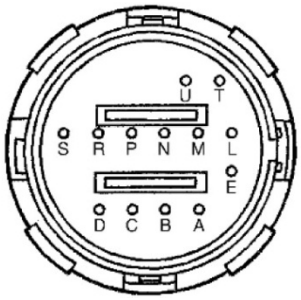
4L60E Technical Information

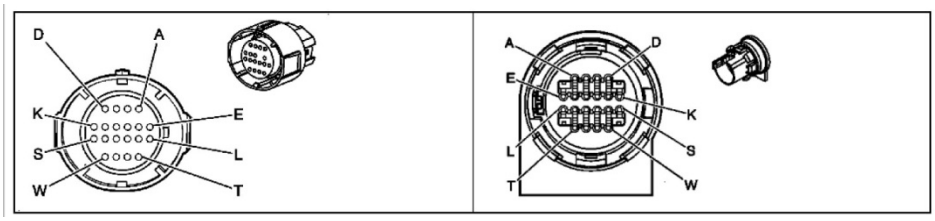


Transmissions plug pin identification 1995 and up.

A: 1-2 shift solenoid ground signal
B: 2-3 shift solenoid ground signal
C: pressure control solenoid high
D: pressure control solenoid low
E: ignition power feed from TCM to solenoids
T: tcc solenoid (on/off in pump)
U: tcc pwm solenoid (valve body)
S: 3-2 downshift solenoid ground signal
L: fluid temp sensor signal
M: fluid temp sensor reference
N: pressure switch C
P: pressure switch D
O: pressure switch E

1993 and 1994 units do not have tcc pwm solenoid.

Transmission harness plug pin identification 2007 and up



Pin	Wire	Circuit	Function	Pin	Wire	Circuit	Function
A	0.5 L-GN	1222	1-2 Shift Solenoid Valve Control	A	0.5 L-GN	1222	1-2 Shift Solenoid Valve Control
B	0.5 YE/BK	1223	2-3 Shift Solenoid Valve Control	B	0.5 YE	1223	2-3 Shift Solenoid Valve Control
C	0.35 OG/BK	1228	PC Solenoid Valve High Control	C	0.5 PU	1228	PC Solenoid Valve High Control
D	0.35 L-BU/WH	1229	PC Solenoid Valve Low Control	D	0.5 L-BU	1229	PC Solenoid Valve Low Control
E	0.8 PK	3039	Ignition Voltage	E	0.5 RD	839	Ignition Voltage
F	0.35 TN/WH	771	Transmission Range Switch Signal A	F	0.35 TN/WH	771	Transmission Range Switch Signal A
G	0.35 YE	772	Transmission Range Switch Signal B	G	0.35 YE	772	Transmission Range Switch Signal B
H	0.35 GY	773	Transmission Range Switch Signal C	H	0.35 GY	773	Transmission Range Switch Signal C
J	0.35 WH	776	Transmission Range Switch Signal P	J	0.35 WH	776	Transmission Range Switch Signal P
K	0.35 OG/BK	1230	Input Speed Sensor (ISS) High Signal	K	0.35 OG/BK	1230	Input Speed Sensor (ISS) High Signal
L	0.35 YE/BK	1227	Transmission Fluid Temperature (TFT) Sensor Signal	L	0.5 BN	1227	Transmission Fluid Temperature (TFT) Sensor Signal
M	0.35 TN	452	Low Reference	M	0.5 GY	452	Low Reference
N	0.8 BK/WH	1551	Ground	N	0.8 BK/WH	1551	Ground
P-S	-	-	Not Used	P	-	-	Not Used
T	0.5 TN/BK	422	Torque Converter Clutch (TCC) Solenoid Valve Control	T	0.5 BK	422	Torque Converter Clutch (TCC) Solenoid Valve Control
U	0.5 BN	418	Torque Converter Clutch Pulse Width Modulation (TCC PWM) Solenoid Valve Control	U	0.5 TN	418	Torque Converter Clutch Pulse Width Modulation (TCC PWM) Solenoid Valve Control
V	0.35 D-BU/WH	1231	Input Speed Sensor (ISS) Low Signal	V	0.35 D-BU/WH	1231	Input Speed Sensor (ISS) Low Signal
W	0.35 OG/BK	1786	P/N Position Switch Signal	W	0.35 OG/BK	1786	P/N Position Switch Signal

