2000-06 TRANSMISSION

Continuously Variable Transmission (CVT) - Insight

CVT

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07GAB-PF50101 or 07GAB-PF50100	Mainshaft Holder	1
②	07GAD-SD40101	Attachement, 78 x 90 mm	1
③	07GAE-PG40200 or 07GAE-PG4020A	Clutch Spring Compressor Bolt Assembly	1
④	07HAC-PK40102	Housing Puller	1
⑤	07HAJ-PK40201	Preload Inspection Tool	1
⑥	07JAB-001020A	Holder Handle	1
⑦	07JAD-PH80101	Oil Seal Driver Attachment	1
⑧	07JAF-SJ80110	Installer Shaft, 14 x 165 mm	1
⑨	07JAF-SJ80120	Installer Nut, 14 mm	2
⑩	07KAF-PS30120	Bearing Installer Attachment	1
⑪	07KAF-PS30200	Bearing Separator	1
⑫	07LAD-PW50601	Attachment, 40 x 50 mm	2
⑬	07LAE-PX40100	Clutch Spring Compressor Attachment	1
⑭	07LAF-PZ70110	Bearing Installer Attachment	1
⑮	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	3
⑯	07MAJ-PY40120	A/T Pressure Hose Adapter	3
⑰	07QAD-P0A0100	Attachment, 42 mm I.D.	1
⑱	07RAB-TB4010A or 07RAB-TB4010B	Companion Flange Holder	2
⑲	07SAZ-001000A	Backprobe Set	2
⑳	07ZAE-PRP0100	Clutch Compressor Attachment	1

④: If the top arm is too short, replace it with 07SAC-P0Z1001.
⑬: 07HAE-PL50101 may also be used to substitute one of these tools.

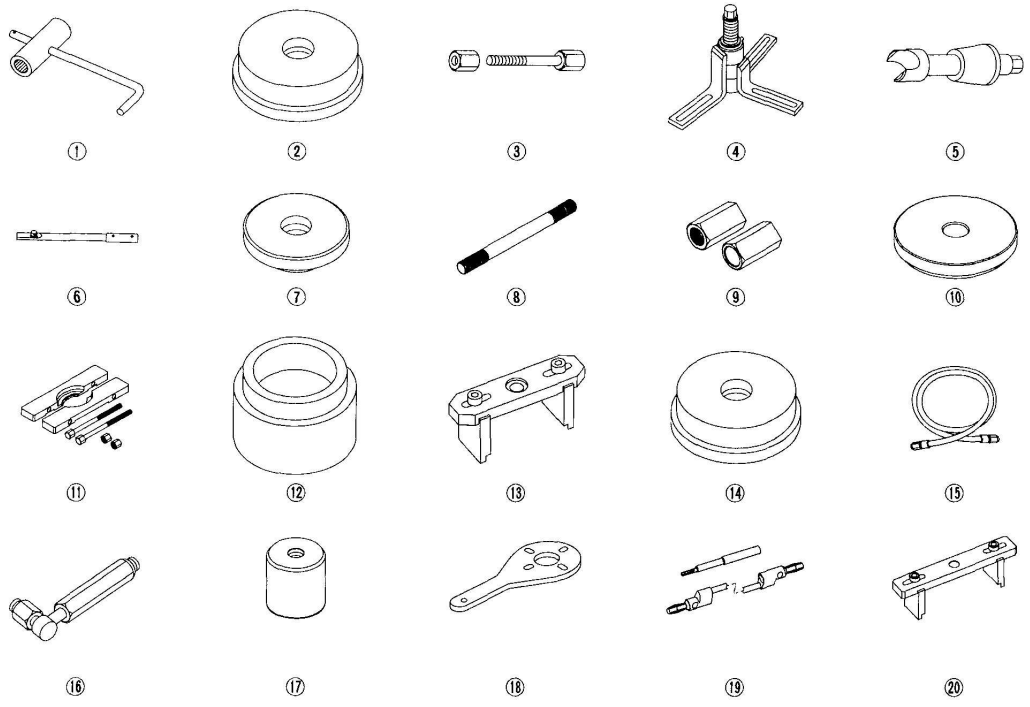

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Fig. 1: Special Tools Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

GENERAL TROUBLESHOOTING INFORMATION

How to Check for DTCs with the Honda Diagnostic System

When the transmission control module (TCM) senses an abnormality in the input or output systems, the D indicator (A) in the gauge assembly (B) will usually blink.

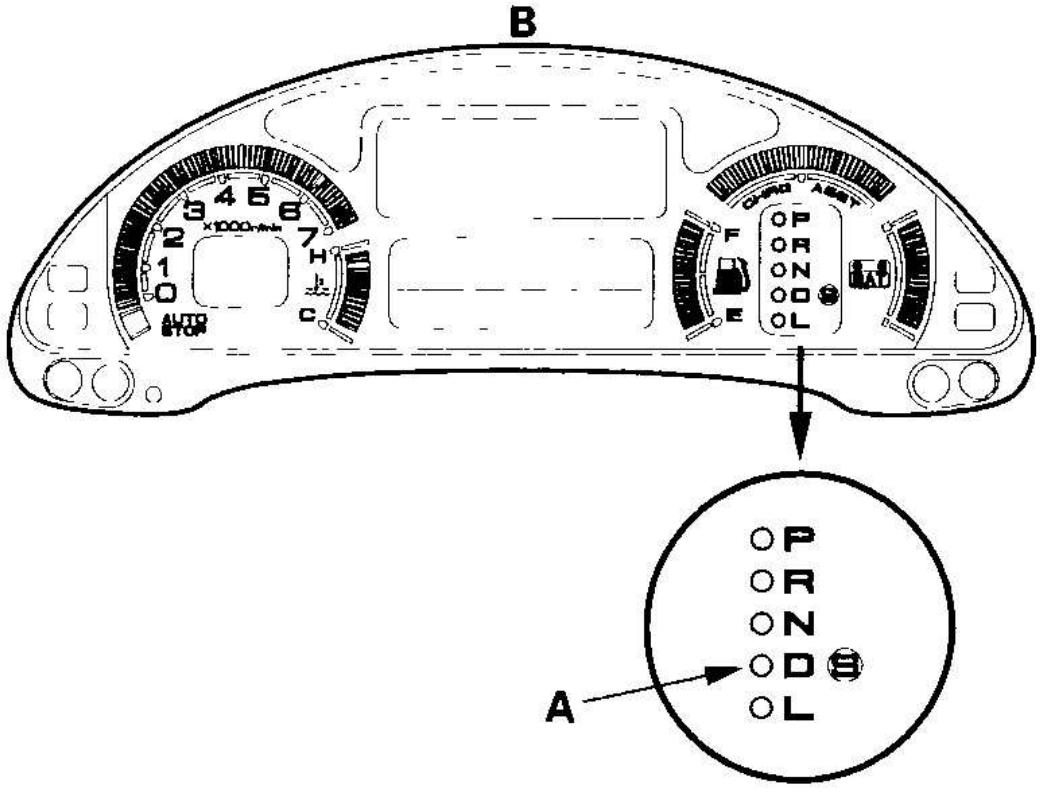

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Fig. 2: Identifying Illumination Of D Indicator In Gauge Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the data link connector (DLC) (A) (located under the driver's side of the dashboard) is connected to the Honda diagnostic system (HDS), it will indicate the

diagnostic trouble code (DTC) when the ignition switch is turned ON (II) and the appropriate menu is selected.

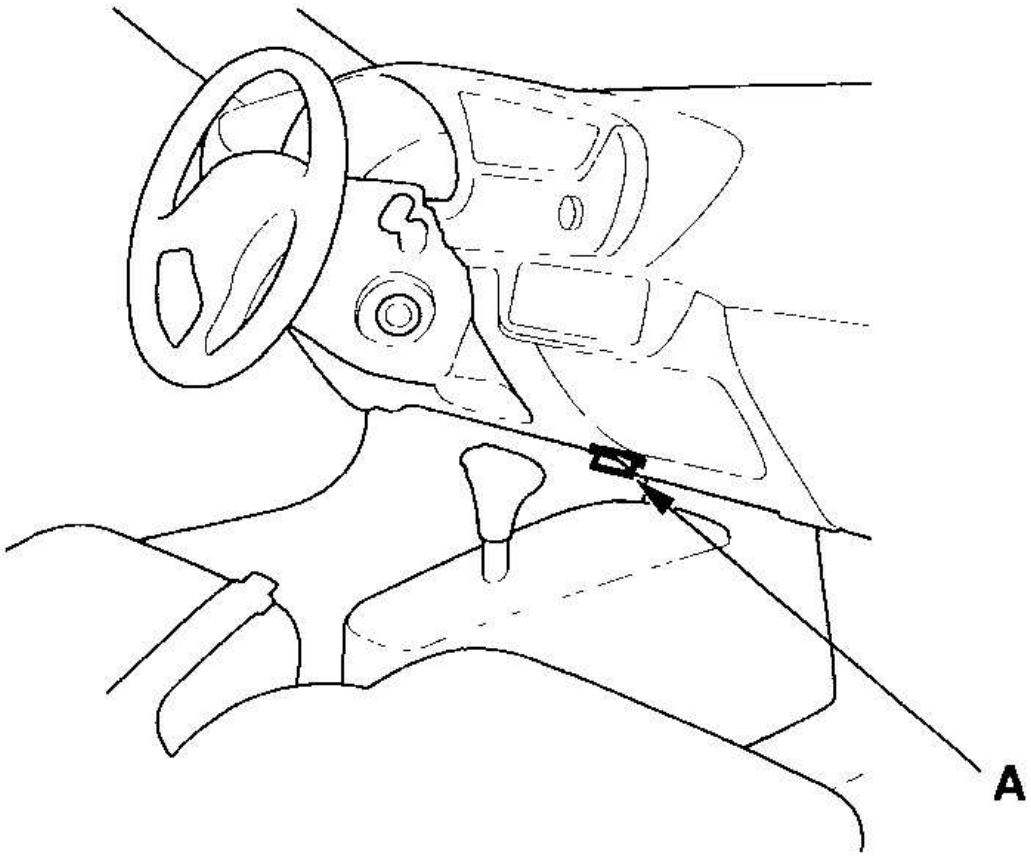

Fig. 3: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the D indicator or malfunction indicator lamp (MIL) has been reported on, or if a driveability problem is suspected, follow this procedure:

1. Connect the HDS to the DLC. (See the HDS user's manual for specific instructions.)
2. Turn the ignition switch ON (II), select A/T system, and observe the DTC in

the DTCs MENU on the HDS screen.

3. Record all fuel and emissions DTCs, A/T DTCs, and freeze data.
4. If there is a fuel and emissions DTC, first check the fuel and emissions system as indicated by the DTC (except for DTC P0700, DTC P0700 means there is one or more A/T DTCs, and no problems were detected in the fuel and emissions circuit of the ECM).
5. Clear the DTC and data.
6. Drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, and then recheck for a DTC. If the A/T DTC returns, go to the **DTC TROUBLESHOOTING INDEX** . If the DTC does not return, there was an intermittent problem within the circuit. Make sure all pins and terminals in the circuit are tight.

Symptom Troubleshooting Versus DTC Troubleshooting

Some symptoms will not trigger diagnostic trouble codes (DTCs) or cause the D indicator to blink. If the malfunction indicator lamp (MIL) was reported ON or the D indicator has been blinking, check for DTCs. If the vehicle has an abnormal symptom, and there are no DTCs stored, go to the **SYMPTOM TROUBLESHOOTING INDEX** . Check the list of probable cause(s) for the symptom, in the sequence listed, until you find the problem.

How to Check for DTCs with the SCS Mode (retrieving the flash codes)

NOTE: The preferred method is to use the HDS to retrieve the DTCs.

When the TCM senses an abnormality in the input or output system, the D indicator (A) in the gauge assembly (B) will usually blink.

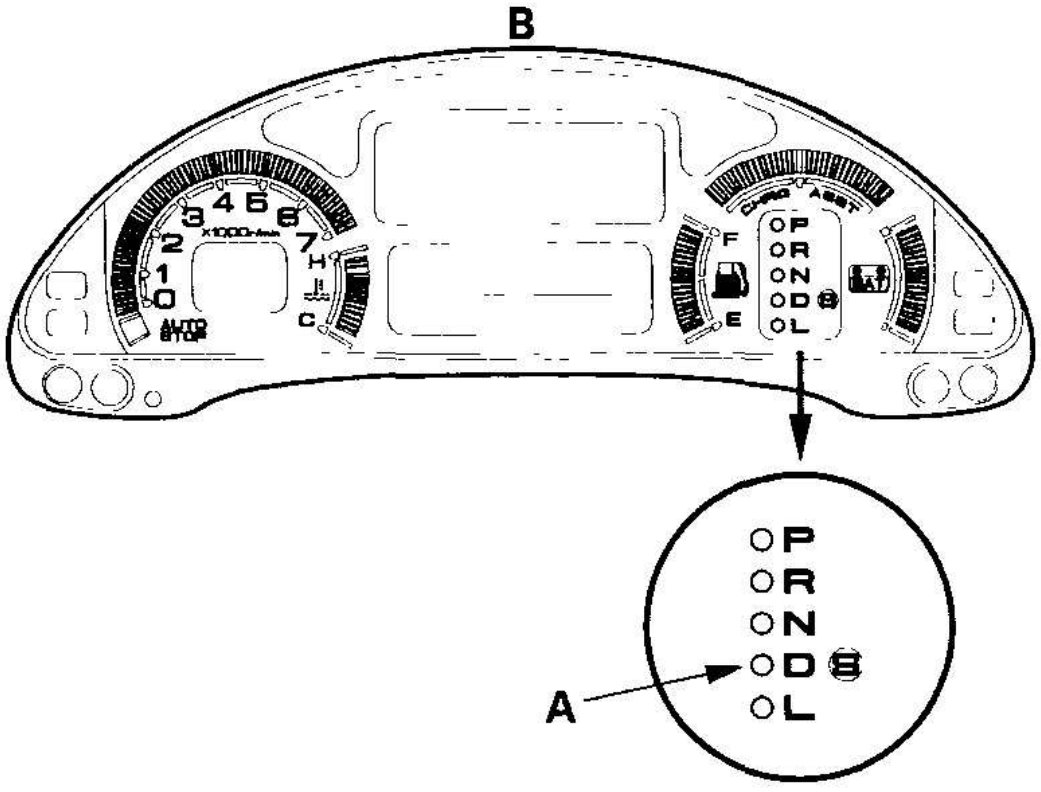

Fig. 4: Identifying Illumination Of D Indicator In Gauge Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the D indicator has been reported on, connect the HDS to the DLC (A) (located under the dash behind the center console). Turn the ignition switch ON (II), select SCS mode, then the D indicator will indicate (blink) the DTC.

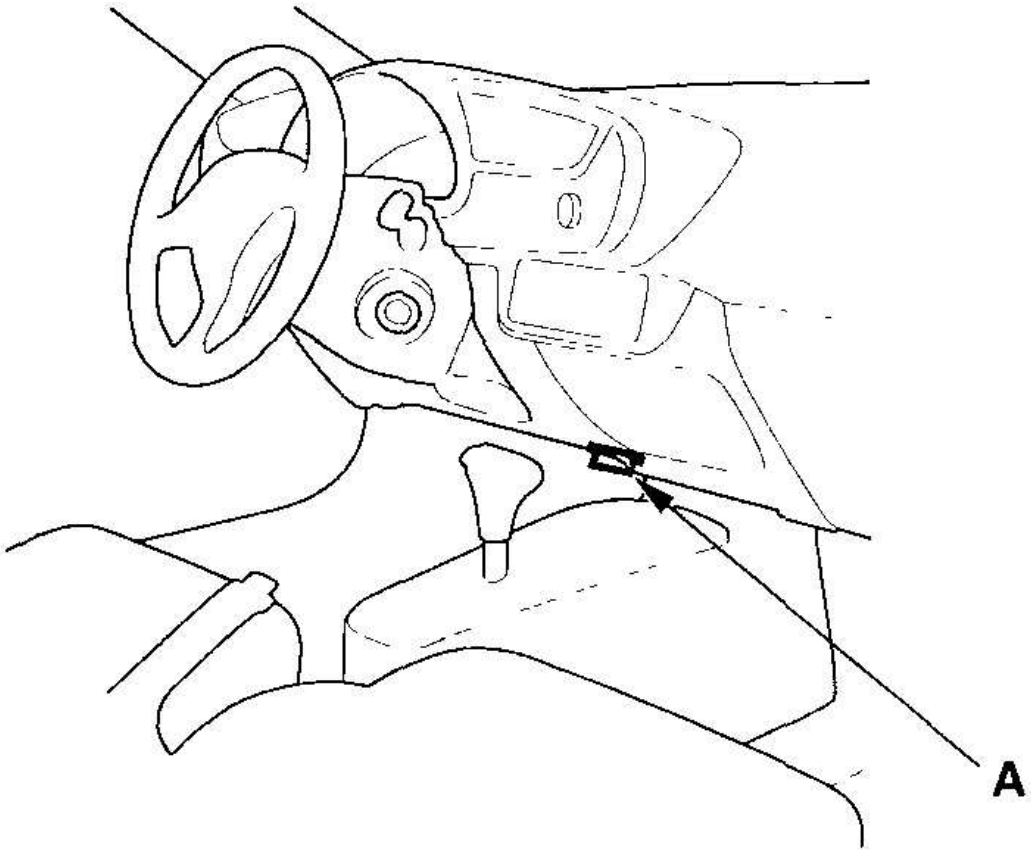

Fig. 5: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the D indicator and the MIL come on at the same time, or if a driveability problem is suspected, follow this procedures:

1. Connect the HDS to the DLC. (See the HDS user's manual for specific instructions.)
2. Turn the ignition switch ON (II), select SCS mode, then observe the D indicator in the gauge assembly. Codes 1 through 9 are indicated by individual short blinks. Codes 10 and above are indicated by a series of long and short blinks. One long blink equals 10 short blinks. Add the long and short blinks

together to determine the code.

Example: DTC 1

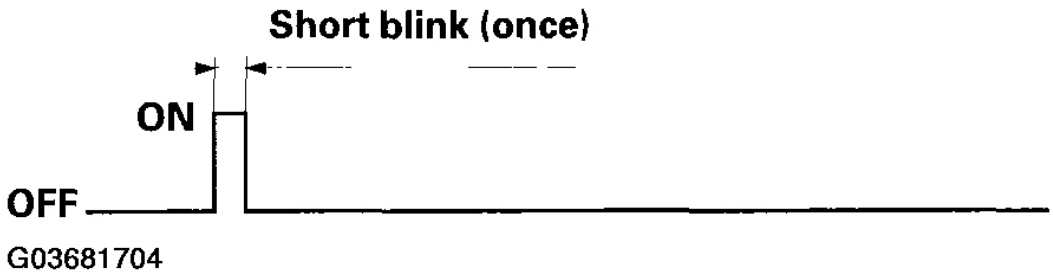

Fig. 6: Blinking Pattern Of MIL (Example DTC 1)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Example: DTC 15

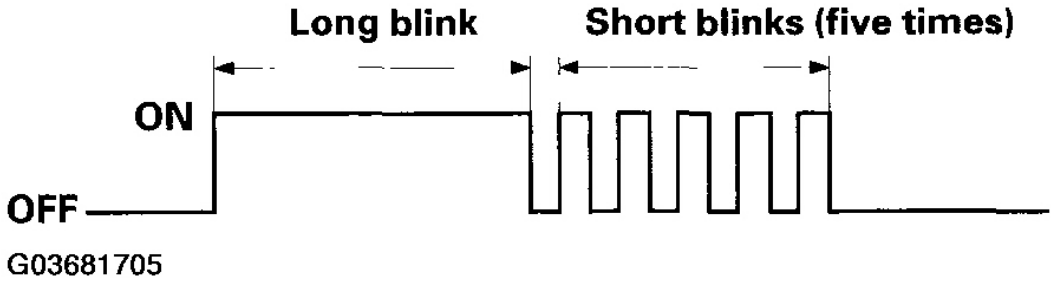

Fig. 7: Blinking Pattern Of MIL (Example DTC 15)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Record all fuel and emissions DTCs and A/T DTCs.
4. If there is a fuel and emissions DTC, first check the fuel and emissions system as indicated by the DTC (except DTC 70, DTC 70 means there is one or more A/T DTCs, and no problems were detected in the fuel and emissions circuit of the ECM).

5. Clear the DTC and data.
6. Drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, and then recheck for DTC. If the A/T DTC returns, go to the **DTC TROUBLESHOOTING INDEX** . If the DTC does not return, there was an intermittent problem within the circuit. Make sure all pins and terminals in the circuit are tight.

How to Troubleshoot Circuit at the TCM

Special Tools Required

Backprobe set 07SAZ-001000A (two required)

1. Remove the passenger's carpet, then remove the right kick panel.
2. Remove the mounting bolts securing the EPS control unit, but do not disconnect EPS control unit connectors, then remove the TCM cover (A).

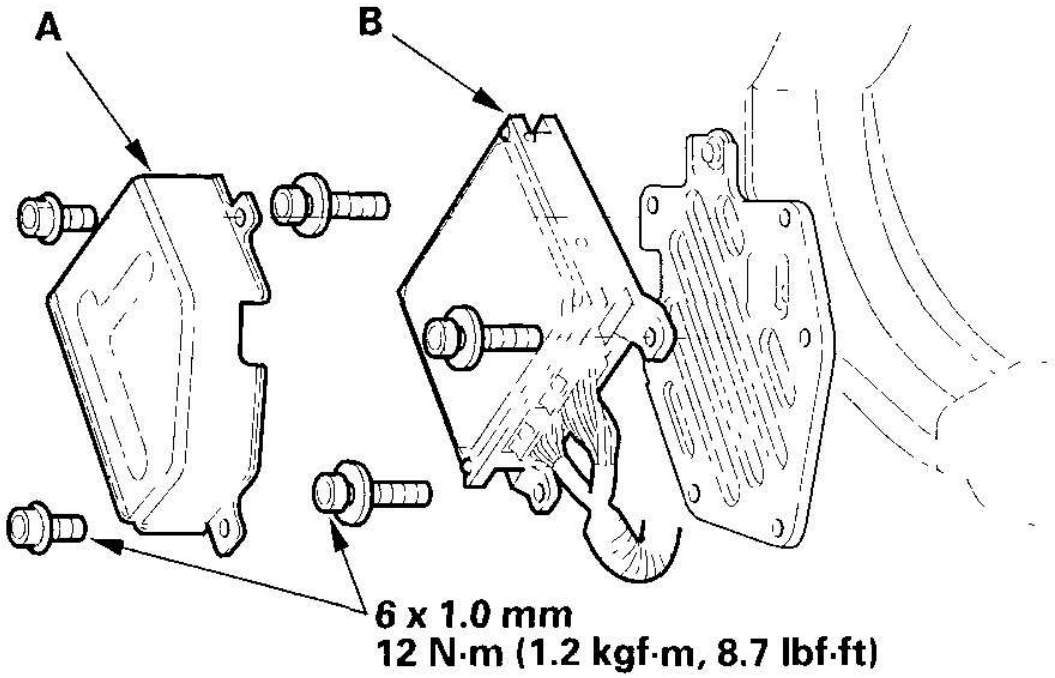

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Fig. 8: Identifying Loosening Torque Of EPS Control Unit Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the TCM (B).
4. Connect the backprobe adapters (A) to the stacking patch cords (B), and connect the cords to a multimeter (C).

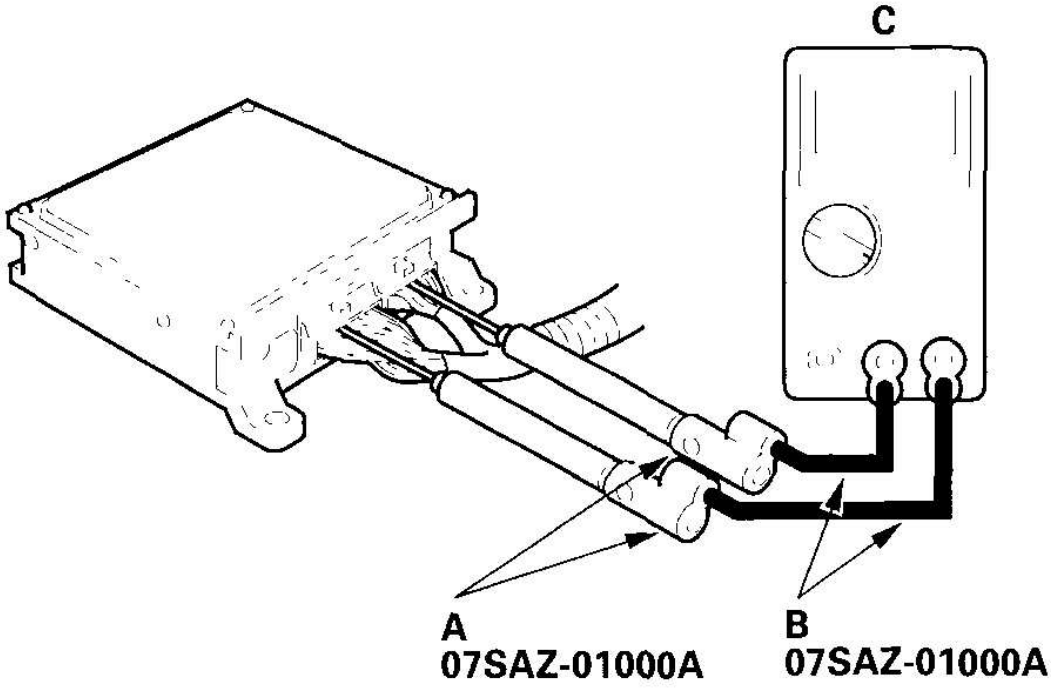

Fig. 9: Connecting Backprobe Adapters To Stacking Patch Cords, And To Multimeter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Using the wire insulation as a guide for the contoured tip of the backprobe adapter, gently slide the tip into the connector from the wire side until it touches the end of the wire terminal.
6. If you cannot get to the wire side of the connector or the wire side is sealed, disconnect the connector and use the tester probe to probe the connectors from the terminal side. Do not force the probe into the connector.

Clear A/T DTCs, and TCM Reset Procedures

1. Connect the HDS to the DLC (A).

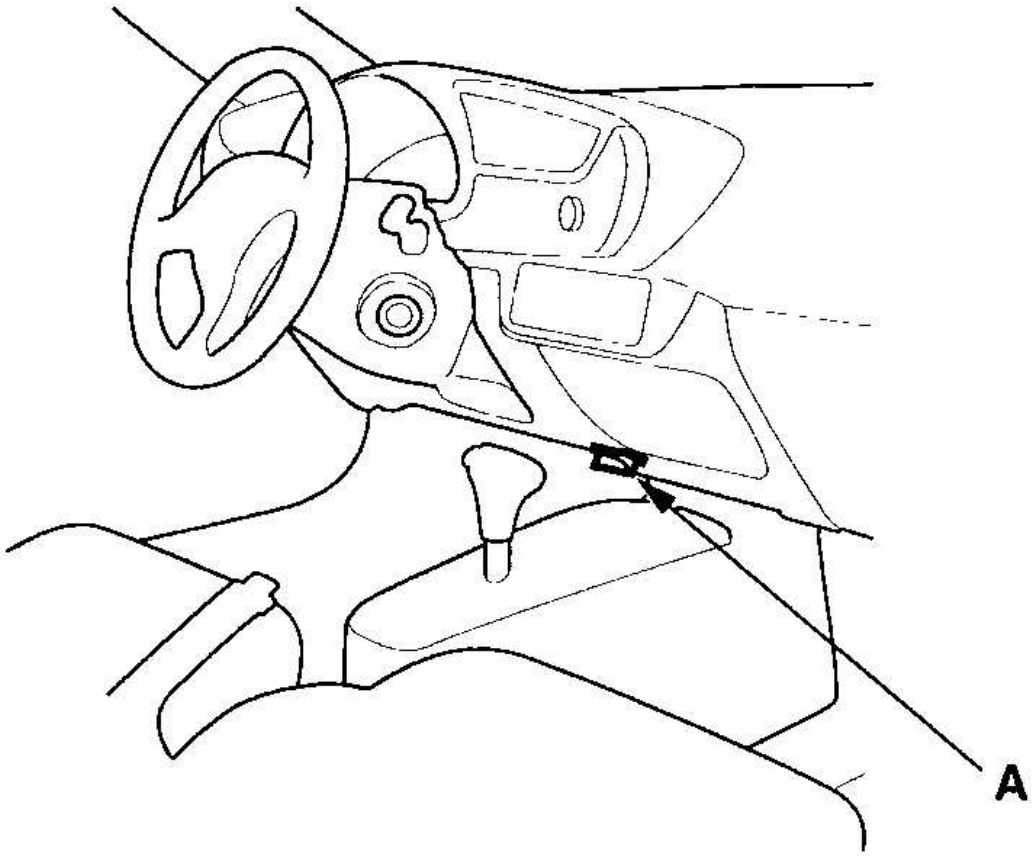

Fig. 10: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Clear the DTC(s) on the HDS screen.

TCM Reset Procedures

1. Get the audio (and navigation) anti-theft codes, and write down the presets.

2. Turn the ignition switch OFF.
3. Use one of these methods to reset the TCM memory:
   - Use the Scan Tool or the HDS, then go to step 7 .
   - Remove the No. 18 (7.5 A) fuse (A) in the under-dash fuse/relay box (B) for more than 10 seconds. Then go to step 3.

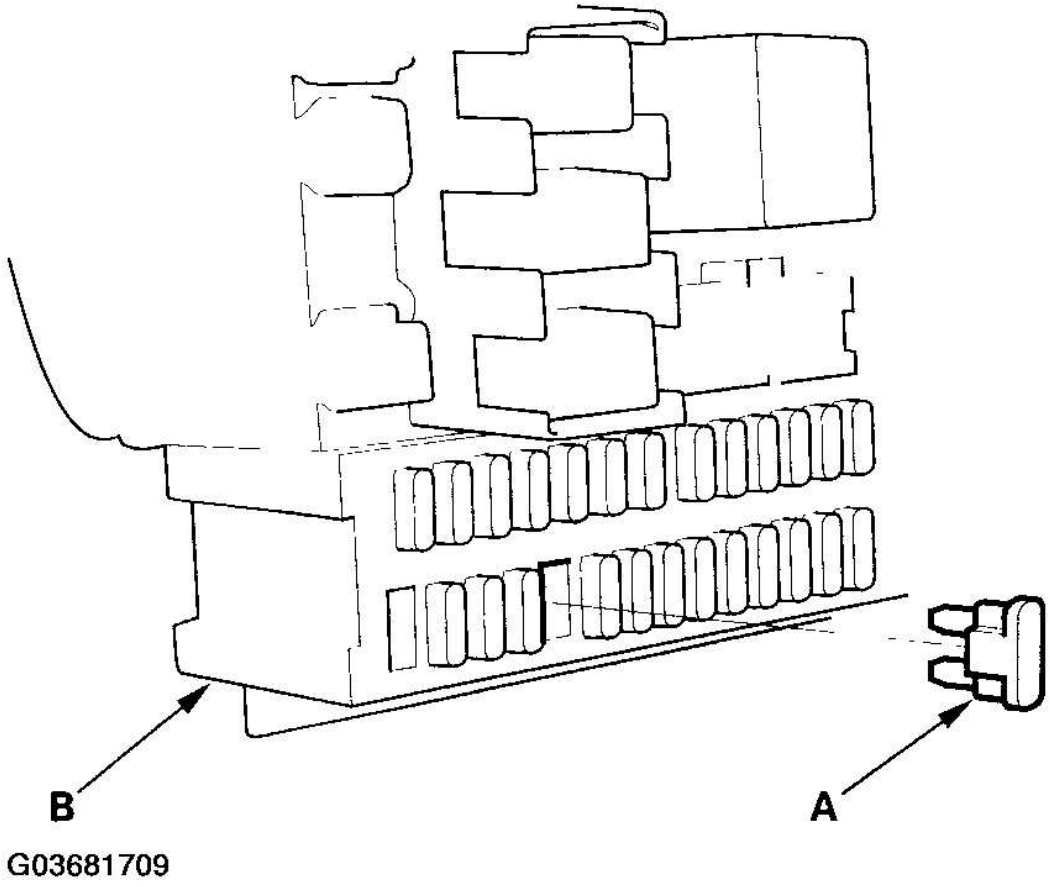

Fig. 11: Removing Number 18 (7.5A) Fuse
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the No. 15 (40 A) fuse from the under-hood fuse/relay box.
5. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in the P or N

position) until the BAT displays at least three segments.

6. Reinstall the No. 15 (40 A) fuse to the under-hood fuse/relay box.
7. Do the ECM idle learn procedure (see **ECM IDLE LEARN PROCEDURE**).
8. Do the start clutch calibration procedure (see **START CLUTCH CALIBRATION PROCEDURES**).

How to End a Troubleshooting Session

This procedure must be done after any troubleshooting.

1. Turn the ignition switch OFF.
2. Reset the TCM. Use the HDS, then disconnect HDS from the DLC (A).

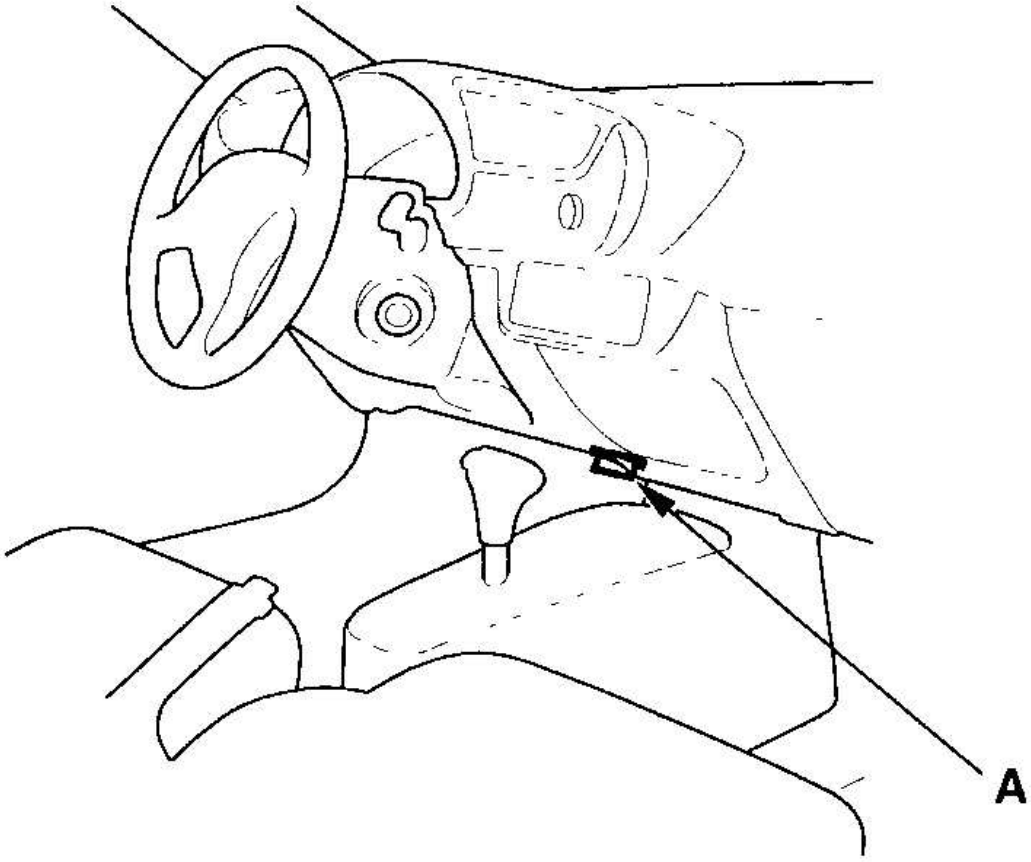

Fig. 12: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Turn the ignition switch ON (II).
4. Enter the anti-theft codes, then enter the customer's audio presets, and set the clock.
5. To verify that the problem is repaired, test-drive the vehicle for several minutes at speeds over 30 mph (50 km/h).
6. Do the Start Clutch Calibration Procedures (see **START CLUTCH CALIBRATION PROCEDURES**).

DTC TROUBLESHOOTING INDEX

2001-2004 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

DTC TROUBLESHOOTING INDEX

DTC (1)	D Indicator	MIL	Detection Item	Page
P0725 (11-1) (2)	Blinks	ON	Engine speed input circuit	(see **DTC P0725: PROBLEM IN ENGINE SPEED INPUT CIRCUIT**)
P1630 (0-2)(2)	Blinks	ON	Transmission control module (TCM)	(see **DTC P0725: PROBLEM IN ENGINE SPEED INPUT CIRCUIT**)
P1655 (37-1) (2)	Blinks	OFF	Communication lines (TMA and TMB) between ECM and TCM	(see **DTC P1655: PROBLEM IN TCM-TO-ECM COMMUNICATION LINES**)
P1705 (5-1)(2)	Blinks	ON	Transmission range switch (short to ground)	(see **DTC P1705: SHORT IN TRANSMISSION RANGE SWITCH CIRCUIT**)
P1706 (6-1)(2)	OFF	ON	Transmission range switch (open)	(see **DTC P1706: OPEN IN TRANSMISSION RANGE SWITCH CIRCUIT**)
P1790 (3-3, 3-4)(2)	Blinks	ON	Throttle position sensor circuit	(see **DTC P1790: PROBLEM IN THROTTLE POSITION SENSOR CIRCUIT**)
P1791 (4-1)(2)	Blinks	OFF	Vehicle speed sensor	(see **DTC P1791: PROBLEM IN VEHICLE SPEED SENSOR CIRCUIT**)
P1792 (10-3,	Blinks	OFF	Engine coolant temperature sensor	(see **DTC P1792: PROBLEM IN ENGINE COOLANT TEMPERATURE SENSOR**

10-4)[2]			circuit	**CIRCUIT**)
P1793 (12-3, 12-4)[2]	Blinks	ON	Manifold absolute pressure sensor circuit	(see **DTC P1793: PROBLEM IN MANIFOLD ABSOLUTE PRESSURE SENSOR CIRCUIT**)
P1799 (92-3, 92-4)[2]	Blinks	OFF	Intake air temperature sensor circuit	(see **DTC P1799: PROBLEM IN INTAKE AIR TEMPERATURE SENSOR CIRCUIT**)
P1850 (90-1) (2)	Blinks	OFF	Creep aid system solenoid valve A	(see **DTC P1850: PROBLEM IN CREEP AID SYSTEM SOLENOID VALVE A CIRCUIT**)
P1851 (91-1) (2)	Blinks	OFF	Creep aid system solenoid valve B	(see **DTC P1851: PROBLEM IN CREEP AID SYSTEM SOLENOID VALVE B CIRCUIT**)
P1879 (32-1) (2)	Blinks	ON	CVT start clutch pressure control valve circuit	(see **DTC P1879: PROBLEM IN CVT START CLUTCH PRESSURE CONTROL VALVE CIRCUIT**)
P1882 (33-1) (2)	Blinks	OFF	Inhibitor solenoid	(see **DTC P1882: PROBLEM IN INHIBITOR SOLENOID CIRCUIT**)
P1885 (34-1) (2)	Blinks	ON	CVT input shaft (drive pulley) speed sensor	(see **DTC P1885: PROBLEM IN CVT INPUT SHAFT (DRIVE PULLEY) SPEED SENSOR CIRCUIT**)
P1886 (35-1) (2)	Blinks	ON	CVT output shaft (driven pulley) speed sensor	(see **DTC P1886: PROBLEM IN CVT OUTPUT SHAFT (DRIVEN PULLEY) SPEED SENSOR CIRCUIT**)
P1888				(see **DTC P1888: PROBLEM**

(36-1) (2)	Blinks	ON	CVT speed sensor	IN CVT SPEED SENSOR CIRCUIT)
P1890 (42-1)	Blinks	ON	Shift control system	(see DTC P1890: PROBLEM IN SHIFT CONTROL SYSTEM)
P1891 (43-1)	Blinks	ON	Start clutch control system	(see DTC P1891: PROBLEM IN START CLUTCH CONTROL SYSTEM)
P1894 (38-1) (2)	Blinks	ON	CVT drive pulley pressure control valve circuit	(see DTC P1894: PROBLEM IN CVT DRIVE PULLEY PRESSURE CONTROL VALVE CIRCUIT)
P1895 (39-1) (2)	Blinks	ON	CVT driven pulley pressure control valve circuit	(see DTC P1895: PROBLEM IN CVT DRIVEN PULLEY PRESSURE CONTROL VALVE CIRCUIT)

NOTE:

(1) The DTC in parenthesis is the Honda code that you will see when you use the HDS. The first number(s) before the - (hyphen) is the flash code the D indicator indicates when the data link connector (DLC) is connected to the HDS, and the HDS in SCS mode.

(2) This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

2005-2006 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

MODELS DESCRIPTION

DTC (1)	D Indicator	MIL	Detection Item	Page
P0501 (4-5) (2)	Blinks	ON	Vehicle speed sensor circuit (range/performance)	(see DTC P0501: RANGE/PERFORMANCE PROBLEM IN VEHICLE

				SPEED SENSOR CIRCUIT)
P0502 (4-3) (2)	Blinks	ON	Vehicle speed sensor circuit (no signal input)	(see **DTC P0502: PROBLEM IN VEHICLE SPEED SENSOR CIRCUIT (NO SIGNAL INPUT)**)
P0603 (0-3) (2)	Blinks	ON	Transmission control module (TCM)	(see **DTC P0603: PROBLEM IN TCM**)
P0705 (5-2) (2)	Blinks	ON	Transmission range switch circuit (short to ground) (multiple shift-position input)	(see **DTC P0705: SHORT IN TRANSMISSION RANGE SWITCH CIRCUIT (MULTIPLE SHIFT-POSITION INPUT)**)
P0706 (6-2) (2)	Not blinks	ON	Transmission range switch circuit (open)	(see **DTC P0706: OPEN IN TRANSMISSION RANGE SWITCH CIRCUIT**)
P0716 (34-5) (2)	Blinks	ON	CVT input shaft (drive pulley) speed sensor circuit (range/performance)	(see **DTC P0716: RANGE/PERFORMANCE PROBLEM IN CVT INPUT SHAFT (DRIVE PULLEY) SPEED SENSOR CIRCUIT**)
P0717 (34-3) (2)	Blinks	ON	CVT input shaft (drive pulley) speed sensor circuit (no signal input)	(see **DTC P0717: PROBLEM IN CVT INPUT SHAFT (DRIVE PULLEY) SPEED SENSOR CIRCUIT (NO SIGNAL INPUT)**)
P0721 (35-5) (2)	Blinks	ON	CVT output shaft (driven pulley) speed sensor circuit (range/performance)	(see **DTC P0721: RANGE/PERFORMANCE PROBLEM IN CVT OUTPUT SHAFT (DRIVEN PULLEY) SPEED SENSOR CIRCUIT**)
P0722 (35-3)	Blinks	ON	CVT output shaft (driven pulley) speed	(see **DTC P0722: PROBLEM IN CVT OUTPUT SHAFT (DRIVEN PULLEY) SPEED**

(2)			sensor circuit (no signal input)	SENSOR CIRCUIT (NO SIGNAL INPUT))
P0726 (11-5) (2)	Blinks	ON	Engine RPM signal input circuit (range/ performance)	(see DTC P0726: RANGE/PERFORMANCE PROBLEM IN ENGINE RPM SIGNAL INPUT CIRCUIT)
P0727 (11-3) (2)	Blinks	ON	Engine RPM signal input circuit (no signal input)	(see DTC P0727: PROBLEM IN ENGINE RPM SIGNAL INPUT CIRCUIT (NO SIGNAL INPUT))

NOTE:

(1) The DTC in parenthesis is the Honda code that you will see when you use the HDS. The first number(s) before the - (hyphen) is the flash code the D indicator indicates when the data link connector (DLC) is connected to the HDS, and the HDS in SCS mode.

(2) This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

2005-2006 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

MODELS DESCRIPTION

DTC (1)	D Indicator	MIL	Detection Item	Page
P0780 (42-2)	Blinks	ON	Shift control system	(see DTC P0780: PROBLEM IN SHIFT CONTROL SYSTEM)
P0801 (33-2) (2)	Blinks	OFF	Inhibitor solenoid circuit	(see DTC P0801: PROBLEM IN INHIBITOR SOLENOID CIRCUIT)
P0811 (43-2)	Blinks	ON	Start clutch control system	(see DTC P0811: PROBLEM IN START CLUTCH CONTROL SYSTEM)

P0962 (38-3) (2)	Blinks	ON	CVT drive pulley pressure control valve circuit low	(see **DTC P0962: CVT DRIVE PULLEY PRESSURE CONTROL VALVE CIRCUIT LOW VOLTAGE**)
P0963 (38-4) (2)	Blinks	ON	CVT drive pulley pressure control valve circuit high	(see **DTC P0963: CVT DRIVE PULLEY PRESSURE CONTROL VALVE CIRCUIT HIGH VOLTAGE**)
P0966 (39-3) (2)	Blinks	ON	CVT driven pulley pressure control valve circuit low	(see **DTC P0966: CVT DRIVEN PULLEY PRESSURE CONTROL VALVE CIRCUIT LOW VOLTAGE**)
P0967 (39-4) (2)	Blinks	ON	CVT driven pulley pressure control valve circuit high	(see **DTC P0967: CVT DRIVEN PULLEY PRESSURE CONTROL VALVE CIRCUIT HIGH VOLTAGE**)
P0970 (32-3) (2)	Blinks	ON	CVT start clutch pressure control valve circuit low	(see **DTC P0970: CVT START CLUTCH PRESSURE CONTROL VALVE CIRCUIT LOW VOLTAGE**)
P0971 (32-4) (2)	Blinks	ON	CVT start clutch pressure control valve circuit high	(see **DTC P0971: CVT START CLUTCH PRESSURE CONTROL VALVE CIRCUIT HIGH VOLTAGE**)
P1655 (37-1) (2)	Blinks	OFF	Transmisison control module (TCM)-to-engine control module (ECM) communication circuit	(see **DTC P1655: PROBLEM IN TCM-TO-ECM COMMUNICATION LINES**)

P1782 (3-11) (2)	Blinks	ON	Throttle position (TP) sensor circuit low	(see **DTC P1782: TP SENSOR CIRCUIT LOW VOLTAGE**)
P1783 (3-12) (2)	Blinks	ON	Throttle position (TP) sensor circuit high	(see **DTC P1783: TP SENSOR CIRCUIT HIGH VOLTAGE**)
P1784 (12-11) (2)	Blinks	ON	Manifold absolute pressure (MAP) sensor circuit low	(see **DTC P1784: MAP SENSOR CIRCUIT LOW VOLTAGE**)
P1785 (12-12) (2)	Blinks	ON	Manifold absolute pressure (MAP) sensor circuit high	(see **DTC P1785: MAP SENSOR CIRCUIT HIGH VOLTAGE**)
P1792 (10-3, 10-4) (2)	Blinks	OFF	Engine coolant temperature (ECT) sensor circuit	(see **DTC P1792: PROBLEM IN ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT**)
P1799 (92-3, 92-4) (2)	Blinks	OFF	Intake air temperature (IAT) sensor circuit	(see **DTC P1799: PROBLEM IN INTAKE AIR TEMPERATURE SENSOR CIRCUIT**)
P1850 (90-1) (2)	Blinks	OFF	Creep aid system solenoid valve A	(see **DTC P1850: PROBLEM IN CREEP AID SYSTEM SOLENOID VALVE A CIRCUIT**)
P1851 (91-1) (2)	Blinks	OFF	Creep aid system solenoid valve B	(see **DTC PI851: PROBLEM IN CREEP AID SYSTEM SOLENOID VALVE B CIRCUIT**)
P2159 (36-9) (2)	Blinks	ON	CVT speed sensor circuit (range/performance)	(see **DTC P2159: RANGE/PERFORMANCE PROBLEM IN CVT SPEED SENSOR CIRCUIT**)

P2160 (36-7) (2)	Blinks	ON	CVT speed sensor circuit (no signal input)	(see **DTC P2160: PROBLEM IN CVT SPEED SENSOR CIRCUIT (NO SIGNAL INPUT)**)

NOTE:

(1) The DTC in parenthesis is the Honda code that you will see when you use the HDS. The first number(s) before the - (hyphen) is the flash code the D indicator indicates when the data link connector (DLC) is connected to the HDS, and the HDS in SCS mode.

(2) This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

SYMPTOM TROUBLESHOOTING INDEX

SYMPTOM TROUBLESHOOTING

Symptom	Probable cause(s)	Notes
When you turn the ignition switch ON (II), the D indicator comes on and stays on in all shift lever positions, or it never comes on at all	A problem in the D indicator circuit	Check the D indicator circuit (see **D INDICATOR CIRCUIT TROUBLESHOOTING**).
Transmission does not shift into S mode when pressing the S mode button, or does not return to D mode from S mode	A problem in the mode switch circuit	Check the mode switch circuit (see **MODE SWITCH CIRCUIT TROUBLESHOOTING**).
S indicator does not come on	A problem in the S	Check the S indicator circuit (see **S INDICATOR CIRCUIT**

when the S mode is selected	indicator circuit	**TROUBLESHOOTING**).
Vehicle feels like the brakes drag	A problem in the creep aid system	Check the creep aid system solenoid valves A and B circuit (see **CREEP AID SYSTEM SOLENOID VALVE A AND B TROUBLESHOOTING**).
Shift lever cannot be moved from P while you are pressing on the brake pedal	A problem in the shift lock system (interlock system)	Check the interlock system - shift lock system circuit (see **SHIFT LOCK SYSTEM CIRCUIT TROUBLESHOOTING**).
Ignition switch cannot be moved from ACC (I) to LOCK (0) (key is pushed in, shift lever in P)	A problem in the key interlock system (interlock system)	Check the interlock system - key interlock system circuit (see **KEY INTERLOCK SYSTEM CIRCUIT TROUBLESHOOTING**).
	1. Low CVT Fluid level 2. ATF pump worn, binding, or foreign materials in ATF pump 3. ATF pump chain or ATF pump sprocket worn or damaged 4. Input shaft worn or	• Check the CVT Fluid level, and check the ATF cooler lines for leakage and loose connections. If necessary, clean the ATF cooler lines. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, cooler and cooler lines. • Check that the ATF strainer is in good condition, if the ATF strainer is clogged with particles of steel or aluminum, inspect the ATF pump. If the ATF pump is OK, find the

Engine runs, but vehicle does not move in any position	damaged 5. Sun gear worn or damaged 6. Final driven gear worn or damaged 7. Secondary drive gear and secondary driven gear worn or damaged 8. Flywheel and drive plate worn or damaged 9. Intermediate housing assembly worn or damaged 10. Forward clutch defective 11. Start clutch defective 12. ATF strainer and ATF filter clogged 13. Lower valve body assembly defective 14. CVT drive pulley pressure control valve defective	damaged components that caused the debris. • Inspect the planetary carrier, drive pulley shaft, ATF pump drive sprocket, and flywheel. If any part is worn or damaged, replace it. • Inspect the drive pulley pressure, driven pulley pressure, and forward clutch feed pipes for wear, damage and out of round. If the drive pulley pressure feed pipe is scored, replace the end cover. If the forward clutch feed pipe is scored, replace the O-ring under the feed pipe guide. • Replace the start clutch assembly if the secondary drive gear is worn or damaged. Inspect the secondary gear shaft thrust clearance if the secondary driven gear is worn or damaged. • Inspect the input shaft splines and flywheel housing input shaft oil seal for wear and damage. • Check the forward clutch pressure. • Inspect the forward clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or

	15. CVT driven pulley pressure pulley pressure control valve defective 16. CVT start clutch pressure control valve defective 17. Manual valve body defective	damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Calibrate the start clutch control system after replacing the start clutch. • Check for a stored DTC, and check for loose solenoid harness connector.
Vehicle moves in R, but not in D and L	1. Forward clutch defective 2. Shift cable broken or out of adjustment, or shift cable end removed 3. Manual valve lever and lever pin defective 4. Start clutch defective 5. Manual valve body defective	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Check for a loose shift cable at the shift lever and the transmission

		control lever. • Calibrate the start clutch control system after replacing the start clutch.
Vehicle moves in D and L, but not in R	1. Sun gear worn or damaged 2. Forward clutch defective 3. Shift cable broken or out of adjustment, or shift cable end removed 4. Manual valve lever and lever pin defective 5. Reverse brake defective 6. Reverse brake piston and related parts stuck, worn or damaged 7. Planetary carrier worn or damaged	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the reverse brake pressure. • Inspect the brake piston and O-rings. Check the spring retainer and return spring assembly for wear and damage. Inspect the brake end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If

	8. Manual valve body defective	discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. • Inspect the reverse brake piston, piston O-rings, return spring and spring retainer assembly, discs and plates for wear and damage.
No shift to higher ratio or lower ratio	1. Intermediate housing assembly worn or damaged 2. Pulley pressure feed pipe damaged or out of round 3. CVT input shaft (drive pulley) speed sensor and CVT output shaft (driven pulley) speed sensor defective 4. CVT speed sensor defective 5. TCM defective 6. Lower valve body assembly defective 7. CVT drive pulley pressure control valve defective 7. CVT driven	• Inspect the drive pulley pressure feed pipe. If the feed pipe is scored, replace the end cover. • Replace the input shaft if the bushing for the drive pulley pressure feed pipe is loose or damaged. • Inspect the driven pulley pressure feed pipe. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the driven pulley pressure feed pipe is loose or damaged. • Check the drive pulley and driven pulley pressure, and lubrication pressure. If low or no pressure, check the ATF pump, pump chain, and sprockets. • Check for a stored DTC, and check

	pulley pressure control valve defective 8. Solenoid harness worn or damaged	for loose connectors. • Check the speed sensors installation.
Poor acceleration	1. Intermediate housing assembly worn or damaged 2. Pulley pressure feed pipe damaged or out of round 3. CVT input shaft (drive pulley) speed sensor and CVT output shaft (driven pulley) speed sensor defective 4. CVT speed sensor defective 5. TCM defective 6. Start clutch defective 7. IMA motor defective 8. Lower valve body assembly defective 9. CVT drive pulley pressure	• Inspect the drive pulley pressure feed pipe. If the feed pipe is scored, replace the end cover. • Replace the input shaft if the bushing for the drive pulley pressure feed pipe is loose or damaged. • Inspect the driven pulley pressure feed pipe. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the driven pulley pressure feed pipe is loose or damaged. • Check the drive pulley and driven pulley pressure, and lubrication pressure. If low or no pressure, check the ATF pump, pump chain, and sprockets. Check for a stored DTC, and check for loose

	control valve defective 9. CVT driven pulley pressure control valve defective 10. CVT start clutch pressure control valve defective 11. Solenoid harness worn or damaged	connectors. • Check the speed sensors installation. • Calibrate the start clutch control system after replacing the start clutch.
Flares while driving	1. Intermediate housing assembly worn or damaged 2. Forward clutch defective 3. TCM defective 4. Start clutch defective 5. Start clutch feed pipe damaged or out of round 6. Lower valve body assembly defective 7. CVT drive pulley pressure control valve defective 8. CVT driven	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide.

	pulley pressure control valve defective 9. CVT start clutch pressure control valve defective 10. Solenoid harness worn or damaged 11. Start clutch control system memory in TCM defective	• Check for a stored DTC, and check for loose connectors. • Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly, if the bushing for the start clutch feed pipes are loose or damaged.
Excessive shock when accelerating and decelerating	1. Intermediate housing assembly worn or damaged 2. Forward clutch defective 3. TCM defective 4. Start clutch defective 5. Start clutch feed pipe damaged or out of round 6. Lower valve body assembly defective 7. CVT drive pulley pressure control valve defective	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Check for a stored DTC, and check

	8. CVT driven pulley pressure control valve defective 9. CVT start clutch pressure control valve defective 10. Start clutch control system memory in TCM defective	for loose connectors. • Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly, if the bushing for the start clutch feed pipes are loose or damaged.
No engine braking	1. Intermediate housing assembly worn or damaged 2. TCM defective 3. Start clutch defective 4. Start clutch feed pipe damaged or out of round 5. IMA motor defective 6. Lower valve body assembly defective 7. CVT drive pulley pressure control valve defective 8. CVT driven pulley pressure	• Check for a stored DTC, and check for loose connectors. • Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly, if the bushing for the start clutch feed pipes are loose or damaged.

	control valve defective 9. CVT start clutch pressure control valve defective	
Vehicle does not accelerate in R	1. Intermediate housing assembly worn or damaged 2. TCM defective 3. Reverse brake defective 4. Reverse brake piston and related parts stuck, worn or damaged 5. Planetary carrier worn or damaged 6. Start clutch defective 7. IMA motor defective 8. Lower valve body assembly defective 9. CVT drive pulley pressure control valve defective 10. CVT driven	• Check for a stored DTC, and check for loose connectors. • Check the reverse brake pressure. • Inspect the brake piston and O-rings. Check the spring retainer and return spring assembly for wear and damage. Inspect the brake end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. • Inspect the reverse brake piston, piston O-rings, return spring and spring retainer assembly, discs and plates for wear and damage. • Calibrate start clutch control system after replacing the start

	pulley pressure control valve defective 11. CVT start clutch pressure control valve defective	clutch.
Vehicle does not creep on a flat road in D	1. TCM defective 2. Start clutch defective 3. Start clutch feed pipe damaged or out of round 4. Lower valve body assembly defective 5. CVT drive pulley pressure control valve defective 6. CVT driven pulley pressure control valve defective 7. Solenoid harness worn or damaged 8. Start clutch control system memory in TCM defective	• Check for a stored DTC, and check for loose connectors. • Calibrate start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the start clutch feed pipes are loose or damaged.
		• Check the forward clutch pressure. • Inspect the clutch piston, clutch

Vehicle moves in N, shift cable is properly adjusted	1. Forward clutch defective 2. Start clutch defective 3. Reverse brake return spring or spring retainer worn or damaged 4. Manual valve lever and lever pin defective 5. Manual valve body defective	piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Calibrate the start clutch control system after replacing the start clutch.
Late shift after shifting from N to D	1. Forward clutch defective 2. Shift cable broken or out of adjustment, or shift cable end removed 3. Manual valve lever and lever pin defective 4. Clutch end-	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of

	incorrect 5. Manual valve body defective	round. If the feed pipe is scored, replace it and O-ring under the feed pipe guide. • Check for a loose shift cable at the shift lever and the transmission control lever.
Late shift after shifting from N to R	1. Shift cable broken or out of adjustment, or shift cable end removed 2. Manual valve lever and lever pin defective 3. Reverse brake defective 4. Reverse brake piston and related parts stuck, worn or damaged 5. Clutch end-plate clearance incorrect 6. Manual valve body defective	• Check for a loose shift cable at the shift lever and the transmission control lever. • Check the reverse brake pressure. • Inspect the brake piston and O-rings. Check the spring retainer and return spring assembly for wear and damage. Inspect the brake end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. • Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate.
	1. Intermediate housing assembly worn	

Engine stops when shifted to D from N	or damaged 2. Forward clutch defective 3. TCM defective 4. Start clutch defective 5. Lower valve body assembly defective 6. CVT drive pulley pressure control valve defective 7. CVT driven pulley pressure control valve defective 8. CVT start clutch pressure control valve defective 9. Start clutch control system memory in TCM defective	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and O-ring under the feed pipe guide. • Check for a stored DTC, and check for loose connectors. • Calibrate start clutch control system after replacing the start clutch.
	1. Intermediate housing assembly worn or damaged 2. TCM defective 3. Reverse brake piston and related parts	

Engine stops when shifted to R from N	stuck, worn or damaged 4. Planetary carrier worn or damaged 5. Start clutch defective 6. Lower valve body assembly defective 7. CVT drive pulley pressure control valve defective 8. CVT driven pulley pressure control valve defective 9. CVT start clutch pressure control valve defective 10. Start clutch control system memory in TCM defective	• Check for a stored DTC, and check for loose connectors. • Inspect the reverse brake piston, piston O-rings, return spring and spring retainer assembly, discs and plates for wear and damage. • Calibrate start clutch control system after replacing the start clutch. • Check for a stored DTC, and check for loose solenoid harness connector.
Noise from transmission in R	1. Sun gear worn or damaged 2. Reverse brake defective 3. Reverse brake piston and related parts	• Check the reverse brake pressure. • Inspect the brake piston and O-rings. Check the spring retainer and return spring assembly for wear and damage. Inspect the brake end-plate-to-top-disc clearance. If the clearance is out of

	stuck, worn or damaged 4. Planetary carrier worn or damaged	tolerance, inspect the brake discs and plates for wear and damage. If discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate.
Engine idle vibration	1. ATF pump worn, binding, or foreign materials in ATF pump 2. ATF pump chain or ATF pump sprocket worn or damaged 3. Flywheel and drive plate worn or damaged 4. Engine output low 5. IMA motor defective 6. Flywheel assembly defective	• Inspect the differential pinion gear for wear. If the differential pinion gears are worn, replace the differential assembly and the ATF strainer, and thoroughly clean the transmission, cooler and cooler lines. • Check that the ATF strainer is in good condition. If the ATF strainer is clogged with particles of steel or aluminum, inspect the ATF pump. If the ATF pump is OK, find the damaged components that caused the debris. • Inspect the input shaft splines and flywheel housing input shaft oil seal for wear and damage.
	1. ATF pump worn, binding, or foreign materials in ATF pump 2. ATF pump chain or ATF	• Inspect the differential pinion gear for wear. If the differential pinion gears are worn, replace the differential assembly and the ATF

Noise from transmission in N and P	pump sprocket worn or damaged 3. Planetary carrier worn or damaged 4. Input shaft needle bearing seized up, worn or damaged 5. Transmission range switch defective 6. Flywheel assembly defective	strainer, and thoroughly clean the transmission, cooler and cooler lines. • Check that the ATF strainer is in good condition. If the ATF strainer is clogged with particles of steel or aluminum, inspect the ATF pump. If the ATF pump is OK, find the damaged components that caused debris. • Check for a stored DTC, and check for loose transmission range switch connectors.
Unstable RPM while driving	1. TCM defective 2. Lower valve body assembly defective 3. CVT drive pulley pressure control valve defective 4. CVT driven pulley pressure control valve defective 5. CVT start clutch pressure control valve defective	Check for a stored DTC, and check for loose connectors.
	1. Flywheel and	

Excessive vibration in all shift lever positions	drive plate worn or damaged 2. Flywheel assembly defective	Inspect the input shaft splines and flywheel housing input shaft oil seal for wear and damage.
Shift lever does not operate smoothly	1. Shift cable broken or out of adjustment, or shift cable end removed 2. Control lever worn or damaged 3. Manual valve lever and lever pin defective 4. Manual valve body defective	Check for loose shift cable at the shift lever and the transmission control lever.
Transmission will not shift into P, or transmission cannot shift out of P	1. Shift cable broken or out of adjustment, or shift cable end removed 2. Control lever worn or damaged 3. Park pawl and pawl shaft worn or damaged 4. Detent lever worn or damaged 5. Park gear worn	Check for a loose shift cable at the shift lever and the transmission control lever.

	or damaged 6. Park pawl spring worn or damaged	
Vehicle does not accelerate after a certain speed has been exceeded	1. Intermediate housing assembly worn or damaged 2. Forward clutch defective 3. CVT input shaft (drive pulley) speed sensor and CVT output shaft (driven pulley) speed sensor defective 4. CVT speed sensor defective 5. TCM defective 6. Start clutch defective 7. Lower valve body assembly defective 8. CVT drive pulley pressure control valve defective 9. CVT driven pulley pressure control valve defective	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored, replace it and the O-ring under the feed pipe guide. • Check for a stored DTC, and check for loose connectors. • Check the speed sensors installation. • Calibrate the start clutch control system after replacing the start clutch.

Excessive shock when starting off	1. CVT start clutch pressure control valve defective 2. Start clutch control system memory in TCM defective	• Check for a stored DTC, and check for a loose solenoid harness connector. • Calibrate start clutch control system.
Flares while accelerating at low vehicle speed	1. Start clutch defective 2. Start clutch feed pipe damaged or out of round 3. CVT start clutch pressure control valve defective 4. Start clutch control system memory in TCM defective	• Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the start clutch feed pipes are loose or damaged. • Check for a stored DTC, and check for a loose solenoid harness connector.
Excessive vibration at idle when shifted to R, D, and L	1. Start clutch defective 2. Start clutch feed pipe damaged or out of round 3. IMA motor defective 4. CVT start clutch pressure control valve defective 5. Start clutch	• Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the start clutch feed pipes are loose or damaged. • Check for a stored DTC, and check

	control system memory in TCM defective	for a loose solenoid harness connector.
Excessive engine RPM drop-off when shifted to R, D, and L	1. TCM defective 2. Start clutch defective 3. Start clutch feed pipe damaged or out of round 4. CVT start clutch pressure control valve defective 5. Start clutch control system memory in TCM defective	• Check for a stored DTC, and check for loose connectors. • Calibrate the start clutch control system after replacing the start clutch. • Inspect the start clutch feed pipe. If the feed pipe is scored, replace the end cover. • Replace the drive pulley shaft with the intermediate housing assembly if the bushing for the start clutch feed pipes are loose or damaged.
Stall speed high	1. Forward clutch defective 2. Start clutch defective 3. CVT start clutch pressure control valve defective	• Check the forward clutch pressure. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch end-plate-to-top-disc clearance. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the forward clutch feed pipe for wear, damage, and out of round. If the feed pipe is scored,

		replace it and the O-ring under the feed pipe guide. • Calibrate the start clutch control system after replacing the start clutch. • Check for a stored DTC, and check for loose solenoid harness connector.
Stall speed low	1. Intermediate housing assembly worn or damaged 2. Start clutch defective 3. IMA motor defective 4. CVT drive pulley pressure control valve defective 5. CVT driven pulley pressure control valve defective 6. CVT start clutch pressure control valve defective	• Calibrate the start clutch control system after replacing the start clutch. • Check for a stored DTC, and check for a loose solenoid harness connector.
Judder when starting off	1. Start clutch defective 2. CVT Fluid deteriorated	• Calibrate the start clutch control system after replacing the start clutch. • Replace CVT Fluid.
	1. Shift cable	

A/T gear position indicator does not indicate shift lever positions	broken or out of adjustment, or shift cable end removed 2. Transmission range switch defective 3. Control lever worn or damaged	• Check for a loose shift cable at the shift lever and the transmission control lever. • Check for a stored DTC, and check for a loose transmission range switch connectors.

SYSTEM DESCRIPTION

General Operation

The continuously variable transmission (CVT) is an electronically controlled automatic transmission with drive and driven pulleys, and steel belt. The CVT provides non-stage speeds forward and one reverse.

Transmission

Around the outside of the flywheel is a ring gear which meshes with the starter pinion when the engine is being started. The transmission has four parallel shafts: the input shaft, the drive pulley shaft, the driven pulley shaft, and the secondary gear shaft. The input shaft is connected to the flywheel, which is connected to the motor rotor. This is connected to the end of the engine crankshaft. The drive pulley shaft and driven pulley shaft consists of movable and fixed face pulleys. Both pulleys are linked by the steel belt.

The input shaft includes the sun gear and planetary gears with carrier. The drive pulley shaft includes the drive pulley and forward clutch. The driven pulley shaft includes the driven pulley, start clutch, and the secondary drive gear, which is integral with the park gear. The secondary gear shaft is positioned between the secondary drive gear and the final driven gear. The secondary gear shaft includes the secondary driven gear and the final drive gear, which serves to change the rotation direction, because the drive pulley shaft and driven pulley shaft rotate the same direction. When certain conditions of the planetary gears in the transmission

are engaged by the forward clutch and the reverse brake, power is transmitted from the drive pulley shaft to the driven pulley shaft to provide the L, D, and R positions.

Electronic Control

The electronic control system consists of the transmission control module (TCM), sensors, and solenoid valves. Shifting is electronically controlled for comfortable driving under all conditions. The TCM is located below the dashboard, behind the kick panel on the passenger's side.

Hydraulic Control

The lower valve body assembly includes the main valve body, the secondary valve body, the CVT driven pulley pressure control valve, the CVT drive pulley pressure control valve, the CVT start clutch pressure control valve, and the inhibitor solenoid valve. These valve bodies are positioned on the lower portion of the transmission housing. The manual valve body is bolted on the intermediate housing.

The main valve body contains the start clutch shift valve, the shift inhibitor valve, and the lubrication valve. The secondary valve body contains the pressure high (PH) regulator valve, the pressure high control (PHC) shift valve B, the start clutch back-up valve, the clutch reducing valve, and the start clutch accumulator. The CVT driven pulley pressure control valve contains the pulley control valve A and the driven pulley control valve with the solenoid. The CVT drive pulley pressure control valve contains the pulley control valve B and the drive pulley control valve with the solenoid. The CVT start clutch pressure control valve consists of the start clutch pressure control valve and the solenoid. These solenoids are controlled by the TCM. The manual valve body contains the manual valve and the reverse inhibitor valve.

The ATF pump is located on the transmission housing, and it is linked with the input shaft by the sprockets and the sprocket chain. The pulleys, forward clutch, and start clutch receive fluid from their respective feed pipes, and the reverse brake receives fluid from internal hydraulic circuit.

Shift Control

The TCM controls the shift pulley ratio through the solenoids, while receiving input

signal from the various sensors and switches located throughout the vehicle. The TCM actuates the pulley control solenoids to control the pulley control valves A and B. Drive pulley pressure, regulated at pulley control valve B, is applied to the drive pulley; driven pulley pressure, regulated at pulley control valve A, is applied to the driven pulley; and the pulley ratio is changed to their directed ratio.

Gear Selection

The shift lever has five positions; P: PARK, R: REVERSE, N: NEUTRAL, D: DRIVE, and L: LOW.

GEAR POSITION AND DESCRIPTION

Position	Description
P: PARK	Front wheels locked; park pawl engaged with the park gear on the secondary drive gear. The start clutch and forward clutch released.
R: REVERSE	Reverse; reverse brake engaged.
N: NEUTRAL	Neutral; the start clutch and forward clutch released.
D: DRIVE	D position has two modes; Drive mode and Second mode with switching the mode switch on the steering wheel. • Drive mode General driving; the transmission automatically adjusts to keep the engine at the best speed for driving conditions. • Second mode For rapid acceleration; the transmission selects a wider range of the ratios to give better acceleration.
L: LOW	For engine braking and power for climbing; the transmission shifts into the lowest range of the ratios.

Starting is possible only in the P and N positions through the use of a slide-type, neutral-safety switch.

Automatic Transmission (A/T) Gear Position Indicator

The A/T gear position indicator in the instrument panel shows what shift lever position has been selected without looking down at the console.

Clutches/Reverse Brake/Planetary Gear/Pulleys

Clutches/Reverse Brake

The CVT uses the hydraulic-actuated clutches and brake to engage and disengage the transmission gears. When hydraulic pressure is introduced into the clutch drum and the reverse brake piston cavity, the clutch piston and the reverse brake piston move. This presses the friction discs and steel plate together, locking them so they do not slip. Power is then transmitted through the engaged clutch pack to its hub-mounted gear, and through the engaged ring gear to the pinion gears.

Likewise, when the hydraulic pressure is bled from the clutch pack and reverse brake piston cavity, the piston releases the friction discs and the steel plates, and they are free to slide past each other. This allows the gear to spin independently on its shaft, transmitting no power.

Start Clutch

The start clutch engages/disengages the secondary drive gear, and is located at the end of the driven pulley shaft. The start clutch is supplied hydraulic pressure by its ATF feed pipe within the driven pulley shaft.

Forward Clutch

The forward clutch engages/disengages the sun gear, and is located at the end of the drive pulley shaft. The forward clutch is supplied hydraulic pressure by its ATF feed pipe within the drive pulley shaft.

Reverse Brake

The reverse brake locks the planetary carrier in the R position, and is located inside the intermediate housing around the planetary carrier. The reverse brake discs are mounted to the planetary carrier and the reverse brake plates are mounted on the intermediate housing. The reverse brake is supplied hydraulic pressure by a circuit connected to the internal hydraulic circuit.

Planetary Gear

The planetary gear consists of the sun gear, planetary pinion gears, and ring gear. The sun gear is connected to the input shaft with splines. The pinion gears are mounted on the planetary carrier. The planetary carrier is located on the end of the input shaft, over the sun gear. The ring gear is located in the planetary carrier, and connected to the forward clutch drum. The sun gear inputs the engine power via the input shaft to the planetary gears, and the ring gear outputs the engine power. The planetary gear mechanism is only used for switching the rotation direction of the pulley shafts. In the D and L positions (forward range), the pinion gears do not rotate and revolve around the sun gear, so the carrier rotates. In the R position (reverse range), the reverse brake locks the planetary carrier, and the sun gear drives the pinion gears to rotate. The pinion gears rotate, but do not revolve around the sun gear. The pinion gears drive the ring gear in the opposite direction from the rotation direction of the sun gear.

Pulleys

Each pulley consists of a movable face and a fixed face, and the effective pulley ratio changes with engine speed. The drive pulley and the driven pulley are linked by the steel belt.

To achieve a low pulley ratio, high hydraulic pressure works on the movable face of the driven pulley and reduces the effective diameter of the drive pulley, and a lower hydraulic pressure works on the movable face of the driven pulley to eliminate the steel belt slippage. To achieve a high pulley ratio, high hydraulic pressure works on the movable face of the drive pulley and reduces the effective diameter of the driven pulley, and low hydraulic pressure works on the movable face of the driven pulley to eliminate the steel belt slippage.

Power Flow

Transmission Cutaway View

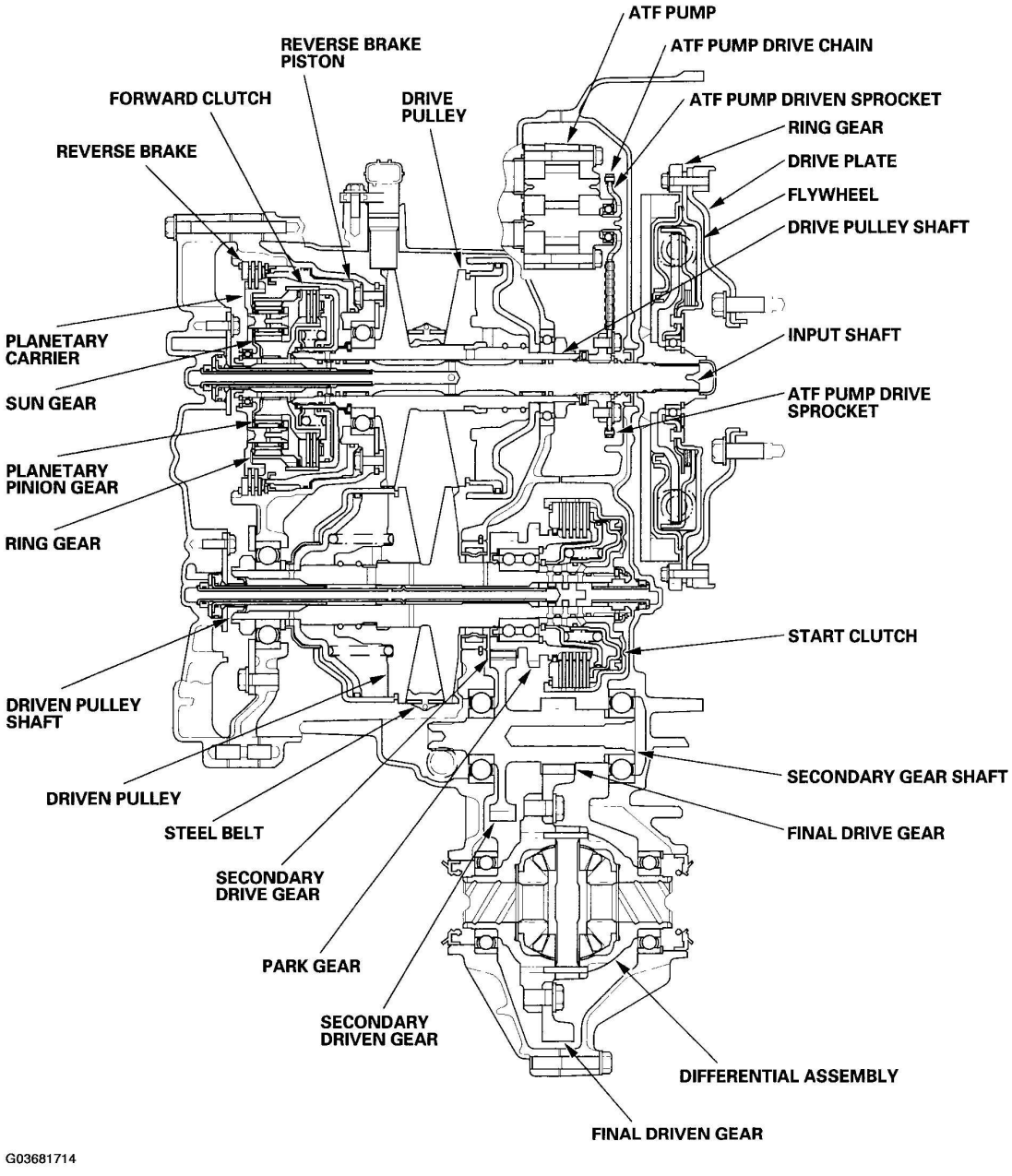

Fig. 13: Transmission Cutaway View
Courtesy of AMERICAN HONDA MOTOR CO., INC.

P Position

Hydraulic pressure is not applied to the start clutch, forward clutch, and reverse brake. Power is not transmitted to the secondary drive gear. The secondary drive gear is locked by the park pawl interlocking with the park gear.

N Position

Engine power transmitted from the flywheel drives the input shaft, but the hydraulic pressure is not applied to the forward clutch and reverse brake. Power is not transmitted to the drive pulley shaft. Also hydraulic pressure is not applied to the start clutch.

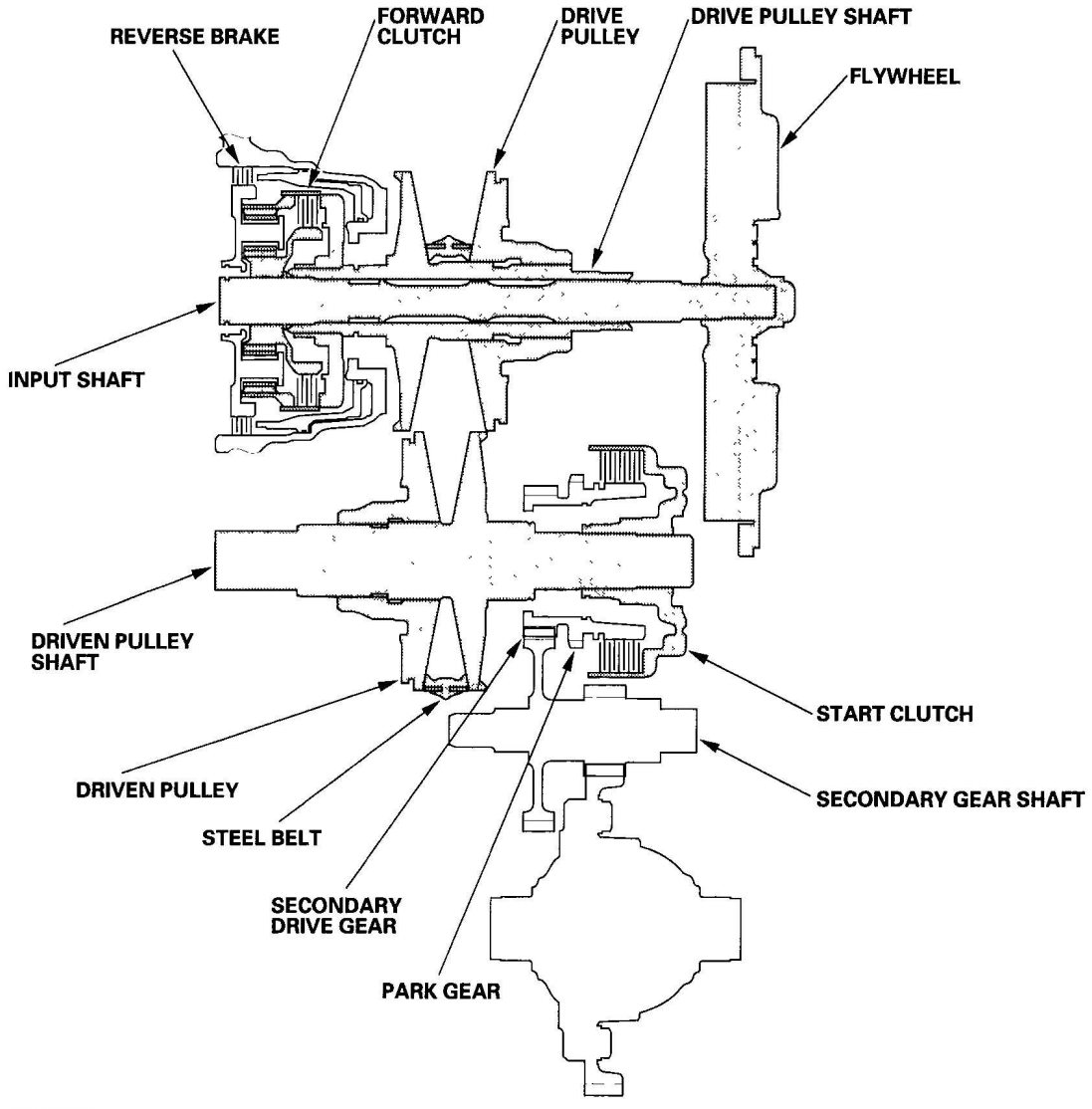

Fig. 14: Identifying Transmission Power Flow - P And N Positions
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D and L Position (Forward Range)

- Forward clutch: engaged
- Reverse brake: released
- Start clutch: engaged
- Hydraulic pressure is applied to the forward clutch and start clutch, and the sun gear drives the forward clutch.
- The forward clutch drives the drive pulley shaft, which drives the driven pulley shaft linked by the steel belt.
- The driven pulley shaft drives the secondary drive gear via the start clutch.
- Power is transmitted to the secondary driven gear and final drive gear, which in turn drives the final driven gear.

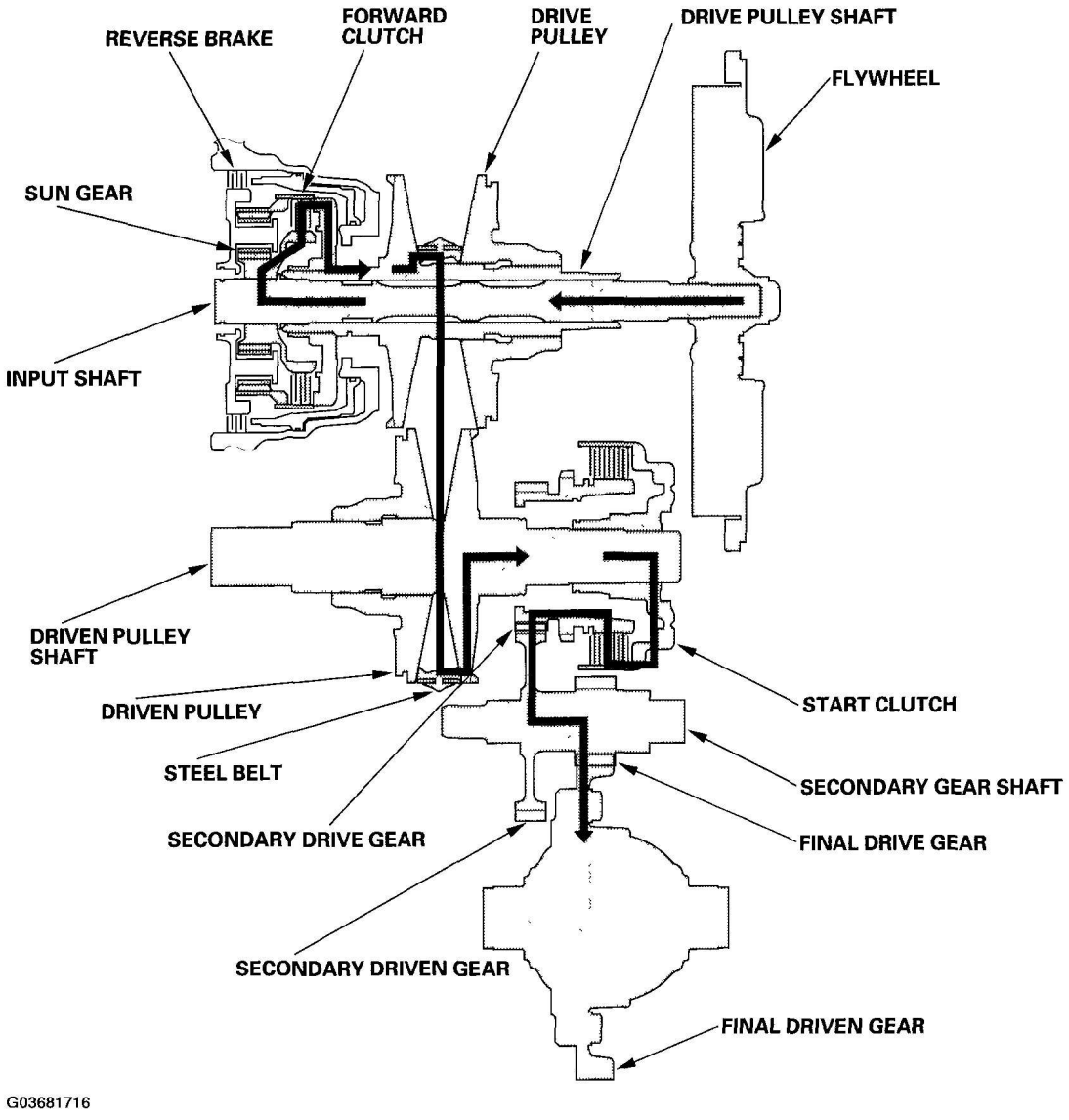

Fig. 15: Identifying Transmission Power Flow - D And L Position (Forward Range)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position (Reverse Range)

- Forward clutch: released
- Reverse brake: engaged
- Start clutch: engaged
- Hydraulic pressure is applied to the reverse brake and the start clutch, and the

planetary carrier locks with the reverse brake.

- The sun gear drives the pinion gears to rotate, and the pinion gears drive the ring gear in the opposite direction from the rotation direction of the sun gear.
- The ring gear drives the drive pulley shaft via the forward clutch drum, and drive pulley shaft drives the driven pulley shaft linked by the steel belt.
- The driven pulley shaft drives the secondary drive gear via the start clutch.
- Power is transmitted to the secondary driven gear and final drive gear, which in turn drives the final driven gear.

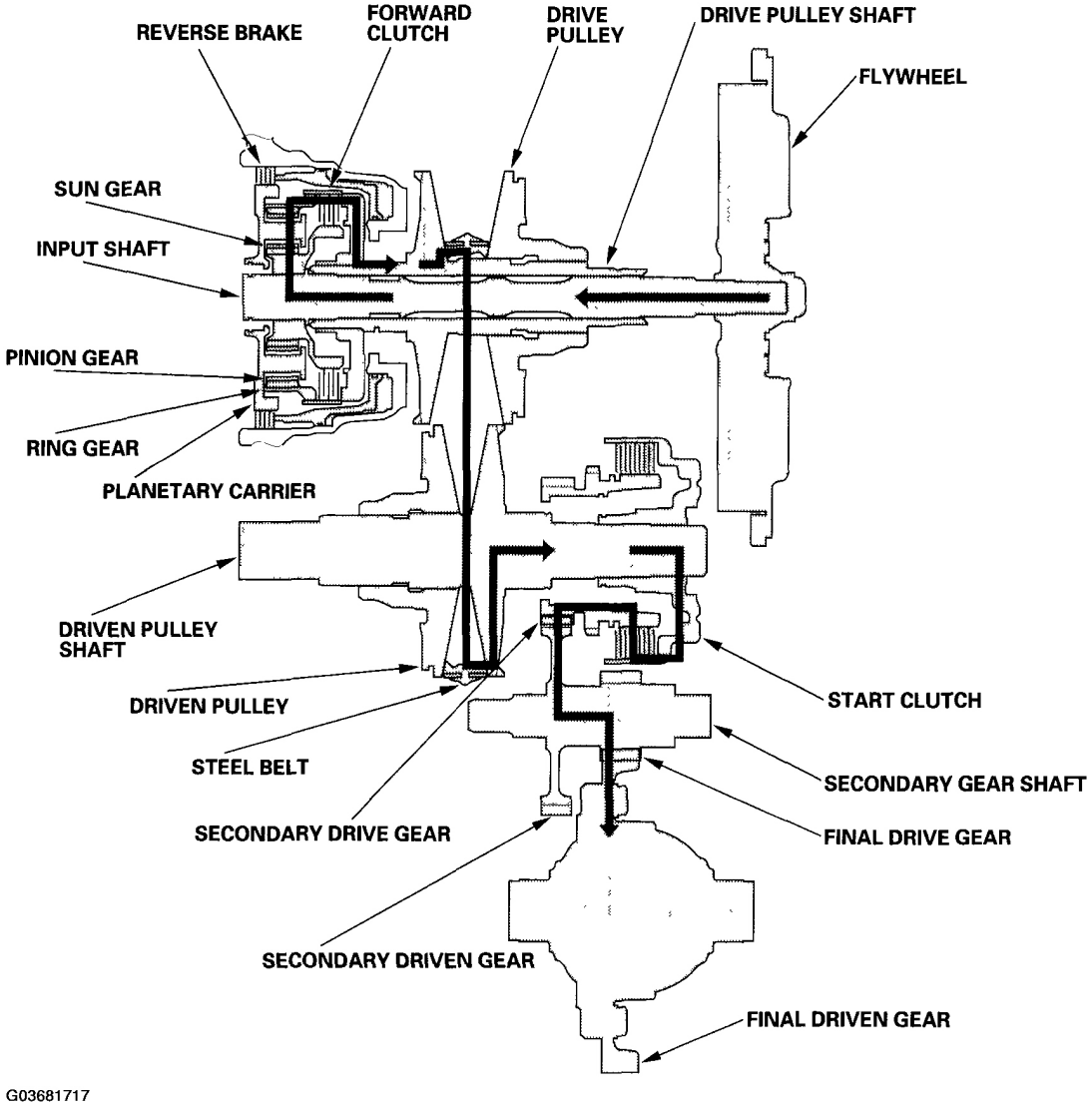

Fig. 16: Identifying Transmission Power Flow - R Position (Reverse

Range)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Electronic Control System

Functional Diagram

The electronic control system consists of the transmission control module (TCM), sensors, switches, and solenoid valves. Shifting is electronically controlled for comfortable driving under all conditions.

The TCM receives input signals from the ECM, sensors and switches, perform processing data, and outputs signals for automatic transmission control system. The A/T control system, which includes the shift control, pulley pressure control, start clutch pressure control, reverse inhibitor control, and creep aid control, is stored in the TCM.

The TCM actuates the pulley control solenoids to control the pulley control valves A and B shifting transmission pulley ratios.

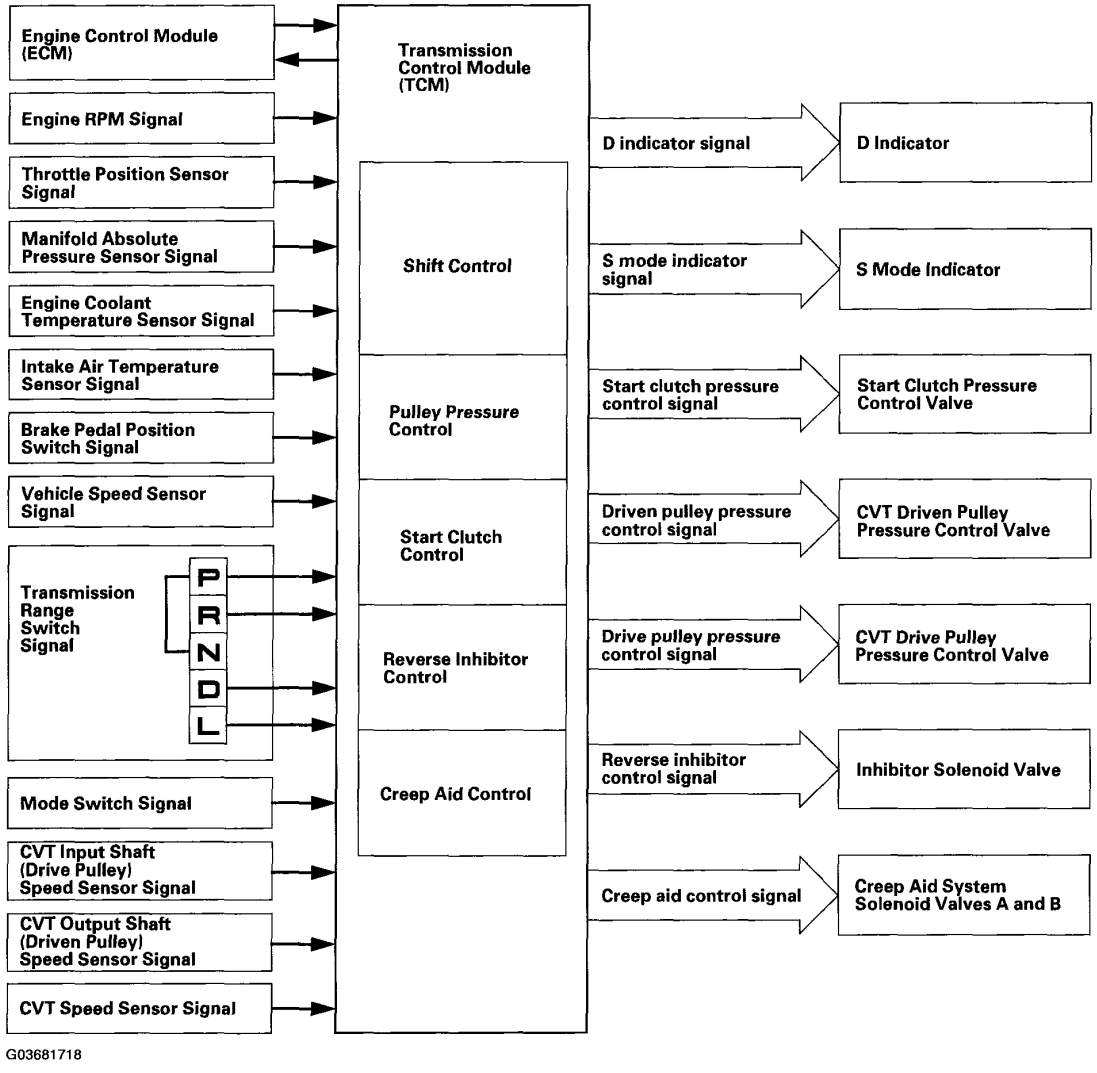

Fig. 17: Electronic Control System Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Pulley Pressure Control/Shift Control

To reduce belt slippage and increase belt life, the TCM calculates signals from the sensors and switches, and actuates the pulley pressure control valves to maintain optimum pulley pressure. When the pulley ratio is low (low vehicle speed), high hydraulic pressure works on the movable face of the driven pulley and reduces the effective diameter of the driven pulley, and a lower hydraulic pressure works on the movable face of the drive pulley to eliminate the steel belt slippage. When the pulley ratio is high (high vehicle speed), high hydraulic pressure works on the

movable face of the drive pulley and reduces the effective diameter of the drive pulley, and a lower hydraulic pressure works on the movable face of the driven pulley to eliminate the steel belt slippage.

The TCM compares actual driving conditions with memorized driving conditions to control shifting, and instantly determines a drive pulley ratio from various signals sent from sensors and switches. The TCM activates the CVT drive pulley pressure control valve to control pulley pressure to the pulleys. The drive pulley drives the driven pulley via a steel belt at varying ratios ranging from 2.441 to 0.407 in the D position.

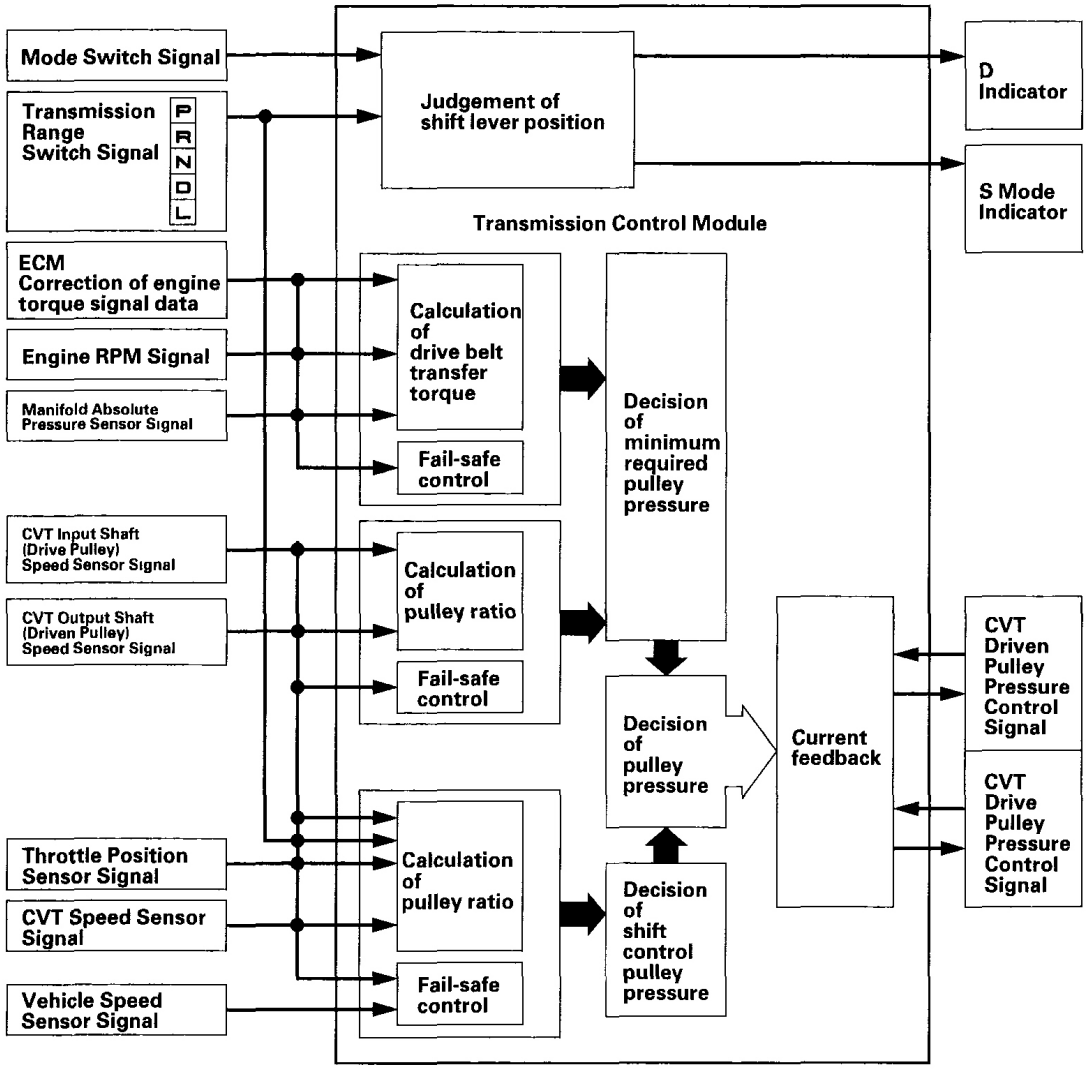

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Fig. 18: Pulley Pressure Control/Shift Control Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Start Clutch Control

The hydraulic-controlled start clutch controls smooth starting-off and creeping in the D, L, and R positions like a torque converter. The TCM receives input signals from the ECM, sensors switches actuates the start clutch pressure control valve to regulate the clutch reducing pressure, and the clutch reducing pressure controls the start clutch.

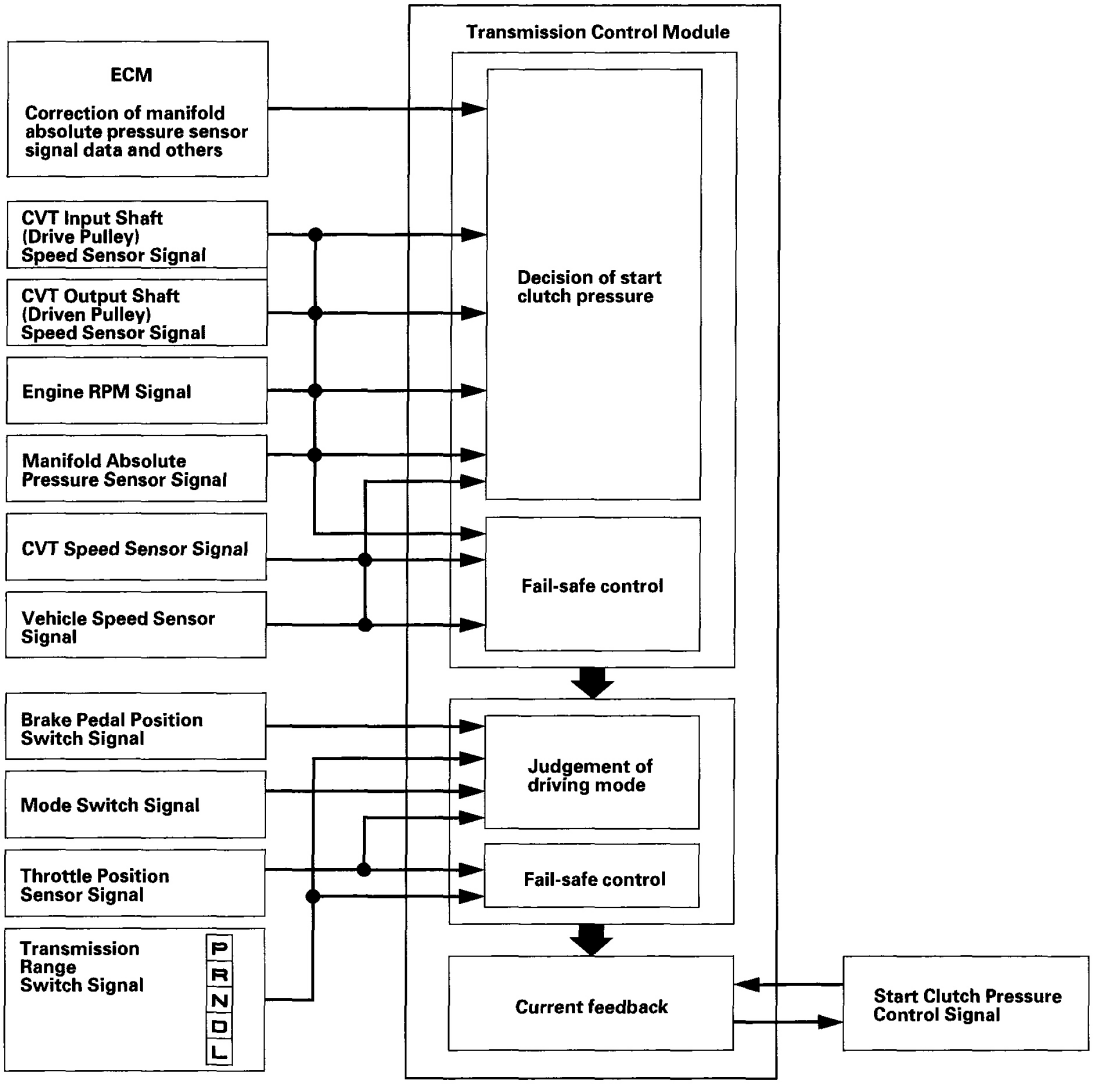


Fig. 19: Start Clutch Control Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Creep Aid Control

The Creep Aid System prevents the vehicle from moving backwards when the vehicle starts off on an ascending slope after the brake pedal is released.

When the vehicle comes to a stop, the engine is stopped by the auto-stop system under certain conditions. The start clutch is released because the ATF pump does not operate when the engine is stopped.

With the auto-stop system, when the vehicle comes to a stop with the brakes applied on an ascending slope, the TCM turns the creep-aid system solenoid valves A and B ON. This maintains the brake pressure, applied during the stop, to the brakes. When the engine restarts, the TCM turns the creep-aid system solenoid valves A and B OFF releasing the brake system pressure, allowing the vehicle to creep.

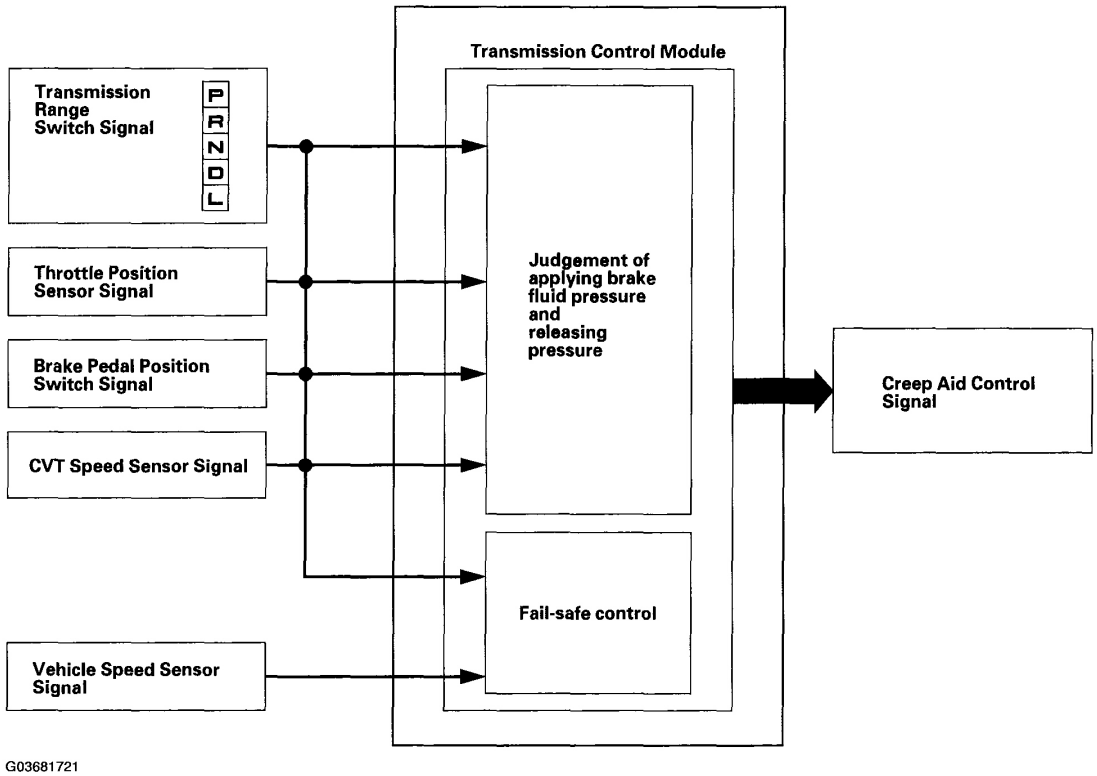


Fig. 20: Creep Aid Control Functional Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Electronic Controls Location

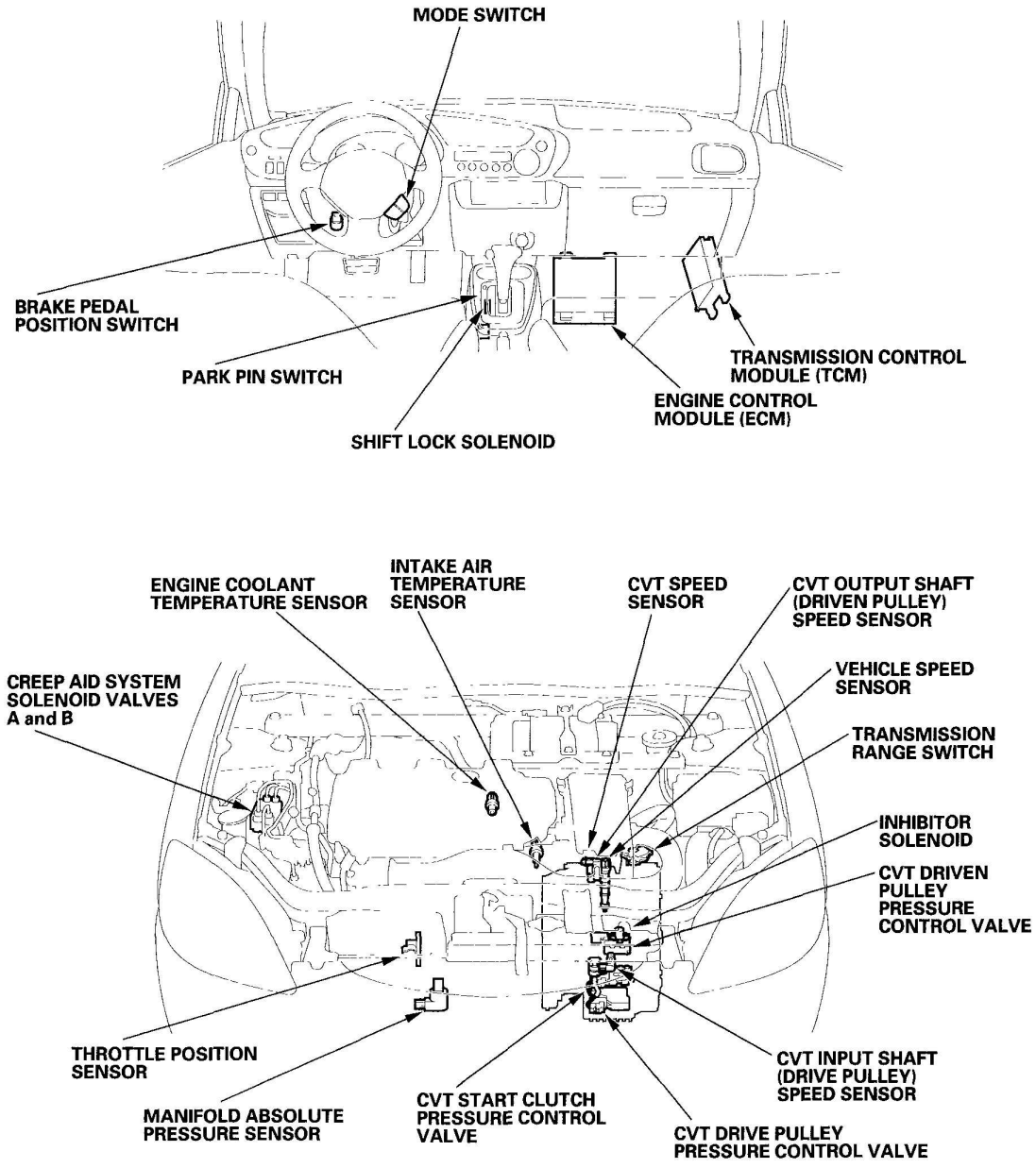


Fig. 21: Identifying Electronic Controls Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TCM Electrical Connection

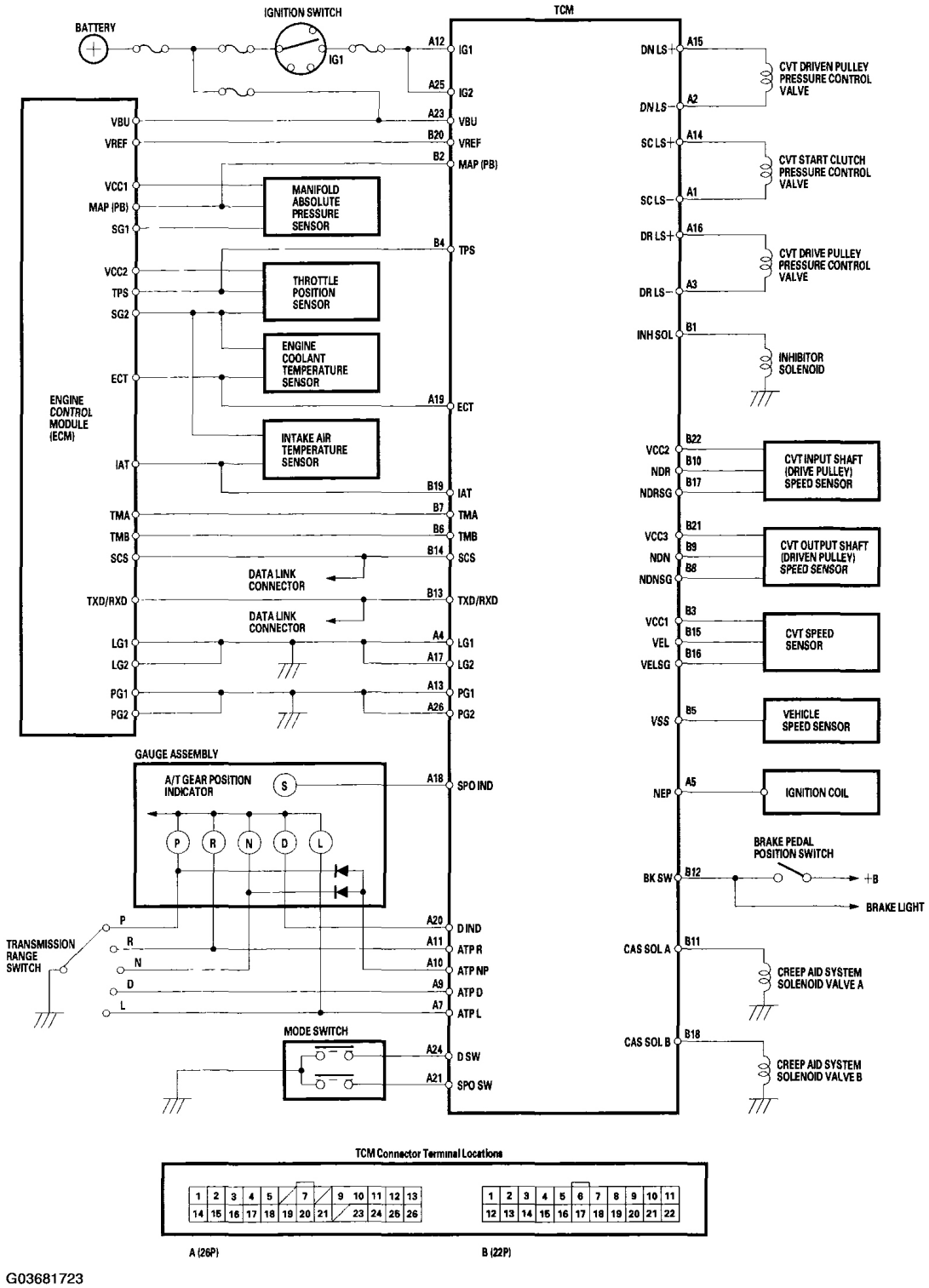
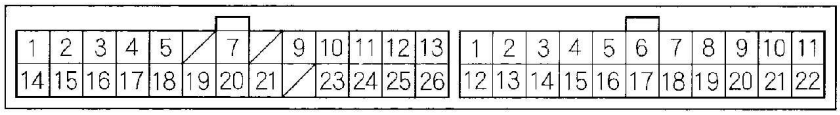


Fig. 22: TCM Electrical Connection Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TCM Inputs and Outputs

TCM Connector Terminal Locations

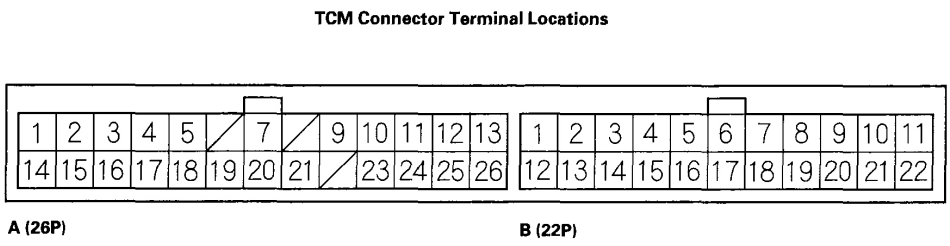


A (26P) B (22P)

TCM CONNECTOR A (26P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
A1	PNK/BLU	SC LS−	CVT start clutch pressure control valve power supply negative electrode	With ignition switch ON (II): Current control
A2	PNK/BLK	DN LS−	CVT driven pulley pressure control valve power supply negative electrode	With ignition switch ON (II): Current control
A3	GRN/YEL	DR LS−	CVT drive pulley pressure control valve power supply negative electrode	With ignition switch ON (II): Current control
A4	BRN/BLK	LG1	Ground	Less than 1.0 V at all times
A5	BLU	NEP	Engine speed signal input	With engine running: Pulsing signal
A7	BLU	ATP L	Transmission range switch L position input	In the L position: 0 V In other than the L position: About 10 V
A9	PNK	ATP D	Transmission range switch D position input	In the D position: 0 V In other than the D position: About 5 V
A10	LT GRN	ATP NP	Transmission range switch P and N positions input	In the P and N positions: 0 V In other than the P and N positions: About 5 V
A11	GRN/BLK	ATP R	Transmission range switch R position input	In the R position: 0 V In other than the R position: About 10 V
A12	BLK/YEL	IG1	Power supply circuit	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
A13	BLK	PG1	Ground	Less than 1.0 V at all times
A14	YEL	SC LS+	CVT start clutch pressure control valve power supply positive electrode	With ignition switch ON (II): Current control
A15	GRN/WHT	DN LS+	CVT driven pulley pressure control valve power supply positive electrode	With ignition switch ON (II): Current control
A16	BLU/WHT	DR LS+	CVT drive pulley pressure control valve power supply positive electrode	With ignition switch ON (II): Current control
A17	BRN/BLK	LG2	Ground	Less than 1.0 V at all times
A18	LT GRN	SPO IND	S mode indicator output	In S mode (S mode indicator comes on): About 10 V In drive mode (S mode indicator turns off): 0 V
A19	RED/WHT	ECT	Engine coolant temperature sensor signal input	Ignition switch ON (II): About 0.1—4.8 V (depending on engine coolant temperature)
A20	GRN/BLK	D IND	D indicator control	When ignition switch is first turned ON (II): About 10 V In the D position: About 10 V
A21	YEL	SPO SW	Sport mode switch signal input	With Sport mode switch ON: 0 V With Sport mode switch OFF: About 5 V
A23	WHT/BLU	VBU	Back-up power supply	Always battery voltage
A24	BLU	D SW	Drive mode switch signal input	With Drive mode switch ON: 0 V With Drive mode switch OFF: About 5 V
A25	BLK/YEL	IG2	Power supply circuit	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
A26	BLK	PG2	Ground	Less than 1.0 V at all times

Fig. 23: TCM Inputs And Outputs - Connector A (26P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.



TCM CONNECTOR B (22P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
B1	GRN/BLK	INH SOL	Inhibitor solenoid control	With inhibitor solenoid ON: Battery voltage With inhibitor solenoid OFF: 0 V
B2	RED/GRN	MAP (PB)	Manifold absolute pressure sensor signal input	With ignition switch ON (II): About 3.0 V With engine idling: About 1.0 V (depending on engine speed)
B3	YEL/RED	VCC1	Power supply for sensors	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V
B4	RED/BLK	TPS	Throttle position sensor signal input	With ignition switch ON (II) and throttle fully open: About 4.5 V With ignition switch ON (II) and throttle fully closed: About 0.5 V
B5	BLU/WHT	VSS	Vehicle speed sensor signal input	With ignition switch ON (II) and rotating front wheels: 0 V or about 5 V
B6	PNK	TMB	Data communication line: transmission control data output to ECM	With ignition switch ON (II): Pulsing signal
B7	GRY	TMA	Data communication line: Engine control data input from ECM	With ignition switch ON (II): Pulsing signal
B8	RED/WHT	NDN SG	CVT output shaft (driven pulley) speed sensor ground	Less than 1.0 V at all times
B9	WHT	NDN	CVT output shaft (driven pulley) speed sensor signal input	Ignition switch ON (II): 0 V or about 5 V With engine idling 1.5—3.5 V

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Fig. 24: TCM Inputs And Outputs - Connector B (22P) (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TCM CONNECTOR B (22P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
B10	RED/BLU	NDR	CVT input shaft (drive pulley) speed sensor signal input	Ignition switch ON (II): 0 V or about 5 V With engine idling 1.5—3.5 V
B11	WHT/RED	CAS SOL A	Creep aid system solenoid valve A control	Creep aid system solenoid valve A ON: Battery voltage Creep aid system solenoid valve A OFF: 0 V
B12	GRN/WHT	BK SW	Brake pedal position switch signal input	With brake pedal pressed: Battery voltage With brake pedal released: 0 V
B13	LT BLU	DIAG-H (TXD/RXD)	Data communication line; Diagnostic trouble code output	With ignition switch ON (II): About 5 V
B14	BRN	SCS	Service check signal	With ignition switch ON (II) and SCS line open: About 5 V With ignition switch ON (II) and SCS line short-circuited: About 0 V
B15	WHT/RED	VEL	CVT speed sensor signal input	Ignition switch ON (II): 0 V or about 5 V With vehicle running (front wheels rotating): 1.5—3.5 V
B16	BLK/WHT	VEL SG	CVT speed sensor ground	Less than 1.0 V at all times
B17	GRN	NDR SG	CVT input shaft (drive pulley) speed sensor ground	Less than 1.0 V at all times
B18	BLU/WHT	CAS SOL B	Creep aid system solenoid valve B control	Creep aid system solenoid valve B ON: Battery voltage Creep aid system solenoid valve B OFF: 0 V
B19	RED/YEL	IAT	Intake air temperature sensor signal input	With ignition switch ON (II): 0.1—4.8 V (depending on intake air temperature)
B20	WHT/RED	VREF	+5 V reference	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V
B21	YEL/GRN	VCC3	Power supply for sensors	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V
B22	YEL/BLU	VCC2	Power supply for sensors	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V

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Fig. 25: TCM Inputs And Outputs - Connector B (22P) (2 Of 2) Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hydraulic Control

The hydraulic control system is controlled by the ATF pump, the valves, and the solenoids. The ATF pump is driven by the input shaft. The ATF pump and the input shaft are linked by the ATF pump drive chain and the sprockets. Fluid from the ATF pump flows through the pressure high (PH) regulator valve to maintain specified pressure to the drive pulley, the driven pulley, and the manual valve.

The lower valve body assembly includes the main valve body, the secondary valve body, the CVT driven pulley pressure control valve, the CVT start clutch pressure control valve, and the CVT drive pulley pressure control valve. The manual valve body is bolted on the intermediate housing, and houses the manual valve which switches hydraulic pressure to meet with the shift lever position.

Main Valve Body

The main valve body contains the start clutch shift valve, the shift inhibitor valve, and the lubrication valve.

- Start Clutch Shift Valve

  When a control system malfunction occurs, the start clutch shift valve receives shift inhibitor pressure (SI) and covers the port of lubrication pressure by-pass circuit.

- Shift Inhibitor Valve

  The shift inhibitor valve switches the fluid passage to switch the start clutch control from electronic control to hydraulic control when the electronic control system is faulty.

- Lubrication Valve

  The lubrication valve stabilizes the lubrication pressure to the internal circuit.

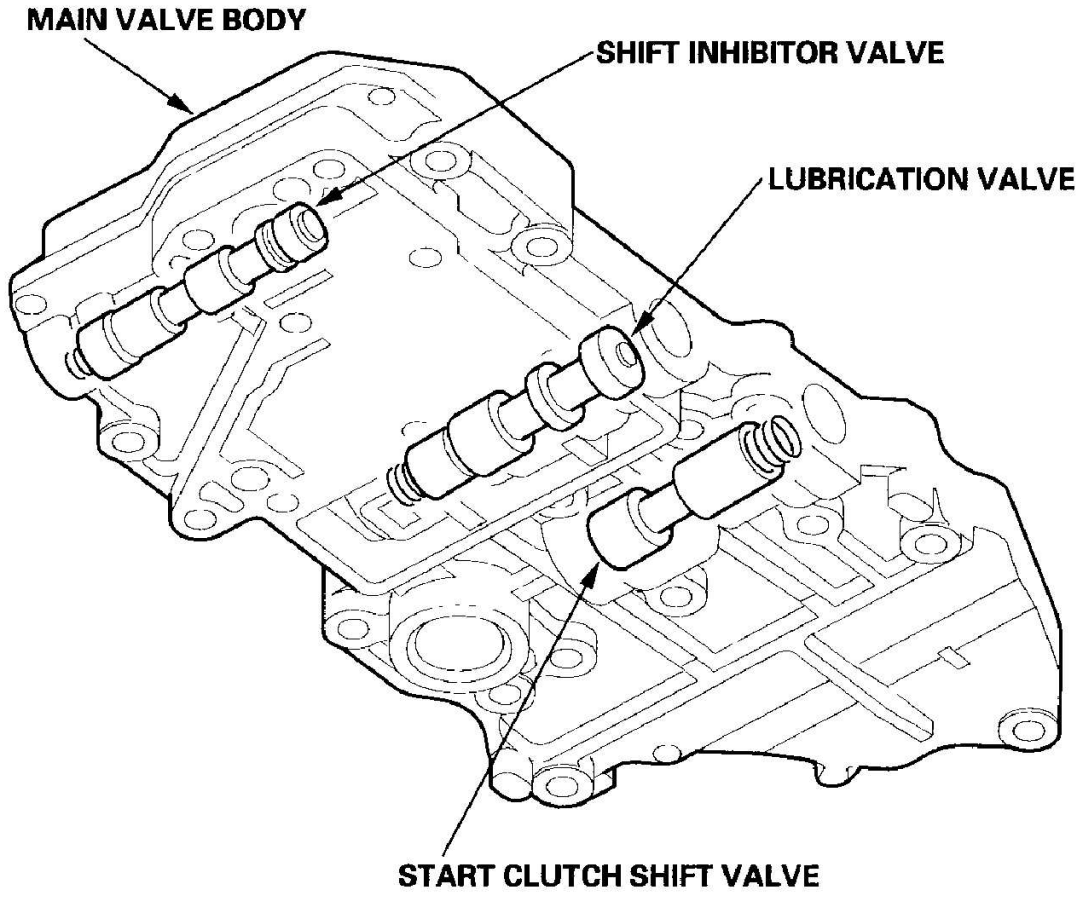

Fig. 26: Identifying Main Valve Body Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Secondary Valve Body

The secondary valve body contains the pressure high (PH) regulator valve, the pressure high control (PHC) shift valve B, the start clutch back-up valve, the clutch reducing valve, and the start clutch accumulator.

- PH Regulator Valve

  The PH regulator valve maintains hydraulic pressure supplied from the ATF pump, and supplies PH pressure to the hydraulic control circuit and the lubrication circuit. PH pressure is regulated at the PH regulator valve by the PH control pressure (PHC) from PHC shift valve B.

- PHC Shift Valve

  The PHC shift valve supplies PH control pressure (PHC) to the PH regulator valve to regulate PH pressure in accordance with the drive pulley control pressure (DRC) or driven pulley pressure (DNC).

- Start Clutch Back-up Valve

  When a control system malfunction occurs, the start clutch back-up valve supplies start clutch control B pressure (CCB) based on shift inhibitor pressure (SI) to the start clutch.

- Clutch Reducing Valve

  The clutch reducing valve receives PH pressure from the PH regulator valve and regulates clutch reducing pressure (CR).

- Start Clutch Accumulator

  The start clutch accumulator stabilizes the hydraulic pressure that is supplied to the start clutch.

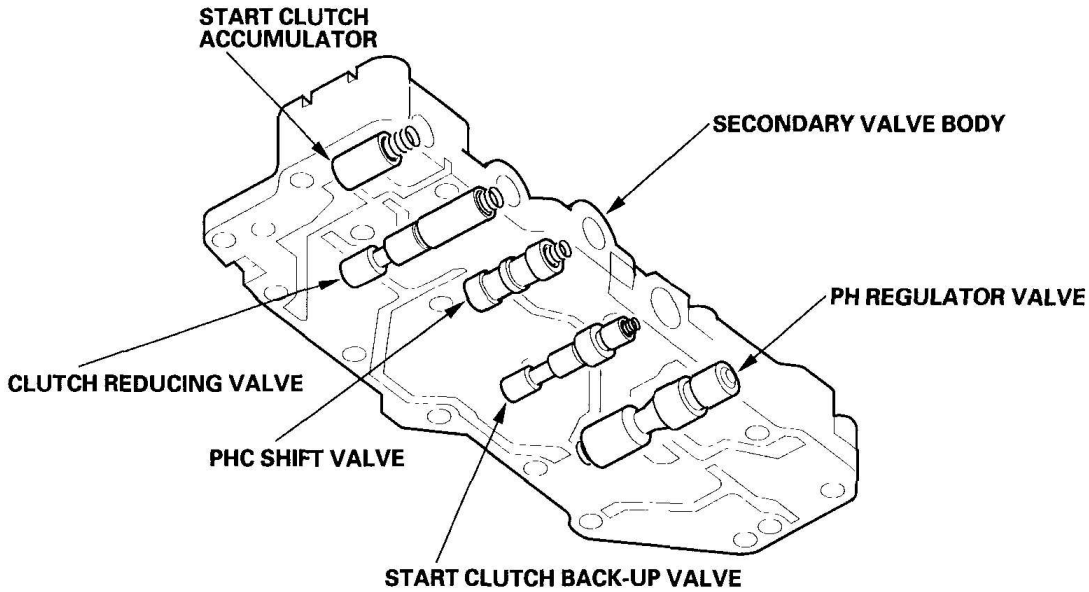

Fig. 27: Identifying Secondary Valve Body Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CVT Driven Pulley Pressure Control Valve

The CVT driven pulley pressure control valve contains the driven pulley control valve with the solenoid and the pulley control valve A. The driven pulley control valve controls the position of the pulley control valve A to applying driven pulley pressure (DN) to the driven pulley.

CVT Drive pulley pressure Control Valve

The CVT drive pulley pressure control valve contains the drive pulley control valve with the solenoid and the pulley control valve B. The drive pulley control valve controls the position of the pulley control valve B to applying drive pulley pressure (DR) to the drive pulley. The combination of the CVT driven pulley pressure control valve and the CVT drive pulley pressure speed change control valve applying pulley control pressures to the respective pulley provides a power transfer completely, to eliminate steel belt slippage and to make long belt life.

CVT Start Clutch Pressure Control Valve

The CVT start clutch pressure control valve consists of the start clutch pressure control valve and the solenoid. The CVT start clutch pressure control valve controls start clutch engagement according to the throttle opening.

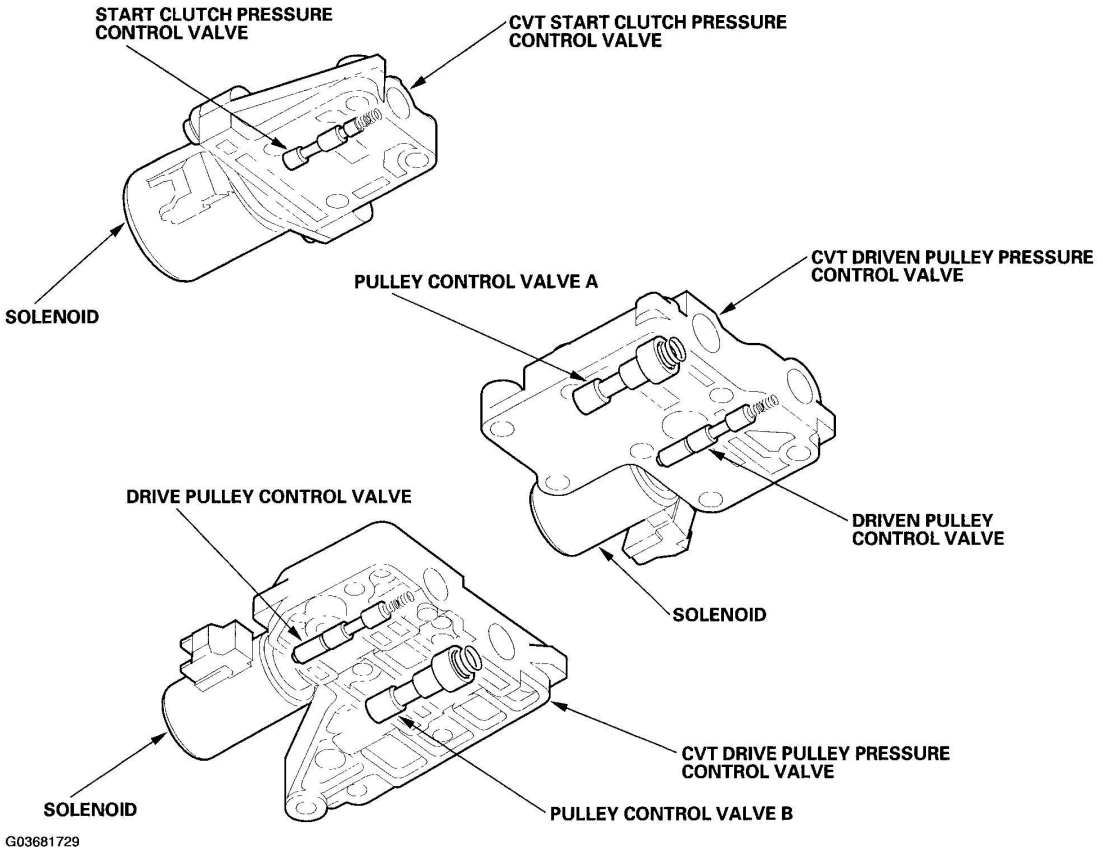

Fig. 28: Identifying CVT Start Clutch Pressure Control Valve Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Manual Valve Body

The manual valve body contains the manual valve and the reverse inhibitor valve. The manual valve body is bolted on the intermediate housing.

- Manual Valve

  The manual valve mechanically uncovers/covers the fluid passage according to the shift lever position.

- Reverse Inhibitor Valve
- The reverse inhibitor valve is controlled by reverse inhibitor (Rl) pressure from the reverse inhibitor solenoid. The reverse inhibitor valve intercepts the hydraulic pressure flowing to the reverse brake while the vehicle is moving

forward at speeds over about 6 mph (10 km/h).

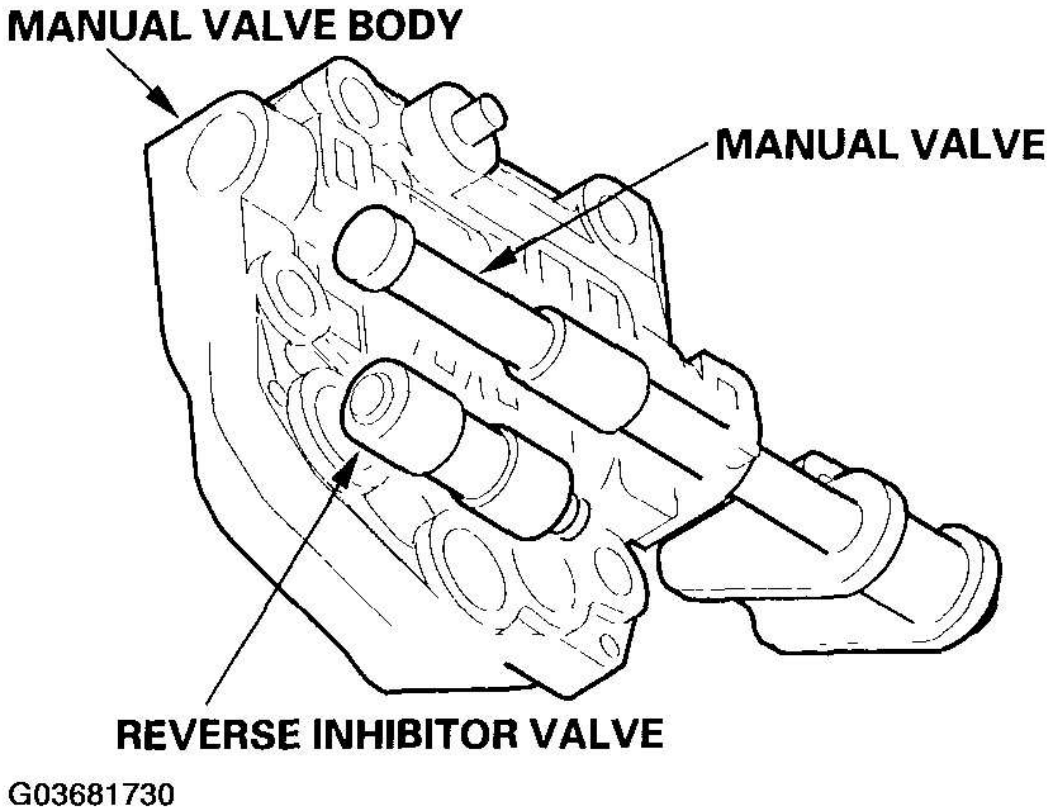

Fig. 29: Identifying Manual Valve Body Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hydraulic Flow

As the engine turns, the ATF pump starts to operate. Continuously variable transmission fluid (CVTF) is drawn through the ATF strainer and discharge into the hydraulic circuit. Then, CVTF flowing from the ATF pump flows to the PH regulator valve and becomes pressure high (PH) pressure. PH pressure flows to the pulley control valves and then to the pulleys. The TCM actuates the solenoids to control hydraulic pressure shifting pulley ratio and engaging the start clutch.

Hydraulic pressure at the port is as follows:

HYDRAULIC PRESSURE DESCRIPTION

Port	Description of Hydraulic Pressure	Port	Description of Hydraulic Pressure
CC	Start Clutch Control	LUB'	Lubrication
CCB	Start Clutch Control B	PH	Pressure High
COL	ATF Cooler	PHC	Pressure High Control
CR	Clutch Reducing	RCC	Recirculation
DN	Driven Pulley	Rl	Reverse Inhibitor
DNC	Driven Pulley Control	RVS	Reverse Brake
DR	Drive Pulley	RVS'	Reverse Brake
DRC	Drive Pulley Control	SC	Start Clutch
FWD	Forward Clutch	SI	Shift Inhibitor
LUB	Lubrication	X	Drain

General Chart Of Hydraulic Pressure

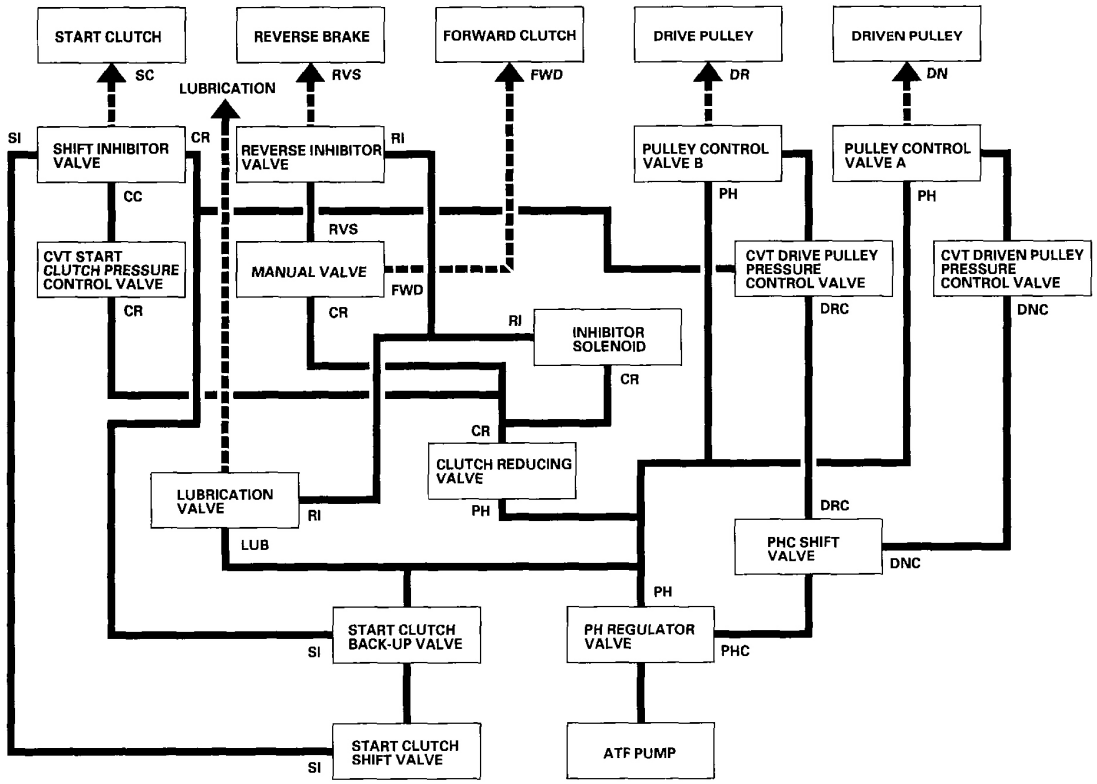

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Fig. 30: Hydraulic Pressure General Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

N Position

Fluid from the ATF pump is regulated to high pressure at the PH regulator valve, and flows to the pulley control valves. The CVT driven pulley pressure control valve and the CVT drive pulley pressure control valve control the pulley control valves A and B to apply pressure to the pulleys. The driven pulley receives pressure higher than pressure drive pulley receives, but hydraulic pressure to the forward clutch is intercepted by the manual valve and to the start clutch is intercepted by the CVT start clutch pressure control valve. Under this condition, hydraulic pressure is not applied to the start and forward clutches.

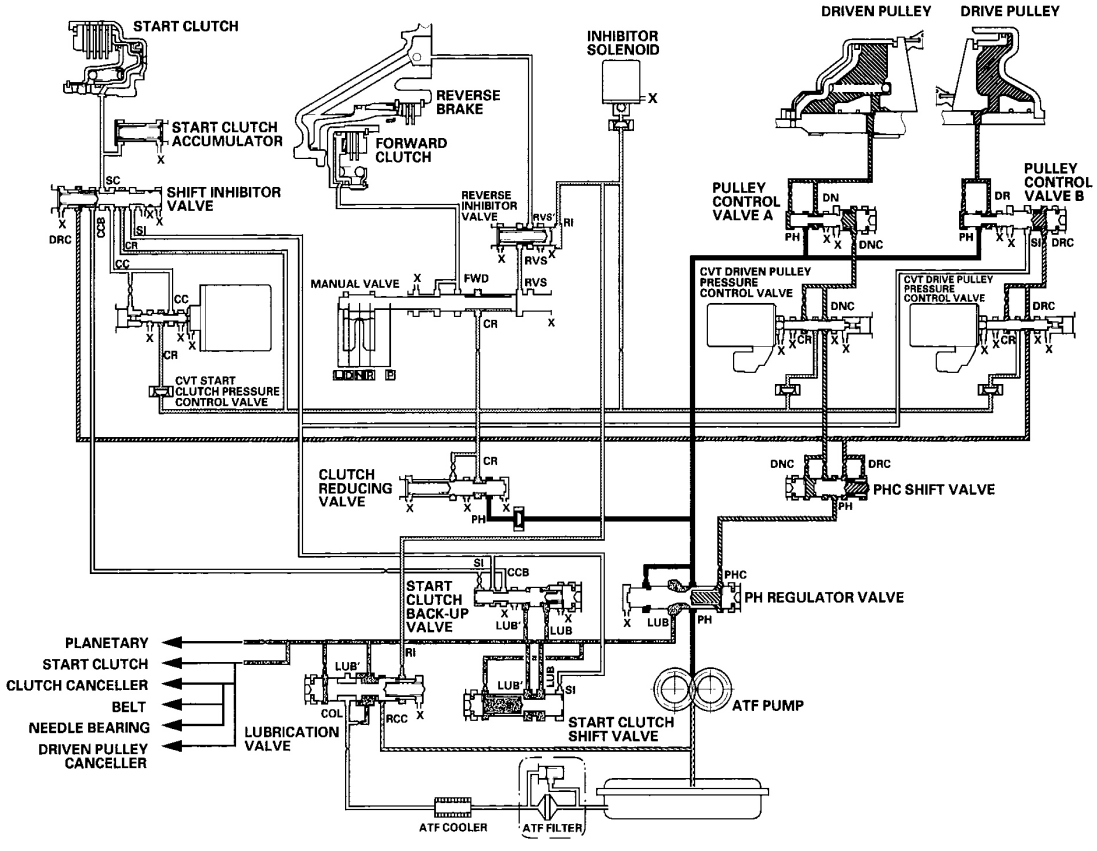

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Fig. 31: Hydraulic Circuit - N Position (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at low speed range

The manual valve is shifted into D position, and uncovers the port leading forward clutch pressure (FWD) to the forward clutch. The forward clutch pressure (FWD) flows to the forward clutch, the forward clutch is engaged and drives the input shaft and drive pulley shaft. The drive pulley receives low pressure, and driven pulley receives high pressure. The TCM actuates the CVT start clutch pressure control valve to control start clutch pressure. The start clutch control pressure (CC) from the CVT start clutch pressure control valve becomes the start clutch pressure (SC) at the shift inhibitor valve, and flows to the start clutch. The start clutch is engaged, and the vehicle moves.

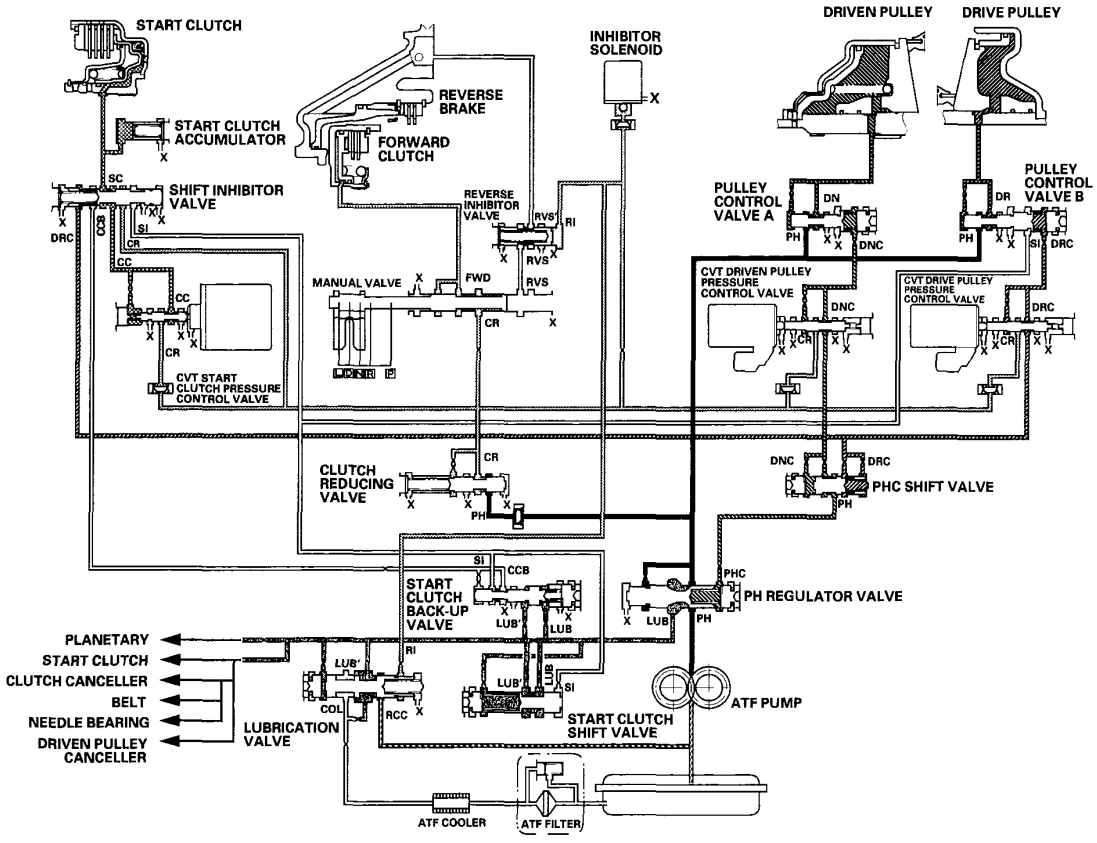

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Fig. 32: Hydraulic Circuit - D Position, At Low Speed Range (2001-2003 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at middle speed range

As the speed of the vehicle reaches the prescribed value, the TCM controls the CVT driven pulley pressure control valve and the CVT drive pulley pressure control valve to provide about the same hydraulic pressure to the pulleys. The diameter contacted with the steel belt on the drive and driven pulleys become nearly equal, and the pulley ratio is in middle. Hydraulic pressure remains to apply to the start and forward clutches.

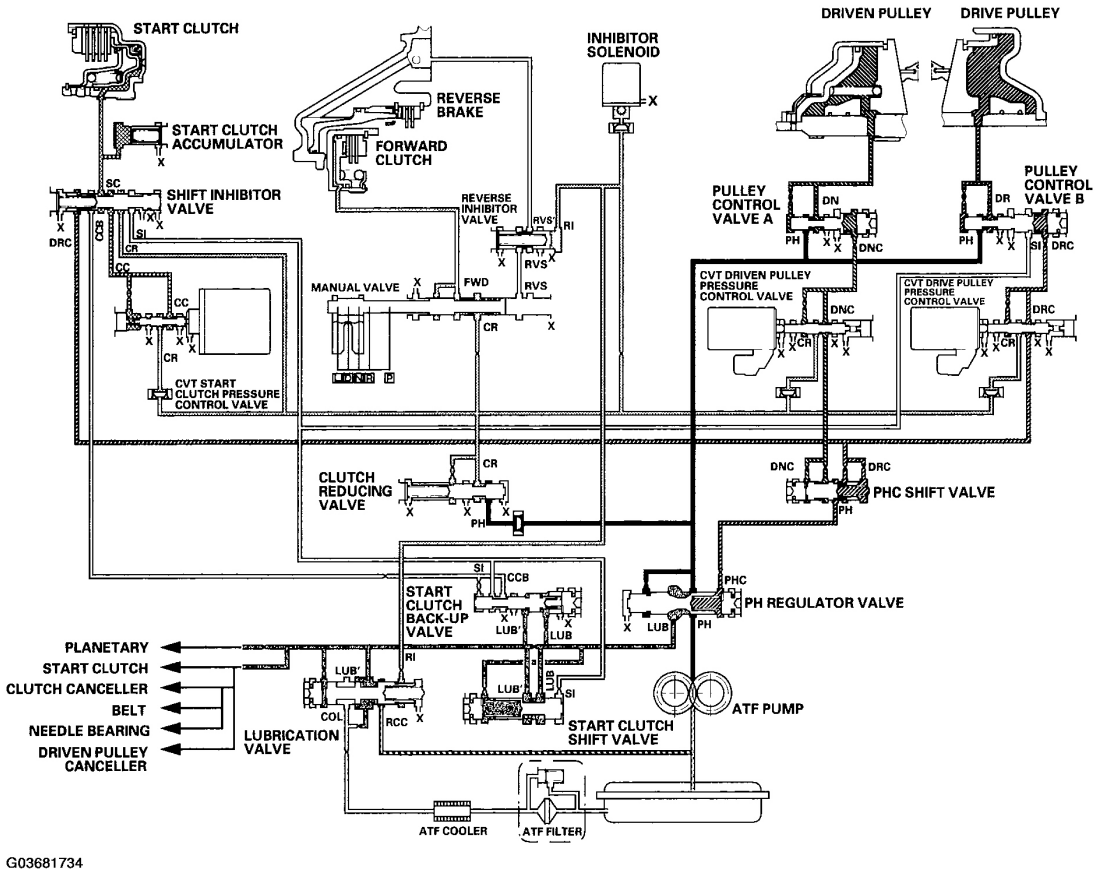

Fig. 33: Hydraulic Circuit - D Position, At Middle Speed Range (2001-2003 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at high speed range

Vehicle speed is further increased, the TCM controls the CVT driven pulley pressure control valve and the CVT drive pulley pressure control valve to apply hydraulic pressure to the drive pulley high and to the driven pulley low. The drive

pulley receives high pressure and the driven pulley receives low. The drive pulley provides the steel belt to large-diameter contact and the driven pulley provides to small-diameter contact, and the pulley ratio is in high. Hydraulic pressure remains to apply to the start and forward clutches.

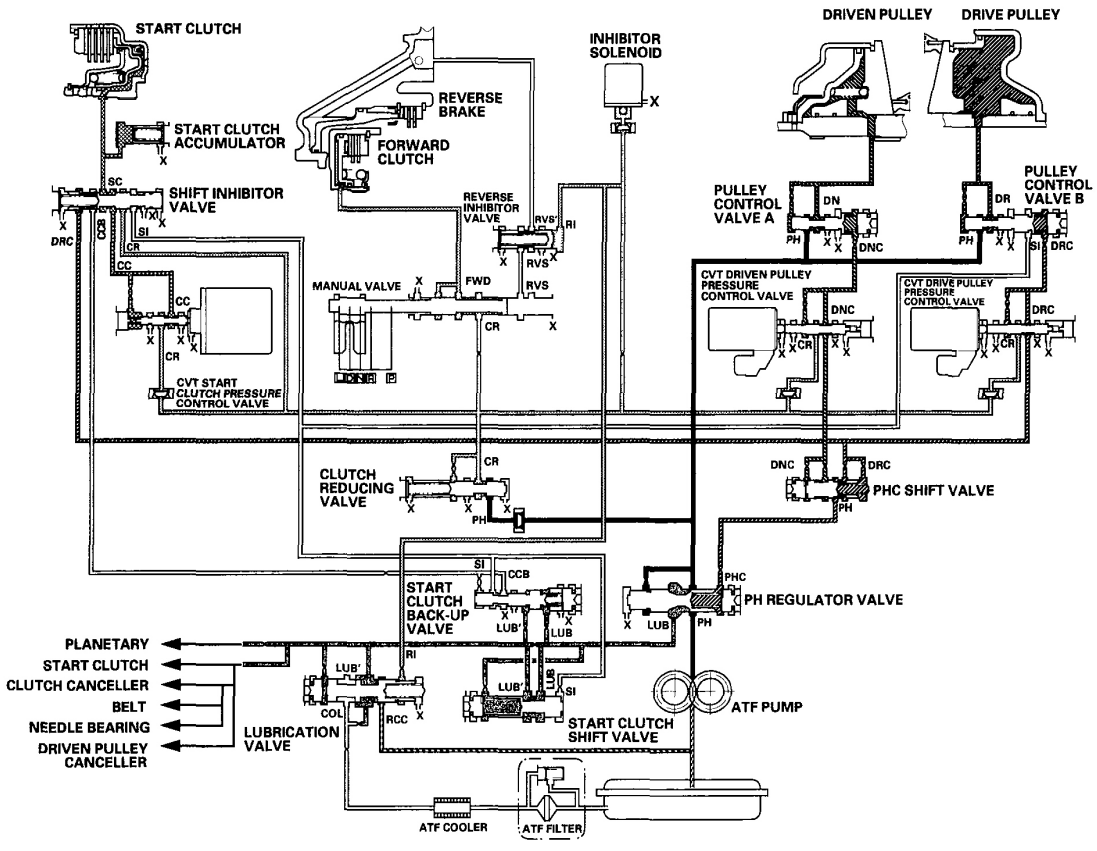

Fig. 34: Hydraulic Circuit - D Position, At High Speed Range (2001-2003 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position

The manual valve is shifted into the R position, and uncovers the port leading reverse brake pressure (RVS) to the reverse inhibitor valve. The reverse inhibitor solenoid is turned OFF by the TCM, and reverse inhibitor pressure (Rl) is applied to the right end of the reverse inhibitor valve. The reverse inhibitor valve is moved to the left side, and uncovers the port leading reverse brake pressure (RVS') to the reverse brake. Clutch reducing pressure (CR) becomes reverse brake pressure

(RVS), and flows to the reverse brake via the reverse inhibitor valve. The reverse brake is engaged, and it locks the planetary carrier.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

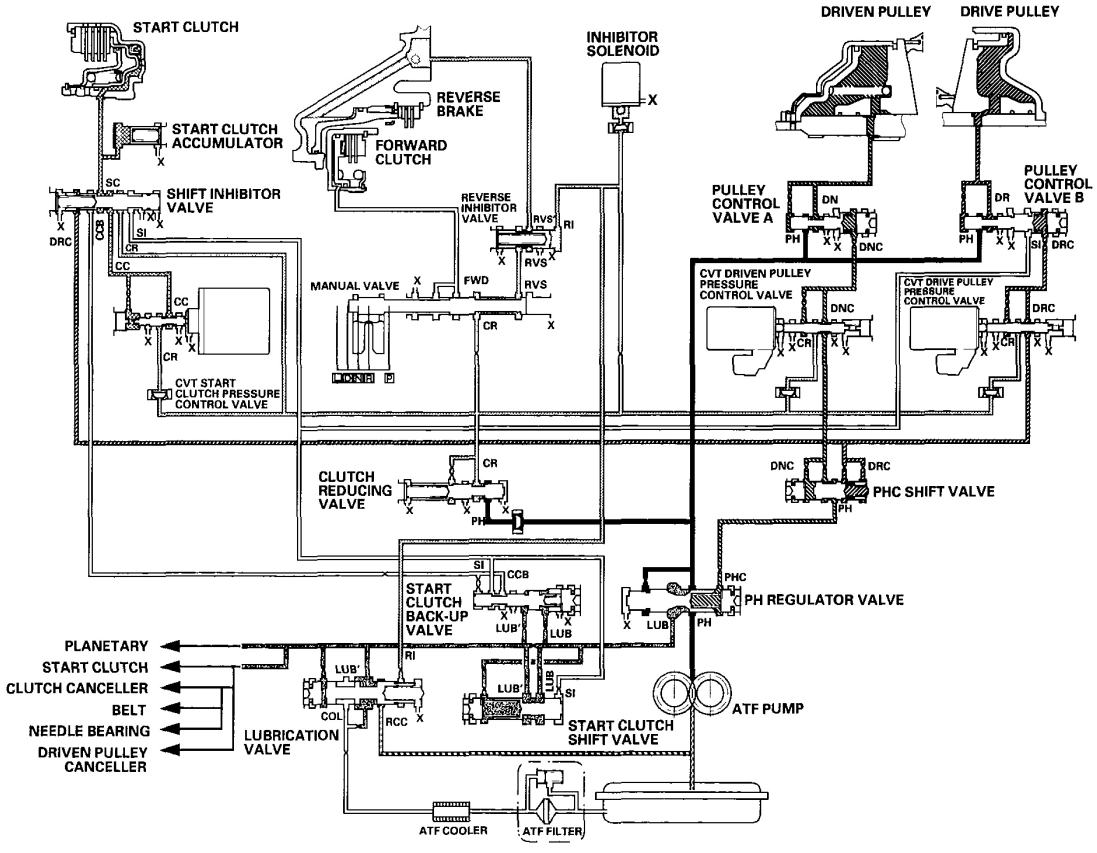

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Fig. 35: Hydraulic Circuit - R Position (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position

Reverse Inhibitor Control

If the R position is selected while the vehicle is moving forward at speeds over 6 mph (10 km/h), the TCM outputs signal to turn ON the reverse inhibitor solenoid, and reverse inhibitor pressure (RI) in the right end of the reverse inhibitor valve is released. The reverse inhibitor valve is moved to the right side, and uncovers the

port to stop reverse brake pressure to the reverse brake from the manual valve. Reverse brake pressure (RVS) is not applied to the reverse brake, and power is not transmitted to the reverse direction.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

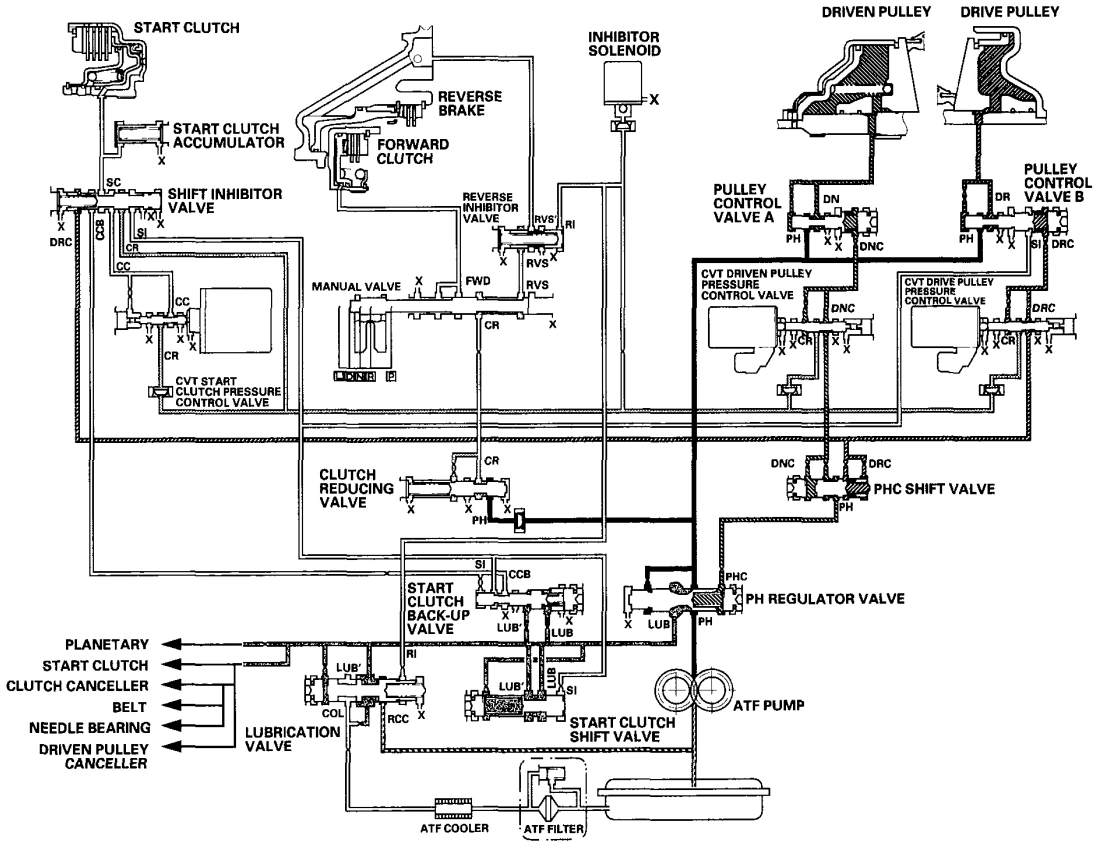

Fig. 36: Hydraulic Circuit - R Position (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

P Position

The manual valve is shifted into the P position, the manual valve intercepts hydraulic pressure to the forward clutch. Hydraulic pressure is not applied to the start and forward clutches, and power is not transmitted to the drive pulley shaft.

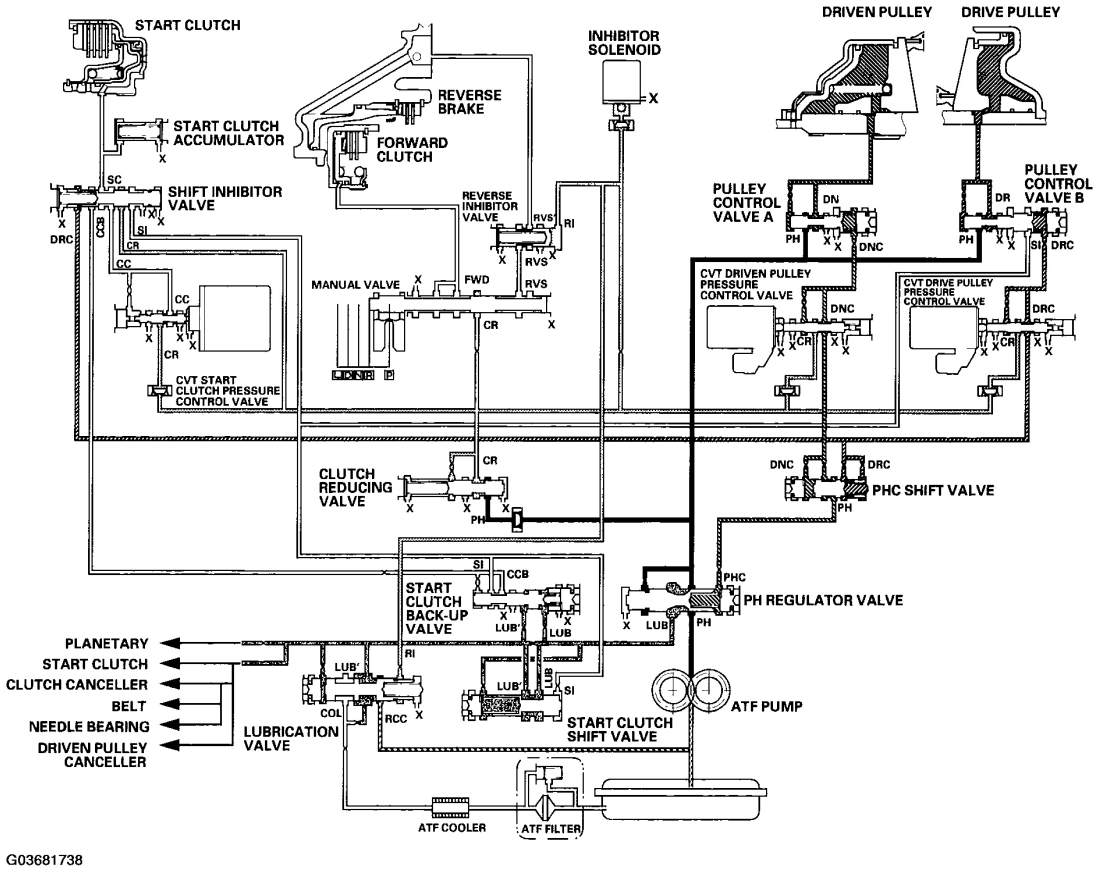

Fig. 37: Hydraulic Circuit - P Position (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, when an electronic control system malfunction occurs.

When an electronic control system malfunction occurs, the CVT start clutch pressure control valve cannot operate to control the start clutch pressure circuit, and the transmission creates the temporary circuit of the start clutch pressure control to allow the vehicle to be driven.

The CVT start clutch control valve covers the port leading start clutch control pressure (CC) to the shift inhibitor valve, and the shift inhibitor valve is moved to the left side by drive pulley control pressure (DRC). Clutch reducing pressure (CR) becomes shift inhibitor pressure (SI) at the shift inhibitor valve, flows to the left side of the start clutch back-up valve, and becomes start clutch control B pressure (CCB). Start clutch control B pressure (CCB) becomes start clutch pressure (SC) at

the shift inhibitor valve, and flows to the start clutch. Clutch reducing pressure (CR) also flows to the manual valve, and becomes to forward clutch pressure (FWD). The start clutch and the forward clutch are engaged, and the vehicle will move.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

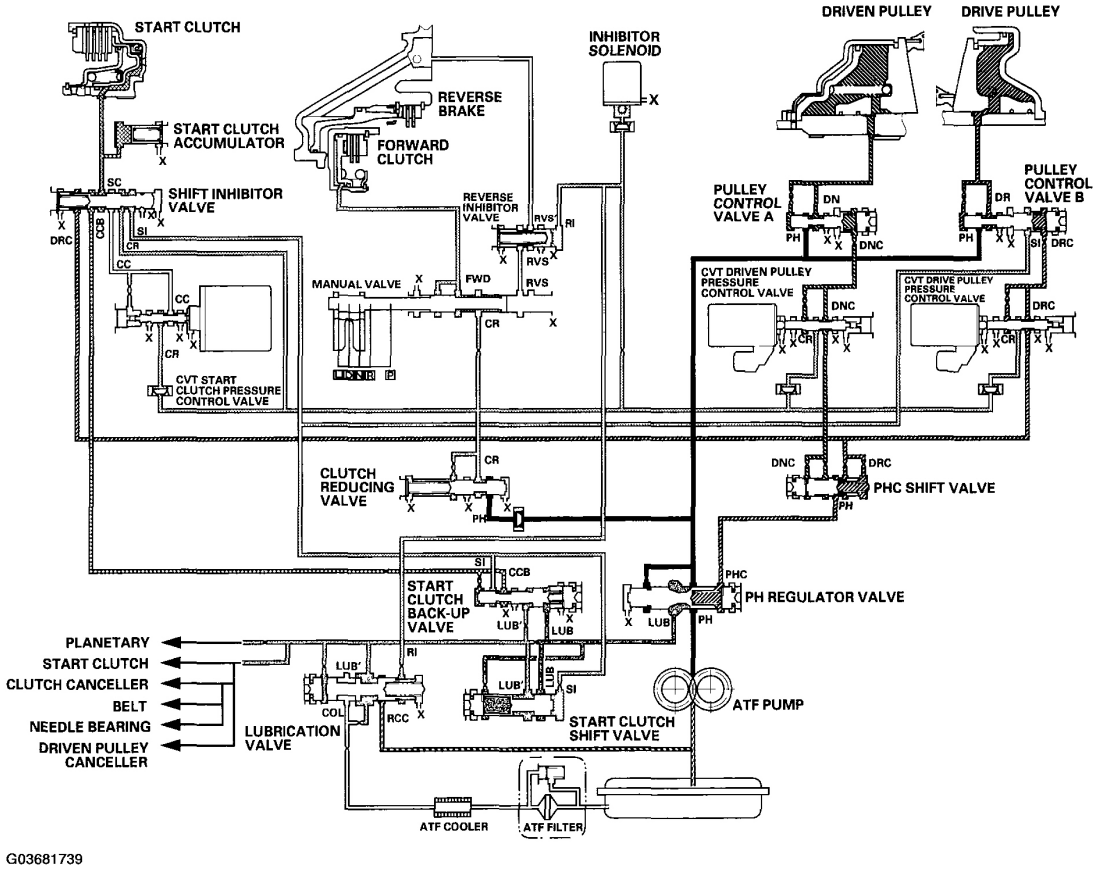

Fig. 38: Hydraulic Circuit - D Position (2001-2003 Models) Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position, when an electronic control system malfunction occurs.

When an electronic control system malfunction occurs, the CVT start clutch pressure control valve cannot operate to control the start clutch pressure circuit, and the transmission creates the temporary circuit of the start clutch pressure control to allow the vehicle to be driven.

The CVT start clutch control valve covers the port leading start clutch control pressure (CC) to the shift inhibitor valve, and the shift inhibitor valve is moved to the left side by drive pulley control pressure (DRC). Clutch reducing pressure (CR) becomes shift inhibitor pressure (SI) at the shift inhibitor valve, flows to the left side of the start clutch back-up valve, and becomes start clutch control B pressure (CCB). Start clutch control B pressure (CCB) becomes start clutch pressure (SC) at the shift inhibitor valve, and flows to the start clutch. Clutch reducing pressure (CR) also flows to the manual valve, and becomes to reverse brake pressure (RVS). The start clutch and the reverse brake are engaged, and the vehicle will reverse.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

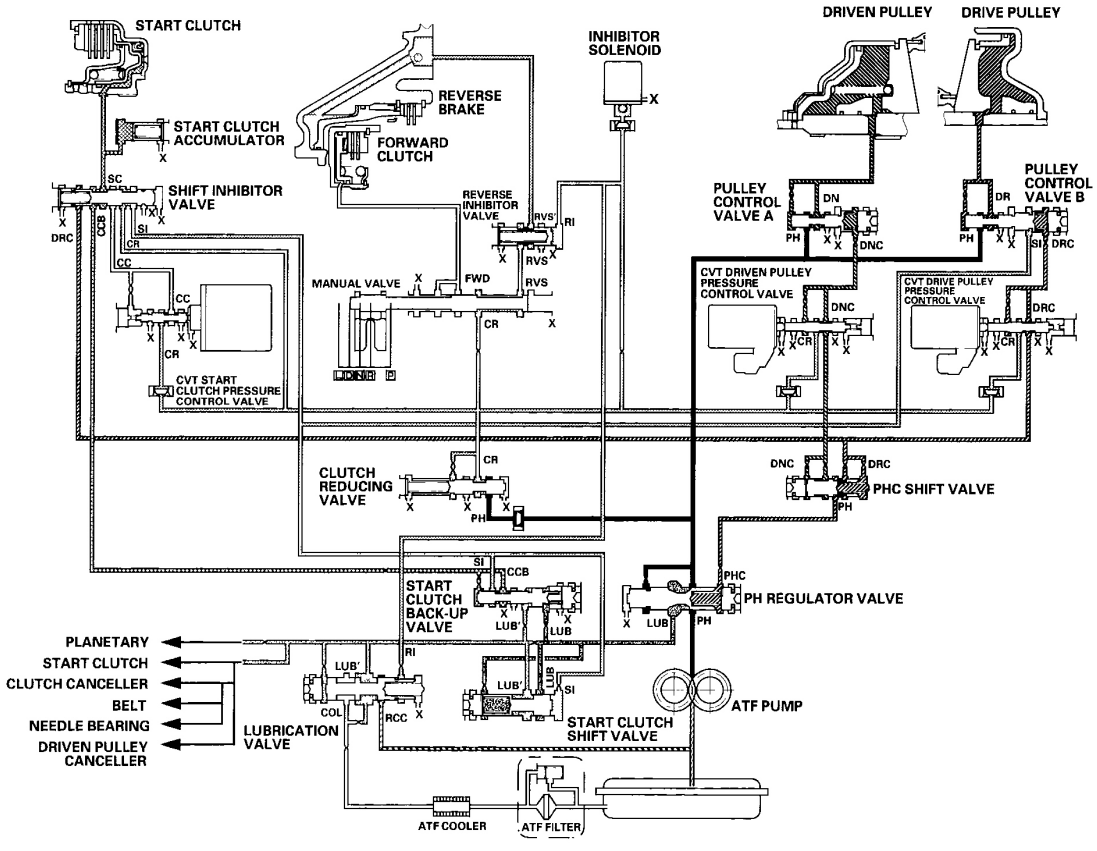

Fig. 39: Hydraulic Circuit - R Position (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

N Position

Fluid from the ATF pump is regulated to high pressure at the PH regulator valve, and flows to the pulley control valves. The CVT driven pulley pressure control valve and the CVT drive pulley pressure control valve control the pulley control valves A and B to apply pressure to the pulleys. The driven pulley receives pressure higher than pressure drive pulley receives, but hydraulic pressure to the forward clutch is intercepted by the manual valve and to the start clutch is intercepted by the CVT start clutch pressure control valve. Under this condition, hydraulic pressure is not applied to the start and forward clutches.

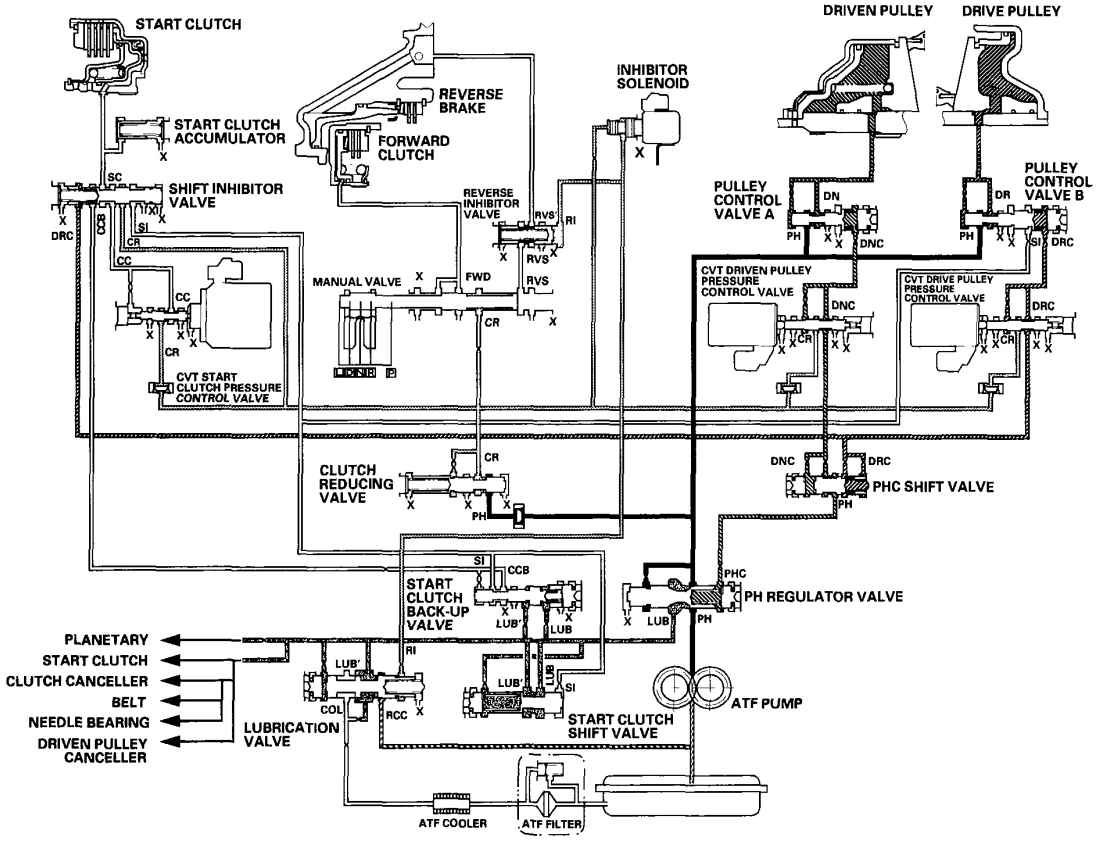

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Fig. 40: Hydraulic Circuit - N Position (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at low speed range

The manual valve is shifted into the D position, and uncovers the port leading

forward clutch pressure (FWD) to the forward clutch. The forward clutch pressure (FWD) flows to the forward clutch, the forward clutch is engaged and drives the input shaft and drive pulley shaft. The drive pulley receives low pressure, and driven pulley receives high pressure. The TCM actuates the CVT start clutch pressure control valve to control start clutch pressure. The start clutch control pressure (CC) from the CVT start clutch pressure control valve becomes the start clutch pressure (SC) at the shift inhibitor valve, and flows to the start clutch. The start clutch is engaged, and the vehicle moves.

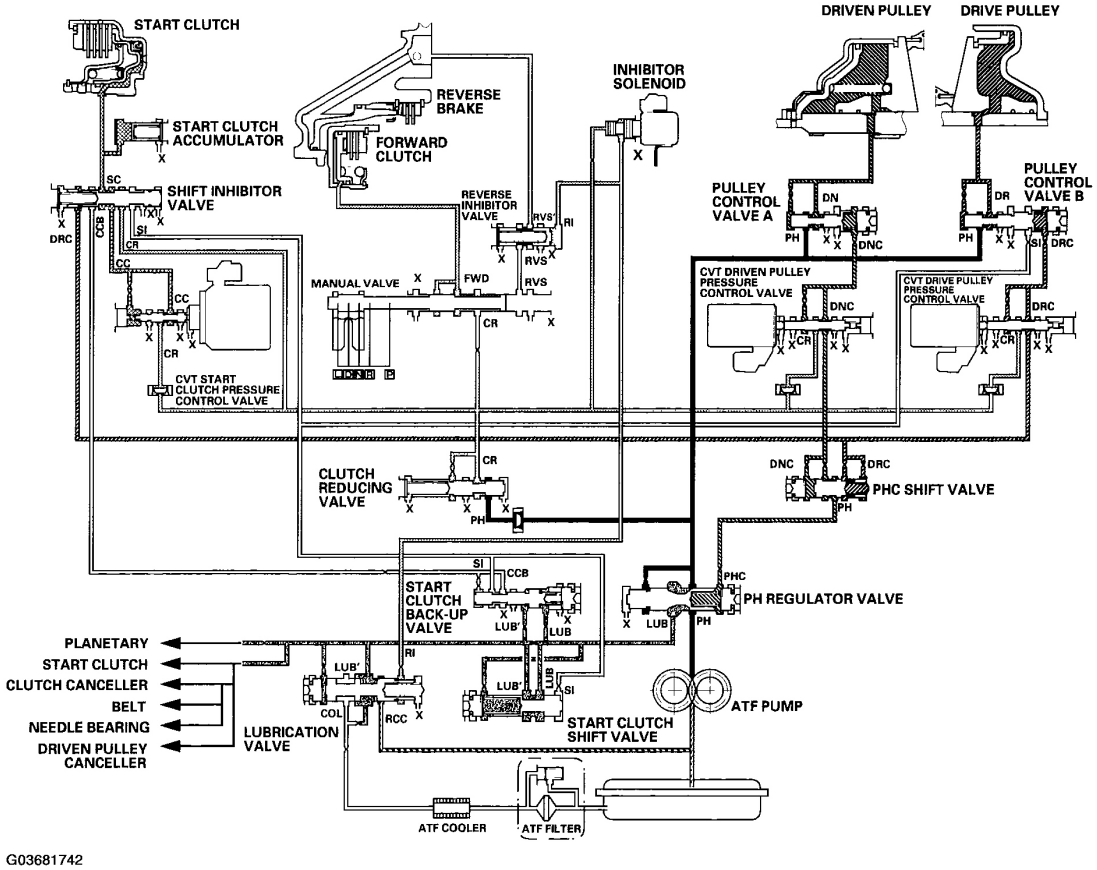

Fig. 41: Hydraulic Circuit - D Position At Low Speed Range (2004-2006 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at middle speed range

As the speed of the vehicle reaches the prescribed value, the TCM controls the CVT

driven pulley pressure control valve and the CVT drive pulley pressure control valve to provide about the same hydraulic pressure to the pulleys. The diameter contacted with the steel belt on the drive and driven pulleys become nearly equal, and the pulley ratio is in middle. Hydraulic pressure remains to apply to the start and forward clutches.

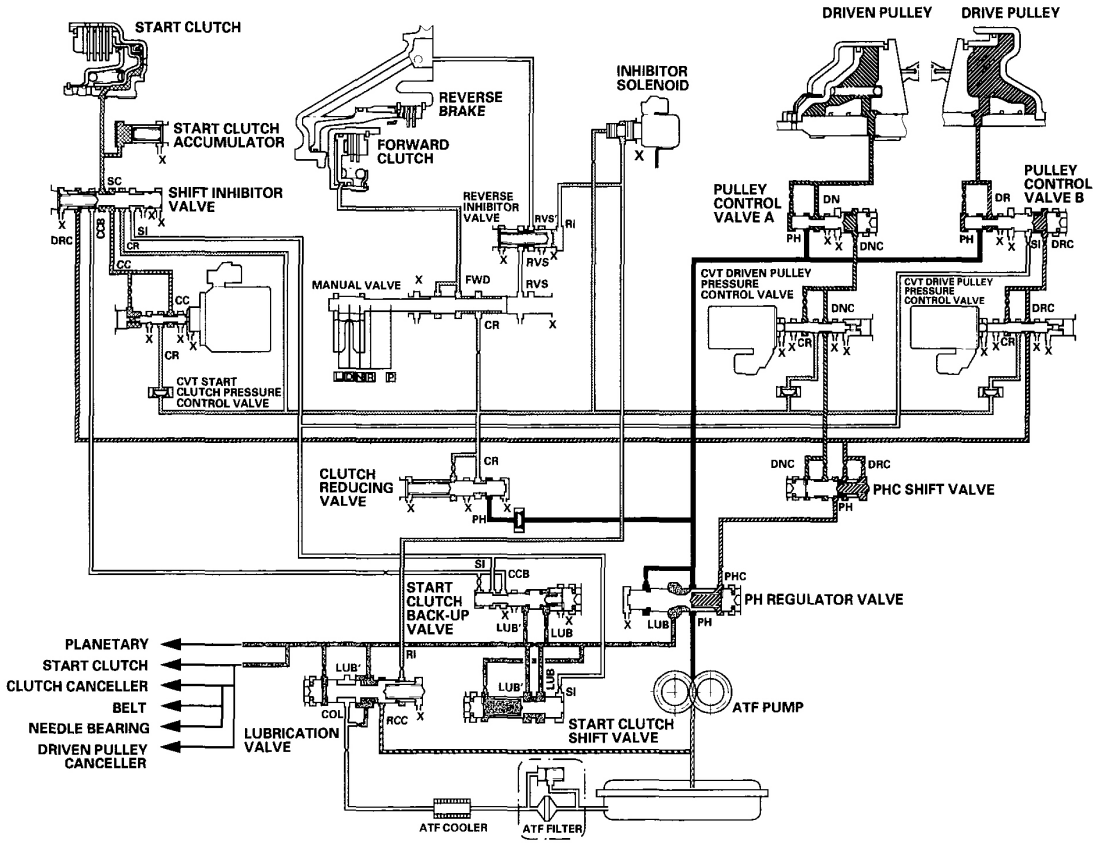

Fig. 42: Hydraulic Circuit - D Position, At Middle Speed Range (2004-2006 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, at high speed range

Vehicle speed is further increased, the TCM controls the CVT driven pulley pressure control valve and the CVT drive pulley pressure control valve to apply hydraulic pressure to the drive pulley high and to the driven pulley low. The drive pulley receives high pressure and the driven pulley receives low. The drive pulley

provides the steel belt to large-diameter contact and the driven pulley provides to small-diameter contact, and the pulley ratio is in high. Hydraulic pressure remains to apply to the start and forward clutches.

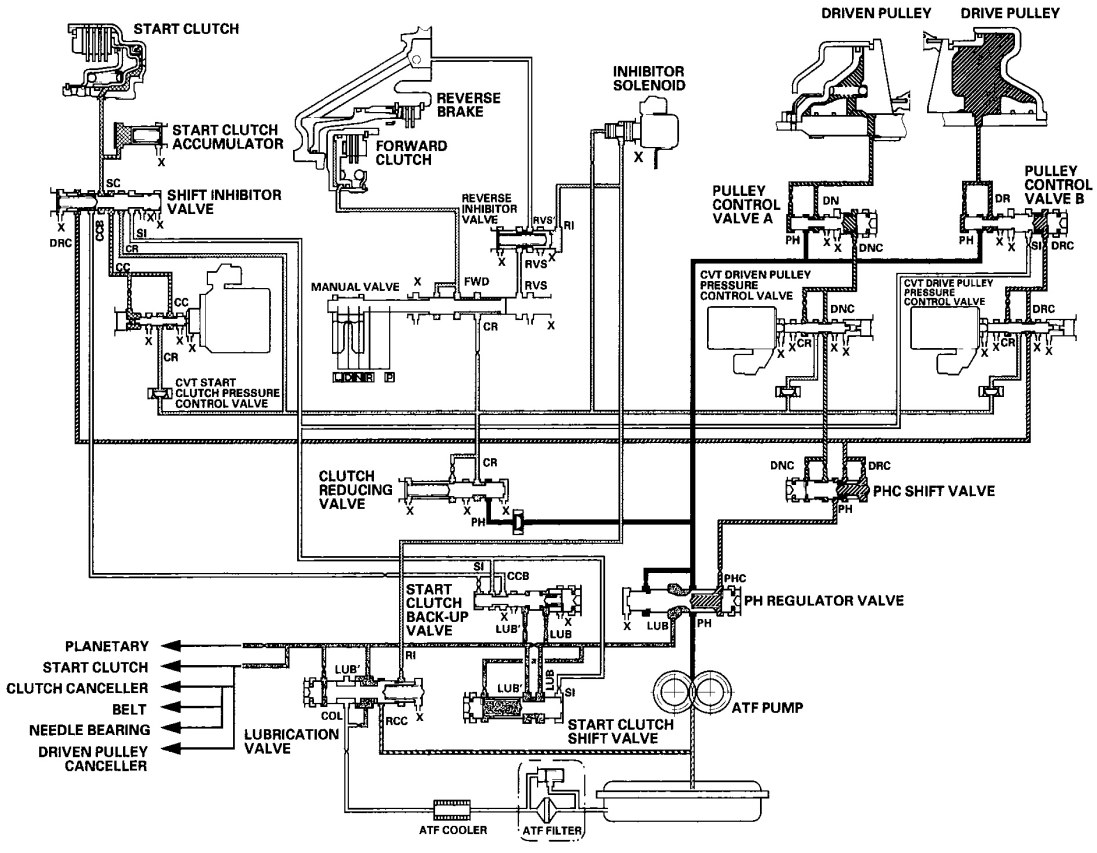

Fig. 43: Hydraulic Circuit - D Position, At High Speed Range (2004-2006 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position

The manual valve is shifted into the R position, and uncovers the port leading reverse brake pressure (RVS) to the reverse inhibitor valve. The reverse inhibitor solenoid is turned OFF by the TCM, and reverse inhibitor pressure (RI) is applied to the right end of the reverse inhibitor valve. The reverse inhibitor valve is moved to the left side, and uncovers the port leading reverse brake pressure (RVS') to the reverse brake. Clutch reducing pressure (CR) becomes reverse brake pressure

(RVS), and flows to the reverse brake via the reverse inhibitor valve. The reverse brake is engaged, and it locks the planetary carrier.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

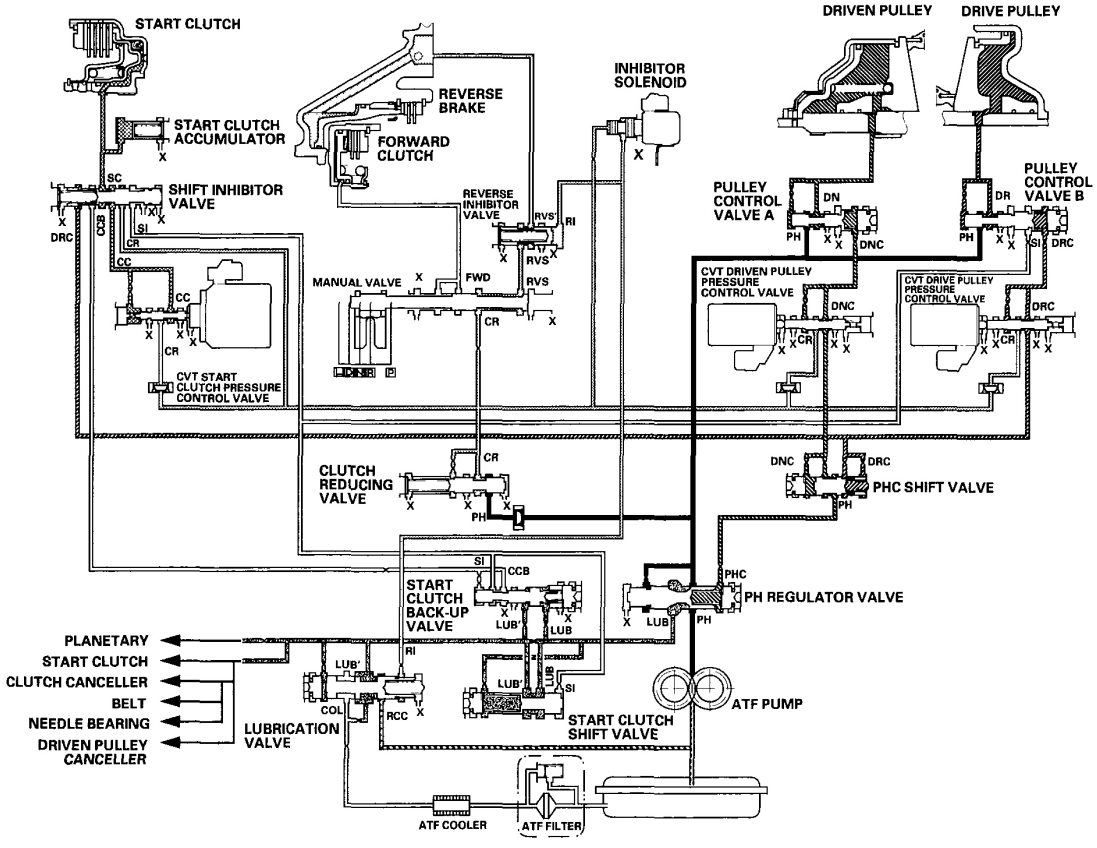

Fig. 44: Hydraulic Circuit - R Position (2004-2006 Models) (1 Of 2) Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position

Reverse Inhibitor Control

If the R position is selected while the vehicle is moving forward at speeds over 6 mph (10 km/h), the TCM outputs signal to turn ON the reverse inhibitor solenoid, and reverse inhibitor pressure (RI) in the right end of the reverse inhibitor valve is released. The reverse inhibitor valve is moved to the right side, and uncovers the

port to stop reverse brake pressure to the reverse brake from the manual valve. Reverse brake pressure (RVS) is not applied to the reverse brake, and power is not transmitted to the reverse direction.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

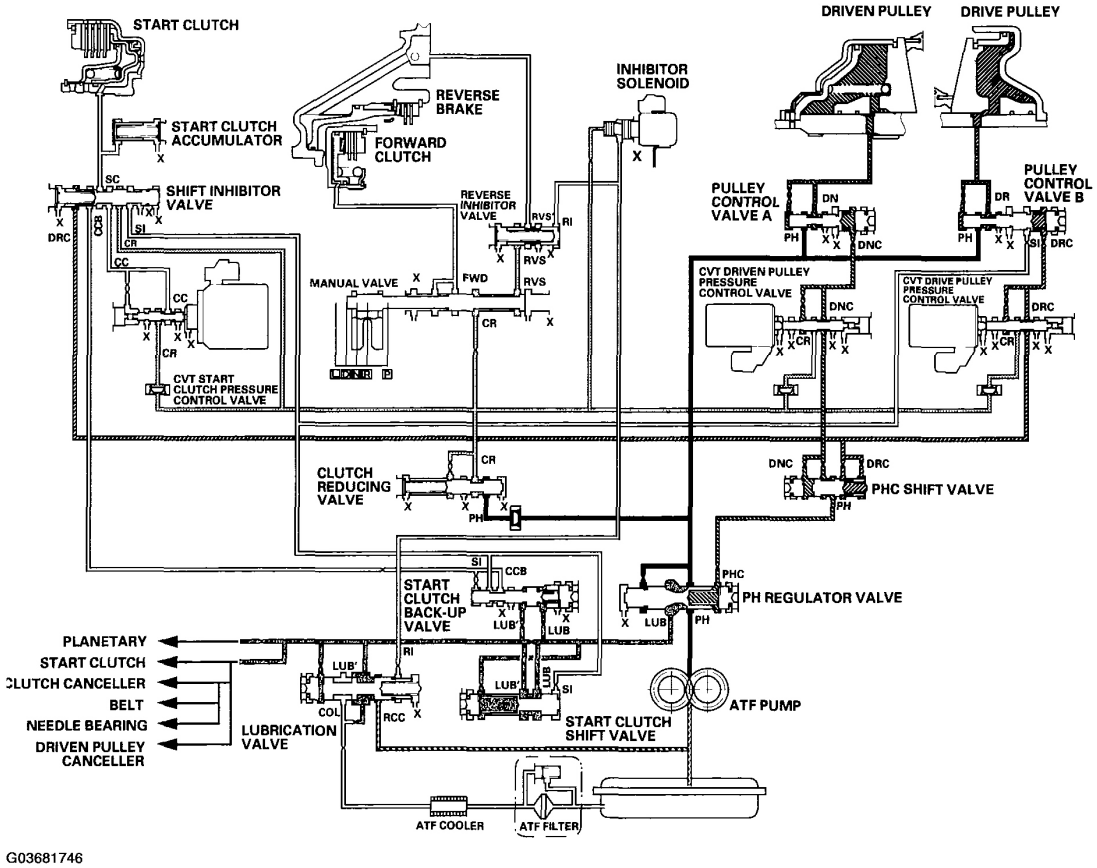

Fig. 45: Hydraulic Circuit - R Position (2004-2006 Models) (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

P Position

The manual valve is shifted into the P position, the manual valve intercepts hydraulic pressure to the forward clutch. Hydraulic pressure is not applied to the start and forward clutches, and power is not transmitted to the drive pulley shaft.

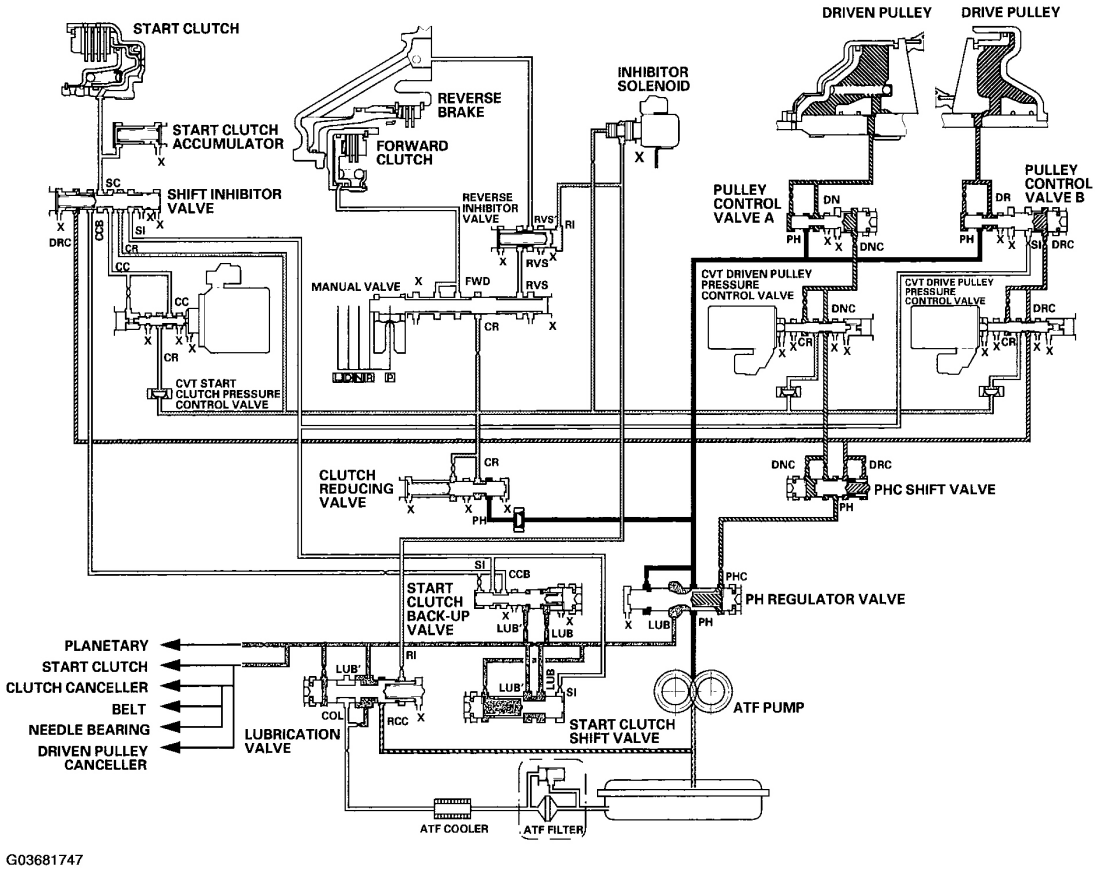

Fig. 46: Hydraulic Circuit - P Position (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position, when an electronic control system malfunction occurs.

When an electronic control system malfunction occurs, the CVT start clutch pressure control valve cannot operate to control the start clutch pressure circuit, and the transmission creates the temporary circuit of the start clutch pressure control to allow the vehicle to be driven.

The CVT start clutch control valve covers the port leading start clutch control pressure (CC) to the shift inhibitor valve, and the shift inhibitor valve is moved to the left side by drive pulley control pressure (DRC). Clutch reducing pressure (CR) becomes shift inhibitor pressure (SI) at the shift inhibitor valve, flows to the left side of the start clutch back-up valve, and becomes start clutch control B pressure (CCB). Start clutch control B pressure (CCB) becomes start clutch pressure (SC) at

the shift inhibitor valve, and flows to the start clutch. Clutch reducing pressure (CR) also flows to the manual valve, and becomes to forward clutch pressure (FWD). The start clutch and the forward clutch are engaged, and the vehicle will move.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

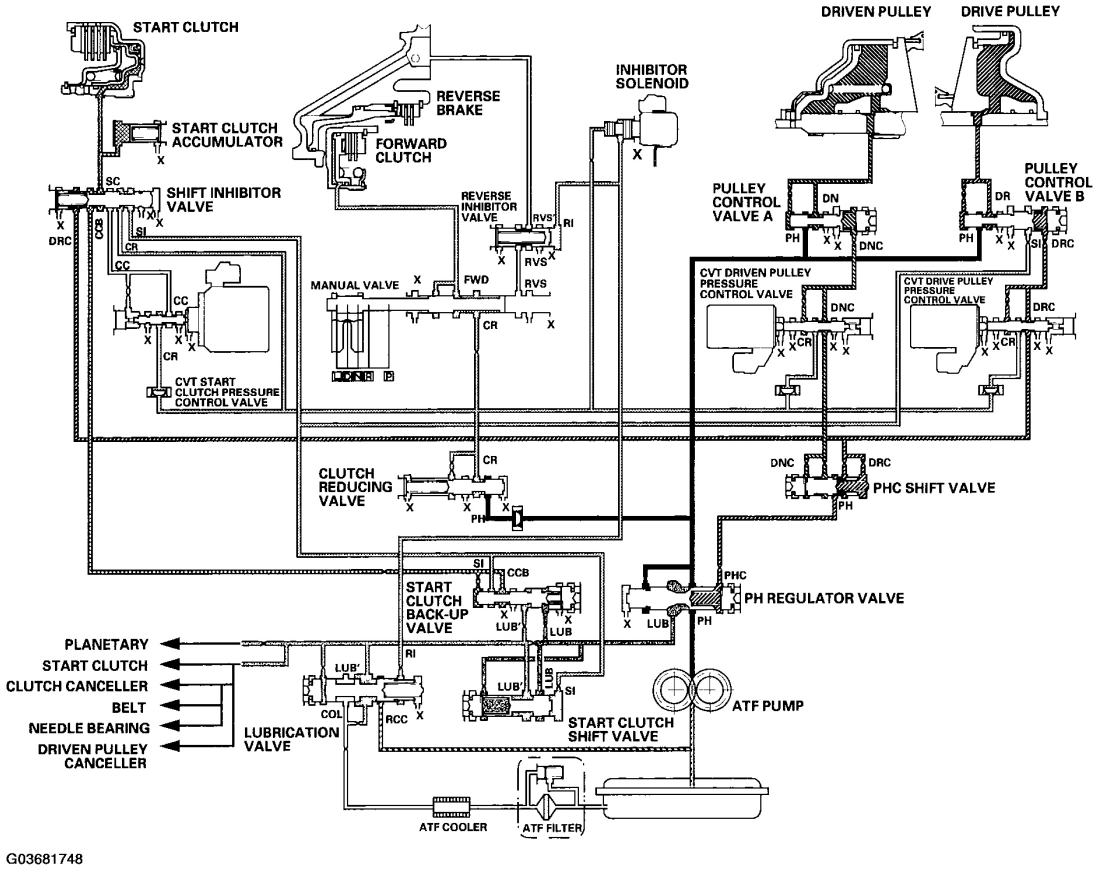

Fig. 47: Hydraulic Circuit - D Position, When Electronic Control System Malfunction Occurs (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position, when an electronic control system malfunction occurs.

When an electronic control system malfunction occurs, the CVT start clutch pressure control valve cannot operate to control the start clutch pressure circuit, and the transmission creates the temporary circuit of the start clutch pressure control to

allow the vehicle to be driven.

The CVT start clutch control valve covers the port leading start clutch control pressure (CC) to the shift inhibitor valve, and the shift inhibitor valve is moved to the left side by drive pulley control pressure (DRC). Clutch reducing pressure (CR) becomes shift inhibitor pressure (SI) at the shift inhibitor valve, flows to the left side of the start clutch back-up valve, and becomes start clutch control B pressure (CCB). Start clutch control B pressure (CCB) becomes start clutch pressure (SC) at the shift inhibitor valve, and flows to the start clutch. Clutch reducing pressure (CR) also flows to the manual valve, and becomes to reverse brake pressure (RVS). The start clutch and the reverse brake are engaged, and the vehicle will reverse.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.

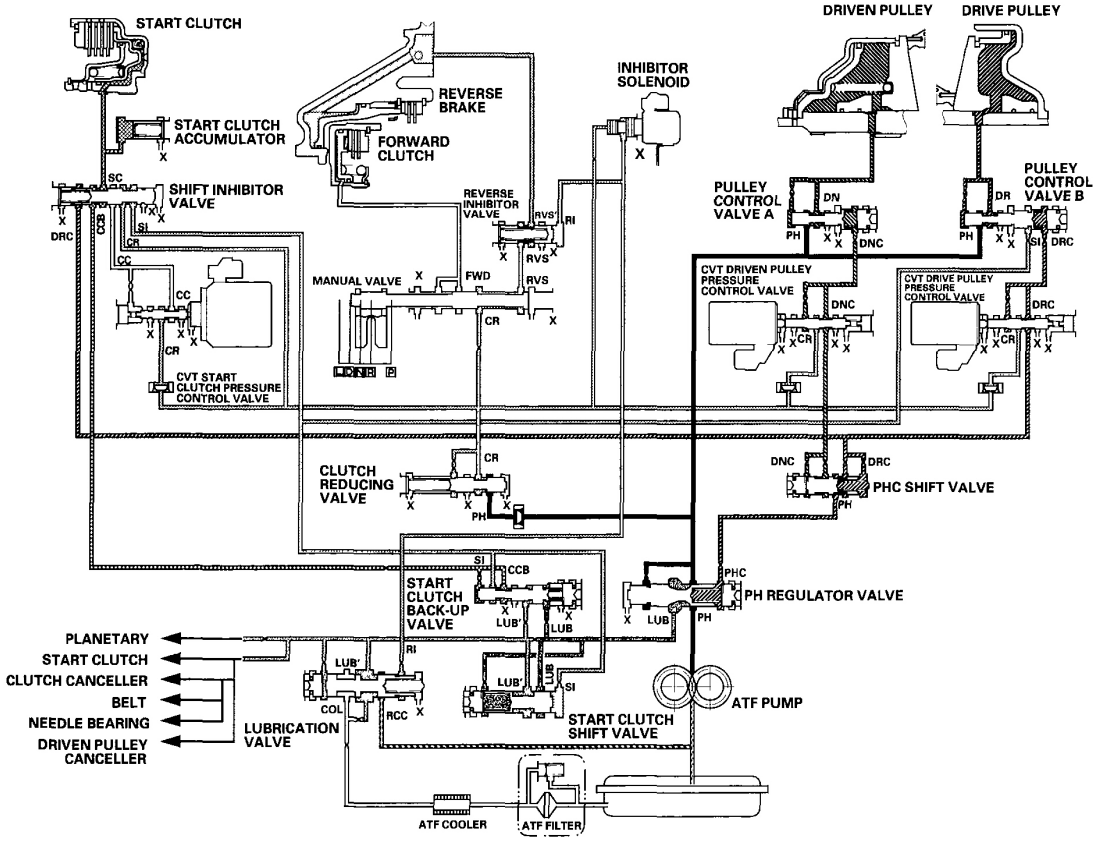

Fig. 48: Hydraulic Circuit - R Position, When Electronic Control System

Malfunction Occurs (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Park Mechanism

The park mechanism locks the transmission by engaging the park pawl with the park gear which is integral with the secondary drive gear. The secondary drive gear engages with the secondary driven gear which is integral with the final drive gear, and the final drive gear engages the final driven gear.

Shifting to the P position causes the park cone (installed at the end of the park rod) to press the park pawl onto the park gear. Even if the end of the park pawl rides on the top of the park gear teeth, slight movement of the vehicle will cause the park pawl and park gear to mesh with each other completely because the park cone receives the tension from the park rod spring. The park pawl receives the tension (which acts to separate the park pawl from the park gear) from the park pawl spring.

