

Article Text

ARTICLE BEGINNING

Honda MP1A Electronic Controls

Transaxle is equipped with shift and key interlock systems.

Shift interlock system prevents shift lever from being moved from Park unless brake pedal is depressed and accelerator is in idle position. In case of a malfunction, shift lever can be released by placing ignition key in release slot near shift lever. Key interlock system prevents ignition key from being removed from ignition lock assembly unless shift lever is in Park.

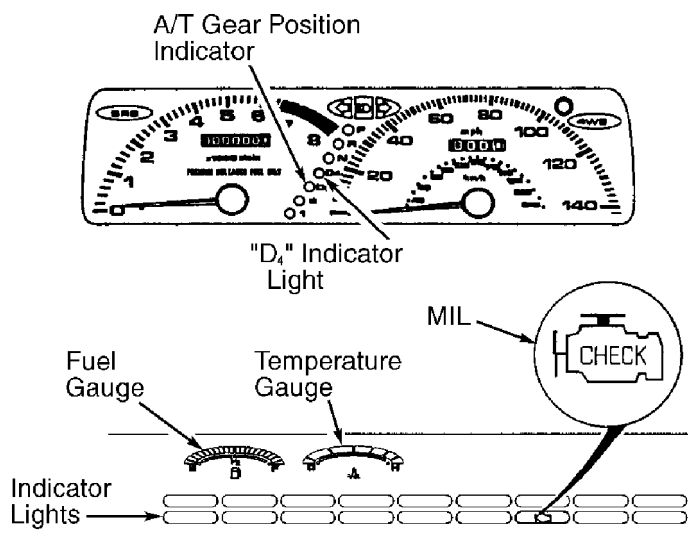
The A/T gear position indicator on instrument panel contains lights to indicate which position A/T gear position switch on shift lever is in.

OPERATION

A/T GEAR POSITION INDICATOR

With ignition in RUN or START position, voltage is supplied to A/T gear position indicator, located on instrument panel. See Fig. 1. When shift lever is moved to designated gear position, A/T gear position switch completes the ground circuit for A/T gear position indicator on instrument panel. The light on A/T gear position indicator will be illuminated to indicate shift lever gear position. The TCM controls operation of the "D4" indicator light on A/T gear position indicator on instrument panel. The A/T gear position switch is mounted on driver's side of shift lever. See Figs. 5-8.

When headlights are turned on, voltage is supplied on Red/Black wire terminal on A/T gear position indicator. This changes light illumination from fixed illumination to being controlled by the dash light dimmer input on the Red wire.



95H19827

Fig. 1: A/T Gear Position Indicator I.D. ("D4" Light & MIL Light)
Courtesy of American Honda Motor Co., Inc.

SHIFT & KEY INTERLOCK SYSTEMS

Shift Interlock System

Shift interlock system prevents shift lever from being moved from Park unless brake pedal is depressed and accelerator is in idle position. In case of a malfunction, shift lever can be released by placing ignition key in release slot near shift lever. Voltage is provided to shift lock solenoid when ignition is on.

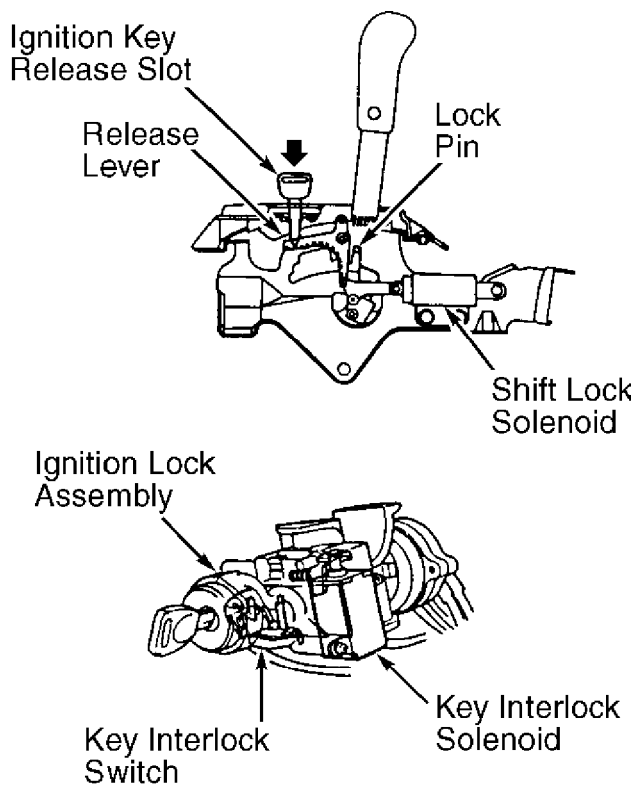
When brake pedal is depressed, battery voltage is applied to the TCM from brakelight switch. With accelerator pedal in idle position, a low voltage is applied to the TCM from the throttle position sensor. The TCM then supplies voltage to shift lock circuit in the interlock control unit. When A/T gear position switch is in Park position, interlock control unit then operates shift lock solenoid by controlling the ground circuit. When shift lock solenoid is energized, shift lever is released and can be moved.

Shift lock solenoid is mounted on driver's side of shift lever. See Figs. 2-3. The A/T gear position switch is located on side of shift lever. See Figs. 5-8. Interlock control unit is located above driver's side kick panel and contains a Gray 8-pin electrical connector. See Figs. 5-8.

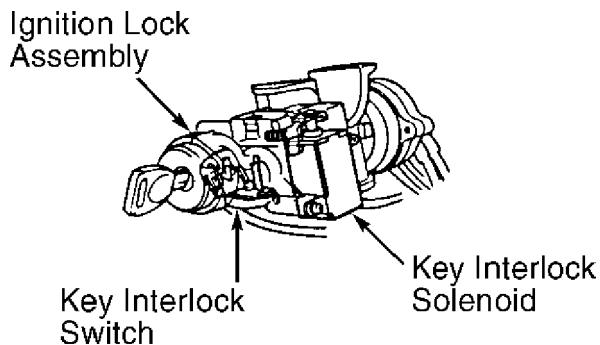
Key Interlock System

Key interlock system prevents ignition key from being removed from ignition lock assembly unless shift lever is in Park. Voltage is provided to key interlock switch from No. 46 fuse (15-amp) in engine compartment fuse box. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall. When ignition key is installed in ignition lock assembly, key interlock switch closes, providing voltage to key interlock solenoid and interlock control unit.

If shift lever is not in Park, interlock control unit activates key interlock solenoid by completing the ground circuit, preventing ignition key from being removed from ignition lock assembly. Key interlock switch and solenoid are located on ignition lock assembly. See Figs. 2-3. Interlock control unit is located above driver's side kick panel and contains a Gray 8-pin electrical connector. See Figs. 5-8.



93A22640
Fig. 2: Shift & Key Interlock System Component I.D. (1 of 2)
 Courtesy of American Honda Motor Co., Inc.



93B22641
Fig. 3: Shift & Key Interlock System Component I.D. (2 of 2)
 Courtesy of American Honda Motor Co., Inc.

TRANSMISSION CONTROL MODULE (TCM)

The TCM receives information from various input devices and uses information to control lock-up and shift control solenoid valves. See Fig. 4. The TCM contains a self-diagnostic system, which will store fault code if failure or problem exists in the transaxle electronic control system. Fault code can be retrieved to determine transaxle problem area. Fault code may also be referred to as

Diagnostic Trouble Code (DTC). For information on self-diagnostic system, see SELF-DIAGNOSTIC SYSTEM. The TCM is located behind passenger's side kick panel. See Figs. 5-8.

TCM INPUT DEVICES

Air Conditioning Signal

The A/C clutch relay provides input signal to TCM to indicate A/C operation. The A/C clutch relay is located at driver's side front corner of engine compartment. See Figs. 5-8.

Brake Switch Signal

Brakelight switch provides input signal to TCM to indicate vehicle braking. Brakelight switch is located on brake pedal support. See Figs. 5-8.

Engine Coolant Temperature Sensor Signal

Engine Coolant Temperature (ECT) sensor delivers input signal to TCM to indicate engine coolant temperature. Engine coolant temperature sensor is located on cylinder head, below the distributor and contains a Green/White wire and a Yellow/Blue wire in the electrical connector. See Fig. 4.

Engine Speed Signal

An engine speed or RPM signal is delivered to TCM from ignition control module in the distributor.

Engine Control Module (ECM)

An upshift and downshift comparative input signal and shift acknowledgment input signal are sent between ECM and TCM. A 5-volt reference signal also exists between ECM and the TCM. The ECM is located on passenger's side floor panel, below the carpet. Refer to the Figs. 5-8.

Service Check Connector

Service check connector is used when retrieving fault codes for transaxle electronic control system diagnosis. When jumper wire is installed between service check connector electrical terminals, an input is delivered to TCM to display fault codes on "D4" indicator light on A/T gear position indicator on instrument panel. Service check connector is a 2-pin Blue or Gray connector, located below center of instrument panel, near center console. See Fig. 9.

Mainshaft & Countershaft Speed Sensor Signal

Mainshaft speed sensor delivers an input signal to TCM to indicate the speed of the mainshaft in the transaxle. Countershaft speed sensor delivers an input signal to TCM to indicate the speed of the countershaft in the transaxle. Countershaft and mainshaft speed

sensors are located on transaxle. See Figs. 5-8.

Throttle Position Sensor Signal

Throttle position sensor delivers an input signal to TCM to indicate throttle position. Throttle position sensor is mounted on throttle body. See Figs. 5-8.

Vehicle Speed Sensor Signal

Vehicle Speed Sensor (VSS) delivers an input signal to TCM to indicate the vehicle speed. Vehicle speed sensor is located on transaxle, below thermostat housing. See Figs. 5-8.

TCM OUTPUT DEVICES

Shift Control Solenoid Valves

The TCM controls transaxle shifting by delivering an output signal to shift control solenoid valves "A" and "B". Shift control solenoid valves are operated in accordance with gear position. See the SHIFT CONTROL SOLENOID VALVE OPERATION table. Shift control solenoid valves are located on the transaxle. See Figs. 5-8. Shift control solenoid valve "A" has a Blue/Yellow wire and solenoid valve "B" has a Green/White wire.

SHIFT CONTROL SOLENOID VALVE OPERATION

AA			
Shift Lever	Solenoid		Solenoid
Position	Valve "A"		Valve "B"
"D" Or "D4" (1st Gear)	Off	On
"D" Or "D4" (2nd Gear)	On	On
"D" Or "D4" (3rd Gear)	On	Off
"D4" (4th Gear)	Off	Off
"R"	On	Off
"1"	On	Off
"2"	On	On
AA			

Lock-Up Control Solenoid Valves

The TCM controls torque converter lock-up by delivering an output signal to lock-up control solenoid valves "A" and "B". Lock-up control solenoid valves are operated in accordance with lock-up condition. See LOCK-UP CONTROL SOLENOID VALVE OPERATION table. Lock-up control solenoid valves are located on the transaxle. See Figs. 5-8. Lock-up control solenoid valve "A" has a Yellow wire and solenoid valve "B" has a Green/Black wire.

LOCK-UP CONTROL SOLENOID VALVE OPERATION

AA

Lock-Up Condition	Solenoid Valve "A"	Solenoid Valve "B"
No Lock-Up	Off	Off
Slight Lock-Up	On	1)
Half Lock-Up	On	On
Full Lock-Up	On	On
Lock-Up During Deceleration ...	On	1)

(1) - Solenoid valve will cycle on and off.

AA

"D4" Indicator Light

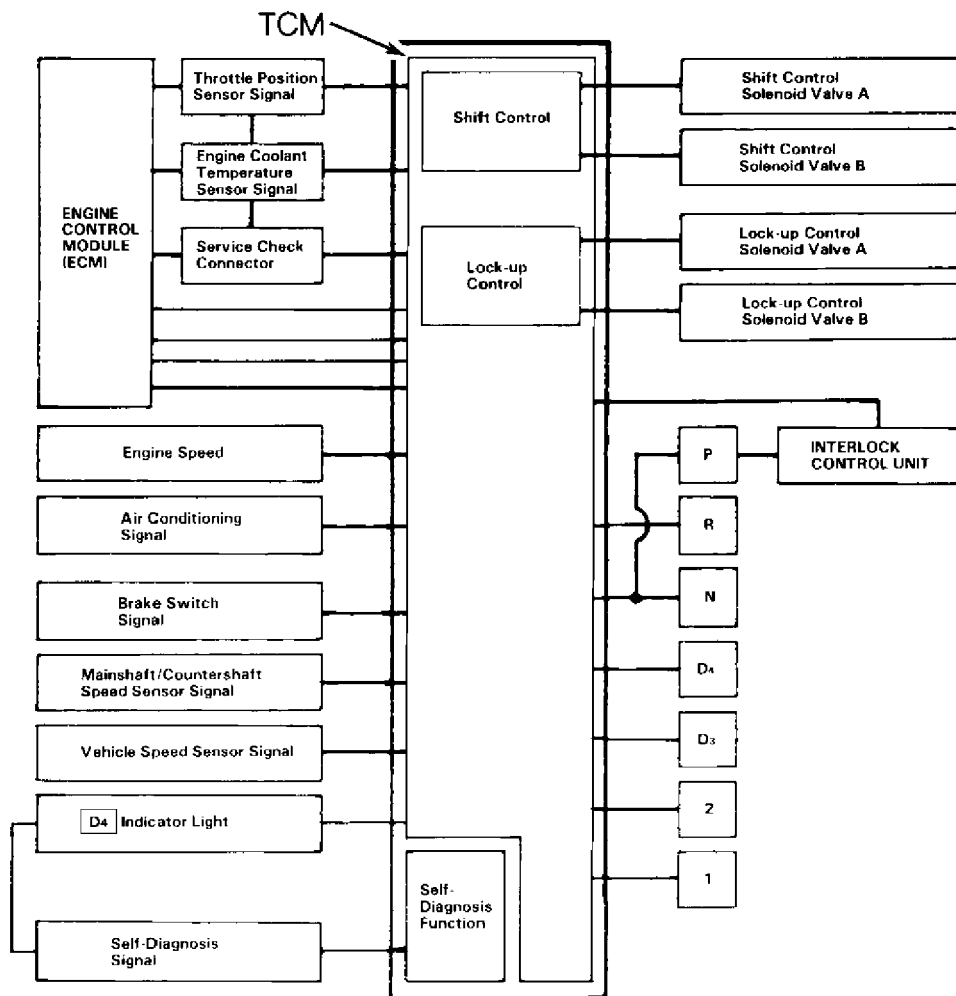
If a fault exists in transaxle electronic control system and fault code is stored, TCM will output fault signal by blinking "D4" indicator light on A/T gear position indicator on instrument panel. See Fig. 1.

Interlock Control Unit

When A/T gear position switch is in Park position, TCM provides voltage to shift lock circuit in interlock control unit if brake pedal is depressed and accelerator is in idle position. Interlock control unit then operates shift lock solenoid by controlling the ground circuit. When shift lock solenoid is energized, shift lever is released and can be moved. Interlock control unit is located above driver's side kick panel and contains a Gray 8-pin electrical connector. See Figs. 5-8.

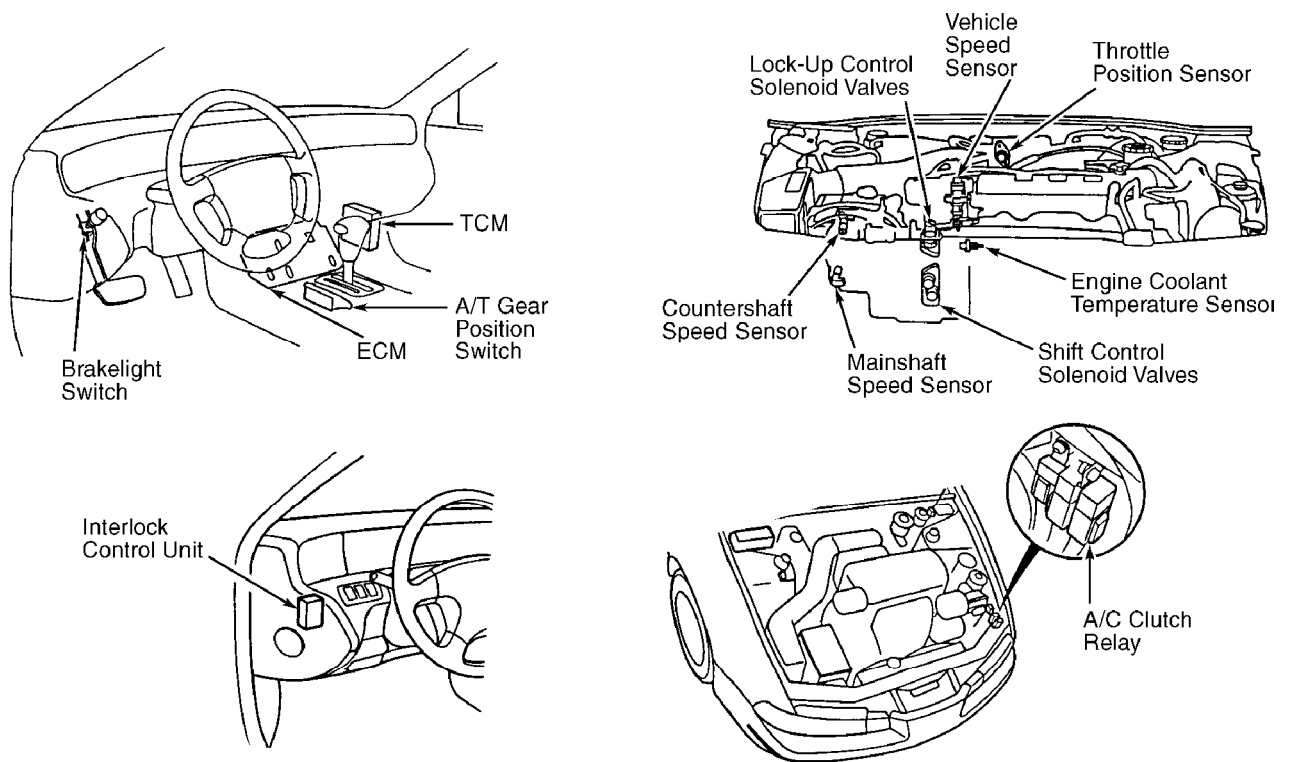
Self-Diagnostic Indicator

If an abnormality exists in transaxle electronic control system and fault code is stored in TCM memory, TCM will deliver an output signal to turn on and blink "D4" indicator light on A/T gear position indicator on instrument panel. See Fig. 1. Fault code can be retrieved to identify problem area by installing jumper wire between service check connector electrical terminals. Fault codes will be displayed by blinking "D4" indicator light on A/T gear position indicator on instrument panel.

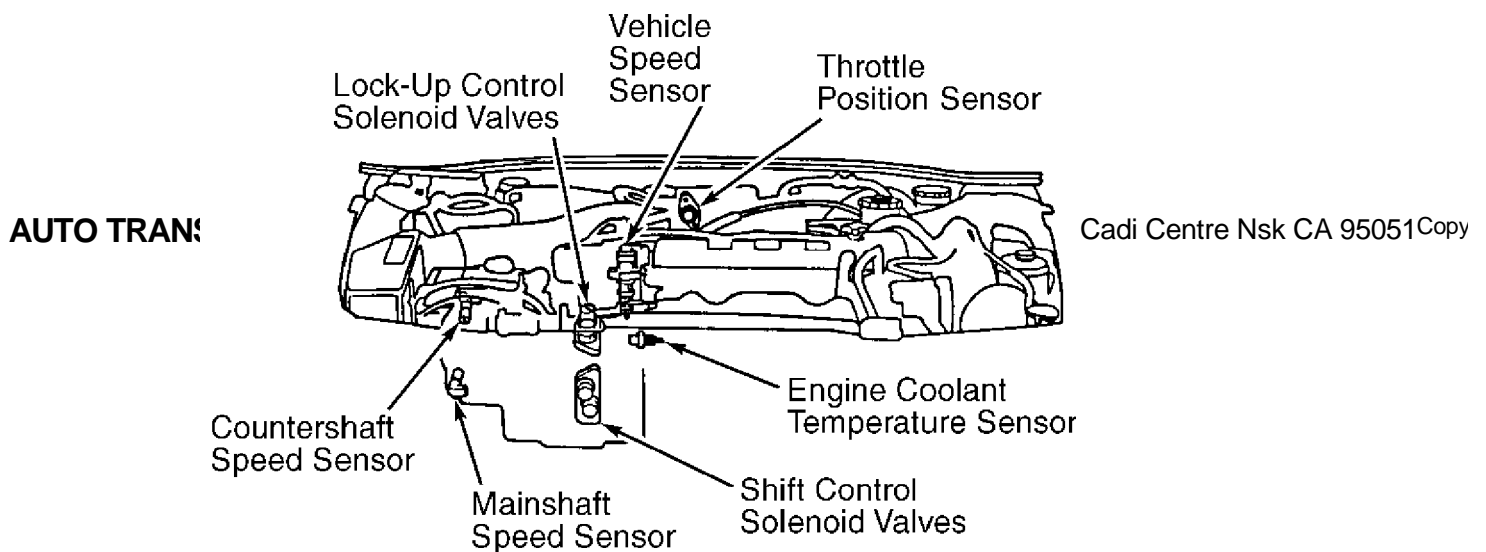


95119628

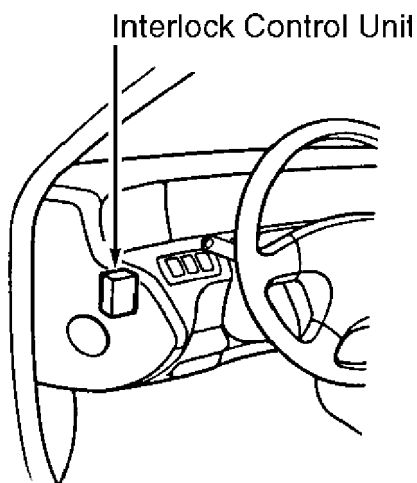
Fig. 4: Identifying Input & Output Devices
 Courtesy of American Honda Motor Co., Inc.



95J19629
Fig. 5: Identifying TCM Input & Output Device Locations
 Courtesy of American Honda Motor Co., Inc.

