AUTOMATIC TRANSMISSION

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07GAB-PF50101 or 07GAB-PF50100	Mainshaft Holder	1
②	07GAD-PG40100 or 07GAD-PG40101	Oil 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	07HAD-SG00100	Attachment, 83 mm	1
⑥	07JAH-PH80101	Oil Seal Driver Attachment	1
⑦	07JAD-SH30100	Attachment, 65 mm	1
⑧	07LAD-PW50601	Attachment, 40 x 50 mm	1
⑨	07LAE-PX40100	Clutch Spring Compressor Attachment	2
⑩	07MAD-PR90100	Attachment, 45 x 55 mm	1
⑪	07MAF-SP0011A	Tapered Bearing Race Installer	1
⑫	07MAF-SP0013A	Installer Shaft	1
⑬	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	3
⑭	07MAJ-PY40120	A/T Pressure Hose Adapter	3
⑮	07NAD-PX40100	Attachment, 78 x 80 mm	1
⑯	07XAA-002010A	Wrench, 40 x 42 mm	1
⑰	07XAB-0020100	Companion Flange Holder	1
⑱	07ZAE-PRP0100	Clutch Compressor Attachment	1
⑲	07ZAJ-RDJA110	Pin Probe (male)	2

⑨: 07HAE-PL50101 may be used to substitute one of these tools.

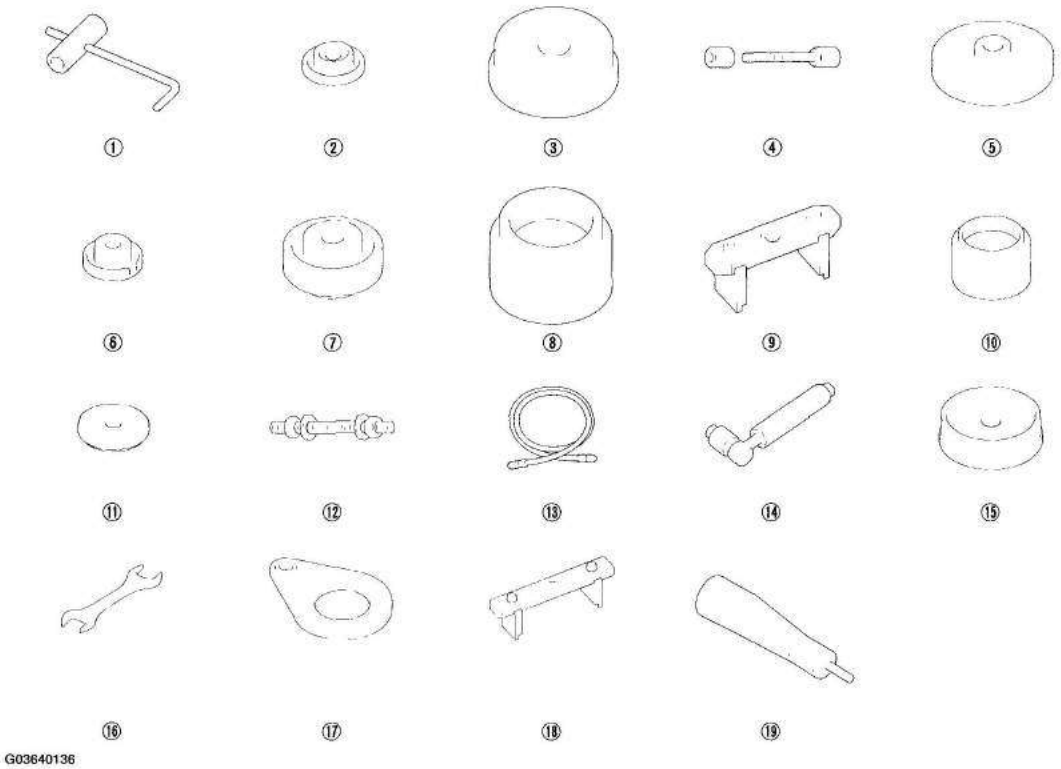


Fig. 1: Identifying Special Tools (1 Of 2)
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Ref. No.	Tool Number	Description	Qty
⑳	07ZAJ-RDJA120	Flat Spade Probe (male)	1
㉑	070AJ-0020101	Preload Inspection Tool	1
㉒	07406-0020400 or 07406-0020401	A/T Clutch Pressure Gauge Set	1
㉓	07736-A01000B or 07736-A01000A	Adjustable Bearing Puller, 25—40 mm	1
㉔	07741-0010201	Sliding Hammer Weight	1
㉕	07746-0010200	Attachment, 37 x 40 mm	1
㉖	07746-0010300	Attachment, 42 x 47 mm	1
㉗	07746-0010400	Attachment, 52 x 55 mm	1
㉘	07746-0010500	Attachment, 62 x 68 mm	1
㉙	07746-0010600	Attachment, 72 x 75 mm	1
㉚	07746-0010800	Attachment, 22 x 24 mm	1
㉛	07746-0030100	Driver, 40 mm I.D.	1
㉜	07746-0030300	Attachment, 30 mm I.D.	1
㉝	07749-0010000	Driver	1
㉞	07936-1660101	Bearing Remover Shaft Set, 12 mm	1
㉟	07936-3710100	Bearing Remover Shaft Handle	1
㊱	07936-3710600	Bearing Remover Shaft Set, 20 mm	1
㊲	07936-8890300	Bearing Remover Shaft Set, 30 mm	1
㊳	07936-GE00100	Bearing Remover Shaft, 10 mm	1
㊴	07936-GE00200	Bearing Remover Head, 10 mm	1
㊵	07947-6340500	Driver Attachment	1

㉓: Must be used with commercially available 3/8 "-16 slide hammer.

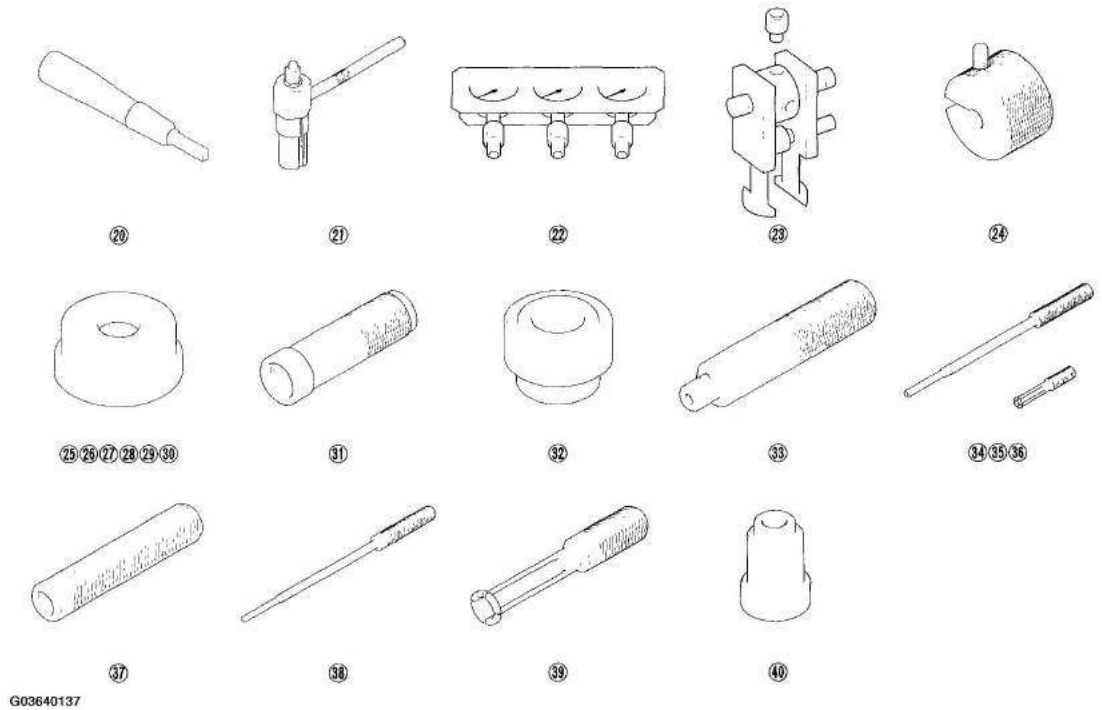


Fig. 2: Identifying Special Tools (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 D5 indicator (A) in the gauge assembly (B) will usually blink.

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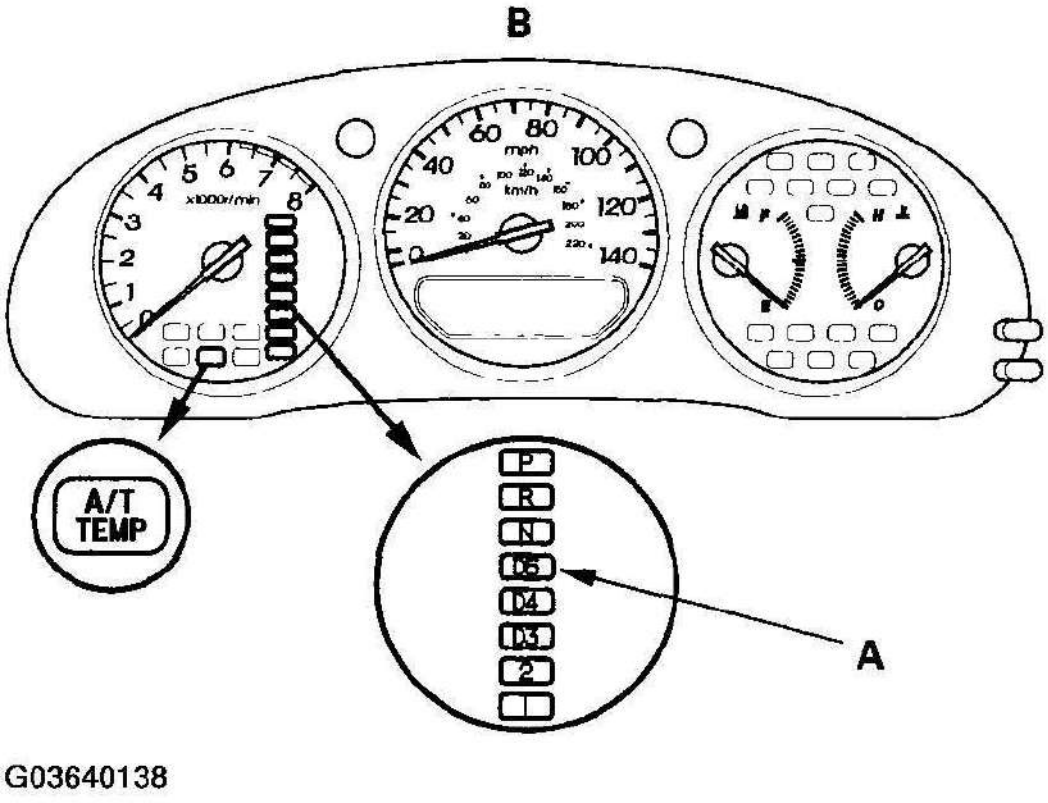


Fig. 3: Identifying D5 Indicator In Gauge Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the Honda diagnostic system (HAS) is connected to the data link connector (DLC) (A) (located behind the driver's dashboard lower cover) 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.

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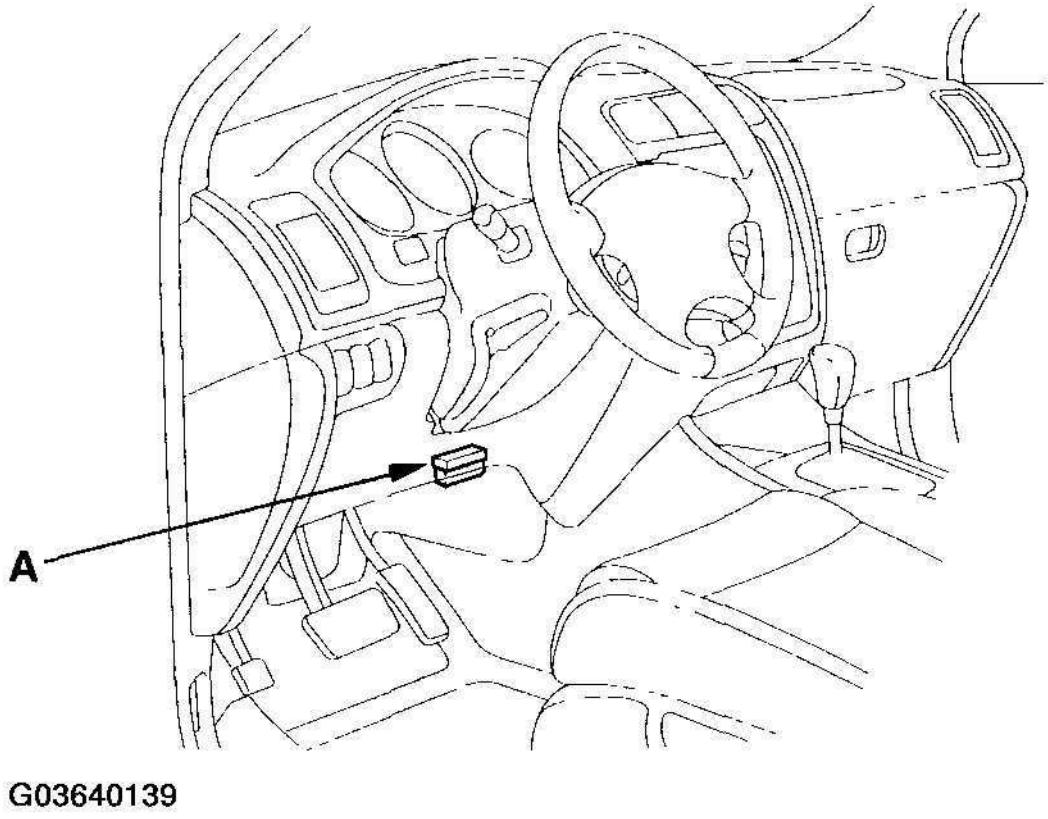


Fig. 4: Identifying Data Link Connector Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the D5 indicator or malfunction indicator lamp (MIL) has been reported on, or if a driveability problem is suspected, follow this procedure:

1. Connect the HAS to the DLC. (See the HAS 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 HAS 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.

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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)

When the PCM senses an abnormality in the input or output system, the D5 indicator (A) in the gauge assembly (B) will usually blink.

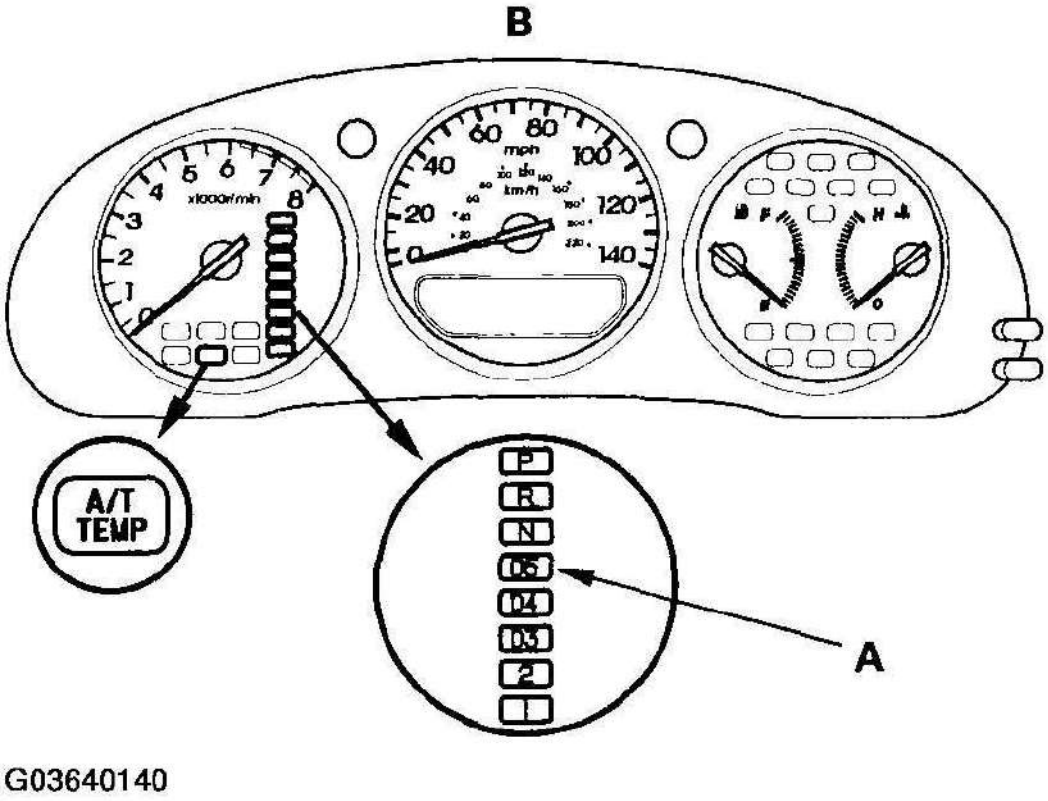


Fig. 5: Identifying D5 Indicator In Gauge Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the D5 indicator has been reported on, connect the HAS to the DLC (A) (located behind the driver's dashboard lower cover). Turn the ignition switch ON (II), select SCS mode, then the D5 indicator will indicate flash the DTC.

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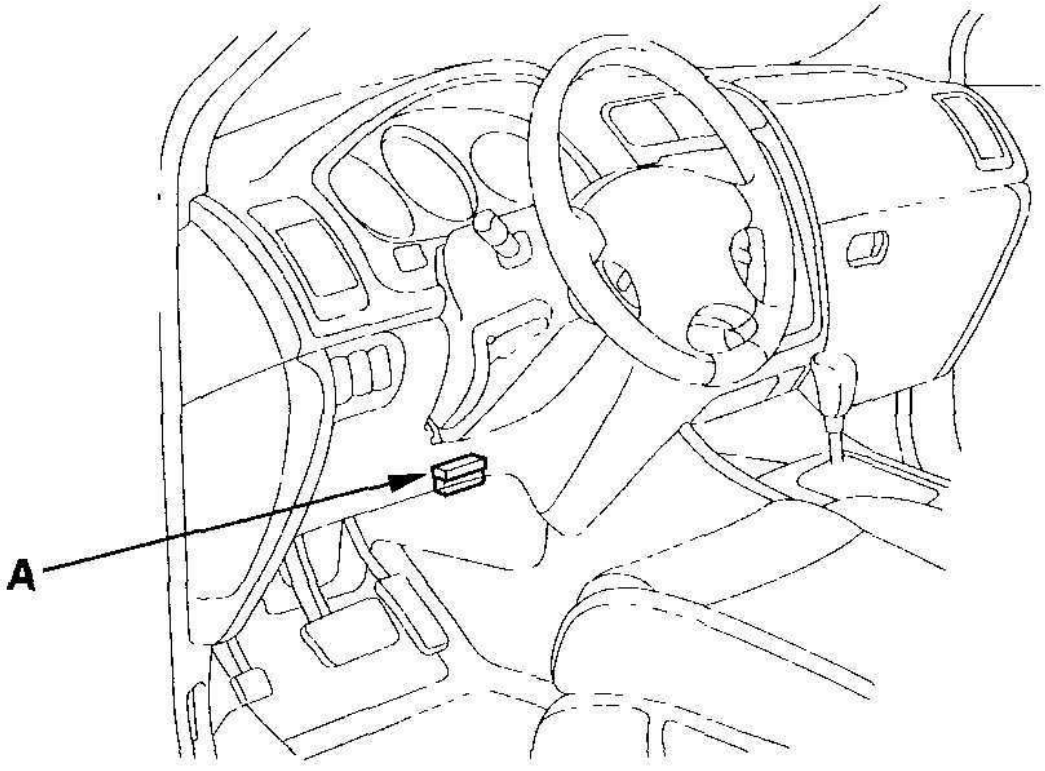


Fig. 6: Identifying Data Link Connector Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the D5 indicator and the MIL come on at the same time, or if a driveability problem is suspected, follow this procedure:

1. Connect the HAS to the DLC. (See the HAS user's manual for specific instructions.)
2. Turn the ignition switch ON (II), select SCS mode, then observe the D5 indicator in the gauge assembly.

   Codes 1 through 9 are indicated by individual short blinks. Code 10 and above are indicated by a series of long and short blinks. One long blink equals 10 short blinks. Add the long and short blinks together to determine the code.

   Example: DTC 1-1

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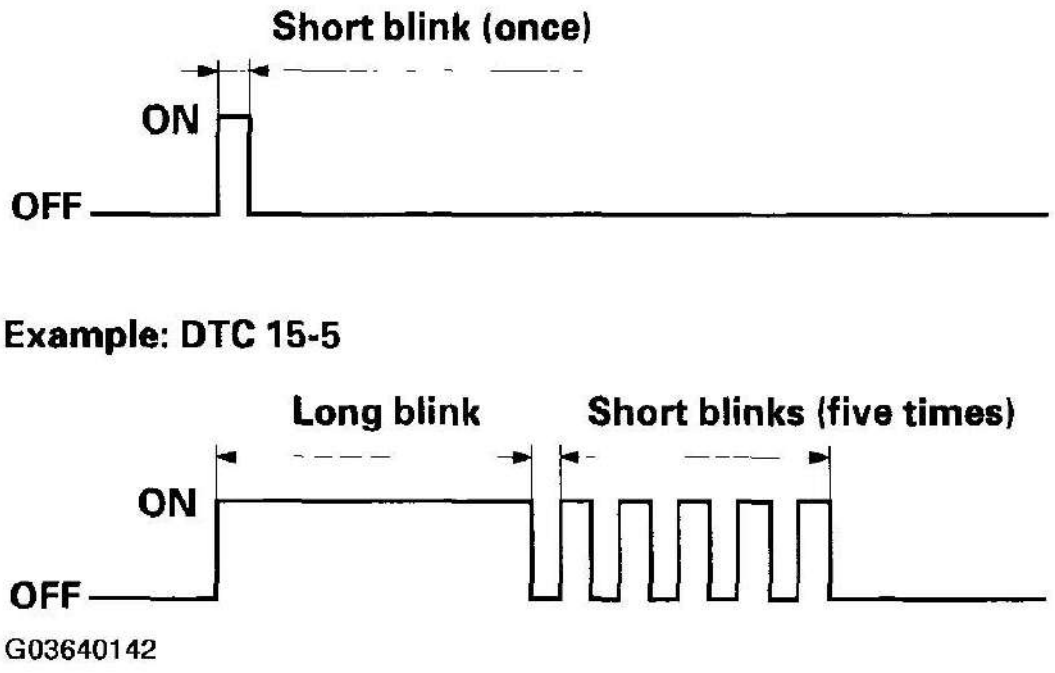


Fig. 7: Identifying D5 Indicator Blinking Pattern
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

How to Troubleshoot Circuits at the PCM

Special Tools Required

- Digital multimeter KS-AHM-32-003 (1) or a commercially available digital multimeter
- Pin probe (male) 07ZAJ-RDJA110 (two required)
- Flat spade probe (male) 07ZAJ-RDJA120

1. With the ignition switch ON (II), connect the HAS to the DLC, and into any of the live data screens.

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2. Turn the ignition switch OFF.
3. Turn off the HAS and then turn it back ON. Go to the **SCS MODE** and follow the screens to ground the DLC.

NOTE: Steps 1 thru 3 must be done to protect the PCM from damage, or wait at least 60 minutes before disconnecting PCM connectors.

4. Disconnect PCM connectors and probe the connector terminals from the terminal side of the connector. Make sure the connector terminal diameter, and select the suitable pin probe (male) and/or flat spade probe (male).

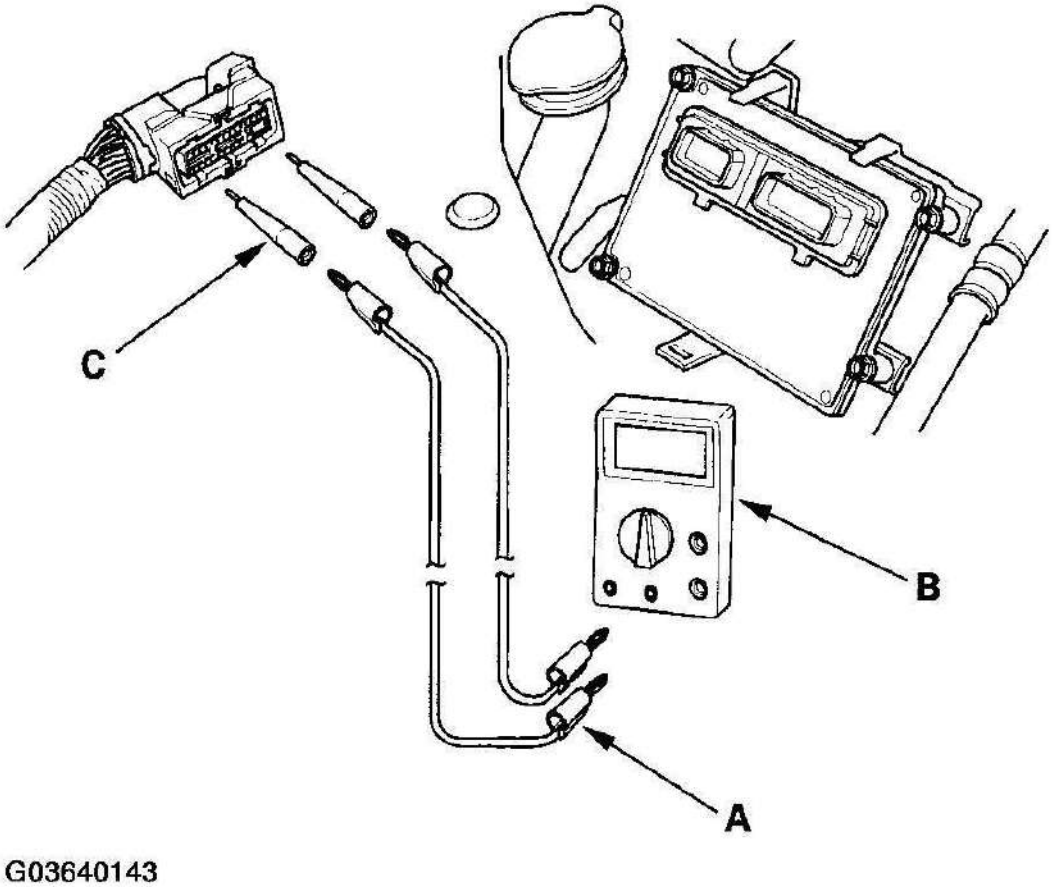


Fig. 8: Connecting Patch Cord Terminals (A) To Digital Multimeter (B)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Connect the patch cord terminals (A) to the digital multimeter (B), and connect the other terminals of the patch cords to the pin probe (male) (C) and/or flat spade probe (male) (C).

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6. Gently slide the probe into the connector terminals from the terminals side. Do not force the tips into the terminals.

Clear A/T DTCs, and PCM Reset Procedures

1. Turn the ignition switch OFF.
2. Connect the HAS to the DLC.
3. Turn the ignition switch ON (II).
4. Clear the DTC(s) on the HAS screen.

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 result 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.

PCM Updating and Substitution for Testing

Special Tools Required

Honda Interface Module (HIM) EQS05A35570

Use this procedure 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, update a PCM whenever the PCM is substituted or replaced.**
- **You cannot 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 any electrical system; audio system, brakes, air conditioning, power windows, moon roof, and door locks, during the update.**

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- **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 HAS or the Honda Interface Module (HIM) to the DLC located behind the driver's dashboard lower cover.

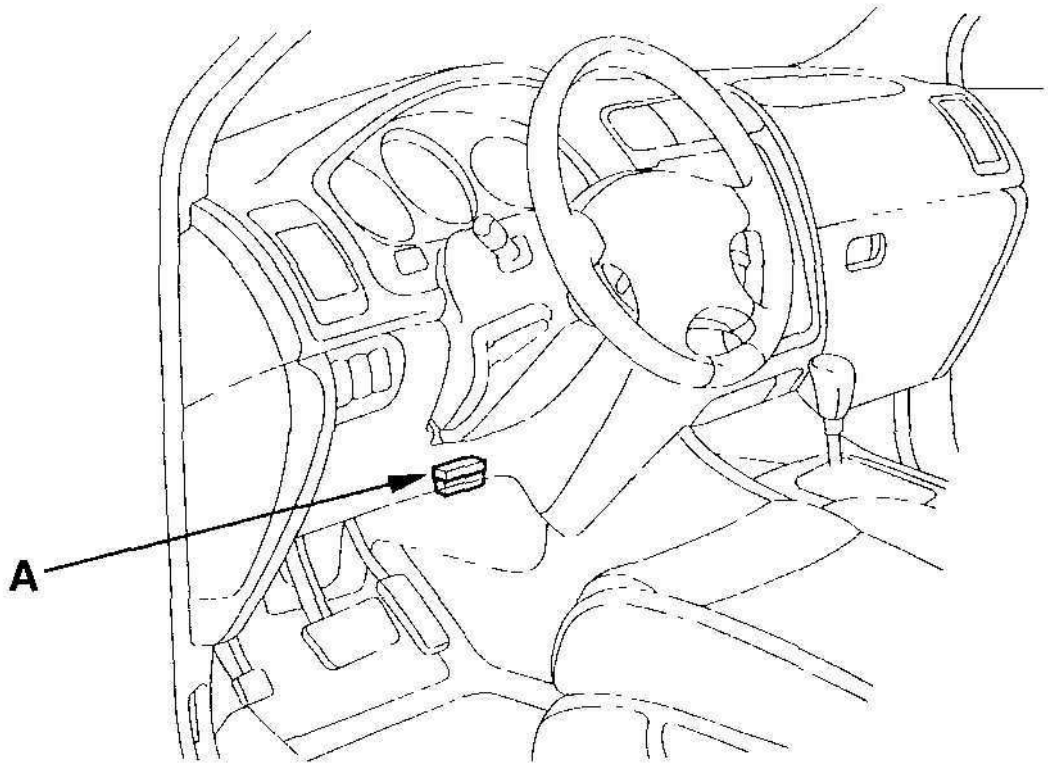


Fig. 9: Identifying Data Link Connector Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Select the INSPECTION MENU with the HAS.
4. Do the TP POSITION CHECK in the ETCS TEST.
5. If the HAS does not have the update function, disconnect the HAS from the vehicle and connect the Honda Interface Module (HIM).
6. If the software is the PCM is the latest, disconnect the HAS or the HIM from the DLC and go back to the

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procedure that you were doing. If the software in the PCM is not the latest, do the PCM update procedure as described on the HIM label or in the PCM update system.

NOTE: If the PCM update system requires you to cool the PCM, follow what is shown in the screen.

7. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
8. Clear the CKP pattern with the HAS while the engine is stopped.

How to Substitute the PCM

1. Connect the HAS to the DLC.
2. Turn the ignition switch OFF.
3. Jump the SCS line with the HAS.
4. Remove the PCM, and install a known-good PCM.
5. Rewrite the immobilizer code with the PCM replacement procedure in the HAS; this will allow you to start the engine.
6. After completing your test, reinstall the original PCM, and rewrite the immobilizer code with the PCM replacement procedure in the HAS again.

How to Remove and Install the PCM

1. Connect the HAS to the DLC.
2. Turn the ignition switch OFF.
3. Jump the SCS line with the HAS.
4. Disconnect PCM connectors.
5. Remove the PCM.
6. Install the PCM in the reverse order of the removal.

How to End a Troubleshooting Session

This procedure must be done after any troubleshooting.

1. Turn the ignition switch OFF.
2. Connect the HAS to the DLC.
3. Turn the ignition switch ON (II).
4. Clear the DTC(s) on the HAS screen.
5. Start the engine in the P or N position, and warm it up to normal operating temperature (the radiator fan comes on).
6. 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.

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DTC CODES

DTC CHART

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 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 OFF
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

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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	Short 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 P1710	1st-hold Switch Stuck ON or Short in 1st-hold Switch Circuit
DTC P2769	Short in Torque Converter Clutch Solenoid Valve Circuit
DTC P2770	Open in Shift Solenoid Valve C Circuit

DTC TROUBLESHOOTING INDEX

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

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DTC * (1)	D5 Indicator	MIL	Detection Item
P0705 (5-2) * (2)	Blinks	ON	Transmission range switch (multiple shift-position input)
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 D5 indicator indicates when the data link connector (DLC) is connected to the HDS, and the HDS in SCS mode.
* (2): This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

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Fig. 10: DTC Troubleshooting Index (1 Of 2)
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NOTE: Record all freeze data and review General Troubleshooting Information (see GENERAL TROUBLESHOOTING INFORMATION) before you troubleshoot.

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DTC * (1)	D5 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 (short)
P0963 (16-4) * (2)	Blinks	ON	A/T clutch pressure control solenoid valve A (open)
P0966 (23-3) * (2)	Blinks	ON	A/T clutch pressure control solenoid valve B (short)
P0967 (23-4) * (2)	Blinks	ON	A/T clutch pressure control solenoid valve B (open)
P0970 (29-3) * (2)	Blinks	ON	A/T clutch pressure control solenoid valve C (short)
P0971 (29-4) * (2)	Blinks	ON	A/T clutch pressure control solenoid valve C (open)
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)
P1710 (63-1) * (2)	OFF	OFF	1st-hold switch (short or stuck on)
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)

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 D5 indicator indicates when the data link connector (DLC) is connected to the HDS, and the HDS in SCS mode.

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

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Fig. 11: DTC Troubleshooting Index (2 Of 2)
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SYMPTOM TROUBLESHOOTING INDEX

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SYMPTOM TROUBLESHOOTING INDEX

Symptom	Probable cause(s)	Notes
When you turn the ignition switch ON (II), the D5 indicator comes on and stays on in all shift lever positions, or it never comes on at all	A problem in the D5 indicator circuit	Check the D5 indicator circuit (see **D5 INDICATOR 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 (I) 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**).
Shift lever cannot pass through R from N	A problem in the reverse lock system of the interlock system	Check the interlock system - reverse lock system circuit (see **REVERSE LOCK SYSTEM CIRCUIT TROUBLESHOOTING**).
When you turn the ignition switch ON (II), the A/T TEMP indicator comes on and stays on or never comes on at all	A problem in the A/T TEMP indicator circuit	Check the A/T TEMP indicator circuit (see **A/T TEMP INDICATOR CIRCUIT TROUBLESHOOTING**).

SYMPTOM TROUBLESHOOTING INDEX

Symptom	Probable cause(s)	Notes
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. Park mechanism defective 10. Transmission-to-engine assembly error 11. Axle disengaged	• 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 lever. • Improper alignment of ATF pump and torque converter 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 strainer is clogged, find the damaged components that caused the debris. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, and thoroughly

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		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 tops out, it will block the fluid return passage and result in damage.
Vehicle moves in R, but not in D5, D4, D3, 2, or 1	1. 1st accumulator defective 2. Idler gears worn or damaged 3. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the secondary shaft and 1st/1st-hold clutch assembly for wear and damage. • Inspect the clutch piston 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.
Vehicle moves in 2 and R, but not in D5, D4, D3, or 1	1. 1st gear one-way clutch defective 2. 1st gears worn or damaged 3. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the secondary shaft and 1st/1st-hold clutch assembly for wear and damage. • Inspect the clutch piston 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.
Vehicle moves in D5, D4, D3, 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 clutch assembly for wear and damage. • Inspect the clutch piston and O-rings. Check the spring retainer for wear and

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		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.
Vehicle moves in D5, D4, D3, 1, and R, but not in 2	1. 2nd accumulator defective 2. 2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the secondary shaft and 2nd clutch assembly for wear and damage. • Inspect the clutch piston 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.
Vehicle moves in D5, D4, D3, 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	• 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 chambers, and inspect the engagement teeth chambers 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 clicking, grinding, or whirring noises, also replace the mainshaft 5th gear, reverse idler gear, and countershaft 5th gear. • 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

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		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.
Poor acceleration; flares when starting off in D5, D4, D3, and R	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	• 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 lever. • Check the line pressure. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. • 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 D5, D4, D3, and R; stall speed high in D5, D4, D3, 2, and 1	1. 1st accumulator defective 2. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the clutch piston 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 D5, D4, D3, and R; stall speed high in 2	1. 2nd accumulator defective 2. 2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the clutch piston 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

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		clutch end plate clearance.
Poor acceleration; flares when starting off in D5, D4, D3, and R; stall speed high in R	1. Shift solenoid valve C defective 2. Shift cable broken or out of adjustment 3. Reverse CPC valve defective 4. 5th accumulator defective 5. 5th clutch defective	• Check the D5 indicator, and check for loose connectors. • Inspect the O-ring, and check the shift solenoid valve seizure. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the 5th clutch pressure. • Inspect the clutch piston 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 D5, D4, D3, and R; stall speed low	1. Torque converter clutch solenoid valve defective 2. Torque converter one-way clutch defective 3. Engine output low 4. Torque converter clutch piston defective 5. 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 5. Torque converter clutch piston defective 6. ATF pump worn or binding 7. Lock up shift valve defective	• Set the idle RPM in gear to the specified idle speed. If it is still no good, adjust the engine and transmission mounts. • 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. Lubrication control valve defective	• Check the ATF level, and drain the ATF if necessary. • Check all clutch pressures. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the

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	5. 1st-hold clutch defective 6. 1st clutch defective 7. 2nd clutch defective 8. 3rd clutch defective 9. 4th clutch defective 10. 5th clutch defective 11. Clutch end plate clearance incorrect 12. Needle bearing seized up, worn, or damaged 13. Thrust washer seized up, worn, or damaged	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.
Late shift after shifting from N to D5, D4, and D3, or excessive shock when shifting	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. Shift cable broken or out of adjustment 6. Connection between 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 A defective 11. CPC valve B defective 12. CPC valve C stuck 13. Foreign material in separator plate orifice 14. Shift valve C defective 15. Shift valve E defective 16. Servo control valve defective 17. 1st accumulator defective	• Check the D5 indicator, 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 valve is stuck, inspect the CPC valves. • Check for a loose shift cable at the shift lever and the transmission control lever. • 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.

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	18. 1st check ball stuck 19. One-way check ball stuck 20. 1st clutch defective	
Late shift after shifting from N to R, or excessive shock when shifting	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve B defective 3. A/T clutch pressure control solenoid valve C defective 4. Shift cable broken or out of adjustment 5. Connection between shift cable and transmission or body is worn 6. Input shaft (mainshaft) speed sensor defective 7. Output shaft (countershaft) speed sensor defective 8. ATF temperature sensor defective 9. Shift fork shaft stuck 10. CPC valve C stuck 11. Reverse CPC valve defective 12. Foreign material in separator plate orifice 13. Shift valve E defective 14. 5th accumulator defective 15. 5th clutch defective	• Check the D5 indicator, 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 valve is stuck, inspect the CPC valves. • Check for a loose shift cable at the shift lever and the transmission control lever. • 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 A/T does not shift	1. Input shaft (mainshaft) speed sensor defective 2. Output shaft (countershaft) speed sensor defective 3. Modulator valve defective	• Check the D5 indicator, and check for loose connectors. • Check the line pressure.
Erratic shifting: fails to shift in D5, D4, and D3; starts off in 5th	1. Shift solenoid valve B defective 2. Shift valve B defective	• Check the D5 indicator, 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 the D5 indicator, and check for loose connectors. • Inspect the O-ring, and check the shift

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		solenoid valve for seizure.
Erratic shifting: fails to shift in D5, D4, D3, and 1; starts off in 3rd	1. Shift solenoid valve A defective 2. Shift valve A defective	• Check the D5 indicator, 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 1st	1. Shift solenoid valve A defective 2. Shift valve A defective	• Check the D5 indicator, 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. Input shaft (mainshaft) speed sensor defective 3. Output shaft (countershaft) speed sensor defective 4. ATF temperature sensor defective 5. CPC valve A defective 6. Foreign material in separator plate orifice	• Check the D5 indicator, and check for loose connectors. • 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. • 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 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 2-3 upshift or 3-2 downshift	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve B defective 3. 3rd clutch transmission fluid pressure switch defective 4. CPC valve B defective 5. Foreign material in separator plate orifice 6. Shift valve C defective 7. 2nd accumulator defective	• Check the D5 indicator, 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 clutch pressures. • Inspect the clutch piston, clutch check valve and O-rings. Check the spring

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	8. 3rd accumulator defective 9. 2nd check ball stuck 10. 2nd clutch defective 11. 3rd clutch defective	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 B defective 3. 4th clutch transmission fluid pressure switch defective 4. CPC valve B defective 5. Foreign material in separator plate orifice 6. Shift valve C defective 7. 3rd accumulator defective 8. 4th accumulator defective 9. 3rd clutch defective 10. 4th clutch defective	• Check the D5 indicator, 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 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 4-5 upshift or 5-4 downshift	1. Shift solenoid valve C defective 2. A/T clutch pressure control solenoid valve B defective 3. A/T clutch pressure control solenoid valve C defective 4. CPC valve B defective 5. CPC valve C defective 6. Foreign material in separator plate orifice 7. Shift valve C defective 8. Shift valve E defective 9. Kick down valve or kick down short valve defective 10. 4th accumulator defective 11. 5th accumulator defective 12. 4th clutch defective	• Check the D5 indicator, 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 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.

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	13. 5th clutch defective	
Noise from transmission in all shift lever positions	1. ATF pump worn or binding 2. Idler gears worn or damaged 3. Thrust washer seized up, worn, or damaged	Improper alignment of ATF pump and torque converter housing may cause ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak.
Vehicle does not accelerate above 31 mph (50 km/h)	Torque converter one-way clutch defective	Replace torque converter.
Vibration in all shift lever positions	Drive plate defective or transmission misassembled	• Set the idle RPM in gear to the specified idle speed. If still no good, adjust the engine and transmission 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 shift cable and transmission or body is worn	• Check the D5 indicator, 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 out of adjustment, adjust it and the shift cable. • Check for a loose shift cable at the shift lever and the transmission control lever.
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 lever. • Check the park pawl, control shaft, and park lever link for wear and damage. Check if the control shaft lever pin is disengage from the manual valve guide.
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 the D5 indicator, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve C body gasket for wear and damage. If the A/T clutch pressure control solenoid valve C is stuck, inspect the CPC valves.
Torque converter clutch does not	1. Torque converter clutch solenoid valve defective	• Check the D5 indicator, and check for loose connectors.

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operate smoothly	2. A/T clutch pressure control solenoid valve C defective 3. Lock up 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	• Inspect the A/T clutch pressure control solenoid valve C body gasket for wear and damage. If the A/T clutch pressure control solenoid valve C 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 the D5 indicator, and check for loose connectors. • Inspect the A/T clutch pressure control solenoid valve C body gasket for wear and damage. If the A/T clutch pressure control solenoid valve C is stuck, inspect the CPC valves.
AT gear position indicator does not indicate shift lever positions	1. Transmission range switch defective or out of adjustment 2. Shift cable broken or out of adjustment 3. Connection between shift cable and transmission or body is worn	• Check the D5 indicator, 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 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 the D5 indicator, and check for loose connectors.
Engine does not rev to high RPM, and the transmission	VTEC rocker arms defective	Check the engine rocker arms.

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upshifts at low RPM (engine at normal operating temperature)		

SYSTEM DESCRIPTION

General Operation

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

Torque Converter, Shafts, 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 four parallel shafts: the mainshaft, the countershaft, the secondary shaft, and the intermediary 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 gears for the final drive, 2nd, idler, 1st, 4th, 5th, and reverse (the final drive gear is integral with the countershaft). The secondary shaft includes the 1st, 1st-hold, and 2nd clutches, and gears for park, 2nd, idler, and 1st. The intermediary shaft includes the 3rd clutch, and gears for 3rd and 4th. The countershaft 5th gear and the countershaft reverse gear can be locked to the countershaft at its left end, providing 5th gear or reverse, depending with which way the selector is moved. The gears on the mainshaft, secondary shaft, and intermediary shaft are in constant mesh with those on the countershaft. When certain conditions of gears in the transmission are engaged by the clutches, power is transmitted through the mainshaft, and/or to the secondary shaft, intermediary shaft, then 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 in the engine compartment.

