AUTOMATIC TRANSMISSION

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07GAB-PF50101 or 07GAB-PF50100	Mainshaft Holder	1
②	07GAD-PG40101 or 07GAD-PG40100	Seal Driver Attachment	1
③	07GAD-SD40101	Attachment, 78 x 90 mm	1
④	07GAE-PG40200 or 07GAE-PG4020A	Clutch Spring Compressor Bolt Assembly	1
⑤	07HAC-PK40102	Housing Puller	1
⑥	07JAD-PH80101	Oil Seal Driver Attachment	1
⑦	07LAE-PX40100 or 07HAE-PL50101	Clutch Spring Compressor Attachment	2
⑧	07MAD-PR90100	Attachment, 45 x 55 mm	1
⑨	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	3
⑩	07MAJ-PY40120	A/T Pressure Hose Adapter	3
⑪	07NAD-PX40100	Attachment, 78 x 80 mm	1
⑫	07ZAE-PRP0100	Clutch Compressor Attachment	1
⑬	070AJ-0020100	Preload Inspection Tool	1
⑭	07406-0020400 or 07406-0020401	A/T Oil Pressure Gauge Set w/Panel	1
⑮	07736-A01000B or 07736-A01000A	Adjustable Bearing Puller, 25—40 mm	1
⑯	07746-0010500	Attachment, 62 x 68 mm	1
⑰	07746-0010600	Attachment, 72 x 75 mm	1
⑱	07746-0010800	Attachment, 22 x 24 mm	1
⑲	07746-0030100	Driver, 40 mm I.D.	1
⑳	07749-0010000	Driver	1
㉑	07947-6340500	Driver Attachment	1

⑤: If the top arm is too short, replace it with 07SAC-P0Z01001.
⑨: 07HAE-PL50101 may be used to substitute one of these tools.
⑮: Must be used with commercially available 3/8 ″-16 slide hammer.

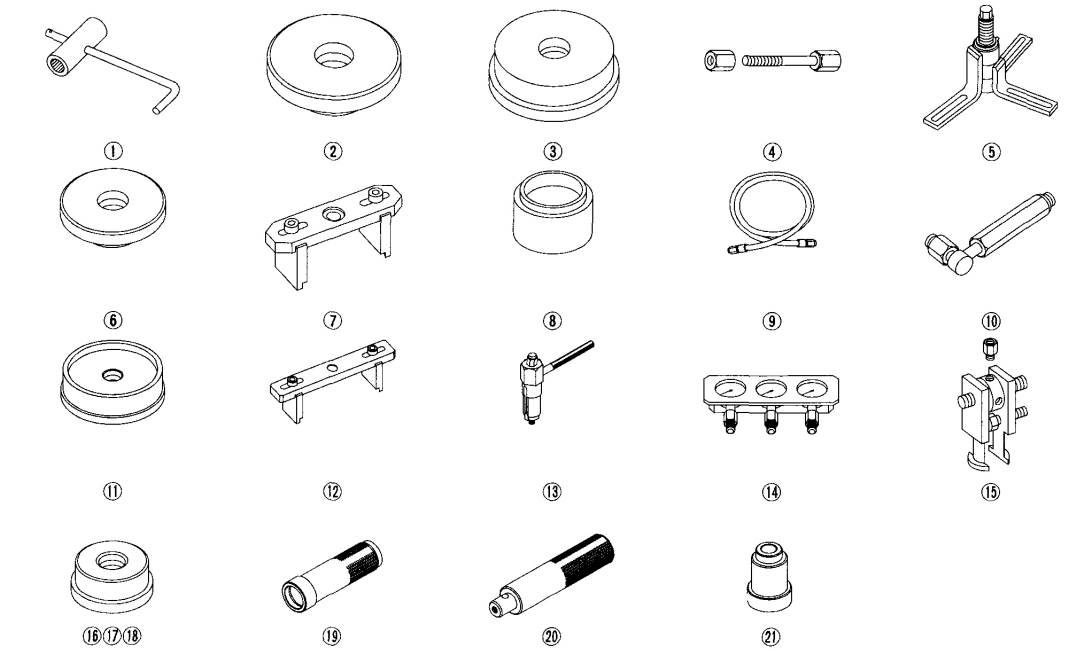


Fig. 1: Identifying Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

GENERAL TROUBLESHOOTING INFORMATION

How to Check for DTCs with the Honda Diagnostic System

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

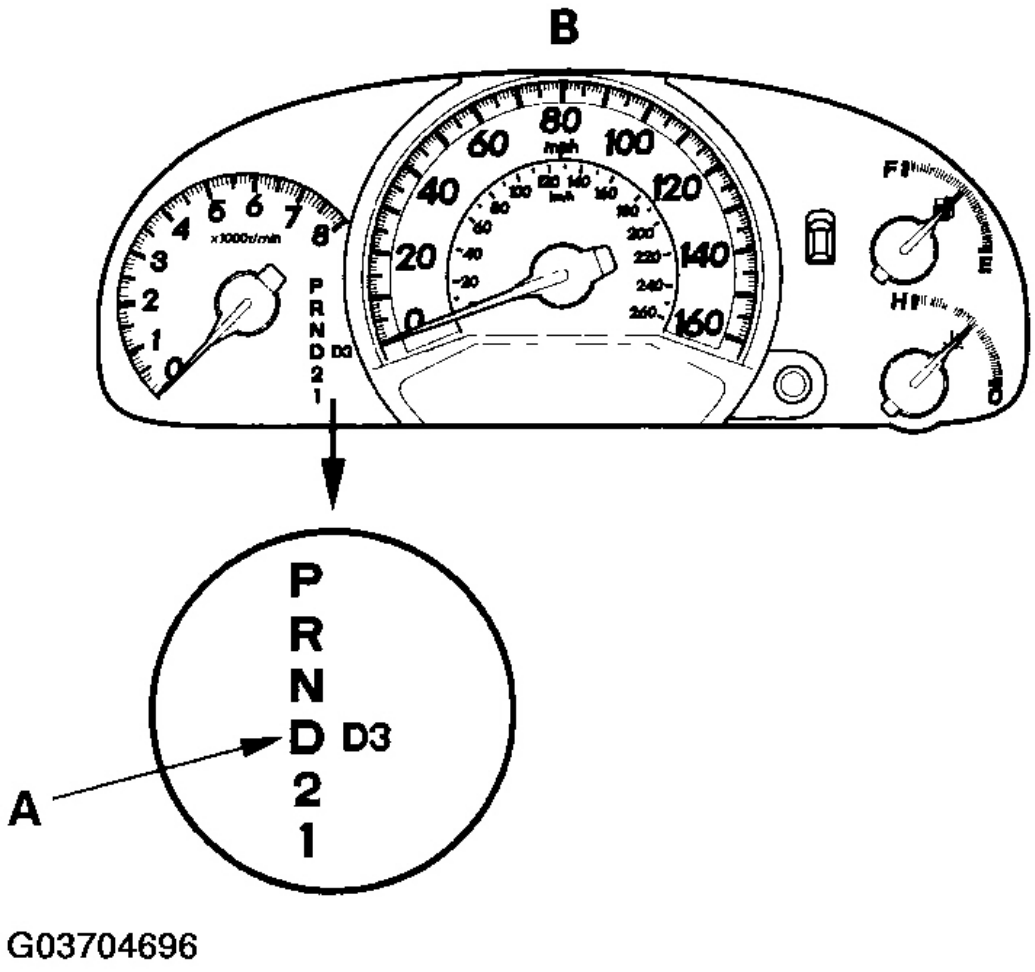


Fig. 2: Identifying D Indicator Gauge Control Module
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the Honda diagnostic system (HDS) is connected to the data link connector (DLC) (A) (located under the left end of the dash) and the SCS mode is selected, it will indicate the diagnostic trouble code (DTC) when the ignition switch is turned ON (II) and the appropriate

menu is selected.

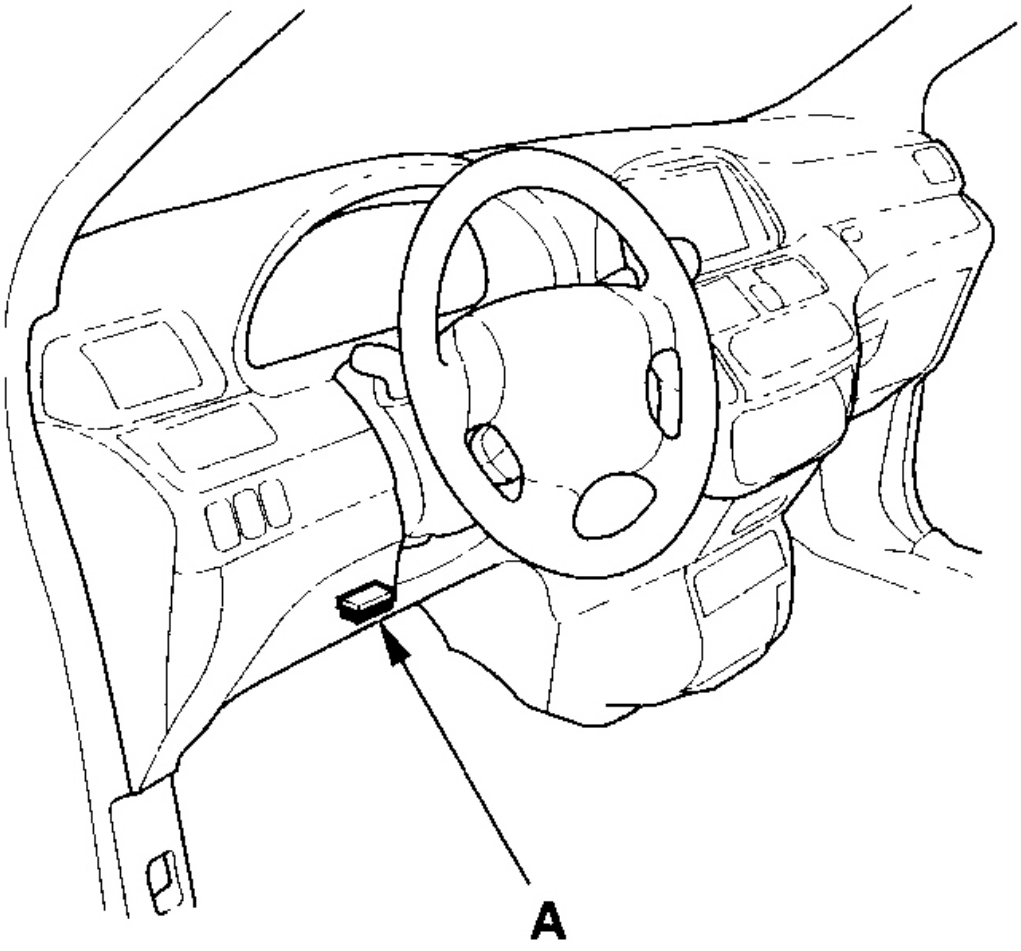


Fig. 3: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 PCM).
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 PCM senses an abnormality in the input or output system, the D indicator (A) in the gauge control module (B) will usually blink.

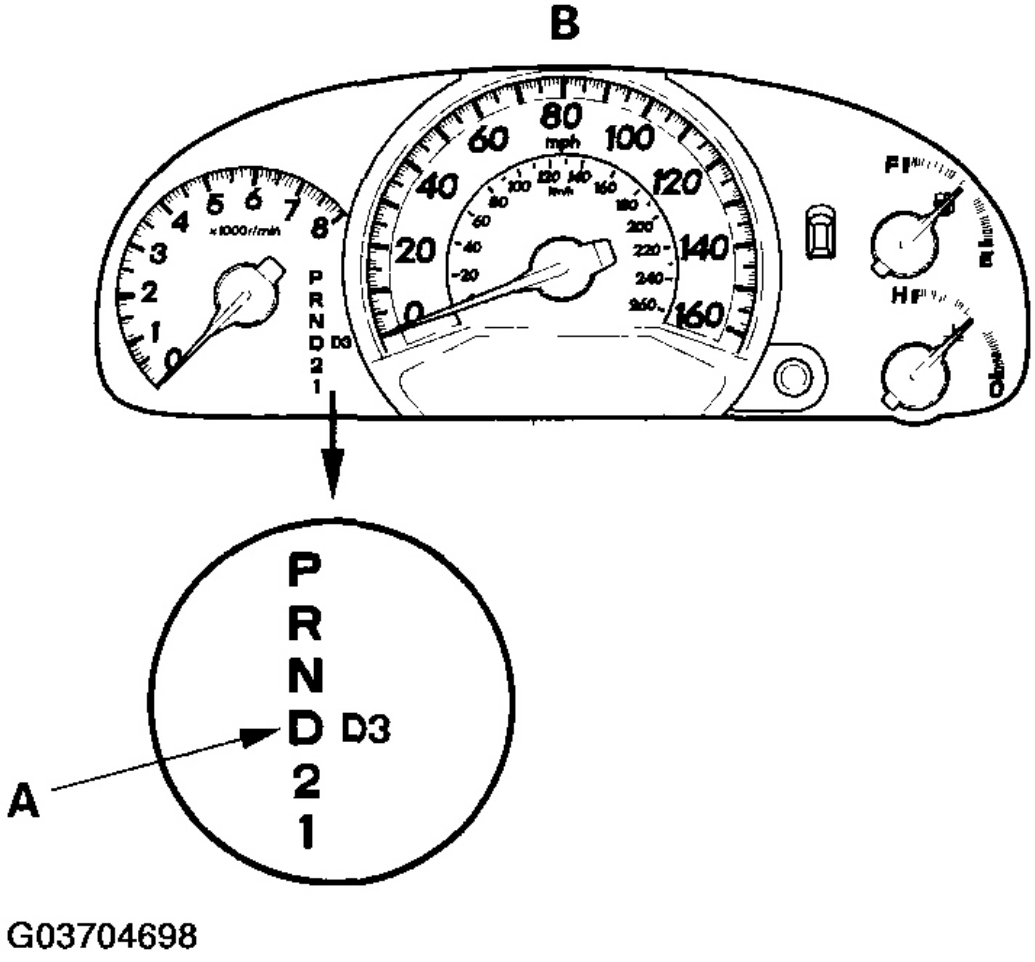
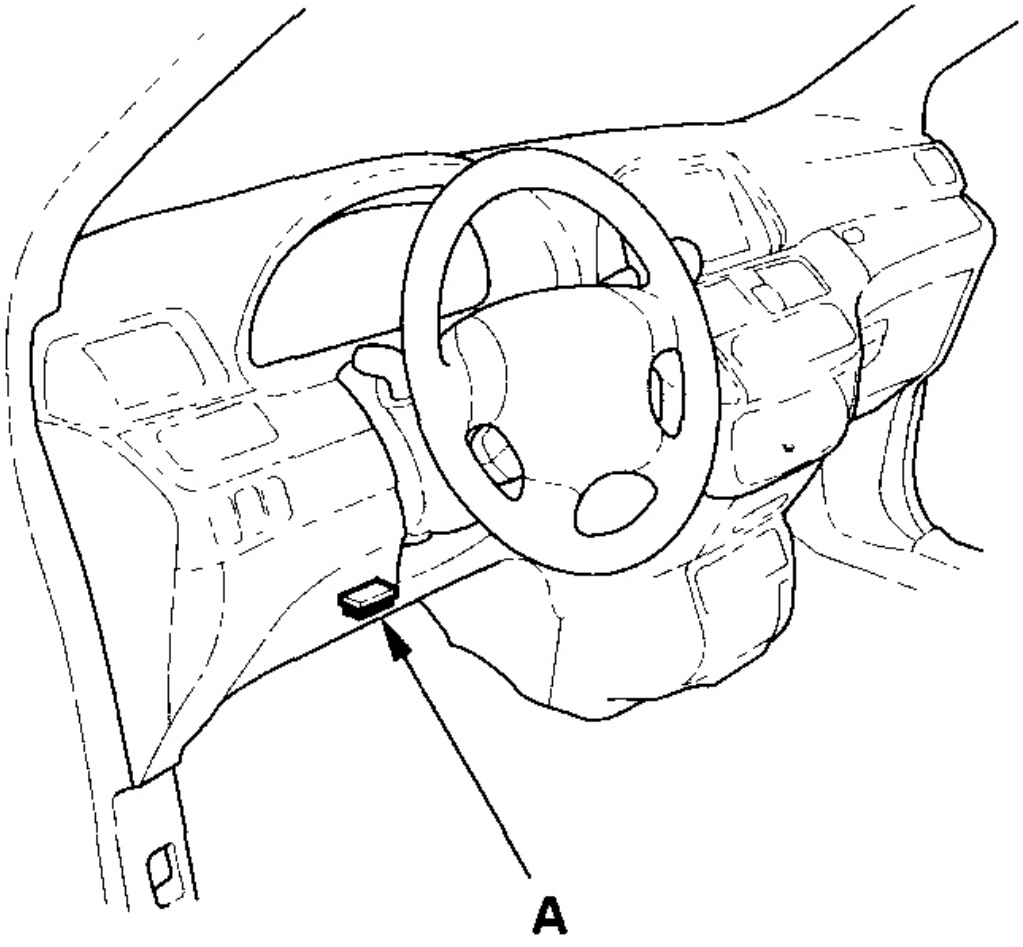


Fig. 4: Identifying D Indicator Gauge Control Module
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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



G03704699

Fig. 5: Connecting HDS To DLC
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 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 SCS mode, then observe the D indicator in the gauge control module.

   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.

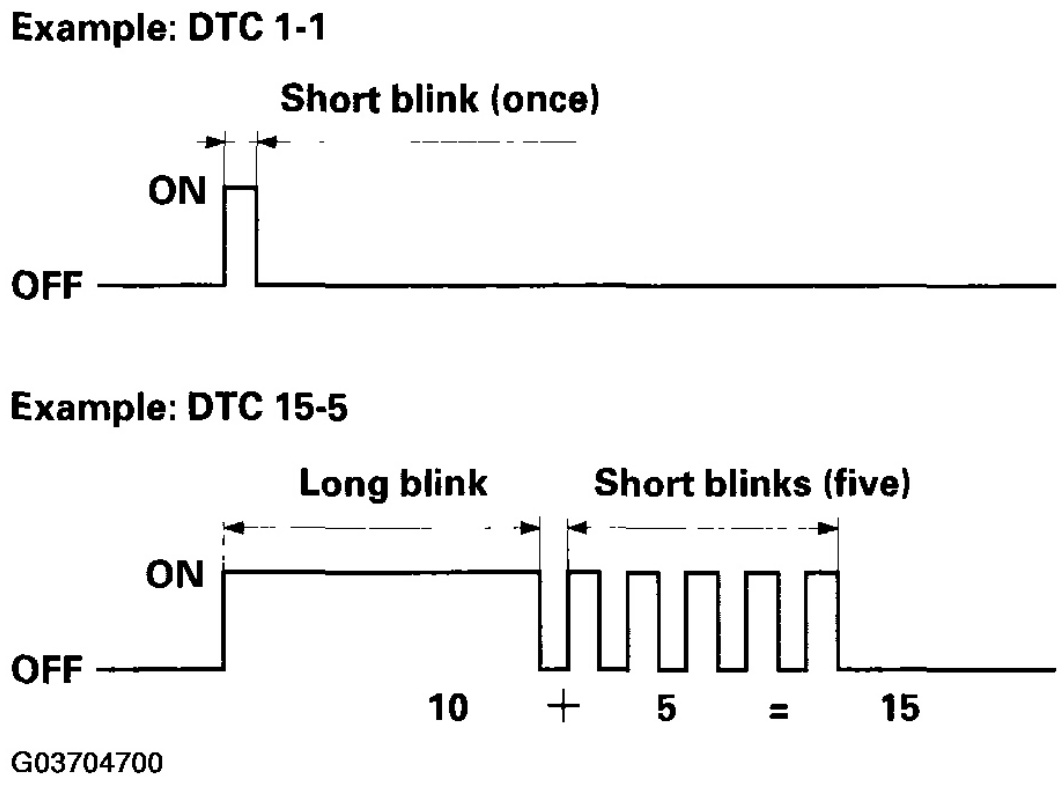


Fig. 6: Example Of DTC 1-1 And 15-5 Blinking Pattern
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 PCM).
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.

NOTE: The PCM overwrites data and monitors the EVAP system for up to 15 minutes after the ignition switch is turned OFF. Jumping the SCS line after turning the ignition switch OFF cancels this function. Disconnecting the PCM during this function, without jumping the SCS line first, can damage the PCM.

1. Jump the SCS line with the HDS.
2. Disconnect the PCM connectors and probe the terminals from the terminal side of the connectors.
3. Check the connector terminal diameter, and select the suitable pin probe (male).
4. Connect one side of the patch cord (A) terminals to a commercially available digital multimeter (B), and connect the other side of the patch cord terminals to a commercially available banana jack (Pomona Electronics Tool No. 3563 or equivalent (C)).

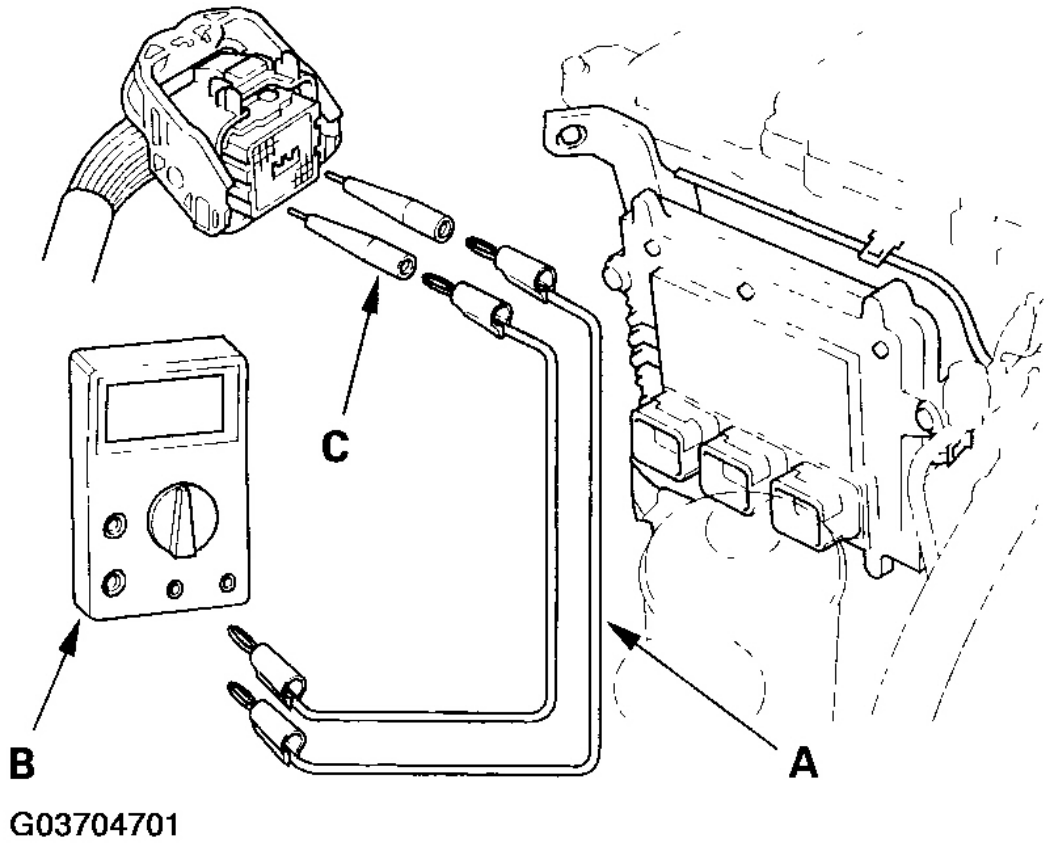


Fig. 7: Connecting Patch Cord Terminals To Digital Multimeter

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Note for Diagnosis/Troubleshooting at the PCM when diagnosis/troubleshooting is made at the PCM connector, use the inspection port (A) at the connector terminal side.

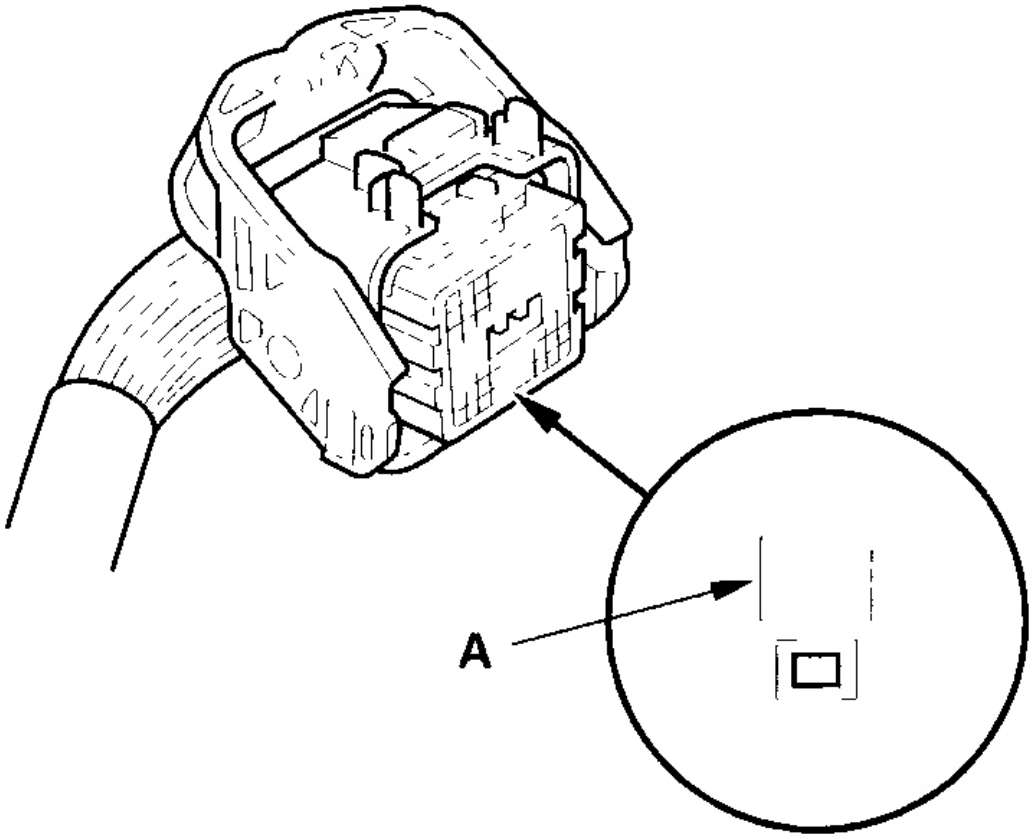


Fig. 8: Using Inspection Port At Connector Terminal Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Gently slide the pin probe (male) into the inspection port. Do not slide the probe into the connector terminals.

NOTE:

- **For accurate results, always use the pin probe (male).**
- **To prevent damage to the connector terminals, do not**

insert test equipment probes, paper clips, or other substitutes as they can damage the terminals. Damaged terminals cause a poor connection and an incorrect measurement.

- **Do not puncture the insulation on a wire. Punctures can cause poor or intermittent electrical connections.**

DTC Clear

1. Clear the DTC with the HDS while the engine is stopped.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON (II), and wait for 30 seconds.
4. Turn the ignition switch OFF, and disconnect the HDS from the DLC.

PCM Reset

This command clears stored specific data from the PCM such as DTCs, freeze data, and readiness codes. It does not clear CKP PATTERN data.

1. Reset the PCM with the HDS while the engine is stopped.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON (II), and wait for 30 seconds.
4. Turn the ignition switch OFF, and disconnect the HDS from the DLC.
5. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

OBD Status

The OBD status shows the current system status of each DTC and all of the parameters. This function is used to see if the technician's repair was successfully finished. The results of diagnostic tests for the DTC are displayed as:

- PASSED: On board diagnosis is successfully finished.
- FAILED: On board diagnosis has finished but failed.
- NOT COMPLETED: The On Board Diagnosis was running but is out of the enable conditions of the DTC.

How to End a Troubleshooting Session

This procedure must be done after any troubleshooting.

1. Reset the PCM with the HDS while the engine is stopped.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON (II), and wait for 30 seconds.
4. Turn the ignition switch OFF, and disconnect the HDS from the DLC.
5. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
6. Start the engine in the P or N position, and warm it to normal operating temperature (the radiator fan comes on).
7. To verify that the problem is repaired, test-drive the vehicle for several minutes at speeds over 30 mph (50 km/h) or in freeze data range.

PCM Updating and Substitution for Testing

Special Tools Required

Honda interface module (HIM) EQS05A35570

Use one of these procedures when you have to substitute a known-good PCM in a troubleshooting procedure. Update the PCM only if the PCM does not already have the latest software loaded.

NOTE: Do not turn the ignition switch OFF while updating the PCM. If you turn the ignition switch OFF before completion, the PCM can be damaged.

How to Update the PCM

NOTE:

- **To ensure the latest program is installed, do a PCM update whenever the PCM is substituted or replaced.**
- **You can not update a PCM with the program it already has. It will only accept a new program.**
- **Before you update the PCM, make sure the vehicle's battery is fully charged.**
- **To prevent PCM damage, do not operate anything electrical (audio system, brakes, A/C, power windows, moonroof, or door locks) during the update.**
- **If you need to diagnose the Honda interface module (HIM) because the HIM's red (#3) light came on or was flashing during the update, leave the ignition switch in the ON (II) position**

when you disconnect the HIM from the data link connector (DLC). This will prevent PCM damage.

1. Turn the ignition switch ON (II). Do not start the engine.
2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

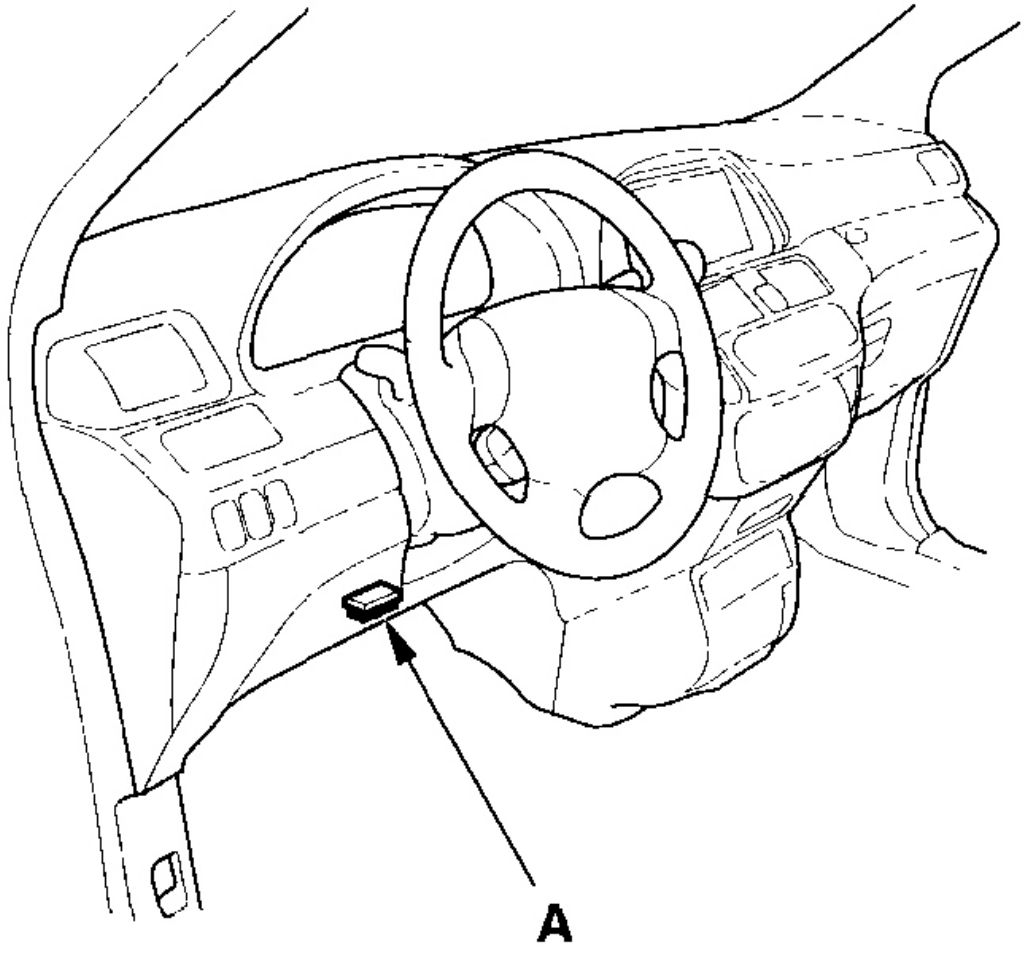


Fig. 9: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Select the INSPECTION MENU with the HDS.
4. Do the TP LEARNING CHECK in the ETCS TEST.
5. If the HDS does not have the update function, disconnect the HDS from the vehicle and connect the Honda interface module (HIM).
6. Do the PCM update procedure as described on the HIM label and in the PCM update system.
7. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
8. Do the CKP pattern clear/pattern learn procedure with the HDS while the engine is stopped.

How to Substitute the PCM

1. Remove the PCM from the vehicle.
2. Install a known-good PCM.
3. Turn the ignition switch ON (II).

NOTE: US model: DTC P0630 "VIN Not Programmed or Mismatch" will be stored because VIN has not been programmed into the PCM, but ignore it and continue this procedure.

4. US model: Input the VIN to the PCM with the HDS.
5. US model: Select WRITE DATA in the REPLACE PCM with the HDS.
6. Rewrite the immobilizer code with the PCM replacement procedure in the HDS; it allows you to start the engine.
7. After completing your tests, install the original PCM, and rewrite the immobilizer code with the PCM replacement procedure in the HDS.
8. If you substitute a new PCM select the INSPECTION MENU with the HDS, with the original PCM installed.
9. Do the TP POSITION CHECK in the ETCS TEST.
10. Replace the PCM, and rewrite the immobilizer code with the PCM replacement procedure in the HDS.

How to Remove and Install the PCM for Testing

If DTC troubleshooting requires voltage or resistance checks at the PCM connectors, remove the PCM and test it:

1. Jump the SCS line with the HDS.

2. Remove the covers (A).

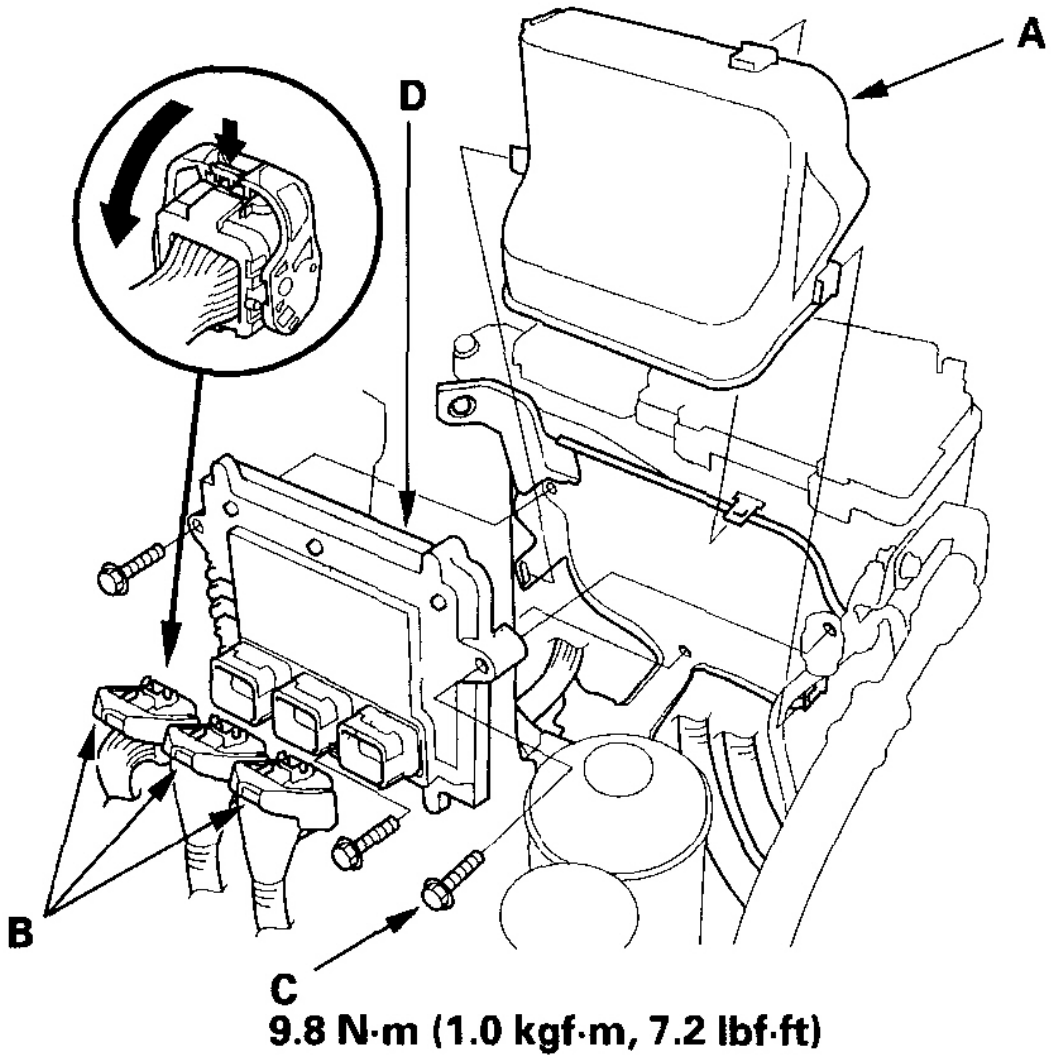


Fig. 10: Removing Covers
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Disconnect the PCM connectors (B).
4. Remove the bolts (C), then remove the PCM (D).
5. Install the PCM in the reverse order of removal.

6. Exit the SCS mode with the HDS.
7. Turn the ignition switch ON (II).

NOTE: If DTC P0630 "VIN Not Programmed or Mismatch" is stored at this time, ignore it and continue this procedure.

8. Input the VIN to the PCM with the HDS.
9. Rewrite the immobilizer code with the PCM replacement procedure in the HDS; it allows you to start the engine.
10. Reset the PCM with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

DTC Troubleshooting Index

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

DTC TROUBLESHOOTING CHART

DTC (1)	D Indicator	MIL	Detection Item
P0705 (5-2) (2)	Blinks	ON	Transmission range switch (multiple shift-position input) (short)
P0706 (6-2) (2)	OFF	ON	Transmission range switch (open)
P0711 (28-5) (2)	Blinks	OFF	ATF temperature sensor (range/performance)
P0712 (28-3) (2)	Blinks	OFF	ATF temperature sensor (short)
P0713 (28-4) (2)	Blinks	OFF	ATF temperature sensor (open)
P0716 (15-5) (2)	Blinks	ON	Input shaft (mainshaft) speed sensor (range/performance)
P0717 (15-3) (2)	Blinks	ON	Input shaft (mainshaft) speed sensor (no signal input)

P0718 (15-6) (2)	Blinks	ON	Input shaft (mainshaft) speed sensor (intermittent failure)
P0721 (9-5) (2)	Blinks	ON	Output shaft (countershaft) speed sensor (range/performance)
P0722 (9-3) (2)	Blinks	ON	Output shaft (countershaft) speed sensor (no signal input)
P0723 (9-6) (2)	Blinks	ON	Output shaft (countershaft) speed sensor (intermittent failure)
P0731 (64-1)	Blinks	OFF	1st gear incorrect ratio
P0732 (64-2)	Blinks	OFF	2nd gear incorrect ratio
P0733 (64-3)	Blinks	OFF	3rd gear incorrect ratio
P0734 (64-4)	Blinks	OFF	4th gear incorrect ratio
P0735 (64-5)	Blinks	OFF	5th gear incorrect ratio
P0741 (40-3)	OFF	ON	Torque converter clutch circuit performance or stuck OFF
P0746 (76-3)	Blinks	ON	A/T clutch pressure control solenoid valve A stuck OFF
P0747 (76-4)	Blinks	ON	A/T clutch pressure control solenoid valve A stuck ON
P0751 (70-3)	Blinks	ON	Shift solenoid valve A stuck OFF
P0752 (70-4)	Blinks	ON	Shift solenoid valve A stuck ON
P0756 (71-3)	Blinks	ON	Shift solenoid valve B stuck OFF

NOTE

(1) The DTC in parentheses 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 in the SCS mode.

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

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

DTC TROUBLESHOOTING CHART

DTC (1)	D Indicator	MIL	Detection Item
P0757 (71-4)	Blinks	ON	Shift solenoid valve B stuck ON
P0761 (72-3)	Blinks	ON	Shift solenoid valve C stuck OFF
P0762 (72-4)	Blinks	ON	Shift solenoid valve C stuck ON
P0776 (77-3)	Blinks	ON	A/T clutch pressure control solenoid valve B stuck OFF
P0777 (77-4)	Blinks	ON	A/T clutch pressure control solenoid valve B stuck ON
P0780 (45-1)	Blinks	ON	Shift control system
P0847 (26-3)(2)	Blinks	OFF	3rd clutch transmission fluid pressure switch (short or stuck ON)
P0848 (26-4)(2)	Blinks	OFF	3rd clutch transmission fluid pressure switch (open or stuck OFF)
P0872 (27-3)(2)	Blinks	OFF	4th clutch transmission fluid pressure switch (short or stuck ON)
P0873 (27-4)(2)	Blinks	OFF	4th clutch transmission fluid pressure switch (open or stuck OFF)
P0962 (16-3)(2)	Blinks	ON	A/T clutch pressure

			control solenoid valve A (open/short)
P0963 (16-4)(2)	Blinks	ON	A/T clutch pressure control solenoid valve A
P0966 (23-3)(2)	Blinks	ON	A/T clutch pressure control solenoid valve B (open/short)
P0967 (23-4)(2)	Blinks	ON	A/T clutch pressure control solenoid valve B
P0970 (29-3)(2)	Blinks	ON	A/T clutch pressure control solenoid valve C (open/short)
P0971 (29-4)(2)	Blinks	ON	A/T clutch pressure control solenoid valve C
P0973 (7-3)(2)	Blinks	ON	Shift solenoid valve A (short)
P0974 (7-4)(2)	Blinks	ON	Shift solenoid valve A (open)
P0976 (8-3)(2)	Blinks	ON	Shift solenoid valve B (short)
P0977 (8-4)(2)	Blinks	ON	Shift solenoid valve B (open)
P0979 (22-3)(2)	Blinks	ON	Shift solenoid valve C (short)
P0980 (22-4)(2)	Blinks	ON	Shift solenoid valve C (open)
P2769 (1-3)(2)	Blinks	ON	Torque converter clutch solenoid valve circuit (short)
P2770 (1-4)(2)	Blinks	ON	Torque converter clutch solenoid valve circuit (open)

(1) The DTC in parentheses 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 in the 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 CHART

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	1. F-CAN communication line defective 2. Gauge control module defective 3. MET INH line defective	Check the A/T gear position indicator circuit (see **A/T GEAR POSITION INDICATOR CIRCUIT TROUBLESHOOTING**).
The transmission still shifts into 4th or 5th gear in D even though the D3 switch is pushed	A problem in the D3 switch circuit	Check the D3 switch circuit (see **D3 SWITCH CIRCUIT TROUBLESHOOTING**).
Shift lever cannot be moved from P while you are pressing on the brake pedal	A problem in the shift lock system of the interlock system	Check the interlock system - shift lock system circuit (see **SHIFT LOCK SYSTEM CIRCUIT TROUBLESHOOTING**).
Ignition switch cannot be moved from ACC (1) to LOCK (0) (key is pushed in, shift lever in P)	A problem in the key interlock system of the interlock system	Check the interlock system - key interlock system circuit (see **KEY INTERLOCK SYSTEM CIRCUIT TROUBLESHOOTING**).
		• Check the ATF level, and check the ATF cooler lines for leakage and loose connections. If necessary, clean the ATF cooler lines. • Check for a loose shift cable at the shift lever and the transmission control shaft. • Improper alignment of ATF pump and torque converter

Engine runs, but vehicle does not move in any gear	1. Low ATF level 2. Shift cable broken or out of adjustment 3. Connection between shift cable and transmission or body is worn 4. ATF pump worn or binding 5. Regulator valve stuck or spring worn 6. ATF strainer clogged 7. Mainshaft worn or damaged 8. Final gears worn or damaged 9. Transmission-to-engine assembly error 10. Axle disengaged	housing may cause ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the line pressure. • Check the ATF strainer for debris. 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. If no cause for contamination is found, replace the torque converter. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, and thoroughly clean the transmission, and clean the cooler and lines. Replace the torque converter. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will result in ATF pump seizure if not detected. Use the proper tools. • Install the main seal flush with the torque converter

		housing. If you push it into the torque converter housing until it bottoms out, it will block the fluid return passage and result in damage.
Vehicle moves in R, but not in D or 1	1. 1st accumulator defective 2. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the secondary shaft and 1st/1st-hold/2nd clutch assembly for wear and damage. • 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 and damaged, replace them as a set. If they are OK, adjust the clutch end plate clearance.
Vehicle moves in 2 and R, but not in D or 1	1. 1st gear one-way clutch defective 2. 1st gears worn or	• Check the 1st clutch pressure. • Inspect the secondary shaft and 1st/1st-hold/2nd clutch assembly for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clutch

	damaged 3. 1st clutch defective	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 clutch end plate clearance.
Vehicle moves in D, 2, and R, but not in 1	1. 1st-hold accumulator defective 2. 1st-hold clutch defective	• Check the 1st-hold clutch pressure. • Inspect the secondary shaft and 1st/1st-hold/2nd clutch assembly for wear and damage. • 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 clutch end plate clearance.
		• Check the 2nd clutch pressure. • Inspect the secondary shaft and 1st/1st-hold/2nd clutch assembly for wear and damage. • Inspect the clutch piston,

Vehicle moves in D, 1, and R, but not in 2	1. 2nd accumulator defective 2. 2nd gears worn or damaged 3. 2nd clutch defective	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 clutch end plate clearance.
		• Check the line pressure and 5th clutch pressure. • Check for a missing shift fork bolt on the shift fork shaft. • Check the ATF strainer for debris. 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. If no cause for the contamination is found, replace the torque converter. • Inspect the reverse selector gear teeth chamfers, and inspect engagement teeth chamfers of the countershaft 5th gear and reverse gear. Replace the reverse gears and the reverse selector if they are worn or damaged. If the transmission makes

Vehicle moves in D, 2, and 1, but not in R (or moves forward in R)	1. Shift fork shaft stuck 2. Modulator valve defective 3. Reverse CPC valve defective 4. 5th accumulator defective 5. 5th clutch defective 6. Reverse gears worn or damaged	clicking, grinding, or whirring noises, also replace the mainshaft 5th gear, reverse idler gear, and countershaft 5th gear. • If the 5th clutch feed pipe guide in the end cover is scored by the mainshaft, inspect the ball bearing for excessive movement in the transmission housing. If the ball bearing is OK, replace the end cover as it is dented. The O-ring under the guide is probably worn. • Replace the mainshaft if the bushing for the 4th and 5th clutch feed pipes are loose or damaged. If the 5th clutch feed pipe is damaged or out of round, replace the end cover. • 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.
		• Check the ATF level, and check the ATF cooler lines

Poor acceleration; flares when starting off in D; stall speed high in D, 2, and 1	1. Low ATF level 2. Shift cable broken or out of adjustment 3. ATF pump worn or binding 4. Regulator valve stuck or spring worn 5. ATF strainer clogged 6. Torque converter check valve defective	for leakage and loose connections. If necessary, clean the ATF cooler lines. • Check for a loose shift cable at the shift lever and the transmission control shaft. • Check the line pressure. • Improper alignment of ATF pump and torque converter housing may cause ATF pump seizure. The symptom is mostly an rpm-ticking noise or a high pitched squeak. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will result in ATF pump seizure if not detected. Use the proper tools.
Poor acceleration; flares when starting off in D; stall speed high in 2	2nd clutch defective	• Check the 2nd 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 clutch end plate clearance.
Poor acceleration; flares when starting off in R; stall speed high in R	1. Shift cable broken or out of adjustment 2. 5th clutch defective	• Check for a loose shift cable at the shift lever and the transmission control shaft. • Check the 5th 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 clutch end plate clearance.
Poor acceleration; stall speed low	1. Torque converter clutch solenoid valve defective 2. Engine output low 3. Lock-up clutch piston defective 4. Lock-up shift valve defective	Check for a stuck lock-up valve in the valve body.
Engine idle vibration	1. Low ATF level 2. Torque converter clutch solenoid valve defective 3. Drive plate defective or transmission misassembled 4. Engine output low	• Set idle rpm in gear to the specified idle speed. If it is still no good, adjust the engine and transmission mounts.

	5. Lock-up clutch piston defective 6. ATF pump worn or binding 7. Lock-up shift valve defective	• Check the ATF level, and check the ATF cooler lines for leakage and loose connections. If necessary, clean the ATF cooler lines.
Vehicle moves in N	1. Excessive ATF 2. Foreign material in separator plate orifice 3. Relief valve defective 4. 1st-hold clutch defective 5. 1st clutch defective 6. 2nd clutch defective 7. 3rd clutch defective 8. 4th clutch defective 9. 5th clutch defective 10. Clutch and plate clearance incorrect 11. Needle bearing seized up, worn, or damaged 12. Thrust washer seized up, worn, or damaged	• Check the ATF level, and drain the ATF if it is over filled. • 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 clutch end plate clearance. • Check all clutch pressures.
	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid valve for seizure. • Inspect the A/T clutch pressure control solenoid valve body gasket and ATF feed pipes for wear and damage. If the A/T clutch pressure control solenoid

Late shift after shifting from N to D, or excessive shock when shifted into D	4. A/T clutch pressure control solenoid valve C defective 5. Shift cable broken or out of adjustment 6. Connection between the shift cable and transmission or body is worn 7. Input shaft (mainshaft) speed sensor defective 8. Output shaft (countershaft) speed sensor defective 9. ATF temperature sensor defective 10. CPC valve C stuck 11. Foreign material in separator plate orifice 12. Shift valve C defective 13. Shift valve E defective 14. Servo control valve defective 15. 1st accumulator defective 16. 1st check ball stuck 17. 1st clutch defective	valve is stuck, inspect the CPC valves. • Check for a loose shift cable at the shift lever and the transmission control shaft. • Check the ATF strainer for debris. 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. If no cause for the contamination is found, replace the torque converter. • Check the 1st 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 clutch end plate clearance.
	1. Shift solenoid valve C	• Check for a stored DTC, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid

Late shift after shifting from N to R	defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective 4. A/T clutch pressure control solenoid valve C defective 5. Shift cable broken or out of adjustment 6. Connection between the shift cable and transmission or body is worn 7. Input shaft (mainshaft) speed sensor defective 8. Output shaft (countershaft) speed sensor defective 9. ATF temperature sensor defective 10. Shift fork shaft stuck 11. CPC valve C stuck 12. Reverse CPC valve defective 13. Foreign material in separator plate orifice 14. Shift valve E defective 15. 5th accumulator defective 16. 5th clutch defective	valve for seizure. • Inspect the A/T clutch pressure control solenoid valve body gasket and ATF feed pipes for wear and damage. If the A/T clutch pressure control solenoid valve is stuck, inspect the CPC valves. • Check for a loose shift cable at the shift lever and the transmission control shaft. • Check the ATF strainer for debris. 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. If no cause for the contamination is found, replace the torque converter. • Check the 5th 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 clutch end plate

		clearance.
The transmission does not shift	1. Input shaft (mainshaft) speed sensor defective 2. Output shaft (countershaft) speed sensor defective 3. Modulator valve defective	• Check for a stored DTC, and check for loose connectors. • Check the line pressure. • Check the input shaft (mainshaft) and output shaft (countershaft) speed sensor installation.
Erratic shifting: fails to shift in D; starts off in 5th	1. Shift solenoid valve B defective 2. Shift valve B defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid valve for seizure.
Erratic shifting: fails to shift in 2; starts off in 4th	1. Shift solenoid valve B defective 2. Shift valve B defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid valve for seizure.
Erratic shifting: fails to shift in D and 1; starts off in 3rd	1. Shift solenoid valve A defective 2. Shift valve A defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid valve for seizure.
Excessive shock or flares on all upshifts and downshifts	1. A/T clutch pressure control solenoid valve A defective 2. A/T clutch pressure control solenoid valve B defective 3. Input shaft (mainshaft) speed sensor defective 4. Output shaft	• Check for a stored DTC, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve body gasket and ATF feed pipes for wear and

	(countershaft) speed sensor defective 5. ATF temperature sensor defective 6. CPC valve A defective 7. Foreign material in separator plate orifice	damage. If the A/T clutch pressure control solenoid valve is stuck, inspect the CPC valves. • Inspect the sensor O-rings.
Excessive shock or flares on 1-2 upshift or 2-1 downshift	1. Foreign material in separator plate orifice 2. 2nd accumulator defective 3. 2nd check ball stuck 4. 2nd clutch defective	• Check the 1st and 2nd clutch pressures. • 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 clutch end plate clearance.
Excessive shock or flares	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective 4. 3rd clutch transmission fluid pressure switch defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Check for clogged orifice in the transmission fluid pressure switch connector. If the orifice is clogged, remove it and clean the connector. • Check the 2nd and 3rd

on 2-3 upshift or 3-2 downshift	5. CPC valve B defective 6. Foreign material in separator plate orifice 7. Shift valve C defective 8. 2nd accumulator defective 9. 3rd accumulator defective 10. 2nd check ball stuck 11. 2nd clutch defective 12. 3rd clutch defective	clutch pressures. • 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 clutch end plate clearance.
Excessive shock or flares on 3-4 upshift or 4-3 downshift	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective 4. 4th clutch transmission fluid pressure switch defective 5. CPC valve B defective 6. Foreign material in separator plate orifice 7. Shift valve C defective 8. 3rd accumulator defective 9. 4th accumulator	• Check for a stored DTC, and check for loose connectors. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Check for clogged orifice in the transmission fluid pressure switch connector. If the orifice is clogged, remove it and clean the connector. • Check the 3rd and 4th clutch pressures. • 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

	defective 10. 3rd clutch defective 11. 4th clutch defective	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 clutch end plate clearance.
Excessive shock or flares on 4-5 upshift or 5-4 downshift	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective 4. A/T clutch pressure control solenoid valve C defective 5. CPC valve B defective 6. CPC valve C defective 7. Foreign material in separator plate orifice 8. Shift valve C defective 9. Shift valve E defective 10. Kick-down valve or kick-down short valve defective 11. 4th accumulator defective 12. 5th accumulator defective 13. 4th clutch defective 14. 5th clutch defective	• Check for a stored DTC, and check for loose connectors. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Check the 4th and 5th clutch pressures. • 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 clutch end plate clearance.
		• Improper alignment of ATF pump and torque converter housing may cause ATF

Noise from transmission in all shift lever positions	1. ATF pump worn or binding 2. Torque converter housing or transmission housing bearing worn or damaged	pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Inspect the contact of the countershaft and secondary shaft with the bearings. • Check the ATF guide plates for damage and wear. • Inspect the 1st clutch feed pipe for damage and out of round. If the 1st clutch feed pipe is damaged or out of round, replace it. Replace the secondary shaft if the bushing for the 1st clutch feed pipe is damaged or out of round.
Vehicle does not accelerate above 31 mph (50 km/h)	Torque converter one-way clutch defective	Replace the torque converter.
Vibration in all shift lever positions	Drive plate defective or transmission misassembled	• Check for a misinstalled/damaged drive plate. • Set idle rpm in gear to the specified idle speed. If still no good, adjust the engine mounts. • Check the stall speed.
Shift lever does not operate smoothly	1. Transmission range switch defective or out of adjustment 2. Shift cable broken or out of adjustment 3. Connection between the	• Check for a stored DTC, and check for loose connectors. • Inspect the transmission range switch. If the transmission range switch is faulty, replace it. If the transmission range switch is

	shift cable and transmission or body is worn	out of adjustment, adjust it and the shift cable. • Check for a loose shift cable at the shift lever and the transmission control shaft.
Transmission does not shift into P	1. Shift cable broken or out of adjustment 2. Connection between shift cable and transmission or body is worn 3. Park mechanism defective	• Check for a loose shift cable at the shift lever and the transmission control shaft. • Check the park pawl spring installation and the park lever spring installation. If installation is incorrect, install the spring correctly. Make sure that the park lever stop is not installed upside down. Check the distance between the park pawl shaft and the park lever roller pin. If the distance is out of tolerance, adjust the distance with the park lever stop.
Torque converter clutch does not disengage	1. Torque converter clutch solenoid valve defective 2. A/T clutch pressure control solenoid valve C defective 3. Torque converter clutch piston defective 4. Lock-up shift valve defective 5. Lock-up control valve defective 6. Lock-up timing valve defective	• Check for a stored DTC, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve body gasket for wear and damage. If the A/T clutch pressure control solenoid valve is stuck, inspect the CPC valves.
	1. Torque converter clutch solenoid valve defective	

Torque converter clutch does not operate smoothly	2. A/T clutch pressure control solenoid valve C defective 3. Torque converter clutch piston defective 4. Torque converter check valve defective 5. Lock-up shift valve defective 6. Lock-up control valve defective 7. Lock-up timing valve defective	• Check for a stored DTC, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve body gasket for wear and damage. If the A/T clutch pressure control solenoid valve is stuck, inspect the CPC valves. • Center all engine mounts.
Torque converter clutch does not engage	1. Torque converter clutch solenoid valve defective 2. A/T clutch pressure control solenoid valve C defective 3. Input shaft (mainshaft) speed sensor defective 4. Output shaft (countershaft) speed sensor defective 5. Torque converter clutch piston defective 6. Torque converter check valve defective 7. Lock-up shift valve defective 8. Lock-up control valve defective	• Check for a stored DTC, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve body gasket for wear and damage. If the A/T clutch pressure control solenoid valve is stuck, inspect the CPC valves.
	1. Transmission range switch defective or out of adjustment	• Check for a stored DTC, and check for loose connectors. • Inspect the transmission range switch. If the

A/T gear position indicator does not indicate shift lever positions	2. Shift cable broken or out of adjustment 3. Connection between the shift cable and transmission or body is worn	transmission range switch is faulty, replace it. If the transmission range switch is out of adjustment, adjust it and the shift cable. • Check for a loose shift cable at the shift lever and the transmission control shaft.
Speedometer and odometer do not work	Output shaft (countershaft) speed sensor defective	Check for a stored DTC, and check for loose connectors.
The engine does not rev to high rpm, and the transmission upshifts at low rpm (engine at normal operating temperature)	VTEC rocker arms defective	Check the engine rocker arms.

SYSTEM DESCRIPTION

General Operation

The automatic transmission is a combination of a 3-element torque converter and triple-shaft electronically controlled unit which provides 5 speeds forward and 1 reverse. The entire unit is positioned in line with the engine.

Torque Converter, Gears, and Clutches

The torque converter consists of a pump, turbine, and stator assembly in a single unit. The converter housing (pump) is connected to the engine crankshaft and turns as the engine turns. Around the outside of the torque converter is a ring gear which meshes with the starter pinion when the engine is being started. The entire torque converter assembly serves as a flywheel, transmitting power to the transmission mainshaft. The transmission has three parallel shafts: the mainshaft, the countershaft, and the secondary shaft. The mainshaft is in line with the engine crankshaft. The mainshaft includes the 4th and 5th clutches, and gears for 3rd, 4th, 5th, and reverse (reverse gear is integral with the 5th gear). The countershaft includes the 3rd clutch, and gears for the final drive, 1st, 4th, 5th, reverse, 2nd, park, and 3rd (the final drive gear is integral with the countershaft). The secondary shaft includes the 1st, 1st-hold and 2nd clutches, and gears for 1st, 2nd, and idler. The countershaft 5th gear and the countershaft reverse gear can be locked to the countershaft at its center, providing 5th gear or reverse, depending with which way the selector is moved. The gears on the mainshaft and the secondary shaft are in constant mesh with those on the countershaft. When certain combinations of gears in the transmission are engaged by

the clutches, power is transmitted through the mainshaft, then to the secondary shaft to the countershaft or through the mainshaft to the countershaft to provide drive.

Electronic Control

The electronic control system consists of the powertrain control module (PCM), sensors, and seven solenoid valves. Shifting and lock-up are electronically controlled for comfortable driving under all conditions. The PCM is located on the passenger's side of the engine compartment.

Hydraulic Control

The valve bodies include the main valve body, the regulator valve body, the servo body, the top accumulator body, and the accumulator body. They are bolted to the torque converter housing. The main valve body contains the manual valve, the modulator valve, the shift valve C, the shift valve D, the kick-down valve, the servo control valve, the torque converter check valve, the reverse CPC valve, the lock-up shift valve, the relief valve, the cooler check valve, and the ATF pump gears. The regulator valve body contains the regulator valve, the lock-up timing valve, and the lock-up control valve. The servo body contains the servo valve, the shift valve A, the shift valve B, the CPC valves A and B. The top accumulator body contains shift valve E, CPC valve C, 4th/1st-hold accumulator, and 5th accumulator. The accumulator body contains the 1st and 2nd accumulators and lubrication check valve. Fluid from the regulator passes through the manual valve to the various control valves. The 1st, 3rd, 4th, and 5th clutches receive fluid from their respective feed pipes, and the 1st-hold and 2nd clutches receive fluid from the internal hydraulic circuit.

Shift Control Mechanism

To shift gears, the PCM controls shift solenoid valves A, B, and C, and automatic transmission (A/T) clutch pressure control solenoid valves A and B, while receiving input signals from various sensors and switches located throughout the vehicle. The shift solenoid valves shift the positions of the shift valves to switch the port providing hydraulic pressure to the clutch. The A/T clutch pressure control solenoid valves A and B control the CPC valves A and B to shift smoothly between lower gear and higher gear. This pressurizes a line to one of the clutches, engaging the clutch and its corresponding gear.

Lock-up Mechanism

The lock-up mechanism operates in the D position (2nd, 3rd, 4th, and 5th), and D position D3 driving mode (2nd and 3rd). The pressurized fluid is drained from the back of the torque converter through a fluid passage, causing the torque converter clutch piston to be held against the torque converter cover. As this takes place, the mainshaft rotates at the same speed as the engine crankshaft. Together with hydraulic control, the PCM optimizes the timing of the lock-up

mechanism. When the torque converter clutch solenoid valve activates, modulator pressure changes to switch lock-up on and off. The lock-up control valve and the lock-up timing valve control the volume of lock-up according to A/T clutch pressure control solenoid valve C. The torque converter clutch solenoid valve is mounted on the torque converter housing, and A/T clutch pressure control solenoid valve C is mounted on the transmission housing. They are all controlled by the PCM.

Gear Selection

The shift lever has six positions; P: PARK, R: REVERSE, N: NEUTRAL, D: DRIVE 1st through 5th gear ranges, and 1st through 3rd gear ranges with D3 driving mode, 2: 2nd gear, and 1: 1st gear.

DESCRIPTION CHART

Position	Description
P: PARK	Front wheels locked; park pawl engaged with park gear on countershaft. All clutches are released.
R: REVERSE	Reverse; reverse selector engaged with countershaft reverse gear and 5th clutch engaged.
N: NEUTRAL	All clutches are released.
D: DRIVE (1st through 5th)	General driving; starts off in 1st, shifts automatically to 2nd, 3rd, 4th, then 5th, depending on vehicle speed and throttle position. Downshifts through 4th, 3rd, 2nd, and 1st on deceleration to stop. The lock-up mechanism operates in 2nd, 3rd, 4th, and 5th gear.
D3: DRIVE with D3 driving mode (1st through 3rd)	Used for rapid acceleration at highway speeds and general driving; up-hill and down-hill driving; starts off in 1st, shifts automatically to 2nd, then 3rd, depending on vehicle speed and throttle position. Downshifts through 2nd to 1st on deceleration to stop. The lock-up mechanism operates in 2nd and 3rd gear.
2: SECOND	Used for engine braking or better traction starting off on loose or slippery surfaces; stays

	in 2nd gear; does not shift up or down.
1: FIRST	Used for engine braking; stays in 1st gear; does not shift up.

Starting is possible only in the P and N positions because 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 which shift lever position has been selected without having to look down at the shift lever.

Clutches

The five-speed automatic transmission uses hydraulically-actuated clutches to engage or disengage the transmission gears. When hydraulic pressure is introduced into the clutch drum, the clutch piston moves. This presses the friction discs and steel plates together, locking them so they don't slip. Power is then transmitted through the engaged clutch pack to its hub-mounted gear. Likewise, when the hydraulic pressure is bled from the clutch pack, the piston releases the friction discs and steel plates, and they are free to slide past each other. This allows the gear to spin independently on its shaft, transmitting no power.

Transmission Cutaway View:

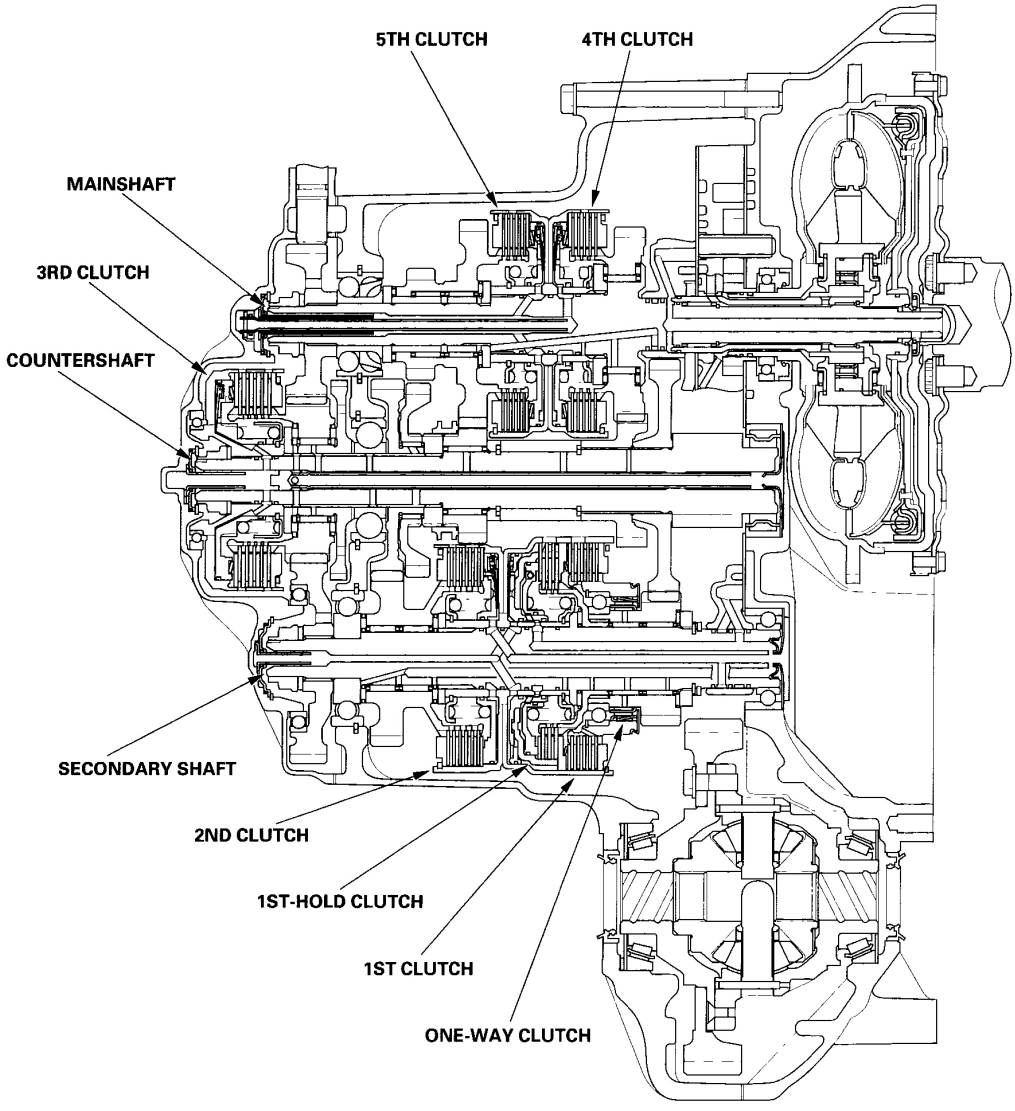


Fig. 11: Automatic Transmission Cutaway View And Clutches
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1st Clutch

The 1st clutch engages/disengages 1st gear, and is located at the middle of the secondary shaft. The 1st clutch is joined back-to-back to the 2nd clutch. The 1st clutch is supplied hydraulic pressure by its ATF feed pipe within the secondary shaft.

1st-hold Clutch

The 1st-hold clutch engages/disengages 1st-hold in 1 position, and is located in the 1st clutch drum. The 1st-hold clutch is supplied hydraulic pressure through the orifice inside the secondary shaft by a circuit connected to the internal hydraulic circuit.

2nd Clutch

The 2nd clutch engages/disengages 2nd gear, and is located at the middle of the secondary shaft. The 2nd clutch is joined back-to-back to the 1st clutch. The 2nd clutch is supplied hydraulic pressure through the orifice inside the secondary shaft by a circuit connected to the internal hydraulic circuit.

3rd Clutch

The 3rd clutch engages/disengages 3rd gear, and is located at the end of the countershaft, just behind the end cover. The 3rd clutch is supplied hydraulic pressure by its ATF feed pipe in the countershaft.

4th Clutch

The 4th clutch engages/disengages 4th gear, and is located at the middle of the mainshaft. The 4th clutch is joined back-to-back to the 5th clutch. The 4th clutch is supplied hydraulic pressure by its ATF feed pipe within the mainshaft.

5th Clutch

The 5th clutch engages/disengages 5th gear, as well as reverse gear, and is located at the middle of the mainshaft. The 5th clutch is joined back-to-back to the 4th clutch. The 5th clutch is supplied hydraulic pressure by its ATF feed pipe within the mainshaft.

One-way Clutch

The one-way clutch is positioned between the 1st clutch hub and the secondary shaft 1st gear. The secondary shaft 1st gear is splined to the 1st-hold clutch hub, with the 1st-hold clutch hub splined to the secondary shaft. The secondary shaft 1st gear provides the outer race surface, and the 1st clutch hub provides the inner race surface. The one-way clutch locks when power is transmitted from the secondary shaft 1st gear to the countershaft 1st gear. The 1st clutch and gears remain engaged in the 1st, 2nd, 3rd, 4th, and 5th gear ranges in the D, 2, or 1 position.

However, the one-way clutch disengages when the 2nd, 3rd, 4th, or 5th clutches and gears are applied in the D or 2 position. This is because the increased rotational speed of the gears on the secondary shaft causes the one-way clutch to free-wheel with the 1st clutch still engaged.

Power Flow

Gear Operation

Gears on the mainshaft:

- 4th gear is engaged/disengaged with the mainshaft by the 4th clutch.
- 5th gear is engaged/disengaged with the mainshaft by the 5th clutch.
- Reverse gear is engaged/disengaged with the mainshaft by the 5th clutch.
- 3rd gear is splined with the mainshaft and rotates with the mainshaft.

Gears on the countershaft:

- Final gear is integral with the countershaft.
- 1st gear, 4th gear, 2nd gear, and park gear are splined with the countershaft, and rotate with the countershaft.
- 5th gear and reverse gear rotate freely from the countershaft. The reverse selector engages 5th gear and reverse gear with the reverse selector hub. The reverse selector hub is splined to the countershaft so 5th gear and reverse gear engage with the countershaft.
- 3rd gear is engaged/disengaged with the countershaft by the 3rd clutch.

Gears on the secondary shaft:

- 1st gear is engaged/disengaged with the secondary shaft by the 1st clutch. 1st gear is engaged with the secondary shaft by the one-way clutch and the 1st-hold clutch when decelerating for engine braking.
- 2nd gear is engaged/disengaged with the secondary shaft by the 2nd clutch.
- Idler gear is splined with the secondary shaft, and rotates with the secondary shaft.

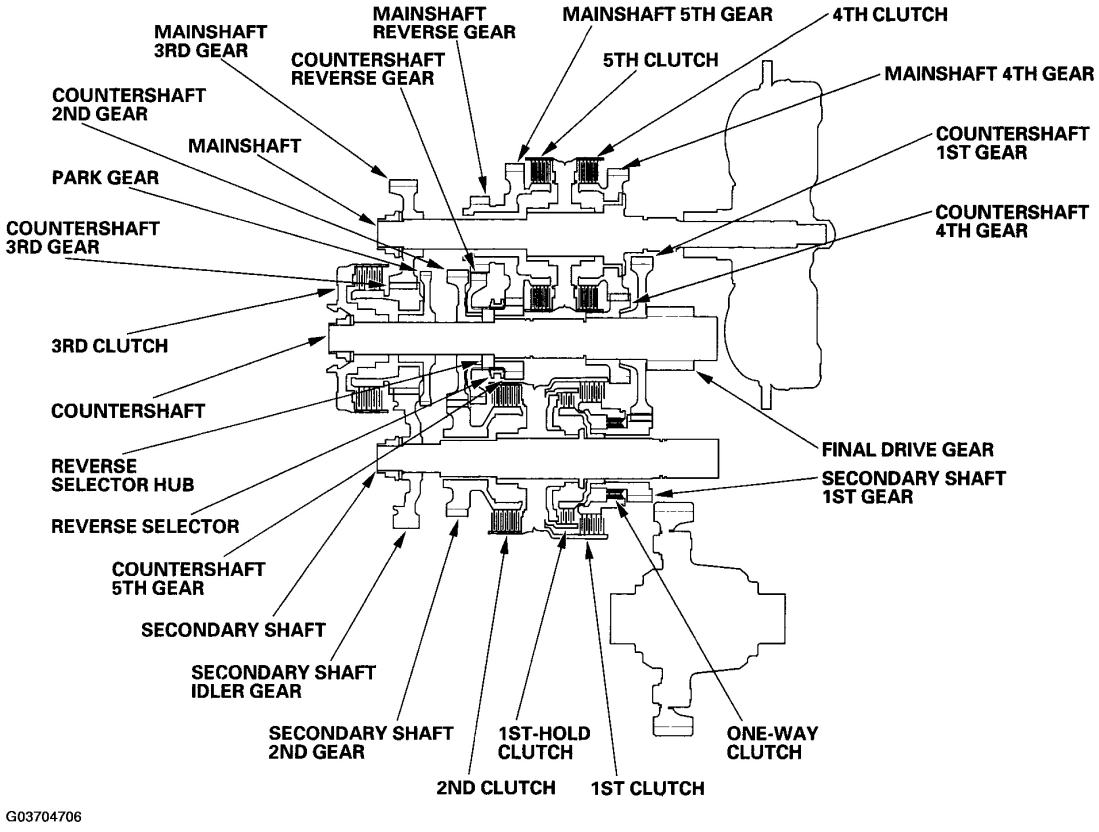


Fig. 12: Automatic Transmission Power Flow Schematic
Courtesy of AMERICAN HONDA MOTOR CO., INC.

P Position

Hydraulic pressure is not applied to the clutches. Power is not transmitted to the countershaft. The countershaft is locked by the park pawl interlocking the park gear.

N Position

Engine power transmitted from the countershaft drives the mainshaft 3rd gear, the countershaft 3rd gear, and the secondary shaft idler gear, but hydraulic pressure is not applied to the clutches. Power is not transmitted to the countershaft. In this position, the position of the reverse selector differs according to whether the shift lever shifted from the D or R position:

- When shifted from the D position, the reverse selector engages with the countershaft 5th gear and the reverse selector hub, and the 5th gear engages with the countershaft.
- When shifted from the R position, the reverse selector engages with the countershaft reverse gear and the reverse selector hub, and the reverse gear engages with the countershaft.

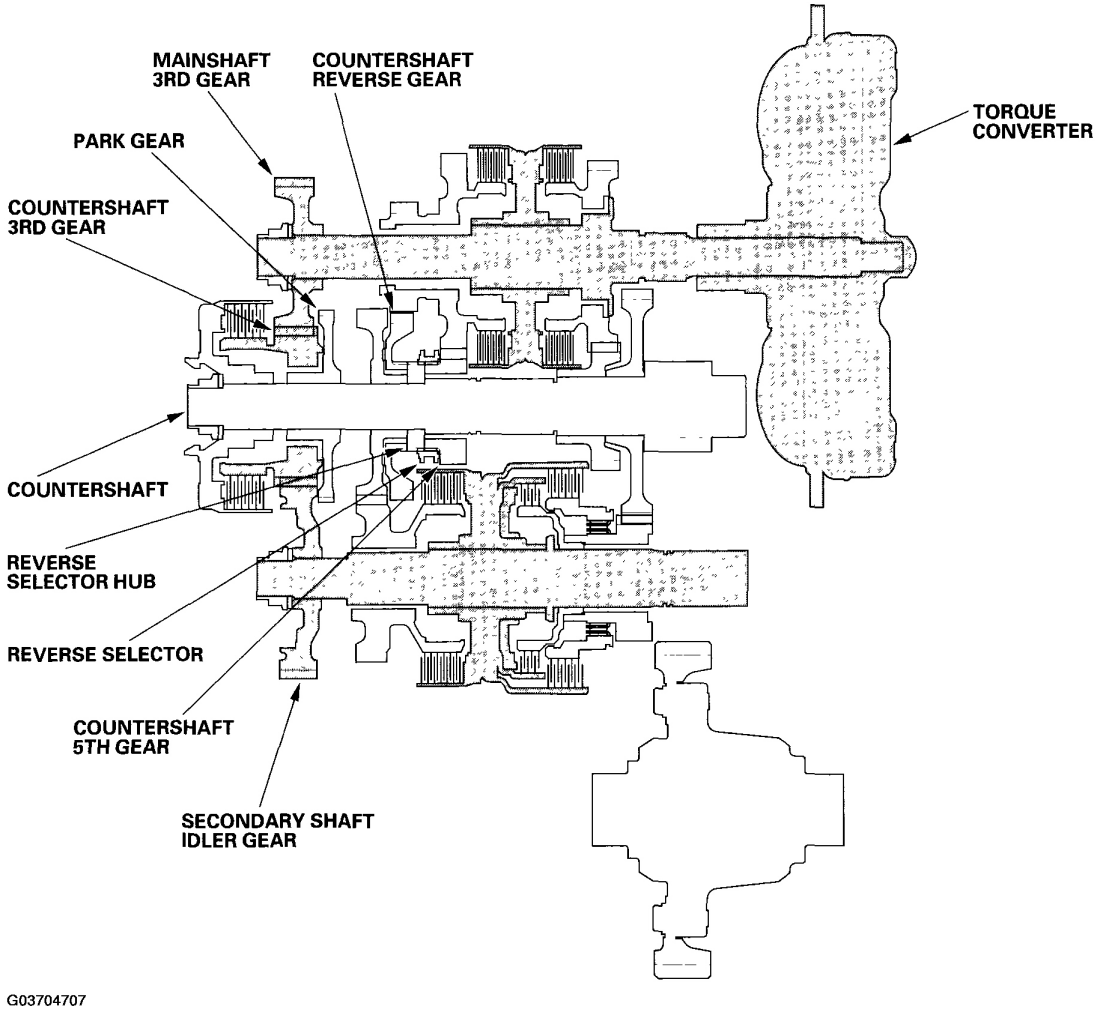


Fig. 13: Automatic Transmission In N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position (Acceleration)

In the 1 position under an acceleration, hydraulic pressure is applied to the 1st clutch and the 1st-hold clutch. The power flow when accelerating is as follows:

- Hydraulic pressure is applied to the 1st clutch, then the 1st clutch engages the secondary shaft 1st gear with the secondary shaft by the one-way clutch.
- Hydraulic pressure is also applied to the 1st-hold clutch, and the 1st-hold clutch engages the secondary shaft 1st gear with the secondary shaft.
- The mainshaft 3rd gear drives the secondary shaft via the countershaft 3rd gear and the secondary shaft idler gear.

- The secondary shaft 1st gear drives the countershaft 1st gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.

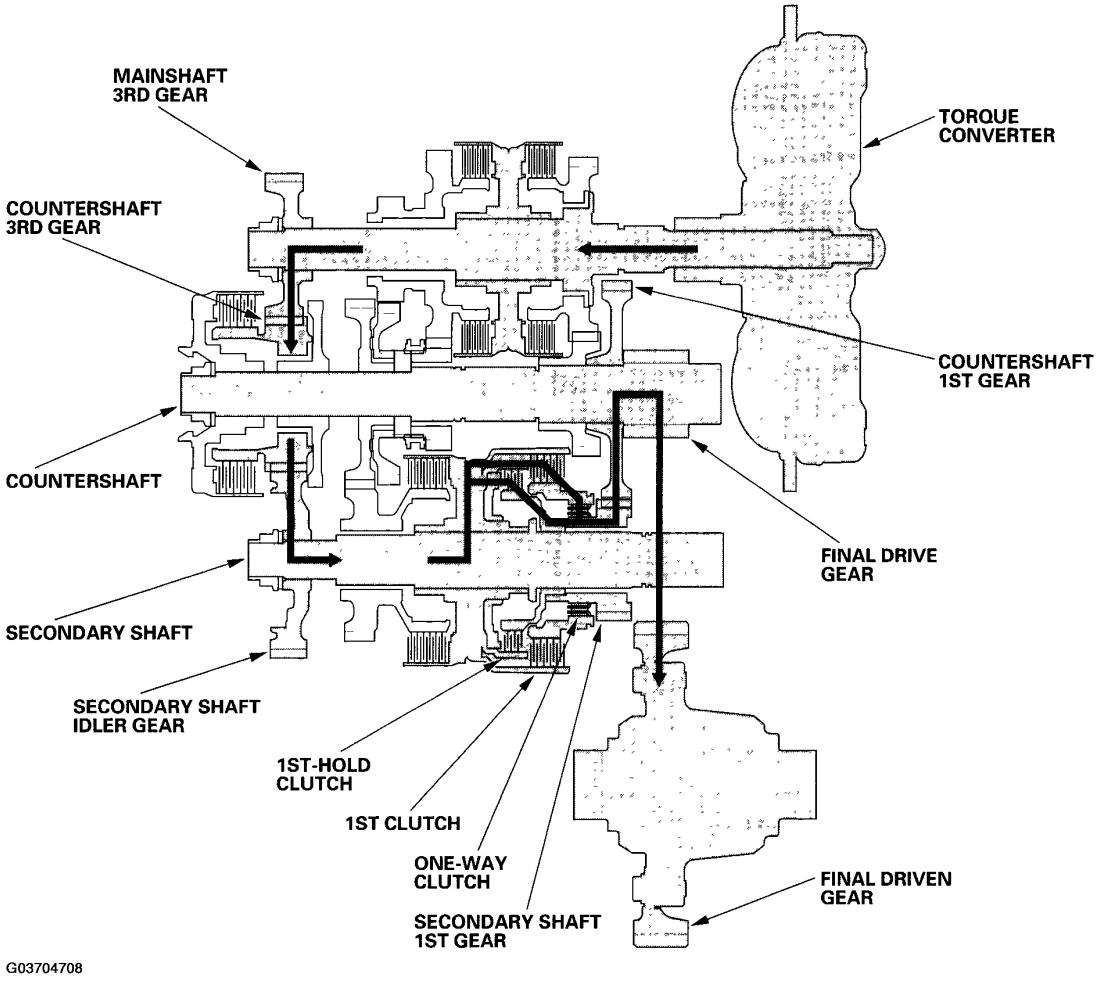


Fig. 14: Automatic Transmission In 1 Position (Acceleration)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position (Deceleration)

The power flow in the 1 position when decelerating as follows:

- Hydraulic pressure is applied to the 1st clutch and the 1st-hold clutch.
- Rolling resistance from the road surface goes through the front wheels to the final drive gear, then to the secondary shaft idler gear.
- The one-way clutch disengages because the application of torque is reversed.

- The counterforce conveyed to the secondary shaft idler gear turns the mainshaft 3rd gear via the countershaft 3rd gear. As a result, engine braking can be obtained with 1st gear.

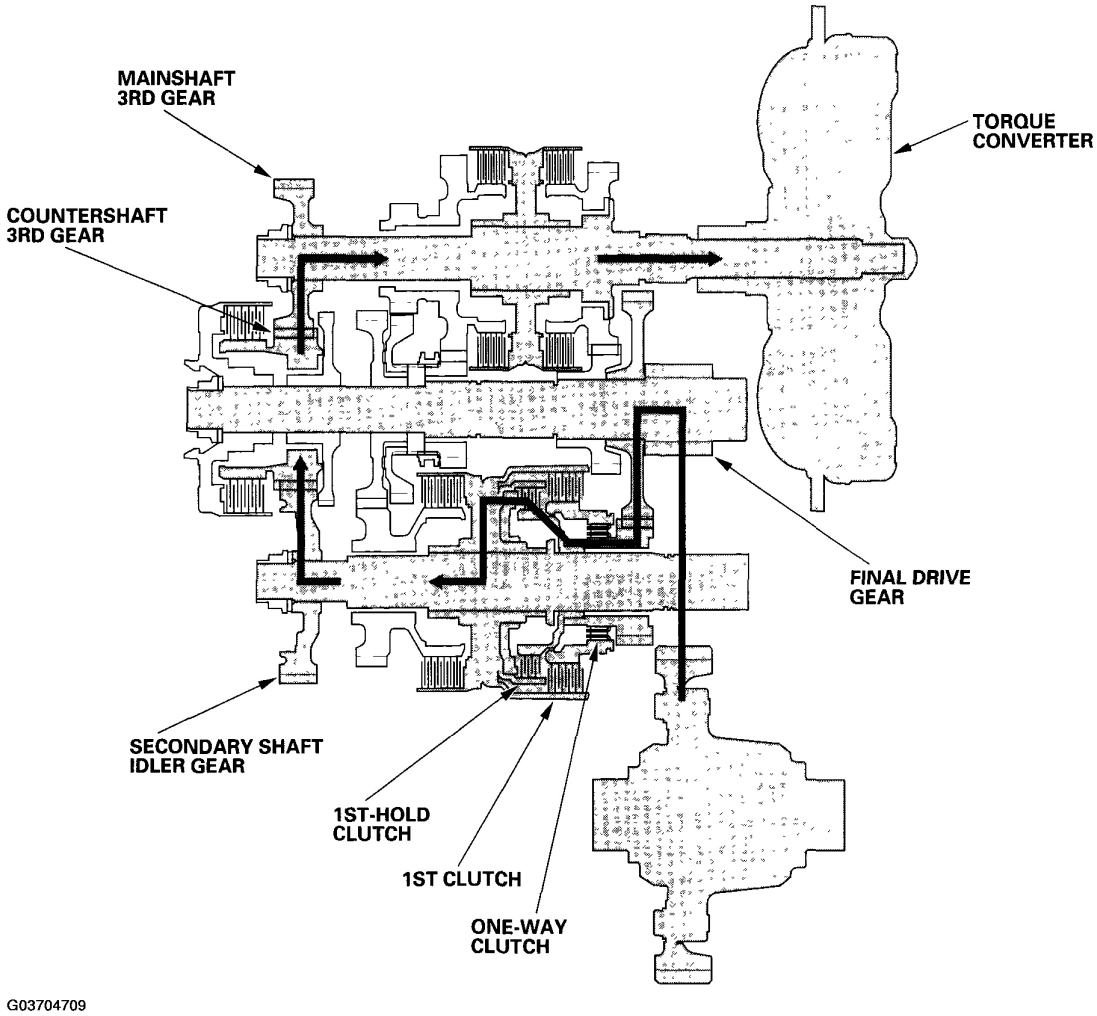


Fig. 15: Automatic Transmission In 1 Position (Deceleration)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

In the D position, the optimum gear is automatically selected from the 1st, 2nd, 3rd, 4th, and 5th gears (in the D position); 1st, 2nd, and 3rd gears (in the D position D3 driving mode) according to conditions such as the balance between the throttle opening (engine loading) and vehicle speed.

D Position in 1st gear

- Hydraulic pressure is applied to the 1st clutch, then the 1st clutch engages the secondary shaft 1st gear with the secondary shaft by the one-way clutch.

- The mainshaft 3rd gear drives the secondary shaft via the countershaft 3rd gear and secondary shaft idler gear.
- The secondary shaft 1st gear drives the countershaft 1st gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.

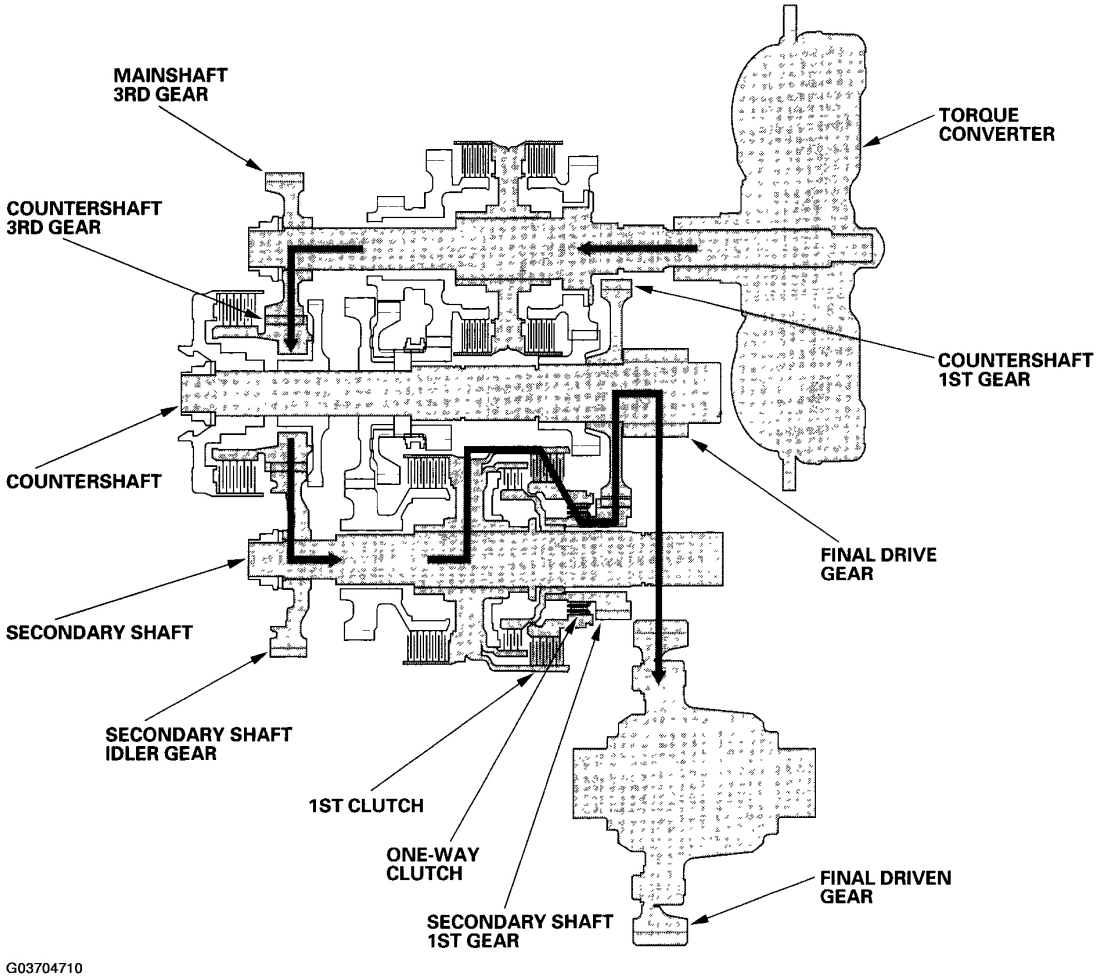


Fig. 16: Automatic Transmission In D Position In 1st Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position in 2nd gear and 2 Position

- Hydraulic pressure is applied to the 2nd clutch, then the 2nd clutch engages the secondary shaft 2nd gear with the secondary shaft.
- The mainshaft 3rd gear drives the secondary shaft via the countershaft 3rd gear and secondary shaft idler gear.

- The secondary shaft 2nd gear drives the countershaft 2nd gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 2nd gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.

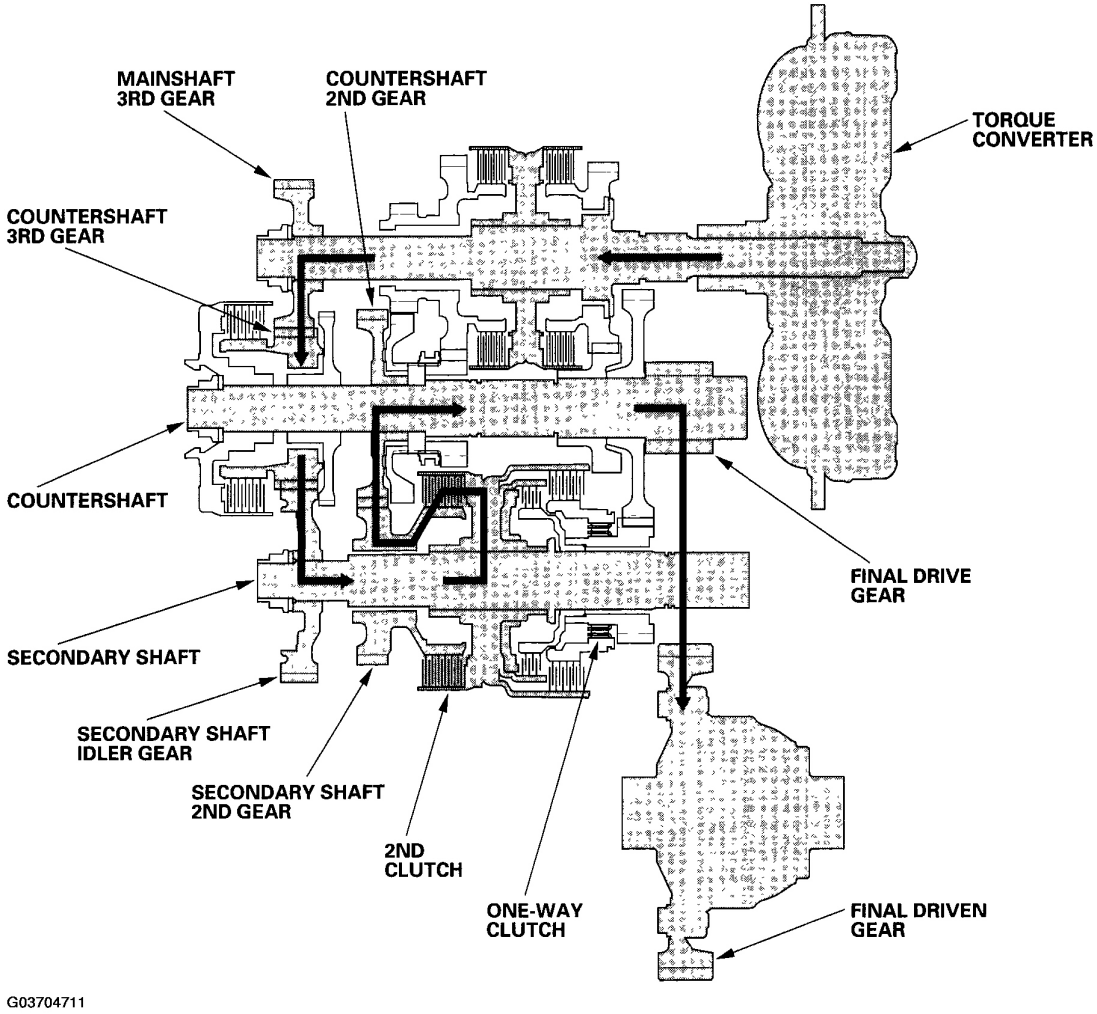


Fig. 17: Automatic Transmission In D Position In 2nd Gear And 2 Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position in 3rd gear

- Hydraulic pressure is applied to the 3rd clutch, then 3rd clutch engages the countershaft 3rd gear with the countershaft.
- The mainshaft 3rd gear drives the countershaft 3rd gear and countershaft.

- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 3rd gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.

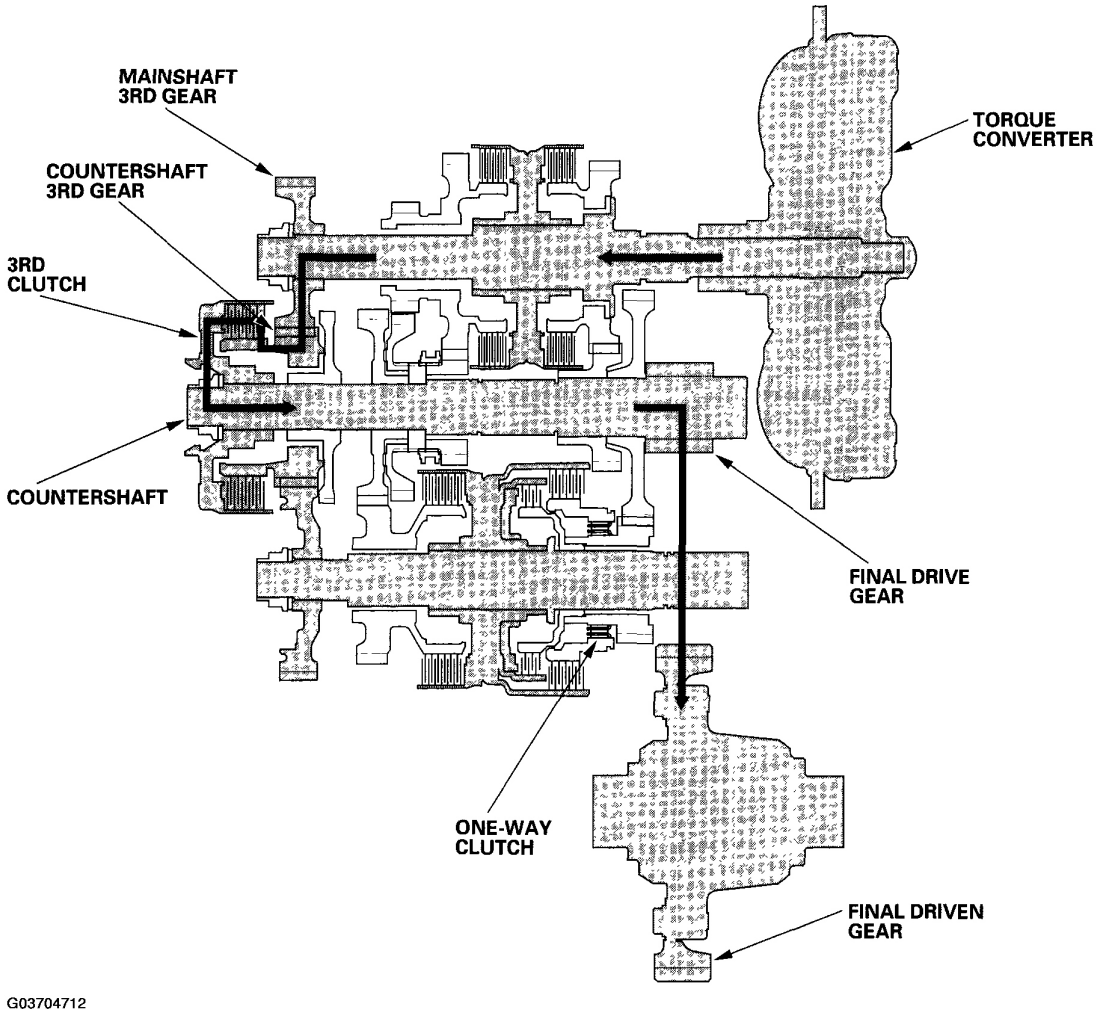


Fig. 18: Automatic Transmission In D Position In 3rd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position in 4th gear

- Hydraulic pressure is applied to the 4th clutch, then the 4th clutch engages the mainshaft 4th gear with the mainshaft.
- The mainshaft 4th gear drives the countershaft 4th gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.

- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 4th gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.

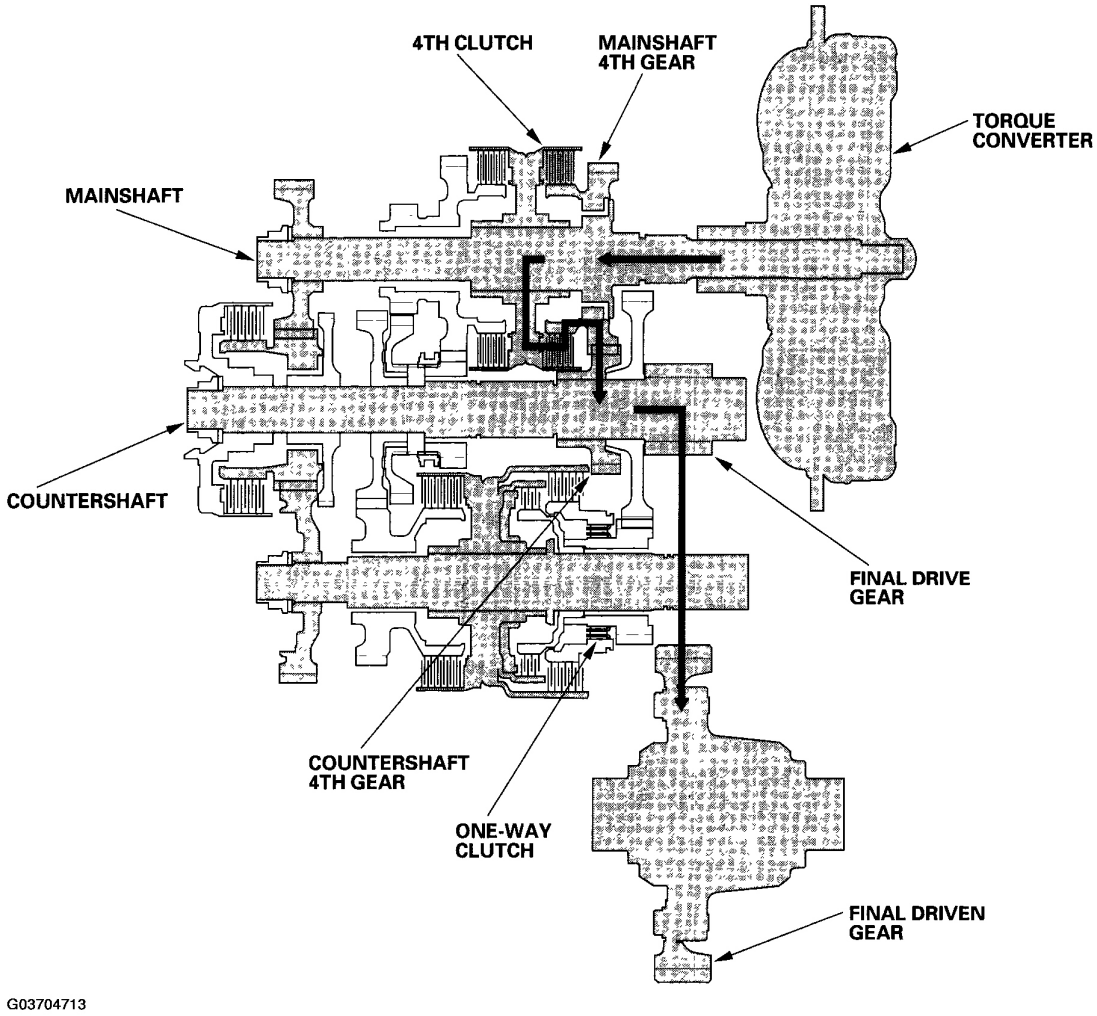


Fig. 19: Automatic Transmission In D Position In 4th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position in 5th gear

- Hydraulic pressure is applied to the servo valve to engage the reverse selector with the countershaft 5th gear while the shift lever in the forward range (D, 2, and 1 positions).
- Hydraulic pressure is also applied to the 5th clutch, then the 5th clutch engages the mainshaft 5th gear with the mainshaft.
- The mainshaft 5th gear drives the countershaft 5th gear, which drives the reverse selector hub and the countershaft.

- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 5th gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.

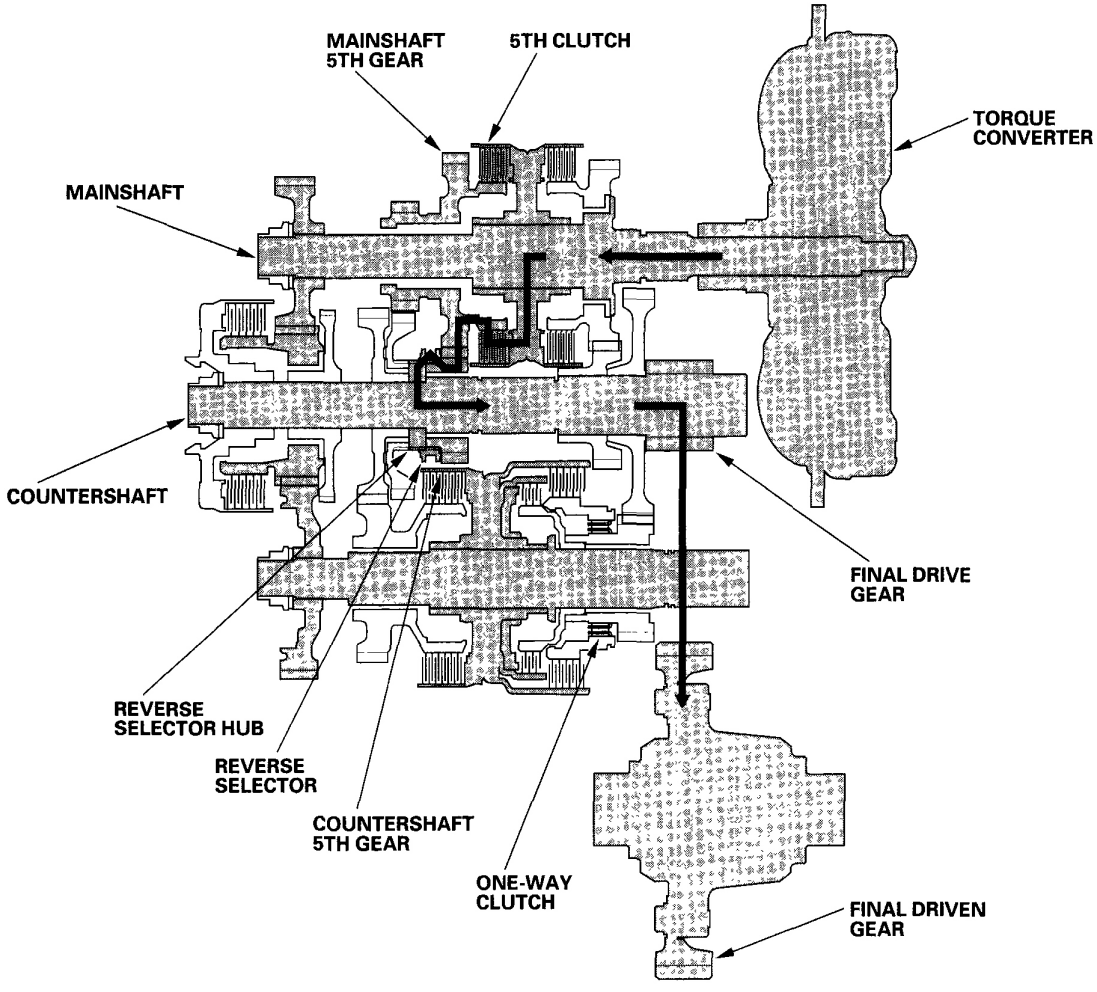


Fig. 20: Automatic Transmission In D Position In 5th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position

- Hydraulic pressure is applied to the servo valve to engage the reverse selector with the countershaft (reverse gear while the shift lever is in R position).
- Hydraulic pressure is also applied to the 5th clutch, then the 5th clutch engages the mainshaft reverse gear with the mainshaft.
- The mainshaft reverse gear drives the countershaft reverse gear via the reverse idler gear.

- The rotation direction of the countershaft reverse gear is changed via the reverse idler gear.
- The countershaft reverse gear drives the countershaft via the reverse selector which drives the reverse selector hub.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.

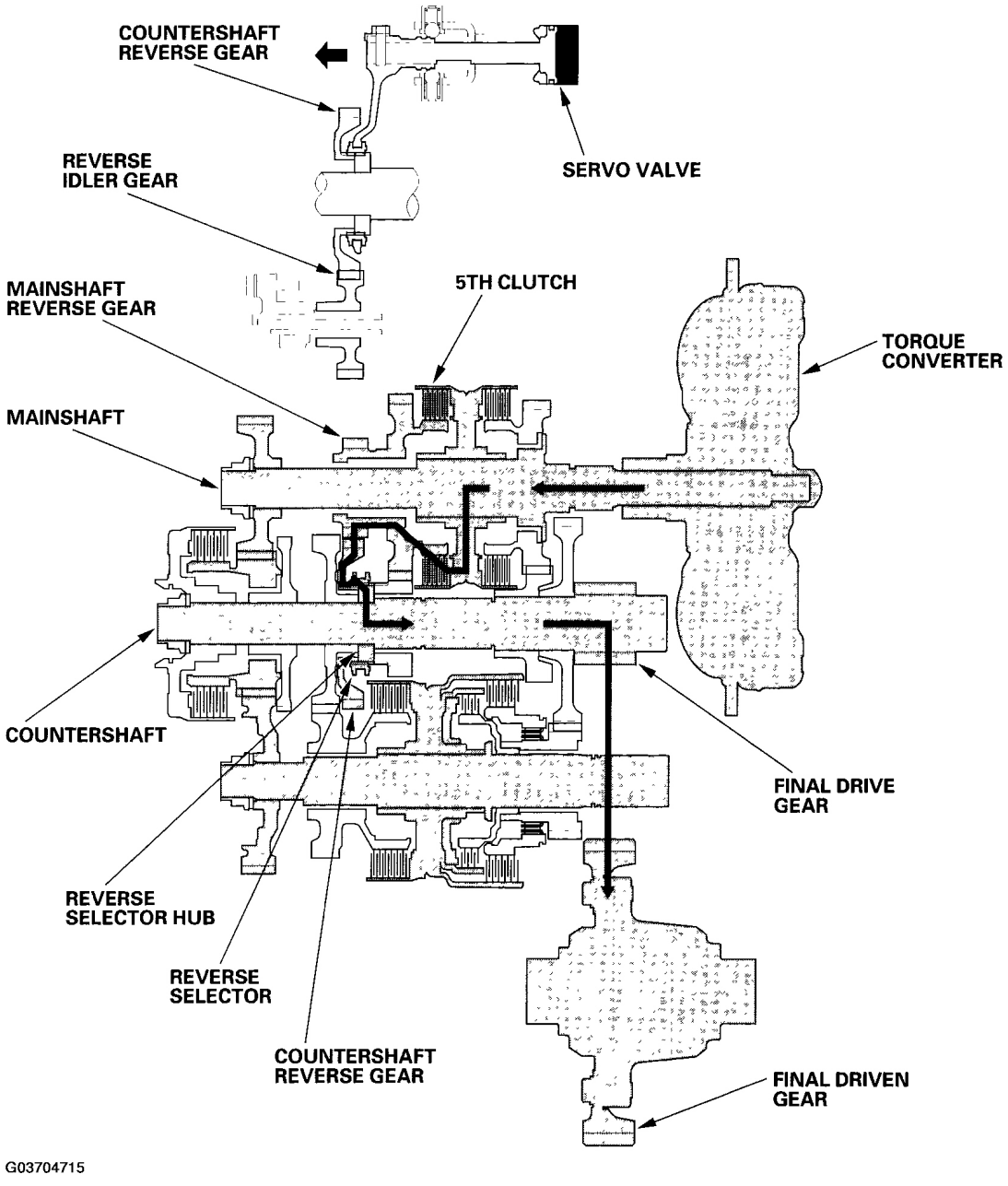


Fig. 21: Automatic Transmission In R Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Electronic Control System

Functional Diagram

The electronic control system consists of the powertrain control module (PCM), sensors, and solenoid valves. Shifting and lock-up are electronically controlled for comfortable driving under all conditions.

The PCM receives input signals from the sensors, switches, and other control units, processes data, and outputs signals for the engine control system and A/T control system. The A/T control system includes shift control, grade logic control, clutch pressure control, and lock-up control.

The PCM switches the shift solenoid valves and the A/T clutch pressure control solenoid valves to control shifting transmission gears and lock-up torque converter clutch.

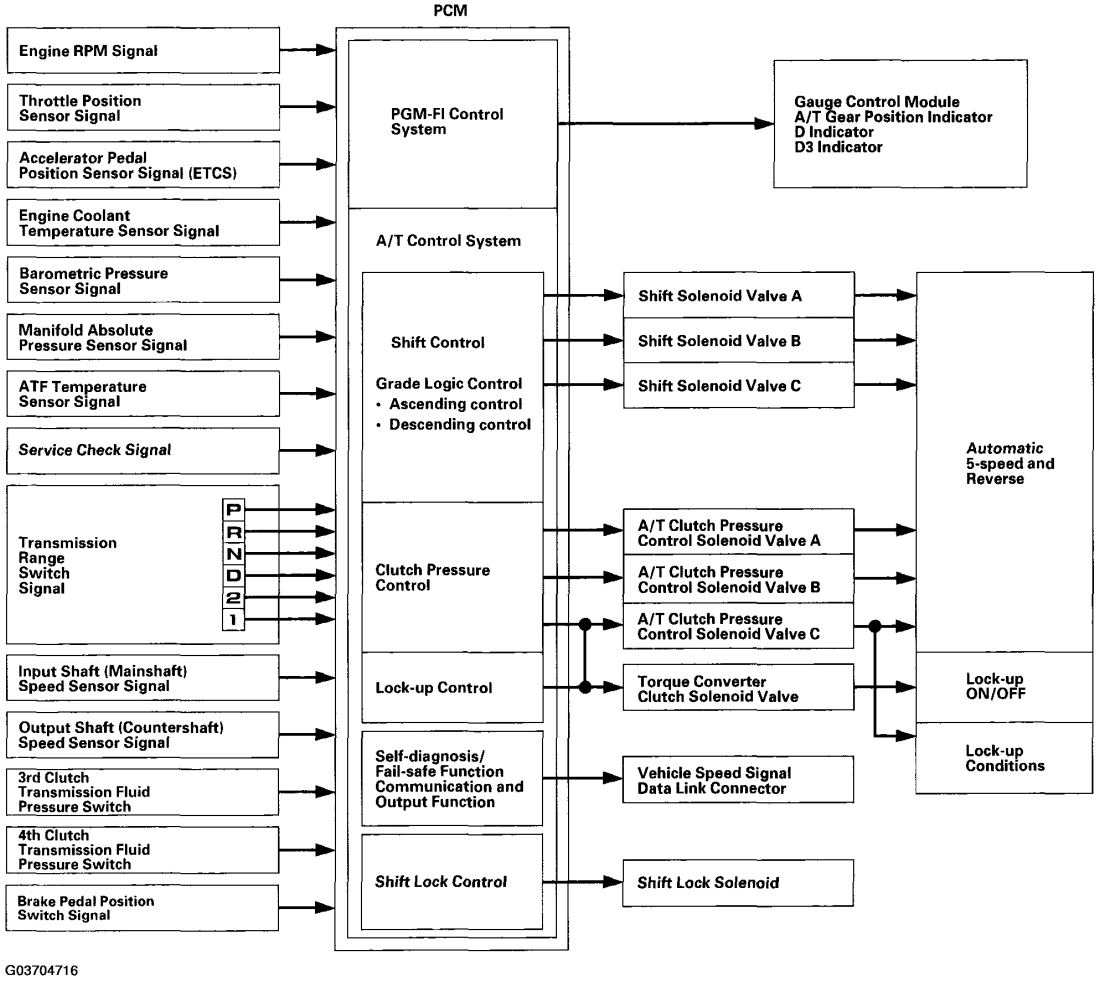


Fig. 22: Electronic Control System Functional Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

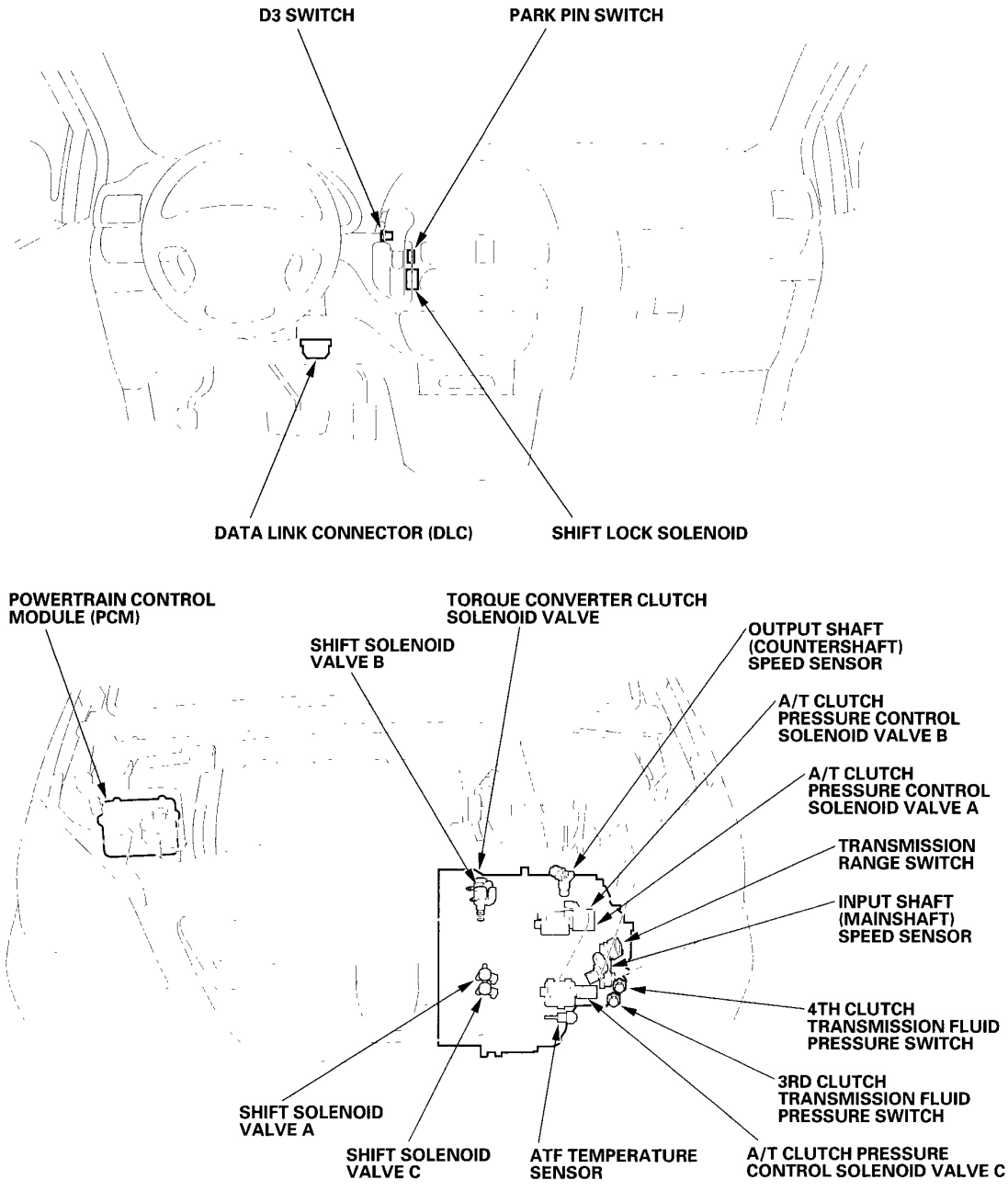


Fig. 23: Identifying Electronic Control Locations
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Shift Control

The PCM instantly determines which gear should be selected by various signals sent from sensors

and switches, and it actuates the shift solenoid valves A, B, and C to control shifting.

Also, the grade logic control system has been adopted to control shifting in the D position. The PCM compares actual driving conditions with memorized driving conditions, based on the input from the throttle position sensor, the engine coolant temperature sensor, the barometric pressure sensor, the brake pedal position switch signal, and the shift lever position signal, to control shifting while the vehicle is ascending or descending a slope.

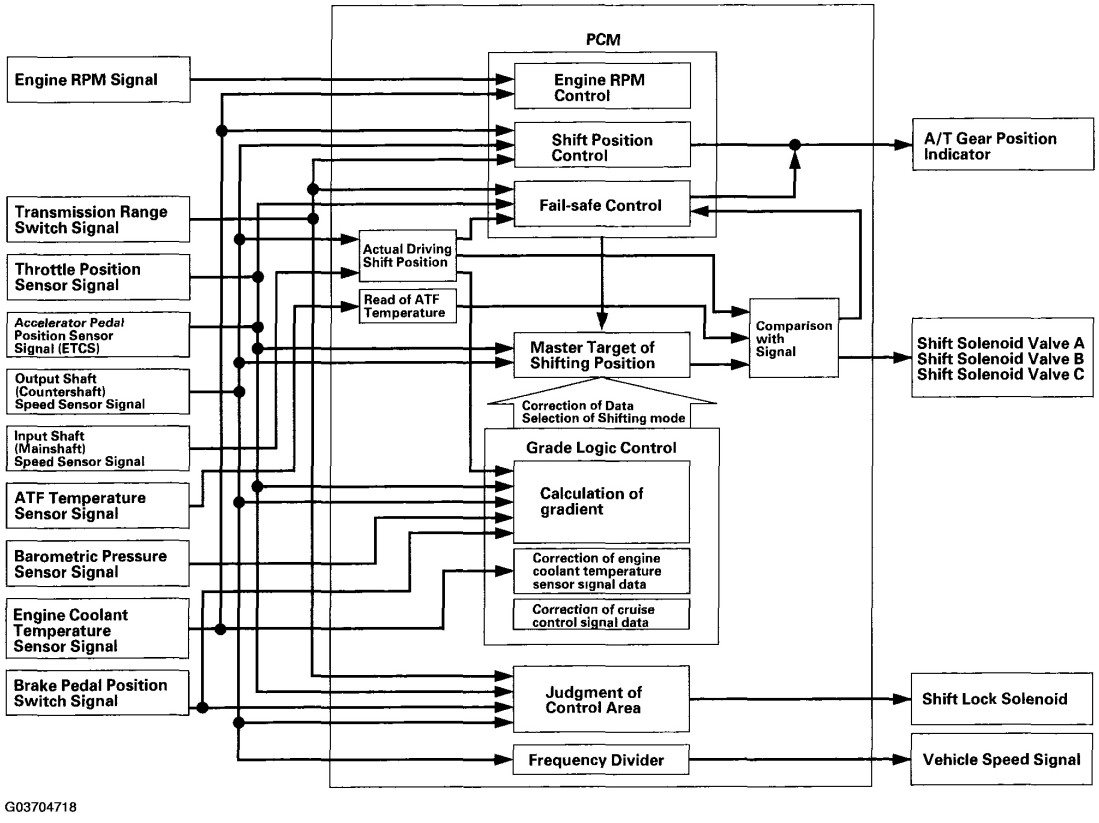


Fig. 24: Electronic Shift Control Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D position D3 Driving Mode Control

This automatic transmission is provided with the D3 driving mode in the D position. The D position has two modes; general driving mode (shifts gears automatically 1st through 5th), and the D3 driving mode (shifts gears automatically 1st through 3rd). The transmission switches modes by pushing the D3 switch on the shift lever knob in the D position.

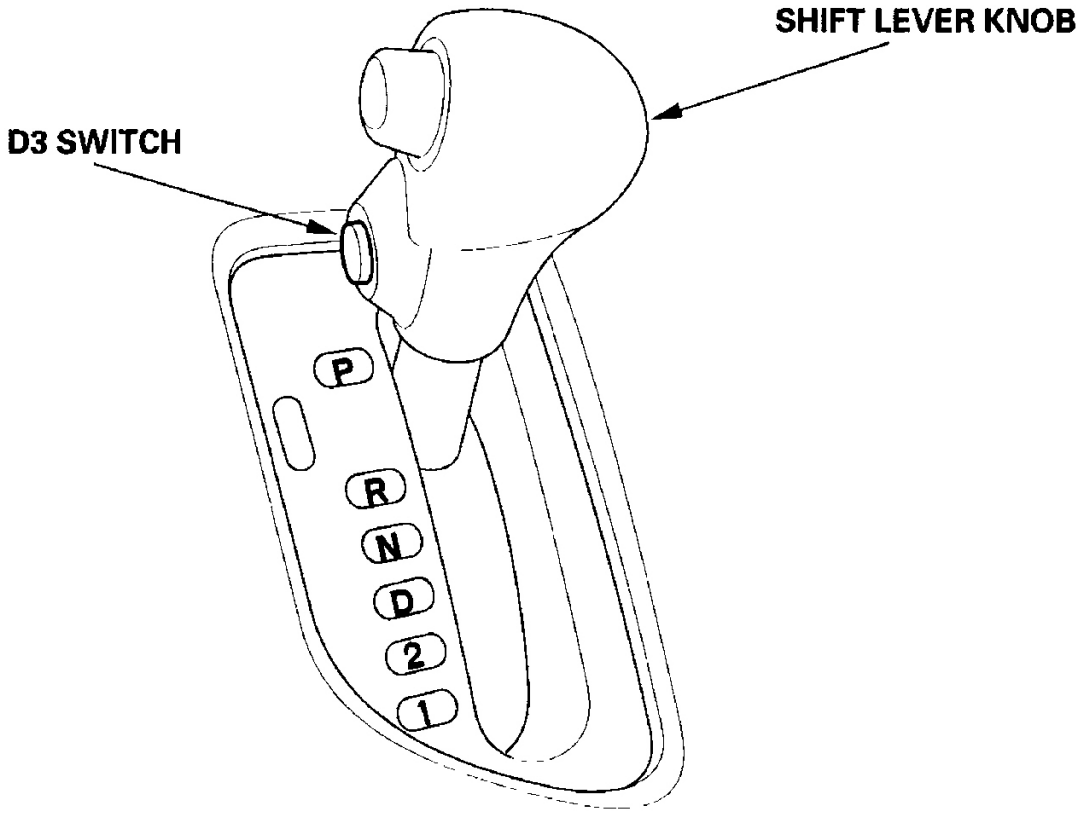


Fig. 25: Identifying D Position D3 Driving Mode Control
Courtesy of AMERICAN HONDA MOTOR CO., INC.

The transmission switches into the D3 driving mode in the D position by pushing the D3 switch, the D3 indicator next to the D indicator in the gauge control module comes on. D3 driving mode is cancelled by pushing the D3 switch, and the D3 indicator goes off. Also, the D3 driving mode is cancelled when the ignition switch is turned off. When the shift lever is moved out of the D position in the D3 driving mode, the D3 indicator goes off, but the transmission returns into the D3 driving mode when returning the shift lever into the D position, and the D3 indicator comes on.

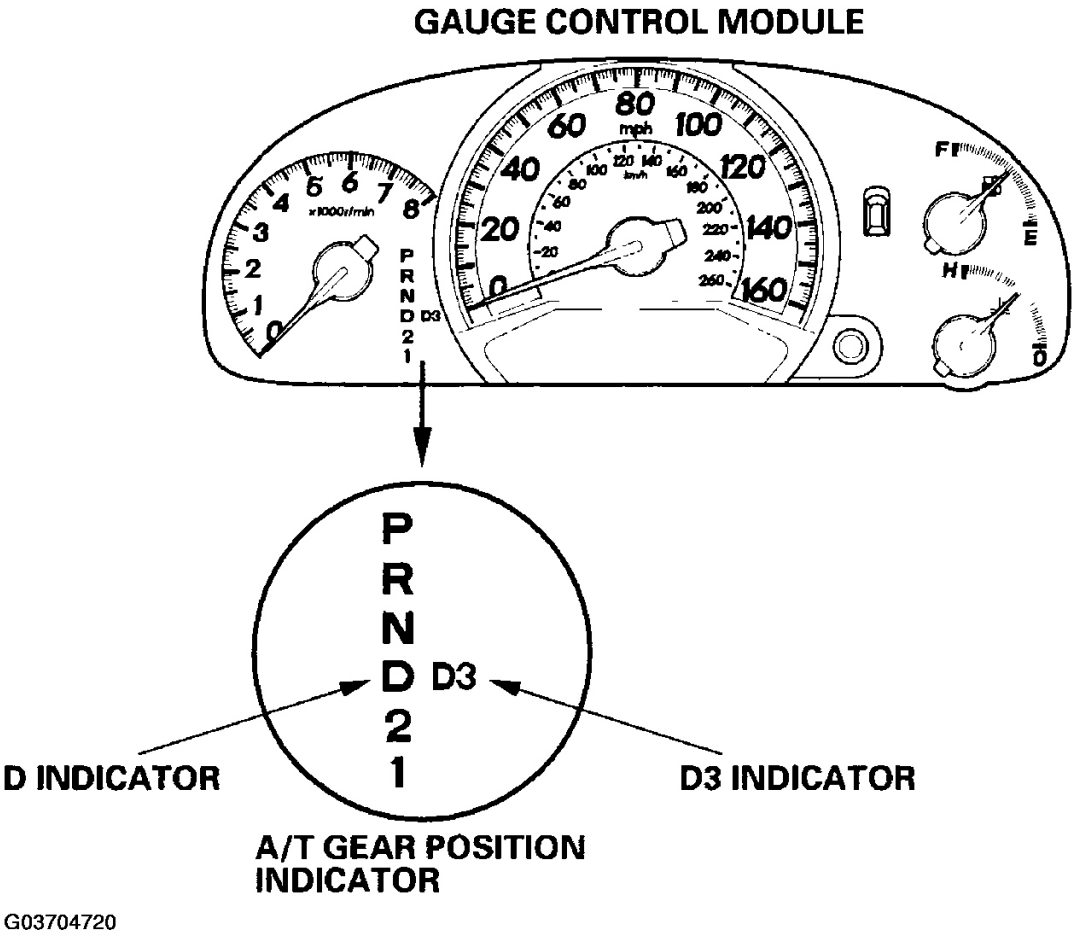


Fig. 26: Identifying D3 Indicator Gauge Control Module
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Shift Solenoid Valve ON-OFF Operation

The PCM turns on and off the shift solenoid valves A, B, and C to control shifting of the transmission gears. The combination of driving signals to shift solenoid valves A, B, and C are shown in **GEAR POSITION CHART**.

GEAR POSITION CHART

Position	Gear position	Shift solenoid valves		
		A	B	C
	Shifting from the N position	OFF	ON	OFF
	Stays in 1st	ON	ON	ON

D	Shifting gears between 1st and 2nd	ON	ON	ON
	Stays in 2nd	ON	ON	OFF
	Shifting gears between 2nd and 3rd	OFF	ON	OFF
	Stays in 3rd	OFF	ON	ON
	Shifting gears between 3rd and 4th	OFF	OFF	ON
	Stays in 4th	OFF	OFF	OFF
	Shifting gears between 4th and 5th	ON	OFF	OFF
	Stays in 5th	ON	OFF	ON
2	2nd	ON	ON	OFF
1	1st	ON	ON	ON
R	Shifting from the P and N position	OFF	ON	ON
	Stays in reverse	OFF	ON	OFF
	Reverse inhibit	ON	ON	ON
P	Park	OFF	ON	OFF
N	Neutral	OFF	ON	OFF

Grade Logic Control: Ascending Control

When the PCM determines that the vehicle is climbing a hill in the D position, the system extends the engagement area of 2nd gear, 3rd gear, and 4th gear to prevent the transmission from frequently shifting between 2nd and 3rd gears, between 3rd and 4th gears, and between 4th and 5th gears, so the vehicle can run smooth and have more power when needed.

NOTE: Shift commands stored in the PCM between 2nd and 3rd gears, between 3rd and 4th gears, and between 4th and 5th gears, enable the PCM to automatically select the most suitable gear according to the magnitude of a gradient.

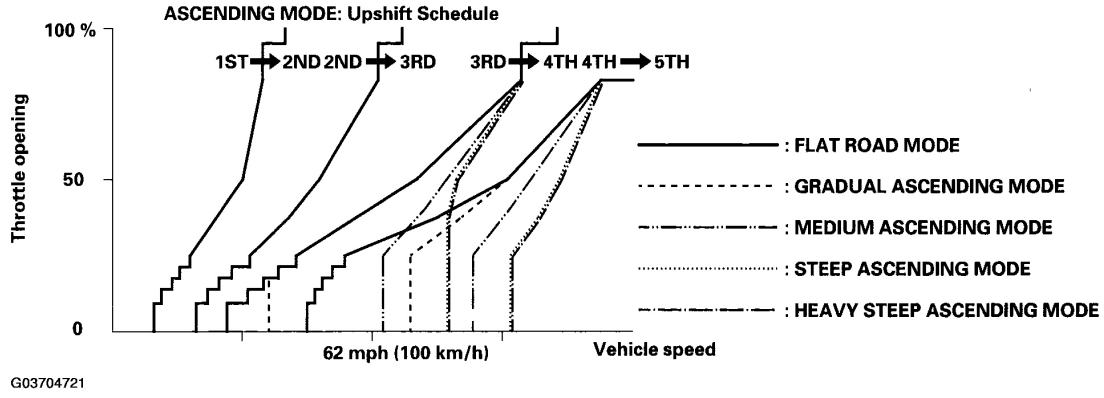


Fig. 27: Identifying Grade Logic Control Ascending Control
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Grade Logic Control: Descending Control

When the PCM determines that the vehicle is going down a hill in the D position, the shift-up speed from 4th to 5th gear, 3rd to 4th gear, and from 2nd to 3rd (when the throttle is closed) becomes faster than the set speed for flat road driving to widen the 4th gear, 3rd gear, and 2nd gear driving areas. This, in combination with engine braking from the deceleration lock-up, achieves smooth driving when the vehicle is descending. There are three descending modes with different 4th gear driving areas, 3rd gear driving areas and 2nd gear driving areas according to the magnitude of a gradient stored in the PCM. When the vehicle is in 5th or 4th gear and you are decelerating while applying the brakes on a steep hill, the transmission will downshift to a lower gear. When you accelerate, the transmission will then return to a higher gear.

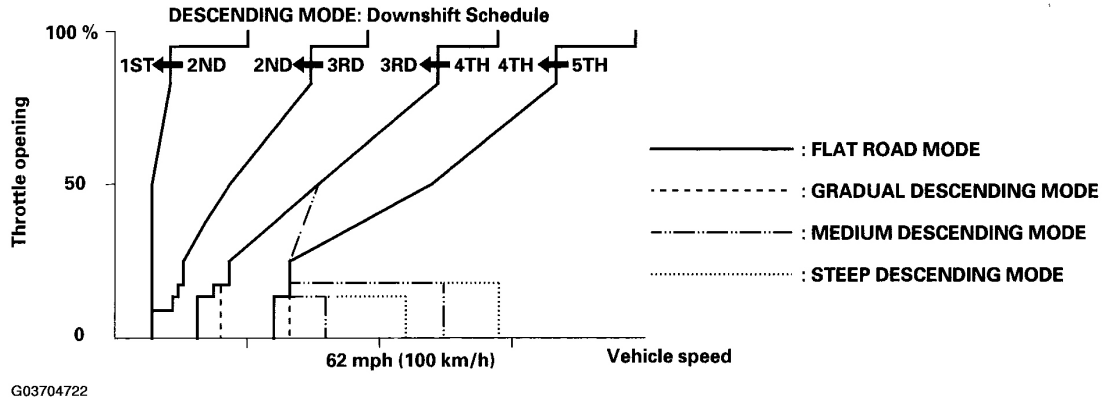


Fig. 28: Identifying Grade Logic Control Descending Control
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Deceleration Control

When the vehicle goes around a corner and needs to decelerate first and then accelerate, the PCM sets the data for deceleration control to reduce the number of times the transmission shifts. When the vehicle is decelerating from speeds above 27 mph (43 km/h), the PCM shifts the transmission from 5th or 4th to 2nd earlier than normal to cope with upcoming acceleration.

Clutch Pressure Control

The PCM actuates the A/T clutch pressure control solenoid valves A, B, and C to control the clutch pressure. When shifting between lower and higher gears, the clutch pressure regulated by the A/T clutch pressure control solenoid valves A, B, and C engages and disengages the clutch smoothly.

The PCM receives input signals from the various sensors and switches, performs processing data, and outputs a current to the A/T clutch pressure control solenoid valves A, B, and C.

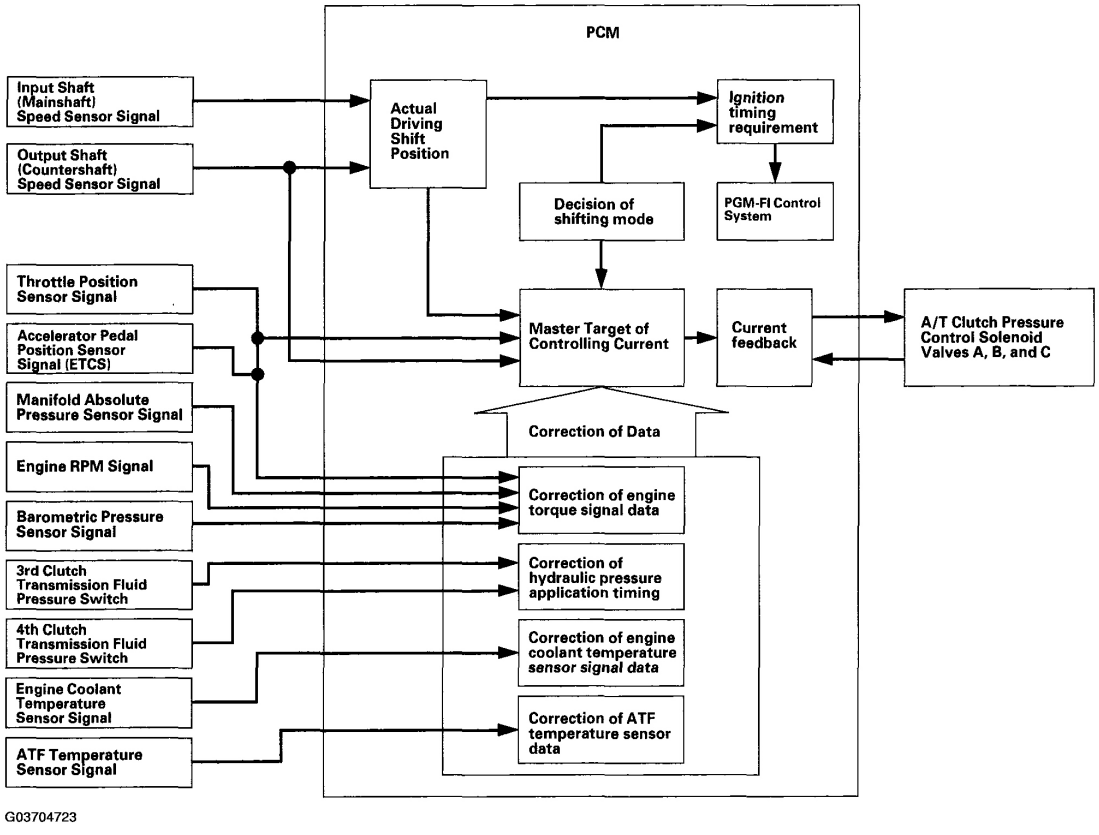


Fig. 29: Clutch Pressure Control Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Lock-up Control

The torque converter clutch solenoid valve controls the hydraulic pressure to switch the lock-up shift valve and lock-up ON and OFF. The PCM actuates the torque converter clutch solenoid valve and the A/T clutch pressure control solenoid valve to start lock-up. The A/T clutch pressure control solenoid valve C applies and regulates hydraulic pressure to the lock-up control valve to control the amount of the lock-up.

The lock-up mechanism operates in the D position (2nd, 3rd, 4th, and 5th), and in the D position D3 driving mode (2nd and 3rd).

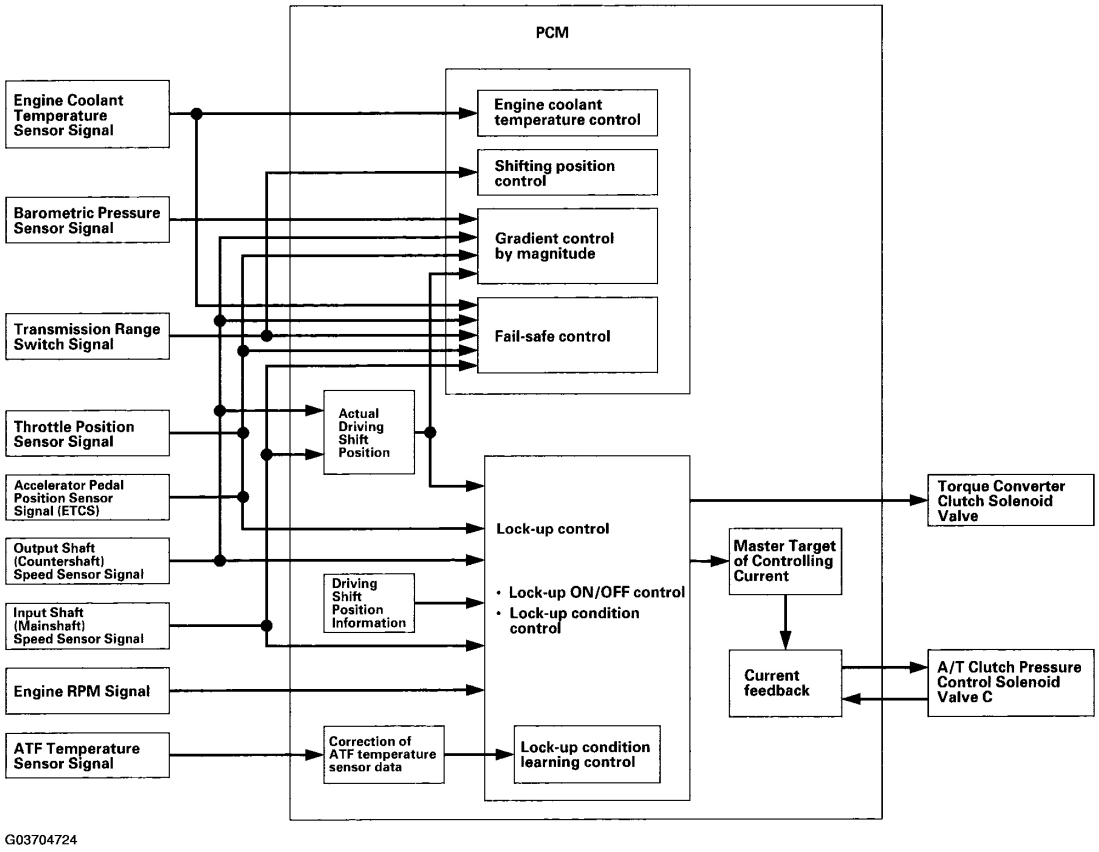


Fig. 30: Lock-Up Control Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM A/T Control System Electrical Connections

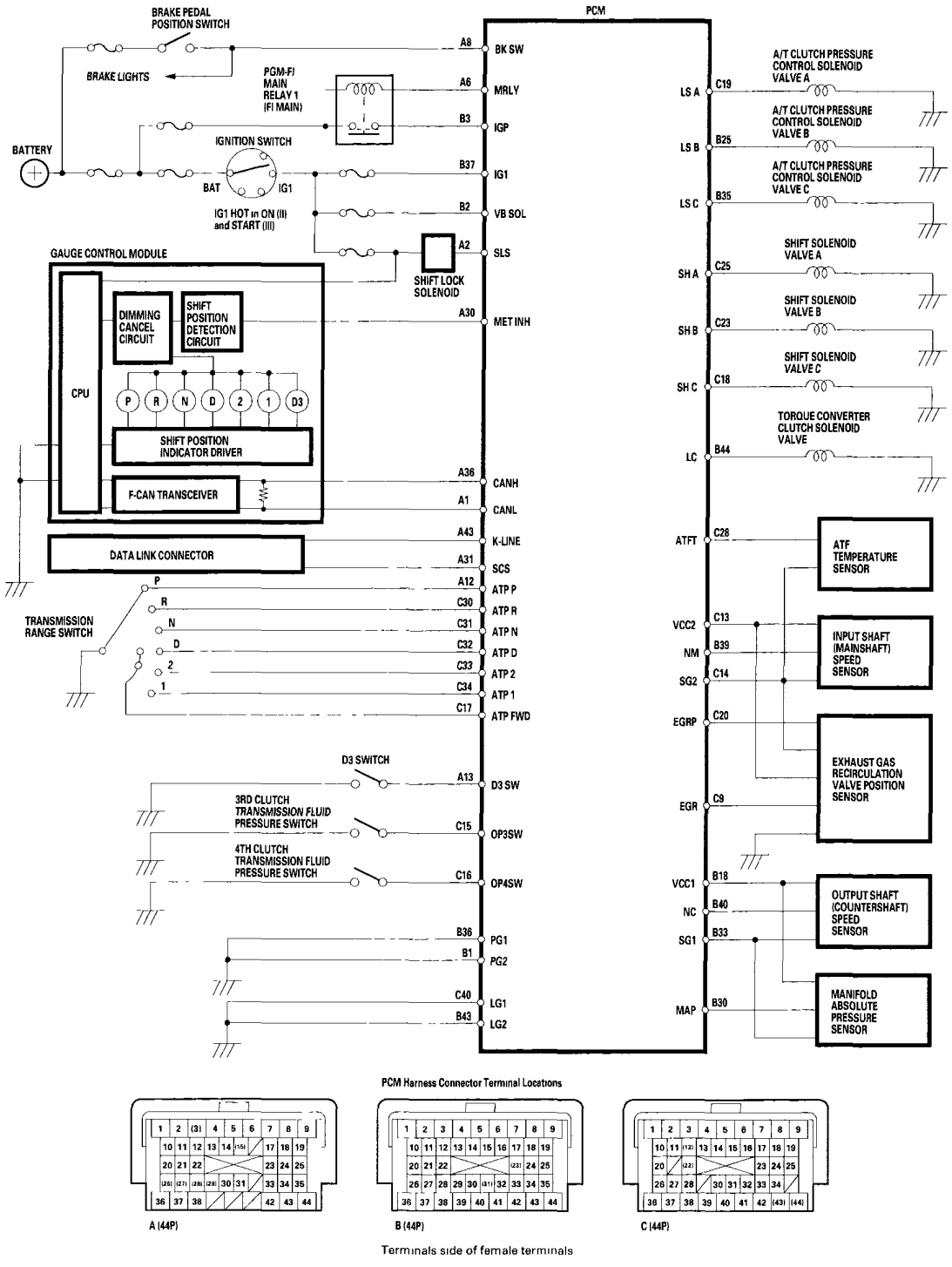
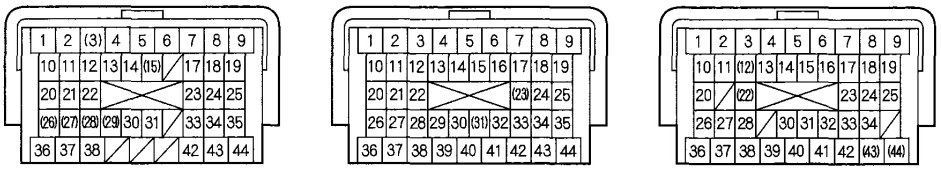


Fig. 31: PCM A/T Control System Electrical Connections Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM A/T Control System Inputs and Outputs

PCM Connector Harness Terminals



A (44P) B (44P) C (44P)

Terminal side of female terminals

PCM CONNECTOR A (44P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
A1	RED	CAN L	F-CAN communication signal	With ignition switch ON (II): About 2.5 V
A2	YEL/BLK	SLS	Shift lock solenoid control	With ignition switch ON (II), in the P position, brake pedal pressed, and accelerator released: 0 V
A6	RED/YEL	MRLY	PGM-FI main relay 1 control power source for DTC memory	With ignition switch ON (II): 0 V With ignition switch OFF: Battery voltage
A8	WHT/BLK	BK SW	Brake pedal position switch signal input	Brake pedal pressed: Battery voltage Brake pedal released: 0V
A12	BLU/BLK	ATP P	Transmission range switch P position signal input	In the P position: 0 V In other than the P position: Battery voltage
A13	GRN/BLK	D3 SW	D3 switch signal input	With ignition switch ON (II): Battery voltage
A30	YEL/GRN	MET INH	Communication line PCM-to-gauge control module	With ignition switch ON (II): Battery voltage
A31	BRN	SCS	Detects service check signal	With the SCS shorted with the HDS: About 0 V With the SCS open: About 5 V
A36	WHT	CAN H	F-CAN communication signal	With ignition switch ON (II): About 2.5 V
A43	BLU	K-LINE	Communication line PCM-to-DLC	With ignition switch ON (II): About 9.0 V

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Fig. 32: Identifying PCM A/T Control System Inputs And Outputs (PCM Connector A (44P)) Chart

Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM CONNECTOR B (44P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
B1	BLK	PG2	Ground	Less than 1.0 V at all times
B2	BLK/YEL	VB SOL	Power supply circuit for solenoid valves	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
B3	YEL/BLK	IGP	Power supply circuit from PGM-FI main relay 1	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
B18	YEL/RED	VCC1	Power supply for sensors	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V
B25	BRN/WHT	LS B	A/T clutch pressure control solenoid valve C control	With ignition switch ON (II): Pulsing signal
B33	GRN/WHT	SG1	Sensor ground	Less than 1.0 V at all times
B35	GRN/RED	LS C	A/T clutch pressure control solenoid valve C control	With ignition switch ON (II): Pulsing signal
B36	BLK	PG1	Ground	Less than 1.0 V at all times
B37	BLK/YEL	IG1	Power supply circuit	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
B39	RED	NM	Input shaft (mainshaft) speed sensor signal input	With ignition switch ON (II): 0 V or about 5 V With engine idling in the N position: Pulsing signal (0—5 V)
B40	BLU	NC	Output shaft (countershaft) speed sensor signal input	With ignition switch ON (II): 0 V or about 5 V With driving: Pulsing signal (0—5 V)
B43	BRN/YEL	LG2	Ground	Less than 1.0 V at all times
B44	YEL	LC	Torque converter clutch solenoid valve control	During lock-up condition: Battery voltage During no lock-up condition: 0 V

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Fig. 33: Identifying PCM A/T Control System Inputs And Outputs (PCM Connector B (44P)) Chart

Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM CONNECTOR C (44P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
C9	BLU/RED	EGR	EGR valve position sensor signal input	With engine running: 1.2—3.0 V depending on EGR valve lift
C13	YEL/BLU	VCC2	Power supply for sensors	With ignition switch ON (II): About 5 V With ignition switch OFF: 0 V
C14	GRN/YEL	SG2	Sensor ground	Less than 1.0 V at all times
C15	BLU/WHT	OP3 SW	3rd clutch transmission fluid pressure switch signal input	With ignition switch ON (II): • Without 3rd clutch pressure: About 5 V • With 3rd clutch pressure: About 0 V
C16	BLU/YEL	OP4 SW	4th clutch transmission fluid pressure switch signal input	With ignition switch ON (II): • Without 4th clutch pressure: About 5 V • With 4th clutch pressure: About 0 V
C17	BLU/YEL	ATP FWD	Transmission range switch D and 2 positions signal input	In the D and 2 positions: 0 V In other than the D and 2 positions: Battery voltage
C18	GRN	SH C	Shift solenoid valve C control	In the 1 position, and D position in 1st, 3rd, and 5th gears: Battery voltage In the P, R, N, 2 positions, and D position in 2nd and 4th gears: 0 V
C19	RED	LS A	A/T clutch pressure control solenoid valve A control	With ignition switch ON (II): Pulsing signal
C20	WHT/BLK	EGRP	EGR valve control	With EGR operating: Duty controlled With EGR not operation: About 0 V
C23	GRN/WHT	SH B	Shift solenoid valve B control	In the P, R, N, 2, and 1 positions, and D position in 1st, 2nd, and 3rd gears: Battery voltage In the D position in 4th and 5th gears: 0 V
C25	BLU/YEL	SH A	Shift solenoid valve A control	In the 2 and 1 positions, and D position in 1st, 2nd, and 5th gears: Battery voltage In the P, R, N positions, and D position in 3rd and 4th gears: 0 V
C28	BLU/YEL	ATFT	ATF temperature sensor signal input	With ignition switch ON (II): 0.2—4.0 V With ignition switch OFF: 0 V
C30	WHT	ATP R	Transmission range switch R position input	In the R position: 0 V In other than the R position: Battery voltage
C31	RED/BLK	ATP N	Transmission range switch N position input	In the N position: 0 V In other than the N position: Battery voltage
C32	RED	ATP D	Transmission range switch D position input	In the D position: 0 V In other than the D position: Battery voltage
C33	BLU	ATP 2	Transmission range switch 2 position input	In the 2 position: 0 V In other than the 2 position: Battery voltage
C34	BRN	ATP 1	Transmission range switch 1 position input	In the 1 position: 0 V In other than the 1 position: Battery voltage
C40	BRN/YEL	LG1	Ground	Less than 1.0 V at all times

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Fig. 34: Identifying PCM A/T Control System Inputs And Outputs (PCM Connector C (44P)) Chart

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hydraulic Controls

The valve body includes the main valve body, the regulator valve body, the servo body, the top accumulator body, and the accumulator body. The ATF pump is driven by splines on the left end

of the torque converter, which is attached to the engine. Fluid flows through the regulator valve to maintain specified pressure through the main valve body to the manual valve, directing pressure to each of the clutches. The shift solenoid valves A and C are mounted on the outside of the torque converter housing. The shift solenoid valve B and the torque converter clutch solenoid valve are mounted on the torque converter housing. The A/T clutch pressure control solenoid valves A and B, and the A/T clutch pressure control solenoid valve C are mounted on the transmission housing.

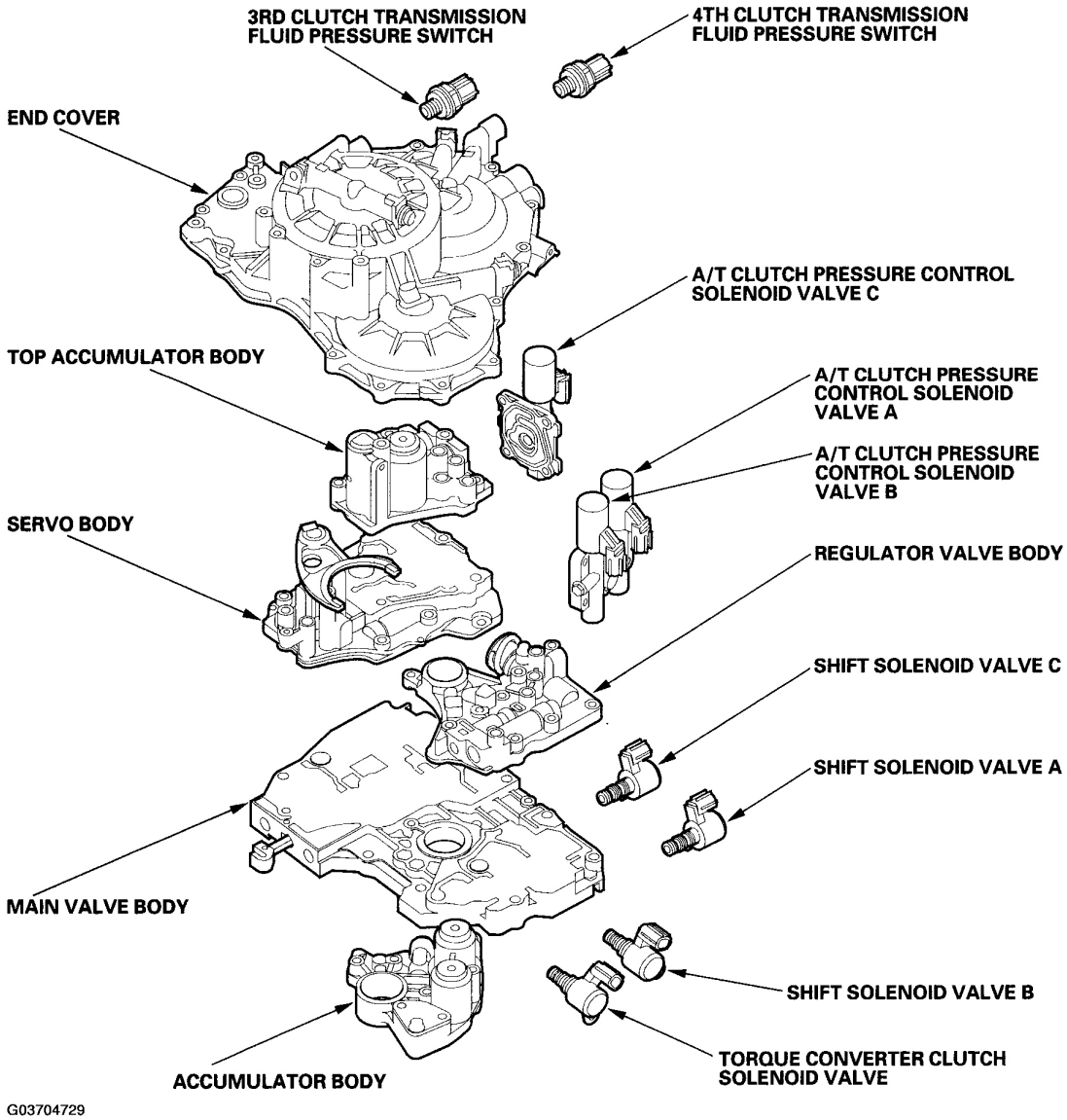


Fig. 35: Exploded View Of Hydraulic Controls
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Main Valve Body

The main valve body contains the manual valve, the modulator valve, the shift valve C, the shift valve D, the servo control valve, the cooler check valve, the torque converter check valve, the reverse CPC valve, the lock-up shift valve, the relief valve, the kick-down valve, the kick-down short valve, and the ATF pump gears. The primary function of the main valve body is to switch fluid pressure on and off and to control hydraulic pressure going to the hydraulic control system.

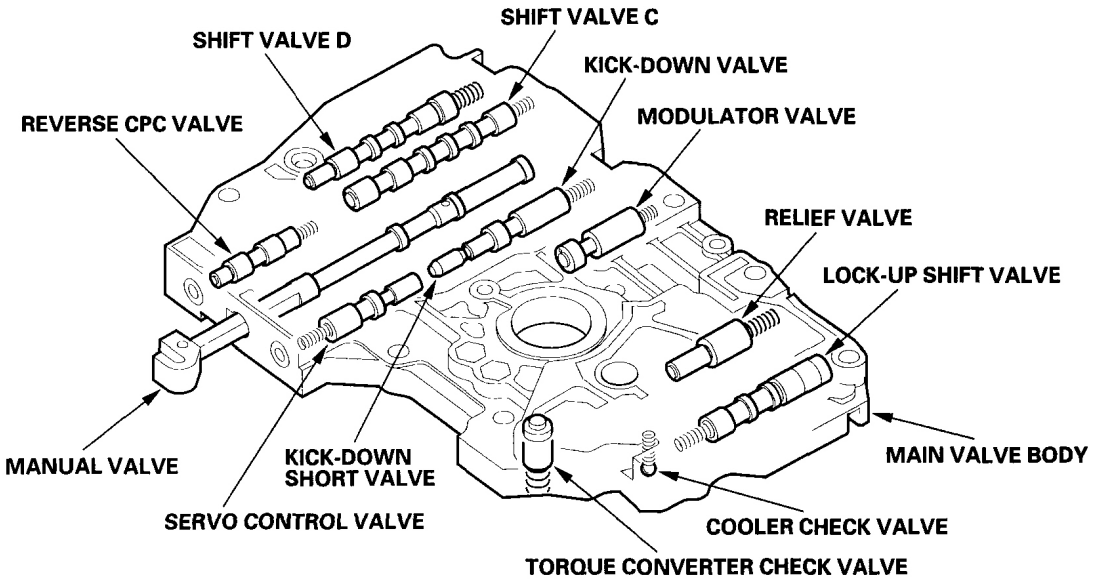


Fig. 36: Identifying Main Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Regulator Valve Body

The regulator valve body is located on the main valve body. The regulator valve body contains the regulator valve, the lock-up timing valve, and the lock-up control valve.

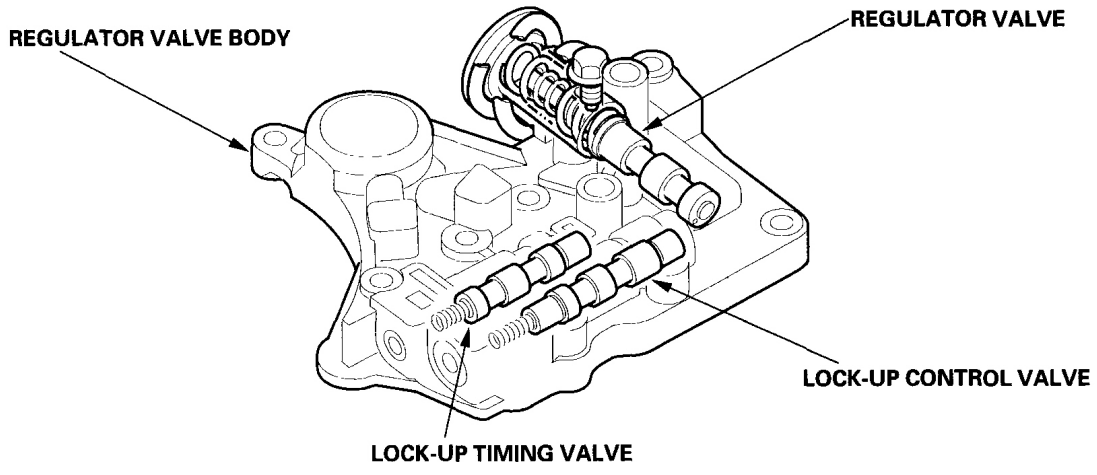


Fig. 37: Identifying Regulator Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Regulator Valve

The regulator valve maintains constant hydraulic pressure from the ATF pump to the hydraulic control system, while also furnishing fluid to the lubricating system and torque converter. Fluid from the ATF pump flows through B and B'. Fluid entering from B flows through the valve orifice to the A cavity. This pressure of the A cavity pushes the regulator valve to the spring side, and this movement of the regulator valve uncovers the fluid port to the torque converter and the relief valve. The fluid flows out to the torque converter and the relief valve, and the regulator valve returns under spring force. According to the level of the hydraulic pressure through B, the position of the regulator valve changes, and the amount of fluid from B' through the torque converter changes. This operation is continued, maintaining the line pressure.

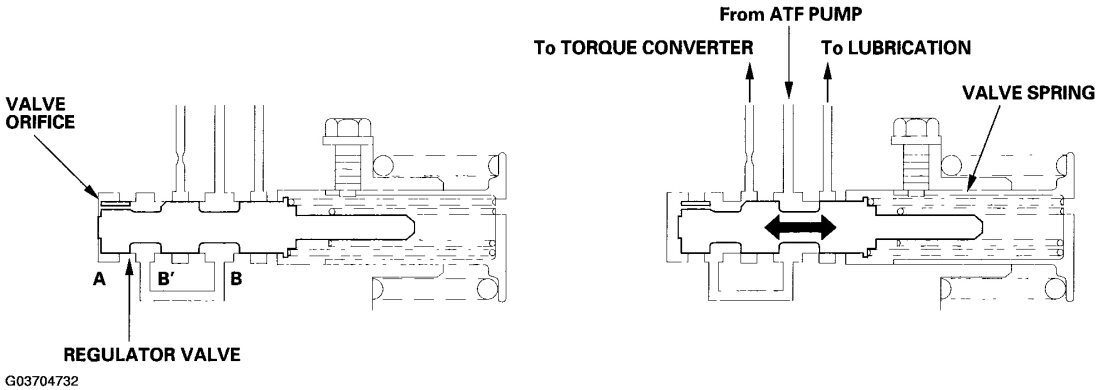


Fig. 38: Cross-Sectional View Of Regulator Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Increases in hydraulic pressure according to torque are performed by the regulator valve using stator torque reaction. The stator shaft is splined to the stator in the torque converter, and its arm end contacts the regulator spring cap. When the vehicle is accelerating or climbing (torque converter range), stator torque reaction acts on the stator shaft, and the stator arm pushes the regulator spring cap in the direction of the arrow in proportion to the reaction. The stator reaction spring compresses, and the regulator valve moves to increase the line pressure which is regulated by the regulator valve. The line pressure reaches its maximum when the stator torque reaction reaches its maximum.

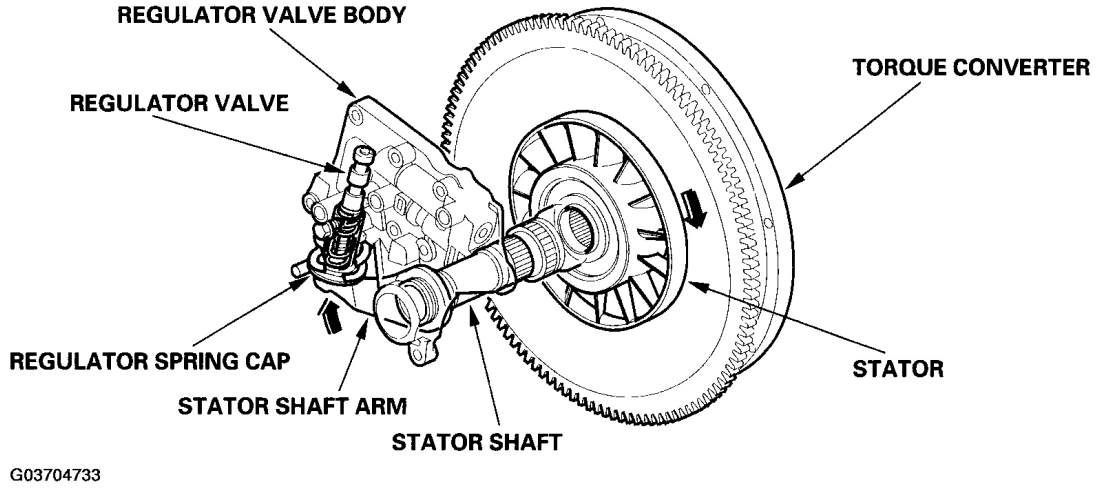


Fig. 39: Locating Regulator Valve Body Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Servo Body

The servo body is on the main valve body. It contains the servo valve, shift valve A, shift valve B, and CPC valves A and B.

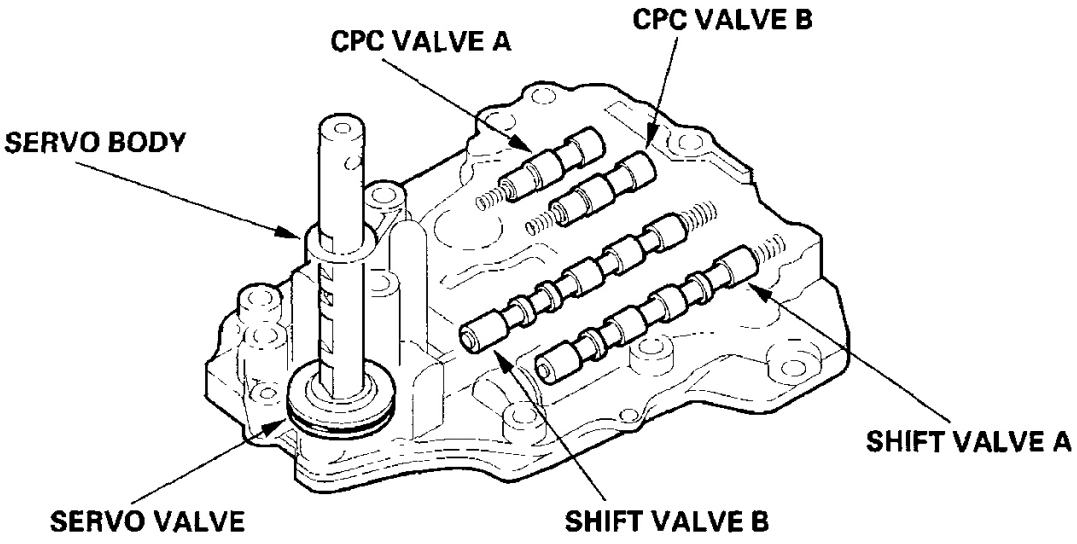


Fig. 40: Identifying Servo Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Top Accumulator Body

The top accumulator body contains shift valve E, CPC valve C, 4th/1st-hold accumulator, and 5th accumulator.