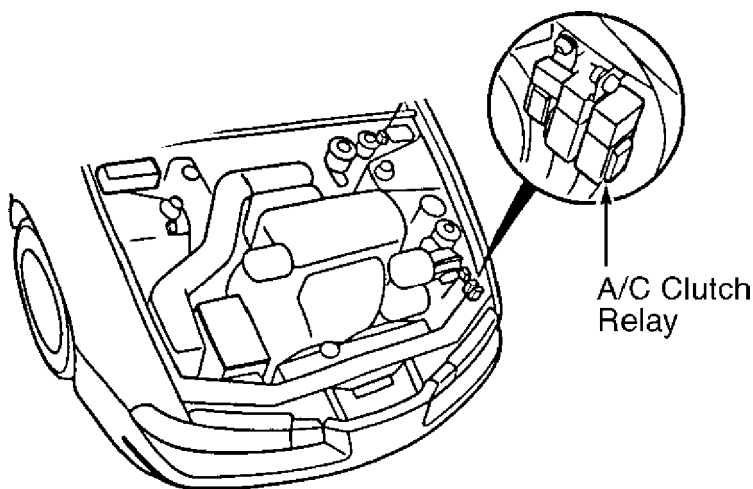


95C19630
Fig. 6: Identifying TCM Input & Output Device Locations
 Courtesy of American Honda Motor Co., Inc.



93F22645

Fig. 7: Identifying TCM Input & Output Device Locations
 Courtesy of American Honda Motor Co., Inc.



93G22646

Fig. 8: Identifying TCM Input & Output Device Locations
 Courtesy of American Honda Motor Co., Inc.

SELF-DIAGNOSTIC SYSTEM

SYSTEM DIAGNOSIS

The TCM monitors transaxle operation. The TCM contains a self-diagnostic system, which stores fault code if failure or problem exists. Fault code may also be referred to as Diagnostic Trouble Code (DTC). The TCM will blink "P4" indicator light on A/T gear position indicator on instrument panel. Fault code can be retrieved for diagnosing transaxle electronic control system. See RETRIEVING FAULT CODES.

RETRIEVING FAULT CODES

NOTE: When diagnosing transaxle, ensure "D4" indicator light is not turned on by problem in PGM-FI system by performing preliminary procedure. See PRELIMINARY PROCEDURE in the following heading. The PGM-FI system controls the fuel injection system.

NOTE: Before performing preliminary procedure, obtain radio anti-theft code from customer. Note radio preset stations, as radio stations and clock setting will be cleared and must be reset. Radio anti-theft code must be re-entered for radio operation.

Preliminary Procedure

1) Ensure ignition is off. Remove No. 43 clock-radio fuse (10-amp) in engine compartment fuse box for 10 seconds. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall. This clears Engine Control Module (ECM) memory to ensure ECM has not turned on "D4" indicator light.

2) Reinstall fuse. To re-enter radio anti-theft code, turn ignition and radio on. When the word "CODE" is displayed on radio, re-enter radio anti-theft code by using the radio station preset buttons. Reset clock and radio stations. Perform diagnostic circuit check to ensure proper operation of "D4" indicator light. See the DIAGNOSTIC CIRCUIT CHECK procedure in the following heading.

Diagnostic Circuit Check

1) Turn ignition on. The "D4" indicator light on A/T gear position indicator on instrument panel should come on for about 2 seconds and then go off, indicating light circuit is operating properly. See Fig. 1. If indicator light functions as described, fault codes may be retrieved. See TCM FAULT CODES.

2) If "D4" indicator light does not come on as described or remains on steady, proceed to the appropriate diagnostic chart. See TROUBLE SHOOTING FLOW CHARTS.

TCM Fault Codes

1) With ignition off, install jumper wire between service check connector electrical terminals. Service check connector is a 2-pin Blue or Gray connector, located below center of instrument panel, near center console. See Fig. 9. This will place TCM in self-diagnostic mode.

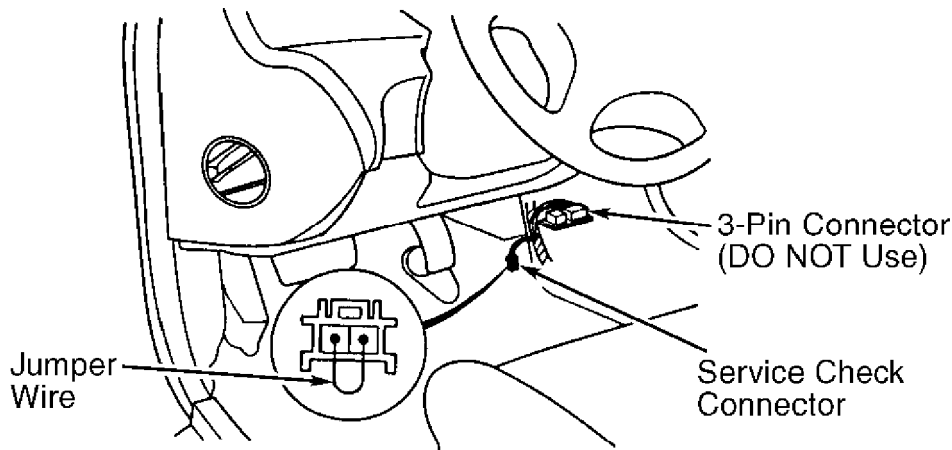
CAUTION: DO NOT use the 3-pin connector located next to service check connector.

blinking "D4" indicator light on the A/T gear position indicator on instrument panel. See Fig. 1.

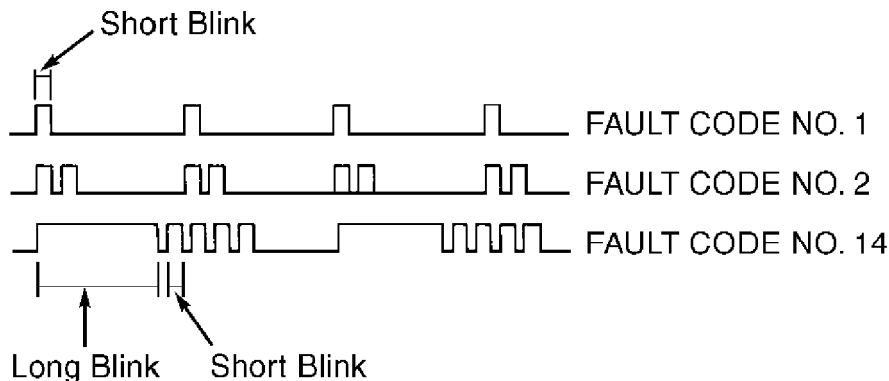
3) Fault codes will be displayed by short and long blinks. One long blink equals 10 short blinks. For example, if a long blink is followed by 4 short blinks, this indicates a Fault Code No. 14. See Fig. 10.

4) Once a fault code is obtained, determine probable cause and symptom. See the FAULT CODE IDENTIFICATION table. If any other fault codes except those listed are displayed, TCM is defective. For trouble shooting of fault codes, see TROUBLE SHOOTING FLOW CHARTS. Turn ignition off. Remove jumper wire from service check connector.

NOTE: If customer describes symptoms for Fault Code No. 3 and "D4" indicator light is off or Fault Code No. 6 or 11, it may be necessary to test drive vehicle to recreate the symptom and then check for trouble code with ignition still on.



93I22648
Fig. 9: Installing Jumper Wire In Service Check Connector
Courtesy of American Honda Motor Co., Inc.



93B22526
Fig. 10: Identifying Fault Code Displays
Courtesy of American Honda Motor Co., Inc.

FAULT CODE IDENTIFICATION

AA

Fault Code (1)	Indicator Light Condition	(2) Probable Cause	(4) Symptom	(5) Symptom
1	Blinks	Defective Lock-Up Control Solenoid "A"	Lock-Up Clutch Does Not Engage Or Remains Engaged, Unstable Idle Speed	

AA

2	Blinks	Defective Lock-Up Control Solenoid "B"	Lock-Up Clutch Does Not Engage	
---	--------	--	--------------------------------	--

AA

3	Blinks Or Remains Off	Defective Throttle Position Sensor	Lock-Up Clutch Does Not Engage	
---	-----------------------	------------------------------------	--------------------------------	--

AA

4	Blinks	Defective Vehicle Speed Sensor	Lock-Up Clutch Does Not Engage	
---	--------	--------------------------------	--------------------------------	--

AA

5	Blinks	Defective A/T Gear Position Switch	Lock-Up Clutch Does Not Engage, Fails To Shift Other Than 2nd-4th Gears	
---	--------	------------------------------------	---	--

AA

6	Off	Defective A/T Gear Position Switch	Lock-Up Clutch Does Not Engage, Lock-Up Clutch Engages & Disengages Fails To Shift Other Than 2nd-4th Gears	
---	-----	------------------------------------	---	--

AA

7	Blinks	Defective Shift Control Solenoid "A"	Fails To Upshift, Remains In 4th Gear	
---	--------	--------------------------------------	---------------------------------------	--

AA

8	Blinks	Defective Shift Solenoid "B"	Remains In 1st Or 4th, Control Solenoid "B"	
---	--------	------------------------------	---	--

AA

9	Blinks	Defective Countershaft Speed Sensor	Lock-Up Clutch Does Not Engage	
---	--------	-------------------------------------	--------------------------------	--

AA

10	Blinks	Defective Engine Coolant Temp. Sensor	Lock-Up Clutch Does Not Engage	
----	--------	---------------------------------------	--------------------------------	--

AA

11	Off	Defective Ignition	Lock-Up Clutch	
----	-----	--------------------	----------------	--

			Coil (Ignitor)		Does Not Engage
AA					
14	Off	Shorted Or Open Transaxle Jerks
				Wire Between	Hard When Shifting
				TCM Terminal	

			D16 & ECM, Faulty ECM		
AA					
15 (6)	Off ..		Defective Mainshaft Transaxle Jerks
				Speed Sensor	Hard When Shifting

AA

- (1) - Number of blinks from "D4" indicator light on A/T gear position indicator on instrument panel with jumper wire installed in service check connector.
- (2) - Operation of "D4" indicator light without jumper wire installed in service check connector.
- (3) - Check listed component for probable cause. Also check wiring and connections of specified component.
- (4) - If transaxle fails to shift from Park with the brake pedal depressed, check the brakelight signal. See BRAKELIGHT SIGNAL under TROUBLE SHOOTING.
- (5) - If lock-up clutch does not engage or does not cycle on and off, check A/C signal. See A/C SIGNAL under TROUBLE SHOOTING.
- (6) - Fault Code No. 15 does not necessarily indicate an electrical problem, as fault code may also be caused by an internal transaxle problem.

AA

CLEARING FAULT CODES

NOTE: Before clearing fault codes, obtain radio anti-theft code from customer. Note radio preset stations, as radio stations and clock setting will be cleared and must be reset. Radio anti-theft code must be re-entered for radio operation.

1) Once repairs have been performed, fault codes must be cleared from TCM memory. Ensure ignition is off. Remove No. 43 clock-radio fuse (10-amp) in engine compartment fuse box for 10 seconds. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall.

2) This will clear TCM and ECM memories. Reinstall fuse. To re-enter radio anti-theft code, turn ignition and radio on. When the word "CODE" is displayed on radio, re-enter radio anti-theft code by using the radio station preset buttons. Reset clock and radio stations.

A/C SIGNAL

NOTE: If A/C signal exists, torque converter lock-up clutch may not engage or cycle on and off.

1) Start engine. Turn blower switch and A/C switch to the ON position. Check if A/C compressor clutch engages.

2) If A/C compressor clutch does not engage, check A/C compressor clutch and wiring. If A/C compressor clutch engages, turn engine off. Ensure ignition is off. Remove passenger's side door sill molding and passenger's side kick panel. Pull carpet back for access to TCM, located behind passenger's side kick panel. See Figs. 5-8.

3) Disconnect 26-pin connector from TCM, located behind passenger's side kick panel. See Figs. 5-8. Connect voltmeter between terminal A22 (Red/Blue wire) and terminal A25 (Black/Red wire) or terminal A26 (Brown/Black wire) of 26-pin connector. Start engine. Note voltage with A/C compressor off.

4) If battery voltage does not exist, go to step 5). If battery voltage exists, A/C signal is okay. Check for loose TCM electrical connections. If electrical connections are okay, substitute TCM with a known good unit and recheck operation.

5) If battery voltage does not exist, check for open circuit in Red/Blue wire between terminal A22 and A/C clutch relay. A/C clutch relay is located at driver's side front corner of engine compartment. See Figs. 5-8.

6) Reinstall electrical connector on TCM. Reinstall passenger's side kick panel and passenger's side door sill molding.

BRAKELIGHT SIGNAL

NOTE: If no brakelight signal exists, transaxle may fail to shift from Park with brake pedal depressed and accelerator pedal in idle position.

1) Ensure brakelights come on when brake pedal is depressed. If brakelights come on, go to next step. If brakelights do not come on, check No. 41 fuse (15-amp) in engine compartment fuse box. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall. If fuse is okay, repair brakelight signal circuit.

2) Ensure ignition is off. Remove passenger's side door sill molding and passenger's side kick panel. Pull carpet back for access to TCM, located behind passenger's side kick panel. See Figs. 5-8. Disconnect 26-pin and 22-pin electrical connectors from TCM.

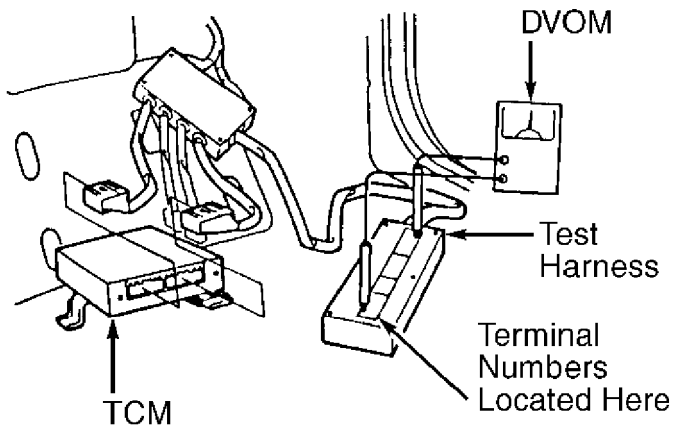
3) Connect Test Harness (07LAJ-PT3010A) to 26-pin and 22-pin electrical connectors. See Fig. 11. DO NOT connect test harness to TCM.

4) Using Digital Volt-Ohmmeter (DVOM), measure voltage between terminals D2 and A25 or A26 on test harness with brake pedal depressed. Terminal numbers are located on test harness. See Fig. 11.

5) If battery voltage exists, brakelight signal to TCM is okay. Check for loose TCM electrical connections. If electrical connections are okay, substitute TCM with a known good unit and recheck operation.

6) If battery voltage does not exist, check for open circuit in the Green/White wire between terminal D2 and brakelight switch. Brakelight switch is located on brake pedal support. See Figs. 5-8.

7) Ensure ignition is off. Remove test harness. Reinstall electrical connectors on TCM. Reinstall passenger's side kick panel and passenger's side door sill molding.



95D19631

Fig. 11: Installing Test Harness

Courtesy of American Honda Motor Co., Inc.

SYSTEM TESTING

A/T GEAR POSITION INDICATOR

NOTE: If necessary, refer to wiring schematic when checking component wiring. See Figs. 18 and 19.

1) Remove instrument panel gauge assembly from instrument panel. On 1993 models, disconnect connector "A" (16-pin) and connector "B" (10-pin) from rear of instrument panel gauge assembly. Refer to the Figs. 12-13.

2) On 1994 models with luminescent gauges, disconnect connector "J" (5-pin), connector "H" (16-pin) and connector "T" (10-pin) from rear of instrument panel gauge assembly. See Fig. 14.

3) On 1994 models without luminescent gauges, disconnect connector "A" (16-pin) and connector "B" (10-pin) from rear of instrument panel gauge assembly.

4) On all models, check for voltage and continuity at electrical connectors as specified. See Figs. 12-14.

5) If necessary to check ground connections, G401, G402, G404 or G521, refer to the GROUND CONNECTION LOCATIONS table. Also, see Fig. 17.

GROUND CONNECTION LOCATIONS

Ground Connection	Location
-------------------	----------

G401

1993

4WS, VTEC & SR-V Behind Passenger's Side Of Instrument Panel, Near Glove Box

S, Si & SR Behind Passenger's Kick Panel, Above TCM

1994 Behind Passenger's Kick Panel, Above TCM

G402 Driver's Side Of Center Console, Near Shift Lever

G404 Passenger's Side Of Center Console, Near Shift Lever

G521 Below Driver's Seat, Near Seat Mount Rail

AA

6) If necessary to check No. 13 fuse (10-amp), fuse is located in the fuse/relay box behind driver's side kick panel. See Figs. 5-8. If necessary to access TCM, TCM is located behind passenger's side kick panel.

7) If necessary to access ECM, the ECM is located on passenger's side floor panel, below the carpet. If necessary to access A/T gear position switch, A/T gear position switch is mounted on driver's side of shift lever. See Figs. 5-8.

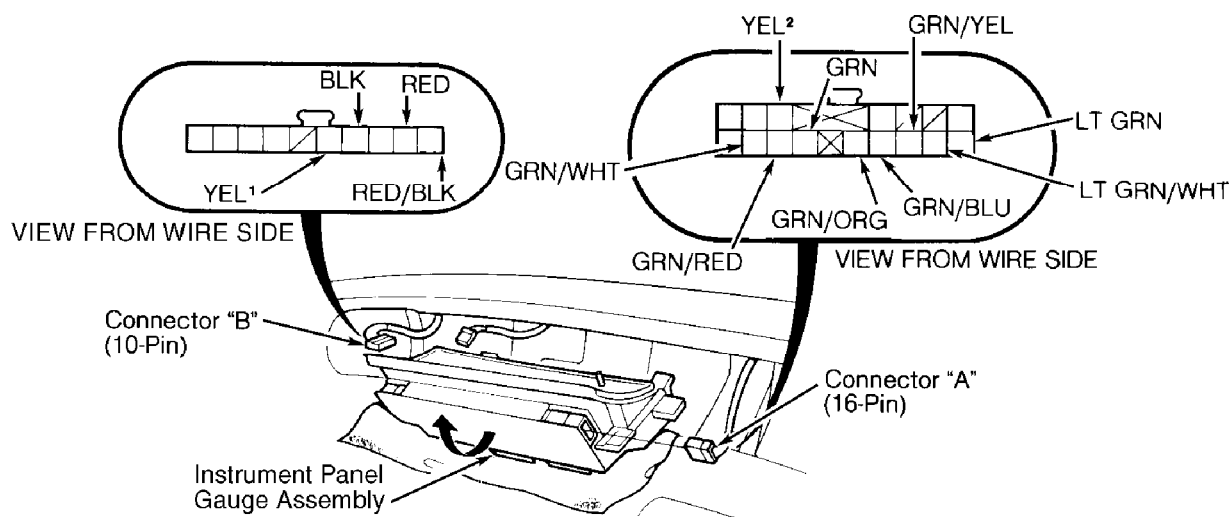


Fig. 12: Testing A/T Gear Position Indicator (1993, 1 of 2)

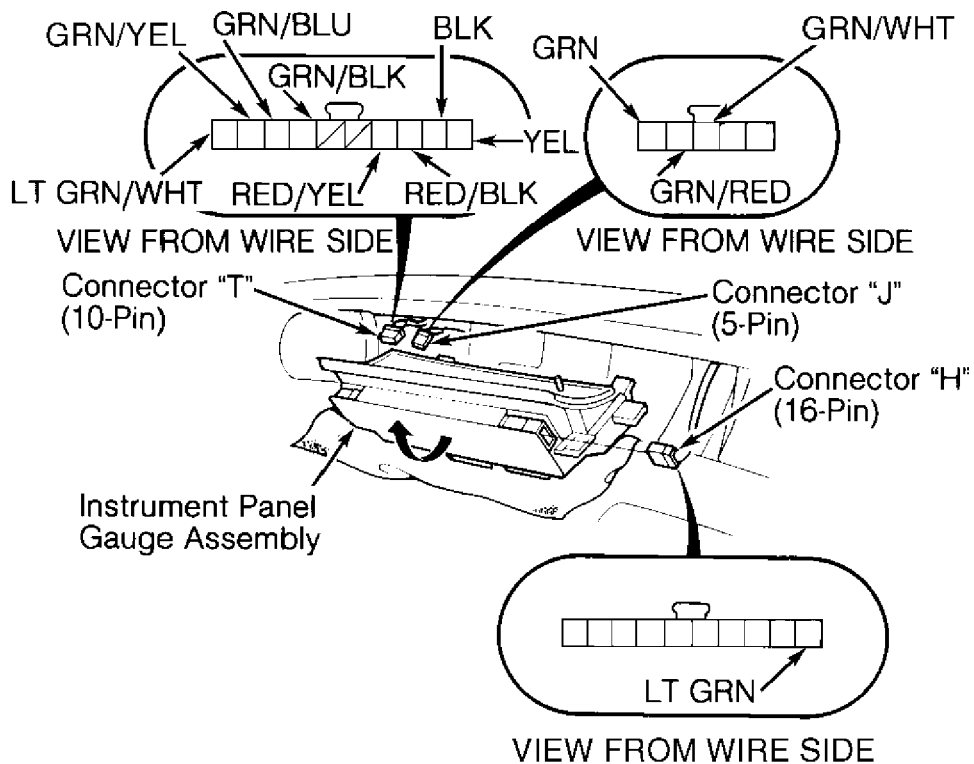
Courtesy of American Honda Motor Co., Inc.

NO.	WIRE	TEST CONDITION	TEST: DESIRED RESULT	POSSIBLE CAUSE
1	BLK	Under all conditions.	Check for continuity to ground: There should be continuity.	<ul style="list-style-type: none"> • Poor ground (G401, G402, G404). • An open in the wire.
2	YEL ¹	Ignition switch ON.	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Blown No. 13 (10 A) fuse. (in the under-dash fuse/relay box) • An open in the wire.
3	GRN/WHT	Shift lever in P . NOTE: Don't push the brake pedal.	Check for continuity to ground: There should be continuity. NOTE: There should be no continuity in any other position.	<ul style="list-style-type: none"> • Faulty A/T gear position switch. • Poor ground (G401, G402, G404). • An open in the wire.
	GRN/RED	Shift lever in R .		
	GRN	Shift lever in N .		
	GRN/BLU	Shift lever in D₃ .		
	GRN/YEL	Shift lever in 2 .		
	LT GRN/WHT	Shift lever in 1 .		
4	RED and RED/BLK	Combination light switch ON and dash lights brightness control dial on full bright.	Check for voltage between RED/BLK and RED terminals: There should be battery voltage.	<ul style="list-style-type: none"> • Faulty dash lights brightness control system. • An open in the wire.
5	GRN/ORN	Ignition switch ON and shift lever in any position except D₄ .	Check for voltage to ground: There should be battery voltage for two seconds after the ignition switch is turned ON, and less than 1 V two seconds later.	<ul style="list-style-type: none"> • Faulty transmission control module (TCM). • An open in the wire.
6	YEL ²	Ignition switch ON and shift lever in any position except D₄ .	Check for voltage to ground: There should be less than 1 V for two seconds after the ignition switch is turned ON, and more than 5 V two seconds later.	<ul style="list-style-type: none"> • Faulty TCM. • An open in the wire.
7	LT GRN	Ignition switch ON.	Check for voltage to ground: There should be more than 11 V.	<ul style="list-style-type: none"> • Faulty ECM or TCM. • An open in the wire.