Hydraulic Control

The valve bodies include the main valve body, the secondary valve body, the regulator valve 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 torque converter check valve, the shift valves A, B, D, E, the CPC valve C, the cooler check valve, the relief valve, the lock up shift valve, the lock up timing valve, the lubrication control valve, the lubrication check valve, and the ATF pump gears. The secondary valve body contains the shift valve C, the CPC valve A, B, the reverse CPC valve, the servo control valve, and the kick down valve. The regulator valve body contains the regulator valve, the lock up control valve, and the 3rd accumulator. The accumulator body contains the 1st, 1st-hold, 2nd, 4th, and 5th accumulators, shift solenoid valves A, B, C, and torque converter clutch solenoid valve. Fluid from the regulator passes through the manual valve to the various control

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valves. The all 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 transaxle (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 to send hydraulic pressure to the clutches. The A/T clutch pressure control solenoid valves A and B control the CPC valve A and B to shift smoothly between lower gear and higher gear. This pressurize a line to one of the clutches, engaging the clutch and its corresponding gear.

Lock up Mechanism

The lock up mechanism operates in the D5 position (2nd, 3rd, 4th, and 5th), and D4 position (2nd, 3rd, and 4th) and D3 position (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 range of lock up according to A/T clutch pressure control solenoid valve C. The torque converter clutch solenoid valve is located on the accumulator body in the transmission, 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 eight positions; P: PARK, R: REVERSE, N: NEUTRAL, D5: 1st through 5th gear ranges, D4: 1st through 4th gear ranges, D3: 1st through 3rd gear ranges, 2: 2nd gear, and 1: 1st gear.

GEAR SELECTION POSITION DESCRIPTION

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 locked.
N: NEUTRAL	All clutches are released.
D5: 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.
D4: DRIVE (1st through 4th)	General driving; starts off in 1st, shifts automatically to 2nd, 3rd, then 4th, depending on vehicle speed and throttle position. Downshifts through 3rd, 2nd, and 1st on deceleration to stop. The lock up mechanism operates in 2nd, 3rd, and 4th gear.
D3: DRIVE (1st through 3rd)	Used for rapid acceleration at highway speeds and general driving; uphill and downhill 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.

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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 console.

Transfer Mechanism

The transfer mechanism consists of the transfer drive gear on the differential, the transfer output shaft in the transmission, the transfer drive gear (hypoid gear), the transfer shaft, the transfer output shaft (hypoid gear), and the companion flange. The transfer mechanism assembly is on the rear side of the transmission, beside the differential. The transfer drive gear on the differential drives the transfer output shaft in the transmission. The transfer output shaft in the transmission is connected to the transfer drive gear (hypoid gear) by splines. Power is transmitted from the transfer drive gear on the differential to the rear differential via the transfer and the propeller shaft.

Clutches

The 5-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 the steel plates, and they are free to slide past each other. This allows the gear to spin independently on its shaft, transmitting no power.

1st Clutch

The 1st clutch engages/disengages 1st gear, and is located at the left end of the secondary shaft. 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 by its ATF feed pipe within the secondary shaft.

2nd Clutch

The 2nd clutch engages/disengages 2nd gear, and is located at the right end of the secondary shaft. The 2nd clutch is supplied hydraulic pressure through the secondary shaft by a circuit connected to the internal hydraulic circuit.

3rd Clutch

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The 3rd clutch engages/disengages 3rd gear, and is located at the end of the intermediary shaft. The 3rd clutch is supplied hydraulic pressure through the intermediary shaft by a circuit connected to the internal hydraulic circuit.

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 through the mainshaft by a circuit connected to the internal hydraulic circuit.

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 through the mainshaft by a circuit connected to the internal hydraulic circuit.

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 D5, D4, D3, or 2 position. However, the one-way clutch disengages when the 2nd, 3rd, 4th, or 5th clutches and gears are applied in the D5, D4, D3, 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

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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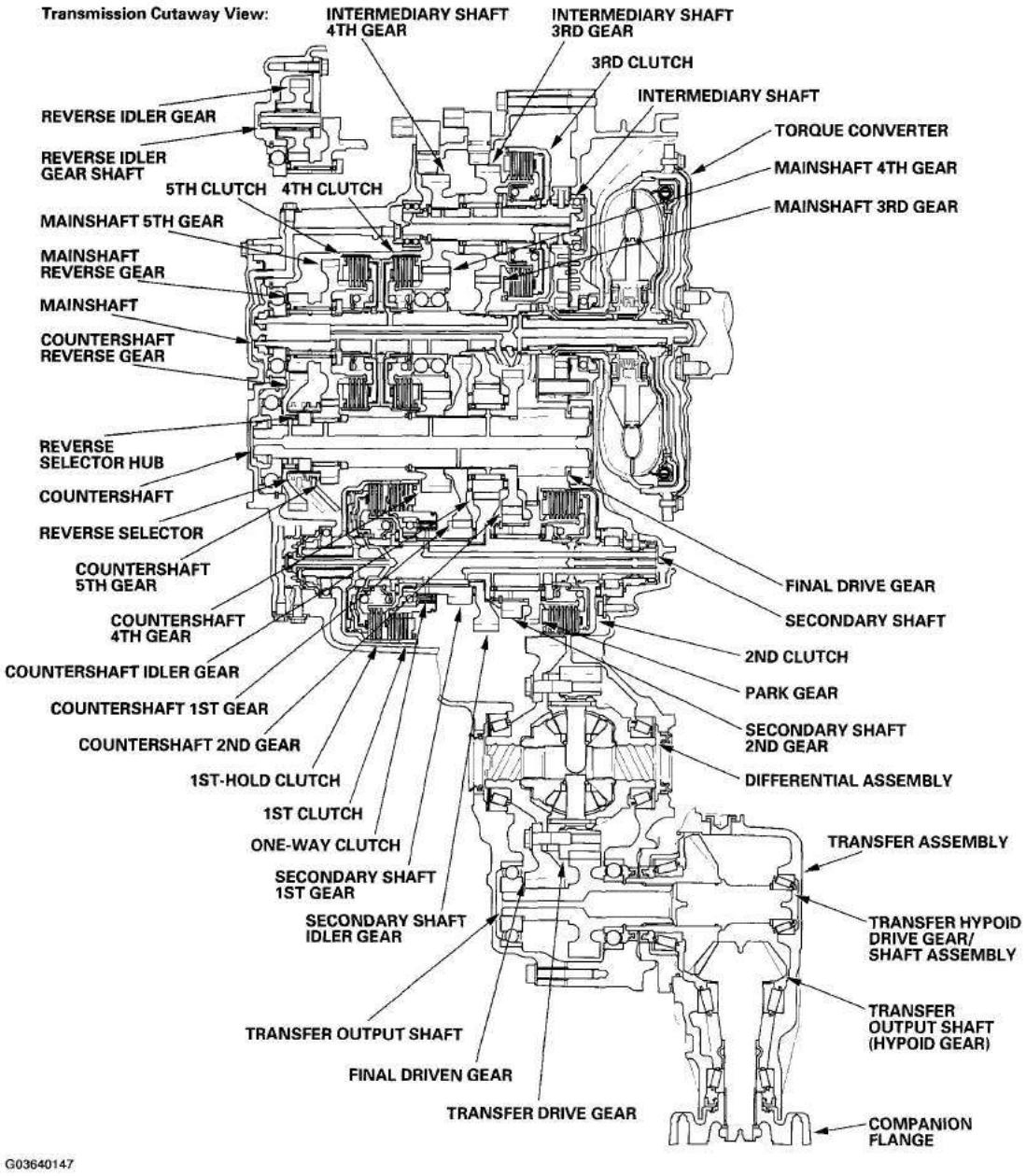


Fig. 12: Transmission Cutaway View - Power Flow
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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- 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, 2nd gear, and 4th 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.
- Idler gear is located over the 2nd gear, and rotates freely from the countershaft.

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.
- Park gear is integral with the 2nd gear.

Gears on the intermediary shaft:

- 3rd gear is engaged/disengaged with the intermediary shaft by the 3rd clutch.
- 4th gear is splined with the intermediary shaft.

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 mainshaft drives the mainshaft 3rd gear, the intermediary shaft 3rd 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 D5 or R position:

- When shifted from the D5 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.

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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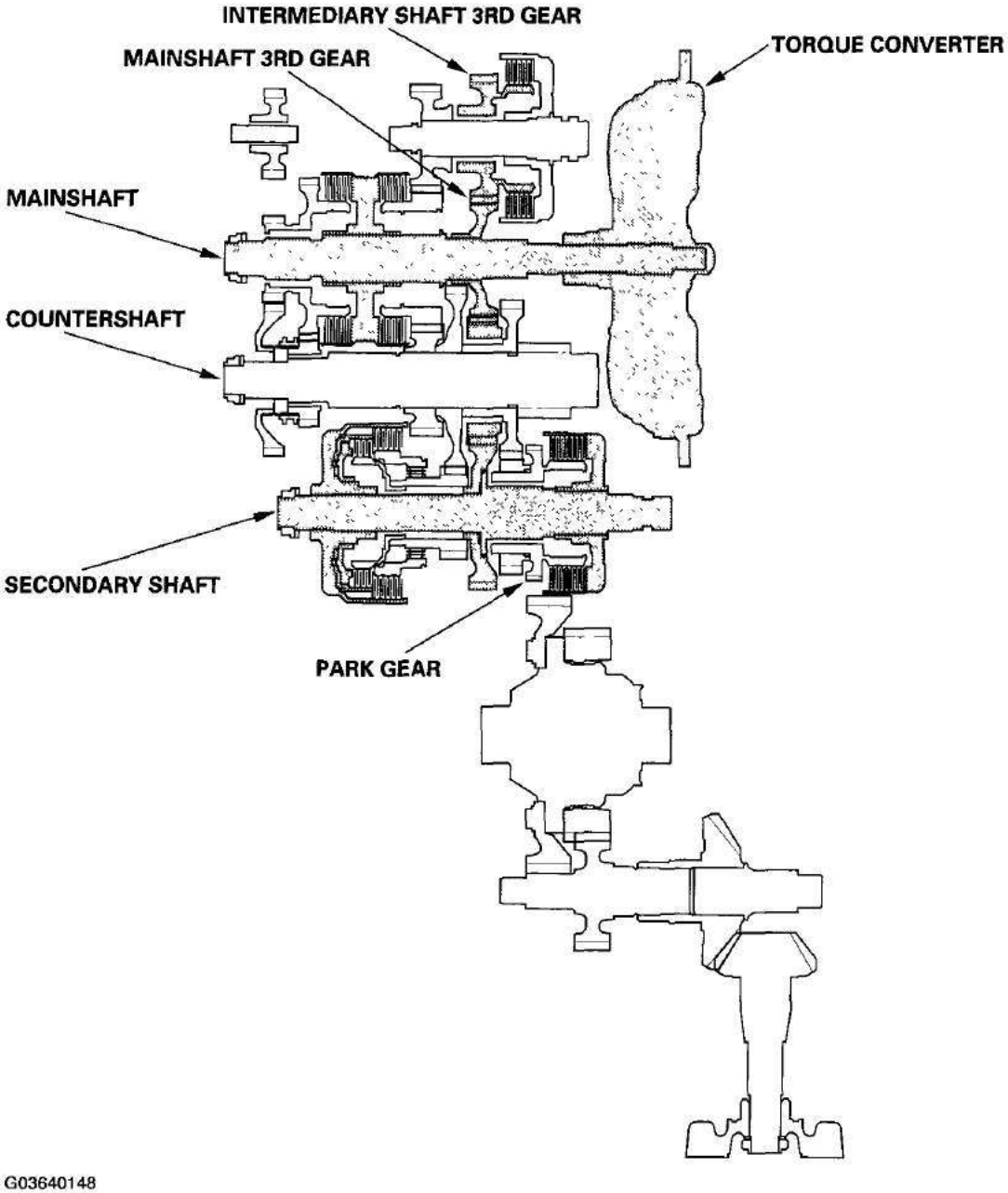


Fig. 13: Transmission Cutaway View - Power Flow (N Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position

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

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- 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 idler 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 and the transfer drive gear.
- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid gear).

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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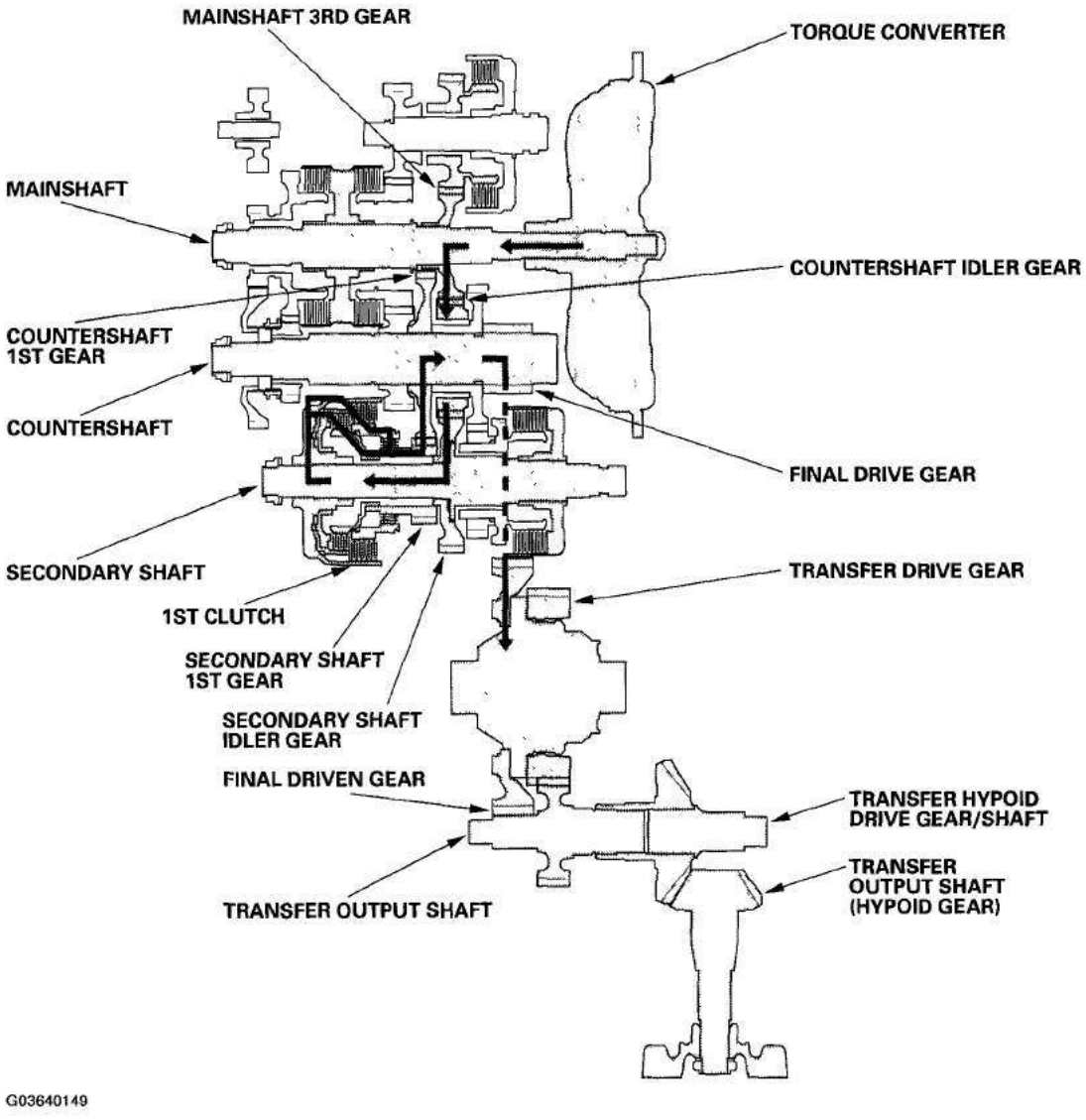


Fig. 14: Transmission Cutaway View - Power Flow (1 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position

The power flow when decelerating is 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 countershaft idler gear.
- The one-way clutch disengages because the application of torque is reversed.
- The force conveyed to the secondary shaft idler gear turns the mainshaft 3rd gear via the countershaft idler gear. As a result, engine braking can be obtained with 1st gear.

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NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

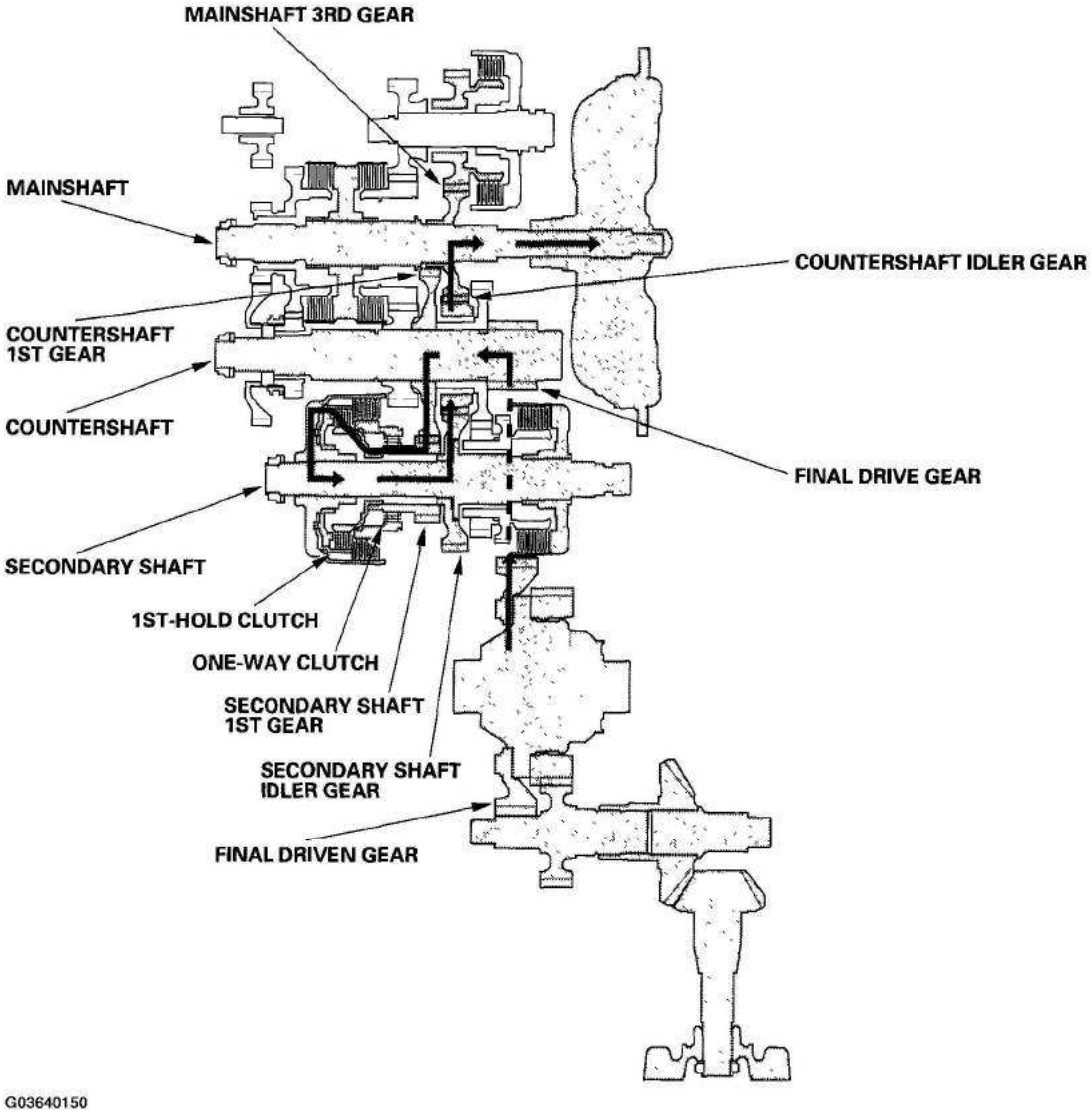


Fig. 15: Transmission Cutaway View - Power Flow (1 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5, D4, or D3 Position

In the D5, D4, or D3 position, the optimum gear is automatically selected from the 1st, 2nd, 3rd, 4th, and 5th gears according to conditions such as the balance between the throttle opening (engine loading) and vehicle speed.

In 1st gear

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- 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 idler 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 and the transfer drive gear.
- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid gear).

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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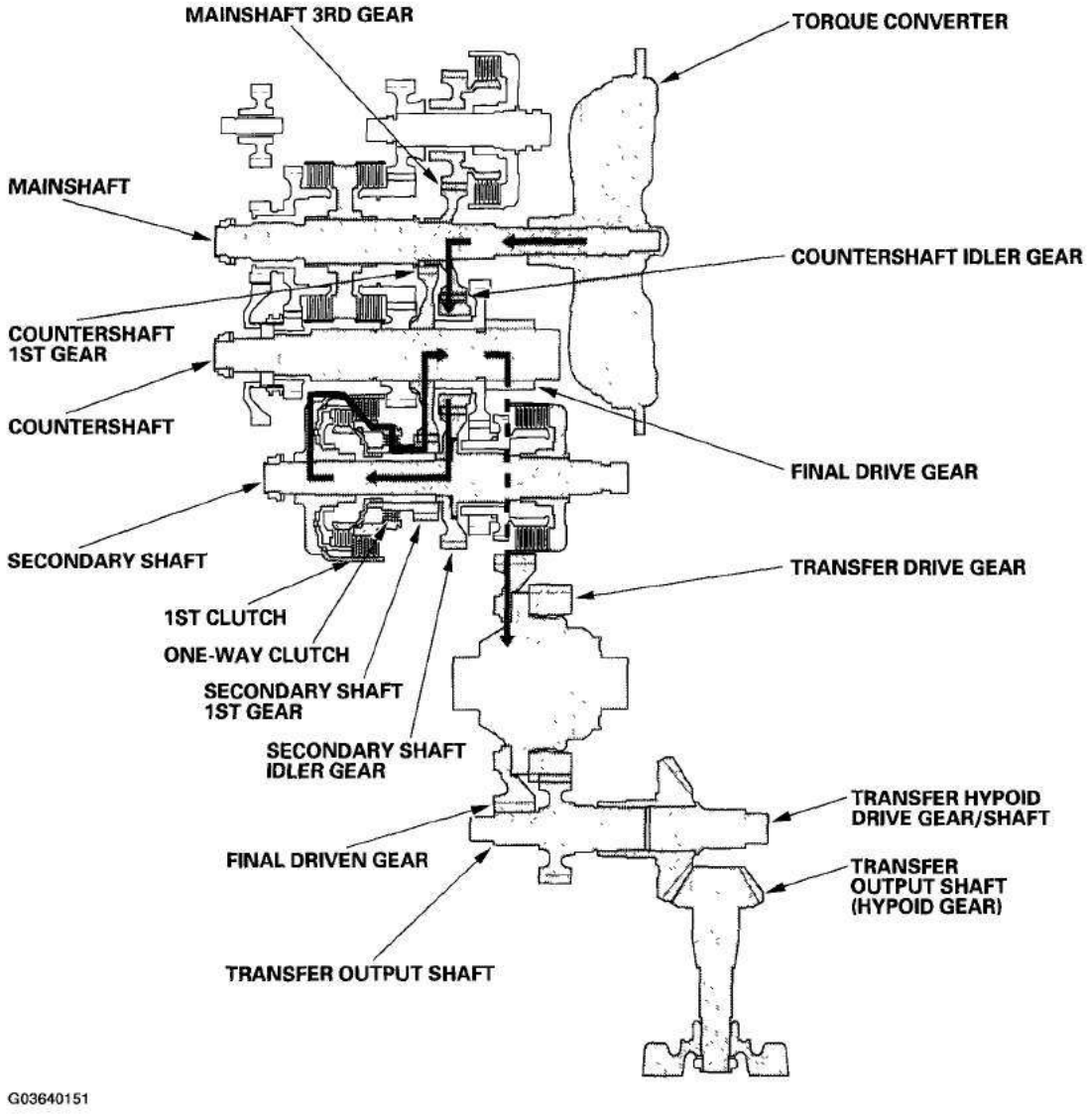


Fig. 16: Transmission Cutaway View - Power Flow In 1st Gear (D5, D4, Or D3 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 idler 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 and the transfer drive gear.
- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid

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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.

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

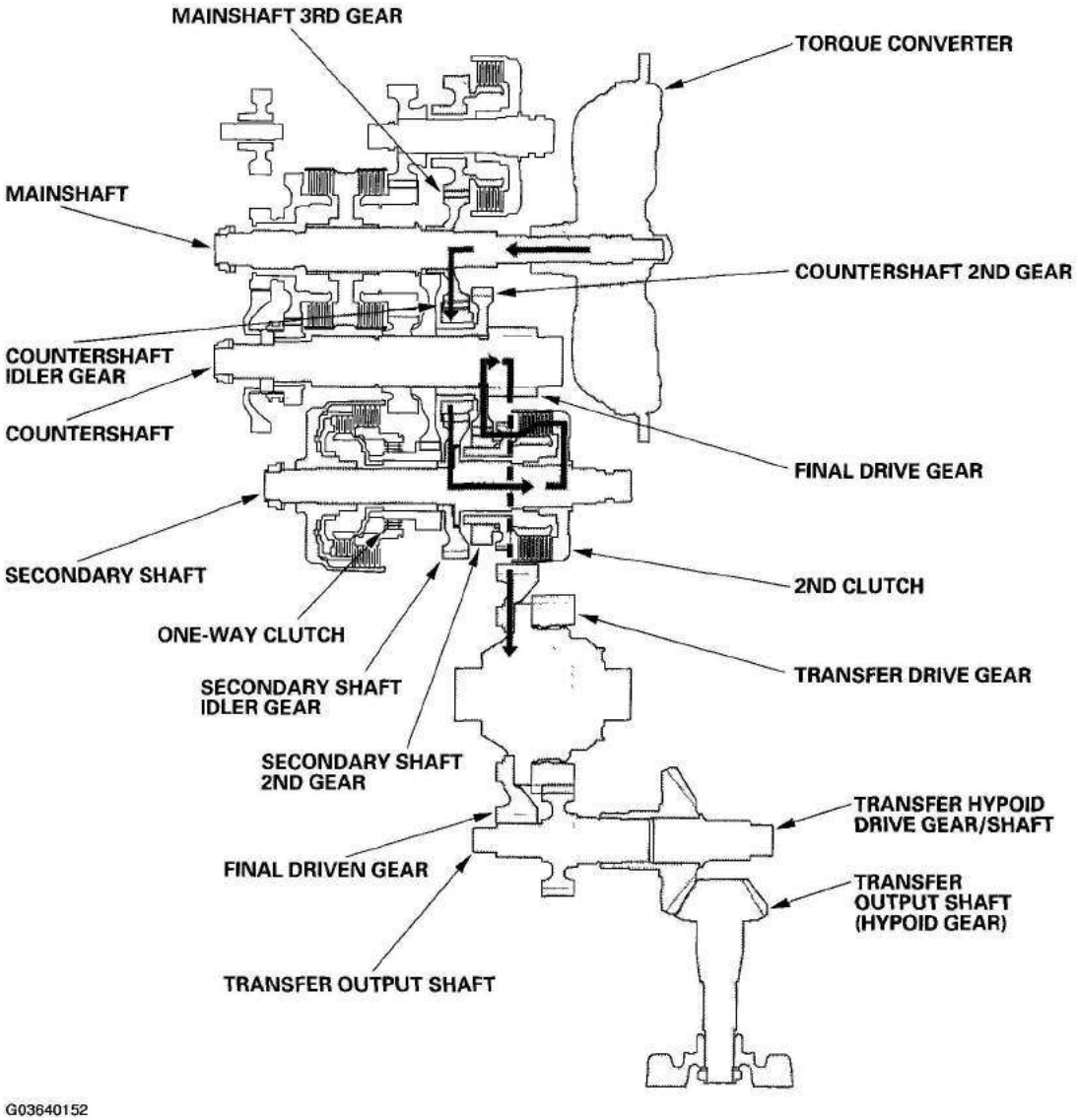


Fig. 17: Transmission Cutaway View - Power Flow In 2nd Gear And 2 Position (D5, D4, Or D3 Position)
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In 3rd gear

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- Hydraulic pressure is applied to the 3rd clutch, then 3rd clutch engages the intermediary shaft 3rd gear with the intermediary shaft.
- The mainshaft 3rd gear drives the intermediary shaft 4th gear via the 3rd gear and 3rd clutch.
- The intermediary shaft 4th gear drives the countershaft 4th gear and the countershaft via the mainshaft 4th gear.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear and the transfer drive gear.
- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid 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.

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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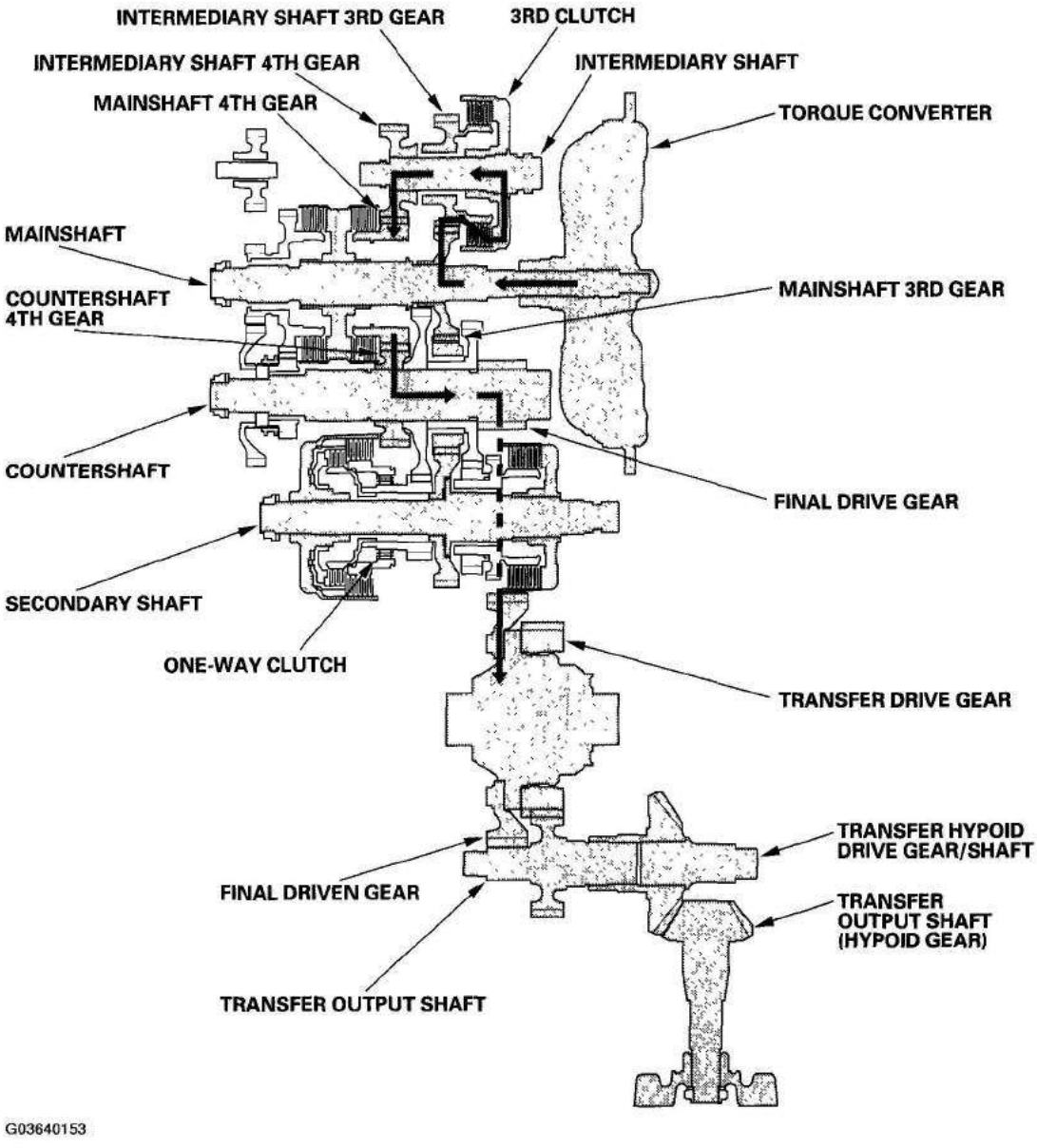


Fig. 18: Transmission Cutaway View - Power Flow In 3rd Gear (D5, D4, Or D3 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 and the transfer drive gear.

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- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid 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.

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

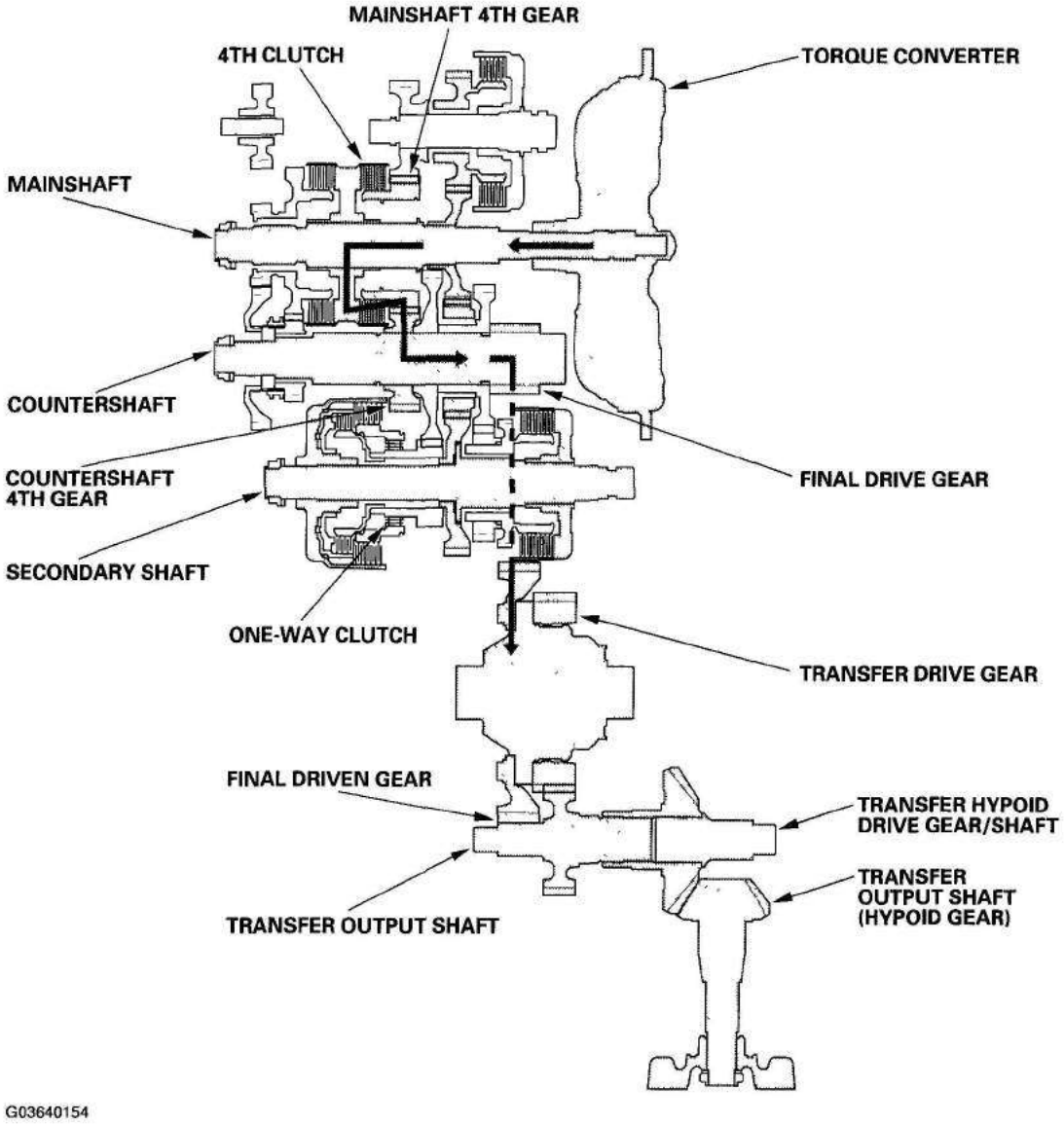


Fig. 19: Transmission Cutaway View - Power Flow In 4th Gear (D5, D4, Or D3 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

In 5th gear

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- 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 (D5, D4, D3, 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 and the transfer drive gear.
- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid 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.

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

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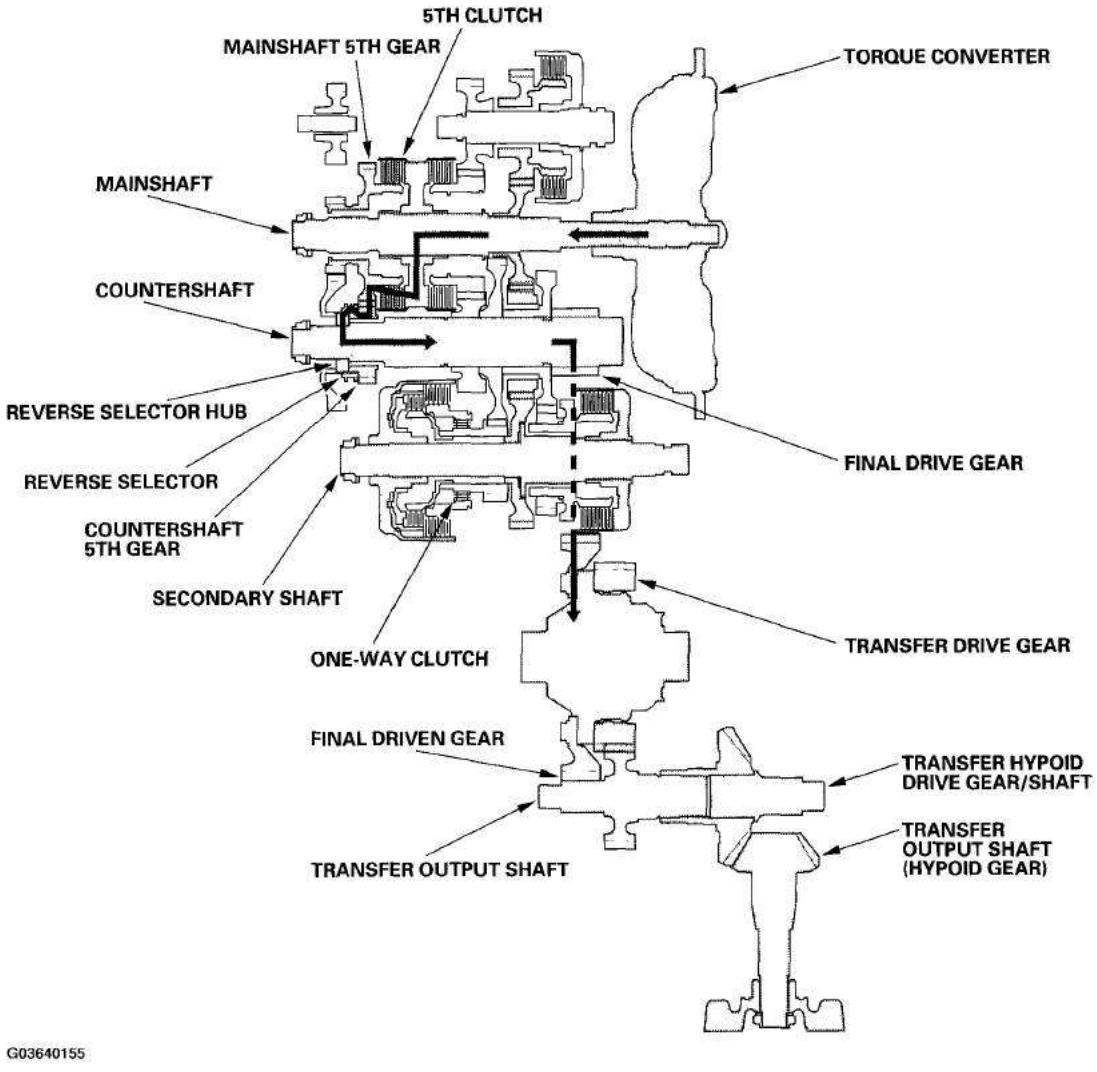


Fig. 20: Transmission Cutaway View - Power Flow In 5th Gear (D5, D4, Or D3 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 and the transfer

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drive gear.

- The transfer output shaft drives the transfer hypoid drive gear/shaft and the transfer output shaft (hypoid gear).

NOTE: The illustration shows the 2005-2006 models; 2003-2004 models are similar.

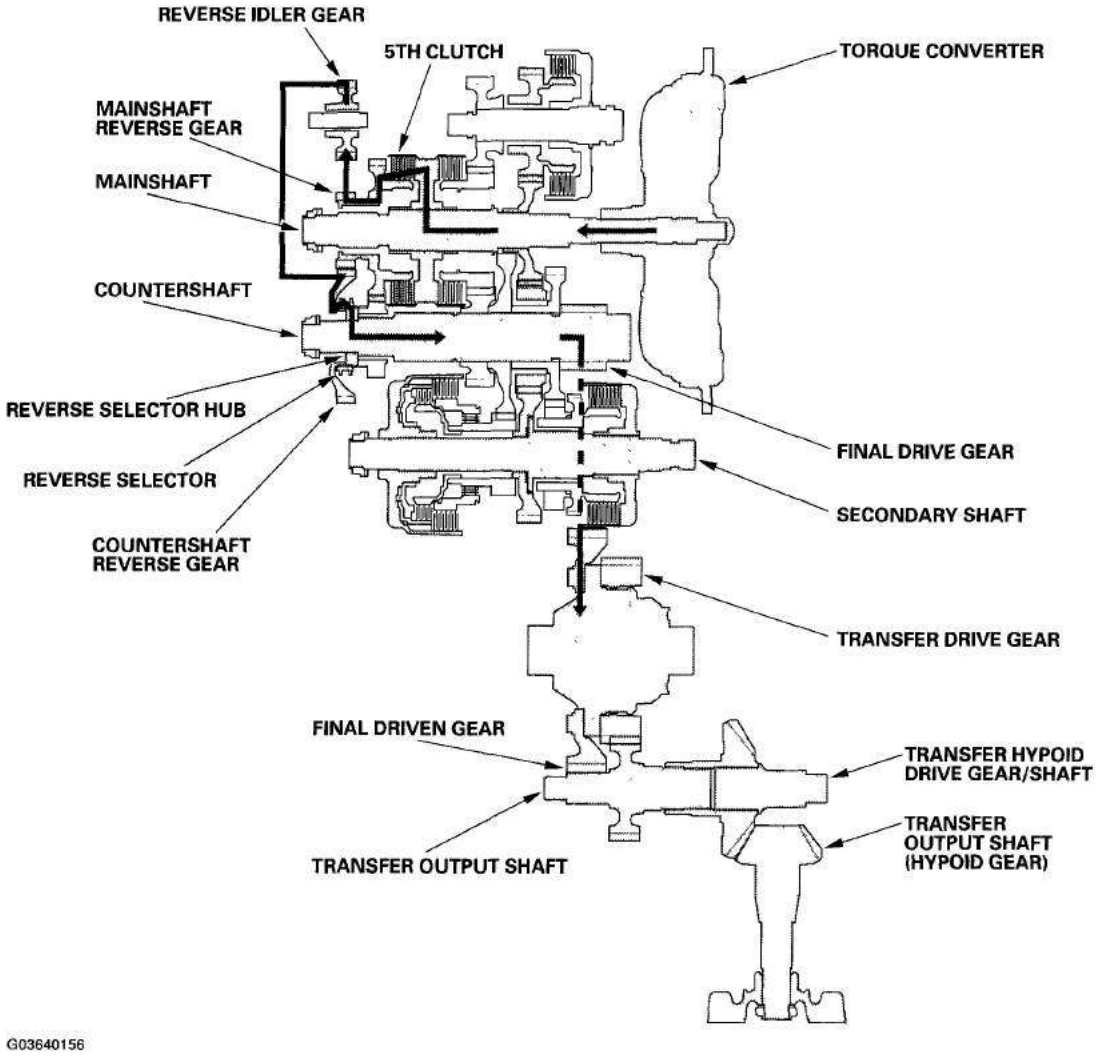


Fig. 21: Transmission Cutaway View - Power Flow In R Position (D5, D4, Or D3 Position)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Electronic Control System

Functional Diagram

The electronic control system consists of the powertrain control module (PCM), sensors, and solenoid valves.

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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.