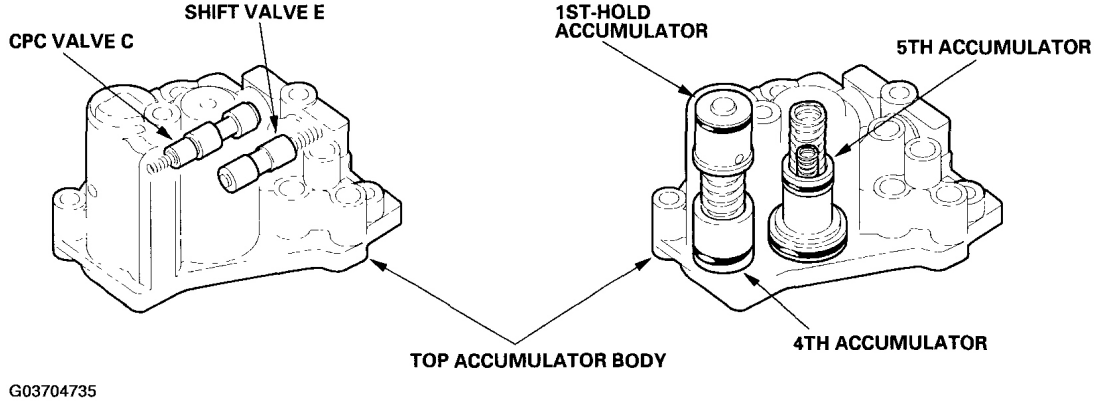


Fig. 41: Identifying Top Accumulator Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Accumulator Body

The accumulator body is on the torque converter housing, next to the main valve body. It contains the 1st and 2nd accumulators and the lubrication check valve.

3rd Accumulator

The 3rd accumulator is in the end cover.

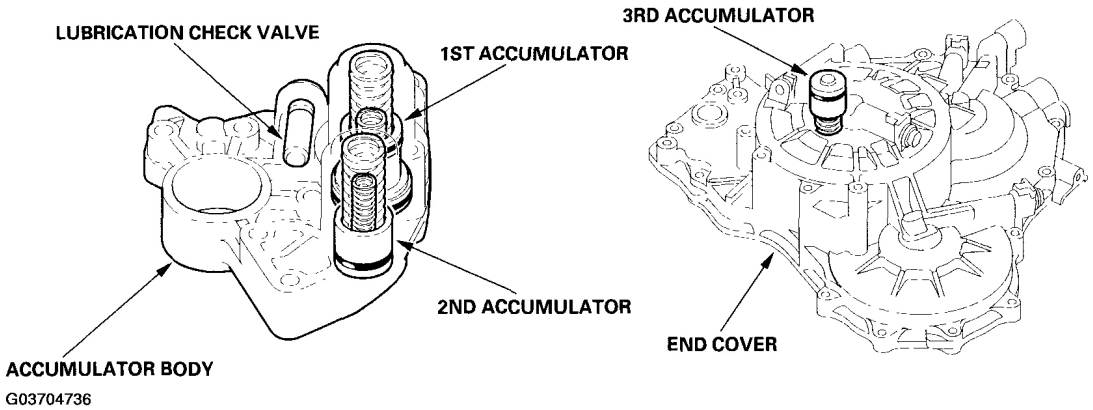


Fig. 42: Identifying 3rd Accumulator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hydraulic Flow

Distribution of Hydraulic Pressure

As the engine turns, the ATF pump starts to operate. Automatic transmission fluid (ATF) is drawn through the ATF strainer (filter) and discharged into the hydraulic circuit. Then, ATF flowing from the ATF pump becomes line pressure that is regulated by the regulator valve. Torque converter pressure from the regulator valve enters the torque converter through the lock-up shift valve and it is discharged from the torque converter. The torque converter check valve prevents torque converter pressure from rising.

The PCM controls the shift solenoid valves ON and OFF, and the shift solenoid valves control shift solenoid pressure to the shift valves. Applying shift solenoid pressure to the shift valves moves the position of the shift valve, and switches the port of hydraulic pressure. The PCM also controls A/T clutch pressure control solenoid valves A and B. The A/T clutch pressure control solenoid valves A and B regulate the A/T clutch pressure control solenoid pressure and apply the A/T clutch pressure control solenoid pressure to CPC valves A and B.

When shifting between upper gear and lower gear, the clutch is engaged by pressure from the CPC pressure mode. The PCM controls one of the shift solenoid valves to move the position of

the shift valve. This movement switches the port of the CPC and line pressure. Line pressure is then applied to the clutch, and the CPC pressure is intercepted. Engaging the clutch with line pressure happens after CPC pressure mode has completed.

Hydraulic pressure at the ports is as follows:

HYDRAULIC PRESSURE CHART

PORT No.	DESCRIPTION OF PRESSURE	PORT No.	DESCRIPTION OF PRESSURE	PORT No.	DESCRIPTION OF PRESSURE
1	LINE	5N	CPC A or LINE	56	LS A
2	LINE	5D	CPC B or LINE	57	LS B
3	LINE	5G	CPC B or LINE	58	LS C
3'	REVERSE CPC or LINE	5K	CPC B or LINE	90	TORQUE CONVERTER
3"	REVERSE CPC or LINE	6	MODULATE	90'	TORQUE CONVERTER
4	LINE	SA	SH A	91	TORQUE CONVERTER
4'	LINE	SB	SH B	91'	TORQUE CONVERTER
4"	LINE	SC	SH C	92	TORQUE CONVERTER
4A	CPC A	LA	LC A	93	ATF COOLER
4B	CPC B	9	LINE	94	TORQUE CONVERTER
4C	CPC C	10	1ST CLUTCH	95	LUBRICATION
5B	CPC A	15	1ST-HOLD CLUTCH	95'	LUBRICATION
5C	CPC B	20	2ND CLUTCH	96	TORQUE CONVERTER
5H	CPC B	25	LINE	99	SUCTION
5J	CPC B	30	3RD CLUTCH	X	DRAIN
5A	CPC A or LINE	40	4TH CLUTCH	HX	HIGH POSITION DRAIN
5E	CPC A or LINE	50	5TH CLUTCH	AX	AIR DRAIN
5F	CPC A or LINE	51	5TH CLUTCH		

5M	CPC A or LINE	55	CPC C or LINE		

NOTE:

- **CPC: Clutch Pressure Control pressure**
- **SH: Shift Solenoid pressure**
- **LS A: A/T Clutch Pressure Control Solenoid A pressure**
- **LS B: A/T Clutch Pressure Control Solenoid B pressure**
- **LS C: A/T Clutch Pressure Control Solenoid C pressure**
- **LC: Torque Converter Clutch Solenoid pressure**

N Position

The PCM controls the shift solenoid valves. The conditions of the shift solenoid valve and positions of the shift valve are as follows:

- Shift solenoid valve A is turned OFF, and shift valve A moves to the left side.
- Shift solenoid valve B is turned ON, and shift valve B stays on the right side.
- Shift solenoid valve C is turned OFF, and shift valve C stays on the left side.

Line pressure (1) passes through the manual valve and becomes line pressure (25). Line pressure (25) stops at shift valve D. Line pressure (1) also flows to the modulator valve and becomes modulator pressure (6). Modulator pressure (6) flows to the shift solenoid valves and the A/T clutch pressure control solenoid valves. Under this condition, hydraulic pressure is not applied to the clutches.

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

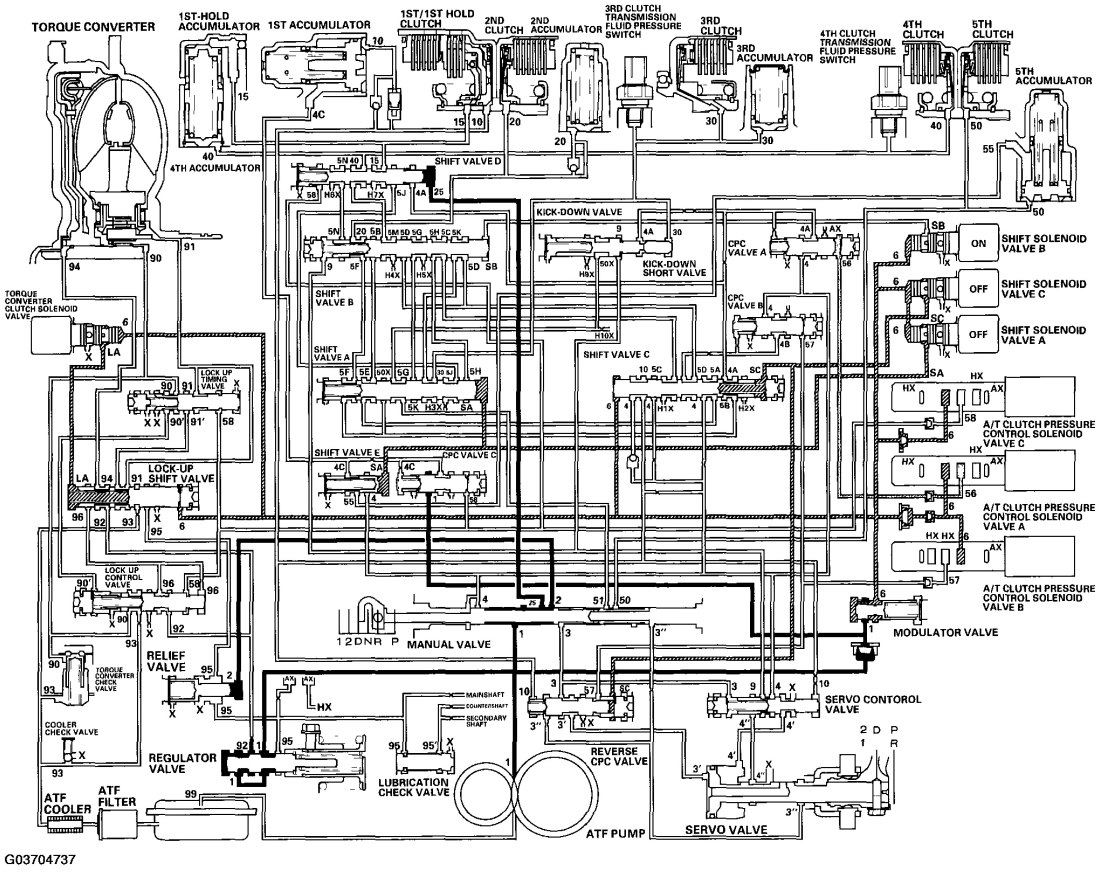
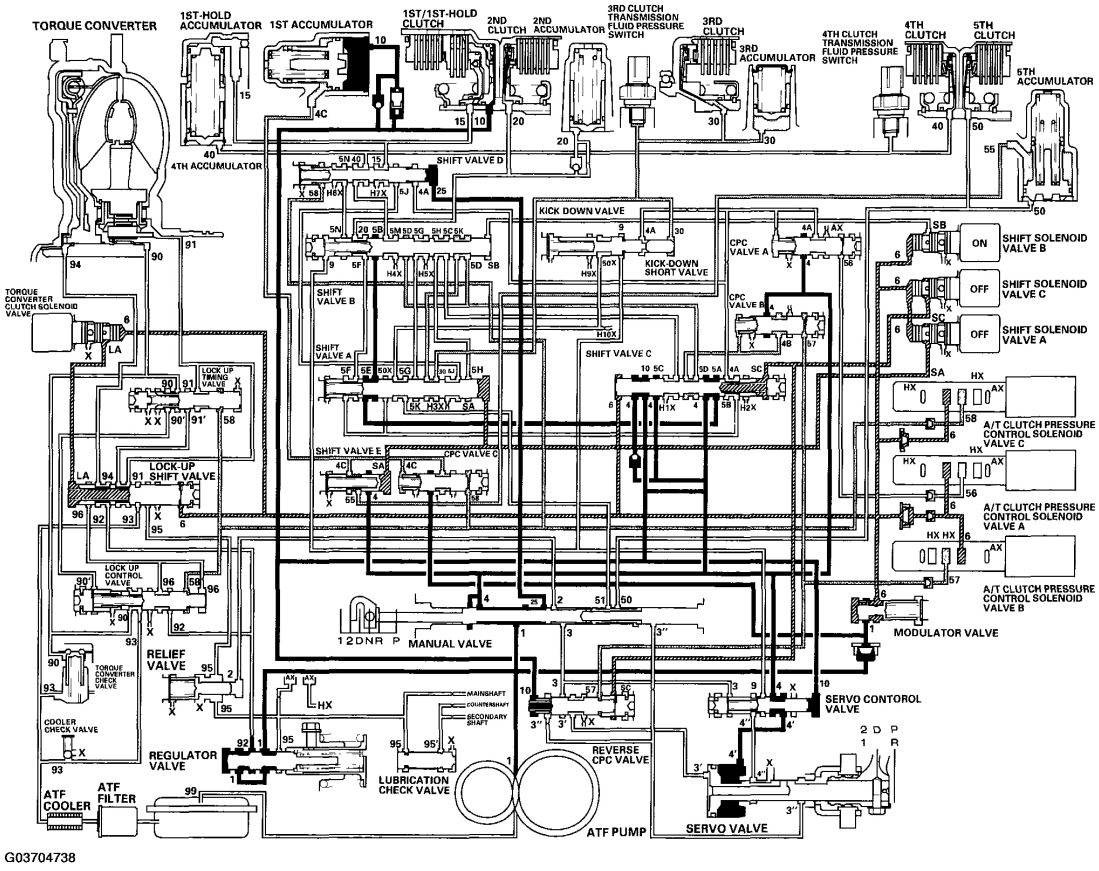


Fig. 43: Oil Circuit Diagram - N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: 1st gear shifting from the N position

Shift solenoid valves remain the same as in the N position when shifting to the D position from the N position. The manual valve is moved to the D position, and switches the port of line pressure (4) leading to shift valve C and CPC valve B. Line pressure (4) flows to the 1st clutch via the orifice. Line pressure (1) becomes CPC C pressure (4C) at CPC valve C, then goes to the 1st accumulator back side. Line pressure (4) also becomes the CPC B pressure (4B) at the CPC B valve. CPC B pressure goes to the 3rd clutch, via the shift valves C, B, and A, and the 3rd clutch is engaged. The 1st clutch is engaged gently when shifting to the D position from the N position.

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



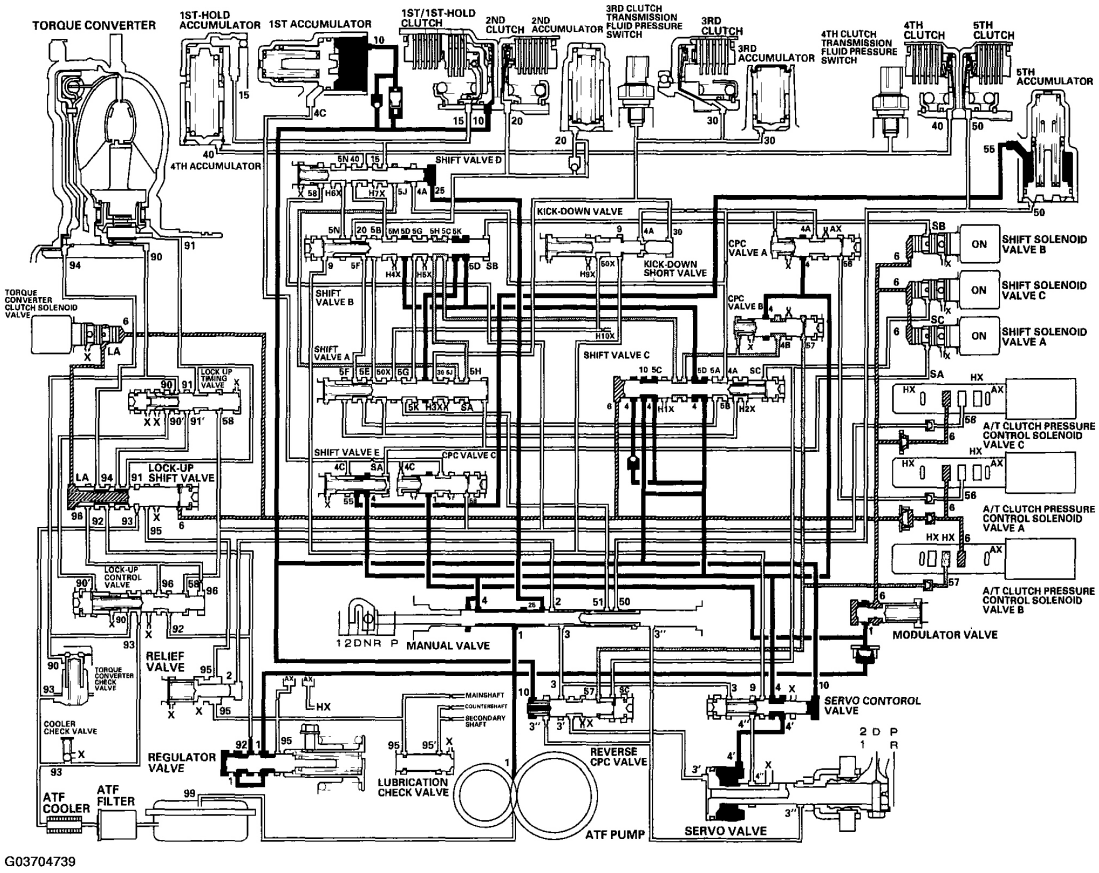
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Fig. 44: Oil Circuit Diagram - D Position: 1st Gear Shifting From N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Driving in 1st gear

The PCM turns shift solenoid valves A and C ON, and shift solenoid valve B stays ON. SH A pressure (SA) in the right side of shift valves A and E is released, and shift valves A and E are moved to the right side. SH C pressure (SC) in the right side of shift valve C is released, and modulator pressure (6) is applied to the left side of shift valve C. Shift valve C is moved to the right side. These valve movements release CPC C pressure (4C) from the back of the 1st accumulator and the 3rd clutch, and the 1st clutch is engaged securely.

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



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Fig. 45: Oil Circuit Diagram - D Position: Driving In 1st Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Shifting between 1st gear and 2nd gear

As the speed of the vehicle reaches the prescribed value, the PCM controls the A/T clutch pressure control solenoid valves. LS B pressure (57) in the right side of CPC valve B is released, and LS A pressure (56) is applied to the right side of CPC valve A. Line pressure (4) becomes CPC A pressure (4A) at CPC valve A, and CPC A pressure passes through shift valves C, A, and B, to become 2nd clutch pressure. The 2nd clutch is engaged with CPC pressure, and the 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

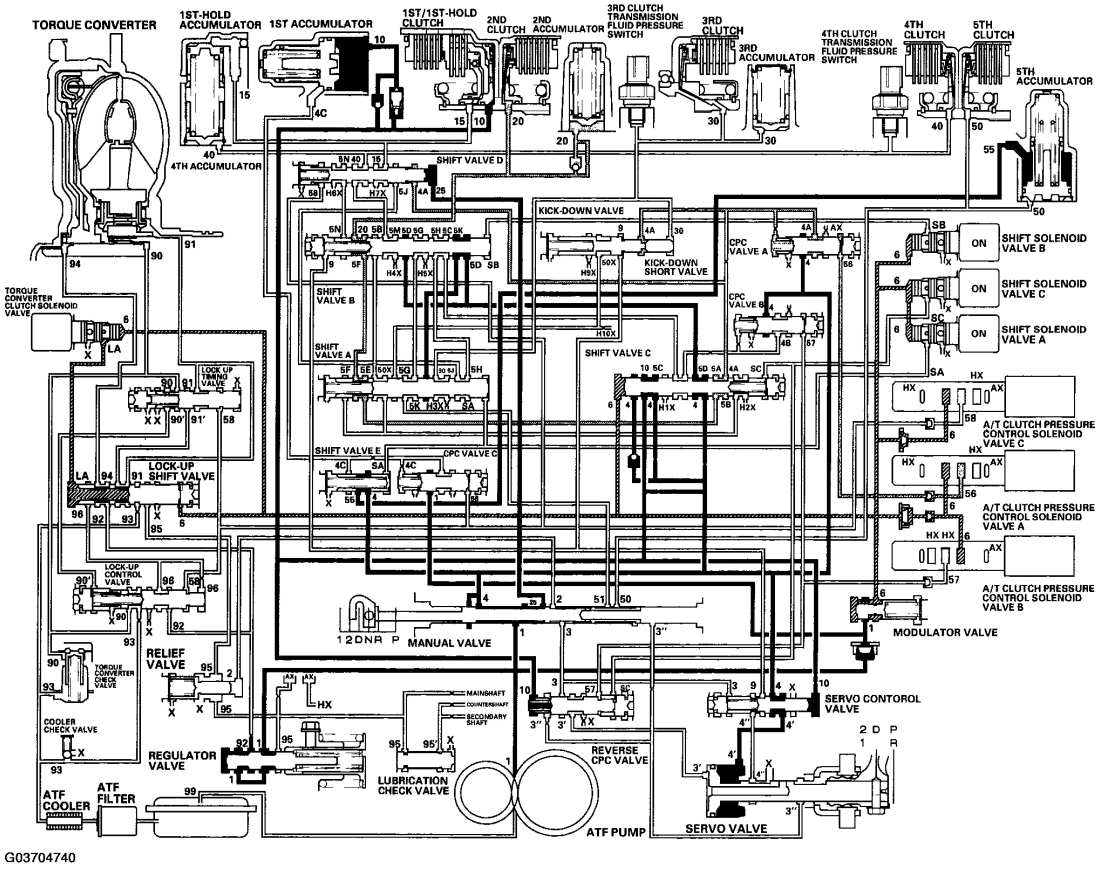


Fig. 46: Oil Circuit Diagram - D Position: Shifting Between 1st Gear And 2nd Gear

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Driving in 2nd gear

The PCM turns shift solenoid valve C OFF, and shift solenoid valves A and B stays ON. Shift solenoid valve C is turned OFF, and SH C pressure (SC) is applied to the right side of shift valve C. Then shift valve C is moved to the left side to switch the line pressure port and CPC pressure port. The 2nd clutch pressure is changed to line pressure mode, and the 2nd clutch is engaged securely. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

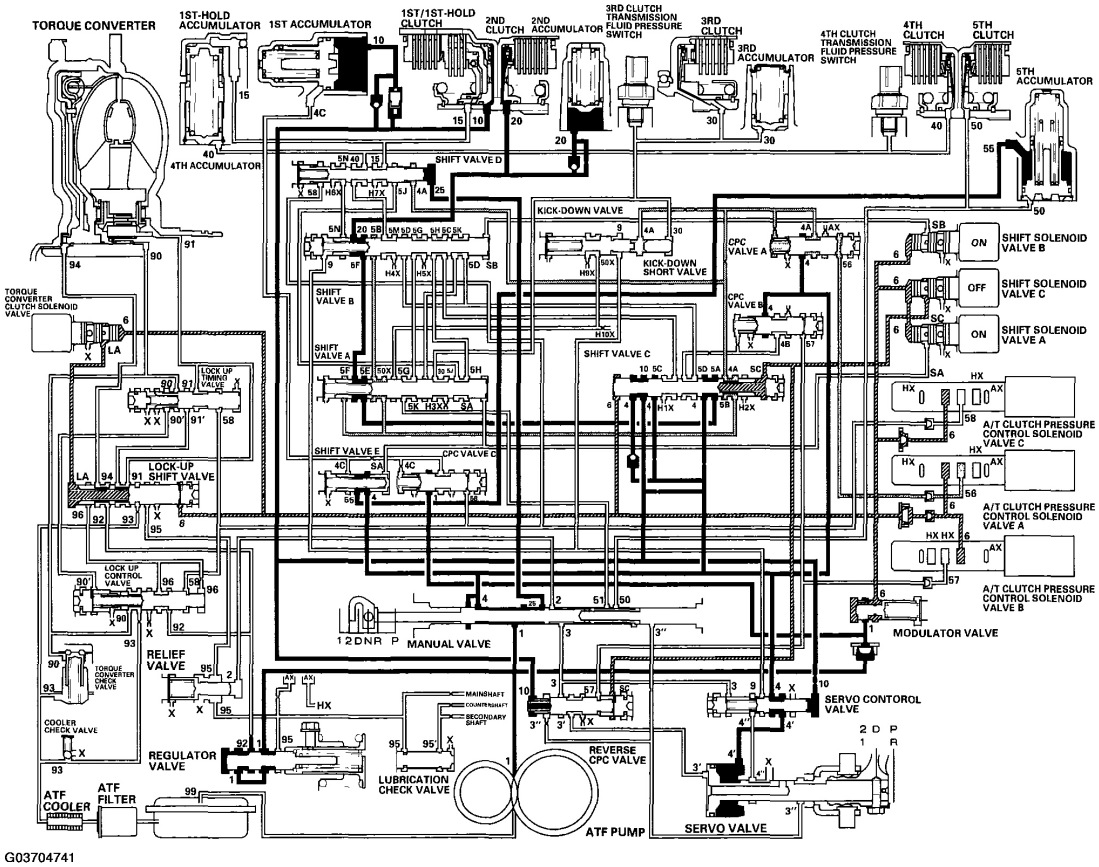


Fig. 47: Oil Circuit Diagram - D Position: Driving In 2nd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Shifting between 2nd gear and 3rd gear

As the speed of the vehicle reaches the prescribed value, the PCM turns shift solenoid valve A OFF. The PCM also controls the A/T clutch pressure control solenoid valve B to apply LS B pressure (57) to CPC valve B. Shift solenoid valve B stays ON, and C stays OFF. Shift solenoid valve A is turned OFF, and SH A pressure (SA) is applied to the right side of shift valves A and E. Then shift valves A and E are moved to the left side to switch the line pressure port and CPC pressure port. Line pressure (4) becomes CPC A pressure (4A) at CPC valve A, and becomes CPC B pressure (4B) at CPC valve B. CPC B pressure (4B) becomes 3rd clutch pressure (30) at shift valve A via shift valves C and B, and flows to the 3rd clutch. The 2nd clutch pressure is changed to CPC pressure mode by switching the position of shift valve A. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

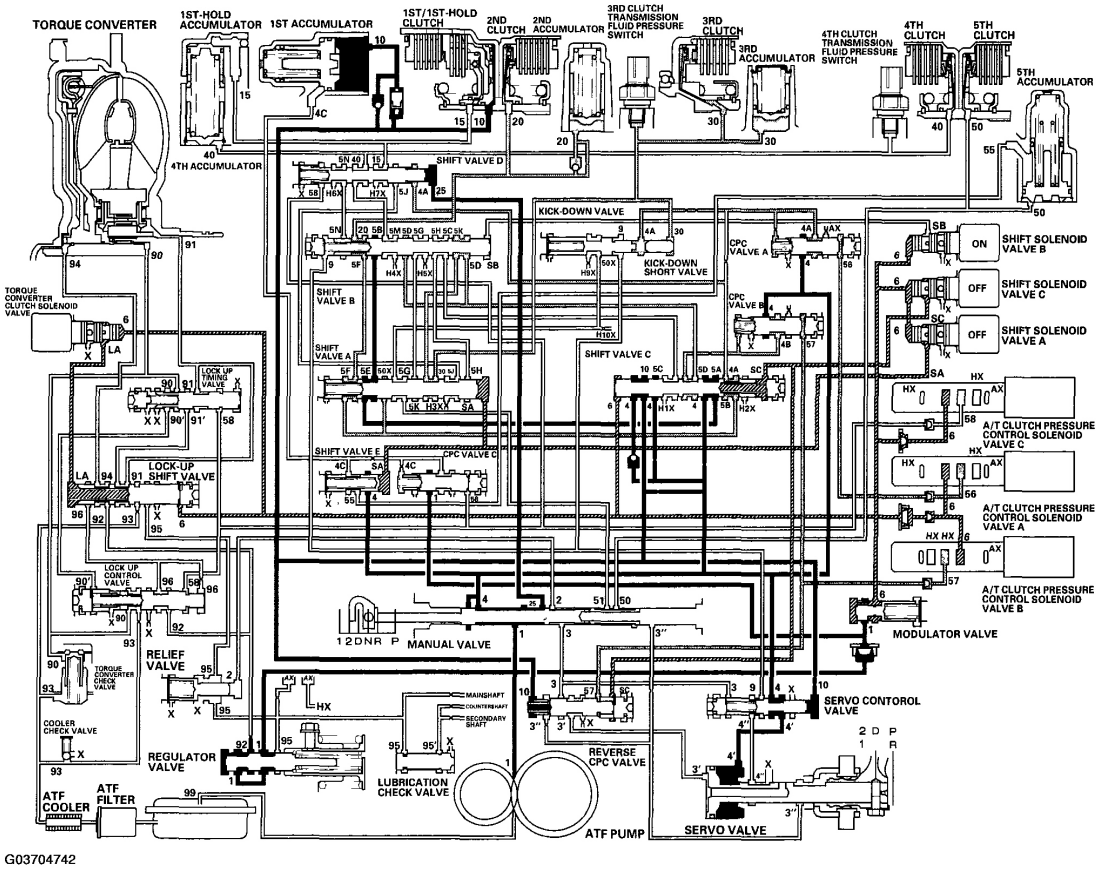


Fig. 48: Oil Circuit Diagram - D Position: Shifting Between 2nd Gear And 3rd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Driving in 3rd gear

The PCM turns shift solenoid valve C ON, and controls A/T clutch pressure control solenoid valve A to release LS A pressure (56) in CPC valve A. Shift solenoid valve A stays OFF, and B stays ON. Releasing LS A pressure (56) in CPC valve A releases CPC A pressure in the 2nd clutch pressure circuit. Shift solenoid valve C is turned ON, and SH C pressure (SC) in the right side of shift valve C is released. Then shift valve C is moved to the right side to switch the line pressure port and CPC pressure port. The 3rd clutch pressure is changed to line pressure mode, and the 3rd clutch is engaged securely. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

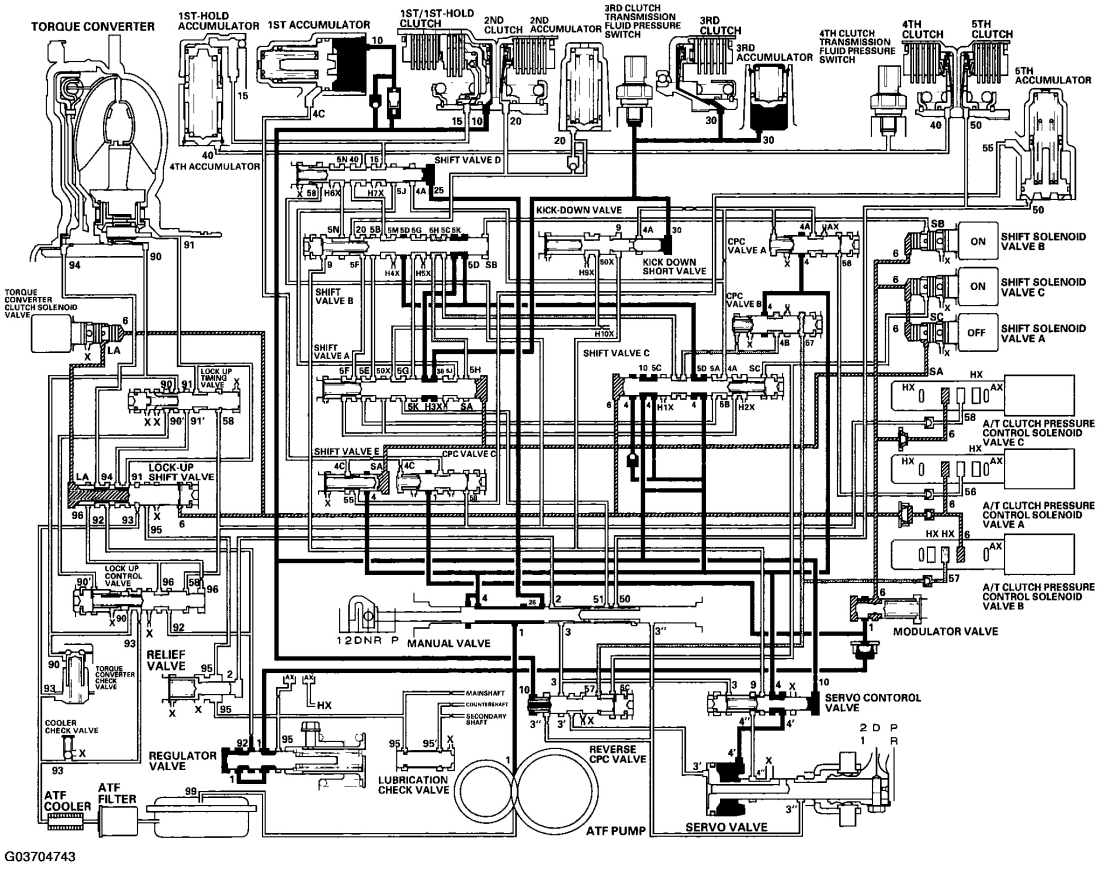
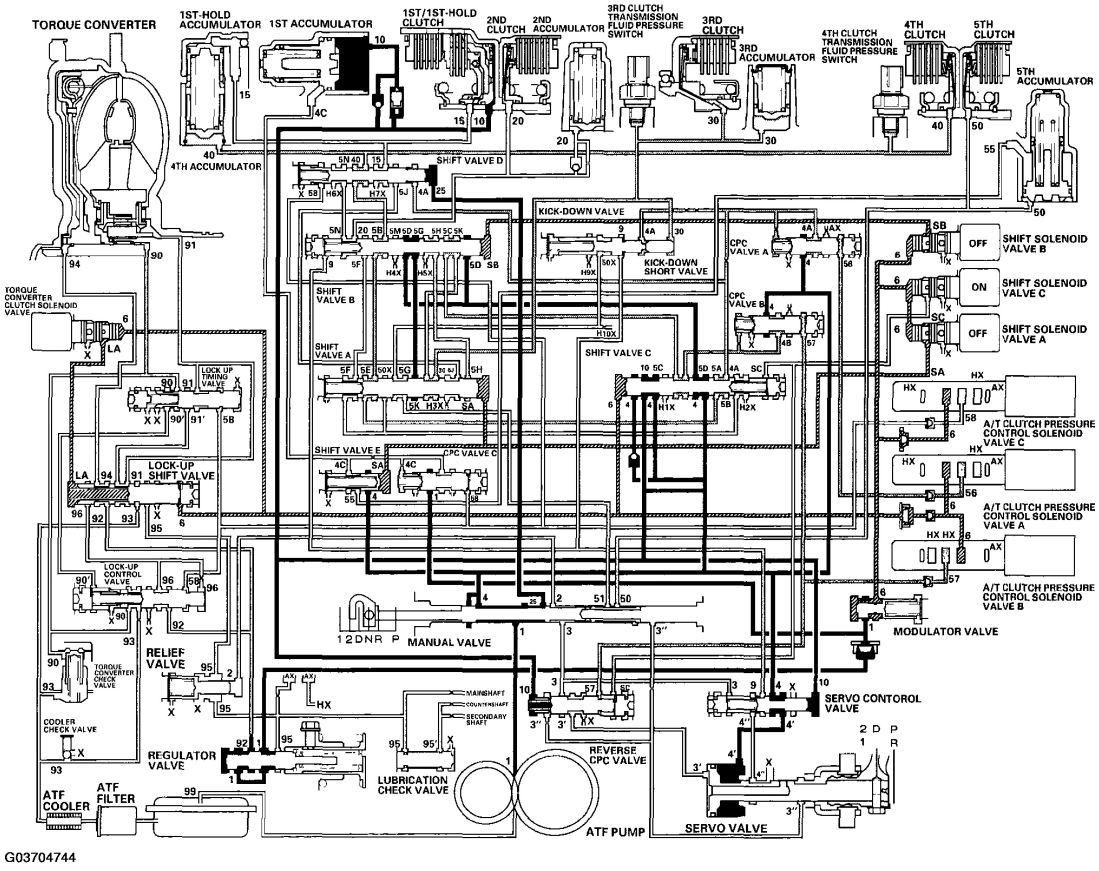


Fig. 49: Oil Circuit Diagram - D Position: Driving In 3rd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Shifting between 3rd gear and 4th gear

As the speed of the vehicle reaches the prescribed value, the PCM turns shift solenoid valve B OFF. The PCM also controls the A/T clutch pressure control solenoid valve A to apply LS A pressure (56) to CPC valve A. Shift solenoid valve A stays OFF, and C stays ON. Shift solenoid valve B is turned OFF, and SH B pressure (SB) is applied to the right side of shift valve B. Then shift valve B is moved to the left side to switch the line pressure port and CPC pressure port. Line pressure (4) becomes CPC A pressure (4A) at CPC valve A, and becomes CPC B pressure (4B) at CPC valve B. CPC A pressure (4A) becomes 4th clutch pressure (40) at shift valve D via shift valves C, A, and B, and flows to the 4th clutch. The 3rd clutch pressure is changed to CPC pressure mode by switching the position of shift valve B. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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



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Fig. 50: Oil Circuit Diagram - D Position: Shifting Between 3rd Gear And 4th Gear

Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Driving in 4th gear

The PCM turns shift solenoid valve C OFF, and controls A/T clutch pressure control solenoid valve B to release LS B pressure (57) in CPC valve B. Shift solenoid valves A and B stay OFF. Releasing LS B pressure (57) in CPC valve B releases CPC B pressure in the 3rd clutch pressure circuit. Shift solenoid valve C is turned OFF, and SH C pressure (SC) is applied to the right side of shift valve C. Then shift valve C is moved to the left side to switch the line pressure port and CPC pressure port. Line pressure (4) from the manual valve becomes 4th clutch pressure (40) at shift valve D via shift valves C, A, and B, and flows to the 4th clutch. The 4th clutch pressure is changed to line pressure mode by switching the position of shift valve C, and the 4th clutch is engaged securely. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

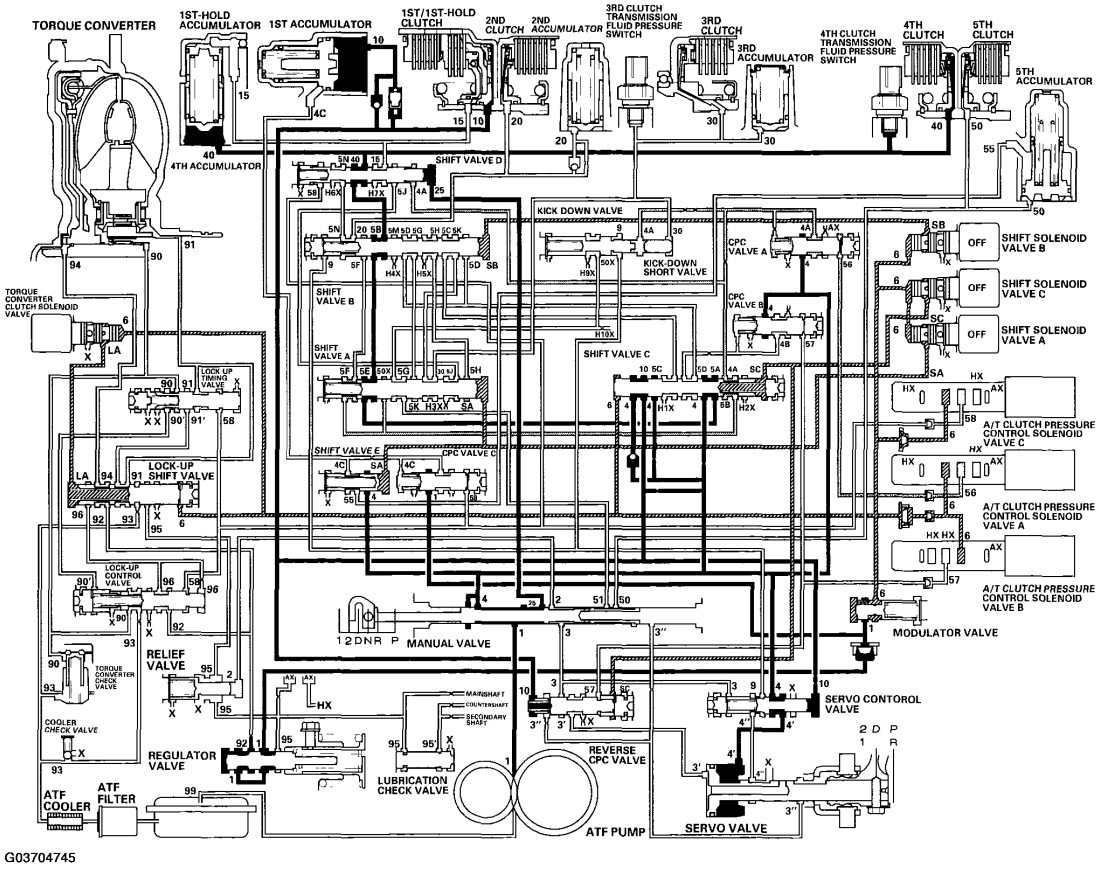


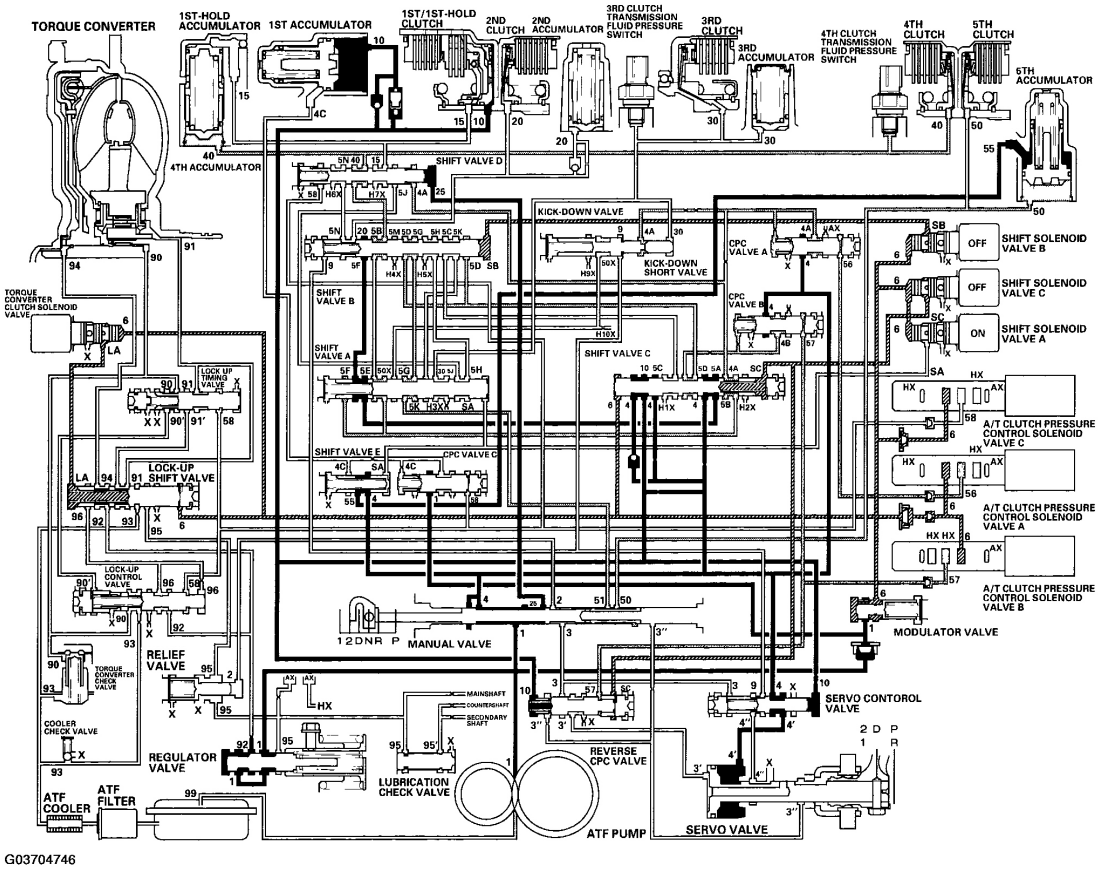
Fig. 51: Oil Circuit Diagram - D Position: Driving In 4th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Shifting between 4th gear and 5th gear

As the speed of the vehicle reaches the prescribed value, the PCM turns shift solenoid valve A ON. The PCM also controls the A/T clutch pressure control solenoid valve B to apply LS B pressure (57) to CPC valve B.

Shift solenoid valve B and C stay OFF. Shift solenoid valve A is turned ON, and SH A pressure (SA) in the right side of shift valves A and E is released. Then shift valves A and E are moved to the left side to switch the line pressure port and CPC pressure port. Line pressure (4) becomes CPC A pressure (4A) at CPC valve A, and becomes CPC B pressure (4B) at CPC valve B. CPC B pressure (4B) becomes 5th clutch pressure (50) at shift valve C, and flows to the 5th clutch via shift valves B and A and the manual valve. The 4th clutch pressure is changed to CPC pressure mode by switching the position of shift valve A. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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



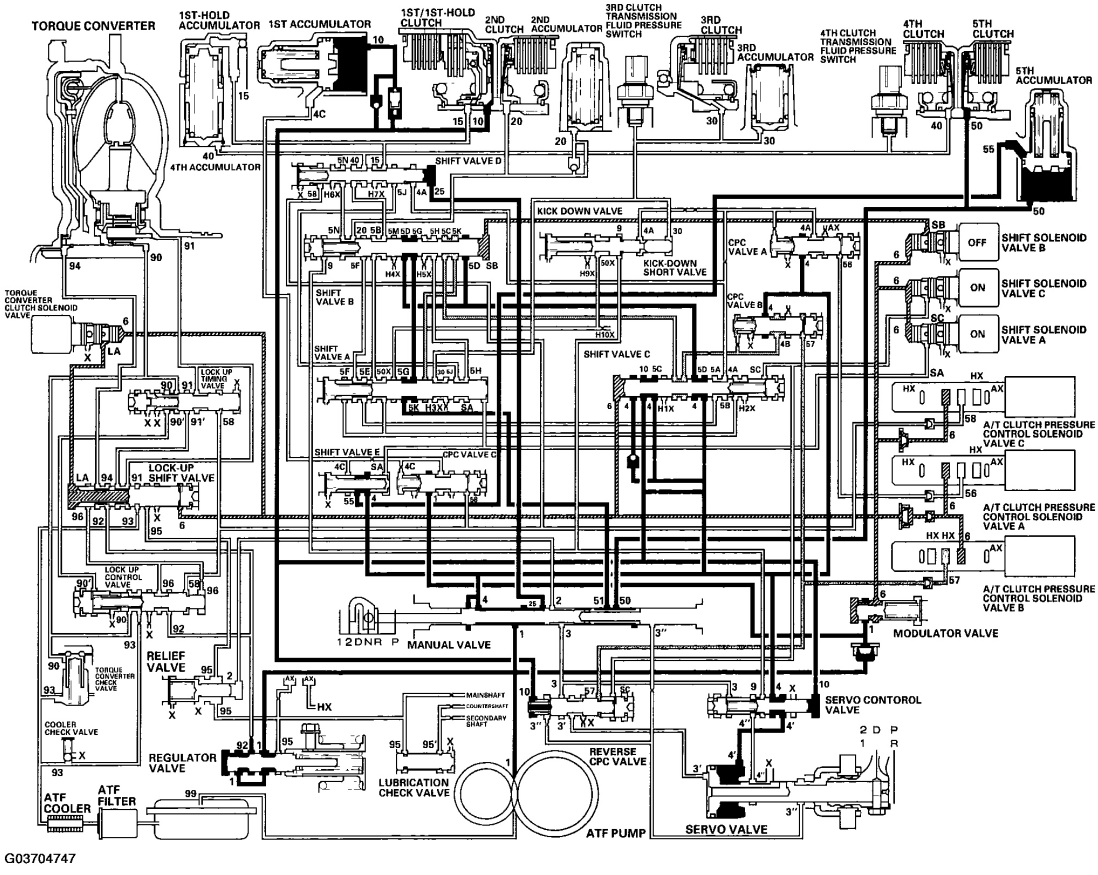
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Fig. 52: Oil Circuit Diagram - D Position: Shifting Between 4th Gear And 5Th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D Position: Driving in 5th gear

The PCM turns shift solenoid valve C ON, and controls A/T clutch pressure control solenoid valve A to release LS A pressure (56) in CPC valve A. Shift solenoid valve A stays ON, and B stays OFF. Releasing LS A pressure (56) in CPC valve A releases CPC A pressure in the 4th clutch pressure circuit. Shift solenoid valve C is turned ON, and SH C pressure (SC) in the right side of shift valve C is released. Then shift valve C is moved to the right side to switch the line pressure port and CPC pressure port. Line pressure (4) from the manual valve becomes 5th clutch pressure (50) at the manual valve, via shift valves C, B, and A, and flows to the 5th clutch. The 5th clutch pressure is changed to line pressure mode by switching the position of shift valve C. The 5th clutch is engaged securely, and the 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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



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Fig. 53: Oil Circuit Diagram - D Position: Driving In 5Th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2 Position

The PCM controls the shift solenoid valves and the A/T clutch pressure control solenoid valves. The conditions of the shift solenoid valves and the positions of shift valves are as follows:

- Shift solenoid valve A is turned ON, and shift valve A stays on the right side.
- Shift solenoid valve B is turned ON, and shift valve B stays on the right side.
- Shift solenoid valve C is turned OFF, and shift valve C stays on the left side.

The PCM also controls A/T clutch pressure control solenoid valve A to apply LS A pressure (56) to CPC valve A. Line pressure (4) from the manual valve becomes 2nd clutch pressure (20) at shift valve B, via shift valves C and A. 2nd clutch pressure (20) is applied to the 2nd clutch, and

the 2nd clutch is engaged. The 1st clutch is also engaged. No power is transmitted because of the one-way clutch.

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

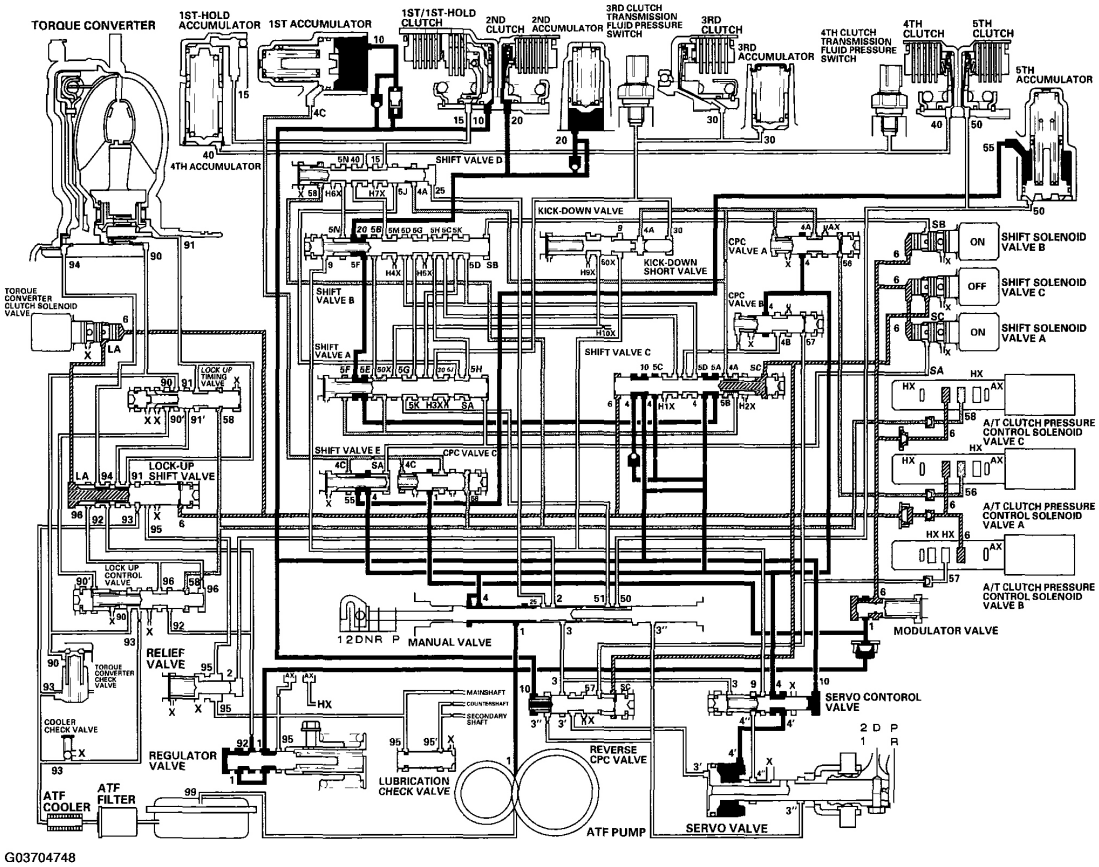


Fig. 54: Oil Circuit Diagram - 2 Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position

The PCM controls the shift solenoid valves and the A/T clutch pressure control solenoid valves. The conditions of the shift solenoid valves and the positions of shift valves are as follows:

- Shift solenoid valve A is turned ON, and shift valve A stays on the right side.
- Shift solenoid valve B is turned ON, and shift valve B stays on the right side.
- Shift solenoid valve C is turned ON, and shift valve C moves to the right side by modulator pressure (6).

The PCM also controls A/T clutch pressure control solenoid valve B to apply LS B pressure (57) to CPC valve B. Line pressure (4) from the manual valve becomes 1st clutch pressure (10) at shift valve C. 1st clutch pressure (10) is applied to the 1st clutch, and the 1st clutch is engaged. Line pressure (4) also flows to CPC valve B, and becomes CPC B pressure (4B). CPC B pressure (4B) becomes 1st-hold clutch pressure (15) at shift valve D, via shift valves C, B, and A. 1st-hold clutch pressure (15) is applied to the 1st-hold clutch, and the 1st-hold clutch is engaged.

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

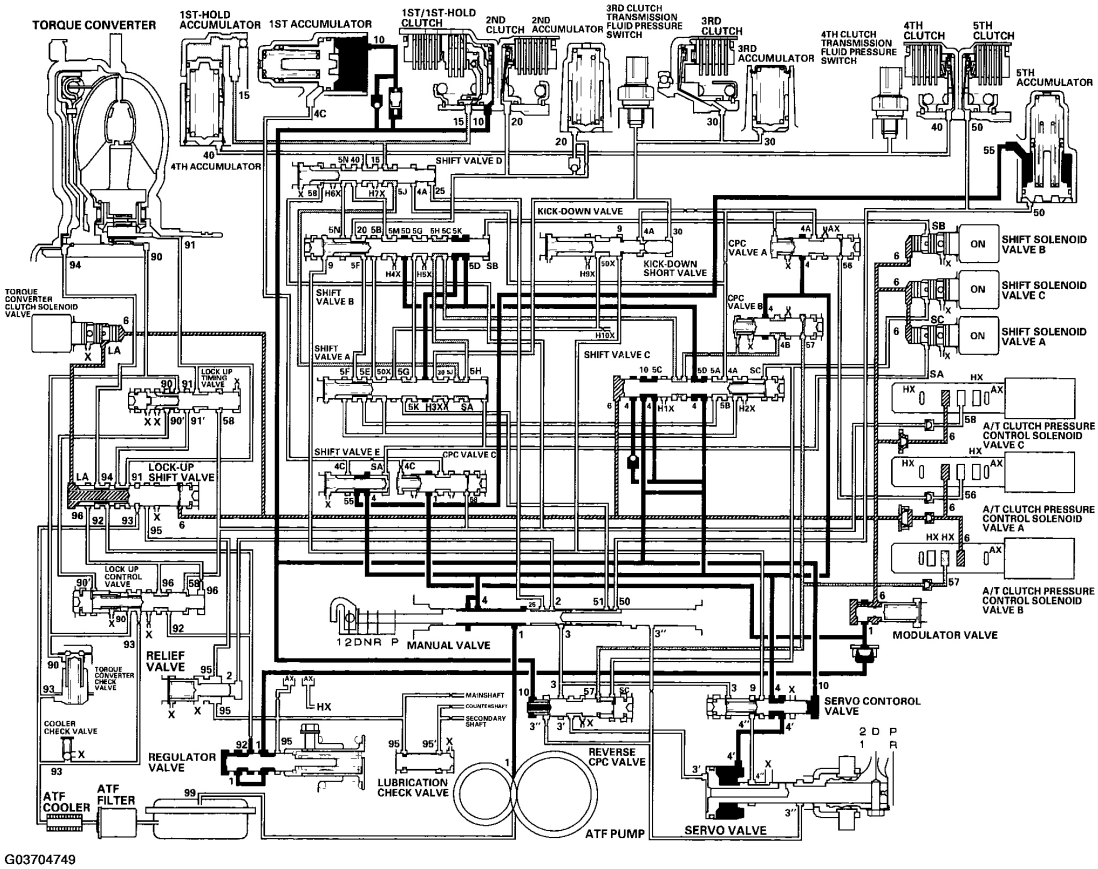


Fig. 55: Oil Circuit Diagram - 1 Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position: Shifting to the R position from the P or N position

Line pressure (1) becomes line pressure (3) at the manual valve, and flows to the reverse CPC valve. Line pressure (3) is regulated by the reverse CPC valve and becomes line pressure (3'). Line pressure (3') pushes the servo valve to the reverse position, passes through the servo valve,

and flows to the manual valve. Line pressure (3") becomes 5th clutch pressure (50). The 5th clutch pressure (50) is applied to the 5th clutch, and 5th clutch is engaged with the reverse CPC pressure mode.

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

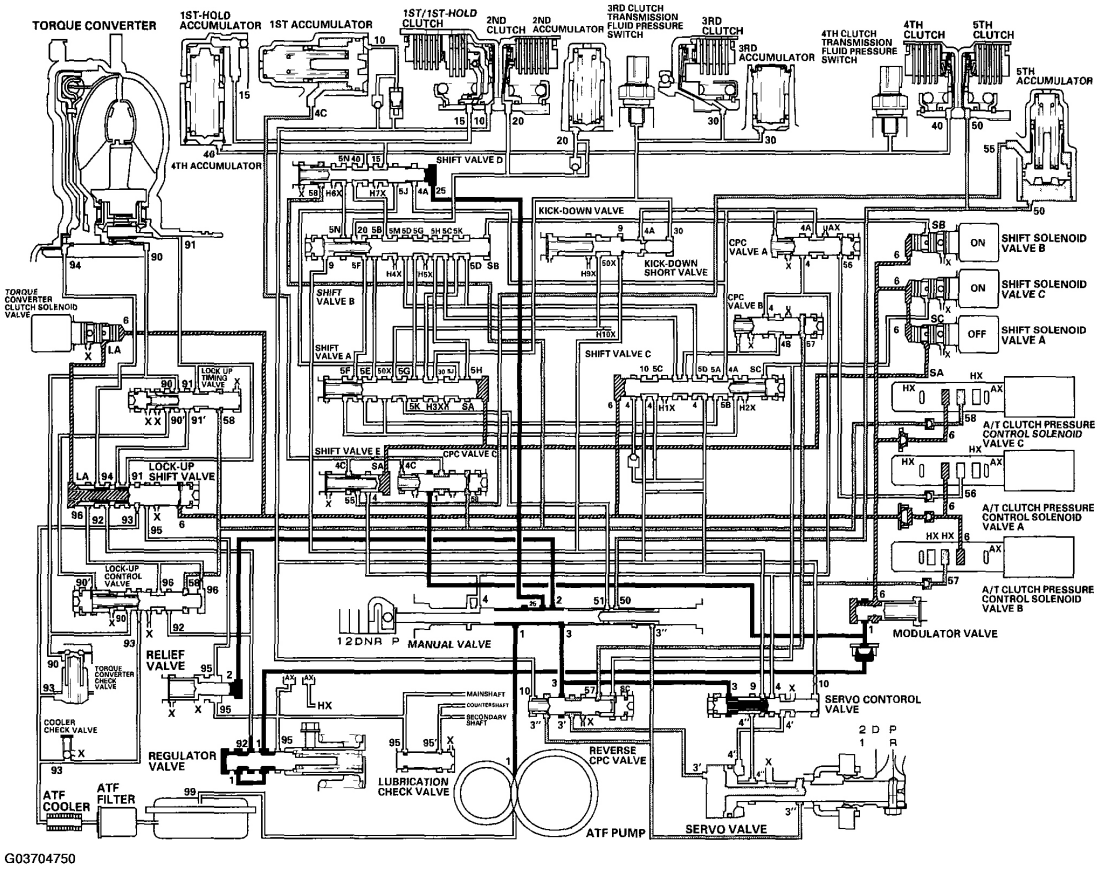


Fig. 56: Oil Circuit Diagram - R Position: Shifting To R Position From P Or N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

R Position: Driving in reverse gear

The PCM turns shift solenoid valve C OFF. Shift solenoid valve A stays OFF and B stays ON. Shift solenoid valve C is turned OFF, and SH C pressure (SC) is applied to the right side of the reverse CPC valve. Then the reverse CPC valve moves to the left side, creating full line pressure. Line pressure to the 5th clutch is the same as when shifting to the R position, and 5th clutch pressure increases. The 5th clutch is engaged with line pressure mode.

Reverse Inhibitor Control

When the R position is selected while the vehicle is moving forward at speeds over 6 mph (10 km/h), the PCM outputs to turn shift solenoid valves A and C ON; and shift solenoid valve B remains ON. The reverse CPC valve is moved to right side and covers the port to stop the line pressure (3') to the servo valve. The line pressure (3') is not applied to the servo valve, and the 5th clutch pressure (50) is not applied to the 5th clutch. As a result, power is not transmitted to the reverse position.

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

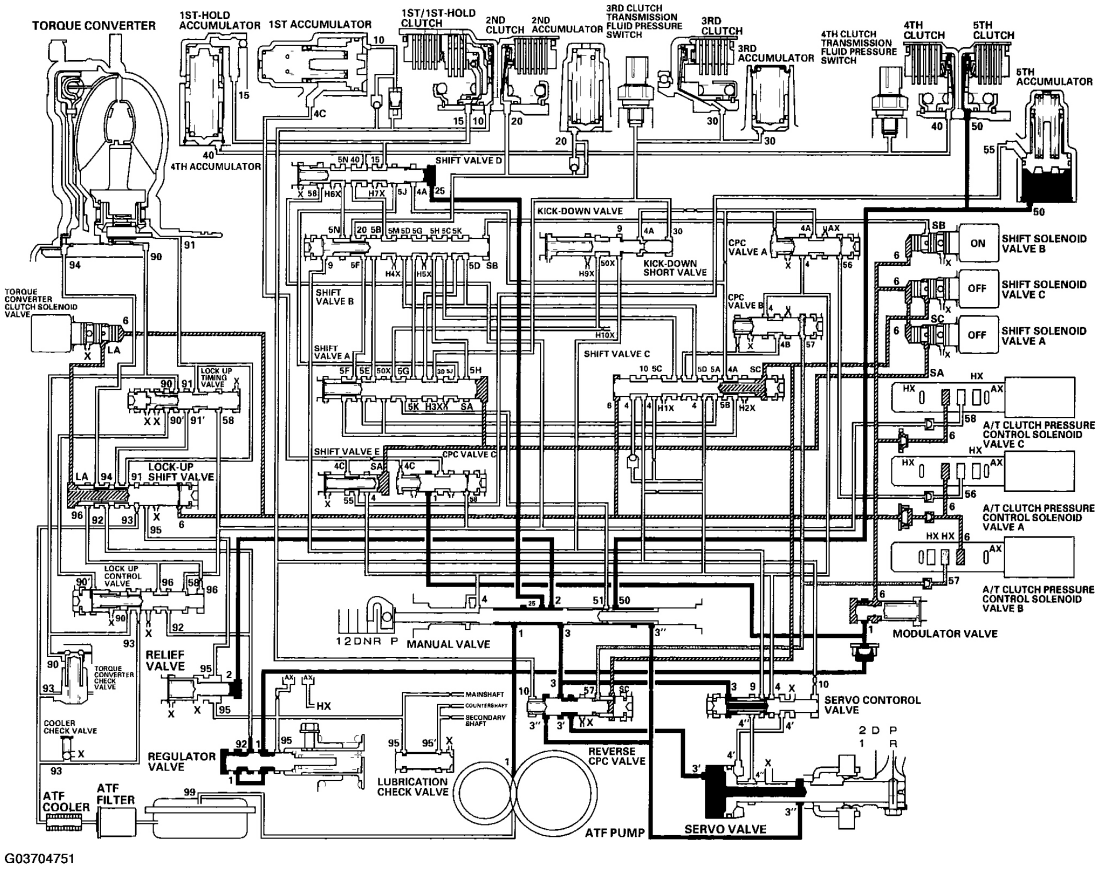


Fig. 57: Oil Circuit Diagram - R Position: Driving In Reverse Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

P Position

Shift solenoid valve C is turned OFF by the PCM, and SH C pressure (SC) is applied to the right

side of the reverse CPC valve. Then the reverse CPC valve is moved to the left side to uncover the port leading line pressure (3) to the servo valve. Line pressure (3') passes through the servo valve and flows to the manual valve. Line pressure (3(" is intercepted at the manual valve, and is not applied to the clutches.

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

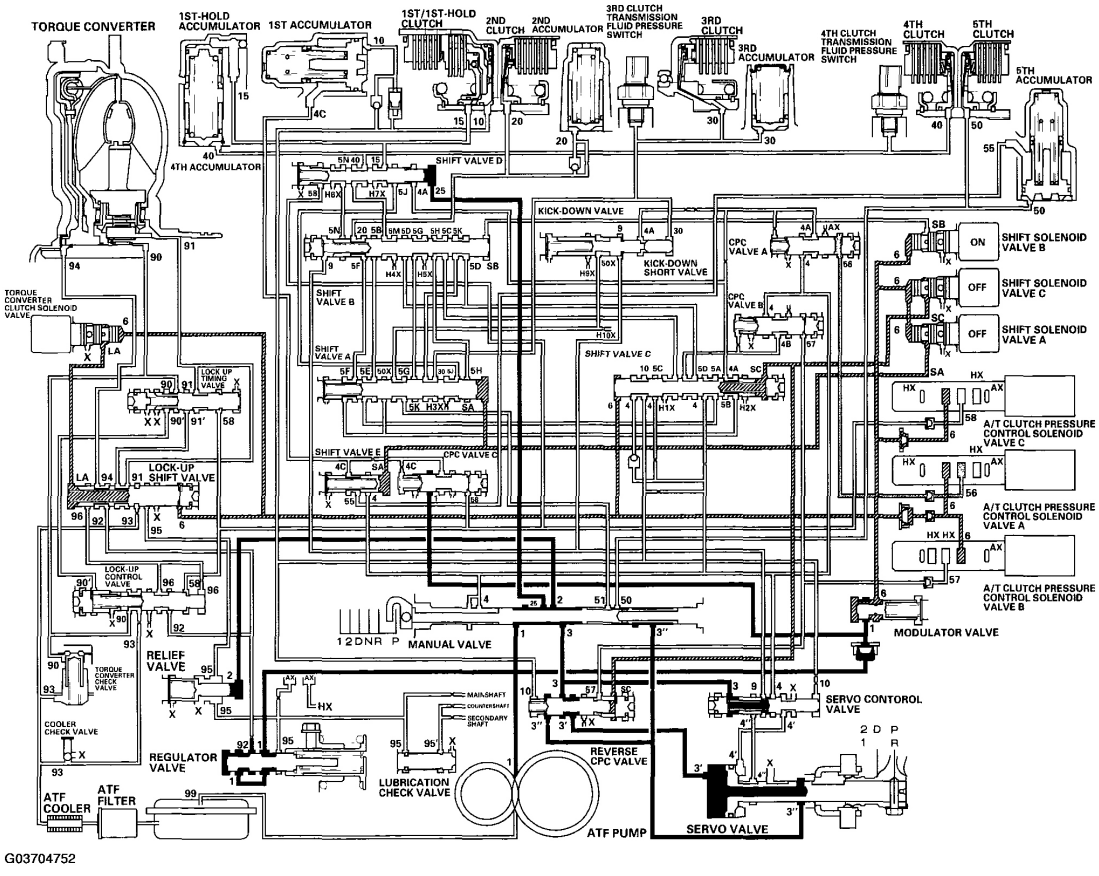
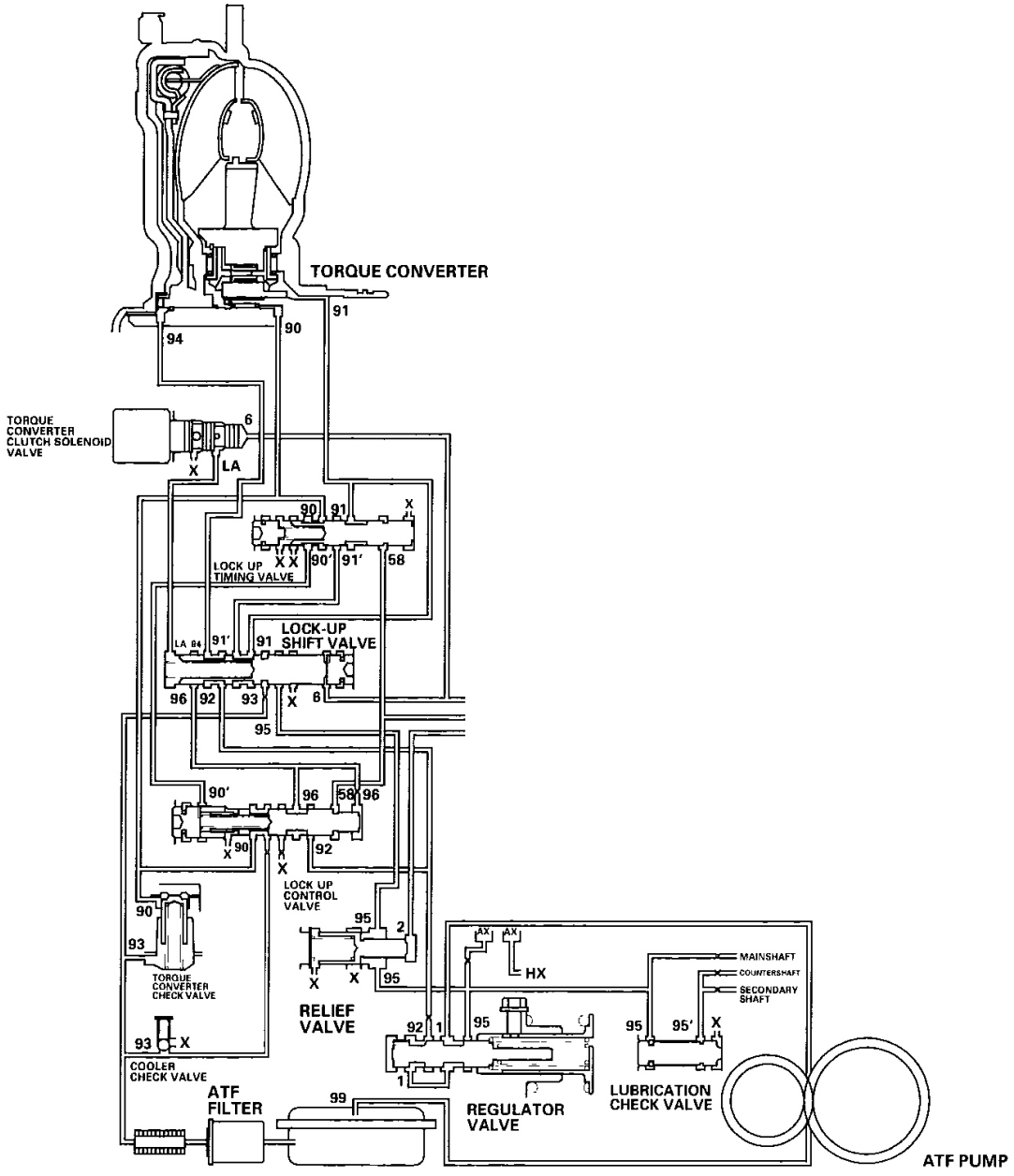


Fig. 58: Oil Circuit Diagram - P Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Lock-up System

The lock-up mechanism of the torque converter clutch operates in the D position (2nd, 3rd, 4th, and 5th), and D position D3 driving mode (2nd and 3rd). The pressurized fluid is drained from the back of the torque converter through a fluid passage, causing the torque converter clutch piston to be held against the torque converter cover. As this takes place, the mainshaft rotates at the same speed as the engine crankshaft. Together with hydraulic control, the PCM optimizes the

timing and amount of the lock-up mechanism. When the torque converter clutch solenoid valve activates, modulator pressure changes to switch lock-up ON and OFF. The lock-up control valve and the lock-up timing valve control the amount of lock-up according to A/T clutch pressure control solenoid valve C. The torque converter clutch solenoid valve is mounted on the torque converter housing, and A/T clutch pressure control solenoid valve C is mounted on the transmission housing. They are controlled by the PCM.



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Fig. 59: Oil Circuit Diagram - Lock-Up System
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Torque Converter Clutch Lock-up ON (Engaging Torque Converter Clutch)

Fluid in the chamber between the torque converter cover and the torque converter clutch piston is drained off, and fluid entering from the chamber between the pump and stator exerts pressure through the torque converter clutch piston against the torque converter cover. The torque converter clutch piston engages with the torque converter cover; torque converter clutch lock-up ON, and the mainshaft rotates at the same speed as the engine.

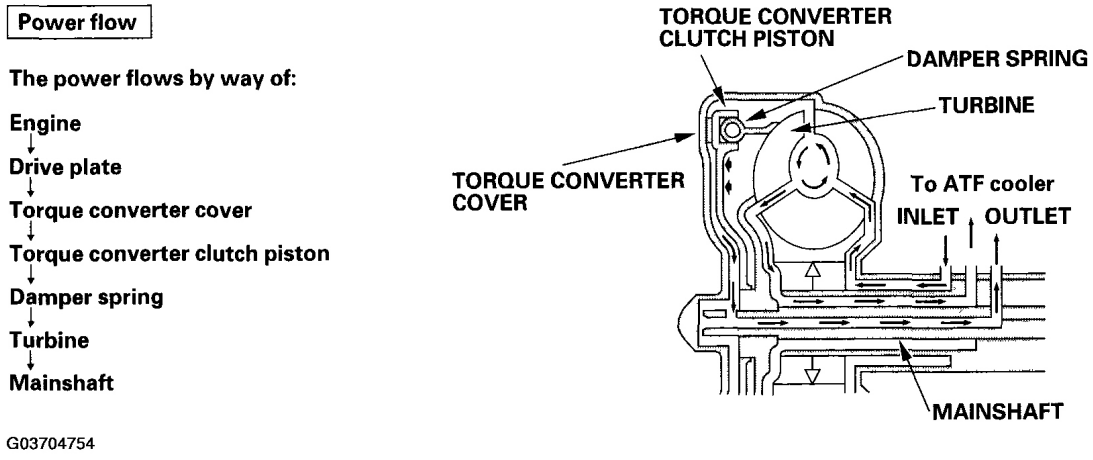


Fig. 60: Oil Circuit Diagram - Torque Converter Clutch Lock-Up On (Engaging Torque Converter Clutch)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Torque Converter Clutch Lock-up OFF (Disengaging Torque Converter Clutch)

Fluid entered from the chamber between the torque converter cover and the torque converter clutch piston passes through the torque converter and goes out from the chambers between the turbine and the stator, and between the pump and the stator. As a result, the torque converter clutch piston moves away from the torque converter cover, and the torque converter clutch is released; torque converter clutch lock-up OFF.

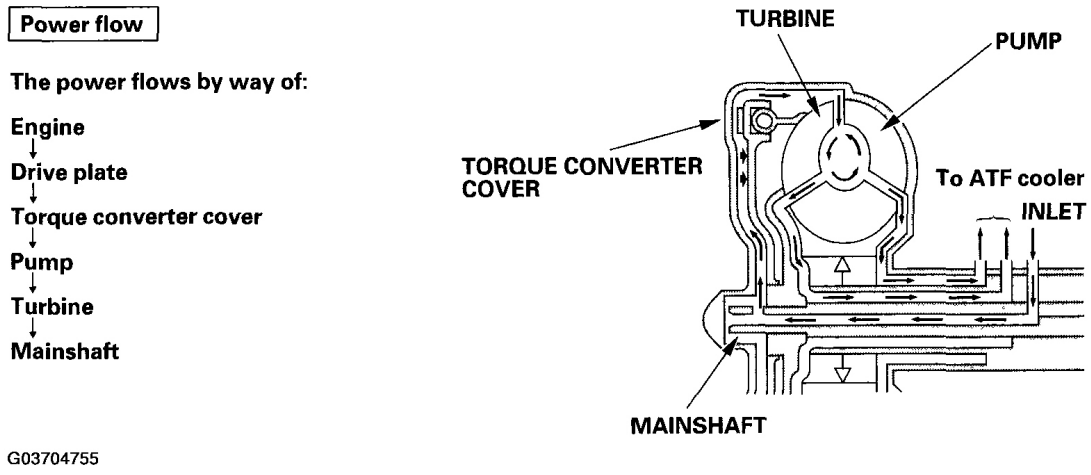


Fig. 61: Oil Circuit Diagram - Torque Converter Clutch Lock-Up Off (Disengaging Torque Converter Clutch)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

No Lock-up

The torque converter clutch solenoid valve is turned OFF by the PCM. The lock-up shift valve receives LC pressure (LA) on the left side, and modulator pressure (6) on the right side. The lock-up shift valve is in the right side to uncover the port leading torque converter pressure (92) to the left side of the torque converter. Torque converter pressure (92) becomes torque converter pressure (94), and enters into the left side of the torque converter to disengage the torque converter clutch. The torque converter clutch is OFF.

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

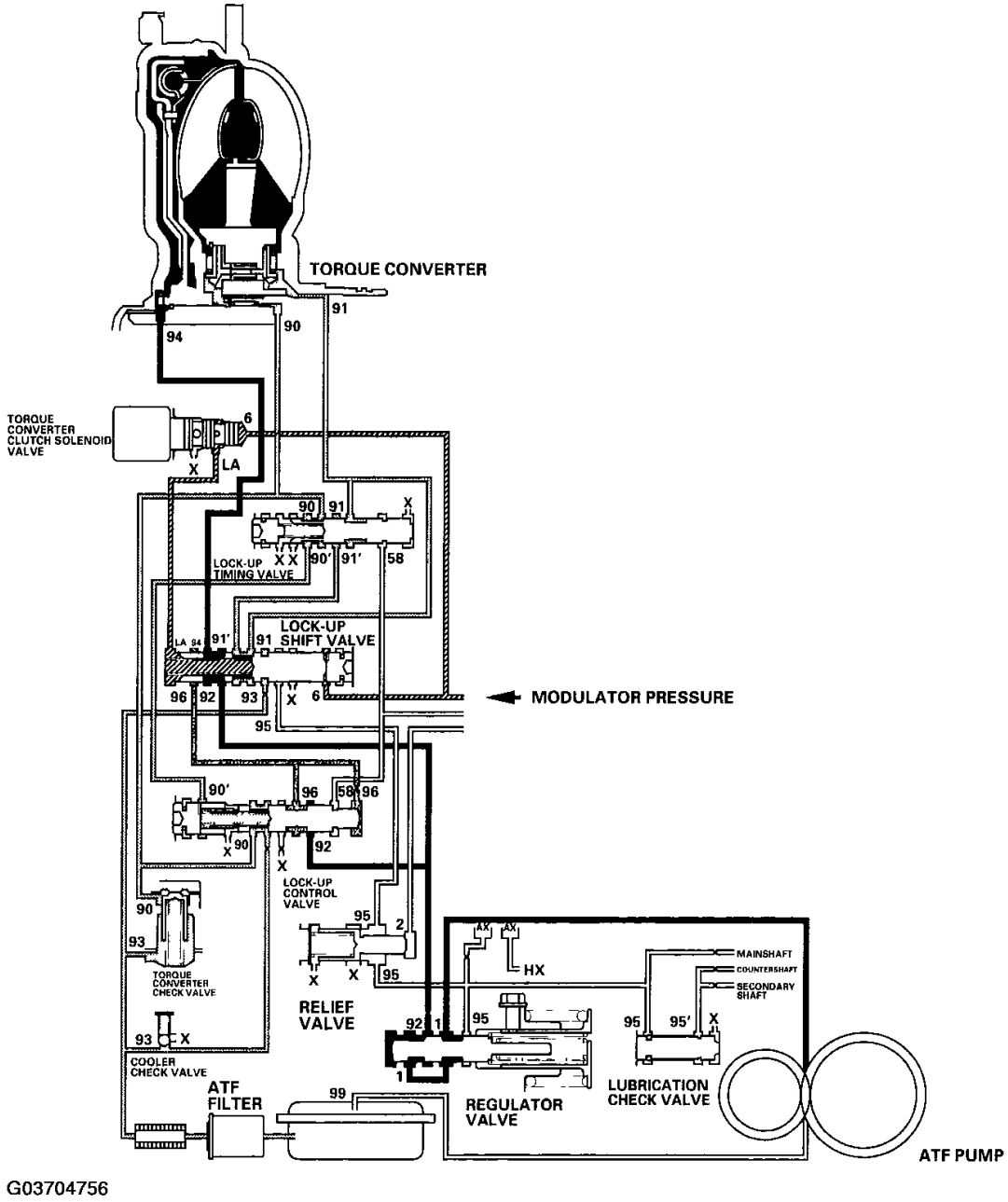


Fig. 62: Oil Circuit Diagram - No Lock-Up
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Partial Lock-up

As the speed of the vehicle reaches the prescribed value, the torque converter clutch solenoid valve is turned ON by the PCM to release LC pressure (LA) in the left cavity of the lock-up shift

valve. Modulator pressure (6) is applied to the right side of the lock-up shift valve, then the lock-up shift valve is moved in the left side to switch the port leading torque converter pressure to the right side of the torque converter. Torque converter pressure (91) is applied to the right side of the torque converter to engage the torque converter clutch. The PCM also controls A/T clutch pressure control solenoid valve C, and LS C pressure (58) is applied to the lock-up control valve and the lock-up timing valve. When LS C pressure (58) is lower, torque converter pressure (91) from the lock-up timing valve is lower. The torque converter clutch is engaged partially. LS C pressure (58) increases, and the lock-up timing valve is moved to the left side to uncover the port leading torque converter pressure to high. The torque converter clutch is then engaged securely. Under this condition, the torque converter clutch is engaged by pressure from the right side of the torque converter; this condition is partial lock-up.

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

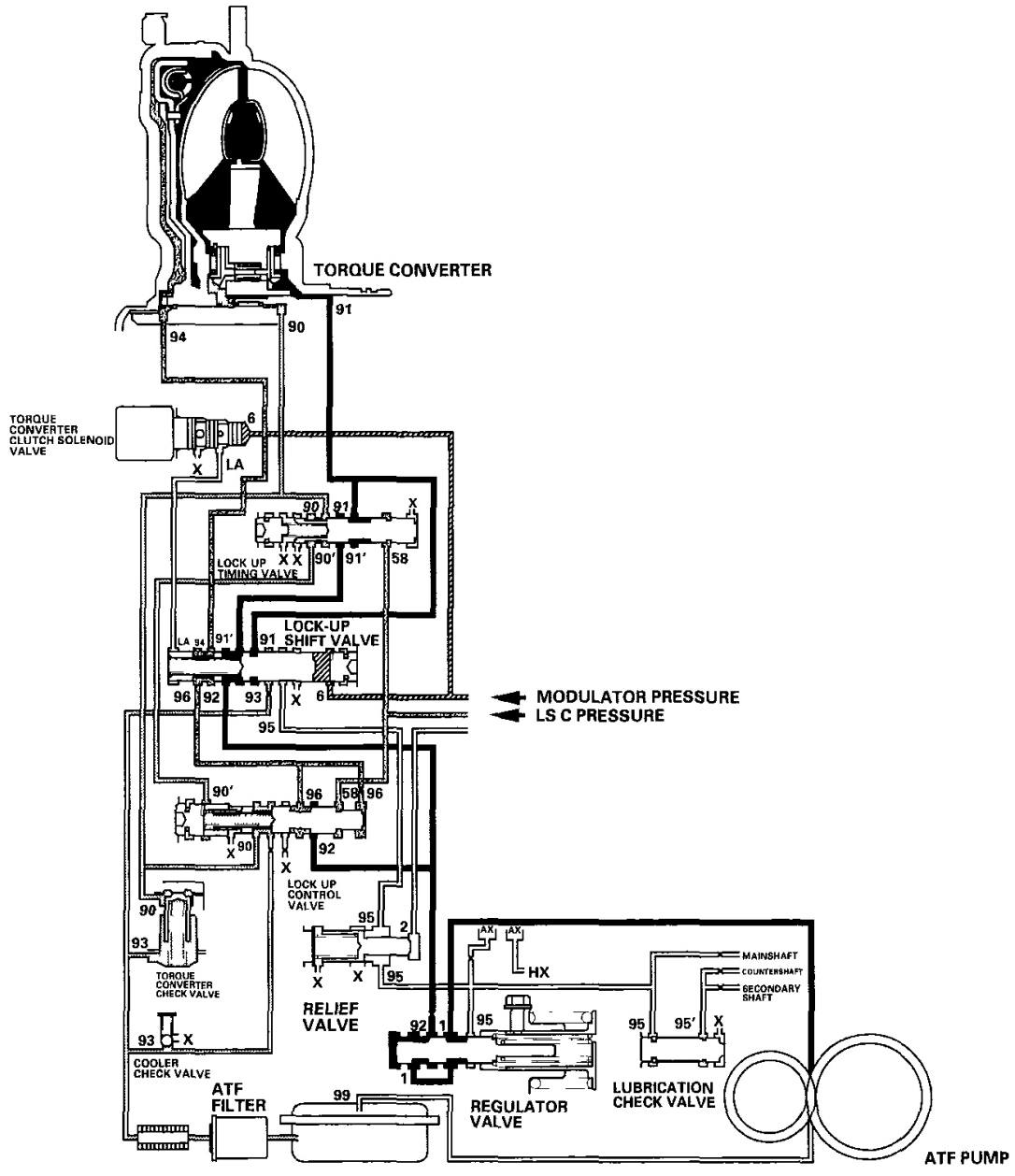


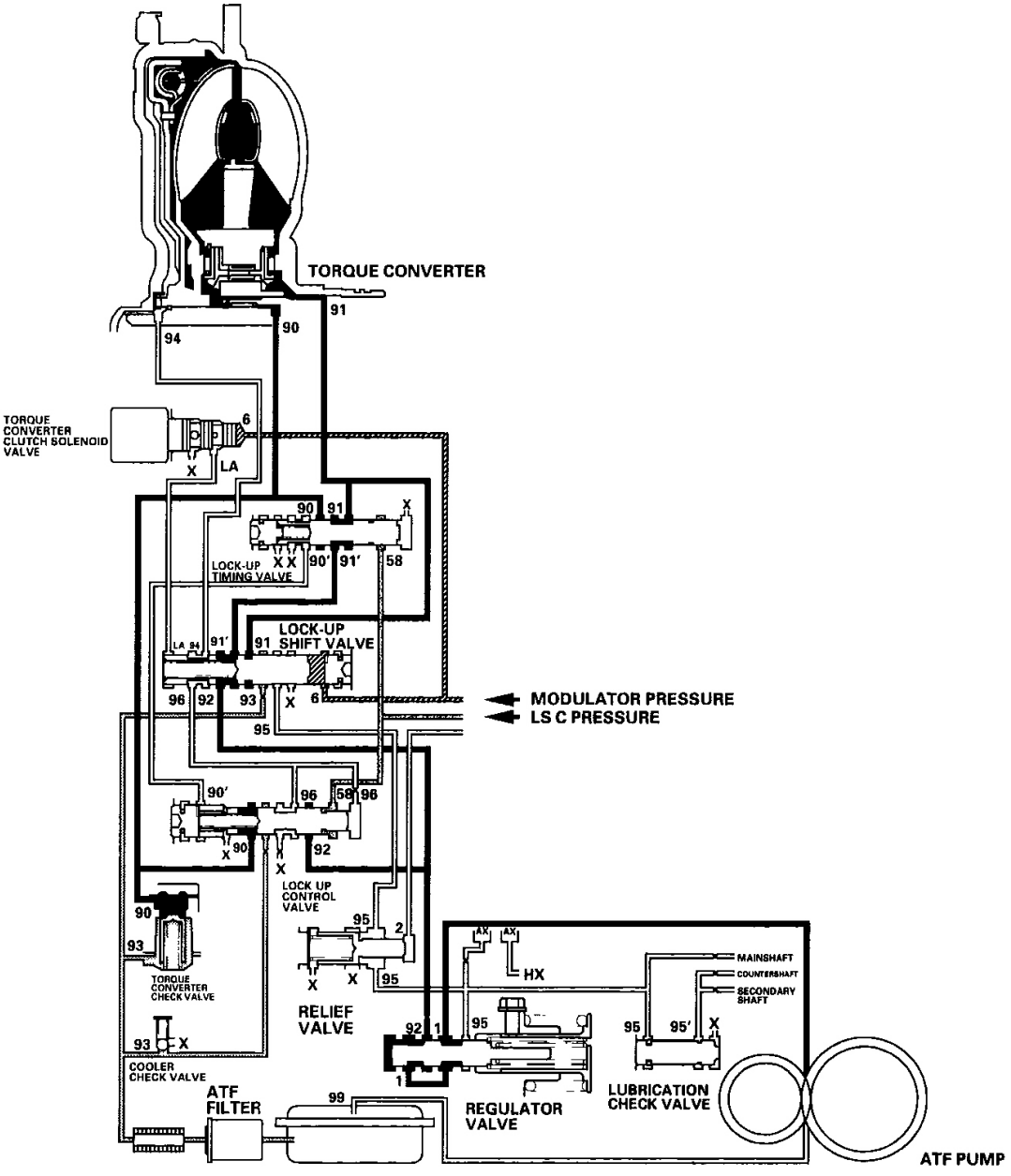
Fig. 63: Oil Circuit Diagram - Partial Lock-Up
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Full Lock-up

When the vehicle speed increases, the PCM sends a signal to the A/T clutch pressure control solenoid valve C to increase LS C pressure (58). The LS C pressure (58) is applied to the lock-up

control valve and the lock-up timing valve, and moves them to the left side. Under this condition, torque converter back pressure is released fully, causing the torque converter clutch to be fully engaged.

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



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Fig. 64: Oil Circuit Diagram - Full Lock-Up
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Circuit Diagram - PCM A/T Control System

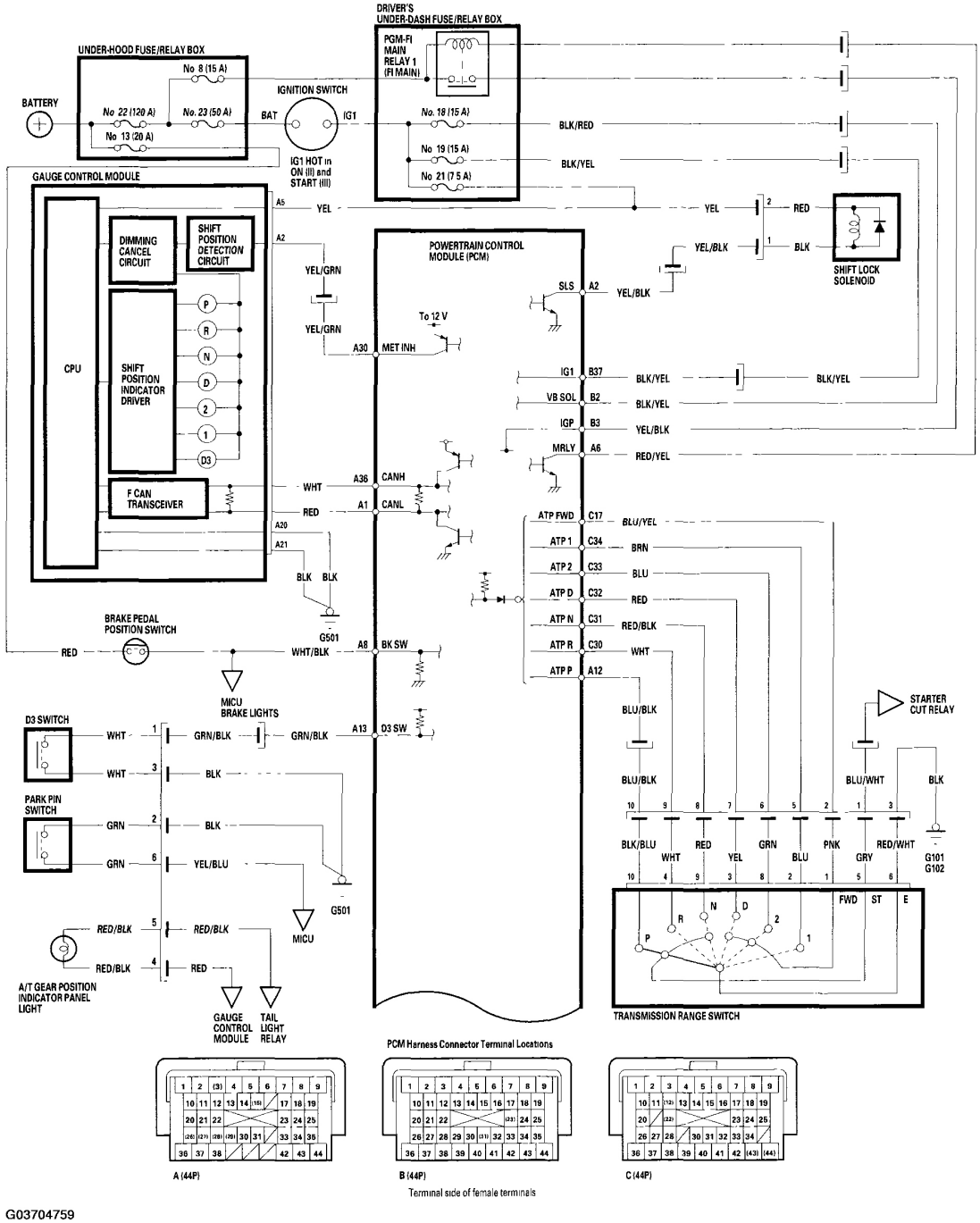


Fig. 65: PCM A/T Control System - Circuit Diagram (1 Of 2)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

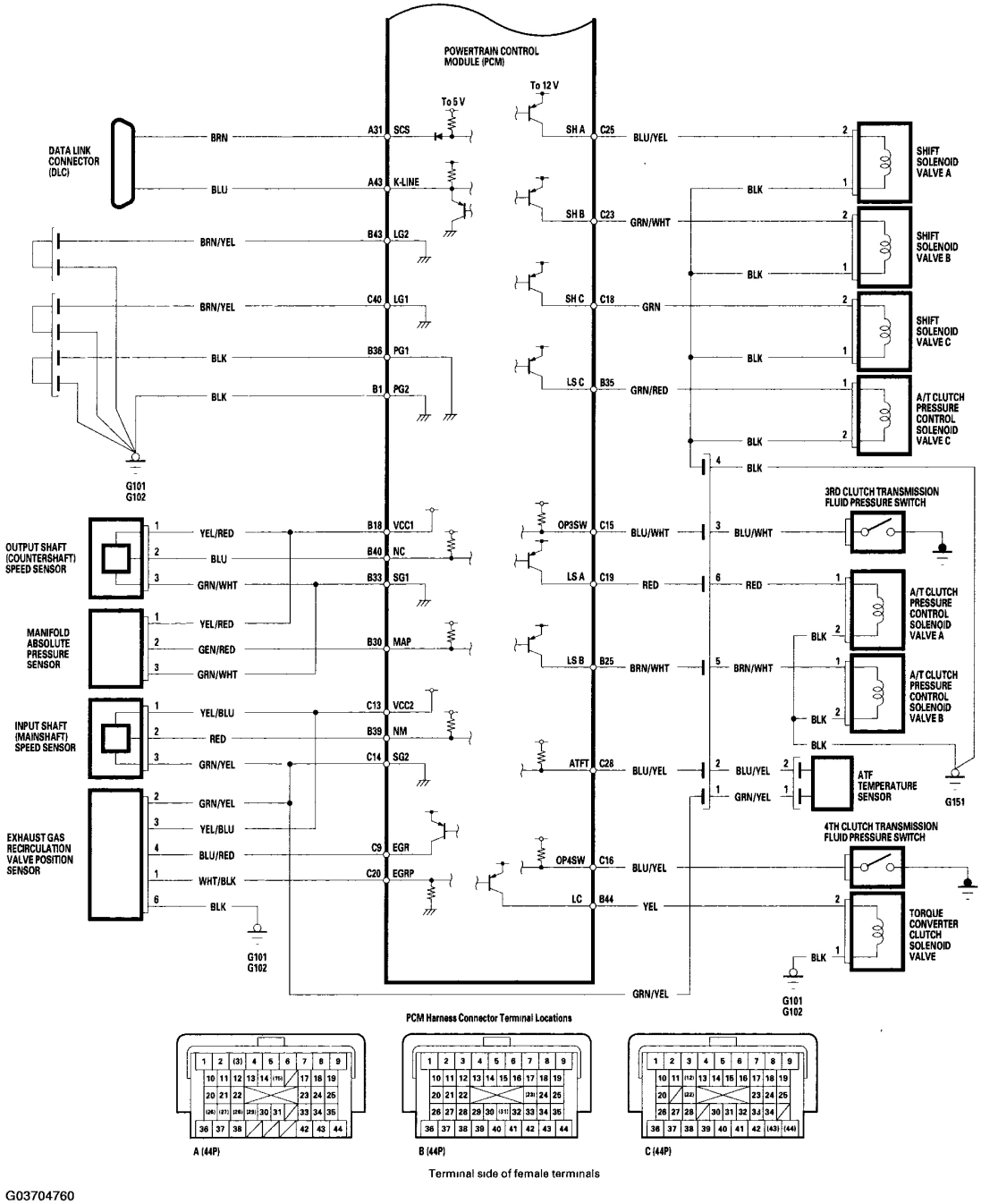


Fig. 66: PCM A/T Control System - Circuit Diagram (2 Of 2)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC INDEX

DTC INDEX

DTC	Description
DTC P0705	Short in Transmission Range Switch Circuit (Multiple Shift-position Input)
DTC P0706	Open in Transmission Range Switch Circuit
DTC P0711	Problem in ATF Temperature Sensor Circuit
DTC P0712	Short in ATF Temperature Sensor Circuit
DTC P0713	Open in ATF Temperature Sensor Circuit
DTC P0716	Problem in Input Shaft (Mainshaft) Speed Sensor Circuit
DTC P0717	Problem in Input Shaft (Mainshaft) Speed Sensor Circuit (No Signal Input)
DTC P0718	Input Shaft (Mainshaft) Speed Sensor Intermittent Failure
DTC P0721	Problem in Output Shaft (Countershaft) Speed Sensor Circuit
DTC P0722	Problem in Output Shaft (Countershaft) Speed Sensor Circuit (No Signal Input)
DTC P0723	Output Shaft (Countershaft) Speed Sensor Intermittent Failure
DTC P0731	Problem in 1st Clutch and 1st Clutch Hydraulic Circuit
DTC P0732	Problem in 2nd Clutch and 2nd Clutch Hydraulic Circuit
DTC P0733	Problem in 3rd Clutch and 3rd Clutch Hydraulic Circuit
DTC P0734	Problem in 4th Clutch and 4th Clutch Hydraulic Circuit
DTC P0735	Problem in 5th Clutch and 5th Clutch Hydraulic Circuit
DTC P0741	Torque Converter Clutch Hydraulic Circuit Stuck OFF
DTC P0746	A/T Clutch Pressure Control Solenoid Valve A Stuck OFF
DTC P0747	A/T Clutch Pressure Control Solenoid Valve A Stuck ON
DTC P0751	Shift Solenoid Valve A Stuck OFF

DTC P0752	Shift Solenoid Valve A Stuck ON
DTC P0756	Shift Solenoid Valve B Stuck OFF
DTC P0757	Shift Solenoid Valve B Stuck ON
DTC P0761	Shift Solenoid Valve C Stuck OFF
DTC P0762	Shift Solenoid Valve C Stuck ON
DTC P0776	A/T Clutch Pressure Control Solenoid Valve B Stuck OFF
DTC P0777	A/T Clutch Pressure Control Solenoid Valve B Stuck ON
DTC P0780	Problem in Shift Control System
DTC P0847	Short in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck ON
DTC P0848	Open in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck OFF
DTC P0872	Short in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck ON
DTC P0873	Open in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck OFF
DTC P0962	Problem in A/T Clutch Pressure Control Solenoid Valve A Circuit
DTC P0963	Problem in A/T Clutch Pressure Control Solenoid Valve A
DTC P0966	Problem in A/T Clutch Pressure Control Solenoid Valve B Circuit
DTC P0967	Problem in A/T Clutch Pressure Control Solenoid Valve B
DTC P0970	Problem in A/T Clutch Pressure Control Solenoid Valve C Circuit
DTC P0971	Problem in A/T Clutch Pressure Control Solenoid Valve C
DTC P0973	Short in Shift Solenoid Valve A Circuit

DTC P0974	Open in Shift Solenoid Valve A Circuit
DTC P0976	Short in Shift Solenoid Valve B Circuit
DTC P0977	Open in Shift Solenoid Valve B Circuit
DTC P0979	Short in Shift Solenoid Valve C Circuit
DTC P0980	Open in Shift Solenoid Valve C Circuit
DTC P2769	Short in Torque Converter Clutch Solenoid Valve Circuit
DTC P2770	Open in Torque Converter Clutch Solenoid Valve Circuit

DTC TROUBLESHOOTING

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

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. Start the engine.
3. Move the shift lever through all positions. Stop for at least 1 second in each position, and monitor the OBD status for P0705 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 4.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for an intermittent short in the wire between the transmission range switch and PCM. If the tester indicates NOT COMPLETED, return to step 2 and recheck.
4. Inspect the transmission range switch (see **TRANSMISSION RANGE SWITCH TEST**).

   Is the switch OK?

   YES - With the switch connector disconnected, go to step 5.

   NO - Replace the transmission range switch (see **TRANSMISSION RANGE**

SWITCH REPLACEMENT), then go to step 42.

5. Turn the ignition switch ON (II).
6. Measure the voltage between transmission range switch connector terminals No. 10 and No. 6.

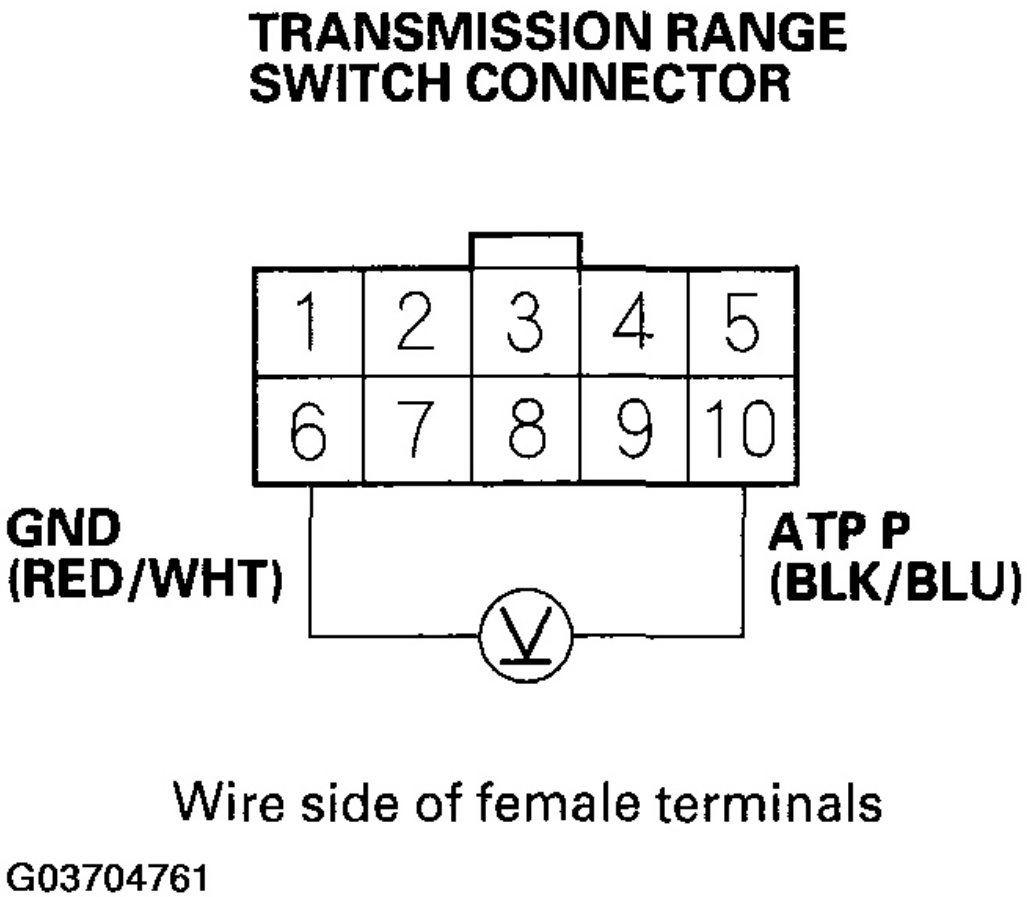


Fig. 67: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 10 And No. 6.
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 12.
NO - Go to step 7.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector A (44P).
10. Check for continuity between PCM connector terminal A12 and body ground.

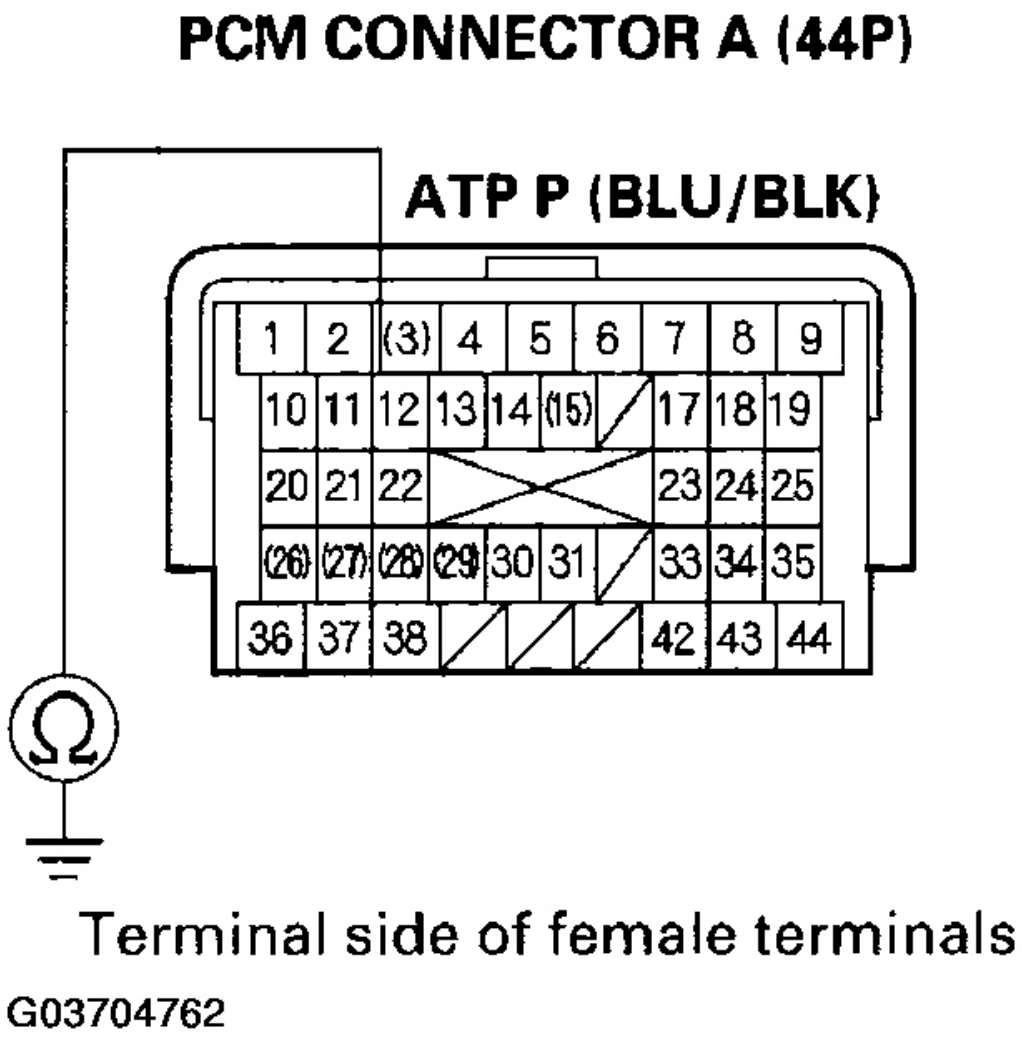


Fig. 68: Checking Continuity Between PCM Connector Terminal A12 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal A12 and transmission range switch, then go to step 42.

NO - Go to step 11.

11. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

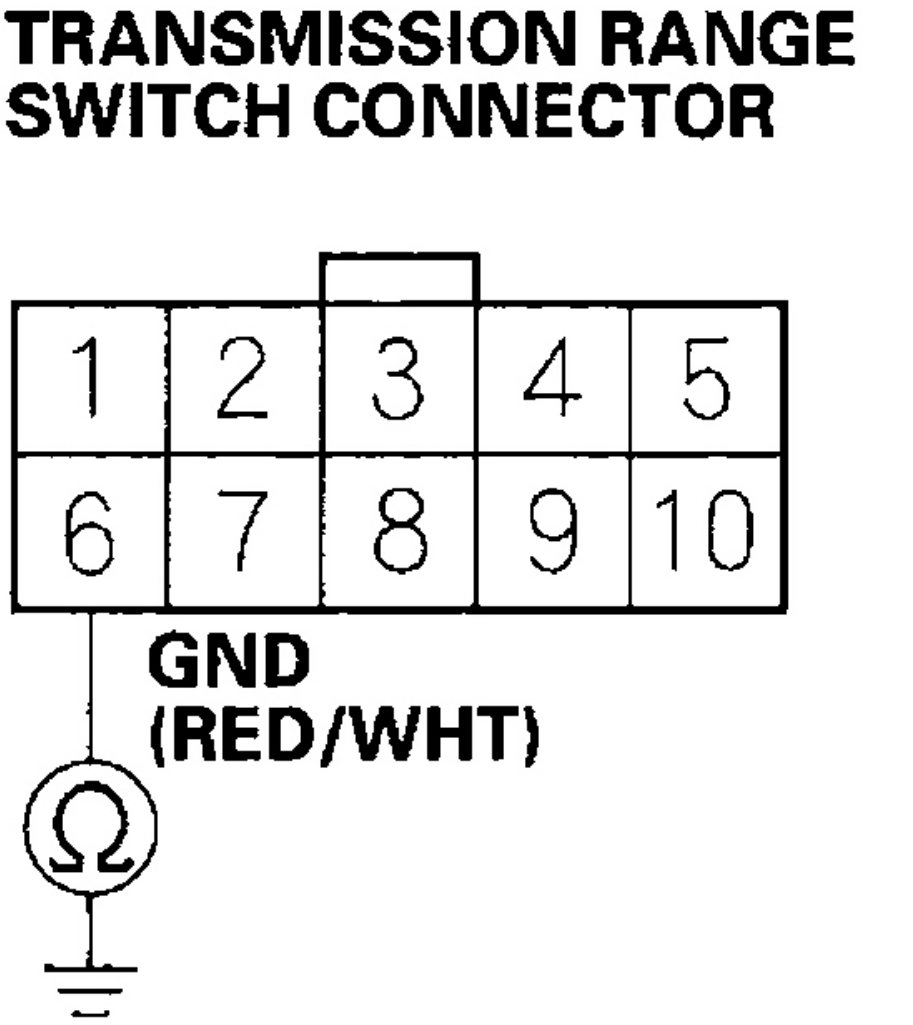


Fig. 69: Checking Continuity Between Transmission Range Switch Connector Terminal No. 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between transmission range switch connector terminal No. 6 and ground (G101, G102), or repair poor ground (G101, G102), then go to step 42.

12. Measure the voltage between transmission range switch connector terminals No. 4 and No. 6.

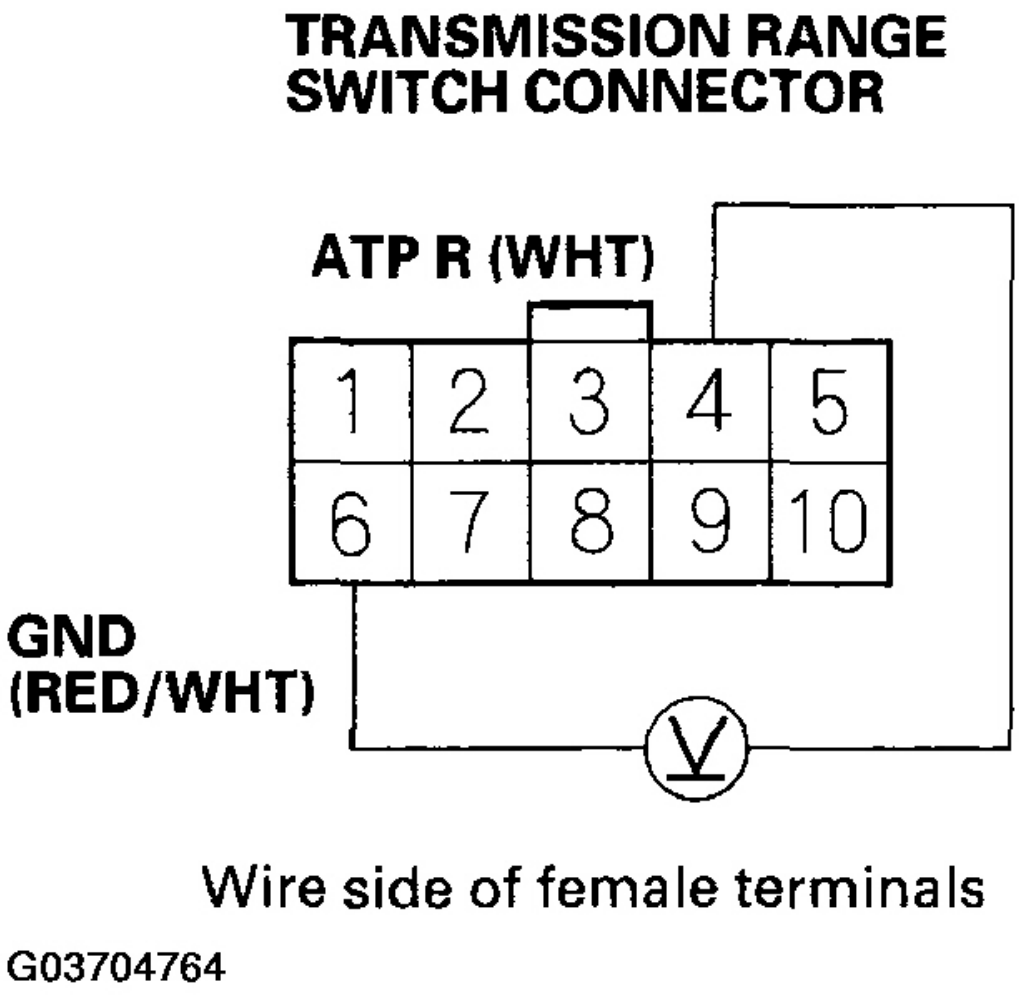


Fig. 70: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 4 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 17.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector C (44P).
16. Check for continuity between PCM connector terminal C30 and body ground.

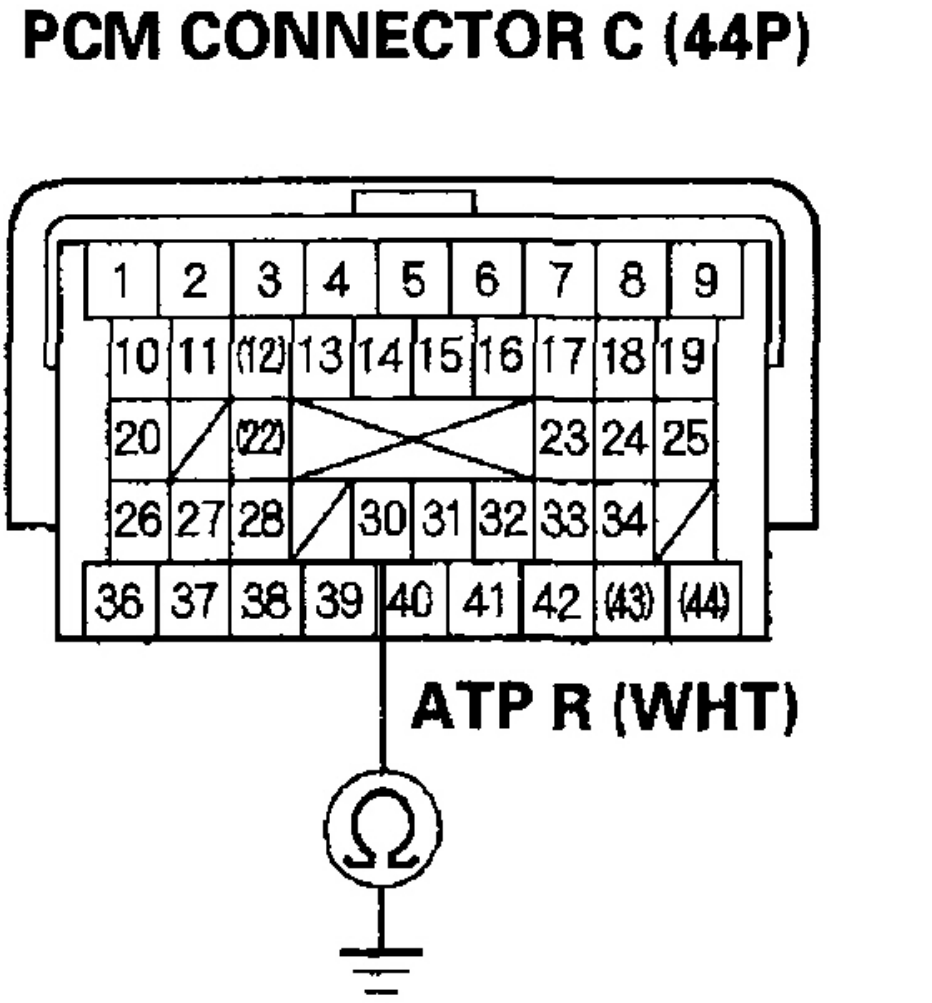


Fig. 71: Checking Continuity Between PCM Connector Terminal C30 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C30 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

17. Measure the voltage between transmission range switch connector terminals No. 9 and No. 6.

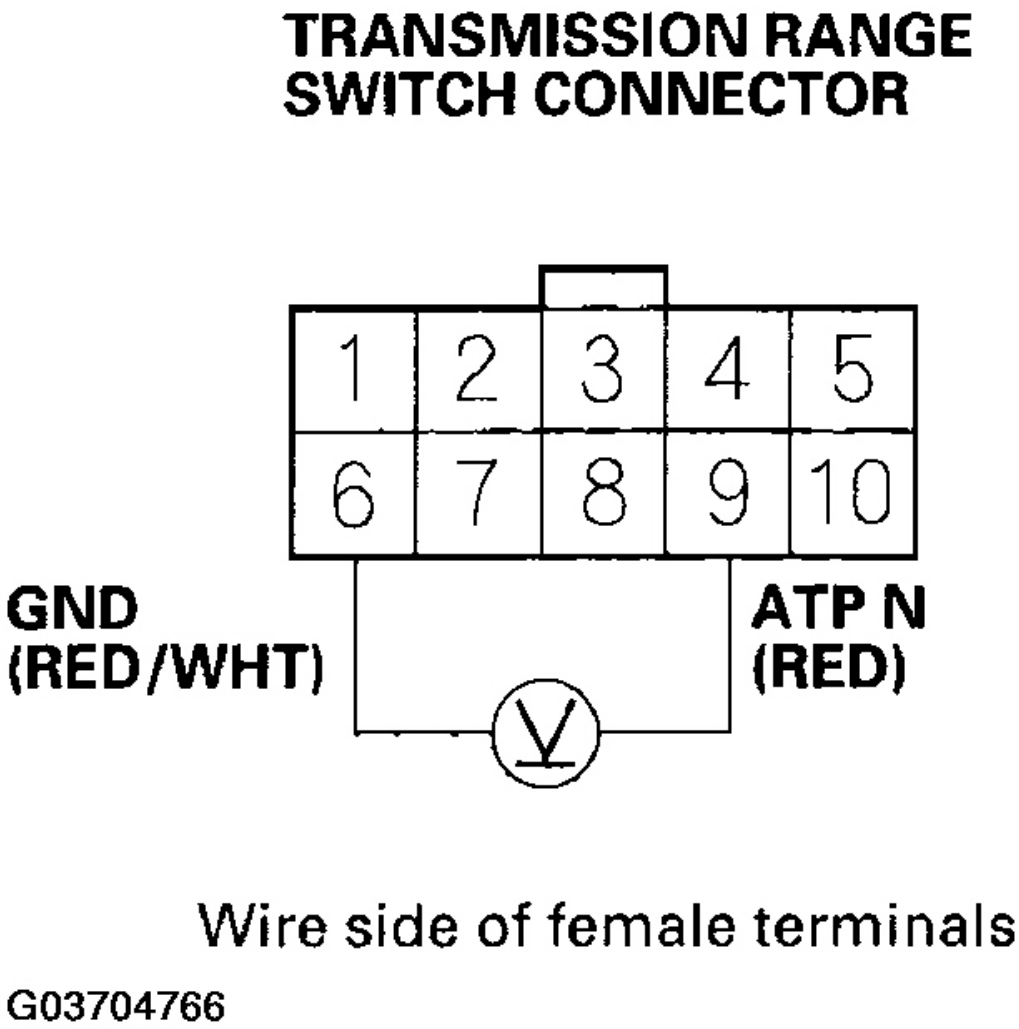


Fig. 72: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 9 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 22.

NO - Go to step 18.

18. Turn the ignition switch OFF.
19. Jump the SCS line with the HDS.
20. Disconnect PCM connector C (44P).
21. Check for continuity between PCM connector terminal C31 and body ground.

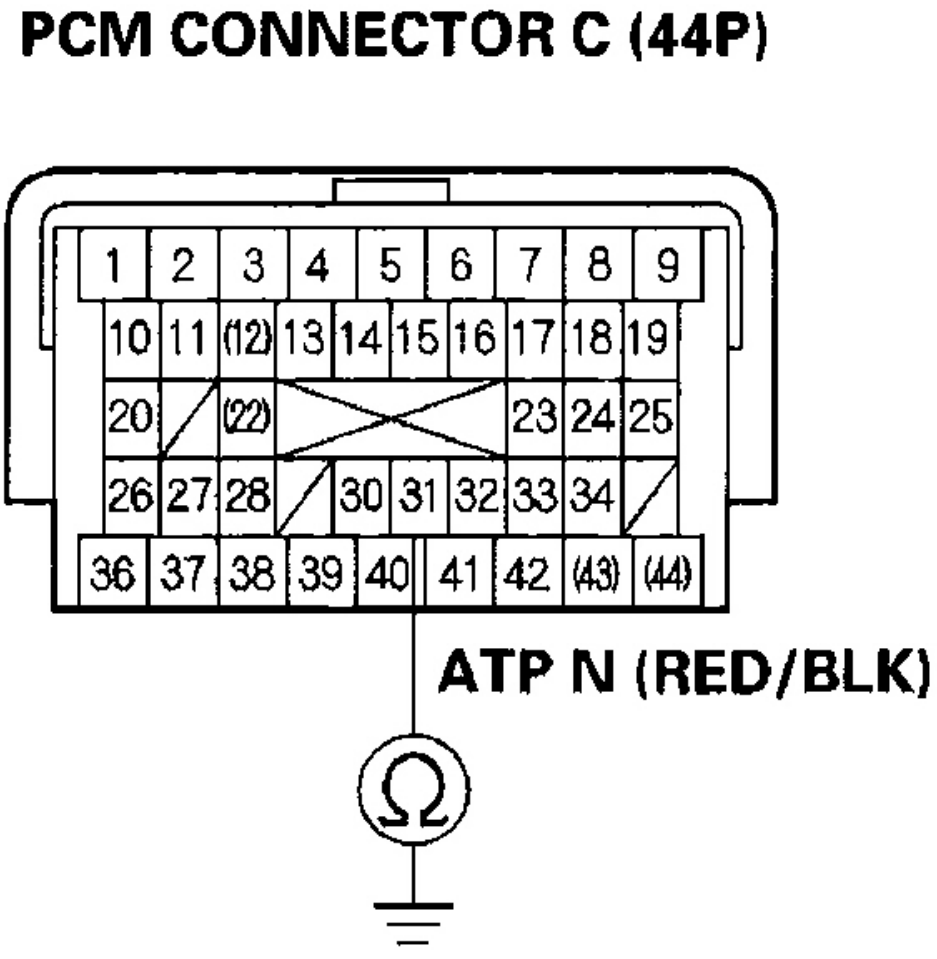


Fig. 73: Checking Continuity Between PCM Connector Terminal C31 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal

C31 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM Updating and Substitution for Testing**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

22. Measure the voltage between transmission range switch connector terminals No. 3 and No. 6.

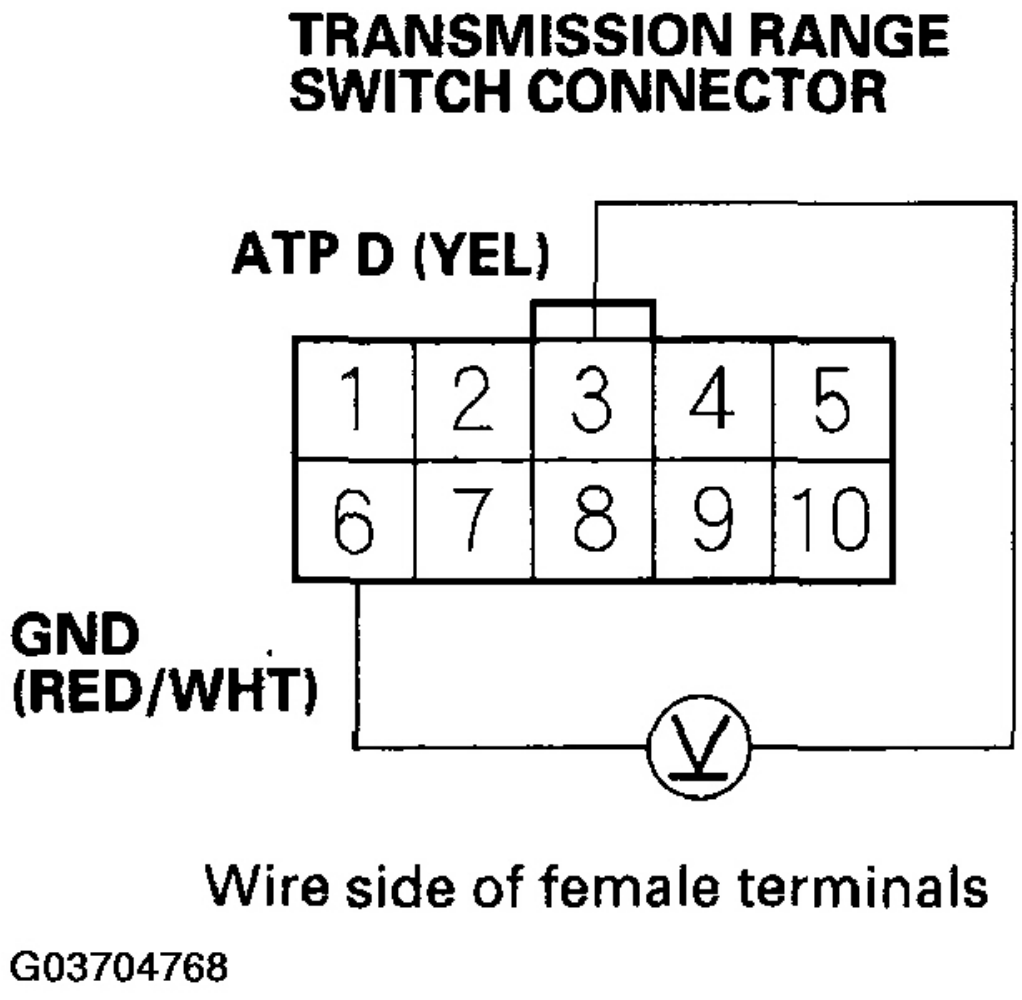


Fig. 74: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 3 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 27.

NO - Go to step 23.

23. Turn the ignition switch OFF.
24. Jump the SCS line with the HDS.
25. Disconnect PCM connector C (44P).
26. Check for continuity between PCM connector terminal C32 and body ground.

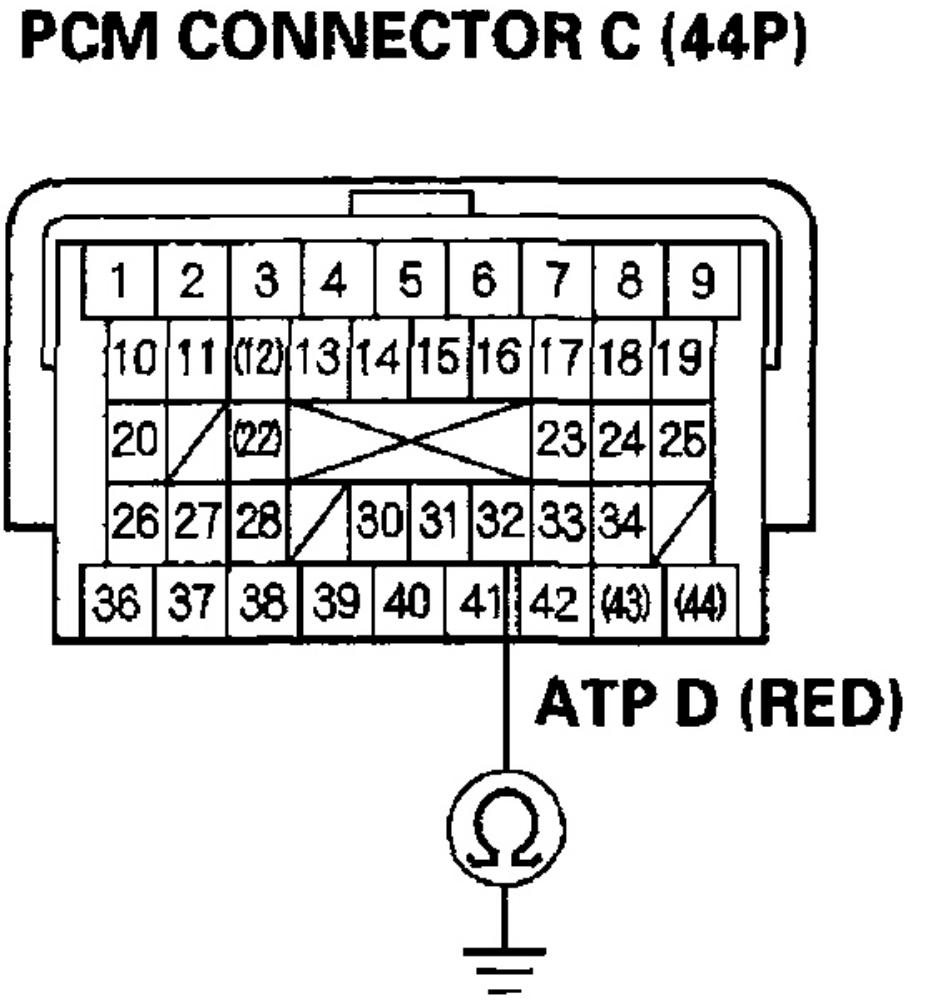


Fig. 75: Checking Continuity Between PCM Connector Terminal C32 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C32 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

27. Measure the voltage between transmission range switch connector terminals No. 8 and No. 6.

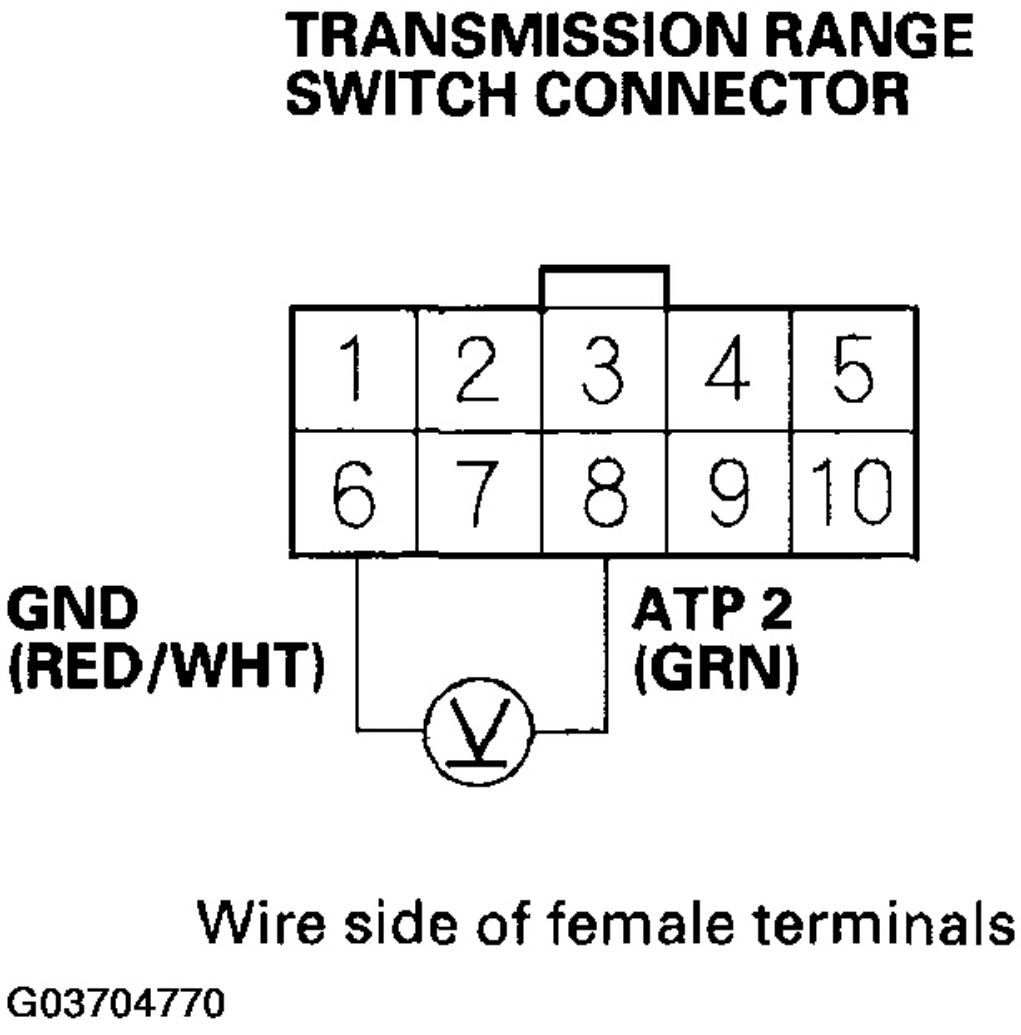


Fig. 76: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 8 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 32.

NO - Go to step 28.

28. Turn the ignition switch OFF.
29. Jump the SCS line with the HDS.
30. Disconnect PCM connector C (44P).
31. Check for continuity between PCM connector terminal C33 and body ground.

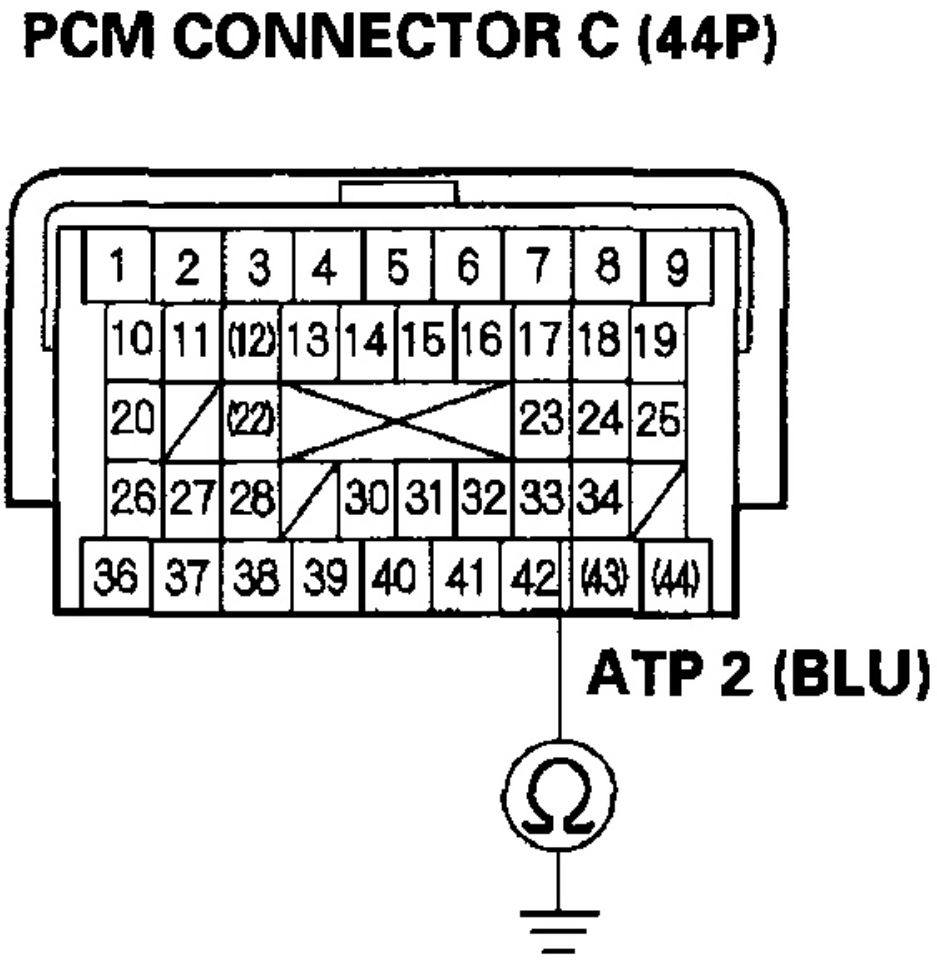


Fig. 77: Checking Continuity Between PCM Connector Terminal C33 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal

C33 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

32. Measure the voltage between transmission range switch connector terminals No. 2 and No. 6.

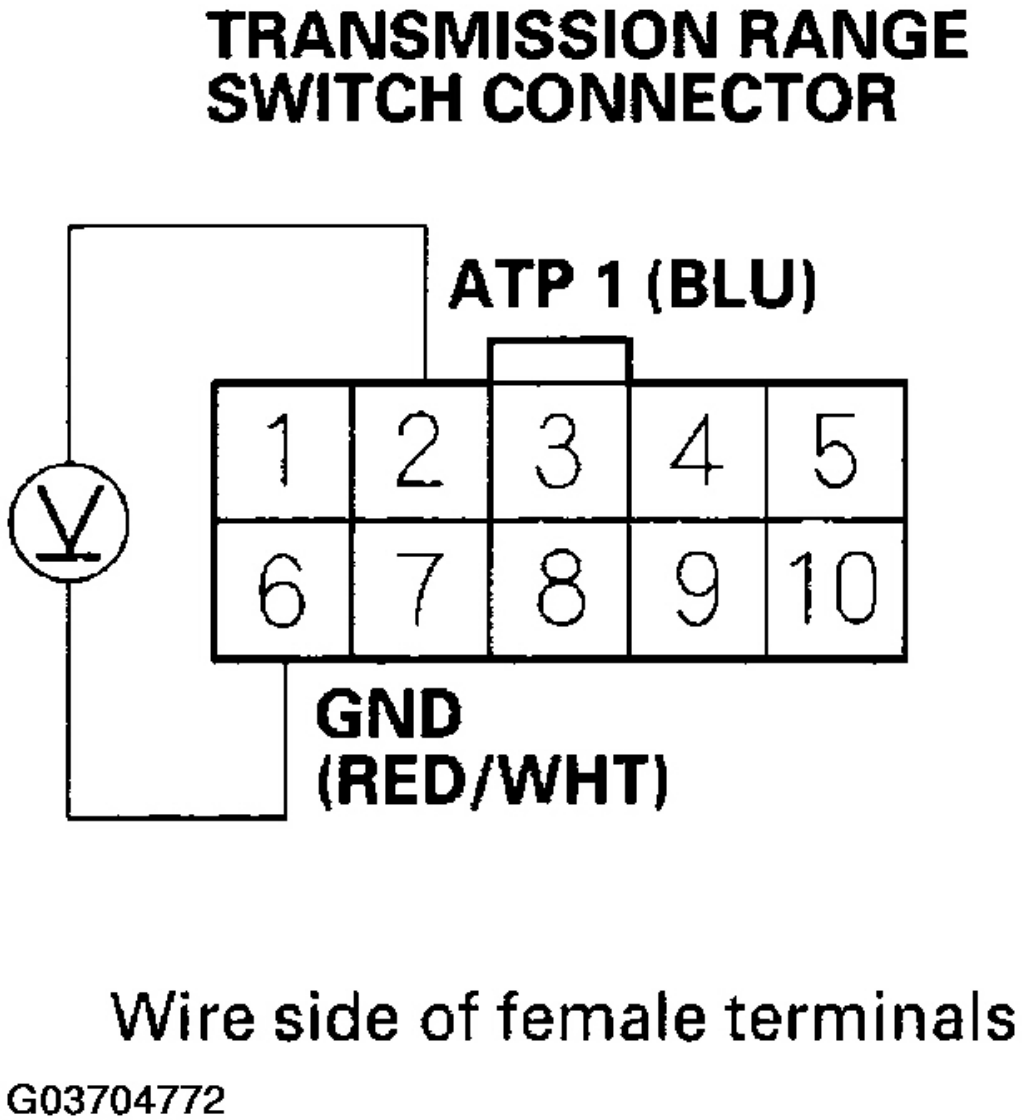


Fig. 78: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 2 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 37.
NO - Go to step 33.

33. Turn the ignition switch OFF.
34. Jump the SCS line with the HDS.
35. Disconnect PCM connector C (44P).
36. Check for continuity between PCM connector terminal C34 and body ground.

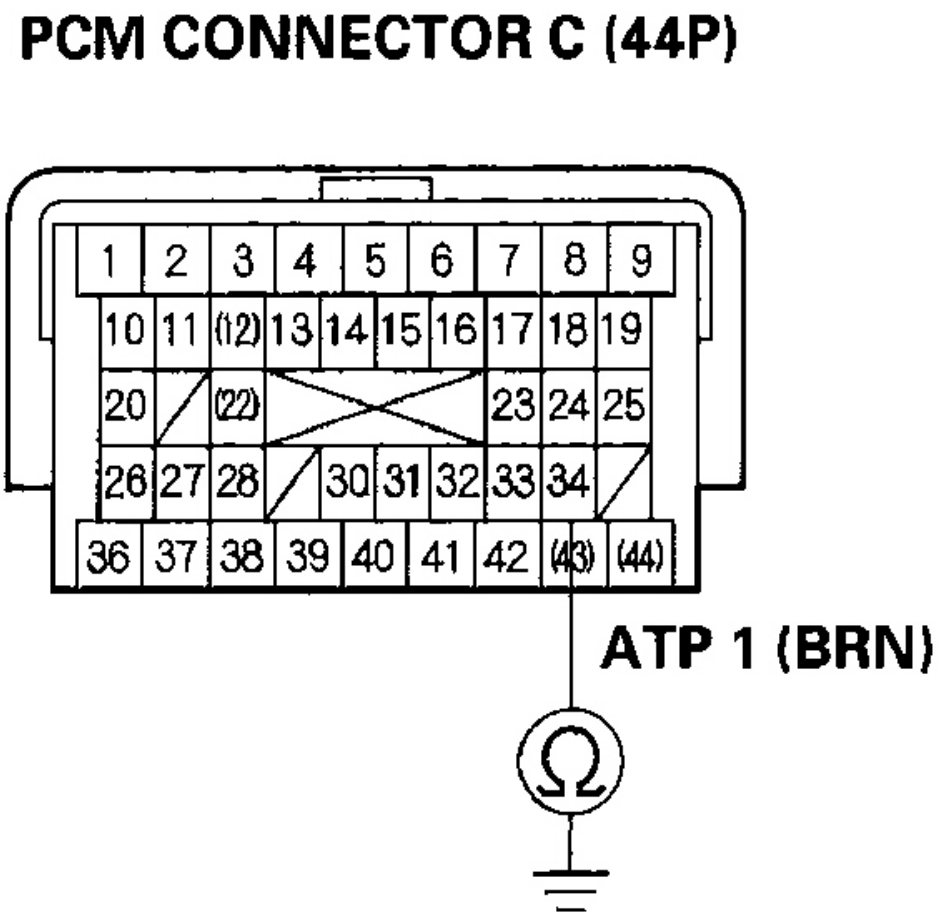


Fig. 79: Checking For Continuity Between PCM Connector Terminal C34 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C34 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

37. Measure the voltage between transmission range switch connector terminals No. 1 and No. 6.

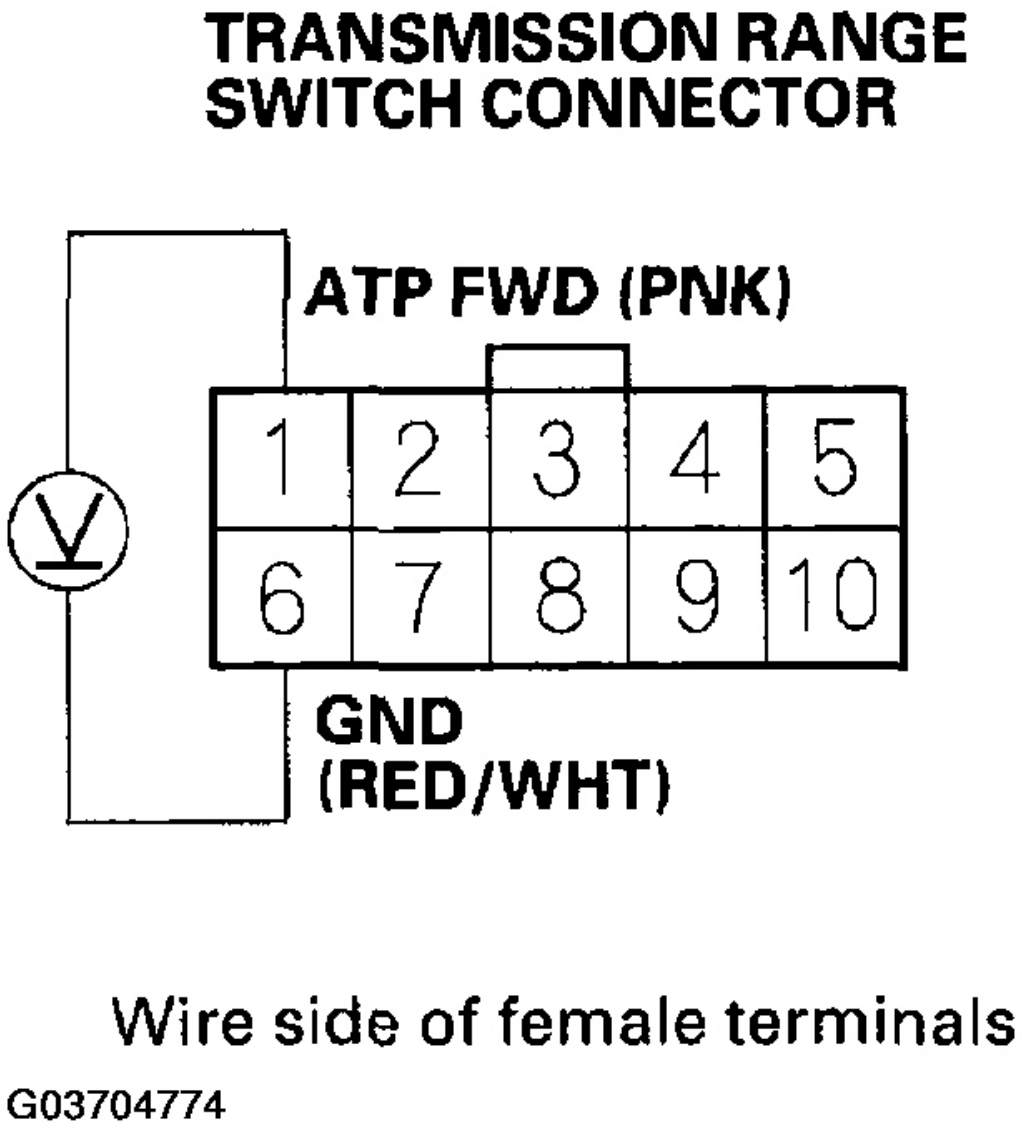


Fig. 80: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 1 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then

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

NO - Go to step 38.

38. Turn the ignition switch OFF.
39. Jump the SCS line with the HDS.
40. Disconnect PCM connector C (44P).
41. Check for continuity between PCM connector terminal C17 and body ground.

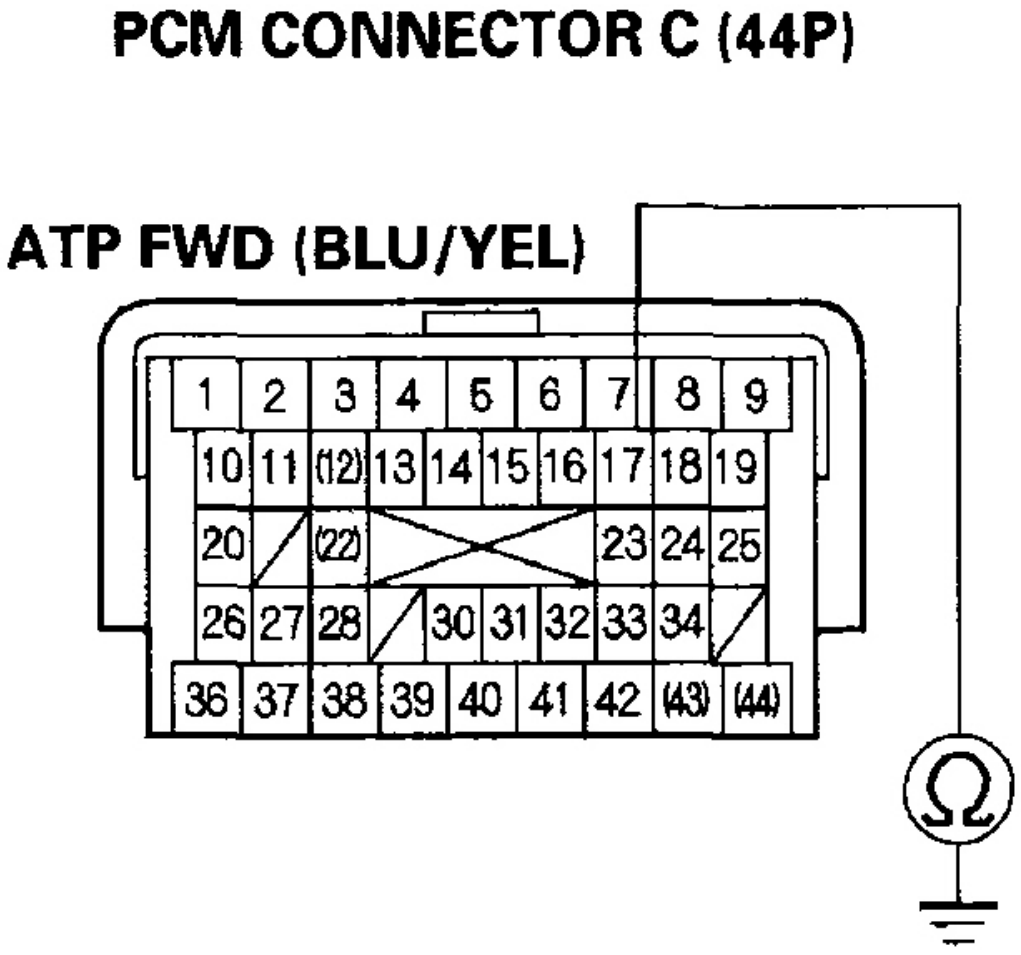


Fig. 81: Checking Continuity Between PCM Connector Terminal C17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal

C17 and transmission range switch, then go to step 42.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

42. Clear the DTC with the HDS.
43. Move the shift lever through all positions. Stop for at least 1 second in each position.
44. Monitor the OBD status for P0705 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 and recheck.

DTC P0706: Open in Transmission Range Switch Circuit

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. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
3. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position until the vehicle speed reaches 35 mph (56 km/h), then slow down and stop the wheels.
4. Monitor the OBD status for P0706 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 5.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the transmission range switch and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

5. Inspect the transmission range switch (see **TRANSMISSION RANGE SWITCH TEST**).

   Is the switch OK?

   YES - Go to step 6.

   NO - Replace the transmission range switch (see **TRANSMISSION RANGE SWITCH REPLACEMENT**), then go to step 21.
6. Install the transmission range switch correctly, and adjust the shift cable (see **SHIFT CABLE ADJUSTMENT**).
7. Clear the DTC with the HDS.
8. Shift the shift lever into the D position, and verify the ATP FWD and ATP D inputs with the HDS in the A/T data list.

   Is ATP FWD and ATP D ON?

   YES - Go to step 9.

   NO - Go to step 14.
9. Shift to the 2 position, and verify the ATF FWD and ATP 2 inputs with the HDS in the A/T data list.

   Is ATP FWD and ATP 2 ON?

   YES - Go to step 10.

   NO - Go to step 14.
10. Clear the DTC with the HDS, and turn the ignition switch OFF.
11. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
12. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position until the vehicle speed reaches 35 mph (56 km/h), then slow down and stop the wheels.
13. Monitor the OBD status for P0706 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate FAILED?

    YES - Go to step 14.

    NO - If the tester indicates PASSED, intermittent failure, the system is OK at this

time. Check for poor connections or loose terminals at the transmission range switch and PCM. If the tester indicates NOT COMPLETED, return to step 12 and recheck.

14. Turn the ignition switch OFF.
15. Disconnect the transmission range switch connector.
16. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

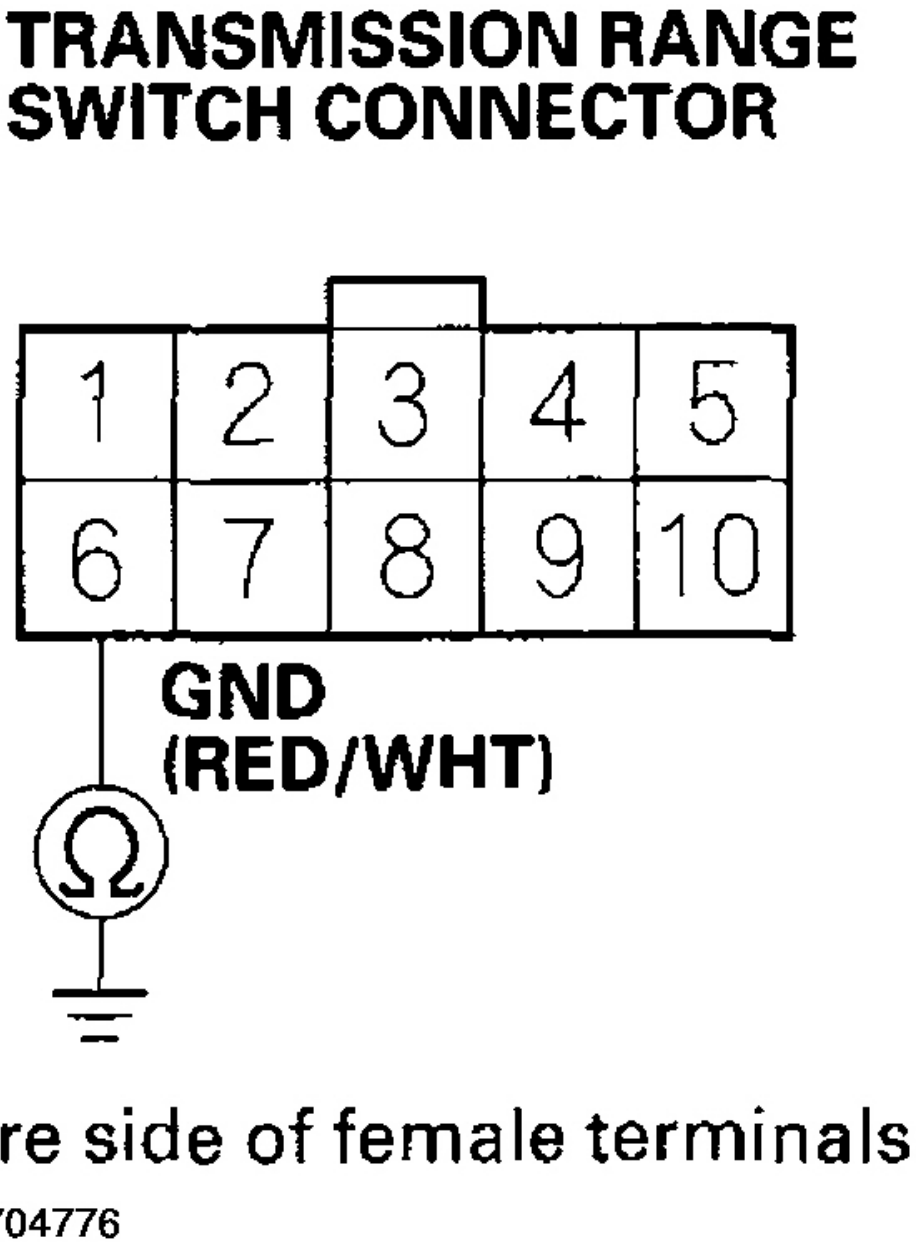


Fig. 82: Checking Continuity Between Transmission Range Switch Connector Terminal No. 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 17.

NO - Repair an open in the wire between the transmission range switch and ground (G101, G102), or repair poor ground (G101, G102), then go to step 21.

17. Turn the ignition switch ON (II).
18. Measure the voltage between transmission range switch connector terminals No. 1 and No. 6.

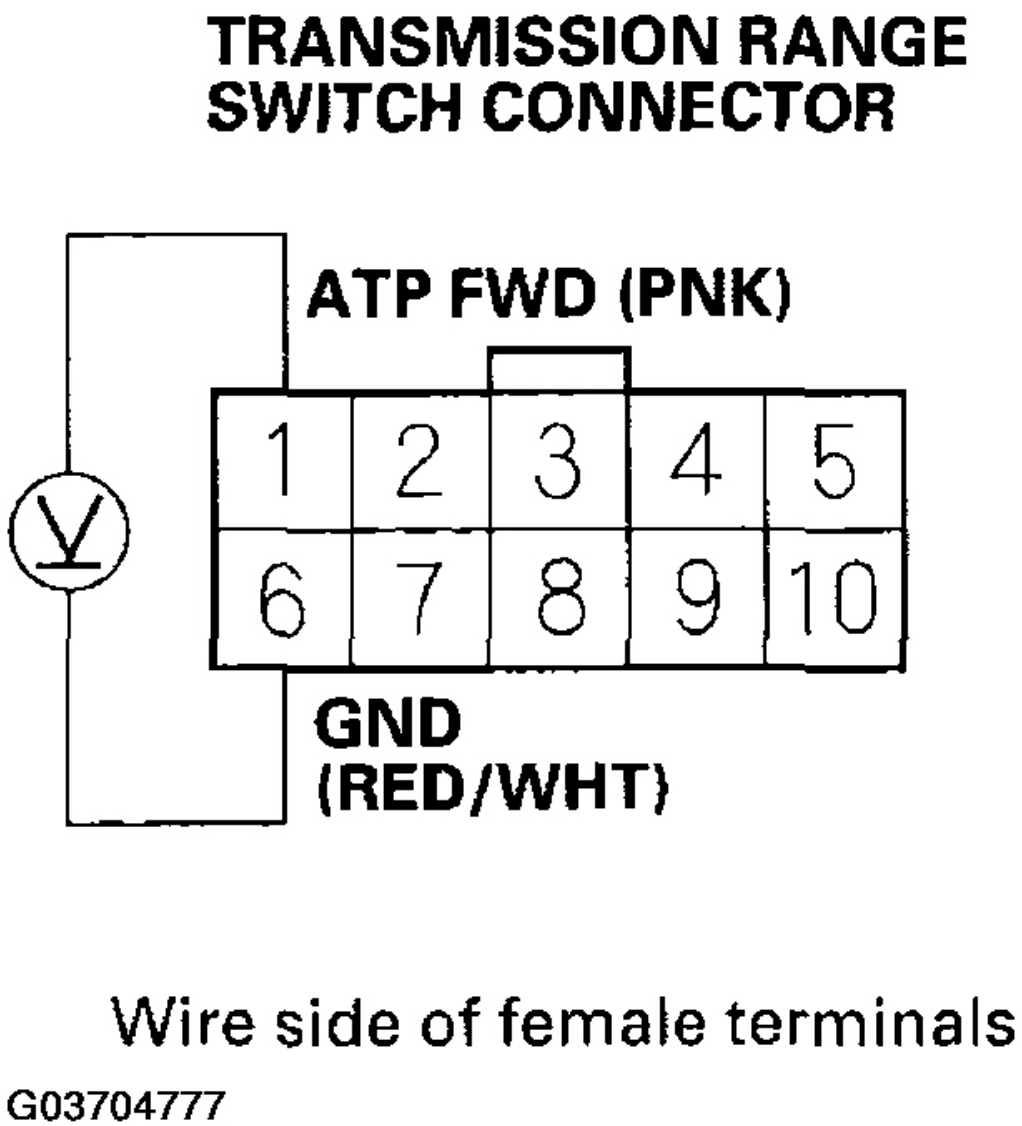


Fig. 83: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 1 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 19.

NO - Repair an open in the wire between the transmission range switch and PCM connector terminal C17, then go to step 21.

19. Measure the voltage between transmission range switch connector terminals No. 3 and No. 6.

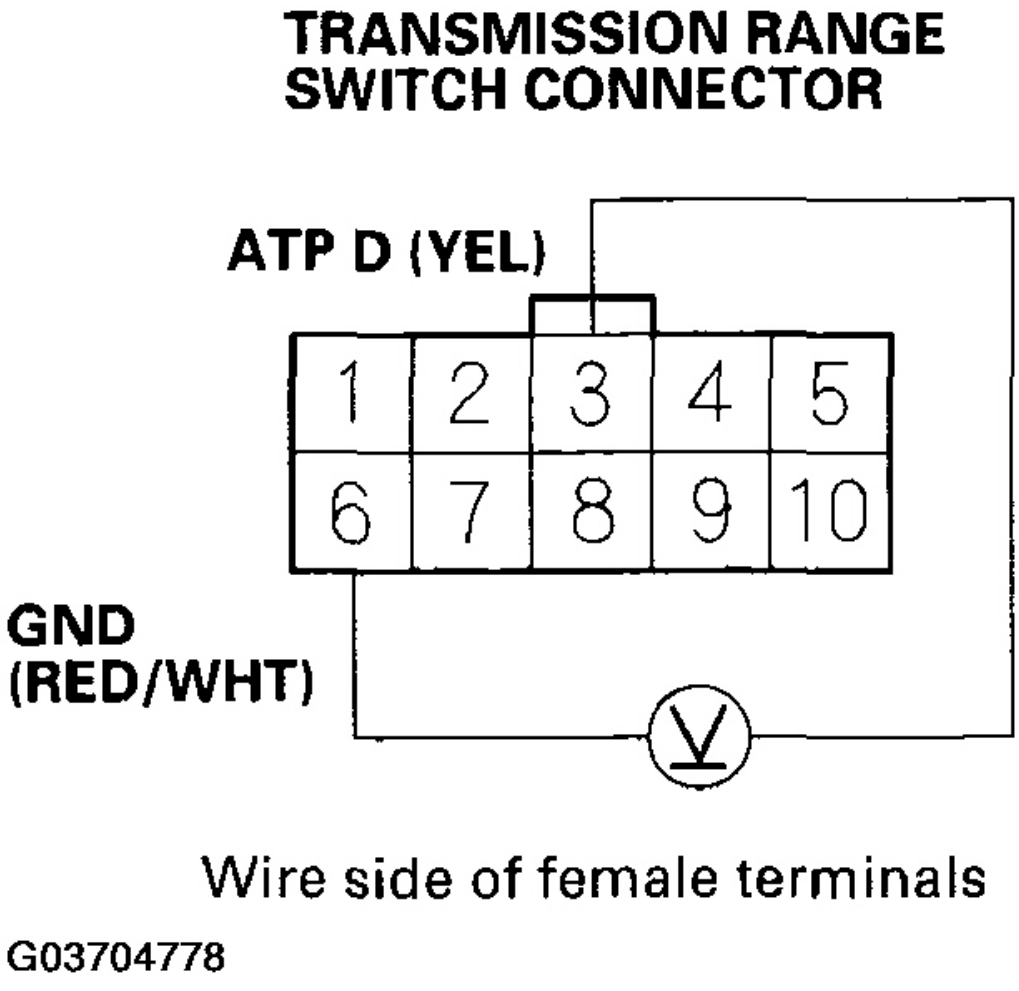


Fig. 84: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 3 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 20.

NO - Repair an open in the wire between the transmission range switch and PCM connector terminal C32, then go to step 21.

20. Measure the voltage between transmission range switch connector terminals No. 8 and No. 6.

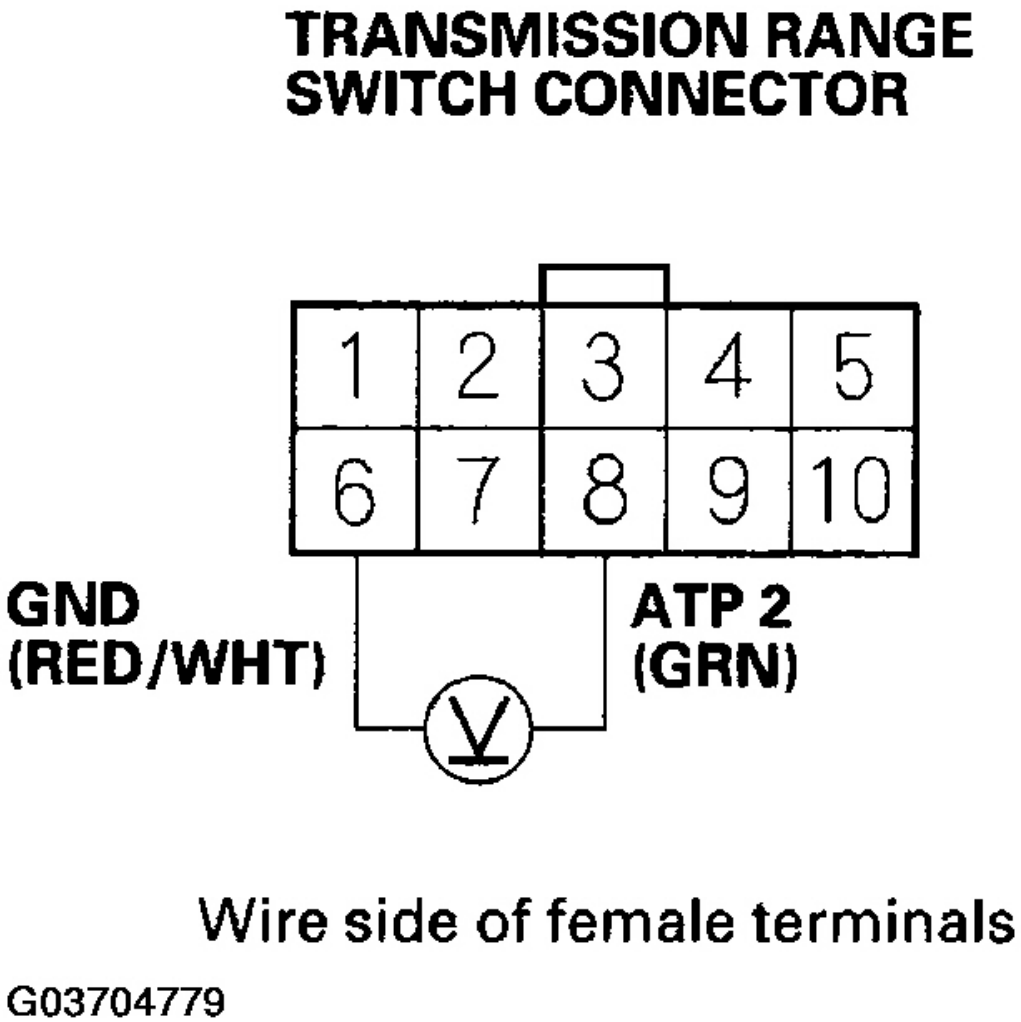


Fig. 85: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 8 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between the transmission range switch and PCM connector terminal C33, then go to step 21.