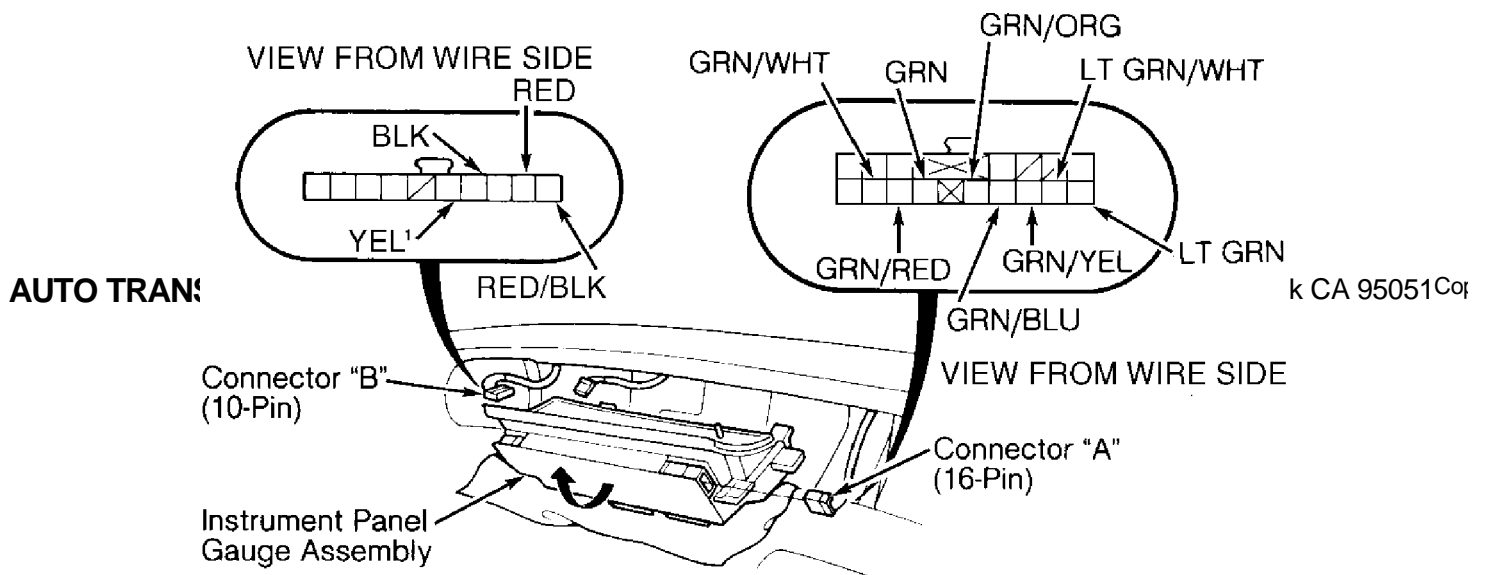
95F19633

Fig. 13: Testing A/T Gear Position Indicator (1993, 2 of 2)

Courtesy of American Honda Motor Co., Inc.



95G19634
Fig. 14: Testing A/T Gear Position Indicator (1994, 1 of 3)
Courtesy of American Honda Motor Co., Inc.



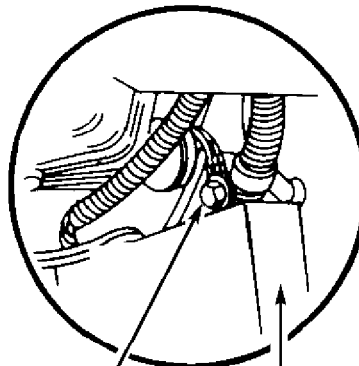
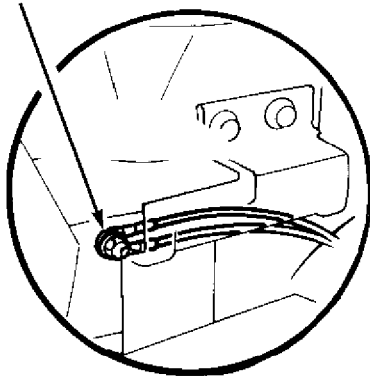
95H19635
Fig. 15: Testing A/T Gear Position Indicator (1994, 2 of 3)
Courtesy of American Honda Motor Co., Inc.

NO.	WIRE	TEST CONDITION	TEST: DESIRED RESULT	POSSIBLE CAUSE
1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	<ul style="list-style-type: none"> • Poor ground (G401, G402, G404, G521) • An open in the wire
2	YEL	Ignition switch ON	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Blown No.13 (10 A) fuse (In the under-dash fuse/relay box) • An open in the wire
3	GRN/WHT	Shift lever in P NOTE: Don't push the brake pedal.	Check for continuity to ground: There should be continuity. NOTE: There should be no continuity in any other position.	<ul style="list-style-type: none"> • Faulty A/T gear position switch • Poor ground (G401, G402, G404, G521) • An open in the wire
	GRN/RED	Shift lever in R		
	GRN	Shift lever in N		
	GRN/BLU	Shift lever in D₃		
	GRN/YEL	Shift lever in 2		
	LT GRN/WHT	Shift lever in 1		
4	RED and RED/BLK	Combination light switch ON, and dash lights brightness control dial on full bright	Check for voltage between RED/BLK and RED terminals: There should be battery voltage.	<ul style="list-style-type: none"> • Faulty dash lights brightness control system • An open in the wire
5	GRN/ORN	Ignition switch ON, and shift lever in any position except D₄	Check for voltage to ground: There should be battery voltage for two seconds after the ignition switch is turned ON, and less than 1 V two seconds later.	<ul style="list-style-type: none"> • Faulty transmission control module (TCM) • An open in the wire
6	LT GRN	Ignition switch ON	Check for voltage to ground: There should be more than 11 V.	<ul style="list-style-type: none"> • Faulty ECM or TCM • An open in the wire

95I19636

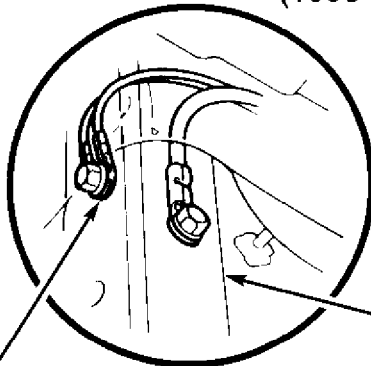
Fig. 16: Testing A/T Gear Position Indicator (1994, 3 of 3)
 Courtesy of American Honda Motor Co., Inc.

Ground Connection G401
(1993 4WS, VTEC & SR-V Models & 1994 Models)



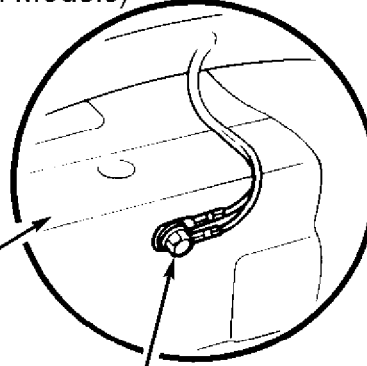
Ground Connection G401
(1993 S, Si & SR Models)

TCM



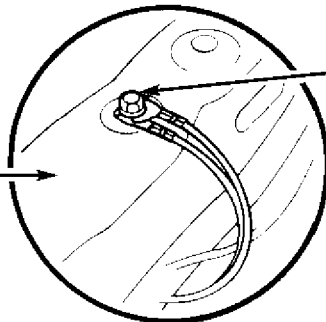
Ground Connection
G402

Center
Console



Ground Connection
G404

AUTO TRANS



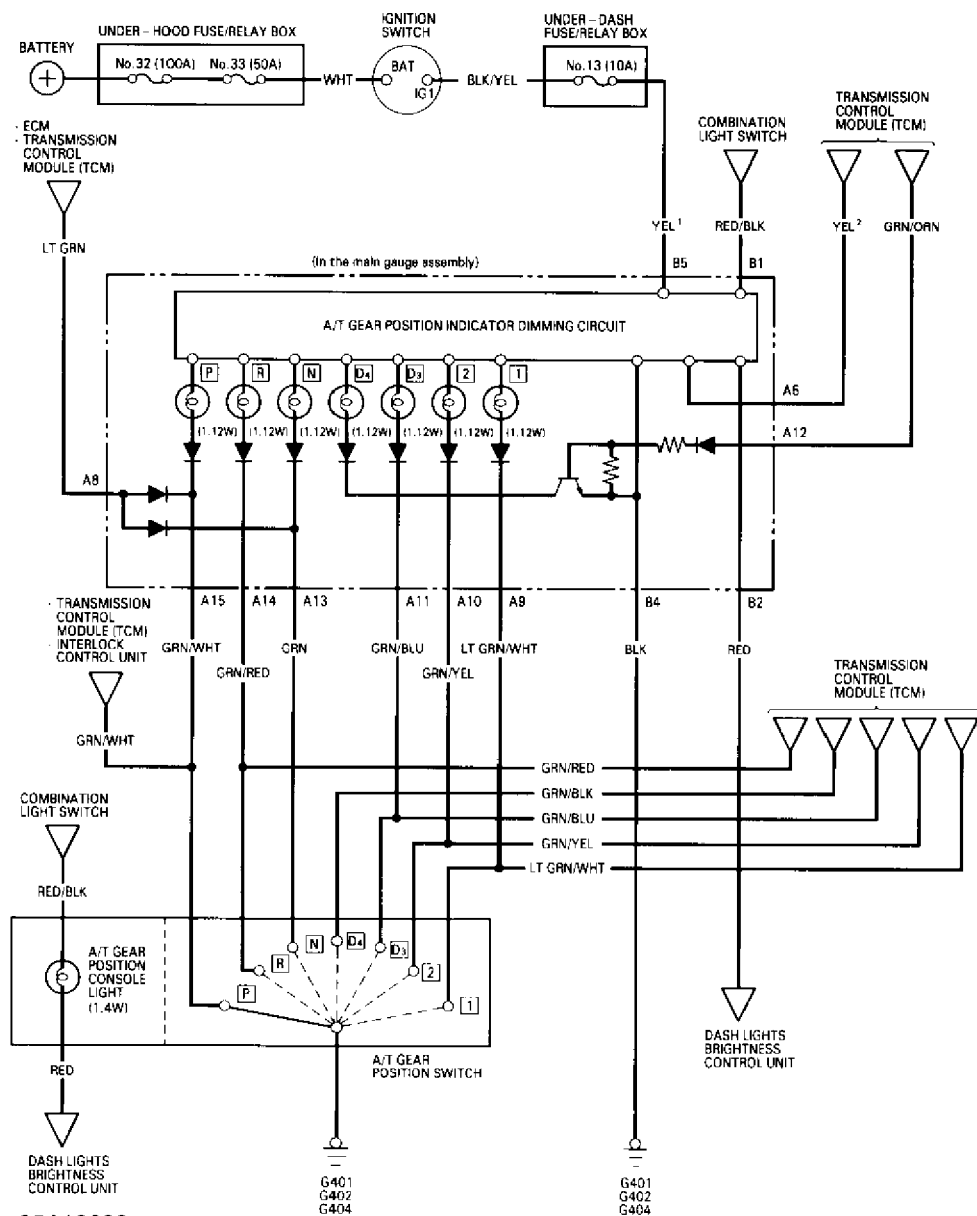
Ground Connection
G521

Centre Nsk CA 95051Cor

Seat Mount
Rail

95J19637

Fig. 17: Identifying Ground Connections
Courtesy of American Honda Motor Co., Inc.



95A19638

Fig. 18: A/T Gear Position Indicator Wiring Schematic (1993)
 Courtesy of American Honda Motor Co., Inc.

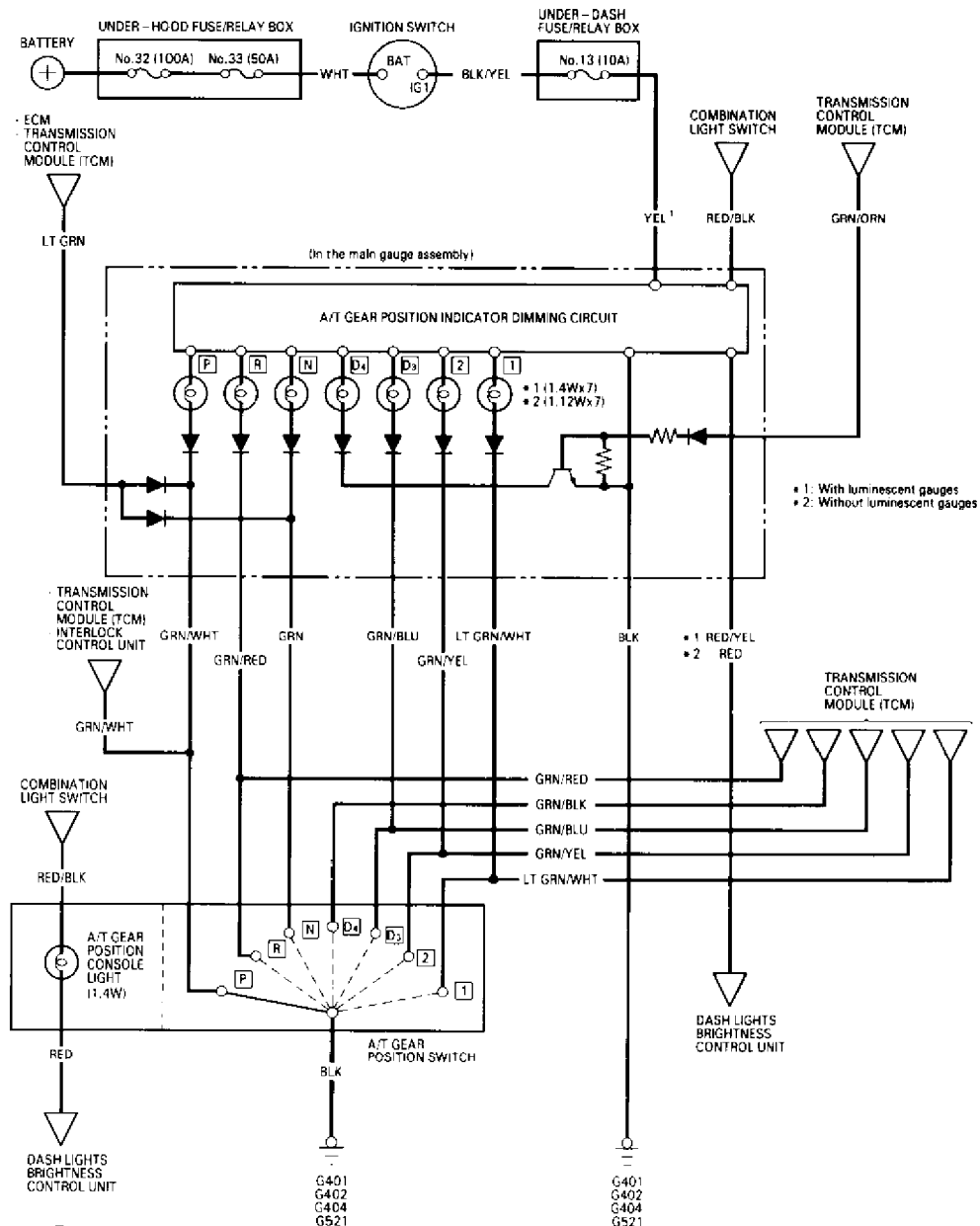


Fig. 19: A/T Gear Position Indicator Wiring Schematic (1994)

~~AUTO TRANS DIAGNOSIS - MP/PA After-Text (p. 23)~~ 1993 Honda Prelude For Cadi Centre Nsk CA 95051 Cor

SHIFT & KEY INTERLOCK SYSTEMS

NOTE: If necessary, refer to wiring schematic when checking component wiring. See Fig. 20.

Shift Interlock System

1) To check system operation, ensure shift lever is in Park. Turn ignition on. Depress brake pedal with accelerator pedal in idle position.

2) If shift lock solenoid clicks, system is working properly. If shift lock solenoid fails to click, go to step 3). If shift lever cannot be moved from Park, check for proper installation procedure of shift lock solenoid. See SHIFT LOCK SOLENOID under REMOVAL & INSTALLATION. If shift lock solenoid installation is okay, check shift cable and shift components at transaxle.

3) Disconnect 8-pin electrical connector from interlock control unit. Interlock control unit is located above driver's side kick panel and contains a Gray 8-pin electrical connector. Refer to the Figs. 5-8.

4) Turn ignition on and depress brake pedal. Using voltmeter, check voltage at White/Green wire of 8-pin electrical connector and ground. Battery voltage should exist.

5) With brake pedal still depressed, depress accelerator pedal. Ensure brake pedal and accelerator are held down at the same time. Check voltage at White/Green wire of 8-pin electrical connector and ground. Battery voltage should not exist.

6) If voltage readings in steps 4) and 5) are as specified, go to step 8). If voltage is not as specified in steps 4) and 5), check No. 41 fuse (15-amp) in engine compartment fuse box. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall. If fuse is okay, check for defective wiring.

7) If wiring checks okay, check for a defective brakelight switch or throttle position sensor. Refer to BRAKELIGHT SWITCH and THROTTLE POSITION SENSOR under COMPONENT TESTING. If all components are okay, substitute TCM and recheck operation.

8) Ensure shift lever is in Park. Using ohmmeter, check continuity between Green/White wire of 8-pin electrical connector and ground. Continuity should exist. If continuity exists, go to step 10).

9) If continuity does not exist, check the A/T gear position switch. See A/T GEAR POSITION SWITCH under COMPONENT TESTING. If the A/T gear position switch is okay, check for defective wiring or ground connections G401, G402, G404 and G521 (1994 models). See Fig. 17 and refer to the GROUND CONNECTION LOCATIONS table.

10) Ensure ignition is on. Using voltmeter, check voltage at Green wire of 8-pin electrical connector and ground. If battery voltage exists, wiring circuit is okay.

11) If battery voltage does not exist, check for defective No. 13 fuse (10-amp), located in fuse/relay box behind driver's side kick panel. If fuse is okay, check for defective wiring circuit. If wiring circuit checks okay, check the shift lock solenoid. Refer to SHIFT LOCK SOLENOID under COMPONENT TESTING.

GROUND CONNECTION LOCATIONS

AA

Ground Connection Location

G401

1993

4WS, VTEC & SR-V Behind Passenger's Side Of Instrument
Panel, Near Glove Box

S, Si & SR Behind Passenger's Kick Panel, Above TCM

1994 Behind Passenger's Kick Panel, Above TCM

G402 Driver's Side Of Center Console, Near Shift Lever

G404 Passenger's Side Of Center Console, Near Shift Lever

G521 Below Driver's Seat, Near Seat Mount Rail

AA

Key Interlock System

1) Disconnect 8-pin electrical connector from interlock control unit. Interlock control unit is located above driver's side kick panel and contains a Gray 8-pin electrical connector. Refer to the Figs. 5-8.

2) Using ohmmeter, check continuity between Black wire of 8-pin electrical connector and ground. Continuity should exist. If continuity exists, go to step 4). If continuity does not exist, go to step 3).

3) Check for defective wiring or ground connections G401, G402, G404 and G521 (1994 models). See GROUND CONNECTION LOCATIONS table. See Fig. 17.

4) Ensure shift lever is in Park. Using ohmmeter, check continuity between Green/White wire of 8-pin electrical connector and ground. Continuity should exist. If continuity exists, go to step 8). If continuity does not exist, go to step 5).

5) Check for open circuit in Green/White wire between interlock control unit and A/T gear position switch. The A/T gear position switch is mounted on driver's side of shift lever. See Figs. 5-8. If Green/White wire is okay, go to step 6).

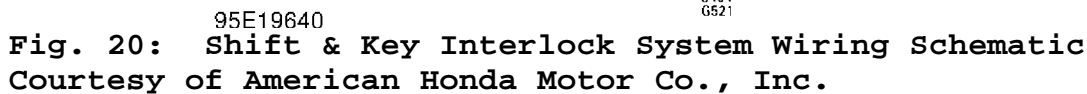
6) Check for open circuit in Black wire between A/T gear position switch and ground connection. Check for defective ground connections G401, G402, G404 and G521 (1994 models). See Fig. 17 and refer to the GROUND CONNECTION LOCATIONS table.

7) If Black wire and ground connection are okay, check A/T gear position switch. See the A/T GEAR POSITION SWITCH under COMPONENT TESTING.

8) Turn ignition lock assembly to ACC position. Using voltmeter, check for battery voltage at White/Red and White/Blue wires of 8-pin electrical connector and ground. If battery voltage exists, wiring circuit is okay.

9) If battery voltage does not exist, check No. 46 fuse (15-amp) in engine compartment fuse box. Engine compartment fuse box is located on passenger's side rear corner of engine compartment, near firewall. If fuse is okay, check for open circuit in White/Blue wire between No. 46 fuse and key interlock switch and key interlock

10) If White/Blue wire is okay, check key interlock solenoid. See KEY INTERLOCK SOLENOID under COMPONENT TESTING. If key interlock solenoid is okay, check for open circuit in White/Red and White/Blue wires between key interlock solenoid and interlock control unit.



A/T GEAR POSITION SWITCH TEST

AUTO TR

switch and neutral position switch. Back-up light and neutral position switch can also be checked when checking A/T gear position switch.

- 1) The A/T gear position switch is mounted on driver's side of shift lever. See Figs. 5-8. Remove center console.
- 2) Disconnect 3-pin and 12-pin electrical connectors at A/T gear position switch and note terminal identification. See Fig. 21.
- 3) Using an ohmmeter, check for continuity between specified terminals in relation to specific shift lever positions. Refer to the A/T GEAR POSITION SWITCH CONTINUITY table.

NOTE: Check continuity while moving shift lever back and forth in free play area of each gear position. DO NOT touch push button on shift lever when checking continuity.

4) If continuity is not as specified, A/T gear position switch may require adjustment. See A/T GEAR POSITION SWITCH under REMOVAL & INSTALLATION. If correct continuity cannot be obtained by adjusting A/T gear position switch, replace A/T gear position switch.