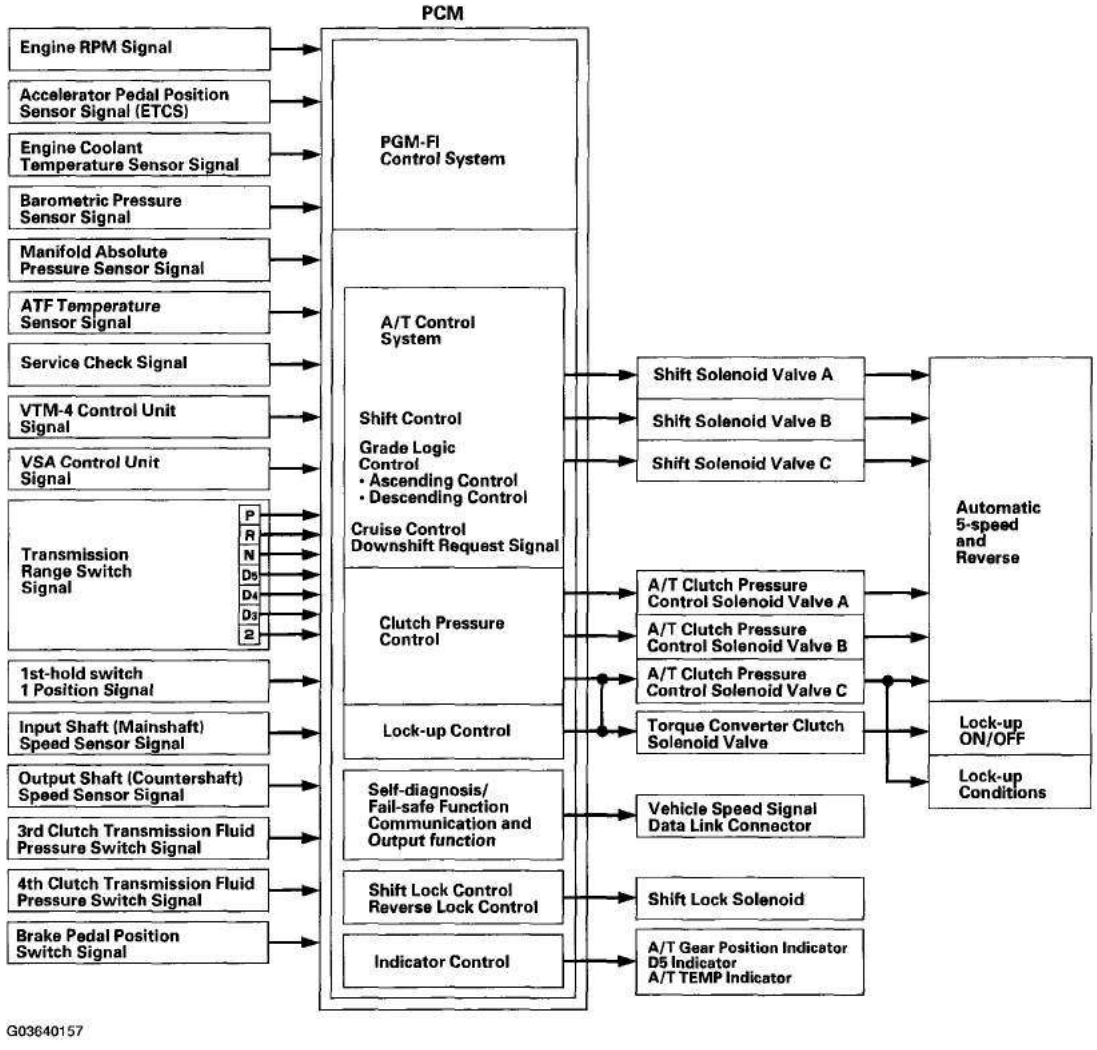


Fig. 22: Electronic Control System - Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Electronic Controls Locations

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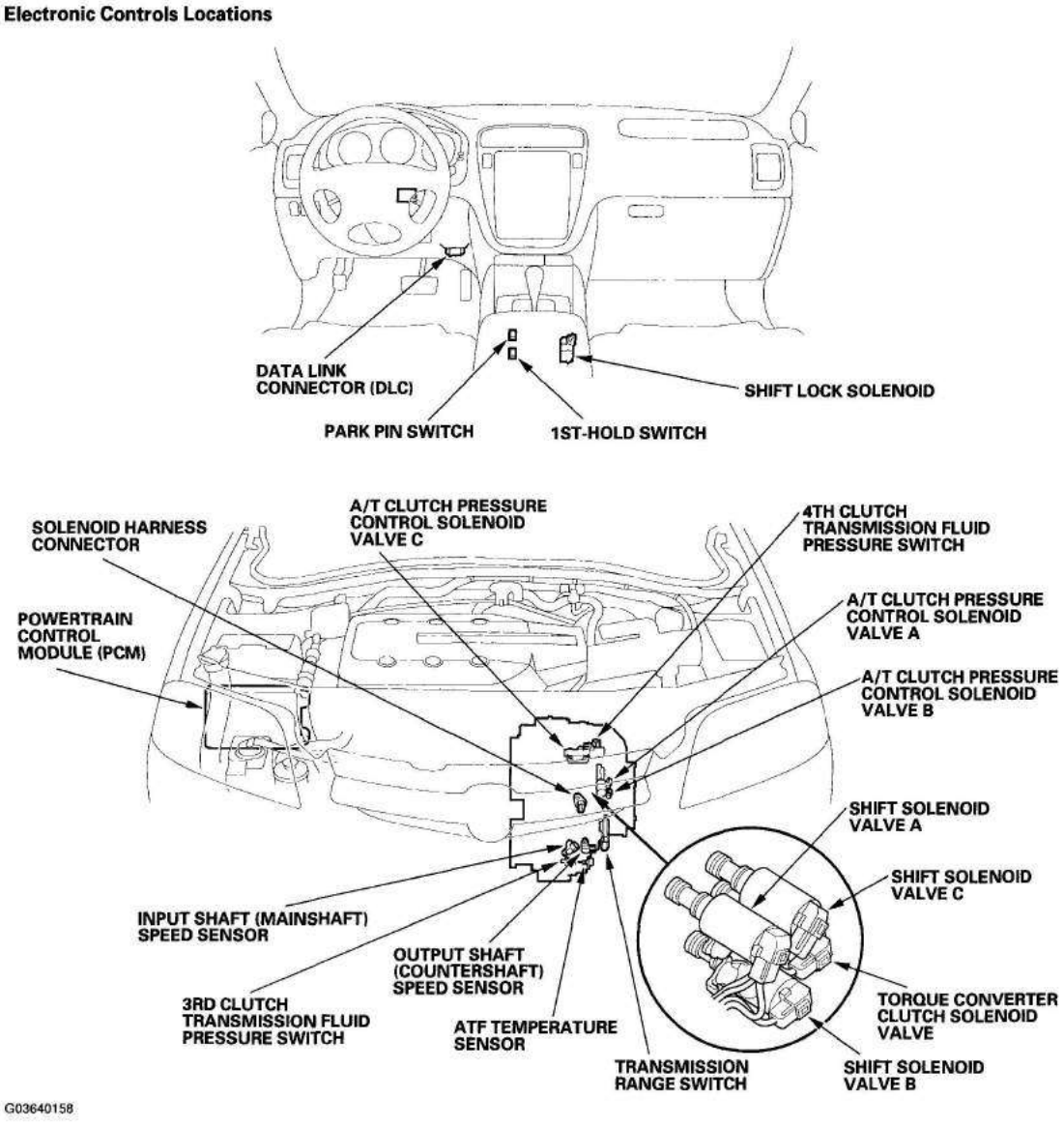


Fig. 23: Identifying Electronic Controls Locations
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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, a grade logic control system has been adopted to control shifting in the D5, D4, and D3 positions. The PCM compares actual driving conditions with programmed 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.

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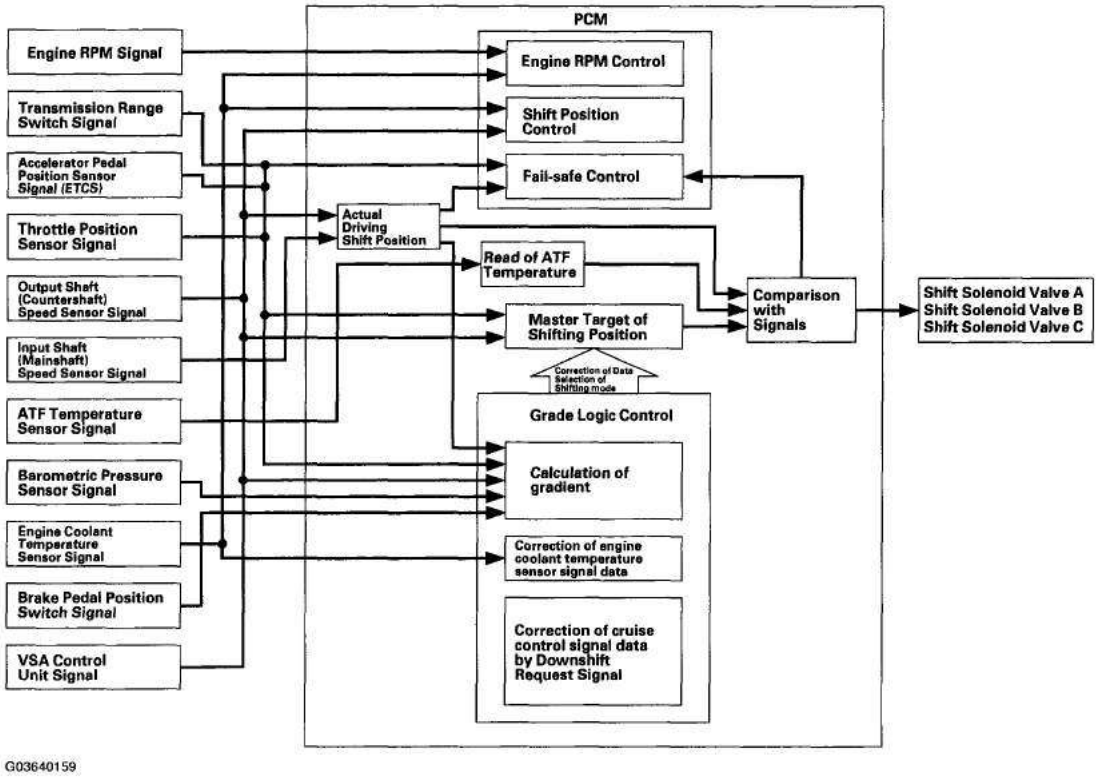


Fig. 24: Identifying Shift Control - Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

The PCM turns on the shift solenoid valves A, B, and C to control shifting transmission gear. The combination of driving signals to shift solenoid valves A, B, and C are shown in the table.

SHIFT SOLENOID VALVES

Position	Gear position	Shift solenoid valves		
		A	B	C
D5, D4, D3	Shifting from the N position	OFF	ON	OFF
	Stays in 1st	ON	ON	ON
	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
D5, D4	Shifting gears between 3rd and 4th	OFF	OFF	ON
	Stays in 4th	OFF	OFF	OFF
D5	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

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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

Ascending Control

When the PCM determines that the vehicle is climbing a hill in the D5, D4, and D3 positions, 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 schedules 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.

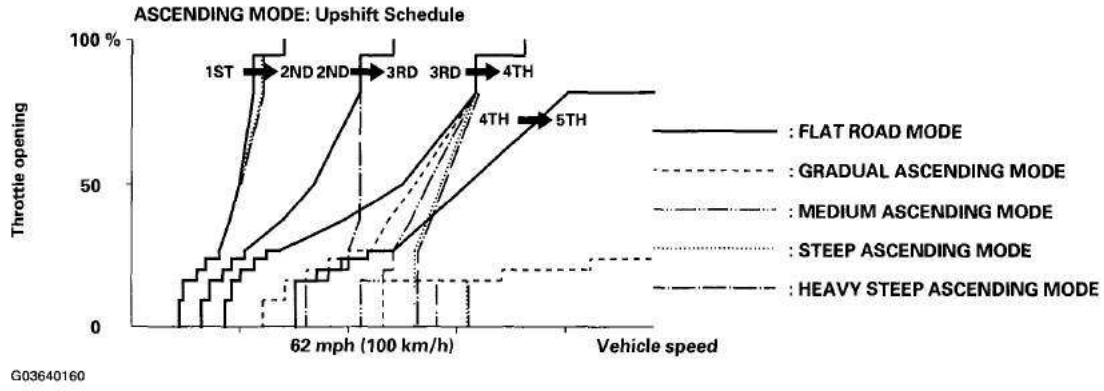


Fig. 25: Identifying Ascending Control Graph
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Descending Control

When the PCM determines that the vehicle is going down a hill in the D5, D4, and D3 positions, 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.

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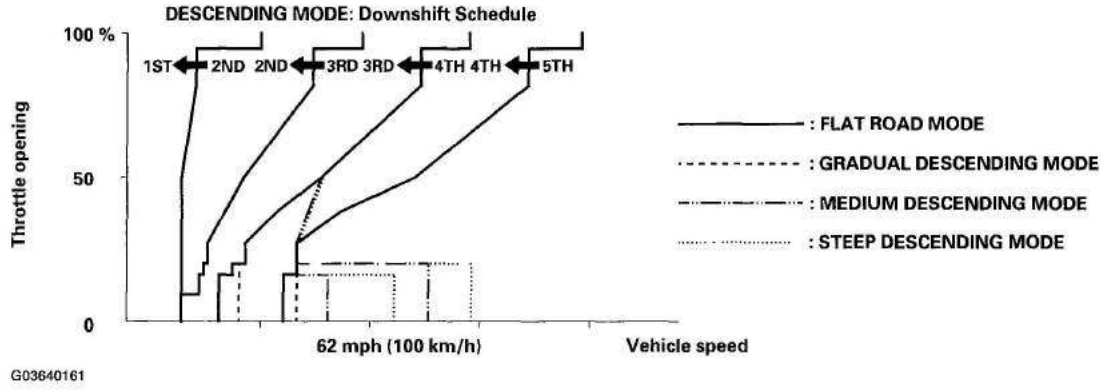


Fig. 26: Identifying Descending Control Graph
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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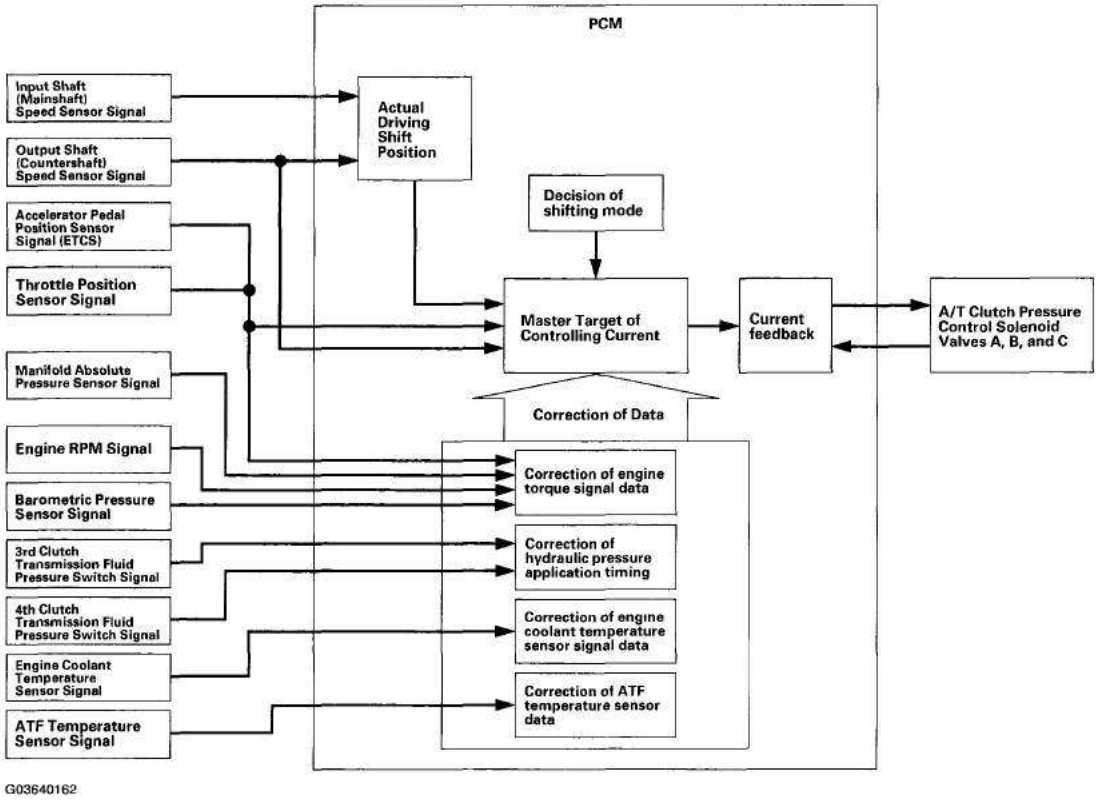


Fig. 27: Identifying Clutch Pressure Control - Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 ON, the condition of the lock up starts. The A/T clutch pressure control solenoid valve C regulates and apply the hydraulic pressure to the lock up control valve to control the volume of the lock up.

The lock up mechanism operates in the D5 position (2nd, 3rd, 4th, and 5th), in the D4 position (2nd, 3rd, and 4th), and in the D3 position (2nd and 3rd).

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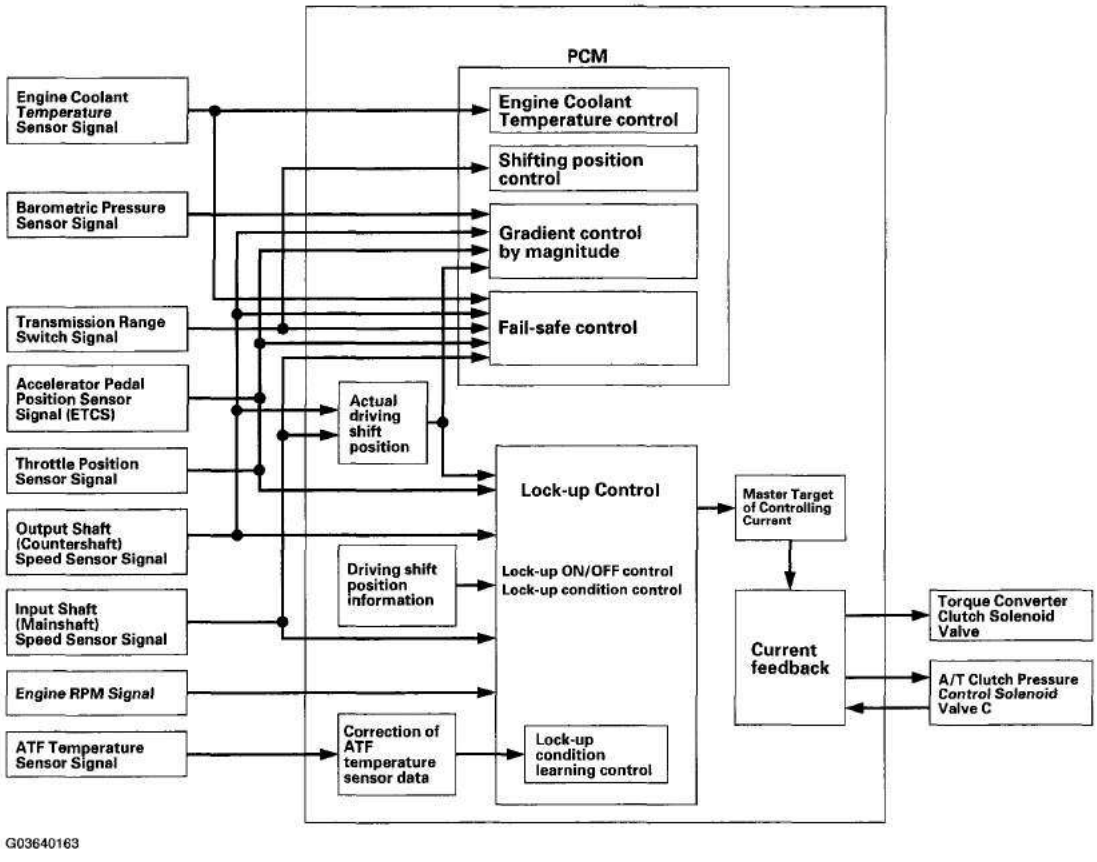


Fig. 28: Identifying Lock-Up Control - Functional Diagram (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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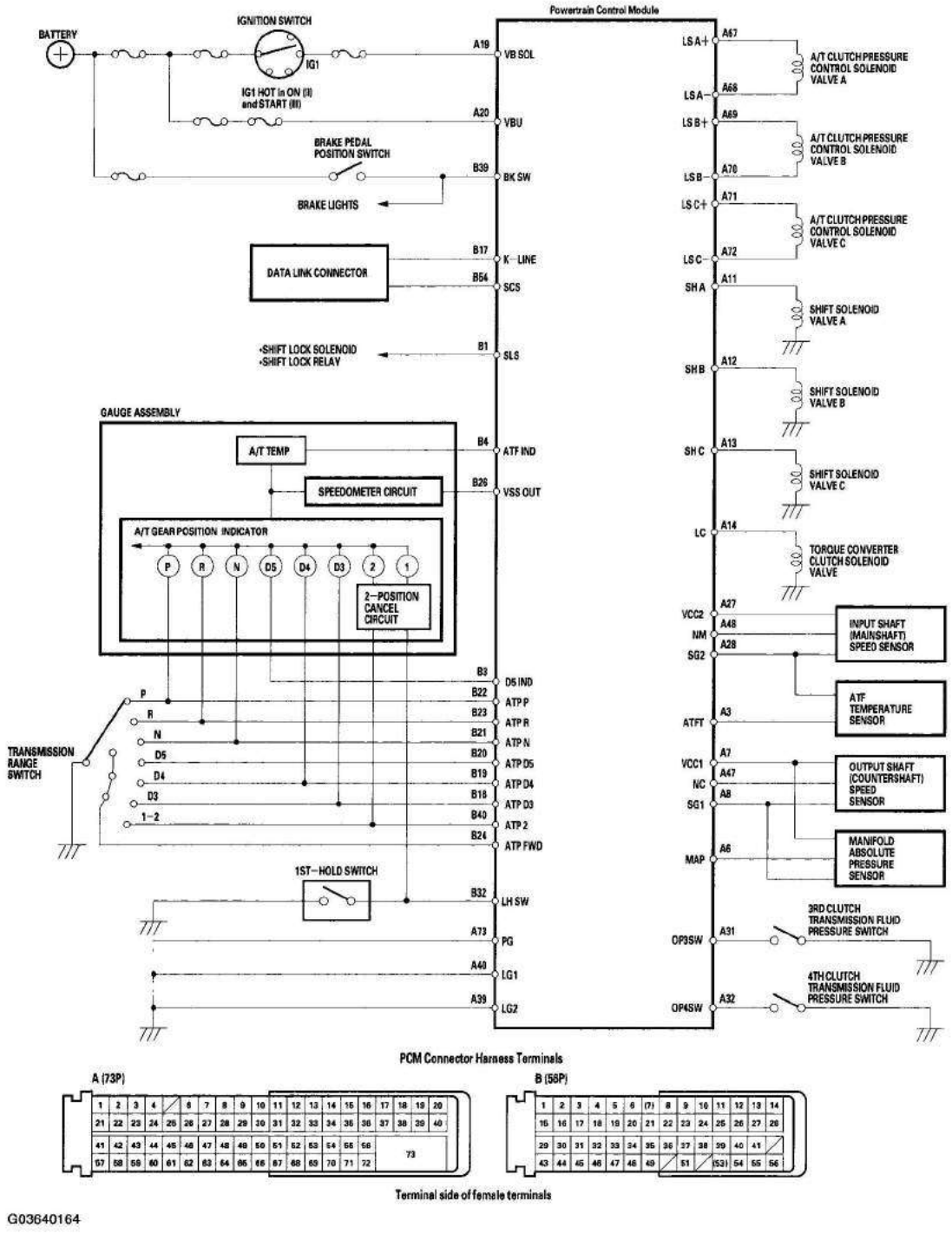
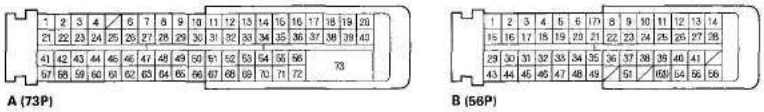


Fig. 29: Identifying Lock-Up Control - Functional Diagram (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM A/T Control System Inputs and Outputs

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PCM Connector Harness Terminals



Terminal side of female terminals

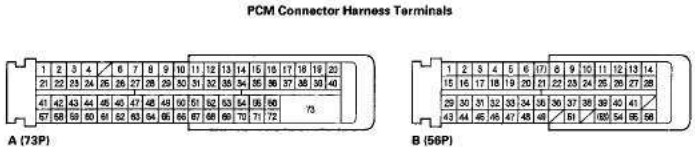
PCM CONNECTOR A (73P)

Terminal Number	Wire Color	Signal	Description	Measuring Conditions/Terminal Voltage
A3	BLU/YEL	ATFT	ATF temperature sensor signal input	With ignition switch ON (II): 0.1—4.2 (Depending on ATF temperature) With ignition switch OFF: 0 V
A7	YEL/RED	VCC1	Power supply for sensors	With ignition switch ON (II): 5 V With ignition switch OFF: 0 V
A8	GRN/WHT	SG1	Sensor ground	Less than 1.0 V at all times
A11	BLU/YEL	SH A	Shift solenoid valve A control	Battery voltage in these positions: • 1 and 2 • D5, D4, and D3 in 1st and 2nd gear • D5 in 5th gear 0 V in these positions: • D5, D4, and D3 in 3rd gear • D5 and D4 in 4th gear • P, R, and N
A12	GRN/WHT	SH B	Shift solenoid valve B control	Battery voltage in these positions: • 1 and 2 • D5, D4, and D3 in 1st, 2nd, and 3rd gear • P, R, and N 0 V in these positions: • D5, D4 in 4th and 5th gear • D5 in 5th gear
A13	GRN	SH C	Shift solenoid valve C control	Battery voltage in these positions: • 1 • D5, D4, and D3 in 1st, 3rd, and 5th gear 0 V in these positions: • 2 • D5, D4, and D3 in 2nd gear • D5 and D4 in 4th gear • P, R, and N
A14	YEL	LC	Torque converter clutch solenoid valve control	During lock-up condition: Battery voltage During no lock-up condition: 0 V
A19	BLK/YEL	VBSOL	Power source for solenoid valves	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
A20	WHT/GRN	VBU	Power source for the PCM memory	Always battery voltage
A27	YEL/BLU	VCC2	Power supply for sensors	With ignition switch ON (II): 5 V With ignition switch OFF: 0 V

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Fig. 30: Identifying PCM Connector Harness Terminals (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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PCM CONNECTOR A (73P)

Terminal Number	Wire color	Signal	Description	Measuring Conditions/Terminal Voltage
A28	GRN/YEL	SG2	Sensor ground	Less than 1.0 V at all times
A29	GRN/WHT	METINH	Communication line PCM-to-gauge assembly	With ignition switch ON (II): Battery voltage
A31	BLU/WHT	OP3SW	3rd clutch transmission fluid pressure switch signal input	With ignition switch ON (II): Without 3rd clutch pressure: About 10 V With 3rd clutch pressure: About 0 V
A32	BLU/YEL	OP4SW	4th clutch transmission fluid pressure switch signal input	With ignition switch ON (II): Without 4th clutch pressure: About 10 V With 4th clutch pressure: About 0 V
A39	BRN/YEL	LG2	Ground	Less than 1.0 V at all times
A40	BRN/YEL	LG1	Ground	Less than 1.0 V at all times
A47	BLU	NC	Output shaft (countershaft) speed sensor signal input	With ignition switch ON (II): 0 V or about 5 V With driving: About 2.5 V
A48	RED	NM	Input shaft (mainshaft) speed sensor signal input	With ignition switch ON (II): 0 V or about 5 V With engine at idling in the N position: About 2.5 V
A67	RED	LS A+	A/T clutch pressure control solenoid valve A power supply positive terminal	With ignition switch ON (II): Current controlled
A68	WHT	LS A−	A/T clutch pressure control solenoid valve A power supply negative terminal	
A69	BRN/WHT	LS B+	A/T clutch pressure control solenoid valve B power supply positive terminal	With ignition switch ON (II): Current controlled
A70	GRN	LS B−	A/T clutch pressure control solenoid valve B power supply negative terminal	
A71	GRN/RED	LS C+	A/T clutch pressure control solenoid valve C power supply positive terminal	With ignition switch ON (II): Current controlled
A72	RED/BLU	LS C−	A/T clutch pressure control solenoid valve C power supply negative terminal	
A73	BLK	PG	Ground	Less than 1.0 V at all times

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Fig. 31: Identifying PCM Connector Harness Terminals (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

PCM CONNECTOR B (56P)

PCM CONNECTOR B DESCRIPTION (56P)

Terminal Number	Wire color	Signal	Description	Measuring Conditions/Terminal Voltage
B1	WHT/GRN	SLS	Shift lock solenoid control	With ignition switch ON (II), in the P position, brake pedal pressed, and

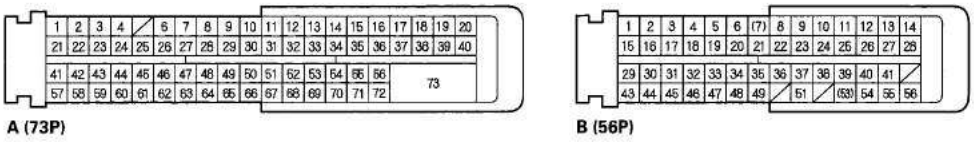
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				accelerator released: 0 V
B3	BLK/RED	D5 IND	D5 indicator control	2003-2004 models • When ignition switch ON (II): About 5 V for 2 seconds • In the D5 position: About 5 V 2005-2006 models • When ignition switch ON (II): Battery voltage for 2 seconds • In the D5 position: Battery voltage
B4	RED/GRN	ATF IND	ATF indicator control	When ignition switch is first turned ON (II): 0 V for 2 seconds ATF in torque converter temperature is under normal operating condition (A/T TEMP indicator OFF): Battery voltage
B17	GRY	K-LINE	Communication line PCM-to-DLC	With ignition switch ON (II): Battery voltage
B18	PNK	ATP D3	Transmission range switch D3 position signal input	In the D3 position: 0 V In other than the D3 position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B19	YEL	ATP D4	Transmission range switch D4 position signal input	In the D4 position: 0 V In other than the D4 position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B20	GRN	ATP D5	Transmission range switch D5 position signal input	In the D5 position: 0 V In other than the D5 position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B21	RED/BLK	ATP N	Transmission range switch N position signal input	In the N position: 0 V In other than the N position: • 2003-2004 models: Battery voltage

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				• 2005-2006 models: About 5 V
B22	BLK/BLU	ATP P	Transmission range switch P position signal input	In the P position: 0 V In other than the P position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B23	WHT	ATP R	Transmission range switch R position signal input	In the R position: 0 V In other than the R position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B24	LT BLU	ATP FWD	Transmission range switch D5, D4, and D3 position signal input	In the D5, D4, and D3 position: 0 V In other than the D5, D4, and D3 positions: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V

PCM Connector Harness Terminals



Terminal side of female terminals

PCM CONNECTOR B (56P)

Terminal Number	Wire color	Signal	Description	Measuring Conditions/Terminal Voltage
B32	BRN	LH SW	1st-hold switch 1 position signal input	In the 1 position: 0 V In other than the 1 position: • 2003-2004 models: About 5 V • 2005-2006 models: Battery voltage
B39	WHT/BLK	BK SW	Brake pedal position switch signal input	Brake pedal pressed: Battery voltage Brake pedal released: 0 V
B40	BLU	ATP 2	Transmission range switch 2 position signal input	In the 2 position: 0 V In other than the 2 position: • 2003-2004 models: Battery voltage • 2005-2006 models: About 5 V
B54	BRN	SCS	Detects service check signal	With the SCS shorted with the HDS: About 0 V With the SCS open: About 5 V

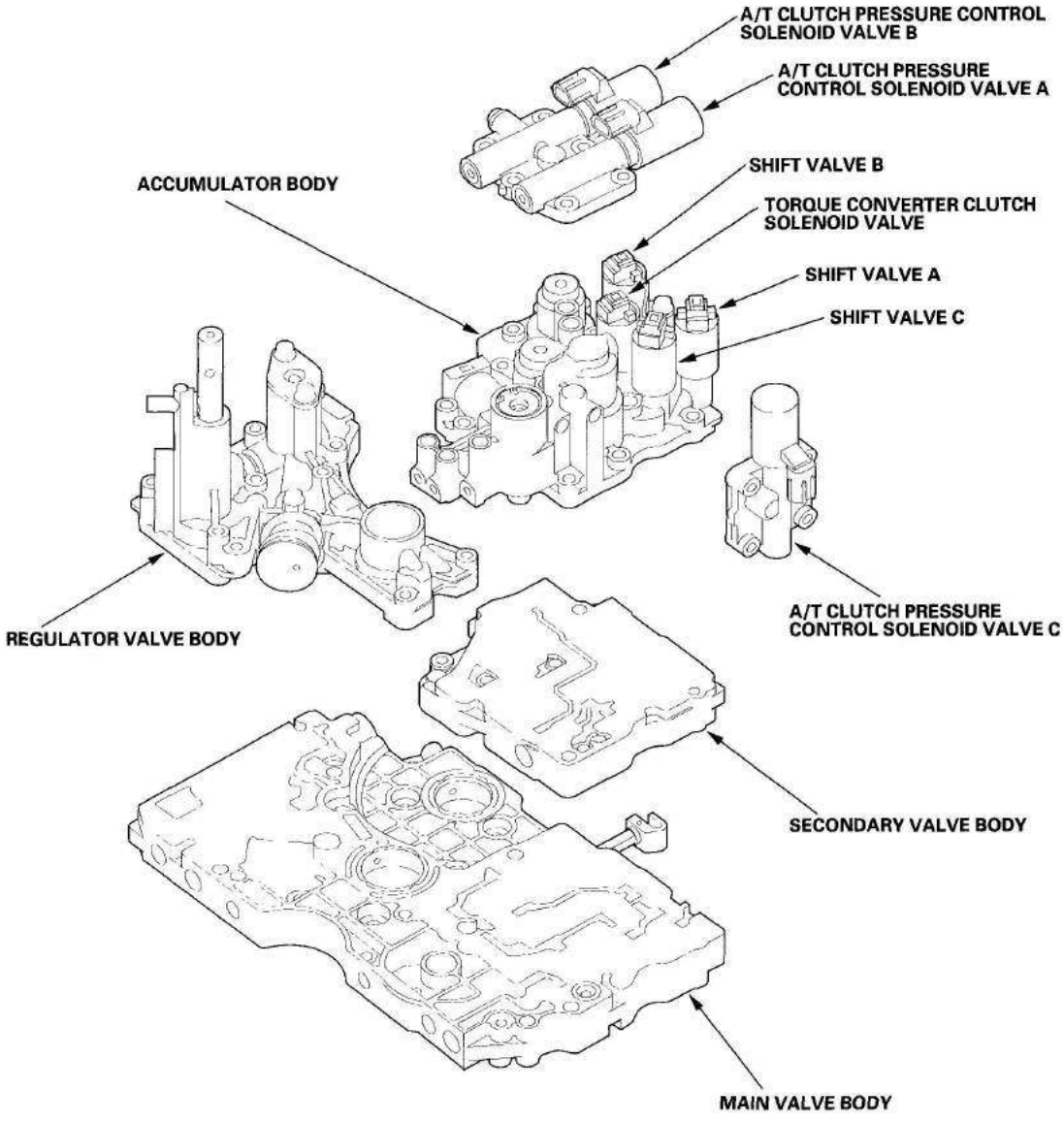
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Fig. 32: Identifying PCM Connector Harness Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hydraulic Controls

The valve body includes the main valve body, the regulator valve body, the secondary valve body, and the accumulator body. The ATF pump is driven by splines on the 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, B, and C, and the torque converter clutch solenoid valve are mounted on the accumulator body. The A/T clutch pressure control solenoid valves A, B, and C are mounted on the transmission housing.



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Fig. 33: Identifying Hydraulic Controls - Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Main Valve Body

The main valve body contains the manual valve, the modulator valve, the torque converter check valve, the shift valves A, B, D, E, the CPC valve C, the cooler check valve, the relief valve, the lock up shift valve, the lock up timing valve, the lubrication control valve, the lubrication check 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.

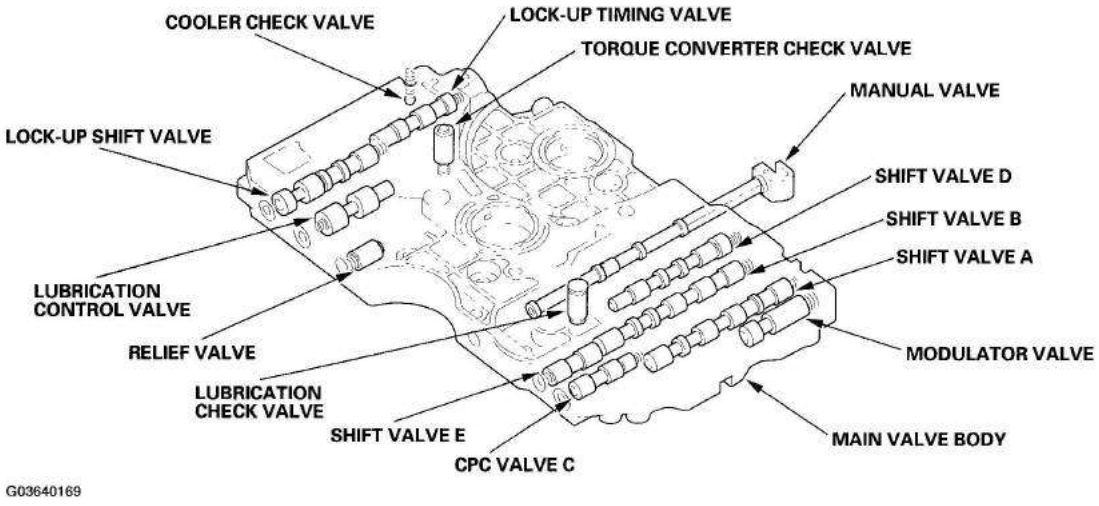


Fig. 34: Identifying Main Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 control valve, the servo valve, and the 3rd accumulator.

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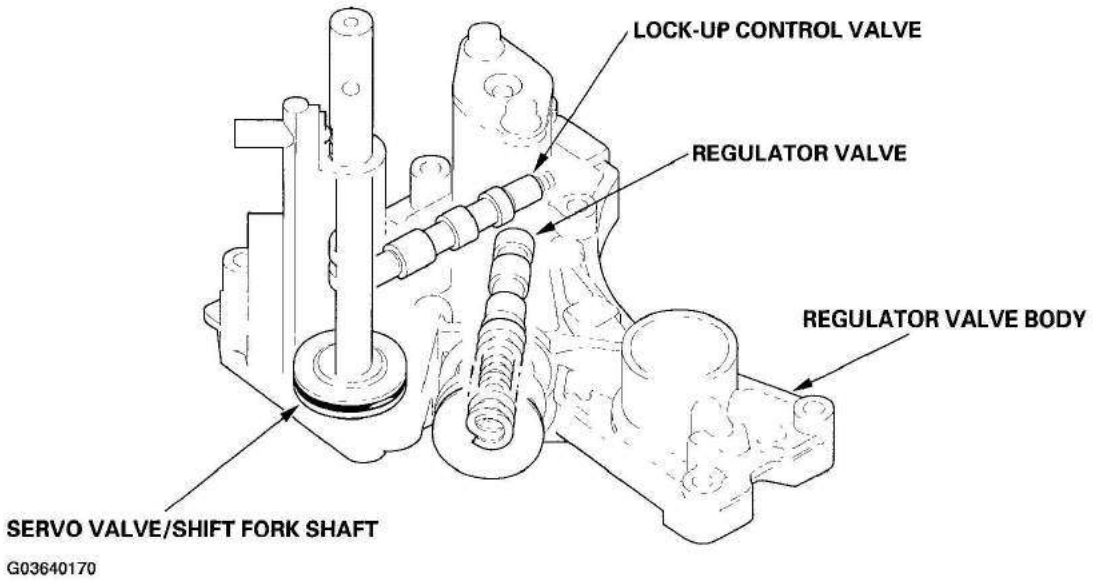


Fig. 35: Identifying Regulator Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

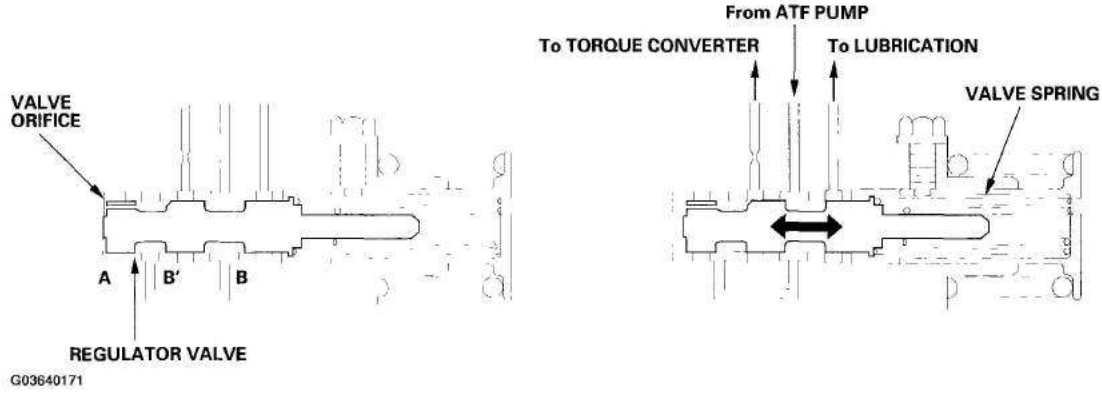


Fig. 36: Identifying Regulator Valve

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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.

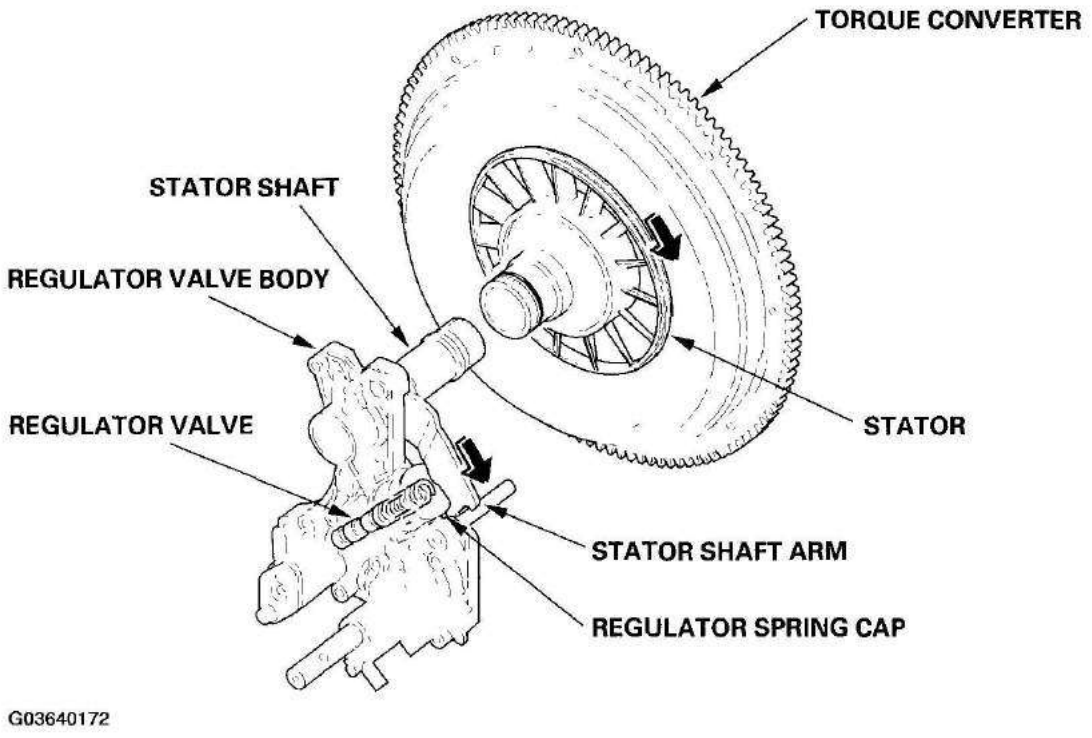


Fig. 37: Inspecting Hydraulic Pressure Increases According To Torque
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Secondary Valve Body

The secondary valve body is on the main valve body. The secondary valve body contains the shift valve C, the CPC valves A, B, the reverse CPC valve, the servo control valve, the kick down valve, and the kick down short valve.