21. Clear the DTC with the HDS.
22. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
23. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position until the vehicle speed reaches 35 mph (56 km/h), then slow down and stop the wheels.
24. Monitor the OBD status for P0706 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 and recheck.

DTC P0711: Problem in ATF Temperature Sensor Circuit

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. Check the ATF temperature with the HDS in the A/T data list.

Does the ATF temperature exceed the ambient-air temperature?

YES - Record the ATF temperature. Leave the engine off for more than 30 minutes, and go to step 2.

NO - Record the ATF temperature. Test the stall speed RPM (see **STALL SPEED TEST**) three times. Go to step 2 after stall speed testing.

2. Check the ATF temperature with the HDS.

Does the ATF temperature change?

YES - Leave the engine off for more than 30 minutes, and go to step 3.

NO - Replace the ATF temperature sensor (see **ATF TEMPERATURE SENSOR**

REPLACEMENT), then go to step 5.

3. Check the ECT SENSOR 1 with the HDS.

   Is the ECT SENSOR 1 equal to the ambient-air temperature?

   YES - Go to step 4.

   NO - Leave the engine off until ECT 1 sensor indicates the same as ambient-air temperature, then go to step 4.

4. Check the ATF temperature with the HDS.

   Is the ATF temperature almost equal to ECT SENSOR 1?

   YES - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ATF temperature sensor and PCM.

   NO - Replace ATF temperature sensor (see **ATF TEMPERATURE SENSOR REPLACEMENT**), then go to step 5.

5. Clear the DTC with the HDS.
6. Test-drive the vehicle for several minutes in the D position through all five gears.
7. Monitor the OBD status for P0711 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate PASSED?

   YES - Troubleshooting is complete.

   NO - Return to step 1 and recheck.

DTC P0712: Short in ATF Temperature Sensor Circuit

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. Check the ATF temperature sensor voltage with the HDS in the A/T data list.

   Is the ATF temperature sensor voltage 0.07 V or less?

YES - Go to step 2.

NO - Intermittent failure, the system is OK at this time. Check for intermittent short in the wire between the ATF temperature sensor and PCM.

2. Disconnect the ATF temperature sensor connector at the transmission end cover.
3. Check the ATF temperature sensor voltage with the HDS.

Is the ATF temperature sensor voltage 0.07 V or less?

YES - Go to step 4.

NO - Replace ATF temperature sensor (see **ATF TEMPERATURE SENSOR REPLACEMENT**), then go to step 8.

4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect PCM connector C (44P).
7. Check for continuity between ATF temperature sensor connector terminal No. 2 and body ground.

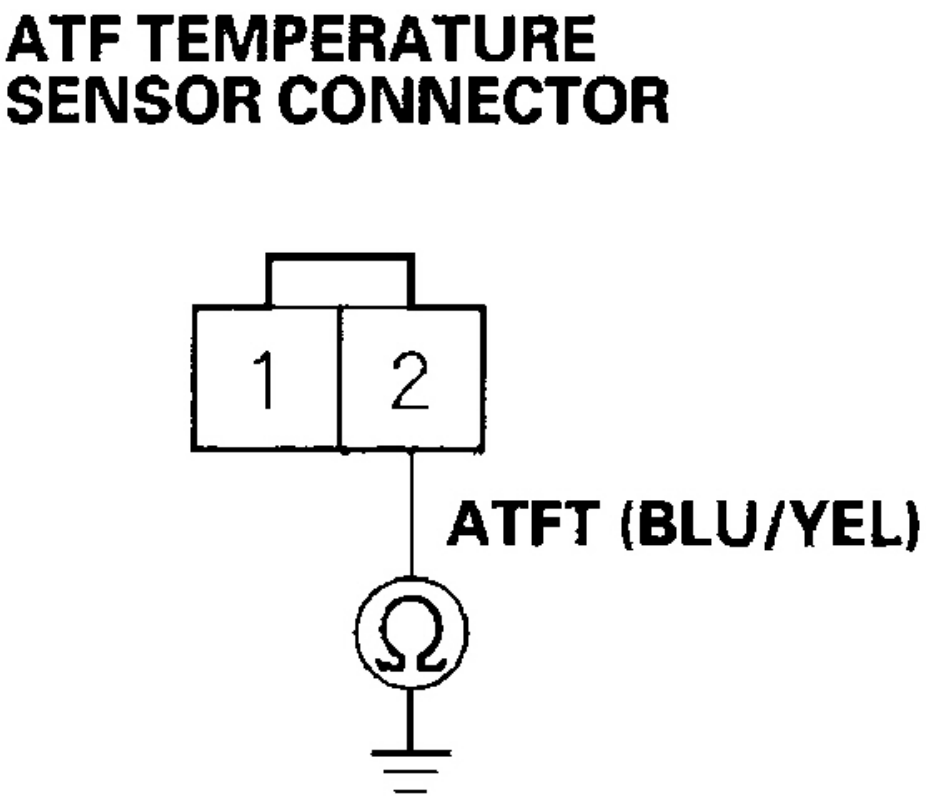


Fig. 86: Checking Continuity Between ATF Temperature Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to ground in the wire between PCM connector terminal C28 and the ATF temperature sensor connector No. 2 terminal, then go to step 8.

NO - Update the PCM if it does not have the latest software, or substitute a known-

good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

8. Clear the DTC with the HDS.
9. Test-drive the vehicle for several minutes in the D position through all five gears.
10. Monitor the OBD status for P0712 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 and recheck.

DTC P0713: Open in ATF Temperature Sensor Circuit

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. Check the ATF temperature sensor voltage with the HDS in the A/T data list.

Does the ATF temperature sensor voltage exceed 4.93 V?

YES - Go to step 2.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ATF temperature sensor and PCM.

2. Turn the ignition switch OFF.
3. Disconnect the ATF temperature sensor connector at the transmission end cover.
4. Turn the ignition switch ON (II).
5. Measure the voltage between ATF temperature sensor connector terminal No. 2 and body ground.

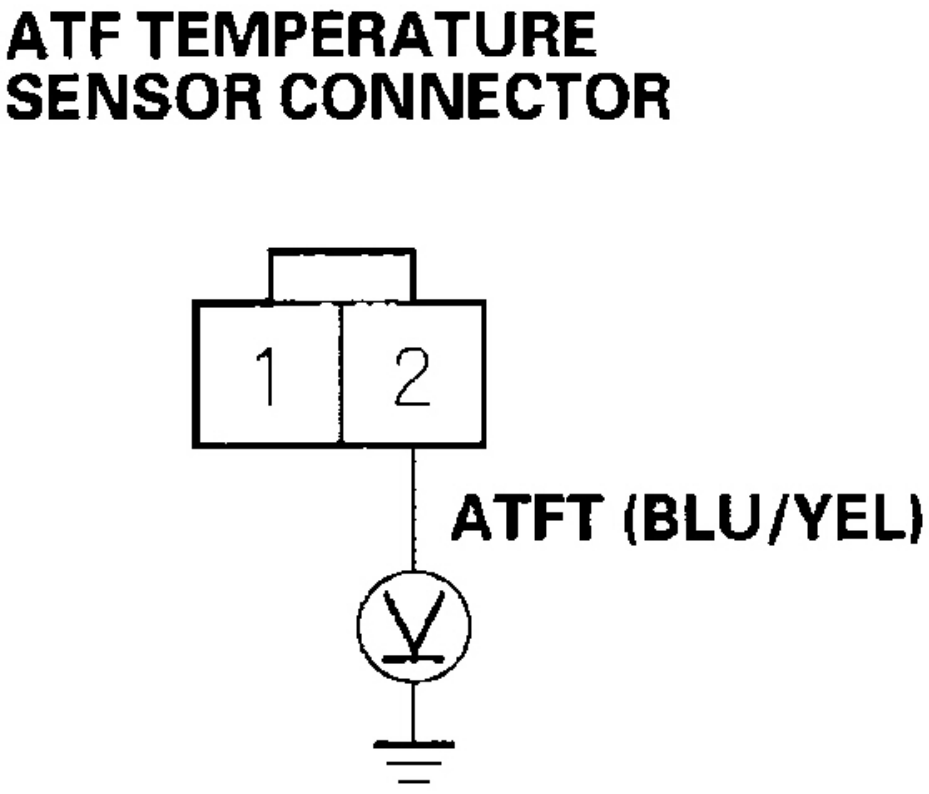


Fig. 87: Measuring Voltage Between ATF Temperature Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 6.

NO - Go to step 7.

6. Measure the voltage between ATF temperature sensor connector terminals No. 1 and No. 2.

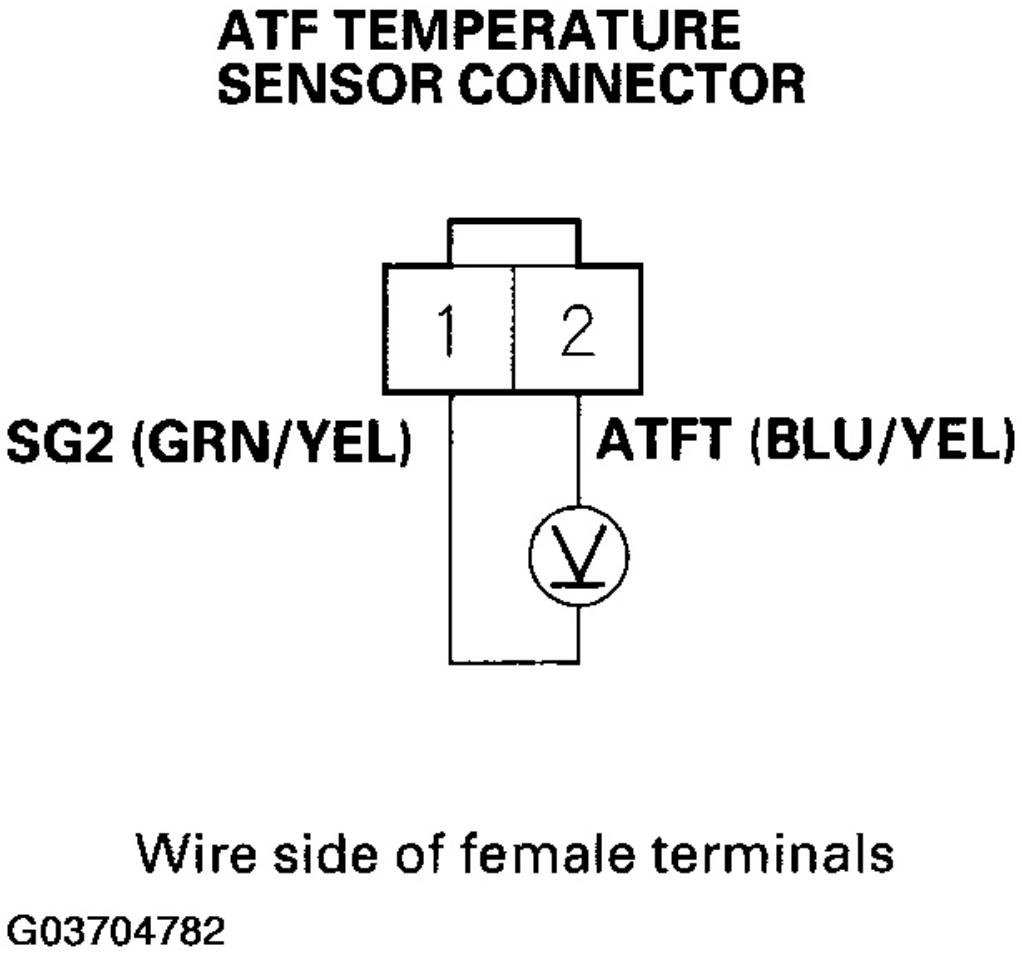


Fig. 88: Measuring Voltage Between ATF Temperature Sensor Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the ATF temperature sensor (see **ATF TEMPERATURE SENSOR REPLACEMENT**), then go to step 11.

NO - Repair an open in the wire between PCM connector terminal C14 and the ATF temperature sensor connector, then go to step 11.

7. Turn the ignition switch OFF.

8. Jump the SCS line with the HDS.
9. Disconnect PCM connector C (44P).
10. Check for continuity between PCM connector terminal C28 and ATF temperature sensor connector terminal No. 2.

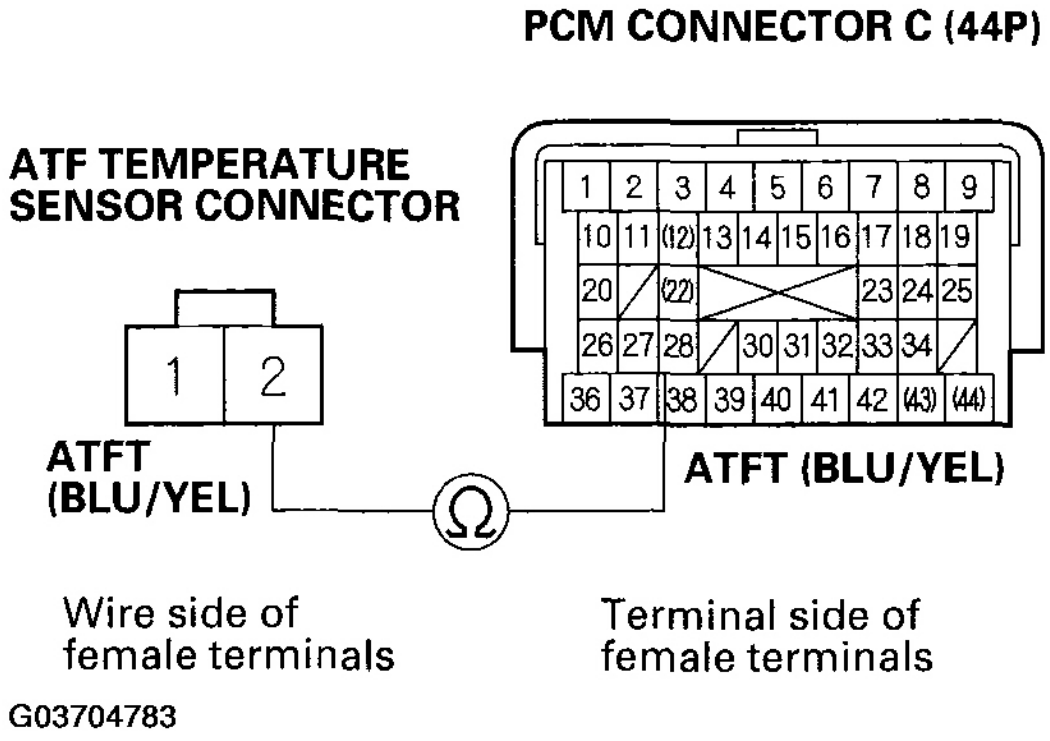


Fig. 89: Checking Continuity Between PCM Connector Terminal C28 And ATF Temperature Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal C28. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal C28 and the ATF

temperature sensor connector, then go to step 11.

11. Clear the DTC with the HDS.
12. Test-drive the vehicle for several minutes in the D position through all five gears.
13. Monitor the OBD status for P0713 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 and recheck.

DTC P0716: Problem in Input Shaft (Mainshaft) Speed Sensor Circuit

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. Record all freeze data, and clear the DTC with the HDS.
2. Check for proper input shaft (mainshaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
4. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds. Slow down and stop the wheels.
5. Monitor the OBD status for P0716 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 6.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections at the PCM and input shaft (mainshaft) speed sensor connectors. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

6. Turn the ignition switch OFF.

7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (44P), C (44P), and input shaft (mainshaft) speed sensor connector.
9. Check for continuity between PCM connector terminals B43, C40, B36, and B1 and body ground.

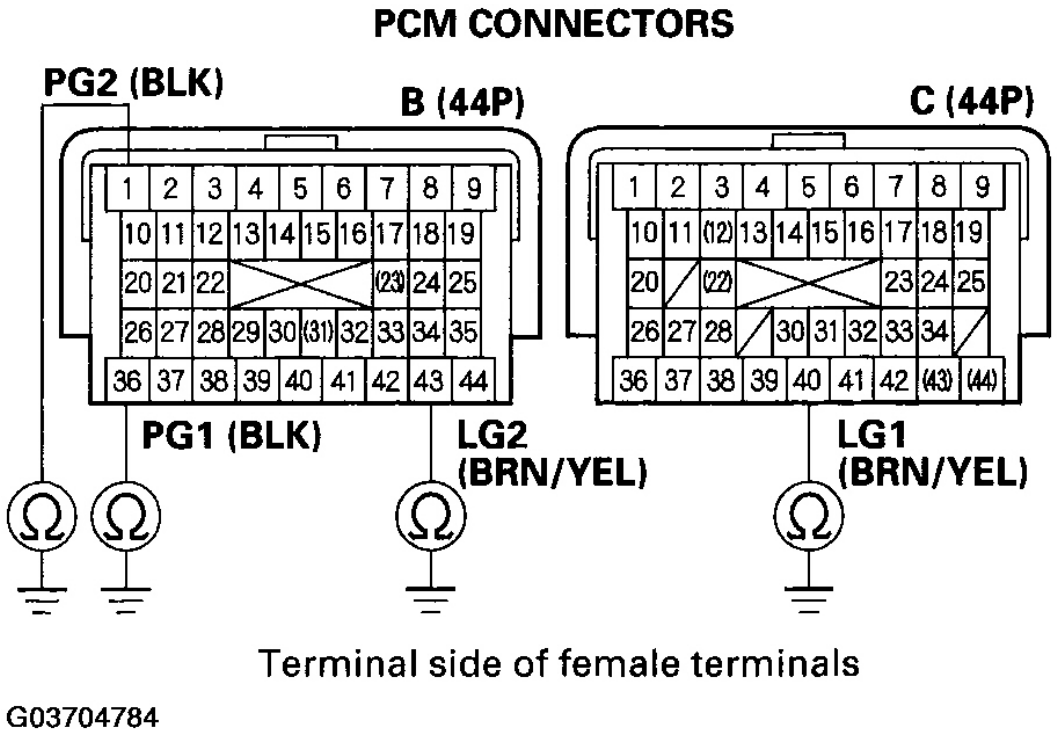


Fig. 90: Checking Continuity Between PCM Connector Terminals And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wire between PCM connector terminals B1, B36, B43, C40, and ground (G101, G102), or repair poor ground (G101, G102), then Go to step 32.

10. Connect PCM connectors B (44P) and C (44P).

11. Turn the ignition switch ON (II).
12. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

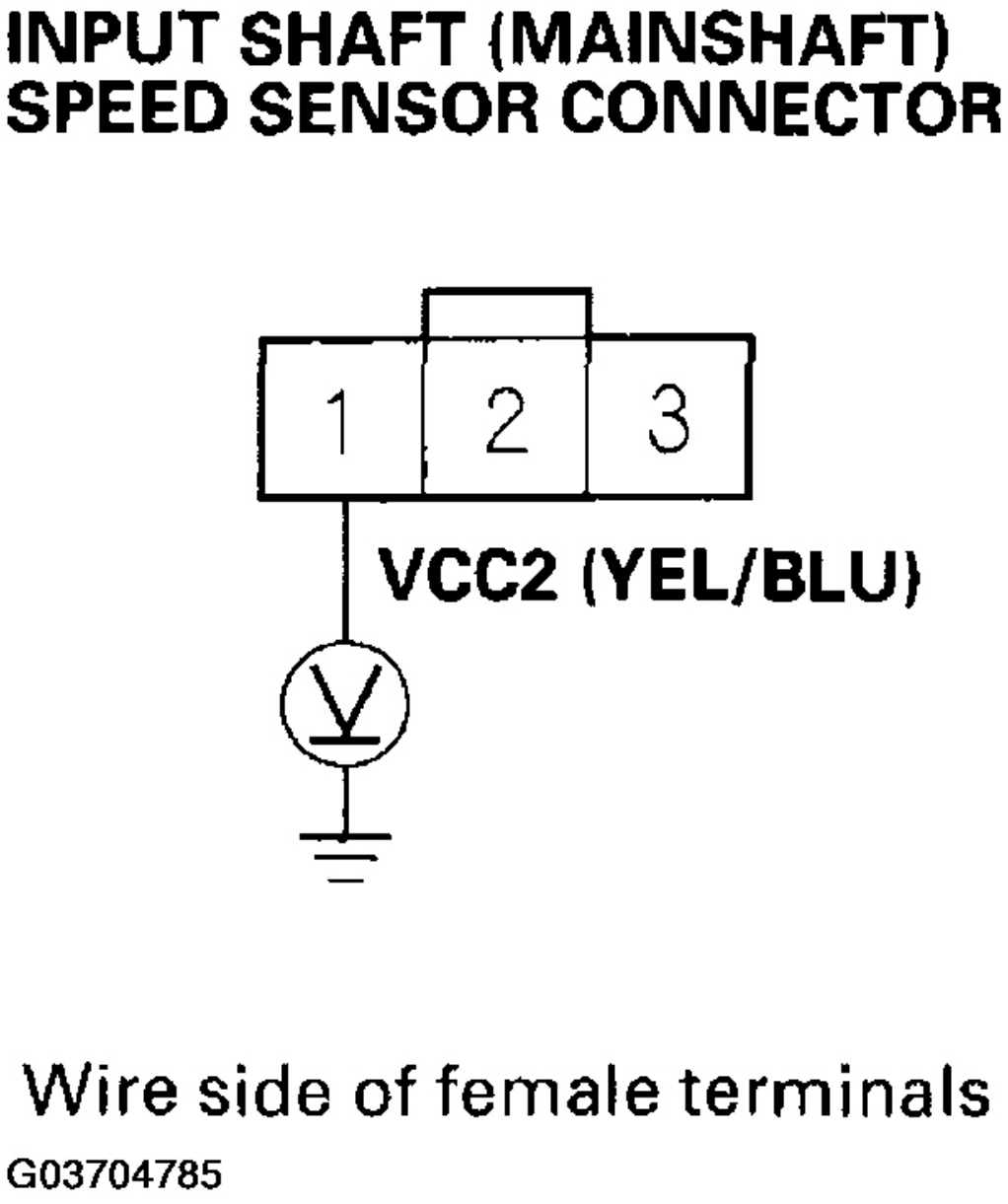


Fig. 91: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor

Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 17.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector C (44P).
15. Check for continuity between PCM connector terminal C13 and input shaft (mainshaft) speed sensor connector terminal No. 1.

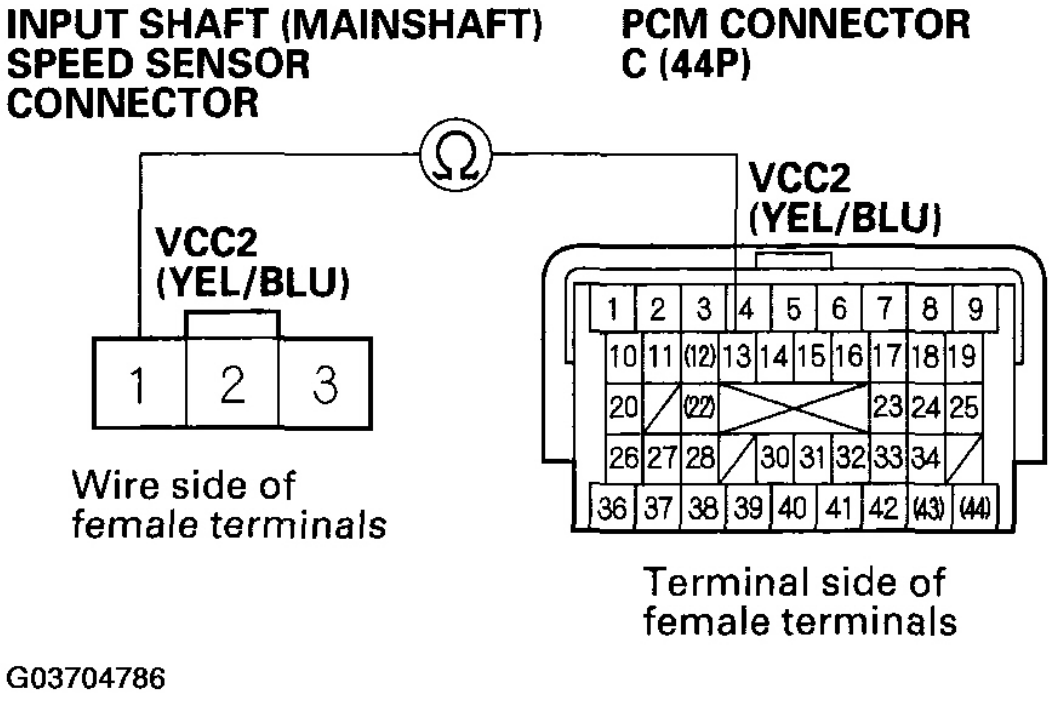


Fig. 92: Checking Continuity Between PCM Connector Terminal C13 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair an open in the wire between PCM connector terminal C13 and the input shaft (mainshaft) speed sensor, then Go to step 32.

16. Check for continuity between PCM connector terminal C13 and body ground.

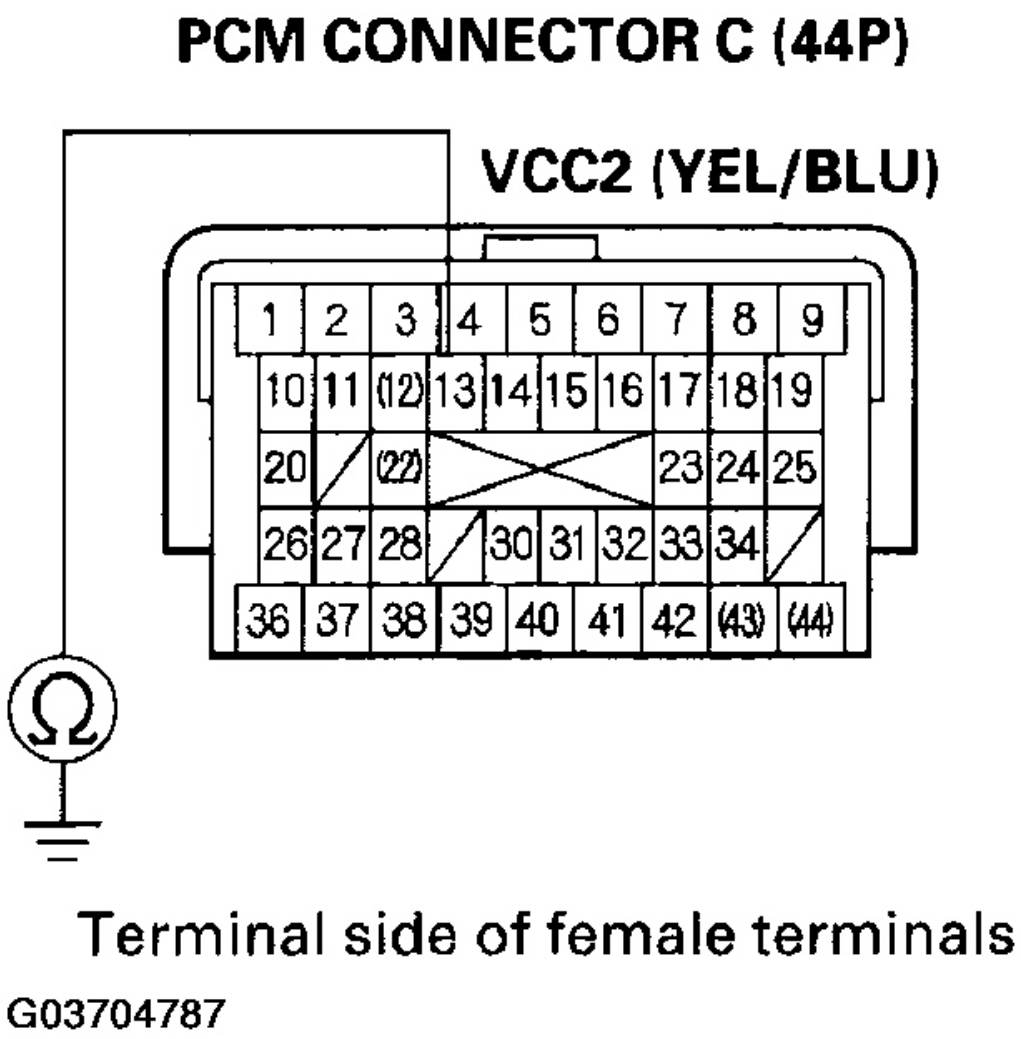


Fig. 93: Checking Continuity Between PCM Connector Terminal C13 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C13 and the input shaft (mainshaft) speed sensor, then Go to step 32.

NO - Check for loose or poor connections at PCM connector terminal C13. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

17. Turn the ignition switch OFF.
18. Disconnect PCM connector B (44P).
19. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

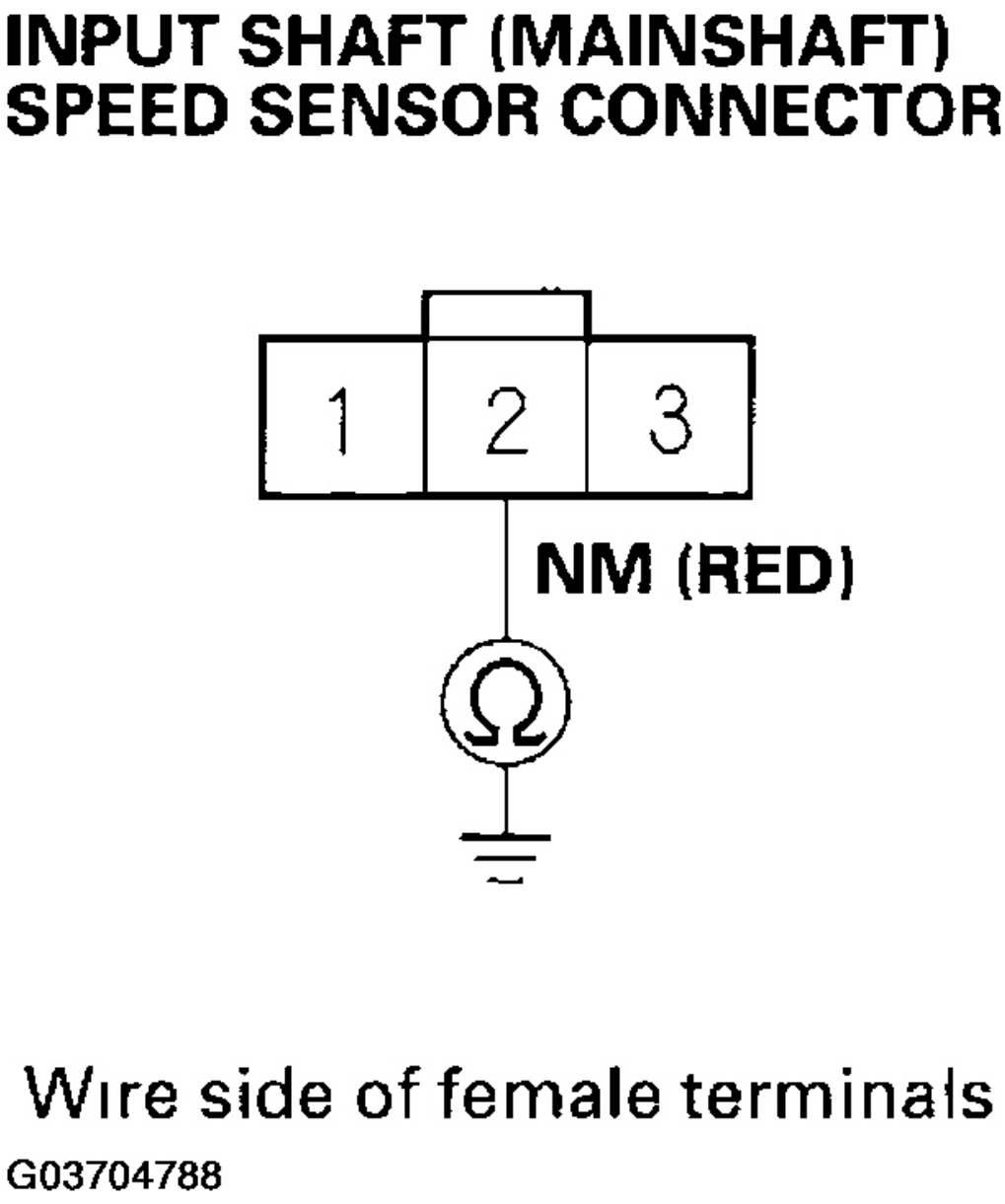


Fig. 94: Checking Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B39 and input shaft (mainshaft) speed sensor connector, then Go to step 32.

NO - Go to step 20.

20. Disconnect PCM connector C (44P).
21. Check for continuity between PCM connector terminal C14 and input shaft (mainshaft) speed sensor connector terminal No. 3.

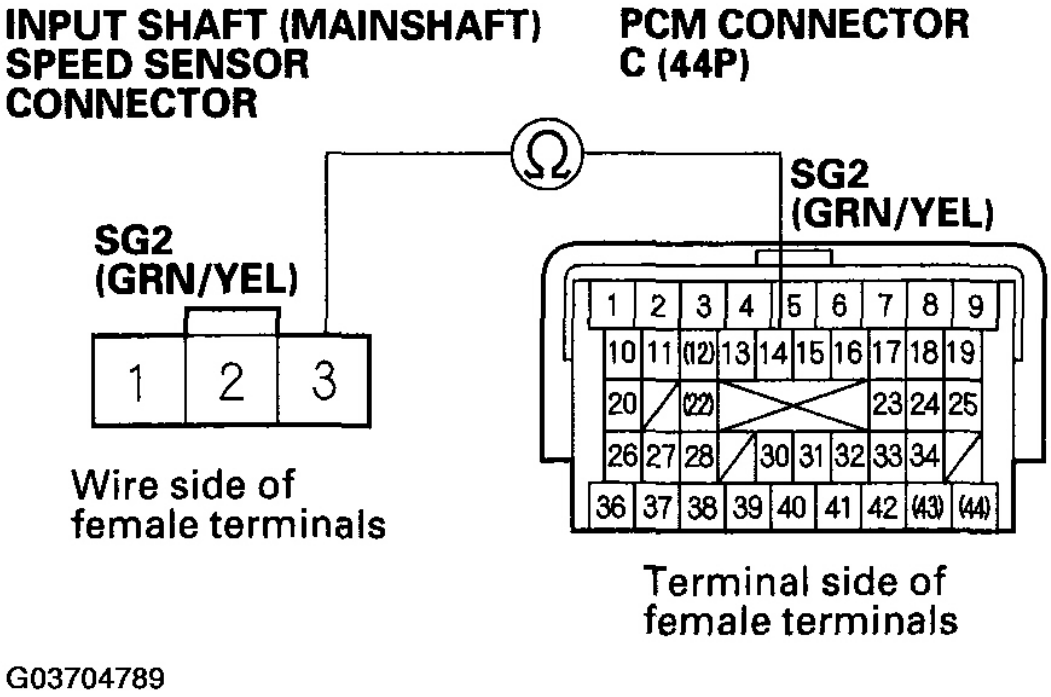


Fig. 95: Checking Continuity Between PCM Connector Terminal C14 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22.

NO - Repair an open in the wire between the input shaft (mainshaft) speed sensor connector and PCM connector terminal C14, then Go to step 32.

22. Connect PCM connectors B (44P) and C (44P).
23. Turn the ignition switch ON (II).

24. Measure the voltage between input shaft (mainshaft) speed sensor connector terminals No. 2 and No. 3.

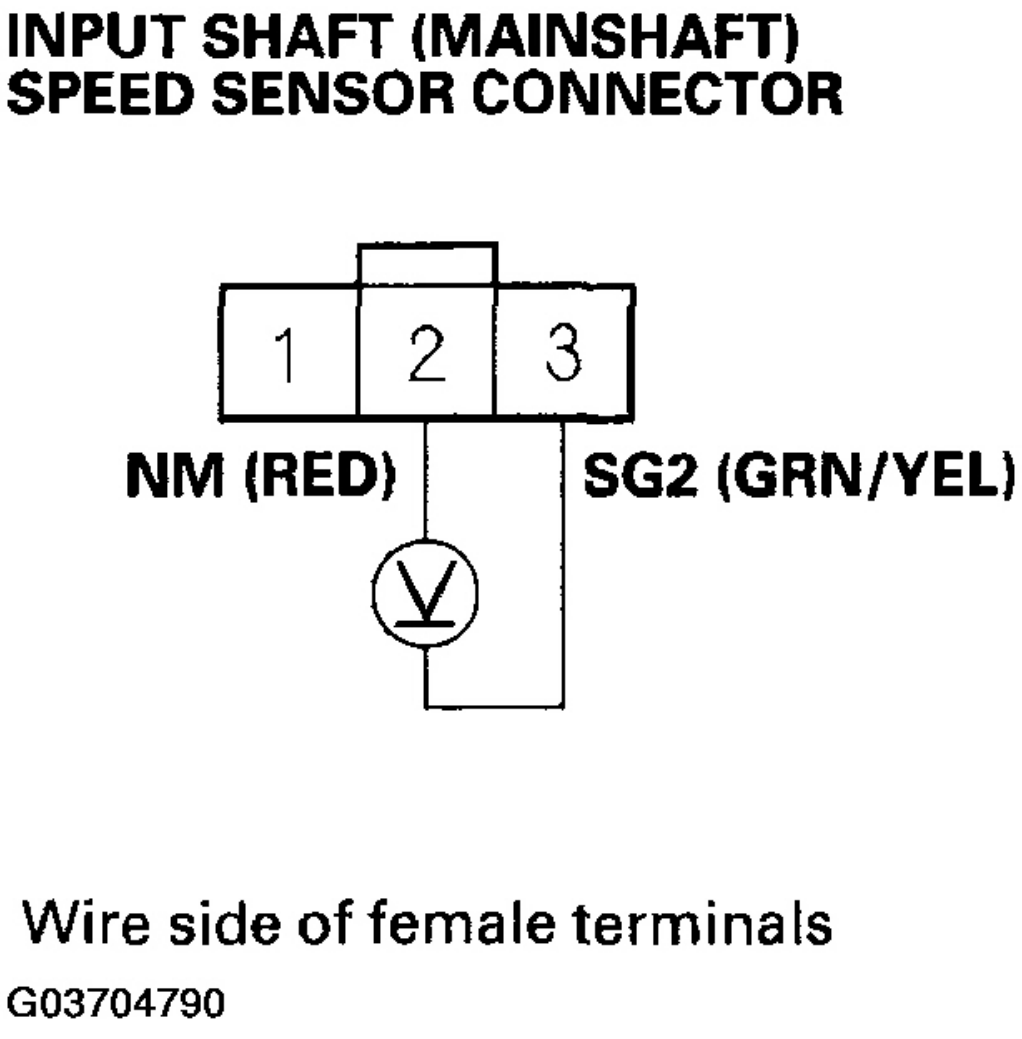


Fig. 96: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 28.

NO - Go to step 25.

25. Turn the ignition switch OFF.
26. Disconnect PCM connector B (44P).
27. Check for continuity between PCM connector terminal B39 and input shaft (mainshaft) speed sensor connector terminal No. 2.

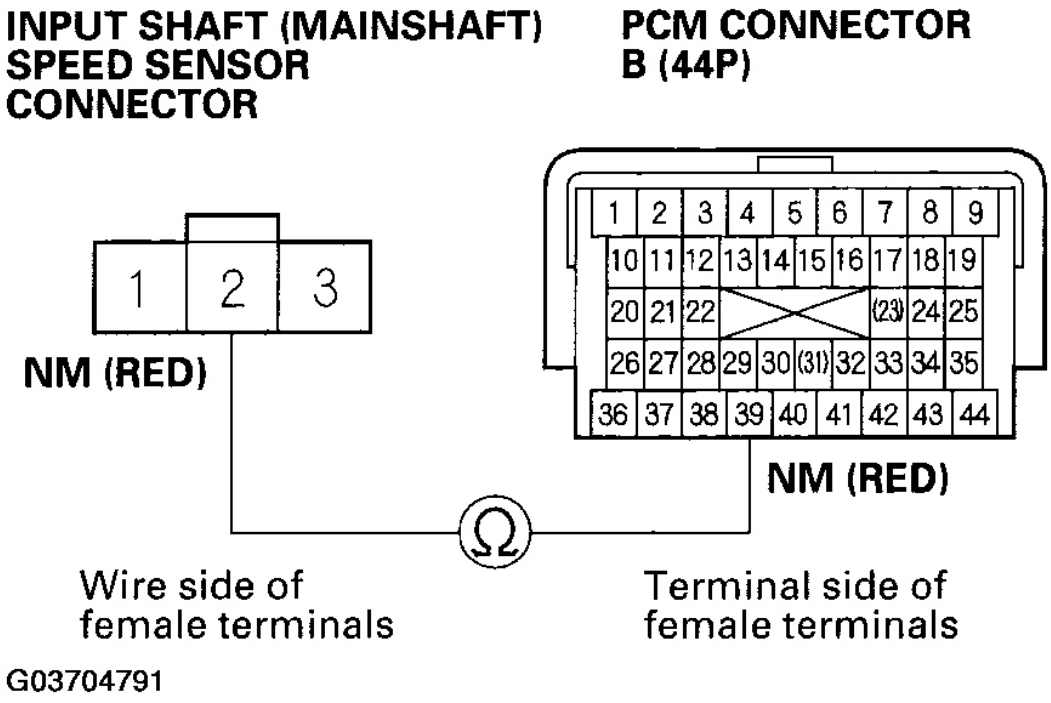


Fig. 97: Checking Continuity Between PCM Connector Terminal B39 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal B39 and the input shaft (mainshaft) speed sensor, then Go to step 32.

28. Connect the input shaft (mainshaft) speed sensor connector.
29. Clear the DTC with the HDS.
30. Start the engine, disable the VSA by pressing the VSA OFF button, run the vehicle in the D position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.
31. Monitor the OBD status for P0716 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate FAILED?

    YES - Replace the input shaft (mainshaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 32.

    NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.
32. Clear the DTC with the HDS.
33. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
34. Monitor the OBD status for P0716 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate PASSED?

    YES - Troubleshooting is complete.

    NO - Return to step 6 and recheck.

DTC P0717: Problem in Input Shaft (Mainshaft) Speed Sensor Circuit (No Signal Input)

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. Record all freeze data, and clear the DTC with the HDS.
2. Check for proper input shaft (mainshaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).

3. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
4. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds. Slow down and stop the wheels.
5. Monitor the OBD status for P0717 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step .

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections at the PCM and input shaft (mainshaft) speed sensor connectors. If the tester indicates NOT COMPLETED, return to step 4 and recheck.
6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (44P), C (44P), and input shaft (mainshaft) speed sensor connector.
9. Check for continuity between PCM connector terminals B43, C40, B36, and B1 and body ground.

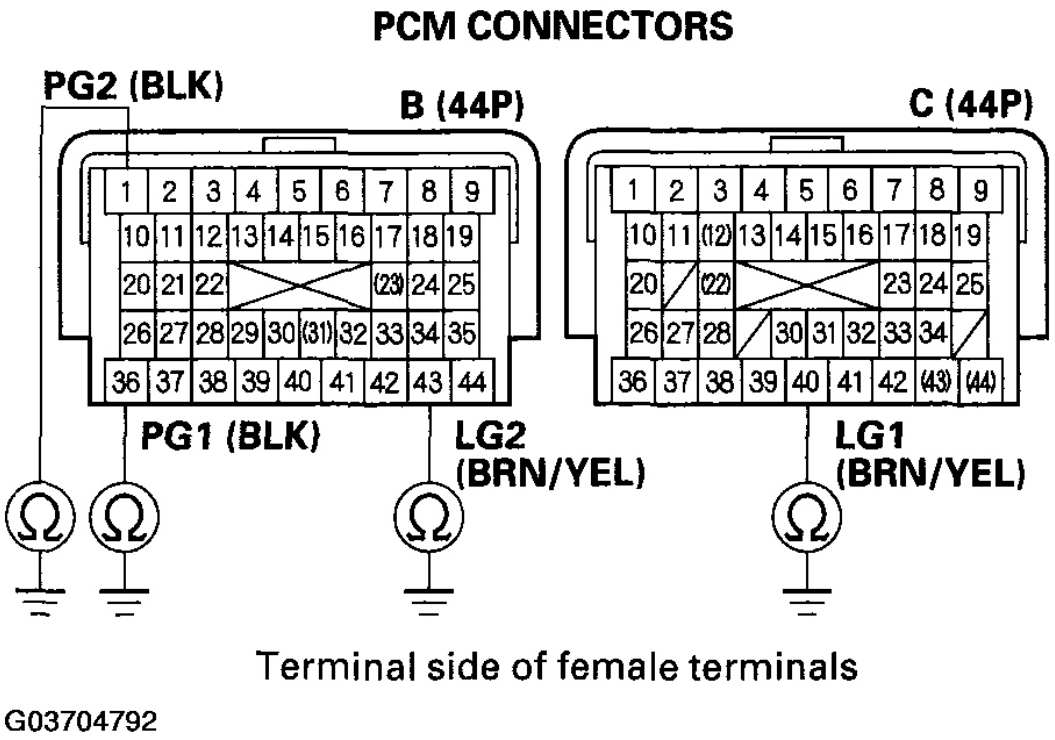


Fig. 98: Checking Continuity Between PCM Connector Terminals And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wires between PCM connector terminals B1, B36, B43, C40, and ground (G101, G102), or repair poor ground (G101, G102), then Go to step 32.

10. Connect PCM connectors B (44P) and C (44P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

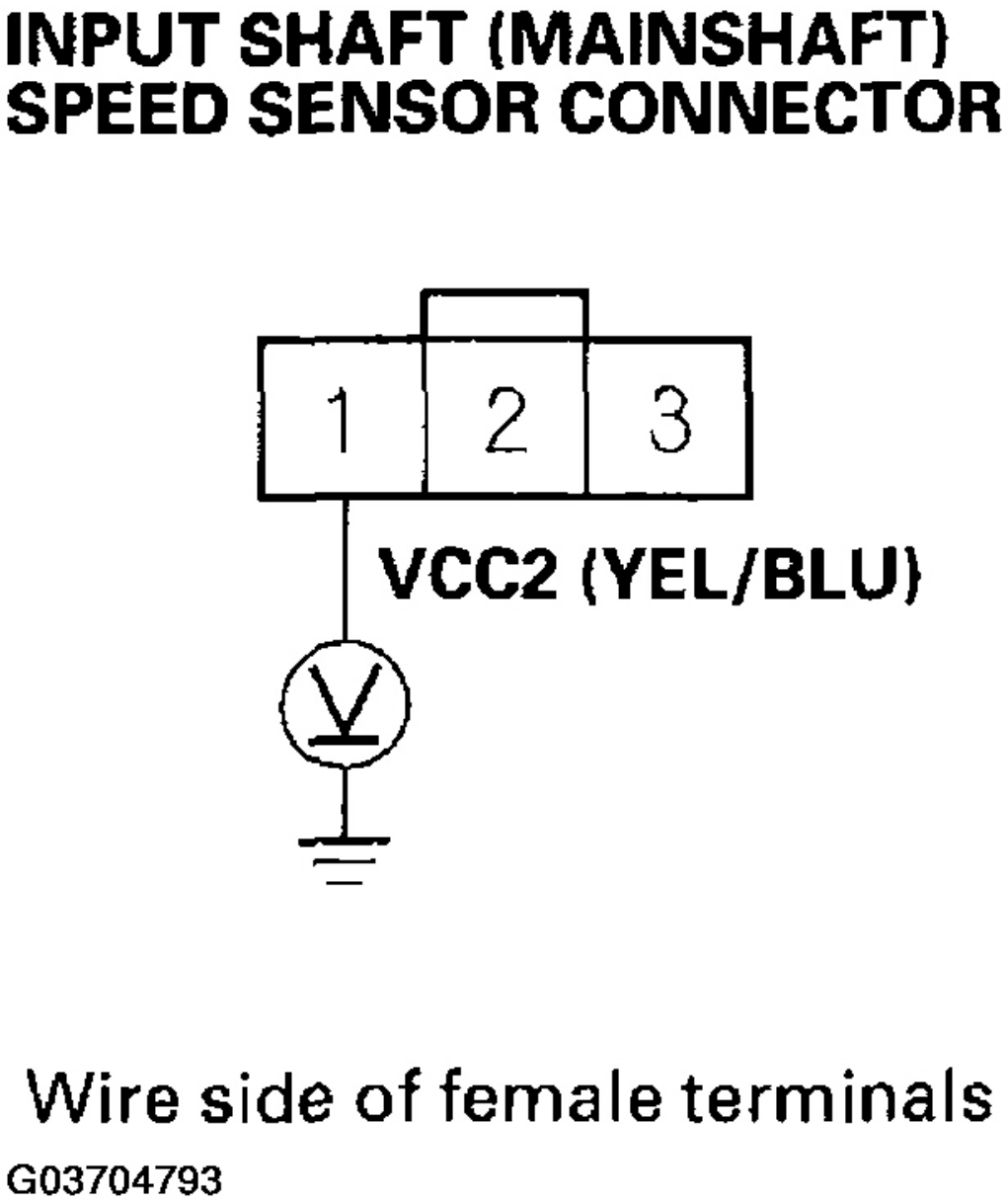


Fig. 99: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 17.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector C (44P).
15. Check for continuity between PCM connector terminal C13 and input shaft (mainshaft) speed sensor connector terminal No. 1.

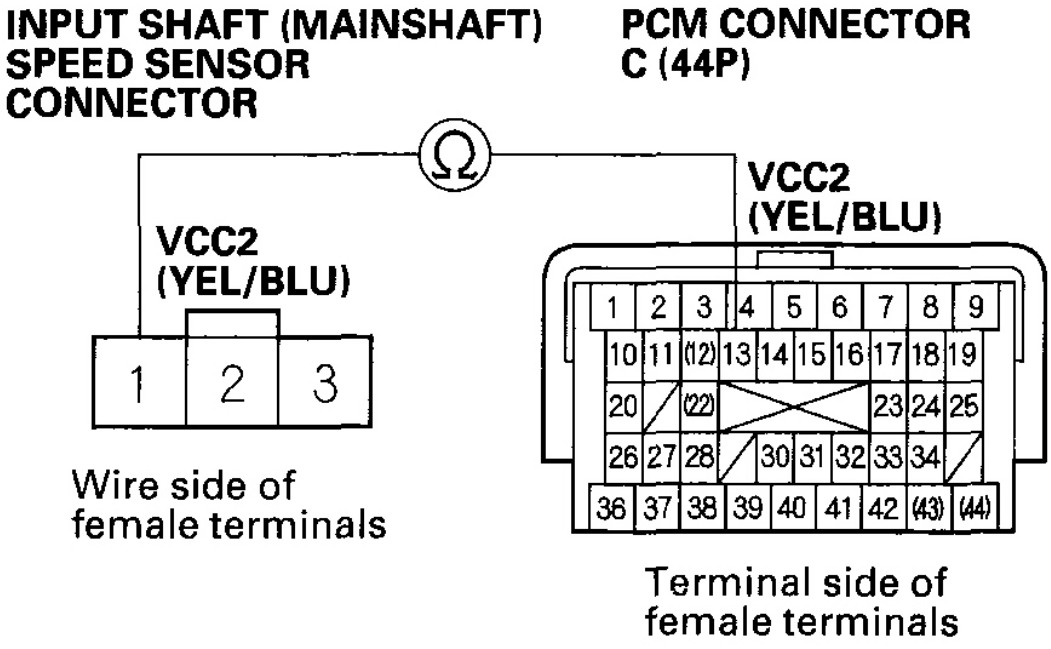


Fig. 100: Checking For Continuity Between PCM Connector Terminal C13 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair an open in the wire between PCM connector terminal C13 and the input shaft (mainshaft) speed sensor, then Go to step 32.

16. Check for continuity between PCM connector terminal C13 and body ground.

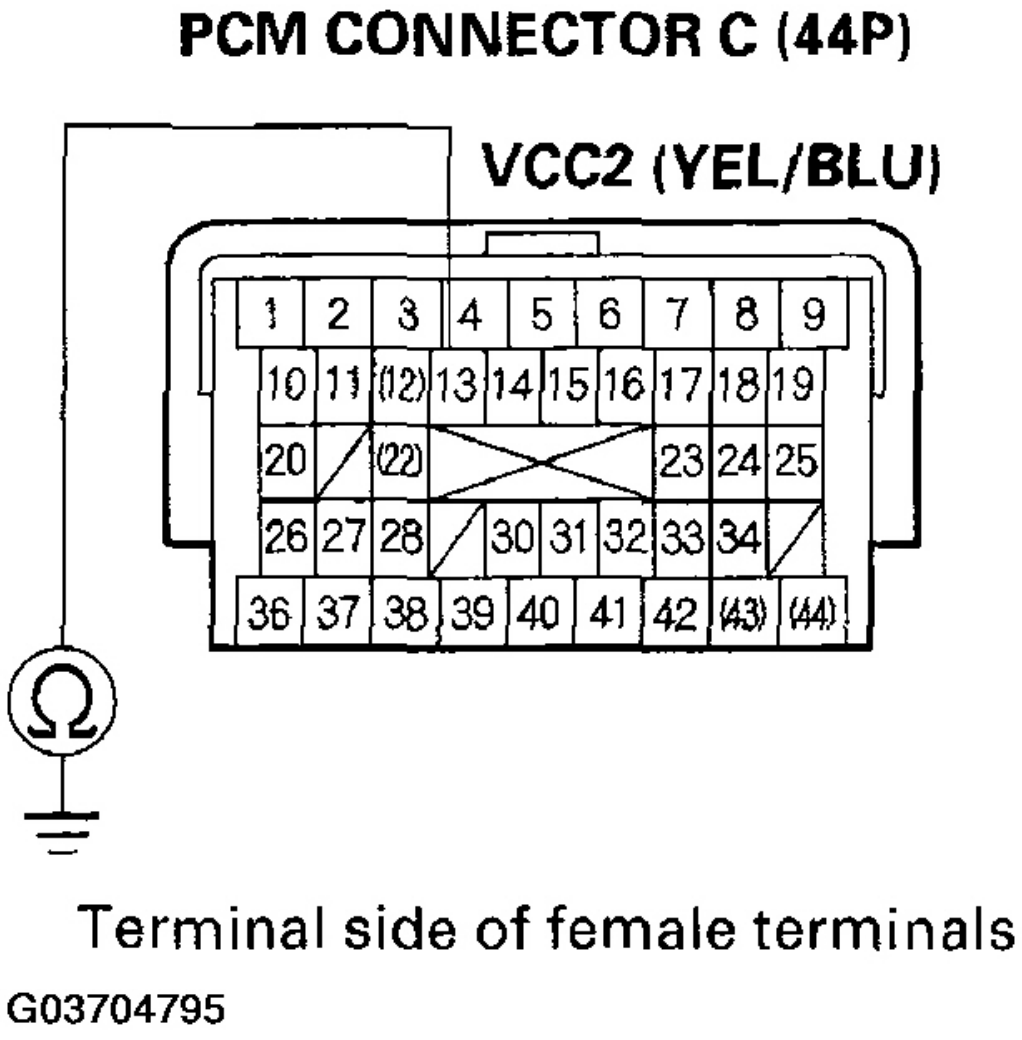


Fig. 101: Checking Continuity Between PCM Connector Terminal C13 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C13 and the input shaft (mainshaft) speed sensor, then Go to step 32.

NO - Check for loose or poor connections at PCM connector terminal C13. If the connection is OK, update the PCM if it does not have the latest software, or substitute

a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

17. Turn the ignition switch OFF.
18. Disconnect PCM connector B (44P).
19. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

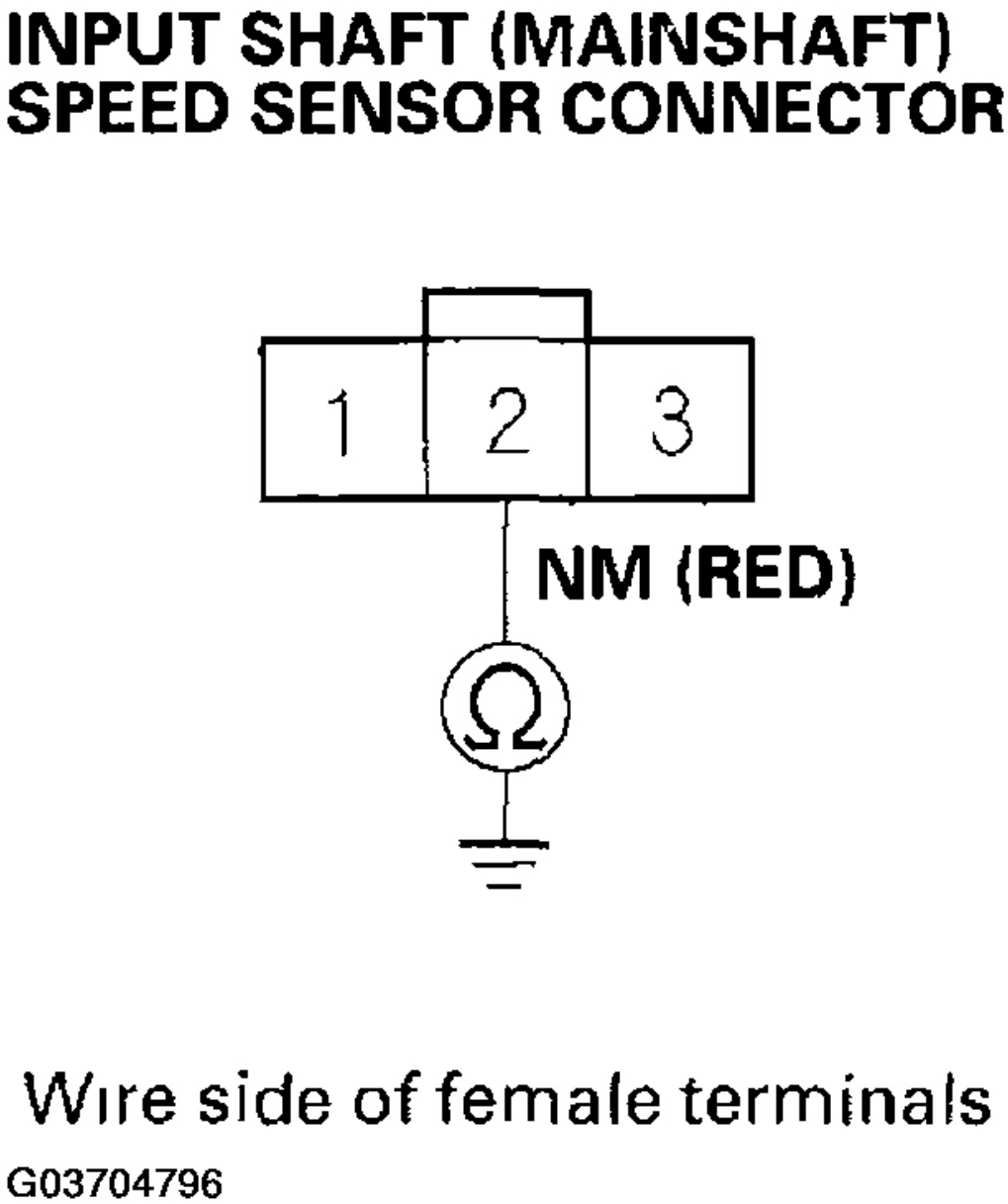


Fig. 102: Checking Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B39 and input shaft (mainshaft) speed sensor connector, then Go to step 32.

NO - Go to step 20.

20. Disconnect PCM connector C (44P).
21. Check for continuity between PCM connector terminal C14 and input shaft (mainshaft) speed sensor connector terminal No. 3.

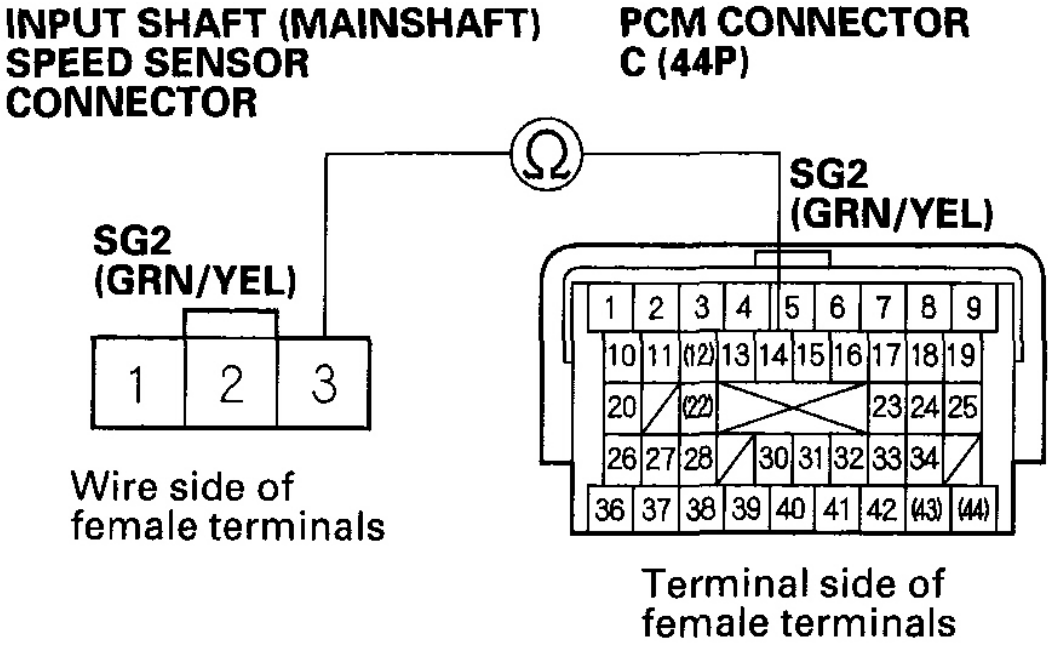


Fig. 103: Checking Continuity Between PCM Connector Terminal C14 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22.

NO - Repair an open in the wire between the input shaft (mainshaft) speed sensor connector and PCM connector terminal C14, then Go to step 32.

22. Connect PCM connectors B (44P) and C (44P).
23. Turn the ignition switch ON (II).

24. Measure the voltage between input shaft (mainshaft) speed sensor connector terminals No. 2 and No. 3.

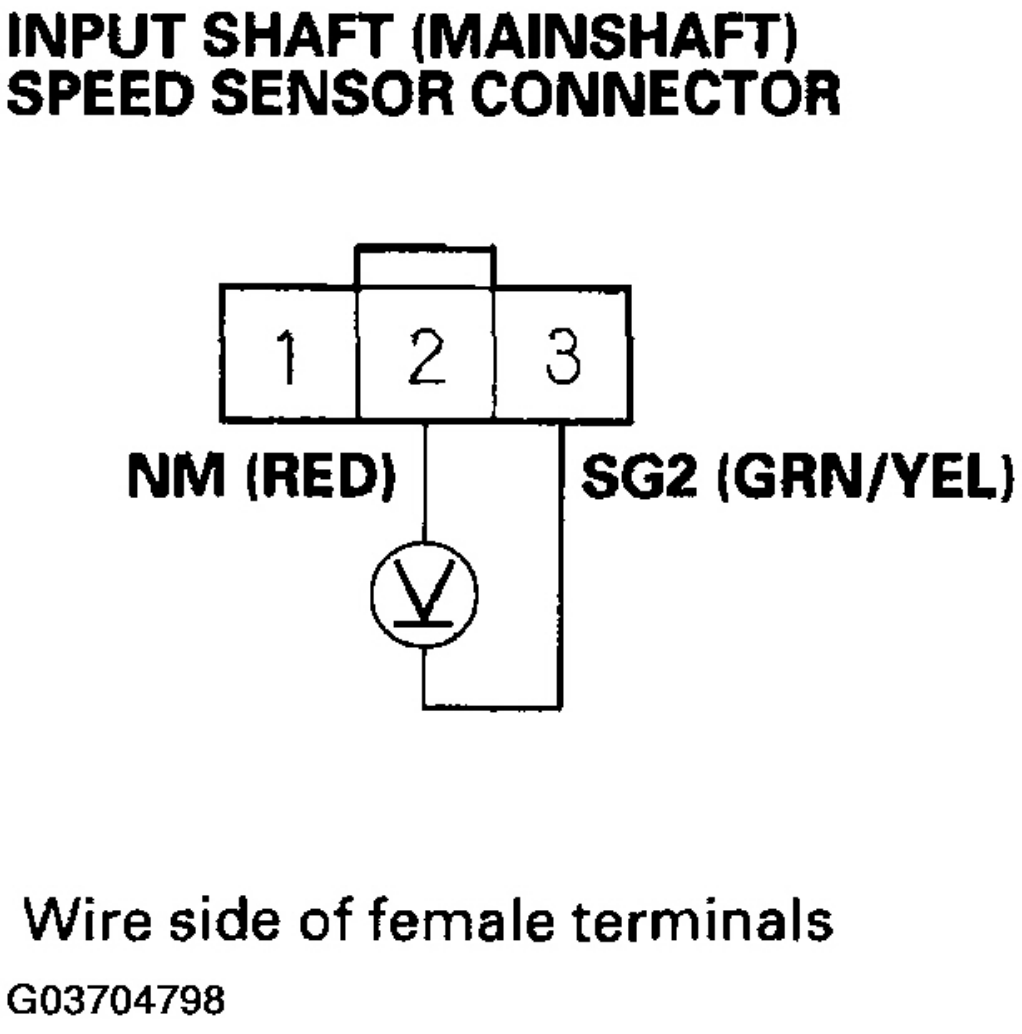


Fig. 104: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 28.

NO - Go to step 25.

25. Turn the ignition switch OFF.
26. Disconnect PCM connector B (44P).
27. Check for continuity between PCM connector terminal B39 and input shaft (mainshaft) speed sensor connector terminal No. 2.

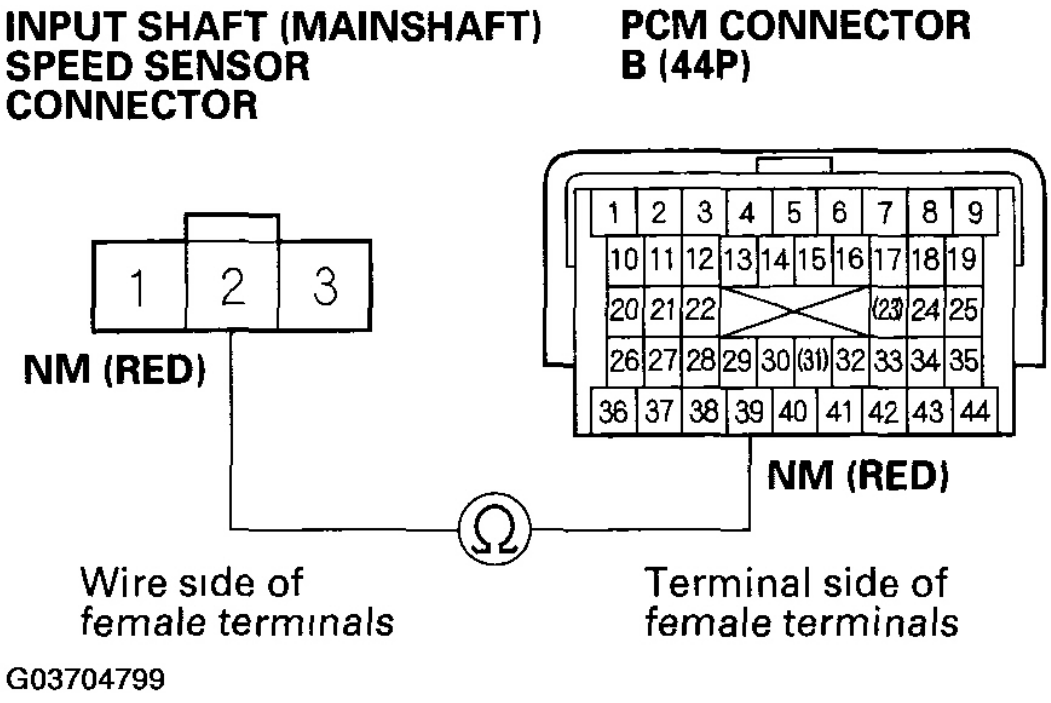


Fig. 105: Checking Continuity Between PCM Connector Terminal B39 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal B39 and the input shaft (mainshaft) speed sensor, then Go to step 32.

28. Connect the input shaft (mainshaft) speed sensor connector.
29. Clear the DTC with the HDS.
30. Start the engine, disable the VSA by pressing the VSA OFF button, run the vehicle in the D position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.
31. Monitor the OBD status for P0717 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate FAILED?

    YES - Replace the input shaft (mainshaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 32.

    NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.
32. Clear the DTC with the HDS.
33. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
34. Monitor the OBD status for P0717 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate PASSED?

    YES - Troubleshooting is complete.

    NO - Return to step 6 and recheck.

DTC P0718: Input Shaft (Mainshaft) Speed Sensor Intermittent Failure

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Monitor the OBD status for P0718 in the DTCs/Freeze Data in A/T Mode Menu for a

pass/fail.

Does the result indicate FAILED?

YES - Go to step 4.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and PCM. If the tester indicates NOT COMPLETED, return to step 2 and recheck.

4. Turn the ignition switch OFF.
5. Disconnect the input shaft (mainshaft) speed sensor connector, and inspect the connector and connector terminals to be sure they are making good contact.

Are the connector terminals OK?

YES - Go to step 6.

NO - Repair the connector terminals, then Go to step 6.

6. Connect the input shaft (mainshaft) speed sensor connector.
7. Test-drive the vehicle for several minutes, and monitor the OBD status for P0718 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - The problem has been corrected. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

8. Turn the ignition switch OFF.
9. Jump the SCS line with the HDS.
10. Disconnect PCM connector B (44P).
11. Disconnect the input shaft (mainshaft) speed sensor connector.
12. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

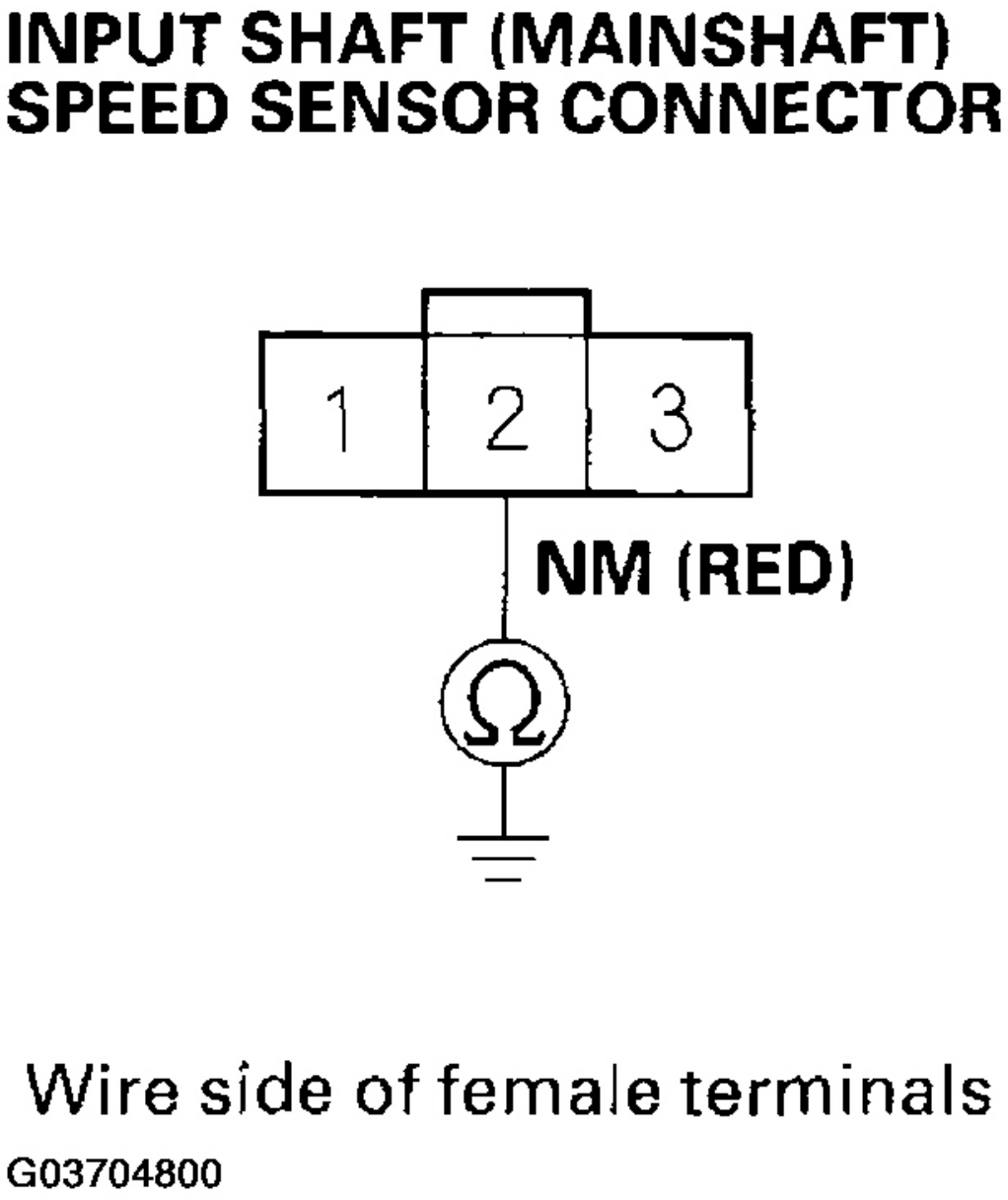


Fig. 106: Checking Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B39 and the input shaft (mainshaft) speed sensor connector, then Go to step 19.

NO - Go to step 13.

13. Connect PCM connector B (44P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

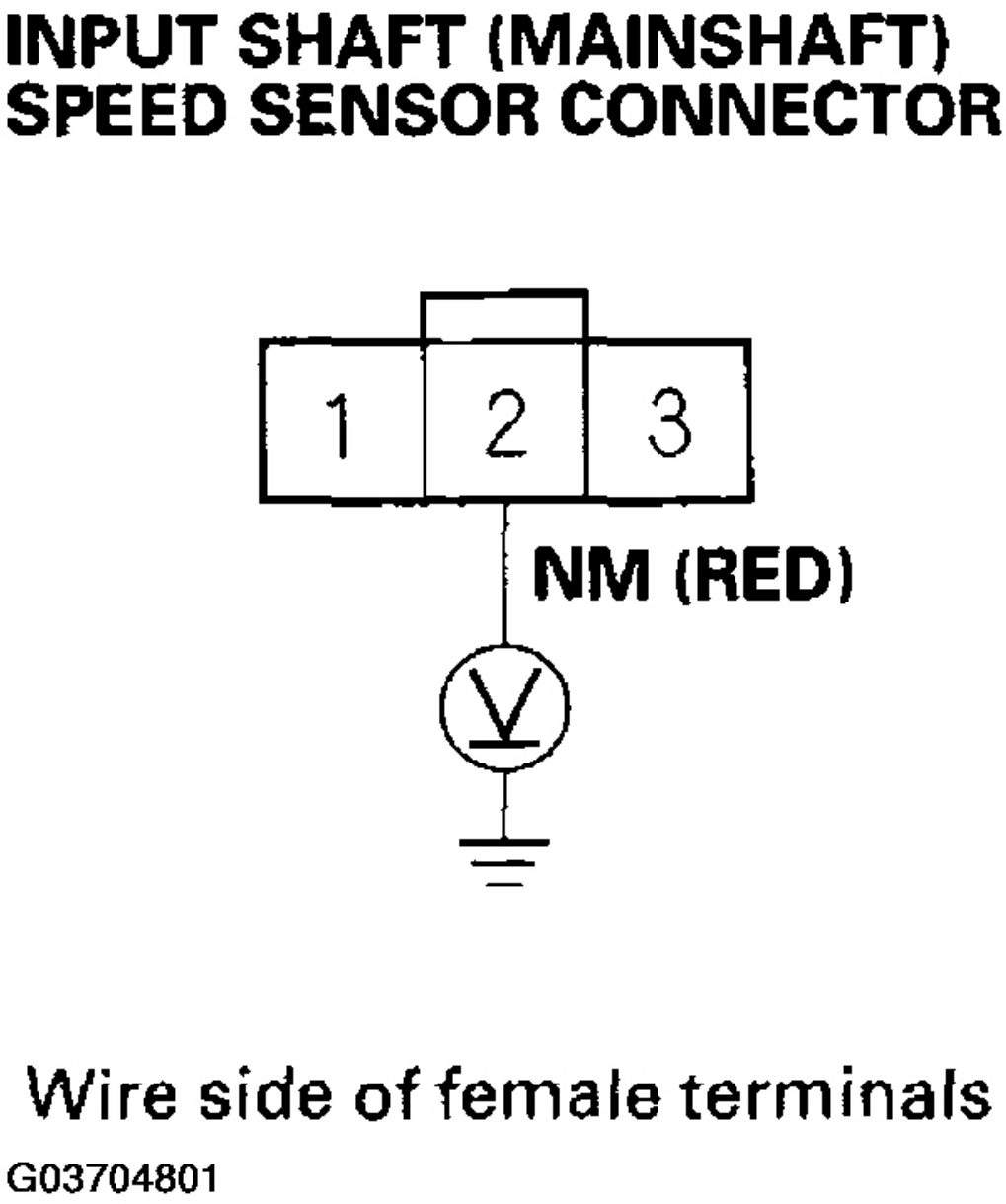


Fig. 107: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the input shaft (mainshaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 19.

NO - Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector B (44P).
18. Check for continuity between PCM connector terminal B39 and input shaft (mainshaft) speed sensor connector terminal No. 2.

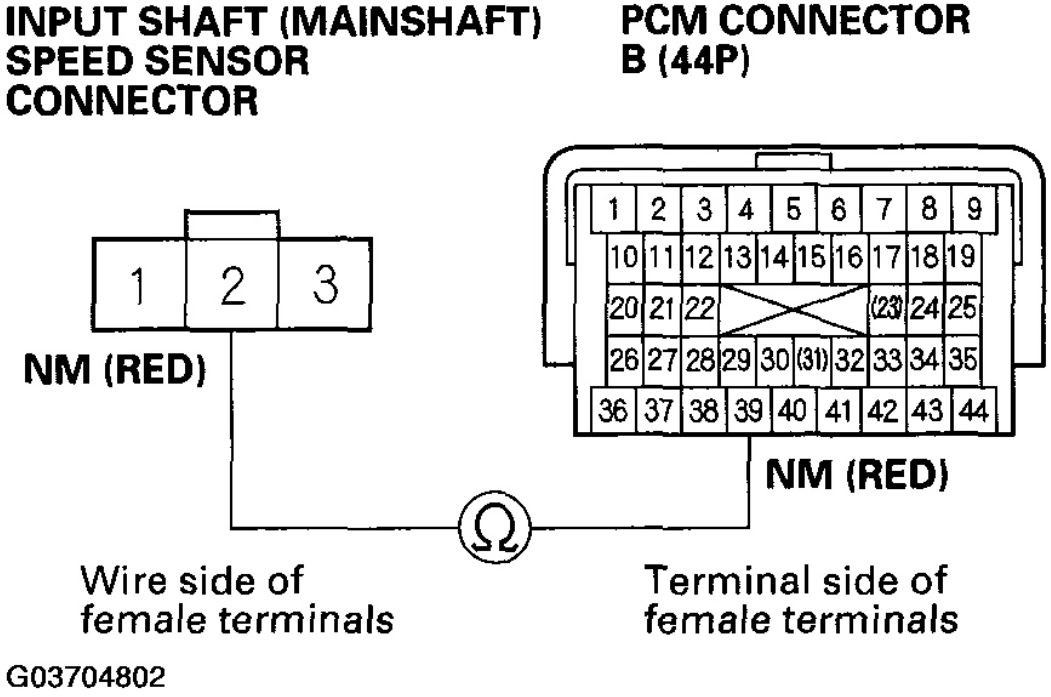


Fig. 108: Checking Continuity Between PCM Connector Terminal B39 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal B39 and the input shaft (mainshaft) speed sensor, then Go to step 19.

19. Clear the DTC with the HDS.
20. Test-drive the vehicle for several minutes in the D position through all five gears.
21. Monitor the OBD status for P0718 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 and recheck.

DTC P0721: Problem in Output Shaft (Countershaft) Speed Sensor Circuit

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. Record all freeze data, and clear the DTC with the HDS.
2. Check for proper output shaft (countershaft) speed sensor installation (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.
4. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position with engine speed 2,000 rpm or higher for more than 10 seconds. Slow down and stop the wheels.
5. Monitor the OBD status for P0721 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 6.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections at the PCM and output shaft (countershaft) speed sensor connectors. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (44P), C (44P), and output shaft (countershaft) speed sensor connector.
9. Check for continuity between PCM connector terminals B43, C40, B36, and B1 and body ground.

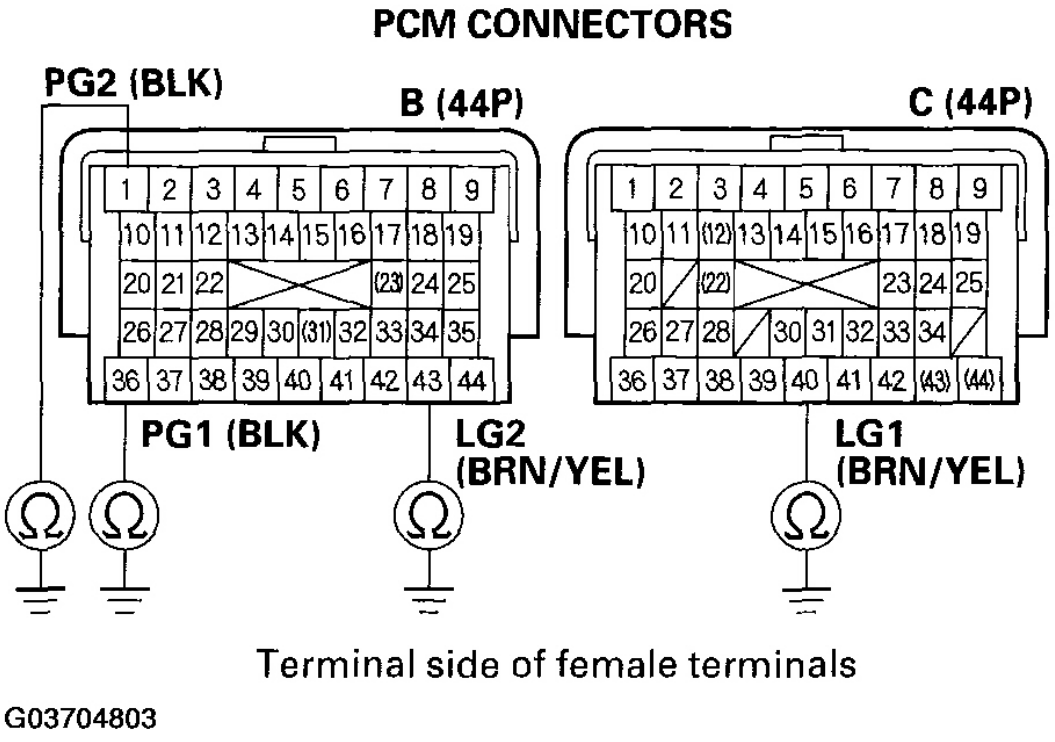


Fig. 109: Checking Continuity Between PCM Connector Terminals And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wires between PCM connector terminals B1, B36, B43, C40, and ground (G101, G102), or repair poor ground (G101, G102), then Go to step 31.

10. Connect PCM connectors B (44P) and C (44P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

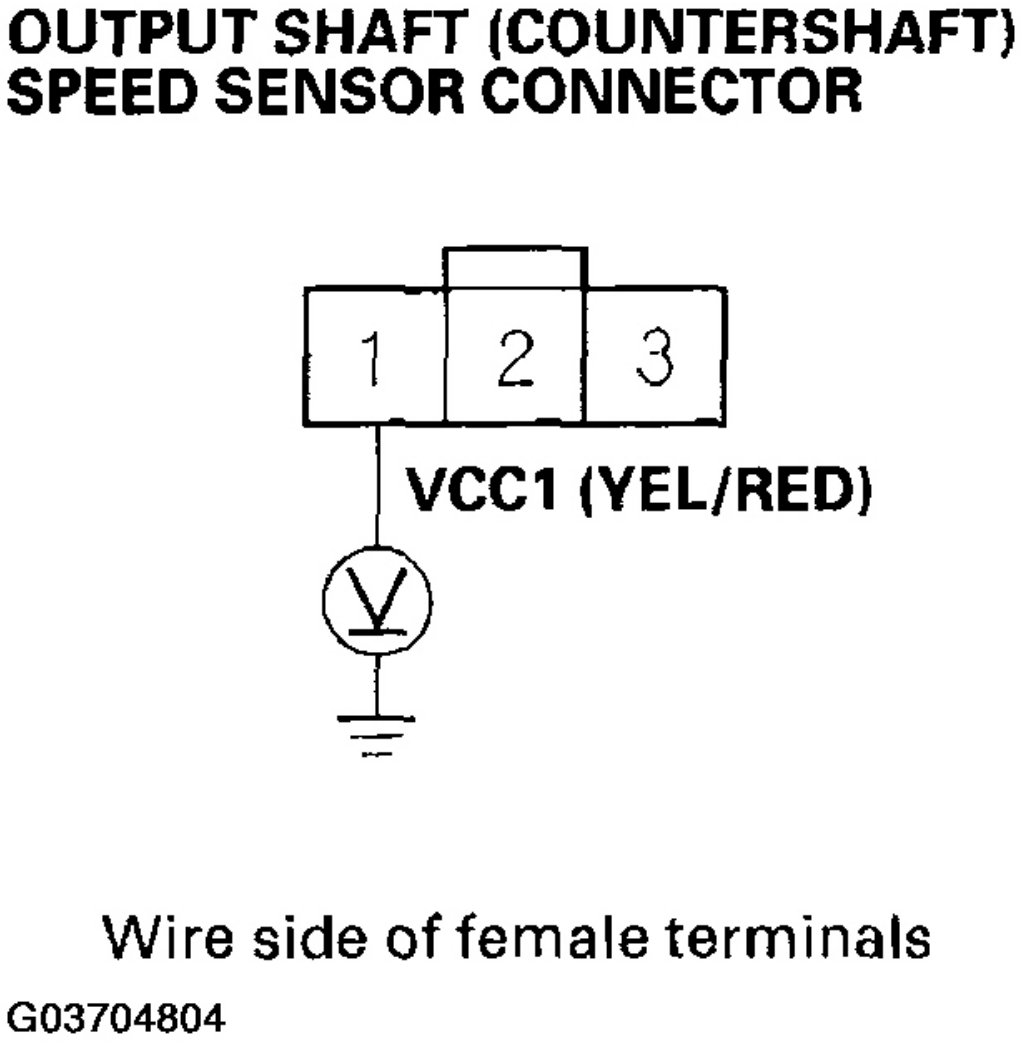


Fig. 110: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 17.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector B (44P).
15. Check for continuity between PCM connector terminal B18 and output shaft (countershaft) speed sensor connector terminal No. 1.

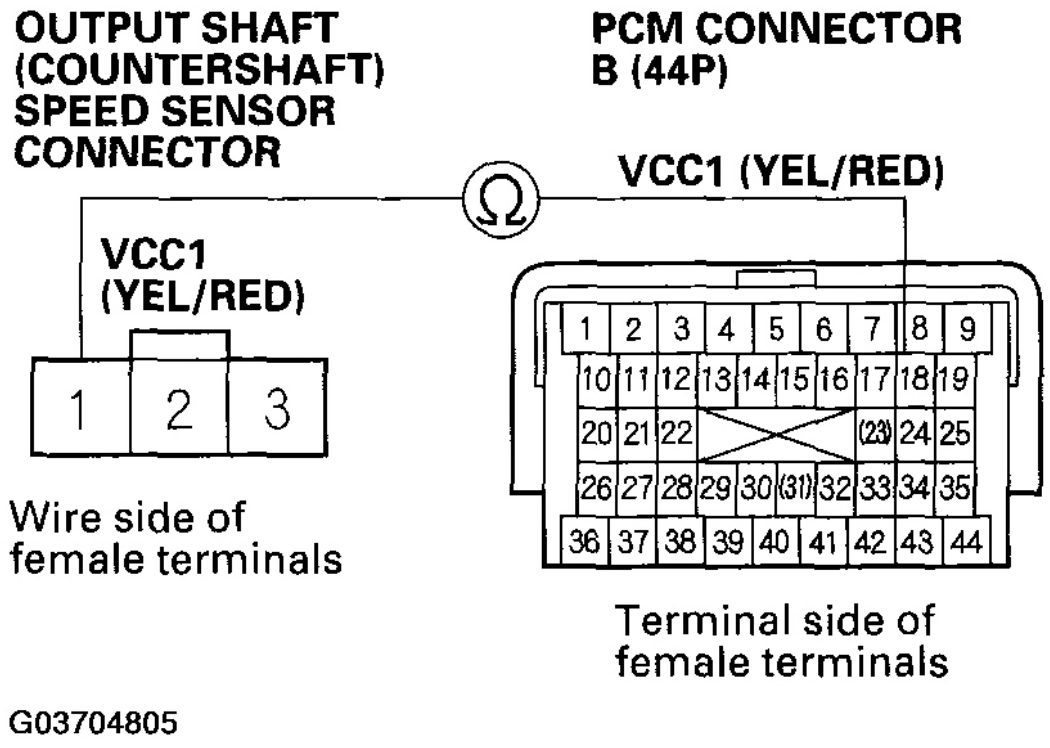


Fig. 111: Checking Continuity Between PCM Connector Terminal B18 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair an open in the wire between PCM connector terminal B18 and the output

shaft (countershaft) speed sensor, then Go to step 31.

16. Check for continuity between PCM connector terminal B18 and body ground.

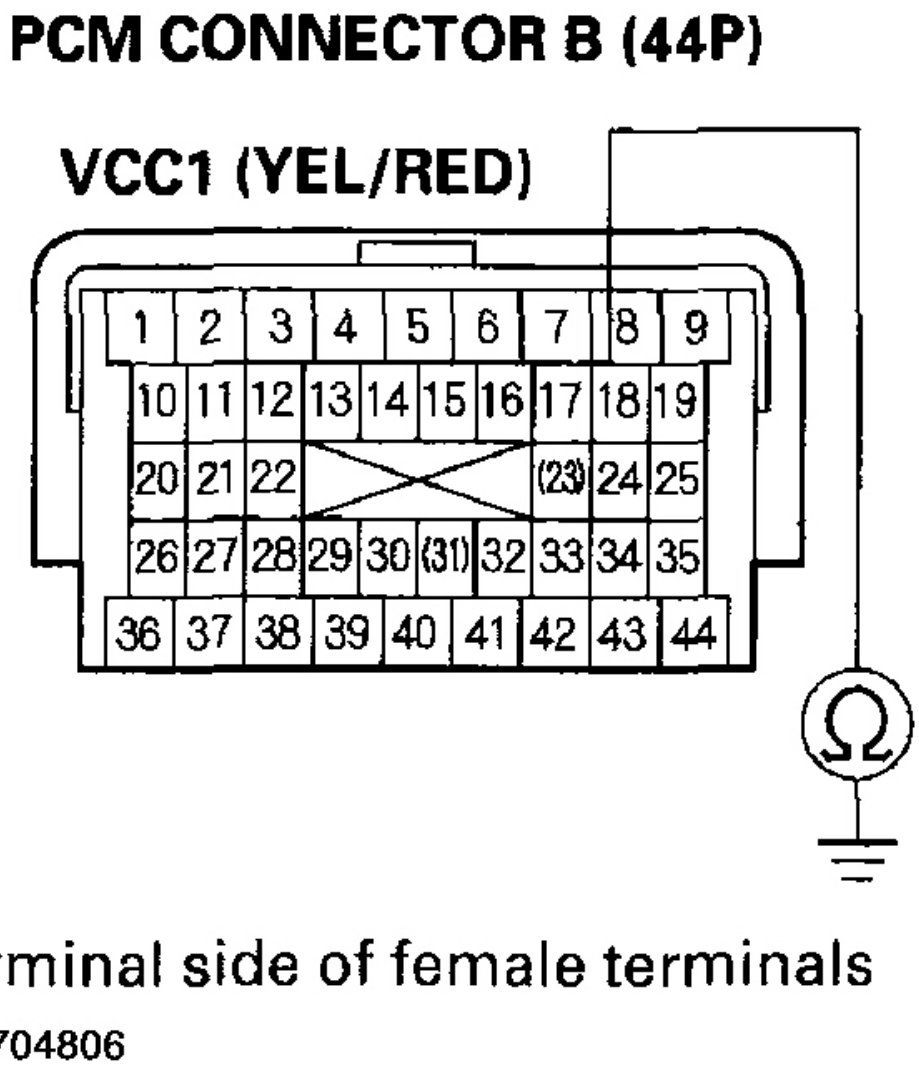


Fig. 112: Checking Continuity Between PCM Connector Terminal B18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B18 and the output shaft (countershaft) speed sensor, then Go to step 31.

NO - Check for loose or poor connections at PCM connector terminal B18. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

17. Turn the ignition switch OFF.
18. Disconnect PCM connector B (44P).
19. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

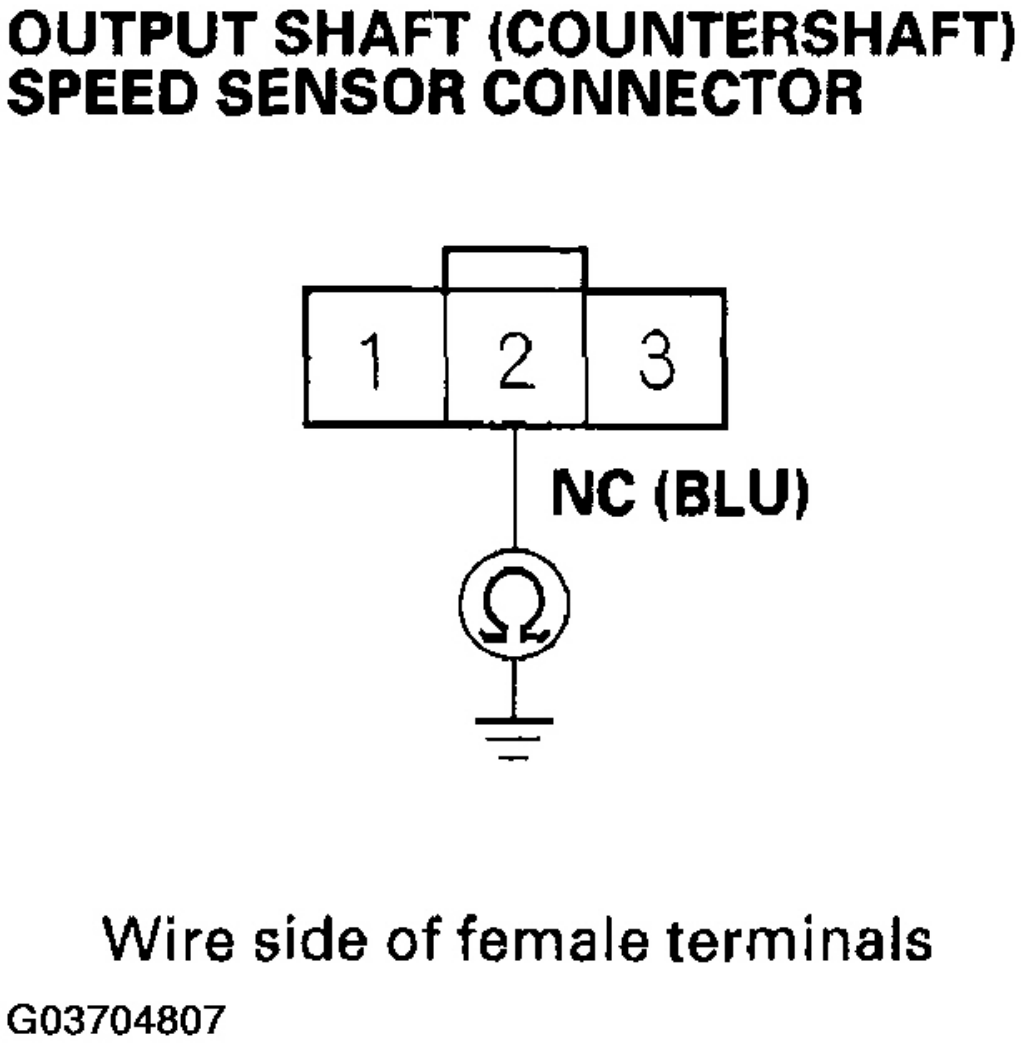


Fig. 113: Checking Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B40 and output shaft (countershaft) speed sensor connector, then Go to step 31.

NO - Go to step 20.

20. Check for continuity between PCM connector terminal B33 and output shaft (countershaft) speed sensor connector terminal No. 3.

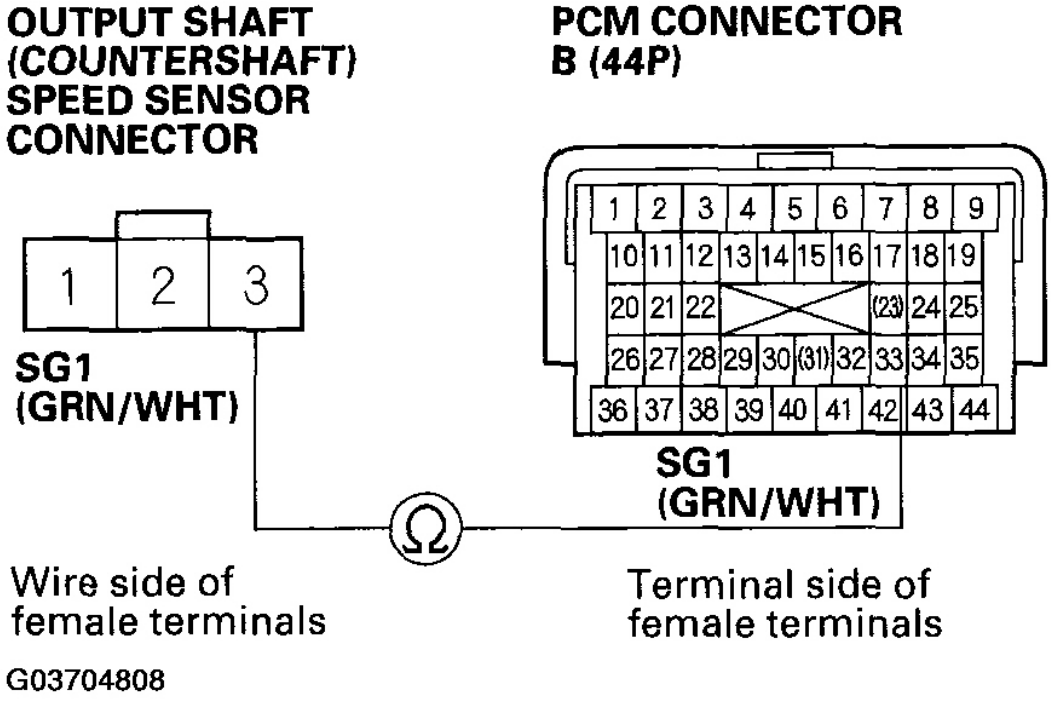


Fig. 114: Checking Continuity Between PCM Connector Terminal B33 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 21.

NO - Repair an open in the wire between output shaft (countershaft) speed sensor connector and PCM connector terminal B33, then Go to step 31.

21. Connect PCM connector B (44P).
22. Turn the ignition switch ON (II).
23. Measure the voltage between output shaft (countershaft) speed sensor connector terminals No. 2 and No. 3.

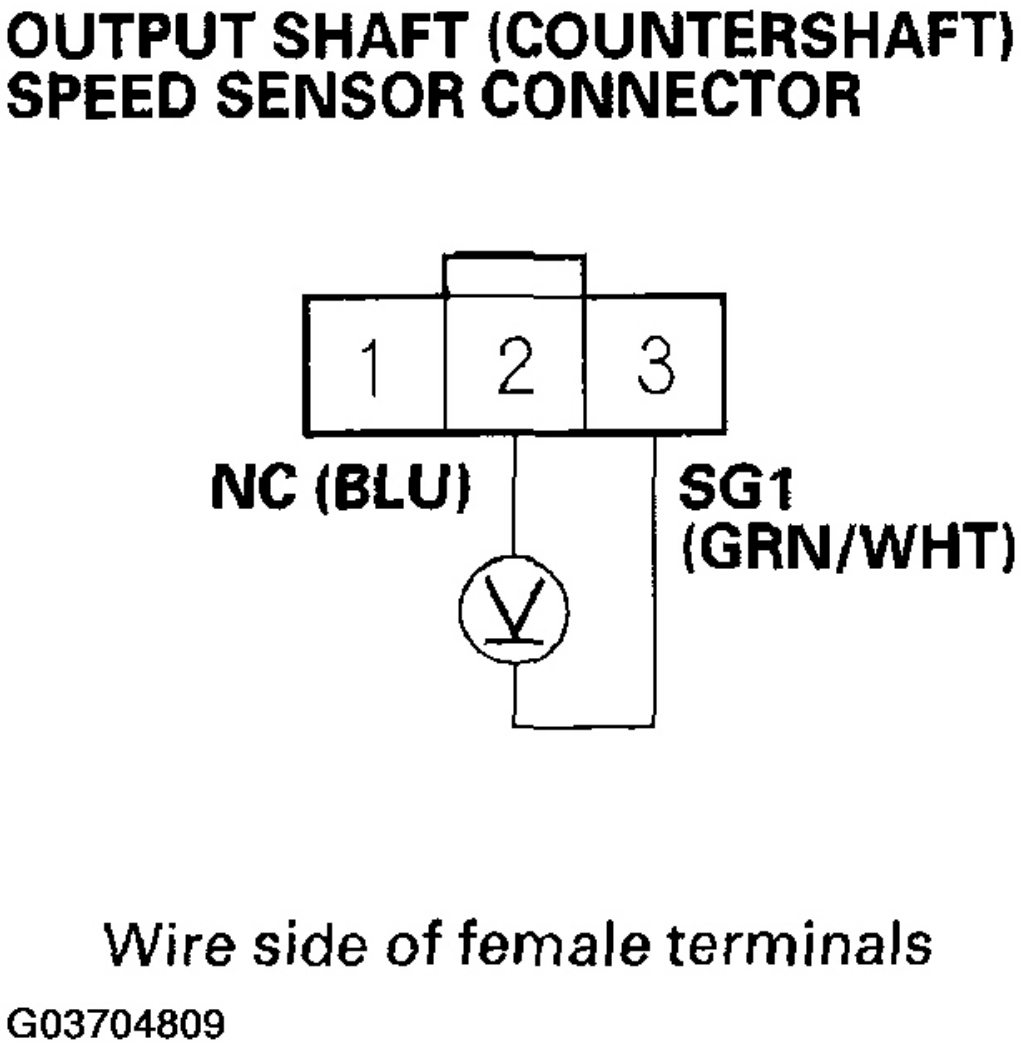


Fig. 115: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 27.

NO - Go to step 24.

24. Turn the ignition switch OFF.

25. Disconnect PCM connector B (44P).
26. Check for continuity between PCM connector terminal B40 and output shaft (countershaft) speed sensor connector terminal No. 2.

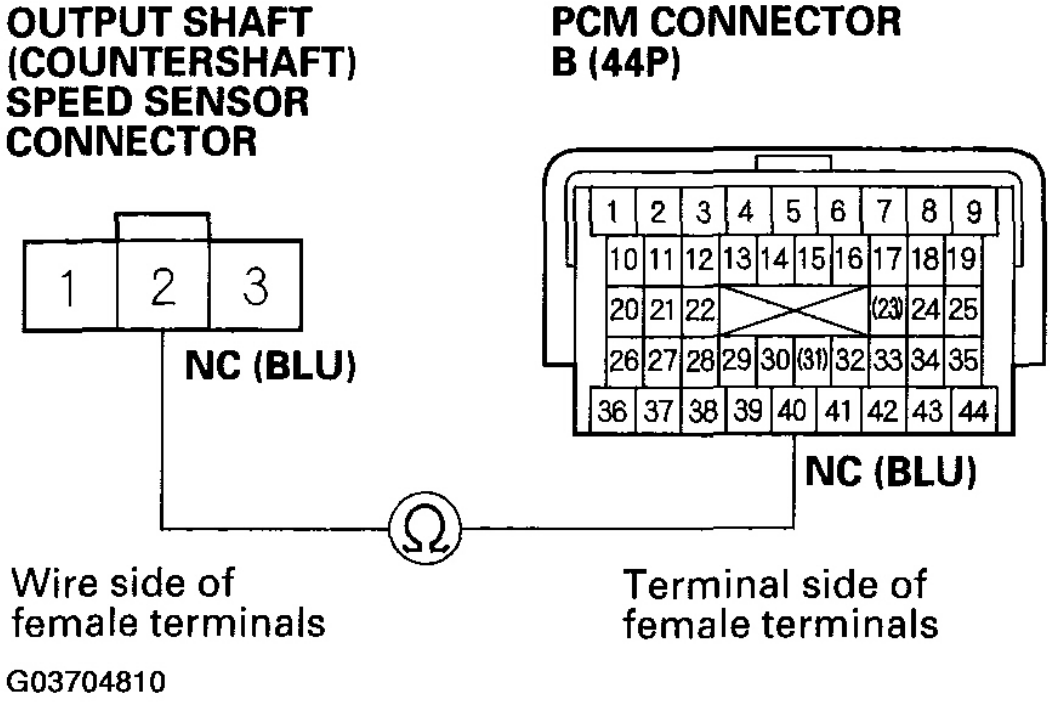


Fig. 116: Checking Continuity Between PCM Connector Terminal B40 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal B40 and the output shaft (countershaft) speed sensor, then Go to step 31.

27. Connect the output shaft (countershaft) speed sensor connector.
28. Clear the DTC with the HDS.

29. Start the engine, disable the VSA by pressing the VSA OFF button, run the vehicle in the D position with engine speed at 2,000 rpm or higher for more than 10 seconds. Slow down and stop the wheels.
30. Monitor the OBD status for P0721 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate FAILED?

    YES - Replace the output shaft (countershaft) speed sensor (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 31.

    NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.
31. Clear the DTC with the HDS.
32. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
33. Monitor the OBD status for P0721 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate PASSED?

    YES - Troubleshooting is complete.

    NO - Return to step 6 and recheck.

DTC P0722: Problem in Output Shaft (Countershaft) Speed Sensor Circuit (No Signal Input)

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. Record all freeze data, and clear the DTC with the HDS.
2. Check for proper output shaft (countershaft) speed sensor installation (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the front of the vehicle, or lift the vehicle up, make sure it is securely supported, and allow the front wheels to rotate freely.

4. Start the engine, disable the VSA by pressing the VSA OFF switch, run the vehicle in the D position with engine speed 2,000 rpm or higher for more than 10 seconds. Slow down and stop the wheels.
5. Monitor the OBD status for P0722 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections at the PCM and output shaft (countershaft) speed sensor connectors. If the tester indicates NOT COMPLETED, return to step 4 and recheck.
6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (44P), C (44P), and output shaft (countershaft) speed sensor connector.
9. Check for continuity between PCM connector terminals B43, C40, B36, and B1 and body ground.

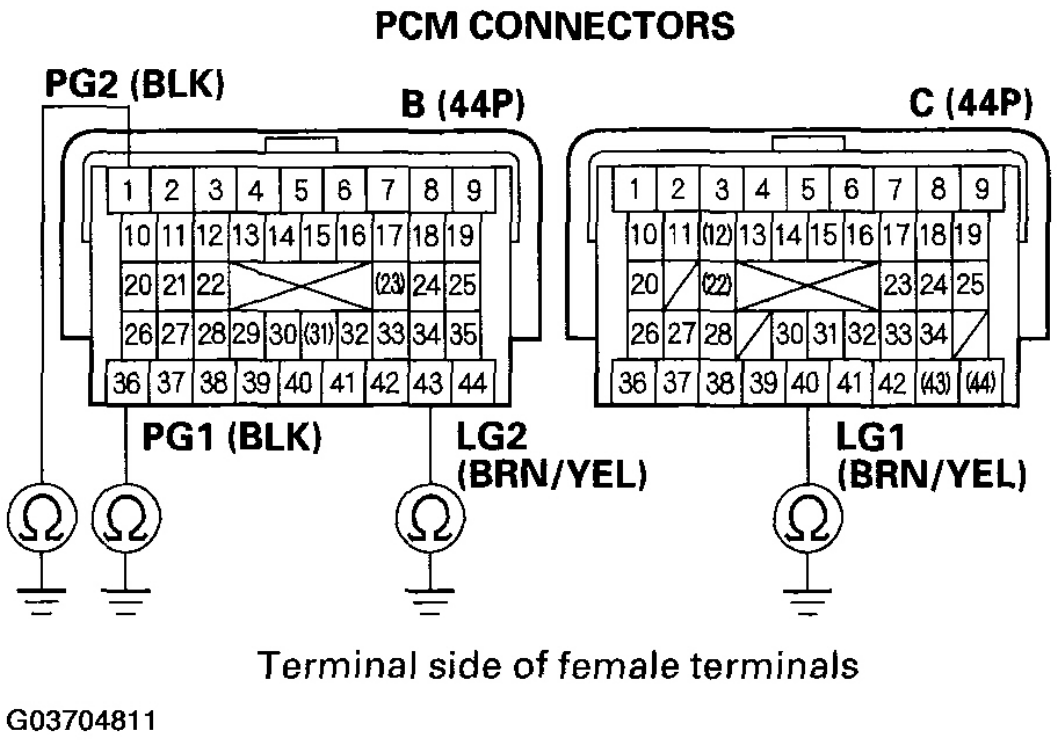


Fig. 117: Checking Continuity Between PCM Connector Terminals And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wires between PCM connector terminals B1, B36, B43, C40, and ground (G101, G102), or repair poor ground (G101, G102), then Go to step 31.

10. Connect PCM connectors B (44P) and C (44P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

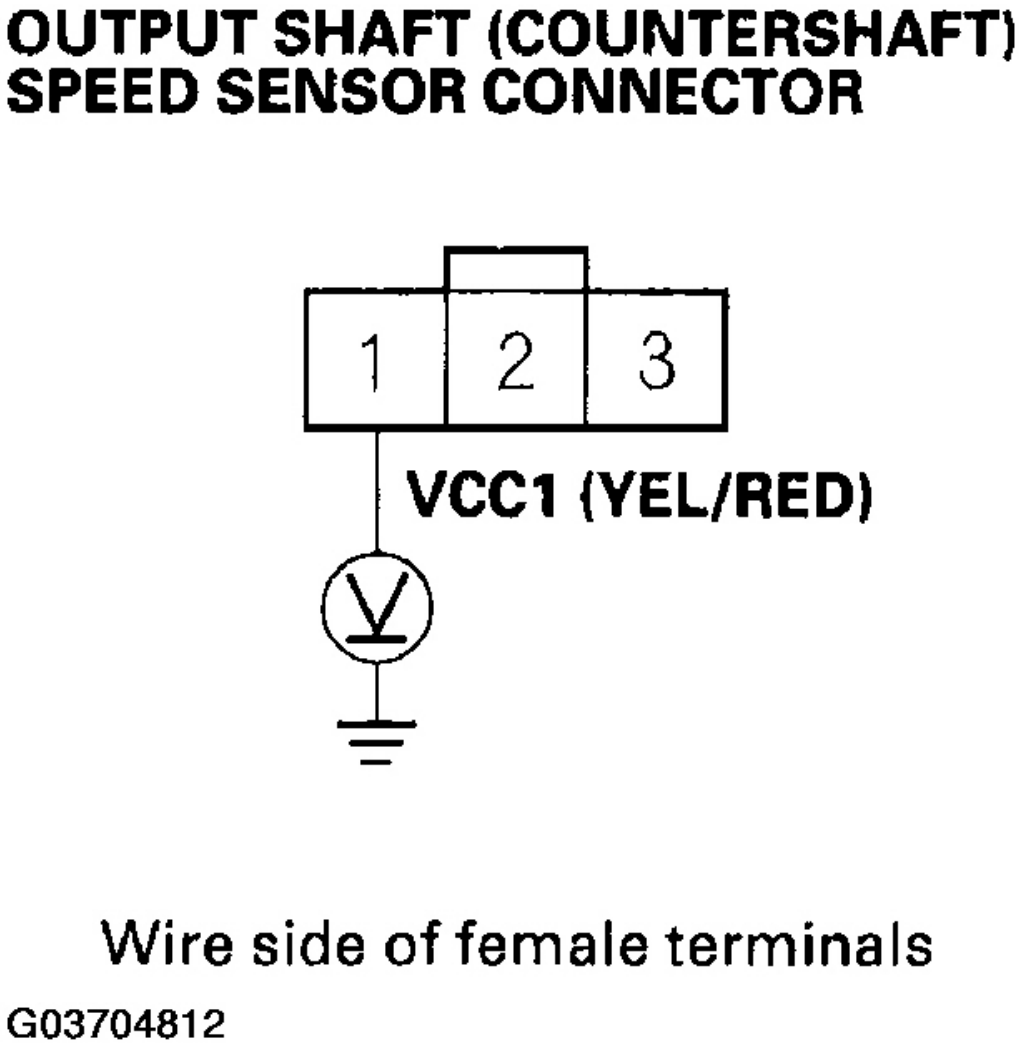


Fig. 118: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 17.

NO - Go to step 13.

13. Turn the ignition switch OFF.

14. Disconnect PCM connector B (44P).
15. Check for continuity between PCM connector terminal B18 and output shaft (countershaft) speed sensor connector terminal No. 1.

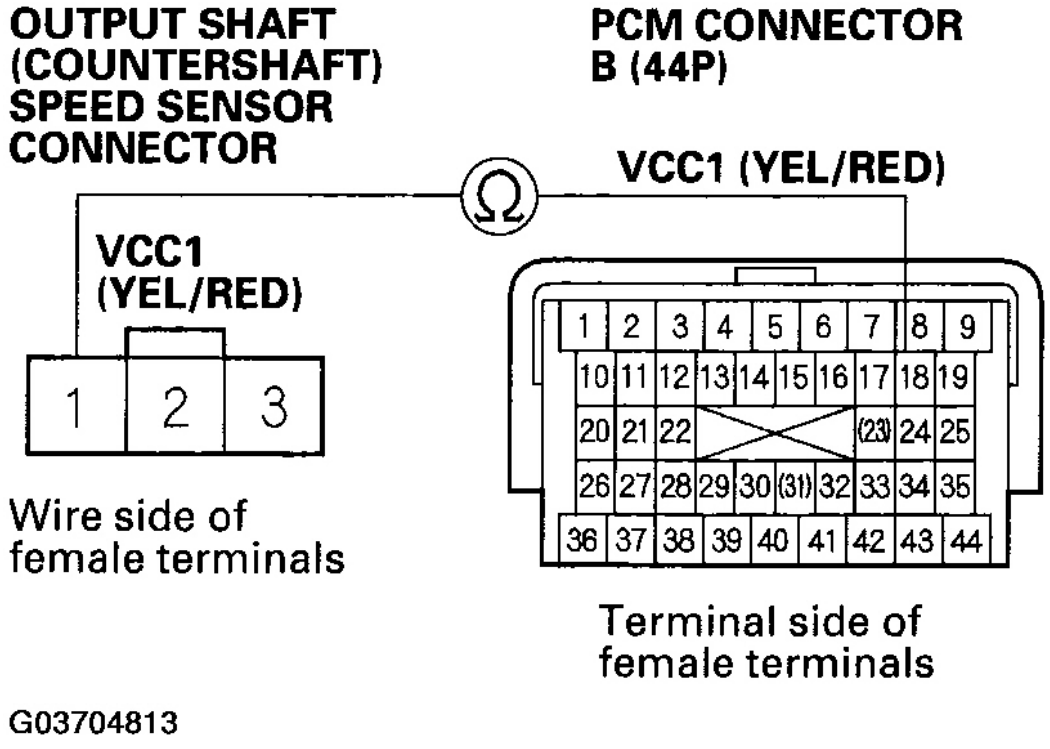


Fig. 119: Checking Continuity Between PCM Connector Terminal B18 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair an open in the wire between PCM connector terminal B18 and the output shaft (countershaft) speed sensor, then Go to step 31.

16. Check for continuity between PCM connector terminal B18 and body ground.

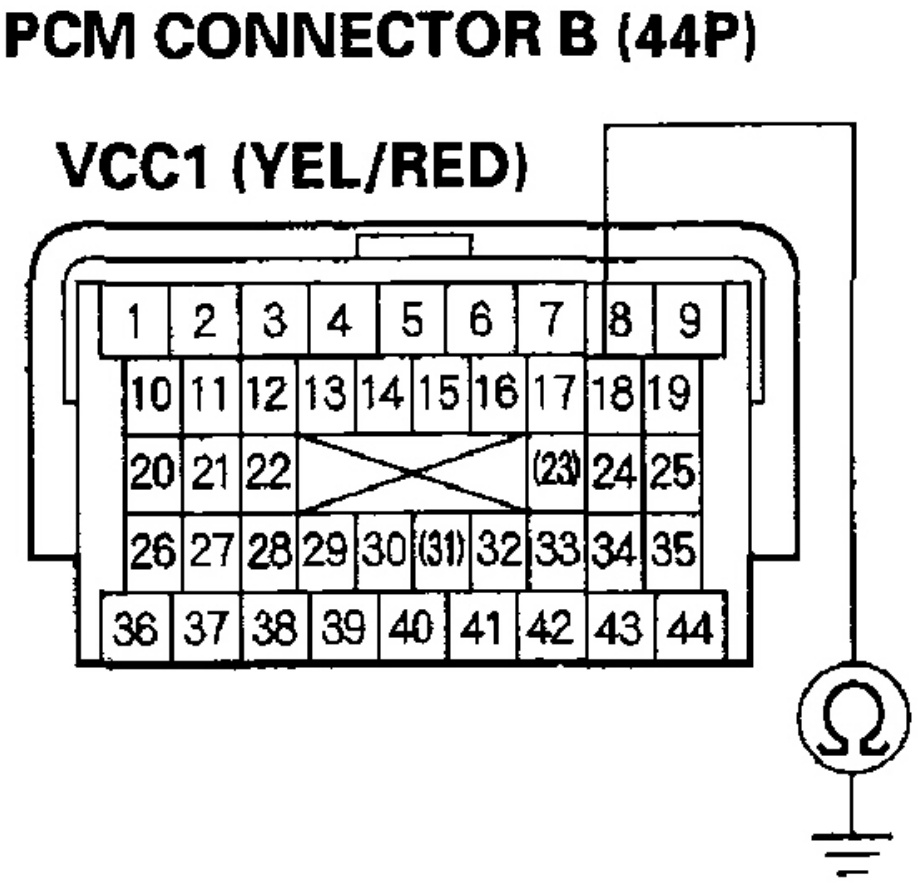


Fig. 120: Checking Continuity Between PCM Connector Terminal B18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B18 and the output shaft (countershaft) speed sensor, then Go to step 31.

NO - Check for loose or poor connections at PCM connector terminal B18. If the

connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

17. Turn the ignition switch OFF.
18. Disconnect PCM connector B (44P).
19. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

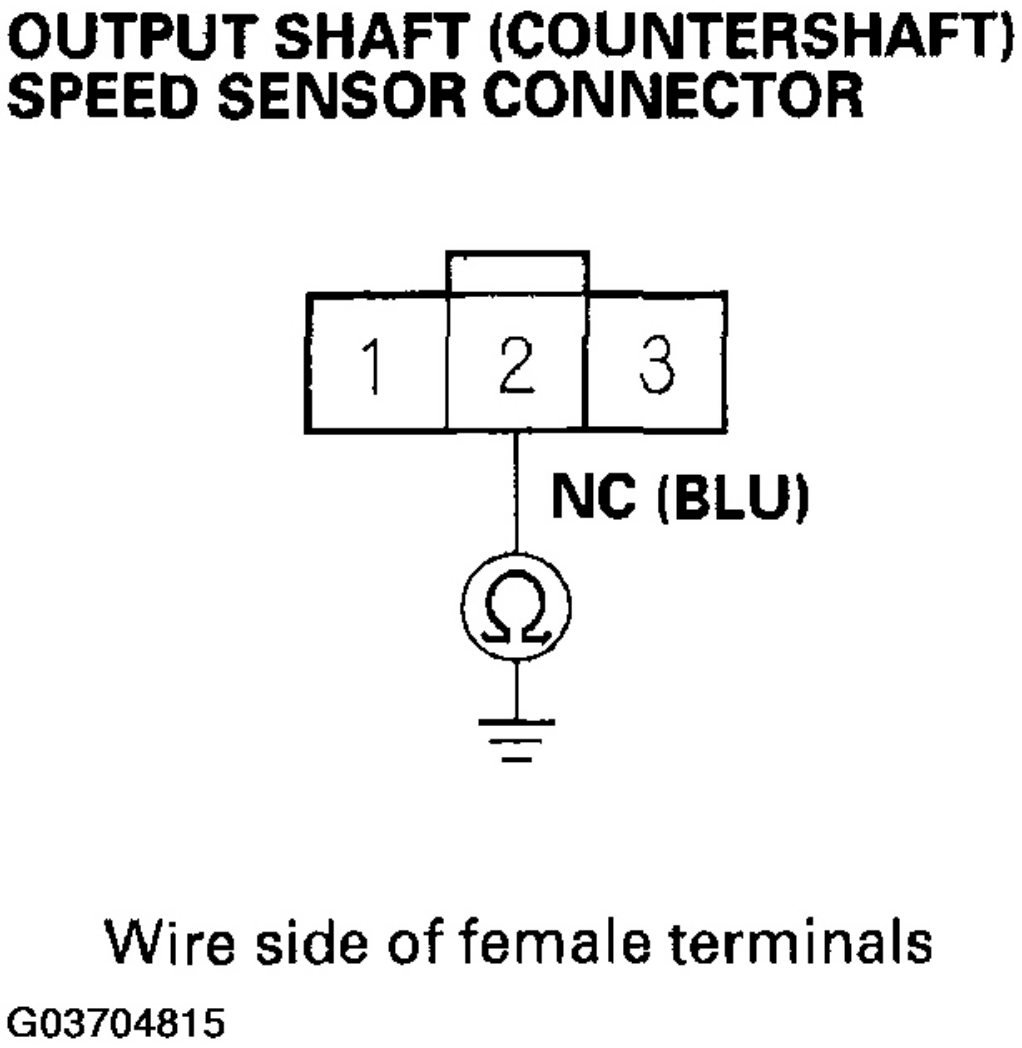


Fig. 121: Checking Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B40 and output shaft (countershaft) speed sensor connector, then Go to step 31.

NO - Go to step 20.

20. Check for continuity between PCM connector terminal B33 and output shaft (countershaft) speed sensor connector terminal No. 3.

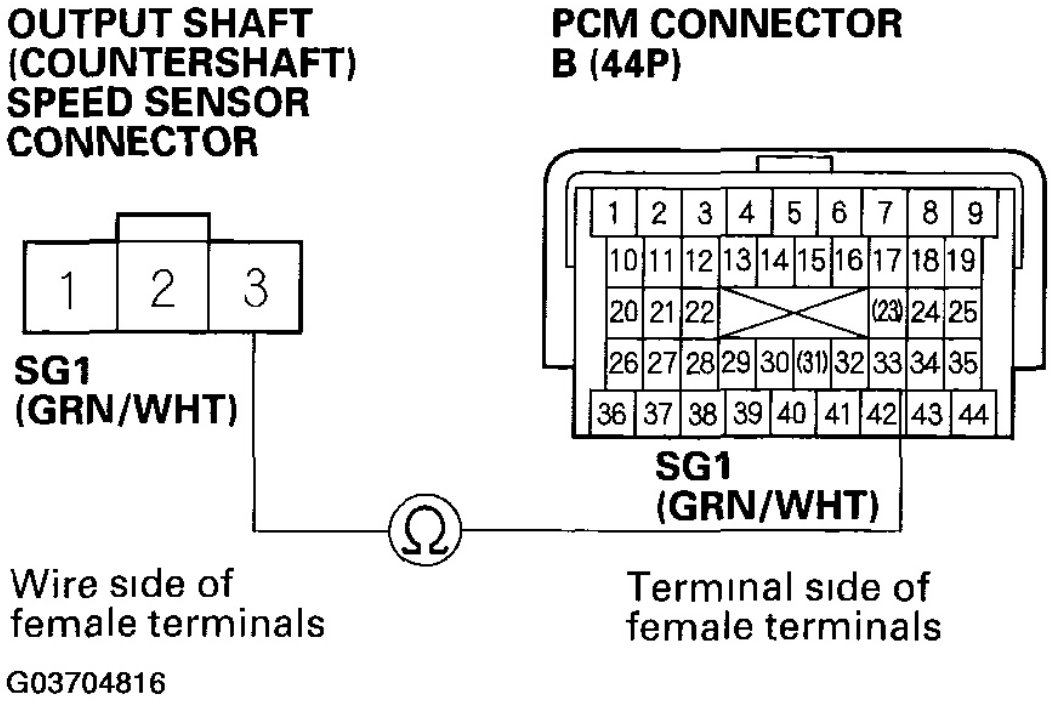


Fig. 122: Checking Continuity Between PCM Connector Terminal B33 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 21.

NO - Repair an open in the wire between output shaft (countershaft) speed sensor connector and PCM connector terminal B33, then Go to step 31.

21. Connect PCM connector B (44P).
22. Turn the ignition switch ON (II).
23. Measure the voltage between output shaft (countershaft) speed sensor connector terminals No. 2 and No. 3.

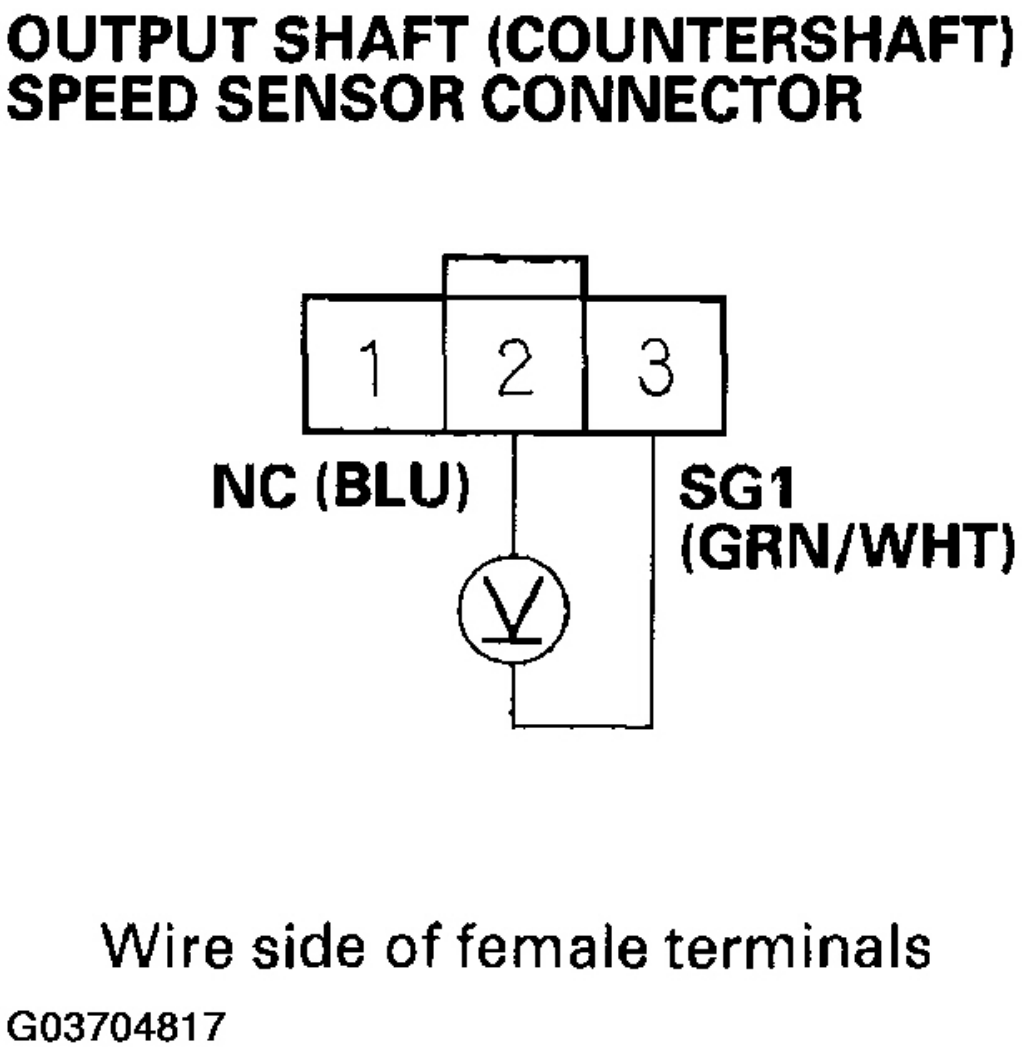


Fig. 123: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminals No. 2 And No. 3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 27.

NO - Go to step 24.

24. Turn the ignition switch OFF.
25. Disconnect PCM connector B (44P).
26. Check for continuity between PCM connector terminal B40 and output shaft (countershaft) speed sensor connector terminal No. 2.

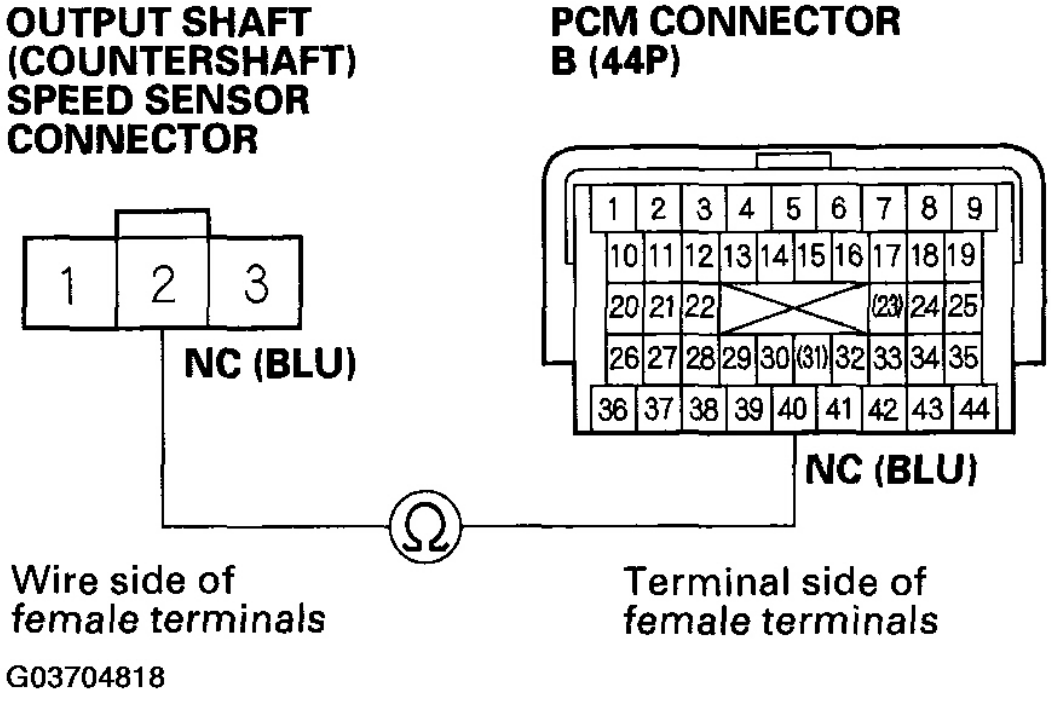


Fig. 124: Checking Continuity Between PCM Connector Terminal B40 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then

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

NO - Repair an open in the wire between PCM connector terminal B40 and the output shaft (countershaft) speed sensor, then Go to step 31.

27. Connect the output shaft (countershaft) speed sensor connector.
28. Clear the DTC with the HDS.
29. Start the engine, disable the VSA by pressing the VSA OFF button, run the vehicle in the D position with engine speed 2,000 rpm or higher for more than 10 seconds. Slow down and stop the wheels.
30. Monitor the OBD status for P0722 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Replace the output shaft (countershaft) speed sensor (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 31.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

31. Clear the DTC with the HDS.
32. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
33. Monitor the OBD status for P0722 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0723: Output Shaft (Countershaft) Speed Sensor Intermittent Failure

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. Record all freeze data, and clear the DTC with the HDS.
2. Test-drive the vehicle for more than 10 minutes under the same conditions as those indicated by the freeze data.
3. Monitor the OBD status for P0723 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 4.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections and loose terminals at the output (countershaft) speed sensor and the PCM. If the tester indicates NOT COMPLETED, return to step 2 and recheck.
4. Turn the ignition switch OFF.
5. Disconnect the output shaft (countershaft) speed sensor connector, and inspect the connector and connector terminals to be sure they are making good contact.

   Are the connector terminals OK?

   YES - Go to step 6.

   NO - Repair the connector terminals, then Go to step 6.
6. Connect the output shaft (countershaft) speed sensor connector.
7. Test-drive the vehicle for several minutes, and monitor the OBD status for P0723 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - The problem has been corrected. If the tester indicates NOT COMPLETED, return to step 7 and recheck.
8. Turn the ignition switch OFF.
9. Jump the SCS line with the HDS.
10. Disconnect PCM connector B (44P).
11. Disconnect the output shaft (countershaft) speed sensor connector.
12. Check for continuity between output shaft (countershaft) speed sensor connector terminal

No. 2 and body ground.

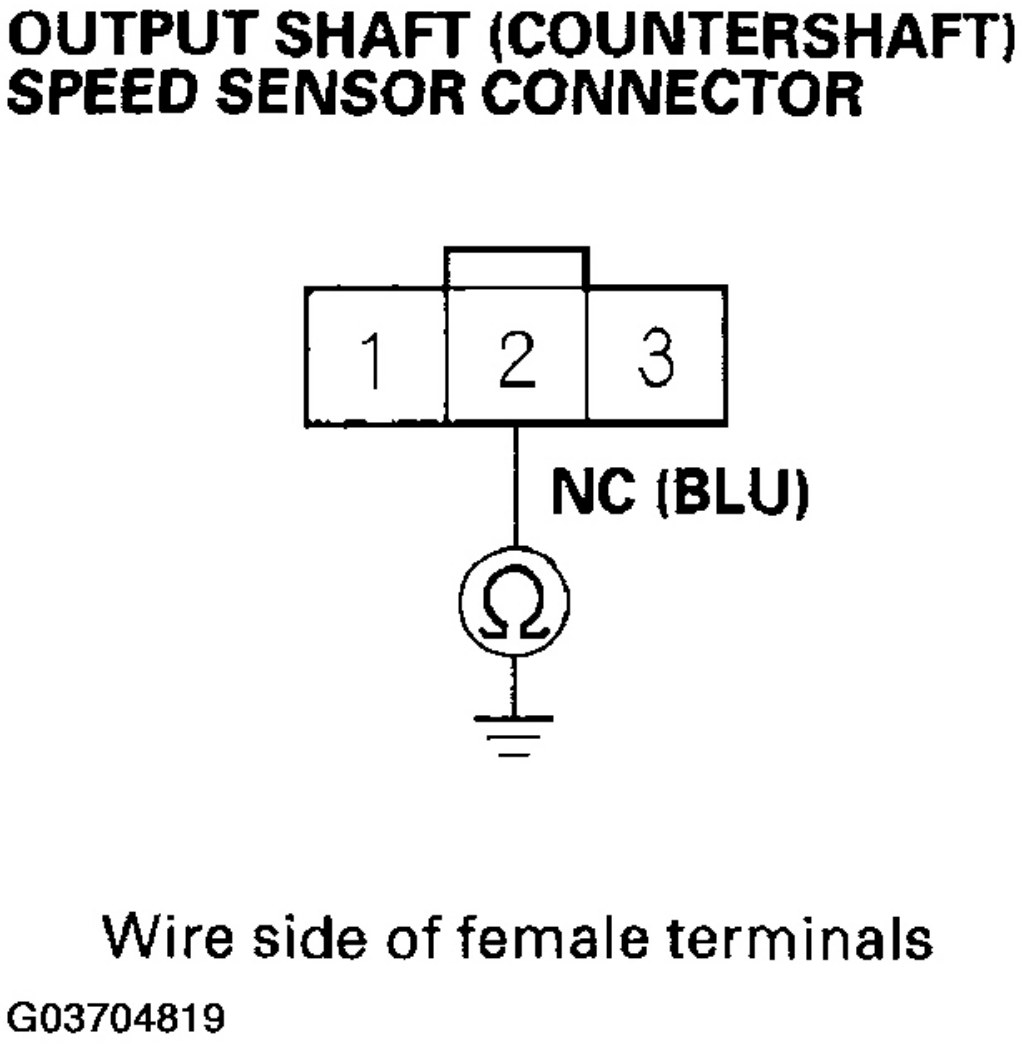


Fig. 125: Checking Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B40 and the output shaft (countershaft) speed sensor connector, then Go to step 19.

NO - Go to step 13.

13. Connect PCM connector B (44P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

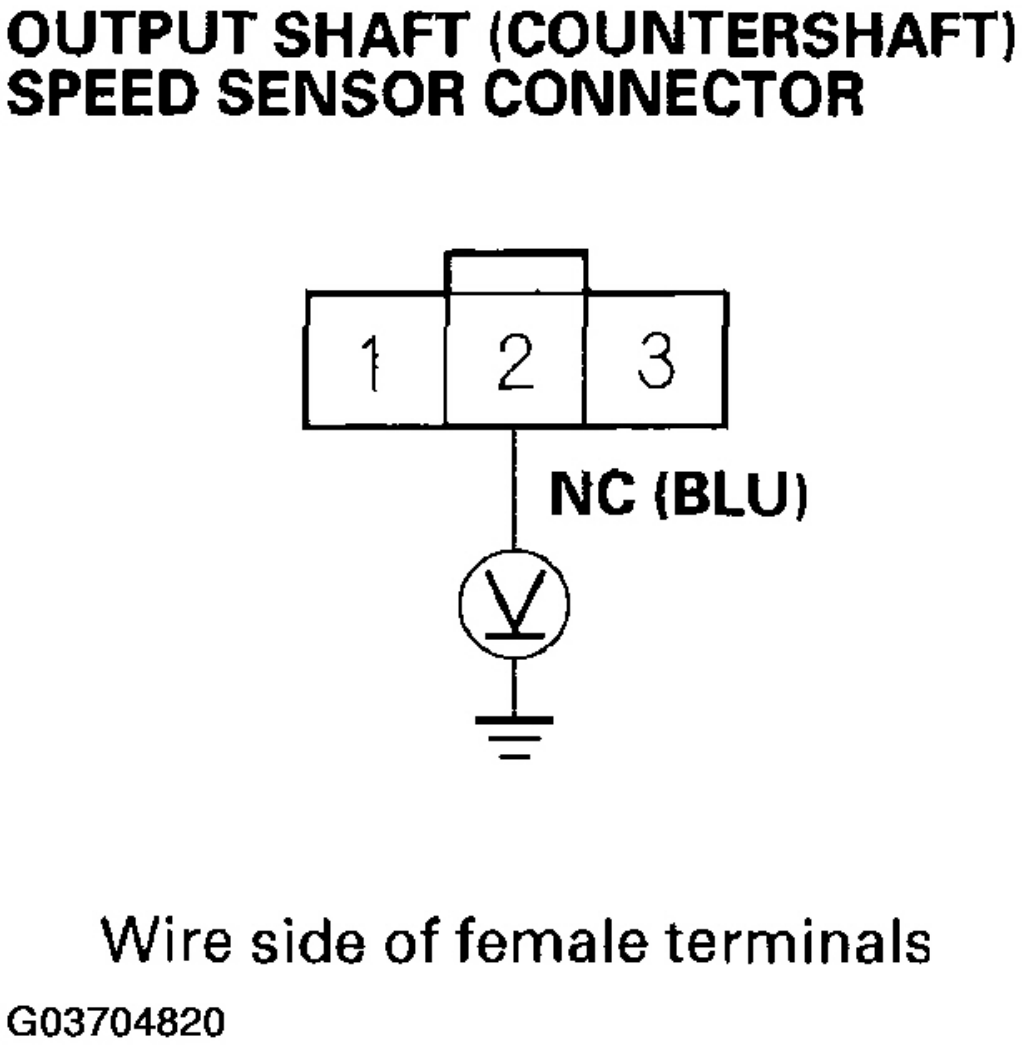


Fig. 126: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the output shaft (countershaft) speed sensor (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**), then Go to step 19.

NO - Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector B (44P).
18. Check for continuity between PCM connector terminal B40 and output shaft (countershaft) speed sensor connector terminal No. 2.

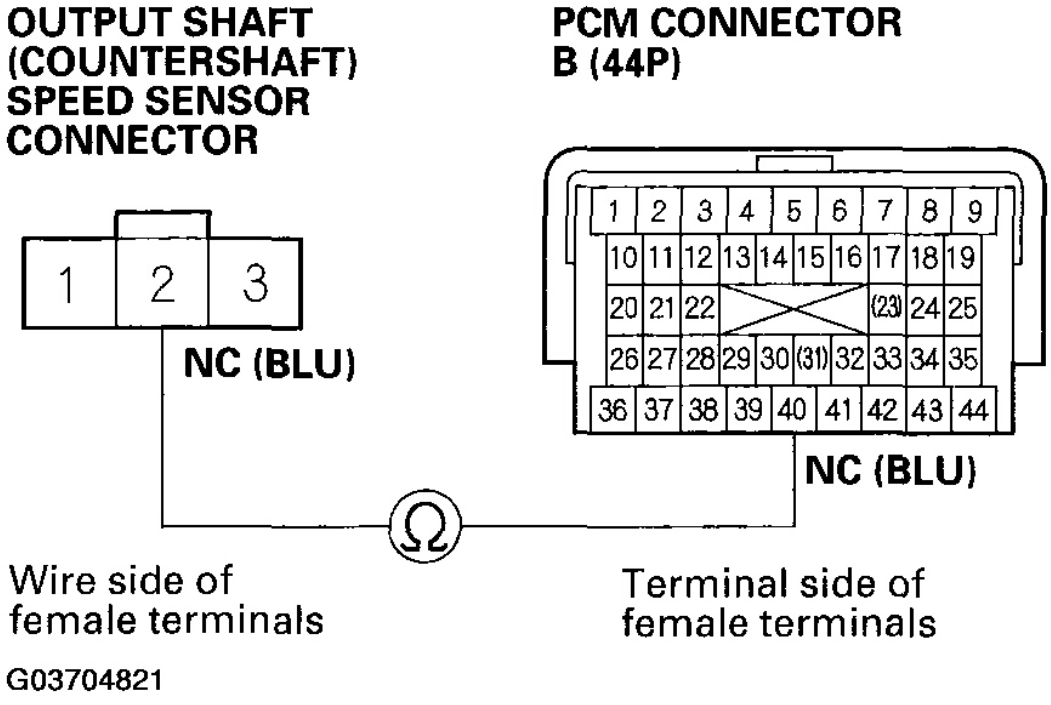


Fig. 127: Checking Continuity Between PCM Connector Terminal B40 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the

original PCM.

NO - Repair an open in the wire between PCM connector terminal B40 and the output shaft (countershaft) speed sensor, then Go to step 19.

19. Clear the DTC with the HDS.
20. Test-drive the vehicle for several minutes in the D position through all five gears.
21. Monitor the OBD status for P0723 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 4 and recheck.

DTC P0731: Problem in 1st Clutch and 1st Clutch Hydraulic Circuit

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Measure the line pressure (see **PRESSURE TEST**).

Is the line pressure within service limit?

YES - Go to step 5.

NO - Repair the ATF pump and regulator valve, or replace the transmission.

5. Measure the 1st clutch pressure (see **PRESSURE TEST**).

Is the 1st clutch pressure within service limit?

YES - Go to step 6.

NO - Shift valves B and C are stuck. Repair the shift valves and hydraulic circuit, or replace the transmission.

6. Clear the DTC with the HDS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in 1st gear in the D position at speeds over 10 mph (16 km/h) for 20 seconds.
8. Monitor the OBD status for P0731 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the 1st clutch, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

DTC P0732: Problem in 2nd Clutch and 2nd Clutch Hydraulic Circuit

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 on **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Measure the line pressure (see **PRESSURE TEST**).

Is the line pressure within service limit?

YES - Go to step 5.

NO - Repair the ATF pump and regulator valve, or replace the transmission.

5. Measure the 2nd clutch pressure (see **PRESSURE TEST**).

Is the 2nd clutch pressure within service limit?

YES - Go to step 6.

NO - Shift valves A, B, and C are stuck. Repair the shift valves and hydraulic circuit, or replace the transmission.

6. Clear the DTC with the HDS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in 2nd gear in the D position at speeds over 10 mph (16 km/h) for 20 seconds.
8. Monitor the OBD status for P0732 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the 2nd clutch, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

DTC P0733: Problem in 3rd Clutch and 3rd Clutch Hydraulic Circuit

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Measure the line pressure (see **PRESSURE TEST**).

Is the line pressure within service limit?

YES - Go to step 5.

NO - Repair the ATF pump and regulator valve, or replace the transmission.

5. Measure the 3rd clutch pressure (see **PRESSURE TEST**).

Is the 3rd clutch pressure within service limit?

YES - Go to step 6.

NO - Shift valves A, B, and C are stuck. Repair the shift valves and hydraulic circuit, or replace the transmission.

6. Clear the DTC with the HDS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in 3rd gear in the D position at speeds over 10 mph (16 km/h) for 20 seconds.
8. Monitor the OBD status for P0733 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the 3rd clutch, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

DTC P0734: Problem in 4th Clutch and 4th Clutch Hydraulic Circuit

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Measure the line pressure (see **PRESSURE TEST**).

Is the line pressure within service limit?

YES - Go to step 5.

NO - Repair the ATF pump and regulator valve, or replace the transmission.

5. Measure the 4th clutch pressure (see **PRESSURE TEST**).

Is the 4th clutch pressure within service limit?

YES - Go to step 6.

NO - Shift valves A, B, C, and D are stuck. Repair the shift valves and hydraulic circuit, or replace the transmission.

6. Clear the DTC with the HDS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in 4th gear in the D position at speeds over 10 mph (16 km/h) for 20 seconds.
8. Monitor the OBD status for P0734 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the 4th clutch, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

DTC P0735: Problem in 5th Clutch and 5th Clutch Hydraulic Circuit

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.

4. Measure the line pressure (see **PRESSURE TEST**).

Is the line pressure within service limit?

YES - Go to step 5.

NO - Repair the ATF pump and regulator valve, or replace the transmission.

5. Measure the 5th clutch pressure (see **PRESSURE TEST**).

Is the 5th clutch pressure within service limit?

YES - Go to step 6.

NO - Shift valves A, B, C, and D are stuck. Repair the shift valves and hydraulic circuit, or replace the transmission.

6. Clear the DTC with the HDS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in 5th gear in the D position at speeds over 10 mph (16 km/h) for 20 seconds.
8. Monitor the OBD status for P0735 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the 5th clutch, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 7 and recheck.

DTC P0741: Torque Converter Clutch Hydraulic Circuit Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.

4. Clear the DTC with the HDS.
5. Choose Lockup Solenoid Test in Miscellaneous Test Menu, and check that the torque converter clutch solenoid valve operates with the HDS.

Is a clicking sound heard?

YES - Go to step 6.

NO - Replace torque converter clutch solenoid valve (see **TORQUE CONVERTER CLUTCH SOLENOID VALVE REPLACEMENT**), then Go to step 10.

6. Choose Clutch Pressure Control (Linear) Solenoid C in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve C with the HDS.

Is the system OK?

YES - Go to step 7.

NO - Follow the instructions indicated on the HDS by the tester result. Go to step 10 if any part is replaced.

7. Run the engine until the engine coolant temperature reaches 176°F (80°C).
8. Test-drive the vehicle at 55 mph (88 km/h) for 2 minutes while monitoring the vehicle speed with the HDS.
9. Monitor the OBD status for P0741 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair the faulty torque converter clutch mechanism, torque converter clutch hydraulic circuit, lock-up shift valve, or lock-up control valve, or replace the transmission.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

10. Clear the DTC with the HDS.
11. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.

12. Monitor the OBD status for P0741 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate PASSED?

    YES - Troubleshooting is complete.

    NO - Return to step 5 and recheck.

DTC P0746: A/T Clutch Pressure Control Solenoid Valve A Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0746 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
8. Clear the DTC with the HDS.
9. Choose Clutch Pressure Control (Linear) Solenoid A in Miscellaneous Test Menu, and test

the A/T clutch pressure control solenoid valve A with the HDS.

Is the system OK?

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

NO - Follow instructions indicated on the HDS by the test result, but the tester has not determined the cause of the failure, go to step 10. If any part was replaced, Go to step 11.

10. Inspect A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A TEST**).

Does the A/T clutch pressure control solenoid valve A work properly?

YES - Repair hydraulic system related with CPC valve A, or replace the transmission, then go to step 11.

NO - Replace A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**), then go to step 11.

11. Clear the DTC with the HDS.
12. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
13. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
14. Monitor the OBD status for P0746 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0747: A/T Clutch Pressure Control Solenoid Valve A Stuck ON

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0747 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
8. Clear the DTC with the HDS.
9. Choose Clutch Pressure Control (Linear) Solenoid A in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve A with the HDS.

   Is the system OK?

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

   NO - Follow instructions indicated on the HDS by the test result, but the tester has not determined the cause of the failure, go to step 10. If any part was replaced, Go to step 11.
10. Inspect A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A TEST**).

    Does the A/T clutch pressure control solenoid valve A work properly?

    YES - Repair hydraulic system related with CPC valve A, or replace the transmission, then go to step 11.

NO - Replace A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**), then go to step 11.

11. Clear the DTC with the HDS.
12. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
13. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
14. Monitor the OBD status for P0747 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0751: Shift Solenoid Valve A Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0751 in the DTCs/Freeze Data in A/T Mode Menu for a

pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

8. Clear the DTC with the HDS.
9. Choose Shift Solenoid A in Miscellaneous Test Menu, and check that the shift solenoid valve A operates with the HDS.

Is a clicking sound heard?

YES - Go to step 10.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE A REPLACEMENT**), then Go to step 13.

10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0751 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valves A and E, or replace the transmission, then go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Retest-drive he vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0751 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0752: Shift Solenoid Valve A Stuck ON

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0752 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
8. Clear the DTC with the HDS.
9. Choose Shift Solenoid A in Miscellaneous Test Menu, and check that the shift solenoid valve A operates with the HDS.

   Is a clicking sound heard?

   YES - Go to step 10.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE A REPLACEMENT**), then Go to step 13.

10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0752 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valves A and E, or replace the transmission, then go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0752 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0756: Shift Solenoid Valve B Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0756 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

8. Clear the DTC with the HDS.
9. Choose Shift Solenoid B in Miscellaneous Test Menu, and check that the shift solenoid valve B operates with the HDS.

Is a clicking sound heard?

YES - Go to step 10.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE B REPLACEMENT**), then Go to step 13.

10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0756 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valve B, or replace the transmission, then go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this

time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0756 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0757: Shift Solenoid Valve B Stuck ON

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0757 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

8. Clear the DTC with the HDS.
9. Choose Shift Solenoid B in Miscellaneous Test Menu, and check that the shift solenoid valve B operates with the HDS.

Is a clicking sound heard?

YES - Go to step 10.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE B REPLACEMENT**), then Go to step 13.

10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0757 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valve B, or replace the transmission, then go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0757 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0761: Shift Solenoid Valve C Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0761 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
8. Clear the DTC with the HDS.
9. Choose Shift Solenoid C in Miscellaneous Test Menu, and check that the shift solenoid valve C operates with the HDS.

   Is a clicking sound heard?

   YES - Go to step 10.

   NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE C REPLACEMENT**), then Go to step 13.
10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20

km/h) for more than 20 seconds, then slow down to a stop.

11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0761 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valves C and E, or replace the transmission, then Go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0761 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0762: Shift Solenoid Valve C Stuck ON

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0762 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.
8. Clear the DTC with the HDS.
9. Choose Shift Solenoid C in Miscellaneous Test Menu, and check that the shift solenoid valve C operates with the HDS.

   Is a clicking sound heard?

   YES - Go to step 10.

   NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE C REPLACEMENT**), then Go to step 13.
10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0762 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

    Does the result indicate FAILED?

    YES - Repair shift valves C and E, or replace the transmission, then Go to step 13.

    NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 10 and recheck.
13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20

km/h) for more than 20 seconds, then slow down to a stop.

15. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
16. Monitor the OBD status for P0762 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0776: A/T Clutch Pressure Control Solenoid Valve B Stuck OFF

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then Go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0776 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this

time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

8. Clear the DTC with the HDS.
9. Choose Clutch Pressure Control (Linear) Solenoid B in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve B with the HDS.

Is the system OK?

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

NO - Follow instructions indicated on the HDS by the test result, but the tester has not determined the cause of the failure, Go to step 10. If any part was replaced, go to step 11.

10. Inspect A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B TEST**).

Does the A/T clutch pressure control solenoid valve B work properly?

YES - Repair hydraulic system related with CPC valve B, or replace the transmission, then go to step 11.

NO - Replace A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**), then go to step 11.

11. Clear the DTC with the HDS.
12. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
13. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
14. Monitor the OBD status for P0776 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0777: A/T Clutch Pressure Control Solenoid Valve B Stuck ON

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

before you troubleshoot.

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0777 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 8.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
8. Clear the DTC with the HDS.
9. Choose Clutch Pressure Control (Linear) Solenoid B in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve B with the HDS.

   Is the system OK?

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

   NO - Follow instructions indicated on the HDS by the test result, but the tester has not determined the cause of the failure, go to step 10. If any part was replaced, Go to step 11.
10. Inspect A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B TEST**).

Does the A/T clutch pressure control solenoid valve B work properly?

YES - Repair hydraulic system related with CPC valve B, or replace the transmission, then go to step 11.

NO - Replace A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**), then go to step 11.

11. Clear the DTC with the HDS.
12. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
13. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
14. Monitor the OBD status for P0777 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0780: Problem in Shift Control System

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

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3 in **ATF REPLACEMENT**) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer have metal debris or excessive clutch material?

YES - Replace the transmission.

NO - Replace the ATF (see step 5 in **ATF REPLACEMENT**), then go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.

6. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
7. Monitor the OBD status for P0780 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 8.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

8. Clear the DTC with the HDS.
9. Run the engine until the engine coolant temperature reaches 176°F (80°C).
10. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
11. Retest-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
12. Monitor the OBD status for P0780 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Repair shift valve D, or replace the transmission, then go to step 13.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

13. Clear the DTC with the HDS.
14. Test-drive the vehicle in the D position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.
15. Monitor the OBD status for P0780 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 8 and recheck.

DTC P0847: Short in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck ON

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 the 3rd PRES SWITCH signal with the HDS in the A/T data list when not in 3rd gear.

   Is the 3rd PRES SWITCH OFF?

   YES - Go to step 3.

   NO - Go to step 6.
3. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
4. Drive the vehicle in 3rd gear in the D position D3 driving mode for more than 5 seconds, then release the D3 driving mode by pressing the D3 switch, and drive in 4th gear for more than 5 seconds.
5. Monitor the OBD status for P0847 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check the OP3SW (BLU/WHT) wire for an intermittent short to body ground between the 3rd clutch transmission fluid pressure switch and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Disconnect the 3rd clutch transmission fluid pressure switch connector.
8. Turn the ignition switch ON (II).
9. Check the 3rd PRES SWITCH signal with the HDS in the A/T data list.

   Is the 3rd PRES SWITCH OFF?

   YES - Replace the 3rd clutch transmission fluid pressure switch (see **3RD CLUTCH**

TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT), then Go to step 14.

NO - Go to step 10.

10. Turn the ignition switch OFF.
11. Jump the SCS line with the HDS.
12. Disconnect PCM connector C (44P).
13. Check for continuity between PCM connector terminal C15 and body ground.

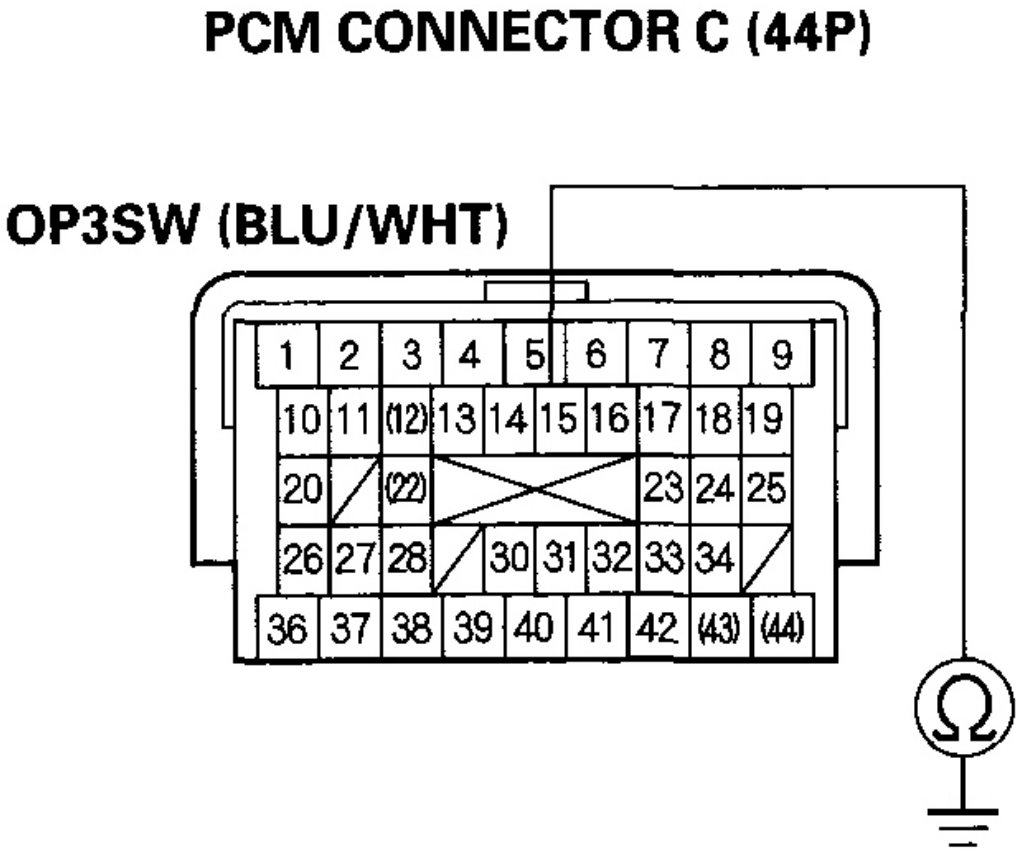


Fig. 128: Checking Continuity Between PCM Connector Terminal C15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C15 and the 3rd clutch transmission fluid pressure switch, then go to step 14.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

14. Clear the DTC with the HDS.
15. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
16. Drive the vehicle in 3rd gear in the D position D3 driving mode for more than 5 seconds, then release the D3 driving mode by pressing the D3 switch, and drive in 4th gear for more than 5 seconds.
17. Monitor the OBD status for P0847 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0848: Open in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck OFF

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. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

3. Drive the vehicle in 3rd gear in the D position D3 driving mode, and verify with the HDS in the A/T data list that the SHIFT MAP NUMBER indicates 3rd.
4. Check the 3rd PRES SWITCH signal with the HDS in the A/T data list.

   Is the 3rd PRES SWITCH ON?

   YES - Go to step 5.

   NO - Go to step 7.
5. Drive the vehicle in 3rd gear in the D position D3 driving mode for more than 5 seconds, then release the D3 driving mode by pressing the D3 switch, and drive in 4th gear for more than 5 seconds.
6. Monitor the OBD status for P0848 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 7.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the 3rd clutch transmission fluid pressure switch and PCM. If the tester indicates NOT COMPLETED, return to step 5 and recheck.
7. Turn the ignition switch OFF.
8. Disconnect the 3rd clutch transmission fluid pressure switch connector.
9. Turn the ignition switch ON (II).
10. Measure the voltage between 3rd clutch transmission fluid pressure switch connector terminal and body ground.

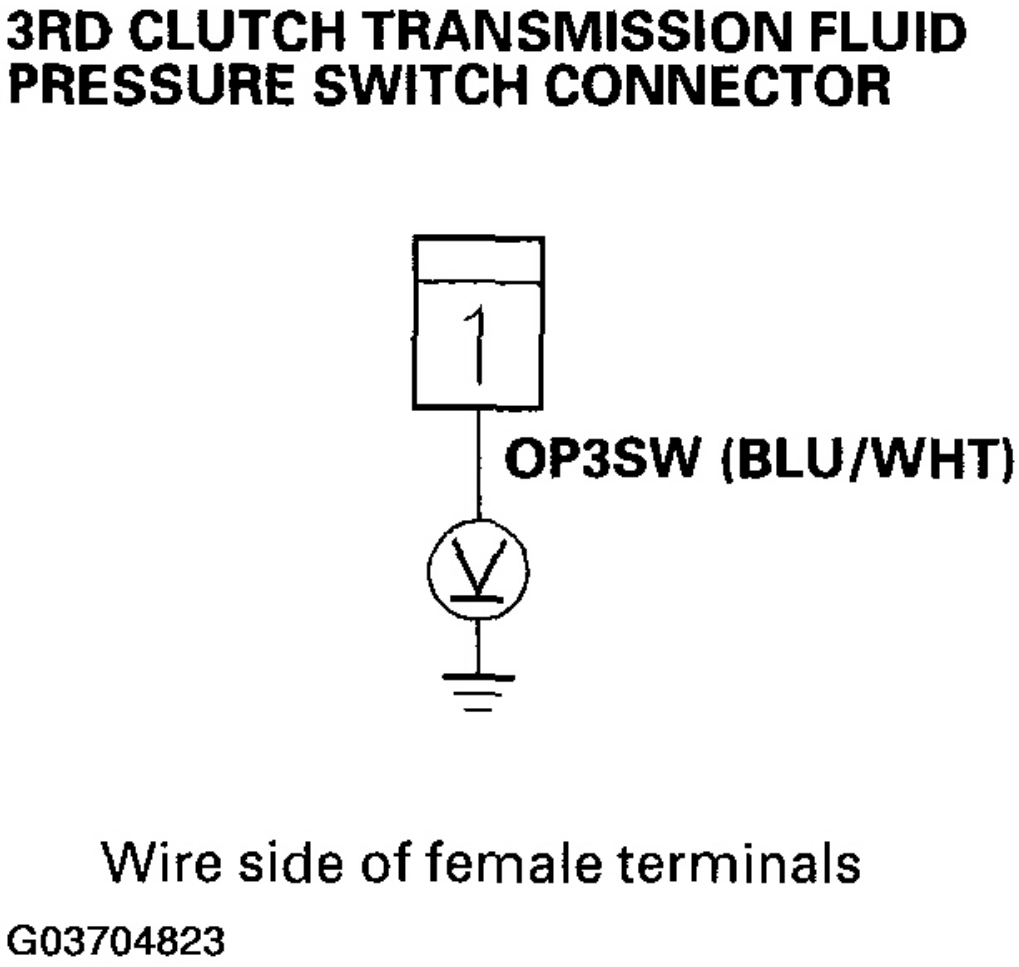


Fig. 129: Measuring Voltage Between 3rd Clutch Transmission Fluid Pressure Switch Connector Terminal And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the 3rd clutch transmission fluid pressure switch (see **3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT**), then Go to step 15.

NO - Go to step 11.

11. Turn the ignition switch OFF.

12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (44P).
14. Check for continuity between PCM connector terminal C15 and 3rd clutch transmission fluid pressure switch connector terminal.

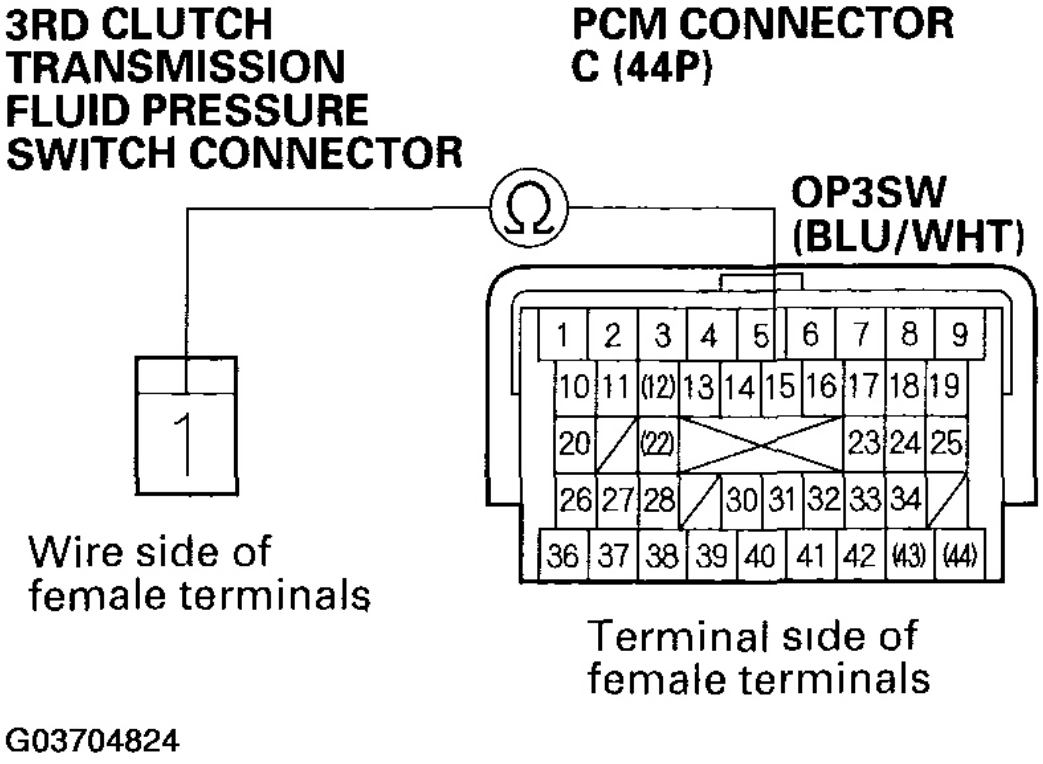


Fig. 130: Checking Continuity Between PCM Connector Terminal C15 And 3rd Clutch Transmission Fluid Pressure Switch Connector Terminal
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector C15. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal C15 and the 3rd

clutch transmission fluid pressure switch, then go to step 15.

15. Clear the DTC with the HDS.
16. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
17. Drive the vehicle in 3rd gear in the D position D3 driving mode for more than 5 seconds, then release the D3 driving mode by pressing the D3 switch, and drive in 4th gear for more than 5 seconds.
18. Monitor the OBD status for P0848 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0872: Short in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck ON

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 the 4th PRES SWITCH signal with the HDS in the A/T data list when not in 4th gear.

Is the 4th PRES SWITCH OFF?

YES - Go to step 3.

NO - Go to step 6.

3. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
4. Drive the vehicle in 4th gear in the D position for more than 5 seconds.
5. Monitor the OBD status for P0872 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 6.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check the OP4SW (BLU/YEL) wire for an intermittent short to body ground between the 4th clutch transmission fluid pressure switch and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

6. Turn the ignition switch OFF.
7. Disconnect the 4th clutch transmission fluid pressure switch connector.
8. Turn the ignition switch ON (II).
9. Check the 4th PRES SWITCH signal with the HDS in the A/T data list.

Is the 4th PRES SWITCH OFF?

YES - Replace the 4th clutch transmission fluid pressure switch (see **4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT**), then Go to step 14.

NO - Go to step 10.

10. Turn the ignition switch OFF.
11. Jump the SCS line with the HDS.
12. Disconnect PCM connector C (44P).
13. Check for continuity between PCM connector terminal C16 and body ground.

