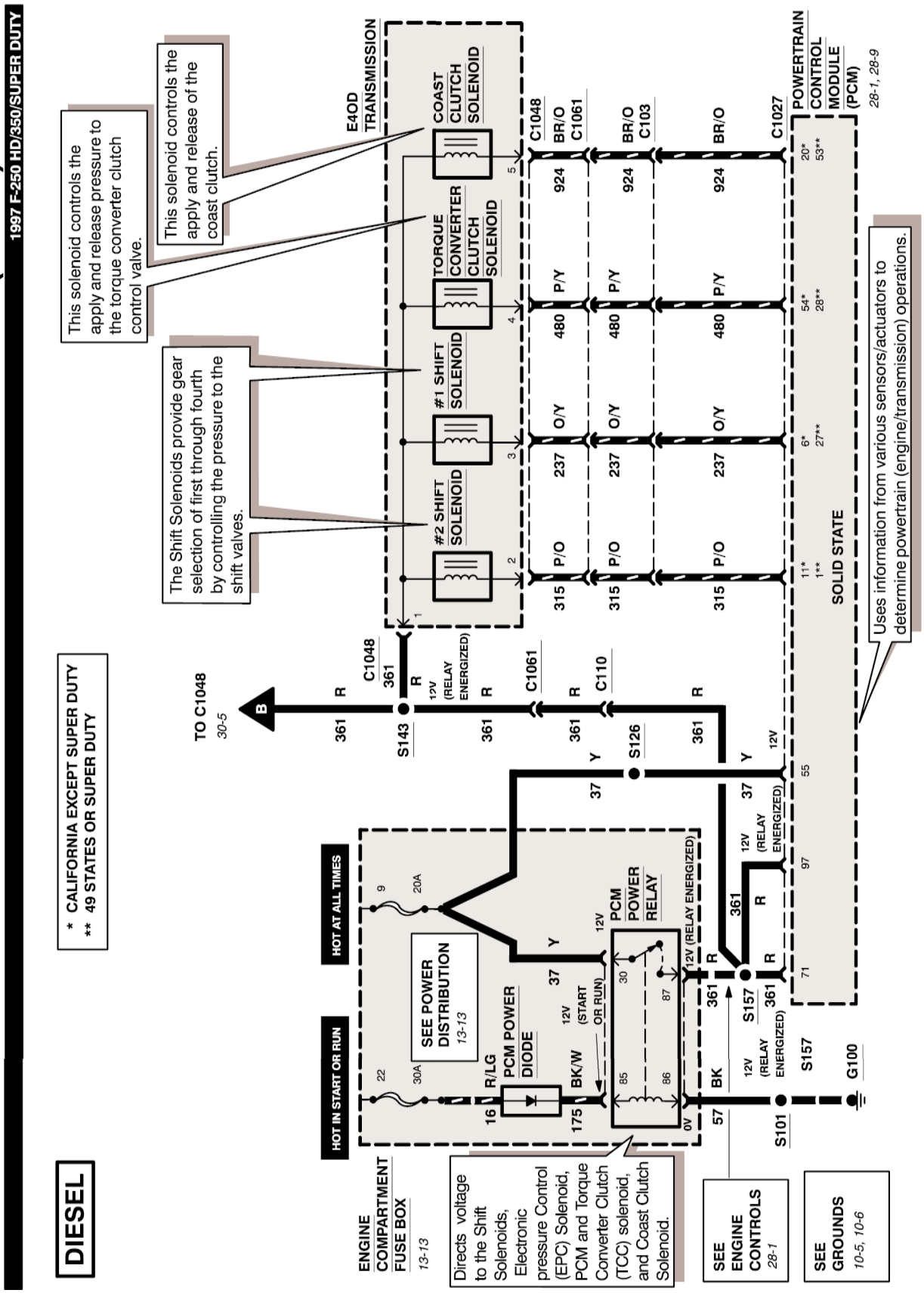
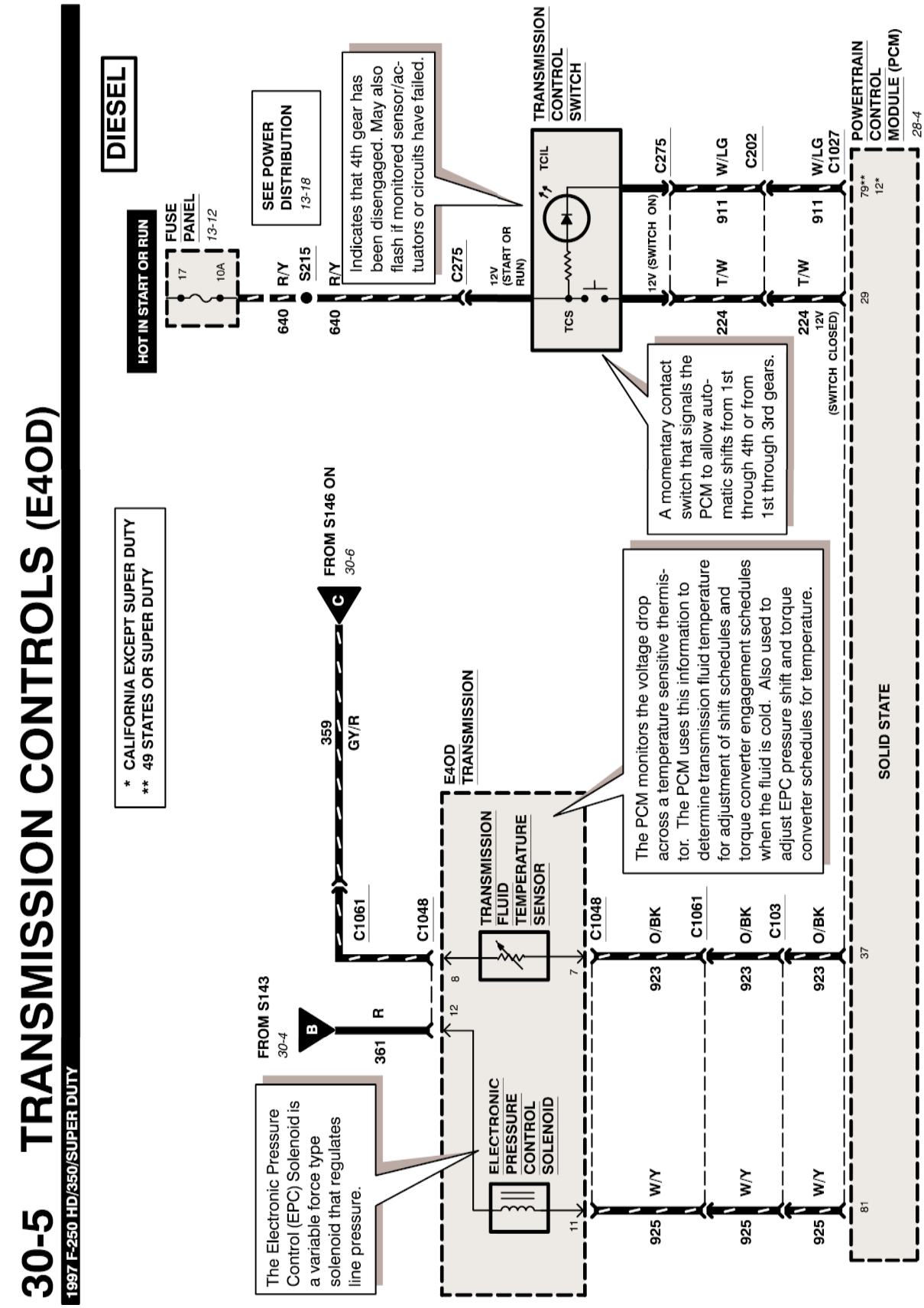
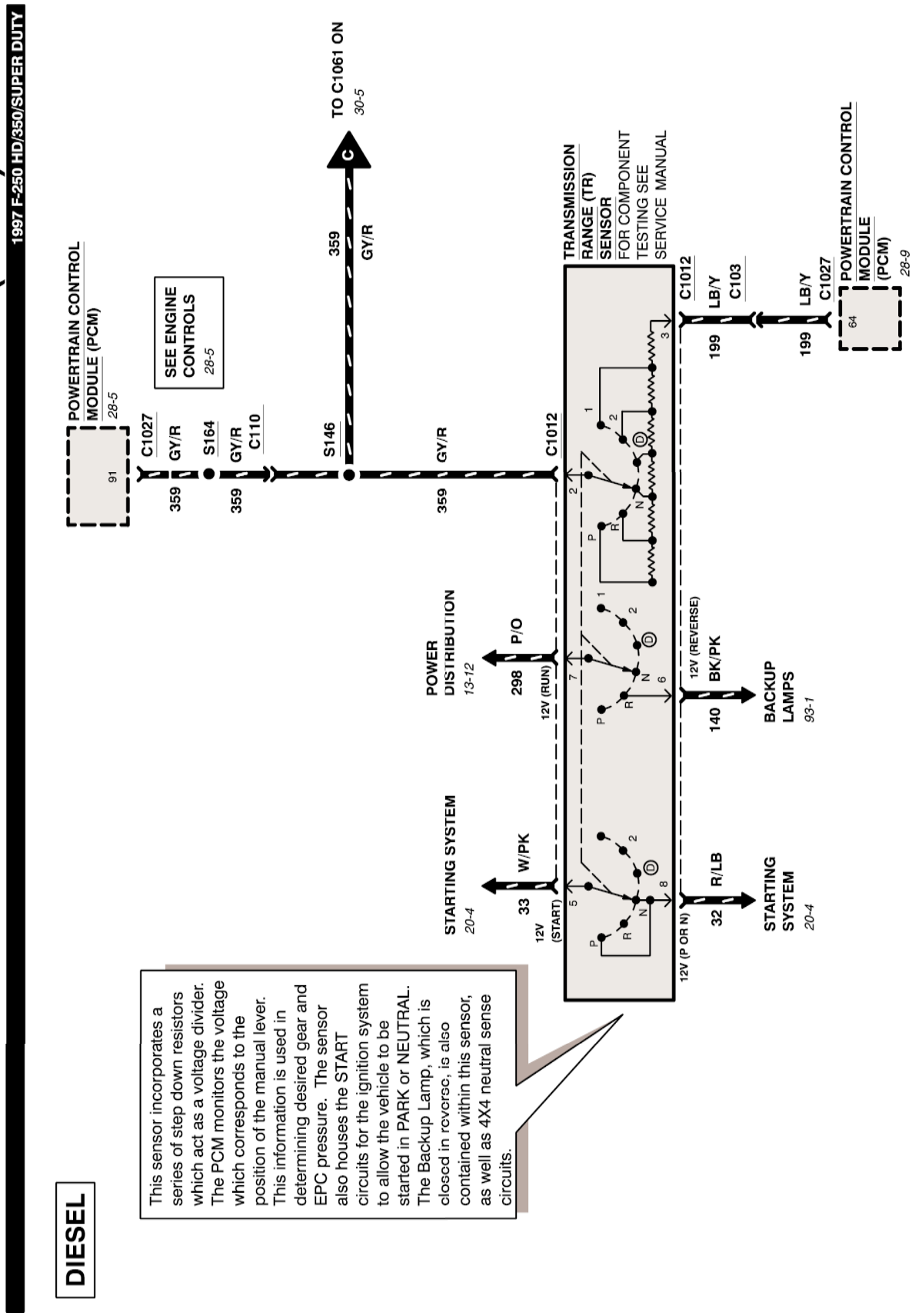

30-1 TRANSMISSION CONTROLS (E4OD)
1997 F-250 HD/350/SUPER DUTY
GASOLINE
For diagnostic information, refer to Powertrain Control/Emissions Diagnosis Manual or Section 07-01 of the Service Manual.
HOT AT ALL TIMES
HOT IN START OR RUN
FUSE PANEL
13-3, 13-11, 13-14
13
15A
17
10A
SEE POWER DISTRIBUTION
13-14, 13-18
R/W
383
S236
R/W
383
LG/R
10