A/T GEAR POSITION SWITCH CONTINUITY SPECIFICATIONS

AA

Shift Lever Position	Terminal Number
-------------------------	--------------------

A/T Gear Position Switch

"P"	8 & 11
"R"	7 & 8
"N"	6 & 8
"D4"	1, 5 & 8
"D"	2, 5 & 8
"2"	3, 5 & 8
"1"	4 & 8

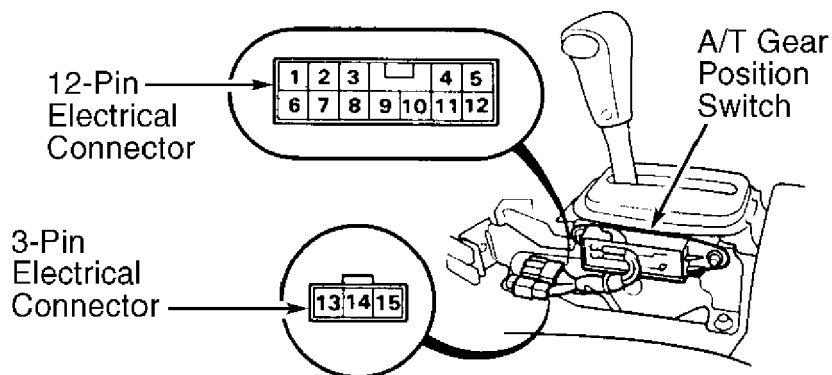
Back-Up Light Switch

"R"	9 & 10
-----------	--------

Neutral Position Switch

"P" & "N"	13 & 15
-----------------	---------

AA



95F19641

Fig. 21: Identifying A/T Gear Position Switch Connector Terminals
 Courtesy of American Honda Motor Co., Inc.

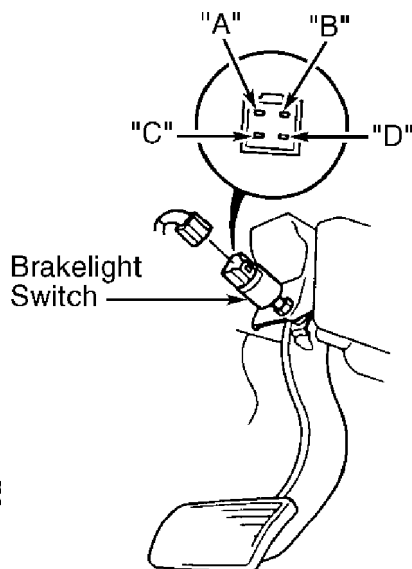
BRAKELIGHT SWITCH TEST

1) Disconnect electrical connector from brakelight located on brake pedal support. See Figs. 5-8. Note brake switch terminal identification. See Fig. 22.

2) Using ohmmeter, check continuity between terminals "A" and "D" with brake pedal released. Continuity should exist.

3) Check continuity between terminals "B" and "C" with brake pedal depressed. Continuity should exist.

4) If continuity is not as specified, ensure brake pedal is properly adjusted so brakelight switch has proper travel for switch operation. If proper brakelight switch travel exists, replace brakelight switch.



AUTO TRAN:

Text (p. 28) 1993 Honda Prelude For Cadi Centre Nsk CA 95051 Cor

93E22651

Fig. 22: Identifying Brakelight Switch Terminals
 Courtesy of American Honda Motor Co., Inc.

COUNTERSHAFT SPEED SENSOR TEST

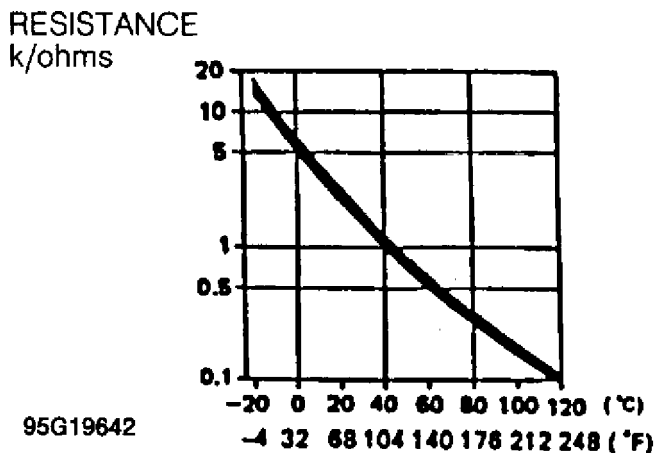
1) Countershaft speed sensor is located on transaxle. See Figs. 5-8. Disconnect electrical connector from countershaft speed sensor.

2) Using ohmmeter, measure resistance between terminals on countershaft speed sensor. Replace countershaft speed sensor if resistance is not 400-600 ohms at 70°F (20°C).

ENGINE COOLANT TEMPERATURE (ECT) SENSOR TEST

1) Engine coolant temperature sensor is located on cylinder head, below the distributor and contains a Green/White wire and a Yellow/Blue wire in the electrical connector. See Figs. 5-8. Disconnect electrical connector from engine coolant temperature sensor.

2) Using ohmmeter, check engine coolant temperature sensor resistance in accordance with engine coolant temperature. See Fig. 23. Replace engine coolant temperature sensor if resistance is not within specification.



ENGINE COOLANT TEMPERATURE

Fig. 23: Checking Engine Coolant Temperature Sensor Resistance
Courtesy of American Honda Motor Co., Inc.

KEY INTERLOCK SOLENOID TEST

1) Remove lower panel from steering column. Disconnect 8-pin electrical connector from main wiring harness and note terminal identification. See Fig. 24.

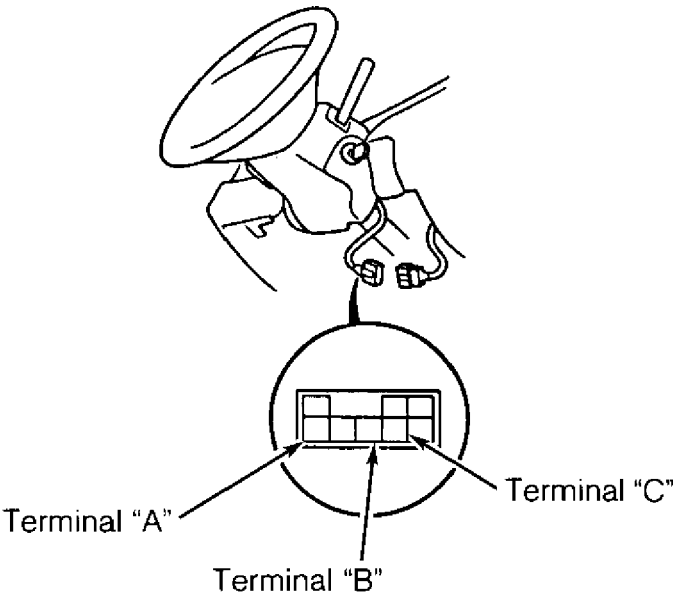
2) Using ohmmeter, check continuity between designated terminals with ignition lock assembly in ACC position. Refer to the KEY INTERLOCK SOLENOID CONTINUITY SPECIFICATION table.

3) Replace ignition lock assembly if continuity is not as

specified. Ignition lock assembly cannot be serviced separately.
AUTO TRANS DIAGNOSIS - MP 1A Article Text (p. 29) 1993 Honda Prelude or Civic Centre NSK CA 95051 Cor

KEY INTERLOCK SOLENOID CONTINUITY SPECIFICATIONS	
AA	
Ignition Key	Continuity Between
Position	Terminals
Key Installed "A", "B" & "C"
Key Removed "B" & "C"
AA	

- 4) Connect battery voltage and ground to terminals "A" and "C". Ensure ignition key cannot be removed with battery voltage applied.
- 5) If ignition key cannot be removed, key interlock solenoid is okay. If ignition key can be removed, replace ignition lock assembly, as key interlock solenoid cannot be serviced separately.



93F22652
Fig. 24: Identifying Key Interlock Solenoid Connector & Terminals
 Courtesy of American Honda Motor Co., Inc.

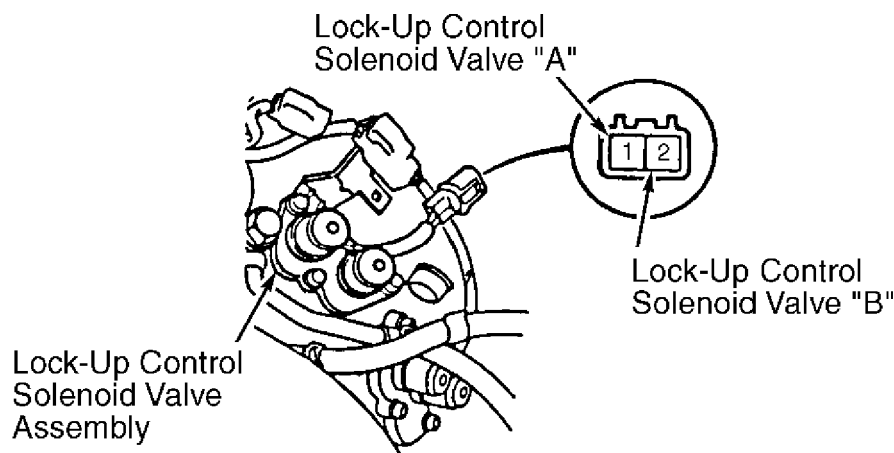
LOCK-UP CONTROL SOLENOID VALVES TEST

- 1) Lock-up control solenoid valves are located on the transaxle. See Figs. 5-8. Disconnect electrical connector at lock-up control solenoid valves.
- 2) Using ohmmeter, measure resistance between terminal No. 1 (solenoid valve "A") or terminal No. 2 (solenoid valve "B") of lock-up control solenoid valve electrical connector and body ground. See Fig. 25.
- 3) Resistance should be 12-24 ohms. Replace lock-up control solenoid valve if resistance is outside this range.

solenoid valve assembly if resistance of either solenoid valve is not within specification.

4) To check lock-up control solenoid valve operation, ensure lock-up control solenoid valve body is grounded. Apply battery voltage to terminal No. 1 (solenoid valve "A") or terminal No. 2 (solenoid valve "B") of lock-up control solenoid valve electrical connector.

5) Clicking sound should be heard, indicating solenoid valve operation. Replace lock-up control solenoid valve assembly if either solenoid valve fails to operate.



95H19643

Fig. 25: Identifying Lock-Up Control Solenoid Valve Terminals
Courtesy of American Honda Motor Co., Inc.

MAINSHAFT SPEED SENSOR TEST

1) Mainshaft speed sensor is located on transaxle. See Figs. 5-8. Disconnect electrical connector from mainshaft speed sensor.

2) Using ohmmeter, measure resistance between terminals on mainshaft speed sensor. Replace mainshaft speed sensor if resistance is not 400-600 ohms at 70°F (20°C).

SHIFT CONTROL SOLENOID VALVES TEST

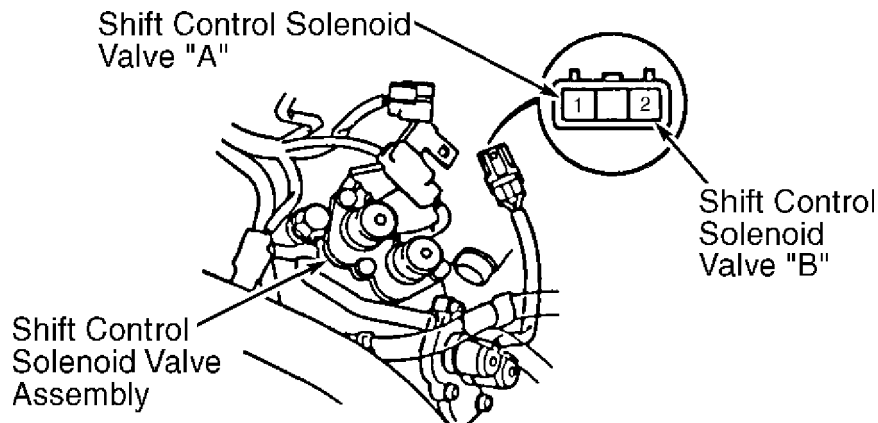
1) Shift control solenoid valves are located on transaxle. See Figs. 5-8. Disconnect electrical connector at shift control solenoid valves.

2) Using ohmmeter, measure resistance between terminal No. 1 (solenoid valve "A") or terminal No. 2 (solenoid valve "B") of shift control solenoid valve electrical connector and body ground. See Fig. 26.

3) Resistance should be 12-24 ohms. Replace shift control solenoid valve assembly if resistance of either solenoid valve is not within specification.

4) To check shift control solenoid valve operation, ensure solenoid valve body is grounded. Apply battery voltage to terminal No. 1 (solenoid valve "A") or terminal No. 2 (solenoid valve "B") of shift control solenoid valve electrical connector.

5) Clicking sound should be heard, indicating solenoid valve operation. Replace shift control solenoid valve assembly if either solenoid valve fails to operate.



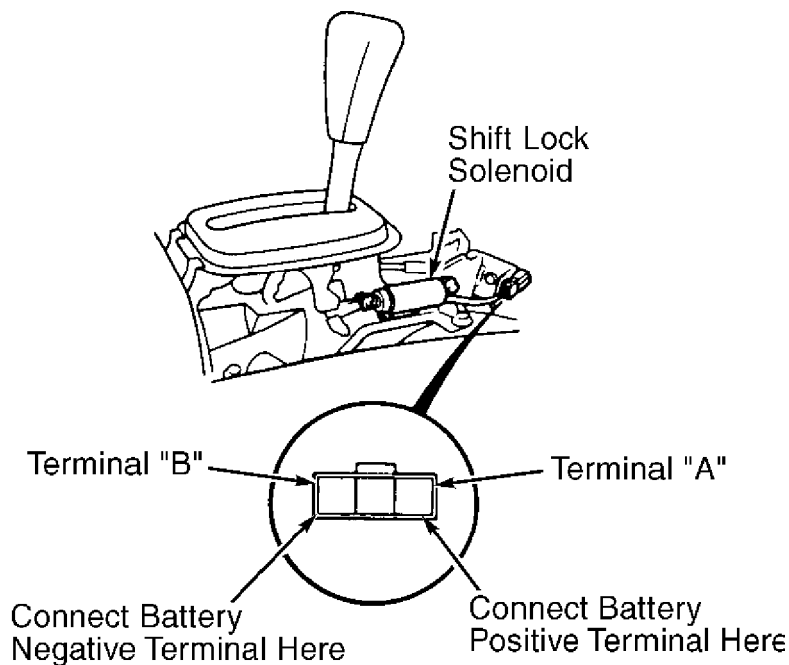
95I19644
Fig. 26: Identifying Shift Control Solenoid Valve Terminals
Courtesy of American Honda Motor Co., Inc.

SHIFT LOCK SOLENOID TEST

1) Remove center console. Disconnect 3-pin connector from main wiring harness and note terminal identification. See Fig. 27.

CAUTION: Battery voltage must be applied to proper shift lock solenoid terminals or diode inside shift lock solenoid will be damaged.

2) Momentarily connect battery positive terminal to terminal "A" and battery negative terminal to terminal "B". See Fig. 27. Ensure shift lock solenoid operates with battery voltage applied. Replace shift lock solenoid if it solenoid does not operate.



93G22653
Fig. 27: Identifying Shift Lock Solenoid Connector & Terminals
 Courtesy of American Honda Motor Co., Inc.

THROTTLE POSITION SENSOR (TPS) TEST

Throttle position sensor should input a .5-volt reference signal to TCM at closed throttle and approximately 4.5-volt signal at full throttle. Voltage should change smoothly as throttle valve is opened and closed. If voltage is not correct, check throttle position sensor wiring circuit. See WIRING DIAGRAMS. Individual component testing not available from manufacturer.

NOTE: If problem in throttle position sensor exists, throttle position sensor may set Fault Code No. 3 in TCM. See RETRIEVING FAULT CODES under SELF-DIAGNOSTIC SYSTEM

VEHICLE SPEED SENSOR (VSS) TEST

AUTO TRANS DIAGNOSIS - MP1A Article Text (p. 33) 1993 Honda Prelude For Cadi Centre Nsk CA 95051 Cor

1) Vehicle speed sensor is located on transaxle, below thermostat housing. See Figs. 5-8. Ensure No. 23 fuse (15-amp) in fuse/relay box behind driver's side kick panel is okay. Replace fuse if necessary. If fuse is okay, disconnect 3-pin electrical connector at vehicle speed sensor.

2) Turn ignition on. Using voltmeter, measure voltage between the Black/Yellow wire and Black wire of 3-pin electrical connector. If battery voltage exists, proceed to step 5). If battery voltage does not exist, proceed to step 3).

3) Using ohmmeter, check for continuity between Black wire of

3-pin electrical connector and body ground. If continuity exists, repair open circuit in Black/Yellow wire between 3-pin electrical connector and No. 23 fuse (15-amp) in fuse/relay box behind driver's side kick panel.

4) If continuity does not exist, check for open circuit in Black wire between 3-pin electrical connector and ground connection G101. See WIRING DIAGRAMS. Ground connection G101 is located on bolt at thermostat housing.

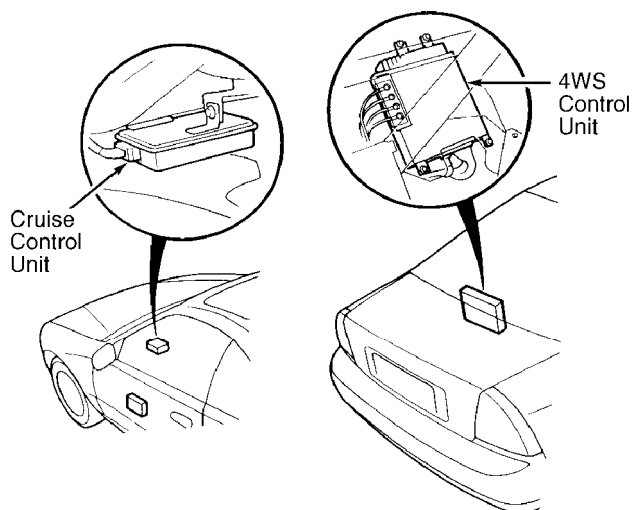
5) Using voltmeter, measure voltage between Orange and Black wires of 3-pin electrical connector. If about 5 volts exist, proceed to step 6). If about 5 volts does not exist, repair open circuit or short circuit to ground in Orange wire. The Orange wire goes to instrument panel gauge assembly, TCM, ECM, cruise control unit and 4 wheel steering (4WS) control unit (if equipped).

NOTE: Cruise control unit is located behind driver's side of instrument panel, near steering column. See Fig. 3. The 4WS control unit is located behind rear seat on driver's side, near shock tower. See Fig. 3.

6) Reconnect 3-pin electrical connector on vehicle speed sensor. Raise and support front of vehicle so front wheels are free to rotate. Using voltmeter, backprobe Orange wire on 3-pin electrical connector and connect it to body ground.

7) Place shift lever in Neutral. Ensure ignition is on. Rotate one front wheel while holding the other front wheel stationary.

8) Note that voltage reading pulses from zero volts to about 5 volts. If voltage pulses correctly, vehicle speed sensor is okay. If voltage does not pulse correctly, replace vehicle speed sensor.



95E19657
Fig. 28: Identifying Cruise Control Unit & 4WS Control Unit
Courtesy of American Honda Motor Co., Inc.

REMOVAL & INSTALLATION

A/T GEAR POSITION SWITCH R & I

Removal

Remove center console. Disconnect electrical connectors from A/T gear position switch. Remove nuts and A/T gear position switch.

Installation

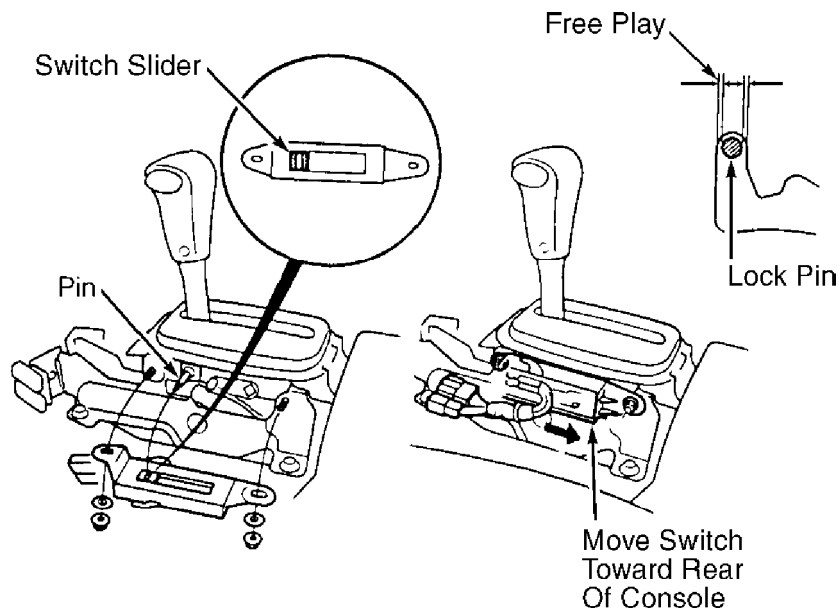
1) Ensure parking brake is applied. Place switch slider on A/T gear position switch in neutral position. See Fig. 29. Place shift lever in Neutral.

2) Install A/T gear position switch and nuts. DO NOT tighten nuts at this time, as A/T gear position switch must be adjusted.

3) To adjust A/T gear position switch, place shift lever in Park. Ensure retaining nuts are loose. Note electrical connector terminal identification. See Fig. 21.

4) Connect ohmmeter between terminals No. 8 and 11. Move A/T gear position switch toward rear of console until continuity exists between terminals No. 8 and 11. Free play at lock pin should be .079" (2.0 mm) maximum. See Fig. 29.

5) Tighten nuts. Check A/T gear position switch for correct continuity in all gears. See A/T GEAR POSITION SWITCH under COMPONENT TESTING. If proper adjustment cannot be obtained, check for damaged shift lever detent or bracket. Install electrical connector and center console.



93B22658

Fig. 29: Installing A/T Gear Position Switch

Courtesy of American Honda Motor Co., Inc.

BRAKELIGHT SWITCH R & I

Removal & Installation

1) Disconnect electrical connector. Remove lock nut and unscrew brakelight switch. To install, screw brakelight switch inward until brakelight plunger is fully depressed.

2) Back off brakelight switch 1/4 turn. Install and tighten lock nut. Install electrical connector. Ensure brakelights and cruise control operate properly.

COUNTERSHAFT SPEED SENSOR R & I

Removal & Installation

Countershaft speed sensor is located on transaxle. See Figs. 5-8. Remove bolt, countershaft speed sensor and "O" ring. To install, reverse removal procedure using NEW "O" ring. Tighten bolt to specification. See TORQUE SPECIFICATIONS.

ENGINE COOLANT TEMPERATURE (ECT) SENSOR R & I

Removal

Engine coolant temperature sensor is located on cylinder head, below the distributor and contains a Green/White wire and a Yellow/Blue wire in the electrical connector. See Fig. 4. Drain cooling system. Remove engine coolant temperature sensor.

Installation

1) Install and tighten engine coolant temperature sensor. When refilling cooling system, open air bleed bolt on thermostat housing.

2) Fill the cooling system until coolant flows from the air bleed bolt. Tighten air bleed bolt to specification. Refer to the TORQUE SPECIFICATIONS table. Finish filling cooling system.