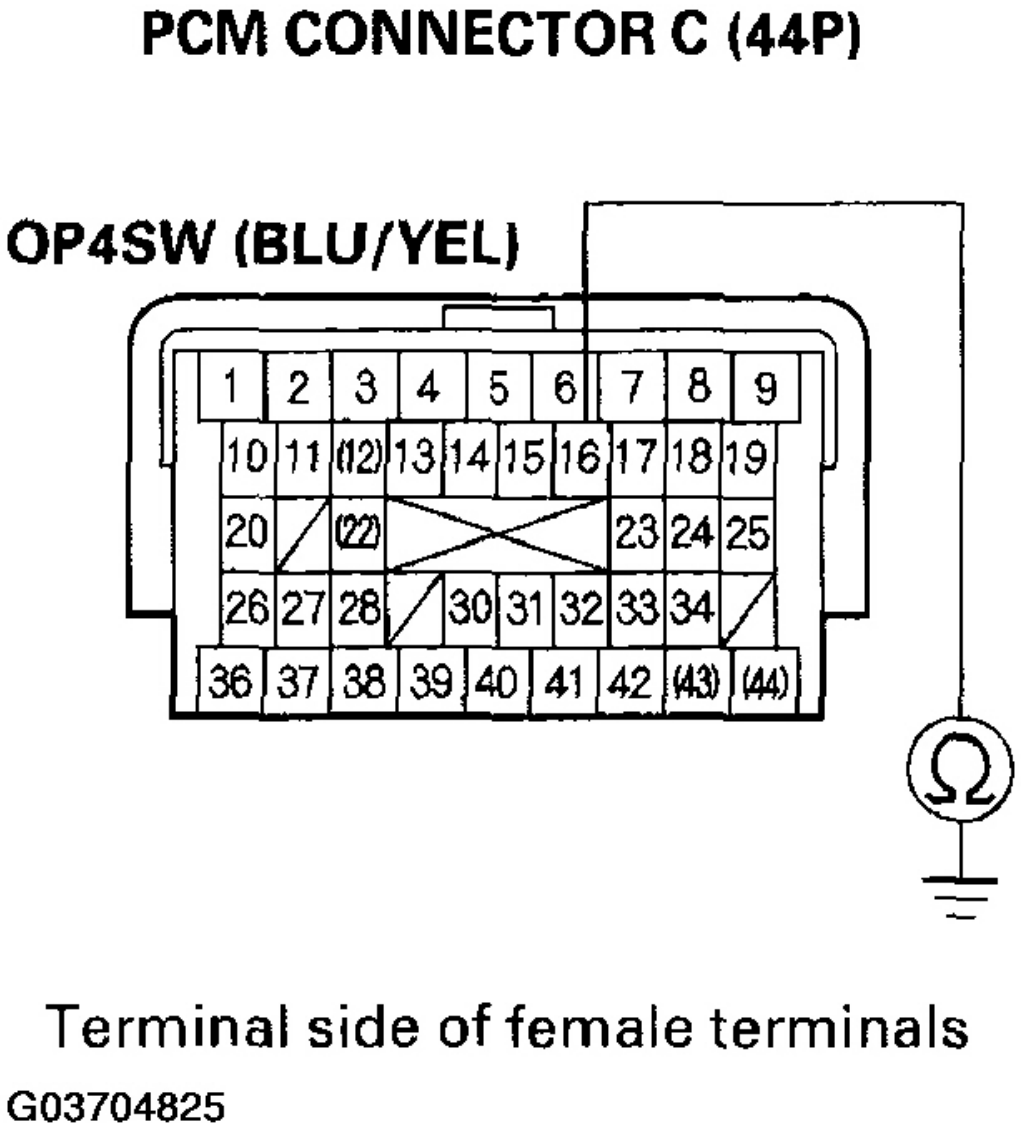


Fig. 131: Checking Continuity Between PCM Connector Terminal C16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C16 and the 4th clutch transmission fluid pressure switch, then Go to step 14.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

14. Clear the DTC with the HDS.
15. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
16. Drive the vehicle in 4th gear in the D position for more than 5 seconds.
17. Monitor the OBD status for P0872 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0873: Open in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck OFF

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. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
3. Drive the vehicle in 4th gear in the D position for more than 5 seconds.
4. Check the 4th PRES SWITCH signal with the HDS in the A/T data list.

Is the 4th PRES SWITCH ON?

YES - Go to step 5.

NO - Go to step 7.

5. Drive the vehicle in 4th gear in the D position for more than 5 seconds.
6. Monitor the OBD status for P0873 in the DTCs/Freeze Data in A/T Mode Menu for a

pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the 4th clutch transmission fluid pressure switch and PCM. If the tester indicates NOT COMPLETED, return to step 5 and recheck.

7. Turn the ignition switch OFF.
8. Disconnect the 4th clutch transmission fluid pressure switch connector.
9. Turn the ignition switch ON (II).
10. Measure the voltage between the 4th clutch transmission fluid pressure switch connector terminal and body ground.

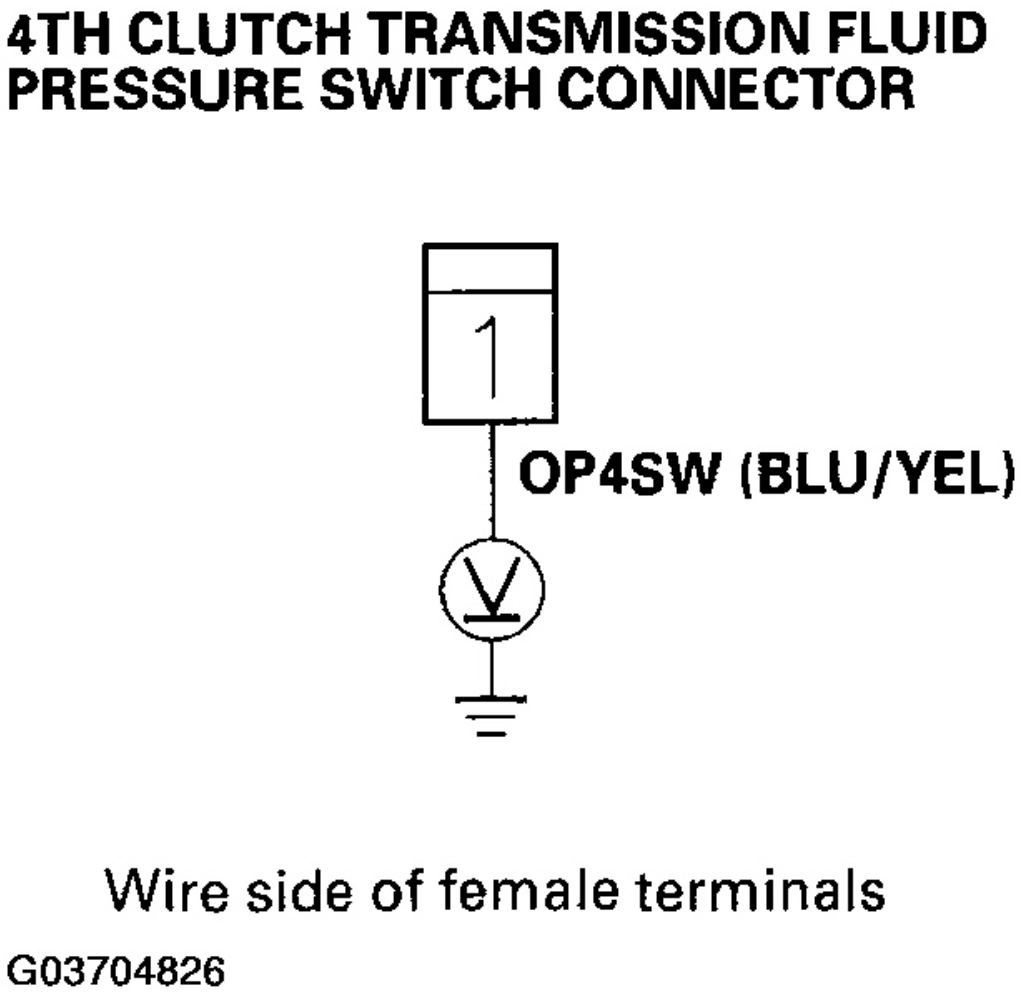


Fig. 132: Measuring Voltage Between 4th Clutch Transmission Fluid Pressure Switch Connector Terminal And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the 4th clutch transmission fluid pressure switch (see **4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT**), then go to step 11.

NO - Go to step 11.

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (44P).
14. Check for continuity between PCM connector terminal C16 and 4th clutch transmission fluid pressure switch connector terminal.

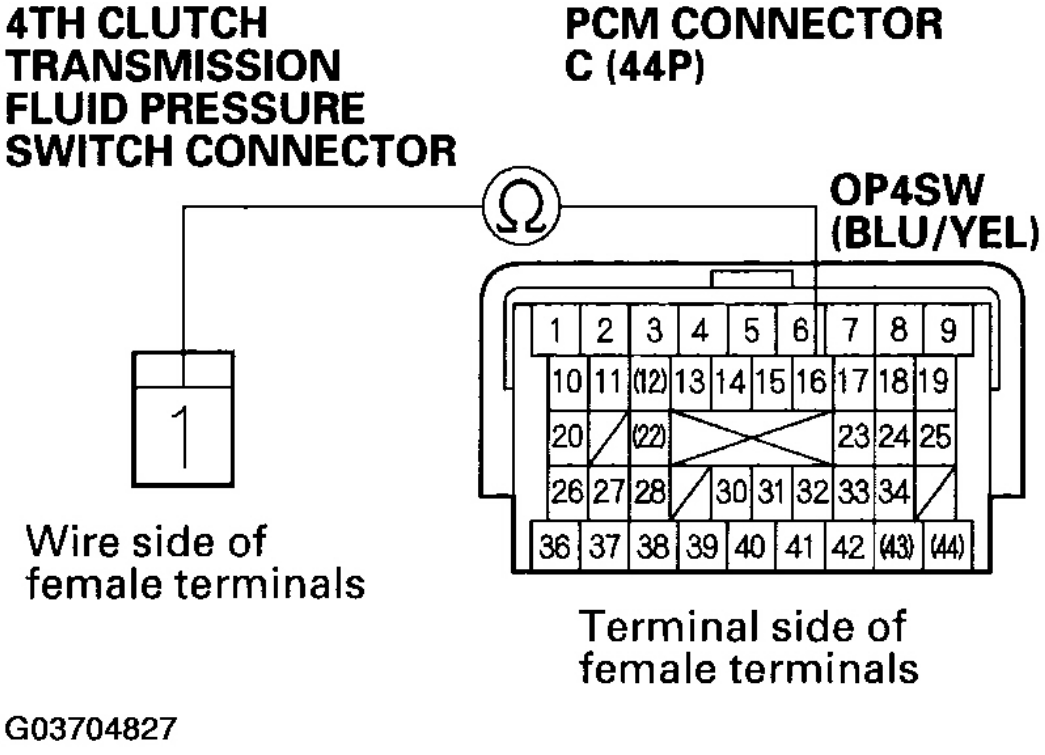


Fig. 133: Checking Continuity Between PCM Connector Terminal C16 And 4th Clutch Transmission Fluid Pressure Switch Connector Terminal
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Check for loose or poor connections at PCM connector C16. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between PCM connector terminal C16 and the 4th clutch transmission fluid pressure switch, then go to step 15.

15. Clear the DTC with the HDS.
16. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
17. Drive the vehicle in 4th gear in the D position for more than 5 seconds.
18. Monitor the OBD status for P0873 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0962: Problem in A/T Clutch Pressure Control Solenoid Valve A Circuit

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 6.

NO - Go to step 3.

3. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve A with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve A at 1.0 A in Clutch Pressure Control Solenoid Control menu.

5. Monitor the OBD status for P0962 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Dose the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve A and the PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve A connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve A connector terminals No. 1 and No. 2.

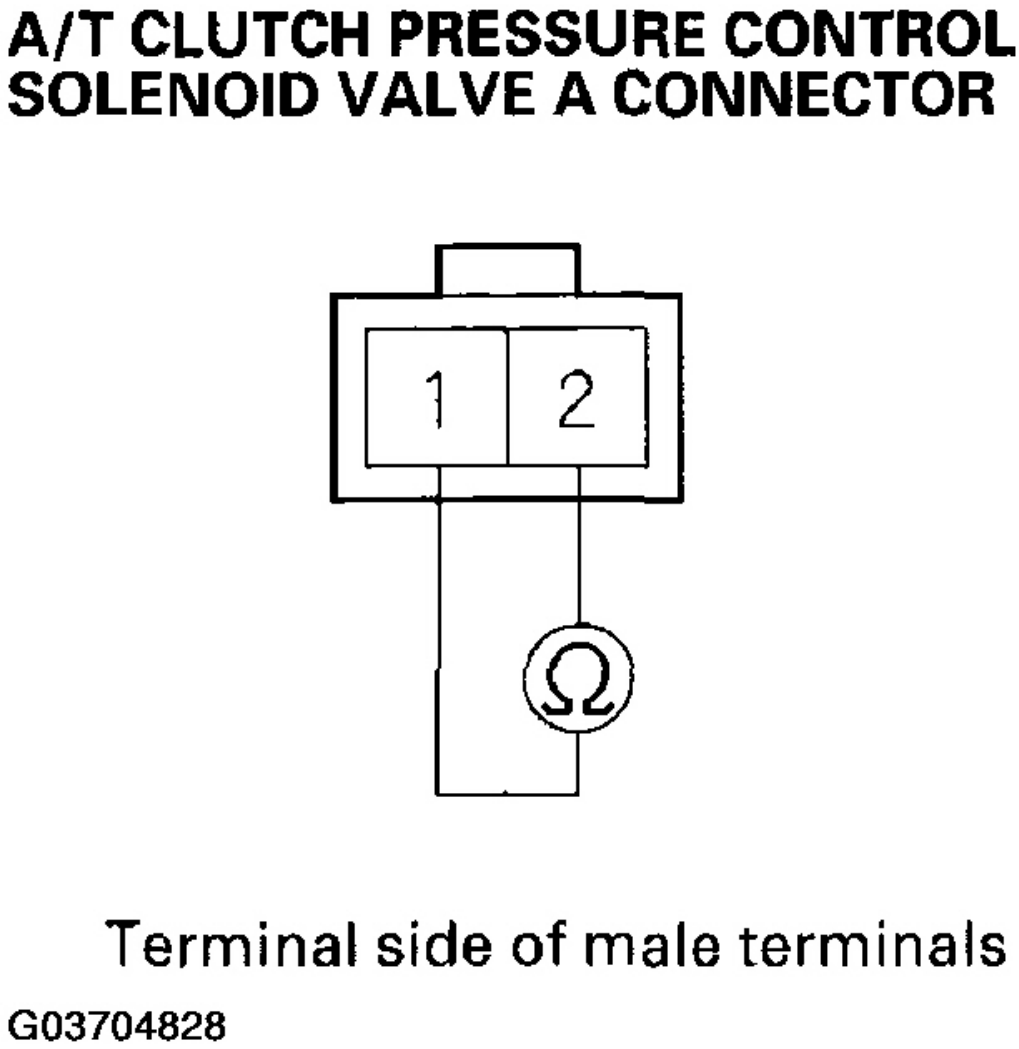


Fig. 134: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm ?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**),

then Go to step 17.

9. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 2 and body ground.

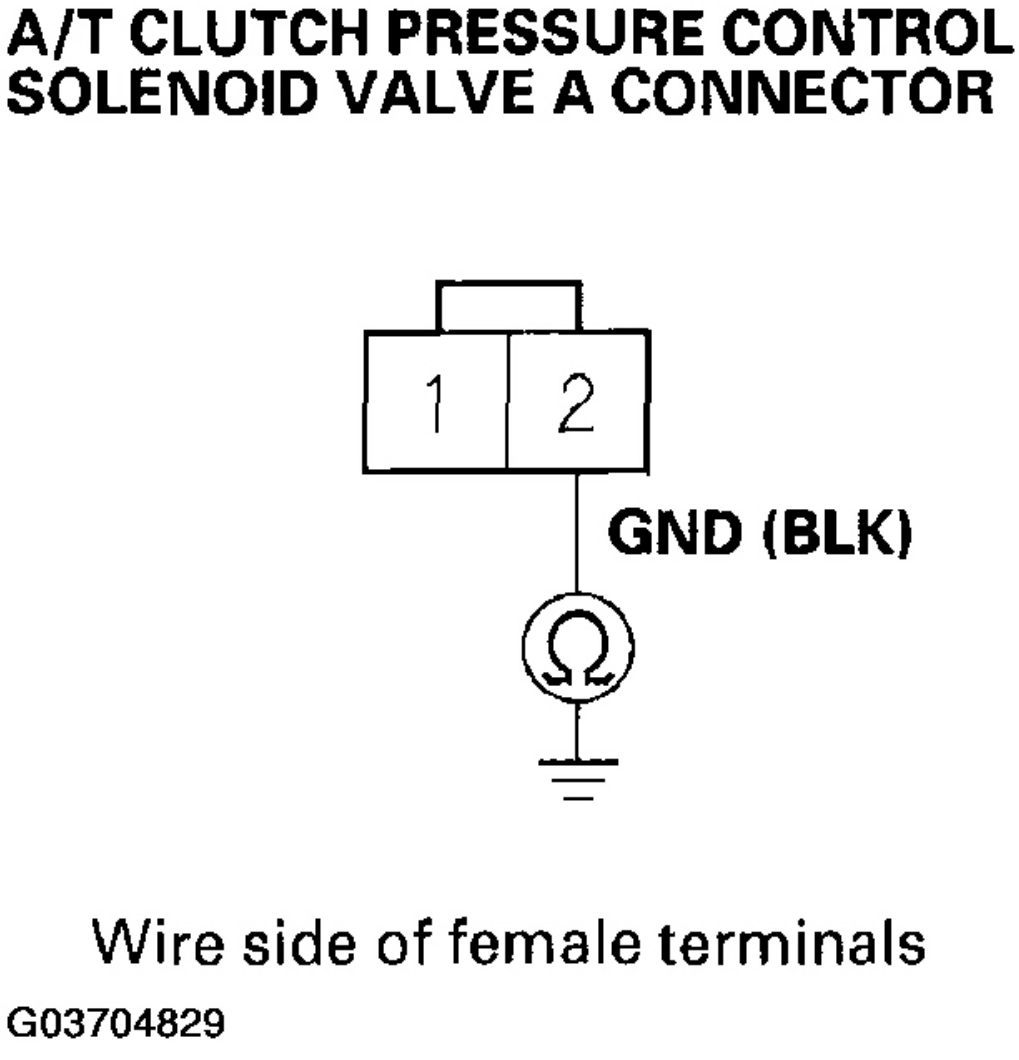


Fig. 135: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve A and ground (G151), or repair poor ground (G151), then Go to step 17.

10. Turn the ignition switch ON (II).
11. Measure the voltage between A/T clutch pressure control solenoid valve A connector terminals No. 1 and No. 2.

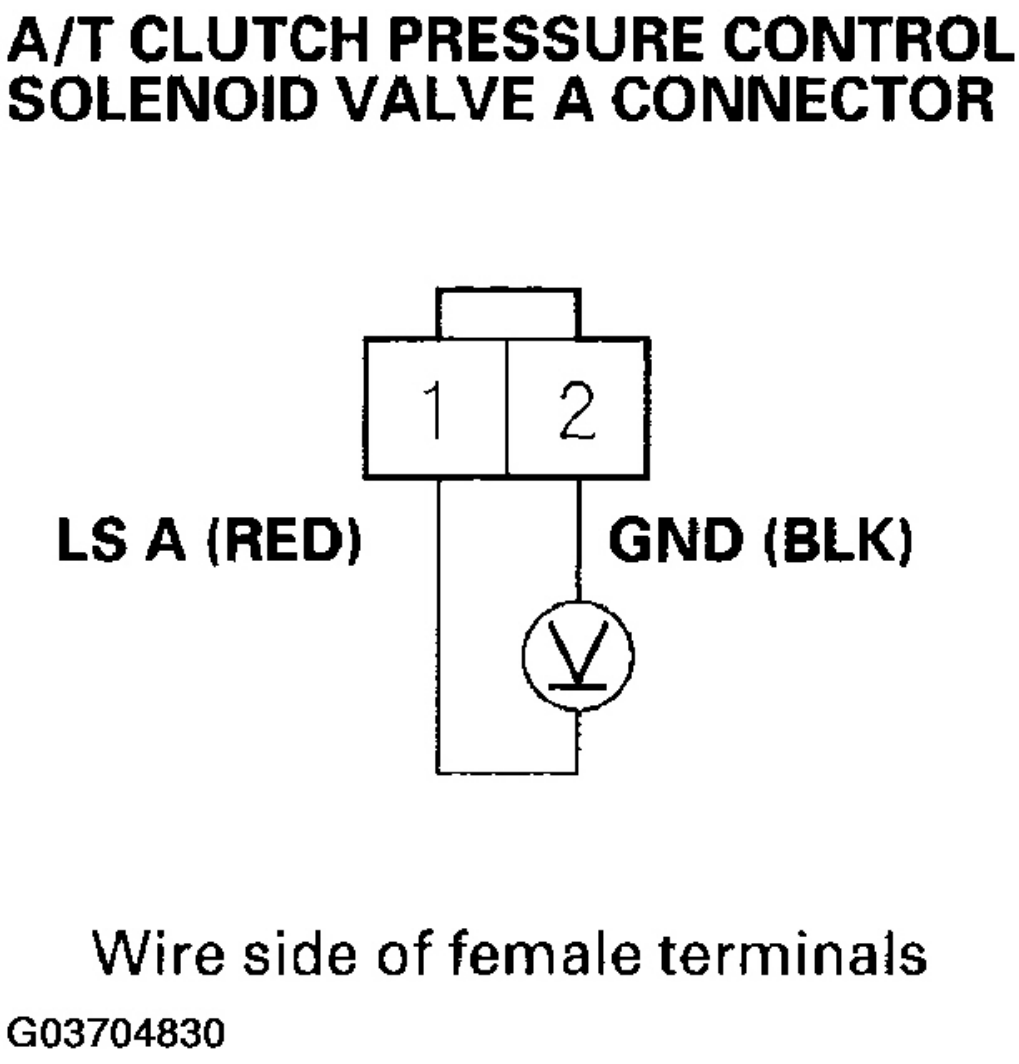


Fig. 136: Measuring Voltage Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminals No. 1 And No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 12.

NO - Repair an open or short in the wire between PCM connector terminal C19 and A/T clutch pressure control solenoid valve A, then Go to step 17.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connectors B (44P) and C (44P).
15. Turn the ignition switch ON (II).
16. Measure the voltage between PCM connector terminals B2 and C40.

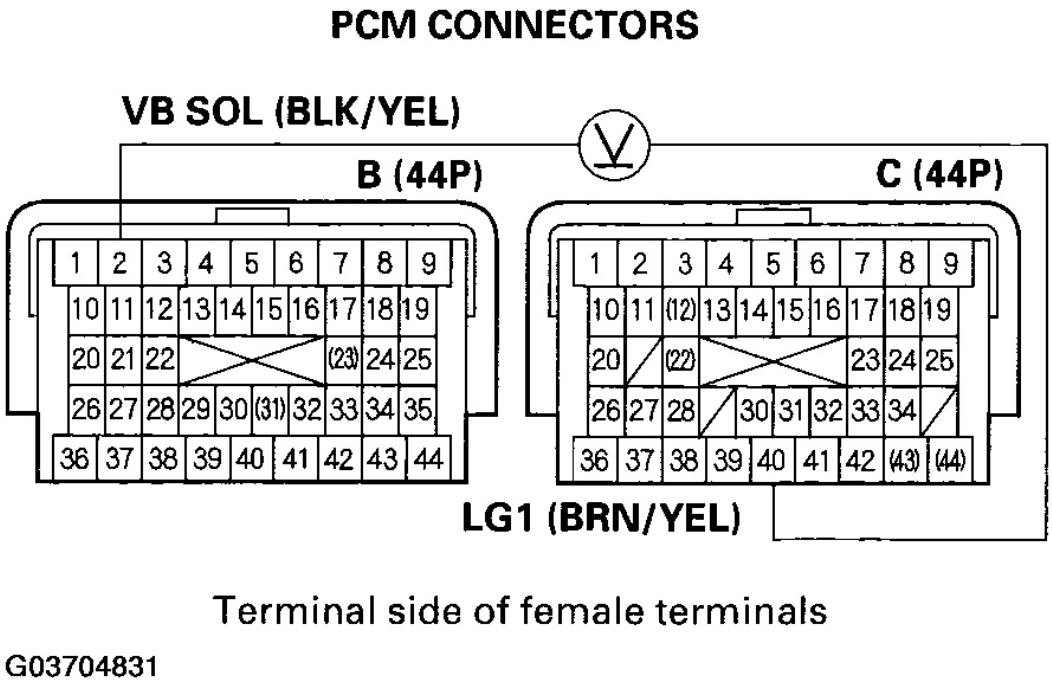


Fig. 137: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the

connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair an open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then go to step 17.

17. Clear the DTC with the HDS.
18. Test-drive the vehicle for several minutes in the D position through all five gears.
19. Monitor the OBD status for P0962 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0963: Problem in A/T Clutch Pressure Control Solenoid Valve A

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 6.

NO - Go to step 3.

3. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve A with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve A at 0.2 A in Clutch Pressure Control Solenoid Control menu.
5. Monitor the OBD status for P0963 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve A and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve A connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve A connector terminals No. 1 and No. 2.

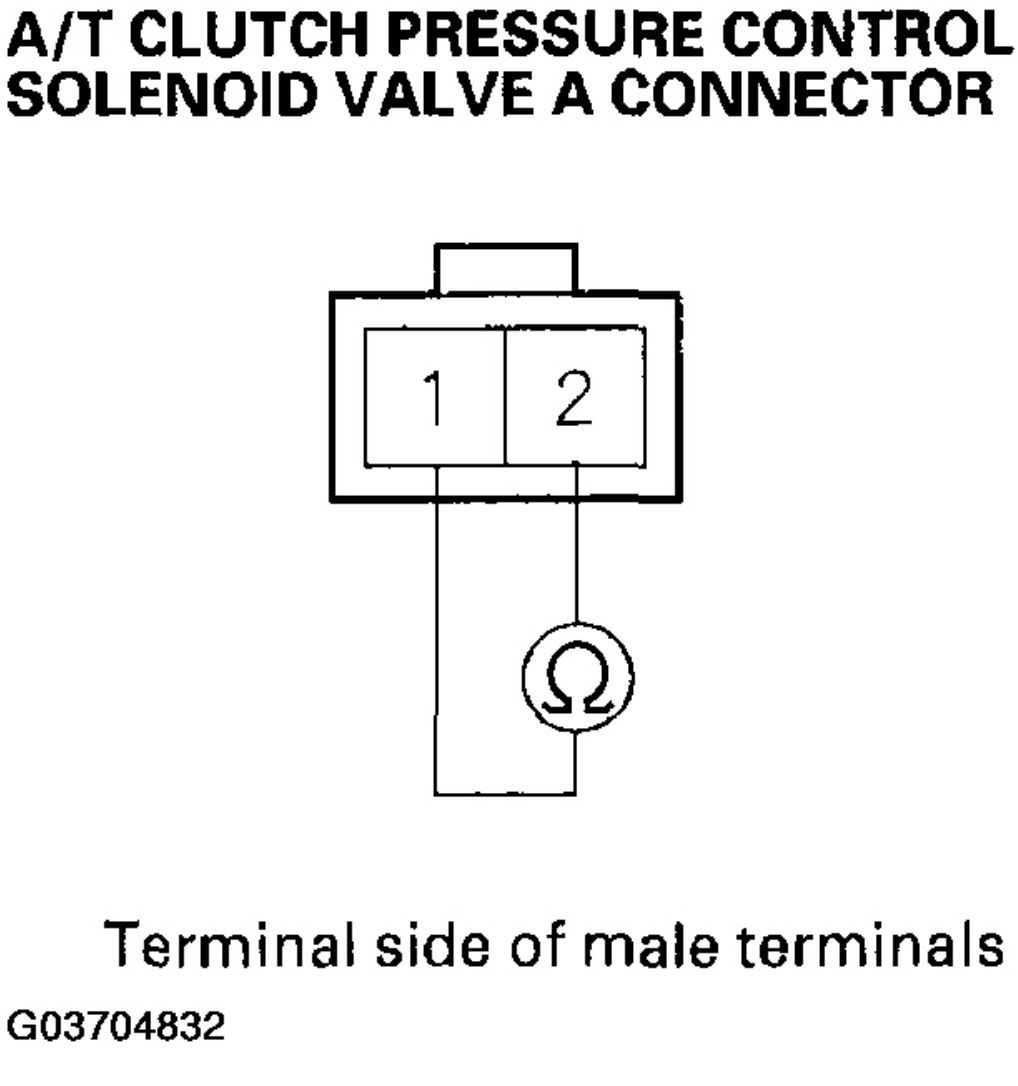


Fig. 138: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**),

then Go to step 10.

9. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 2 and body ground.

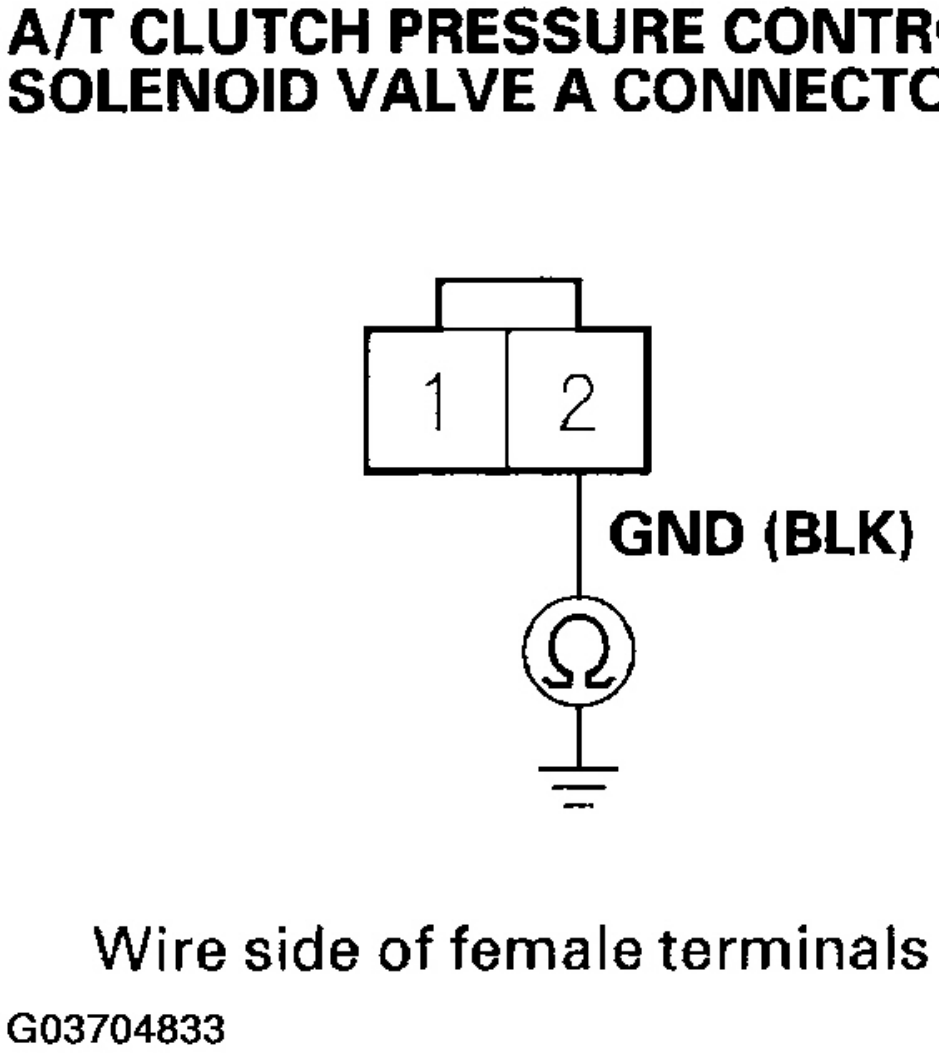


Fig. 139: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve A and ground (G151), or repair poor ground (G151), then go to step 10.

10. Clear the DTC with the HDS.
11. Test-drive the vehicle for several minutes in the D position through all five gears.
12. Monitor the OBD status for P0963 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0966: Problem in A/T Clutch Pressure Control Solenoid Valve B Circuit

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 6.

NO - Go to step 3.

3. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve B with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve B at 1.0 A in Clutch Pressure Control Solenoid Control menu.
5. Monitor the OBD status for P0966 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve B and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve B connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve B connector terminals No. 1 and No. 2.

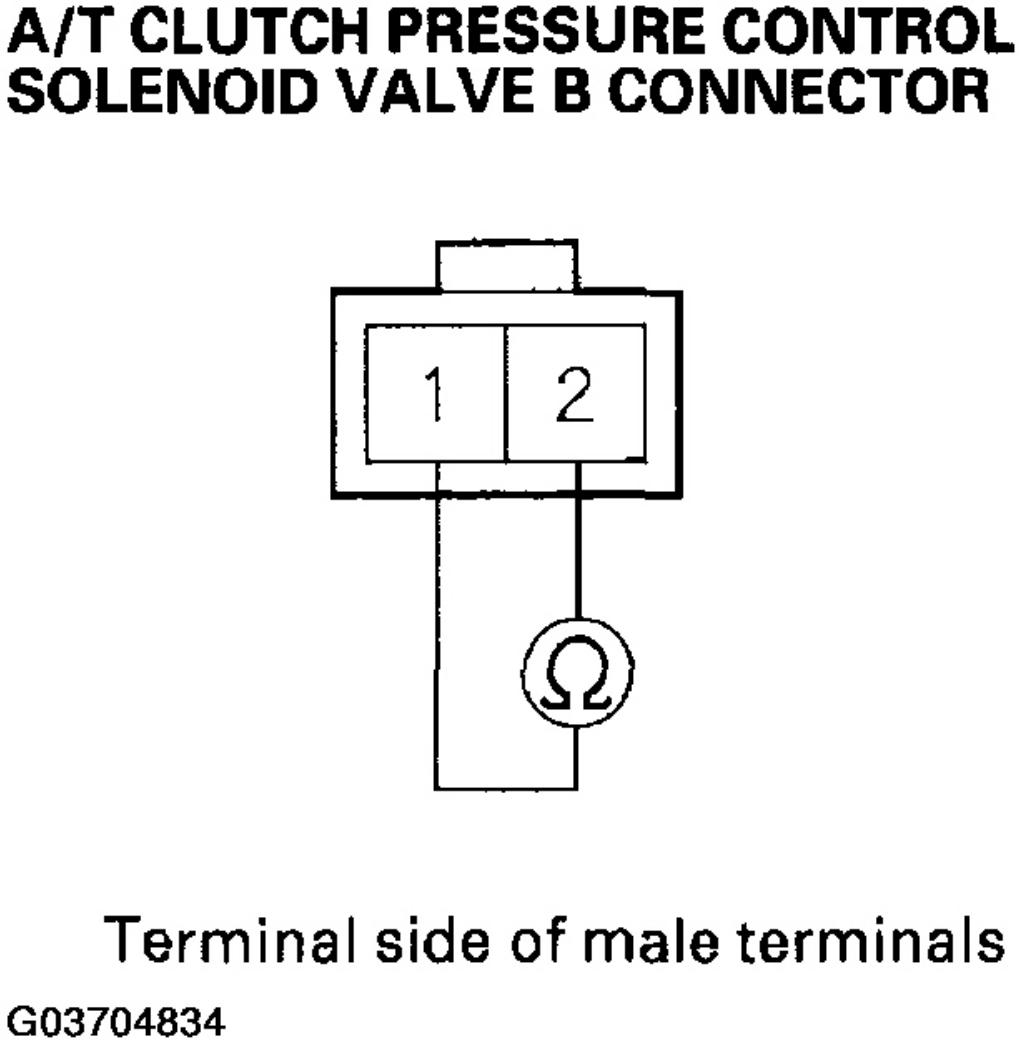


Fig. 140: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**),

then Go to step 17.

9. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and body ground.

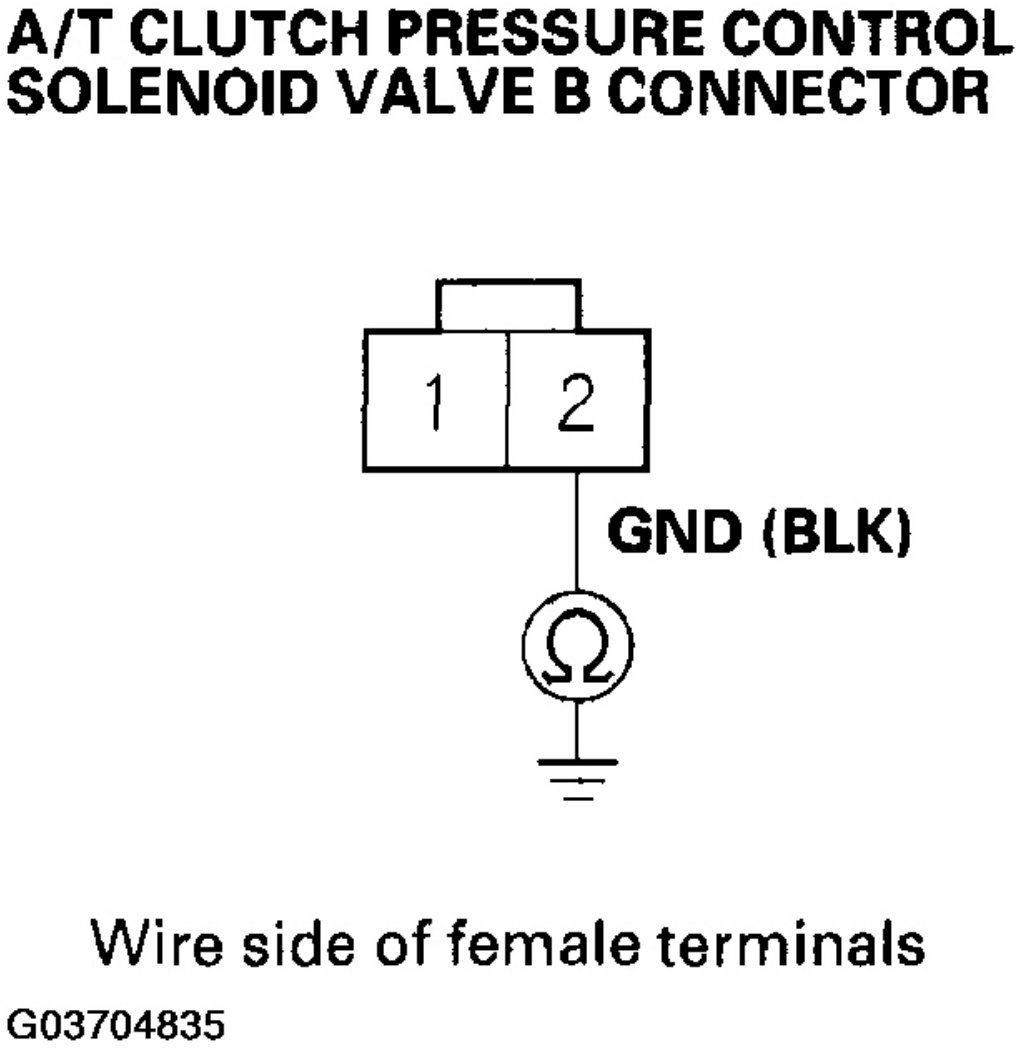


Fig. 141: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve B and ground (G151), or repair poor ground (G151), then Go to step 17.

10. Turn the ignition switch ON (II).
11. Measure the voltage between A/T clutch pressure control solenoid valve B connector terminals No. 1 and No. 2.

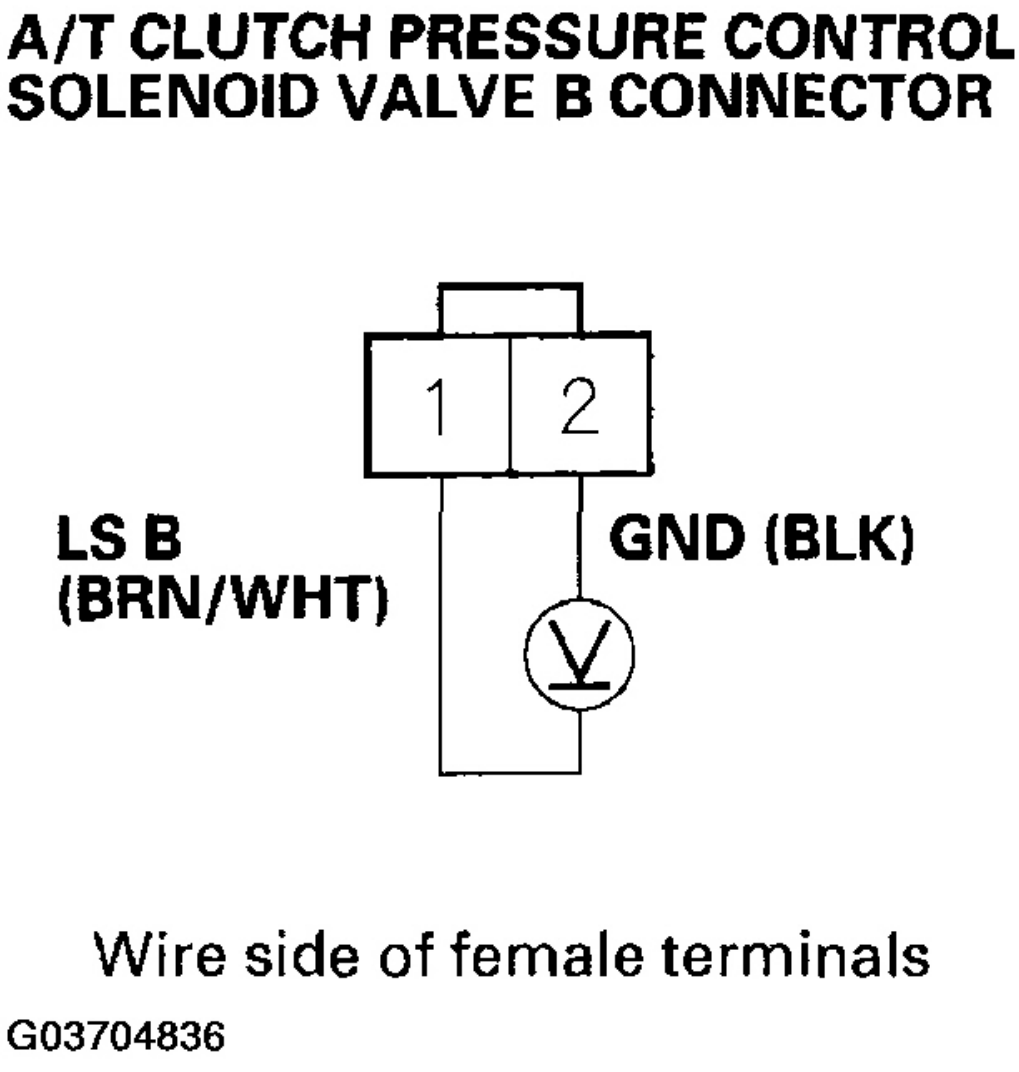


Fig. 142: Measuring Voltage Between A/T Clutch Pressure Control Solenoid Valve B

Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 12.

NO - Repair an open or short in the wire between PCM connector terminal B25 and A/T clutch pressure control solenoid valve B, then Go to step 17.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connectors B (44P) and C (44P).
15. Turn the ignition switch ON (II).
16. Measure the voltage between PCM connector terminals B2 and C40.

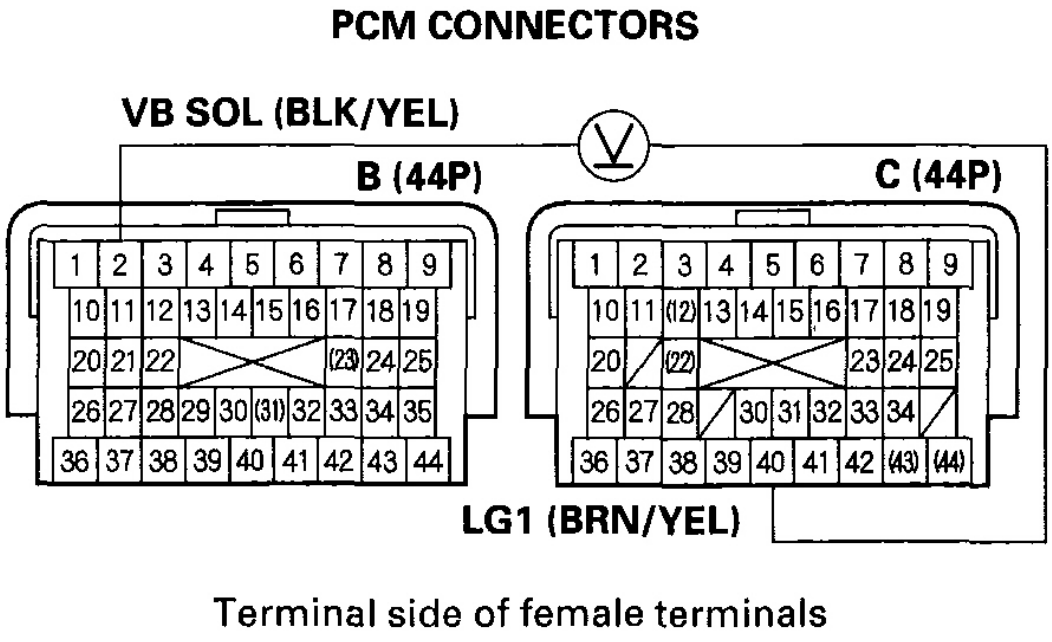


Fig. 143: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay, then go to step 17.

17. Clear the DTC with the HDS.
18. Test-drive the vehicle for several minutes in the D position through all five gears.
19. Monitor the OBD status for P0966 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0967: Problem in A/T Clutch Pressure Control Solenoid Valve B

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 6.

NO - Go to step 3.

3. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve B with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve B at 0.2 A in Clutch Pressure Control Solenoid Control menu.
5. Monitor the OBD status for P0967 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 6.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve B and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve B connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve B connector terminals No. 1 and No. 2.

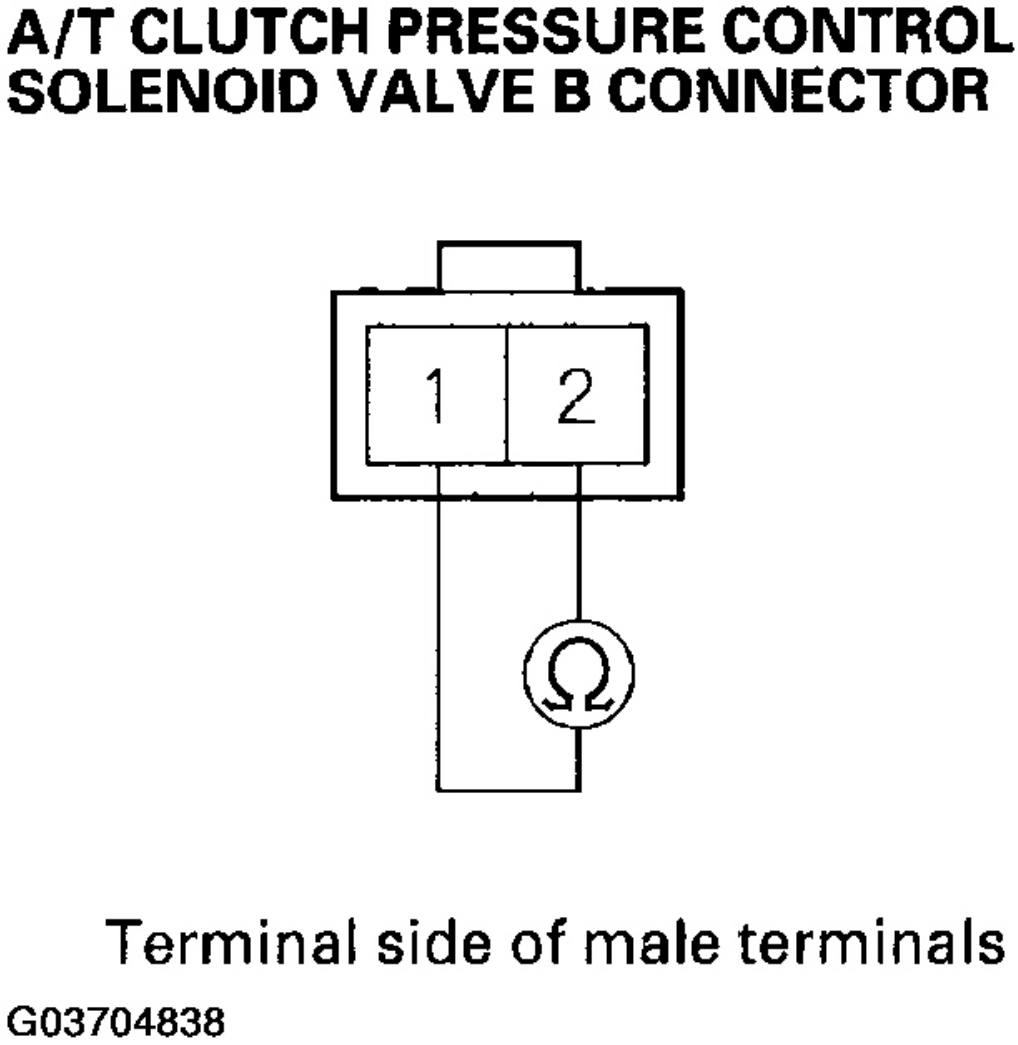


Fig. 144: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**),

then go to step 10.

9. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and body ground.

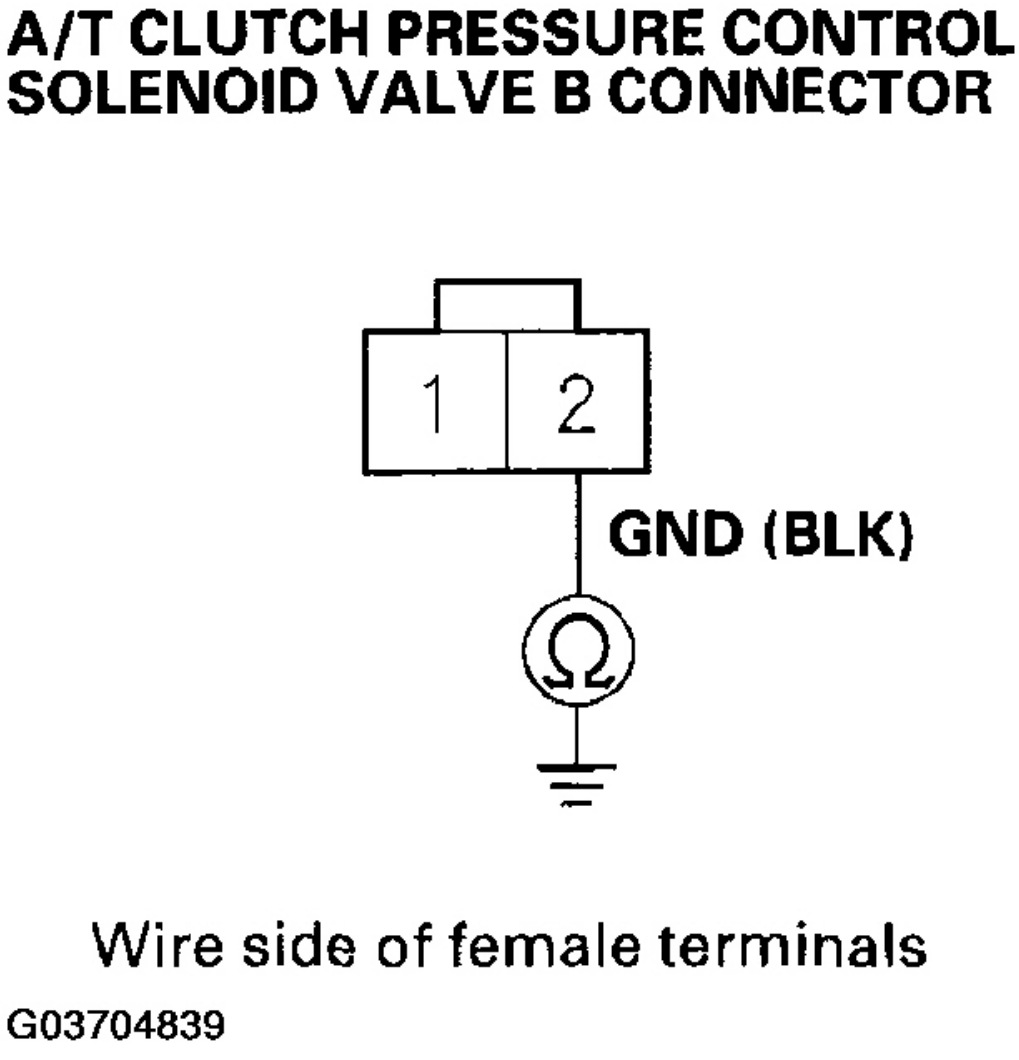


Fig. 145: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve B and ground (G151), or repair poor ground (G151), then go to step 10.

10. Clear the DTC with the HDS.
11. Test-drive the vehicle for several minutes in the D position through all five gears.
12. Monitor the OBD status for P0967 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0970: Problem in A/T Clutch Pressure Control Solenoid Valve C Circuit

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. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve C with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve C at 1.0 A in Clutch Pressure Control Solenoid Control menu.
5. Monitor the OBD status for P0970 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 6.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve C and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve C connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve C connector terminals No. 1 and No. 2.

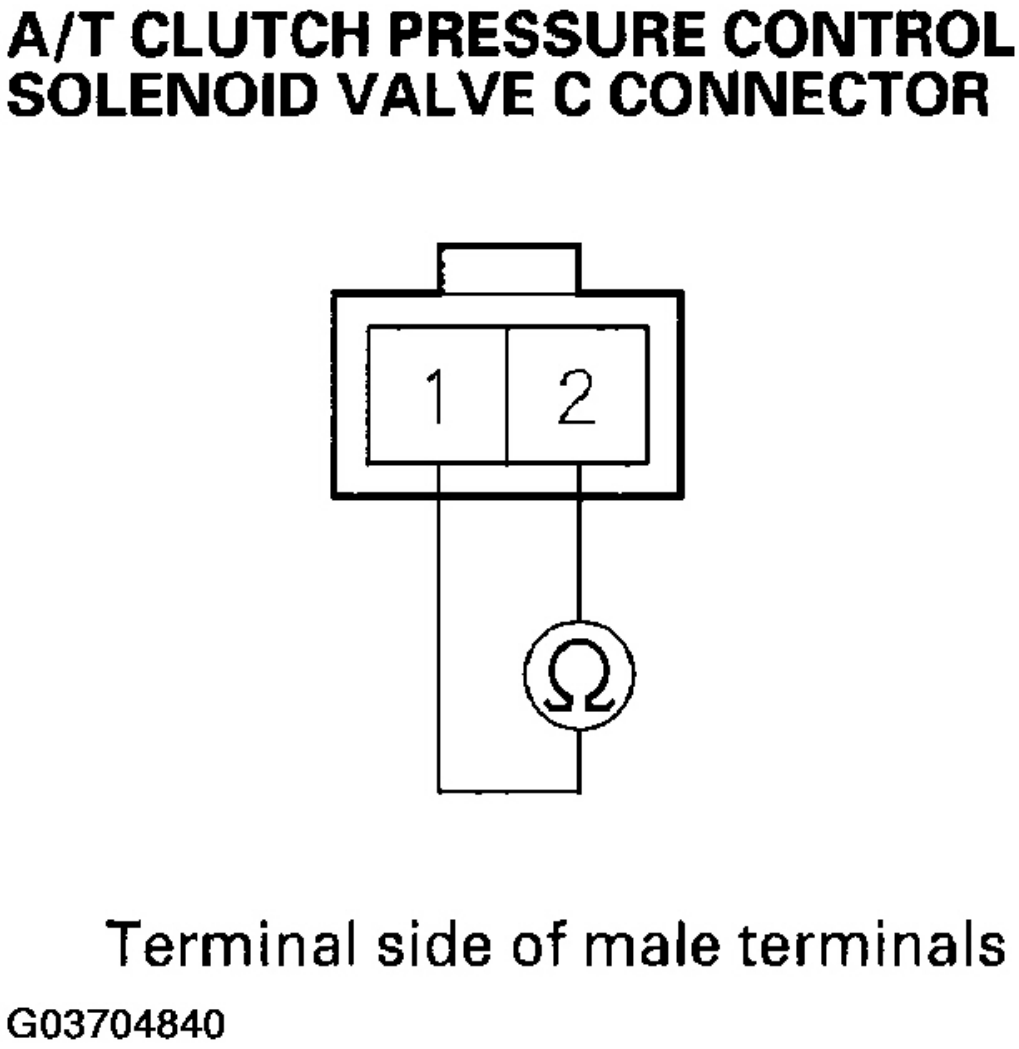


Fig. 146: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve C Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve C (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT**), then Go to

step 17.

9. Check for continuity between A/T clutch pressure control solenoid valve C connector terminal No. 2 and body ground.

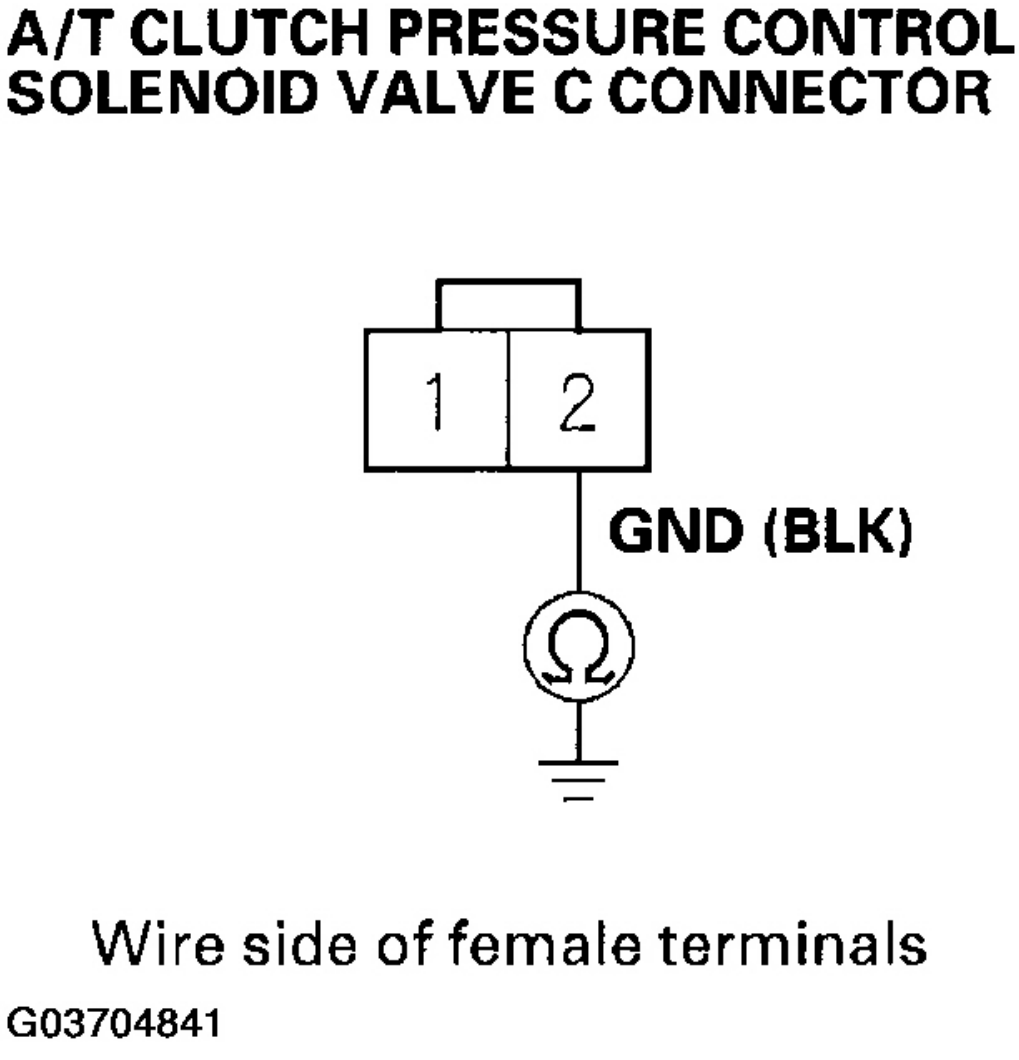


Fig. 147: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve C Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve C and ground (G151), or repair poor ground (G151), then, go to step 17.

10. Turn the ignition switch ON (II).
11. Measure the voltage between A/T clutch pressure control solenoid valve C connector terminals No. 1 and No. 2.

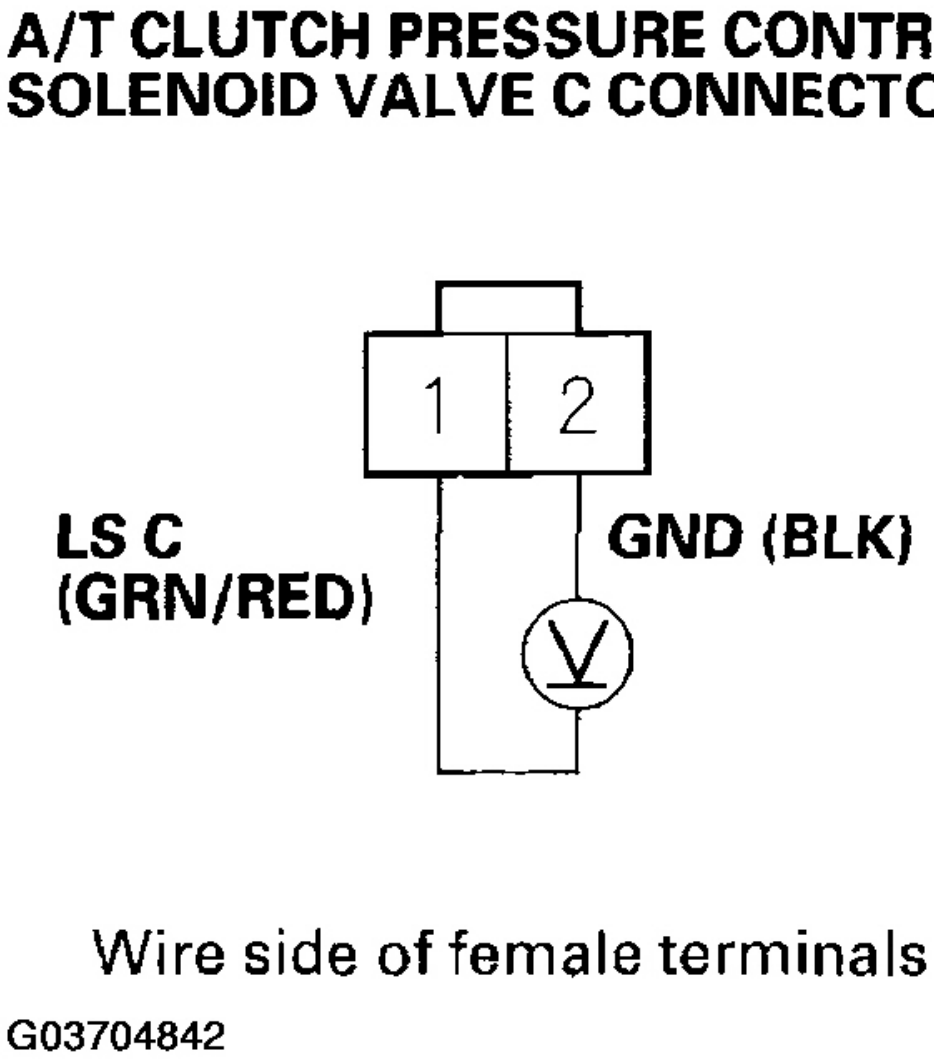


Fig. 148: Measuring Voltage Between A/T Clutch Pressure Control Solenoid Valve C

Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 12.

NO - Repair an open or short in the wire between PCM connector terminal B35 and A/T clutch pressure control solenoid valve C, then Go to step 17.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connectors B (44P) and C (44P).
15. Turn the ignition switch ON (II).
16. Measure the voltage between PCM connector terminals B2 and C40.

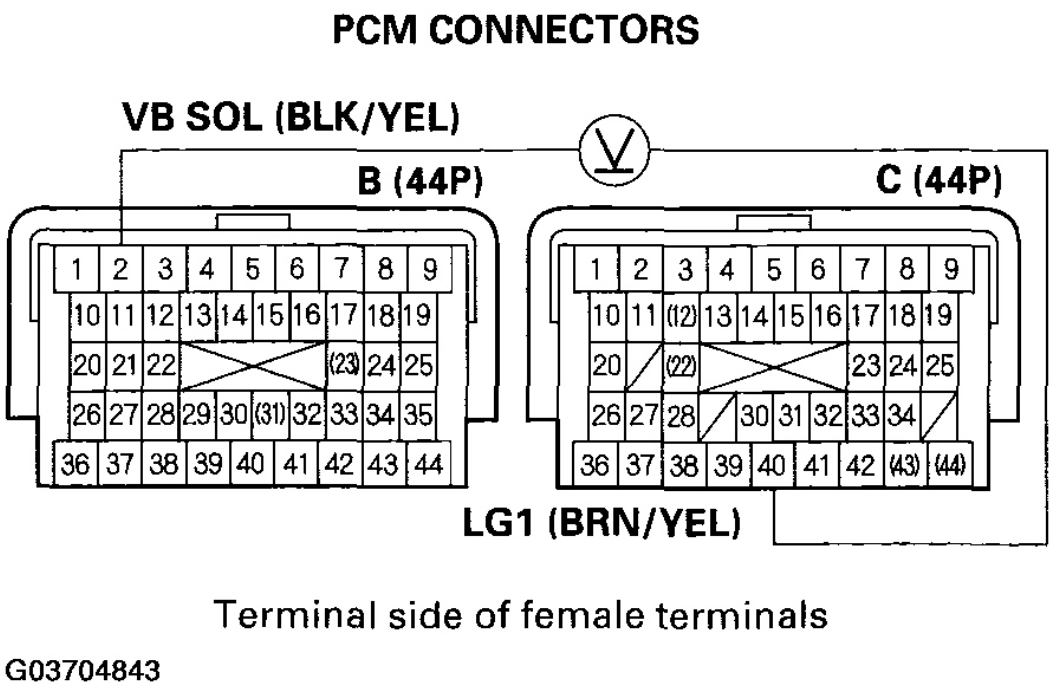


Fig. 149: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then Go to step 17.

17. Clear the DTC with the HDS.
18. Test-drive the vehicle for several minutes in the D position through all five gears.
19. Monitor the OBD status for P0970 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 17 and recheck.

DTC P0971: Problem in A/T Clutch Pressure Control Solenoid Valve C

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. Choose Clutch Pressure Control Solenoid Control in Miscellaneous Test Menu, and test the A/T clutch pressure control solenoid valve C with the HDS.

Is the system normal?

YES - Go to step 4.

NO - Go to step 6.

4. Drive with the A/T clutch pressure control solenoid valve C at 0.2 A in Clutch Pressure Control Solenoid Control menu.
5. Monitor the OBD status for P0971 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 6.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/T clutch pressure control solenoid valve C and PCM. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve C connector.
8. Measure the resistance between A/T clutch pressure control solenoid valve C connector terminals No. 1 and No. 2.

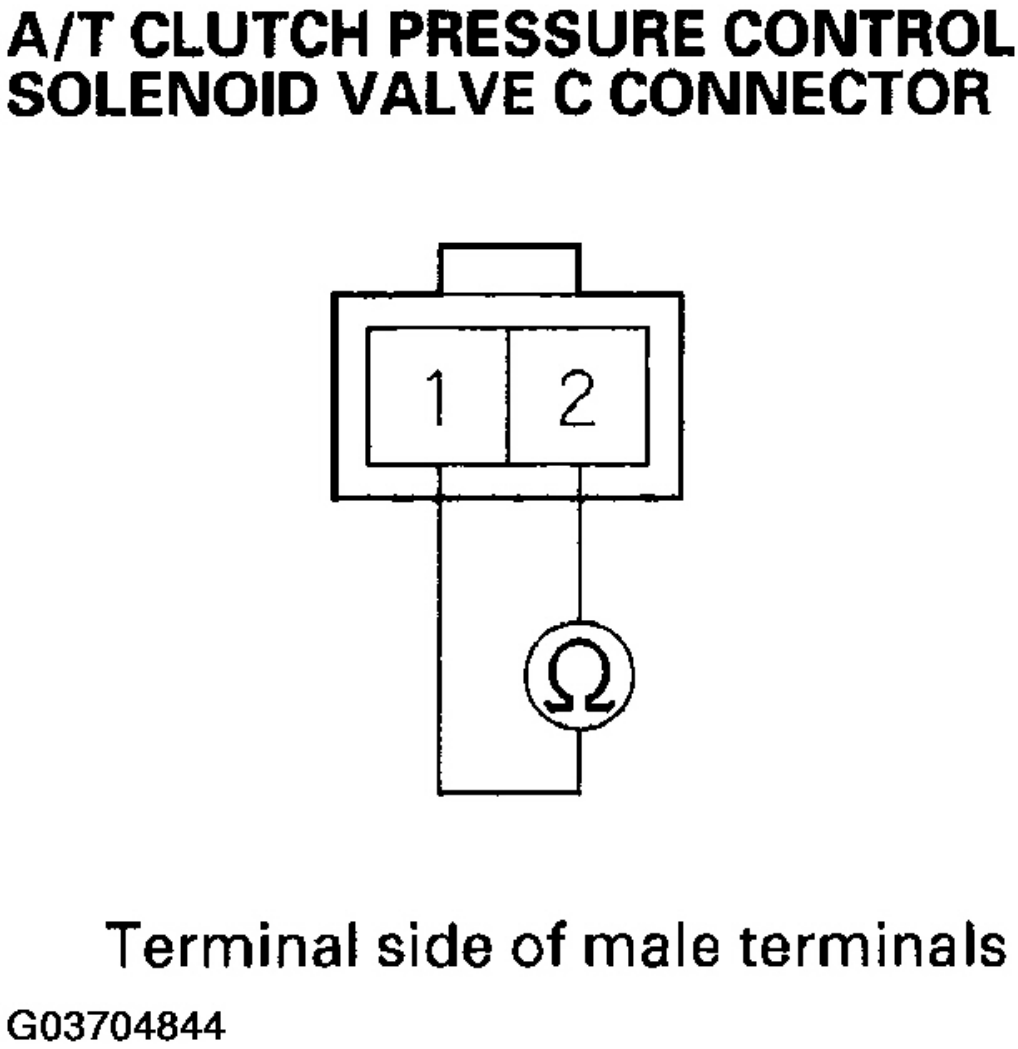


Fig. 150: Measuring Resistance Between A/T Clutch Pressure Control Solenoid Valve C Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3-10 ohm?

YES - Go to step 9.

NO - Replace the A/T clutch pressure control solenoid valve C (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT**), then Go to

step 10.

9. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and body ground.

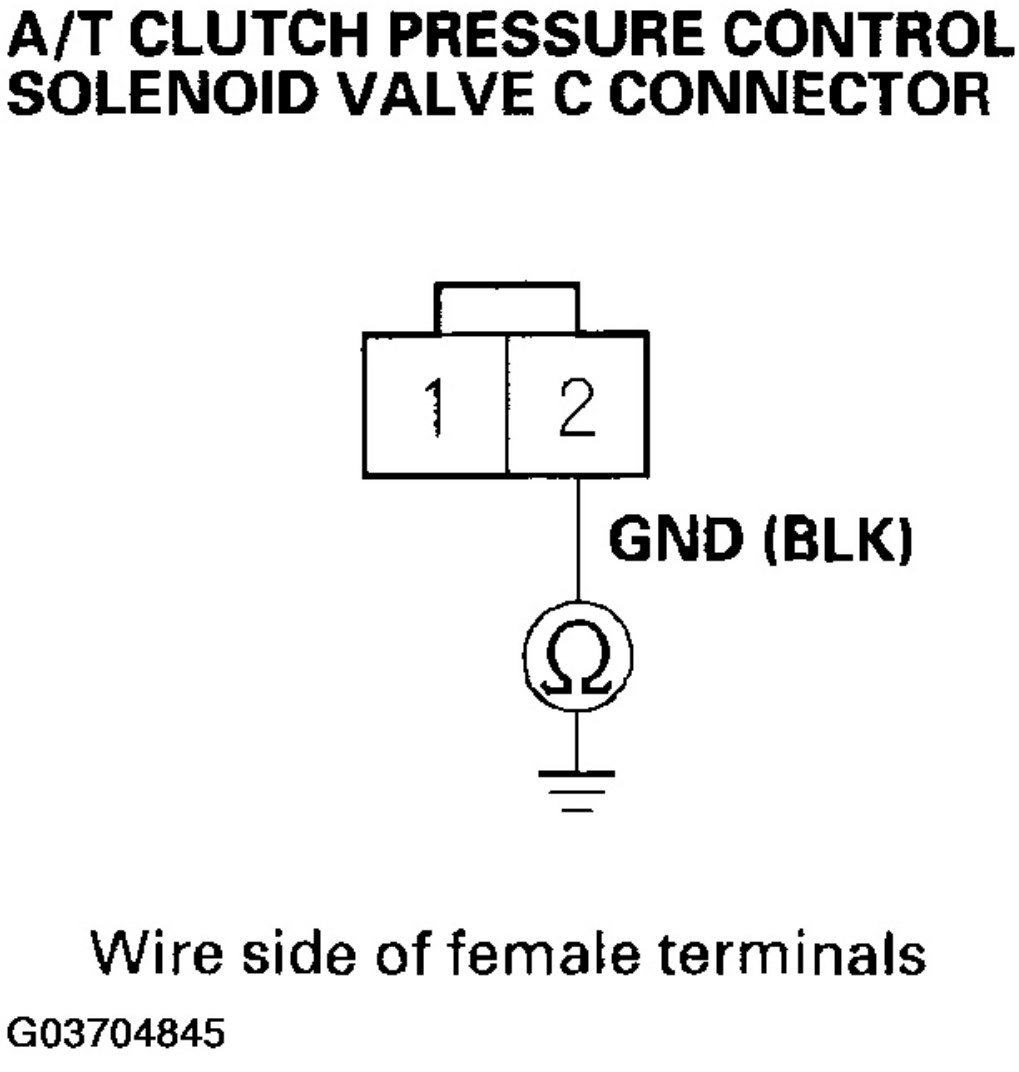


Fig. 151: Checking Continuity Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Repair an open in the wire between the A/T clutch pressure control solenoid valve B and ground (G151), or repair poor ground (G151), then Go to step 10.

10. Clear the DTC with the HDS.
11. Test-drive the vehicle for several minutes in the D position through all five gears.
12. Monitor the OBD status for P0971 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 6 and recheck.

DTC P0973: Short in Shift Solenoid Valve A Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0973 recurs.

Is DTC P0973 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Shift Solenoid A in Miscellaneous Test Menu, and test the shift solenoid valve A with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0973 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check SH A (BLU/YEL) wire for an intermittent short to body ground between shift solenoid valve A and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (44P) and C (44P).
10. Measure the resistance between PCM connector terminals C25 and C40.

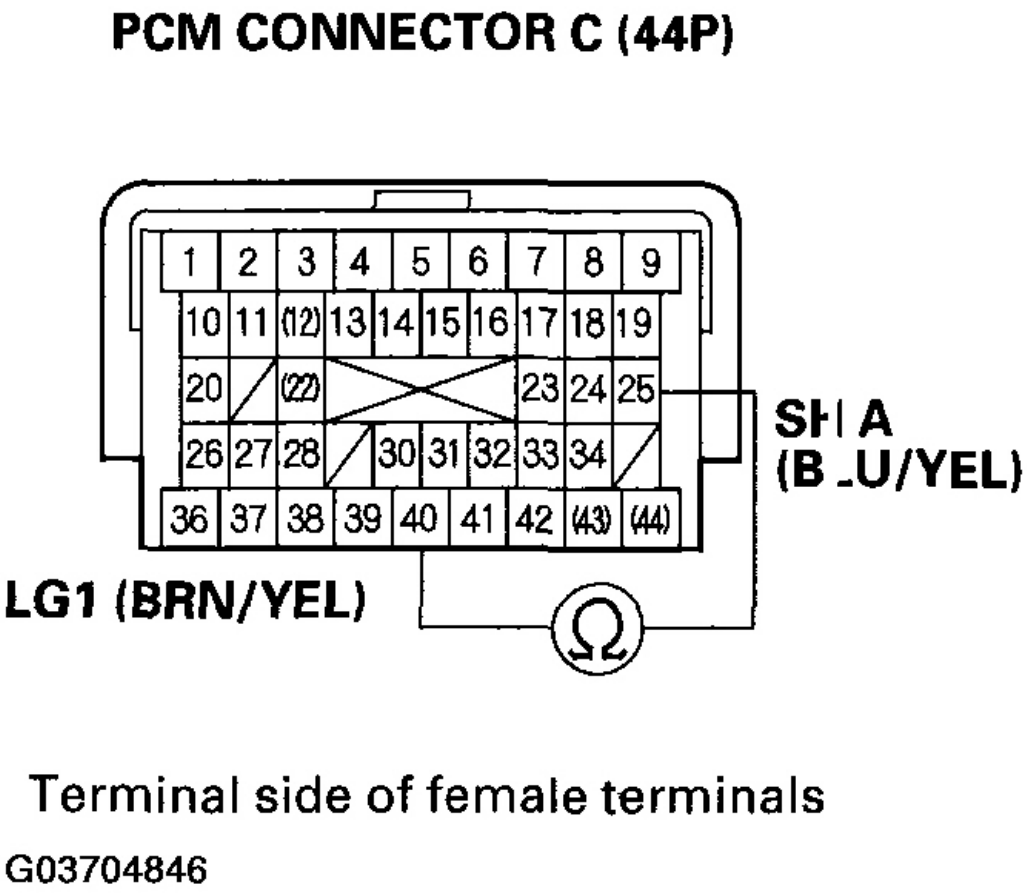


Fig. 152: Measuring Resistance Between PCM Connector Terminals C25 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm?

YES - Go to step 11.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

11. Disconnect shift solenoid valve A connector.
12. Check for continuity between PCM connector terminals C25 and C40.

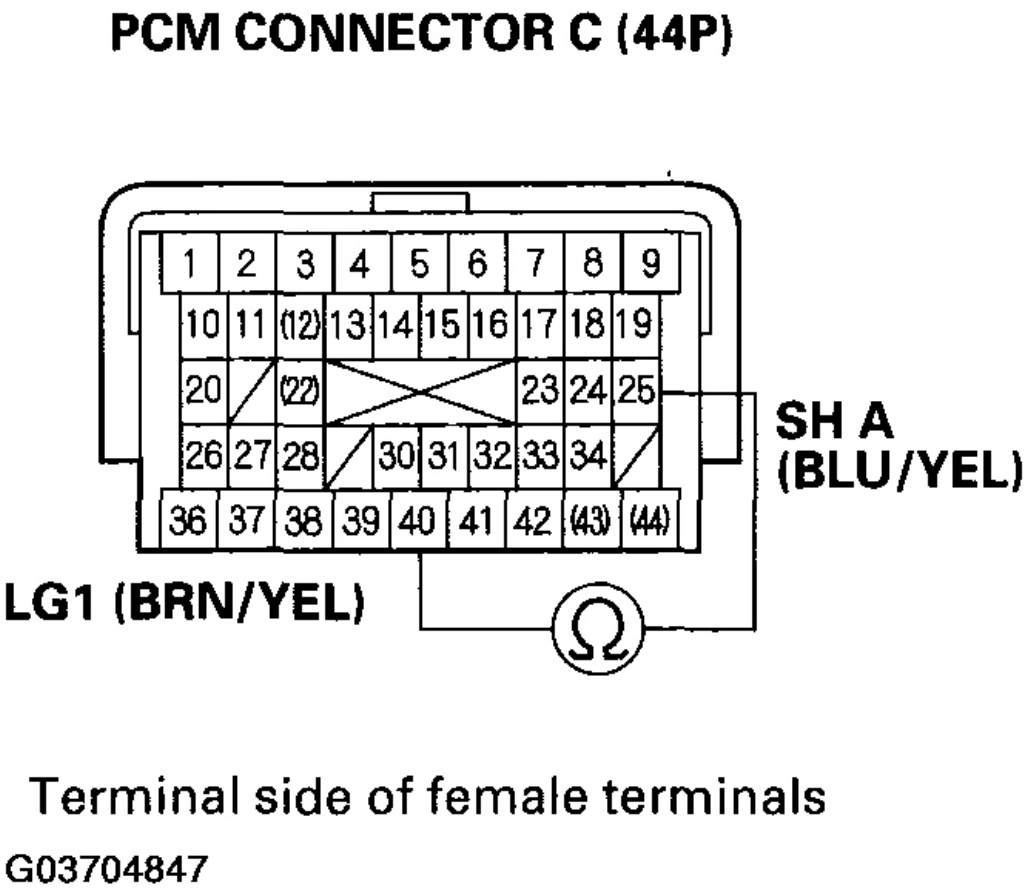


Fig. 153: Checking Continuity Between PCM Connector Terminals C25 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C25 and shift solenoid valve A, then Go to step 16.

NO - Go to step 13.

13. Measure the resistance between shift solenoid valve A connector terminals No. 1 and No. 2.

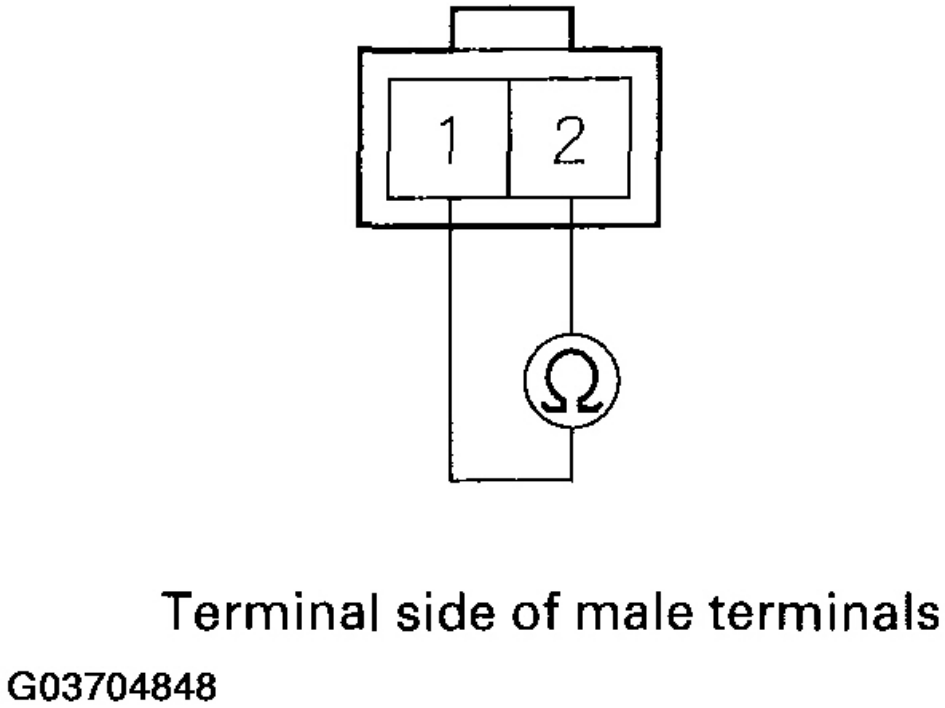


Fig. 154: Measuring Resistance Between Shift Solenoid Valve A Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-15 ohm?

YES - Go to step 14.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE A REPLACEMENT**), then Go to step 16.

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals B2 and C40.

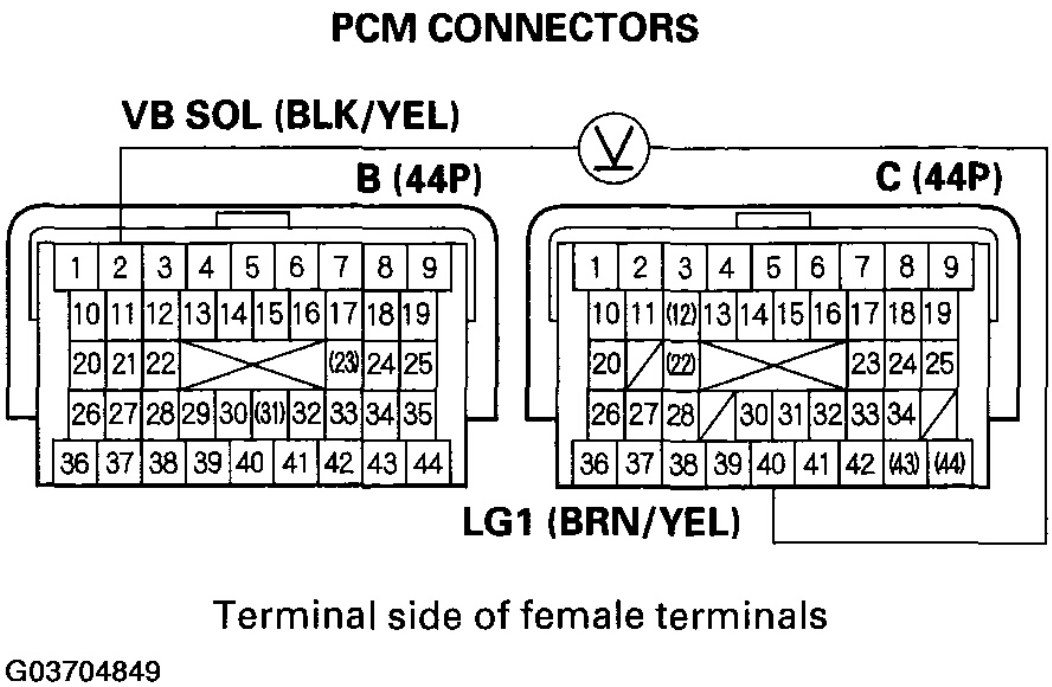


Fig. 155: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then Go to step 16.

16. Clear the DTC with the HDS.
17. Test-drive the vehicle for several minutes in the D position through all five gears.
18. Monitor the OBD status for P0973 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0974: Open in Shift Solenoid Valve A Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0974 recurs.

   Is DTC P0974 indicated?

   YES - Go to step 7.

   NO - Go to step 4.
4. Choose Shift Solenoid A in Miscellaneous Test Menu, and test the shift solenoid valve A with the HDS.

   Is the system normal?

   YES - Go to step 5.

   NO - Go to step 7.
5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0974 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the result indicate FAILED?

   YES - Go to step 7.

   NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at shift solenoid valve A and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.
7. Turn the ignition switch OFF.

8. Jump the SCS line with the HDS.
9. Disconnect PCM connector C (44P).
10. Measure the resistance between PCM connector terminals C25 and C40.

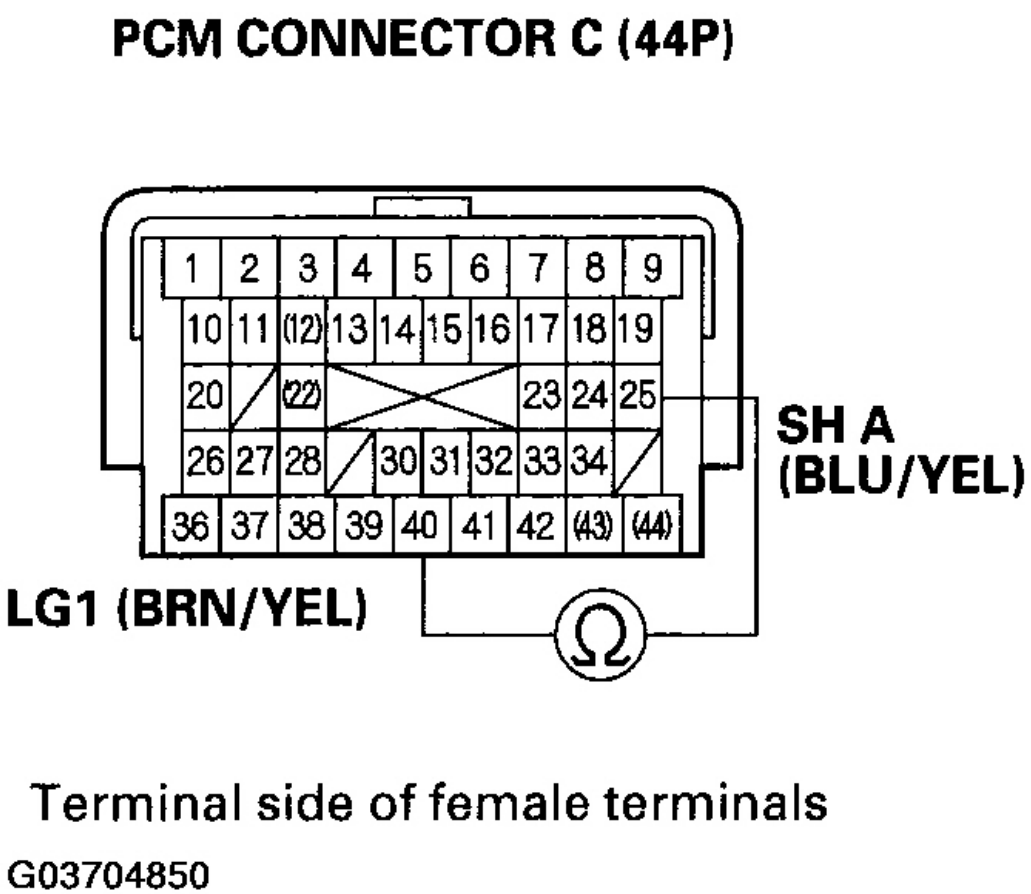


Fig. 156: Measuring Resistance Between PCM Connector Terminals C25 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm?

YES - Check for loose or poor connections at PCM connector terminal C25. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good

PCM, replace the original PCM.

NO - Go to step 11.

11. Disconnect shift solenoid valve A connector.
12. Measure the resistance between shift solenoid valve A connector terminals No. 1 and No. 2.

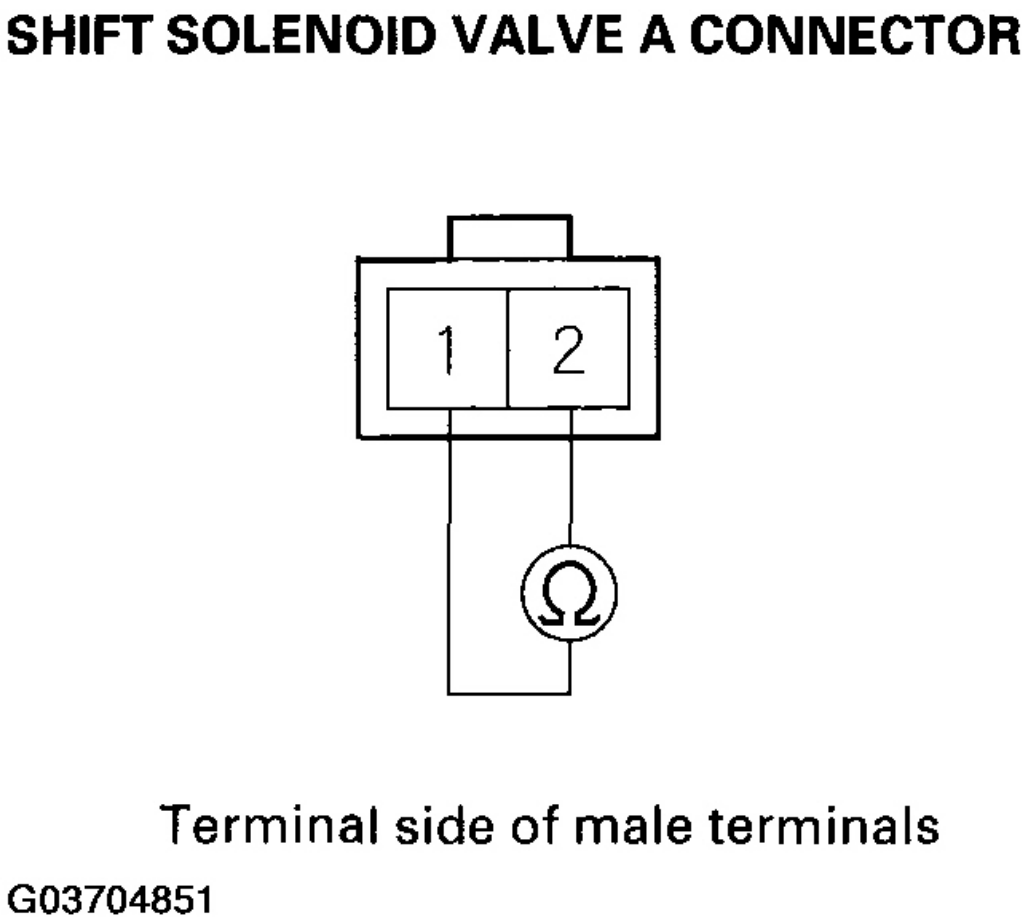


Fig. 157: Measuring Resistance Between Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm?

YES - Go to step 13.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE A**

REPLACEMENT), then Go to step 14.

13. Check for continuity between shift solenoid valve A connector terminal No. 1 and body ground.

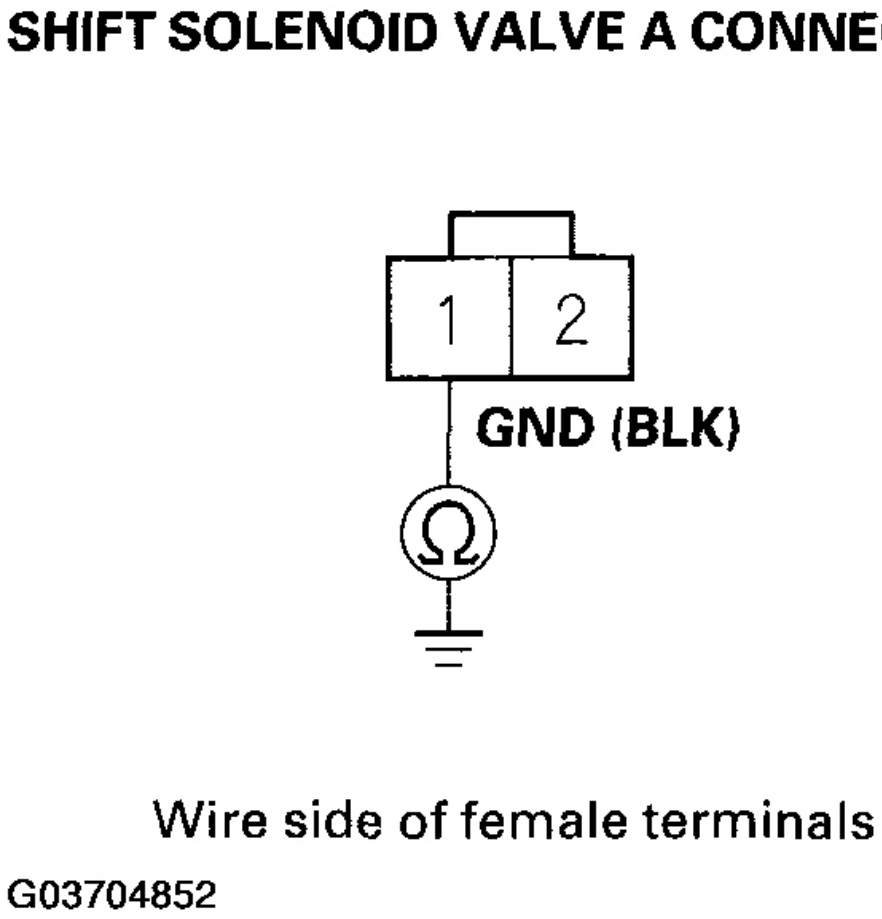


Fig. 158: Checking Continuity Between Shift Solenoid Valve A Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair an open in the wire between PCM connector terminal C25 and shift solenoid valve A, then Go to step 14.

NO - Repair an open in the wire between shift solenoid valve A and ground (G151),

or repair poor ground (G151) then Go to step 14.

14. Clear the DTC with the HDS.
15. Test-drive the vehicle for several minutes in the D position through all five gears.
16. Monitor the OBD status for P0974 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0976: Short in Shift Solenoid Valve B Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0976 recurs.

Is DTC P0976 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Shift Solenoid B in Miscellaneous Test Menu, and test shift solenoid valve B with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0976 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check SH B (GRN/WHT) wire for an intermittent short to body ground between shift solenoid valve B and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector C (44P).
10. Measure the resistance between PCM connector terminals C23 and C40.

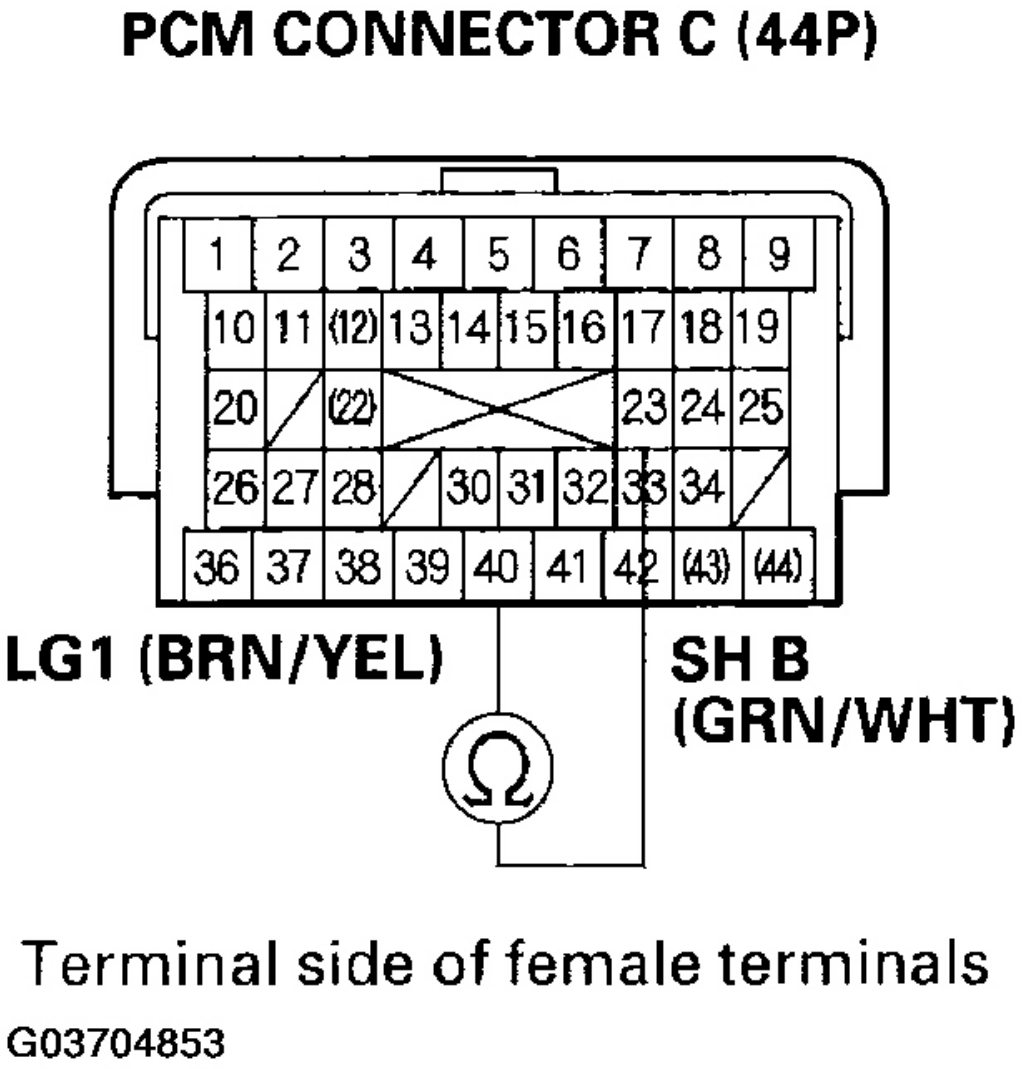


Fig. 159: Measuring Resistance Between PCM Connector Terminals C23 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm?

YES - Go to step 11.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the

original PCM.

11. Disconnect shift solenoid valve B connector.
12. Check for continuity between PCM connector terminals C23 and C40.

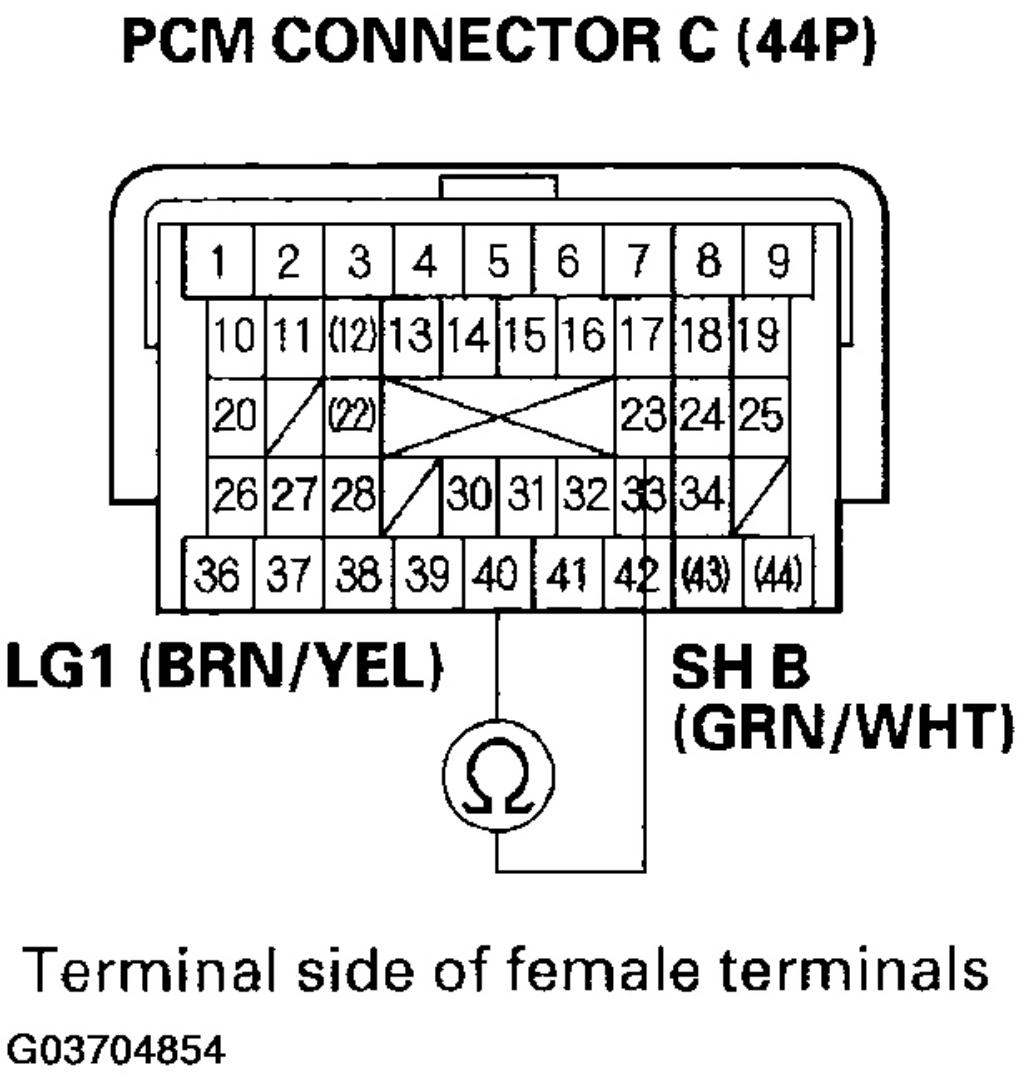


Fig. 160: Checking Continuity Between PCM Connector Terminals C23 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C23 and shift solenoid valve B, then Go to step 16.

NO - Go to step 13.

13. Measure the resistance between shift solenoid valve B connector terminals No. 1 and No. 2.

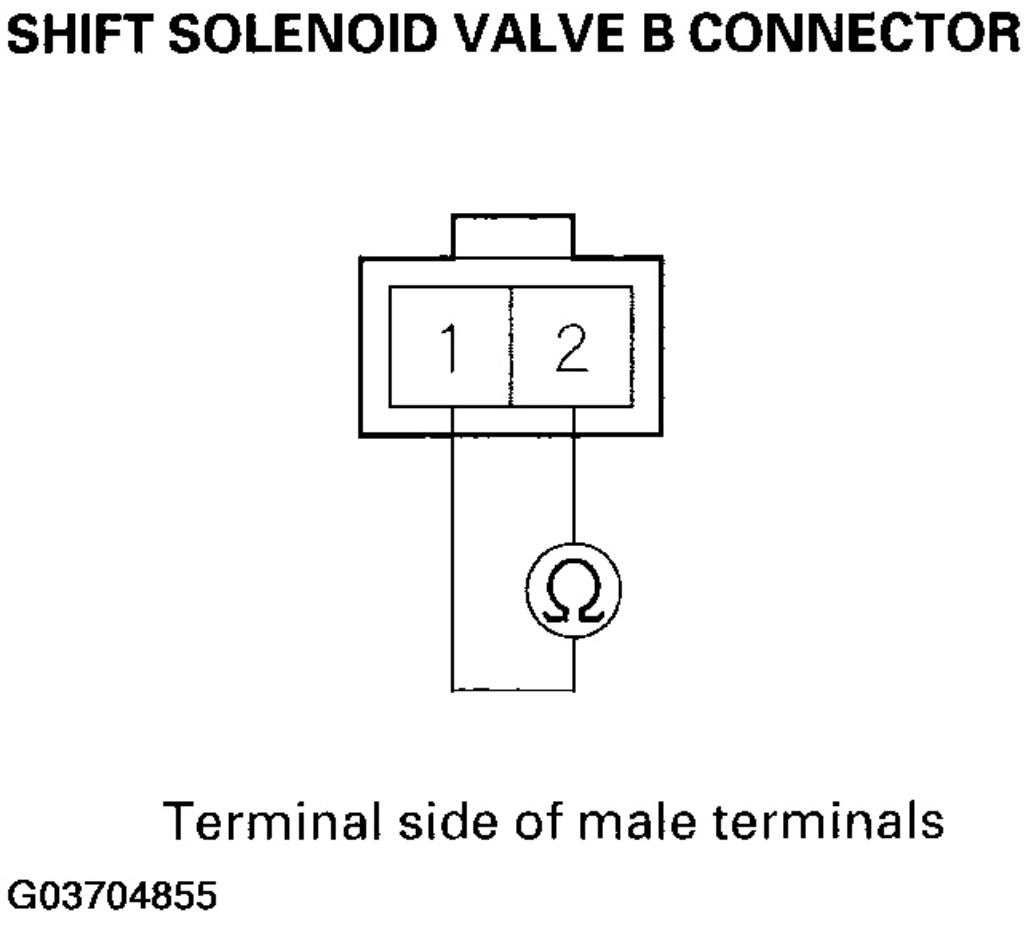


Fig. 161: Measuring Resistance Between Shift Solenoid Valve B Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-15 ohm?

YES - Go to step 14.

NO - Replace the shift solenoid valve B (see **SHIFT SOLENOID VALVE B REPLACEMENT**), then Go to step 16.

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals B2 and C40.

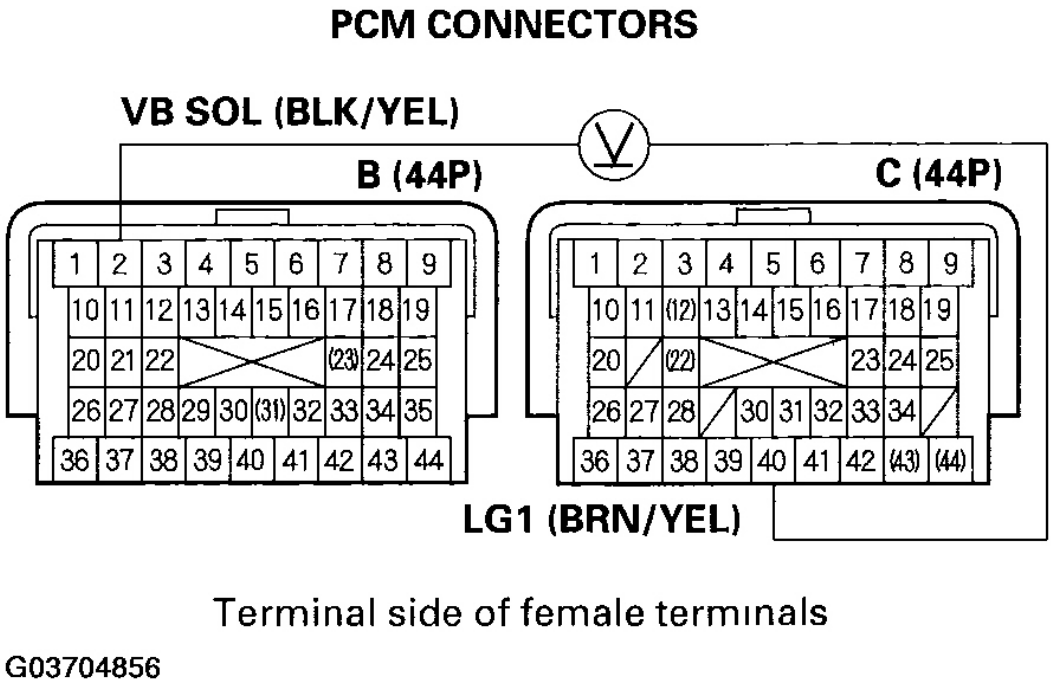


Fig. 162: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair an open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then Go to step 16.

16. Clear the DTC with the HDS.

17. Test-drive the vehicle for several minutes in the D position through all five gears.
18. Monitor the OBD status for P0976 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0977: Open in Shift Solenoid Valve B Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0977 recurs.

Is DTC P0977 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Shift Solenoid B in Miscellaneous Test Menu, and test the shift solenoid valve B with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0977 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at shift solenoid valve B and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with HDS.
9. Disconnect PCM connector C (44P).
10. Measure the resistance between PCM connector terminals C23 and C40.

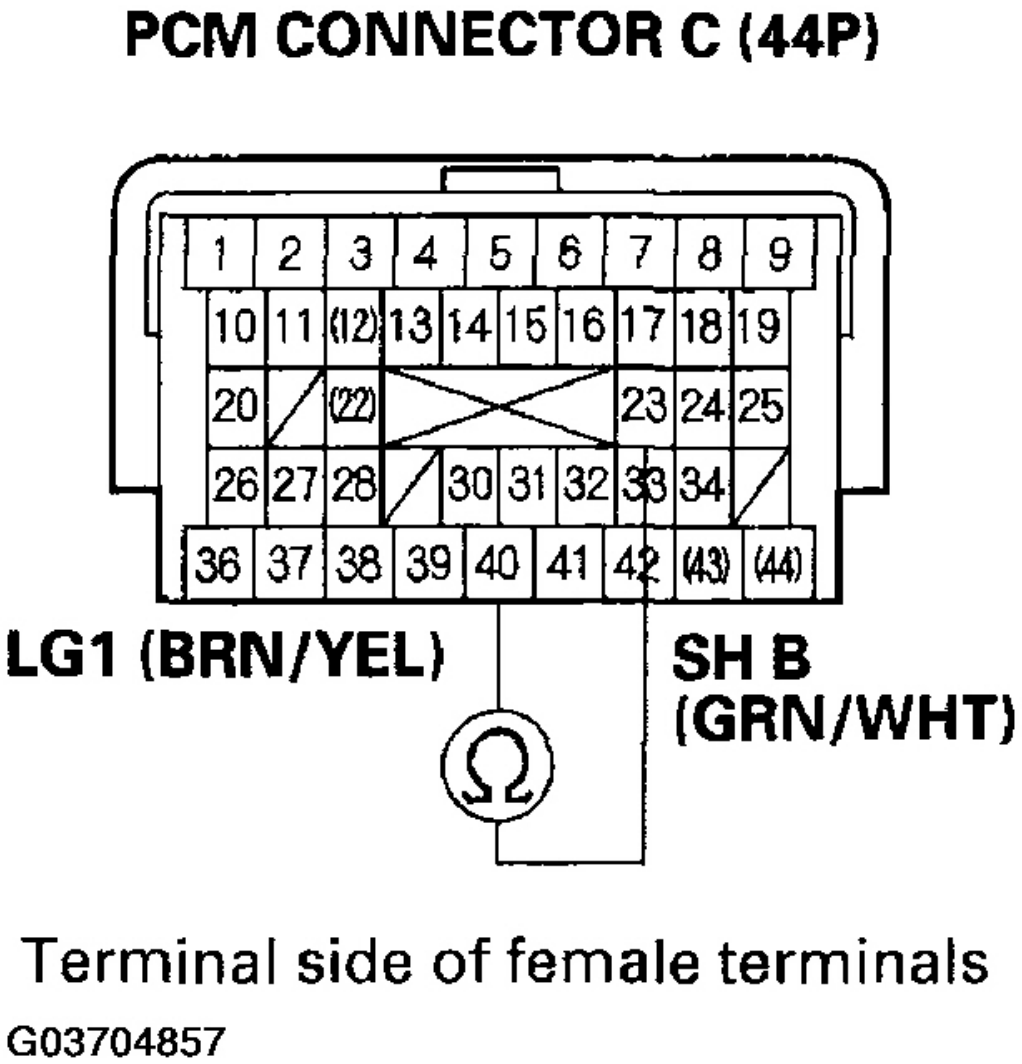


Fig. 163: Measuring Resistance Between PCM Connector Terminals C23 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm?

YES - Check for loose or poor connections at PCM connector terminal C23. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good

PCM, replace the original PCM.

NO - Go to step 11.

11. Disconnect shift solenoid valve B connector.
12. Measure the resistance between shift solenoid valve B connector terminals No. 1 and No. 2.

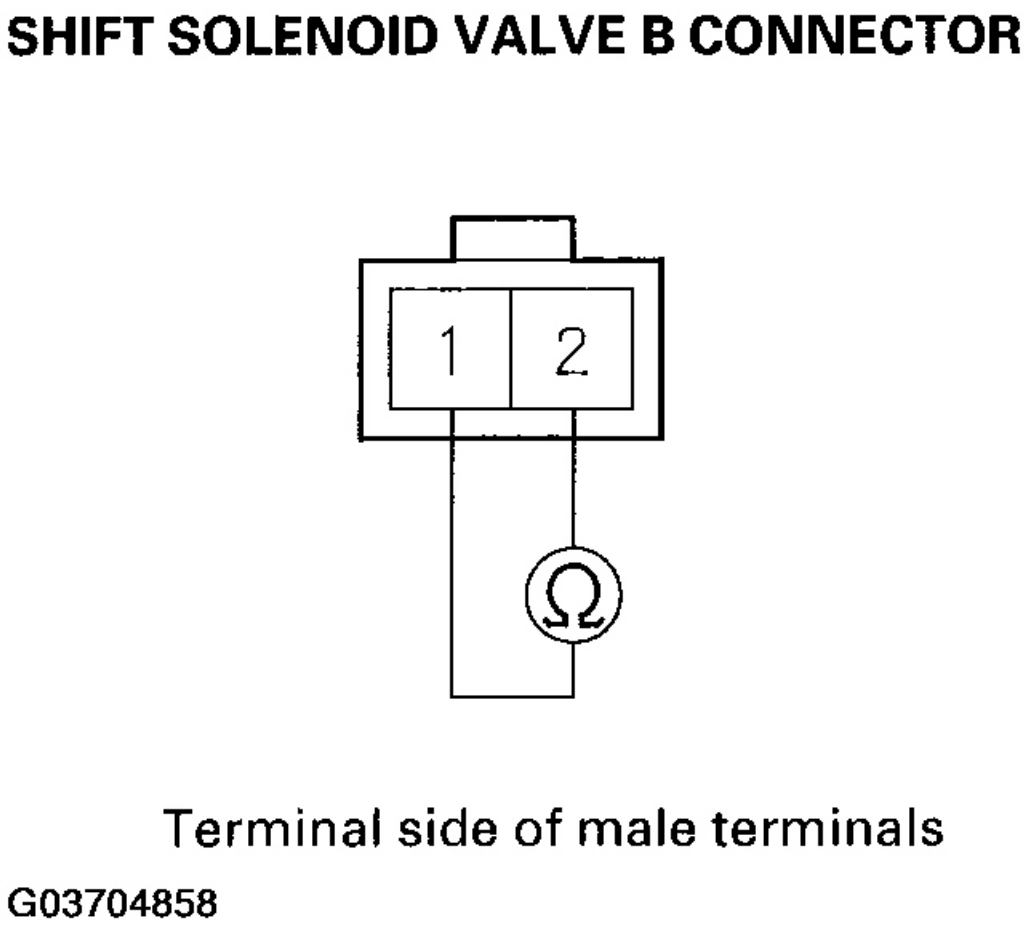


Fig. 164: Measuring Resistance Between Shift Solenoid Valve B Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm?

YES - Go to step 13.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE B REPLACEMENT**), then Go to step 14.

13. Check for continuity between shift solenoid valve B connector terminal No. 1 and body ground.

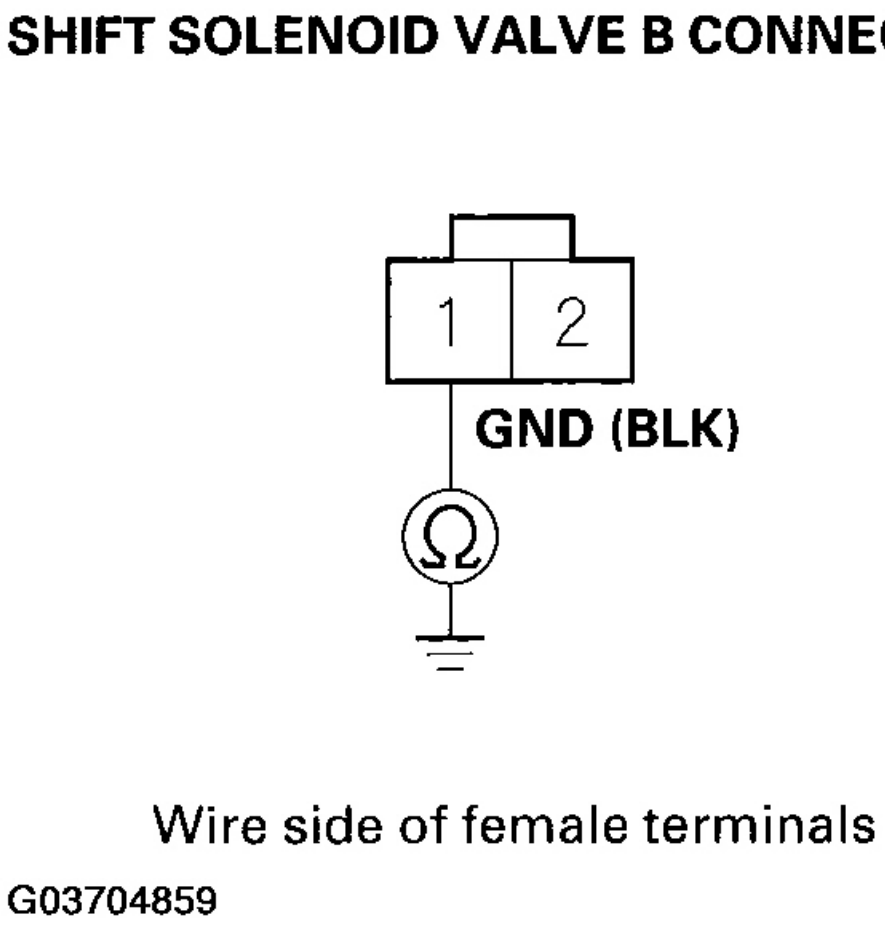


Fig. 165: Checking Continuity Between Shift Solenoid Valve B Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair an open in the wire between PCM connector terminal C23 and shift solenoid valve B, then Go to step 14.

NO - Repair an open in the wire between shift solenoid valve B and ground (G151), or repair poor ground (G151), then Go to step 14.

14. Clear the DTC with the HDS.
15. Test-drive the vehicle for several minutes in the D position through all five gears.
16. Monitor the OBD status for P0977 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0979: Short in Shift Solenoid Valve C Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0979 recurs.

Is DTC P0979 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Shift Solenoid C in Miscellaneous Test Menu, and test the shift solenoid valve C with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0979 in the DTCs/Freeze Data in A/T Mode Menu for a

pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check SH C (GRN) wire for an intermittent short to body ground between shift solenoid valve C and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (44P) and C (44P).
10. Measure the resistance between PCM connector terminals C18 and C40.

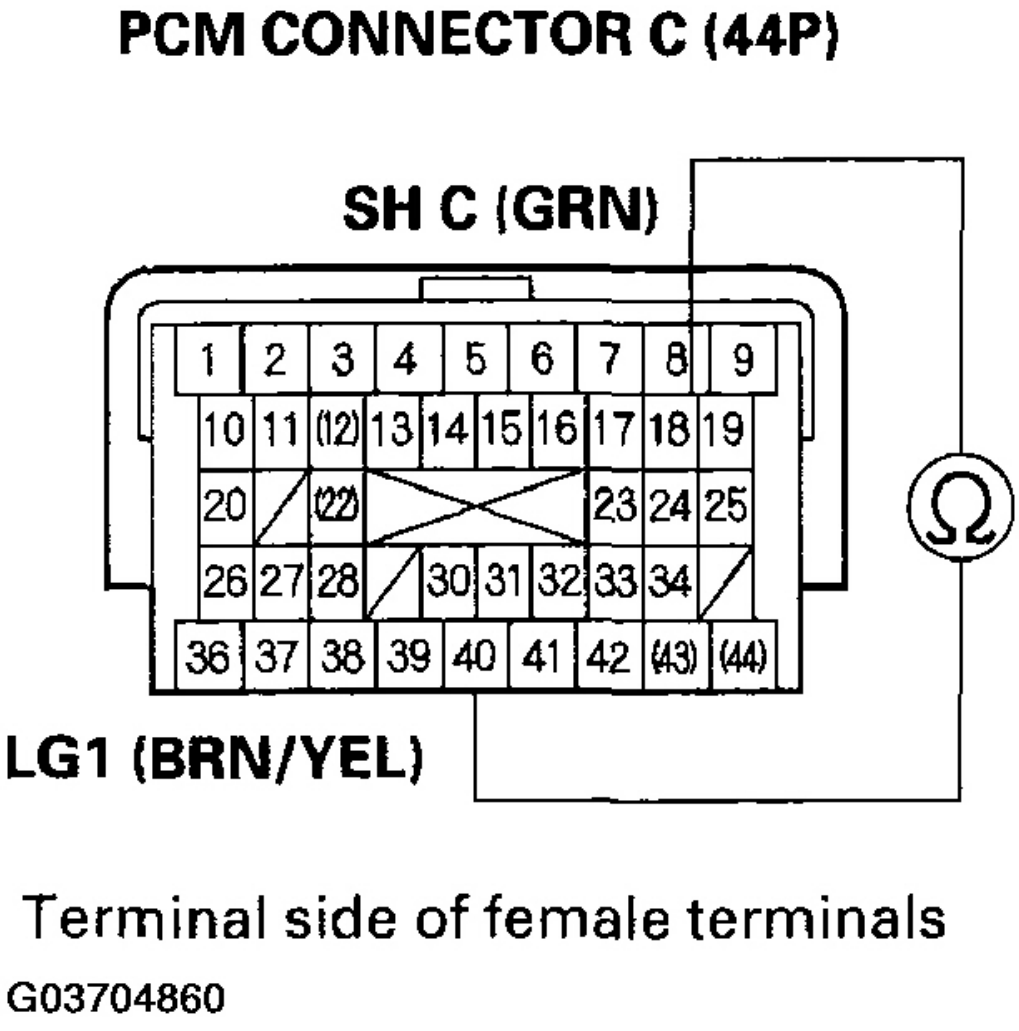


Fig. 166: Measuring Resistance Between PCM Connector Terminals C18 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm?

YES - Go to step 11.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

11. Disconnect shift solenoid valve C connector.
12. Check for continuity between PCM connector terminals C18 and C40.

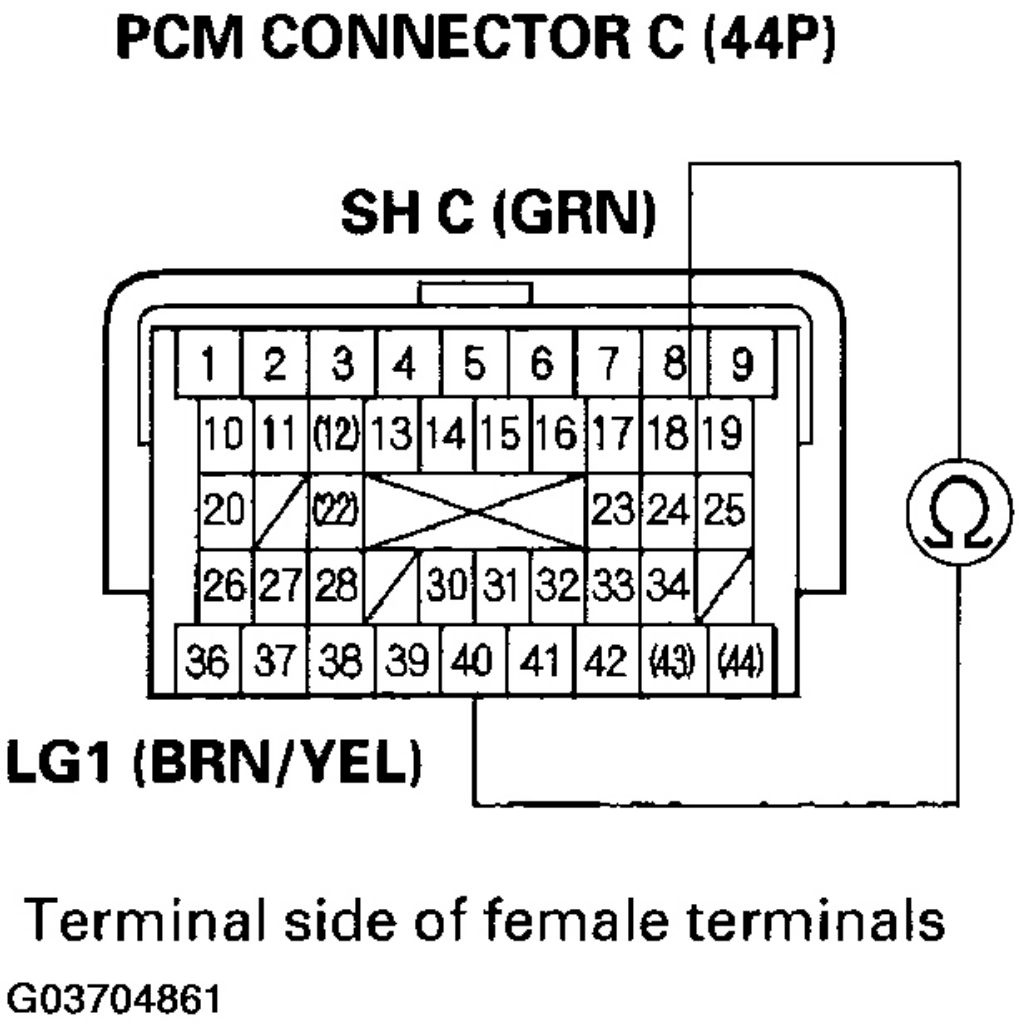


Fig. 167: Checking Continuity Between PCM Connector Terminals C18 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal C18 and shift solenoid valve C, then Go to step 16.

NO - Go to step 13.

13. Measure the resistance between shift solenoid valve C connector terminals No. 1 and No. 2.

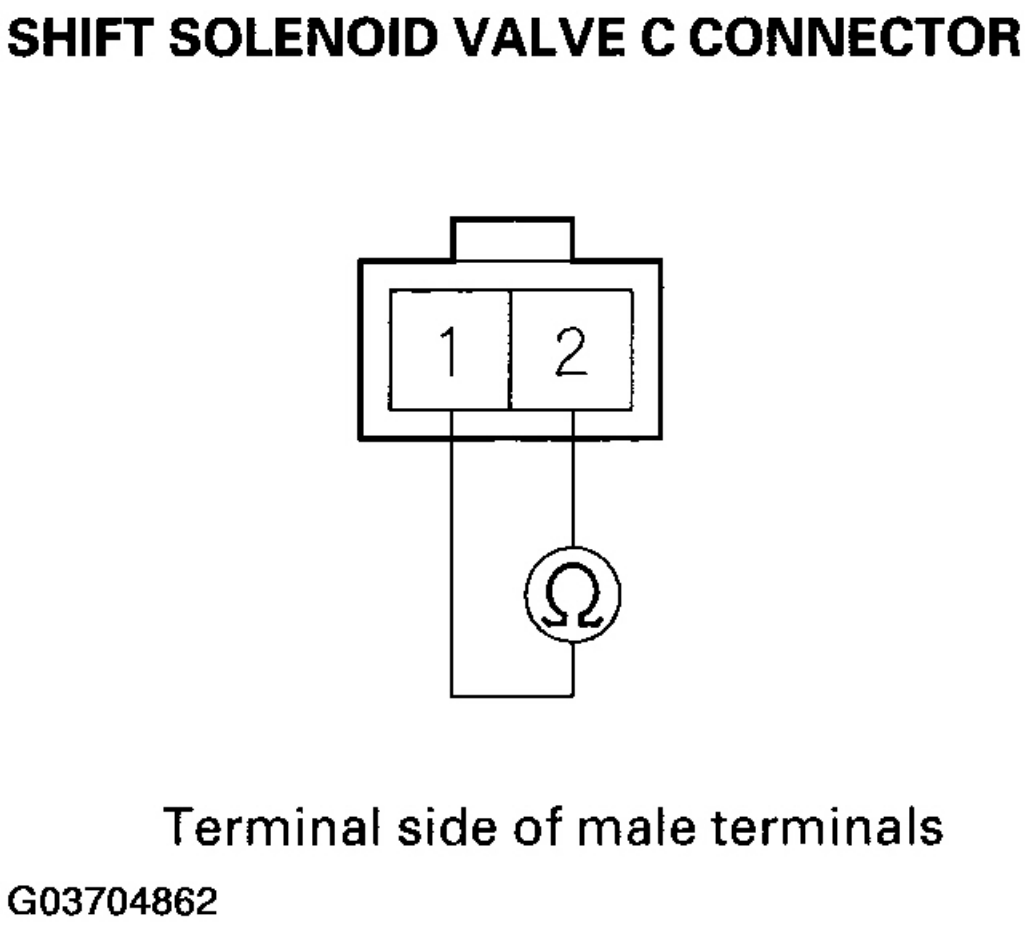


Fig. 168: Measuring Resistance Between Shift Solenoid Valve C Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-15 ohm ?

YES - Go to step 14.

NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE C REPLACEMENT**), then Go to step 16.

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals B2 and C40.

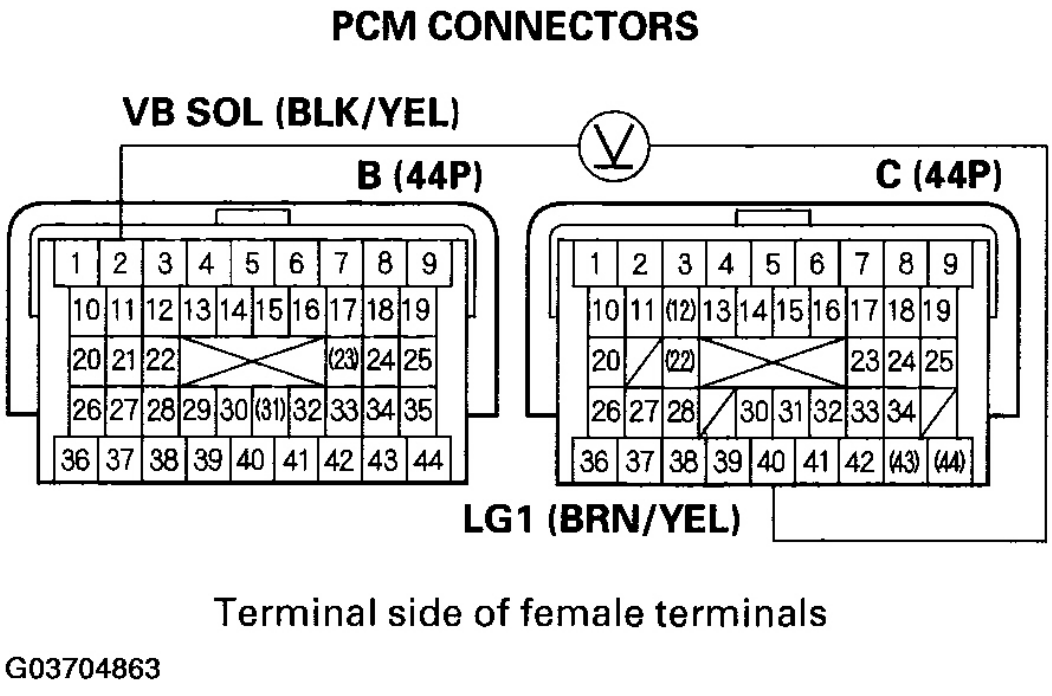


Fig. 169: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then Go to step 16.

16. Clear the DTC with the HDS.
17. Test-drive the vehicle for several minutes in the D position through all five gears.
18. Monitor the OBD status for P0979 in the DTCs/Freeze Data in A/T Mode Menu for a

pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P0980: Open in Shift Solenoid Valve C Circuit

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. Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P0980 recurs.

Is DTC P0980 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Shift Solenoid C in Miscellaneous Test Menu, and test the shift solenoid valve C with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P0980 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this

time. Check for poor connections or loose terminals at shift solenoid valve C and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector C (44P).
10. Measure the resistance between PCM connector terminals C18 and C40.

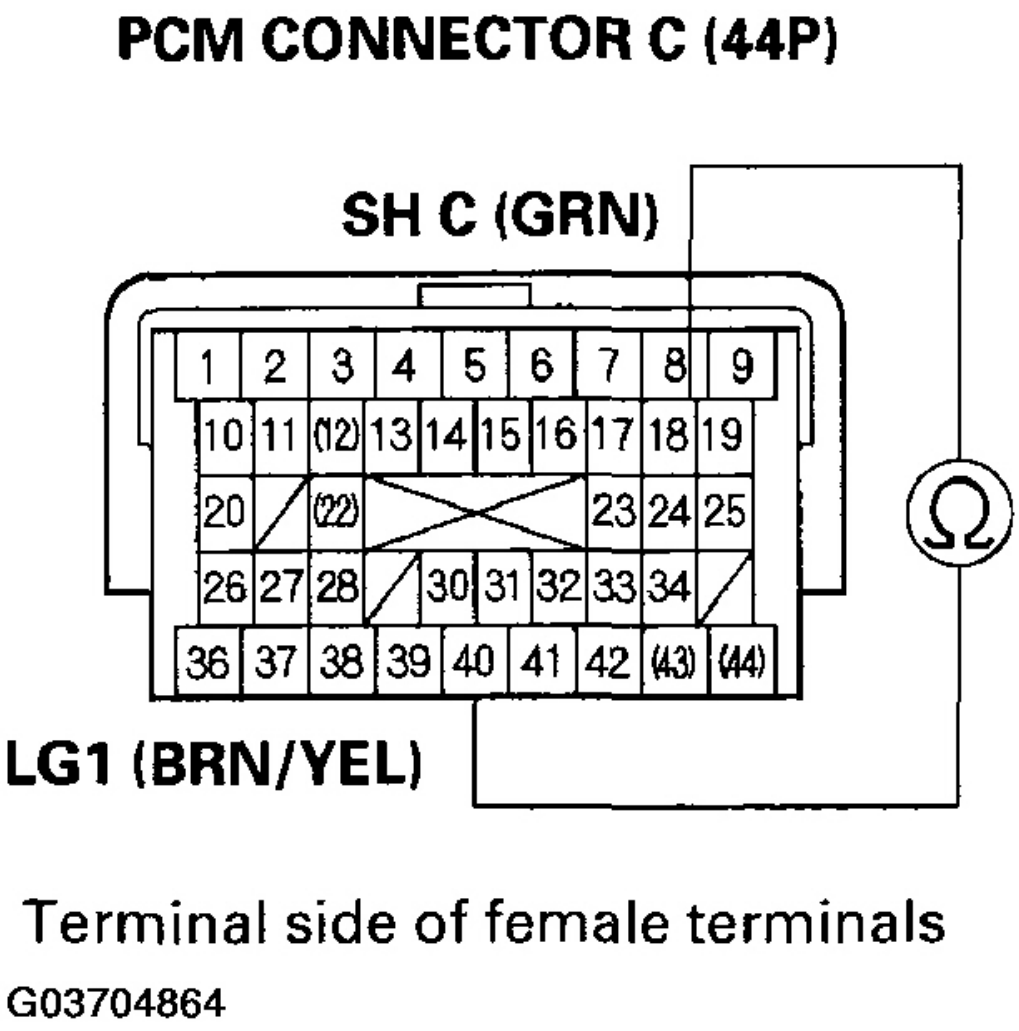


Fig. 170: Measuring Resistance Between PCM Connector Terminals C18 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm ?

YES - Check for loose or poor connections at PCM connector terminal C18. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Go to step 11.

11. Disconnect shift solenoid valve C connector.
12. Measure the resistance between shift solenoid valve C connector terminals No. 1 and No. 2.

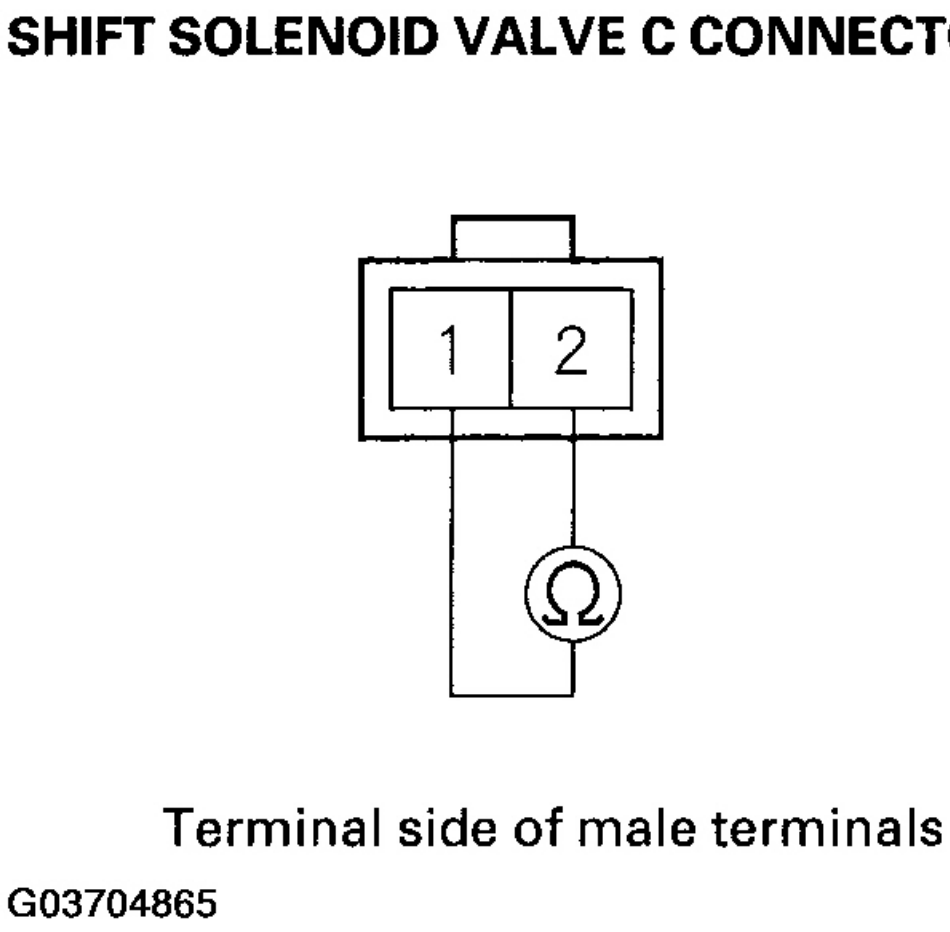


Fig. 171: Measuring Resistance Between Shift Solenoid Valve C Connector

Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm ?

YES - Go to step 13.

NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE C REPLACEMENT**), then Go to step 14.

13. Check for continuity between shift solenoid valve C connector terminal No. 1 and body ground.

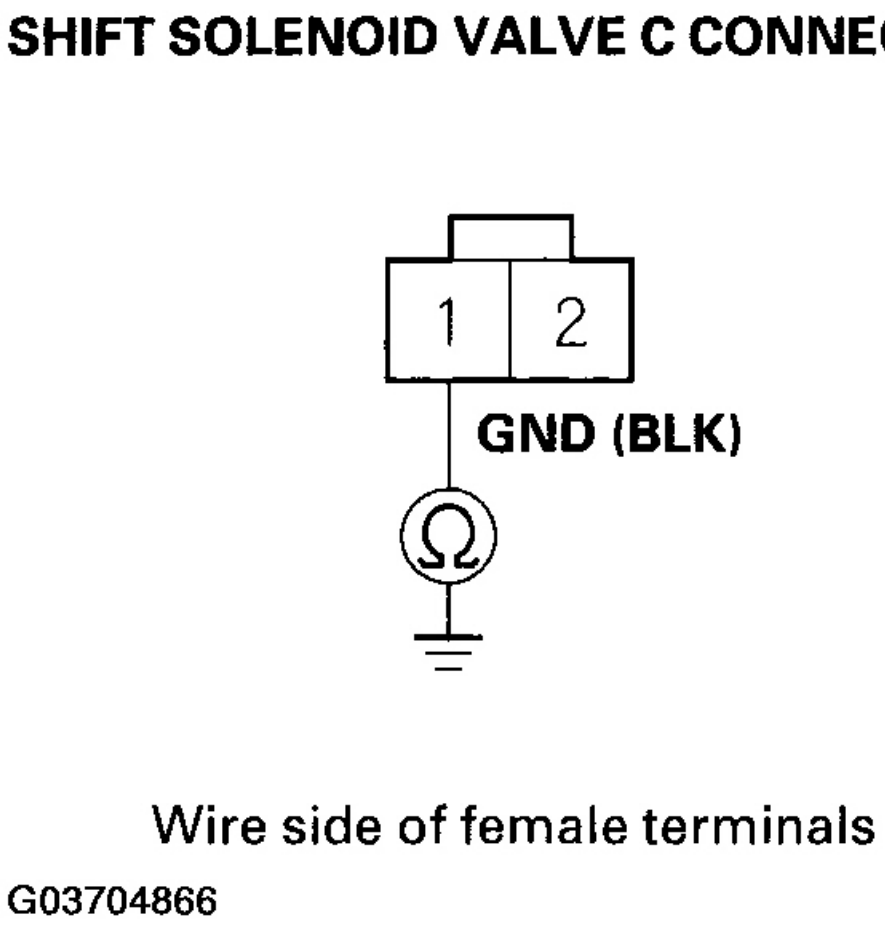


Fig. 172: Checking Continuity Between Shift Solenoid Valve C Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair an open in the wire between PCM connector terminal C18 and shift solenoid valve C, then Go to step 14.

NO - Repair an open in the wire between shift solenoid valve B and ground (G151), or repair poor ground (G151), then Go to step 14.

14. Clear the DTC with the HDS.
15. Test-drive the vehicle for several minutes in the D position through all five gears.
16. Monitor the OBD status for P0980 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P2769: Short in Torque Converter Clutch Solenoid Valve Circuit

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. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on). Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P2769 recurs.

Is DTC P2769 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Lockup Solenoid Test in Miscellaneous Test Menu, and test the torque converter clutch solenoid valve with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on). Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P2769 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check LC (YEL) wire for an intermittent short to body ground between torque converter clutch solenoid valve and PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (44P) and C (44P).
10. Measure the resistance between PCM connector terminals B44 and C40.

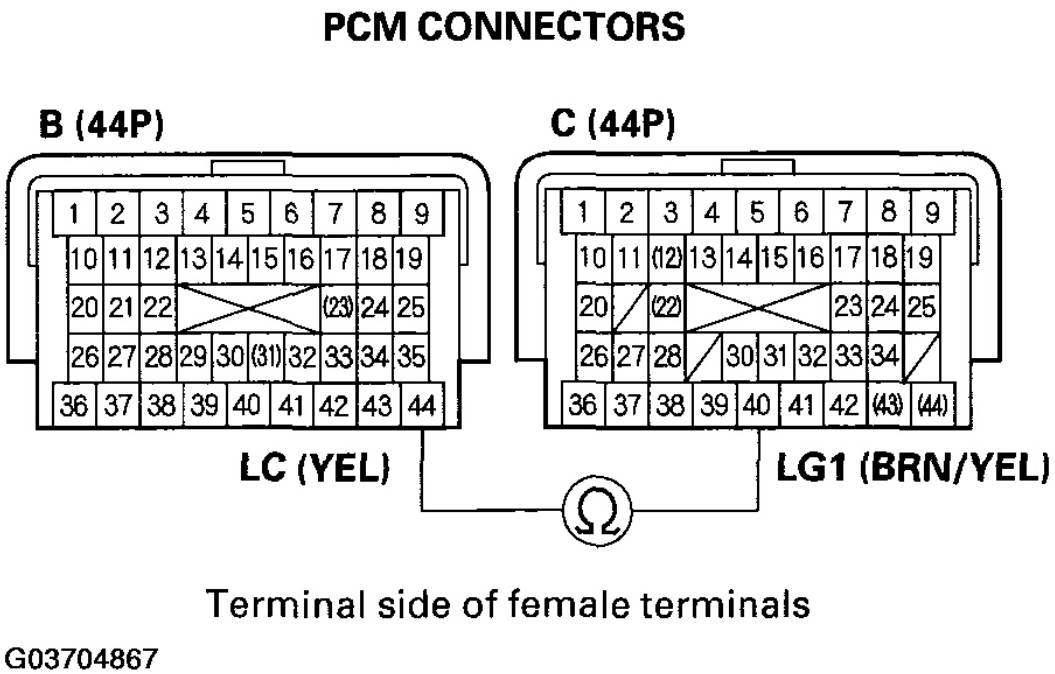


Fig. 173: Measuring Resistance Between PCM Connector Terminals B44 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm ?

YES - Go to step 11.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

11. Disconnect torque converter clutch solenoid valve connector
12. Check for continuity between PCM connector terminals B44 and C40.

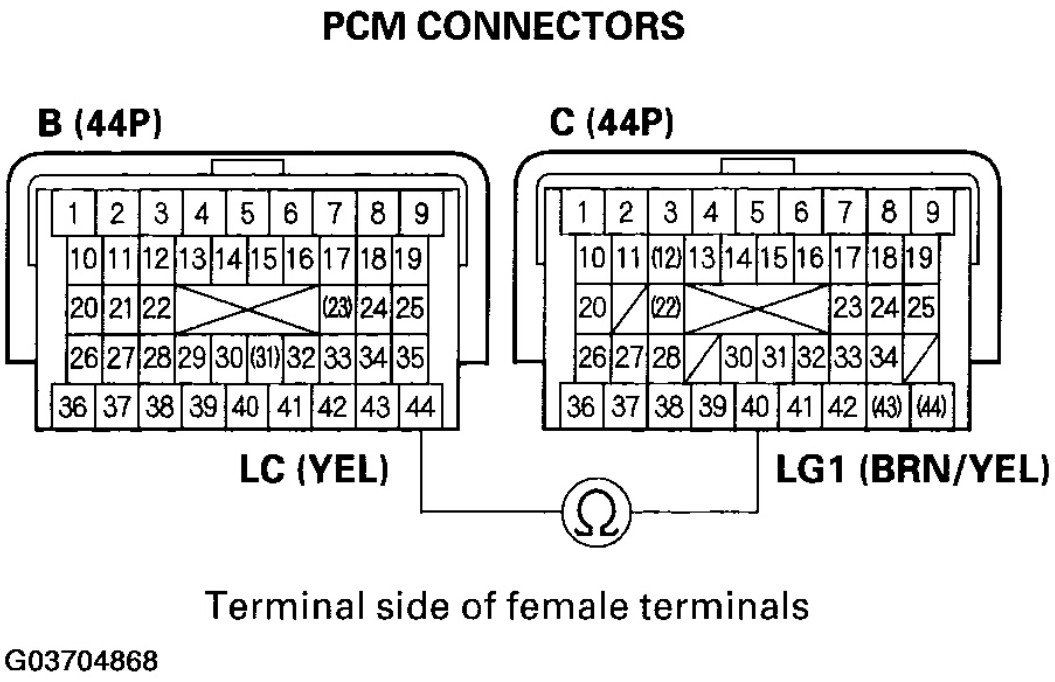


Fig. 174: Checking Continuity Between PCM Connector Terminals B44 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to body ground in the wire between PCM connector terminal B44 and torque converter clutch solenoid valve, then Go to step 16.

NO - Go to step 13.

13. Measure the resistance between torque converter clutch solenoid valve connector terminals as No. 1 and No. 2.

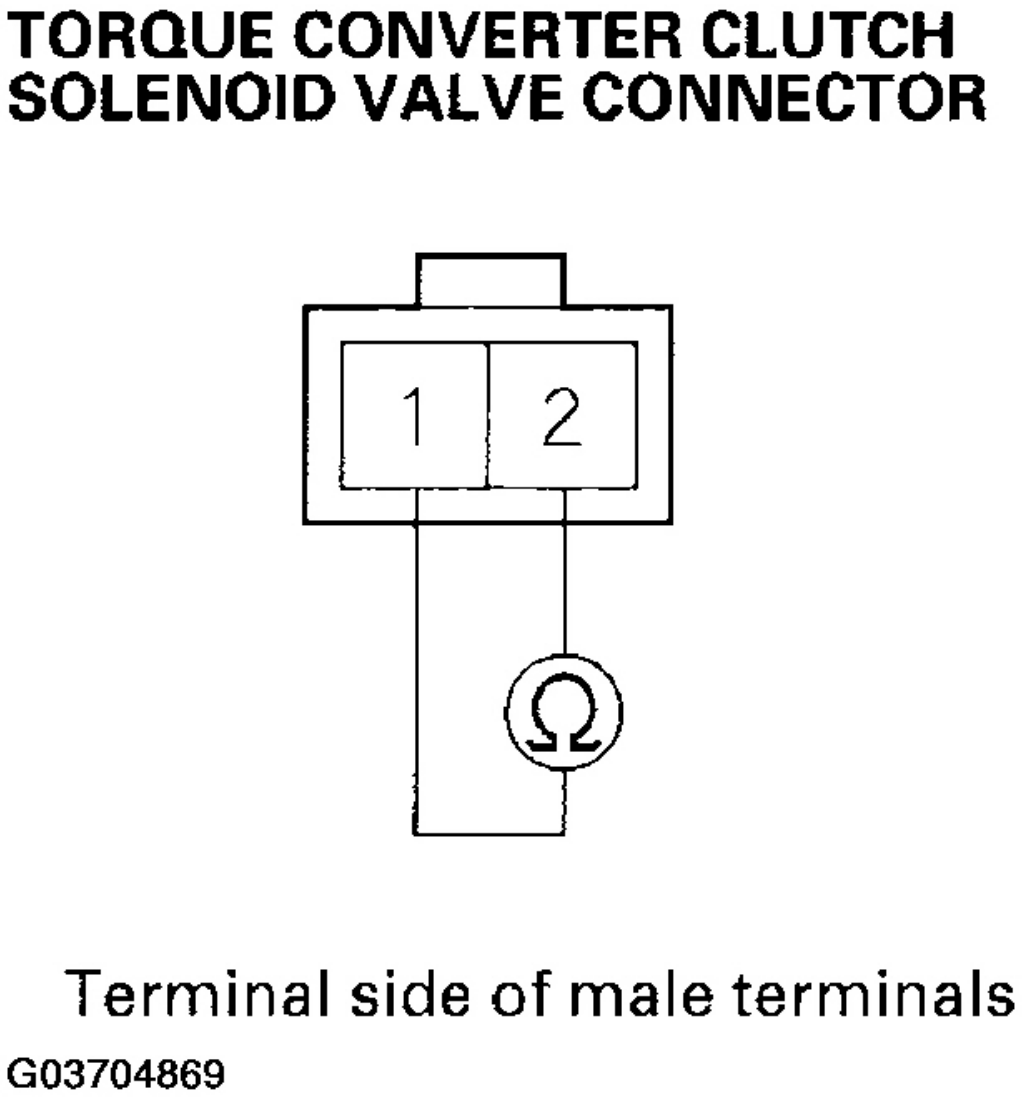


Fig. 175: Measuring Resistance Between Torque Converter Clutch Solenoid Valve Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm ?

YES - Go to step 14.

NO - Replace torque converter clutch solenoid valve (see **TORQUE CONVERTER**

CLUTCH SOLENOID VALVE REPLACEMENT), then Go to step 16.

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals B2 and C40.

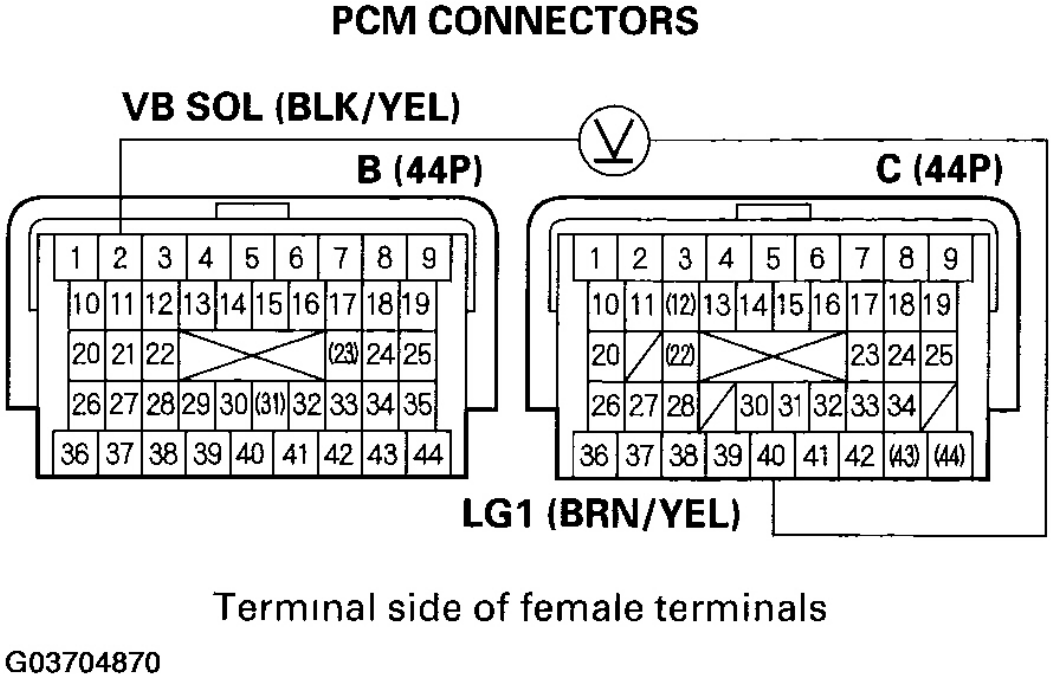


Fig. 176: Measuring Voltage Between PCM Connector Terminals B2 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminal B2. If the connection is OK, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Check for blown No. 18 fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the driver's under-dash fuse/relay box, then Go to step 16.

16. Clear the DTC with the HDS.
17. Start the engine, and warm it up to normal operating temperature (the radiator fan comes

on). Test-drive the vehicle for several minutes in the D position through all five gears.

18. Monitor the OBD status for P2769 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

DTC P2770: Open in Torque Converter Clutch Solenoid Valve Circuit

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. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on). Test-drive the vehicle for several minutes in the D position through all five gears.
3. Check that DTC P2770 recurs.

Is DTC P2770 indicated?

YES - Go to step 7.

NO - Go to step 4.

4. Choose Lockup Solenoid Test in Miscellaneous Test Menu, and test the torque converter clutch solenoid valve with the HDS.

Is the system normal?

YES - Go to step 5.

NO - Go to step 7.

5. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on). Test-drive the vehicle for several minutes in the D position through all five gears.
6. Monitor the OBD status for P2770 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

Does the result indicate FAILED?

YES - Go to step 7.

NO - If the tester indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the torque converter clutch solenoid valve and the PCM. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (44P) and C (44P).
10. Measure the resistance between PCM connector terminals B44 and C40.

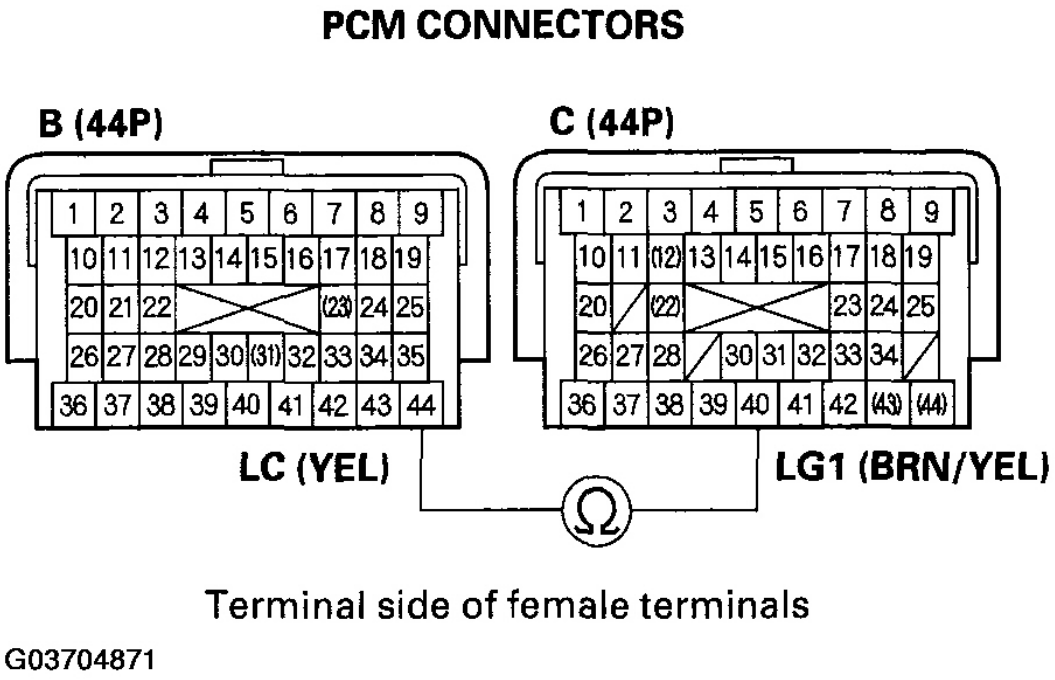


Fig. 177: Measuring Resistance Between PCM Connector Terminals B44 And C40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm ?

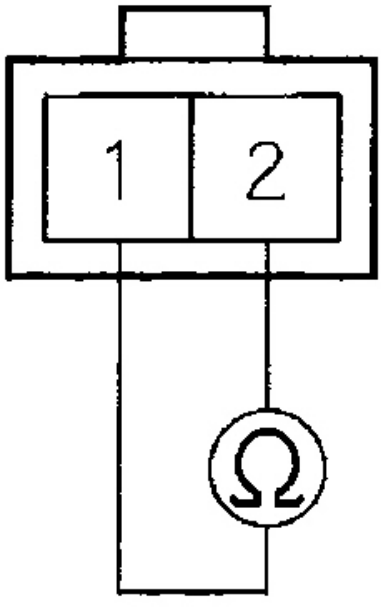
YES - Check for loose or poor connections at PCM connector terminal B44. If the connection is OK, update the PCM if it does not have the latest software, or substitute

a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM.

NO - Go to step 11.

11. Disconnect the torque converter clutch solenoid valve connector.
12. Measure the resistance between torque converter clutch solenoid valve connector terminals No. 1 and No. 2.

TORQUE CONVERTER CLUTCH SOLENOID VALVE CONNECTOR



Terminal side of male terminals

G03704872

Fig. 178: Measuring Resistance Between Torque Converter Clutch Solenoid Valve Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12-25 ohm ?

YES - Go to step 13.

NO - Replace the torque converter clutch solenoid valve (see **TORQUE CONVERTER CLUTCH SOLENOID VALVE REPLACEMENT**), then Go to step 14.

13. Check for continuity between torque converter clutch solenoid valve connector terminal No. 1 and body ground.

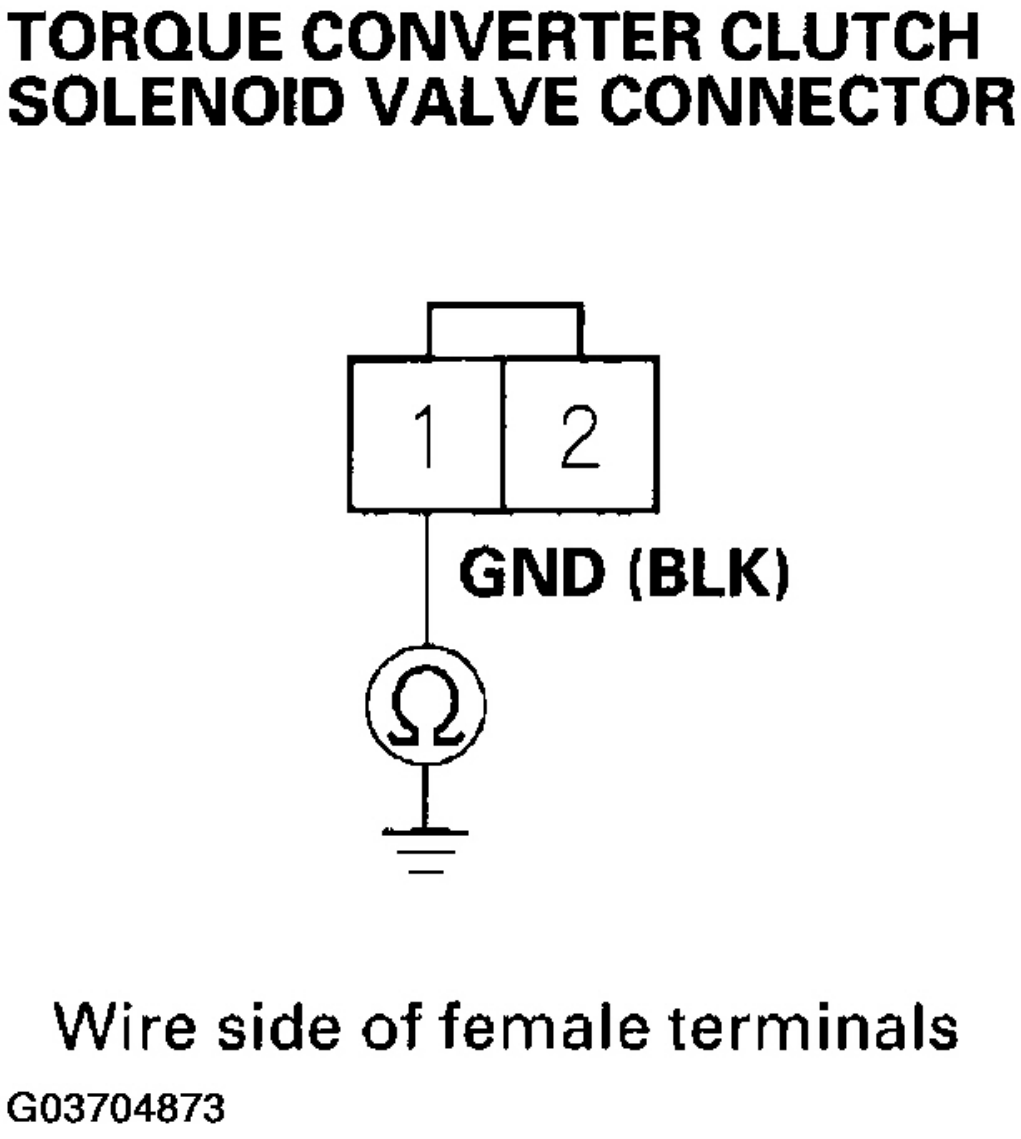


Fig. 179: Checking Continuity Between Torque Converter Clutch Solenoid Valve Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair an open in the wire between PCM connector terminal B44 and the torque converter clutch solenoid valve, then Go to step 14.

NO - Repair an open in the wire between the torque converter clutch solenoid valve and ground (G101, G102), or repair poor ground (G101, G102), then Go to step 14.

14. Clear the DTC with the HDS.
15. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on). Test-drive the vehicle for several minutes in the D position through all five gears.
16. Monitor the OBD status for P2770 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

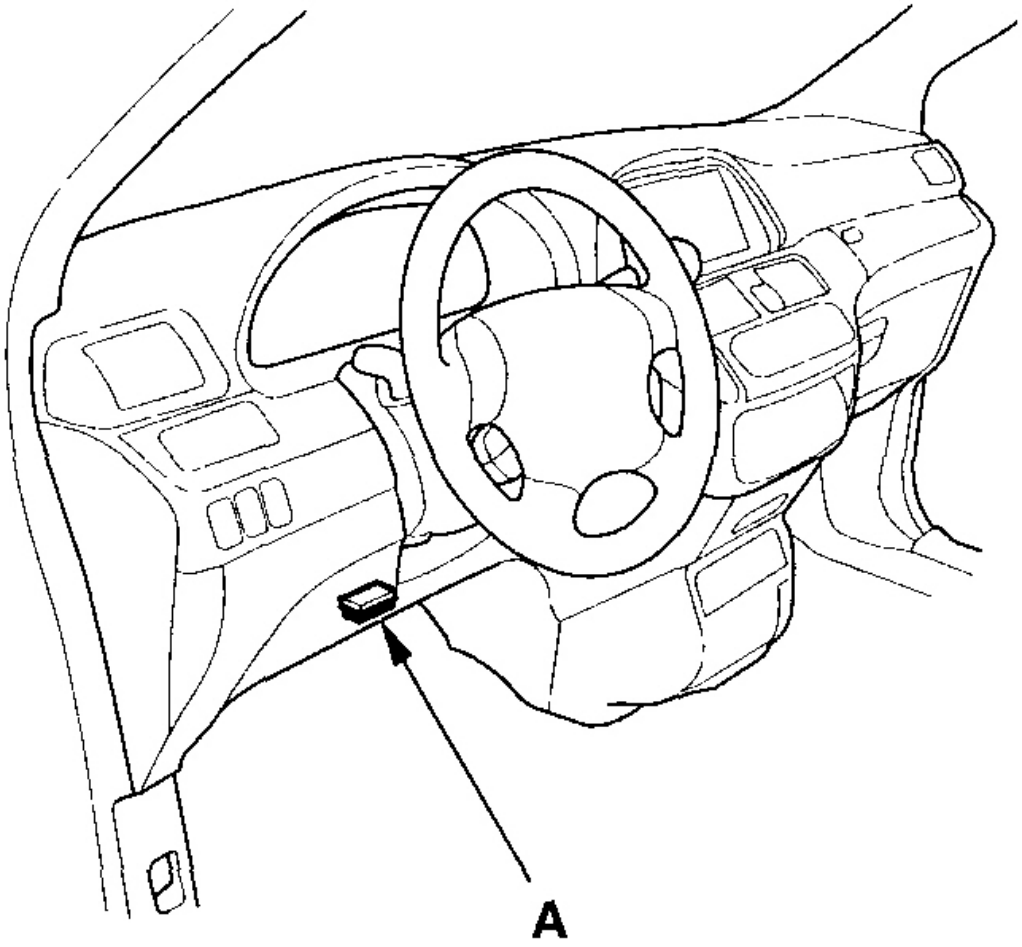
Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 7 and recheck.

ROAD TEST

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Apply the parking brake, and block both 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 HDS to the DLC (A), and go to the A/T data list.



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Fig. 180: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Test-drive the vehicle on a flat road in the D position. Check for abnormal noise and clutch slippage. While driving, check that the shift points occur at the proper speeds by monitoring the accelerator pedal position sensor voltage with the HDS and comparing your shift point speeds and voltage to those in the table. (The accelerator pedal position sensor voltage represents the throttle opening.)