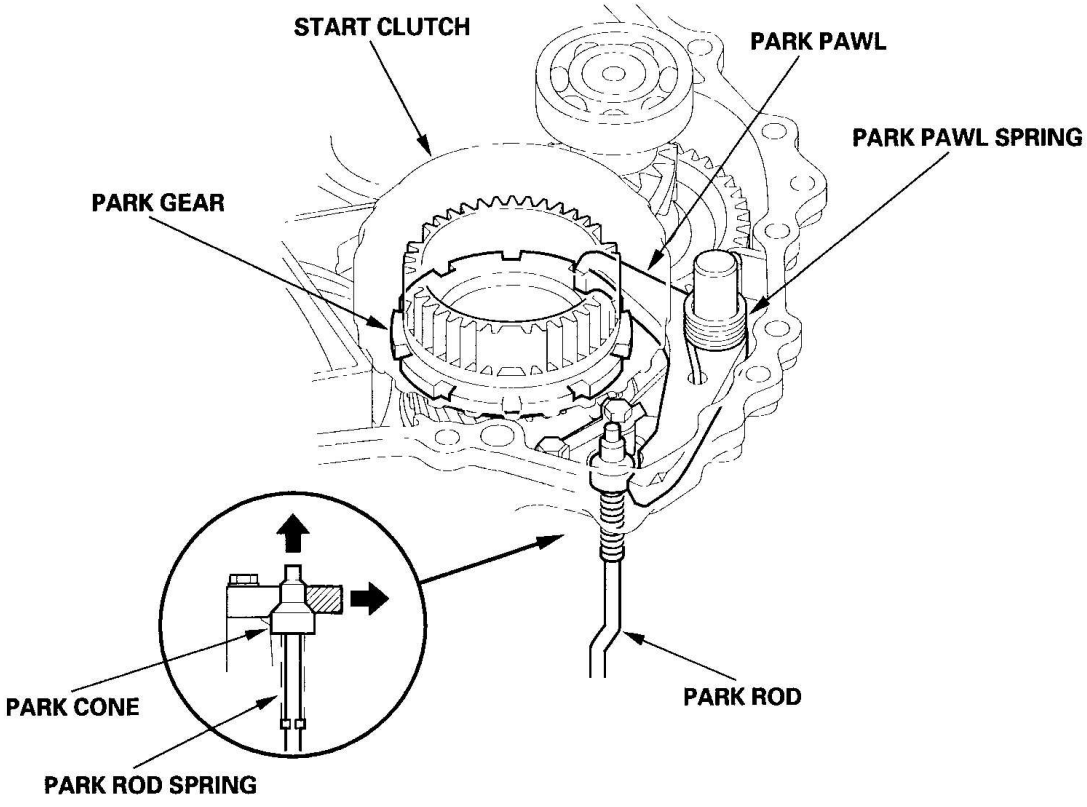

Fig. 49: Identifying Park Mechanism
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Circuit Diagram

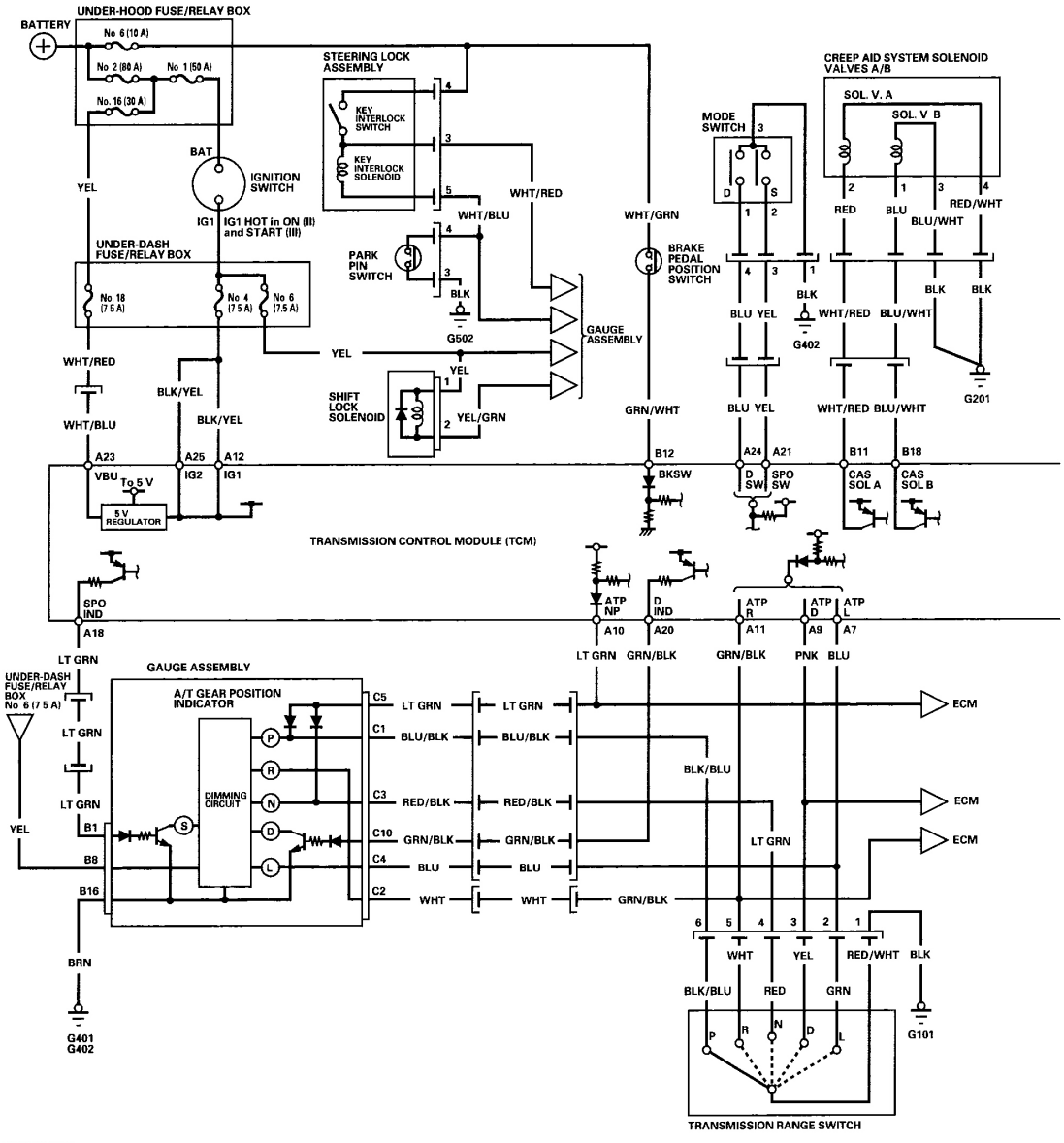

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Fig. 50: CVT Circuit Diagram (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

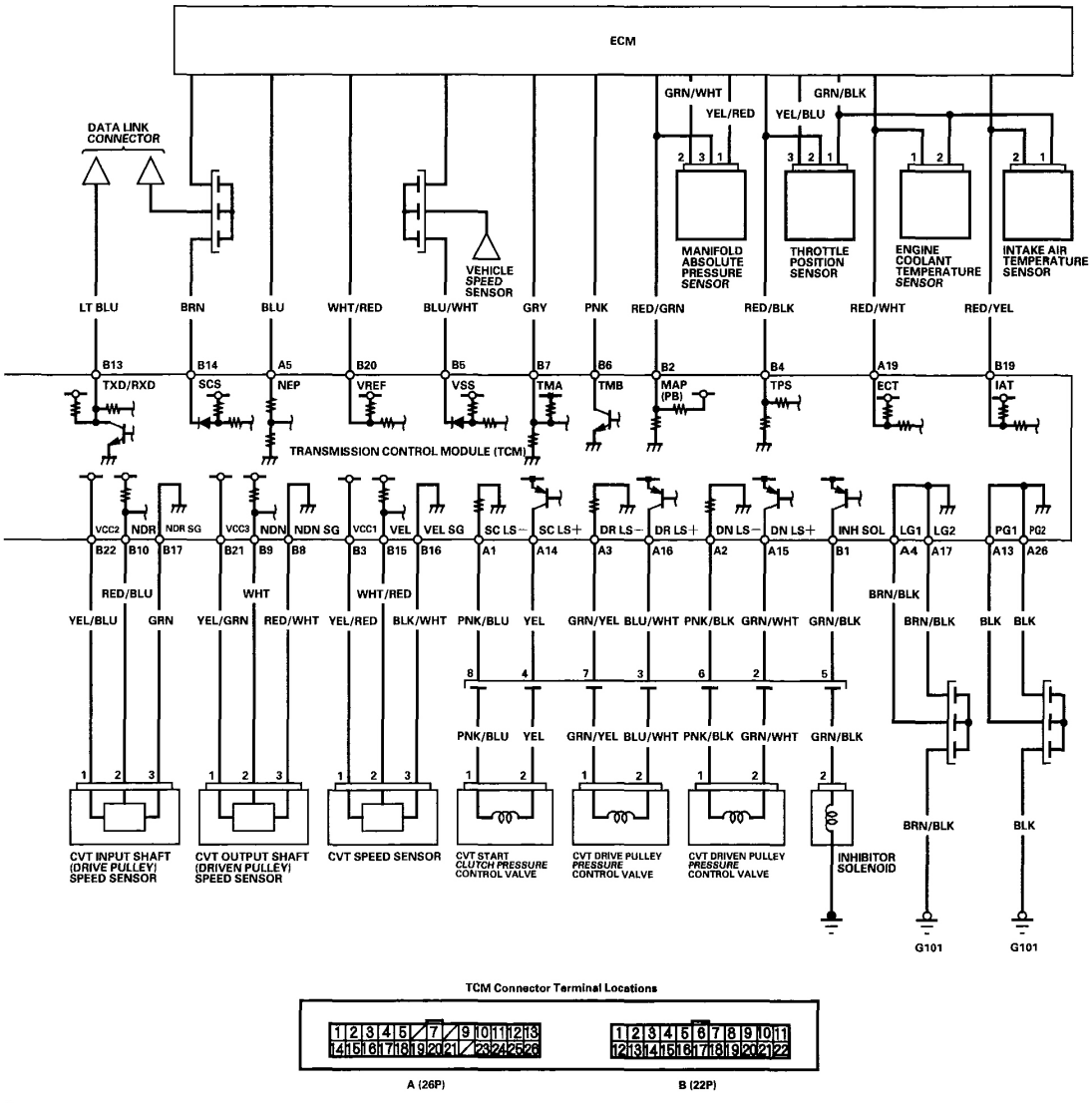

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Fig. 51: CVT Circuit Diagram (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

DTC INDEX

DTC	Description
DTC P0725	Problem in Engine Speed Input Circuit
DTC P1630	Problem in TCM
DTC P1655	Problem in TCM-to-ECM

	Communication Lines
DTC P1705	Short in Transmission Range Switch Circuit
DTC P1706	Open in Transmission Range Switch Circuit
DTC P1790	Problem in Throttle Position Sensor Circuit
DTC P1791	Problem in Vehicle Speed Sensor Circuit
DTC P1792	Problem in Engine Coolant Temperature Sensor Circuit
DTC P1793	Problem in Manifold Absolute Pressure Sensor Circuit
DTC P1799	Problem in Intake Air Temperature Sensor Circuit
DTC P1850	Problem in Creep Aid System Solenoid Valve A Circuit
DTC P1851	Problem in Creep Aid System Solenoid Valve B Circuit
DTC P1879	Problem in CVT Start Clutch Pressure Control Valve Circuit
DTC P1882	Problem in Inhibitor Solenoid Circuit
DTC P1885	Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit
DTC P1886	Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit
DTC P1888	Problem in CVT Speed Sensor Circuit
DTC P1890	Problem in Shift Control System
DTC P1891	Problem in Start Clutch Control System
DTC P1894	Problem in CVT Drive Pulley Pressure Control Valve Circuit
DTC P1895	Problem in CVT Driven Pulley Pressure Control Valve Circuit
DTC P0501	Range/Performance Problem in Vehicle

	Speed Sensor Circuit
DTC P0502	Problem in Vehicle Speed Sensor Circuit (No Signal Input)
DTC P0603	Problem in TCM
DTC P0705	Short in Transmission Range Switch Circuit (Multiple Shift-position Input)
DTC P0706	Open in Transmission Range Switch Circuit
DTC P0716	Range/Performance Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit
DTC P0717	Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit (No Signal Input)
DTC P0721	Range/Performance Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit
DTC P0722	Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit (No Signal Input)
DTC P0726	Range/Performance Problem in Engine RPM Signal Input Circuit
DTC P0727	Problem in Engine RPM Signal Input Circuit (No Signal Input)
DTC P0780	Problem in Shift Control System
DTC P0801	Problem in Inhibitor Solenoid Circuit
DTC P0811	Problem in Start Clutch Control System
DTC P0962	CVT Drive Pulley Pressure Control Valve Circuit Low Voltage
DTC P0963	CVT Drive Pulley Pressure Control Valve Circuit High Voltage
DTC P0966	CVT Driven Pulley Pressure Control Valve Circuit Low Voltage

DTC P0967	CVT Driven Pulley Pressure Control Valve Circuit High Voltage
DTC P0970	CVT Start Clutch Pressure Control Valve Circuit Low Voltage
DTC P0971	CVT Start Clutch Pressure Control Valve Circuit High Voltage
DTC P1655	Problem in TCM-to-ECM Communication Lines
DTC P1782	TP Sensor Circuit Low Voltage
DTC P1783	TP Sensor Circuit High Voltage
DTC P1784	MAP Sensor Circuit Low Voltage
DTC P1785	MAP Sensor Circuit High Voltage
DTC P1792	Problem in Engine Coolant Temperature Sensor Circuit
DTC P1799	Problem in Intake Air Temperature Sensor Circuit
DTC P1850	Problem in Creep Aid System Solenoid Valve A Circuit
DTC P2159	Range/Performance Problem in CVT Speed Sensor Circuit
DTC P2160	Problem in CVT Speed Sensor Circuit (No Signal Input)

DTC P0725: Problem in Engine Speed Input Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Start the engine, and check the tachometer for proper operation.

   Does the tachometer operate properly?

   YES -Go to step 2.

   NO -Check the wire between gauge assembly connector terminal A5 and ECM connector terminal A19. If the wire is OK, check the gauge assembly or ECM.
2. Turn the ignition switch OFF.
3. Disconnect TCM connector A (26P).
4. Start the engine.
5. Measure the voltage between TCM connector terminals A5 and A4.

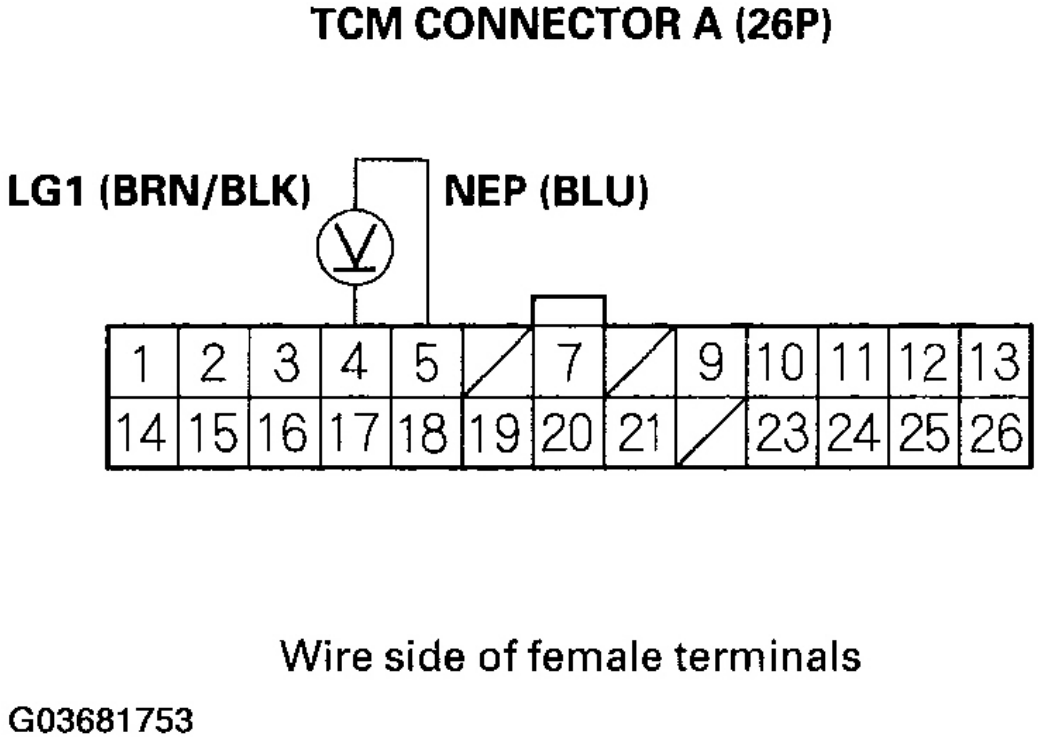


Fig. 52: Measuring Voltage Between TCM Connector A (26P) Terminals A5 And A4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open in the wire between TCM connector terminal A5 and ignition coil.

DTC P1630: Problem in TCM

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Shift to the P or N position.
3. Turn the ignition switch OFF.
4. Disconnect TCM connector A (26P) for more than 5 seconds, then reconnect the connector.
5. Turn the ignition switch ON (II), and wait for more than 5 seconds.
6. Check that DTC P1630 recurs.

Is DTC P1630 indicated?

YES -Update the TCM if it does not have the latest software, or substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at TCM.

DTC P1655: Problem in TCM-to-ECM Communication Lines

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connector B (22P) and ECM connector C (31P).
3. Check for continuity between TCM connector terminal B7 and ECM connector terminal C15.

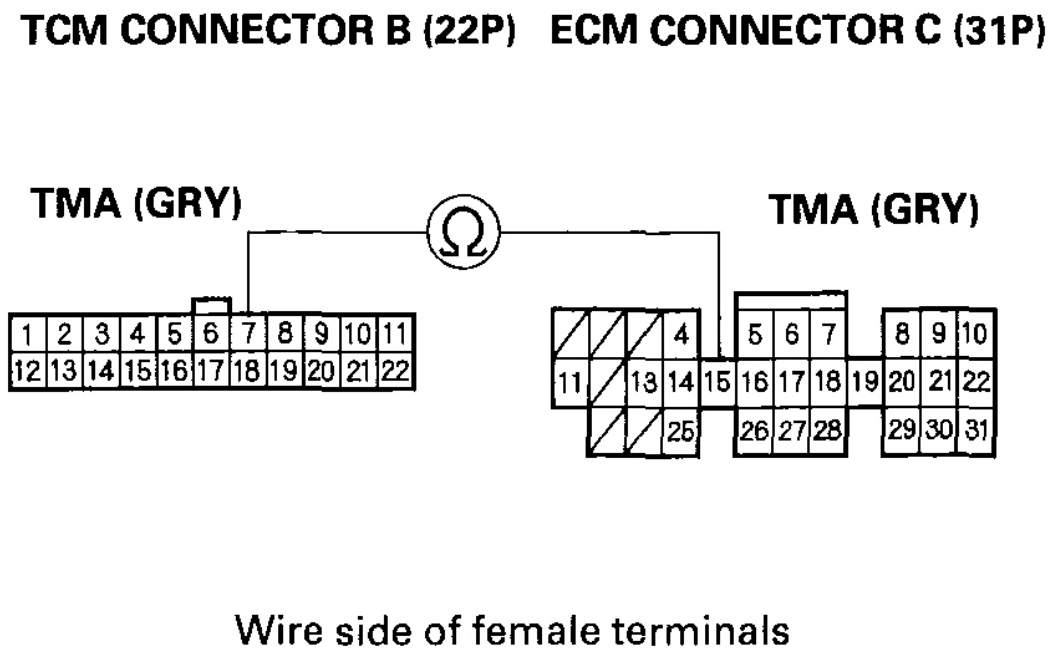


Fig. 53: Checking Continuity Between TCM Connector Terminal B7 And ECM Connector Terminal C15
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 4.

NO -Repair an open in the wire between TCM connector terminal B7 and ECM connector terminal C15.

4. Check for continuity between TCM connector terminal B7 and body ground, or between ECM connector terminal C15 and body ground.

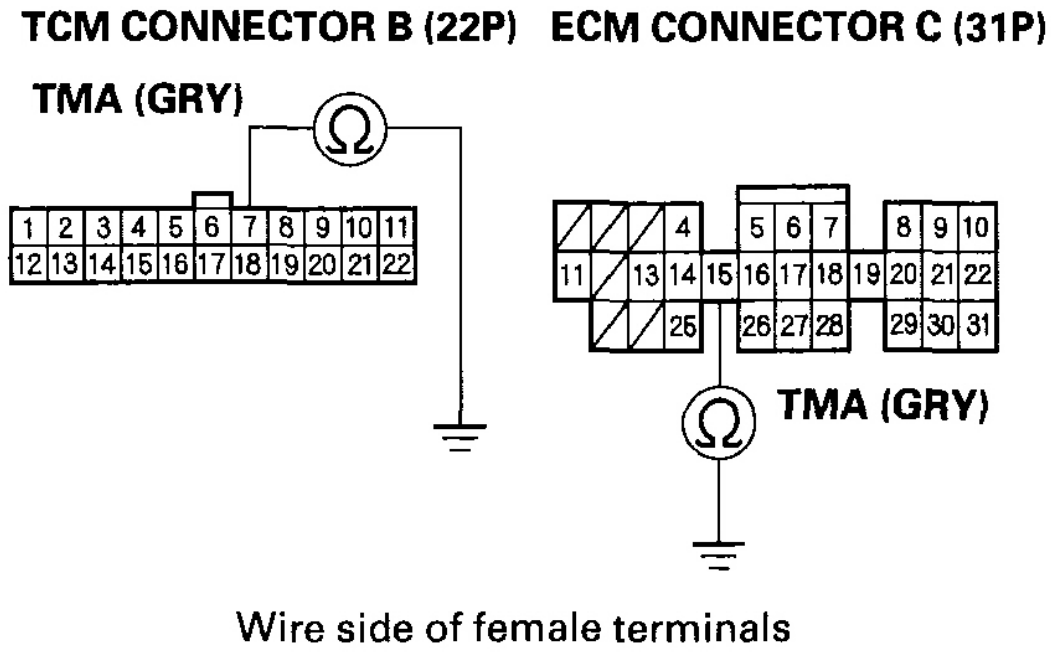


Fig. 54: Checking Continuity Between TCM Connector Terminal B7 And Body Ground, Or Between ECM Connector Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B7, ECM connector terminal C15, and body ground.

NO -Go to step 5.

5. Connect TCM connector B (22P).
6. Turn the ignition switch ON (II).
7. Measure the voltage between ECM connector terminal C15 and body ground.

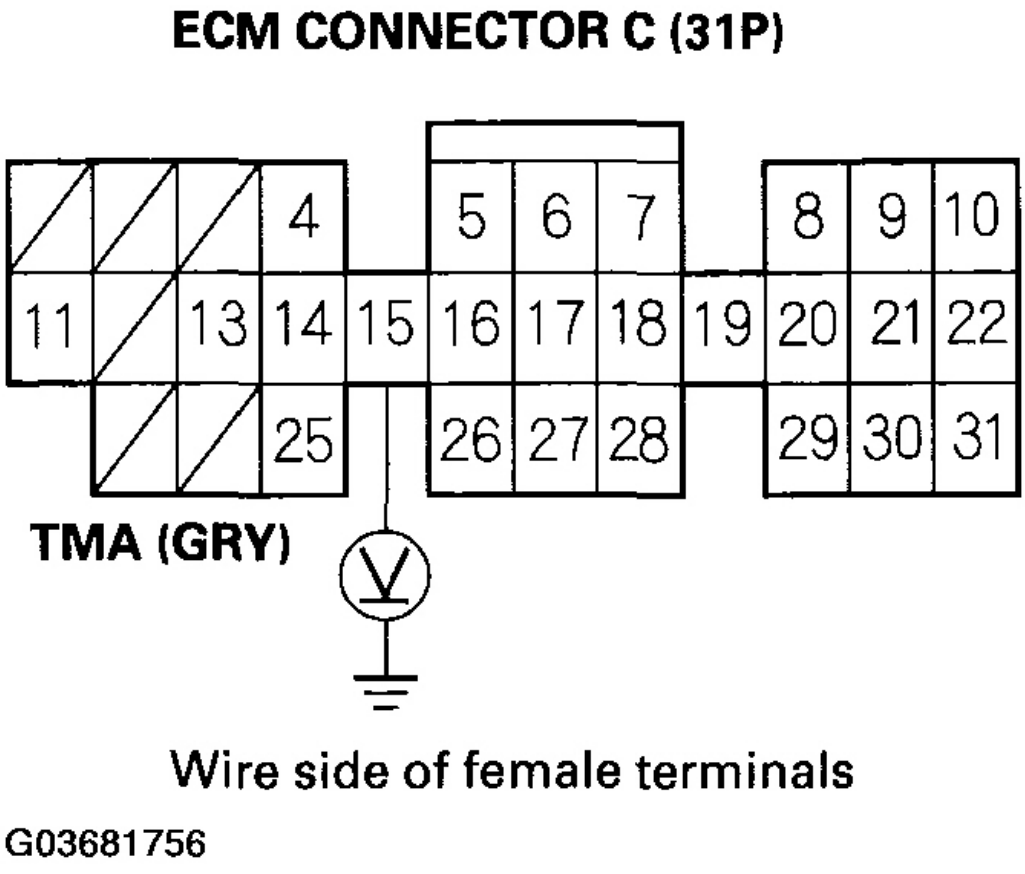


Fig. 55: Measuring Voltage Between ECM Connector C (31P) Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 8.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

8. Turn the ignition switch OFF.
9. Connect ECM connector C (31P).

10. Turn the ignition switch ON (II).
11. Measure the voltage between ECM connector terminal C15 and body ground.

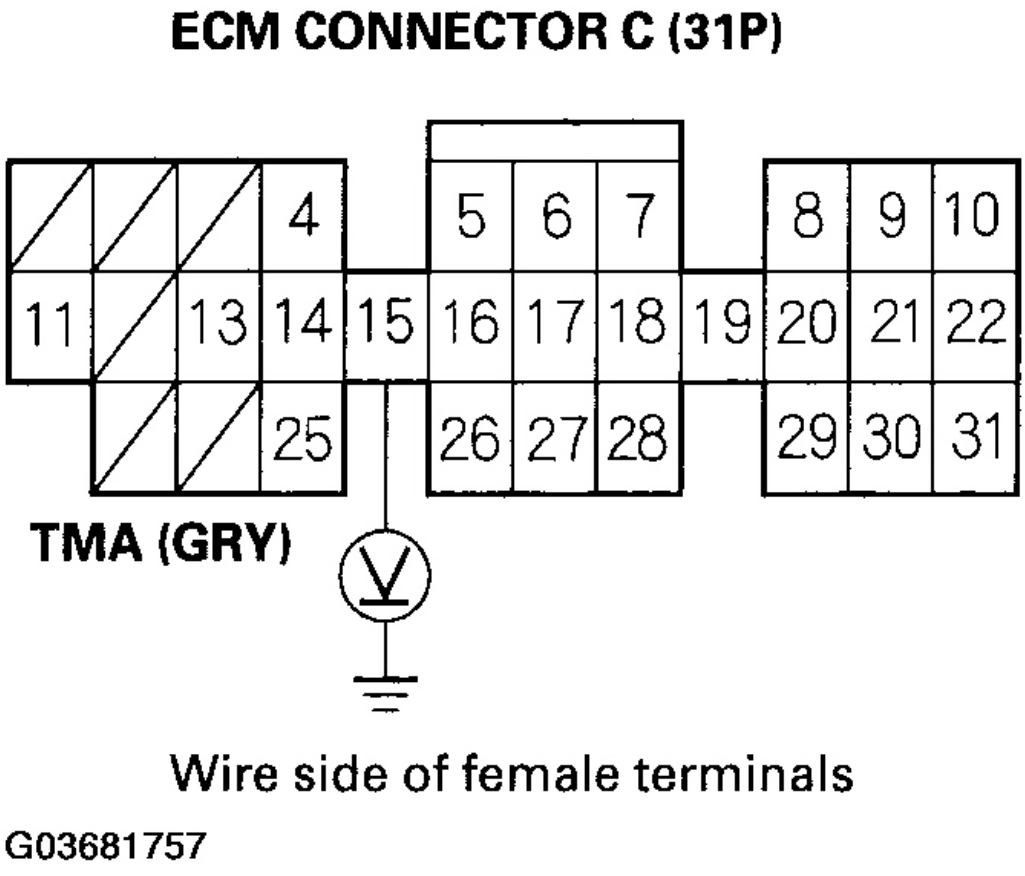


Fig. 56: Measuring Voltage Between ECM Connector C (31P) Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 12.
NO -Replace the ECM.

12. Turn the ignition switch OFF.

13. Disconnect TCM connector B (22P) and ECM connector C (31P).
14. Check for continuity between TCM connector terminal B6 and ECM connector terminal C11.

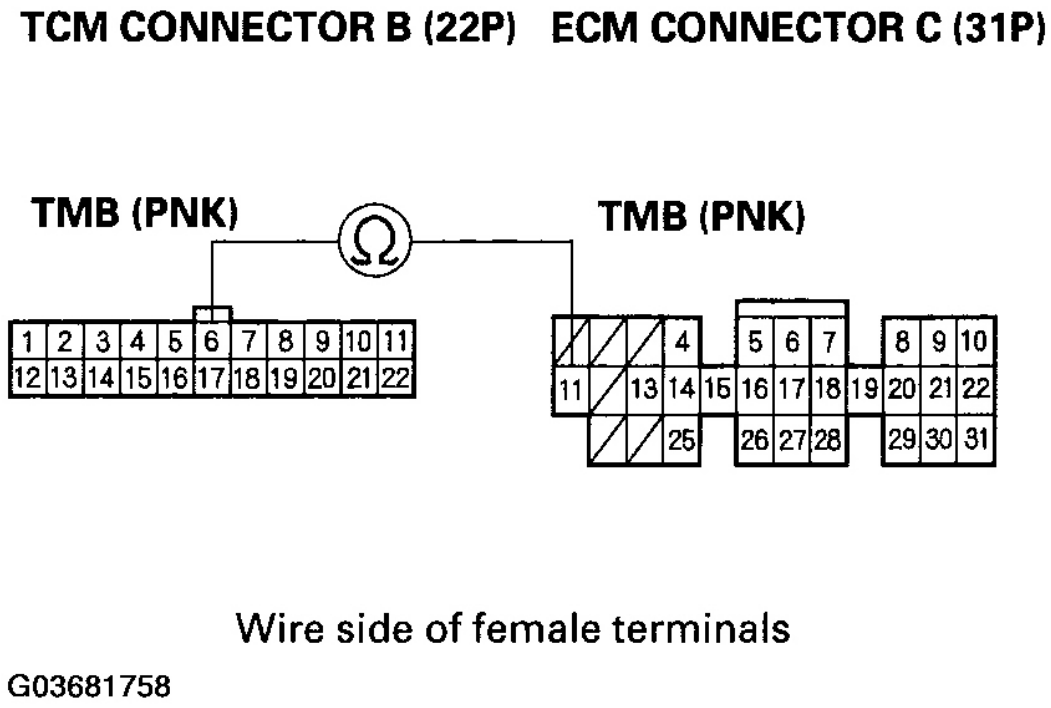


Fig. 57: Checking Continuity Between TCM Connector Terminal B6 And ECM Connector Terminal C11
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 15.

NO -Repair an open in the wire between TCM connector terminal B6 and ECM connector terminal C11.

15. Check for continuity between TCM connector terminal B6 and body ground, or between ECM connector terminal C11 and body ground.

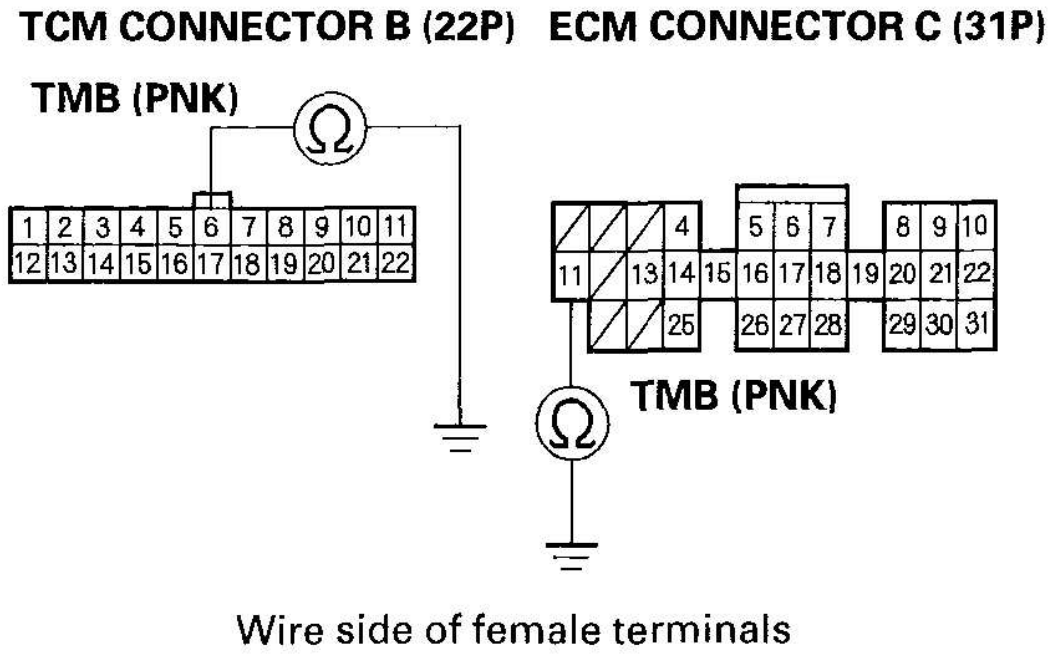


Fig. 58: Checking Continuity Between TCM Connector Terminal B6 And Body Ground, Or Between ECM Connector Terminal C11 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B6, ECM connector terminal C11, and ground.

NO -Go to step 16.

16. Connect ECM connector C (31P).
17. Turn the ignition switch ON (II).
18. Measure the voltage between TCM connector terminal B6 and body ground.

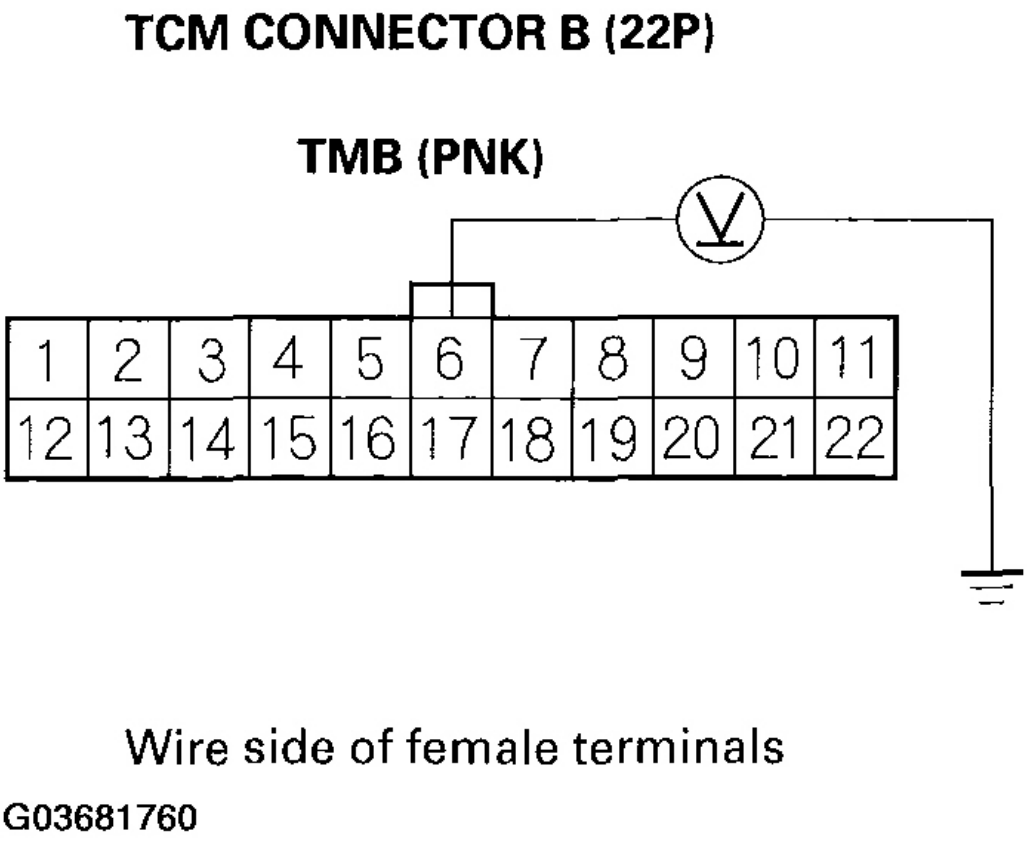


Fig. 59: Measuring Voltage Between TCM Connector B (22P) Terminal B6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 19.

NO -Check for loose terminal fit in the ECM connectors. If necessary, substitute a known-good ECM (see **HOW TO SUBSTITUTE THE ECM**) and recheck.

19. Turn the ignition switch OFF.
20. Connect TCM connector B (22P).
21. Turn the ignition switch ON (II).

22. Measure the voltage between TCM connector terminal B6 and body ground.

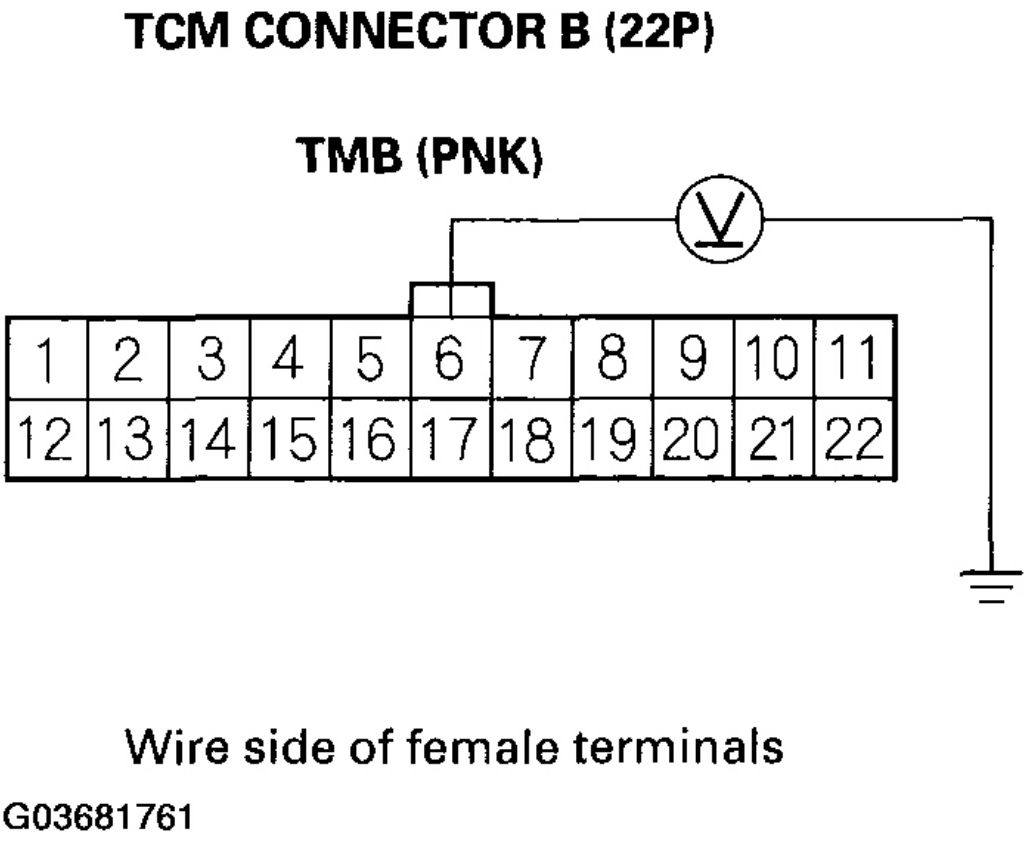


Fig. 60: Measuring Voltage Between TCM Connector B (22P) Terminal B6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck. If the check results are same, replace the ECM.

NO -Replace the TCM.

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Observe the A/T gear position indicator, and shift to each position.

   Do any indicators stay on when the shift lever is not in that position?

   YES -Go to step 3.

   NO -Go to step 4 .
3. Clear the DTC, test-drive the vehicle, and recheck for DTC P1705.

   Does the scan tool or the HDS indicate code P1705?

   YES -Review the freeze data. If the freeze data indicates more than one gear position indicator on at one time, go to step 4.

   NO -Intermittent failure; wiggle the wire harness and check for an intermittent short to ground.
4. Disconnect the transmission range switch connector.

   Do all gear position indicators go out?

   YES -Replace the transmission range switch.

   NO -Turn the ignition switch OFF, then go to step 5.
5. Connect the transmission range switch connector.
6. Turn the ignition switch ON (II).
7. Shift to any position other than the R position.
8. Measure the voltage between TCM connector terminals A11 and A4.

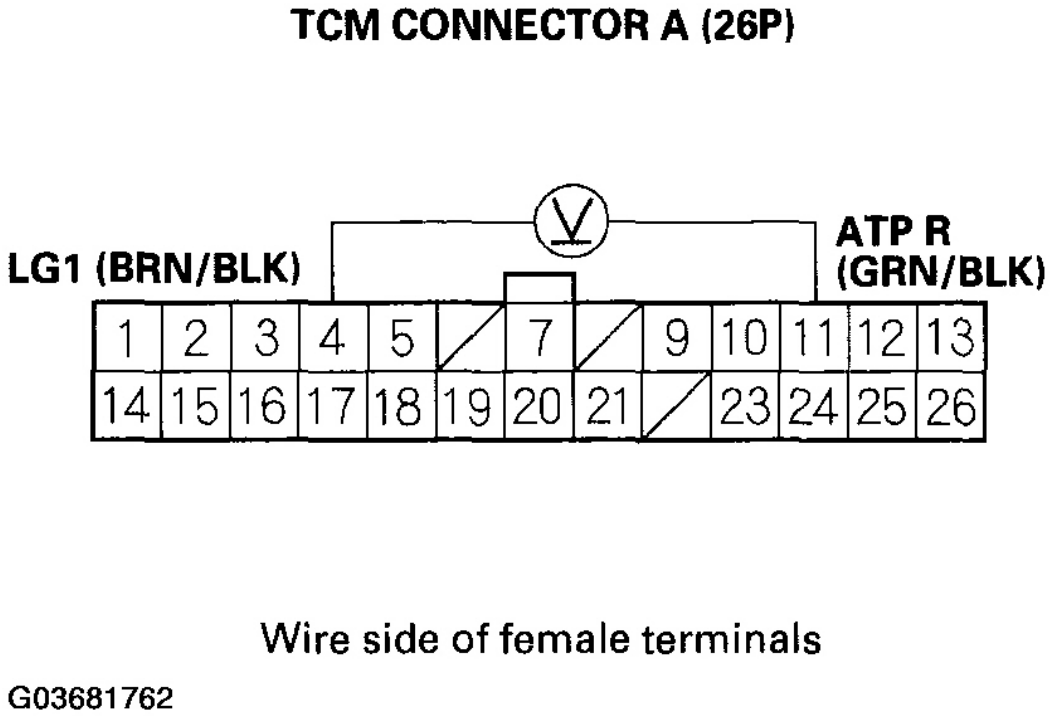


Fig. 61: Measuring Voltage Between TCM Connector A (26P) Terminals A11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 9.

NO -Check for short in the wire between TCM connector terminal A11 and the transmission range switch or A/T gear position indicator, and check for an open in the wires between TCM connector terminals A4, and ground (G101). If the wires are OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

9. Shift to any position other than the P and N positions.
10. Measure the voltage between TCM connector terminals A10 and A4.

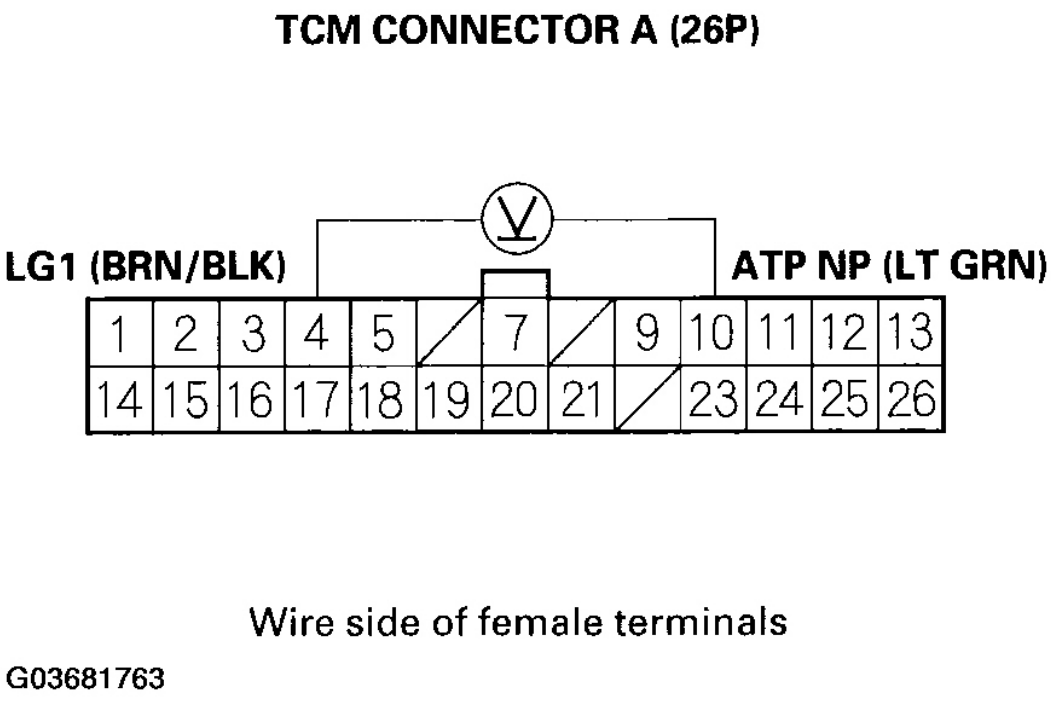


Fig. 62: Measuring Voltage Between TCM Connector A (26P) Terminals A10 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 11.

NO -Check for short in the wire between TCM connector terminal A10 and the A/T gear position indicator, and check for short in the P and N position wires between the gauge assembly and the transmission range switch. If the wires are OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

11. Shift to any position other than the D position.
12. Measure the voltage between TCM connector terminals A9 and A4.

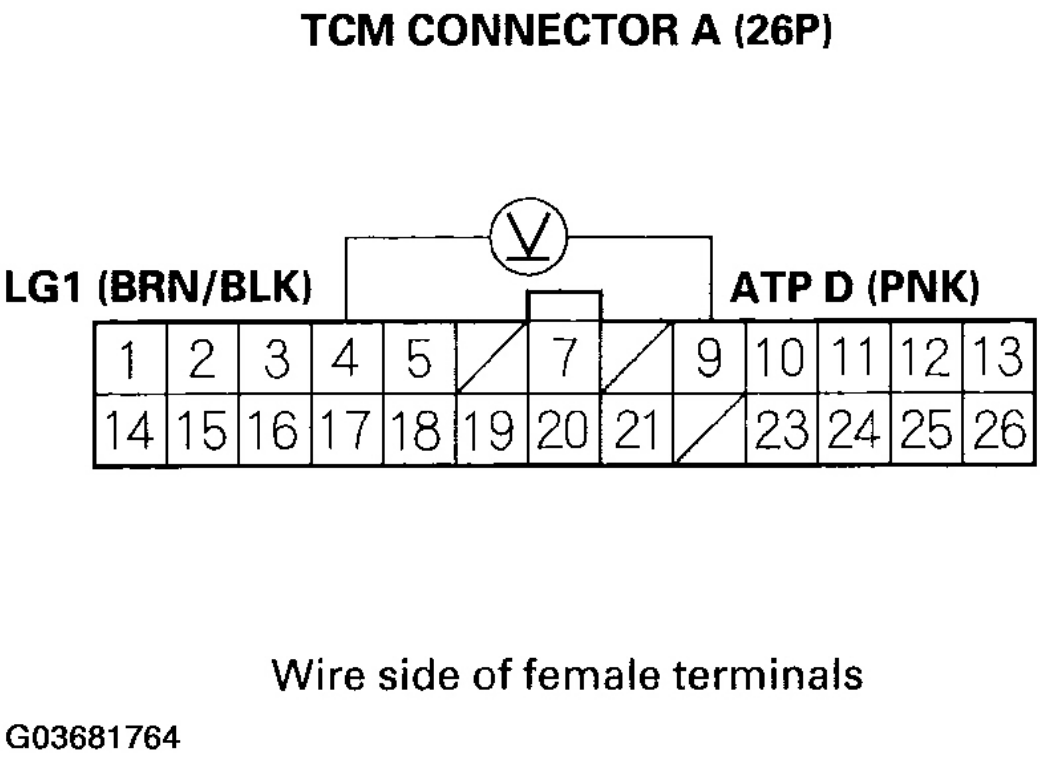


Fig. 63: Measuring Voltage Between TCM Connector A (26P) Terminals A9 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 13.

NO -Check for short in the wire between TCM connector terminal A9 and the transmission range switch. If the wire is OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

13. Shift to any position other than the L position.
14. Measure the voltage between TCM connector terminals A7 and A4.

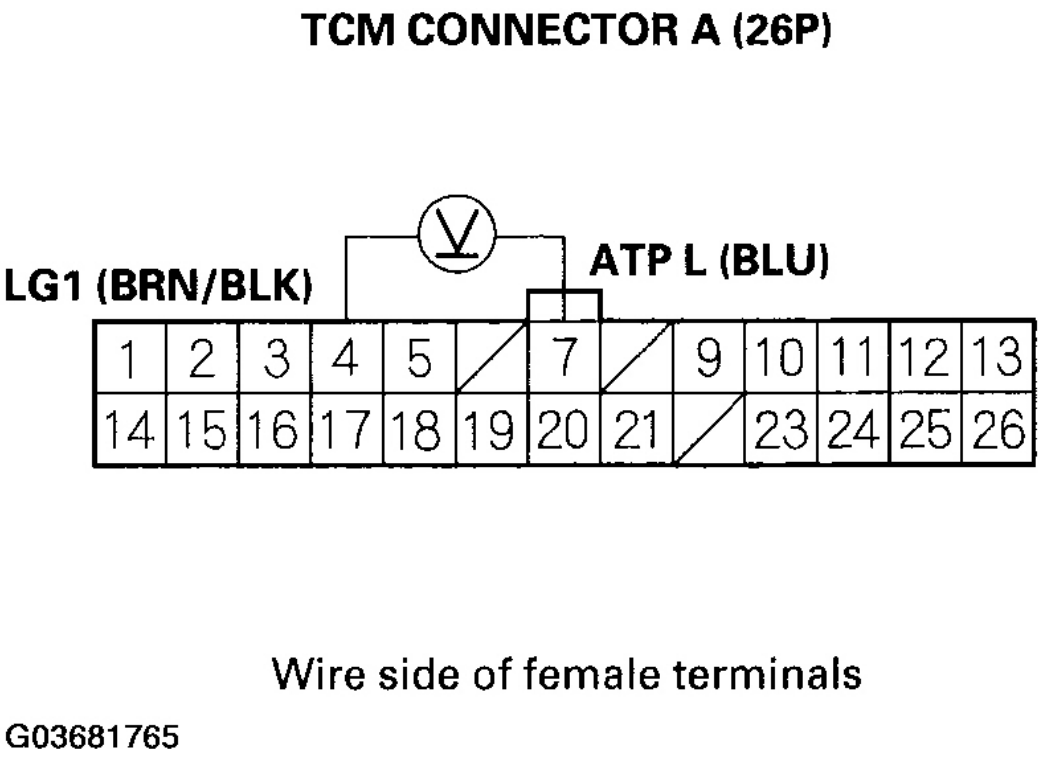


Fig. 64: Measuring Voltage Between TCM Connector A (26P) Terminals A7 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM and recheck.

NO -Check for short in the wire between TCM connector terminal A7 and the transmission range switch or A/T gear position indicator. If the wire is OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

DTC P1706: Open in Transmission Range Switch Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Test the transmission range switch (see **TRANSMISSION RANGE SWITCH TEST**).

   Is the switch OK?

   YES -Go to step 2.

   NO -Replace the transmission range switch.
2. Connect the transmission range switch connector.
3. Check for continuity between TCM connector terminal A4 and body ground, and between A17 and body ground.

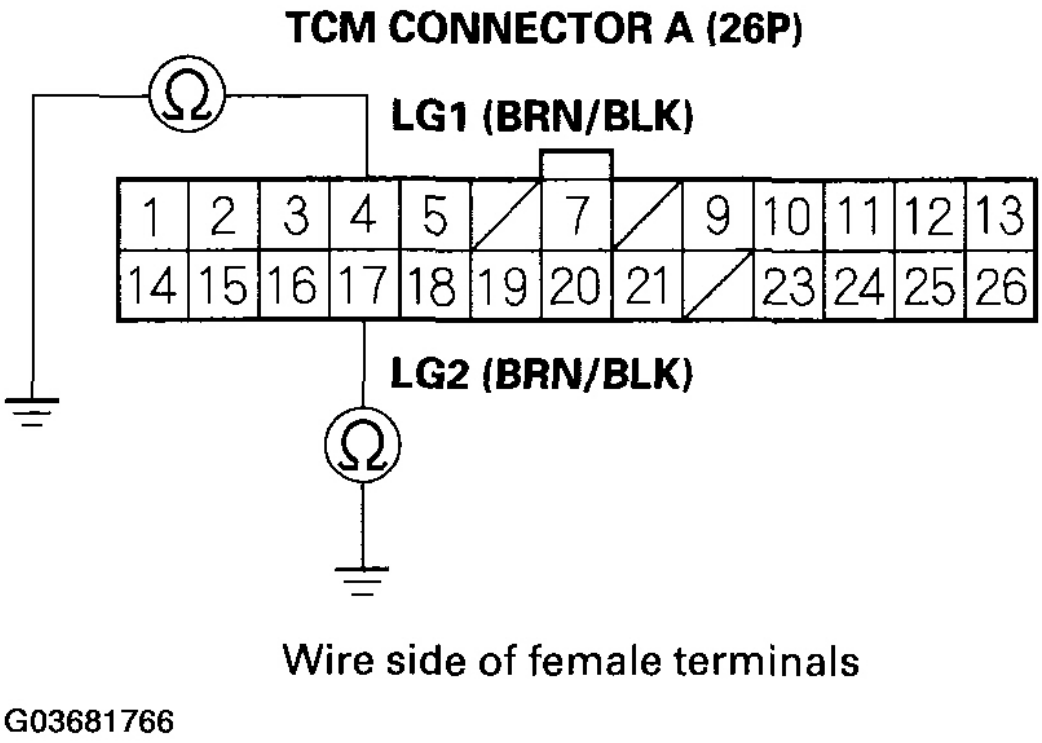


Fig. 65: Checking Continuity Between TCM Connector A (26P) Terminal A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 4.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G10D.

4. Turn the ignition switch ON (II).
5. Shift to the R position.
6. Measure the voltage between TCM connector terminals A11 and A4.

TCM CONNECTOR A (26P)

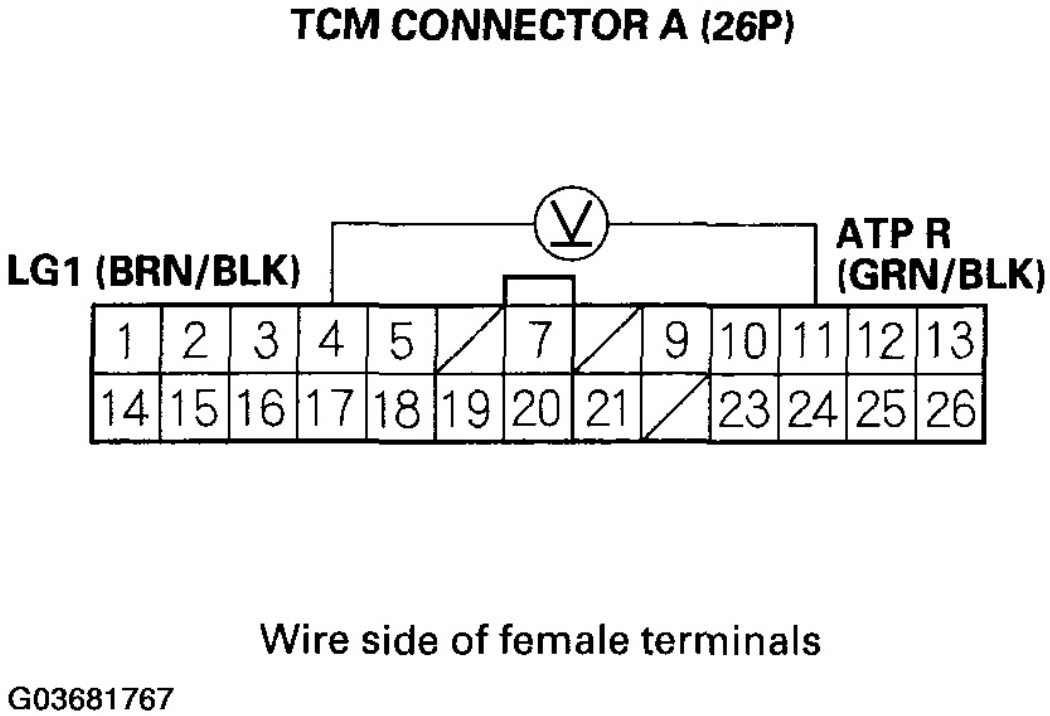


Fig. 66: Measuring Voltage Between TCM Connector A (26P) Terminals A11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Repair an open in the wire between TCM connector terminal A11 and the transmission range switch.

NO -Go to step 7.

7. Shift to the P or N position.
8. Measure the voltage between TCM connector terminals A10 and A4.

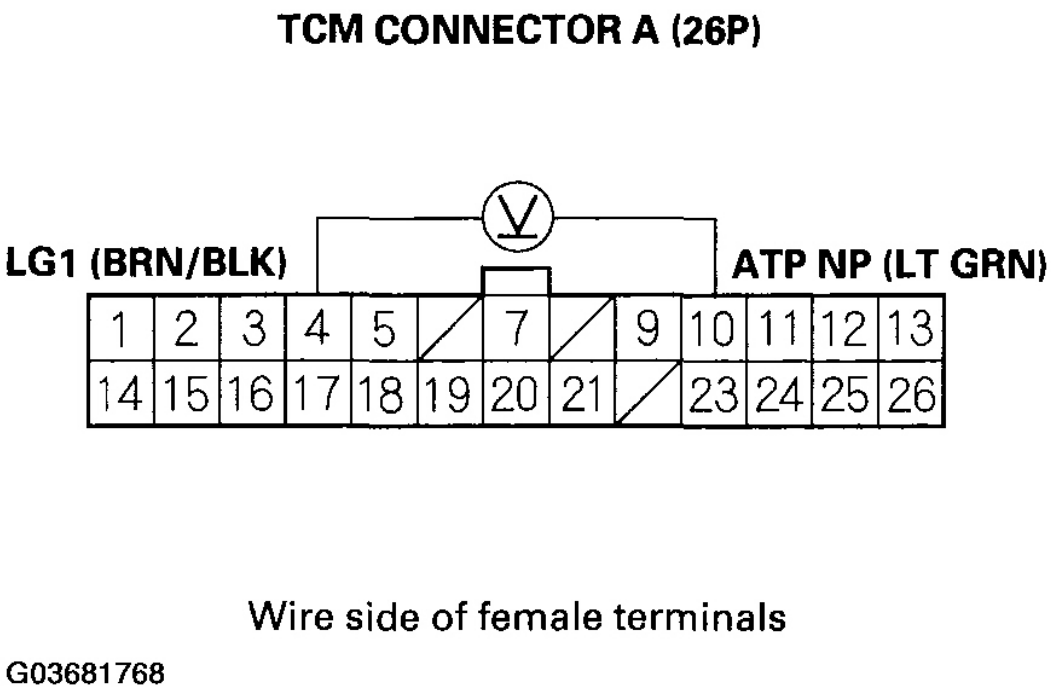


Fig. 67: Measuring Voltage Between TCM Connector A (26P) Terminals A10 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal A10 and the A/T gear position indicator.

NO -Go to step 9.

9. Shift to the D position.
10. Measure the voltage between TCM connector terminals A9 and A4.

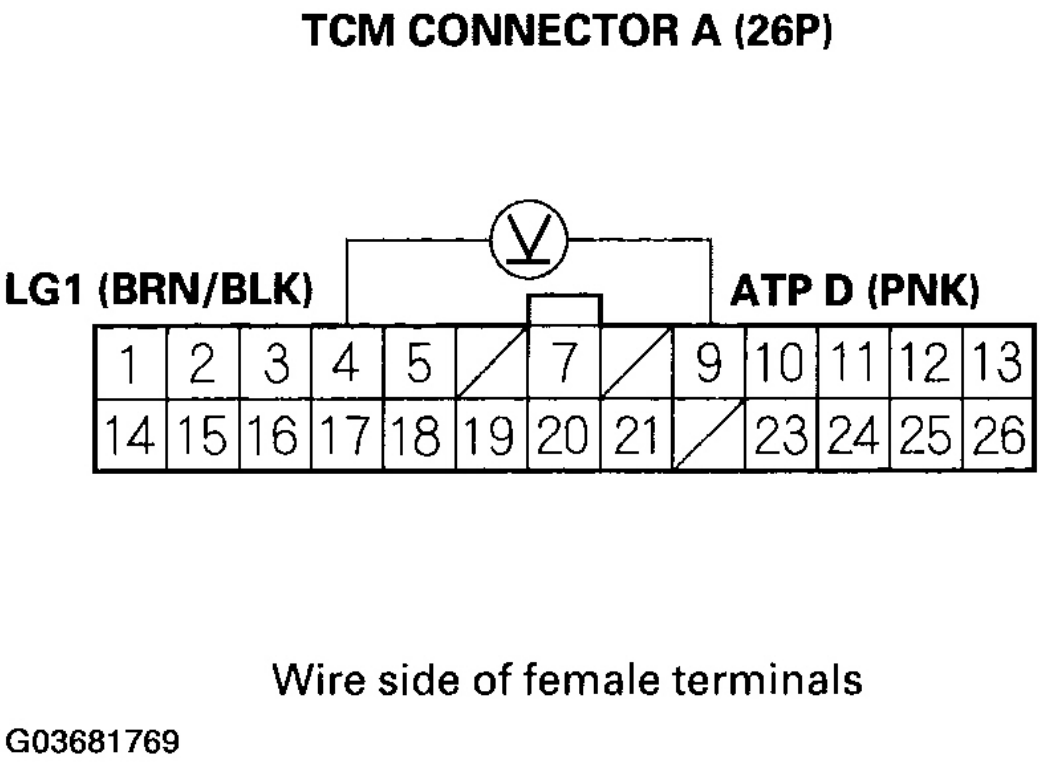


Fig. 68: Measuring Voltage Between TCM Connector A (26P) Terminals A9 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal A9 and the transmission range switch.

NO -Go to step 11.

11. Shift to the L position.
12. Measure the voltage between TCM connector terminals A7 and A4.

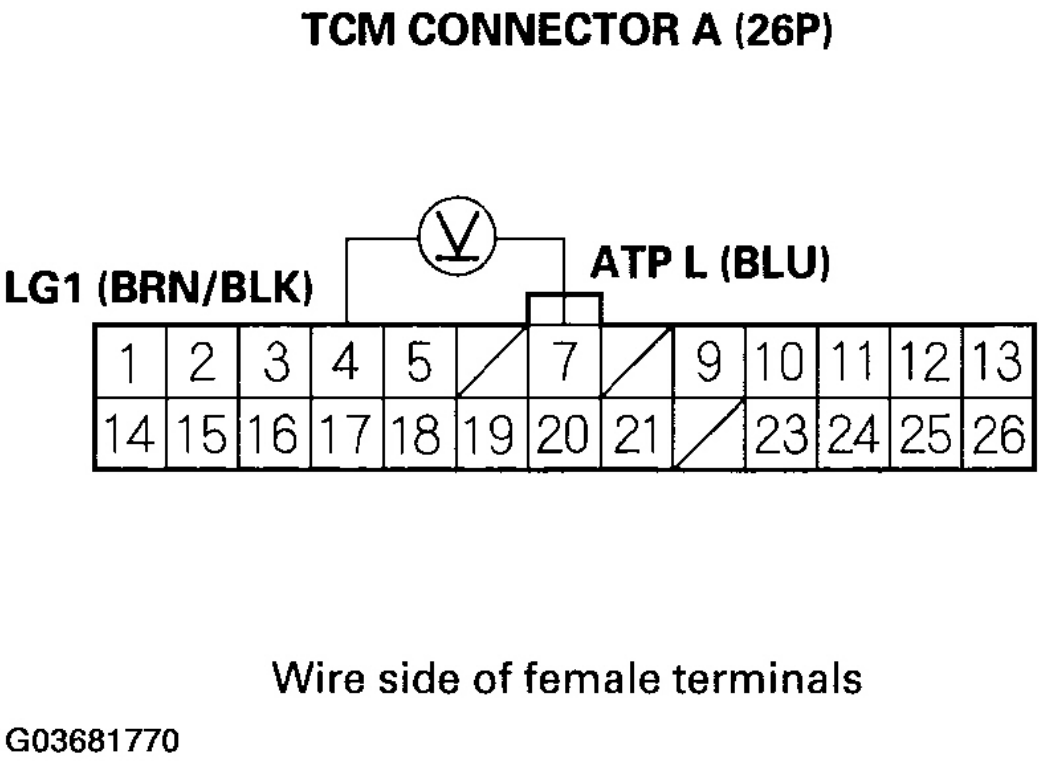


Fig. 69: Measuring Voltage Between TCM Connector A (26P) Terminals A7 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Repair an open in the wire between TCM connector terminal A7 and the transmission range switch.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

DTC P1790: Problem in Throttle Position Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the scan tool or the HDS indicates code for the throttle position (TP) sensor.

   Does the scan tool or the HDS indicate code for TP sensor?

   YES -Do the DTC Troubleshooting for the TP sensor circuit low voltage (see **DTC P0122: TP SENSOR CIRCUIT LOW VOLTAGE**), and the TP sensor circuit high voltage (see **DTC P0123: TP SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1790 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

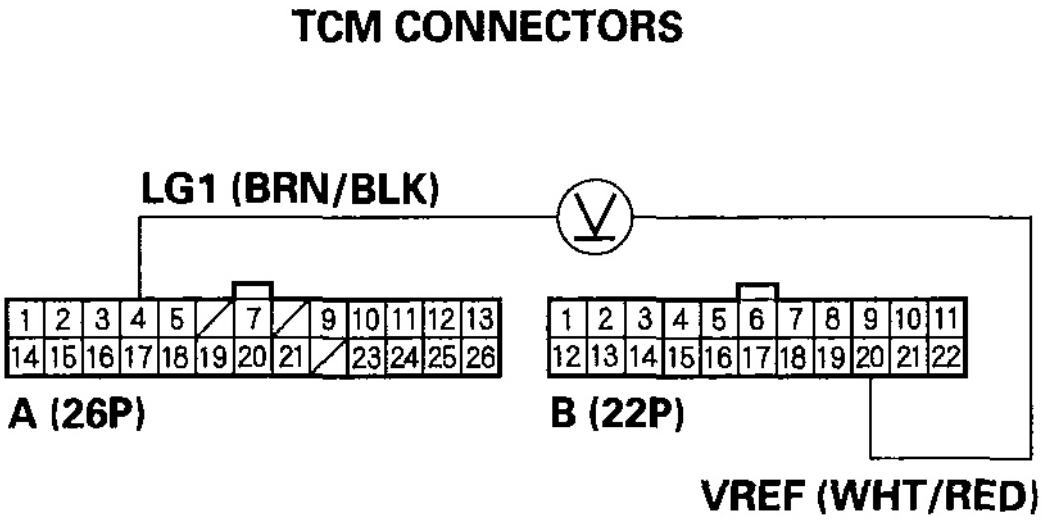


Fig. 70: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20 and the ECM.

6. Close the throttle fully.
7. Measure the voltage between TCM connector terminals B4 and A4.

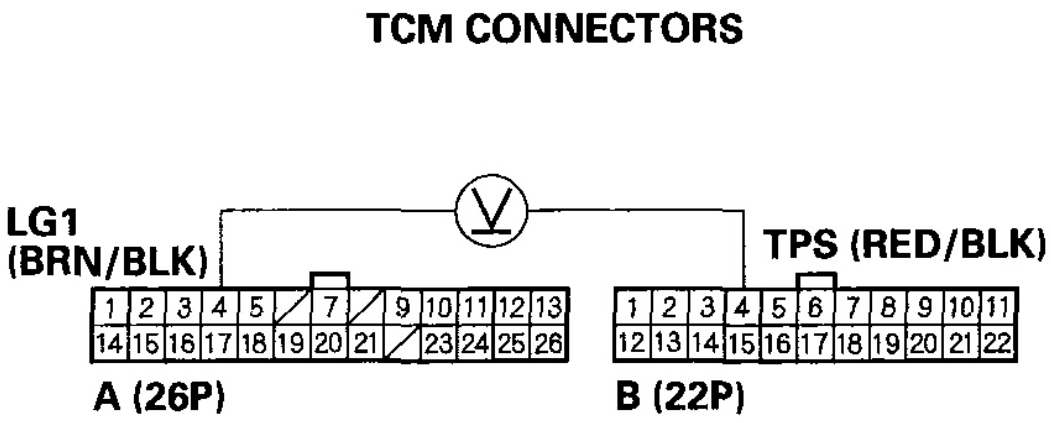


Fig. 71: Measuring Voltage Between TCM Connector Terminals B4 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.5 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open or short in the wire between TCM connector terminal B4 and the TP sensor.

DTC P1791: Problem in Vehicle Speed Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL**

TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Apply the parking brake, and block both rear wheels securely.
2. Raise the front of the vehicle, and make sure it is securely supported.
3. Shift to the N position.
4. Disconnect TCM connectors A (26P) and B (22P).
5. Turn the ignition switch ON (II).
6. Measure the voltage between TCM connector terminals B5 and A4 while rotating the front wheel slowly by hand.

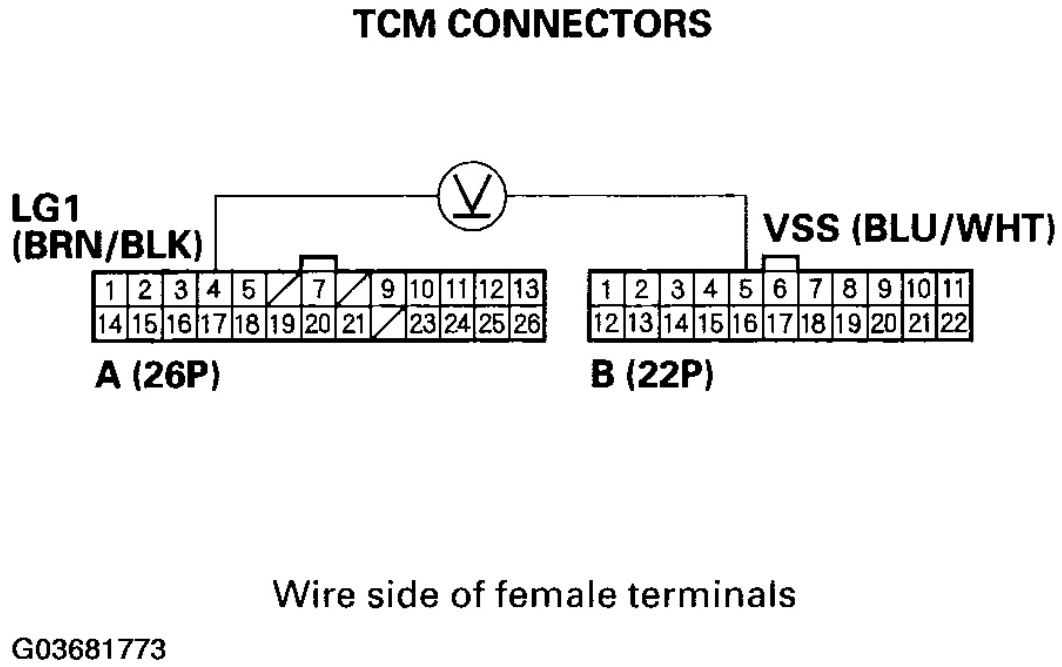


Fig. 72: Measuring Voltage Between TCM Connector Terminals B5 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0 V or about 5 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Check for an open or a short in the wire between TCM connector terminal B5 and the vehicle speed sensor (VSS). If the wire is OK, replace the VSS.

DTC P1792: Problem in Engine Coolant Temperature Sensor Circuit

2001-2004 Models

NOTE:

1. **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
2. **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the scan tool or the HDS indicates code for the engine coolant temperature (ECT) sensor.

   Does the scan tool or the HDS indicate code for ECT sensor?

   YES -Do the DTC Troubleshooting for the ECT sensor circuit low voltage (see **DTC P0117: ECT SENSOR CIRCUIT LOW VOLTAGE**), and the ECT sensor circuit high voltage (see **DTC P0118: ECT SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1792 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

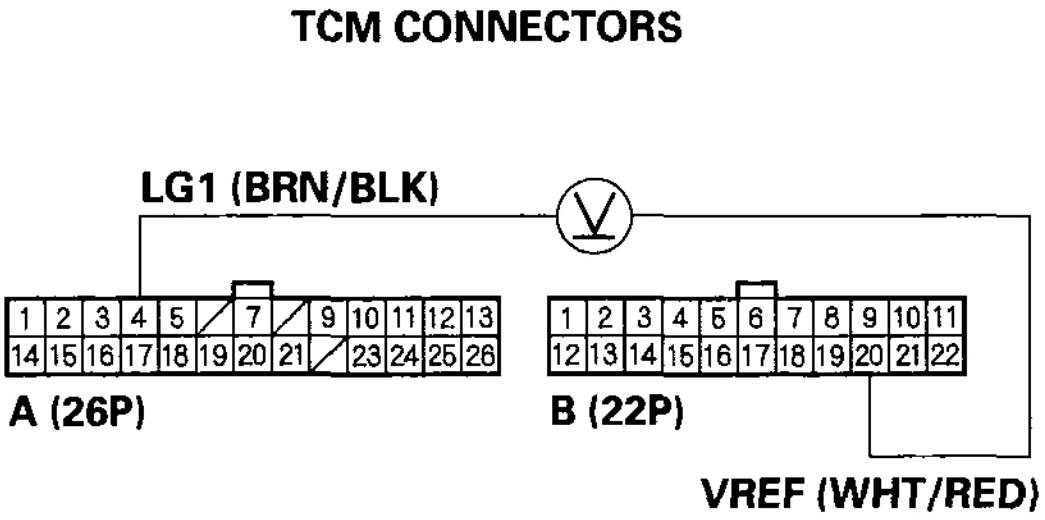


Fig. 73: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20 and the ECM.

6. Measure the voltage between TCM connector terminals A19 and A4.

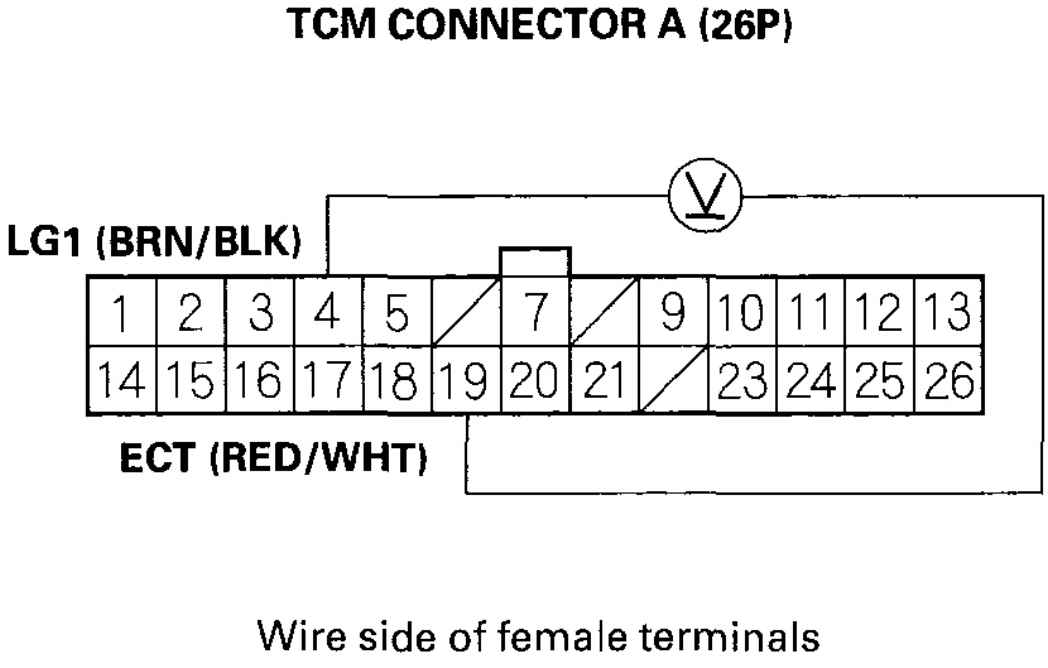


Fig. 74: Measuring Voltage Between TCM Connector A (26P) Terminals A19 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.1 - 4.8 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open or short in the wire between TCM connector terminal A19 and the ECT sensor.

DTC P1793: Problem in Manifold Absolute Pressure Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL**

TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the scan tool or the HDS indicates code for the manifold absolute pressure (MAP) sensor.

   Does the scan tool or the HDS indicate code for MAP sensor?

   YES -Do the DTC Troubleshooting for the MAP sensor circuit low voltage (see **DTC P0107: MAP SENSOR CIRCUIT LOW VOLTAGE**), and the MAP sensor circuit high voltage (see **DTC P0108: MAP SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1793 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

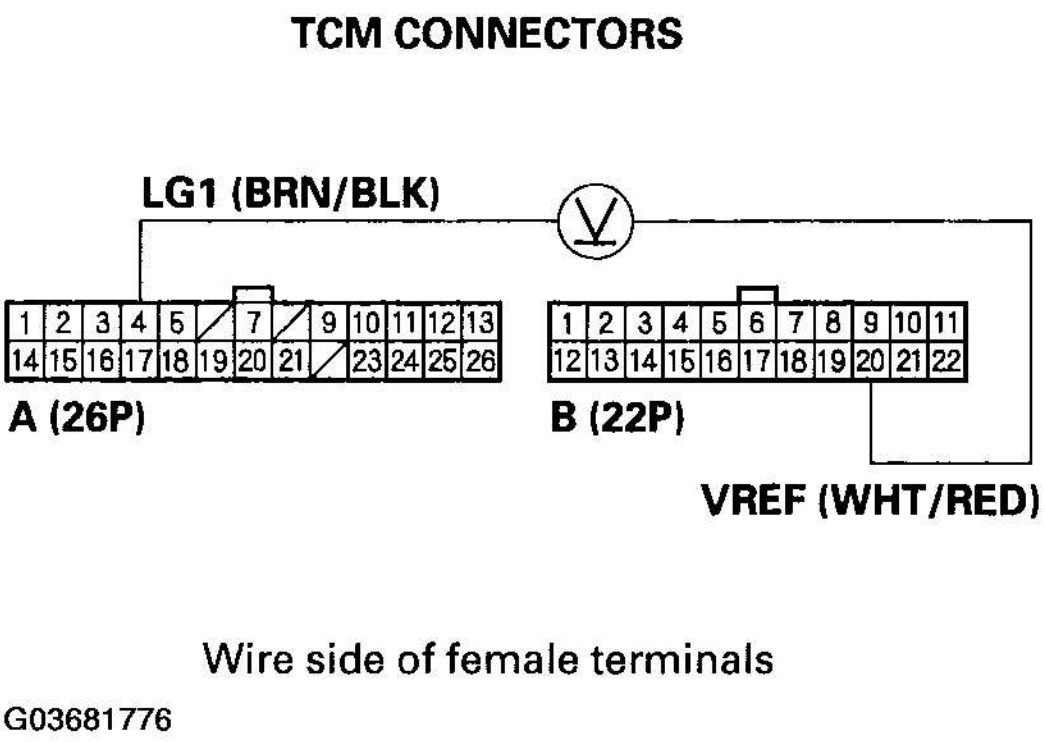


Fig. 75: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20and the ECM.

6. Measure the voltage between TCM connector terminals B2 and A4.

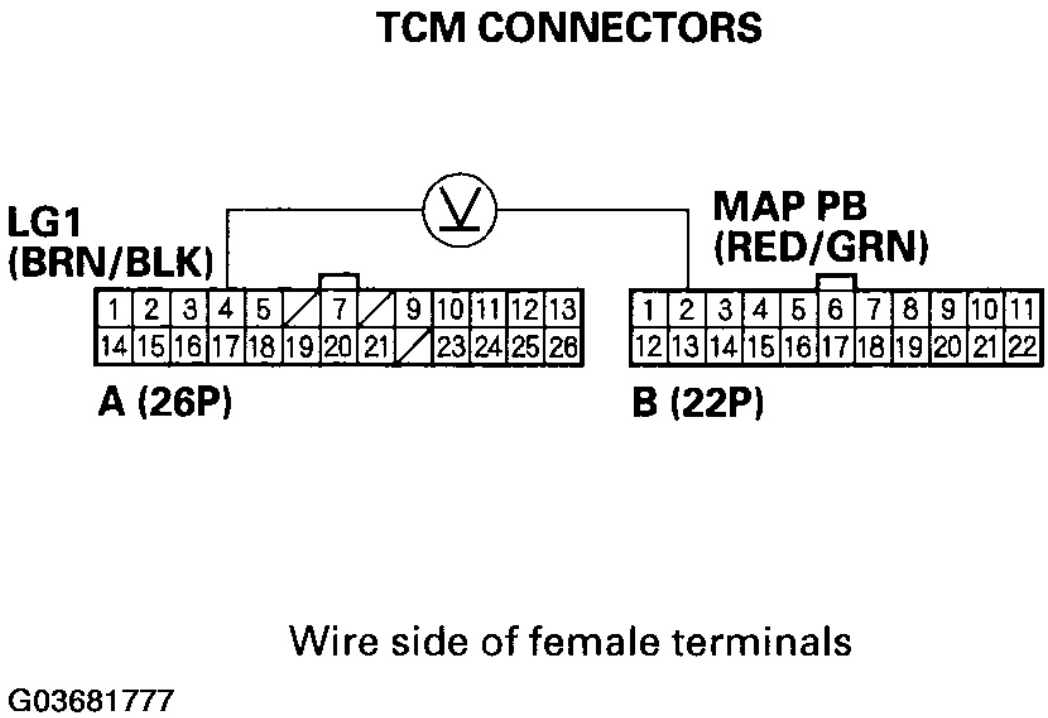


Fig. 76: Measuring Voltage Between TCM Connector Terminals B2 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 3 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open or short in the wire between TCM connector terminal B2 and the MAP sensor.

DTC P1799: Problem in Intake Air Temperature Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL**

TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the scan tool or the HDS indicates code for the intake air temperature (IAT) sensor.

   Does the scan tool or the HDS indicate code for IAT sensor?

   YES -Do the DTC Troubleshooting for the IAT sensor circuit low voltage (see **DTC P0112: IAT SENSOR CIRCUIT LOW VOLTAGE**), and the IAT sensor circuit high voltage (see **DTC P0113: IAT SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1799 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

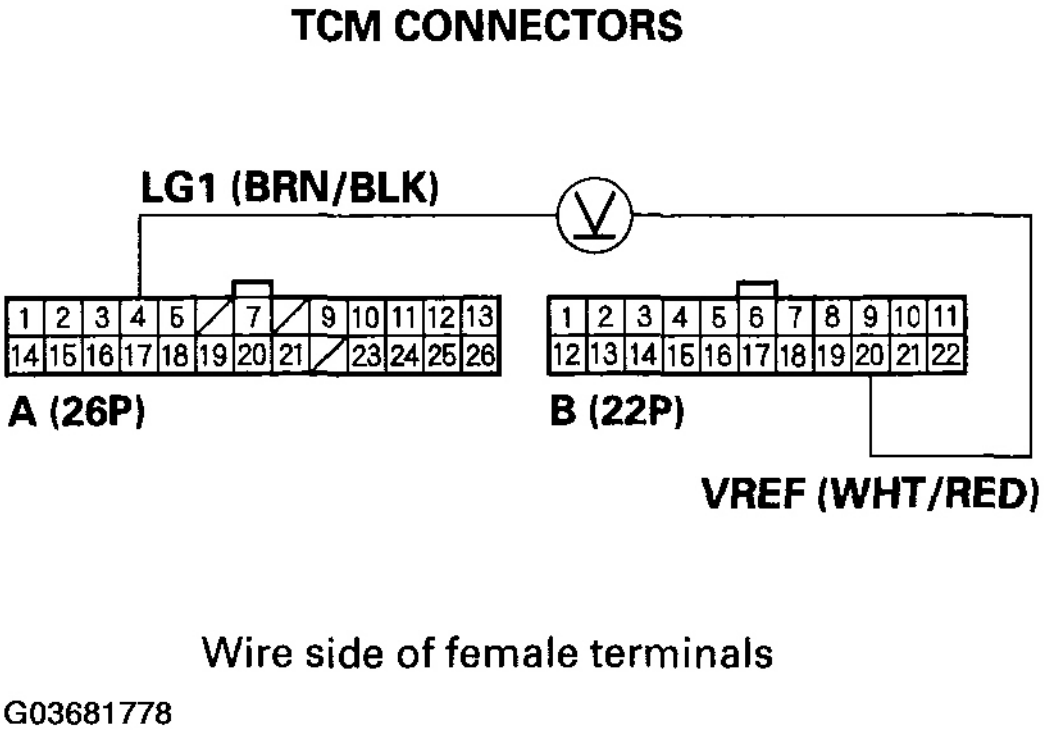


Fig. 77: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20 and the ECM.

6. Measure the voltage between TCM connector terminals B19 and A4.

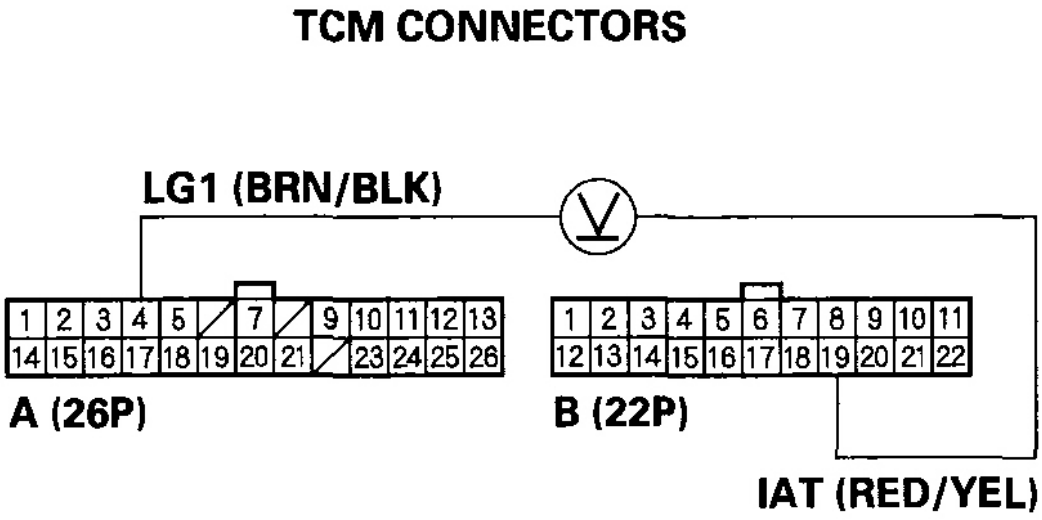


Fig. 78: Measuring Voltage Between TCM Connector Terminals B19 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.1 - 4.8 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open or short in the wire between TCM connector terminal B19 and the IAT sensor.

DTC P1850: Problem in Creep Aid System Solenoid Valve A Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connectors A (26P) and B (22P).
3. Turn the ignition switch ON (II).
4. Measure the voltage between TCM connector terminals B11 and A4.

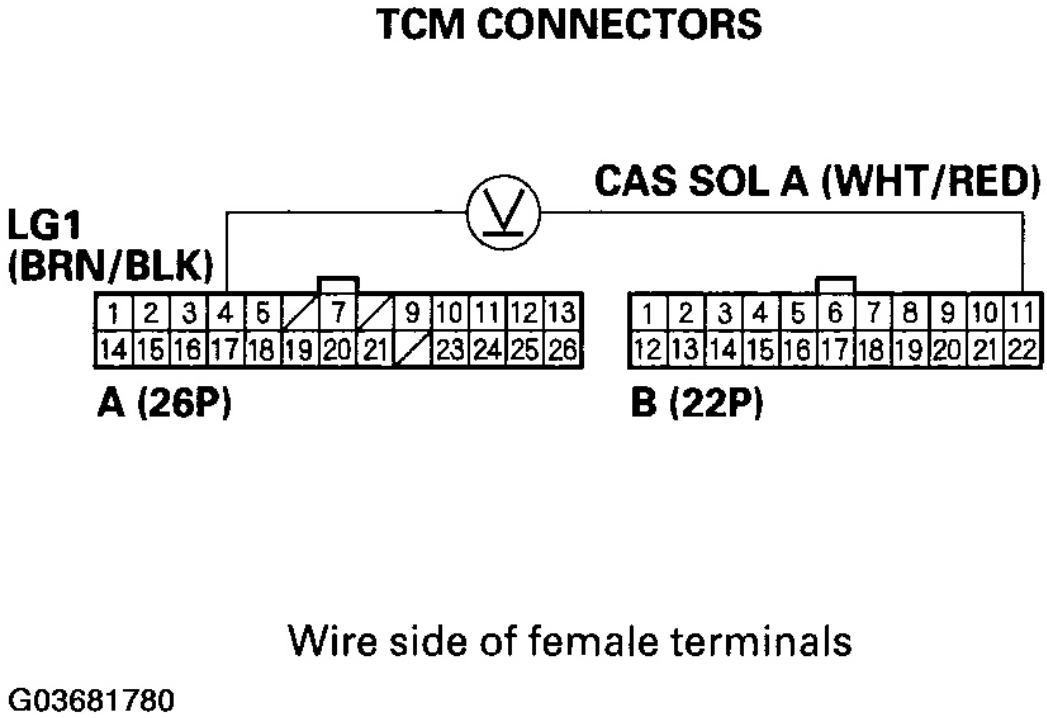


Fig. 79: Measuring Voltage Between TCM Connector Terminals B11 And A4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wire between TCM connector terminal B11 and the creep aid system solenoid valve A.

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the 4P connector from the creep aid system solenoid valves A and B.
7. Check for continuity between TCM connector terminals B11 and A4.

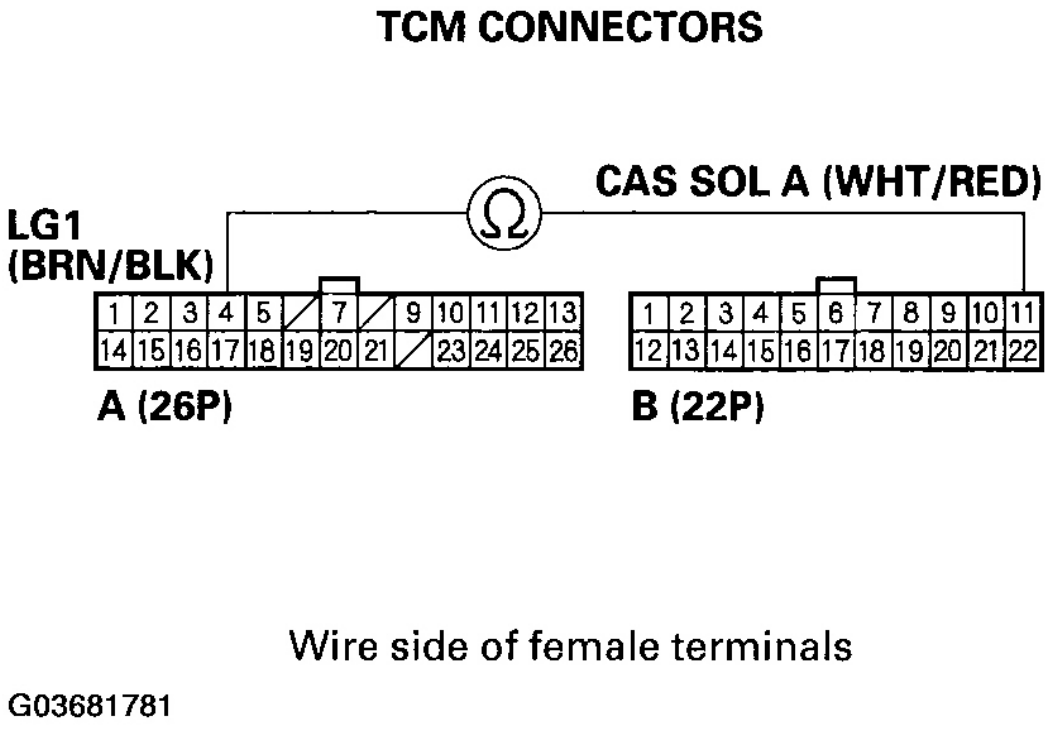


Fig. 80: Checking Continuity Between TCM Connector Terminals B11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B11 and the creep aid system solenoid valve A.

NO -Go to step 8.

8. Connect the creep aid system solenoid valves A and B connector.
9. Measure the resistance between TCM connector terminals B11 and A4.

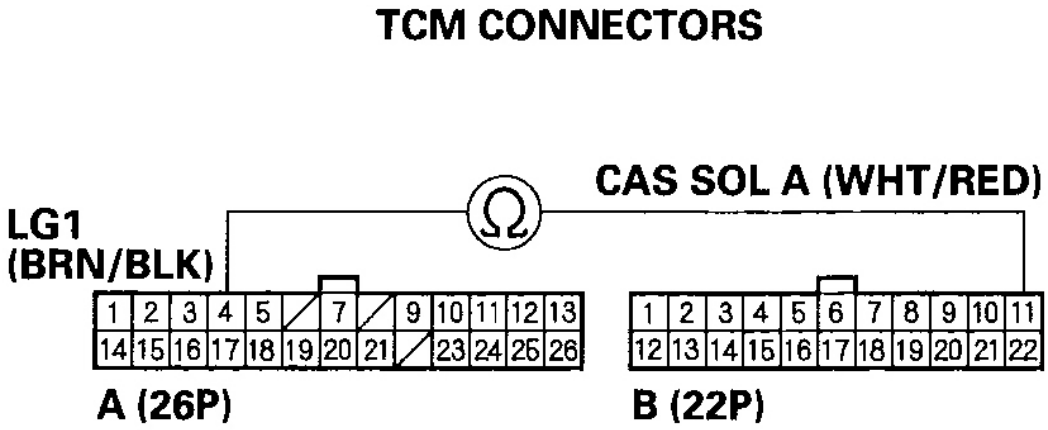


Fig. 81: Measuring Resistance Between TCM Connector Terminals B11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8 - 24 ohm ?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Check for an open in the wire between TCM connector terminal B11

and the creep aid system solenoid valve A. If the wire is OK, replace the creep aid system solenoid valves A and B.

DTC P1851: Problem in Creep Aid System Solenoid Valve B Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connectors A (26P) and B (22P).
3. Turn the ignition switch ON (II).
4. Measure the voltage between TCM connector terminals B18 and A4.

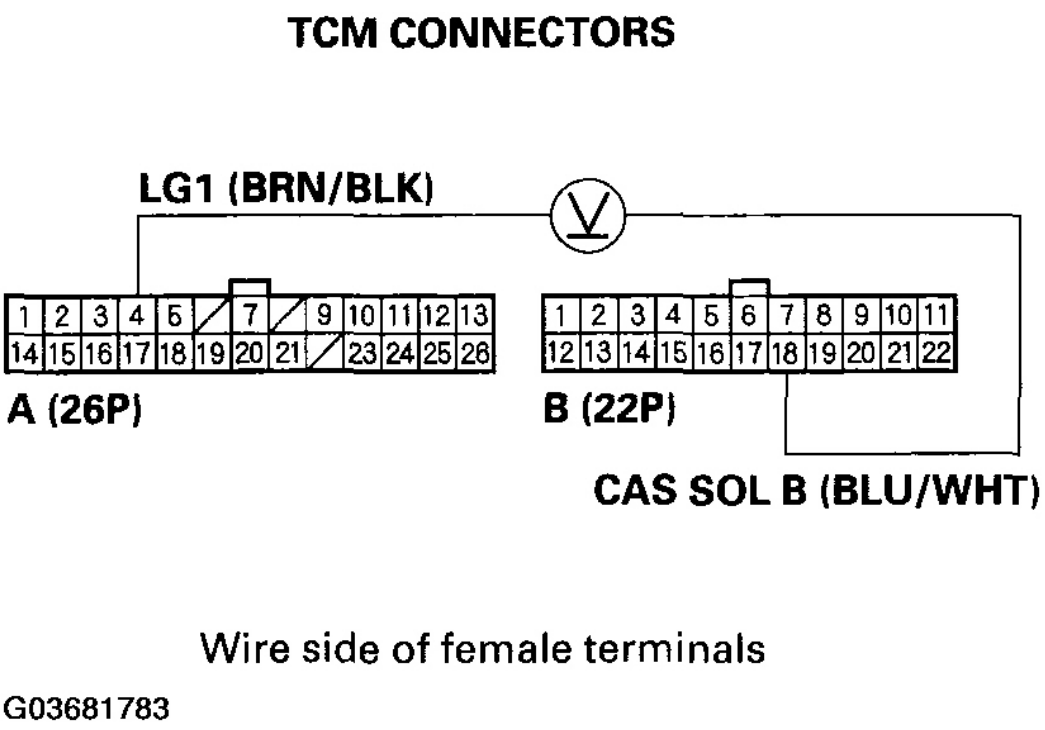


Fig. 82: Measuring Voltage Between TCM Connector Terminals B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B.

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the 4P connector from the creep aid system solenoid valves A and B.
7. Check for continuity between TCM connector terminals B18 and A4.

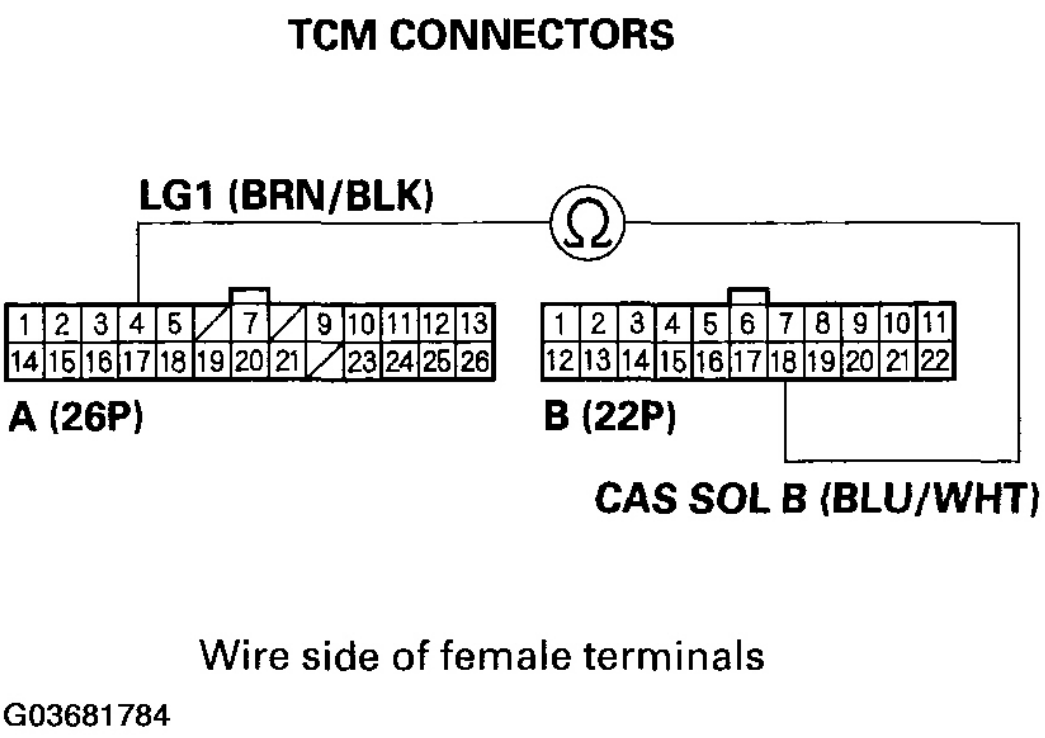


Fig. 83: Checking Continuity Between TCM Connector Terminals B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B.

NO -Go to step 8.

8. Connect the creep aid system solenoid valves A and B connector.
9. Measure the resistance between TCM connector terminals B18 and A4.

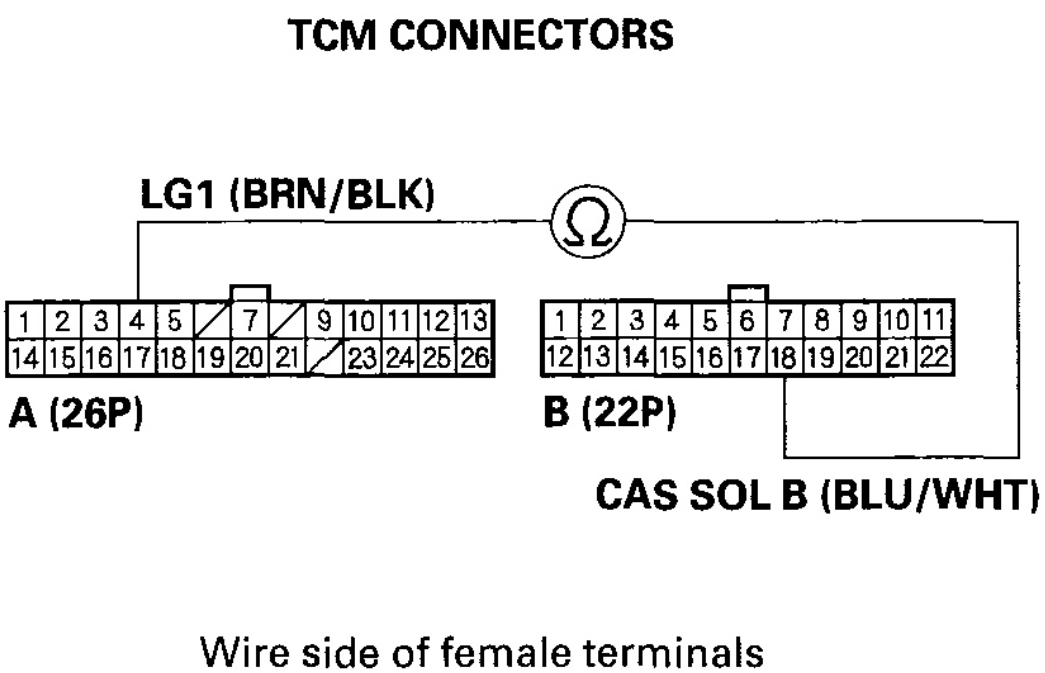


Fig. 84: Measuring Resistance Between TCM Connector Terminals B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8 - 24 ohm ?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Check for an open in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B. If the wire is OK, replace the creep aid system solenoid valves A and B.

DTC P1879: Problem in CVT Start Clutch Pressure Control Valve Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect the solenoid harness connector (8P).
3. Measure the resistance between solenoid harness connector (8P) terminals No. 4 and No. 8.

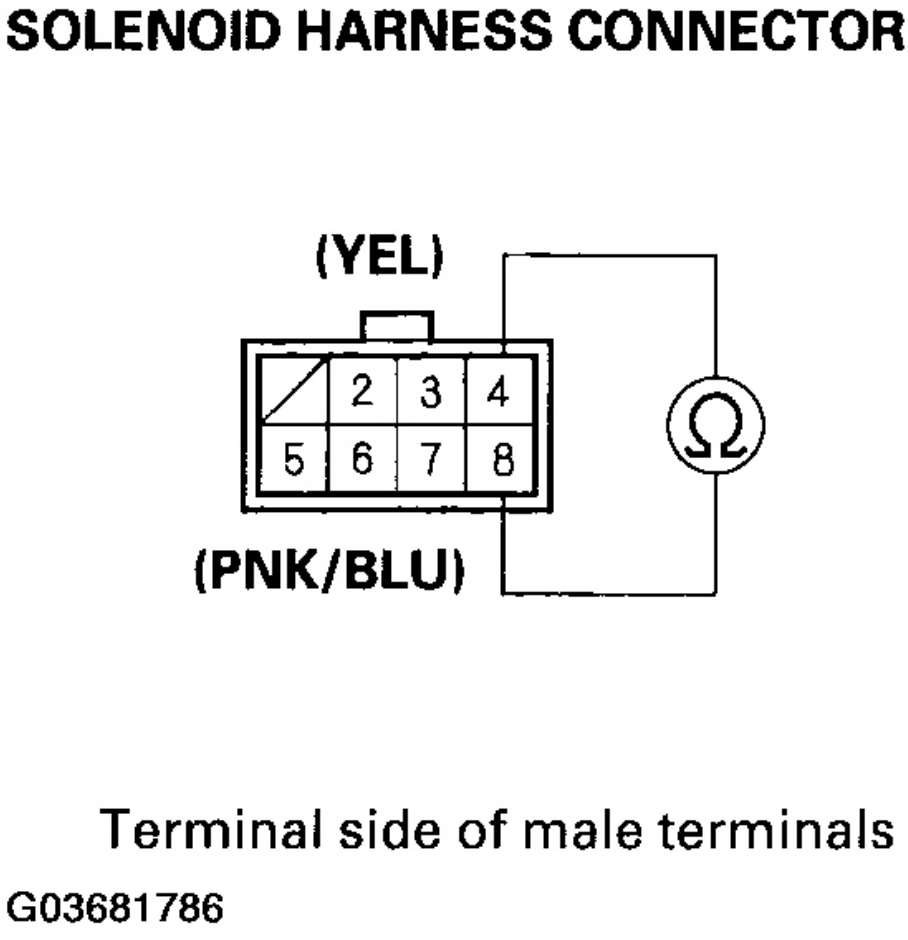


Fig. 85: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 4 And 8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance 3.8- 6.8 ohm?

YES -Go to step 4.

NO -Replace the lower valve body assembly.

4. Disconnect TCM connector A (26P).
5. Check for continuity between TCM connector terminal A1 and body ground, and between A14 and body ground.

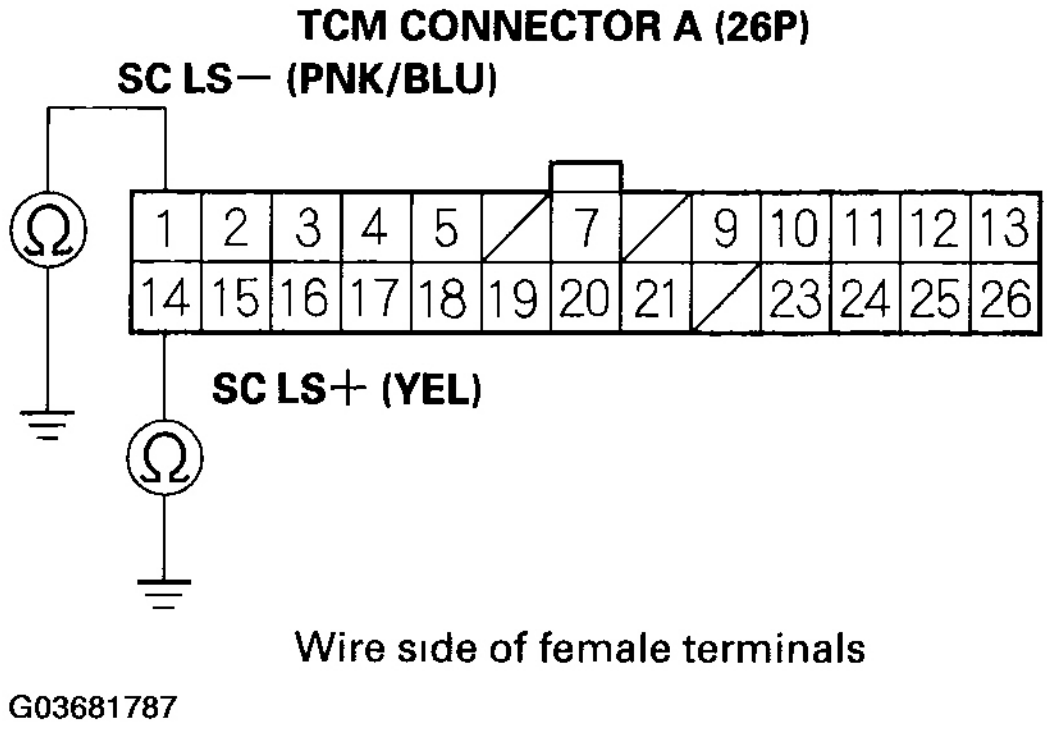


Fig. 86: Checking Continuity Between TCM Connector A (26P) Terminal A1, A14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal A1 or A14 and the solenoid harness connector (8P).

NO -Go to step 6.

6. Connect the solenoid harness connector (8P).
7. Measure the resistance between TCM connector terminals A1 and A14.

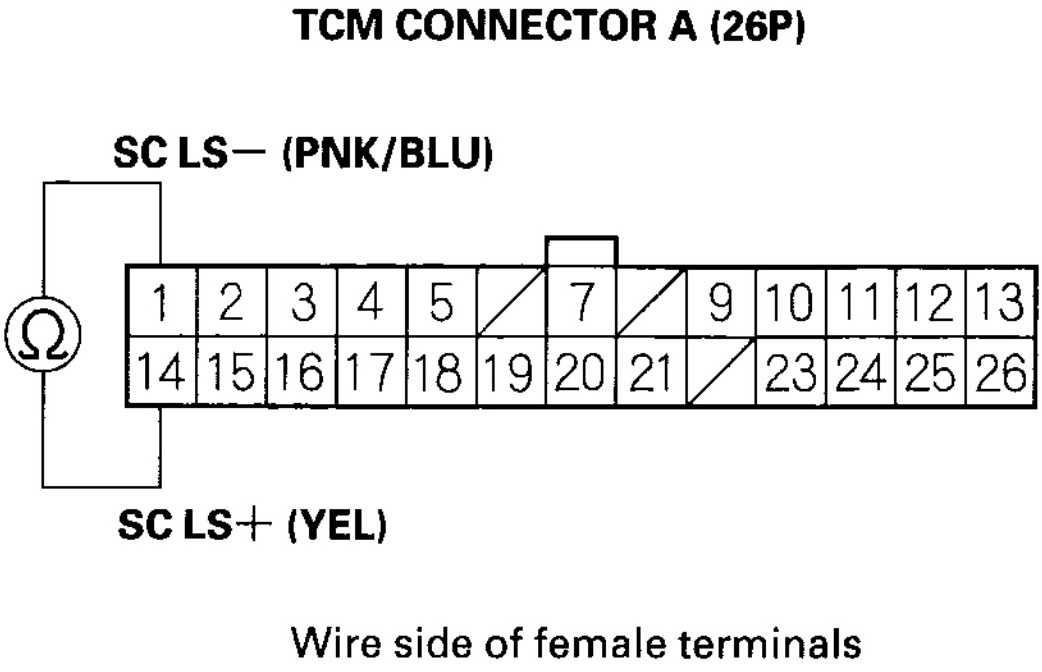


Fig. 87: Measuring Resistance Between TCM Connector A (26P) Terminals A1 And A14
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open in the wire between TCM connector terminal A1 or A14 and the solenoid harness connector (8P).

DTC P1882: Problem in Inhibitor Solenoid Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect the solenoid harness connector (8P).
3. Measure the resistance between solenoid harness connector (8P) terminals No. 5 and body ground.

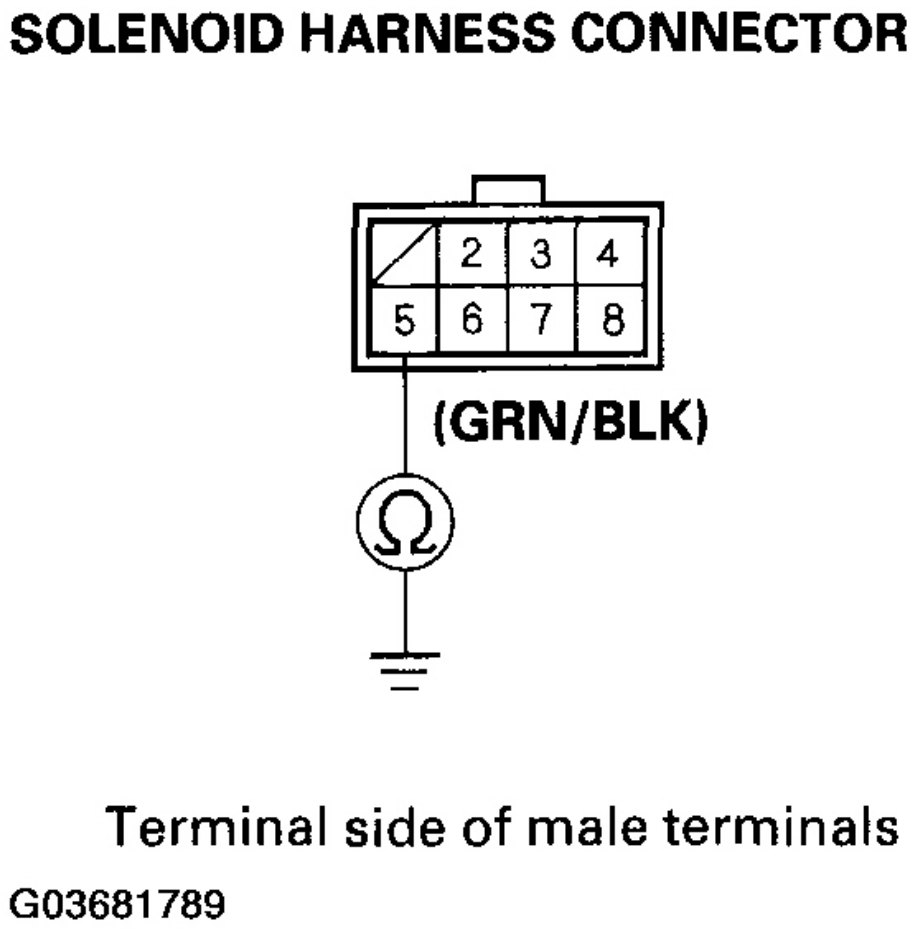


Fig. 88: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance 11.7-21.0 ohm?

YES -Go to step 4.

NO -Replace the lower valve body assembly.

4. Disconnect TCM connector B (22P).
5. Check for continuity between TCM connector terminal B1 and body ground.

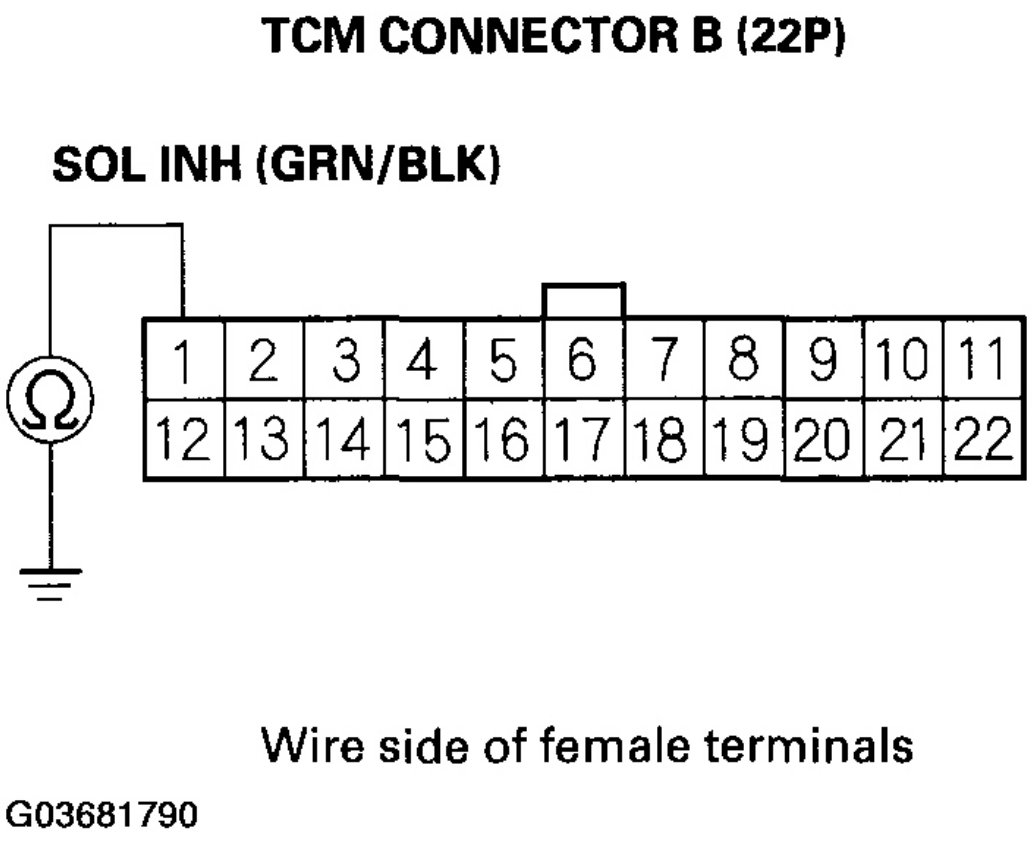


Fig. 89: Checking Continuity Between TCM Connector B (22P) Terminal B1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B1 and the solenoid harness connector (8P).

NO -Go to step 6.

6. Connect the solenoid harness connector (8P).
7. Measure the resistance between TCM connector terminal B1 and body ground.

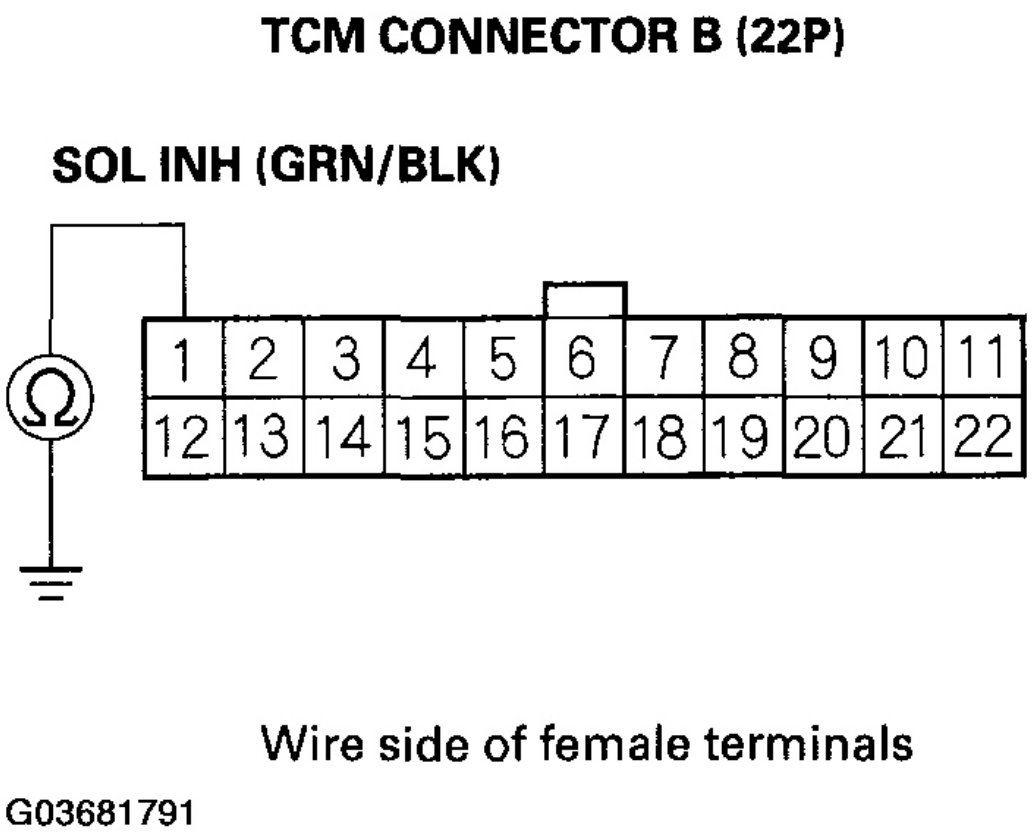


Fig. 90: Measuring Resistance Between TCM Connector B (22P) Terminal B1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 11.7-21.0 ohm?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open in the wire between TCM connector terminal B1 and the solenoid harness connector (8P).

DTC P1885: Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect CVT input shaft (drive pulley) speed sensor connector.
3. Turn the ignition switch ON (II).
4. Measure the voltage between CVT input shaft (drive pulley) speed sensor connector terminal No. 1 and body ground.

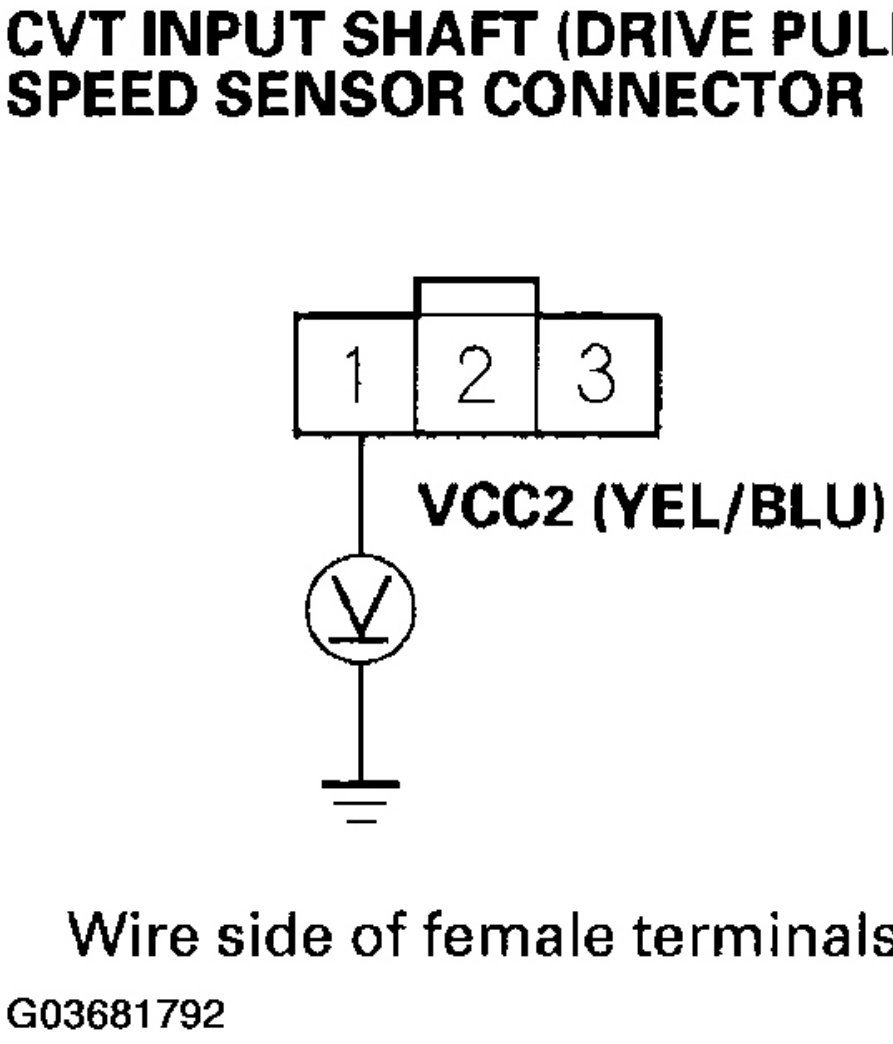


Fig. 91: Measuring Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 5.

NO -Go to step 11 .

5. Turn the ignition switch OFF.

6. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 2 and body ground.

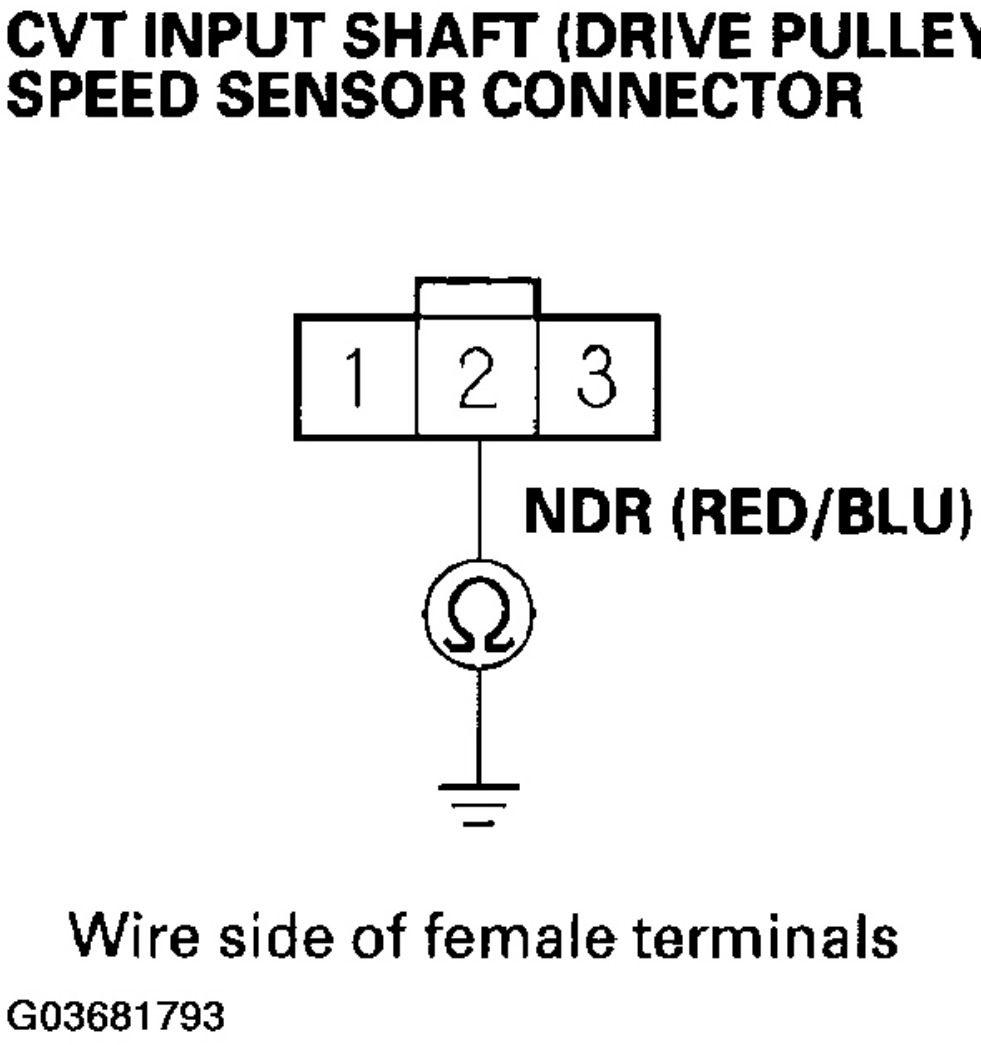


Fig. 92: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B10 and the CVT input shaft (drive pulley) speed sensor.

NO -Go to step 7.

7. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 3 and body ground.

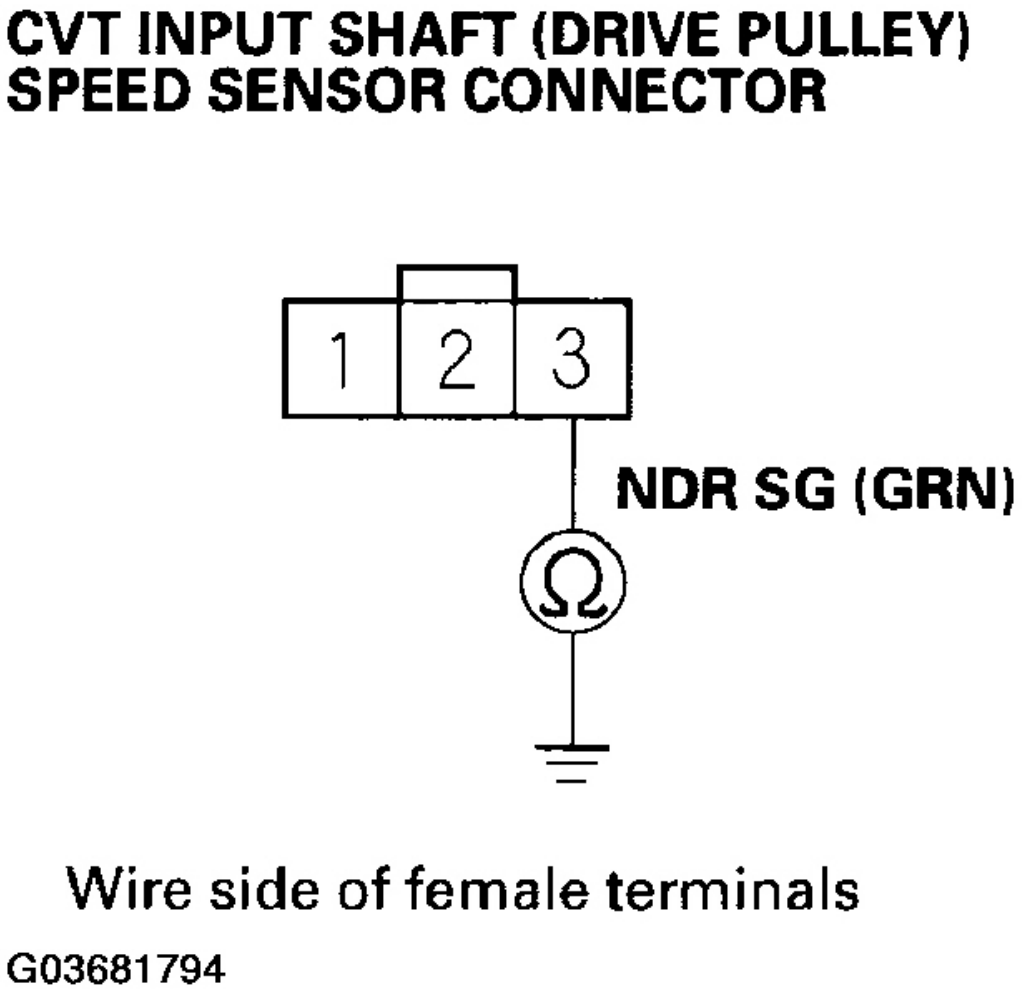


Fig. 93: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 8.

NO -Repair loose terminal or open in the wire between TCM connector terminal B17 and the CVT input shaft (drive pulley) speed sensor.

8. Turn the ignition switch ON (II).
9. Measure the voltage between CVT input shaft (drive pulley) speed sensor connector terminals No. 2 and No. 3.

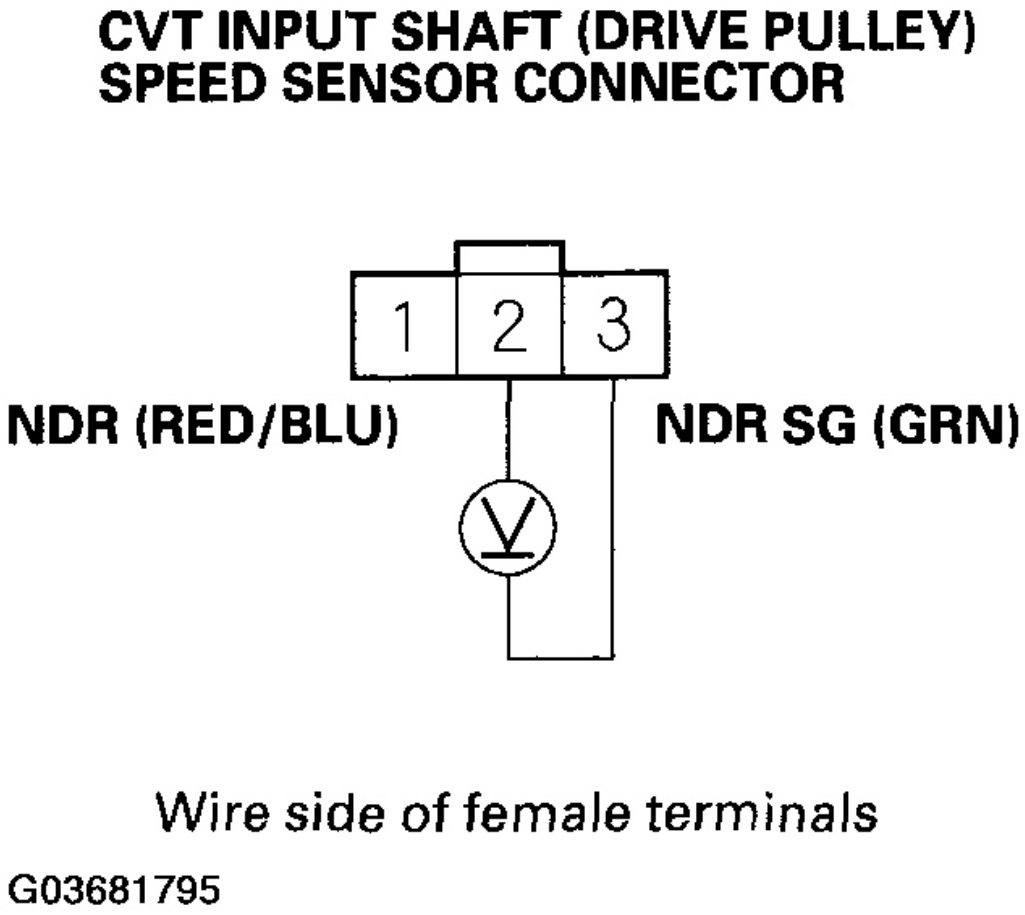


Fig. 94: Measuring Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminals 2 And 3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 10.

10. Measure the voltage between TCM connector terminals B10and B17.

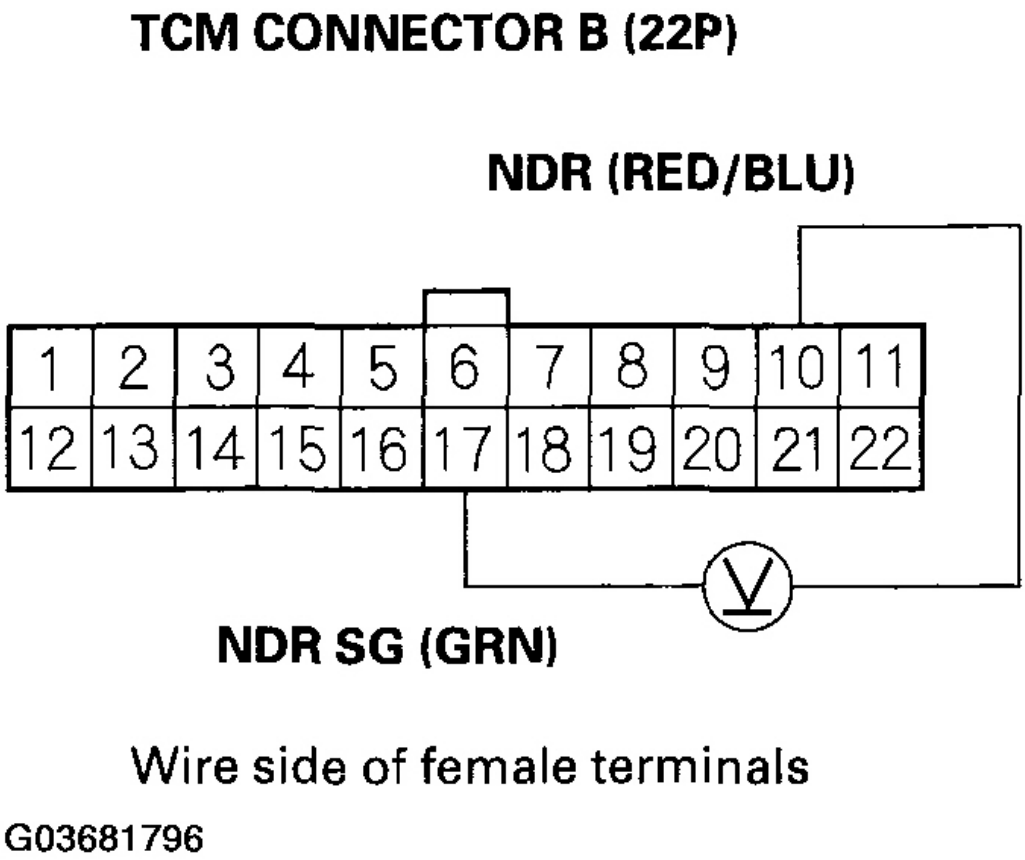


Fig. 95: Measuring Voltage Between TCM Connector B (22P) Terminals B10 And B17

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B10 and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

11. Measure the voltage between TCM connector terminals B17 and B22.

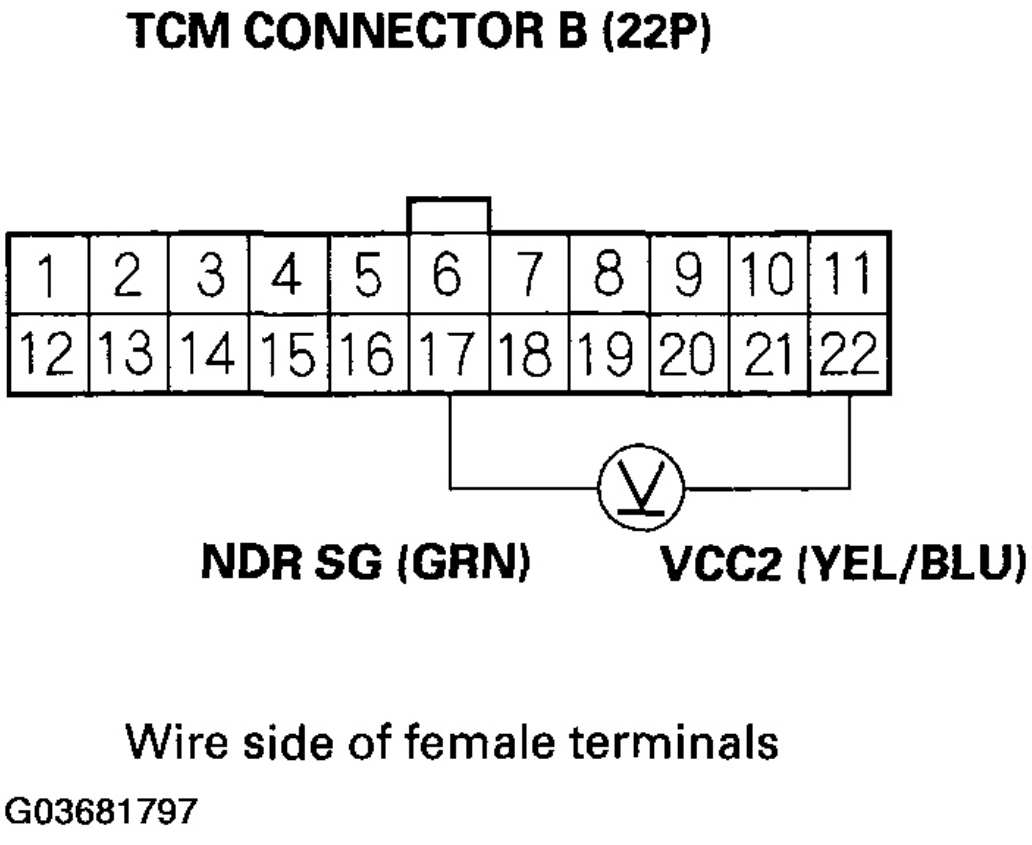


Fig. 96: Measuring Voltage Between TCM Connector B (22P) Terminals B17 And B22
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B22

and the CVT input shaft (drive pulley) speed sensor.

NO -Go to step 12.

12. Turn the ignition switch OFF.
13. Disconnect TCM connector B (22P).
14. Check for continuity between TCM connector terminal B22 and body ground.

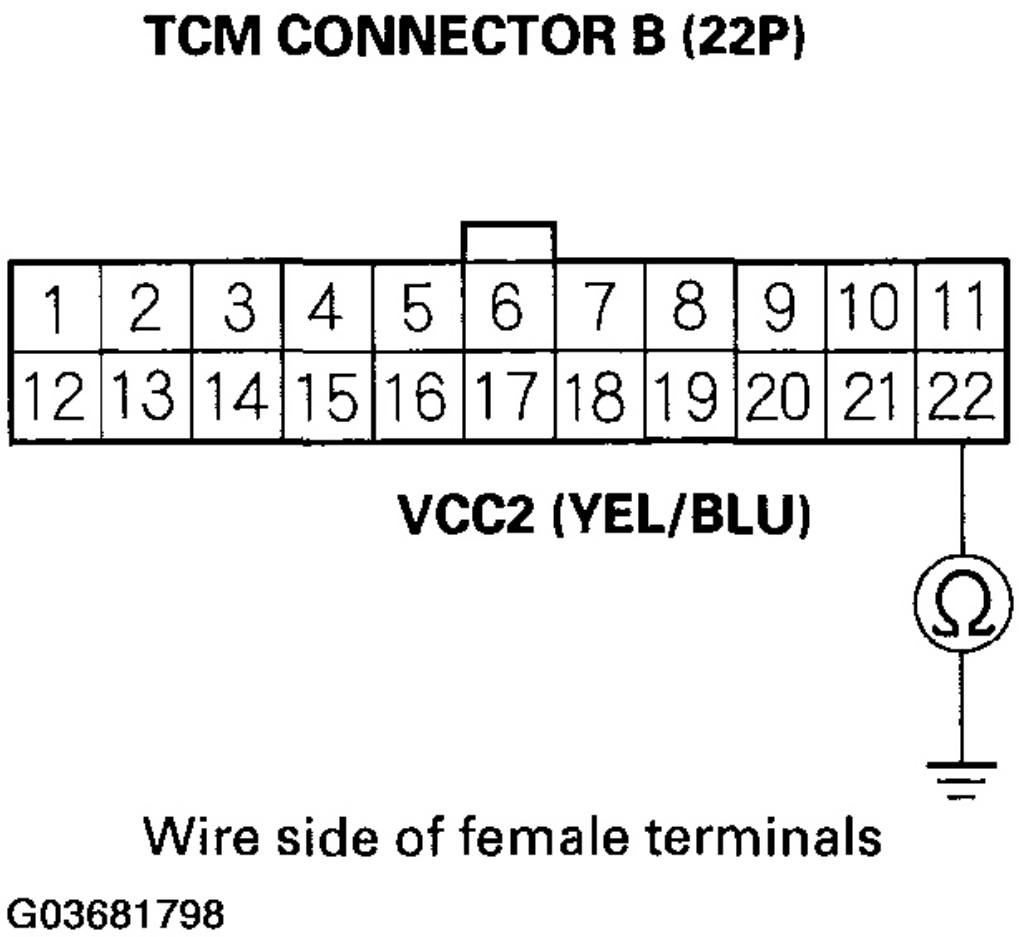


Fig. 97: Checking Continuity Between TCM Connector B (22P) Terminal B22 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B22 and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

15. Turn the ignition switch OFF.
16. Connect CVT input shaft (drive pulley) speed sensor connector.
17. Turn the ignition switch ON (II).
18. Measure the voltage between TCM connector terminals B10 and B17.

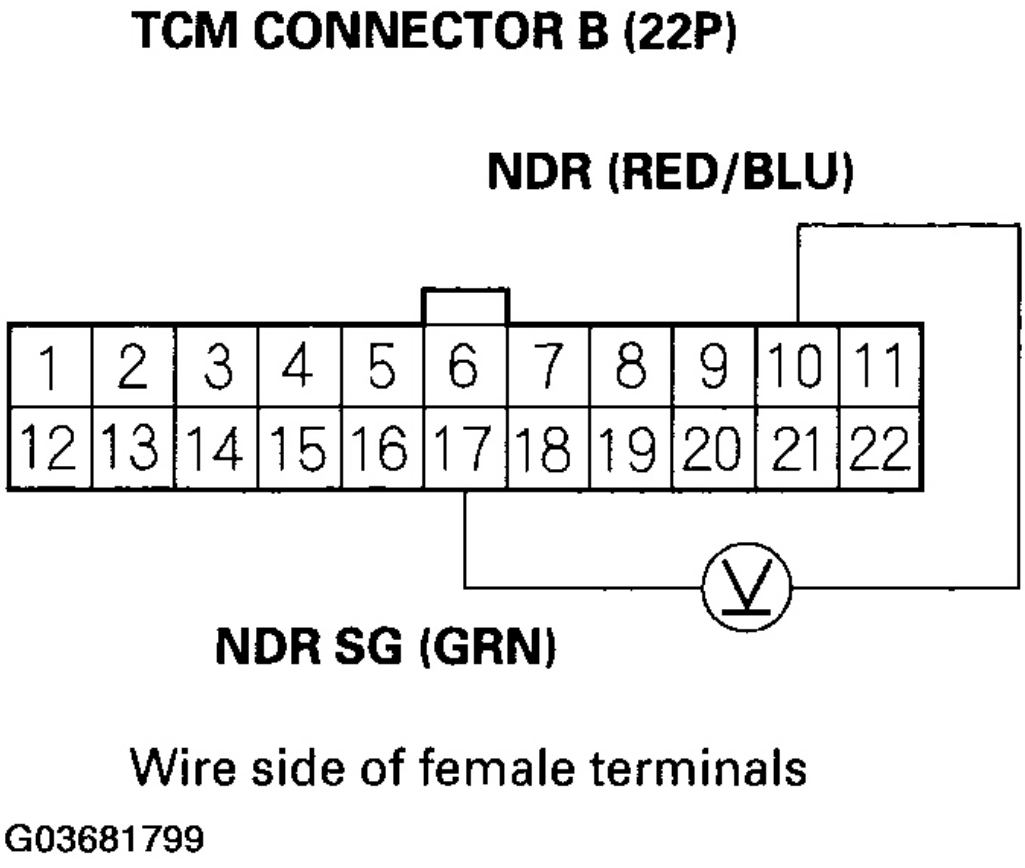


Fig. 98: Measuring Voltage Between TCM Connector B (22P) Terminals B10 And B17
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0 V or about 5 V?

YES -Go to step 17.

NO -Replace the CVT input shaft (drive pulley) speed sensor.

19. Apply the parking brake, and block both rear wheels securely.
20. Raise the front of the vehicle, and make sure it is securely supported.
21. Start the engine, then shift to the D position and drive the vehicle at engine idling.
22. Measure the voltage between TCM connector terminals B10and B17.

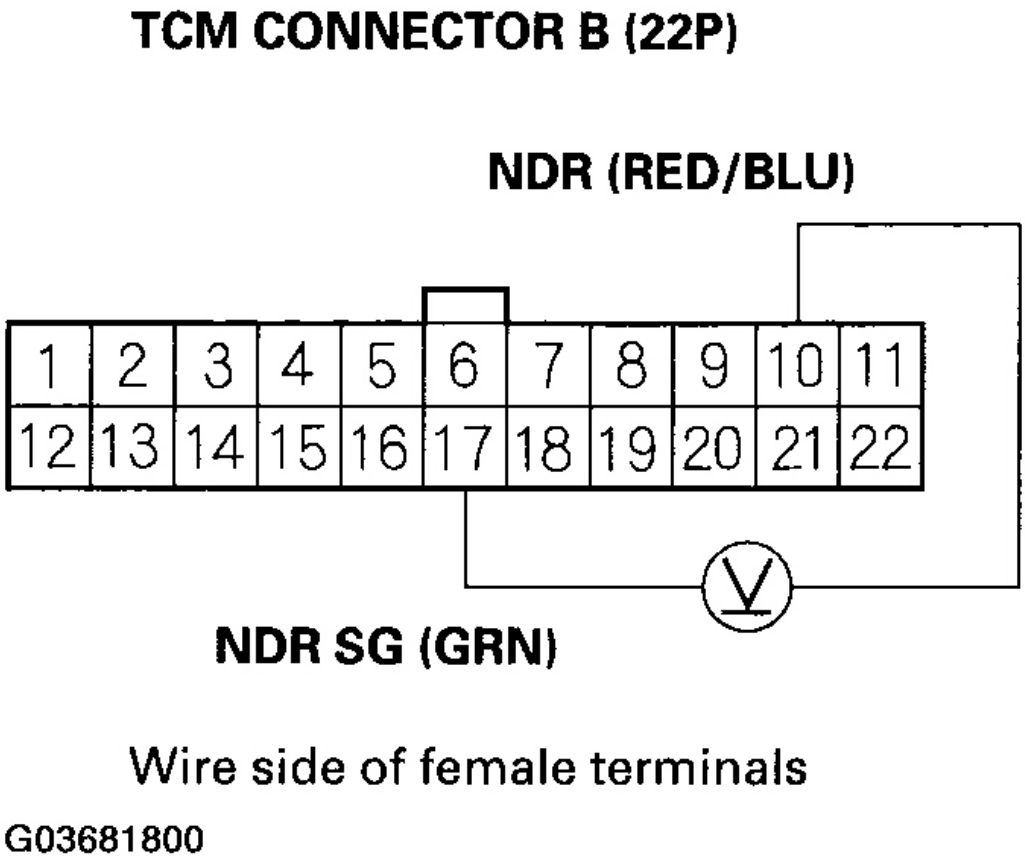


Fig. 99: Measuring Voltage Between TCM Connector B (22P) Terminals B10 And B17
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 1.5- 3.5 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Replace the CVT input shaft (drive pulley) speed sensor.

DTC P1886: Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect CVT output shaft (driven pulley) speed sensor connector.
3. Turn the ignition switch ON (II).
4. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminal No. 1 and body ground.

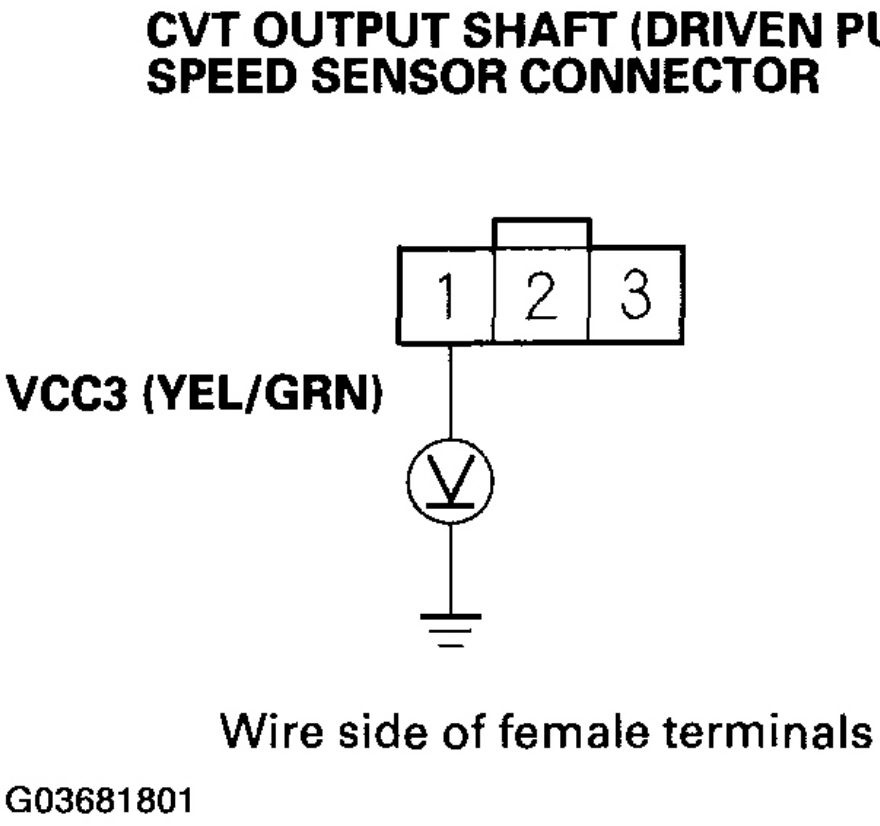


Fig. 100: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 5.

NO -Go to step 11 .

5. Turn the ignition switch OFF.
6. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 2 and body ground.

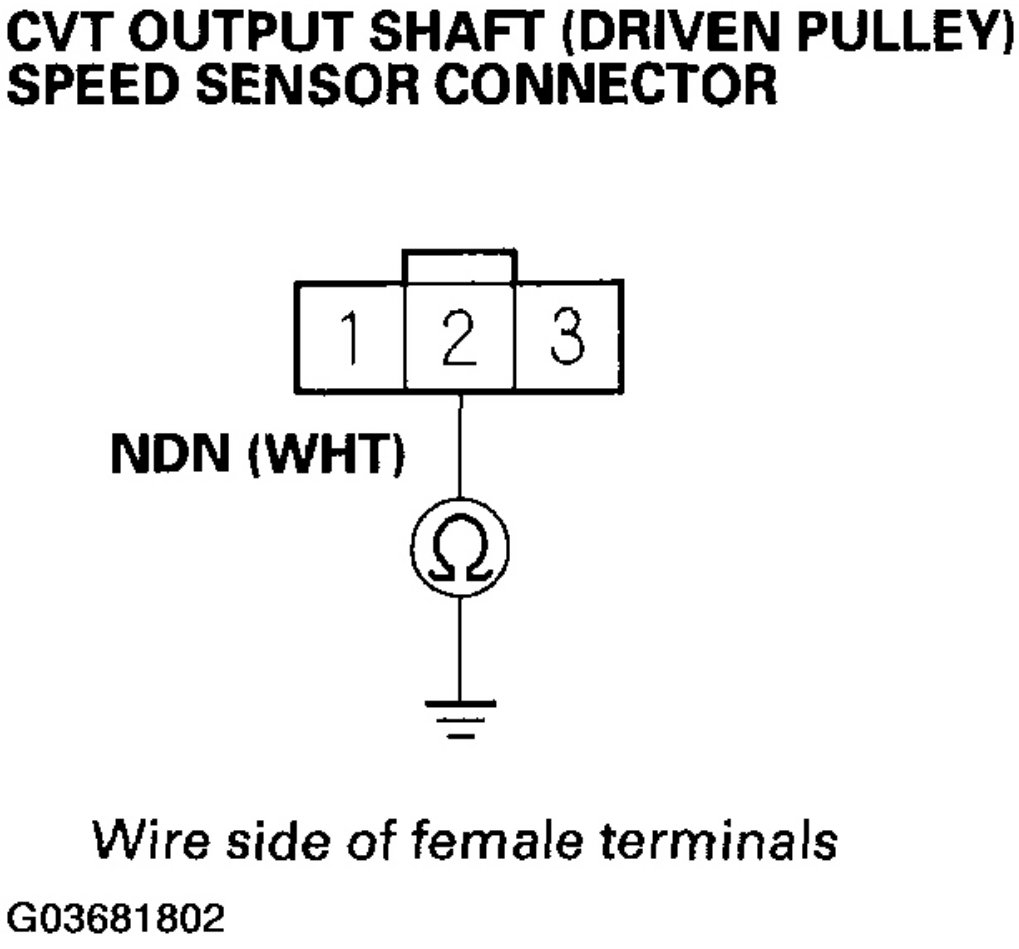


Fig. 101: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 7.

7. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 3 and body ground.

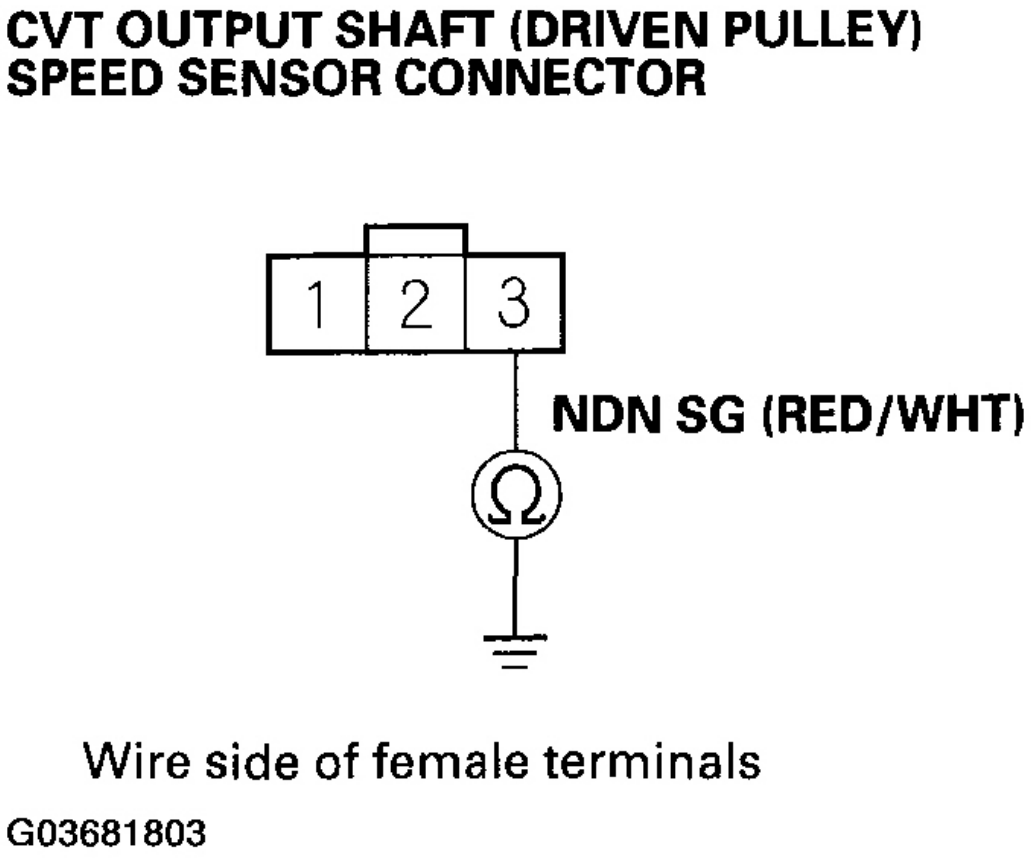


Fig. 102: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 8.

NO -Repair loose terminal or open in the wire between TCM connector terminal B8 and the CVT output shaft (driven pulley) speed sensor.

8. Turn the ignition switch ON (II).
9. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminals No. 2 and No. 3.

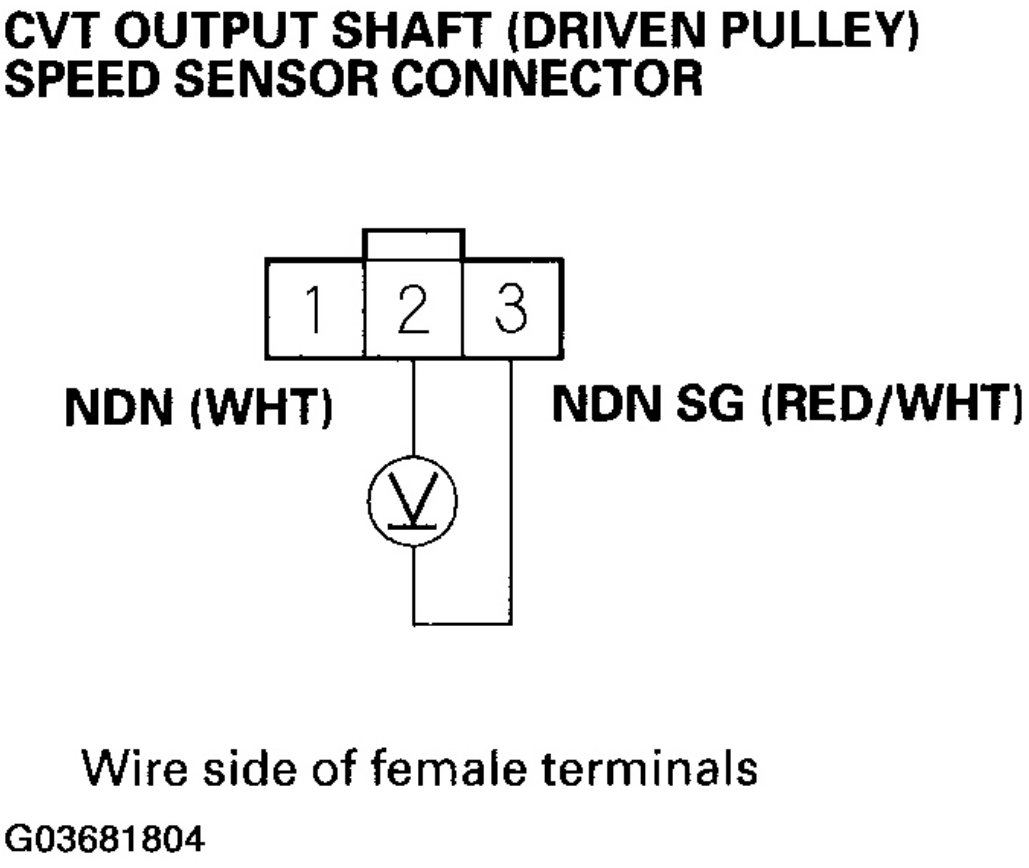


Fig. 103: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminals 2 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 10.

10. Measure the voltage between TCM connector terminals B8 and B9.

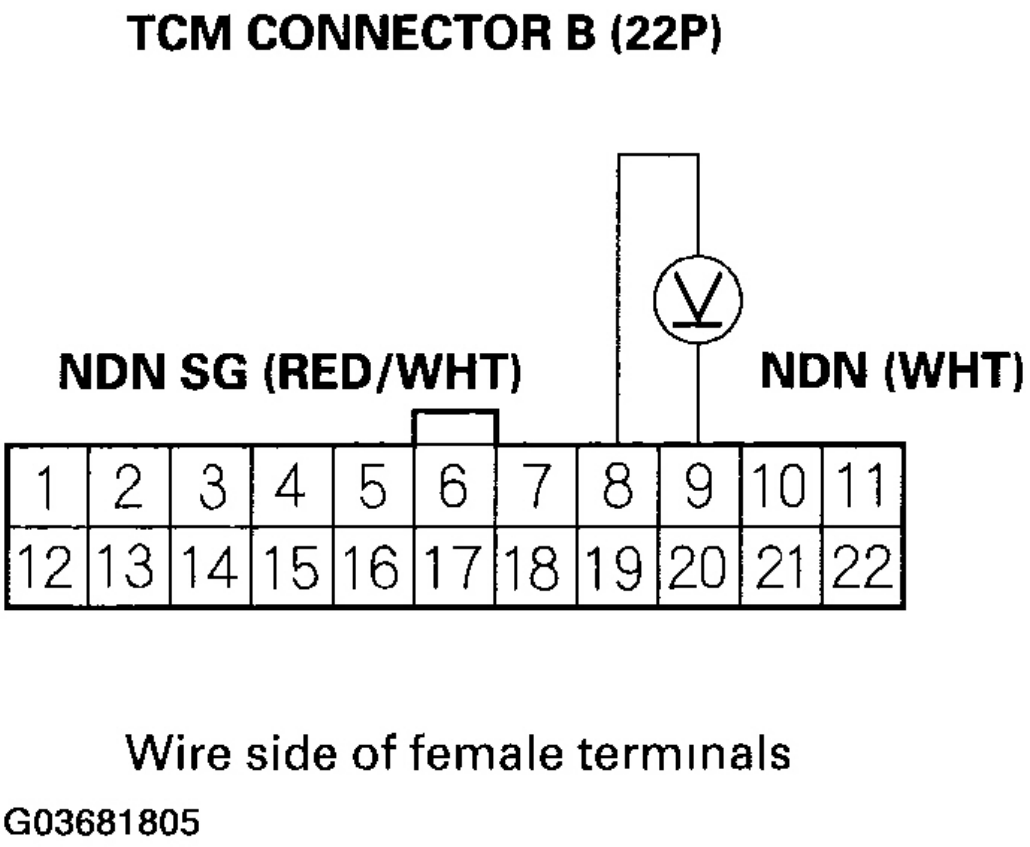


Fig. 104: Measuring Voltage Between TCM Connector B (22P) Terminals B8 And B9
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

11. Measure the voltage between TCM connector terminals B8 and B21.

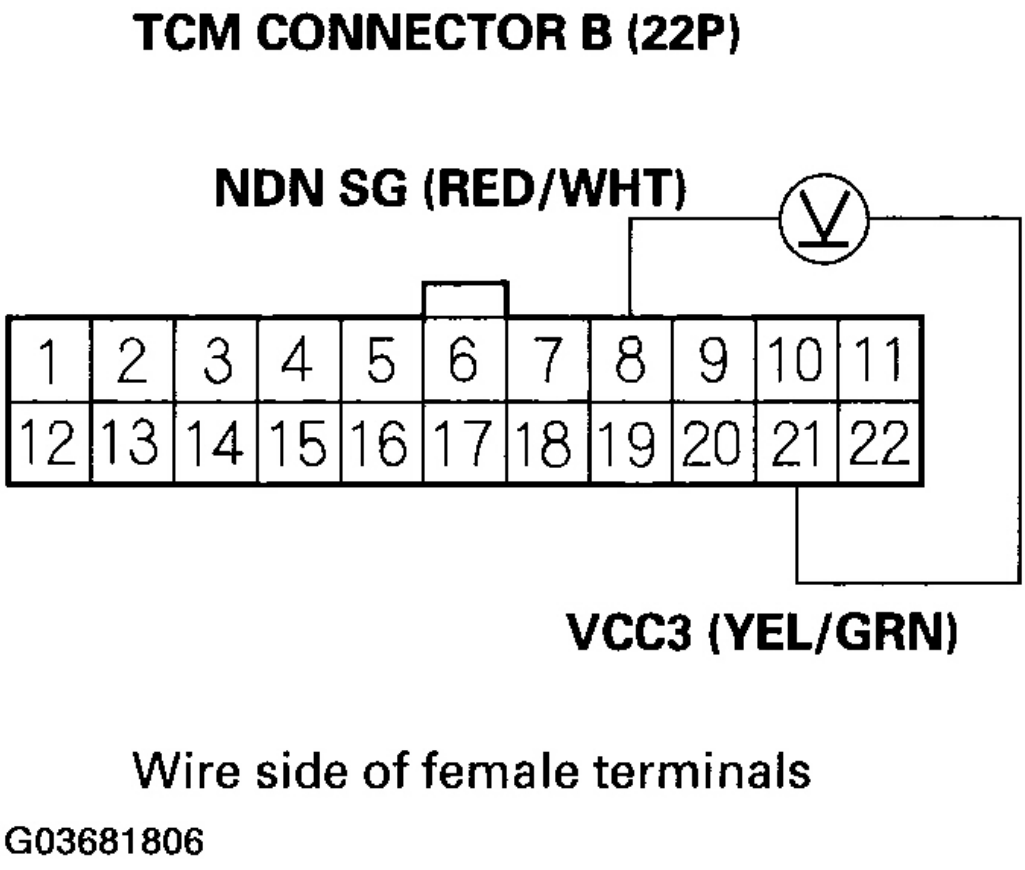


Fig. 105: Measuring Voltage Between TCM Connector B (22P) Terminals B8 And B21
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 12.

12. Turn the ignition switch OFF.
13. Disconnect TCM connector B (22P).
14. Check for continuity between TCM connector terminal B21 and body ground.

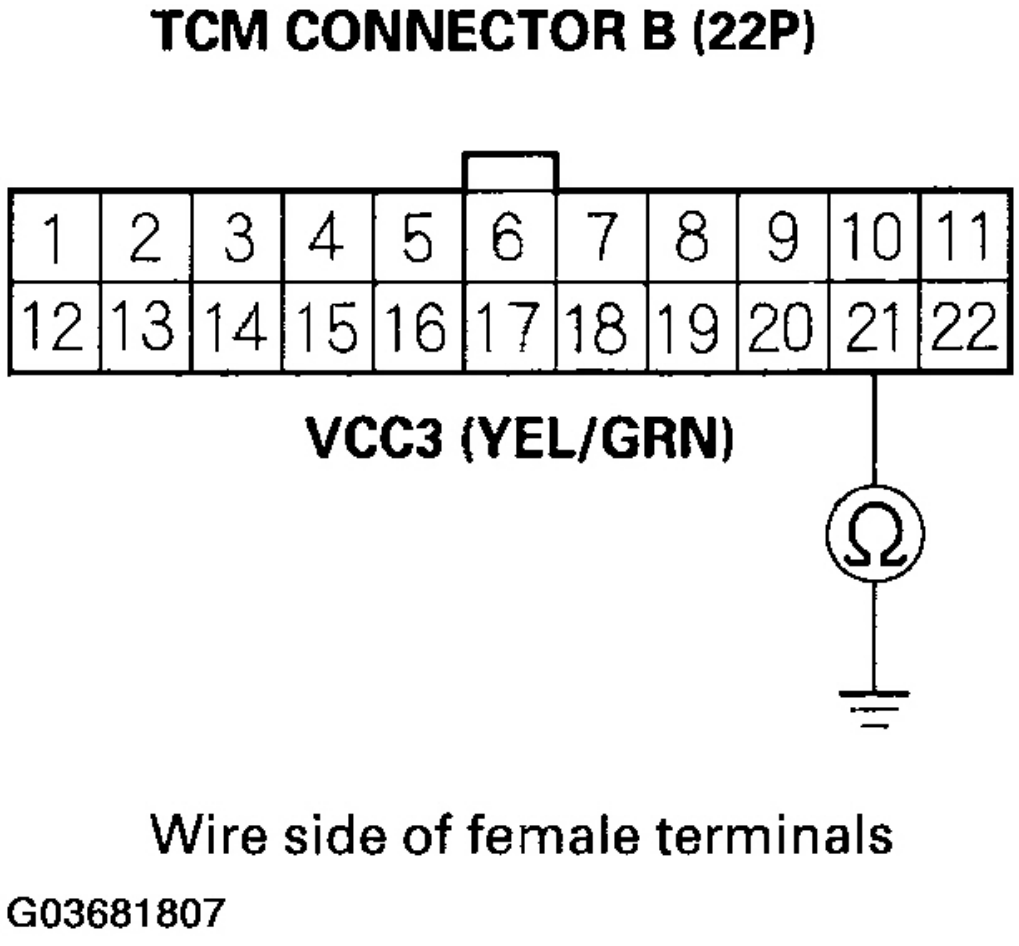


Fig. 106: Checking Continuity Between TCM Connector B (22P) Terminal B21 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

15. Connect CVT output shaft (driven pulley) speed sensor connector.
16. Turn the ignition switch ON (II).
17. Measure the voltage between TCM connector terminals B8 and B9.

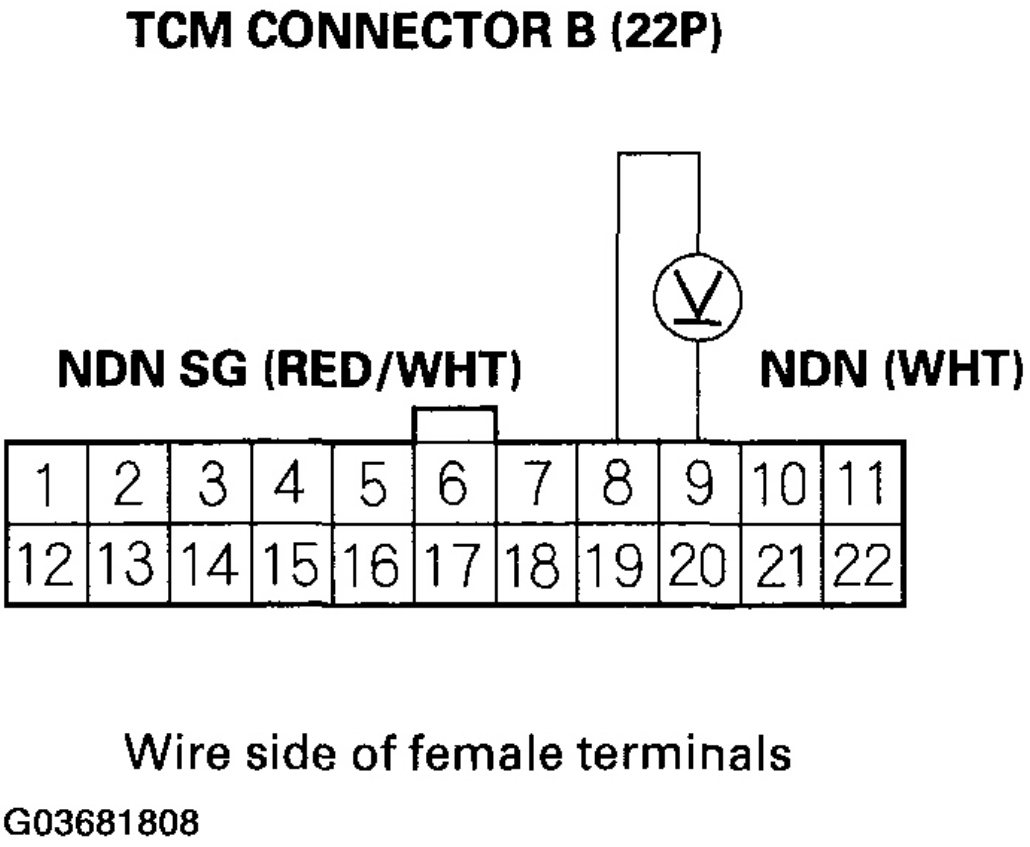


Fig. 107: Measuring Voltage Between TCM Connector B (22P) Terminals B8 And B9
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there O V or about 5 V?

YES -Go to step 17.
NO -Replace the CVT output shaft (driven pulley) speed sensor.

18. Apply the parking brake, and block both rear wheels securely.

19. Raise the front of the vehicle, and make sure it is securely supported.
20. Start the engine, then shift to the D position and drive the vehicle at engine idling.
21. Measure the voltage between TCM connector terminals B8 and B9.

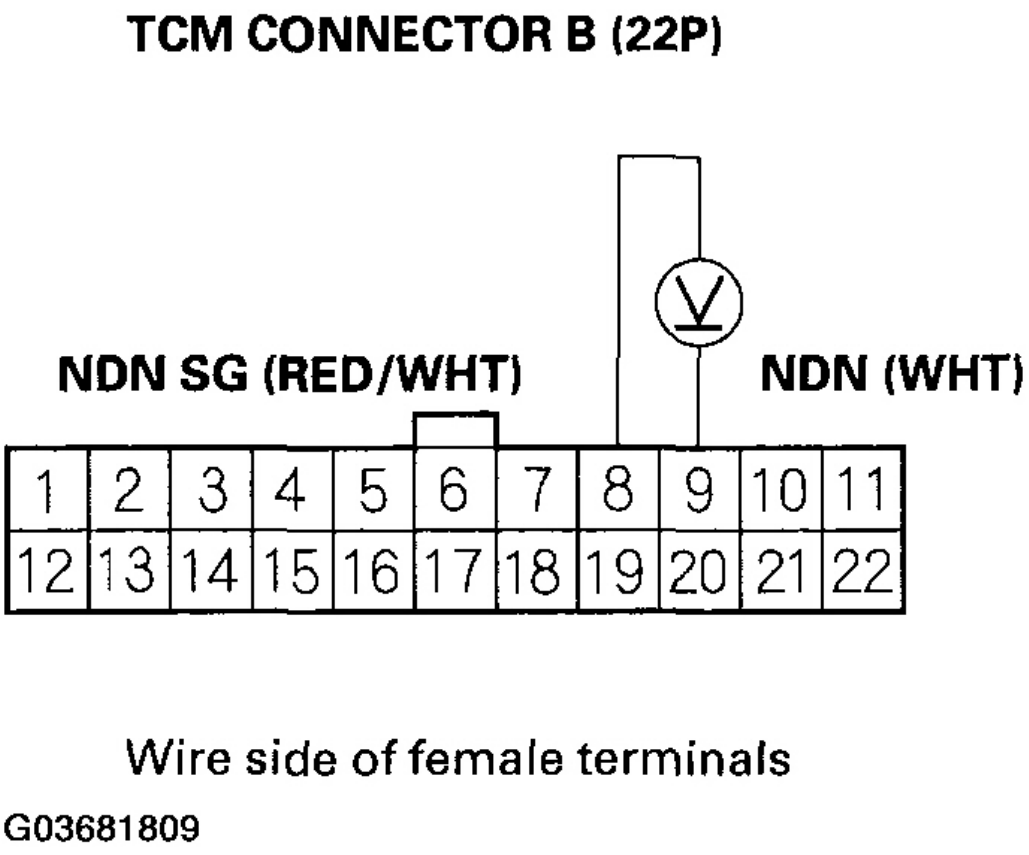


Fig. 108: Measuring Voltage Between TCM Connector B (22P) Terminals B8 And B9
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 1.5- 3.5 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT**

CIRCUIT AT THE TCM) and recheck.

NO -Replace the CVT output shaft (driven pulley) speed sensor.

DTC P1888: Problem in CVT Speed Sensor Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect CVT speed sensor connector.
3. Turn the ignition switch ON (II).
4. Measure the voltage between CVT speed sensor connector terminal No. 1 and body ground.

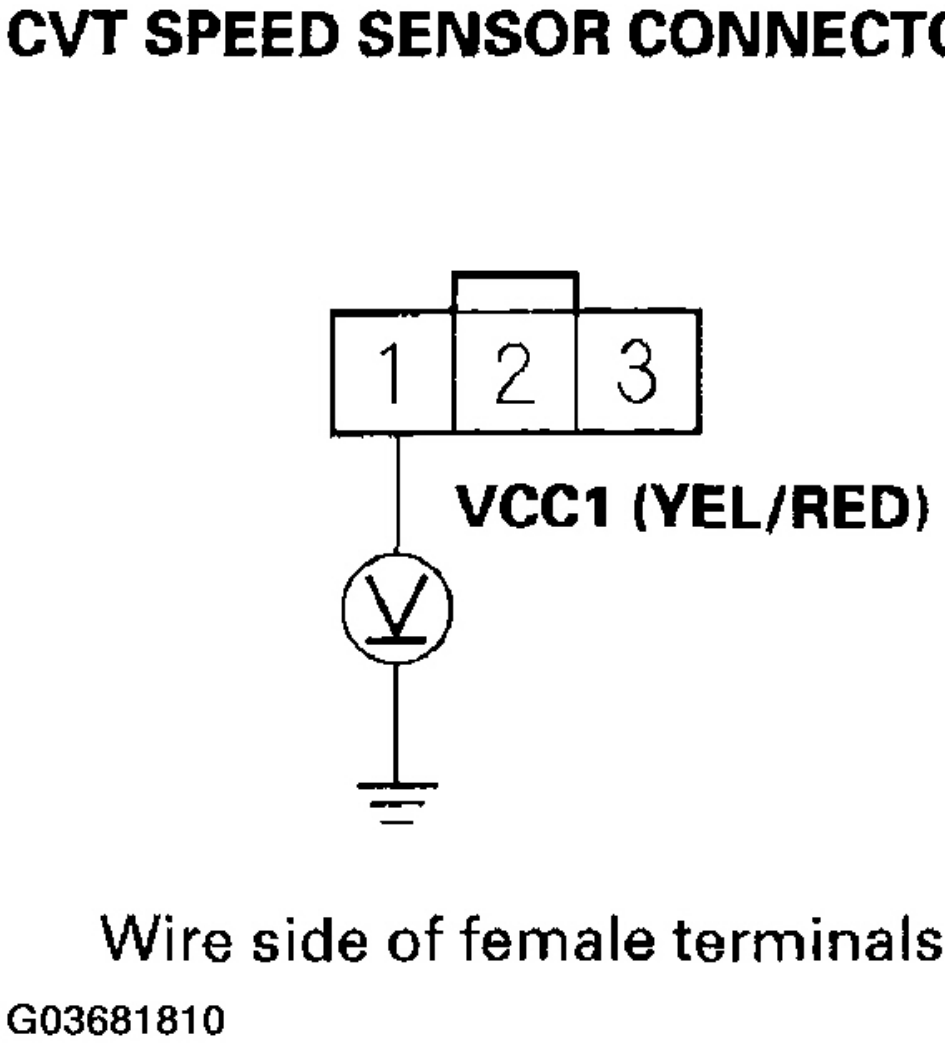


Fig. 109: Measuring Voltage Between CVT Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 5.
NO -Go to step 11 .

5. Turn the ignition switch OFF.
6. Check for continuity between CVT speed sensor connector terminal No. 2 and body ground.

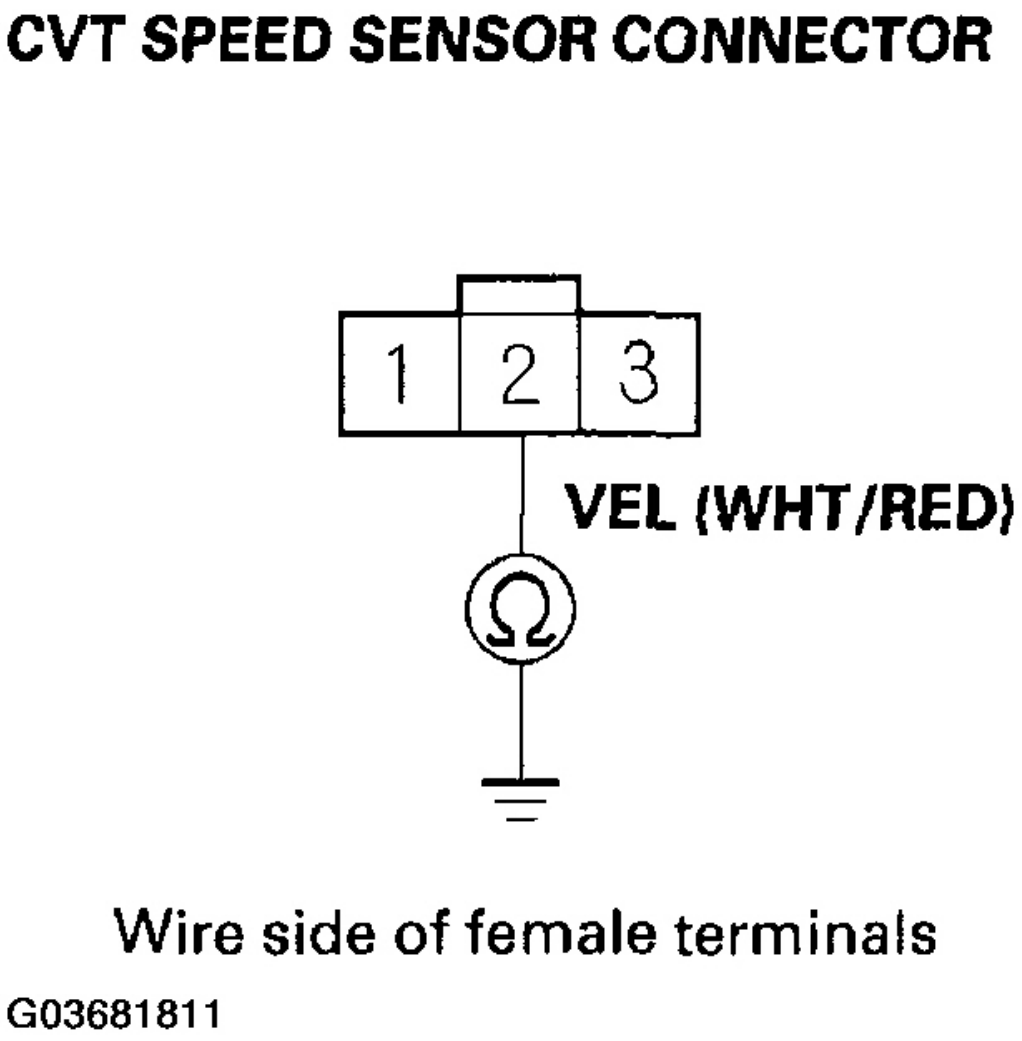


Fig. 110: Checking Continuity Between CVT Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B15and the CVT speed sensor.

NO -Go to step 7.

7. Check for continuity between CVT speed sensor connector terminal No. 3 and body ground.

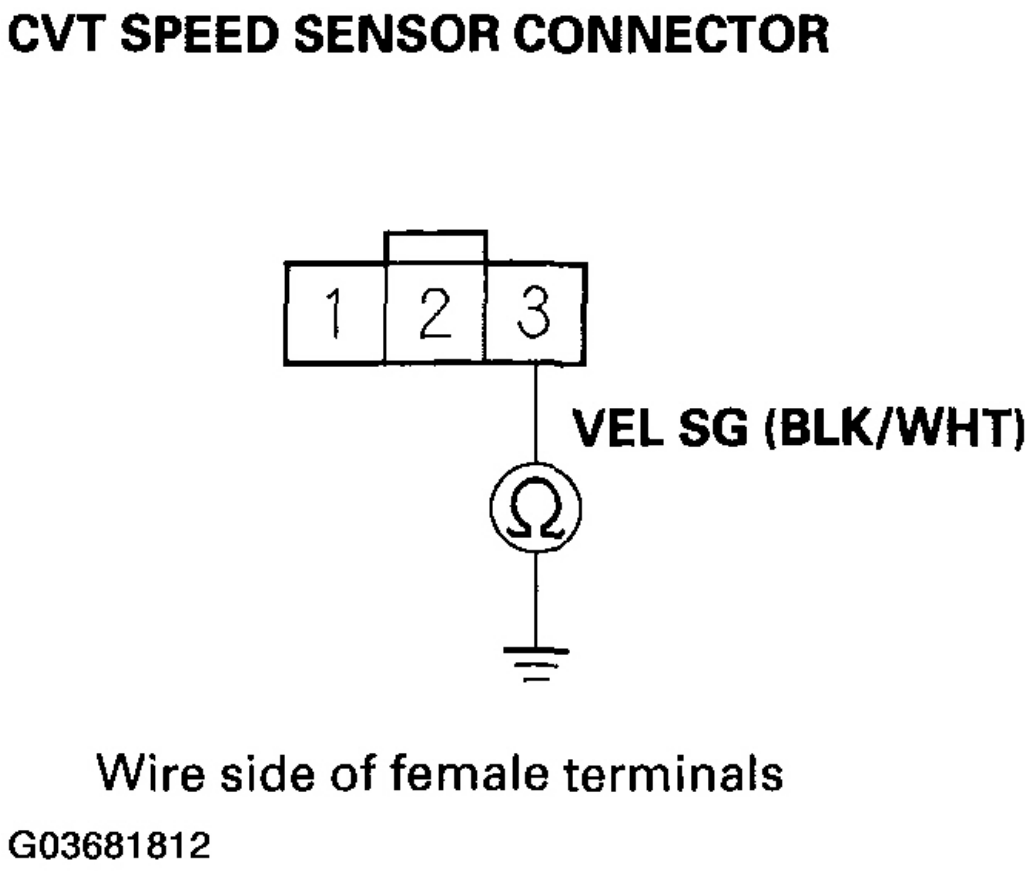


Fig. 111: Checking Continuity Between CVT Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 8.

NO -Repair loose terminal or open in the wire between TCM connector terminal B16 and the CVT speed sensor.

8. Turn the ignition switch ON (II).
9. Measure the voltage between CVT speed sensor connector terminals No. 2 and No. 3.

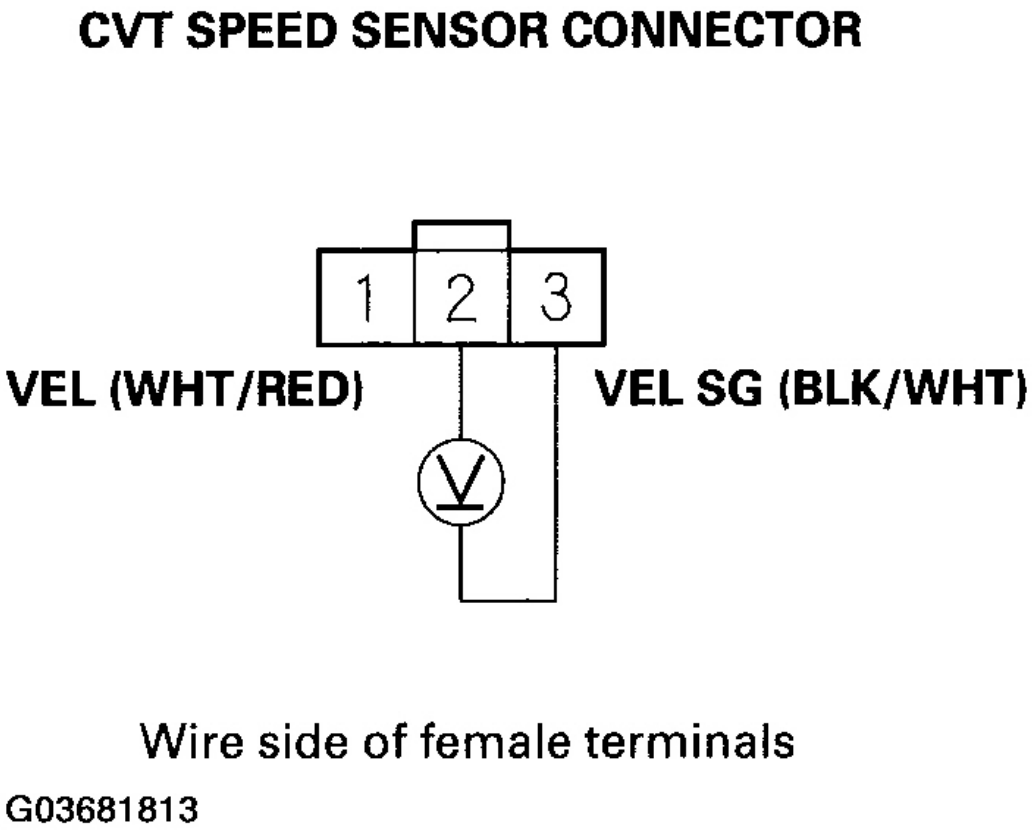


Fig. 112: Measuring Voltage Between CVT Speed Sensor Connector Terminals 2 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 10.

10. Measure the voltage between TCM connector terminals B15 and B16.

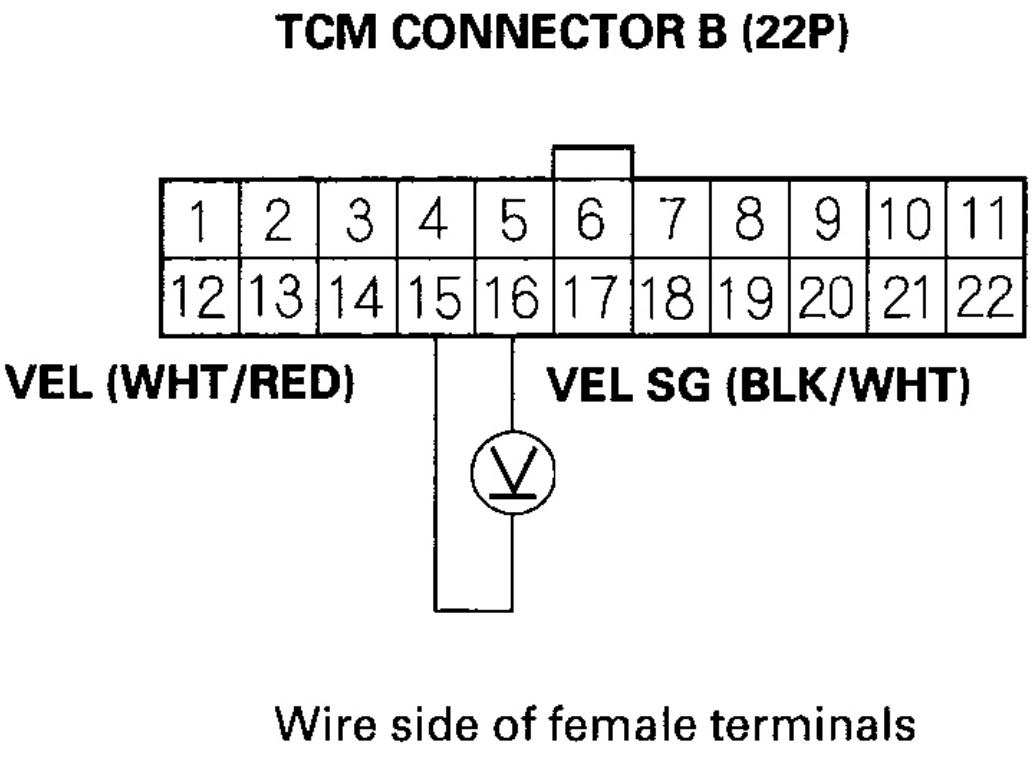


Fig. 113: Measuring Voltage Between TCM Connector B (22P) Terminals B15 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B15 and the CVT speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

11. Measure the voltage between TCM connector terminals B3 and B16.

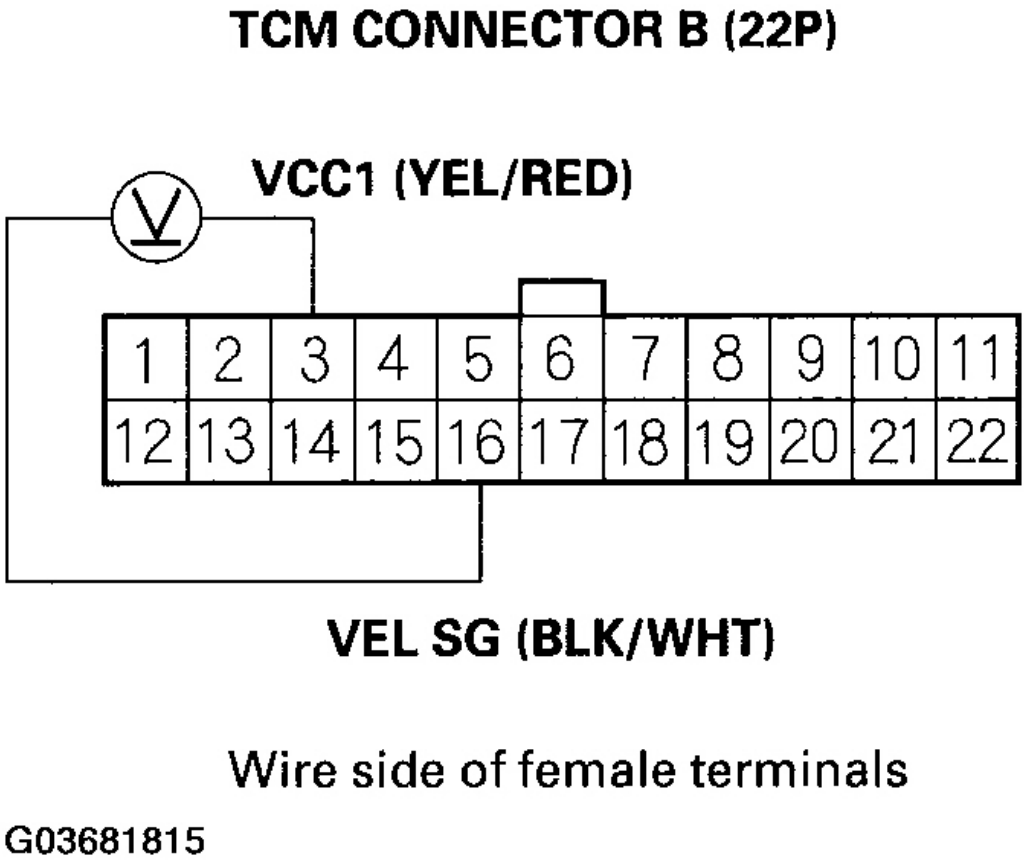


Fig. 114: Measuring Voltage Between TCM Connector B (22P) Terminals B3 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Go to step 12.

12. Turn the ignition switch OFF.
13. Disconnect TCM connector B (22P).

14. Check for continuity between TCM connector terminal B3 and body ground.

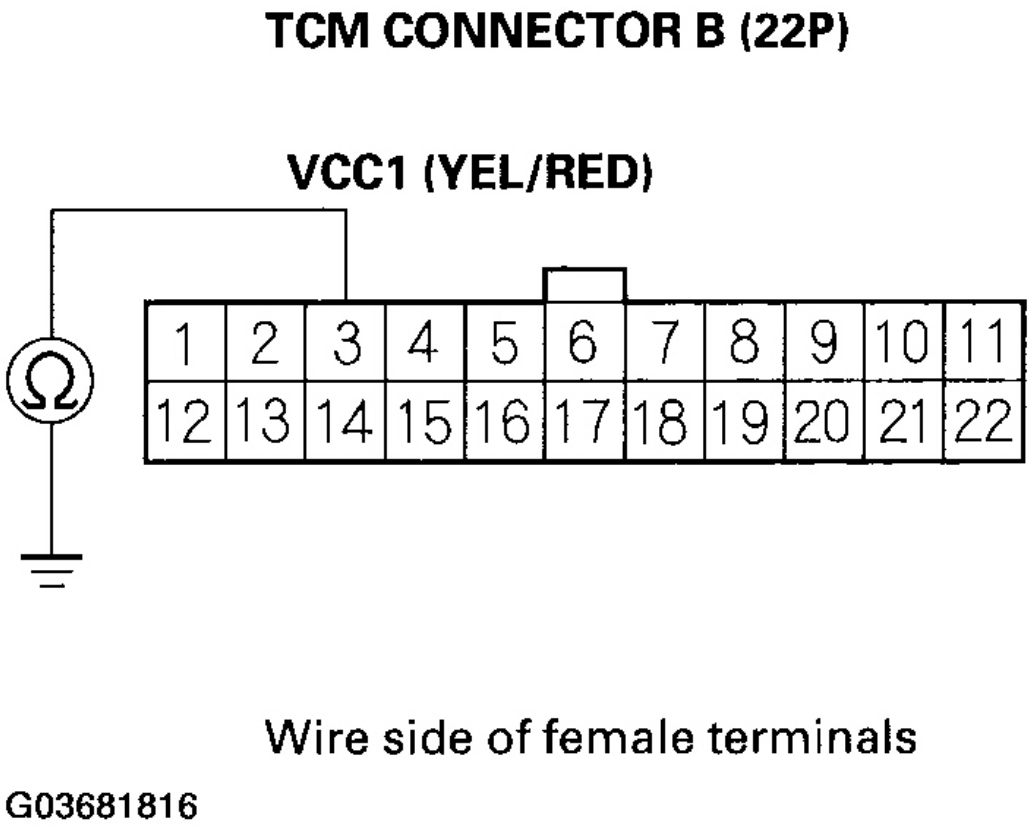


Fig. 115: Checking Continuity Between TCM Connector B (22P) Terminal B3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

15. Connect CVT speed sensor connector.

16. Turn the ignition switch ON (II).
17. Measure the voltage between TCM connector terminals B15 and B16.

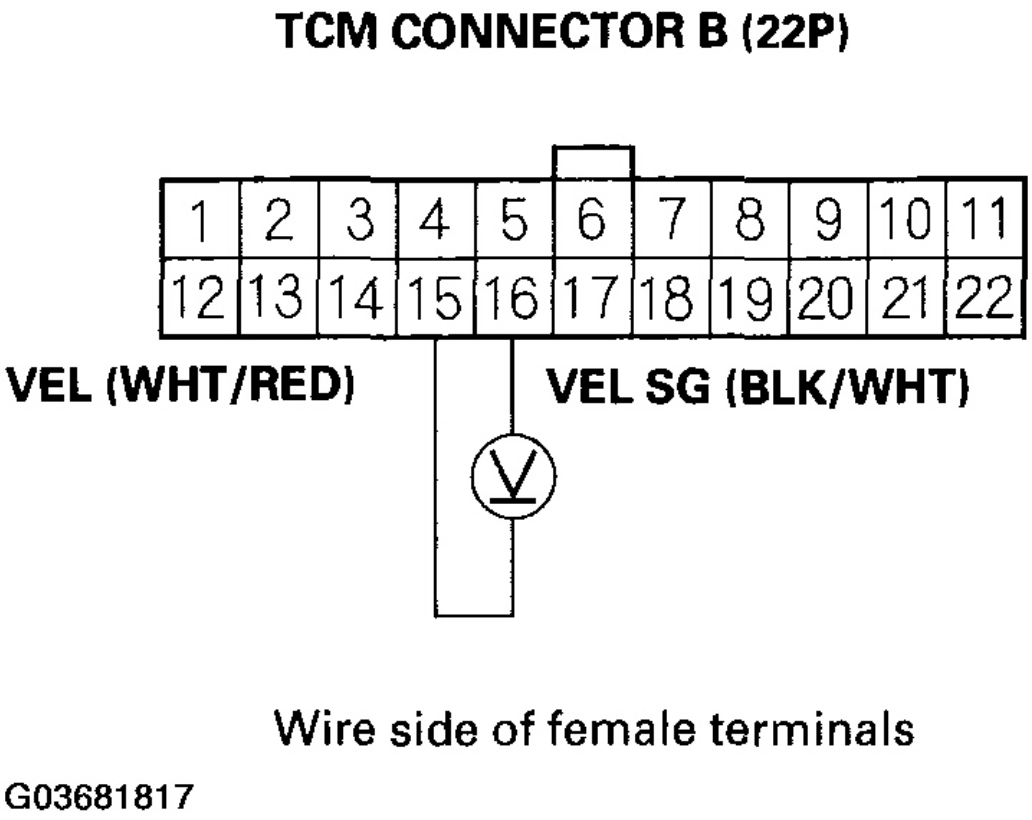


Fig. 116: Measuring Voltage Between TCM Connector B (22P) Terminals B15 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there O V or about 5 V?

YES -Go to step 17.
NO -Replace the CVT speed sensor.

18. Apply the parking brake, and block both rear wheels securely.
19. Raise the front of the vehicle, and make sure it is securely supported.

20. Start the engine, then shift to the D position and drive the vehicle at engine idling.
21. Measure the voltage between TCM connector terminals B15 and B16.

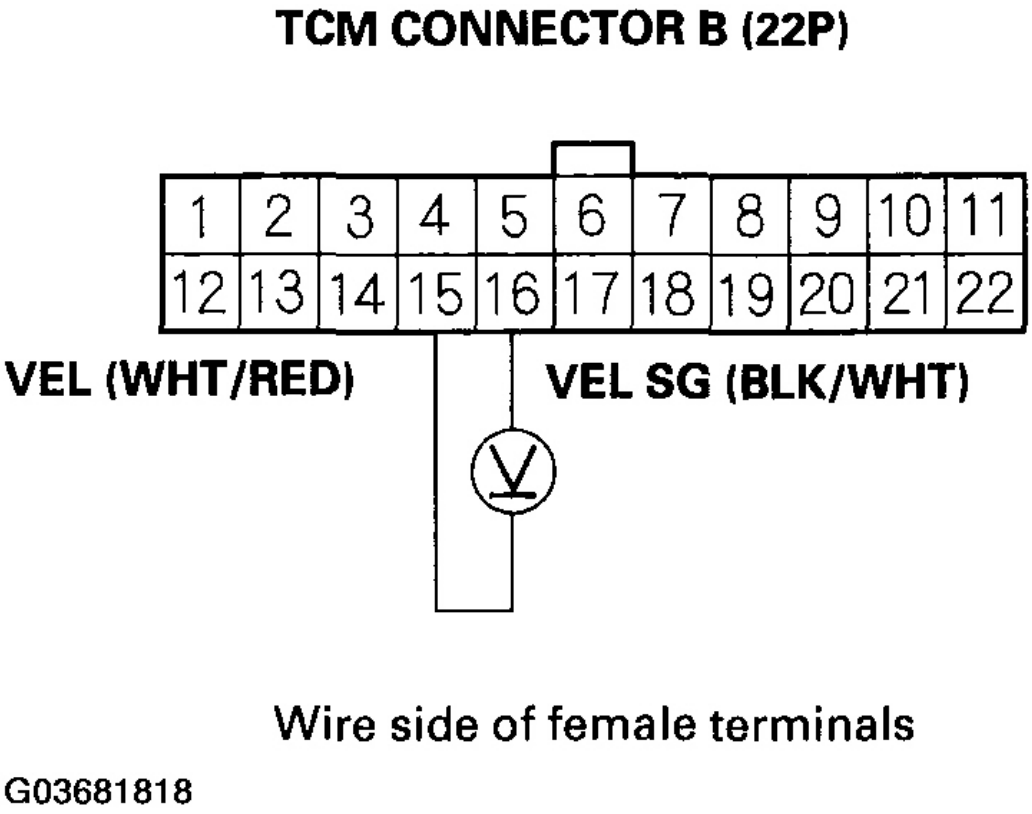


Fig. 117: Measuring Voltage Between TCM Connector B (22P) Terminals B15 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 1.5-3.5 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Replace the CVT speed sensor.

DTC P1890: Problem in Shift Control System

2001-2004 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

1. Check whether the scan tool or the HDS indicates another code.

   Does the scan tool or the HDS indicate another code?

   YES -Do the DTC Troubleshooting for the indicated code(s). Recheck for DTC P1890 after troubleshooting.

   NO -Go to step 2.
2. Measure the stall speed RPM in the D position (see **STALL SPEED TEST**).

   Is the stall speed over 3,500 RPM?

   YES -Replace the transmission.

   NO -If the stall speed is below 2,000 RPM, replace the lower valve body assembly. If the stall speed is 2,000-3,500 RPM, go to step 3.
3. Drive the vehicle at 37 mph (60 km/h), and check the engine speed with respect to vehicle speed and throttle position (see **ROAD TEST**).

   Is the engine speed within specification?

   YES -Replace the lower valve body assembly.

   NO -Replace the transmission.

DTC P1891: Problem in Start Clutch Control System

2001-2004 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot

1. Check whether the scan tool or the HDS indicates another code.

   Does the scan tool or the HDS indicate the another code?

   YES -Do the DTC Troubleshooting for the indicated code(s). Recheck for DTC P1891 after troubleshooting.

   NO -Go to step 2.
2. Warm up the engine to normal operating temperature (the radiator fan comes on), if necessary.
3. Turn the ignition switch OFF.
4. Disconnect solenoid harness connector (8P).
5. Start the engine, and shift to the D position.
6. Check whether the vehicle moves.

   Does the vehicle move?

   YES -Go to step 7.

   NO -Replace the start clutch.
7. Turn the ignition switch OFF.
8. Connect solenoid harness connector (8P).
9. Start the engine, and shift to the D position.
10. Check whether the vehicle creeps and check the creeping speed on level ground.

    Does the vehicle creep and is the creeping speed about 3 mph (5 km/h)?

    YES -Go to step 11.

    NO -Replace the lower valve body assembly.
11. Measure the stall speed RPM in the D position.

    Is the stall speed over 3,500 RPM?

    YES -Replace the start clutch or transmission.

    NO -The system is OK at this time. If necessary, substitute a known-good

TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

DTC P1894: Problem in CVT Drive Pulley Pressure Control Valve Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect the solenoid harness connector (8P).
3. Measure the resistance between solenoid harness connector (8P) terminals No. 3 and No. 7.

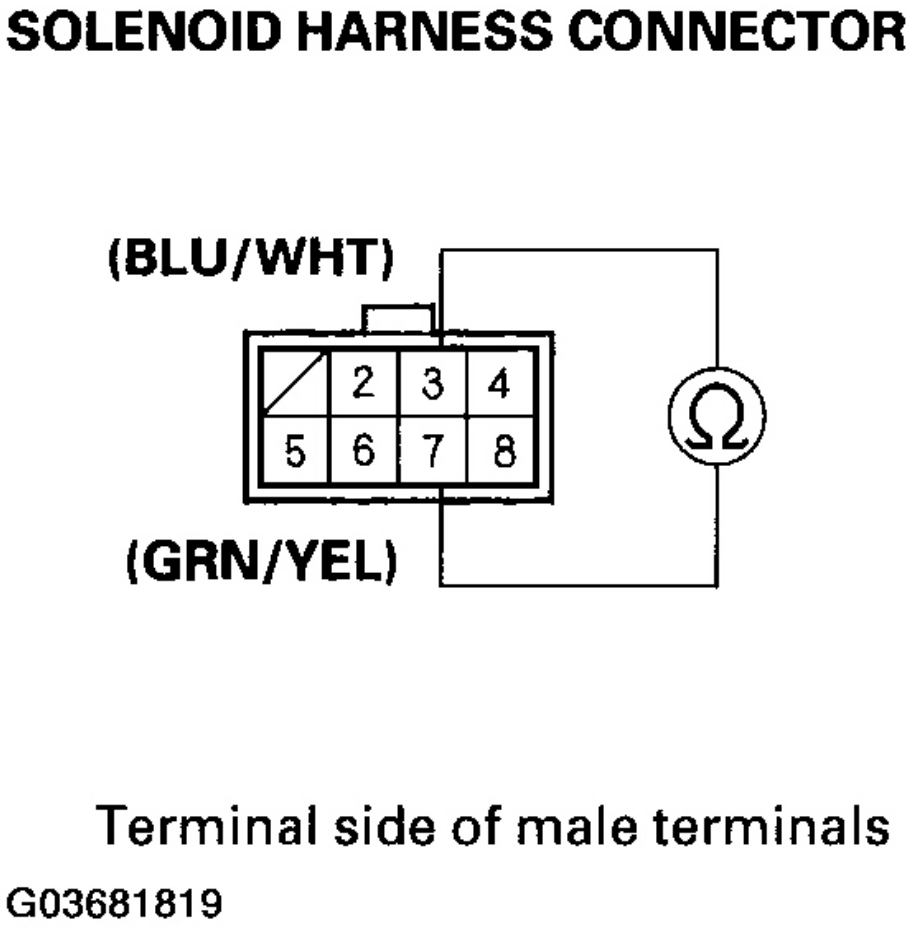


Fig. 118: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 3 And 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance 3.8-6.8 ohm?

YES -Go to step 4.

NO -Replace the lower valve body assembly.

4. Disconnect TCM connector A (26P).
5. Check for continuity between TCM connector terminal A3 and body ground, and between A16 and body ground.