KEY INTERLOCK SOLENOID R & I

Removal & Installation

Key interlock solenoid cannot be serviced separately. Entire ignition lock assembly must be replaced.

LOCK-UP CONTROL SOLENOID VALVES R & I

Removal & Installation

1) Lock-up control solenoid valves are located on the transaxle. See Figs. 5-8. Disconnect electrical connector at lock-up control solenoid valves.

2) Remove bolts, lock-up control solenoid valve assembly and gasket. To install, reverse removal procedure using NEW gasket.

Tighten bolts to specification. See TORQUE SPECIFICATIONS.

MAINSHAFT SPEED SENSOR R & I

Removal & Installation

Mainshaft speed sensor is located on transaxle. Refer to the Figs. 5-8. Remove bolt, mainshaft speed sensor and "O" ring. To install, reverse removal procedure using NEW "O" ring. Tighten bolt to specification. See TORQUE SPECIFICATIONS.

SHIFT CONTROL SOLENOID VALVES R & I

Removal & Installation

1) Shift control solenoid valves are located on transaxle. See Figs. 5-8. Disconnect electrical connector at shift control solenoid valves.

2) Remove bolts, shift control solenoid valve assembly and gasket. To install, reverse removal procedure using NEW gasket. Tighten bolts to specification. See TORQUE SPECIFICATIONS.

SHIFT LOCK SOLENOID R & I

Removal

Remove center console. Disconnect electrical connector at shift lock solenoid. Remove pin from shift lock solenoid. Remove nuts and shift lock solenoid.

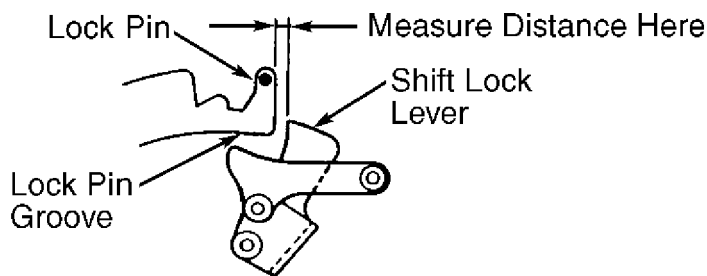
Installation

1) Install shift lock solenoid with NEW nuts snugly installed. Install pin and electrical connector.

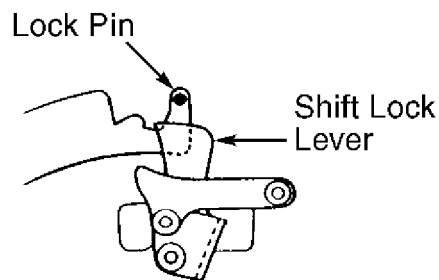
2) Turn ignition on (solenoid energized), ensure clearance between top of shift lock lever and lock pin groove is .094-.134" (2.4-3.4 mm). See Figs. 30-31.

3) If clearance is not as specified, loosen nuts and reposition shift lock solenoid until correct clearance is obtained. Once correct clearance is obtained, tighten nuts to specification. See the TORQUE SPECIFICATIONS table.

4) Turn ignition off (solenoid de-energized). Ensure lock pin is blocked by shift lock lever. See Figs. 30-31. Check solenoid operation several times.

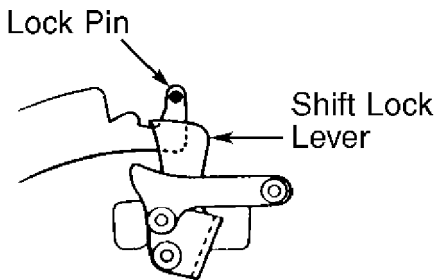


WITH IGNITION ON



WITH IGNITION OFF

93J22656
Fig. 30: Checking Shift Lock Solenoid Operation
 Courtesy of American Honda Motor Co., Inc.



93A22657
Fig. 31: Checking Shift Lock Solenoid Operation
 Courtesy of American Honda Motor Co., Inc.

TCM R & I

Removal & Installation

TCM is located behind passenger's side kick panel. Refer to the Figs. 5-8. Replacement information not available from manufacturer.
 AUTO TRANS DIAGNOSIS - MPTA Article Text (p. 38) 1993 Honda Prelude For Cadi Centre Nsk CA 95051 Cor

THROTTLE POSITION SENSOR R & I

Removal & Installation

Throttle position sensor is mounted on throttle body. Replacement information is not available from manufacturer.

VEHICLE SPEED SENSOR (VSS) R & I

NOTE: When servicing vehicle speed sensor, DO NOT lose vehicle speed sensor drive shaft located between vehicle speed sensor and power steering speed sensor.

Removal & Installation

Vehicle speed sensor is located on transaxle, below thermostat housing. See Figs. 5-8. Disconnect electrical connector at vehicle speed sensor. Remove bolts and vehicle speed sensor. To install, reverse removal procedure.

TROUBLE SHOOTING FLOW CHARTS

FLOW CHART USAGE

1) Use appropriate trouble shooting flow chart corresponding to fault code. Ensure ignition is off before disconnecting electrical connectors from TCM. The TCM is located behind passenger's side kick panel. See Figs. 5-8.

2) The TCM has a 26-pin and 22-pin electrical connectors. These are referenced as connectors 26P and 22P in trouble shooting flow charts.

3) Test Harness (07LAJ-PT3010A) may be required for use with trouble shooting flow chart. To install test harness, ensure ignition is off.

4) Remove passenger's side door sill molding and passenger's side kick panel. Pull carpet back for access to TCM, located behind driver's side kick panel. See Figs. 5-8. Disconnect 26-pin and 22-pin electrical connectors from TCM.

5) Connect test harness to 26-pin and 22-pin electrical connectors or TCM as instructed in trouble shooting flow chart. See Fig. 11.

6) Perform all tests using Digital Volt-Ohmmeter (DVOM). Perform measurements at designated terminals on test harness as instructed in trouble shooting flow chart. Terminal numbers are located on test harness. See Fig. 11.

7) On some fault code trouble shooting flow charts, technician will be instructed to see if Malfunction Indicator Light (MIL) is blinking. The MIL is located on instrument panel. Refer to the Fig. 1.

8) If MIL is blinking, PGM-FI system must be checked. Refer to the appropriate TESTING WITH CODES article in the ENGINE PERFORMANCE section. Refer to the following menu:

* For 1993 models, see: G - TESTS W/CODES

AUTO TRANS DIAGNOC

* For 1994 models, see: G - TESTS W/CODES

9) On some fault code charts, technician will be instructed to disconnect electrical connector from ECM or check wiring between ECM and TCM. The ECM is located on passenger's side floor panel, below the carpet. See Figs. 5-8.

10) Once all repairs are performed, ensure fault code is cleared from TCM memory. See CLEARING FAULT CODES under SELF-DIAGNOSTIC SYSTEM.

NOTE: The following charts and illustrations are courtesy of American Honda Motor Co., Inc.

DIAGNOSTIC CIRCUIT CHECK "D4" LIGHT ON STEADILY (IGNITION ON)

Refer to Fig. 32.

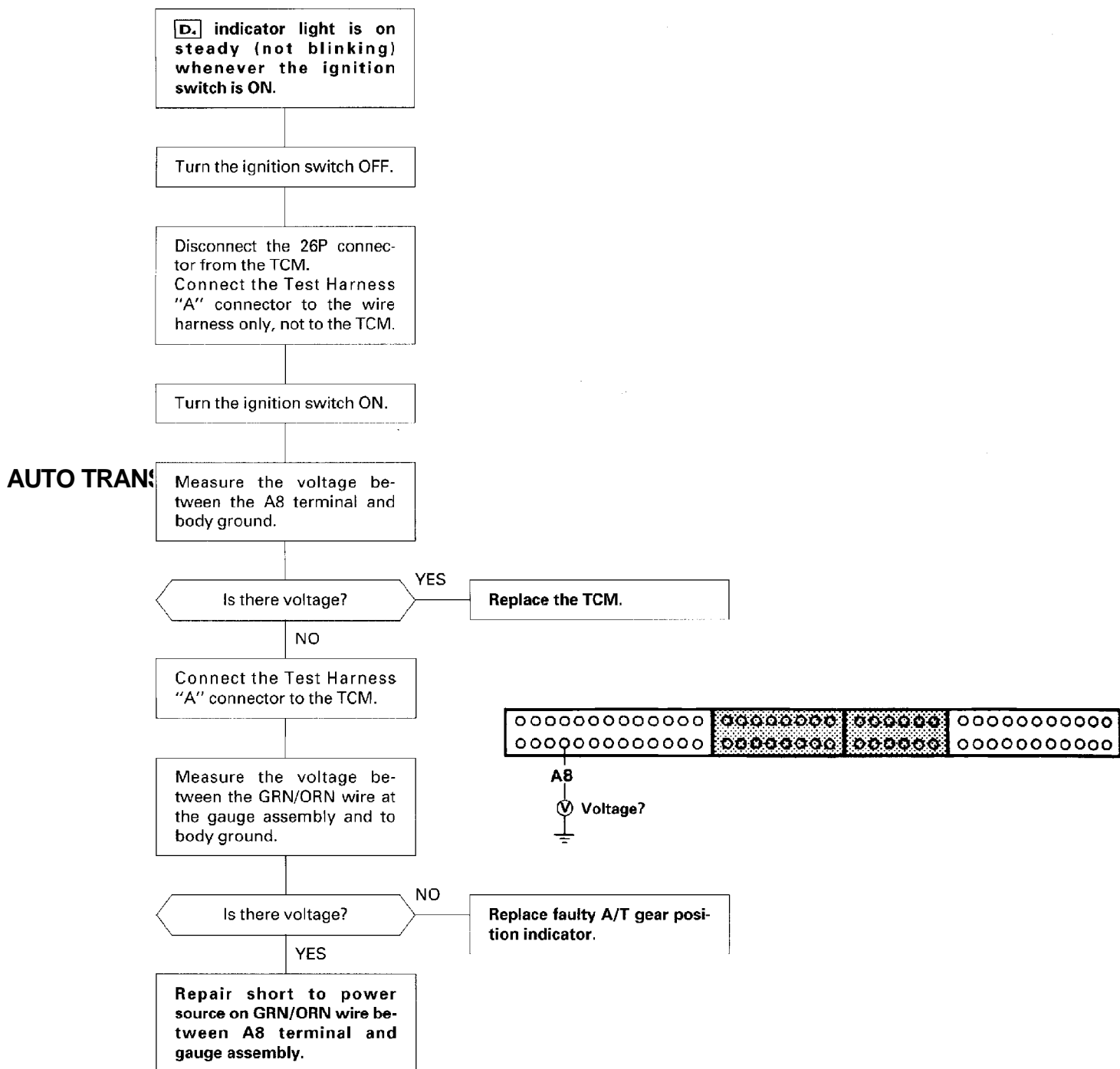
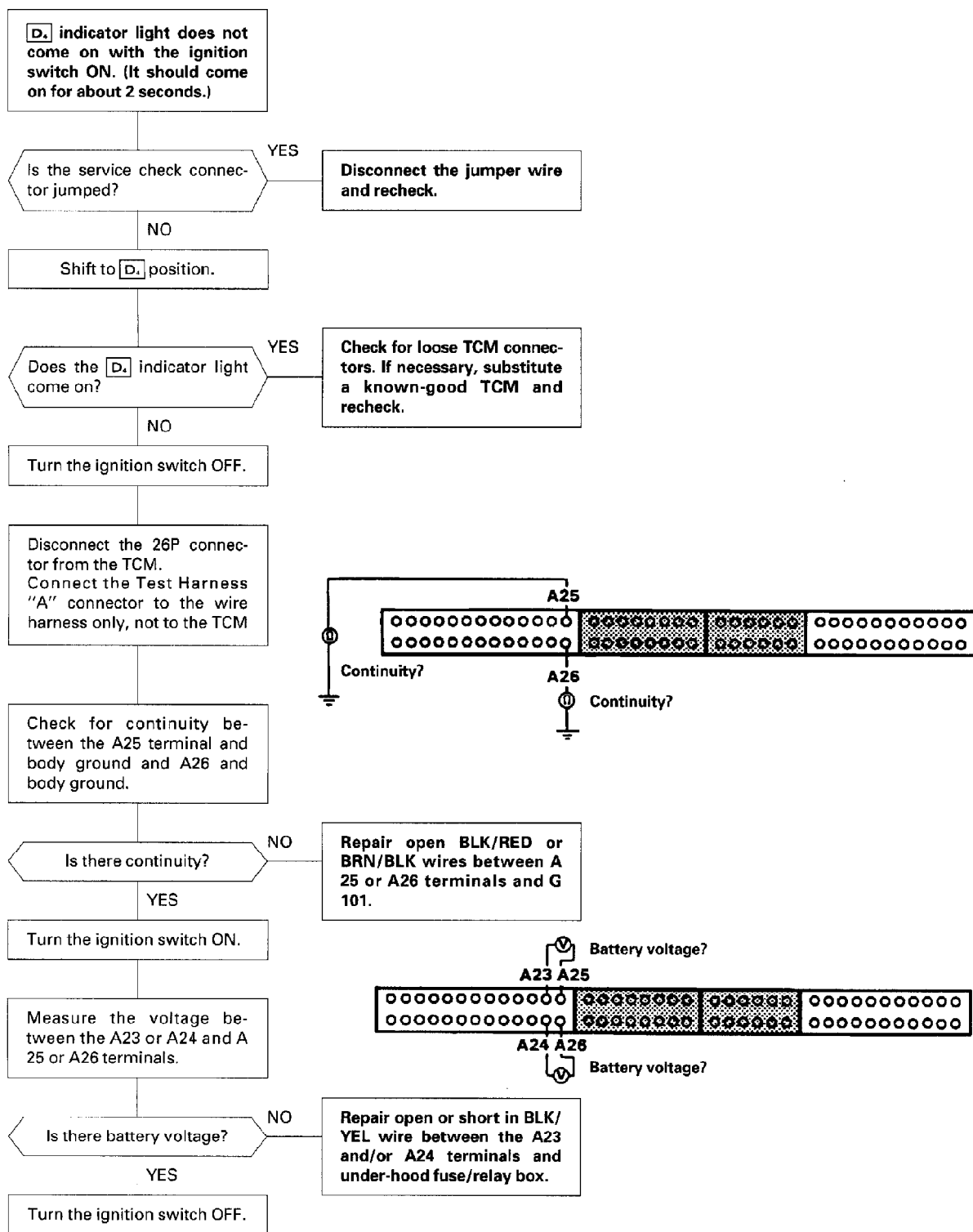


Fig. 32: Diagnostic Circuit Check "D4" Light Steadily (Ignition On)

DIAGNOSTIC CIRCUIT CHECK "D4" LIGHT WILL NOT COME ON

Refer to Figs. 33 and 34.



Continued On Next Page

95G19659

Continued From Previous Page

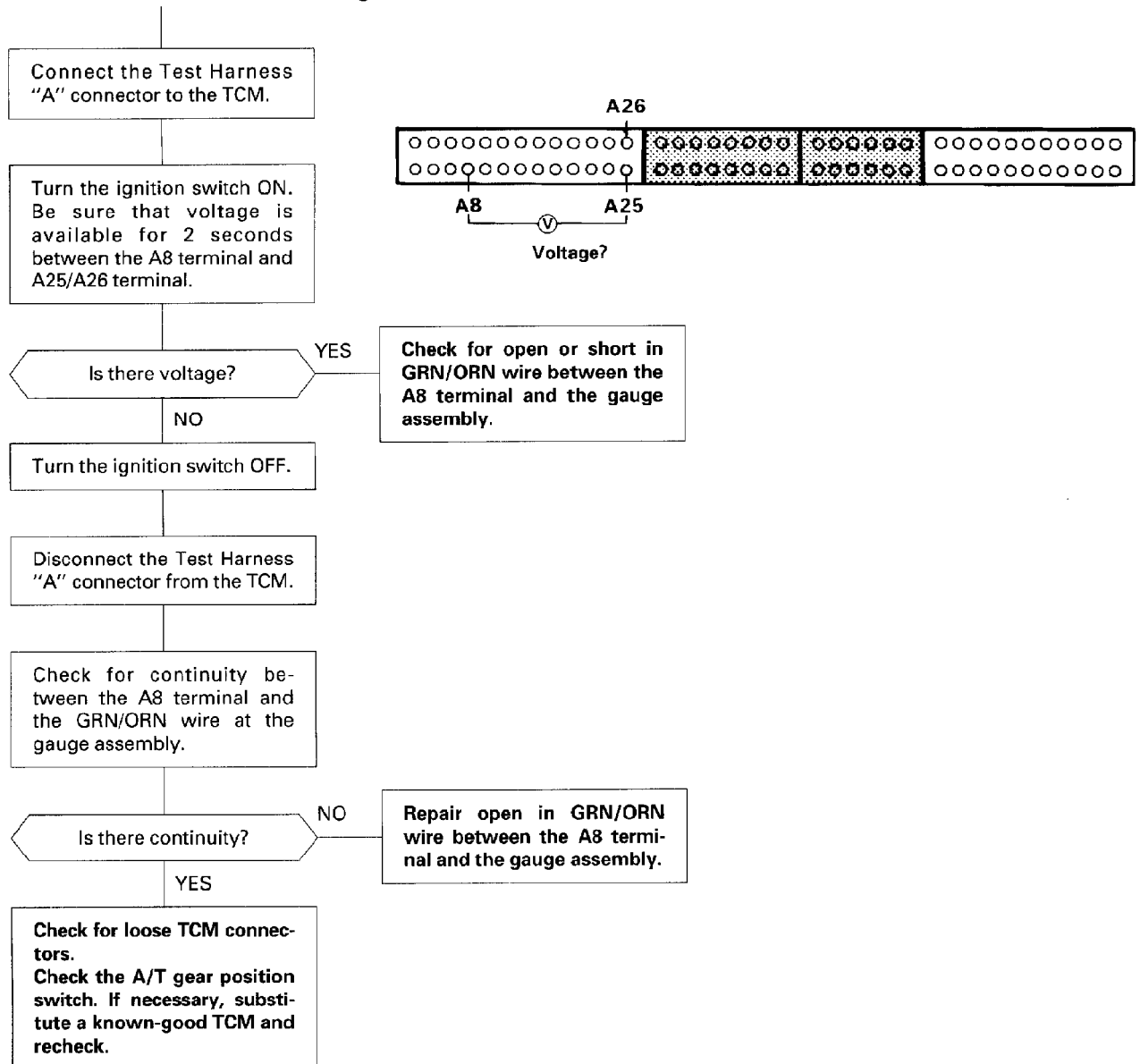
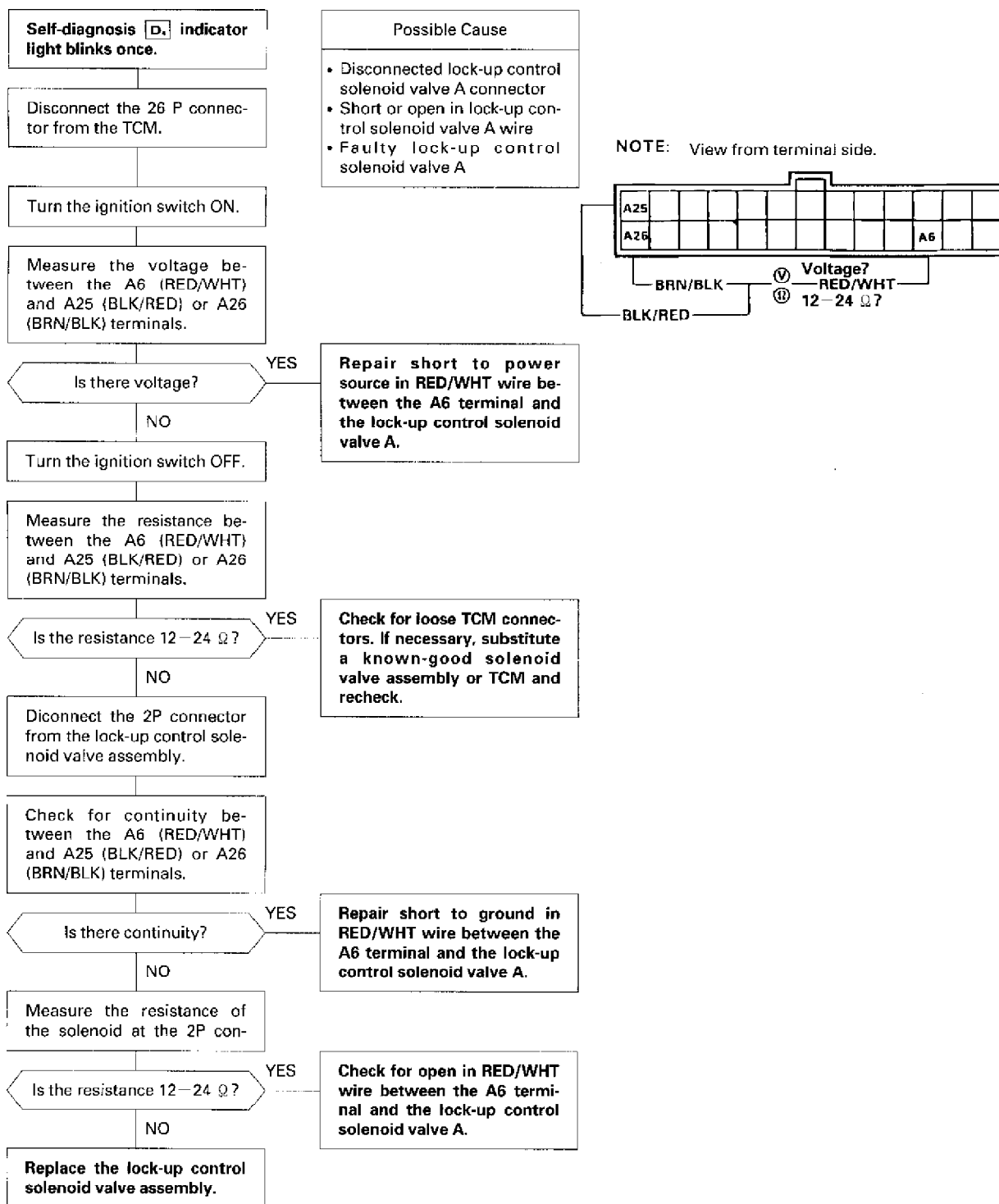


Fig. 34: Circuit Check "D4" Light Will Not Come On (2 of 2)

FAULT CODE NO. 1

NOTE: Connector is viewed from terminal end.

Refer to Fig. 35.



Refer to Fig. 36.