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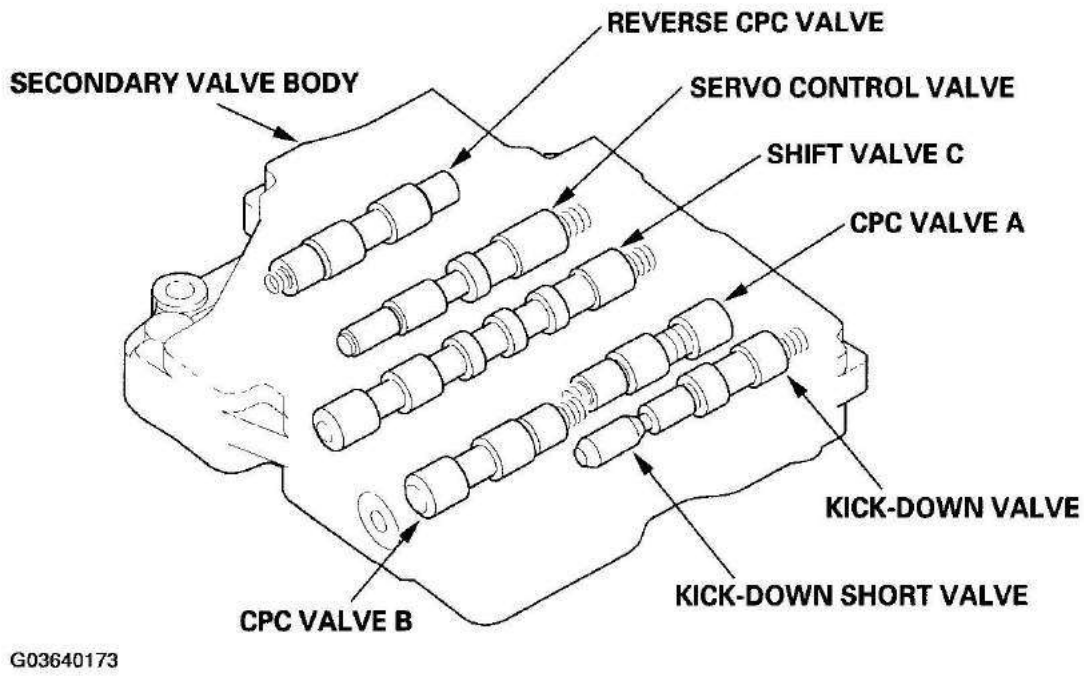


Fig. 38: Identifying Secondary Valve Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Accumulator Body

The accumulator body is on the secondary valve body, and contains the 1st, 1st-hold, 2nd, 4th, and 5th accumulators. The 3rd accumulator is in the regulator valve body.

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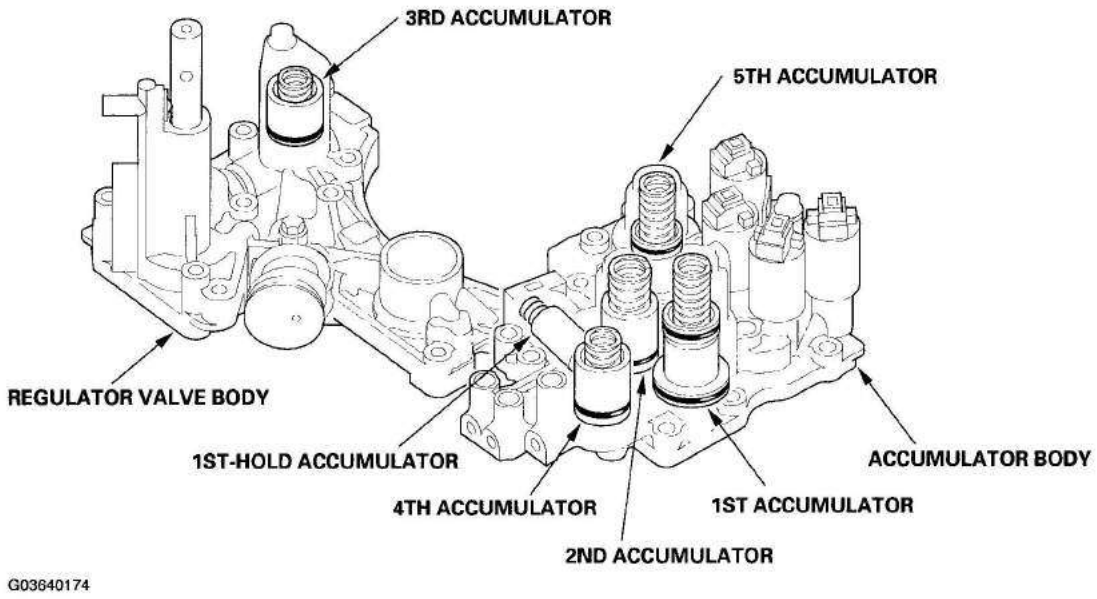


Fig. 39: Identifying Accumulator Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 when shifting is completed.

Hydraulic pressure at the ports

HYDRAULIC PRESSURE PORTS

	DESCRIPTION OF		DESCRIPTION OF		DESCRIPTION OF

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PORT No.	PRESSURE	PORT No.	PRESSURE	PORT No.	PRESSURE
1	LINE	5N	(1) A or LINE	56	(3)
2	LINE	5D	(1) B or LINE	57	(4)
3	LINE	5G	(1) B or LINE	58	(5)
3'	REVERSE (1) or LINE	5K	(1) B or LINE	90	TORQUE CONVERTER
3'	REVERSE (1) or LINE	6	MODULATE	90'	TORQUE CONVERTER
4	LINE	SA	(2) A	91	TORQUE CONVERTER
4'	LINE	SB	(2) B	91'	TORQUE CONVERTER
4"	LINE	SC	(2) C	92	TORQUE CONVERTER
4A	(1) A	LA	(6) A	93	ATF COOLER
4B	(1) B	9	LINE	94	TORQUE CONVERTER
4C	(1) C	10	1ST CLUTCH	95	LUBRICATION
5B	(1) A	15	1ST-HOLD CLUTCH	95'	LUBRICATION
5C	(1) B	20	2ND CLUTCH	96	TORQUE CONVERTER
5H	(1) B	25	LINE	97	TORQUE CONVERTER
5J	(1) B	30	3RD CLUTCH	99	SUCTION
5A	(1) A or LINE	40	4TH CLUTCH	X	DRAIN
5E	(1) A or LINE	50	5TH CLUTCH	HX	HIGH POSITION DRAIN
5F	(1) A or LINE	51	5TH CLUTCH	hX	HIGH POSITION DRAIN
5M	(1) A or LINE	55	(1) C or LINE	AX	AIR DRAIN

NOTE:

- **(1) Clutch Pressure Control pressure**
- **(2) Shift Solenoid pressure**
- **(3) A/T Clutch Pressure Control Solenoid A pressure**
- **(4) A/T Clutch Pressure Control Solenoid B pressure**
- **(5) A/T Clutch Pressure Control Solenoid C pressure**

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- **(6) Torque Converter Clutch Solenoid pressure**

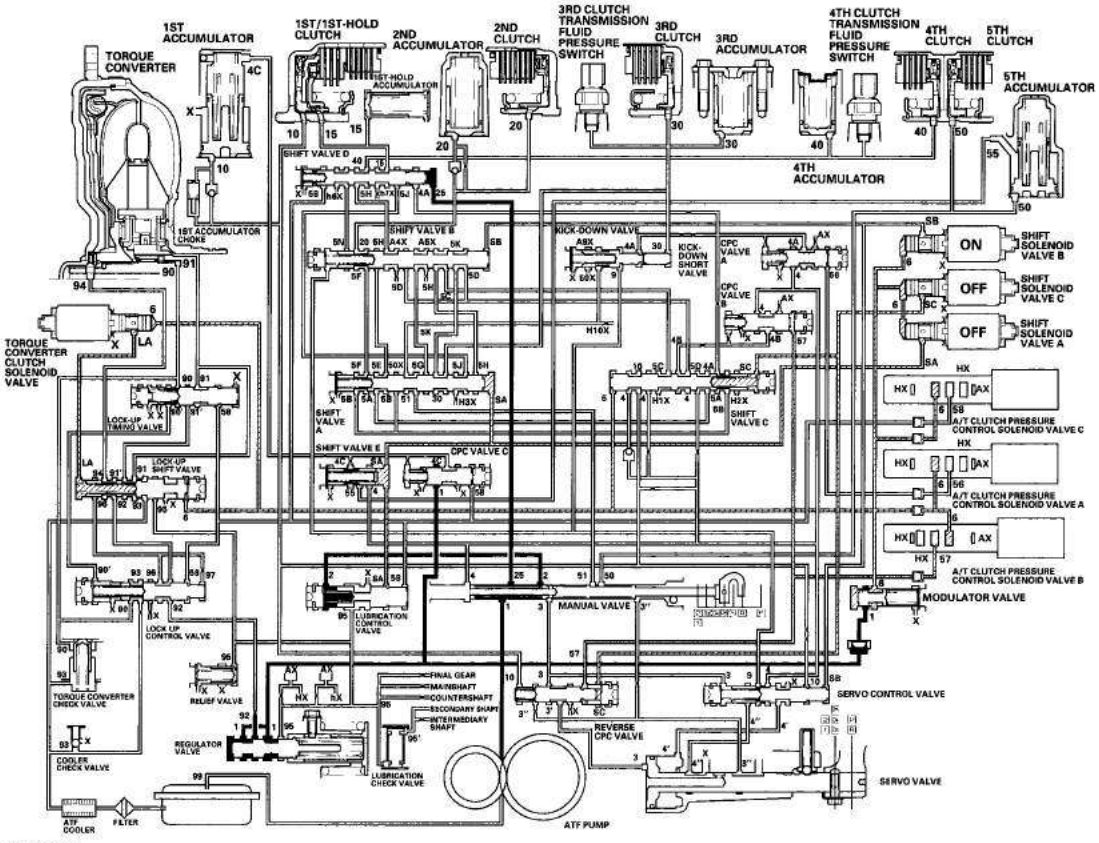
N Position

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

- The shift solenoid valve A is turned OFF, and the shift valve A moves to the left side.
- The shift solenoid valve B is turned ON, and the shift valve B stays on the right side.
- The shift solenoid valve C is turned OFF, and the 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, the A/T clutch pressure control solenoid valves A and B, and the A/T clutch pressure control solenoid valve C. Under this condition, hydraulic pressure is not applied to the clutches.

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



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Fig. 40: Identifying Hydraulic Flow Diagram - N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 Position: 1st gear shifting from the N position

Shift solenoid valves remain the same as in the N position when shifting to the D5 position from the N position. The manual valve moves to D5 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 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 D5 position from the N position.

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

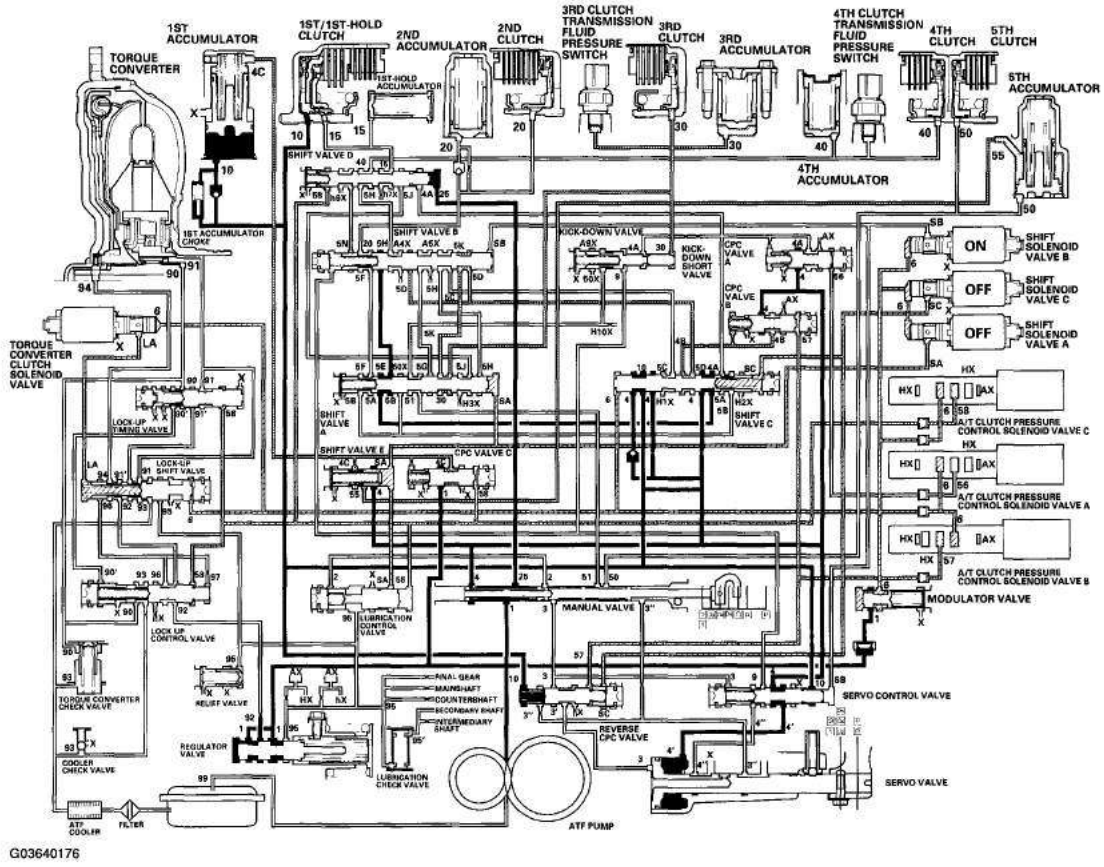


Fig. 41: Identifying Hydraulic Flow Diagram - D5 Position: 1st Gear Shifting From N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 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

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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.

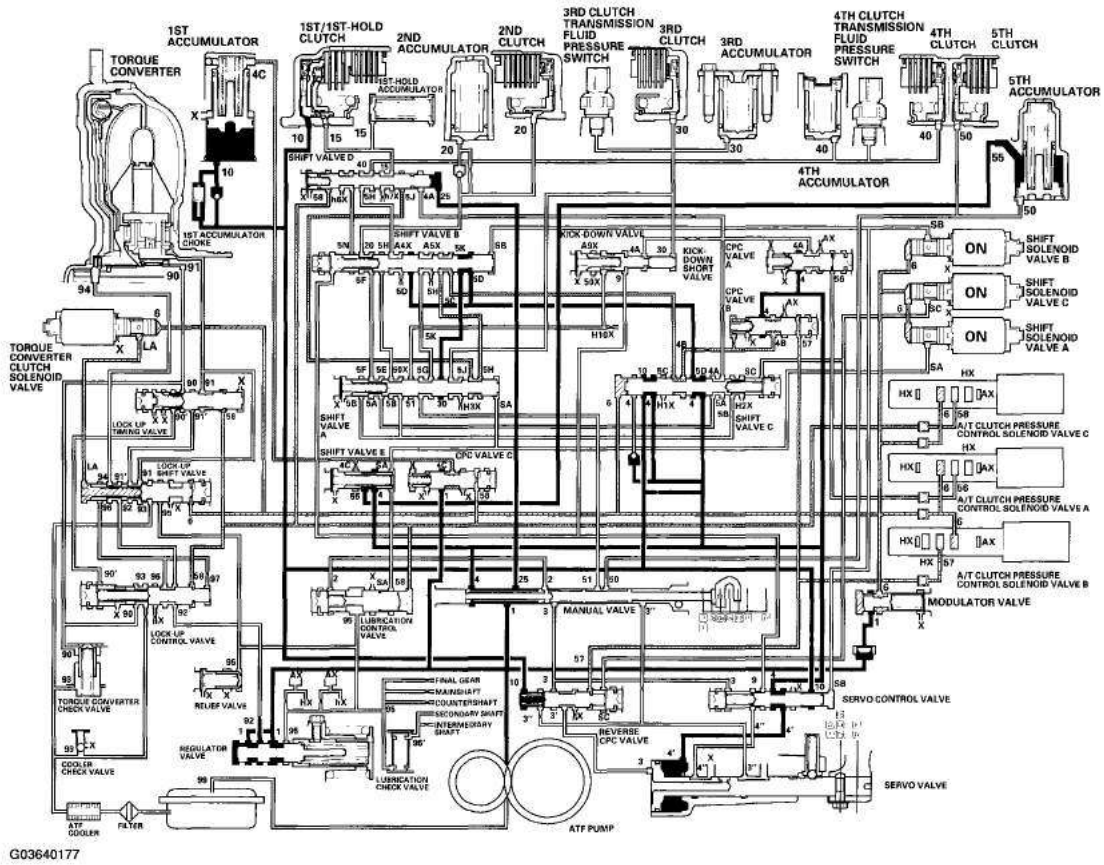


Fig. 42: Identifying Hydraulic Flow Diagram - D5 Position: Driving In 1st Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 Position: Shifting between 1st gear and 2nd gear

As the speed of the vehicle reaches the programmed value, the PCM controls the A/T clutch pressure control solenoid valves A and B. 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.

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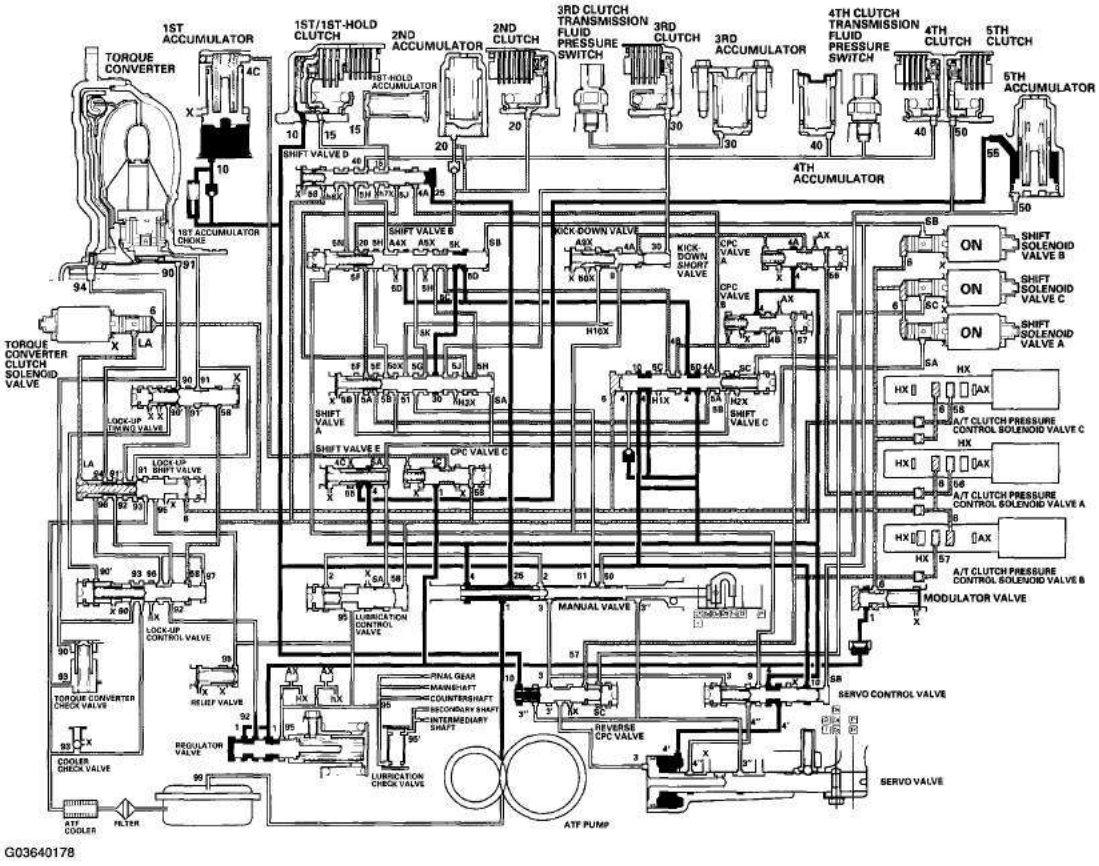


Fig. 43: Identifying Hydraulic Flow Diagram - D5 Position: Shifting Between 1st Gear And 2nd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 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 port of line pressure and CPC pressure. 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.

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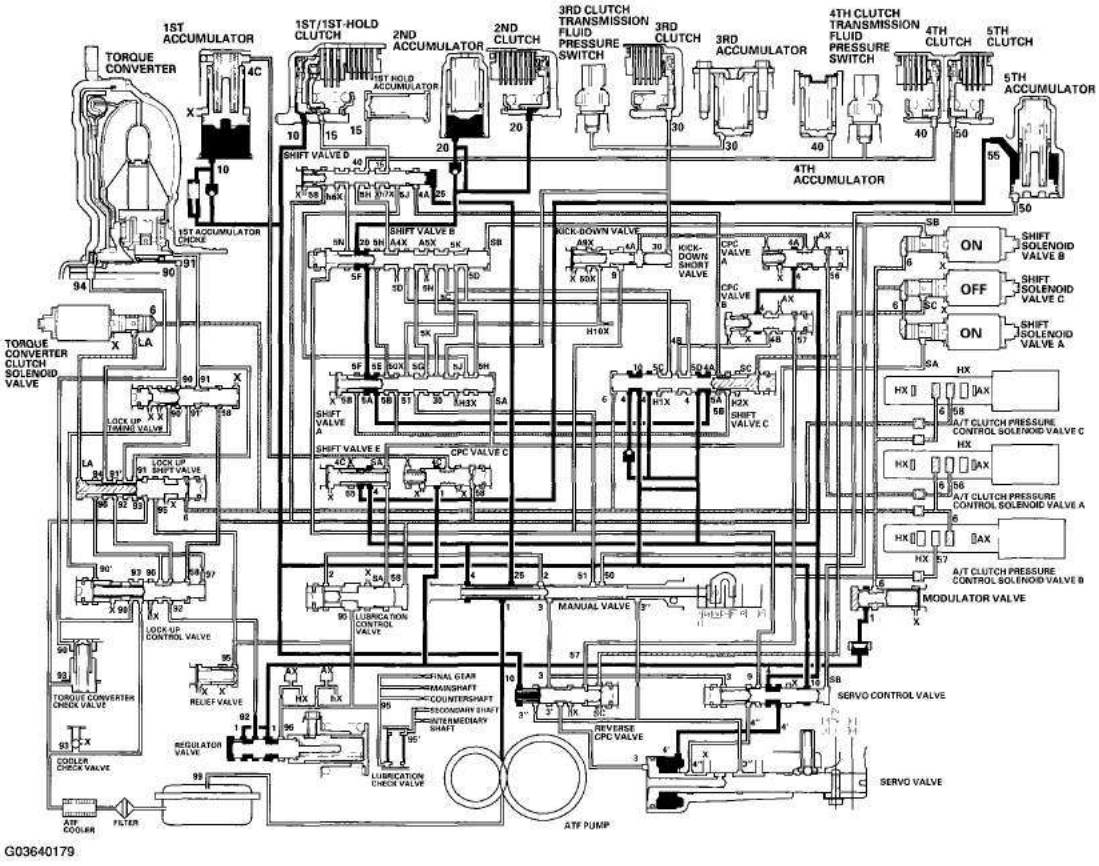


Fig. 44: Identifying Hydraulic Flow Diagram - D5 Position: Driving In 2nd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 Position: Shifting between 2nd gear and 3rd gear

As the speed of the vehicle reaches the programmed 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 port of line pressure and CPC pressure. 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.

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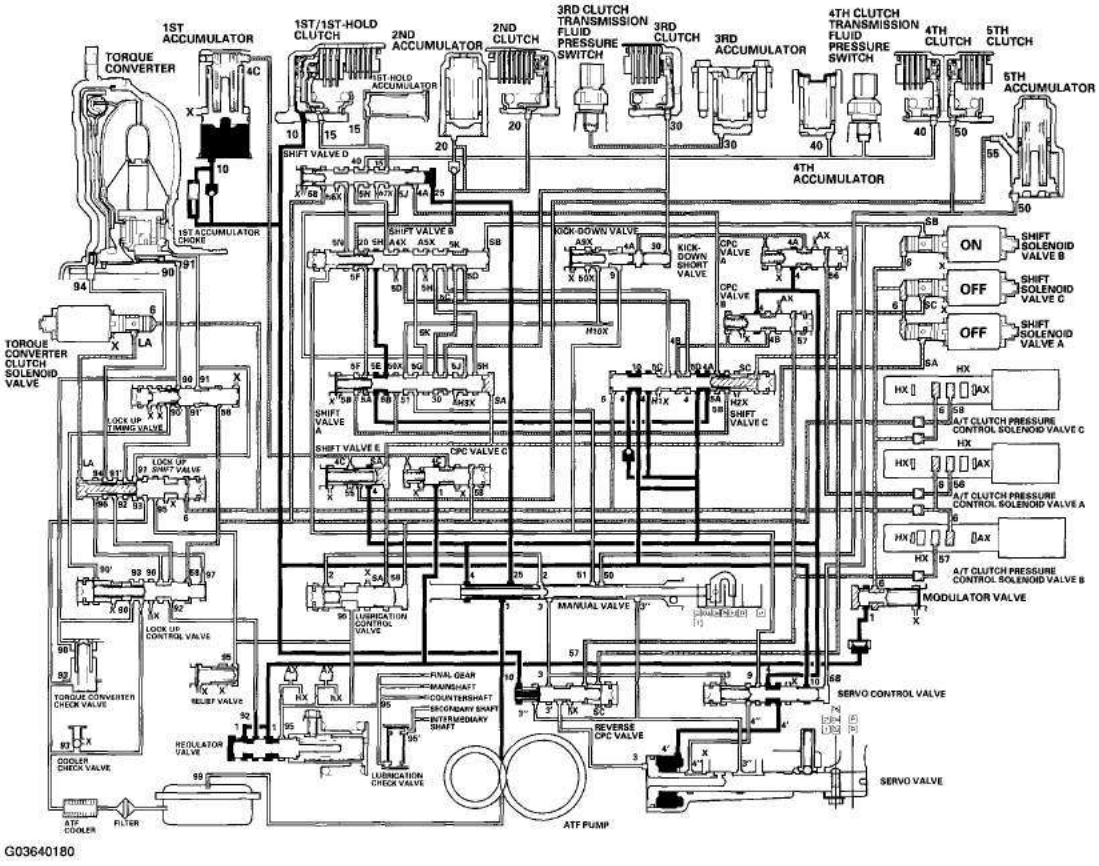


Fig. 45: Identifying Hydraulic Flow Diagram - D5 Position: Shifting Between 2nd Gear And 3rd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 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 port of line pressure and CPC pressure. 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.

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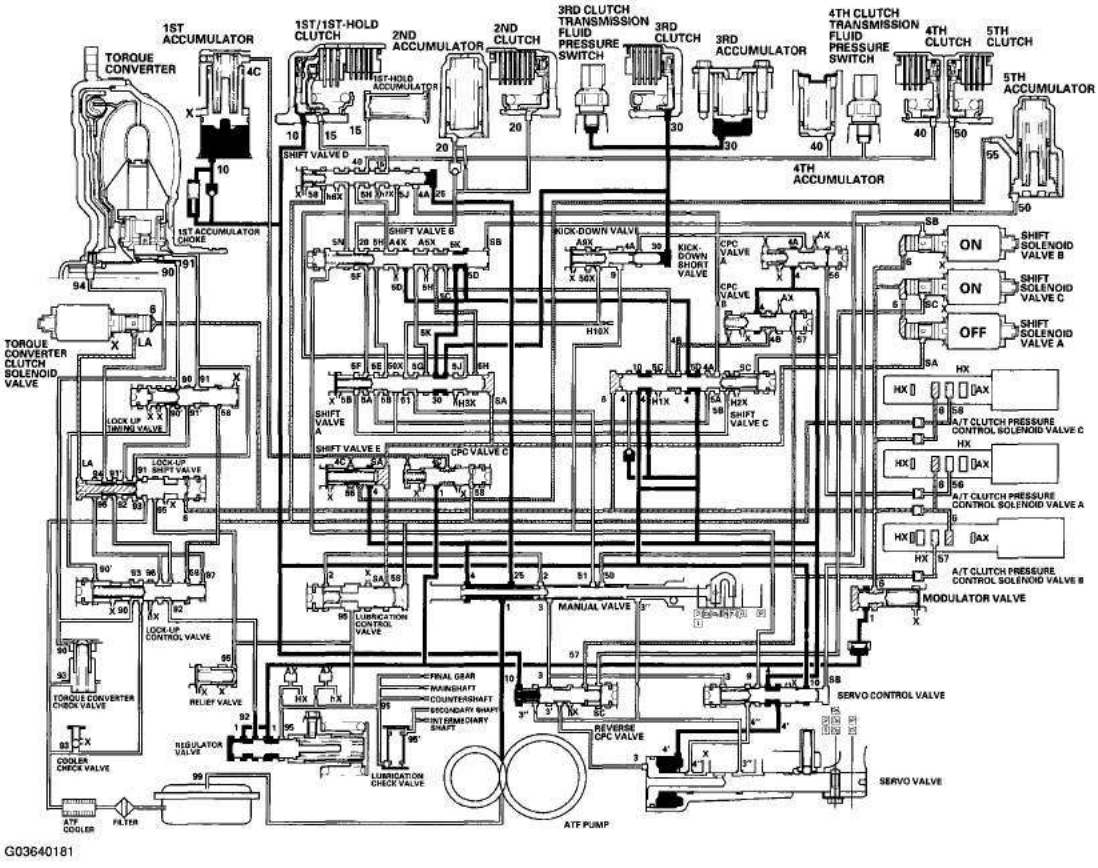


Fig. 46: Identifying Hydraulic Flow Diagram - D5 Position: Driving In 3rd Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 Position: Shifting between 3rd gear and 4th gear

As the speed of the vehicle reaches the programmed 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 port of line pressure and CPC pressure. 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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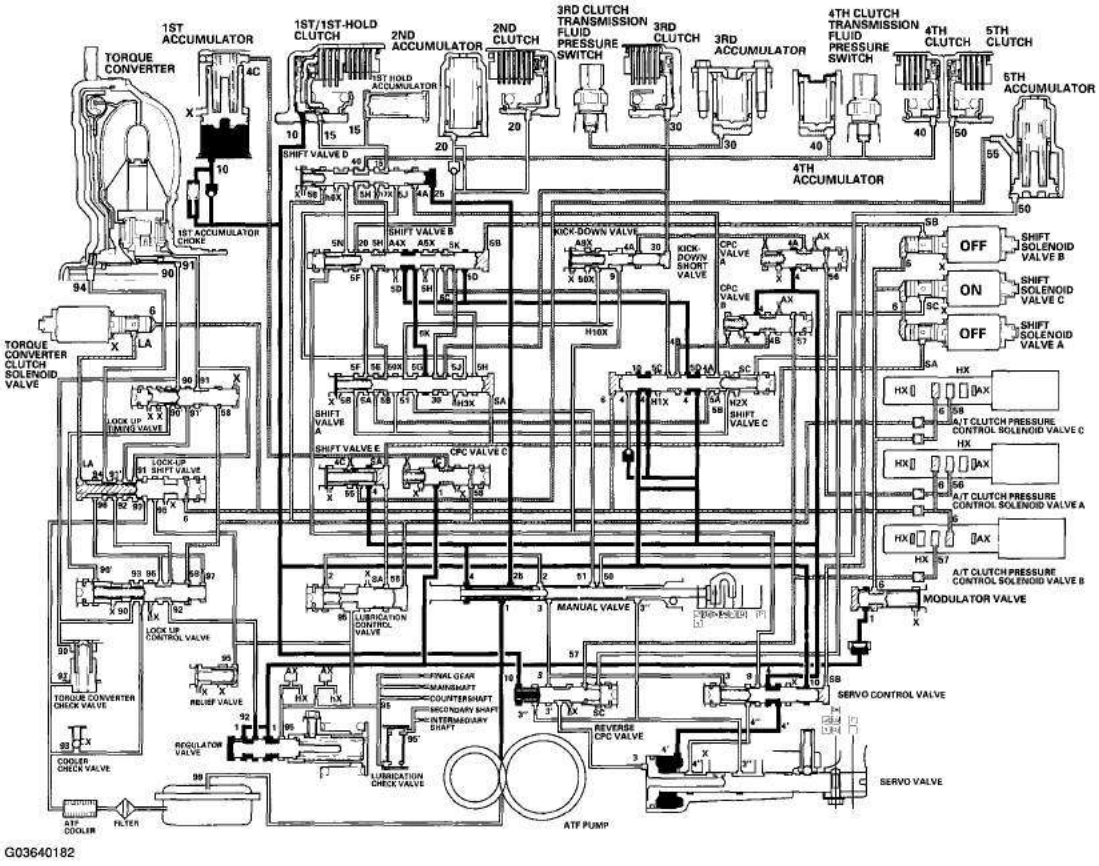


Fig. 47: Identifying Hydraulic Flow Diagram - D5 Position: Shifting Between 3rd Gear And 4th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 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 port of line pressure and CPC pressure. 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.

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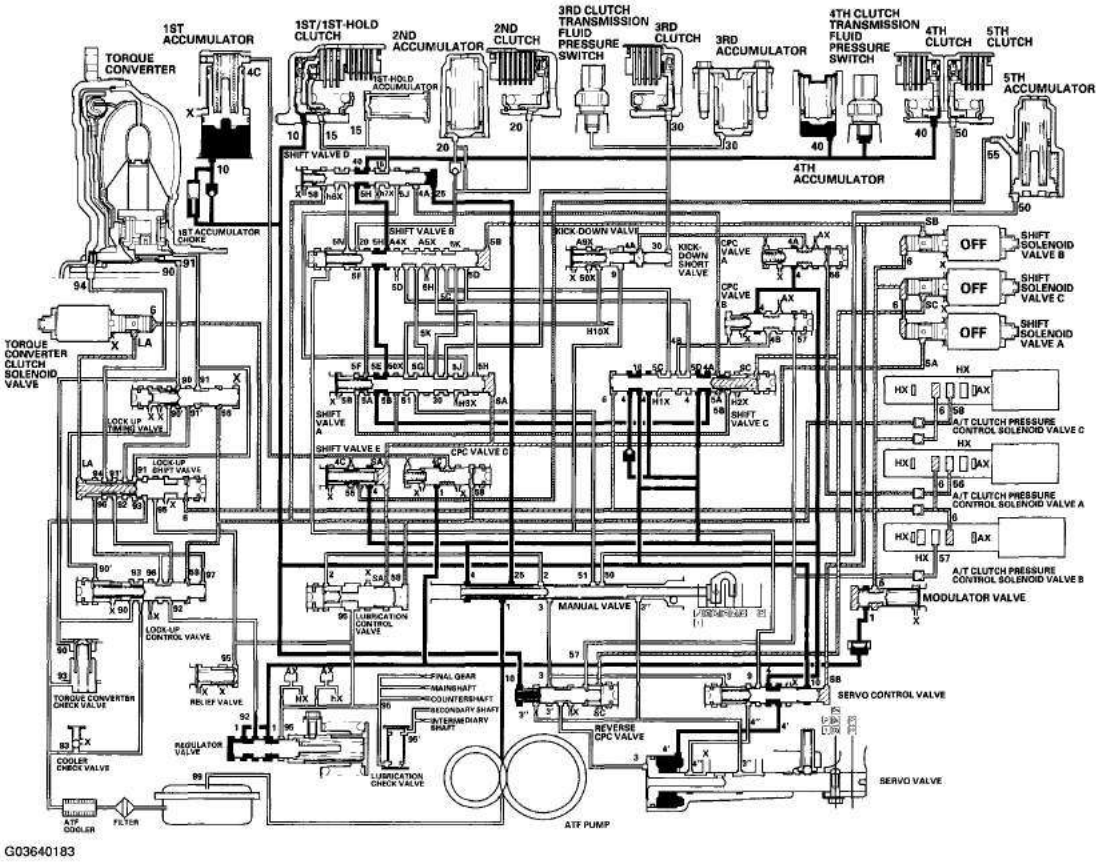


Fig. 48: Identifying Hydraulic Flow Diagram - D5 Position: Driving In 4th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 Position: Shifting between 4th gear and 5th gear

As the speed of the vehicle reaches the programmed 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 valves B and C stay OFF. Shift solenoid valve A is turn 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 port of line pressure and CPC pressure. 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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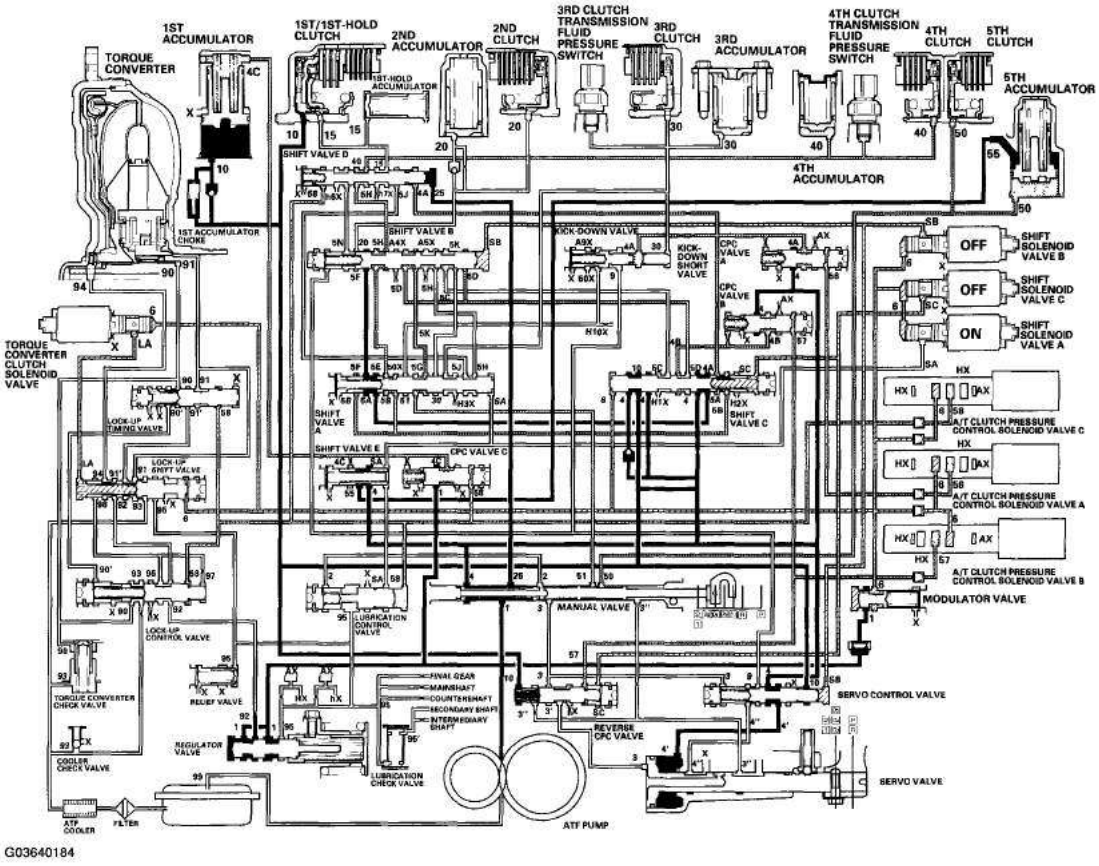


Fig. 49: Identifying Hydraulic Flow Diagram - D5 Position: Shifting Between 4th Gear And 5th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

D5 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 port of line pressure and CPC pressure. 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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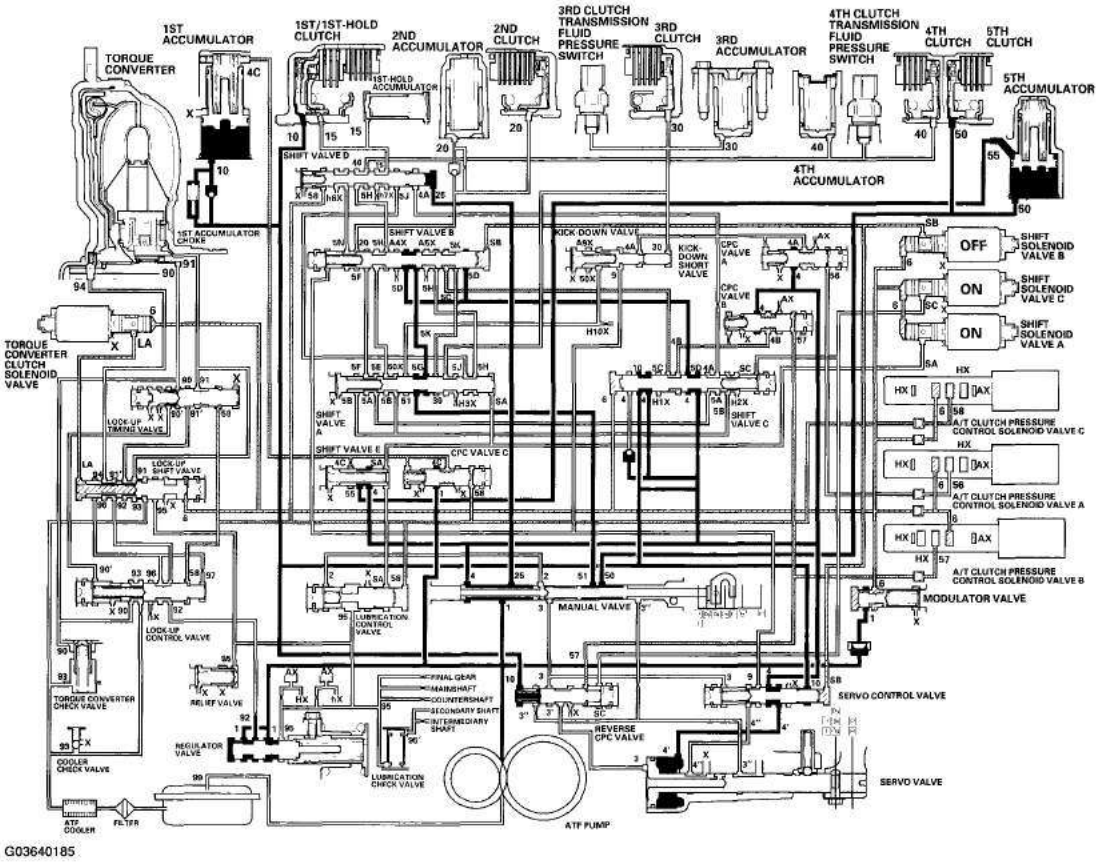


Fig. 50: Identifying Hydraulic Flow Diagram - D5 Position: Driving In 5th Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2 Position

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

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

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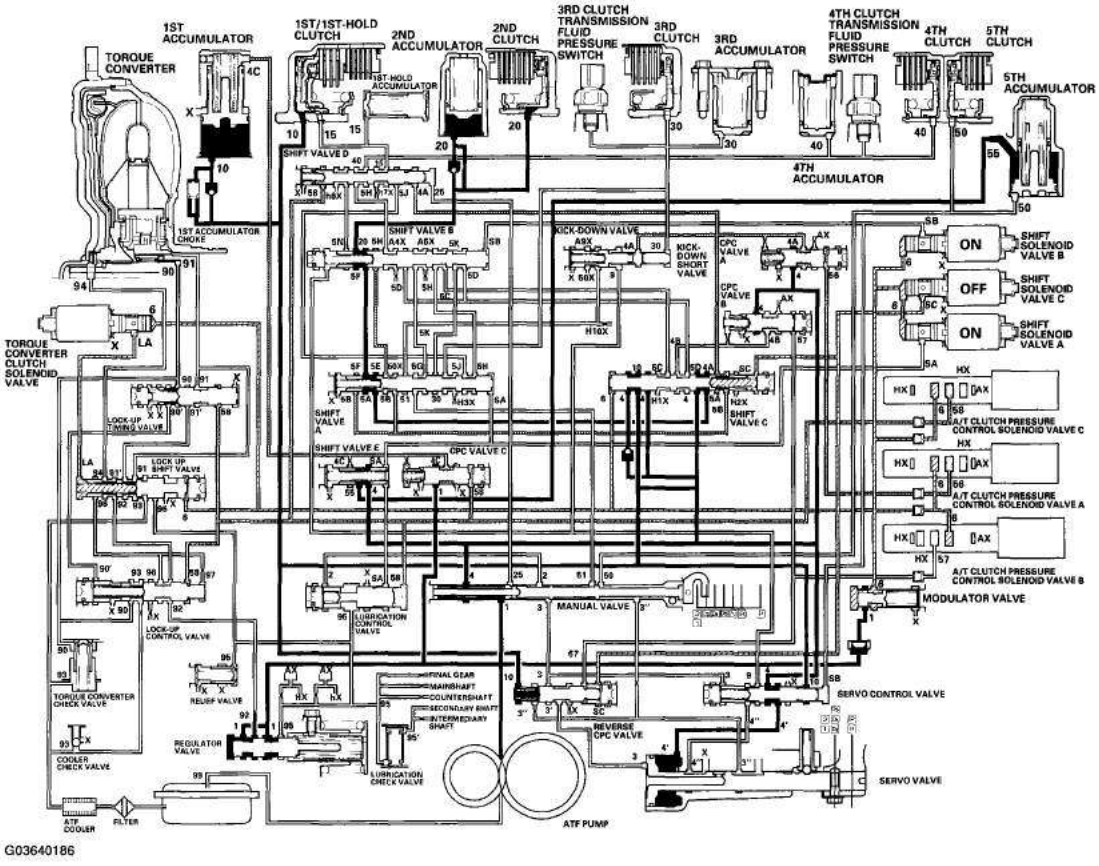


Fig. 51: Identifying Hydraulic Flow Diagram - 2 Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1 Position

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

- Shift solenoid valve A is turned ON, and shift valve A is in the right side.
- Shift solenoid valve B is turned ON, and shift valve B is in 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.