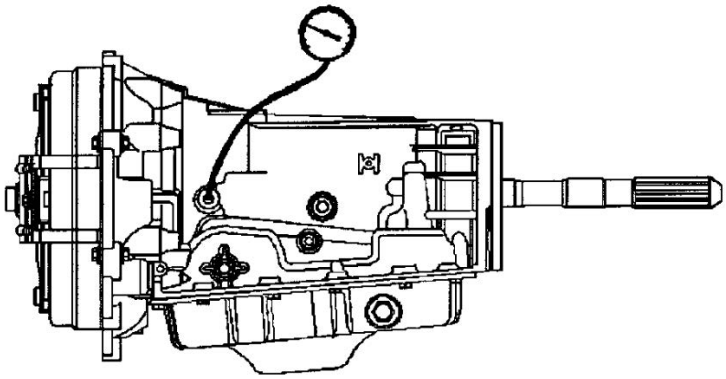
Gear Ratios and clutch/solenoid charts

Gear	1-2 Shift Solenoid	2-3 Shift Solenoid	Gear Ratio
1st	On	On	3.059:1
2nd	Off	On	1.625:1
3rd	Off	Off	1.000:1
4th	On	Off	0.696:1

Selector Lever Position	Shift Solenoid	Elements In Use
"OD" (Overdrive) First Gear	1-2 ON/2-3 ON	Forward Clutch, Forward Sprag & Low Roller Clutch
"OD" (Overdrive) Second Gear	1-2 OFF/2-3 ON	Forward Clutch, Forward Sprag & 2-4 Band
"OD" (Overdrive) Third Gear	1-2 OFF/2-3 OFF	Forward Clutch, Forward Sprag & 3-4 Clutch
"OD" (Overdrive) Fourth Gear	1-2 ON/2-3 OFF	Forward Clutch, 2-4 Band & 3-4 Clutch
"D" (Drive) First Gear	1-2 ON/2-3 ON	Forward Clutch, Forward Sprag & Low Roller Clutch
"D" (Drive) Second Gear	1-2 OFF/2-3 ON	Forward Clutch, Forward Sprag & 2-4 Band
"D" (Drive) Third Gear	1-2 OFF/2-3 OFF	Forward Clutch, Forward Sprag, Overrun Clutch & 3-4 Clutch
"2" (Intermediate) First Gear	1-2 ON/2-3 ON	Forward Clutch, Forward Sprag, Low Roller Clutch & Overrun Clutch
"2" (Intermediate) Second Gear	1-2 OFF/2-3 ON	Forward Clutch, Forward Sprag, Overrun Clutch & 2-4 Band
"1" (Low) First Gear	1-2 ON/2-3 ON	Forward Clutch, Forward Sprag, Low Reverse Clutch, Low Roller Clutch & Overrun Clutch
"1" (Low) Second Gear (1)	1-2 OFF/2-3 ON	Forward Clutch, Forward Sprag, Overrun Clutch & 2-4 Band
"R" (Reverse)	1-2 ON/2-3 ON	Low Reverse Clutch & Reverse Input Clutch
"P" (Park)	1-2 ON/2-3 ON	Low Reverse Clutch
"N" (Neutral)	1-2 ON/2-3 ON	All Clutches & Bands Released Or Ineffective

(1) Gear is only available above 30-35 MPH.

Pressure testing transmission



Gauge port location, use 0-400 psi gauge

Reverse: 64-324 psi (min/max)

Park, neutral, drive ranges 55-189 (min/max)

The folowing chart can be used to determine pressure using scanner to command pressure at all settings to determine epc function/pump and internal leaks.