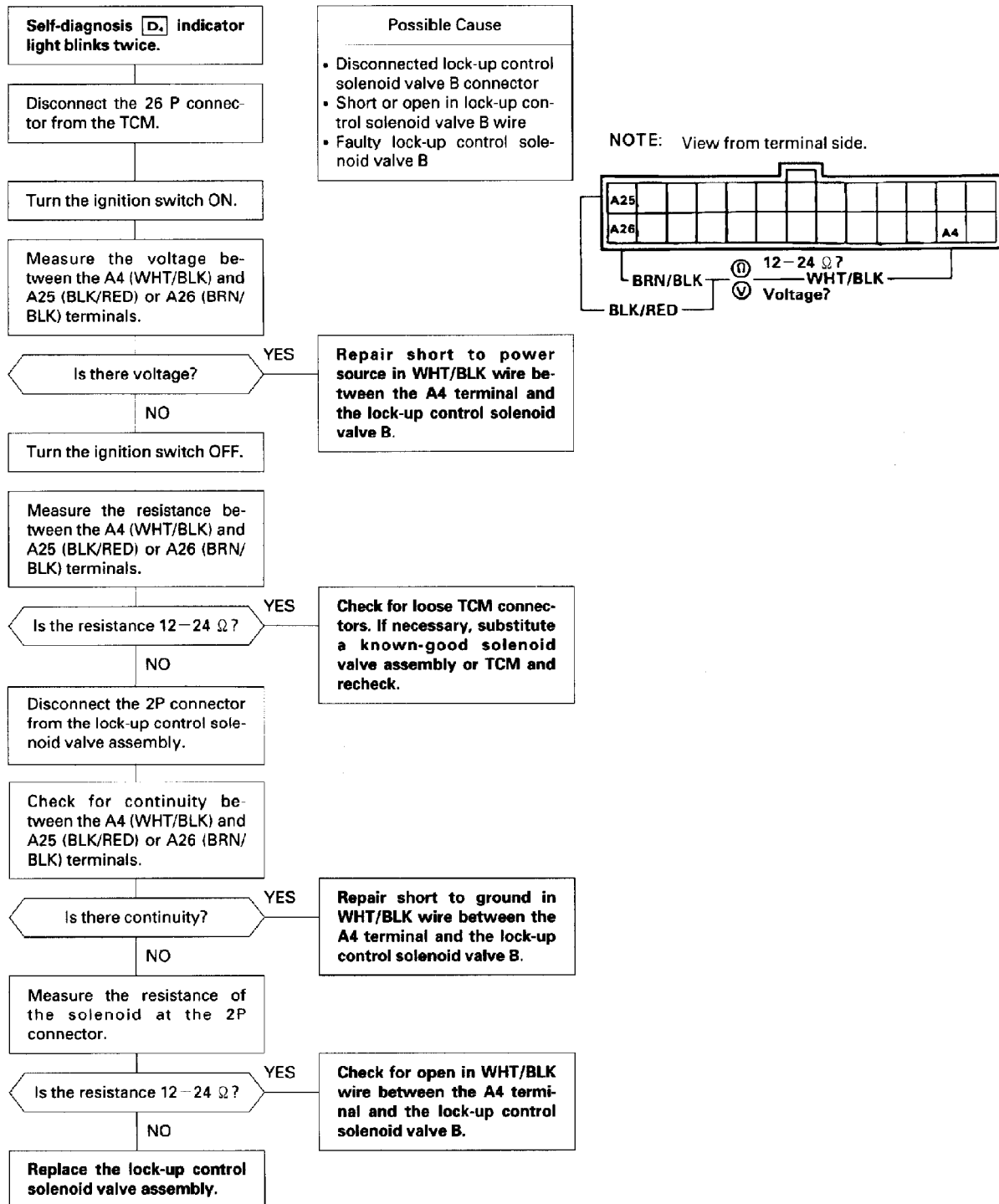


Fig. 36: Fault Code No. 2

Refer to Fig. 37.

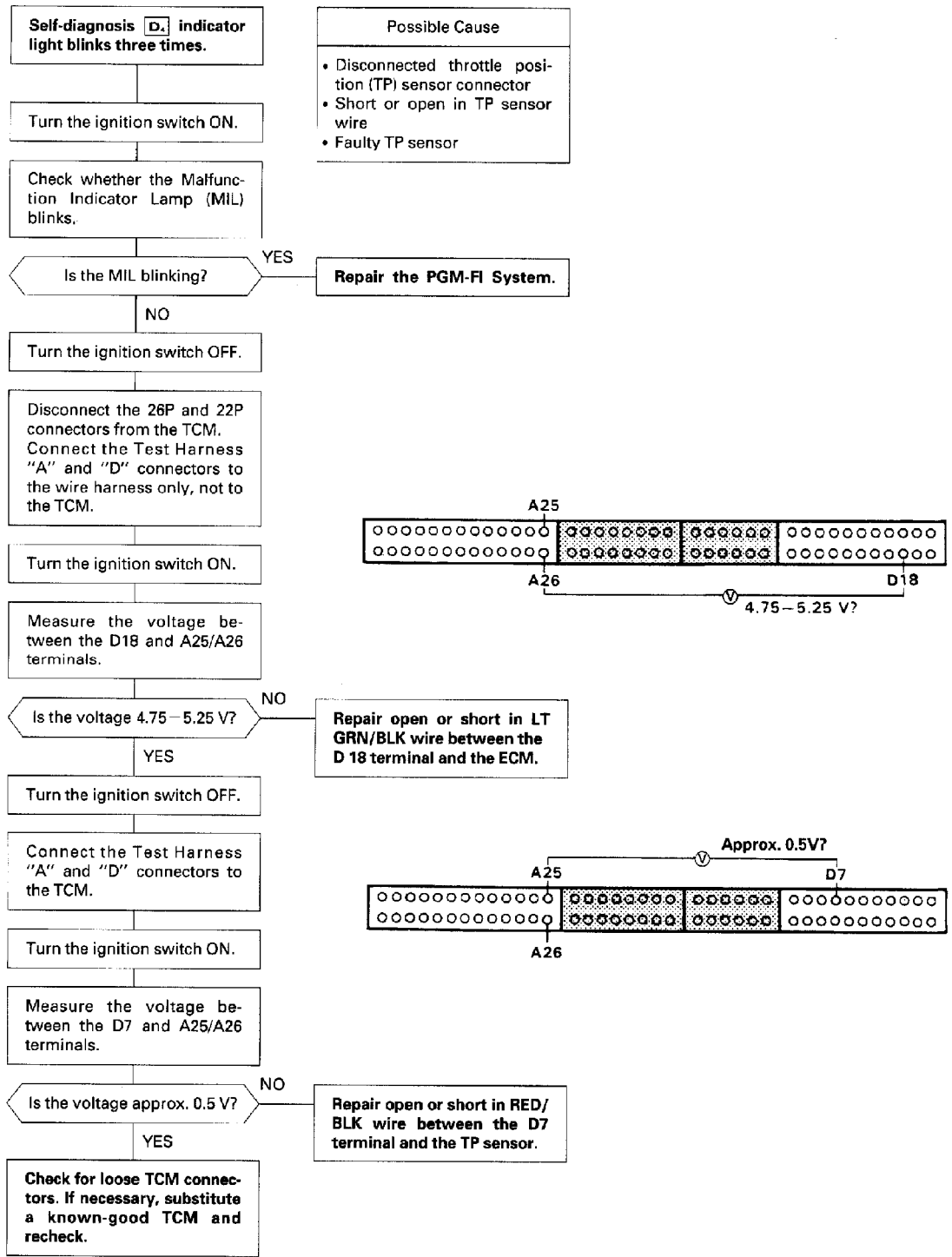
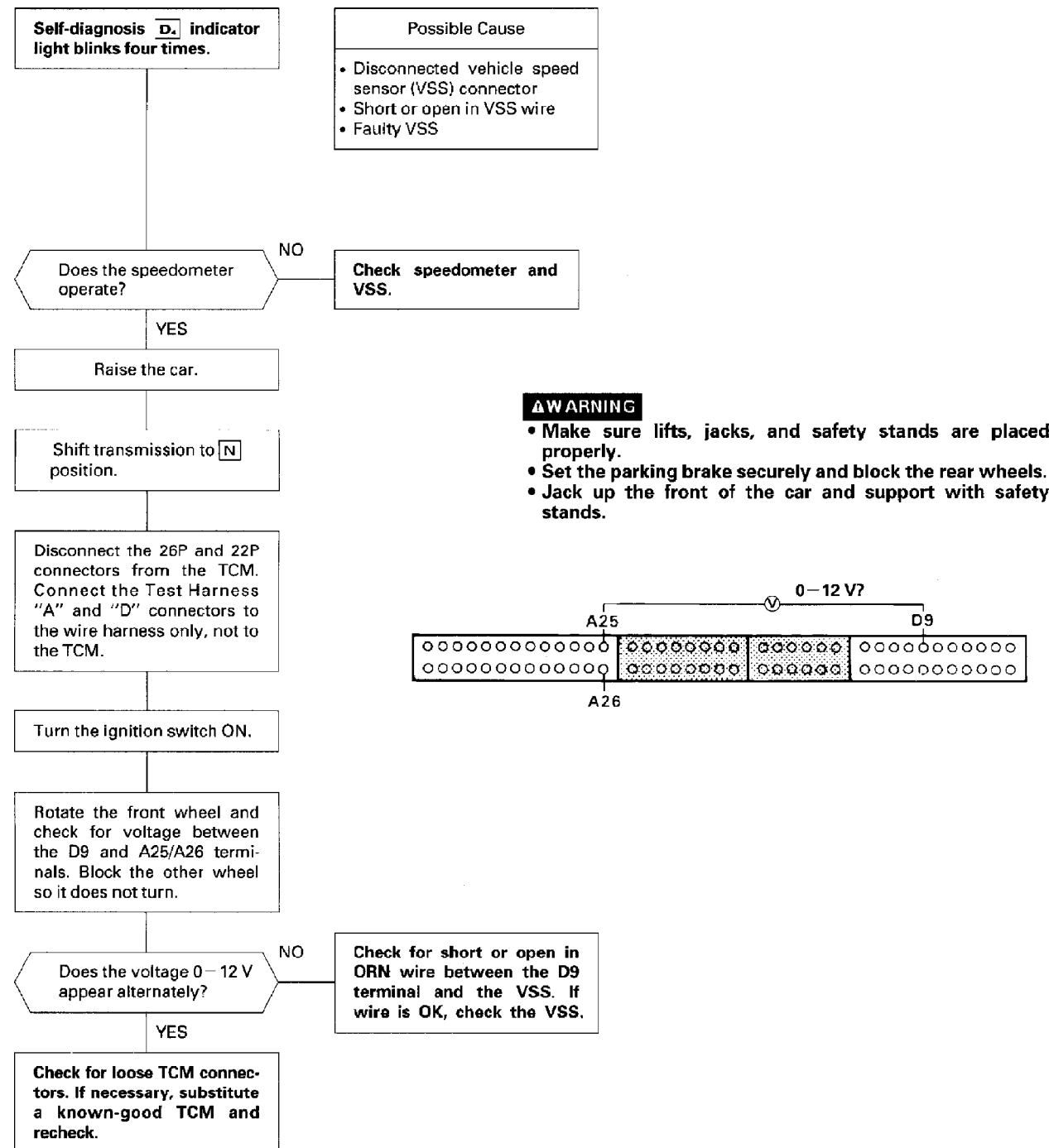


Fig. 37: Fault Code No. 3

Refer to Fig. 38.



95D19664
Fig. 38: Fault Code No. 4

FAULT CODE NO. 5

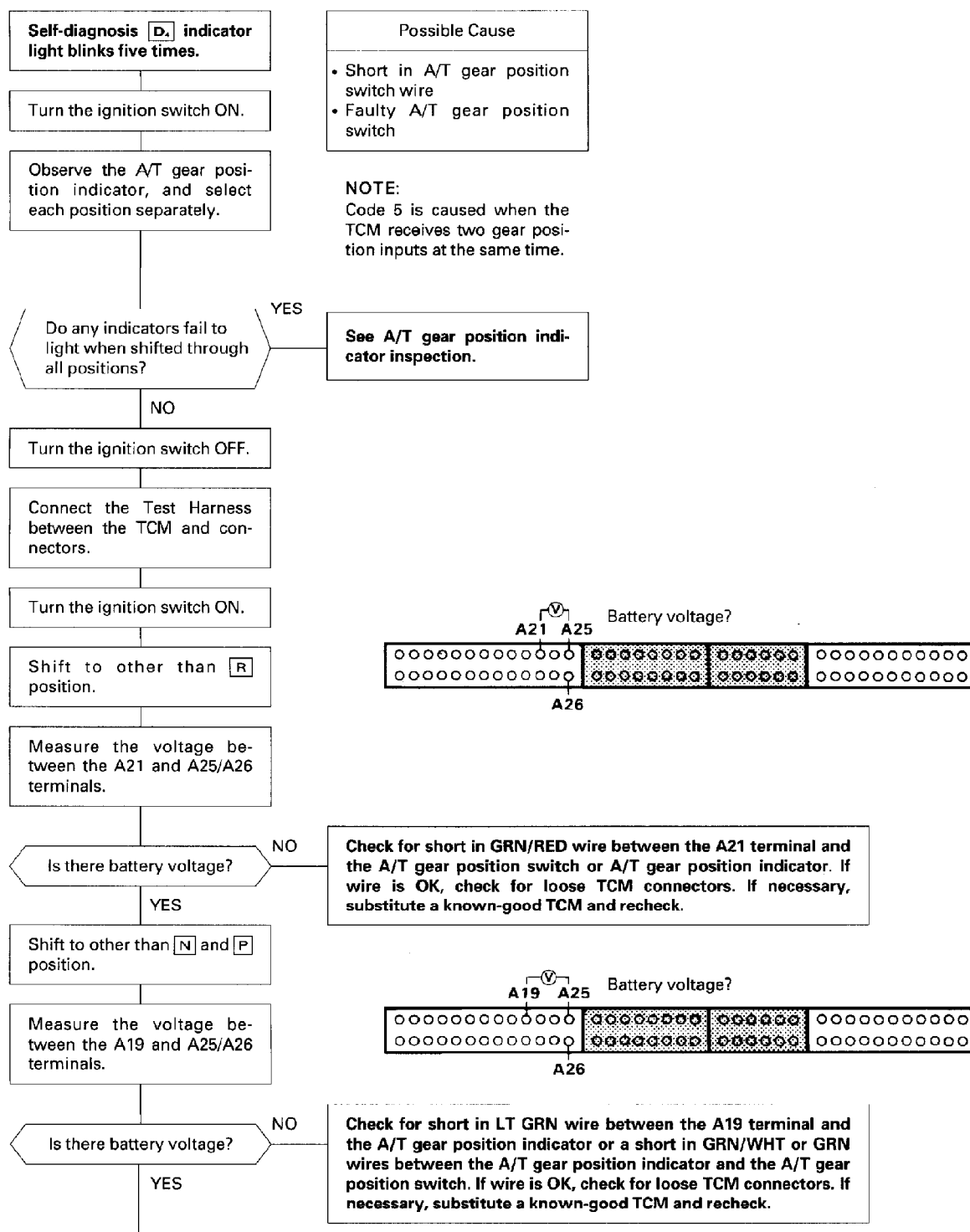


Fig. 39: Fault Code No. 5 (1 of 2)

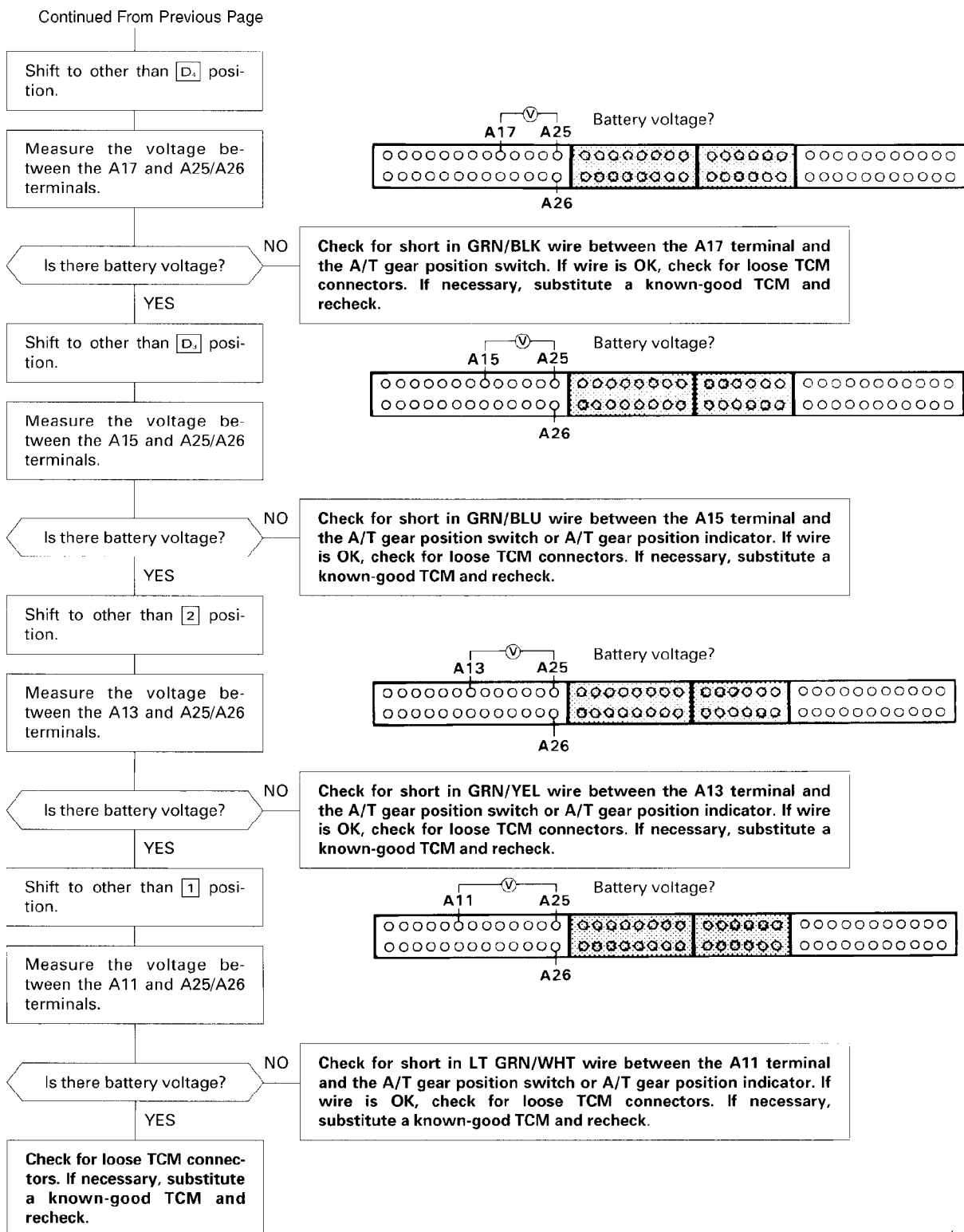
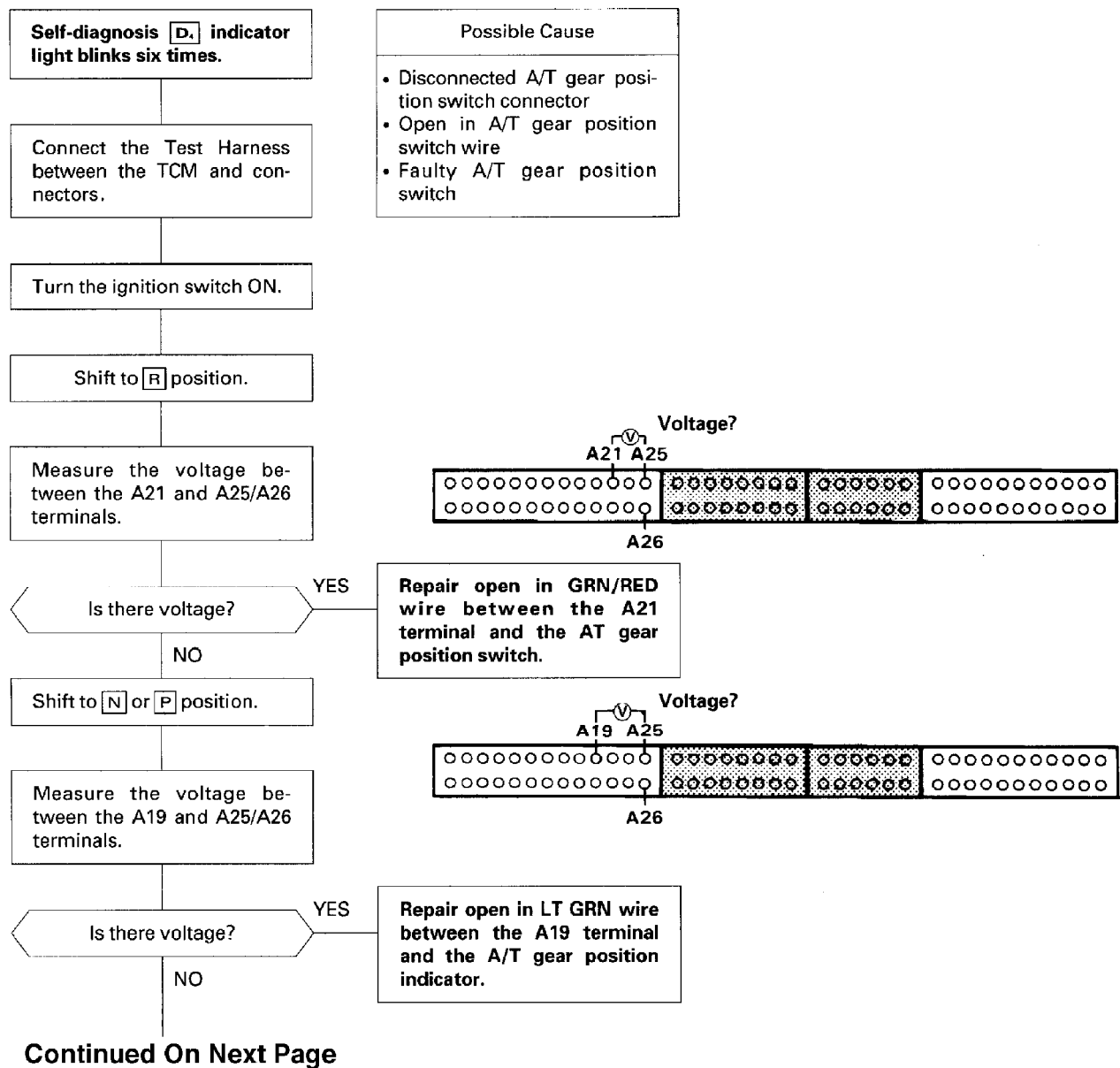