UPSHIFT: D POSITION

Accelerator pedal position sensor voltage: 1.02 V	
1st -> 2nd	10-12 mph (16-19 km/h)
2nd -> 3rd	21-23 mph (33-37 km/h)
3rd -> 4th	33-36 mph (53-58 km/h)
4th -> 5th	40-43 mph (65-70 km/h)
Lock-up ON	47-50 mph (75-80 km/h)
Accelerator pedal position sensor voltage: 2.58 V	
1st -> 2nd	31-37 mph (50-60 km/h)
2nd -> 3rd	48-52 mph (78-84 km/h)
3rd -> 4th	63-66 mph (102-106 km/h)
4th -> 5th	80-84 mph (128-135 km/h)
Lock-up ON	101-105 mph (162-169 km/h)
Fully-opened throttle Accelerator pedal position sensor voltage: 4.65 V	
1st -> 2nd	38-41 mph (61-66 km/h)
2nd -> 3rd	64-68 mph (103-109 km/h)
3rd -> 4th	98-102 mph (157-164 km/h)

DOWNSHIFT: D POSITION

Accelerator pedal position sensor voltage: 1.02 V	
Lock-up OFF	42-45 mph (68-73 km/h)
5th -> 4th	35-37 mph (57-60 km/h)
4th -> 3rd	17-19 mph (28-31 km/h)
3rd -> 2nd	11-14 mph (18-22 km/h)
2nd -> 1st	6-9 mph (10-14 km/h)
Accelerator pedal position sensor voltage: 2.58 V	
Lock-up OFF	81-90 mph (130-145 km/h)
Fully-opened throttle Accelerator pedal position sensor voltage: 4.65 V	
4th -> 3rd	87-89 mph (140-144 km/h)
3rd -> 2nd	55-57 mph (88-92 km/h)
2nd -> 1st	29-31 mph (46-50 km/h)

5. Accelerate to about 35 mph (57 km/h) so the transmission is in 4th or 5th, then shift from the D position to the 2 position. The vehicle should immediately begin to slow down from engine braking.
6. Shift to the 1 position, accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage. Upshifts should not occur in this position.

7. Shift to the 2 position, accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage. Upshifts and downshifts should not occur in this position.
8. Shift to the R position, accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage.
9. Test in P (Park) Position.

   Park the vehicle on a slope (about 16 °), apply the brake, and shift into the P position. Release the brake; the vehicle should not move.

NOTE: Always use the brake to hold the vehicle, when stopped on an incline in gear. Depending on the grade of the incline, the vehicle could roll backwards if the brake is released.

STALL SPEED TEST

1. Make sure the transmission fluid is filled to the proper level (see **ATF LEVEL CHECK**).
2. Apply the parking brake, and block all four wheels.
3. Connect the HDS to the DLC (A), and go to the A/T data list.

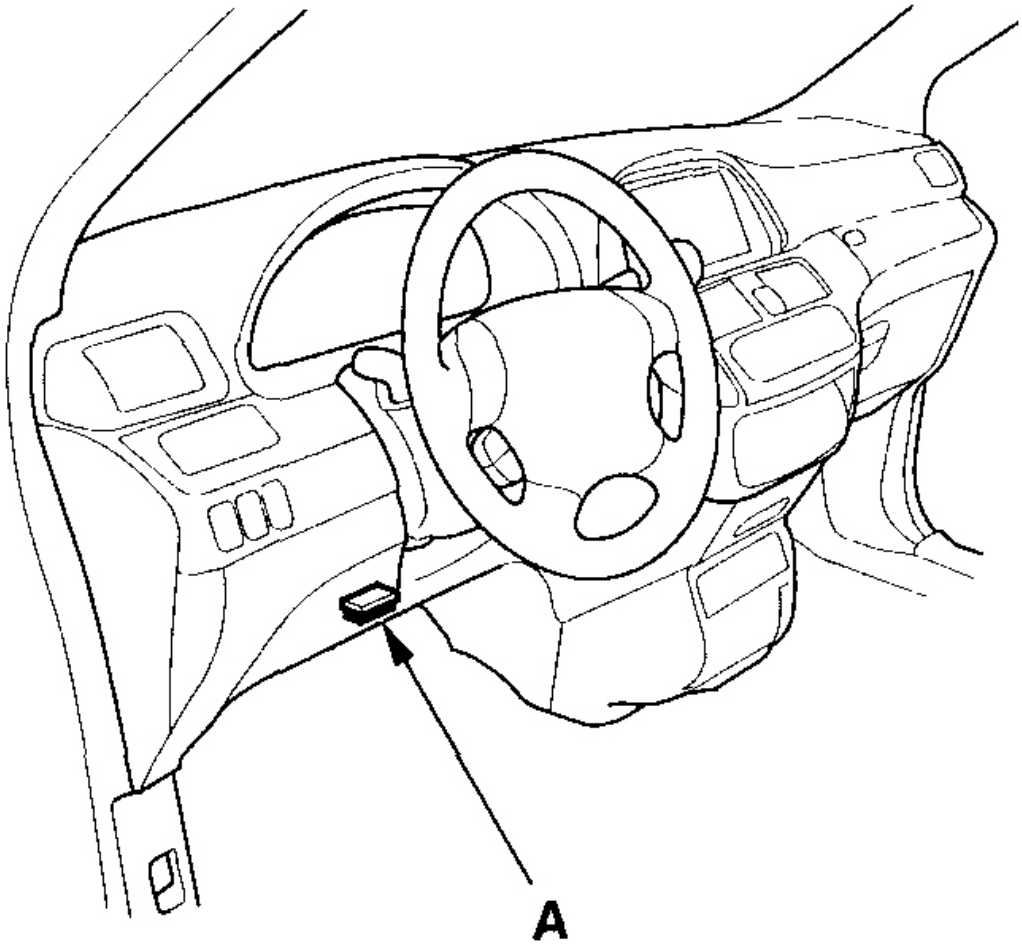


Fig. 181: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 2 position.
6. Firmly 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 D, 1, 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, 2, 1, and R positions.**
- **Do not test stall speed with the A/T pressure gauges installed.**

Stall Speed rpm:

Specification: 2,050 rpm

Service Limit: 1,900-2,200 rpm

8. If the measurements are out of the service limit, problems and probable causes are listed in **DIAGNOSIS CHART** .

DIAGNOSIS CHART

Problem	Probable causes
Stall speed rpm high in the D, 2, 1, and R positions	• ATF pump output low • Clogged ATF strainer • Regulator valve stuck • Slipping clutch
Stall speed rpm high in the 1 position	Slippage of 1st clutch or 1st gear one-way clutch defective
Stall speed rpm high in the 2 position	Slippage of 2nd clutch
Stall speed rpm high in the R position	Slippage of 5th clutch
Stall speed low in the D, 2, 1, and R positions	• Engine output low • Engine throttle valve closed • Torque converter one-way clutch slipping

PRESSURE TEST

Special Tools Required

- A/T oil pressure gauge set w/panel 07406-0020400 or 07406-0020401
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A

- A/T pressure hose adapter 07MAJ-PY40120

1. Make sure the transmission fluid is filled to the proper level (see **ATF 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. Remove the front inner fender and splash shield.
4. Allow the front wheels to rotate freely.
5. Connect the oil pressure gauge to the line pressure inspection port (A). Do not allow dust or other foreign particles to enter the port while connecting the gauge.

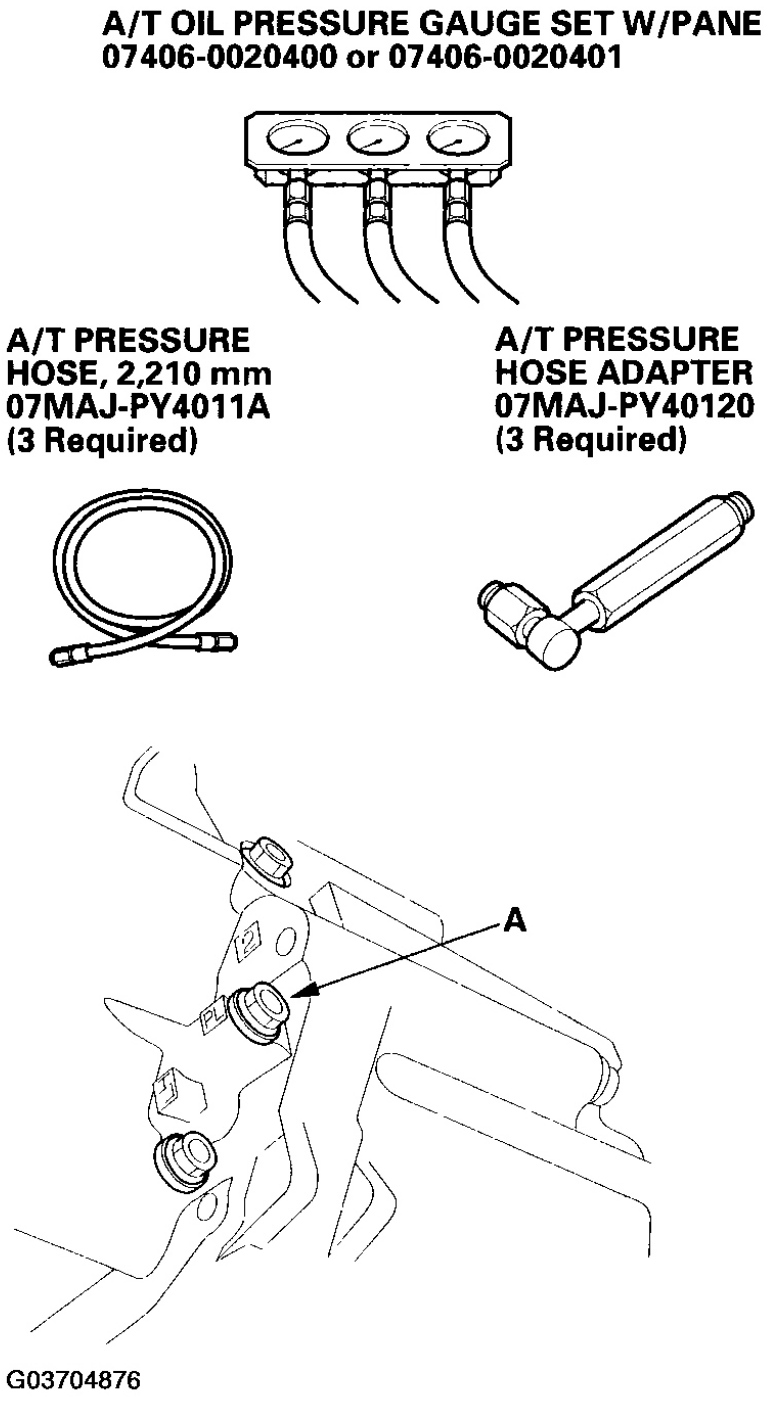
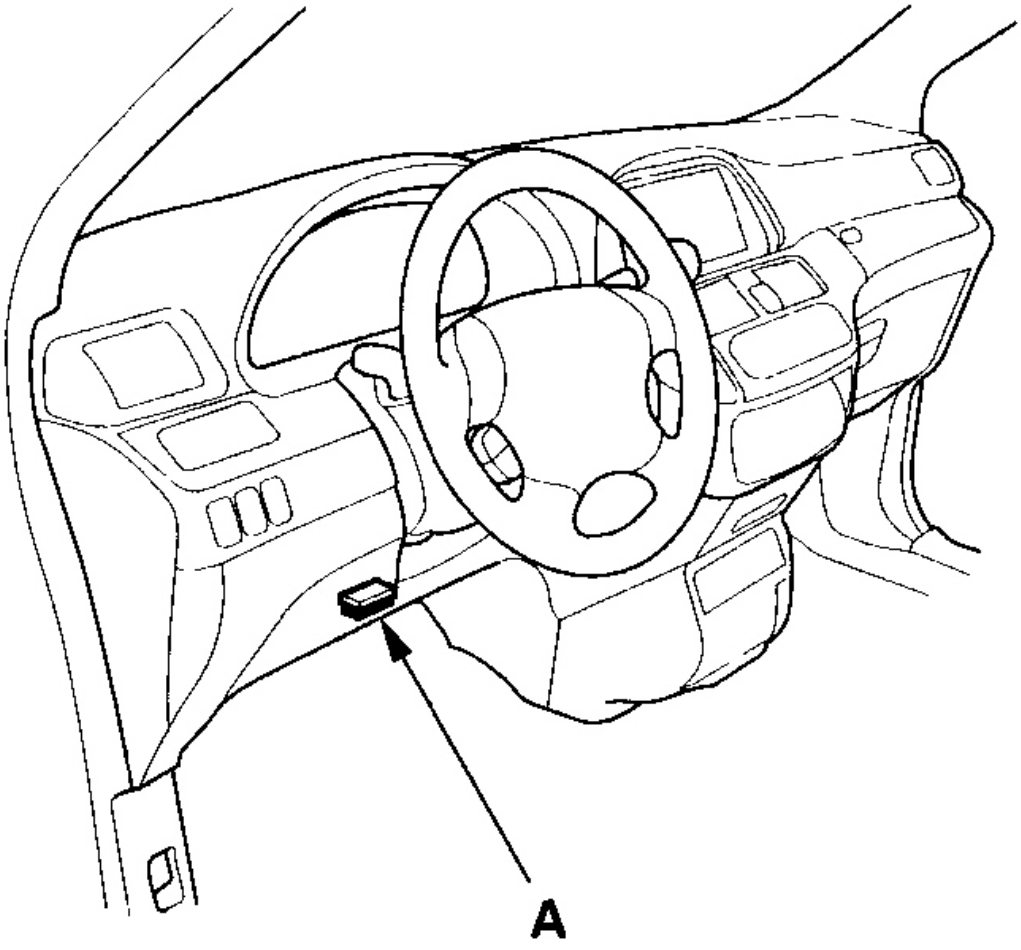


Fig. 182: Connecting Oil Pressure Gauge To Line Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Warm up the engine (the radiator fan comes on). Turn off the engine, and connect the HDS

to the DLC (A).



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Fig. 183: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Start the engine, and run it at 2,000 rpm in the P or N position.
8. Measure the line pressure at the line pressure inspection port (A).

NOTE: Higher pressure may be indicated if measurements are made in shift lever positions other than P or N.

FLUID PRESSURE CHART

Pressure	Fluid Pressure	
	Standard	Service Limit
Line (A)	930-990 kPa (9.5-10.1 kgf/cm^2 , 140-144 psi)	880 kPa (9.0 kgf/cm^2 , 130 psi)

9. Turn the engine off, then disconnect the oil pressure gauge from the line pressure inspection port.
10. Install the sealing bolt to the line pressure inspection hole with a new sealing washer, and tighten the bolt to 18 N.m (1.8 kgf.m, 13 lbf.ft). Do not reuse old sealing washer.
11. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
12. Disconnect the negative cable from the battery first, then disconnect the positive cable. Remove the battery and battery tray.
13. Remove the intake air duct and air cleaner housing.
14. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
15. Connect the oil pressure gauge to the 1st clutch pressure inspection port (B).

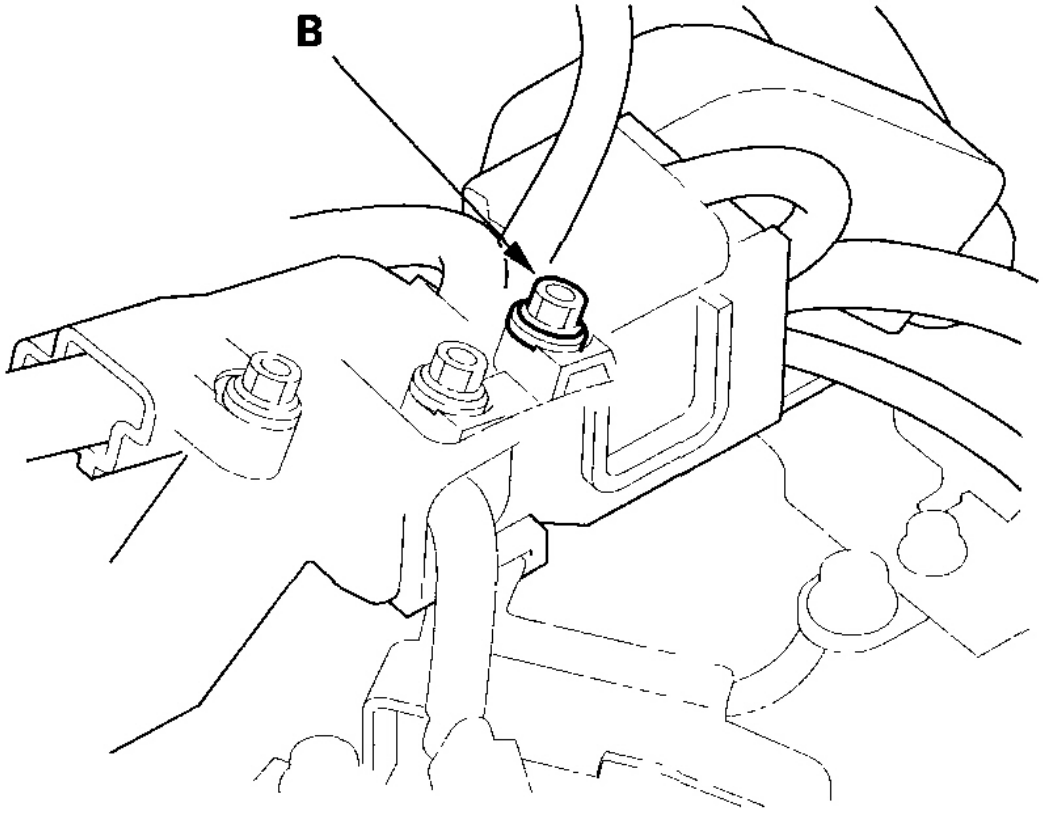


Fig. 184: Connecting Oil Pressure Gauge To 1st Clutch Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Temporarily install the air cleaner housing and intake air duct, and connect the battery terminals.
17. Connect the oil pressure gauges to the 1st-hold clutch pressure inspection port (C) and the 2nd clutch pressure inspection port (D).

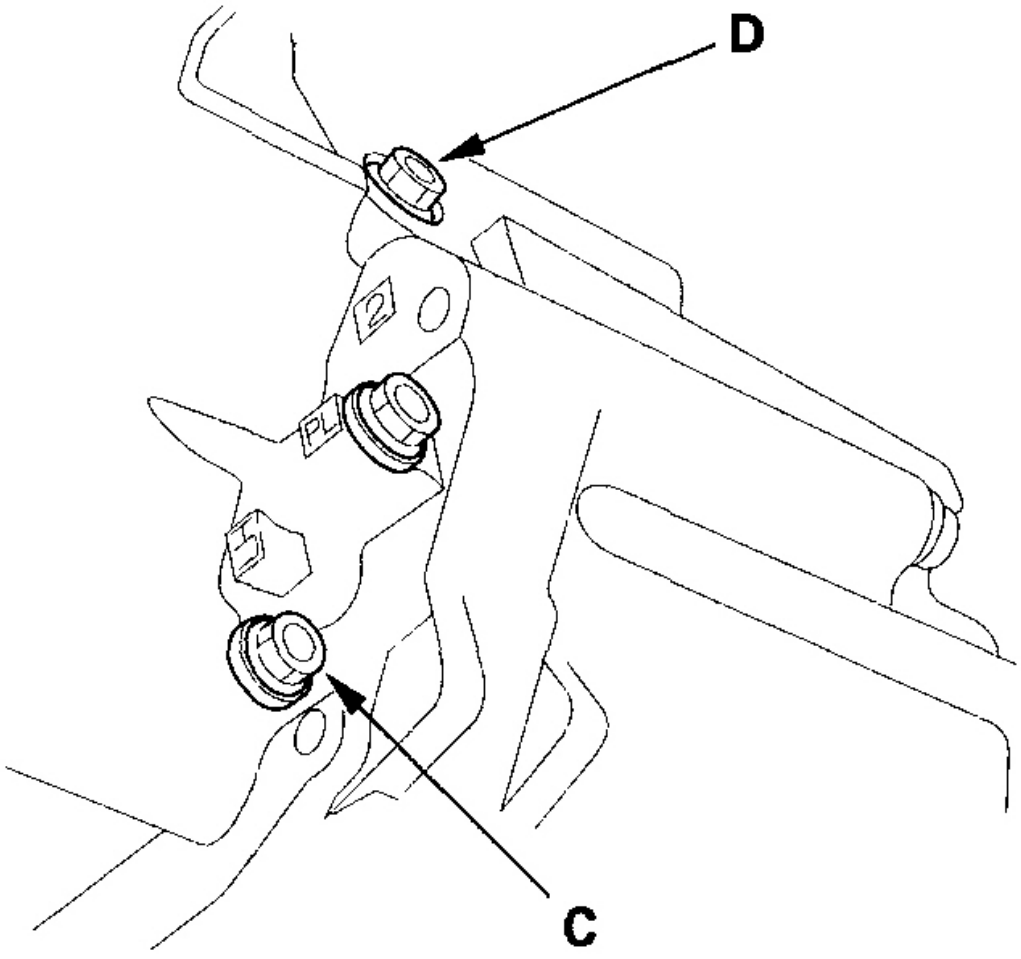


Fig. 185: Connecting Oil Pressure Gauges To 1st-Hold Clutch Pressure Inspection Port And 2nd Clutch Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Start the engine, shift to the 1 position, and measure the 1st clutch pressure at the 1st clutch pressure inspection port (B) and 1st-hold clutch pressure at the 1st-hold clutch pressure inspection port (C) while holding engine speed at 2,000 rpm.
19. Shift to the 2 position, and measure the 2nd clutch pressure at the 2nd clutch pressure inspection port (D) while holding engine speed at 2,000 rpm.

FLUID PRESSURE CHART

Pressure	Fluid Pressure	
	Standard	Service Limit
1st clutch (B) 2nd clutch (D)	900-980 kPa (9.2-10.0 kgf/cm^2 , 130-142 psi)	850 kPa (8.7 kgf/cm^2 , 120 psi)
1st-hold clutch (C)	760-830 kPa (7.7-8.5 kgf/cm^2 , 110-120 psi)	710 kPa (7.2 kgf/cm^2 , 100 psi)

20. Turn the engine off, then disconnect the oil pressure gauges from the 1st clutch pressure, 1st-hold clutch, and 2nd clutch pressure inspection ports.
21. Install the sealing bolts in the 1st clutch pressure, 1st-hold clutch, and 2nd clutch pressure inspection ports with new sealing washers, and tighten the bolts to 18 N.m (1.8 kgf.m, 13 lbf.ft). Do not reuse old sealing washers.
22. Install the battery base, and install the air cleaner housing and intake air duct.
23. Install the battery tray and battery. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
24. Connect the oil pressure gauge to the 3rd clutch pressure inspection port (E), 4th clutch pressure inspection port (F), and 5th clutch pressure inspection port (G).

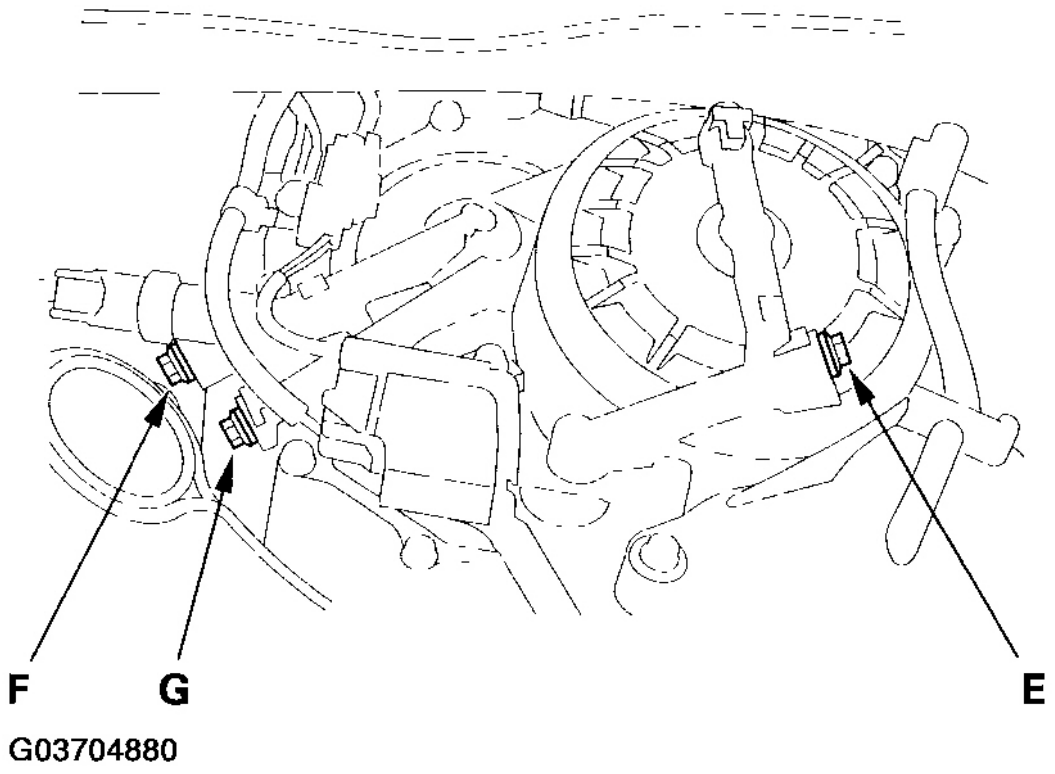


Fig. 186: Connecting Oil Pressure Gauge To 3rd Clutch Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Start the engine with the transmission in the P position while pressing the brake pedal.
26. Shift to the D position, and select the D3 driving mode by pressing the D3 switch. Release the brake pedal; the transmission is in 1st gear.
27. Press the accelerator pedal to increase the engine speed to 2,500 rpm; the transmission shifts into 2nd gear.
28. Release the accelerator pedal; the engine speed decreases to 1,000 rpm with the transmission in 2nd gear.
29. Press the accelerator pedal very slowly so that engine speed increases to 2,000 rpm on 5 seconds, then hold the accelerator; the transmission shifts into 3rd gear. Measure the 3rd clutch pressure at the 3rd clutch pressure inspection port (E) while holding engine speed at 2,000 rpm.
30. Release the D3 driving mode by pressing the D3 switch; the transmission shifts into 4th gear, then 5th gear. Measure the 4th clutch pressure at the 4th clutch pressure inspection

port (F) and 5th clutch pressure at the 5th clutch pressure inspection port (G) while holding engine speed at 2,000 rpm.

FLUID PRESSURE CHART

Pressure	Fluid Pressure	
	Standard	**Service Limit**
3rd clutch (E) 4th clutch (F) 5th clutch (G)	900-980 kPa (9.2-10.0 kgf/cm^2 , 130-142 psi)	850 kPa (8.7 kgf/cm^2 , 120 psi)

31. Bring the engine back to an idle, then apply the brake pedal to stop the wheels from rotating.
32. Shift to the R position, then release the brake pedal. Raise the engine speed to 2,000 rpm, and measure the 5th clutch pressure at the 5th clutch pressure inspection port (E).

FLUID PRESSURE CHART

Pressure	Fluid Pressure	
	Standard	**Service Limit**
5th clutch (G) in R	900-980 kPa (9.2-10.0 kgf/cm^2 , 130-142 psi)	850 kPa (8.7 kgf/cm^2 , 120 psi)

33. Turn the engine off, then disconnect the oil pressure gauges from the 3rd, 4th, and 5th clutch pressure inspection ports.
34. Install the sealing bolts in the 3rd, 4th, and 5th clutch pressure inspection ports with new sealing washers, and tighten the bolts to 18 N.m (1.8 kgf.m, 13 lbf.ft). Do not reuse old sealing washers.
35. If the measurements are out of the service limit, problems and probable causes are listed in **LOW LINE PRESSURE CHART** .

LOW LINE PRESSURE CHART

Problem	Probable causes
No or low line pressure	• Torque converter • ATF pump • Regulator valve

	• Torque converter check valve • Clogged ATF strainer
No or low 1st clutch pressure	• 1st clutch • O-rings
No or low 2nd clutch pressure	• 2nd clutch • O-rings
No or low 3rd clutch pressure	• 3rd clutch • O-rings
No or low 4th clutch pressure	• 4th clutch • O-rings
No or low 5th clutch pressure	• 5th clutch • O-rings
No or low 5th clutch pressure in R	• Servo valve • 5th clutch • O-rings

36. Install the splash shield and front inner fender.
37. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

SHIFT SOLENOID VALVE A TEST

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

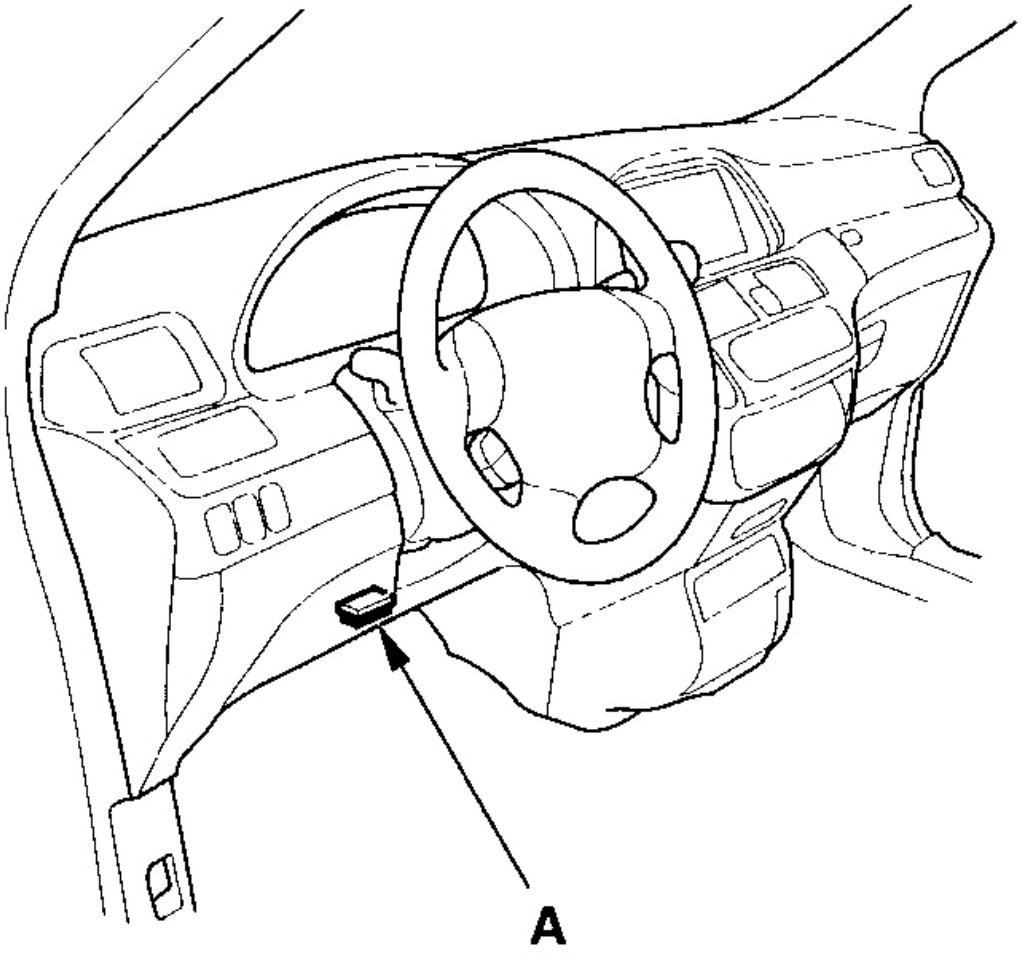
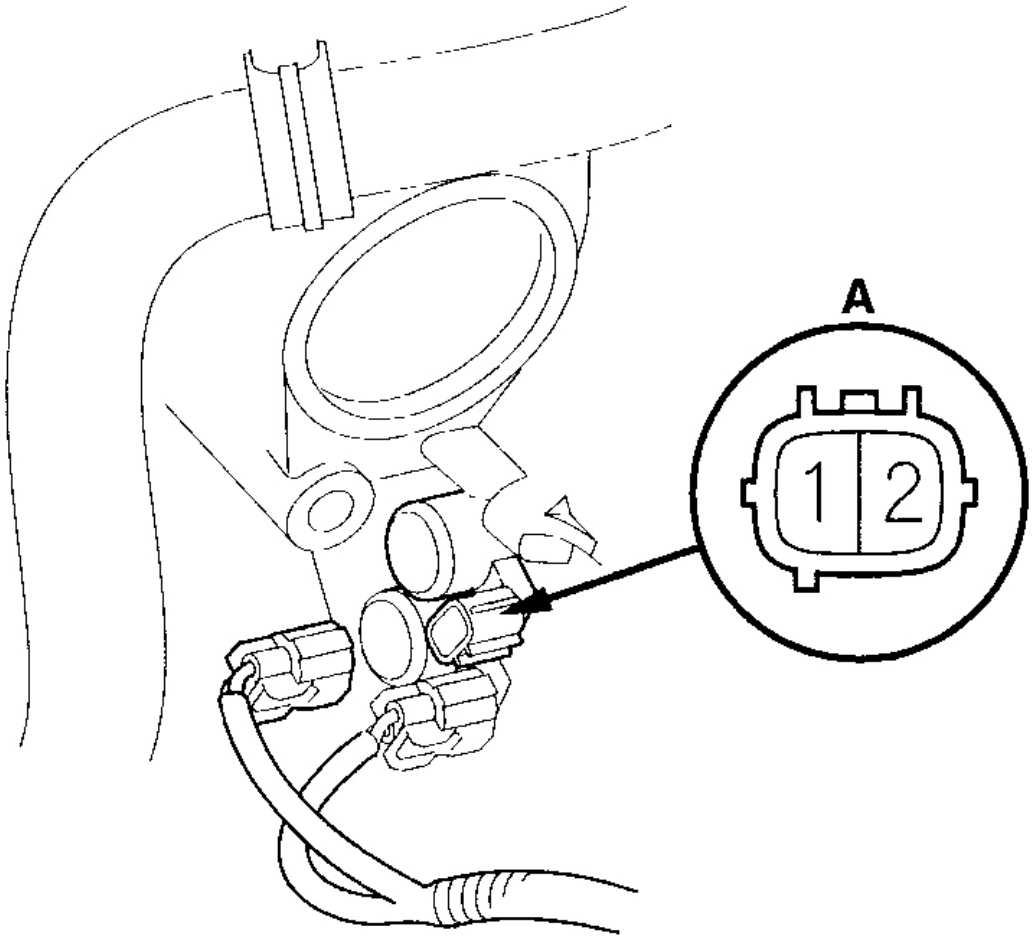


Fig. 187: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Shift Solenoid A in Miscellaneous Test Menu on the HDS.
3. Check that the shift solenoid valve A operates with the HDS. A clicking sound should be heard.
    - If a clicking sound is heard, the valve is OK.
    - If no clicking sound is heard, go to step 4.
4. Make sure you have the anti-theft codes for the radio and navigation system, then write

down the customer's audio presets.

5. Disconnect the negative cable from the battery first, then disconnect the positive cable.
6. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
7. Remove the intake air duct and air cleaner housing.
8. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
9. Remove the starter.
10. Disconnect shift solenoid valve A connector.



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Fig. 188: Disconnecting Shift Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Measure shift solenoid valve A resistance at the solenoid valve connector terminals.

    Standard: 12-25 ohm

    - Replace shift solenoid valve A if the resistance is out of standard (see **SHIFT SOLENOID VALVE A REPLACEMENT**).
    - If the resistance is within the standard, go to step 12.
12. Connect the battery negative terminal to shift solenoid valve A connector terminal No. 1, and connect the battery positive terminal to the terminal No. 2. A clicking sound should be heard.
13. Replace shift solenoid valve A if no clicking sound is heard (see **SHIFT SOLENOID VALVE A REPLACEMENT**).
14. Install the starter.
15. Install the battery base, then install the air cleaner housing and intake air duct.
16. Install the battery tray, battery, and battery cover, then secure the battery with the hold-down bracket.
17. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
18. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

SHIFT SOLENOID VALVE A REPLACEMENT

1. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable.
3. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
4. Remove the intake air duct and air cleaner housing.
5. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
6. Remove the starter.
7. Disconnect shift solenoid valve A connector, and remove shift solenoid valve A.

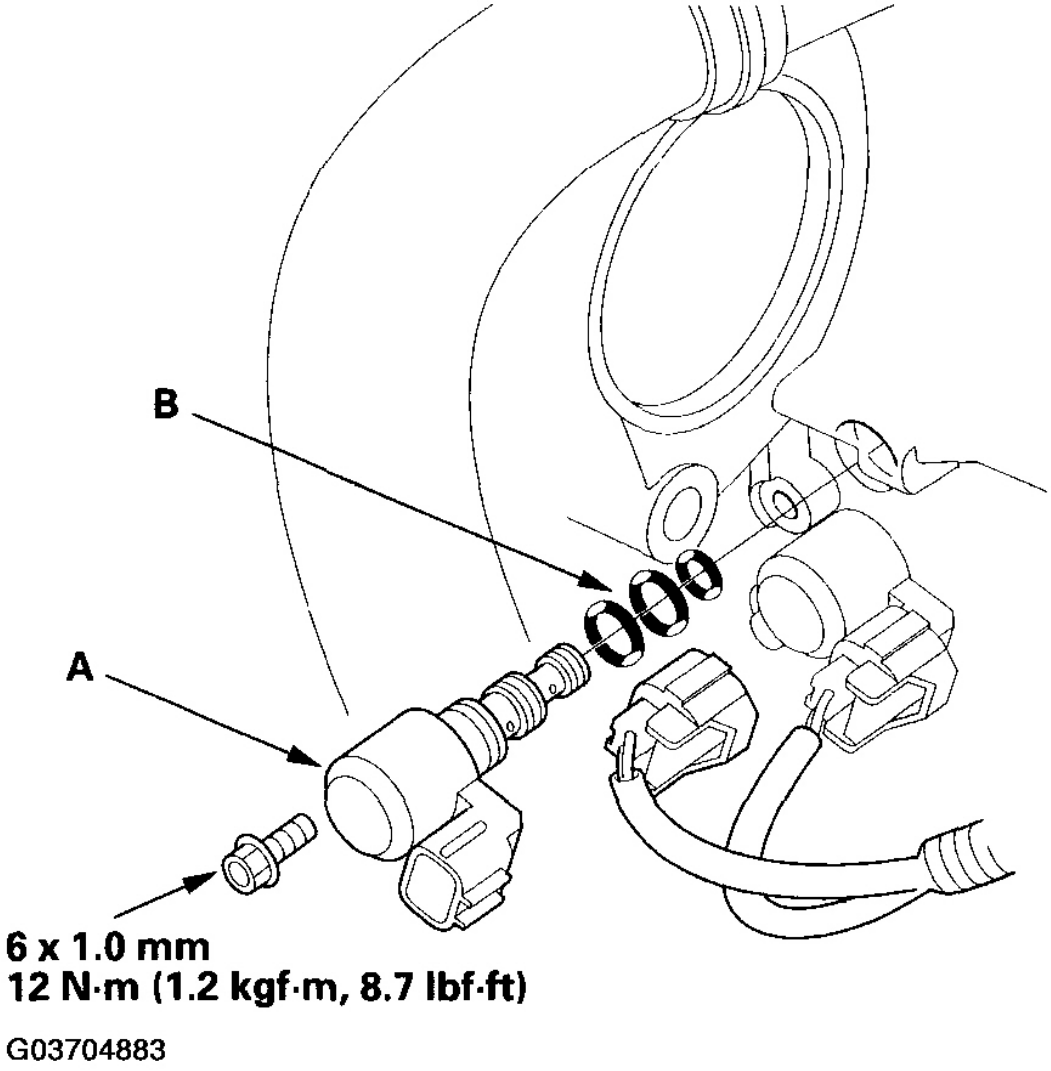


Fig. 189: Removing Shift Solenoid Valve A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install a new shift solenoid valve A with new O-rings (B). While installing the solenoid valve, do not allow dust or other foreign particles to enter the transmission.
9. Check the connector for rust, dirt, or oil, then connect the connector.
10. Install the starter.
11. Install the battery base, then install the air cleaner housing and intake air duct.
12. Install the battery tray, battery, and battery cover, then secure the battery with its hold-down bracket.

13. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
14. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

SHIFT SOLENOID VALVE B TEST

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

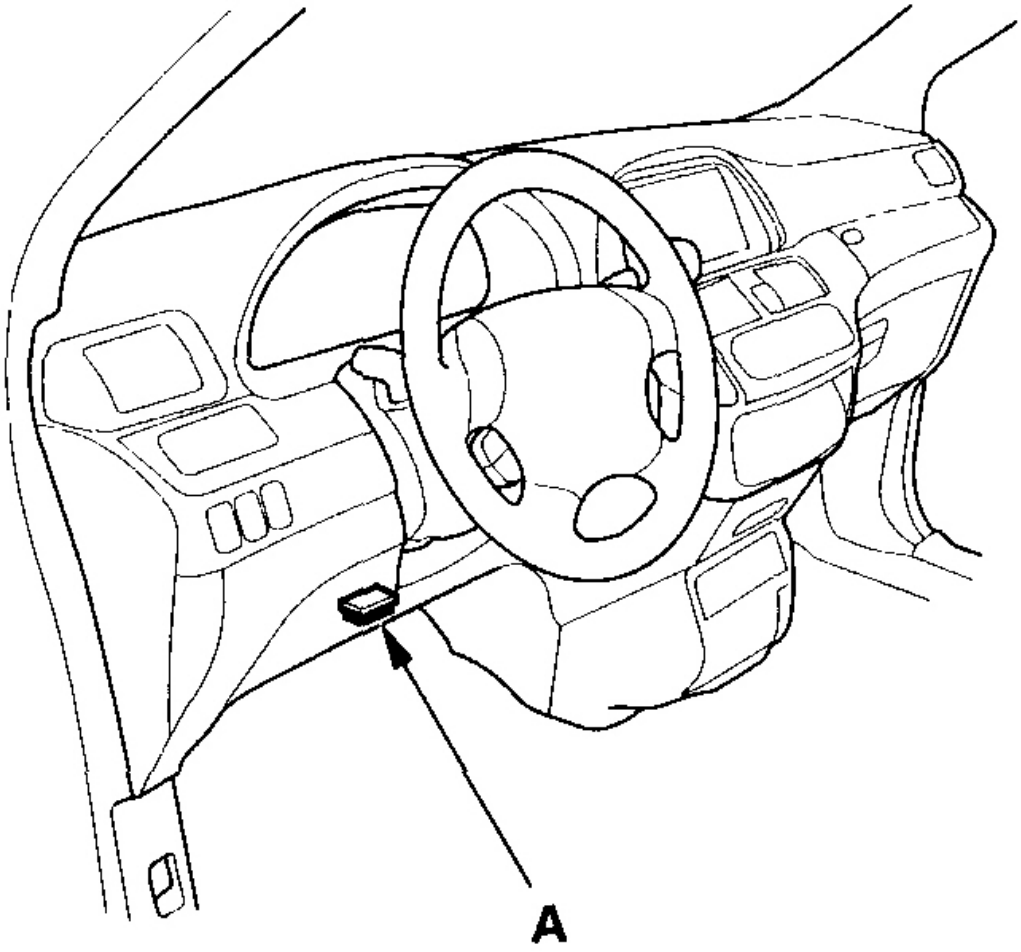


Fig. 190: Connecting HDS To DLC

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Shift Solenoid B in Miscellaneous Test Menu on the HDS.
3. Check that the shift solenoid valve B operates with the HDS. A clicking sound should be heard.
    - If a clicking sound is heard, the valve is OK.
    - If no clicking sound is heard, go to step 4.
4. Remove the intake air duct and air cleaner housing.
5. Disconnect shift solenoid valve B connector.

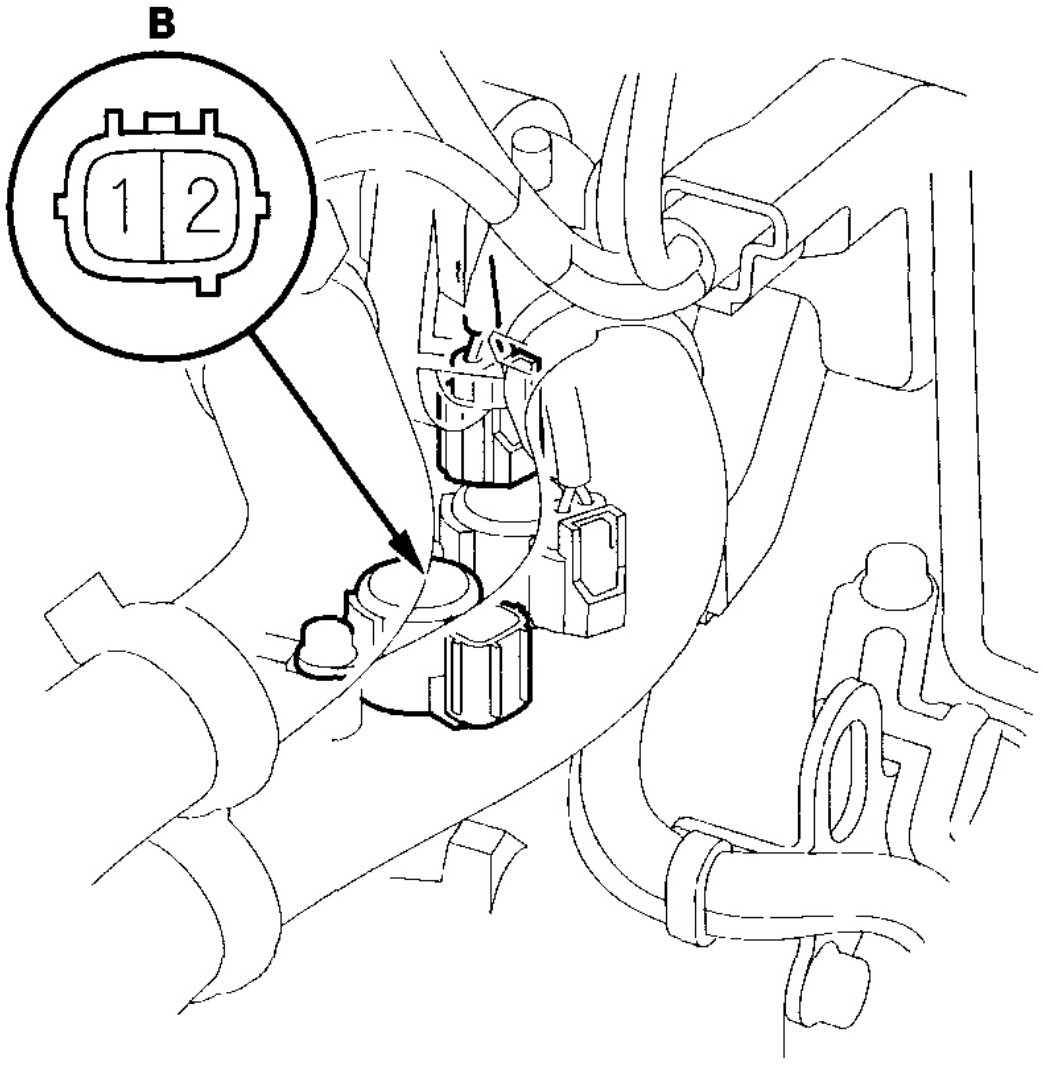


Fig. 191: Disconnecting Shift Solenoid Valve B Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Measure shift solenoid valve B resistance at the solenoid valve connector terminals.

   Standard: 12-25 ohm

   - Replace shift solenoid valve B if the resistance is out of standard (see **SHIFT SOLENOID VALVE B REPLACEMENT**).

- If the resistance is within the standard, go to step 7.

7. Connect the battery negative terminal to shift solenoid valve B connector terminal No. 1, and connect the battery positive terminal to the terminal No. 2. A clicking sound should be heard.
8. Replace shift solenoid valve B if no clicking sound is heard (see **SHIFT SOLENOID VALVE B REPLACEMENT**).
9. Install the air cleaner housing and intake air duct.

SHIFT SOLENOID VALVE B REPLACEMENT

1. Remove the intake air duct and air cleaner housing.
2. Disconnect shift solenoid valve B connector, and remove shift solenoid valve B.

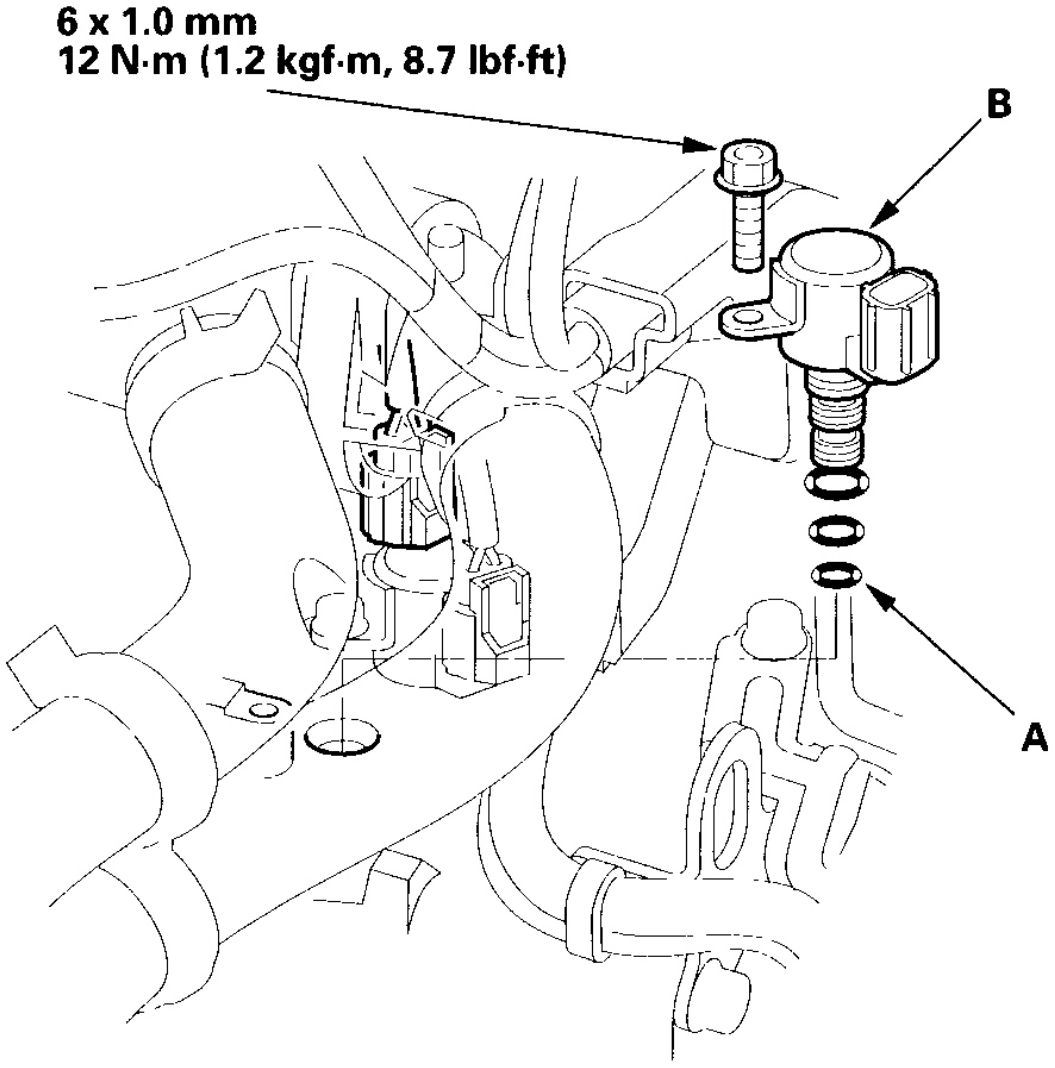
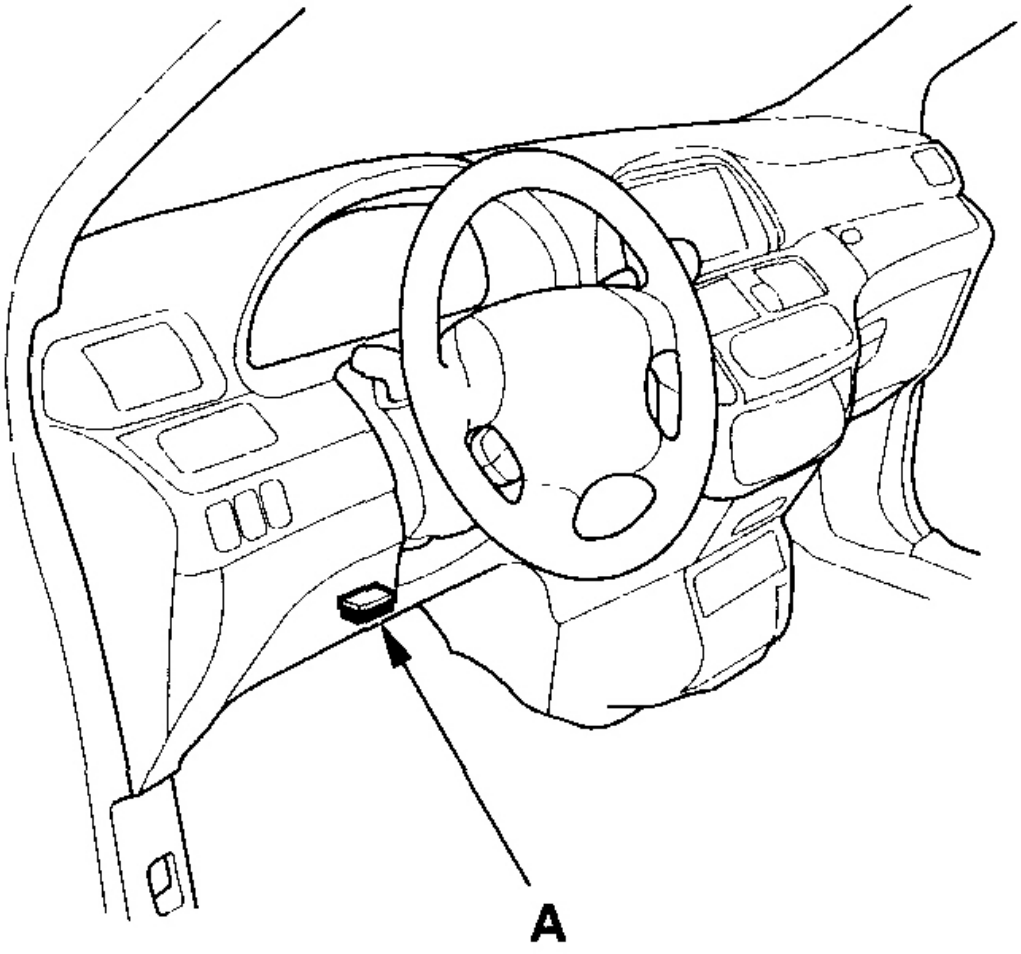


Fig. 192: Removing Shift Solenoid Valve B
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install a new shift solenoid valve B with new O-rings (A). While installing the solenoid valve, do not allow dust or other foreign particles to enter the transmission.
4. Check the connector for rust, dirt, or oil, then connect the connector.
5. Install the air cleaner housing and intake air duct.

SHIFT SOLENOID VALVE C TEST

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



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Fig. 193: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Shift Solenoid C in Miscellaneous Test Menu on the HDS.
3. Check that the shift solenoid valve C operates with the HDS. A clicking sound should be heard.
    - If a clicking sound is heard, the valve is OK.
    - If no clicking sound is heard, go to step 4.

4. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
5. Disconnect the negative cable from the battery first, then disconnect the positive cable.
6. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
7. Remove the intake air duct and air cleaner housing.
8. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
9. Disconnect shift solenoid valve C connector.

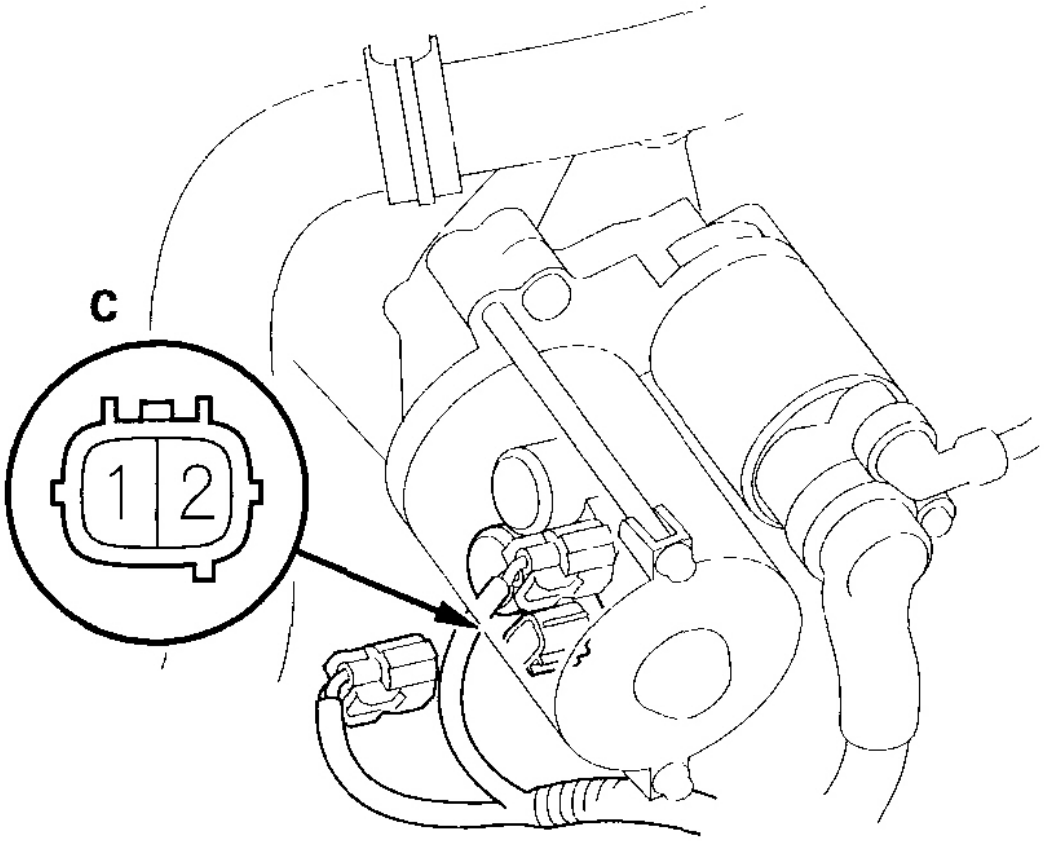


Fig. 194: Disconnecting Shift Solenoid Valve C Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Measure shift solenoid valve C resistance at the solenoid valve connector terminals.

    Standard: 12-25 ohm

    - Replace shift solenoid valve C if the resistance is out of standard (see **SHIFT SOLENOID VALVE C REPLACEMENT**).
    - If the resistance is within the standard, go to step 11.
11. Connect the battery negative terminal to shift solenoid valve C connector terminal No. 1, and connect the battery positive terminal to the terminal No. 2. A clicking sound should be heard.
12. Replace shift solenoid valve C if no clicking sound is heard (see **SHIFT SOLENOID VALVE C REPLACEMENT**).
13. Install the battery base, then install the air cleaner housing and intake air duct.
14. Install the battery tray, battery, and battery cover, then secure the battery with its hold-down bracket.
15. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
16. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

SHIFT SOLENOID VALVE C REPLACEMENT

1. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable.
3. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
4. Remove the intake air duct and air cleaner housing.
5. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
6. Disconnect shift solenoid valve C connector, and remove shift solenoid valve C.

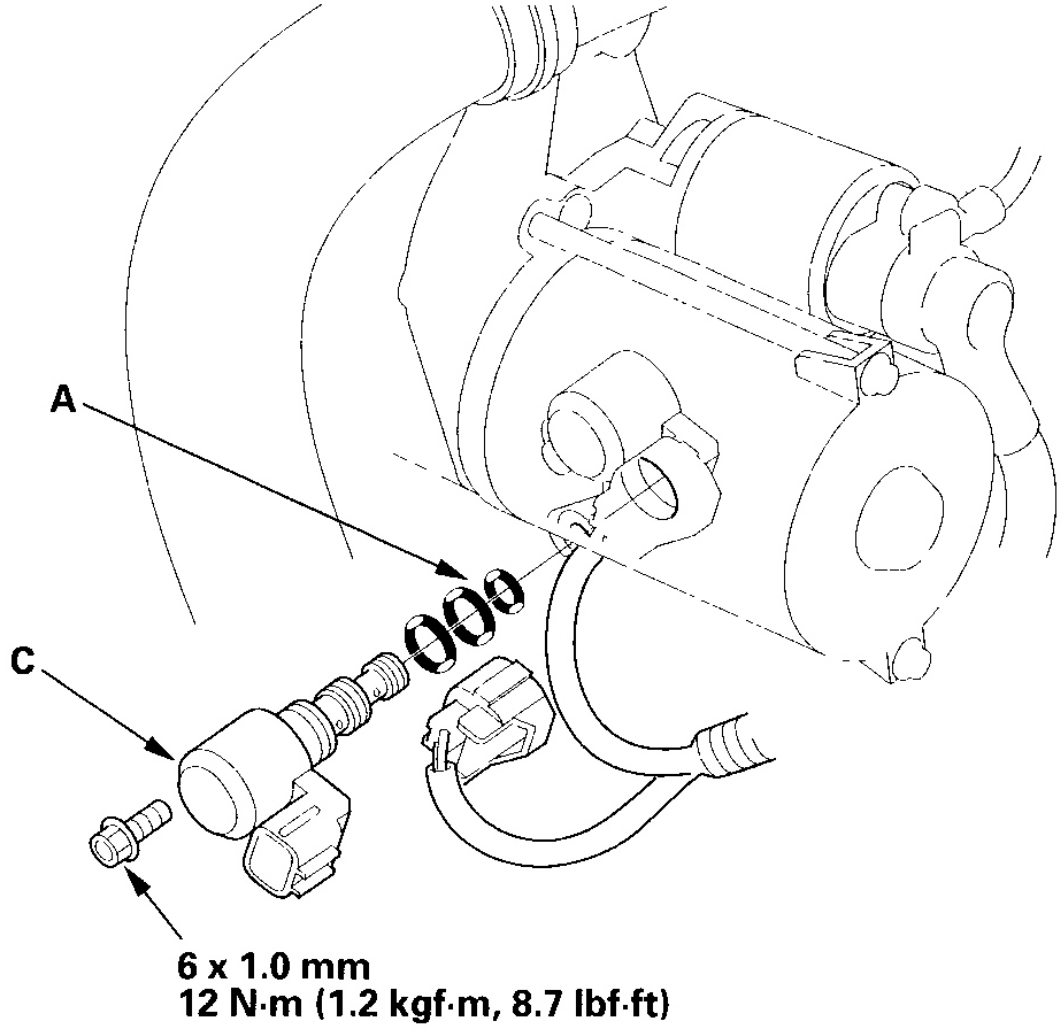


Fig. 195: Removing Shift Solenoid Valve C
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install a new shift solenoid valve C with new O-rings (A). While installing the solenoid valve, do not allow dust or other foreign particles to enter the transmission.
8. Check the connector for rust, dirt, or oil, then connect the connector.
9. Install the battery base, then install the air cleaner housing and intake air duct.
10. Install the battery tray, battery, and battery cover, then secure the battery with its hold-down bracket.
11. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply

grease to prevent corrosion.

12. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST

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

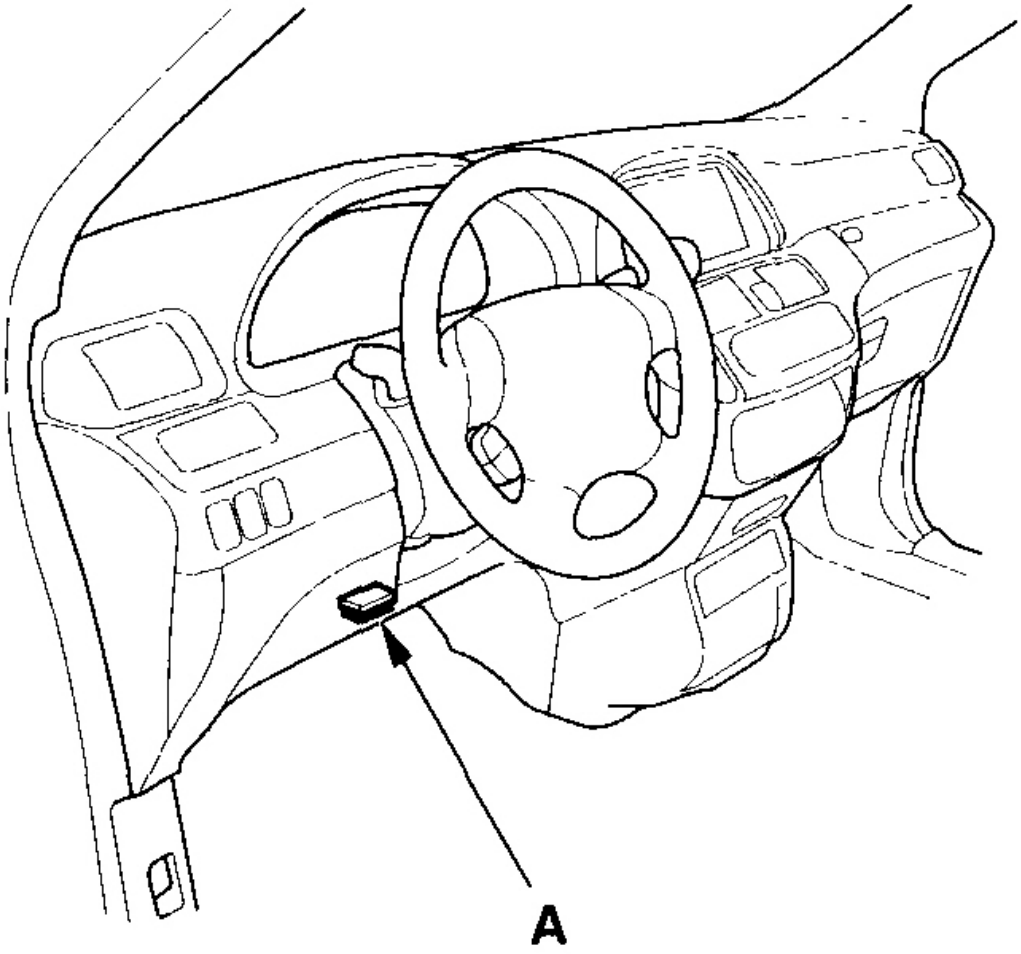


Fig. 196: Identifying Data Link Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Lockup Solenoid Test in Miscellaneous Test Menu on the HDS.
3. Check that the torque converter clutch solenoid valve operates with the HDS. A clicking sound should be heard.
    - If a clicking sound is heard, the valve is OK.
    - If no clicking sound is heard, go to step 4.
4. Remove the intake air duct and air cleaner housing.
5. Disconnect torque converter clutch solenoid valve connector.

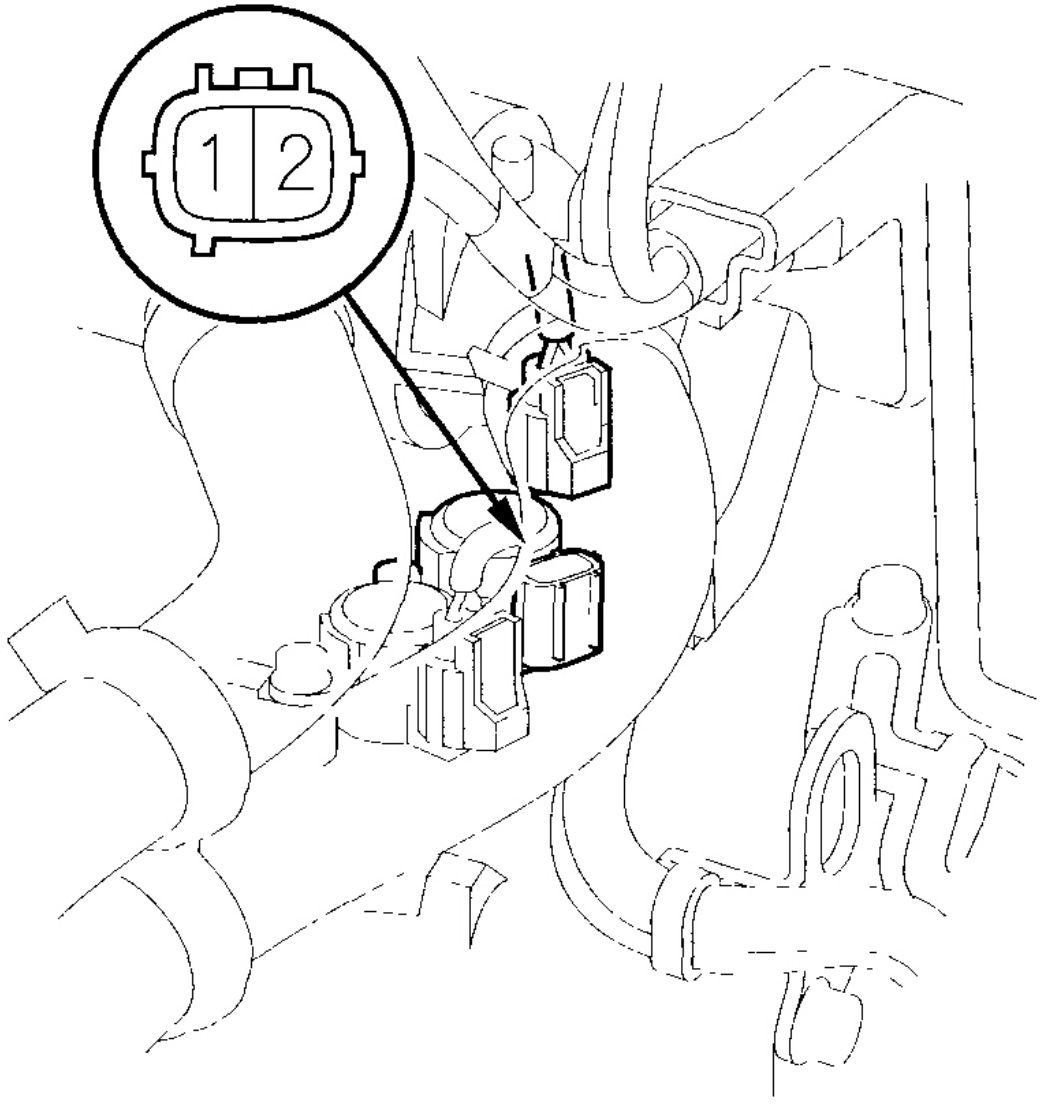


Fig. 197: Disconnecting Torque Converter Clutch Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Measure torque converter clutch solenoid valve resistance at the solenoid valve connector terminals.

Standard: 12-25 ohm

- Replace torque converter clutch solenoid valve if the resistance is out of standard (see **TORQUE CONVERTER CLUTCH SOLENOID VALVE REPLACEMENT**).
- If the resistance is within the standard, go to step 7.

7. Connect the battery negative terminal to torque converter clutch solenoid valve connector terminal No. 1, and connect the battery positive terminal to the terminal No. 2. A clicking sound should be heard.
8. Replace torque converter clutch solenoid valve if no clicking sound is heard (see **TORQUE CONVERTER CLUTCH SOLENOID VALVE REPLACEMENT**).
9. Install the air cleaner housing and intake air duct.

TORQUE CONVERTER CLUTCH SOLENOID VALVE REPLACEMENT

1. Remove the intake air duct and air cleaner housing.
2. Disconnect torque converter clutch solenoid valve connector, and remove torque converter clutch solenoid valve (A).

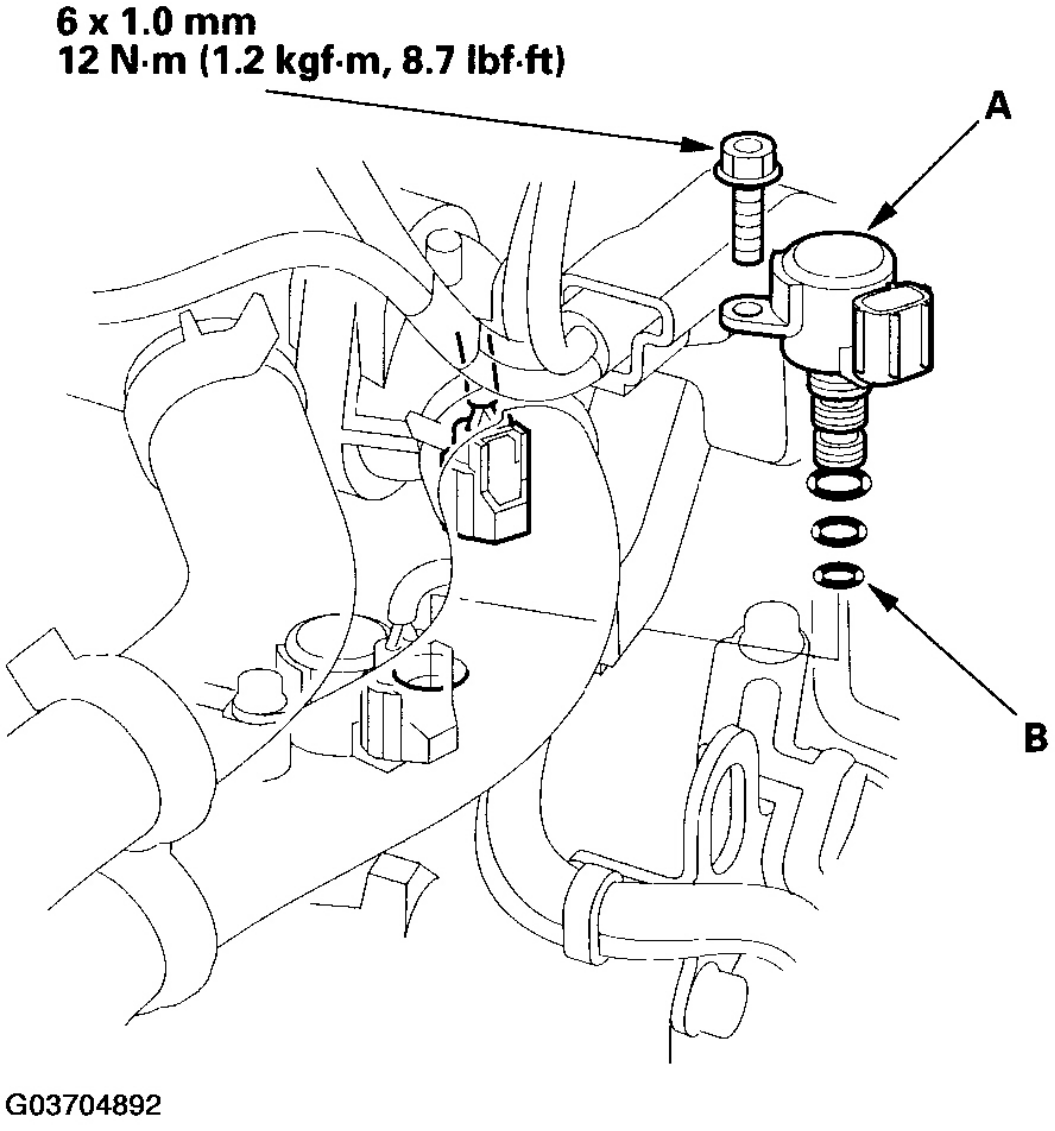
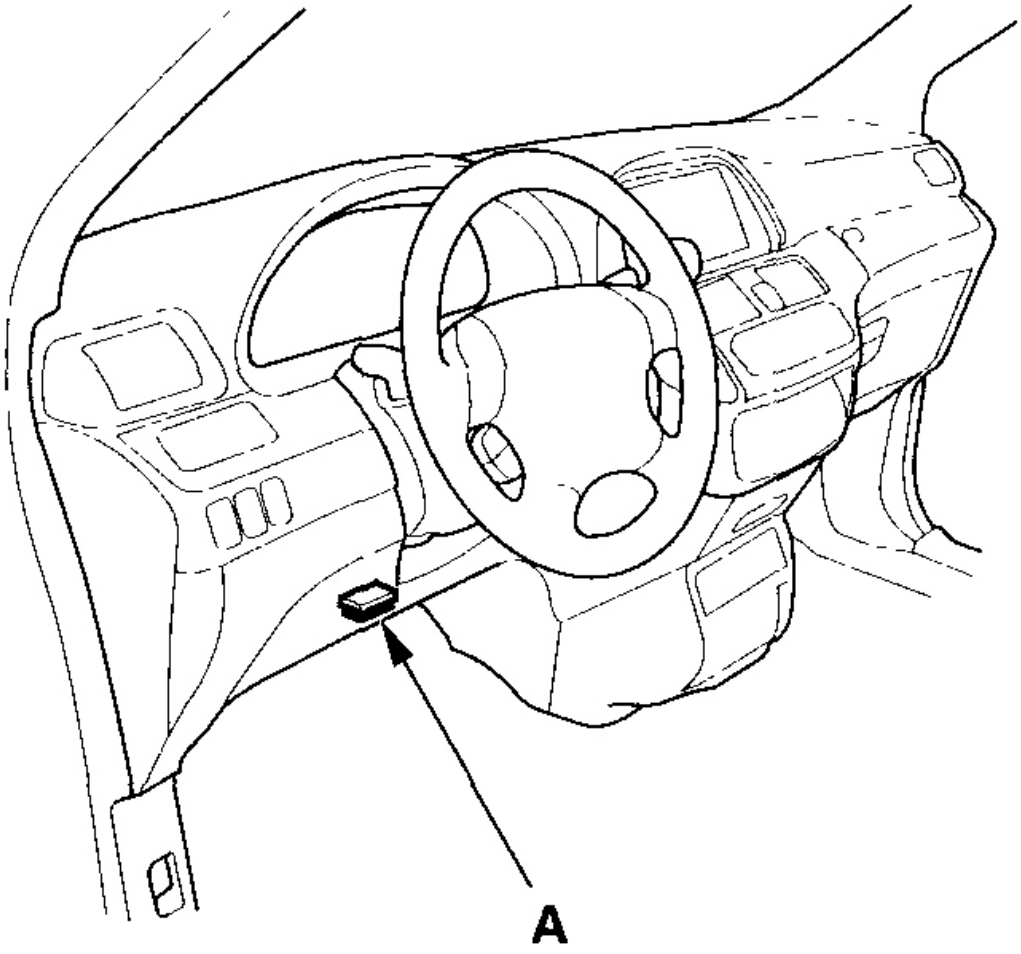


Fig. 198: Removing Torque Converter Clutch Solenoid Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install a new torque converter clutch solenoid valve with new O-rings (B). While installing the solenoid valve, do not allow dust or other foreign particles to enter the transmission.
4. Check the connector for rust, dirt, or oil, then connect the connector.
5. Install the air cleaner housing and intake air duct.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A TEST

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



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Fig. 199: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Clutch Pressure Control (Linear) Solenoid A in Miscellaneous Test Menu on the HDS.
3. Test the A/T clutch pressure control solenoid valve A with the HDS.
   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.

- If the valve does not test OK, and the HDS does not determine the cause, go to step 4.

4. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
5. Disconnect the negative cable from the battery first, then disconnect the positive cable. Remove the battery and battery tray.
6. Remove the intake air duct and air cleaner housing.
7. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
8. Disconnect A/T clutch pressure control solenoid valve A connector.

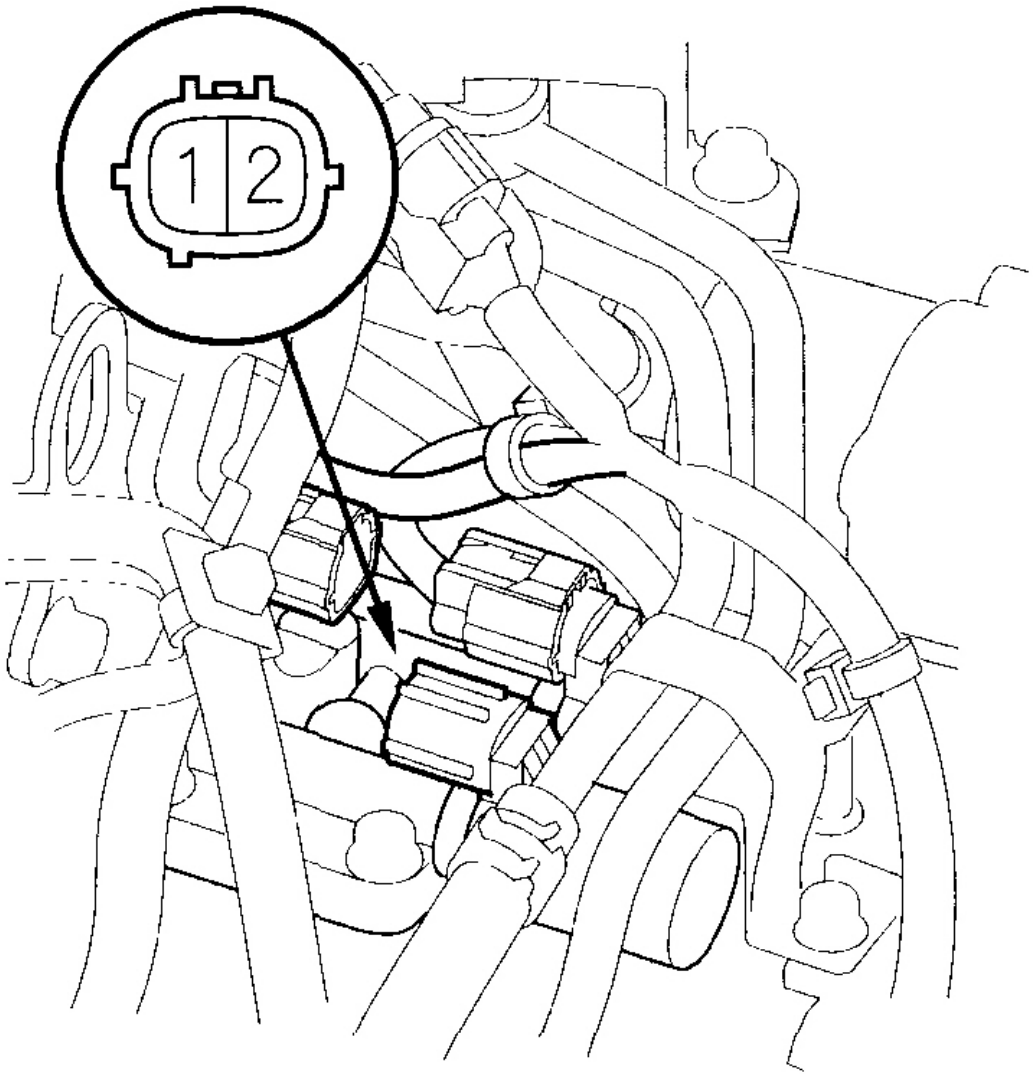


Fig. 200: Disconnecting A/T Clutch Pressure Control Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Measure A/T clutch pressure control solenoid valve A resistance at the connector terminals.

   Standard: 3-10 ohm

   - If the resistance is out of standard, replace A/T clutch pressure control solenoid valve

A and B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**).

- If the resistance is within the standard, go to step 10.

10. Connect the battery negative terminal to the solenoid valve A connector terminal No. 2, and connect the battery positive terminal to the connector terminal No. 1.
    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
    - If no clicking sound is heard, go to step 11.
11. Remove the harness clamp (A) and breather tube clamp (B) from the clamp bracket on the dipstick guide pipe (C), remove the dipstick guide pipe, and remove the O-ring (D).

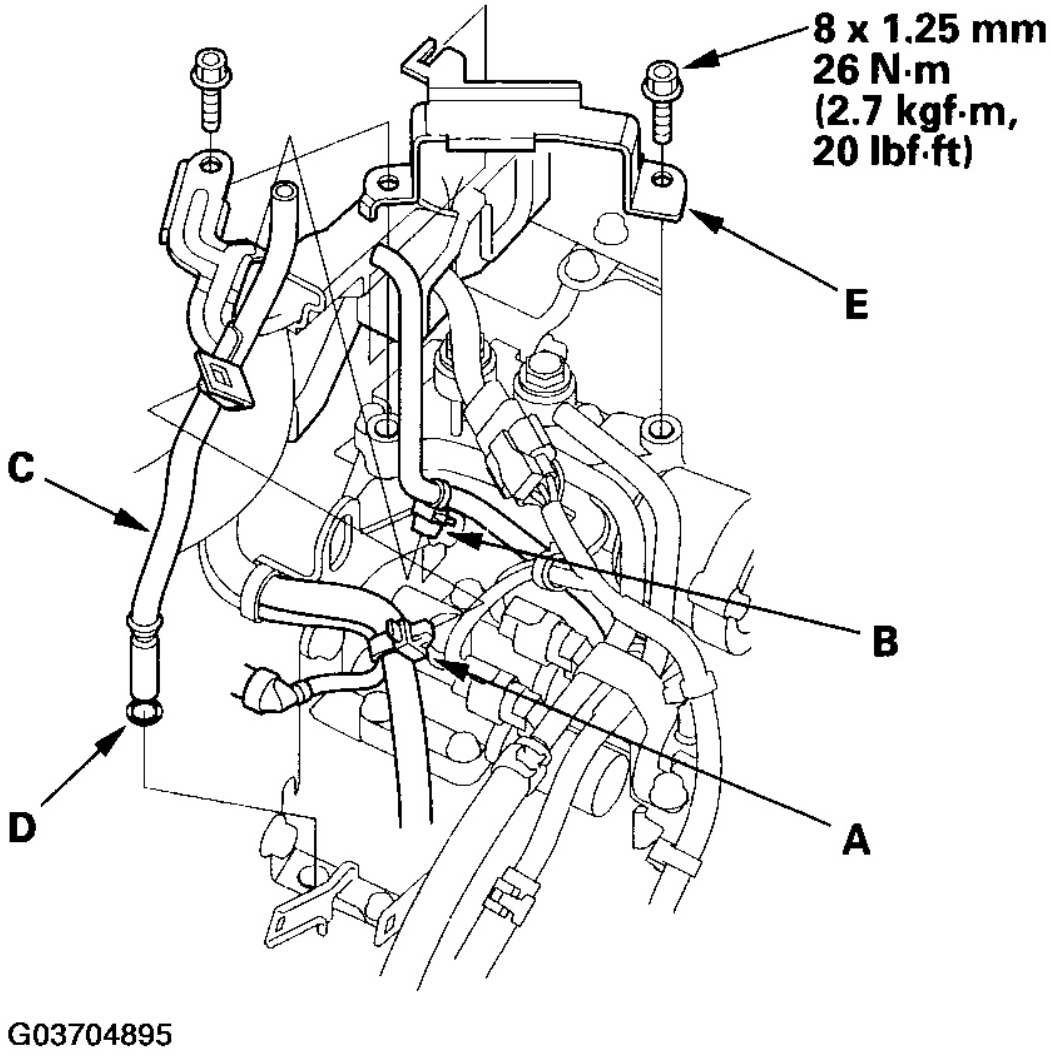


Fig. 201: Removing Harness Clamp And Breather Tube Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the harness cover bracket (E).
13. Remove the transmission subharness clamps (A) from clamp bracket, and disconnect transmission subharness 6P connector (C) and A/T clutch pressure control solenoid valve B connector.

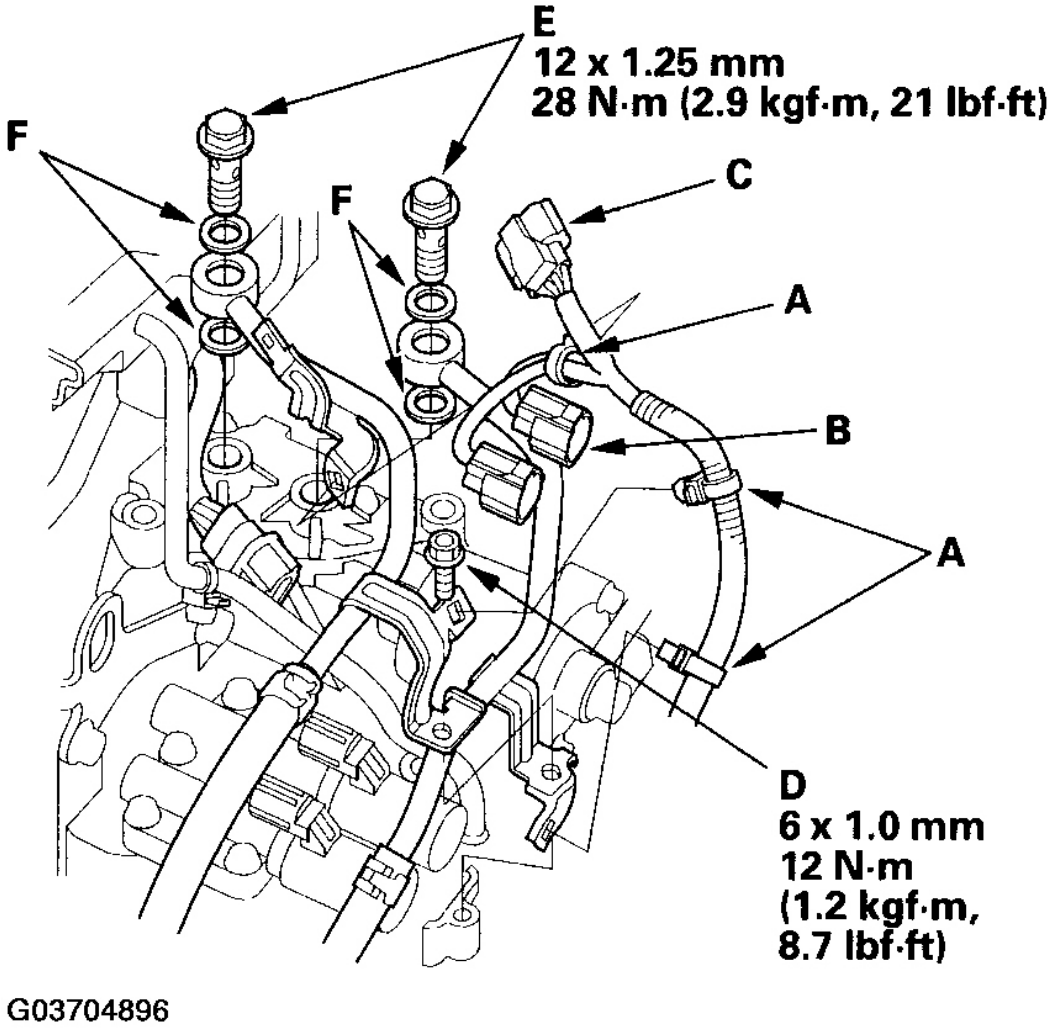


Fig. 202: Removing Transmission Subharness Clamps
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the ATF cooler line bracket bolt (D), and remove the line bolts (E) and sealing washers (F).
15. Remove the A/T clutch pressure control solenoid valve A and B.

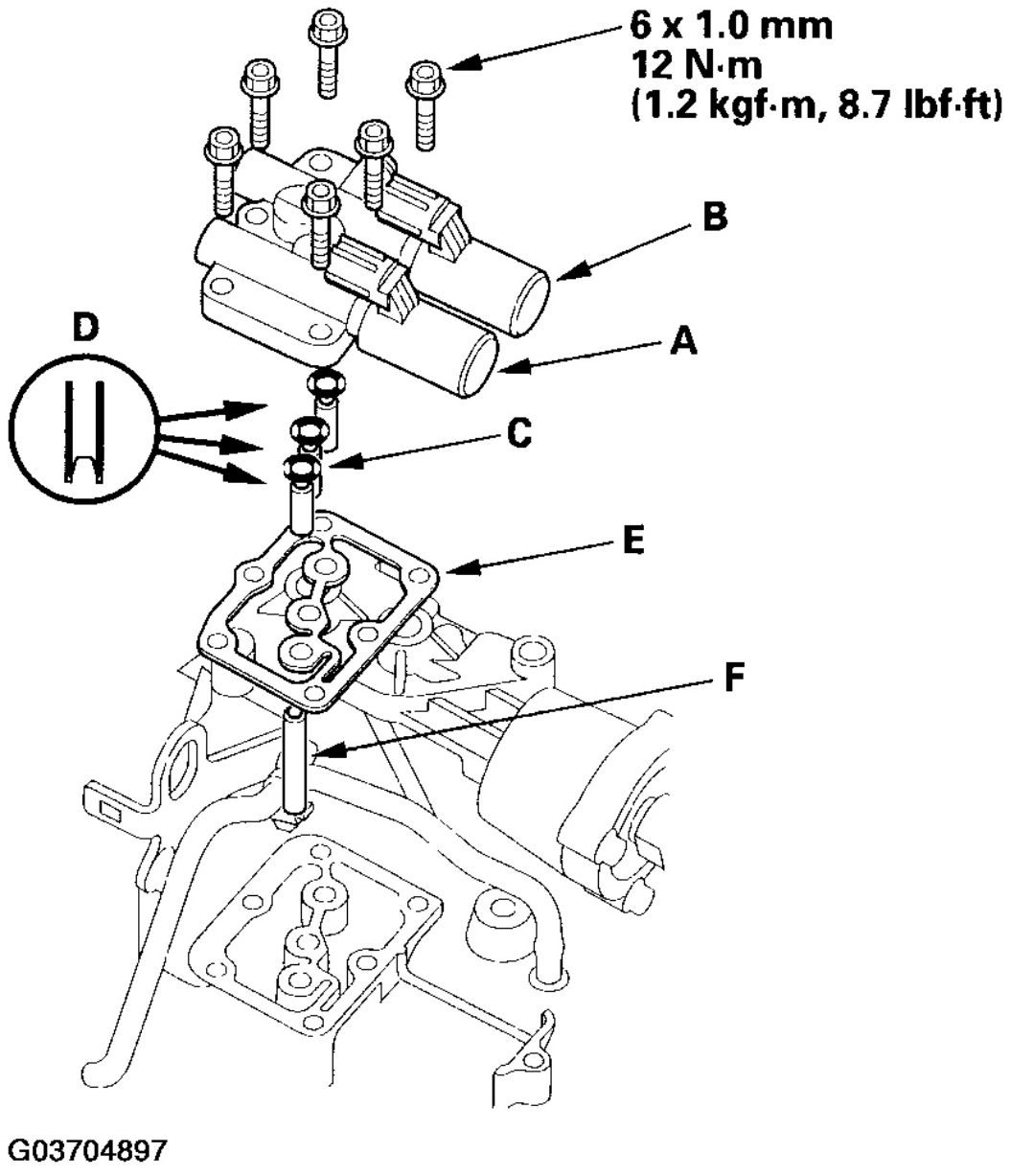
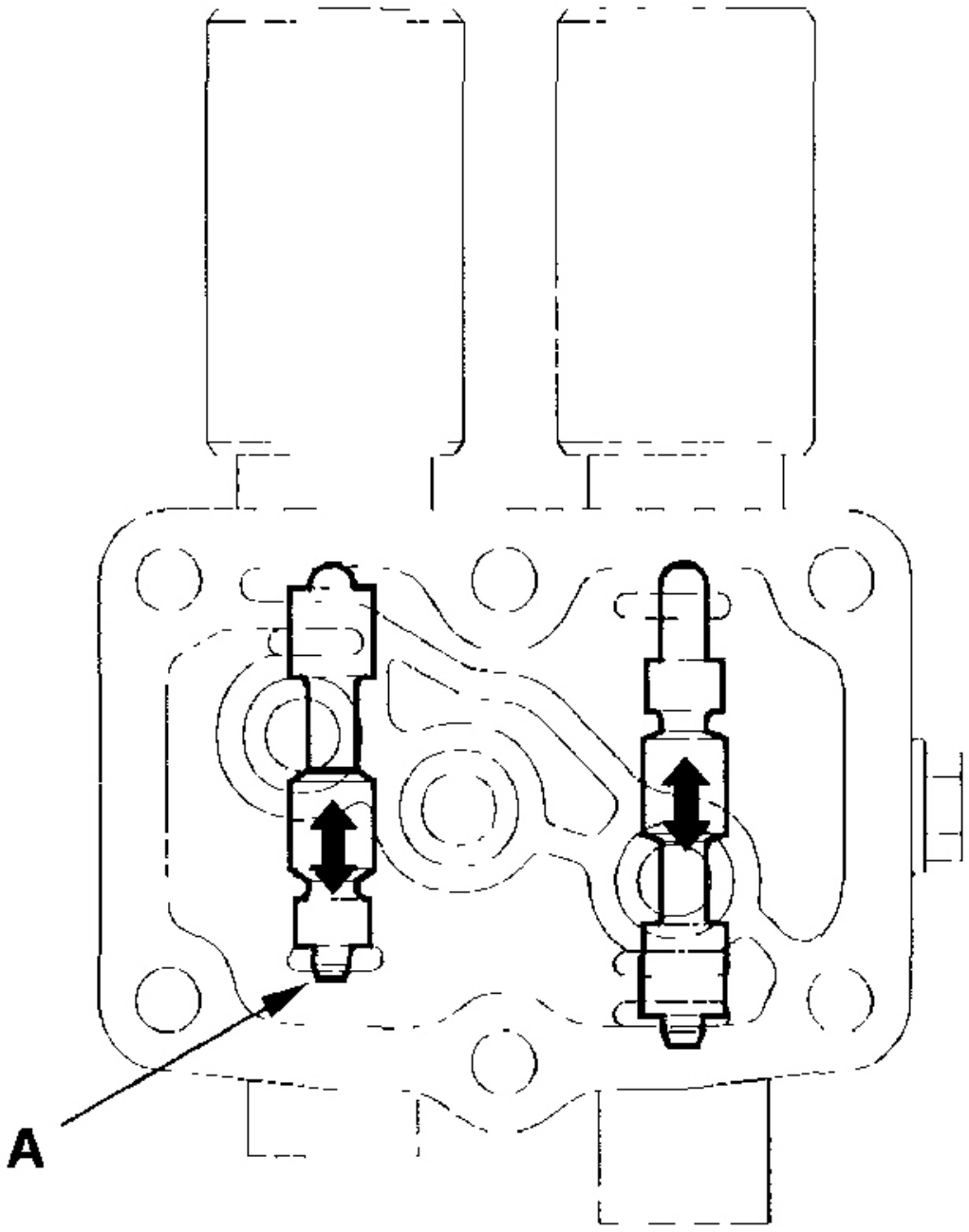


Fig. 203: Removing A/T Clutch Pressure Control Solenoid Valve A And B
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Remove the O-rings (C), 8 x 18 mm ATF feed pipes (D), gasket (E), and 8 x 40 mm ATF feed pipe (F).
17. Connect the battery negative terminal to A/T clutch pressure control solenoid valve A connector terminal No. 2, and connect the battery positive terminal to the connector

terminal No. 1. Make sure A/T clutch pressure control solenoid valve A moves.



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Fig. 204: Connecting Battery Negative Terminal To A/T Clutch Pressure Control Solenoid Valve A Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Disconnect one of the battery terminals and check valve movement at the fluid passage in valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valve A and B.
19. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust and dirt, and clean the passage if necessary.
20. Place a new gasket on the transmission housing, then install the 8 x 18 mm ATF feed pipes with their filter side into the transmission housing.
21. Install new O-rings over the feed pipes, and install the 8 x 40 mm ATF feed pipe.
22. Install the new A/T clutch pressure control solenoid valve A and B.
23. Install the ATF cooler lines with new sealing washers and line bolts, secure the cooler lines with the bracket bolt.
24. Check the connectors for rust, dirt, or oil, then connect the connectors securely to the A/T clutch pressure control solenoid valve A, solenoid valve B, and subharness 6P connector.
25. Slide the harness cover bracket in the harness cover, and install the bracket on the transmission.
26. Install the new O-ring on the dipstick guide pipe, and install the dipstick guide pipe.
27. Install the harness clamps and breather tube clamp on the clamp brackets.
28. Install the battery base, then install the air cleaner housing and intake air duct.
29. Install the battery tray and battery, and battery cover, then secure the battery with the hold-down bracket.
30. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
31. Connect the battery terminals, and enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B TEST

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

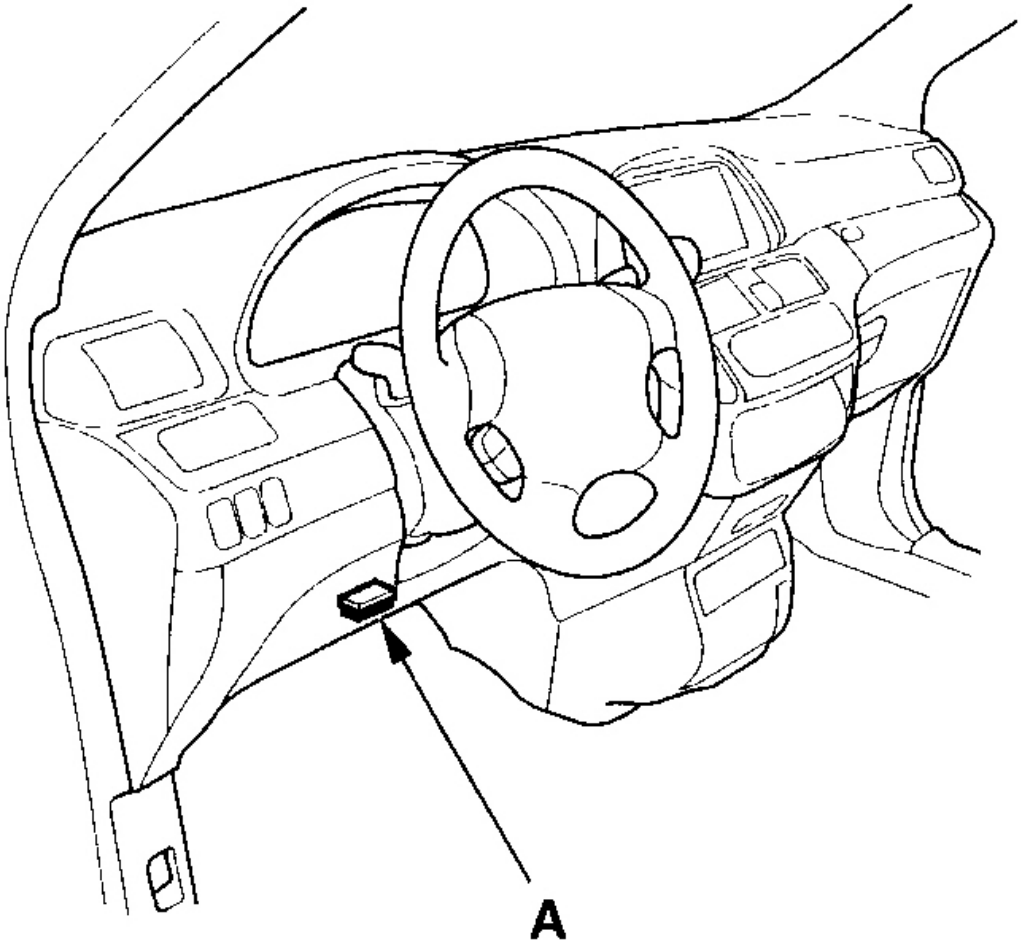


Fig. 205: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Clutch Pressure Control (Linear) Solenoid B in Miscellaneous Test Menu on the HDS.
3. Test the A/T clutch pressure control solenoid valve B with the HDS.
   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.
   - If the valve does not test OK, and the HDS does not determine the cause, go to step 4.

4. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
5. Disconnect the negative cable from the battery first, then disconnect the positive cable. Remove the battery and battery tray.
6. Remove the intake air duct and air cleaner housing.
7. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
8. Disconnect A/T clutch pressure control solenoid valve B connector.

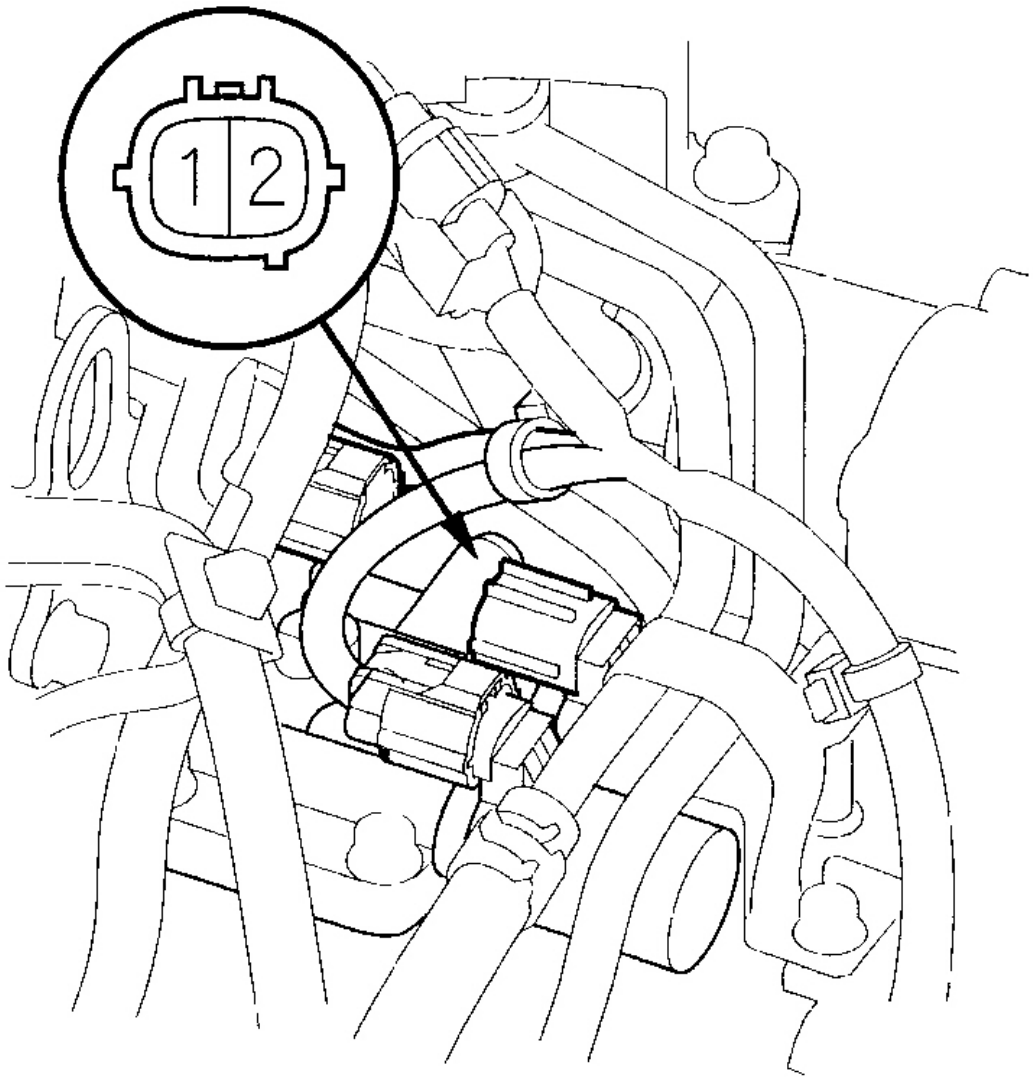


Fig. 206: Disconnecting A/T Clutch Pressure Control Solenoid Valve B Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Measure A/T clutch pressure control solenoid valve B resistance at the connector terminals.

   Standard: 3-10 ohm

   - If the resistance is out of standard, replace A/T clutch pressure control solenoid valve

A and B (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**).

- If the resistance is within the standard, go to step 10.

10. Connect the battery negative terminal to the solenoid valve B connector terminal No. 2, and connect the battery positive terminal to the connector terminal No. 1.
    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
    - If no clicking sound is heard, go to step 11.
11. Remove the harness clamp (A) and breather tube clamp (B) from the clamp bracket on the dipstick guide pipe (C), remove the dipstick guide pipe, and remove the O-ring (D).

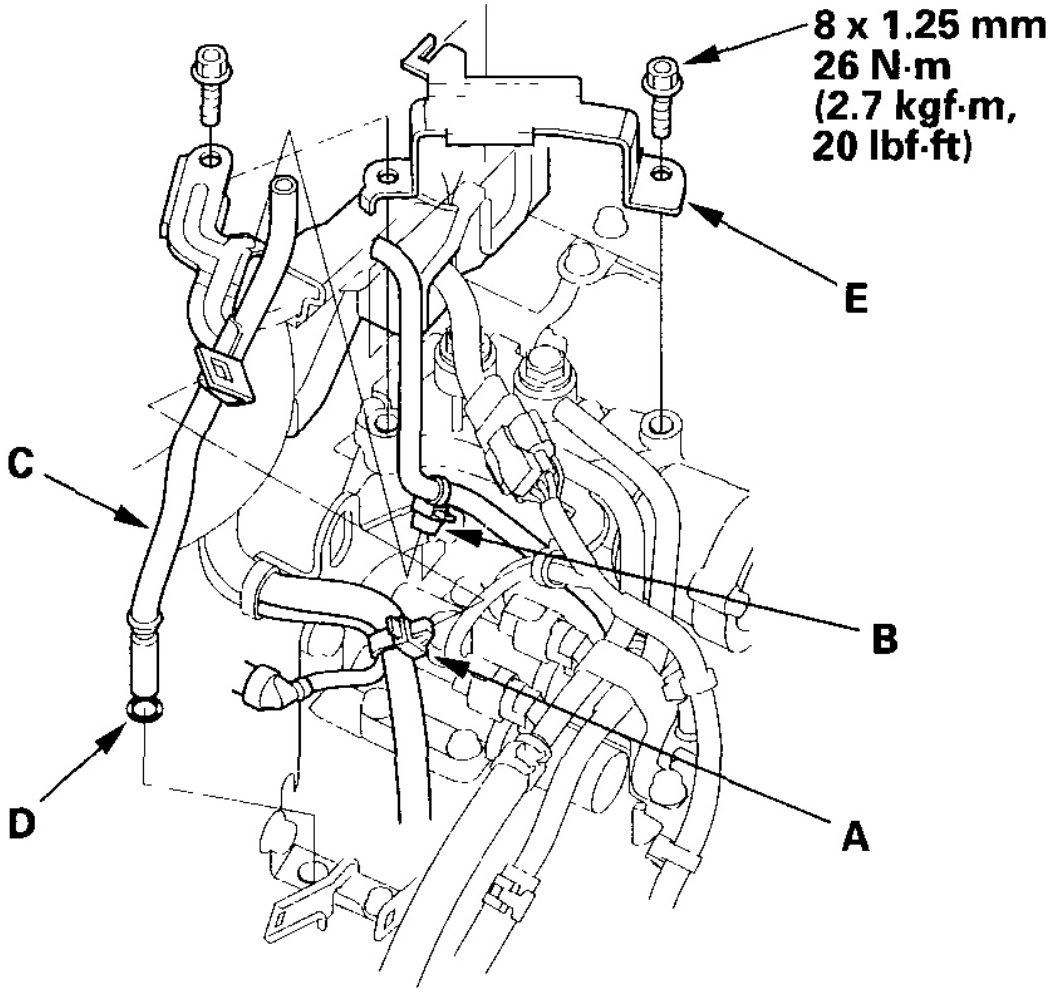


Fig. 207: Removing Dipstick Guide Pipe And Remove O-Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the harness cover bracket (E).
13. Remove the transmission subharness clamps (B) from clamp bracket, and disconnect transmission subharness 6P connector (C) and A/T clutch pressure control solenoid valve A connector.

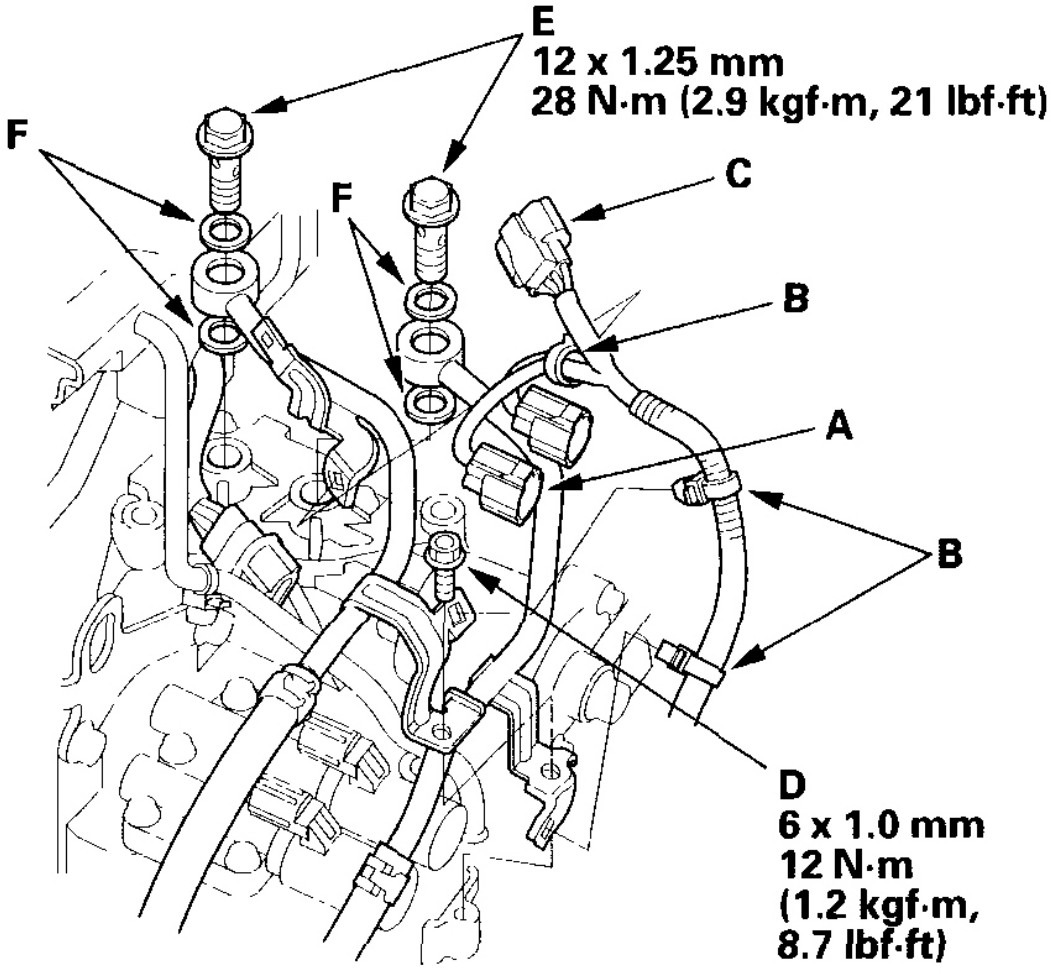


Fig. 208: Disconnecting Transmission Subharness 6P Connector And A/T Clutch Pressure Control Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the ATF cooler line bracket bolt (D), and remove the line bolts (E) and sealing washers (F).
15. Remove the A/T clutch pressure control solenoid valve A and B.

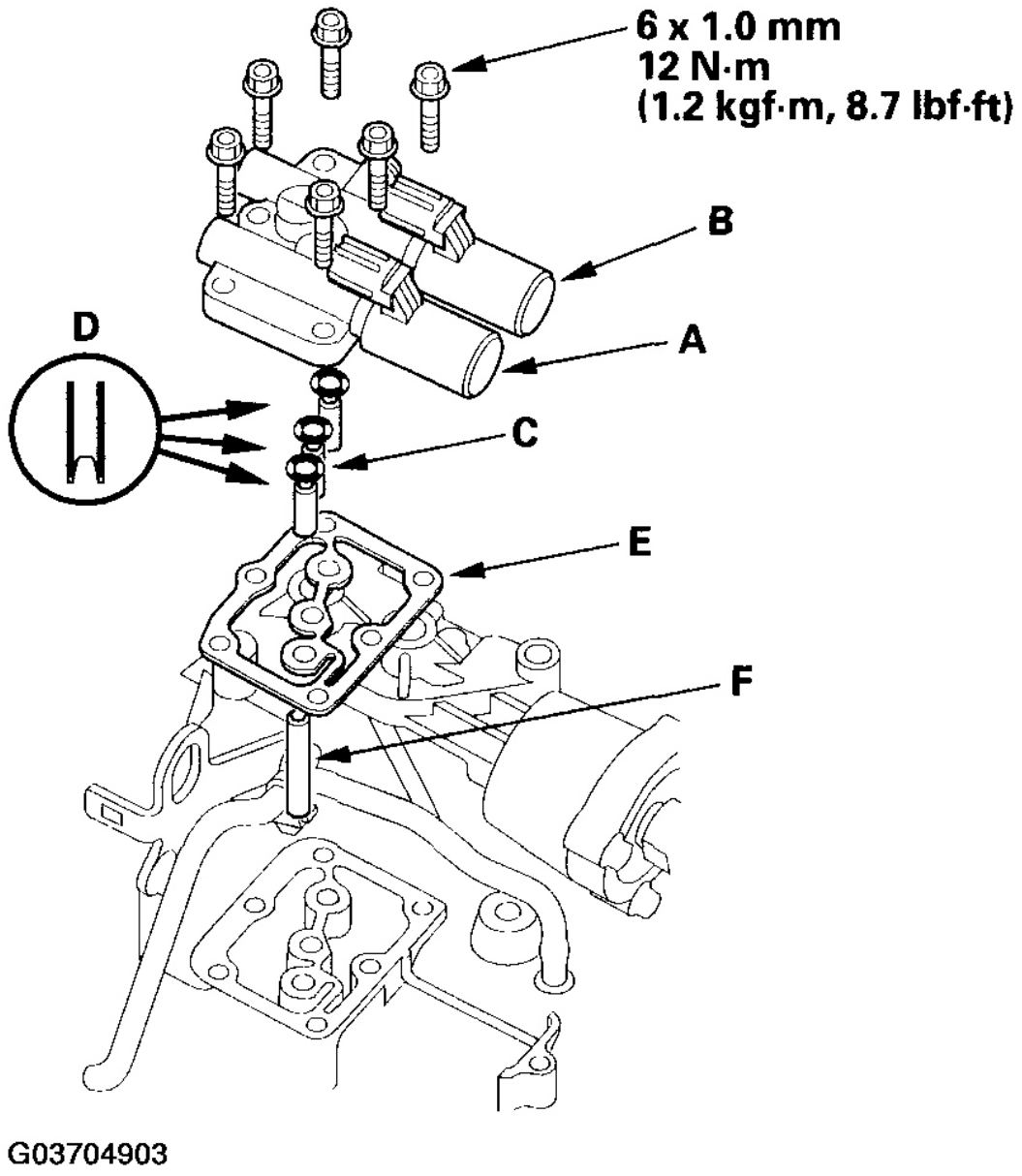


Fig. 209: Removing A/T Clutch Pressure Control Solenoid Valve A And B
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Remove the O-rings (C), 8 x 18 mm ATF feed pipes (D), gasket (E), and 8 x 40 mm ATF feed pipe (F).
17. Connect the battery negative terminal to A/T clutch pressure control solenoid valve B connector terminal No. 2, and connect the battery positive terminal to the connector

terminal No. 1. Make sure A/T clutch pressure control solenoid valve B moves.

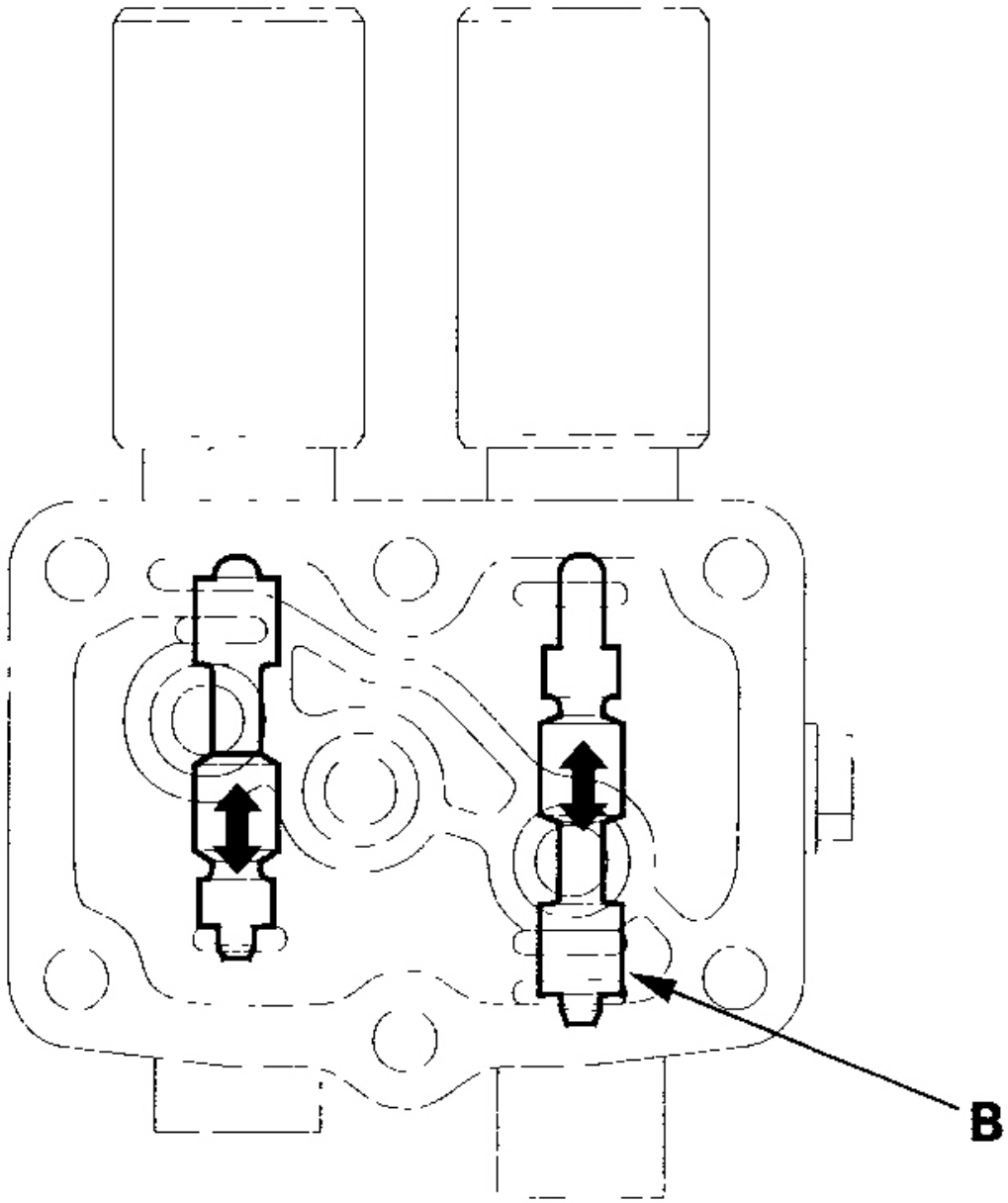


Fig. 210: Connecting Battery Negative Terminal To A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Disconnect one of the battery terminals and check valve movement at the fluid passage in valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valve A and B.
19. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust and dirt, and clean the passage if necessary.
20. Place a new gasket on the transmission housing, then install the 8 x 18 mm ATF feed pipes with their filter side into the transmission housing.
21. Install new O-rings over the feed pipes, and install the 8 x 40 mm ATF feed pipe.
22. Install the new A/T clutch pressure control solenoid valve A and B.
23. Install the ATF cooler lines with new sealing washers and line bolts, secure the cooler lines with the bracket bolt.
24. Check the connectors for rust, dirt, or oil, then connect the connectors securely to the A/T clutch pressure control solenoid valve A, solenoid valve B, and subharness 6P connector.
25. Slide the harness cover bracket in the harness cover, and install the bracket on the transmission.
26. Install the new O-ring on the dipstick guide pipe, and install the dipstick guide pipe.
27. Install the harness clamps and breather tube clamp on the clamp brackets.
28. Install the battery base, then install the air cleaner housing and intake air duct.
29. Install the battery tray and battery, and battery cover, then secure the battery with the hold-down bracket.
30. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
31. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT

1. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable. Remove the battery and battery tray.
3. Remove the intake air duct and air cleaner housing.
4. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.

5. Remove the harness clamp (A) and breather tube clamp (B) from the clamp bracket on the dipstick guide pipe (C), remove the dipstick guide pipe, and remove the O-ring (D).

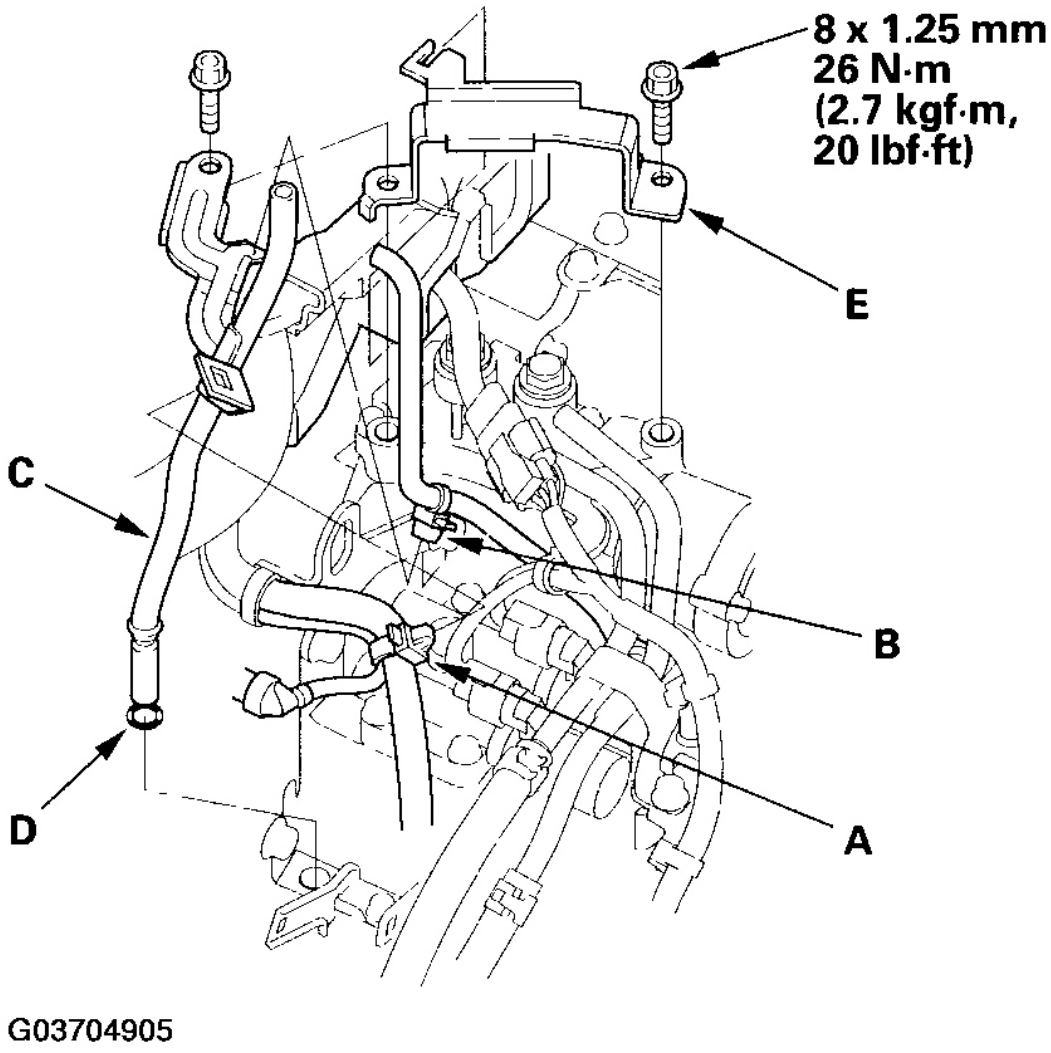


Fig. 211: Removing Dipstick Guide Pipe And O-Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the harness cover bracket (E).
7. Remove the transmission subharness clamps (A) from clamp bracket, and disconnect transmission subharness 6P connector (C) and A/T clutch pressure control solenoid valve B connector.

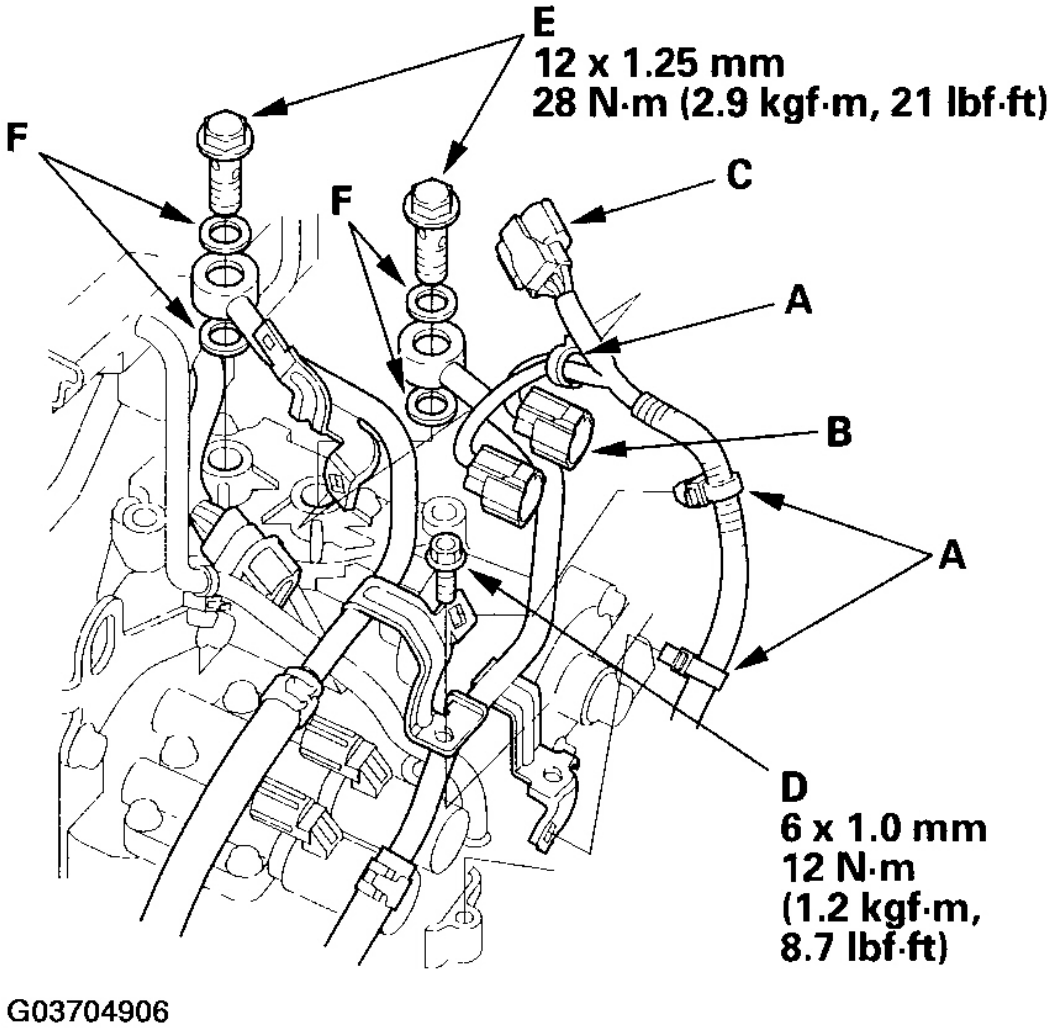


Fig. 212: Disconnecting Transmission Subharness 6P Connector And A/T Clutch Pressure Control Solenoid Valve B Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the ATF cooler line bracket bolt (D), and remove the line bolts (E) and sealing washers (F).
9. Remove the A/T clutch pressure control solenoid valve A and B.

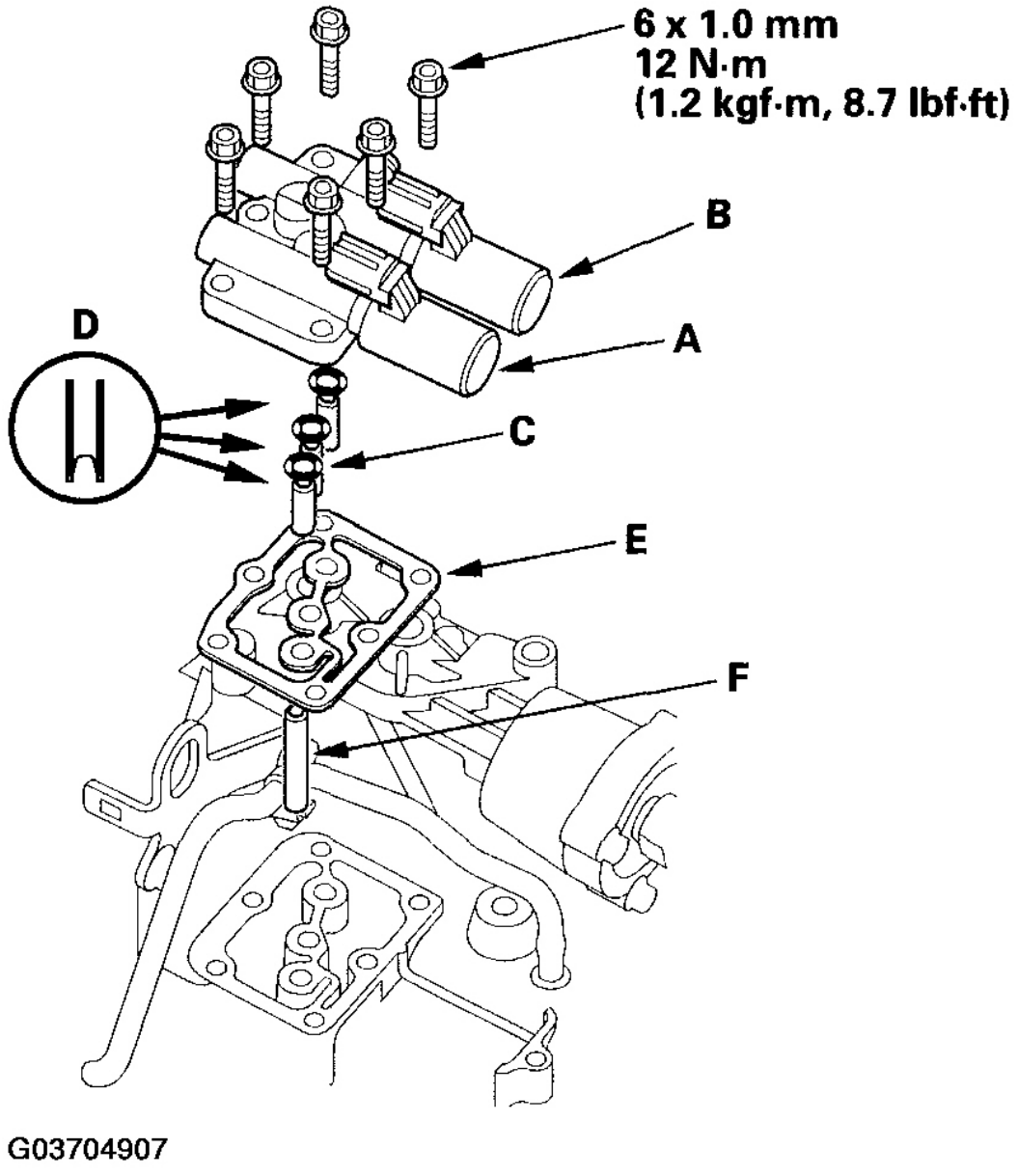


Fig. 213: Removing A/T Clutch Pressure Control Solenoid Valve A And B
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the O-rings (C), 8 x 18 mm ATF feed pipes (D), gasket (E), and 8 x 40 mm ATF feed pipe (F).
11. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust and dirt, and clean the passage if necessary.

12. Place a new gasket on the transmission housing, then install the 8 x 18 mm ATF feed pipes with their filter side into the transmission housing.
13. Install new O-rings over the feed pipes, and install the 8 x 40 mm ATF feed pipe.
14. Install the new A/T clutch pressure control solenoid valve A and B.
15. Install the ATF cooler lines with new sealing washers and line bolts, secure the cooler lines with the bracket bolt.
16. Check the connectors for rust, dirt, or oil, then connect the connectors securely to the A/T clutch pressure control solenoid valve A, solenoid valve B, and subharness 6P connector.
17. Slide the harness cover bracket in the harness cover, and install the bracket on the transmission.
18. Install the new O-ring on the dipstick guide pipe, and install the dipstick guide pipe.
19. Install the harness clamps and breather tube clamp on the clamp brackets.
20. Install the battery base, then install the air cleaner housing and intake air duct.
21. Install the battery tray and battery, and secure the battery with its hold-down bracket.
22. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
23. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C TEST

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

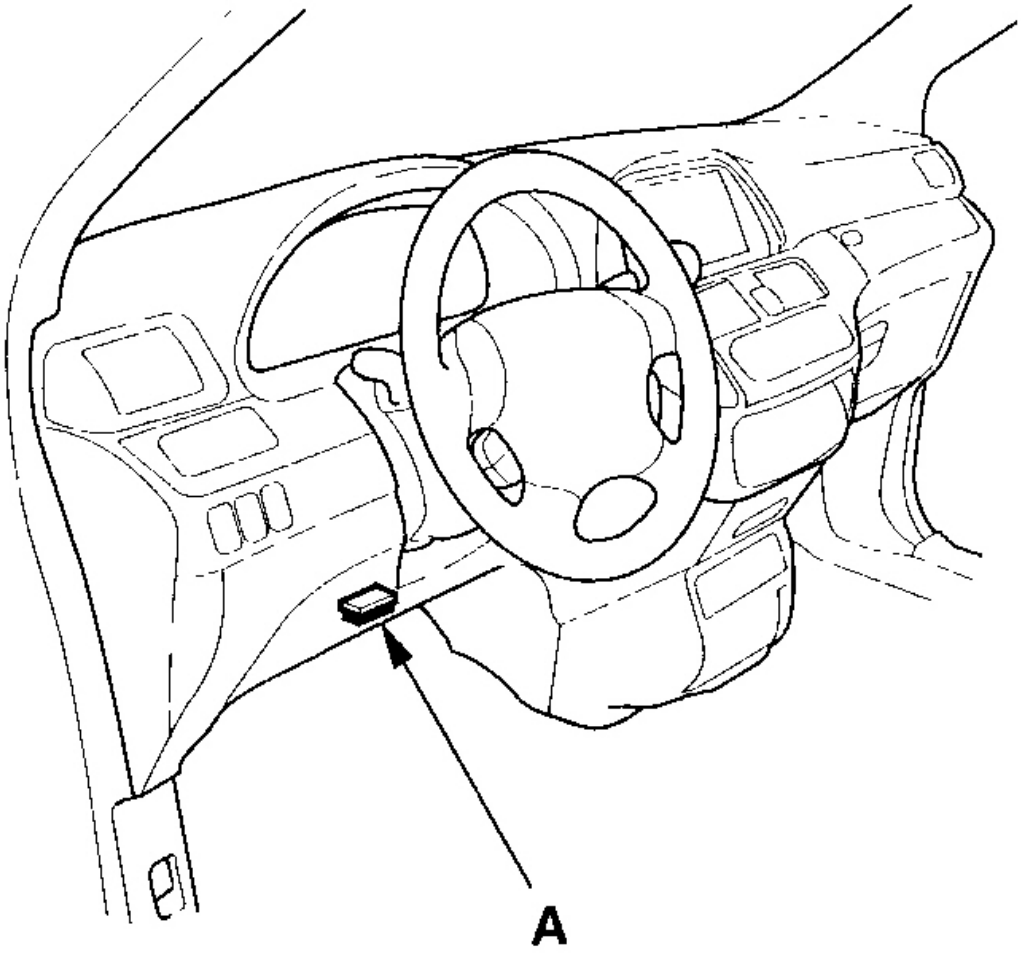
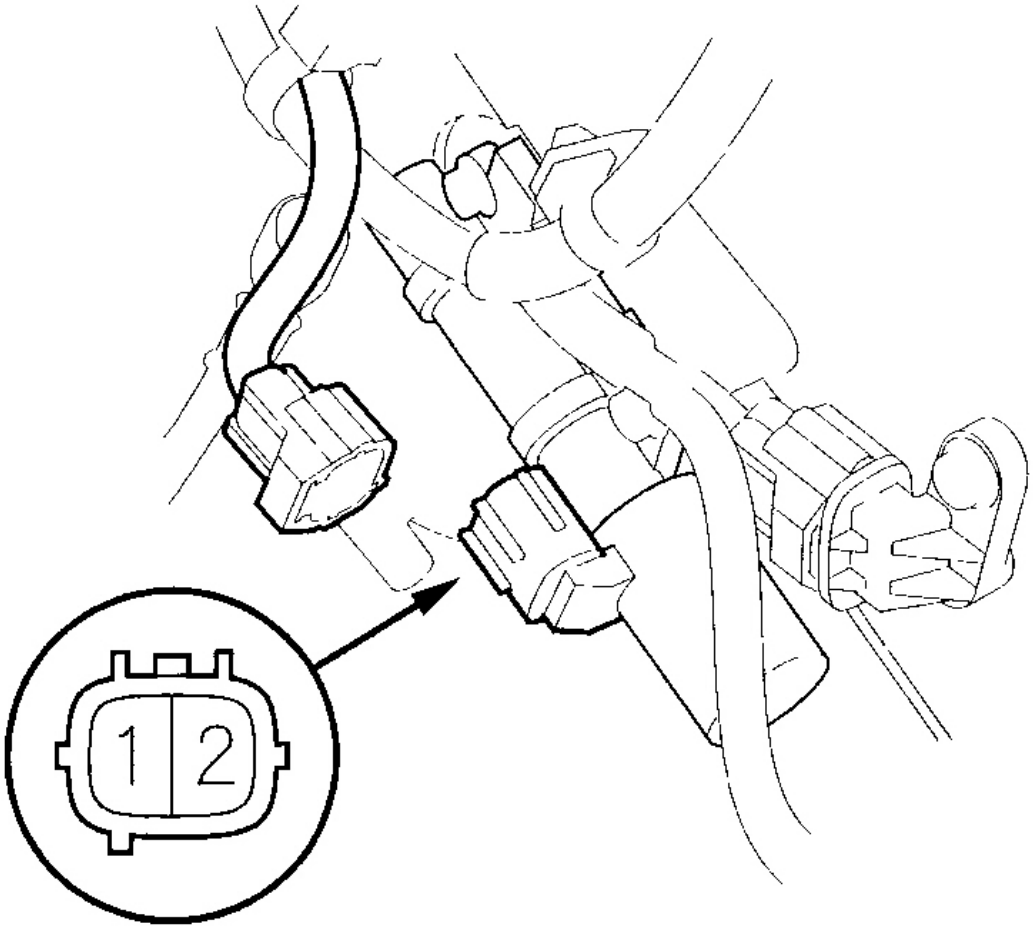


Fig. 214: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Clutch Pressure Control (Linear) Solenoid C in Miscellaneous Test Menu on the HDS.
3. Test the A/T clutch pressure control solenoid valve C with the HDS.
   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.
   - If the valve does not test OK, and the HDS does not determine the cause, go to step 4.

4. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
5. Disconnect the negative cable from the battery first, then disconnect the positive cable.
6. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
7. Remove the intake air duct and air cleaner housing.
8. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the base, then remove the battery base.
9. Disconnect A/T clutch pressure control solenoid valve C connector.



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Fig. 215: Disconnecting A/T Clutch Pressure Control Solenoid Valve C Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Measure A/T clutch pressure control solenoid valve C resistance at the solenoid valve connector.

    Standard: 3-10 ohm

    - If the resistance of the solenoid valve is out of standard, replace A/T clutch pressure control solenoid valve C (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT**).
    - If the resistance is within the standard, go to step 11.
11. Connect the battery negative terminal to A/T clutch pressure control solenoid valve C connector terminal No. 2, and connect the battery positive terminal to the connector terminal No. 1.
    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
    - If no clicking sound is heard, go to step 12.
12. Remove A/T clutch pressure control solenoid valve C.

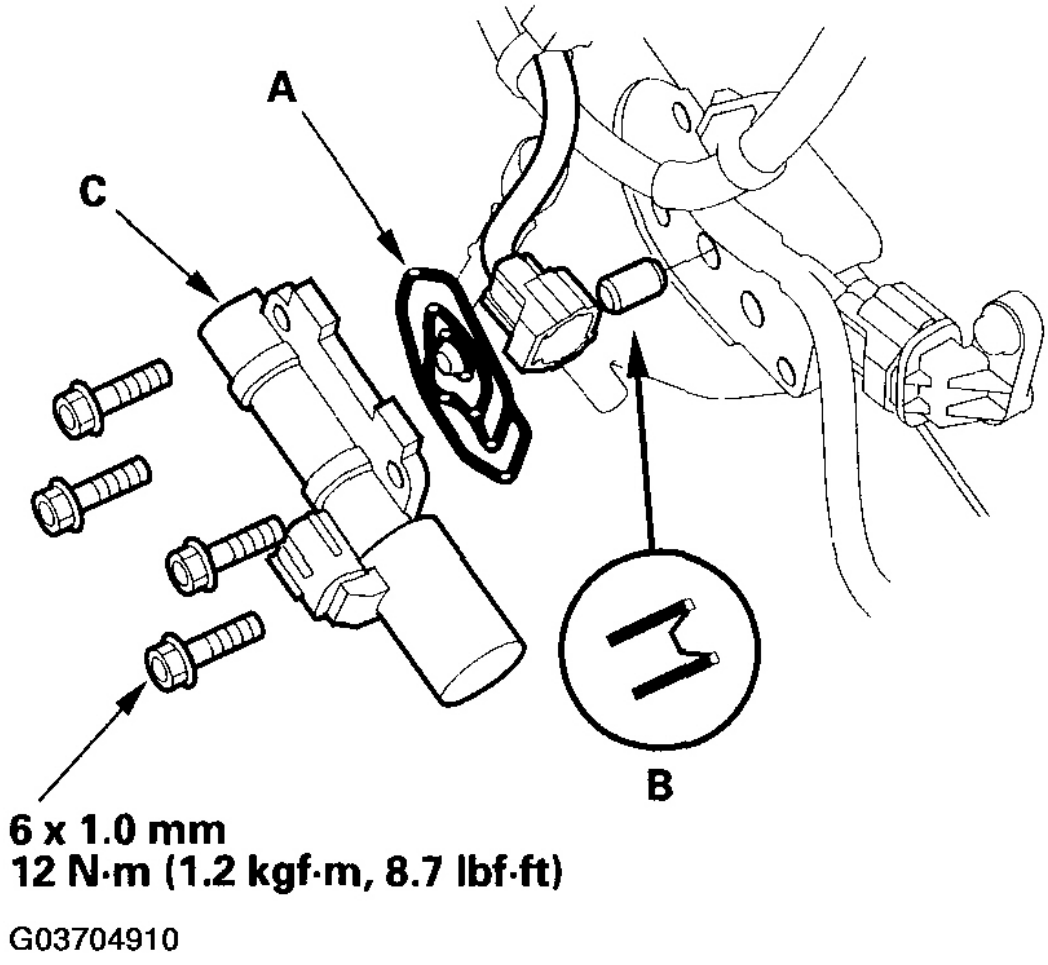


Fig. 216: Removing A/T Clutch Pressure Control Solenoid Valve C
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the gasket (A) and 8 x 12 mm ATF feed pipe (B).
14. Connect the battery negative terminal to A/T clutch pressure control solenoid valve C connector terminal No. 2, and connect the battery positive terminal to the terminal No. 1. Make sure A/T clutch pressure control solenoid valve C moves.

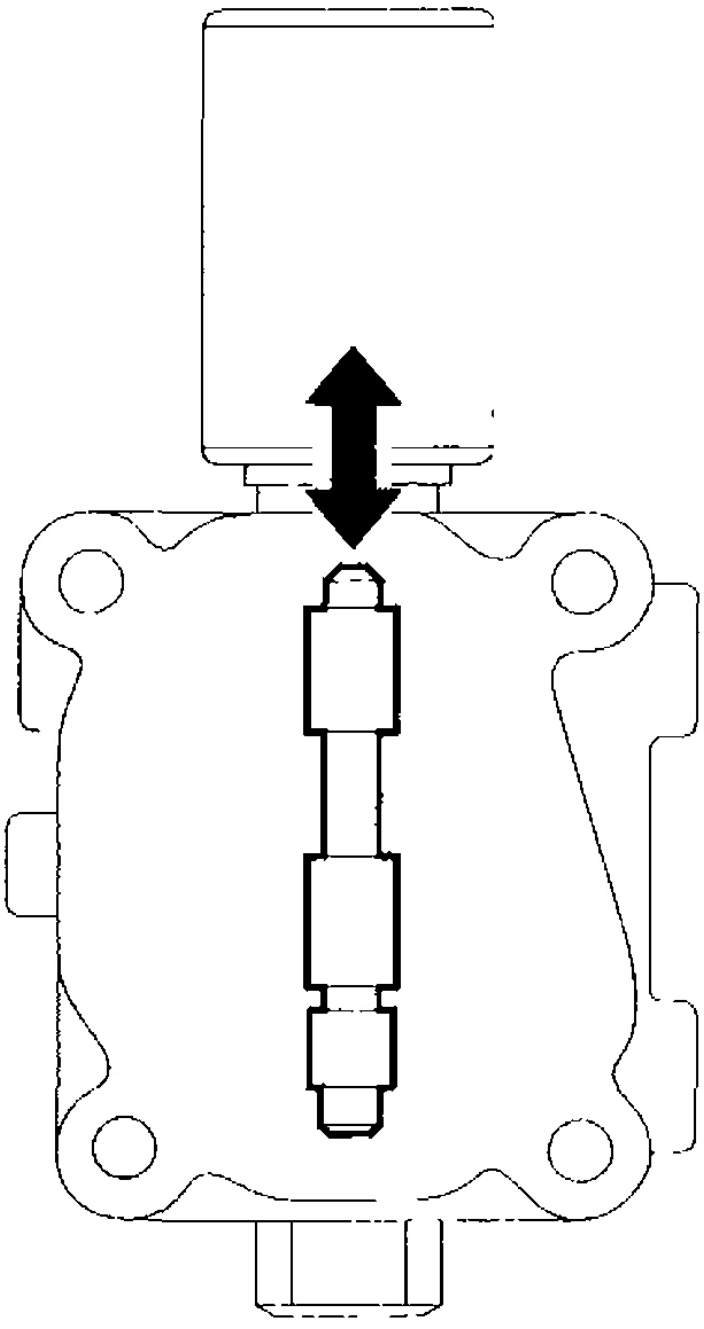


Fig. 217: Connecting Battery Negative Terminal To A/T Clutch Pressure Control Solenoid Valve C Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Disconnect one of the battery terminals and check valve movement at the fluid passage in valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valve C.
16. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust and dirt, and clean the passage if necessary.
17. Install the 8 x 12 mm ATF feed pipe with its filter side into the transmission housing.
18. Install the new gasket in the mounting groove of the A/T clutch pressure control solenoid valve C body, then install A/T clutch pressure control solenoid valve C on the transmission housing. Do not pinch the gasket.
19. Check the A/T clutch pressure control solenoid valve C connector for rust, dirt, or oil, then connect it securely.
20. Install the battery base, then install the air cleaner housing and intake air duct.
21. Install the battery tray, battery, and battery cover, then secure the battery with its hold-down bracket.
22. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
23. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT

1. Lift the vehicle up on a hoist or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Disconnect A/T clutch pressure control solenoid valve C connector.
4. Remove A/T clutch pressure control solenoid valve C.

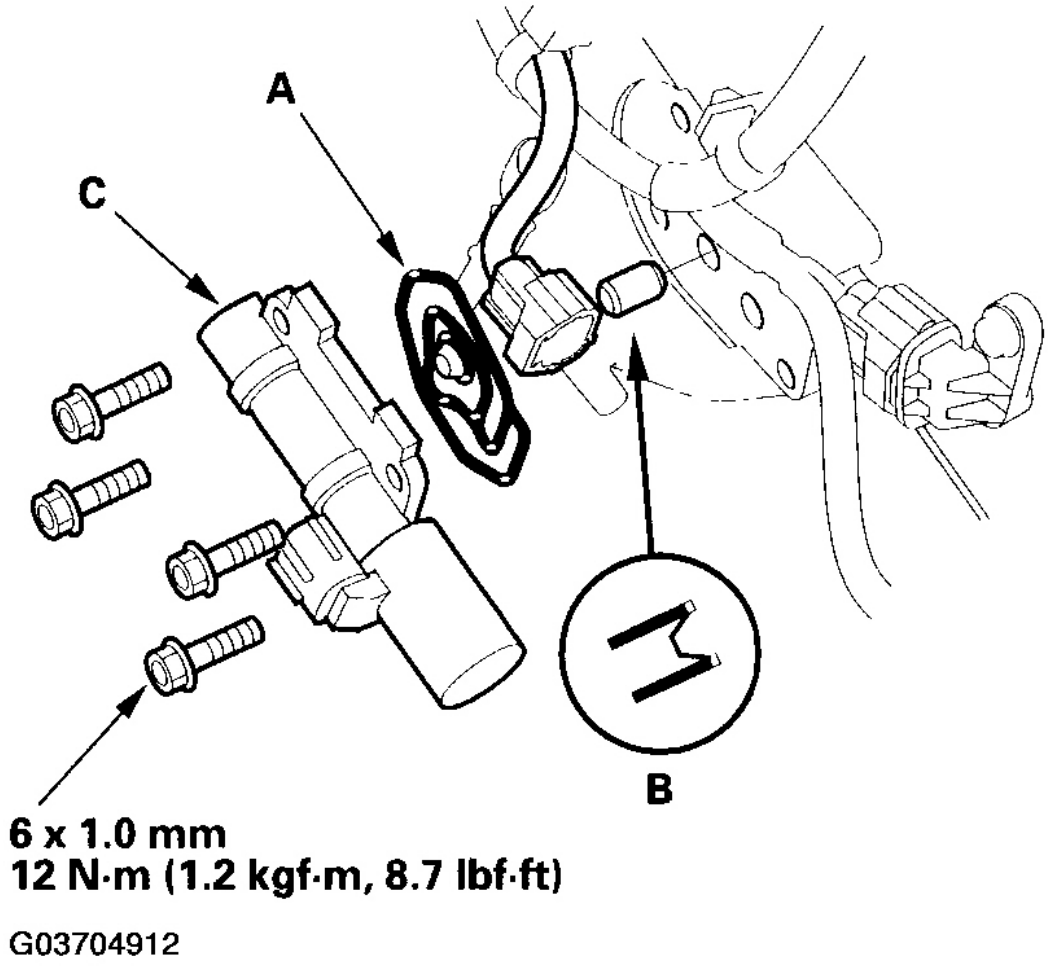


Fig. 218: Removing A/T Clutch Pressure Control Solenoid Valve C
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the gasket (A) and 8 x 12 mm ATF feed pipe (B).
6. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust and dirt, and clean the passage if necessary.
7. Install the 8 x 12 mm ATF feed pipe with its filter side into the transmission housing.
8. Install the new gasket in the mounting groove of the A/T clutch pressure control solenoid valve C body properly, then install A/T clutch pressure control solenoid valve C on the transmission housing. Do not pinch the gasket.
9. Check the A/T clutch pressure control solenoid valve C connector for rust, dirt, or oil, then connect it securely.

10. Install the splash shield and lower the vehicle.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT

1. Lift the vehicle up on a lift or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Disconnect input shaft (mainshaft) speed sensor connector.
4. Remove the bolt securing the input shaft (mainshaft) speed sensor, then remove the input shaft (mainshaft) speed sensor (A) from the end cover.

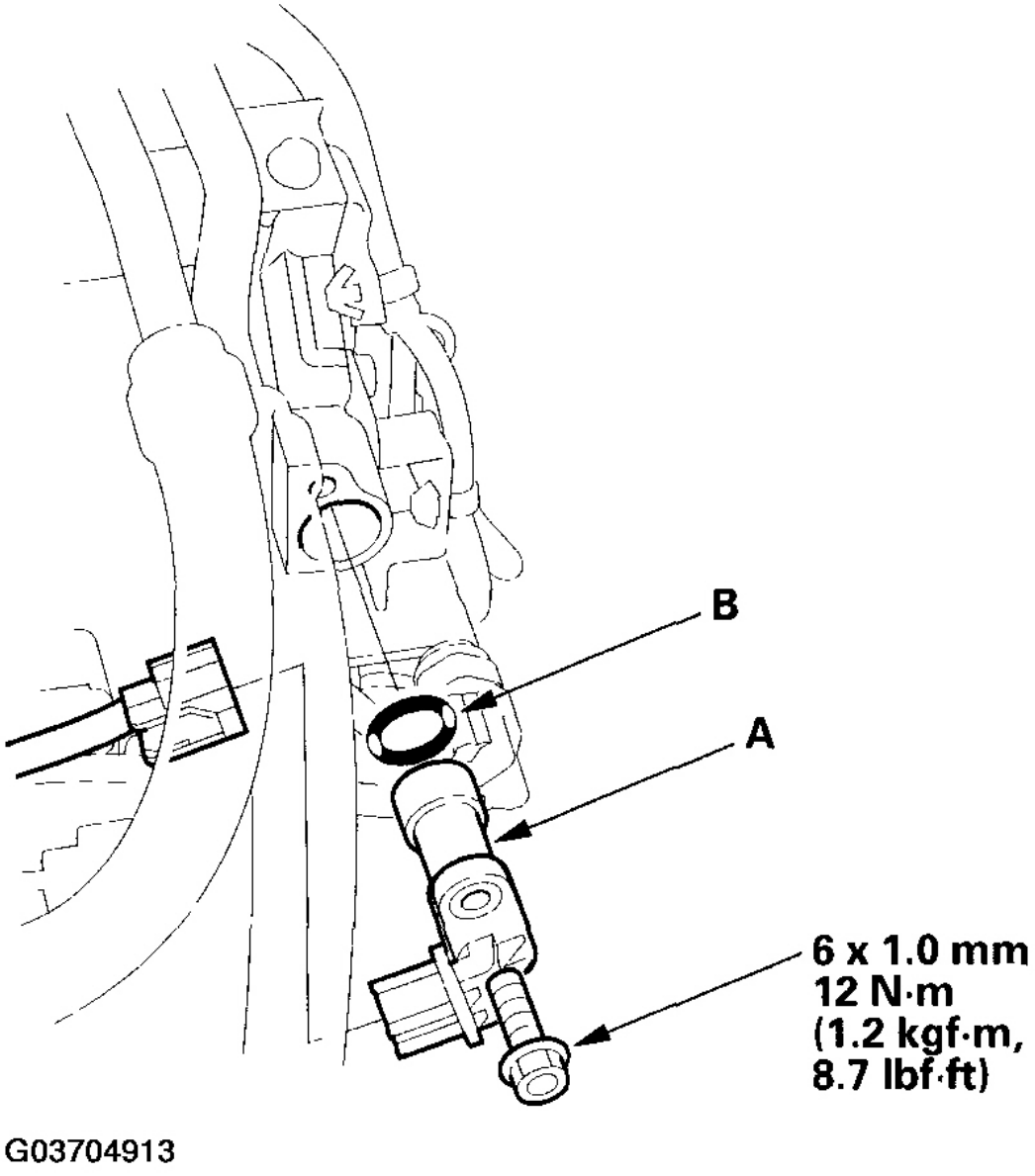


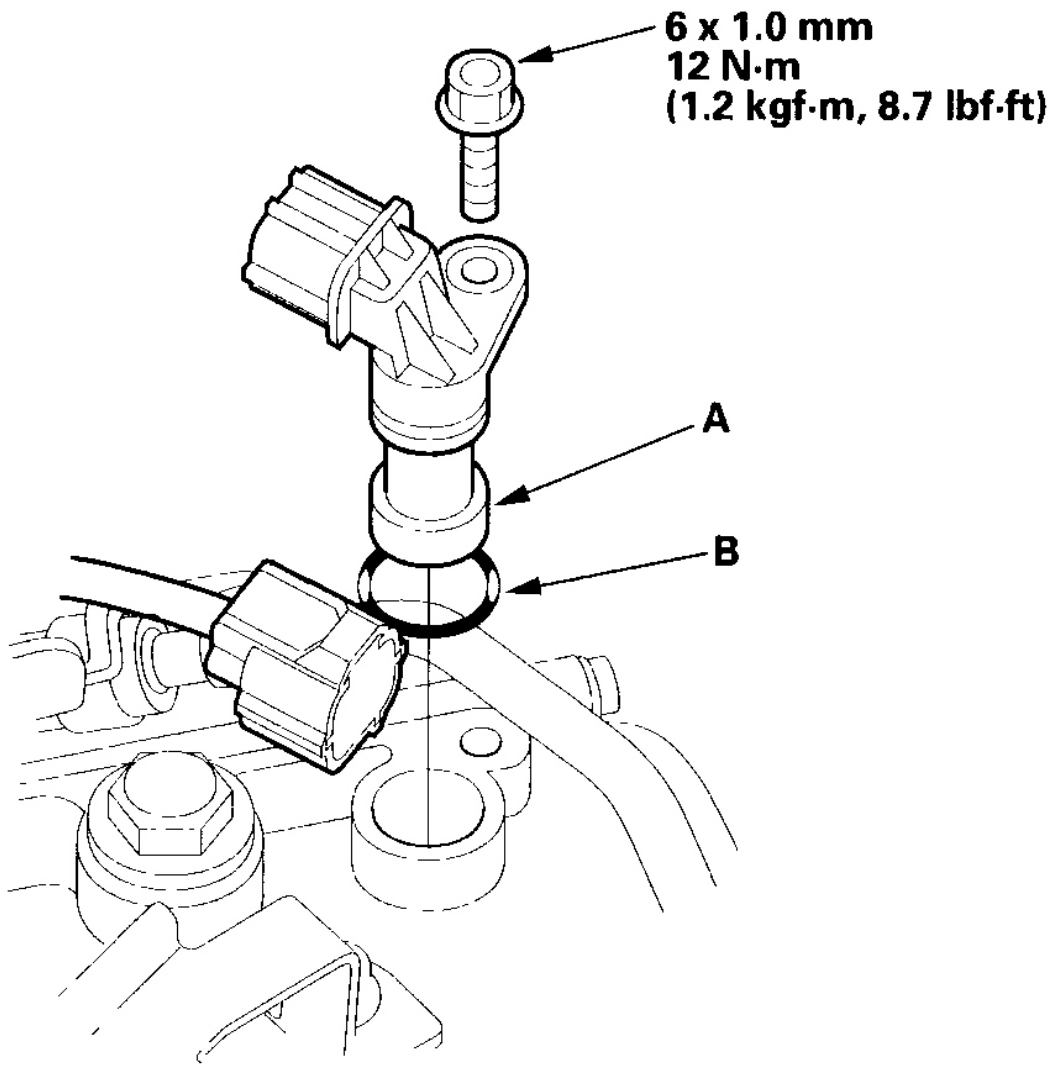
Fig. 219: Removing Input Shaft (Mainshaft) Speed Sensor From End Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the new O-ring (B) on the new input shaft (mainshaft) speed sensor, then install the input shaft (mainshaft) speed sensor in the end cover. Do not allow dust or foreign particles to enter the transmission.
6. Check the connector for rust, dirt, or oil, then connect the connector securely.

7. Install the splash shield and lower the vehicle.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT

1. Remove the intake manifold cover (see step 1 in **REMOVAL**).
2. Disconnect output shaft (countershaft) speed sensor connector.
3. Remove the bolt securing the output shaft (countershaft) speed sensor (A) from the transmission housing.



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Fig. 220: Removing Bolt Securing Output Shaft (Countershaft) Speed Sensor From Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the new O-ring (B) on the new output shaft (countershaft) speed sensor, then install the output shaft (countershaft) speed sensor in the transmission housing. Do not allow dust or foreign particles to enter the transmission.
5. Check for rust, dirt, or oil, then connect the connector securely.
6. Install the intake manifold cover (see step 9 in **INSTALLATION**).

3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT

1. Lift the vehicle up on a hoist or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Disconnect the ATF temperature sensor connector (A).

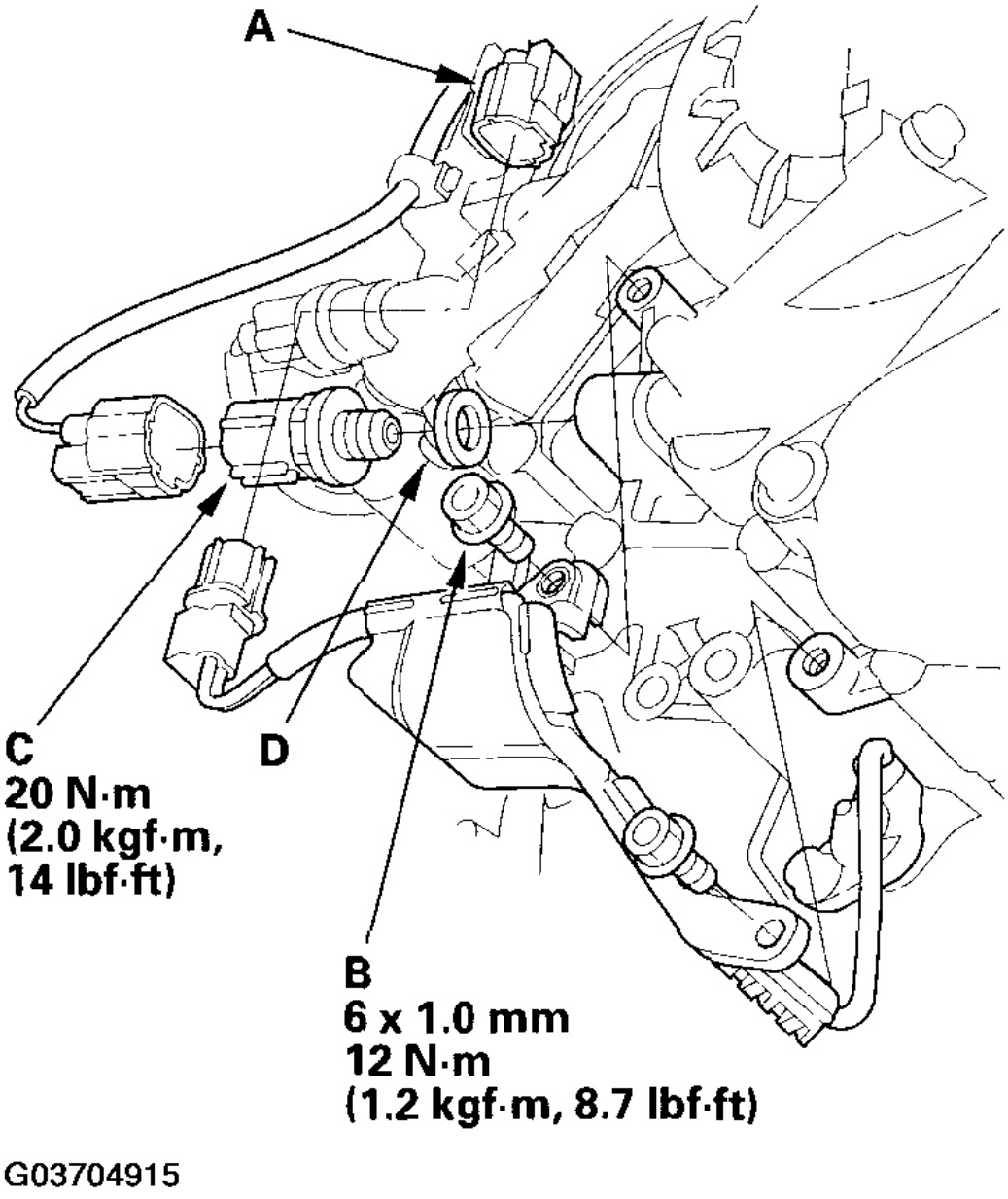


Fig. 221: Disconnecting ATF Temperature Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove ATF temperature sensor harness clamp bolt (B).
5. Disconnect the connector from the 3rd clutch transmission fluid pressure switch (C).
6. Install the new switch with a new sealing washer (D). Tighten the switch on the metal part,

not the plastic part.

7. Check the connector for water, oil, dust, or other particles inside it, and connect the connector securely.
8. Install ATF temperature sensor harness clamp bolt, and connect the ATF temperature sensor connector.
9. Install the splash shield and lower the vehicle.

4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT

1. Lift the vehicle up on a hoist or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Disconnect the connector from the 4th clutch transmission fluid pressure switch (A).