TURN/STOP/ HAZARD LAMPS
90-1
C279
12V
BRAKE ON/OFF (BOO) SWITCH
CLOSED WITH BRAKE
PEDAL DEPRESSED
R/Y
640
S215
R/Y
640
C275
12V (START OR RUN)
Indicates that 4th gear has been disengaged. May also flash if monitored sensor/actuators or circuits have failed.
TRANSMISSION CONTROL SWITCH
TCIL
TCS
12V (SWITCH CLOSED)
C279
LG
511
S240
A momentary contact switch that signals the PCM to allow automatic shifts from 1st through 4th or from 1st through 3rd gears.
12V (SWITCH ON)
C275
W/LG
911
C202
W/LG
911
* C185
** C1027
T/W
224
12V (SWITCH CLOSED)
LG
511
12V (SWITCH CLOSED)
* 49 STATES OR SUPER DUTY
** CALIFORNIA EXCEPT SUPER DUTY
POWERTRAIN CONTROL MODULE (PCM)
26-3, 26-4, 26-7, 27-3, 27-4, 27-9
*2
**92
SOLID STATE
*41
**29
*32
**79
The BOO switch sends a signal to the PCM to disengage the torque converter clutch when the brake pedal is depressed. This signal may be ignored by the PCM if TP signal is above closed throttle.