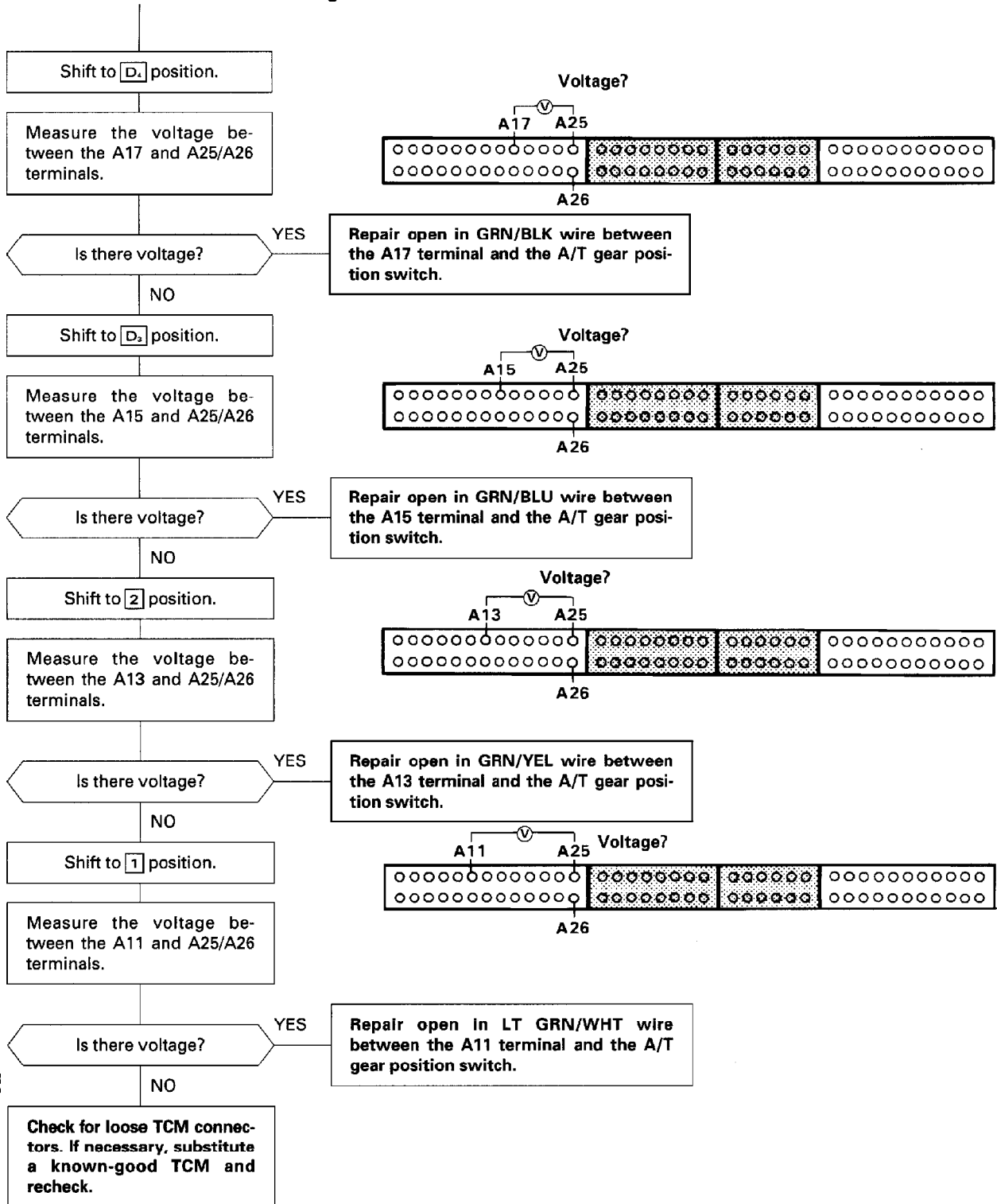
Fig. 40: **Fault Code No. 5 (2 of 2)**
AUTO TRANS DIAGNOSIS - MP1A Article Text (p. 49)
 1993 Honda Prelude For Cadi Centre Nsk CA 95051 Cor
 FAULT CODE NO. 6

Refer to Figs. 41 and 42.



95G19667
Fig. 41: Fault Code No. 6 (1 of 2)

Continued From Previous Page



AUTO TRANS

of

Fig. 42: Fault Code No. 6 (2 of 2)

FAULT CODE NO. 7

NOTE: Connector is viewed from terminal end.

Refer to Fig. 43.

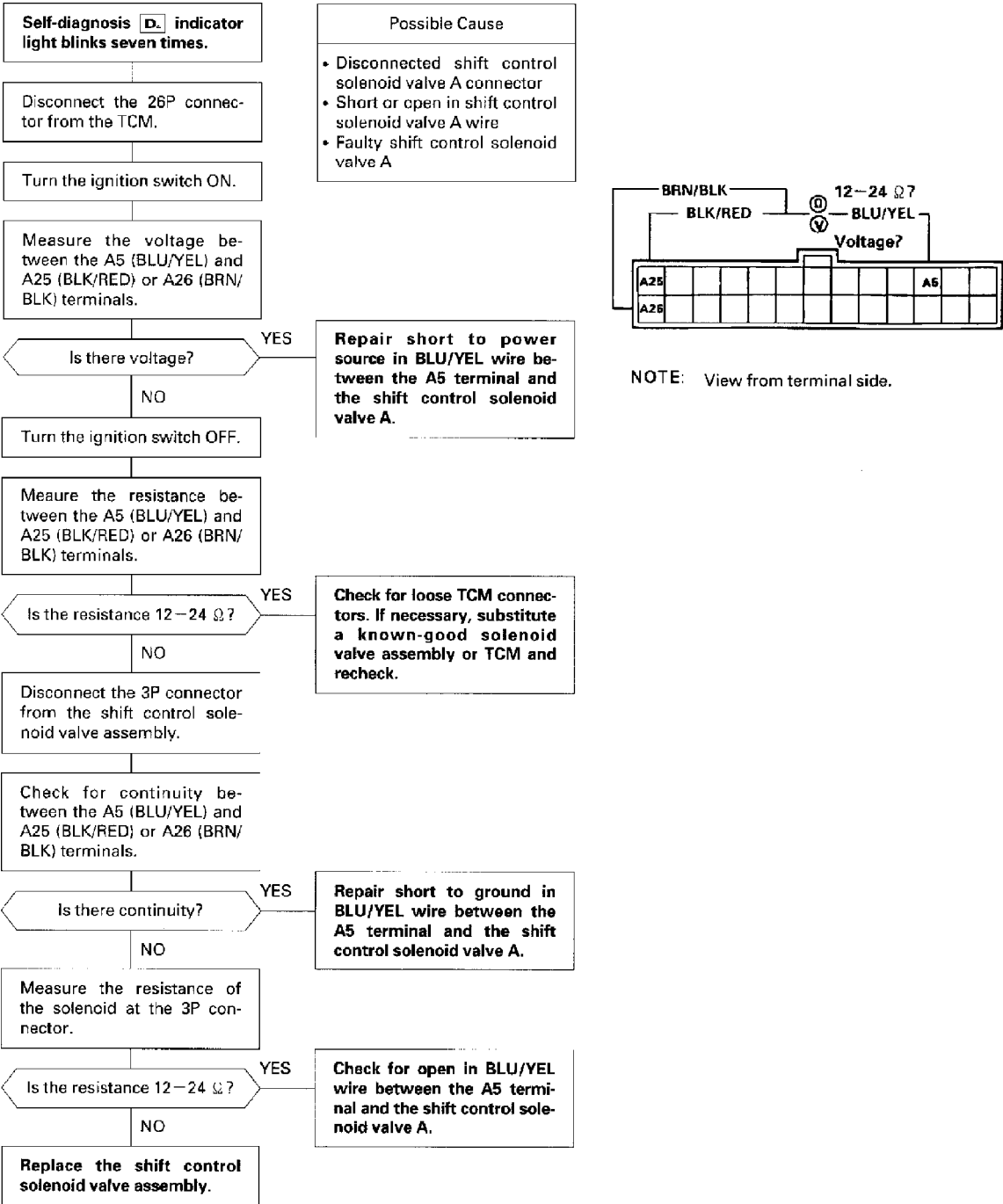
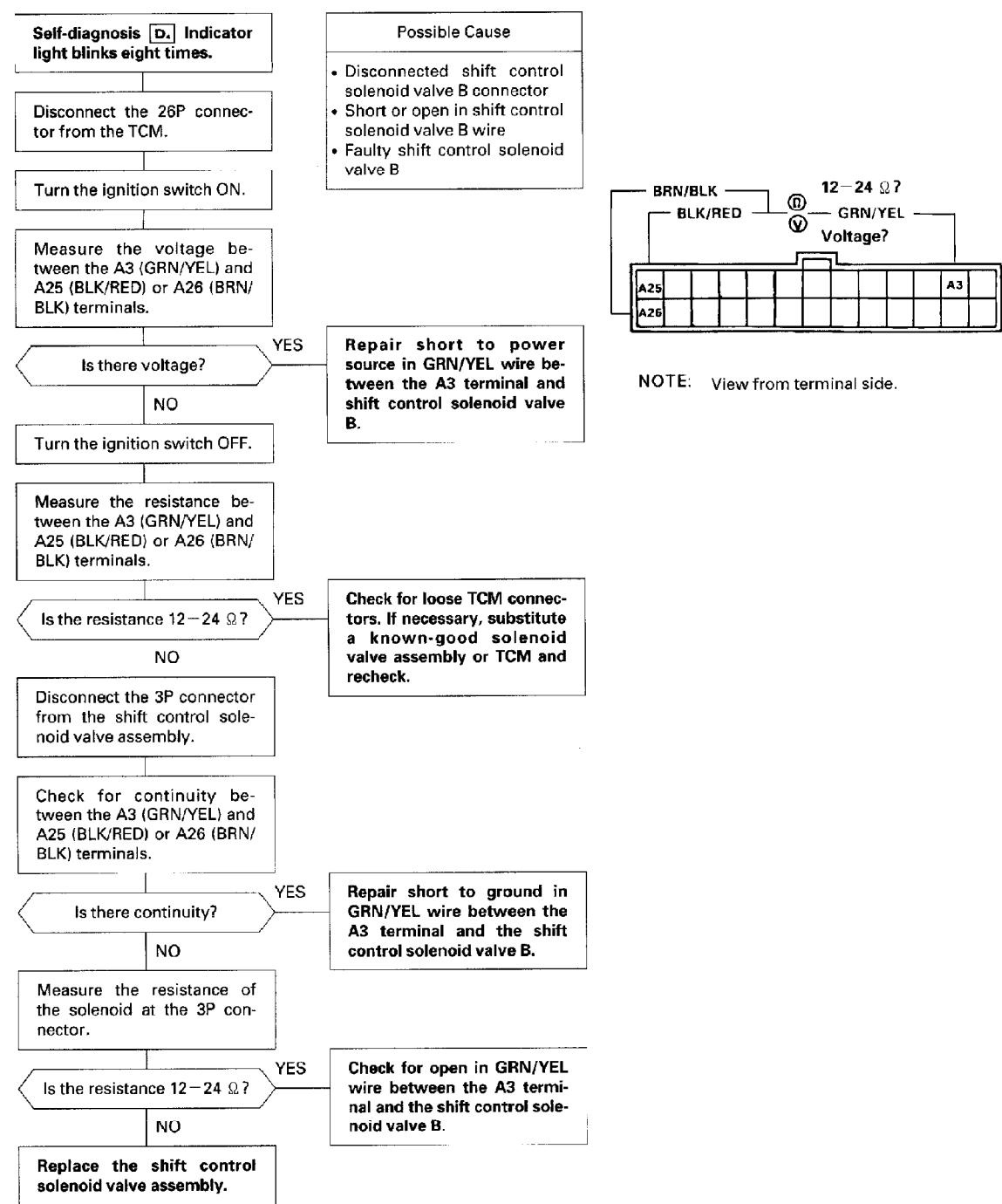


Fig. 43: Fault Code No. 7

NOTE: Connector is viewed from terminal end.

Refer to Fig. 44.



Refer to Figs. 45 and 46.

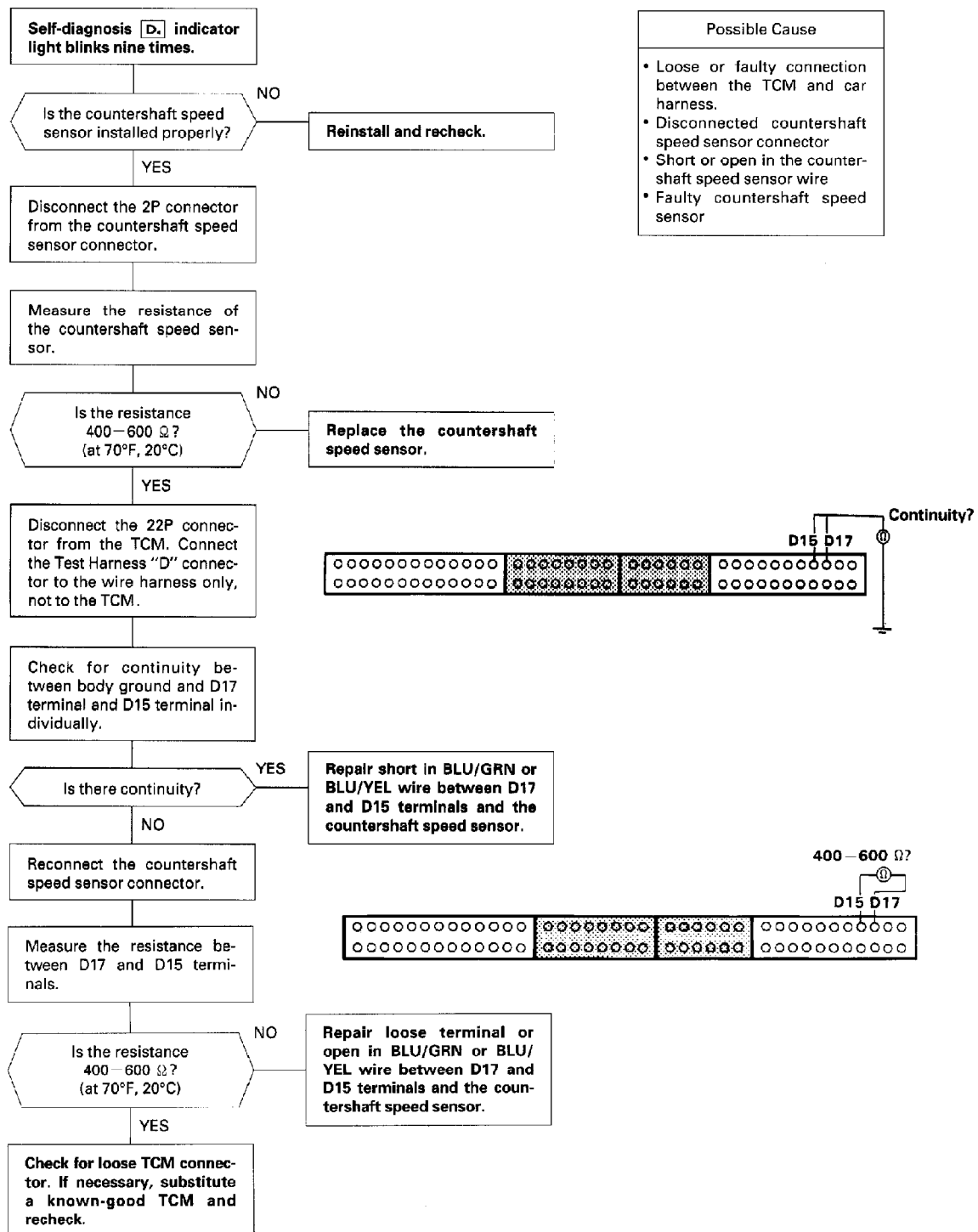


Fig. 45: Fault Code No. 9 (1 of 2)

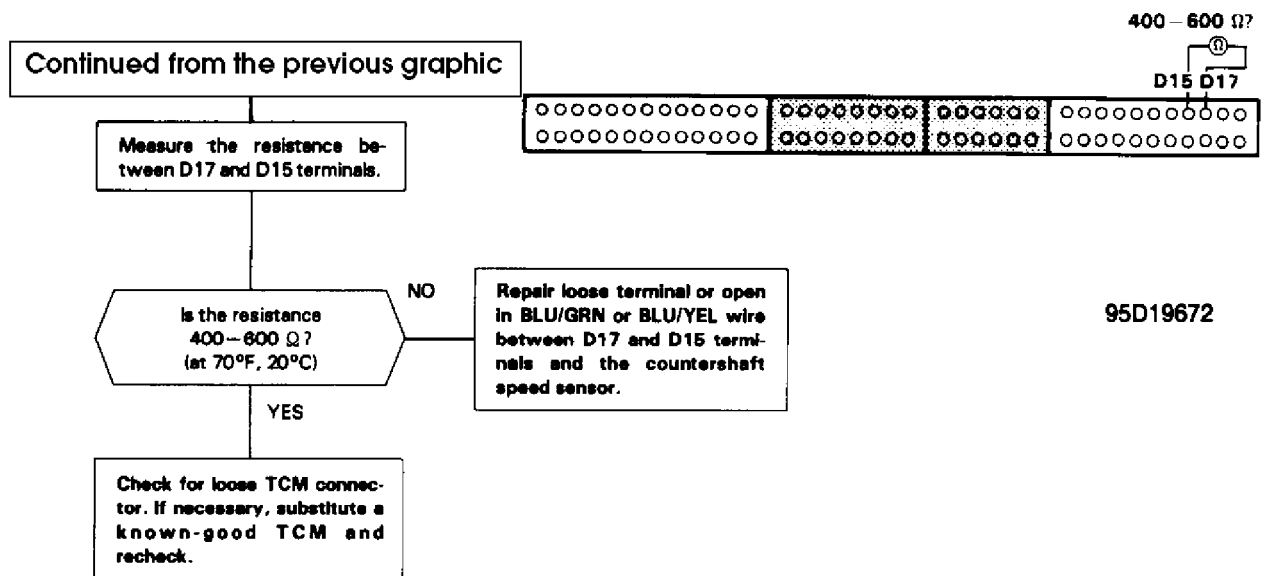


Fig. 46: Fault Code No. 9 (2 of 2)

FAULT CODE NO. 10

Refer to Fig. 47.

AUTO TRANS

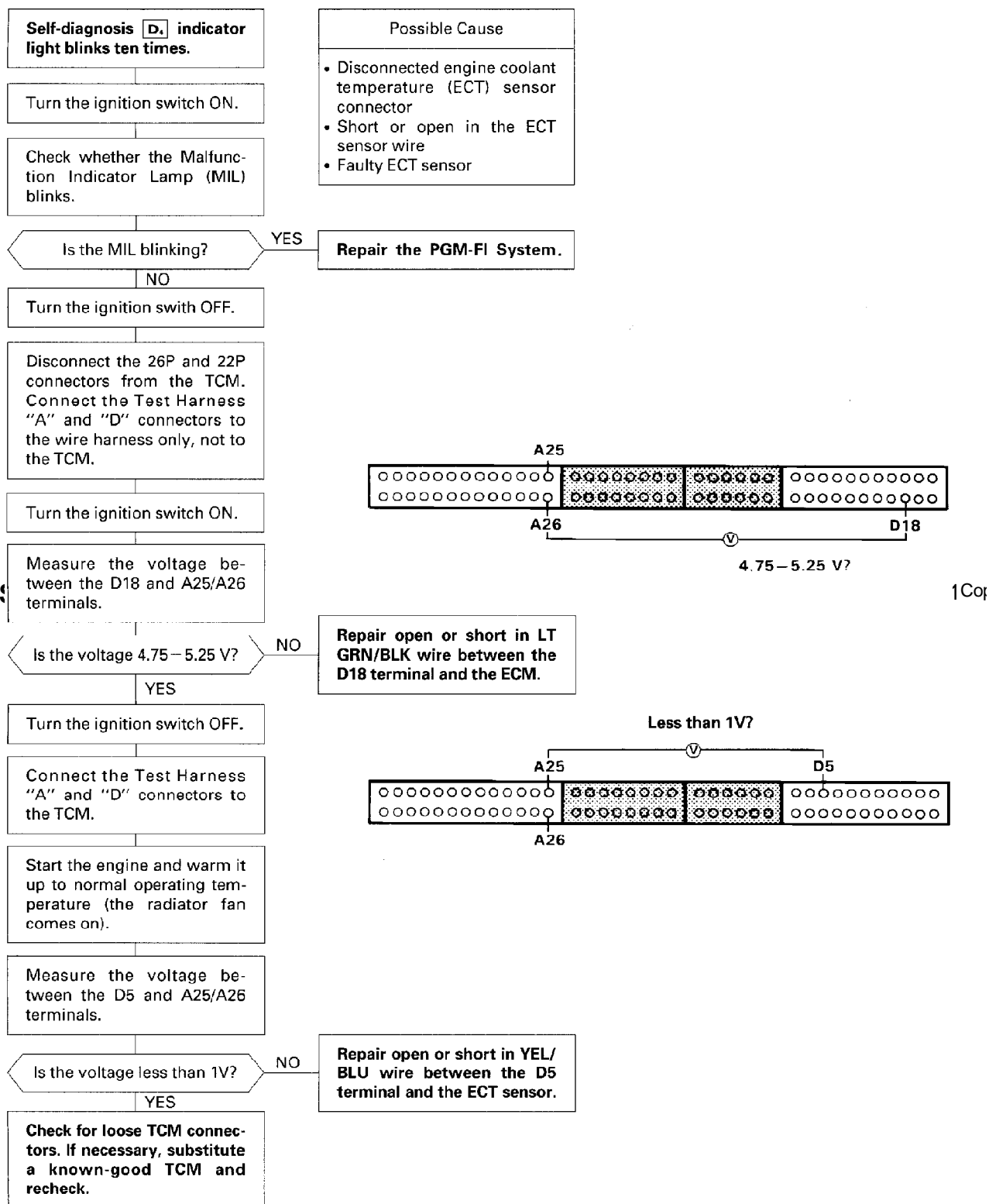
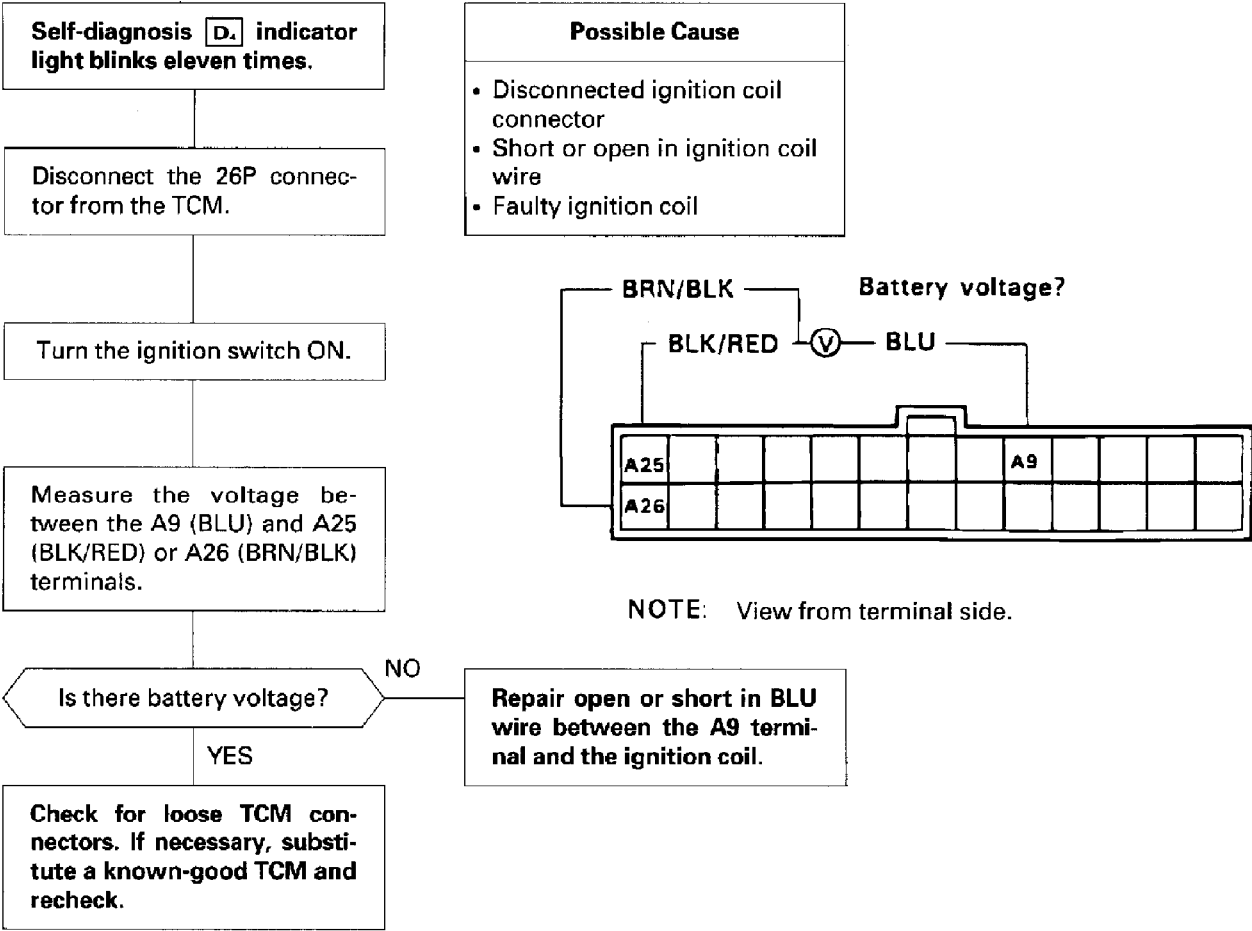