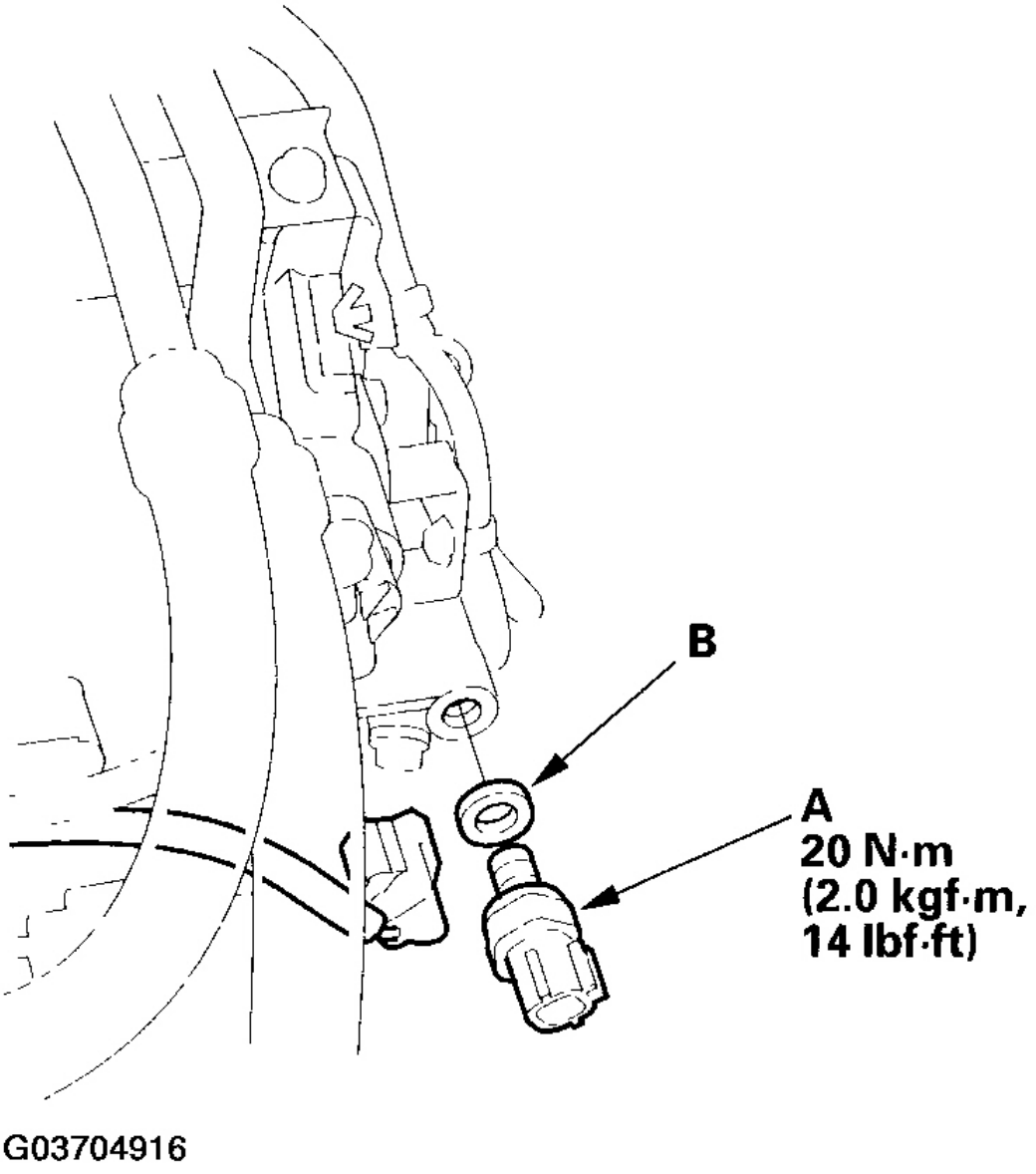


Fig. 222: Disconnecting Connector From 4th Clutch Transmission Fluid Pressure Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the new switch with a new sealing washer (B). Tighten the switch on the metal part, not the plastic part.
5. Check the connector for water, oil, dust, or other particles inside it, and connect the

connector securely.

6. Install the splash shield and lower the vehicle.

ATF TEMPERATURE SENSOR REPLACEMENT

1. Lift the vehicle up on a hoist, or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the front inner fender and splash shield.
3. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).

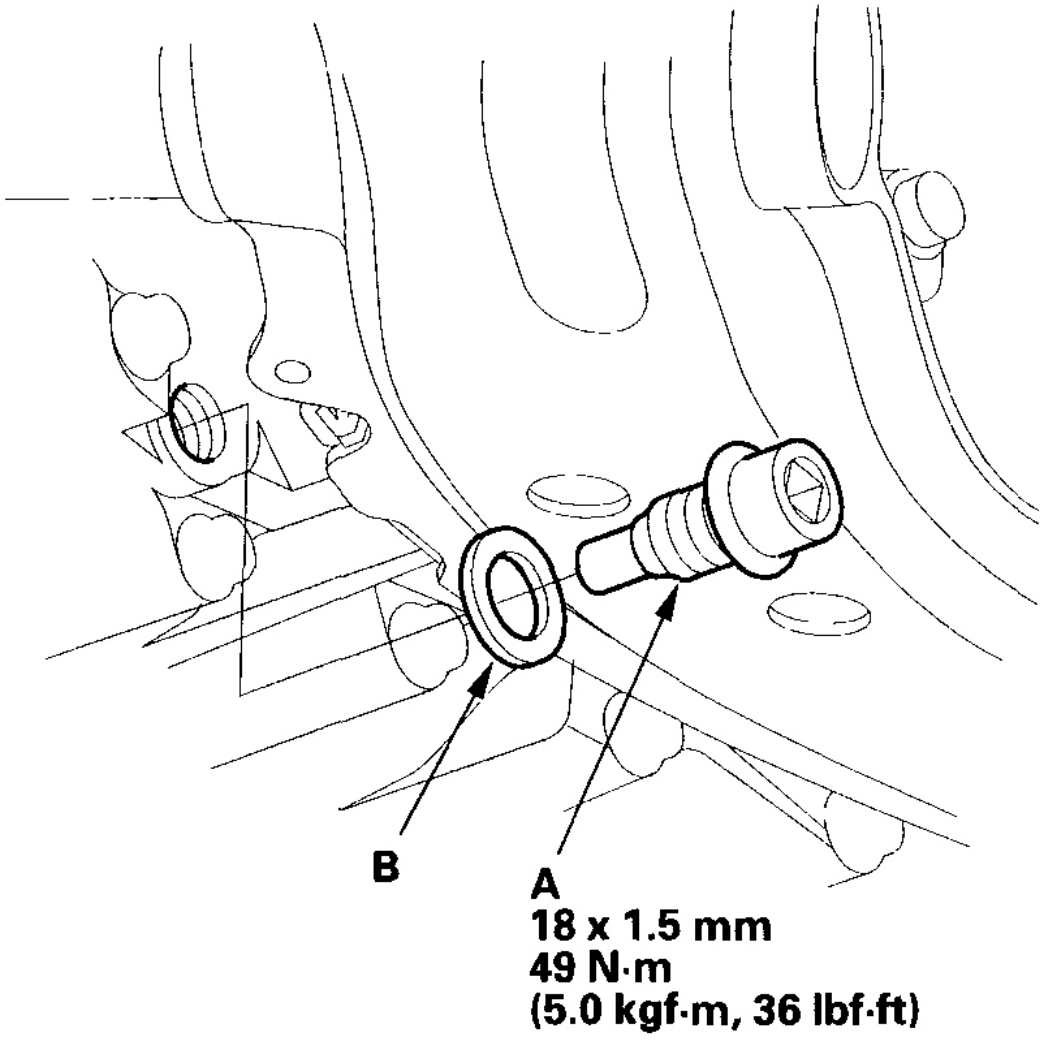


Fig. 223: Removing Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Reinstall the drain plug with a new sealing washer (B).
5. Place the transmission jack under the transmission, and remove the transmission lower mount nuts.

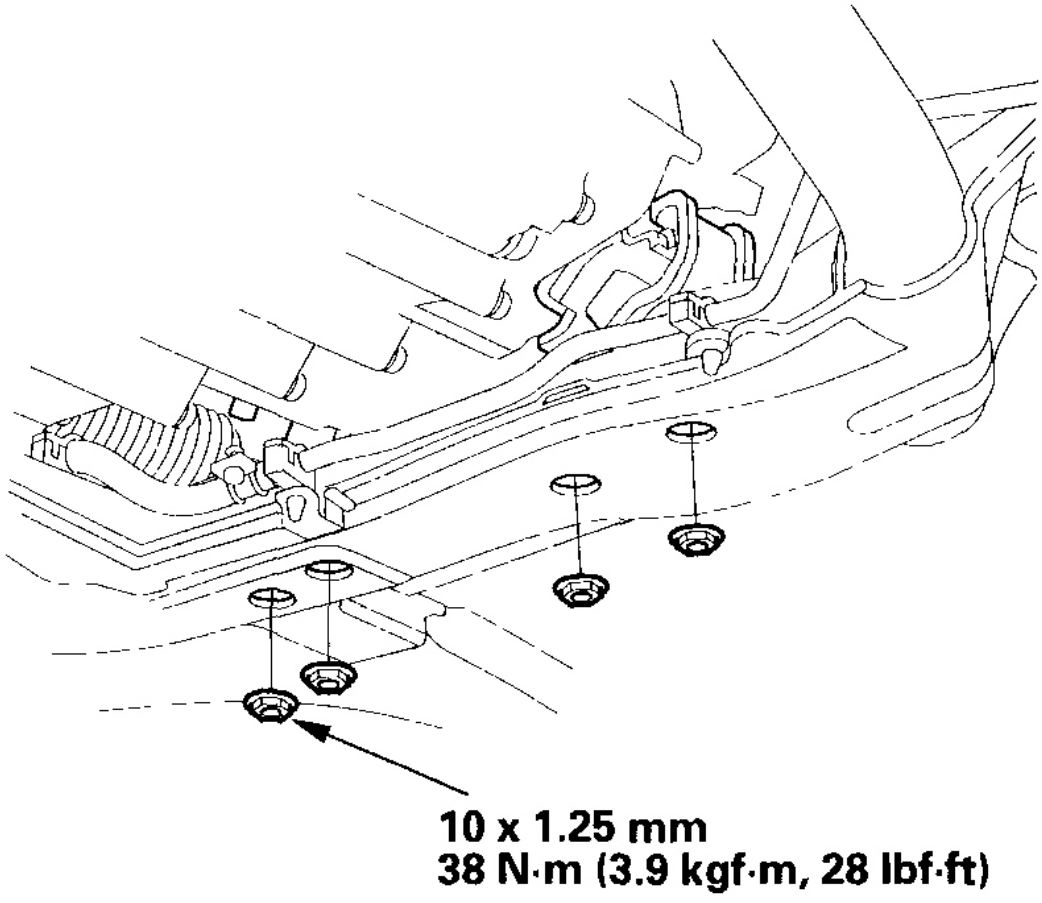


Fig. 224: Removing Transmission Lower Mount Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Lift up the transmission with the jack to create clearance between the transmission and front subframe.

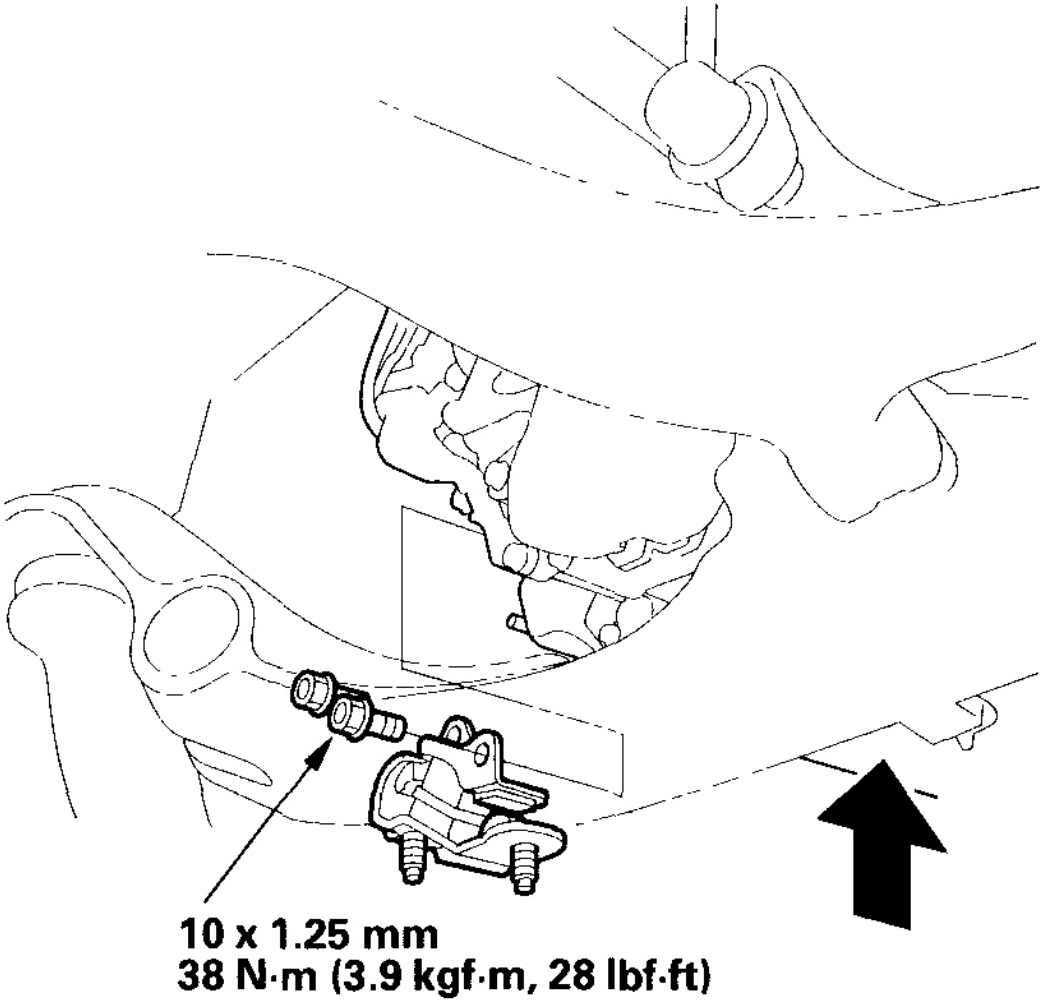


Fig. 225: Removing Transmission Lower Front Mount
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the transmission lower front mount.
8. Disconnect the ATF temperature sensor connector (A).

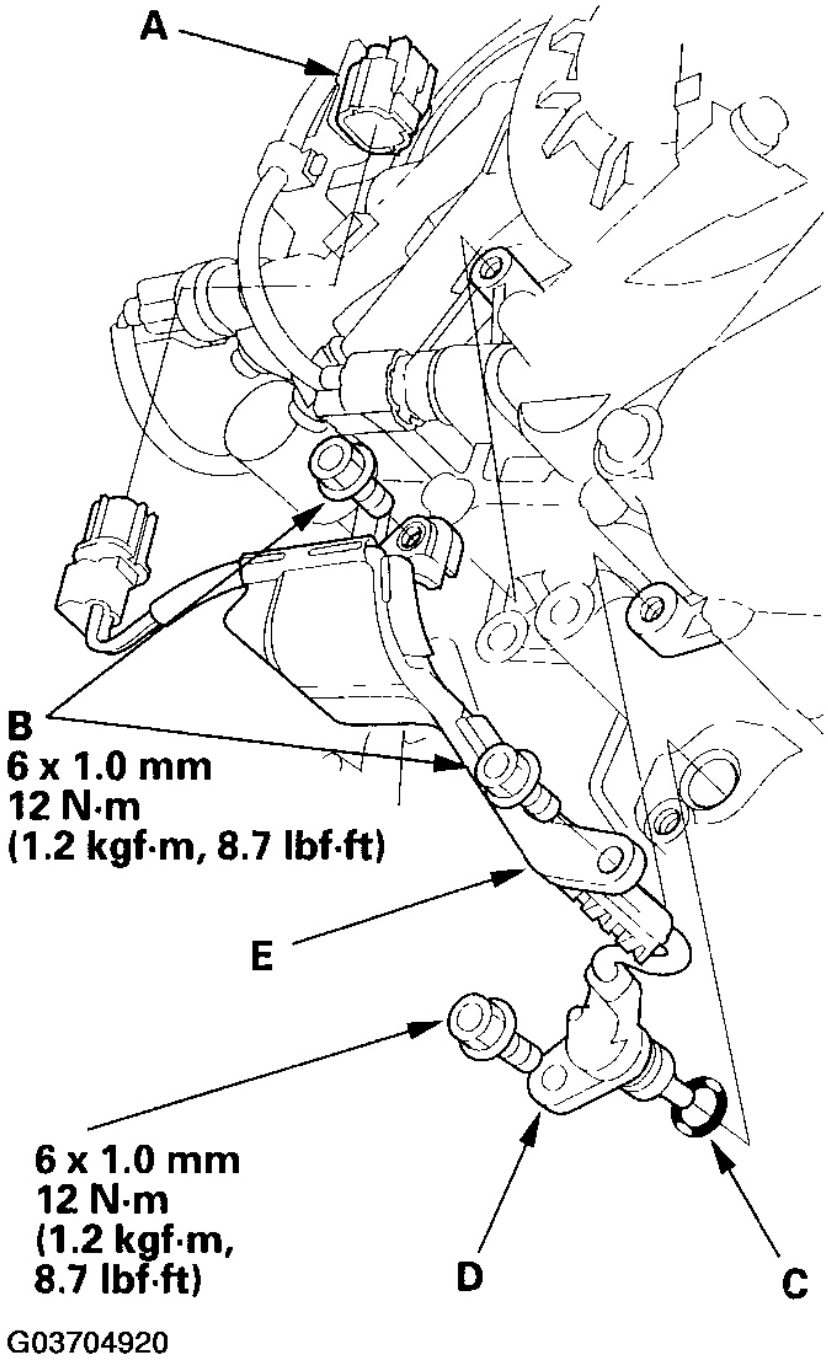


Fig. 226: Disconnecting ATF Temperature Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the ATF temperature sensor harness clamp bolt (B), and remove the sensor.

10. Install a new O-ring (C) on the new ATF temperature sensor (D), then install the sensor.
11. Secure the ATF temperature sensor harness clamp (E) with the bolts.
12. Check the connector for rust, dirt, or oil, then connect the connector securely.
13. Install the transmission lower front mount.
14. Lower the transmission, and install the transmission mount nuts.
15. Refill the transmission with the ATF (see step 5 in **ATF REPLACEMENT**).
16. Install the splash shield and front inner fender.

ATF 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 the level ground, and turn the engine off.

NOTE: Check the fluid level within 60-90 seconds after turning the engine off.

3. Remove the ATF dipstick (yellow loop) (A) from the dipstick guide pipe, and wipe it with a clean cloth.

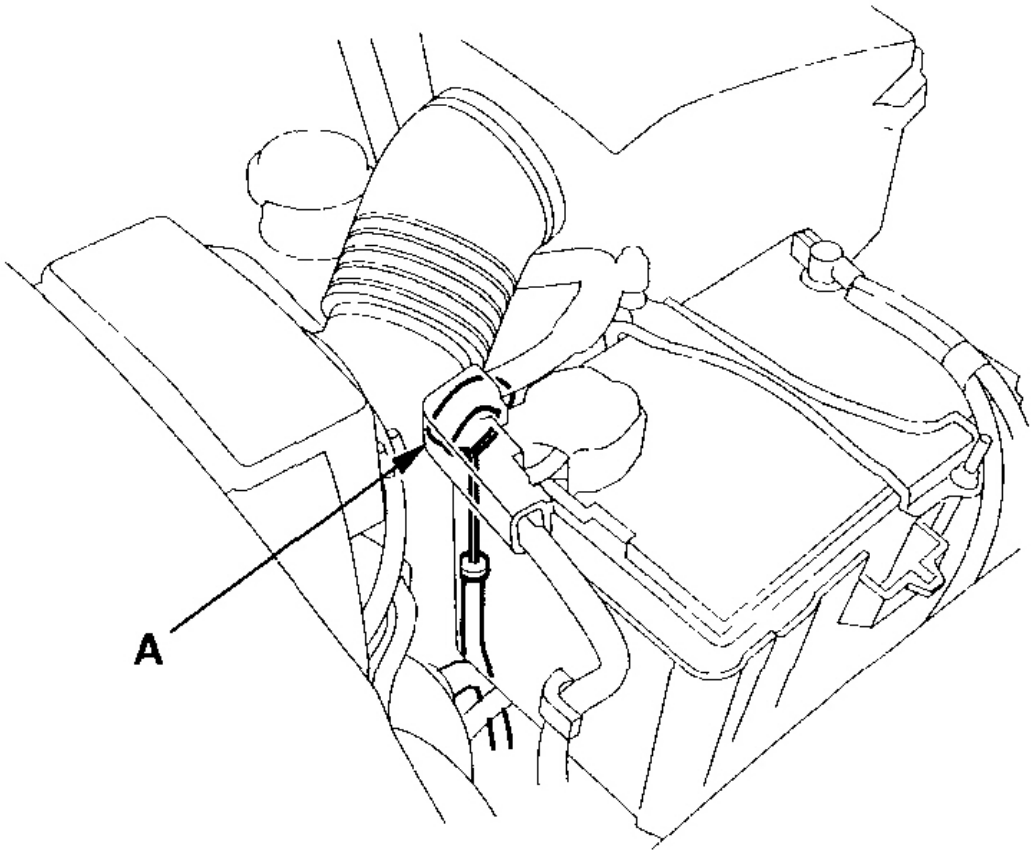


Fig. 227: Removing ATF Dipstick (Yellow Loop) From Dipstick Guide Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Insert the dipstick into the guide pipe.
5. Remove the dipstick and check the fluid level. It should be between the upper mark (A) and lower mark (B).

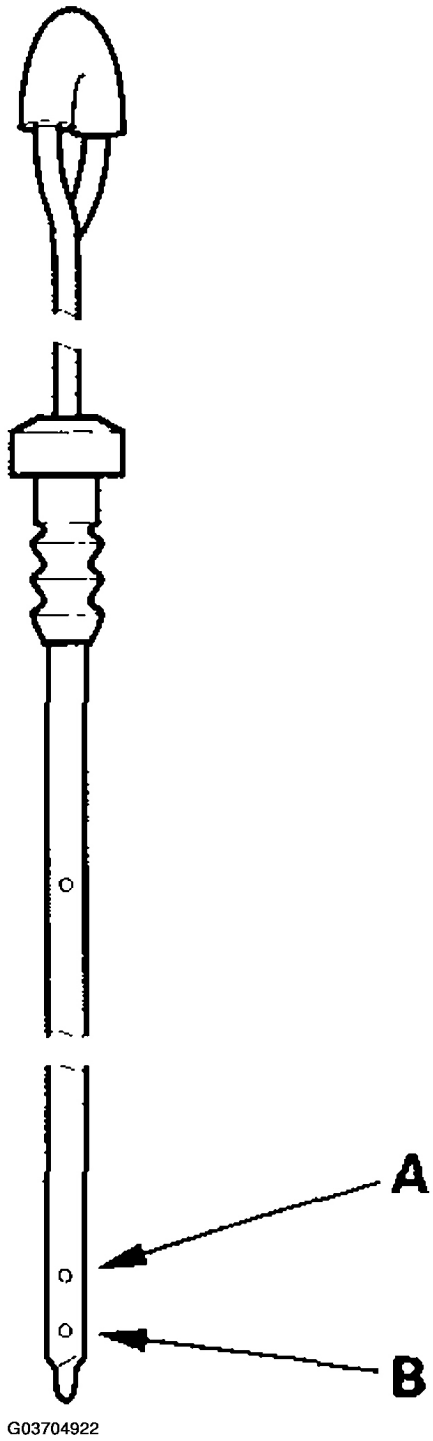


Fig. 228: Checking Dipstick Fluid Level Upper Mark And Lower Mark
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. If the level is below the lower mark, check for fluid leaks at the transmission, hose and line

joints. If a problem is found, fix it before filling the transmission. If the level is above the upper mark, drain the ATF to proper level (see step 3 in **ATF REPLACEMENT**).

7. If necessary, fill the transmission through the dipstick guide pipe opening (A) to bring the fluid level up to the upper mark. Always use Honda ATF-Z1 Automatic Transmission Fluid (ATF). Using a non-Honda ATF can affect shift quality.

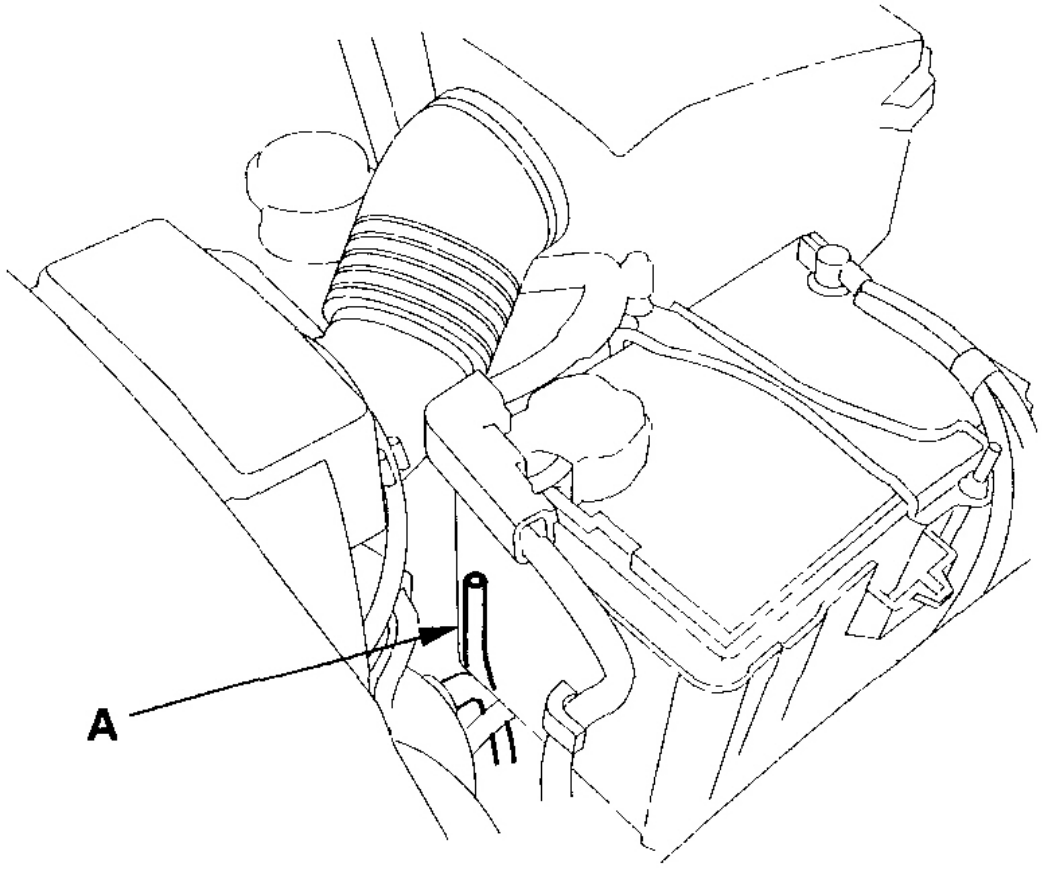


Fig. 229: Filling Transmission Through Dipstick Guide Pipe Opening To Bring Fluid Level Up To Upper Mark
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Insert the dipstick back into the dipstick guide pipe.

ATF REPLACEMENT

NOTE: Keep all foreign particles out of the transmission.

1. Bring the transmission up to normal operating temperature (the radiator fan comes on).
2. Park the vehicle on level ground, and turn the engine off.
3. Remove the ATF filler bolt and drain plug (A), and drain the automatic transmission fluid (ATF).

NOTE: If cooler cleaning is done, refer to ATF Cooler Cleaning (see ATF COOLER CLEANING).

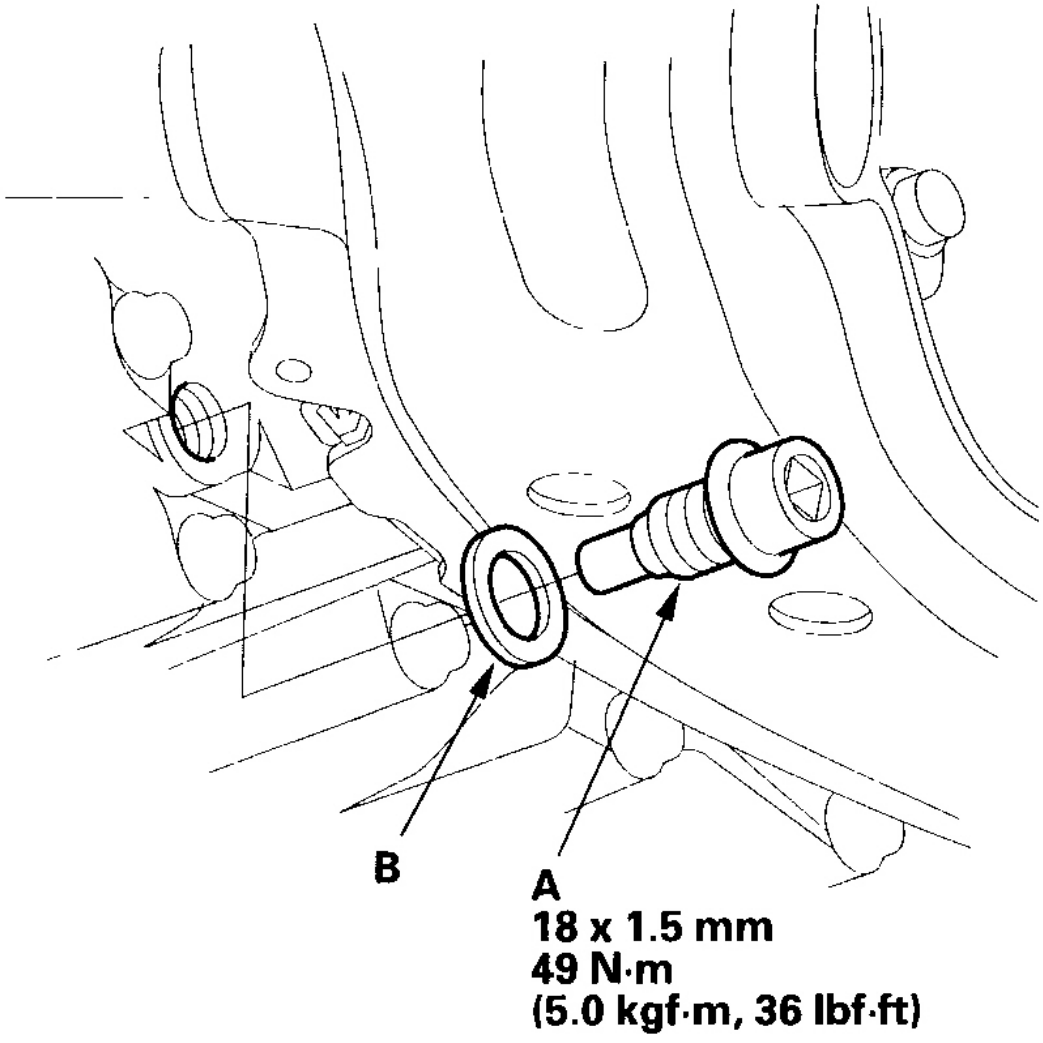


Fig. 230: Removing ATF Filler Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Reinstall the drain plug with a new sealing washer (B).
5. Refill the transmission with the ATF through the filler hole (A) to the upper mark on the dipstick. Always use Honda ATF-Z1 Automatic Transmission Fluid (ATF). Using a non-Honda ATF can affect shift quality.

Automatic Transmission Fluid Capacity:

3.1 L (3.3 US qt) at change
8.0 L (8.5 US qt) at overhaul

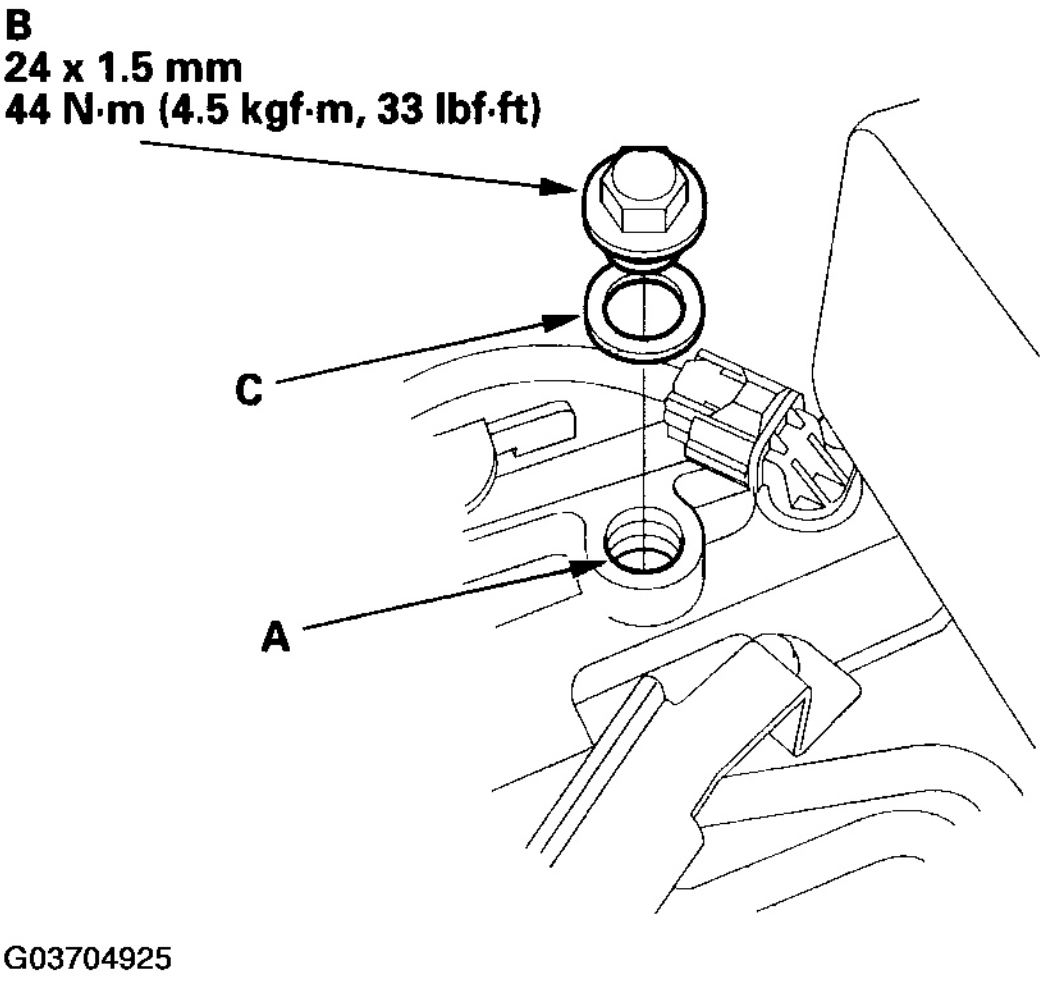


Fig. 231: Installing ATF Filler Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the ATF filler bolt (B) with a new sealing washer (C).

TRANSMISSION REMOVAL

Special Tools Required

- Engine support hanger, A and Reds AAR-T-12566

- Engine hanger adapter VSB02C000022
- Engine hanger balancer bar VSB02C000019
- Front subframe adapter VSB02C000016
- 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. Make sure you have the anti-theft codes for the radio and navigation system, then write down the customer's audio presets.
2. Lift the vehicle up on a lift, and make sure it is securely supported.
3. Remove the front inner fender and splash shield.
4. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).

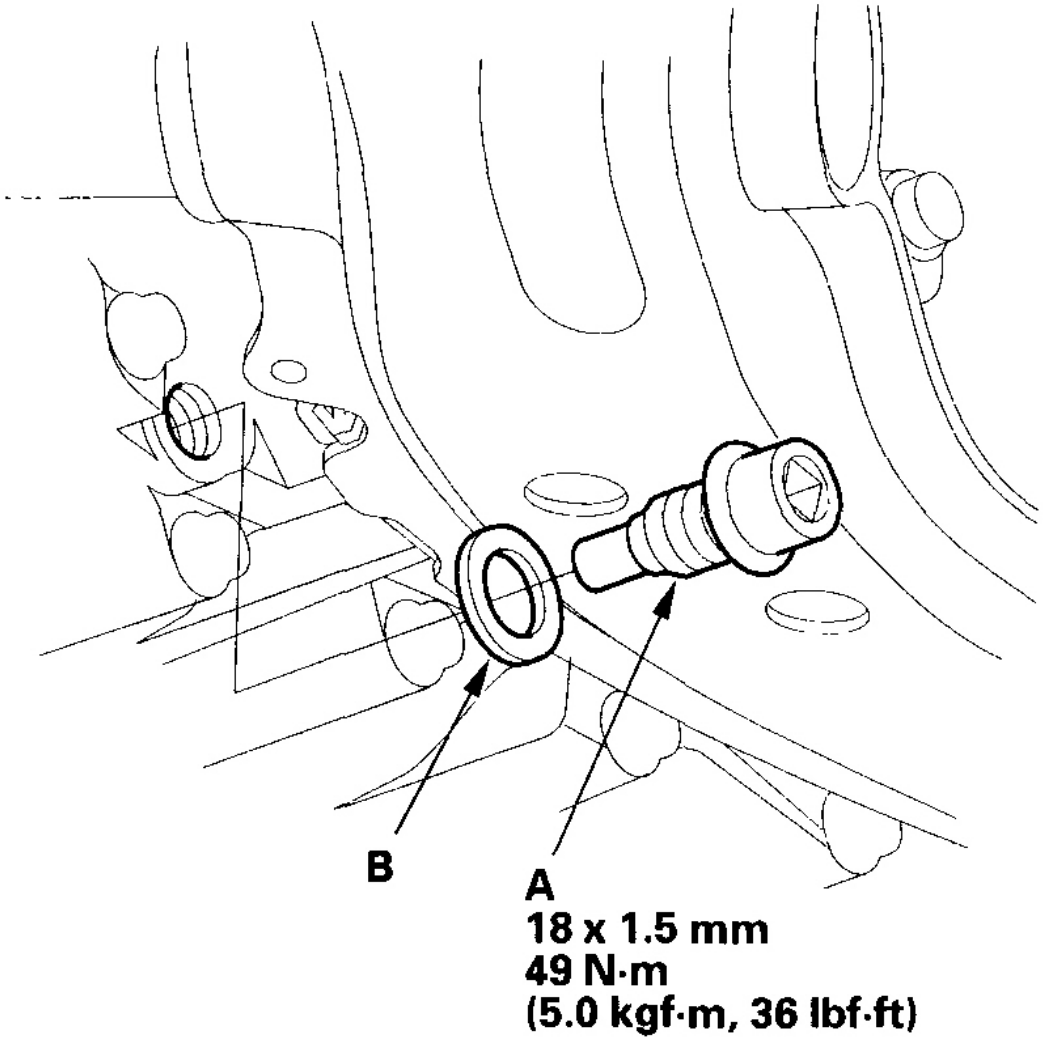


Fig. 232: Removing Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Reinstall the drain plug with a new sealing washer (B).
6. Disconnect the negative cable from the battery first, then disconnect the positive cable.
7. Remove the battery hold-down bracket, battery, and battery tray.
8. Remove the intake air duct and air cleaner housing.
9. Loosen the two bolts securing the rear of the battery base, and remove the two bolts securing the front of the battery base, then remove the battery base.

10. Disconnect the ATF cooler hoses (A) from the ATF cooler lines (B). Turn the ends of the ATF cooler hoses up to prevent ATF from flowing out, and plug the ATF cooler hoses and lines. Check for any signs of leakage at the hose joints.

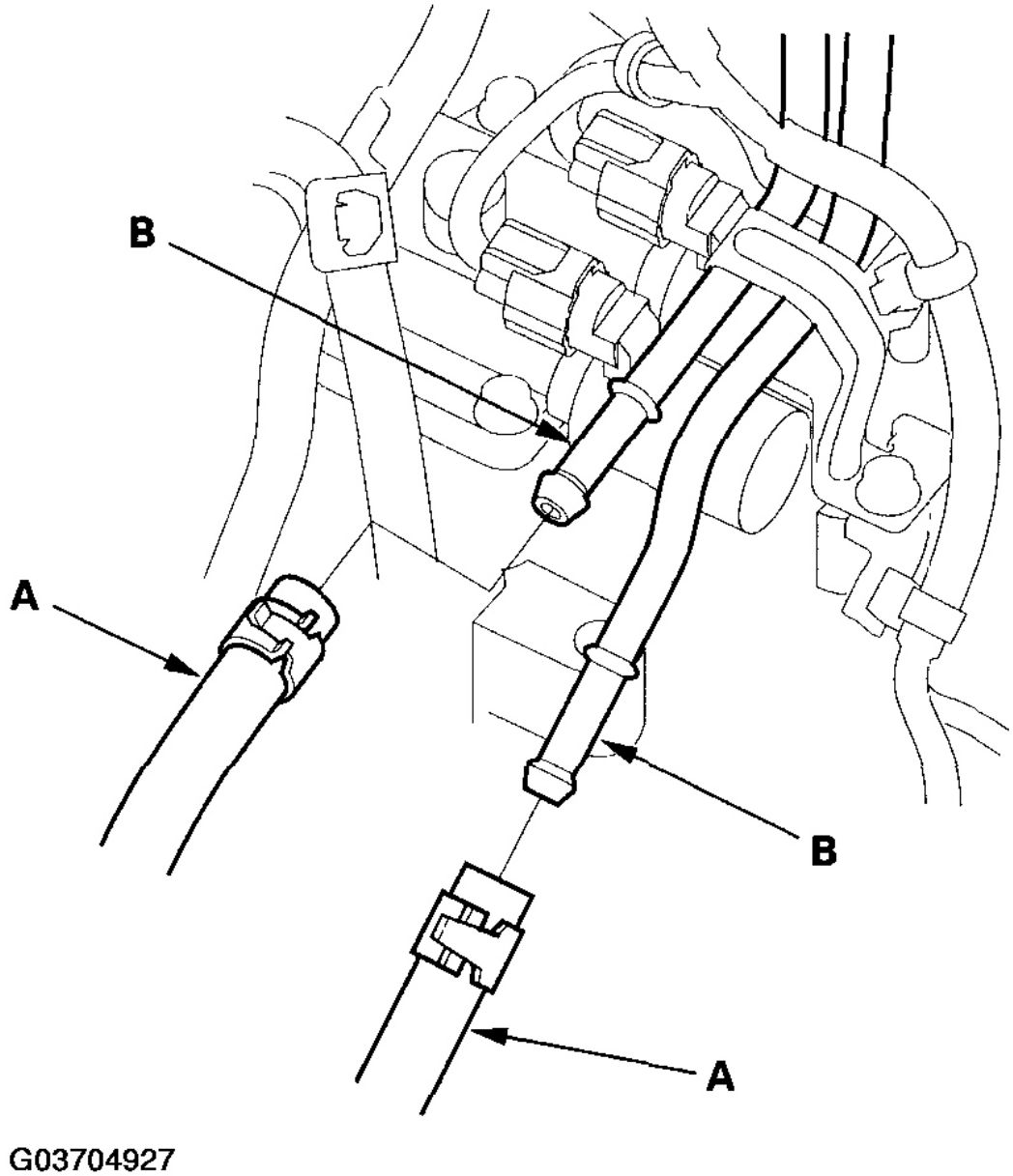


Fig. 233: Disconnecting ATF Cooler Hoses From ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Remove the start cables (A) from the starter (B), and remove the harness clamp (C) from the clamp bracket.

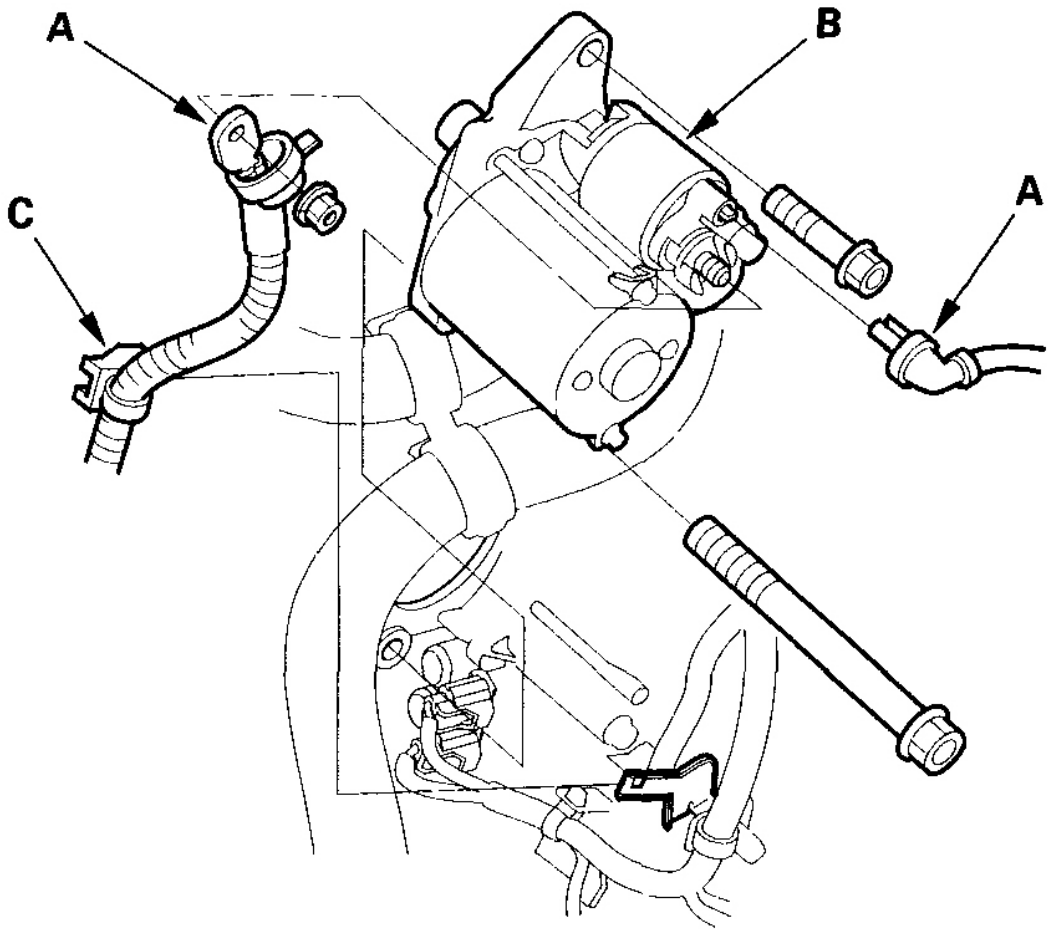


Fig. 234: Removing Start Cables From Starter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the starter.
13. Remove the harness clamps (A) from the clamp bracket (B), and disconnect the connectors from shift solenoid valve A (C), shift solenoid valve C (D), A/T clutch pressure control solenoid valve C (E), input shaft (mainshaft) speed sensor (F), and 4th clutch transmission fluid pressure switch (G).

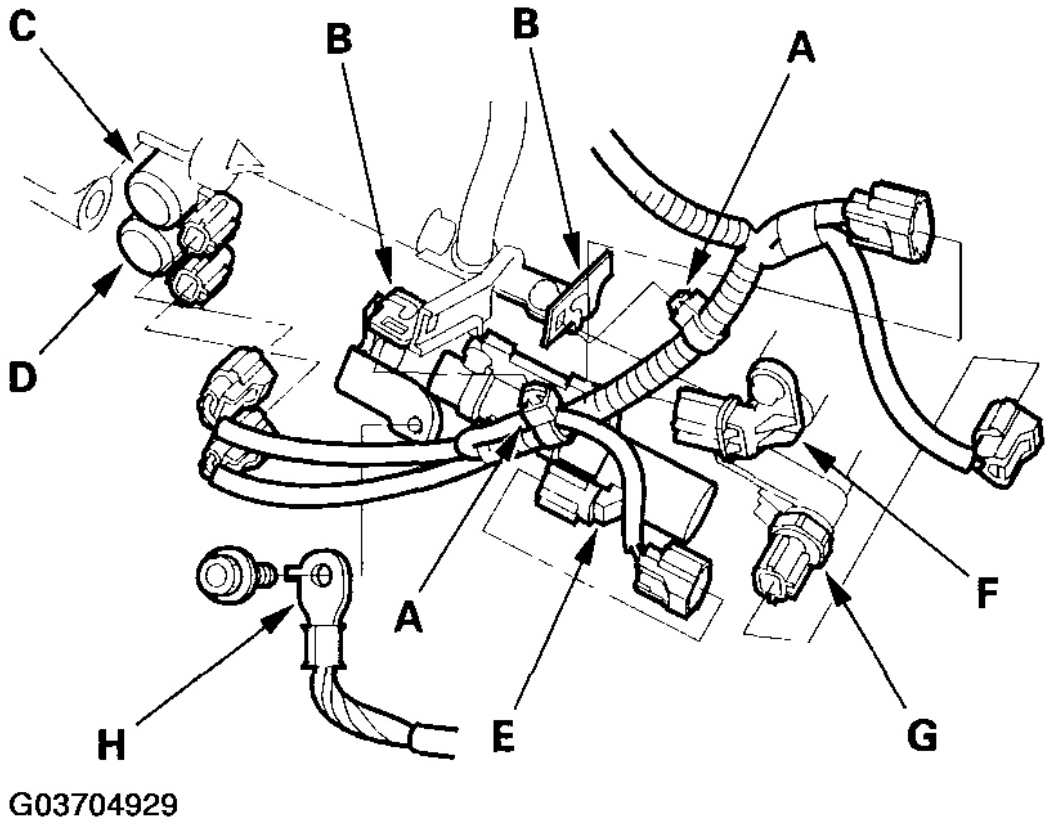


Fig. 235: Disconnecting Connectors From Shift Solenoid Valve A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the transmission ground terminal (H).
15. Disconnect transmission subharness 6P connector (A), and remove the harness clamps (B).

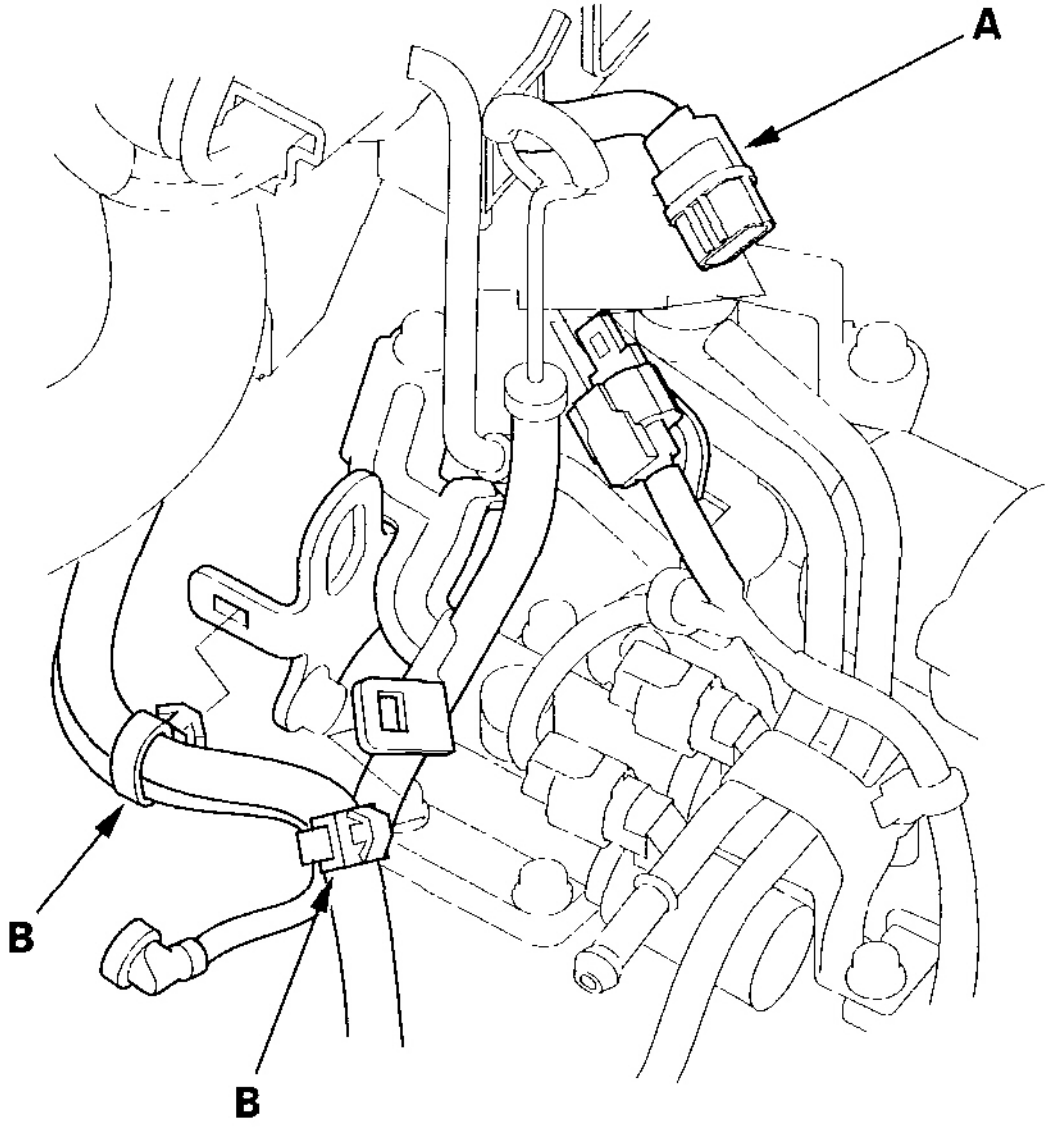


Fig. 236: Disconnecting Transmission Subharness 6P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Disconnect shift solenoid valve B connector and torque converter clutch solenoid valve connector (A).

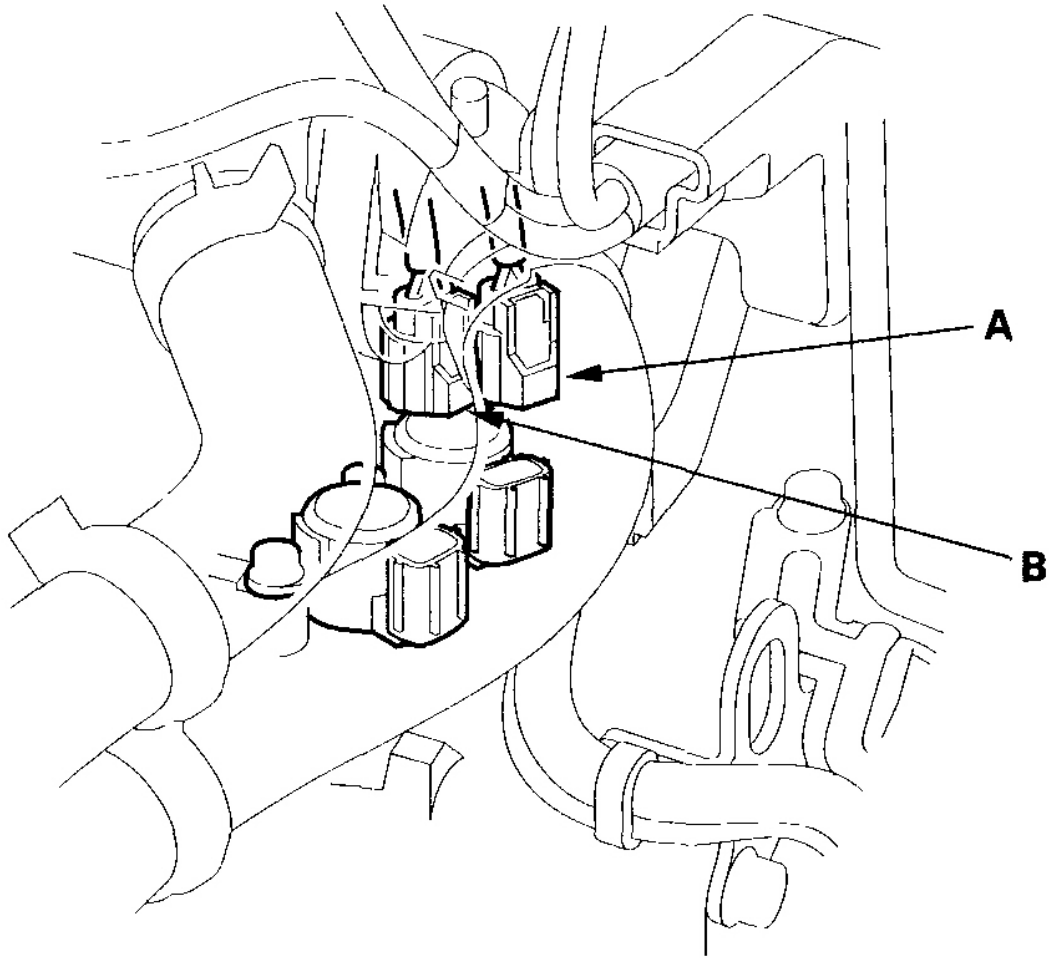


Fig. 237: Disconnecting Shift Solenoid Valve B Connector And Torque Converter Clutch Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Remove the transmission range switch connector (A) from its bracket (B), and disconnect it.

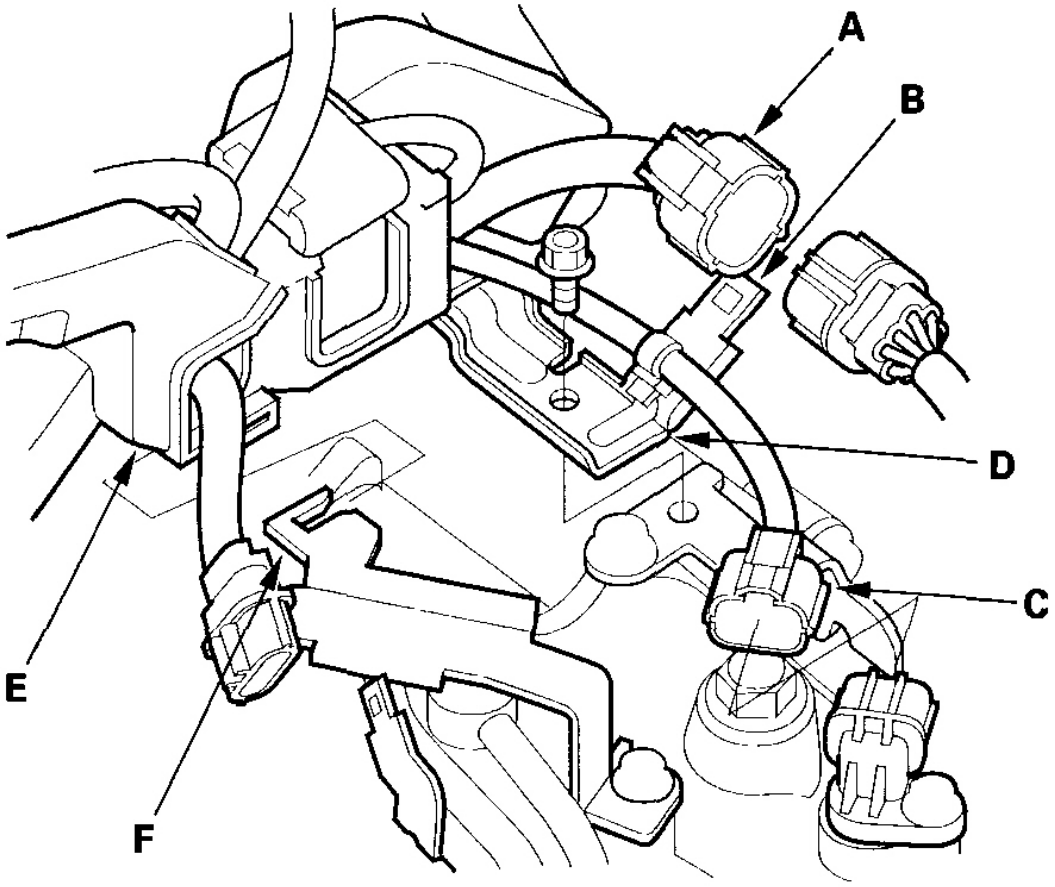
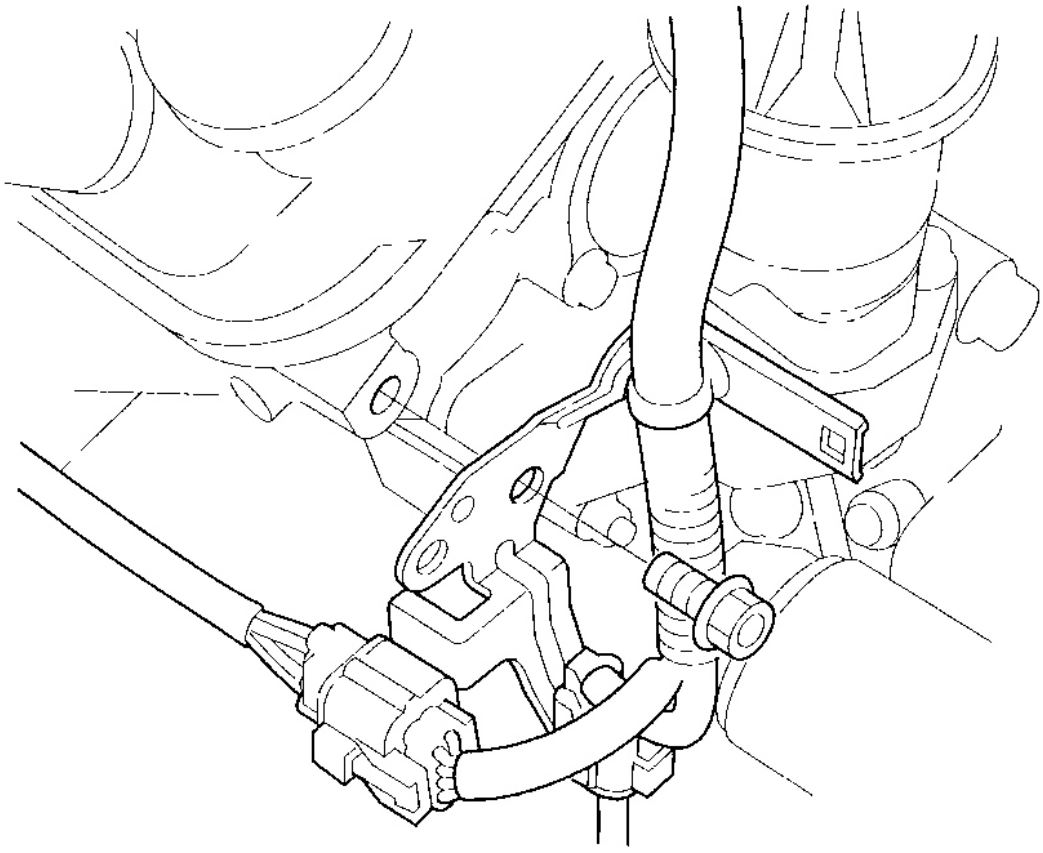


Fig. 238: Removing Transmission Range Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

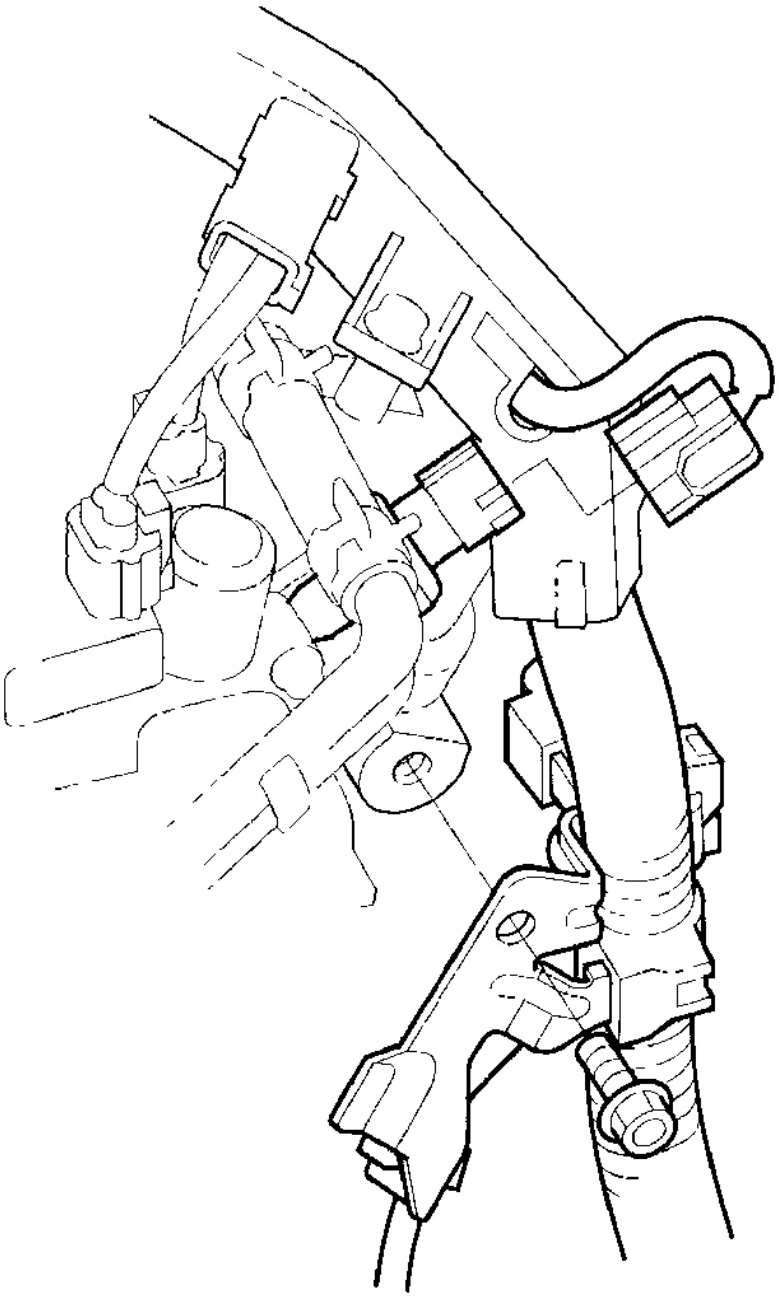
18. Disconnect the output shaft (countershaft) speed sensor connector (C).
19. Remove the bolt securing the harness cover bracket (D), and separate the harness cover (E) from the cover bracket (F).
20. Remove the connector bracket from the engine front cylinder head; use the bracket bolt hole to attach engine hanger balancer bar front arm.



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Fig. 239: Removing Connector Bracket From Engine Front Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Remove the harness clamp bracket from the engine rear cylinder head; use the bracket bolt hole to attach engine hanger balancer bar rear arm.



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Fig. 240: Removing Harness Clamp Bracket From Engine Rear Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Remove the front bulkhead cover.

23. Install the engine hanger adapters (VSB02C000022) on the end of the engine support beams (A), then install the engine support hanger (AAR-T-12566) with the adapters to the vehicle.

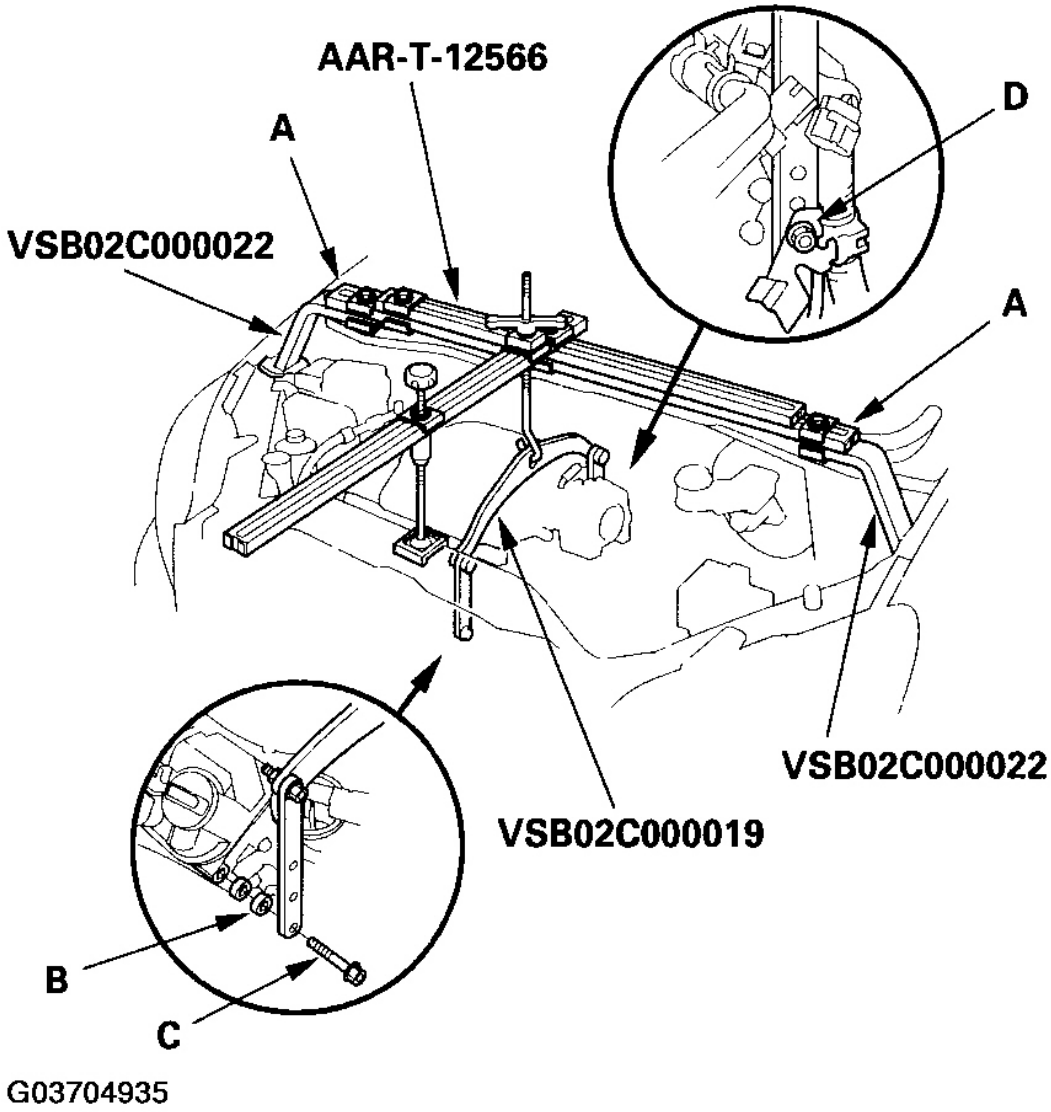
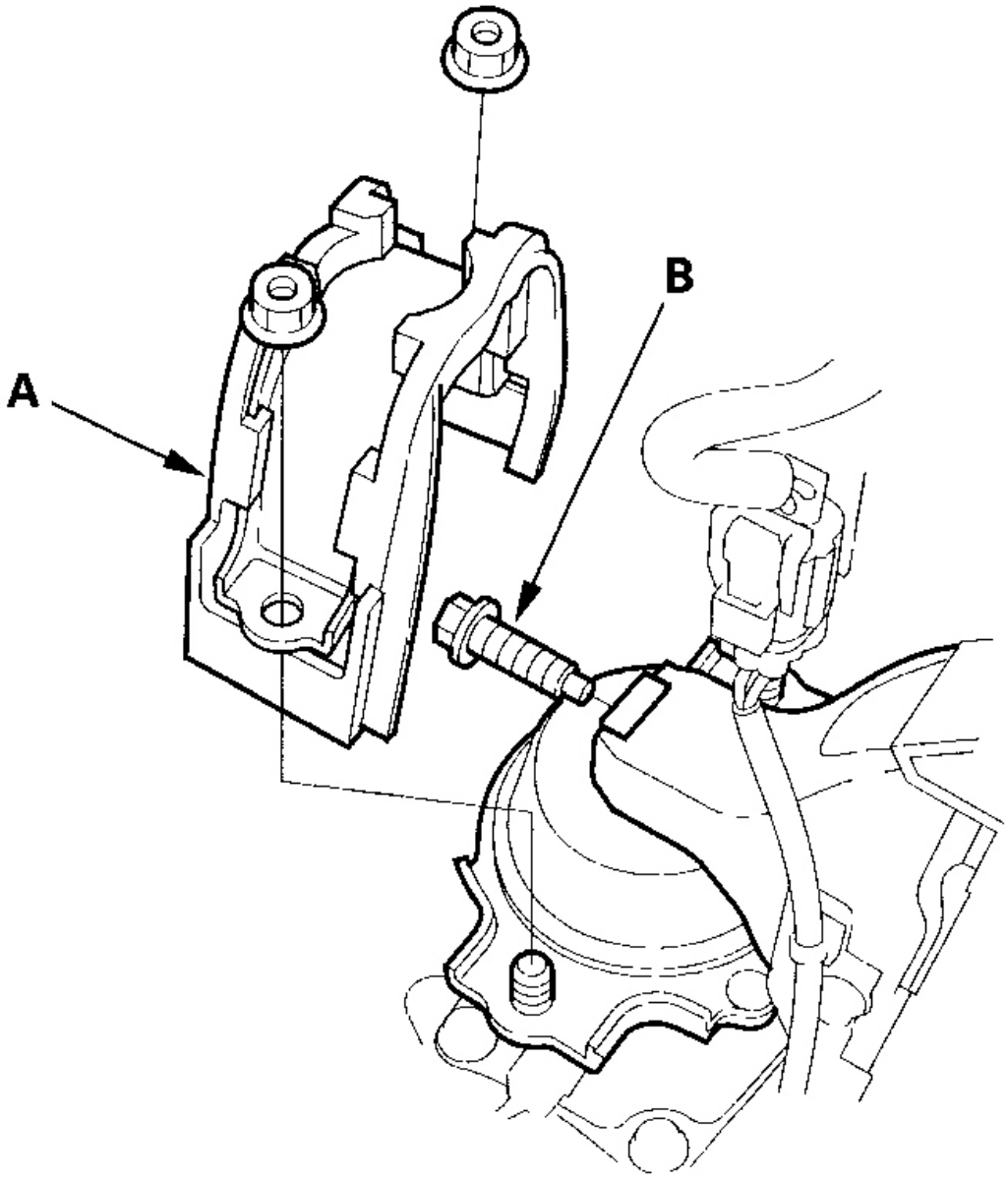


Fig. 241: Installing Engine Hanger Adapters On End Of Engine Support Beams
Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Lift and support the engine with the engine support hanger and engine balancer bar (VSB02C000019). Attach the front arm to the front cylinder head with a spacer (B) and the 10 x 1.25 mm bolt (C). Attach the rear arm to the rear cylinder head with the 8 x 1.25 mm

bolt (D).

25. For model with active engine mount control system: Remove the front engine mount stop (A), and remove the front engine mount bolt (B).



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Fig. 242: Removing Front Engine Mount Stop
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. For model with engine mount control system: Remove the front engine mount stop (A), and vacuum tube clamp bracket (B), and remove the front engine mount bolt (C).

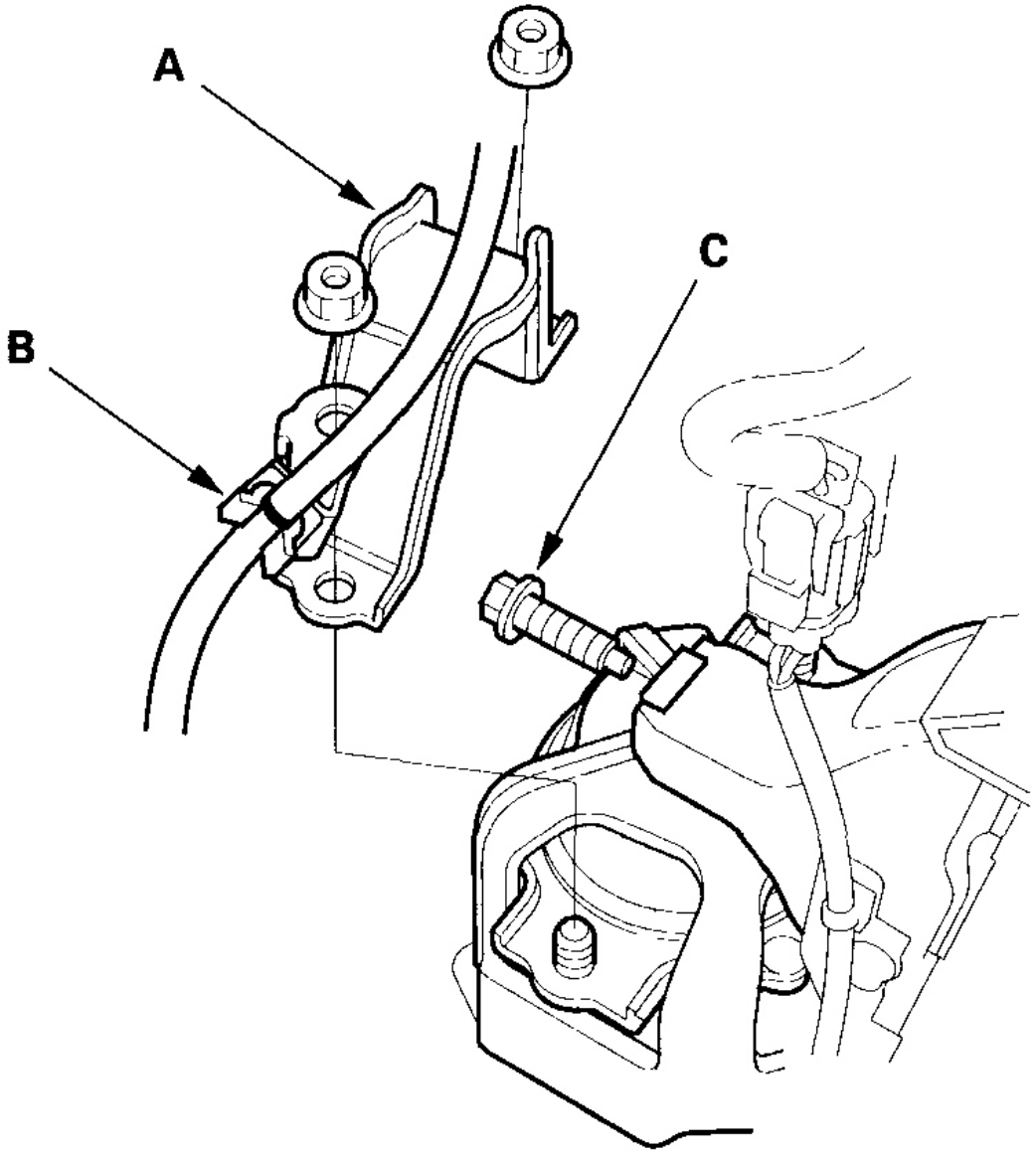


Fig. 243: Removing Front Engine Mount Stop And Vacuum Tube Clamp Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Remove the exhaust pipe A and its mount (B).

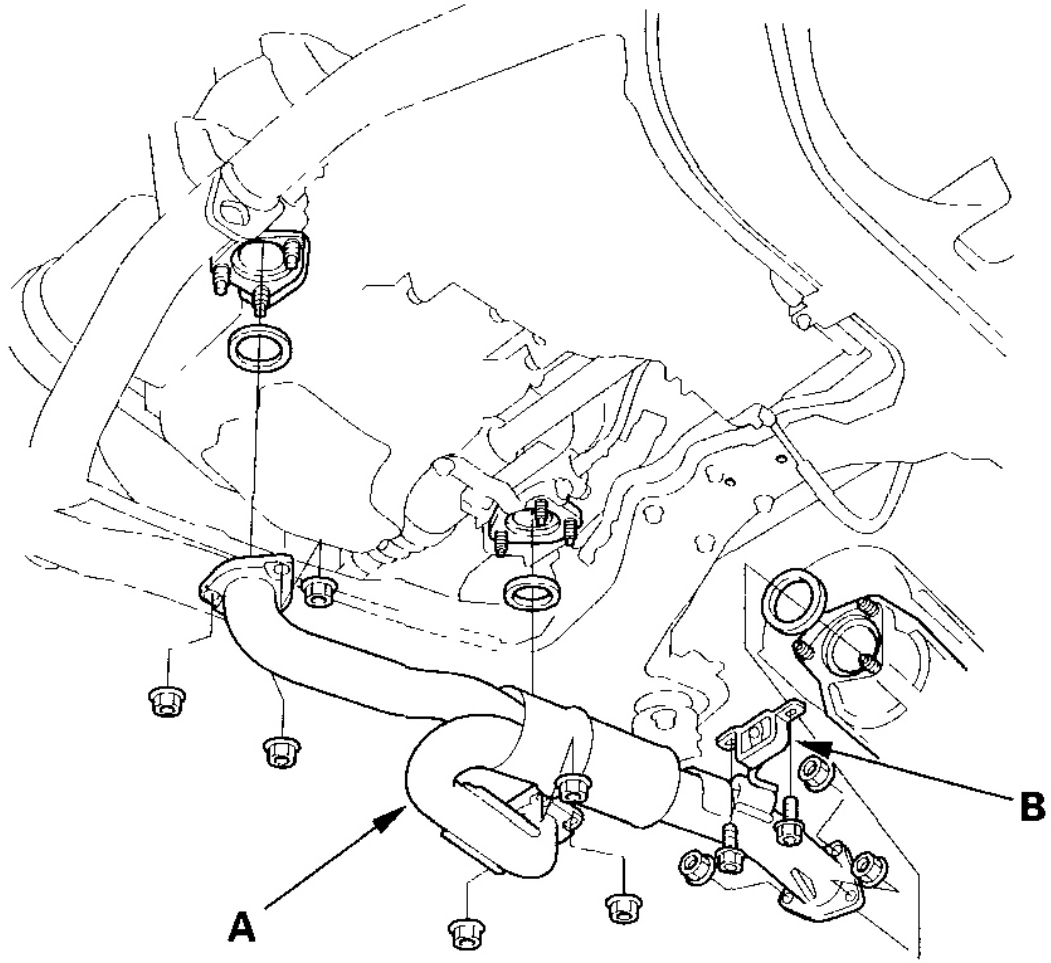


Fig. 244: Removing Exhaust Pipe A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Remove the lock pins (A) and castle nuts (B), and separate the lower arms (C) from the knuckles (D), see step 13 in **KNUCKLE/HUB REPLACEMENT** .

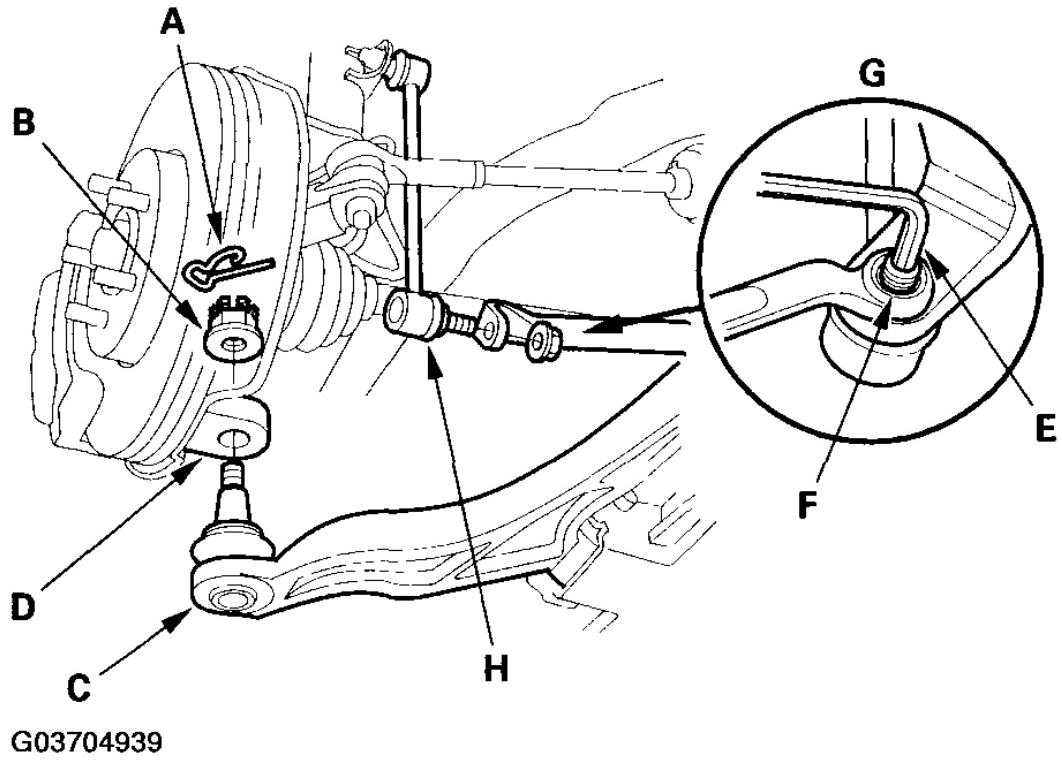


Fig. 245: Separating Lower Arms From Knuckles
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Insert a 6 mm Allen wrench (E) in the top of the joint pin (F), remove the nuts (G), then separate the stabilizer links (H).
30. Remove the bolts securing the shift cable holder (A), then remove the shift cable cover (B).

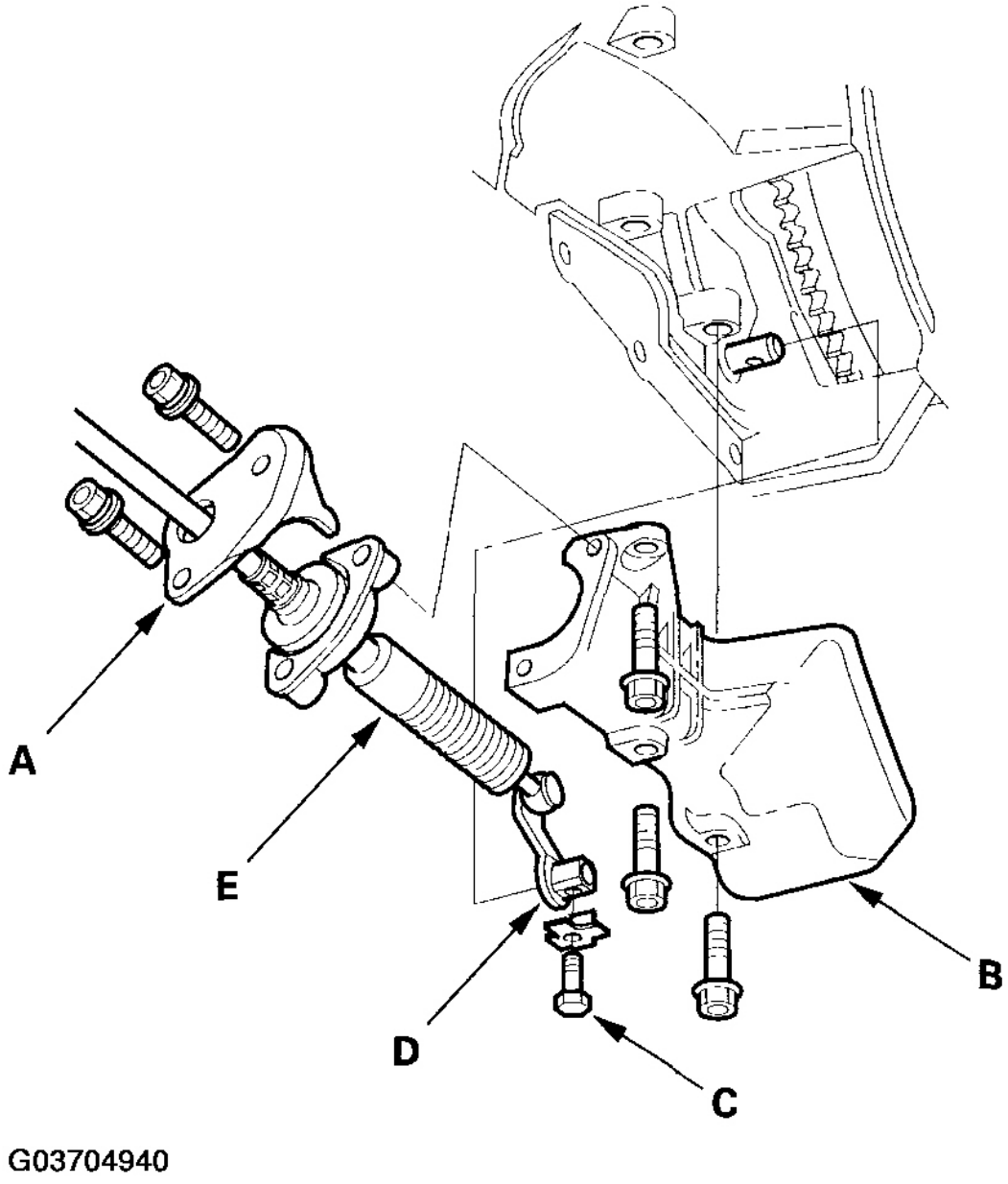


Fig. 246: Removing Shift Cable Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

31. Remove the lock bolt (C) securing the control lever (D), and remove the shift cable (E) and the control lever. Do not bend the shift cable excessively.
32. Install a 6 x 1.0-14 mm bolt (A) and nut (B) on the shift cable cover (C), and reinstall the

shift cable cover to the torque converter housing. If you don't do this, the bolt head of the cable cover may prevent you from removing the torque converter during transmission removal.

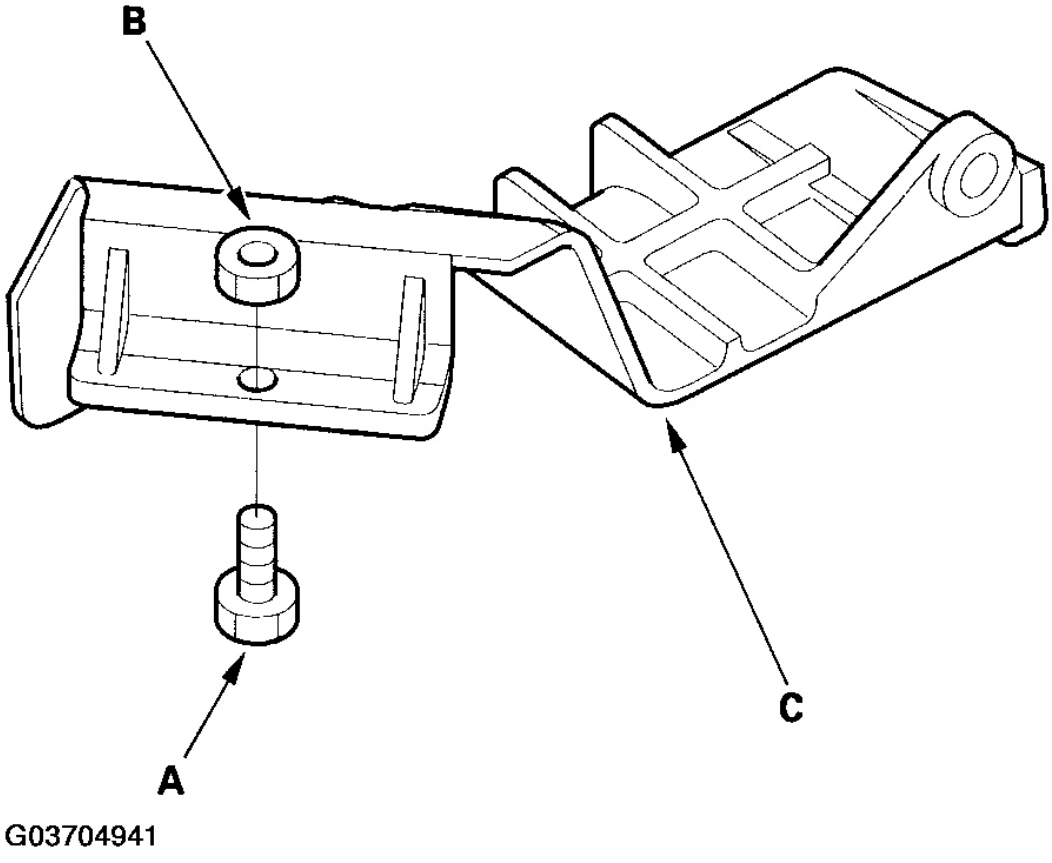


Fig. 247: Installing Shift Cable Cover Bolt And Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

33. Remove the torque converter cover (A), and remove the drive plate bolts (B) (8) while rotating the crankshaft pulley.

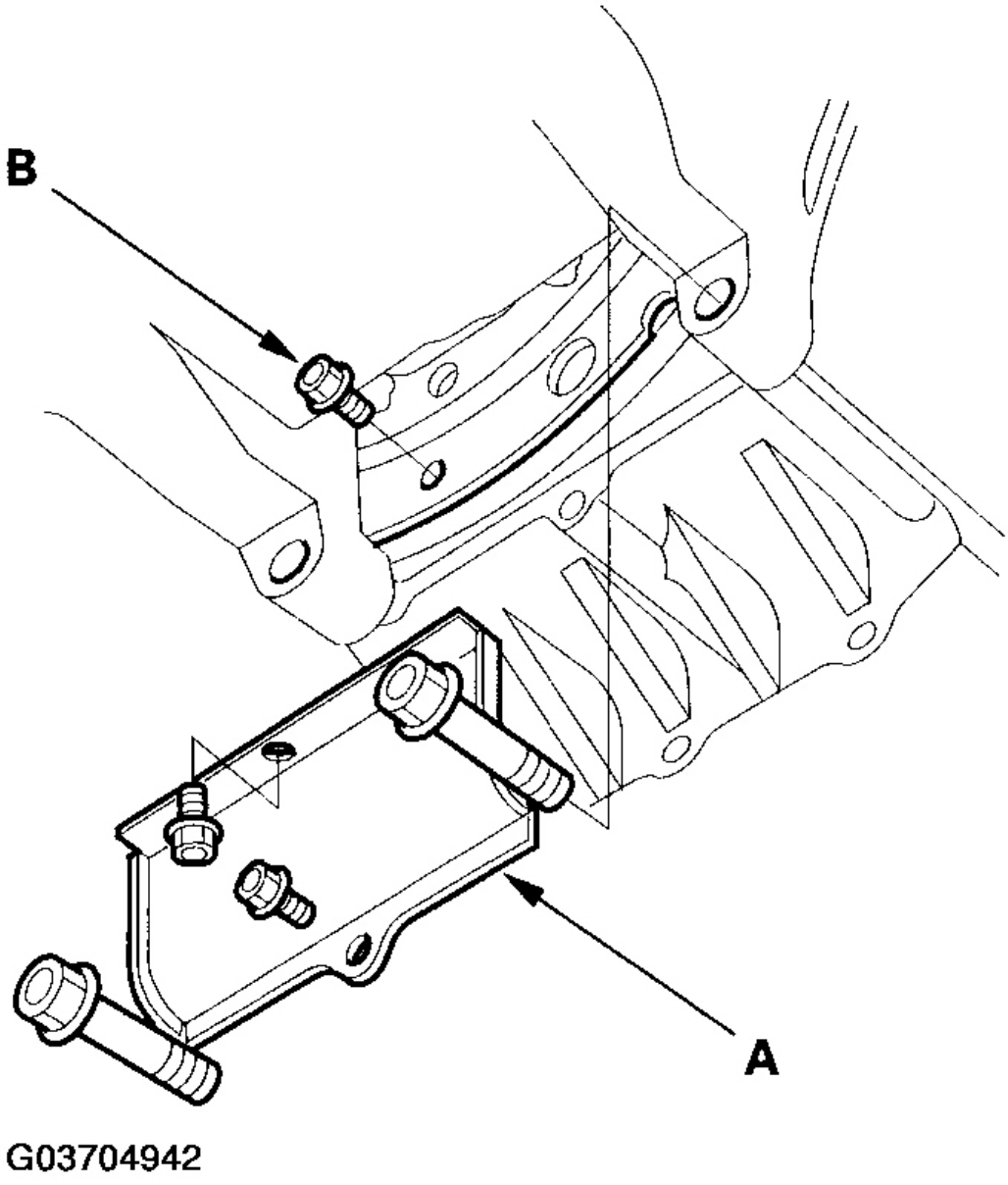


Fig. 248: Removing Torque Converter Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Remove the engine-to-torque converter housing mounting bolts.
35. Remove the power steering fluid line bracket bolts (A), and remove the steering gearbox mounting bolt (B).

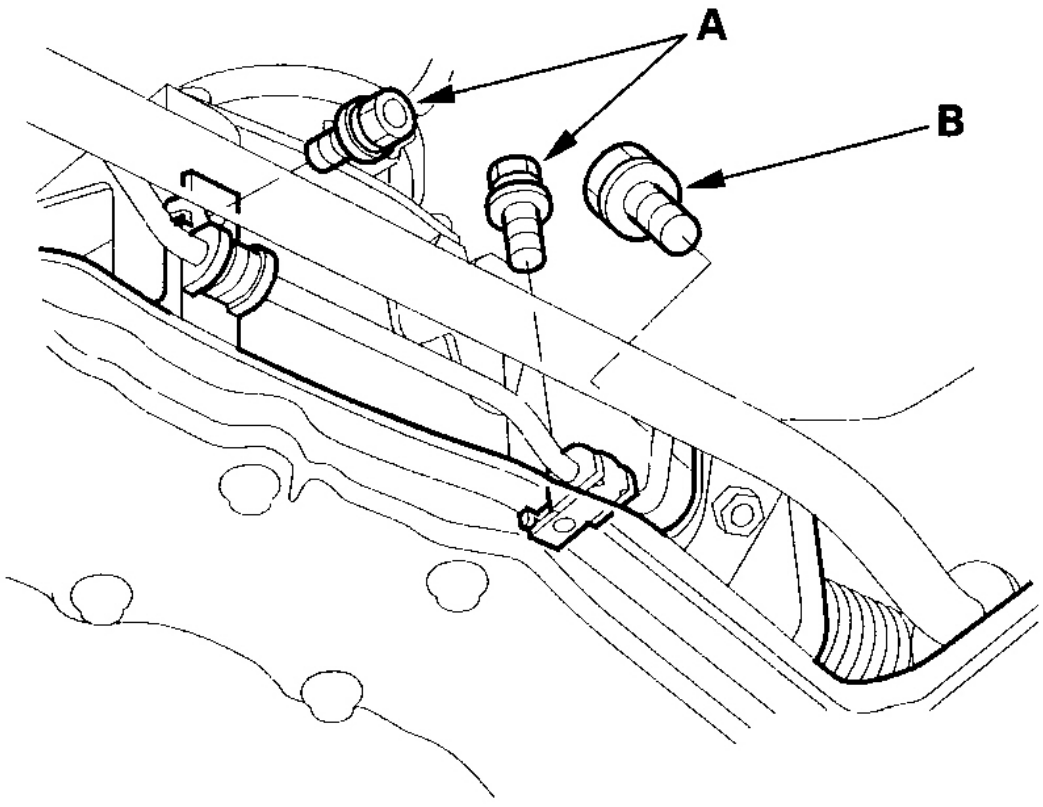


Fig. 249: Removing Power Steering Fluid Line Bracket Bolts And Steering Gearbox Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Remove the steering gearbox mounting bolt (A) and nut (B), and remove the steering gearbox stiffener (C).

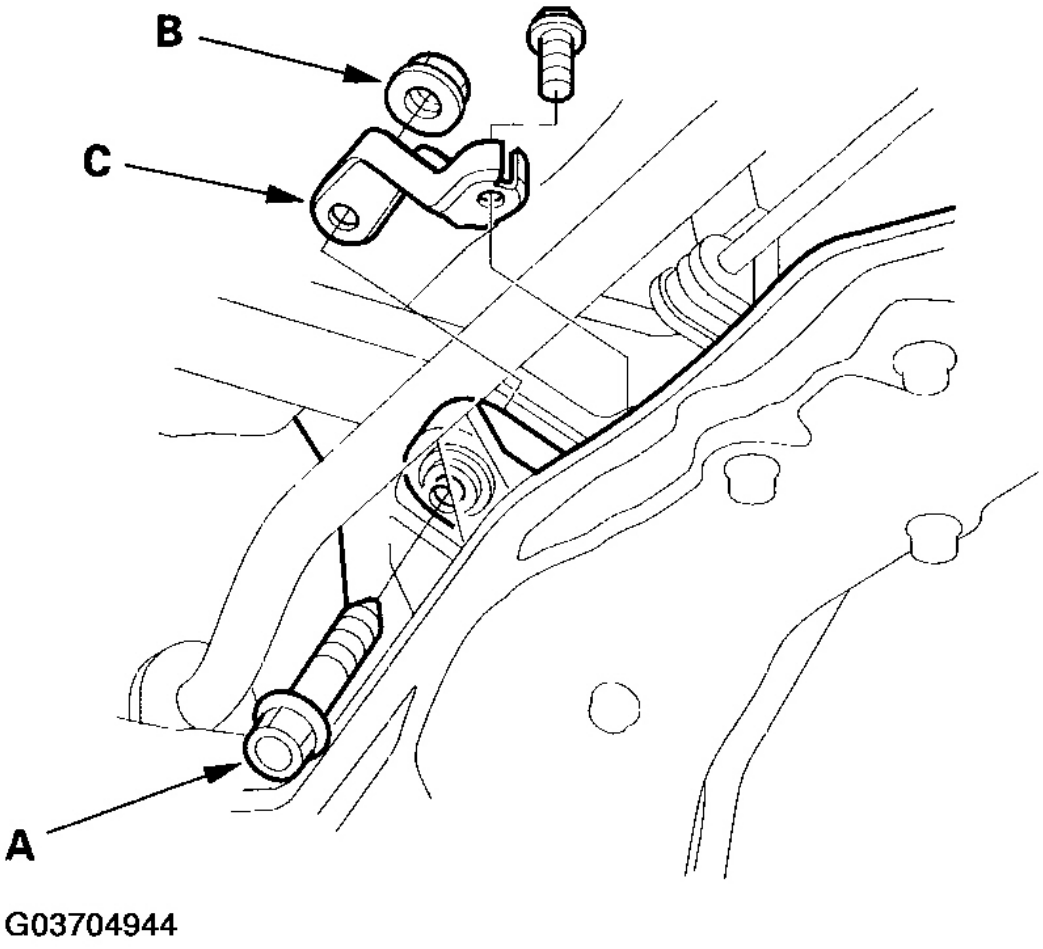


Fig. 250: Removing Steering Gearbox Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

37. Remove the heat shield (A), and remove the steering gearbox mounting bolt (B).

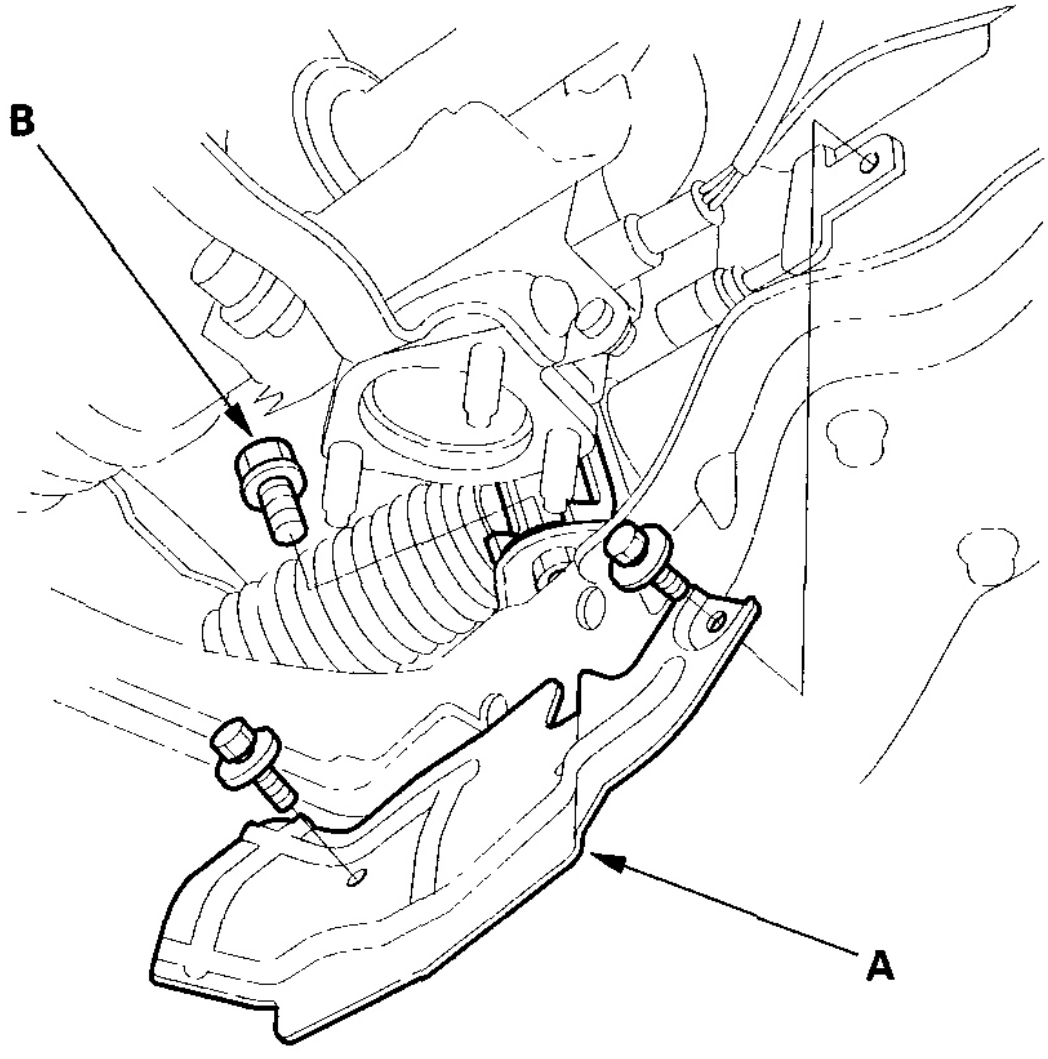


Fig. 251: Removing Heat Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Remove the steering gearbox mounting bolt (A) and nut (B), and remove the steering gearbox stiffener (C).

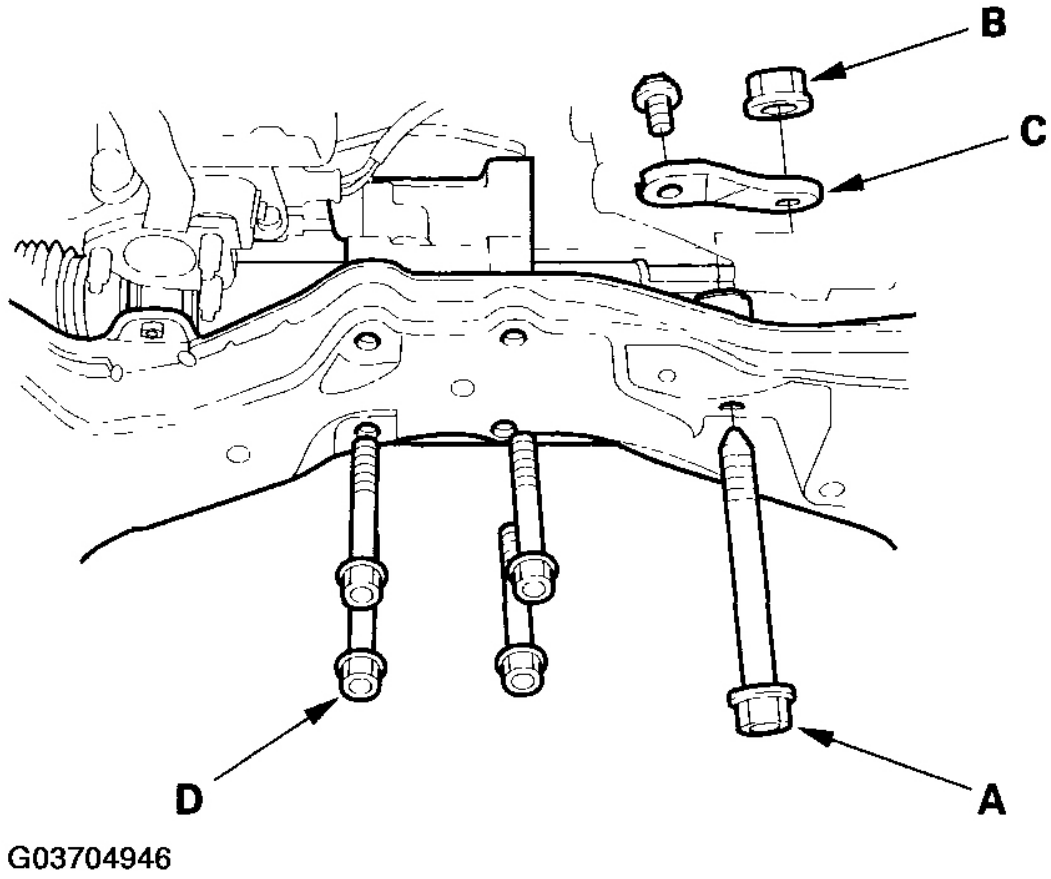


Fig. 252: Removing Steering Gearbox Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

39. Remove the rear mount mounting bolts (D).
40. Unclamp the power steering fluid line clamps (A) on the front subframe.

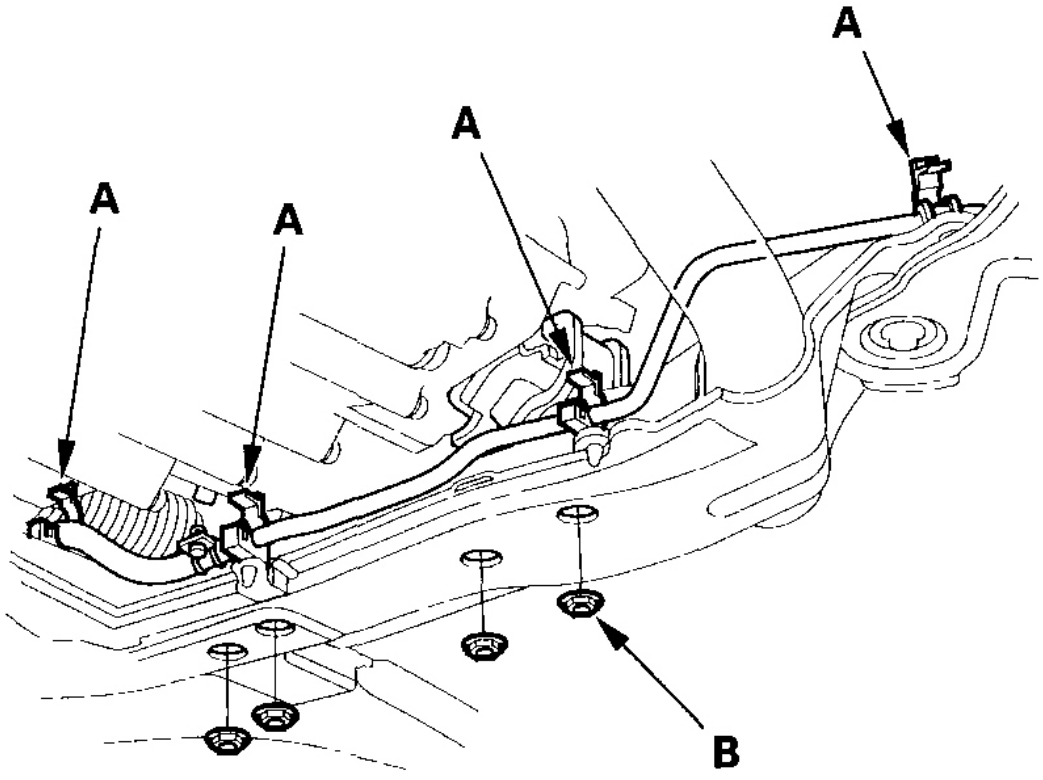


Fig. 253: Unclamping Power Steering Fluid Line Clamps On Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

41. Remove the transmission lower mount nuts (B).
42. For model with active engine mount control system: Disconnect engine mount control solenoid valve connector at the front engine mount.

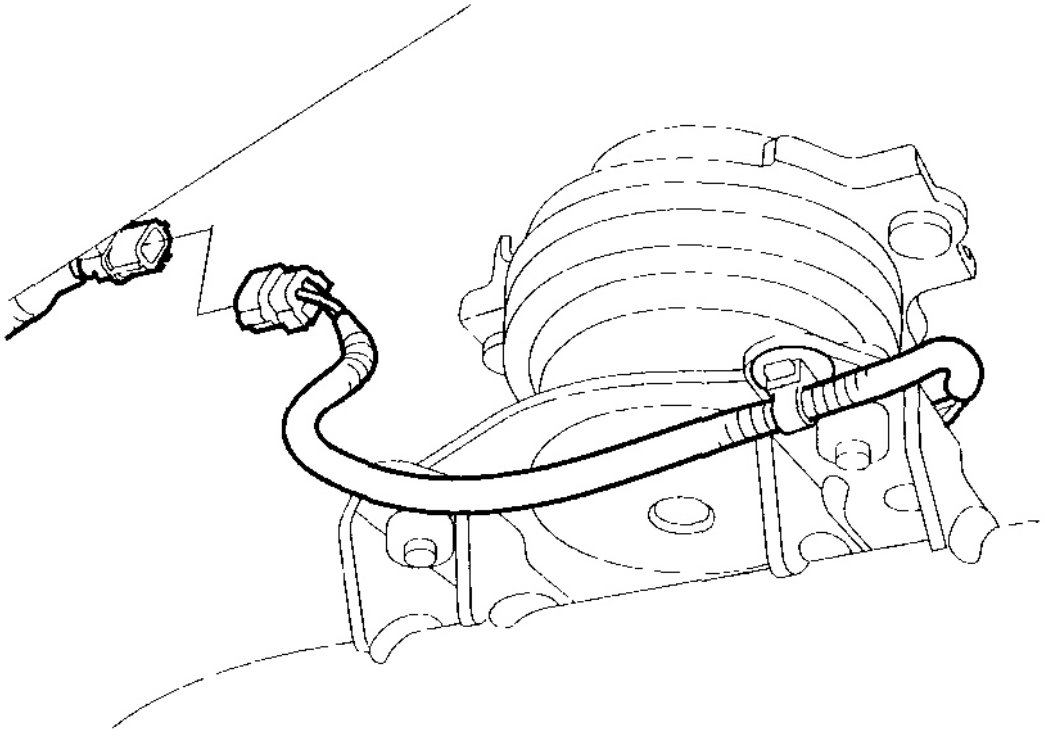


Fig. 254: Disconnecting Engine Mount Control Solenoid Valve Connector At Front Engine Mount
Courtesy of AMERICAN HONDA MOTOR CO., INC.

43. For model with engine mount control system: Remove the vacuum tube joint (A) from its clamp (B) from the front engine mount, disconnect the vacuum tube joint, then reinstall the joint in the clamp.

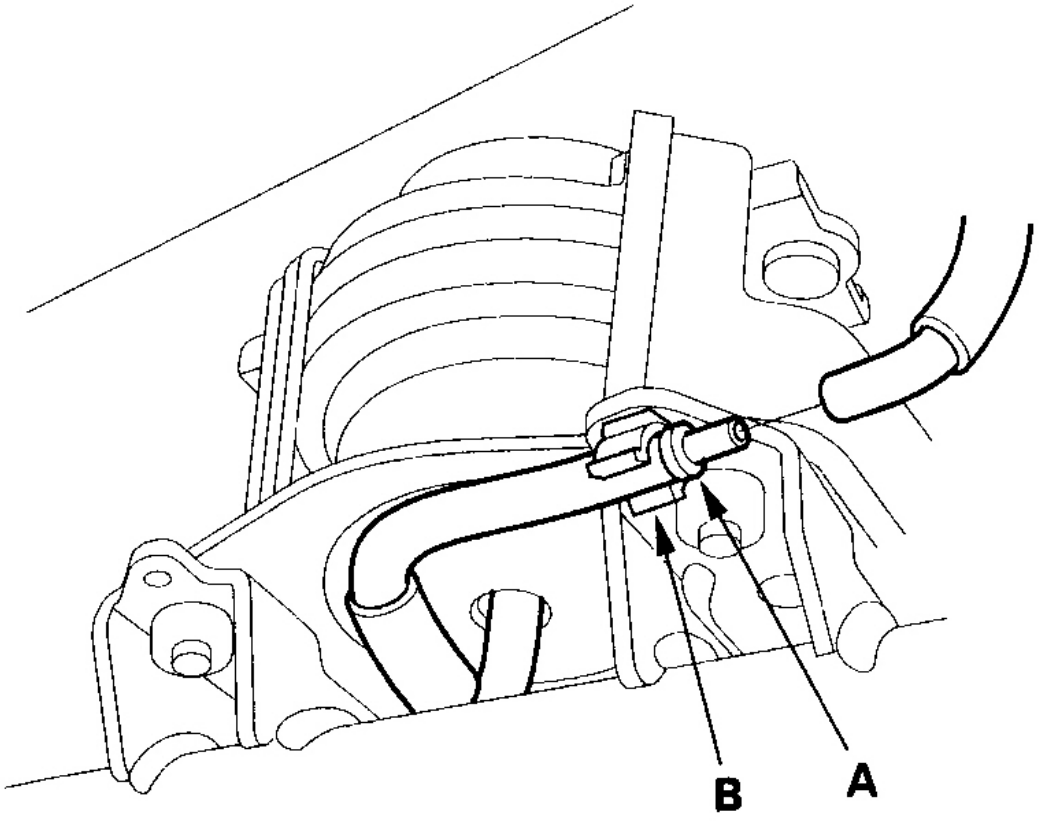


Fig. 255: Removing Vacuum Tube Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Make reference marks (A) on the body across the marks (B) on the edge of the front subframe (C).

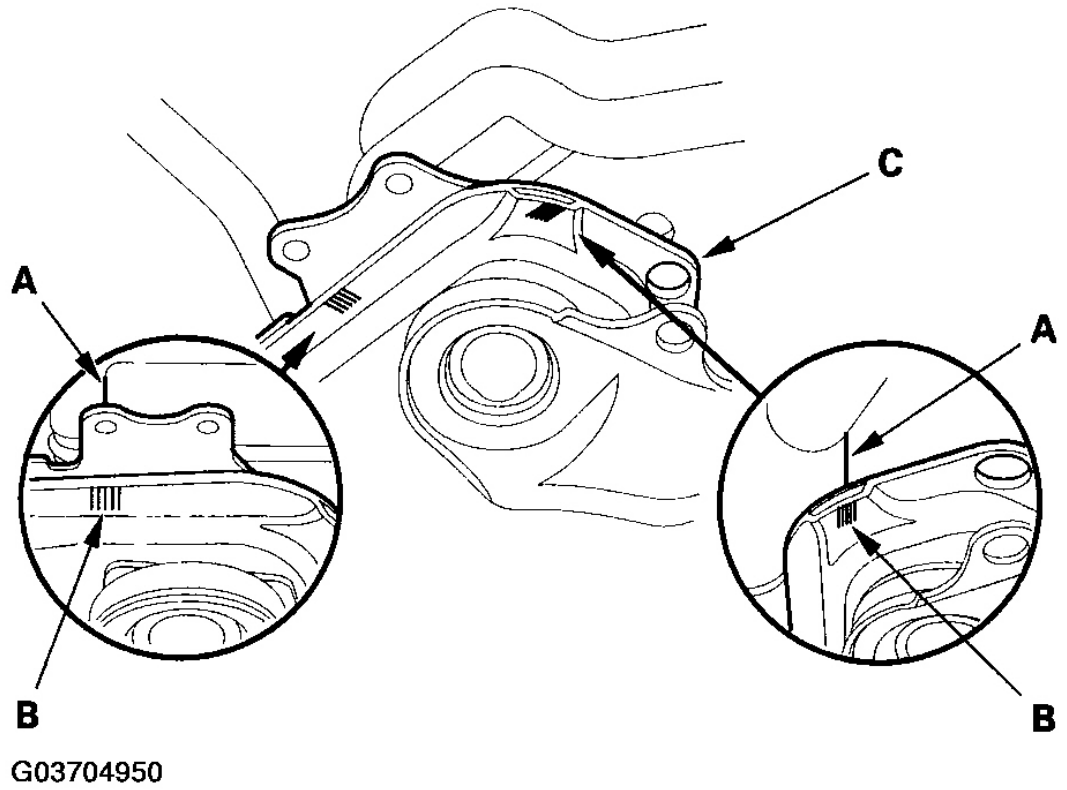


Fig. 256: Making Reference Marks On Body Across Marks On Edge Of Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Attach the front subframe adapter (VSB02C000016) to the front subframe by looping the belt over the front of the subframe, then securing the belt with its stop.

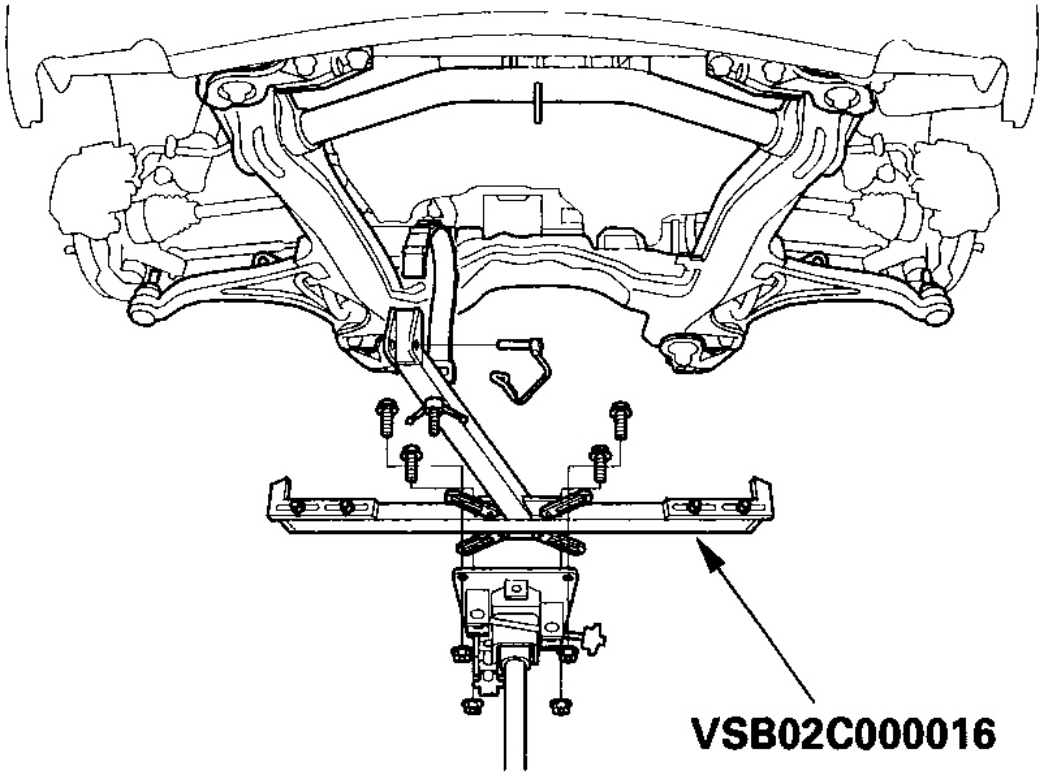


Fig. 257: Attaching Front Subframe Adapter To Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Raise the jack and line up the slots in the arms with the bolt holes on the corner of the jack base, then attach them with bolts.
47. Remove the four bolts securing the front stiffeners (A), two bolts securing the rear stiffeners (B), subframe mounting bolts (C), and remove the front and rear stiffeners.

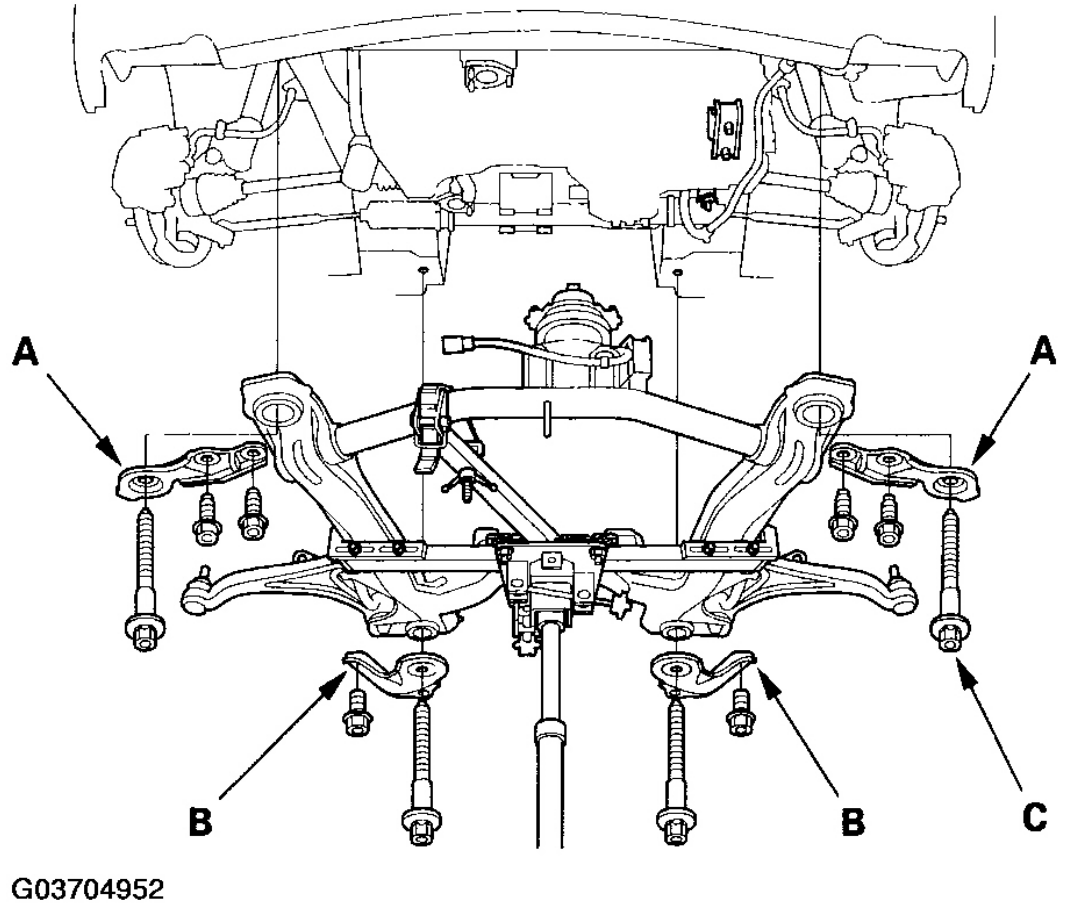
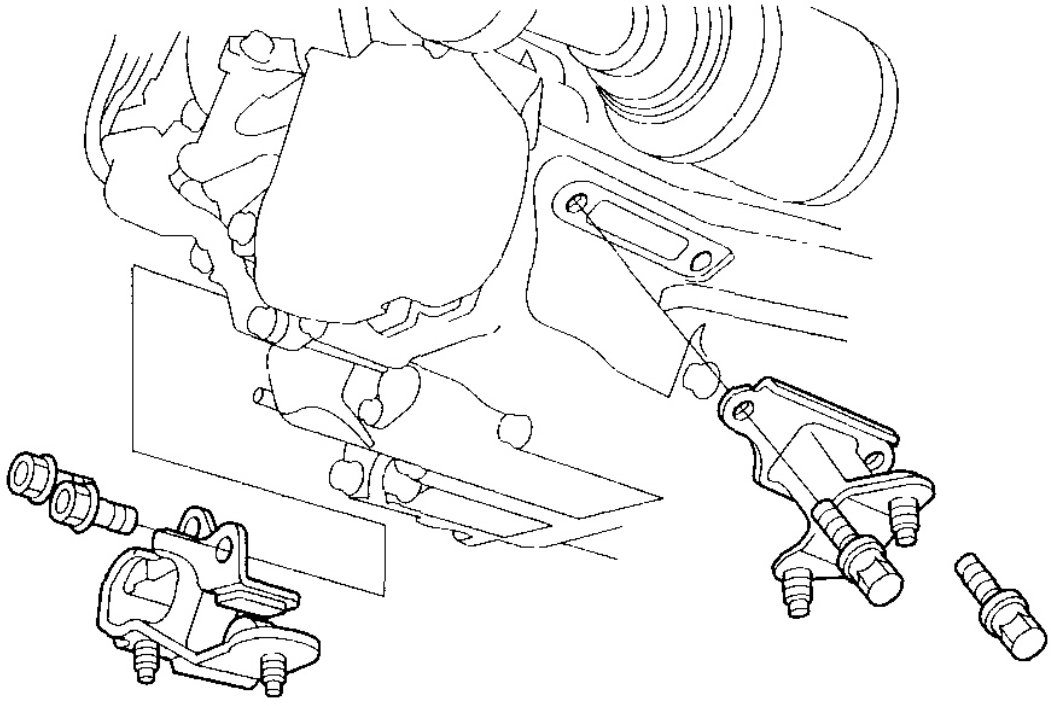


Fig. 258: Removing Front And Rear Stiffeners
Courtesy of AMERICAN HONDA MOTOR CO., INC.

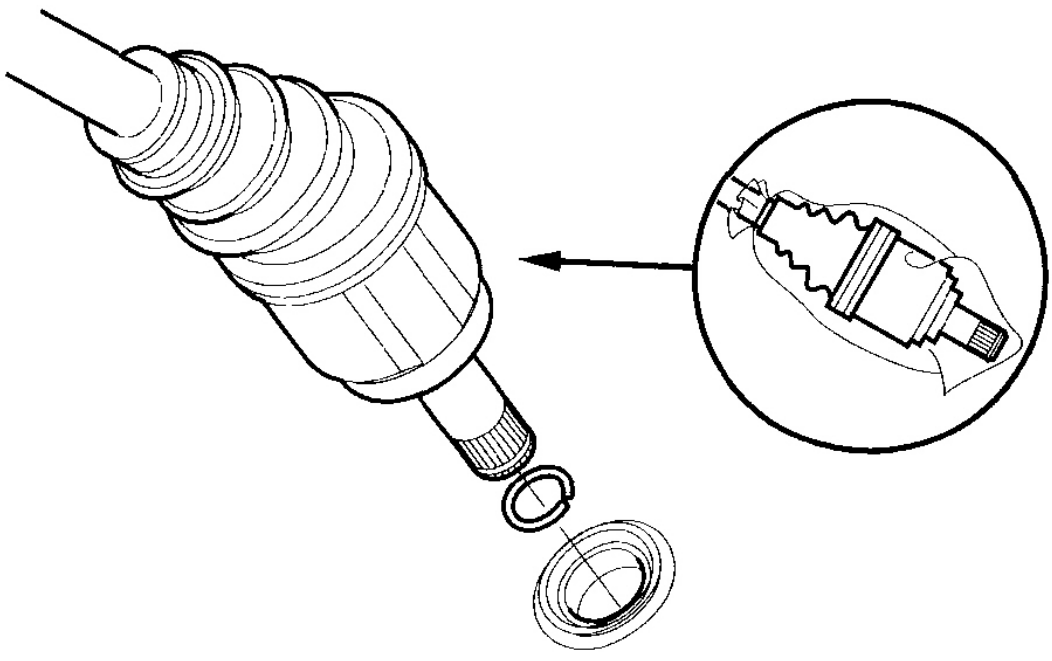
48. Lower the front subframe with the jack.
49. Remove the transmission lower mounts.



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Fig. 259: Removing Transmission Lower Mounts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Remove the left driveshaft from the differential and the right driveshaft from the intermediate shaft (see step 10 in **DRIVESHAFT REMOVAL**).



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Fig. 260: Removing Left Driveshaft From Differential And Right Driveshaft From Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

51. Move the left driveshaft to the front side. Coat all precision finished surfaces with clean engine oil, then put plastic bags over the driveshaft ends.
52. Remove the rear warm up three way catalytic converter (WU-TWC) stay (A) and heat shield (B).

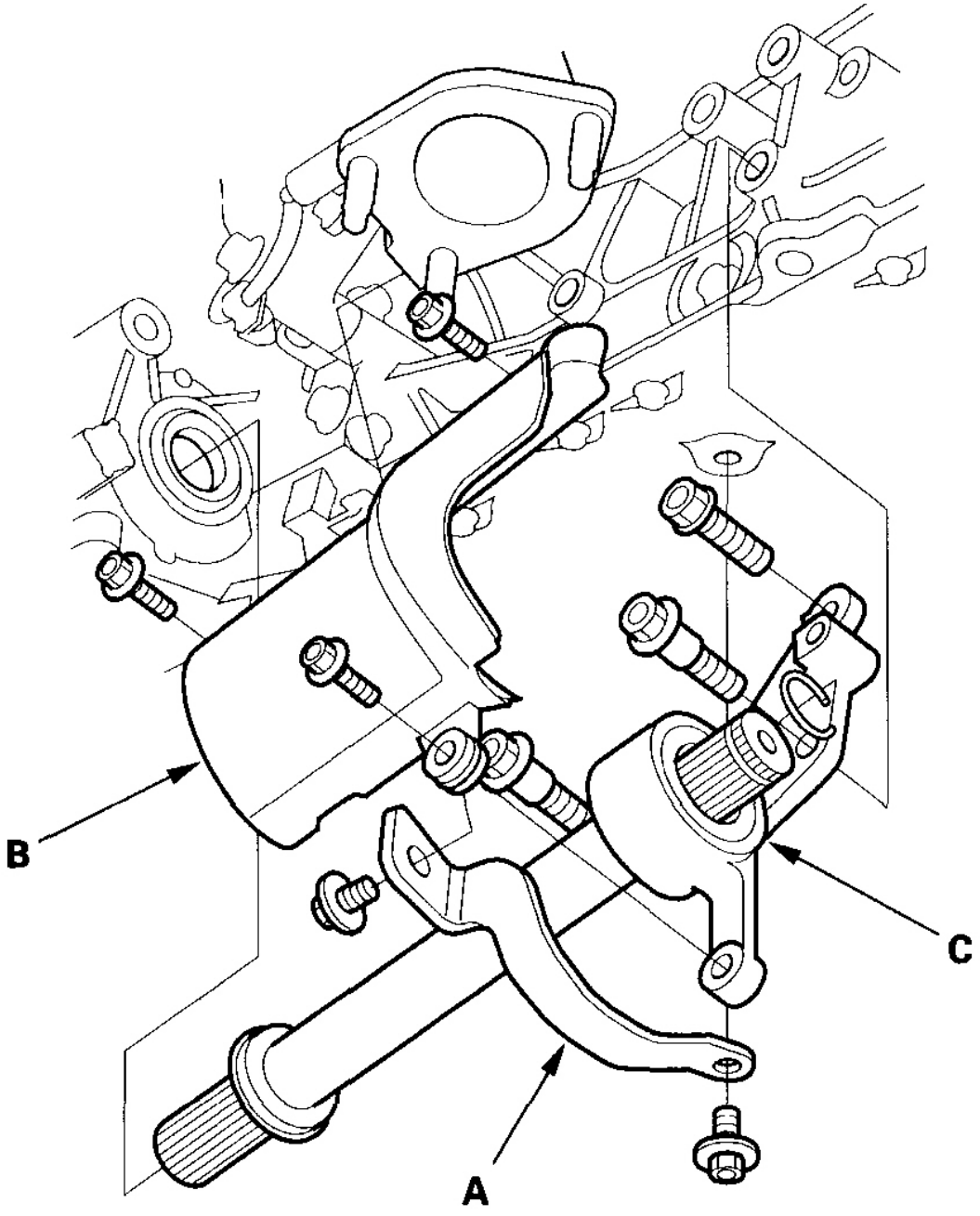


Fig. 261: Removing Rear WU-TWC Stay And Heat Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

53. Remove the intermediate shaft (C). Coat all precision finished surfaces with clean engine

oil, then put plastic bags over the intermediate shaft ends.

54. Remove the upper and front transmission housing mounting bolts.

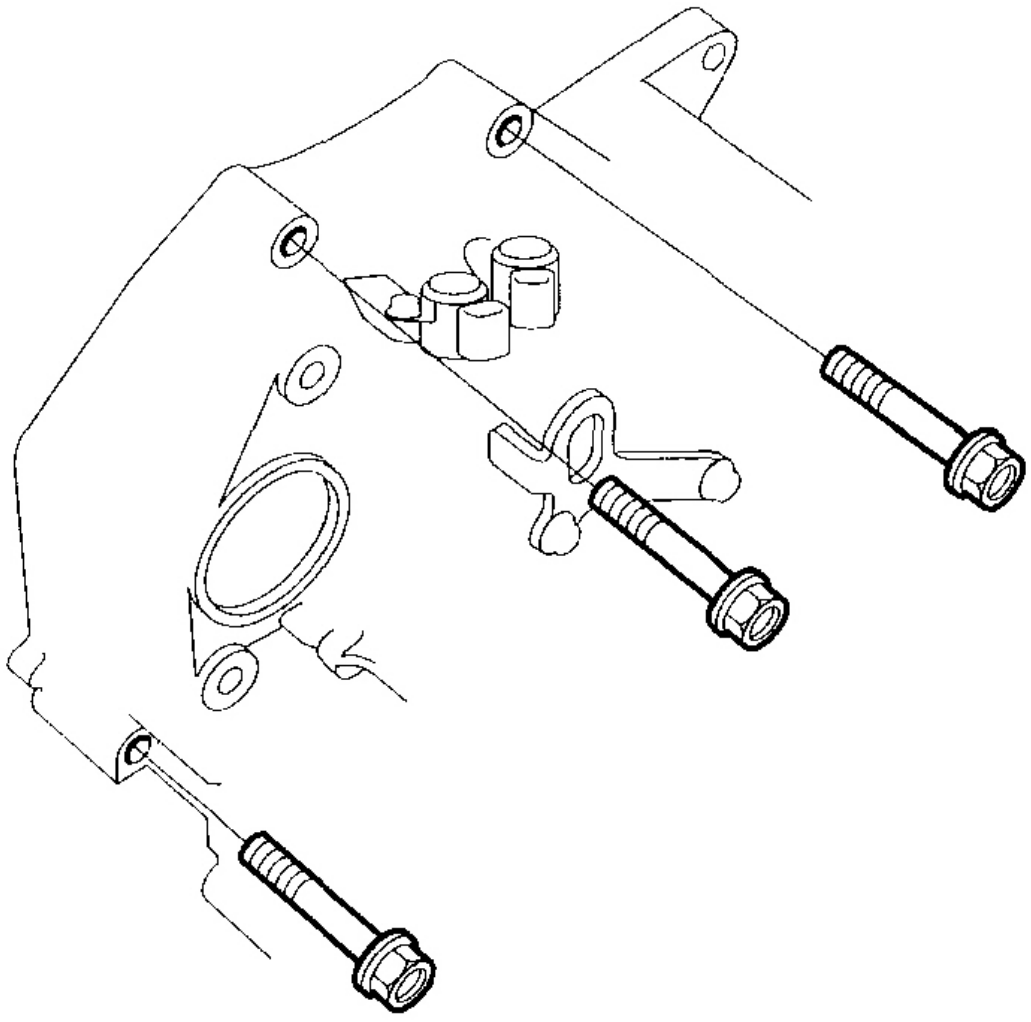


Fig. 262: Removing Upper And Front Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

55. Remove the bolt (A) securing the harness clamp bracket, and remove the front mount bracket (B).

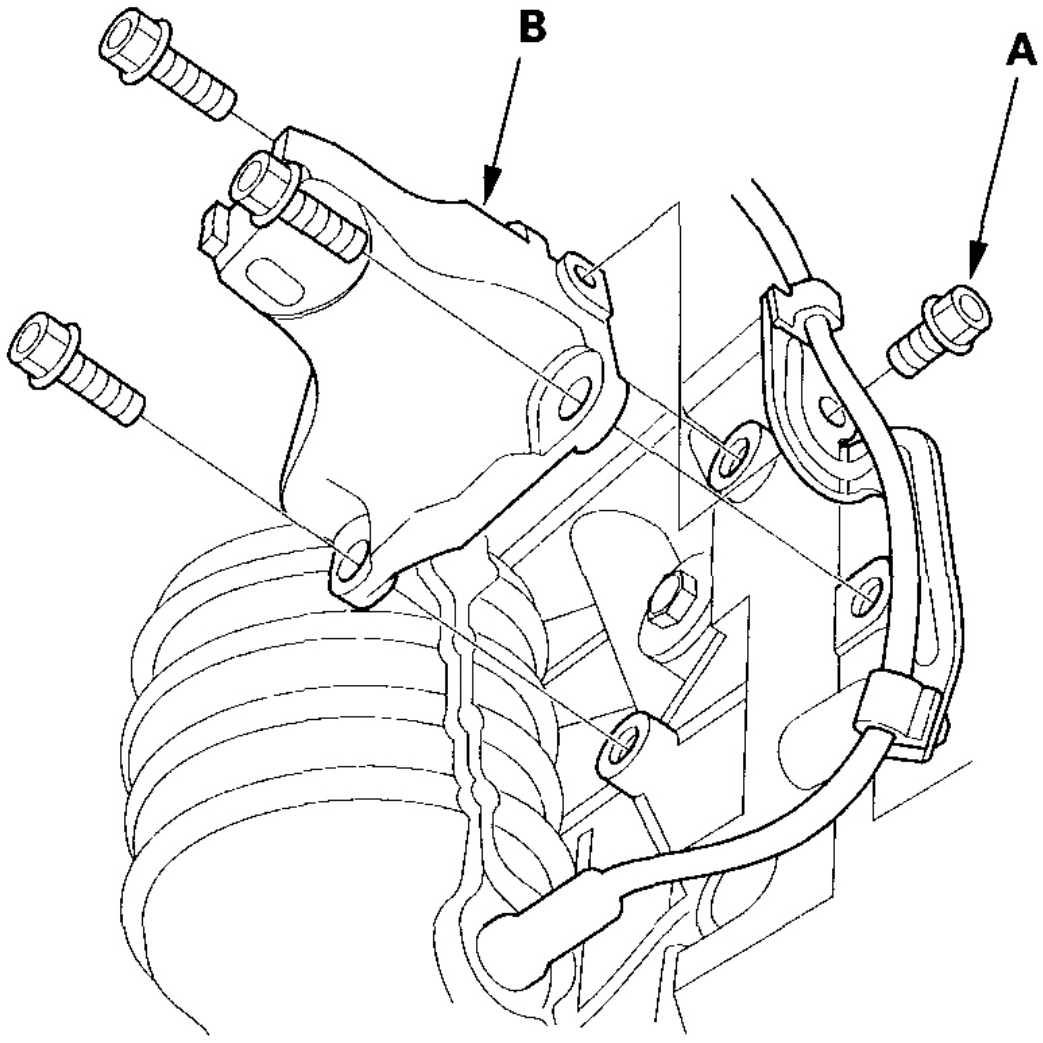
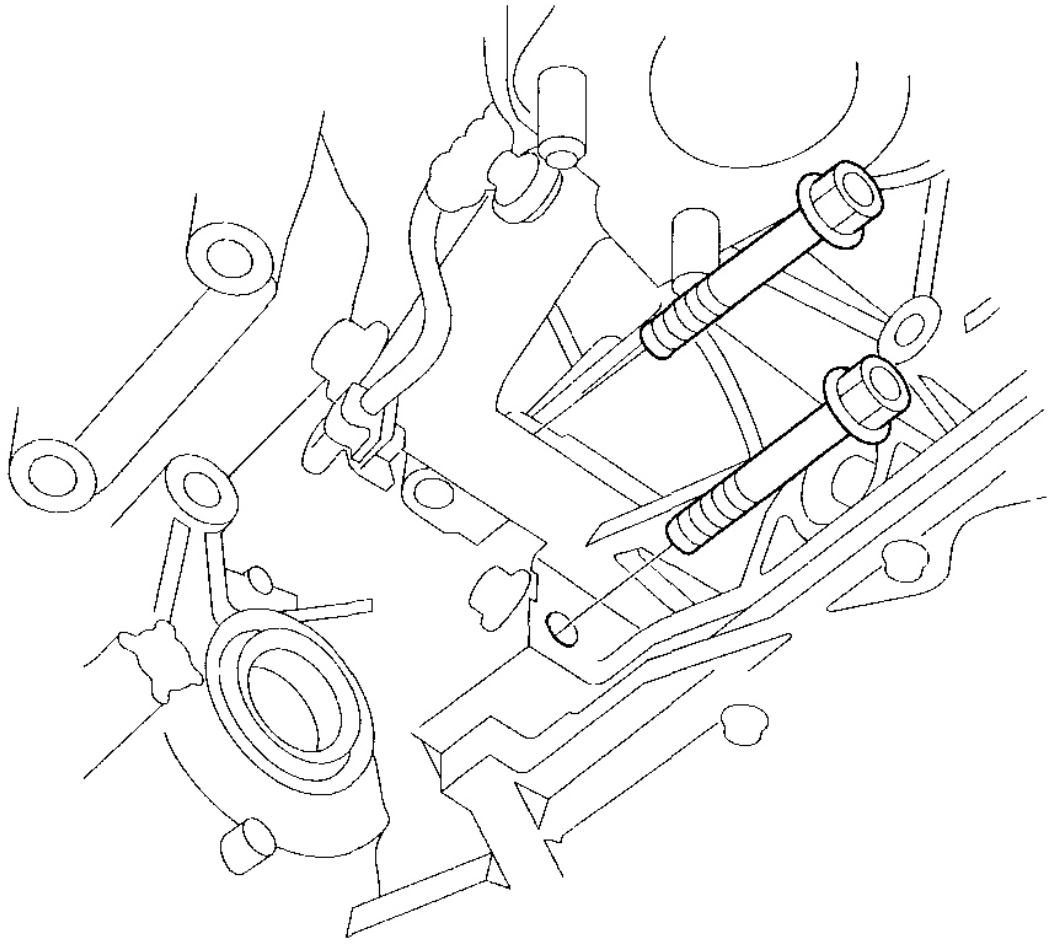


Fig. 263: Removing Front Mount Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

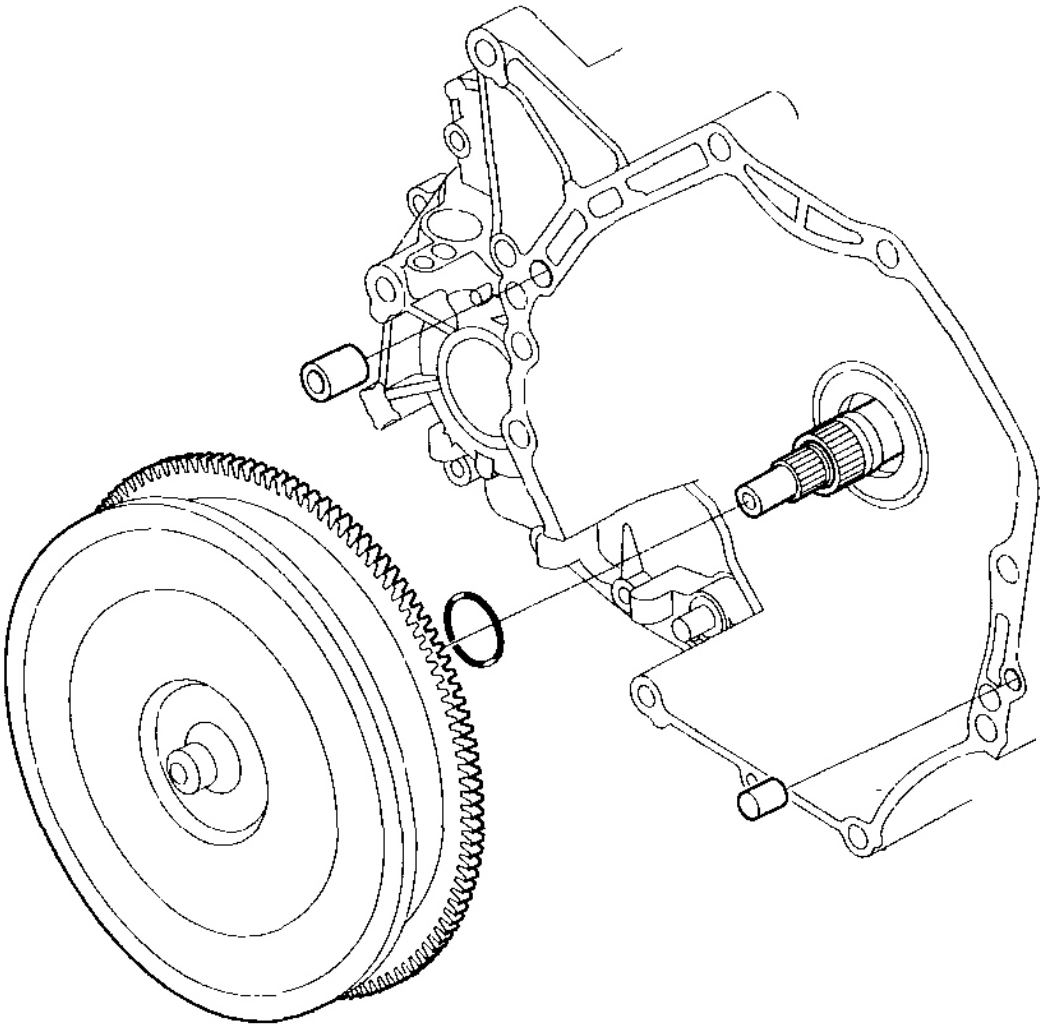
56. Remove the rear transmission housing mounting bolts.



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Fig. 264: Removing Rear Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

57. Slide the transmission away from the engine to remove it from the vehicle, and lower it on the transmission jack. If the torque converter is stuck to the drive plate, pull it toward the transmission housing through the starter opening.
58. Remove the shift cable cover, then remove the torque converter assembly from the torque converter housing.



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Fig. 265: Removing Torque Converter Assembly From Torque Converter Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

59. Inspect the drive plate, and replace it if it is damaged.
60. Remove the 6 x 1.0-14 mm bolt (A) and nut (B) from the shift cable cover (C).

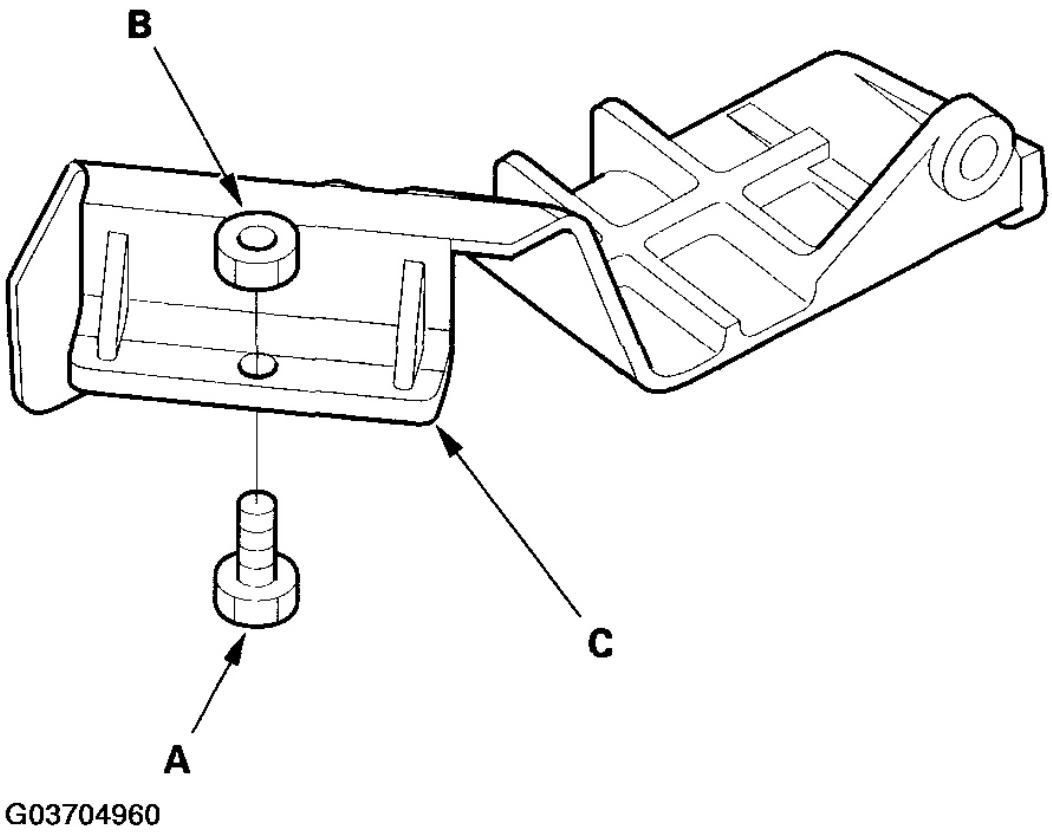


Fig. 266: Removing From Shift Cable Cover Bolt And Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

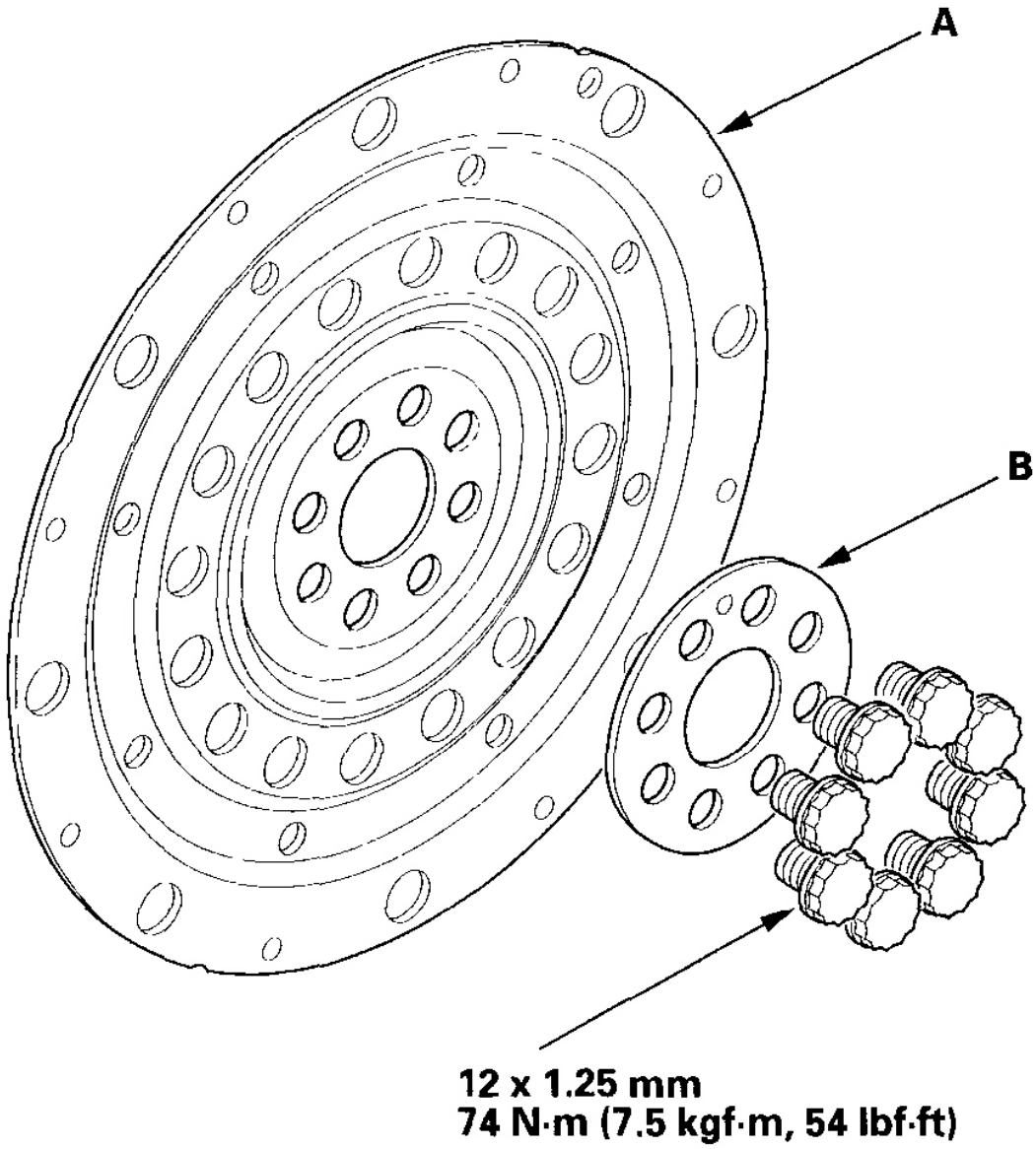


Fig. 267: Removing Drive Plate And Washer From Engine Crankshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the drive plate and washer on the engine crankshaft, and tighten the eight bolts in a crisscross pattern in two or more steps.
4. Install the transmission assembly (see **TRANSMISSION INSTALLATION**).

TRANSMISSION INSTALLATION

Special Tools Required

- Engine support hanger, A and Reds AAR-T-12566
- Engine hanger adapter VSB02C000022
- Engine hanger balancer bar VSB02C000019
- Front subframe adapter VSB02C000016

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. Install the torque converter assembly (A) on the mainshaft (B) with the new O-ring (C).

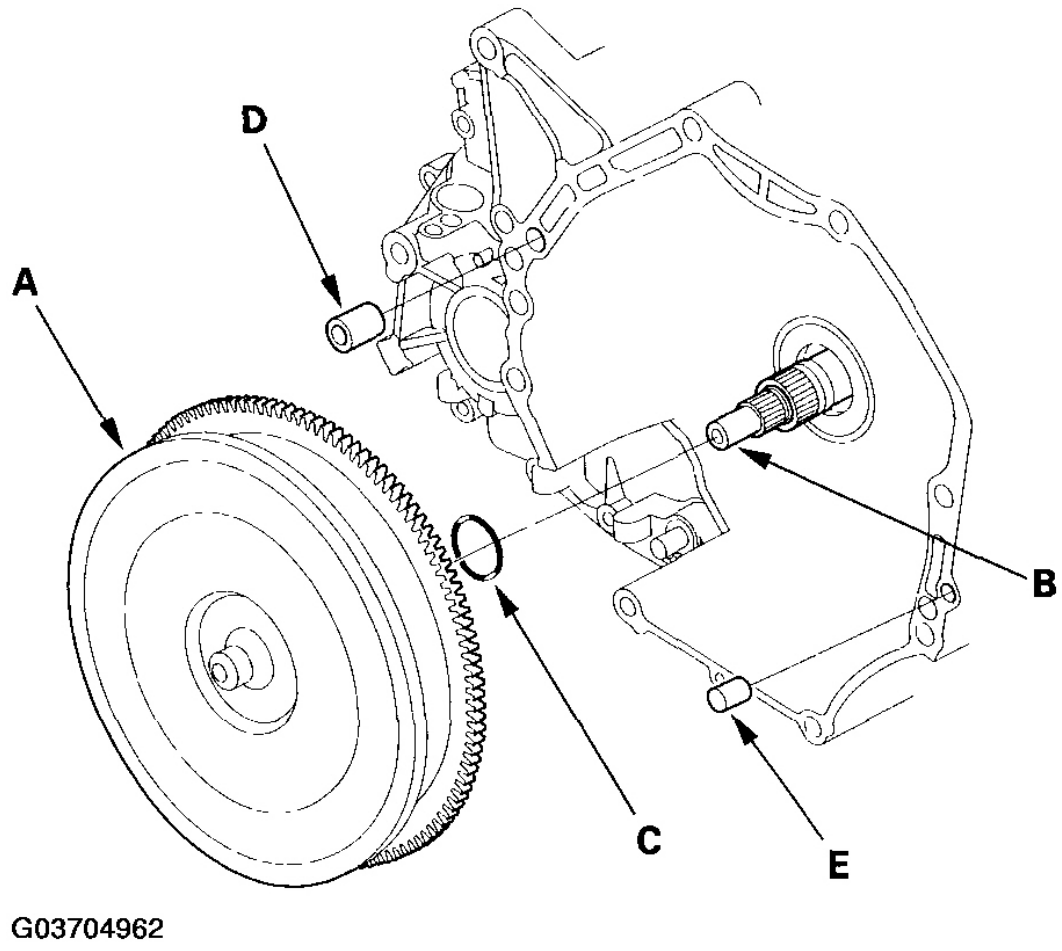


Fig. 268: Installing Torque Converter Assembly On Mainshaft With New O-Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the 14 x 20 mm dowel pin (D) and 10 x 20 mm dowel pin (E) in the torque converter housing.
4. Place the transmission on the jack, and raise the transmission to the engine level.
5. Attach the transmission to the engine, then install the rear transmission housing mounting bolts.

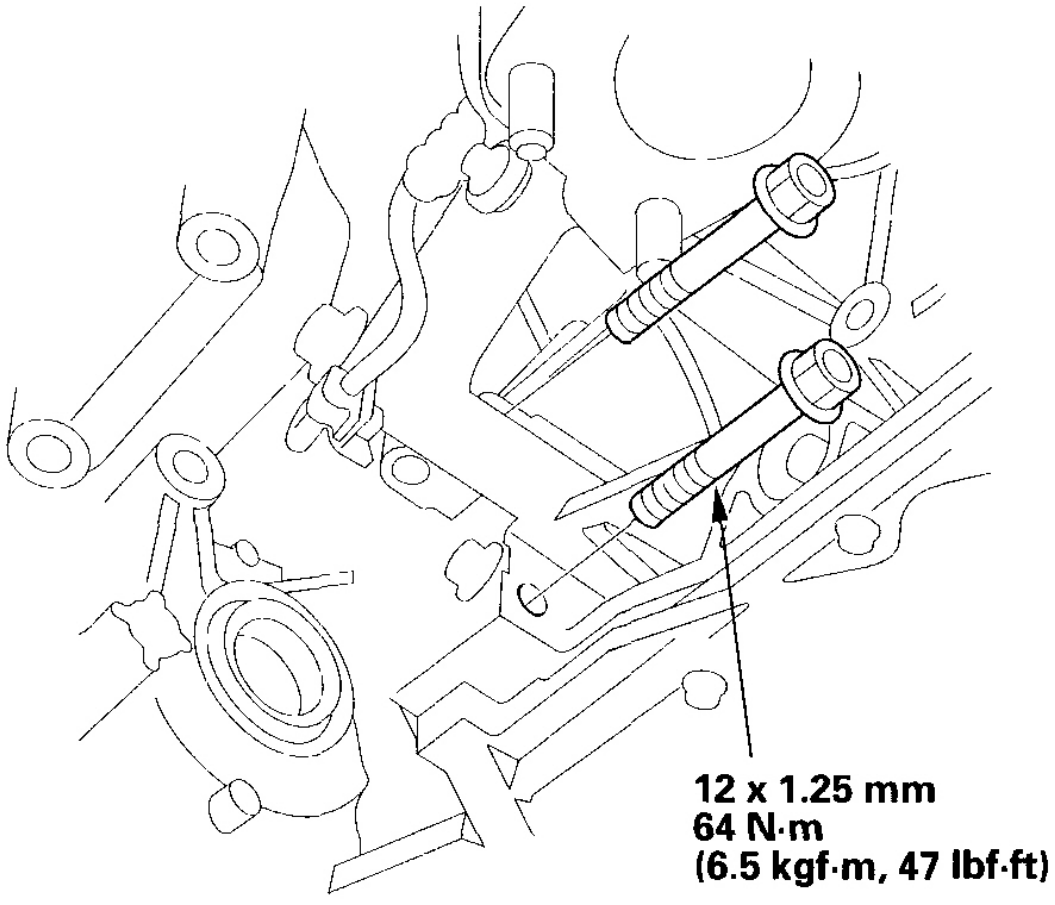


Fig. 269: Installing Rear Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the upper and front transmission housing mounting bolts.

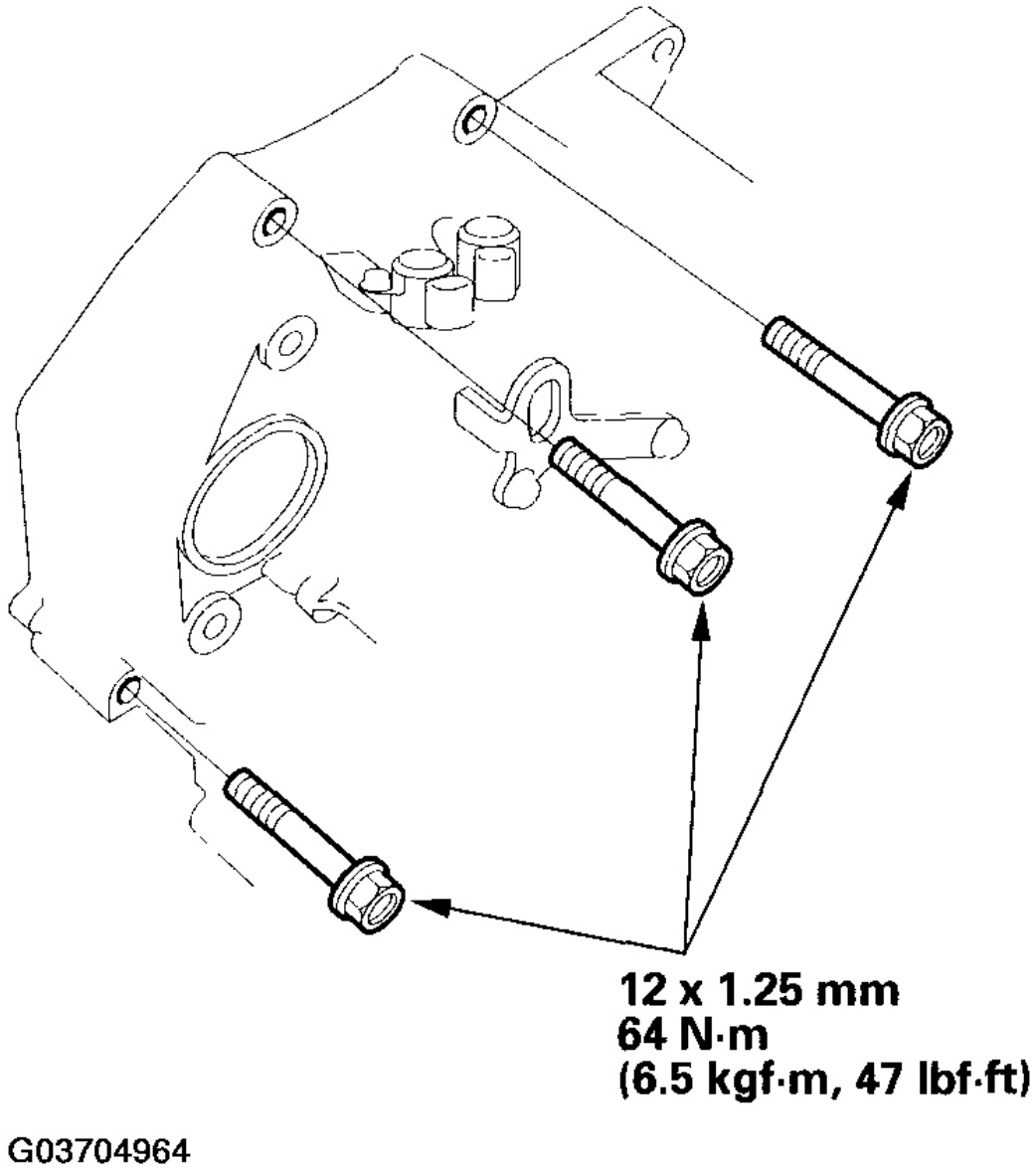


Fig. 270: Installing Upper And Front Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the jack from the transmission.
8. Install the front mount bracket with the new bolts, and install the harness clamp bracket.