SEE TURN/ STOP/HAZARD LAMPS
90-2
Uses information from various sensors/actuators to determine powertrain (engine/ transmission) operations.


TRANSMISSION CONTROLS (E4OD) 30-2
1997 F-250 HD/350/SUPER DUTY
GASOLINE
* 49 STATES OR SUPER DUTY
** CALIFORNIA EXCEPT SUPER DUTY
HOT IN START OR RUN
HOT AT ALL TIMES
ENGINE COMPARTMENT FUSE BOX 13-5
Directs voltage to the Shift Solenoids, Electronic Pressure Control (EPC) Solenoid, Coast Clutch Solenoid and Torque Converter Clutch (TCC) Solenoid.
SEE POWER DISTRIBUTION 13-5
SEE POWER DISTRIBUTION 13-5, 13-6
PCM POWER RELAY
PCM POWER DIODE
12V (START OR RUN)
12V (RELAY ENERGIZED)
0V
E4OD TRANSMISSION
The Electronic Pressure Control (EPC) Solenoid is a variable force type solenoid that regulates line pressure.
ELECTRONIC PRESSURE CONTROL SOLENOID
1 SHIFT SOLENOID
2 SHIFT SOLENOID
TORQUE CONVERTER CLUTCH SOLENOID
COAST CLUTCH SOLENOID
This solenoid controls the apply and release of the coast clutch.
This solenoid controls the apply and release of the torque converter clutch control valve.
The PCM monitors the voltage drop across a temperature sensitive thermistor. The PCM uses this information to determine transmission fluid temperature for adjustment of shift schedules and torque converter engagement schedules when the fluid is cold. Also used to adjust EPC pressure shift and torque converter schedules for temperature.
TRANSMISSION FLUID TEMPERATURE SENSOR
SEE GROUNDS 10-1
FROM S146 ON 30-3
POWERTRAIN CONTROL MODULE (PCM) 26-3, 26-4, 27-3, 27-4
SOLID STATE
The Shift Solenoids provide gear selection of first through fourth by controlling the pressure to the shift valves.
C103
C110
C1048
** C1027
* C185
S102
S169
G100


30-3 TRANSMISSION CONTROLS (E4OD)
1997 F-250 HD/350/SUPER DUTY
GASOLINE
* 49 STATES OR SUPER DUTY
** CALIFORNIA EXCEPT SUPER DUTY
POWERTRAIN CONTROL MODULE (PCM)
26-5, 26-6, 27-5, 27-6
46*
91**
C185* C1027**
359 GY/R
SEE ENGINE CONTROLS
26-5, 26-6, 27-5, 27-6, 27-7, 27-8
S146
359 GY/R
TO C1048 ON
30-2
359 GY/R
C1012
TRANSMISSION RANGE (TR) SENSOR
FOR COMPONENT TESTING SEE SERVICE MANUAL
C1012
LB/Y 199
C103
LB/Y 199
C185* C1027**
POWERTRAIN CONTROL MODULE (PCM)
26-8
64**
30*
POWER DISTRIBUTION
13-4
298 P/O
12V (RUN)
STARTING SYSTEM
20-2
33 W/PK
12V (START)
12V (REVERSE)
140 BK/PK
BACKUP LAMPS
93-1
12V (P OR N)
32 R/LB
STARTING SYSTEM
20-2
This sensor incorporates a series of step down resistors which act as a voltage divider. The PCM monitors the voltage which corresponds to the position of the manual lever. This information is used in determining desired gear and EPC pressure. The sensor also houses the START circuits for the ignition system to allow the vehicle to be started in PARK or NEUTRAL. The Backup Lamp and 4X4 low-neutral sense circuits, which are closed in reverse, are also contained within this sensor.


TRANSMISSION CONTROLS (E4OD) 30-4
1997 F-250 HD/350/SUPER DUTY
DIESEL
* CALIFORNIA EXCEPT SUPER DUTY
** 49 STATES OR SUPER DUTY
This solenoid controls the apply and release pressure to the torque converter clutch control valve.
This solenoid controls the apply and release of the coast clutch.