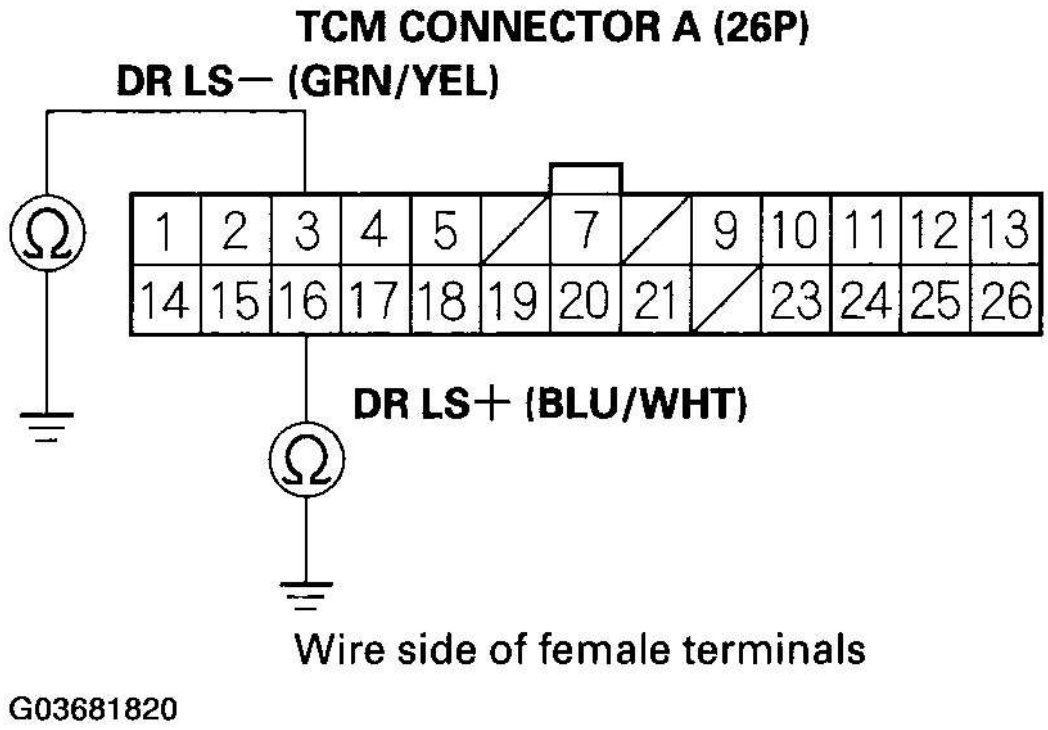


Fig. 119: Checking Continuity Between TCM Connector Terminal A3, A16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal A3 or A16 and the solenoid harness connector (8P).

NO -Go to step 6.

6. Connect the solenoid harness connector (8P).
7. Measure the resistance between TCM connector terminals A3 and A16.

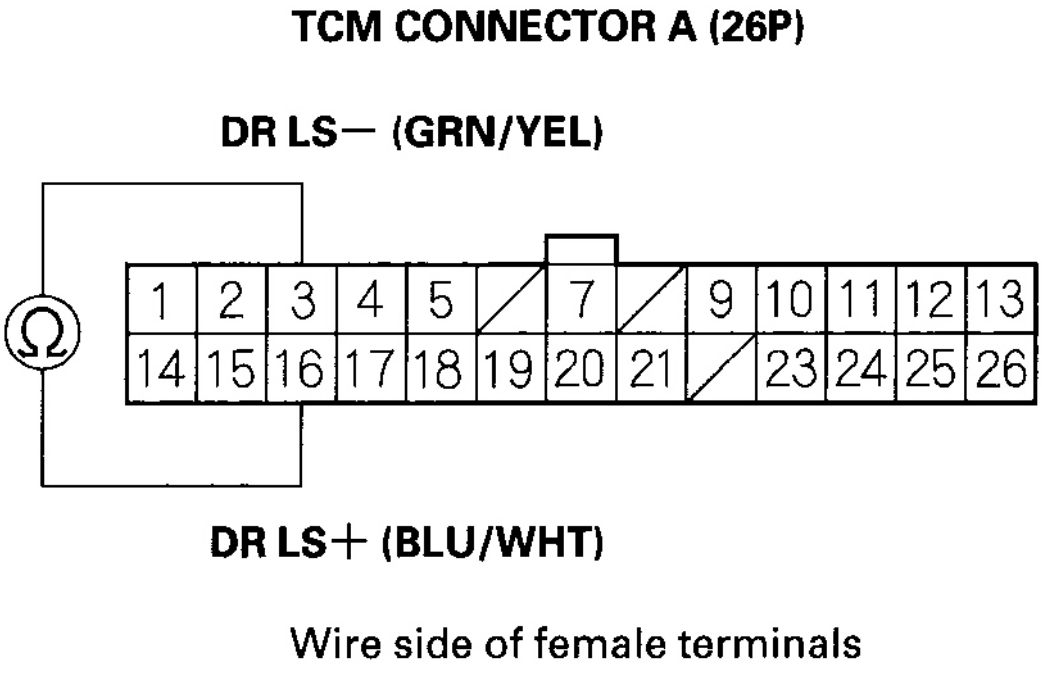


Fig. 120: Measuring Resistance Between TCM Connector A (26P) Terminals A3 And A16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8-6.8 ohm?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open in the wire between TCM connector terminal A3 or A16 and the solenoid harness connector (8P).

DTC P1895: Problem in CVT Driven Pulley Pressure Control Valve Circuit

2001-2004 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect the solenoid harness connector (8P).
3. Measure the resistance between solenoid harness connector (8P) terminals No. 2 and No. 6.

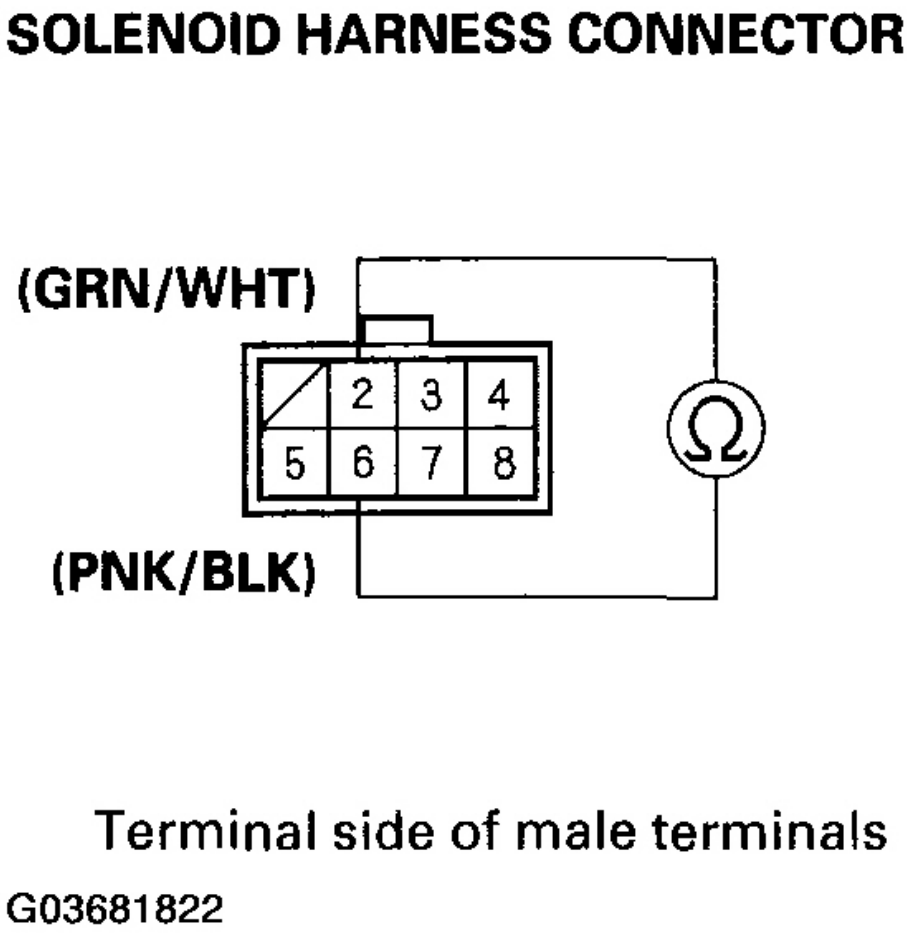


Fig. 121: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 2 And 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance 3.8-6.8 ohm?

YES -Go to step 4.

NO -Replace the lower valve body assembly.

4. Disconnect TCM connector A (26P).
5. Check for continuity between TCM connector terminal A2 and body ground, and between A15 and body ground.

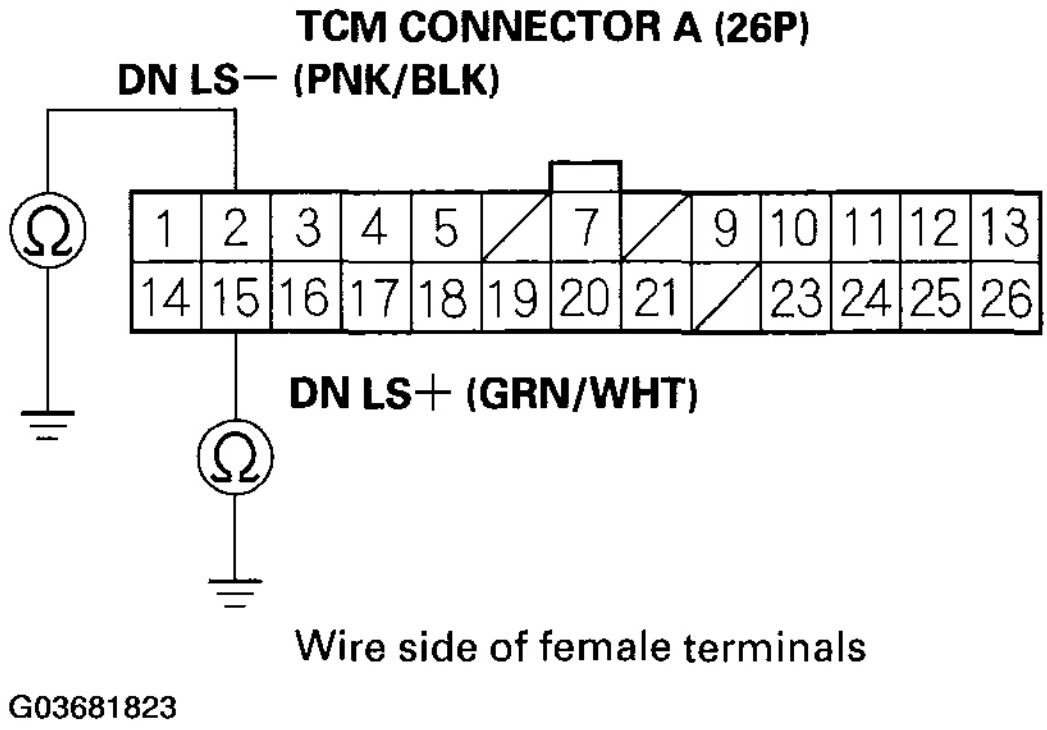


Fig. 122: Checking Continuity Between TCM Connector Terminal A2, A15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal A2 or A15 and the solenoid harness connector (8P).

NO -Go to step 6.

6. Connect the solenoid harness connector (8P).
7. Measure the resistance between TCM connector terminals A2 and A15.

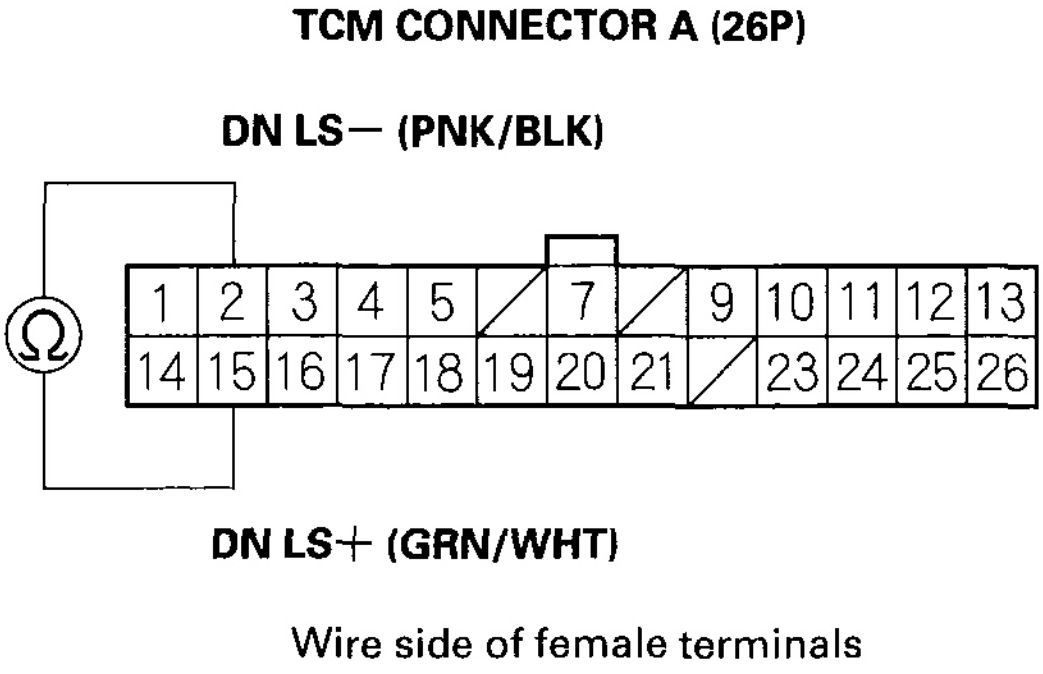


Fig. 123: Measuring Resistance Between TCM Connector A (26P) Terminals A2 And A15
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8-6.8 ohm?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

NO -Repair an open in the wire between TCM connector terminal A2 or A15 and the solenoid harness connector (8P).

DTC P0501: Range/Performance Problem in Vehicle Speed Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and shift into the D position. Push on the accelerator pedal until the rotational speed of the SECONDARY SHAFT SPEED is the same speed as indicated by the freeze data.
3. Monitor the SECONDARY SHAFT SPEED and VEHICLE SPEED SENSOR with the HDS in the data list.

   Do the SECONDARY SHAFT SPEED and VEHICLE SPEED SENSOR signals fluctuate with the same speed?

   YES -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the vehicle speed sensor and TCM.

   NO -Go to step 4.
4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

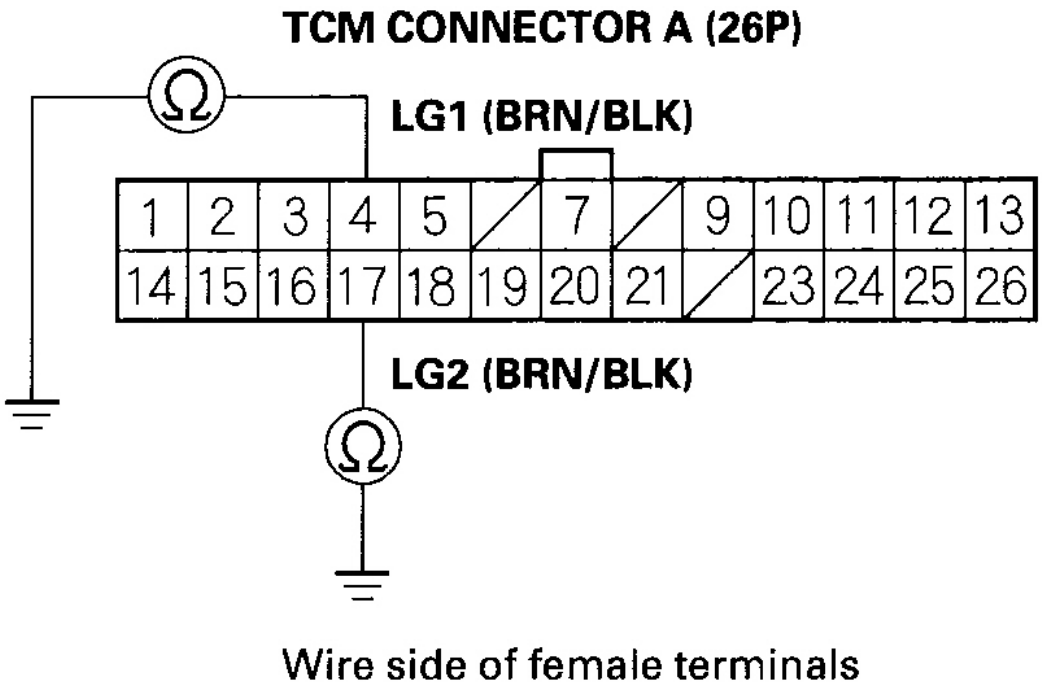


Fig. 124: Checking Continuity Between TCM Connector A (26P) Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

6. Disconnect vehicle speed sensor connector.
7. Turn the ignition switch ON (II).
8. Check for voltage between vehicle speed sensor connector terminal No. 3 and body ground.

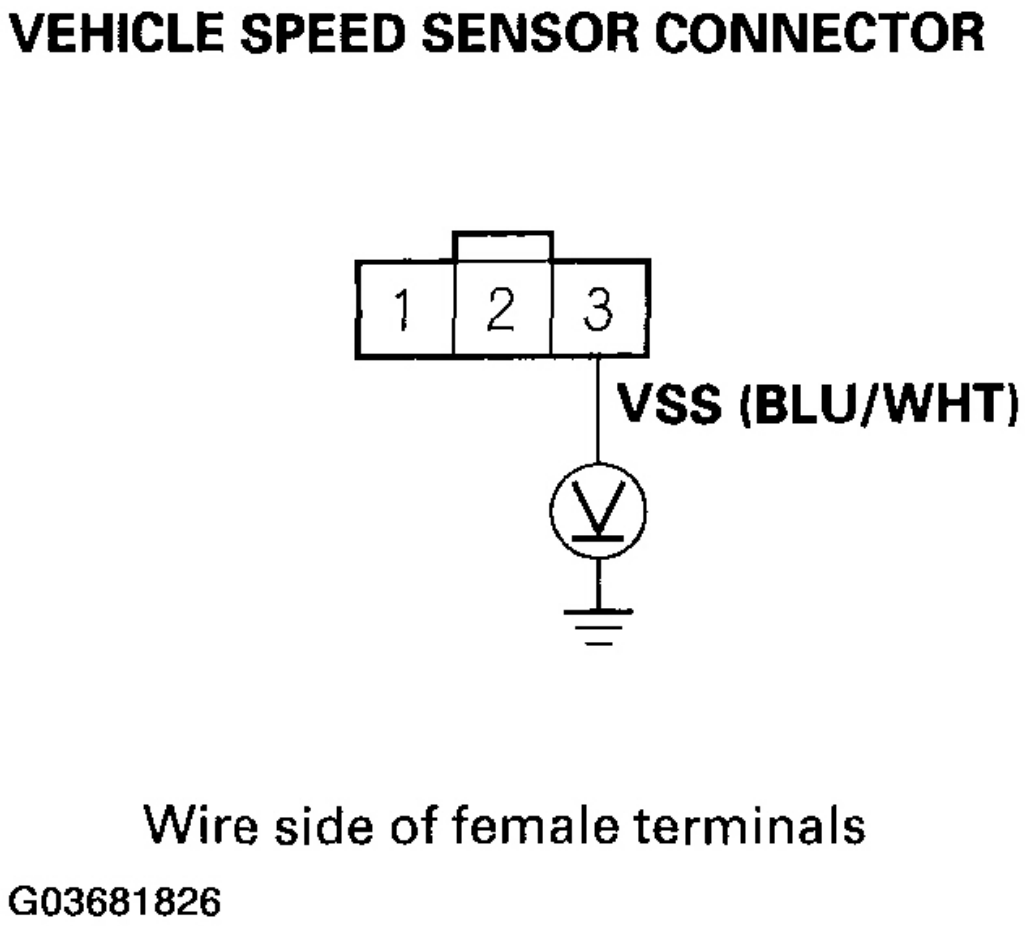


Fig. 125: Checking Voltage Between Vehicle Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between vehicle speed sensor connector terminal No. 3

and body ground.

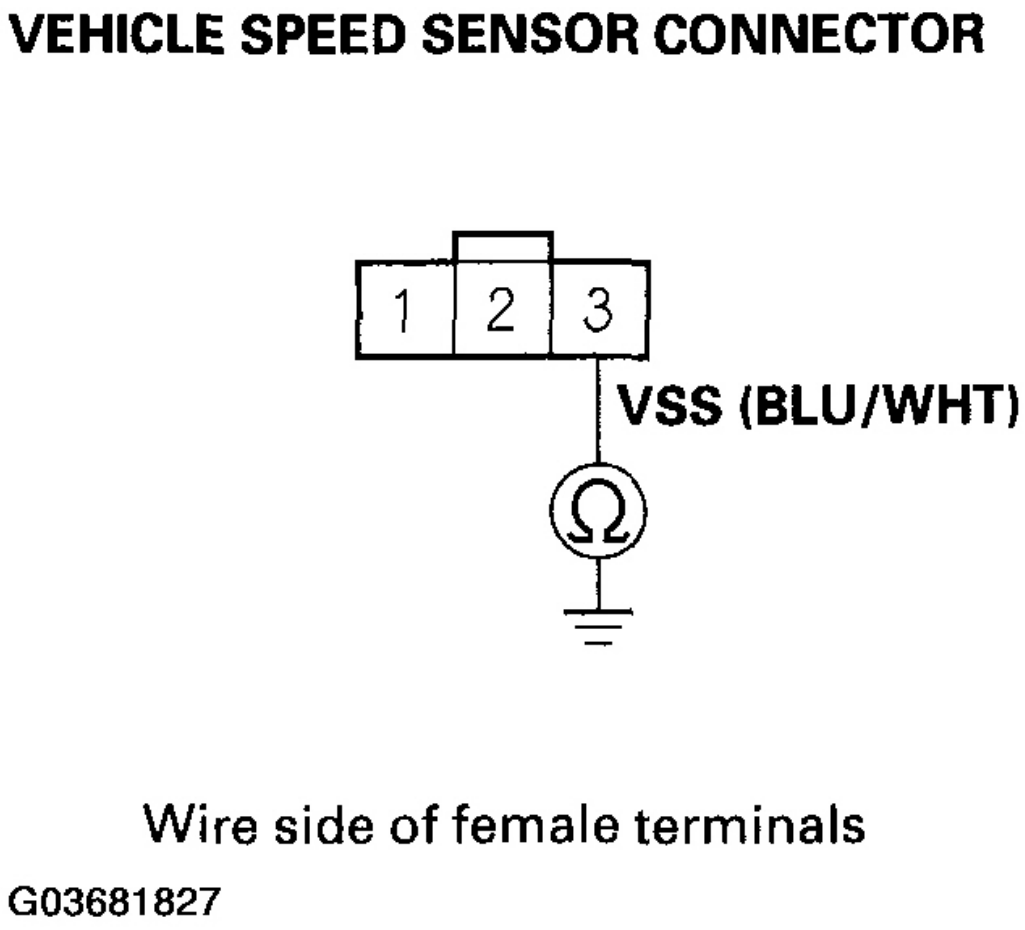


Fig. 126: Checking Continuity Between Vehicle Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B5 and the vehicle speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B5 and A4.

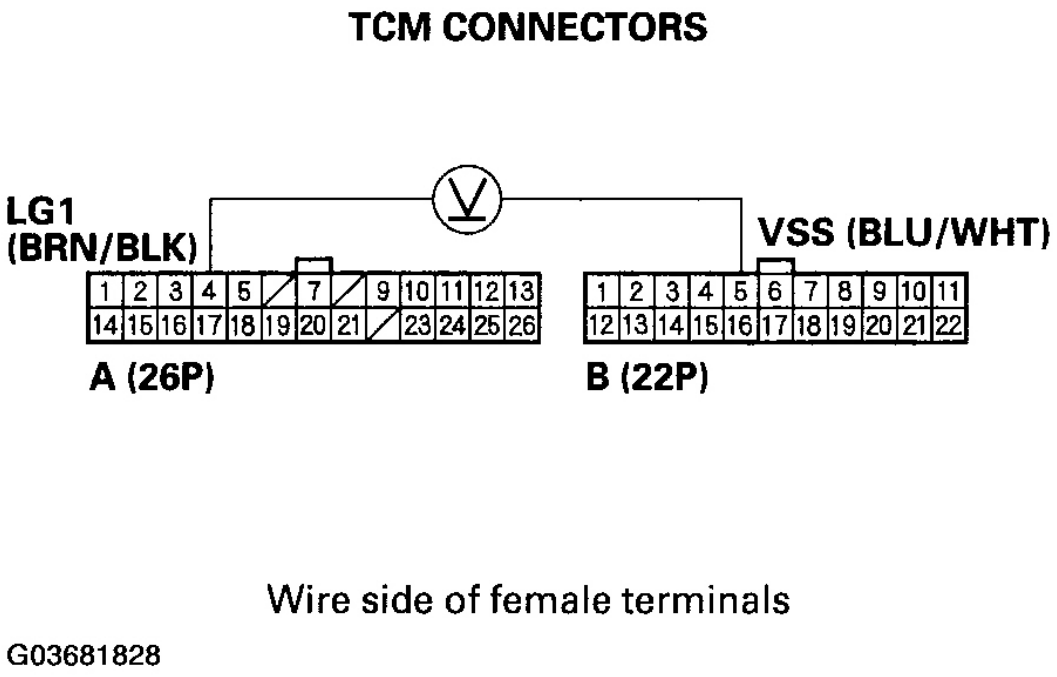


Fig. 127: Measuring Voltage Between TCM Connector Terminals B5 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B5 and the vehicle speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B5. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between vehicle speed sensor connector terminal No. 2 and body ground.

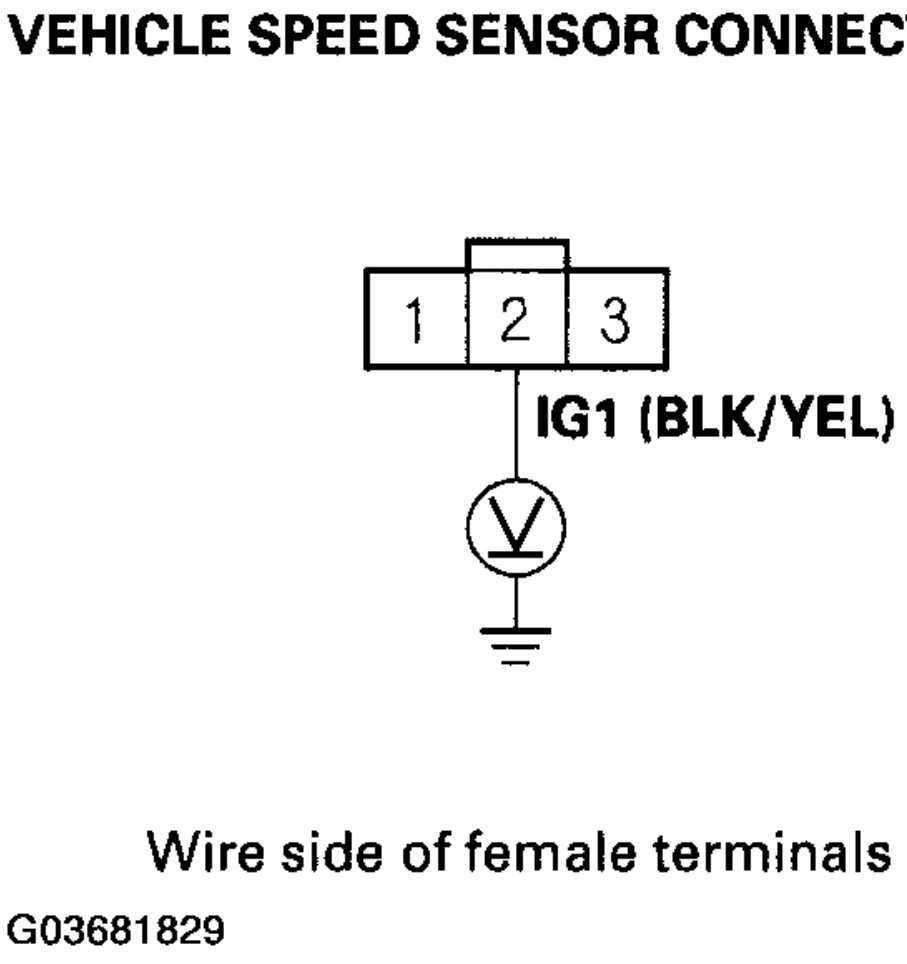


Fig. 128: Measuring Voltage Between Vehicle Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 16.

NO -A short or an open in the wire between the under-dash fuse/relay box

and vehicle speed sensor.

16. Measure the voltage between vehicle speed sensor connector terminals No. 1 and No. 2.

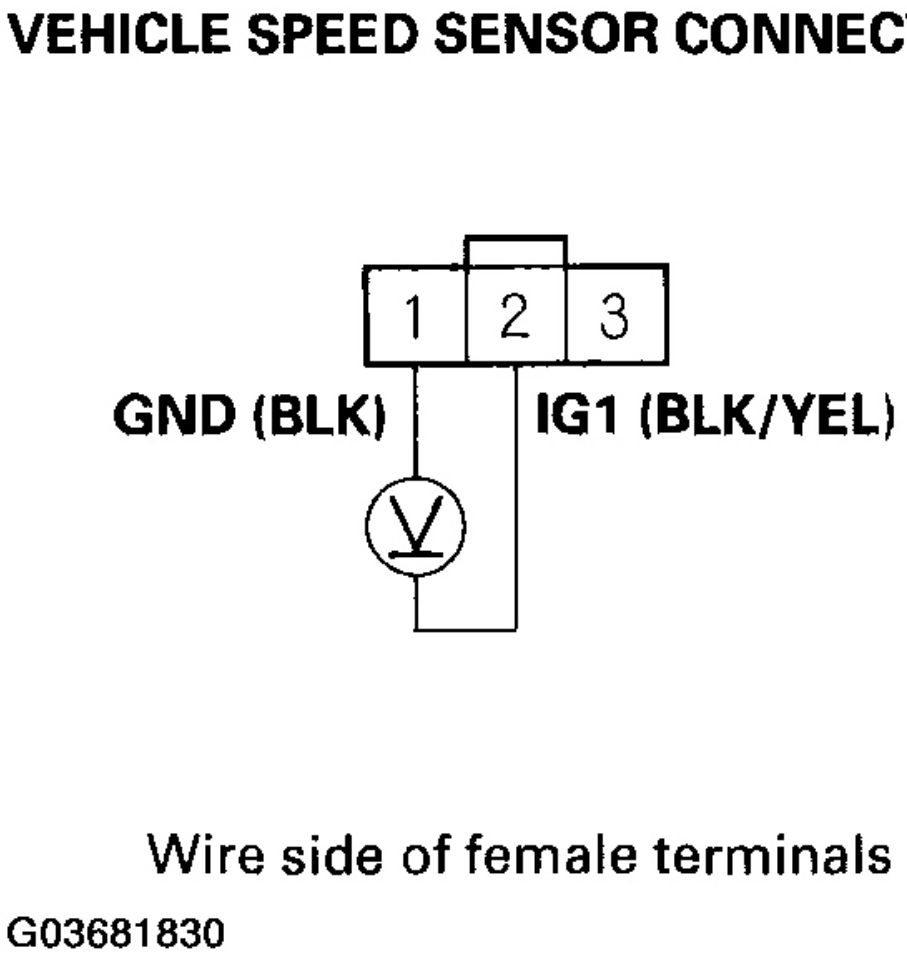


Fig. 129: Measuring Voltage Between Vehicle Speed Sensor Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Replace the vehicle speed sensor (see **SPEED SENSOR**

REPLACEMENT), then go to step 17.

NO -Repair an open in the wire between the vehicle speed sensor and ground (G101), or repair poor ground (G101).

17. Clear the DTC with the HDS.
18. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
19. Check that DTC P0501 recurs.

Is DTC P0501 indicated?

YES -Return to step 1 . and recheck.

NO -Troubleshooting is complete.

DTC P0502: Problem in Vehicle Speed Sensor Circuit (No Signal Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, run the vehicle in the D position with engine speed 2,000 RPM or higher for more than 10 seconds, then slow down and stop the wheels.
3. Check the VEHICLE SPEED SENSOR with the HDS in the data list.

Is the VEHICLE SPEED SENSOR 2 km/h or less?

YES -Go to step 4.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the vehicle speed sensor and TCM.

4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

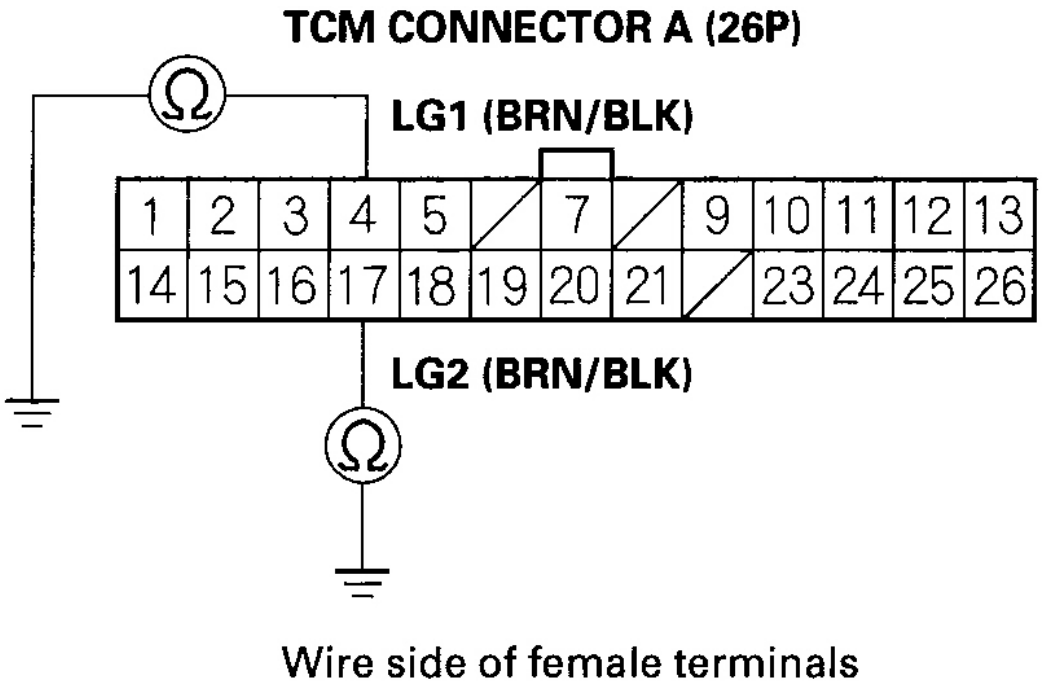


Fig. 130: Checking Continuity Between TCM Connector A (26P) Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G10D).

6. Disconnect vehicle speed sensor connector.
7. Turn the ignition switch ON (II).

8. Check for voltage between vehicle speed sensor connector terminal No. 3 and body ground.

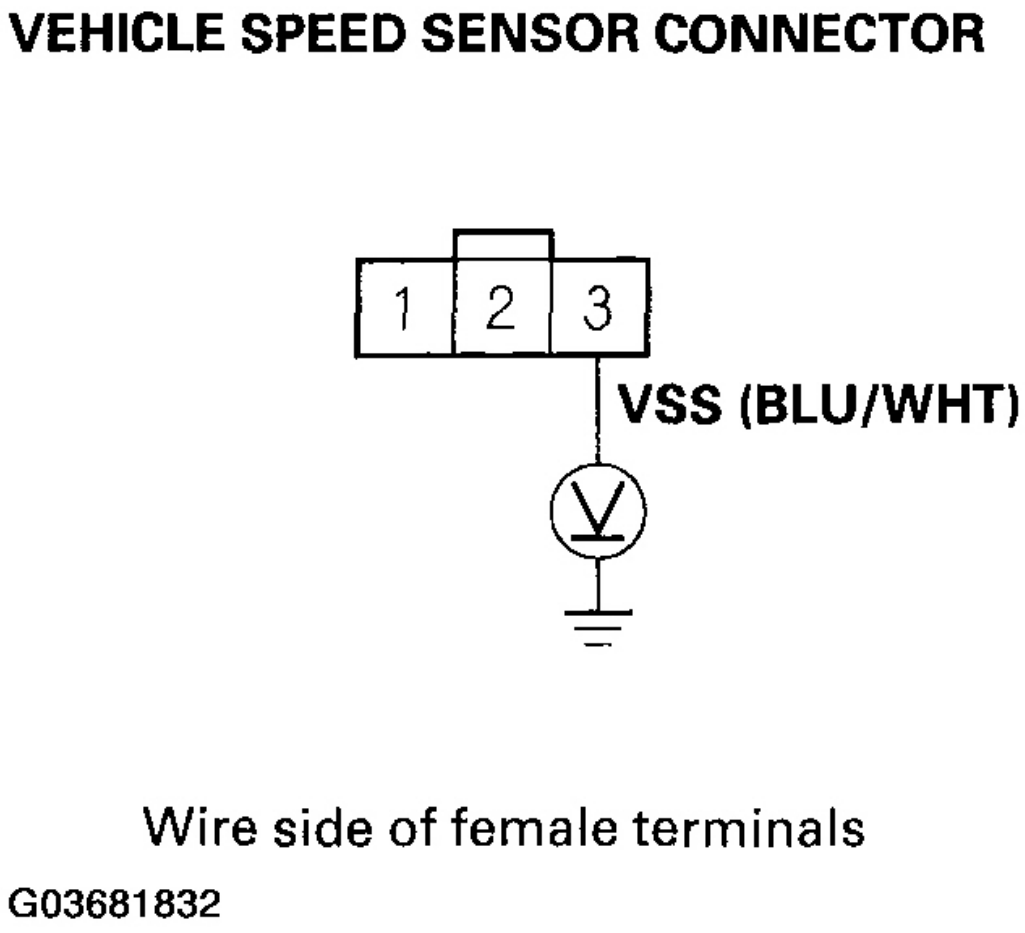


Fig. 131: Checking Voltage Between Vehicle Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .
NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between vehicle speed sensor connector terminal No. 3 and body ground.

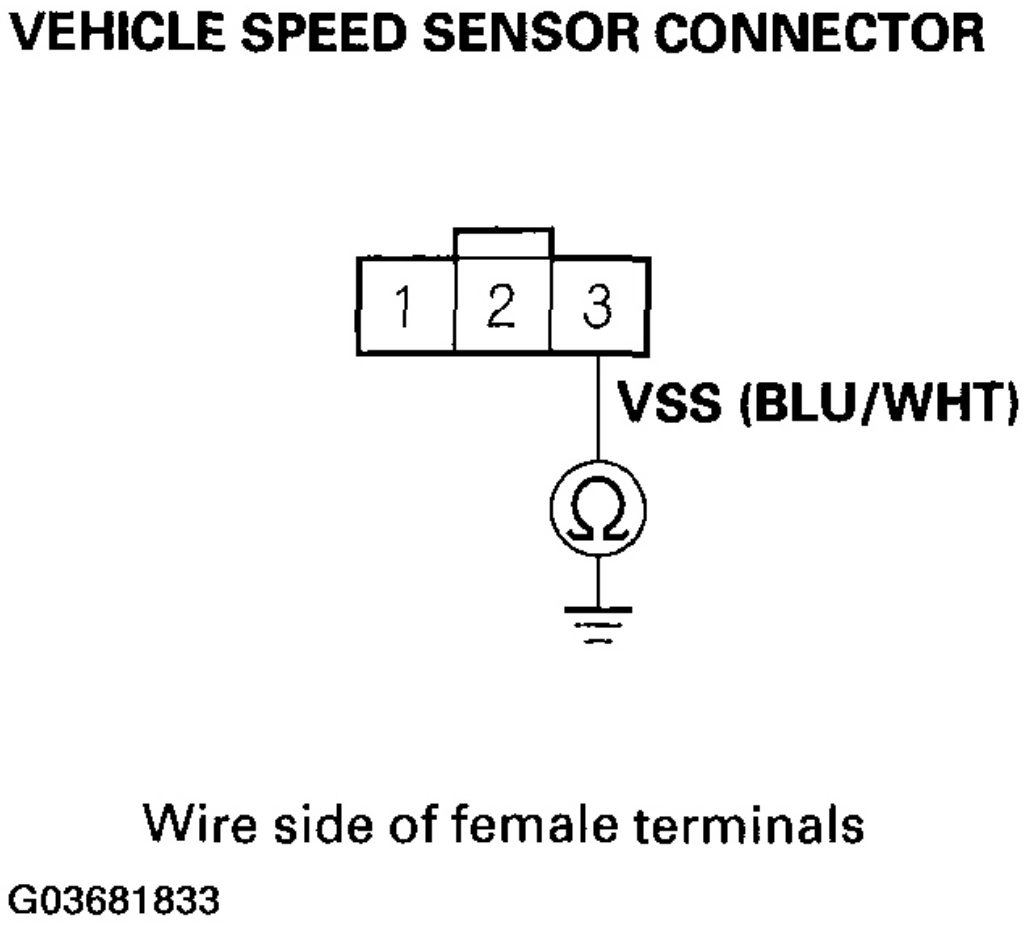


Fig. 132: Checking Continuity Between Vehicle Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B5 and the vehicle speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B5 and A4.

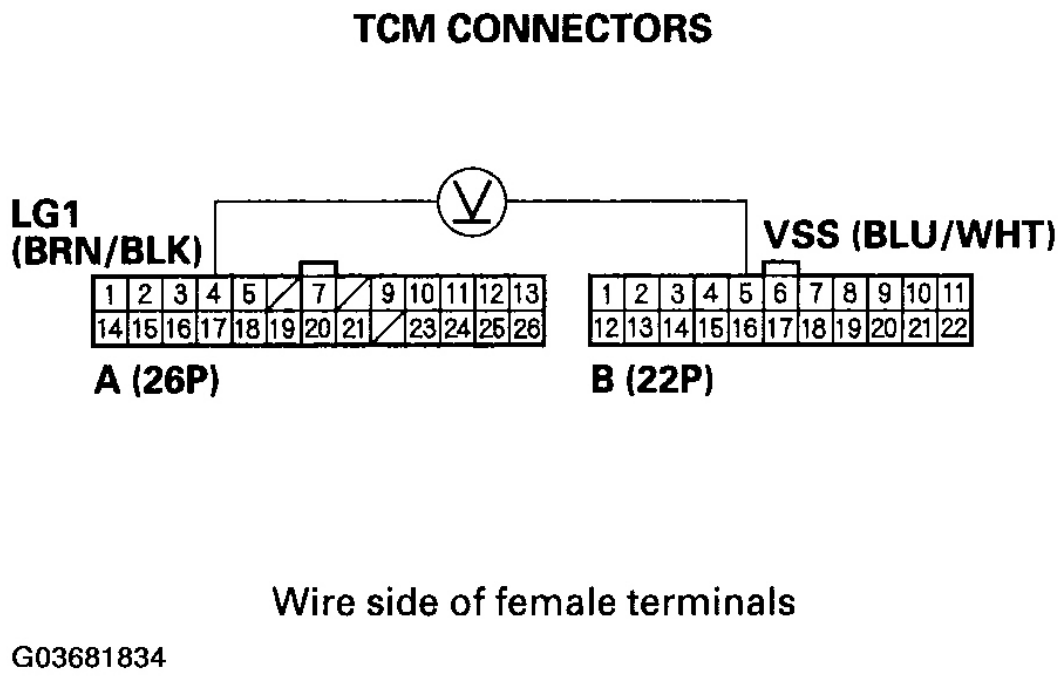


Fig. 133: Measuring Voltage Between TCM Connector Terminals B5 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B5 and the vehicle speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B5. If the connection is OK, substitute a known-good TCM (see **HOW TO**

TROUBLESHOOT CIRCUIT AT THE TCM), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between vehicle speed sensor connector terminal No. 2 and body ground.

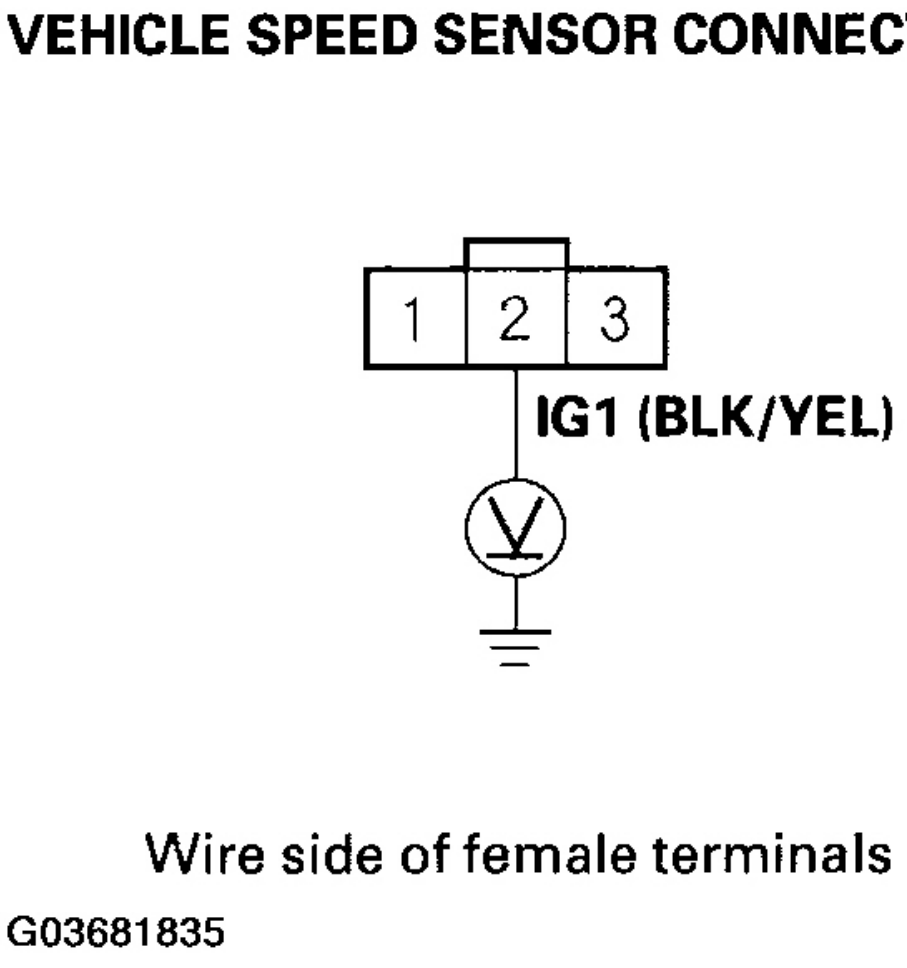


Fig. 134: Measuring Voltage Between Vehicle Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 16.

NO -A short or an open in the wire between the under-dash fuse/relay box and vehicle speed sensor.

16. Measure the voltage between vehicle speed sensor connector terminals No. 1 and No. 2.

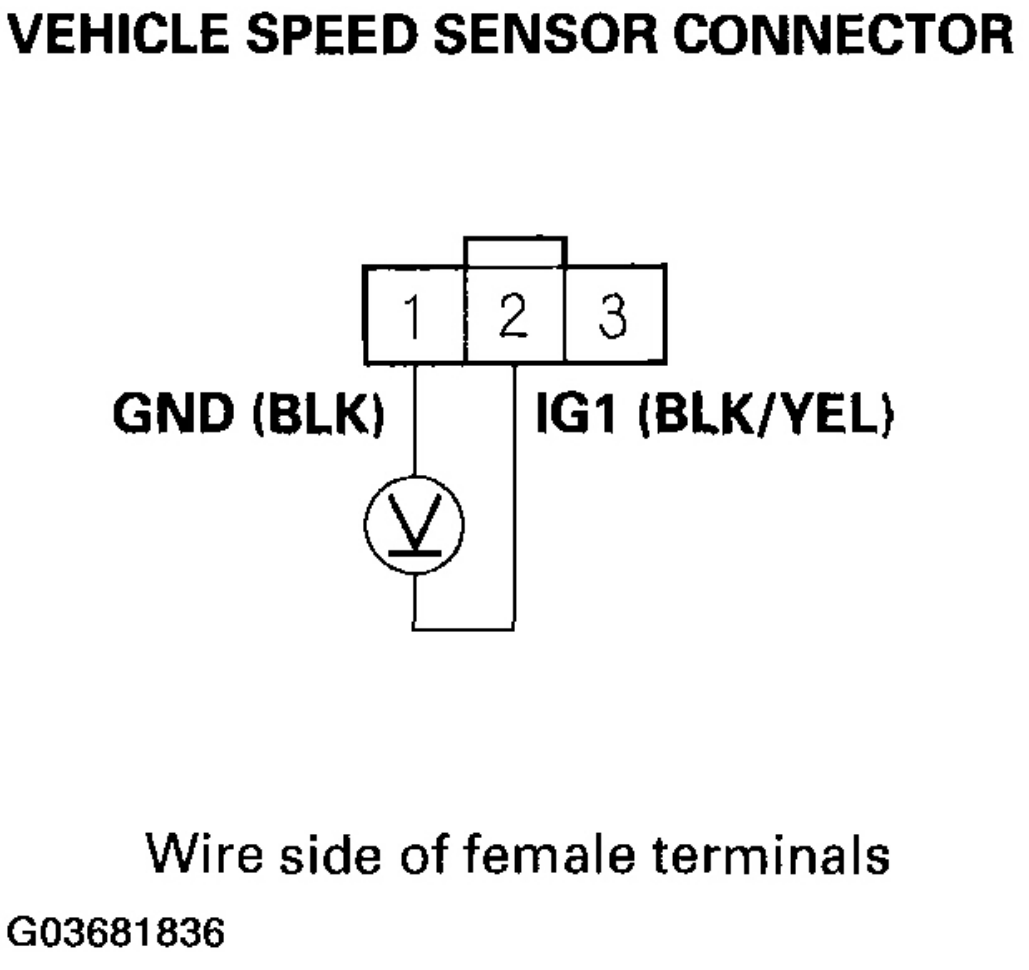


Fig. 135: Measuring Voltage Between Vehicle Speed Sensor Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Replace an the vehicle speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 17.

NO -Repair an open in the wire between the vehicle speed sensor and ground (G101), or repair poor ground (G101).

17. Clear the DTC with the HDS.
18. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
19. Check that DTC P0502 recurs.

Is DTC P0502 indicated?

YES -Return to step 1 . and recheck.

NO -Troubleshooting is complete.

DTC P0603: Problem in TCM

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Shift to the P or N position.
3. Turn the ignition switch OFF.
4. Disconnect TCM connector A (26P) for more than 5 seconds, then reconnect the connector.
5. Turn the ignition switch ON (II), and wait for more than 5 seconds.
6. Check that DTC P0603 recurs.

Is DTC P0603 indicated?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at TCM.

DTC P0705: Short in Transmission Range Switch Circuit (Multiple Shift-position Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Move the shift lever, through all positions. Stop for at least 1 second in each position.
3. Check that DTC P0705 recurs.

Is DTC P0705 indicated?

YES -Go to step 4.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the transmission range switch and TCM.

4. Test the transmission range switch (see **TRANSMISSION RANGE SWITCH TEST**).

Is the switch OK?

YES -Go to step 5.

NO -Replace the transmission range switch (see **TRANSMISSION RANGE SWITCH REPLACEMENT**), then go to step 14 .

5. Turn the ignition switch ON (II).
6. Shift to all positions other than the R position.
7. Measure the voltage between TCM connector terminals A11 and A4.

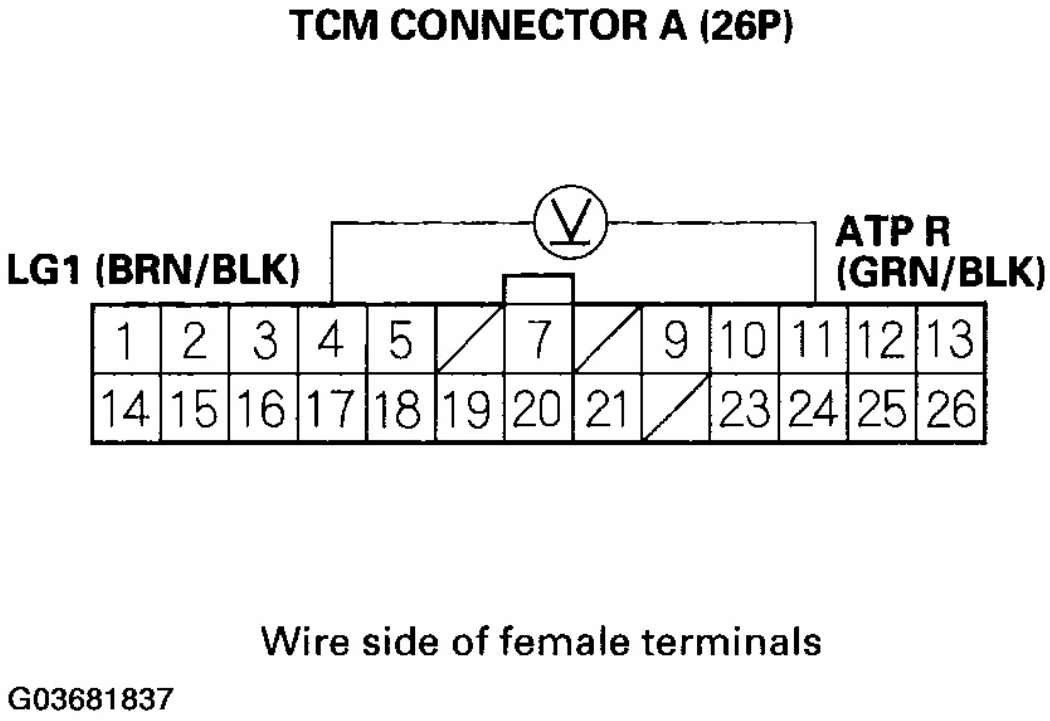


Fig. 136: Measuring Voltage Between TCM Connector A (26P) Terminals A11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 8.

NO -Check for short in the wire between TCM connector terminal A11 and the transmission range switch or A/T gear position indicator, and

check for an open in the wires between TCM connector terminals A4, and ground (G101). If the wires are OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

8. Shift to any position other than the P and N positions.
9. Measure the voltage between TCM connector terminals A10 and A4.

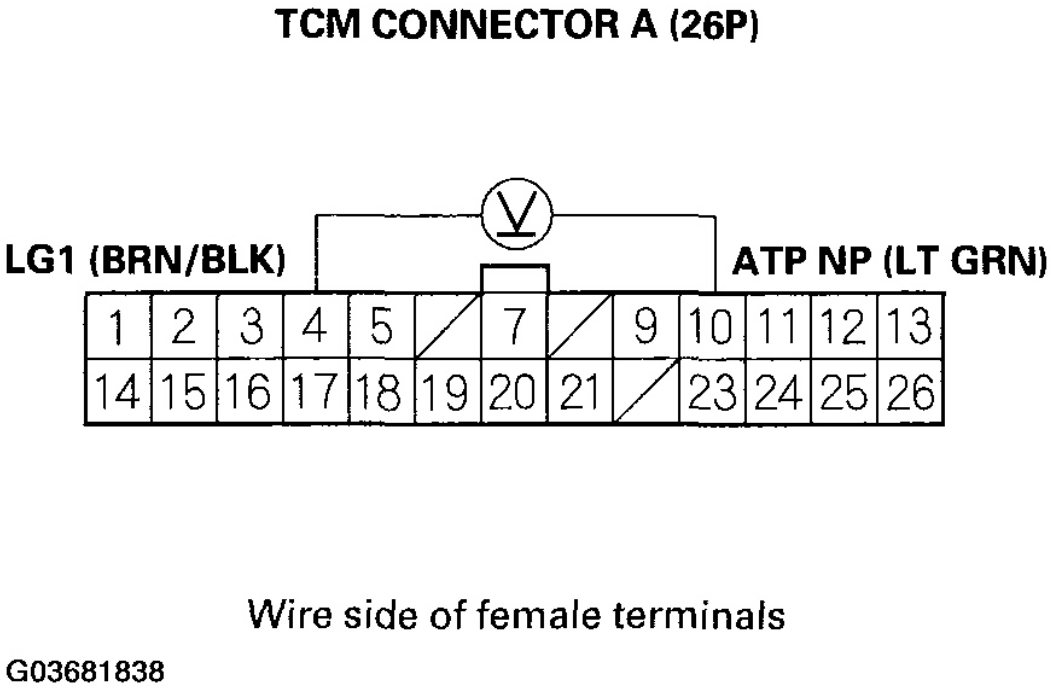


Fig. 137: Measuring Voltage Between TCM Connector A (26P) Terminals A10 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 10.

NO -Check for short in the wire between TCM connector terminal A10

and the A/T gear position indicator, and check for short in the P and N position wires between the gauge assembly and the transmission range switch. If the wires are OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

10. Shift to any position other than the D position.
11. Measure the voltage between TCM connector terminals A9 and A4.

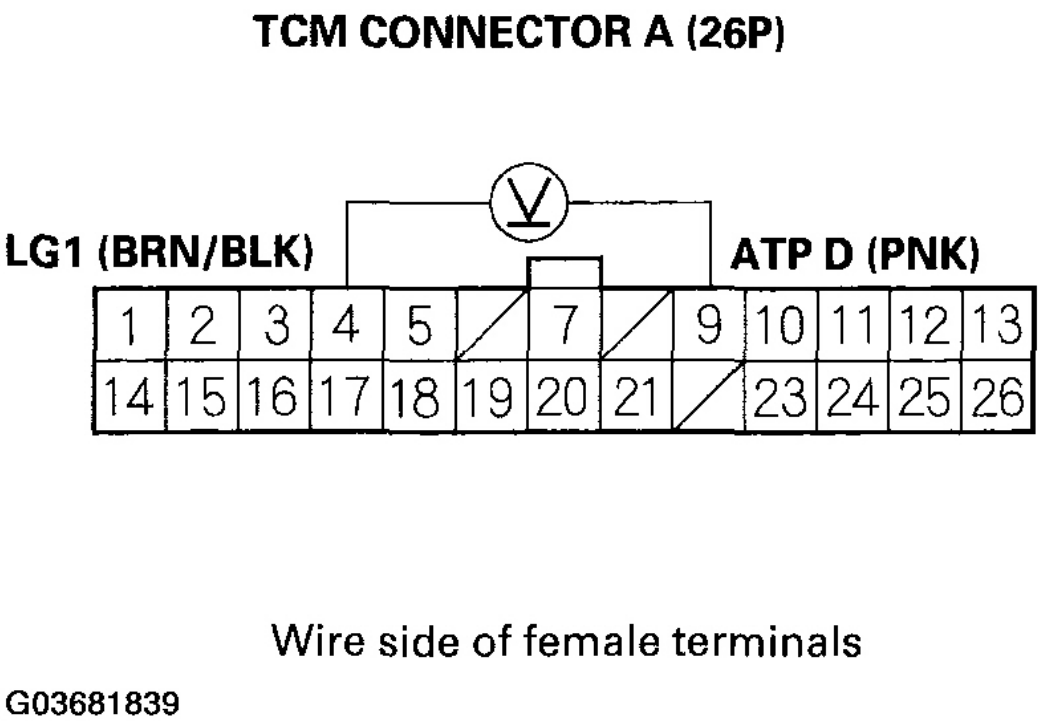


Fig. 138: Measuring Voltage Between TCM Connector A (26P) Terminals A9 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 12.

NO -Check for short in the wire between TCM connector terminal A9 and the transmission range switch. If the wire is OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

12. Shift to any position other than the L position.
13. Measure the voltage between TCM connector terminals A7 and A4 or A17.

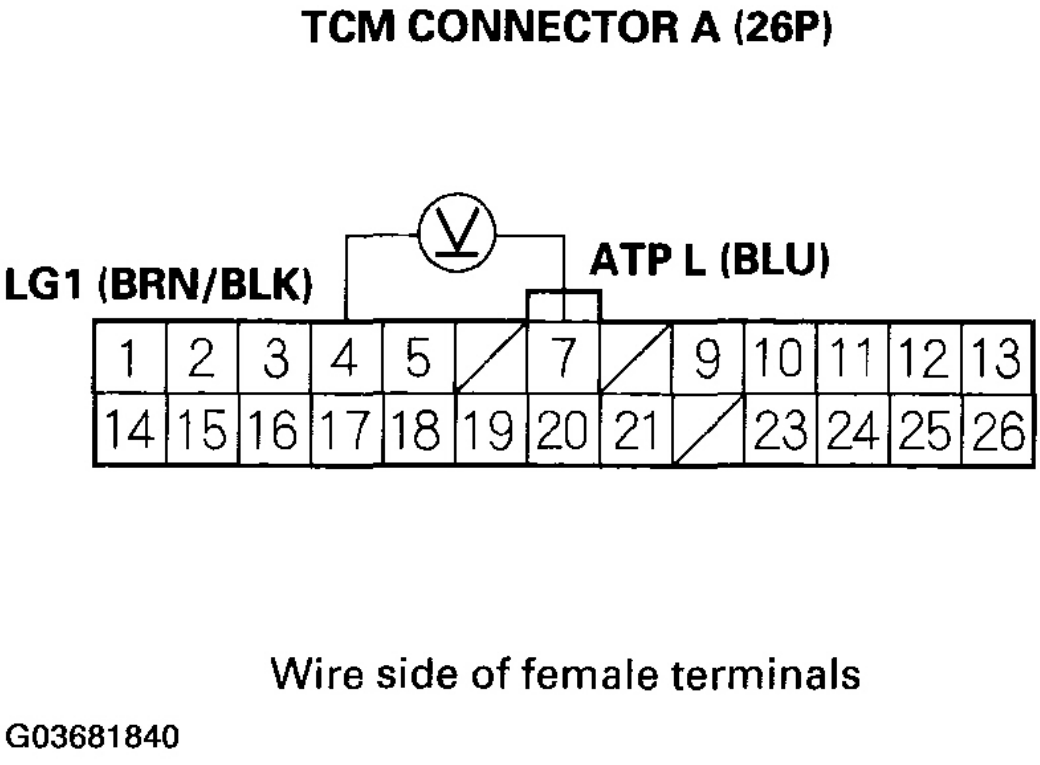


Fig. 139: Measuring Voltage Between TCM Connector A (26P) Terminals A7 And A4 Or A17
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary,

substitute a known-good TCM and recheck.

NO -Check for short in the wire between TCM connector terminal A7 and the transmission range switch or A/T gear position indicator. If the wire is OK, check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

14. Clear the DTC with the HDS.
15. Shift the shift lever out of the P position, then move to each position slowly.
16. Check that DTC P0705 recurs.

Is DTC P0705 indicated?

YES -Return to step 4 . and recheck.

NO -Troubleshooting is complete.

DTC P0706: Open in Transmission Range Switch Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Test the transmission range switch (see **TRANSMISSION RANGE SWITCH TEST**).

Is the switch OK?

YES -Go to step 2.

NO -Replace the transmission range switch (see **TRANSMISSION RANGE SWITCH REPLACEMENT**), then go to step 13 .

2. Connect the transmission range switch connector.
3. Check for continuity between TCM connector terminal A4 and body ground, and between A17 and body ground.

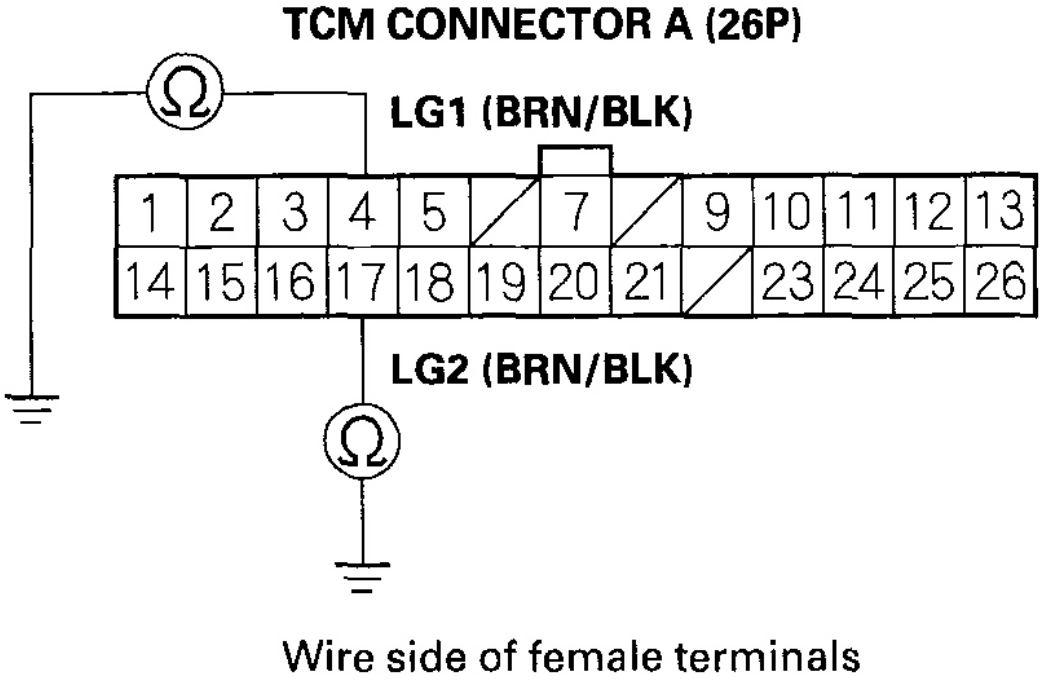


Fig. 140: Checking Continuity Between TCM Connector Terminal A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 4.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

4. Turn the ignition switch ON (II).
5. Shift to the R position.

6. Measure the voltage between TCM connector terminals A11 and A4.

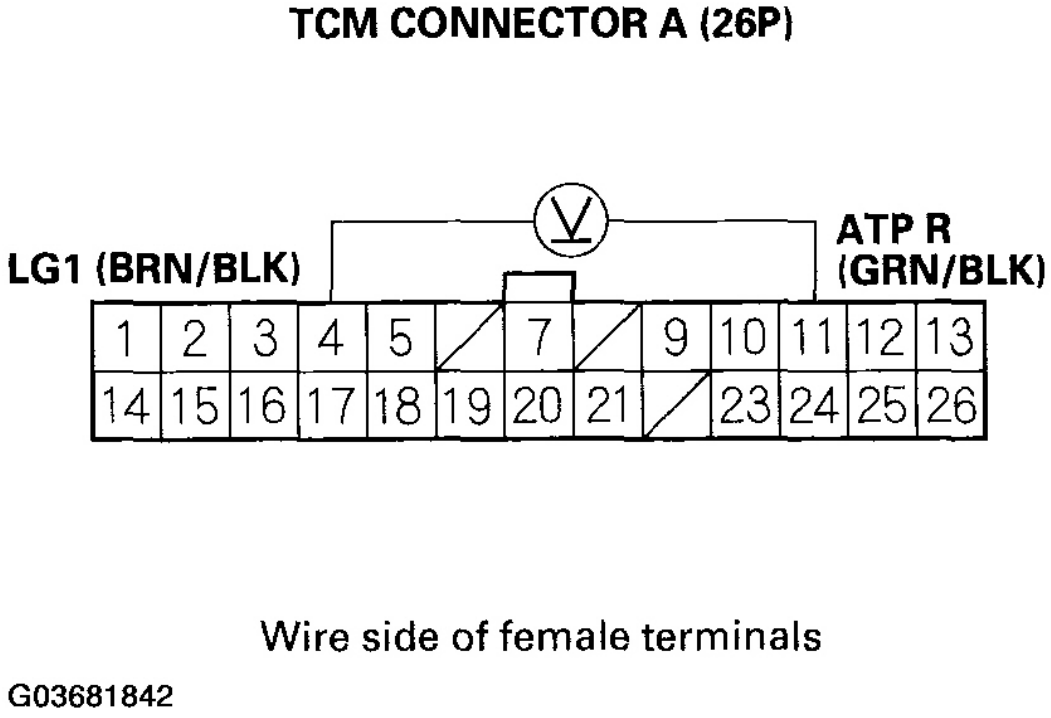


Fig. 141: Measuring Voltage Between TCM Connector A (26P) Terminals A11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair an open in the wire between TCM connector terminal A11 and the transmission range switch.

NO -Go to step 7.

7. Shift to the P or N position.
8. Measure the voltage between TCM connector terminals A10 and A4.

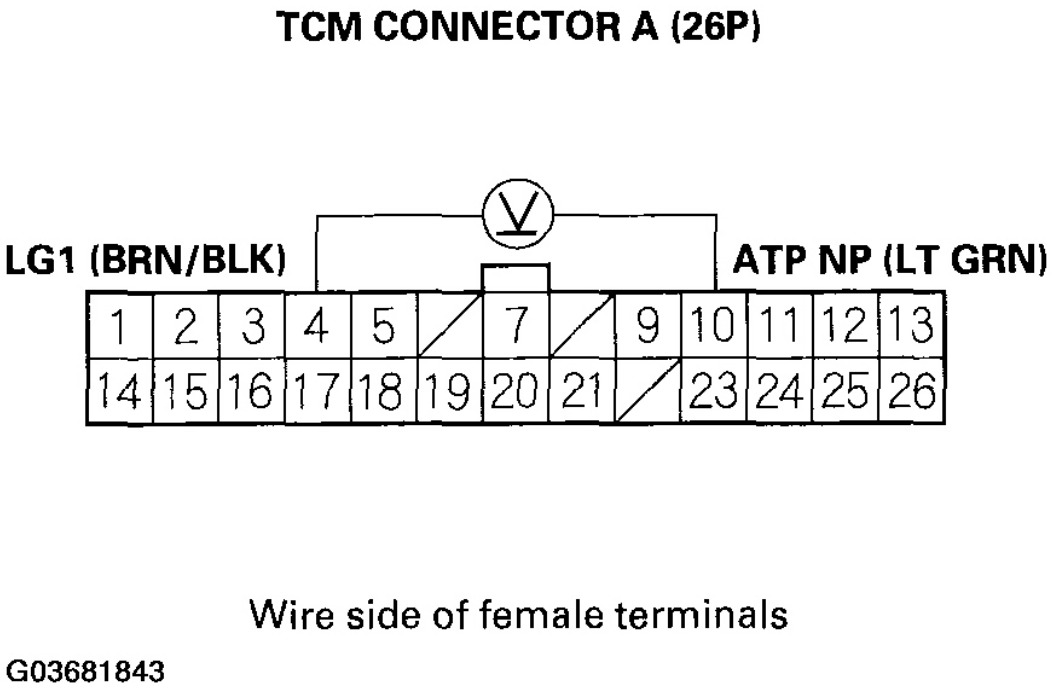


Fig. 142: Measuring Voltage Between TCM Connector A (26P) Terminals A10 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair an open in the wire between TCM connector terminal A10 and the A/T gear position indicator.

NO -Go to step 9.

9. Shift to the D position.
10. Measure the voltage between TCM connector terminals A9 and A4.

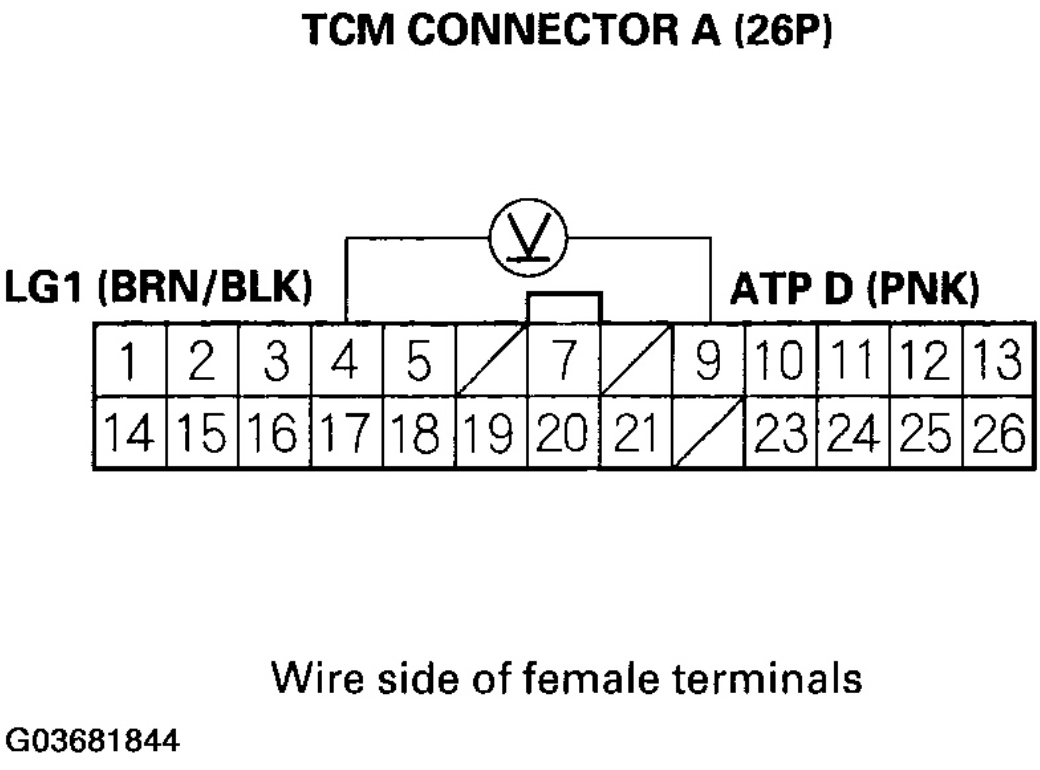


Fig. 143: Measuring Voltage Between TCM Connector A (26P) Terminals A9 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair an open in the wire between TCM connector terminal A9 and the transmission range switch.

NO -Go to step 11.

11. Shift to the L position.
12. Measure the voltage between TCM connector terminals A7 and A4.

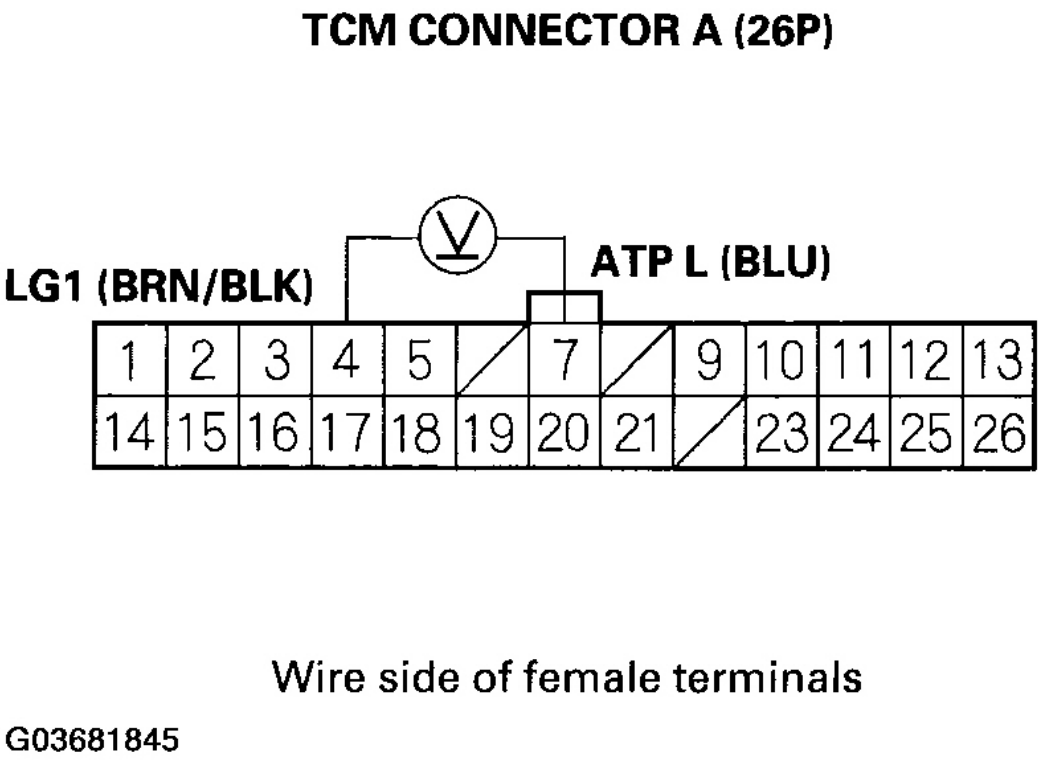


Fig. 144: Measuring Voltage Between TCM Connector A (26P) Terminals A7 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair an open in the wire between TCM connector terminal A7 and the transmission range switch.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position until the vehicle speed reaches 31 mph (50 km/h), and stop the wheels.

15. Check that DTC P0706 recurs.

    Is DTC P0706 indicated?

    YES -Return to step 1 . and recheck.

    NO -Troubleshooting is complete.

DTC P0716: Range/Performance Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and shift into the D position. Push on the accelerator pedal until the engine speed is the same speed as indicated by the freeze data.
3. Monitor the ENGINE SPEED and DRIVE PULLEY with the HDS in the data list.

   Do the ENGINE SPEED and DRIVE PULLEY signals fluctuate?

   YES -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CVT input shaft (drive pulley) speed sensor and TCM.

   NO -Go to step 4.
4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

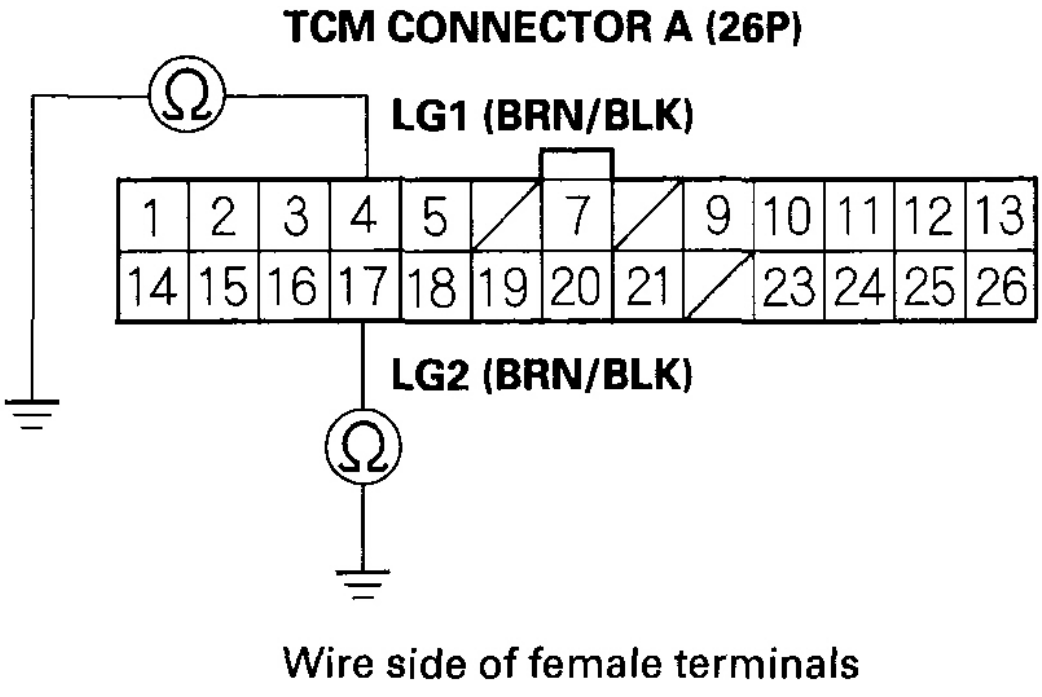


Fig. 145: Checking Continuity Between TCM Connector Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

6. Disconnect CVT input shaft (drive pulley) speed sensor connector.
7. Turn the ignition switch ON (II).
8. Check for voltage between CVT input shaft (drive pulley) speed sensor connector terminal No. 2 and body ground.

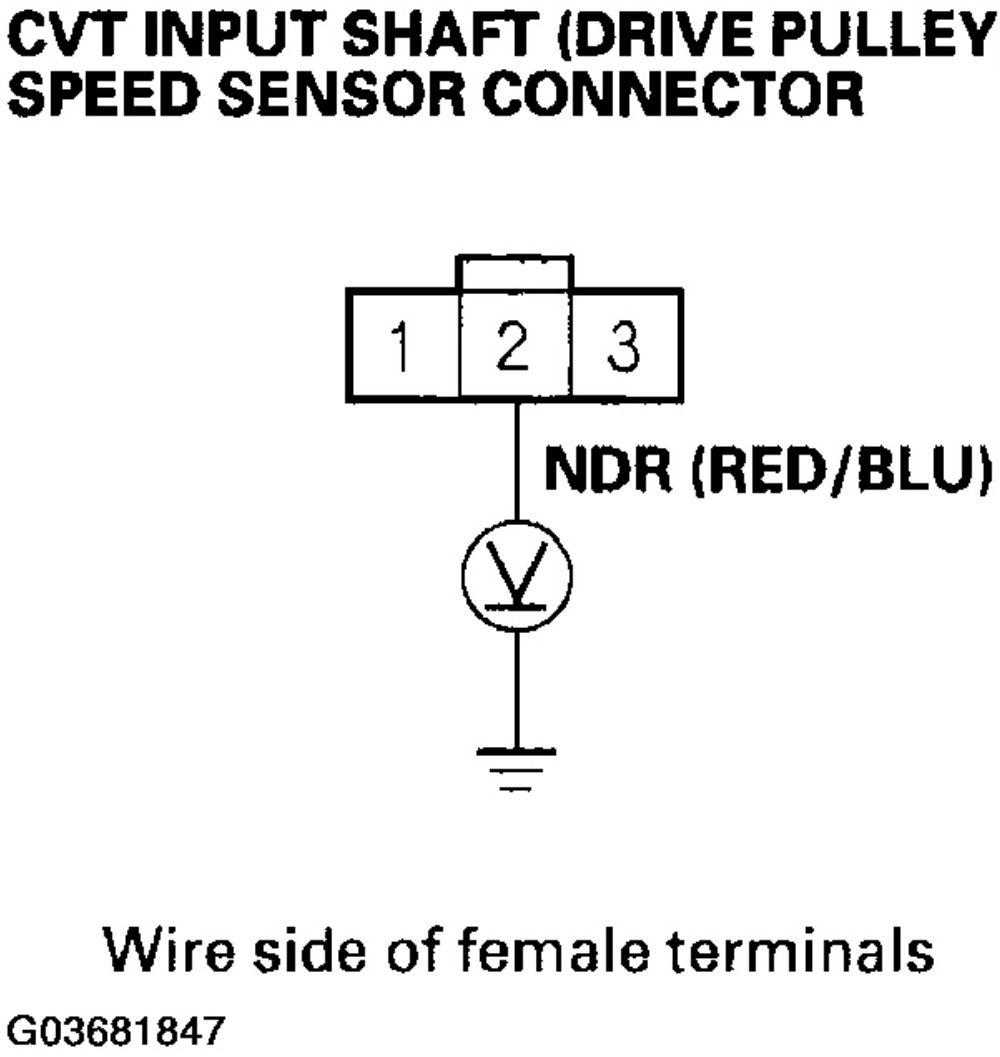


Fig. 146: Checking Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .
NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 2 and body ground.

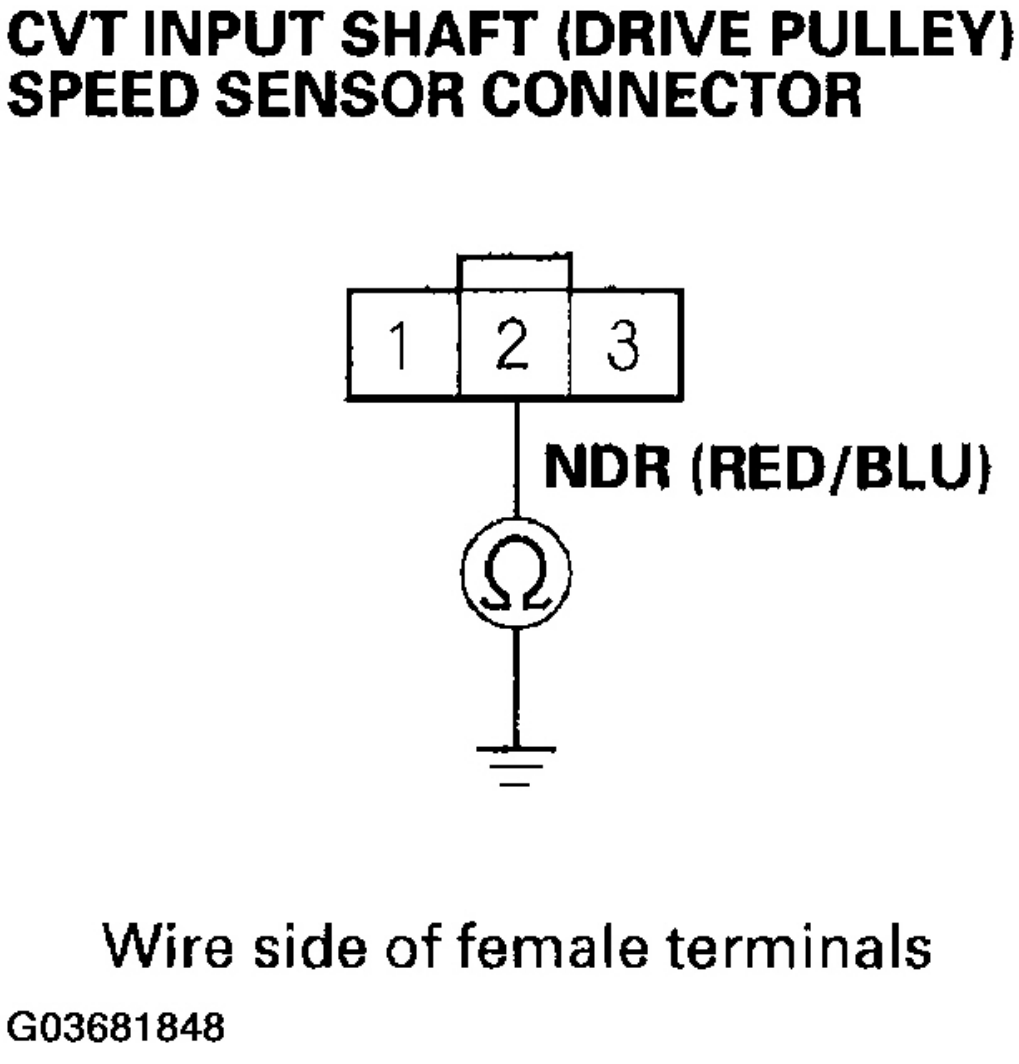


Fig. 147: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B10 and the CVT input shaft (drive pulley) speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B10and A4.

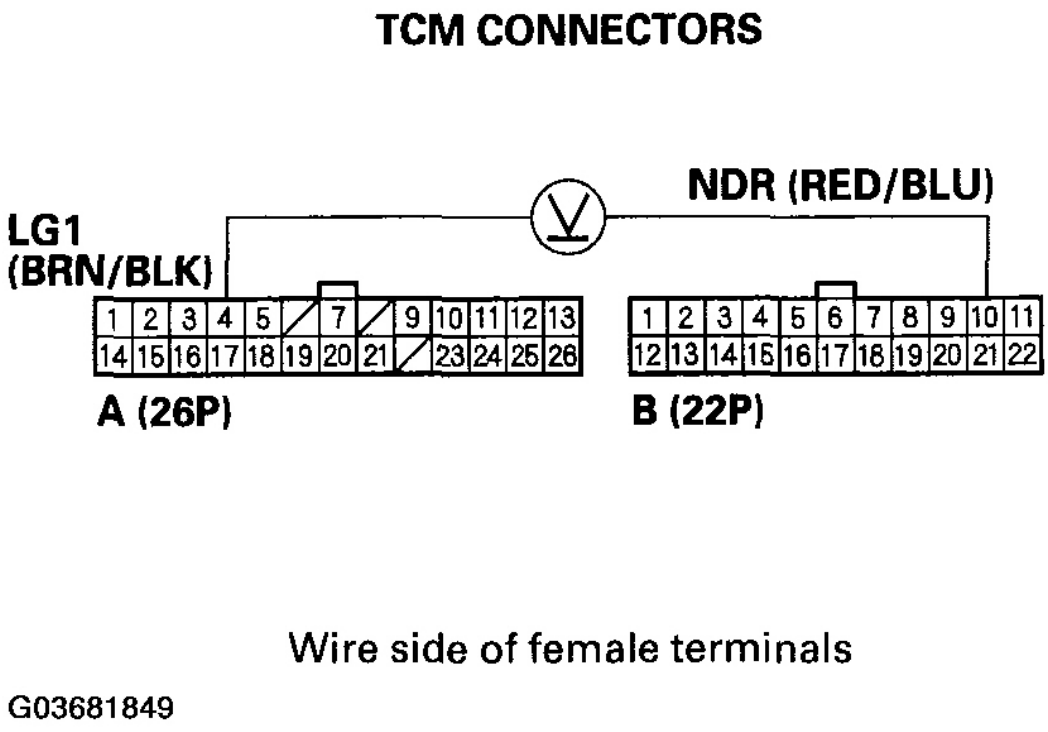


Fig. 148: Measuring Voltage Between TCM Connector Terminals B10 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B10

and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B10. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between CVT input shaft (drive pulley) speed sensor connector terminal No. 1 and body ground.

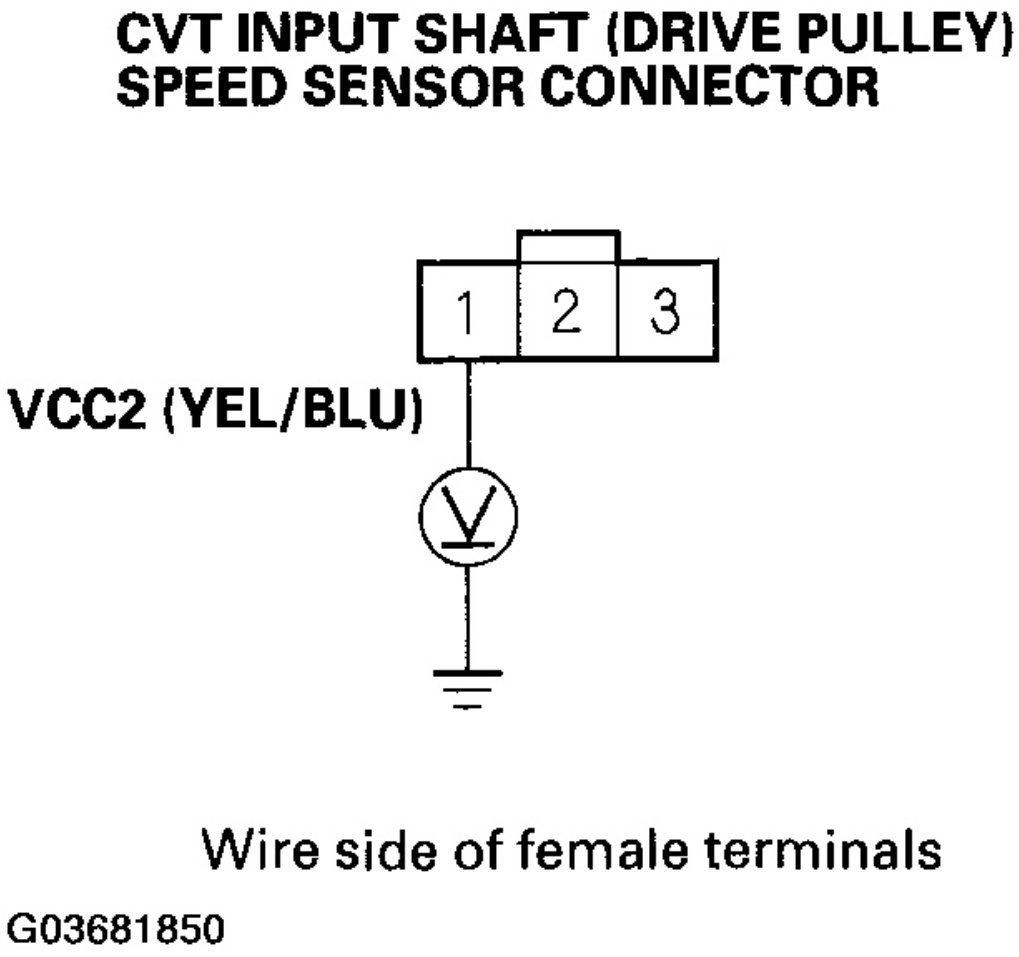


Fig. 149: Measuring Voltage Between CVT Input Shaft (Drive Pulley)

Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 22 .

NO -Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect TCM connector B (22P).
18. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 1 and body ground.

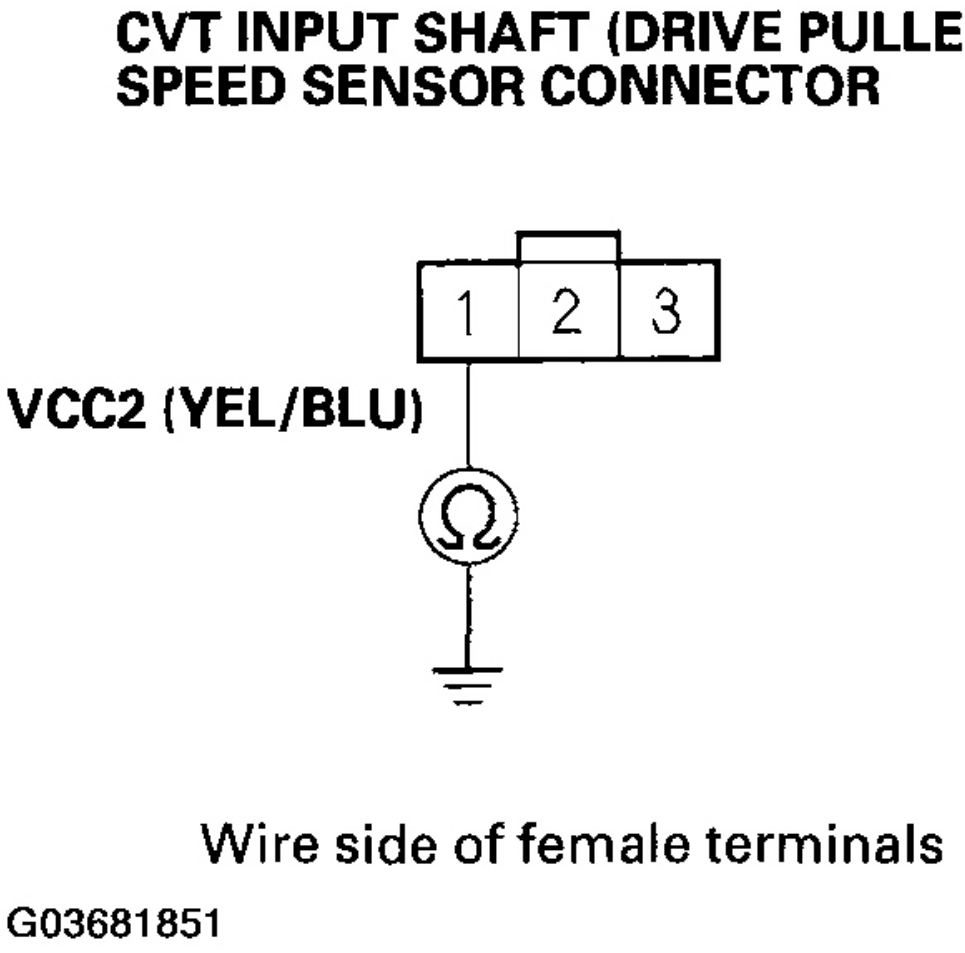


Fig. 150: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B22 and the CVT input shaft (drive pulley) speed sensor.

NO -Go to step 19.

19. Connect TCM connector B (22P).

20. Turn the ignition switch ON (II).
21. Measure the voltage between TCM connector terminals B22 and A4.

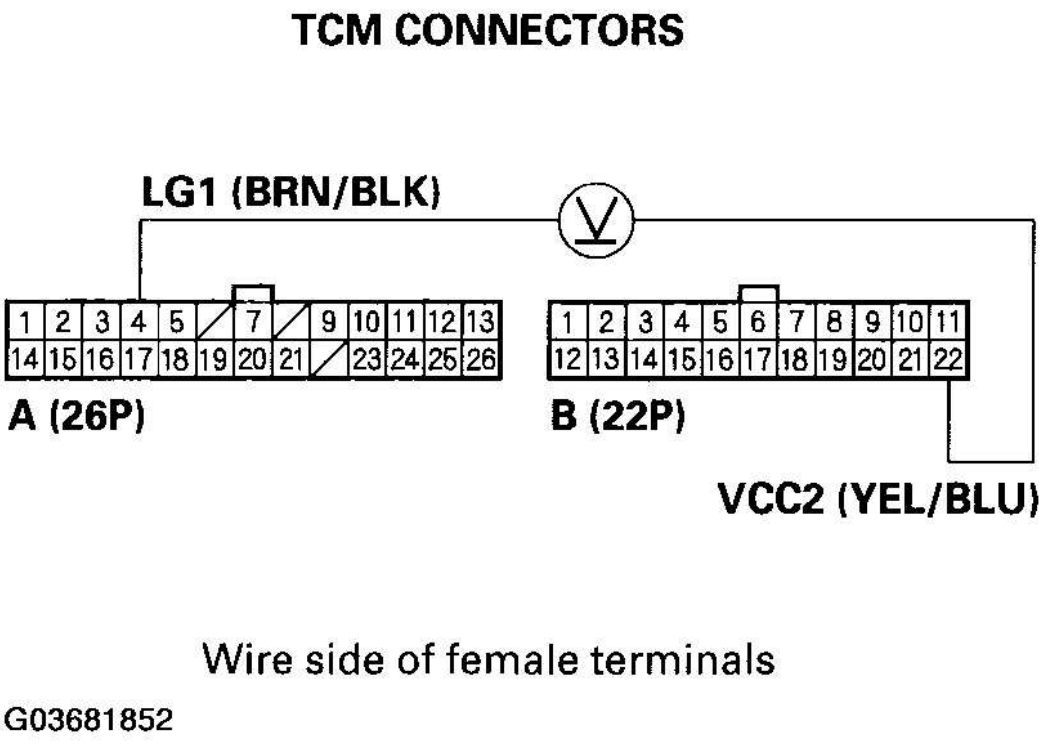


Fig. 151: Measuring Voltage Between TCM Connector Terminals B22 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B22 and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B22. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

22. Measure the voltage between CVT input shaft (drive pulley) speed sensor connector terminals No. 1 and No. 3.

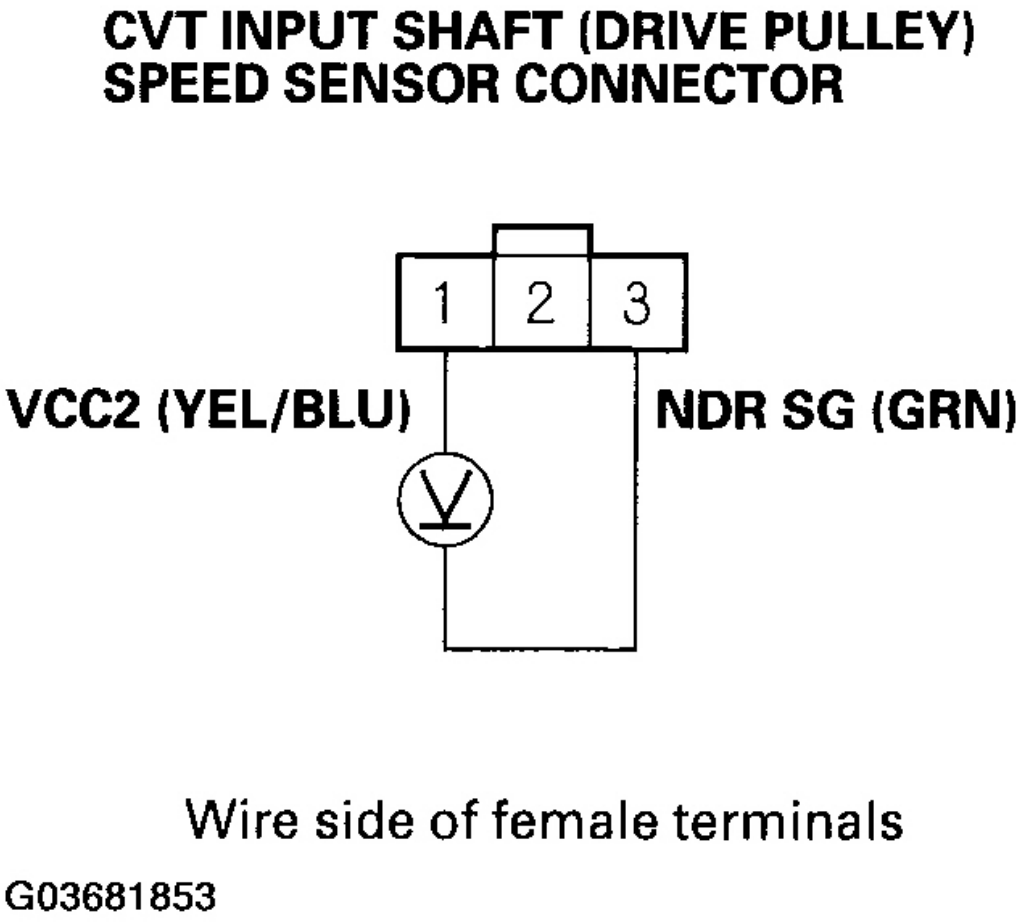


Fig. 152: Measuring Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Replace the CVT input shaft (drive pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 23.

NO -Repair an open in the wire between TCM connector terminal B17 and the CVT input shaft (drive pulley) speed sensor.

23. Clear the DTC with the HDS.
24. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
25. Check that DTC P0716 recurs.

Is DTC P0716 indicated?

YES -Return to step 1 . and recheck.

NO -Troubleshooting is complete.

DTC P0717: Problem in CVT Input Shaft (Drive Pulley) Speed Sensor Circuit (No Signal Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Start the engine, and press the brake pedal securely.
2. Shift to the D position, and let the engine idle.
3. Check the DRIVE PULLEY with the HDS in the data list.

Is the DRIVE PULLEY 128 RPM or less?

YES -Go to step 4.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CVT input shaft (drive pulley) speed sensor and TCM.

4. Turn the ignition switch OFF.

5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

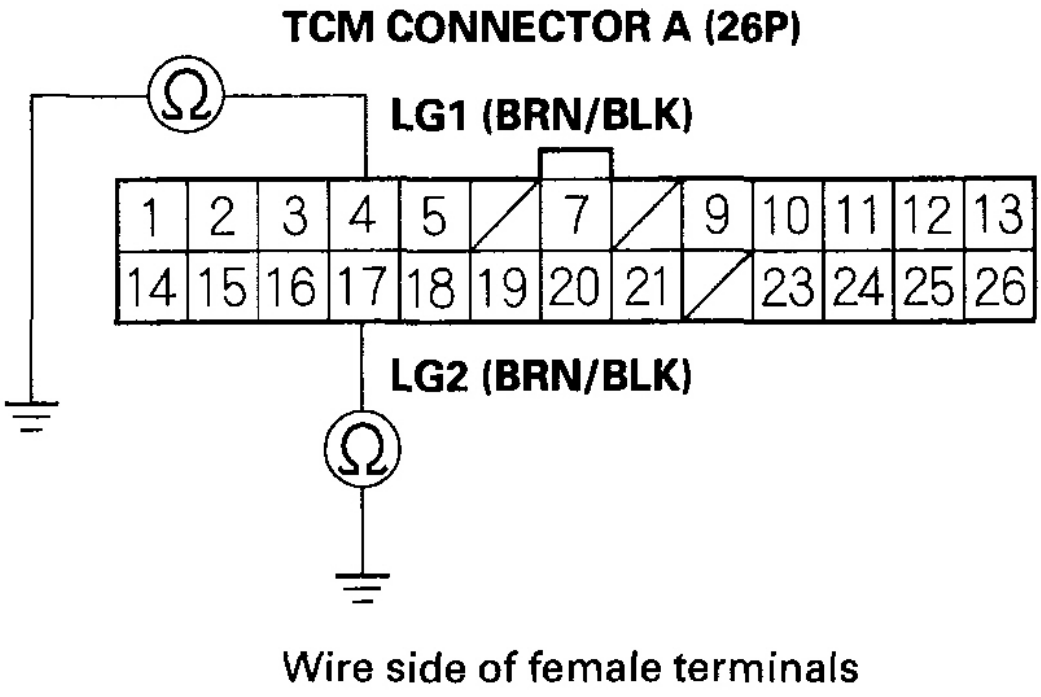


Fig. 153: Checking Continuity Between TCM Connector Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

6. Disconnect CVT input shaft (drive pulley) speed sensor connector.
7. Turn the ignition switch ON (II).
8. Measure the voltage between CVT input shaft (drive pulley) speed sensor

connector terminal No. 1 and body ground.

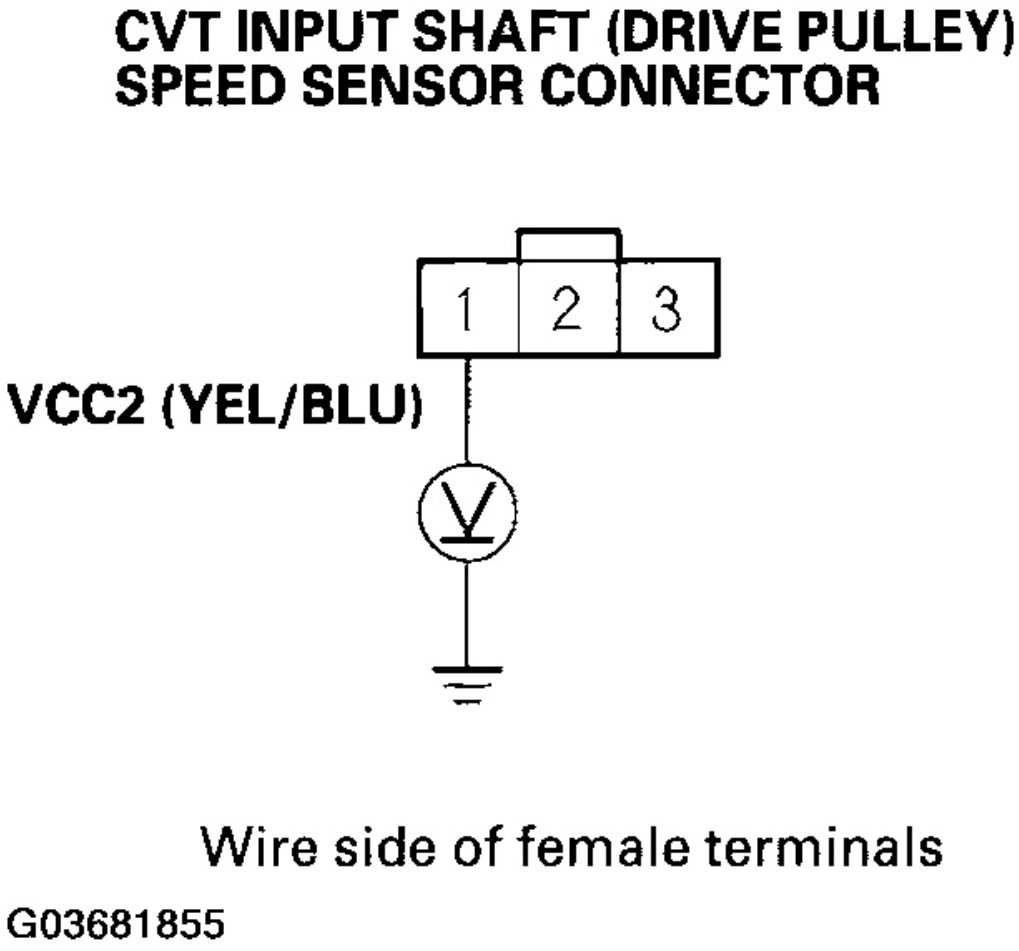


Fig. 154: Measuring Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 9.
NO -Go to step 19 .

9. Turn the ignition switch OFF.

10. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 2 and body ground.

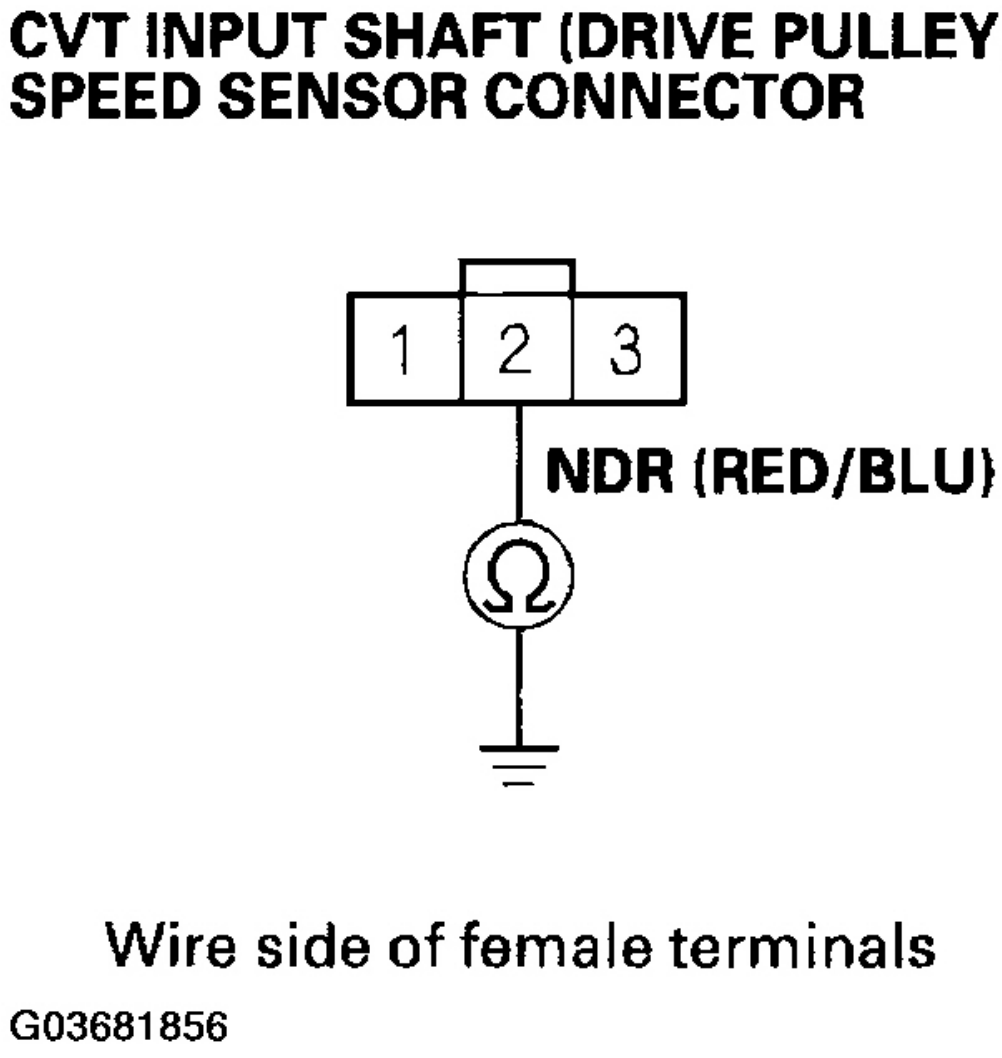


Fig. 155: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B10andthe CVT input shaft (drive pulley) speed sensor.

NO -Go to step 11.

11. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 3 and body ground.

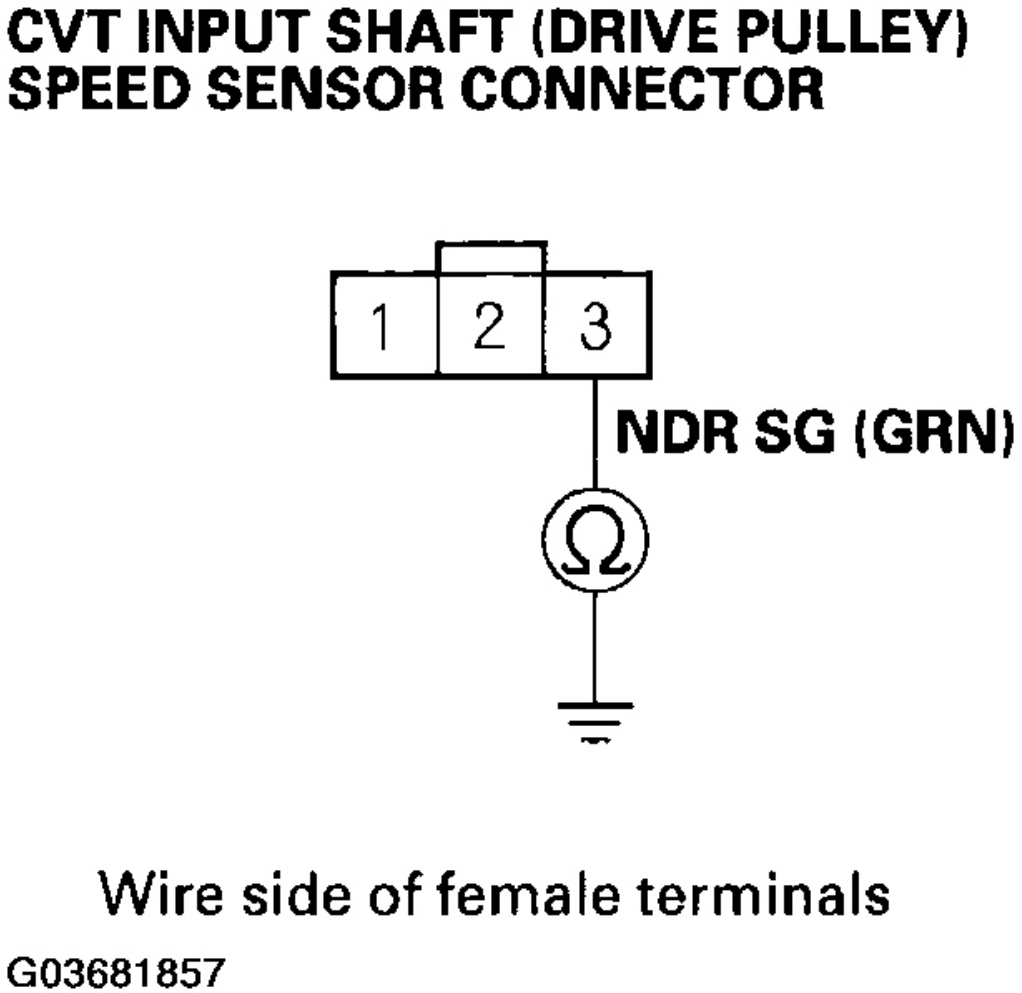


Fig. 156: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

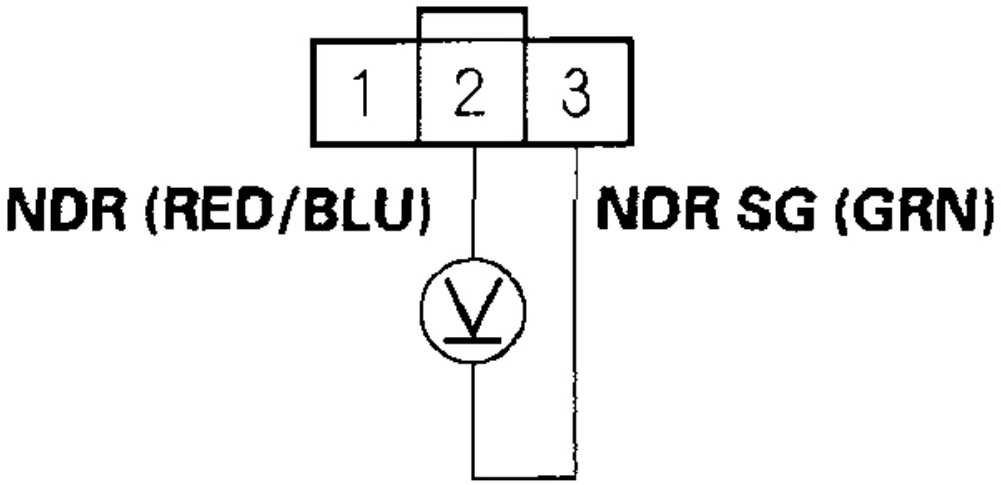
Is there continuity?

YES -Go to step 12.

NO -Repair loose terminal or open in the wire between TCM connector terminal B17 and the CVT input shaft (drive pulley) speed sensor.

12. Turn the ignition switch ON (II).
13. Measure the voltage between CVT input shaft (drive pulley) speed sensor connector terminals No. 2 and No. 3.

CVT INPUT SHAFT (DRIVE PULLEY) SPEED SENSOR CONNECTOR



Wire side of female terminals

G03681858

Fig. 157: Measuring Voltage Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminals 2 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 14.

NO -Go to step 25 .

14. Connect CVT input shaft (drive pulley) speed sensor connector.
15. Measure the voltage between TCM connector terminals B10and B17.

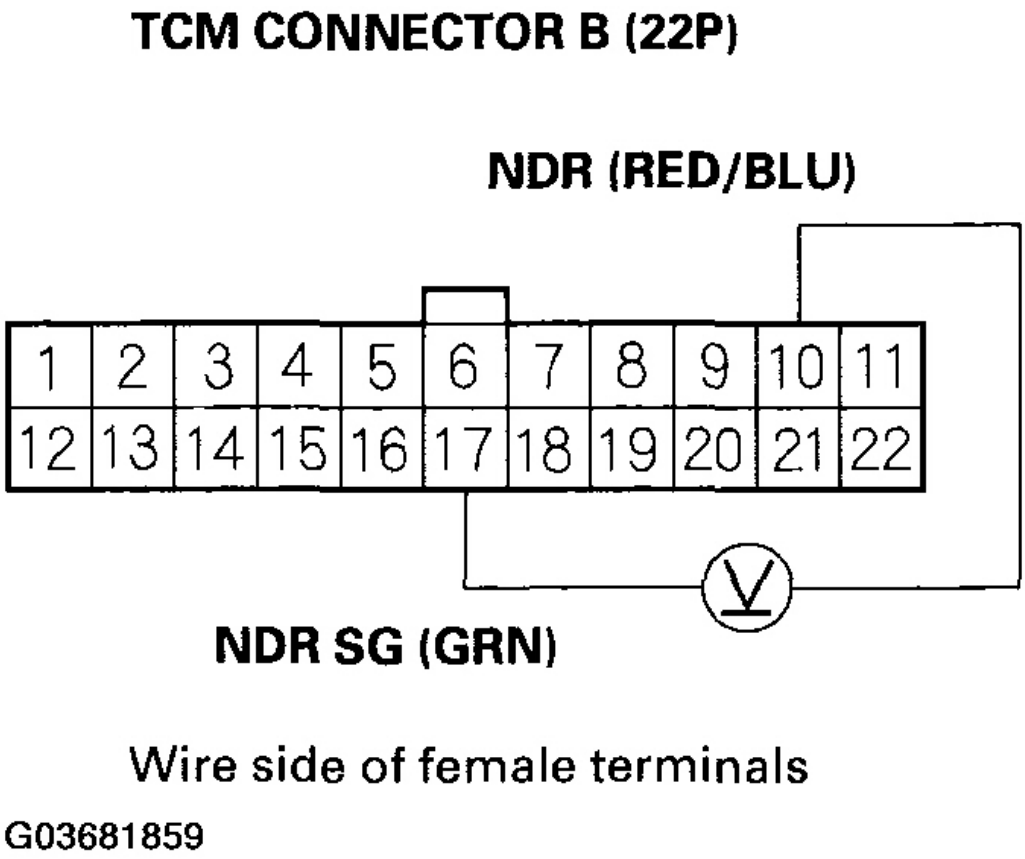


Fig. 158: Measuring Voltage Between TCM Connector B (22P) Terminals B10 And B17

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0 V or about 5 V?

YES -Go to step 16.

NO -Replace the CVT input shaft (drive pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 26 .

16. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
17. Start the engine, shift to the D position, and let the engine idle.
18. Measure the voltage between TCM connector terminals B10 and B17.

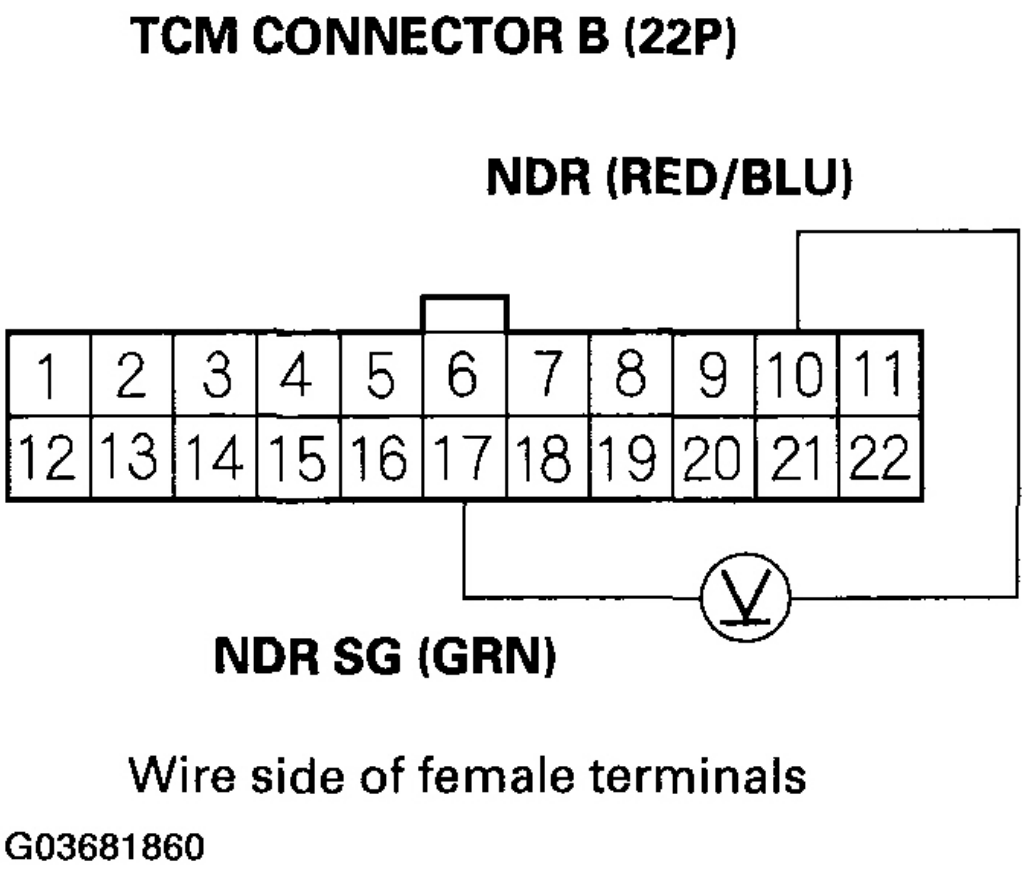


Fig. 159: Measuring Voltage Between TCM Connector B (22P) Terminals

B10 And B17
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 1.5-3.5 V?

YES -Check for loose or poor connections at TCM connector terminals B10and B17. If the connections are OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

NO -Replace the CVT input shaft (drive pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 26 .

19. Turn the ignition switch OFF.
20. Disconnect TCM connector B (22P).
21. Check for continuity between CVT input shaft (drive pulley) speed sensor connector terminal No. 1 and body ground.

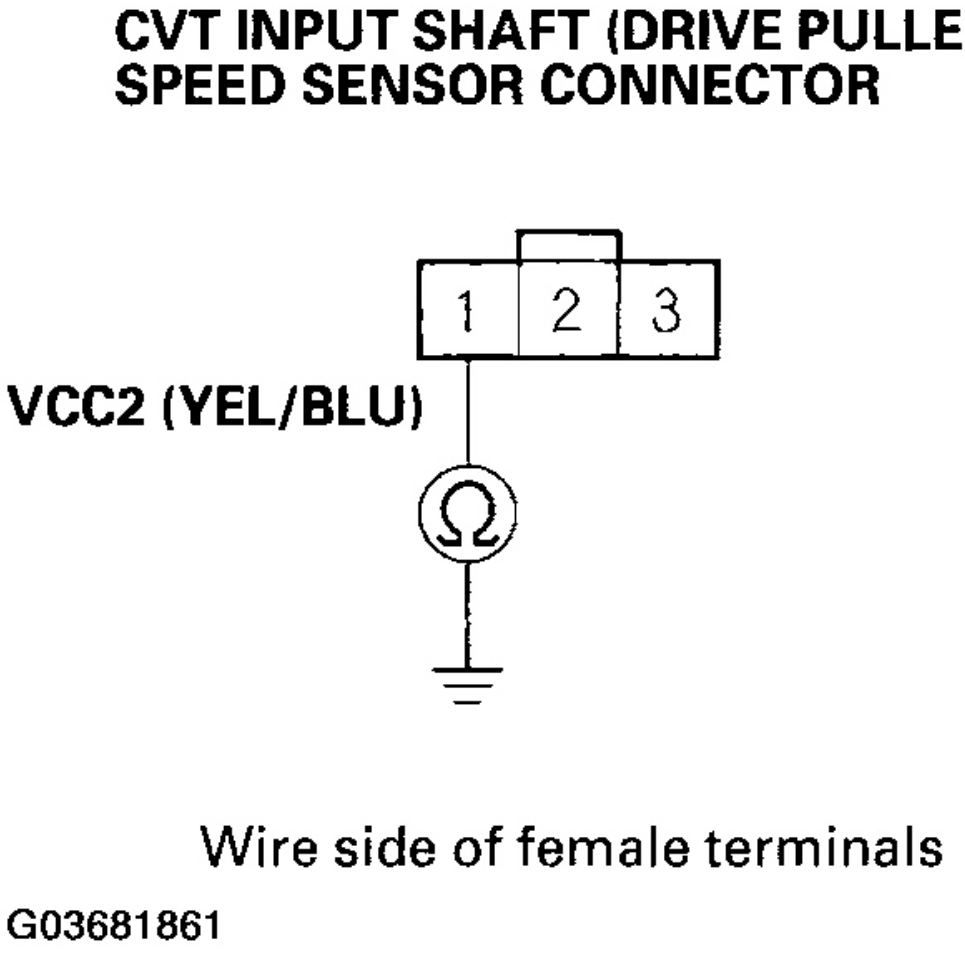


Fig. 160: Checking Continuity Between CVT Input Shaft (Drive Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B22 and the CVT input shaft (drive pulley) speed sensor.

NO -Go to step 22.

22. Connect TCM connector B (22P).

23. Turn the ignition switch ON (II).
24. Measure the voltage between TCM connector terminals B22 and A4.

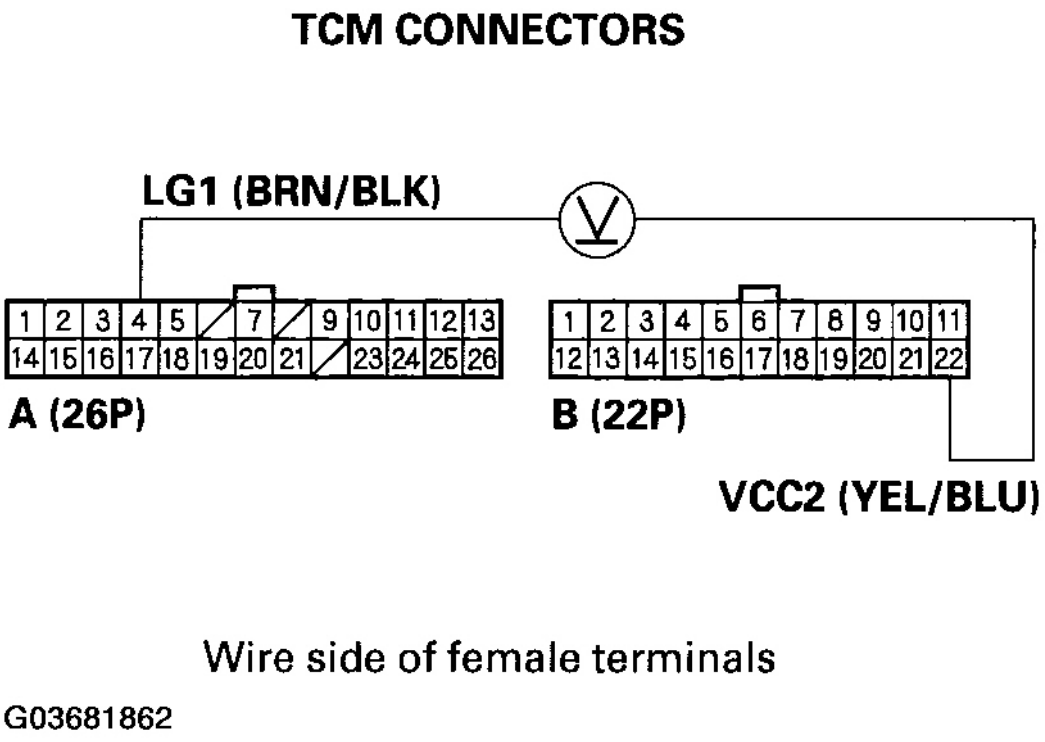


Fig. 161: Measuring Voltage Between TCM Connector Terminals B22 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B22 and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B22. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

25. Measure the voltage between TCM connector terminals B10 and B17.

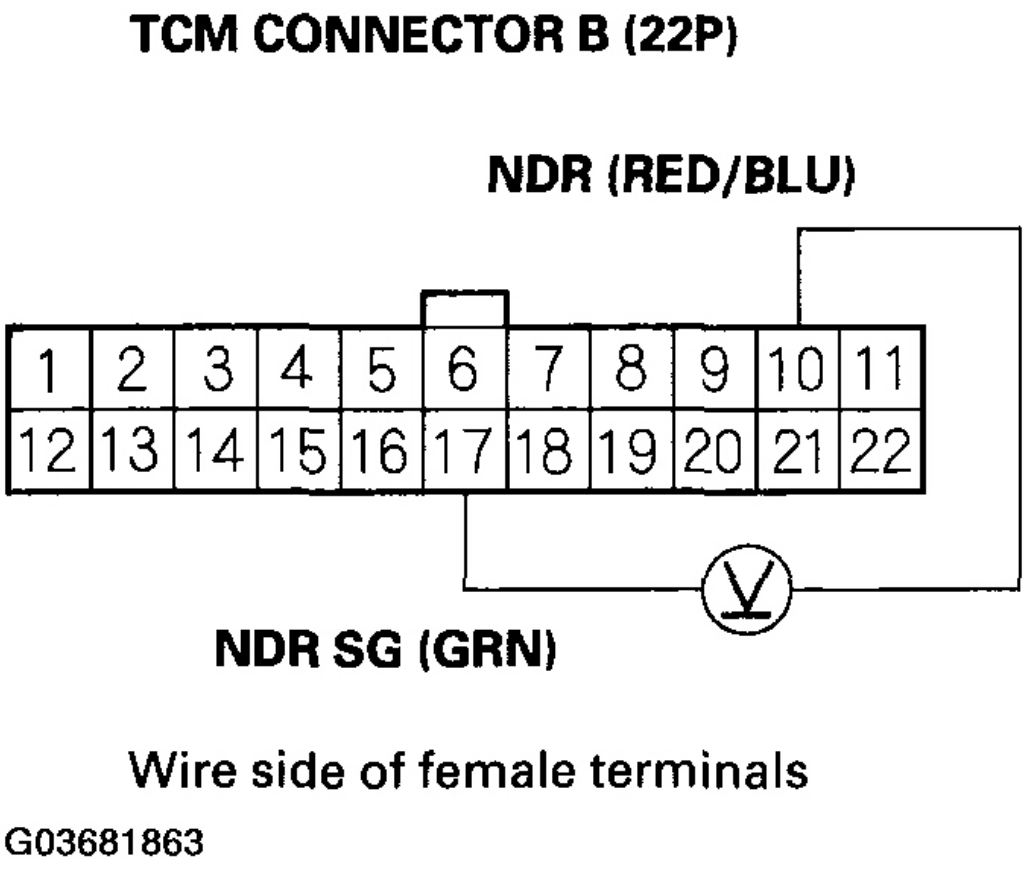


Fig. 162: Measuring Voltage Between TCM Connector B (22P) Terminals B10 And B17
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B10 and the CVT input shaft (drive pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B10. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the

symptom/indication goes away with a known-good TCM, replace the original TCM.

26. Clear the DTC with the HDS.
27. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
28. Check that DTC P0717 recurs.

Is DTC P0717 indicated?

YES -Return to step 1 . and recheck.

NO -Troubleshooting is complete.

DTC P0721: Range/Performance Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and shift into the D position. Push on the accelerator pedal until the rotational speed of the SECONDARY SHAFT SPEED is the same speed as indicated by the freeze data.
3. Monitor the SECONDARY SHAFT SPEED and DRIVEN PULLEY with the HDS in the data list.

Do the SECONDARY SHAFT SPEED and DRIVEN PULLEY signals fluctuate with the same speed?

YES -Intermittent failure, the system is OK at this time. Check for poor

connections or loose terminals at the CVT output shaft (driven pulley) speed sensor and TCM.

NO -Go to step 4.

4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

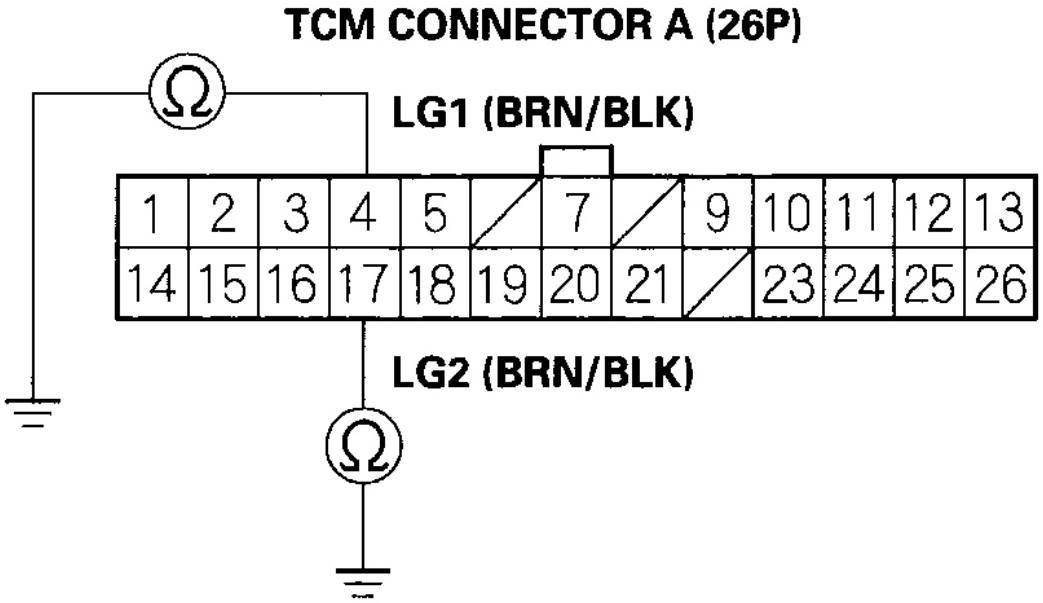


Fig. 163: Checking Continuity Between TCM Connector Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

6. Disconnect CVT output shaft (driven pulley) speed sensor connector.
7. Turn the ignition switch ON (II).
8. Check for voltage between CVT output shaft (driven pulley) speed sensor connector terminal No. 2 and body ground.

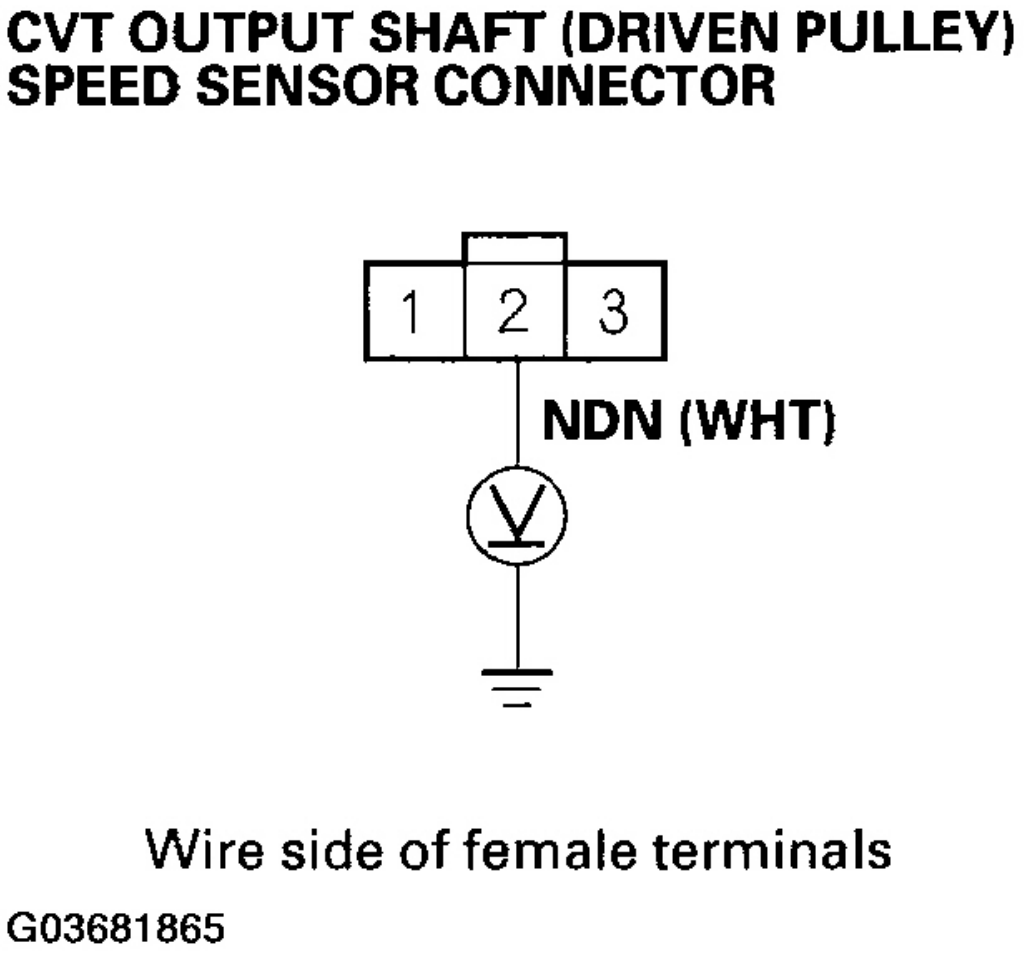


Fig. 164: Checking Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 2 and body ground.

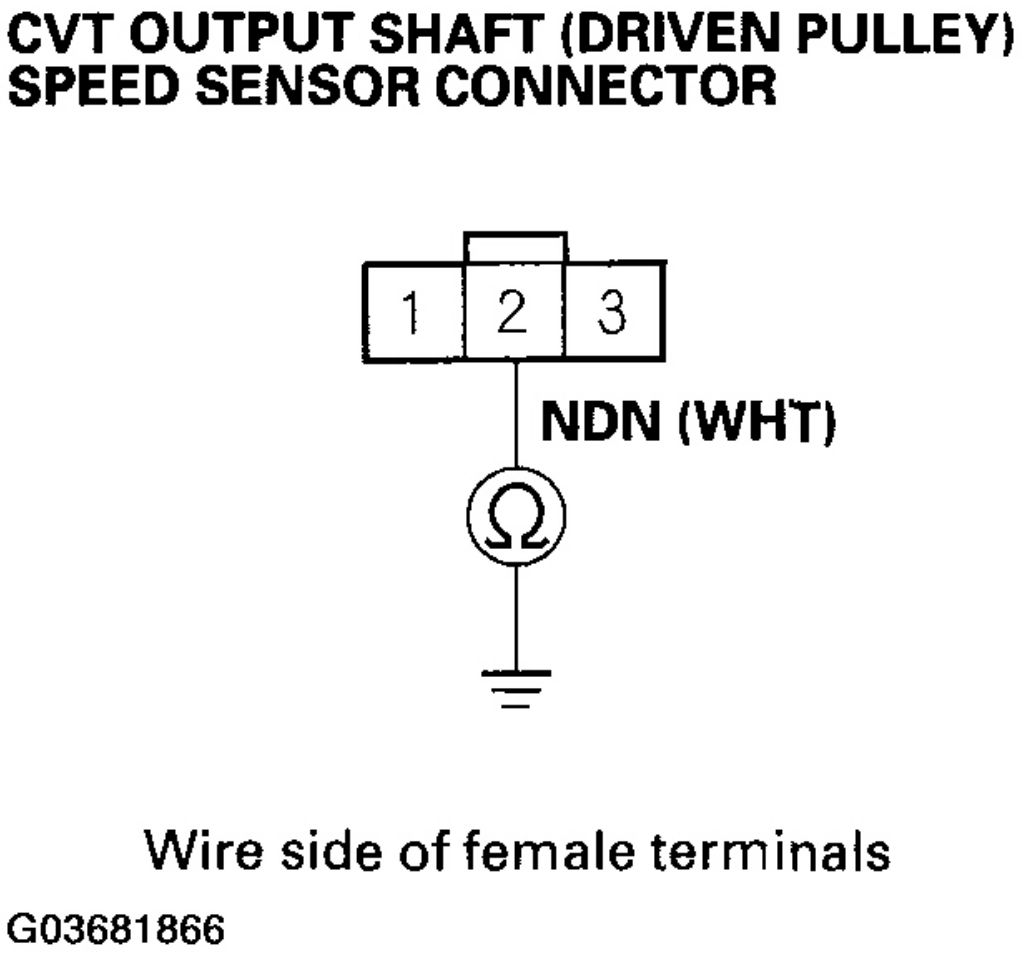


Fig. 165: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B9 and A4.

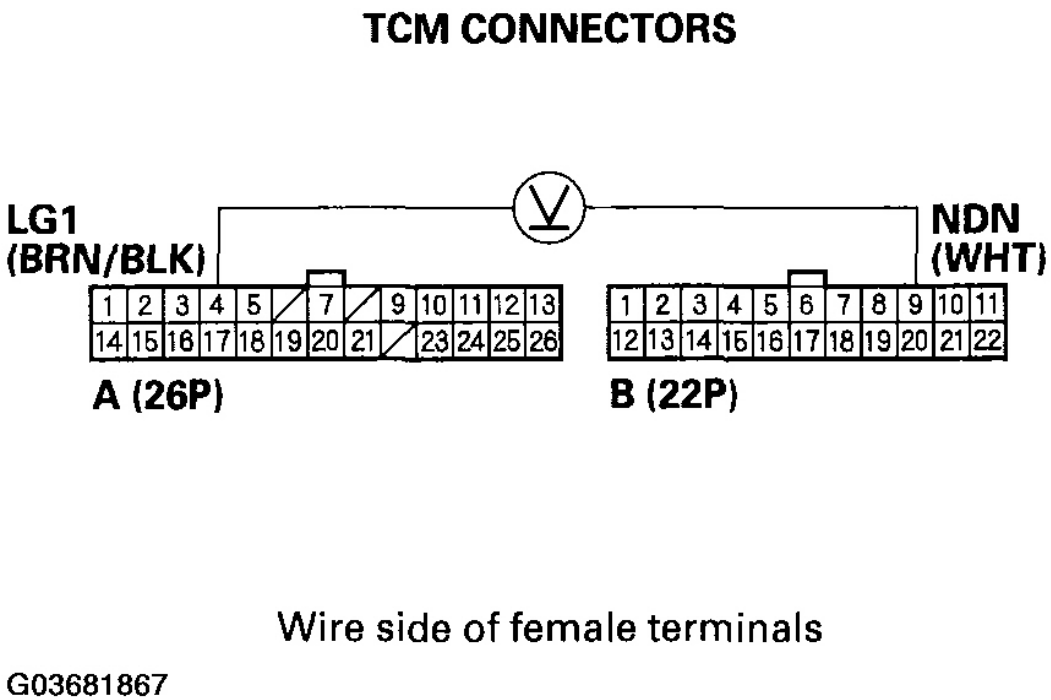


Fig. 166: Measuring Voltage Between TCM Connector Terminals B9 And A4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B9. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminal No. 1 and body ground.

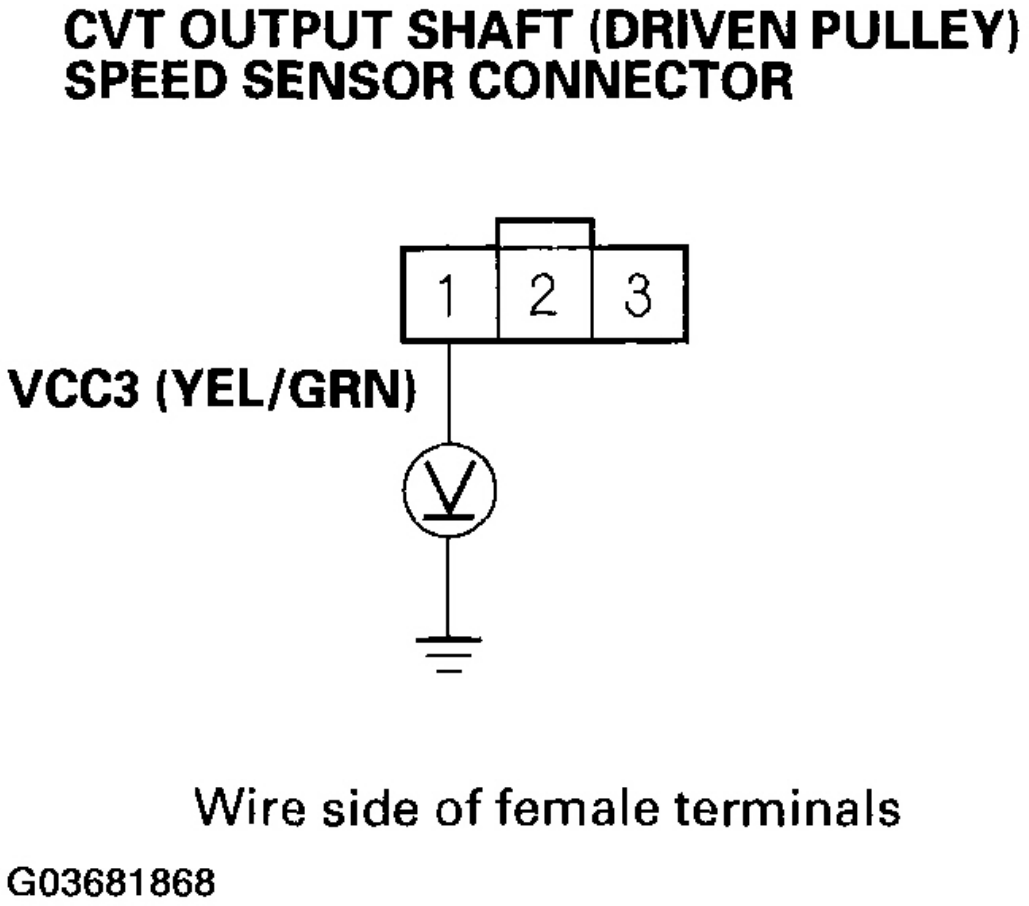


Fig. 167: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 22 .

NO -Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect TCM connector B (22P).
18. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 1 and body ground.

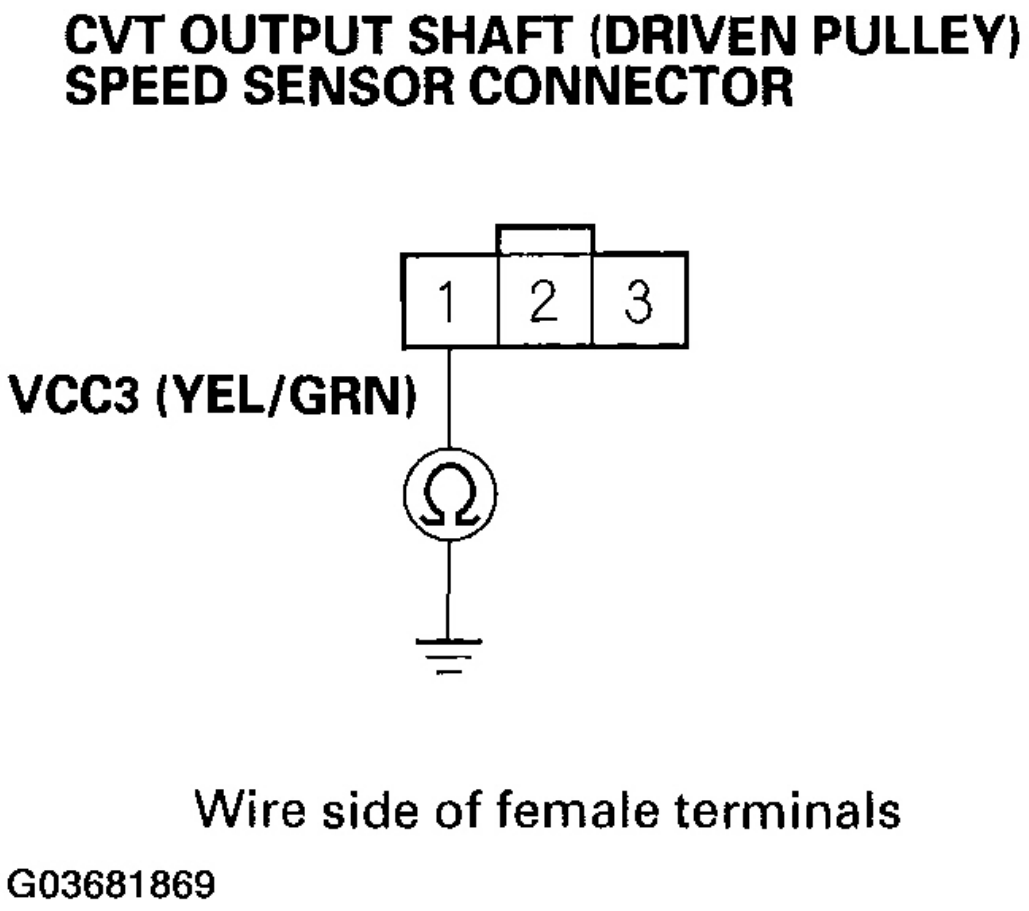


Fig. 168: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 19.

19. Connect TCM connector B (22P).
20. Turn the ignition switch ON (II)
21. Measure the voltage between TCM connector terminals B21 and A4.

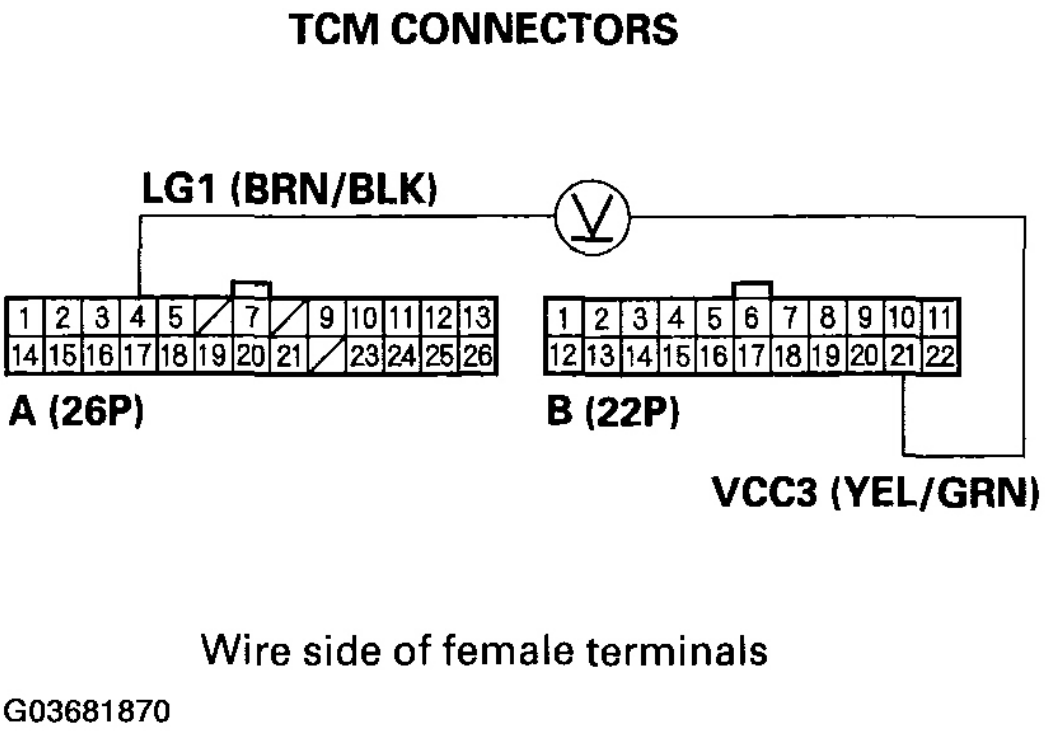


Fig. 169: Measuring Voltage Between TCM Connector Terminals B21 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B21. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

22. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminals No. 1 and No. 3.

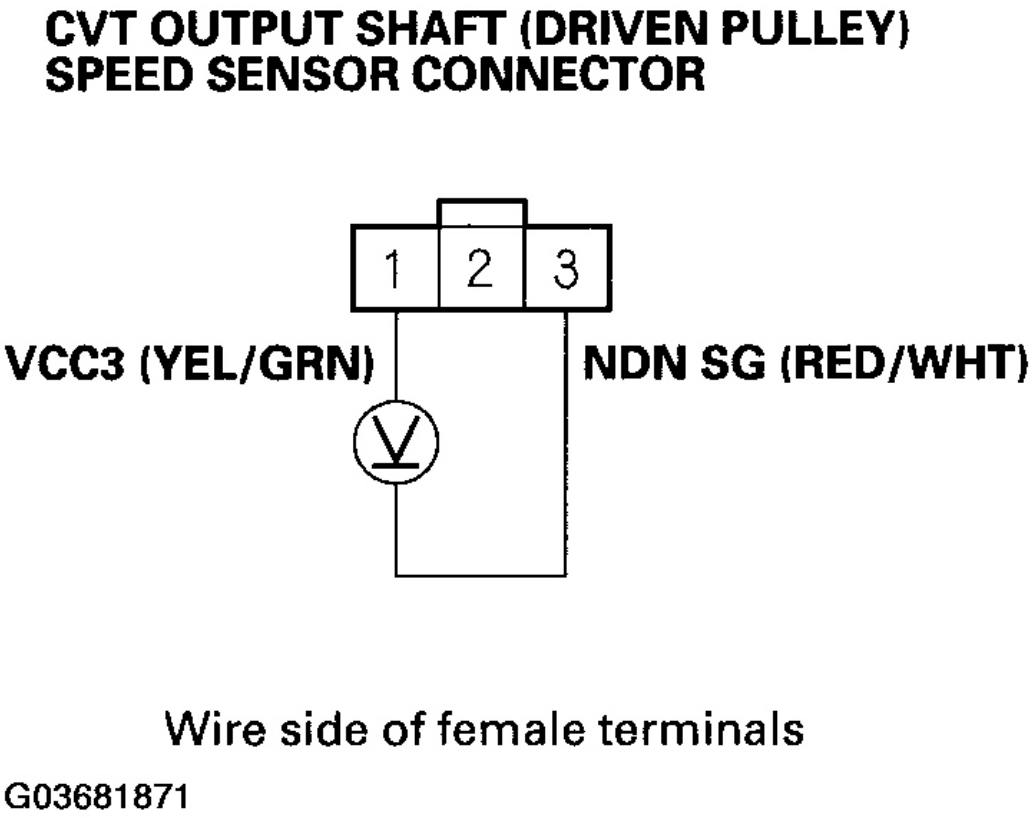


Fig. 170: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Replace the CVT output shaft (driven pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 23.

NO -Repair an open in the wire between TCM connector terminal B8 and the CVT output shaft (driven pulley) speed sensor.

23. Clear the DTC with the HDS.
24. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
25. Check that DTC P0721 recurs.

Is DTC P0721 indicated?

YES -Return to step 1 . and recheck.

NO -Troubleshooting is complete.

DTC P0722: Problem in CVT Output Shaft (Driven Pulley) Speed Sensor Circuit (No Signal Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Start the engine, and press the brake pedal securely.
2. Shift to the D position, and drive the vehicle at engine idle.
3. Check the DRIVEN PULLEY with the HDS in the data list.

Is the DRIVEN PULLEY 0 RPM?

YES -Go to step 4.

NO -Intermittent failure, the system is OK at this time. Check for poor

connections or loose terminals at the CVT output shaft (driven pulley) speed sensor and TCM.

4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

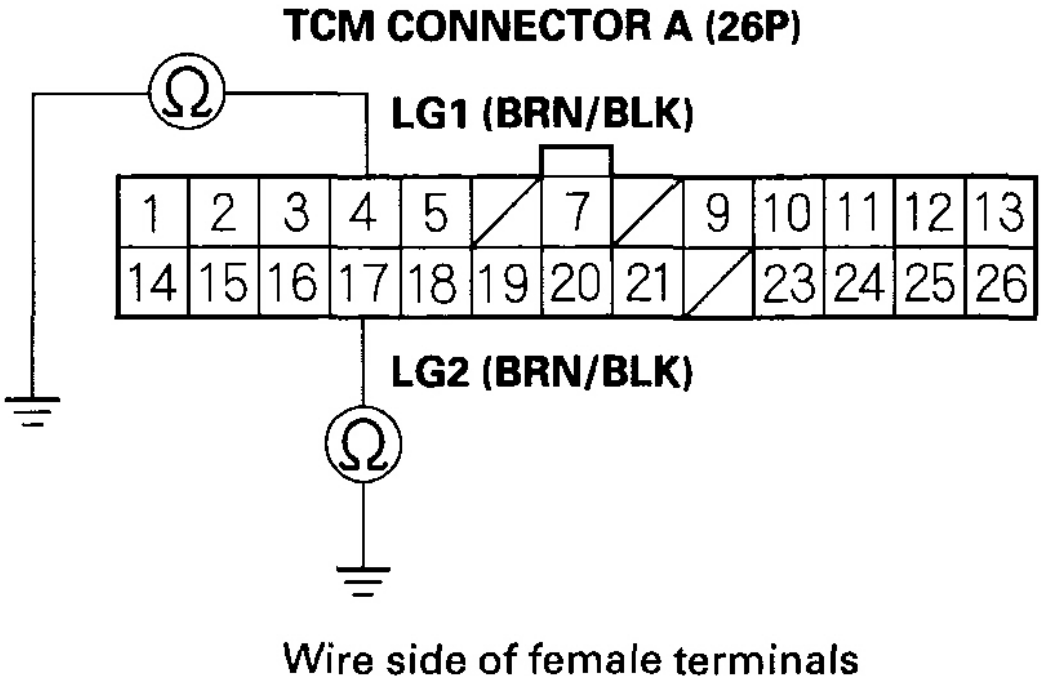


Fig. 171: Checking Continuity Between TCM Connector A (26P) Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G101), or repair poor ground (G101).

6. Disconnect CVT output shaft (driven pulley) speed sensor connector.

7. Turn the ignition switch ON (II).
8. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminal No. 1 and body ground.

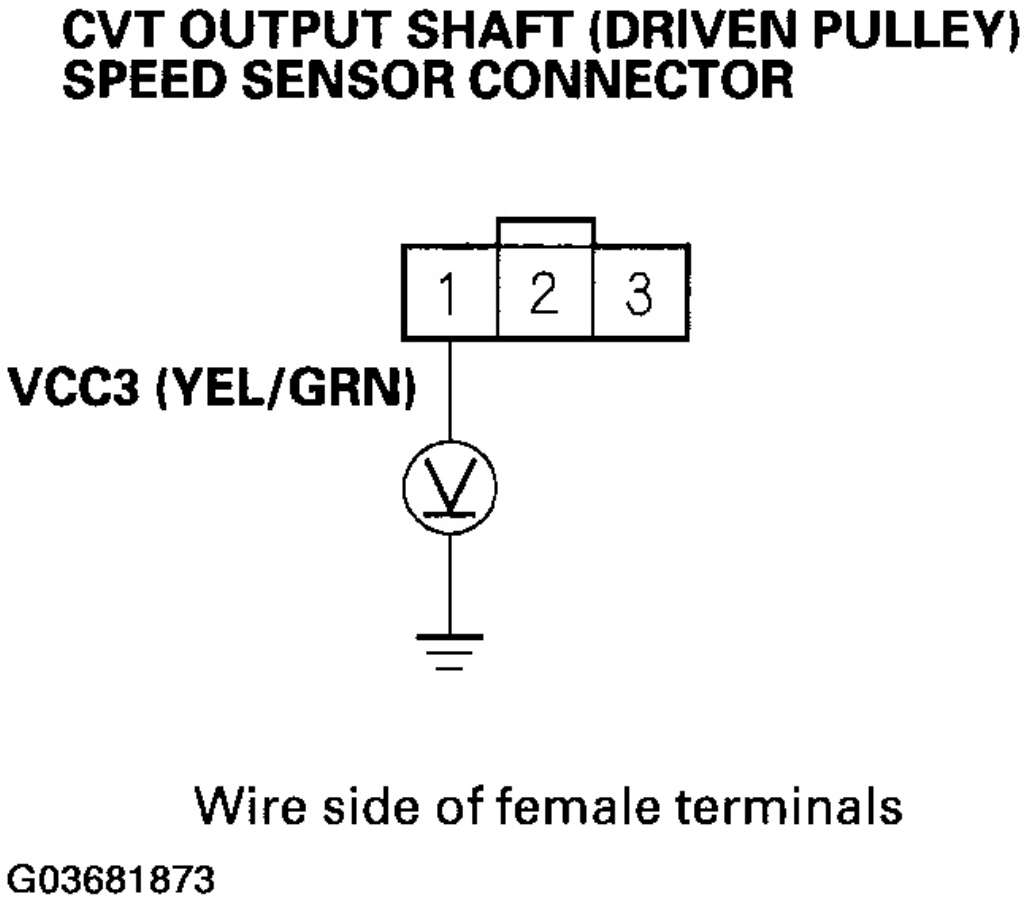


Fig. 172: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 9.

NO -Go to step 19 .

9. Turn the ignition switch OFF.
10. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 2 and body ground.

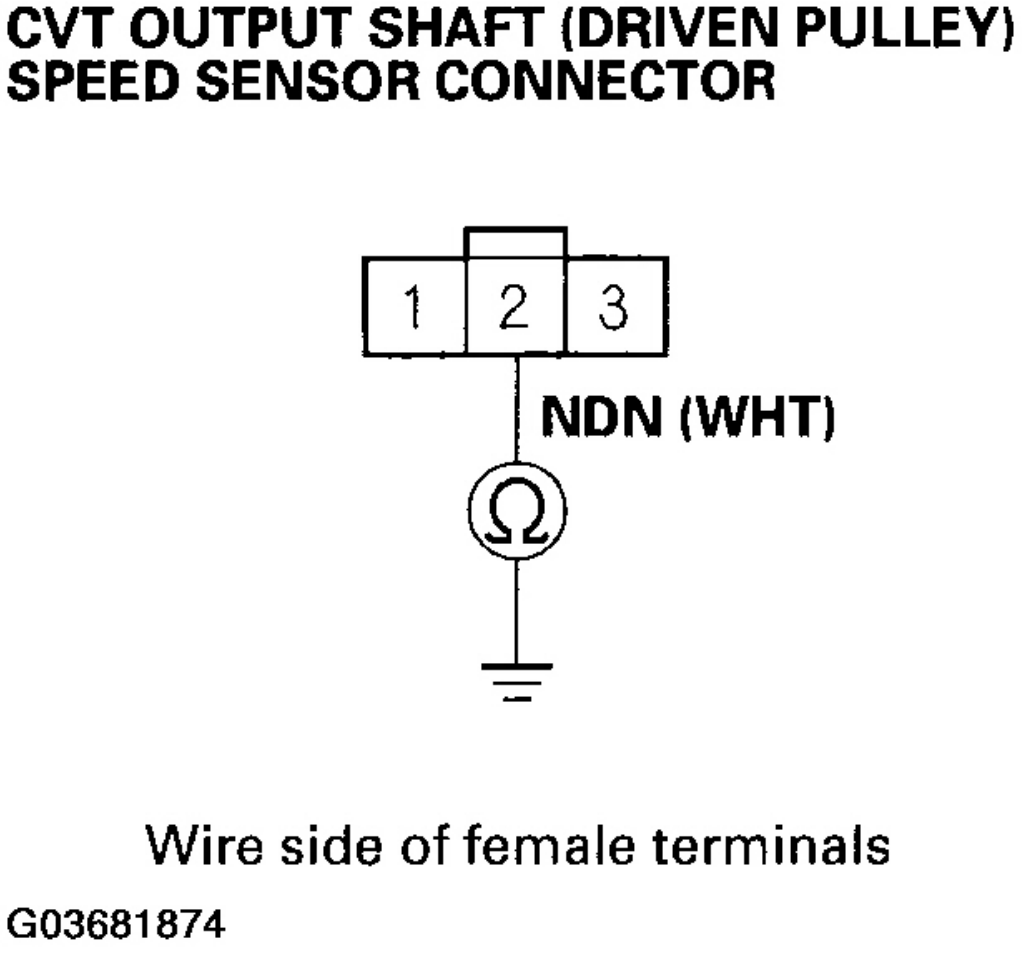


Fig. 173: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector

terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 11.

11. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 3 and body ground.

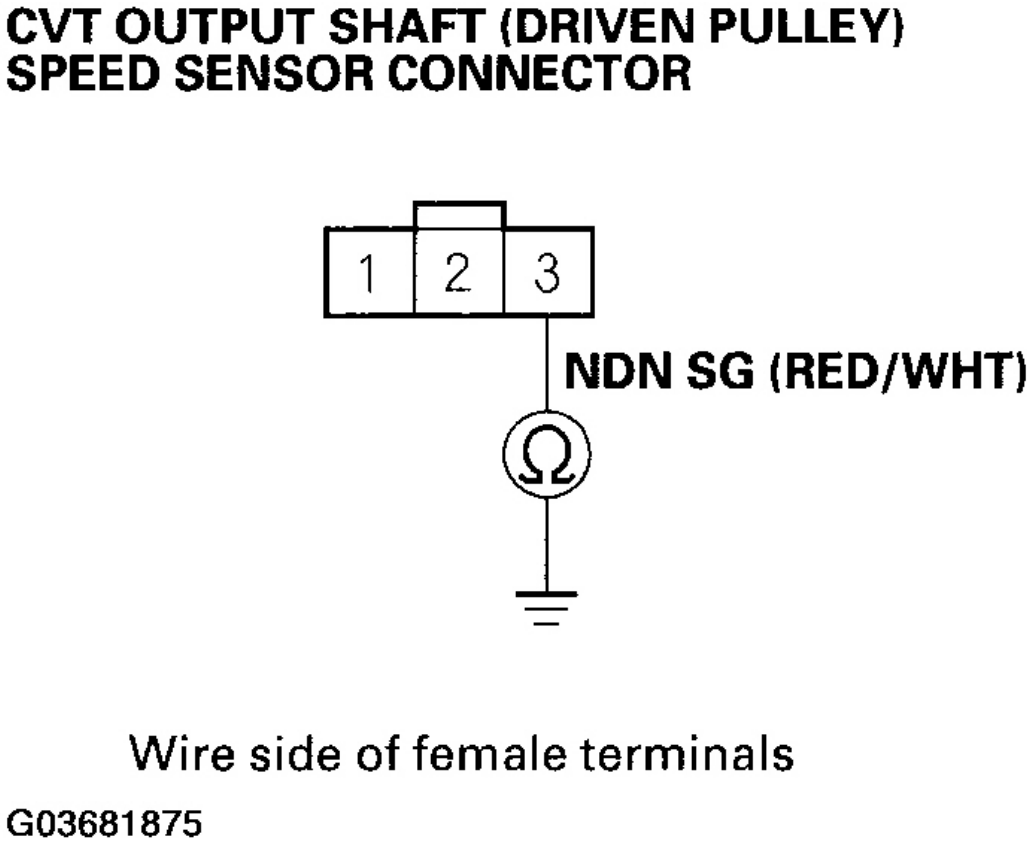


Fig. 174: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 12.

NO -Repair loose terminal or open in the wire between TCM connector

terminal B8 and the CVT output shaft (driven pulley) speed sensor.

12. Turn the ignition switch ON (II).
13. Measure the voltage between CVT output shaft (driven pulley) speed sensor connector terminals No. 2 and No. 3.

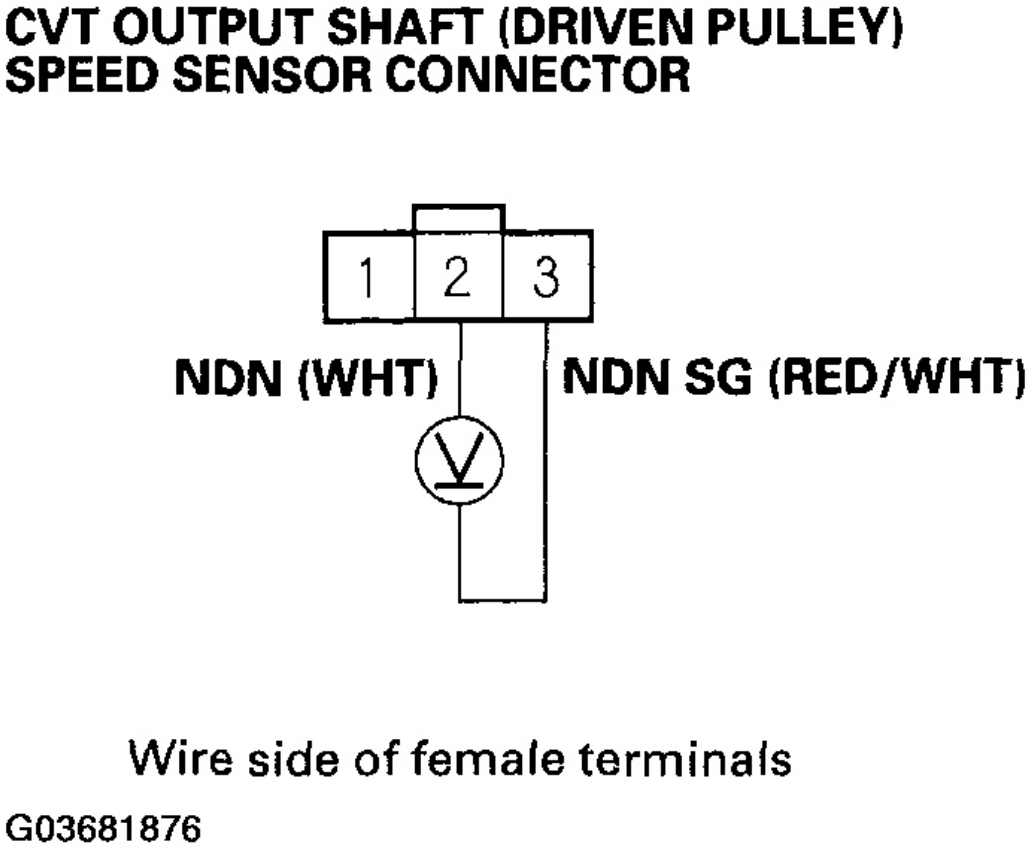


Fig. 175: Measuring Voltage Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminals 2 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 14.
NO -Go to step 25 .

14. Connect CVT output shaft (driven pulley) speed sensor connector.
15. Measure the voltage between TCM connector terminals B9and B8.

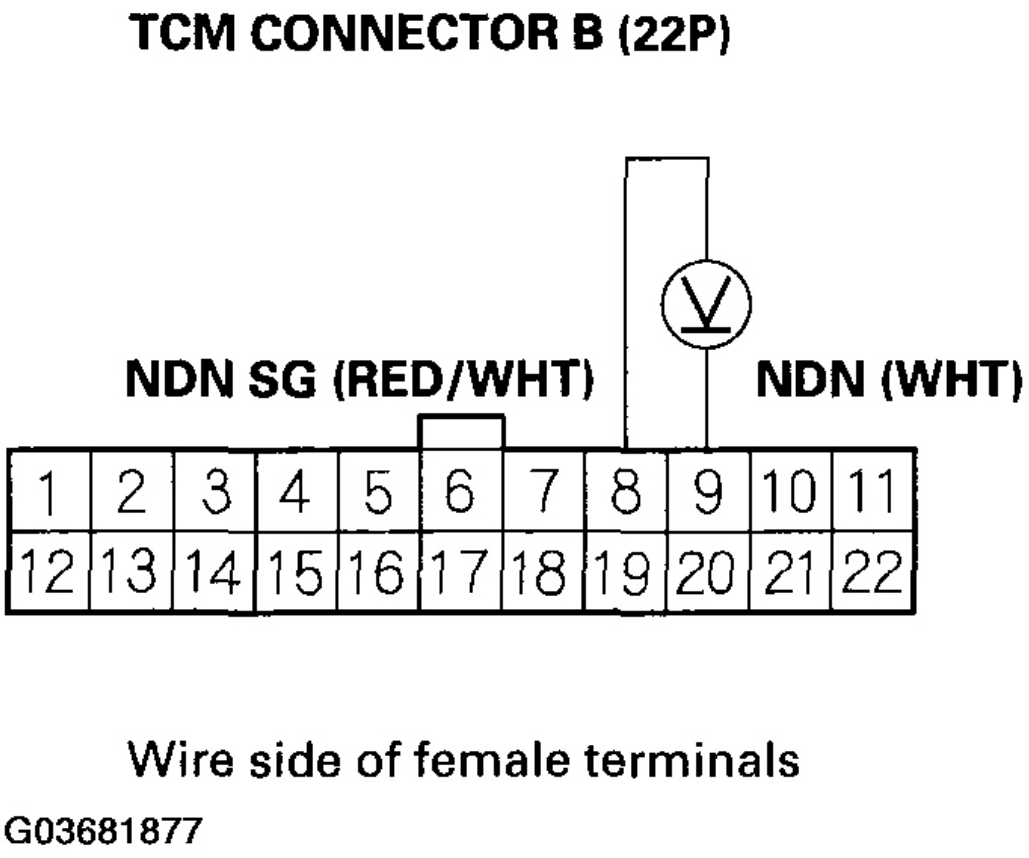


Fig. 176: Measuring Voltage Between TCM Connector B (22P) Terminals B9 And B8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about OV or about 5 V?

YES -Go to step 16.

NO -Replace the CVT output shaft (driven pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 26 .

16. Raise the front of the vehicle, make sure it is securely supported, and allow the

front wheels to rotate freely.

17. Start the engine, shift to the D position, and drive the vehicle at engine idle.
18. Measure the voltage between TCM connector terminals B9 and B8.

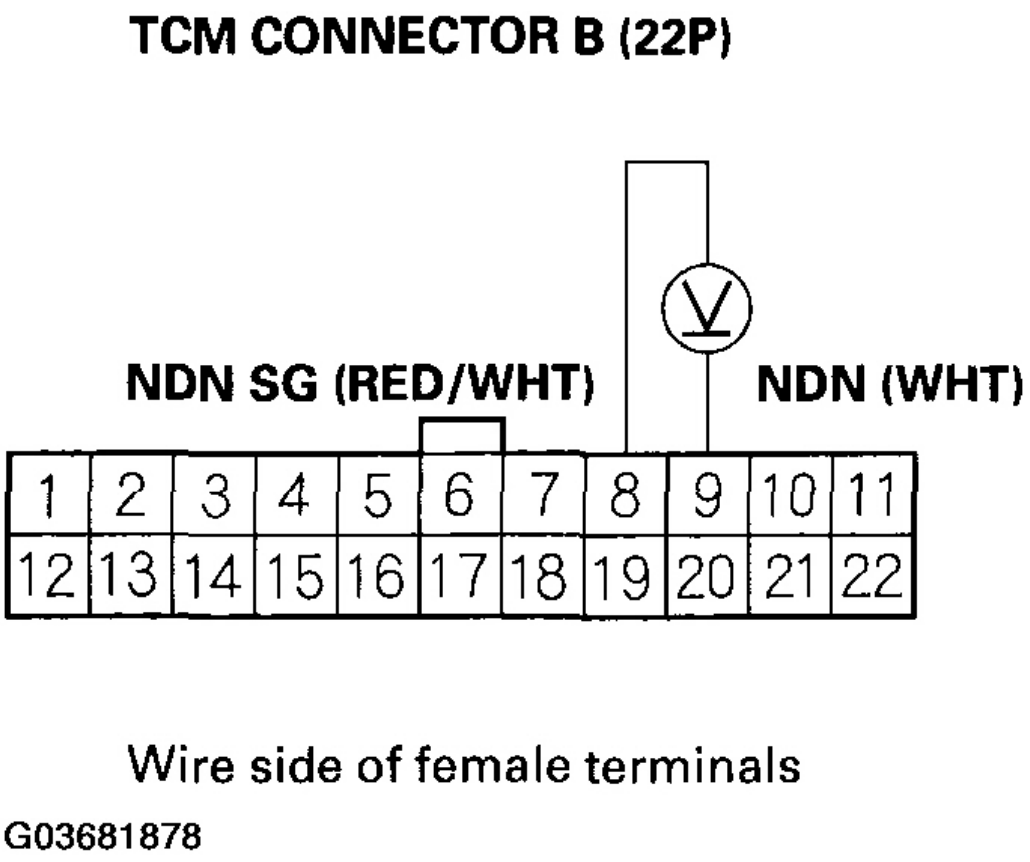


Fig. 177: Measuring Voltage Between TCM Connector B (22P) Terminals B9 And B8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 1.5-3.5 V?

YES -Check for loose or poor connections at TCM connector terminals B9 and B8. If the connections are OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then

recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Replace the CVT output shaft (driven pulley) speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 26 .

19. Turn the ignition switch OFF.
20. Disconnect TCM connector B (22P).
21. Check for continuity between CVT output shaft (driven pulley) speed sensor connector terminal No. 1 and body ground.

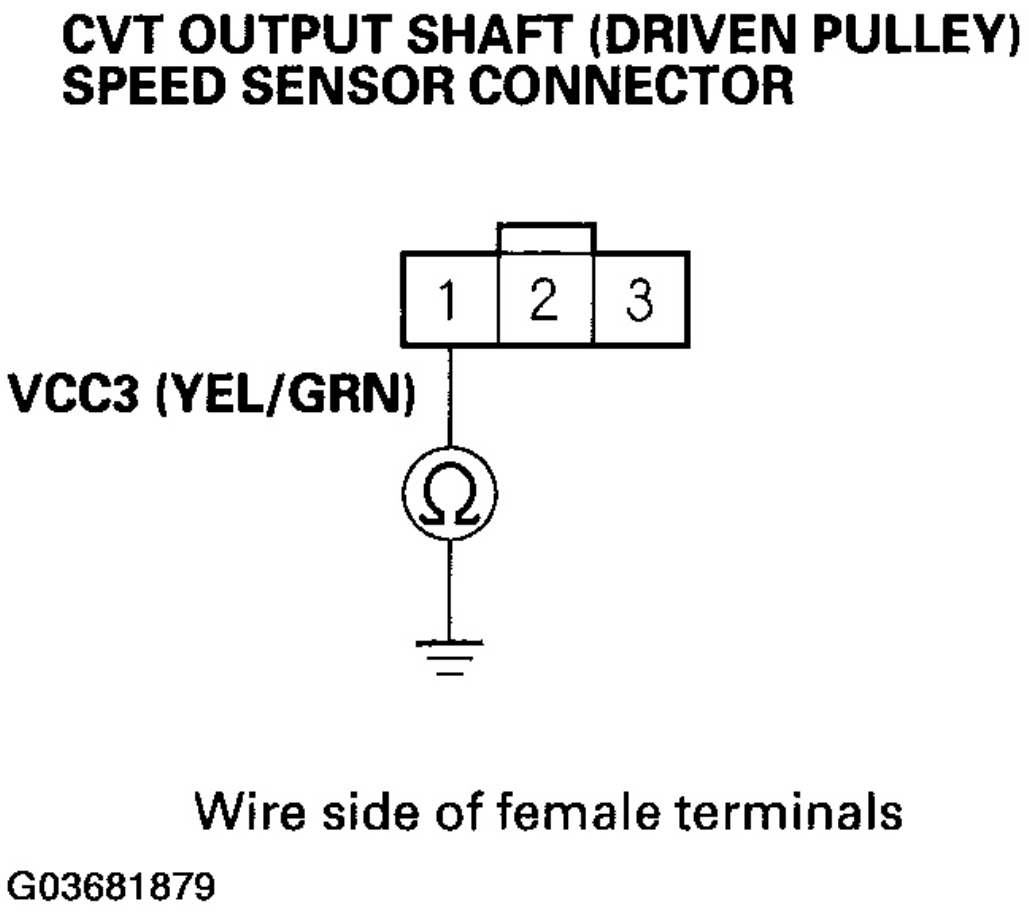


Fig. 178: Checking Continuity Between CVT Output Shaft (Driven Pulley) Speed Sensor Connector Terminal 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Go to step 22.

22. Connect TCM connector B (22P).
23. Turn the ignition switch ON (II).
24. Measure the voltage between TCM connector terminals B21 and A4.

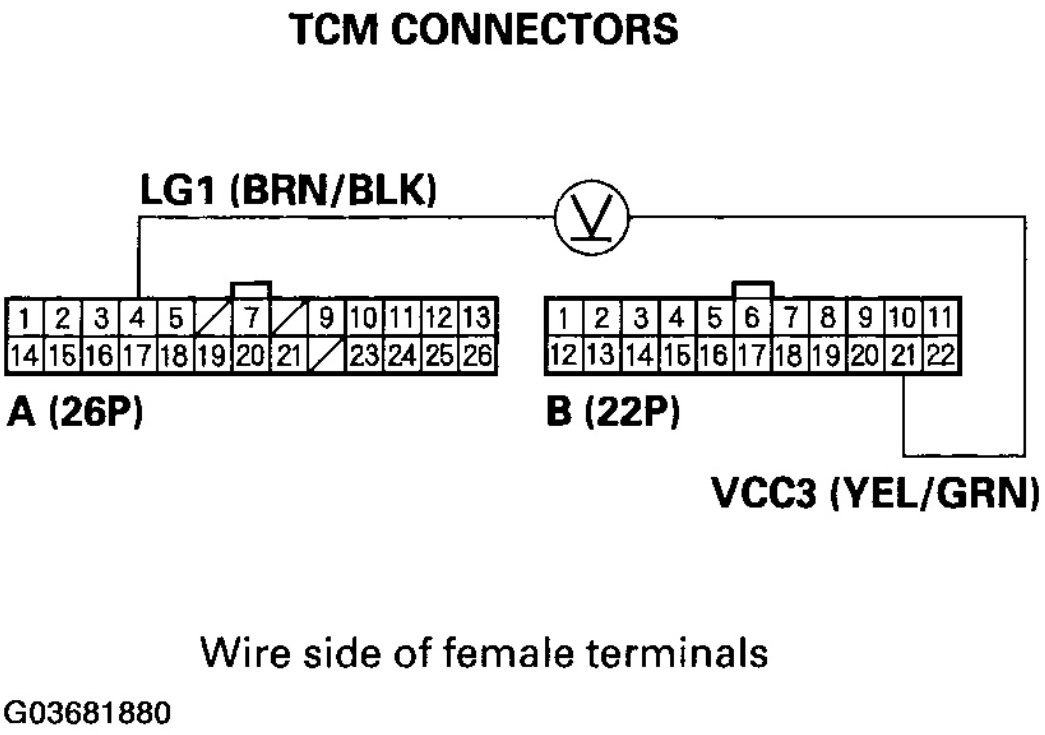


Fig. 179: Measuring Voltage Between TCM Connector Terminals B21 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B21 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B21. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

25. Measure the voltage between TCM connector terminals B9 and B8.

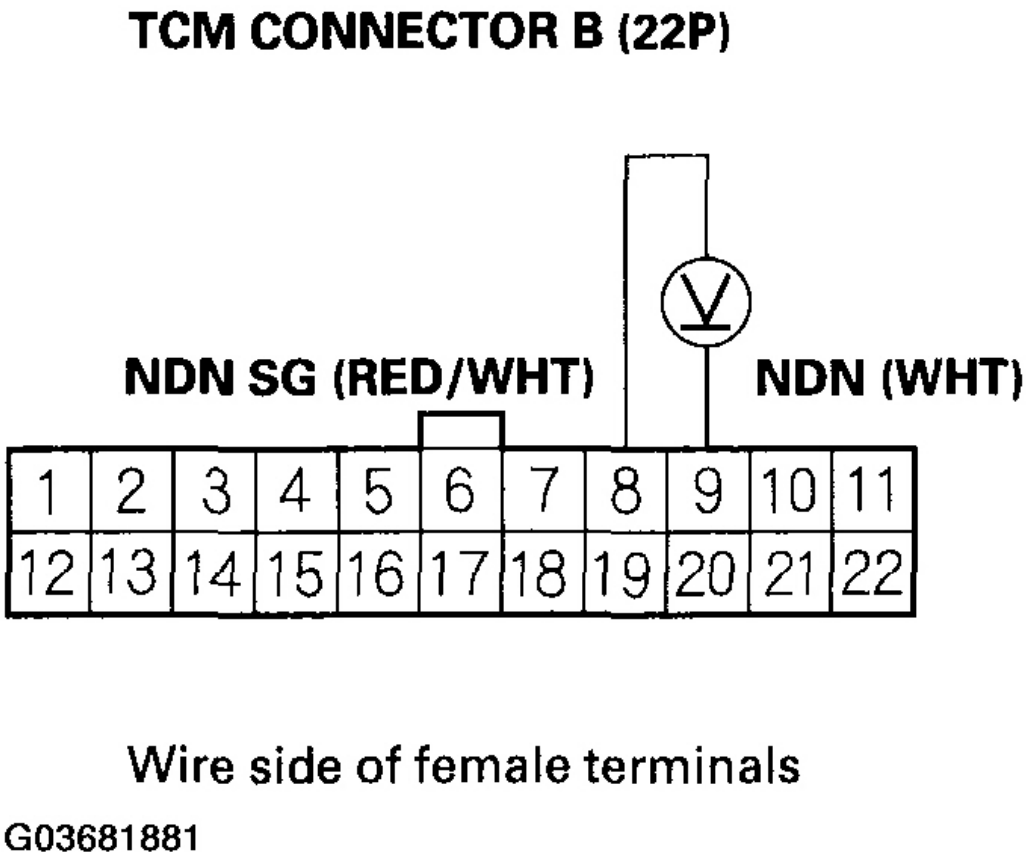


Fig. 180: Measuring Voltage Between TCM Connector B (22P) Terminals B9 And B8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B9 and the CVT output shaft (driven pulley) speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B9. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

26. Clear the DTC with the HDS.
27. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
28. Check that DTC P0722 recurs. Is DTC P0722 indicated?

    YES -Return to step 1 . and recheck.

    NO -Troubleshooting is complete.

DTC P0726: Range/Performance Problem in Engine RPM Signal Input Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and shift into the D position. Push on the accelerator pedal until the rotational speed of the DRIVE PULLEY is the same speed as indicated by the freeze data.
3. Monitor the ENGINE SPEED and DRIVE PULLEY with the HDS in the data list.

Do the ENGINE SPEED and DRIVE PULLEY signals fluctuate with the same speed?

YES -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge assembly and TCM.

NO -Go to step 4.

4. Check the tachometer in the gauge assembly operation.

Does the tachometer operate properly?

YES -Go to step 5.

NO -Replace the gauge assembly (see **GAUGE ASSEMBLY REPLACEMENT**).

5. Turn the ignition switch OFF.
6. Disconnect TCM connector A (26P).
7. Disconnect ECM connector A (32P).
8. Check for continuity between TCM connector terminal A5 and ECM connector A19.

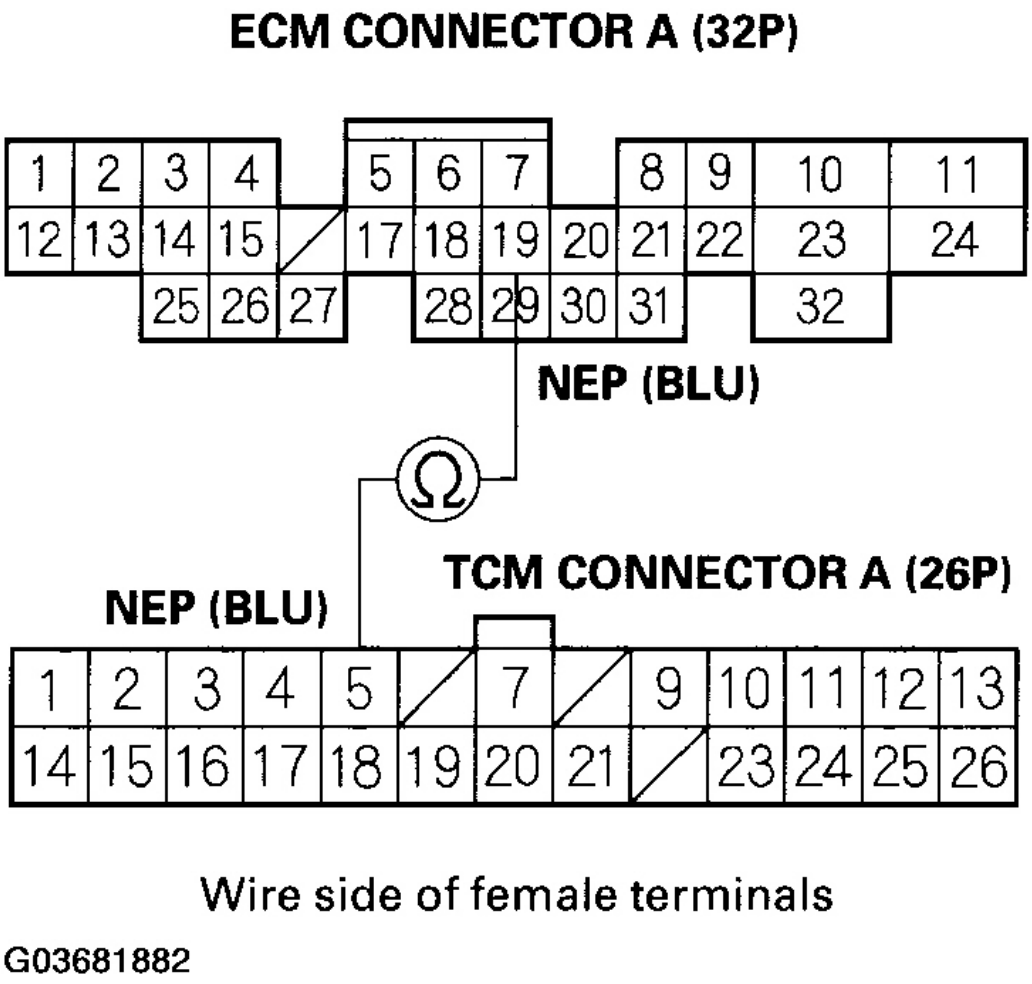


Fig. 181: Checking Continuity Between TCM Connector Terminal A5 And ECM Connector A19
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose or poor connections at TCM connector terminal A5 and ECM connector terminal A19. If the connections are OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM connector terminal A5 and ECM connector terminal A19.

DTC P0727: Problem in Engine RPM Signal Input Circuit (No Signal Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Start the engine.
2. Check the ENGINE SPEED with the HDS in the data list.

   Is the ENGINE SPEED 128 RPM or less?

   YES -Go to step 3.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge assembly and TCM.
3. Check the tachometer in the gauge assembly operation.

   Does the tachometer operate properly?

   YES -Go to step 4.

   NO -Replace the gauge assembly (see **GAUGE ASSEMBLY REPLACEMENT**).
4. Turn the ignition switch OFF.
5. Disconnect TCM connector A (26P).
6. Disconnect ECM connector A (32P).
7. Check for continuity between TCM connector terminal A5 and ECM connector A19.

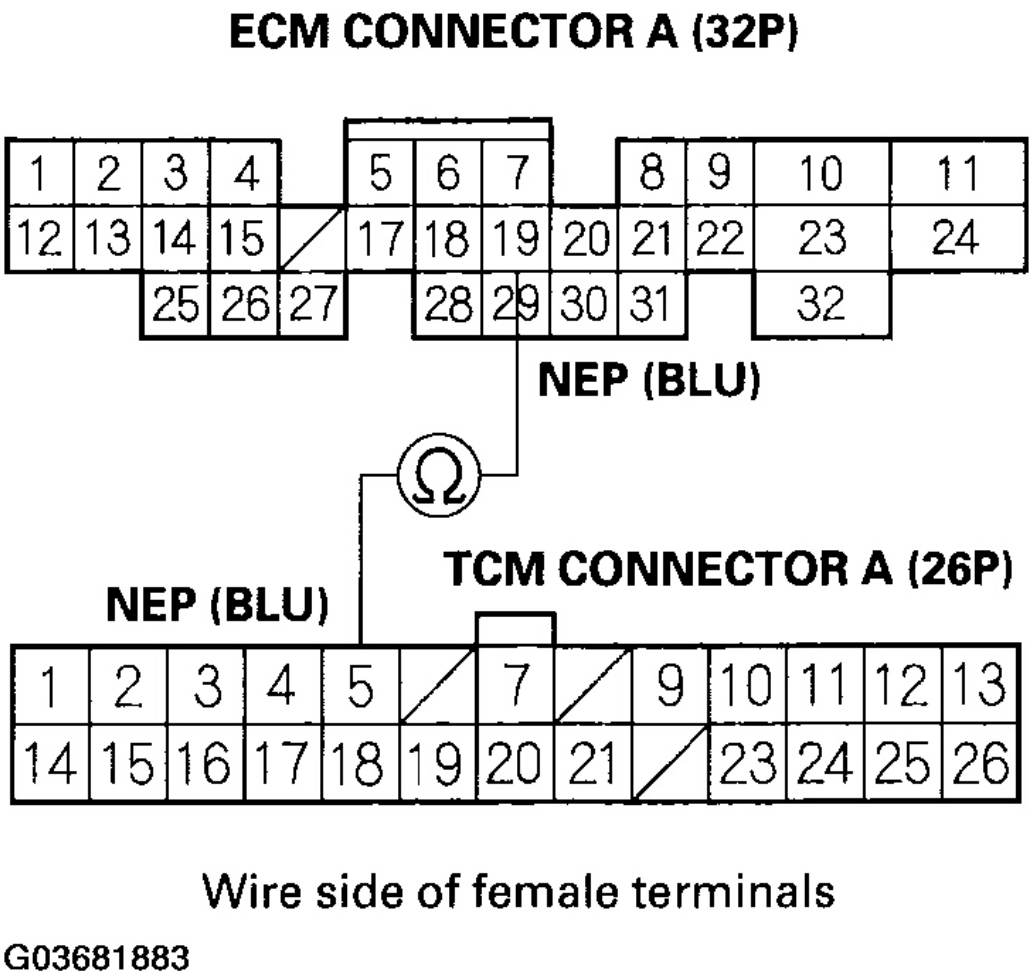


Fig. 182: Checking Continuity Between TCM Connector Terminal A5 And ECM Connector A19
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose or poor connections at TCM connector terminal A5 and ECM connector terminal A19. If the connections are OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM connector terminal A5 and ECM connector terminal A19.

DTC P0780: Problem in Shift Control System

2005-2006 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

1. Check whether the HDS indicates another code.

   Does the HDS indicate another code?

   YES -Do the DTC Troubleshooting for the indicated code(s). Recheck for DTC P0780 after troubleshooting.

   NO -Go to step 2.
2. Measure the stall speed RPM in the D position (see **STALL SPEED TEST**).

   Is the stall speed over 3,500 RPM?

   YES -Replace the transmission.

   NO -If the stall speed is below 2,000 RPM, replace the lower valve body assembly. If the stall speed is 2,000-3,500 RPM, go to step 3.
3. Drive the vehicle at 37 mph (60 km/h) constantly for several minutes, and check the engine speed with respect to vehicle speed (see **ROAD TEST**).

   Is the engine speed within specification?

   YES -Replace the lower valve body assembly.

   NO -Replace the transmission.

DTC P0801: Problem in Inhibitor Solenoid Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect the solenoid harness connector (8P).
3. Measure the resistance between solenoid harness connector (8P) terminals No. 5 and body ground.

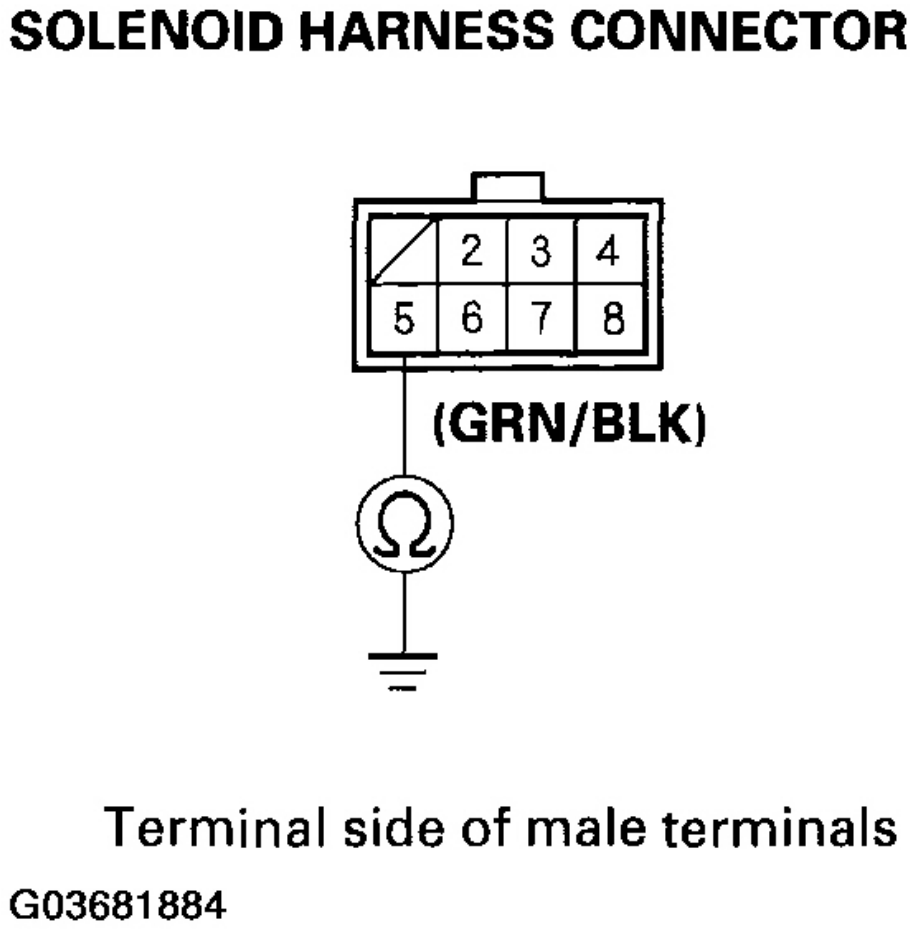


Fig. 183: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the resistance 11.7-21.0 ohm?

YES -Go to step 4.

NO -Remove the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**), and check for an open or a short in the solenoid harness. If the wire is OK, replace the inhibitor solenoid (see **INHIBITOR SOLENOID REPLACEMENT**).

4. Disconnect TCM connector B (22P).
5. Check for continuity between TCM connector terminal B1 and body ground.

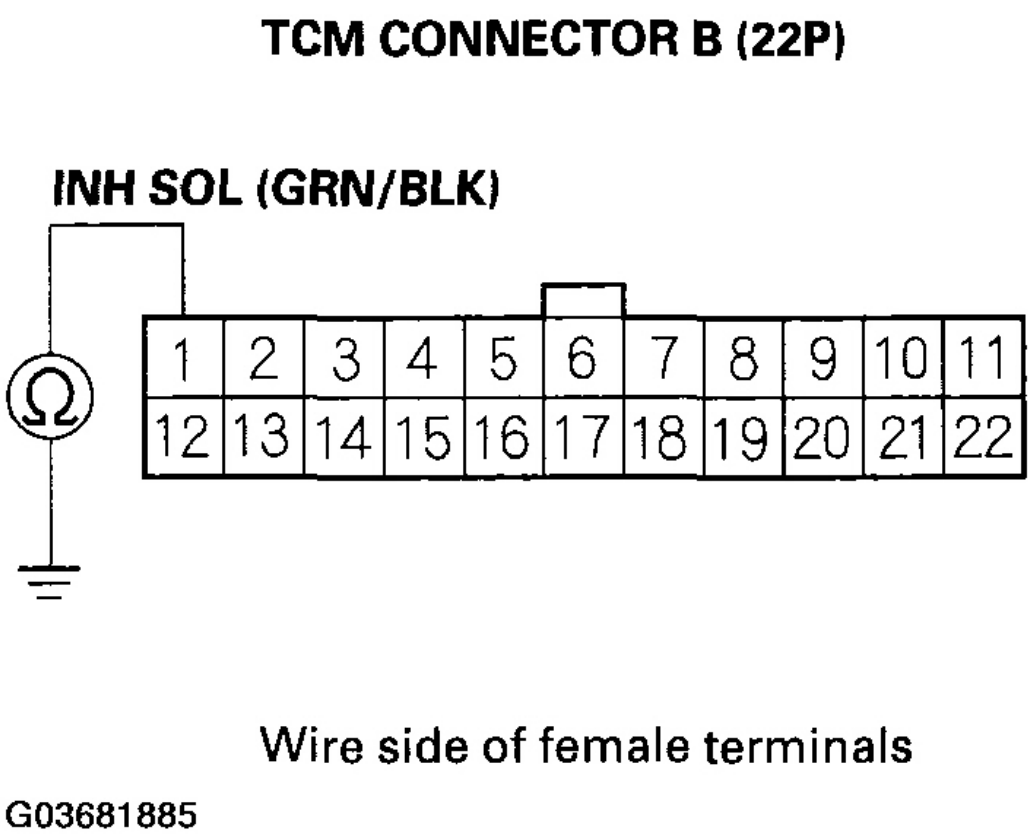


Fig. 184: Checking Continuity Between TCM Connector B (22P) Terminal B1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B1 and the solenoid harness connector (8P).

NO -Go to step 6.

6. Connect the solenoid harness connector (8P).

7. Measure the resistance between TCM connector terminal B1 and body ground.

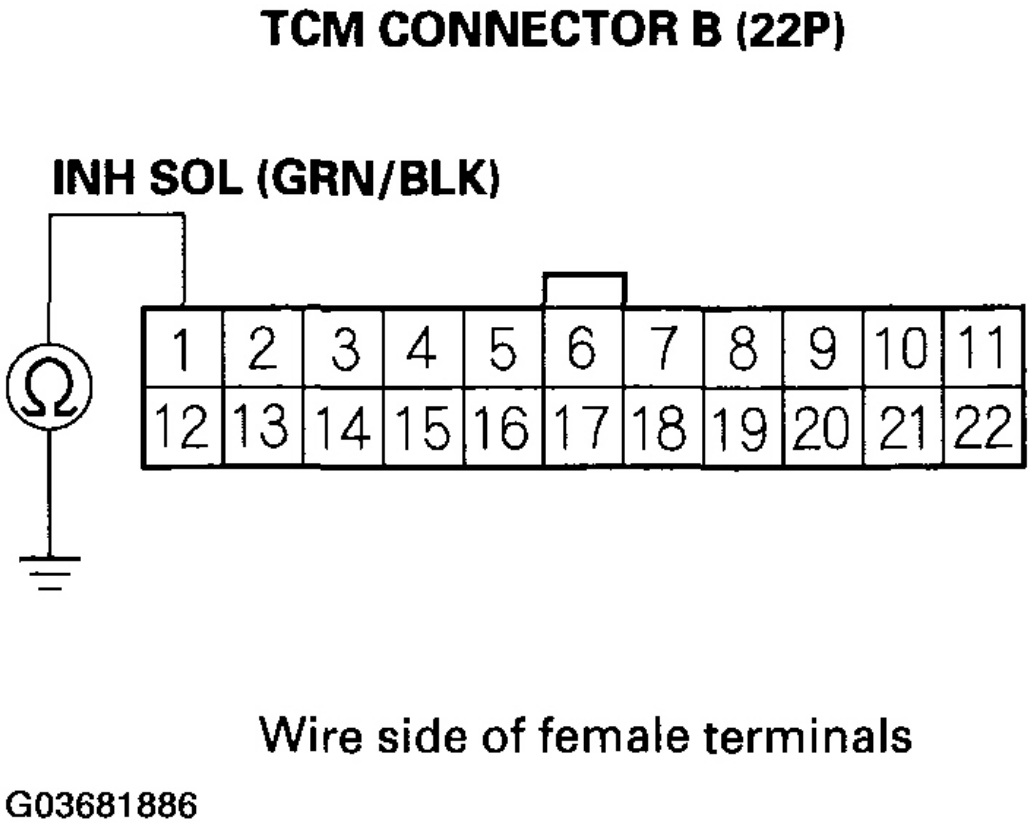


Fig. 185: Measuring Resistance Between TCM Connector B (22P) Terminal B1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 11.7-21.0 ohm?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/ indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM connector terminal B1 and the solenoid harness connector (8P).

DTC P0811: Problem in Start Clutch Control System

2005-2006 Models

NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

1. Check whether the HDS indicates another code.

   Does the HDS indicate the another code?

   YES -Do the DTC Troubleshooting for the indicated code(s). Recheck for DTC P0811 after troubleshooting.

   NO -Go to step 2.
2. Warm up the engine to normal operating temperature (the radiator fan comes on), if necessary.
3. Turn the ignition switch OFF.
4. Disconnect solenoid harness connector (8P).
5. Start the engine, and shift to the D position.
6. Check whether the vehicle moves.

   Does the vehicle move?

   YES -Go to step 7.

   NO -Replace the start clutch.
7. Turn the ignition switch OFF.
8. Connect solenoid harness connector (8P).
9. Start the engine, and shift to the D position.
10. Check whether the vehicle creeps and check the creeping speed on level ground.

    Does the vehicle creep and is the creeping speed about 3 mph (5 km/h)?

    YES -Go to step 11.

NO -Replace the lower valve body assembly.

11. Measure the stall speed RPM in the D position.

Is the stall speed over 3,500 RPM?

YES -Replace the start clutch or transmission.

NO -The system is OK at this time. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck.

DTC P0962: CVT Drive Pulley Pressure Control Valve Circuit Low Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0962 recurs.

Is DTC P0962 indicated?

YES -Go to step 3.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT drive pulley pressure control valve.

3. Turn the ignition switch OFF.
4. Disconnect the solenoid harness connector (8P).
5. Measure the resistance between solenoid harness connector (8P) terminals No. 3 and No. 7.

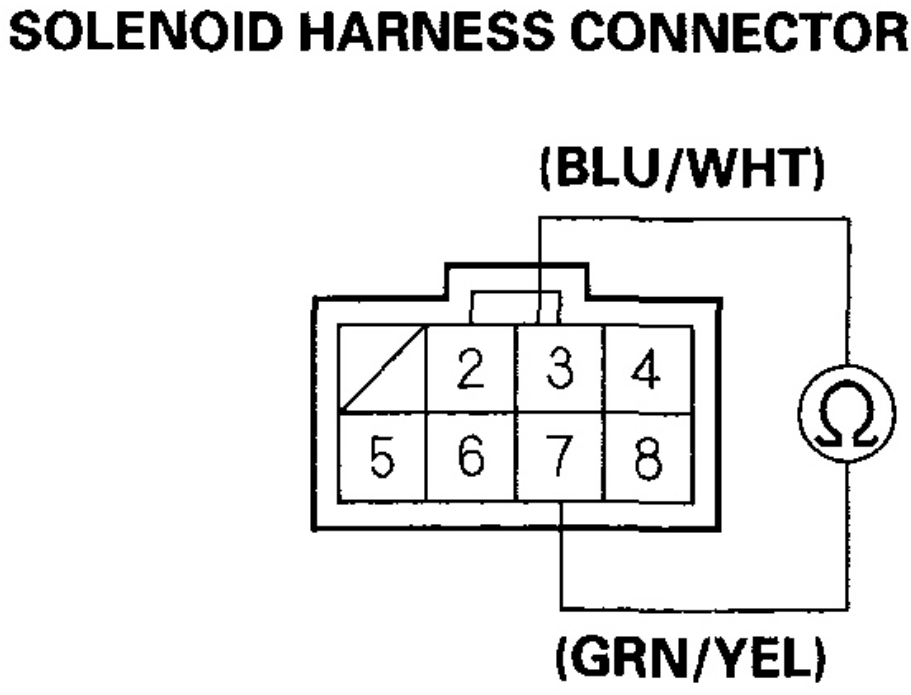


Fig. 186: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 3 And 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 6.

NO -Remove the lower valve body c, and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT drive pulley pressure control valve (see)**CVT START CLUTCH PRESSURE CONTROL VALVE REPLACEMENT** , then go to step 11 .

6. Disconnect TCM connector A (26P).
7. Check for continuity between TCM connector terminal A3 and body ground, and between A16 and body ground.