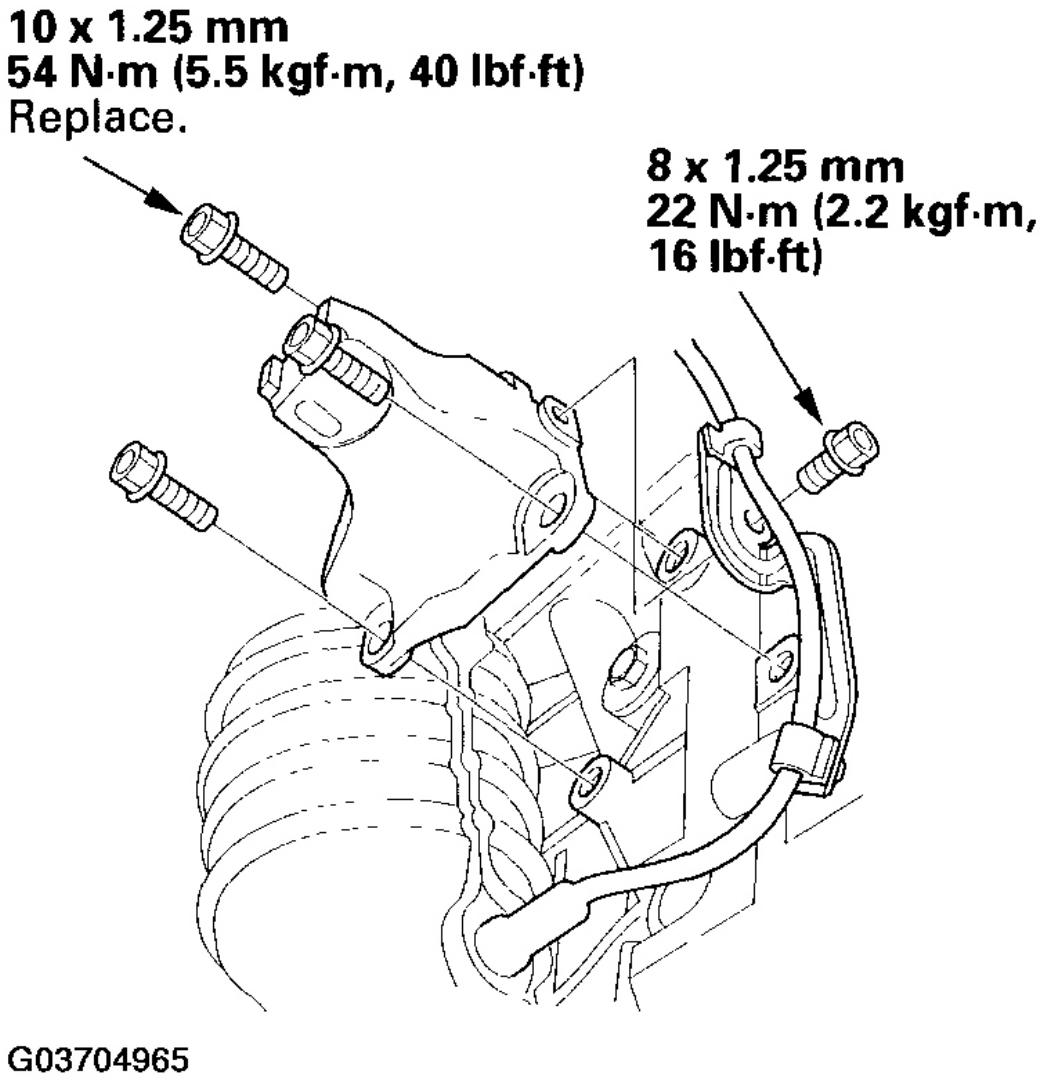


Fig. 271: Installing Front Mount Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the engine-to-torque converter housing mounting bolts.

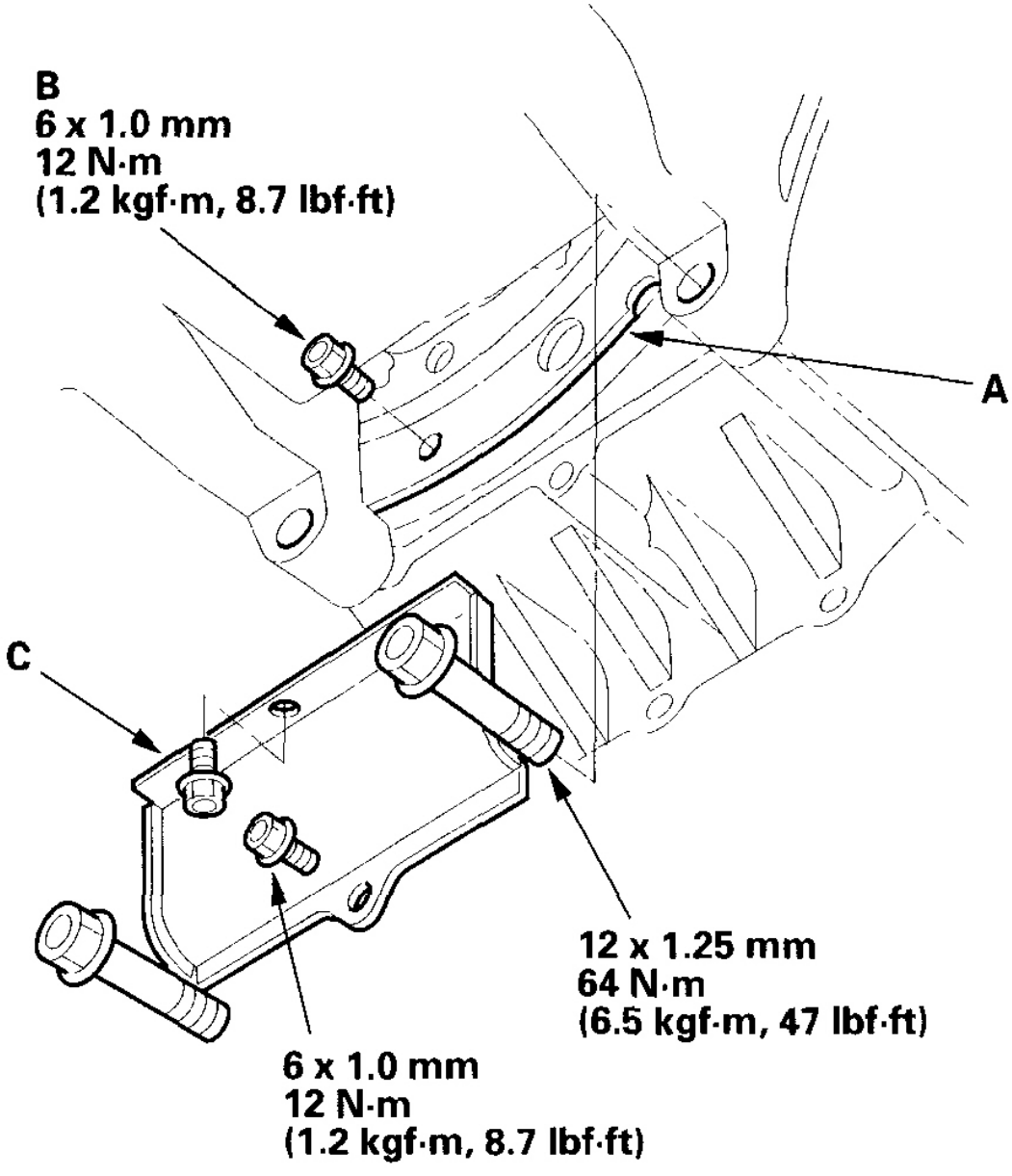


Fig. 272: Installing Engine-To-Torque Converter Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Attach the torque converter to the drive plate (A) with eight bolts (B). Rotate the crankshaft pulley as necessary to tighten the bolt to 1/2 of the specified torque, then to the final torque, in a crisscross pattern. After tightening the last bolt, check that the crankshaft rotates freely.

11. Install the torque converter cover (C).
12. Clean the areas where the intermediate shaft and driveshaft contact the transmission (differential) with carburetor cleaner, and dry with compressed air.
13. Install the new set ring (A) on the intermediate shaft (B), and install the intermediate shaft in the differential. While installing the intermediate shaft in the differential, be sure not to allow dust or other foreign particles to enter the transmission.

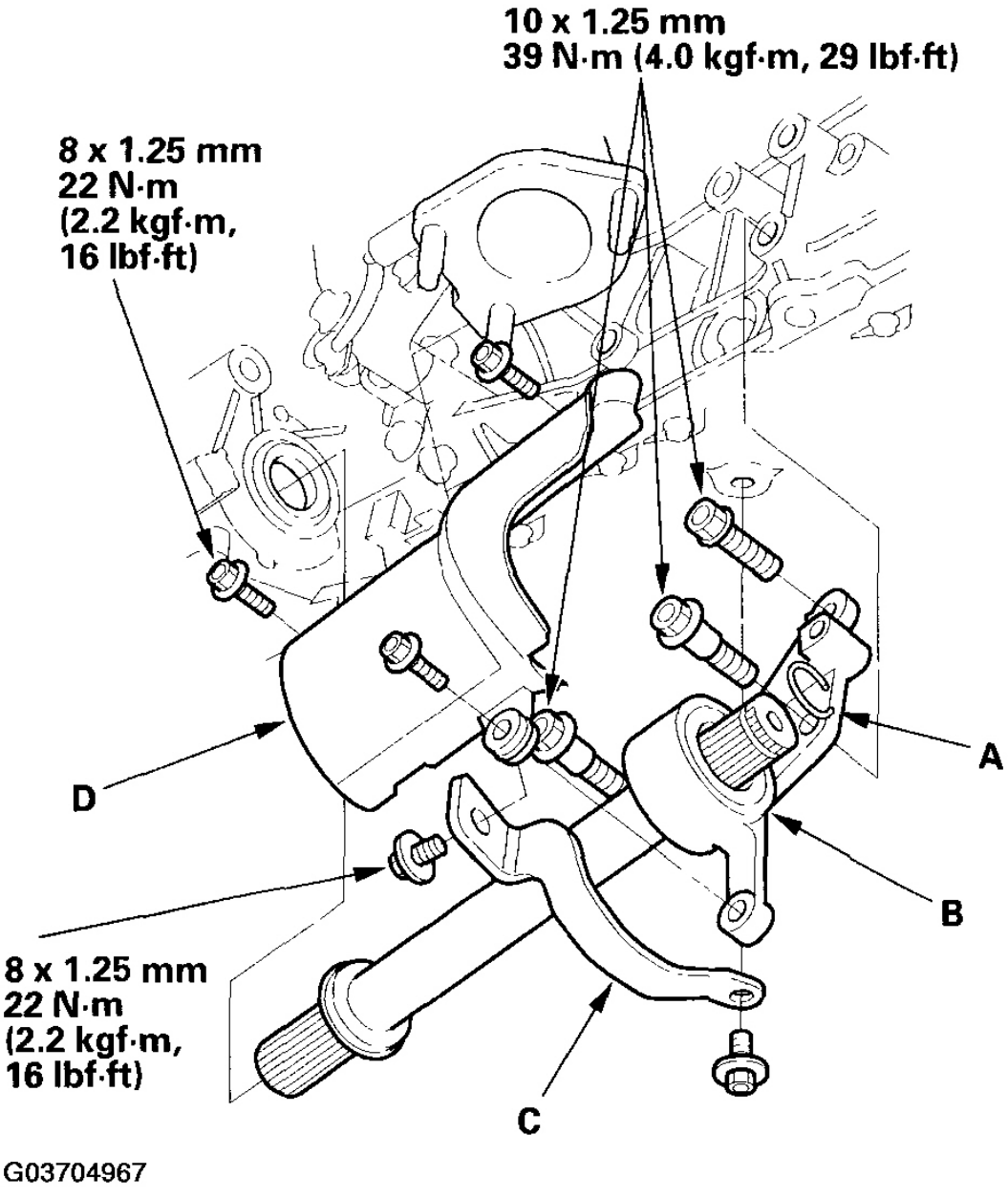


Fig. 273: Installing Set Ring On Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Install the rear warm up three way catalytic converter (WU-TWC) stay (C) and heat shield (D).
15. Install the new set ring on the left driveshaft, then install the left driveshaft in the differential

(see **INSTALLATION**). While installing the driveshaft in the differential, be sure not to allow dust or other foreign particles to enter the transmission. Install the right driveshaft over the intermediate shaft.

NOTE: Turn the right and left steering knuckle fully outward, and slide the driveshaft and intermediate shaft into the differential and over the intermediate shaft until you feel the set ring engage the side gear.

16. Install the transmission lower front mount (A), and install the lower rear mount (B) with the new bolts.

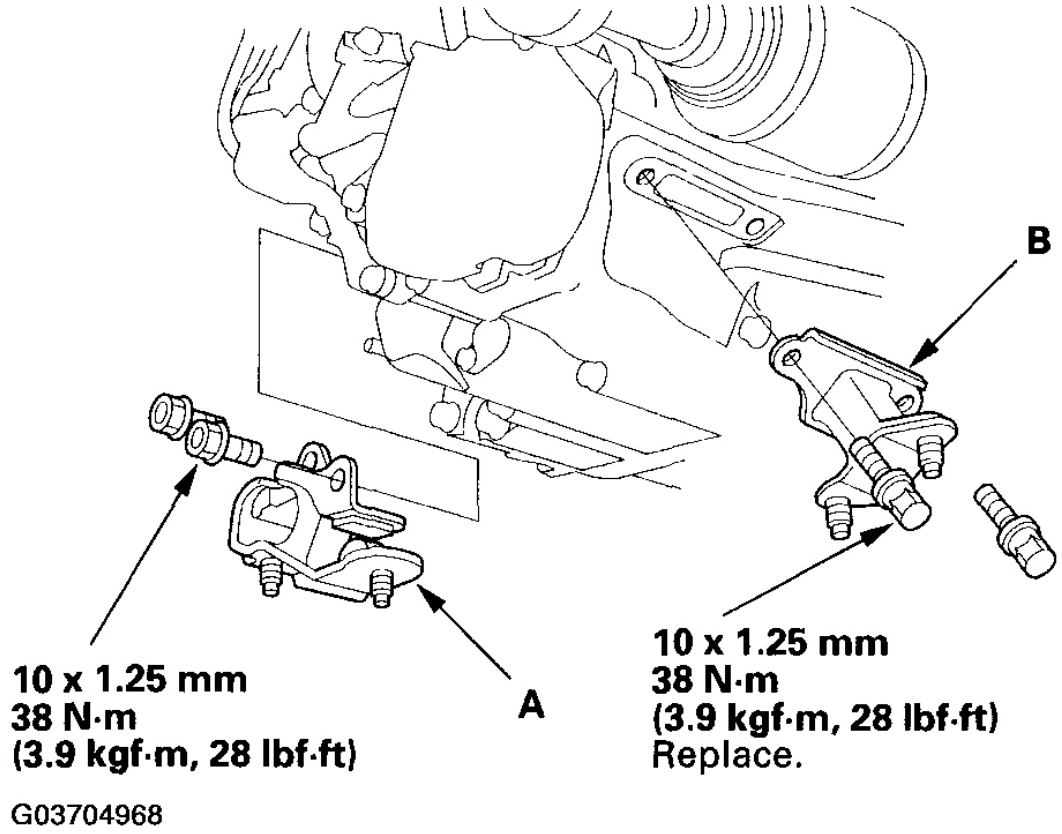


Fig. 274: Installing Transmission Lower Front Mount And Lower Rear Mount
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Support the front subframe (A) with the front subframe adapter (VSB02C000016) and a

jack, and lift it up to body.

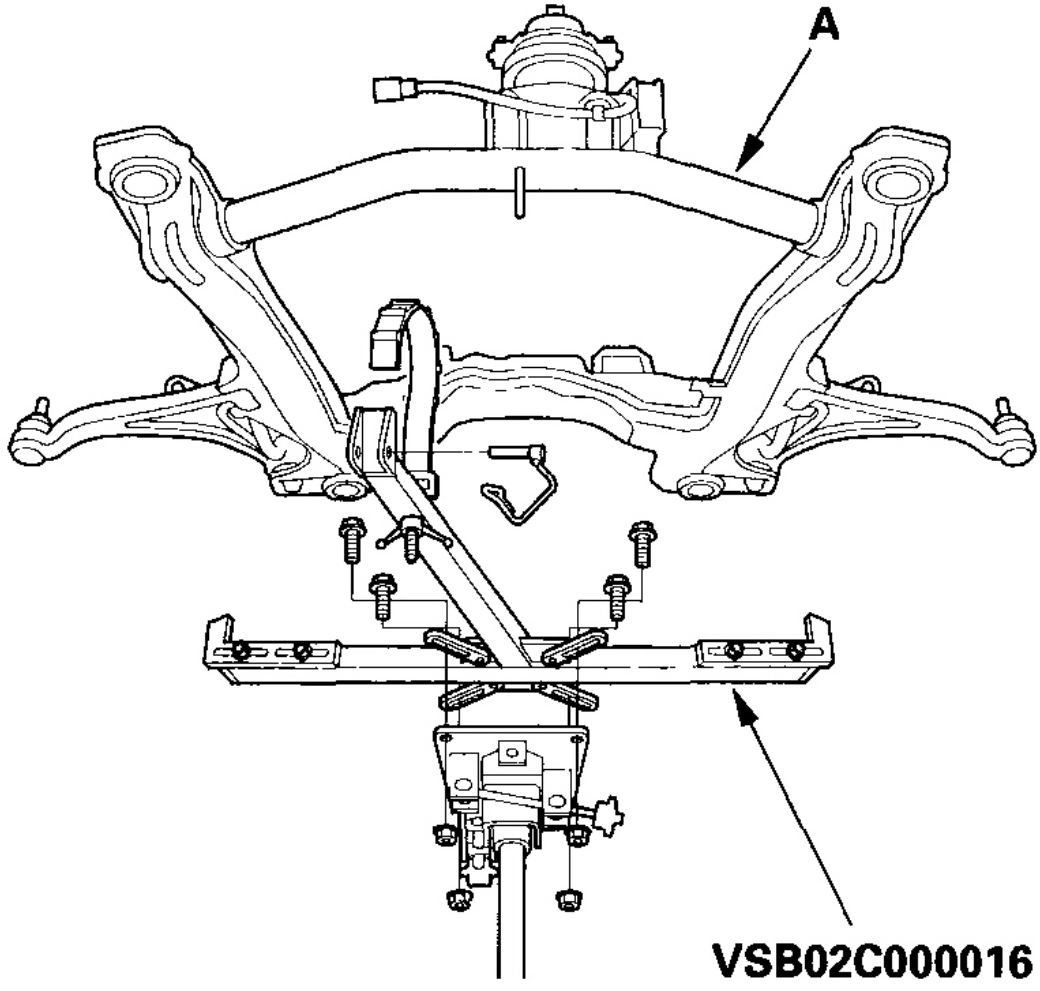


Fig. 275: Supporting Front Subframe With Front Subframe Adapter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Loosely install the new subframe mounting bolts (A), front stiffener mounting bolts (B), rear stiffener mounting bolts (C), and front and rear stiffeners.

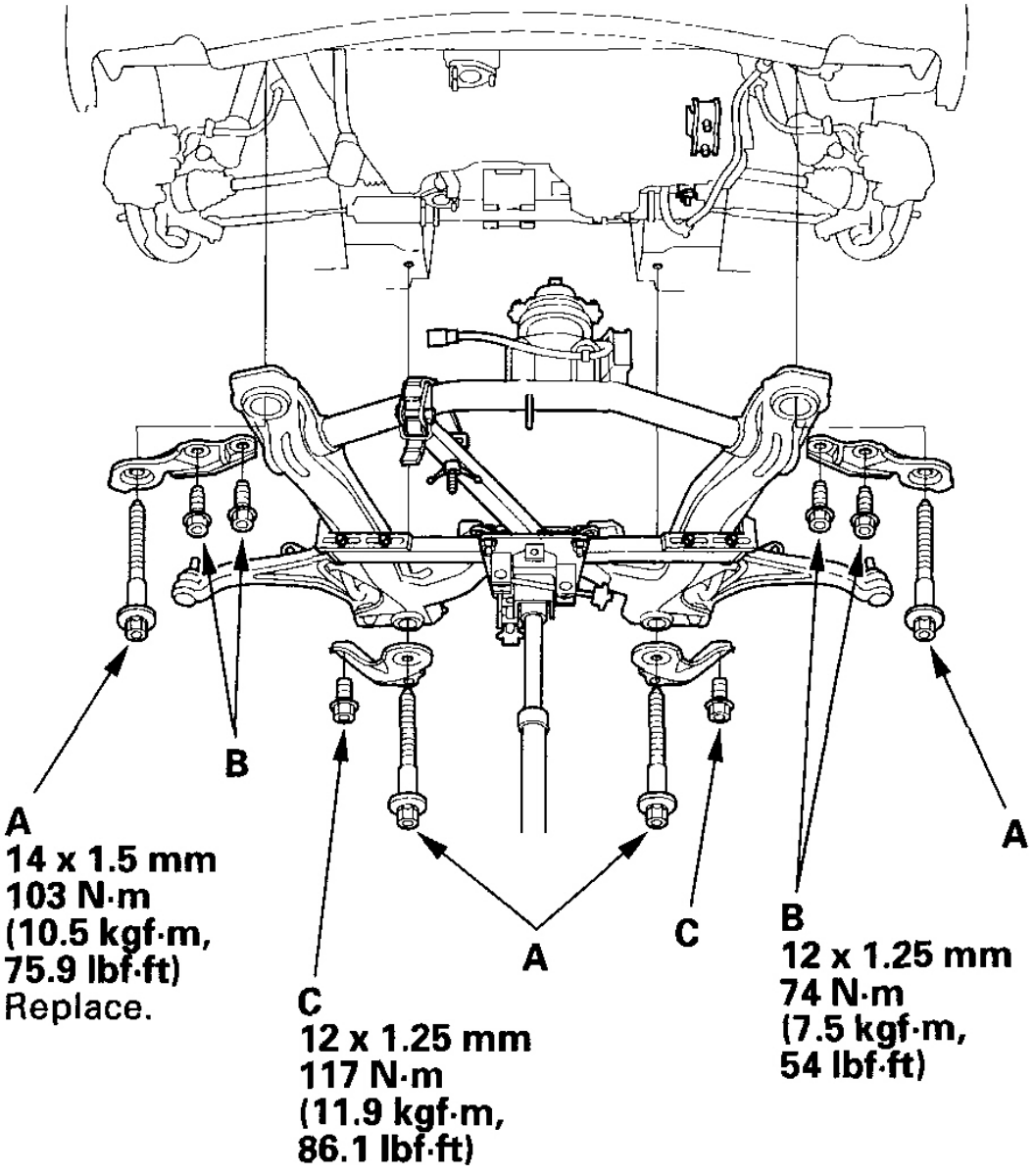


Fig. 276: Installing Subframe Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Align all reference marks (A) on the body and subframe. Tighten the rear subframe mounting bolts, then front bolts, and tighten the stiffener bolts to the specified torque.

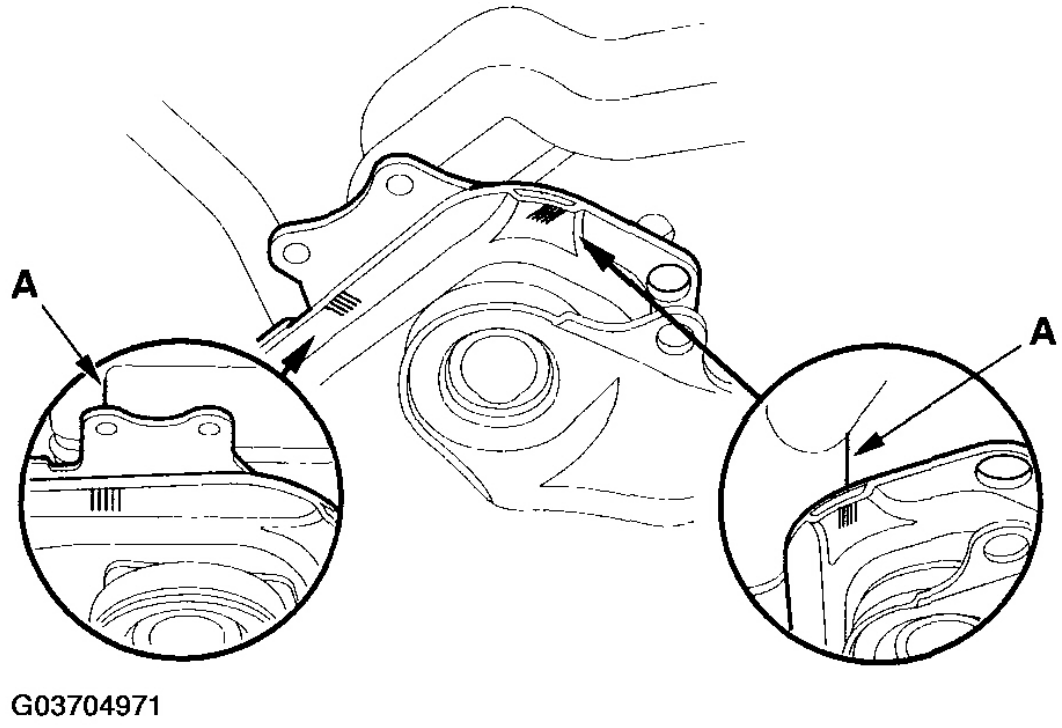


Fig. 277: Aligning All Reference Marks On Body And Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Install the transmission lower mount nuts.

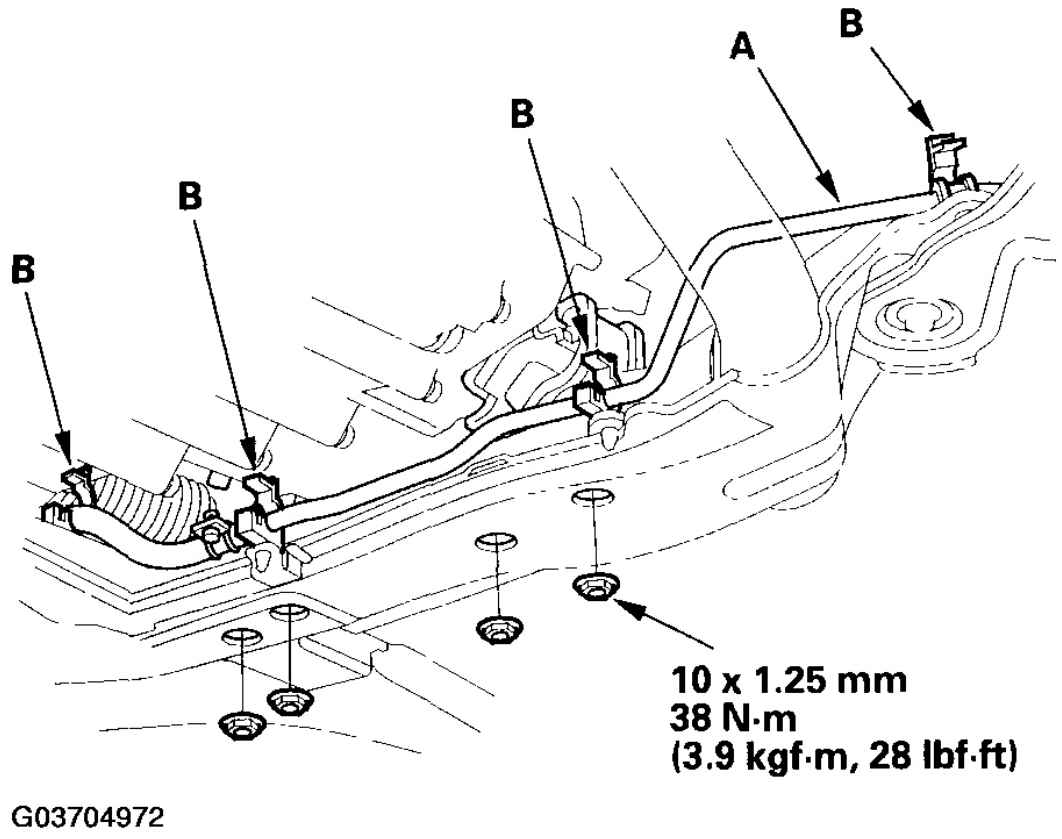


Fig. 278: Installing Transmission Lower Mount Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Install the power steering fluid line (A) on the clamps (B).
22. Install the rear mount mounting bolts.

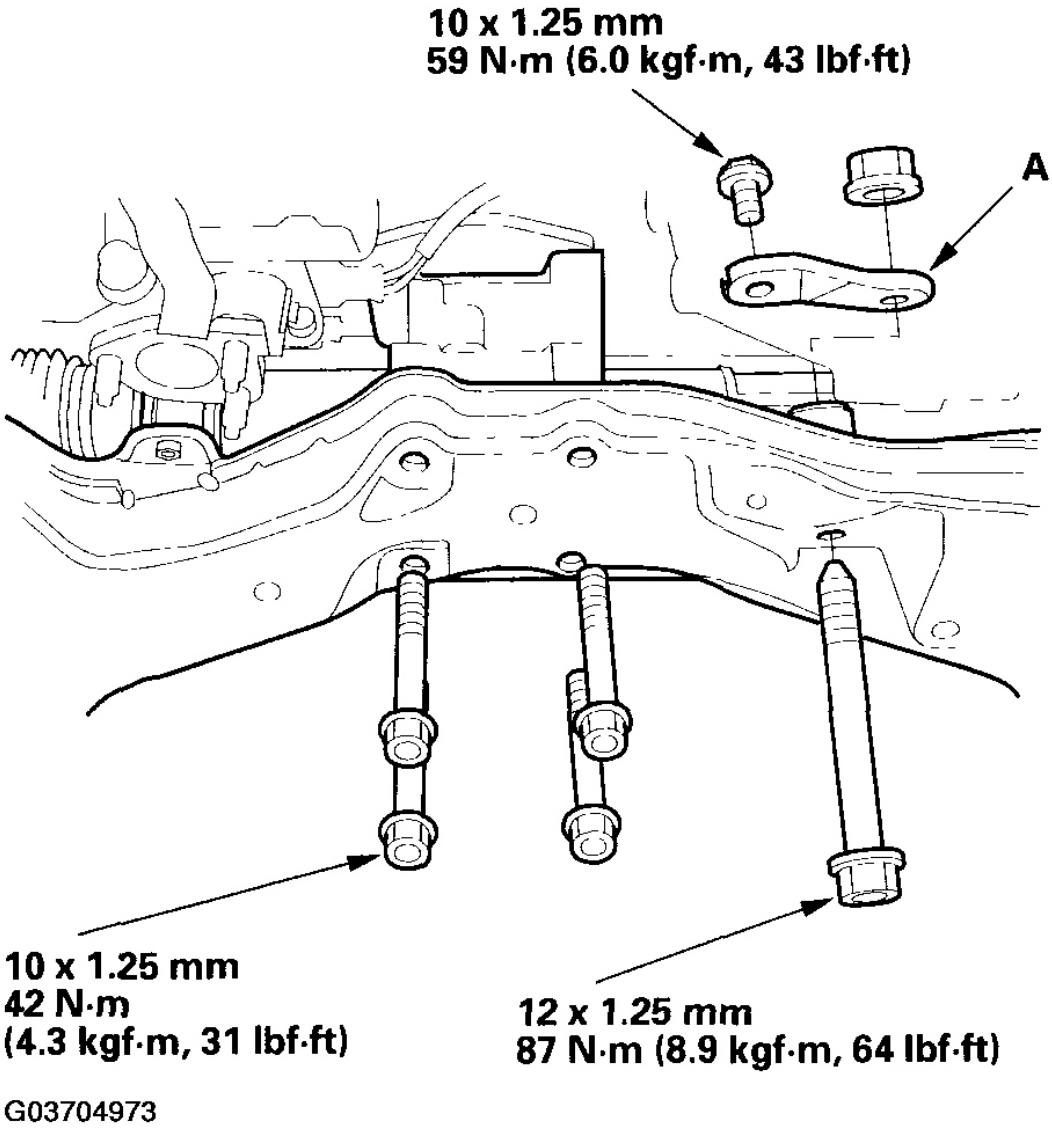


Fig. 279: Installing Rear Mount Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Install the steering gearbox stiffener (A), and loosely install the bolts.
24. Install the steering gearbox stiffener, and loosely install the bolts.

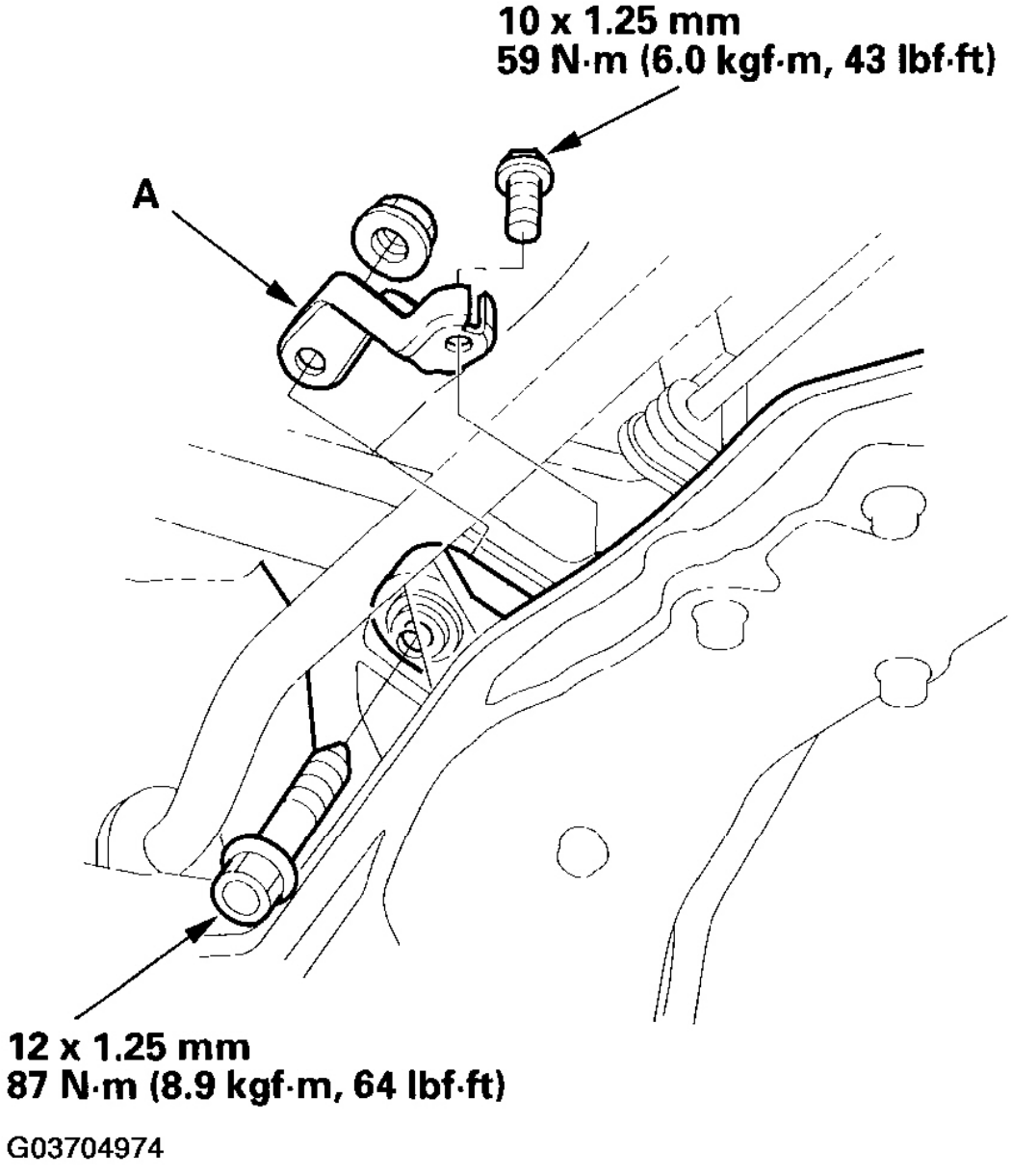


Fig. 280: Installing Steering Gearbox Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Install the steering gearbox mounting bolt and heat shield (A).

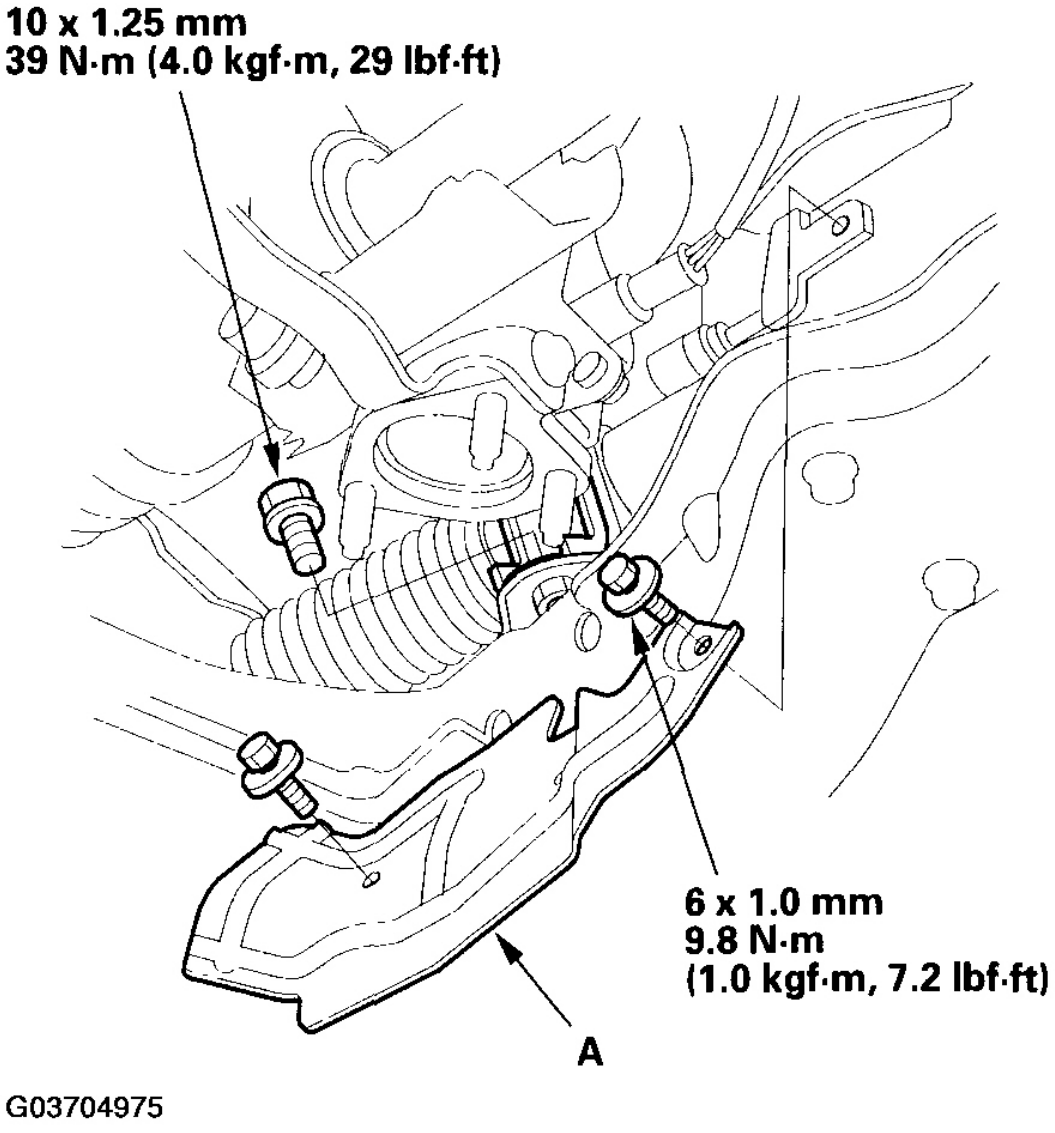


Fig. 281: Installing Steering Gearbox Mounting Bolt And Heat Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Install the steering gearbox mounting bolt and power steering fluid line bracket bolts.

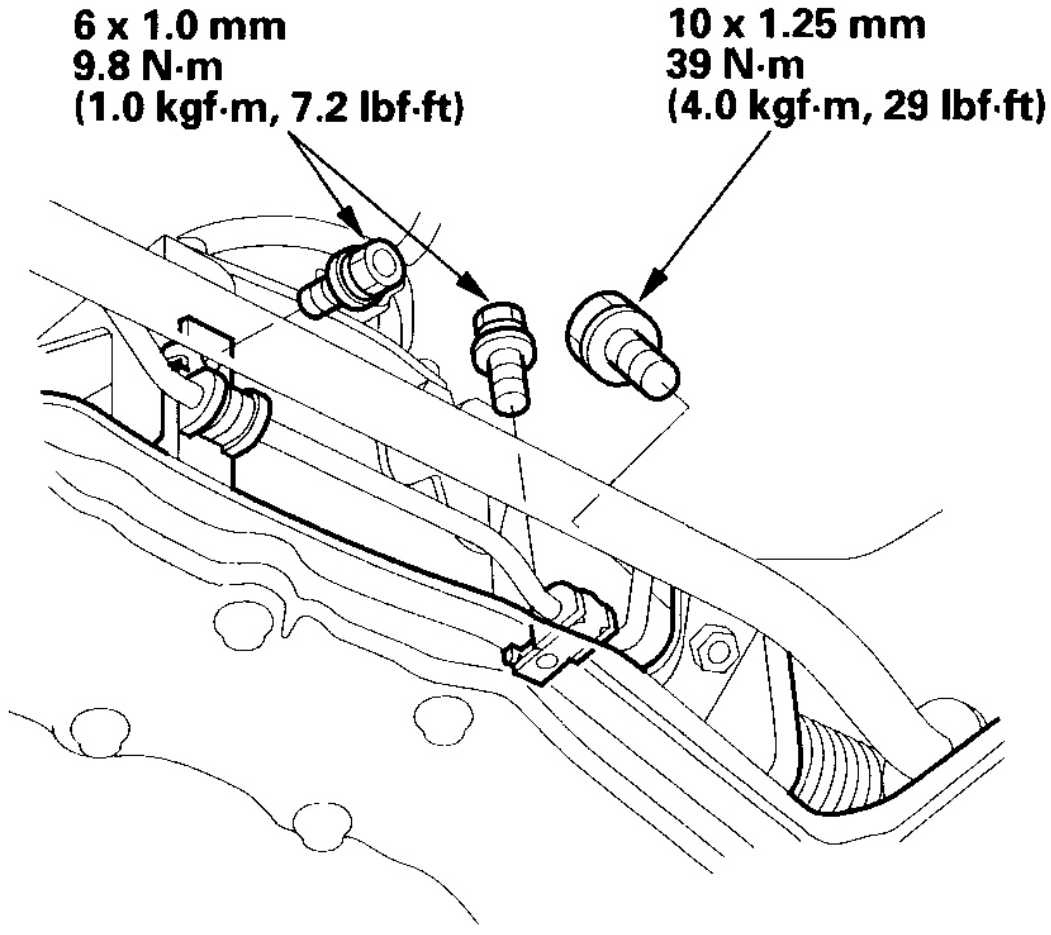


Fig. 282: Installing Steering Gearbox Mounting Bolt And Power Steering Fluid Line Bracket Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Tighten the steering gearbox mounting bolts and gearbox stiffener mounting bolts to the specified torque.
28. For model with active engine mount control system: Connect engine mount control solenoid valve connector.

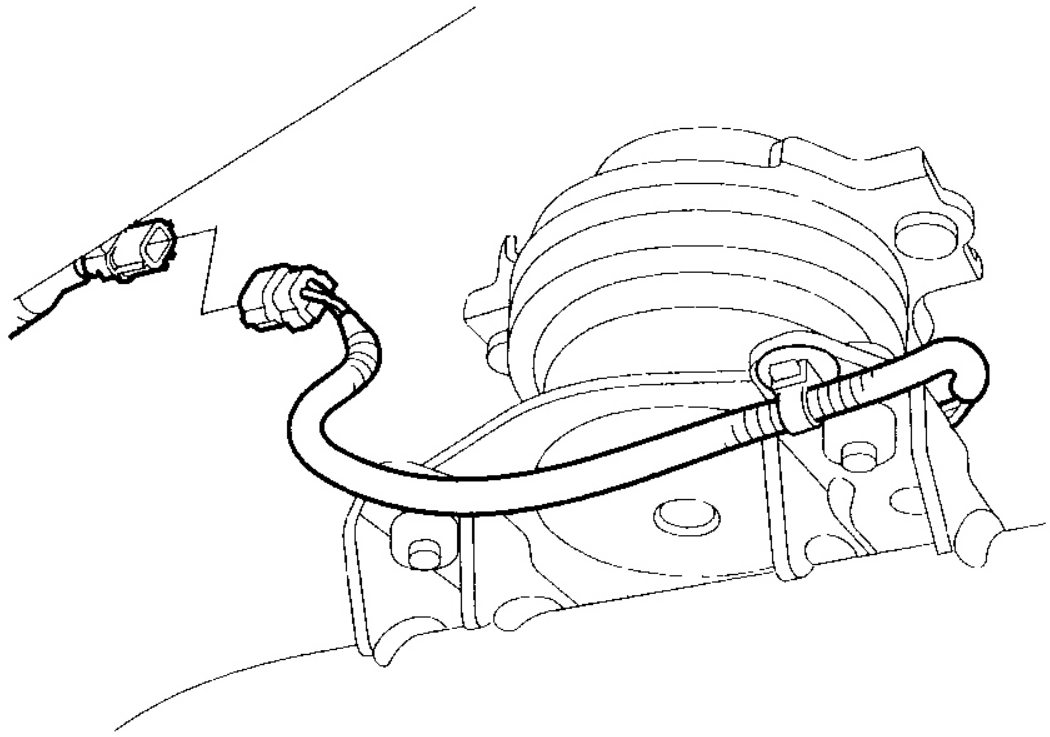


Fig. 283: Connecting Engine Mount Control Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. For model with engine mount control system: Connect the vacuum tube joint, and install the joint in the clamp at the engine mount.

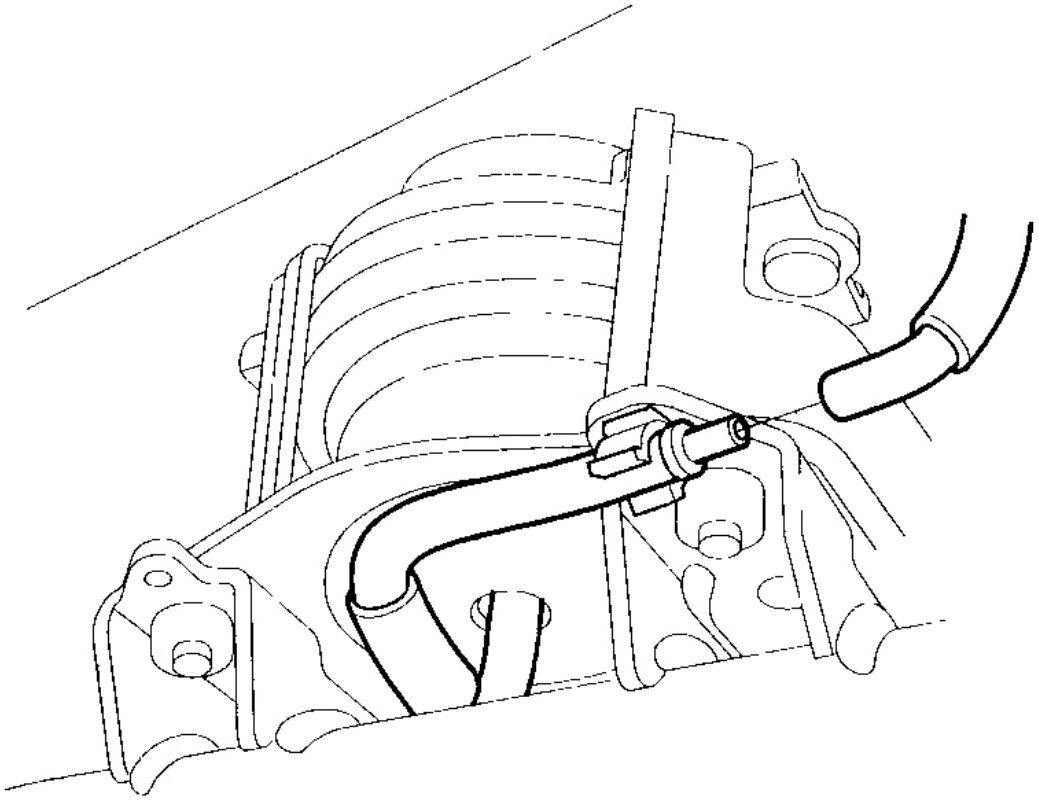


Fig. 284: Connecting Vacuum Tube Joint (For Model With Engine Mount Control System)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Install selector control lever (A) on the selector control shaft (B). Do not bend the shift cable excessively.

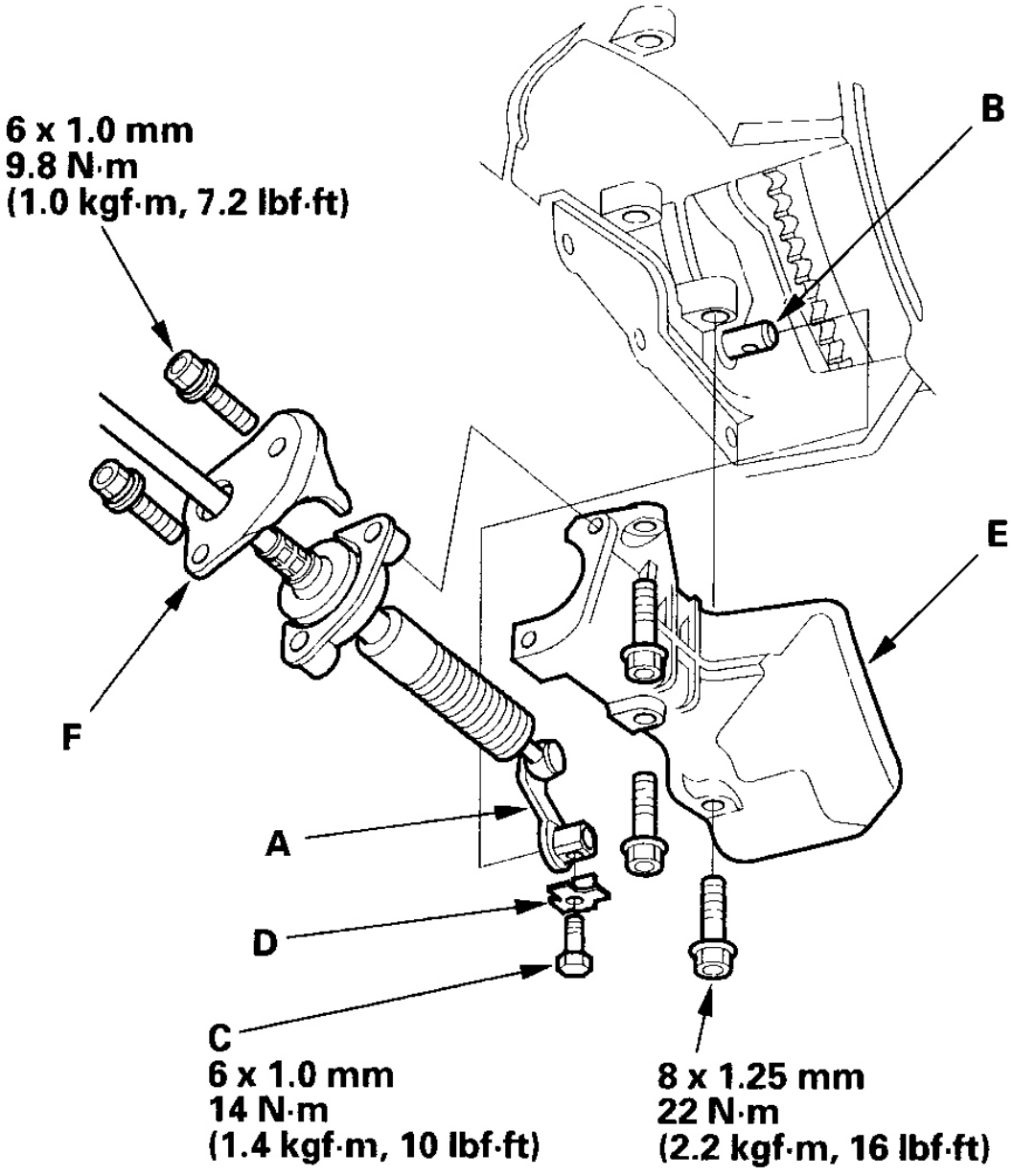


Fig. 285: Installing Selector Control Lever On Selector Control Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

31. Install the lock bolt (C) and a new lock washer (D), and bend the lock washer tab against the bolt head.
32. Install the shift cable cover (E), and secure the shift cable holder (F) on the shift cable

cover.

33. Install the ball joint on each lower arm (A) with the new castle nut (B) and lock pin (C).

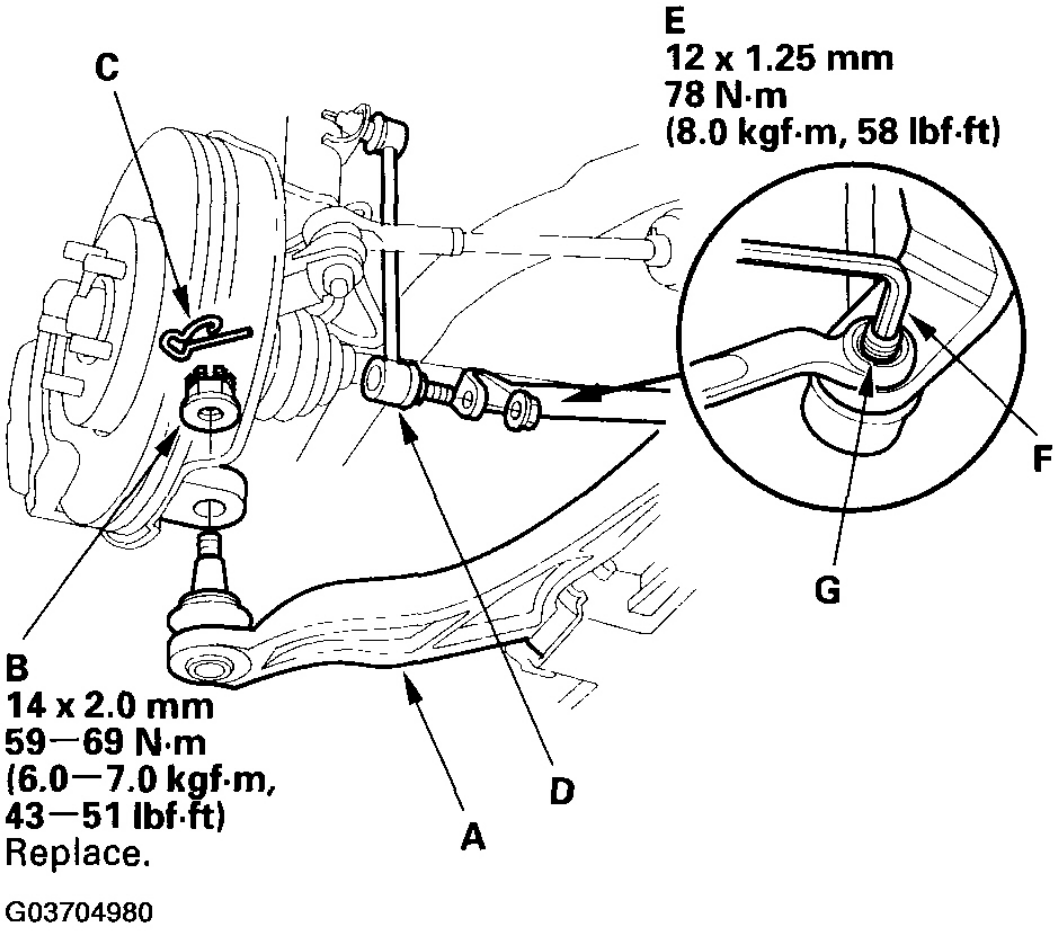


Fig. 286: Installing Ball Joint On Lower Arm
Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Install the stabilizer links (D) to the lower arms, and install the nuts (E). Insert a 6 mm Allen wrench (F) in the ball joint pin (G), and tighten the nuts.
35. Install the exhaust pipe (A) with the new self-locking nuts, its mount (B), and new gaskets (C) (D).

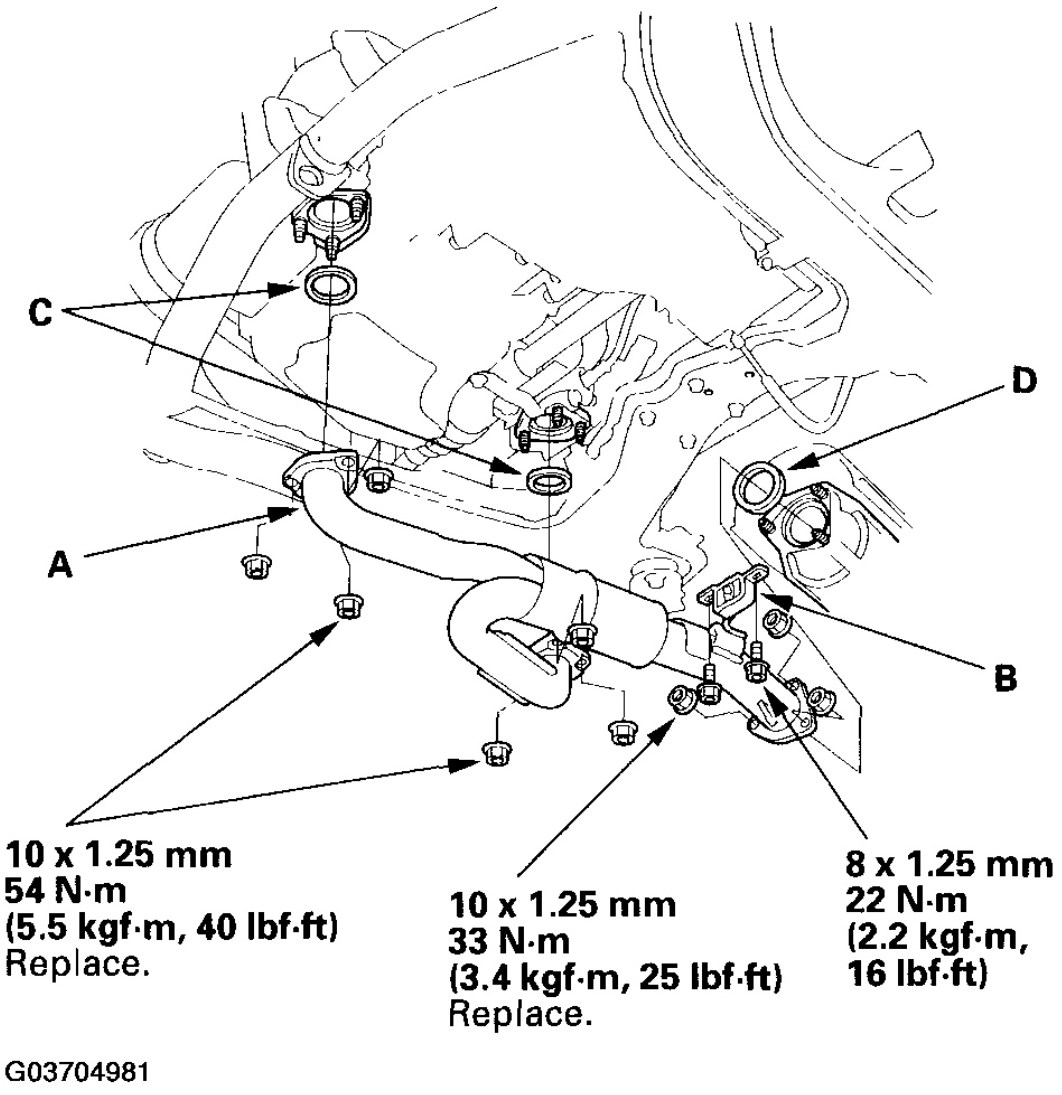


Fig. 287: Installing Exhaust Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. For model with active engine mount control system: Install the new front engine mount bolt, and install the front engine mount stop.

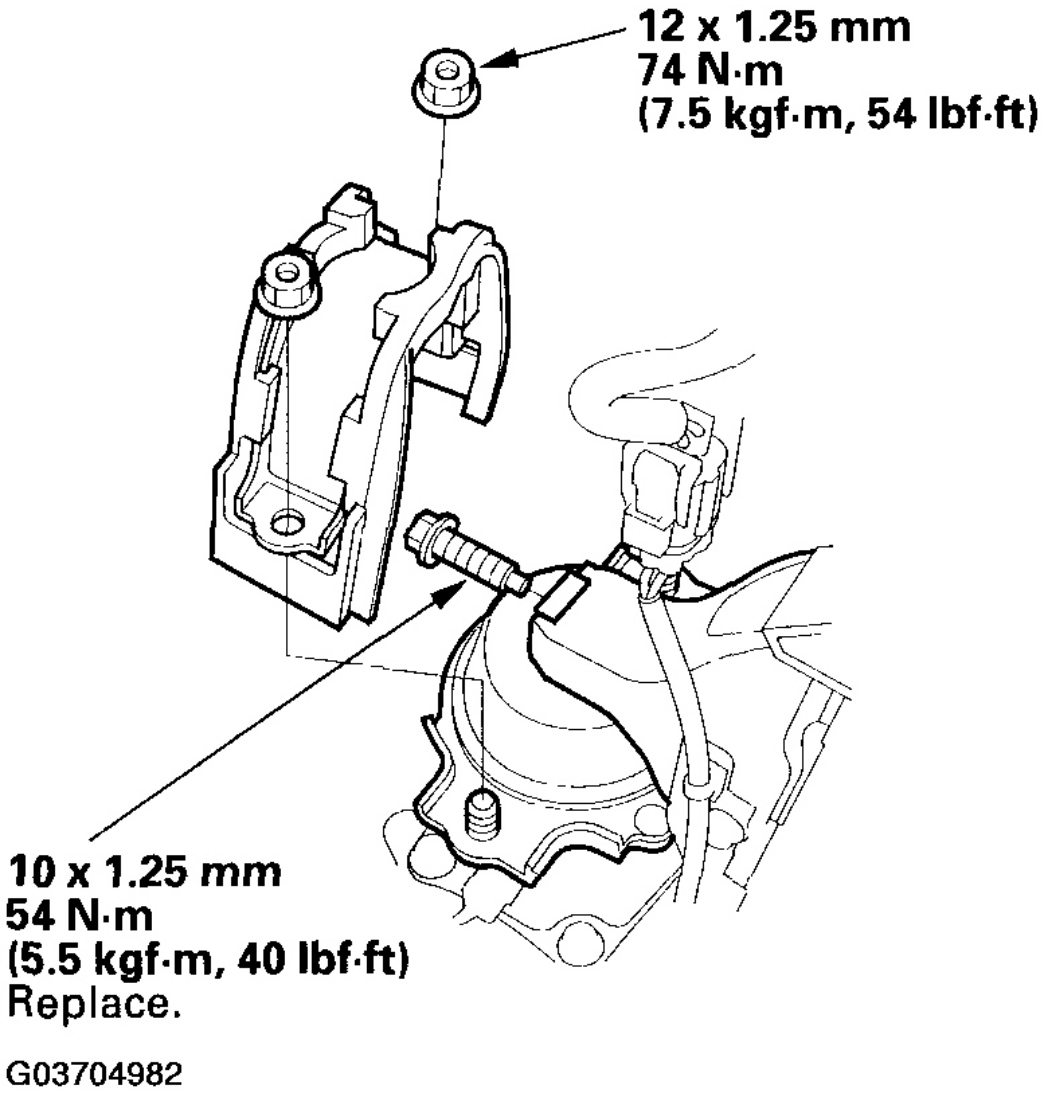


Fig. 288: Installing Front Engine Mount Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

37. For model with engine mount control system: Install the new front engine mount bolt, and install the front engine mount stop (A) and vacuum tube clamp bracket (B).

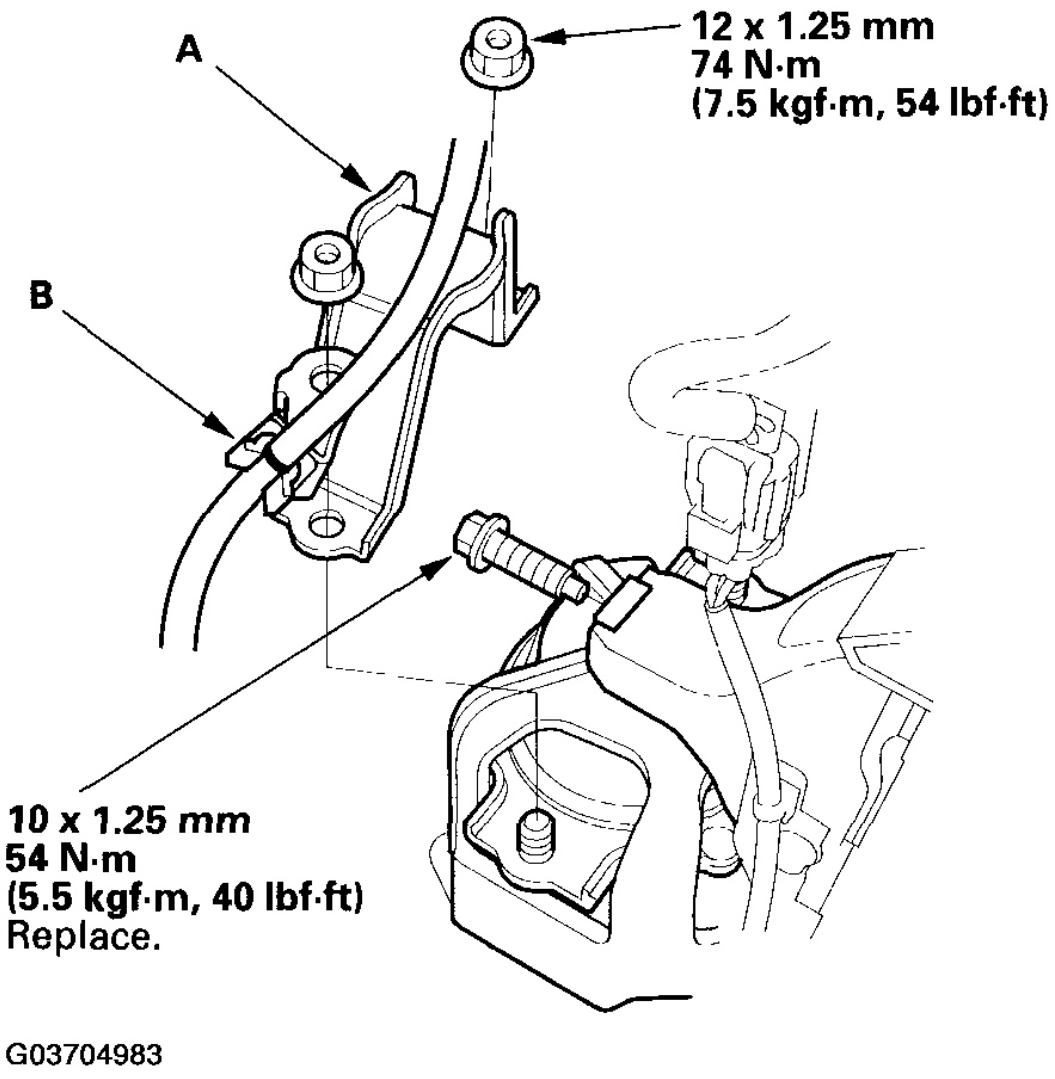


Fig. 289: Installing Front Engine Mount Stop
Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Remove the engine support hanger and engine balancer bar.
39. Install the harness clamp bracket to the engine rear cylinder head.

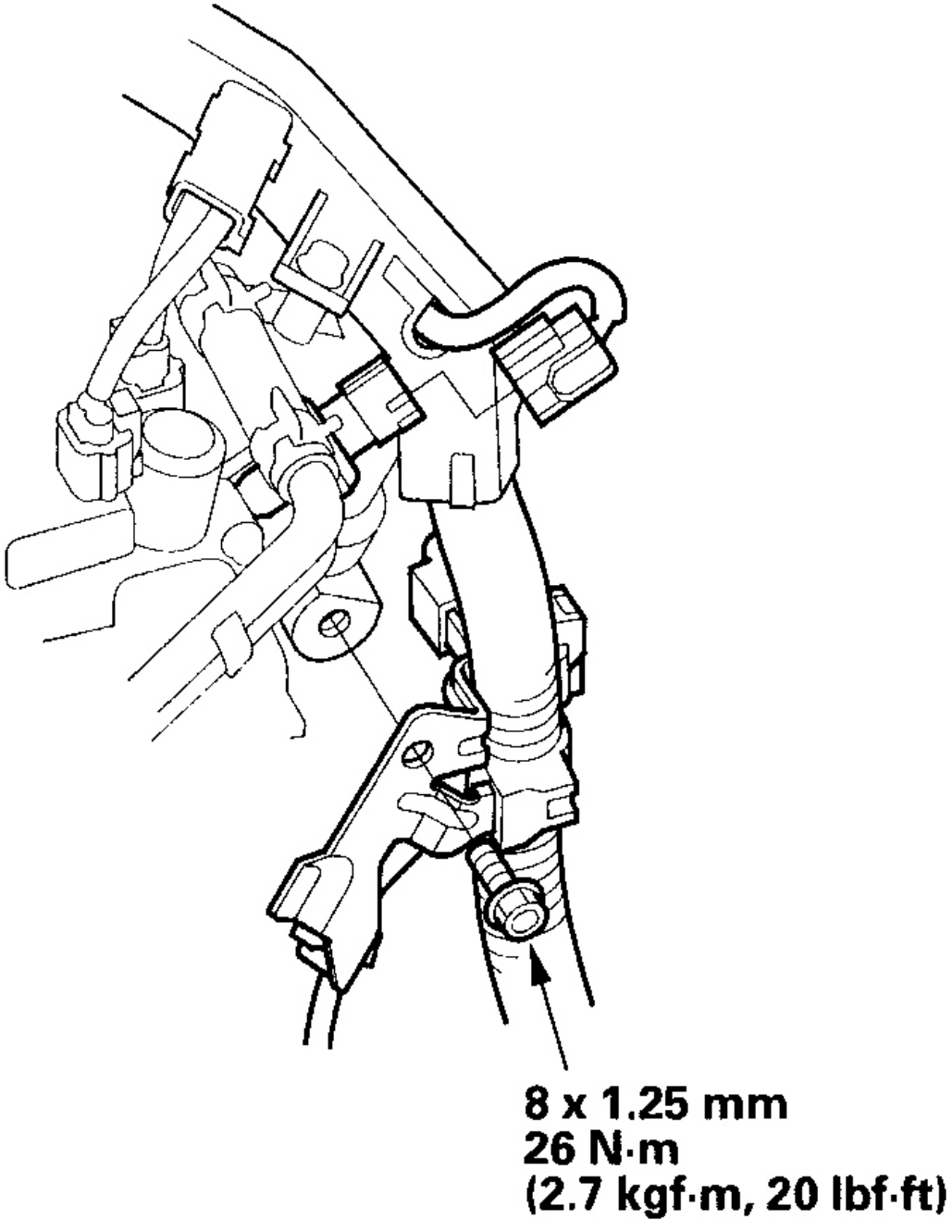


Fig. 290: Installing Harness Clamp Bracket To Engine Rear Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

40. Install the connector bracket to the engine front cylinder head.

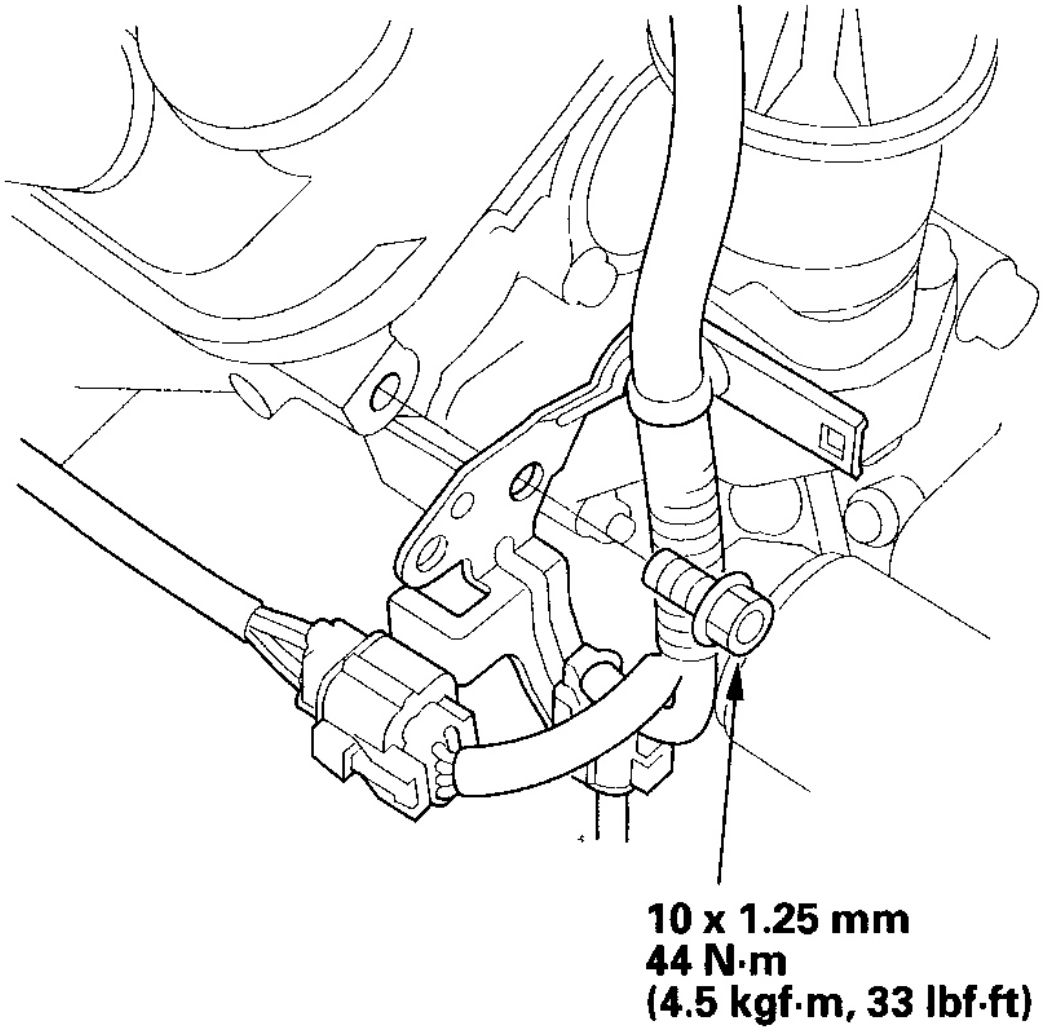


Fig. 291: Installing Connector Bracket To Engine Front Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

41. Install the harness cover (A) on the harness cover bracket (B), and secure the harness cover bracket (C) with the bolt on the transmission.

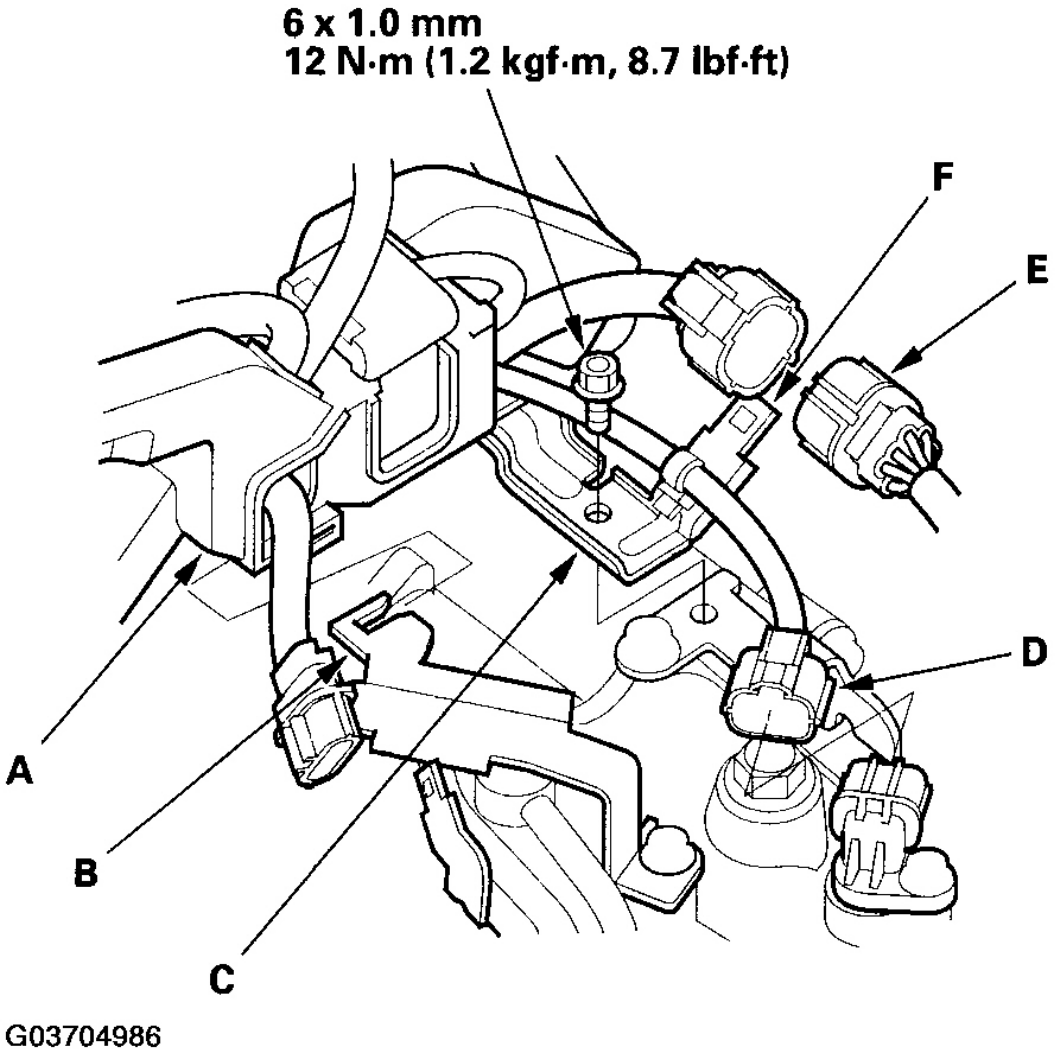
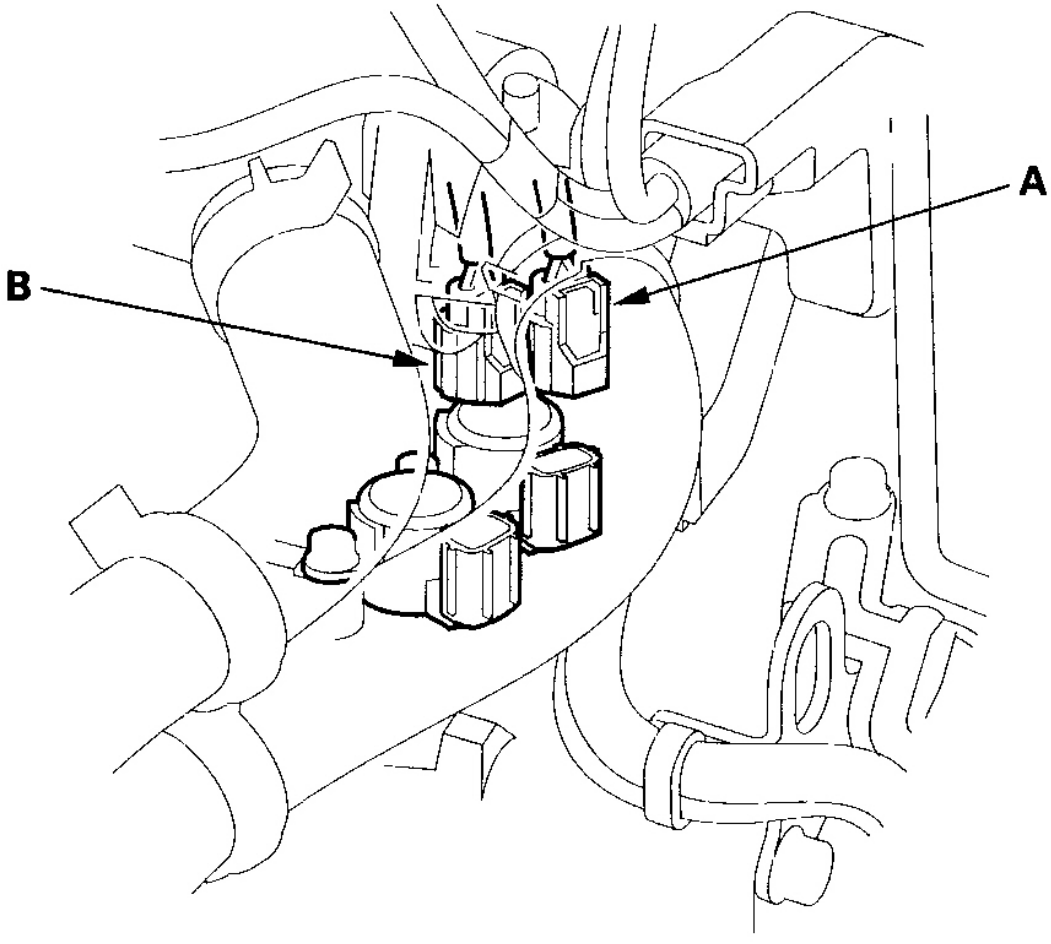


Fig. 292: Installing Harness Cover On Harness Cover Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Connect output shaft (countershaft) speed sensor connector (D). Connect transmission range switch connector (E), and install it on the connector bracket (F).
43. Connect shift solenoid valve B connector and torque converter clutch solenoid valve connector (A).



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Fig. 293: Connecting Shift Solenoid Valve B Connector And Torque Converter Clutch Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Connect transmission subharness 6P connector (A), and install the harness clamps (B) on the clamp brackets (C).

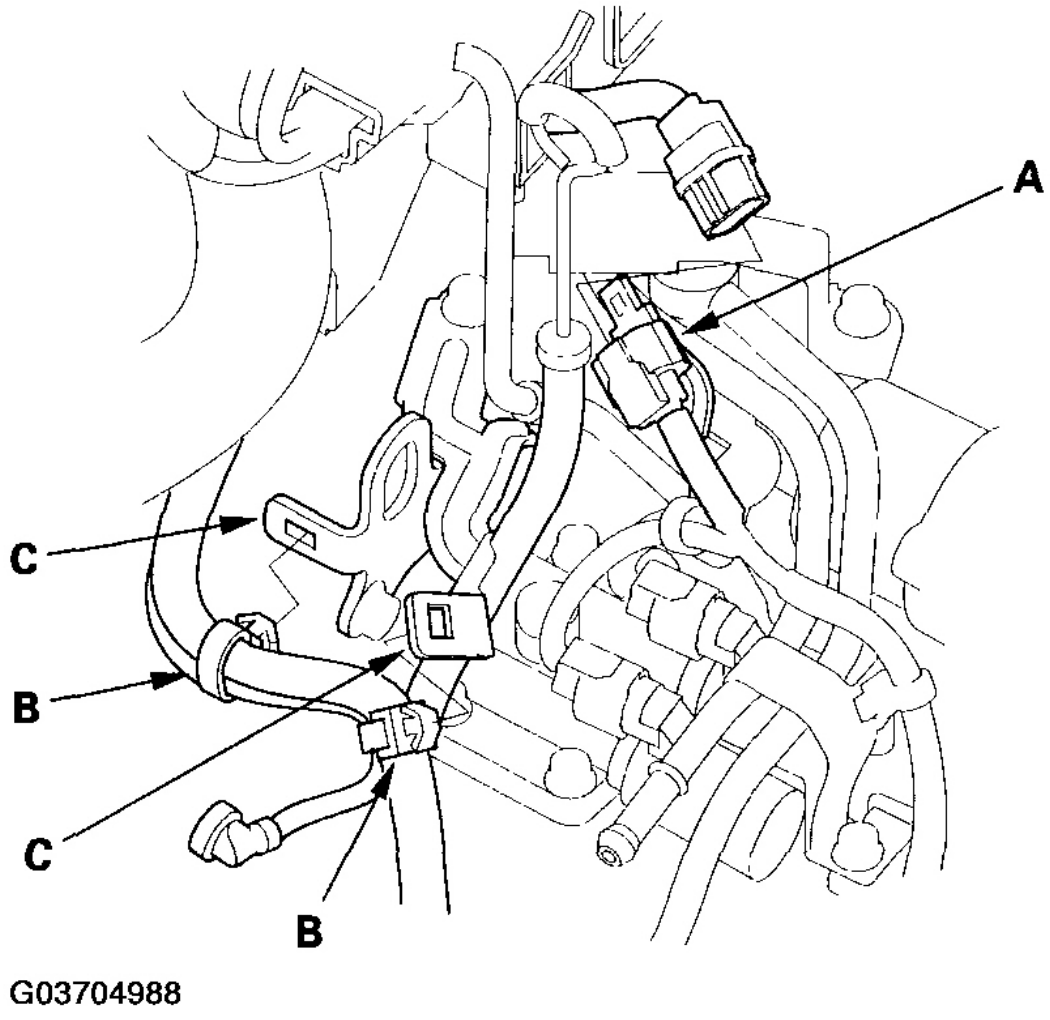


Fig. 294: Connecting Transmission Subharness 6P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Connect the connectors to the shift solenoid valve A, shift solenoid valve C (B), A/T clutch pressure control solenoid valve C, input shaft (mainshaft) speed sensor (D), and 4th clutch transmission fluid pressure switch (E). Install the harness clamps (F) on the clamp brackets (G).

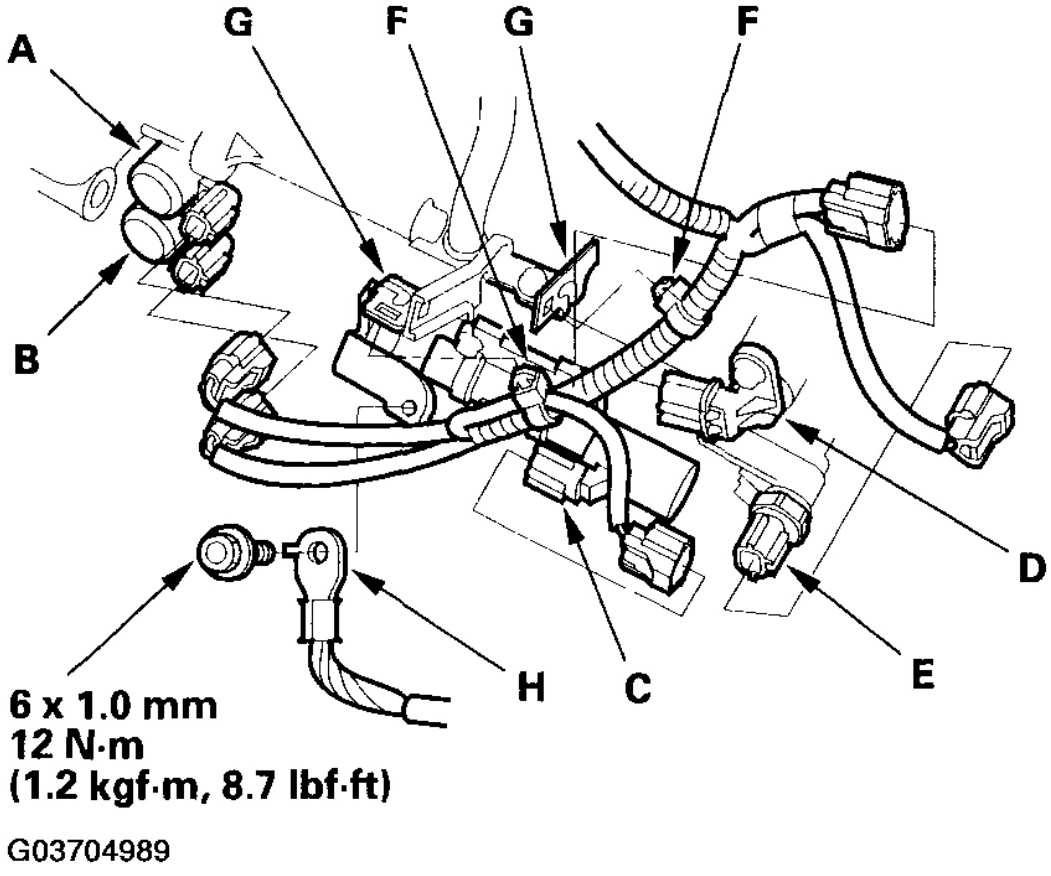


Fig. 295: Connecting Connectors To Shift Solenoid Valve A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Install the transmission ground terminal (H).
47. Install the starter (A) on the torque converter housing. Connect the starter cables (B), and install the harness clamp (C) on the clamp bracket (D).

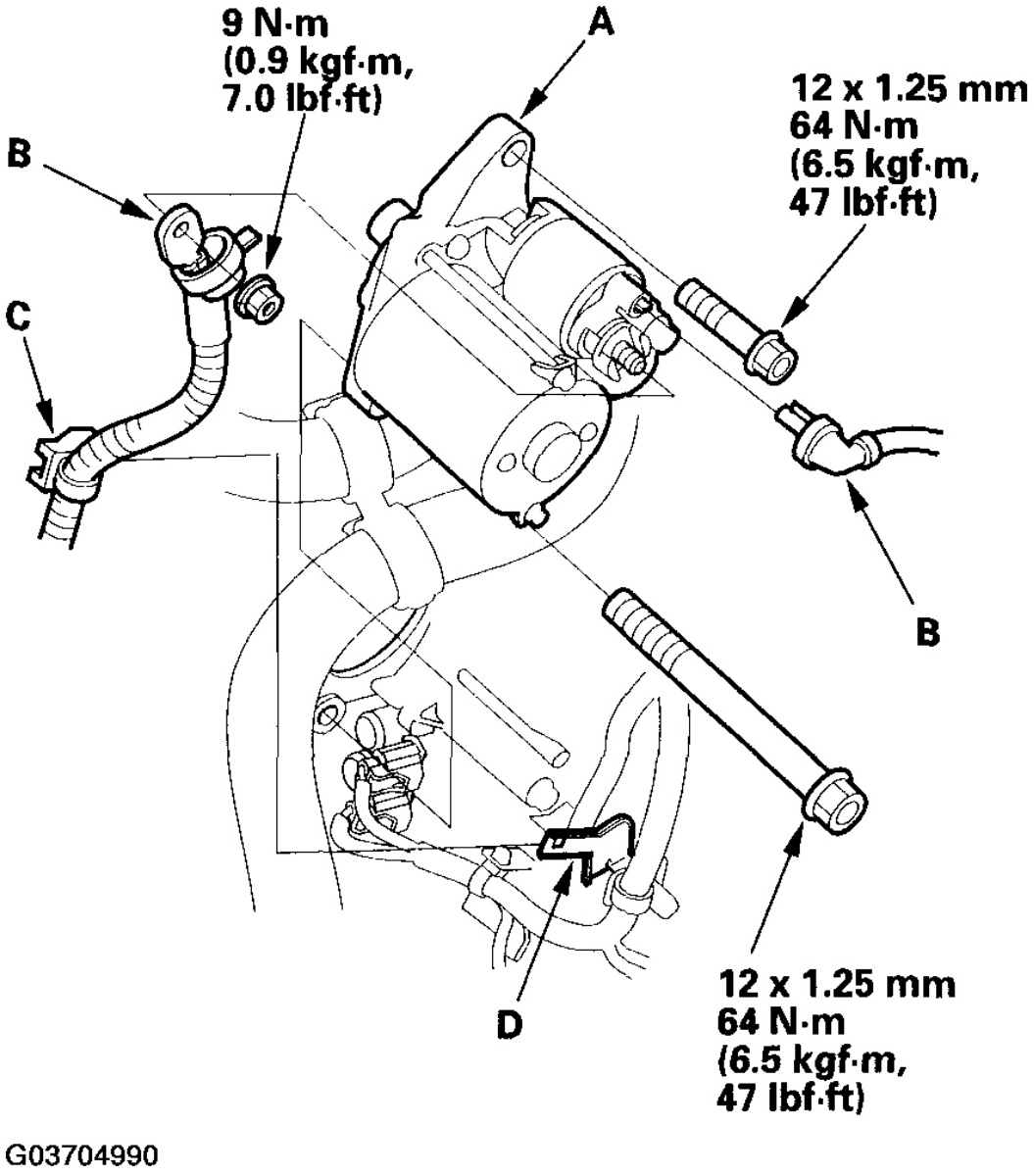


Fig. 296: Installing Starter On Torque Converter Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Connect the ATF cooler hoses (A) to the ATF cooler lines (B), and secure the hoses with the clips (C) (see **ATF COOLER HOSE REPLACEMENT**).

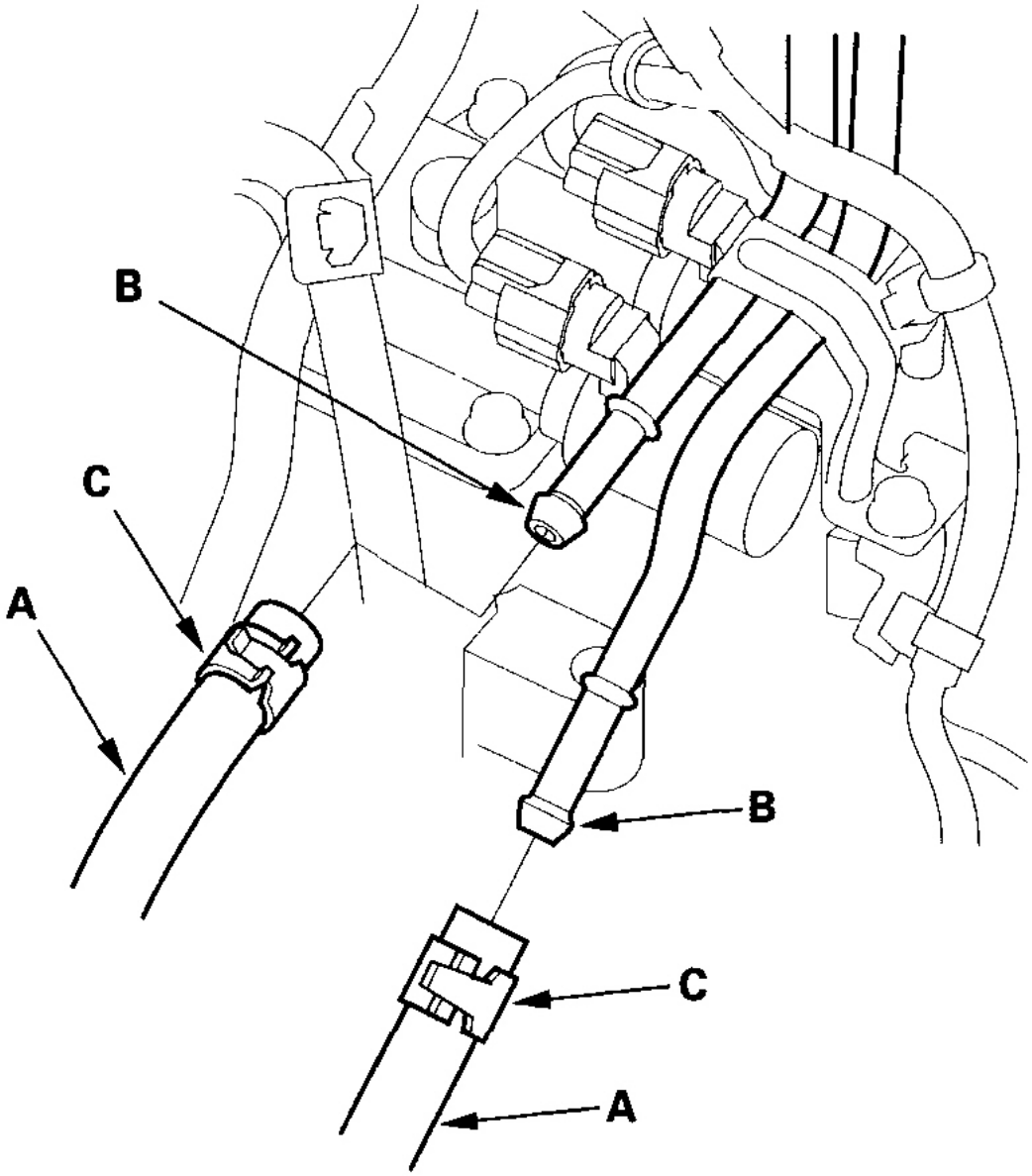


Fig. 297: Connecting ATF Cooler Hoses To ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

49. Install the battery base.
50. Install the air cleaner housing and intake air duct.

51. Install the battery tray and battery, and secure the battery with its hold-down bracket.
52. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
53. Install the front bulkhead cover.
54. Set the parking brake. Start the engine, and shift the transmission through all positions three times.
55. Check the shift lever operation, A/T gear position indication operation, and shift cable adjustment.
56. Check and adjust the front wheel alignment (see **WHEEL ALIGNMENT**).
57. Install the splash shield and front inner fender.
58. Start the engine in the P or N position, and warm it up to normal operating temperature (the radiator fan comes on).
59. Turn off the engine, and check the ATF level (see **ATF LEVEL CHECK**).
60. Do the road test (see **ROAD TEST**).
61. Enter the audio and navigation anti-theft codes, then enter the customer's audio presets, and set the clock.

ATF COOLER CLEANING

Special Tools Required

- ATF Cooler Cleaner GHTTTCF6H
- Magnetic Nonbypass 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 ATF-Z 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 ATF 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 ATF-Z1; do not use any additives.

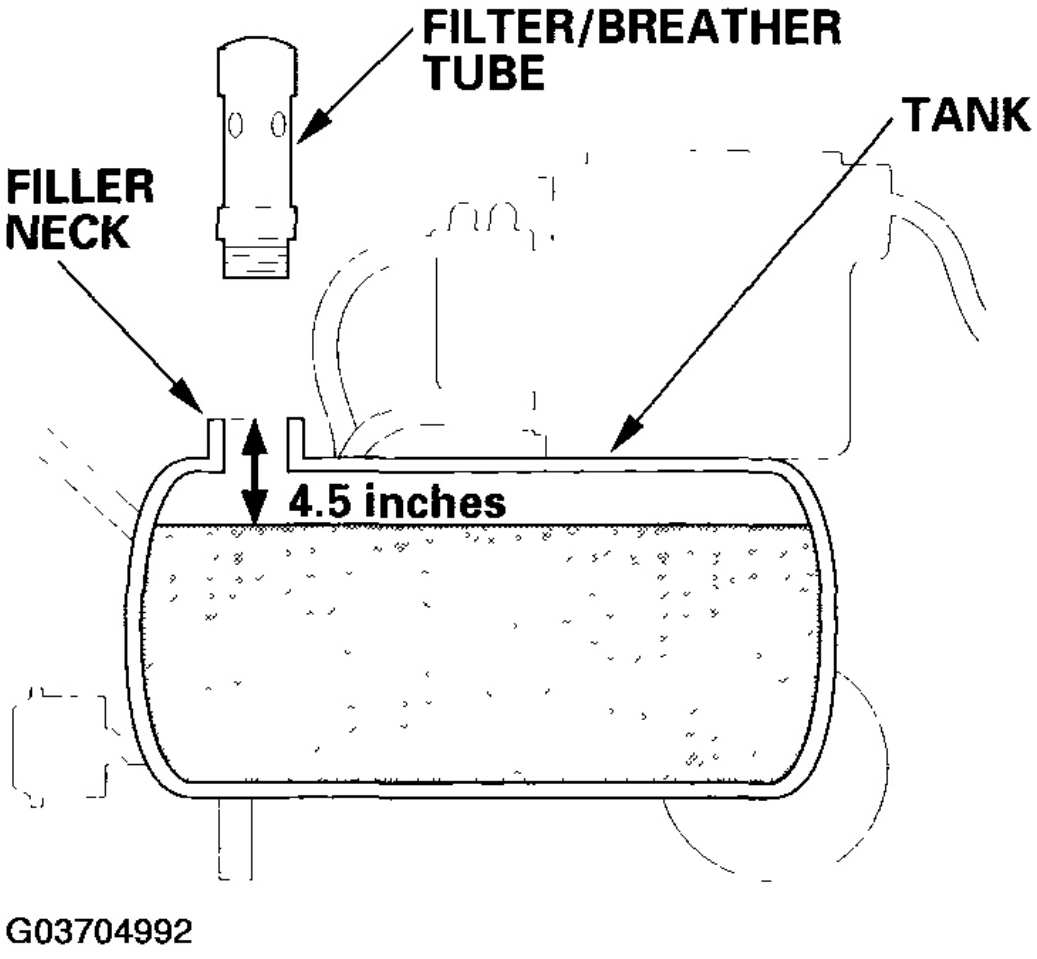


Fig. 298: Checking Fluid In Cooler Cleaner Tank
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

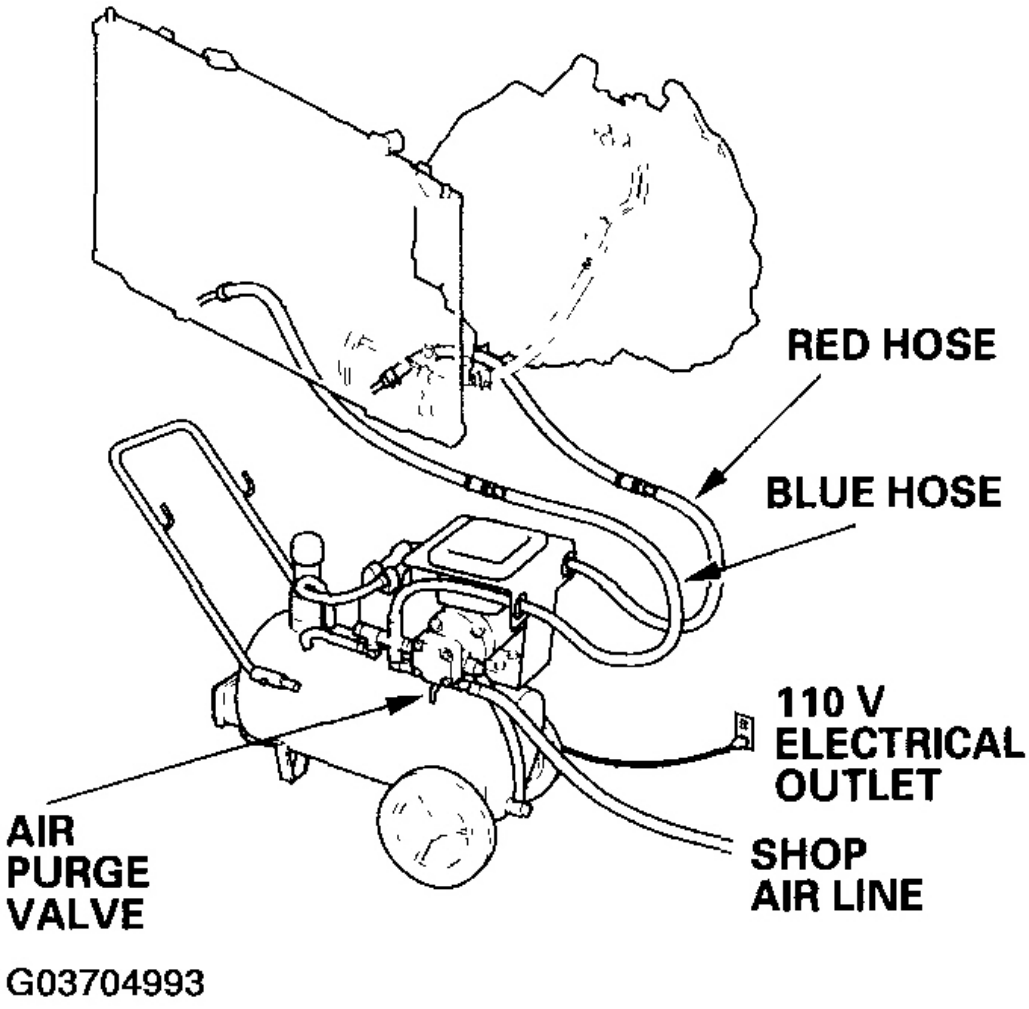


Fig. 299: Plugging Cooler Cleaner Into Grounded Electrical Outlet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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).

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.

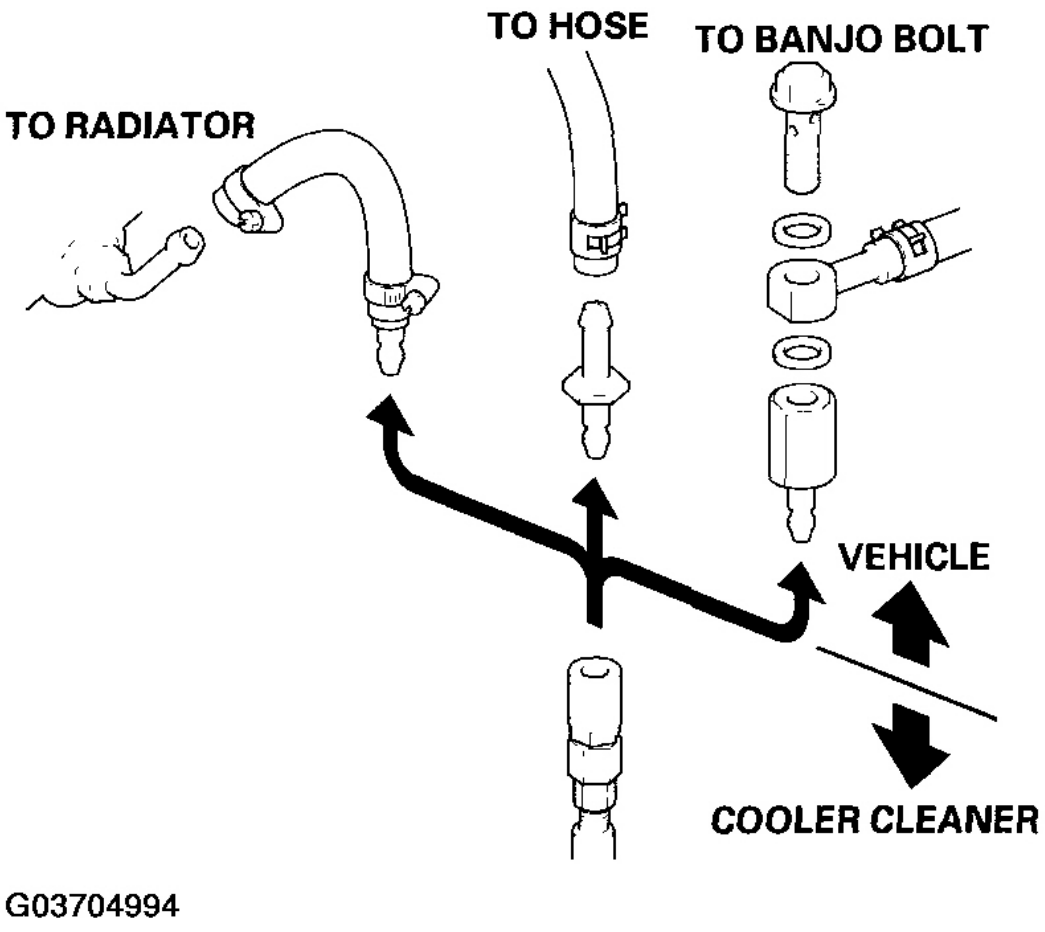


Fig. 300: Attaching Fittings To Radiator And Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 ATF 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.

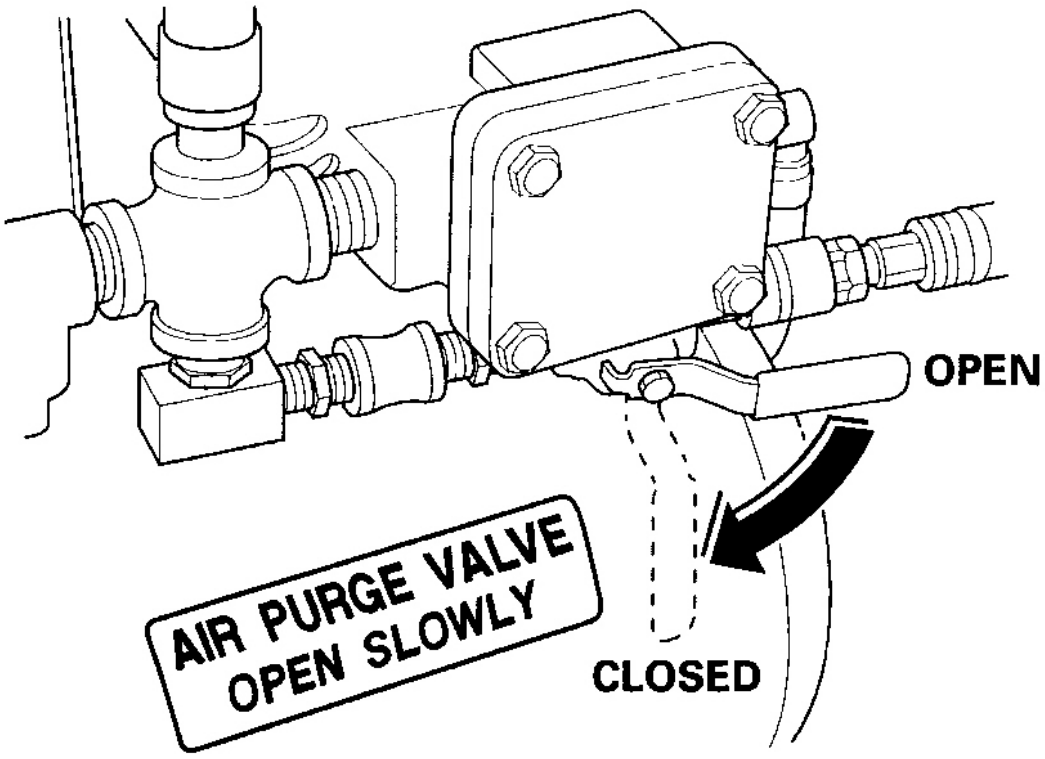


Fig. 301: Identifying Air Purge Valve Opening And Closing Position

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 ATF, 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 ATF, 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 nonbypass spin-on filters once a year or when you notice a restriction in the ATF flow.
- Check the level and condition of the fluid in the tank before each use.
- Replace the ATF in the tank when it looks dark or dirty.

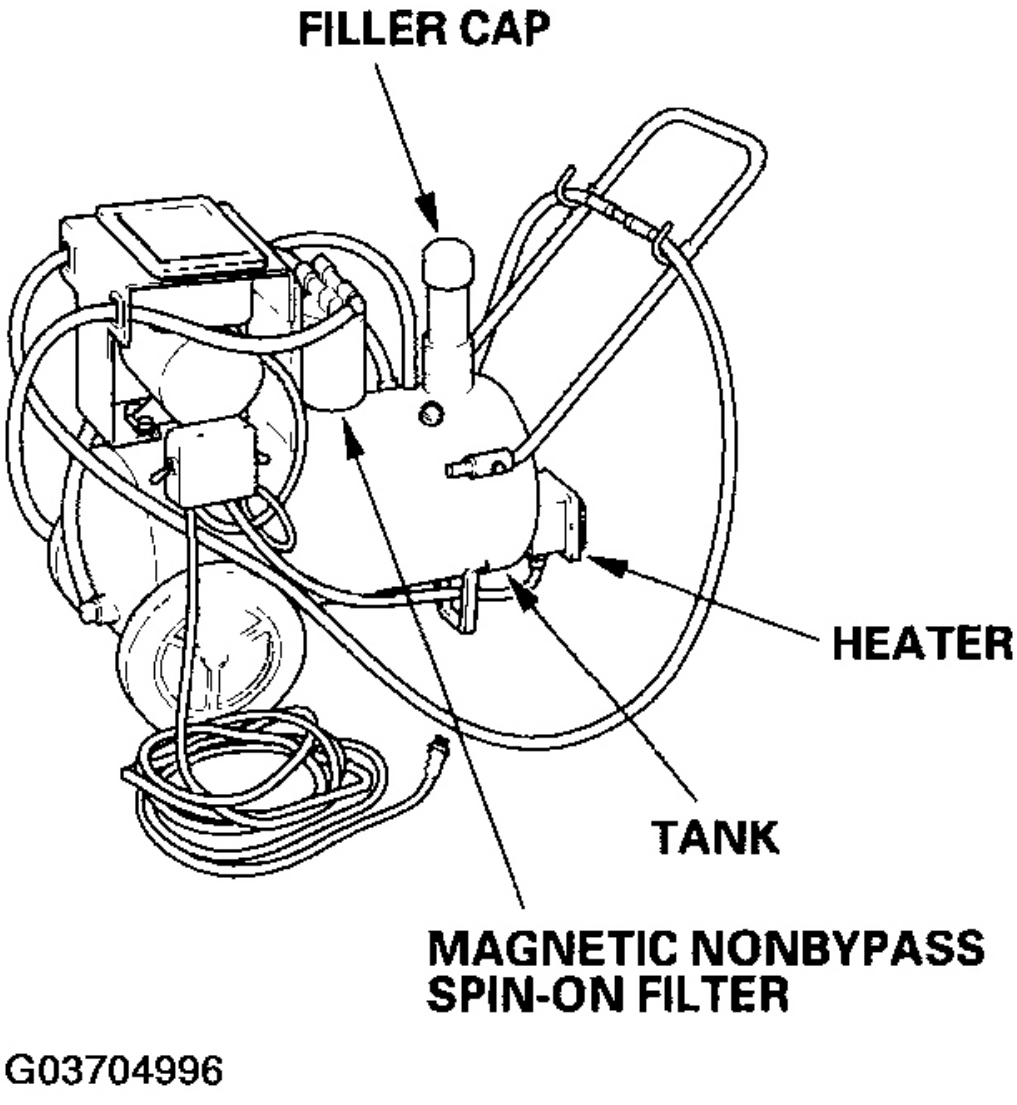


Fig. 302: Identifying ATF Cooler Cleaner
Courtesy of AMERICAN HONDA MOTOR CO., INC.

ATF COOLER HOSE REPLACEMENT

1. Slide the ATF cooler hoses over the ATF cooler lines until the hose ends contact with the bulge (A) of the ATF cooler lines.

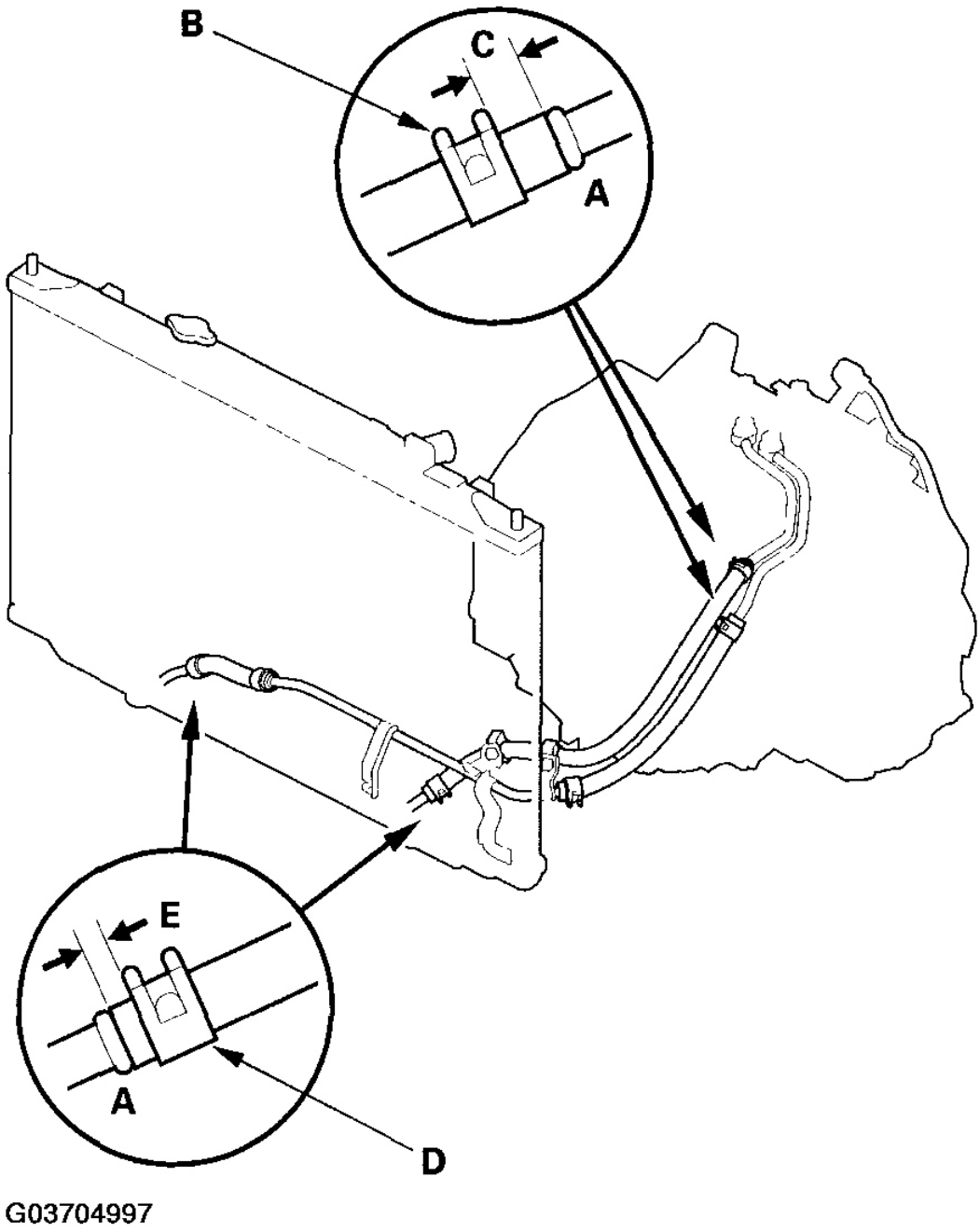


Fig. 303: Sliding ATF Cooler Hoses Over ATF Cooler Lines Until Contact With Bulge
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Secure the hoses with the clips (B) at 6-8 mm (0.2-0.3 in.) (C) from the hose ends.

3. Secure the hoses at the ATF cooler with the clips (D) at 2-4 mm (0.1-0.2 in.) (E) from the hose ends.

SHIFT LEVER REMOVAL

1. Remove the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see **DASHBOARD CENTER PANEL REMOVAL/INSTALLATION**).
2. Disconnect D3 switch/park pin switch/A/T gear position indicator panel light harness connector and shift lock solenoid connector.

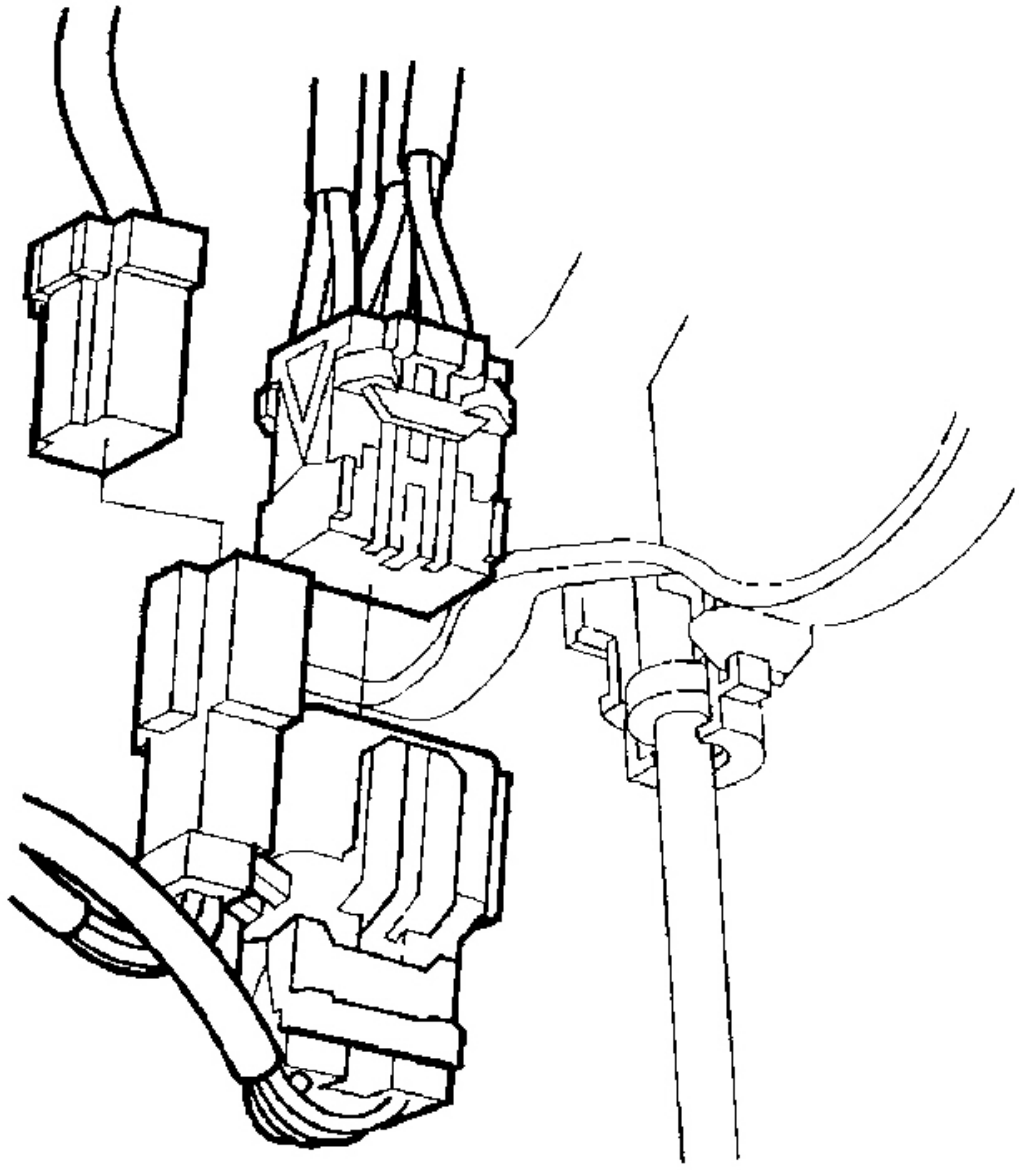


Fig. 304: Disconnecting D3 Switch/Park Pin Switch/A/T Gear Position Indicator Panel Light Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Shift the shift lever into the R position.

4. Slide the lock tab (A) down on the shift cable end holder (B).

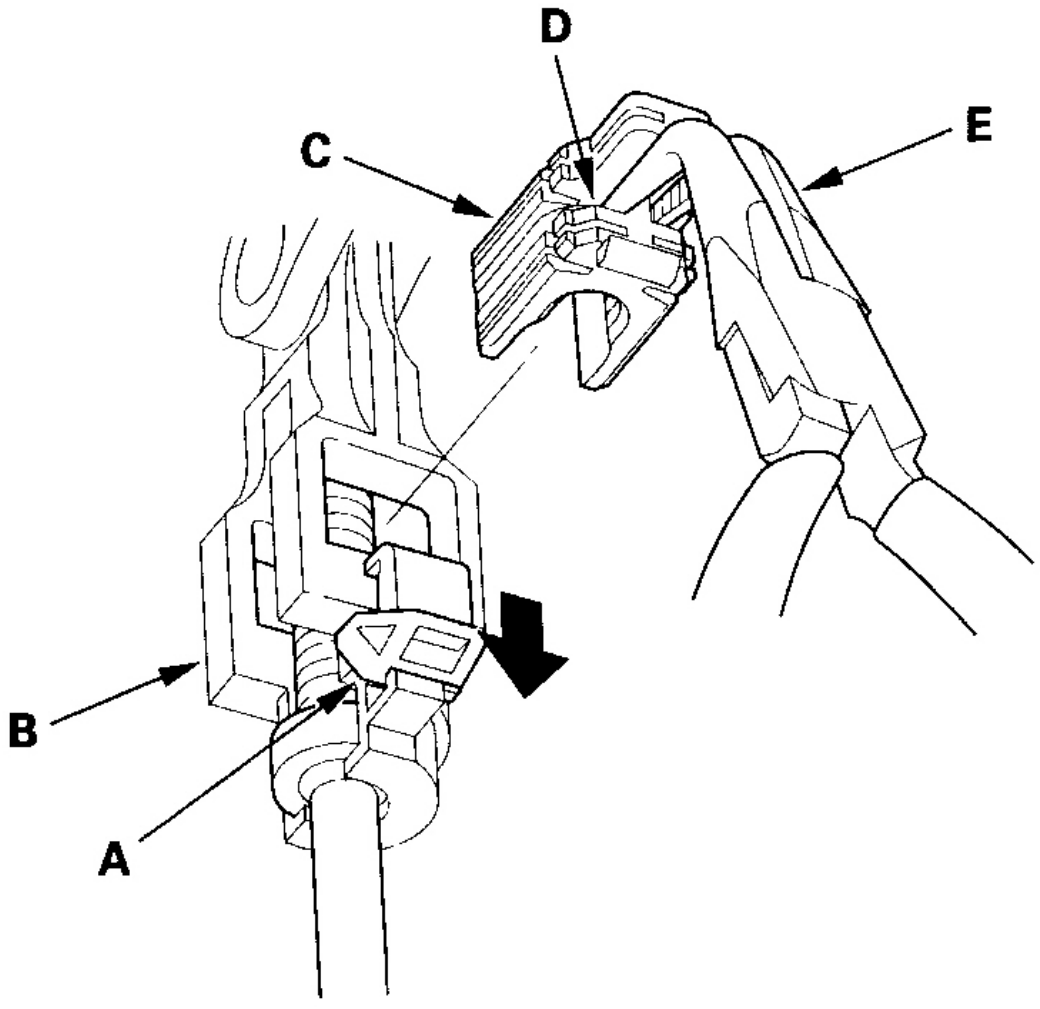


Fig. 305: Sliding Lock Tab Down On Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Grasp the shift cable lock (C) in the middle (D) with angle-jaw needle-nose pliers (E), and remove it from the shift cable end and shift cable end holder. Do not pry the shift cable lock with a screwdriver, it may damage the shift cable end holder.
6. Separate the shift cable end from the shift cable end holder.

7. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the guide tab (C) on the socket holder will be perpendicular to the opening (D) of the socket holder bracket (E). Then slide the holder to remove the shift cable from the socket holder bracket. Do not remove the shift cable by twisting the shift cable guide (F).

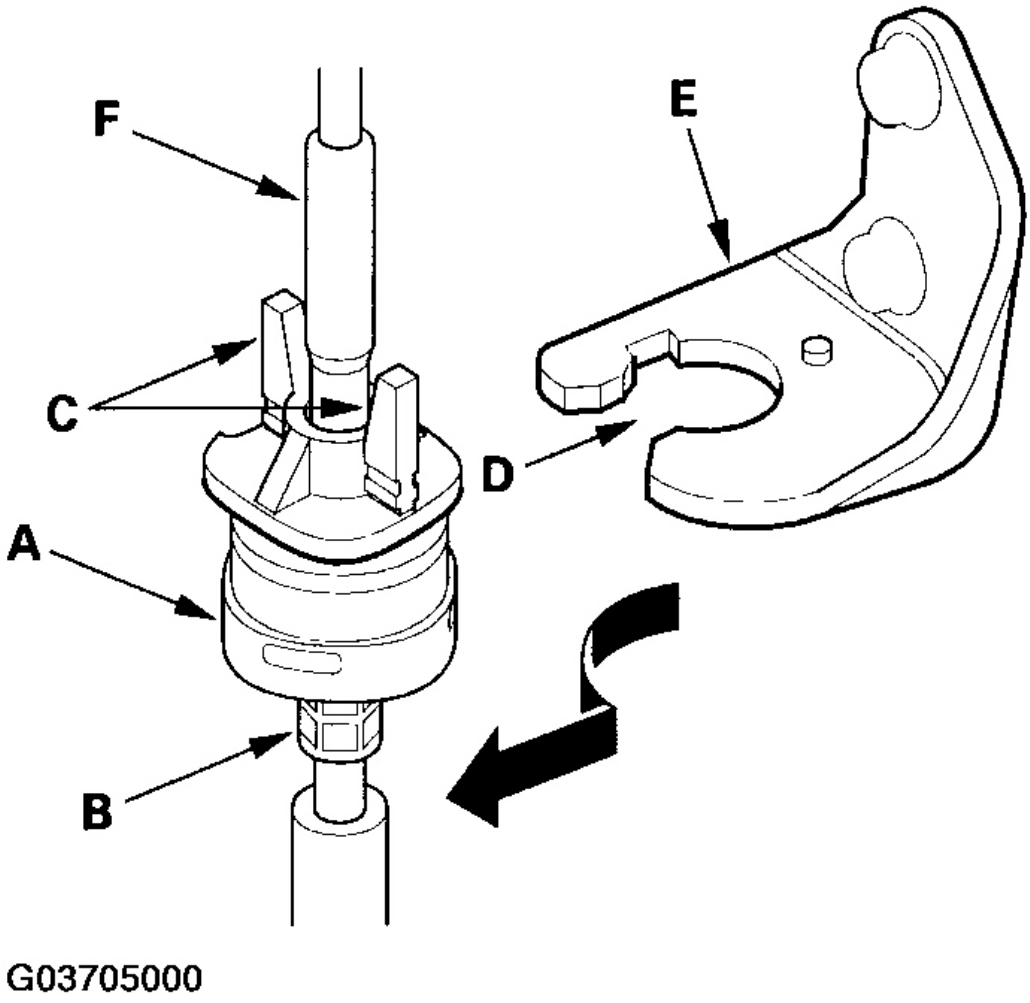


Fig. 306: Rotating Socket Holder Quarter Turn On Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the harness clamp (A) and shift lever assembly.

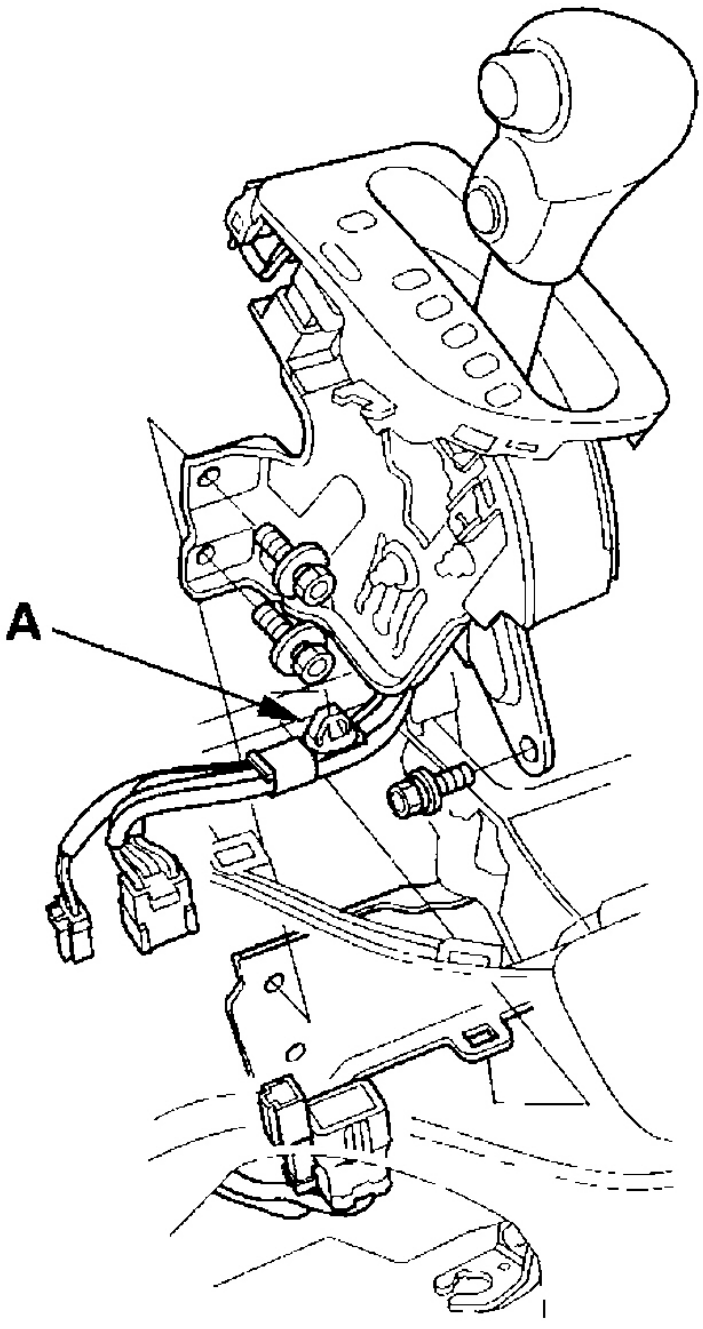


Fig. 307: Removing Harness Clamp And Shift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT LEVER INSTALLATION

1. Install the shift lever assembly.

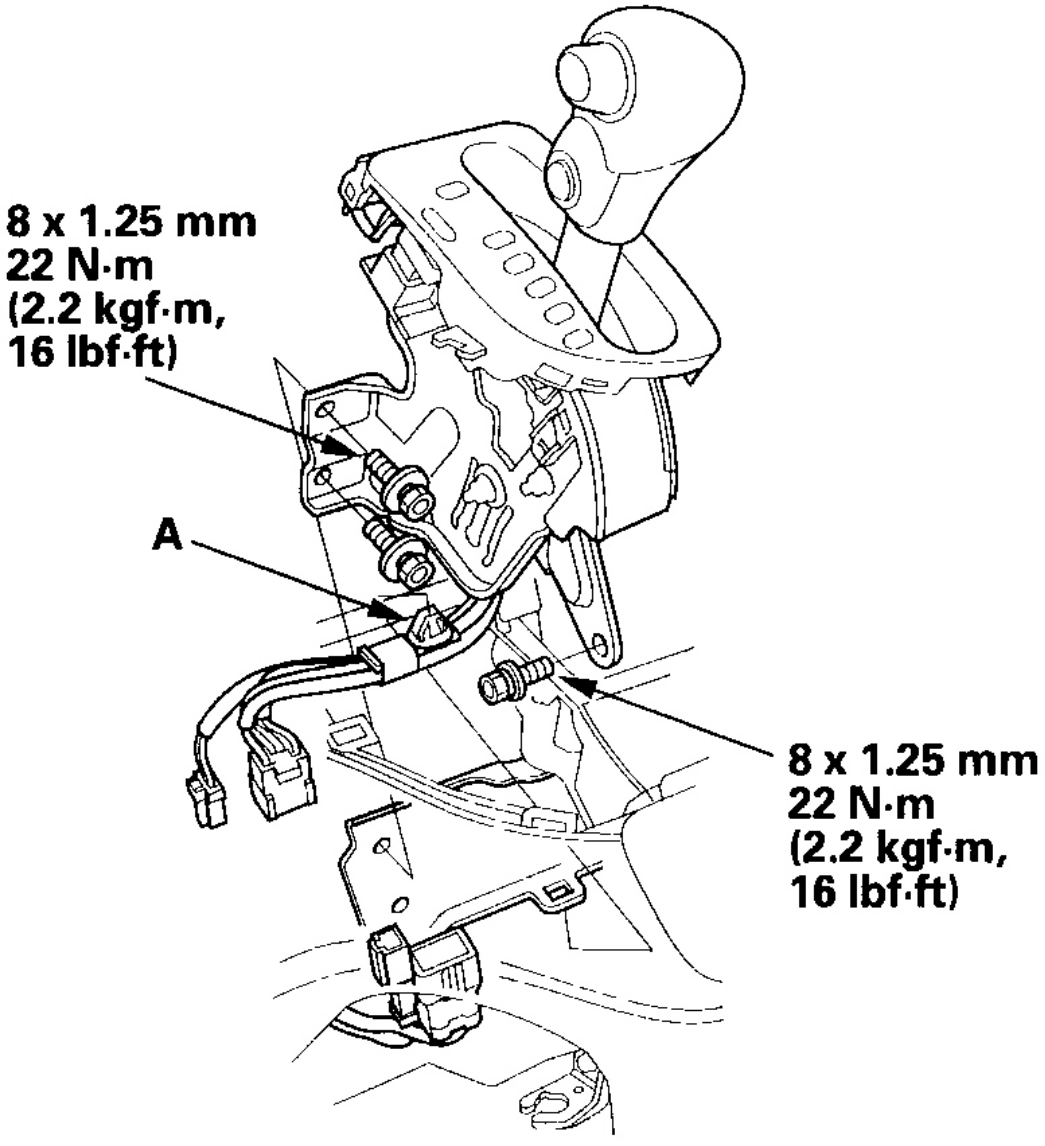


Fig. 308: Installing Shift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the harness clamp (A).
3. Connect D3 switch/park pin switch/A/T gear position indicator panel light harness

connector and shift lock solenoid connector.

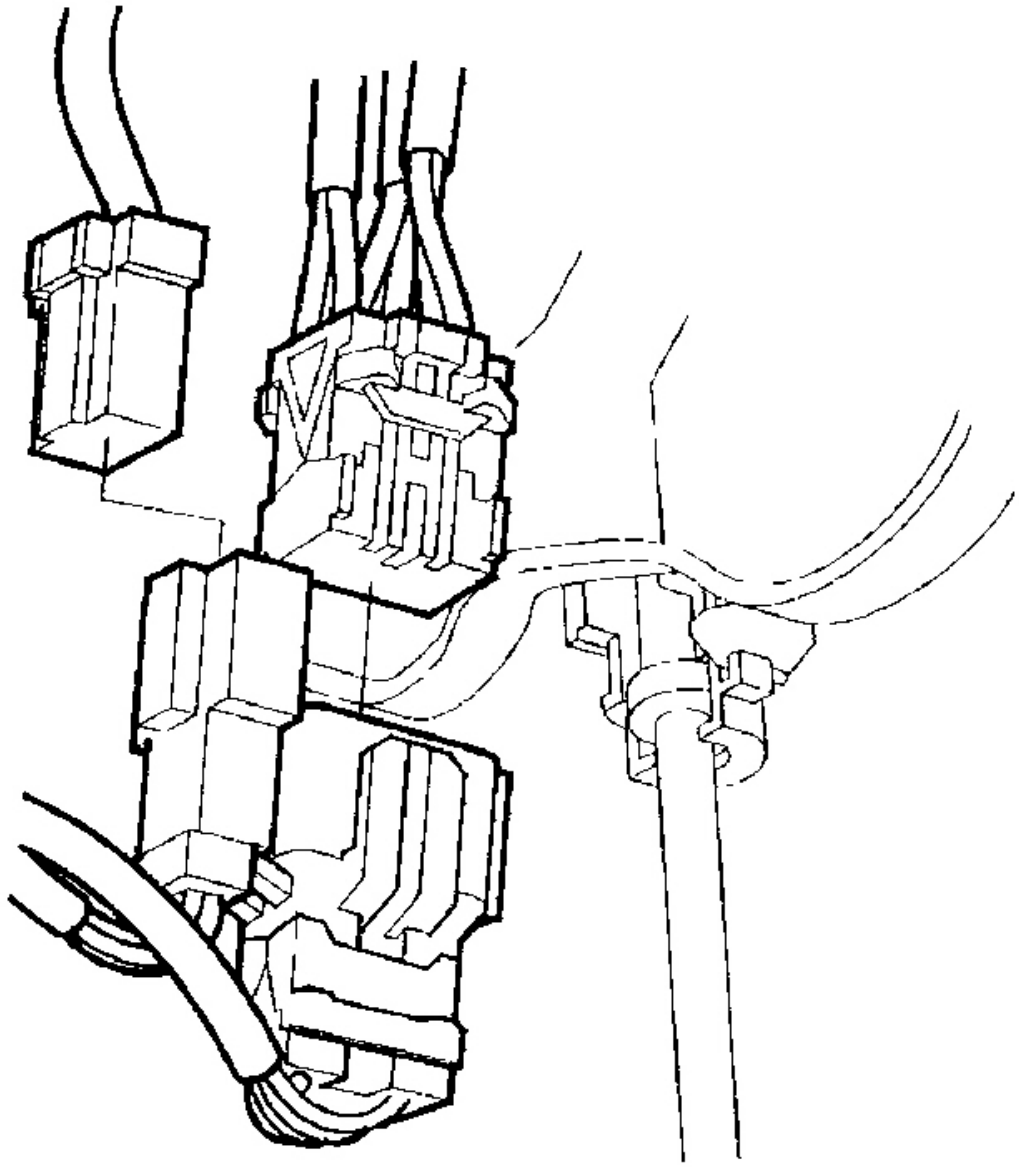


Fig. 309: Connecting D3 Switch/Park Pin Switch/A/T Gear Position Indicator Panel Light Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Turn the ignition switch ON (II), and verify that the R position indicator comes on.

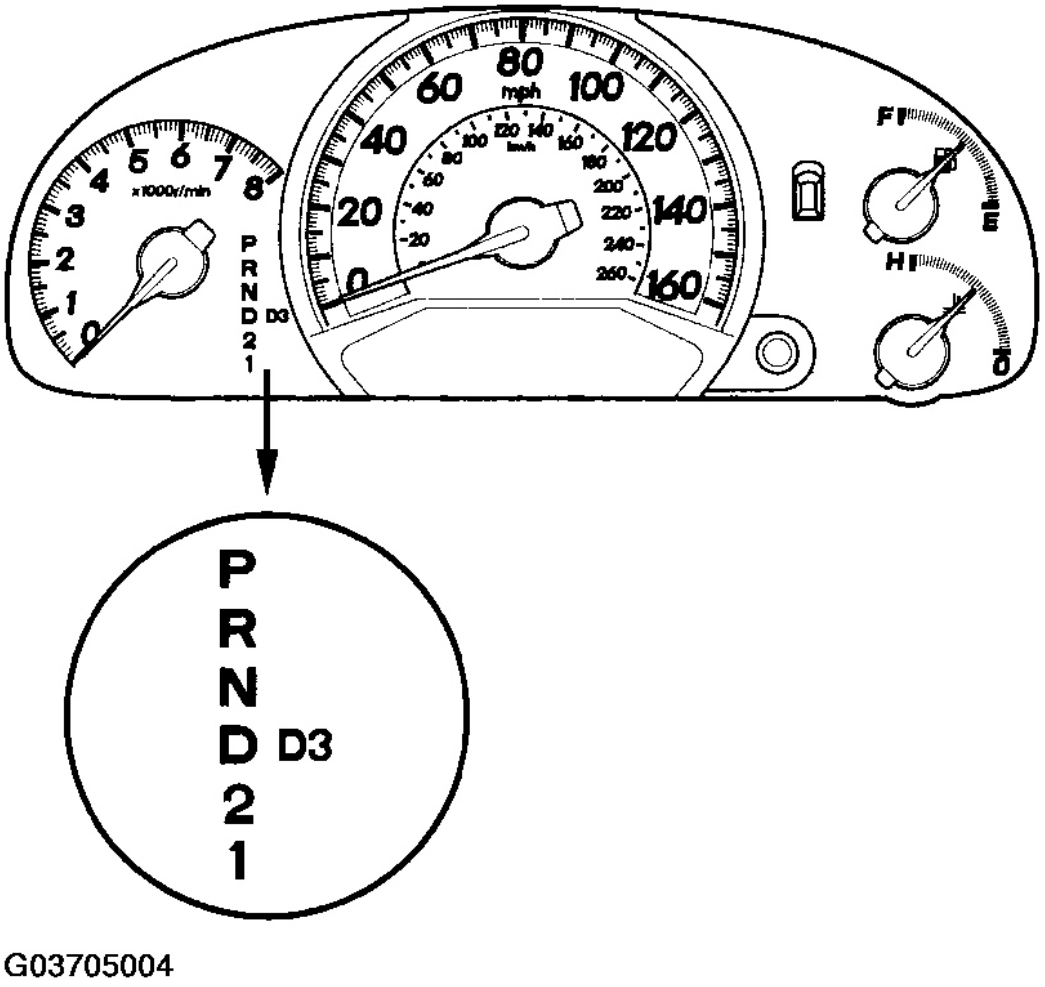


Fig. 310: Verifying That R Position Indicator Comes On
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. If necessary, push the shift cable (A) until it stops, then release it. Pull the shift cable back one step so that the shift cable is in the R position. Do not hold the shift cable guide (B) to adjust the shift cable.

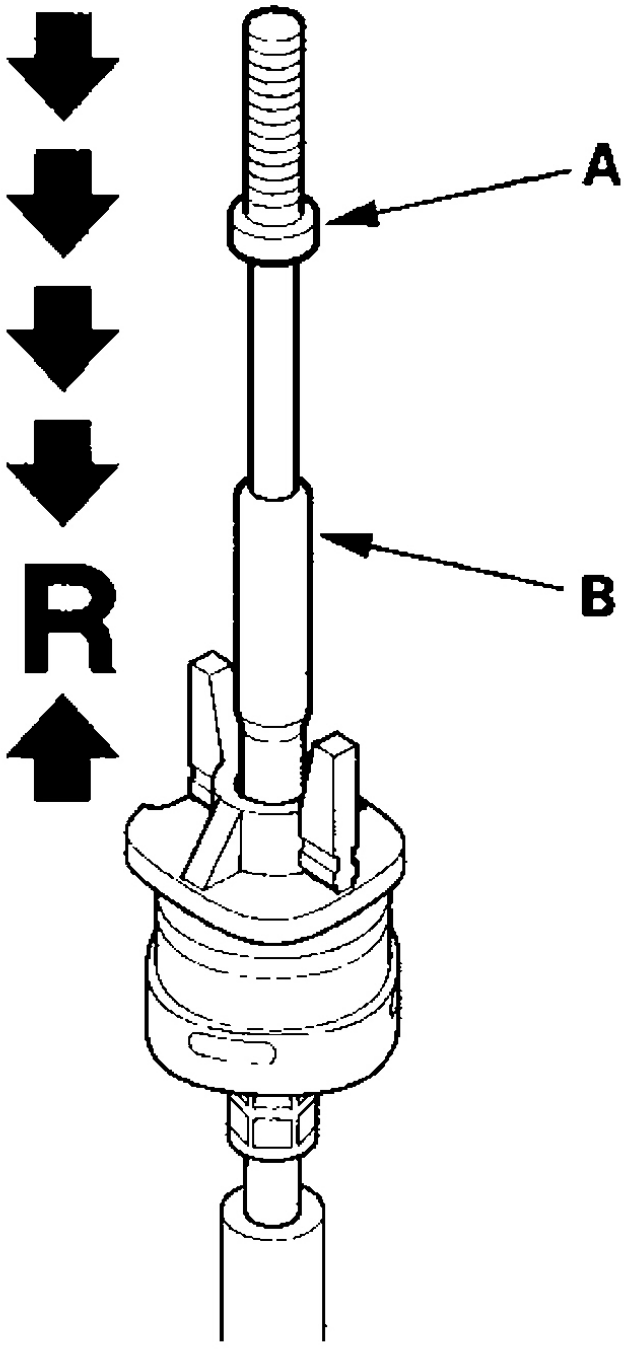


Fig. 311: Pushing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch OFF.

7. Insert a 6.0 mm (0.24 in.) pin (A) into the positioning hole (B) on the shift lever bracket base and through the positioning hole on the shift lever. The shift lever is secured in the R position.

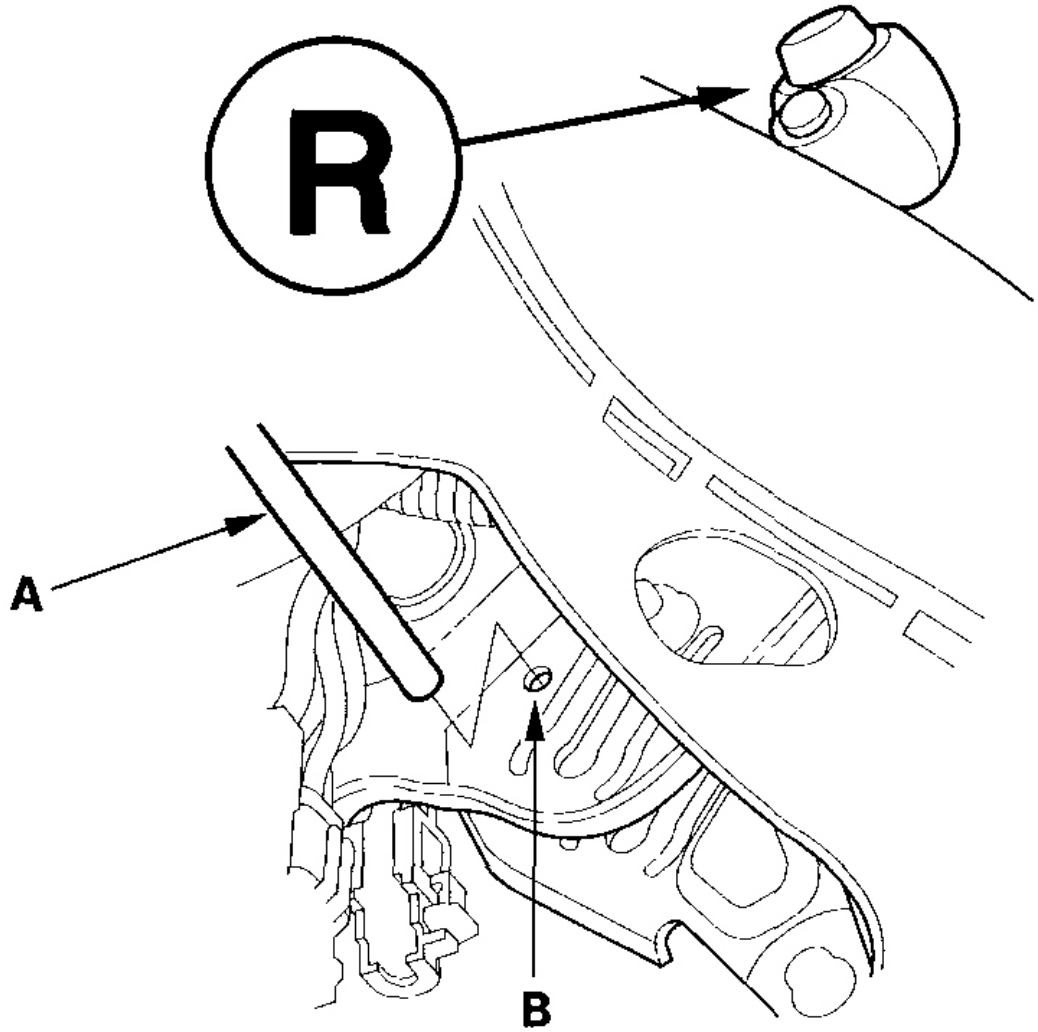


Fig. 312: Inserting Pin Into Positioning Hole On Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Rotate the socket holder (A) on the shift cable (B) to place the guide tab (C) on the holder perpendicular to the opening (D) in the socket holder bracket (E). Align the holder with the

opening in the bracket, then slide the holder into the bracket. Rotate the holder a quarter turn until the holder lock (F) stops at the projection (G) to secure the shift cable. Do not install the shift cable by twisting the shift cable guide (H).

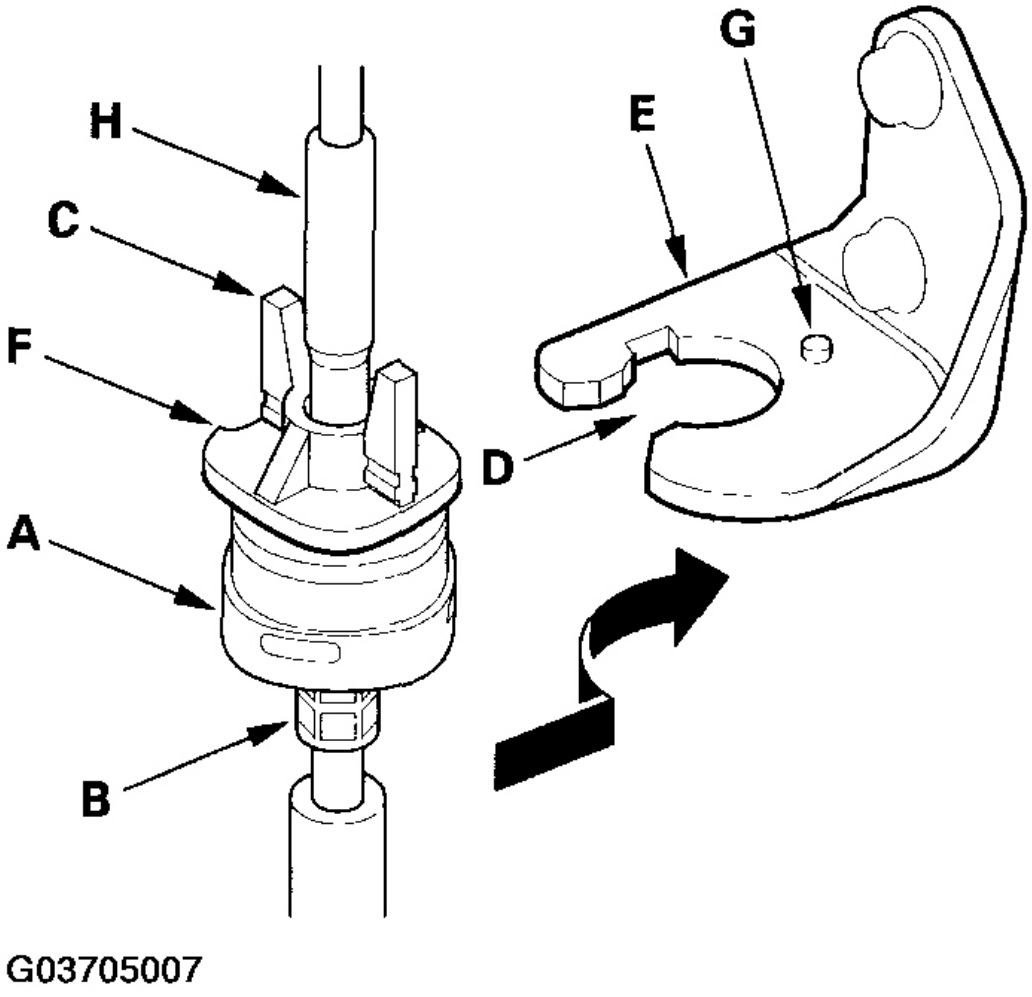


Fig. 313: Rotating Socket Holder On Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the shift cable end (A) in the shift cable end holder (B). Keep the shift cable end and end holder free of grease.

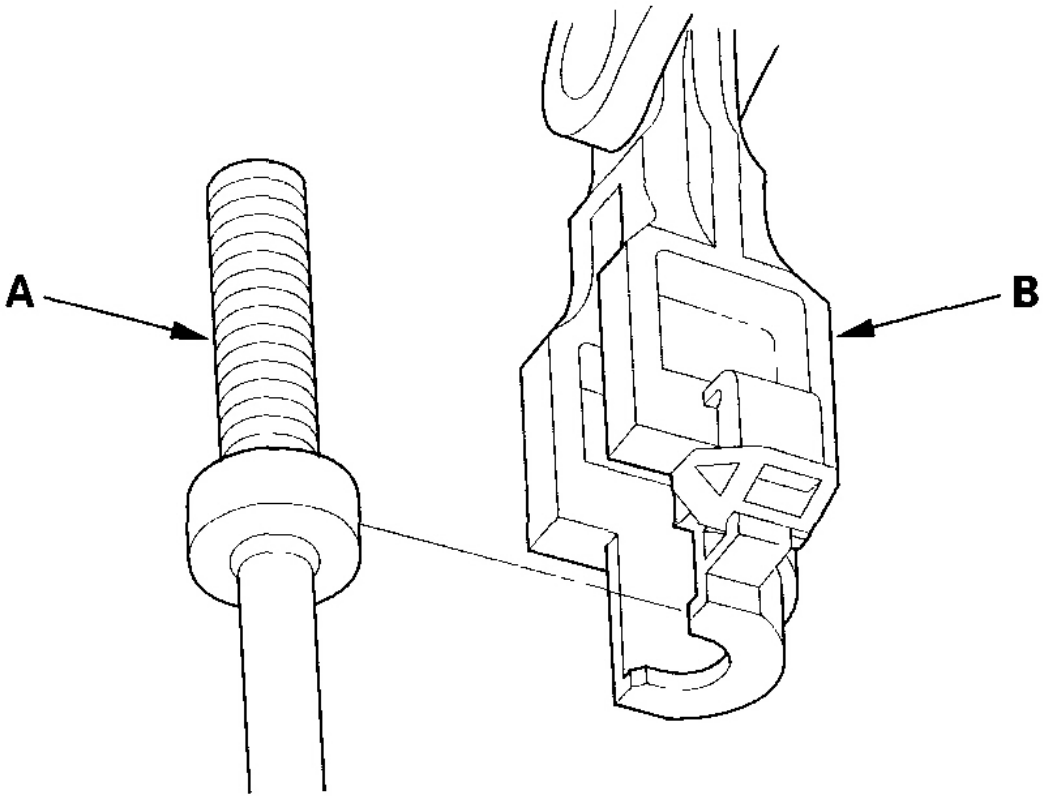


Fig. 314: Installing Shift Cable End In Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Install the new shift cable lock (A) to secure the shift cable end and shift cable end holder, then push the lock tab (B) up until it stops to lock the joint.

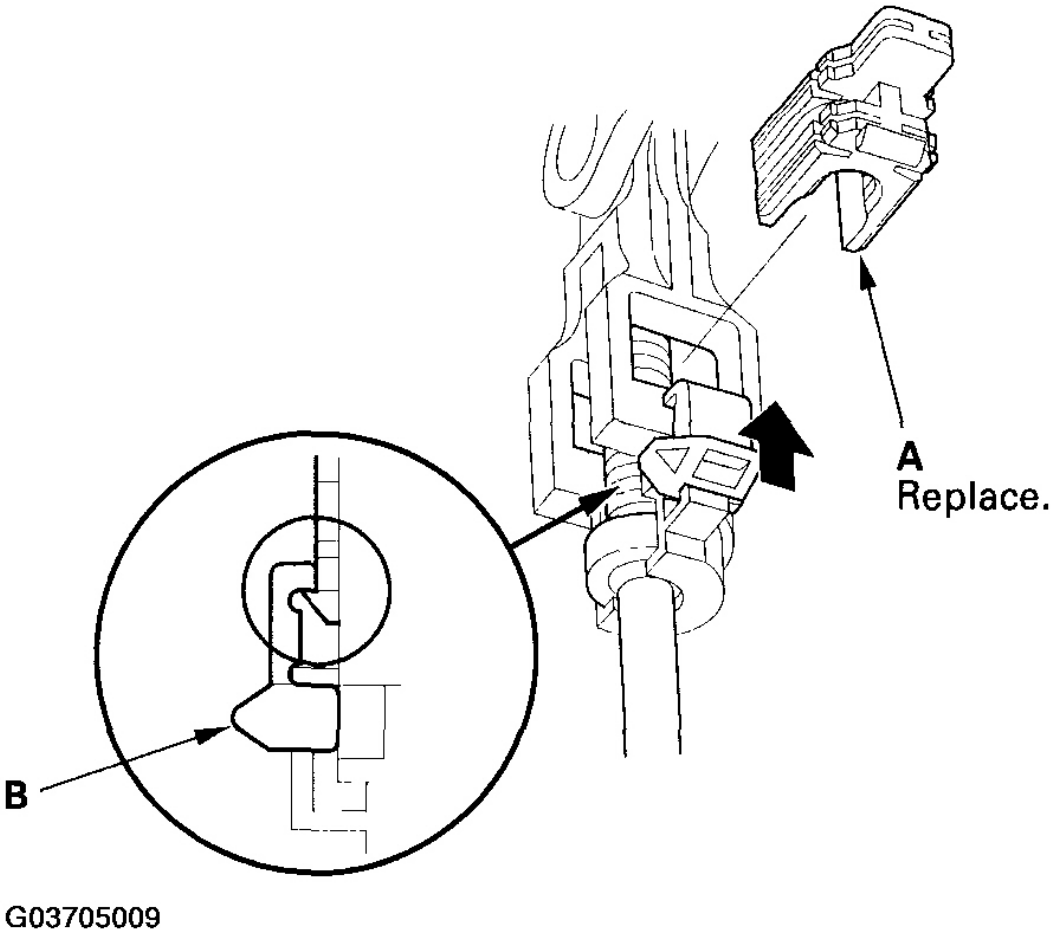


Fig. 315: Installing Shift Cable Lock To Secure Shift Cable End And Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
12. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
13. Install the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see **DASHBOARD CENTER PANEL REMOVAL/INSTALLATION**).

SHIFT LEVER DISASSEMBLY/REASSEMBLY

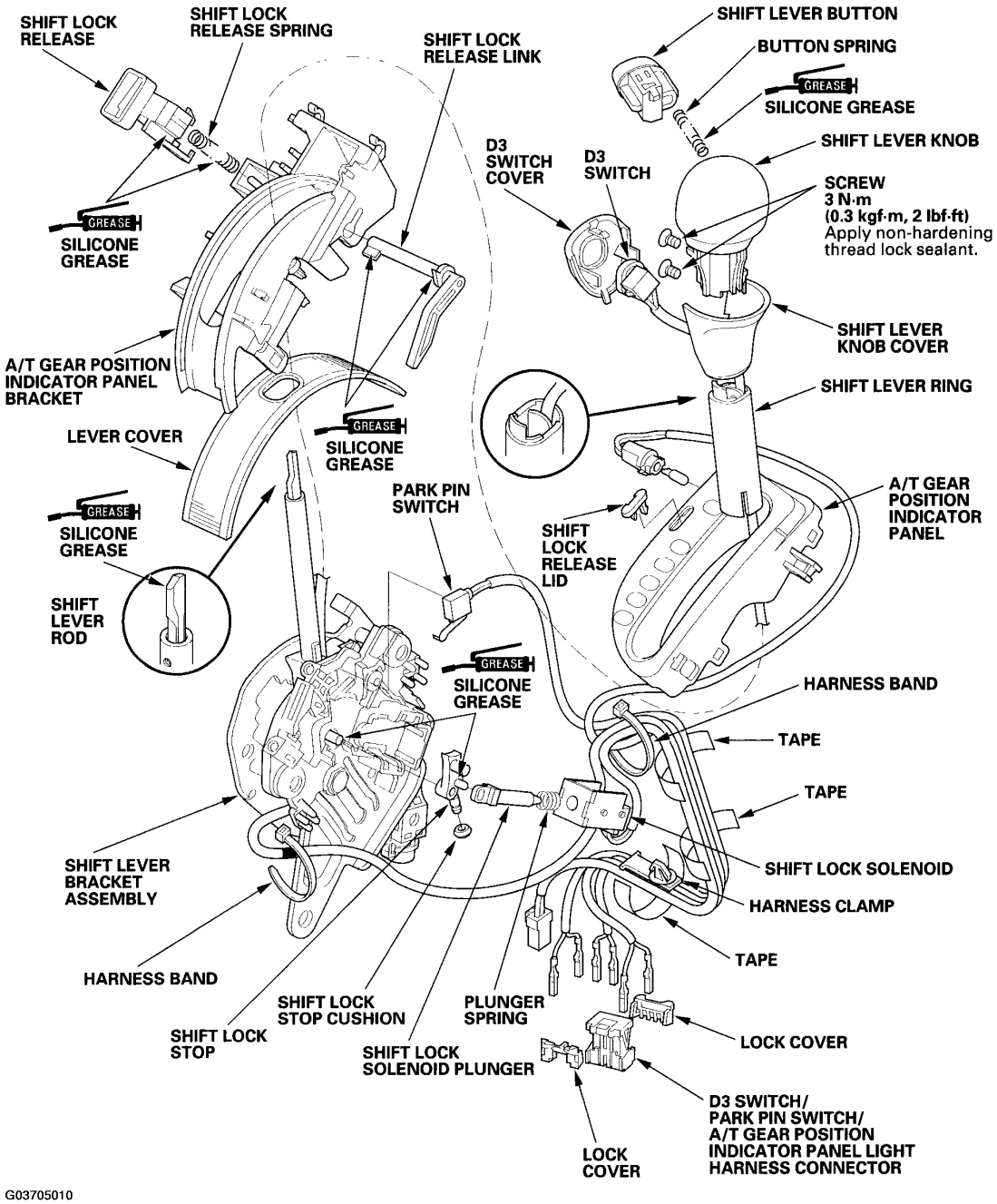


Fig. 316: Disassembly/Reassembly Of Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT LEVER BRACKET ASSEMBLY REPLACEMENT

1. Remove the shift lever assembly (see **SHIFT LEVER REMOVAL**).
2. Pry off the D3 switch cover (A).

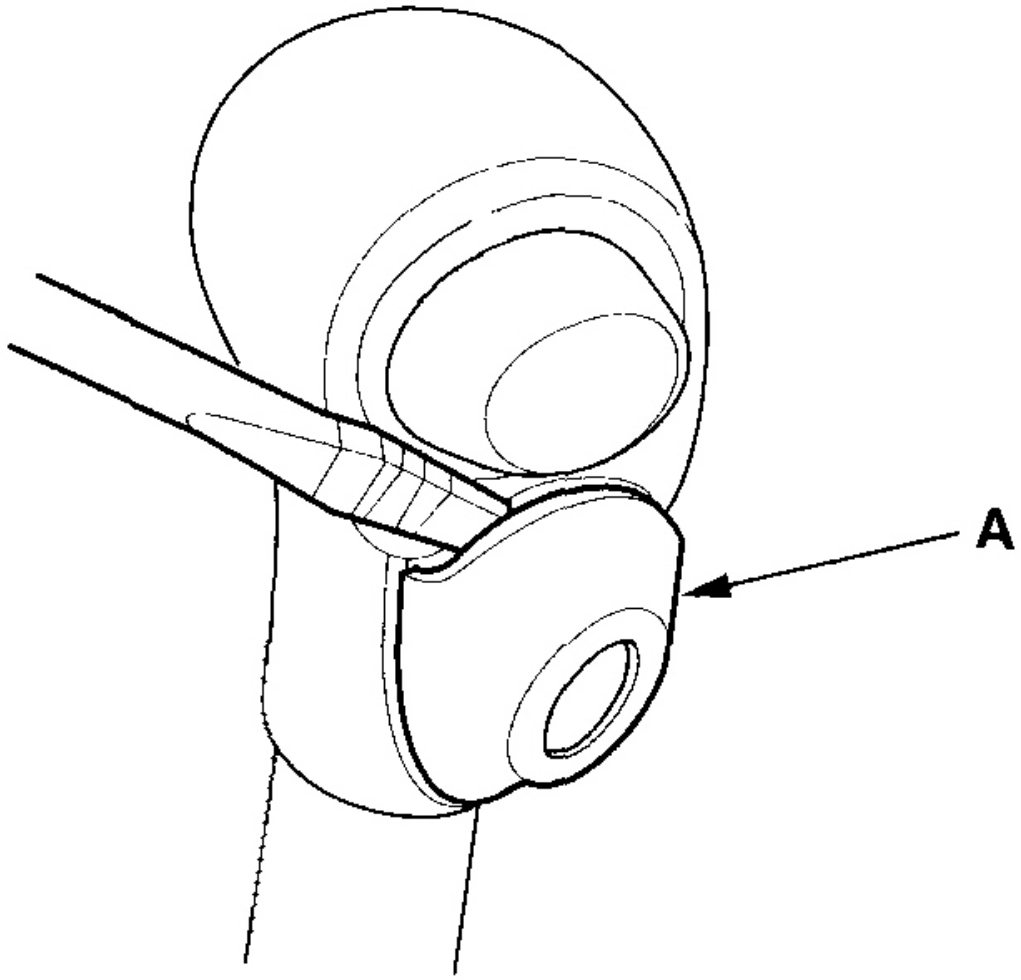


Fig. 317: Prying Off D3 Switch Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the D3 switch (A) by expanding its locks (B). Remove the screws (C), shift lever button (D), spring (E), shift lever knob (F), and shift lever knob cover (G).