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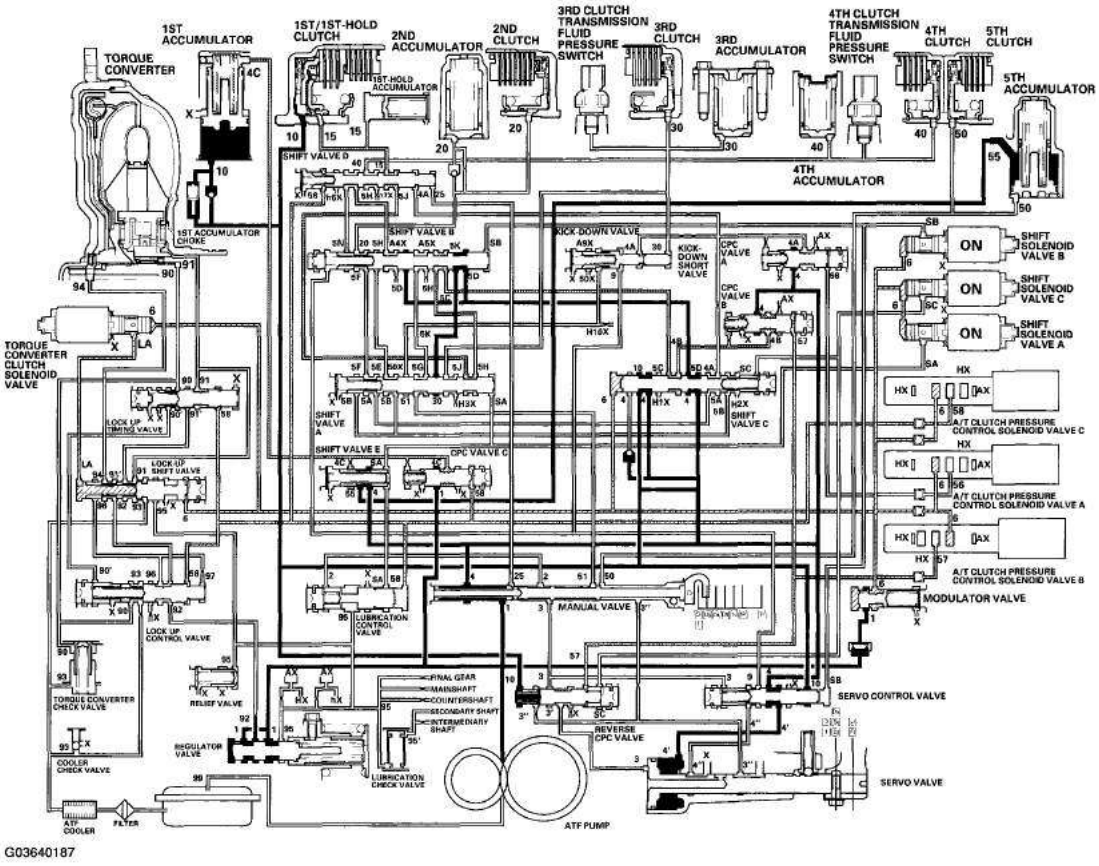


Fig. 52: Identifying Hydraulic Flow Diagram - 1 Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 reverse CPC pressure (3'). Reverse CPC pressure (3') pushes the servo valve to the reverse position, passes through the servo valve, and flows to the manual valve. Reverse CPC pressure (3") becomes 5th clutch pressure (50) at the manual valve. The 5th clutch pressure (50) is applied to the 5th clutch, and 5th clutch is engaged with reverse CPC pressure.

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

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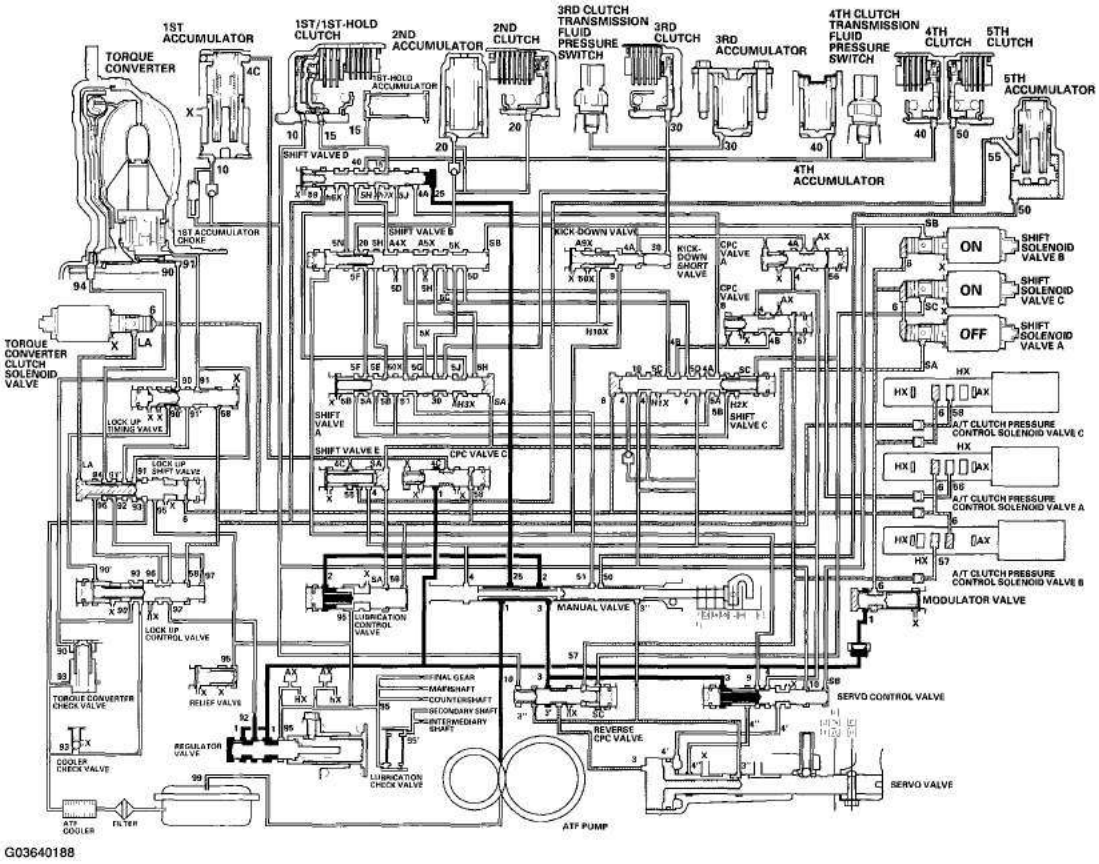


Fig. 53: Identifying Hydraulic Flow Diagram - R Position: Shifting To R Position From P Or N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

Reverse Inhibitor Control

When the R position is selected while the vehicle is moving forward at speed over 6 mph (10 km/h), the PCM outputs to turn the shift solenoid valves A and C ON, and shift solenoid valve B stays 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 direction.

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

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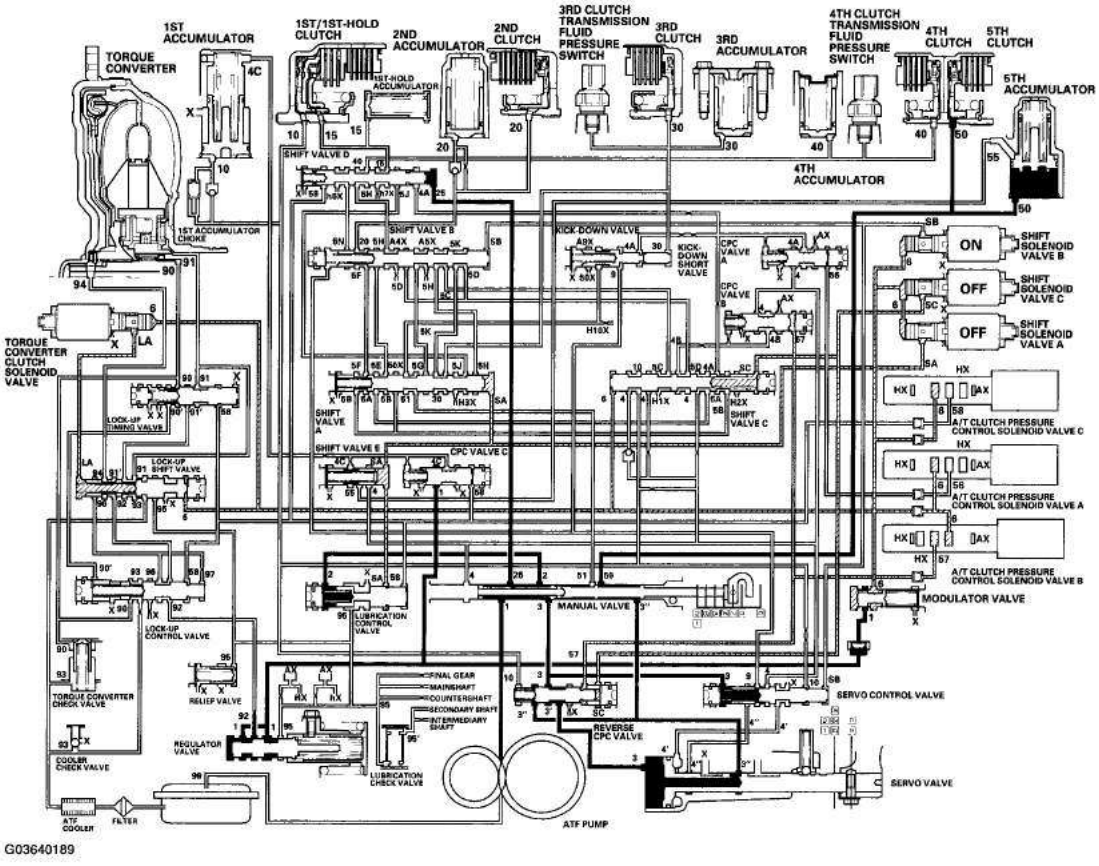


Fig. 54: Identifying Hydraulic Flow Diagram - R Position: Driving In Reverse Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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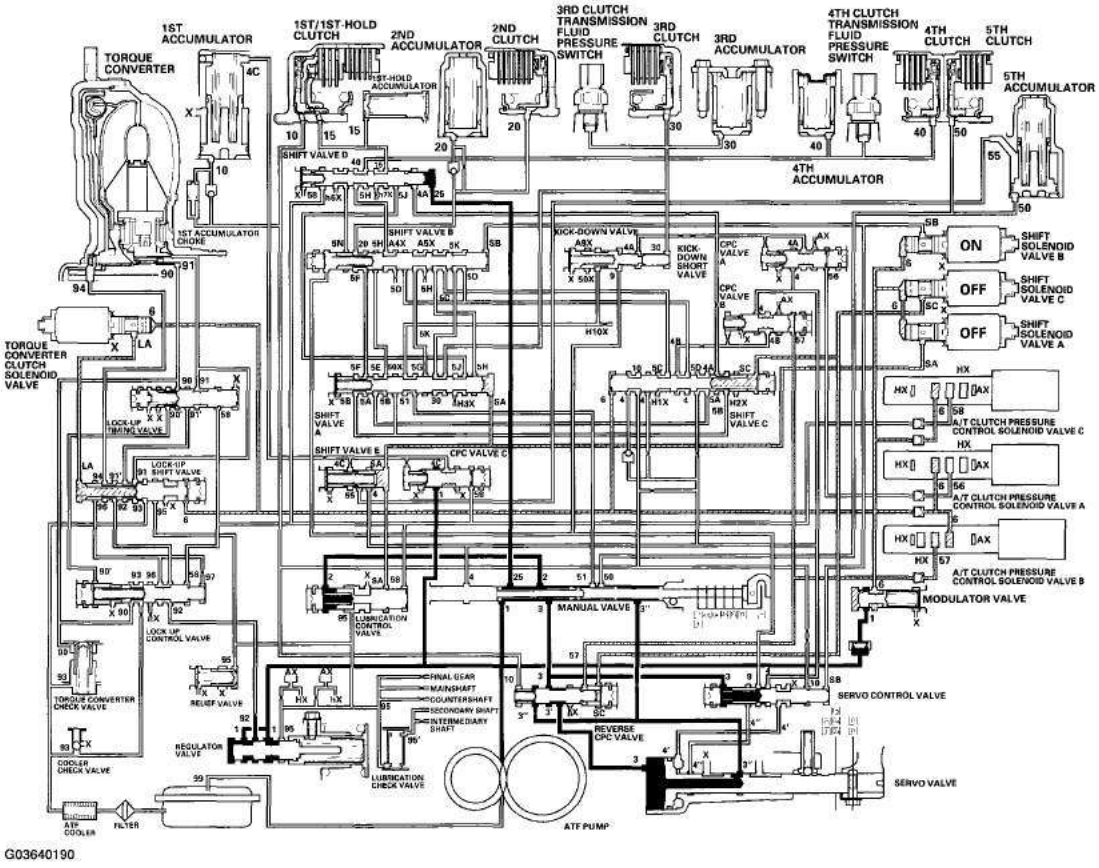


Fig. 55: Identifying Hydraulic Flow Diagram - P Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Lock up System

The lock up mechanism of the torque converter clutch operates in the D5 position (2nd, 3rd, 4th, and 5th), in the D4 position (2nd, 3rd, and 4th), and in the D3 position (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 the hydraulic control, the PCM optimizes the timing and amount of the lock up mechanism. When torque converter clutch solenoid valve is turned on by the PCM, the torque converter clutch solenoid valve pressure switches the lock up shift valve lock up on and off. The A/T clutch pressure control solenoid valve C, the lock up control valve, and lock up timing valve control the amount of lock up.

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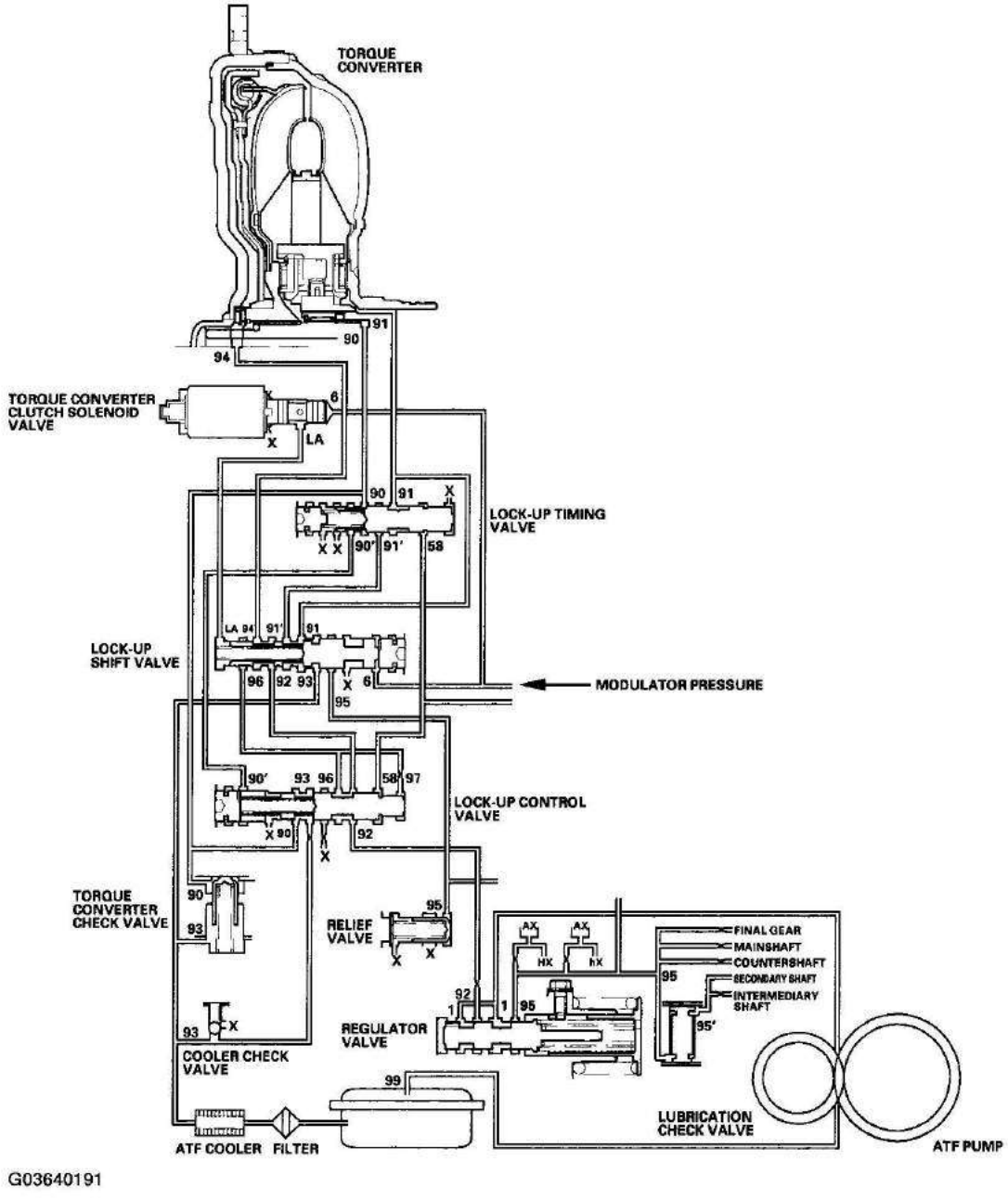


Fig. 56: Identifying Lock-Up System Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

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converter cover; torque converter clutch lock up ON, and the mainshaft rotates at the same as the engine.

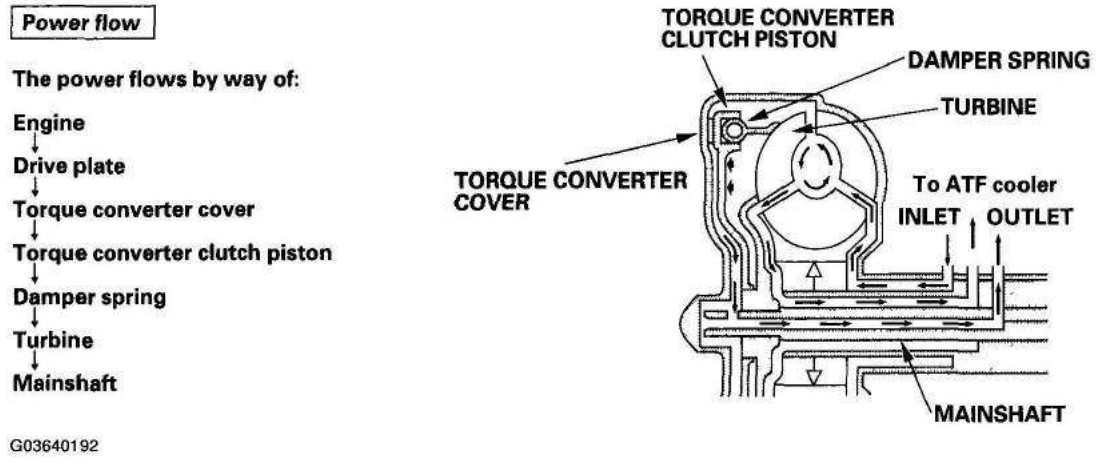


Fig. 57: Identifying Torque Converter Clutch Lock-Up ON Diagram (Engaging Torque Converter Clutch)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 lock up is released; torque converter clutch lock up OFF.

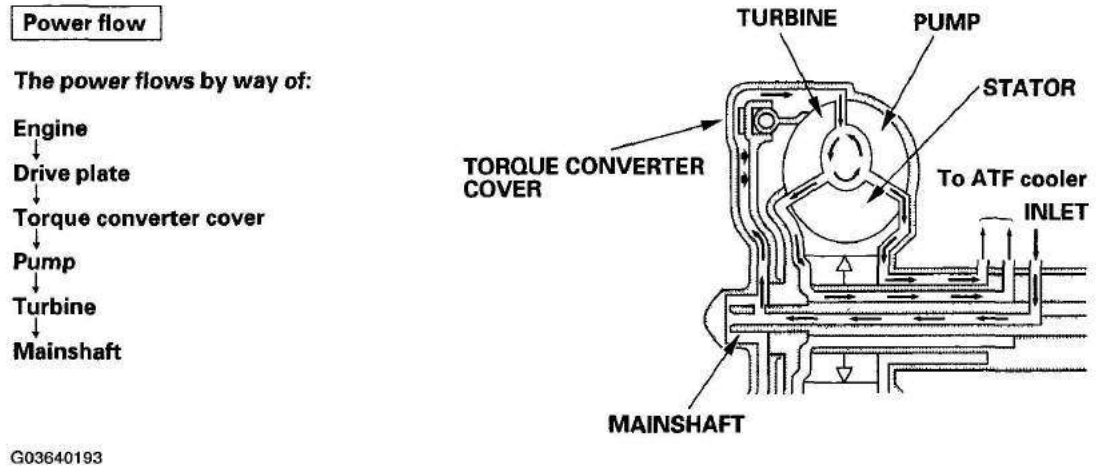


Fig. 58: Identifying Torque Converter Clutch Lock up OFF Diagram (Disengaging Torque Converter Clutch)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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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.

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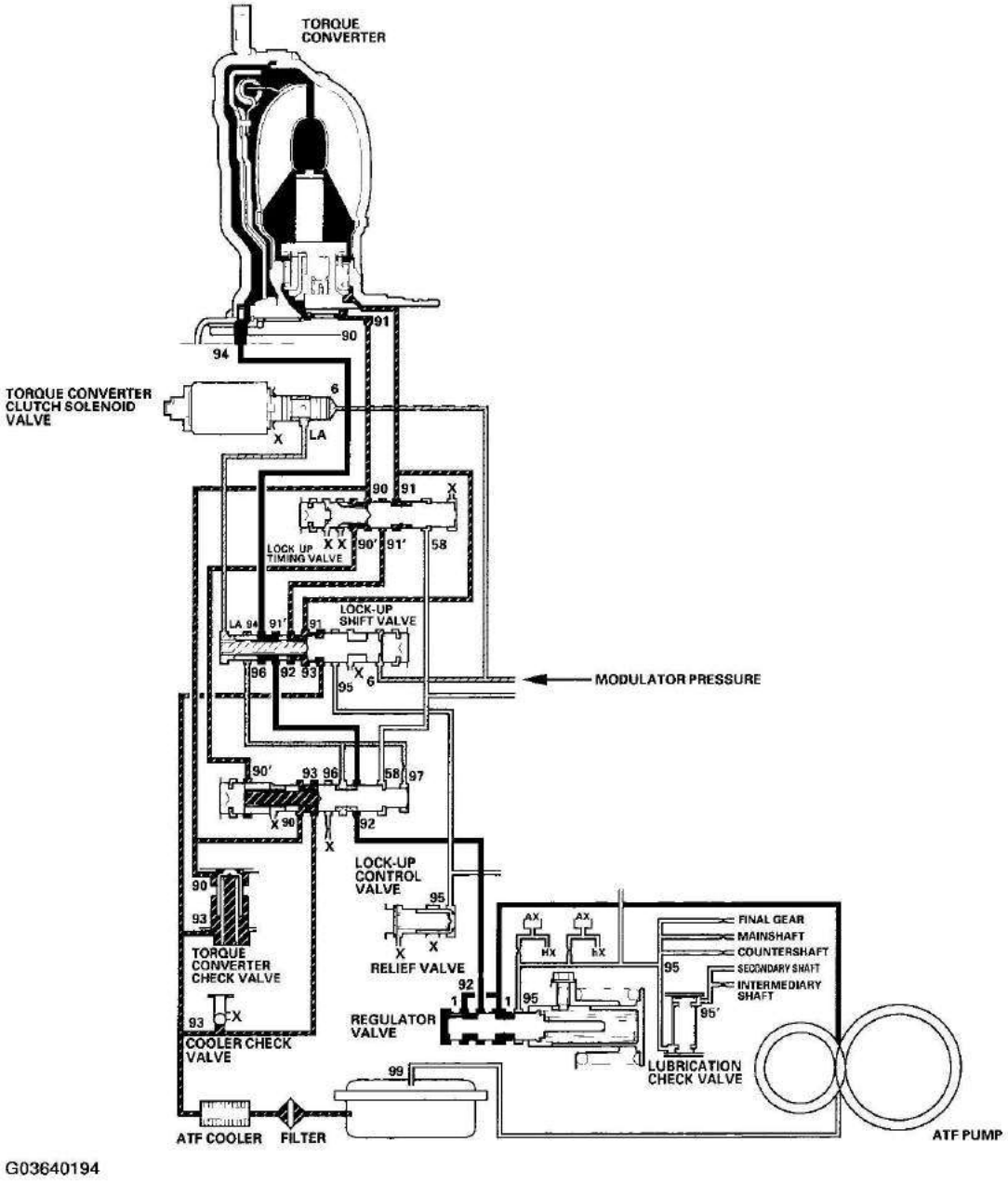


Fig. 59: Identifying No Lock-Up Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Partial Lock up

As the speed of the vehicle reaches the programmed 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

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pressure (91) is applied to the right side of the torque converter to engage the lock up 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.

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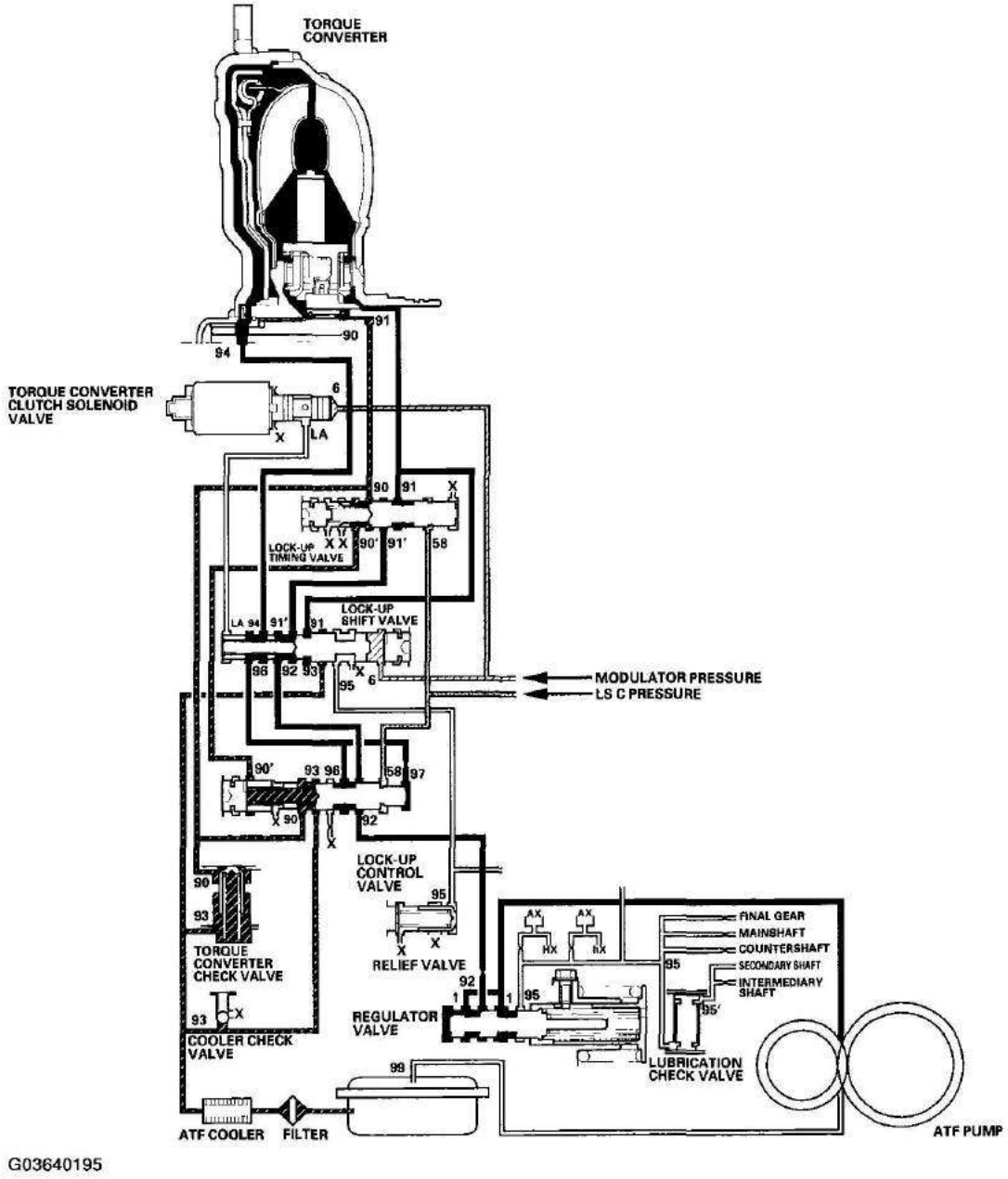


Fig. 60: Identifying Partial Lock-Up Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Full Lock up

When the vehicle speed increases, the PCM controls 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.

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

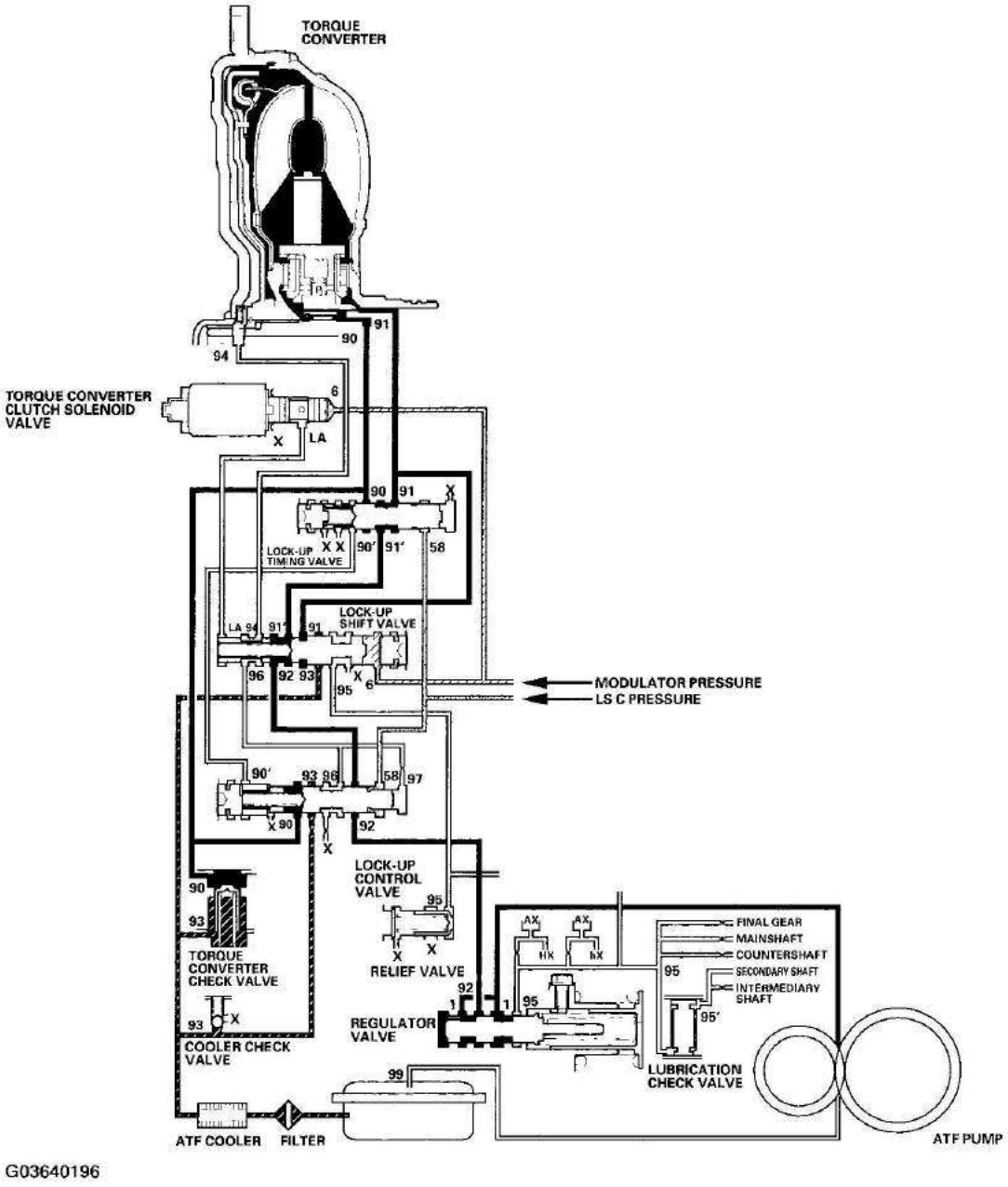


Fig. 61: Identifying Full Lock-Up Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Shift Lever

The shift lever has eight positions: P, R, N, D5, D4, D3, 2, 1 positions. The shift lever shifts between positions

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along the gate in the A/T gear position indicator panel. The shift lever can shift out of the P position and into the R position without pressing the shift lever. The shift lock/reverse lock mechanism is an additional shift lever lockout mechanism.

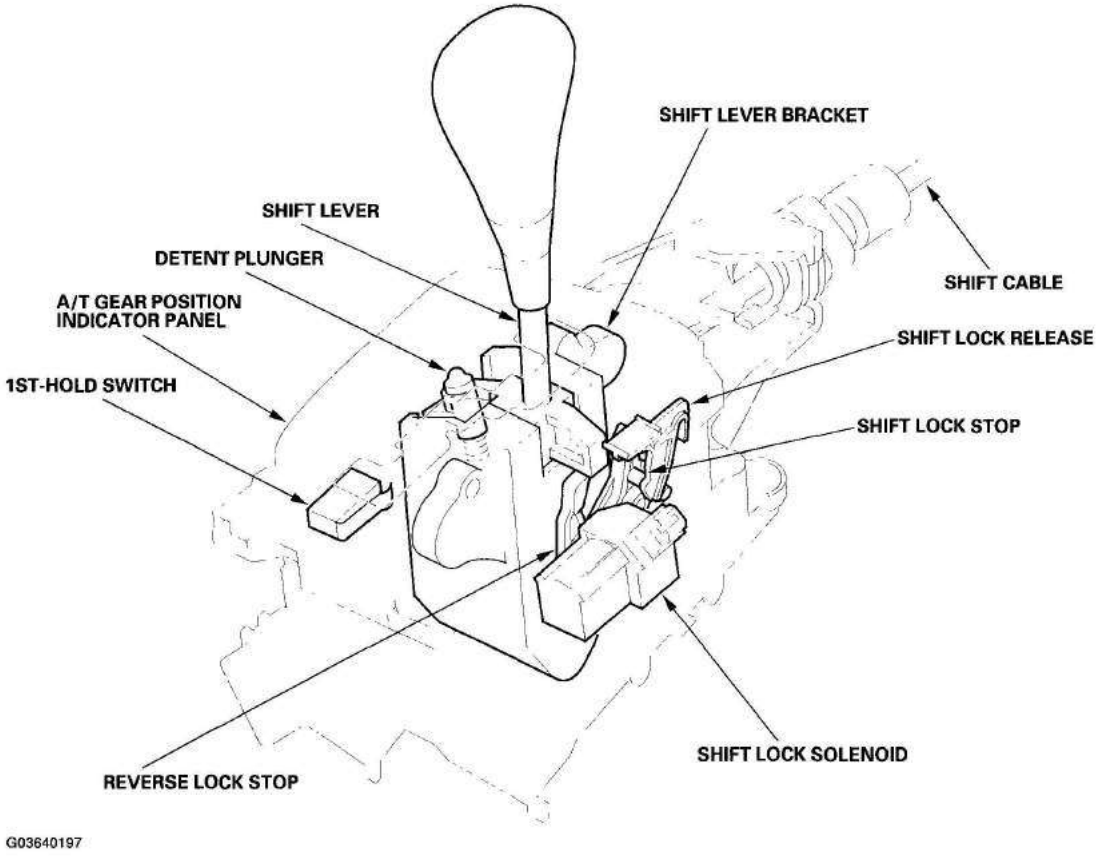


Fig. 62: Identifying Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Shift Lock/Reverse Lock Mechanism

The shift lock system reduces the risk of unintentional engine starting. Starting the engine is possible only in the P and N positions. The shift lock system and the key interlock system make up the interlock control system. The key interlock mechanism is located in the steering lock assembly.

The shift lock mechanism consists of the shift lock solenoid, shift lock stop, shift lock release, and related parts. The reverse lock mechanism shares the shift lock solenoid with the shift lock mechanism. The reverse lock stop and the shift lock stop are interlocked with the shift lock solenoid operation. The shift lock solenoid is electronically controlled by these shift lock control system signals: brake pedal position switch signal, interlock control signal, and transmission range switch P position signal. If the shift lock solenoid does not operate, the shift lock/reverse lock mechanism can be released by pressing the shift lock release.

In the P position while pressing the brake pedal, the shift lock solenoid is turned ON, and the shift lock solenoid

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plunger is retracted to release the shift lock stop. This allows the shift lever to be moved.

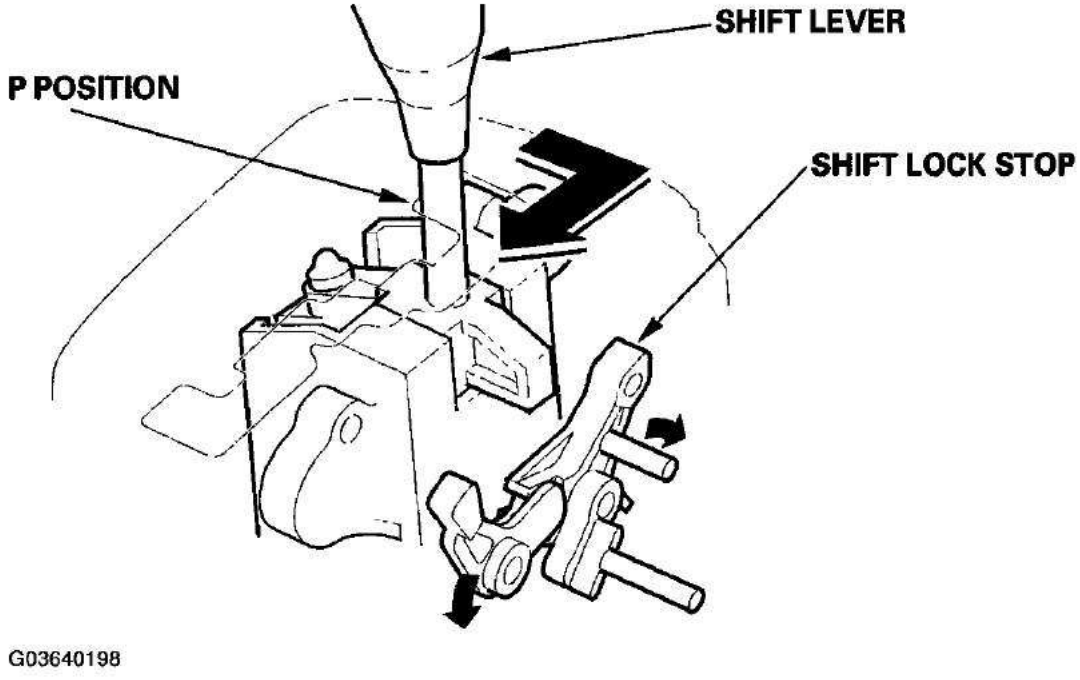


Fig. 63: Identifying Shift Lock/Reverse Lock Mechanism (P Position) - Shift Lock Solenoid Is Turned ON
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the brake pedal is released, the shift lock solenoid remains OFF, and the shift lock stop locks to block the shift lever in the P position.

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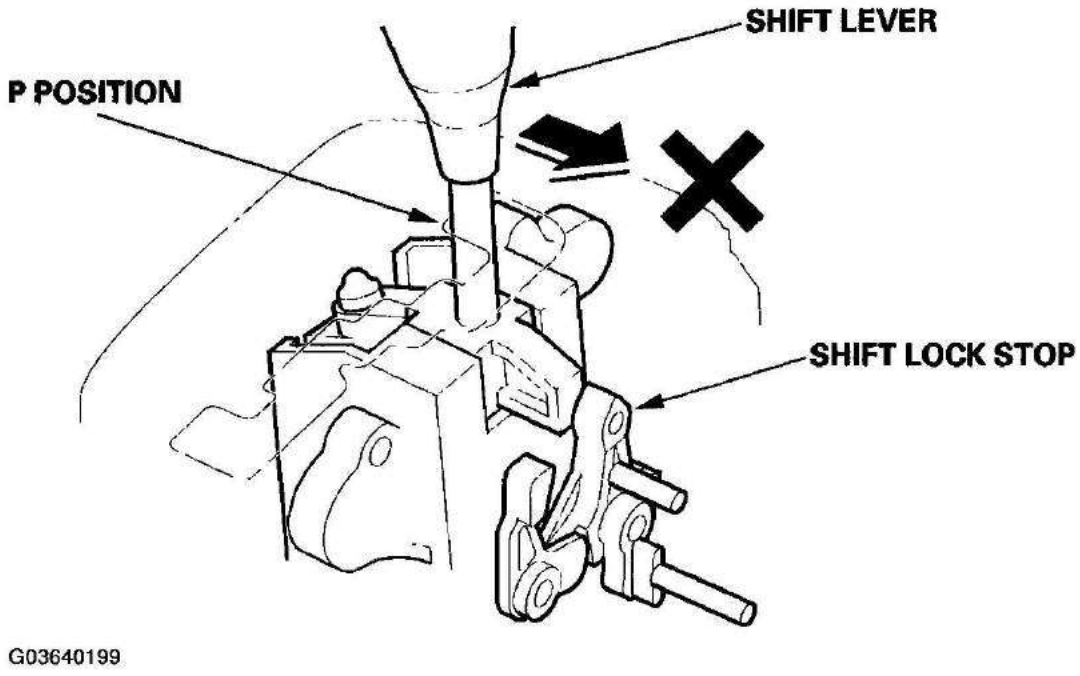


Fig. 64: Identifying Shift Lock/Reverse Lock Mechanism (P Position) - Shift Lock Solenoid Remains OFF
Courtesy of AMERICAN HONDA MOTOR CO., INC.

When the shift lever is shifted to the R position from the D5 position and N position (under certain conditions), the shift lock solenoid is turned ON, and the shift lock solenoid plunger is retracted to release the reverse lock stop. This allows the shift lever to be moved to the R position.