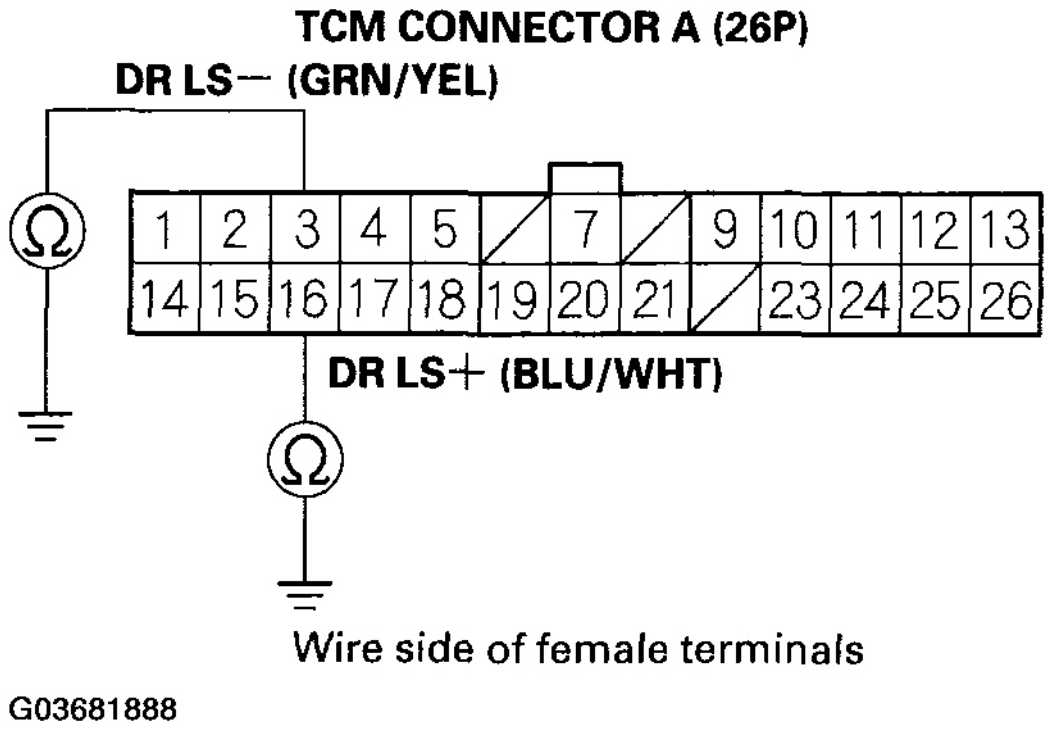


Fig. 187: Checking Continuity Between TCM Connector Terminal A3, A16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminals A3 and the solenoid harness connector, or between A16 and the connector.

NO -Go to step 8.

8. Connect the solenoid harness connector (8P).
9. Measure the resistance between TCM connector terminals A3 and A16.

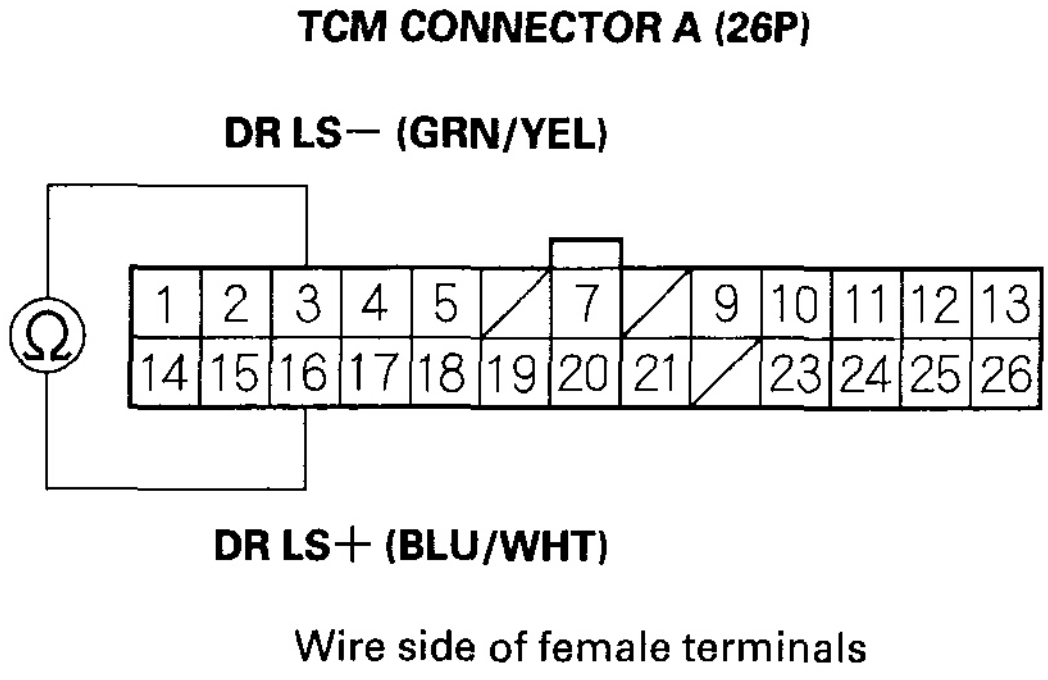


Fig. 188: Measuring Resistance Between TCM Connector A (26P) Terminals A3 And A16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 10.

NO -Repair an open in the wire between TCM connector terminal A3 and the solenoid harness connector, or between A16 and the connector.

10. Check for continuity between TCM connector terminals A4 and body ground, A13 and body ground, A17 and body ground, and between A26 and body ground.

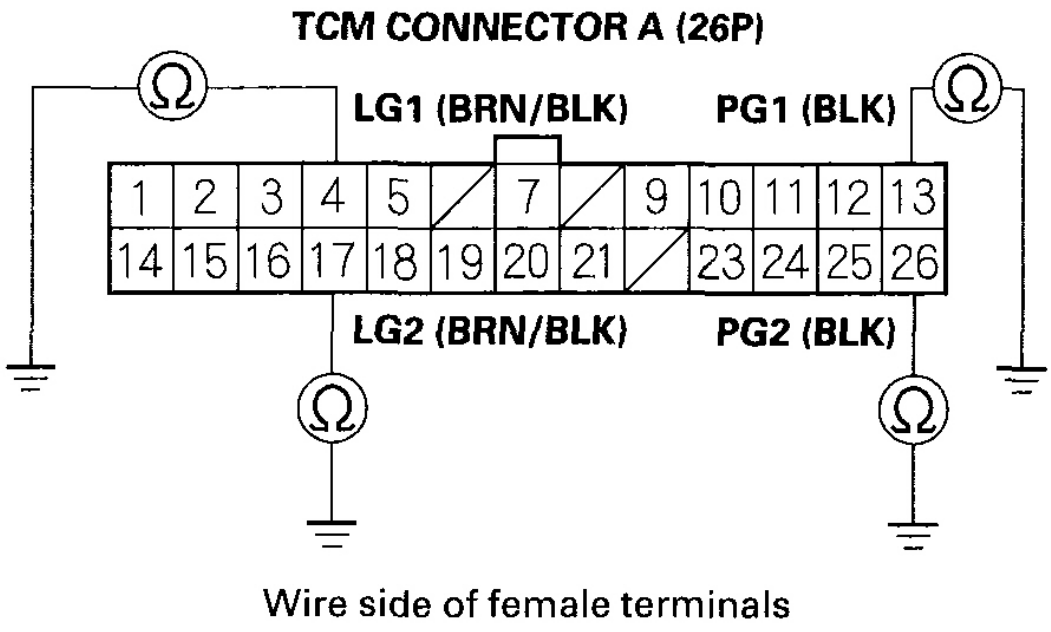


Fig. 189: Checking Continuity Between TCM Connector Terminals A4, A17, A13 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wires between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

11. Clear the DTC with the HDS.
12. Check that DTC P0962 recurs.

Is DTC P0962 indicated?

YES -Return to step 3 . and recheck.

NO -Troubleshooting is complete.

DTC P0963: CVT Drive Pulley Pressure Control Valve Circuit High Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0963 recurs.

   Is DTC P0963 indicated?

   YES -Go to step 3.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT drive pulley pressure control valve.
3. Turn the ignition switch OFF.
4. Disconnect the solenoid harness connector (8P).
5. Measure the resistance between solenoid harness connector (8P) terminals No. 3 and No. 7.

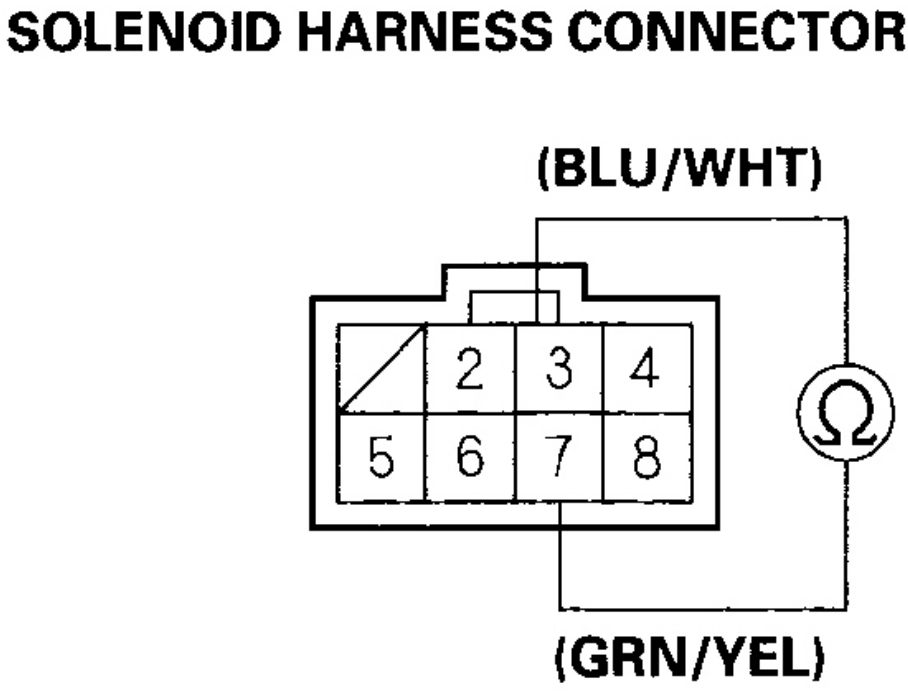


Fig. 190: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 3 And 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8-6.8 ohm?

YES -Go to step 6.

NO -Remove the lower valve body (see)**LOWER VALVE BODY ASSEMBLY REPLACEMENT** , and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT drive pulley pressure control valve (see **CVT DRIVE PULLEY PRESSURE CONTROL**

VALVE REPLACEMENT), then go to step 11 .

6. Disconnect TCM connector A (26P).
7. Turn the ignition switch ON (II).
8. Check for the voltage between TCM connector terminals A3 and body ground, and between A16 and body ground.

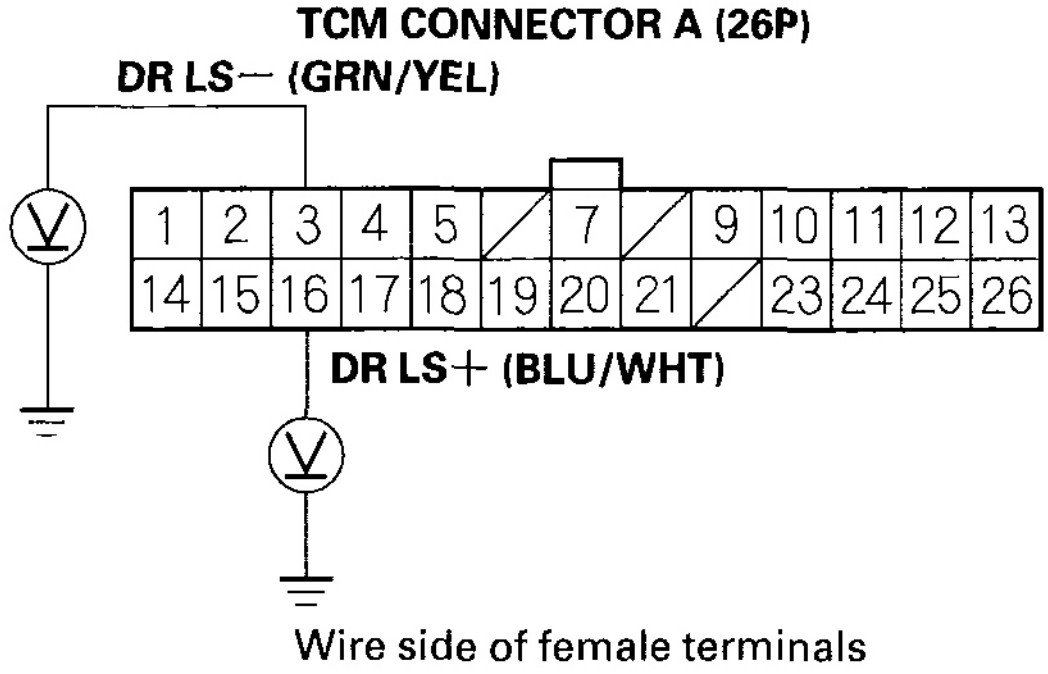


Fig. 191: Checking Voltage Between TCM Connector Terminals A3, A16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wires between TCM connector terminals A3, A16, and the solenoid harness connector.

NO -Go to step 9.

9. Check for continuity between TCM connector terminals A3 and body ground,

and between A16 and body ground.

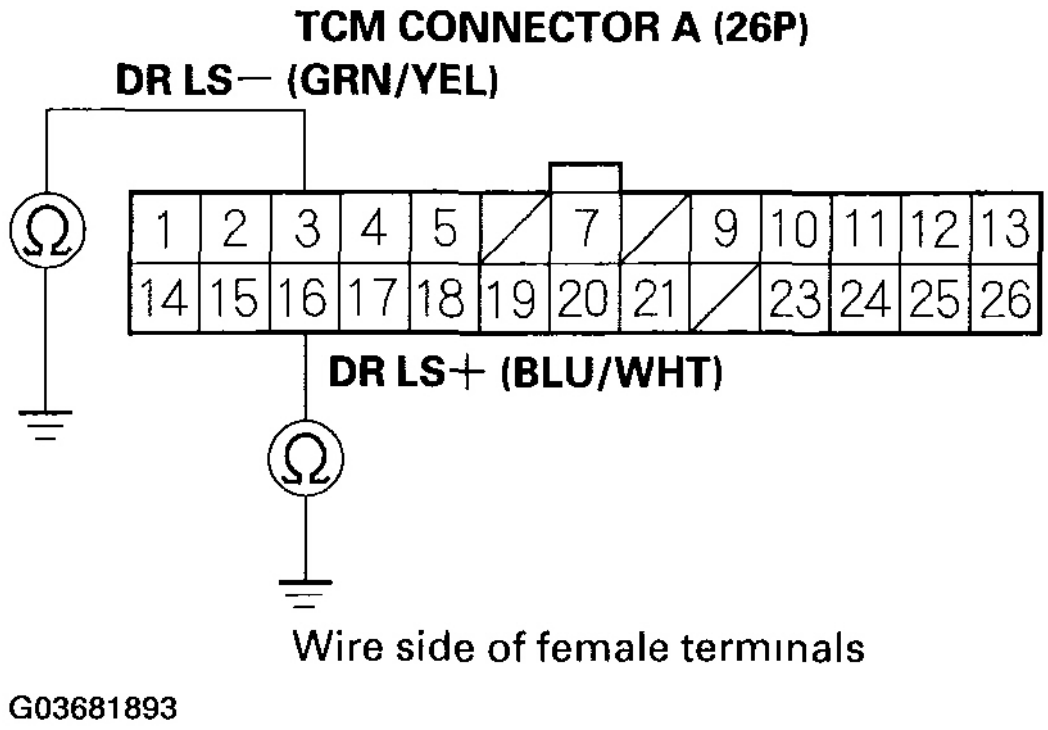


Fig. 192: Checking Continuity Between TCM Connector Terminals A3, A16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminals A3 and the solenoid harness connector, or between A16 connector.

NO -Go to step 10.

10. Check for continuity between TCM connector terminals A4 and body ground, A3 and body ground, A17 and body ground, and between A26 and body ground.

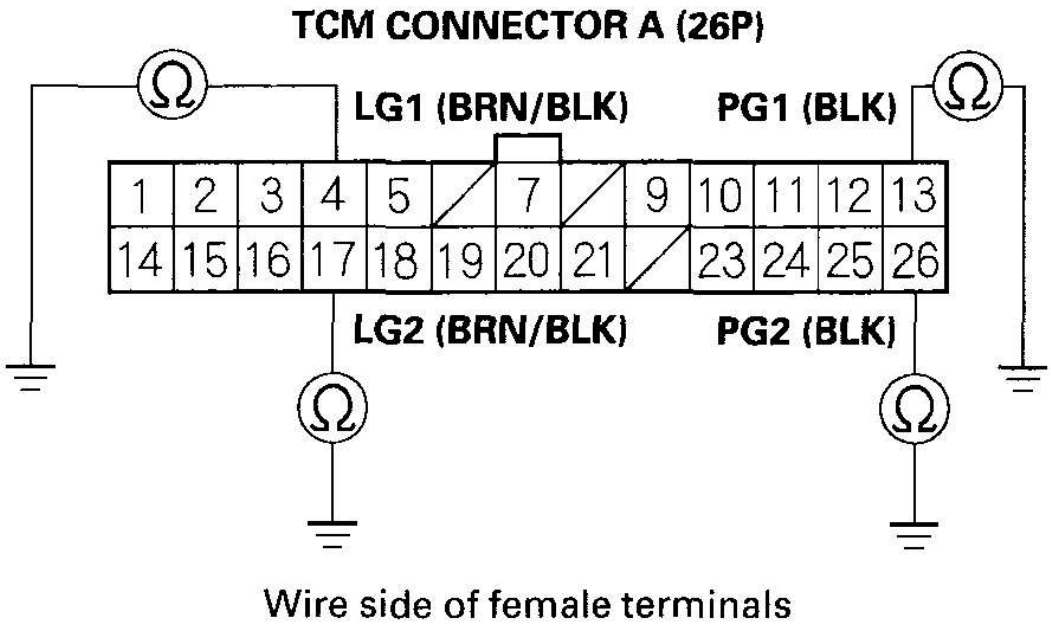


Fig. 193: Checking Continuity Between TCM Connector Terminals A4, A13, A17, A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then a know-good TCM, replace the original TCM

NO -Repair an open in the wires between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

11. Clear the DTC with the HDS.
12. Check the DTC P0963 recurs.

Is DTC P0963 indicated?

YES -Return to step 3 . and recheck.

NO -Troubleshooting is complete.

DTC P0966: CVT Driven Pulley Pressure Control Valve Circuit Low Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0966 recurs.

   Is DTC P0966 indicated?

   YES -Go to step 3.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT driven pulley pressure control valve.
3. Turn the ignition switch OFF.
4. Disconnect the solenoid harness connector (8P).
5. Measure the resistance between solenoid harness connector (8P) terminals No. 2 and No. 6.

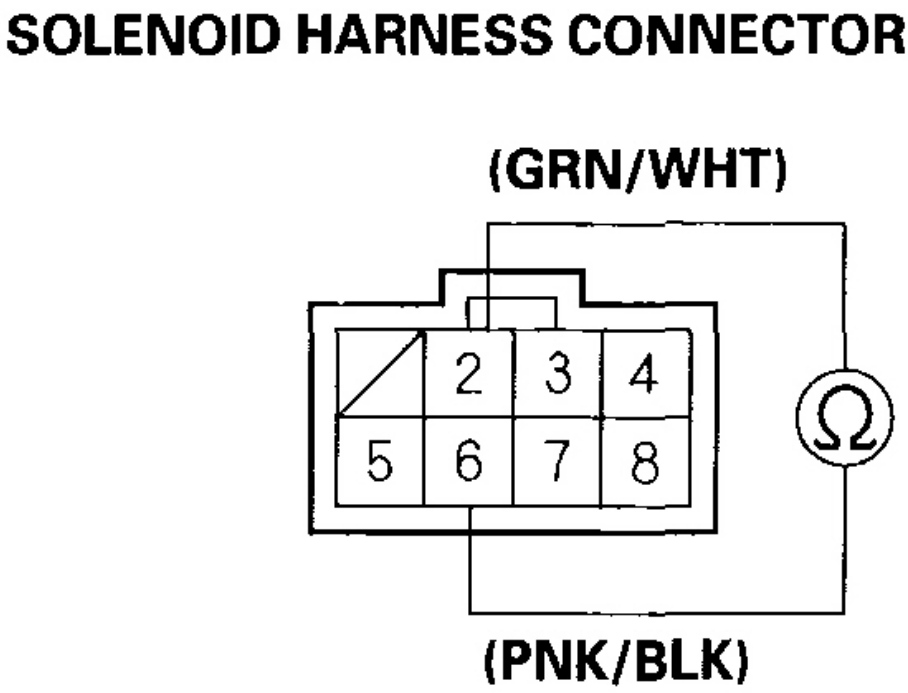


Fig. 194: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 2 And 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 4.

NO -Remove the lower valve body (see)**LOWER VALVE BODY ASSEMBLY REPLACEMENT** , and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT driven pulley pressure control valve (see **CVT DRIVEN PULLEY PRESSURE**

CONTROL VALVE REPLACEMENT), then go to step 11 .

6. Disconnect TCM connector A (26P).
7. Check for continuity between TCM connector terminal A2 and body ground, and between A15 and body ground.

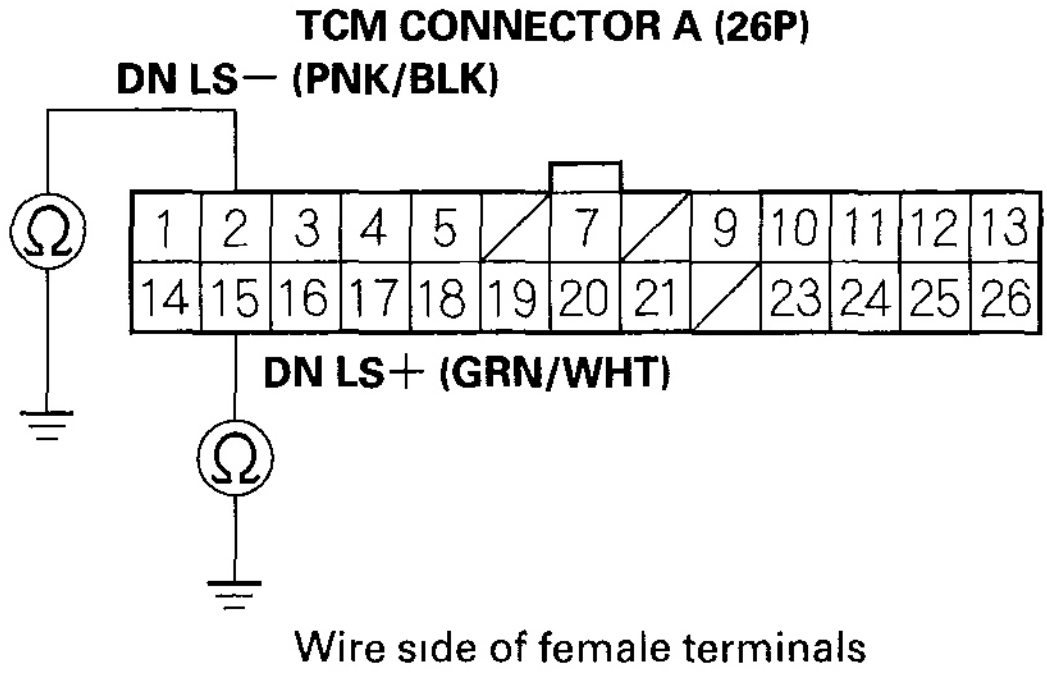


Fig. 195: Checking Continuity Between TCM Connector A (26P) Terminal A2, A15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminals A2 and the solenoid harness connector, or between A15 and the connector.

NO -Go to step 8.

8. Connect the solenoid harness connector (8P).

9. Measure the resistance between TCM connector terminals A2 and A15.

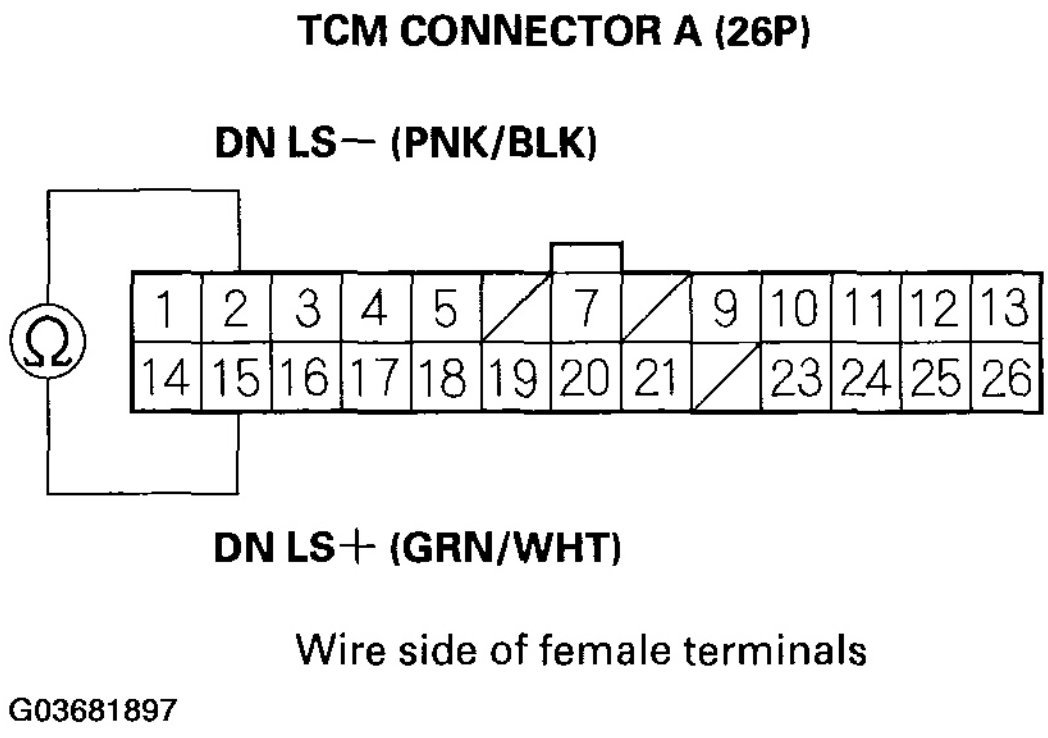


Fig. 196: Measuring Resistance Between TCM Connector A (26P) Terminals A2 And A15
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 10.

NO -Repair an open in the wire between TCM connector terminal A2 and the solenoid harness connector, or between A15 and the connector.

10. Check for continuity between TCM connector terminals A4 and body ground, A13 and body ground, A17 and body ground, and between A26 and body ground.

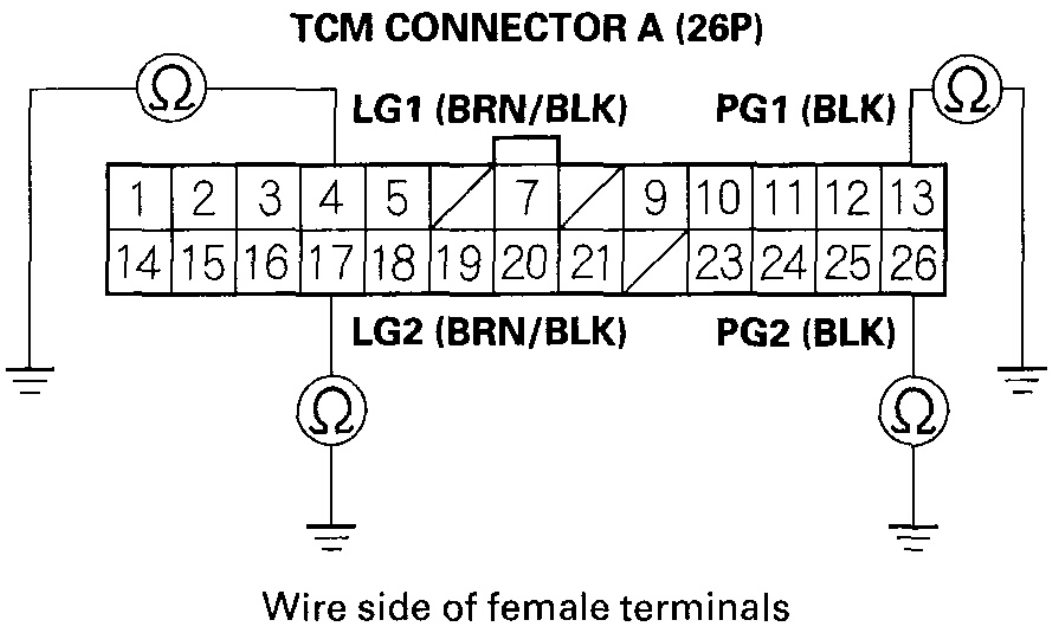


Fig. 197: Checking Continuity Between TCM Connector Terminals A4, A13, A17, A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

11. Clear the DTC with the HDS.
12. Check that DTC P0966 recurs.

Is DTC P0966 indicated?

YES -Return to step 3 . and recheck.

NO -Troubleshooting is complete.

DTC P0967: CVT Driven Pulley Pressure Control Valve Circuit High Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0967 recurs.

   Is DTC P0967 indicated?

   YES -Go to step 3.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT driven pulley pressure control valve.
3. Turn the ignition switch OFF.
4. Disconnect the solenoid harness connector (8P).
5. Measure the resistance between solenoid harness connector (8P) terminals No. 2 and No. 6.

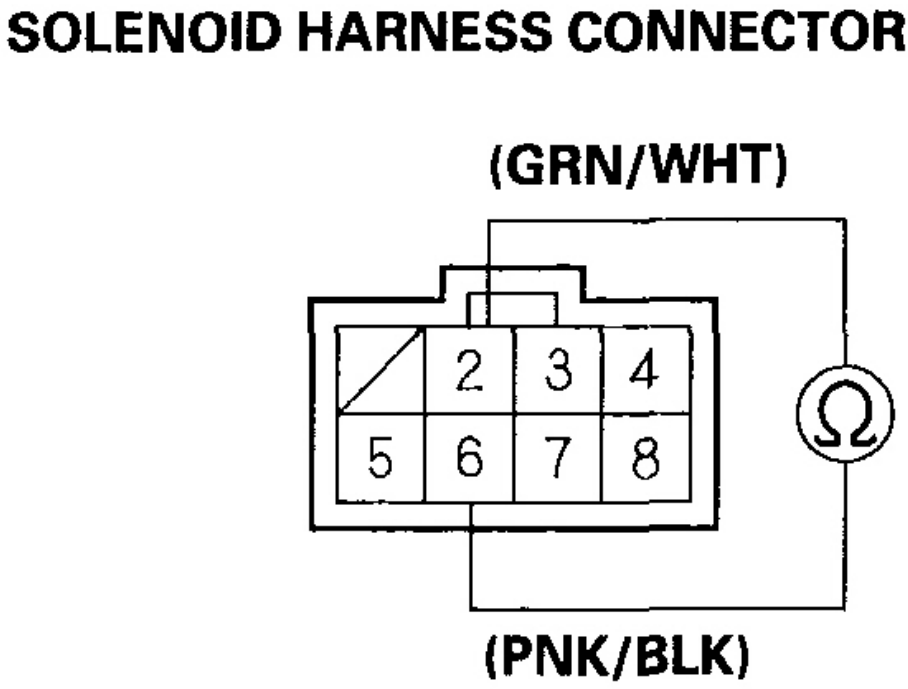


Fig. 198: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 2 And 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8-6.8 ohm?

YES -Go to step 4 .

NO -Remove the lower valve body (see)**LOWER VALVE BODY ASSEMBLY REPLACEMENT** , and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT driven pulley pressure control valve (see **CVT DRIVEN PULLEY PRESSURE**

CONTROL VALVE REPLACEMENT), then go to step 11 .

6. Disconnect TCM connectors A (26P).
7. Turn the ignition switch ON (II).
8. Check for the voltage between TCM connector terminals A2 and body ground, and between A15 and body ground.

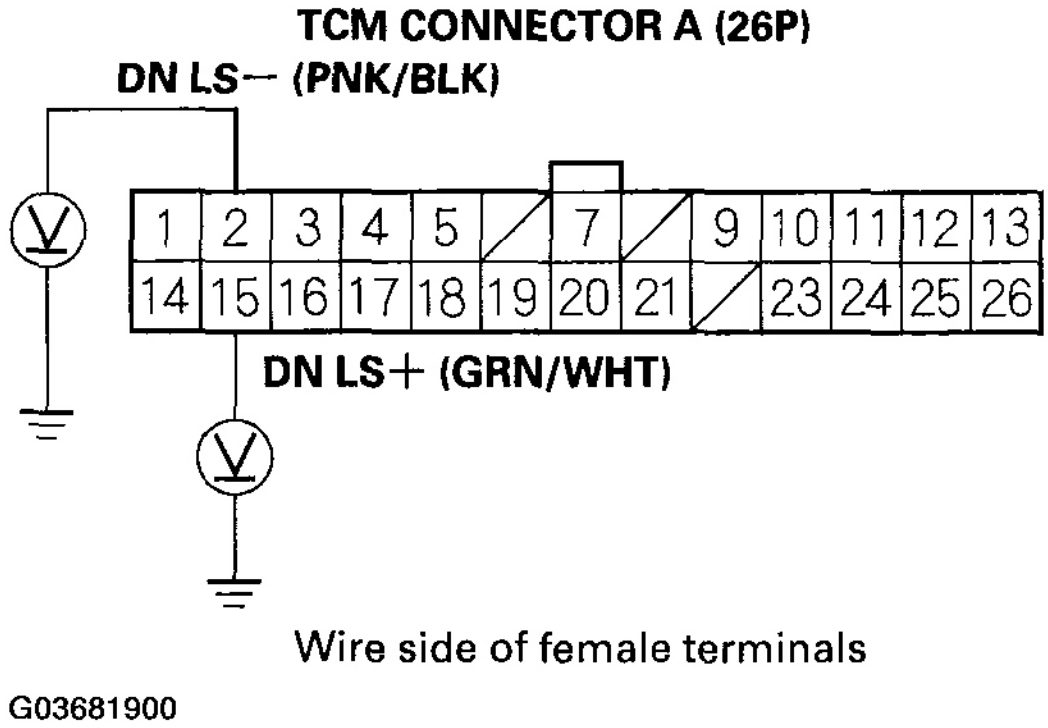


Fig. 199: Checking Voltage Between TCM Connector Terminals A2, A15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wires between TCM connector terminals A2, A15, and the solenoid harness connector.

NO -Go to step 9.

9. Check for continuity between TCM connector terminals A2 and body ground,

and between A15 and body ground.

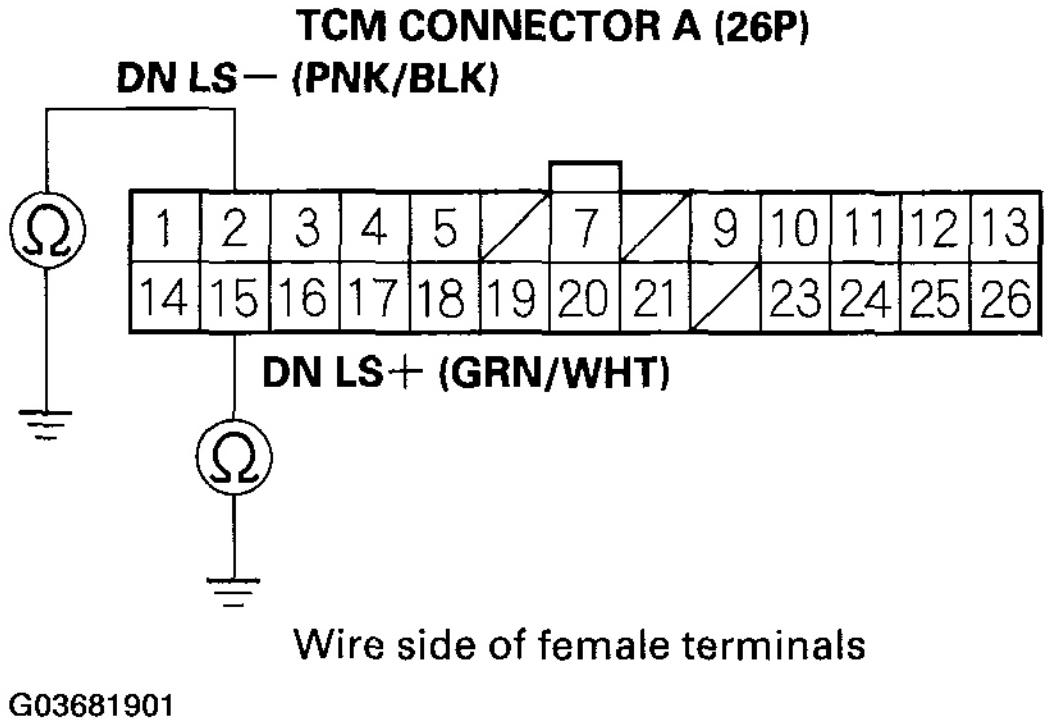


Fig. 200: Checking Continuity Between TCM Connector A (26P) Terminals A2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminals A2 and the solenoid harness connector, or between A15 and the connector.

NO -Go to step 10.

10. Check for continuity between TCM connector terminals A4 and body ground, A13 and body ground, A17 and body ground, and between A26 and body ground.

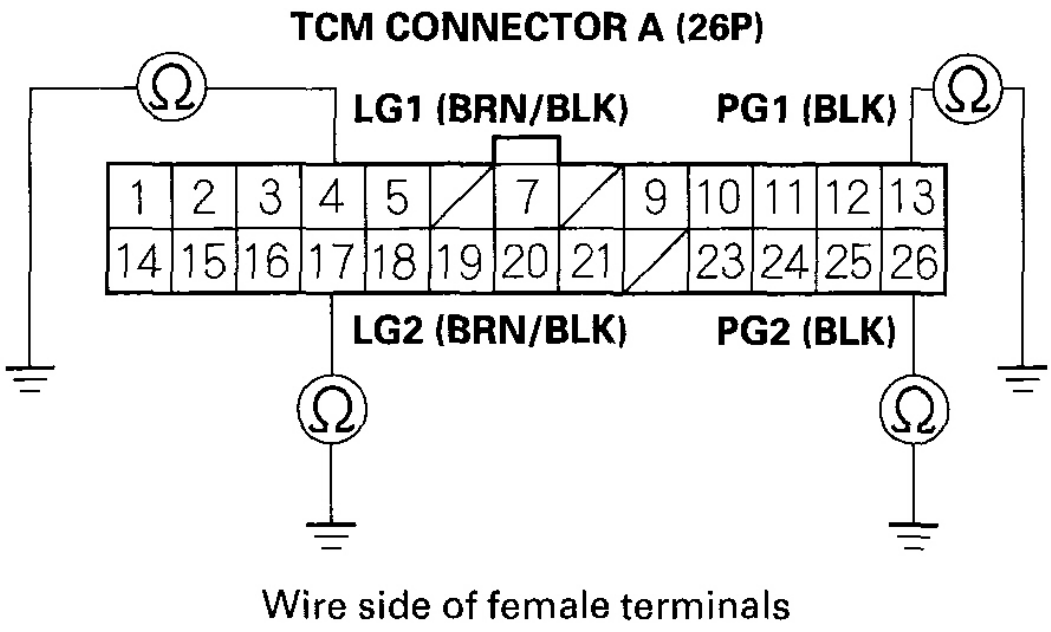


Fig. 201: Checking Continuity Between TCM Connector Terminals A4, A17, A13, A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wires between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

11. Clear the DTC with the HDS.
12. Check that DTC P0967 recurs.

Is DTC P0967 indicated?

YES -Return to step 3 . and recheck.

NO -Troubleshooting is complete.

DTC P0970: CVT Start Clutch Pressure Control Valve Circuit Low Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0970 recurs.

   Is DTC P0970 indicated?

   YES -Go to step 6 .

   NO -Go to step 3.
3. Apply the parking brake, and block the front wheels securely.
4. Start the engine, fully press the brake pedal, and shift to the D position.
5. Check that DTC P0970 recurs.

   Is DTC P0970 indicated?

   YES -Go to step 6.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT start clutch pressure control valve.
6. Turn the ignition switch OFF.
7. Disconnect the solenoid harness connector (8P).
8. Measure the resistance between solenoid harness connector (8P) terminals No.4 and No.8.

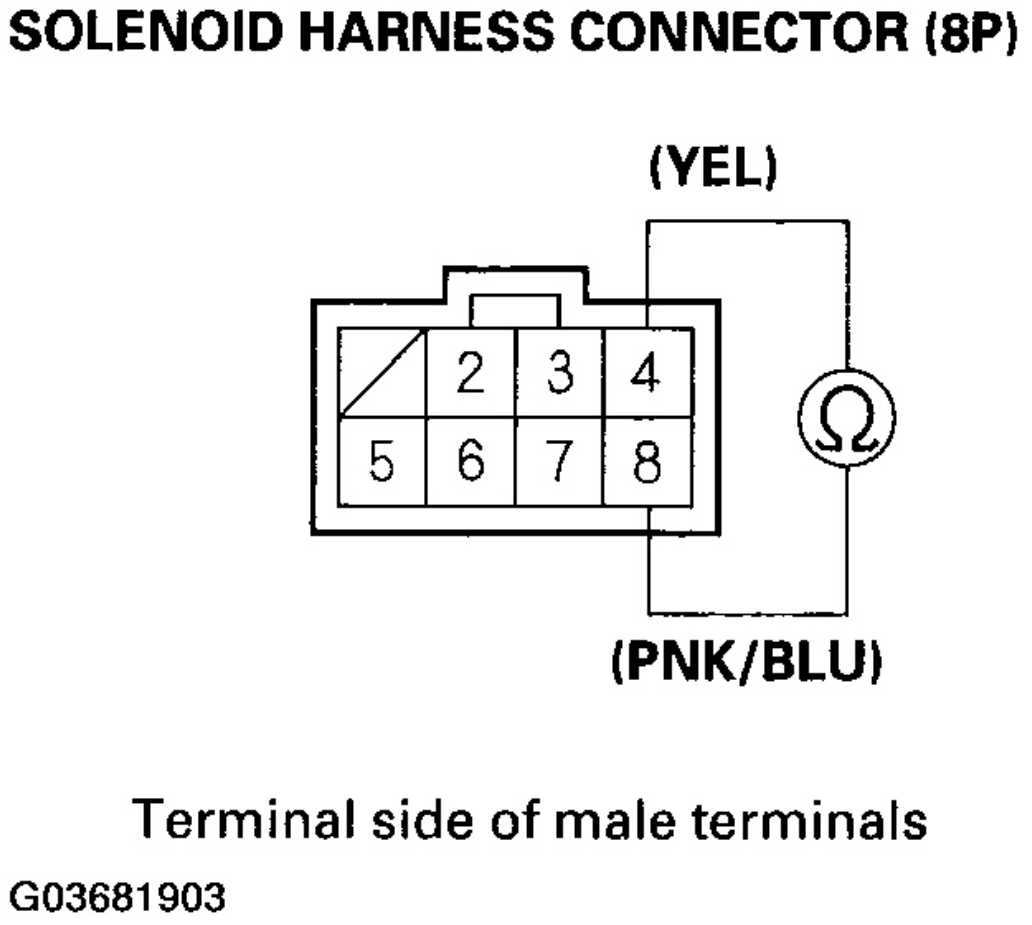


Fig. 202: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 4 And 8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8-6.8 ohm?

YES -Go to step 9.

NO -Remove the lower valve body (see)**LOWER VALVE BODY ASSEMBLY REPLACEMENT** , and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT start clutch pressure control valve (see **CVT START CLUTCH PRESSURE CONTROL**

VALVE REPLACEMENT), then go to step 14 .

9. Disconnect TCM connector A (26P).
10. Check for continuity between TCM connector terminals A1 and body ground, and between A14 and body ground.

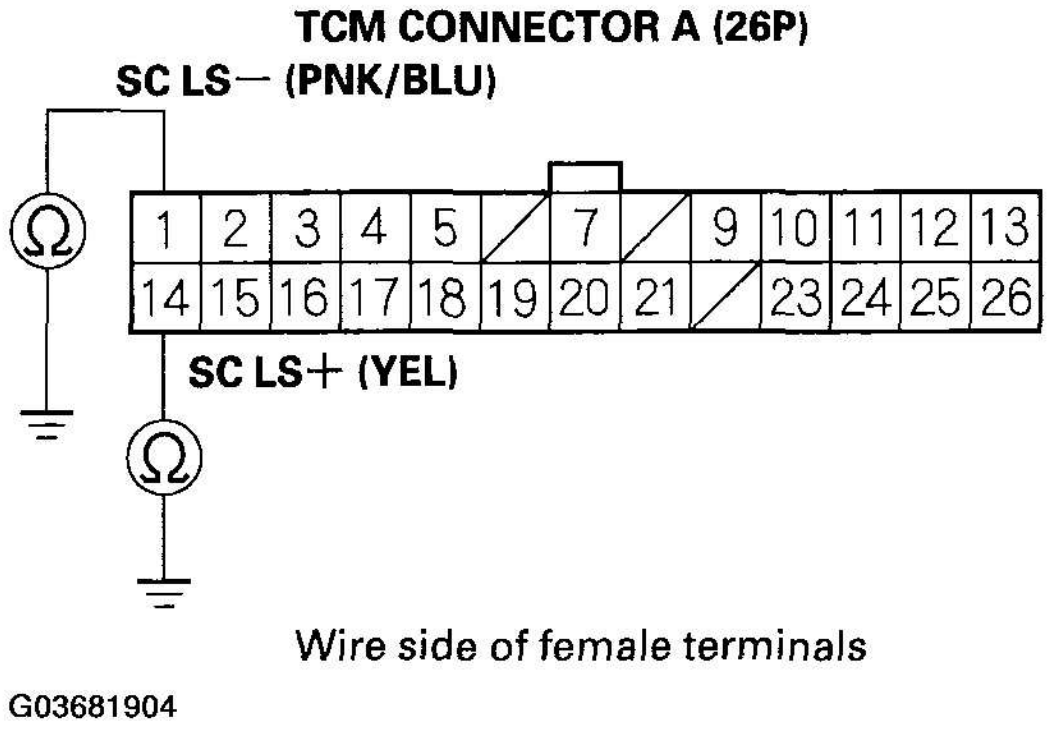


Fig. 203: Checking Continuity Between TCM Connector Terminals A1, A14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal A1 and the solenoid harness connector, or between A14 and the connector.

NO -Go to step 11.

11. Connect the solenoid harness connector (8P).

12. Measure the resistance between TCM connector terminals A1 and A14.

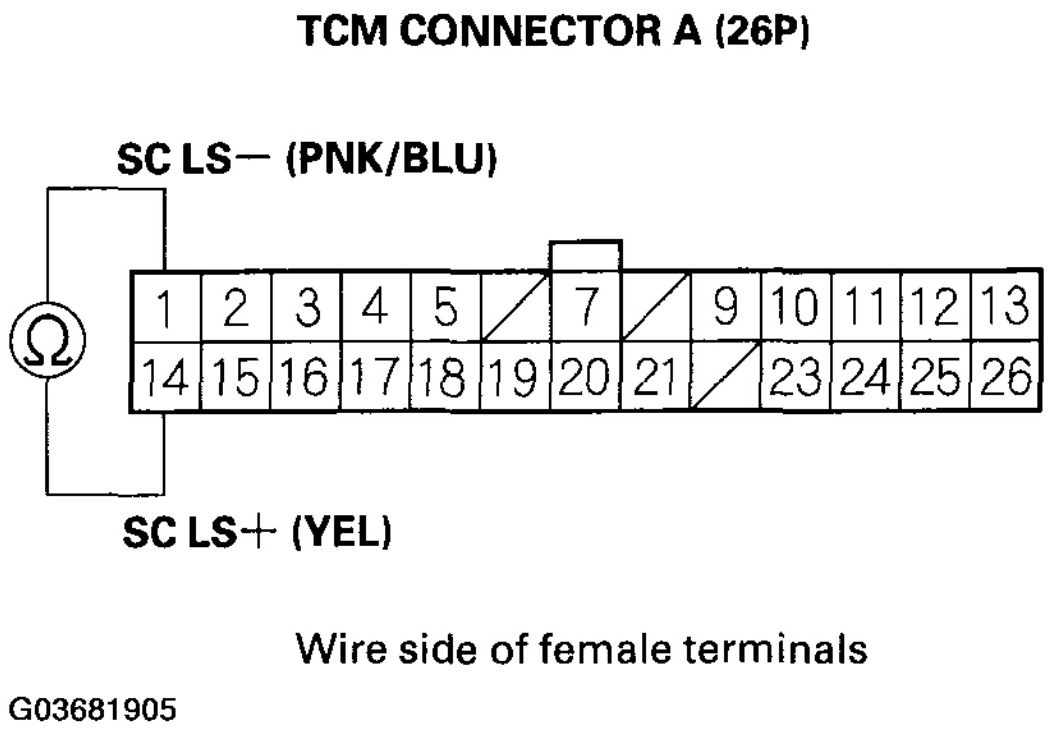


Fig. 204: Measuring Resistance Between TCM Connector A (26P) Terminals A1 And A14
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 13.

NO -Repair an open in the wire between TCM connector terminal A1 and the solenoid harness connector, or between A14 and the connector.

13. Check for continuity between TCM connector terminals A4 and body ground, A13 and body ground, A17 and body ground, and between A26 and body ground.

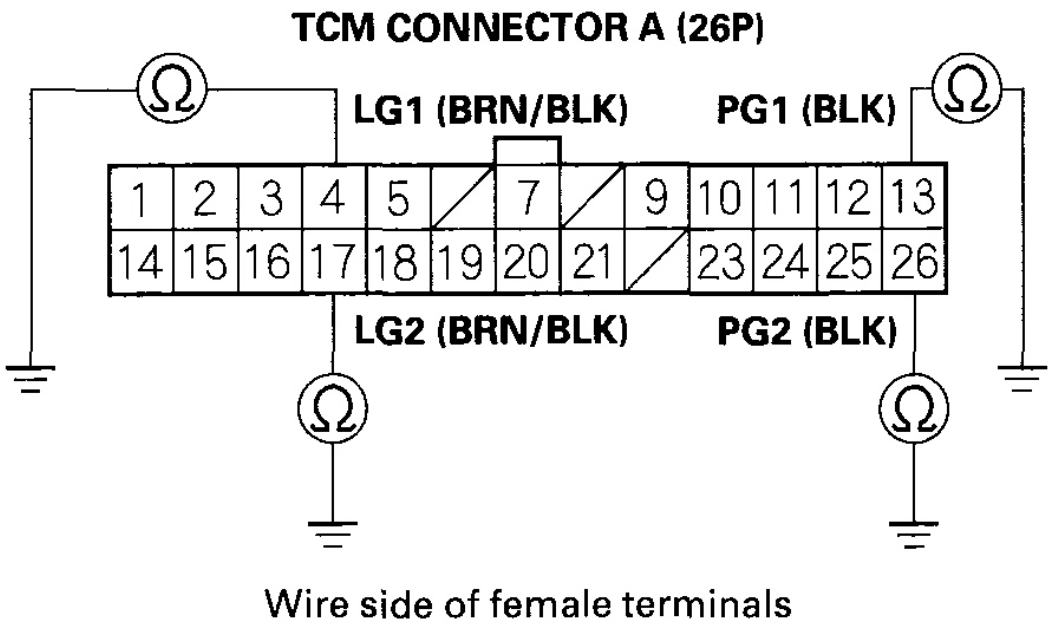


Fig. 205: Checking Continuity Between TCM Connector Terminals A4, A13, A17, A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wires between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

14. Clear the DTC with the HDS.
15. Check that DTC P0970 recurs.

Is DTC P0970 indicated?

YES -Return to step 6 . and recheck.

NO -Troubleshooting is complete.

DTC P0971: CVT Start Clutch Pressure Control Valve Circuit High Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Clear the DTC with the HDS.
2. Check that DTC P0971 recurs.

   Is DTC P0971 indicated?

   YES -Go to step 6 .

   NO -Go to step 3.
3. Apply the parking brake, and block the front wheels securely.
4. Start the engine, fully press the brake pedal, and shift to the D position.
5. Check that DTC P0971 recurs.

   Is DTC P0971 indicated?

   YES -Go to step 6.

   NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the solenoid harness connector, TCM, and the CVT start clutch pressure control valve.
6. Turn the ignition switch OFF.
7. Disconnect the solenoid harness connector (8P).
8. Measure the resistance between solenoid harness connector (8P) terminals No.4 and No.8.

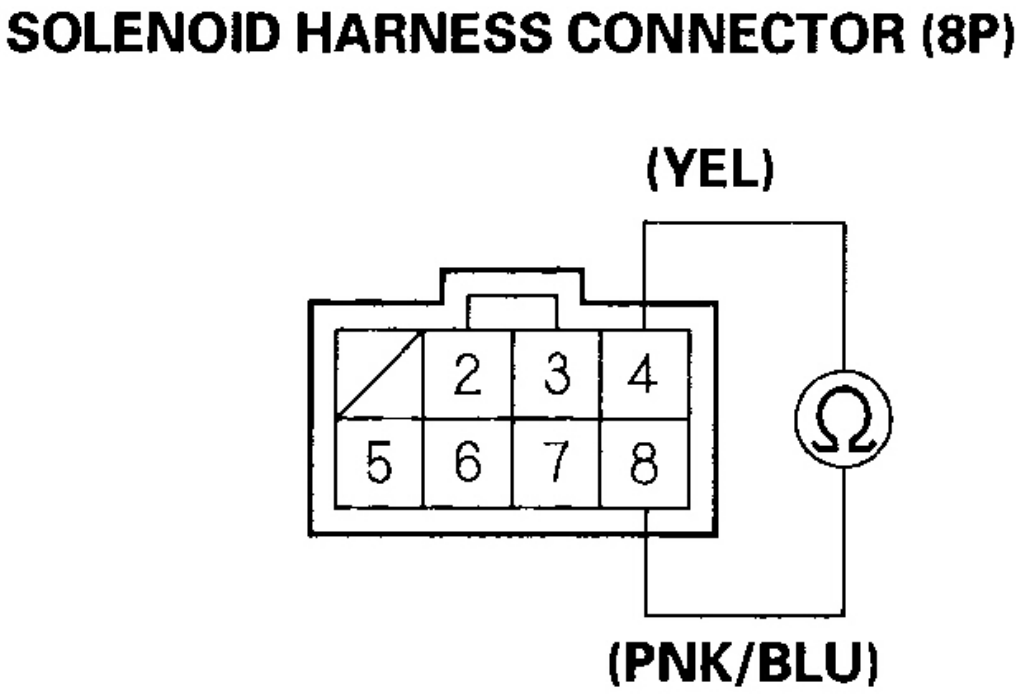


Fig. 206: Measuring Resistance Between Solenoid Harness Connector (8P) Terminals 4 And 8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3.8- 6.8 ohm?

YES -Go to step 9.

NO -Remove the lower valve body (see)**LOWER VALVE BODY ASSEMBLY REPLACEMENT** , and check for an open or a short in the solenoid harness. If the wire is OK, replace the CVT start clutch pressure control valve (see **CVT START CLUTCH PRESSURE CONTROL**

VALVE REPLACEMENT), then go to step 14 .

9. Disconnect TCM connectors A (26P).
10. Turn the ignition switch ON (II).
11. Check for the voltage between TCM connector terminals A1 and body ground, and between A14 and ground.

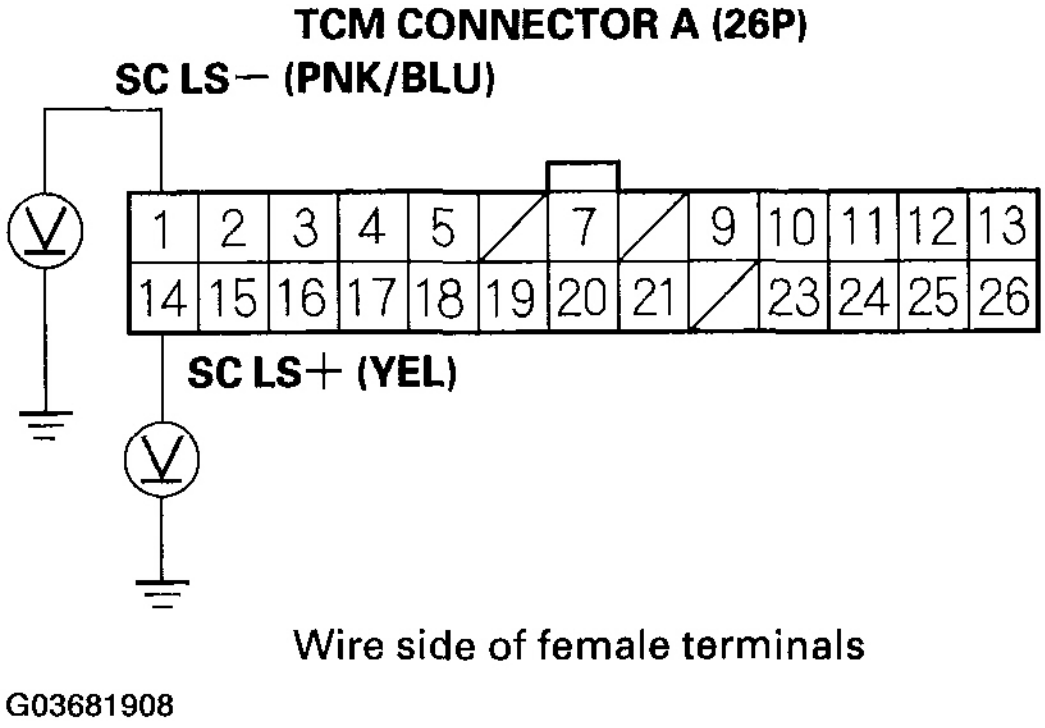


Fig. 207: Checking Voltage Between TCM Connector A (26P) Terminals A1, A14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wires between TCM connector terminals A1, A14, and the solenoid harness connector.

NO -Go to step 12.

12. Check for continuity between TCM connector terminals A1 and body ground,

and between A14 and body ground.

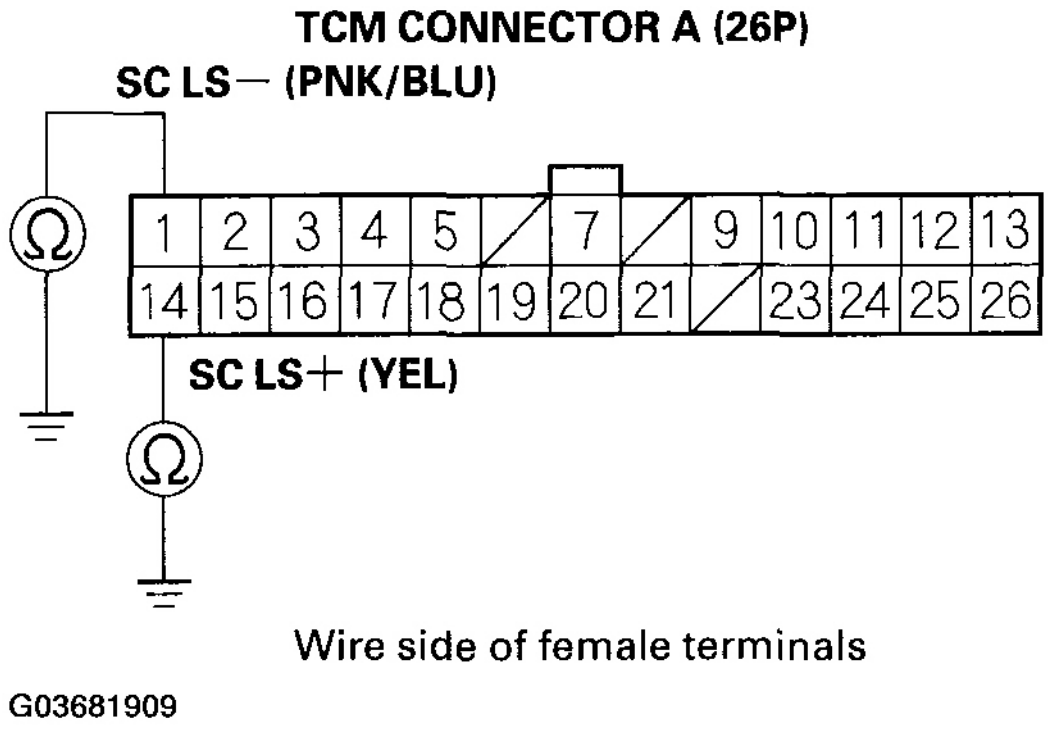


Fig. 208: Checking Continuity Between TCM Connector A (26P) Terminals A1, A14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal A1 and the solenoid harness connector, or between A14 and the connector.

NO -Go to step 13.

13. Check for continuity between TCM connector terminals A4 and body ground, A13 and body ground, A17 and body ground, and between A26 and body ground.

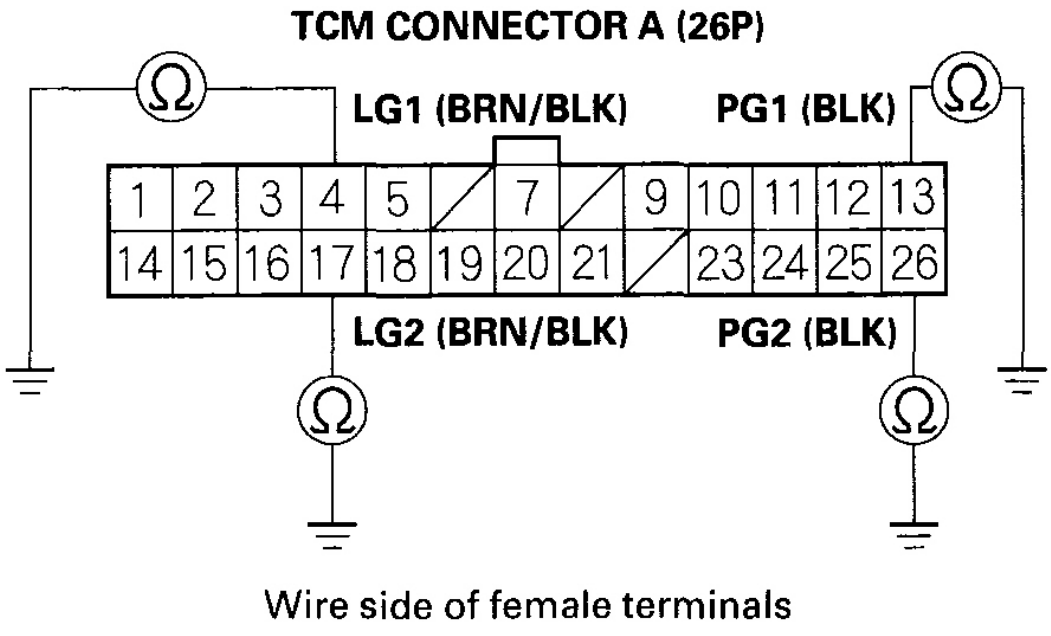


Fig. 209: Checking Continuity Between TCM Connector A (26P) Terminals A4, A13, A17, A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wires between TCM connector terminals A4, A13, A17, A26, and ground (G101), or repair poor ground (G101).

14. Carry out step 1 thru 4, and check that DTC P0971 recurs.

Is DTC P0971 indicated?

YES -Return to step 6 . and recheck.

NO -Troubleshooting is complete.

DTC P1655: Problem in TCM-to-ECM Communication Lines

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connector B (22P) and ECM connector C (31P).
3. Check for continuity between TCM connector terminal B7 and ECM connector terminal C15.

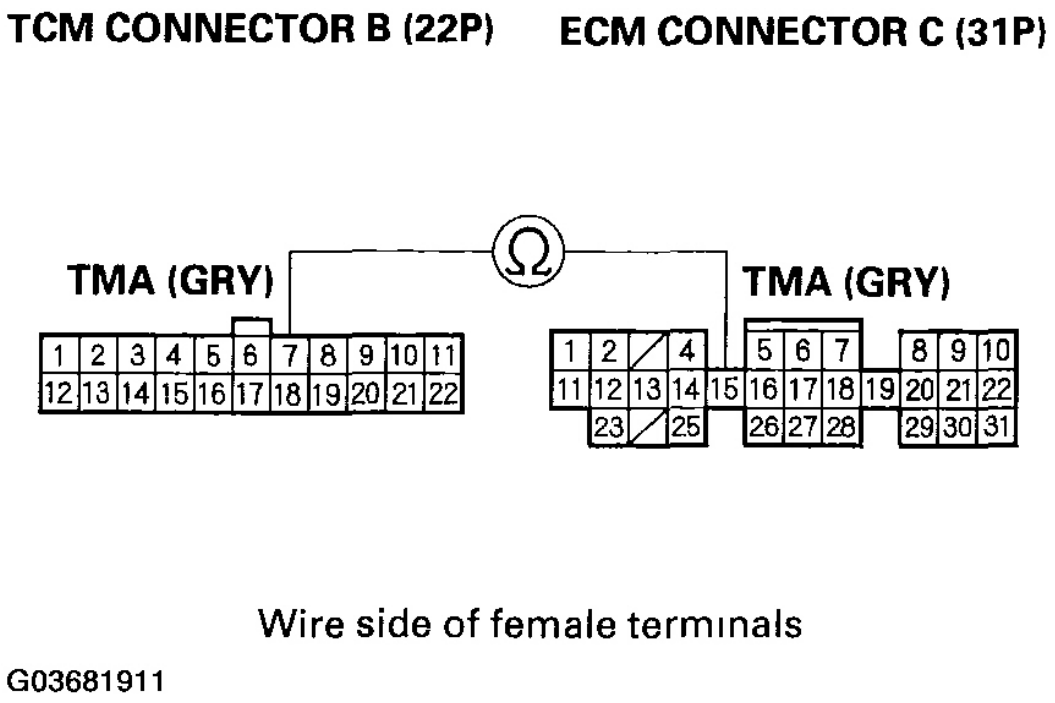


Fig. 210: Checking Continuity Between TCM Connector B (22P) Terminal

B7 And ECM Connector C (31P) Terminal C15
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 4.

NO -Repair an open in the wire between TCM connector terminal B7 and ECM connector terminal C15.

4. Check for continuity between TCM connector terminal B7 and body ground, or between ECM connector terminal C15 and body ground.

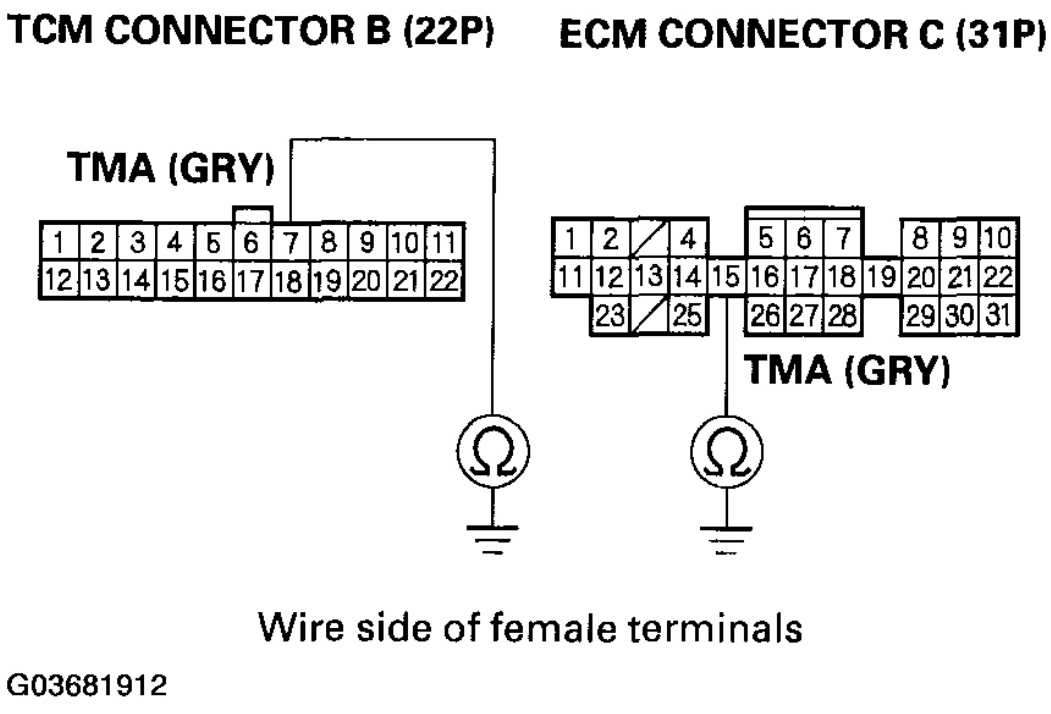


Fig. 211: Checking Continuity Between TCM Connector B (22P) Terminal B7 And Body Ground, Or Between ECM Connector C (31P) Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B7, ECM connector terminal C15 terminal, and body ground.

NO -Go to step 5.

5. Connect TCM connector B (22P).
6. Turn the ignition switch ON (II).
7. Measure the voltage between ECM connector terminal C15 and body ground.

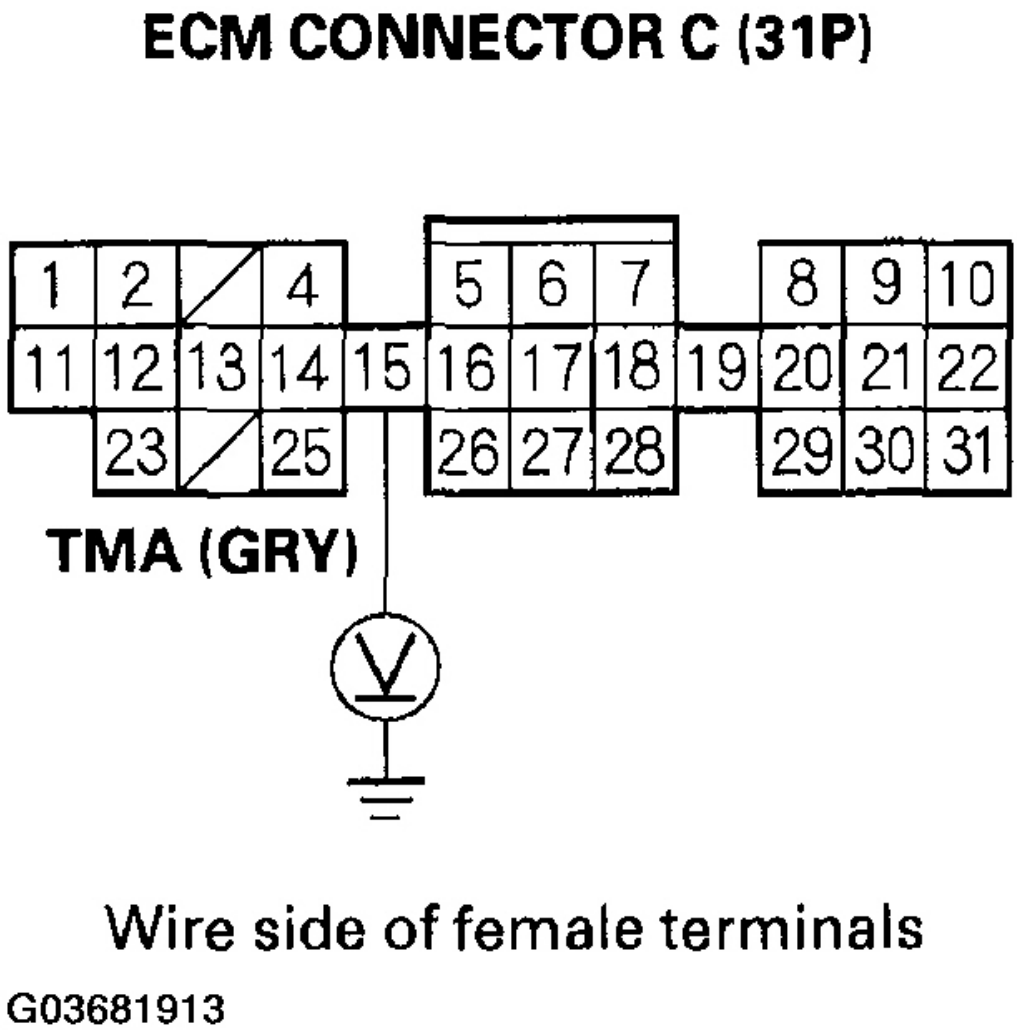


Fig. 212: Measuring Voltage Between ECM Connector C (31P) Terminal

C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 8.

NO -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

8. Turn the ignition switch OFF.
9. Connect ECM connector C (31P).
10. Turn the ignition switch ON (II).
11. Measure the voltage between ECM connector terminal C15 and body ground.

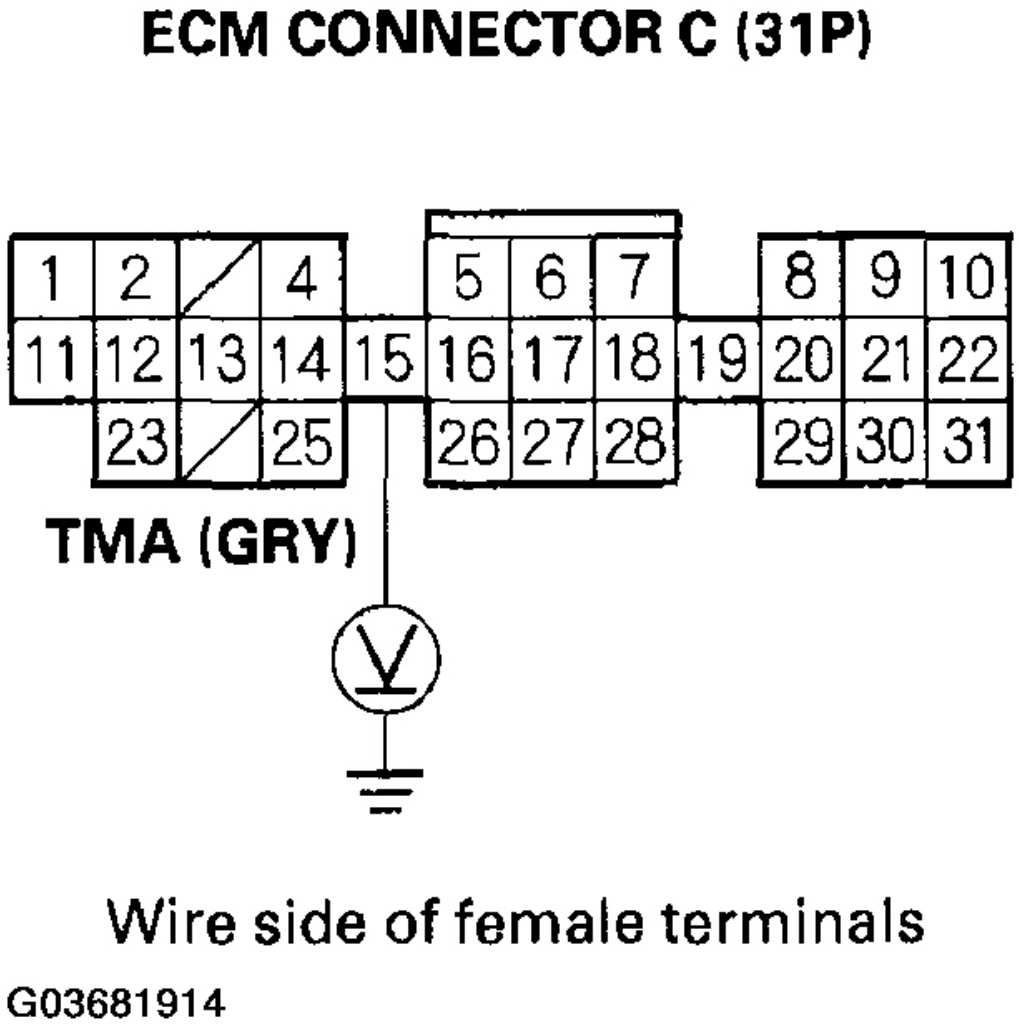


Fig. 213: Measuring Voltage Between ECM Connector C (31P) Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 12.
NO -Replace the ECM.

12. Turn the ignition switch OFF.

13. Disconnect TCM connector B (22P) and ECM connector C (31P).
14. Check for continuity between TCM connector terminal B6 and ECM connector terminal C11.

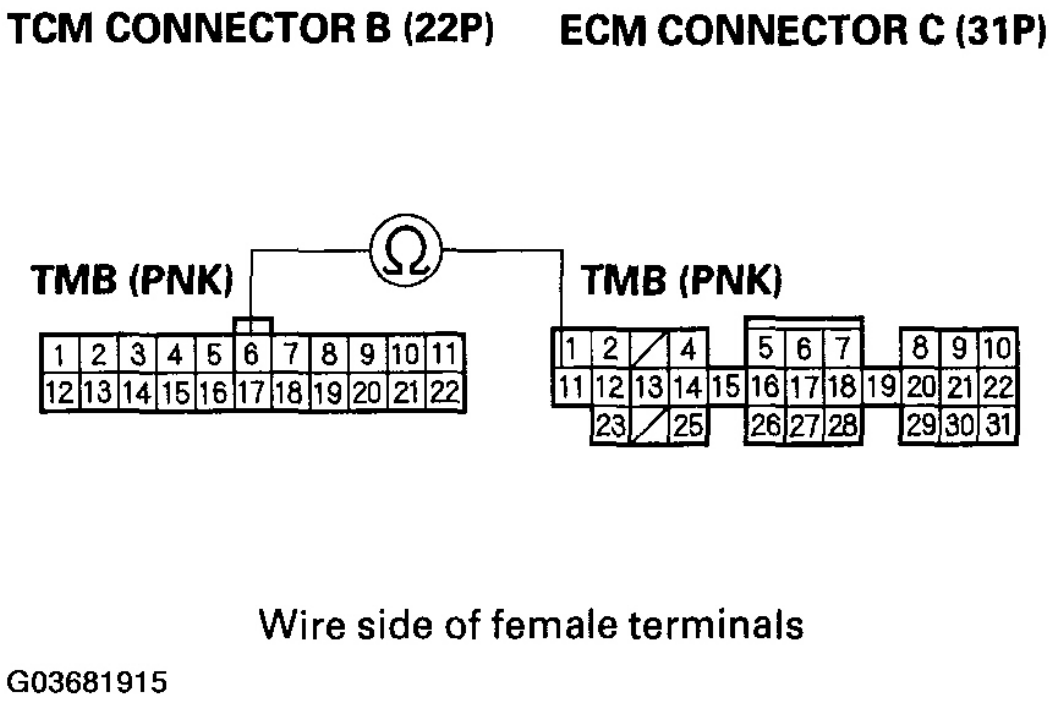


Fig. 214: Checking Continuity Between TCM Connector B (22P) Terminal B6 And ECM Connector C (31P) Terminal C11
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 15.

NO -Repair an open in the wire between TCM connector terminal B6 and ECM connector terminal C11.

15. Check for continuity between TCM connector terminal B6 and body ground, or between ECM connector terminal C11 and body ground.

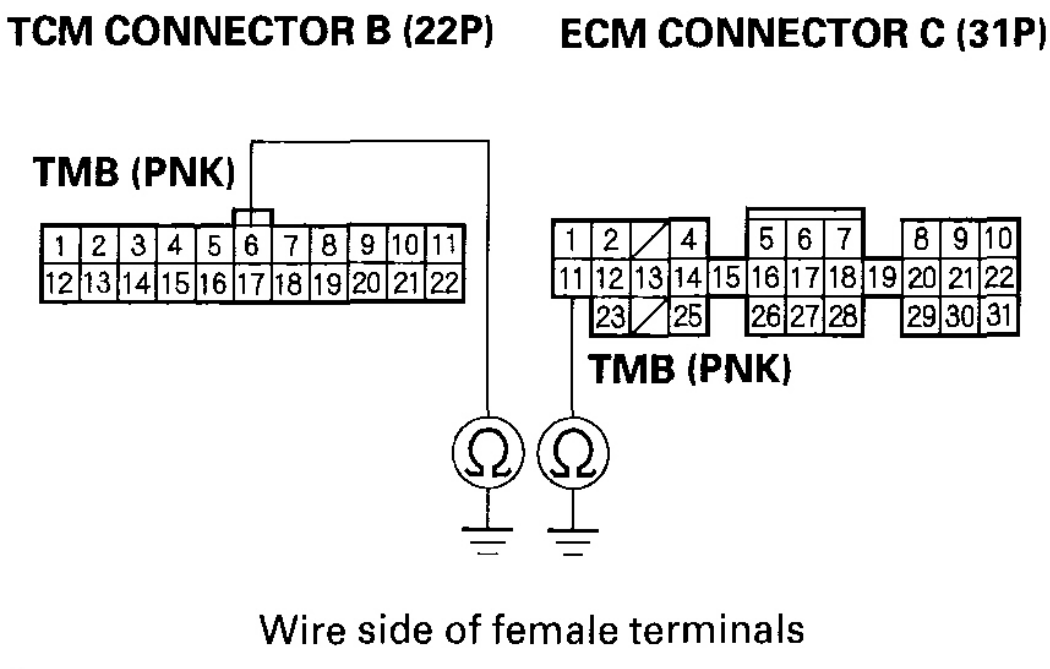


Fig. 215: Checking Continuity Between TCM Connector Terminal B6 And Body Ground Or Between ECM Connector Terminal C11 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B6, ECM connector terminal C11, and ground.

NO -Go to step 16.

16. Connect ECM connector C (31P).
17. Turn the ignition switch ON (II).
18. Measure the voltage between TCM connector terminal B6 and body ground.

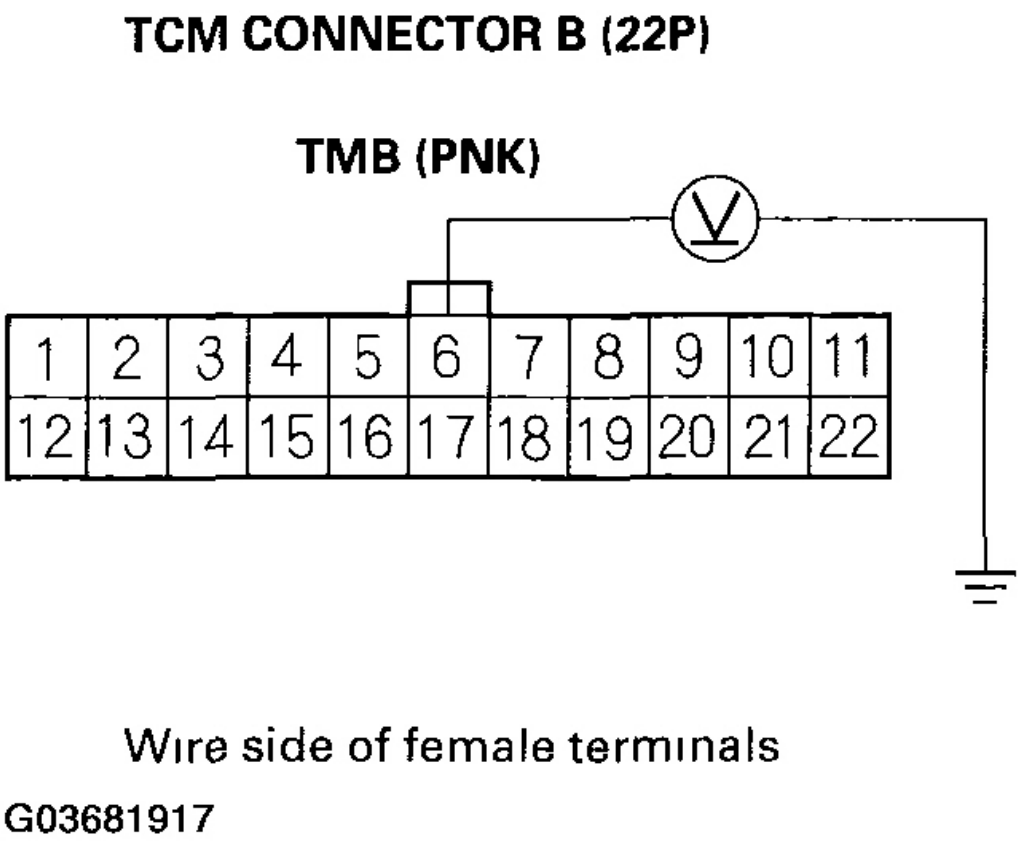


Fig. 216: Measuring Voltage Between TCM Connector B (22P) Terminal B6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 19.

NO -Check for loose terminal fit in the ECM connectors. If necessary, substitute a known-good ECM (see **HOW TO SUBSTITUTE THE ECM**), then recheck. If the symptom/indication goes away with a known-good ECM, replace the original ECM.

19. Turn the ignition switch OFF.
20. Connect TCM connector B (22P).

21. Turn the ignition switch ON (II).
22. Measure the voltage between TCM connector terminal B6 and body ground.

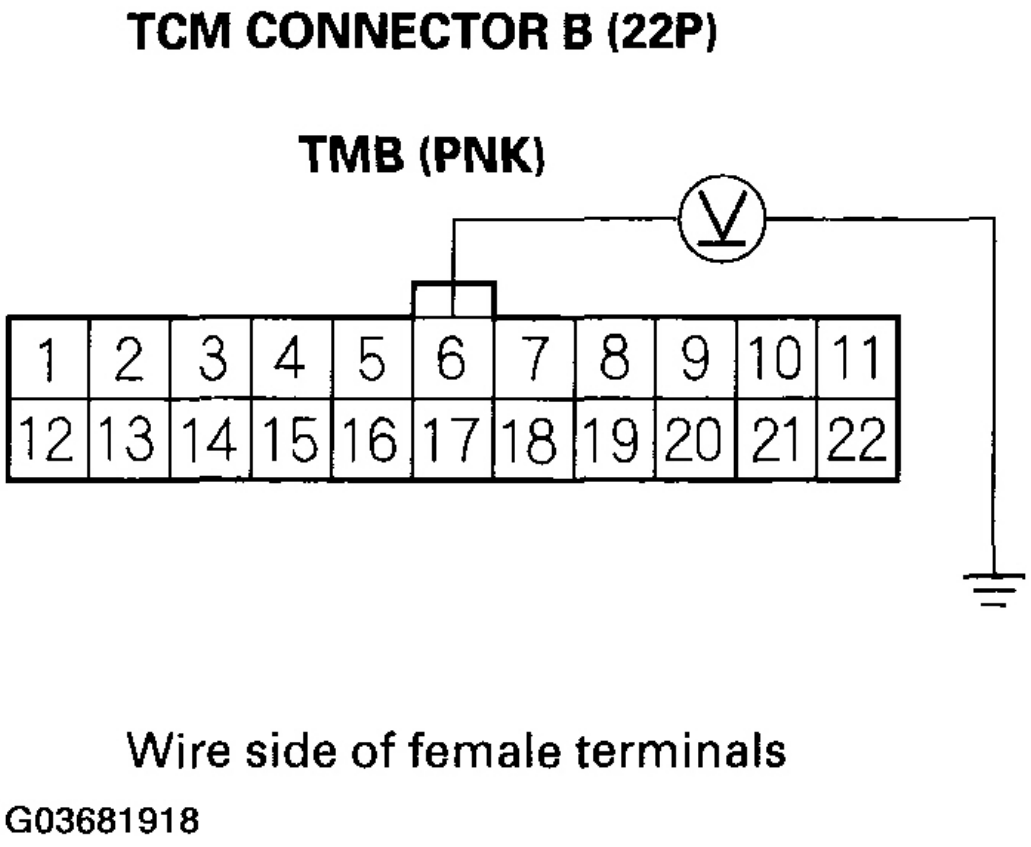


Fig. 217: Measuring Voltage Between TCM Connector B (22P) Terminal B6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) and recheck. If the check results are same, replace the ECM.

NO -Replace the TCM.

DTC P1782: TP Sensor Circuit Low Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check the TP SENSOR in the DATA LIST with the HDS.

   Is there about 0.5 V when the throttle is fully closed and about 4.5 V when the throttle is fully opened?

   YES -Check for poor connections or loose terminals at the TP sensor, the TCM, and the ECM, then recheck. If DTC P1782 is indicated, go to step 3.

   NO -Do the DTC Troubleshooting for the TP sensor circuit low voltage (see **DTC P0122: TP SENSOR CIRCUIT LOW VOLTAGE**). Recheck for DTC P1782 after troubleshooting.
3. Turn the ignition switch OFF.
4. Disconnect the TP sensor 3P connector.
5. Disconnect TCM connector B (22P).
6. Connect TP sensor 3P connector terminal No. 2 to body ground with a jumper wire.

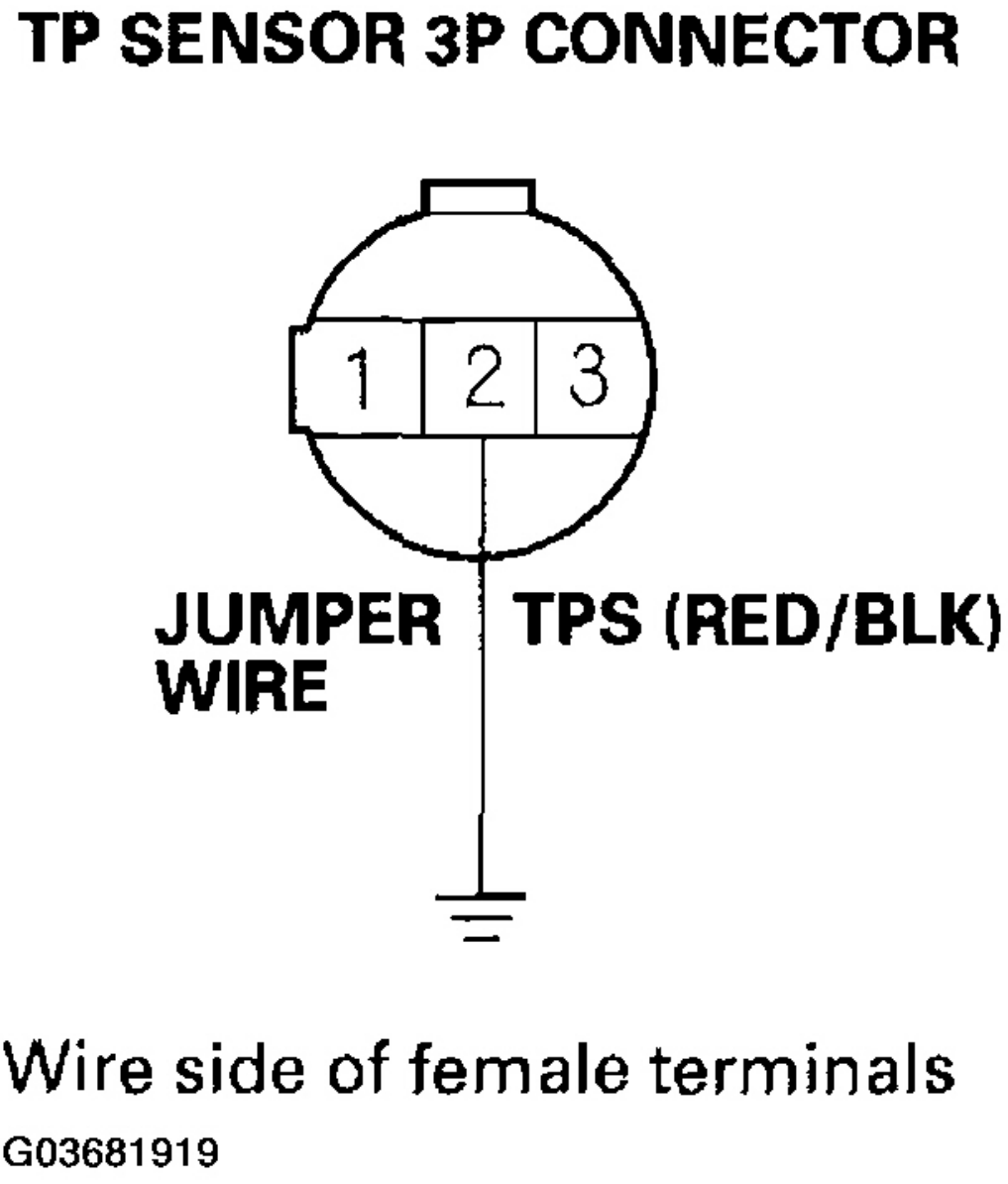


Fig. 218: Connecting TP Sensor 3P Connector Terminal 2 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Check for continuity between TCM connector terminal B4 and body ground.

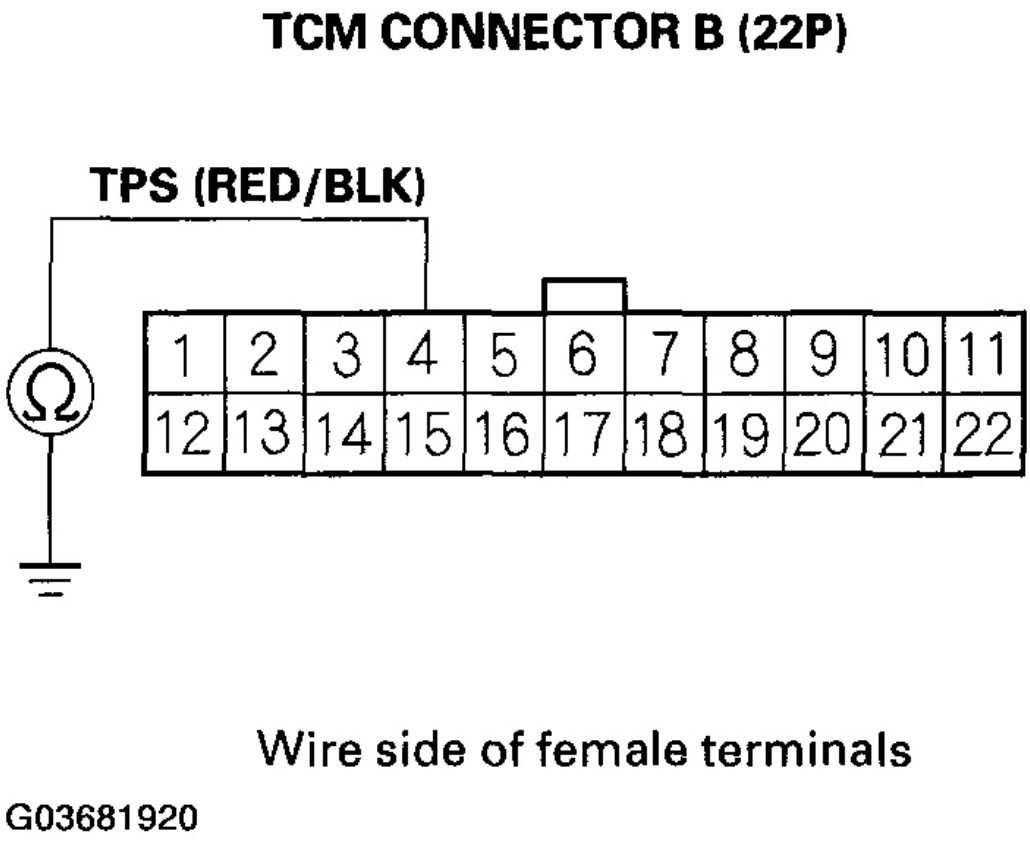


Fig. 219: Checking Continuity Between TCM Connector Terminal B4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM (B4), and the TP sensor.

DTC P1783: TP Sensor Circuit High Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check the TP SENSOR in the DATA LIST with the HDS.

   Is there about 0.5 V when the throttle is fully closed and about 4.5 V when the throttle is fully opened?

   YES -Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the TP sensor, the TCM, and at the ECM.

   NO -Go to step 3.
3. Check the DTCs with HDS.

   Is DTC P0123 indicated?

   YES -Do the DTC Troubleshooting for the TP sensor circuit high voltage (see **DTC P0123: TP SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1783 after troubleshooting.

   NO -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

DTC P1784: MAP Sensor Circuit Low Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you**

troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check the MAP SENSOR in the DATA LIST with the HDS.

   Is about 101 kPa (760 mmHg, 30 in.Hg), or 2.9 V indicated?

   YES -Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the MAP sensor, the TCM, and at the ECM.

   NO -Go to step 3.
3. Check the DTCs with HDS.

   Is DTC P0107 indicated?

   YES -Do the DTC Troubleshooting for the MAP sensor circuit low voltage (see **DTC P0107: MAP SENSOR CIRCUIT LOW VOLTAGE**). Recheck for DTC P1784 after troubleshooting.

   NO -Go to step 4.
4. Disconnect the TCM connector B (22P) and ECM connector C (31P).
5. Check for continuity between MAP sensor connector terminal No. 3 and body ground.

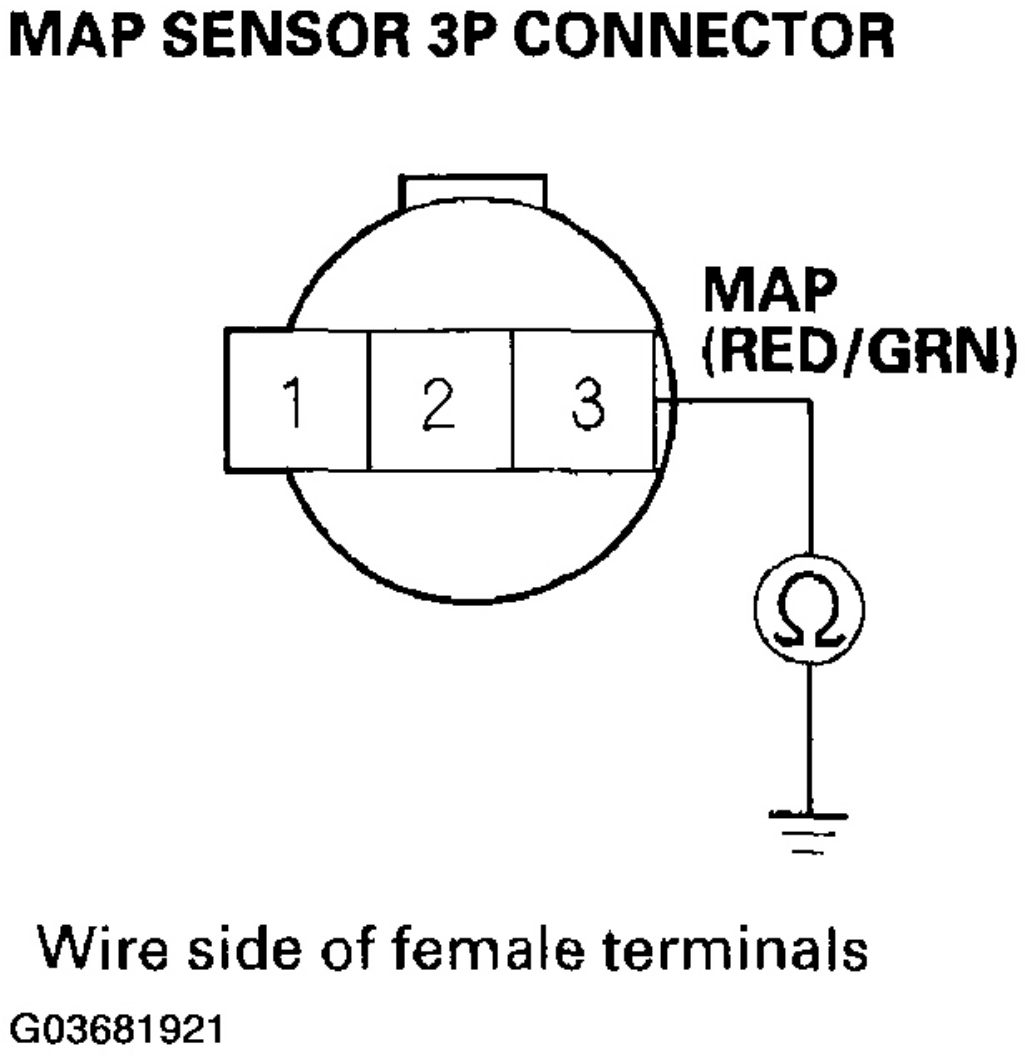


Fig. 220: Checking Continuity Between MAP Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short in the wire between the TCM (B2), and the MAP sensor.

NO -Substitute a known-good TCM (see **HOW TO TROUBLESHOOT**

CIRCUIT AT THE TCM), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

DTC P1785: MAP Sensor Circuit High Voltage

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check the MAP SENSOR in the DATA LIST with the HDS.

   Is about 101 kPa (760 mmHg, 30 in.Hg), or 2.9 V indicated?

   YES -Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the MAP sensor, the TCM, and at the ECM.

   NO -Go to step 3.
3. Check the DTCs with HDS.

   Is DTC P0108 indicated?

   YES -Do the DTC Troubleshooting for the MAP sensor circuit high voltage (see **DTC P0108: MAP SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1785 after troubleshooting.

   NO -Go to step 4.
4. Connect MAP sensor 3P connector terminal NO. 3 to body ground with a jumper wire.

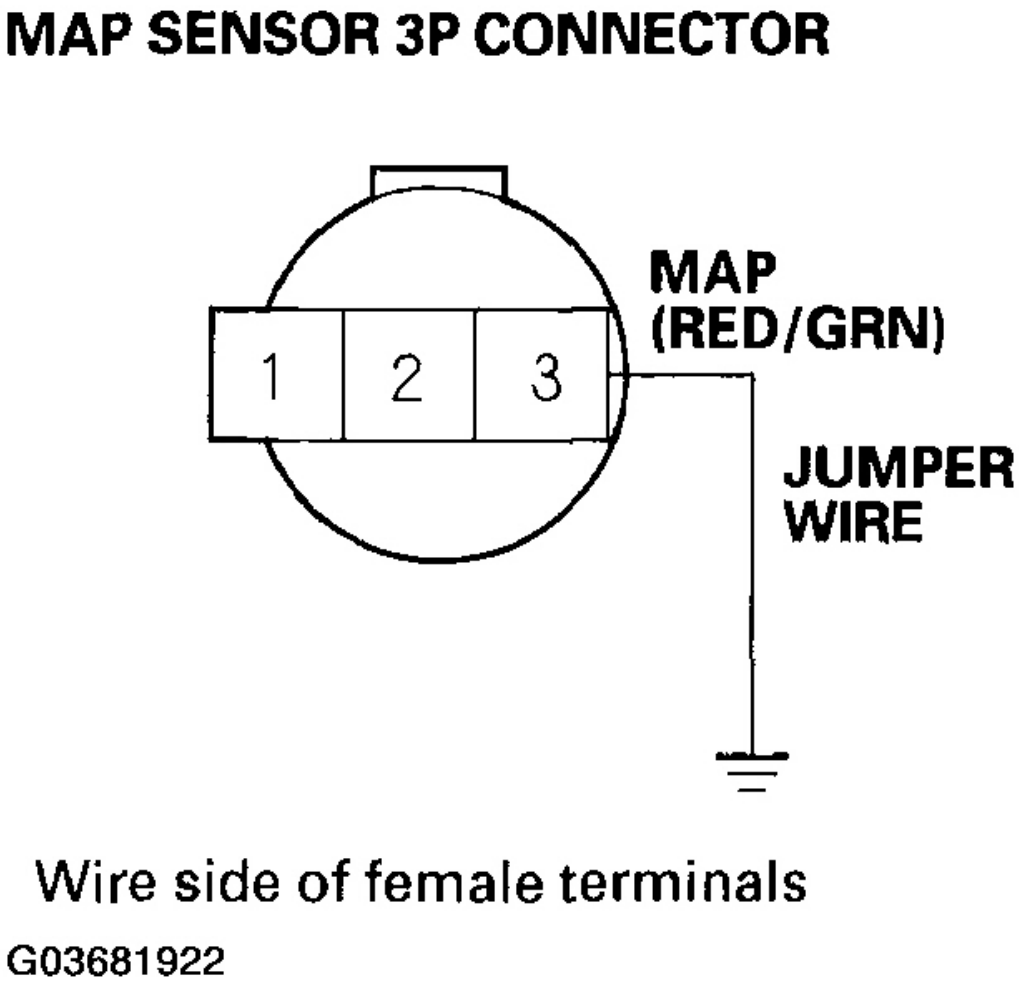


Fig. 221: Connecting MAP Sensor 3P Connector Terminal 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Check for continuity between TCM connector terminal B2 and body ground.

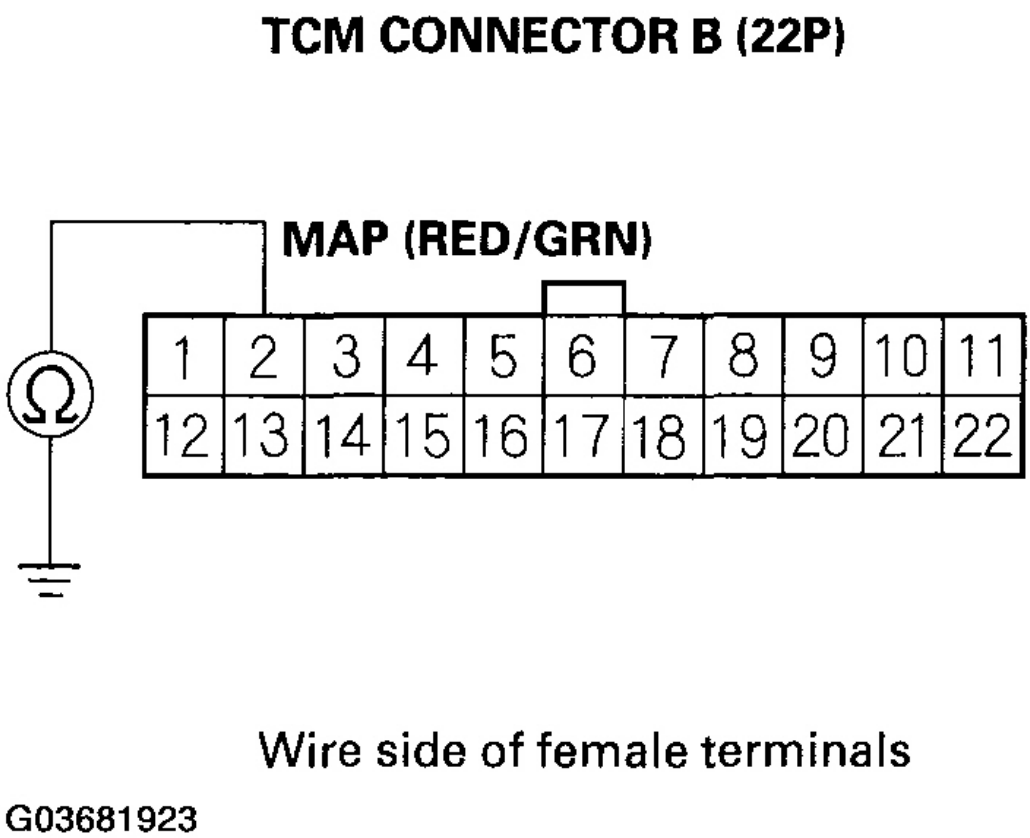


Fig. 222: Checking Continuity Between TCM Connector B (22P) Terminal B2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a Known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a Known-good TCM, replace the original TCM.

NO -Repair an open in the wire between TCM (B2), and the MAP sensor.

DTC P1792: Problem in Engine Coolant Temperature Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the HDS indicates code for the engine coolant temperature (ECT) sensor.

   Does the scan tool or the HDS indicate code for ECT sensor?

   YES -Do the DTC Troubleshooting for the ECT sensor circuit low voltage (see **DTC P0117: ECT SENSOR CIRCUIT LOW VOLTAGE**), and the ECT sensor circuit high voltage (see **DTC P0118: ECT SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1792 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

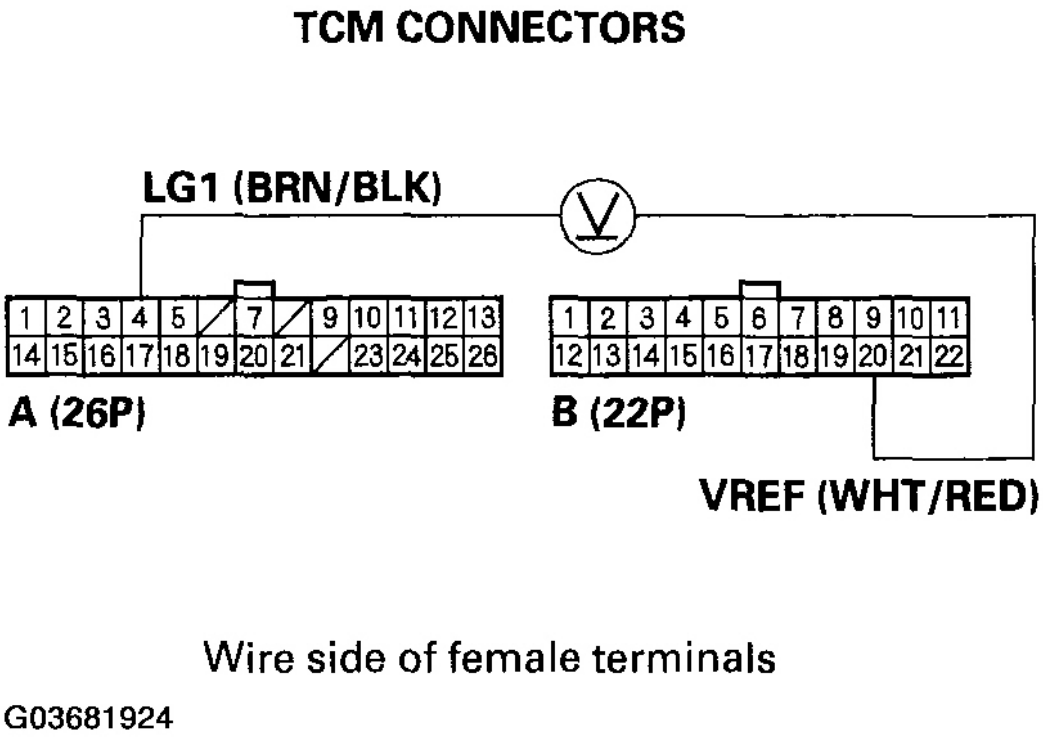


Fig. 223: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20 and the ECM.

6. Measure the voltage between TCM connector terminals A19 and A4.

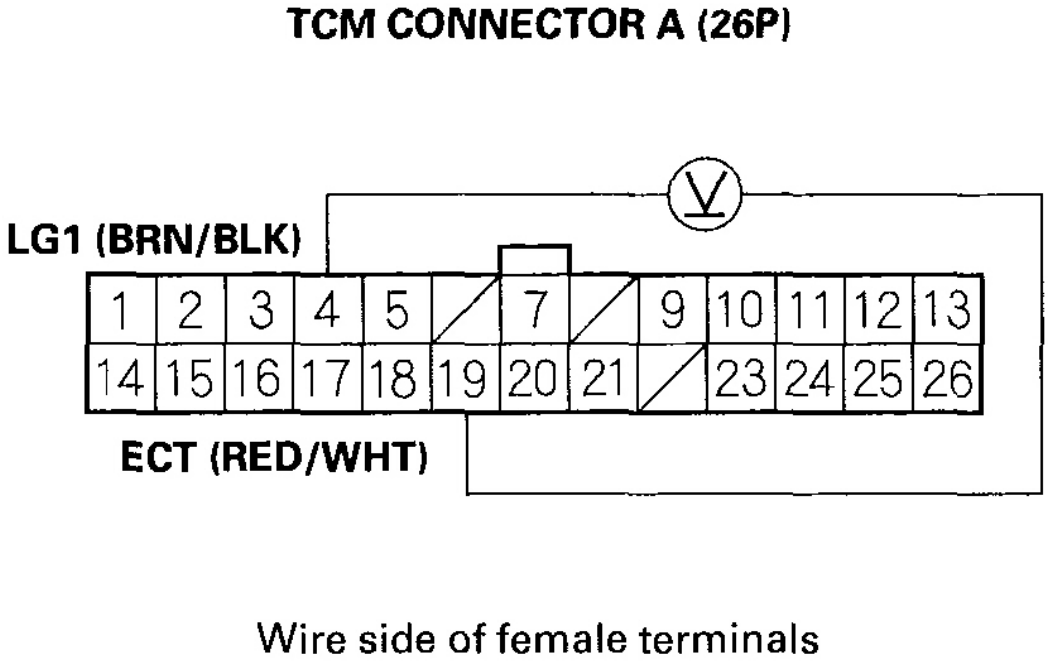


Fig. 224: Measuring Voltage Between TCM Connector A (26P) Terminals A19 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.1- 4.8 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a Known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a Known-good TCM, replace the original TCM.

NO -Repair an open or short in the wire between TCM connector terminal A19 and the ECT sensor.

DTC P1799: Problem in Intake Air Temperature Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General**

Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch ON (II).
2. Check whether the HDS indicates code for the intake air temperature (IAT) sensor.

   Does the scan tool or the HDS Indicate code for IAT sensor?

   YES -Do the DTC Troubleshooting for the IAT sensor circuit low voltage (see **DTC P0112: IAT SENSOR CIRCUIT LOW VOLTAGE**), and the IAT sensor circuit high voltage (see **DTC P0113: IAT SENSOR CIRCUIT HIGH VOLTAGE**). Recheck for DTC P1799 after troubleshooting.

   NO -Turn the ignition switch OFF, then go to step 3.
3. Disconnect TCM connectors A (26P) and B (22P).
4. Turn the ignition switch ON (II).
5. Measure the voltage between TCM connector terminals B20 and A4.

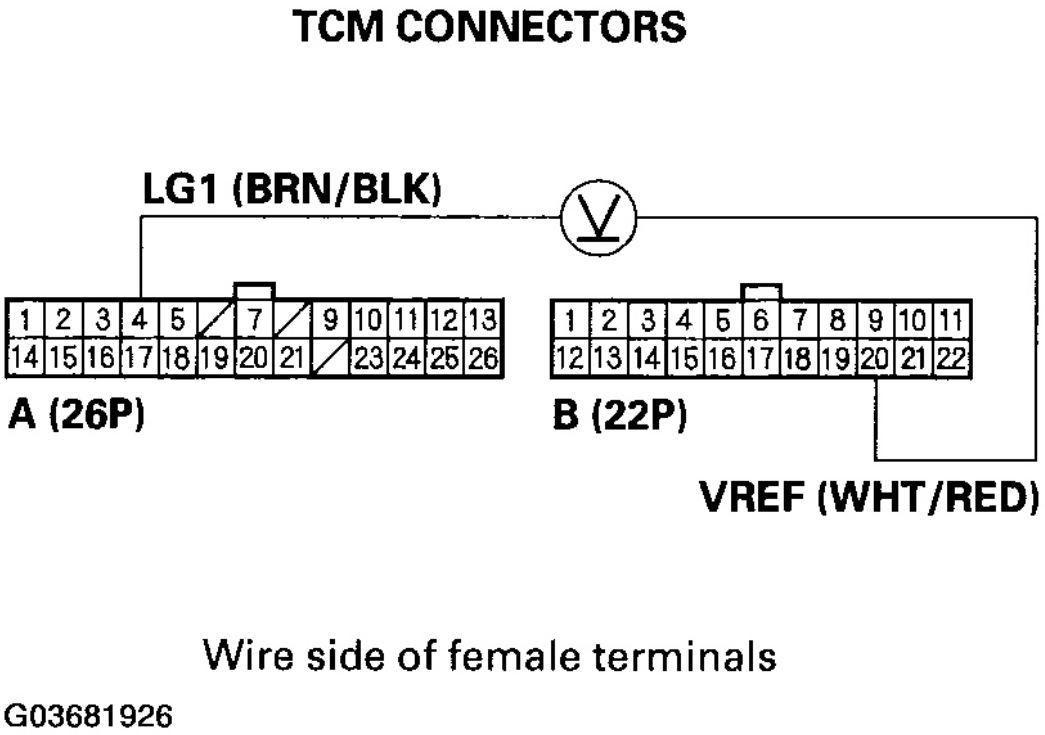


Fig. 225: Measuring Voltage Between TCM Connector Terminals B20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 6.

NO -Repair an open or short in VREF wire between TCM connector terminals B20 and the ECM.

6. Measure the voltage between TCM connector terminals B19and A4.

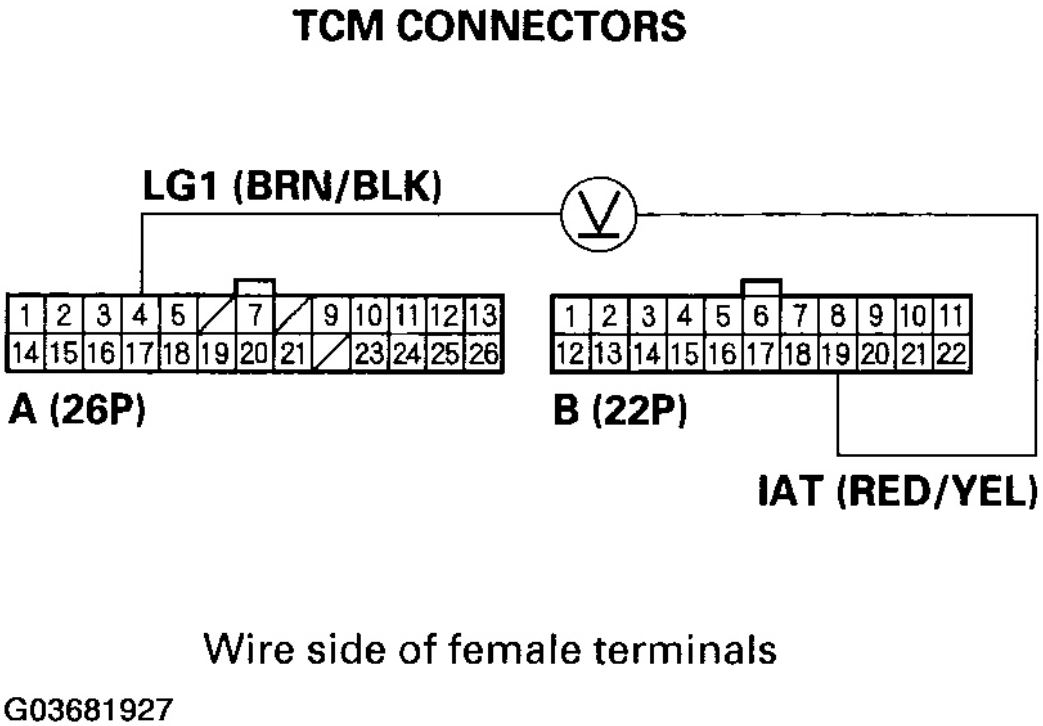


Fig. 226: Measuring Voltage Between TCM Connector Terminals B19 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.1-4.8 V?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a Known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a Known-good TCM, replace the original TCM.

NO -Repair an open or short in the wire between TCM connector terminal B19and the IAT sensor.

DTC P1850: Problem in Creep Aid System Solenoid Valve A Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connectors A (26P) and B (22P).
3. Turn the ignition switch ON (II).
4. Measure the voltage between TCM connector terminals B11 and A4.

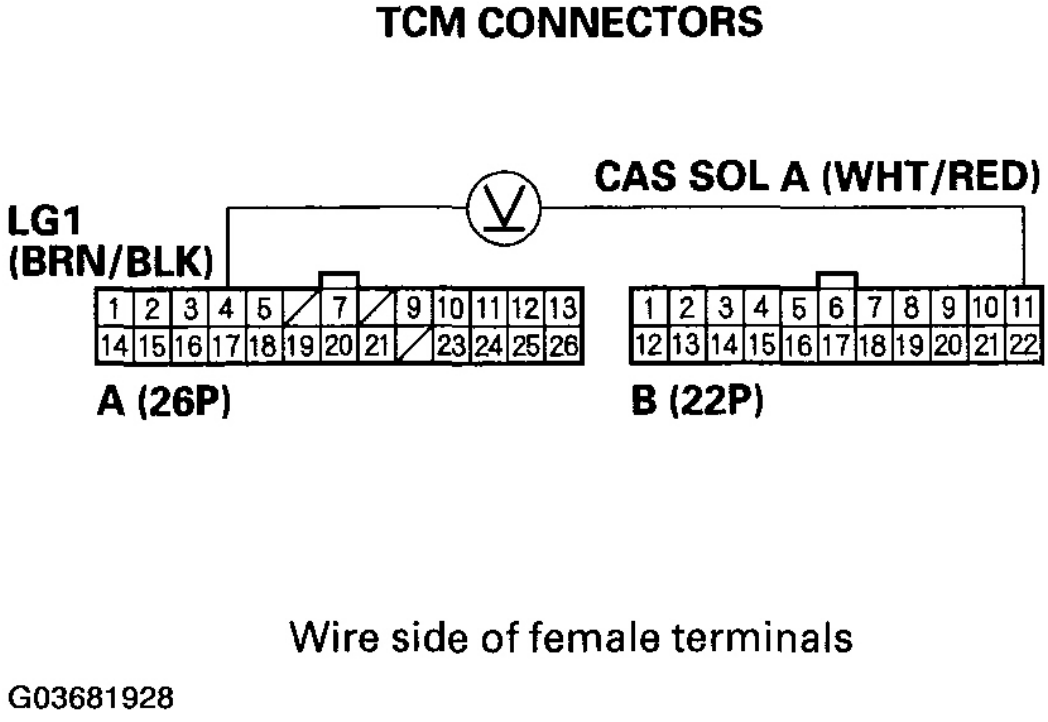


Fig. 227: Measuring Voltage Between TCM Connector Terminals B11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wire between TCM connector terminal B11 and the creep aid system solenoid valve A.

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the 4P connector from the creep aid system solenoid valves A and B.
7. Check for continuity between TCM connector terminals B11 and A4.

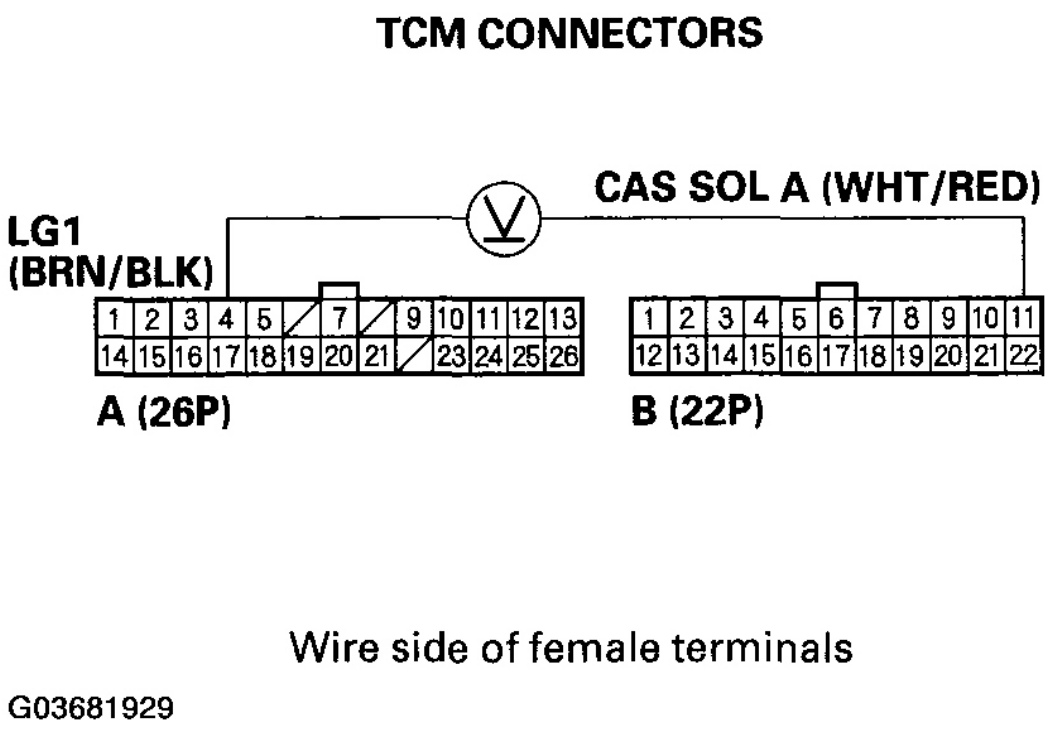


Fig. 228: Checking Continuity Between TCM Connector Terminals B11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector

terminal B11 and the creep aid system solenoid valve A.

NO -Go to step 8.

8. Connect the creep aid system solenoid valves A and B connector.
9. Measure the resistance between TCM connector terminals B11 and A4.

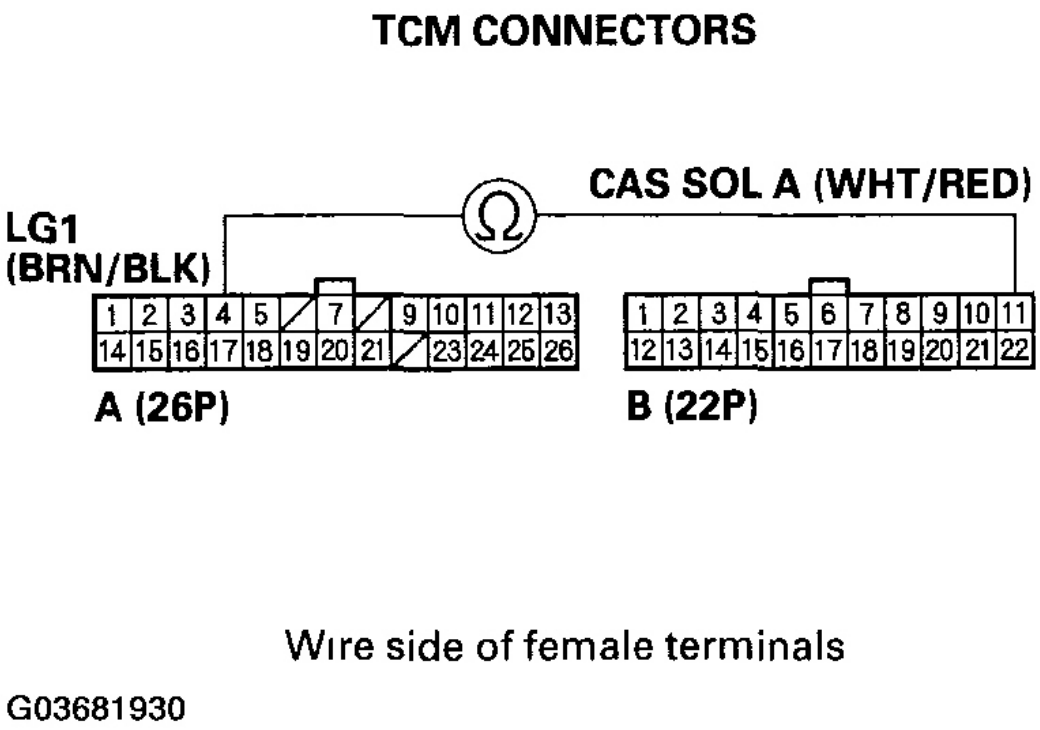


Fig. 229: Measuring Resistance Between TCM Connector Terminals B11 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8-24 ohm ?

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a Known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a Known-good TCM, replace the original TCM.

NO -Check for an open in the wire between TCM connector terminal B11

and the creep aid system solenoid valve A. If the wire is OK, replace the creep aid system solenoid valves A and B.

DTC PI851: Problem in Creep Aid System Solenoid Valve B Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Turn the ignition switch OFF.
2. Disconnect TCM connectors A (26P) and B (22P).
3. Turn the ignition switch ON (II).
4. Measure the voltage between TCM connector terminals B18 and A4.

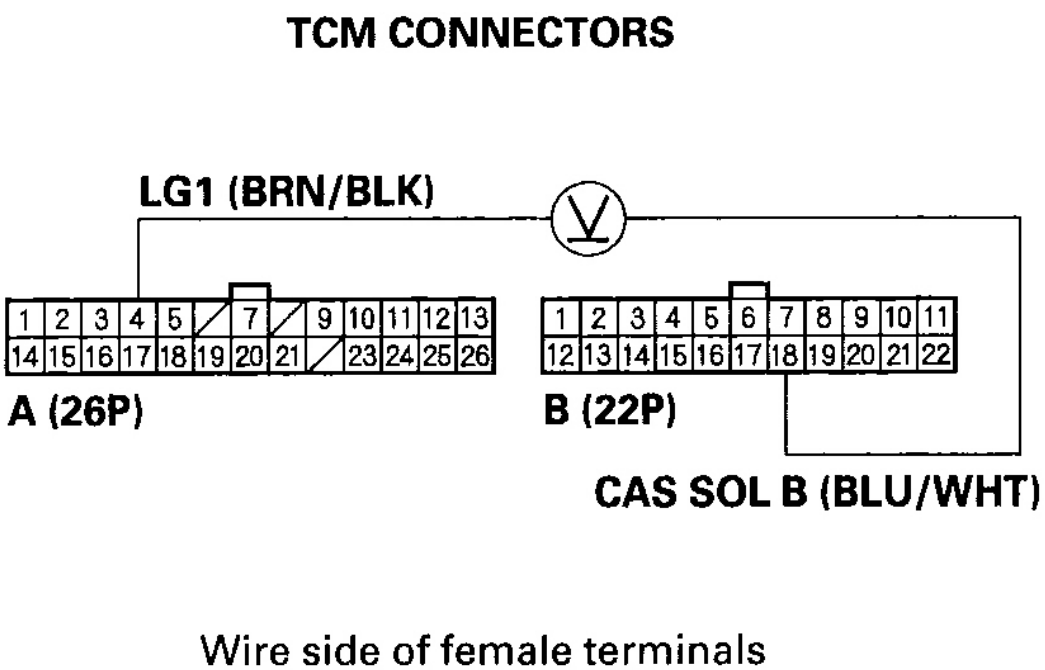


Fig. 230: Measuring Voltage Between TCM Connector Terminals B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B.

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the 4P connector from the creep aid system solenoid valves A and B.
7. Check for continuity between TCM connector terminals B18 and A4.

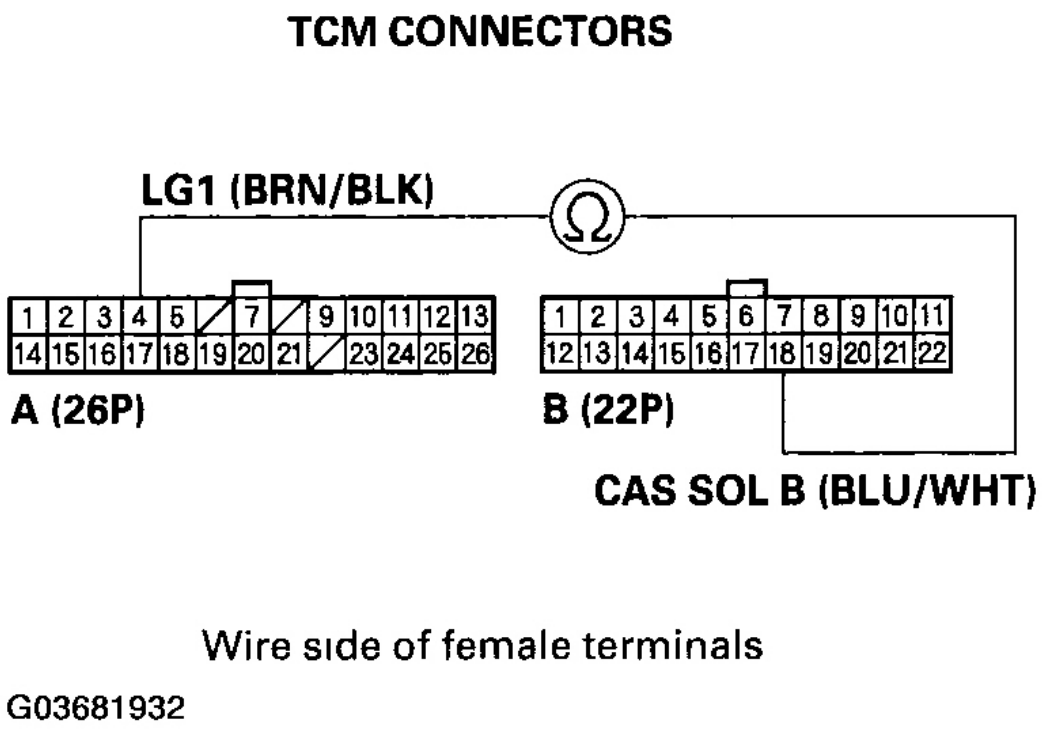


Fig. 231: Checking Continuity Between TCM Connector Terminals B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B.

NO -Go to step 8.

8. Connect the creep aid system solenoid valves A and B connector.
9. Measure the resistance between TCM connector terminal b18 and A4

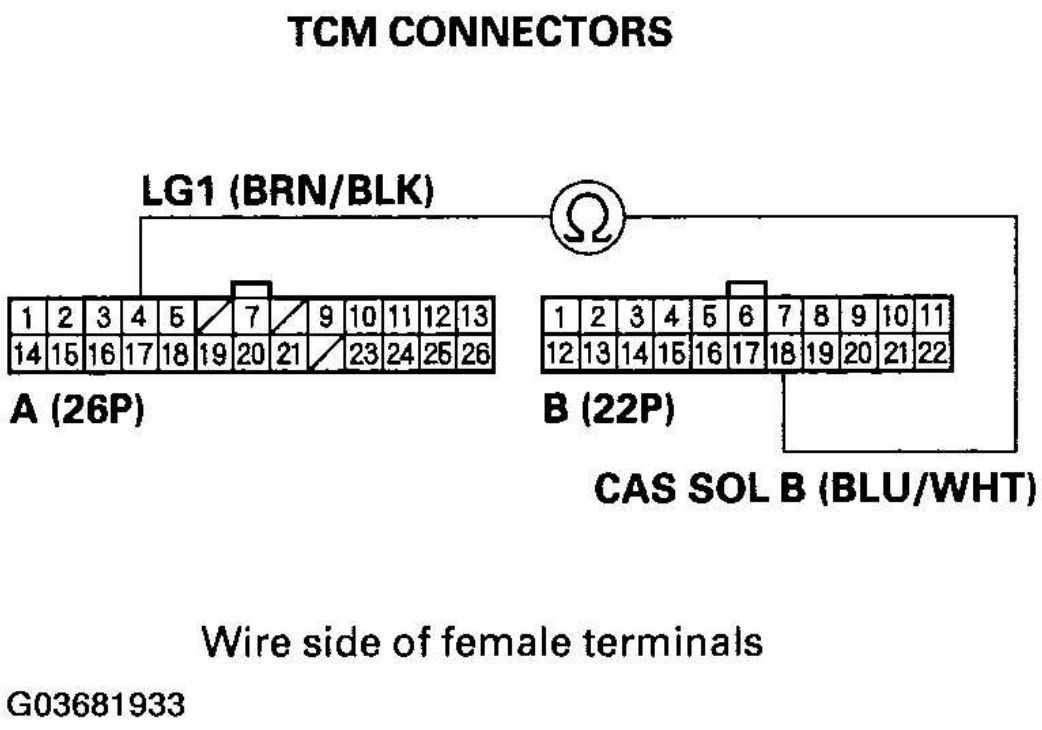


Fig. 232: Measuring Resistance Between TCM Connector Terminal B18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8-24 ohm

YES -Check for loose terminal fit in the TCM connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck If the symptom/indication goes away with a known good TCM, replace the original TCM.

NO --Check for an open in the wire between TCM connector terminal B18 and the creep aid system solenoid valve B If the wire is OK, replace the creep aid system solenoid valves A and B.

DTC P2159: Range/Performance Problem in CVT Speed Sensor Circuit

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and shift into the D position. Push on the accelerator pedal until the rotational speed of the VEHICLE SPEED SENSOR is the same speed as indicated by the freeze data.
3. Monitor the SECONDARY SHAFT SPEED and VEHICLE SPEED SENSOR with the HDS in the data list.

   Do the SECONDARY SHAFT SPEED and VEHICLE SPEED SENSOR signals fluctuate with the same speed?

   YES -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CVT speed sensor and TCM.

   NO -Go to step 4.
4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

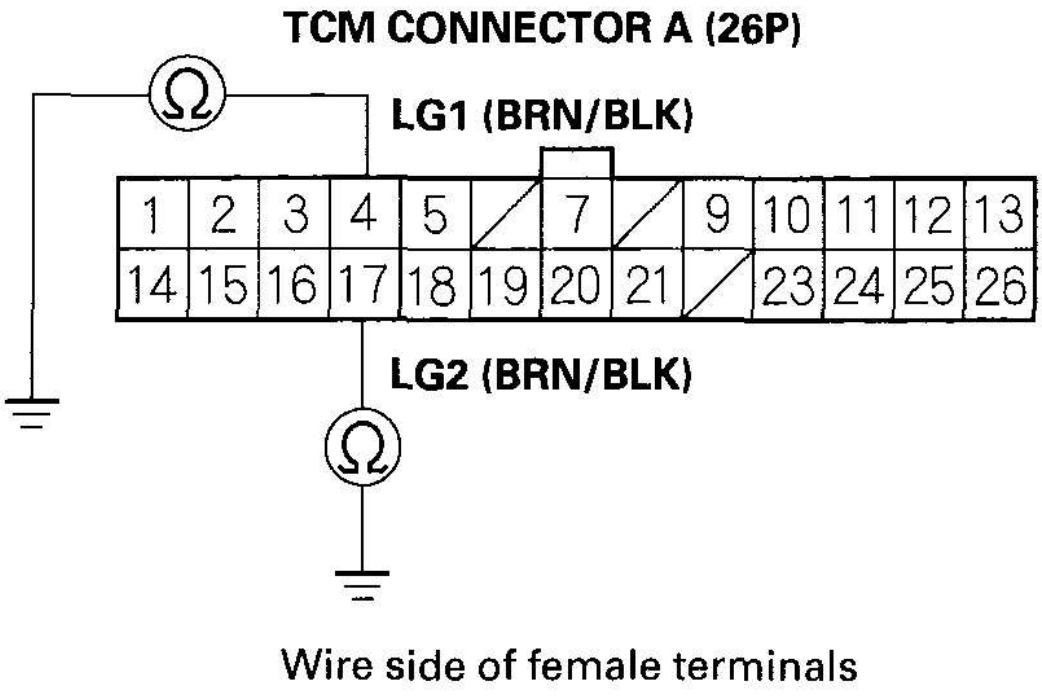


Fig. 233: Checking Continuity Between TCM Connector Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G 101), or repair poor ground (G101).

6. Disconnect CVT speed sensor connector.
7. Turn the ignition switch ON (II).
8. Check for voltage between CVT speed sensor connector terminal No. 2 and body ground.

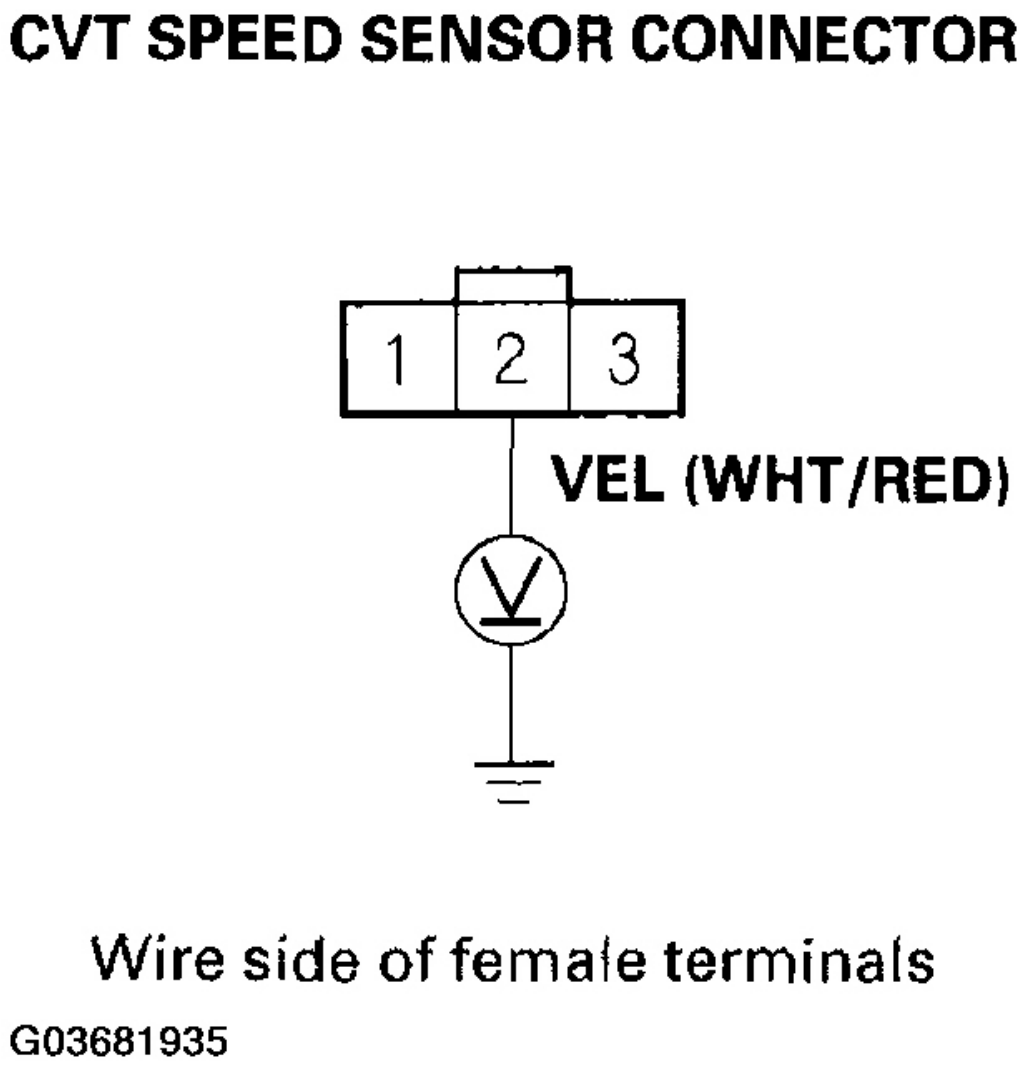


Fig. 234: Checking Voltage Between CVT Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .
NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between CVT speed sensor connector terminal No. 2 and body ground.

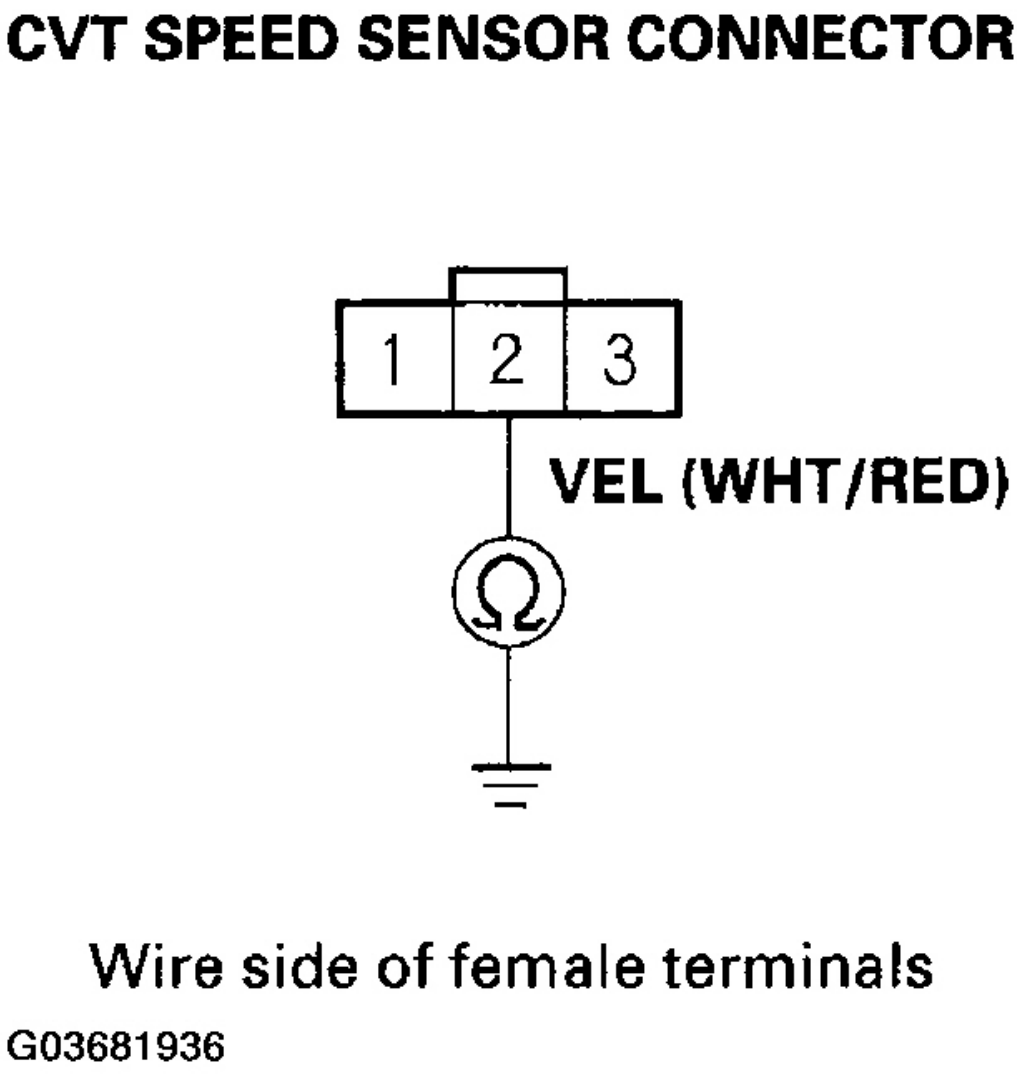


Fig. 235: Checking Continuity Between CVT Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B15 and the CVT speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B15 and A4.

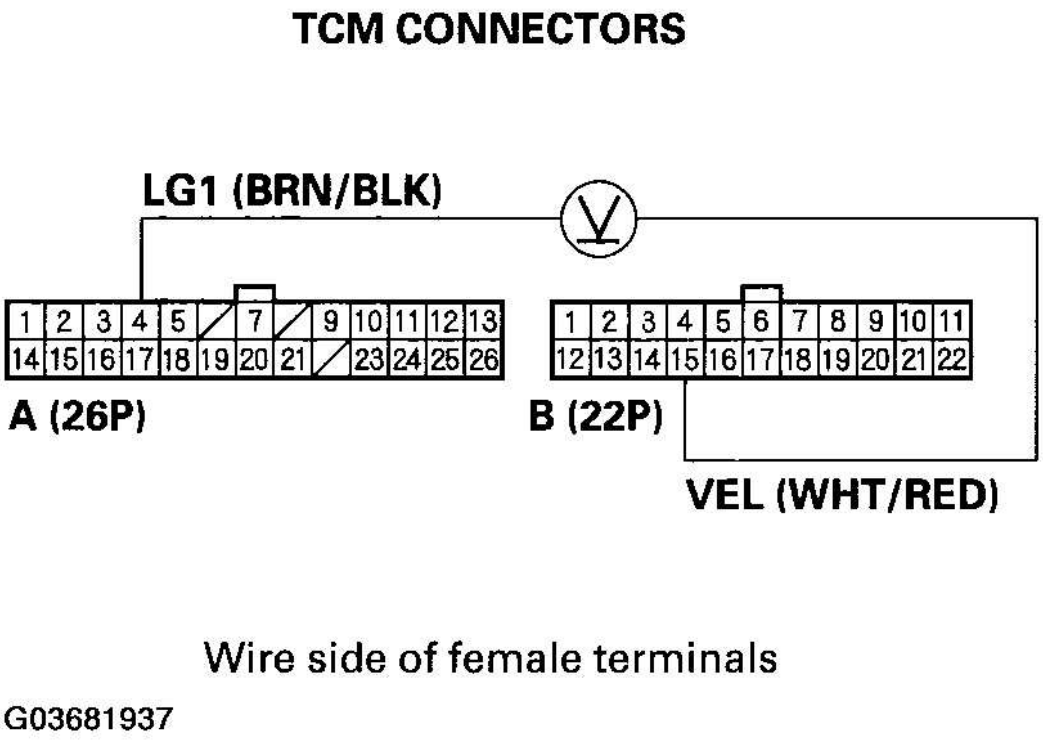


Fig. 236: Measuring Voltage Between TCM Connector Terminals B15 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal

B15and the CVT speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B15. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between CVT speed sensor connector terminal No. 1 and body ground.

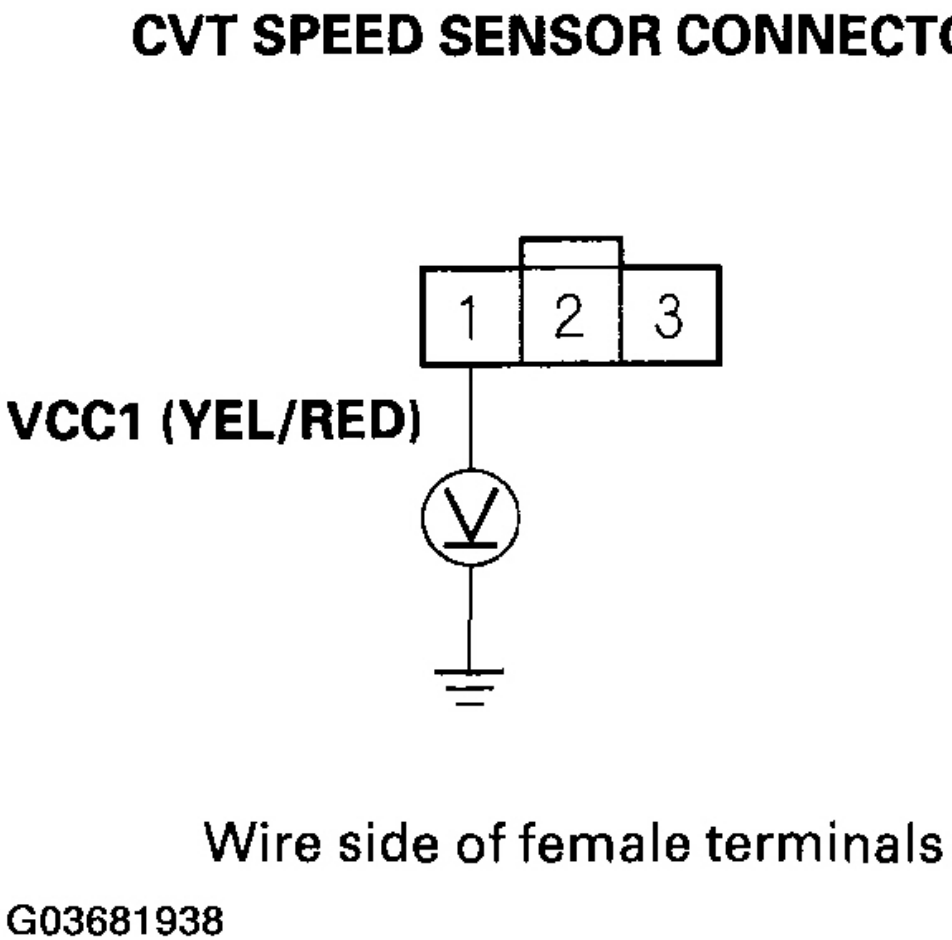


Fig. 237: Measuring Voltage Between CVT Speed Sensor Connector Terminal 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 22 .

NO -Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect TCM connector B (22P).
18. Check for continuity between CVT speed sensor connector terminal No. 1 and body ground.

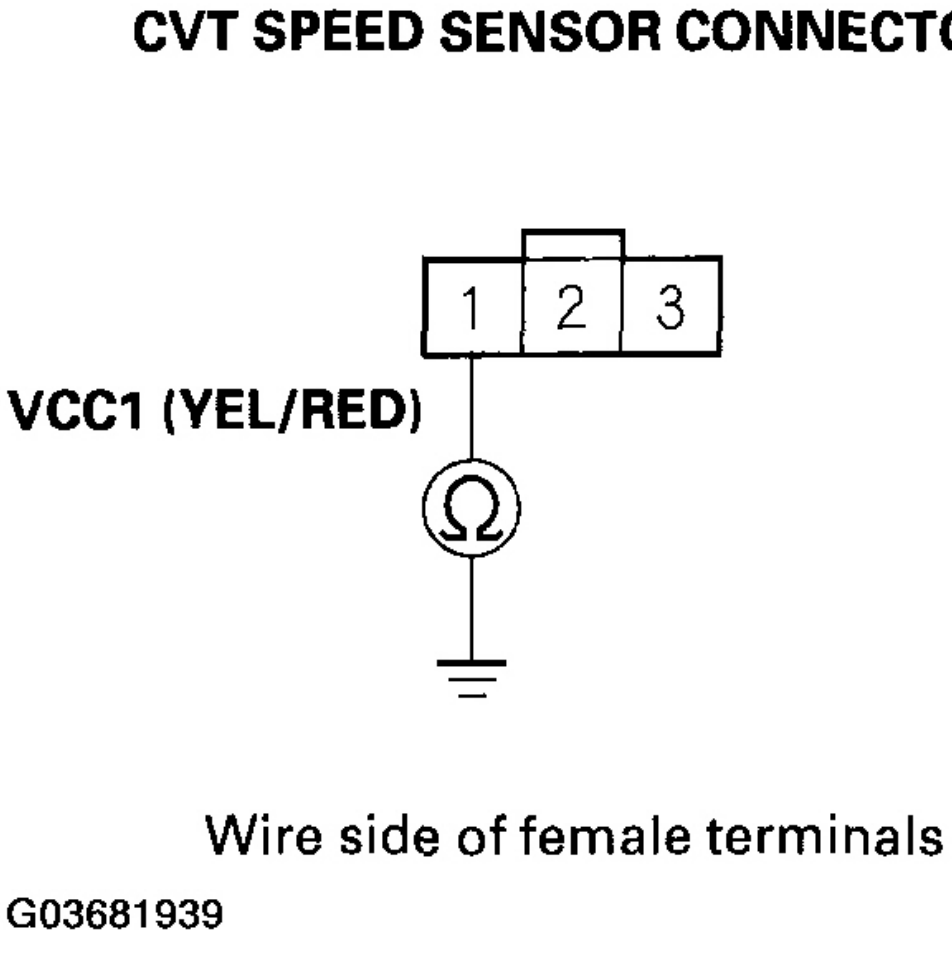


Fig. 238: Checking Continuity Between CVT Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Go to step 19.

19. Connect TCM connector B (22P).
20. Turn the ignition switch ON (II).
21. Measure the voltage between TCM connector terminals B3and A4.

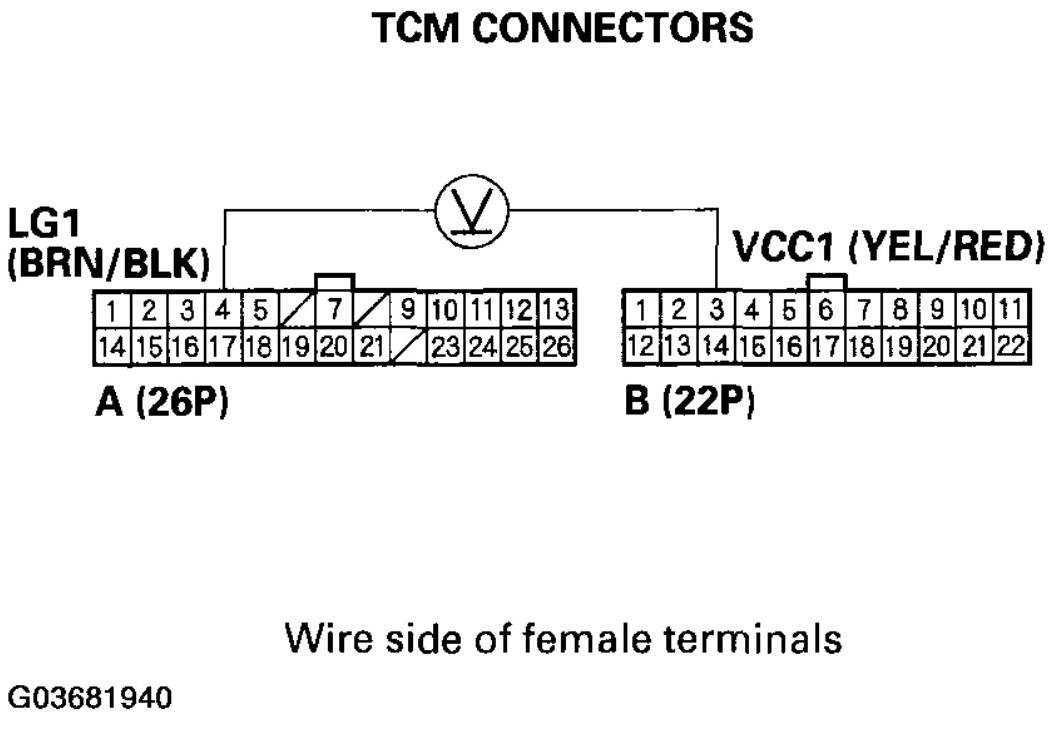


Fig. 239: Measuring Voltage Between TCM Connector Terminals B3 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B3. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

22. Measure the voltage between CVT speed sensor connector terminals No. 1 and No. 3.

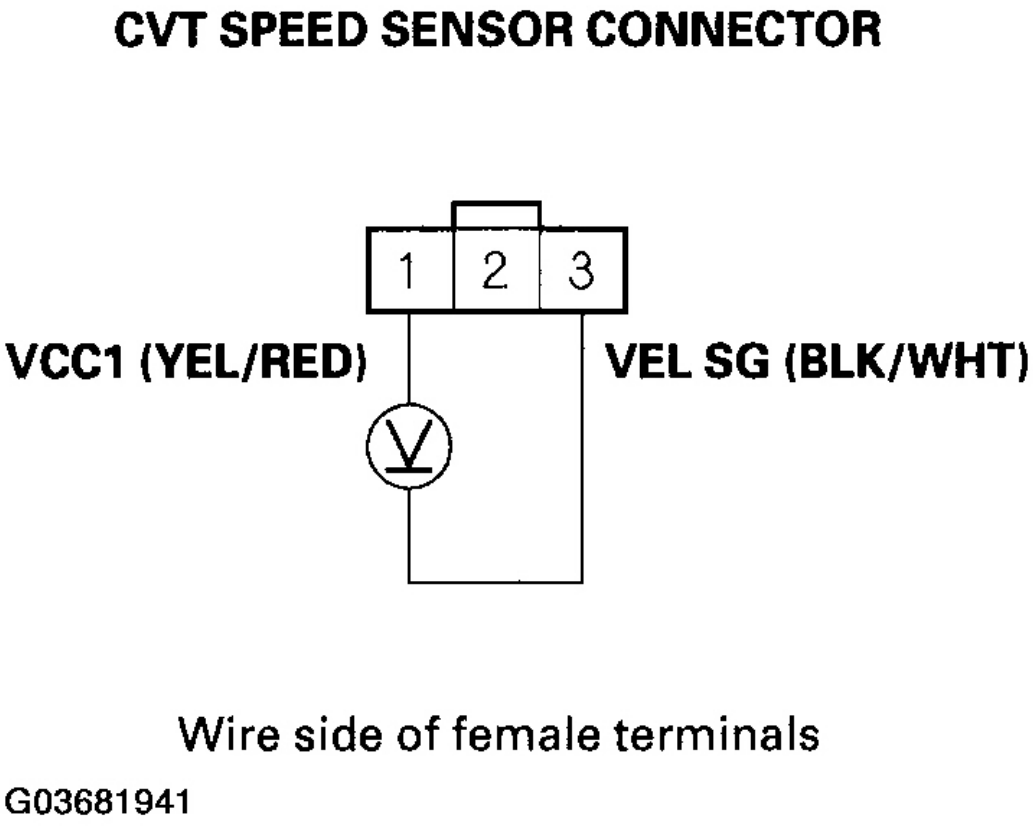


Fig. 240: Measuring Voltage Between CVT Speed Sensor Connector Terminals 1 And 3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Replace the CVT speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 23.

NO -Repair an open in the wire between TCM connector terminal B16 and the CVT speed sensor.

23. Clear the DTC with the HDS.
24. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
25. Check that DTC P2159 recurs.

Is DTC P2159 indicated?

YES -Return to step 4 . and recheck.

NO -Troubleshooting is complete.

DTC P2160: Problem in CVT Speed Sensor Circuit (No Signal Input)

2005-2006 Models

NOTE:

- **Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.**
- **This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.**

1. Raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely.
2. Start the engine, and drive the vehicle in the D position. Accelerate the vehicle slowly until the vehicle speed reaches 12 mph (20 km/h).
3. Check the SECONDARY SHAFT SPEED with the HDS in the data list.

Is the SECONDARY SHAFT SPEED 2 km/h or less?

YES -Go to step 4.

NO -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CVT speed sensor and TCM.

4. Turn the ignition switch OFF.
5. Check for continuity between TCM connector terminals A4 and body ground, and between A17 and body ground.

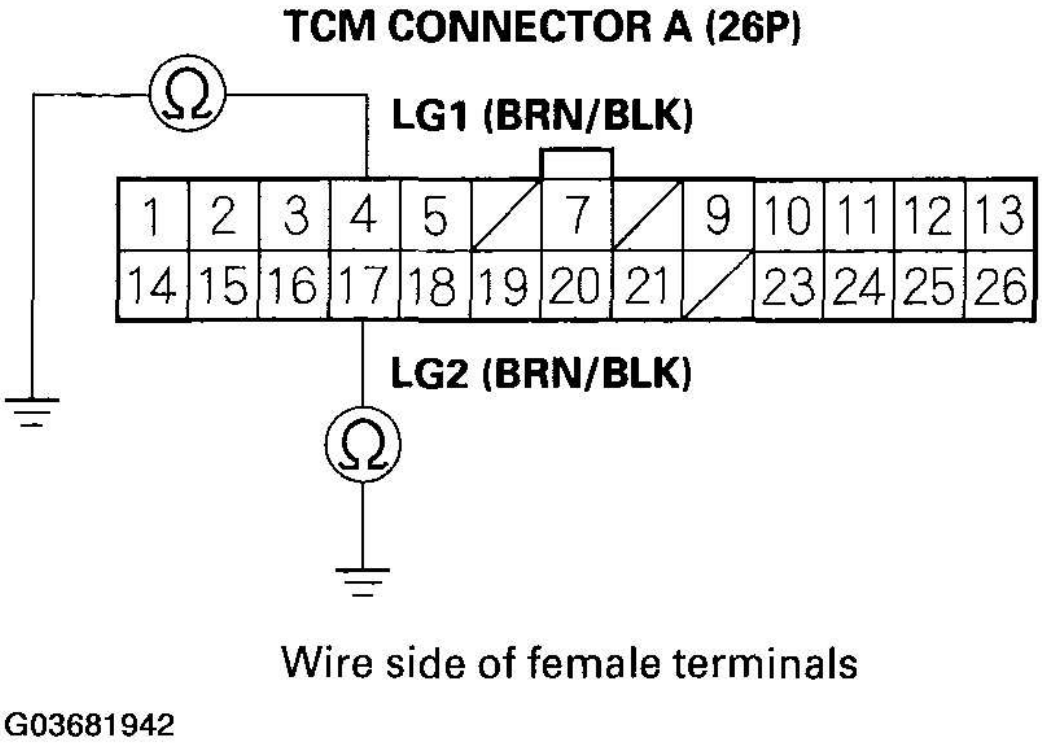


Fig. 241: Checking Continuity Between TCM Connector Terminals A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

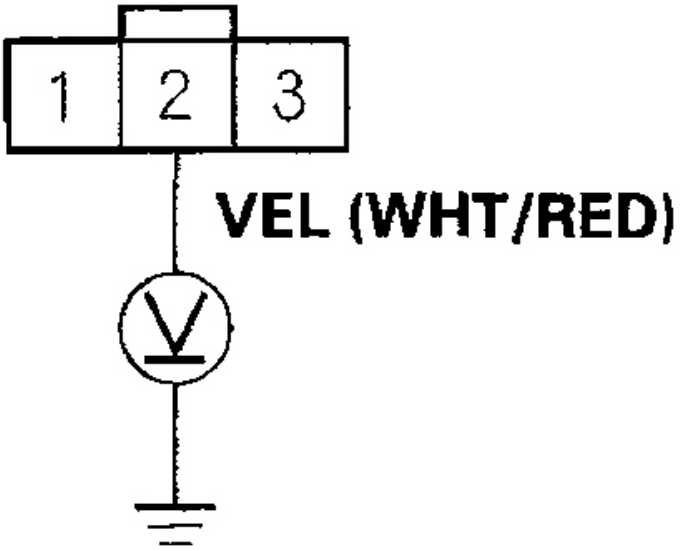
Is there continuity?

YES -Go to step 6.

NO -Repair an open in the wires between TCM connector terminals A4, A17, and ground (G 101), or repair poor ground (G 101).

6. Disconnect CVT speed sensor connector.
7. Turn the ignition switch ON (II).
8. Check for voltage between CVT speed sensor connector terminal No. 2 and body ground.

CVT SPEED SENSOR CONNECTOR



Wire side of female terminals

G03681943

Fig. 242: Checking Voltage Between CVT Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 15 .

NO -Go to step 9.

9. Turn the ignition switch OFF.
10. Disconnect TCM connector B (22P).
11. Check for continuity between CVT speed sensor connector terminal No. 2 and body ground.

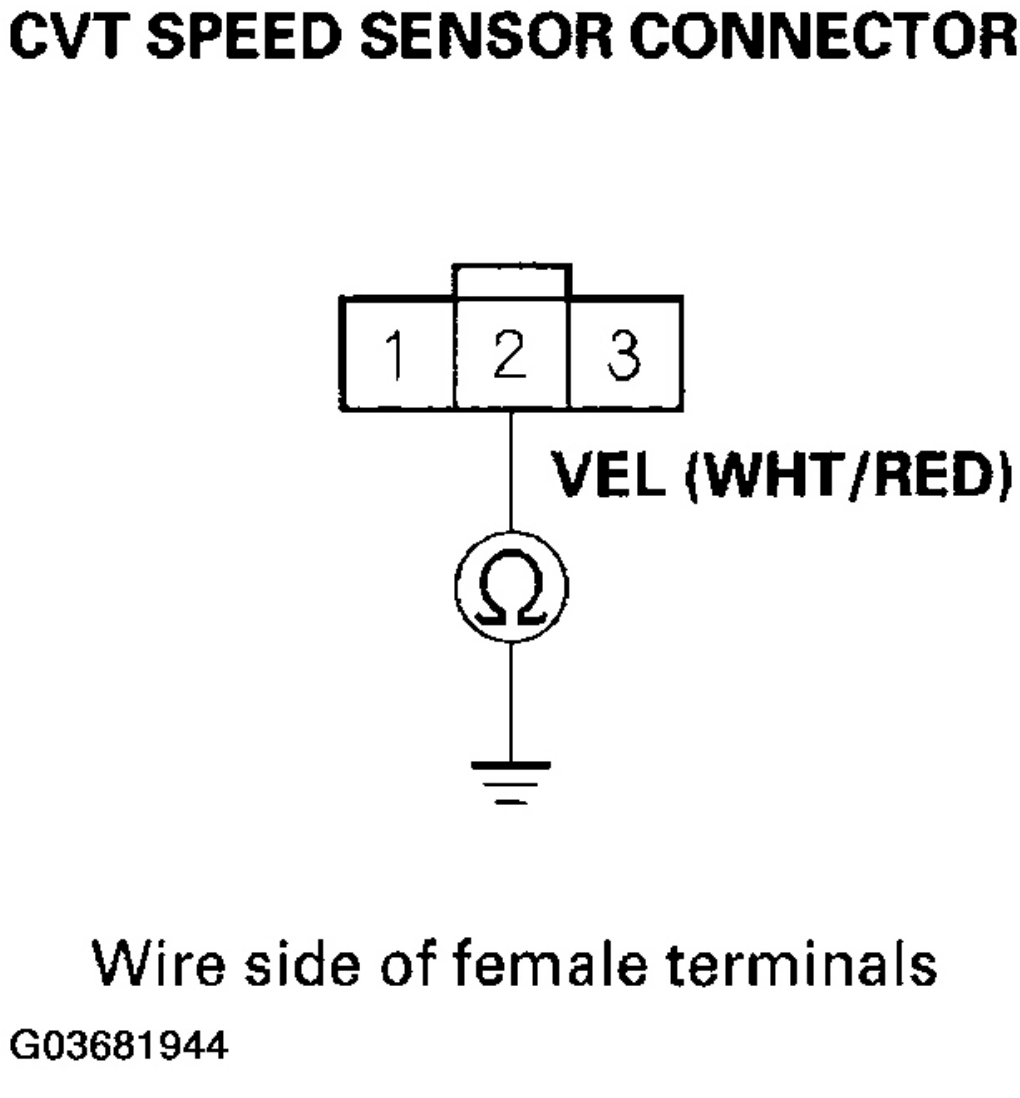


Fig. 243: Checking Continuity Between CVT Speed Sensor Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B15 and the CVT speed sensor.

NO -Go to step 12.

12. Connect TCM connector B (22P).
13. Turn the ignition switch ON (II).
14. Measure the voltage between TCM connector terminals B15 and A4.

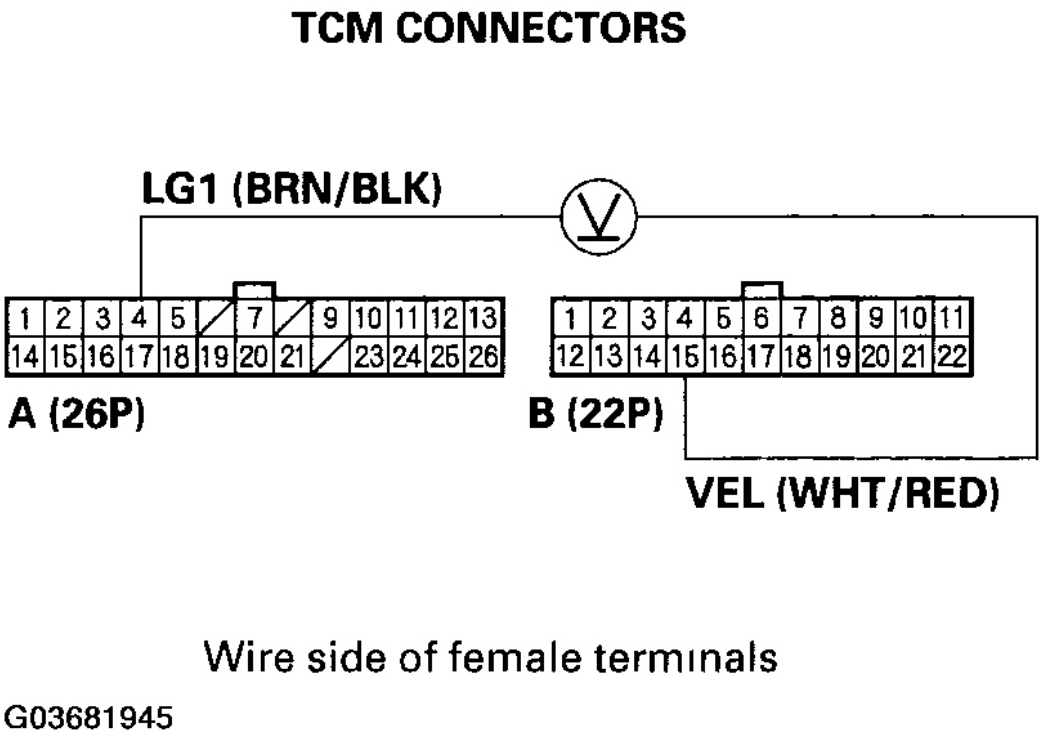


Fig. 244: Measuring Voltage Between TCM Connector Terminals B15 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B15 and the CVT speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B15. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the

symptom/indication goes away with a known-good TCM, replace the original TCM.

15. Measure the voltage between CVT speed sensor connector terminal No. 1 and body ground.

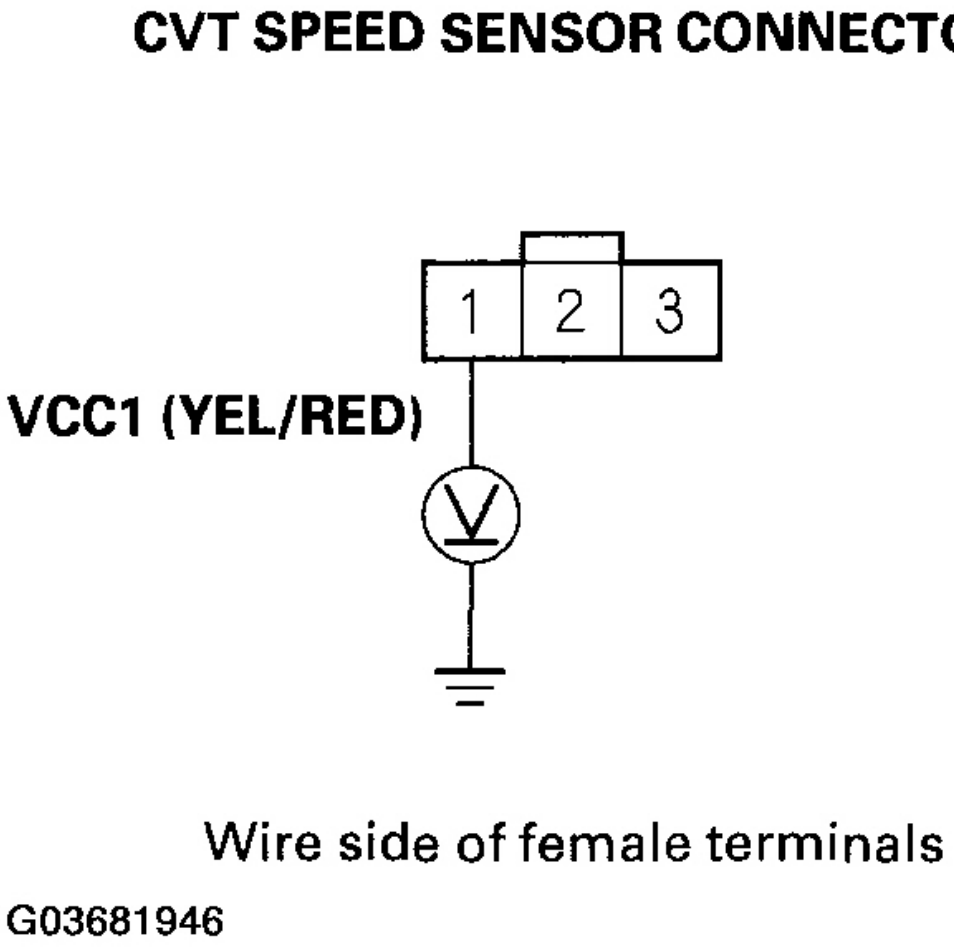


Fig. 245: Measuring Voltage Between CVT Speed Sensor Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Go to step 22 .

NO -Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect TCM connector B (22P).
18. Check for continuity between CVT speed sensor connector terminal No. 1 and body ground.

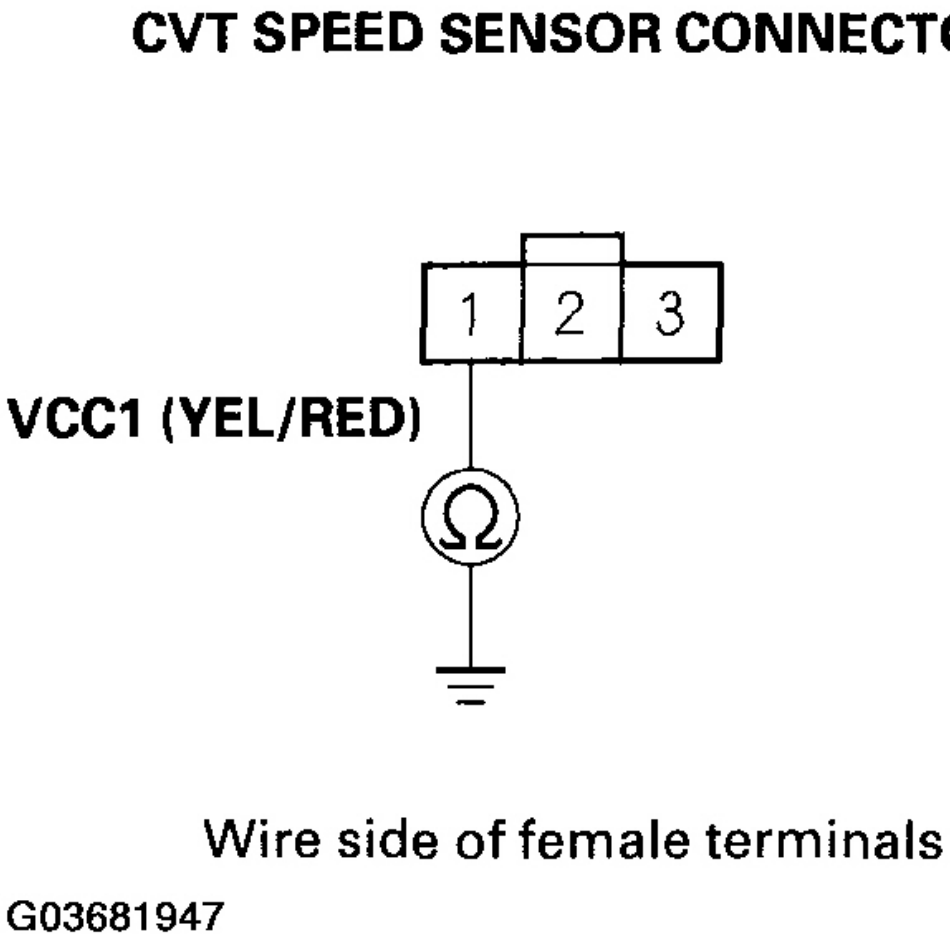


Fig. 246: Checking Continuity Between CVT Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short to ground in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Go to step 19.

19. Connect TCM connector B (22P).
20. Turn the ignition switch ON (II).
21. Measure the voltage between TCM connector terminals B3 and A4.

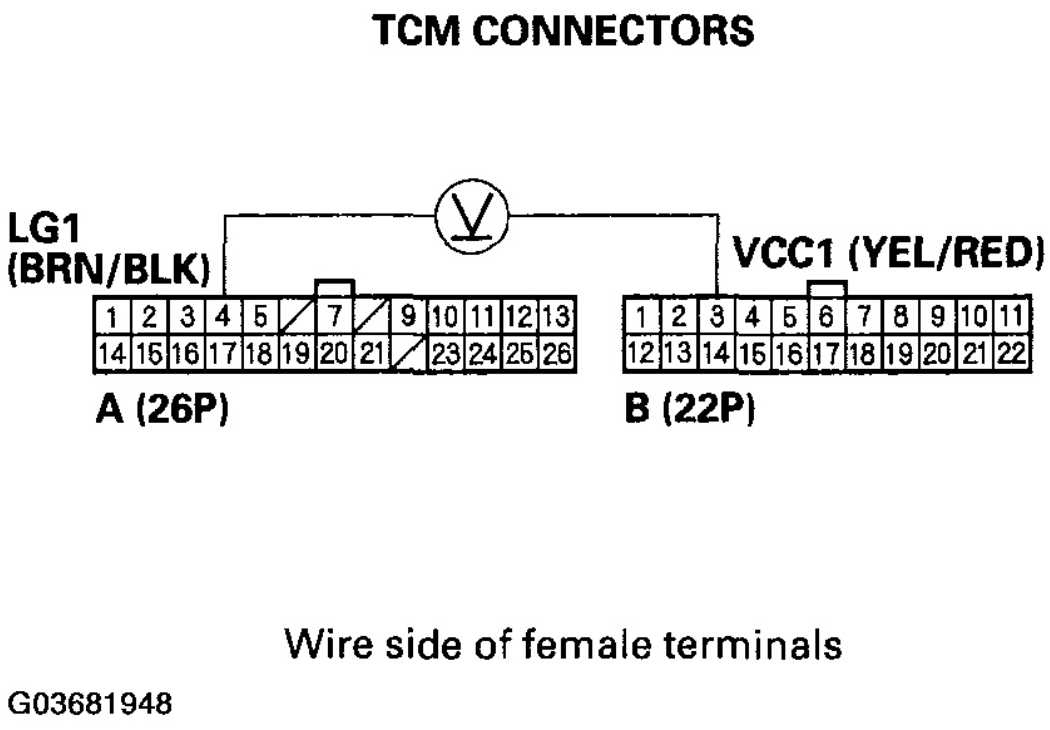


Fig. 247: Measuring Voltage Between TCM Connector Terminals B3 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Repair an open in the wire between TCM connector terminal B3 and the CVT speed sensor.

NO -Check for loose or poor connections at TCM connector terminal B3. If the connection is OK, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), then recheck. If the symptom/indication goes away with a known-good TCM, replace the original TCM.

22. Measure the voltage between CVT speed sensor connector terminals No. 1 and No. 3.

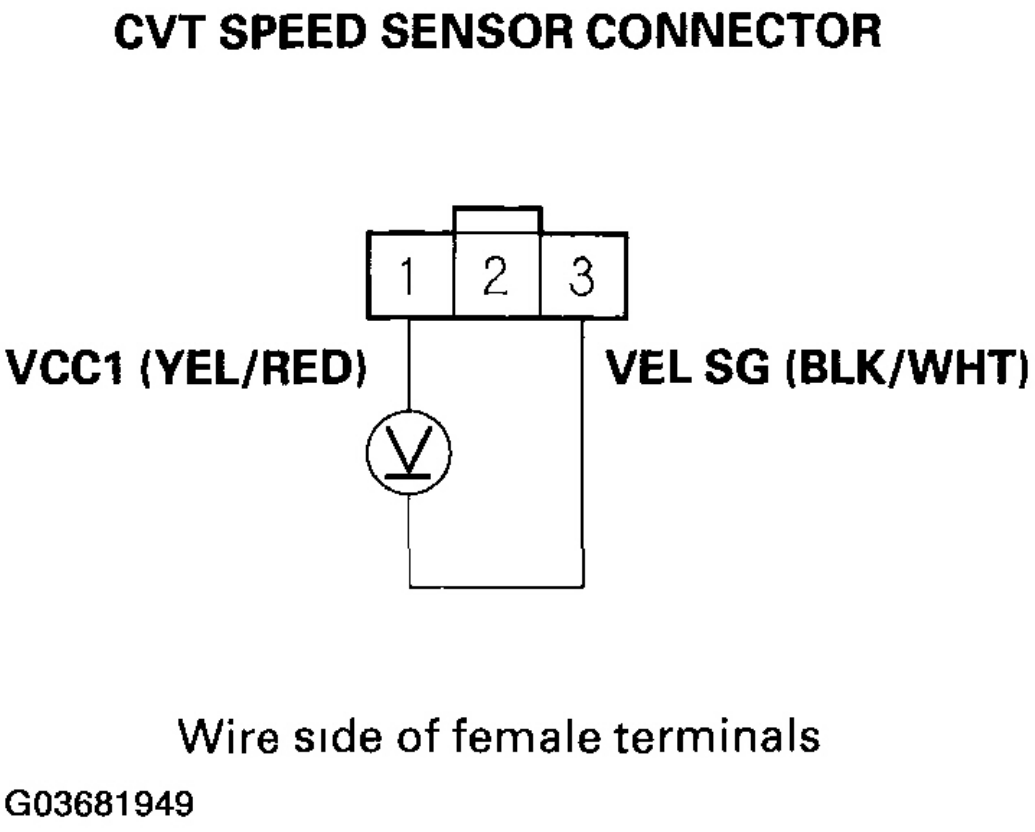


Fig. 248: Measuring Voltage Between CVT Speed Sensor Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Replace the CVT speed sensor (see **SPEED SENSOR REPLACEMENT**), then go to step 23.

NO -Repair an open in the wire between TCM connector terminal B16 and the CVT speed sensor.

23. Clear the DTC with the HDS.
24. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
25. Check that DTC P2160 recurs.

Is DTC P2160 indicated?

YES -Return to step 4 . and recheck.

NO -Troubleshooting is complete.

D INDICATOR CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch ON (II), and watch the D indicator.

Does the D indicator come on and stay on?

YES -Go to step 2.

NO -If the light comes on for about 2 seconds and then goes off, it's OK. If it does not come on at all, go to step 12 .

2. Make sure the Honda diagnostic system (HDS) is not connected to the DLC.
3. Turn the ignition switch OFF.
4. Disconnect TCM connector A (26P).
5. Turn the ignition switch ON (II).
6. Measure the voltage between TCM connector terminal A20 and body ground.

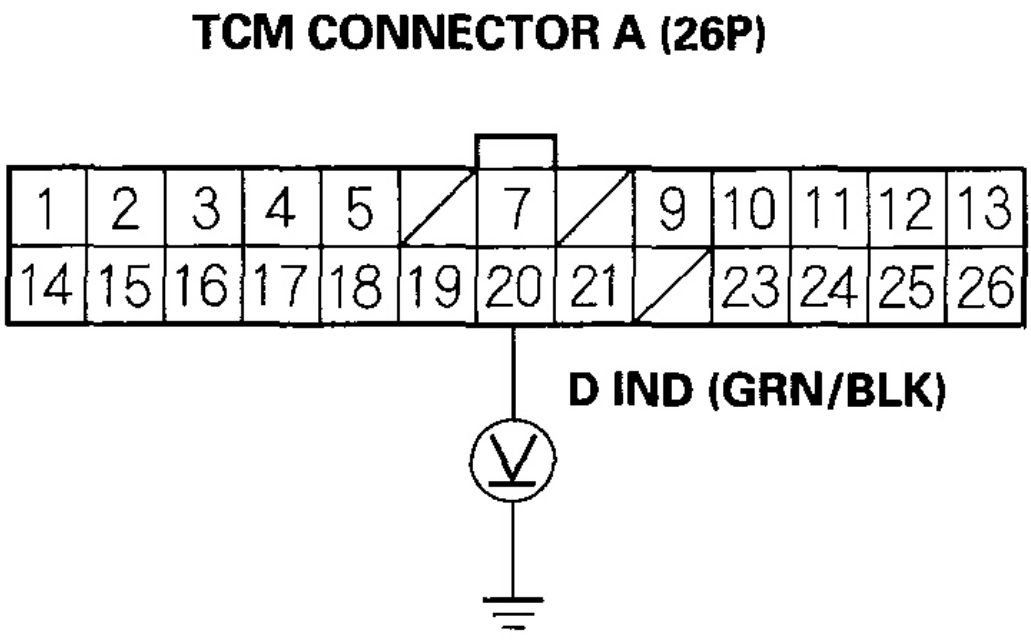


Fig. 249: Measuring Voltage Between TCM Connector A (26P) Terminal A20 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Repair a short to power in the wire between TCM connector terminal A20 and the gauge assembly.

NO -Go to step 7.

7. Turn the ignition switch OFF.
8. Reconnect TCM connector A (26P).
9. Turn the ignition switch ON (II).
10. Shift to any position other than the D position.

11. Measure the voltage between TCM connector terminal A9 and body ground.

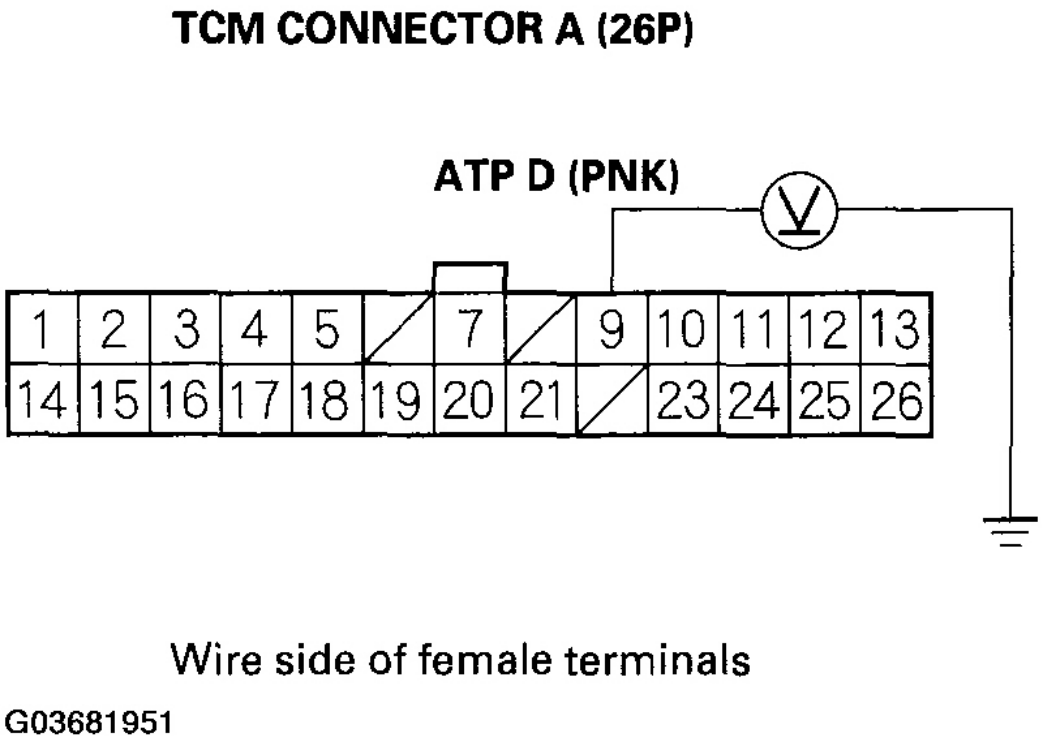


Fig. 250: Measuring Voltage Between TCM Connector A (26P) Terminal A9 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES -Faulty TCM or the gauge assembly.

NO -Check for short to ground in the wire between TCM connector terminal A9 and the transmission range switch. If the wire is OK, check the transmission range switch.

12. Shift to the D position, and watch the D indicator.

Does the D indicator come on?

YES -Check for loose terminal fit in the TCM connectors, and recheck the D indicator several times. If the problem is intermittent, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), and recheck. If the light then works OK every time, replace the original TCM.

NO -Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect TCM connector A (26P).
15. Check for continuity between TCM connector terminal A4 and body ground, and between terminal A17 and body ground.

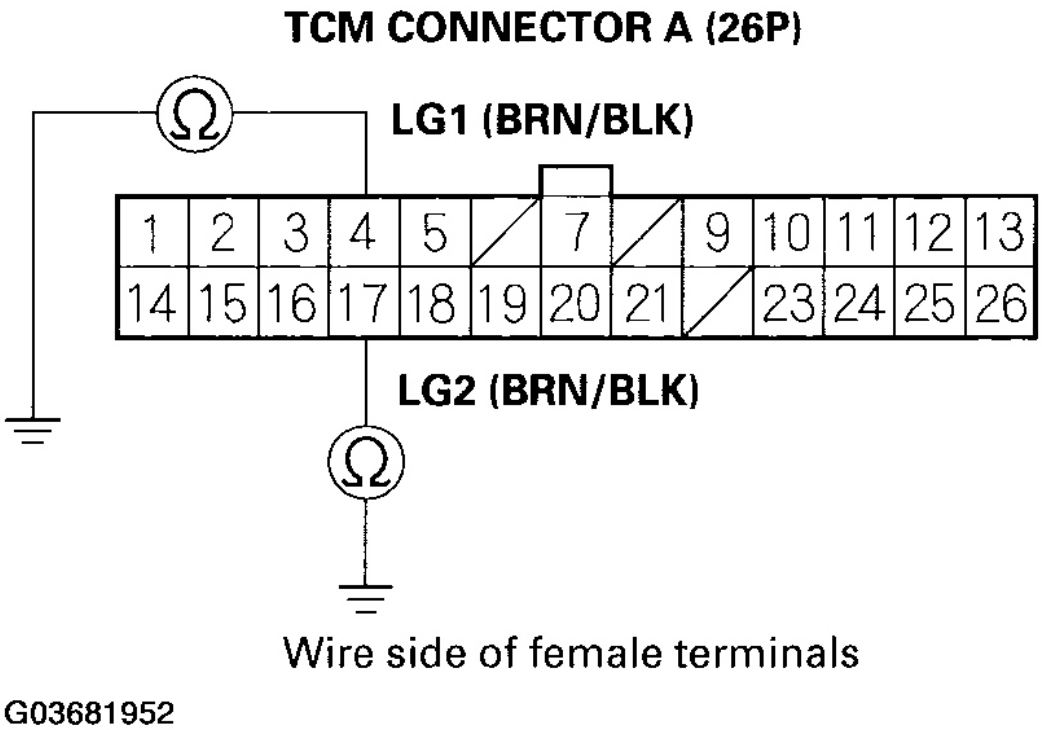


Fig. 251: Checking Continuity Between TCM Connector Terminal A4, A17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity between each terminal and ground?

YES -Go to step 16.

NO -Repair an open in the wire(s) between TCM connector terminal A4 or A17 and ground (G101), or repair poor ground (G101).

16. Turn the ignition switch ON (II).
17. Measure the voltage between TCM connector terminals A4 and A12, and between terminals A17 andA25.

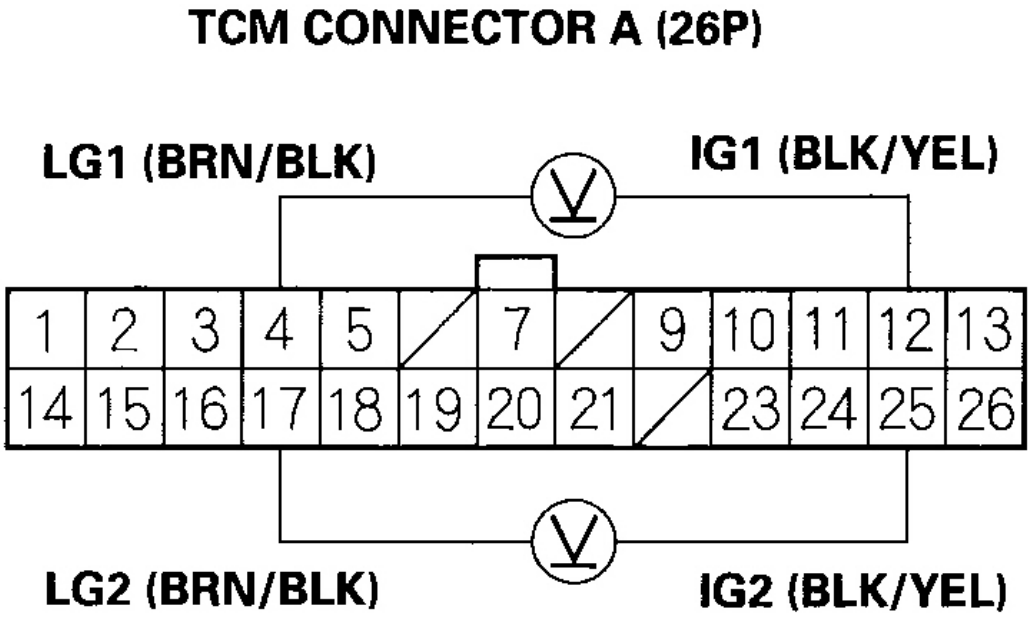


Fig. 252: Measuring Voltage Between TCM Connector Terminals A4 And A12 And Between Terminals A17 And A25
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 18.

NO -Repair an open or short in the wire between TCM connector terminals A12 or A25 and the under-dash fuse/relay box.

18. Turn the ignition switch OFF.
19. Reconnect TCM connector A (26P).
20. Connect the multimeter between TCM connector terminals A20 and A4.

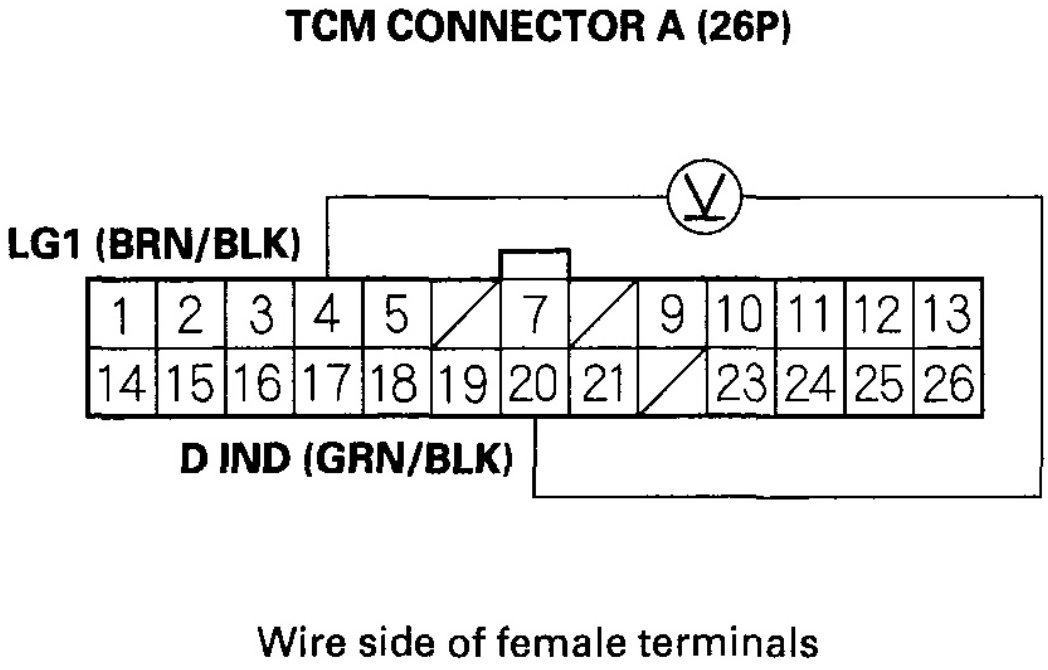


Fig. 253: Connecting Multimeter Between TCM Connector A (26P) Terminals A20 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Turn the ignition switch ON (II), and check for the voltage.

Is there voltage for at least 2 seconds?

YES -Check for an open in the wire between TCM connector terminal A20 and the gauge assembly. If the wire is OK, check for a faulty D indicator bulb or a faulty printed circuit board in the gauge assembly.

NO -Go to step 22.

22. Turn the ignition switch OFF.
23. Disconnect TCM connector A (26P).
24. Check for continuity between TCM connector terminal A20 and gauge assembly connector terminal C10.

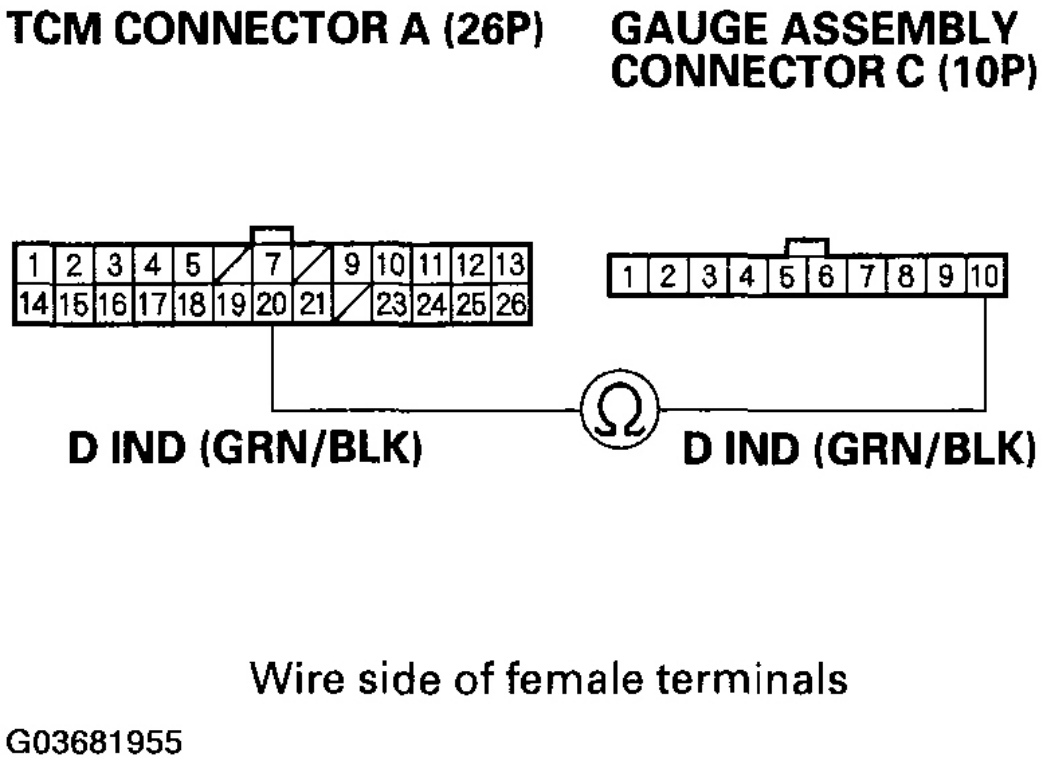


Fig. 254: Checking Continuity Between TCM Connector A (26P) Terminal A20 And Gauge Assembly Connector Terminal C10
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for loose terminal fit in the TCM connectors. Check the transmission range switch. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**), and

recheck.

NO -Repair an open in the wire between TCM connector terminal A20 and gauge assembly.

MODE SWITCH CIRCUIT TROUBLESHOOTING

SRS components are located in this area. Review the SRS component locations (see **COMPONENT LOCATION INDEX**), and the precautions and procedures (see **PRECAUTIONS AND PROCEDURES**) before performing repairs or service.

1. Test the mode switch (see **MODE SWITCH TEST**).

   Is the switch OK?

   YES -Go to step 2.

   NO -Replace the mode switch.
2. Connect the mode switch connector.
3. Remove the steering column covers, and disconnect cable reel 4P connector (see **CABLE REEL REPLACEMENT**).
4. Check for continuity between cable reel 4P connector terminals No. 1 and No. 3 while pressing the S mode switch, and when the switch is released. Check for continuity between terminals No. 1 and No. 4 while pressing the D mode switch, and when the switch is released.

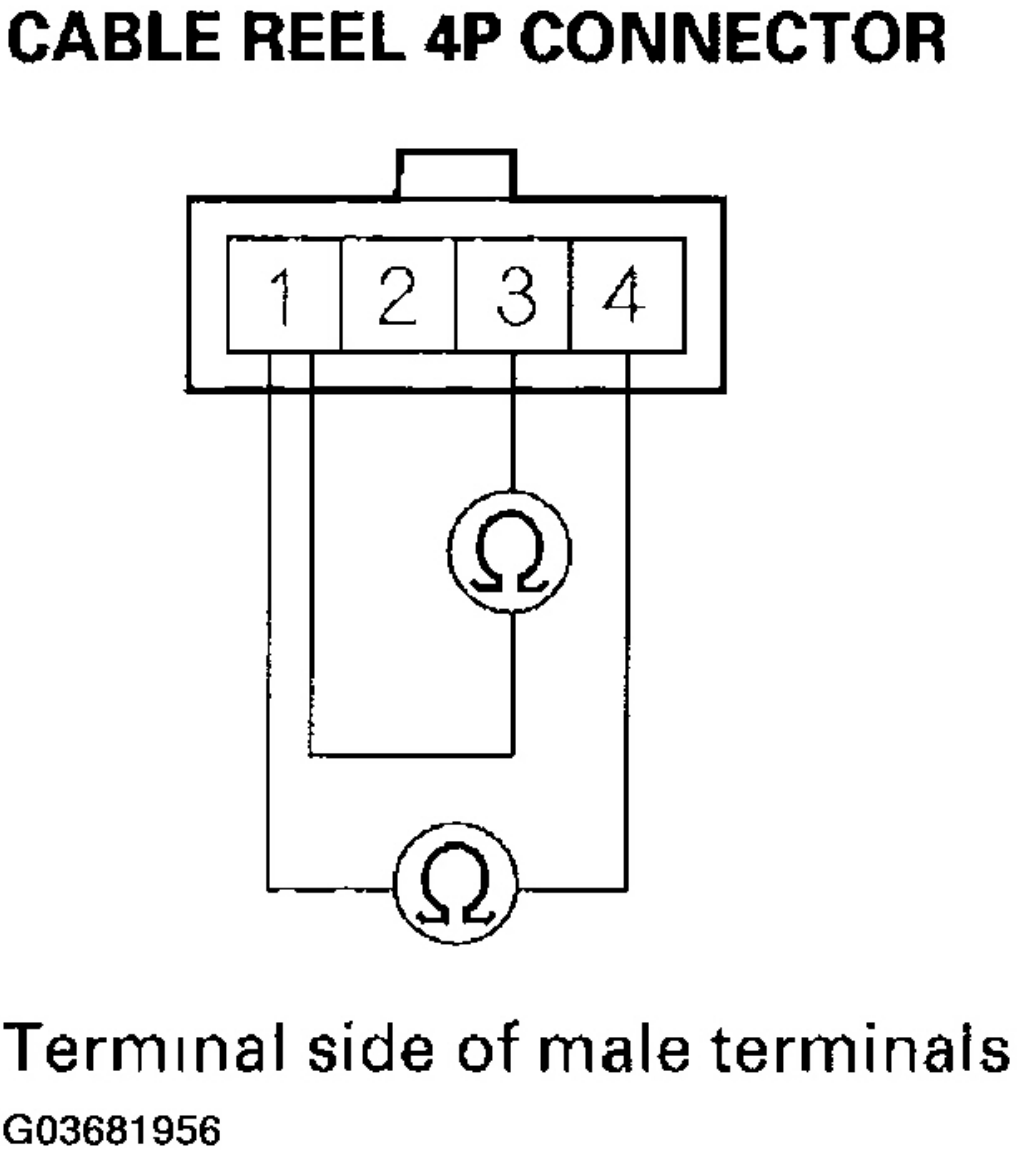


Fig. 255: Checking Continuity Between Cable Reel 4P Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity while pressing each switch, and no continuity when each switch is released?

YES -Go to step 5.

NO -Repair an open or short in the wire between the cable reel 4P connector and the switch connector, or replace the mode switch.

5. Turn the ignition switch ON (II).
6. Measure the voltage between cable reel 4P connector terminal No. 3 and body ground, and between terminal No. 4 and body ground.

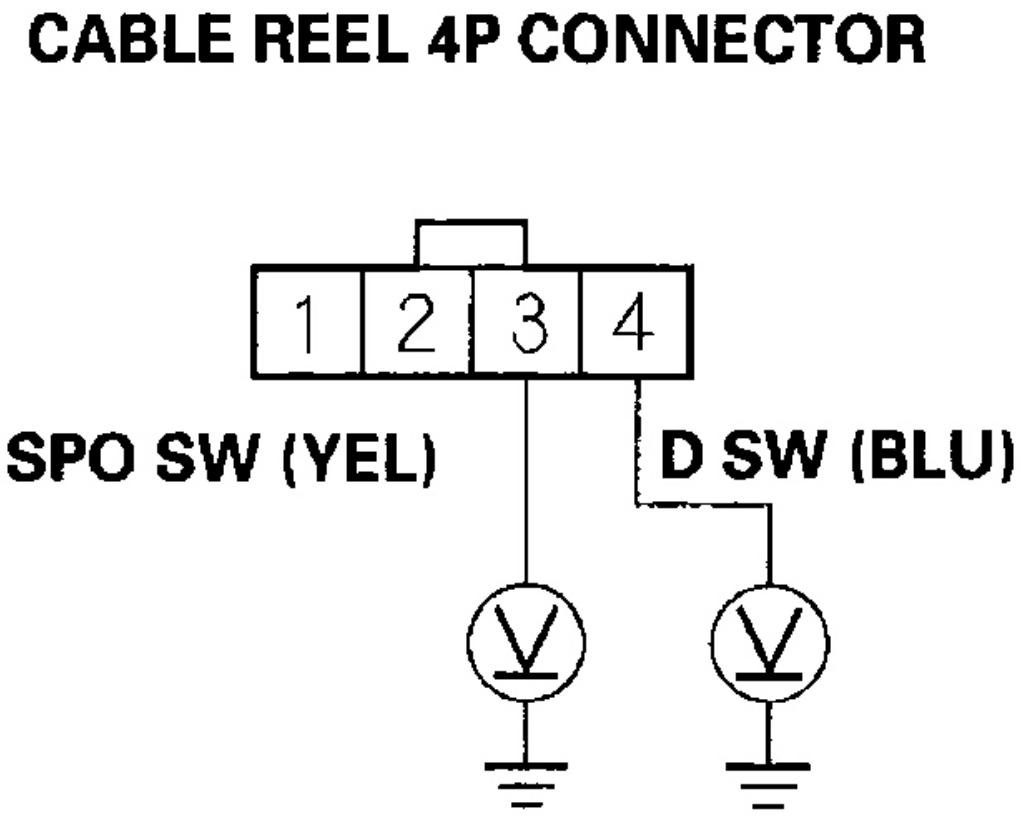


Fig. 256: Measuring Voltage Between Cable Reel 4P Connector Terminal 3 And Body Ground, And Between Terminal 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V between each terminal and body ground?

YES -Repair an open in the wire between cable reel 4P connector terminal No. 1 and ground, or repair poor ground (G402).

NO -Go to step 7.

7. Measure the voltage between TCM connector terminals A21 and A4 for S mode switch circuit. Measure the voltage between terminals A24 and A 4 for D mode switch circuit.

