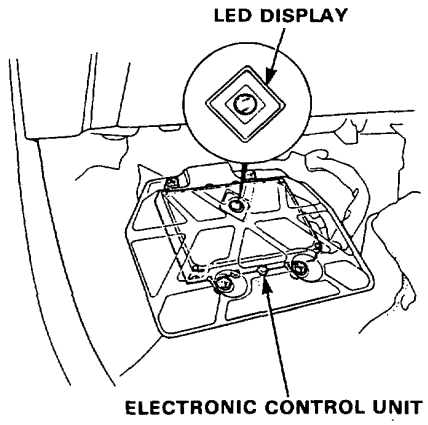
If the look-up control electrical system is suspected to be faulty according to the symptom charts on pages 9-4 and 9-5, check the following.

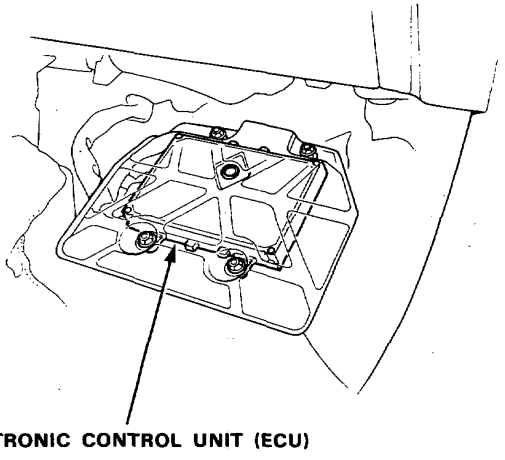
1. **PGM-FI engine type :**
   Check the LED of ECU under the instrument panel.
   If it blinks, count the number of blinks according to the troubleshooting chart.

   **The drawing below is for the PGM-FI engine type.*

RHD:



LHD:



2. Check and adjust the throttle control cable (page 9-43).
3. Check for power input signal of the lock-up control solenoid valve (See section 6).
4. Check the lock-up control solenoid valve (page 9-6).
5. Check the hydraulic system according to the troubleshooting in pages 9-4 and 9-5.

Troubleshooting

Symptom-to-System

SYMPTOM	Check these items on PROBABLE CAUSE LIST	Check these items on NOTES PAGE
Engine runs, but car does not move in any gear.	1, 6, 7, 16	K, L, R, S
Car moves in R and 2, but not in D3 or D4.	8, 29, 45, 49	C, M, O
Car moves in D3, D4 and R, but not in 2.	9, 30, 50	C, L
Car moves in D3, D4 and 2, but not in R.	1, 11, 12, 22, 39, 40, 41	C, L, Q
Car moves in N.	1, 8, 9, 10, 11 47, 48	C, D
Excessive idle vibration.	5, 17	B, K, L
Slips in all gears.	6, 7, 16	C, L, U
Slips in low gear.	8, 29, 45, 46, 49	C, N, O, U
Slips in 2nd gear.	9, 20, 23, 30, 46, 50	C, L, U
Slips in 3rd gear.	10, 21, 23, 31, 45, 46	C, L, U
Slips in 4th gear.	11, 23, 32, 46	C, L, U
Slips in reverse gear.	11, 32	C
Slips on 2 - 3 upshift.	3, 15, 24	E, L, V
Slips on 3 - 4 upshift.	3, 15, 25	E, L, V
No upshift; trans stays in low gear.	12, 13, 14, 19, 23	E, F, G, L
No downshift to low gear.	12, 19	G, L
Late upshift.	2, 12, 13, 14	E, F, L, V
Early upshift.	3, 13, 14	E, F, L, V
Erratic shifting.	2, 14, 26	E, F, V
Harsh shift (up & down shifts).	2, 4, 15, 23, 24, 25, 27, 48	A, E, H, I, L, V
Harsh shift (1 - 2).	2, 9	C, D, V
Harsh shift (2 - 3).	2, 10, 23, 24	C, D, H, L, V
Harsh shift (3 - 4).	2, 11, 23, 25	C, D, I, L, V
Harsh kickdown shifts.	2, 23, 27	L, V, Q
Harsh kickdown shift (2 - 1).	48	O
Harsh downshift (3 - 2) at closed throttle.	15	E, T
Axle(s) slips out of trans on turns.	44, 51	L, P, Q
Axle(s) stuck in trans.	44	L, Q
Ratcheting noise when shifting into R.	6, 7, 39, 40, 41	K, L, Q
Loud popping noise when taking off in R.	39, 40, 41	L, Q
Ratcheting noise when shifting from R to P, or from R to N.	39, 40, 41, 52	L, Q
Noise from trans in all selector lever positions.	6, 17	K, L, Q
Noise from trans only when wheels rolling.	40, 43	L, Q
Gear whine, rpm related (pitch changes with shifts).	6, 42	K, L, Q
Gear whine, speed related (pitch changes with speed).	40, 43	L, Q
Trans will not shift into 4th gear in D4.	1, 21, 28	L
Engine stalls on emergency stops (shift lever in D4 only).	2, 33	L, V
Lockup clutch does not lock up smoothly.	35, 37, 17	L
Lockup clutch does not operate properly.	2, 3, 12, 15, 18, 33, 34, 35, 36, 37, 38	E, L, V
Transmission has multitude of problems shifting, at disassembly large deposits of metal found on magnet.	44	L, Q
Hard to shift into 3rd and 4th in D4 range.	53	
Hard to shift into 3rd in D3 range.	53	
Slow to shift into R range from D3 and D4 ranges.	54	
Excessive shock when shifting into R range from P and N ranges.	54	