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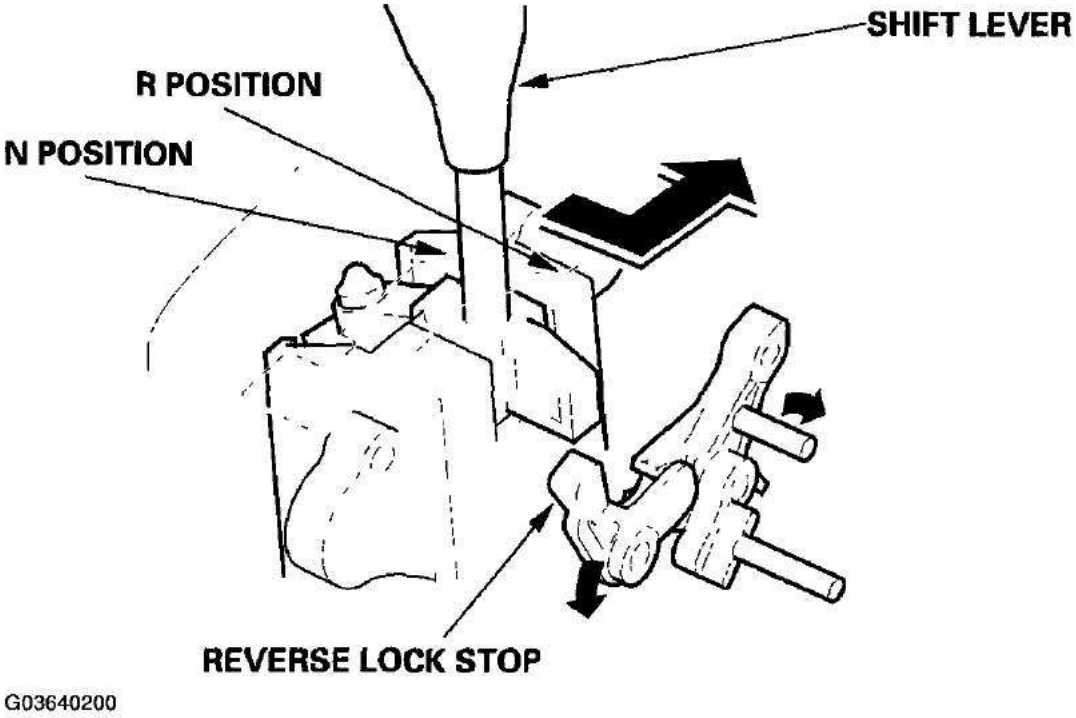


Fig. 65: Identifying Shift Lock/Reverse Lock Mechanism (R Position) - Shift Lock Solenoid Is Turned ON
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the conditions of turning ON the solenoid are not met, the shift lock solenoid remains OFF, and the reverse lock stop locks to block the shift lever in the N position.

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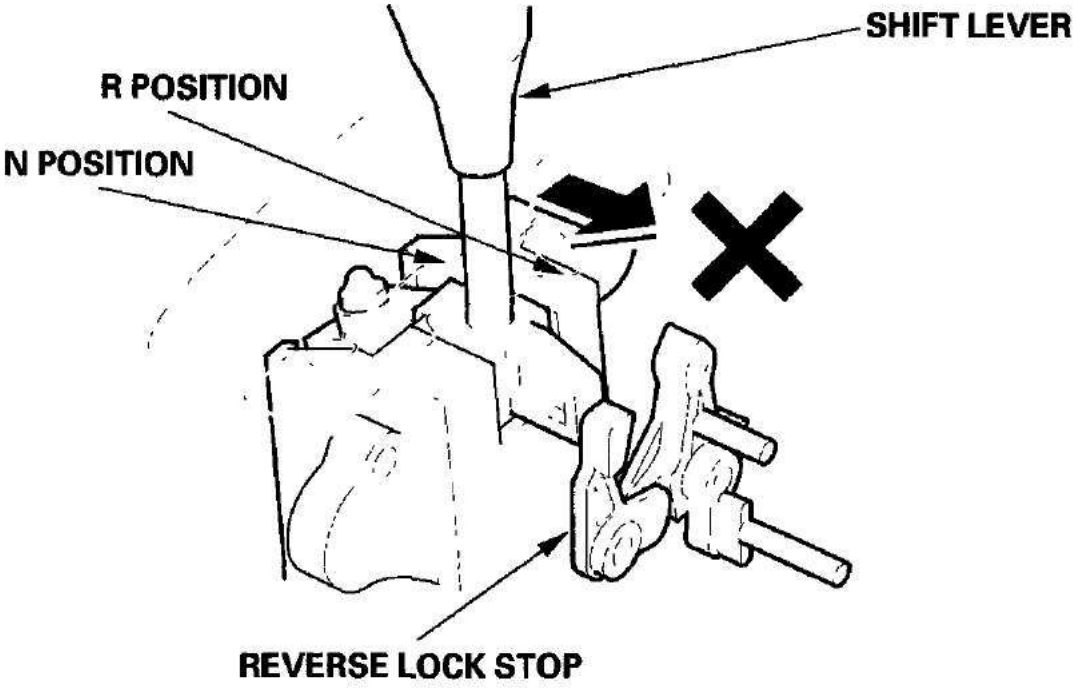


Fig. 66: Identifying Shift Lock/Reverse Lock Mechanism (N Position) - Shift Lock Solenoid Remains OFF
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Circuit Diagram - PCM A/T Control System - 2003-2004 Models

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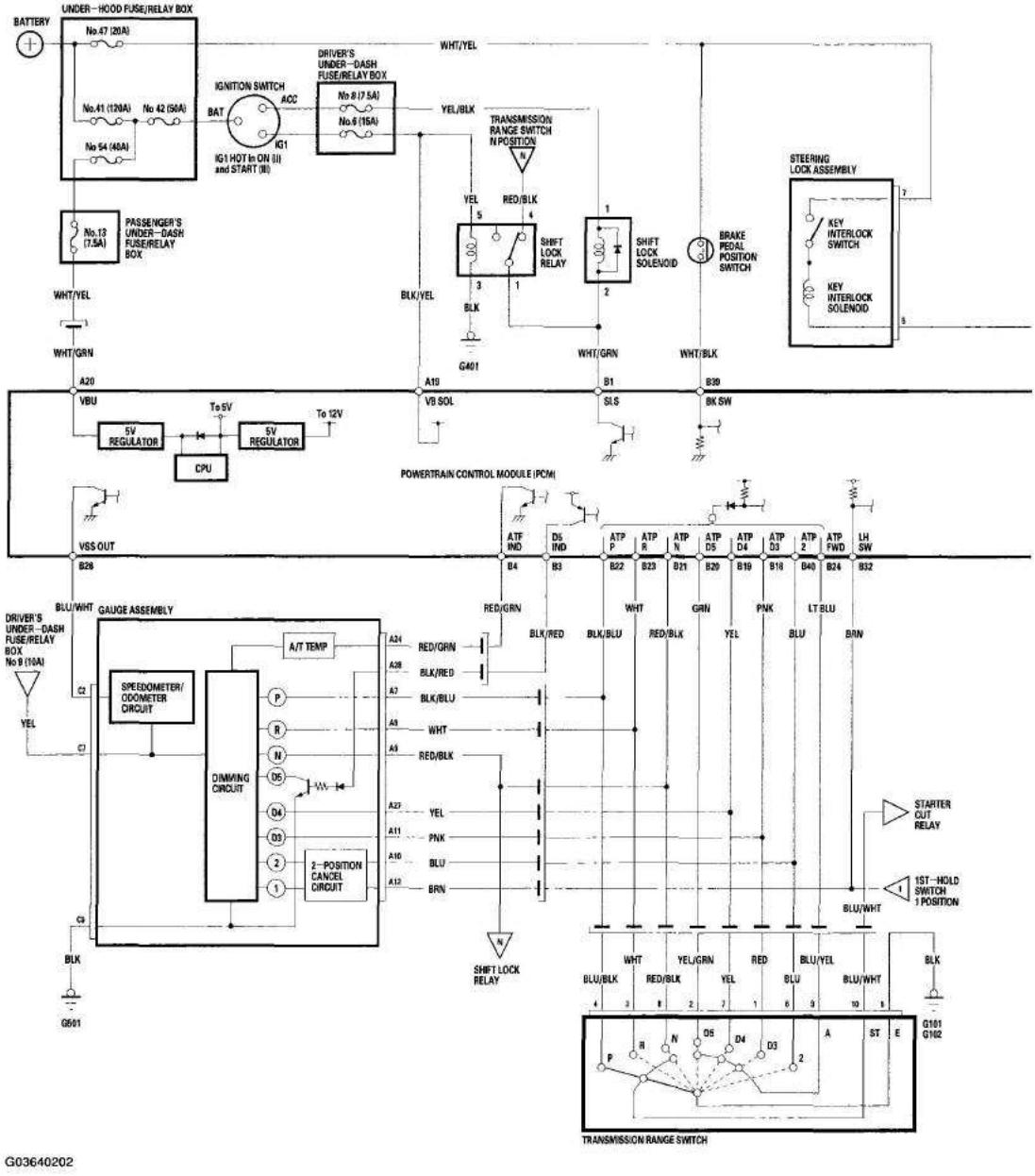


Fig. 67: Identifying Circuit Diagram - PCM A/T Control System - 2003-2004 Models (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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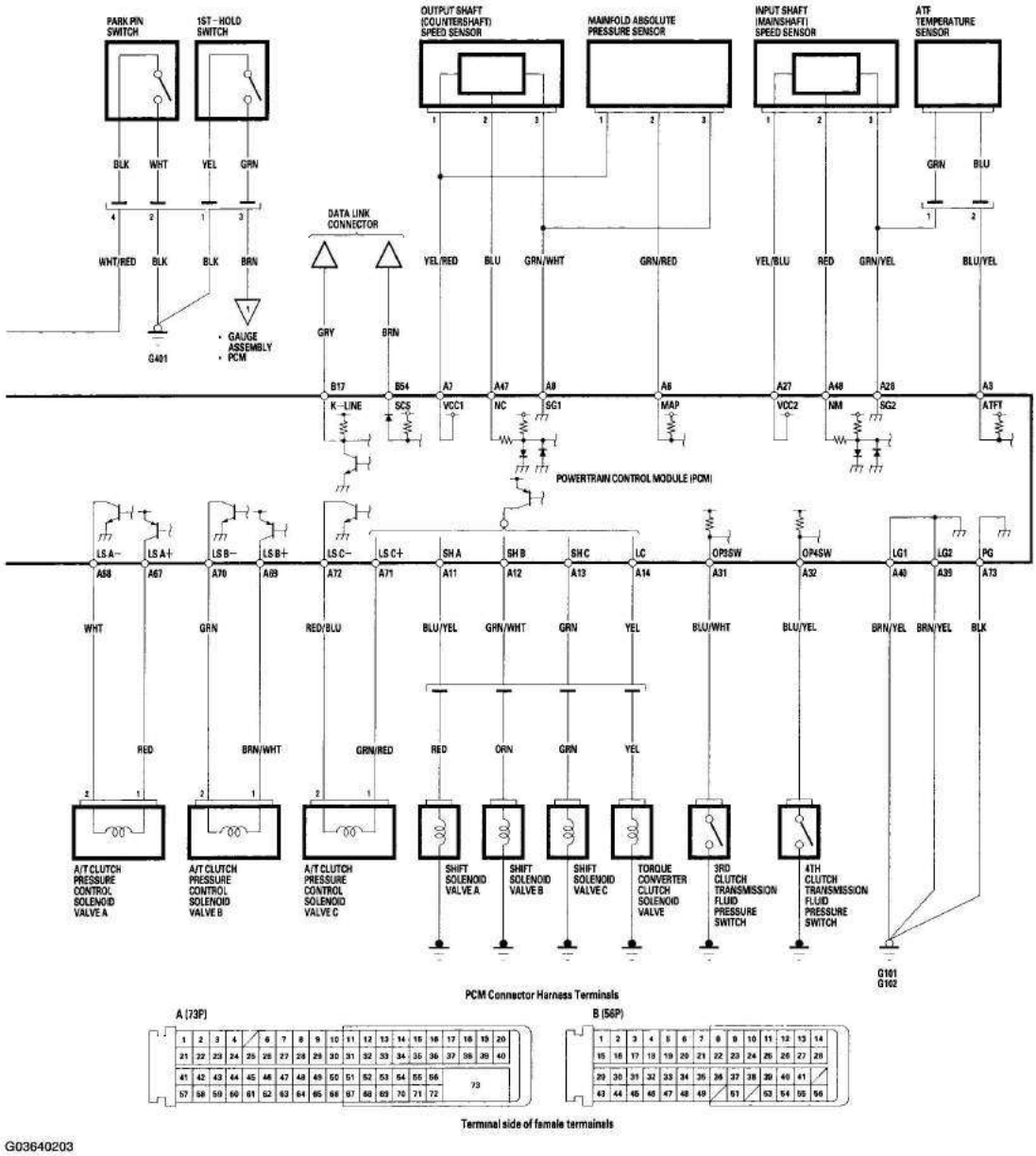
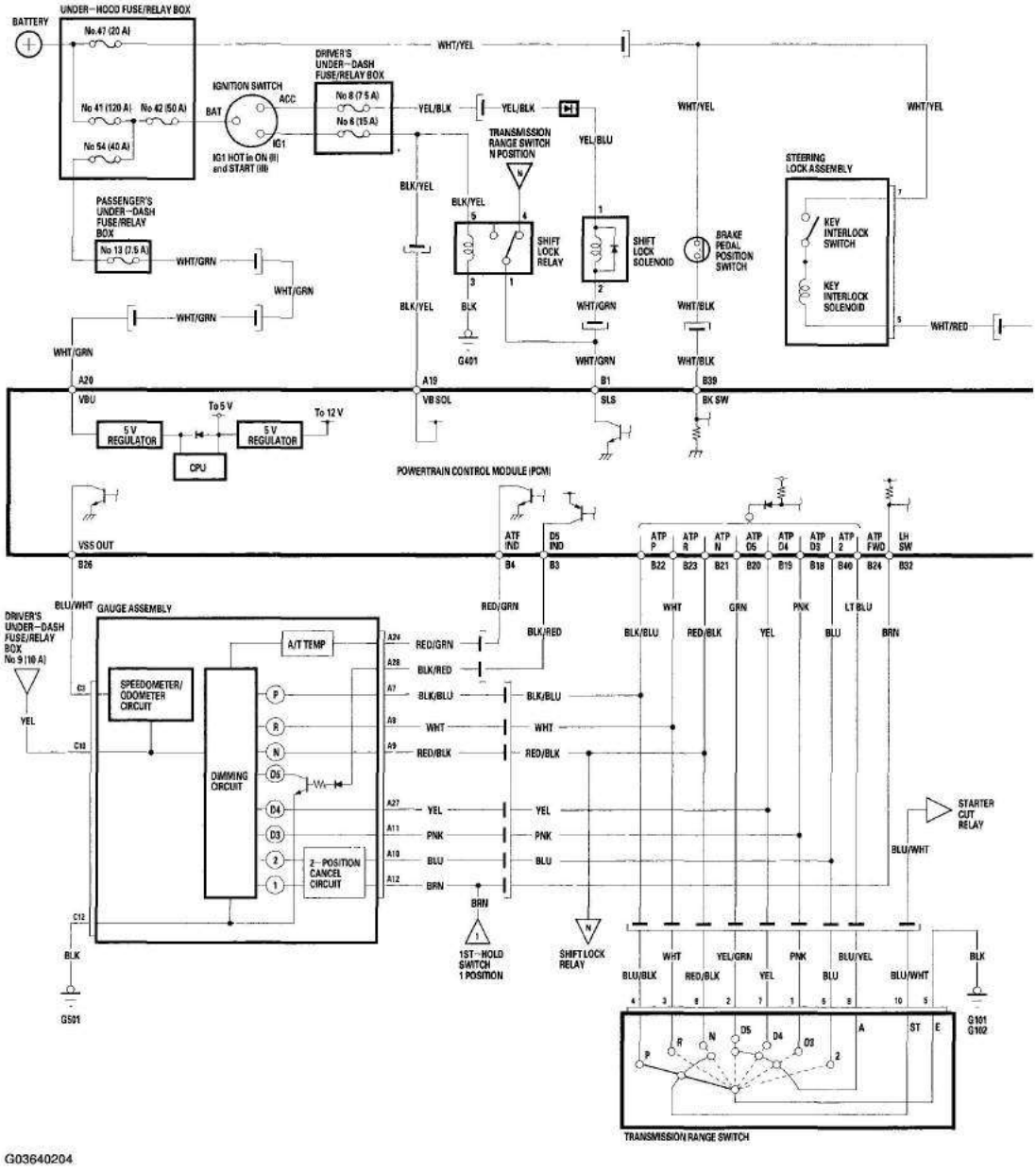


Fig. 68: Identifying Circuit Diagram - PCM A/T Control System - 2003-2004 Models (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Circuit Diagram - PCM A/T Control System - 2005-2006 Models

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Fig. 69: Identifying Circuit Diagram - PCM A/T Control System - 2005-2006 Models (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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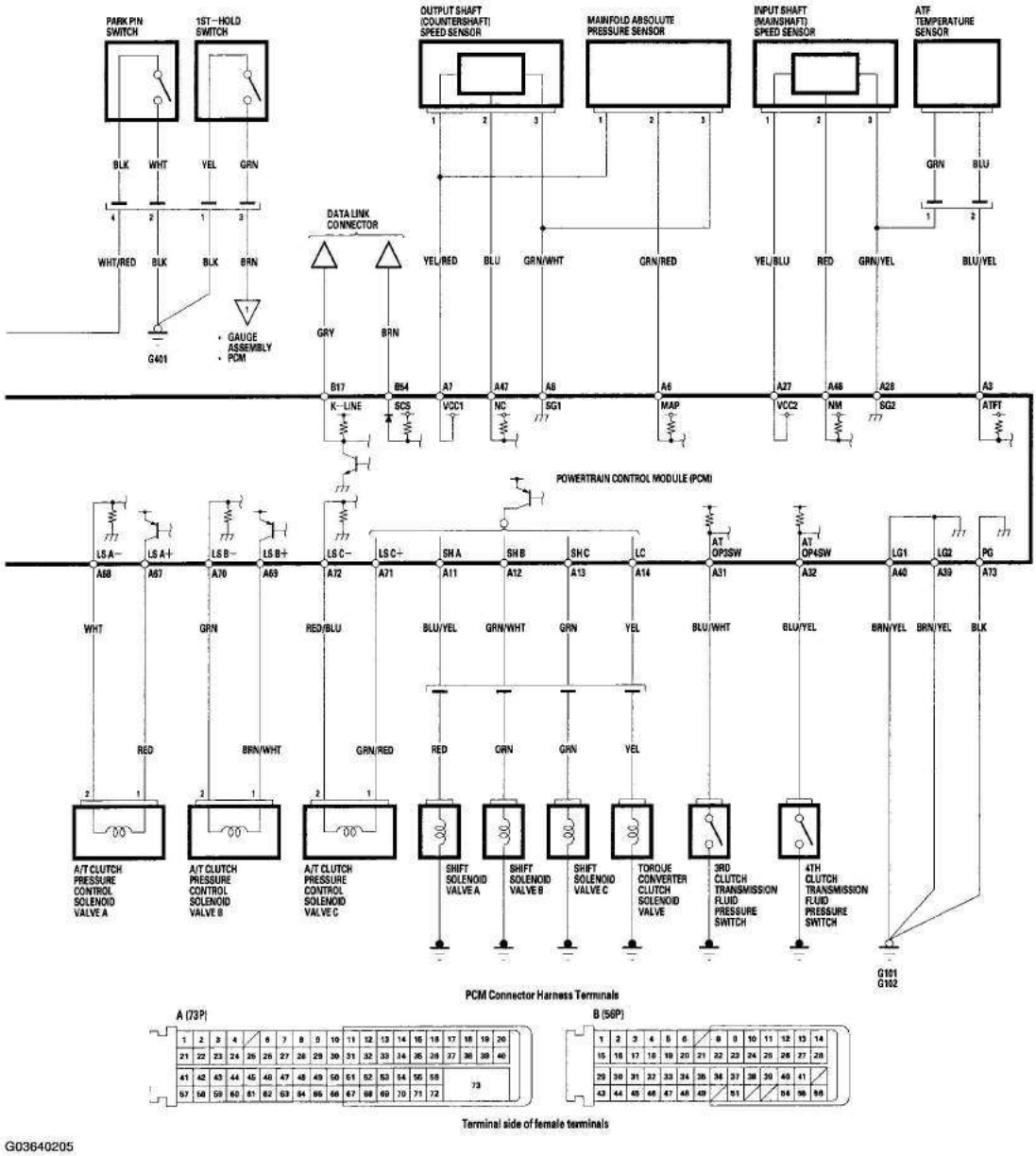


Fig. 70: Identifying Circuit Diagram - PCM A/T Control System - 2005-2006 Models (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.**

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- **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 HAS.
2. Start the engine.
3. Move the shift lever through all positions, stopping for at least 1 second in each position. 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 - Intermittent failure, the system is OK at this time. Check for an intermittent short in the wire between the transmission range switch, PCM and gauge assembly. 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 52 .
5. Turn the ignition switch ON (II).
6. Measure the voltage between transmission range switch connector terminals No. 4 and No. 5.

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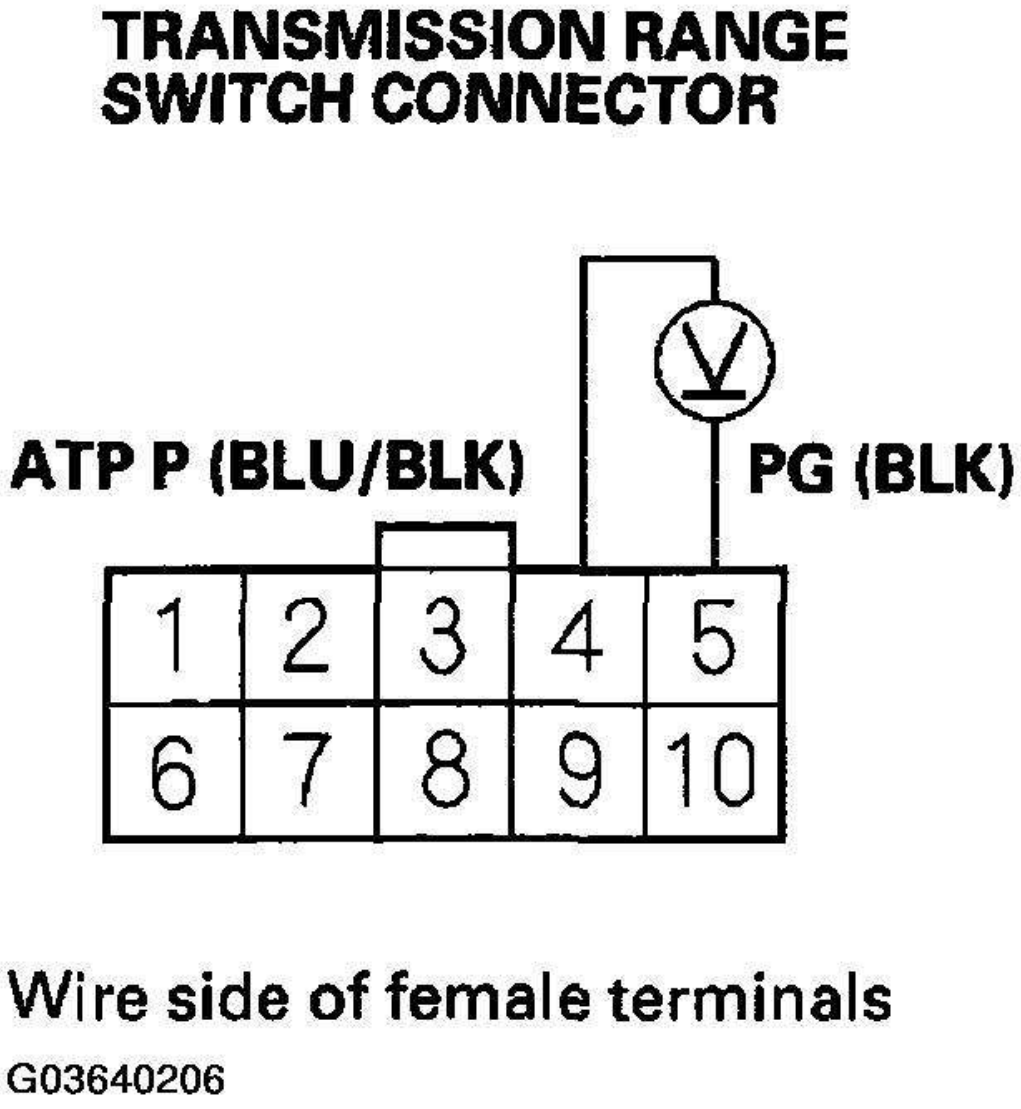


Fig. 71: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 4 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

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

7. Turn the ignition switch OFF.

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8. Jump the SCS line with the HAS.
9. Disconnect PCM connector B (56P).
10. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
11. Check for continuity between PCM connector terminal B22 and body ground.

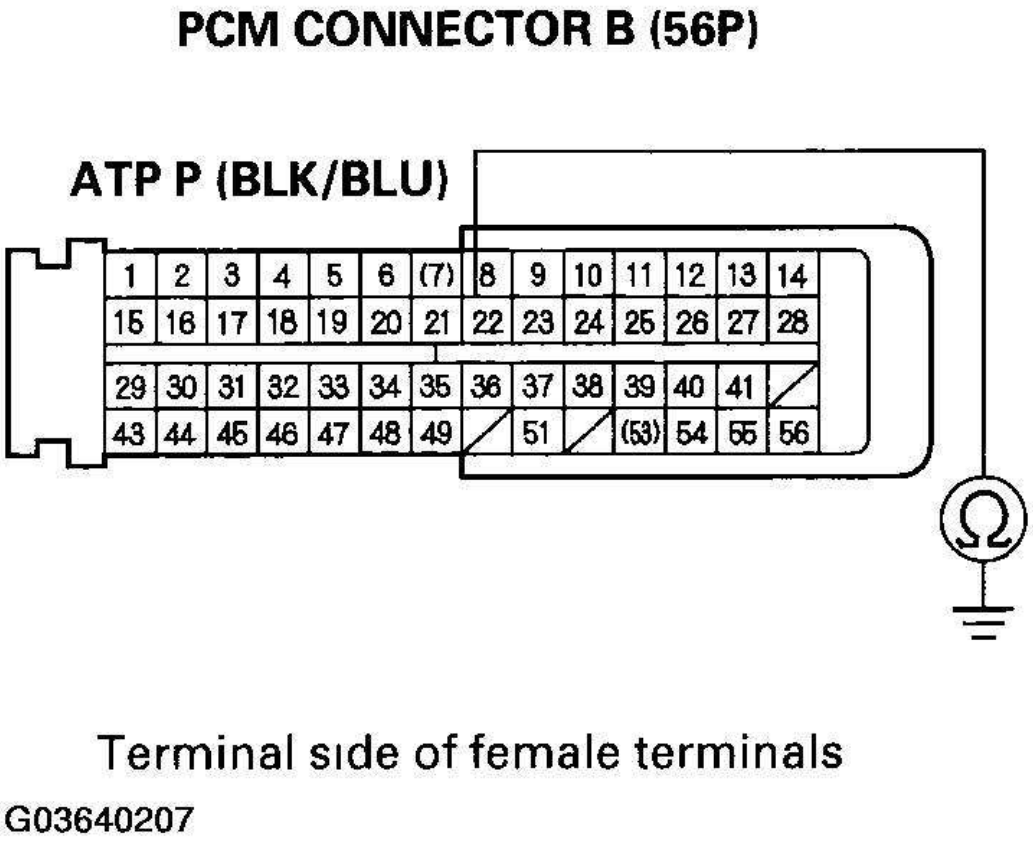


Fig. 72: Checking For Continuity Between PCM Connector Terminal B22 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B22, transmission range switch, and gauge assembly, then go to step 52 .

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.

12. Measure the voltage between transmission range switch connector terminals No. 3 and No. 5.

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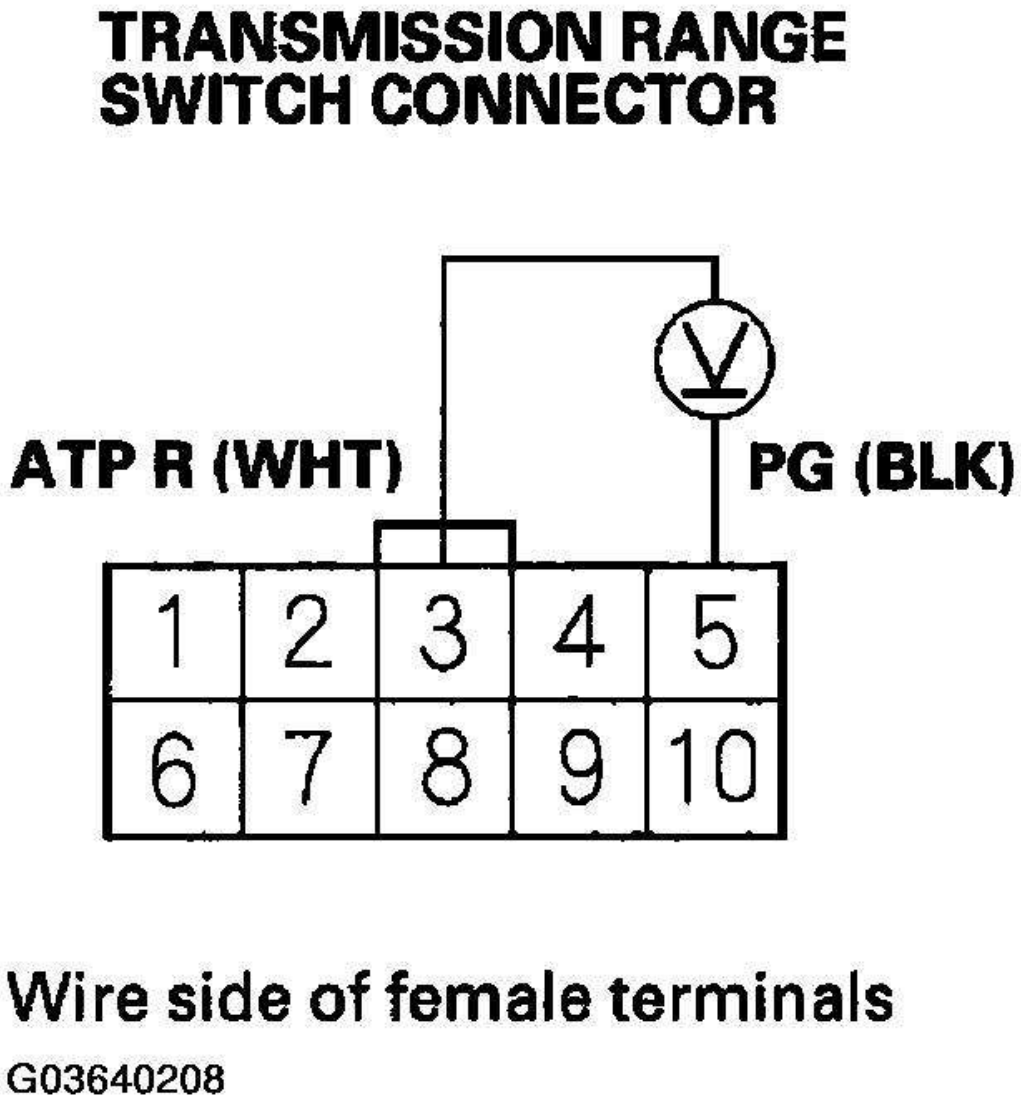


Fig. 73: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 3 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 18 .
NO - Go to step 13.

13. Turn the ignition switch OFF.

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14. Jump the SCS line with the HAS.
15. Disconnect PCM connector B (56P).
16. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
17. Check for continuity between PCM connector terminal B23 and body ground.

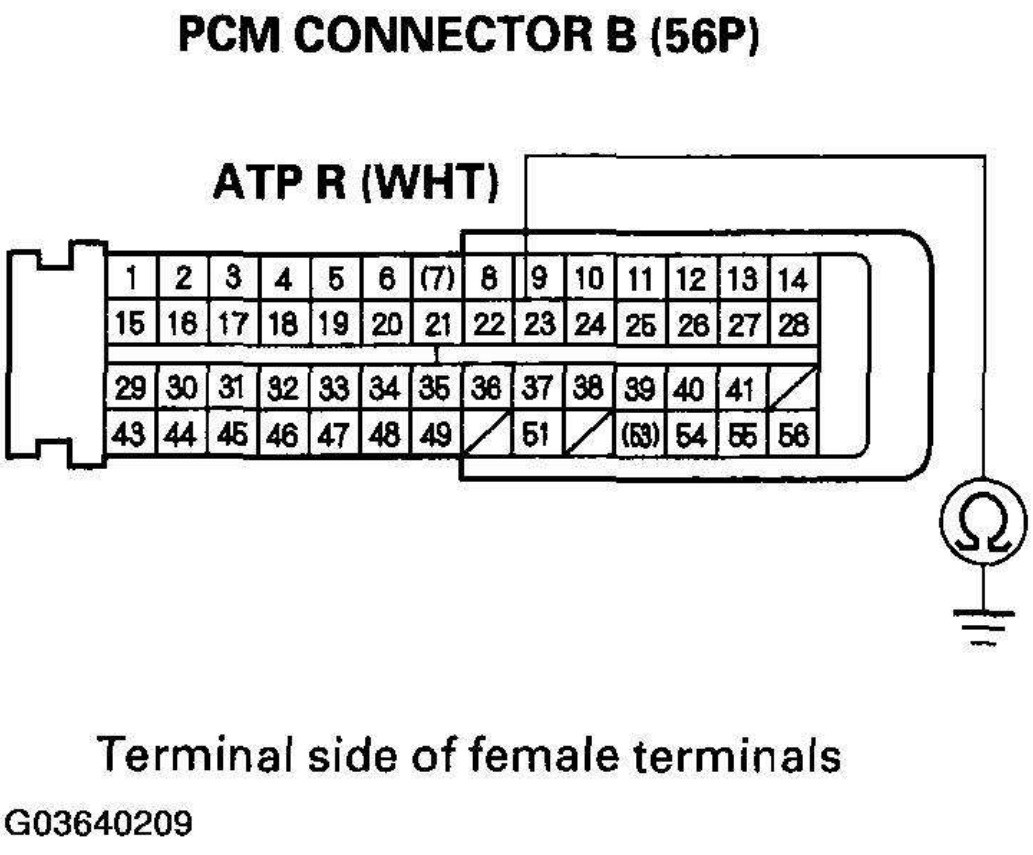


Fig. 74: Checking For Continuity Between PCM Connector Terminal B23 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B23, transmission range switch, and gauge assembly, then go to step 52 .

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.

18. Measure the voltage between transmission range switch connector terminals No. 8 and No. 5.

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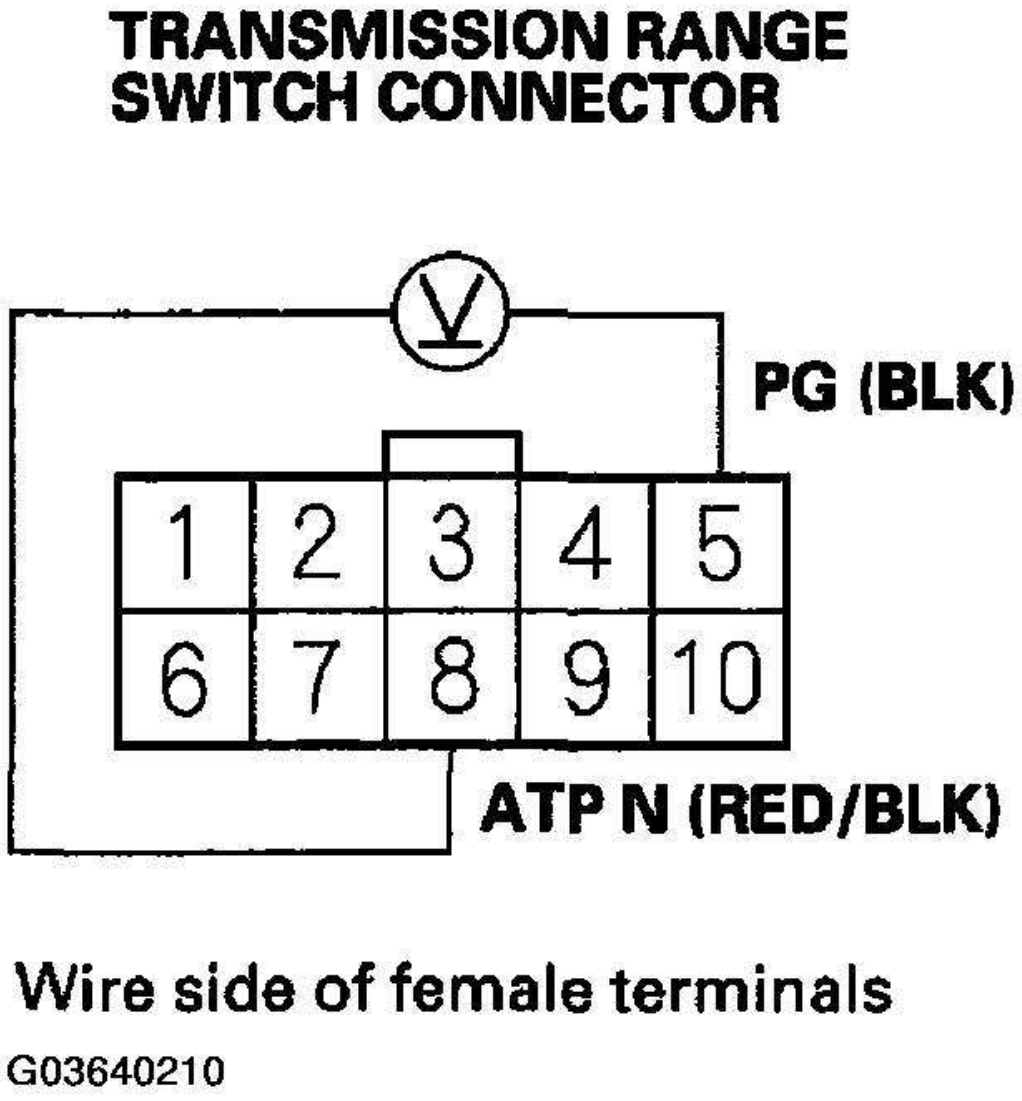


Fig. 75: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 8 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

YES - Go to step 24 .
NO - Go to step 19.

19. Turn the ignition switch OFF.

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20. Jump the SCS line with the HAS.
21. Disconnect PCM connector B (56P).
22. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
23. Check for continuity between PCM connector terminal B21 and body ground.

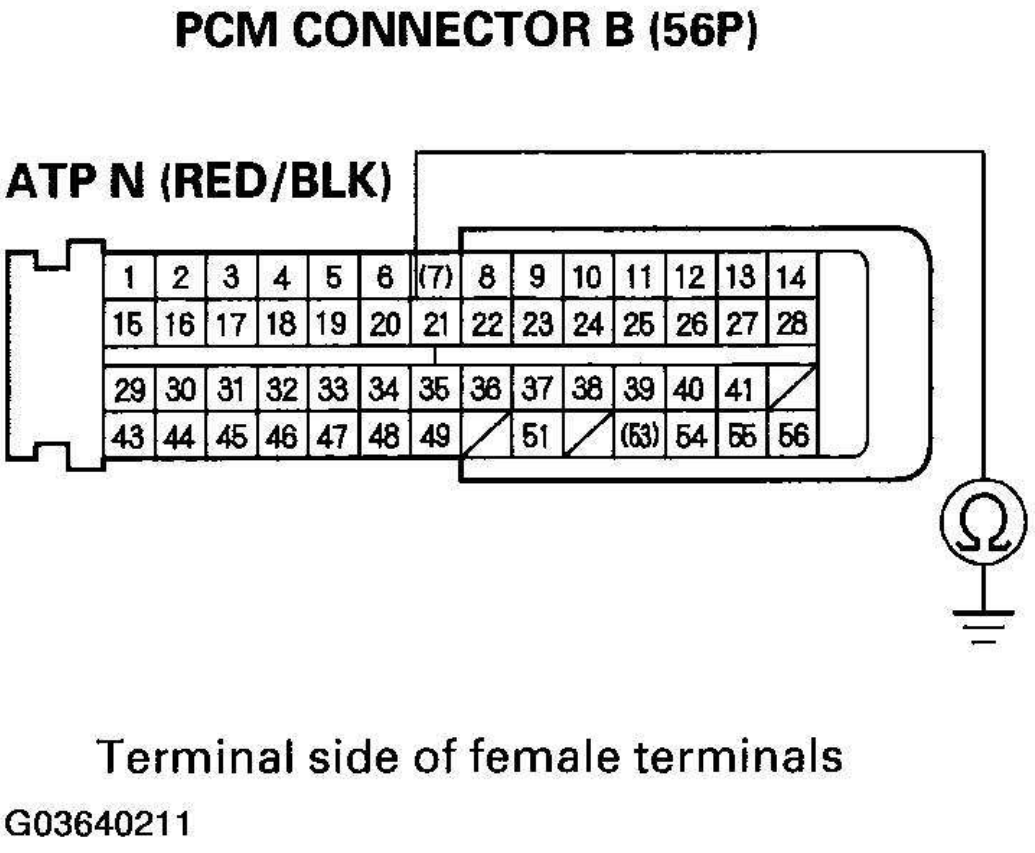


Fig. 76: Checking For Continuity Between PCM Connector Terminal B21 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B21, transmission range switch, and gauge assembly, then go to step 52 .

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.

24. Measure the voltage between transmission range switch connector terminals No. 2 and No. 5.

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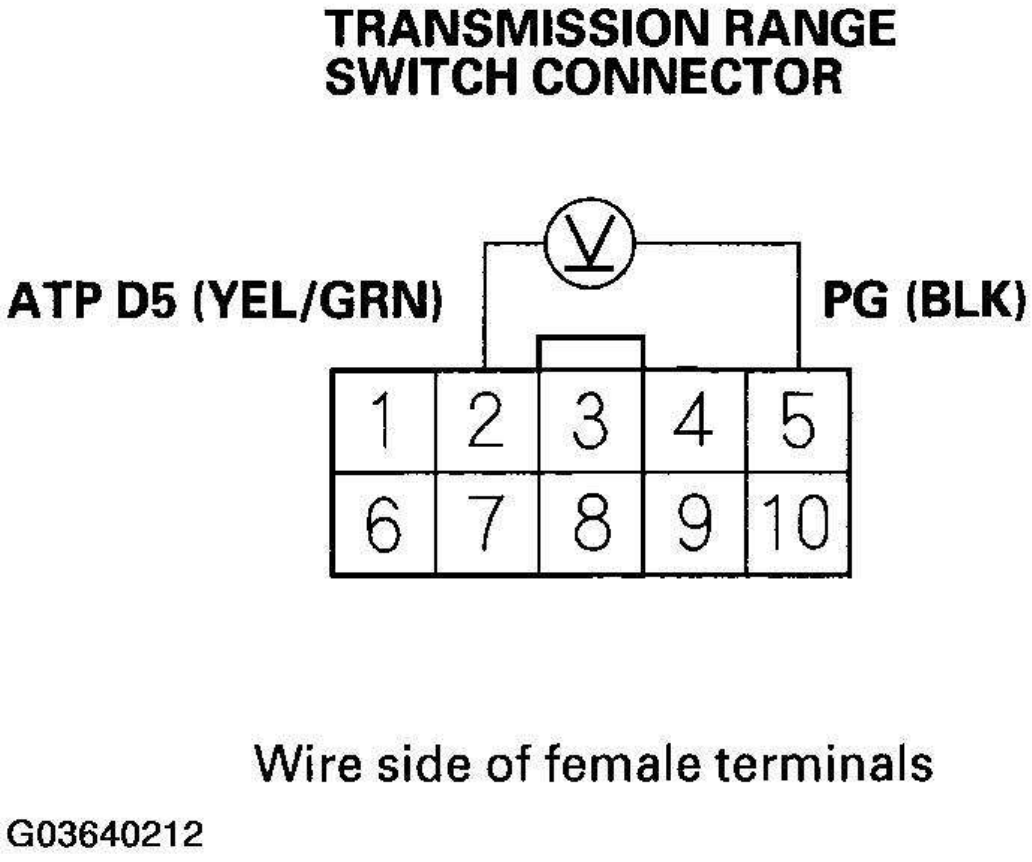


Fig. 77: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 2 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

YES - Go to step 29 .
NO - Go to step 25.

25. Turn the ignition switch OFF.
26. Jump the SCS line with the HAS.
27. Disconnect PCM connector B (56P).
28. Check for continuity between PCM connector terminal B20 and body ground.