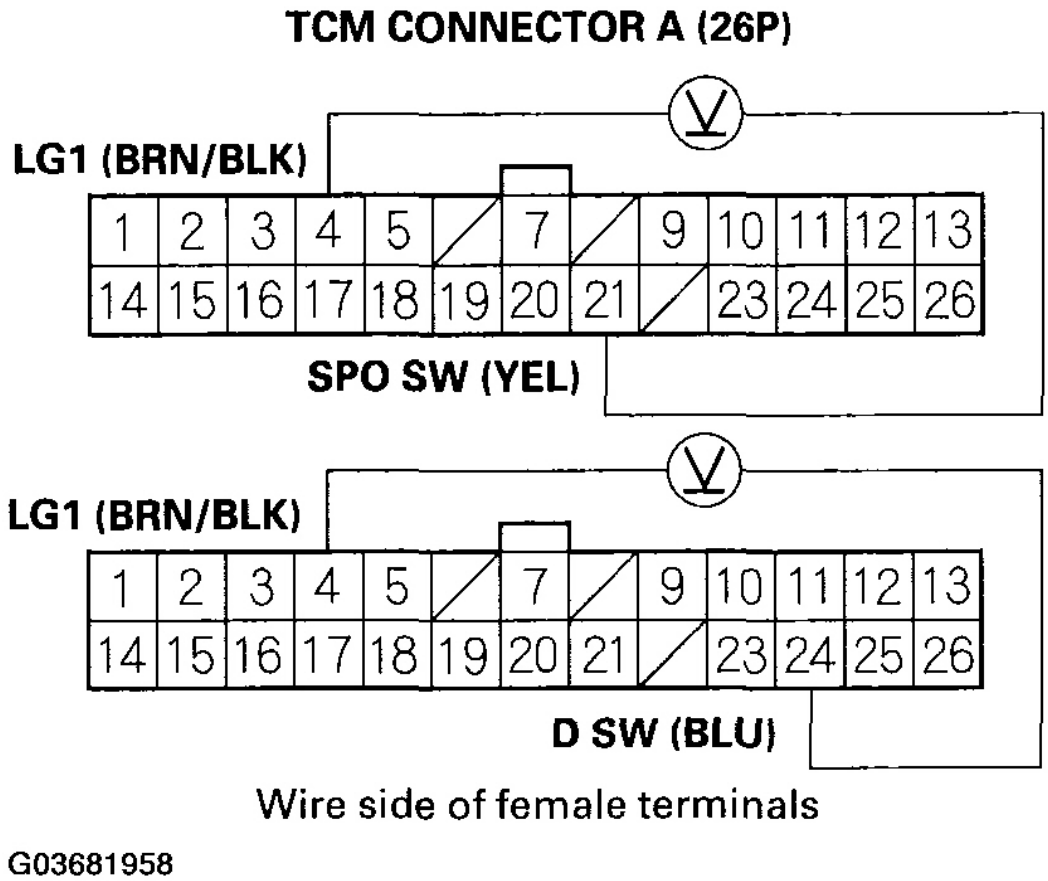


Fig. 257: Measuring Voltage Between TCM Connector Terminals A21 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Repair an open or short in the S mode switch wire between TCM connector terminal A21 and the cable reel 4P connector, and repair open or short in the D mode switch wire between terminal A24 and the cable reel 4P connector.

NO -Replace the TCM.

S INDICATOR CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch ON (II).
2. Shift to the D position.
3. Measure the voltage between TCM connector terminals A18 and A4 with S mode position selected by turning S mode switch on.

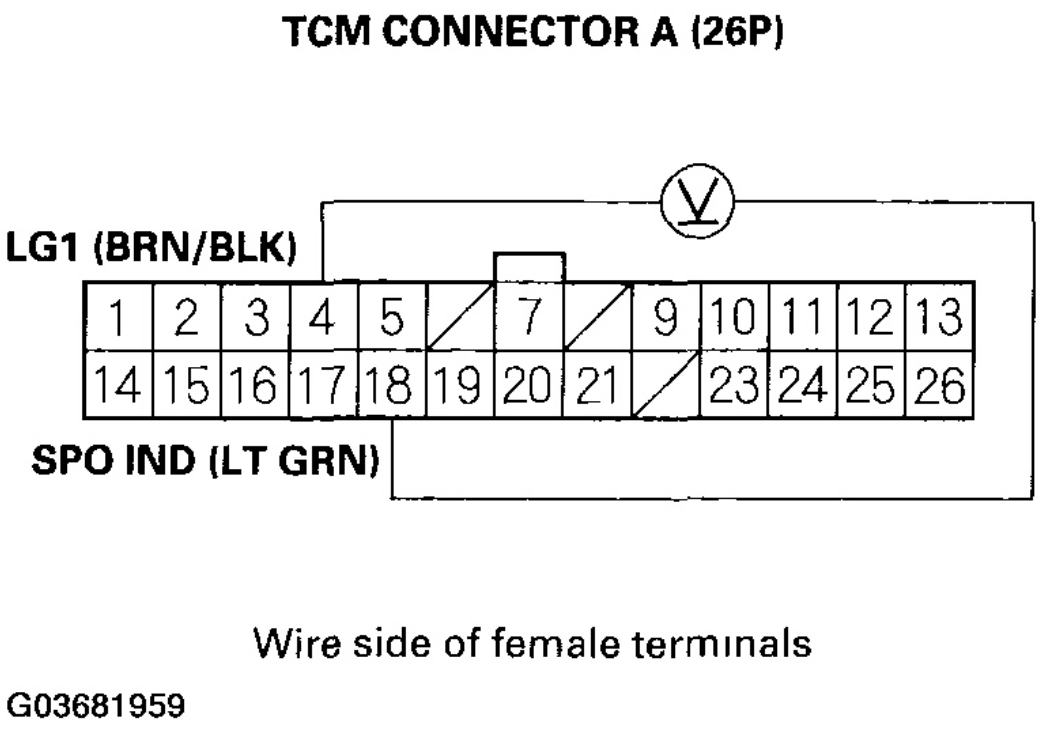


Fig. 258: Measuring Voltage Between TCM Connector Terminals A18 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 10 V?

YES -Go to step 4.

NO -Go to step 5 .

4. Measure the voltage between gauge assembly connector terminal B1 and body ground.

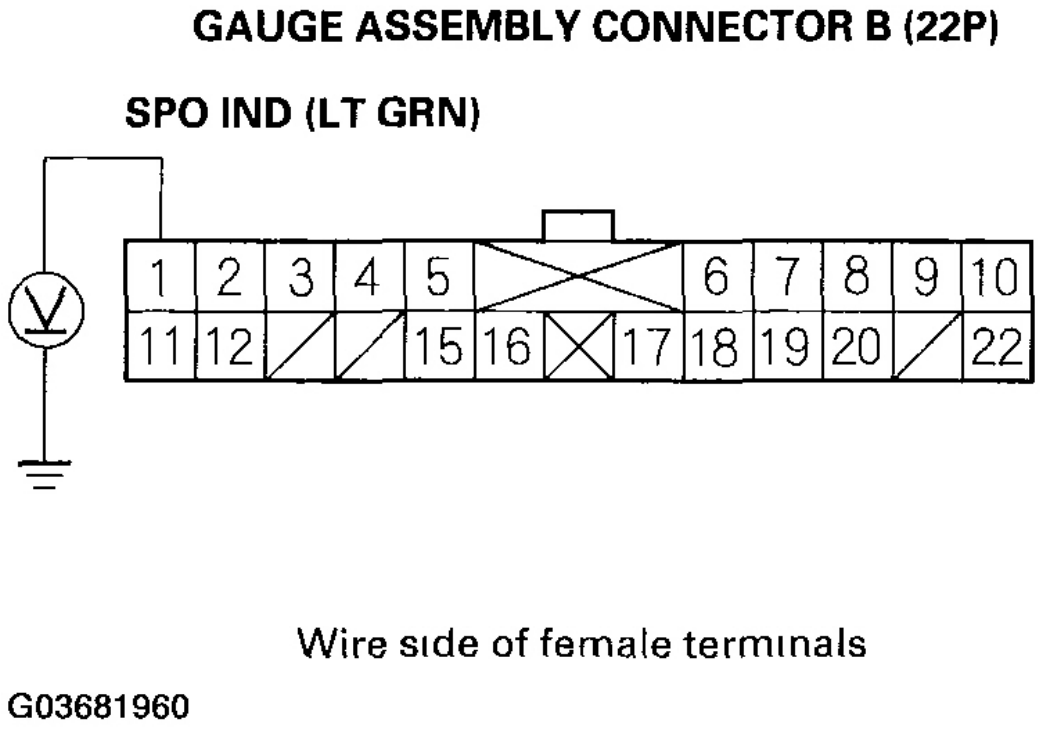


Fig. 259: Measuring Voltage Between Gauge Assembly Connector B (22P) Terminal B1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 10 V?

YES -Check for blown S indicator bulb. If the indicator bulb is OK, check for loose terminal fit in the TCM and gauge assembly connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) or gauge assembly and recheck.

NO -Repair an open in the wire between TCM connector terminal A18 and the gauge assembly connector B(22P).

5. Turn the ignition switch OFF.
6. Disconnect TCM connector A (26P).
7. Disconnect gauge assembly connector B (22P).

8. Check for continuity between TCM connector terminal A18 and body ground.

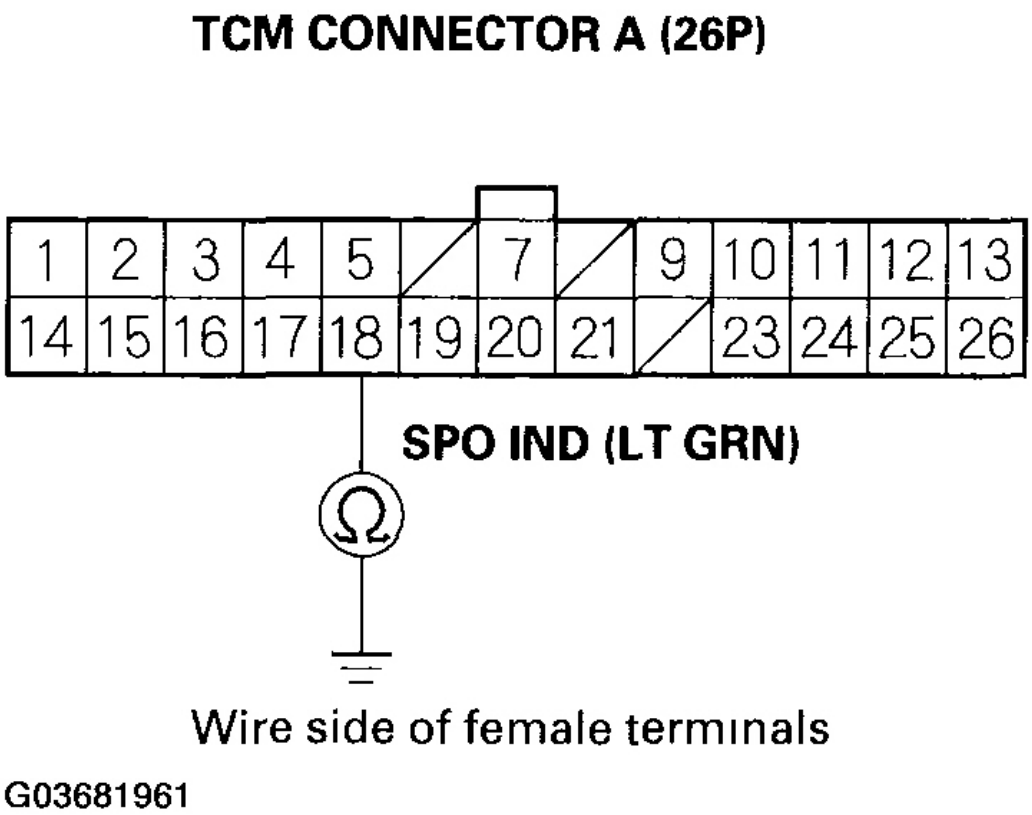


Fig. 260: Checking Continuity Between TCM Connector A (26P) Terminal A18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair a short in the wire between TCM connector terminal A18 and the gauge assembly connector B (22P).

NO -Check for loose terminal fit in the TCM and gauge assembly connectors. If necessary, substitute a known-good TCM (see **HOW TO TROUBLESHOOT CIRCUIT AT THE TCM**) or gauge assembly and recheck.

CREEP AID SYSTEM SOLENOID VALVE A AND B TROUBLESHOOTING

1. Turn the ignition switch OFF.
2. Raise the front and rear of the vehicle, and make sure it is securely supported.
3. Disconnect the creep aid system solenoid connector.
4. Check for creep aid system solenoid valve A operation by connecting the battery positive terminal to creep aid system solenoid connector terminal No. 2, and connecting the battery negative terminal to the connector terminal No. 4. Check for the solenoid valve B operation with connecting the battery positive terminal to the connector terminal No. 1, and connecting the connector terminal No. 3.

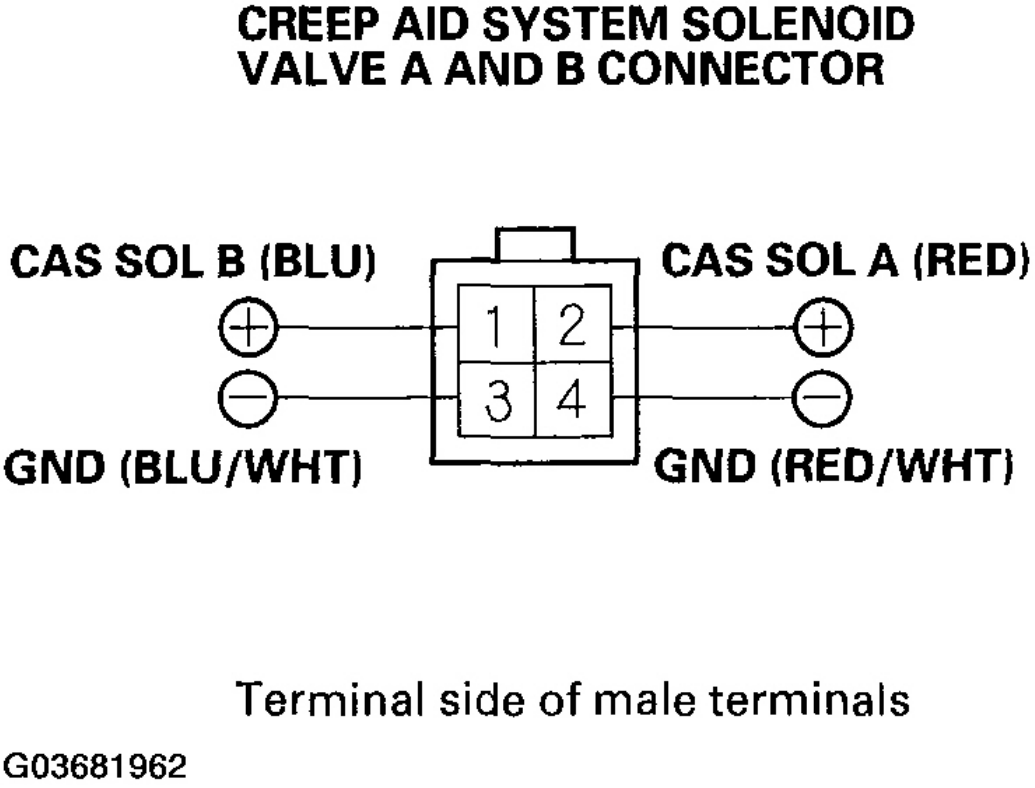


Fig. 261: Checking Operation Of Creep Aid System Solenoid Valve A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is a clicking sound heard when connecting battery terminals?

YES -Go to step 5.

NO -Replace the creep aid system solenoid valves A and B.

5. While connecting the battery positive terminal to the connector terminals No. 1 and No. 2, and connecting the battery negative terminal to the connector terminal No. 2 and No. 4, press the brake pedal.
6. Release the brake pedal, and check the application of the brake by rotating the wheel by hand. Repeat the same test for all wheels. All the wheels should stay locked for 1 second after the brake pedal released.

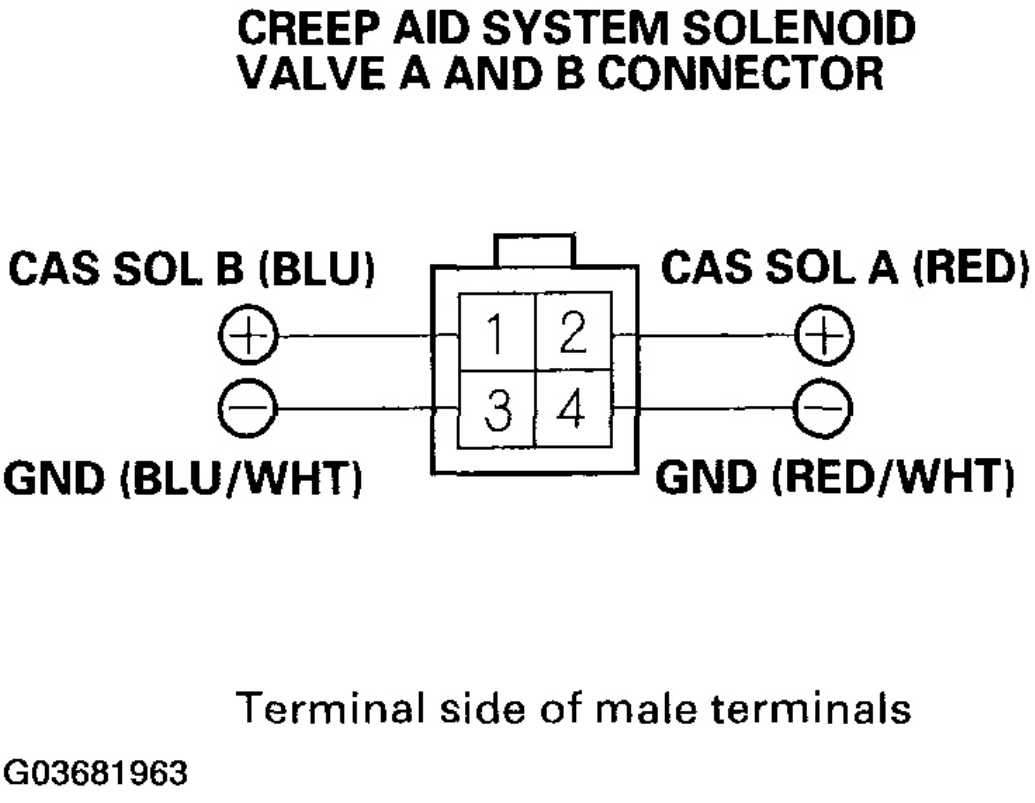


Fig. 262: Checking Application Of Brake
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Do the brakes operate properly?

YES -The brake system and the creep aid system operate properly.

NO -The brakes on the right front wheel and the left rear wheel or on the left front wheel and right rear wheel drag, replace the creep aid system valve body. If the brake on the one of the wheels or all wheels drag, inspect the brake system.

ROAD TEST

Special Tools Required

Backprobe set 07SAZ-001000A (two required)

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Apply parking brake, and block rear wheels. Start the engine, then shift to the D position while pressing the brake pedal. Press the accelerator pedal, and release it suddenly. The engine should not stall.
3. Connect the Honda diagnostic system (HDS), and go to the PGM-FI Data List; then go to step 8 . If you don't have a HDS, go to step 4.
4. Remove the passenger's carpet, then remove the right kick panel.
5. Remove the mounting bolts securing the EPS control unit, but do not disconnect the EPS control unit connectors, then remove the TCM cover (A).

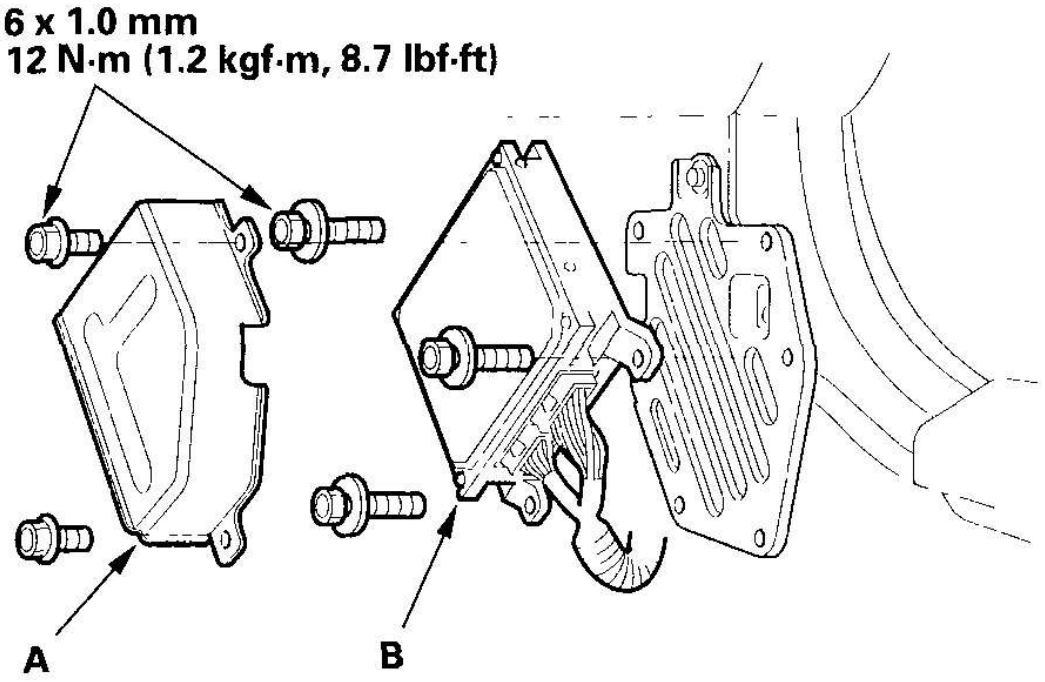
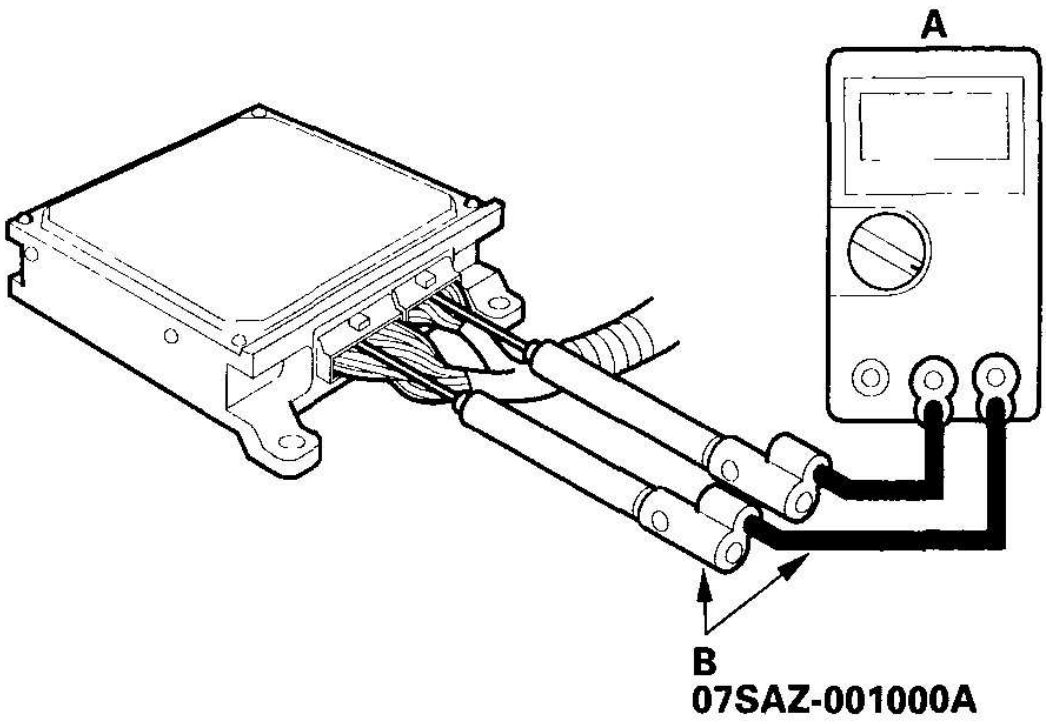
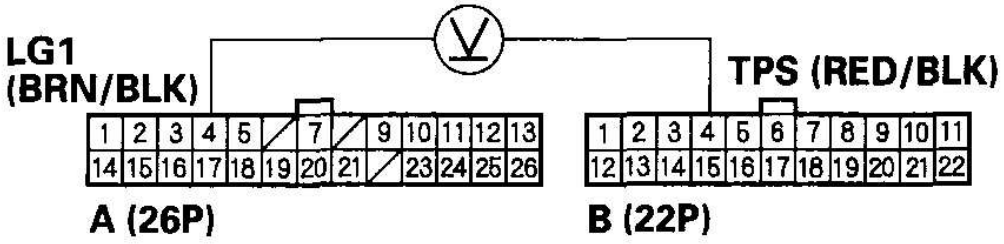


Fig. 263: Identifying Loosening Torque Of EPS Control Unit Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the TCM (B).
7. Connect a digital multimeter (A) and the special tools (B) to check voltage between TCM connector terminals B4and A4.



TCM CONNECTORS



Wire side of female terminals

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Fig. 264: Checking Voltage Between TCM Connector Terminals B4 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Test-drive the vehicle on a flat road in the position shown. While driving, check that the engine speeds meet the approximate vehicle speeds shown in the table.

D Position with D mode: Engine Speed RPM

D POSITION WITH D MODE - ENGINE SPEED RPM

Throttle Opening	Vehicle Speed	Engine Speed (RPM)
Throttle position sensor voltage: 0.75 V	25 mph (40 km/h)	1,000-1,400
	37 mph (60 km/h)	1,117-1,517
Throttle position sensor voltage: 2.0 V	25 mph (40 km/h)	2,150-2,750
	37 mph (60 km/h)	2,360-2,960
	62 mph (100 km/h)	2,650-3,250
Throttle position sensor voltage: 4.5 V	25 mph (40 km/h)	3,570-4,170
	37 mph (60 km/h)	4,170-4,770
	62 mph (100 km/h)	4,950-5,550

S Position with S mode: Engine Speed RPM

S POSITION WITH S MODE - ENGINE SPEED RPM

Throttle Opening	Vehicle Speed	Engine Speed (RPM)
Throttle position sensor voltage: 0.75 V	25 mph (40 km/h)	1,700-2,300
	37 mph (60 km/h)	2,300-2,900
	62 mph (100 km/h)	3,400-4,000
	25 mph (40 km/h)	2,500-3,100

Throttle position sensor voltage: 2.0 V	37 mph (60 km/h)	2,800-3,400
	62 mph (100 km/h)	3,700-4,300
Throttle position sensor voltage: 4.5 V	25 mph (40 km/h)	4,475-5,075
	37 mph (60 km/h)	5,050-5,650
	62 mph (100 km/h)	5,200-5,800

L Position: Engine Speed RPM

L POSITION - ENGINE SPEED RPM

Throttle Opening	Vehicle Speed	Engine Speed (RPM)
Throttle position sensor voltage: 0.75 V	25 mph (40 km/h)	2,930-3,530
	37 mph (60 km/h)	3,620-4,220
	62 mph (100 km/h)	4,340-4,940
Throttle position sensor voltage: 2.0 V	25 mph (40 km/h)	3,460-4,060
	37 mph (60 km/h)	4,060-4,660
	62 mph (100 km/h)	4,692-5,292
Throttle position sensor voltage: 4.5 V	25 mph (40 km/h)	4,475-5,075
	37 mph (60 km/h)	5,050-5,650
	62 mph (100 km/h)	5,200-5,800

STALL SPEED TEST

1. Make sure the transmission fluid is filled to the proper level (see **CVT FLUID LEVEL CHECK**).
2. Apply the parking brake, and block the front wheels.
3. Connect a tachometer to the engine, and start the engine.
4. Make sure the A/C switch is OFF.
5. After the engine has warmed up to normal operating temperature (the radiator

fan comes on), shift to the D position.

6. Fully press the brake pedal and accelerator pedal for 6 to 8 seconds, and note the engine speed. Do not move the shift lever while raising the engine speed.
7. Allow 2 minutes for cooling, then repeat the test in the L and R positions.

NOTE:

- **Do not test stall speed for more than 10 seconds at a time.**
- **Stall speed tests should be used for diagnostic purposes only.**
- **Stall speed tests should be the same in the D, L, and R positions.**
- **Do not test stall speed with the A/T pressure gauges installed.**

Stall Speed RPM

Specification: 2,500 RPM

Service Limit: 2,350-2,650 RPM

8. If the measurements are out of the service limit, problems and probable causes are listed in the table:

PROBLEMS AND PROBABLE CAUSES

Problem	Probable cause
Stall speed RPM high in the D, L, and R positions	• ATF pump output low • ATF pump defective • Clogged ATF strainer • Pressure high (PH) regulator valve stuck closed • Slippage of forward clutch • Start clutch defective
Stall speed high in the R position	• Slippage of reverse brake

	• Start clutch defective
Stall speed low in the D, L, and R positions	• Engine output low • Start clutch defective • Pulley control valves A and B stuck

PRESSURE TEST

Special Tools Required

- A/T high pressure gauge 07AAJ-PLYA100
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure hose adapter 07MAJ-PY40120
- A/T oil pressure gauge set w/Panel 07406-0020400 or 07406-0020401
- A/T low pressure gauge 07406-0070300

1. Before testing, make sure the transmission fluid is filled to the proper level (see **CVT FLUID LEVEL CHECK**).
2. Lift the vehicle up on a hoist, or apply parking brake, block rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
3. Allow the front wheels to rotate freely.
4. Remove the engine under cover on the transmission side.
5. Use the following special tools. Do not allow dust or other foreign particles to enter the ports while connecting the gauges.

NOTE:

- **Drive pulley pressure and driven pulley pressure may be above 3.43 MPa (35.0 kgf/cm^2 , 498 psi) when there is a transmission problem that causes the TCM to go into fail-safe mode.**
- **When troubleshooting you must use the A/T high pressure gauge (07AAJ-PLYA 100) when measuring drive pulley pressure and driven pulley**

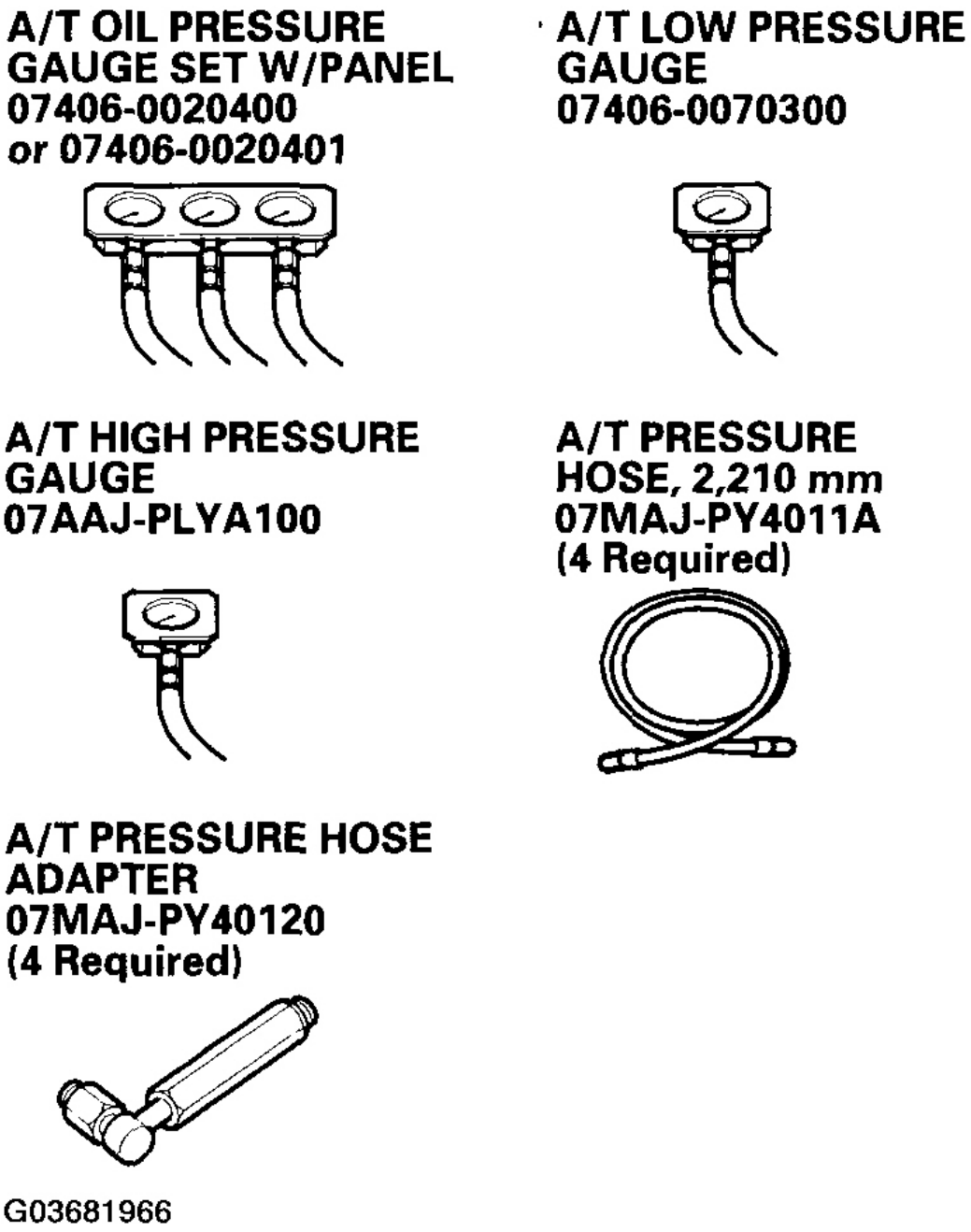

Fig. 265: Identifying Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Connect the gauge (07406-0020400 or 07406-0020401) to the reverse brake

pressure inspection port (A).

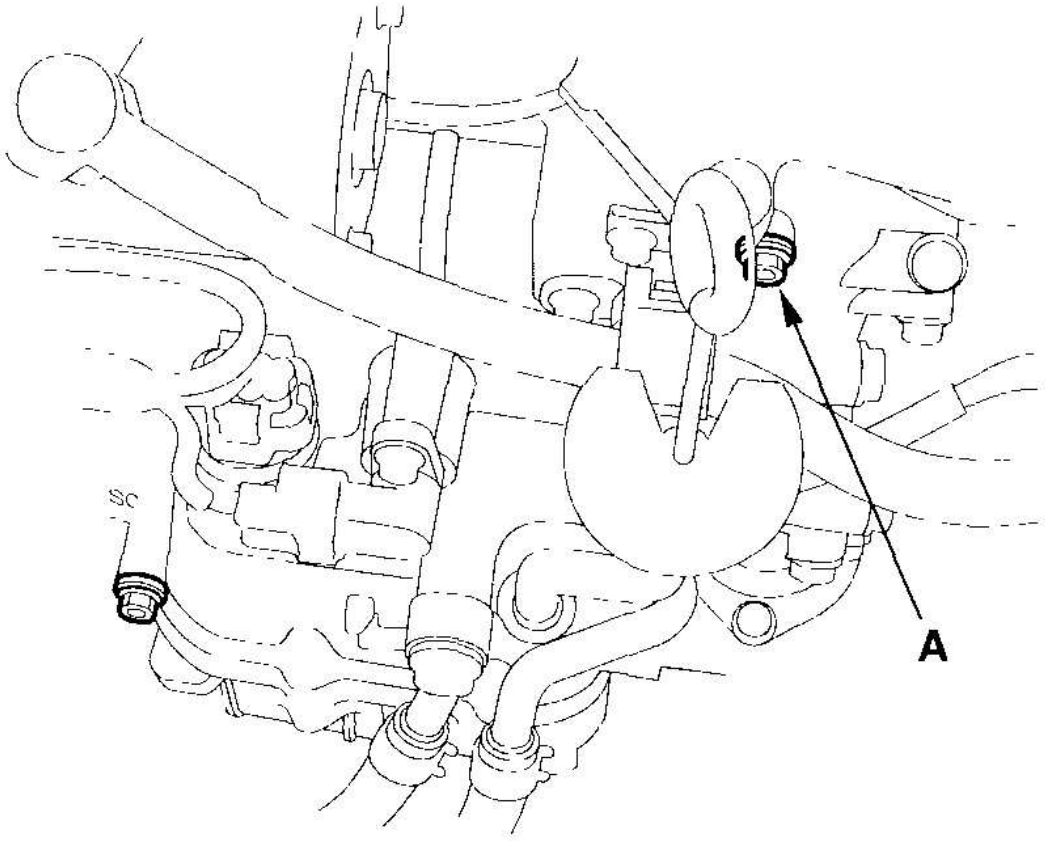

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Fig. 266: Identifying Reverse Brake Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Connect the gauge (07406-0020400 or 07406-0020401) to the forward clutch pressure inspection port (B).

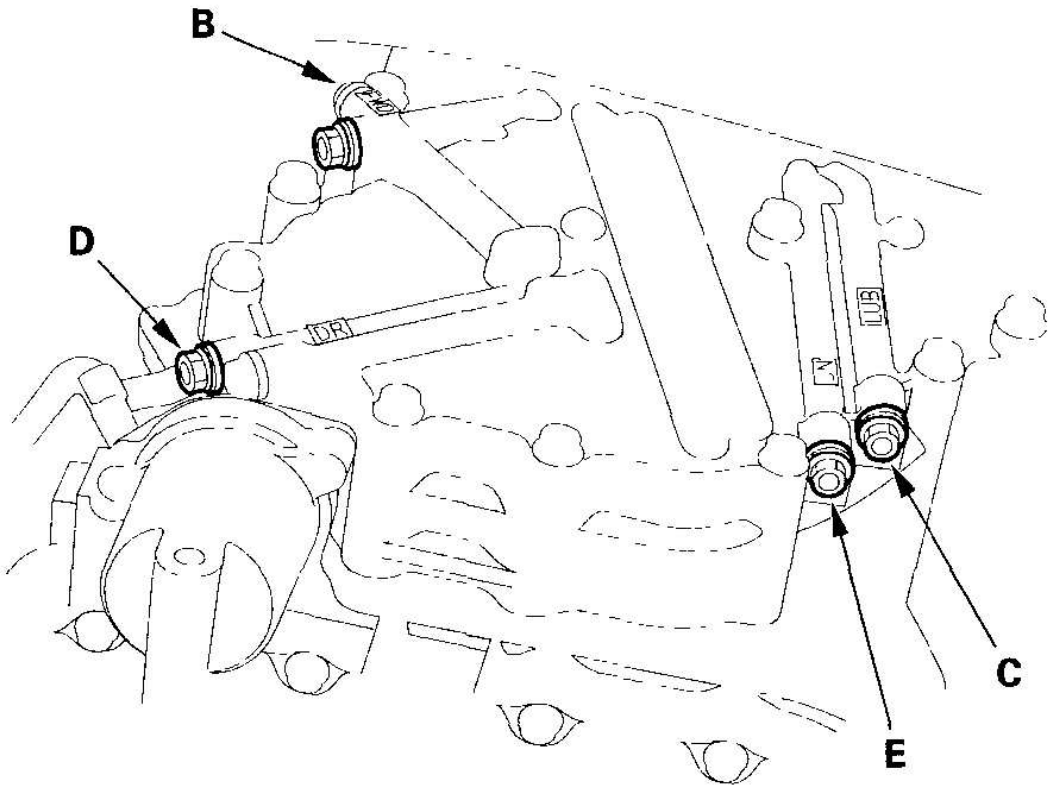

Fig. 267: Identifying Forward Clutch Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Connect the low pressure gauge (07406-0070300) to the lubrication pressure inspection port (C).
9. Connect the commercially available oil pressure gauges (specs described in step 6) to the drive pulley pressure inspection port (D) and the driven pulley pressure inspection port (E).
10. Warm up the engine (the radiator fan comes on), then turn off the engine, and connect the tachometer.
11. Start the engine, and run it at 1,500 RPM.
12. Shift to the D position, and measure the forward clutch pressure at the forward clutch pressure inspection port (B).

Forward Clutch Pressure

2001-2003 models

Standard: 1.40-1.75 MPa

(14.3-17.8 kgf/cm^2 , 203-253 psi)

2004-2006 models

Standard: 1.57-1.84 MPa

(16.0-18.8 kgf/cm^2 , 228-267 psi)

13. Shift to the R position, and measure the reverse brake pressure at the reverse brake pressure inspection port (A).

Reverse Brake Pressure

2001-2003 models

Standard: 1.40-1.75 MPa

(14.3-17.8 kgf/cm^2 , 203-253 psi)

2004-2006 models

Standard: 1.57-1.84 MPa

(16.0-18.8 kgf/cm^2 , 228-267 psi)

14. Shift to the N position, and measure the drive pulley pressure at the drive pulley pressure inspection port (D).

Drive Pulley Pressure

Standard: 0.20-0.70 MPa

(2.0-7.1 kgf/cm^2 , 29-101 psi)

15. Measure the driven pulley pressure at the driven pulley pressure inspection port (E).

    Driven Pulley Pressure

    Standard: 1.50-2.30 MPa

    (15.3-23.5 kgf/cm^2 , 218-334 psi)

16. Measure the lubrication pressure at the lubrication pressure inspection port (C) while holding engine speed at 3,000 RPM.

    Lubrication Pressure

    Standard: 0.20 MPa

    (2.0 kgf/cm^2 , 28 psi) or more

17. If the measurements are out of standard, problems and probable causes are listed in the table:

PROBLEM AND PROBABLE CAUSES

Problem	Probable causes
No or low forward clutch pressure	• Forward clutch defective
No or low reverse brake pressure	• Reverse brake defective
No or low drive pulley pressure	• ATF pump defective • PH regulator valve defective • Pulley control valve A defective • Pulley control valve B defective
Drive pulley pressure too	• PH regulator valve defective • Pulley control valve A defective • Pulley control valve B defective

high	• CVT drive pulley pressure control valve defective
No or low driven pulley pressure	• ATF pump defective • PH regulator valve defective • Pulley control valve A defective • Pulley control valve B defective • CVT driven pulley pressure control valve defective
Driven pulley pressure too high	• PH regulator valve defective
No or low lubrication pressure	• ATF pump defective • Lubrication valve defective

18. Install the sealing bolts with new sealing washers, and tighten the bolts to the specified torque.

    Torque: 18 N.m (1.8 kgf.m, 13 lbf.ft)

    NOTE: Do not reuse old sealing washers.

19. Install the engine undercover.

SOLENOID VALVE TEST

1. Disconnect the solenoid harness connector (8P).

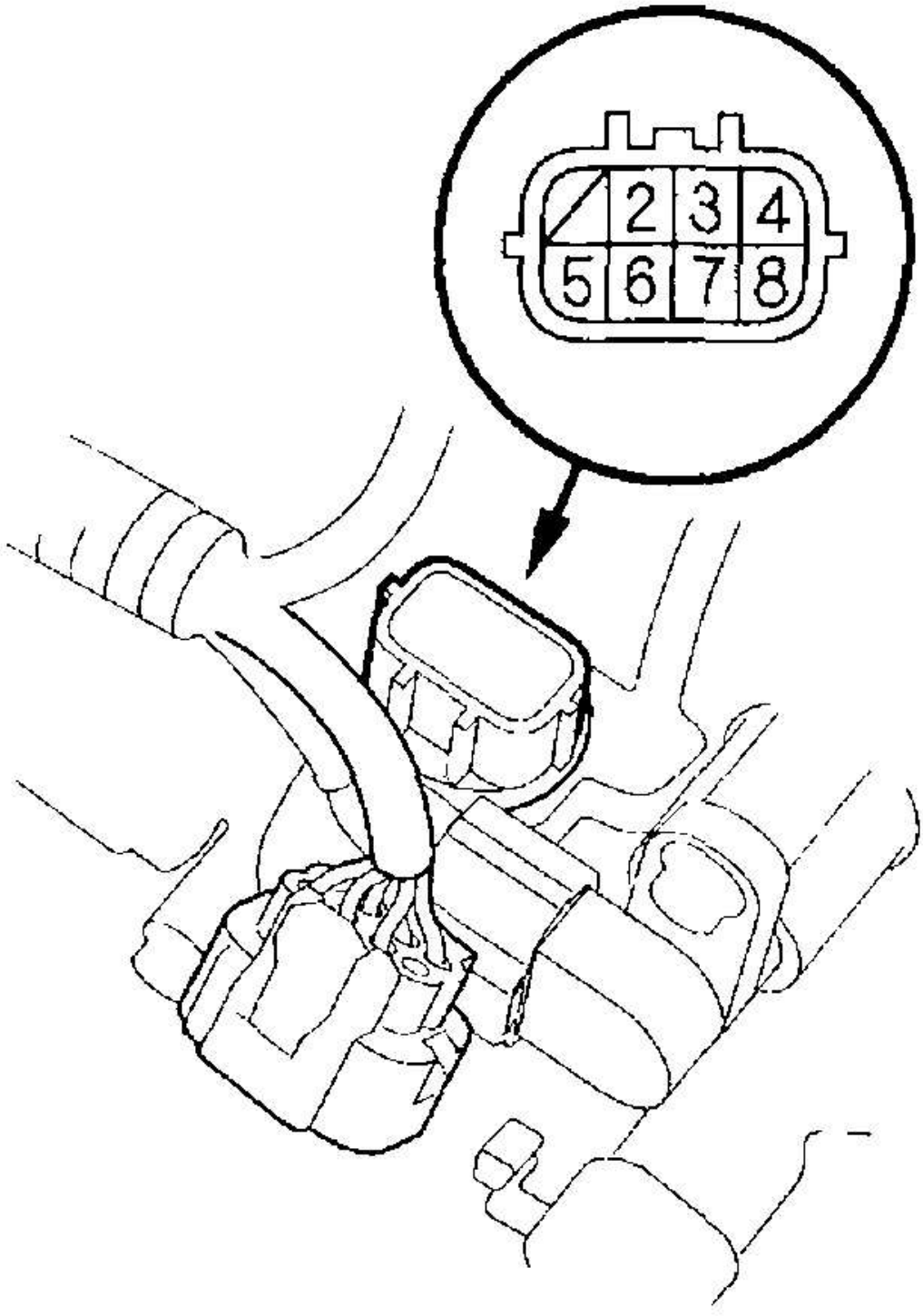

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Fig. 268: Disconnecting Solenoid Harness Connector (8P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Measure CVT drive pulley pressure control valve assembly resistance between solenoid harness connector terminals No. 3 and No. 7.

   Standard: 3.8-6.8 ohm

3. Measure CVT driven pulley pressure control valve assembly resistance between terminals No. 2 and No. 6.

   Standard: 3.8-6.8 ohm

4. Measure CVT start clutch pressure control valve assembly resistance between terminals No. 4 and No. 8.

   Standard: 3.8-6.8 ohm

5. Measure the inhibitor solenoid resistance between terminal No. 5 and body ground.

   Standard: 11.7-21.0

6. Replace the lower valve body assembly, if the measurement of any solenoid is out of standard.
7. If all of the resistances are within the standard, a clicking sound should be heard when connecting the battery terminals to the solenoid harness connector terminals.
   - CVT drive pulley pressure control valve assembly
   - No. 3 to battery positive terminal
   - No. 7 to battery negative terminal
   - CVT driven pulley pressure control valve assembly
   - No. 2 to battery positive terminal
   - No. 6 to battery negative terminal
   - CVT start clutch pressure control valve assembly

- No. 4 to battery positive terminal
- No. 8 to battery negative terminal
- Inhibitor solenoid
- No.5 to battery positive terminal and body ground to negative terminal

8. If no clicking sound is heard, remove the lower valve body assembly, and check the solenoid.

SPEED SENSOR REPLACEMENT

1. Disconnect the connectors from the CVT input shaft (drive pulley) speed sensor (A), the CVT output shaft (driven pulley) speed sensor (B), and the CVT speed sensor (C).

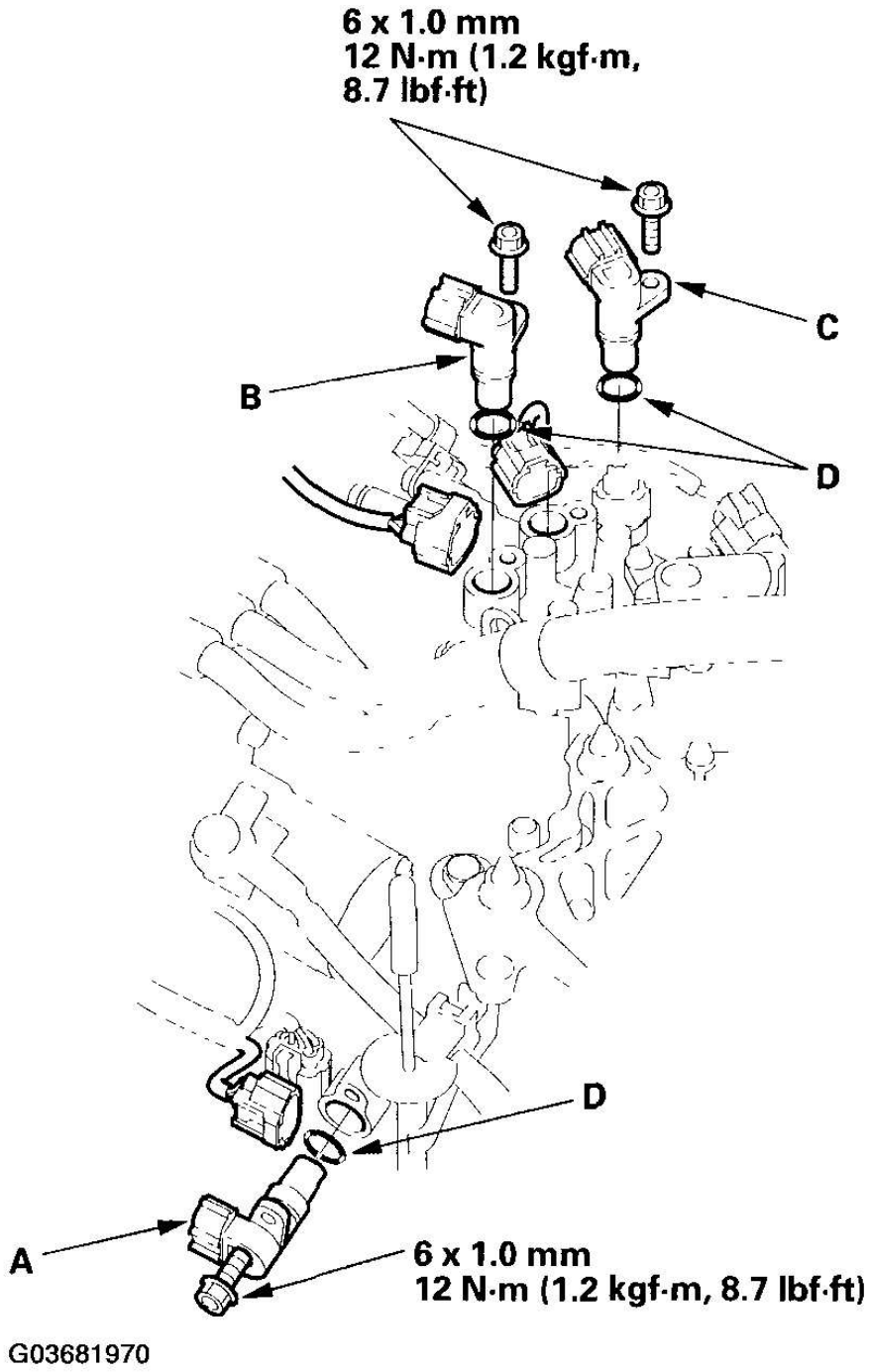

Fig. 269: Identifying Loosening Torque Of CVT Input Shaft (Drive Pulley) Speed Sensor, CVT Output Shaft (Driven Pulley) Speed Sensor, And CVT Speed Sensor Bolts And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the 6 mm bolts, then remove the speed sensors.
3. Replace the O-rings (D) with new ones before installing the speed sensors.
4. Install the CVT input shaft (drive pulley) speed sensor, CVT output shaft (driven pulley) speed sensor, and CVT speed sensor.
5. Check the speed sensor connectors for rust, dirt, or oil, then connect the connectors securely.

CREEP AID SYSTEM SOLENOID VALVE TEST

1. Disconnect the connector from the creep aid system solenoid valves A and B.

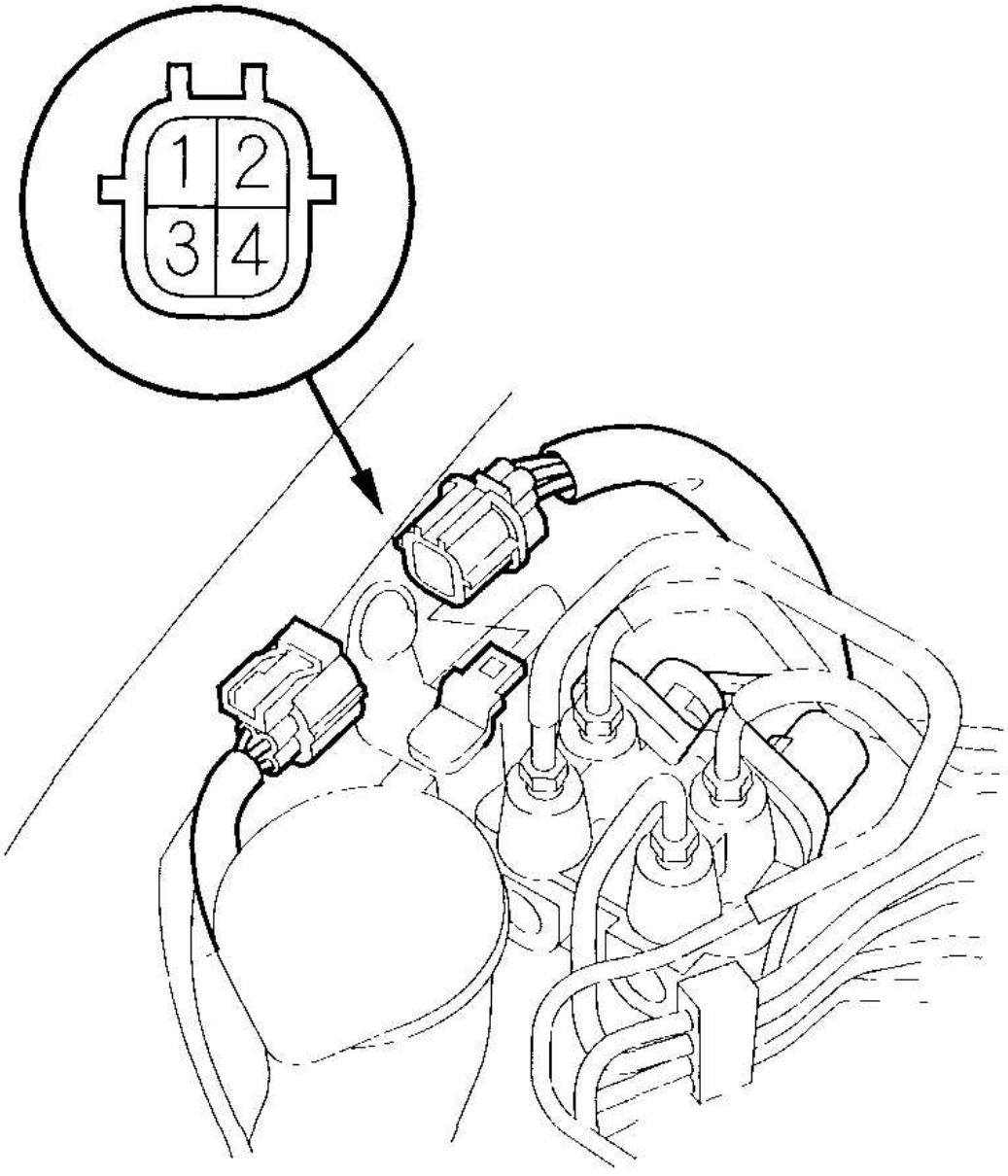

Fig. 270: Disconnecting Connector From Creep Aid System Solenoid Valves A And B
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Measure the solenoid valve A resistance between the solenoid valve connector

terminals No. 2 and No. 4, and measure the solenoid valve B resistance between terminals No. 1 and No. 3.

Standard: 8-24 ohm

3. If the resistance of either solenoid valve is out of the standard, replace the creep aid system solenoid valves A and B.
4. If the resistance is within the standard, connect the battery positive terminal to solenoid valve connector terminal No. 1, and connect the battery negative terminal to terminal No. 3. A clicking sound should be heard.

   Connect the battery positive terminal to terminal No. 2, and connect the battery negative terminal to terminal No. 4. A clicking sound should be heard.

5. If no clicking sound is heard, replace creep aid system solenoid valves A and B.

START CLUTCH CALIBRATION PROCEDURES

When the following parts are replaced or removed, the TCM must memorize the feedback signal for the start clutch control.

- Battery
- Back-up fuse
- TCM
- Transmission assembly
- Lower valve body assembly
- Engine assembly replacement or overhaul
- Start clutch replacement.

There are two methods to calibrate the start clutch control using the Honda diagnostic system (HDS), or the SCS mode.

Calibration Procedure with the HDS

1. Connect the HDS to the DLC (A).

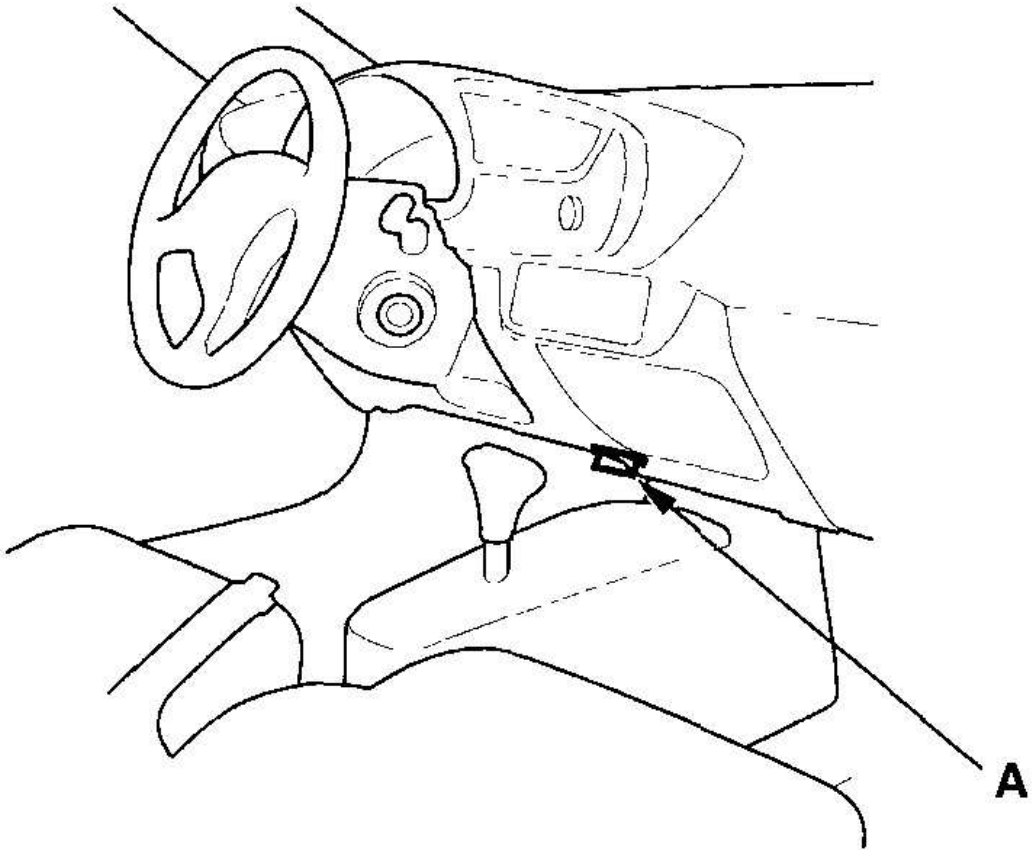

Fig. 271: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Follow the tester's prompts in the Start Clutch Calibration Procedures (see the HDS Operator's manual).

Calibration Procedure with SCS mode

1. Apply parking brake, and block all four wheels securely.
2. Warm up the engine to normal operating temperature (the radiator fan comes on).
3. Make sure that the MIL does not come on and the D indicator does not blink.

4. If the MIL comes on or the D indicator blinks, check the PGM-FI control system or the A/T control system.
5. Turn the ignition switch OFF.
6. Connect the HDS to the DLC, and follow the screen prompts to short-circuit the SCS signal terminal using the tester menu.
7. Press the brake pedal, and continue pressing the pedal until completion of the calibration.
8. Start the engine, and shift to the N position. Shift to the L position and return to the N position. Repeat this shifting three times within 20 seconds after the engine is started.
9. Check that the D indicator comes on for one minute with the shift lever in the N position, then goes off.
10. If the D indicator blinks, or the D indicator comes on, and stays on (it does not go off after one minute).

    Turn the ignition switch OFF, restart the procedures with step 6.

11. Shift to the D position, and check that the D indicator light comes on for 2 minutes, then it goes off.
12. If the D indicator blinks, or the D indicator comes on, and stays on (it does not go off after 1 minute).

    Turn the ignition switch OFF, restart the procedures with step 6.

13. Turn the ignition switch OFF to reach completion.
14. Test-drive the vehicle to verify that a problem does not occur on the start clutch control system.

MODE SWITCH TEST

1. Remove the screws securing the mode switch, then remove the switch.

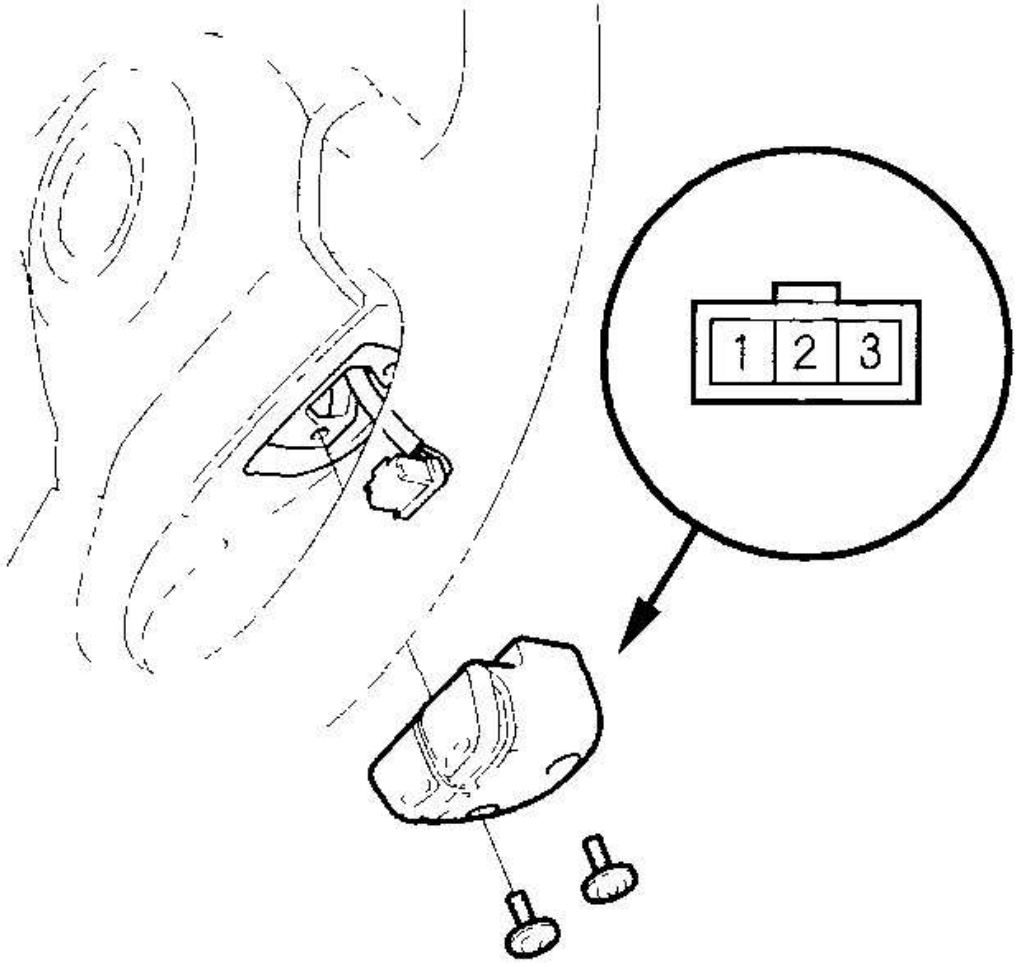

Fig. 272: Identifying Mode Switch Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the connector from the switch.
3. Check the S mode switch for continuity between connector terminals No. 2 and No. 3.

   There should be continuity while pressing the S mode switch, and no continuity when the switch released.

4. Check the D mode switch for continuity between connector terminals No. 1 and No. 3.

   There should be continuity while pressing the D mode switch, and no continuity when the switch is released.

5. If either switch is faulty, replace it.
6. If the switch is OK, but switch failure occurred, check and repair the wire harness on the mode switch circuit.

MODE SWITCH REPLACEMENT

1. Remove the screws securing the mode switch, then remove the switch.

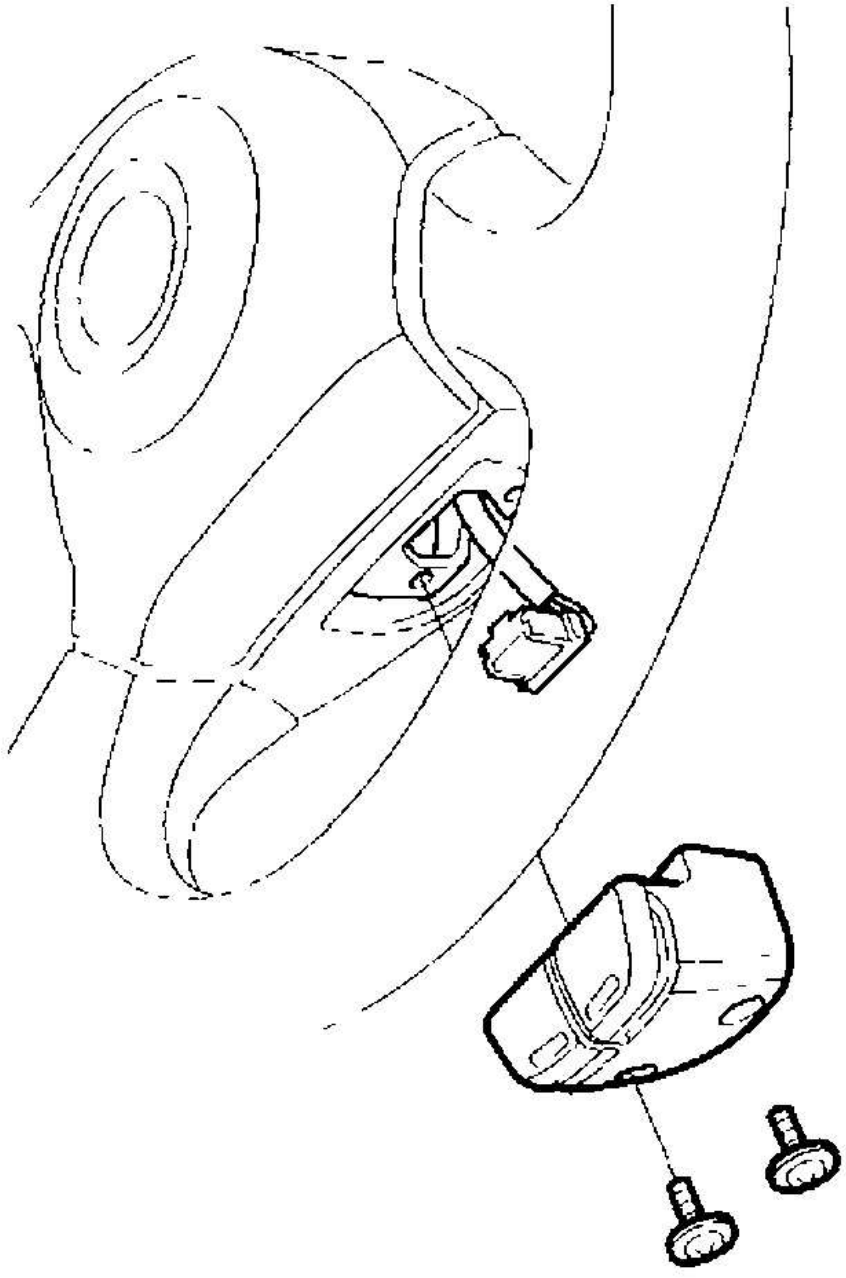

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Fig. 273: Removing Mode Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the connector from the switch.
3. Install the new mode switch.

CVT FLUID LEVEL CHECK

NOTE: Keep all foreign particles out of the transmission.

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Park the vehicle on level ground, and turn the engine off.

NOTE: Check the fluid level within 60-90 seconds after turning the engine off.

3. Remove the dipstick (yellow loop) (A) from the transmission, and wipe it with a clean cloth.

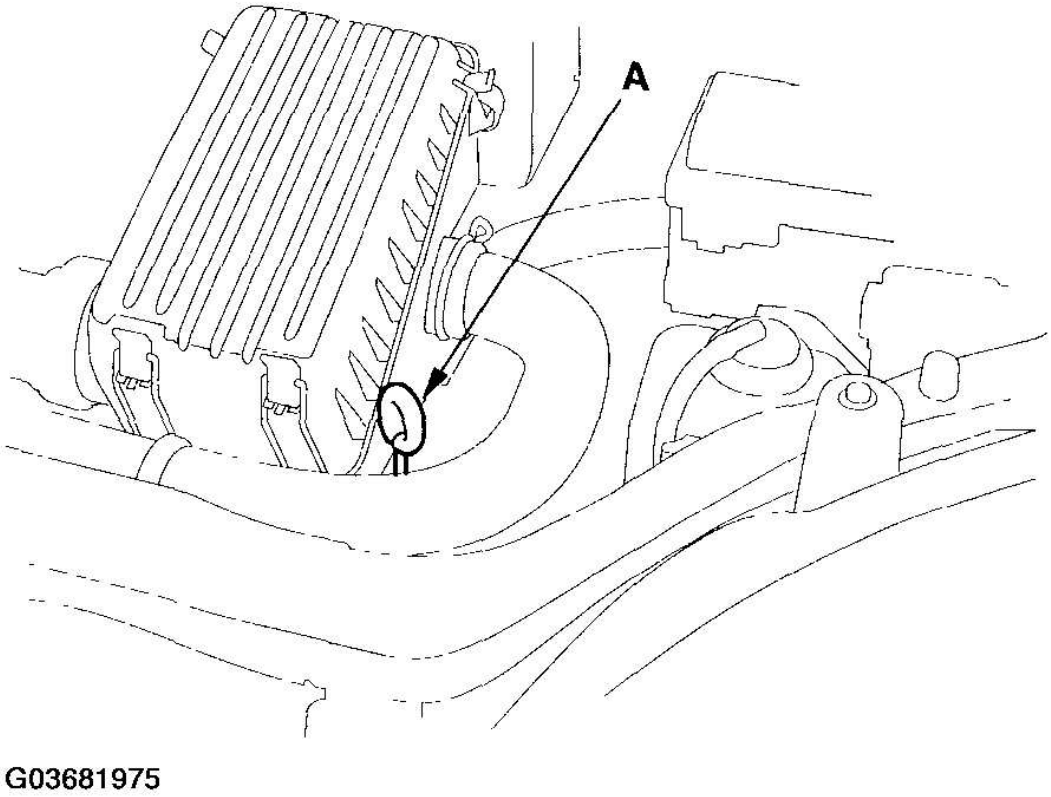

Fig. 274: Identifying Dipstick
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Insert the dipstick back into the transmission.
5. Remove the dipstick and check the fluid level in 60-90 seconds after the engines is turned off. It should be between the upper mark (A) and lower mark (B) on the Hot portion of the gauge (C). Do not check the fluid level when the engine is cold.

NOTE: Some dipstick do not have HOT and COLD printed on them.

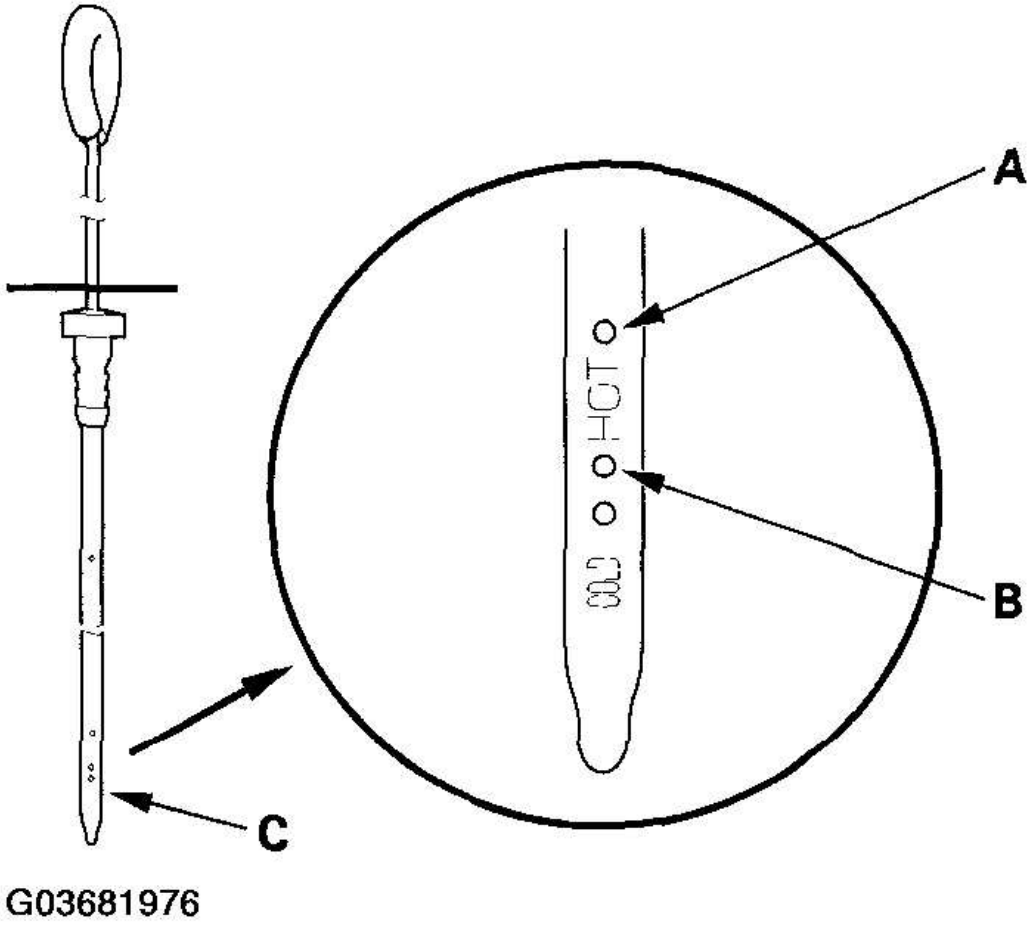

Fig. 275: Identifying Hot And Cold Mark On Dipstick
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. If the level is below the lower mark, check for fluid leaks at the transmission, hose and line joints, and cooler lines.
7. if the level exceeds the upper mark (A), drain the fluid for proper level.
8. Pour the recommended fluid into the opening of the dipstick pipe (A) to bring it to the upper mark. Always use Honda Continuously Variable

   Transmission Fluid (CVT Fluid). Using a non-Honda CVT Fluid can affect shift quality.

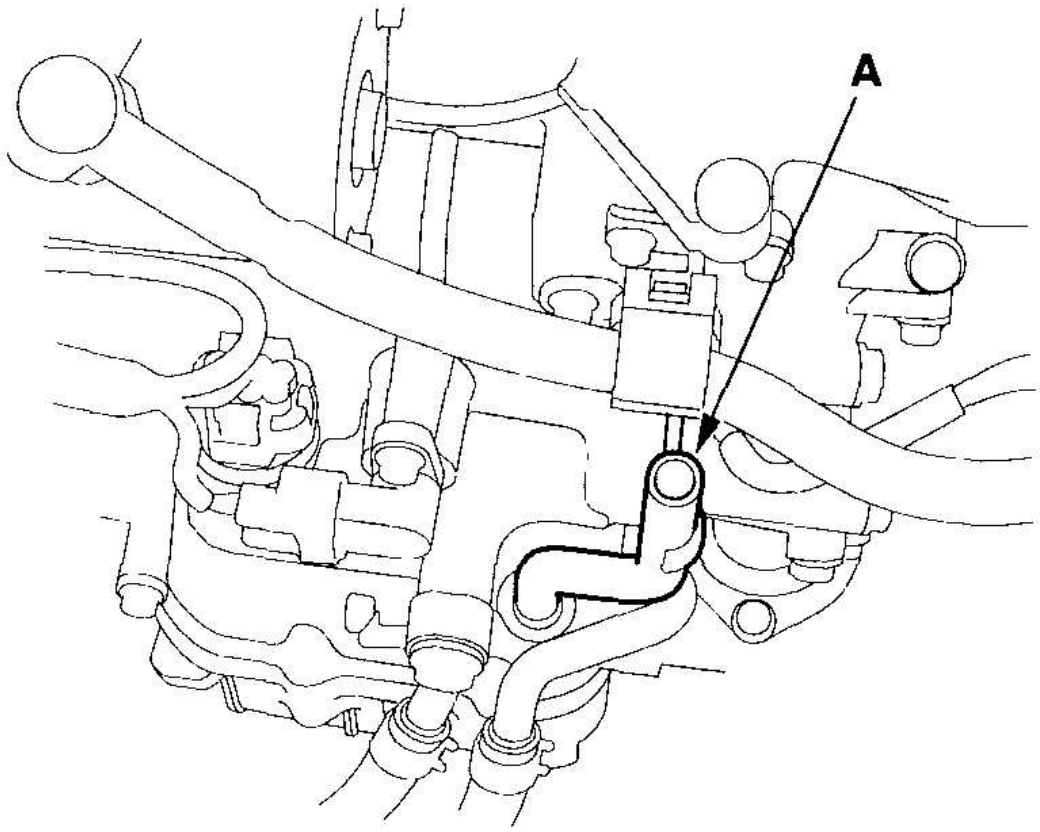

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Fig. 276: Identifying Opening Of Dipstick Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Insert the dipstick back into the transmission.

CVT FLUID REPLACEMENT

NOTE: Keep all foreign particles out of the transmission.

1. Bring the transmission up to normal operating temperature (the radiator fan comes on) by driving the vehicle.
2. Park the vehicle on level ground, and turn the engine off.
3. Remove the engine under cover on the transmission side.

4. Remove the drain plug (A), and drain the continuously variable transmission fluid (CVTF).

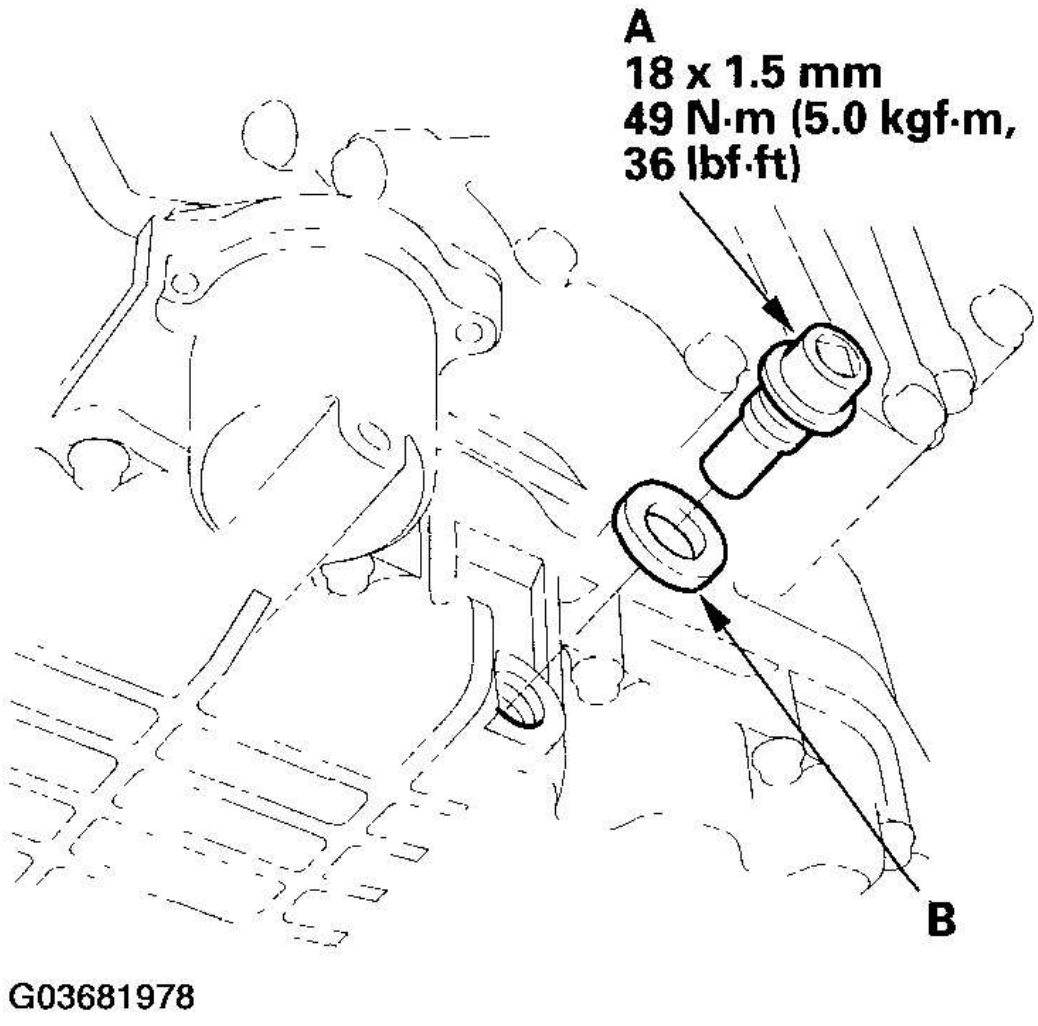


Fig. 277: Identifying Loosening Torque Of Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Reinstall the drain plug with a new sealing washer (B).
6. Remove the air cleaner housing.
7. Refill transmission with the recommended fluid into the filler hole (A) to the upper mark on the dipstick. Always use Honda Continuously Variable

Transmission Fluid (CVT Fluid). Using a non-Honda CVT Fluid can affect shift quality.

Continuously Variable Transmission Fluid

Capacity:

3.3 L (3.5 US qt) at change

5.5 L (5.8 US qt) at overhaul

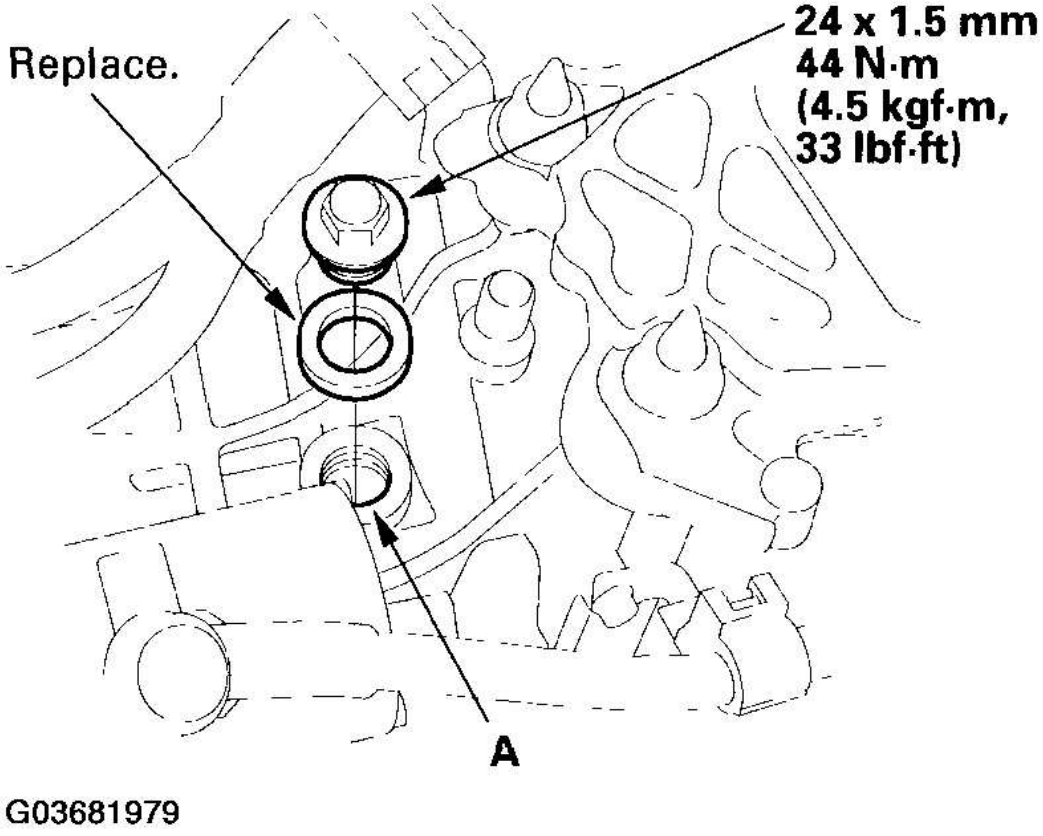


Fig. 278: Identifying Filler Hole And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Check that the fluid level is between the upper mark (A) and lower mark (B)

on the COLD portion of the gauge.

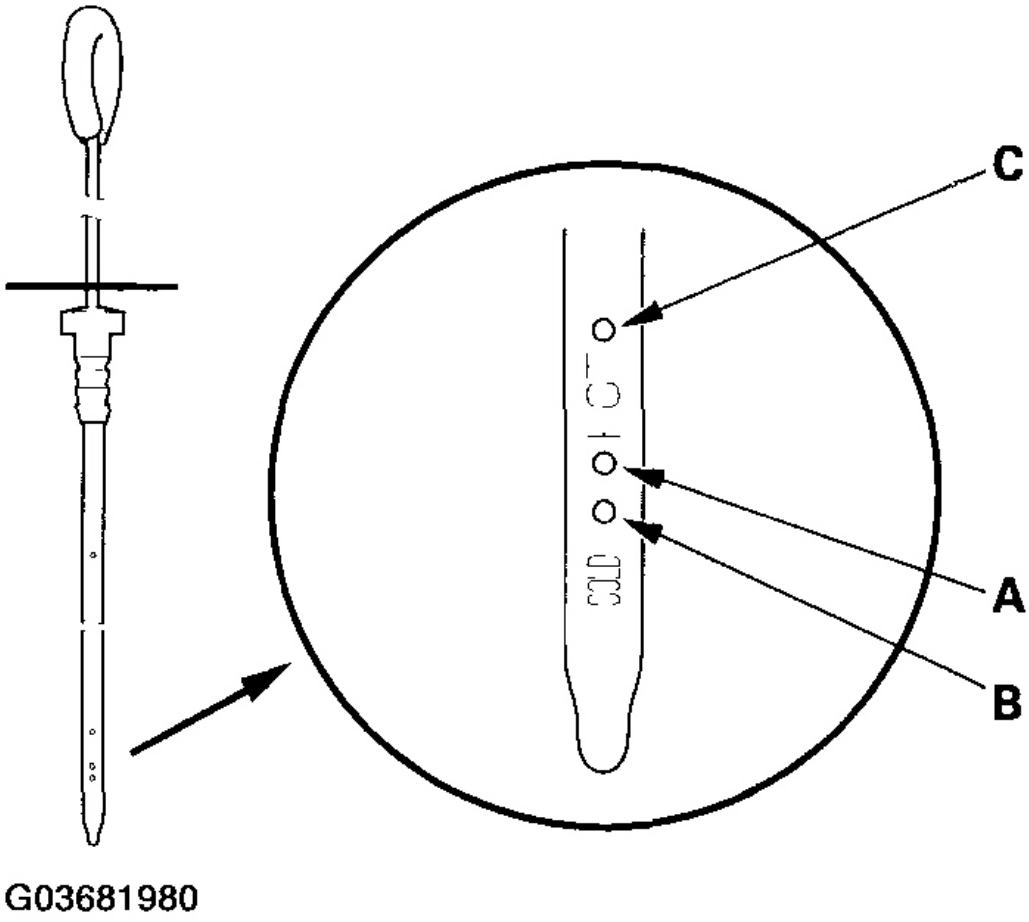


Fig. 279: Identifying Hot And Cold Mark On Dipstick
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the ATF filler bolt with a new sealing washer.
10. Insert the dipstick back into the transmission.
11. Warm up the engine to normal operating temperature (the radiator fan comes on).
12. Check that the fluid level is between the upper mark (C) and lower mark (A) on HOT level.

13. Install the air cleaner housing, and install the engine cover.

LOWER VALVE BODY ASSEMBLY REPLACEMENT

1. Raise the front of the vehicle, and make sure it is securely supported.
2. Apply the parking brake, and block the rear wheels securely.
3. Remove the air cleaner housing.
4. Disconnect the solenoid harness connector (8P).
5. Remove the engine under cover on the transmission housing.
6. Remove the drain plug (A), and drain the continuously variable transmission fluid (CVT Fluid). Reinstall the drain plug with a new sealing washer (B).

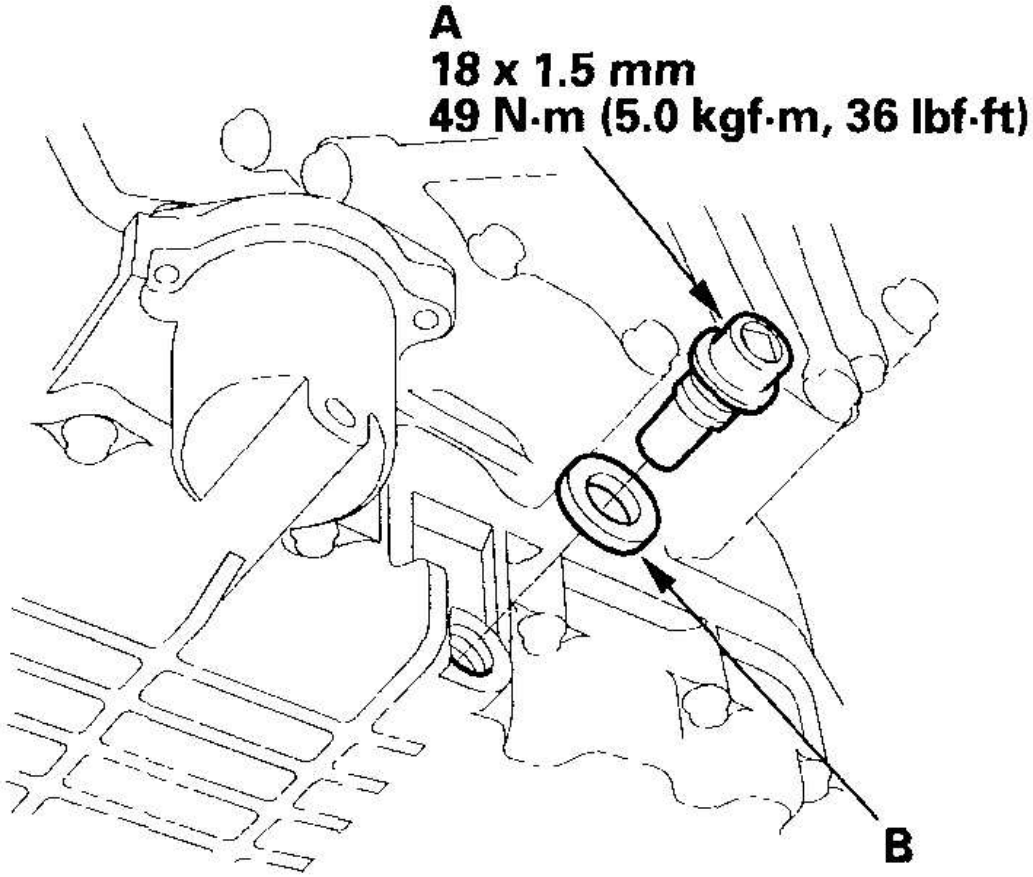


Fig. 280: Identifying Loosening Torque Of Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the ATF cooler inlet hose (A) from the ATF cooler inlet line (B). Turn the end of the ATF cooler inlet hose up to prevent CVT Fluid from flowing out, and plug the ATF cooler hose and line.

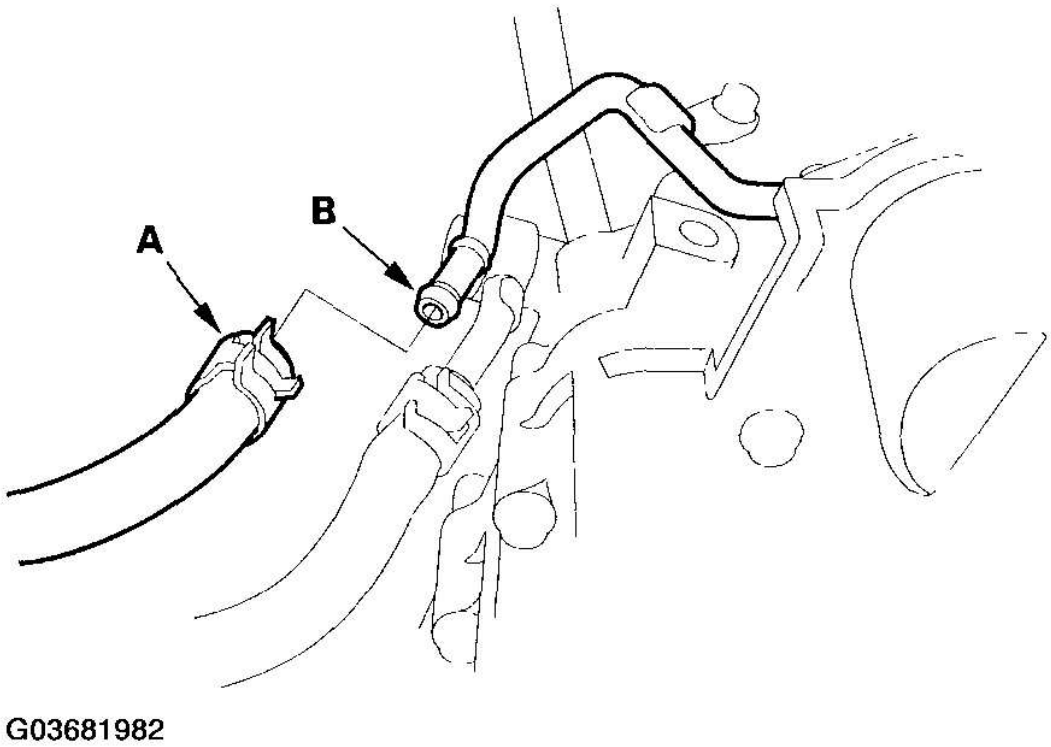


Fig. 281: Removing ATF Cooler Inlet Hose From ATF Cooler Inlet Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the bolt (A) securing the ATF cooler inlet line (B) on the transmission.

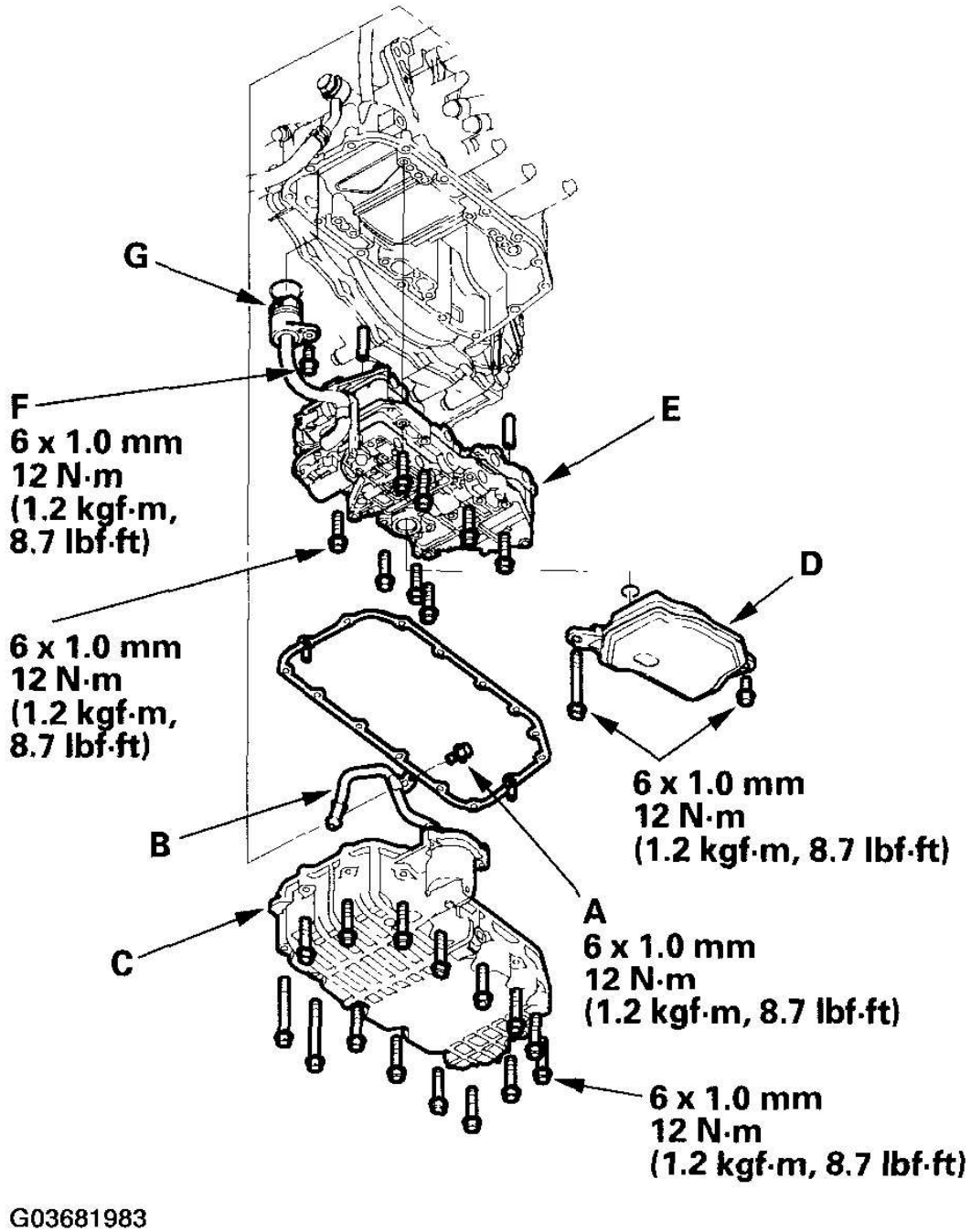


Fig. 282: Identifying Loosening Torque Of Bolt Securing ATF Cooler Inlet Line On Transmission

Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the ATF pan (C).
10. Remove the ATF strainer (D).
11. Remove the lower valve body assembly (E), and remove the bolt (F) securing the solenoid harness connector (G) with holding the lower valve body assembly, then remove the harness connector and valve body assembly.
12. Replace the lower valve body assembly, and install it in the reverse order of removal.
13. Check the solenoid harness connector for rust, dirt, or oil, then connect the connector securely.
14. Refill the transmission with CVT Fluid (see **CVT FLUID REPLACEMENT**).
15. Install the engine under cover and the air cleaner housing.
16. Do the start clutch calibration procedure (see **START CLUTCH CALIBRATION PROCEDURES**).

CVT START CLUTCH PRESSURE CONTROL VALVE REPLACEMENT

2004-2006 Models

1. Remove the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).
2. Disconnect the CVT start clutch pressure control valve connector (A).

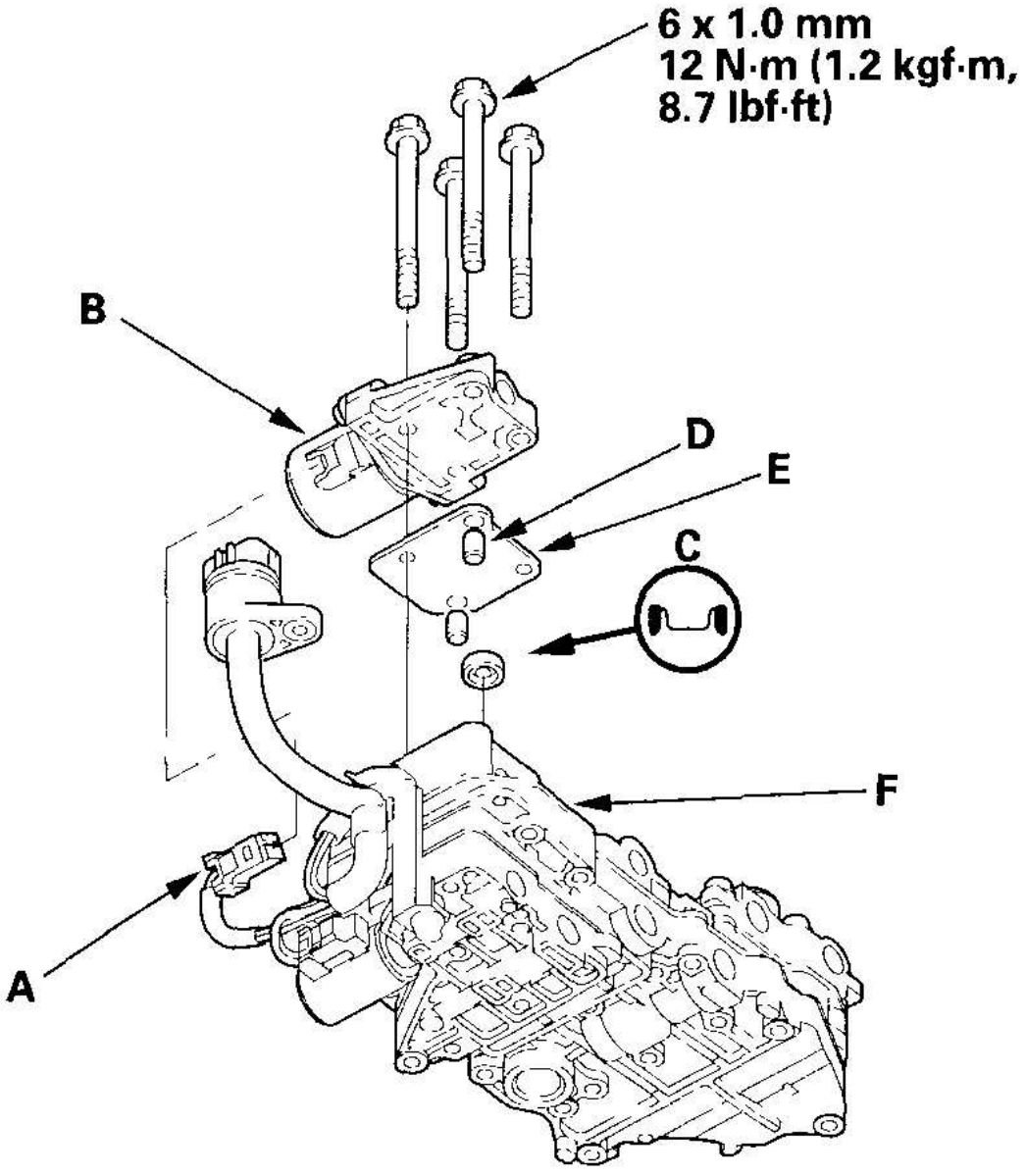


Fig. 283: Disconnecting CVT Start Clutch Pressure Control Valve Connector And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the CVT start clutch pressure control valve (B).

4. Check that the filter (C) is in good condition, replace it if it is clogged or damaged.
5. Install the new CVT start clutch pressure control valve with the dowel pins (D) and separator plate (E) on the lower valve body (F).
6. Connect the CVT start clutch pressure control valve connector.
7. Install the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).

CVT DRIVE PULLEY PRESSURE CONTROL VALVE REPLACEMENT

2004-2006 Models

1. Remove the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).
2. Remove the solenoid harness clamp (A).

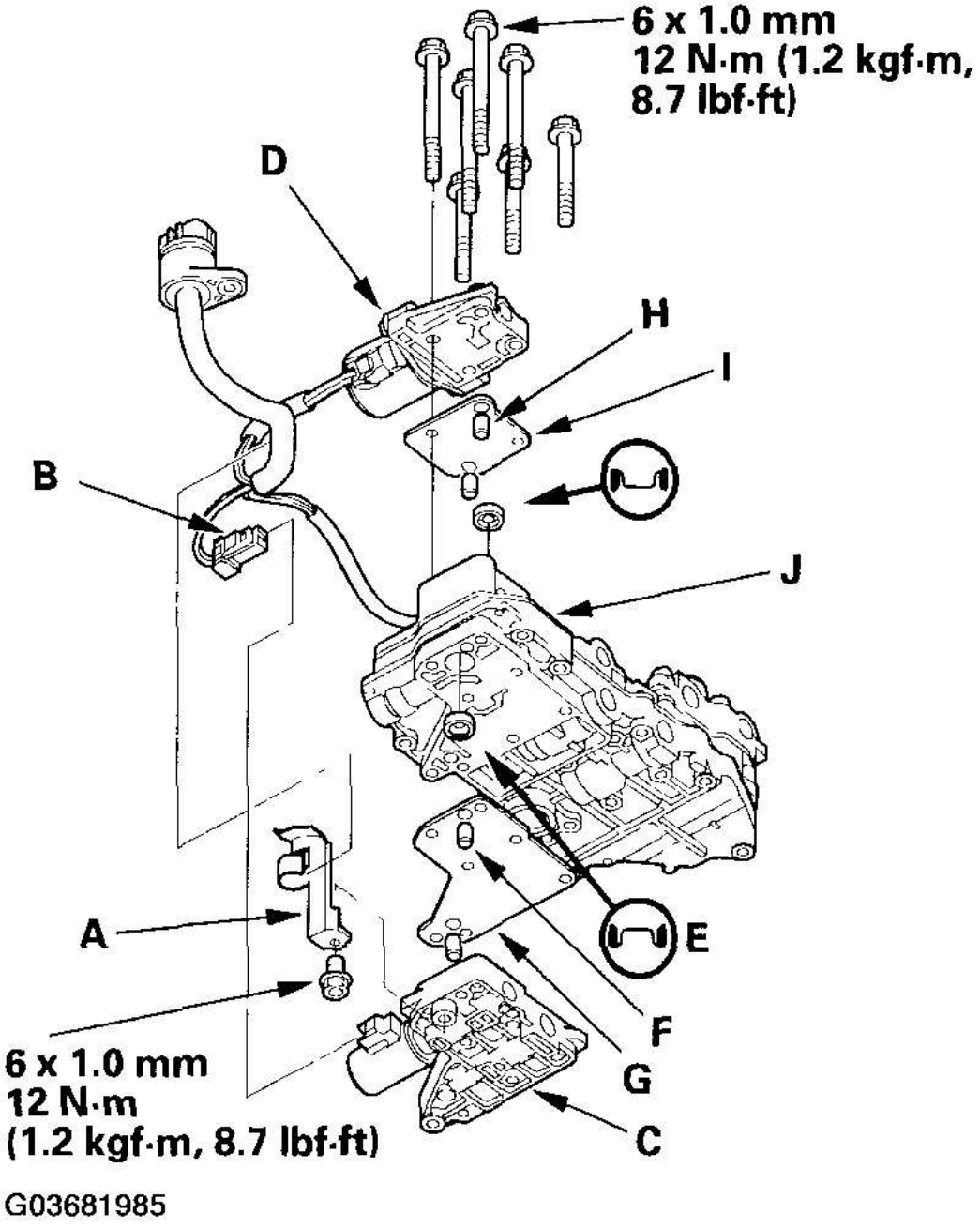


Fig. 284: Removing Solenoid Harness Clamp And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

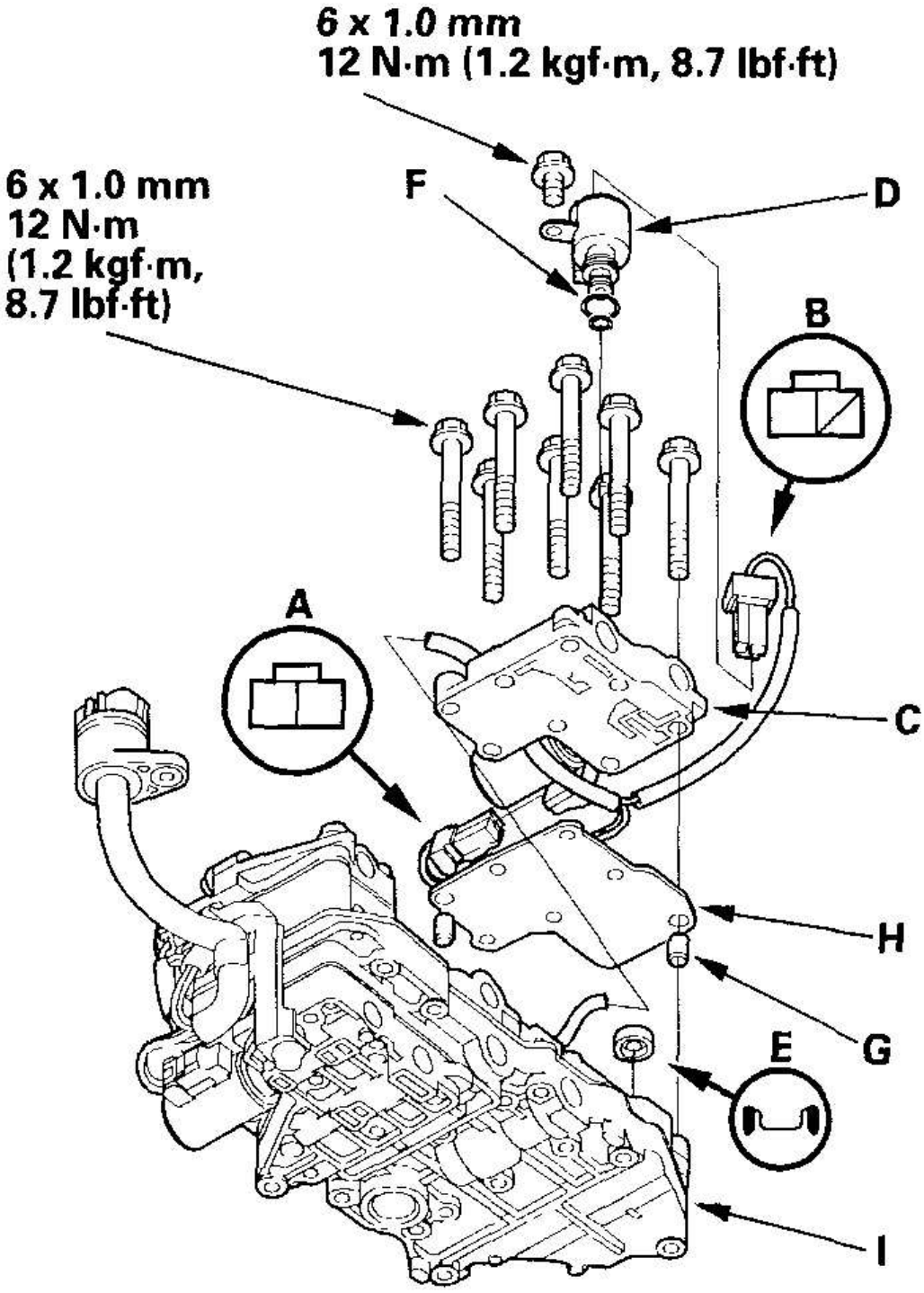
3. Disconnect the CVT drive pulley pressure control valve connector (B).

4. Remove the seven bolts, and remove the CVT drive pulley pressure control valve (C). The CVT start clutch pressure control valve (D) also be removed, it uses those four bolts.
5. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
6. Install the new CVT drive pulley pressure control valve with the dowel pins (F) and separator plate (G), and CVT start clutch pressure control valve with the dowel pins (H) and separator plate (I) on the lower valve body (J).
7. Connect the CVT drive pulley pressure control valve connector.
8. Install the solenoid harness clamp.
9. Install the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).

CVT DRIVEN PULLEY PRESSURE CONTROL VALVE REPLACEMENT

2004-2006 Models

1. Remove the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).
2. Disconnect the CVT driven pulley pressure control valve connector (A) and the inhibitor solenoid connector (B).


6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
6 x 1.0 mm
12 N·m
(1.2 kgf·m,
8.7 lbf·ft)
F
D
B
A
C
H
G
E
I

G03681986

Fig. 285: Disconnecting CVT Driven Pulley Pressure Control Valve Connector And Inhibitor Solenoid Connector With Specified Torques
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the CVT driven pulley pressure control valve (C), and remove the inhibitor solenoid (D) from the CVT driven pulley pressure control valve.
4. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
5. Replace the O-rings (F) on the inhibitor solenoid, if necessary.
6. Install the inhibitor solenoid on the new CVT driven pulley pressure control valve.
7. Install the new CVT driven pulley pressure control valve with the dowel pins (G) and separator plate (H) on the lower valve body (I).
8. Connect the CVT driven pulley pressure control valve connector and the inhibitor solenoid connector.
9. Install the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).

INHIBITOR SOLENOID REPLACEMENT

2004-2006 Models

1. Remove the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).
2. Disconnect the inhibitor solenoid connector (A).

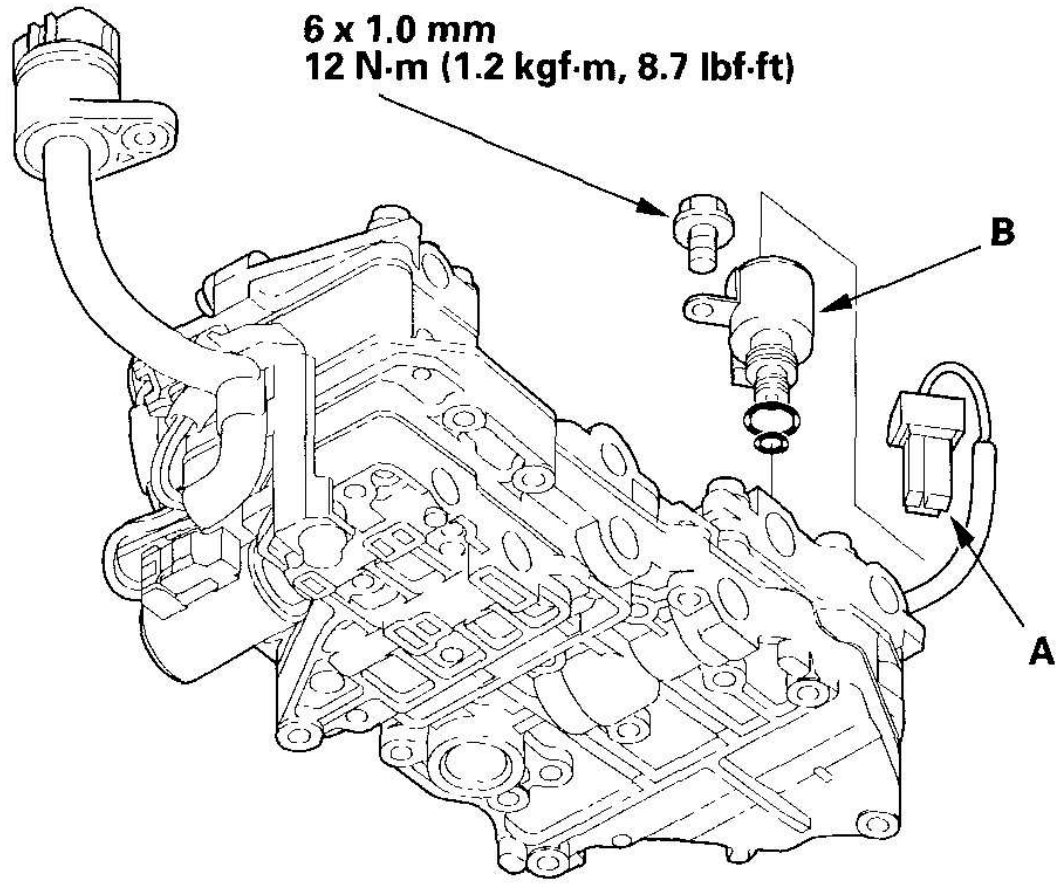


Fig. 286: Disconnecting Inhibitor Solenoid Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the inhibitor solenoid (B).
4. Install the new inhibitor solenoid on the CVT pulley pressure control valve.
5. Connect the inhibitor solenoid connector.
6. Install the lower valve body (see **LOWER VALVE BODY ASSEMBLY REPLACEMENT**).

TRANSMISSION REMOVAL

Special Tools Required

Engine support hanger, A and Reds AAR-T-12566 These special tools are available through the Honda Tool and Equipment Program 1-888-424-6857

NOTE:

- **Use fender covers to avoid damaging painted surfaces.**
- **Special tool Reds engine support hanger AAR-T-12566 must be used with the side engine mount installed.**

1. Before removing the transmission, read the Service Precautions for the IMA System (see **SERVICE PRECAUTIONS**).
2. Turn the battery module switch OFF, and measure the voltage at the junction board terminals (see **TURNING OFF POWER TO THE HIGH VOLTAGE CIRCUIT**).
3. Shift the shift lever into the N position.
4. Make sure you have the anti-theft code for the radio, then write down the audio presets.
5. Disconnect the battery negative terminal, then remove the positive terminal.
6. Remove the battery hold-down bracket, then remove the battery and battery tray.
7. Remove the engine cover, air cleaner housing, and resonator.
8. Remove the engine under cover and engine under cover bracket.
9. Remove the drain plug (A), and drain the continuously variable transmission fluid (CVTF). Reinstall the drain plug with a new sealing washer (B).

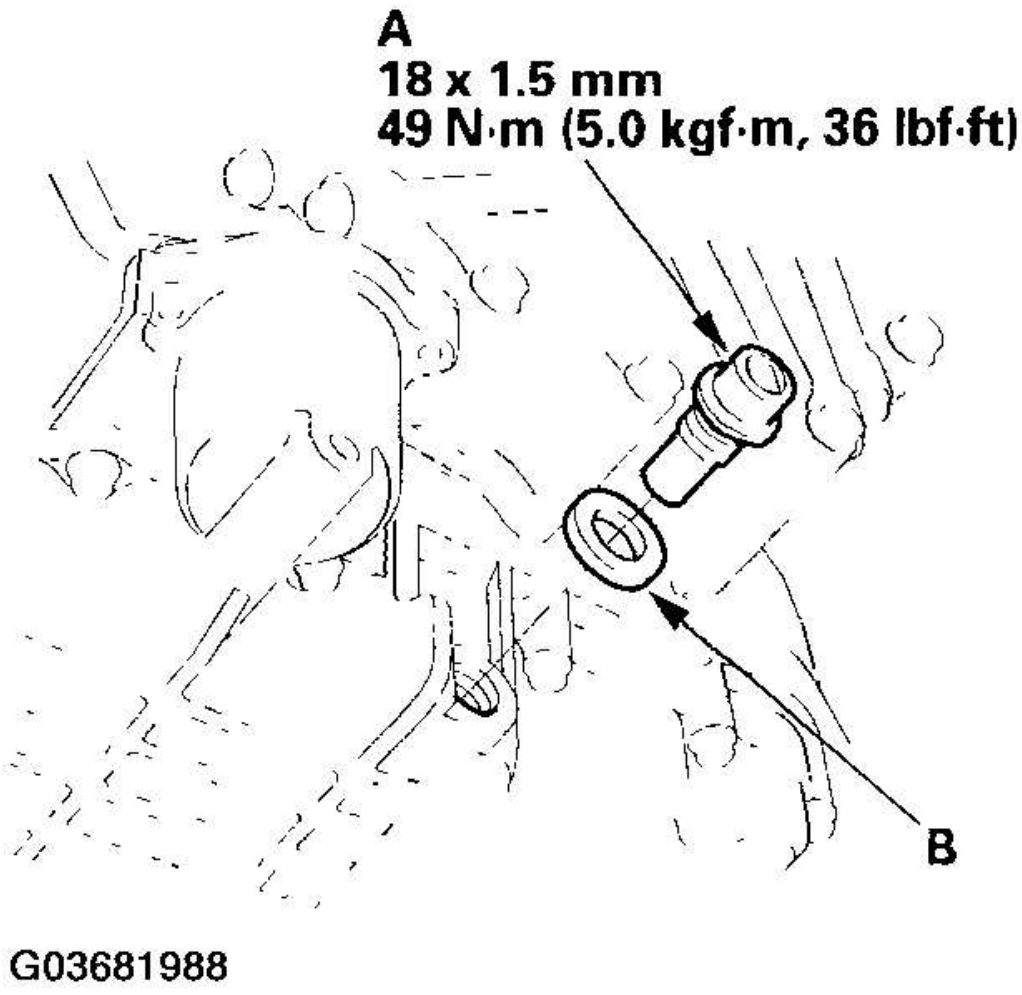
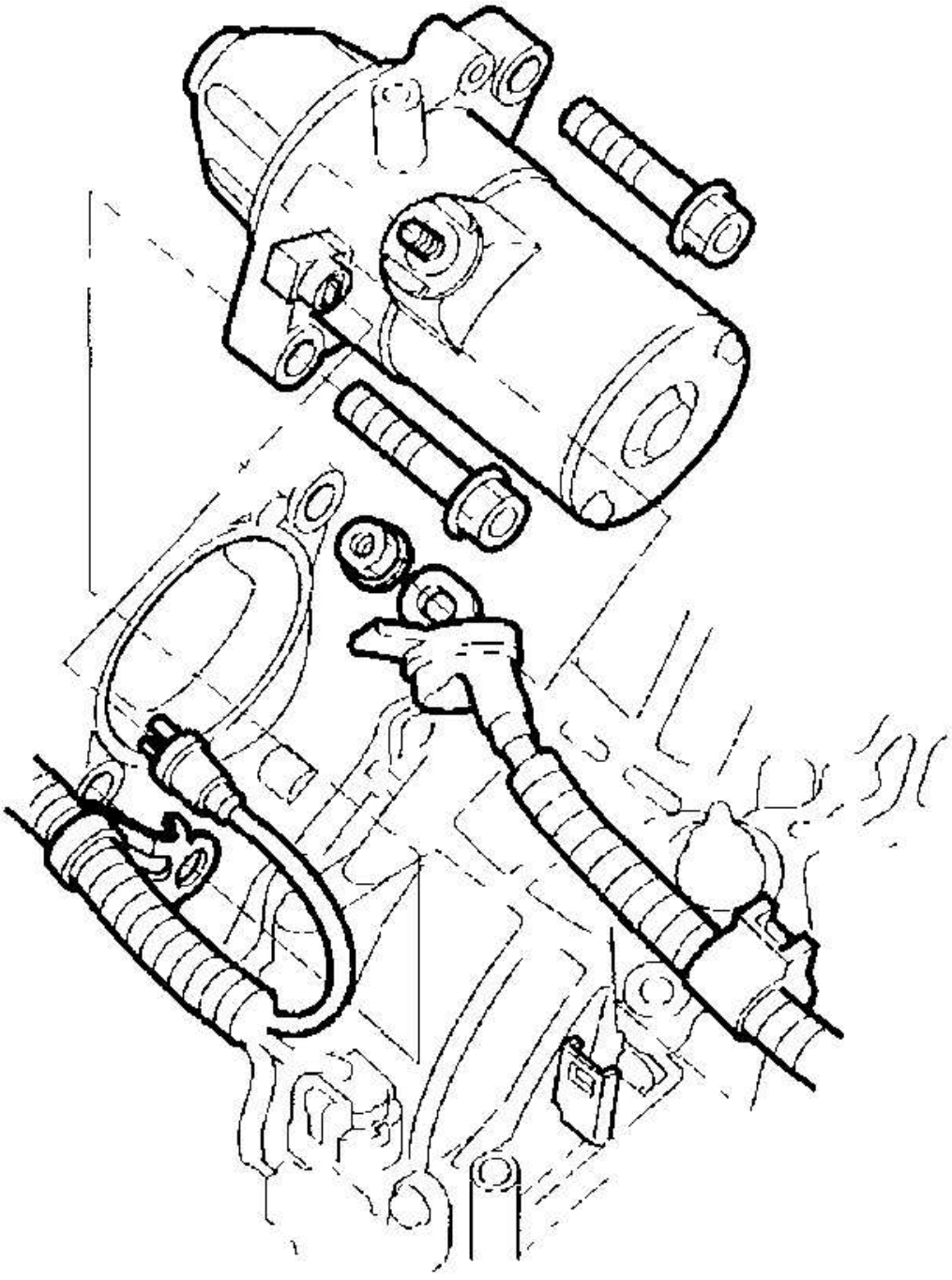


Fig. 287: Identifying Loosening Torque Of Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the starter cable, then remove the starter.



G03681989

Fig. 288: Removing Starter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Disconnect the CVT input shaft (drive pulley) speed sensor connector (A), solenoid harness connector (8P) (B), and remove the transmission ground cable (C).

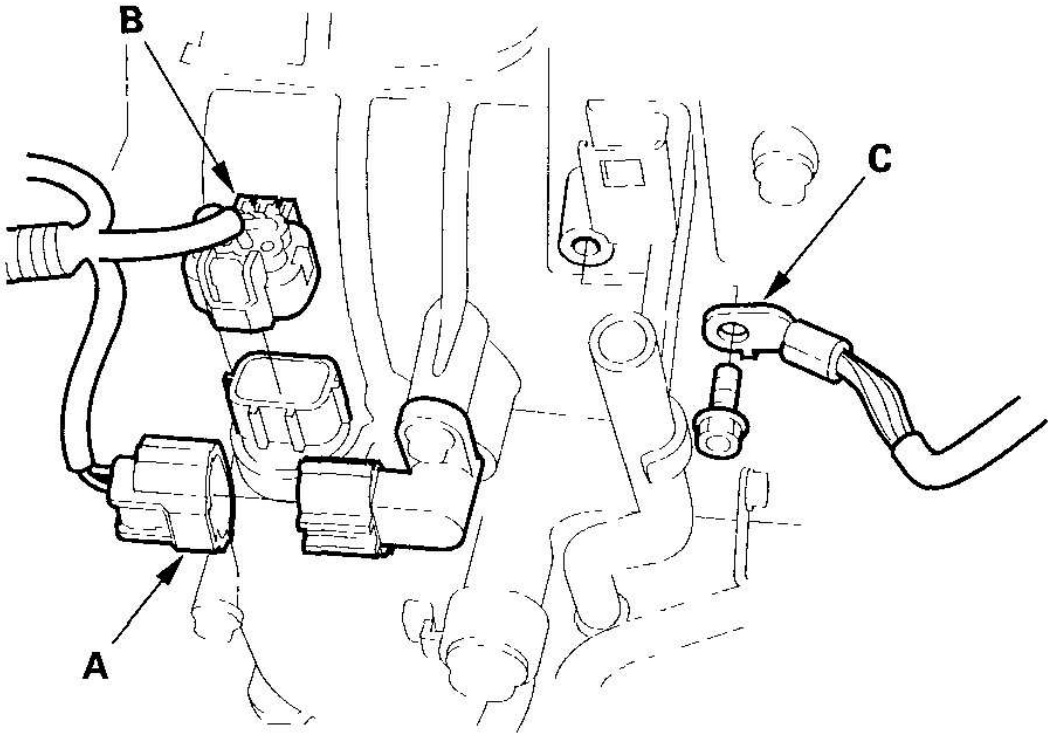


Fig. 289: Disconnecting CVT Input Shaft (Drive Pulley) Speed Sensor Connector, Solenoid Harness Connector (8P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Loosen the locknut (A) on the shift cable (B).

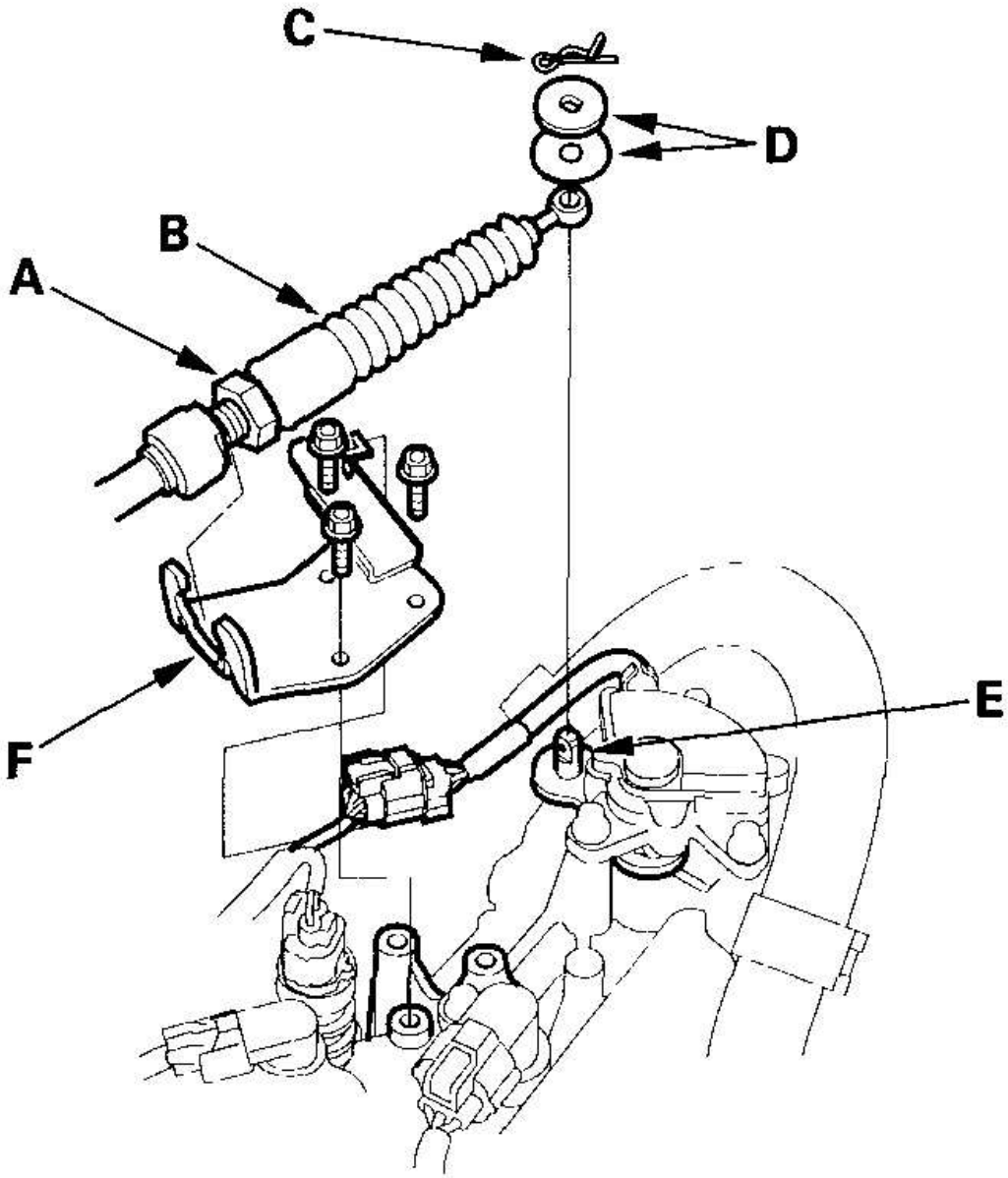


Fig. 290: Loosening Locknut On Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the spring clip (C) and washers (D), and separate the shift cable from

the control lever (E) and the shift cable bracket (F). Do not bend the shift cable excessively.

14. Remove the shift cable bracket.
15. Remove the harness clamps (A) from the clamp brackets (B), and remove the transmission range switch connector (C) from the connector bracket, then disconnect it.

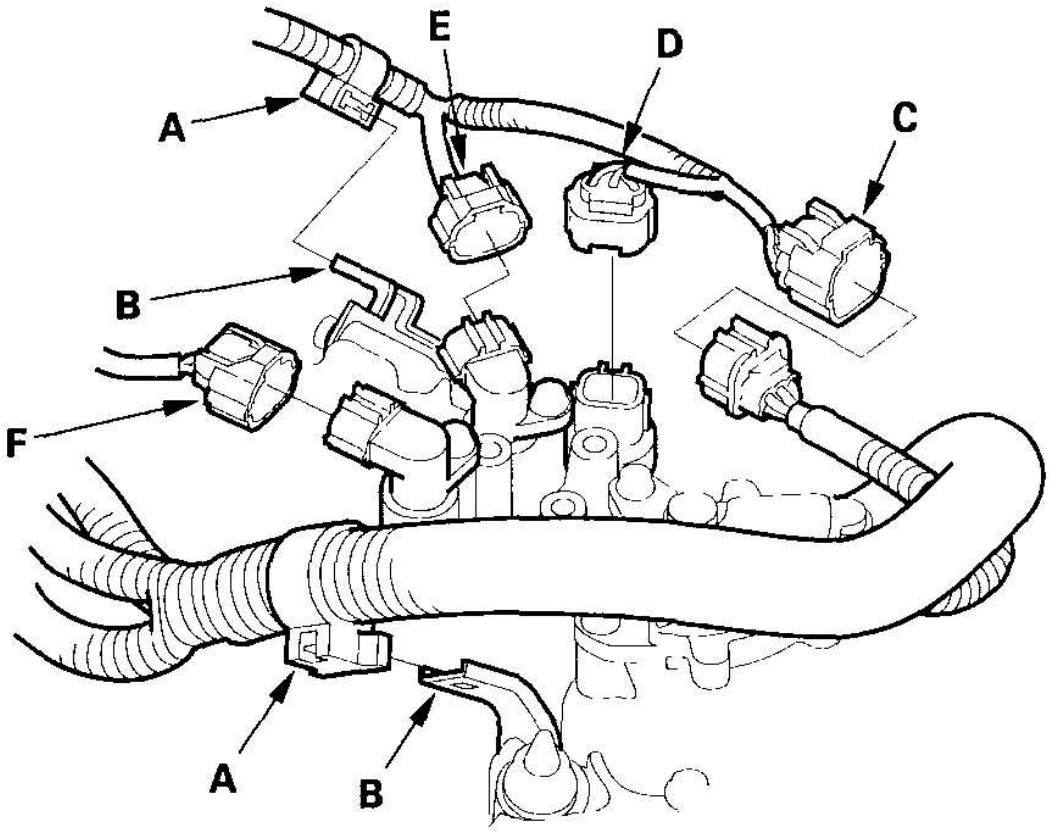
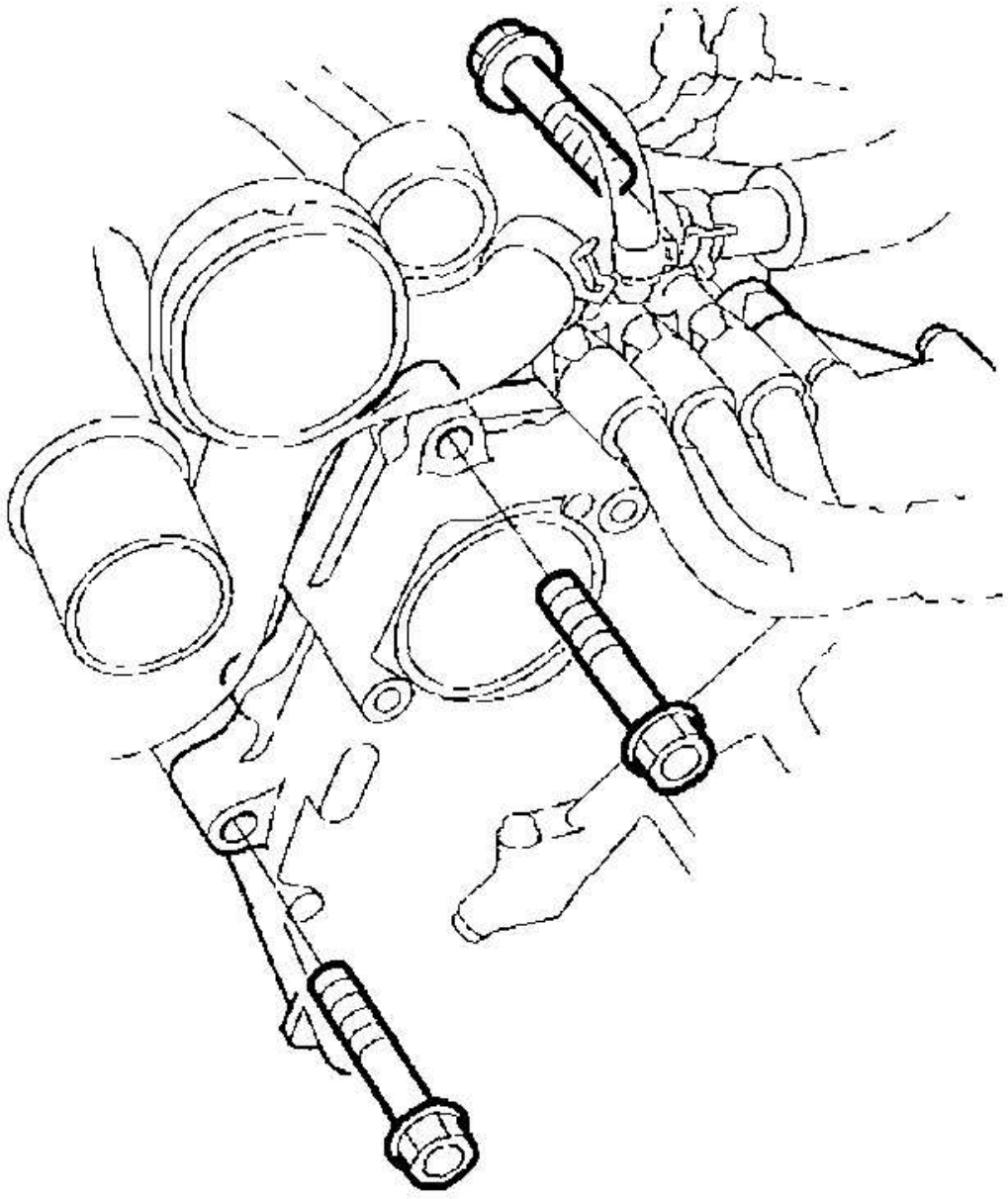


Fig. 291: Disconnecting Transmission Range Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Disconnect the vehicle speed sensor connector (D), CVT speed sensor connector (E), and CVT output shaft (driven pulley) speed sensor connector (F).

17. Remove the front and upper transmission housing mounting bolts.



G03681993

Fig. 292: Removing Front And Upper Transmission Housing Mounting

Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Remove the spindle nut (A), and tap the driveshaft inward with a plastic hammer to allow the special tool on the lower arm ball joint (see **KNUCKLE/HUB/HUB BEARING UNIT REPLACEMENT**).

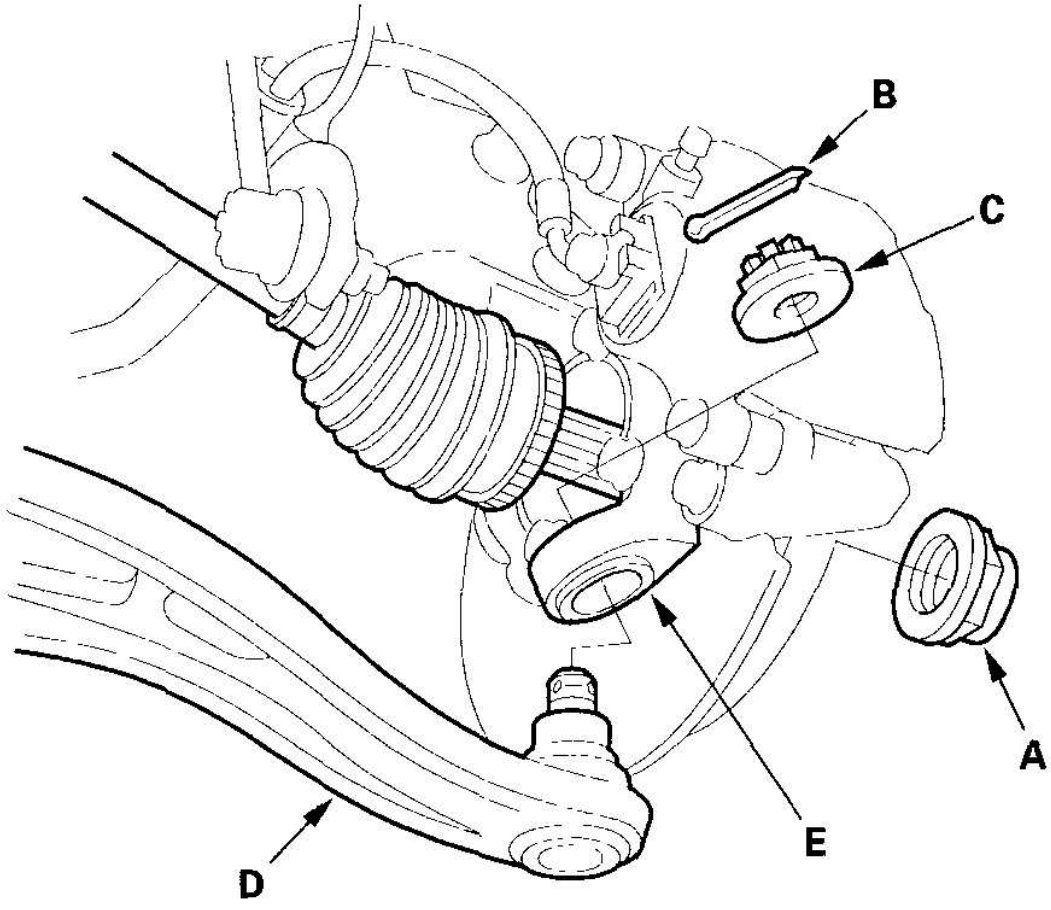


Fig. 293: Removing Spindle Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Remove the cotter pins (B) and castle nuts (C), and separate the lower arms (D) from the knuckles (E) (see step 10 on **FRONT SUSPENSION**).

20. Remove the driveshafts from the differential (see step 10 on **DRIVELINE/AXLE**).

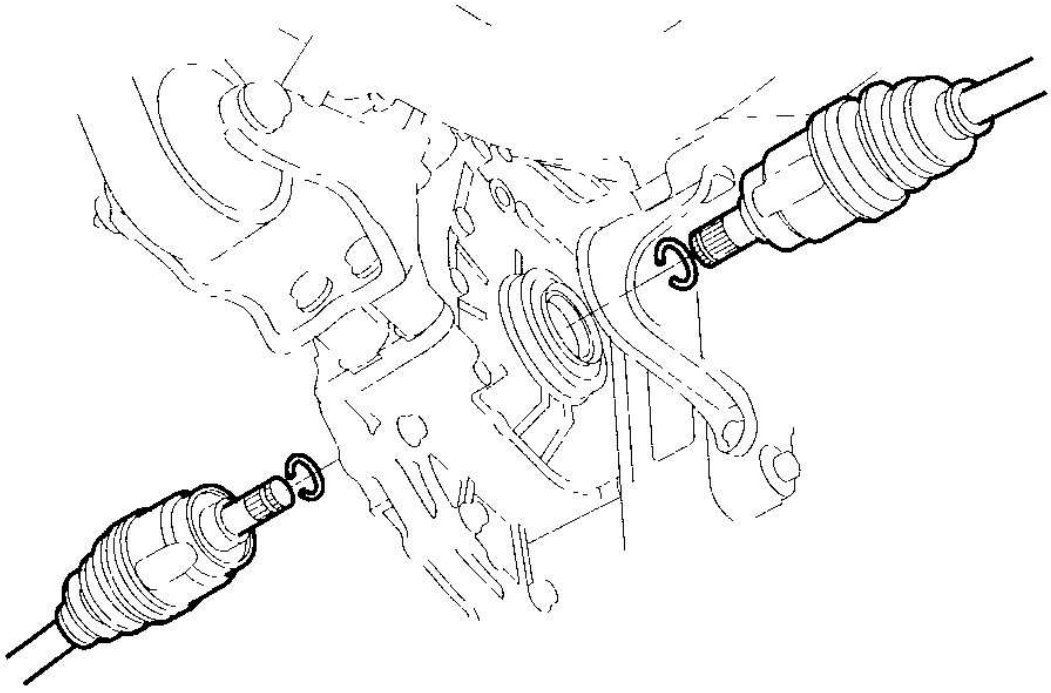


Fig. 294: Removing Driveshafts From Differential
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Remove the driveshafts. Coat all precision finished surfaces with clean engine oil, then tie the plastic bags over the driveshaft ends.
22. Remove the ATF cooler hoses (A) from the ATF cooler lines (B). Turn the ends of the ATF cooler hoses up to prevent CVTF from flowing out, then plug the ATF cooler hoses and lines. Check for any signs of leakage at the hose joints.

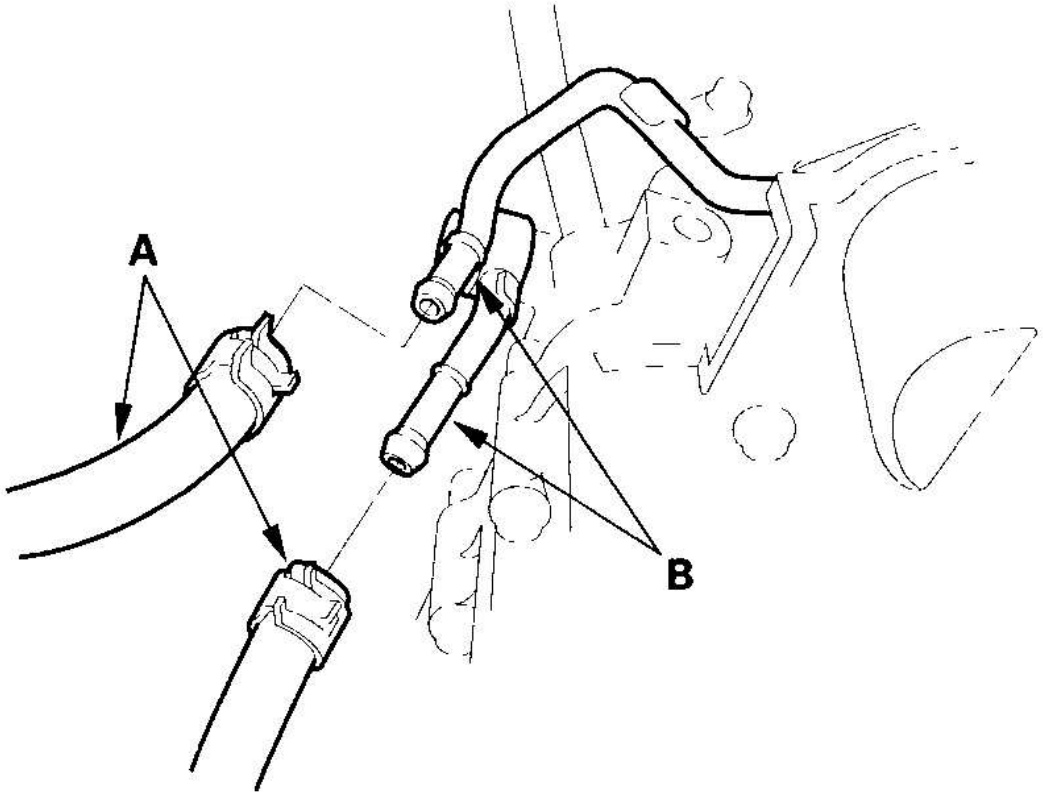


Fig. 295: Removing ATF Cooler Hoses From ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Remove the rear mount/bracket.

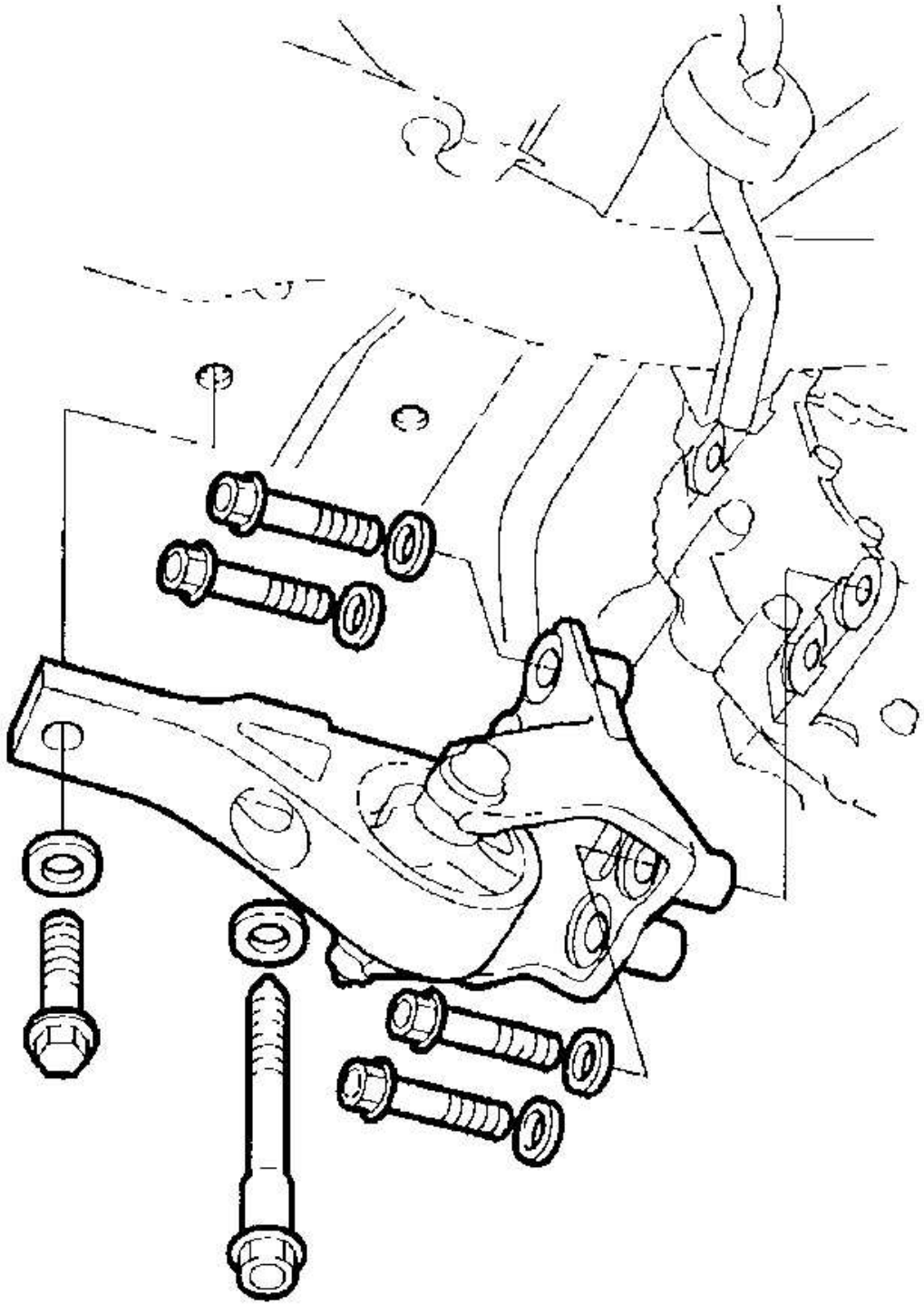


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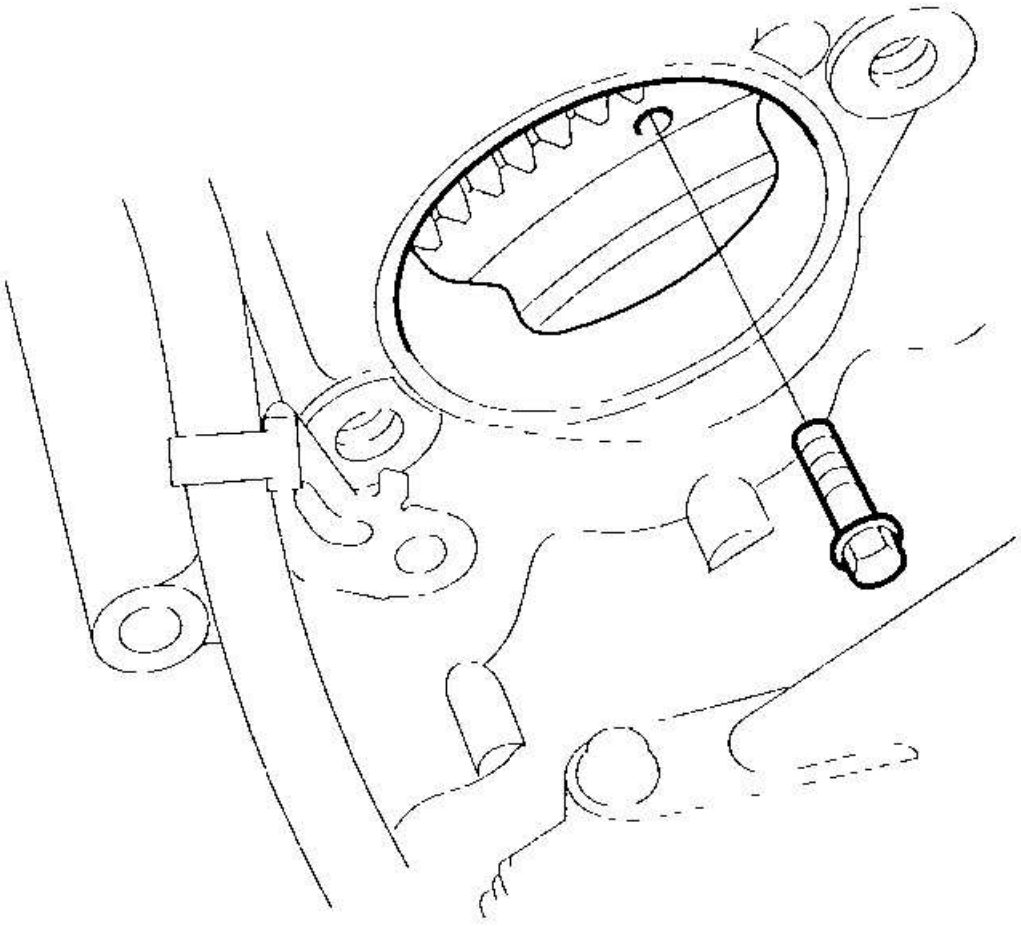
Fig. 296: Removing Rear Mount/Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Remove the eight drive plate bolts at the opening of the starter while rotating the engine crankshaft pulley.

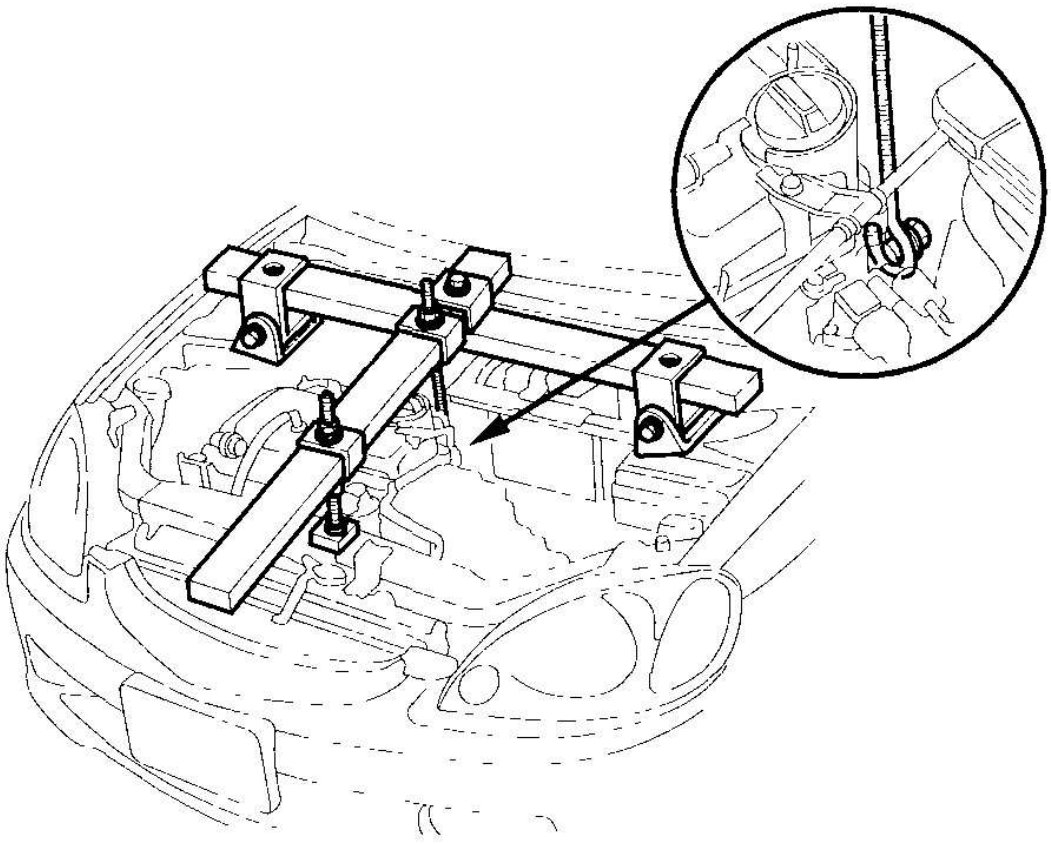


G03681998

Fig. 297: Removing Drive Plate Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Lift and support the engine assembly with an engine hanger (P/N AAR-T-

1256). Raise the transmission just enough to take the weight off of the mounts.



G03681999

Fig. 298: Supporting Engine Assembly With Engine Hanger
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Place a jack under the transmission.
27. Remove the transmission ground cable from the transmission mount bracket, and remove the transmission mount bracket.

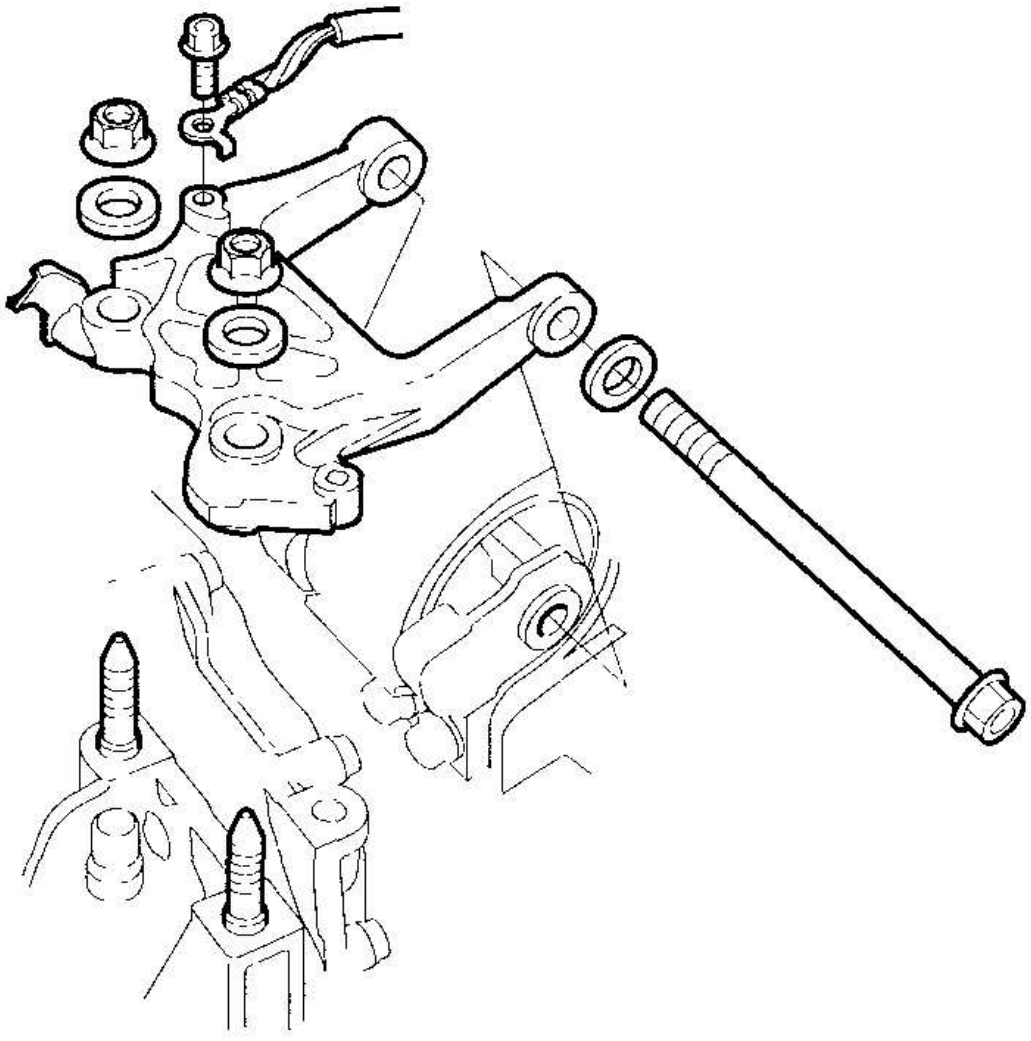


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Fig. 299: Removing Transmission Mount Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Remove the heat shield (A) and exhaust manifold bracket (B), then remove the lower transmission housing mounting bolts.

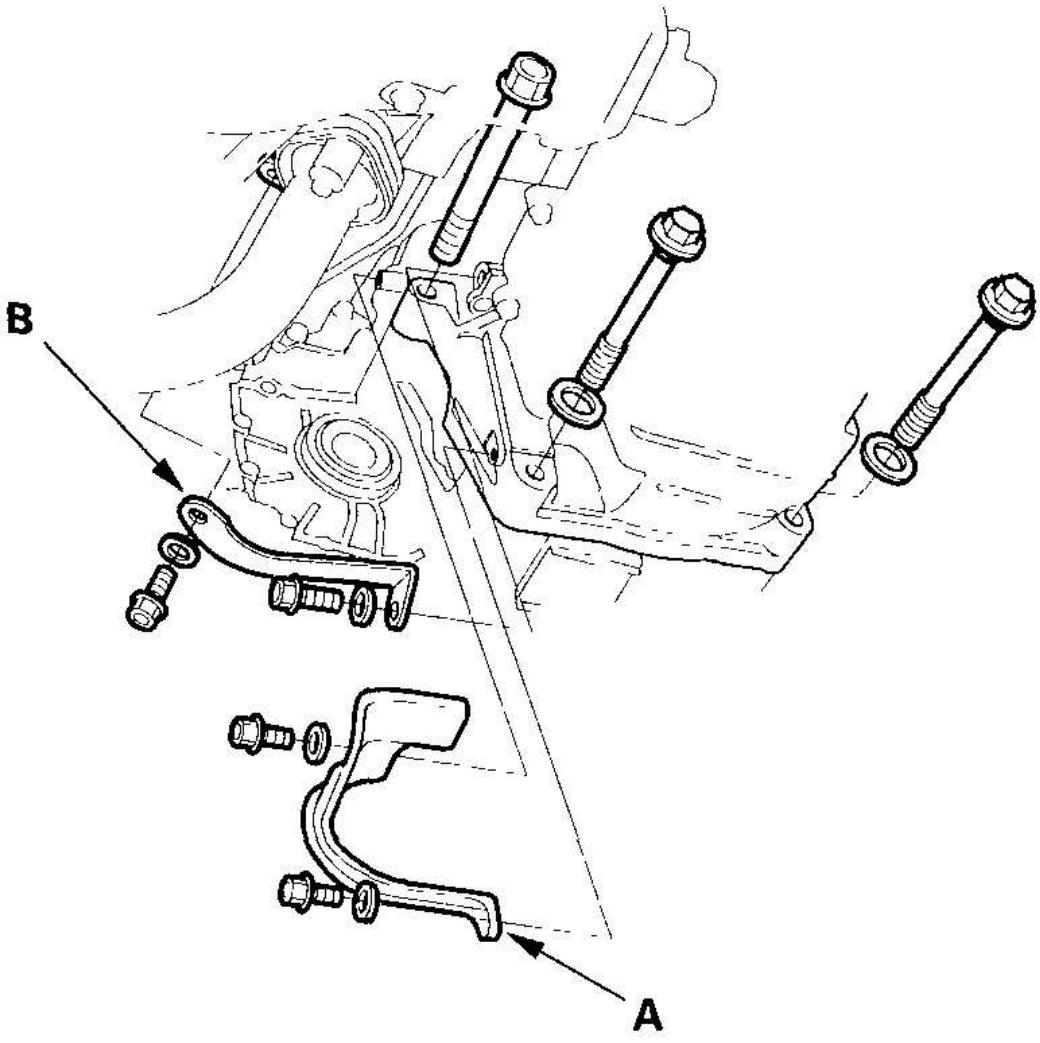

Fig. 300: Removing Heat Shield And Exhaust Manifold Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Pull the transmission away from the engine until it clears the dowel pins, then lower it on the jack.
30. Remove the flywheel from the transmission.

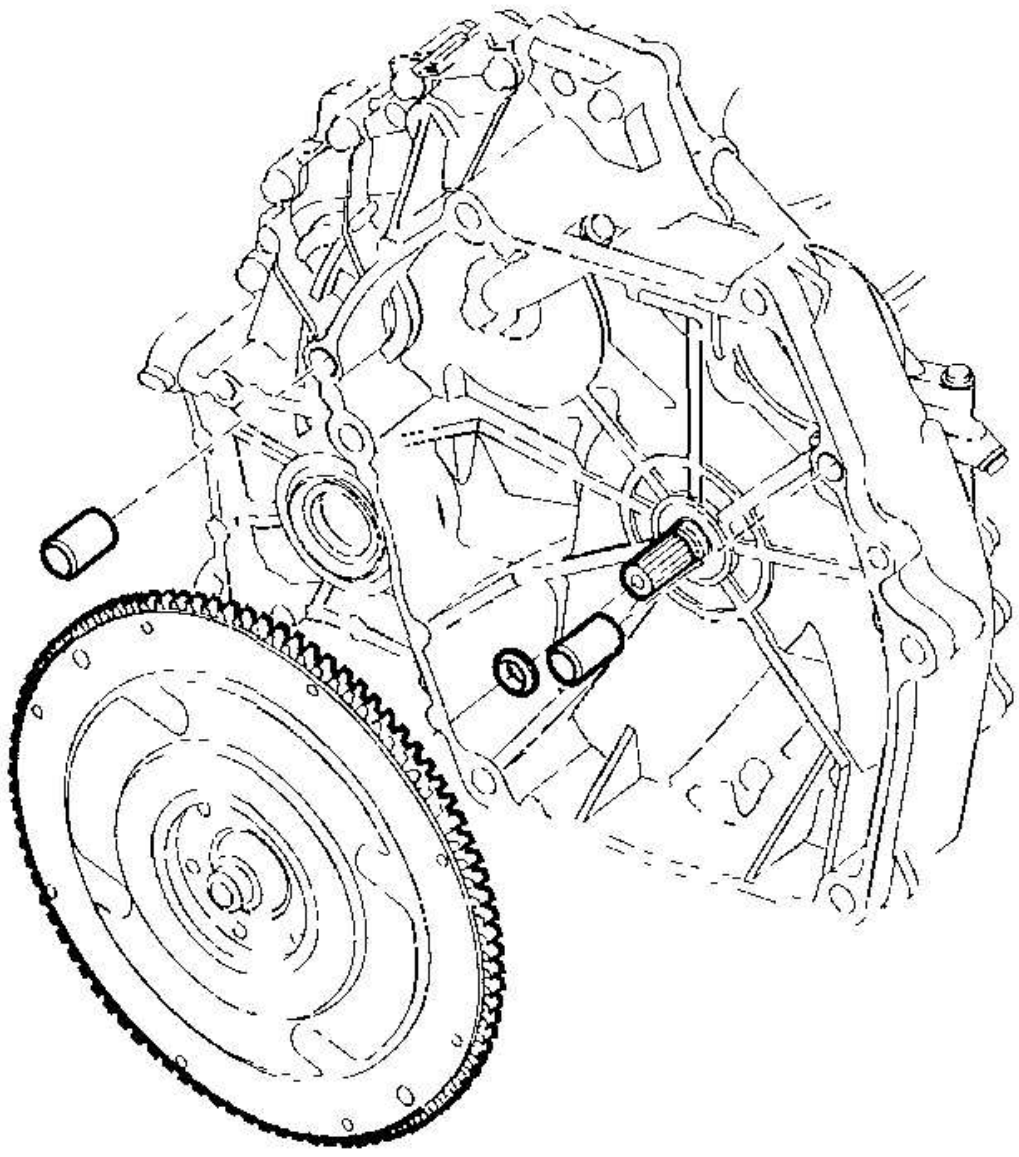

Fig. 301: Removing Flywheel From Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

31. Inspect the drive plate and replace it if it is damaged.

DRIVE PLATE REMOVAL AND INSTALLATION

1. Remove the transmission assembly (see **TRANSMISSION REMOVAL**).
2. Remove the drive plate (A) and washer (B) from the engine crankshaft.

2001-2003 Models:

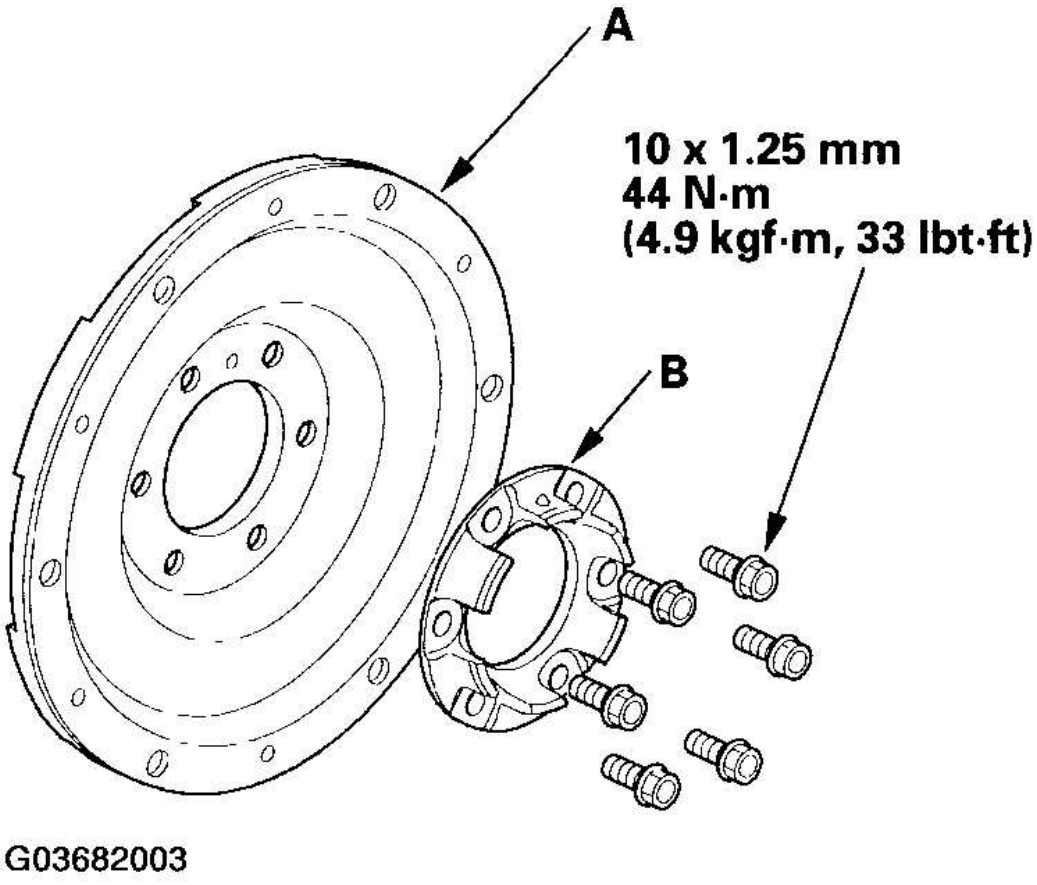

Fig. 302: Identifying Loosening Torque Of Drive Plate Bolts (2001-2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2004-2006 Models:

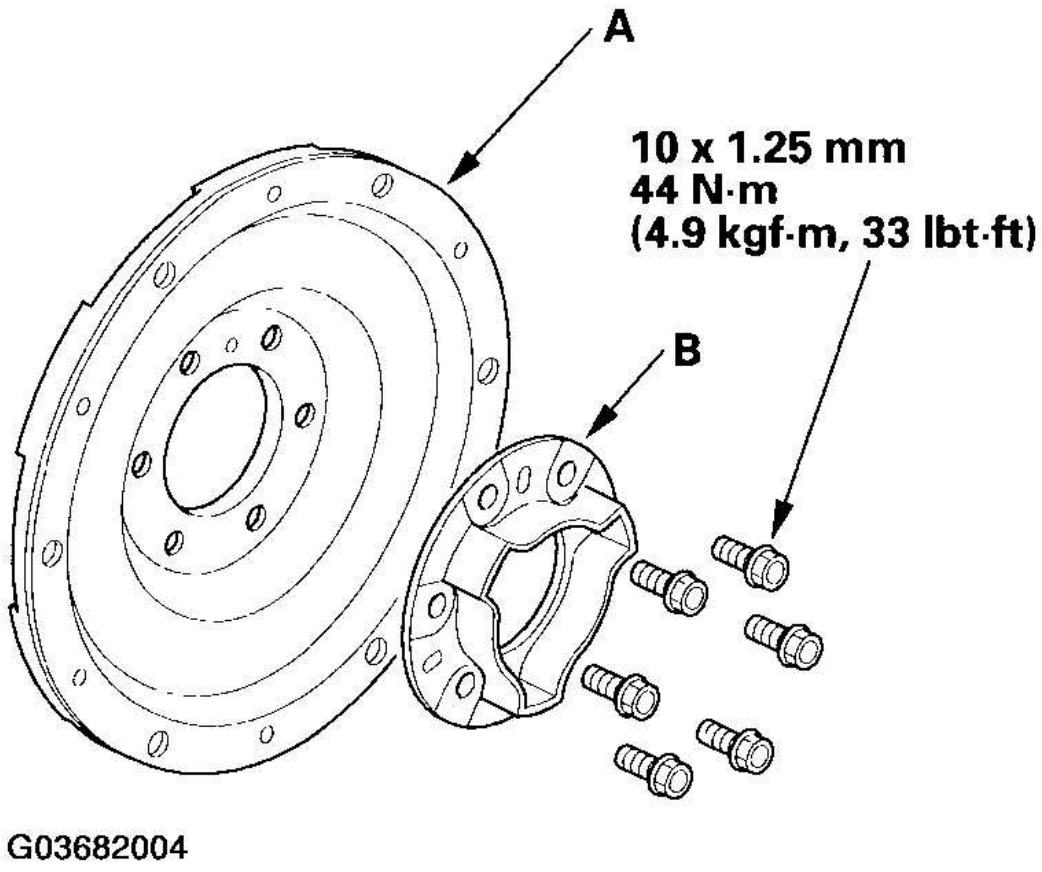

Fig. 303: Identifying Loosening Torque Of Drive Plate Bolts (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the drive plate, and install the washer in the direction shown on the engine crankshaft.
4. Tighten the six bolts in a crisscross pattern.
5. Install the transmission assembly (see **TRANSMISSION INSTALLATION**).

TRANSMISSION INSTALLATION

Special Tools Required

Engine support hanger, A and Reds AAR-T-12566 These special tools are available

through the Honda Tool and Equipment Program 1-888-424-6857

NOTE: Use fender covers to avoid damaging painted surfaces.

1. Clean the ATF cooler (see **ATF COOLER CLEANING**).
2. Remove the used grease in the flywheel hub cap and flywheel splines.
3. Push out about 2 grams (0.07 oz.) of super high temp area grease (P/N 08798-9002) using a ruler. One gram equals 40 mm of ruler length.

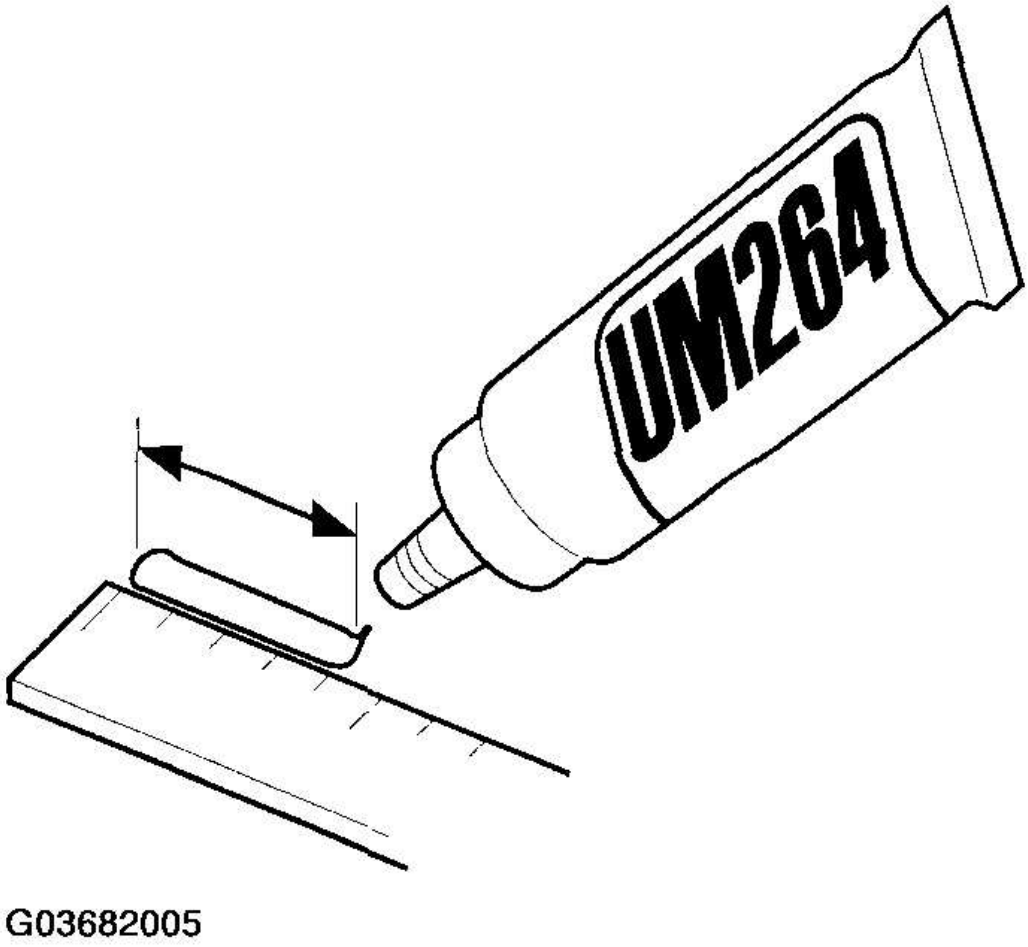

Fig. 304: Identifying Dimension Of 2 Gram Grease
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Fill the inside of the flywheel hub cap (A) with the measured grease. Do not use more than 2.5 gram (0.086 oz.) or you will damage the transmission.

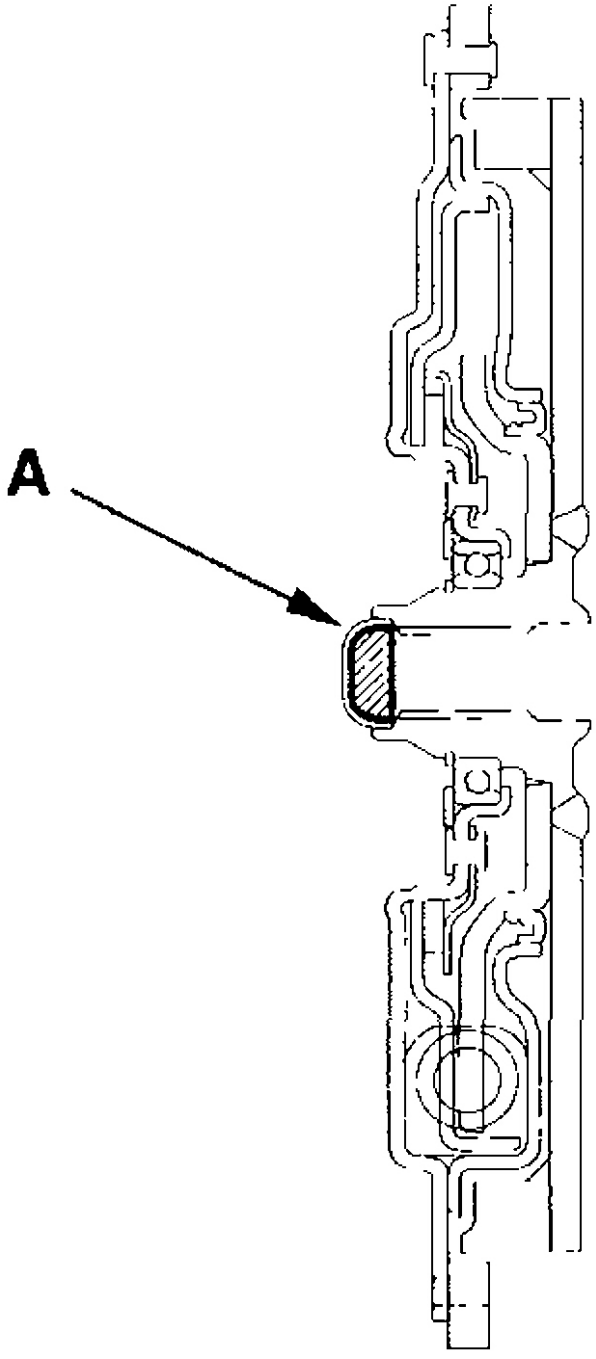

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Fig. 305: Identifying Flywheel Hub Cap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install a new rubber sealing ring (A) on the input shaft (B), and install the 14 mm dowel pins (C) in the flywheel housing.

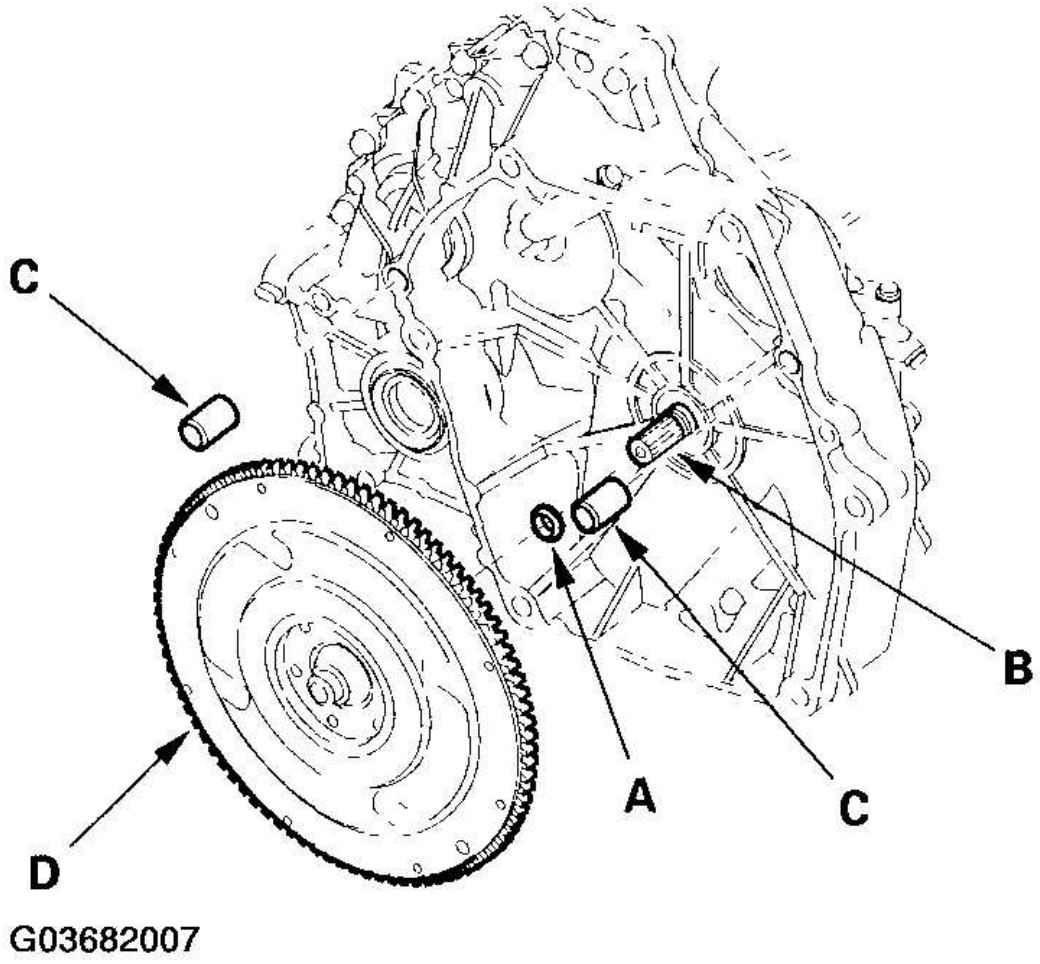

Fig. 306: Installing Rubber Sealing Ring On Input Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the flywheel (D) on the input shaft.
7. Place the transmission on a jack, and raise it to the engine level.

8. Install the lower transmission housing mounting bolts.

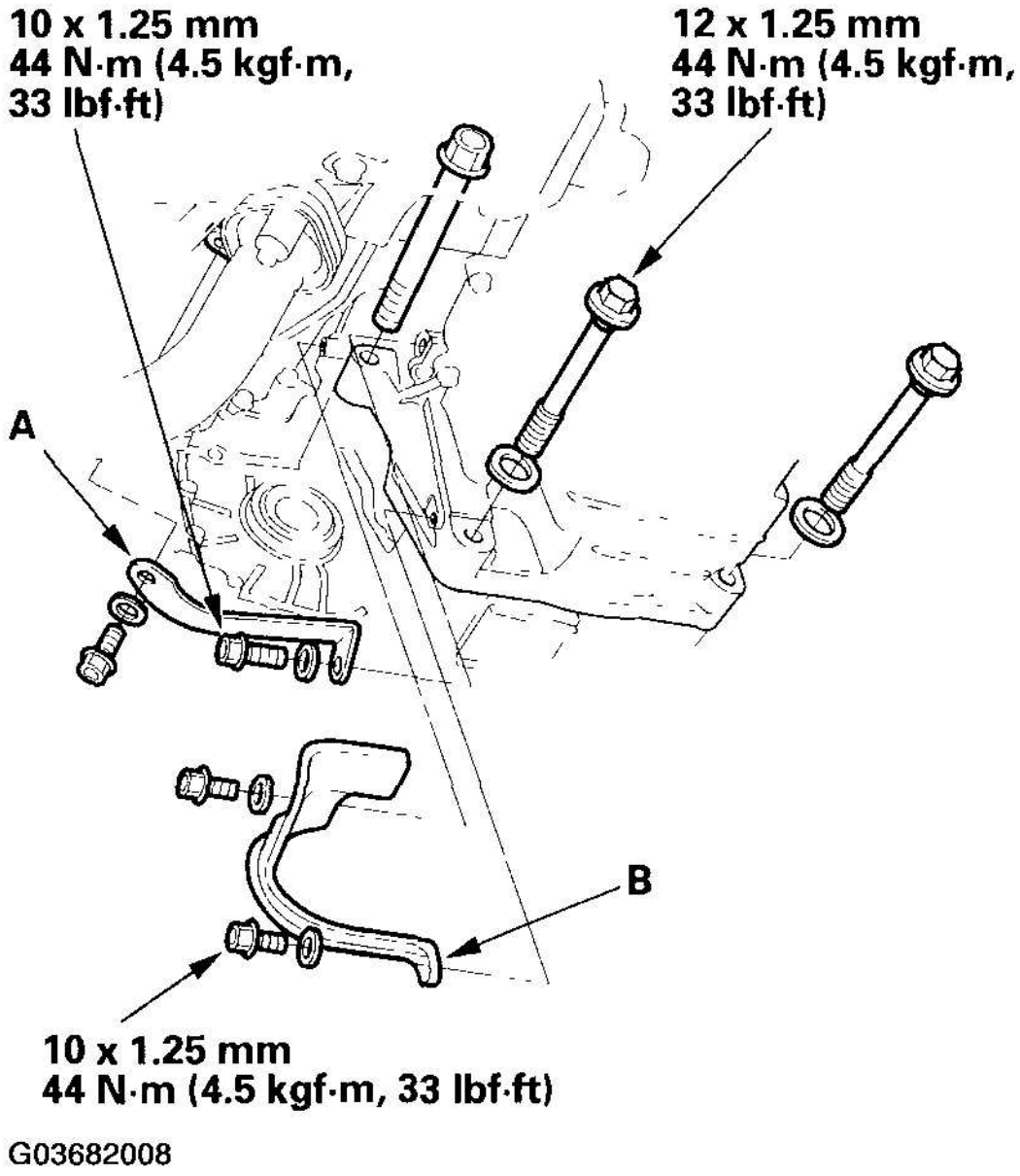

Fig. 307: Identifying Loosening Torque Of Lower Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the exhaust manifold bracket (A) and heat shield (B).
10. Install the transmission mount bracket (A). Tighten the bolt (B) loosely, and tighten the nuts (C) to the specified torque, then tighten the bolt to the specified torque.

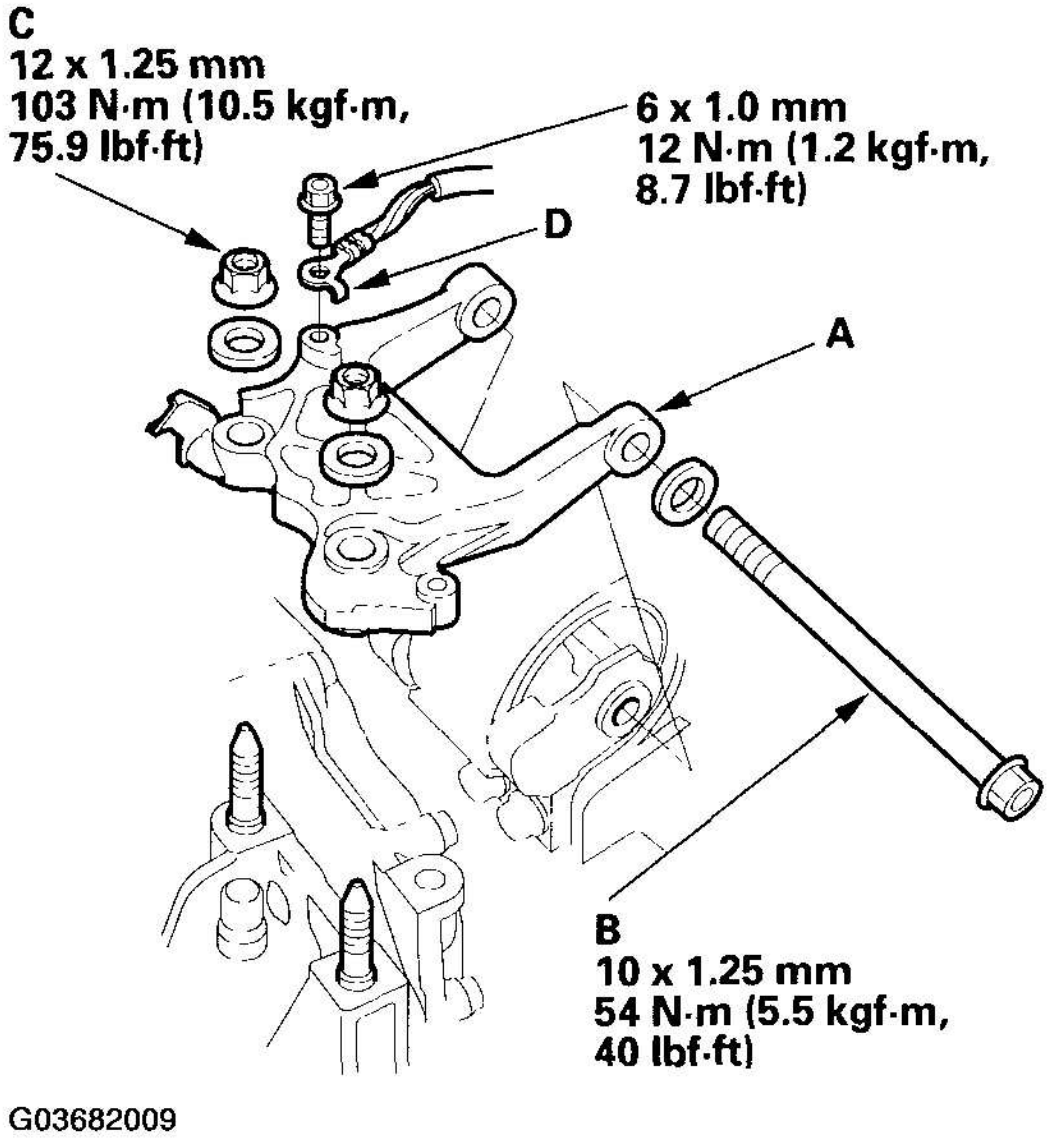

Fig. 308: Identifying Tightening Torque Of Transmission Mount Bracket Bolts

Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Install the transmission ground cable (D) on the transmission mount bracket.
12. Install the front and upper transmission housing mounting bolts.

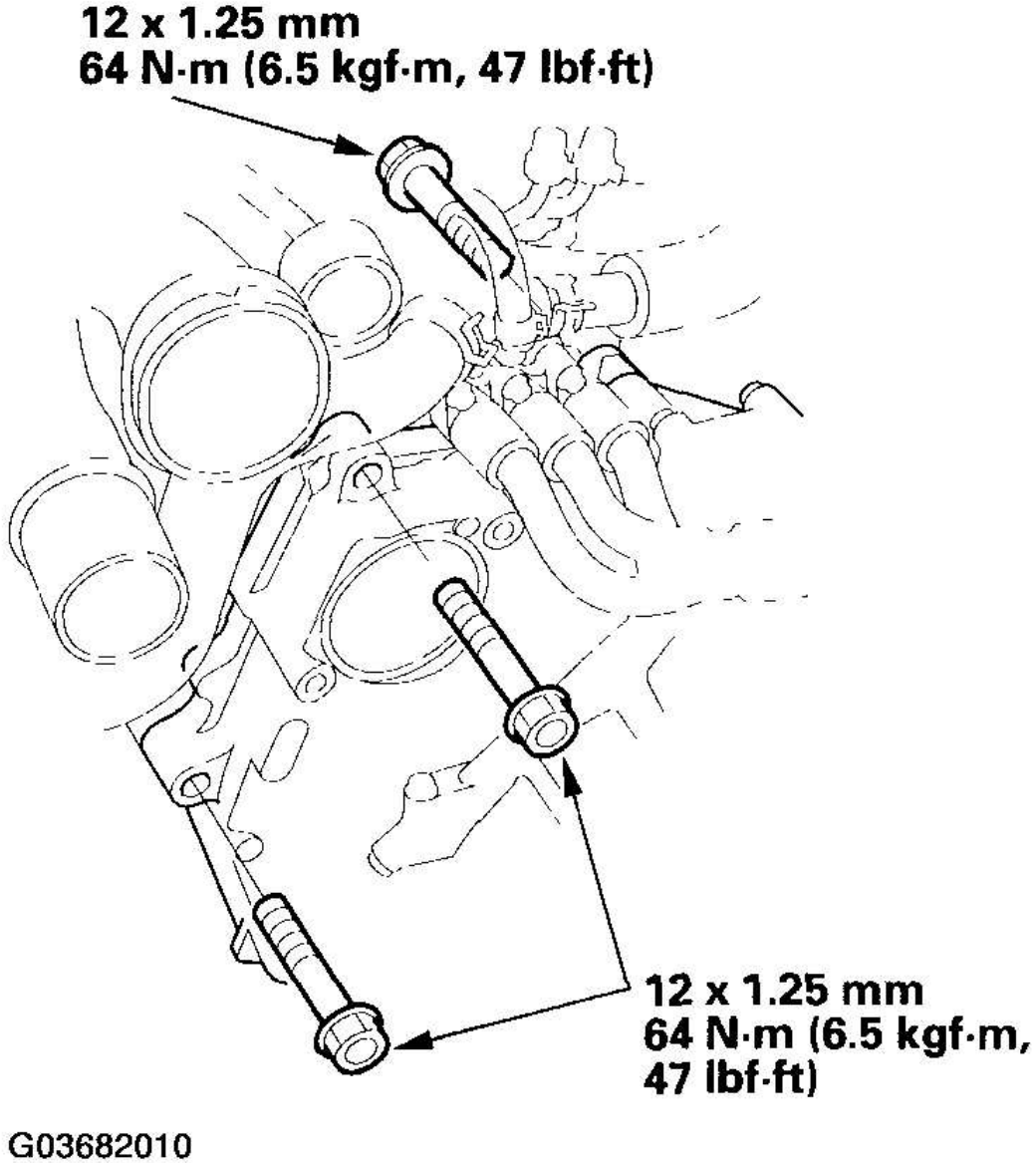

Fig. 309: Identifying Tightening Torque Of Upper Transmission Housing Mounting Bolts

Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Install the rear mount/bracket.

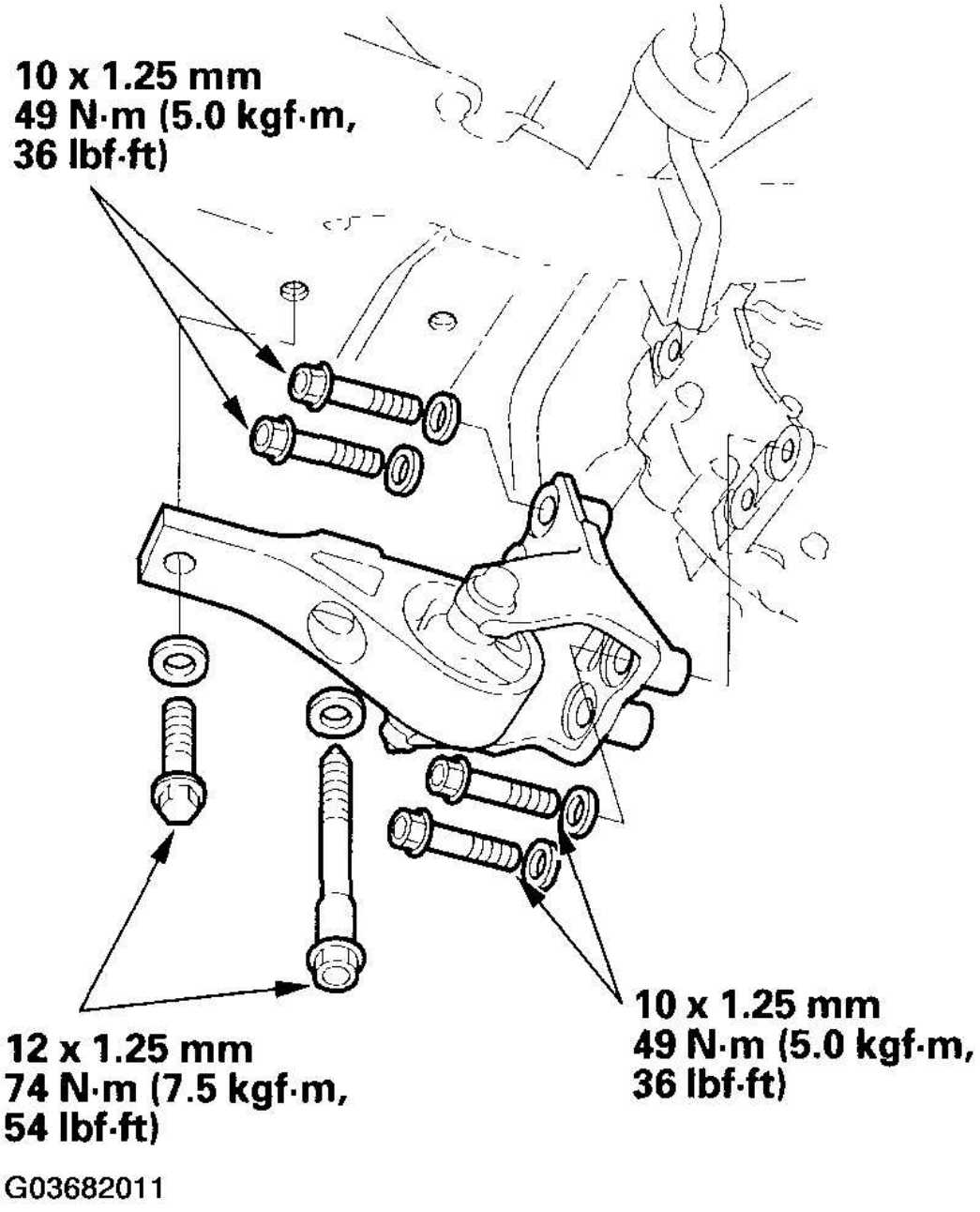

Fig. 310: Identifying Tightening Torque Of Rear Mount/Bracket Bolts

Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the engine hanger.
15. Attach the flywheel to the drive plate with eight bolts. Rotate the crankshaft pulley as necessary to tighten the bolts to 1/2 of the specified torque, then to the final torque, in a crisscross pattern. After installing the last bolt, check that the crankshaft rotate freely.

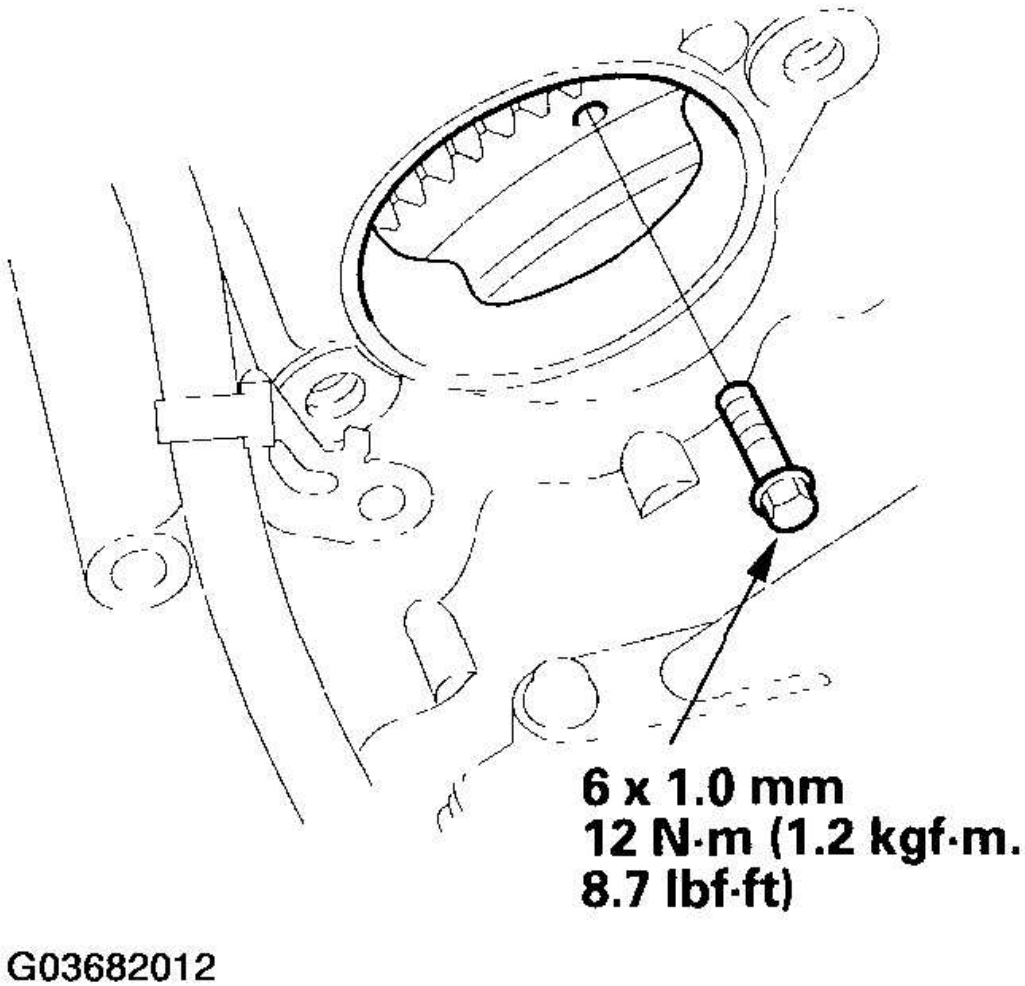

Fig. 311: Identifying Tightening Torque Of Drive Plate Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Connect the ATF cooler hoses (A) to the ATF cooler lines (B) (see step 1).

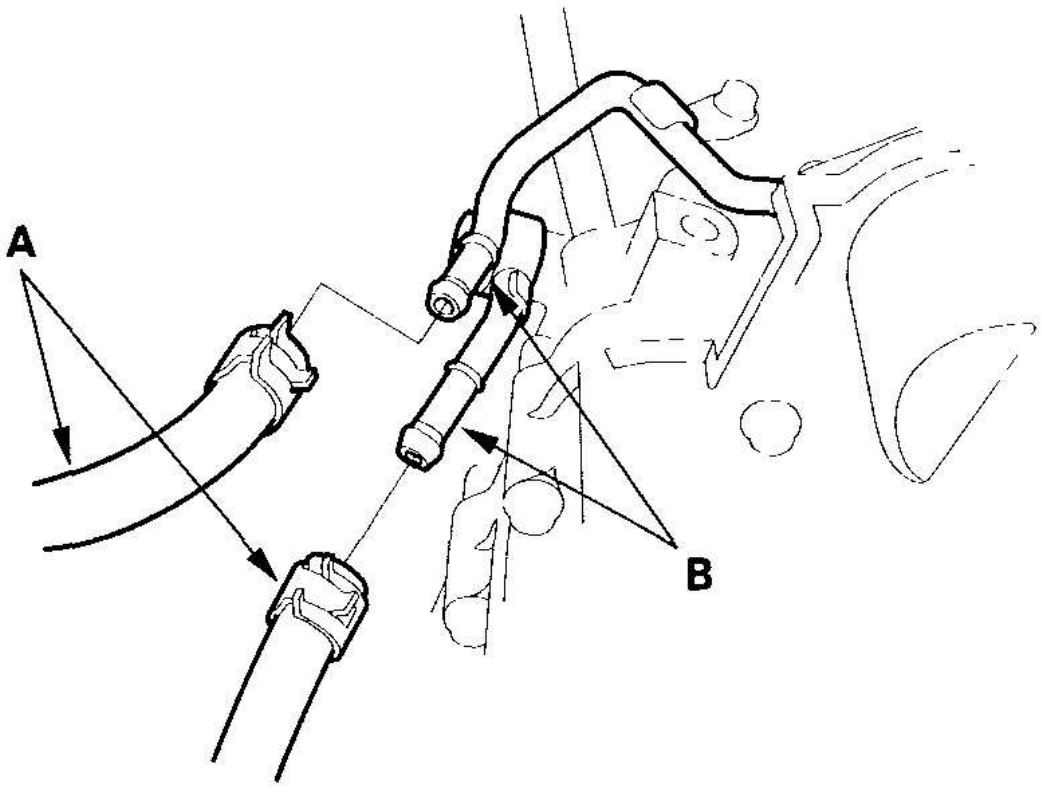

Fig. 312: Connecting ATF Cooler Hoses To ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Install new set rings (A) on the driveshafts (B).