The following symptoms can be caused by improper repair or assembly.	Check these items on PROBABLE CAUSE DUE TO IMPROPER REPAIR	Check these ITEMS ON NOTES PAGE
Car creeps in N.	R1, R2	
Car does not move in D3 or D4.	R5	
Trans locks up in R.	R4	
Trans has no park.	R3	
Excessive drag in trans.	R8	R, K
Excessive vibration, rpm related.	R9	
Noise with wheels moving only.	R7	
Main seal pops out.	R10	S
Various shifting problems.	R11, R12	
Harsh upshifts.	R13	
In D3 or D4 trans starts in 2nd gear.	R6	

	PROBABLE CAUSE
1.	Shift cable broken/out of adjustment
2.	Throttle cable too short
3.	Throttle cable too long
4.	Wrong type ATF
5.	Idle rpm too low high
6.	Oil pump worn or seized
7.	Pressure regulator stuck
8.	Low clutch defective
9.	2nd clutch defective
10.	3rd clutch defective
11.	4th clutch defective
12.	Governor valve stuck
13.	Throttle A valve stuck
14.	Modulator valve stuck
15.	Throttle B valve stuck
16.	Oil screen clogged
17.	Torque convertor defective
18.	Torque governor check valve stuck
19.	1 - 2 shift valve stuck
20.	2 - 3 shift valve stuck
21.	3 - 4 shift valve stuck
22.	Reverse control valve stuck
23.	Clutch pressure control valve stuck
24.	2nd oriffice control valve stuck
25.	Orifice control valve stuck
26.	3 - 2 timing valve stuck
27.	kickdown valve stuck
28.	Shift timing valve accumulator stuck
29.	Low clutch accumulator defective
30.	2nd clutch accumulator defective
31.	3rd clutch accumulator defective
32.	4th/reverse accumulator defective
33.	Lockup clutch cut valve stuck
34.	Lockup clutch timing valve A stuck
35.	Lockup clutch timing valve B stuck
36.	Lockup clutch shift valve stuck
37.	Lockup clutch control valve stuck
38.	Lockup control solenoid valve broken
39.	Shift fork bent
40.	Reverse gears worn damaged (3 gears)
41.	Reverse selector worn
42.	3rd gears worn damaged (2 gears)
43.	Final gears worn damaged (2 gears)
44.	Differential pinion shaft worn
45.	Feedpipe O-ring broken

	PROBABLE CAUSE
46.	Servo valve check valve loose
47.	Gear clearance incorrect
48.	Clutch clearance incorrect
49.	Sprag clutch defective
50.	Sealing rings/guide worn
51.	Axle-inboard joint clip missing
52.	4th gears worn (damaged (2 gears)
53.	Servo control valve stuck
54.	Reverse timing valve stuck

	PROBABLE CAUSES DUE TO IMPROPER REPAIR
R1	Improper clutch clearance
R2	Improper gear clearance
R3	Parking pawl installed upside down
R4	Parking shift arm installed upside down
R5	Sprag clutch installed upside down
R6	Feed pipe missing in governor shaft
R7	Reverse hub installed upside down
R8	Oil pump binding
R9	Torque converter not fully seated in oil pump
R10	Main seal improperly installed
R11	Springs improperly installed
R12	Valves improperly installed
R13	Ball check valves not installed
R14	Shift fork bolt not installed