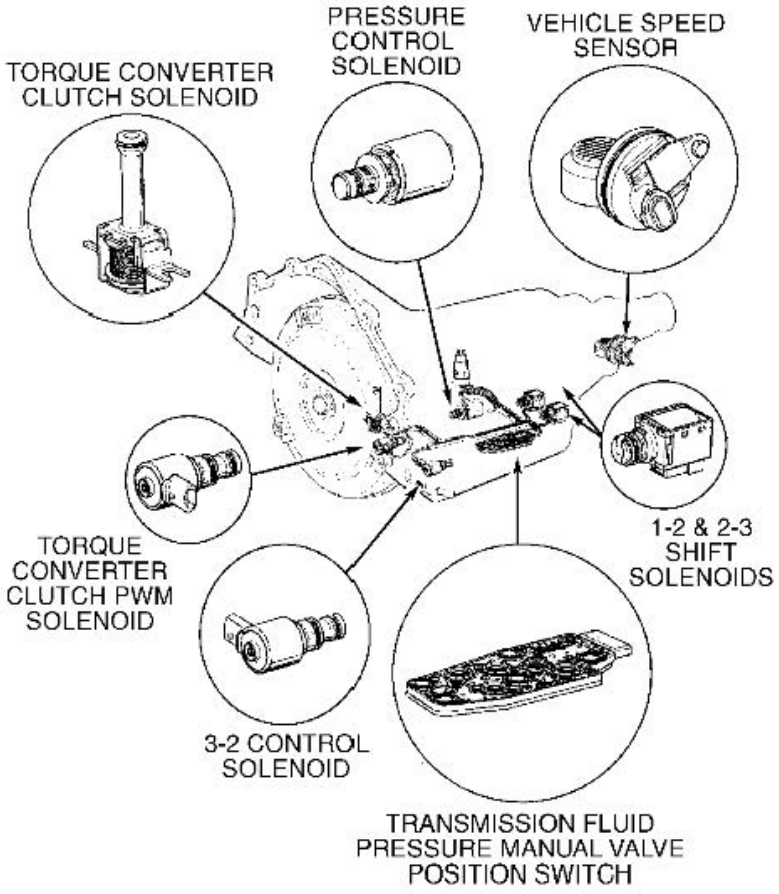
Application & PCS Current (Amp)	Line Pressure - psi (kPa)
2.2L, 3.8L, 4.2L & 4.3L	
.00	169-195 (1165-1345)
.10	167-194 (1151-1338)
.20	161-190 (1110-1310)
.30	155-186 (1069-1282)
.40	144-177 (993-1220)
.50	133-167 (917-1151)
.60	120-153 (827-1055)
.70	102-138 (703-952)
.80	83-119 (572-821)
.90	62-97 (427-629)
1.00	53-69 (365-476)
1.10	53-68 (365-469)
4.8L, 5.0L, 5.3L, 5.7L & 6.0L	
.00	198-227 (1365-1565)
.10	197-226 (1358-1558)
.20	189-221 (1303-1524)
.30	181-216 (1248-1489)
.40	168-205 (1158-1413)
.50	154-193 (1062-1331)
.60	137-175 (945-1207)
.70	114-156 (786-1076)
.80	90-132 (621-910)
.90	64-105 (441-724)
1.00	53-85 (365-586)
1.10	53-68 (365-469)

MLPS switch states

Gearshift Lever Position	Signal "A"	Signal "B"	Signal "C"	Signal "P"
Park	LOW	HI	HI	LOW
Reverse	LOW	LOW	HI	HI
Neutral	HI	LOW	HI	LOW
"OD"	HI	LOW	LOW	HI
"3"	LOW	LOW	LOW	LOW
"2"	LOW	HI	LOW	HI
"1"	HI	HI	LOW	LOW
(1) HI = ignition voltage; LOW = zero volts.				

This can be matched to data on a scanner to diagnose any pressure switch codes, problems.

Solenoid and electrical internal components



93 and 94 units do not have tcc pwm sol. And 07 up also has internal input speed sensor. 4x4 spd. Sensor on transfer case.