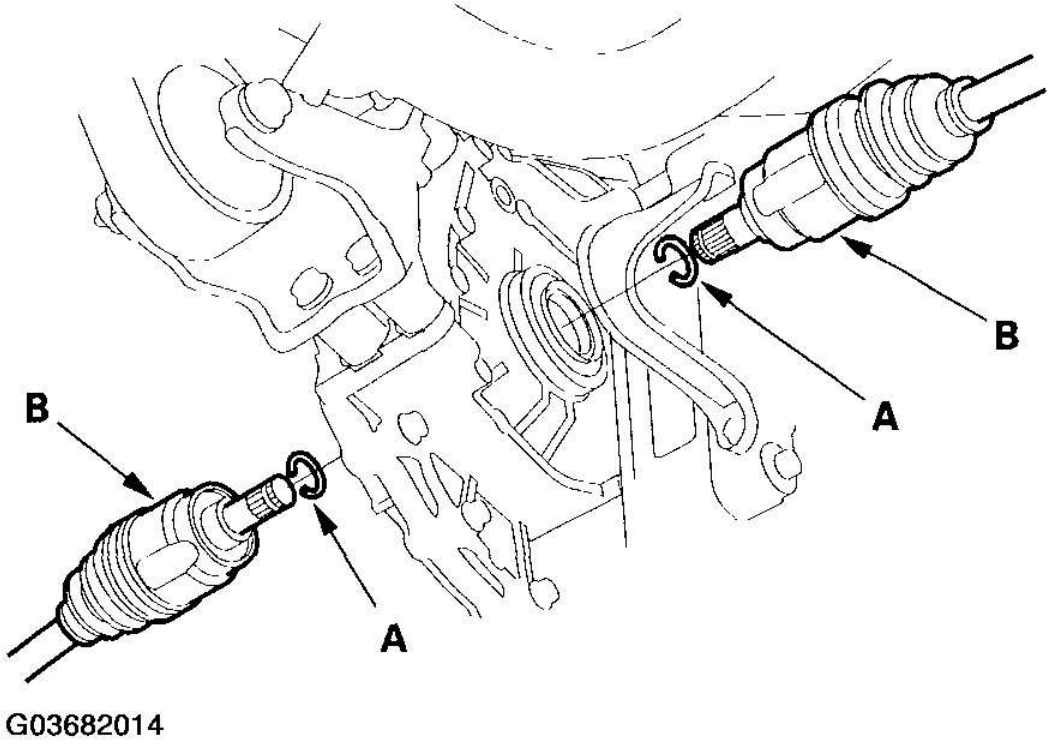

Fig. 313: Installing Set Rings On Driveshafts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Install the right and left driveshaft (see **DRIVESHAFT INSTALLATION**). While installing the driveshafts in the differential, be sure not to allow dust or other foreign particles to enter the transmission.

NOTE:

- **Clean the areas where the driveshafts contact the transmission (differential) with solvent or carburetor cleaner, and dry with compressed air.**
- **Turn the right and left steering knuckle fully outward, and slide the driveshafts into the differential until you feel its set ring engages the side gear.**

19. Connect the ball joints (A) to the knuckles (B), and install the castle nuts (C)

and new cotter pins (D).

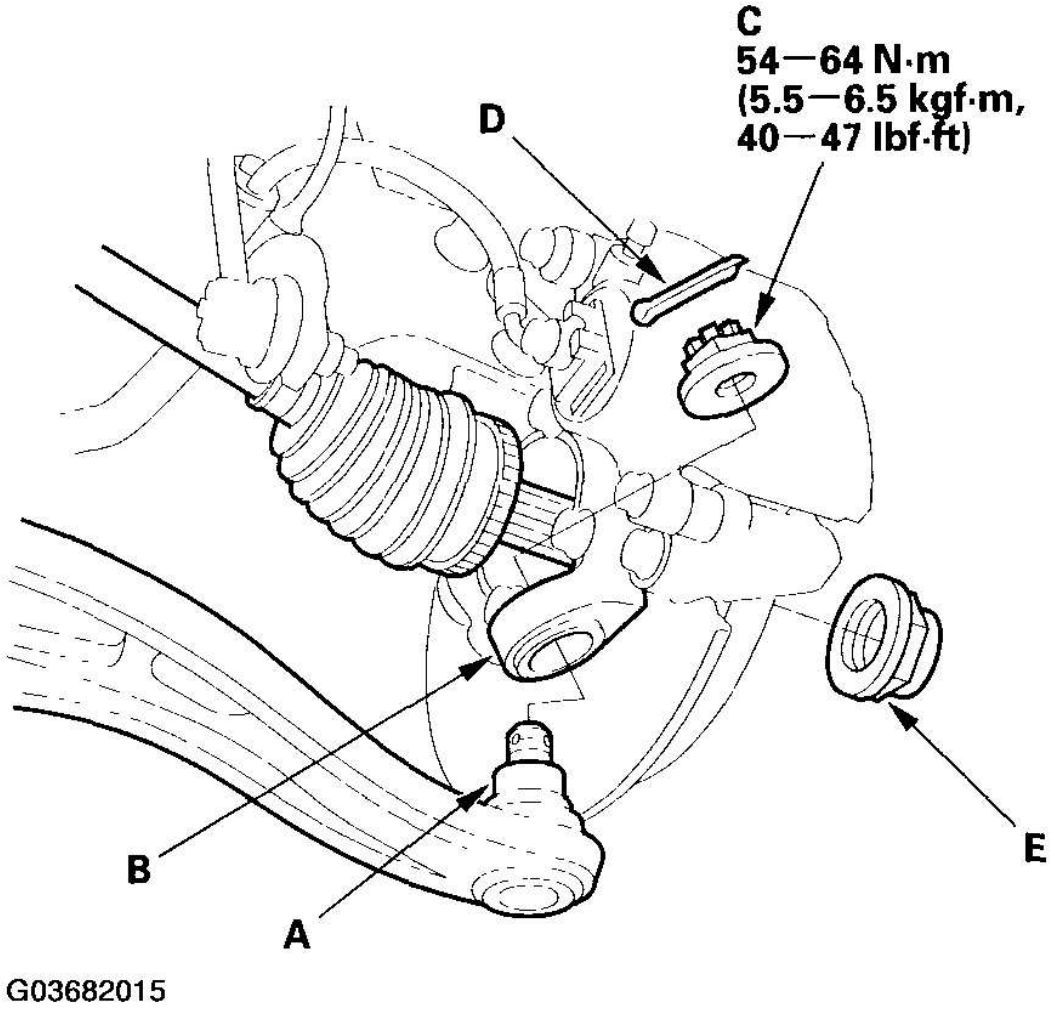

Fig. 314: Identifying Tightening Torque Of Castle Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Install the spindle nuts (E) on the driveshaft (see **DRIVESHAFT INSTALLATION**).
21. Install the engine under cover and its bracket.

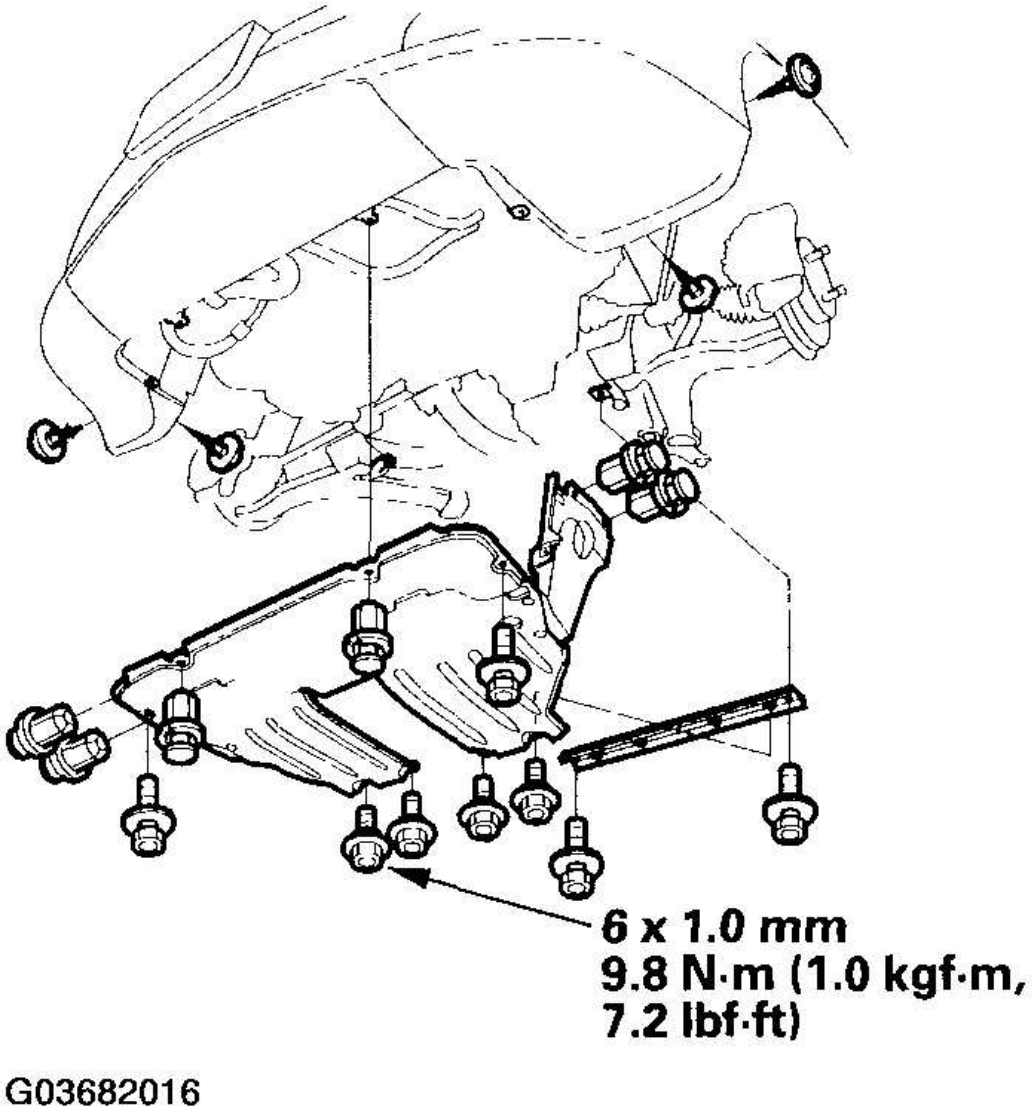

Fig. 315: Identifying Tightening Torque Of Engine Under Cover Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Connect the CVT output shaft (driven pulley) speed sensor connector (A), CVT speed sensor connector (B), and vehicle speed sensor connector (C).

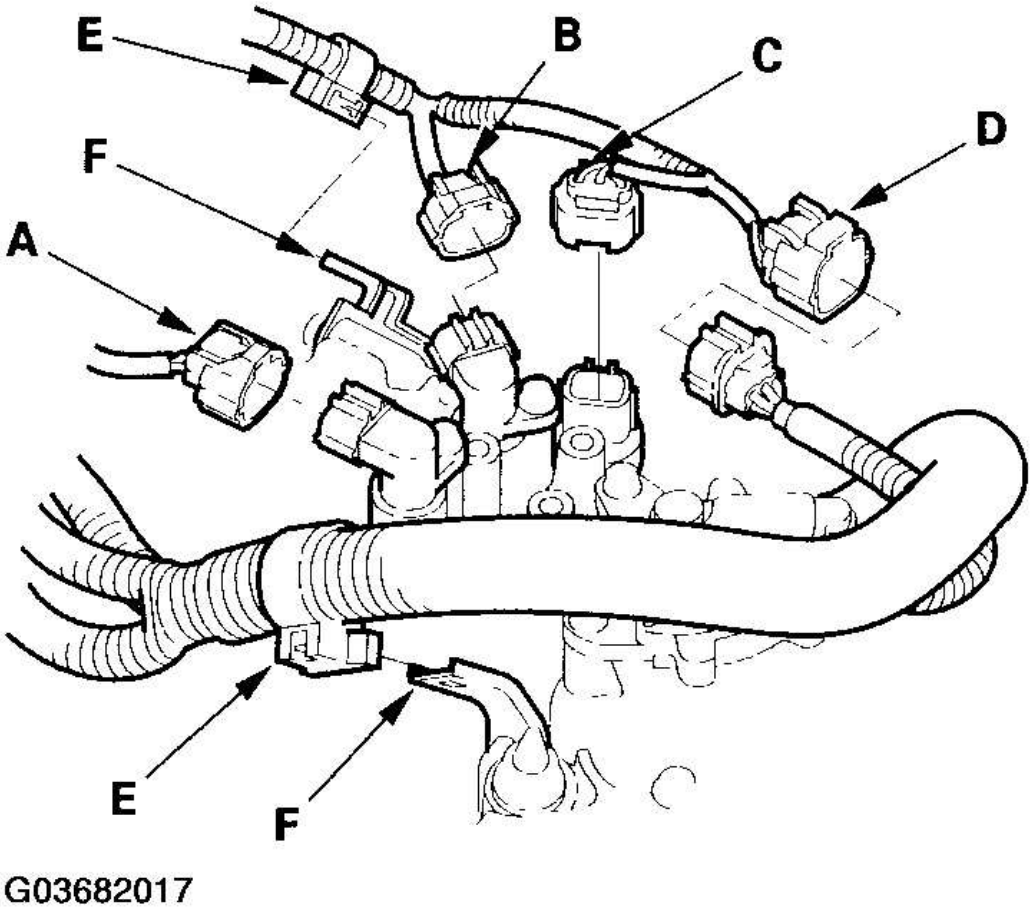

Fig. 316: Connecting CVT Output Shaft (Driven Pulley) Speed Sensor Connector , CVT Speed Sensor Connector, And Vehicle Speed Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Connect the transmission range switch connector (D), and install it on the connector bracket, then install the harness clamps (E) on the brackets (F).
24. Install the shift cable bracket (A).

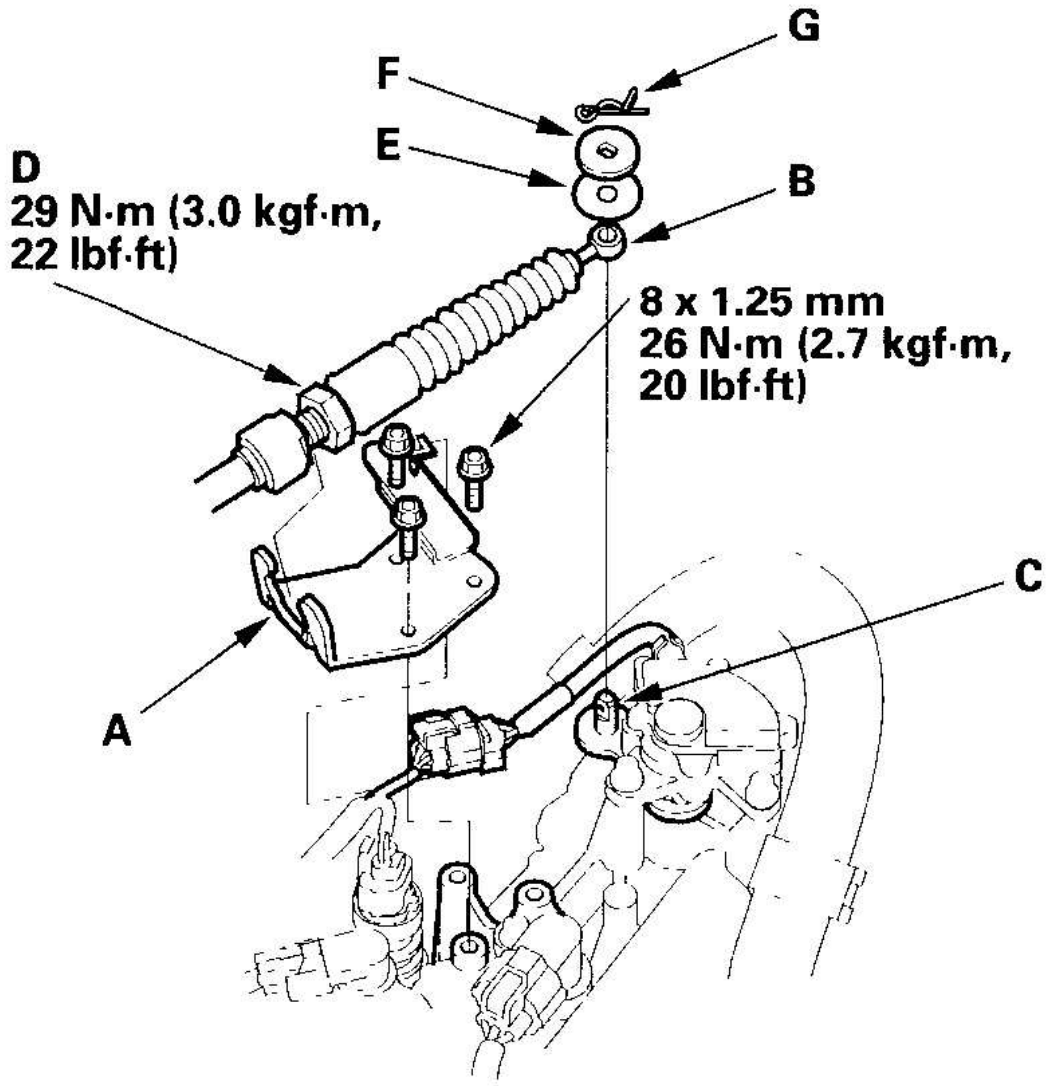

Fig. 317: Identifying Tightening Torque Of Shift Cable Bracket Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Install the shift cable end (B) on the control lever (C). Install the shift cable on its bracket, and tighten the locknut (D). Do not bend the shift cable excessively.
26. Install the plastic washer (E), then the steel washer (F), and install the spring

clip (G) in the direction shown.

27. Connect the solenoid harness connector (8P) (A) and CVT input shaft (drive pulley) speed sensor connector (B).

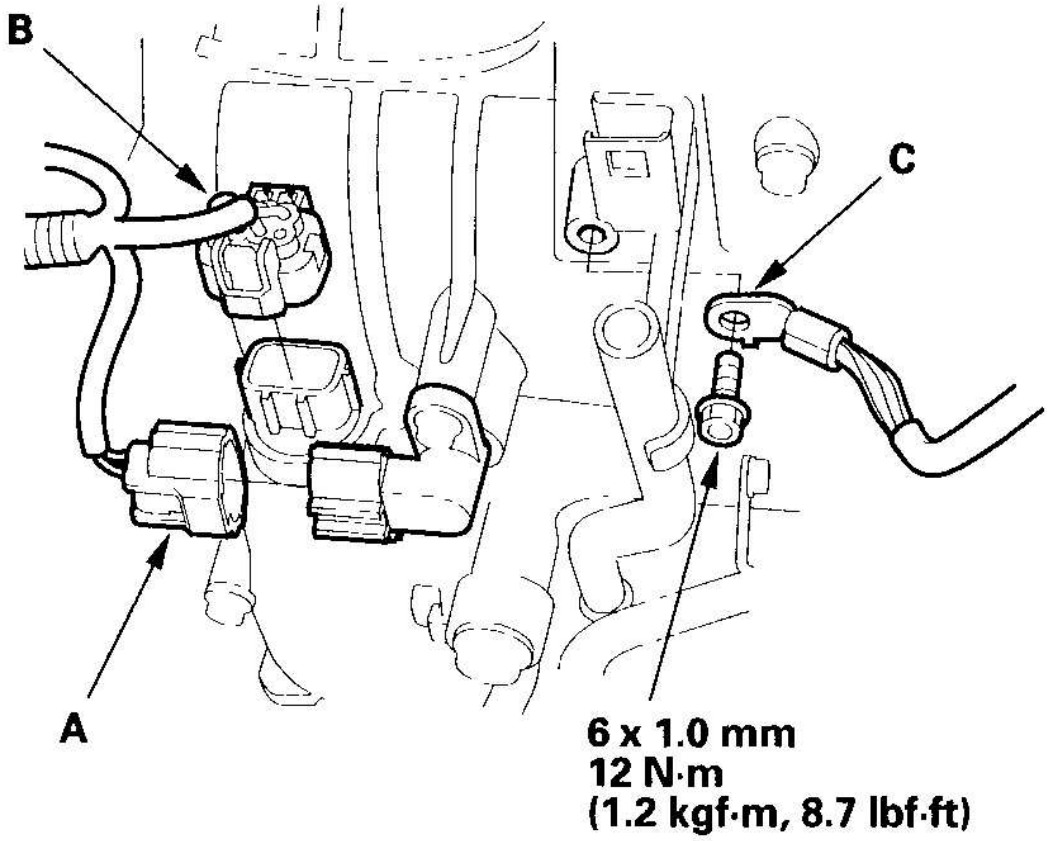

Fig. 318: Identifying Tightening Torque Of Transmission Ground Cable Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Install the transmission ground cable (C).
29. Install the starter and starter cable.

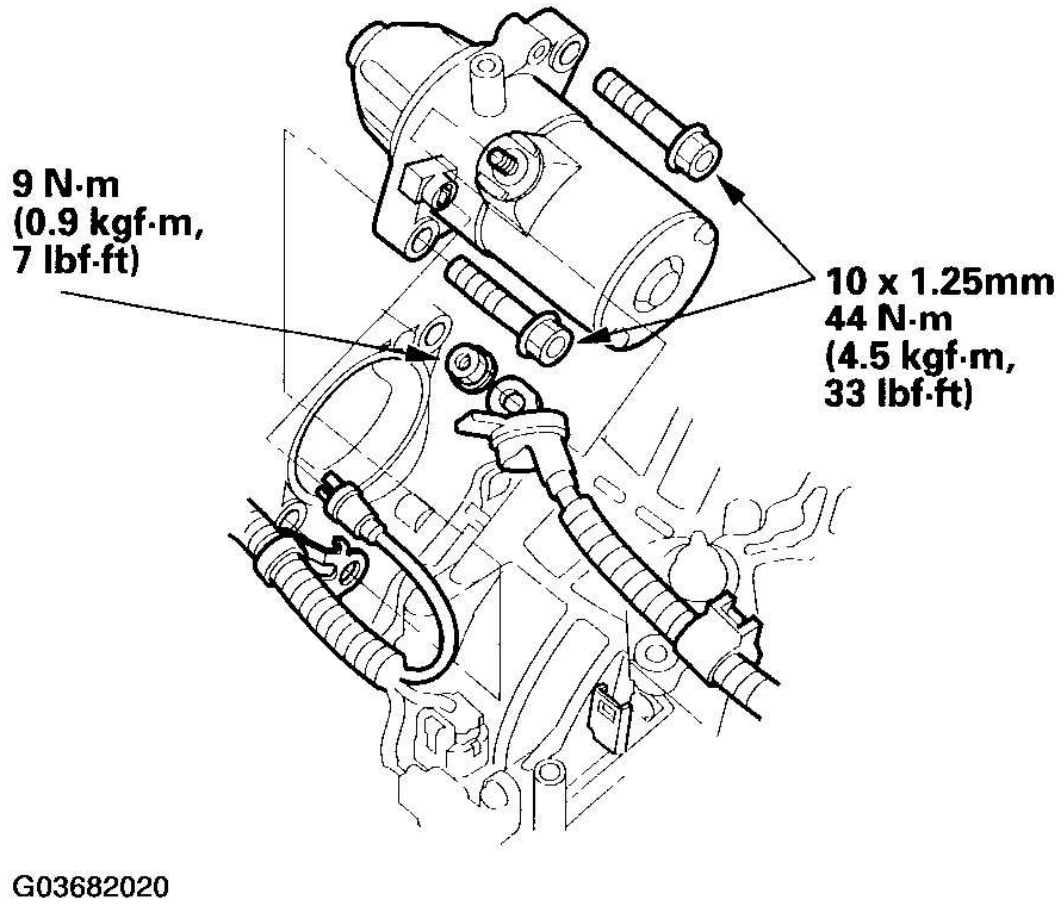

Fig. 319: Identifying Tightening Torque Of Starter And Starter Cable Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Refill transmission with the recommended fluid into the filler hole (see **CVT FLUID REPLACEMENT**).
31. Install the battery tray and battery, then secure the battery with its hold-down bracket.
32. Install the resonator and air cleaner housing.
33. Clean the battery posts and cable terminals with sandpaper.
34. Connect the battery terminals in the direction shown.

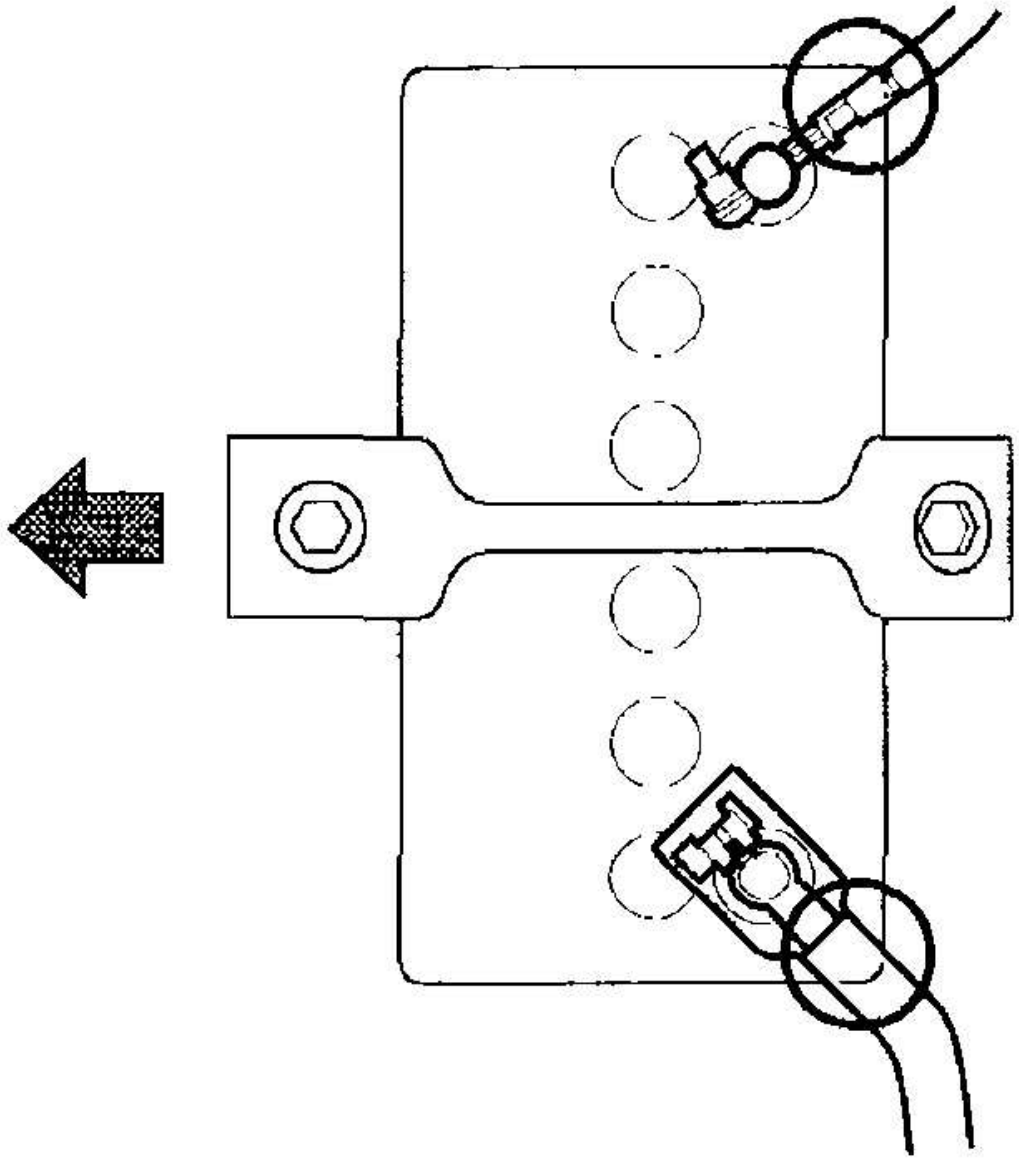

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Fig. 320: Identifying Direction For Connecting Battery Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Apply grease to the battery terminals.

36. Remove the No. 15 (40 A) fuse from the under-hood fuse/relay box.
37. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in the P or N position) until the BAT displays at least three segments.
38. Reinstall the No. 15 (40 A) fuse from the under-hood fuse/relay box.
39. Check the ignition timing (see **IGNITION TIMING INSPECTION**).
40. Apply parking brake, and start the engine.
41. Shift the transmission through all gears three times, and check the shift lever operation, A/T gear position indicator operation, and shift cable adjustment.
42. Check and adjust the front wheel alignment (see **WHEEL ALIGNMENT**).
43. Start the engine and let it reach normal operating temperature (the radiator fan comes on) with the transmission in the P or N position, then turn it off and check the CVTF level (see **CVT FLUID LEVEL CHECK**).
44. Install the engine cover.
45. Remove the No. 15 (40 A) fuse from the under-hood fuse/relay box.
46. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in the P or N position) until the BAT displays at least three segments.
47. Reinstall the No. 15 (40 A) fuse to the under-hood fuse/relay box.
48. Do the start clutch calibration procedures (see **START CLUTCH CALIBRATION PROCEDURES**).
49. Do the ECM idle learn procedure (see **ECM IDLE LEARN PROCEDURE**).
50. Perform a road test (see **ROAD TEST**).
51. Enter the radio anti-theft code, then enter the audio presets, and set the clock.

ATF COOLER CLEANING

Special Tools Required

- ATF Cooler Cleaner GHTTTCF6H
- Magnetic Non bypass Spin-on Filter GTHGNBP2 These special tools are available through the Honda Tool and Equipment Program 1-888-424-6857

Before installing an overhauled or remanufactured automatic transmission, you must thoroughly clean the ATF cooler to prevent system contamination. Failure to do so could cause a repeat automatic transmission failure.

The cleaning procedure involves heated CVTF delivered under high pressure (100 psi). Check the security of all hoses and connections. Always wear safety glasses or a face shield, along with gloves and protective clothing. If you get CVTF in your eyes or on your skin, rinse with water immediately.

WARNING:

- **Improper use of the ATF cooler cleaner can result in burns and other serious injuries.**
- **Always wear eye protection and protective clothing, and follow this procedure.**

1. Check the fluid in the cooler cleaner tank. (The fluid level should be 4.5 inches from the top of the filler neck.) Adjust the level if needed; do not overfill. Use only Honda CVTF; do not use any additives.

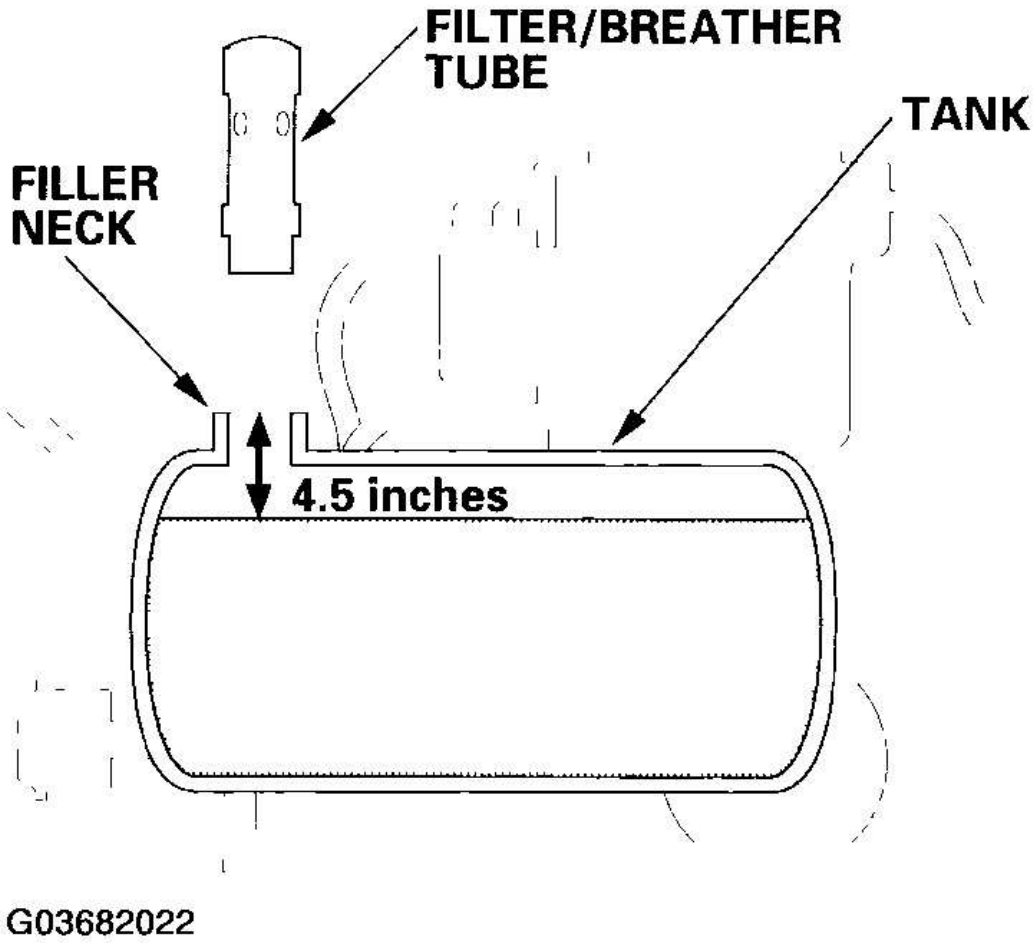


Fig. 321: Checking Fluid In Cooler Cleaner Tank
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Plug the cooler cleaner into a 110 V grounded electrical outlet.

NOTE: Make sure the outlet has no other appliances (light fixtures, drop lights, extension cords) plugged into it. Also, never plug the cooler cleaner into an extension cord or drop light; you could damage the unit.

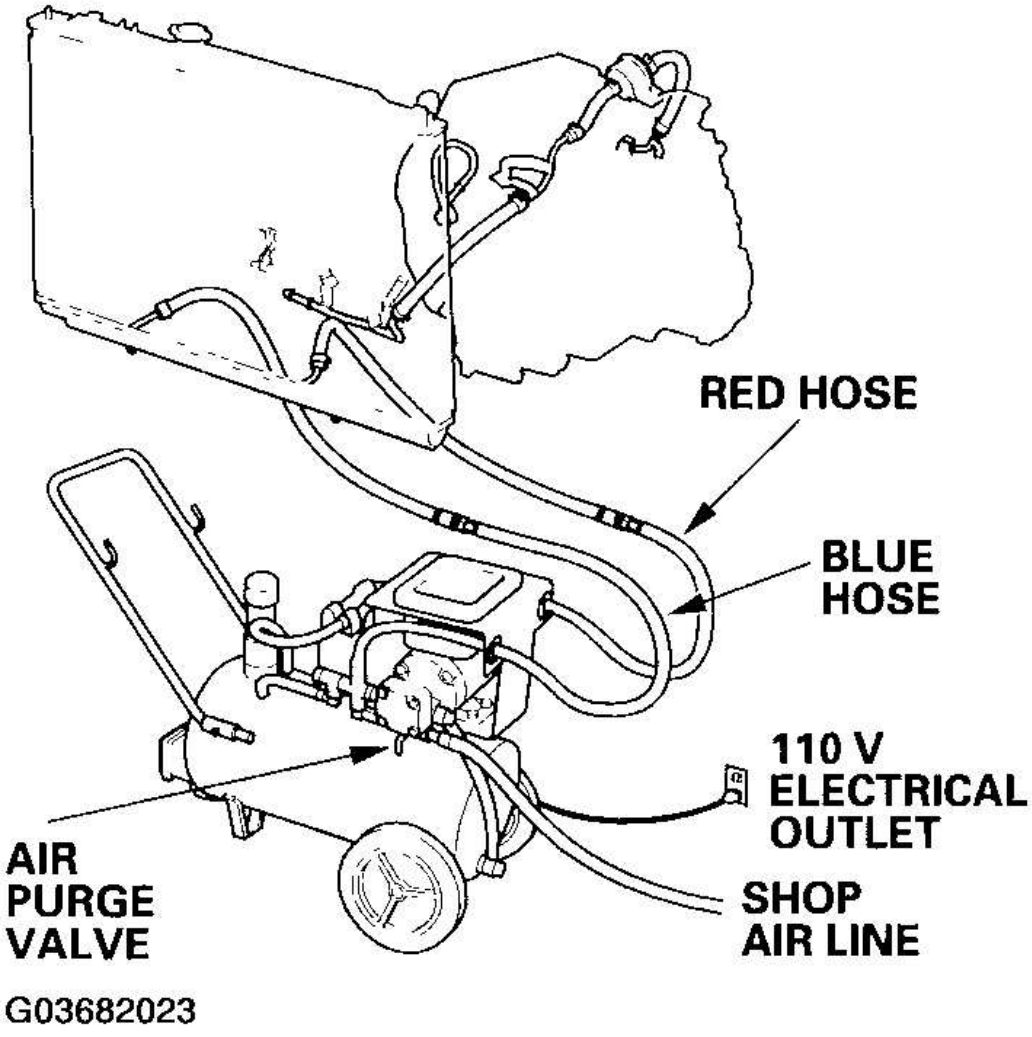


Fig. 322: Plugging Cooler Cleaner Into 110 V Grounded Electrical Outlet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Flip the HEAT toggle switch to ON; the green indicator above the toggle switch comes on. Wait 1 hour for the cooler cleaner to reach its operating temperature. (The cooler cleaner is ready to use when the temperature gauge reads 140 to 150°F.)

NOTE: If the red indicator above the HEAT toggle switch

comes on, the fluid level in the tank is too low for the tank heater to work (see step 1 . of this procedure).

4. Select the appropriate pair of fittings, and attach them to the radiator, to the hoses, or to the banjo bolts for flow through the ATF cooler cleaner.

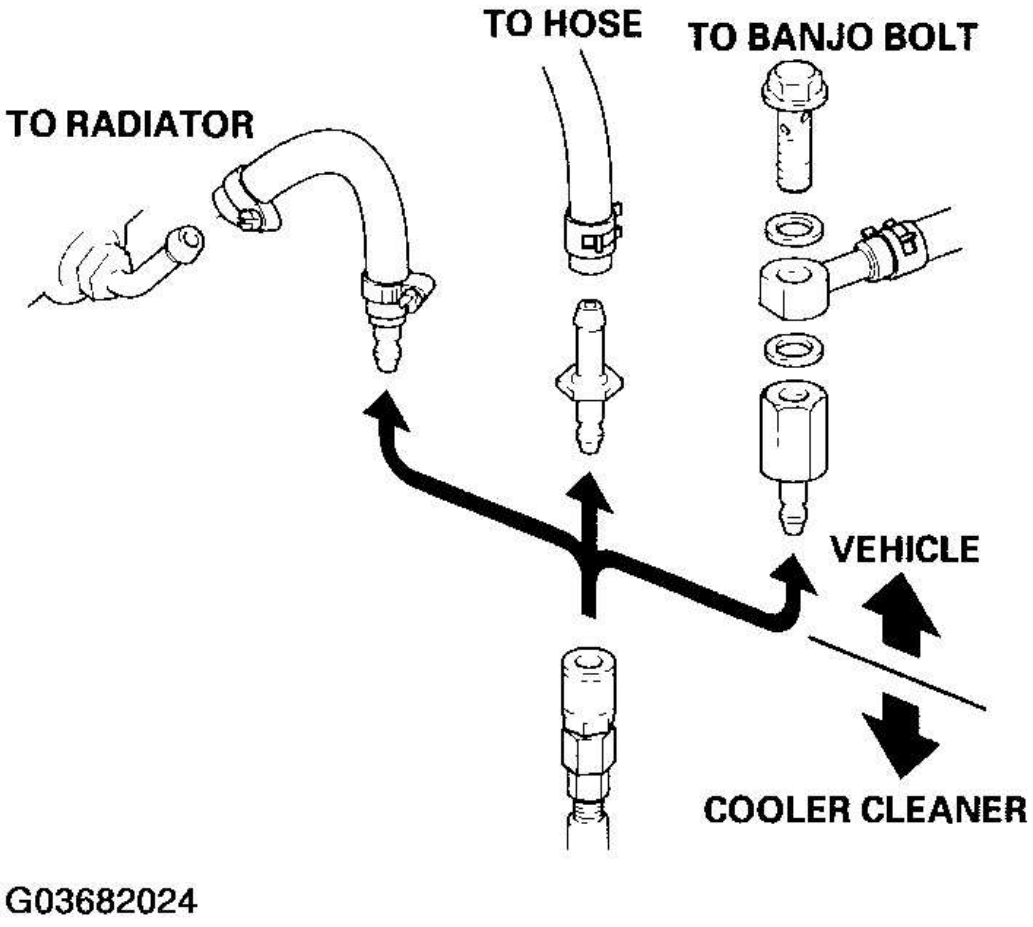


Fig. 323: Attaching Fittings To Radiator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Connect the red hose to the cooler outlet line (the line that normally goes to the external filter on the transmission).
6. Connect the blue hose to the cooler inlet line.

7. Connect a shop air hose (regulated to 100 to 125 psi) to the air purge valve.

NOTE: The quick-connect fitting has a one-way check valve to keep CVTF from entering your shop's air system. Do not remove or replace the fitting. Attach the coupler provided with the cooler cleaner to your shop air line if your coupler is not compatible.

8. Flip the MOTOR toggle switch to ON; the green indicator above the toggle switch comes on. Let the pump run for 5 minutes. While the pump is running, open and close the air purge valve periodically to cause agitation and improve the cleaning process. Always open the valve slowly. At the end of the 5-minutes cleaning period, leave the air purge valve open.

NOTE: While the pump is running with the air purge valve open, it is normal to see vapor coming from the filler/breather tube vents.

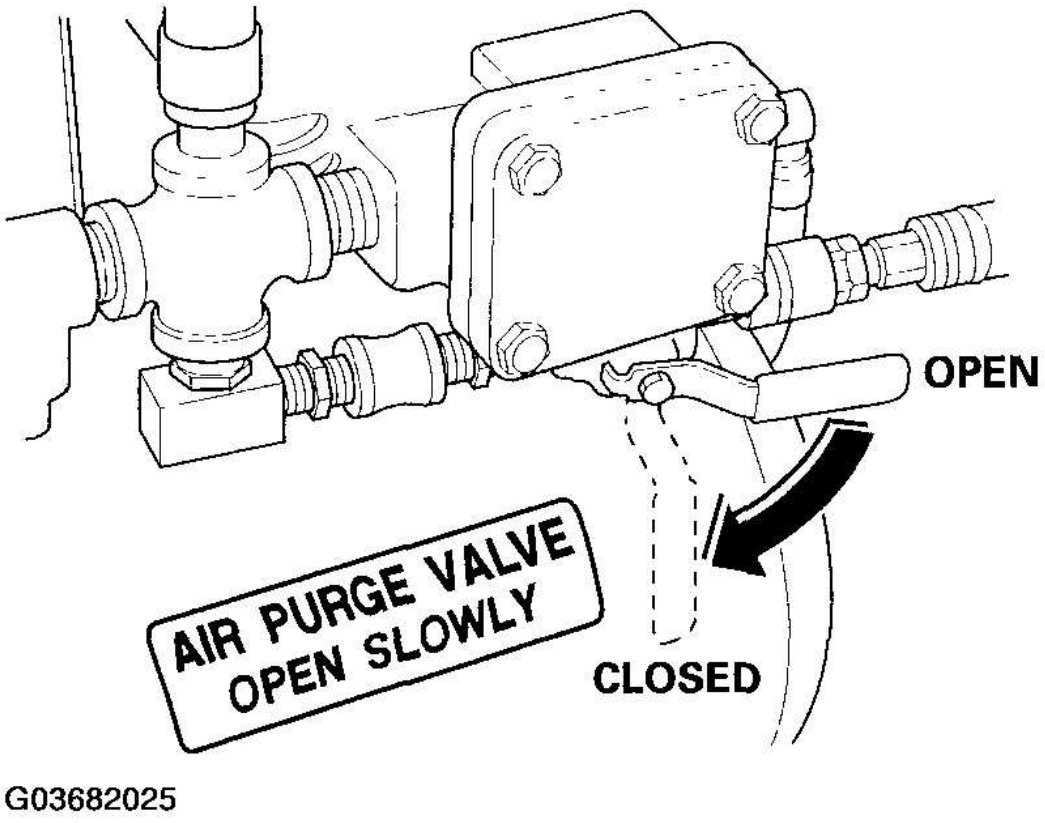


Fig. 324: Opening Air Purge Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. With the air purge valve open, flip the MOTOR toggle switch to OFF; the green indicator goes off. Leave the air purge valve open for at least 15 seconds to purge the lines and hoses of residual CVTF, then close the valve.
10. Disconnect the red and blue hoses from the ATF cooler. Now connect the red hose to the cooler inlet line.
11. Now connect the blue hose to the cooler outlet line.
12. Flip the MOTOR toggle switch to ON, and let the pump run for 5 minutes. While the pump is running, open and close the air purge valve periodically. Always open the valve slowly. At the end of the 5-minutes cleaning period, leave the air purge valve open.

NOTE: While the pump is running with the air purge valve open, it is normal to see vapor coming from the filler/breather tube vents.

13. With the air purge valve open, flip the MOTOR toggle switch to OFF. Leave the air purge valve open for at least 15 seconds to purge the lines and hoses of residual CVTF, then close the valve.
14. Disconnect the red and blue hoses from the ATF cooler lines.
15. Connect the red and blue hoses to each other.
16. Disconnect the shop air from the air purge valve. Disconnect and stow the coupler if used.
17. Disconnect and stow the fittings from the ATF cooler inlet and outlet lines.
18. Unplug the cooler cleaner from the 110 V outlet.

Tool Maintenance

Follow these instructions to keep the ATF cooler cleaner working properly:

- Replace the two magnetic non bypass spin-on filters once a year or when you notice a restriction in the CVTF flow.
- Check the level and condition of the fluid in the tank before each use.
- Replace the CVTF in the tank when it looks dark or dirty.

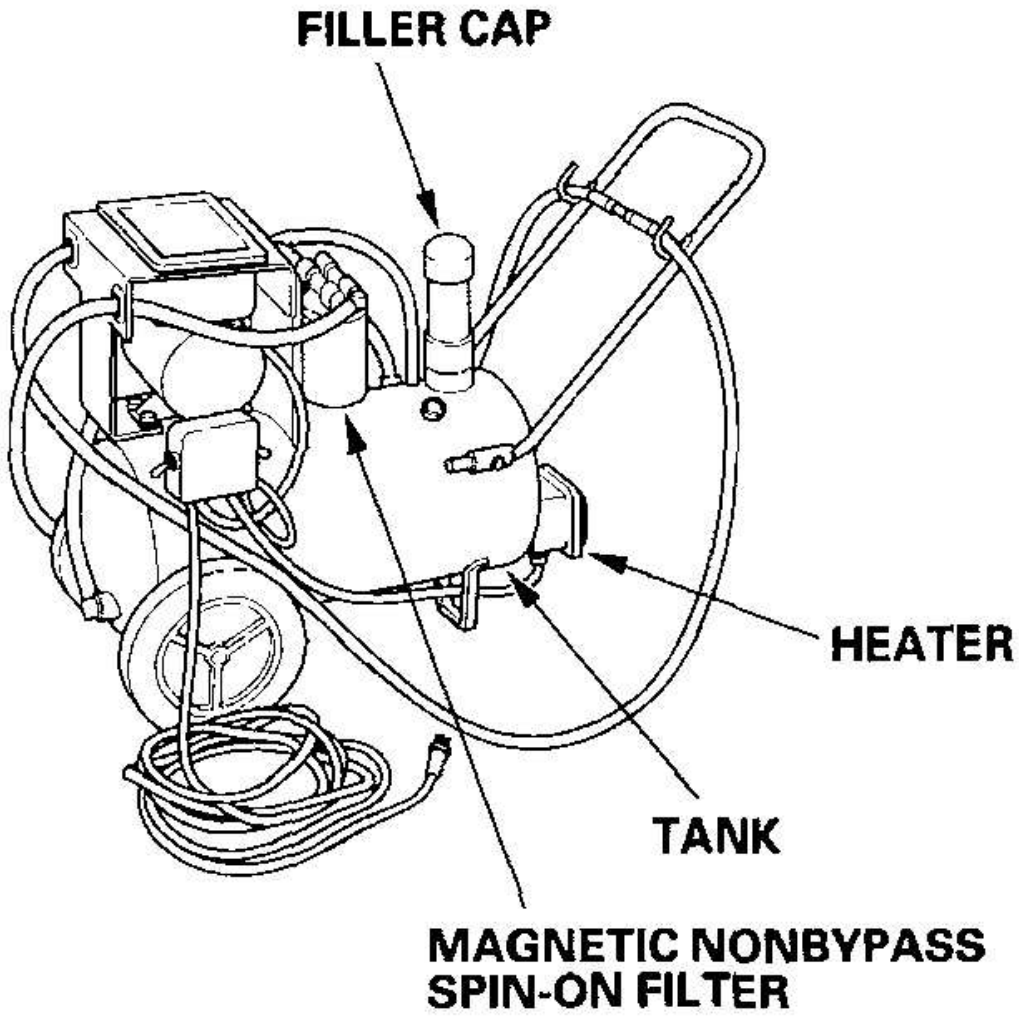


Fig. 325: View Of ATF Cooler Cleaner
Courtesy of AMERICAN HONDA MOTOR CO., INC.

ATF COOLER HOSE REPLACEMENT

1. Lubricate hose and line joints with CVTF, then install the ATF cooler hoses (A) to the ATF cooler lines (B).

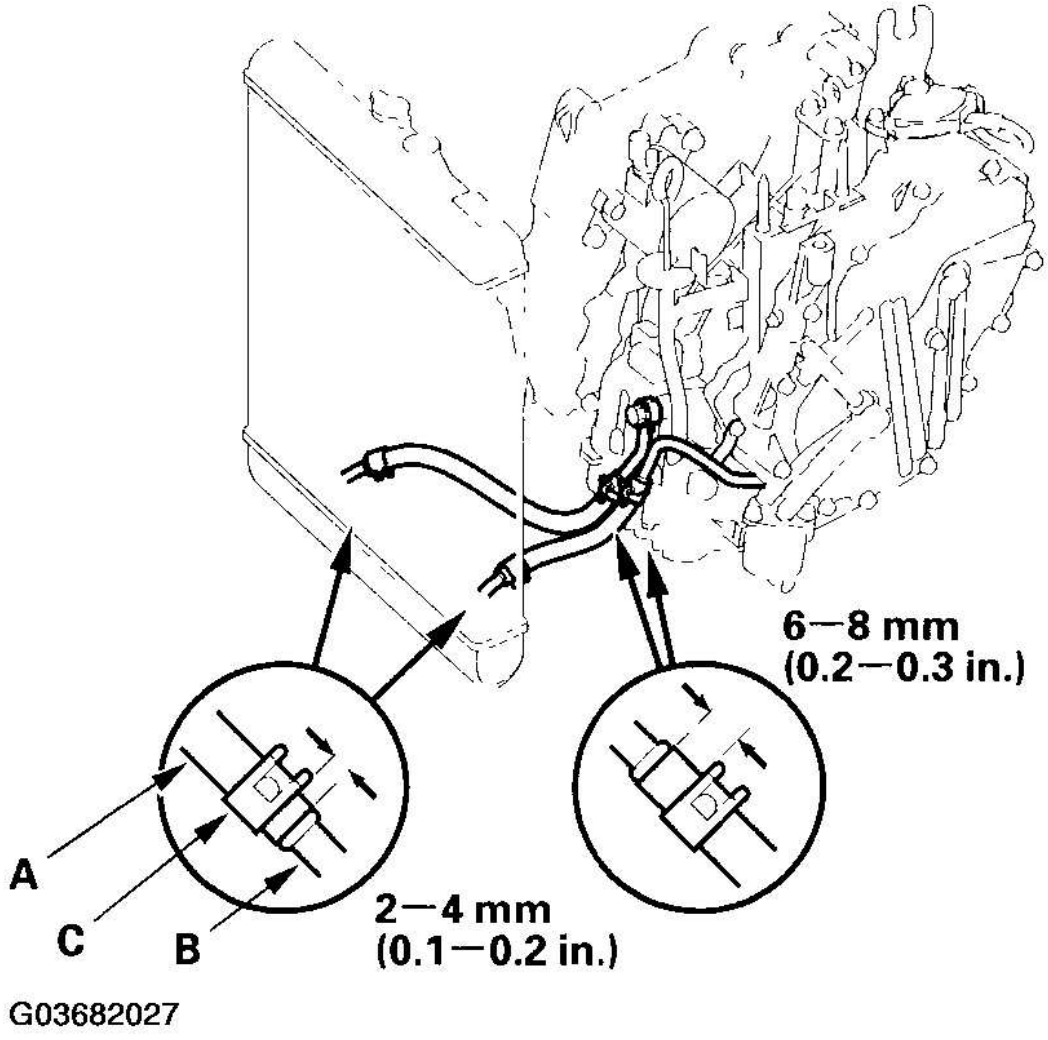


Fig. 326: Installing ATF Cooler Hoses To ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Secure the ATF cooler hoses with the clips (C) in the position shown.

SHIFT LEVER REMOVAL

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Shift the transmission into the R position.

3. Remove the nut securing the shift cable end, then separate the cable end from the shift lever.

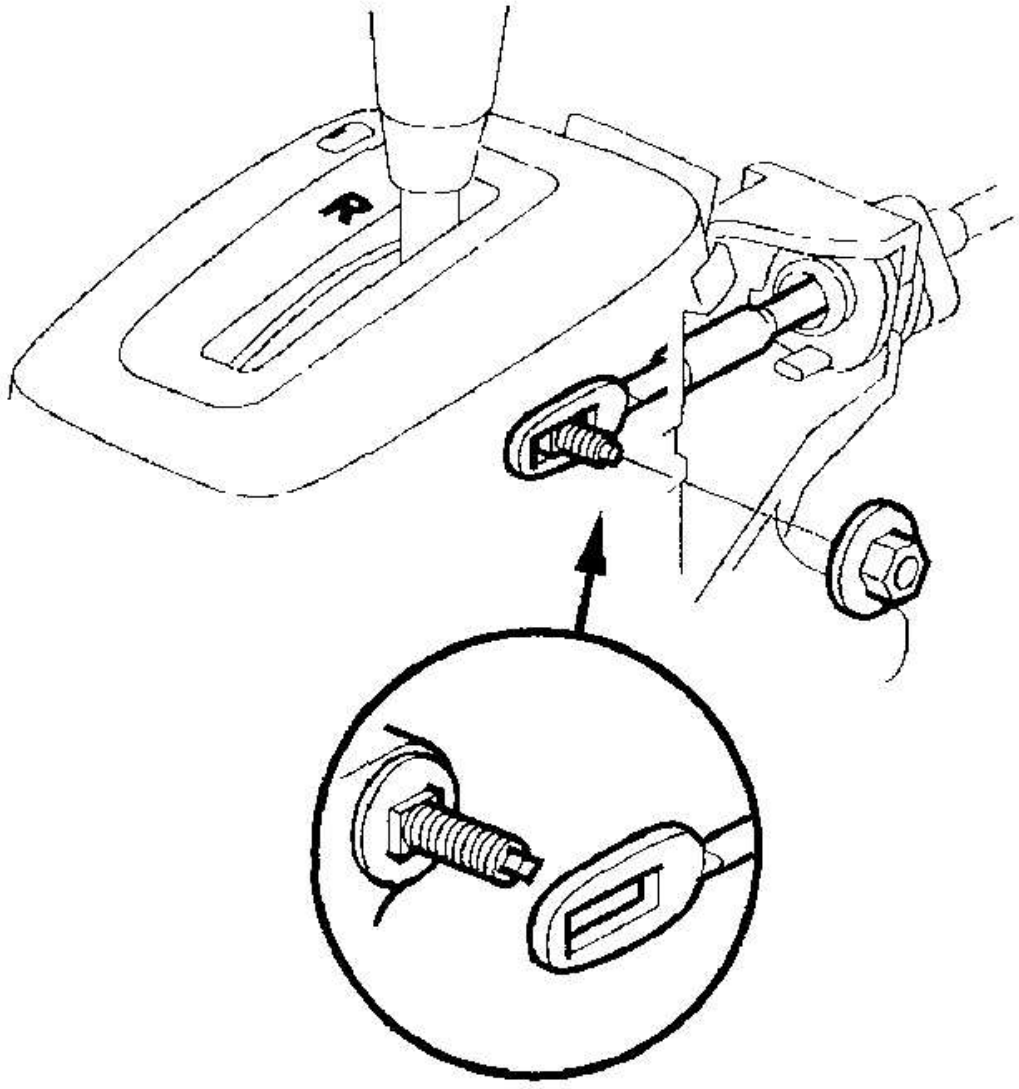


Fig. 327: Separating Cable From Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the projection (C) on the socket holder faces direction to remove. Then slide the holder to remove the shift cable from the shift cable bracket base (D). Do not remove the shift cable by twisting the shift cable guide (E).

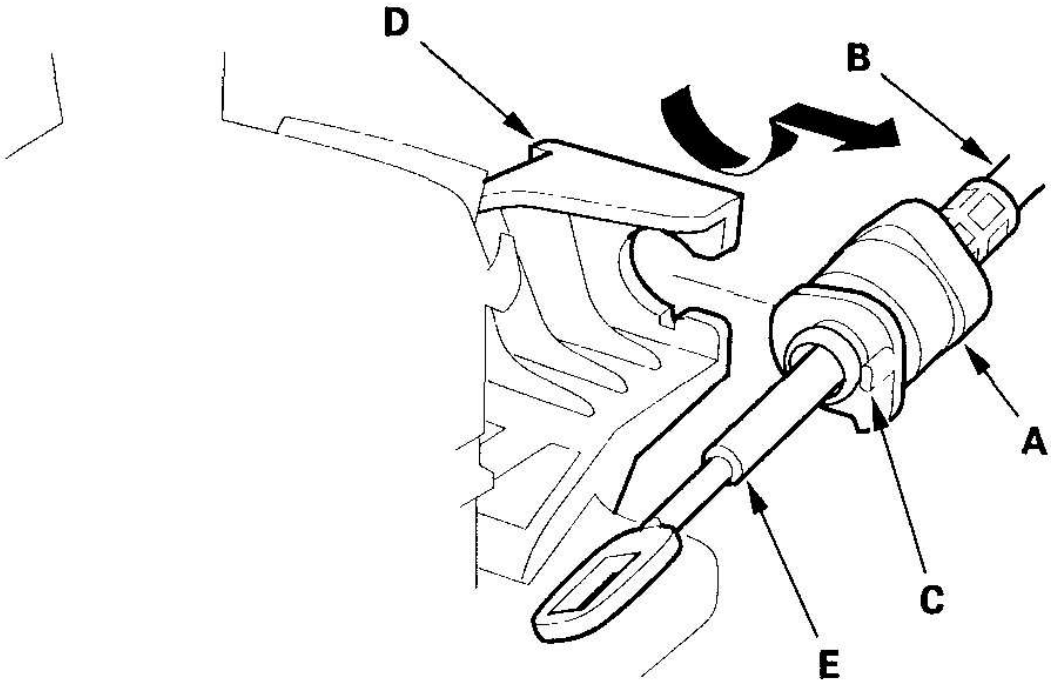


Fig. 328: Removing Shift Cable From Shift Cable Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the shift lock solenoid connector (A) and park pin switch/indicator lamp connector (B).

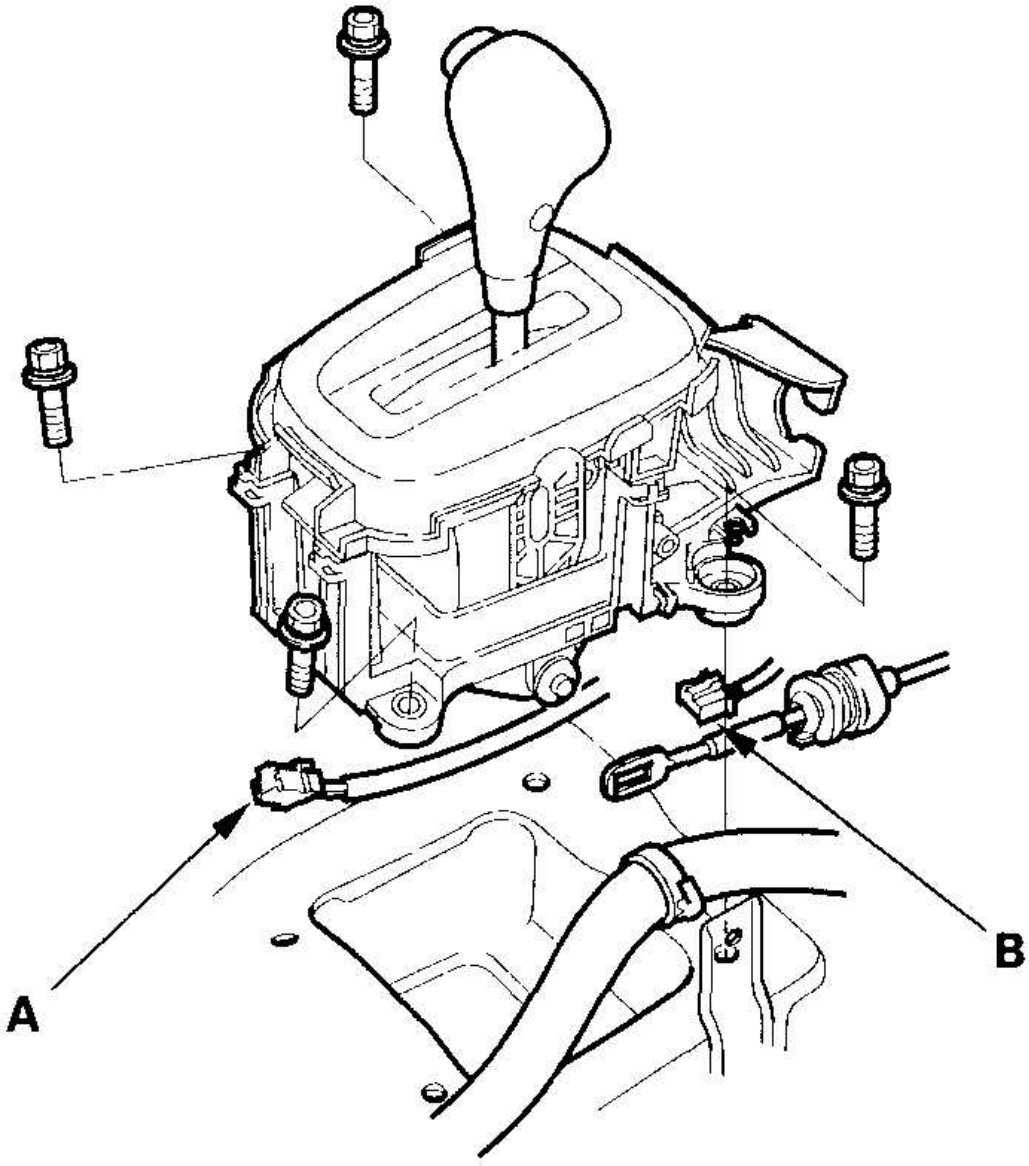


Fig. 329: Removing Shift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the shift lever assembly.

SHIFT LEVER INSTALLATION

1. Install the shift lever assembly.

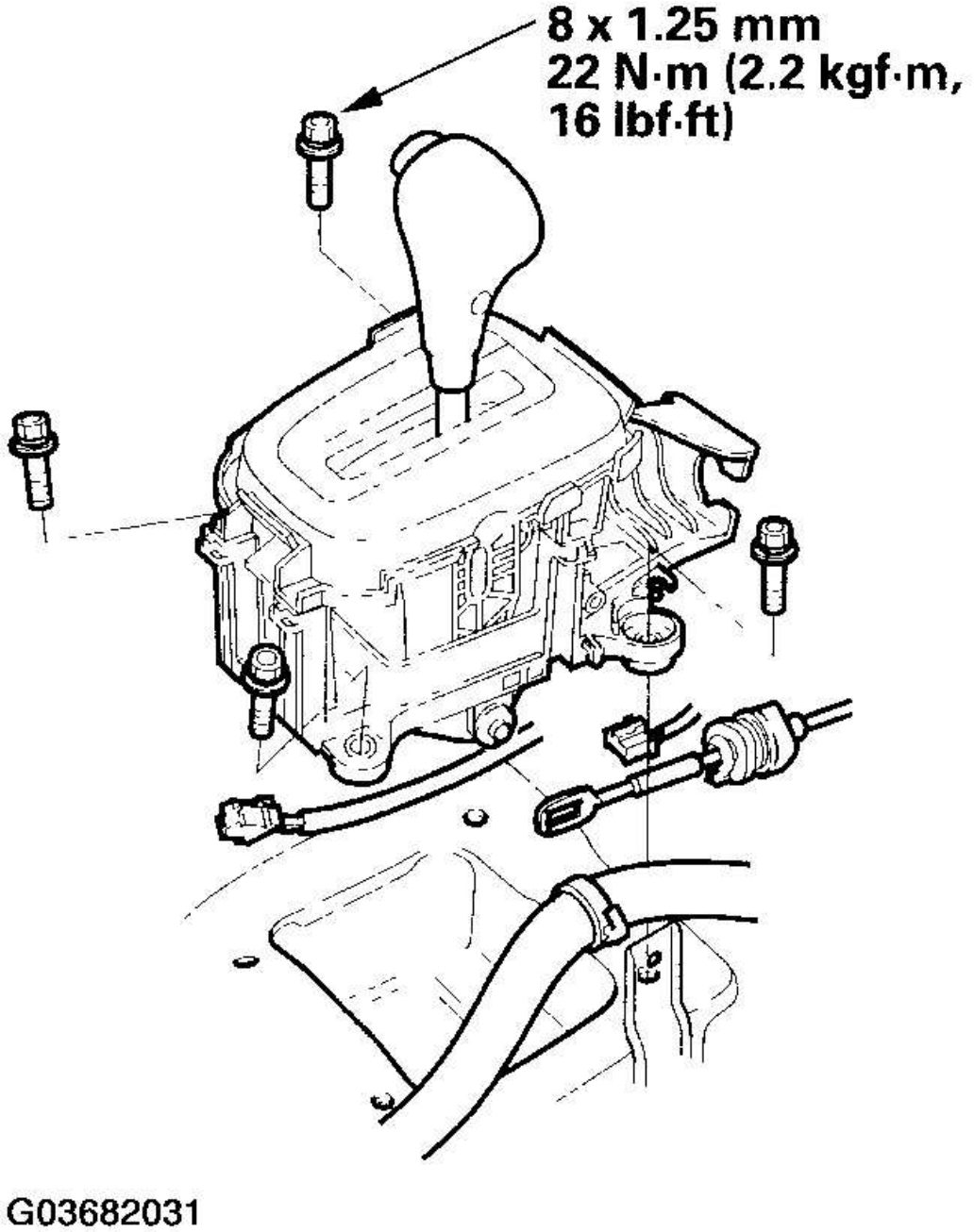


Fig. 330: Identifying Tightening Torque Of Shift Lever Assembly Bolts

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II), and verify that the R position indicator comes on.
3. If necessary, push the shift cable (A) until it stops, then release it. Pull the shift cable back one step so that the shift position is in the R position. Do not push and pull the shift cable by holding the shift cable guide (B).

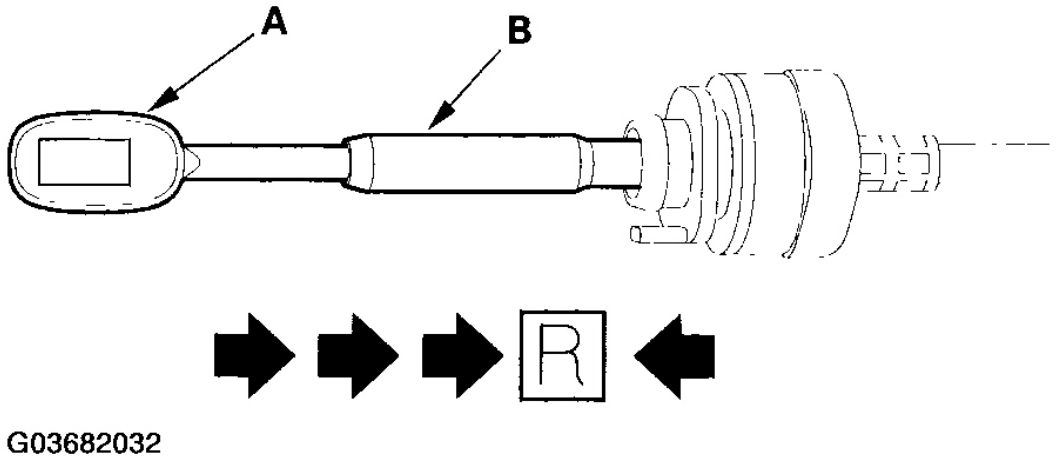


Fig. 331: Pushing And Pulling Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Turn the ignition switch OFF.
5. Insert a 6.0 mm (0.24 in.) pin (A) through the positioning hole (B) on the shift lever bracket base and into the positioning hole (C) on the shift lever. The shift lever is secured in the R position.

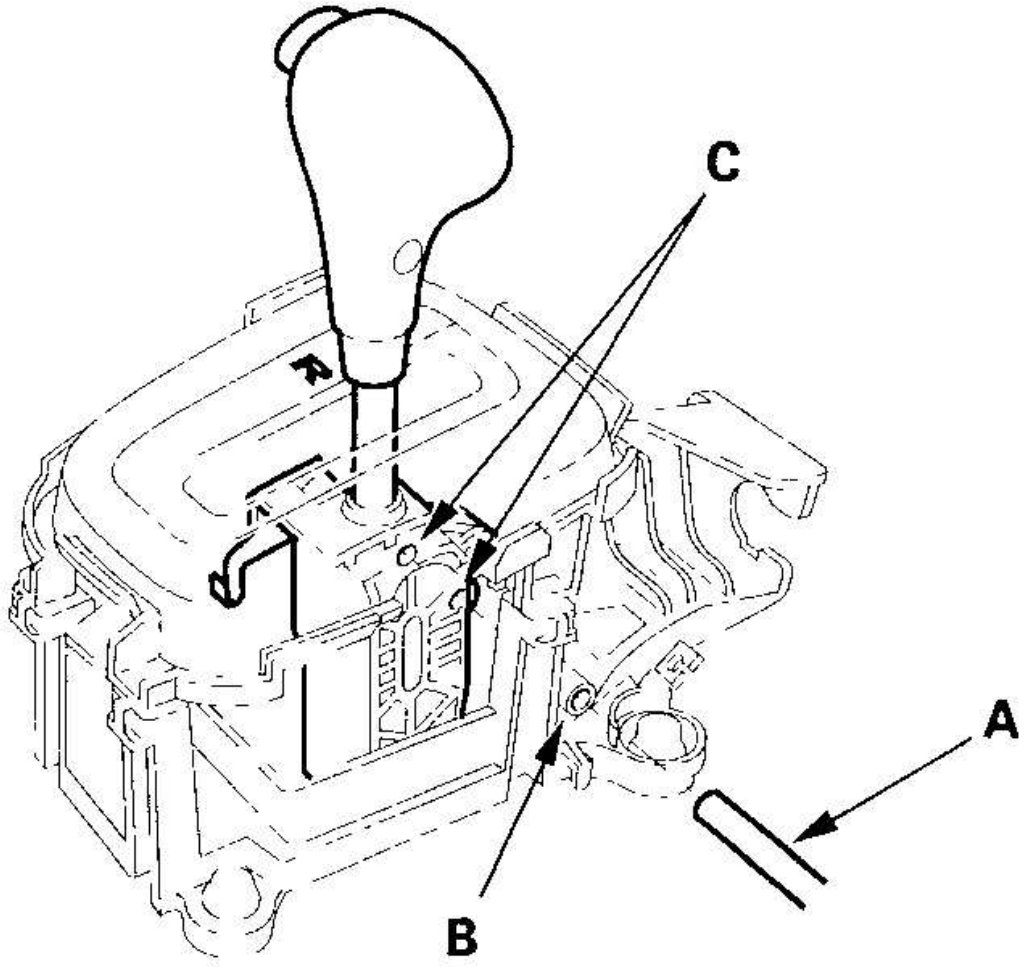


Fig. 332: Inserting Pin Through Positioning Hole On Shift Lever Bracket Base And Into Positioning Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Align the socket holder (A) on the shift cable (B) with the slot in the bracket base (C), then slide the holder into the base. Install the shift cable end (D) over the mounting stud (E) by aligning its square hole (F) with the square fitting (G) at the bottom of the stud. Rotate the holder a quarter turn to secure the shift cable. Do not install the shift cable by twisting the shift cable guide (H).

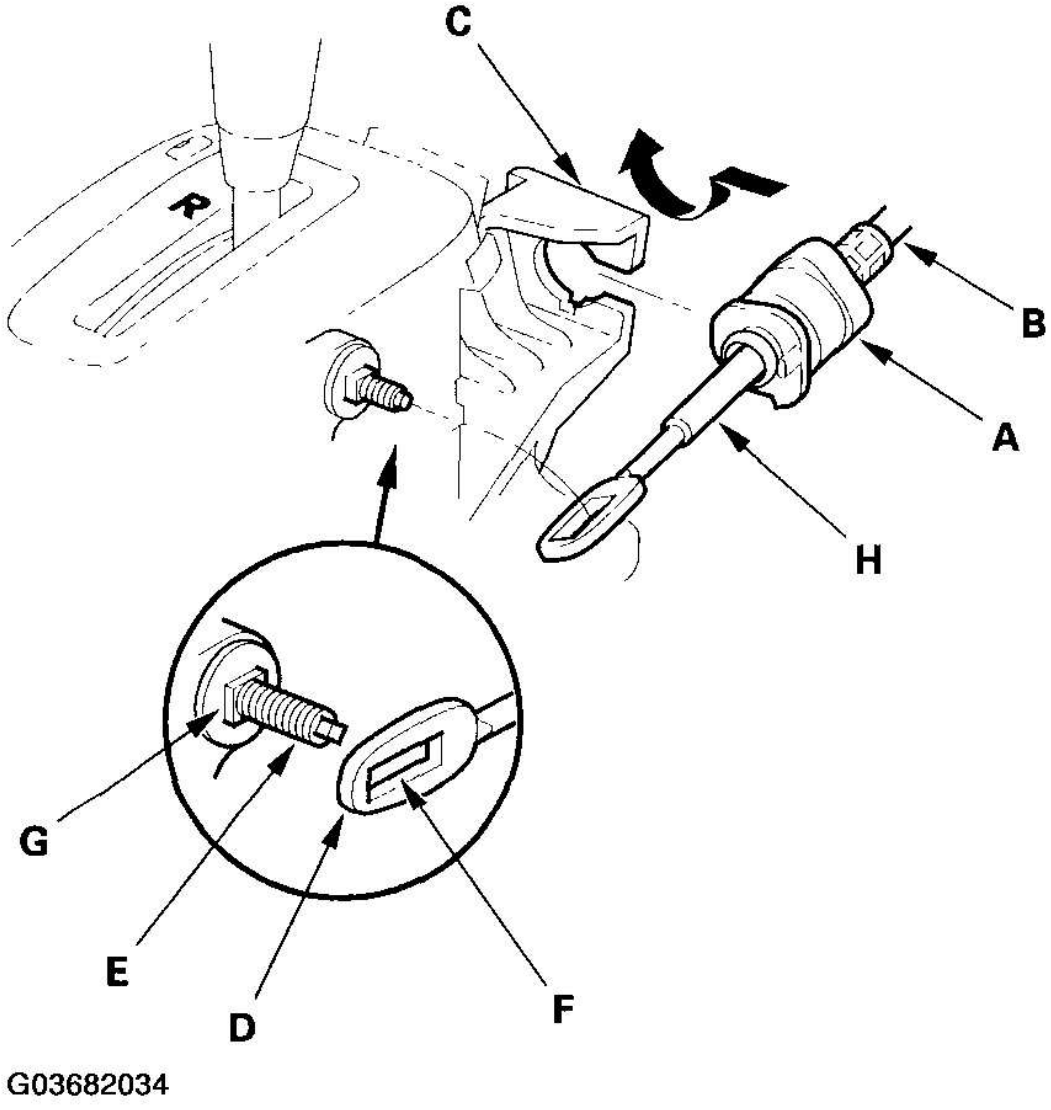


Fig. 333: Installing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Verify that the shift cable end (A) is properly installed on the mounting stud (B).

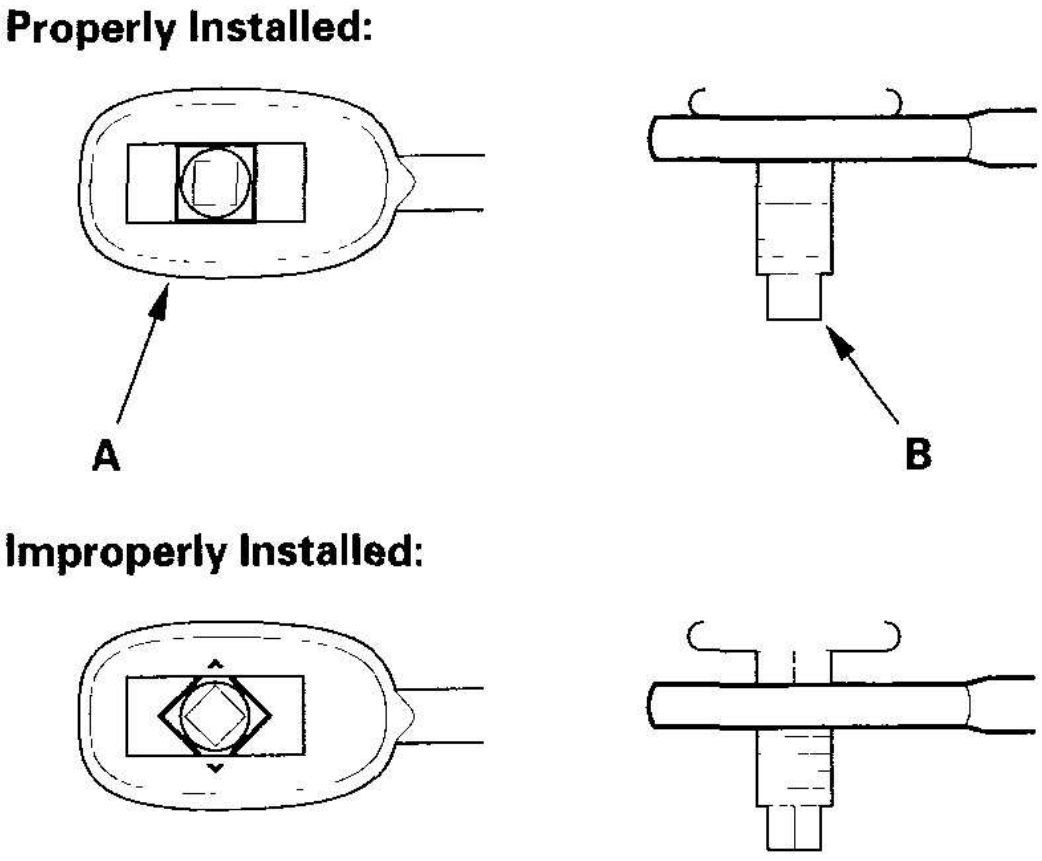


Fig. 334: Identifying Proper And Improper Installed Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. If improperly installed, remove the shift cable from the shift cable bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
9. Install and tighten the nut.

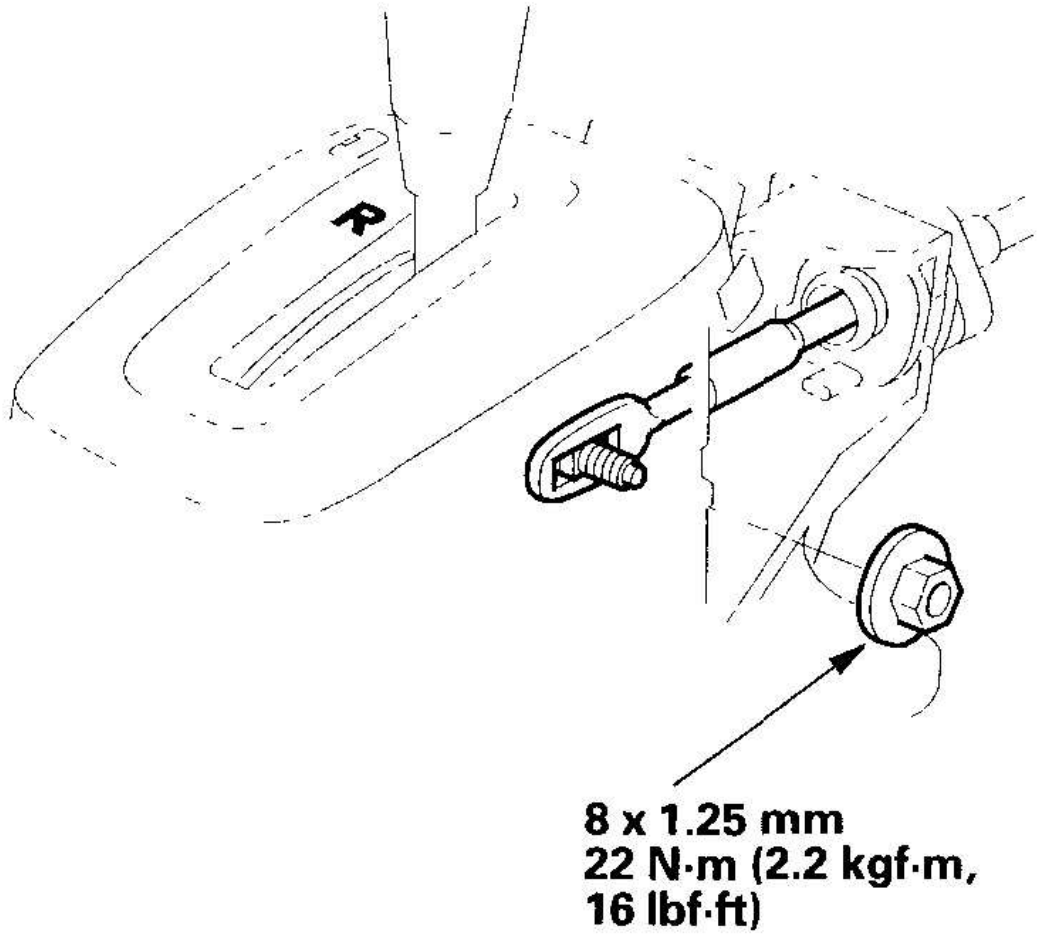


Fig. 335: Identifying Tightening Torque Of Shift Cable Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
11. Connect the shift lock solenoid connector and park pin switch/indicator lamp connector.
12. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
13. Push the shift lock release, and verify that the shift lever releases.

14. Reinstall the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).

SHIFT LEVER DISASSEMBLY/REASSEMBLY

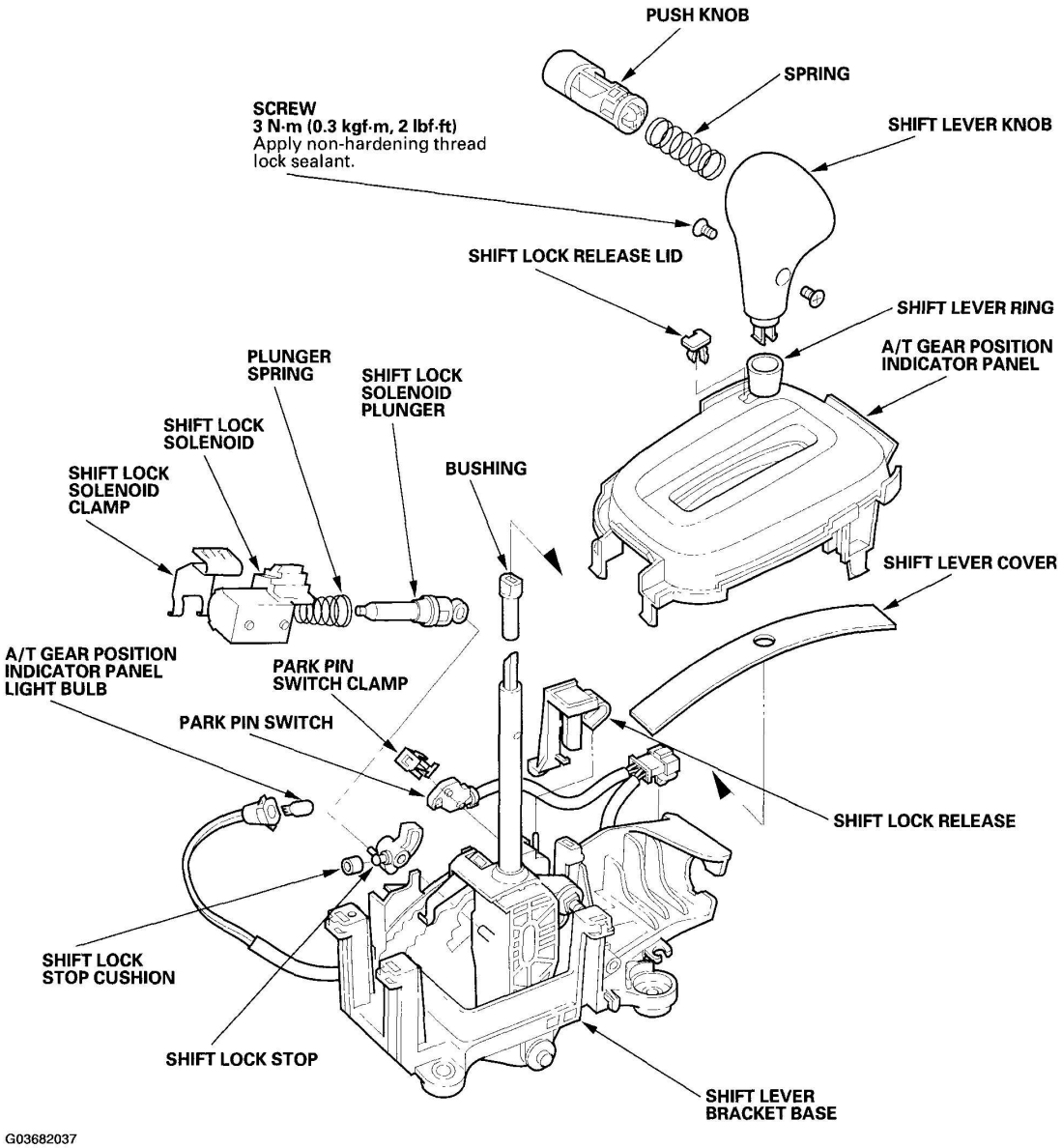


Fig. 336: Exploded View Of Shift Lever And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT CABLE REPLACEMENT

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Shift the transmission into the R position.
3. Remove the nut securing the shift cable end, then separate the cable end from the shift lever.

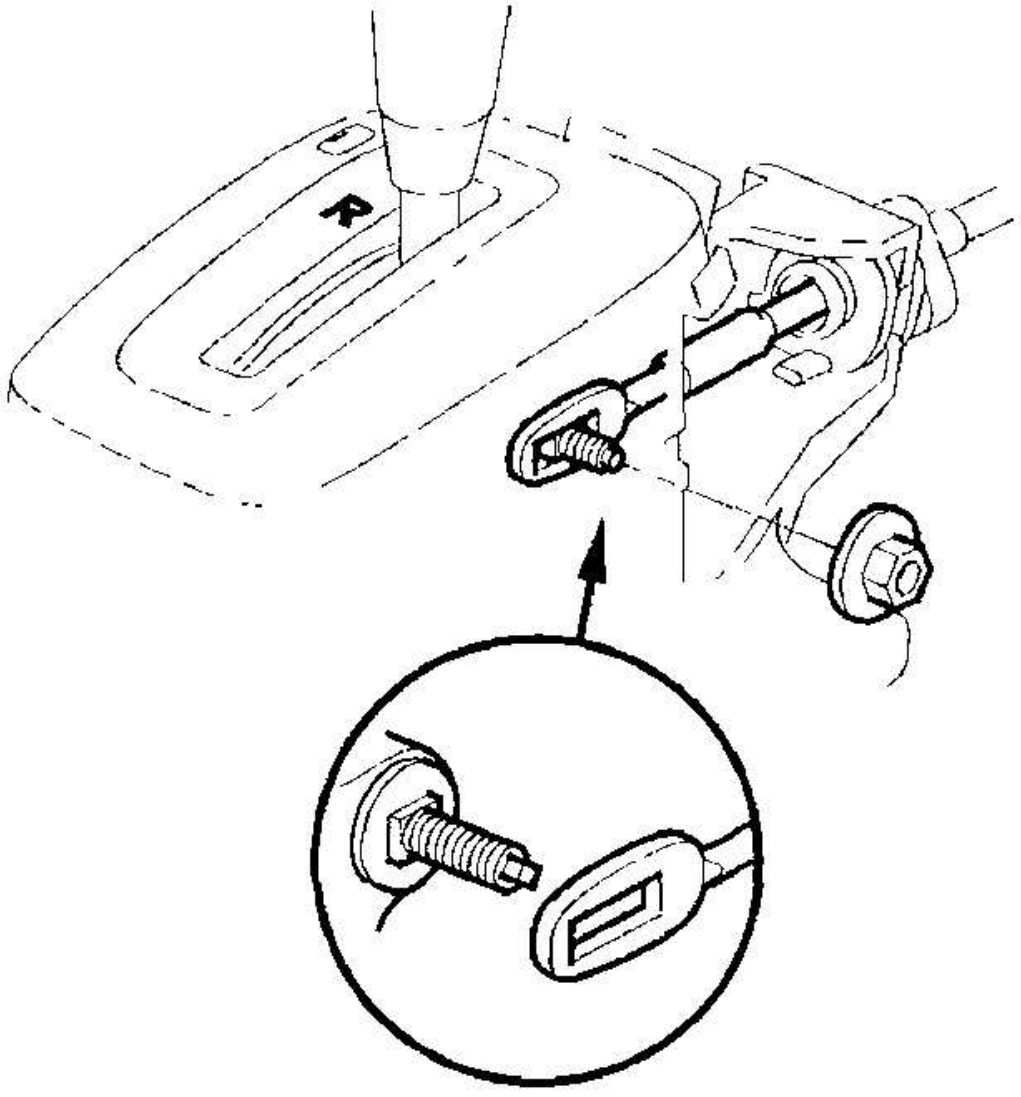


Fig. 337: Separating Cable End From Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the projection (C) on the socket holder faces direction to remove. Then slide the holder to remove the shift cable from the shift cable bracket base (D).

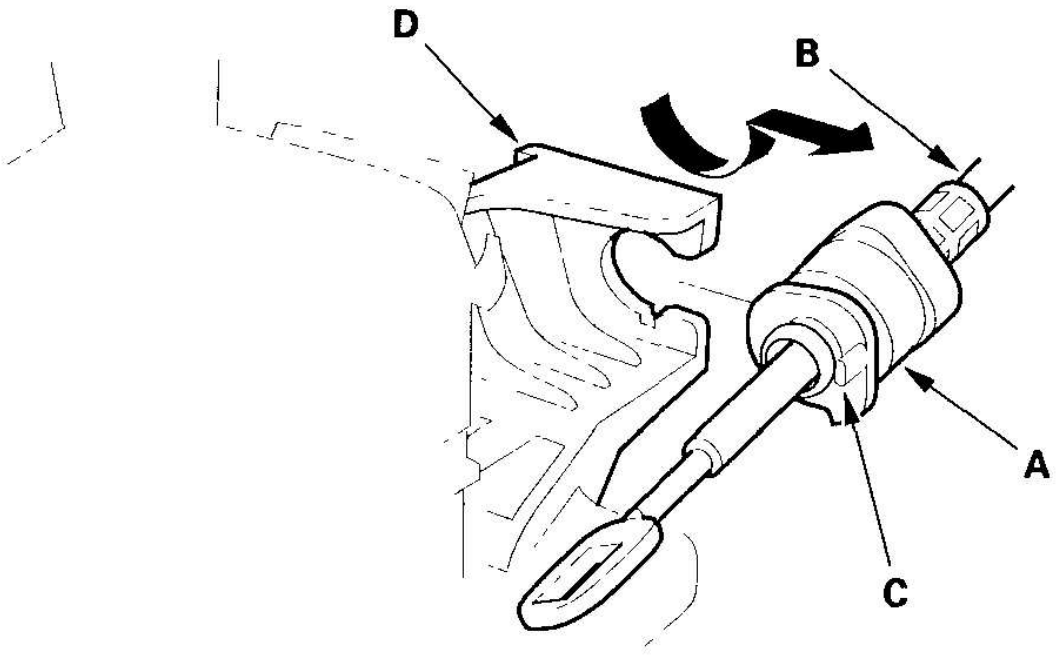


Fig. 338: Removing Shift Cable From Shift Cable Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the shift cable bracket (A) in the cabin, under the dash.

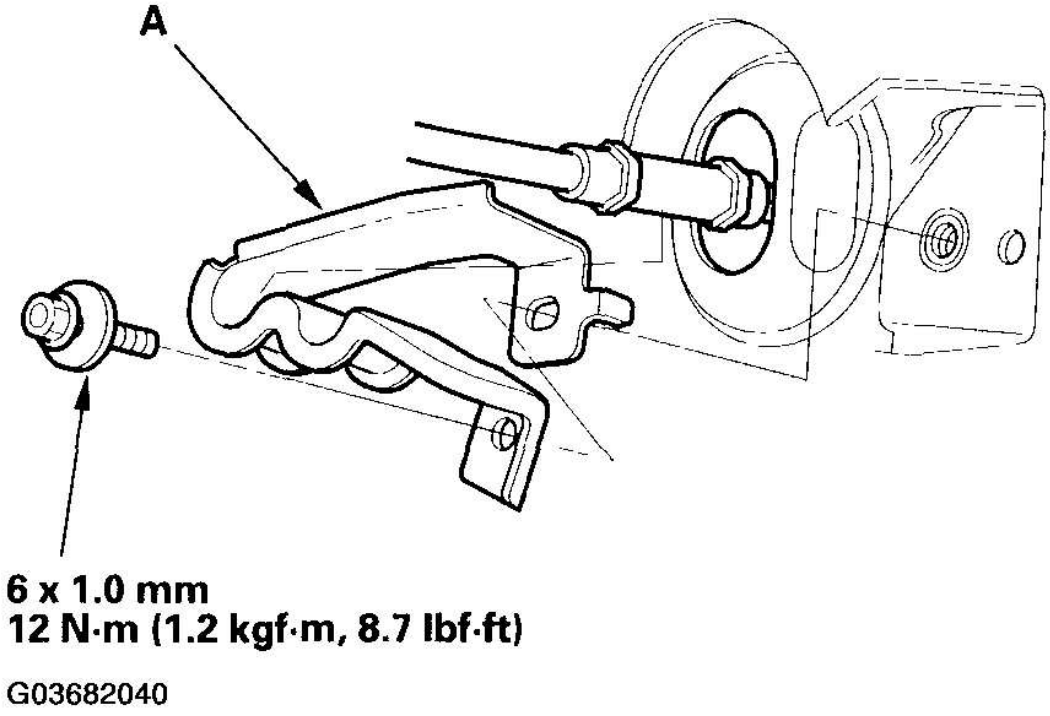


Fig. 339: Identifying Loosening Torque Of Shift Cable Bracket Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the air cleaner housing.
7. Loosen the locknut (A) on the shift cable (B).

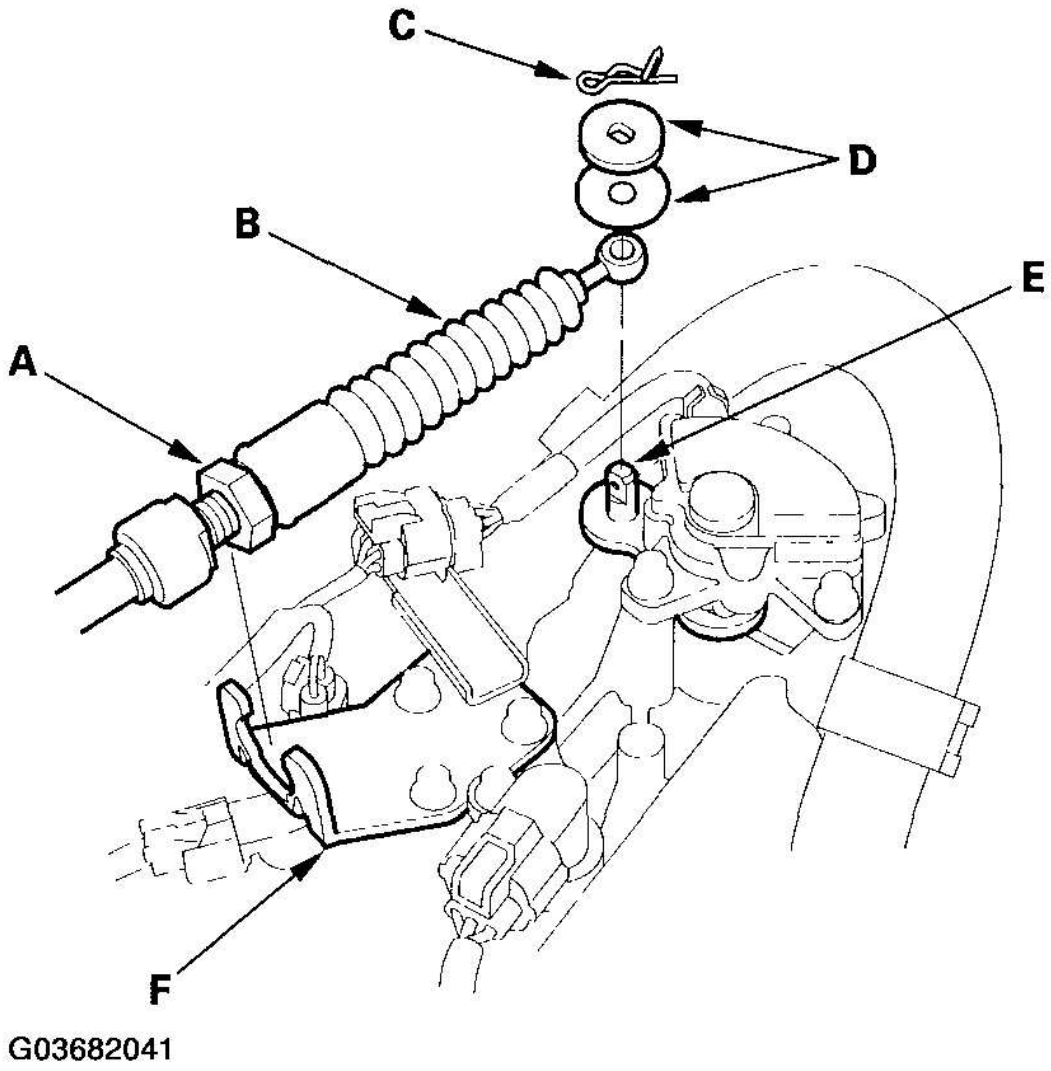


Fig. 340: Separating Shift Cable From Control Lever And Shift Cable Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the spring clip (C) and washers (D), and separate the shift cable from the control lever (E) and the shift cable bracket (F).
9. Remove the grommet, and pull the shift cable out.

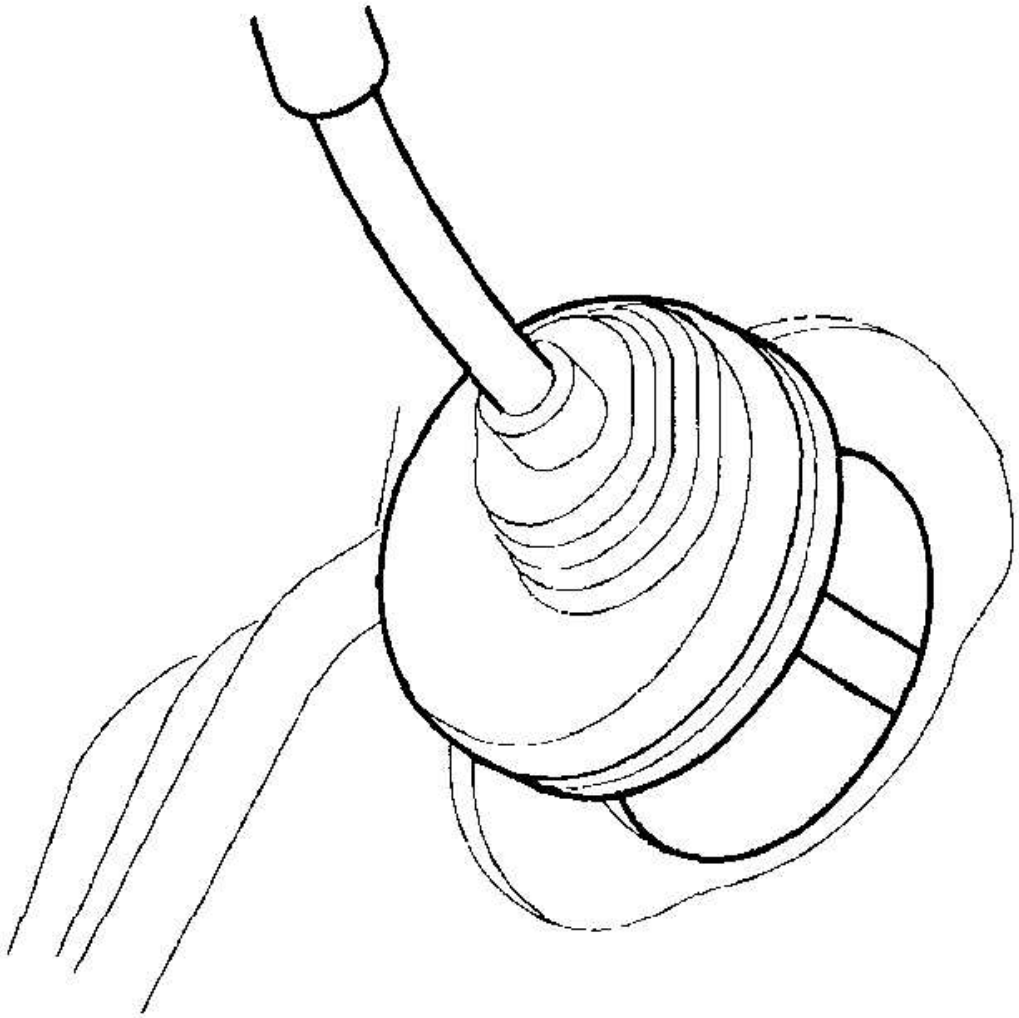


Fig. 341: Removing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Insert the new shift cable through the grommet hole, then install the grommet.
11. Verify that the transmission is in the R position on the control lever.
12. Install the shift cable end (A) on the control lever (B). Install the shift cable on its bracket (C), and tighten the locknut (D). Do not bend the shift cable

excessively.

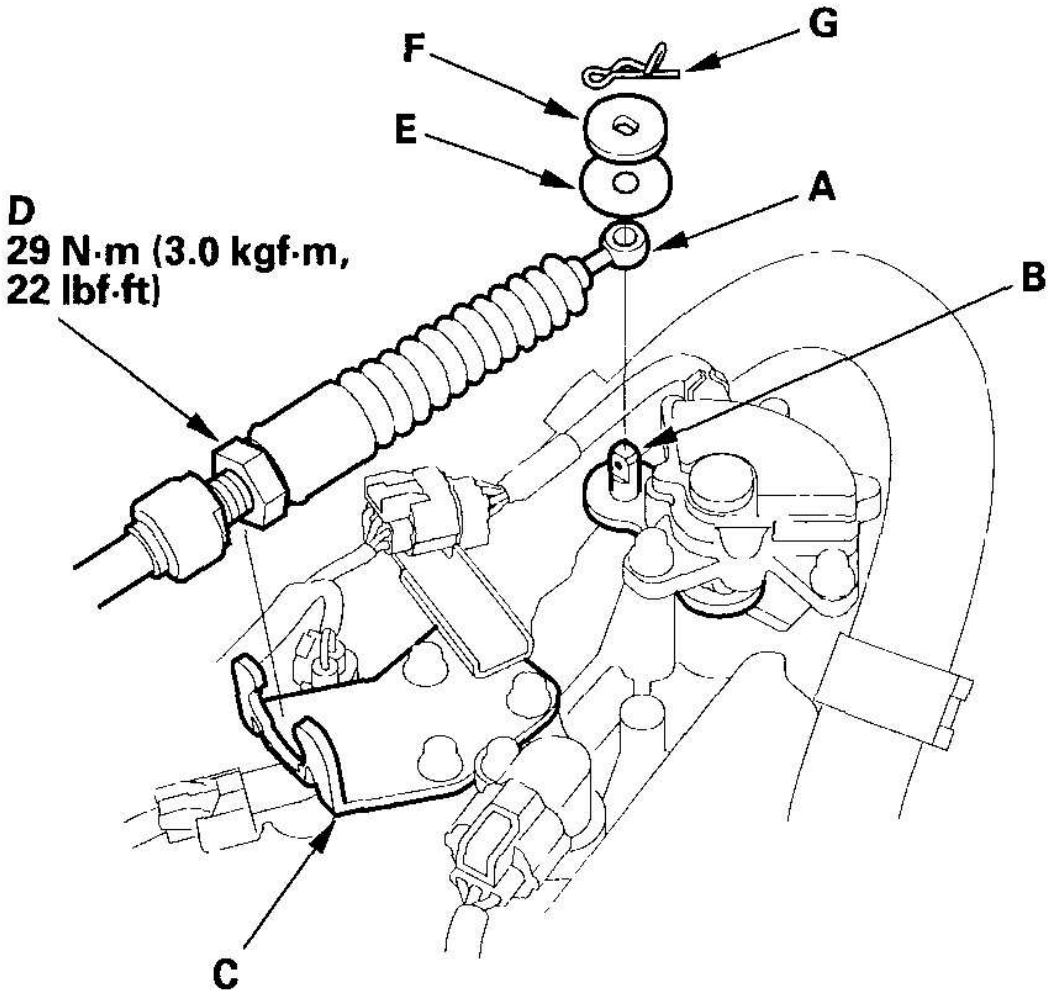


Fig. 342: Identifying Tightening Torque Of Lock Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Install the plastic washer (E), then the steel washer (F), and install the spring clip (G) in the direction shown.
14. Turn the ignition switch ON (II), and verify that the R position indicator comes on.
15. If necessary, push the shift cable (A) until it stops, then release it. Pull the shift

cable back one step so that the shift position is in the R position. Do not push and pull the shift cable by holding the shift cable guide (B).

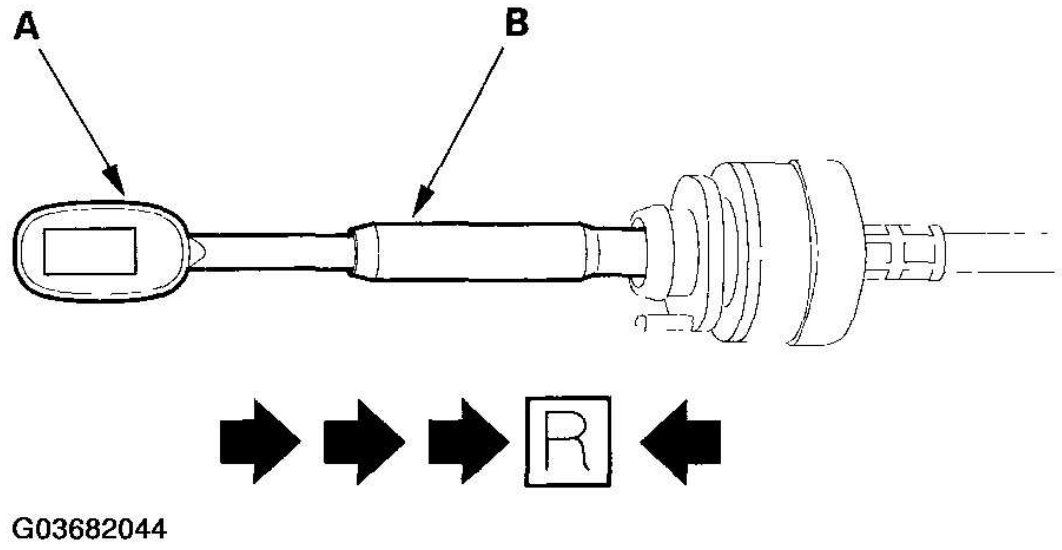


Fig. 343: Pushing And Pulling Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Turn the ignition switch OFF.
17. Insert a 6.0 mm (0.24 in.) pin (A) through the positioning hole (B) on the shift lever bracket base and into the positioning hole (C) on the shift lever. The shift lever is secured in the R position.

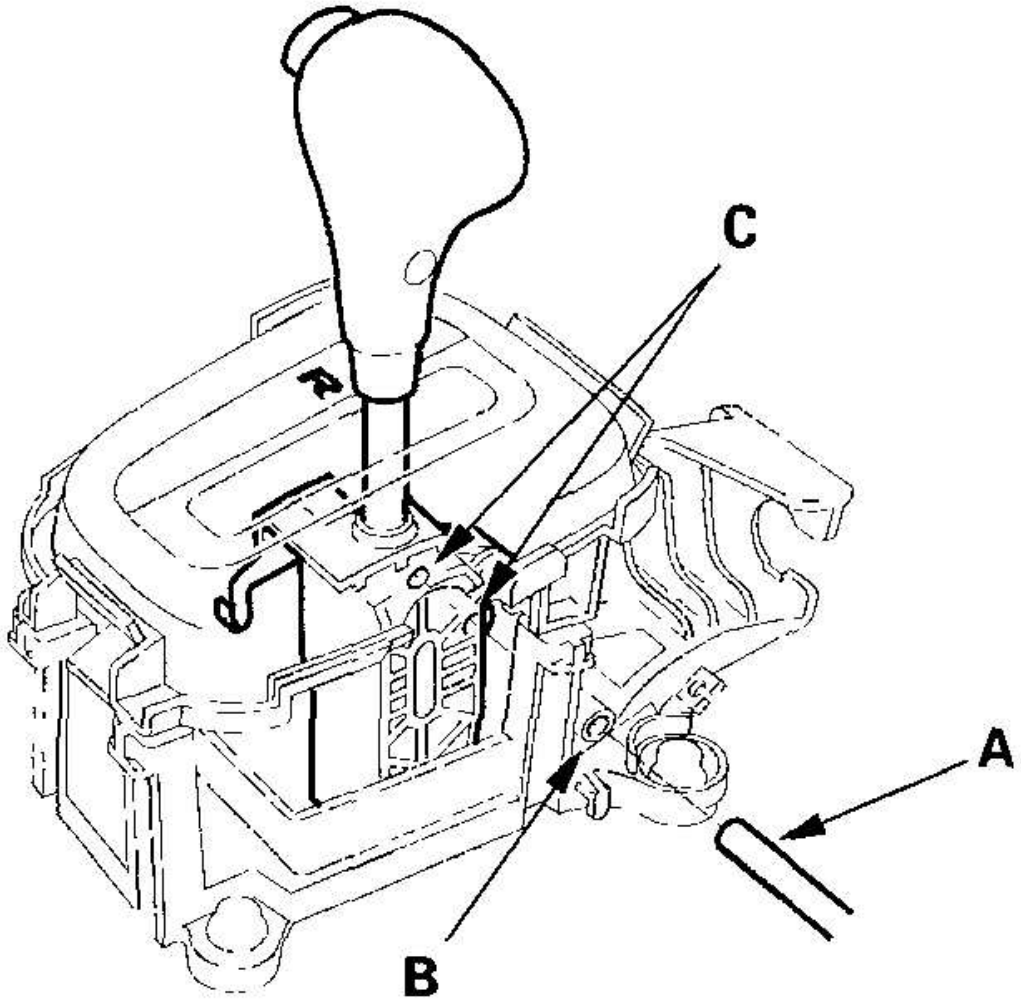


Fig. 344: Inserting Pin Through Positioning Hole On Shift Lever Bracket Base And Into Positioning Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Align the socket holder (A) on the shift cable (B) with the slot in the bracket base (C), then slide the holder into the base. Install the shift cable end (D) over the mounting stud (E) by aligning its square hole (F) with the square fitting (G) at the bottom of the stud. Rotate the holder a quarter turn to secure the shift

cable. Do not install the shift cable by twisting the shift cable guide (H).

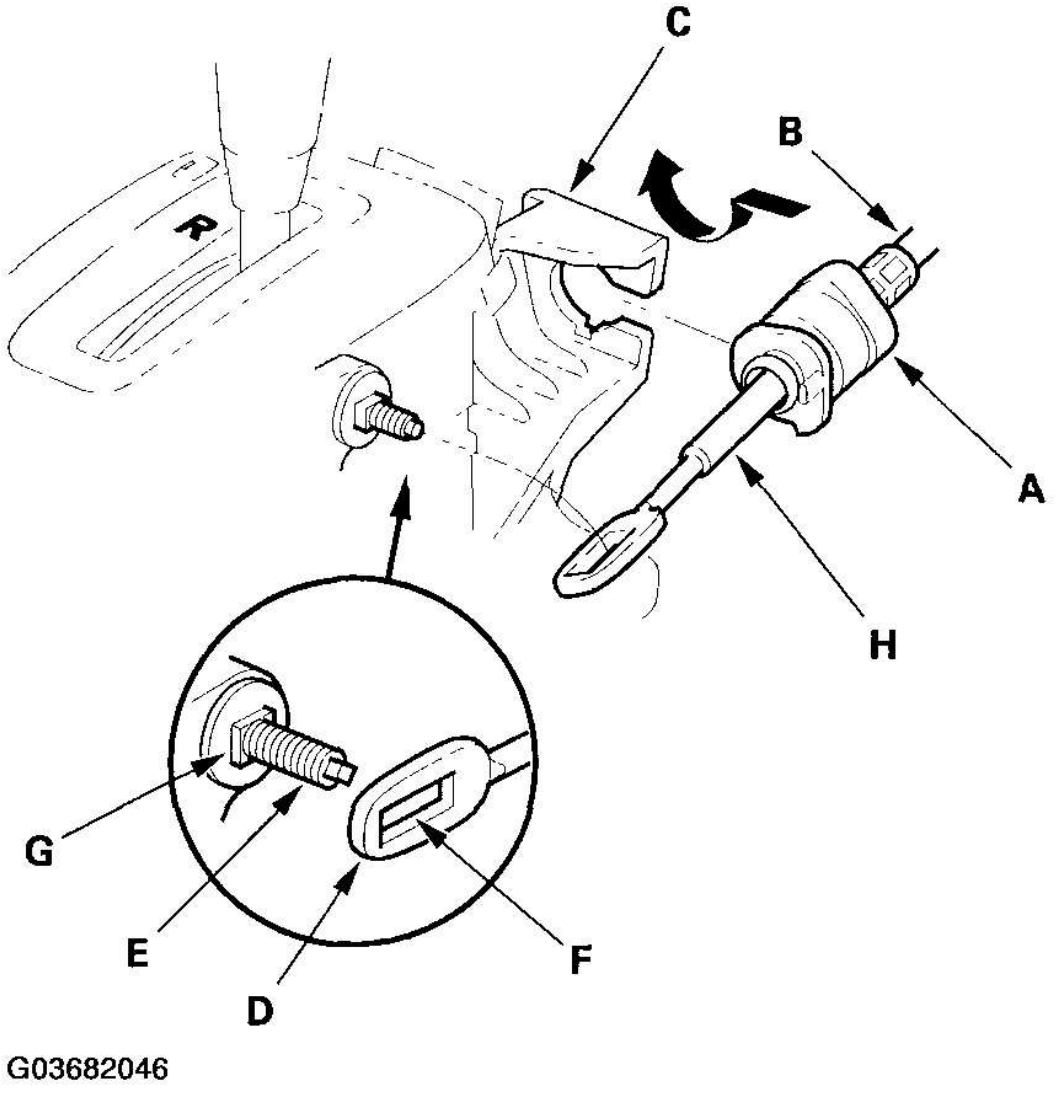


Fig. 345: Installing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Verify that the shift cable end (A) is properly installed on the mounting stud (B).

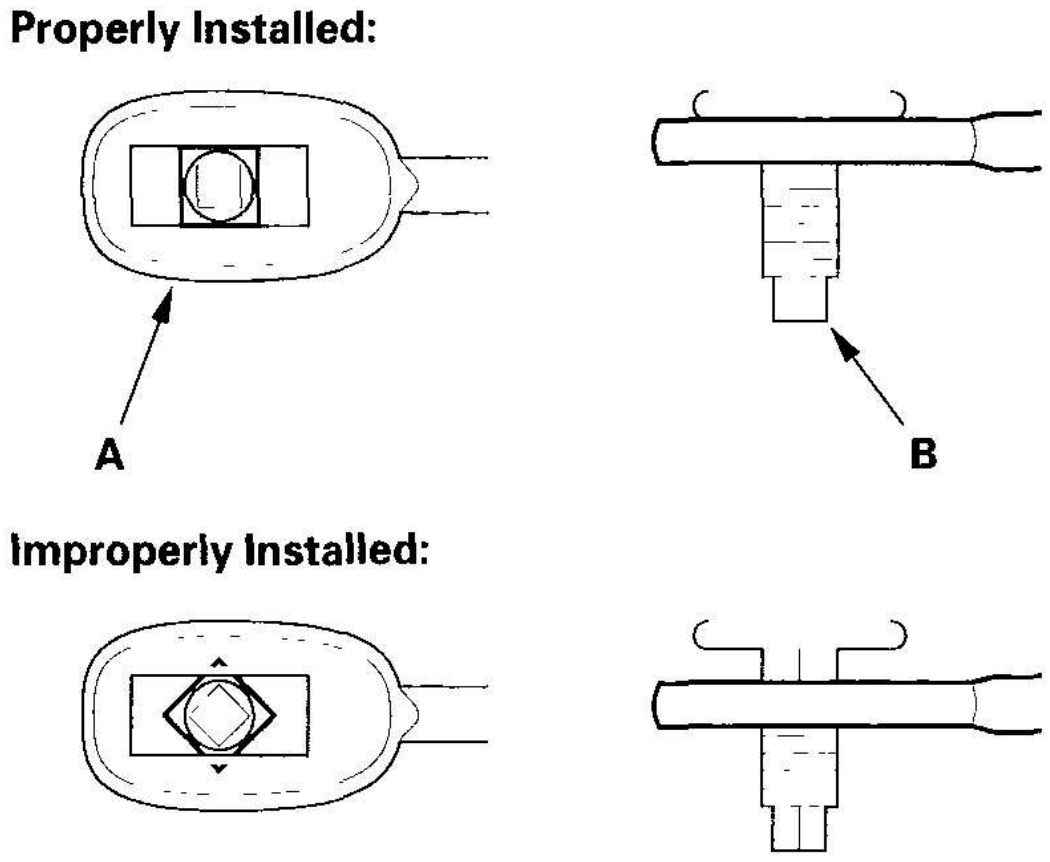


Fig. 346: Identifying Proper And Improperly Installed Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. If improperly installed, remove the shift cable from the shift cable bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
21. Install and tighten the nut.

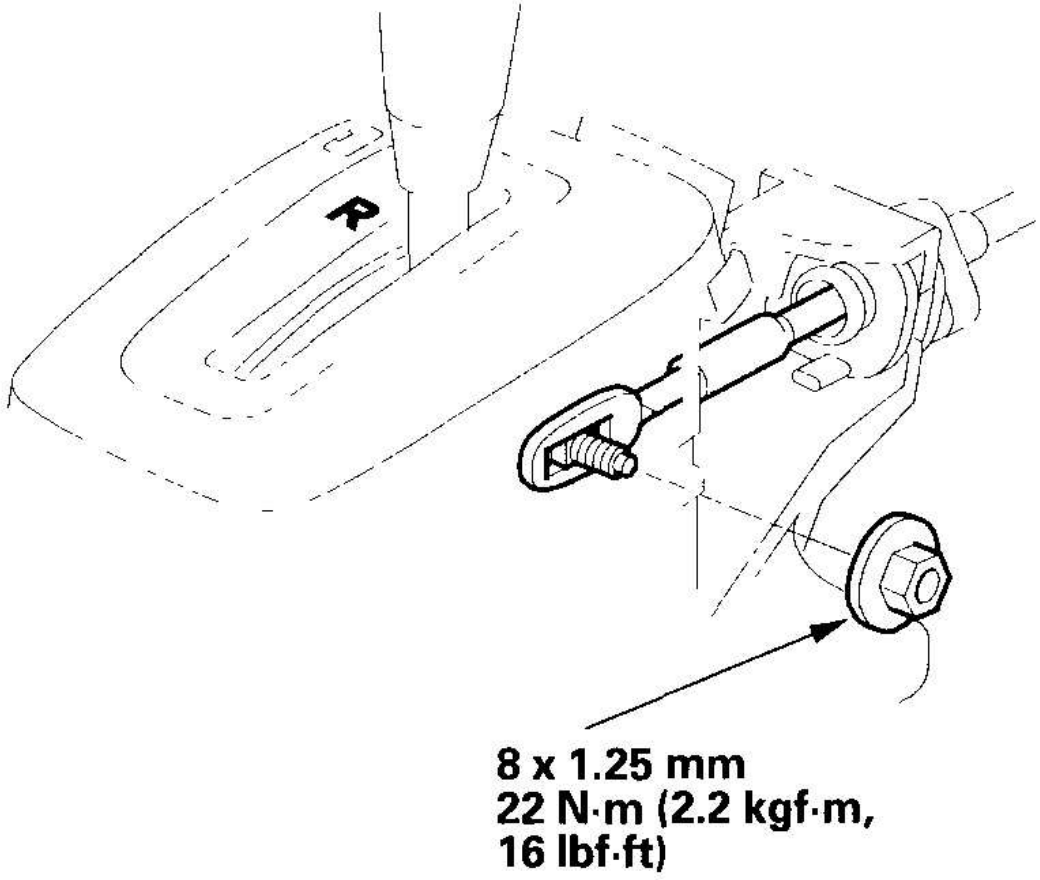


Fig. 347: Identifying Tightening Torque Of Shift Cable Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
23. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
24. Allow the wheels to rotate freely.
25. Start the engine, and check the shift lever operation in all gears.
26. Reinstall the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).

SHIFT CABLE ADJUSTMENT

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Shift the transmission into the R position.
3. Remove the nut securing the shift cable end, then separate the cable end from the shift lever.

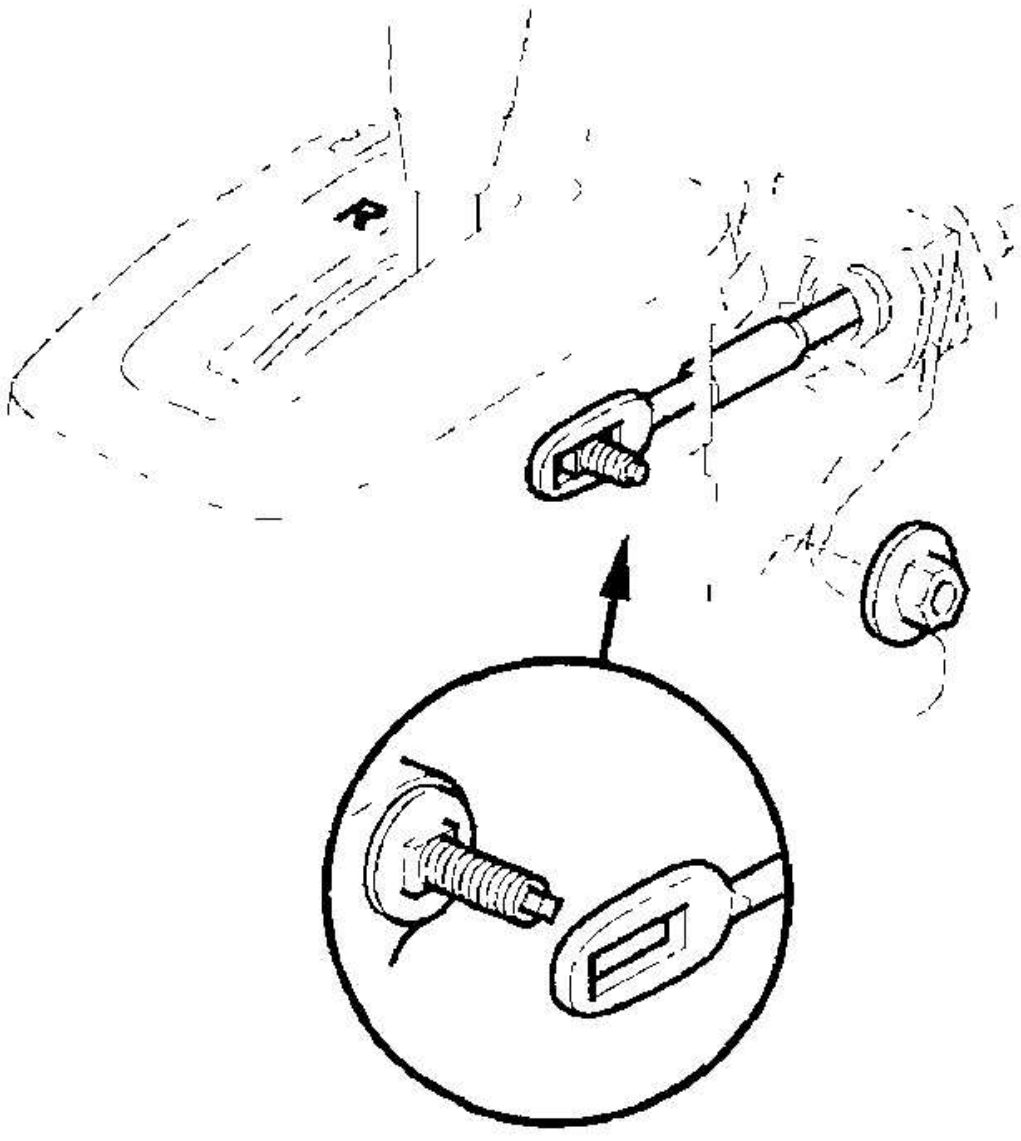


Fig. 348: Separating Cable End From Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the projection (C) on the socket holder faces direction to remove. Then slide the holder to

remove the shift cable from the shift cable bracket base (D). Do not remove the shift cable by twisting the shift cable guide (E).

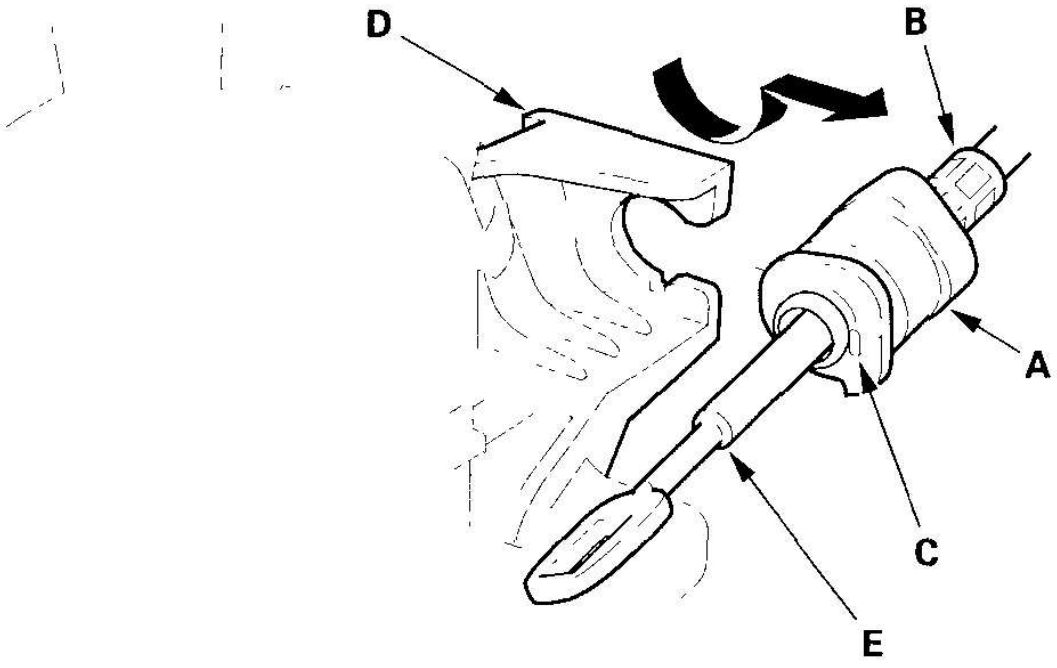


Fig. 349: Removing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Push the shift cable (A) until it stops, then release it. Pull the shift cable back one step so that the shift position is in the R position. Do not push and pull the shift cable by holding the shift cable guide (B).

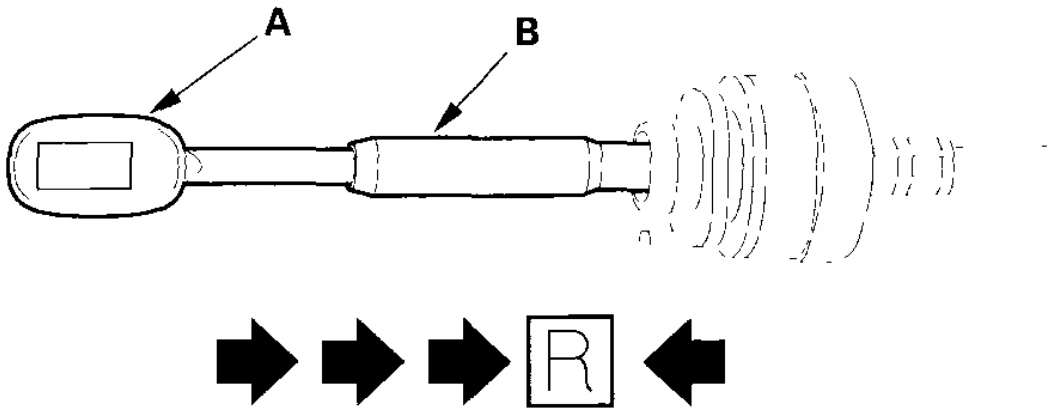


Fig. 350: Pushing And Pulling Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II), and verify that the R position indicator light comes on.
7. Turn the ignition switch OFF.
8. Insert a 6.0 mm (0.24 in.) pin (A) through the positioning hole (B) on the shift lever bracket base and into the positioning hole (C) on the shift lever. The shift lever is secured in the R position.

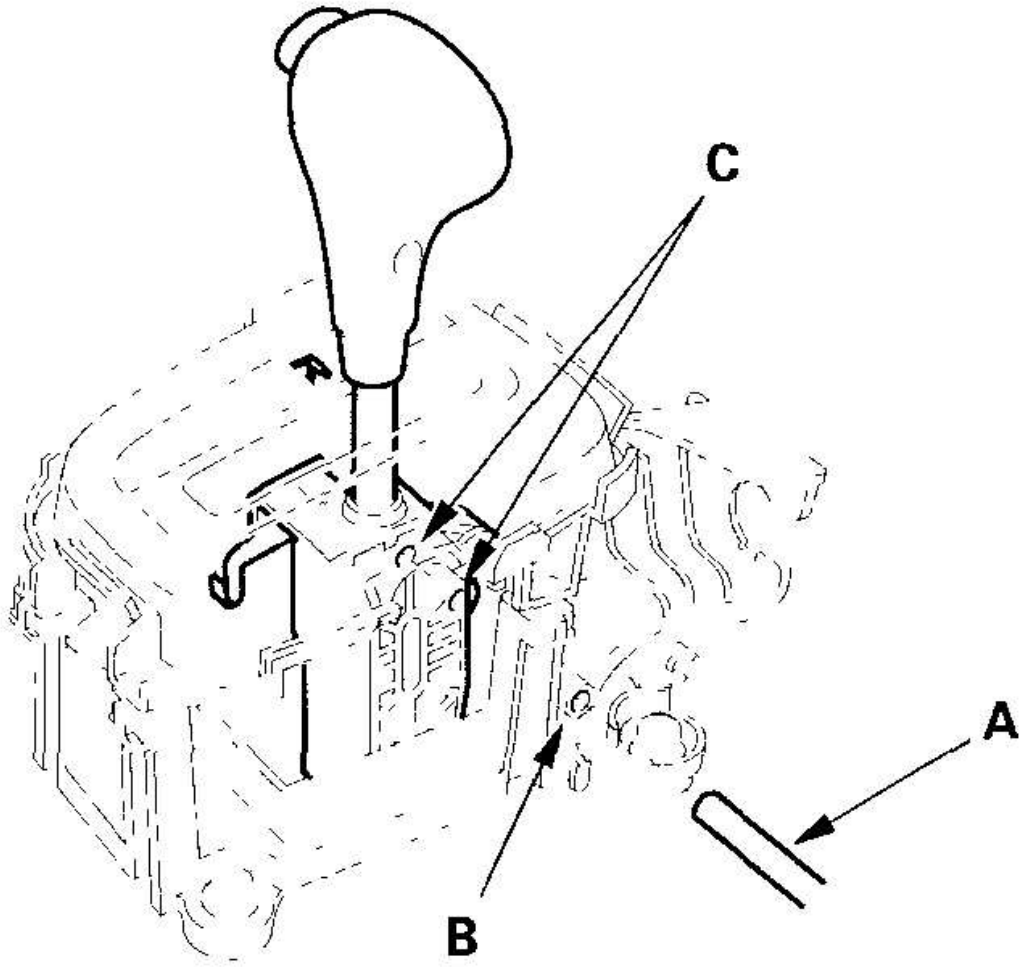


Fig. 351: Inserting Pin Through Positioning Hole On Shift Lever Bracket Base And Into Positioning Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Align the socket holder (A) on the shift cable (B) with the slot in the bracket base (C), then slide the holder into the base. Install the shift cable end (D) over the mounting stud (E) by aligning its square hole (F) with the square fitting (G) at the bottom of the stud. Rotate the holder a quarter turn to secure the shift cable. Do not install the shift cable by twisting the shift cable guide (H).

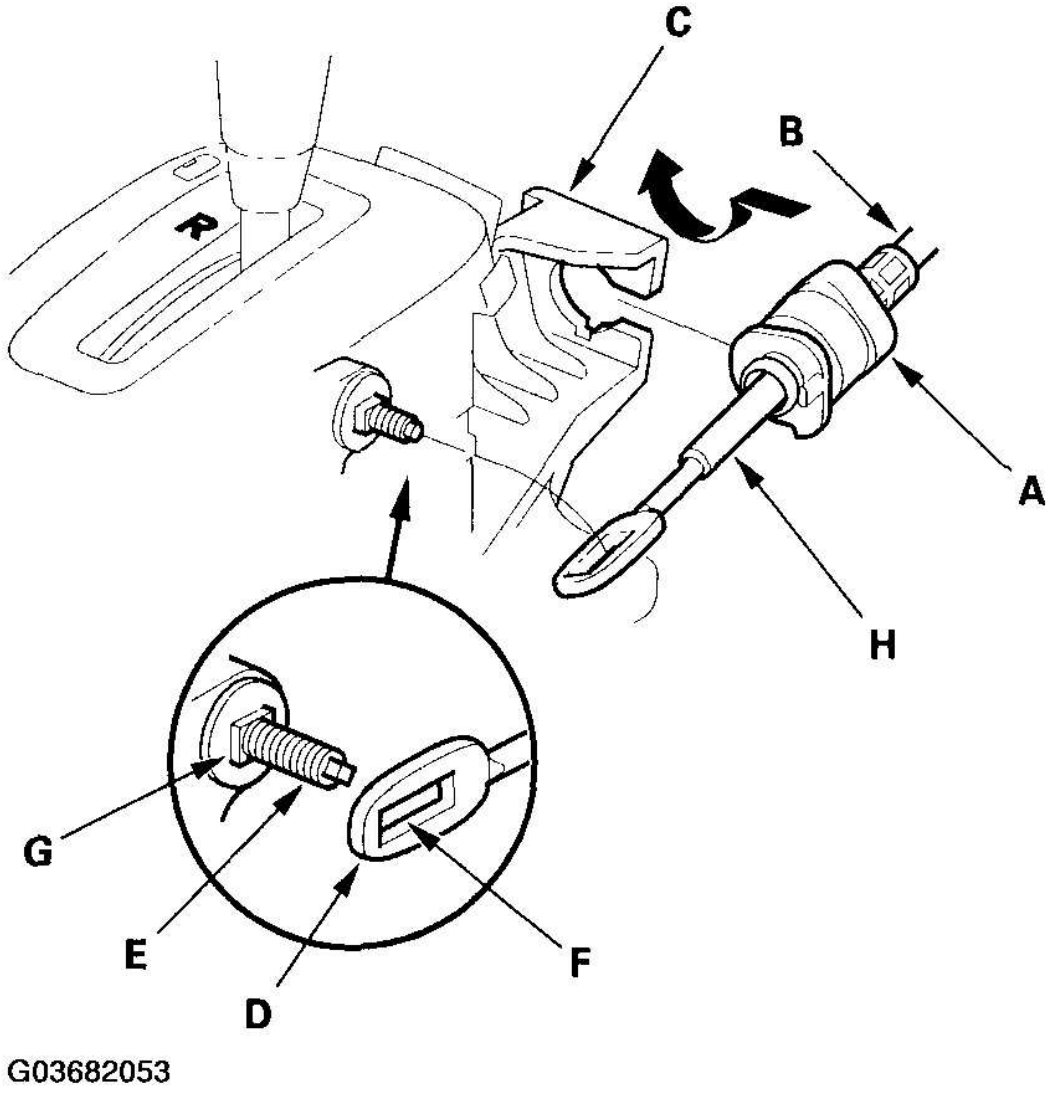


Fig. 352: Installing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Verify that the shift cable end (A) is properly installed on the mounting stud (B).

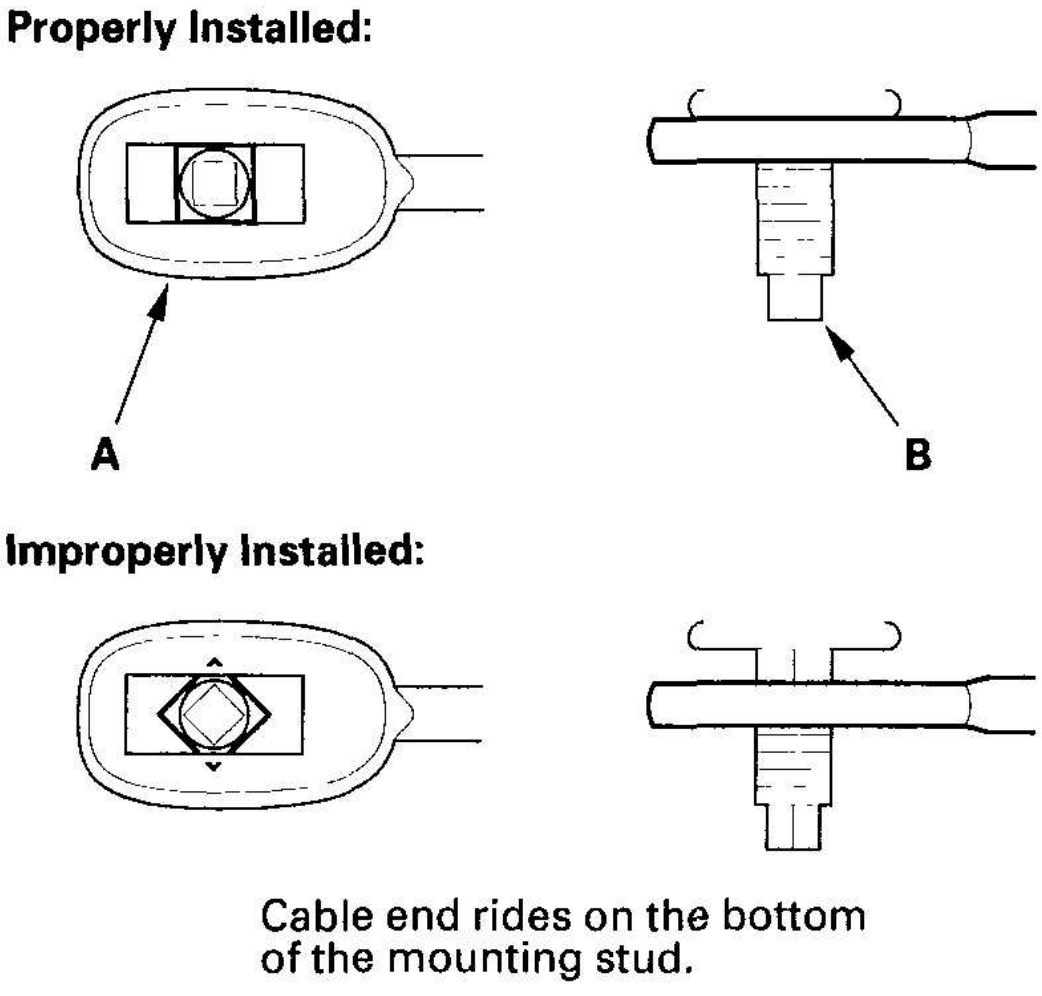


Fig. 353: Identifying Properly And Improperly Installed Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. If improperly installed, remove the shift cable from the shift cable bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
12. Install and tighten the nut.

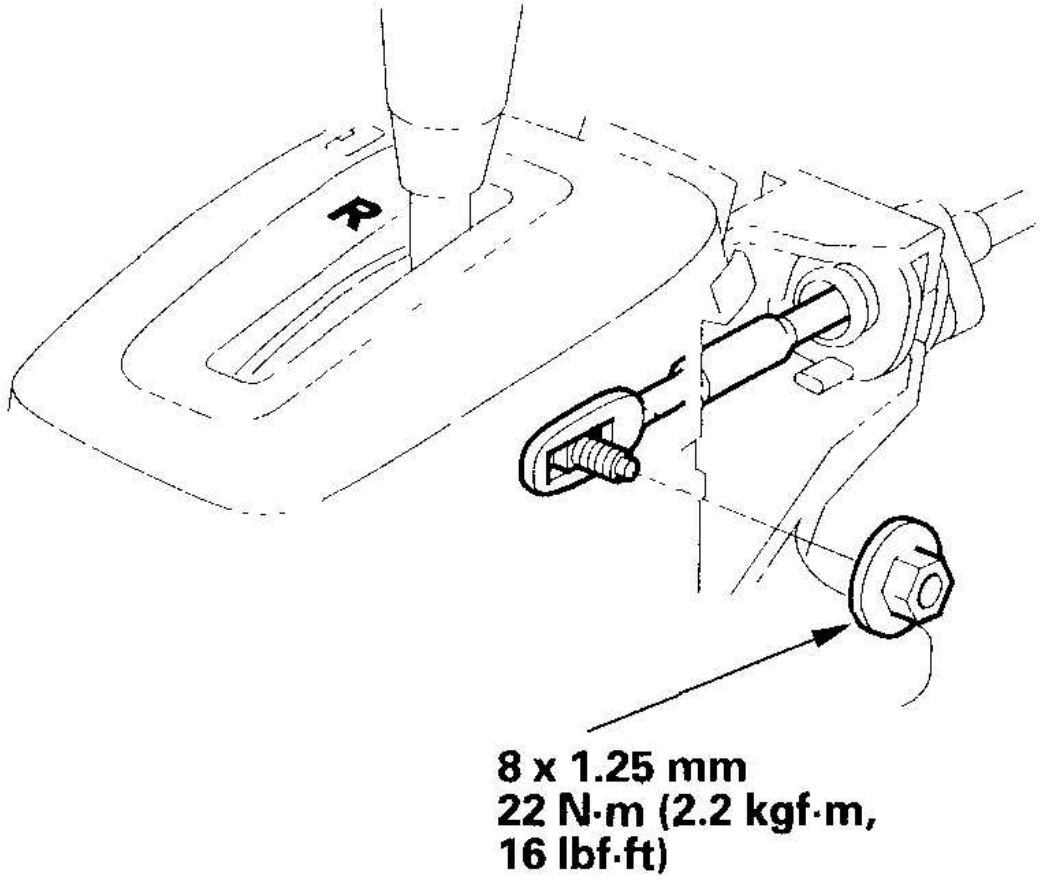


Fig. 354: Identifying Tightening Torque Of Shift Cable Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
14. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
15. Allow the wheels to rotate freely.
16. Start the engine, and check the shift lever operation in all gears.
17. Reinstall the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).

A/T GEAR POSITION INDICATOR

COMPONENT LOCATION INDEX

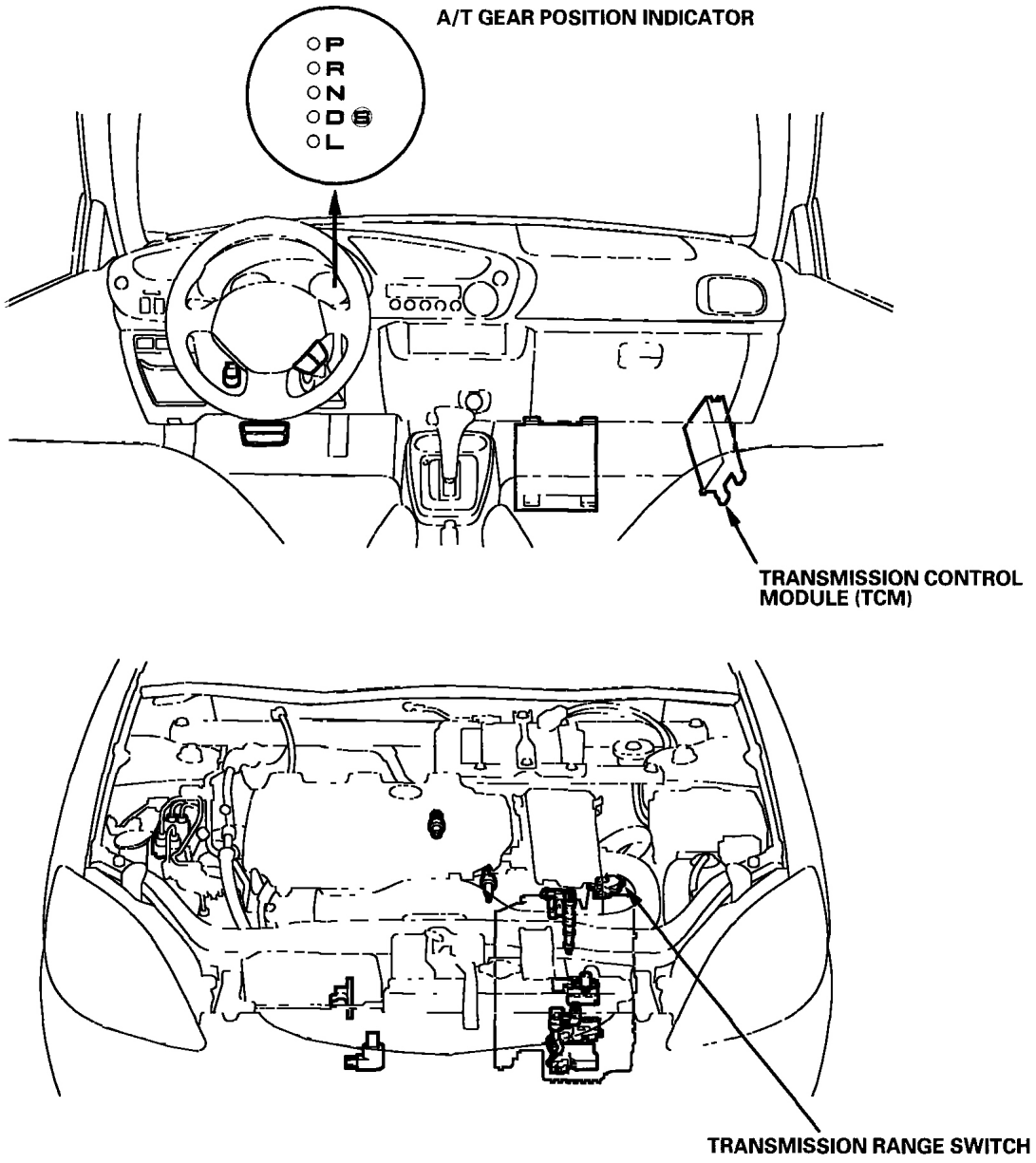
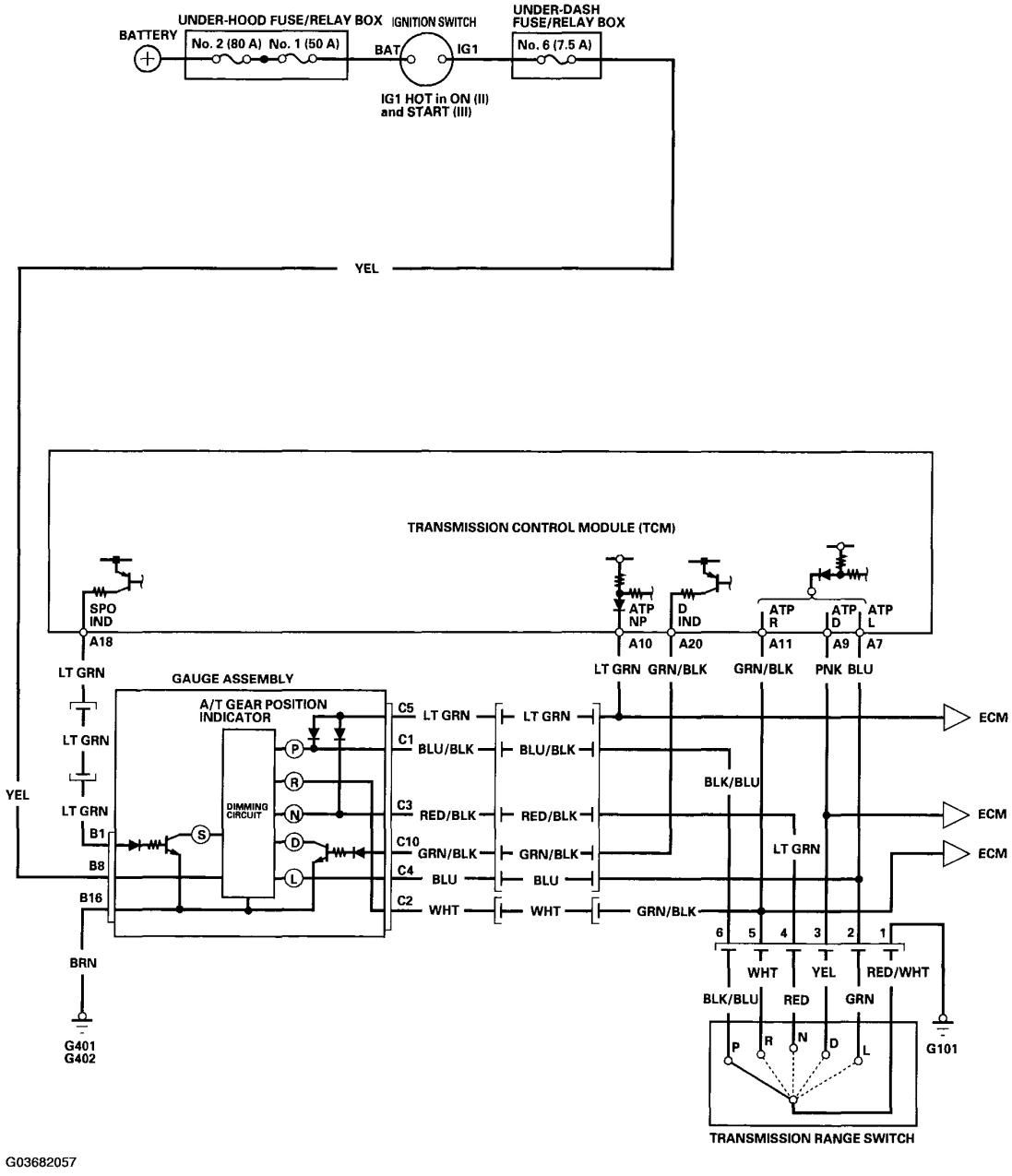


Fig. 355: A/T Gear Position Indicator Component Location Index
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM



G03682057

Fig. 356: A/T Gear Position Indicator Circuit Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INDICATOR INPUT TEST

1. If the D indicator or MIL has been reported on, check for a DTC, and repair the

system as indicated by the DTC.

2. If the D indicator does not come on, and the A/T gear position indicator light does not come on, remove the gauge assembly from the dashboard, then disconnect the gauge assembly connectors B (22P) and C (10P).
3. Inspect the connectors and connector terminals to be sure they are making good contact.
4. If the terminals are bent, loose, or corroded, repair them as necessary, and recheck the system.
5. Shift to the P position, and check for continuity between C1 terminal (BLU/BLK) and ground. There should be continuity in the P position and no continuity in any other shift lever position. If the test results are different, check for a faulty transmission range switch or an open in the wire.

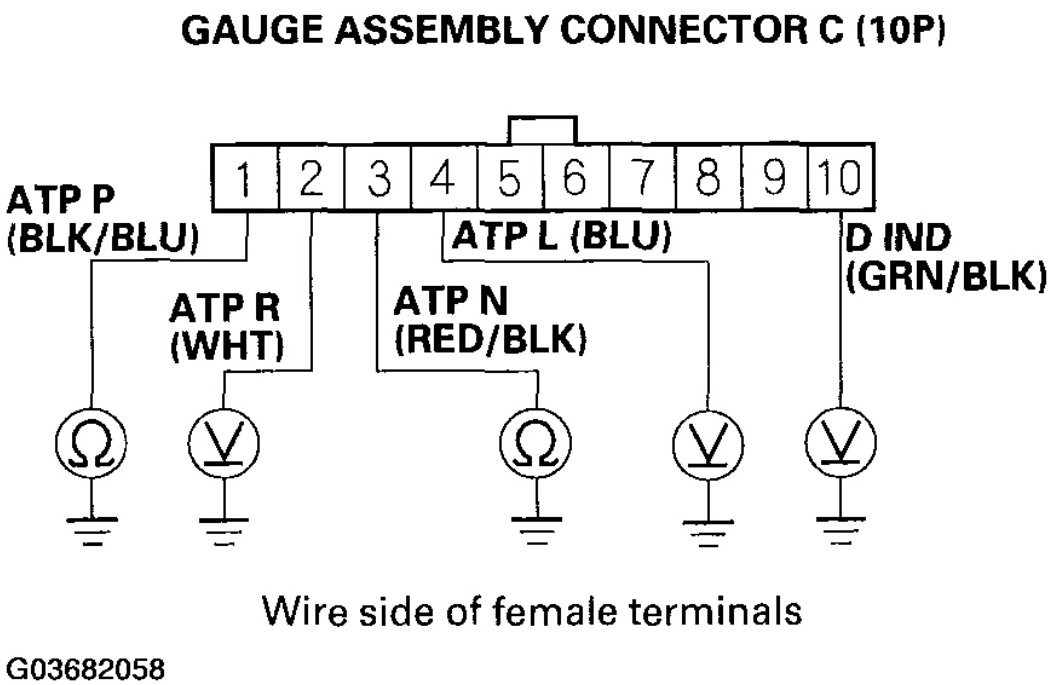


Fig. 357: Checking Continuity Between Gauge Assembly Connector C (10P) Terminals And Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II), and shift to the R position by pressing the brake pedal. Check for voltage between C2 terminal (WHT) and ground. There should be 0 V in the R position, and about 5 V in any other position. If the test results are different, check for a faulty transmission range switch or an open in the wire.
7. Shift to the N position, and check for continuity between C3 terminal (RED/BLK) and ground. There should be continuity in the N position and no continuity in any other position. If the test results are different, check for a faulty transmission range switch or an open in the wire.
8. Shift to the D position, and check for voltage between C10 terminal (GRN/BLK) and ground. There should be battery voltage in the D position, and 5 V in any other position. If the test results are different, check for faulty transmission range switch and TCM, or an open in the wire.
9. Shift to the L position, and check for voltage between C4 terminal (BLU) and ground. There should be 0 V in the L position, and about 5 V in any other position. If the test results are different, check for a faulty transmission range switch or an open in the wire.
10. Shift to the D position and check for voltage between B1 terminal (LT GRN) and ground. There should be 10 V while pressing the S mode switch and 0 V when the switch is released. If the test results are different, check for a faulty mode switch and TCM, or an open in the wire.

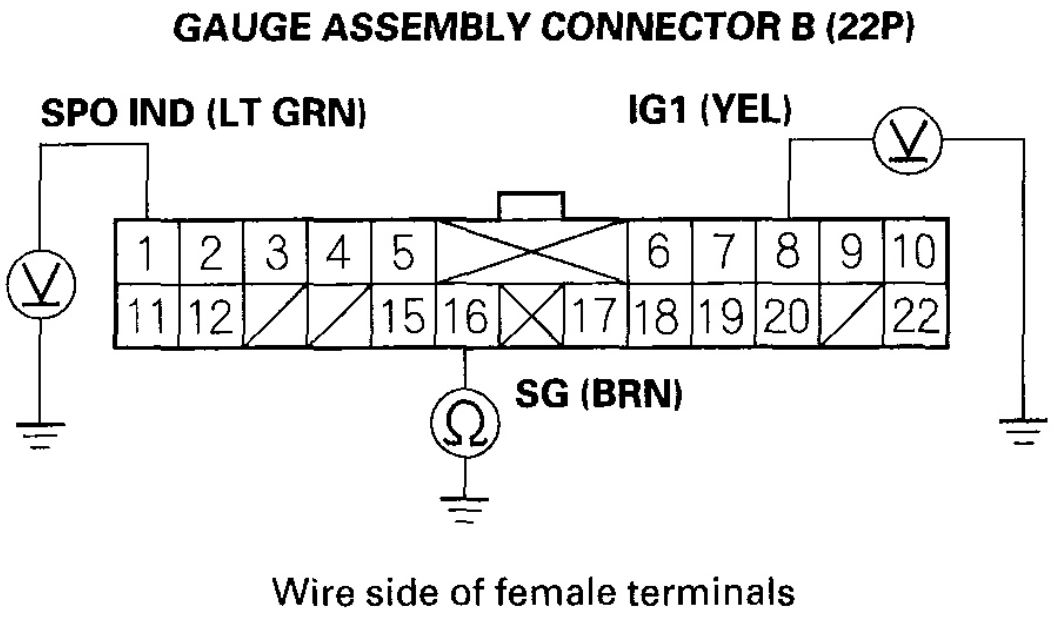


Fig. 358: Checking Continuity And Resistance Of Gauge Assembly Connector B (22P) Terminals And Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check for voltage between the B8 terminal (YEL) and ground. There should be battery voltage. If the test result is different, check for a blown No. 6 (7.5 A) fuse in the under-dash fuse/relay box or an open in the wire.
12. Check for continuity between the B16 terminal (BRN) and ground. There should be continuity under all conditions. If the test result is different, check for a poor ground (G401) or an open in the wire.
13. If the input test found nothing wrong, but the indicator is faulty, replace the printed circuit board.

TRANSMISSION RANGE SWITCH TEST

1. Remove the air cleaner housing.
2. Remove the transmission range switch connector from the connector bracket, then disconnect it.

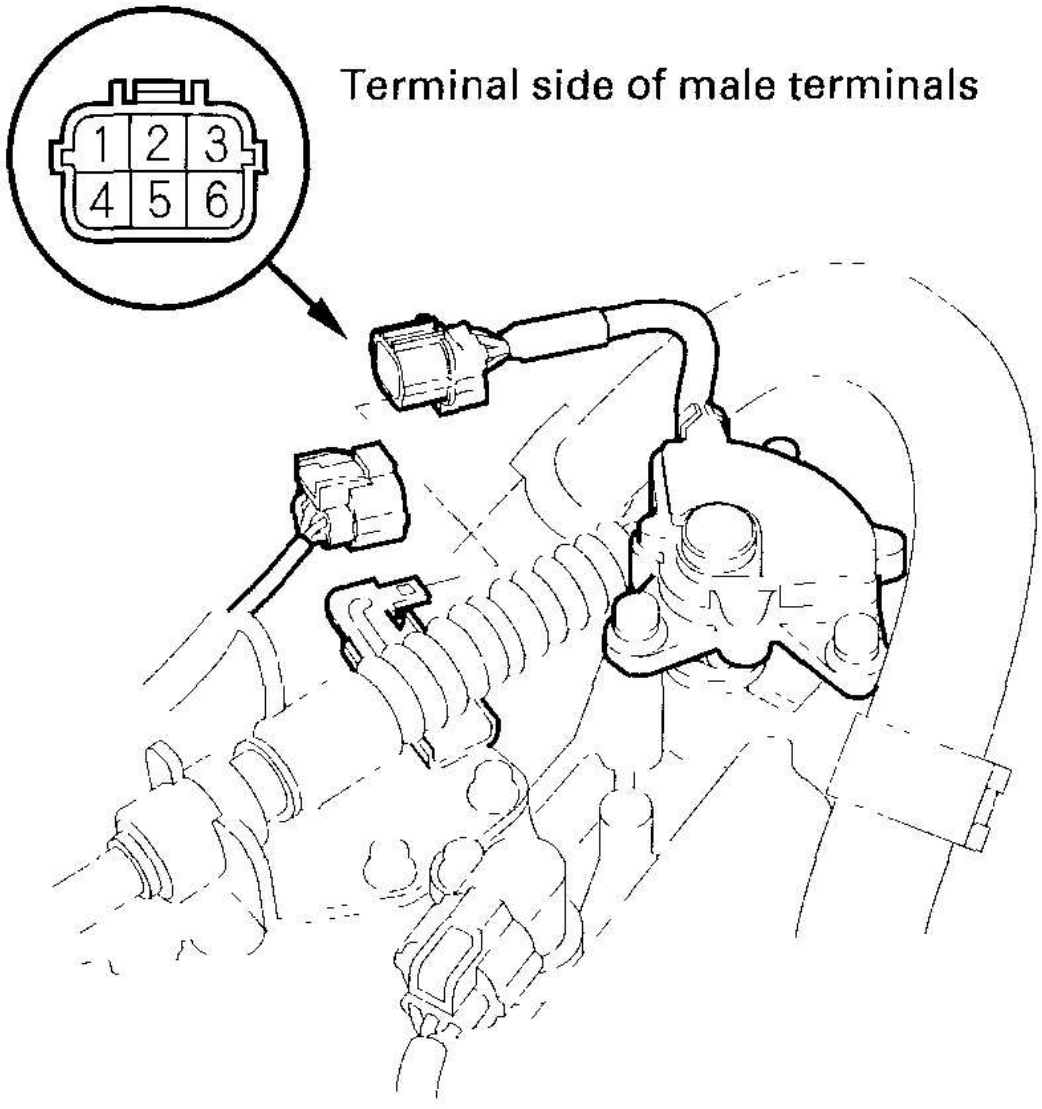


Fig. 359: Disconnecting Transmission Range Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Connector Terminal Specifications

CONNECTOR TERMINAL SPECIFICATIONS

Terminal	signal

1	GND
2	L
3	D
4	N
5	R
6	P

3. Check for continuity between terminals at the connector. There should be continuity between terminals listed for each switch position.
   - In the P position:

     Between terminals No. 1 and No. 6
   - In the R position:

     Between terminals No. 1 and No. 5
   - In the N position:

     Between terminals No. 1 and No. 4
   - In the D position:

     Between terminals No. 1 and No. 3
   - In the L position:

     Between terminals No. 1 and No. 2
4. If there is no continuity between any terminals, adjust the transmission range switch. If the transmission range switch adjustment is OK, replace the transmission range switch.

TRANSMISSION RANGE SWITCH REPLACEMENT

1. Remove the air cleaner housing.
2. Remove the transmission range switch connector from the connector bracket

(A), then disconnect it.

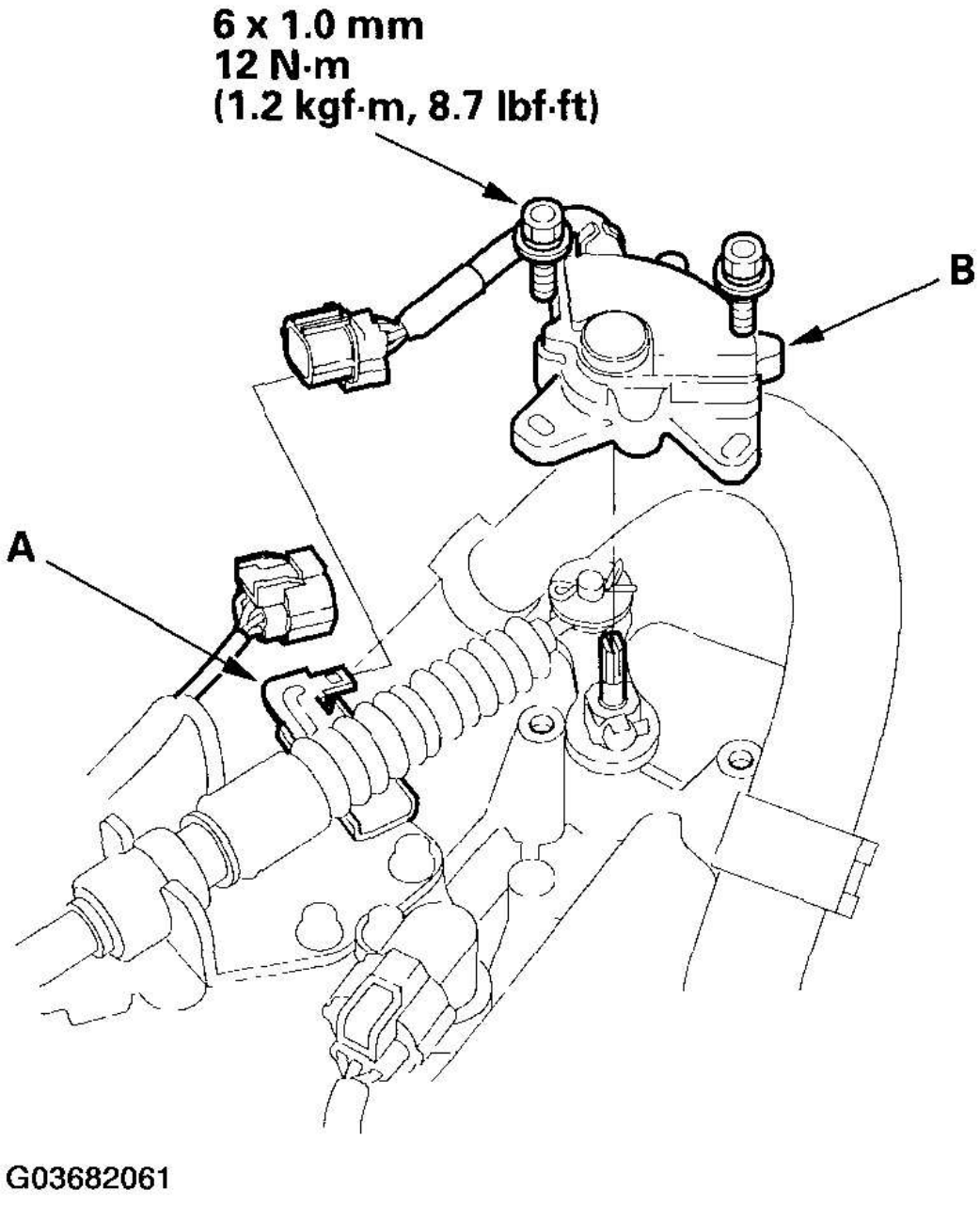


Fig. 360: Identifying Loosening Torque Of Connector Bracket Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the transmission range switch (B).
4. Shift the transmission into the N position by turning the control lever (A). Do not squeeze the end (B) of the control shaft tips together when shifting. If the tips are squeezed together it will cause a faulty signal or position due to the play between the control shaft and the switch.

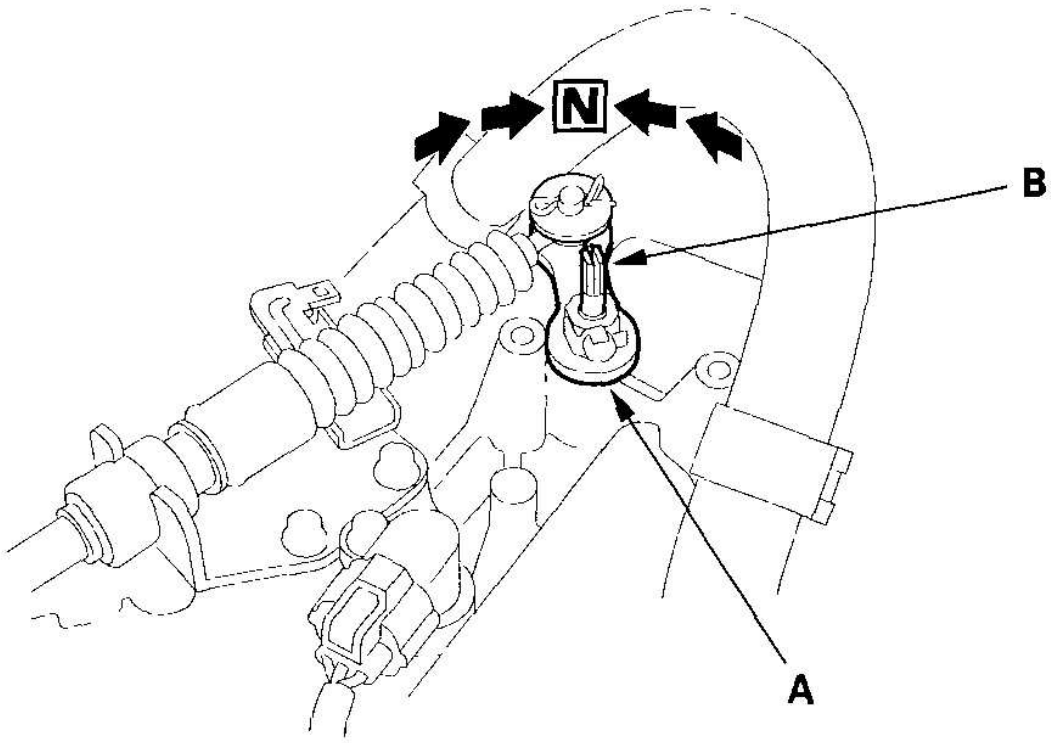


Fig. 361: Turning Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Set the transmission range switch to the N position. The switch clicks in the N position.

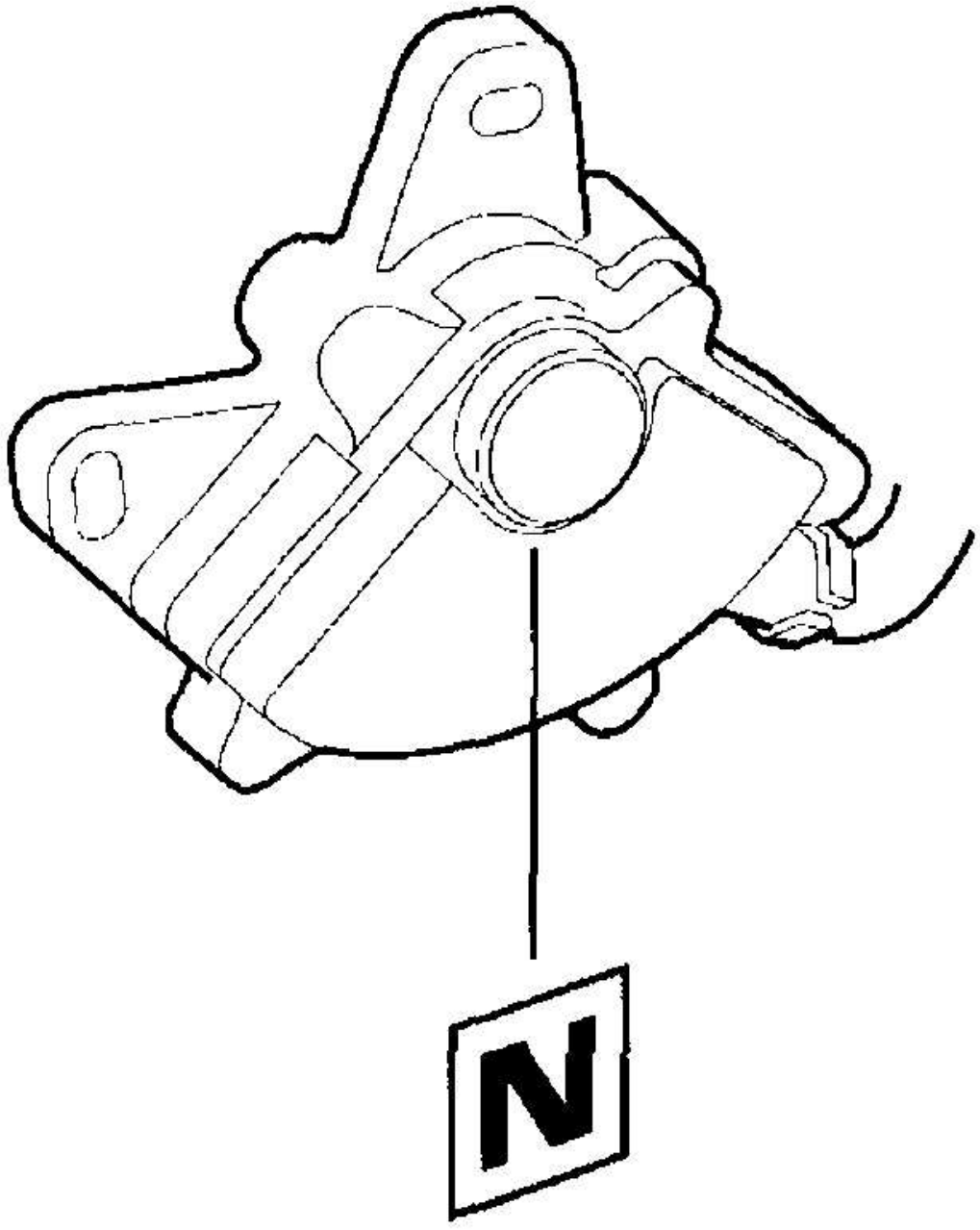


Fig. 362: Identifying Transmission Range Switch N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the transmission range switch gently over the control shaft, then tighten the bolts. Do not move the switch when tightening the bolts.
7. Connect the connector securely, then install it on its bracket.
8. Turn the ignition switch ON (II). Move the shift lever through all positions, and check the transmission range switch synchronization with the A/T gear position indicator.

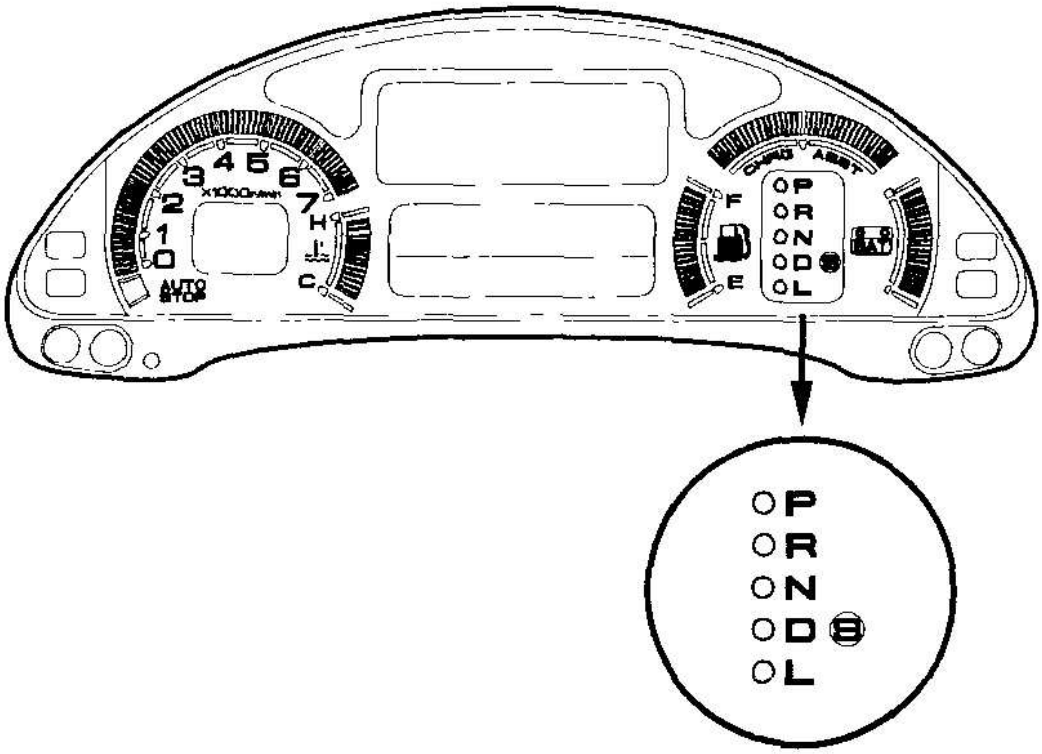


Fig. 363: Identifying A/T Gear Position Indicator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Check that the engine can start in the P and N positions, and will not start in any other shift lever position.
10. Check that the back-up lights come on when the shift lever is in the R position.
11. Allow the wheels to rotate freely, then start the engine, and check the shift

lever operation.

A/T INTERLOCK SYSTEM

COMPONENT LOCATION INDEX

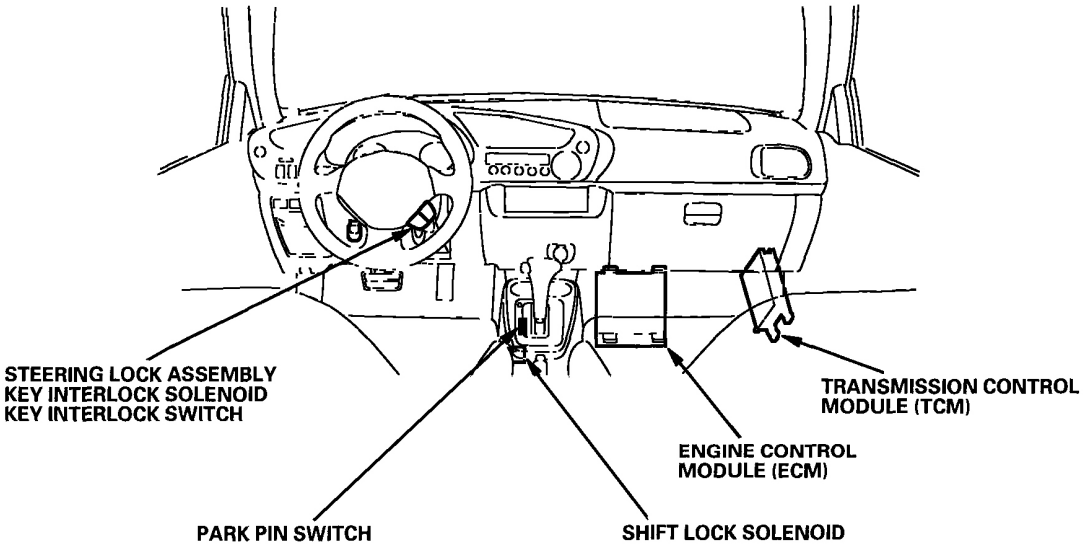


Fig. 364: A/T Interlock System Component Location Index
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

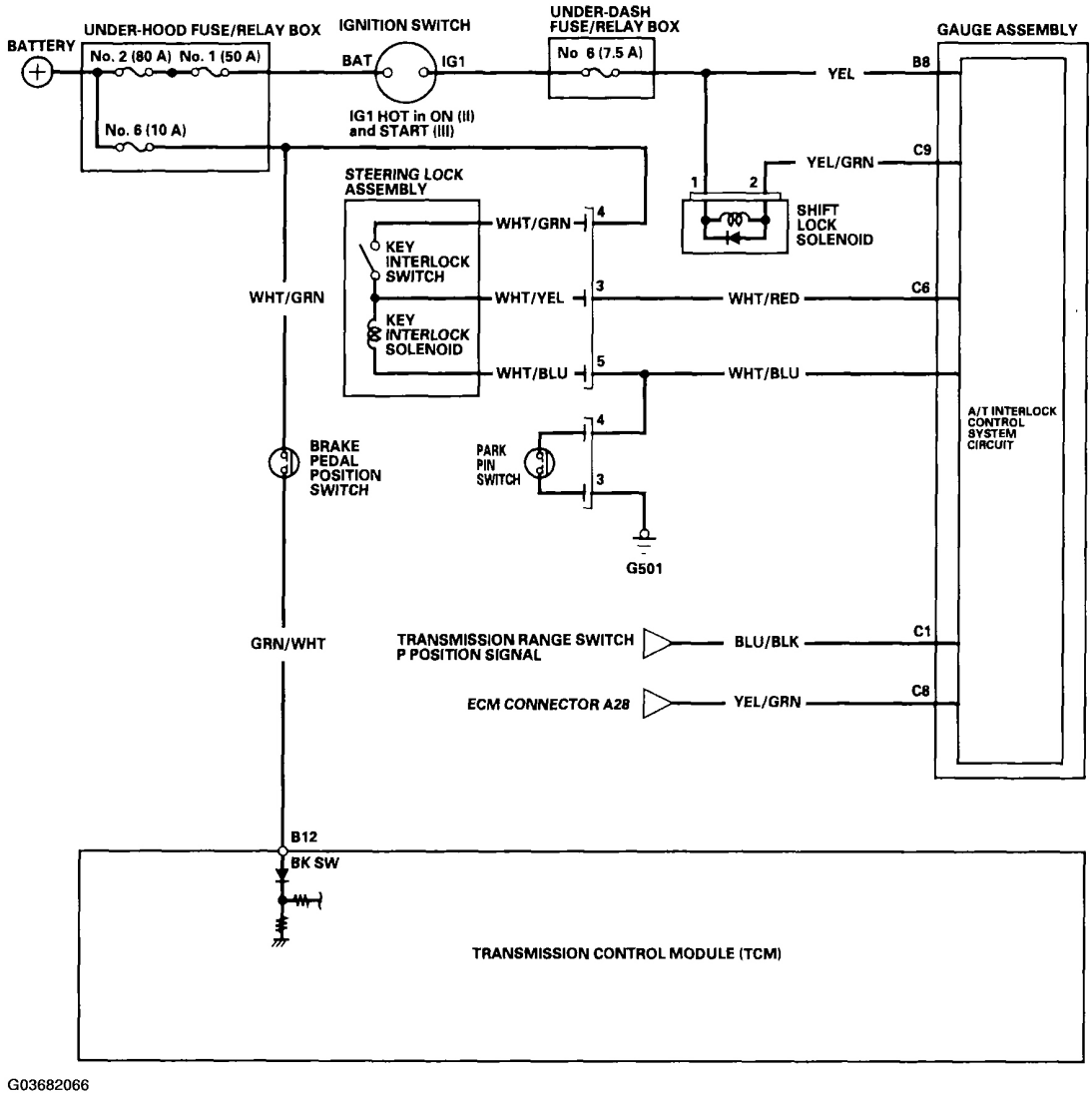


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Fig. 365: A/T Interlock System Circuit Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT LOCK SYSTEM CIRCUIT TROUBLESHOOTING

1. Press the brake pedal.

   Are the brake lights ON?

   YES -Go to step 2.
   NO -Repair faulty brake light circuit.

2. Turn the ignition switch ON (II), and shift to the P position.
3. Press the brake pedal, and release the accelerator.
4. Measure the voltage between ECM connector terminal A28 and body ground.

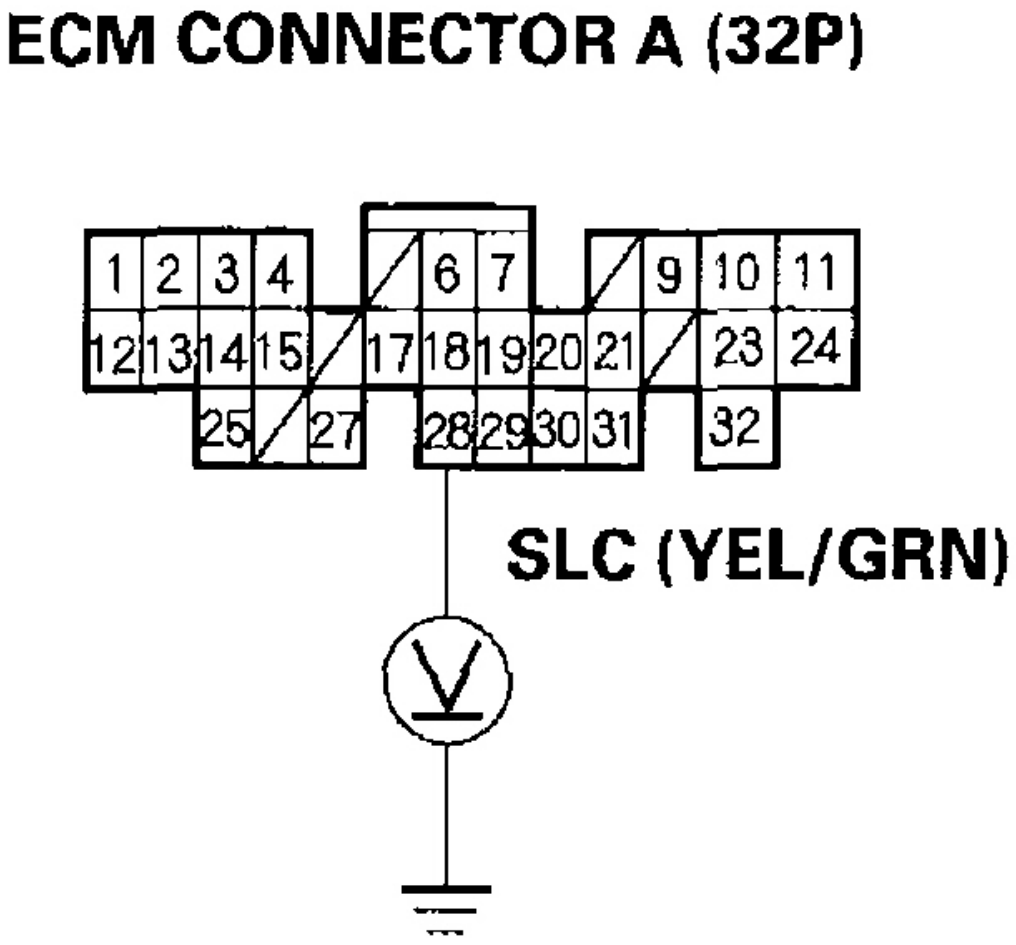


Fig. 366: Measuring Voltage Between ECM Connector A (32P) Terminal

A28 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Check for an open in the wire between ECM connector terminal A28 and the gauge assembly interlock control system circuit, and check for loose terminal fit in the gauge assembly connectors. If necessary, substitute a known-good gauge assembly and recheck.

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect TCM connectors A (26P) and B (22P).
7. Press the brake pedal, and measure the voltage between TCM connector terminals B12 and A4.

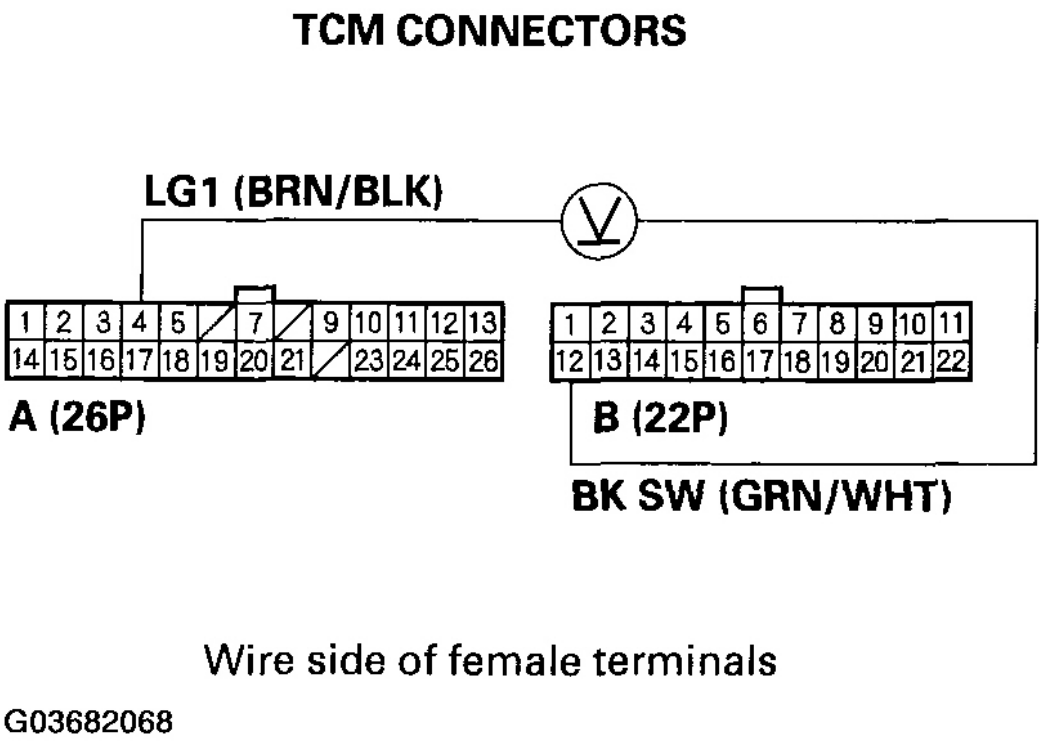


Fig. 367: Measuring Voltage Between TCM Connector Terminals B12

And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage while pressing the brake pedal?

YES -Release the brake pedal, and go to step 8.

NO -Repair an open in the wire between TCM connector terminal B12 and the brake pedal position switch.

8. Reconnect TCM connectors A (26P) and B (22P).
9. Turn the ignition switch ON (II).
10. Measure the voltage between TCM connector terminals B4 and A4.

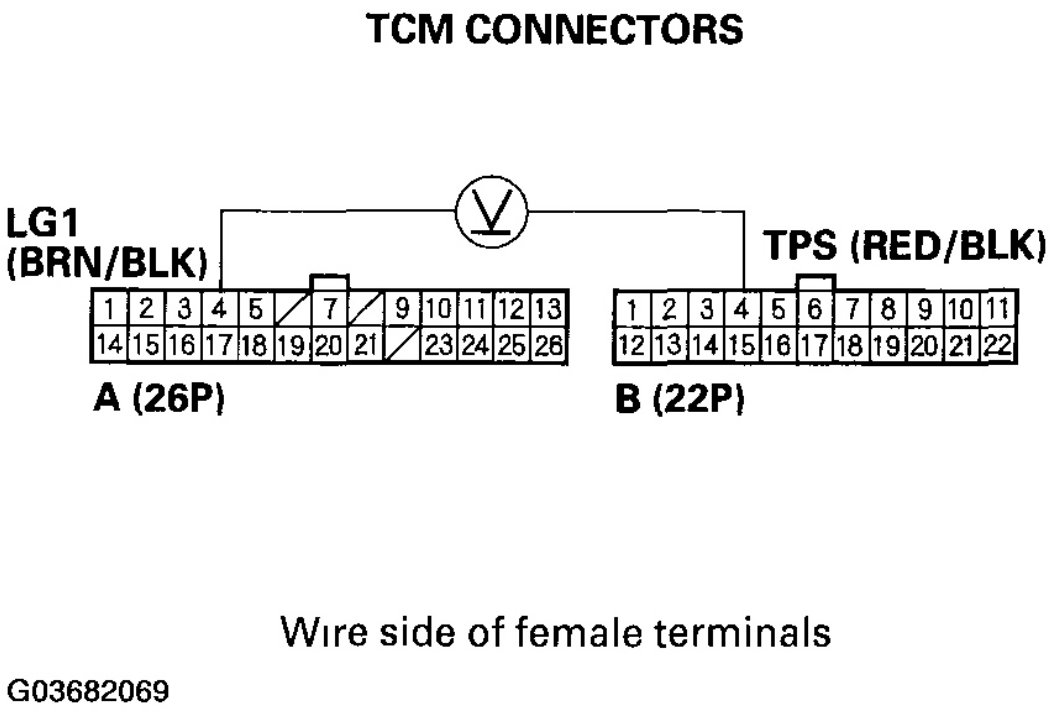


Fig. 368: Measuring Voltage Between TCM Connector Terminals B4 And A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.5 V?

YES -Go to step 15 .

NO -Go to step 11.

11. Turn the ignition switch OFF.
12. Disconnect the throttle position (TP) sensor connector.
13. Turn the ignition switch ON (II).
14. Measure the voltage between TP sensor connector terminals No. 1 and No. 3.

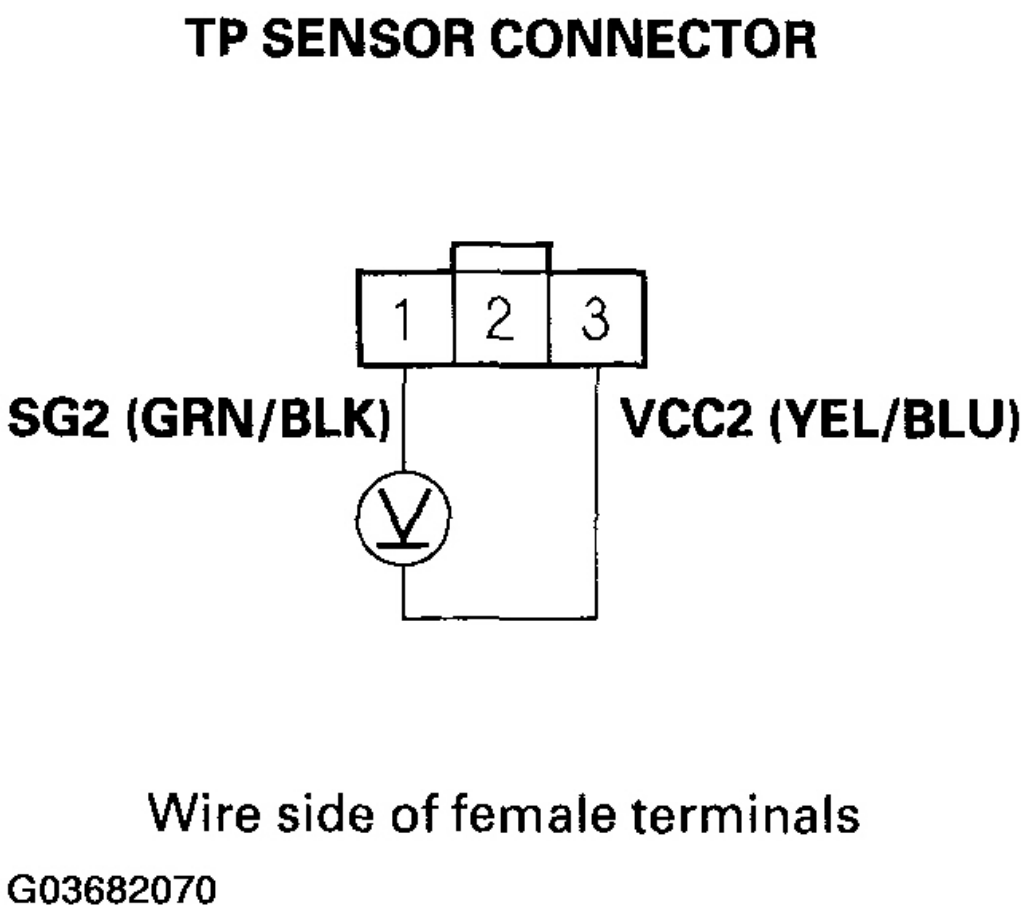


Fig. 369: Measuring Voltage Between TP Sensor Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES -Check for an open or a short in the wire between TCM connector terminal B4 and the TP sensor. If the wire is OK, replace the TP sensor.

NO -Go to step 15.

15. Turn the ignition switch OFF.
16. Disconnect ECM connector B (25P).
17. Check for continuity between TP sensor connector terminal No. 3 and body ground.

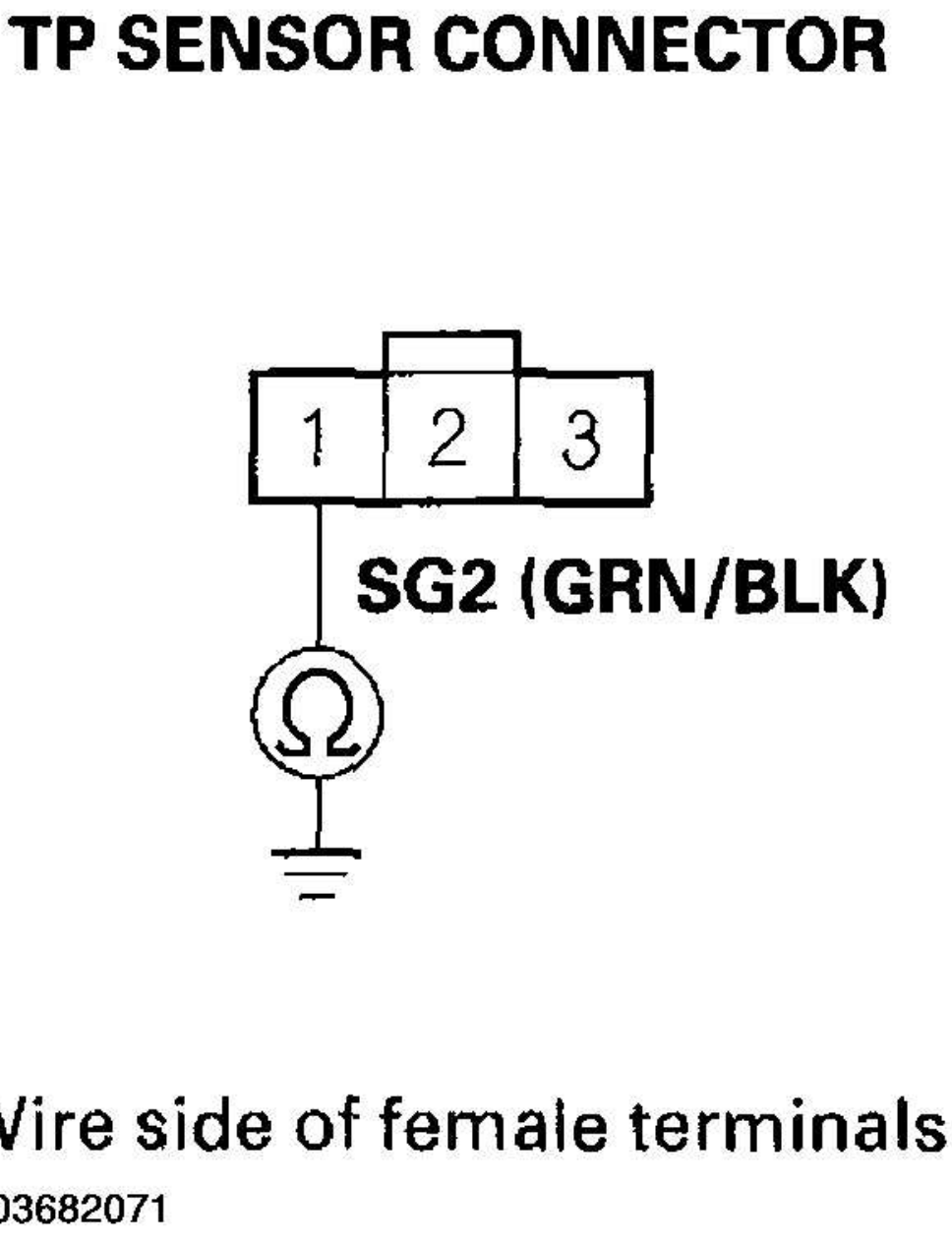


Fig. 370: Checking Continuity Between TP Sensor Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Check for a short to ground in the wire between TP sensor connector terminal No. 3 and ground. If the wire is OK, replace the TP sensor.

NO -Go to step 18.

18. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
19. Disconnect the shift lock solenoid connector.
20. Turn the ignition switch ON (II).
21. Press the brake pedal, and check the voltage between shift solenoid connector terminals.

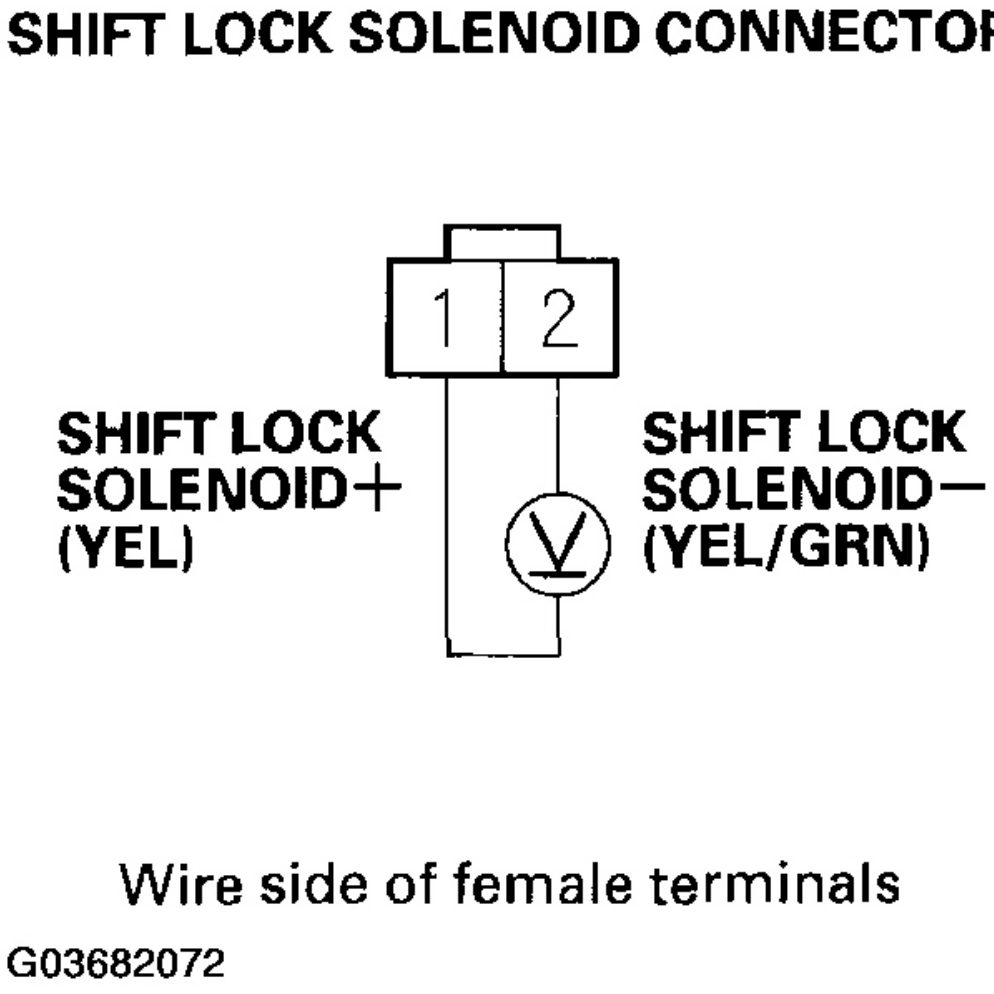


Fig. 371: Checking Voltage Between Shift Solenoid Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 21.

NO -Check for an open or short in the wires between the shift lock solenoid connector and the gauge assembly. If wires are OK, check for a loose terminal fit in the gauge assembly connector. If necessary, substitute a known-good gauge assembly and recheck.

22. Connect the battery positive terminal to shift lock solenoid connector terminal No. 1, and connect the battery negative terminal to connector terminal No. 2. Do not connect the battery positive terminal to connector terminal No. 2 or you will damage the diode inside the shift lock solenoid.
23. Check that the shift lock solenoid operates.

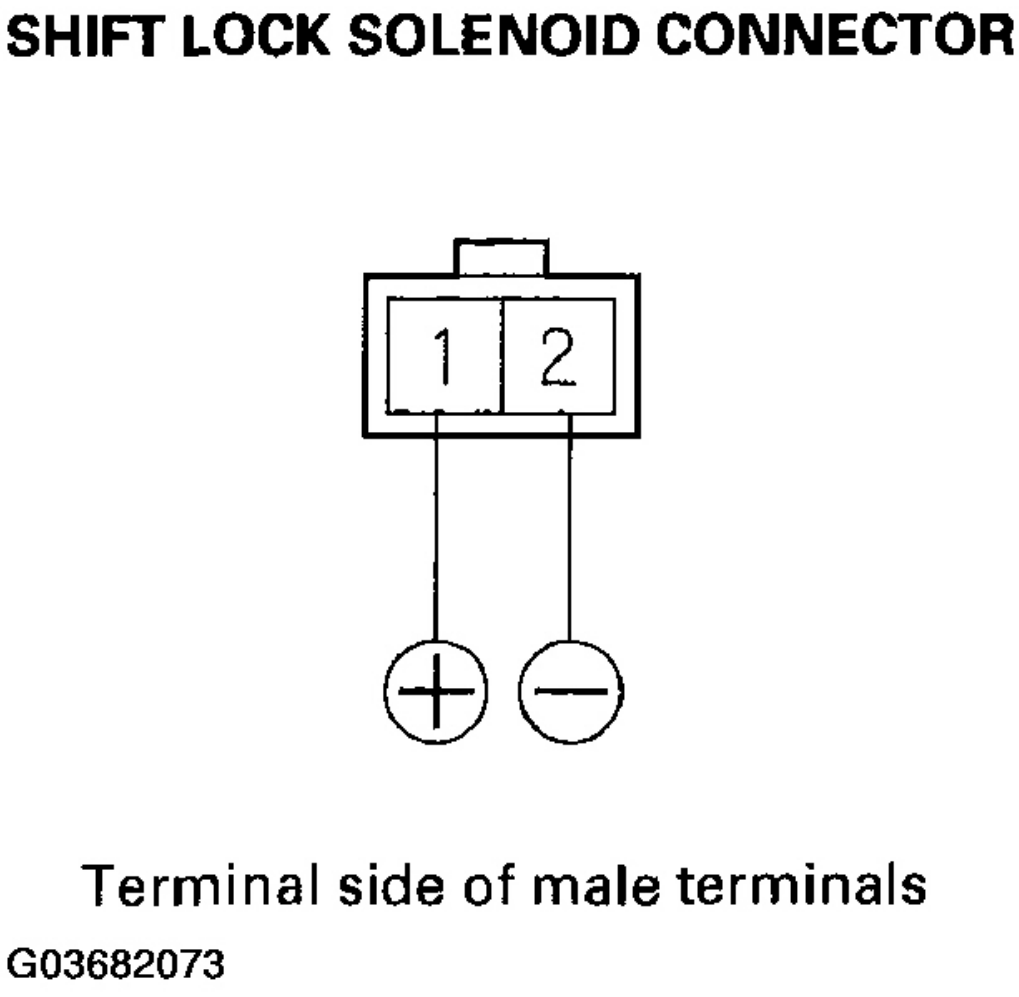


Fig. 372: Checking Shift Lock Solenoid Operation
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the shift lock solenoid operate properly?

YES -Check for loose gauge assembly connectors. If necessary, substitute a known-good gauge assembly and recheck.

NO -Replace the shift lock solenoid.

KEY INTERLOCK SYSTEM CIRCUIT TROUBLESHOOTING

1. Disconnect steering lock assembly 5P connector.
2. Turn the ignition switch to ACC (I) or ON (II).
3. Connect the battery positive terminal to steering lock assembly 5P connector terminal No. 4, and connect the battery negative terminal to connector terminal No. 5.

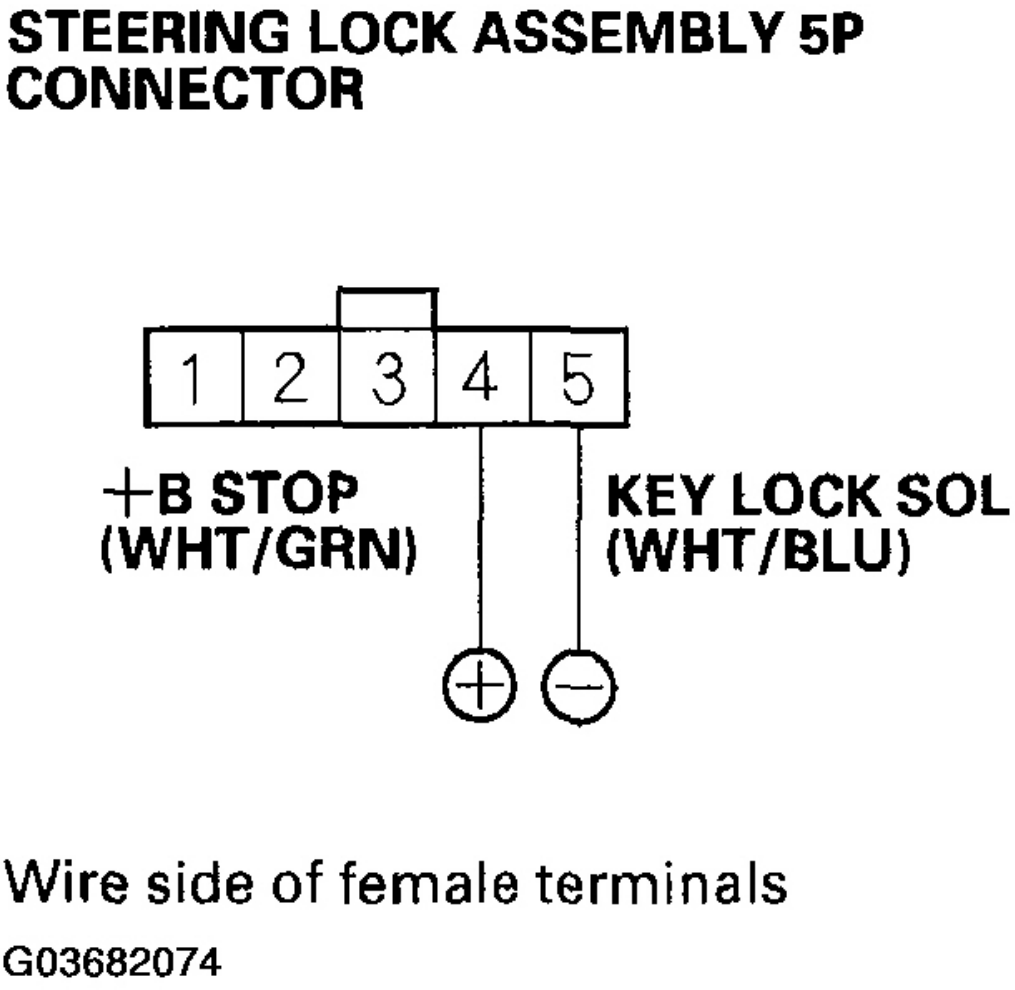


Fig. 373: Connecting Battery Positive Terminal To Steering Lock Assembly 5P Connector Terminal 4 And Battery Negative Terminal To Terminal 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Check the key interlock solenoid operation. A clicking sound should be heard when pushing the ignition key in, and you should not be able to turn it to OFF (0) position.