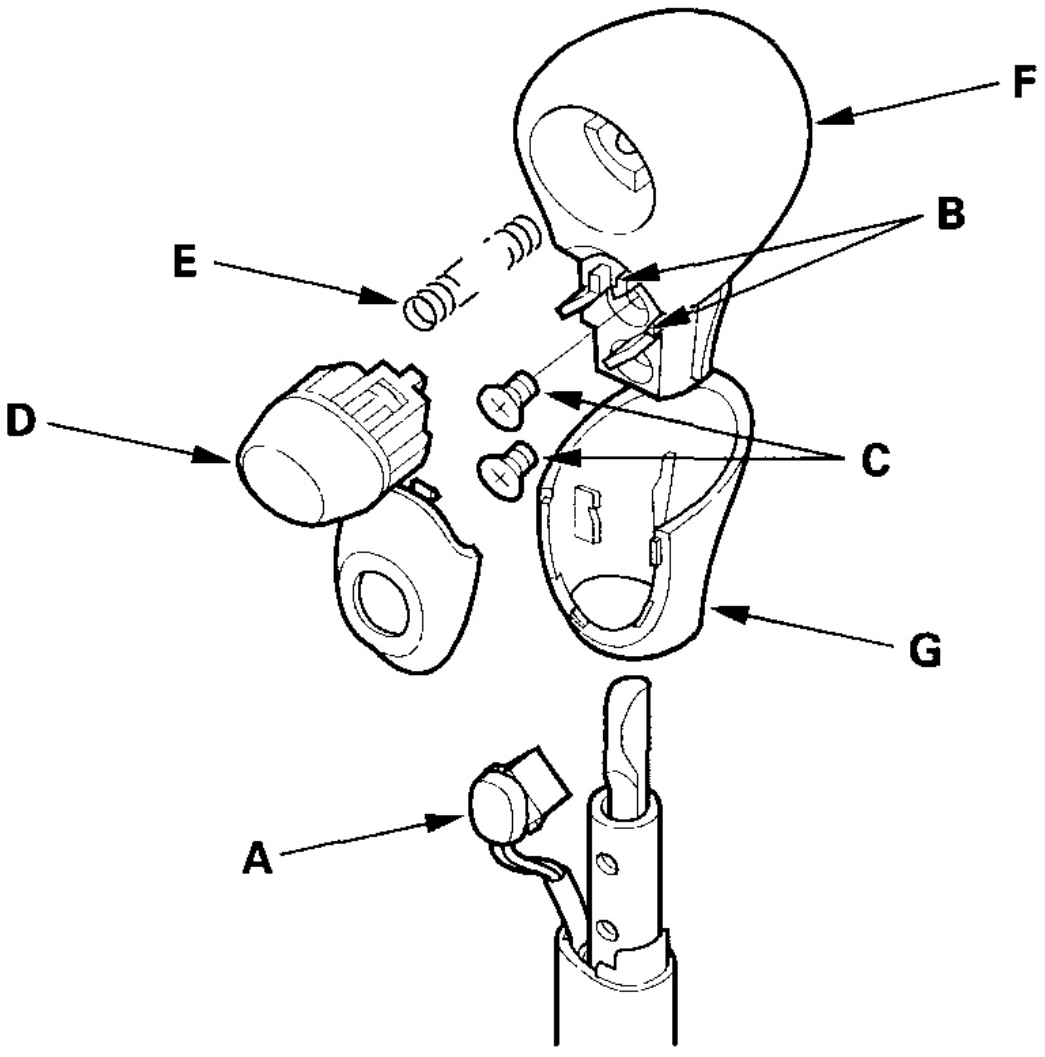


Fig. 318: Removing D3 Switch By Expanding Its Locks
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the harness bands and tapes.
5. Pry the lock covers (A) of the D3 switch/park pin switch/A/T gear position indicator panel light harness connector (B), and remove the covers.

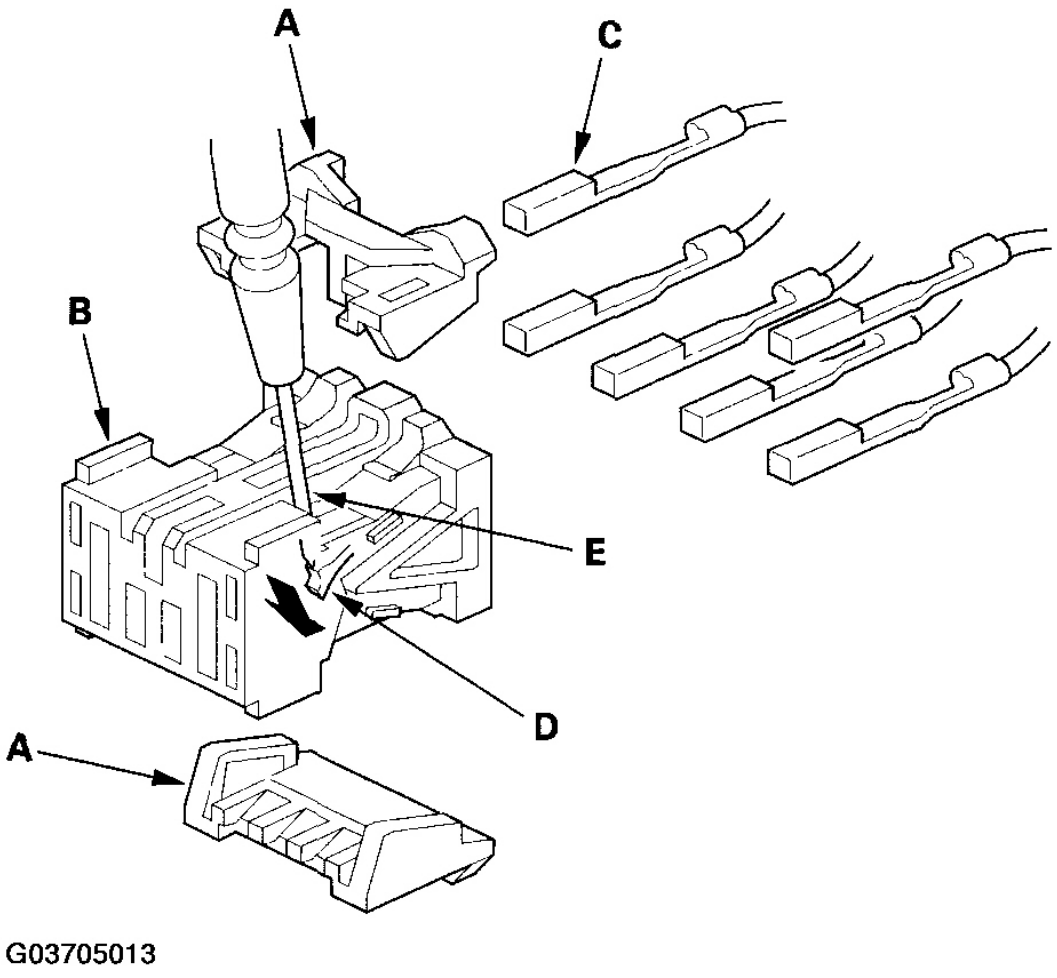
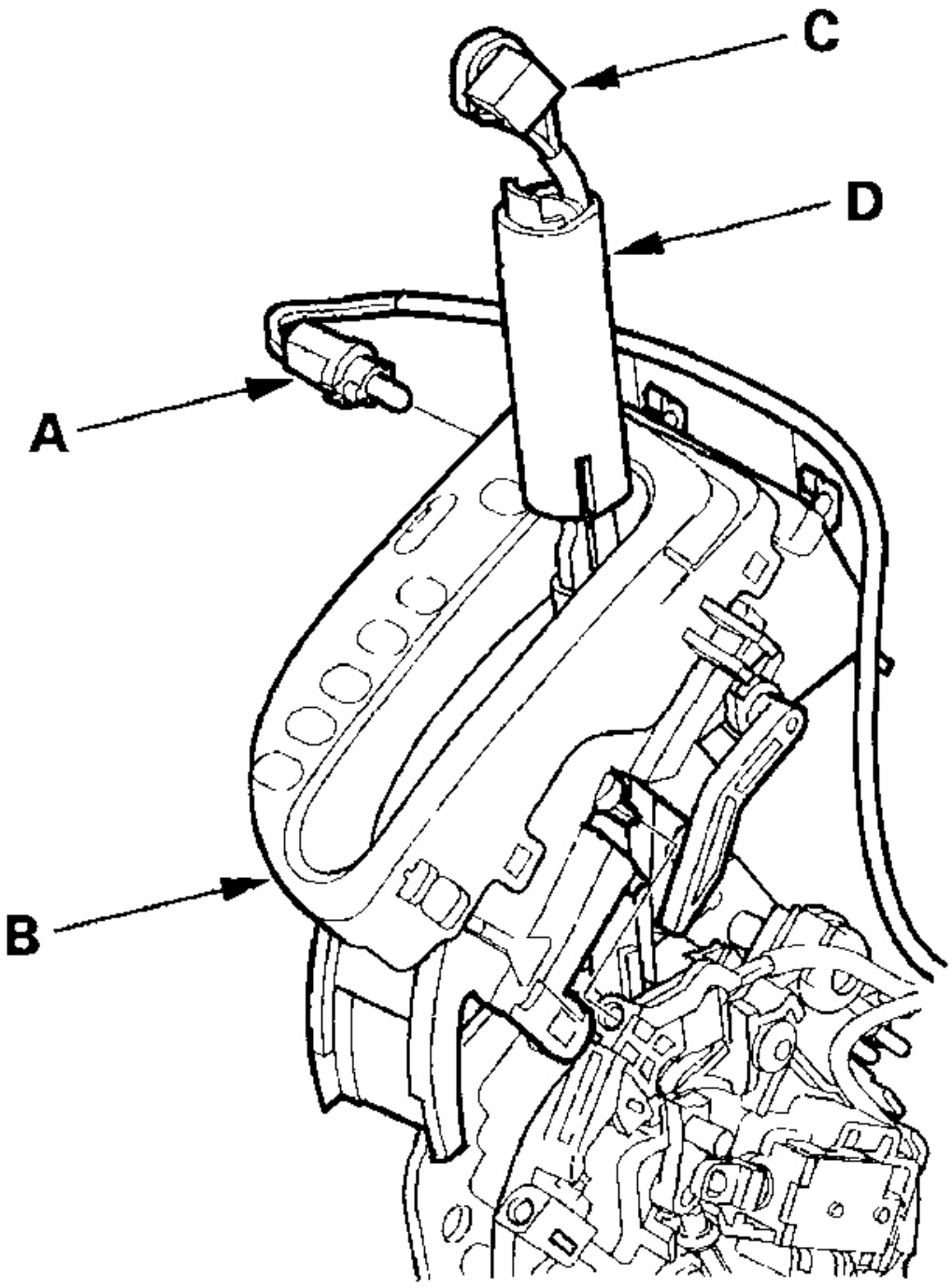


Fig. 319: Prying Lock Covers Of D3 Switch/Park Pin Switch/A/T Gear Position Indicator Panel Light Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the terminal (C) from the connector by pushing the lock tab (D) in the connector using a thin blade screwdriver (E). Remove all six terminals, and replace the connector.
7. Remove the A/T gear position indicator panel light socket (A). Remove the A/T gear position indicator panel (B), D3 switch and harness (C), and shift lever ring (D) together from the shift lever bracket.



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Fig. 320: Removing A/T Gear Position Indicator Panel Light Socket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the park pin switch (A).

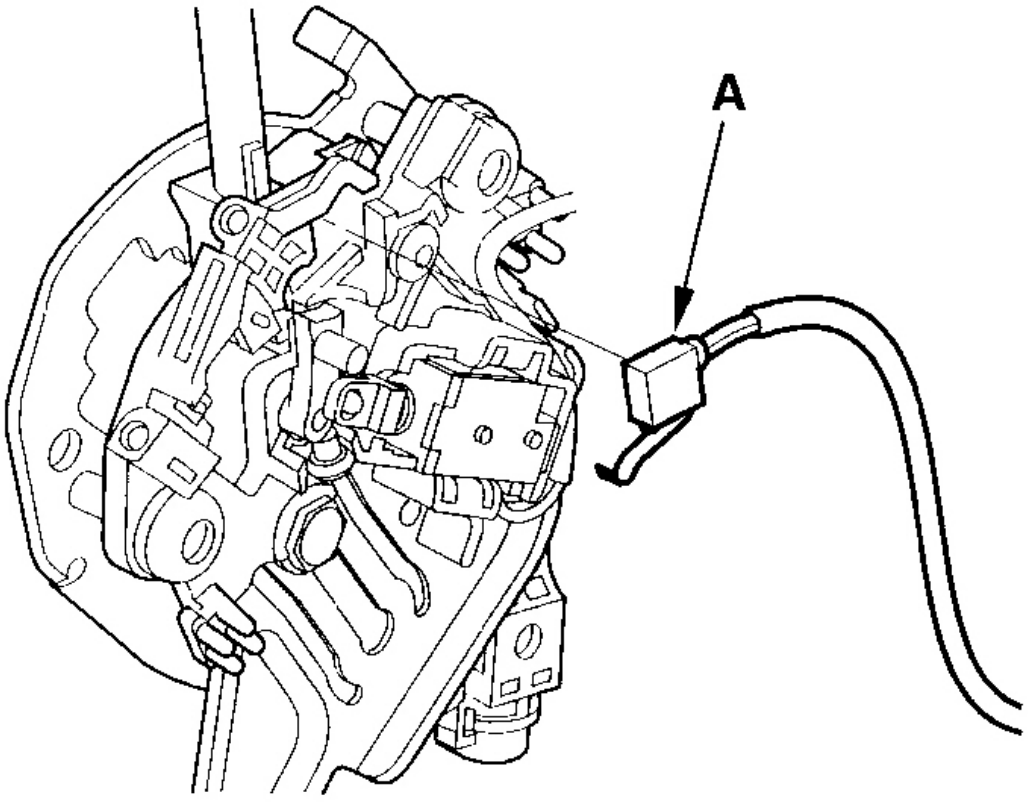


Fig. 321: Removing Park Pin Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the shift lock solenoid (A) by expanding its locks (B), and remove the shift lock solenoid plunger (C) and plunger spring (D).

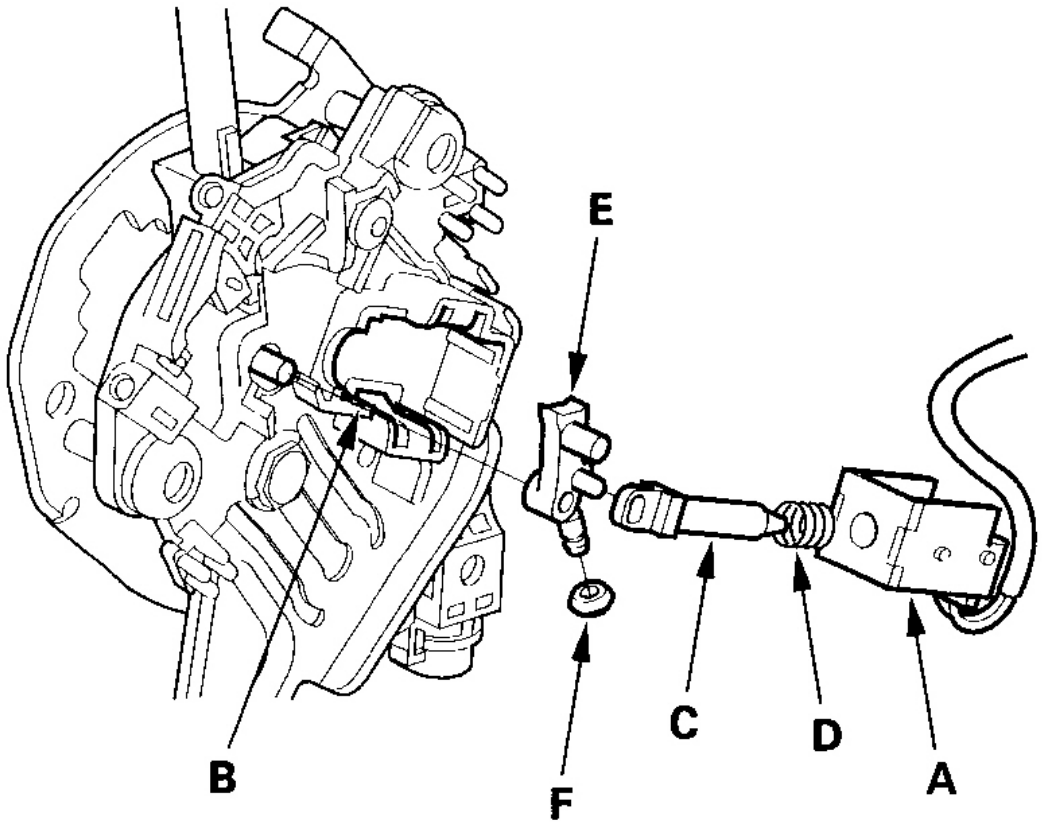


Fig. 322: Removing Shift Lock Solenoid
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the shift lock stop (E). Remove the shift lock stop cushion (F), if necessary.
11. Replace the shift lever bracket assembly.
12. Apply silicone grease to the pin on the shift lever bracket, and install the shift lock stop over the pin. Make sure to install the shift lock stop cushion on the stop.
13. Install the shift lock solenoid plunger and plunger spring in the shift lock solenoid.
14. Apply silicone grease to the tip of the shift lock stop, and install the shift lock solenoid by aligning the joint of the shift lock solenoid plunger with the tip of the shift lock stop.
15. Install the park pin switch.
16. Insert the D3 switch harness (A) through the shift lever (B), and install the shift lever ring (C) and the A/T gear position indicator panel (D).

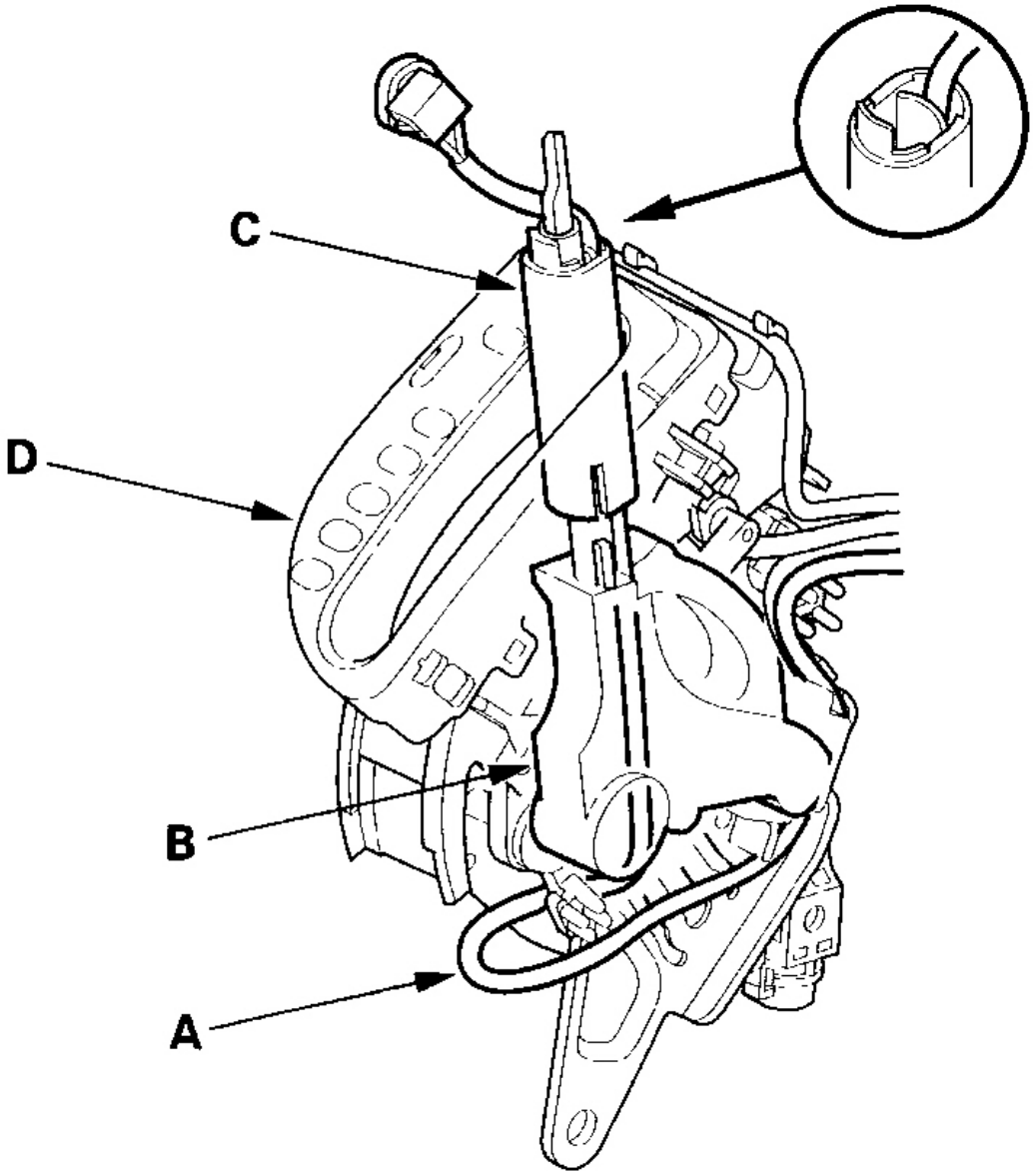


Fig. 323: Inserting D3 Switch Harness Through Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Install the A/T gear position indicator panel light socket in the indicator panel.
18. Install the D3 switch harness terminals (WHT) (A) in the No. 1 and No. 3 cavities. Either

D3 switch harness terminal can be installed in the No. 1 and No. 3 cavities.

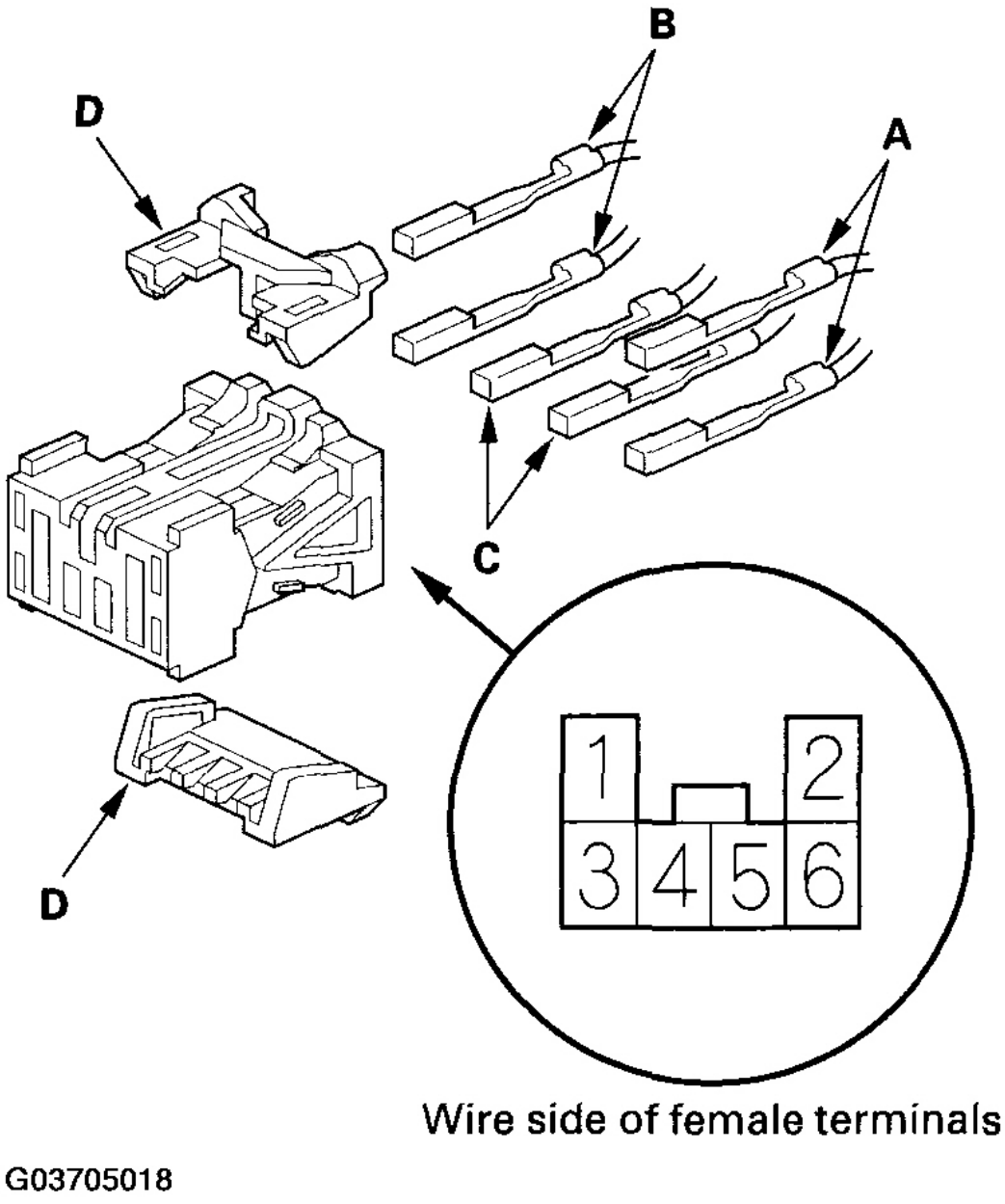


Fig. 324: Installing D3 Switch Harness Terminals (WHT) In No. 1 And 3 Cavities
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Install the park pin switch harness terminals (GRN) (B) in the No. 2 and No. 6 cavities.

Either park pin switch harness terminal can be installed in the No. 2 and No. 6 cavities.

20. Install the A/T gear position indicator panel light harness (RED/BLK) (C) in the No. 4 and No. 5 cavities. Either A/T gear position indicator panel light harness terminal can be installed in the No. 4 and No. 5 cavities.
21. Make sure that all six terminals lock securely, then install the lock covers (D) securely.
22. Route the D3 switch harness (A) along the harness guide (B), place the mark (C) of the harness on the guide, and tie the harness and guide with the new band (D).

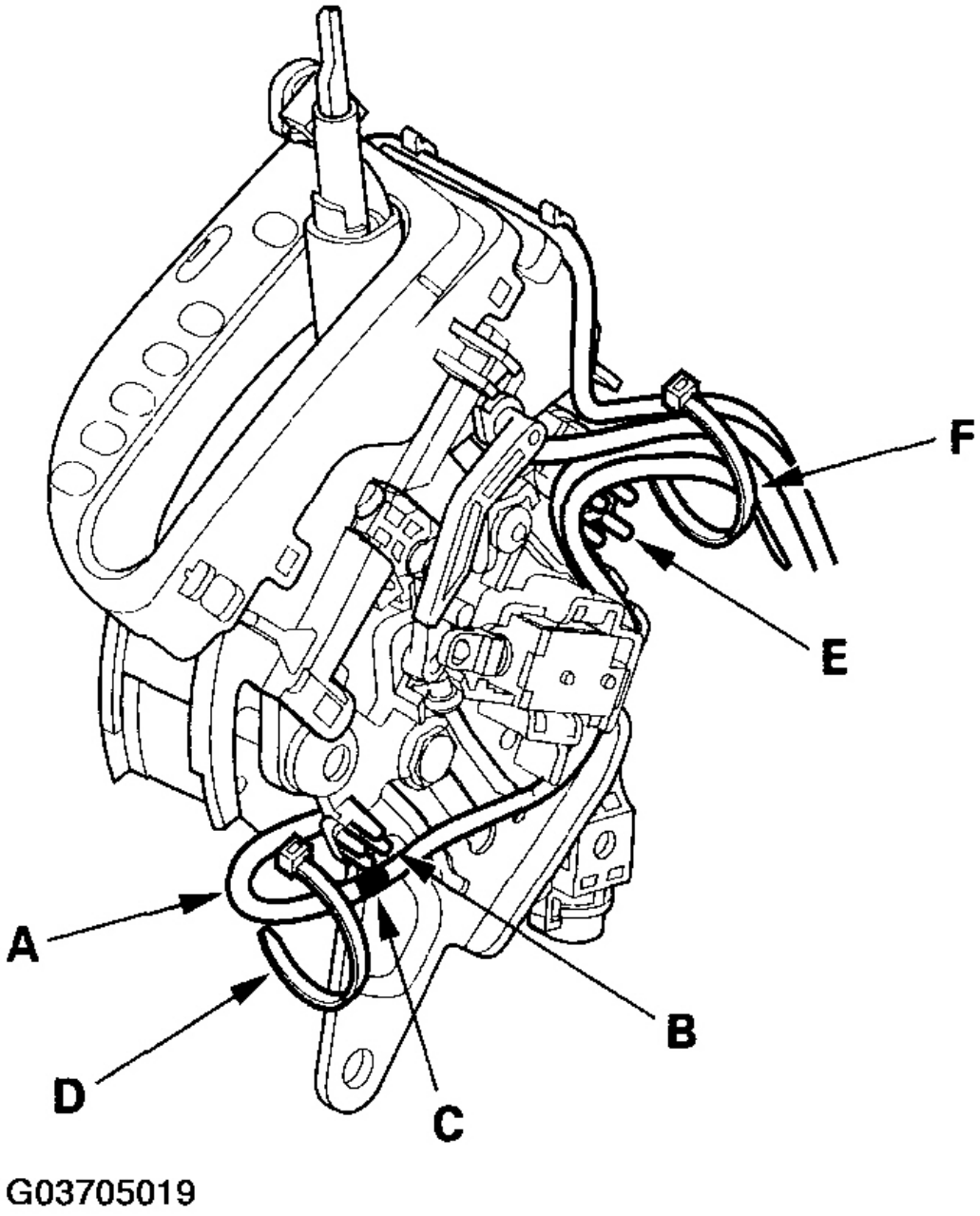


Fig. 325: Routing D3 Switch Harness Along Harness Guide
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Route the harnesses along the harness guide (E), and tie the harnesses and guide with the new band (F).

24. Tie the harnesses together into bundles with new tape (A) in two places.

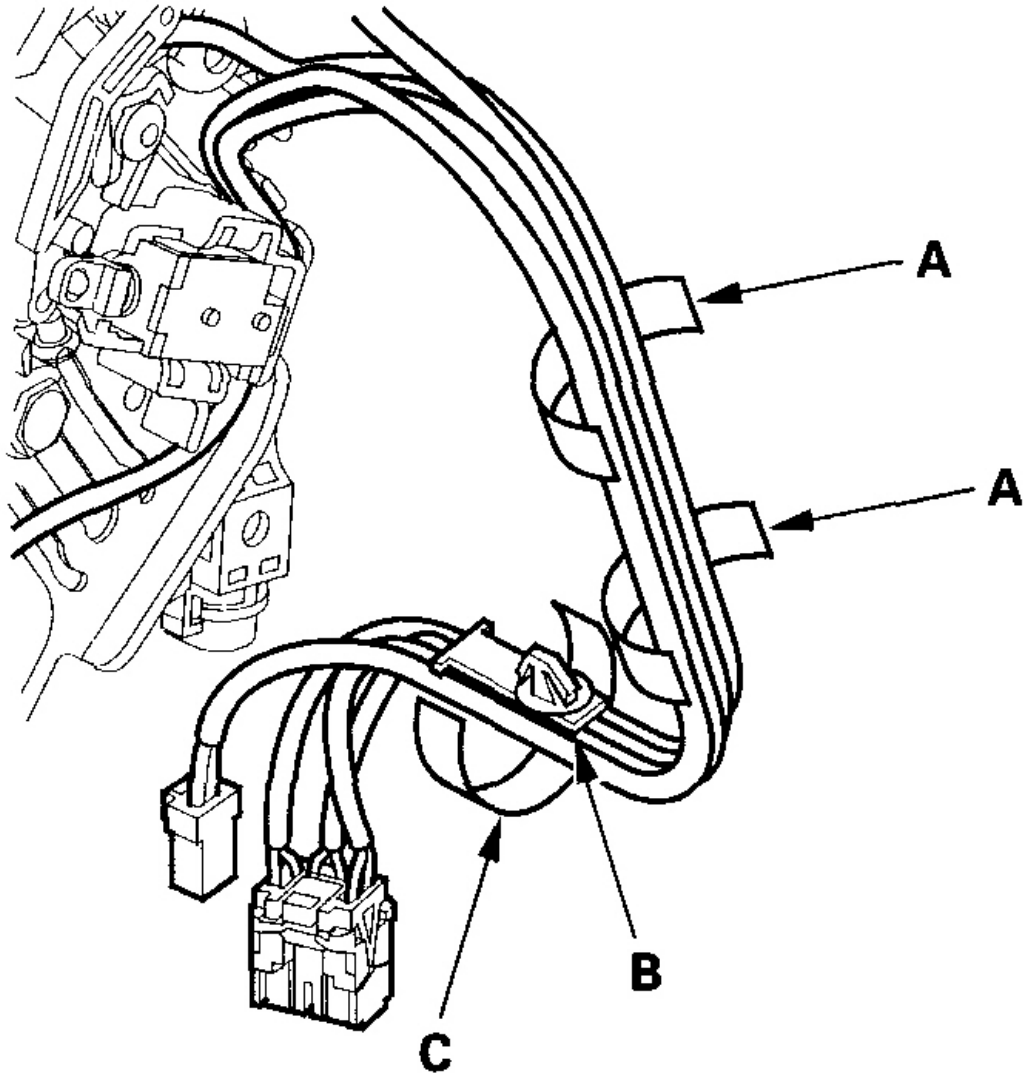


Fig. 326: Tying Harnesses Together Into Bundles With Tape In Two Places
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Tie the harnesses and the harness clamp (B) together into a bundle with tape (C).
26. Point the bevel (A) of the shift lever rod (B) toward the threaded holes (C), and push it into

the bottom. Apply silicone grease to the top of the rod.

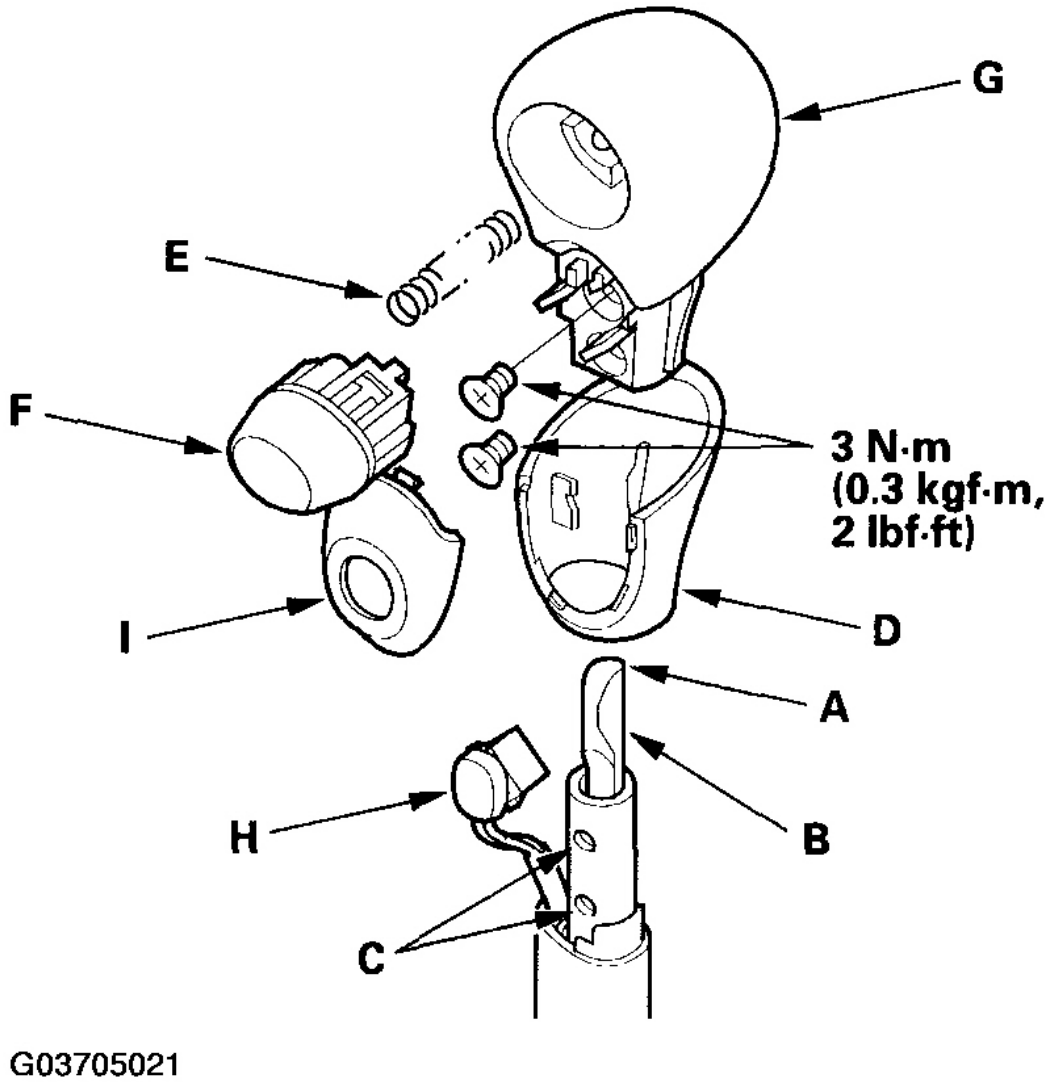


Fig. 327: Pointing Bevel Of Shift Lever Rod Toward Threaded Holes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Install the shift lever knob cover (D).
28. Apply silicone grease to the shift lever button spring (E), and install the spring, shift lever button (F), and shift lever knob (G).
29. Apply non-hardening thread lock sealant to screw threads, and secure the shift lever knob to the shift lever.

30. Install the D3 switch (H) and D3 switch cover (I).
31. Install the shift lever assembly (see **SHIFT LEVER INSTALLATION**).

A/T GEAR POSITION INDICATOR PANEL ASSEMBLY REPLACEMENT

1. Remove the shift lever assembly (see **SHIFT LEVER REMOVAL**).
2. Pry off the D3 switch cover (A).

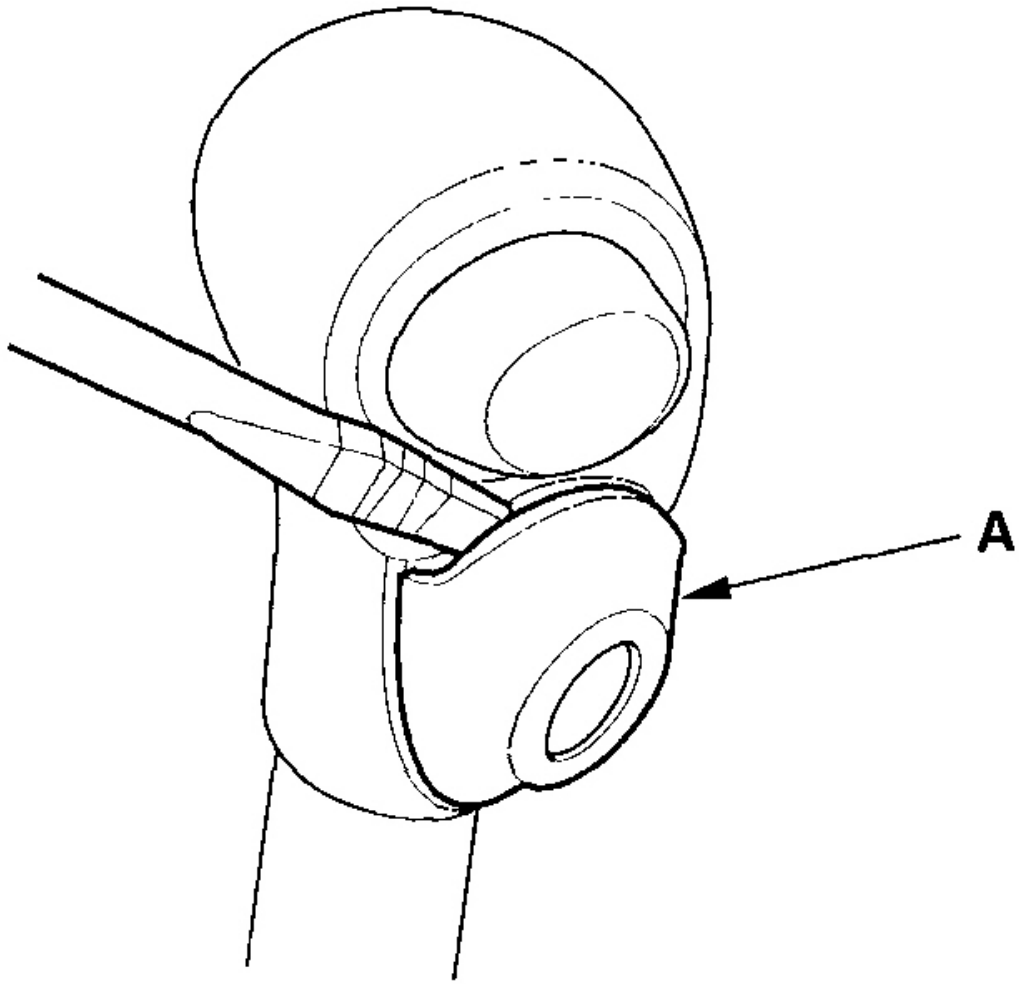


Fig. 328: Prying Off D3 Switch Cover

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the D3 switch (A) by expanding its locks (B). Remove the screws (C), shift lever button (D), spring (E), shift lever knob (F), and shift lever knob cover (G).

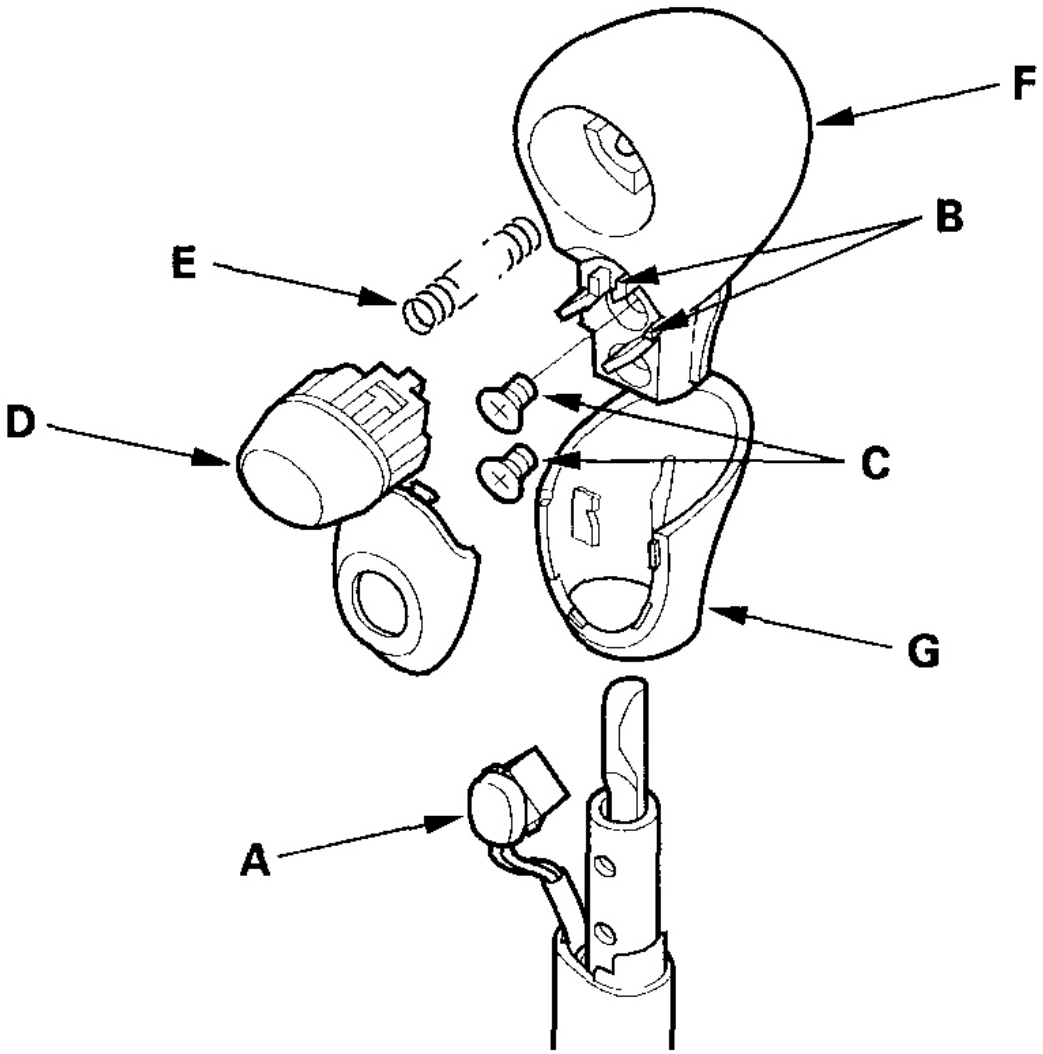


Fig. 329: Removing D3 Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the shift lever rod (A), and remove the A/T gear position indicator panel light

socket (B).

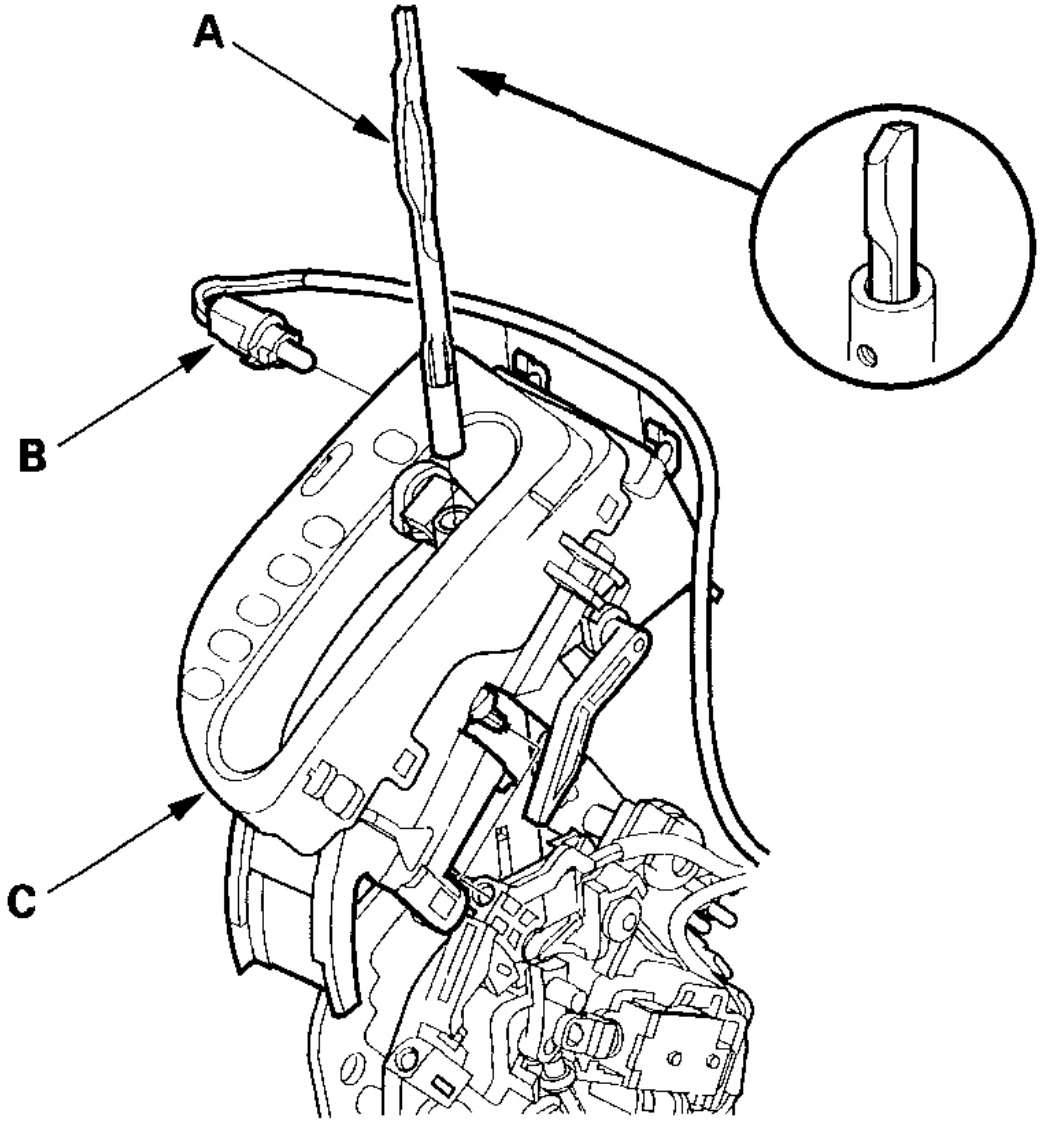


Fig. 330: Removing Shift Lever Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the A/T gear position indicator panel assembly (C).
6. Disassemble the old A/T gear position indicator panel assembly, and remove the shift lock

release (A), release spring (B), and shift lock release link (C).

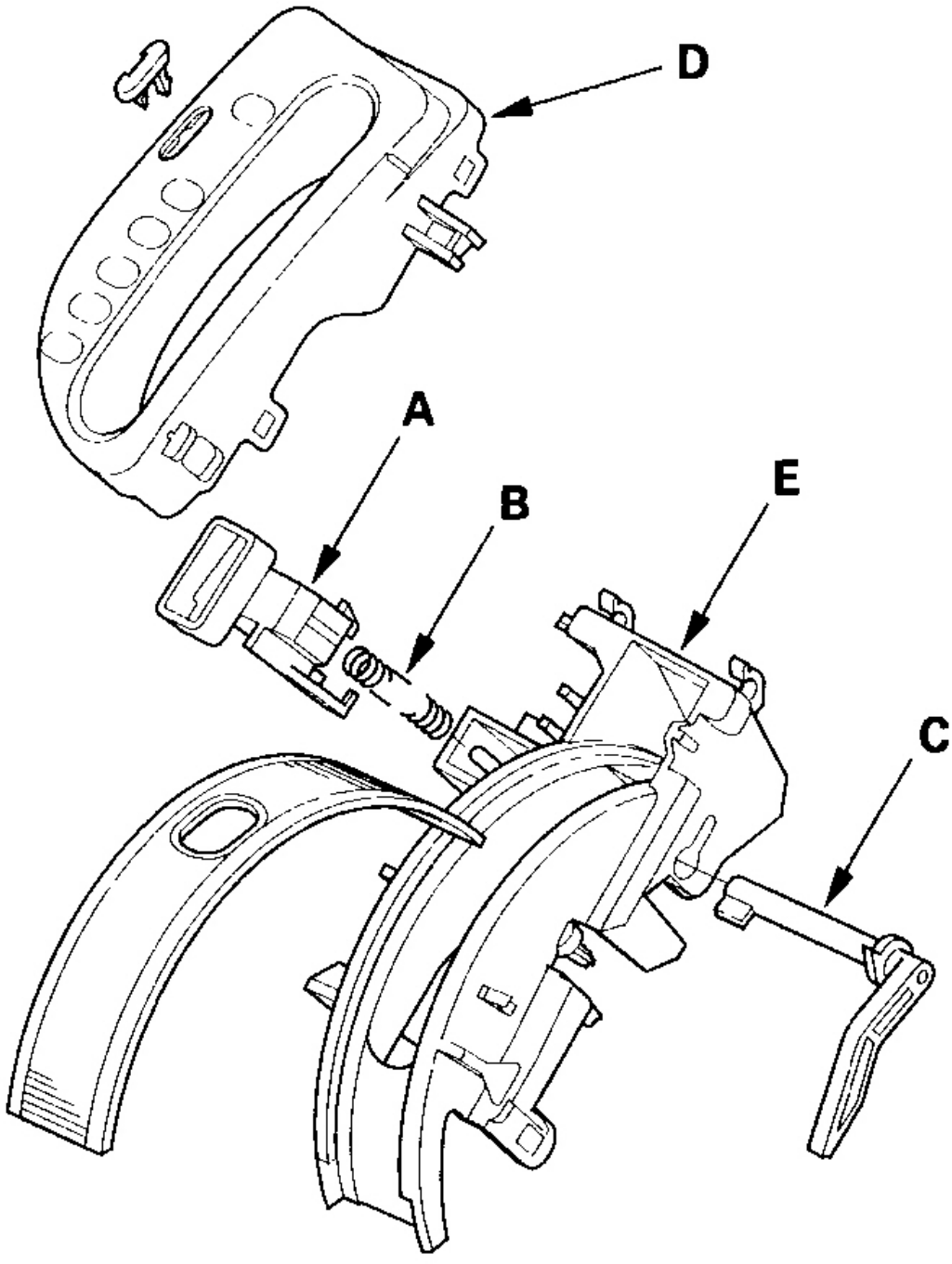
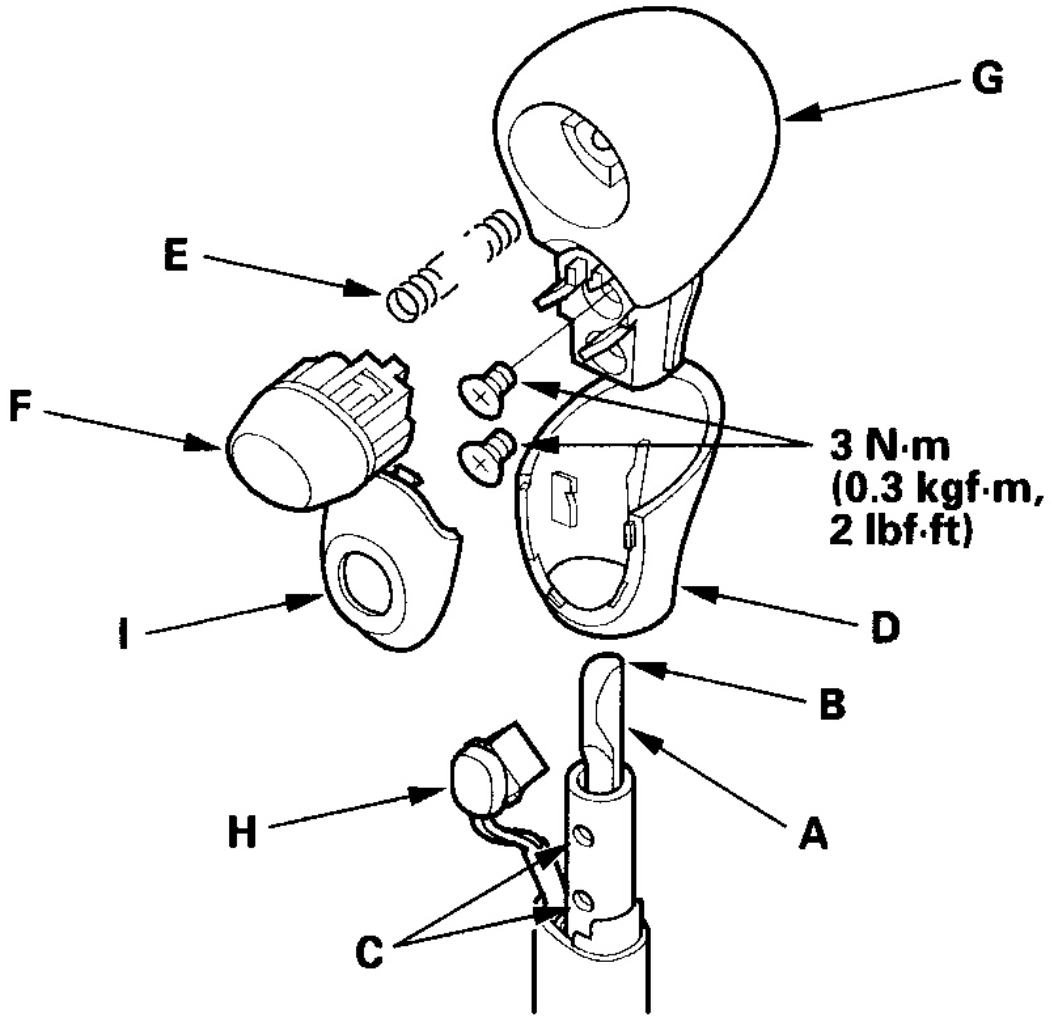


Fig. 331: Removing Shift Lock Release

Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Apply silicone grease to the shift lock release, release spring, and shift lock release link.
8. Install the shift lock release, release spring, and shift lock release link in the new A/T gear position indicator panel (D) and A/T gear position indicator panel bracket (E), and assemble the A/T gear position indicator panel assembly.
9. Install the A/T gear position indicator panel assembly.
10. Install the shift lever rod (A) by pointing the bevel (B) of the shift lever rod towards the threaded holes (C), and push it into the bottom. Apply silicone grease to the top of the rod.



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Fig. 332: Installing Shift Lever Rod Pointing Bevel Of Shift Lever Rod Towards Threaded Holes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Install the shift lever knob cover (D).
12. Apply silicone grease to the shift lever button spring (E), and install the spring, shift lever button (F), and shift lever knob (G).
13. Apply non-hardening thread lock sealant to screw threads, and secure the shift lever knob to the shift lever.
14. Install the D3 switch (H) and D3 switch cover (I).
15. Install the shift lever assembly (see **SHIFT LEVER INSTALLATION**).

SHIFT LEVER RING REPLACEMENT

1. Remove the shift lever assembly (see **SHIFT LEVER REMOVAL**).
2. Pry off the D3 switch cover (A).

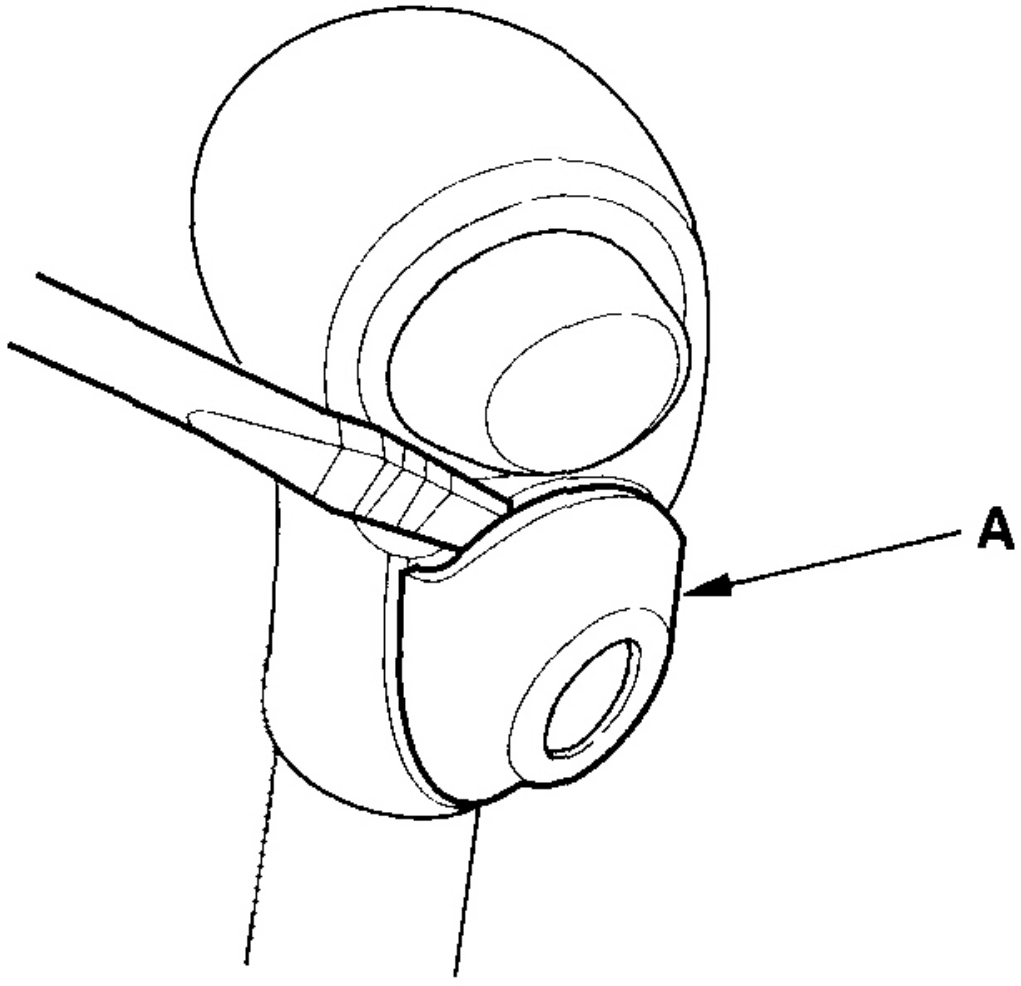


Fig. 333: Prying Off D3 Switch Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the D3 switch (A) by expanding its locks (B). Remove the screws (C), shift lever button (D), spring (E), shift lever knob (F), and shift lever knob cover (G).

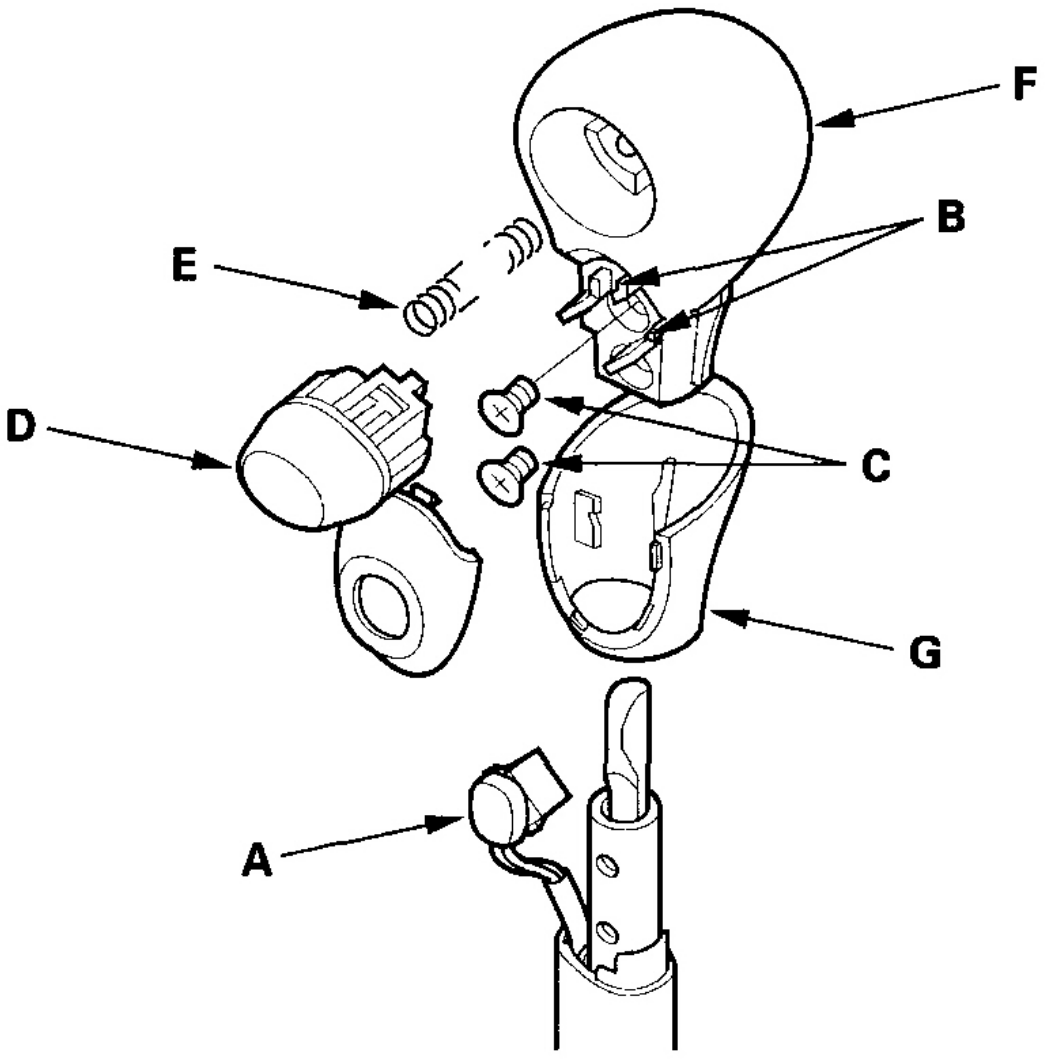


Fig. 334: Removing D3 Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the harness bands and tapes.
5. Pry the lock covers (A) of the D3 switch/park pin switch/A/T gear position indicator panel light harness connector (B), and remove the covers.

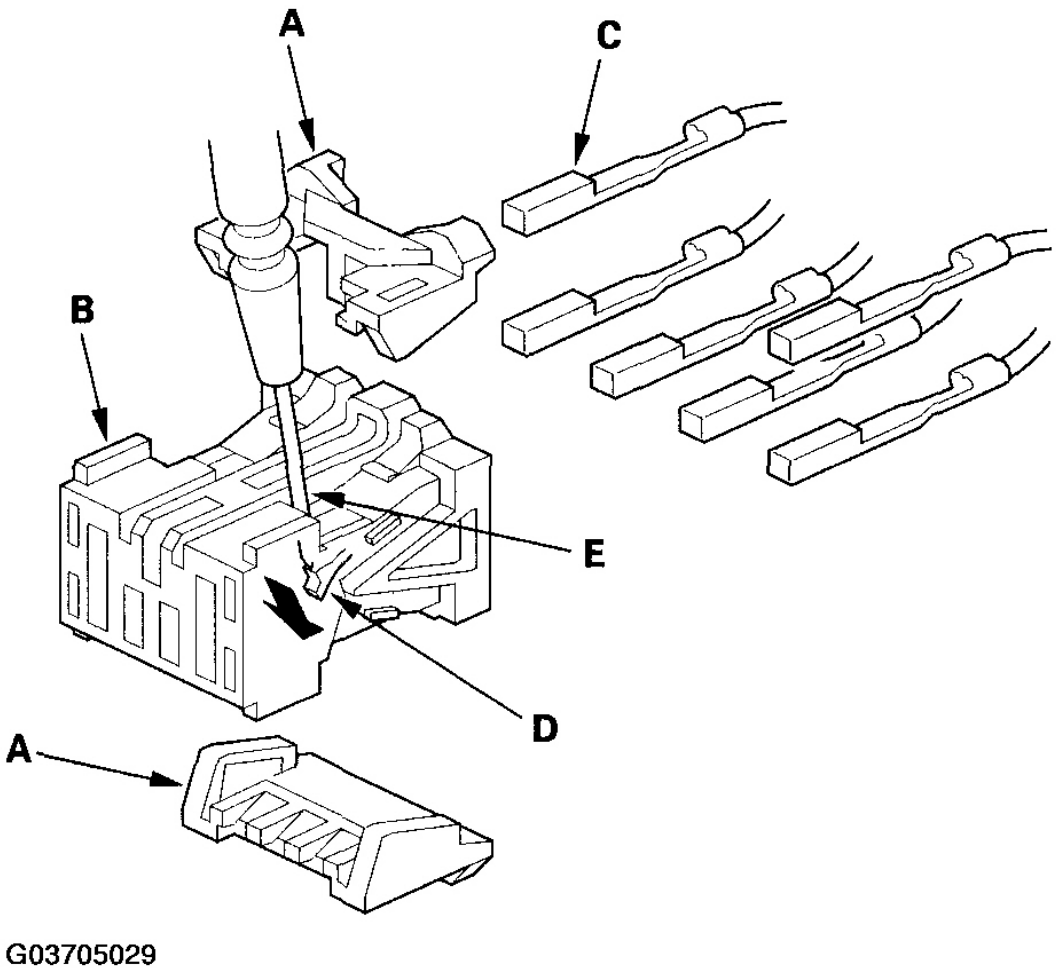


Fig. 335: Prying Lock Covers Of D3 Switch/Park Pin Switch/A/T Gear Position Indicator Panel Light Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the terminal (C) from the connector by pushing the lock tab (D) in the connector using a thin blade screwdriver (E). Remove all six terminals, and replace the connector.
7. Pull the D3 switch harness (A) out of the shift lever, and remove the shift lever ring.

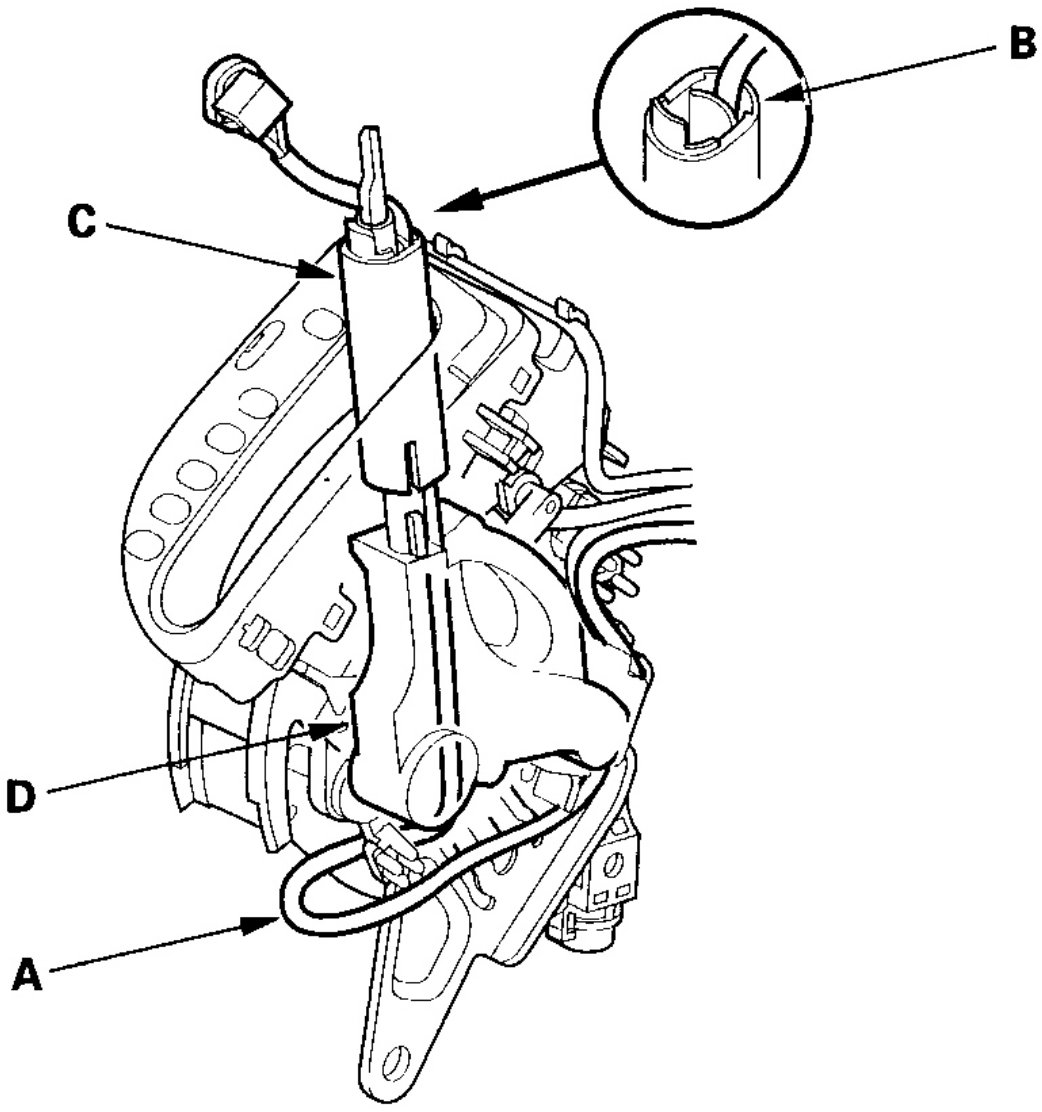


Fig. 336: Removing Shift Lever Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Insert the D3 switch harness through the passage (B) of the new shift lever ring (C).
9. Insert the D3 switch harness into the shift lever (D) and through the shift lever, and install the shift lever ring.
10. Install the D3 switch harness terminals (WHT) (A) in the No. 1 and No. 3 cavities. Either

D3 switch harness terminal can be installed in the No. 1 and No. 3 cavities.

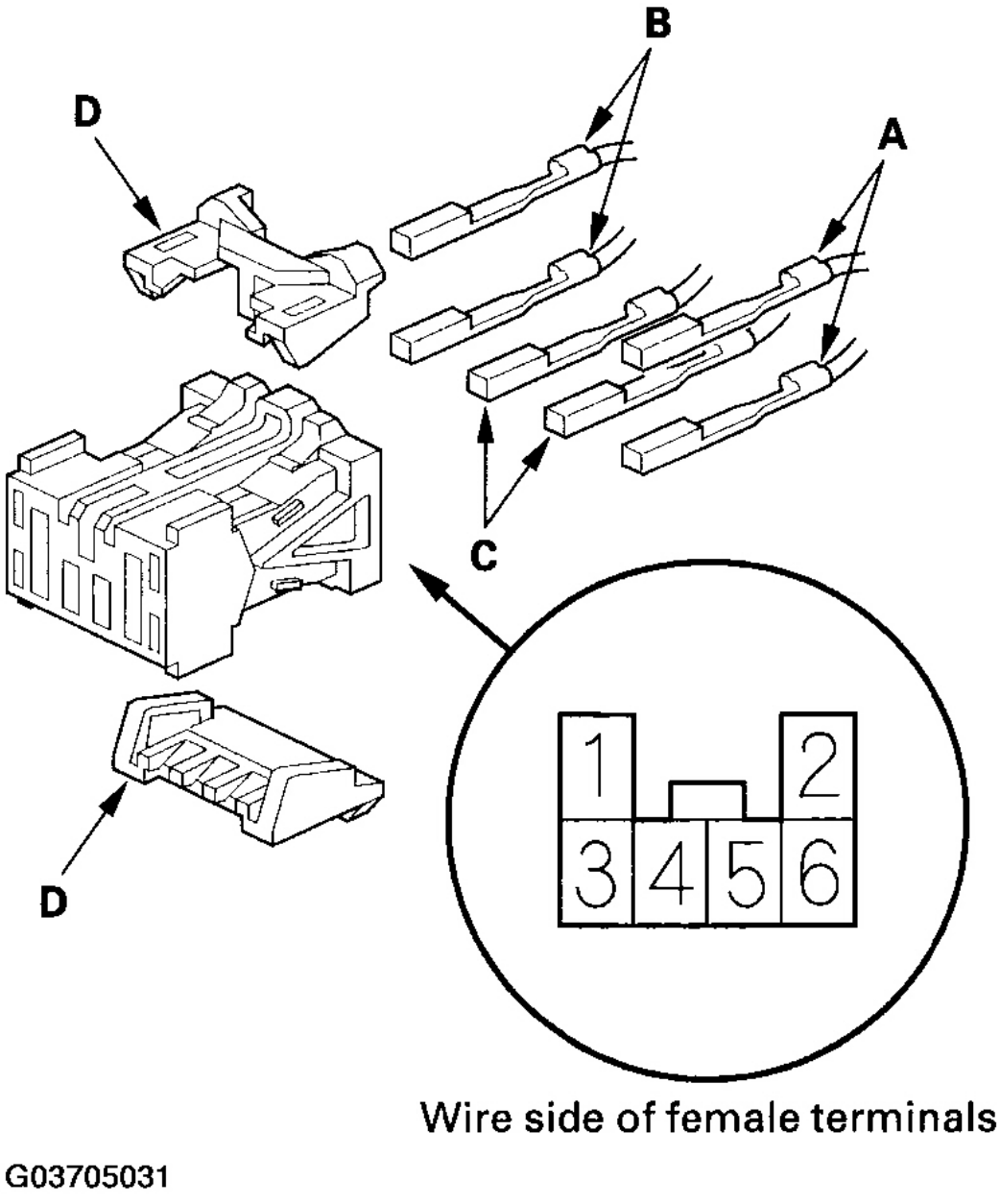


Fig. 337: Installing D3 Switch Harness Terminals (WHT) In No. 1 And 3 Cavities
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Install the park pin switch harness terminals (GRN) (B) in the No. 2 and No. 6 cavities.

Either park pin switch harness terminal can be installed in the No. 2 and No. 6 cavities.

12. Install the A/T gear position indicator panel light harness (RED/BLK) (C) in the No. 4 and No. 5 cavities. Either A/T gear position indicator panel light harness terminal can be installed in the No. 4 and No. 5 cavities.
13. Make sure that all six terminals lock securely, then install the lock covers (D) securely.
14. Route the D3 switch harness (A) along the harness guide (B), place the mark (C) of the harness on the guide, and tie the harness and guide with the new band (D).

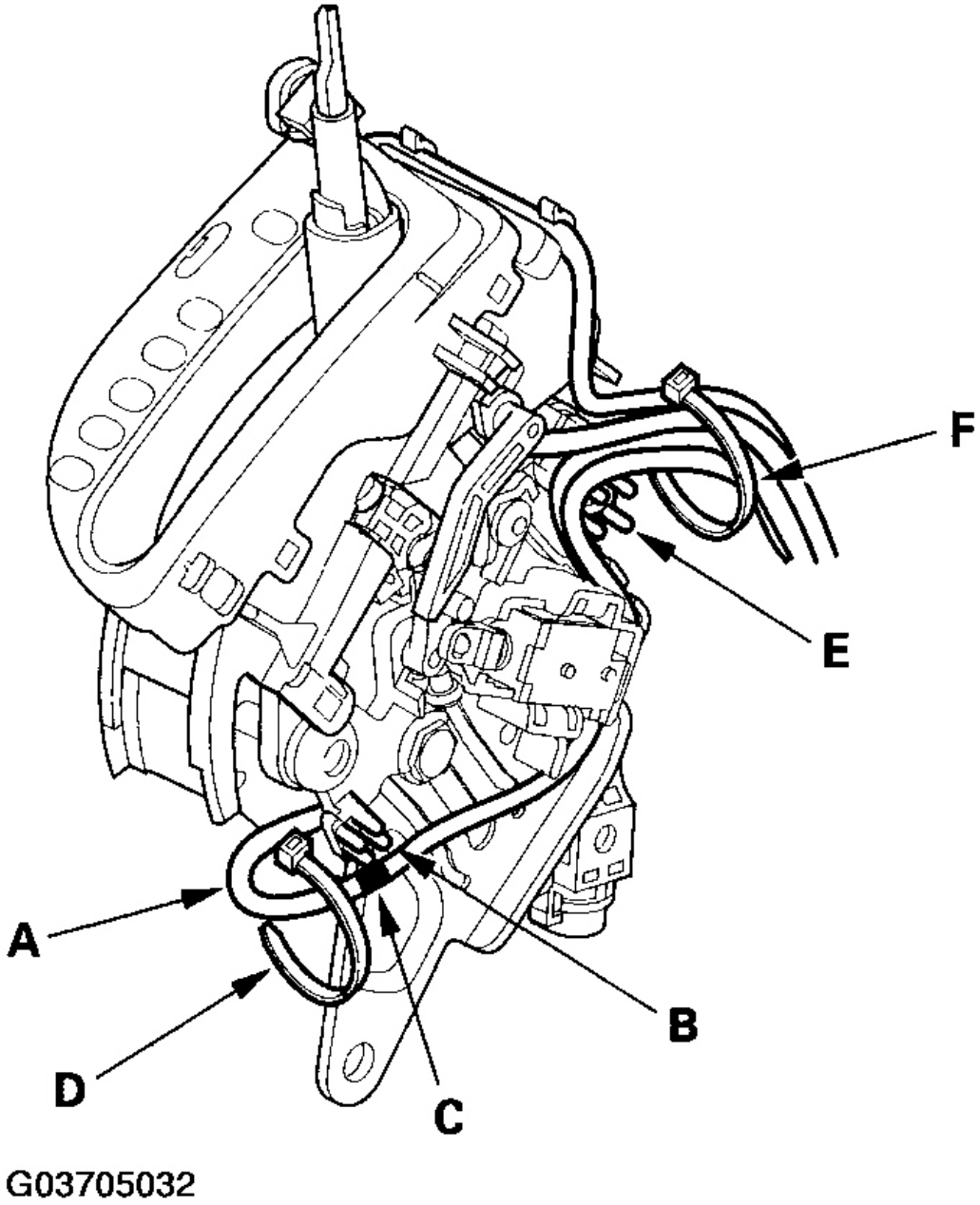


Fig. 338: Routing D3 Switch Harness Along Harness Guide
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Route the harnesses along the harness guide (E), and tie the harnesses and guide with the new band (F).

16. Tie the harnesses together into bundles with new tape (A) in two places.

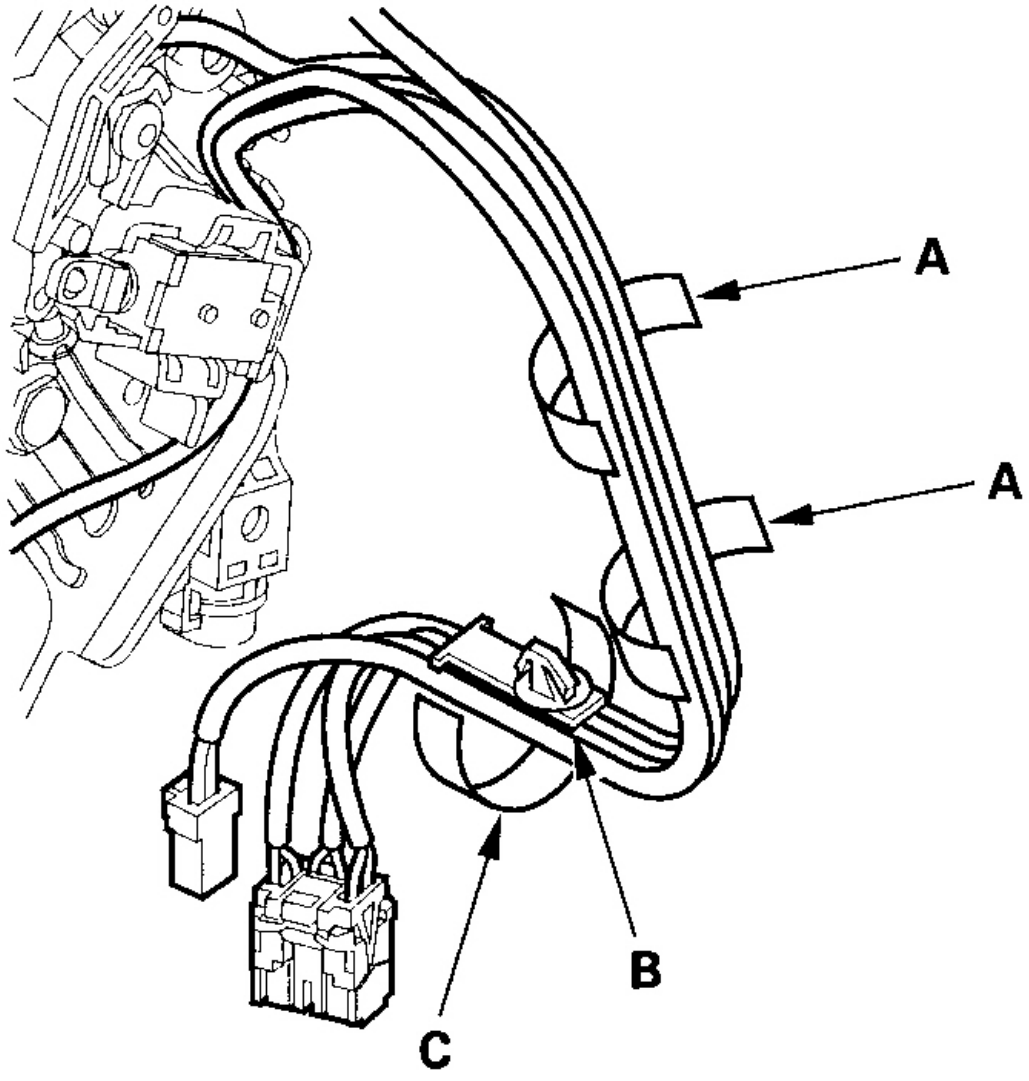


Fig. 339: Tying Harnesses Together Into Bundles
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Tie the harnesses and the harness clamp (B) together into a bundle with tape (C).
18. Point the bevel (A) of the shift lever rod (B) toward the threaded holes (C), and push it into

the bottom. Apply silicone grease to the top of the rod.

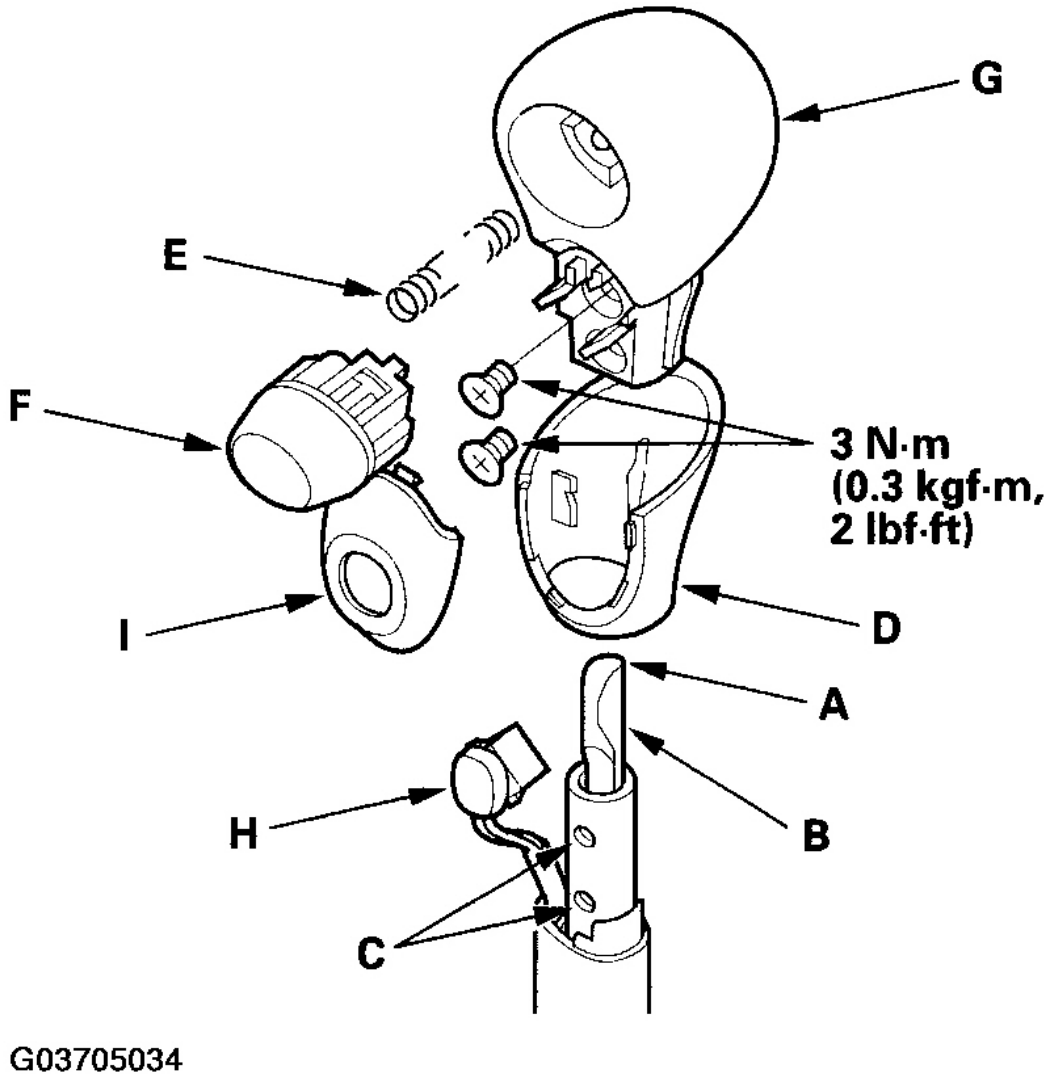


Fig. 340: Pointing Bevel Of Shift Lever Rod Toward Threaded Holes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Install the shift lever knob cover (D).
20. Apply silicone grease to the shift lever button spring (E), and install the spring, shift lever button (F), and shift lever knob (G).
21. Apply non-hardening thread lock sealant to screw threads, and secure the shift lever knob to the shift lever.

22. Install the D3 switch (H) and D3 switch cover (I).
23. Install the shift lever assembly (see **SHIFT LEVER INSTALLATION**).

SHIFT LEVER KNOB REPLACEMENT

1. Remove the shift lever assembly (see **SHIFT LEVER REMOVAL**).
2. Pry off the D3 switch cover (A).

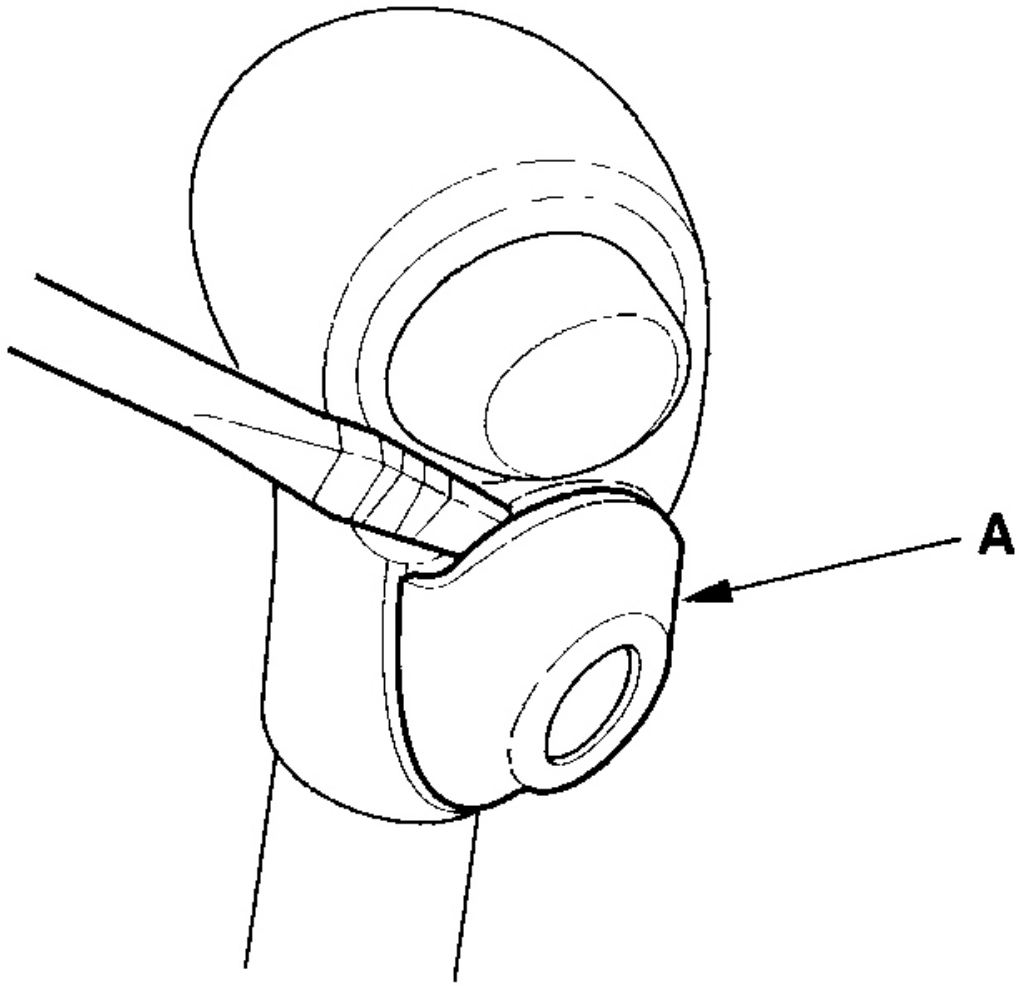


Fig. 341: Prying Off D3 Switch Cover

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the D3 switch (A) by expanding its locks (B). Remove the screws (C), shift lever button (D), spring (E), shift lever knob (F), and shift lever knob cover (G).

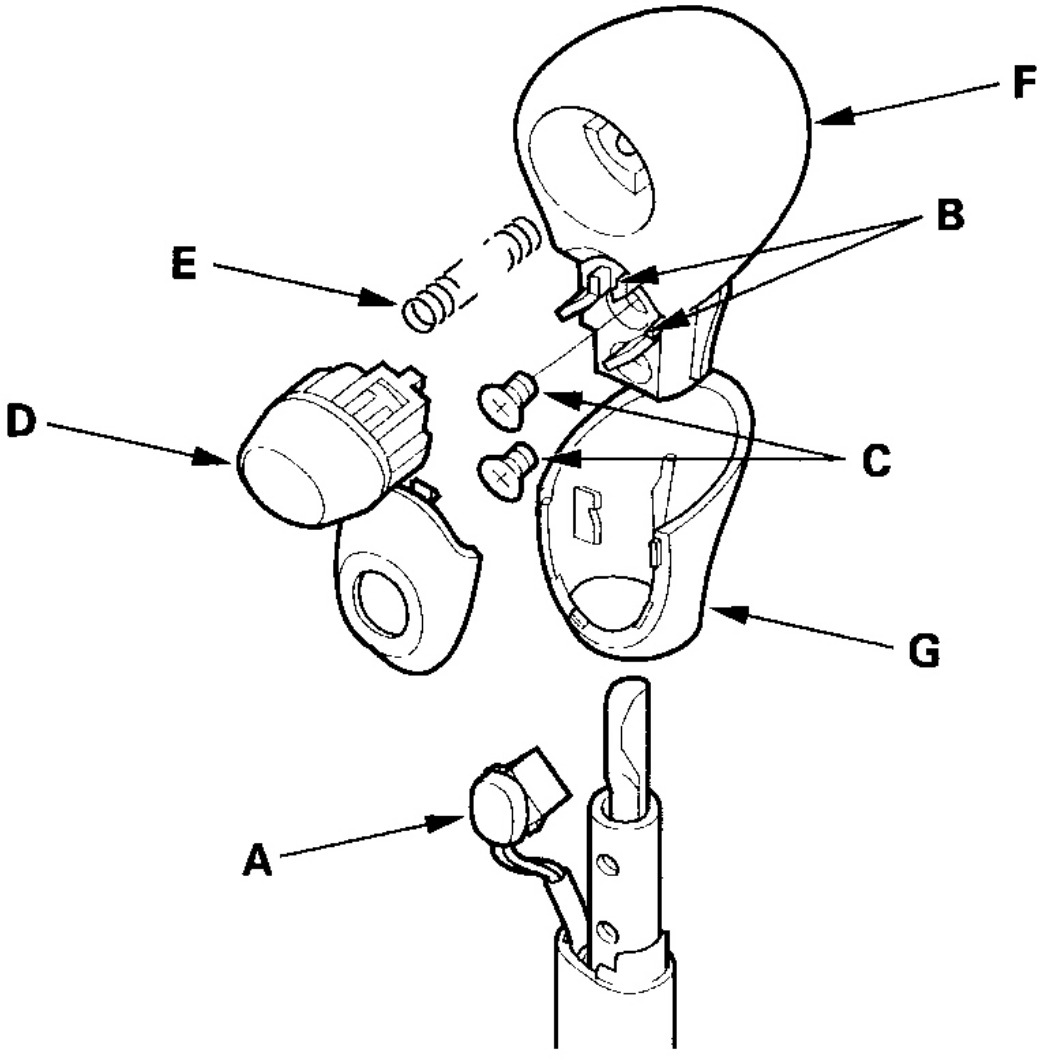


Fig. 342: Removing D3 Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Point the bevel (A) of the shift lever rod (B) toward the threaded holes (C), and push it into

the bottom. Apply silicone grease to the top of the rod.

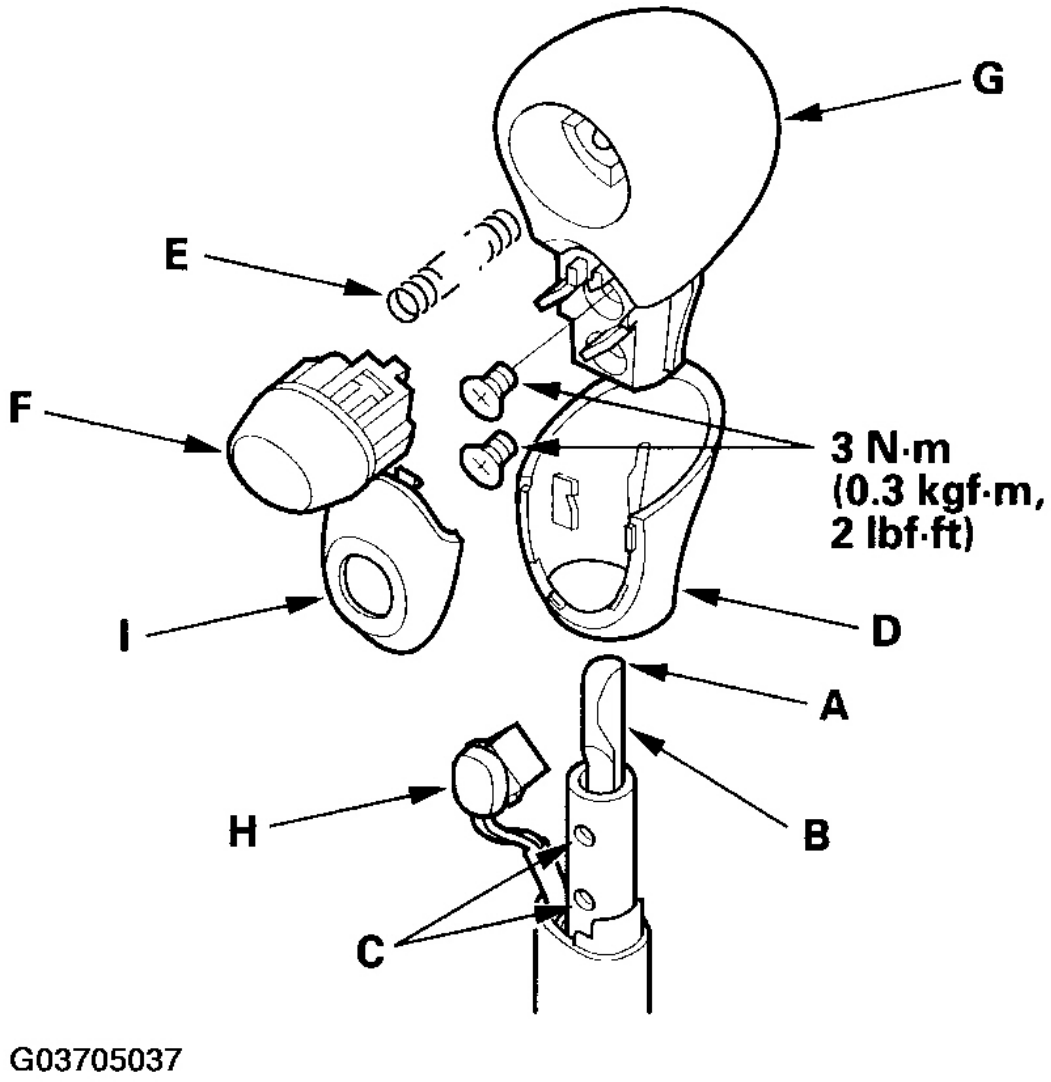


Fig. 343: Pointing Bevel Of Shift Lever Rod Toward Threaded Holes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the shift lever knob cover (D).
6. Apply silicone grease to the shift lever button spring (E), and install the spring, shift lever button (F), and shift lever knob (G).
7. Apply non-hardening thread lock sealant to screw threads, and secure the shift lever knob to the shift lever.

8. Install the D3 switch (H) and D3 switch cover (I).
9. Install the shift lever assembly (see **SHIFT LEVER INSTALLATION**).

SHIFT CABLE REPLACEMENT

1. Raise the front of the vehicle, or lift the vehicle up, and make sure it is securely supported.
2. Remove the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see **DASHBOARD CENTER PANEL REMOVAL/INSTALLATION**).
3. Shift the shift lever into the R position.
4. Slide the lock tab (A) down on the shift cable end holder (B).

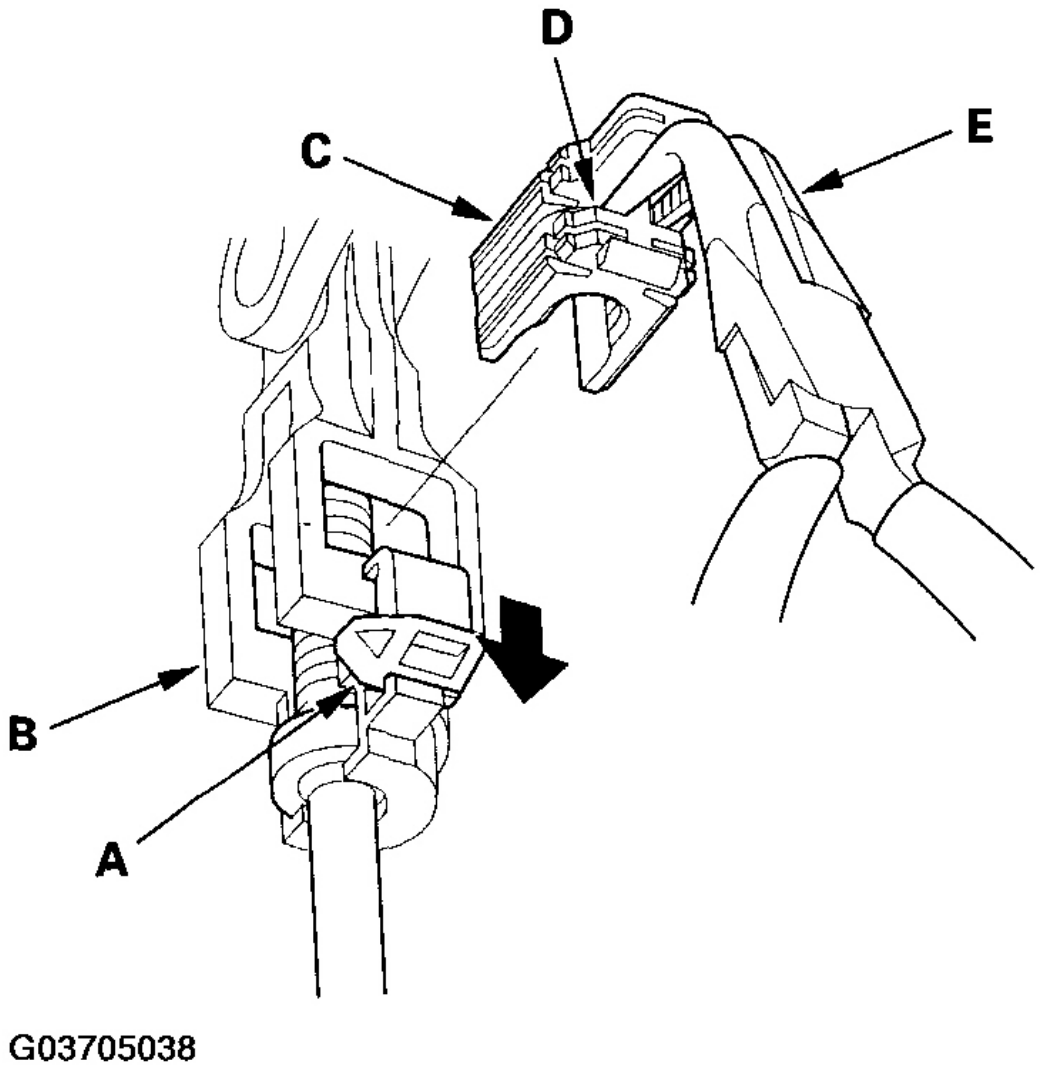


Fig. 344: Sliding Lock Tab Down On Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Grasp the shift cable lock (C) in the middle (D) with angle-jaw needle-nose pliers (E), and remove it from the shift cable end and shift cable end holder. Do not pry the shift cable lock with a screwdriver, it may damage the shift cable end holder.
6. Separate the shift cable end (A) from the shift cable end holder (B).

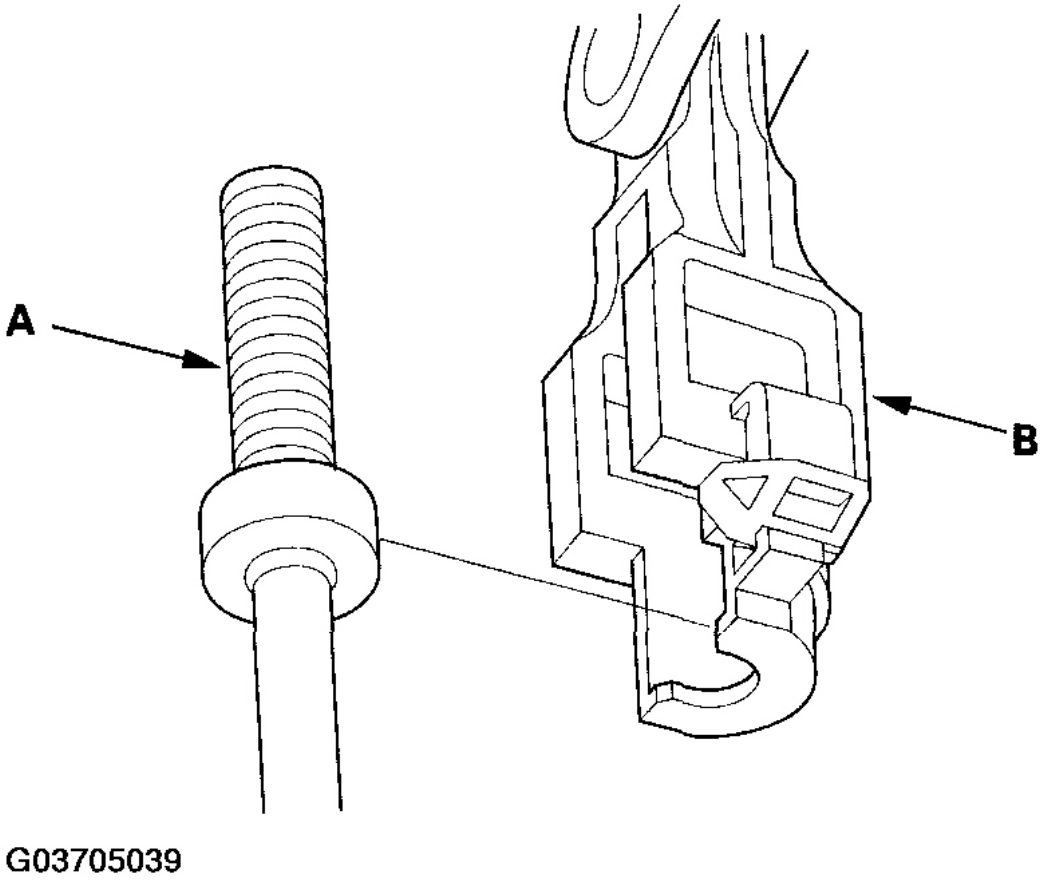


Fig. 345: Separating Shift Cable End From Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the guide tab (C) on the socket holder will be perpendicular to the opening (D) of the socket holder bracket (E). Then slide the holder to remove the shift cable from the socket holder bracket.

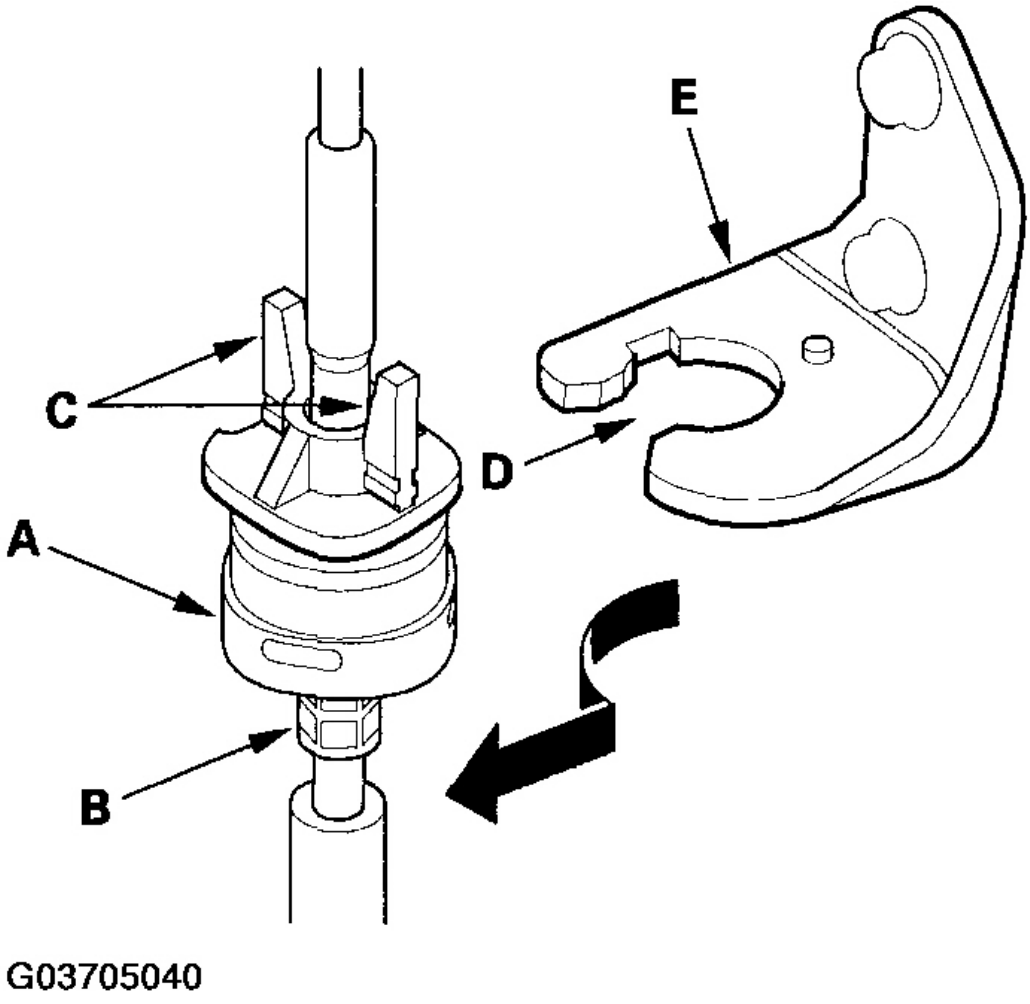


Fig. 346: Rotating Socket Holder On Shift Cable Quarter Turn
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the shift cable bracket (A) and grommet (B), and pull out the shift cable (C).

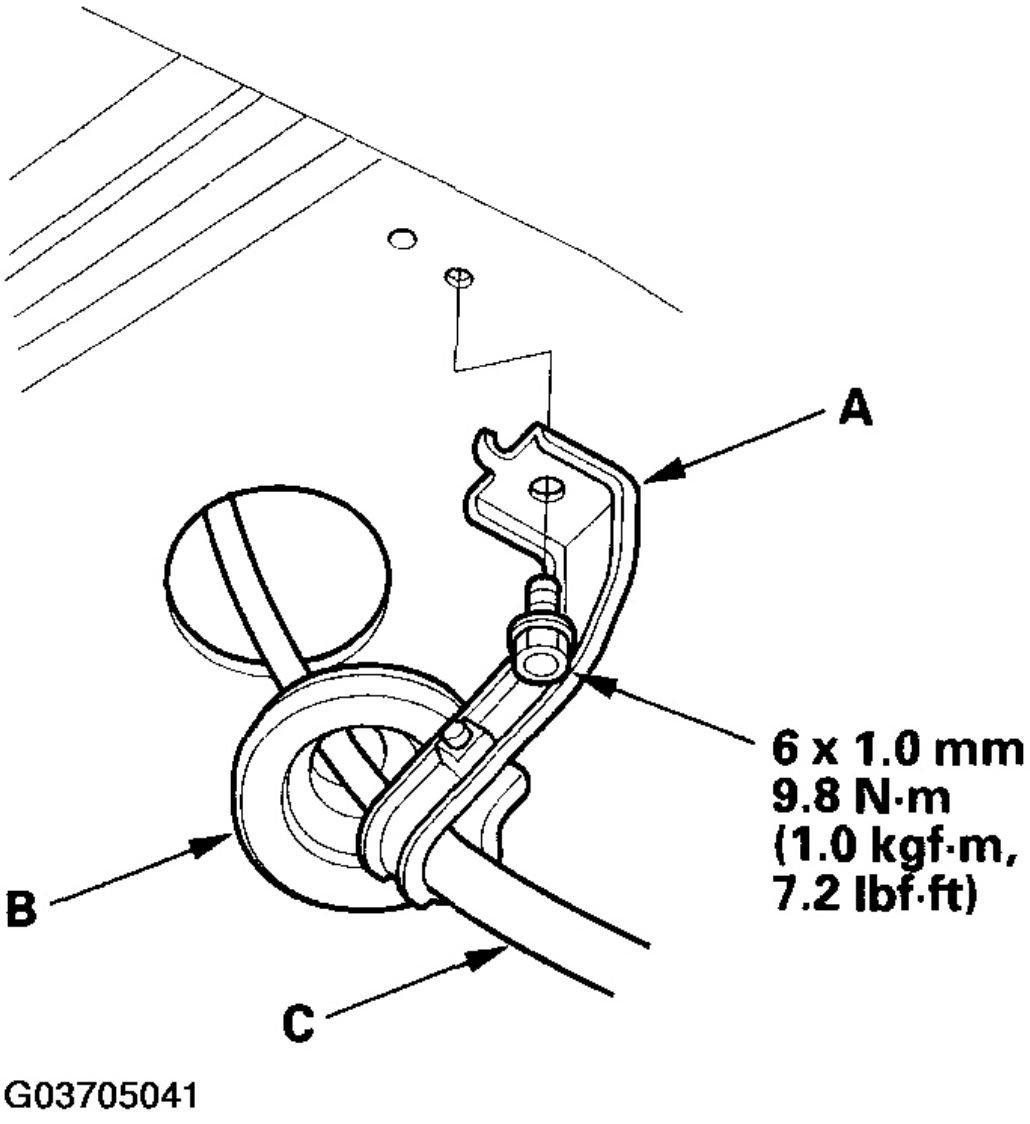


Fig. 347: Removing Shift Cable Bracket And Grommet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the bolts securing the shift cable holder (A), then remove the shift cable cover (B).

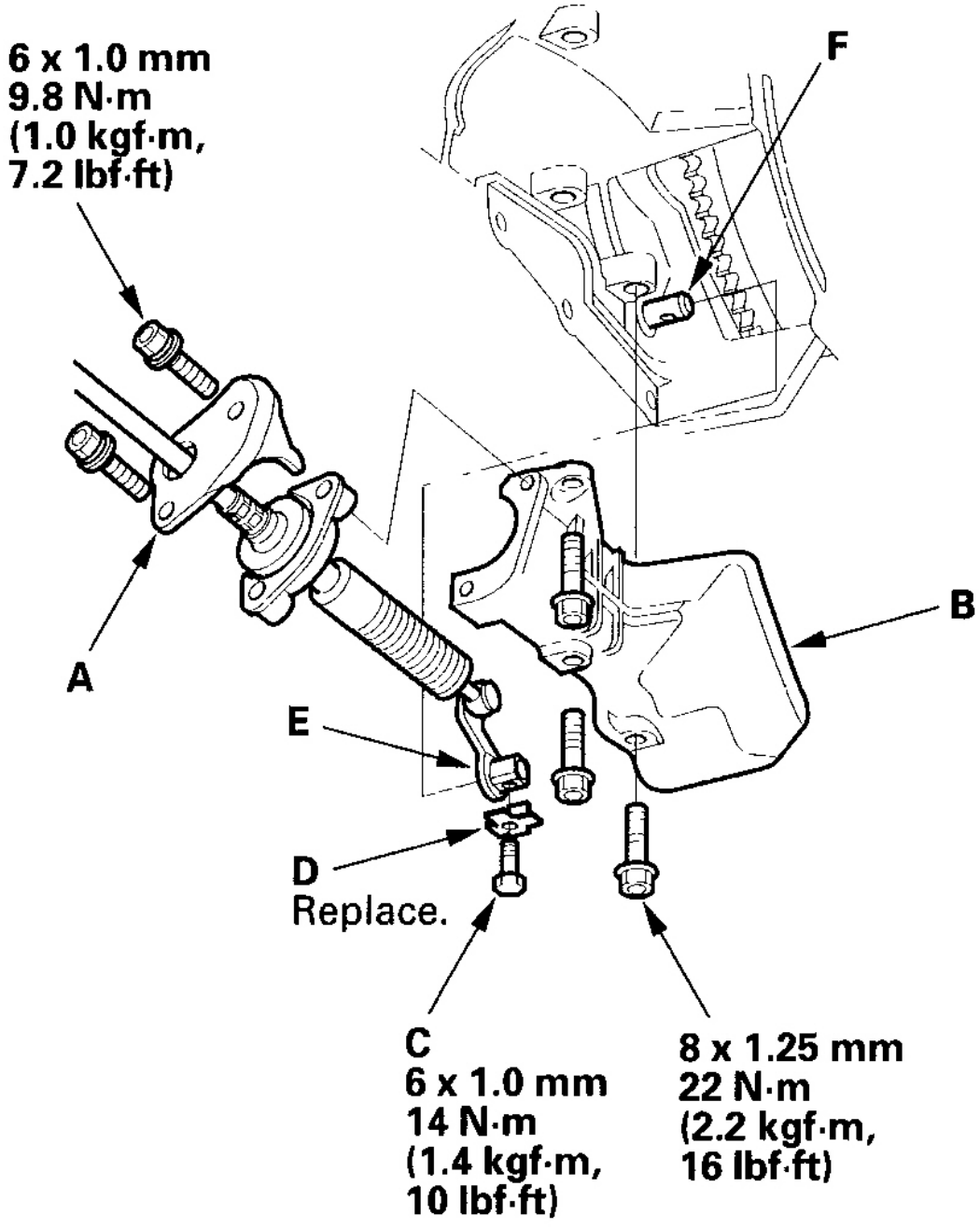
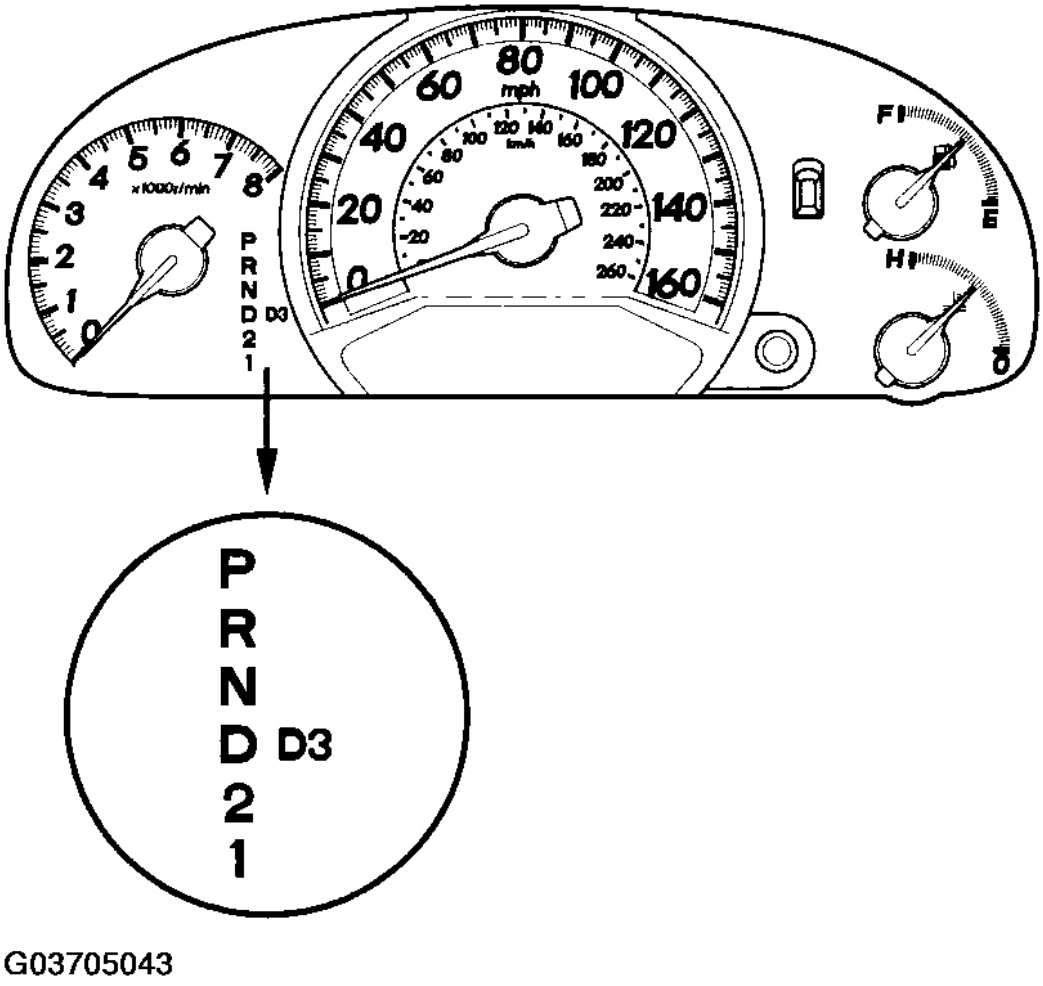


Fig. 348: Removing Shift Cable Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the lock bolt (C) and lock washer (D) securing the selector control lever (E), and remove the shift cable and selector control lever from the selector control shaft (F).
11. Install the new shift cable through the grommet hole. Do not bend the shift cable excessively.
12. Install the shift cable bracket on the body, and install the grommet in its hole.
13. Install selector control lever on the selector control shaft. Do not bend the shift cable excessively.
14. Verify that the transmission is in the R position at the selector control lever.
15. Install the lock bolt and a new lock washer. Bend the lock washer tab against the bolt head.
16. Install the shift cable cover, and secure the shift cable holder on the shift cable cover.
17. Turn the ignition switch ON (II), and verify that the R position indicator comes on.



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Fig. 349: Verifying R Position Indicator Comes On
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. If necessary, push the shift cable (A) until it stops, then release it. Pull the shift cable back one step so that the shift cable is in the R position. Do not hold the shift cable guide (B) to adjust the shift cable.

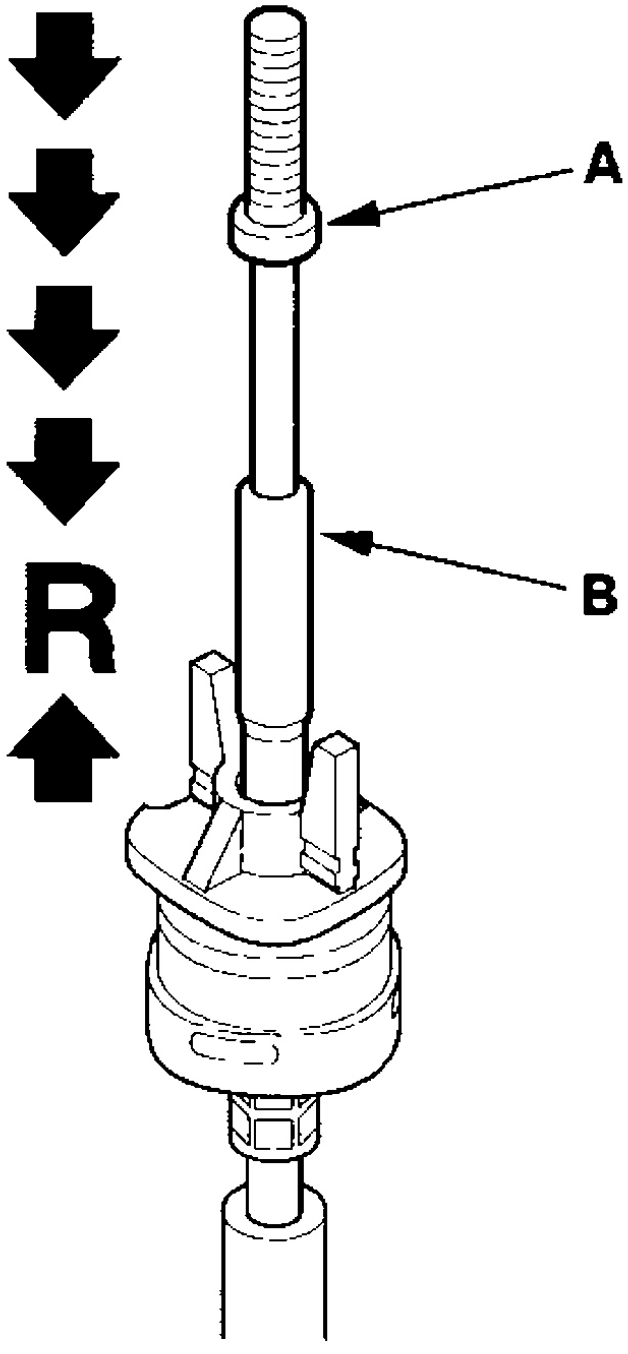


Fig. 350: Pushing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Turn the ignition switch OFF.

20. Insert a 6.0 mm (0.24 in.) pin (A) into the positioning hole (B) on the shift lever bracket base and through the positioning hole on the shift lever. The shift lever is secured in the R position.

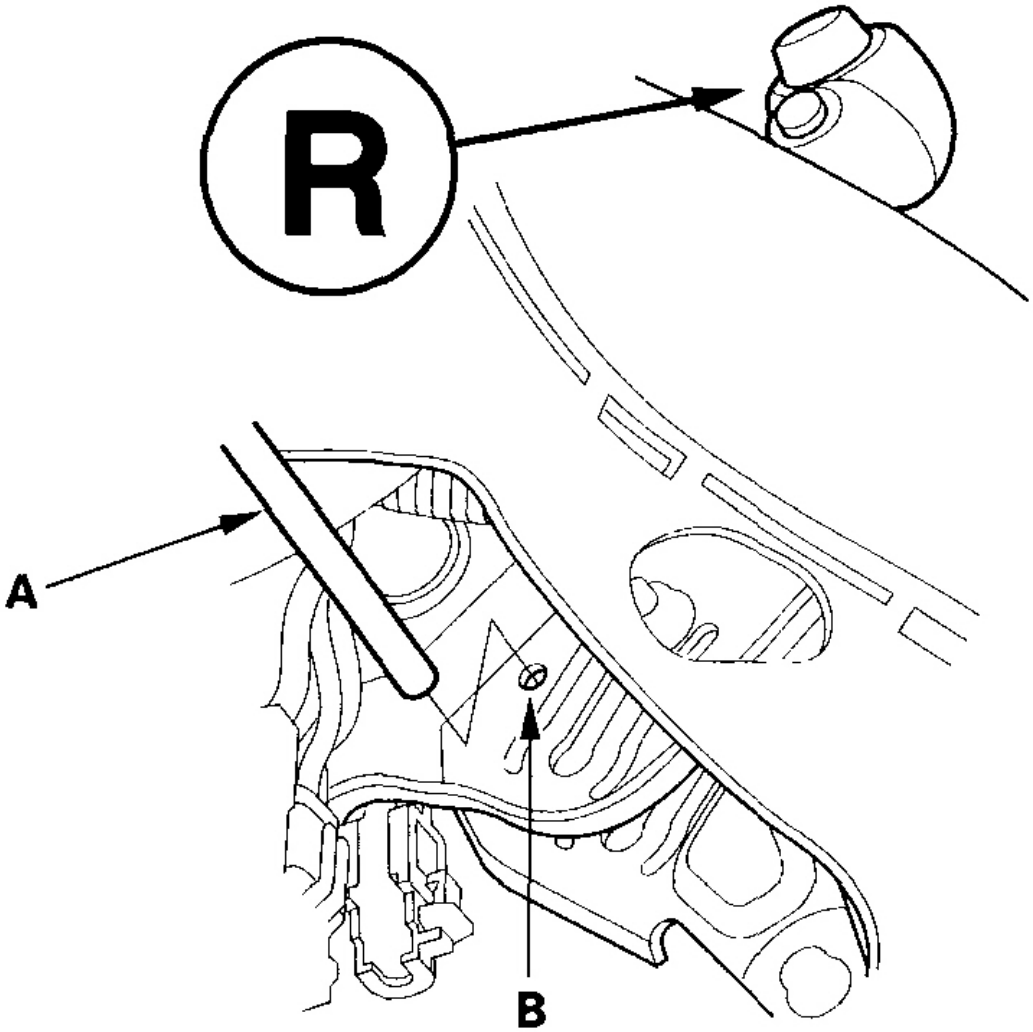


Fig. 351: Inserting Pin Into Positioning Hole On Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Rotate the socket holder (A) on the shift cable (B) to place the guide tab (C) on the holder will be perpendicular to the opening (D) in the socket holder bracket (E). Align the holder

with the opening in the bracket, then slide the holder into the bracket. Rotate the holder a quarter turn until the holder lock (F) stops at the projection (G) to secure the shift cable. Do not install the shift cable by twisting the shift cable guide (H).

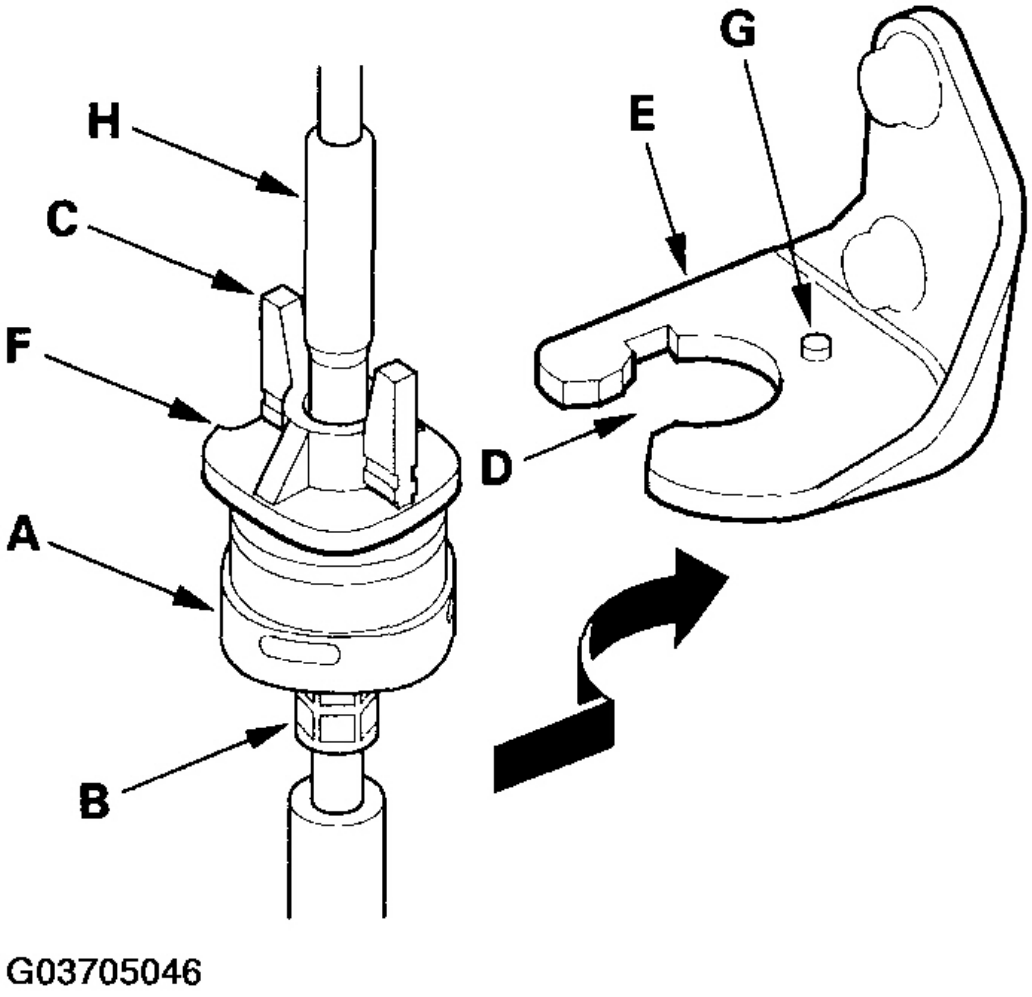


Fig. 352: Rotating Socket Holder On Shift Cable To Place Guide Tab On Holder To Opening In Socket Holder Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Install the shift cable end (A) in the shift cable end holder (B). Keep the shift cable end and end holder free of grease.

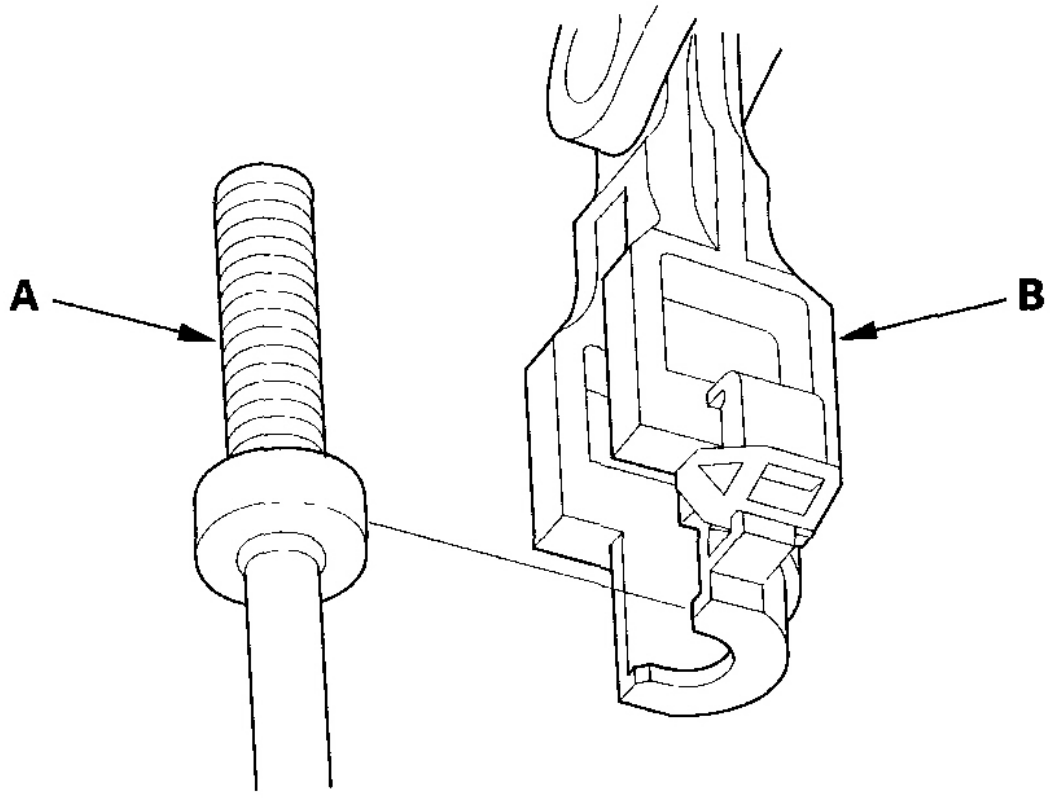


Fig. 353: Installing Shift Cable End In Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Install the new shift cable lock (A) to secure the shift cable end and shift cable end holder, then push the lock tab (B) up until it stops to lock the joint.

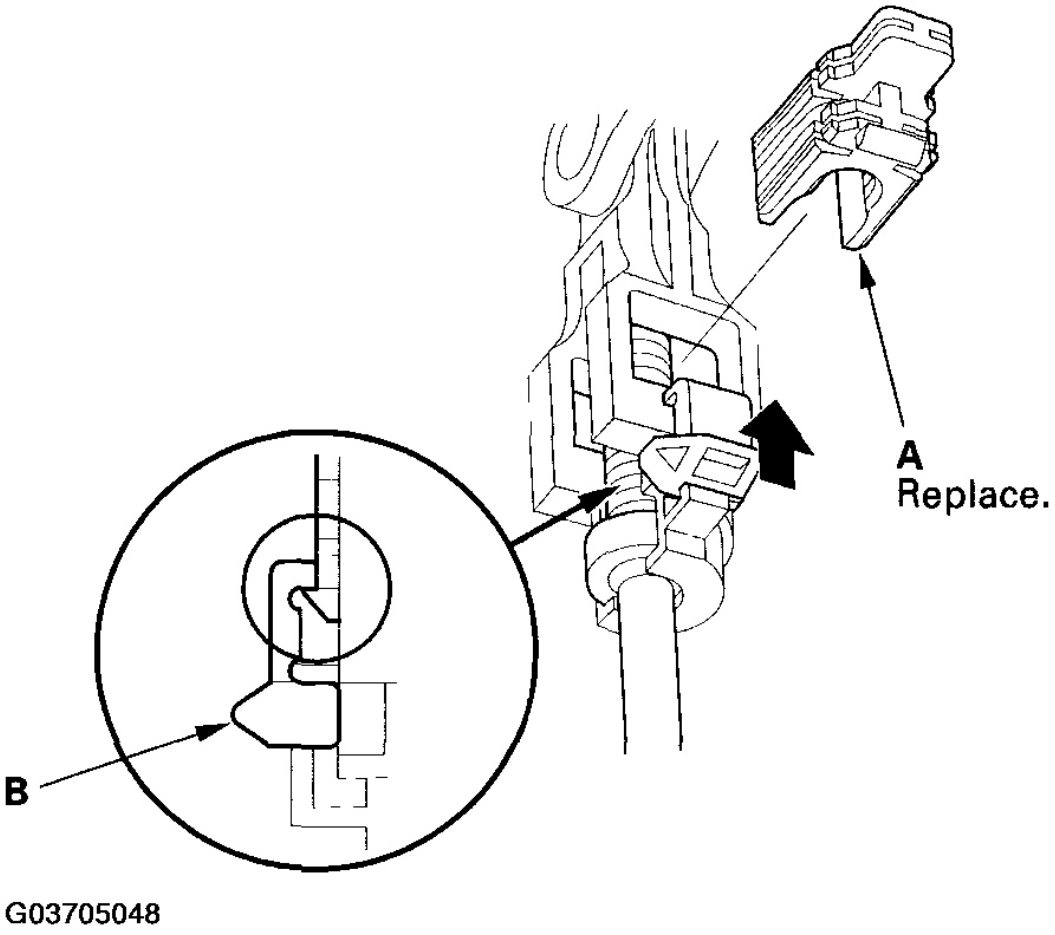


Fig. 354: Installing Shift Cable Lock
Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
25. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
26. Install the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see **DASHBOARD CENTER PANEL REMOVAL/INSTALLATION**).

SHIFT CABLE ADJUSTMENT

1. Remove the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see

DASHBOARD CENTER PANEL REMOVAL/INSTALLATION).

2. Shift the shift lever into the R position.
3. Slide the lock tab (A) down on the shift cable end holder (B).

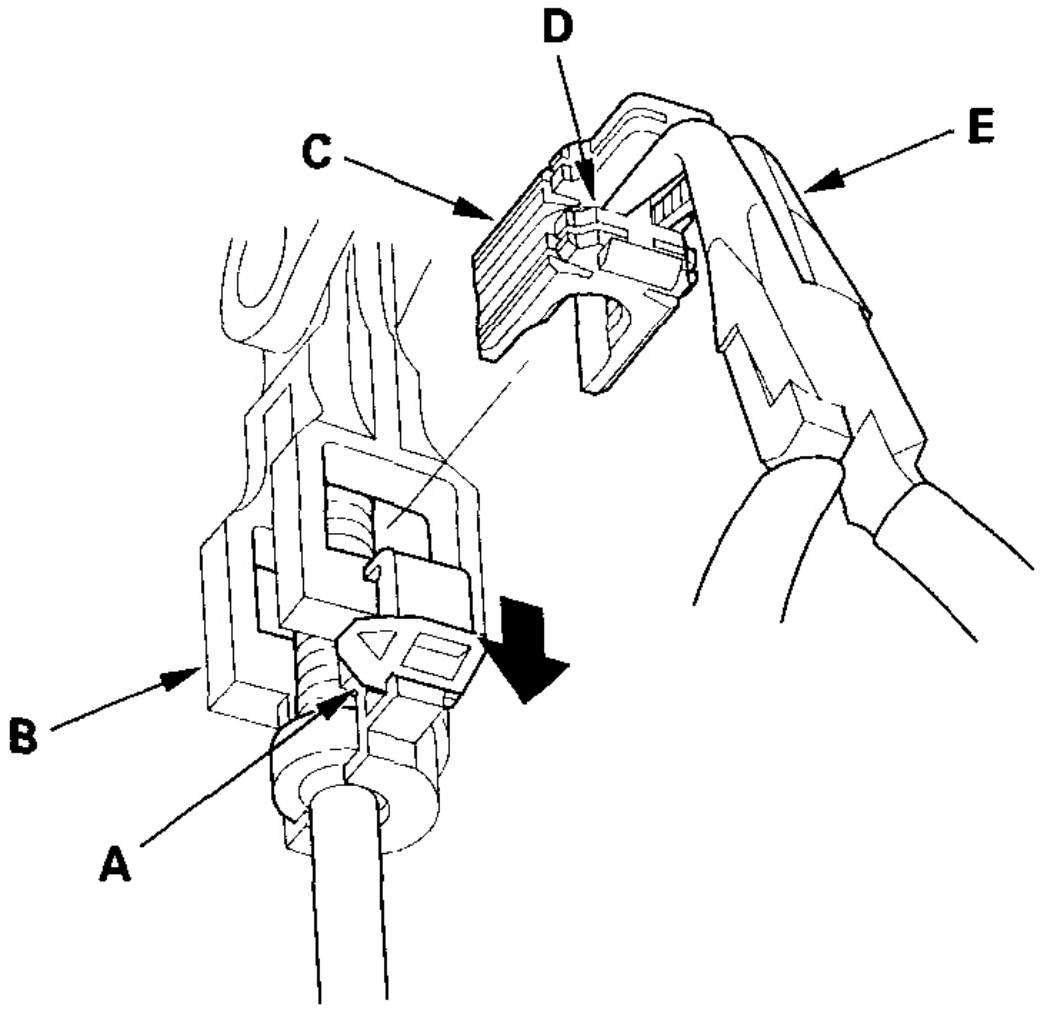


Fig. 355: Sliding Lock Tab Down On Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Grasp the shift cable lock (C) in the middle (D) with angle-jaw needle-nose pliers (E), and remove it from the shift cable end and shift cable end holder. Do not pry the shift cable lock

with a screwdriver, it may damage the shift cable end holder.

5. Separate the shift cable end (A) from the shift cable end holder (B).

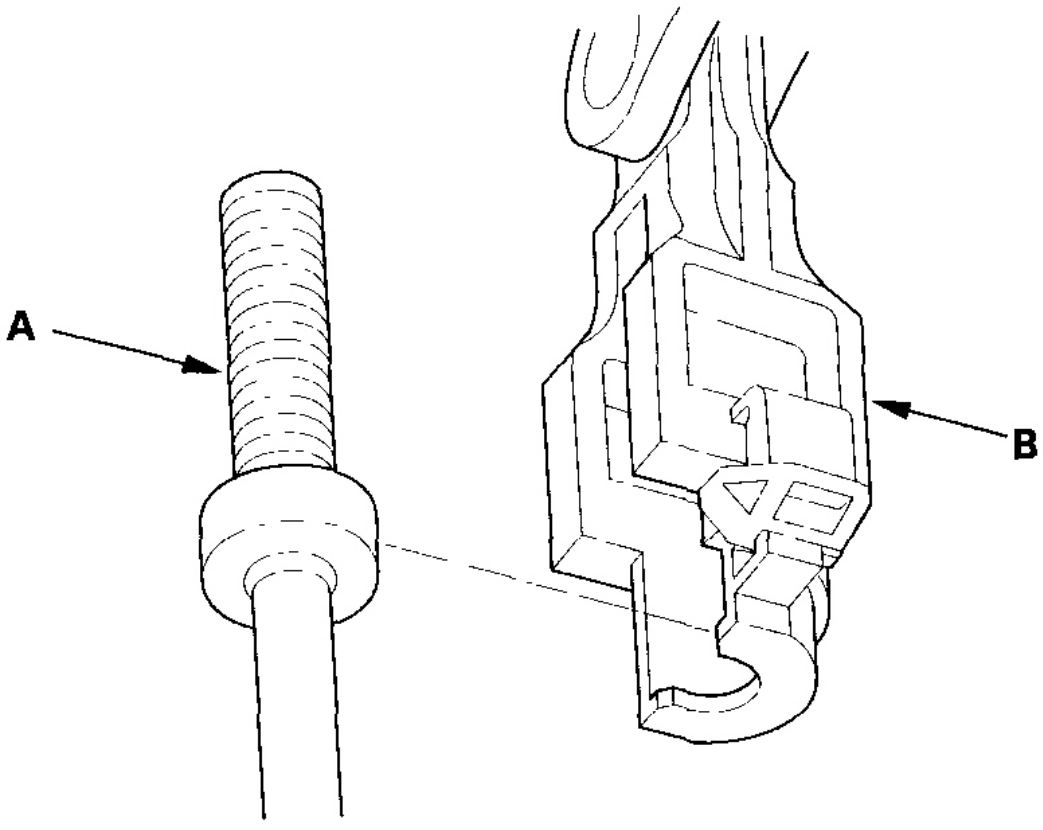


Fig. 356: Separating Shift Cable End From Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Rotate the socket holder (A) on the shift cable (B) a quarter turn; the guide tab (C) on the socket holder will be perpendicular to the opening (D) of the socket holder bracket (E). Then slide the holder to remove the shift cable from the socket holder bracket. Do not remove the shift cable by twisting the shift cable guide (F).

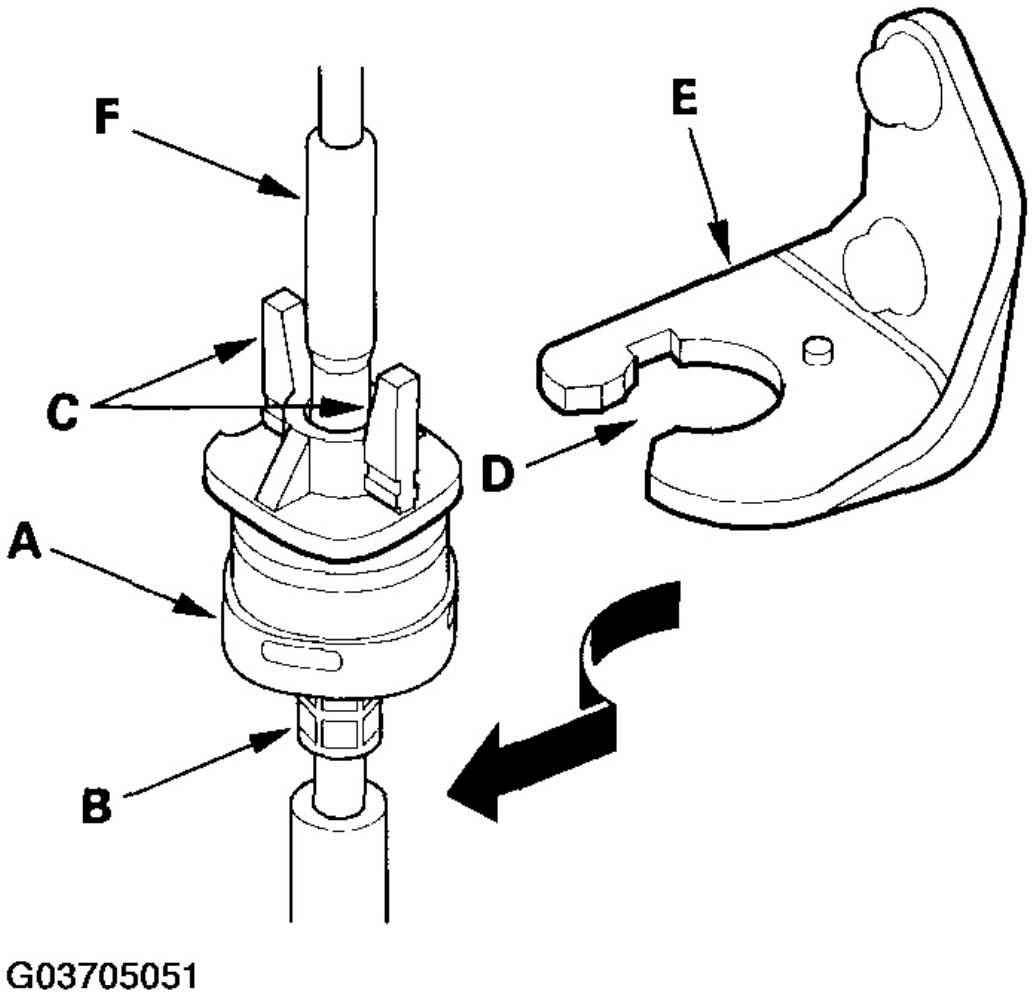


Fig. 357: Rotating Socket Holder On Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Push the shift cable (A) until it stops, and release it. Pull the shift cable back one step so that the shift cable is in the R position. Do not hold the shift cable guide (B) to adjust the shift cable.

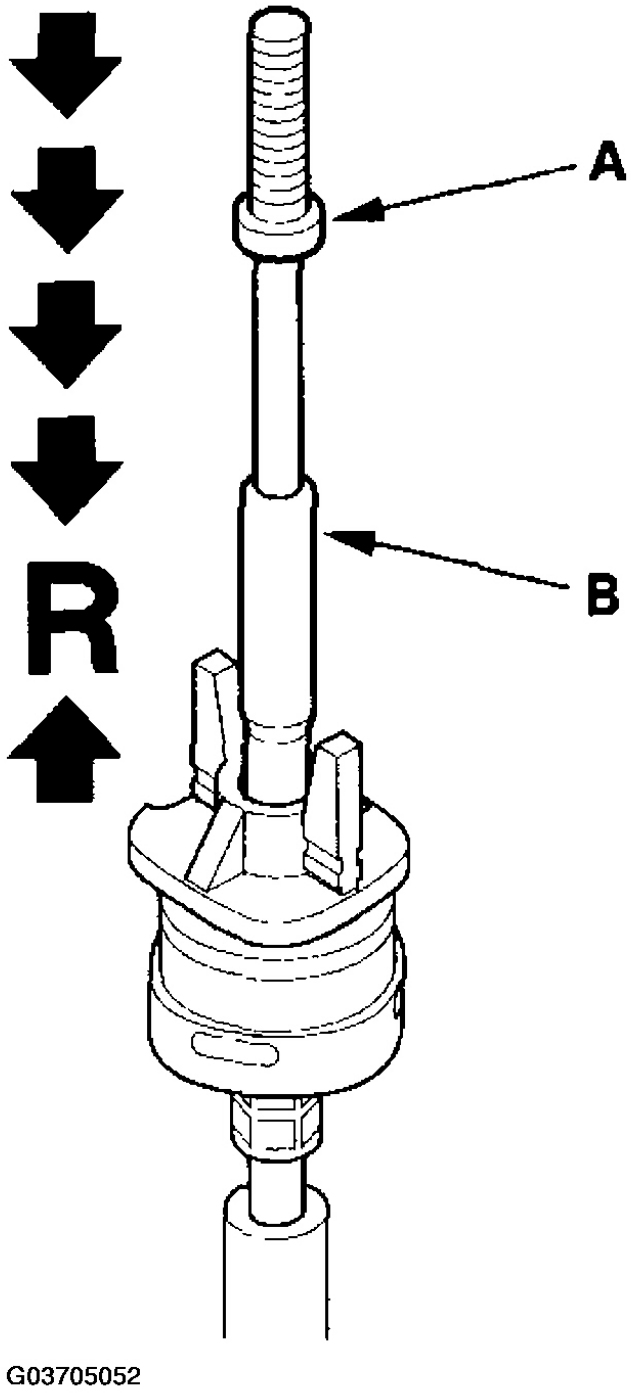


Fig. 358: Pushing Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Turn the ignition switch ON (II), and verify that the R position indicator comes on.

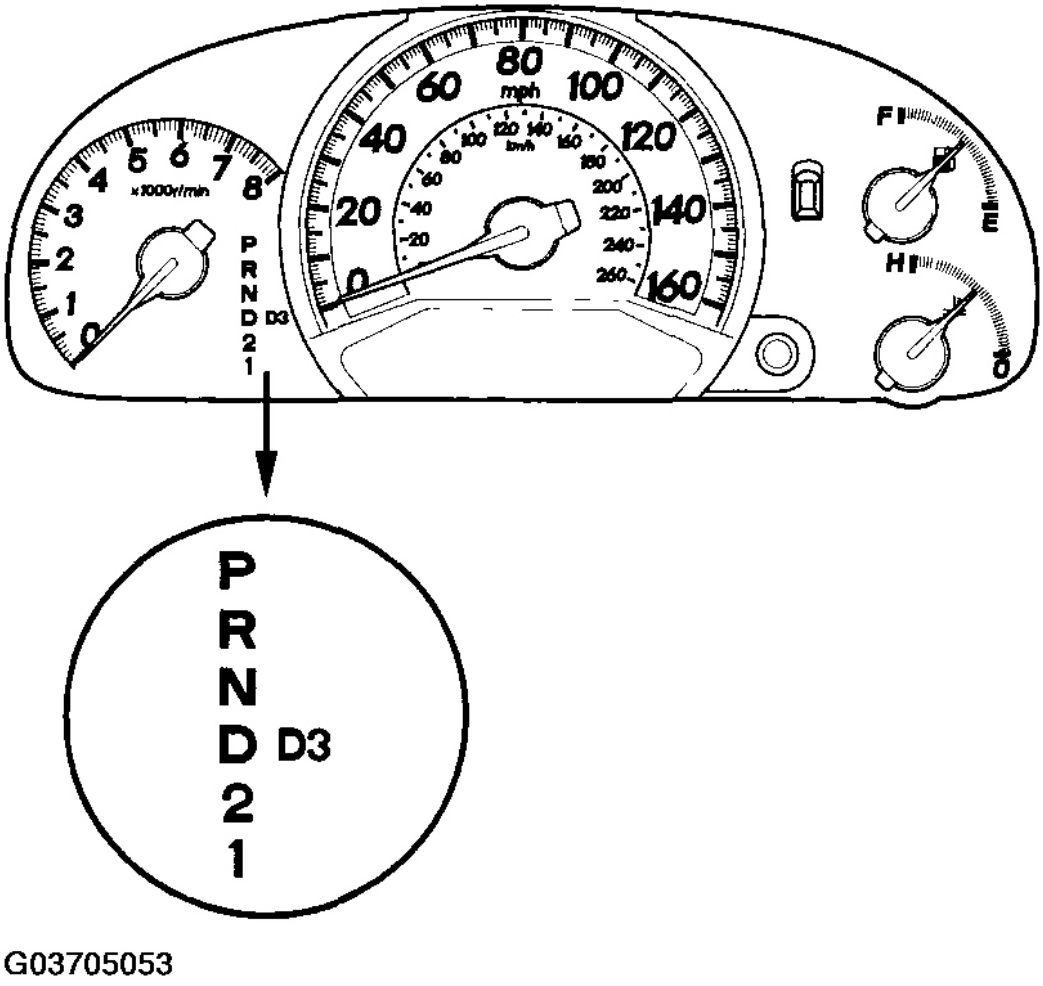


Fig. 359: Verifying R Position Indicator Comes On
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Turn the ignition switch OFF.
10. Insert a 6.0 mm (0.24 in.) pin (A) into the positioning hole (B) on the shift lever bracket base and through the positioning hole on the shift lever. The shift lever is secured in the R position.

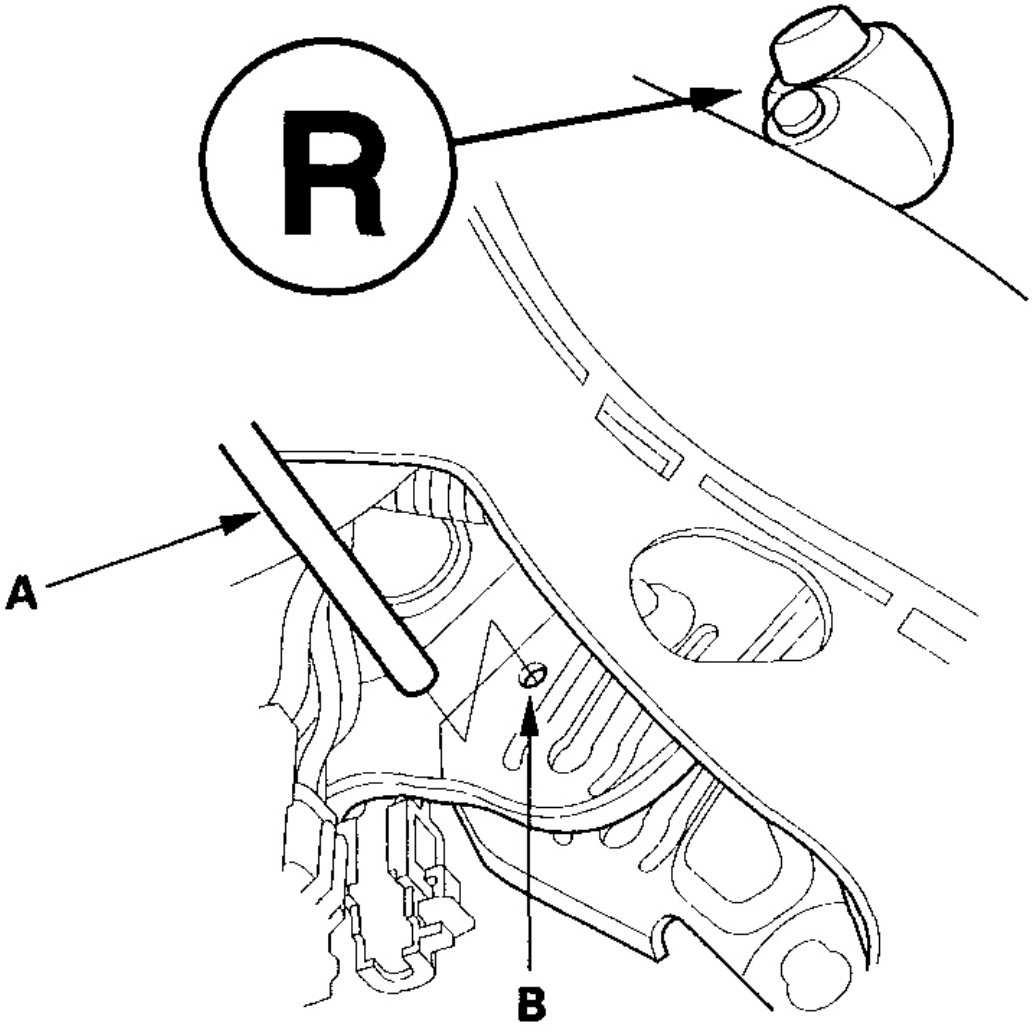


Fig. 360: Inserting Pin Into Positioning Hole On Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Rotate the socket holder (A) on the shift cable (B) to place the guide tab (C) on the holder will be perpendicular to the opening (D) in the socket holder bracket (E). Align the holder with the opening in the bracket, then slide the holder into the bracket. Rotate the holder a quarter turn until the holder lock (F) stops at the projection (G) to secure the shift cable. Do not install the shift cable by twisting the shift cable guide (H).

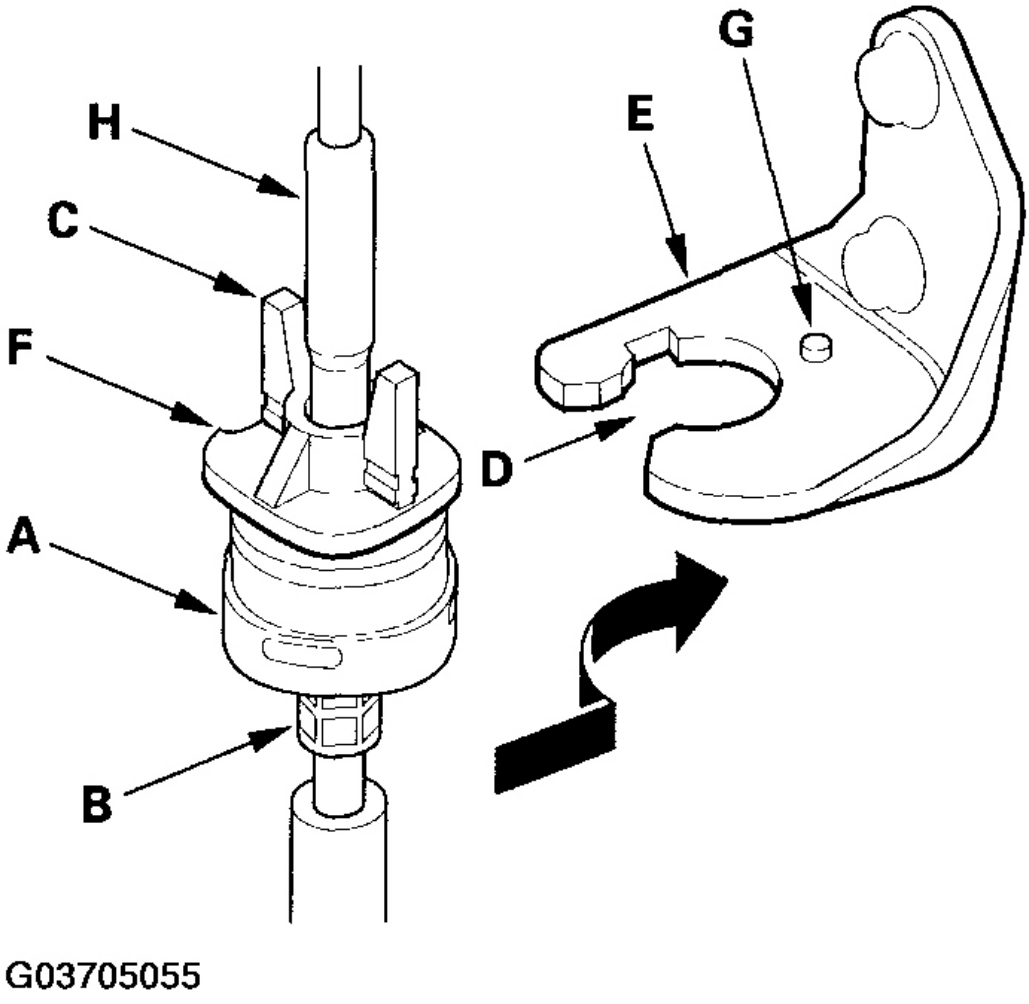


Fig. 361: Rotating Socket Holder On Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Install the shift cable end (A) in the shift cable end holder (B). Keep the shift cable end and end holder free of grease.

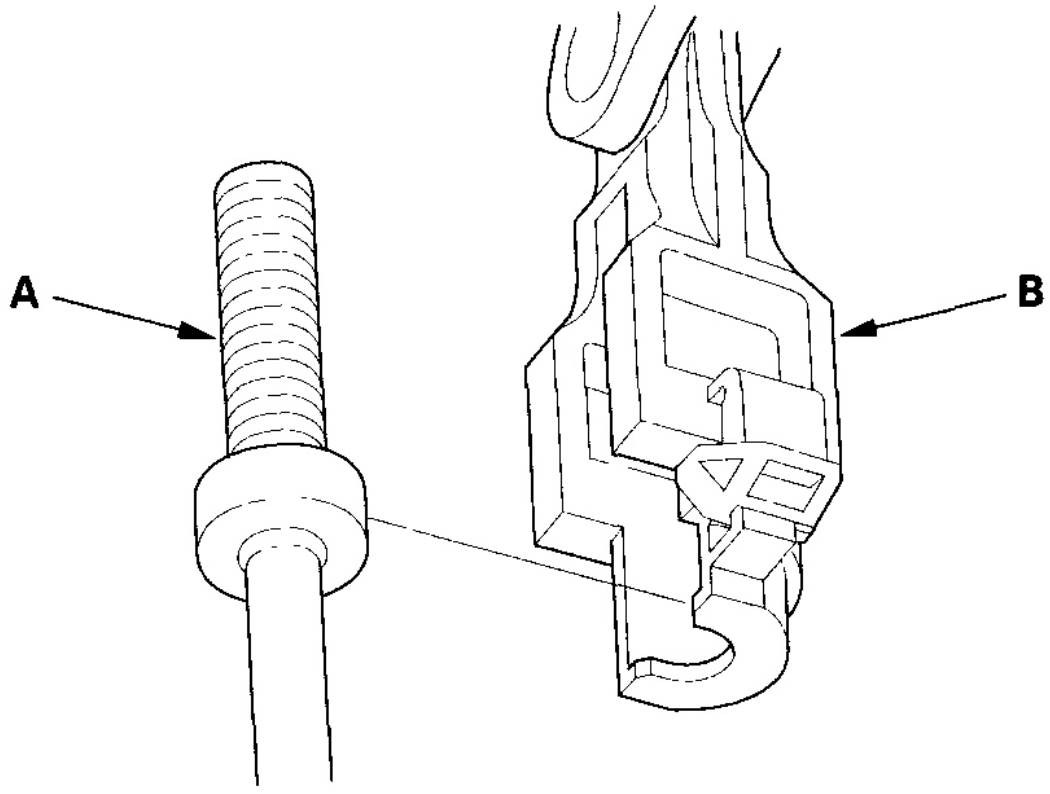


Fig. 362: Installing Shift Cable End In Shift Cable End Holder
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Install the new shift cable lock (A) to secure the shift cable end and shift cable end holder, then push the lock tab (B) up until it stops to lock the joint.

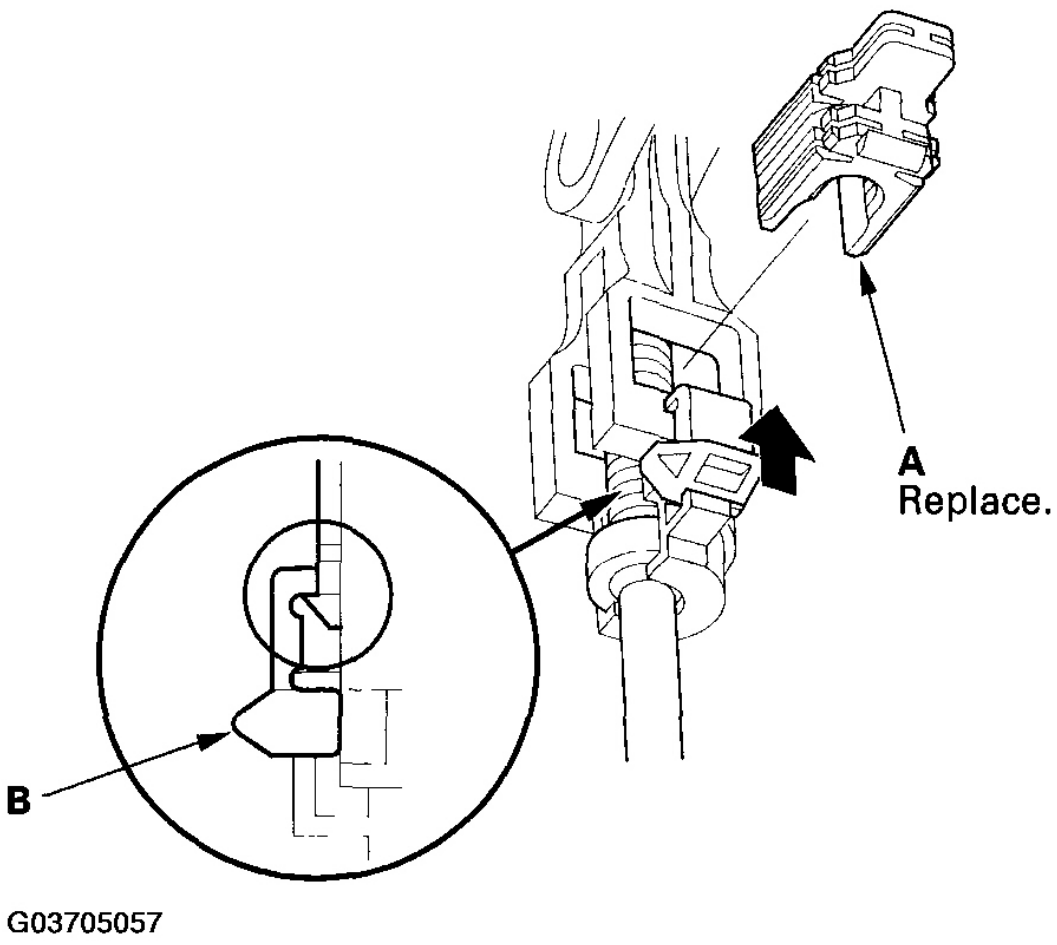


Fig. 363: Installing Shift Cable Lock
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
15. Move the shift lever to each position, and verify that the A/T gear position indicator follows the transmission range switch.
16. Install the dashboard center lower cover (see **DASHBOARD CENTER LOWER COVER REMOVAL/INSTALLATION**), and dashboard center panel (see **DASHBOARD CENTER PANEL REMOVAL/INSTALLATION**).