The Shift Solenoids provide gear selection of first through fourth by controlling the pressure to the shift valves.
E4OD TRANSMISSION
#2 SHIFT SOLENOID
#1 SHIFT SOLENOID
TORQUE CONVERTER CLUTCH SOLENOID
COAST CLUTCH SOLENOID
TO C1048
30-5
C1048
C1061
C110
C1027
POWERTRAIN CONTROL MODULE (PCM)
28-1, 28-9
SOLID STATE
Uses information from various sensors/actuators to determine powertrain (engine/transmission) operations.
HOT AT ALL TIMES
HOT IN START OR RUN
SEE POWER DISTRIBUTION
13-13
PCM POWER DIODE
PCM POWER RELAY
ENGINE COMPARTMENT FUSE BOX
13-13
Directs voltage to the Shift Solenoids, Electronic pressure Control (EPC) Solenoid, PCM and Torque Converter Clutch (TCC) solenoid, and Coast Clutch Solenoid.
SEE ENGINE CONTROLS
28-1
SEE GROUNDS
10-5, 10-6
S143
S126
S157
S101
G100
(RELAY ENERGIZED)
(START OR RUN)


30-5 TRANSMISSION CONTROLS (E4OD)
1997 F-250 HD/350/SUPER DUTY
DIESEL
* CALIFORNIA EXCEPT SUPER DUTY
** 49 STATES OR SUPER DUTY
HOT IN START OR RUN
FUSE PANEL 13-12
17
10A
SEE POWER DISTRIBUTION 13-18
640 R/Y
S215
640 R/Y
Indicates that 4th gear has been disengaged. May also flash if monitored sensor/actuators or circuits have failed.
C275
12V (START OR RUN)
TRANSMISSION CONTROL SWITCH
TCIL
TCS
12V (SWITCH ON)
C275
224 T/W
911 W/LG
C202
224 T/W
911 W/LG
C1027
12V (SWITCH CLOSED)
POWERTRAIN CONTROL MODULE (PCM) 28-4
79**
12*
29
A momentary contact switch that signals the PCM to allow automatic shifts from 1st through 4th or from 1st through 3rd gears.
FROM S146 ON 30-6
C
359 GY/R
C1061
C1048
E4OD TRANSMISSION
TRANSMISSION FLUID TEMPERATURE SENSOR
8
7
The PCM monitors the voltage drop across a temperature sensitive thermistor. The PCM uses this information to determine transmission fluid temperature for adjustment of shift schedules and torque converter engagement schedules when the fluid is cold. Also used to adjust EPC pressure shift and torque converter schedules for temperature.
C1048 O/BK 923
C1061 O/BK 923
C103 O/BK 923
37
SOLID STATE
FROM S143 30-4
B
R
361
12
ELECTRONIC PRESSURE CONTROL SOLENOID
11
W/Y 925
W/Y 925
W/Y 925
81
The Electronic Pressure Control (EPC) Solenoid is a variable force type solenoid that regulates line pressure.


TRANSMISSION CONTROLS (E4OD) 30-6
1997 F-250 HD/350/SUPER DUTY
DIESEL
This sensor incorporates a series of step down resistors which act as a voltage divider. The PCM monitors the voltage which corresponds to the position of the manual lever. This information is used in determining desired gear and EPC pressure. The sensor also houses the START circuits for the ignition system to allow the vehicle to be started in PARK or NEUTRAL. The Backup Lamp, which is closed in reverse, is also contained within this sensor, as well as 4X4 neutral sense circuits.
POWERTRAIN CONTROL MODULE (PCM) 28-5
91
C1027
359 GY/R
S164
359 GY/R
C110
SEE ENGINE CONTROLS 28-5
S146
359 GY/R
C
TO C1061 ON 30-5
359 GY/R
C1012
TRANSMISSION RANGE (TR) SENSOR
FOR COMPONENT TESTING SEE SERVICE MANUAL
C1012
199 LB/Y
C103
199 LB/Y
C1027
POWERTRAIN CONTROL MODULE (PCM) 28-9
64
POWER DISTRIBUTION 13-12
298 P/O
12V (RUN)
STARTING SYSTEM 20-4
33 W/PK
12V (START)
12V (REVERSE)
140 BK/PK
BACKUP LAMPS 93-1
12V (P OR N)
32 R/LB
STARTING SYSTEM 20-4
P R N D
1 2 3 4 5 6 7 8