   Does the key interlock solenoid operate properly?

YES -Go to step 5.

NO -Faulty key interlock solenoid/switch. Replace the ignition key cylinder/steering lock assembly.

5. Check for continuity between steering lock assembly 5P connector terminals No. 3 and No. 4.

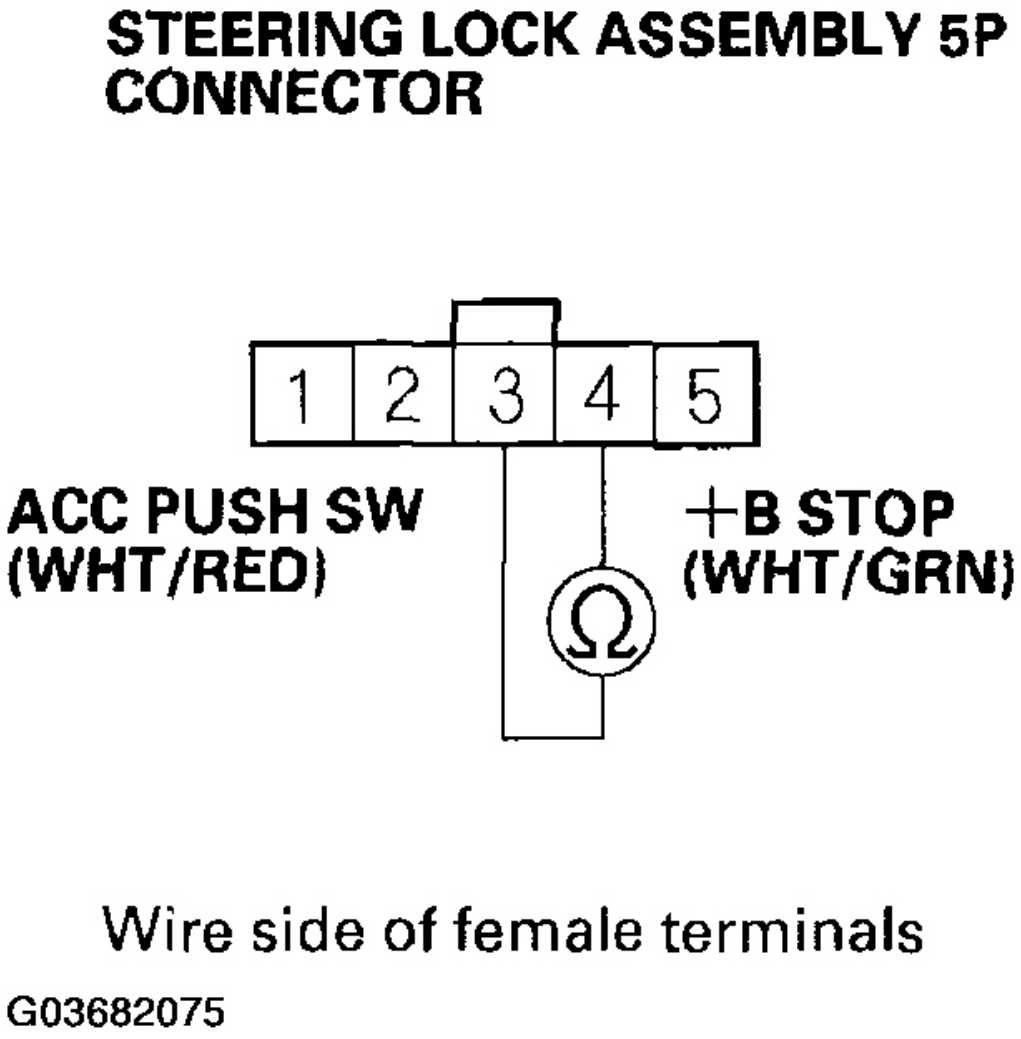


Fig. 374: Checking Continuity Between Steering Lock Assembly 5P Connector Terminals 3 And 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity while pushing the key in, and no continuity when the key is released?

YES -Go to step 6.

NO -Replace the ignition key cylinder/steering lock assembly.

6. Measure the voltage between steering lock assembly 5P connector terminal No. 4 and body ground.

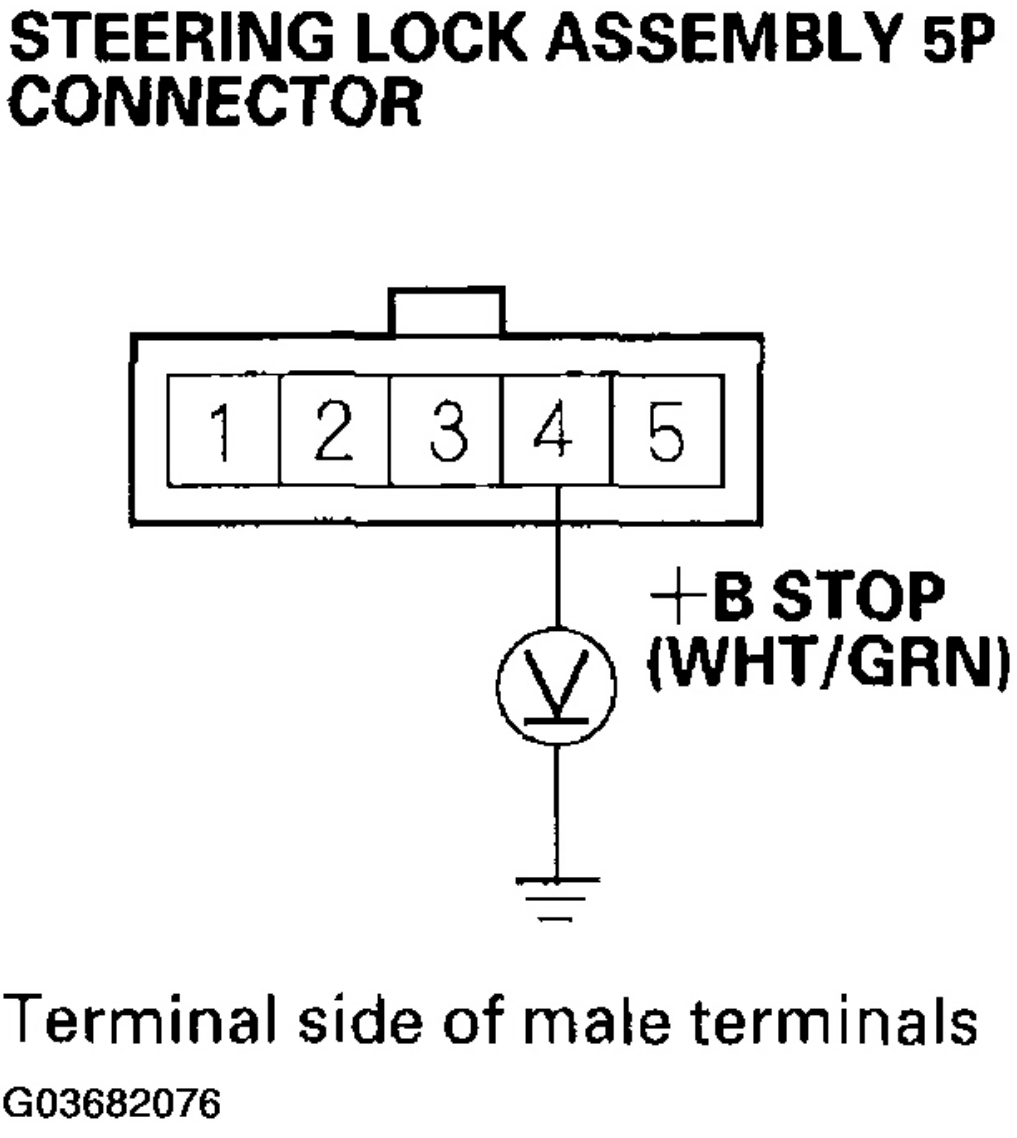


Fig. 375: Measuring Voltage Between Steering Lock Assembly 5P Connector Terminal 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 7.

NO -Check for a blown No. 6 (10 A) fuse in the under-hood fuse/relay box. If the fuse is OK, repair open or short in the wire between steering lock assembly 5P connector terminal No. 4 and the under-hood fuse/relay box.

7. Measure the voltage between steering lock assembly 5P connector terminals No. 3 and No. 4. (shift lever must be in the P position)

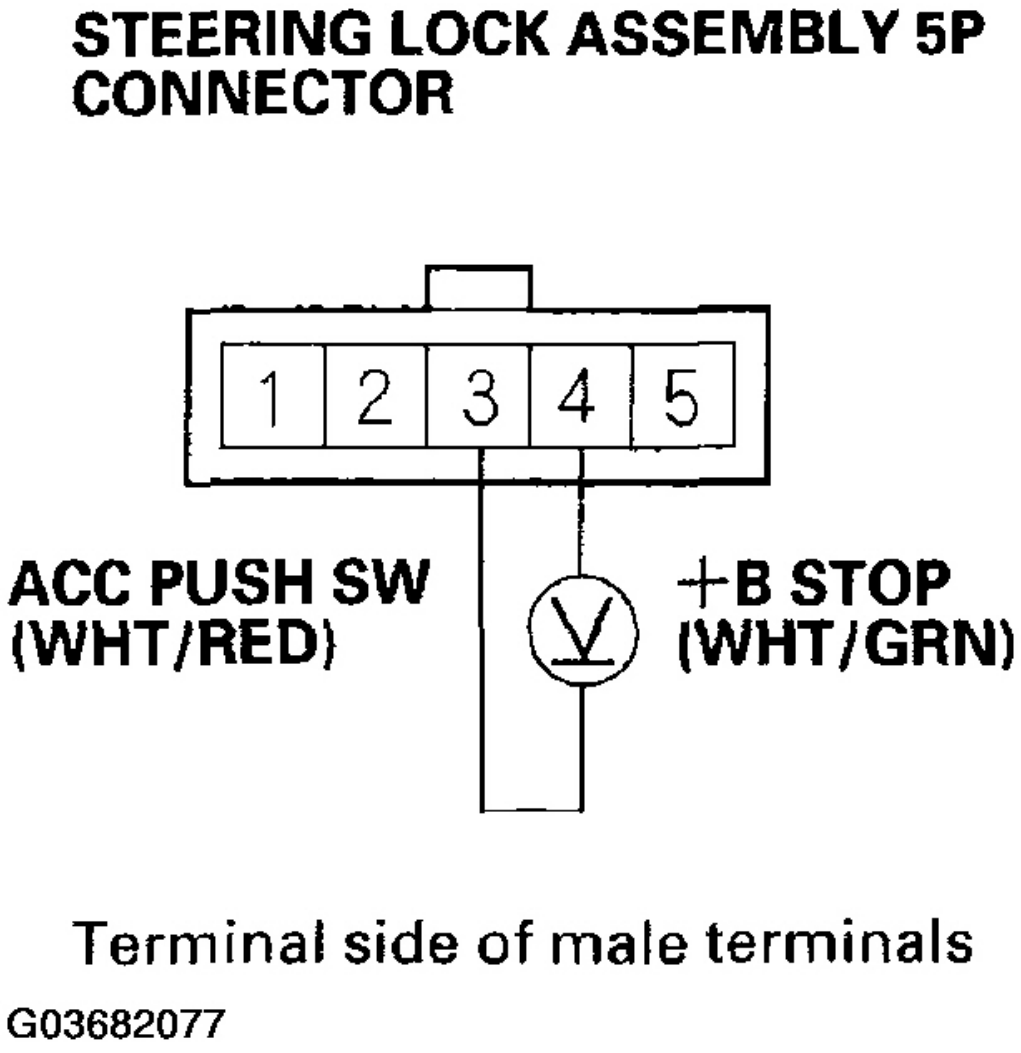


Fig. 376: Measuring Voltage Between Steering Lock Assembly 5P

Connector Terminals 3 And 4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage when the shift lever is in the P position, and 0 V when the shift lever is out of the P position?

YES -Go to step 8.

NO -Check for an open or a short in the wire between steering lock assembly connector terminal No. 3 and the gauge assembly. If the wire is OK, check loose terminal fit in the gauge assembly connectors. If necessary, substitute a known-good gauge assembly and recheck.

8. Shift the shift lever back to the P position, and measure the voltage between steering lock assembly connector terminals No. 4 and No. 5.

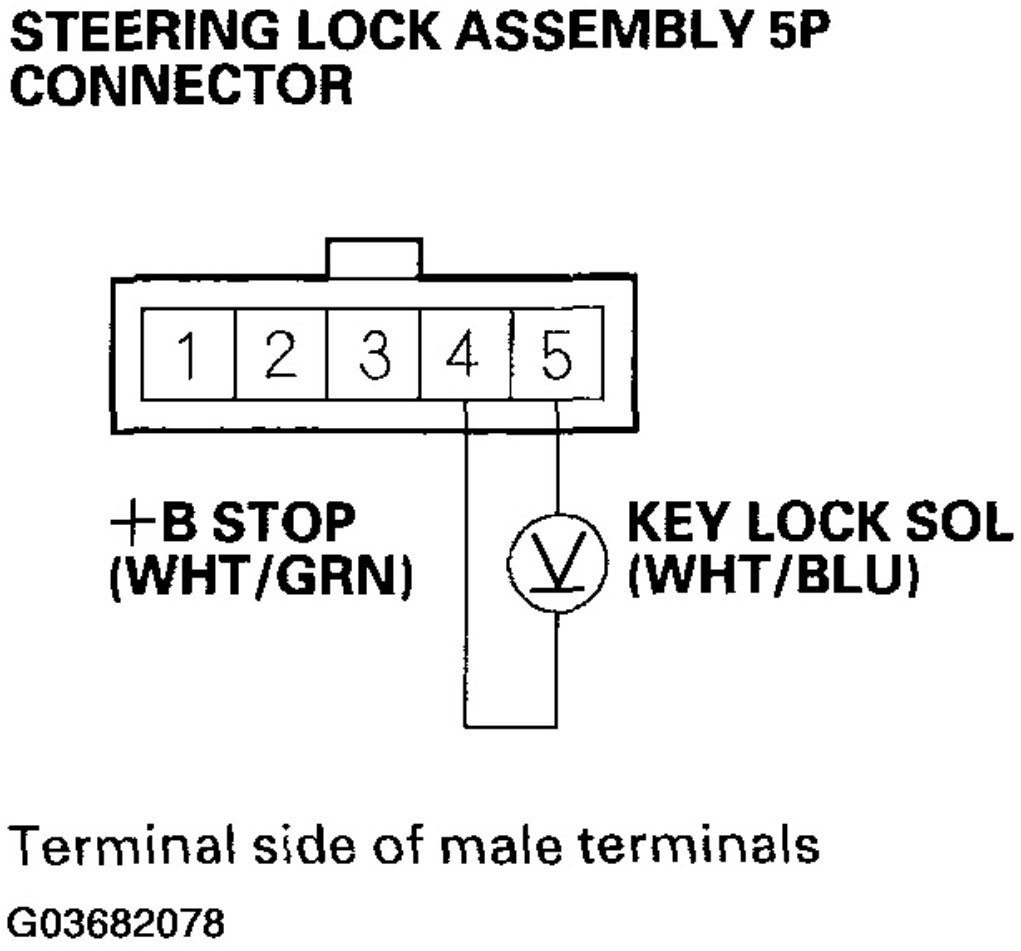


Fig. 377: Measuring Voltage Between Steering Lock Assembly Connector Terminals 4 And 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage when the shift lever is in the P position, and 0 V when the shift lever is out of the P position?

YES -Check for loose terminal fit in the gauge assembly connectors, substitute a known-good gauge assembly and recheck.

NO -Go to step 9.

9. Remove the front console (see **FRONT CONSOLE**

REMOVAL/INSTALLATION).

10. Disconnect the park pin switch connector.
11. Check for continuity between park pin switch connector terminals No. 3 and No. 4 while you move the shift lever in and out of the P position.

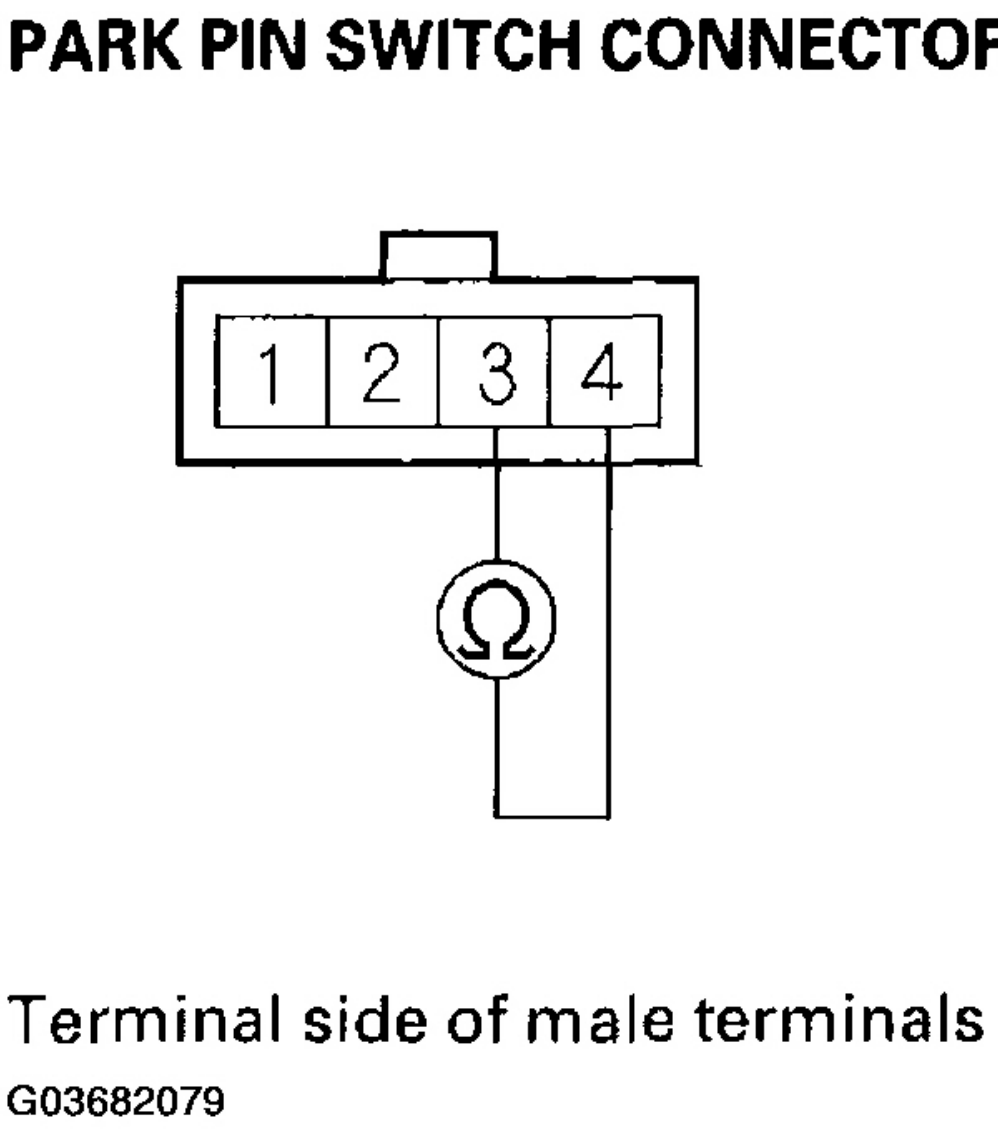


Fig. 378: Checking Continuity Between Park Pin Switch Connector Terminals 3 And 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity with the shift lever in the P position, and no continuity with the shift lever is out of the P position?

YES -Repair an open or short in the wire between steering lock assembly connector terminal No. 5 and park pin switch connector, and repair open in the wire between the park pin switch connector and ground.

NO -Replace the park pin switch.

SHIFT LOCK SOLENOID TEST

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Disconnect the shift lock solenoid connector.

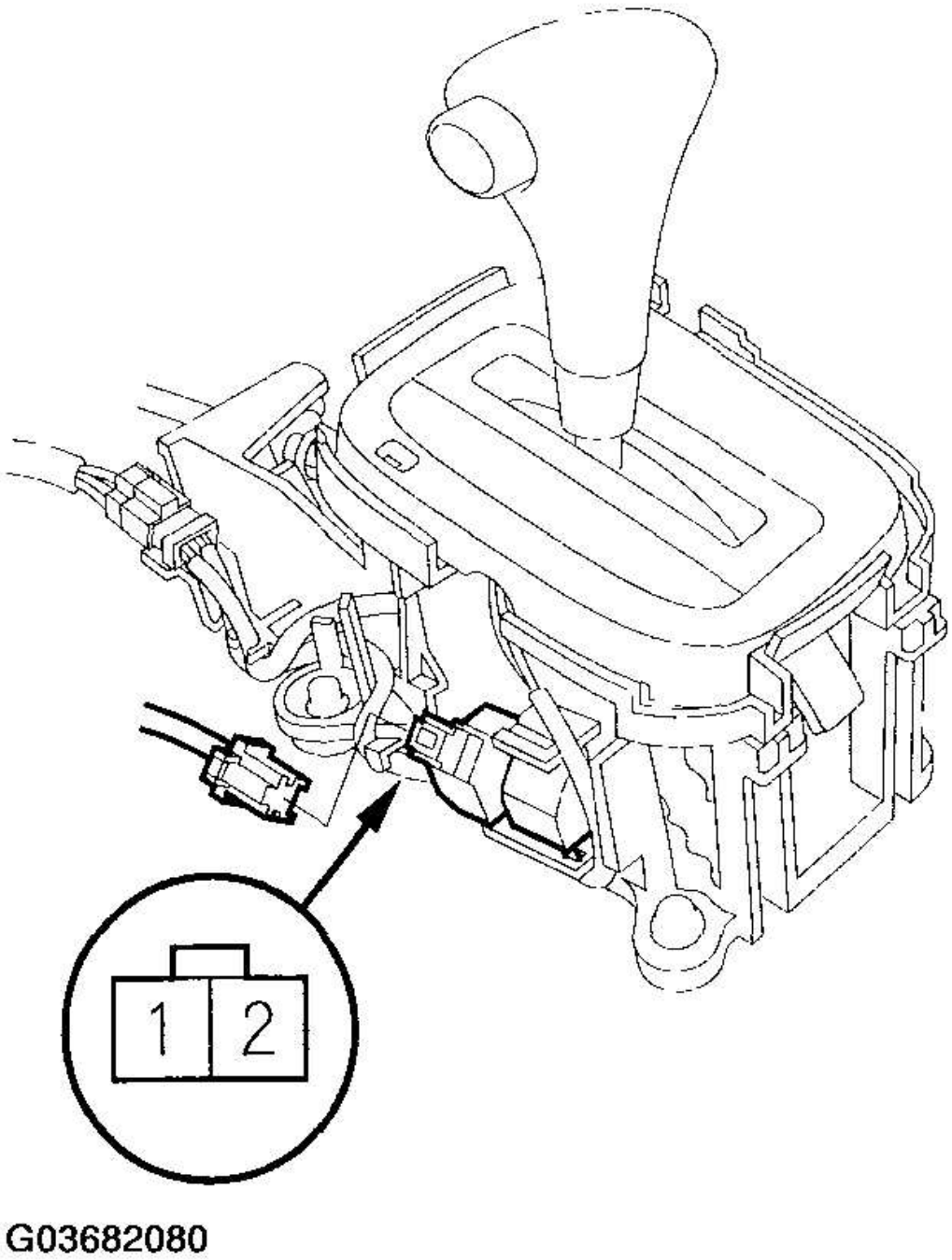


Fig. 379: Disconnecting Shift Lock Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Connect the battery positive terminal to shift lock solenoid connector terminal No. 1, and connect the battery negative terminal to connector terminal No. 2. Do not connect the battery positive terminal to connector terminal No. 2 or you will damage the diode inside the shift lock solenoid.
4. Check that the shift lever can be moved from the P position. Release the battery terminals from the solenoid connector. Move the shift lever back to the P position, and check that it locks securely.
5. Check that the shift lock releases when the shift lock release is pushed, and check that it locks when the shift lock release is released.
6. If the shift lock solenoid does not work properly, replace it.

SHIFT LOCK SOLENOID REPLACEMENT

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Disconnect the shift lock solenoid connector.
3. Pry the shift lock solenoid clamp (A) with a screwdriver, and remove it.

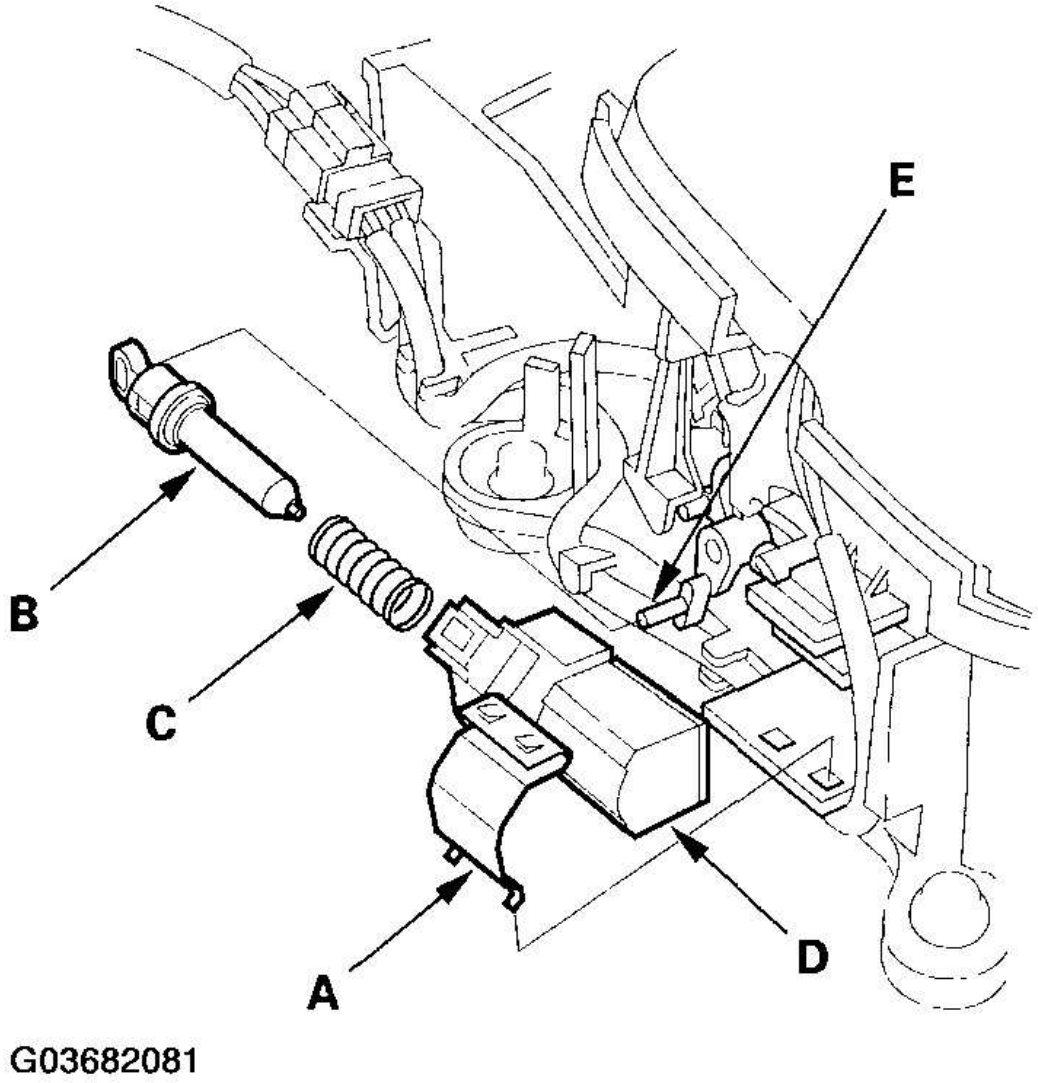


Fig. 380: Removing Shift Lock Solenoid
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the shift lock solenoid.
5. Install the shift lock solenoid plunger (B) and plunger spring (C) in the new shift lock solenoid (D).
6. Install the shift lock solenoid by aligning the joint of the shift lock solenoid plunger with the tip of the shift lock stop (E).

7. Secure the shift lock solenoid with the solenoid clamp.
8. Connect the shift lock solenoid connector.
9. Install the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).

PARK PIN SWITCH TEST

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Disconnect the park pin switch connector.

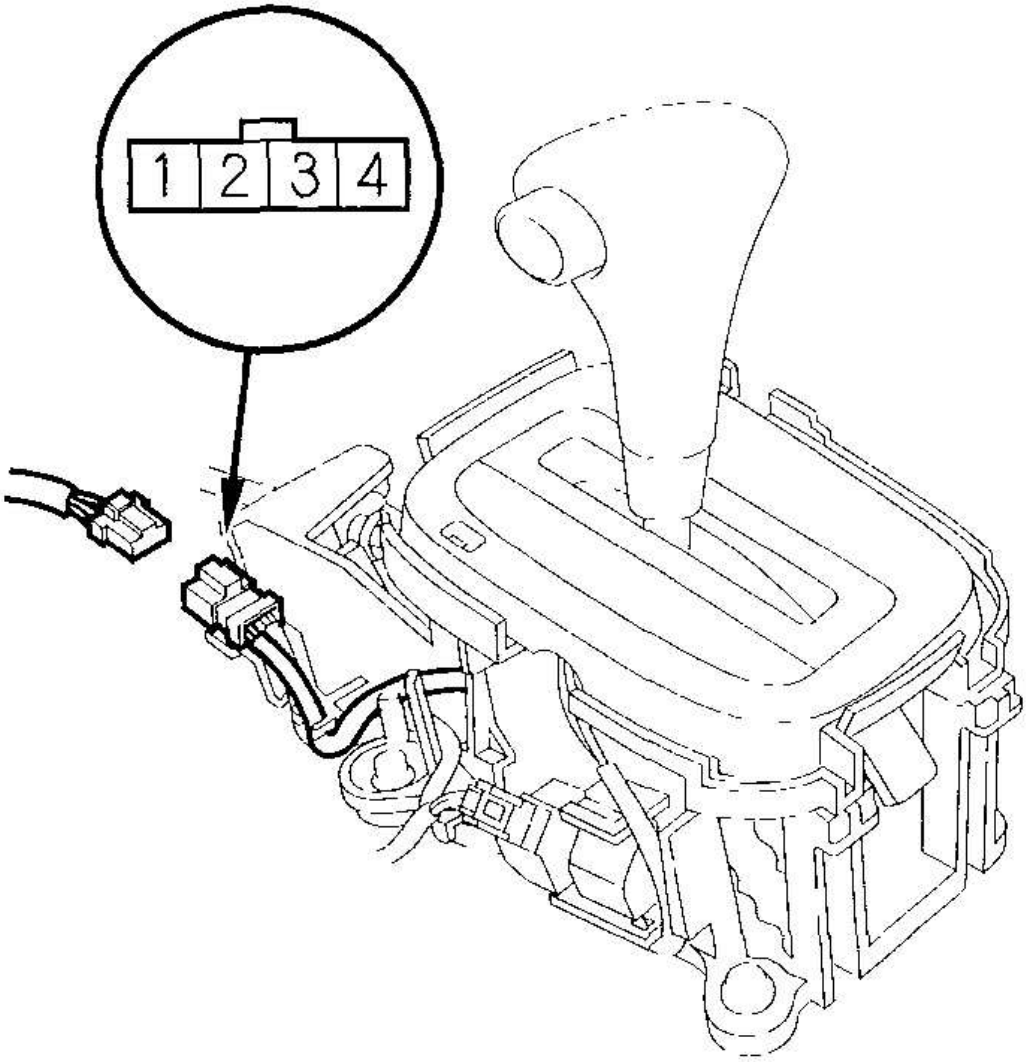


Fig. 381: Disconnecting Park Pin Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Shift to the P position, then check for continuity between connector terminals No. 3 and No. 4. There should be continuity.
4. If there is no continuity between connector terminals No. 3 and No. 4, replace the parking pin switch.

5. Shift out of the P position, and check for continuity between connector terminals No. 3 and No. 4. There should be no continuity.
6. If there is continuity between connector terminals No. 3 and No. 4, replace the park pin switch.

PARK PIN SWITCH REPLACEMENT

1. Remove the front console (see **FRONT CONSOLE REMOVAL/INSTALLATION**).
2. Remove the A/T gear position indicator panel light, and remove the bulb (A) from the socket (B).

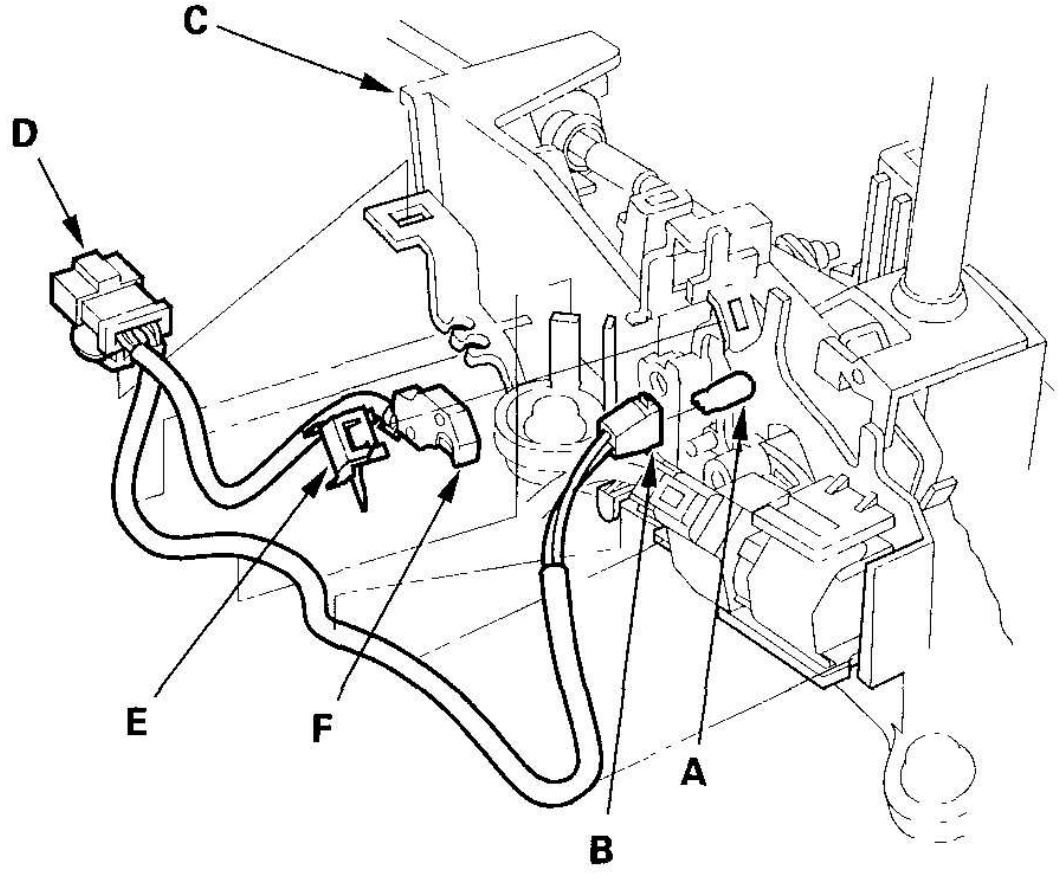


Fig. 382: Removing Park Pin Switch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Separate the A/T gear position indicator panel from the shift lever bracket base (C).
4. Disconnect the park pin switch connector (D), and remove it from the bracket base.
5. Remove the park pin switch clamp (E) and the park pin switch (F).
6. Install the new park pin switch in the shift lever bracket base, and install the park pin switch clamp to secure it.
7. Install the removed parts in the reverse order of removal.

TRANSMISSION LOWER VALVE BODY

ATF PAN, ATF STRAINER, AND LOWER VALVE BODY ASSEMBLY REMOVAL

1. Remove the bolt (A) securing the ATF cooler inlet line (B).

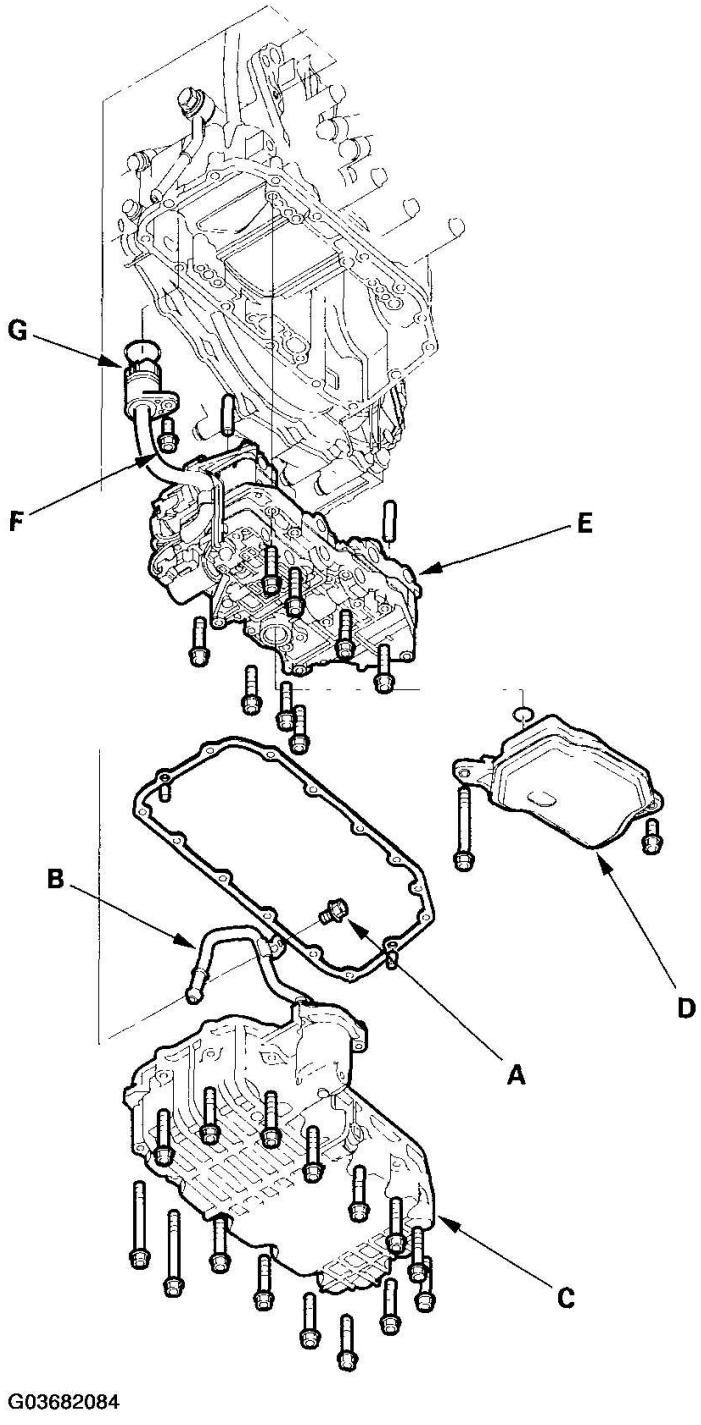


Fig. 383: Removing ATF Cooler Inlet Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the ATF pan (C) (15 bolts).
3. Remove the ATF strainer (D).
4. Remove the lower valve body assembly (E) mounting bolts.
5. Remove the bolt (F) securing the solenoid harness connector (G) with holding the lower valve body assembly, and remove the connector and valve body assembly.
6. Clean the inlet opening (A) of the ATF strainer (B) thoroughly with compressed air, then check that it is in good condition, and that the inlet opening is not clogged.

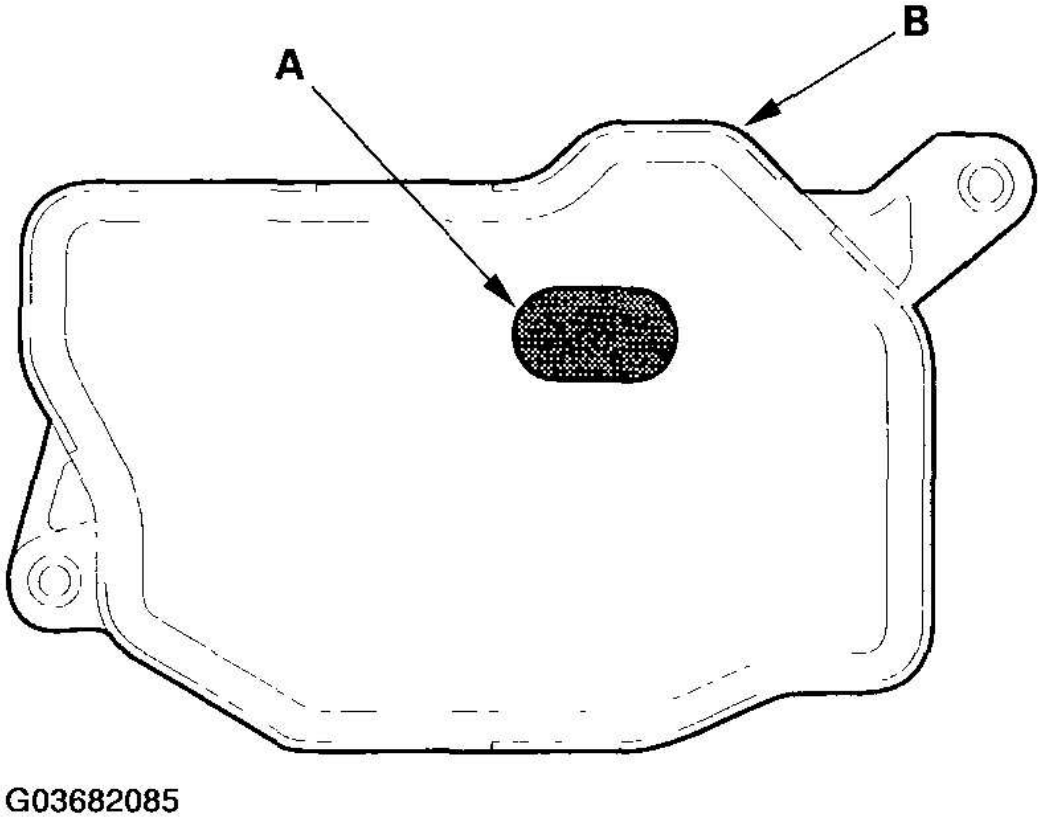


Fig. 384: Identifying Inlet Opening And ATF Strainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Test the ATF strainer by pouring clean CVT Fluid through the inlet opening.

and replace it if it is clogged or damaged.

CVT START CLUTCH PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

2004-2006 Models:

1. Disconnect the CVT start clutch pressure control valve connector (A).

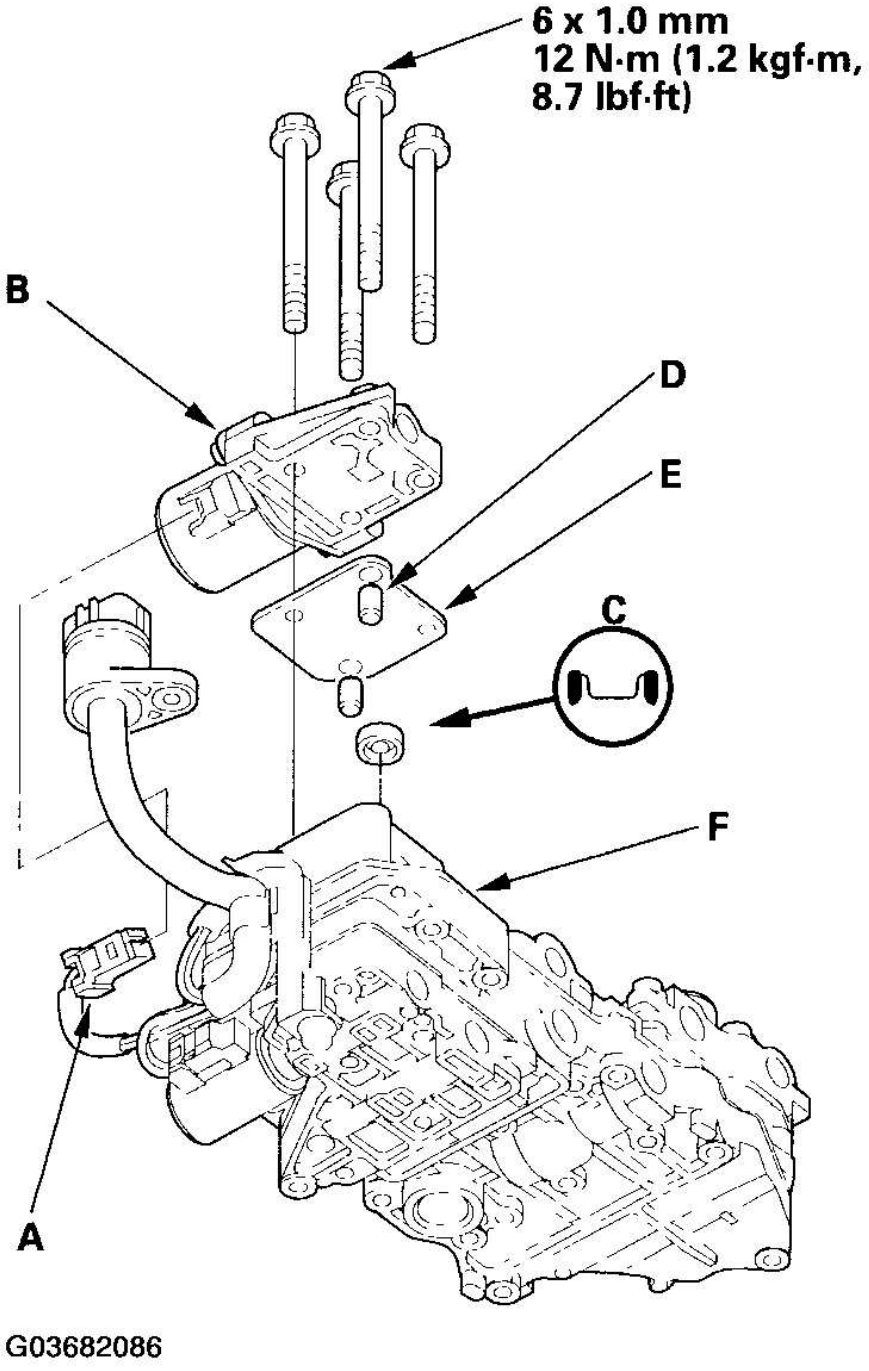


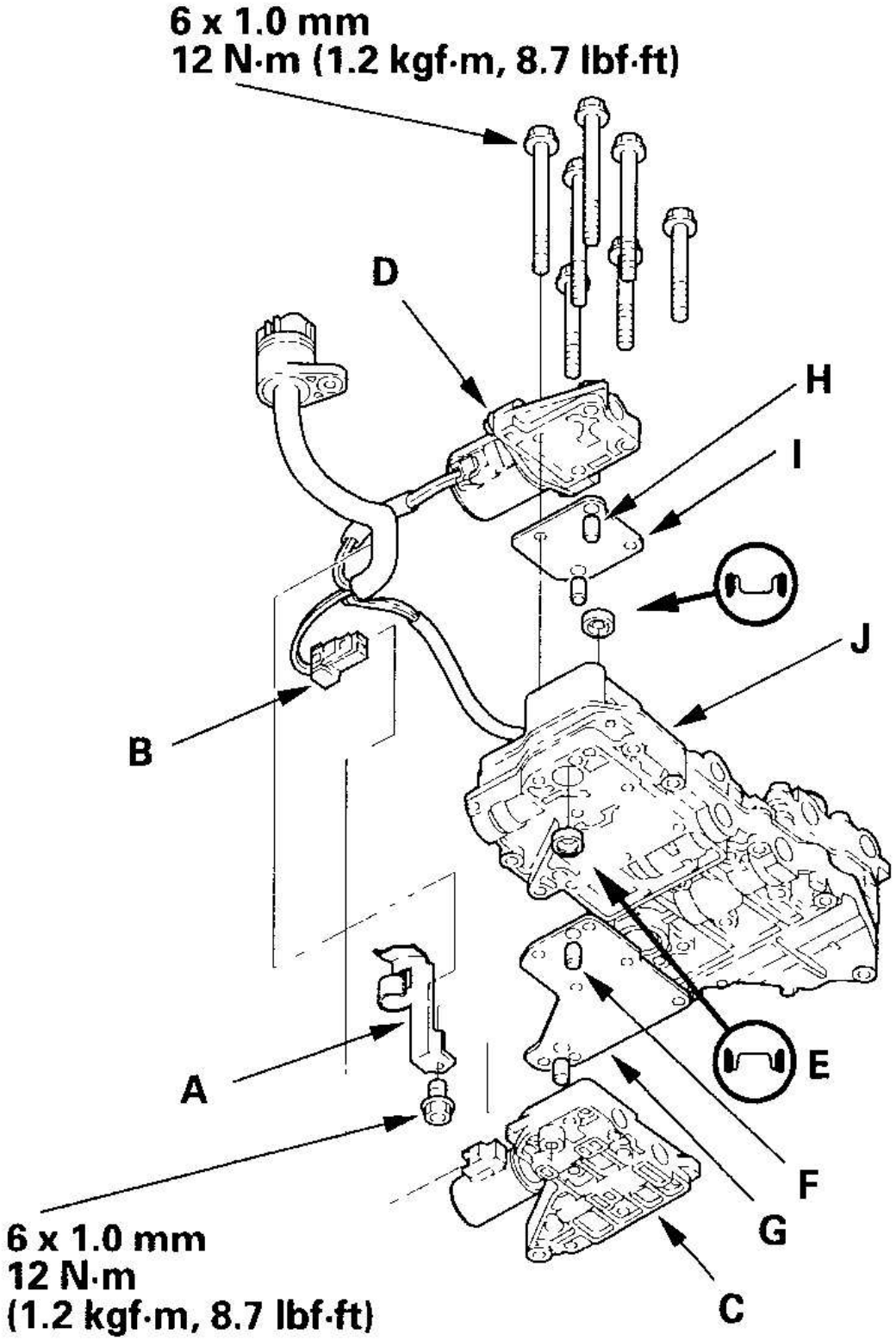
Fig. 385: Identifying Loosening Torque Of CVT Start Clutch Pressure Control Valve Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the CVT start clutch pressure control valve (B).
3. Check that the filter (C) is in good condition, replace it if it is clogged or damaged.
4. Install the CVT start clutch pressure control valve with the dowel pins (D) and separator plate (E) on the lower valve body (F).
5. Connect the CVT start clutch pressure control valve connector.

CVT DRIVE PULLEY PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

2004-2006 Models:

1. Remove the solenoid harness clamp (A).


6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
D
H
I
J
B
A
E
F
G
C
6 x 1.0 mm
12 N·m
(1.2 kgf·m, 8.7 lbf·ft)

G03682087

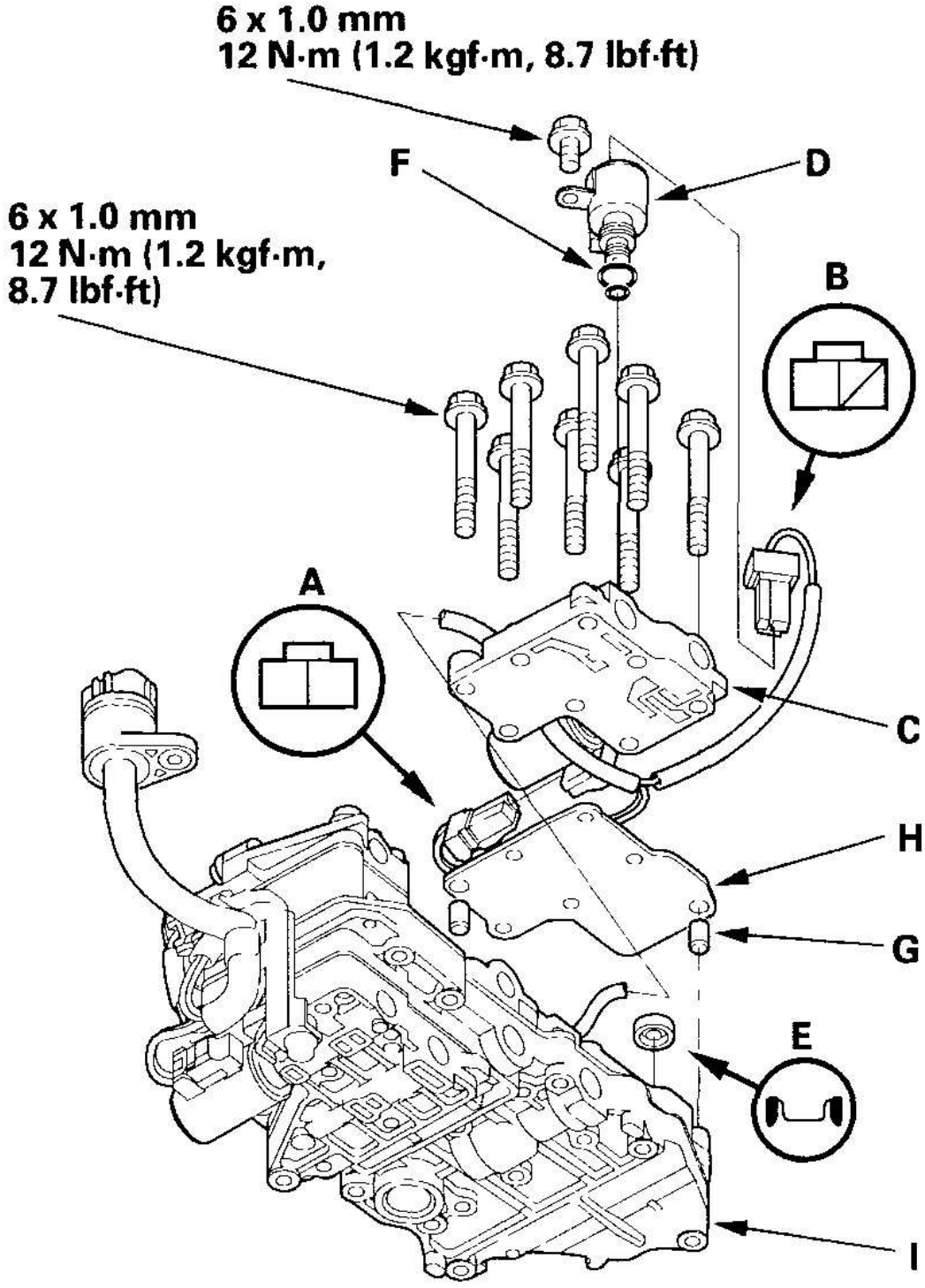
Fig. 386: Removing CVT Drive Pulley Pressure Control Valve And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the CVT drive pulley pressure control valve connector (B).
3. Remove the seven bolts, and remove the CVT drive pulley pressure control valve (C). The CVT start clutch pressure control valve (D) also be removed, it uses those four bolts.
4. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
5. Install the CVT drive pulley pressure control valve with the dowel pins (F) and separator plate (G), and CVT start clutch pressure control valve with the dowel pins (H) and separator plate (I) on the lower valve body (J).
6. Connect the CVT drive pulley pressure control valve connector.
7. Install the solenoid harness clamp.

CVT DRIVEN PULLEY PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

2004-2006 Models:

1. Disconnect the CVT driven pulley pressure control valve connector (A) and the inhibitor solenoid connector (B).


6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
F
D
6 x 1.0 mm
12 N·m (1.2 kgf·m,
8.7 lbf·ft)
B
A
C
H
G
E
I

G03682088

Fig. 387: Disconnecting CVT Driven Pulley Pressure Control Valve Connector And Inhibitor Solenoid Connector With Specified Torques
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the CVT driven pulley pressure control valve (C), and remove the inhibitor solenoid (D) from the CVT driven pulley pressure control valve.
3. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
4. Replace the O-rings (F) on the inhibitor solenoid, if necessary.
5. Install the inhibitor solenoid on the new CVT driven pulley pressure control valve.
6. Install the CVT driven pulley pressure control valve with the dowel pins (G) and separator plate (H) on the lower valve body (I).
7. Connect the CVT driven pulley pressure control valve connector and the inhibitor solenoid connector.

INHIBITOR SOLENOID REMOVAL AND INSTALLATION

2004-2006 Models:

1. Disconnect the inhibitor solenoid connector (A).

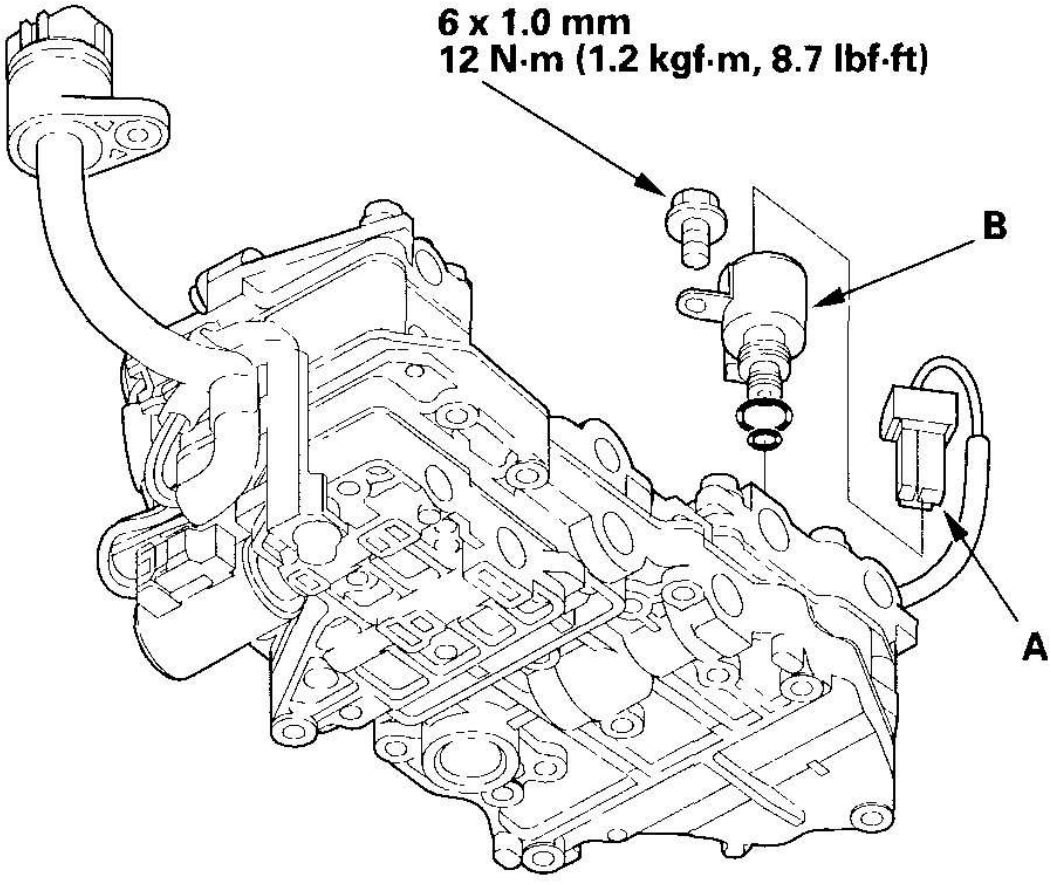


Fig. 388: Identifying Loosening Torque Of Inhibitor Solenoid Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the inhibitor solenoid (B).
3. Install the inhibitor solenoid on the CVT driven pulley pressure control valve.
4. Connect the inhibitor solenoid connector.

TRANSMISSION HOUSING/FLYWHEEL HOUSING

FLYWHEEL HOUSING AND START CLUTCH REMOVAL

Exploded View

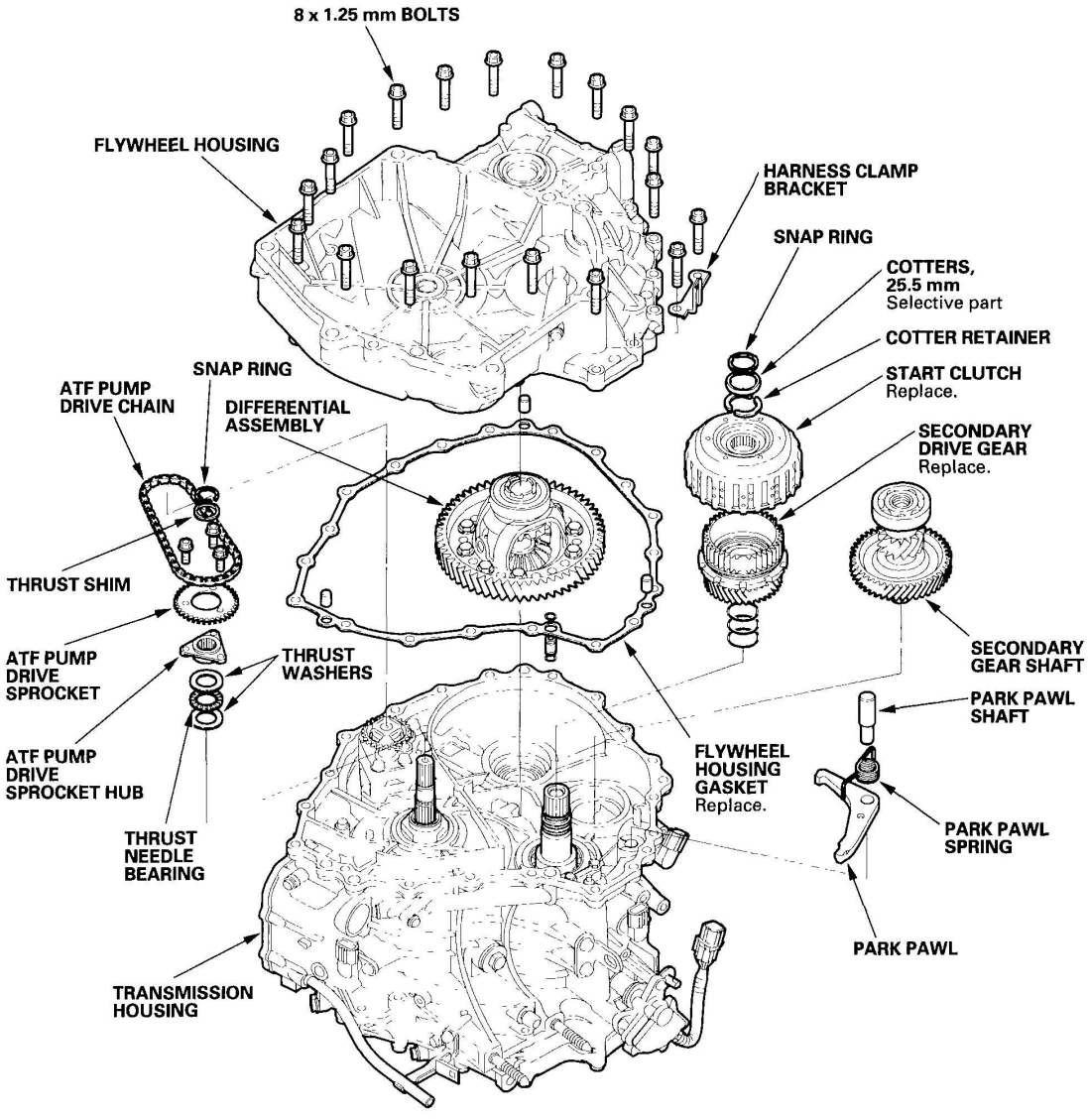


Fig. 389: Exploded View Of Flywheel Housing And Start Clutch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Special Tools Required

Start clutch remover 07TAE-P4VA120

NOTE: Refer to the EXPLODED VIEW as needed during the following procedure.

1. Remove the flywheel housing (19 bolts).
2. Remove the differential assembly.
3. Remove the snap ring and thrust shim on the ATF pump drive sprocket, then remove the bolts securing the ATF pump drive sprocket.
4. Remove the ATF pump drive chain, then remove the ATF pump drive sprocket, sprocket hub, thrust washers and thrust needle bearing from the input shaft.
5. Remove the park pawl shaft, park pawl spring then and park pawl.
6. Remove the snap ring securing the start clutch, and remove the cotter retainer and the cotters.
7. Set the special tool on the start clutch (A), then attach the pawl (B) of the special tool to the park gear (C) securely. Do not place the pawl of the special tool on the start clutch guide. If the pawl contacts the start clutch guide, the clutch guide may be damaged. Do not allow dust or other foreign particles to enter into the driven pulley shaft.

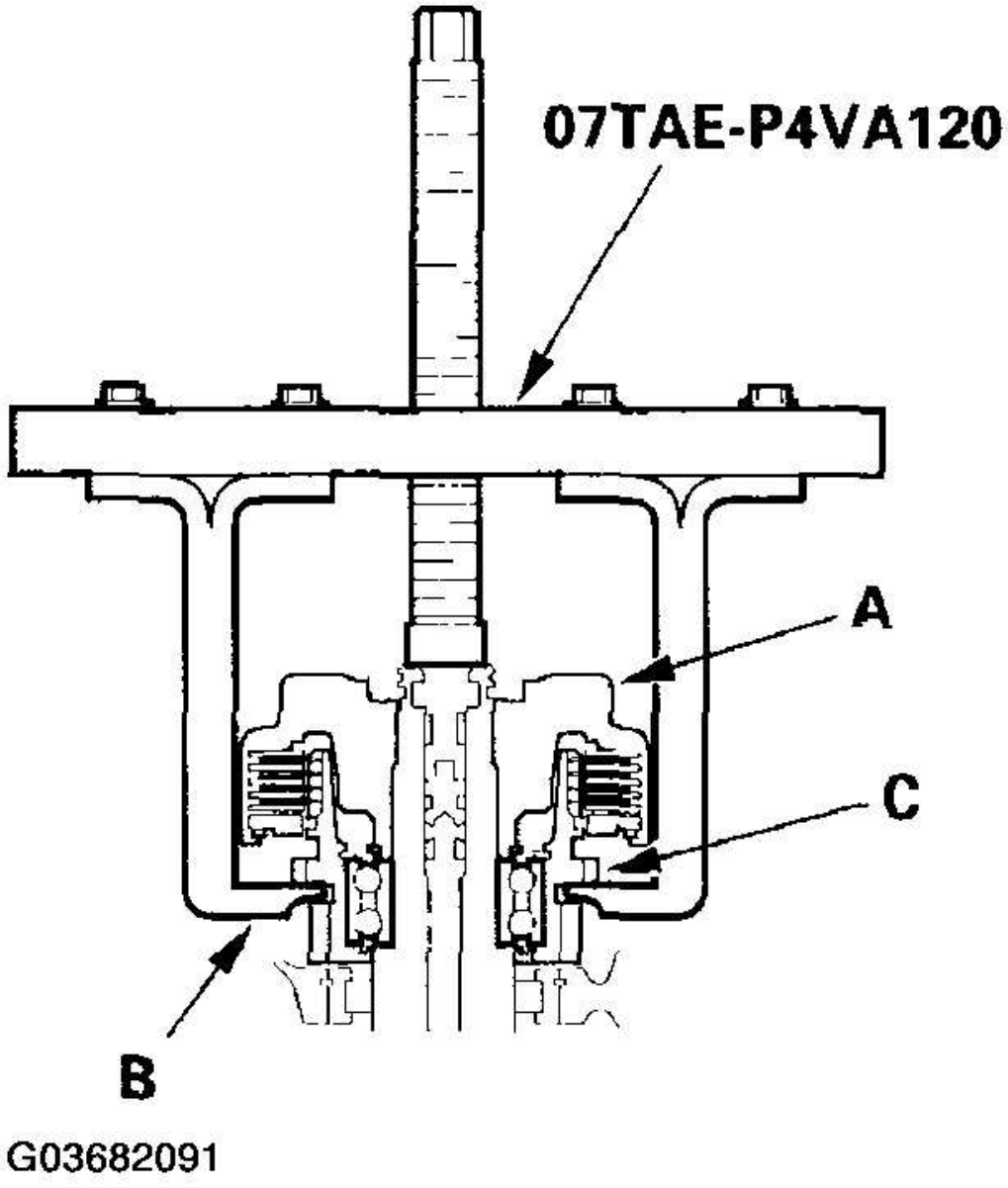


Fig. 390: Setting Special Tool On Start Clutch And Attaching Pawl Of Special Tool To Park Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the start clutch (A) and the secondary drive gear assembly (B) with

the special tool.

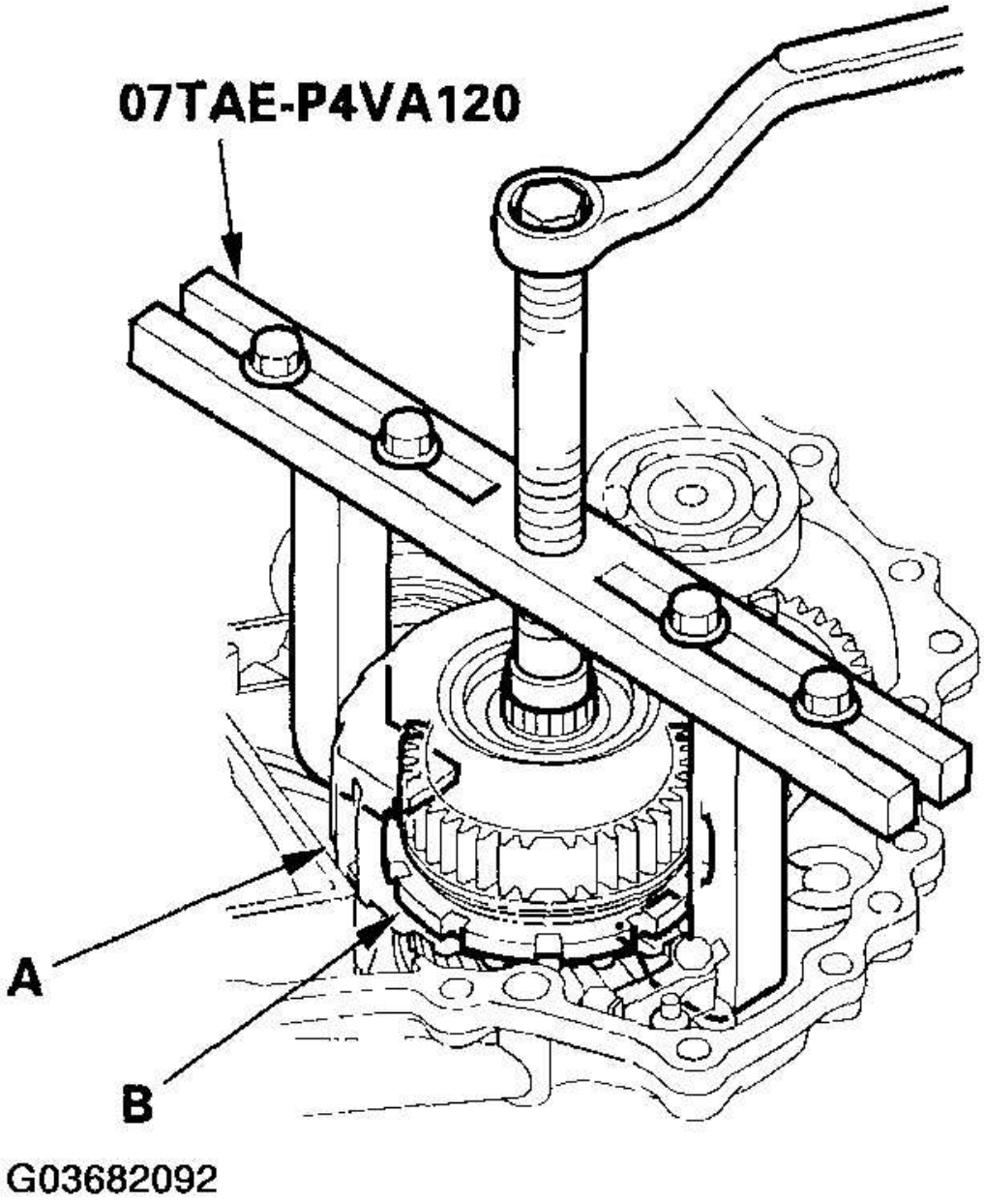


Fig. 391: Removing Start Clutch And Secondary Drive Gear Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the secondary gear shaft.
10. Remove the secondary drive gear from the start clutch.
11. Remove the sealing ring (A) from the secondary drive gear (B), and clean it; the ring will be reinstalled on the new secondary drive gear when assembling the transmission.

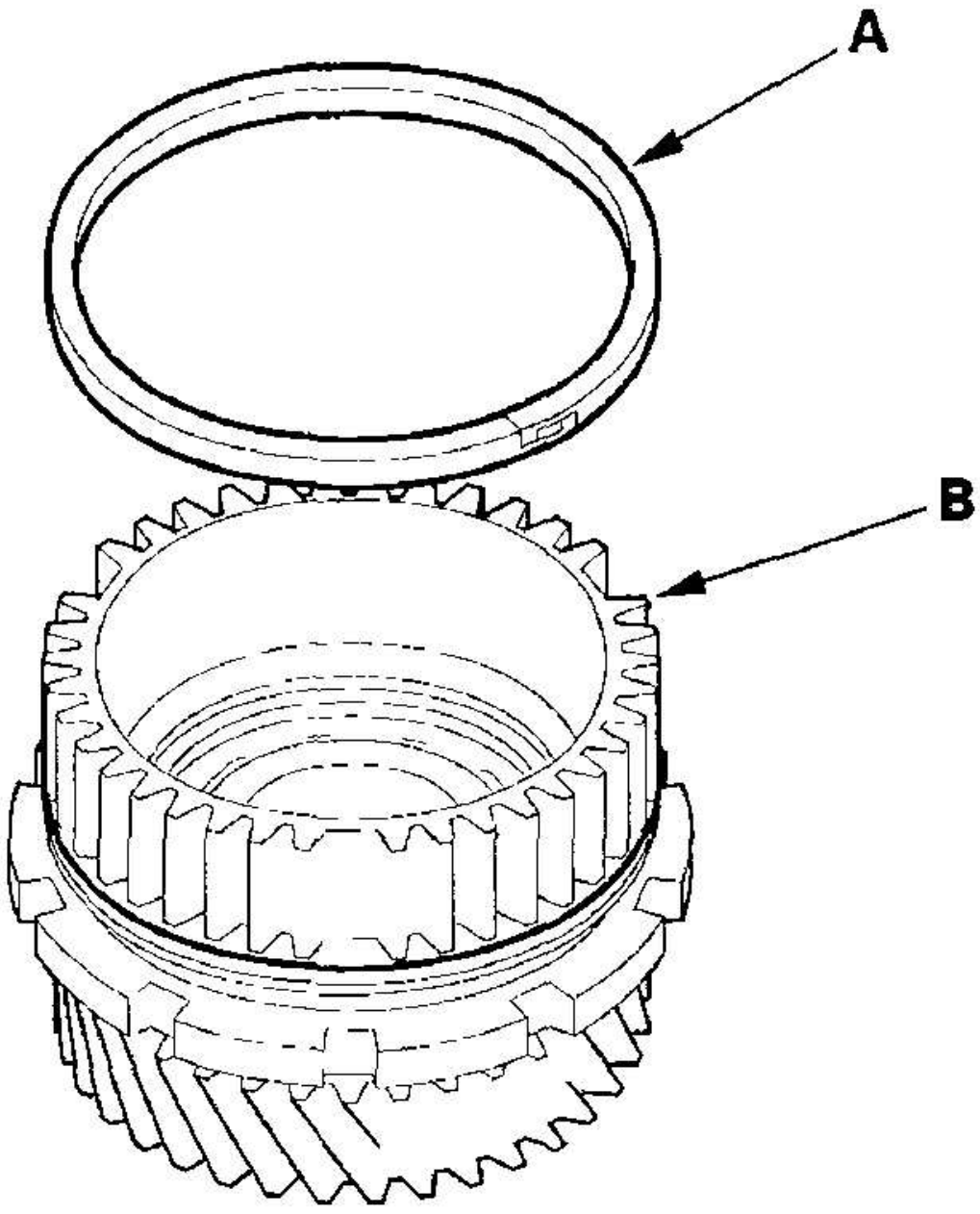


Fig. 392: Removing Sealing Ring From Secondary Drive Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

ATF PUMP REPLACEMENT

1. Remove the ATF pump drive sprocket mounting bolts, then remove the ATF pump drive chain.
2. Expand the snap ring under the ATF pump driven sprocket, and remove the ATF pump driven sprocket from the ATF pump.

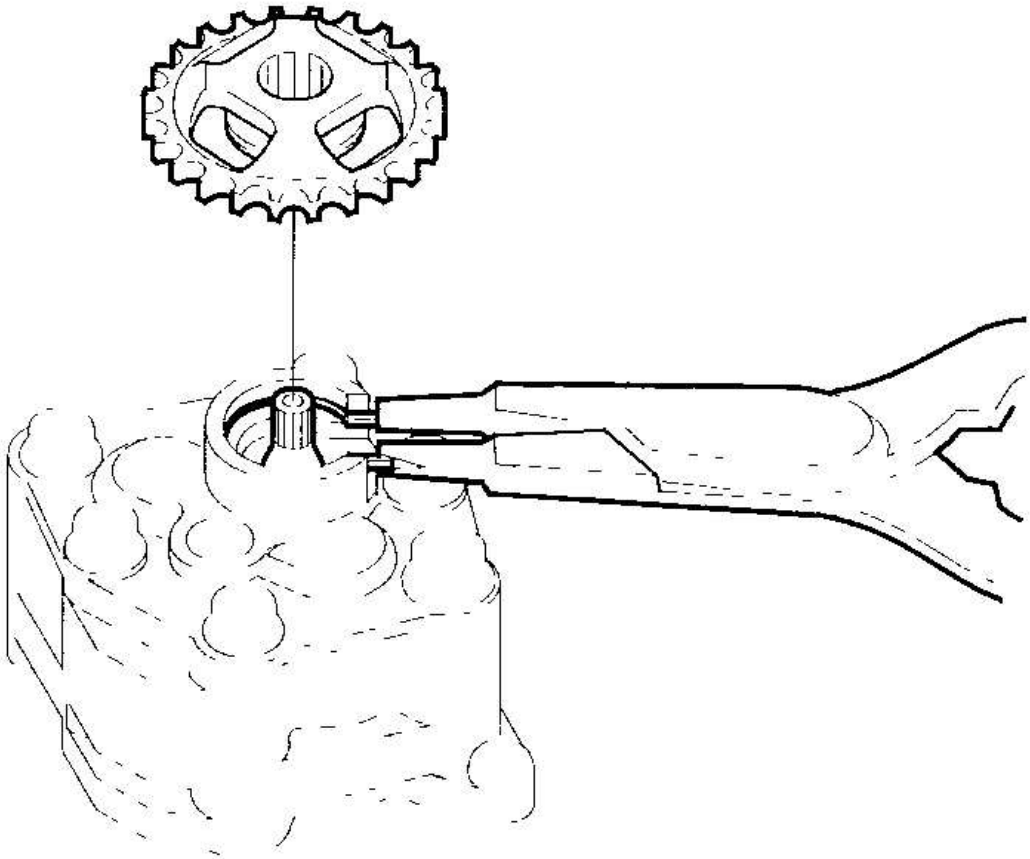


Fig. 393: Removing ATF Pump Driven Sprocket From ATF Pump
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the ATF pump from the transmission housing.

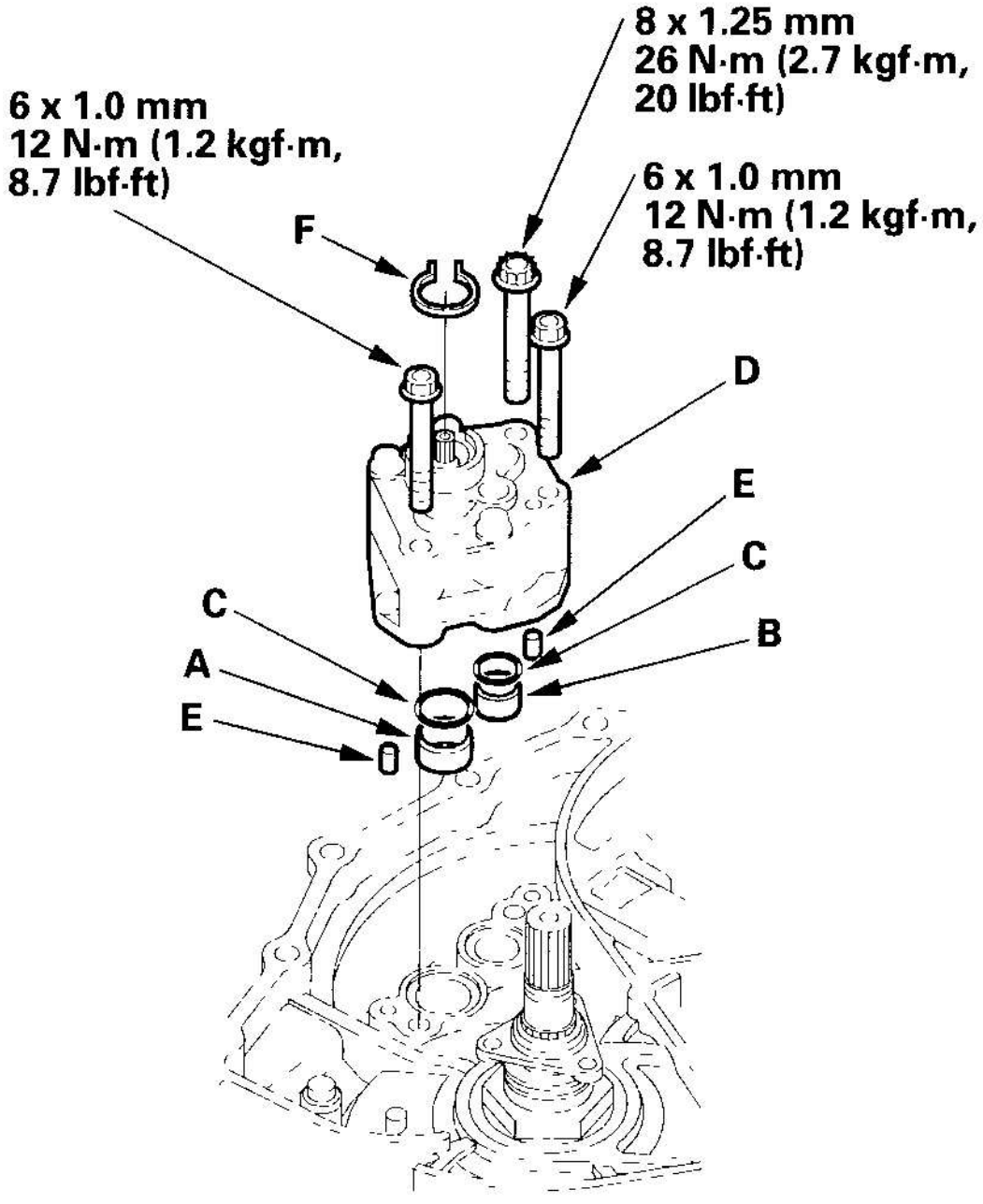


Fig. 394: Identifying Loosening Torque Of ATF Pump Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the 22 x 10 mm ATF pipe (A) and the 18 x 10 mm ATF pipe (B) in the

transmission housing, then install the new O-rings (C) over the ATF pipes.

5. Install the new ATF pump body (D) with the dowel pins (E). Do not pinch the O-rings.
6. Install the snap ring (F) in the snap ring groove.
7. Install the ATF pump driven sprocket.
8. Install the ATF pump drive chain and ATF pump drive sprocket.

DRIVEN PULLEY SHAFT BEARING REMOVAL/INSTALLATION

Special Tools Required

- Attachment, 72 x 75 mm 07746-0010600
- Driver 07749-0010000

NOTE: Coat all parts with CVT Fluid before assembly.

1. To remove the driven pulley shaft bearing from the transmission housing, expand the snap ring with the snap ring pliers, then push the bearing out.

NOTE: Do not remove the snap ring unless it is necessary to clean the groove in the housing.

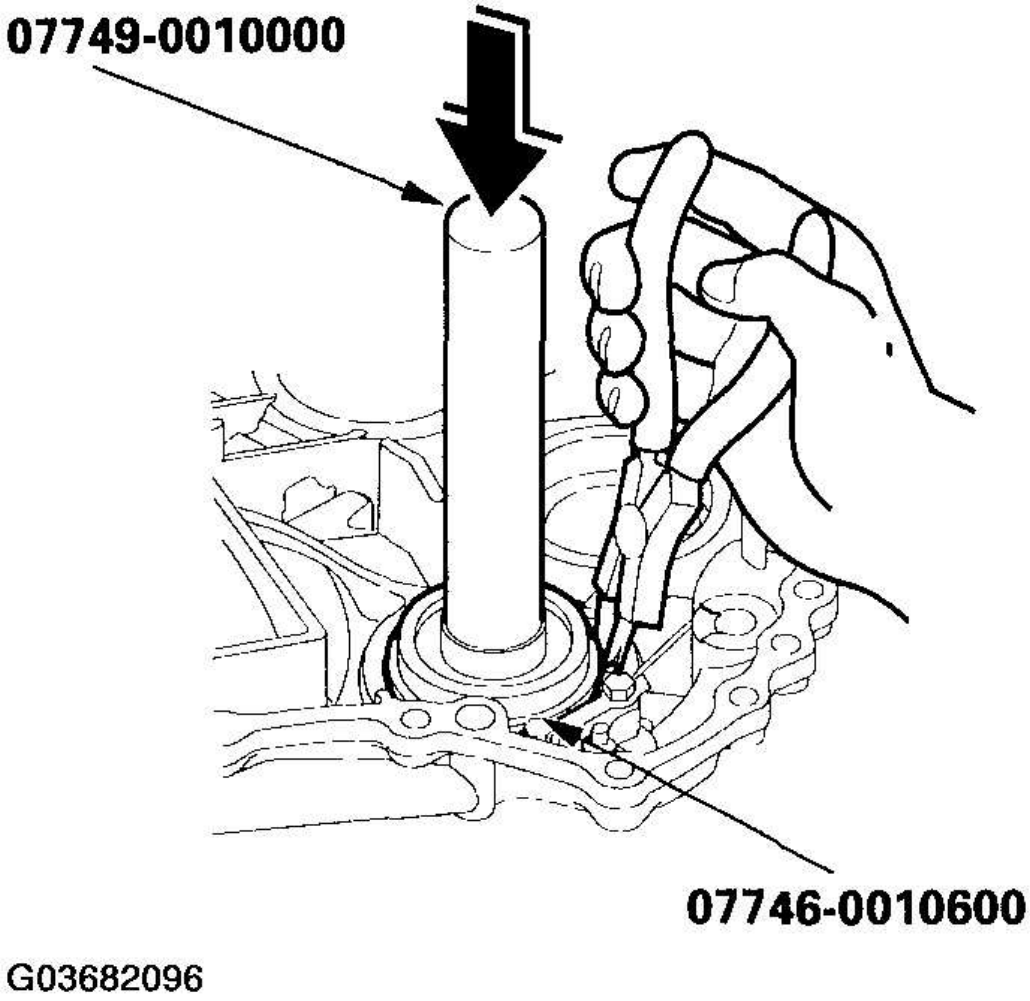
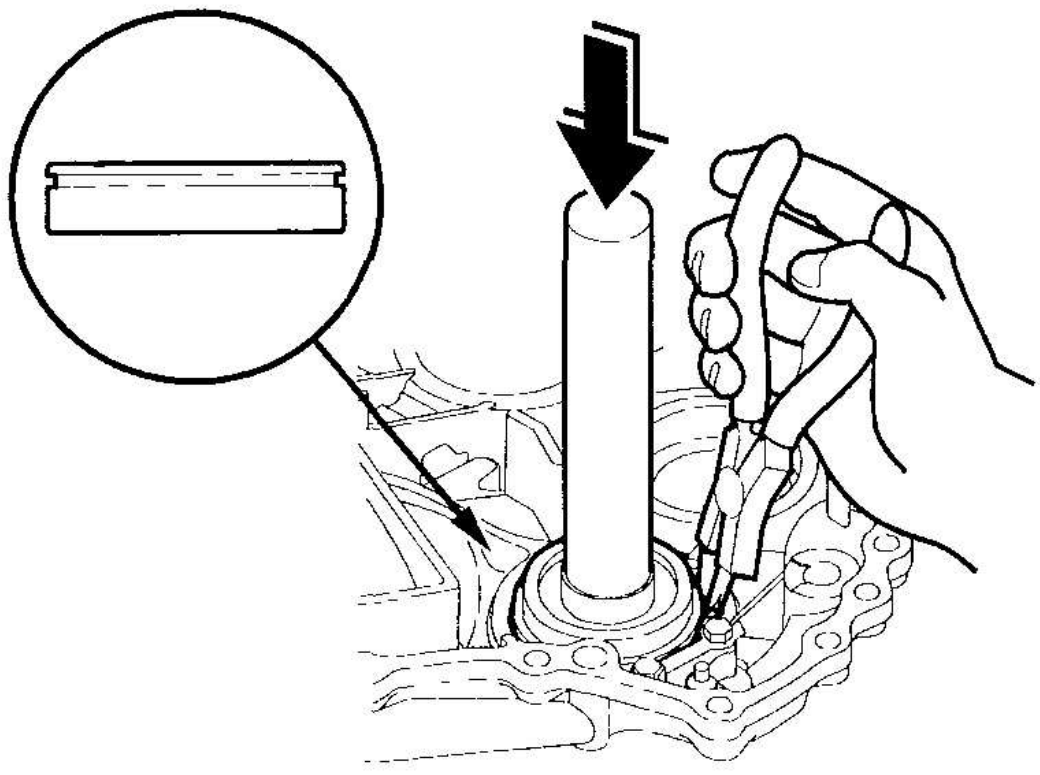


Fig. 395: Removing Driven Pulley Shaft Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the bearing in the direction shown.



G03682097

Fig. 396: Identifying Direction For Installing Drive Pulley Shaft Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Expand the snap ring with the snap ring pliers, and install the bearing part-way into the housing.
4. Release the pliers, then push the bearing down into the housing until the snap ring snaps in place around it.
5. After installing the bearing verify that the snap ring (A) is seated in the bearing and housing groove, and that the ring end gap (B) is 0-9 mm (0-0.35 in.).

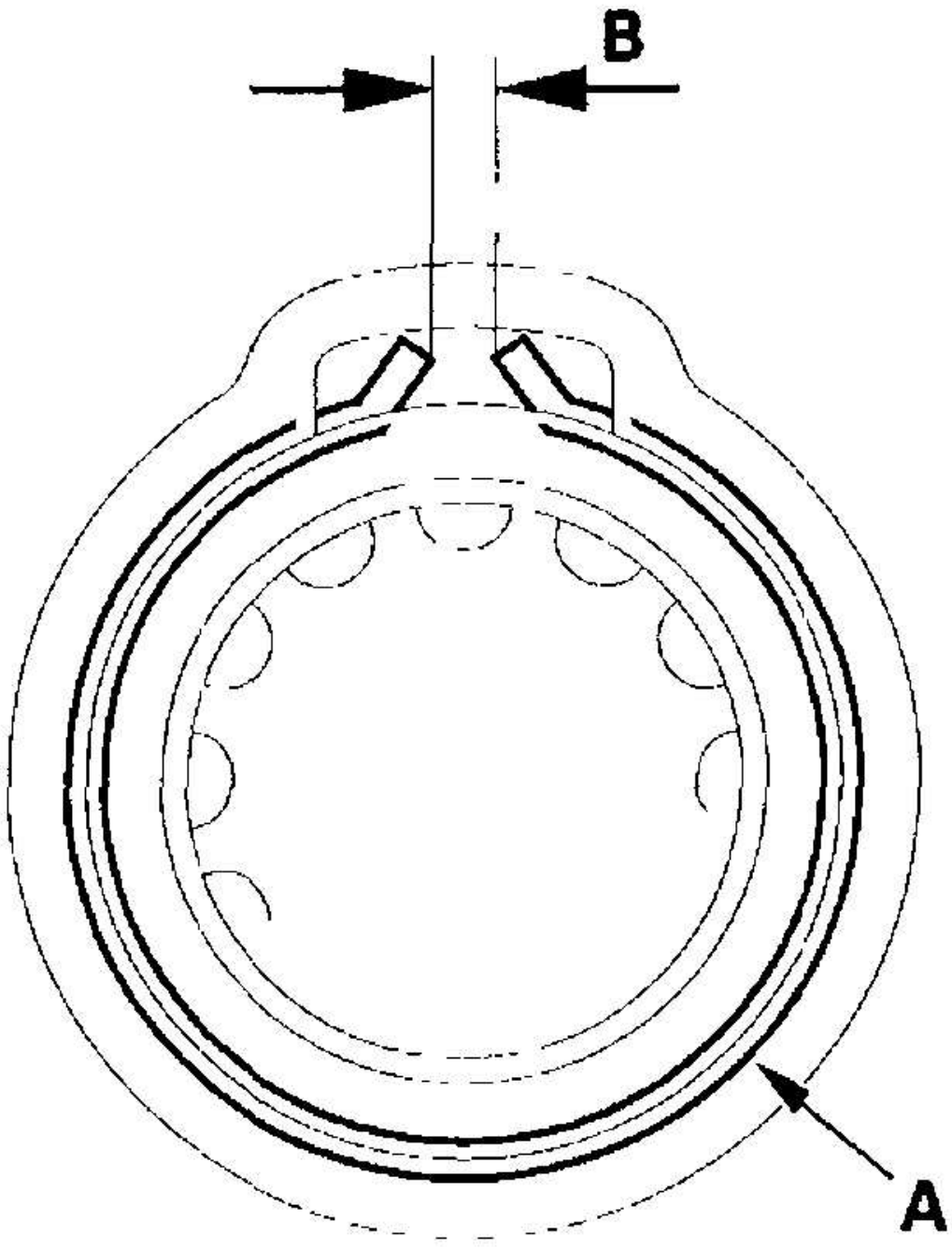


Fig. 397: Identifying Ring End Gap

Courtesy of AMERICAN HONDA MOTOR CO., INC.

FLYWHEEL HOUSING INPUT SHAFT OIL SEAL REPLACEMENT

Special Tools Required

- Attachment, 32 x 35 mm 07746-0010100
- Driver 07749-0010000

1. Remove the input shaft oil seal (A) from the flywheel housing (B).

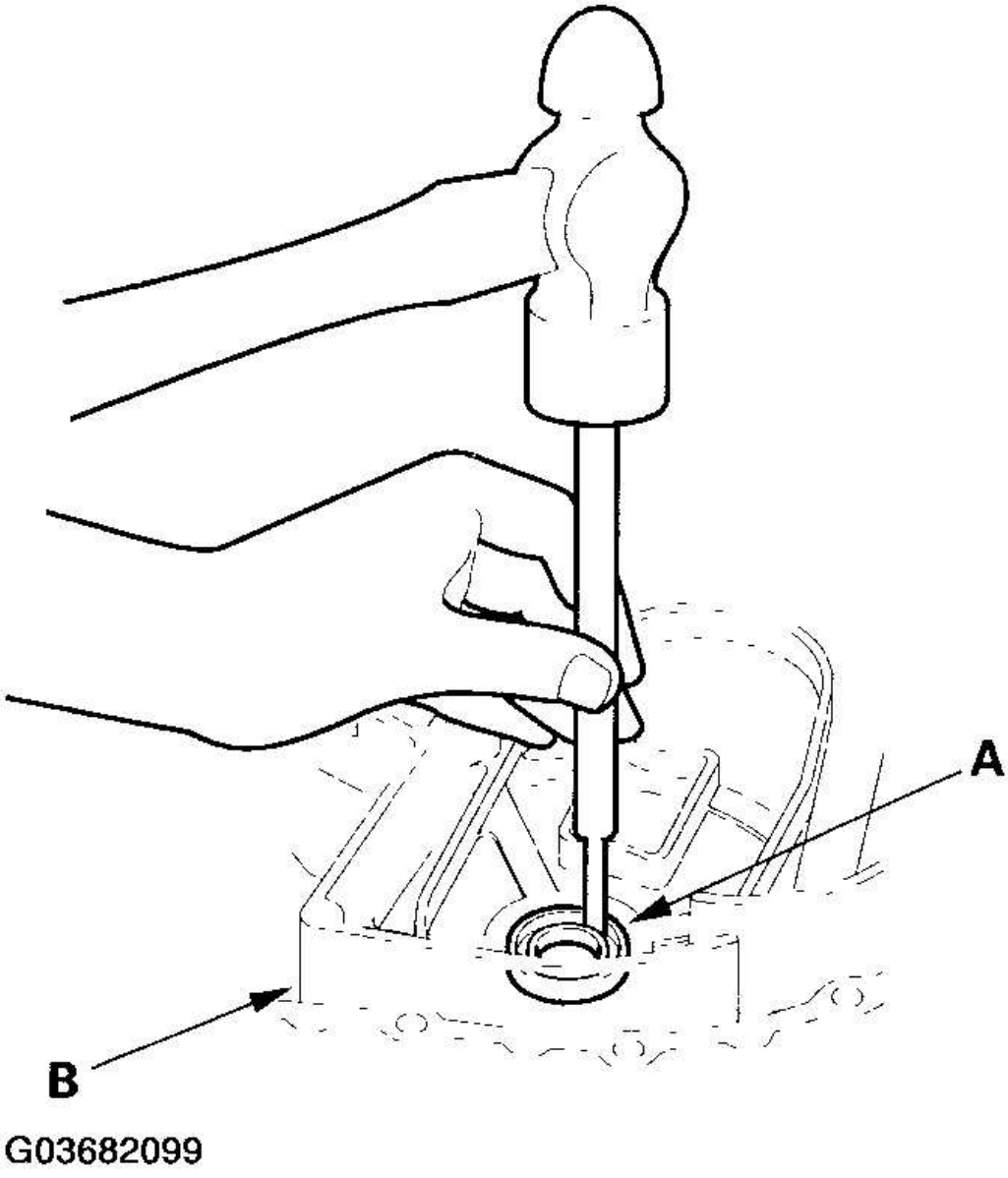


Fig. 398: Removing Input Shaft Oil Seal From Flywheel Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new oil seal in the flywheel housing with the special tools in the specification shown.

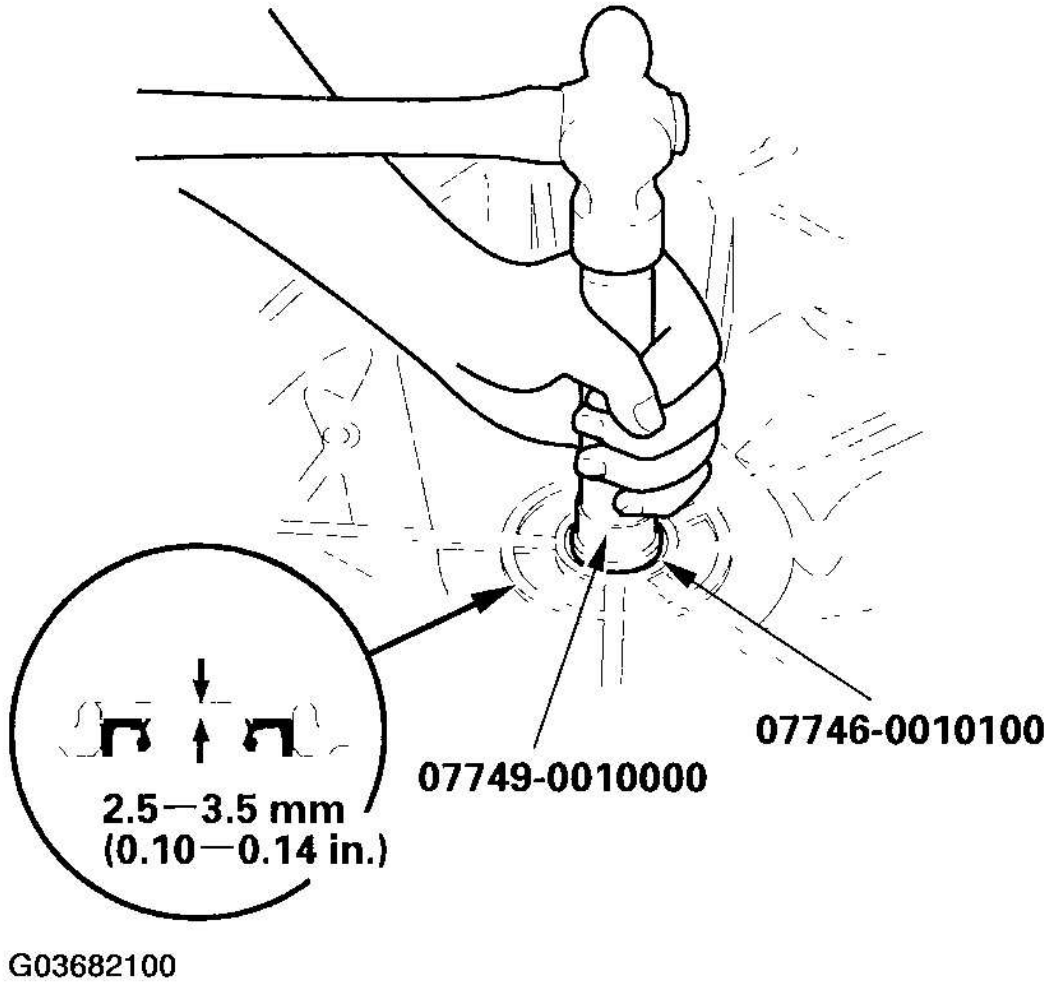
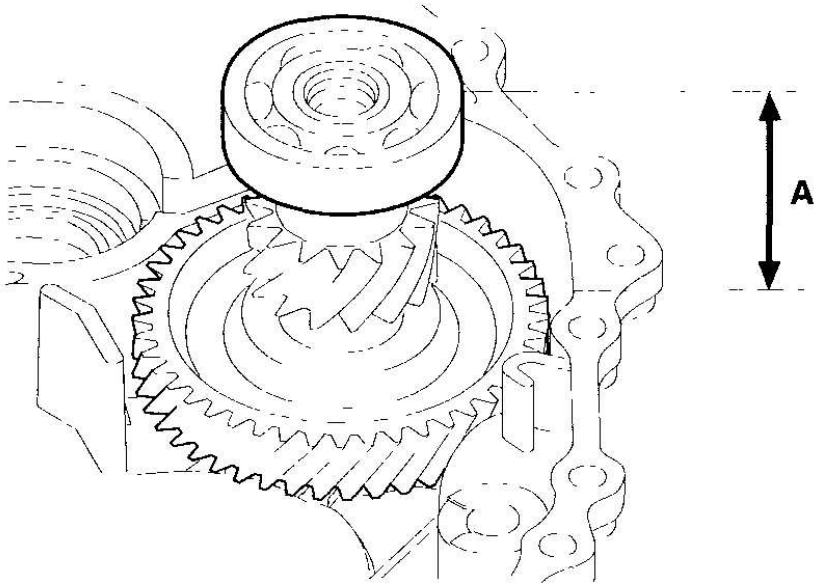


Fig. 399: Installing Oil Seal In Flywheel Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

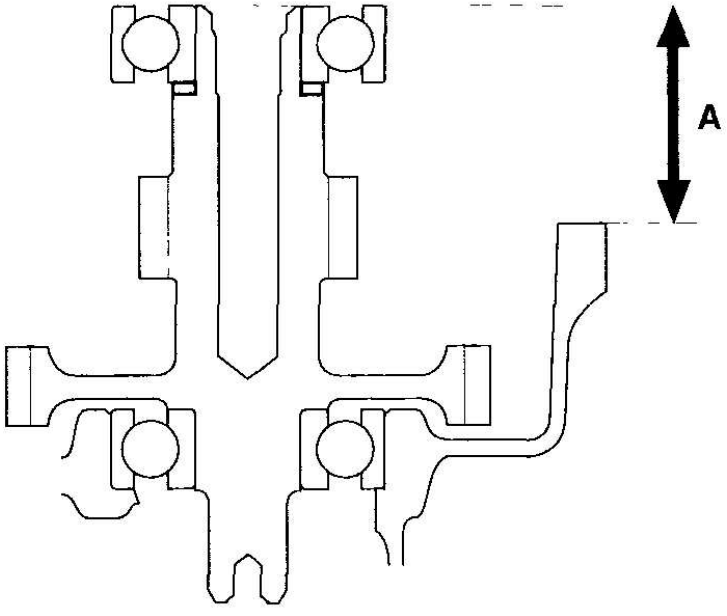
SECONDARY GEAR SHAFT THRUST CLEARANCE INSPECTION

NOTE: If the transmission housing or flywheel housing was replaced, secondary gear shaft thrust clearance must be inspected.

1. Install the secondary gear shaft in the transmission housing.



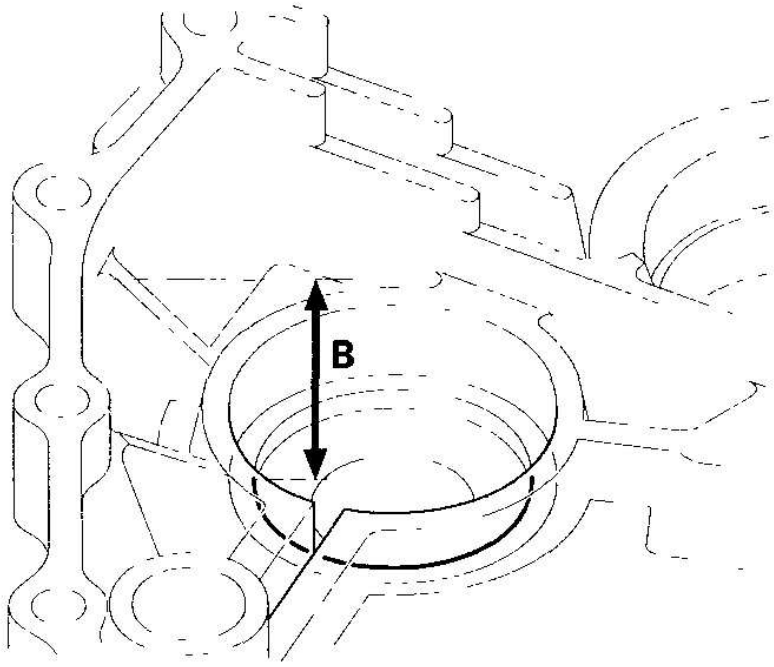
Sectional View



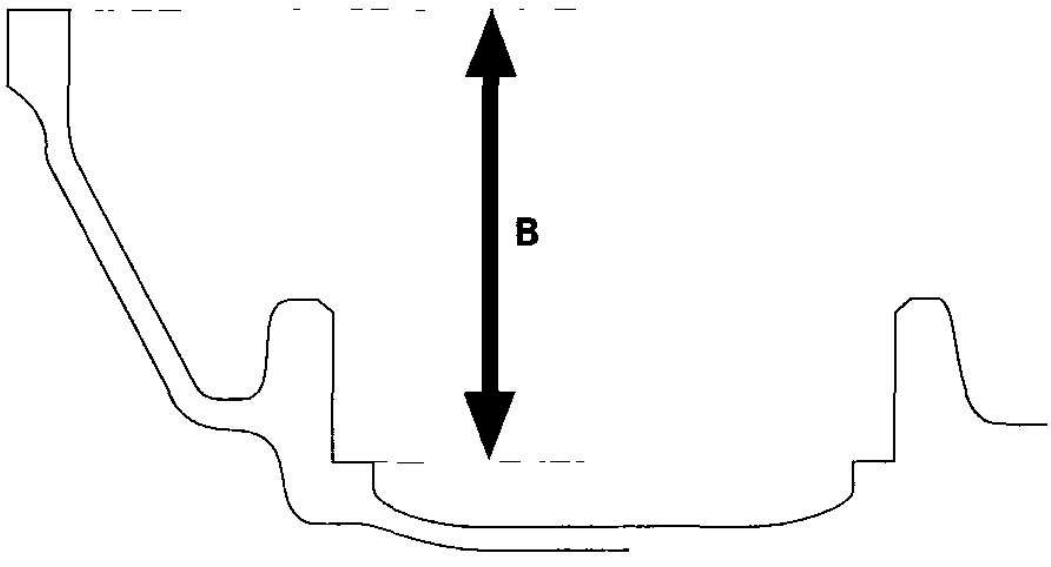
G03682101

Fig. 400: Installing Secondary Gear Shaft In Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Sectional View



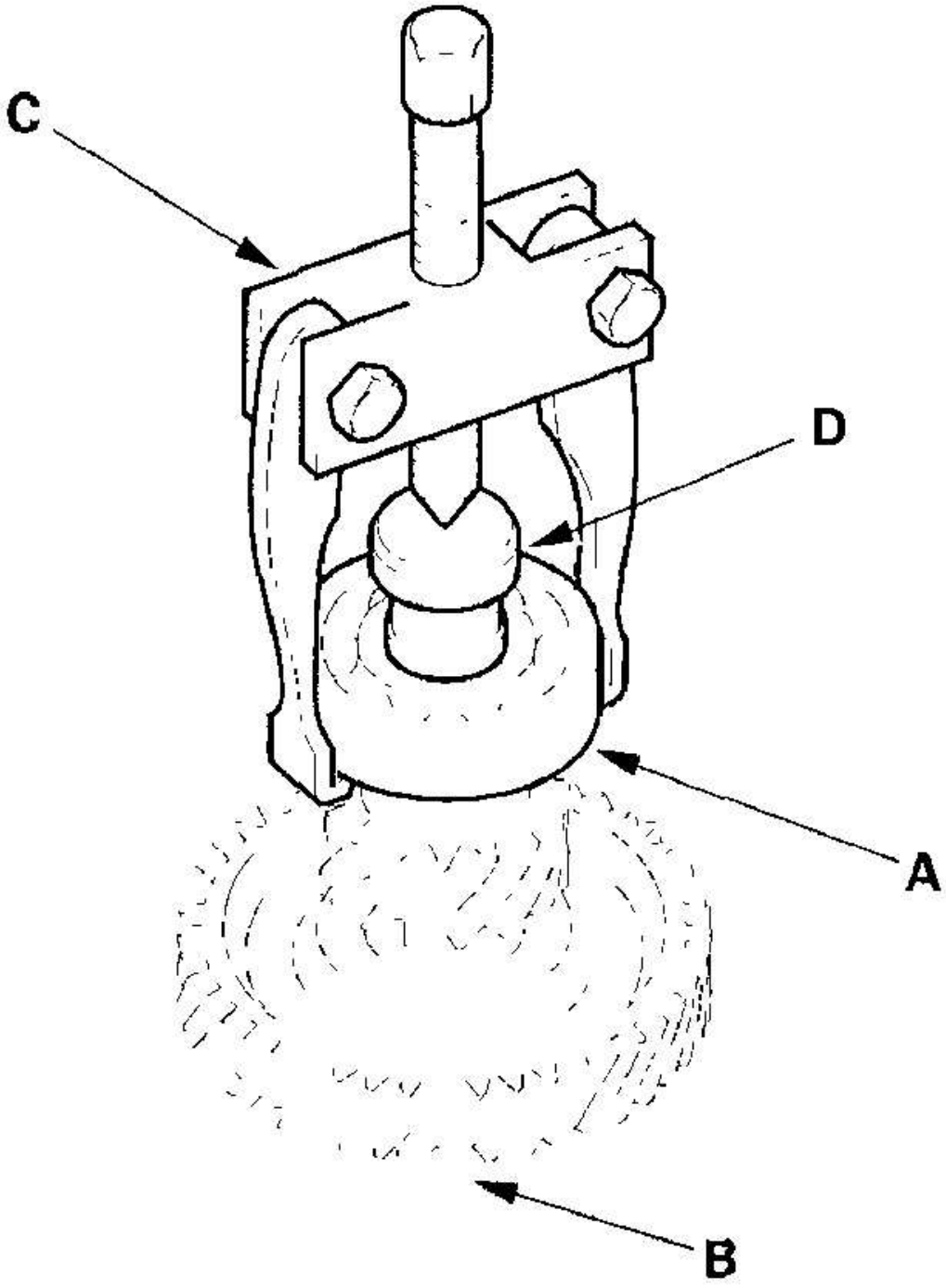
Sectional View



G03682102

Fig. 401: Measuring Distance Between Transmission Housing Surface And Top Of Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

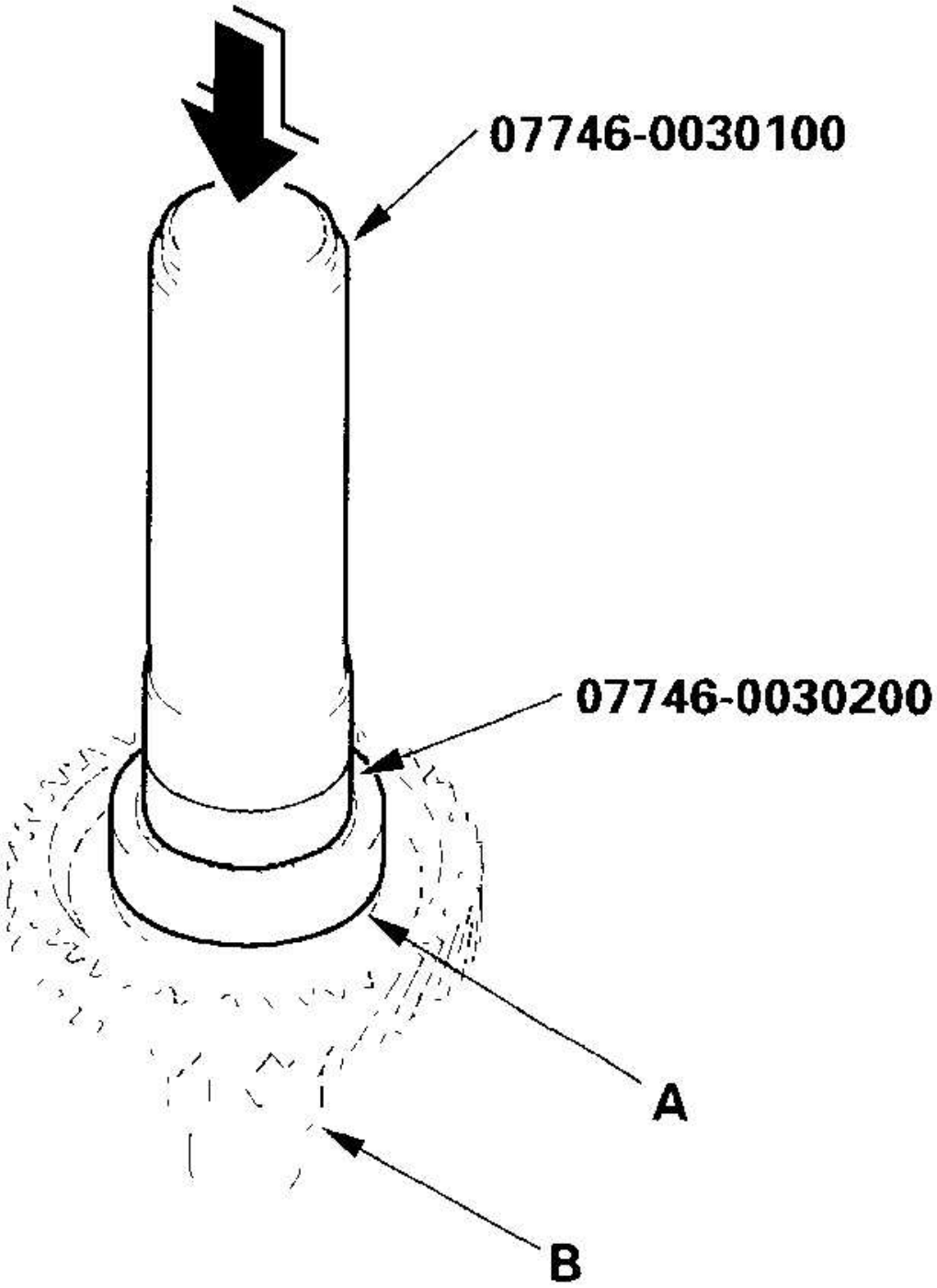
2. Measure the distance (A) between the transmission housing surface and the top of the bearing, then note the measurement (Measurement A).
3. Measure the distance (B) between the flywheel housing surface and bearing mounting surface in the housing, then note the measurement (Measurement B).



G03682103

Fig. 402: Measuring Distance Between Flywheel Housing Surface And Bearing Mounting Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Sectional View



G03682104

Fig. 403: Sectional View Of Flywheel Housing Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Calculate the secondary gear shaft clearance by subtracting Measurement B from Measurement A.

   Standard: 0.5-0.65 mm (0.02-0.03 in.)

   NOTE: The standard clearance includes the thickness of the flywheel housing gasket (0.5 mm, 0.02 in.)

5. If the clearance is out of standard, adjust it with the 25 x 35 mm thrust shim (see **25 X 35 MM THRUST SHIM SELECTION**).

SECONDARY GEAR SHAFT BEARING REPLACEMENT

Special Tools Required

- Driver, 40 mm I.D. 07746-0030100
- Attachment, 25 mm I.D. 07746-0030200

1. Remove the bearing (A) from the secondary gear shaft (B) with a universal two-jaw (or three-jaw) puller (C). Place a shaft protector (D) between the secondary gear shaft and a puller to prevent damaging the shaft.

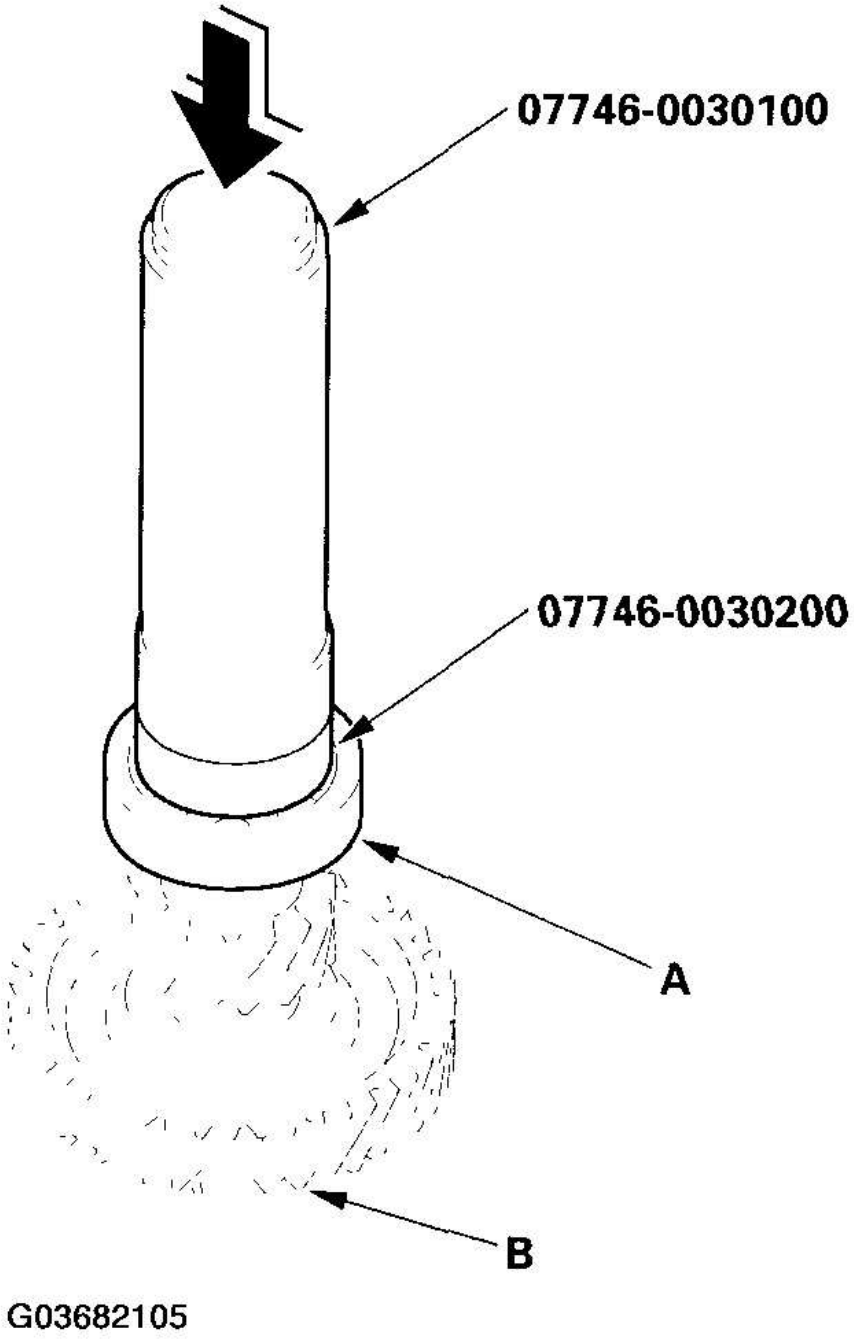
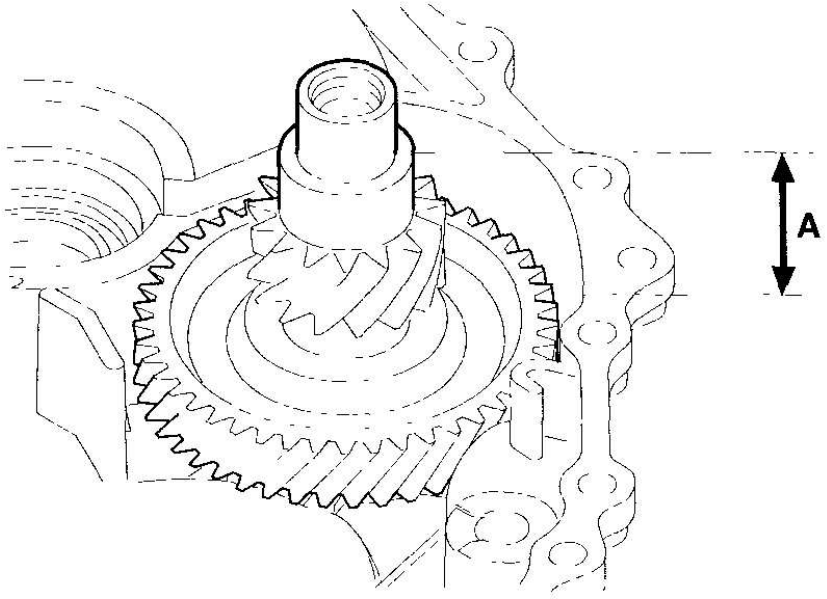
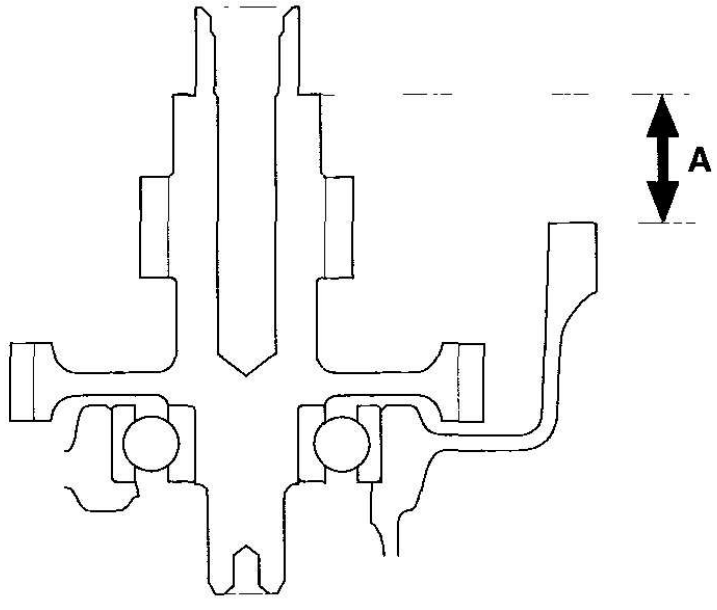


Fig. 404: Removing Bearing From Secondary Gear Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new bearing (A) on the secondary gear shaft (B) of the transmission housing side with the special tools and a press.



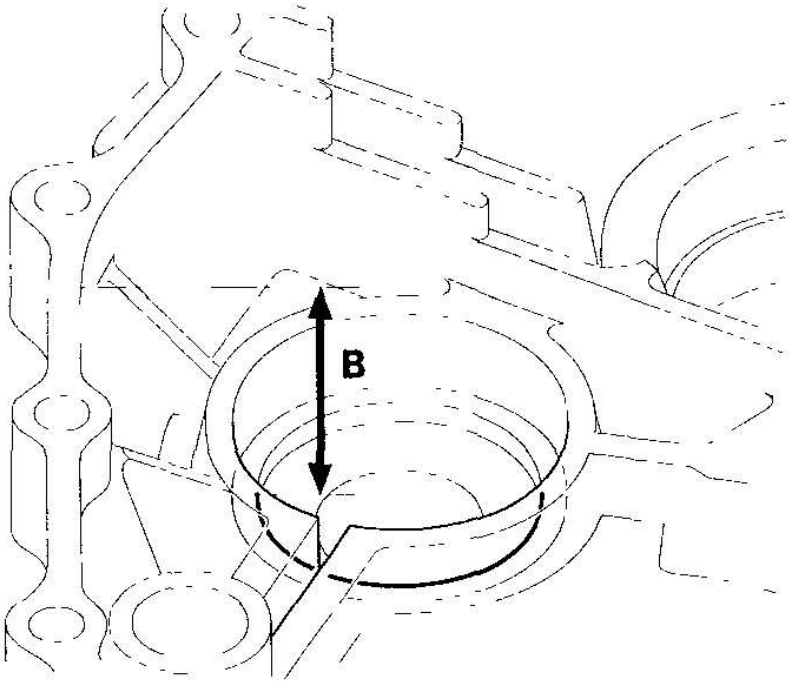
Sectional View



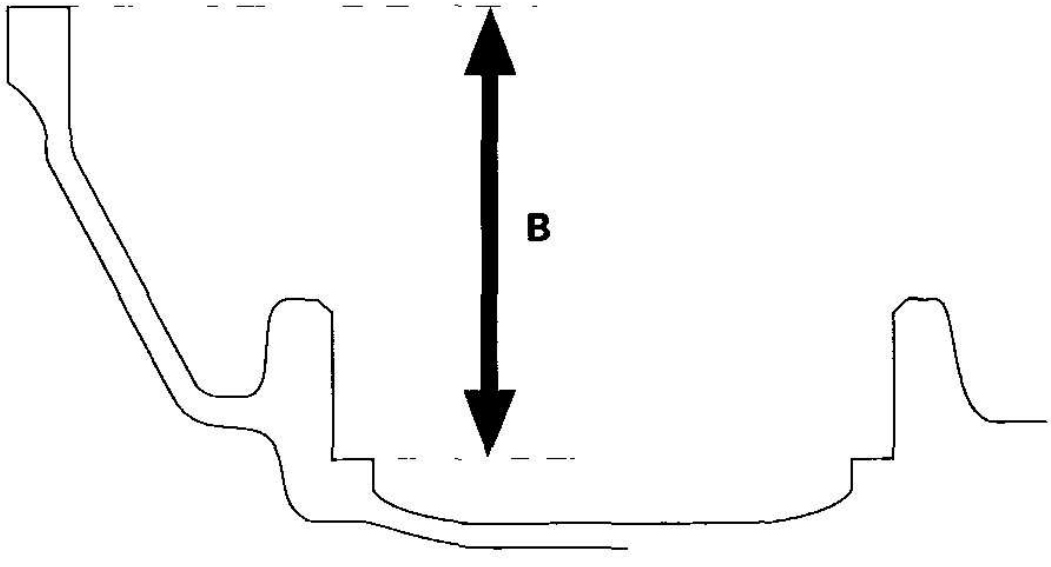
G03682106

Fig. 405: Installing Bearing On Secondary Gear Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Select the 25 x 35 mm thrust shim (see **25 X 35 MM THRUST SHIM SELECTION**).
4. Install the selected thrust shim, then install the new bearing (A) on the secondary gear shaft (B) of the flywheel housing side using the special tools and a press.



Sectional View



G03682107

Fig. 406: Installing Thrust Shim
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25 X 35 MM THRUST SHIM SELECTION

NOTE: If the secondary gear shaft bearings or secondary gear shaft is replaced, select the 25 x 35 mm thrust shim to adjust the secondary gear shaft thrust clearance.

1. Remove the bearing on flywheel housing side of the secondary gear shaft (see **SECONDARY GEAR SHAFT BEARING REPLACEMENT**).
2. Install the secondary gear shaft in the transmission housing.
3. Measure the distance (A) between the transmission housing surface and the 25 x 35 mm thrust shim mounting surface on the secondary gear shaft, then note the measurement (Measurement A).

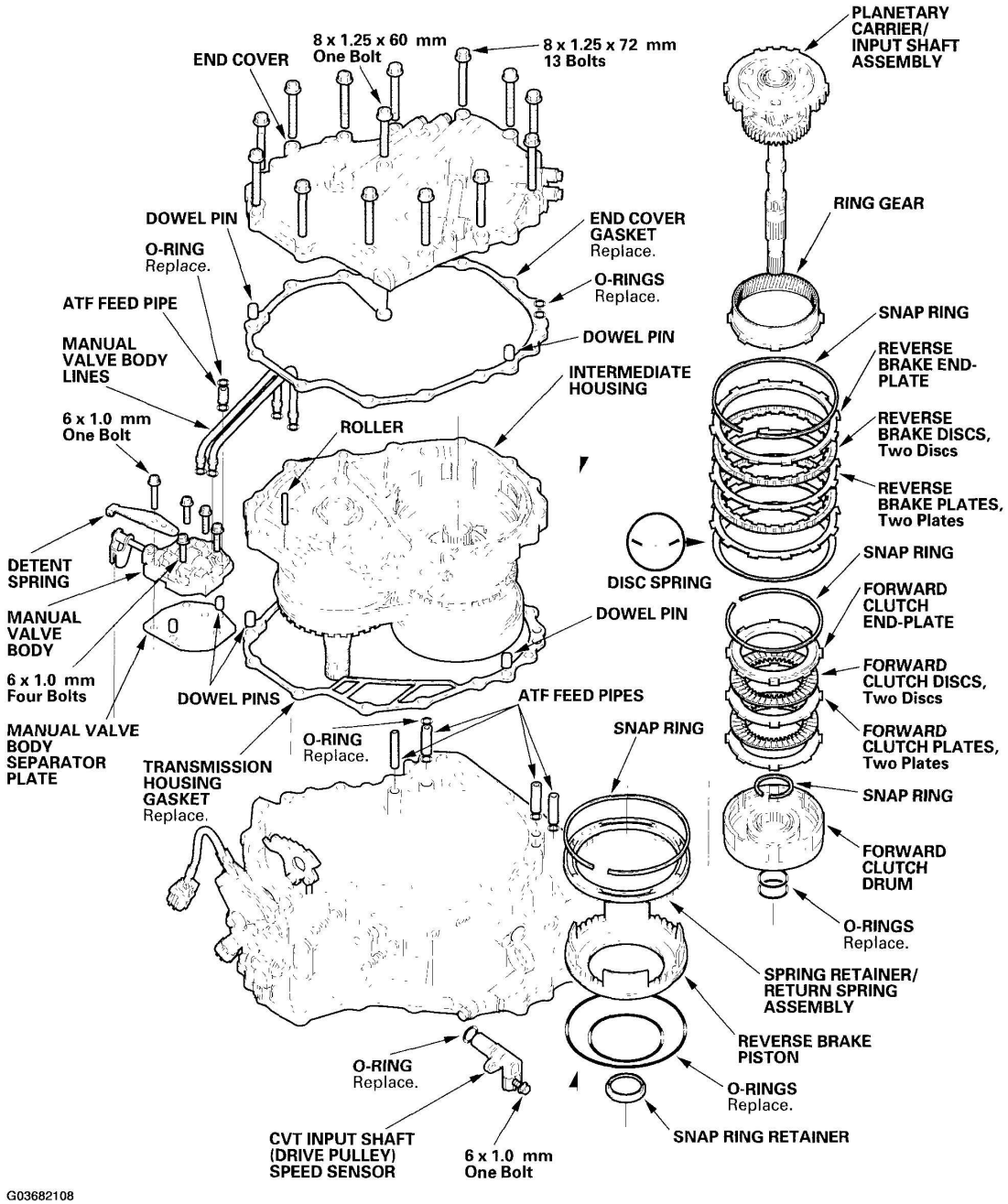


Fig. 407: Measuring Distance Between Transmission Housing Surface And Thrust Shim Mounting Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Measure the distance (B) between the flywheel housing surface and bearing mounting surface in the housing, then note the measurement (Measurement B).

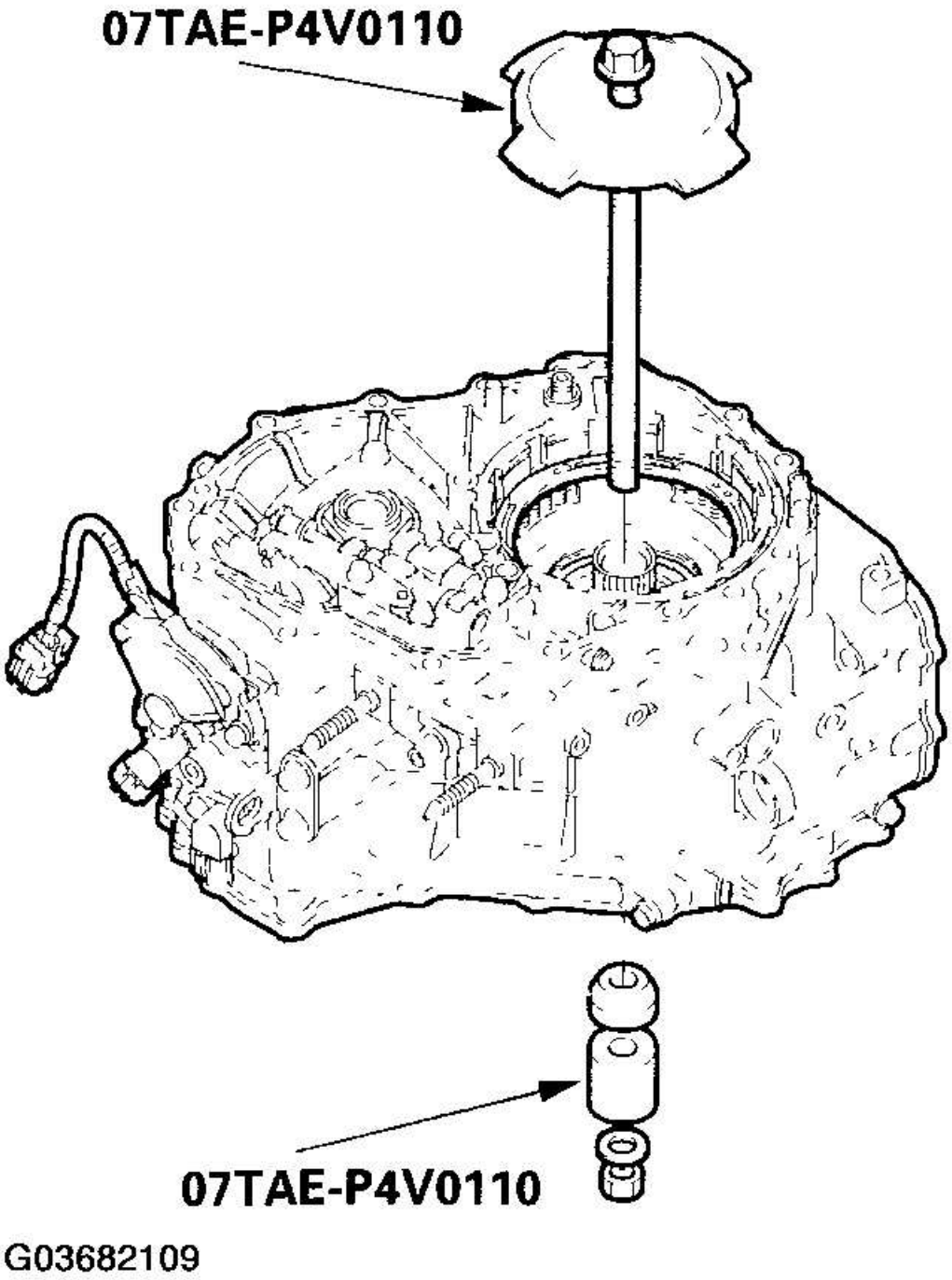


Fig. 408: Measuring Distance Between Flywheel Housing Surface And Bearing Mounting Surface

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Sectional View

5. Calculate the thickness of the 25 x 35 mm thrust shim using the formula:

   Formula:

   25 x 35 mm Thrust Shim Thickness = Measurement B - Measurement A - Bearing thickness (17 mm) + Flywheel housing gasket thickness (0.5 mm)
   Standard: 0-0.15 mm (0-0.006 in.)

6. Select the 25 x 35 mm thrust shim using the table.

   THRUST SHIM, 25 x 35 mm

   THRUST SHIM, 25 X 35 MM SPECIFICATIONS

No.	Part Number	Thickness
A	90551-P4V-000	2.8 mm (0.110 in.)
B	90552-P4V-000	2.9 mm (0.114 in.)
C	90553-P4V-000	3.0 mm (0.118 in.)
D	90554-P4V-000	3.1 mm (0.122 in.)
E	90555-P4V-000	3.2 mm (0.126 in.)
F	90556-P4V-000	3.3 mm (0.130 in.)
G	90557-P4V-000	3.4 mm in.)
H	90558-P4V-000	3.5 mm (0.138 in.)
I	90559-P4V-000	3.6 mm (0.142 in.)
J	90560-P4V-000	3.7 mm (0.146 in.)
K	90561-P4V-000	3.8 mm (0.150 in.)

7. Remove the secondary gear shaft from the transmission housing.
8. Install the selected 25 x 35 mm thrust shim in the secondary gear shaft, then install the bearing (see **SECONDARY GEAR SHAFT BEARING REPLACEMENT**).

END COVER/INTERMEDIATE HOUSING

FORWARD CLUTCH, REVERSE BRAKE, AND INTERMEDIATE HOUSING REMOVAL

Exploded View

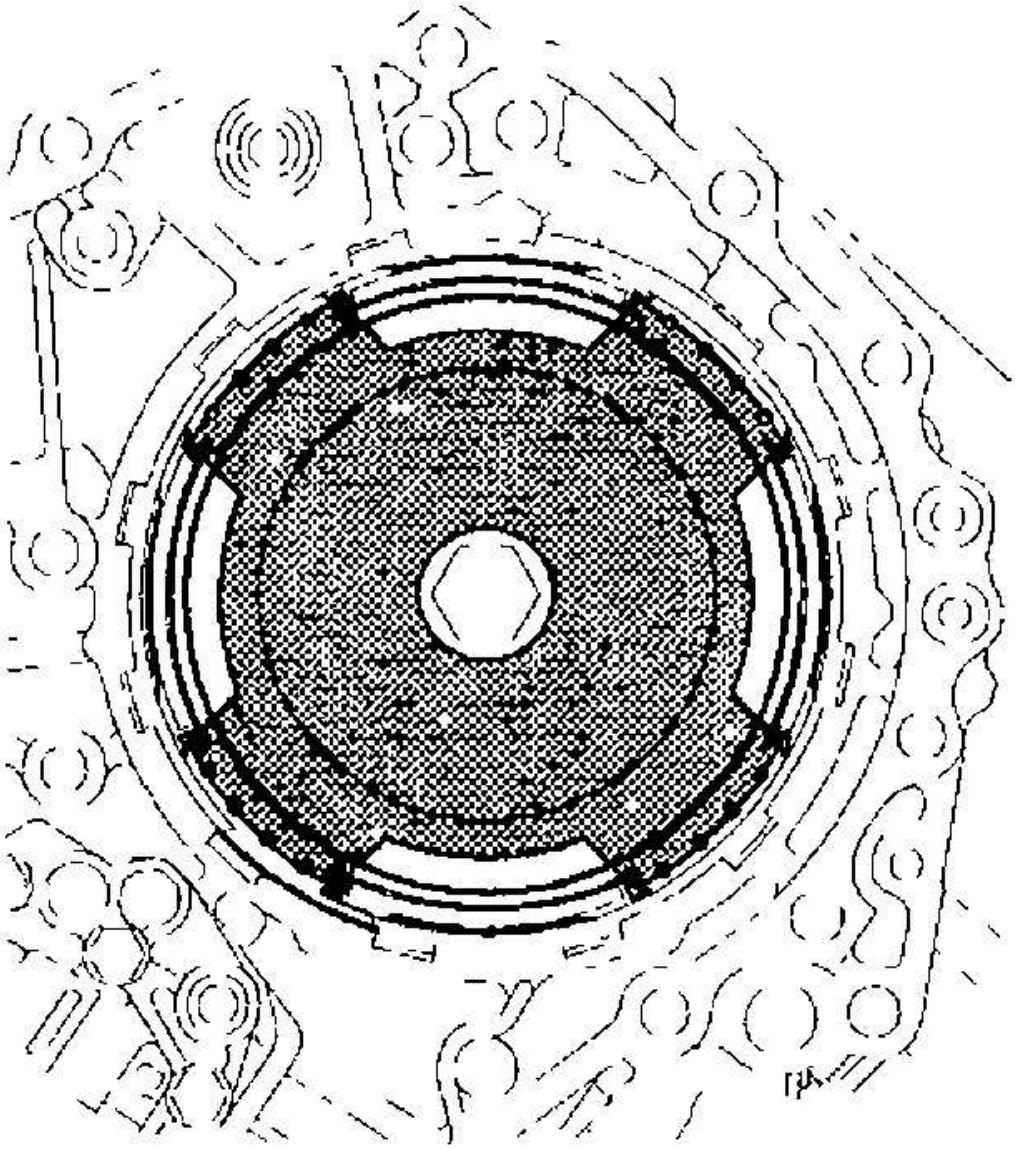


Fig. 409: Exploded View Of Forward Clutch, Reverse Brake, And Intermediate Housing

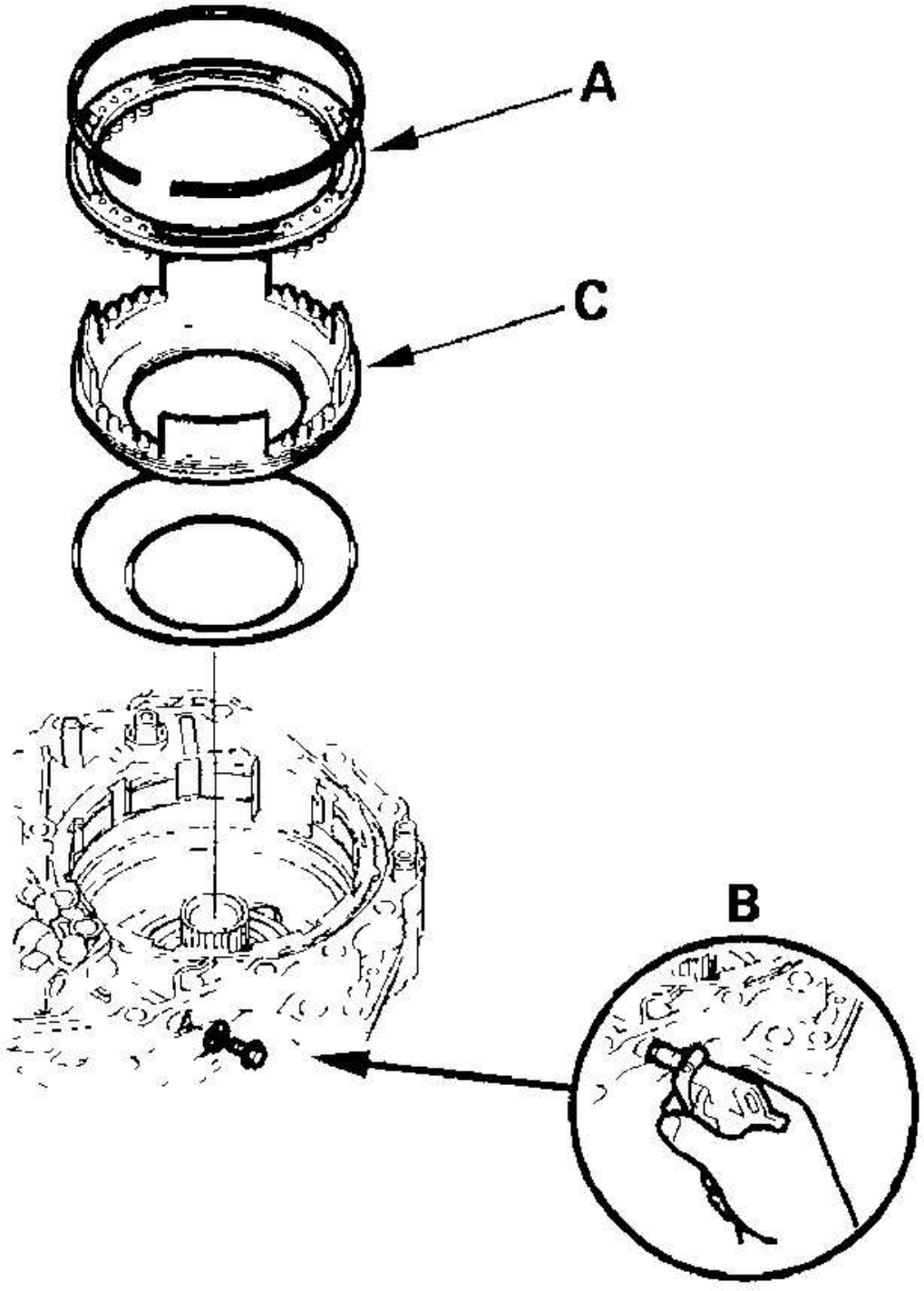
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Special Tools Required

Reverse brake spring compressor 07TAE-P4V0110

NOTE: Refer to the EXPLODED VIEW as needed during the following procedure.

1. Remove the end cover.
2. Remove the manual valve body lines.
3. Remove the planetary carrier/input shaft assembly, then remove the ring gear.
4. Remove the reverse brake snap ring, then remove the reverse brake end-plate, brake discs, brake plates, and disc spring.
5. Remove the snap ring securing the forward clutch end-plate, then remove the forward clutch end-plate, discs and plates.
6. Remove the snap ring securing the forward clutch to the drive pulley shaft, then remove the forward clutch.
7. Install the special tool to remove the snap ring securing the reverse brake return spring retainer.



G03682111

Fig. 410: Removing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Compress the return spring with the special tool, then remove the snap ring. Be sure the special tool set over the reverse brake return springs.

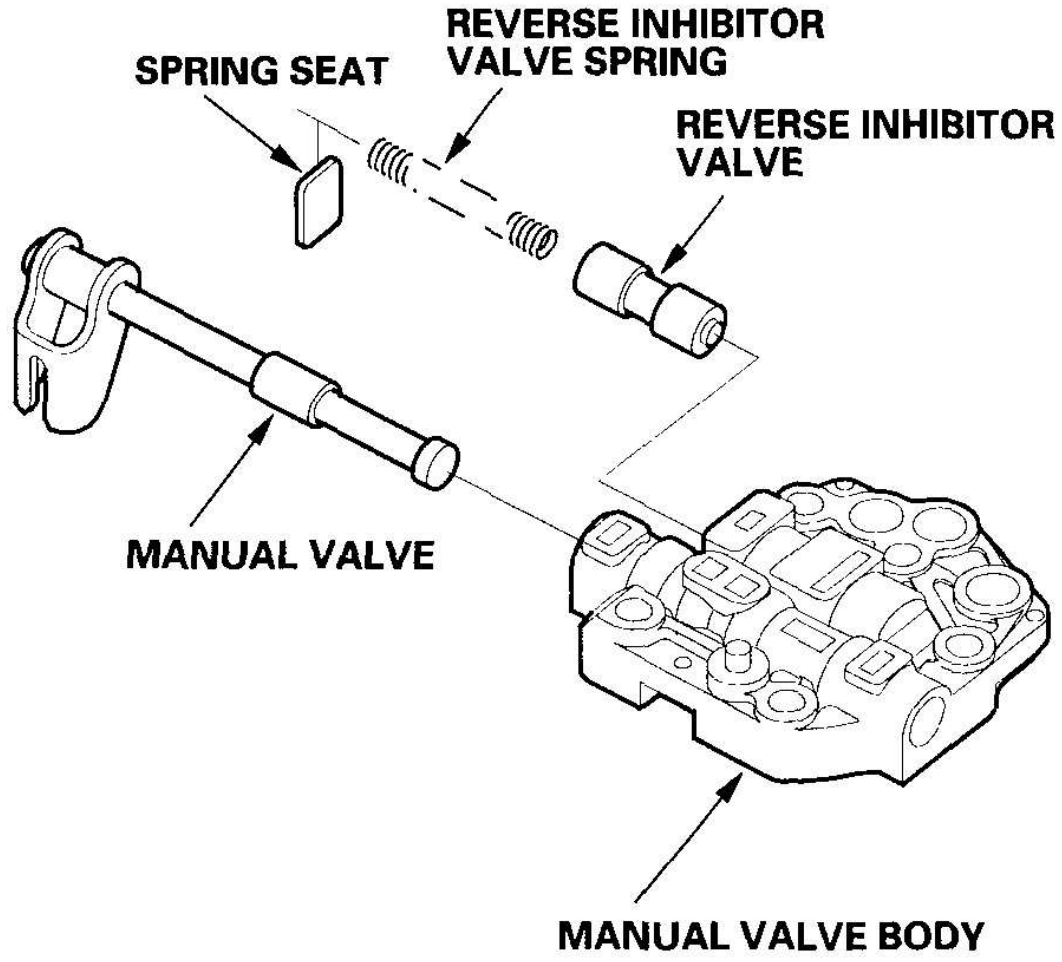


Fig. 411: Identifying Reverse Brake Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the special tool, then remove the spring retainer/return spring assembly (A).

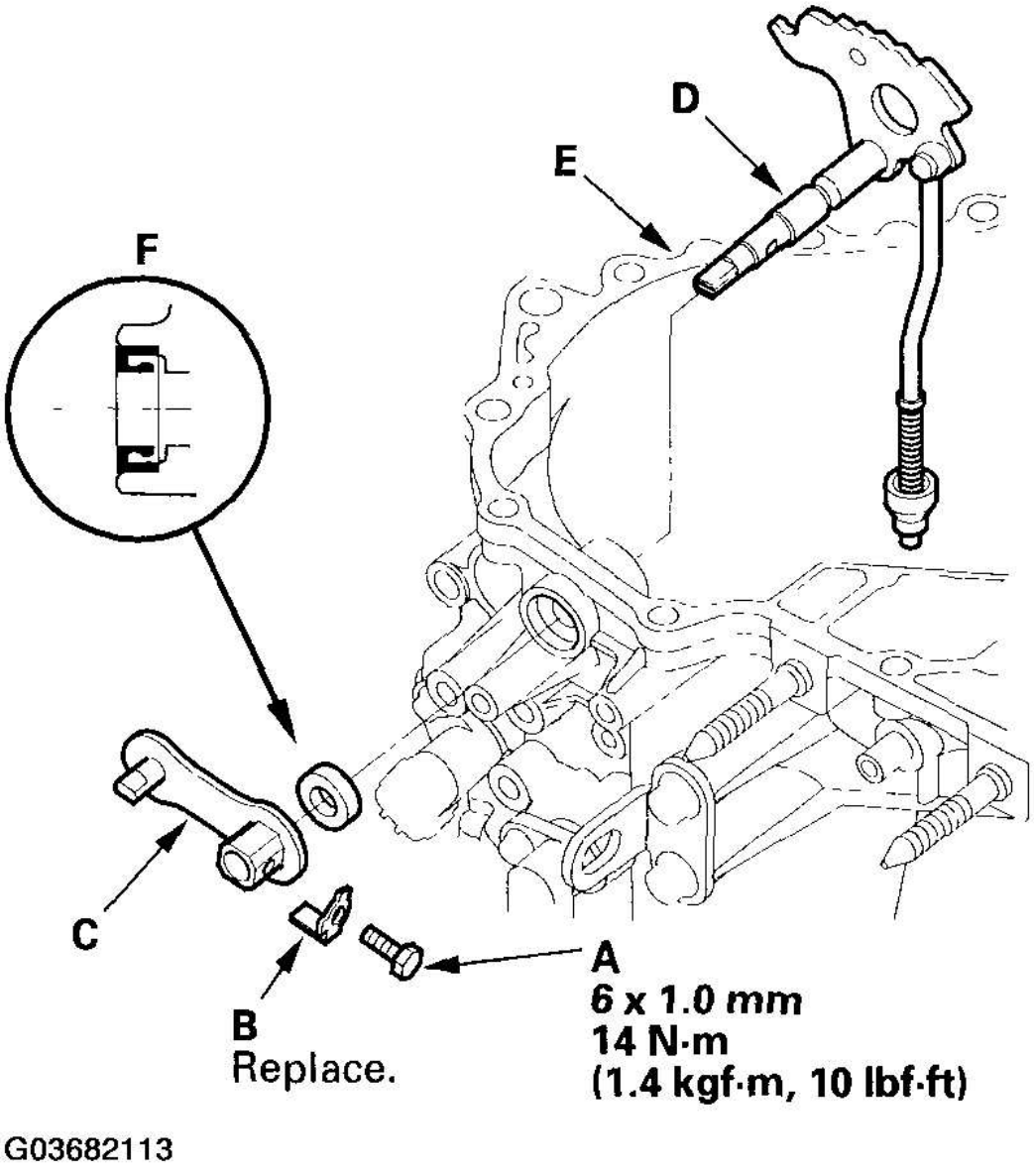


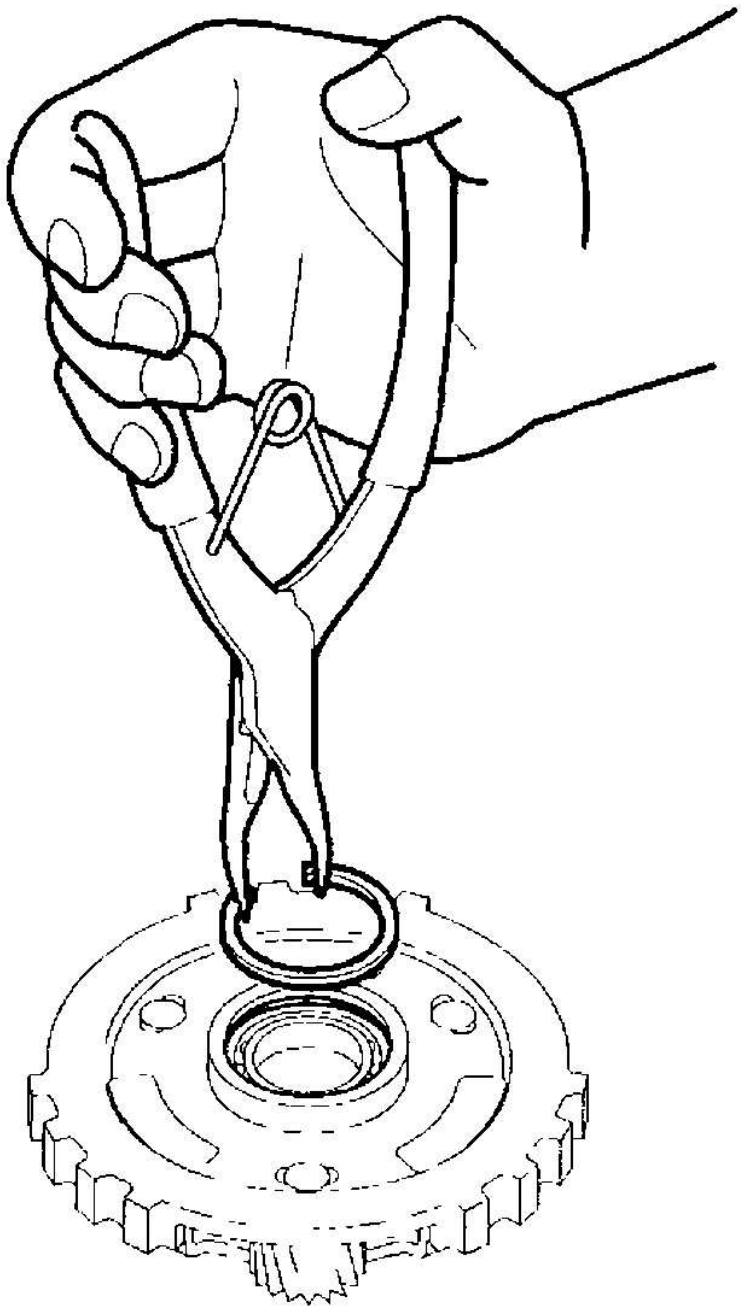
Fig. 412: Removing Spring Retainer/Return Spring Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Apply air pressure to reverse brake pressure circuit hole (B) to remove the reverse brake piston (C).
11. Remove the snap ring retainer from the drive pulley shaft.

12. Remove the CVT input shaft (drive pulley) speed sensor.
13. Remove the manual valve body and separator plate.
14. Remove the roller. Push the control shaft toward the outside of the transmission housing if the transmission range switch is removed.
15. Remove the intermediate housing, then remove the ATF feed pipes from the transmission housing.

MANUAL VALVE BODY DISASSEMBLY, INSPECTION, AND REASSEMBLY

1. Clean all parts thoroughly in solvent or carburetor cleaner, and dry with compressed air. Blow out all passages.



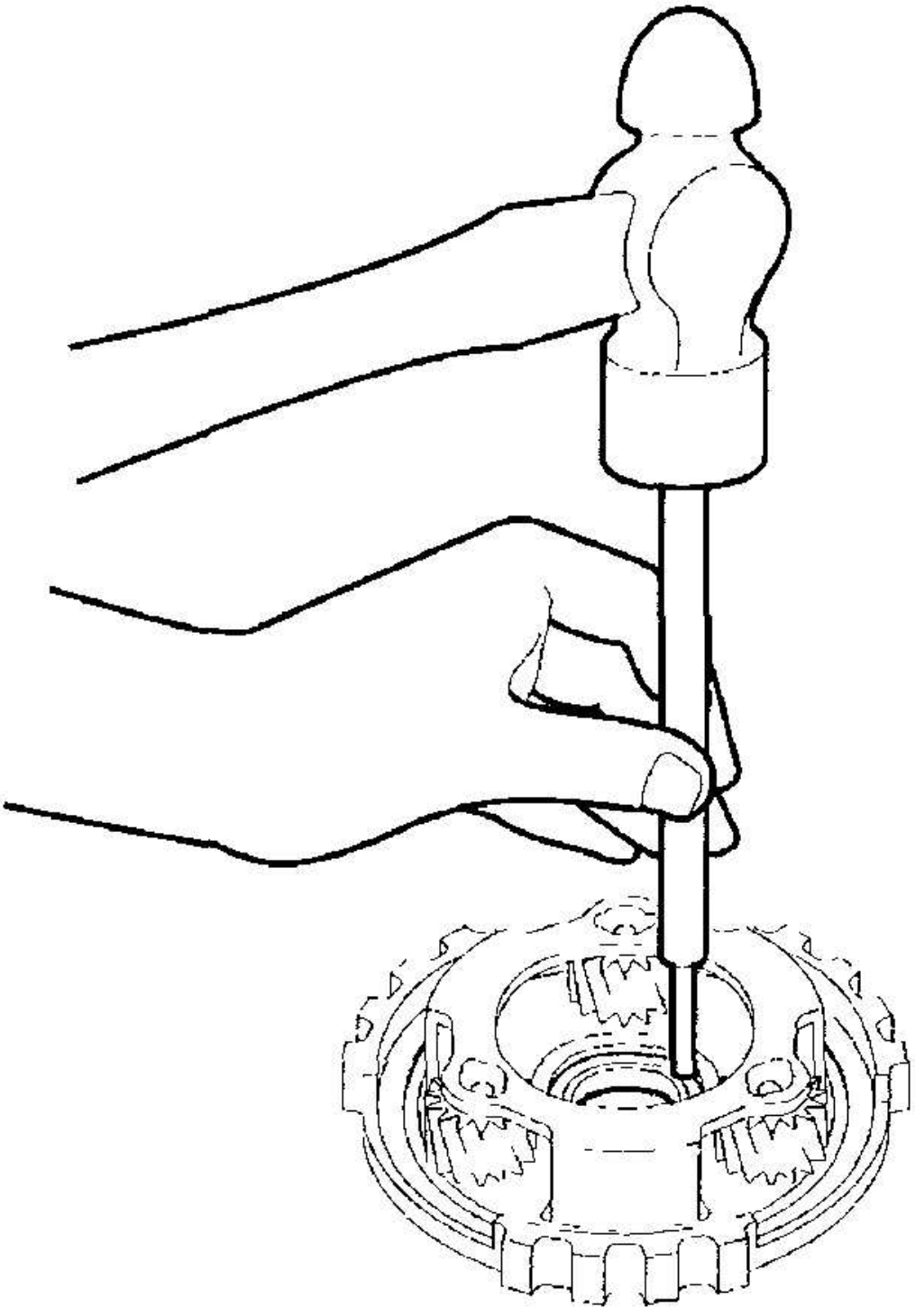
G03682114

Fig. 413: Inspecting Manual Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Inspect the manual valve body for wear, scratches, and scoring.
3. If the manual valve body is worn or damaged, replace it.
4. Coat all parts with CVTF during reassembly.

CONTROL SHAFT REMOVAL/INSTALLATION

1. Remove the transmission range switch from the control shaft.
2. Remove the bolt (A) and lock washer (B).



G03682115

Fig. 414: Identifying Loosening Torque Of Lock Washer Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the control lever (C) from the control shaft (D).
4. Remove the control shaft assembly from the transmission housing (E).
5. Inspect the oil seal (F), and replace it if it is worn or damaged.
6. Inspect the end of the control shaft tips together for squeeze. If the end of the control shaft is squeezed, worn or damaged, replace the control shaft assembly.
7. Install the control shaft assembly in the transmission housing.
8. Install the control lever to the control shaft.
9. Install and tighten the bolt with the new lock washer, then bend the lock tab of the lock washer.

NOTE: Do not install the transmission range switch, install it after installing the end cover in the transmission assembly.

PLANETARY CARRIER BEARING REPLACEMENT

Special Tools Required

- Driver 07749-0010000
- Attachment, 32 x 35 mm 07746-0010100

1. Remove the snap ring securing the planetary carrier bearing.

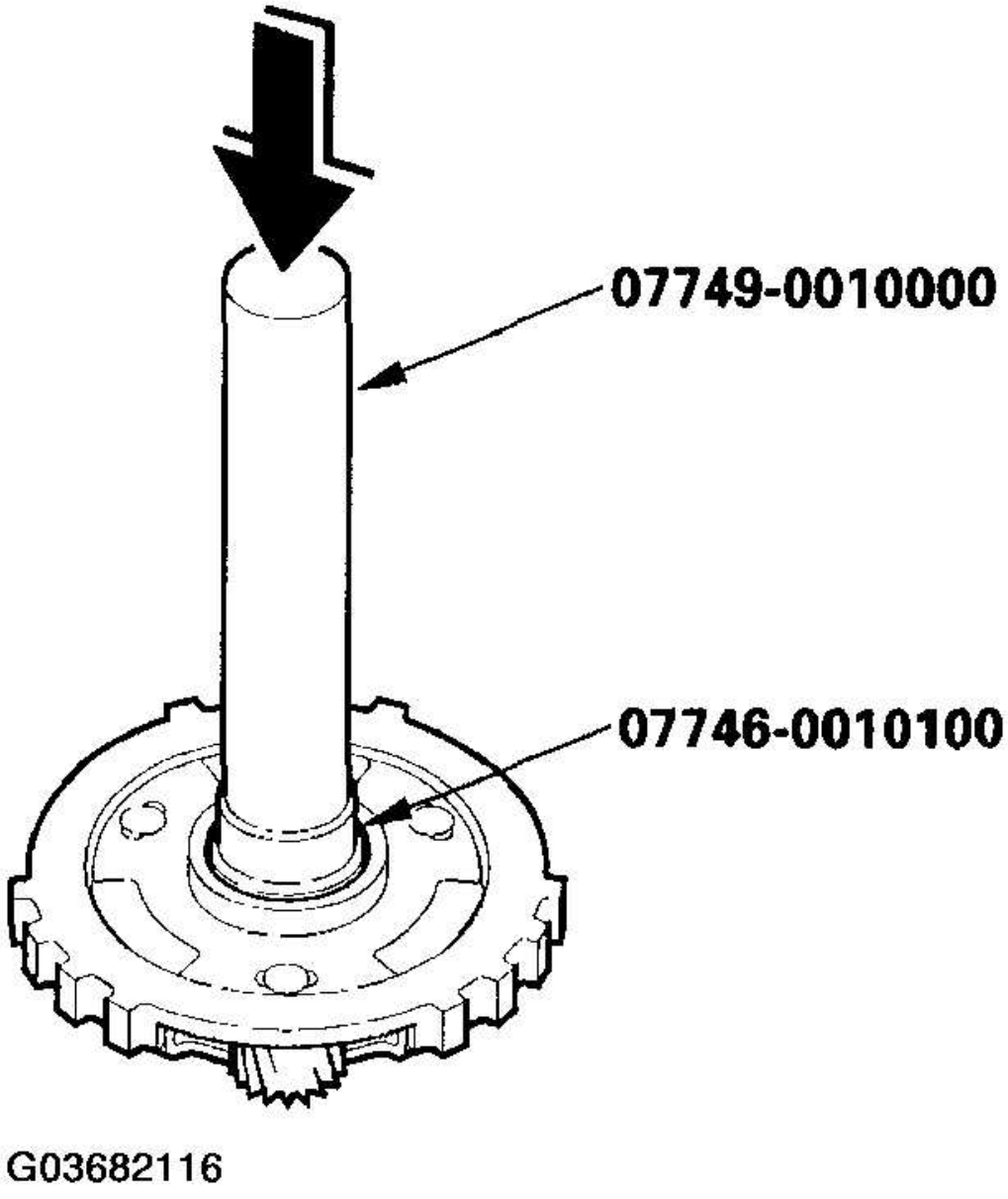


Fig. 415: Removing Planetary Carrier Bearing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the planetary carrier bearing.

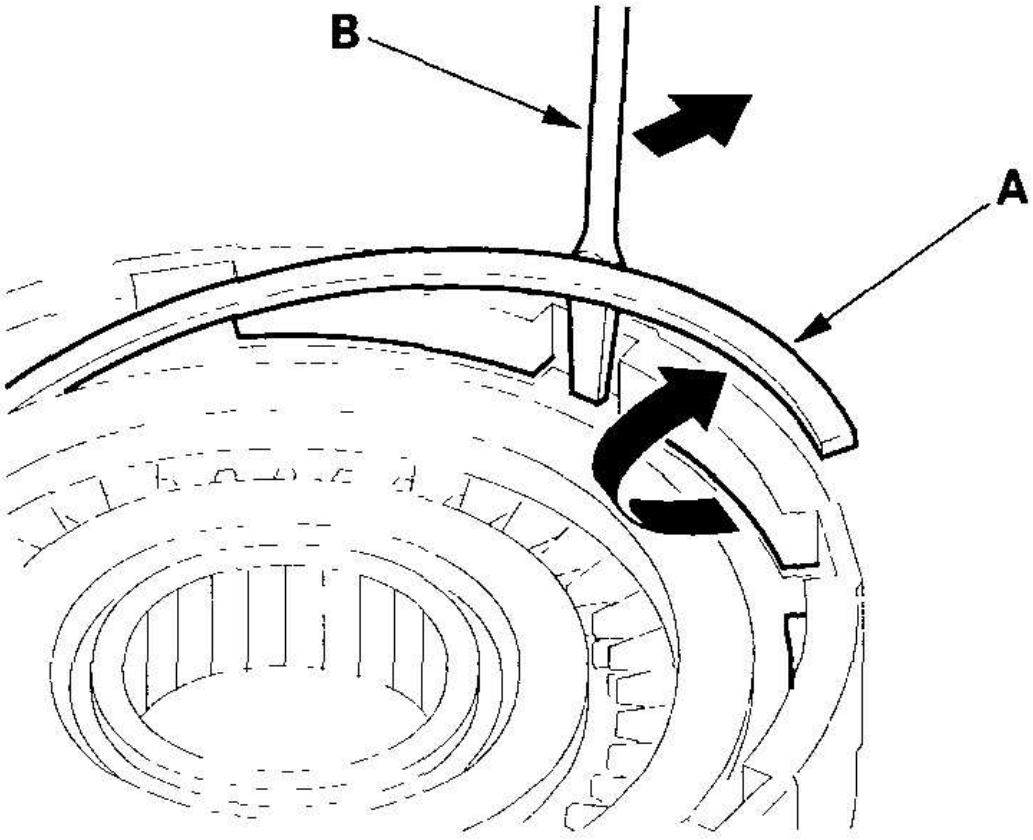


Fig. 416: Removing Planetary Carrier Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the new bearing with the special tools.

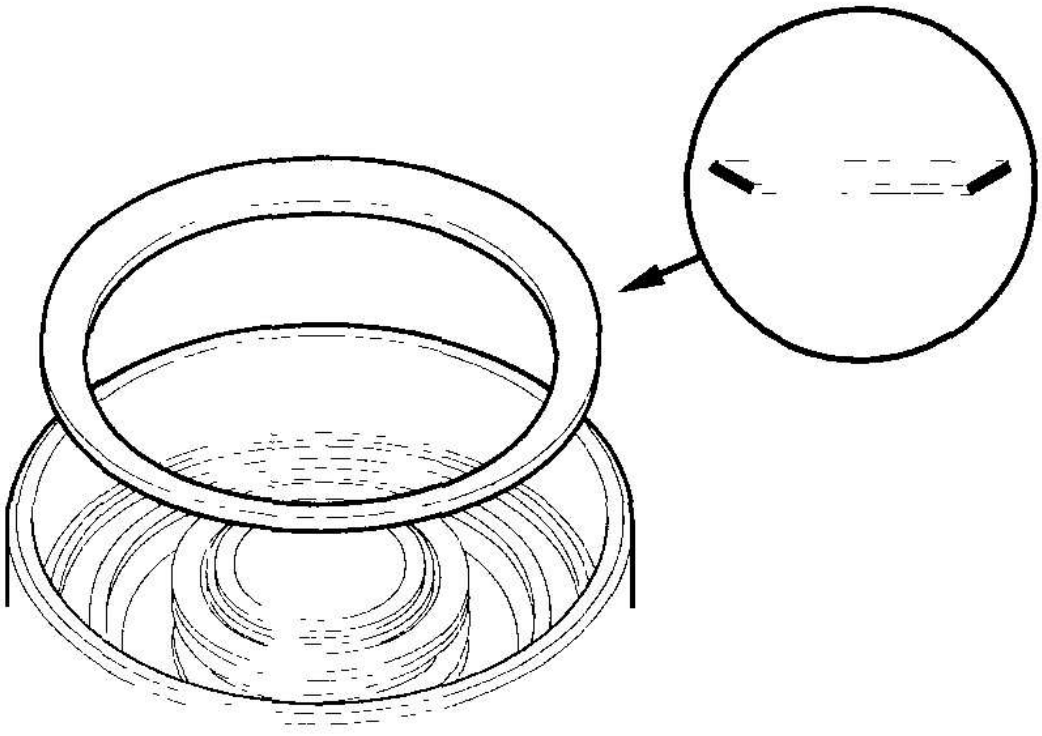


Fig. 417: Installing Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the snap ring to secure the bearing on the planetary carrier.

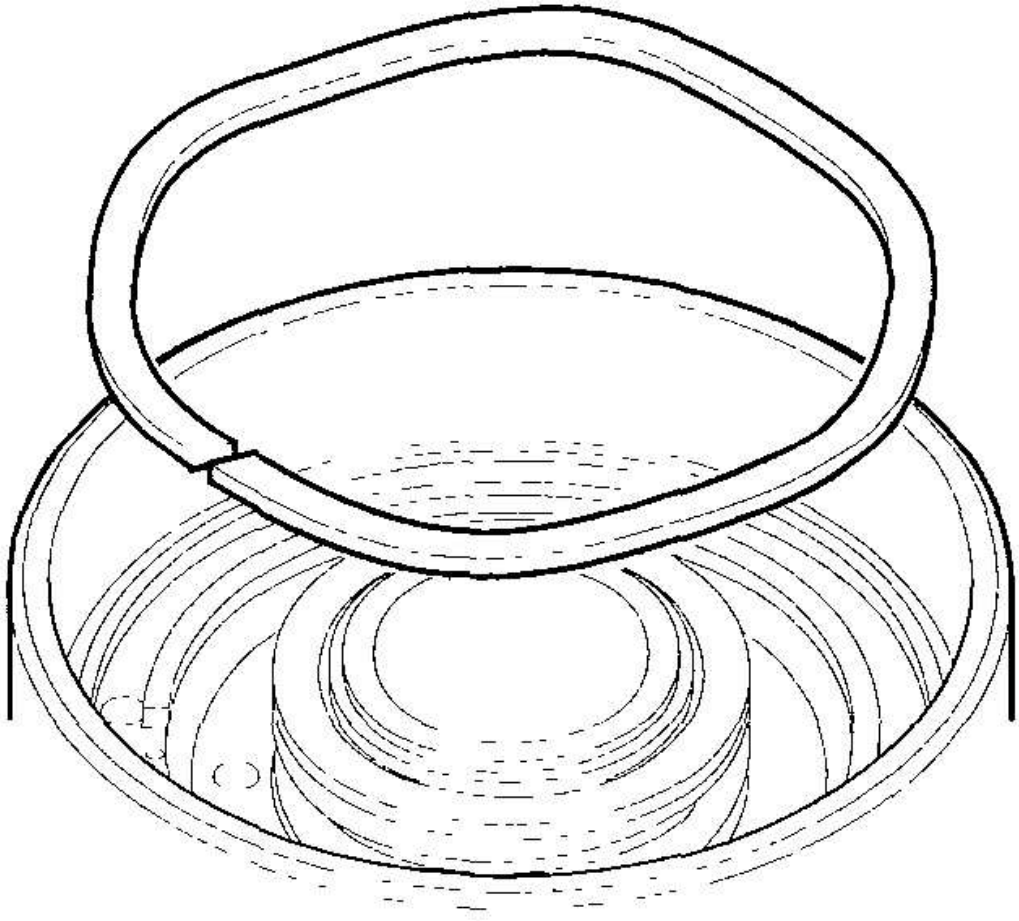
FORWARD CLUTCH

CLUTCH DISASSEMBLY

Special Tools Required

- Clutch spring compressor bolt assembly 07GAE-PG40200 or 07GAE-PG4020A
- Clutch spring compressor attachment 07HAE-PL50101
- Clutch spring compressor attachment 07LAE-PX40100

1. Remove the snap ring (A), then remove the clutch end-plate, the clutch discs, and the plates with a screwdriver (B).



G03682119

Fig. 418: Removing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. 2001-2004 models: Remove the disc spring.

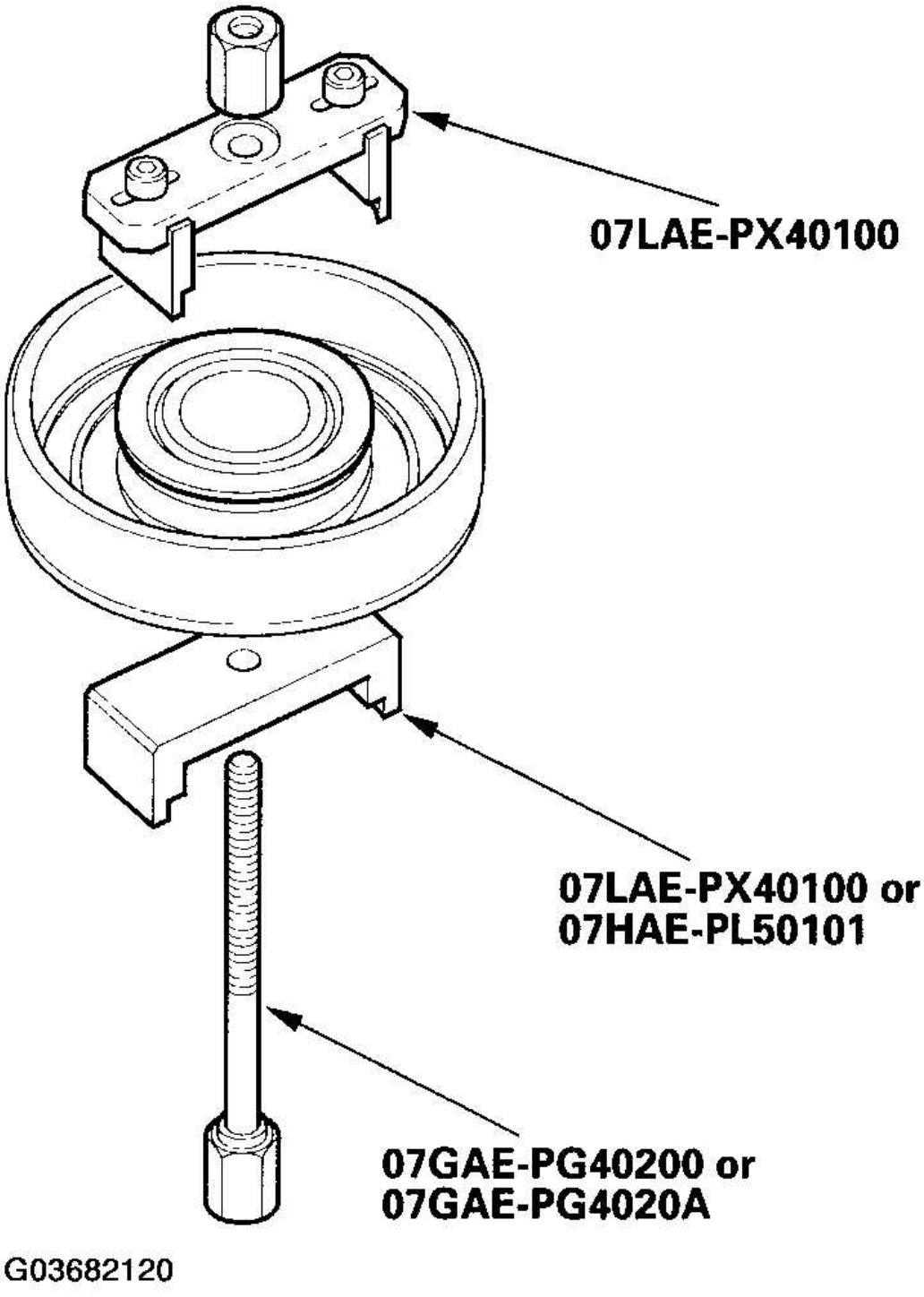


Fig. 419: Removing Disc Spring (2001-2004 Models)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. 2005-2006 models: Remove the waved spring.

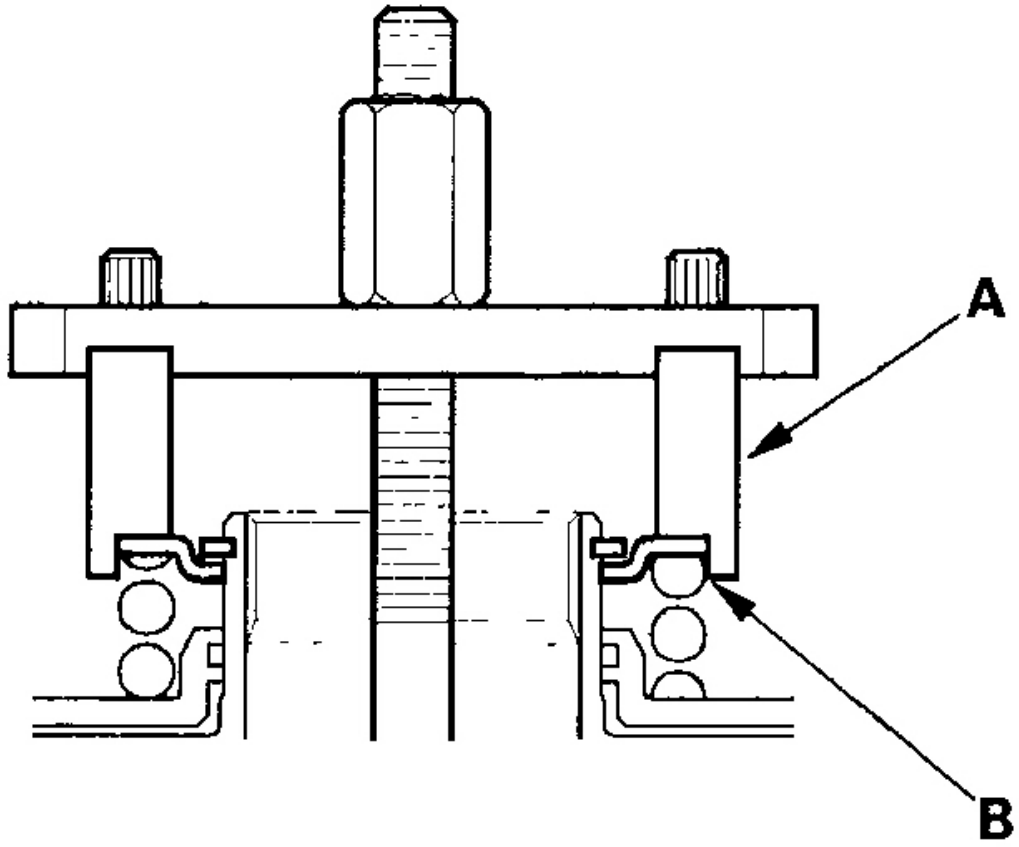
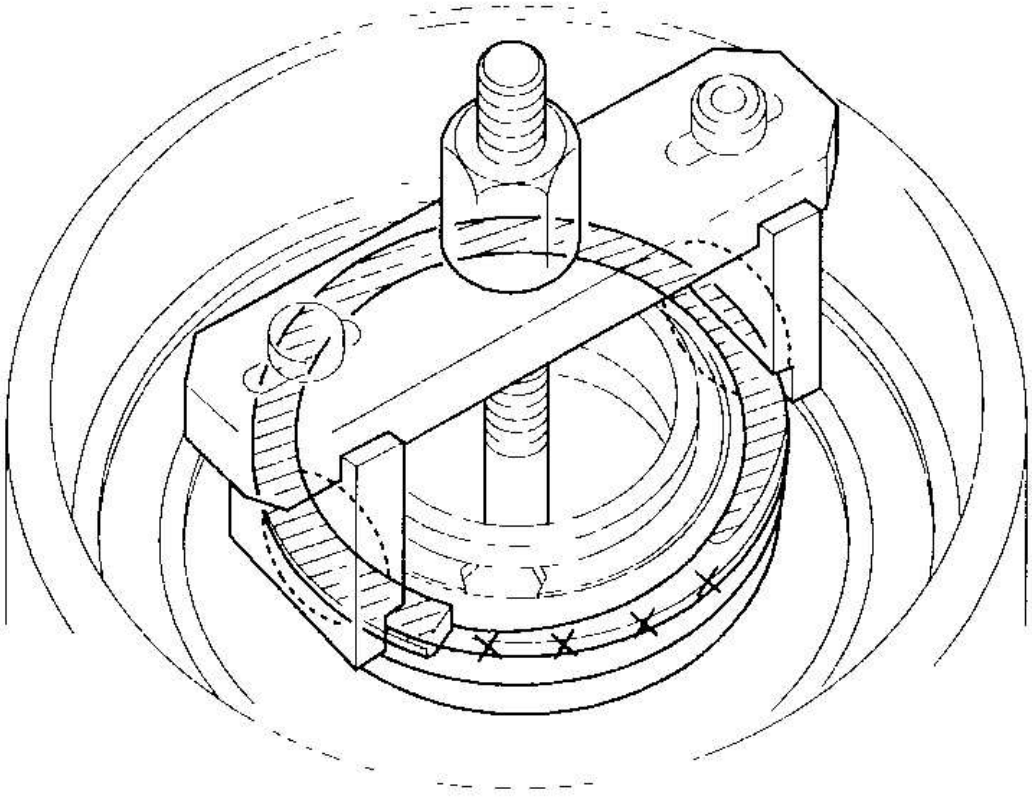


Fig. 420: Removing Waved Spring (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

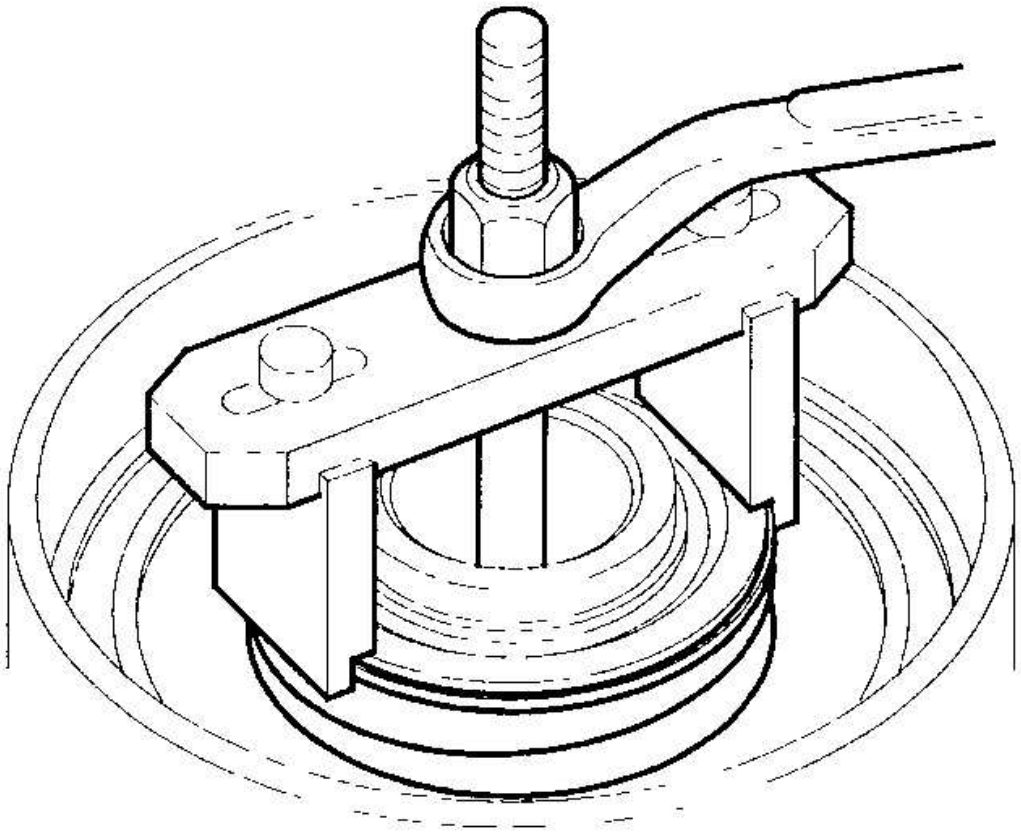
4. Install the special tool on the clutch assembly.



G03682122

Fig. 421: Installing Special Tool On Clutch Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Be sure the special tool (A) is adjusted to have full contact with the spring retainer (B) on the clutch.
6. If either end of the special tool is set over an area of the spring retainer which is unsupported by the return spring, the retainer may be damaged.



G03682123

Fig. 422: Identifying Contact Of Special Tool With Spring Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Compress the spring until the snap ring can be removed.

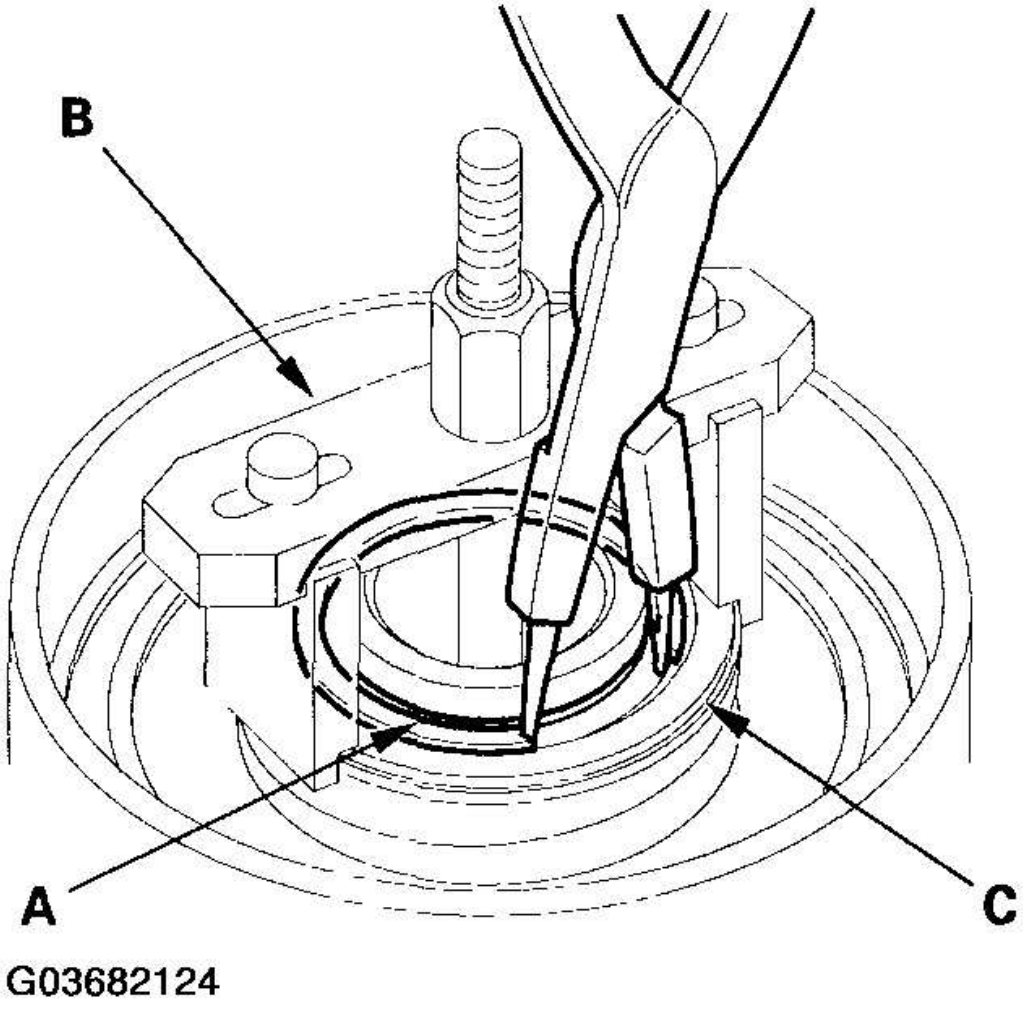


Fig. 423: Compressing Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the snap ring (A). Then remove the special tools (B), spring retainer (C), and return spring.

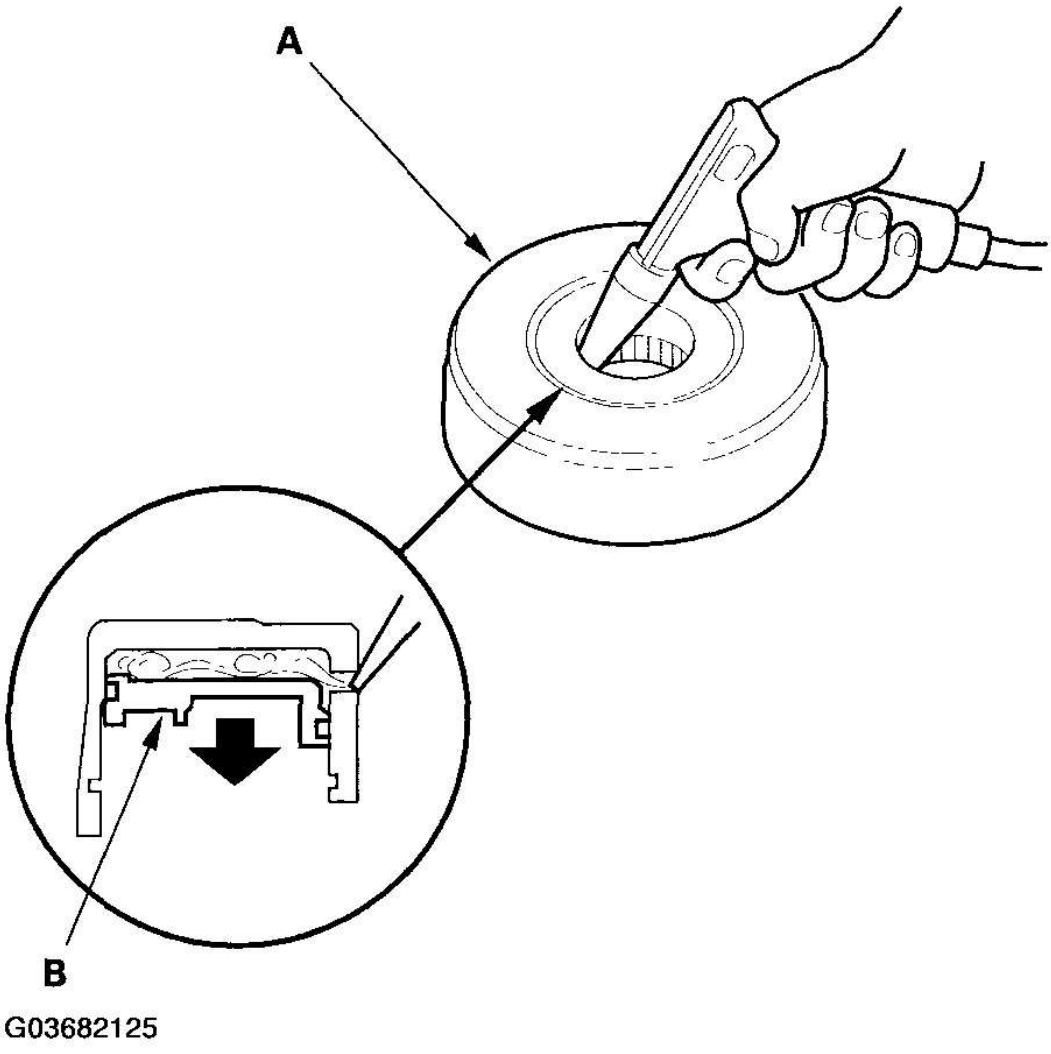


Fig. 424: Removing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Wrap a shop rag around the clutch drum (A), and apply air pressure to the fluid passage to remove the piston (B). Place a finger tip on the other end while applying air pressure.

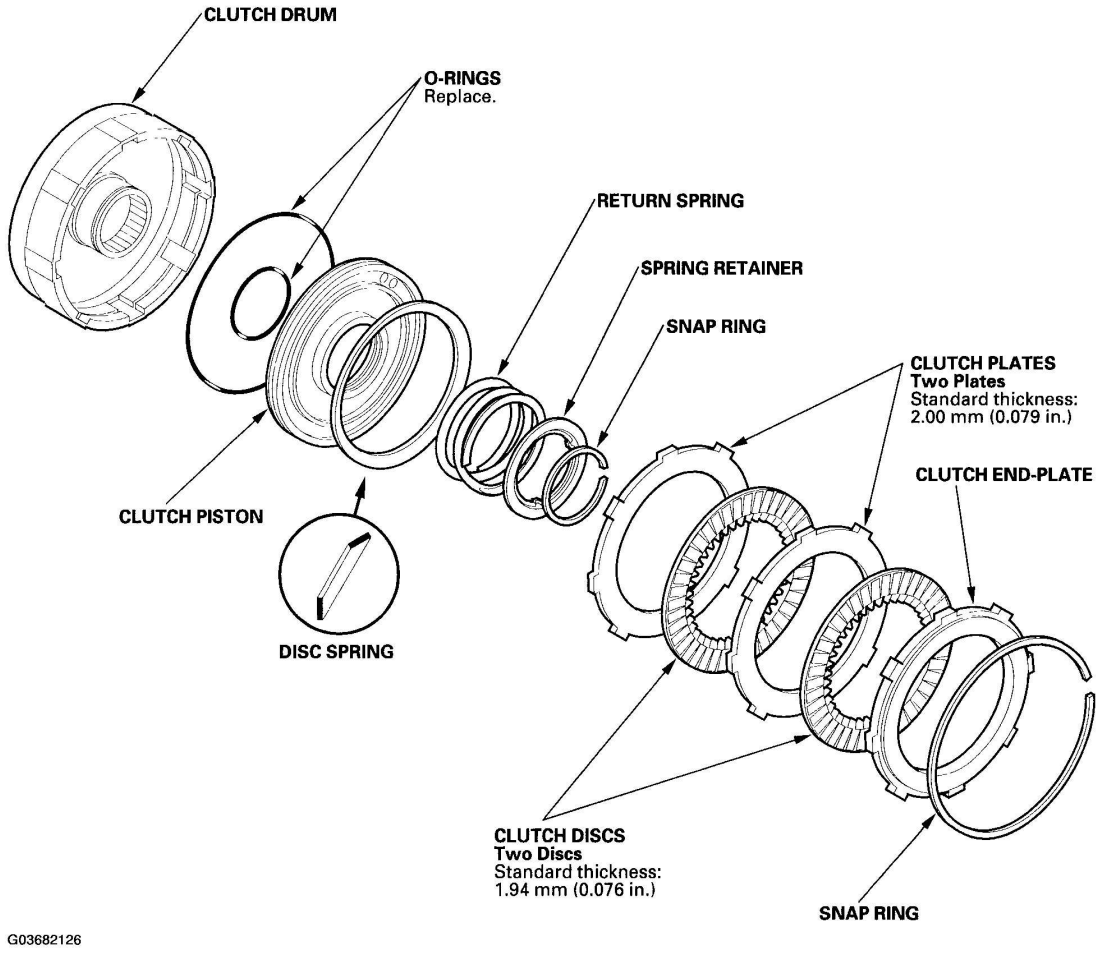


Fig. 425: Removing Piston
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CLUTCH INSPECTION

1. Inspect the clutch piston and clutch piston check valve. If the clutch check valve is loose or damaged, replace the clutch piston.

2001-2004 Models:

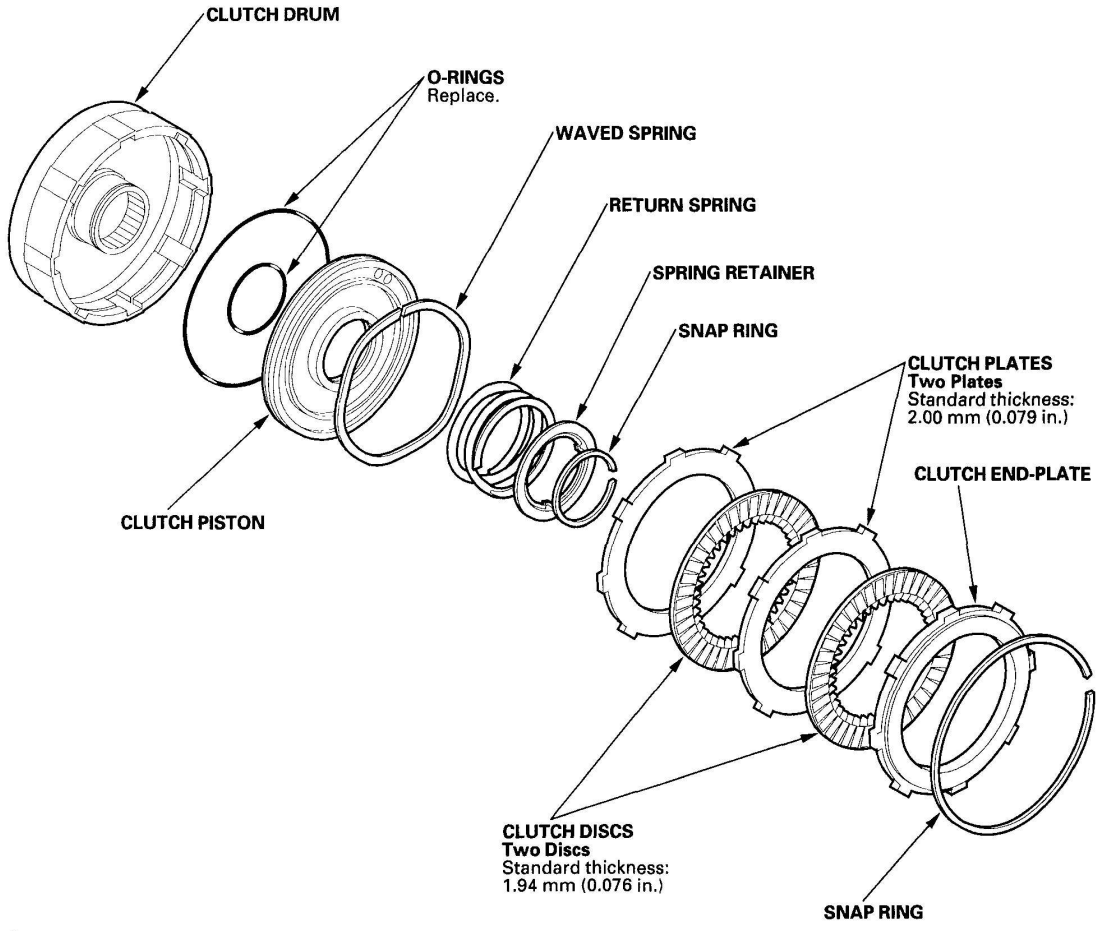


Fig. 426: Inspecting Clutch (2001-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 Models:

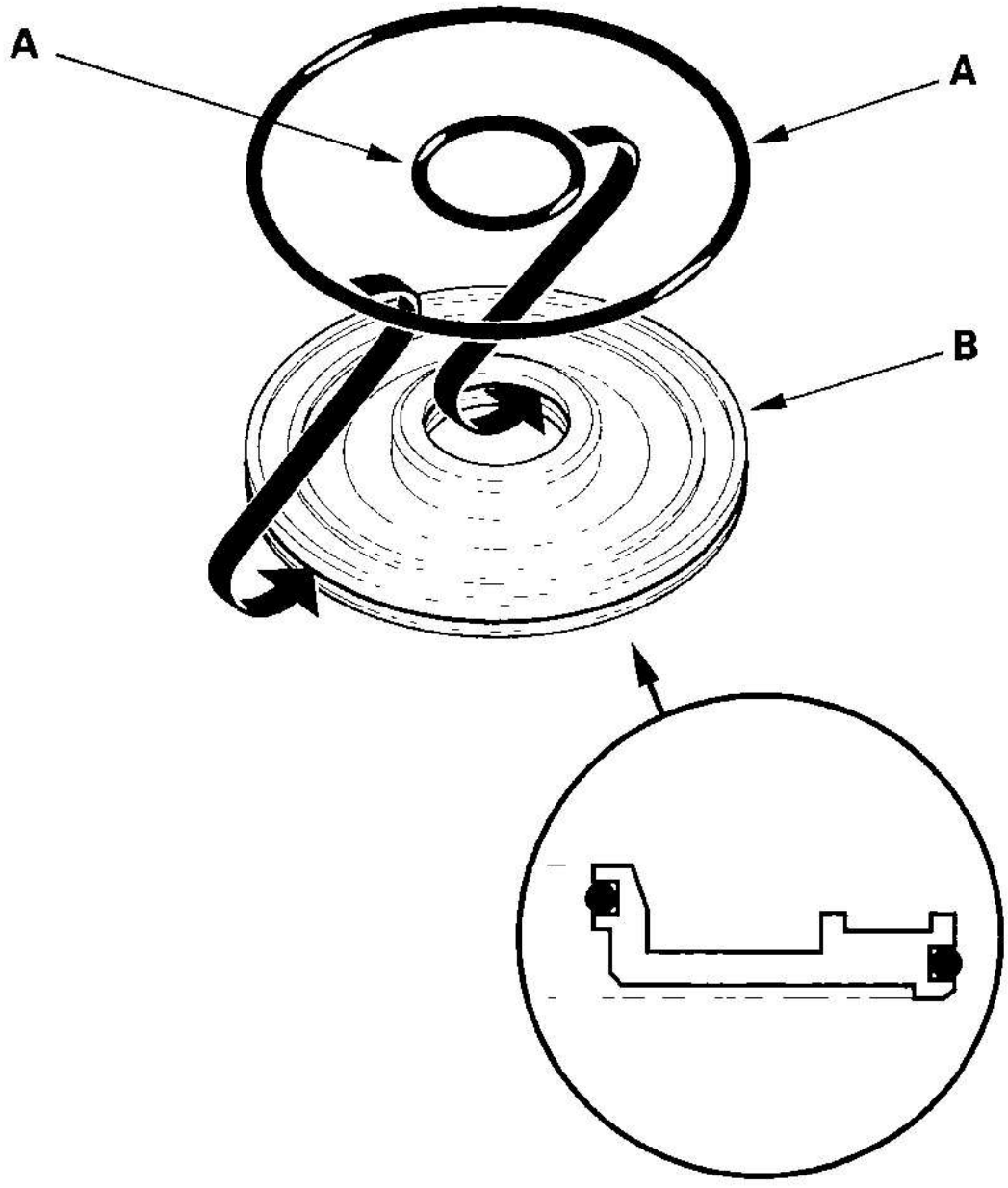


Fig. 427: Inspecting Clutch (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Check the spring retainer for wear and damage.

3. Inspect the clutch discs, clutch plates, and clutch end-plate for wear, damage, and discoloration.
   - If the clutch discs are worn or damaged, replace the disc and plates as a set.
   - If the clutch plates are worn, damaged, or discolored, replace the discs and plates as a set.
   - If the clutch end-plate is worn, damaged, or discolored, inspect the clutch end-plate-to-top-disc clearance, then replace the clutch end-plate.