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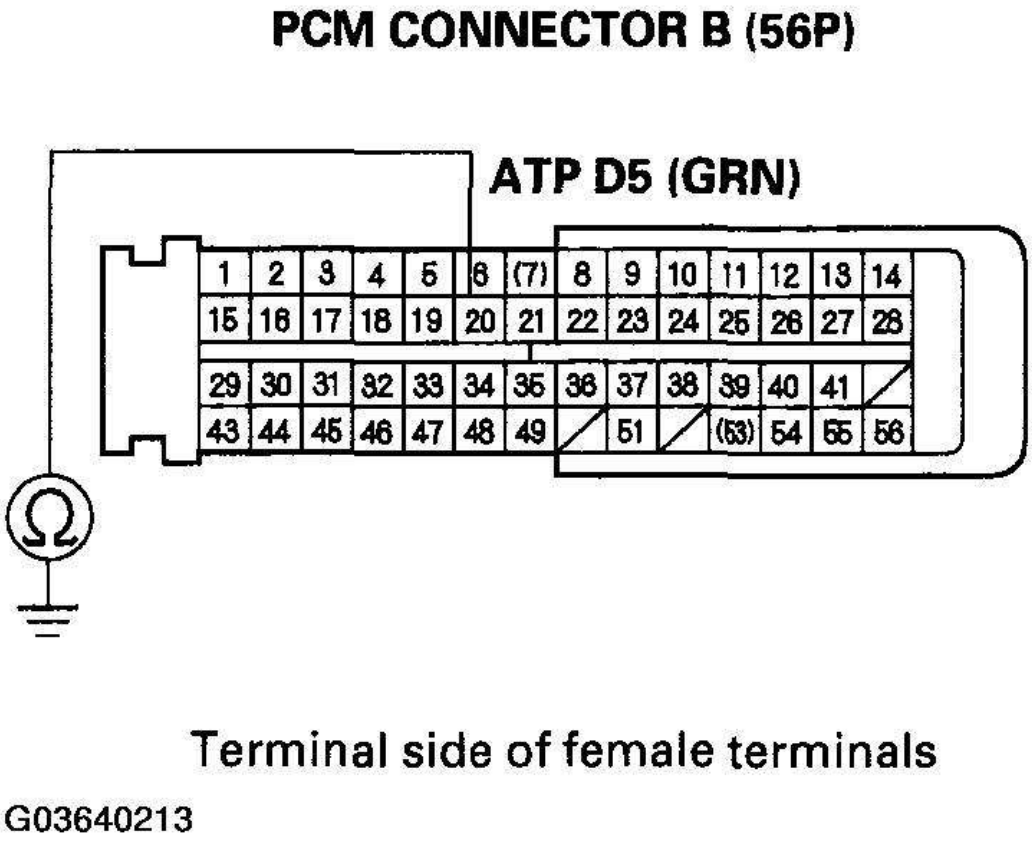


Fig. 78: Checking For Continuity Between PCM Connector Terminal B20 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B20, transmission range switch, then go to step 52 .

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.

29. Measure the voltage between transmission range switch connector terminals No. 7 and No. 5.

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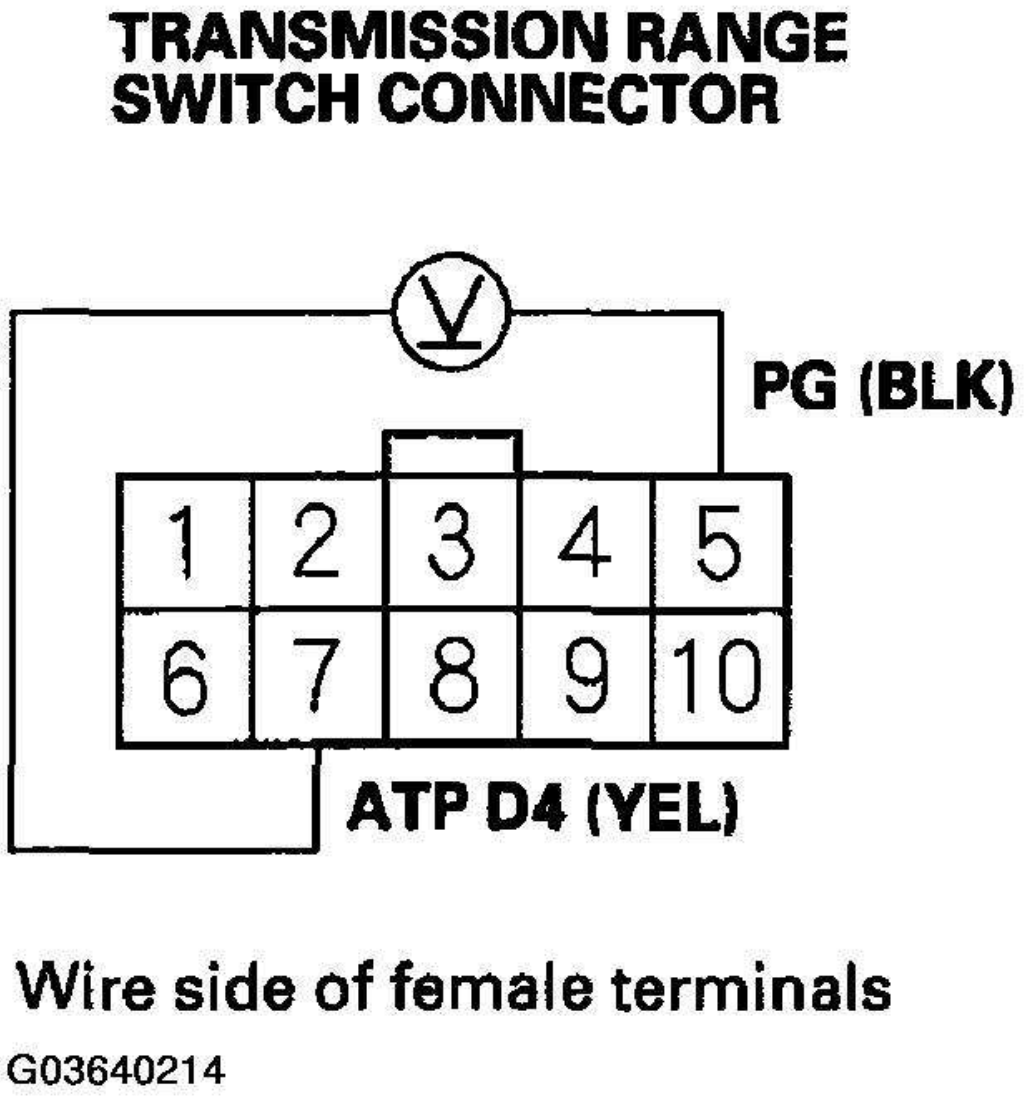


Fig. 79: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 7 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

YES - Go to step 35 .
NO - Go to step 30.

30. Turn the ignition switch OFF.

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31. Jump the SCS line with the HAS.
32. Disconnect PCM connector B (56P).
33. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
34. Check for continuity between PCM connector terminal B19 and body ground.

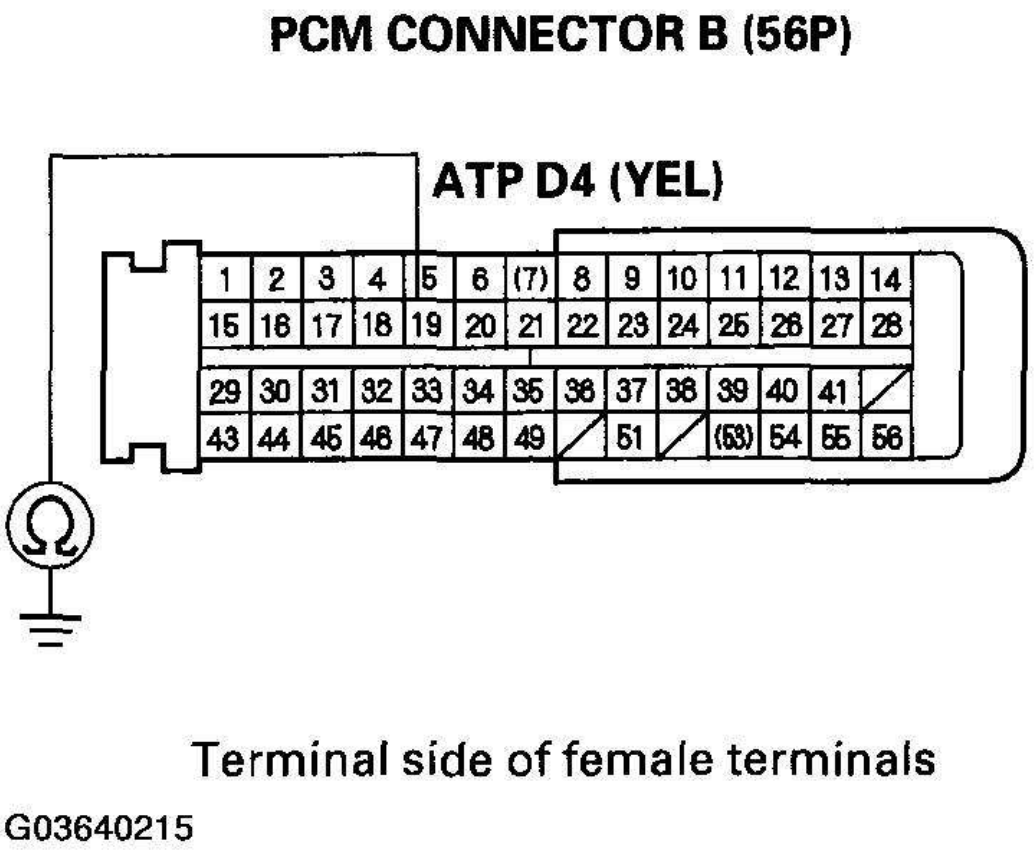


Fig. 80: Checking For Continuity Between PCM Connector Terminal B19 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B19, transmission range switch, and gauge assembly, then go to step 52 .

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.

35. Measure the voltage between transmission range switch connector terminals No. 1 and No. 5.

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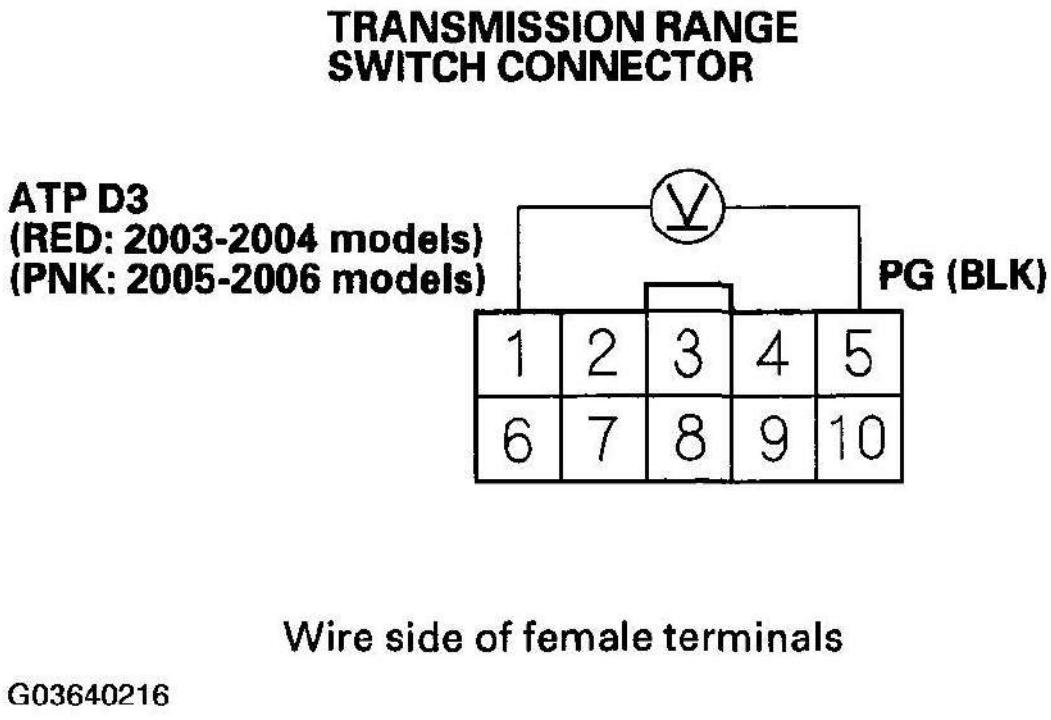


Fig. 81: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 1 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

YES - Go to step 41 .
NO - Go to step 36.

36. Turn the ignition switch OFF.
37. Jump the SCS line with the HAS.
38. Disconnect PCM connector B (56P).
39. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
40. Check for continuity between PCM connector terminal B18 and body ground.

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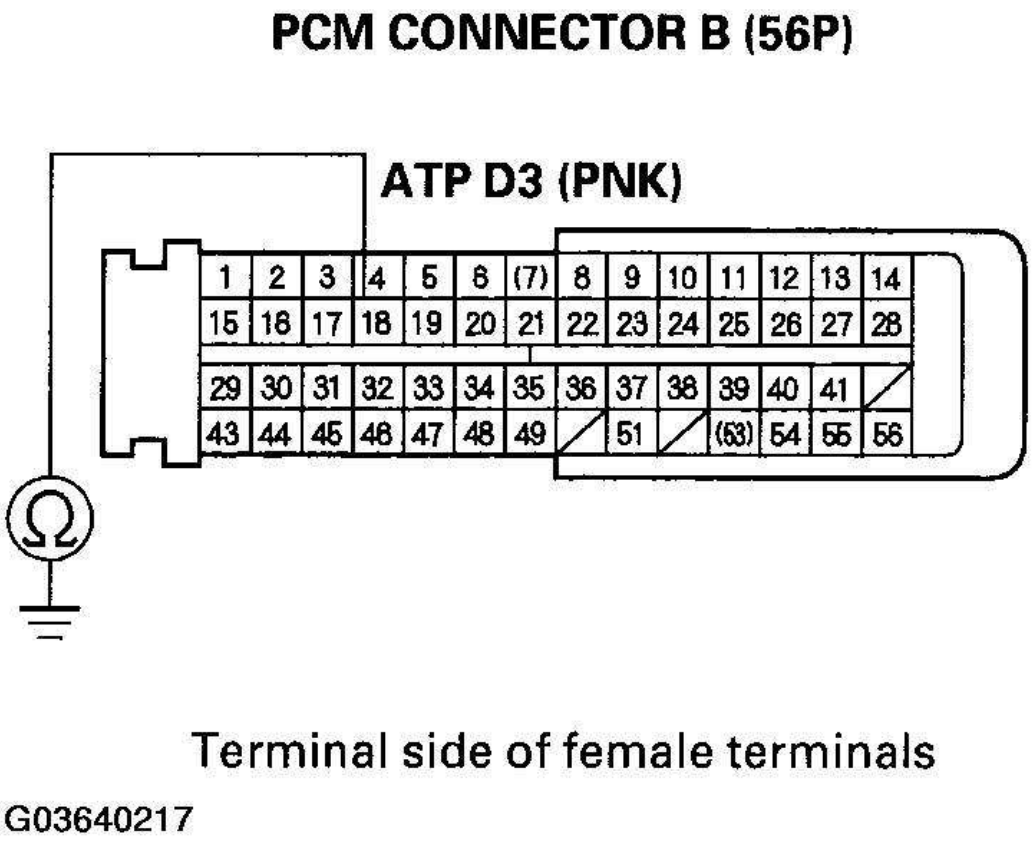


Fig. 82: Checking For Continuity Between PCM Connector Terminal B18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B18, transmission range switch, and gauge assembly, then go to step 52 .

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.

41. Measure the voltage between transmission range switch connector terminals No. 6 and No. 5.

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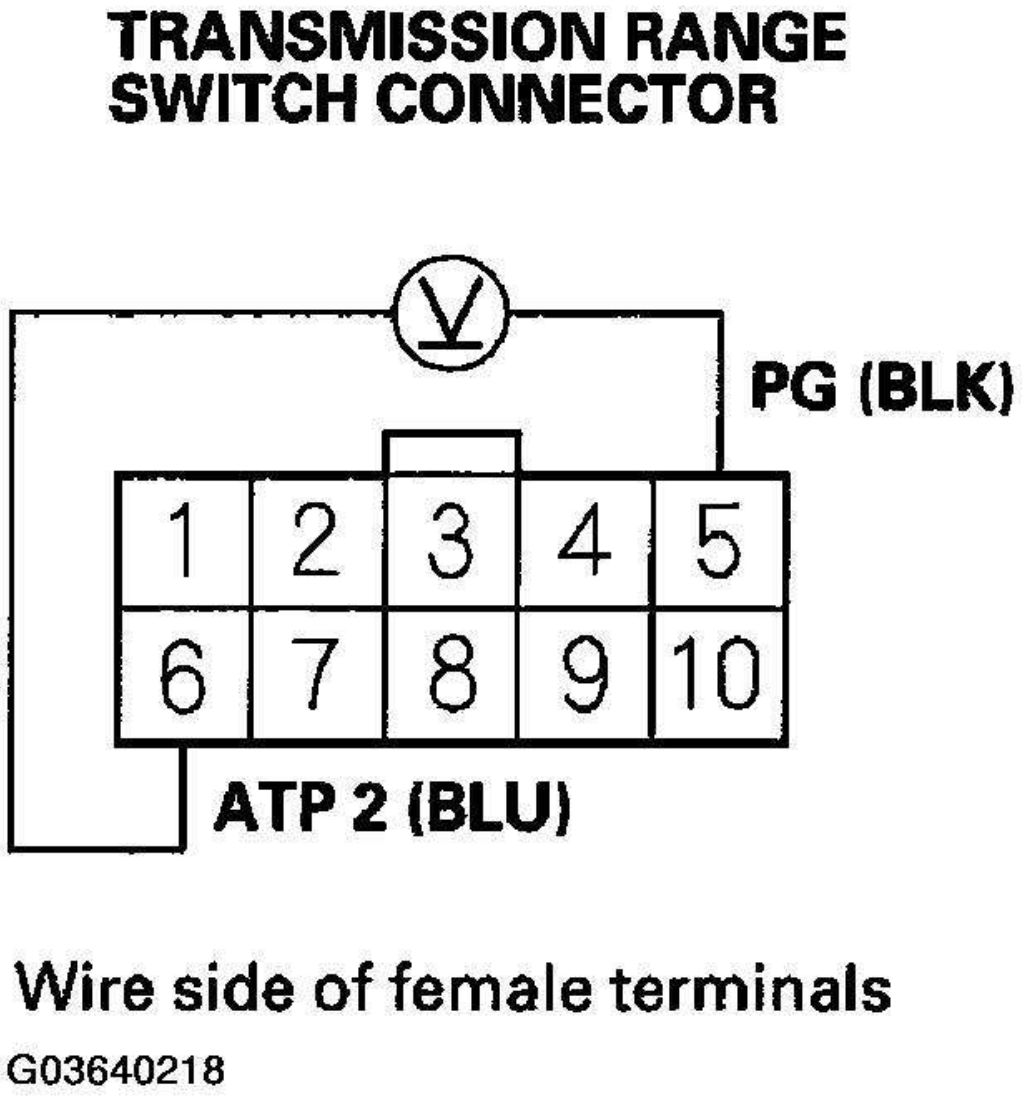


Fig. 83: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 6 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

YES - Go to step 47 .
NO - Go to step 42.

42. Turn the ignition switch OFF.

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43. Jump the SCS line with the HAS.
44. Disconnect PCM connector B (56P).
45. Disconnect gauge assembly connector A (30P) (see **GAUGE ASSEMBLY REPLACEMENT**).
46. Check for continuity between PCM connector terminal B40 and body ground.

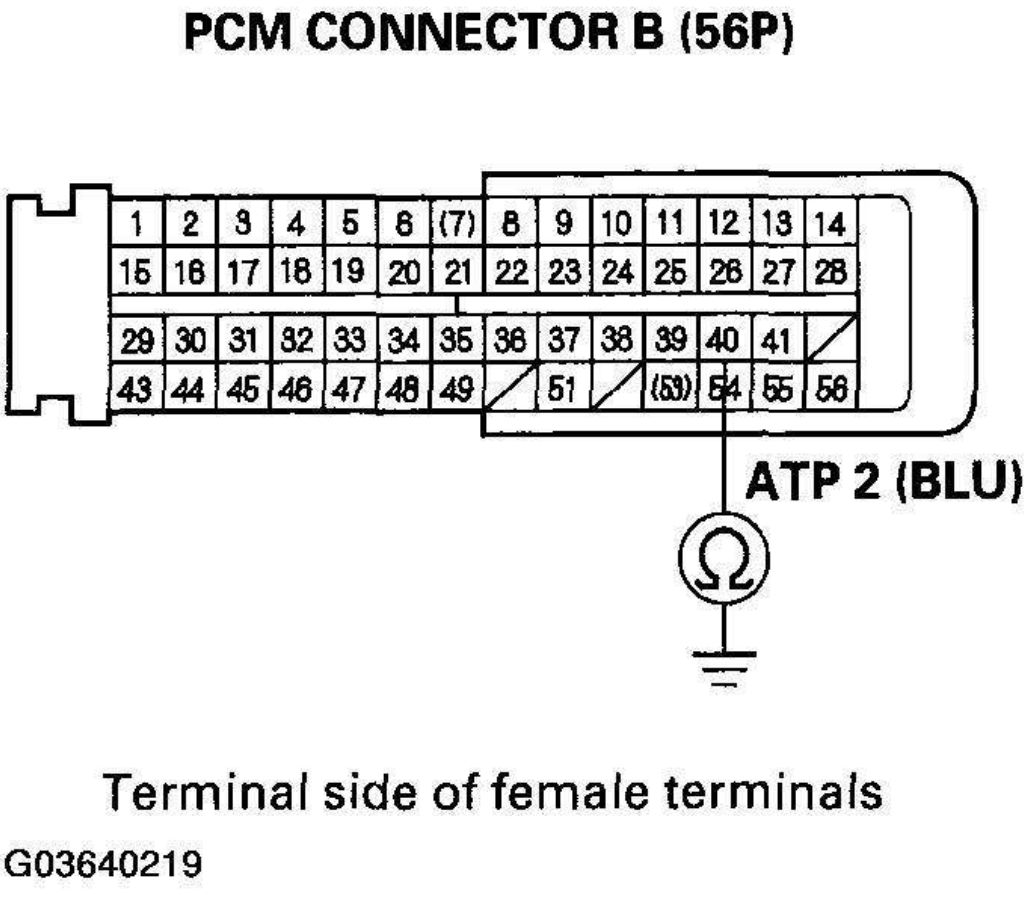


Fig. 84: Checking For Continuity Between PCM Connector Terminal B40 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B40, transmission range switch, and gauge assembly, then go to step 52 .

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.

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47. Measure the voltage between transmission range switch connector terminals No. 9 and No. 5.

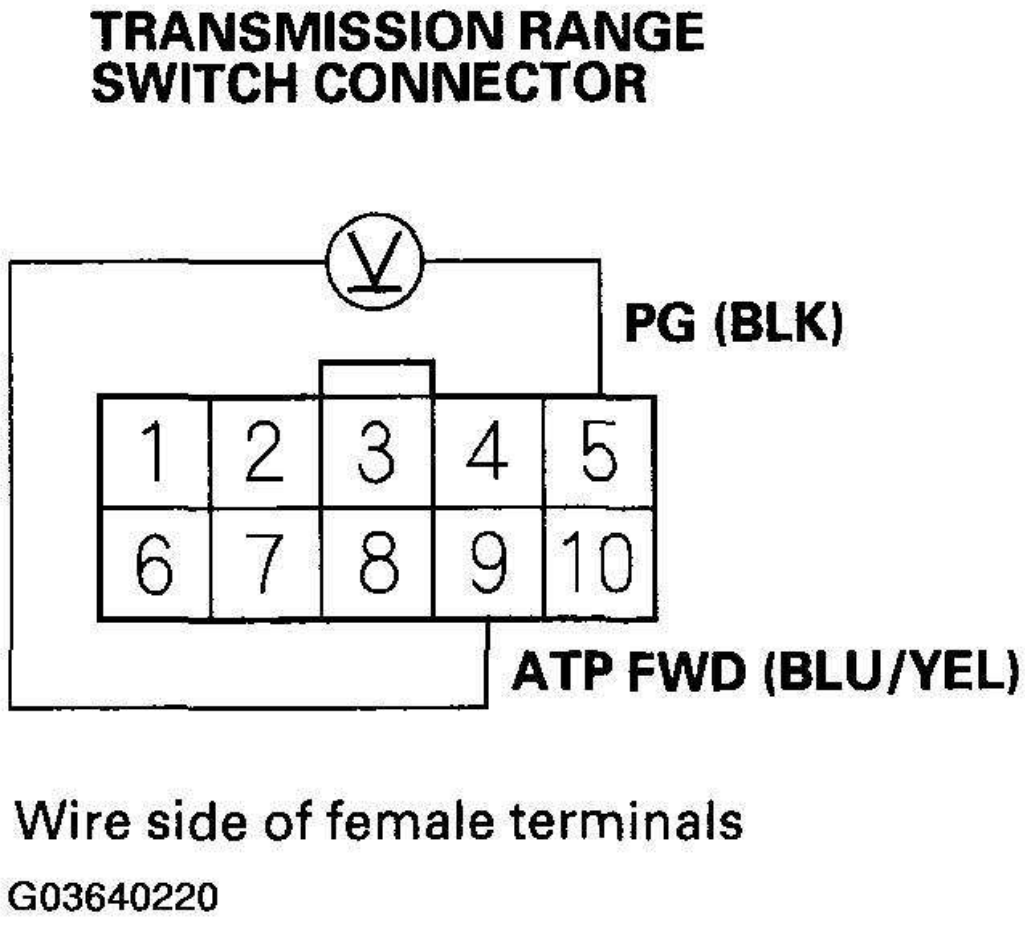


Fig. 85: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 9 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage (2003-2004 models) or about 5 V (2005-2006 models)?

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 48.

48. Turn the ignition switch OFF.
49. Jump the SCS line with the HAS.

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50. Disconnect PCM connector B (56P).
51. Check for continuity between PCM connector terminal B24 and body ground.

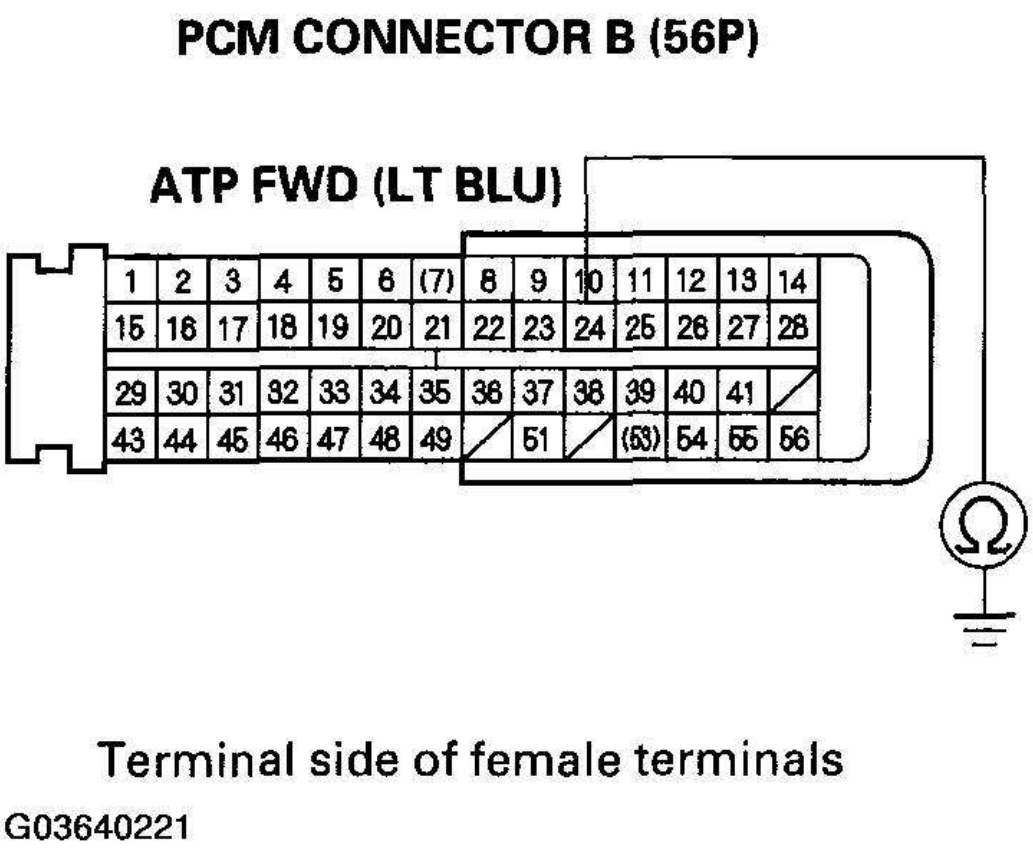


Fig. 86: Checking For Continuity Between PCM Connector Terminal B24 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal B24, transmission range switch, then go to step 52 .

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.

52. Clear the DTC with the HAS.
53. Move the shift lever through all positions, stopping for at least 1 second in each position. Monitor the OBD status for P0705 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

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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 HAS.
2. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
3. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position until the vehicle speed reaches 31 mph (50 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 - 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 31 .

6. Install the transmission range switch correctly, and adjust the shift cable (see **SHIFT CABLE ADJUSTMENT**).
7. Clear the DTC with the HAS.
8. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
9. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position until the vehicle speed reaches 31 mph (50 km/h), then slow down and stop wheels.
10. 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 11.

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

11. Shift the shift lever into the D5 position, and verify the ATP FWD and ATP D5 inputs with the HAS in the A/T data list.

Is ATP FWD and ATP D5 ON?

YES - Go to step 12.

NO - Go to step 19 .

12. Shift to the D4 position, and verify the ATP FWD and ATP D4 inputs with the HAS in the A/T data list.

Is ATP FWD and ATP D4 ON?

YES - Go to step 13.

NO - Go to step 19 .

13. Shift to the D3 position, and verify the ATP FWD and ATP D3 inputs with the HAS in the A/T data list.

Is ATP FWD and ATP D3 ON?

YES - Go to step 14.

NO - Go to step 19 .

14. Shift to the 2 position, and verify the ATP 2 input with the HAS in the A/T data list.

Is ATP 2 ON?

YES - Go to step 15.

NO - Go to step 19 .

15. Clear the DTC with the HAS, and turn the ignition switch OFF.
16. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
17. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position until the vehicle speed reaches 35 mph (56 km/h), then slow down and stop the wheels.
18. 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 19.

NO - 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 16 and recheck.

19. Turn the ignition switch OFF.
20. Disconnect the transmission range switch connector.
21. Check for continuity between transmission range switch connector terminal No. 5 and body ground.

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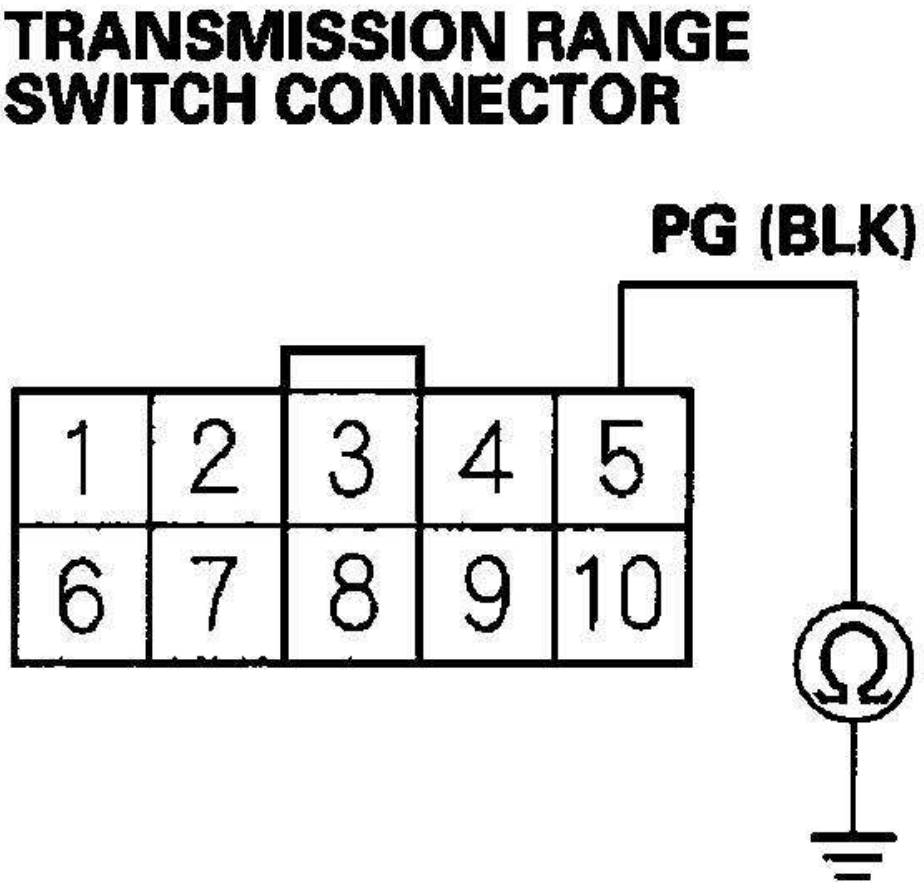


Fig. 87: Checking For Continuity Between Transmission Range Switch Connector Terminal No. 5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22.

NO - Repair open in the wire between the transmission range switch and ground (G101, G102), or repair poor ground (G101, G102), then go to step 31 .

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22. Turn the ignition switch ON (II).
23. Measure the voltage between transmission range switch connector terminals No. 4 and No. 5.

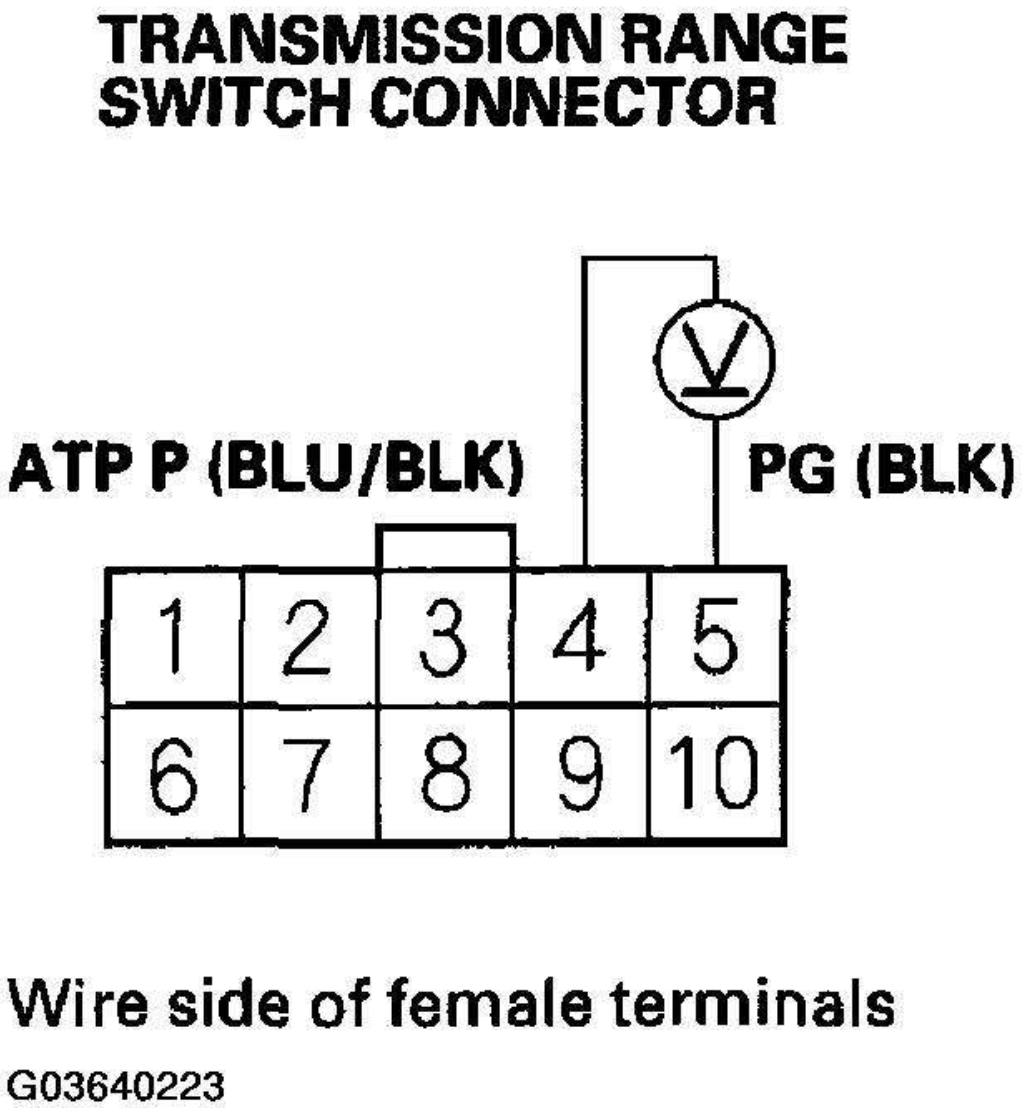


Fig. 88: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 4 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

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YES - Go to step 24.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B22, then go to step 31 .

24. Measure the voltage between transmission range switch connector terminals No. 3 and No. 5.

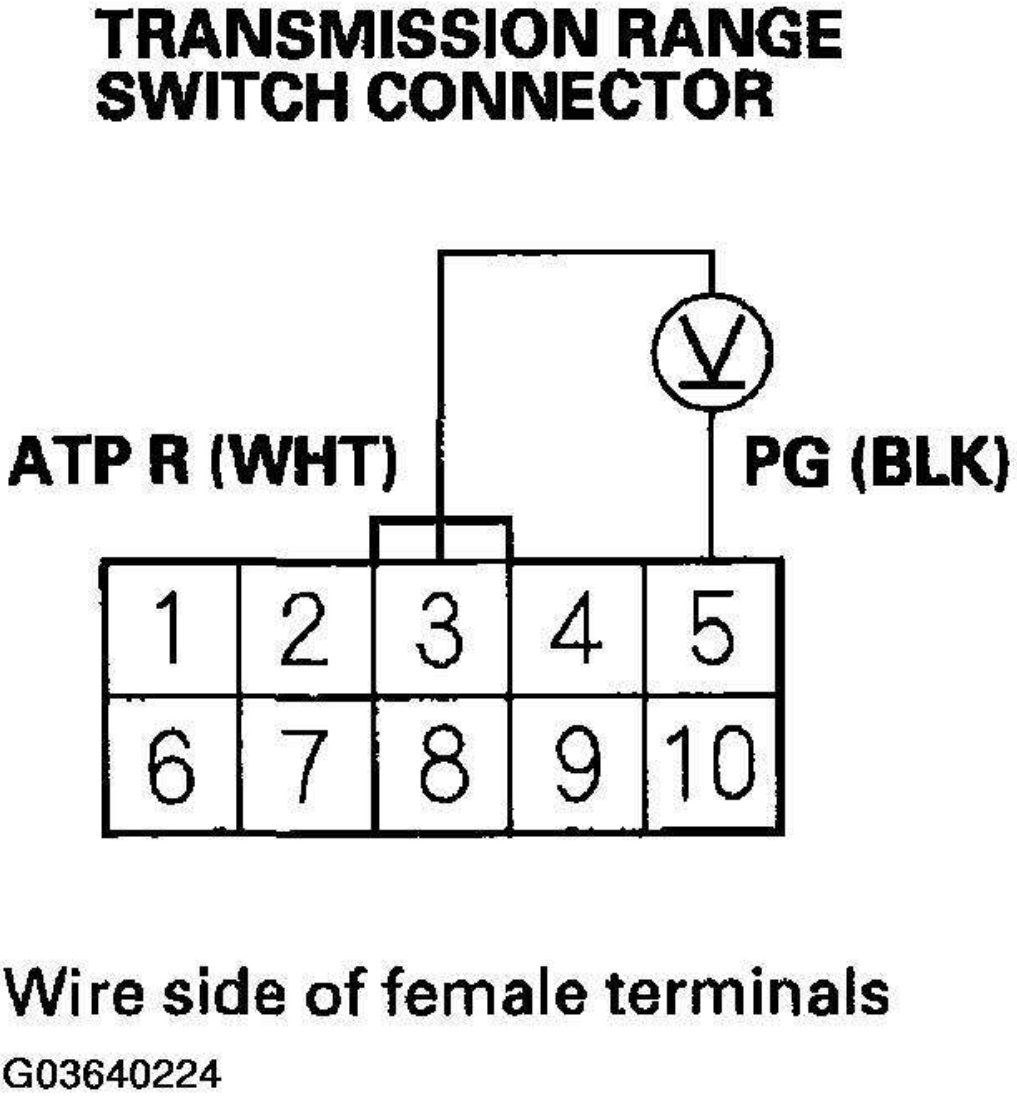


Fig. 89: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 3 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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Is there voltage?

YES - Go to step 25.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B23, then go to step 31 .

25. Measure the voltage between transmission range switch connector terminals No. 8 and No. 5.

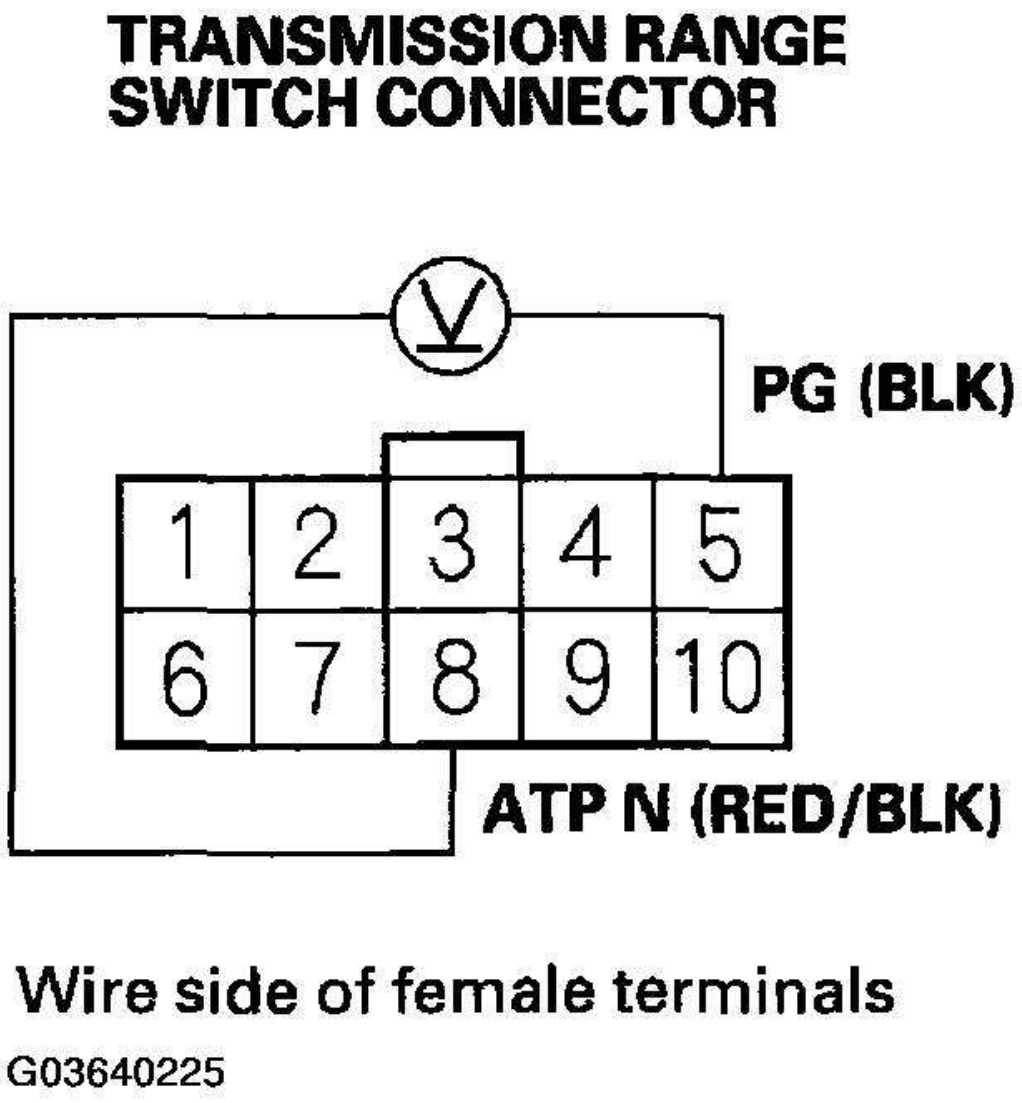


Fig. 90: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 8 And No. 5

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Is there voltage?