	NOTES
A	Flushing procedure (repeat 3 times): 1. Drain the trans. 2. Refill with 3 qts. of Dexron recommended type ATF. 3. Start the engine and shift trans to D4. 4. Let trans shift through gears at least 5 times. 5. Shift to reverse and neutral at least 5 times. 6. Drain and refill.
B	Set idle rpm in gear to specified idle speed. If still no good, adjust the motor mounts as outlined in engine section of service manual.
C	If the large clutch piston O-ring is broken, inspect the piston groove for rough machining.
D	If the clutch pack is seized, or is excessively worn, inspect the other clutches for wear, and check the orifice control valves and throttle valves for free movement.
E	If throttle valve B is stuck, inspect the clutches for wear.
F	If the modulator valve is stuck open (does not modulate line pressure), the trans will shift normally with less than 5 8 throttle but will shift up very late over 5 8 throttle. If the modulator valve is stuck closed, throttle valve A pressure will be zero and result in early upshifts and no forced downshift.
G	If the 1 – 2 valve is stuck closed, the transmission will not upshift. If stuck open, the transmission has no low gear.
H	If the 2nd orifice control valve is stuck, inspect the 2nd and 3rd clutch packs for wear.
I	If the 3rd orifice control valve is stuck, inspect the 3rd and 4th clutch packs for wear.
J	If the clutch pressure control valve is stuck closed, the transmission will not shift out of low gear.

	NOTES
K	Improper alignment of main valve body and torque converter case may cause oil pump seizure. The symptoms are mostly an rpm related ticking noise high pitched squeak. In severe instances, it may stall the engine. Follow instruction procedure
L	If the oil screen is clogged with particles of steel or aluminum, inspect the oil pump and differential pinion shaft. If both are OK, and no cause for the contamination is found, replace the torque converter.
M	If the low clutch feedpipe guide in the end cover is scored by the mainshaft, inspect the ball bearing for excessive movement in the transmission housing. If OK, replace the end cover as it is dented. The O-ring under the guide is probably broken.
N	Replace the mainshaft if the bushings for the low-and 4th feedpipe are loose or damaged. If the low feedpipe is damaged or out of round, replace it. If the 4th feedpipe is damaged or out of round, replace the end cover.
O	A worn or damaged sprag clutch is mostly a result of shifting the trans in D3 or D4 while the wheels rotate in reverse, such as rocking the car in snow.
P	Inspect the frame for collision damage.
Q	Inspect for damage or wear: 1. Governor shaft woodruff key 2. Reverse selector gear teeth chamfers 3. Engagement teeth chamfers of countershaft 4th & reverse gear 4. Shift fork, for scuff marks in center 5. Differential pinion shaft for wear under pinion gears 6. Bottom of 3rd clutch for swirl marks Replace items 1, 2, 3 and 4 if worn or damaged. If trans makes clicking, grinding or whiring noise, also replace mainshaft 4th gear and reverse idler gear and counter 4th gear in addition to 1, 2, 3, or 4. If differential pinion shaft is worn, overhaul differential assembly and replace oil screen and throughly clean trans, flush torque converter and cooler and lines. If bottom of 3rd clutch is swirled and trans makes gear noise, replace countershaft and ring gear.
R	Be very careful not to damage the torque converter case when replacing the main ball bearing. You may also damage the oil pump when you torque down the main valve body; this will result in oil pump seizure if not detected. Use proper tools.
S	Install the main seal flush with the torque converter ease. If you push it into the torque converter case until it bottoms out, it will block the oil return passage and result in damage.
T	Harsh downshifts when coasting to a stop with zero throttle may be caused by a bent-in throttle valve retainer/cam stopper. Throttle control cable adjustment may clear this problem. See page 9-43.
U	Check if servo valve check valve stopper cap is installed. If it was not installed, the check valve may have been pushed out by hydraulic pressure causing a leak (internal) affecting all forward gears.
V	Throttle cable adjustment is essential for proper operation of the transmission. Not only does it affect the shift points if misadjusted but also the shift quality and lockup clutch operation. A too long adjusted cable will result in throttle pressure being too low for the amount of engine torque input into the transmission, and may cause clutch slippage. A too short adjusted cable will result in too high throttle pressures which may cause harsh shifts, erratic shifts and torque converter hunting.