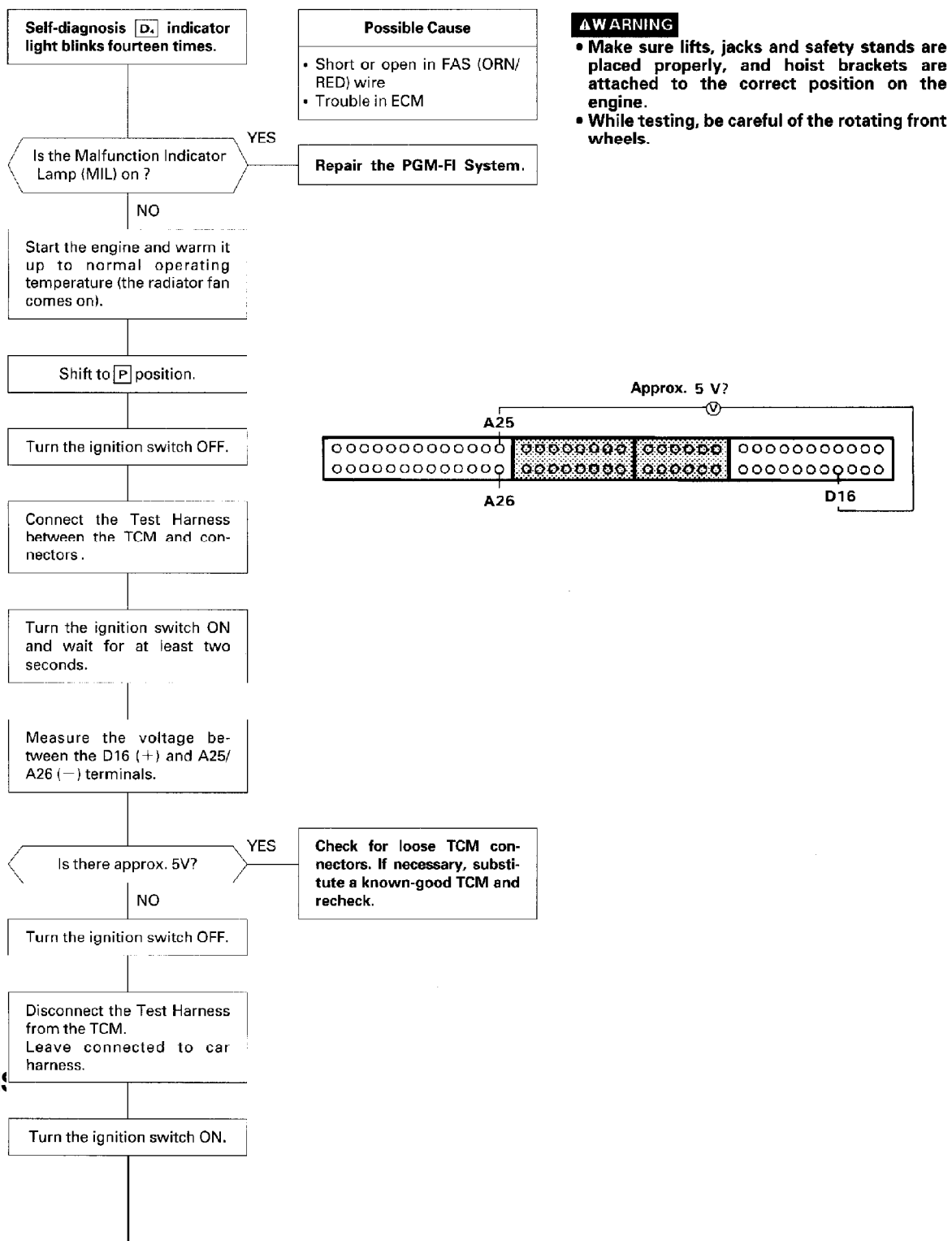
Fig. 47: Fault Code No. 10

FAULT CODE NO. 11

NOTE: Connector is viewed from terminal end.

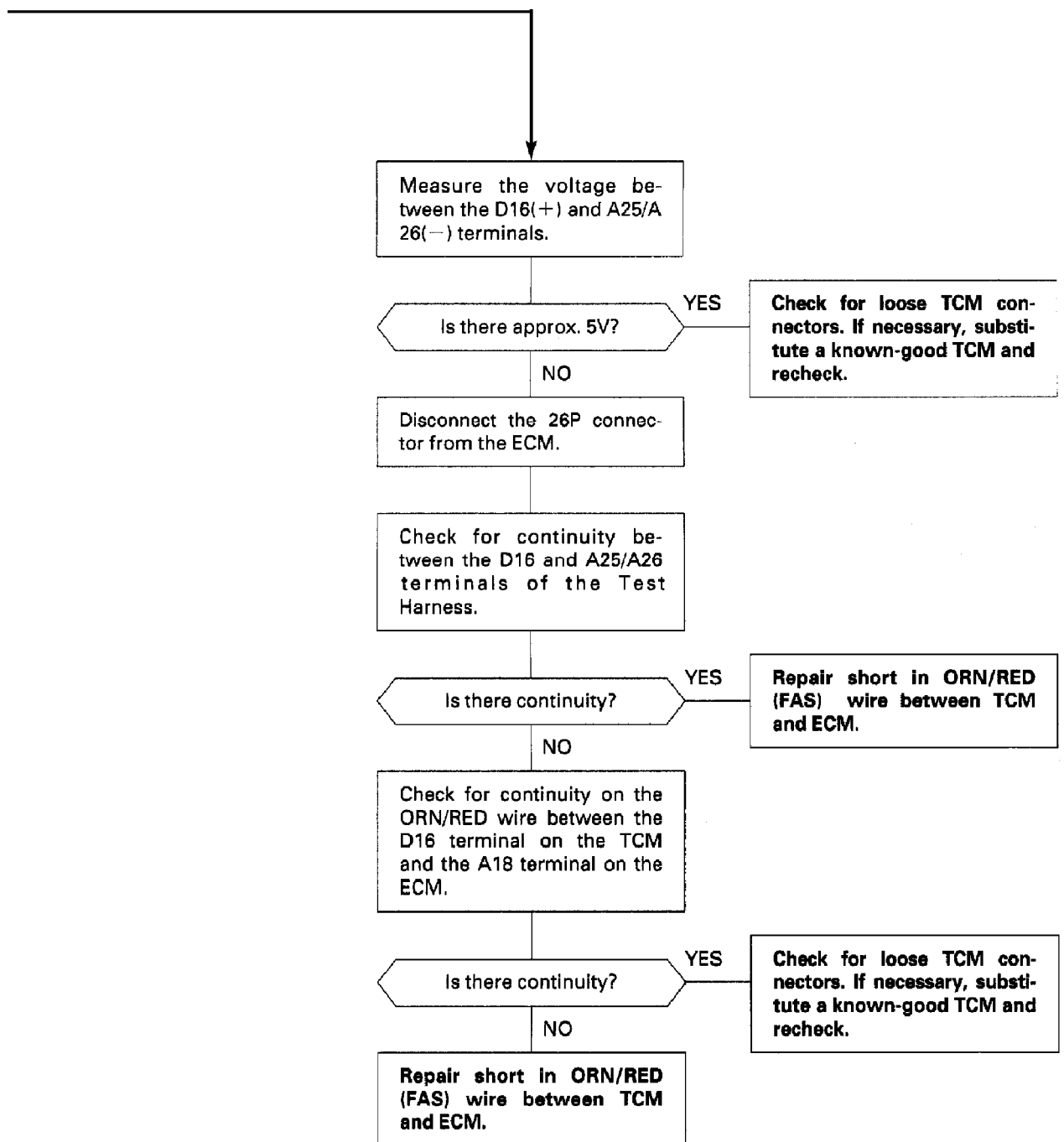
Refer to Fig. 48.





AUTO TRANS

Fig. 49: Fault Code No. 14 (1 of 2)



95H19676

Fig. 50: Fault Code No. 14 (2 of 2)

FAULT CODE NO. 15

Refer to Figs. 51 and 52.

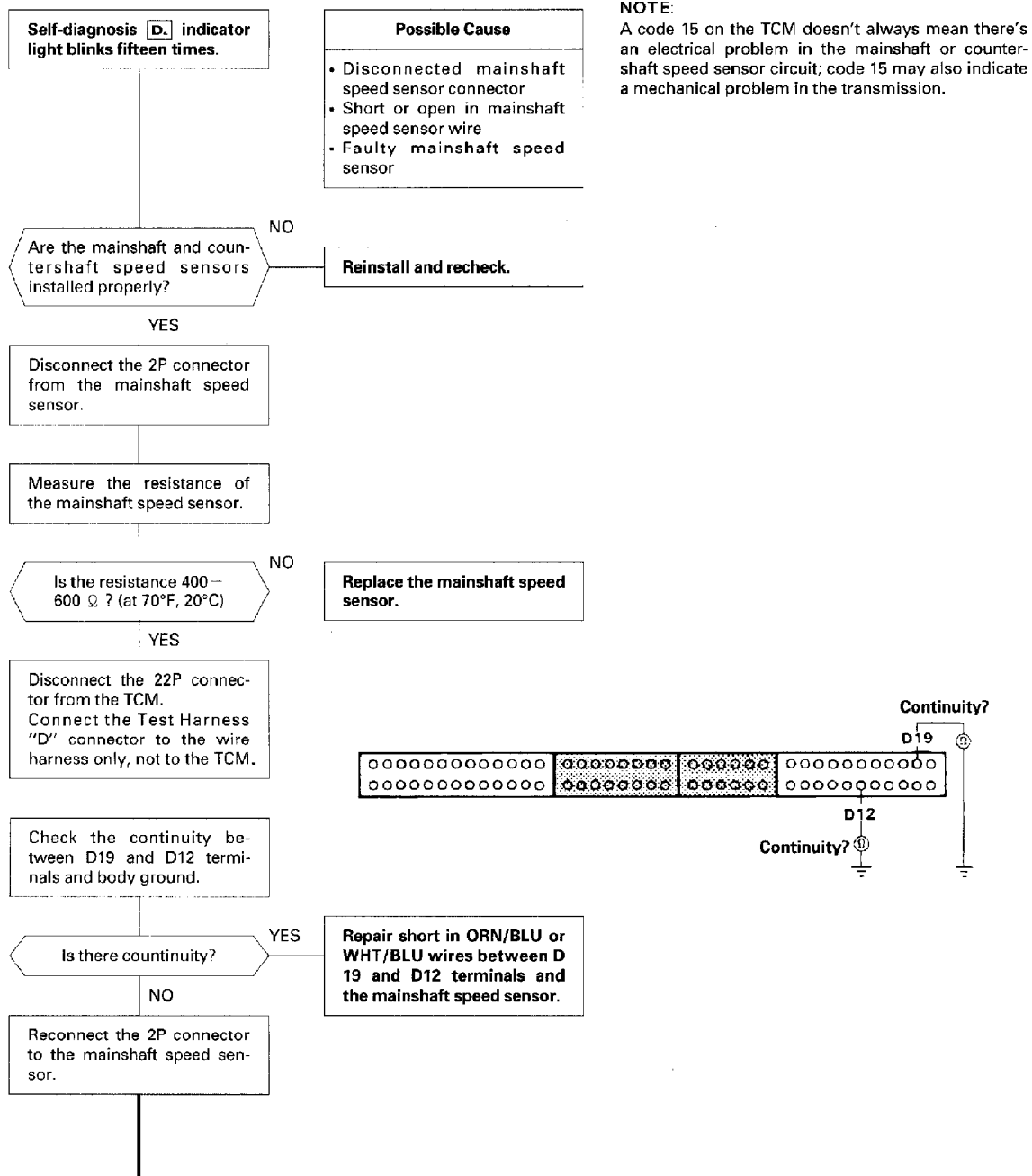


Fig. 51: Fault Code No. 15 (1 of 2)

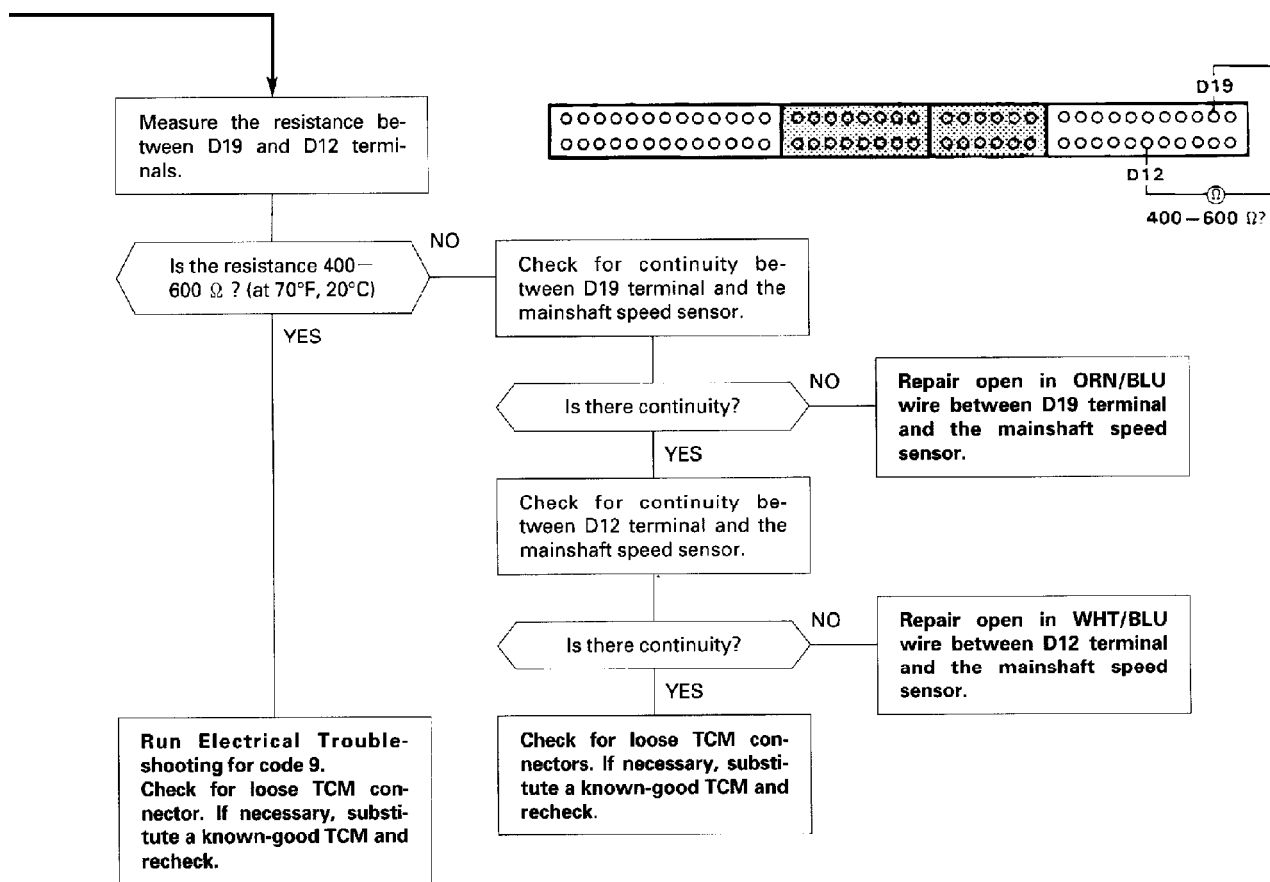
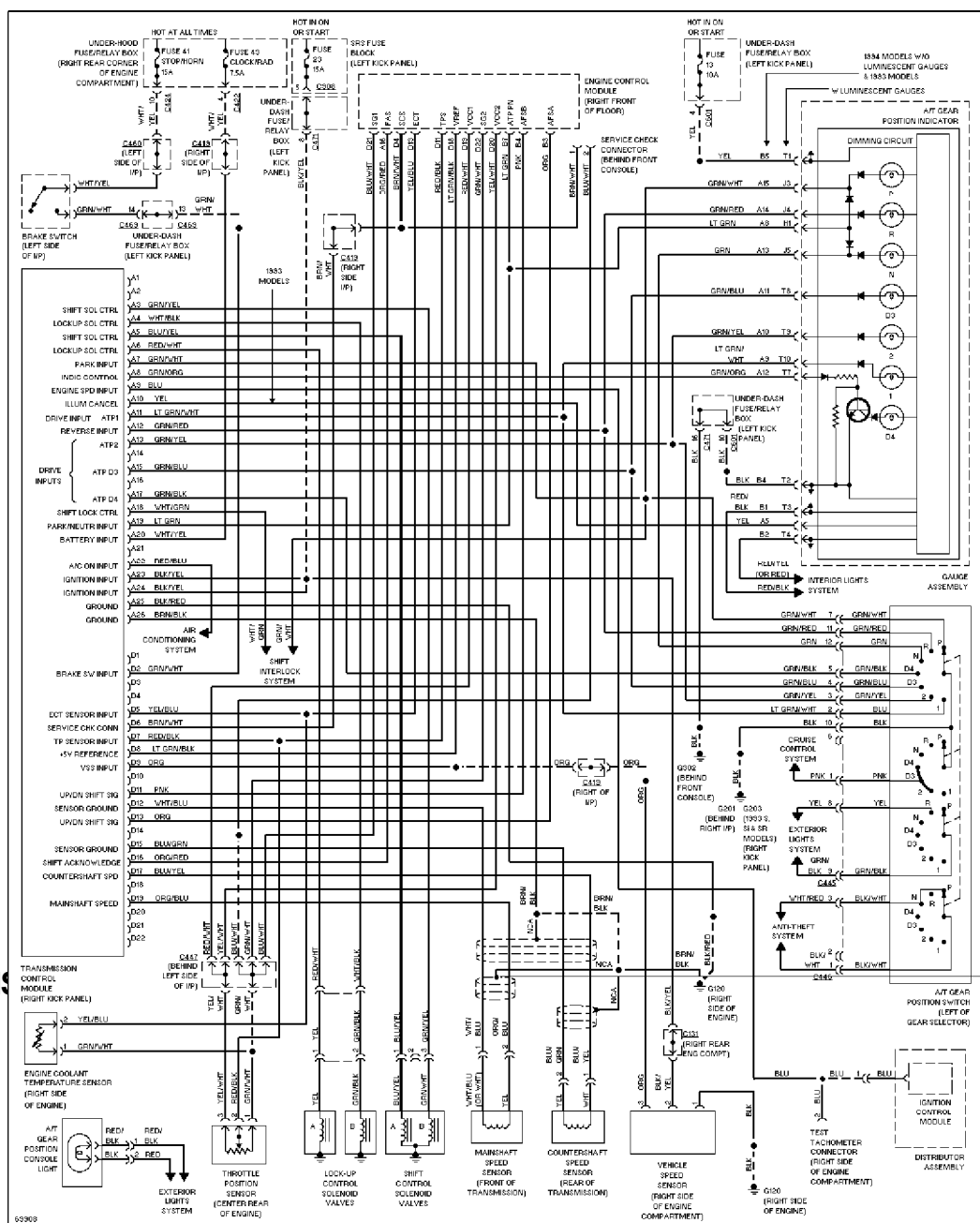


Fig. 52: Fault Code No. 15 (2 of 2)

WIRING DIAGRAMS



AUTO TRANS

Nsk CA 95051Coq

Fig. 53: Transaxle Wiring Diagram (1993-94 Prelude)

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

AA

Application

INCH Lbs.

Air Bleed Bolt 89 (10.0)

Countershaft Speed Sensor Bolt 106 (12.0)

Lock-Up Control Solenoid Valve Bolt 106 (12.0)
Mainshaft Speed Sensor Bolt 106 (12.0)
Shift Control Solenoid Valve Bolt 106 (12.0)
Shift Lock Solenoid Nut 89 (10.0)
AA

END OF ARTICLE