CLUTCH REASSEMBLY

Special Tools Required

- Clutch spring compressor bolt assembly 07GAE-PG40200 or 07GAE-PG4020A
- Clutch spring compressor attachment 07HAE-PL50101
- Clutch spring compressor attachment 07LAE-PX40100

1. Soak the clutch discs thoroughly in CVTF for a minimum of 30 minutes.
2. Install new O-rings (A) on the piston (B).

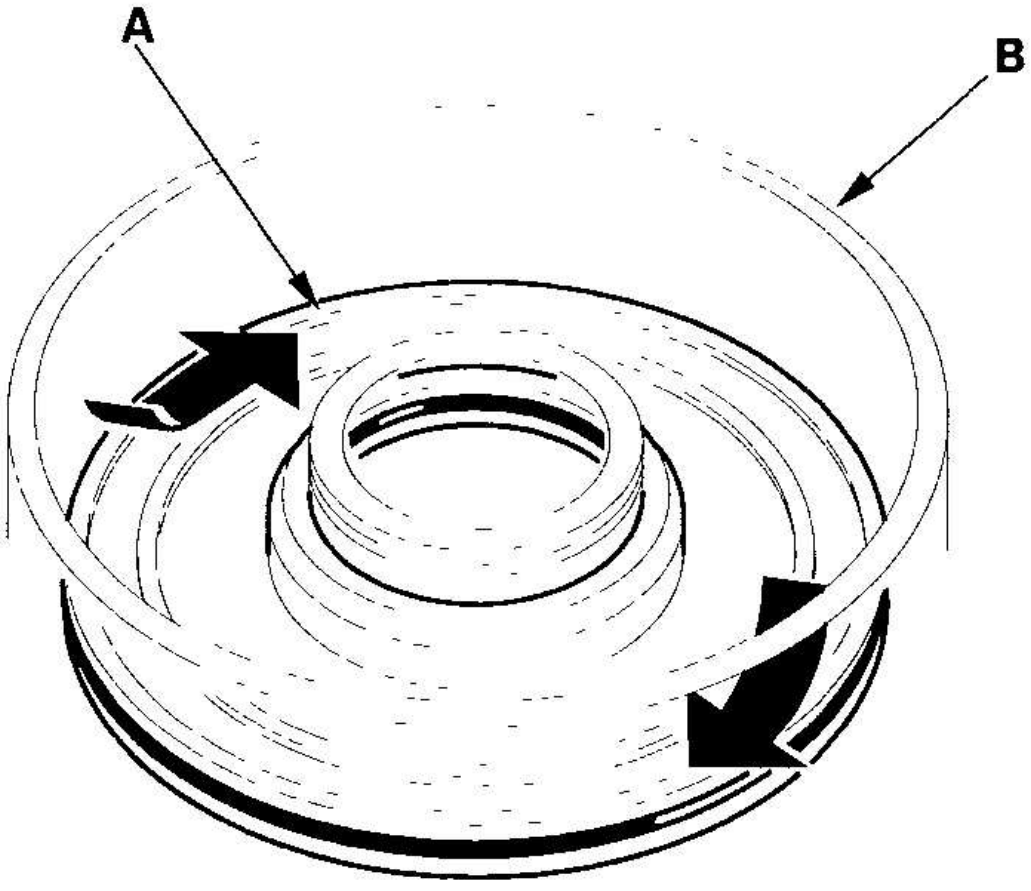
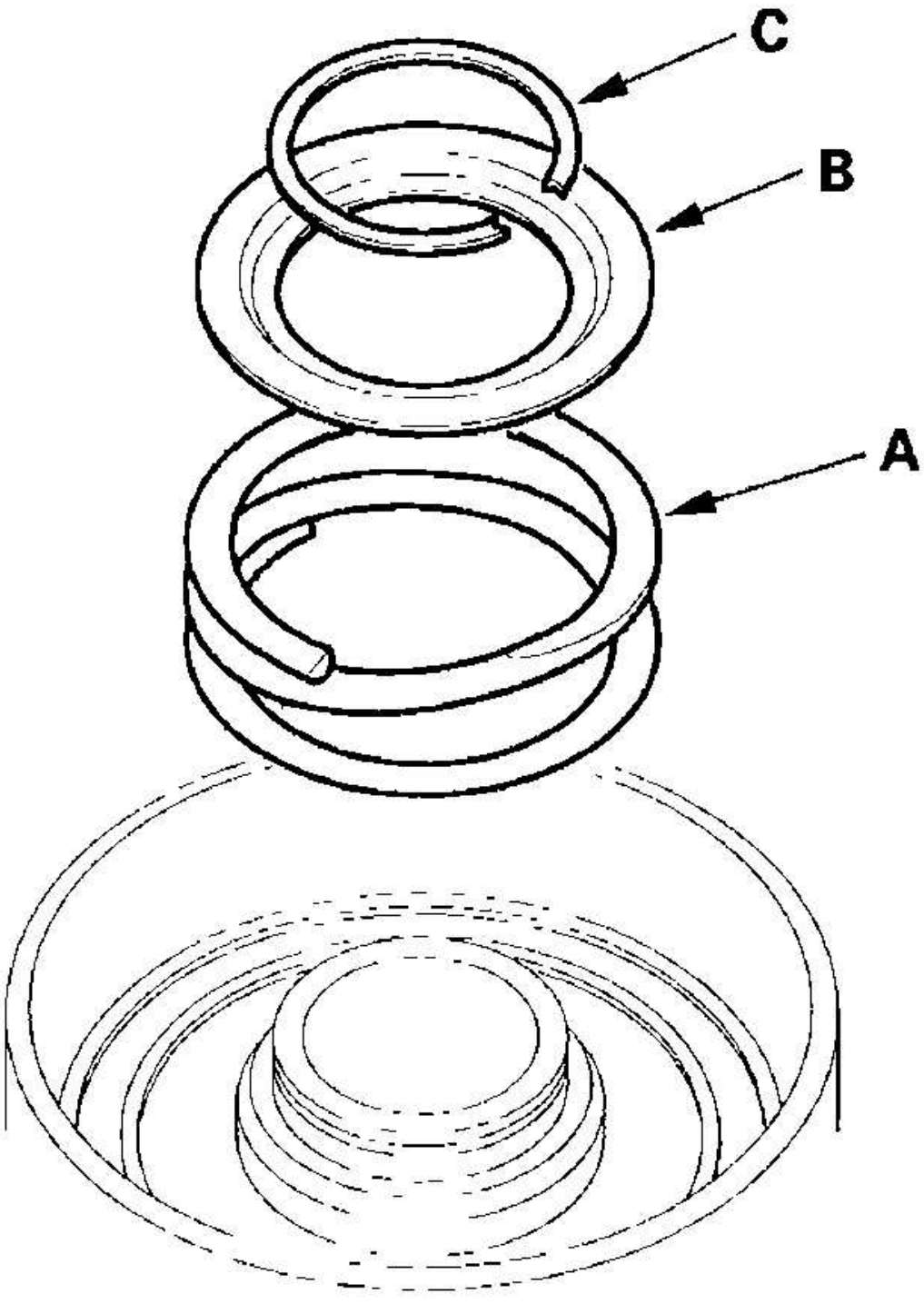


Fig. 428: Installing O-Rings On Piston
Courtesy of AMERICAN HONDA MOTOR CO., INC.

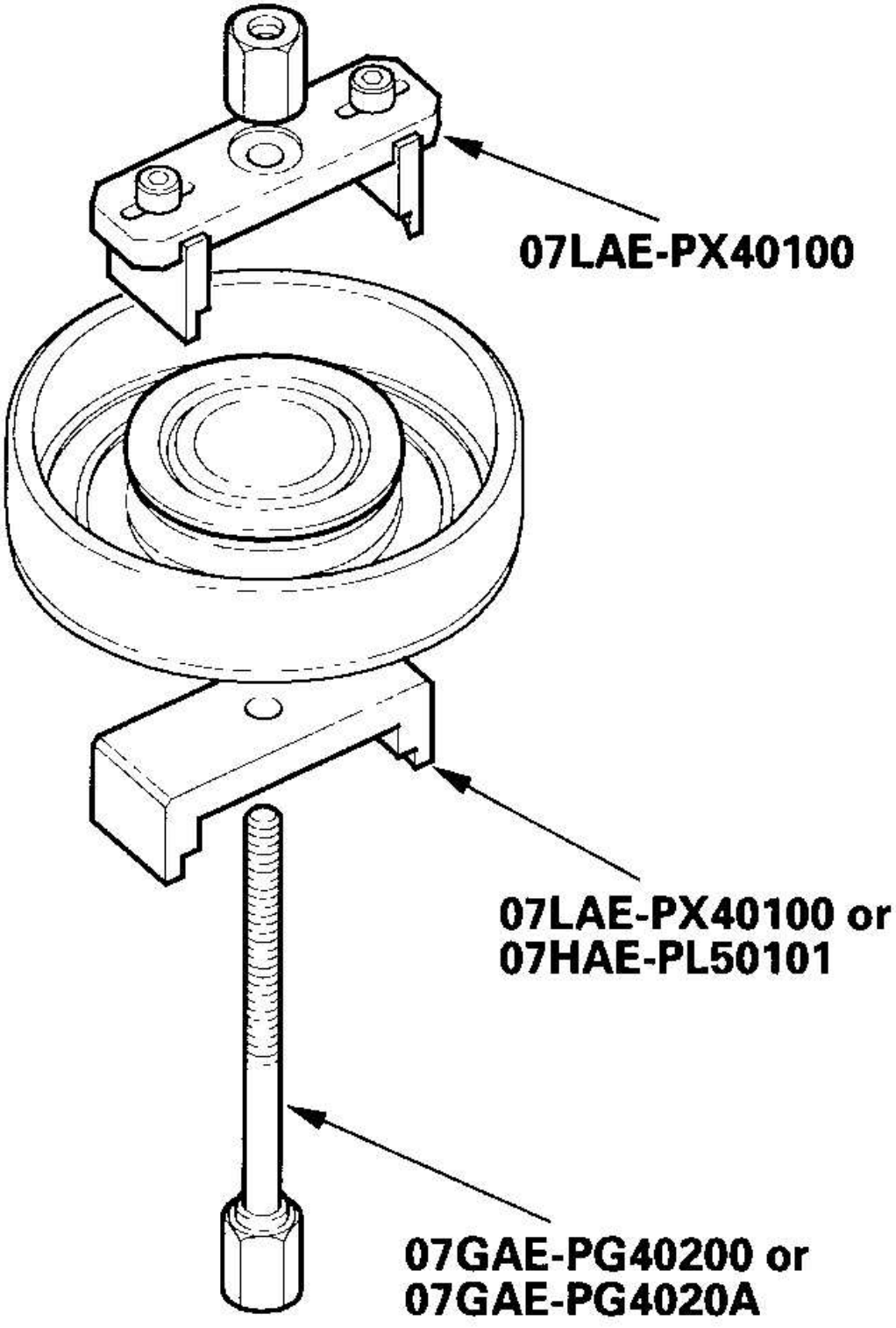
3. Install the piston (A) in the clutch drum (B). Apply pressure and rotate to ensure proper seating. Lubricate the piston O-ring with CVTF before installing. Do not pinch the O-ring by installing the piston with too much force.



G03682130

Fig. 429: Installing Piston In Clutch Drum
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the return spring (A) and spring retainer (B), and position the snap ring (C) on the retainer.


07LAE-PX40100
07LAE-PX40100 or
07HAE-PL50101
07GAE-PG40200 or
07GAE-PG4020A

G03682131

Fig. 430: Installing Return Spring And Spring Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the special tool.

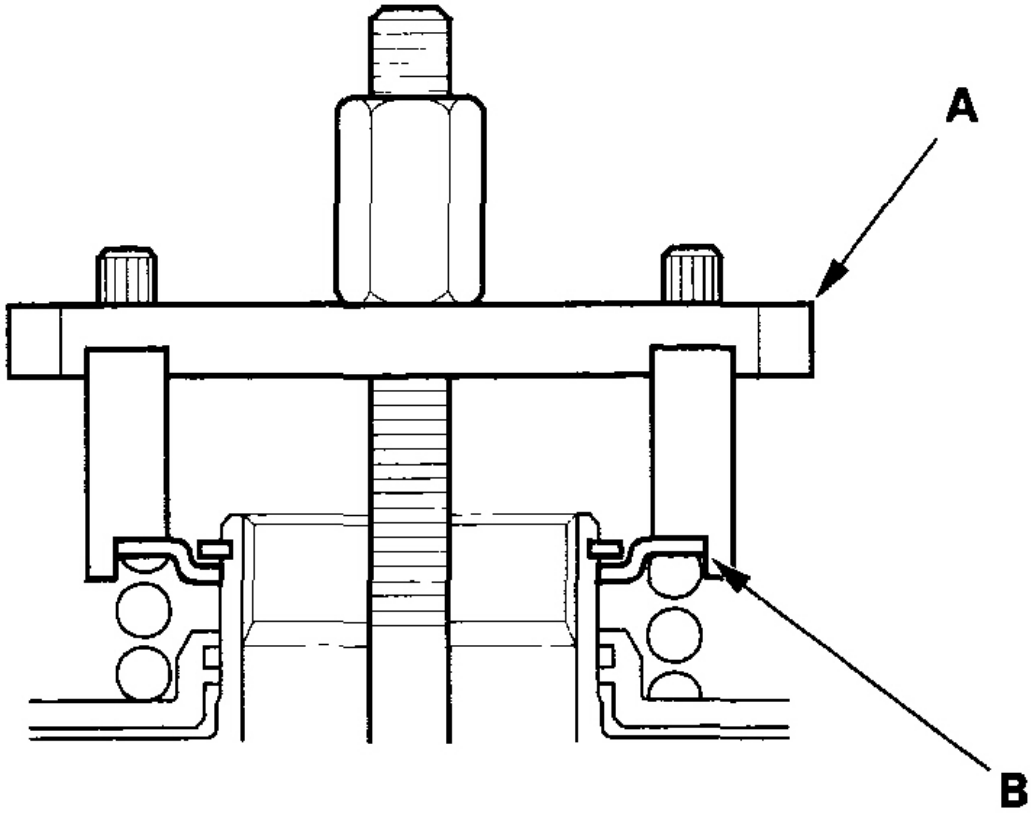
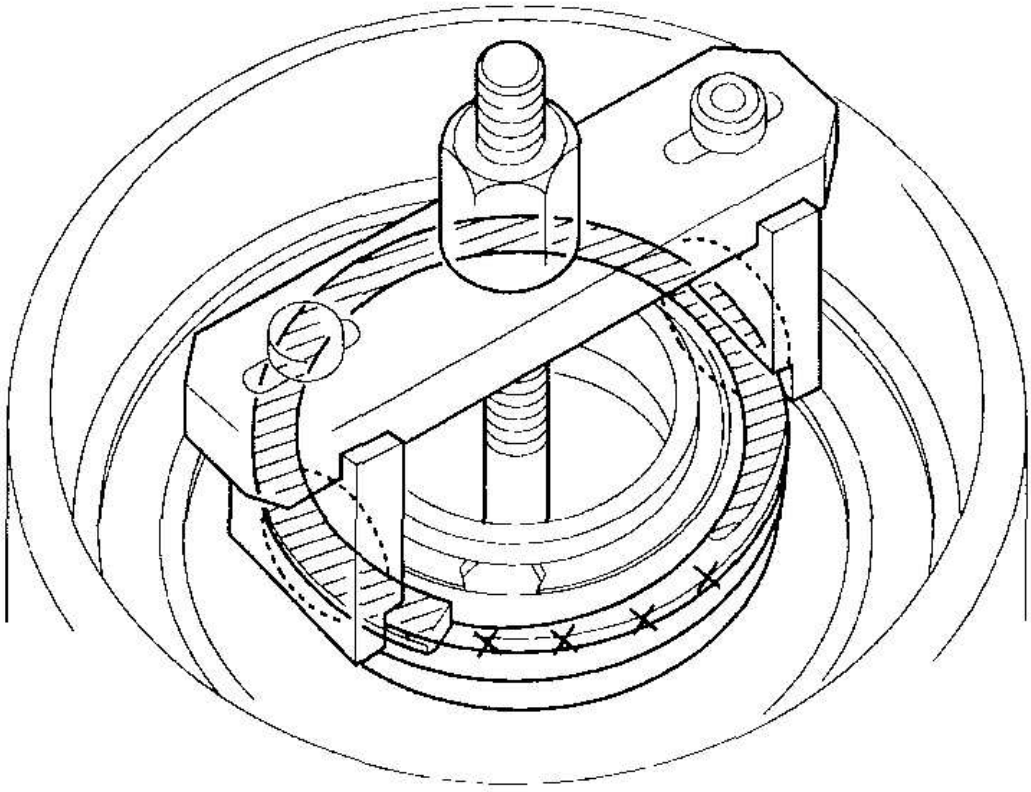


Fig. 431: Installing Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

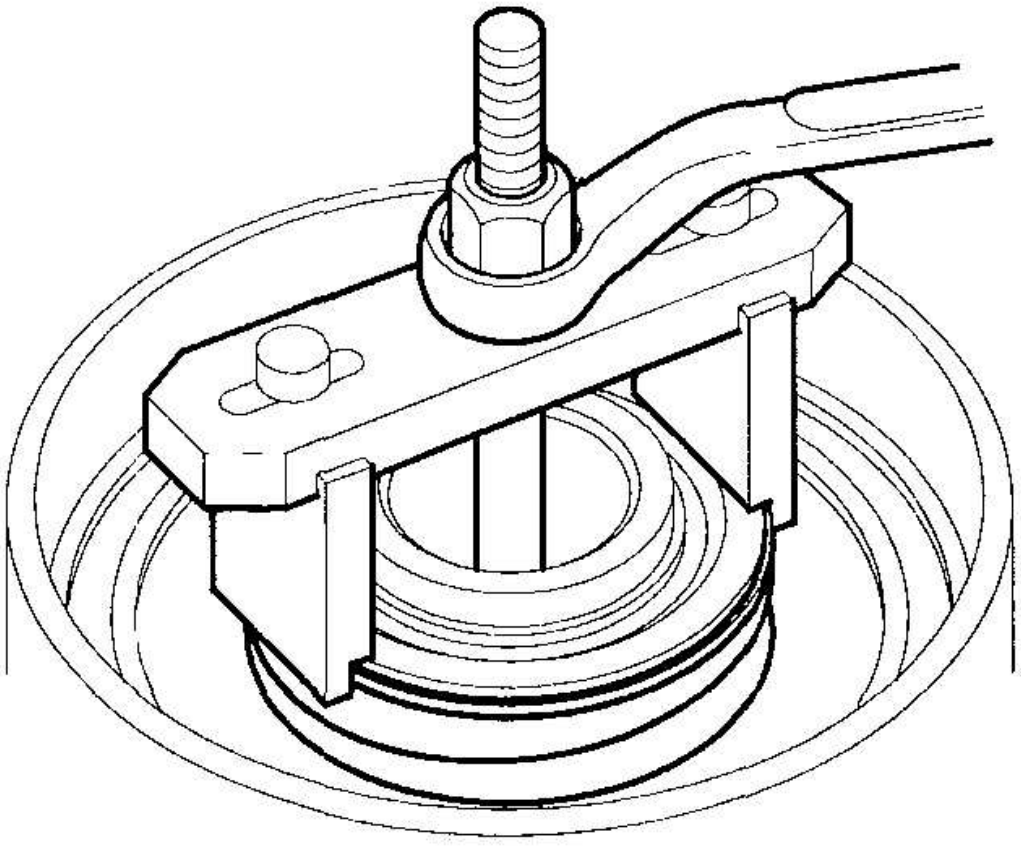
6. Be sure the special tool (A) is adjusted to have full contact with the spring retainer (B) on the clutches.



G03682133

Fig. 432: Identifying Contact Of Special Tool With Spring Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. If either end of the special tool is set over an area of the spring retainer which is unsupported by the return spring, the retainer may be damaged.



G03682134

Fig. 433: Inspecting Damaged Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Compress the return spring.

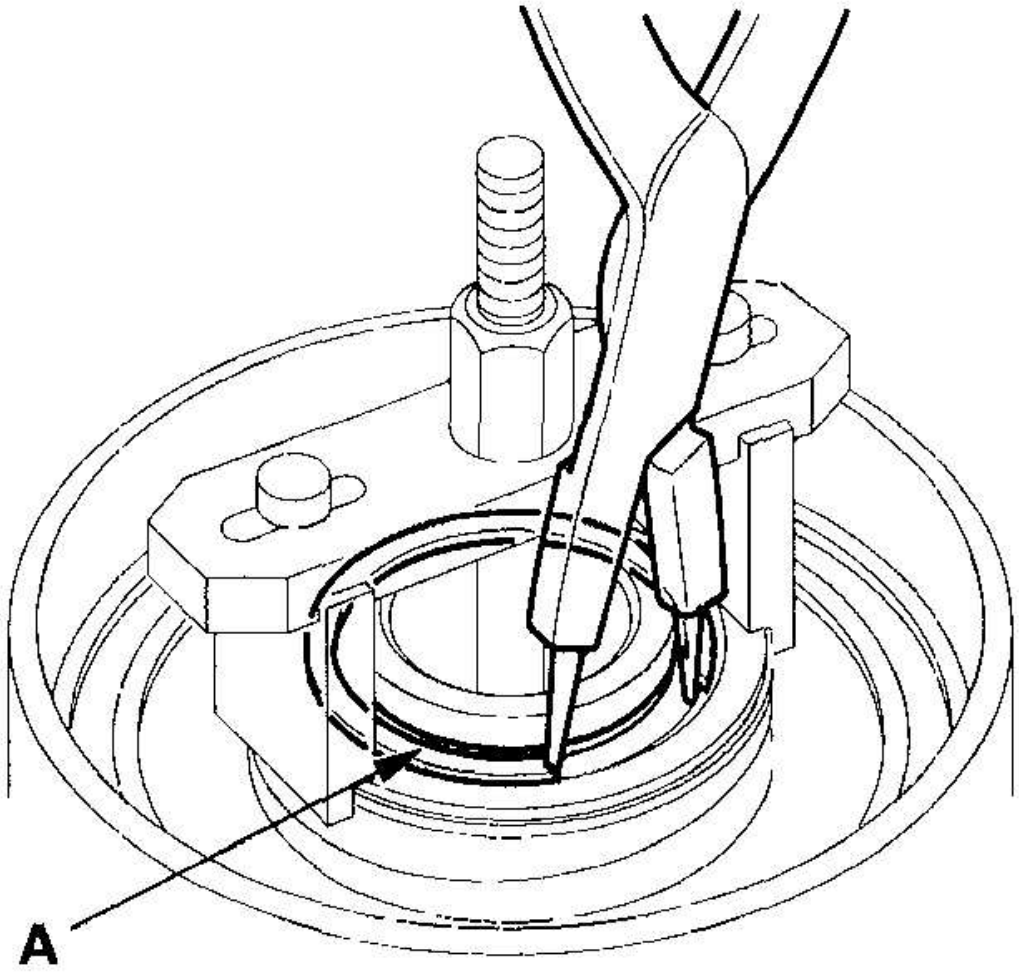
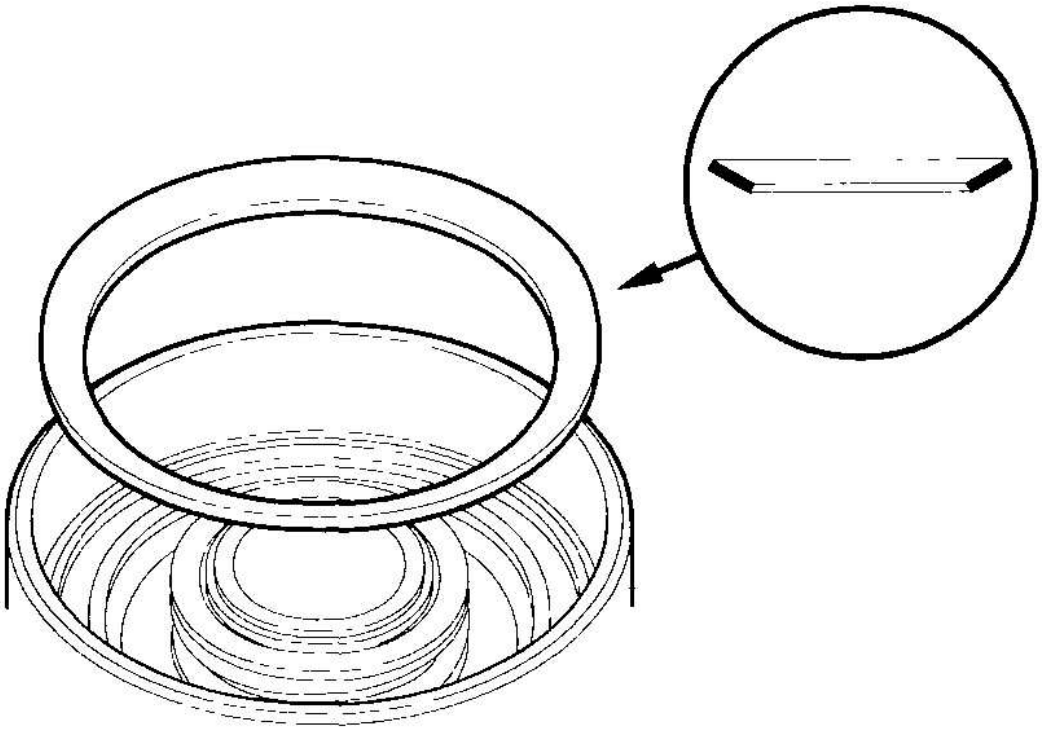


Fig. 434: Compressing Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

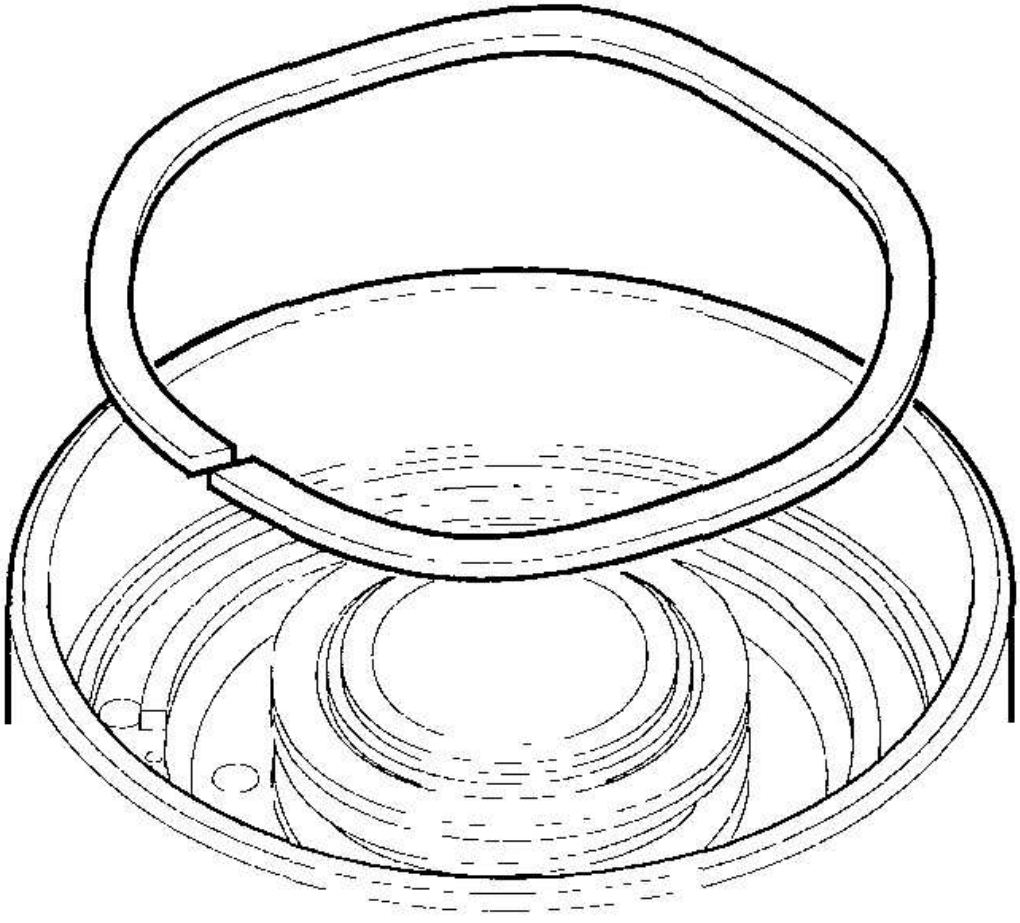
9. Install the snap ring (A).



G03682136

Fig. 435: Installing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the special tools.
11. 2001-2004 models: Install the disc spring in the direction shown.



G03682137

Fig. 436: Installing Disc Spring (2001-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. 2005-2006 models: Install the waved spring.

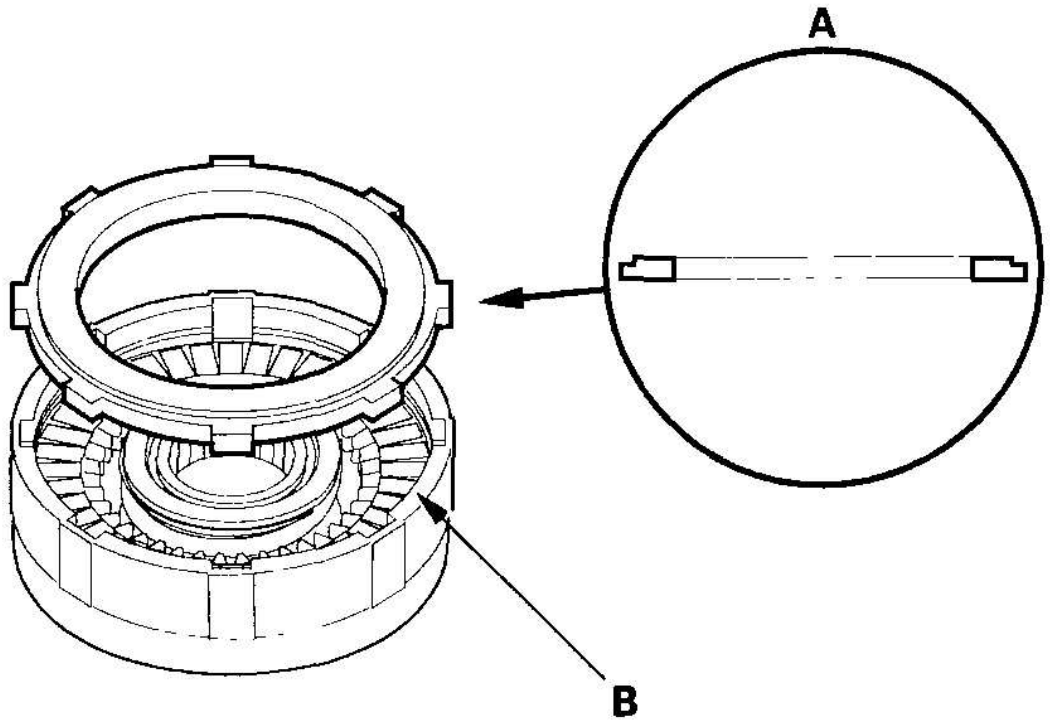


Fig. 437: Installing Waved Spring (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Starting with a clutch plate, alternately install the clutch plates and discs. Install the clutch end-plate (A) with the flat side toward the disc (B).

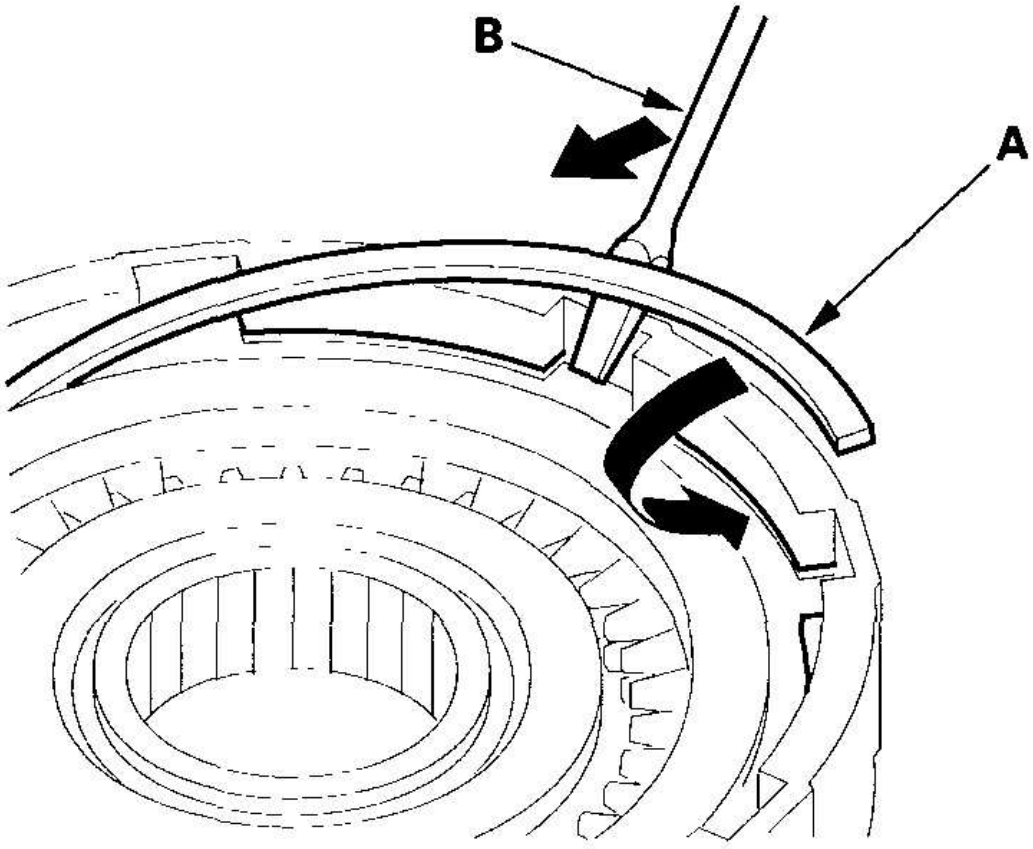


Fig. 438: Installing Clutch End-Plate
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Install the snap ring (A) with a screwdriver (B).

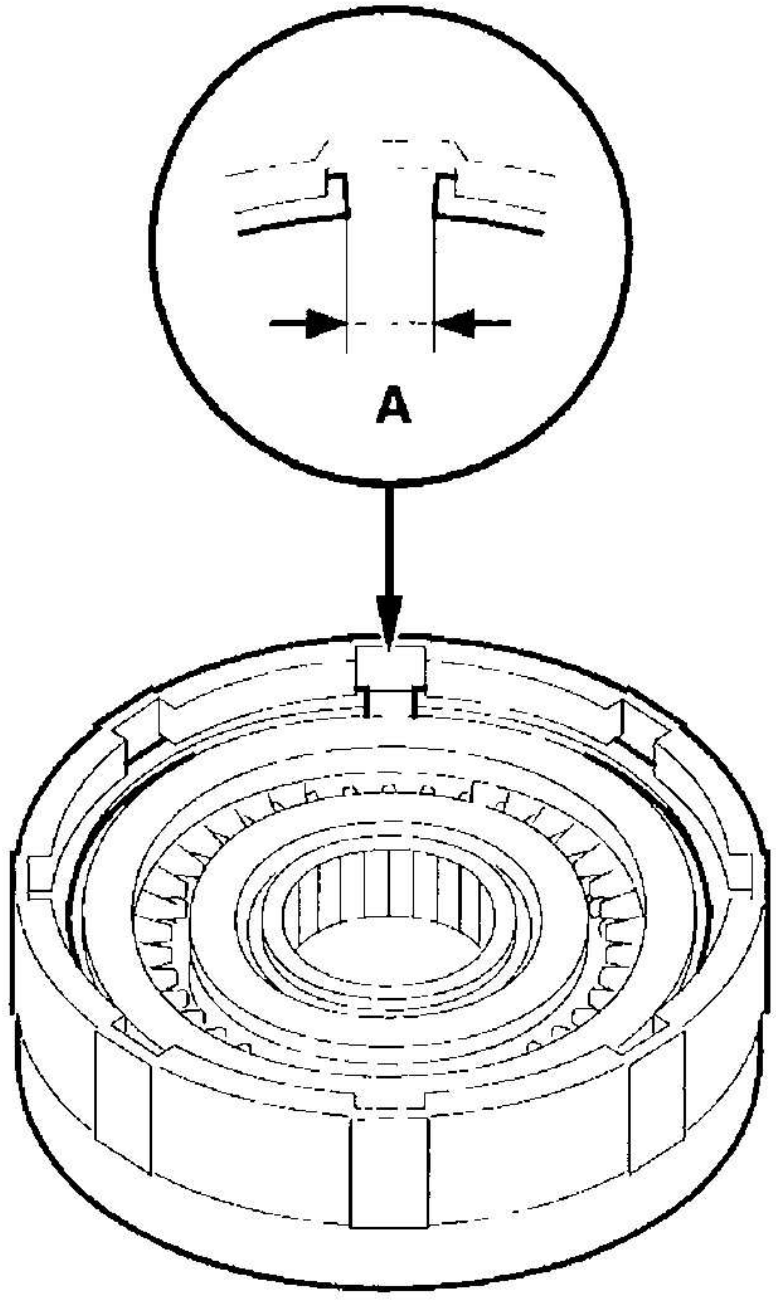
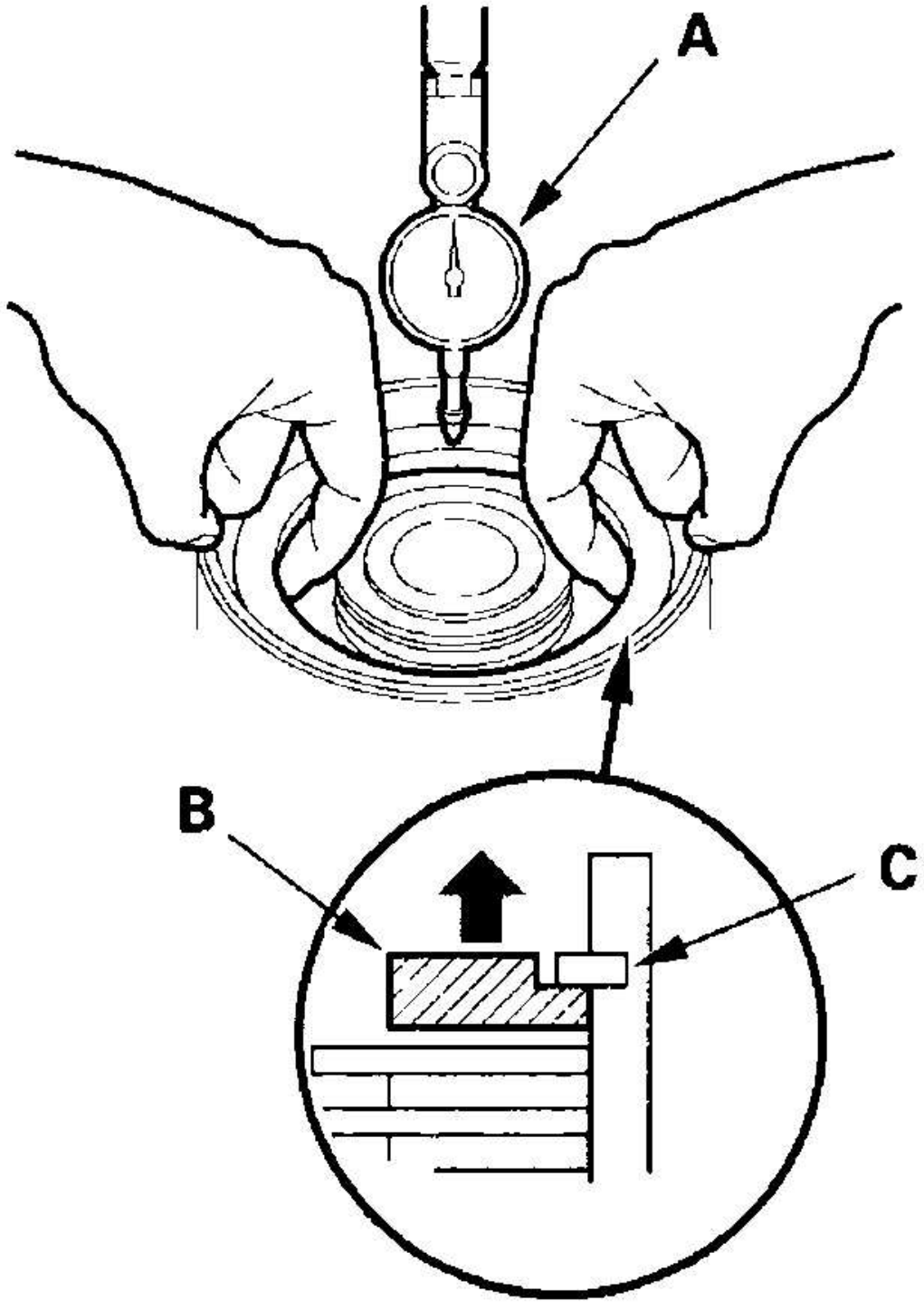


Fig. 439: Installing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Verify that the snap ring end gap (A) is 7.9 mm (0.311 in.) or move.



G03682141

Fig. 440: Identifying Snap Ring End Gap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check that the clutch piston engages by applying air pressure to the fluid passage, and also check that the piston releases when released air pressure.
17. Set a dial indicator (A) on the clutch end-plate (B).

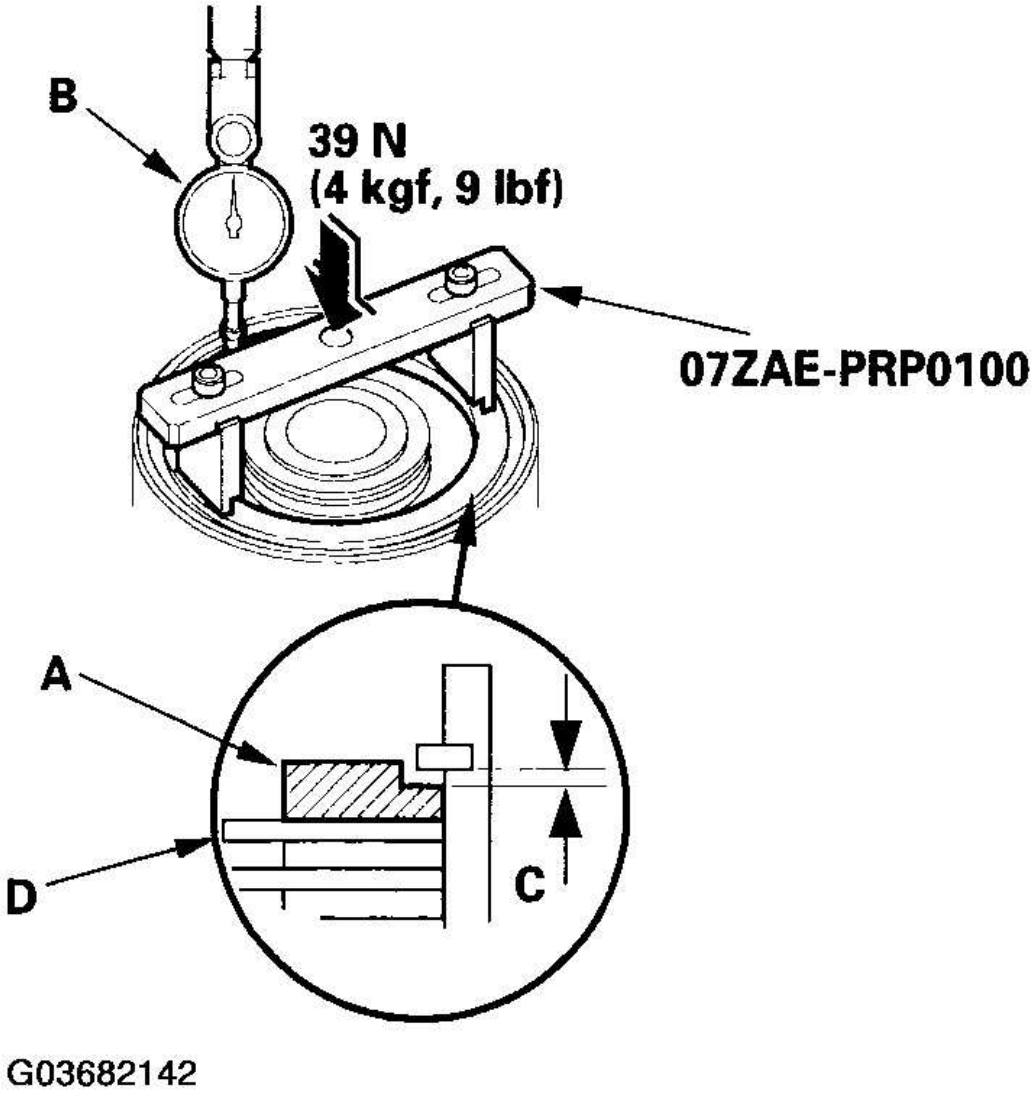
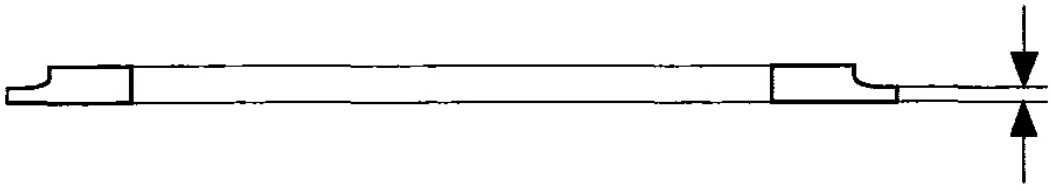


Fig. 441: Setting Dial Indicator On Clutch End-Plate

Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Zero the dial indicator with the clutch end-plate lifted up to the snap ring (C).
19. Release the clutch end-plate to lower the clutch end-plate, then put the special tool on the end-plate (A).



G03682143

Fig. 442: Setting Special Tool On End Plate
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Press the special tool down with 39 N (4 kgf, 9 lbf) using a force gauge, and read the dial indicator (B). The dial indicator reads the clearance (C) between the clutch end-plate and top disc (D). Take measurements in at least three places, and use the average as the actual clearance.

    Clutch End-Plate-to-Top-Disc Clearance Service Limit: 0.6-0.8 mm (0.024-0.031 in.)

21. If the clearance is out of the service limit, select a new clutch end-plate from the following table, then recheck.

    NOTE: If the thickest clutch end-plate is installed, but the clearance is still over the standard, replace the clutch discs and clutch plates.

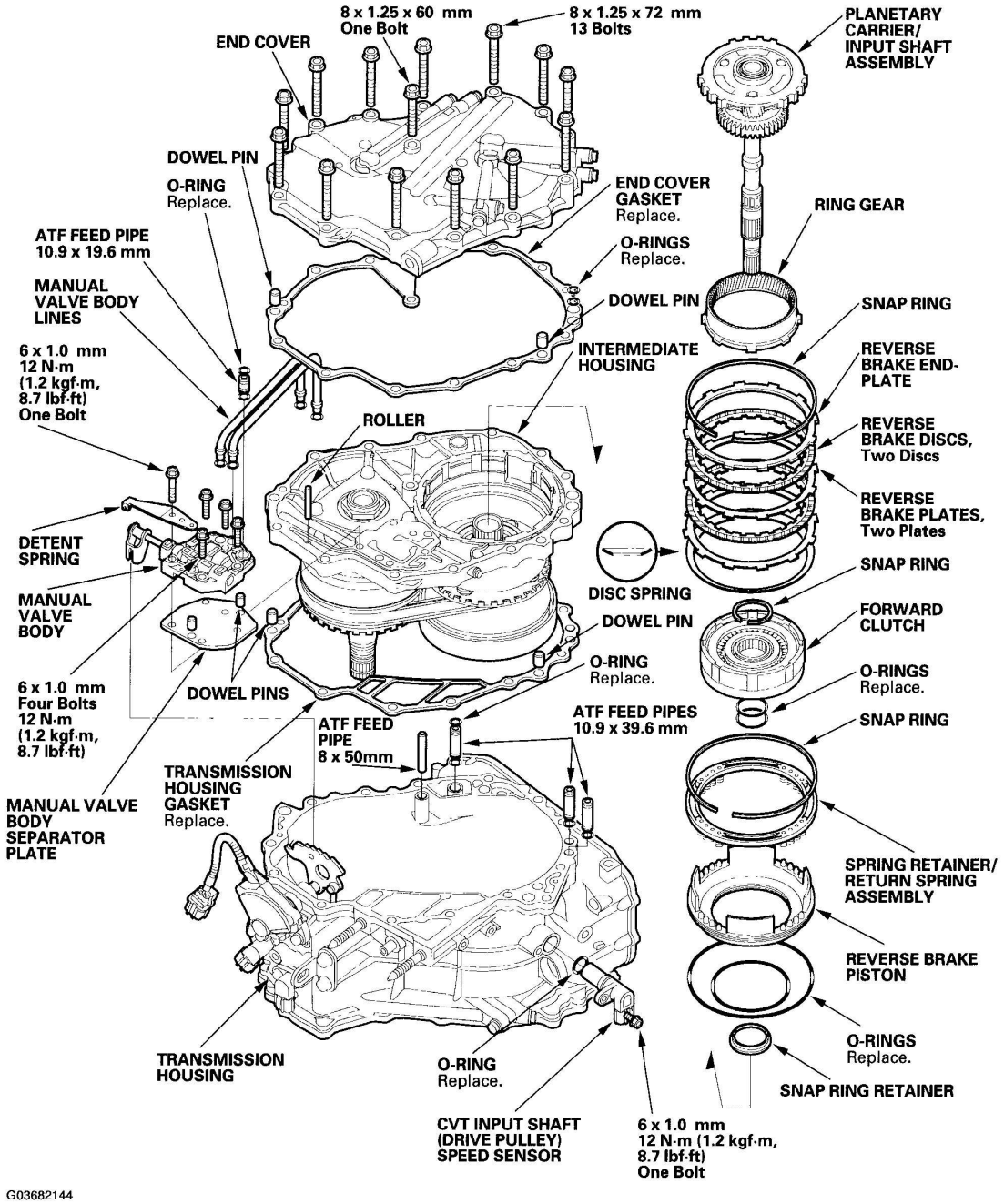


Fig. 443: Identifying Thickness Of Forward Clutch End Plate And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

FORWARD CLUTCH END-PLATE

FORWARD CLUTCH END-PLATE THICKNESS

Mark	Part Number	Thickness
14	22574-P4V-003	3.4 mm (0.134 in.)
15	22561-P4V-003	3.5 mm (0.138 in.)
16	22562-P4V-003	3.6 mm (0.142 in.)
17	22563-P4V-003	3.7 mm (0.146 in.)
18	22564-P4V-003	3.8 mm (0.150 in.)
19	22565-P4V-003	3.9 mm (0.154 in.)
20	22566-P4V-003	4.0 mm (0.157 in.)
21	22567-P4V-003	4.1 mm (0.161 in.)
22	22568-P4V-003	4.2 mm (0.165 in.)
23	22569-P4V-003	4.3 mm (0.169 in.)
24	22570-P4V-003	4.4 mm (0.173 in.)
25	22571-P4V-003	4.5 mm (0.177 in.)
26	22572-P4V-003	4.6 mm (0.181 in.)
27	22573-P4V-003	4.7 mm (0.185 in.)

22. After replacing the clutch end-plate, make sure that the clearance is within tolerance.

END COVER/INTERMEDIATE HOUSING

INTERMEDIATE HOUSING, REVERSE BRAKE, AND FORWARD CLUTCH INSTALLATION

Exploded View

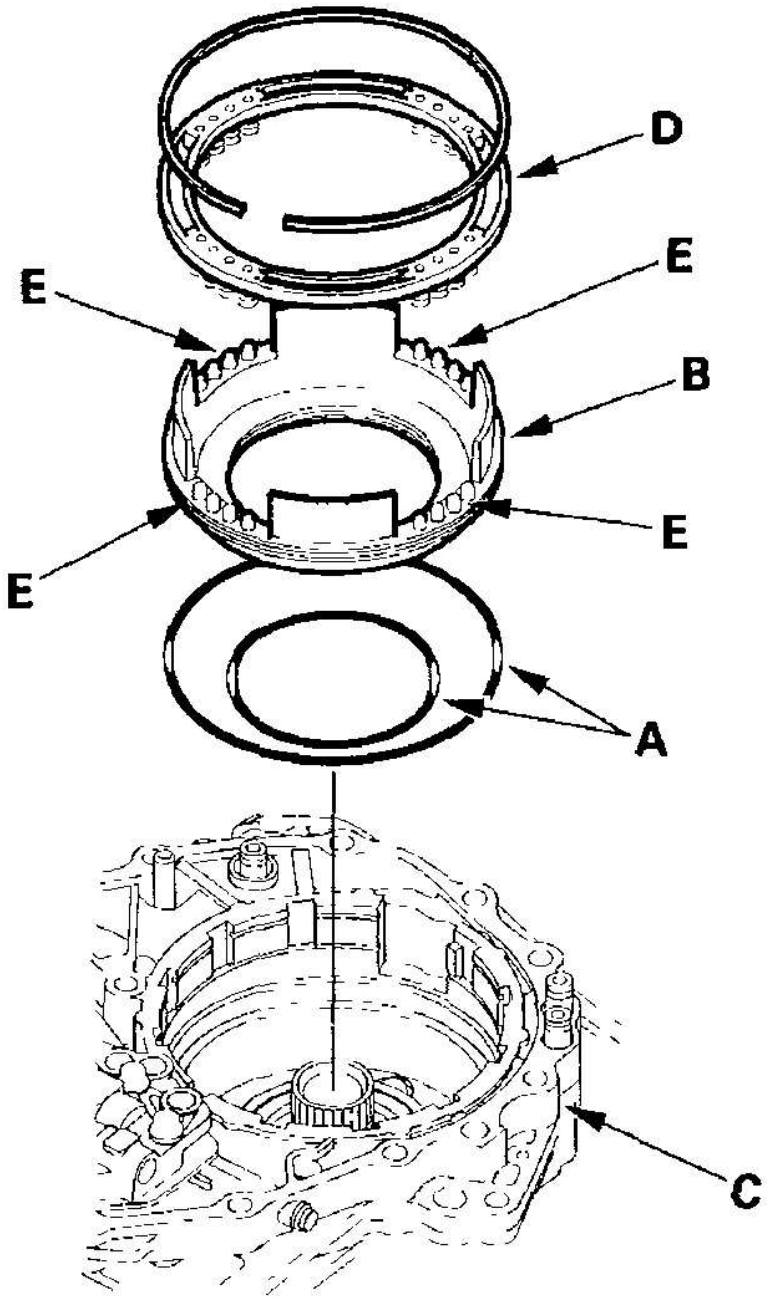


Fig. 444: Exploded View Of Intermediate Housing, Reverse Brake, And Forward Clutch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Special Tools Required

Reverse brake spring compressor 07TAE-P4V0110

1. Install 8 x 50 mm ATF feed pipe in the transmission housing, and install the 10.9 x 39.6 mm ATF feed pipes with new O-rings in the transmission housing.
2. Install the two dowel pins and new transmission housing gasket on the transmission housing.
3. Push the control shaft toward the outside of the transmission housing, then install the intermediate housing.
4. Install the manual valve body separator plate and two dowel pins on the intermediate housing, and install the manual valve body (four bolts) with the detent spring (one bolt).
5. Put the control shaft back, then install the roller in the intermediate housing with aligning the groove on the control shaft.
6. Install the new O-rings (A) on the reverse brake piston (B), then install the piston in the intermediate housing (C).

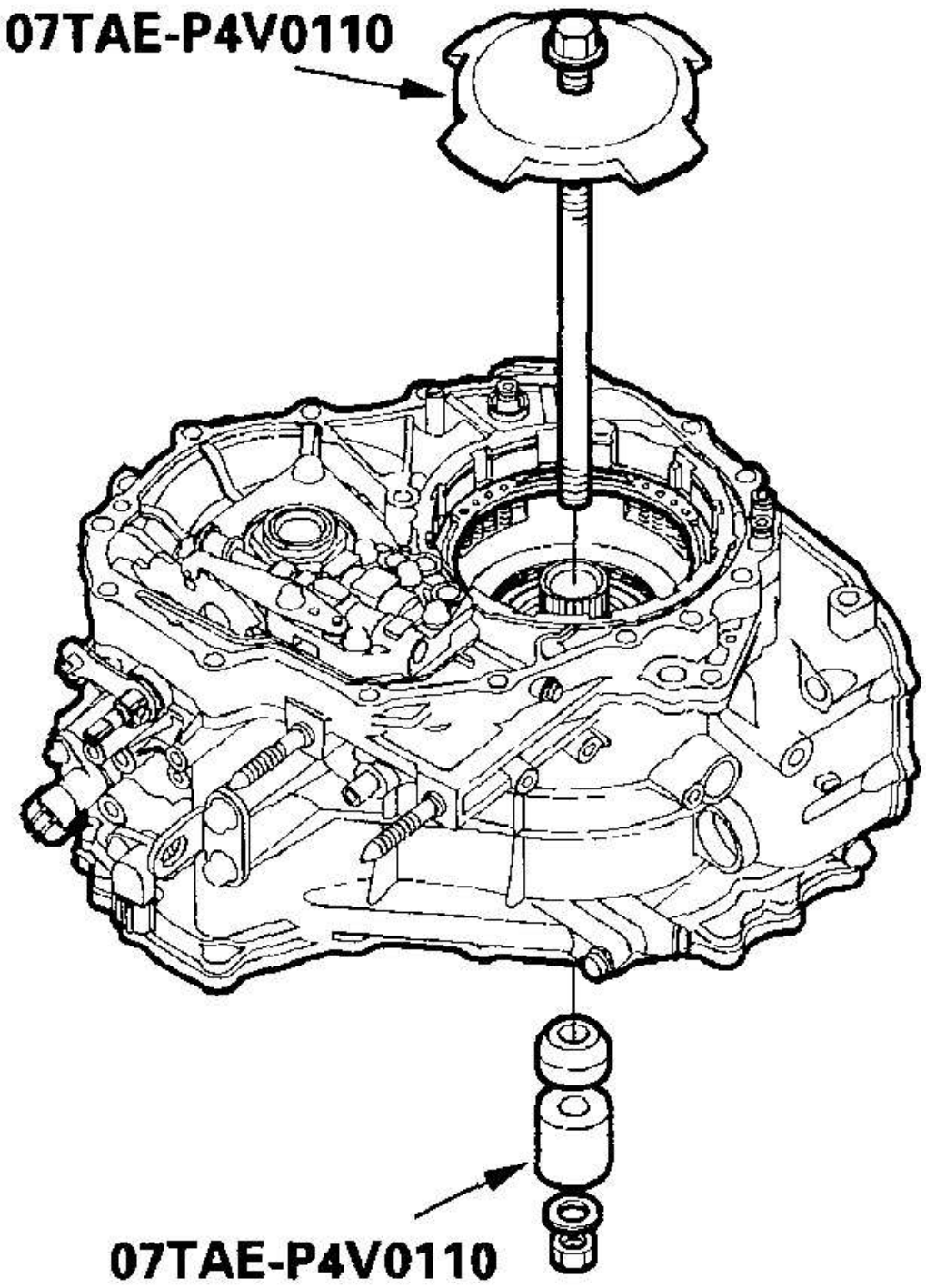


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Fig. 445: Installing Reverse Brake Piston In Intermediate Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the spring retainer/return spring assembly (D); Install the return springs on the spring guide (E) on the reverse brake piston.
8. Install the special tool through the drive pulley shaft to compress the return spring. Be sure the special tool (spring compressor attachment) is set over the return springs, not over the reverse brake piston.

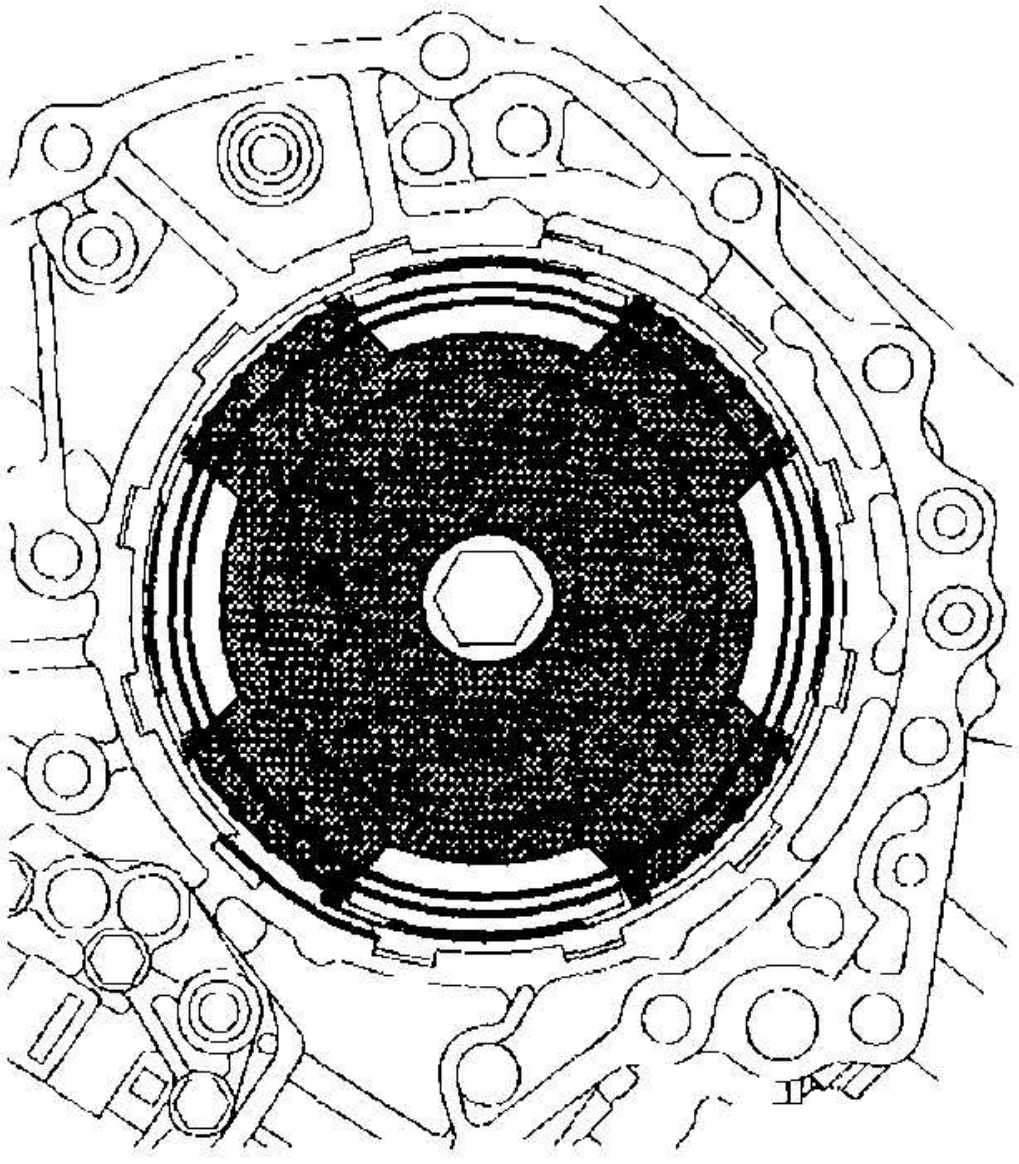

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Fig. 446: Installing Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Compress the return springs, making sure that the special tool is set over the return springs and the spring retainer tabs do not ride on the reverse brake

piston.

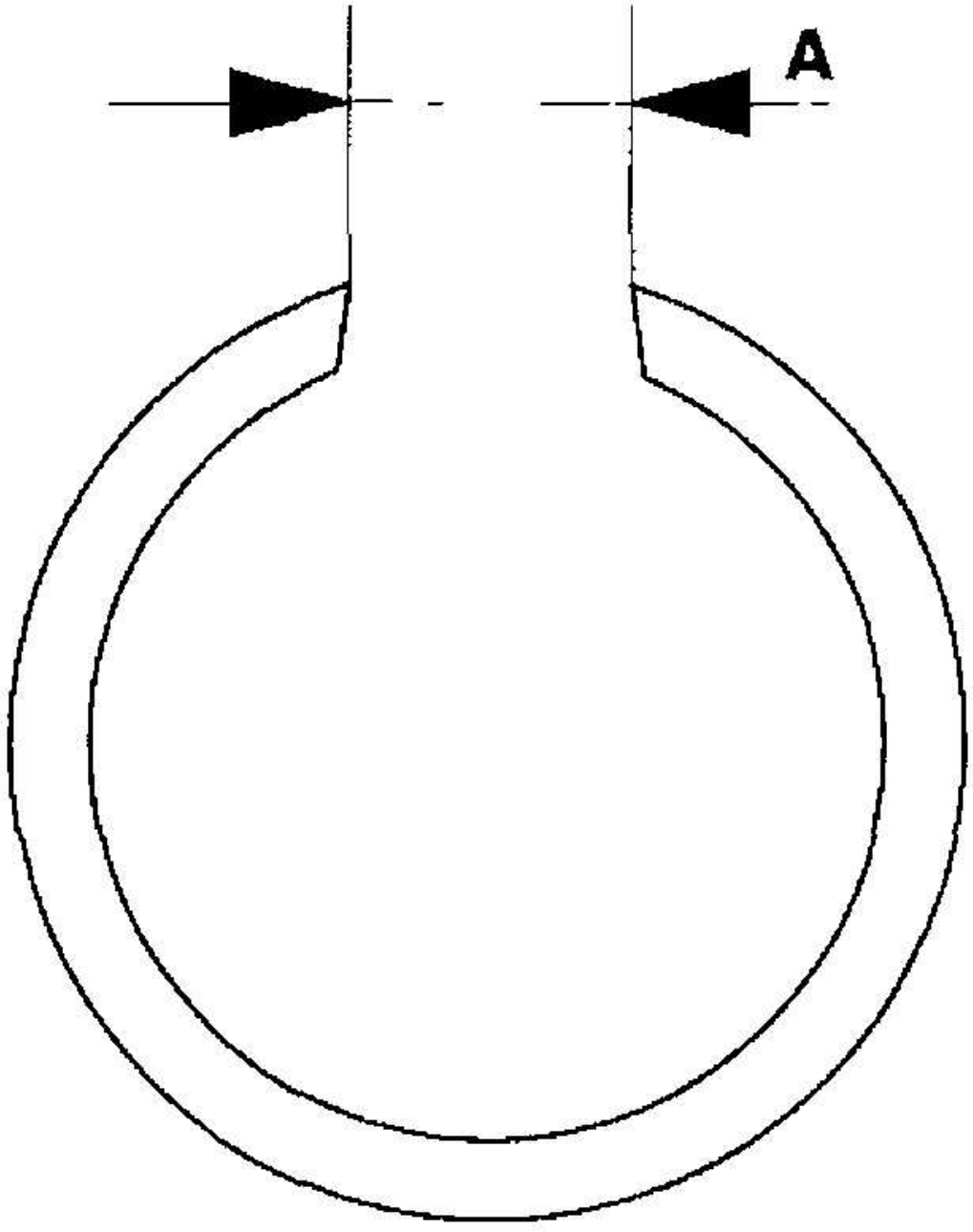

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Fig. 447: Compressing Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Install the snap ring in the intermediate housing above the spring retainer.
11. Verify that the snap ring end gap (A) is 15 mm (0.59 in.) or more.

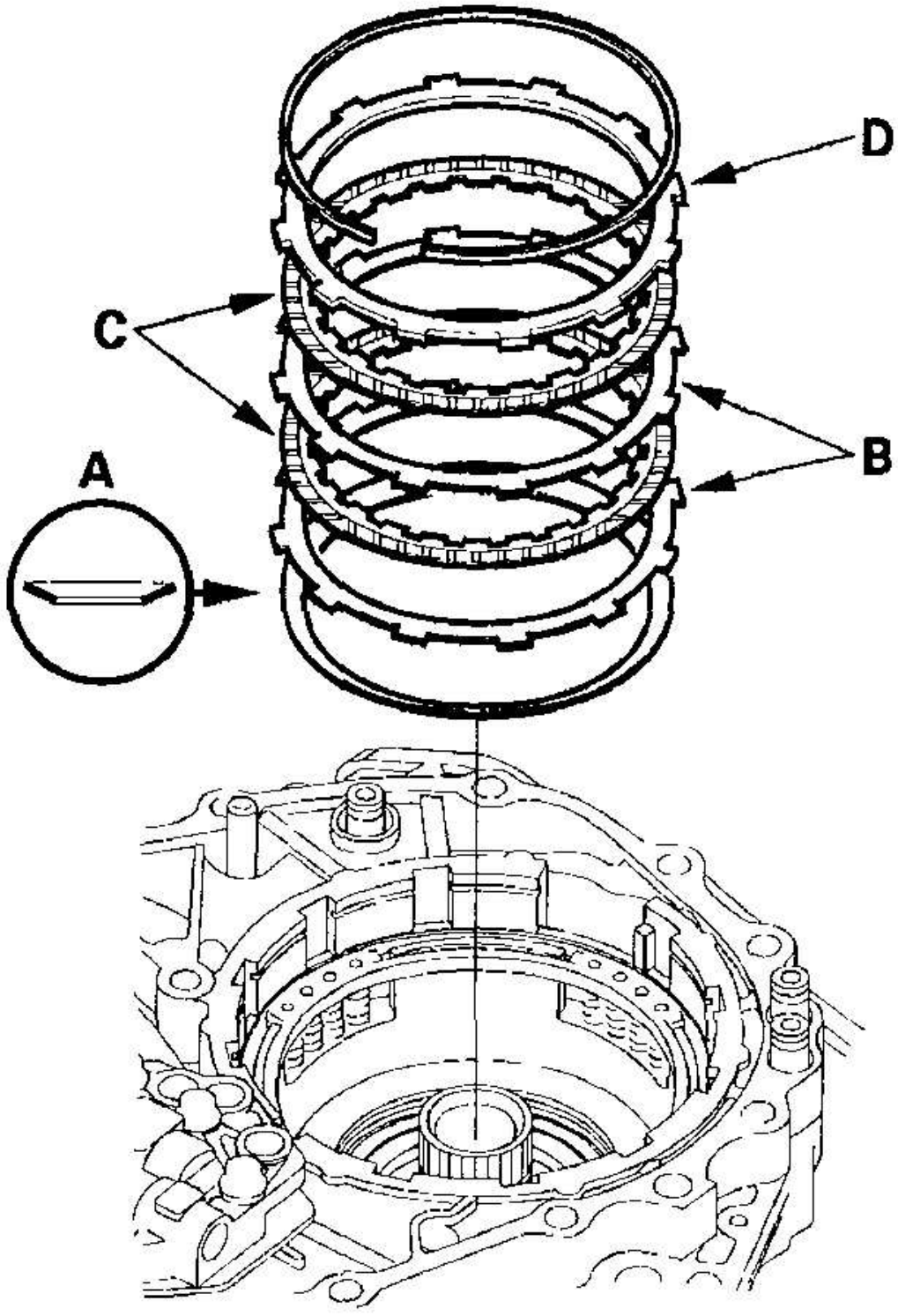

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Fig. 448: Identifying Snap Ring End Gap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Inspect the brake discs, brake plates, and brake end-plate for wear, damage, and discoloration.
    - If the discs or plates are worn or damaged, replace the disc and plates as a set.
    - If the end-plate is worn, damaged, or discolored, replace the end-plate.
13. Soak the reverse brake discs thoroughly in CVTF for a minimum of 30 minutes. Before installing the plates and discs, make sure the inside of the brake is free of dirt and other foreign matter.
14. Install the disc spring (A) in the direction shown.

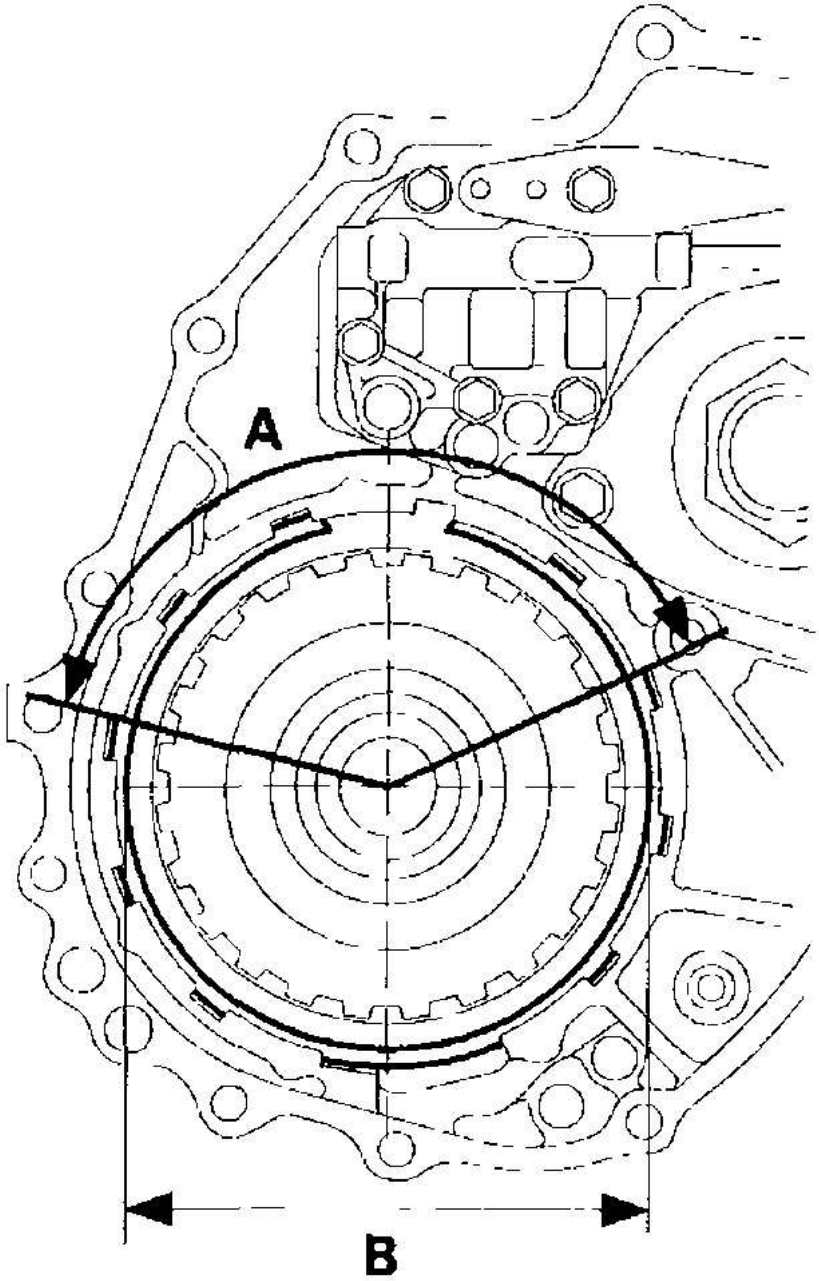

Fig. 449: Identifying Direction For Installing Disc Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Starting with the reverse brake plate (B), alternately install the plates and discs (C). Install the reverse brake end-plate (D).
16. Install the snap ring by installing its end gap in the direction (A) shown.

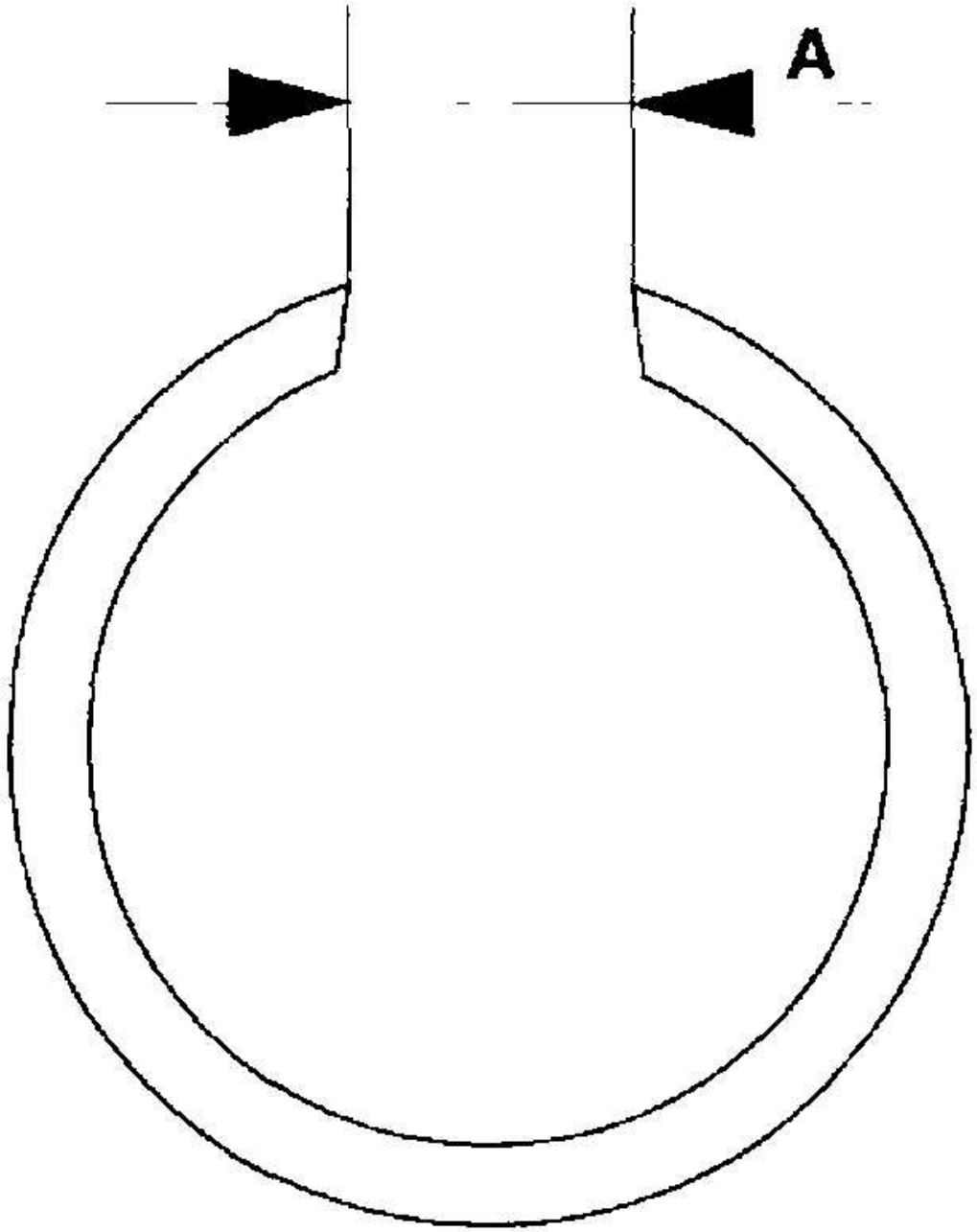

Fig. 450: Installing Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Verify that the inside diameter (B) of the snap ring is 143.5 mm (5.65 in.) and above.
18. Verify that the snap ring end gap (A) is 18 mm (0.71 in.) and above.

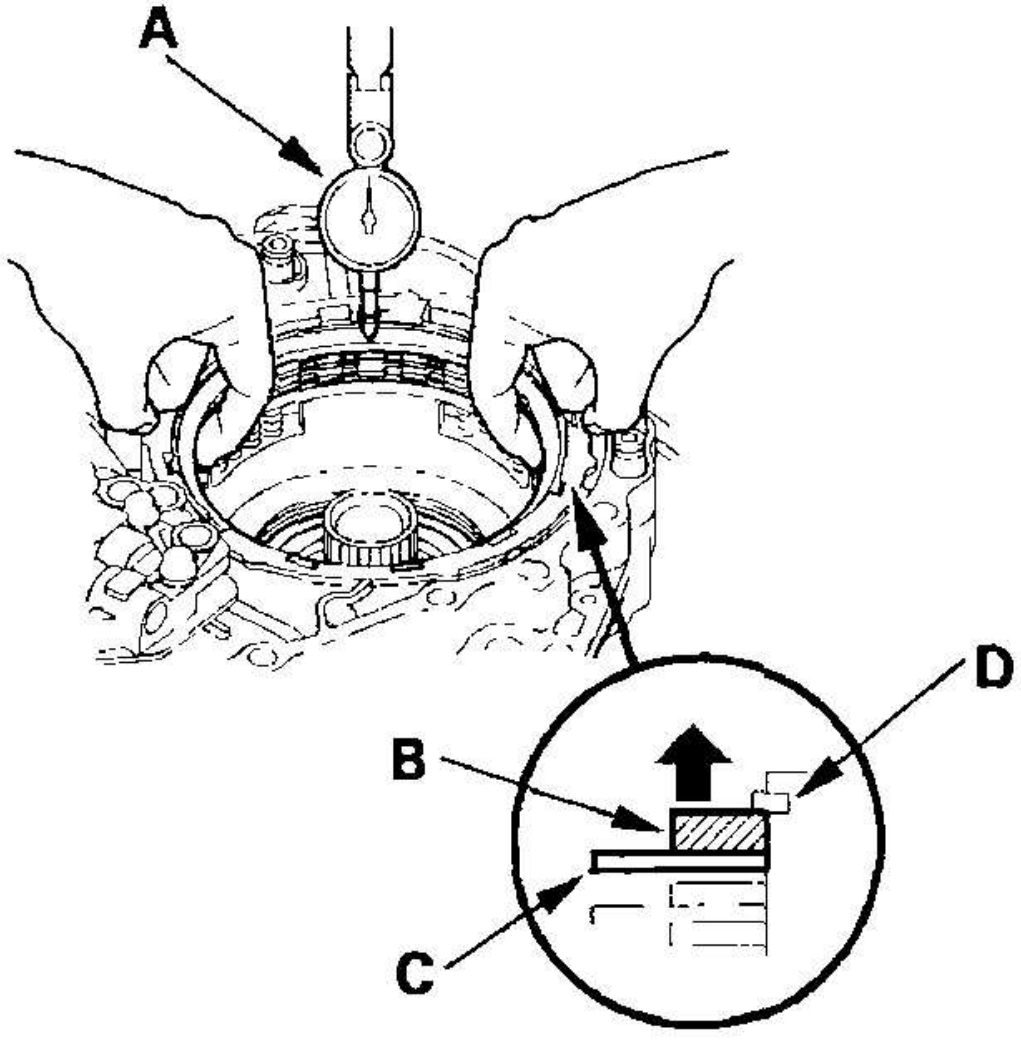

Fig. 451: Identifying Snap Ring End Gap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Set a dial indicator (A) on the reverse brake end-plate (B).

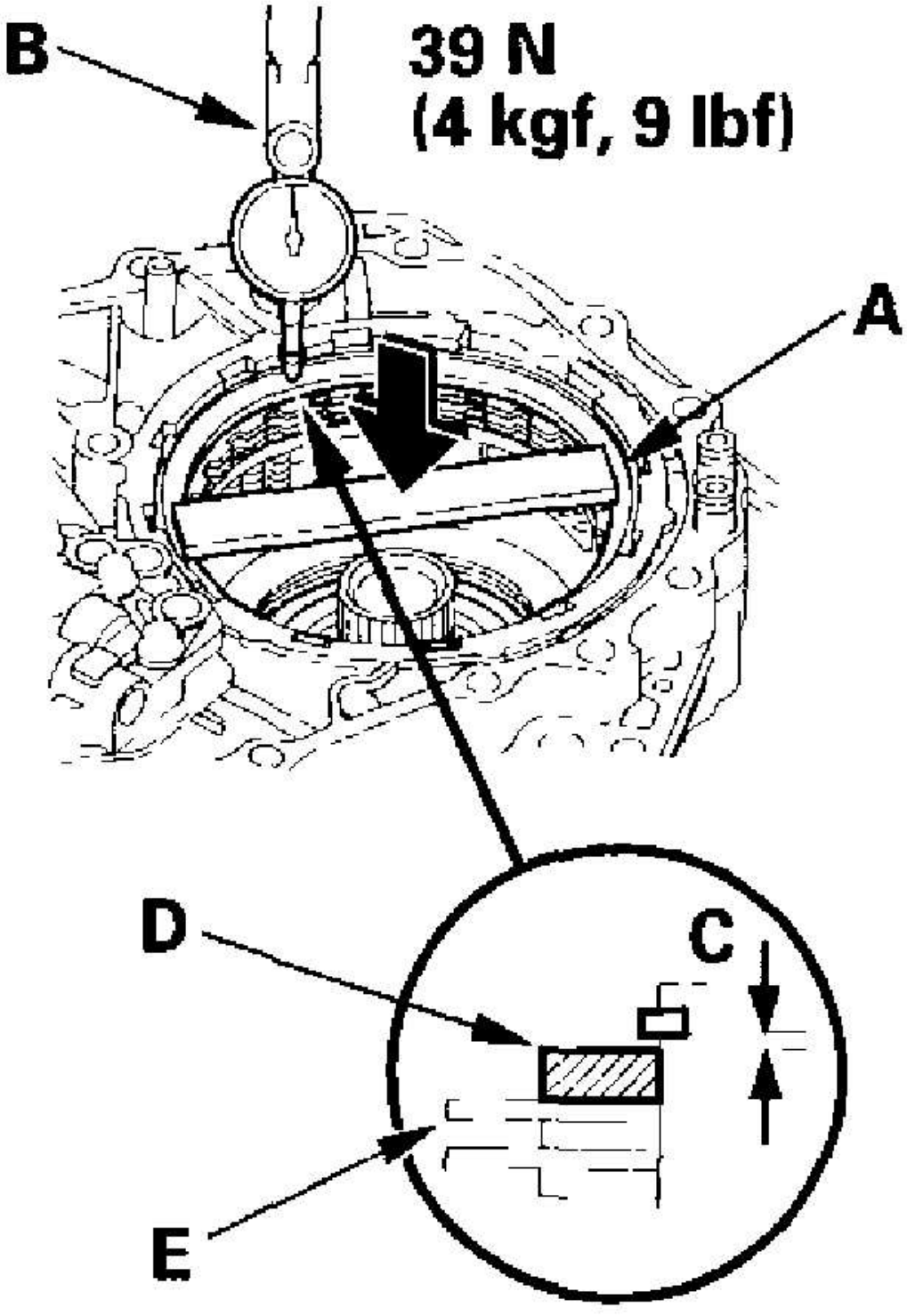

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Fig. 452: Setting Dial Indicator On Reverse Brake End-Plate And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Zero the dial indicator with lifting the top disc (C) up to contact the reverse brake end-plate to the snap ring (D).
21. Release the end-plate to lower the end-plate, and place a steel plate across the width of the reverse brake end-plate.
22. Press the steel plate (A) down with 39 N (4 kgf, 9 lbf) using a force gauge, and read the dial indicator (B). the dial indicator reads the clearance (C) between the reverse brake end-plate (D) and top disc (E). Take measurements in at least three places, and use the average as the actual clearance.

Standard: 0.55-0.70 mm (0.022-0.028 in.)

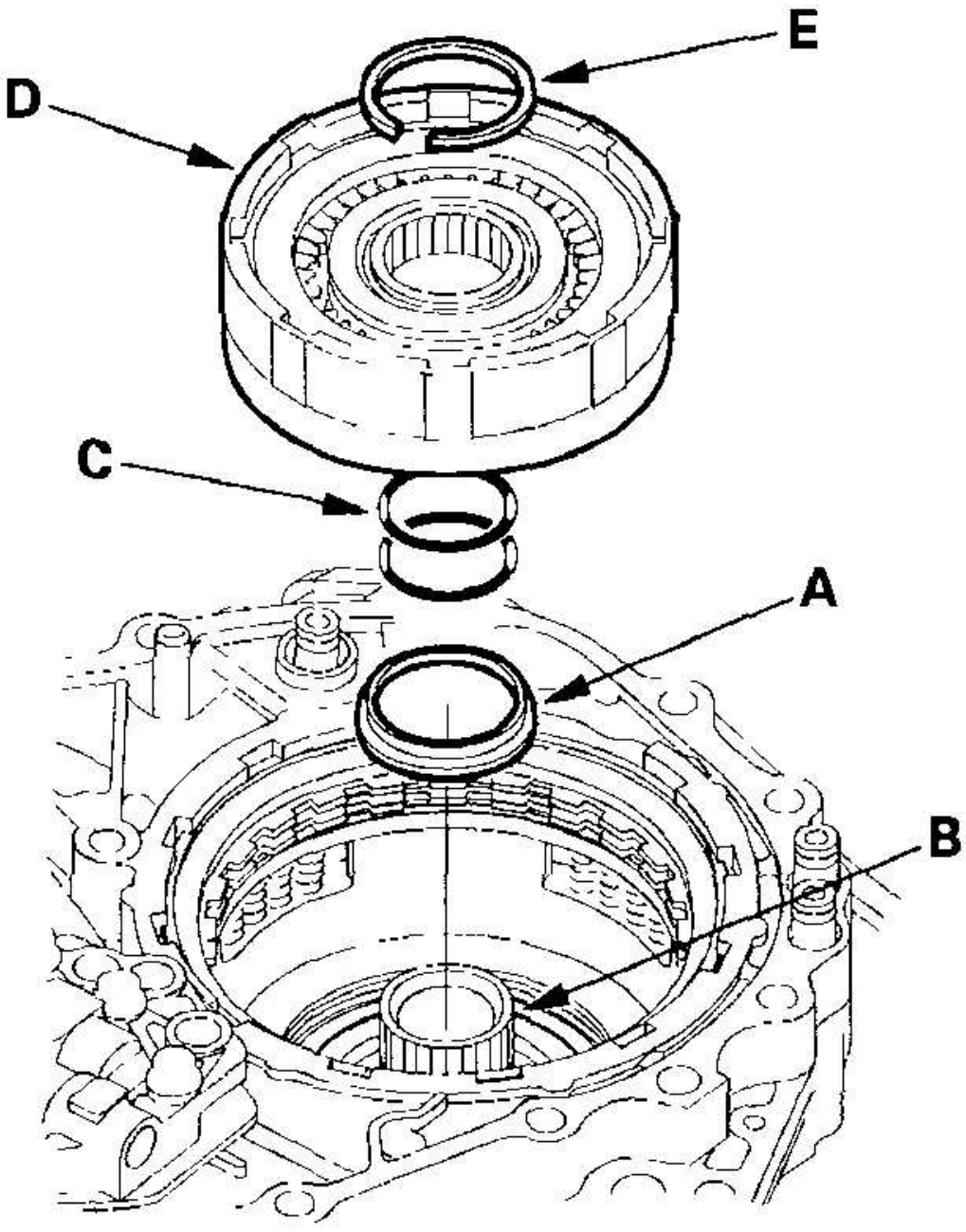

Fig. 453: Checking Clearance Between Reverse Brake End-Plate And Top Disc

Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. If the clearance is out of standard, select a new reverse brake end-plate from the following table, then recheck.

NOTE: If the thickest end-plate is installed, but the clearance is still over the service limit, replace the reverse brake discs and plates as a set.

REVERSE BRAKE END-PLATE

REVERSE BRAKE END-PLATE SPECIFICATIONS

No.	Part Number	Thickness
1	22551-P4V-003	3.6 mm (0.142 in.)
A	22551 -PWR-003	3.7 mm (0.146 in.)
2	22552-P4V-003	3.8 mm (0.150 in.)
B	22552-PWR-003	3.9 mm (0.154 in.)
3	22553-P4V-003	4.0 mm (0.157 in.)
C	22553-PWR-003	4.1 mm (0.161 in.)
4	22554-P4V-003	4.2 mm (0.165 in.)
D	22554-PWR-003	4.3 mm (0.169 in.)
5	22555-P4V-003	4.4 mm (0.173 in.)
E	22555-PWR-003	4.5 mm (0.177 in.)
6	22556-P4V-003	4.6 mm (0.181 in.)
F	22556-PWR-003	4.7 mm (0.185 in.)
7	22557-P4V-003	4.8 mm (0.189 in.)
8	22558-P4V-003	5.0 mm (0.197 in.)

24. After replacing the reverse brake end-plate, make sure that the clearance is within tolerance.
25. Install the snap ring retainer (A) over the drive pulley shaft (B).

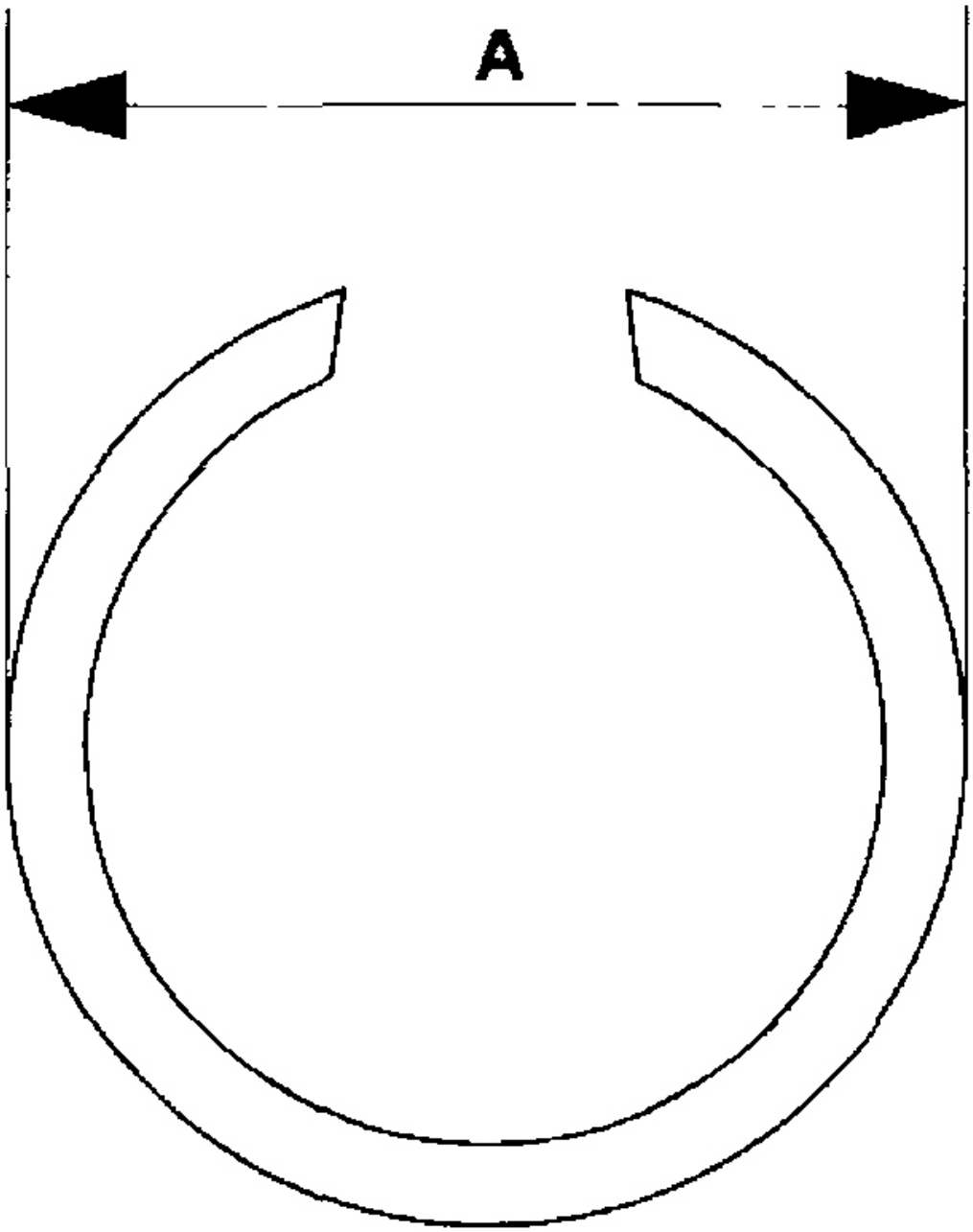

Fig. 454: Installing Snap Ring Retainer Over Drive Pulley Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Wrap the drive pulley shaft splines with tape to prevent O-ring damage. Install the new O-ring (C) in the drive pulley shaft O-ring grooves, then remove the tape.
27. Install the forward clutch (D) on the drive pulley shaft, then install the snap ring (E) to secure the forward clutch.
28. Verify that the snap ring outside diameter (A) is 41.4 mm (1.63 in.) or less.

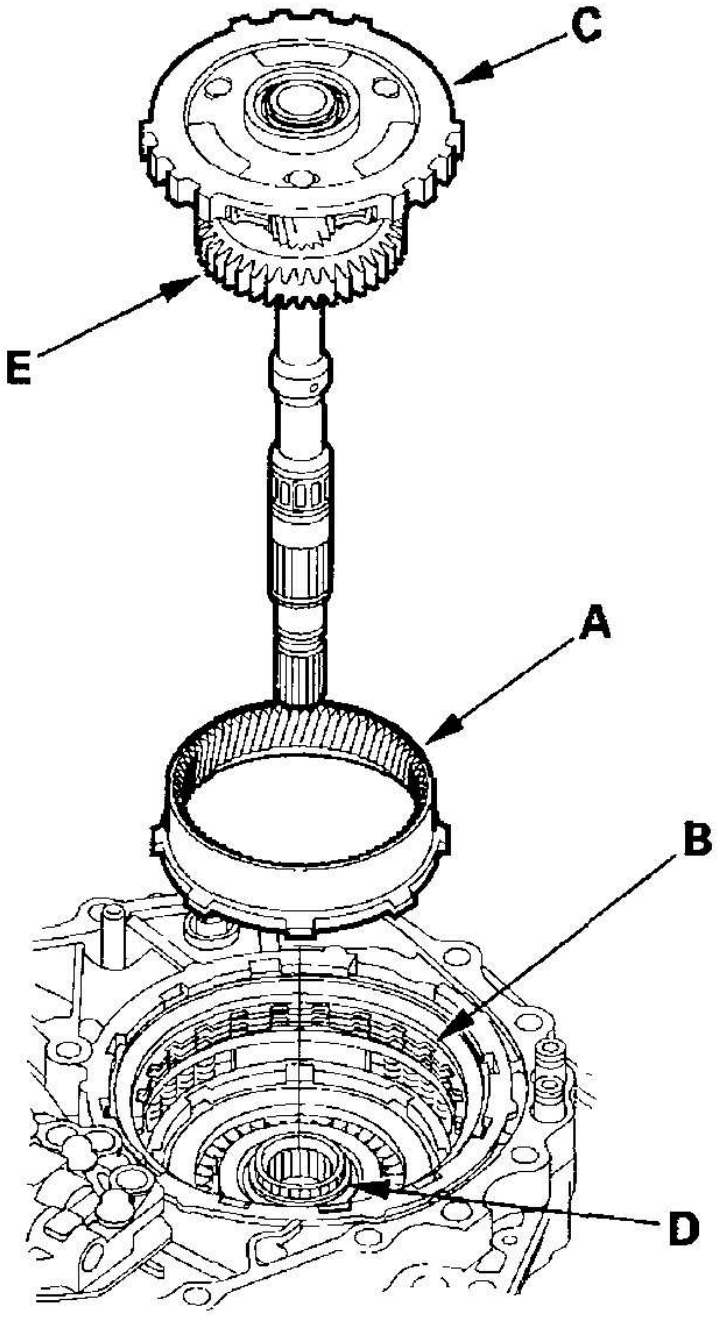

Fig. 455: Identifying Snap Ring Outer Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Install the ring gear (A) on the forward clutch (B).

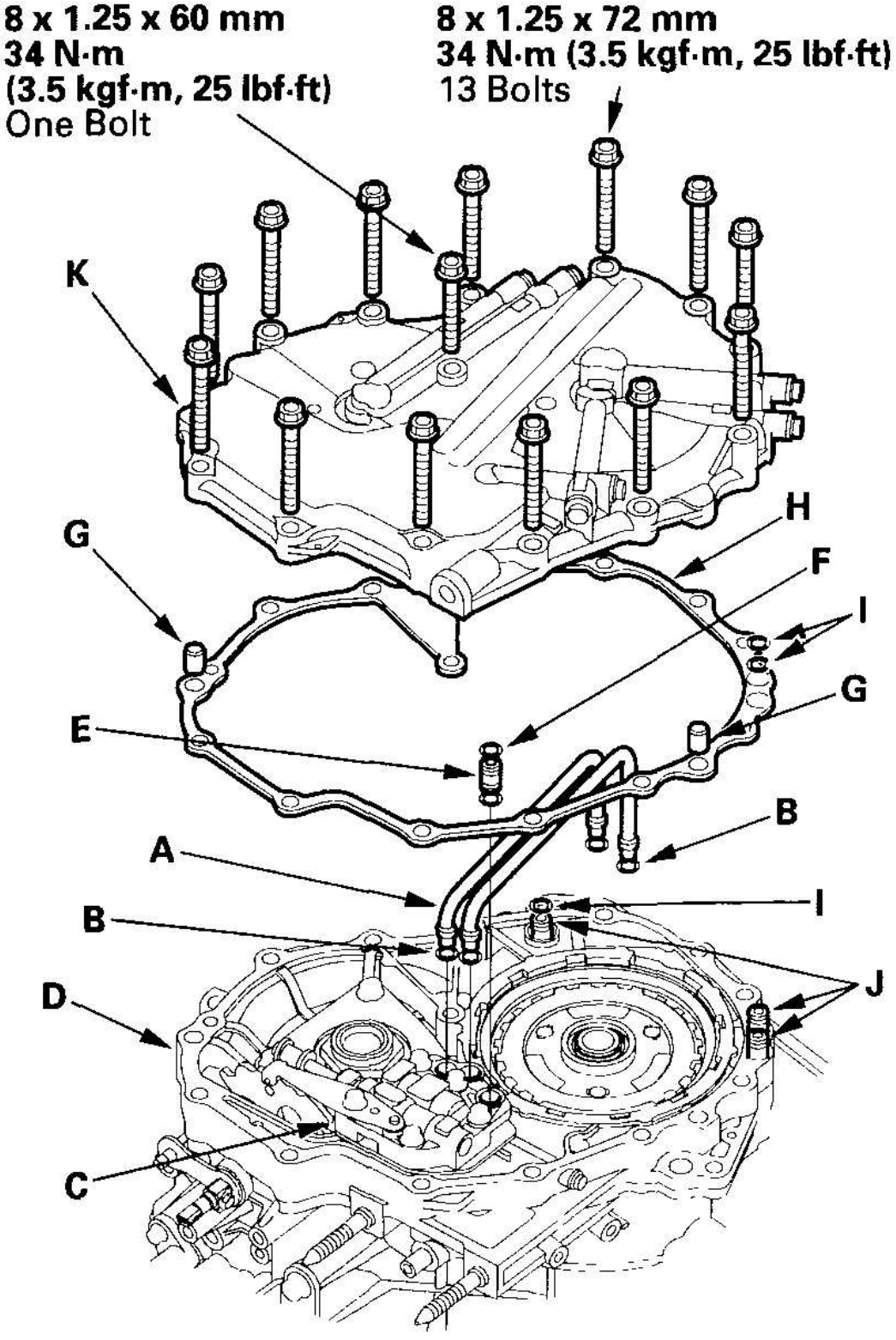
8 x 1.25 x 60 mm
34 N·m
(3.5 kgf·m, 25 lbf·ft)
One Bolt
8 x 1.25 x 72 mm
34 N·m (3.5 kgf·m, 25 lbf·ft)
13 Bolts
K
H
G
F
I
G
E
B
A
I
B
J
D
C

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Fig. 456: Installing Ring Gear On Forward Clutch And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Install the planetary carrier/input shaft assembly (C) through the drive pulley shaft (D) with aligning the sun gear (E) to the clutch discs and aligning the planetary carrier to the reverse brake discs.
31. Install the manual valve body lines (A) with new 0-rings (B) on the manual valve body (C) and intermediate housing (D).
32. Install the ATF feed pipe (E) with new O-rings (F) on the manual valve body.
33. Install the two dowel pins (G) and the new end cover gasket (H) on the intermediate housing, and install the new O-rings (I) over the ATF feed pipes (J).
34. Install the end cover (K).
35. Install the CVT input shaft (drive pulley) speed sensor with a new O-ring.

TRANSMISSION HOUSING/FLYWHEEL HOUSING

START CLUTCH AND FLYWHEEL HOUSING INSTALLATION

Special Tools Required

Start clutch installer 07TAE-P4VA130

1. Install the sealing ring (A) on the new secondary drive gear (B).

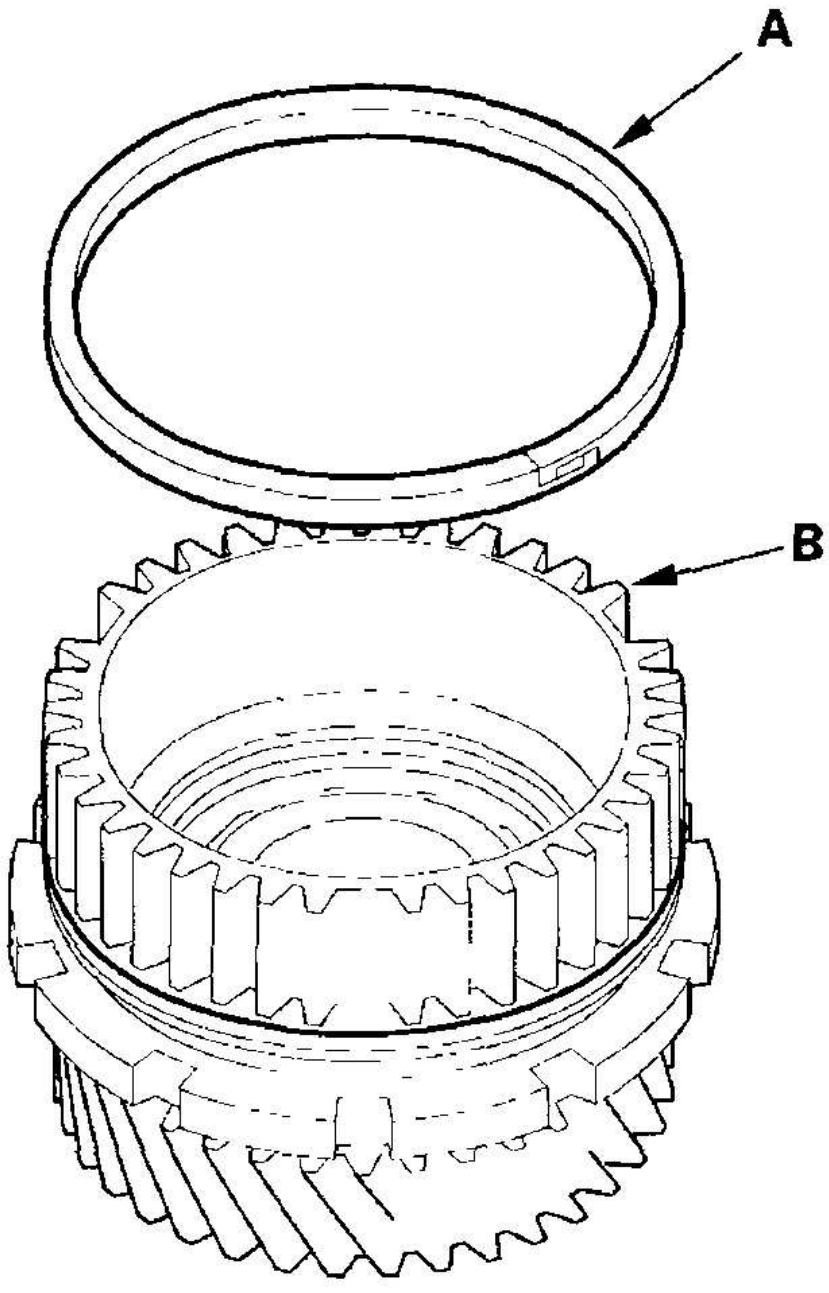

Fig. 457: Intalling Sealing Ring On Secondary Drive Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the park pawl (A), pawl spring (B), and pawl shaft (C) in the transmission housing, then move the control lever to any position other than the P position.

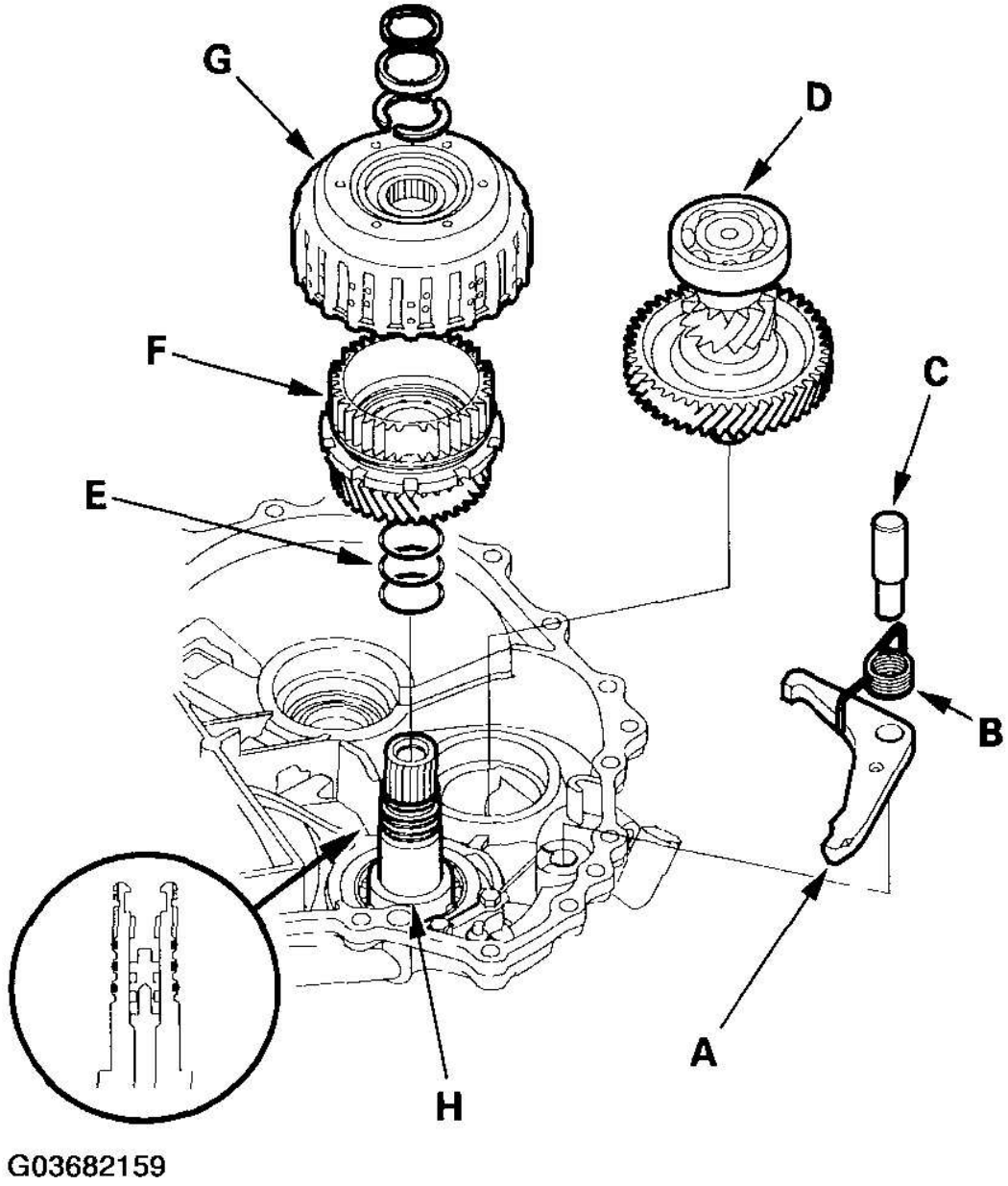

Fig. 458: Installing Park Pawl, Pawl Spring, And Pawl Shaft In Transmission Housing

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the secondary gear shaft (D) in the transmission housing.
4. Wrap the driven pulley shaft splines with tape to prevent O-rings damage, install the new O-rings (E) in the shaft O-ring grooves, and remove the tape.
5. Install the secondary drive gear assembly (F) in the new start clutch (G), then install them on the driven pulley shaft (H).
6. Pull the handle of the special tool up, then install the tip of it into the driven pulley shaft feed pipe hole, and set the special tool on the start clutch. Do not allow dirt or other foreign particles to enter into the transmission.

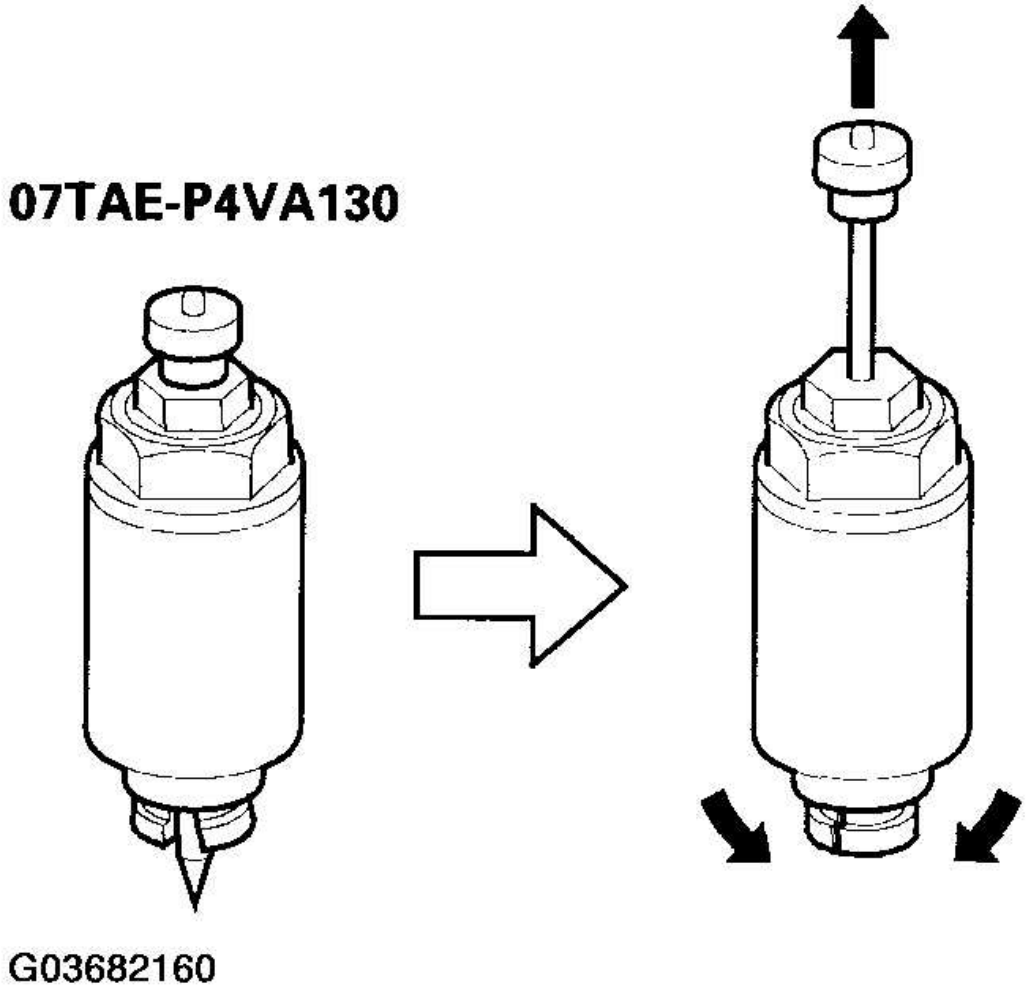

Fig. 459: Pulling Special Tool Handle
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Push the handle (A) of the special tool, then tighten the nut to seat the secondary drive gear assembly on the drive pulley shaft.

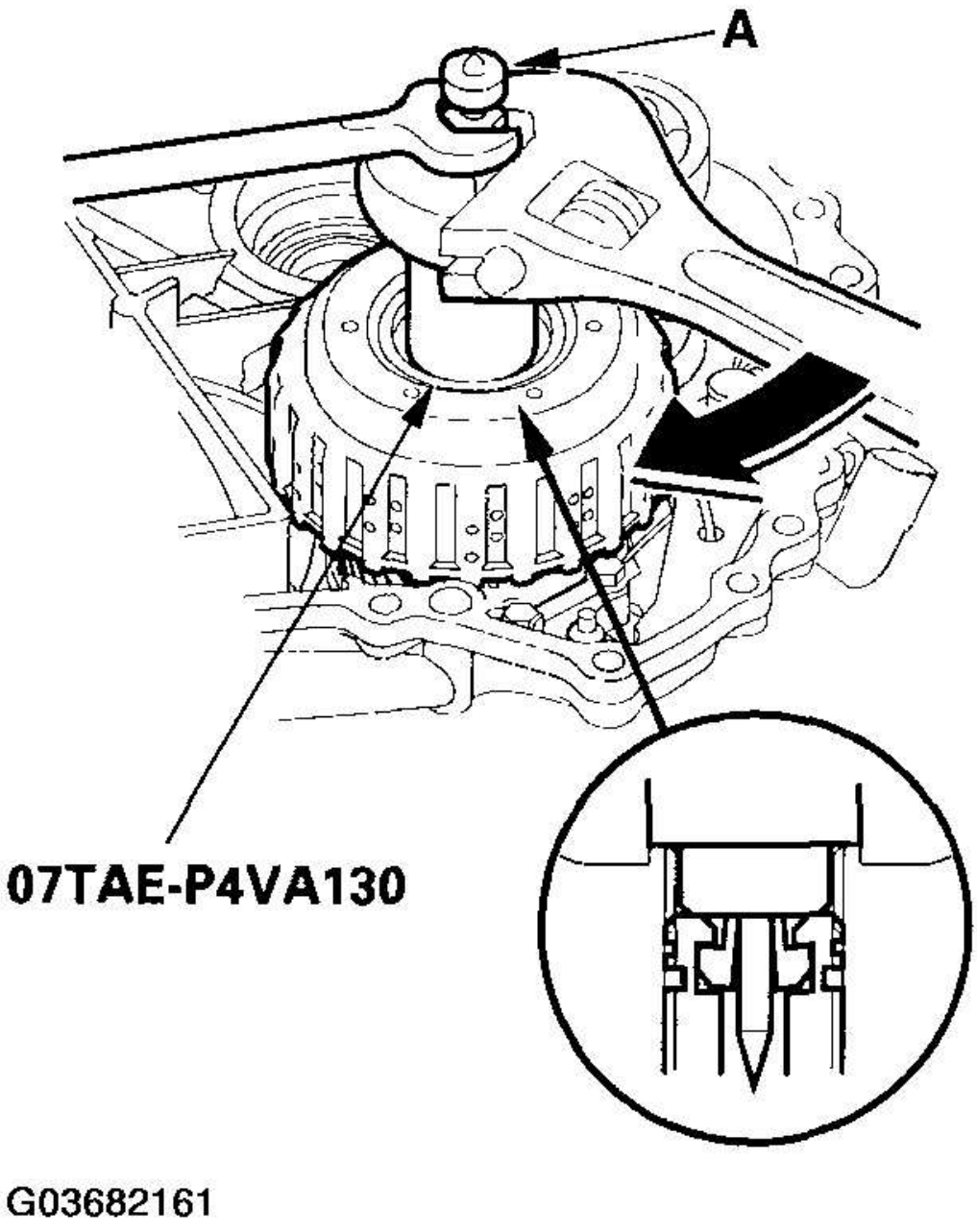

Fig. 460: Seating Secondary Drive Gear Assembly On Drive Pulley Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Pull the handle of the special tool up, and remove the special tool.

9. Install the 25.5 mm cotters in the cotter groove on the driven pulley shaft, then measure the clearance between the cotters (A) and the start clutch guide (B) with a feeler gauge (C). Take measurements in at least three places, and use the average as the actual clearance.

   Standard: 0-0.13 mm (0-0.005 in.)

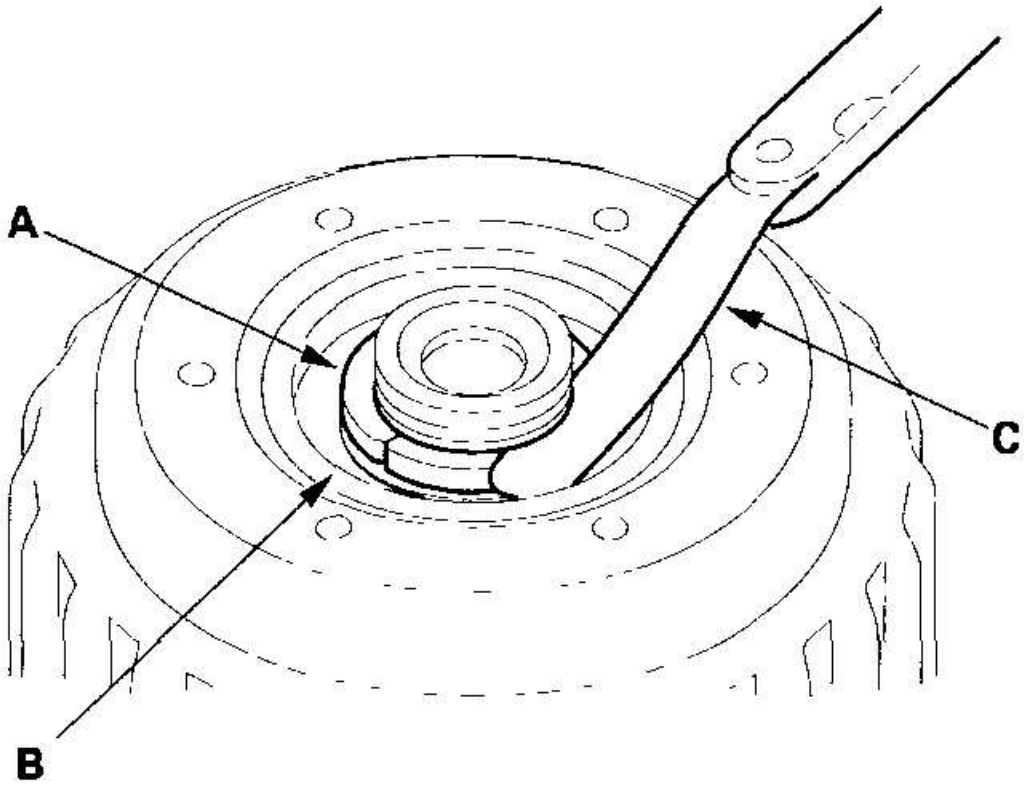

Fig. 461: Measuring Thickness Of Cotter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. If the clearance is out of standard, remove the cotters, and measure their thickness.
11. Select and install the new 25.5 mm cotters as a set, then recheck.

COTTERS, 25.5 mm

COTTERS, 25.5 MM SPECIFICATIONS

No.	Part Number	Thickness
A	90429-P4V-000	2.9 mm (0.114 in.)
B	90430-P4V-000	3.0 mm (0.118 in.)
C	90431-P4V-000	3.1 mm (0.122 in.)
D	90432-P4V-000	3.2 mm (0.126 in.)

12. After replacing the cotters, make sure that the clearance is within the tolerance.
13. Install the cotter retainer and snap ring.
14. Verify that the snap ring outside diameter (A) is 33.9 mm (1.33 in.) or less.

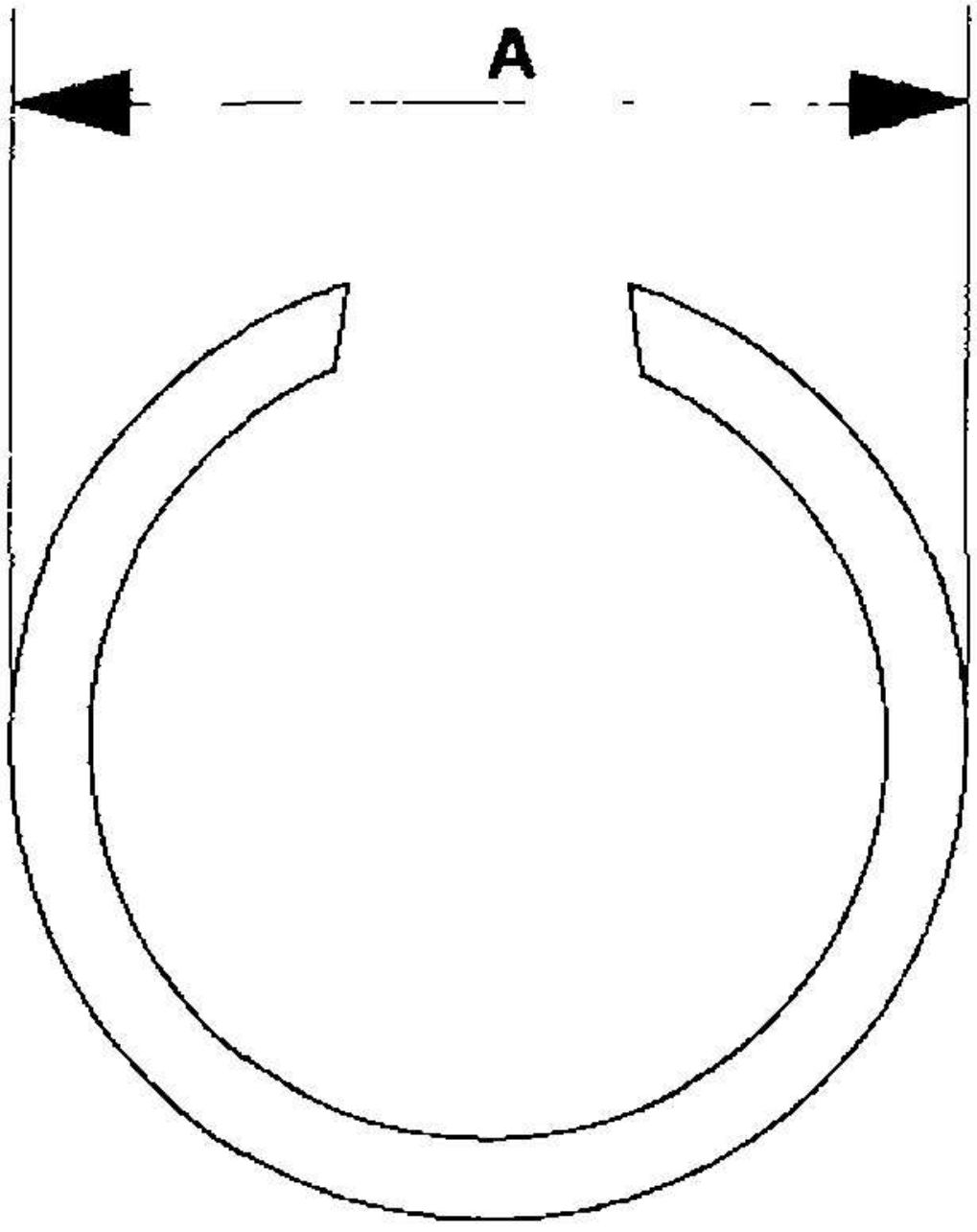

Fig. 462: Identifying Snap Ring Outer Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Install the thrust washer (A), thrust needle bearing (B), thrust washer (C), ATF pump drive sprocket hub (D), 22 x 28 mm thrust shim (E), and snap ring (F) on the input shaft (G).

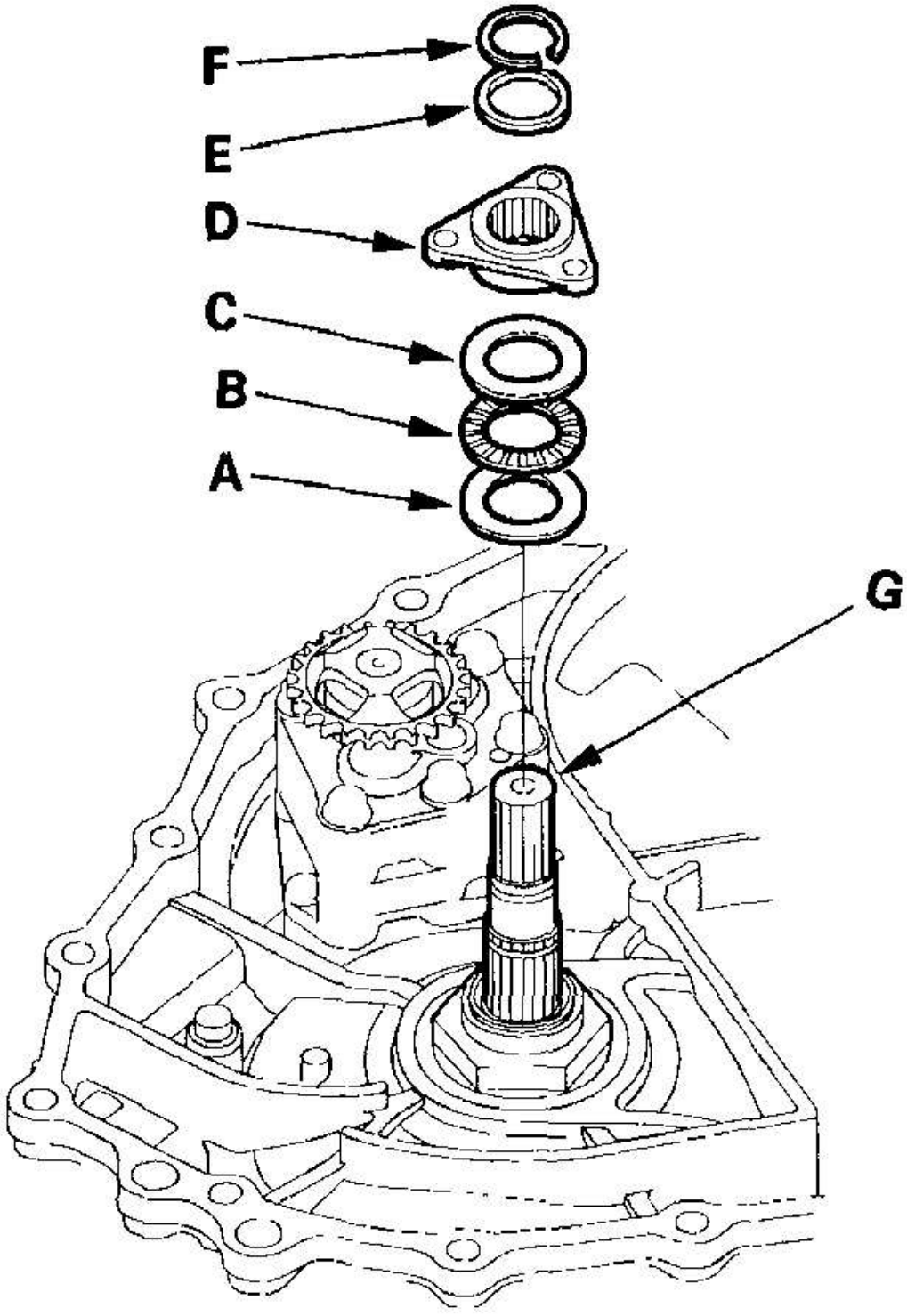

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Fig. 463: Installing Thrust Washer, Needle Bearing, Washer, ATF Pump Drive Sprocket Hub, Thrust Shim, And Snap Ring On Input Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Verify that the snap ring outside diameter (A) is 26.3 mm (1.04 in.) or less.

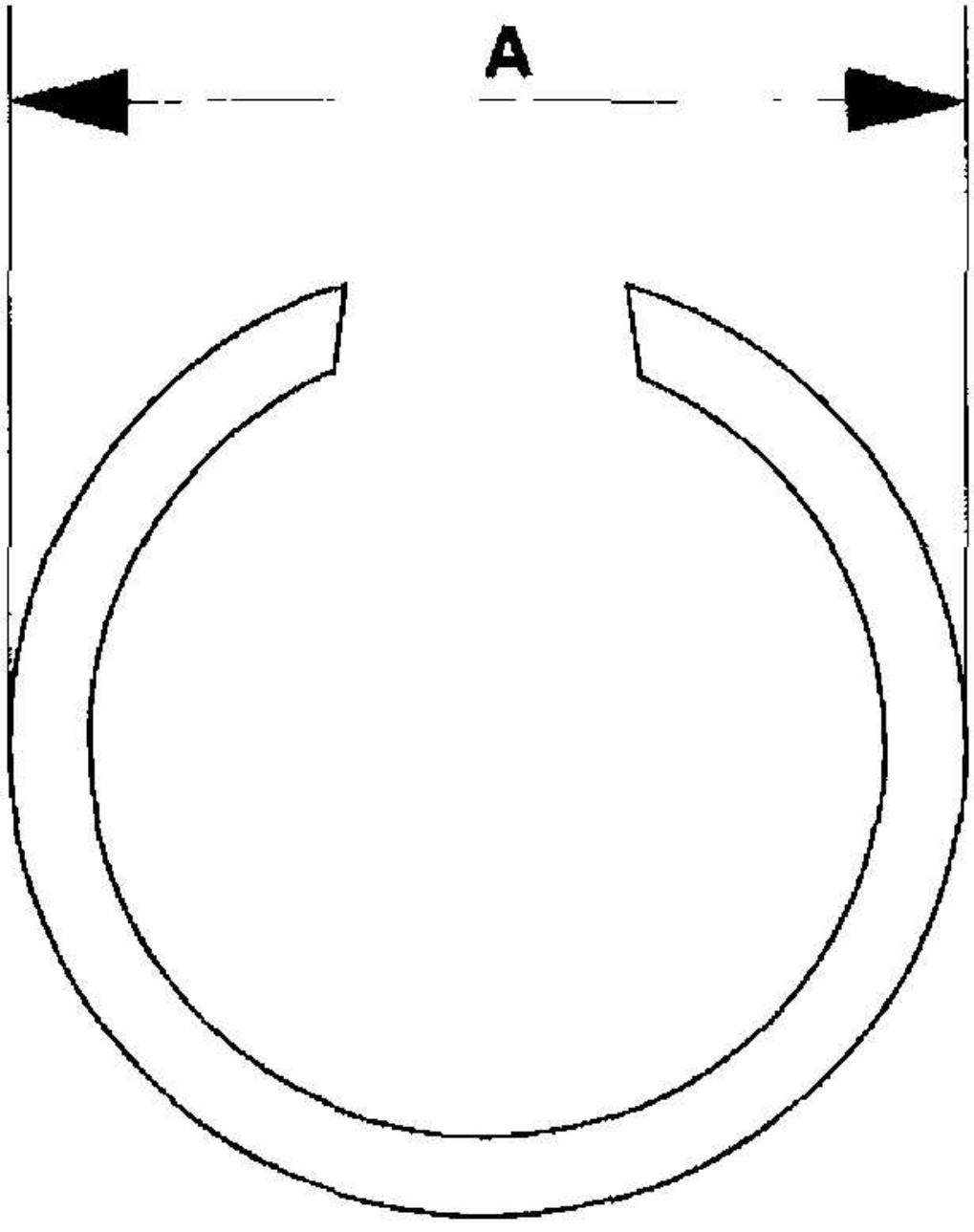

Fig. 464: Identifying Snap Ring Outside Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Measure the clearance between the 22 x 28 mm thrust shim (A) and snap ring (B) with a feeler gauge (C). Take measurements in at least three places, and use the average as the actual clearance.

    Standard: 0.37-0.65 mm (0.015-0.026 in.)

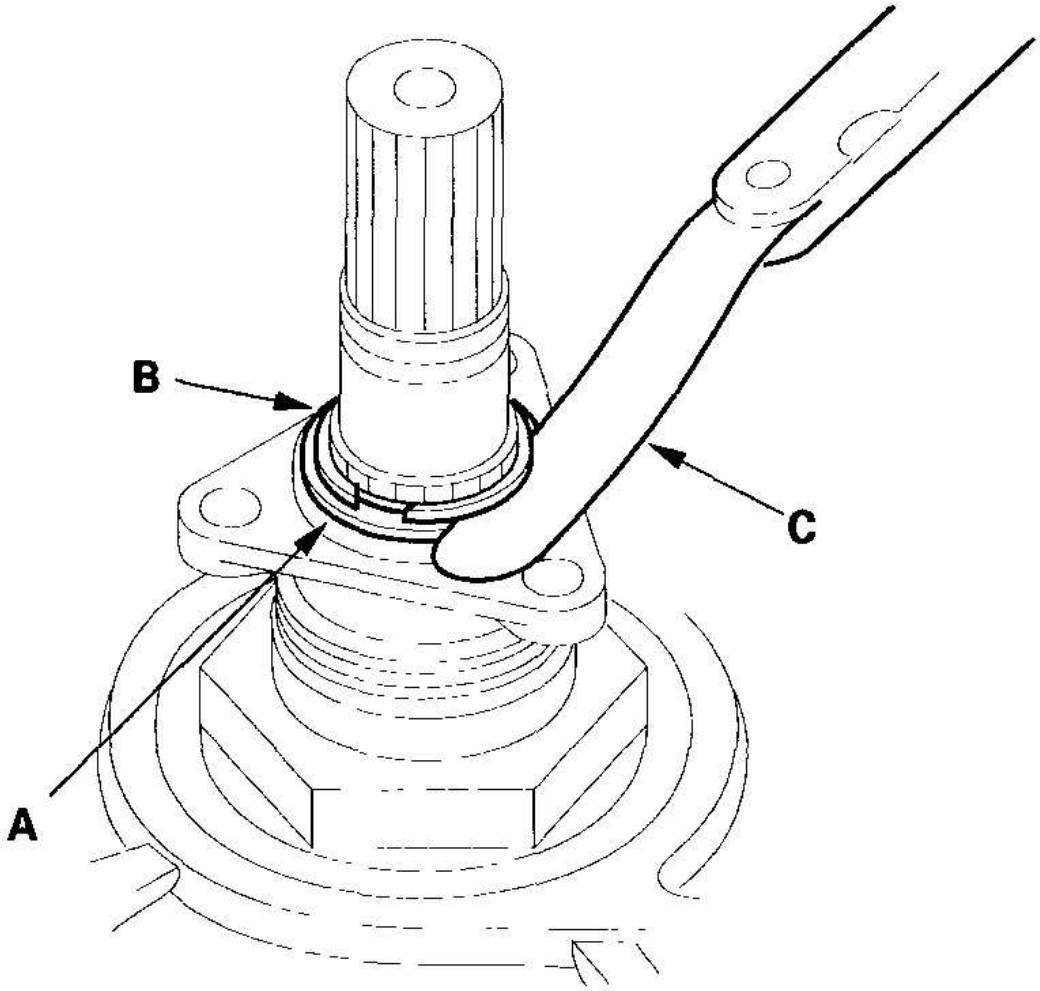

Fig. 465: Measuring Thrust Shim Thickness
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. If the clearance is out of standard, remove the 22 x 28 mm thrust shim, and

measure its thickness.

19. Select and install a new 22 x 28 mm thrust shim, then recheck.

THRUST SHIM, 22 x 28 mm

THRUST SHIM, 22 X 28 MM SPECIFICATIONS

No.	Part Number	Thickness
C	90573-P4V-000	1.15 mm (0.045 in.)
D	90574-P4V-000	1.40 mm (0.055 in.)
E	90575-P4V-000	1.65 mm (0.065 in.)
F	90576-P4V-000	1.90 mm (0.075 in.)
G	90577-P4V-000	2.15 mm (0.085 in.)
H	90578-P4V-000	2.40 mm (0.095 in.)

20. After replacing the 22 x 28 mm thrust shim, make sure the clearance is within the tolerance and the snap ring outside diameter is correct.
21. Install the ATF pump drive sprocket (A) on the sprocket hub (B), and put the ATF pump drive chain (C) on the ATF pump drive sprocket and ATF pump driven sprocket (D), then install and tighten the three bolts.

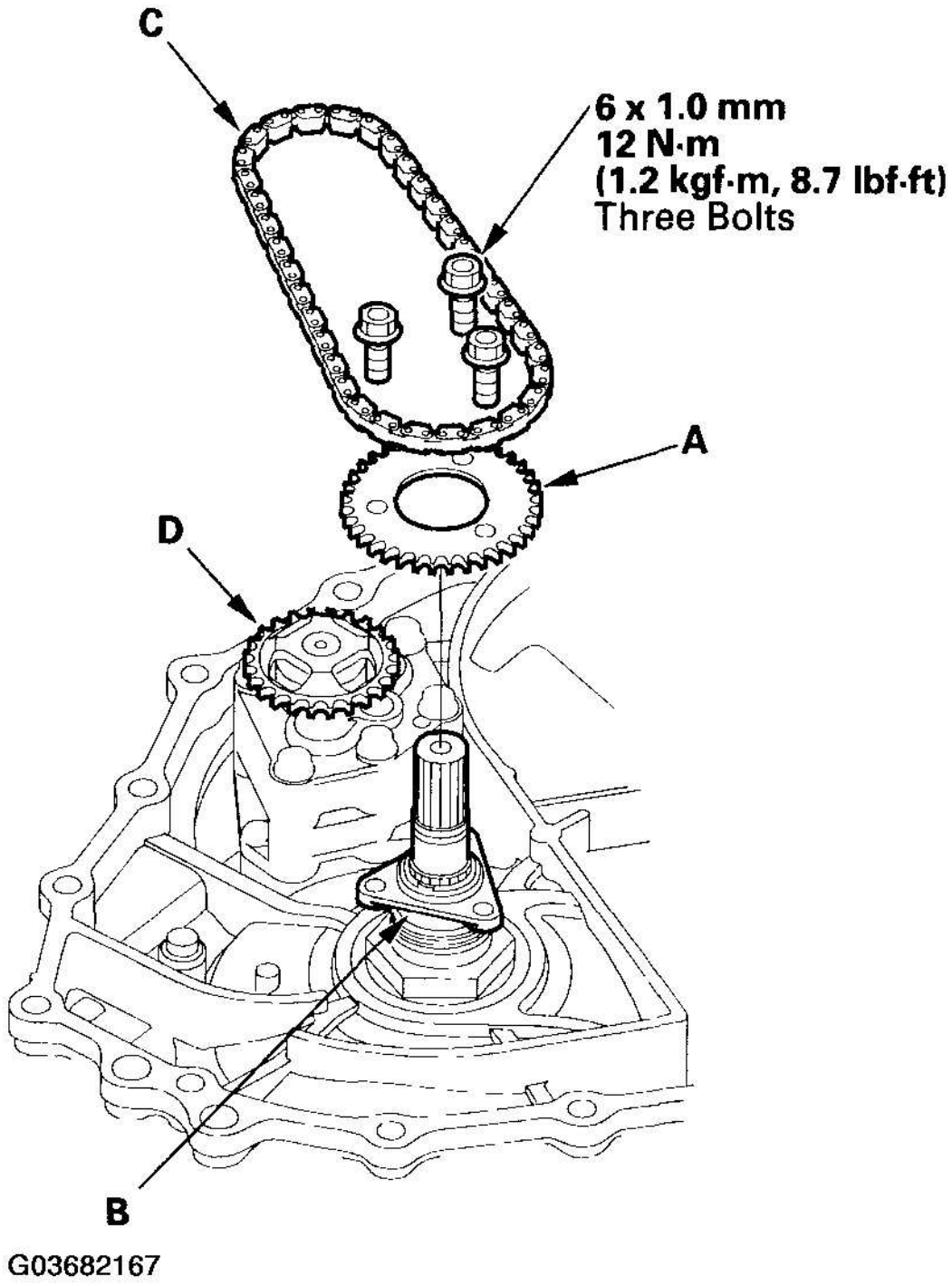

Fig. 466: Installing ATF Pump Drive Sprocket On Sprocket Hub And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Install the differential assembly (A).

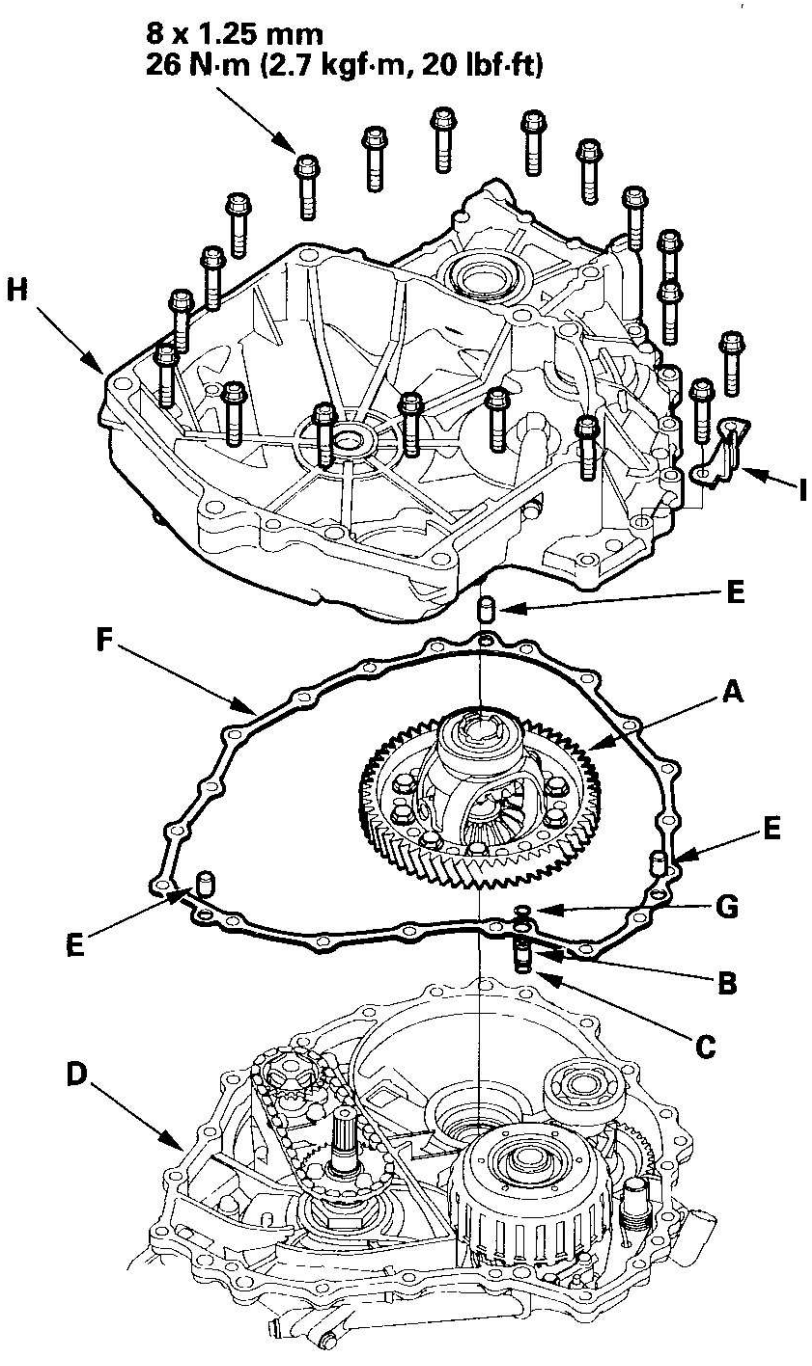

Fig. 467: Installing Differential Assembly And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Install the ATF feed pipe (B) with a new O-ring (C) in the transmission housing (D).
24. Install the three dowel pins (E) and new flywheel housing gasket (F) on the transmission housing.
25. Install a new O-ring (G) over the ATF feed pipe.
26. Install the flywheel housing (H) and tighten the mounting bolts with the harness clamp bracket (I).

TRANSMISSION LOWER VALVE BODY

LOWER VALVE BODY ASSEMBLY, ATF STRAINER, AND ATF PAN INSTALLATION

1. Install the solenoid harness connector (A) with a new O-ring (B), and install the lower valve body assembly (C) with the ATF feed pipes (D).

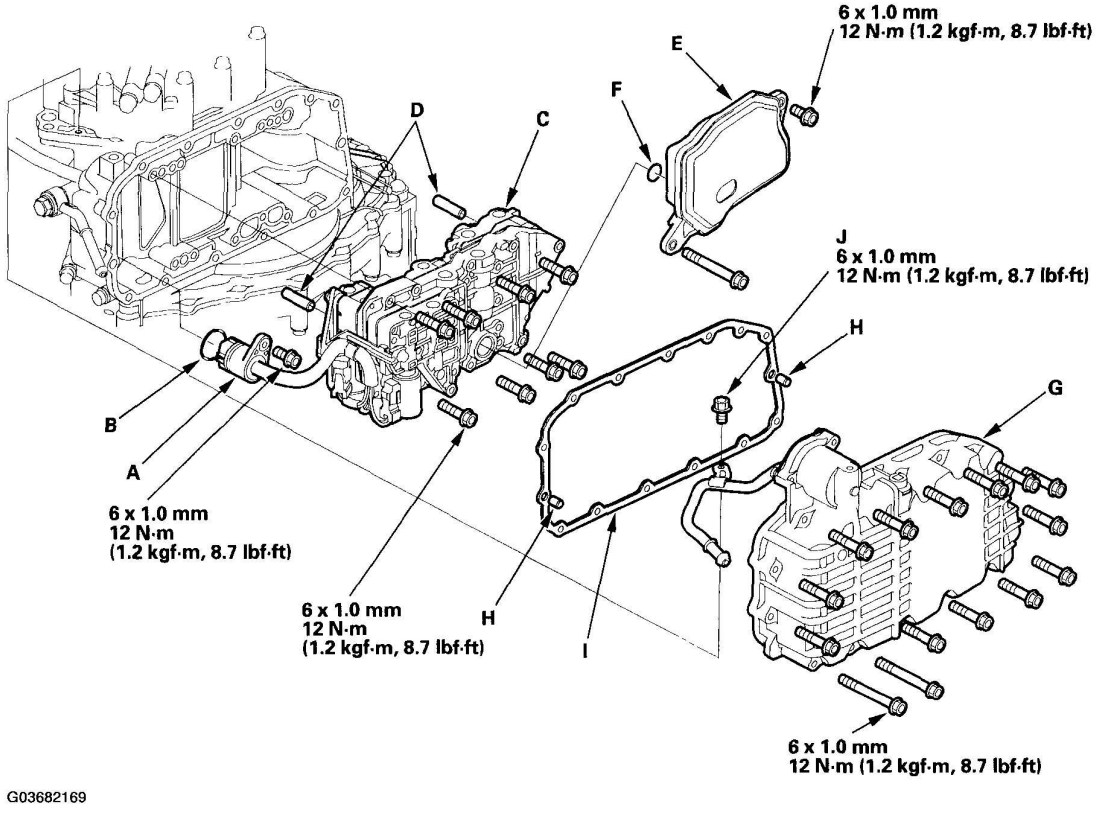

Fig. 468: Installing Lower Valve Body Assembly, ATF Strainer, And ATF Pan With Specified Torques
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the ATF strainer (E) with a new O-ring (F).
3. Install the ATF pan (G) with the two dowel pins (H) and a new ATF pan gasket (I).
4. Install the ATF cooler inlet line mounting bolt (J).

TRANSMISSION RANGE SWITCH

TRANSMISSION RANGE SWITCH INSTALLATION

1. Set the transmission to the N position by turning the control lever (A). Do not squeeze the end of the control shaft tips together when setting. If the tips are squeeze together it will cause a faulty signal or position due to the play between the control shaft and the switch.

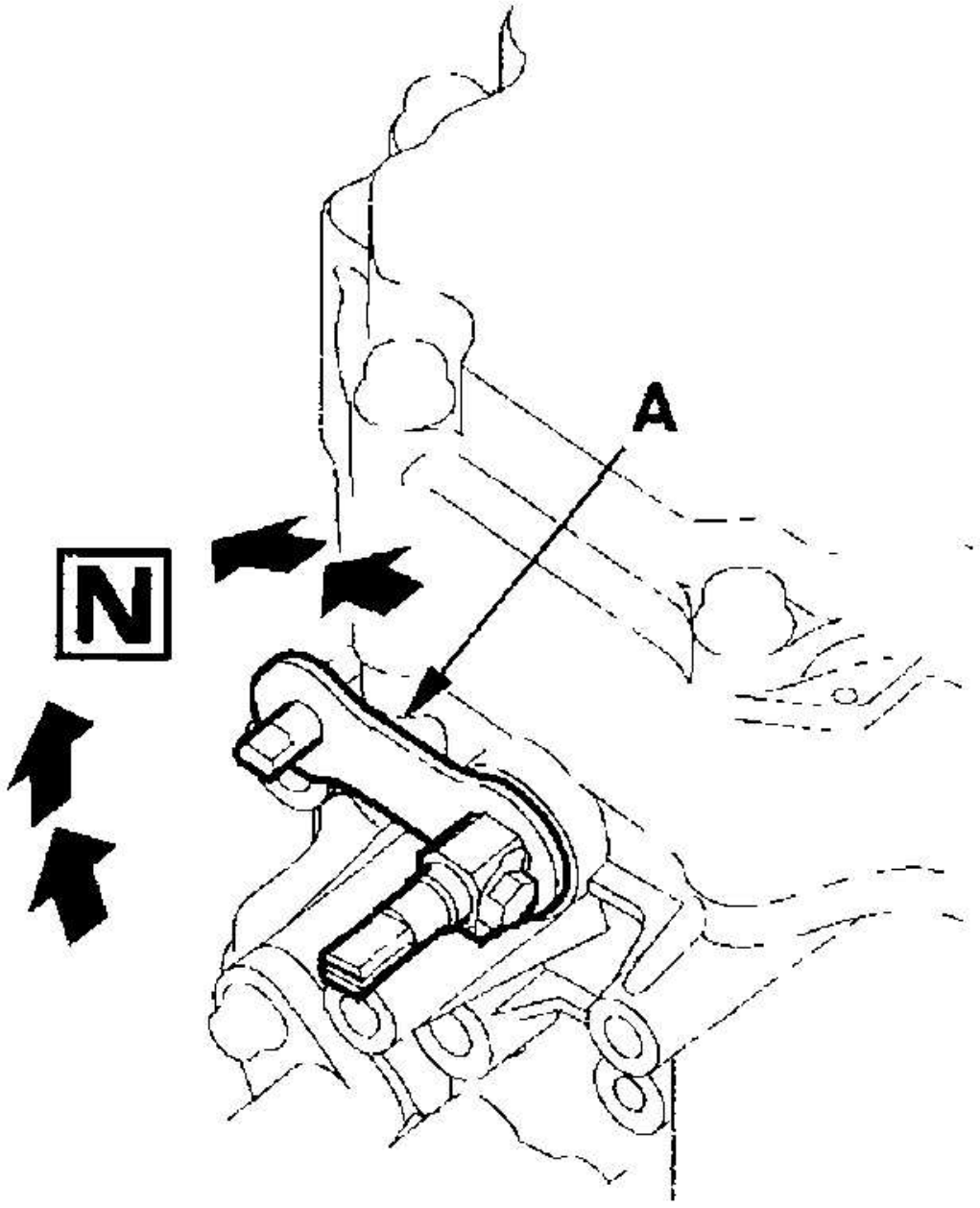

Fig. 469: Turning Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Set the transmission range switch to the N position. The switch clicks in the N position.

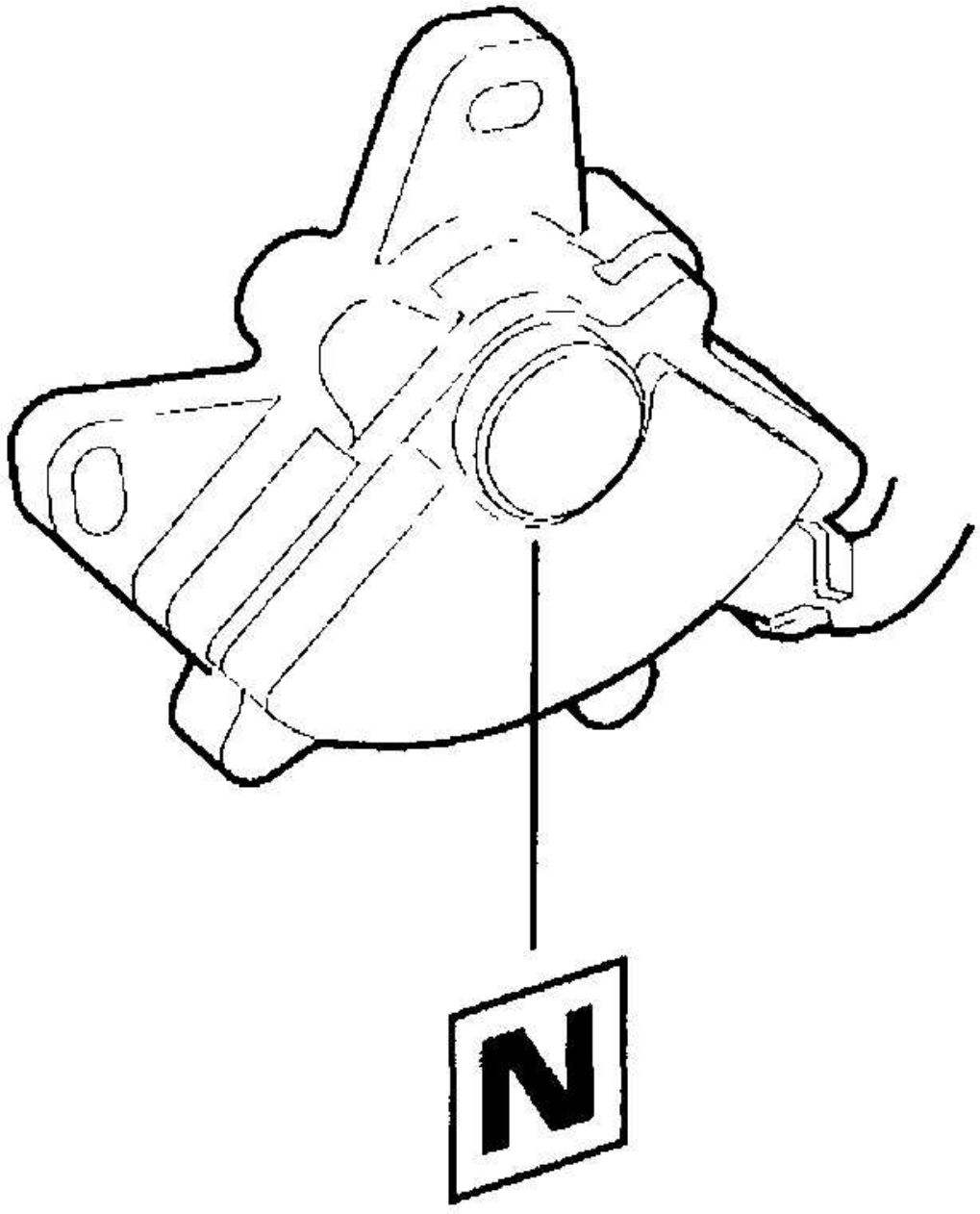

Fig. 470: Identifying Transmission Range Switch N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the transmission range switch (A) gently on the selector control shaft (B), then tighten the bolts. Do not move the switch when tightening the bolts.

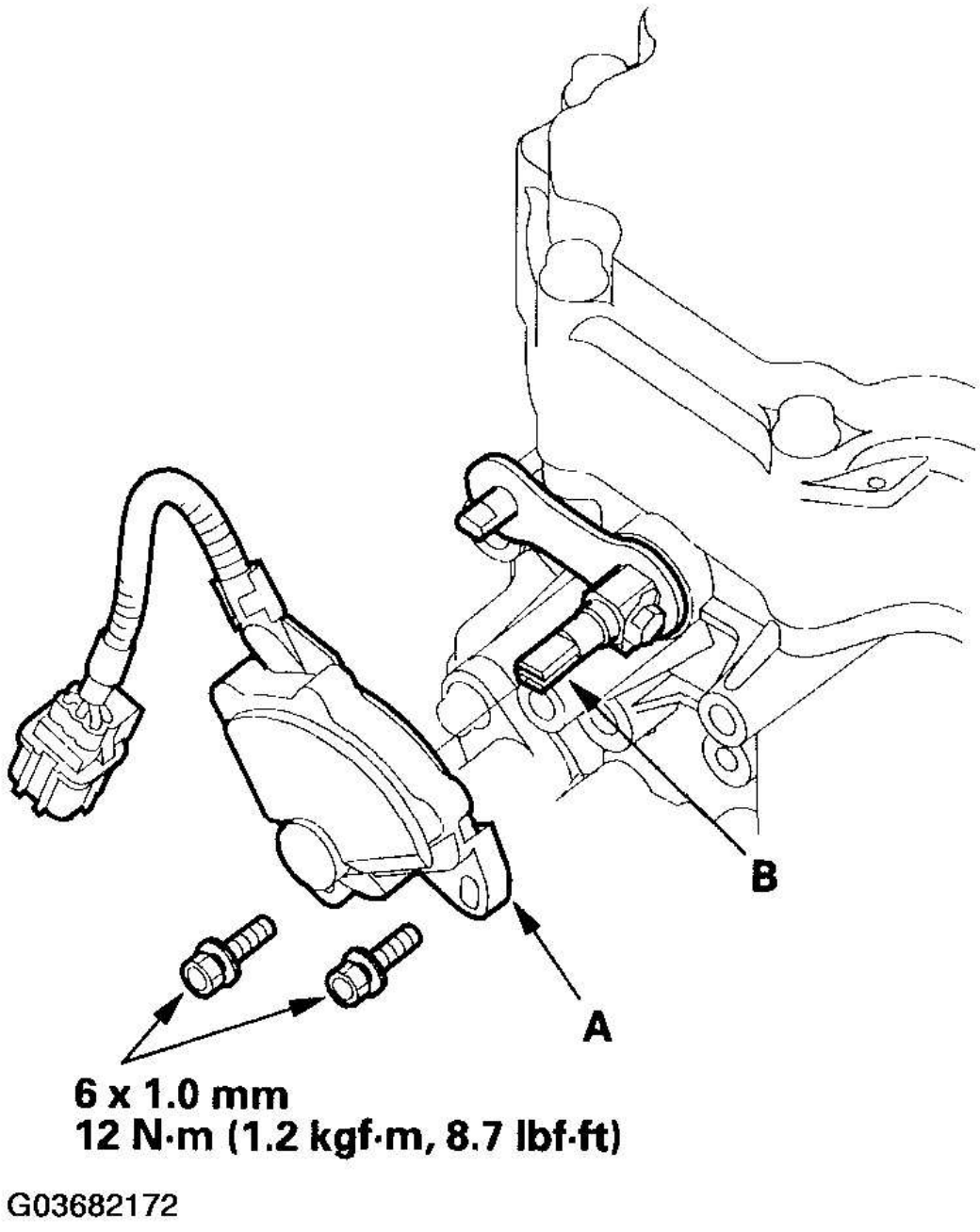

Fig. 471: Identifying Tightening Torque Of Transmission Range Switch

Bolts

Courtesy of AMERICAN HONDA MOTOR CO., INC.

CVT DIFFERENTIAL

COMPONENT LOCATION INDEX

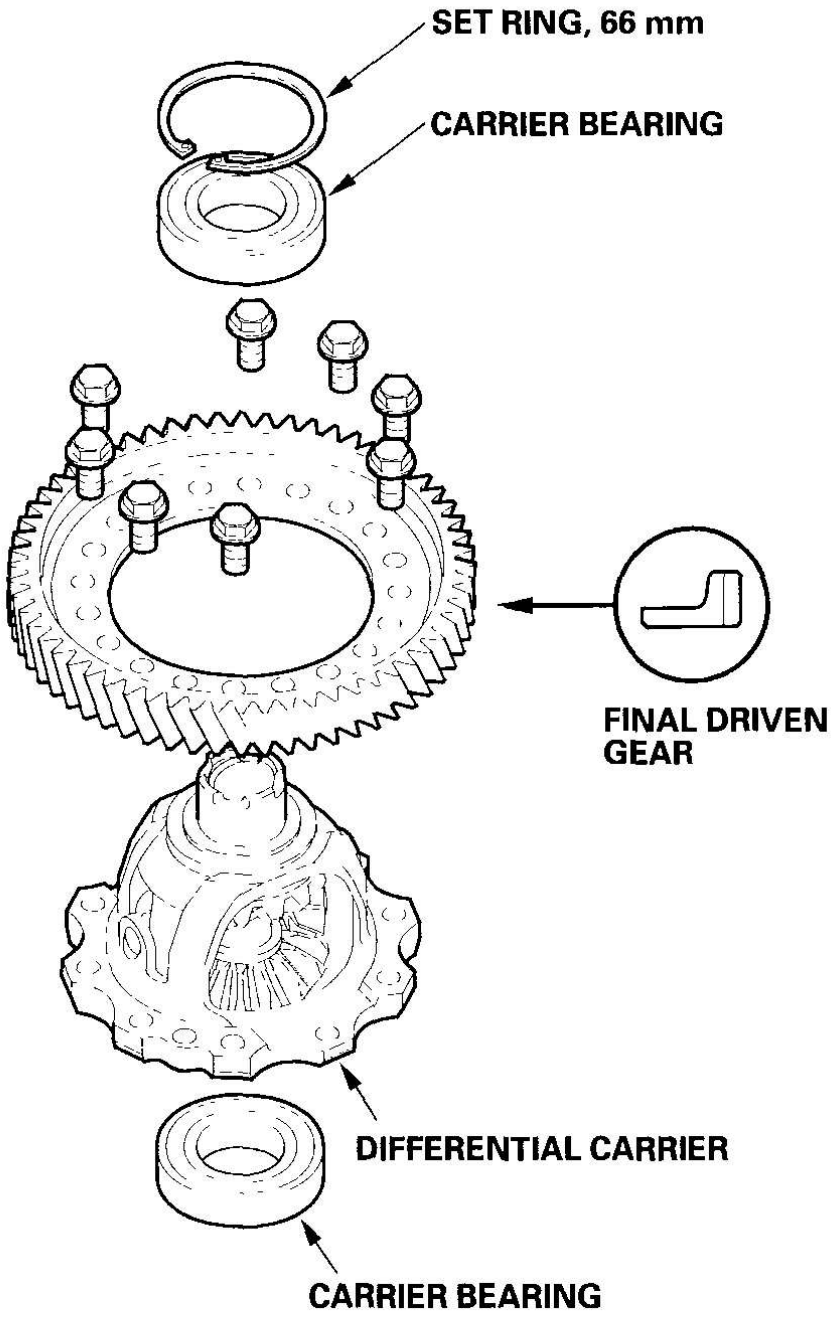

Fig. 472: CVT Differential Component Location Index
Courtesy of AMERICAN HONDA MOTOR CO., INC.

BACKLASH INSPECTION

1. Install the driveshafts on the differential, then place the axles on V-blocks.

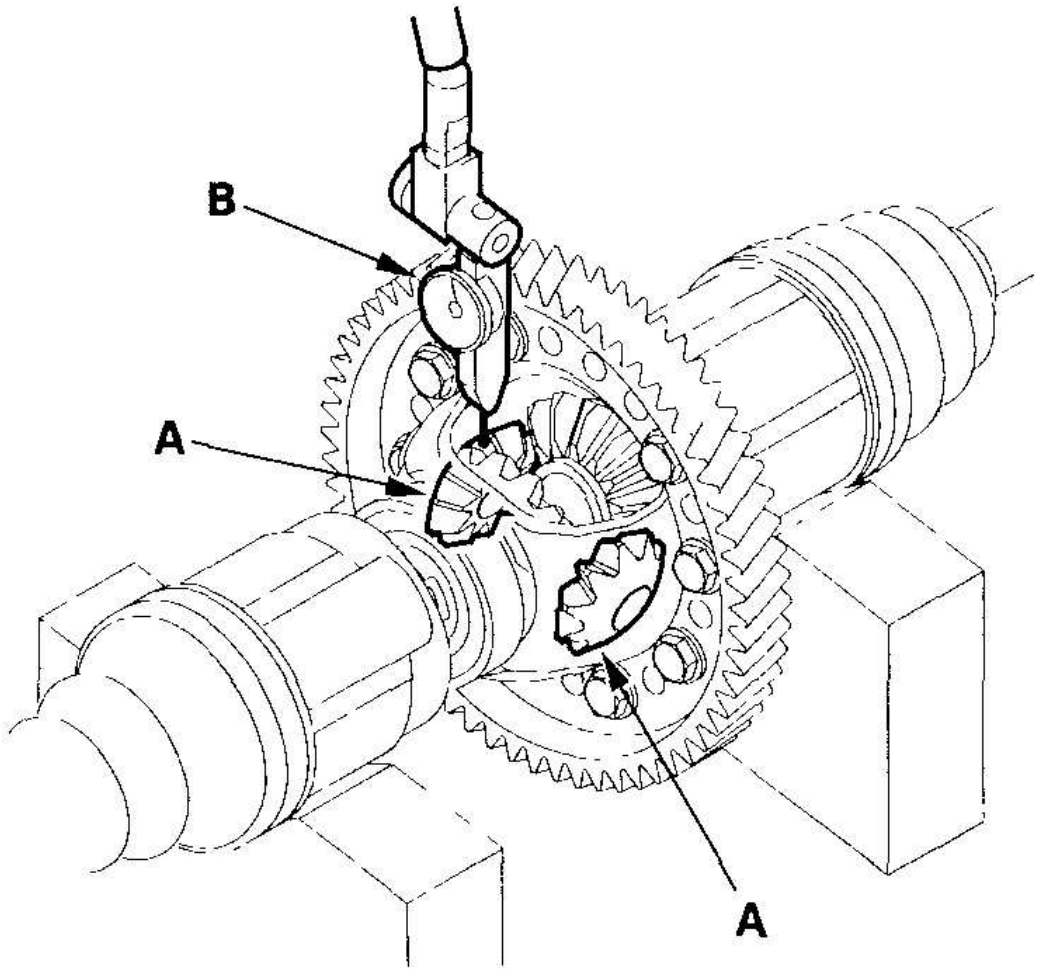

Fig. 473: Checking Pinion Gear Backlash
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Check the backlash of the pinion gears (A) with a dial indicator (B).

   Standard: 0.05-0.15 mm (0.002-0.006 in.)

3. If the backlash is out of standard, replace the differential assembly.

DIFFERENTIAL CARRIER/FINAL DRIVEN GEAR REPLACEMENT

1. Remove the final driven gear from the differential carrier. The final driven gear bolts have left-hand threads.

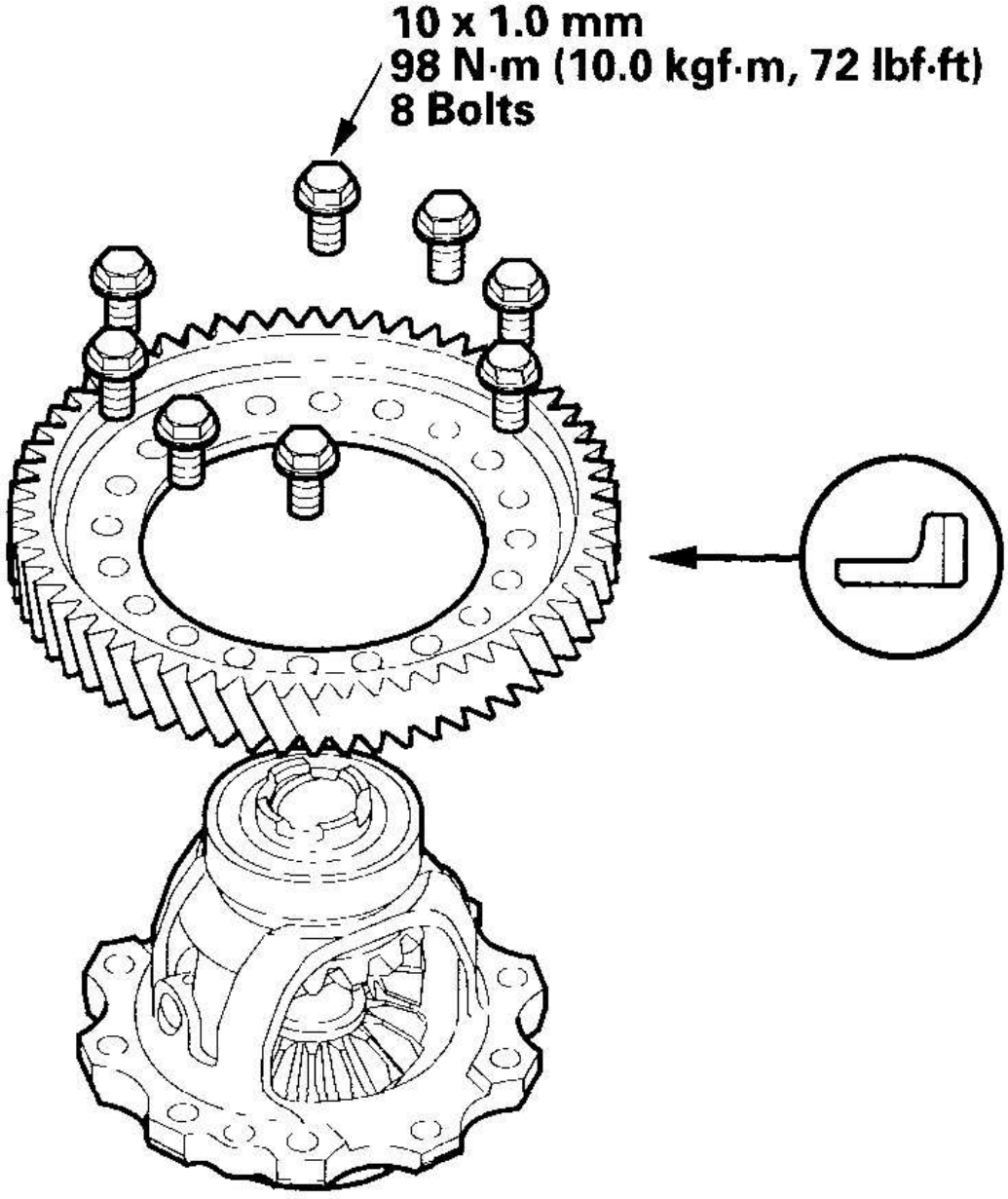

Fig. 474: Identifying Loosening Torque Of Final Driven Gear Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the final driven gear with the chamfered side on the inner bore facing the differential carrier in the direction shown.
3. Tighten the eight bolts in the position shown in a crisscross pattern.

CARRIER BEARING REPLACEMENT

Special Tools Required

- Driver, 40 mm I.D. 07746-0030100
- Attachment 35 mm I.D. 07746-0030400

1. Remove the bearings (A) with a commercially available bearing puller (B) and shaft protector (C).

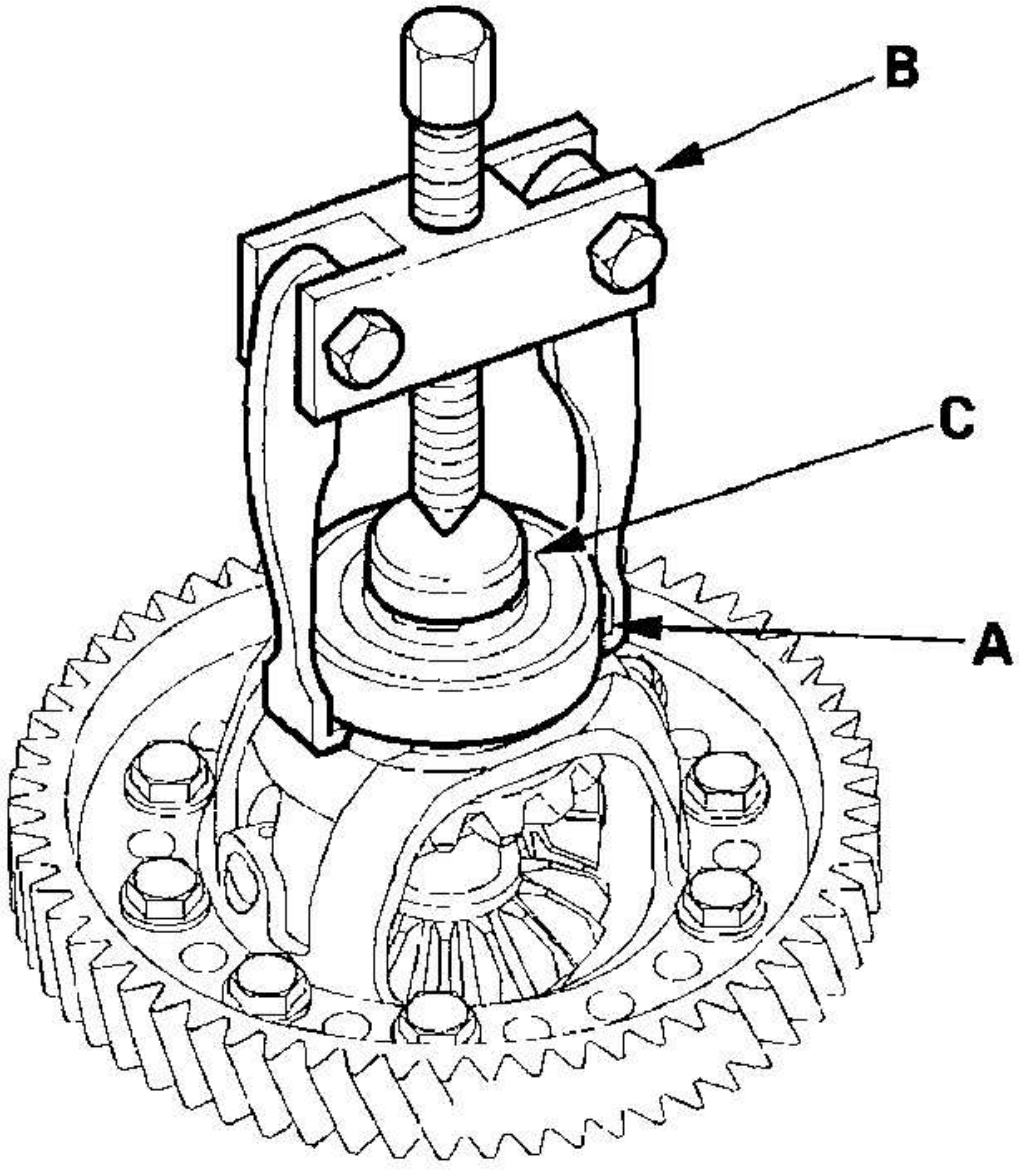

Fig. 475: Removing Carrier Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the bearings with the special tools and a press. Press the bearing on until

it bottoms.

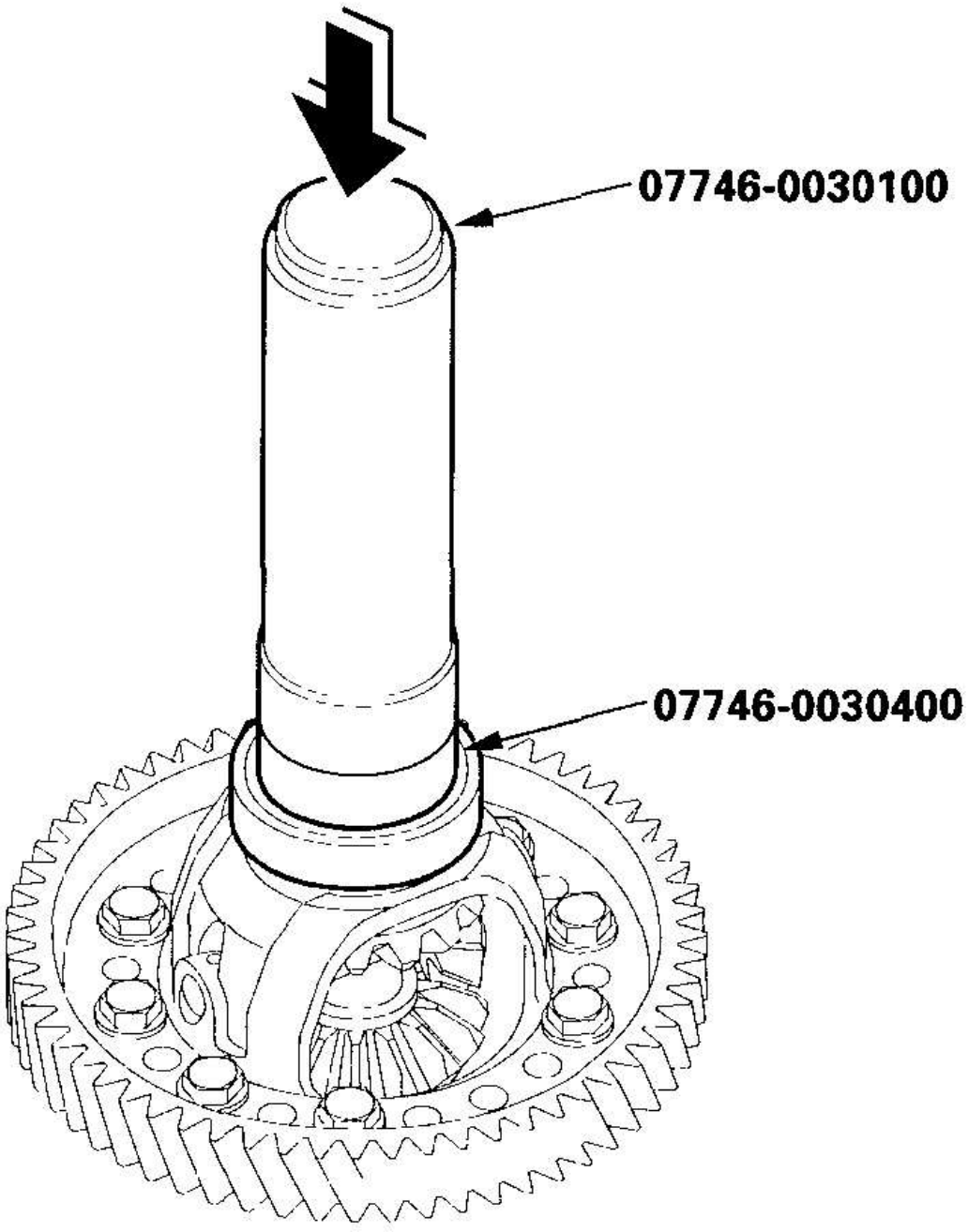

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Fig. 476: Installing Carrier Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

OIL SEAL REPLACEMENT

Special Tools Required

- Driver attachment, 58 mm 07JAD-PH80101
- Driver attachment, 64 x 72 mm 07JAD-PN00100 Driver 07749-0010000

1. Remove the oil seal from the transmission housing.

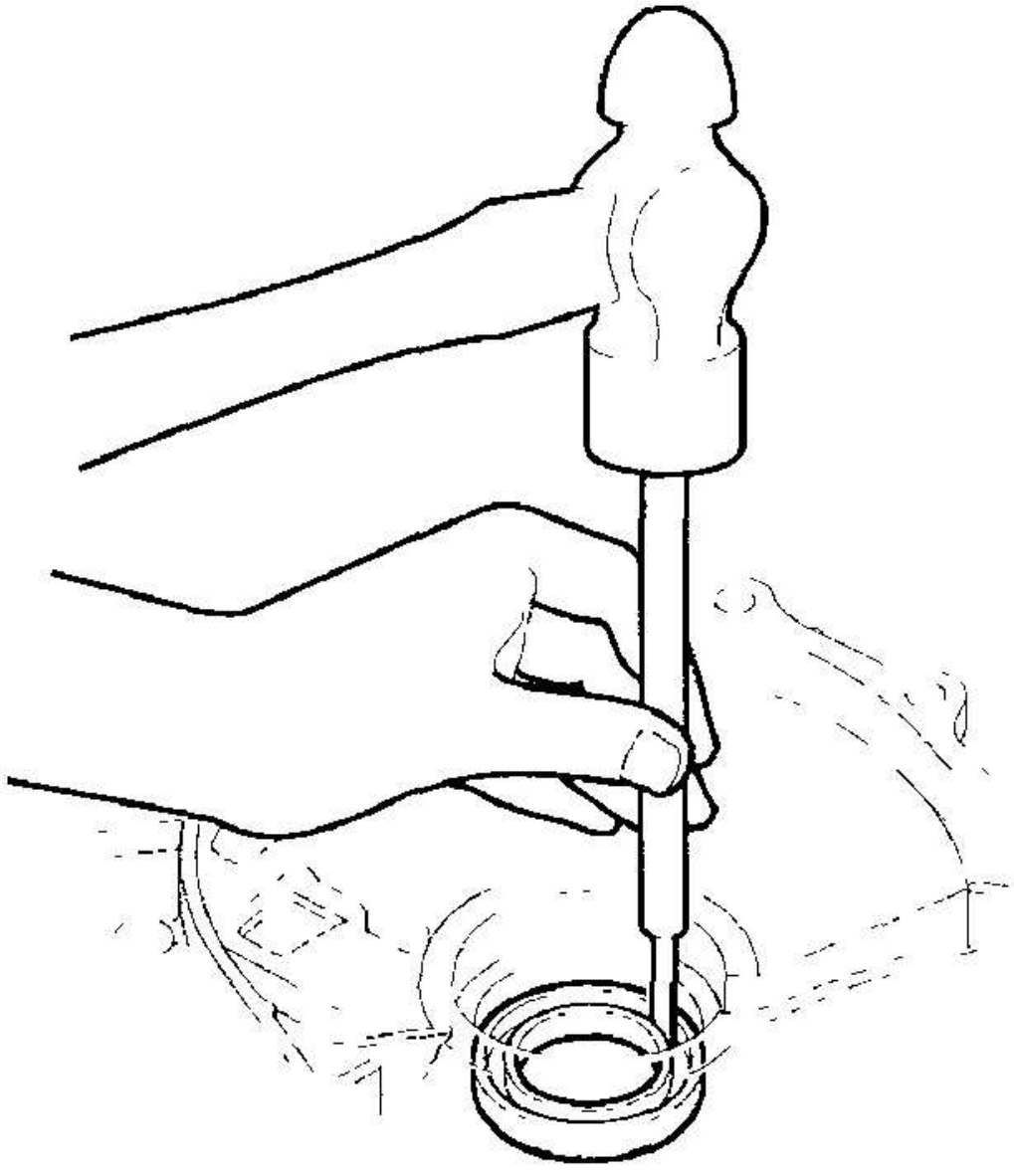

Fig. 477: Removing Oil Seal From Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the oil seal from the flywheel housing.

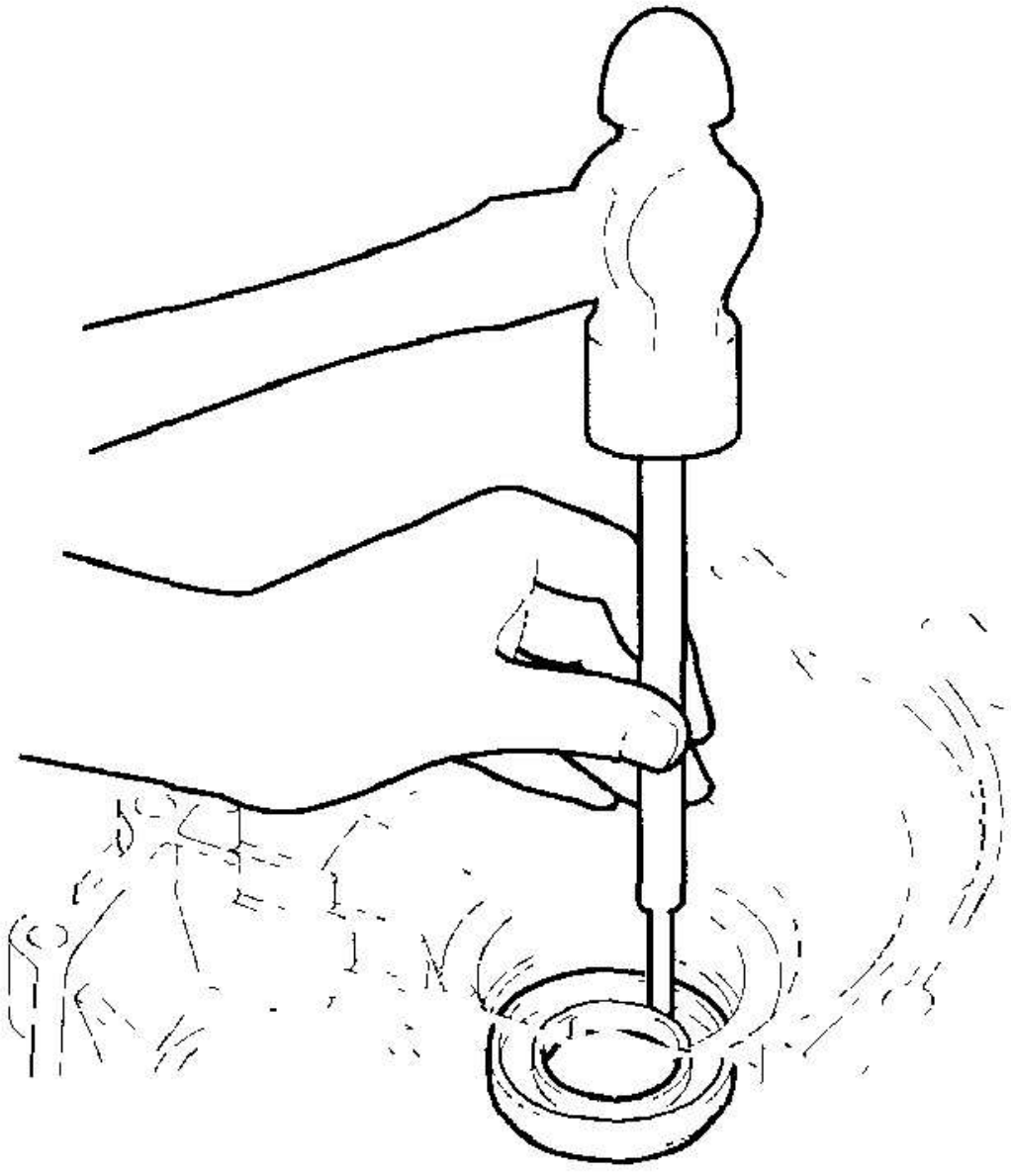

Fig. 478: Removing Oil Seal From Flywheel Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the new oil seal in the transmission housing with the special tools.

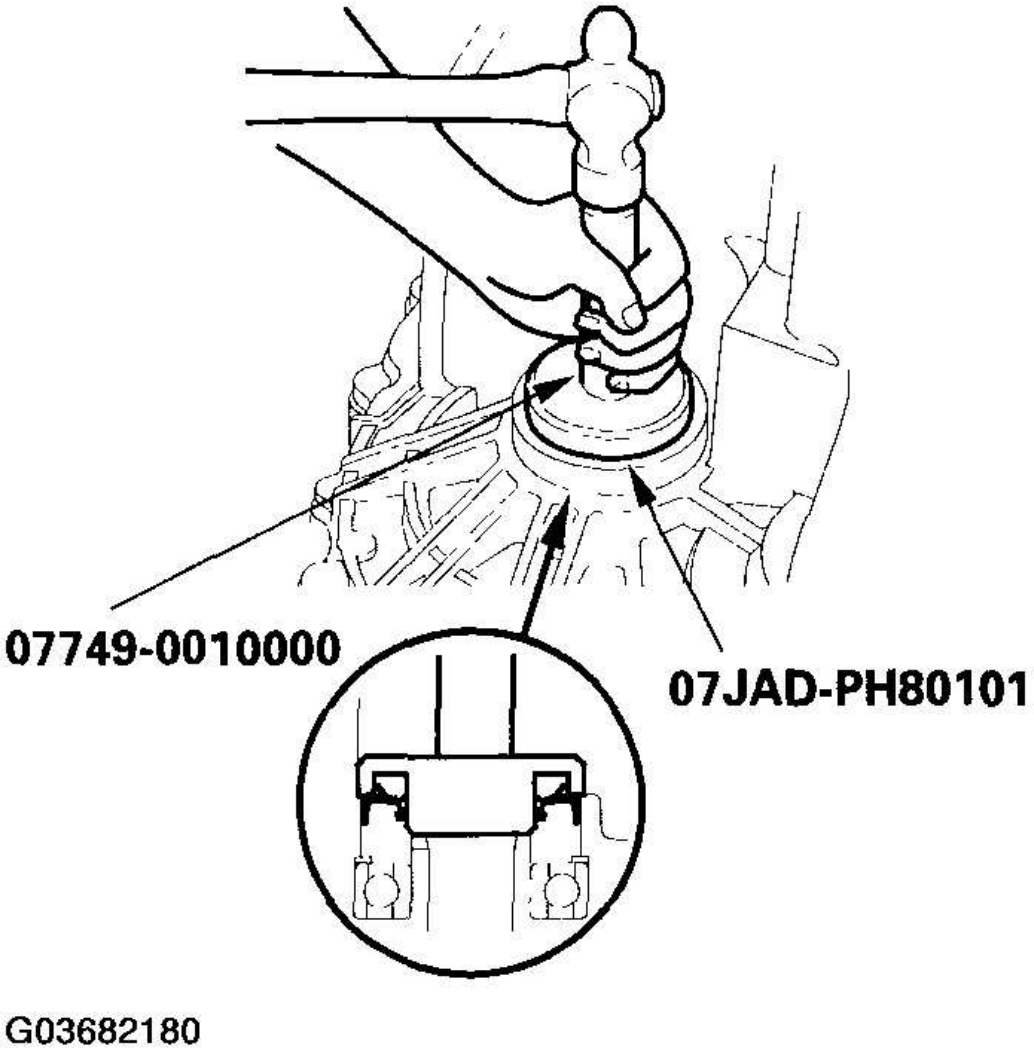

Fig. 479: Installing Oil Seal In Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the new oil seal in the flywheel housing with the special tools.

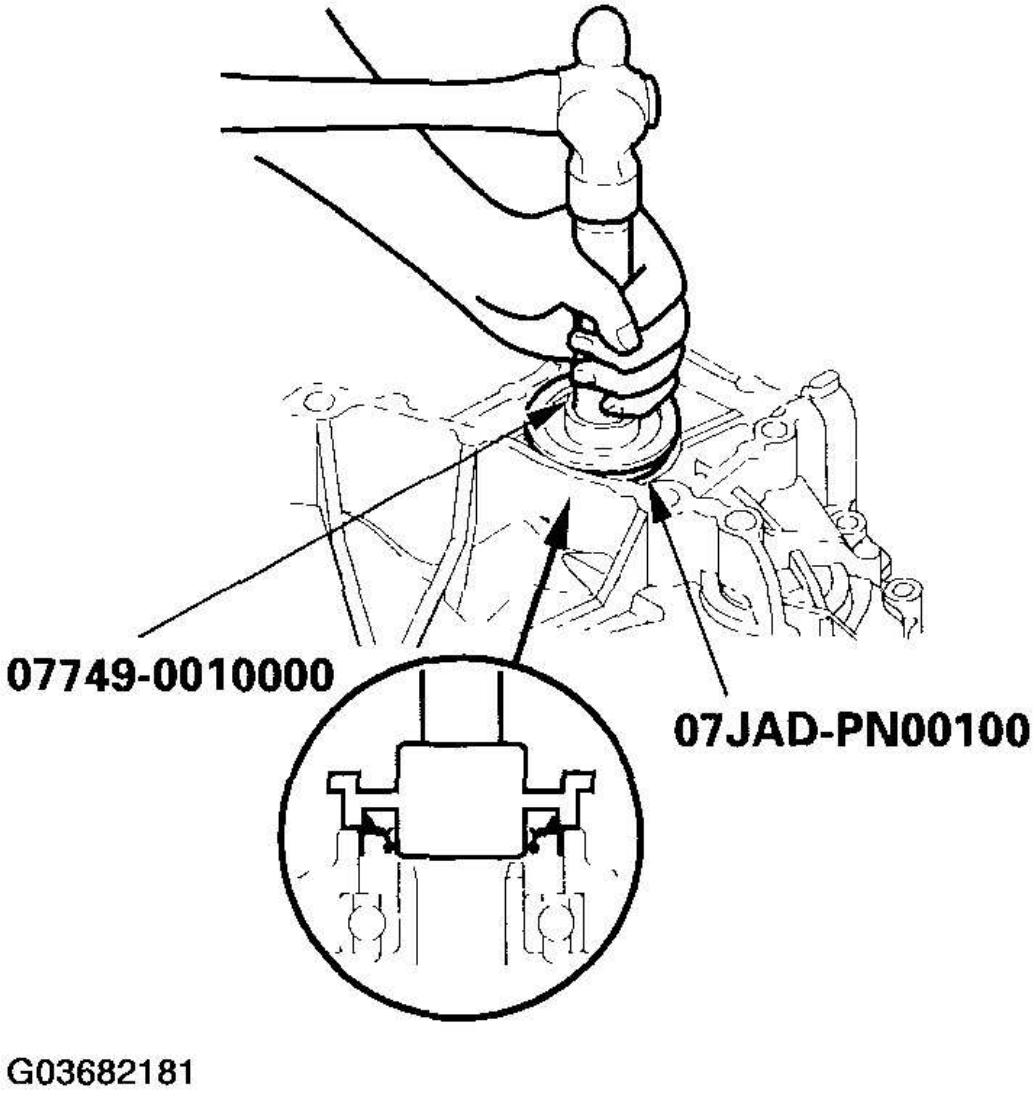

Fig. 480: Installing Oil Seal In Flywheel Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CARRIER BEARING SIDE CLEARANCE INSPECTION

Special Tools Required

- Driver, 40 mm I.D. 07746-0030100
- Attachment 35 mm I.D. 07746-0030400

1. Install the differential assembly in the transmission housing, then drive the differential to seat it in the housing.

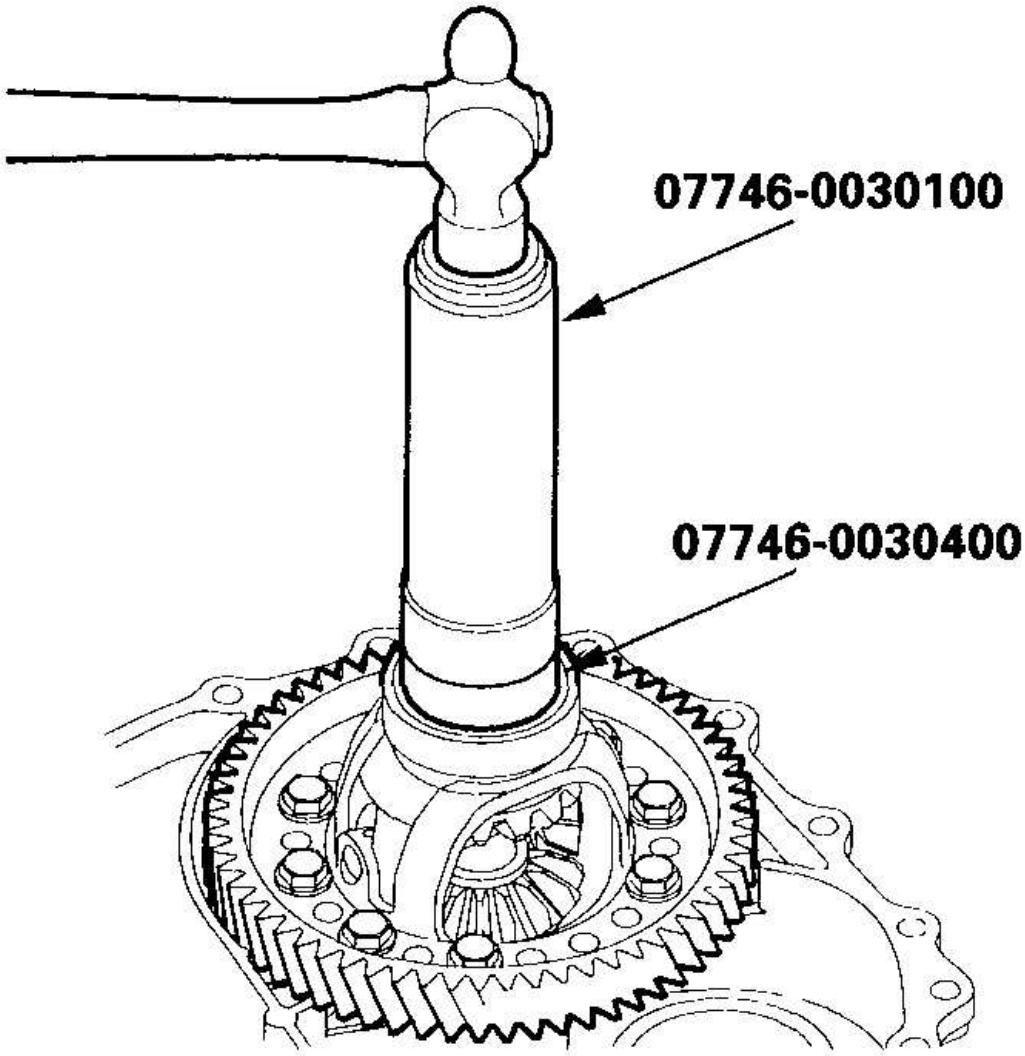

Fig. 481: Installing Differential Assembly In Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the three dowel pins (A) and the gasket (B) on the transmission housing

(C).

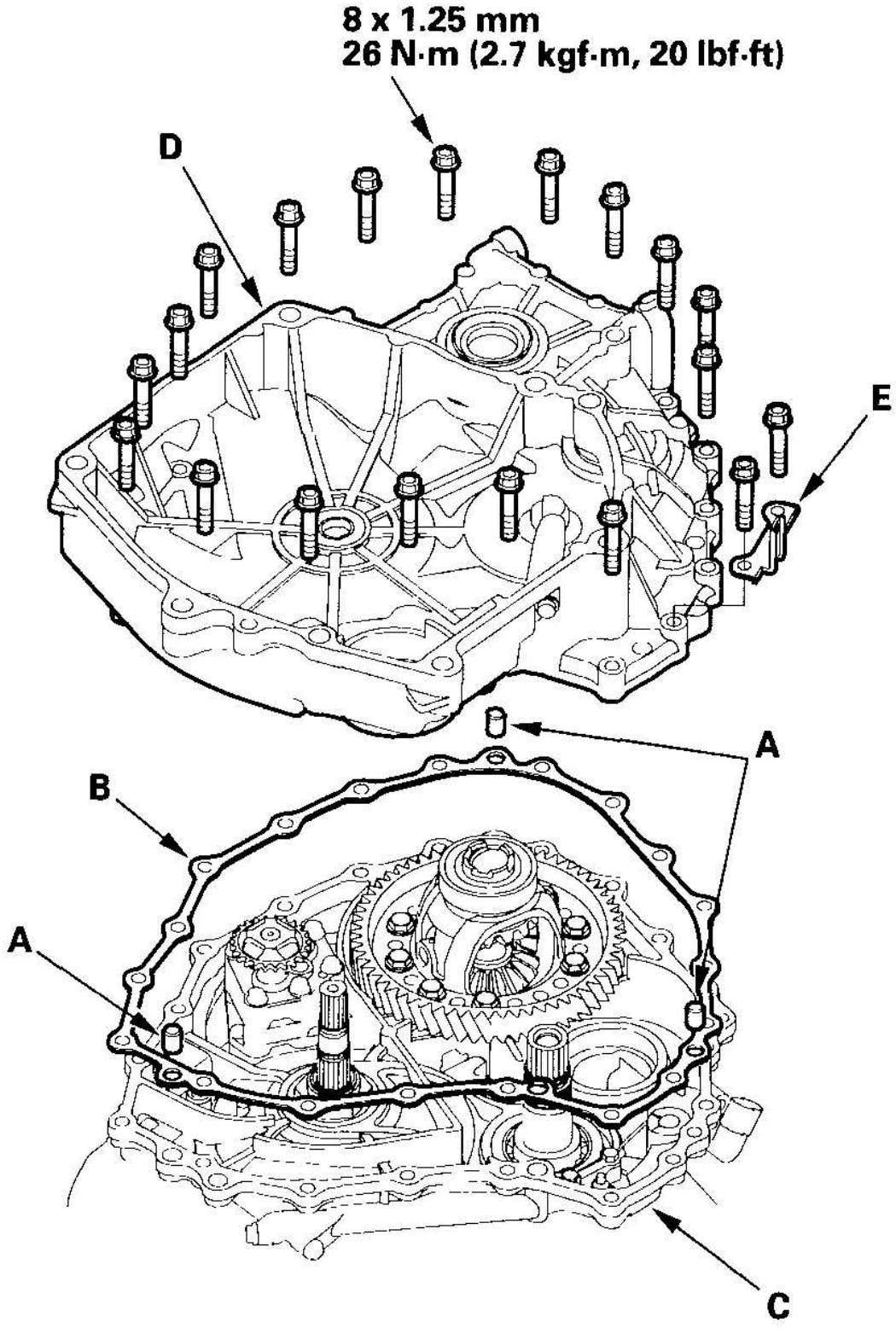

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Fig. 482: Installing Dowel Pins And Gasket On Transmission Housing With Specified Torques
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Place the flywheel housing (D) on the transmission housing.
4. Install the housing bolts with the harness clamp bracket (E), and tighten the bolts in two or more steps in a crisscross pattern.
5. Install the set ring.

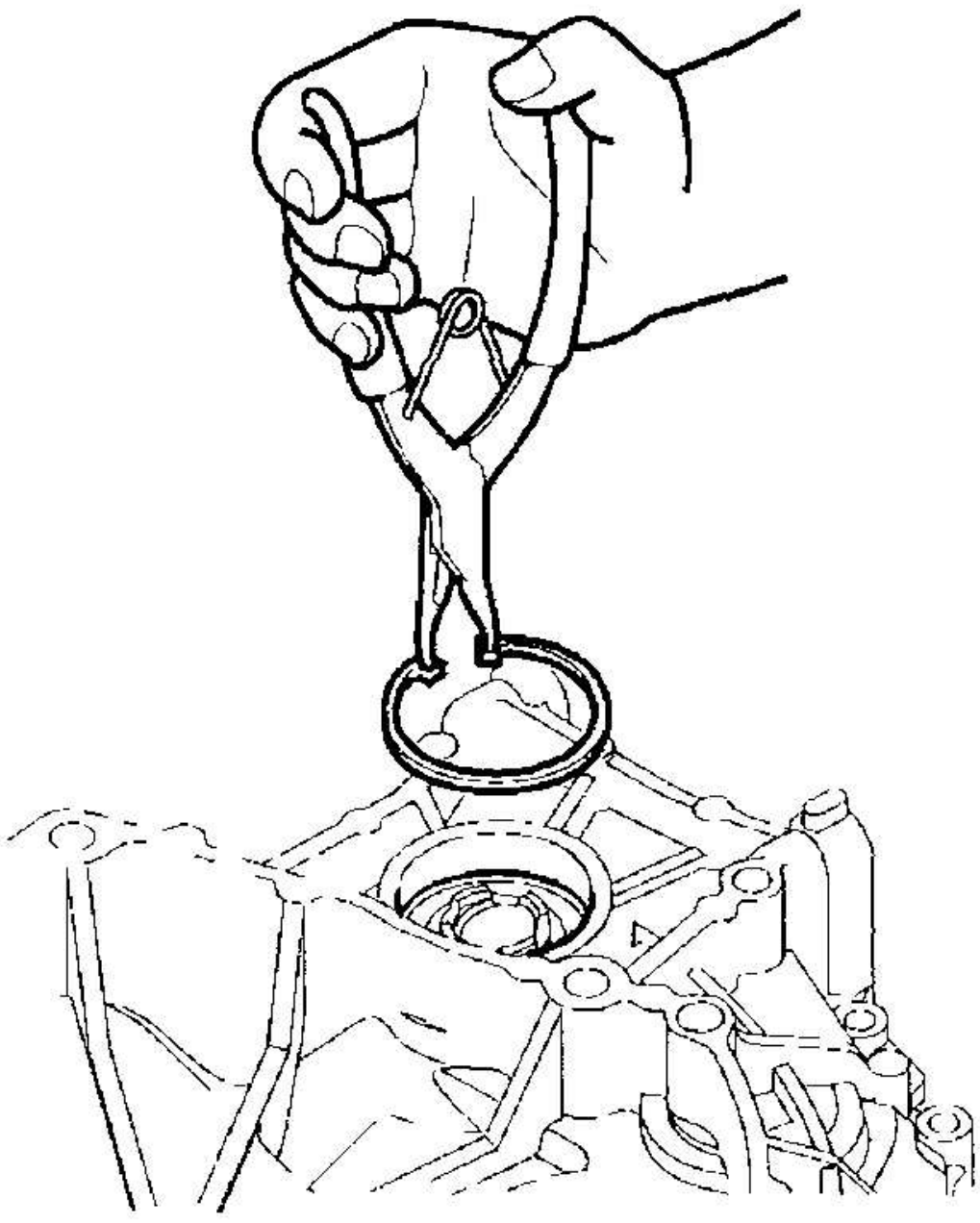

Fig. 483: Installing Set Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Measure the clearance between the set ring and carrier bearing outer race with a feeler gauge.

   Standard: 0-0.15 mm (0-0.006 in.)

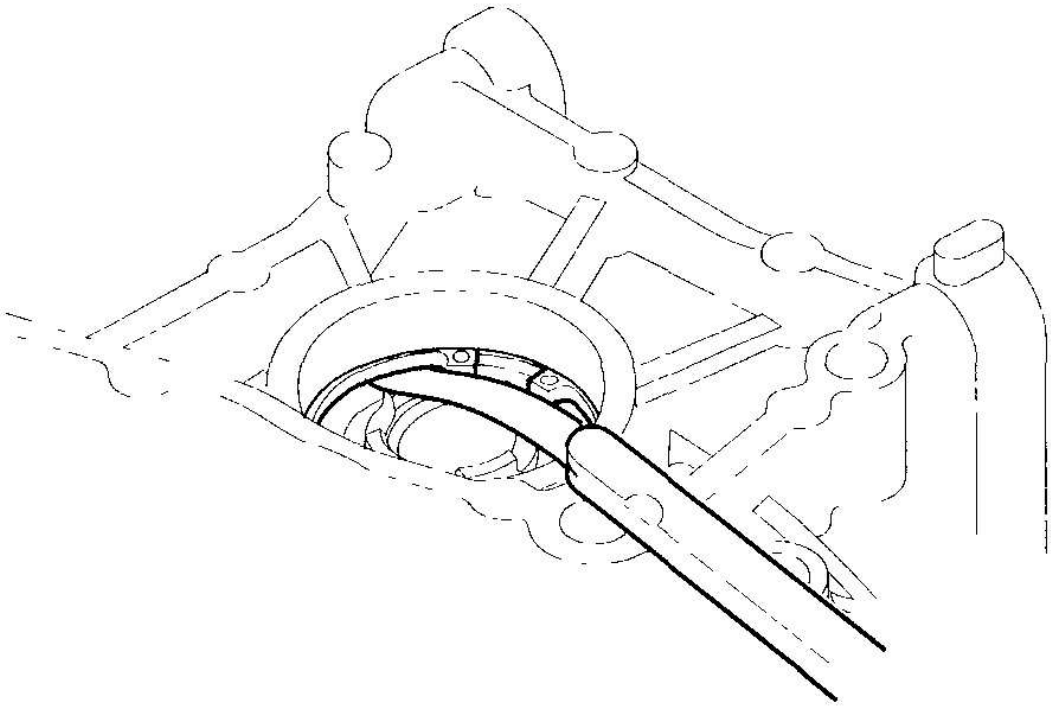

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Fig. 484: Measuring Clearance Between Set Ring And Carrier Bearing Outer Race
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. If the clearance is out of standard, remove the 66 mm set ring, and measure its thickness.
8. Select and install a new set ring, then recheck the clearance and make sure it is within the standard.

SET RING, 66 mm

SET RING, 66 MM SPECIFICATIONS

No.	Part Number	Thickness
1	90414-PN0-000	1.50 mm (0.059 in.)
2	90415-PN0-000	1.60 mm (0.063 in.)
3	90416-PN0-000	1.70 mm (0.067 in.)
4	90417-PN0-000	1.80 mm (0.071 in.)
5	90418-PN0-000	1.90 mm (0.075 in.)
6	90419-PN0-000	2.00 mm (0.079 in.)