YES - Go to step 26.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B21, then go to step 31 .

26. Measure the voltage between transmission range switch connector terminals No. 2 and No. 5.

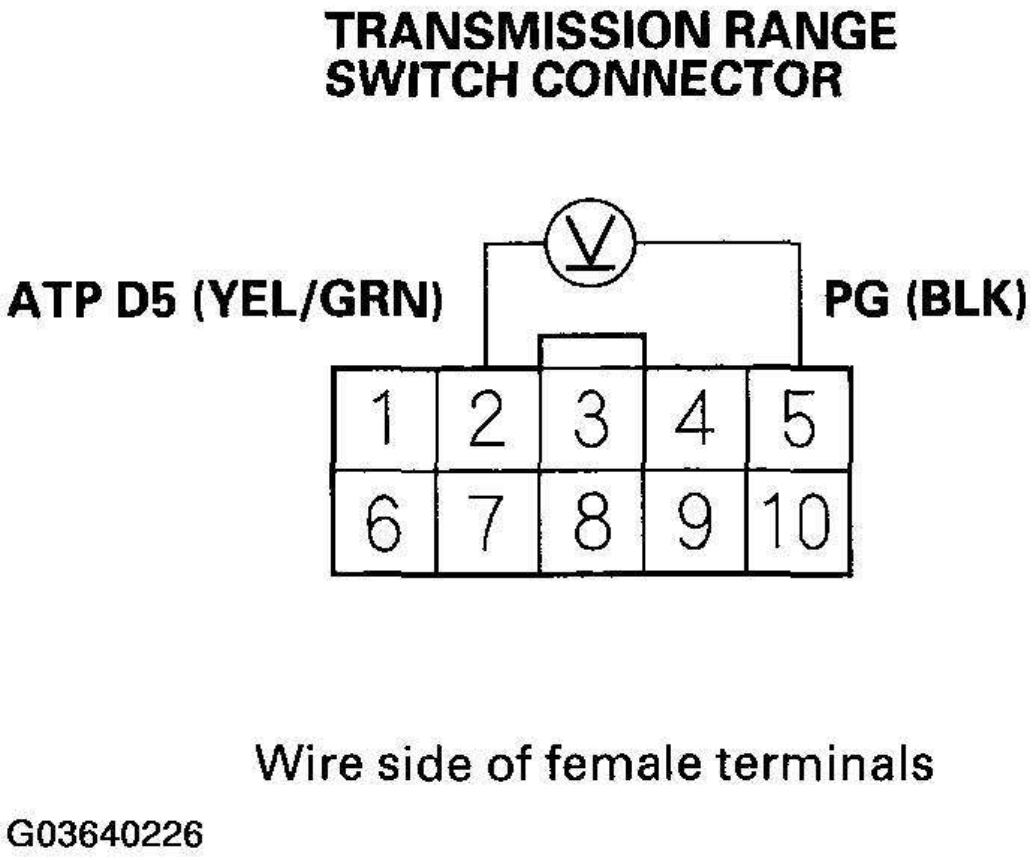


Fig. 91: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 2 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES - Go to step 27.

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NO - Repair open in the wire between the transmission range switch and PCM connector terminal B20, then go to step 31 .

27. Measure the voltage between transmission range switch connector terminals No. 7 and No. 5.

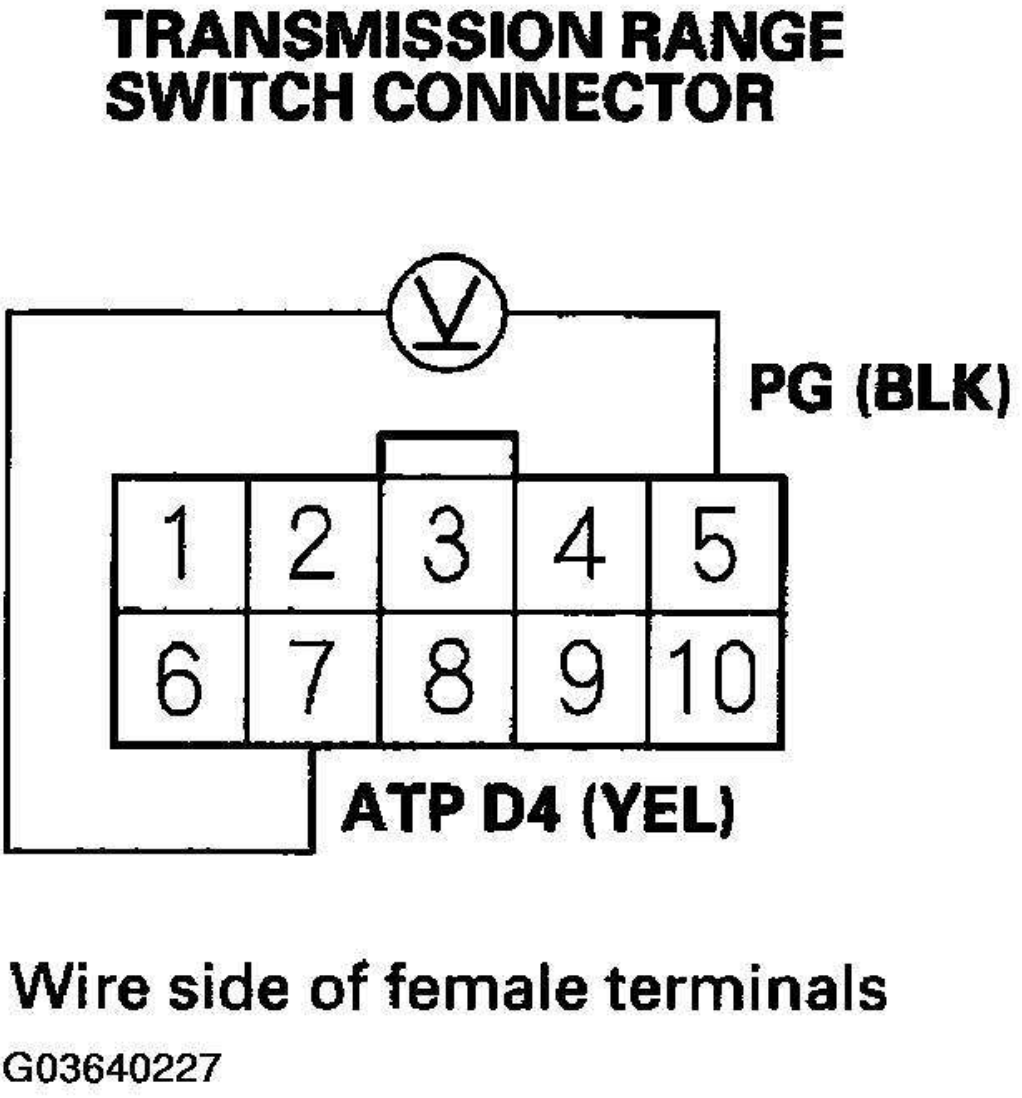


Fig. 92: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 7 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

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YES - Go to step 28.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B19, then go to step 31 .

28. Measure the voltage between transmission range switch connector terminals No. 1 and No. 5.

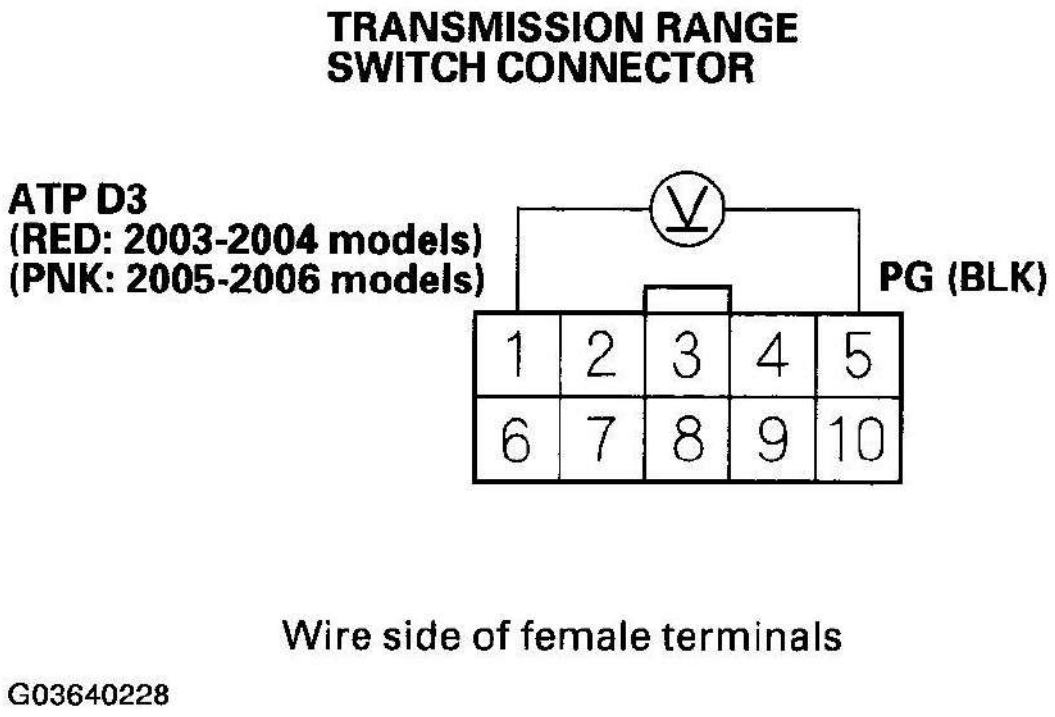


Fig. 93: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 1 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES - Go to step 29.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B18, then go to step 31 .

29. Measure the voltage between transmission range switch connector terminals No. 6 and No. 5.

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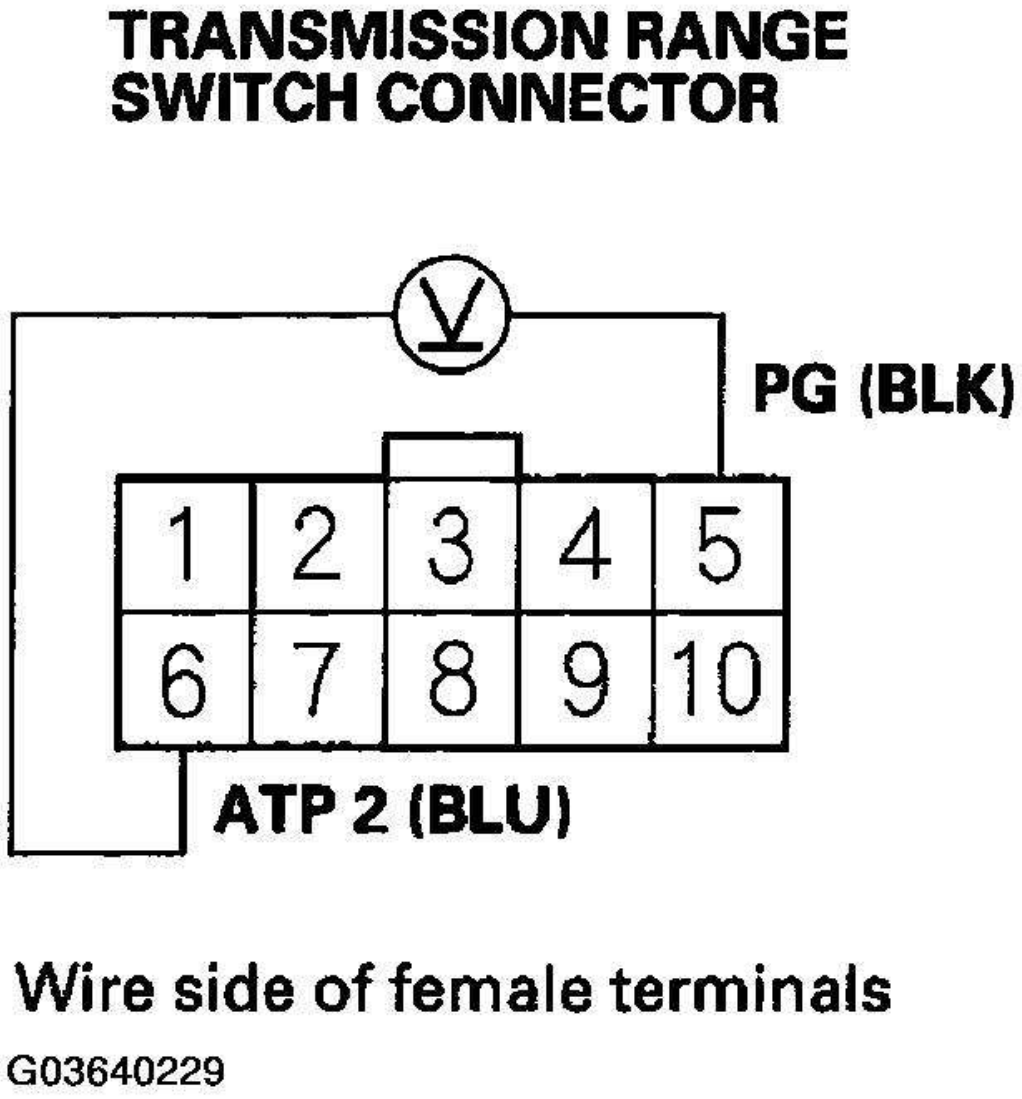


Fig. 94: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 6 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there voltage?

YES - Go to step 30.

NO - Repair open in the wire between the transmission range switch and PCM connector terminal B40, then go to step 31 .

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30. Measure the voltage between transmission range switch connector terminals No. 9 and No. 5.

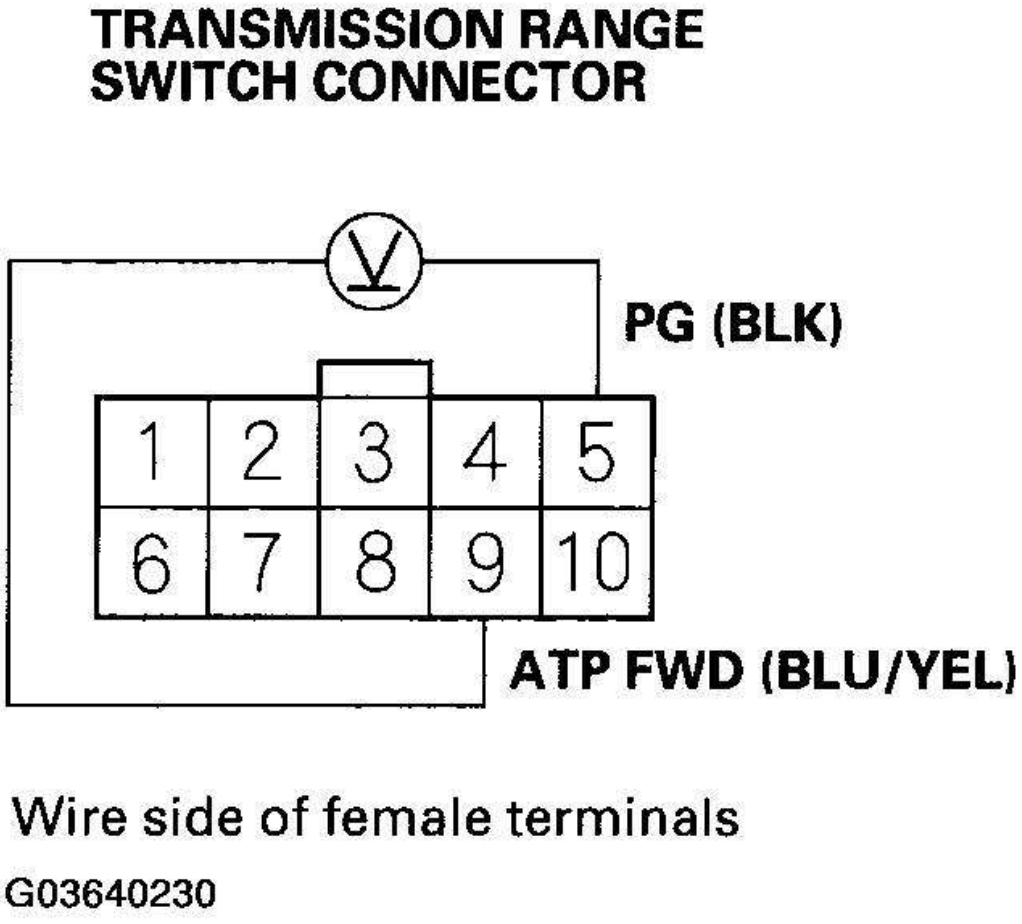


Fig. 95: Measuring Voltage Between Transmission Range Switch Connector Terminals No. 9 And No. 5
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 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 open in the wire between the transmission range switch and PCM connector terminal B24, then go to step 31.

31. Clear the DTC with the HAS.

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32. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
33. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position until the vehicle speed reaches 31 mph (50 km/h), then slow down and stop the wheels.
34. 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 HAS in the A/T data list.

   Does the ATF temperature exceed an 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 HAS.

   Did 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 with the HAS.

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

   YES - Go to step 4.

   NO - Leave the engine off until ECT SENSOR equals ambient-air temperature, then go to step 4.
4. Check the ATF temperature with the HAS.

   Is the ATF temperature almost equal to ECT SENSOR?

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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 HAS.
6. Test-drive the vehicle for several minutes in the D5 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 ATF temperature sensor voltage with the HAS in the A/T data list.

Is 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 an 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 ATF temperature sensor voltage with the HAS.

Is 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 HAS.
6. Disconnect PCM connector A (73P).
7. Check for continuity between ATF temperature sensor connector terminal No. 2 and body ground.

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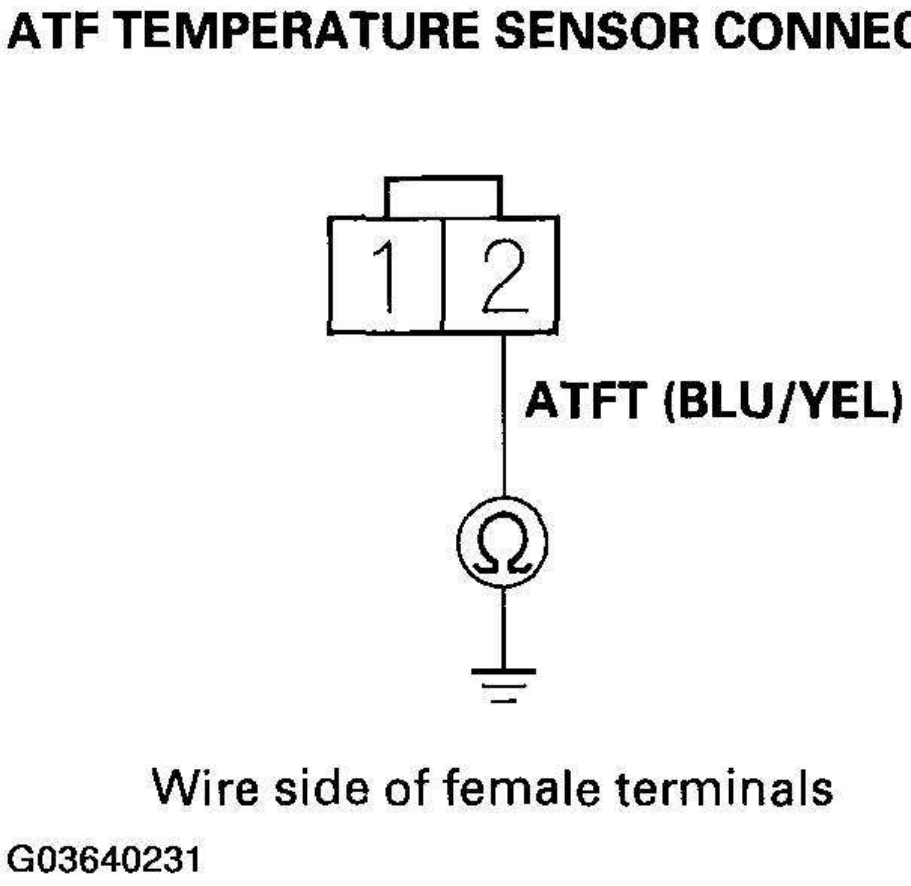


Fig. 96: Checking For Continuity Between ATF Temperature Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A3 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 HAS.
9. Test-drive the vehicle for several minutes in the D5 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.

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

   Does 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.

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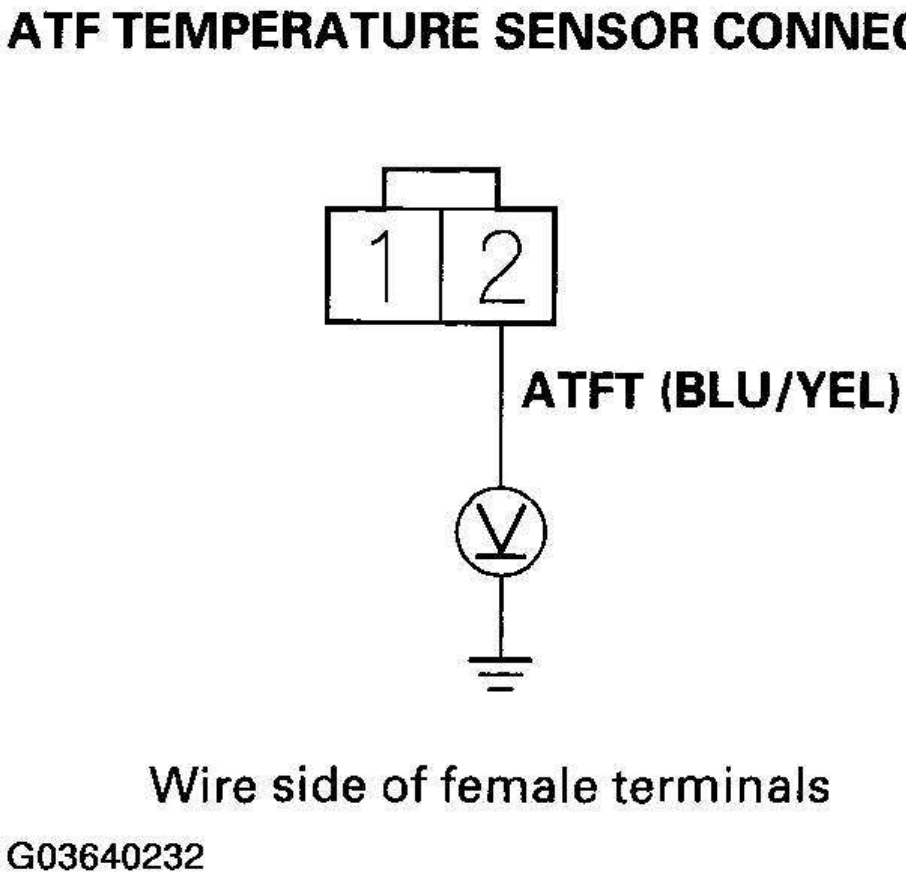


Fig. 97: Measuring Voltage Between ATF Temperature Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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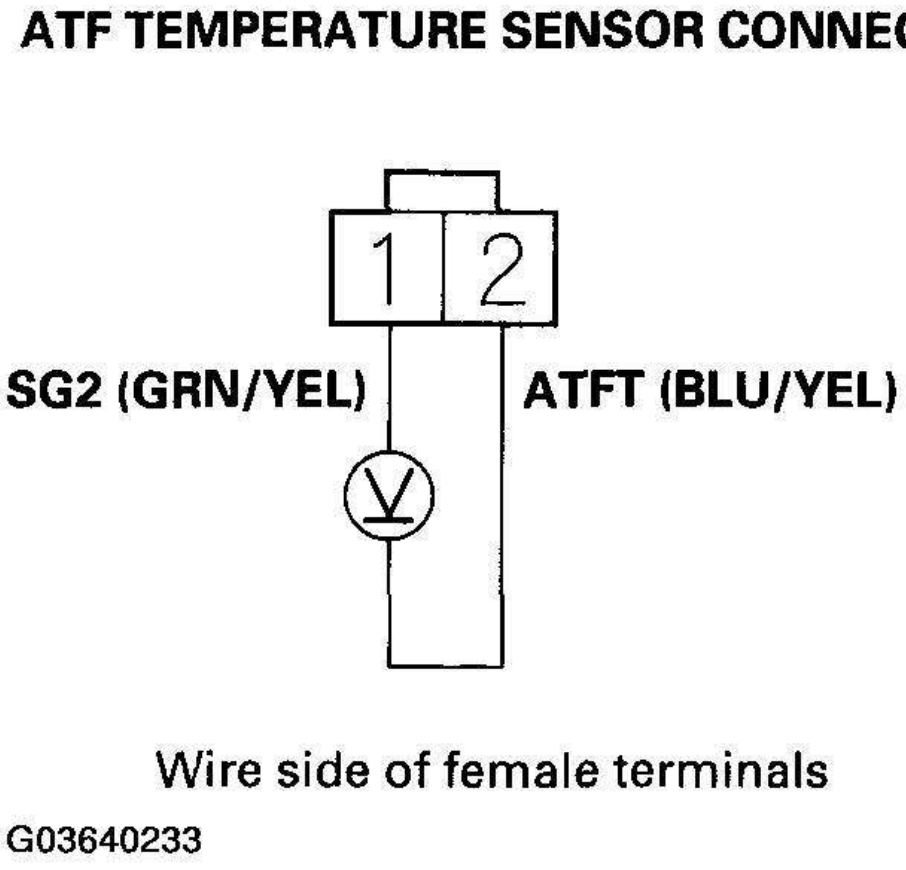


Fig. 98: Measuring Voltage Between ATF Temperature Sensor Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

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

NO - Repair open in the wire between PCM connector terminal A28 and the ATF temperature sensor connector, then go to step 11 .

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HAS.
9. Disconnect PCM connector A (73P).
10. Check for continuity between PCM connector terminal A3 and ATF temperature sensor connector terminal No. 2.

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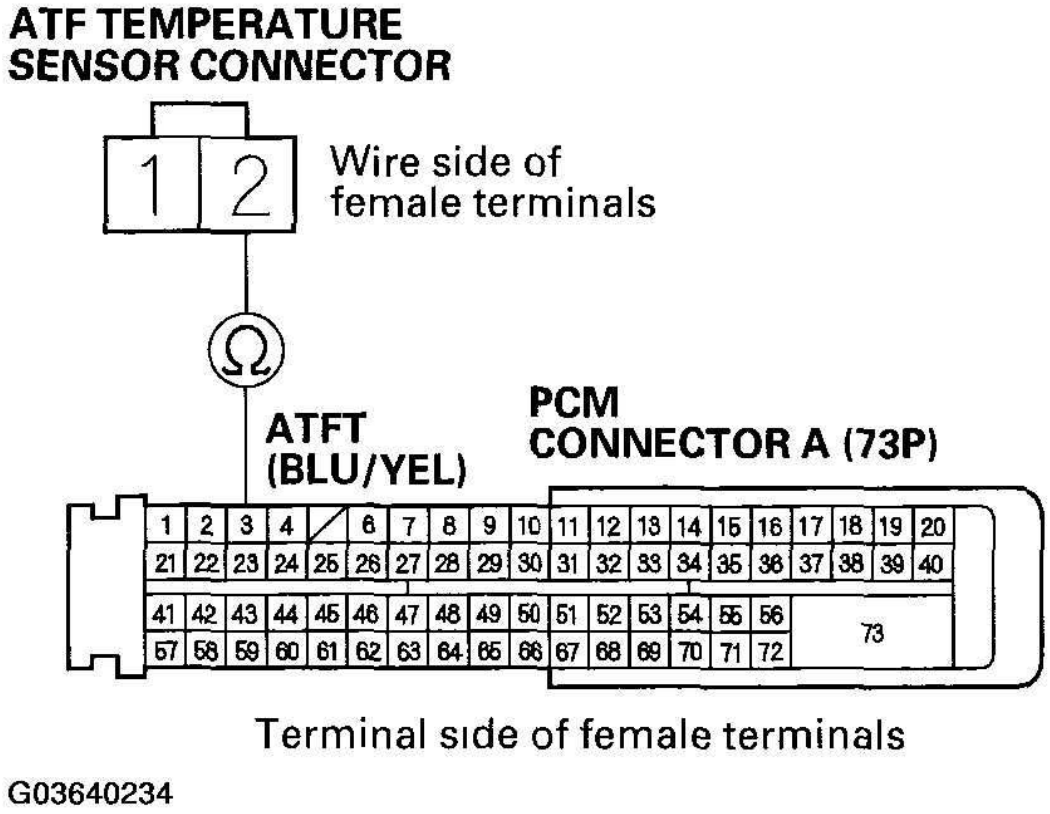


Fig. 99: Checking For Continuity Between PCM Connector Terminal A3 And ATF Temperature Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal A3. 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 open in the wire between PCM connector terminal A3 and the ATF temperature sensor connector, then go to step 11.

11. Clear the DTC with the HAS.
12. Test-drive the vehicle for several minutes in the D5 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?

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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. Clear the DTC with the HAS.
2. Check for proper input shaft (mainshaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
4. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 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 - Intermittent failure, the system is OK at this time. 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 HAS.
8. Disconnect PCM connector A (73P) and input shaft (mainshaft) speed sensor connector.
9. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body ground, and between A73 and body ground.

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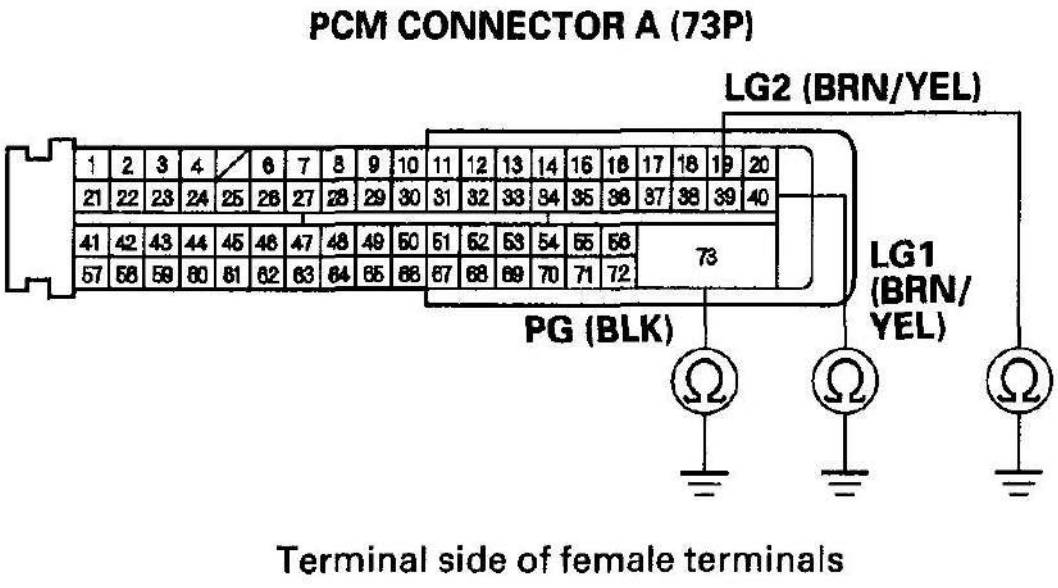


Fig. 100: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 30 .

10. Connect PCM connector A (73P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

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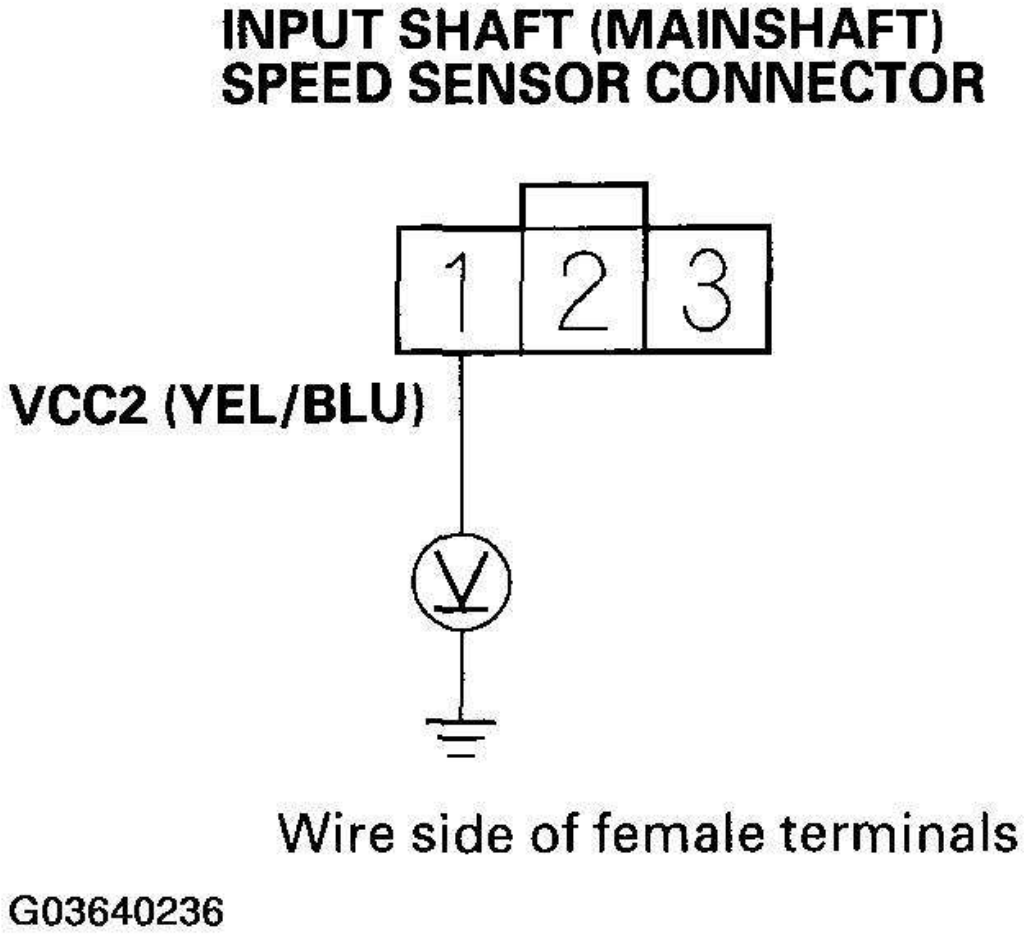


Fig. 101: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16 .

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A27 and input shaft (mainshaft) speed sensor connector terminal No. 1.

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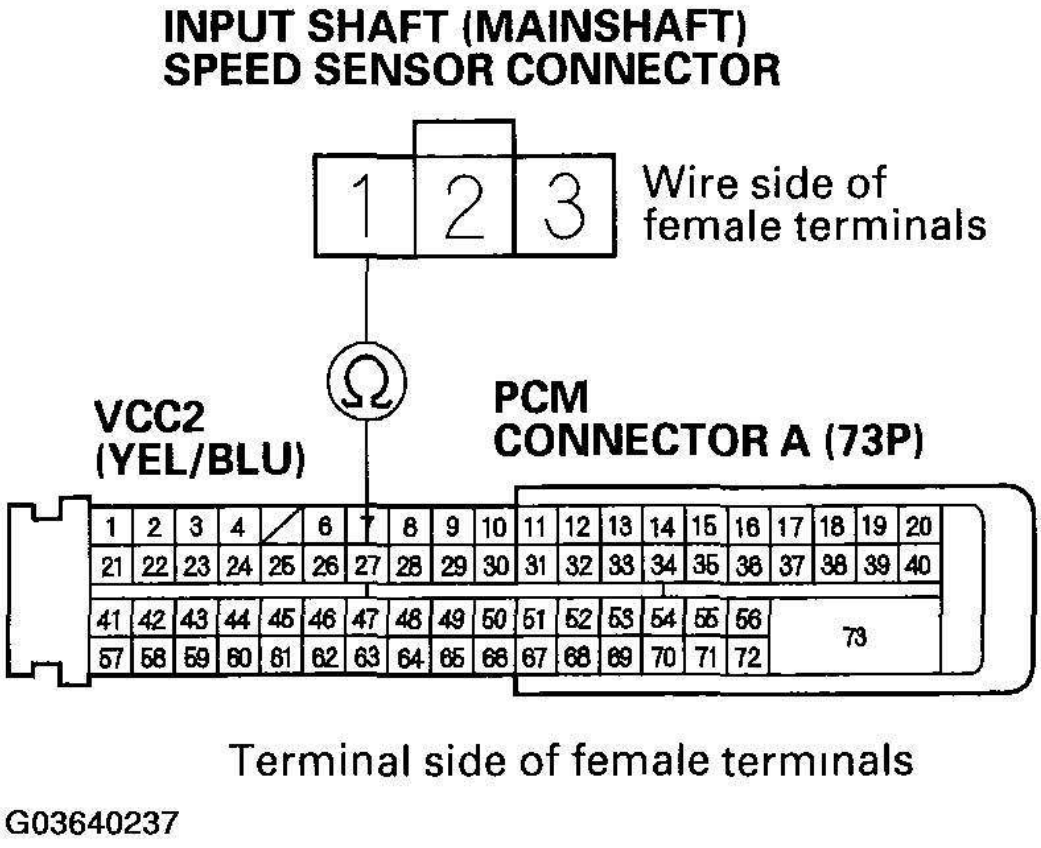


Fig. 102: Checking For Continuity Between PCM Connector Terminal A27 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal A27. 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 open in the wire between PCM connector terminal A27 and the input shaft (mainshaft) speed sensor, then go to step 30 .

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

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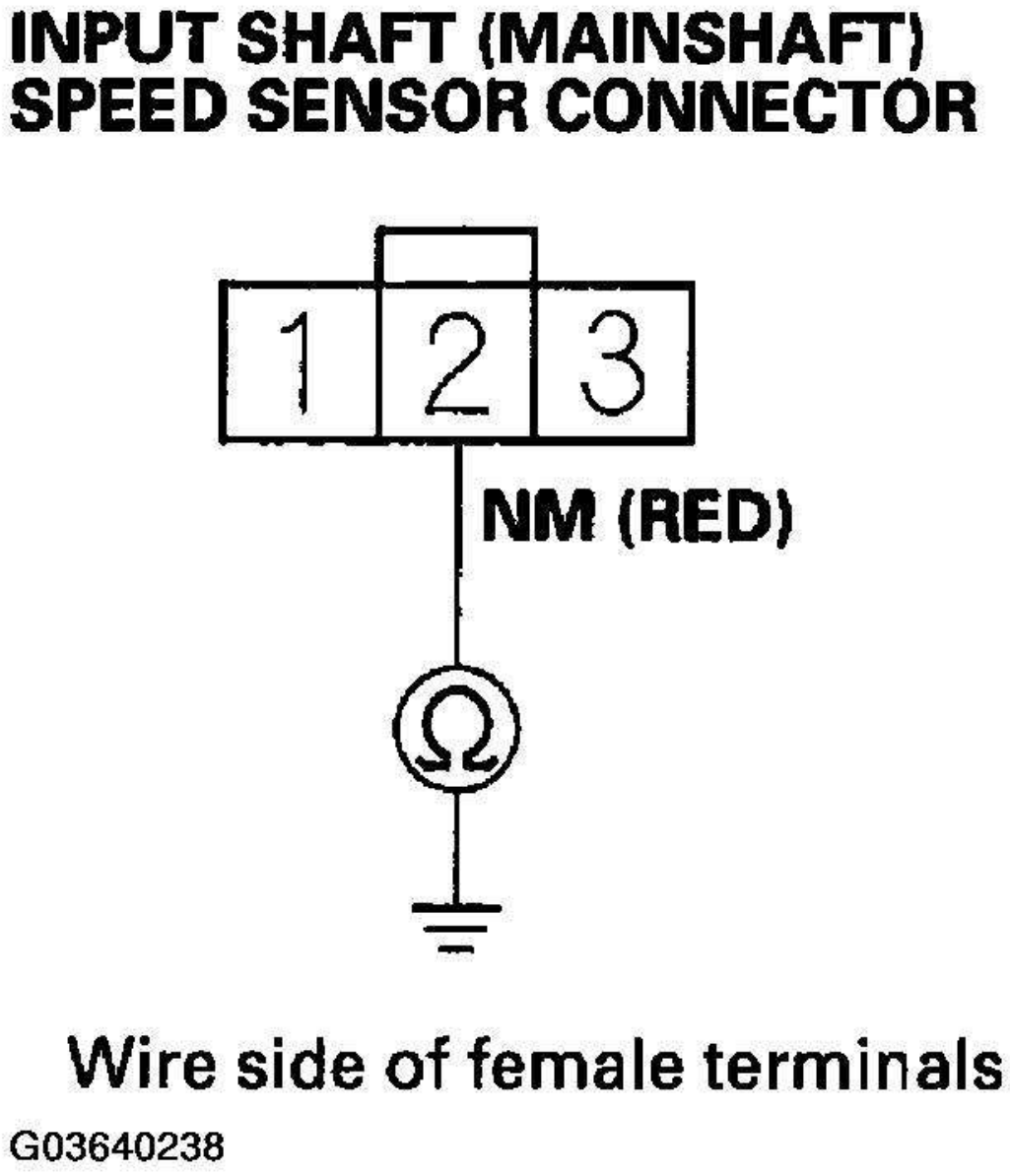


Fig. 103: Checking For Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A48 and input shaft

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(mainshaft) speed sensor connector, then go to step 30 .

NO - Go to step 19.

19. Check for continuity between PCM connector terminal A28 and input shaft (mainshaft) speed sensor connector terminal No. 3.

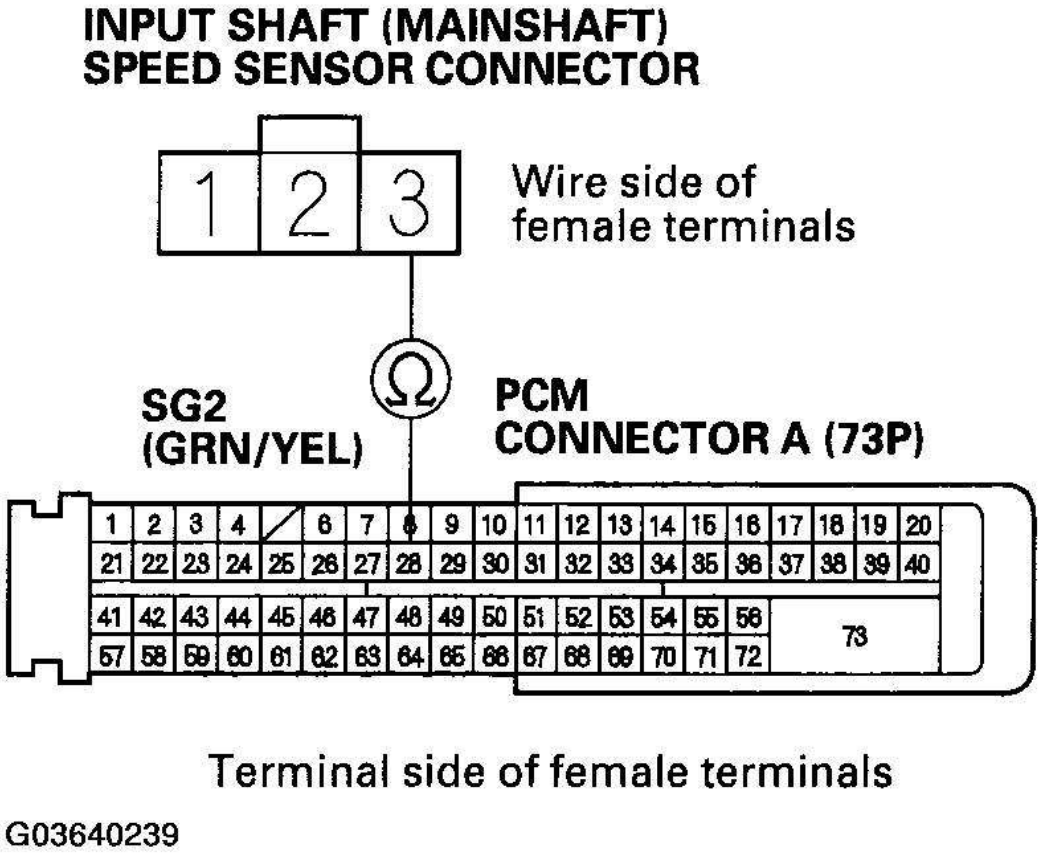


Fig. 104: Checking For Continuity Between PCM Connector Terminal A28 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the input shaft (mainshaft) speed sensor connector and PCM connector terminal A28, then go to step 30 .

20. Connect PCM connector A (73P).
21. Turn the ignition switch ON (II).

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

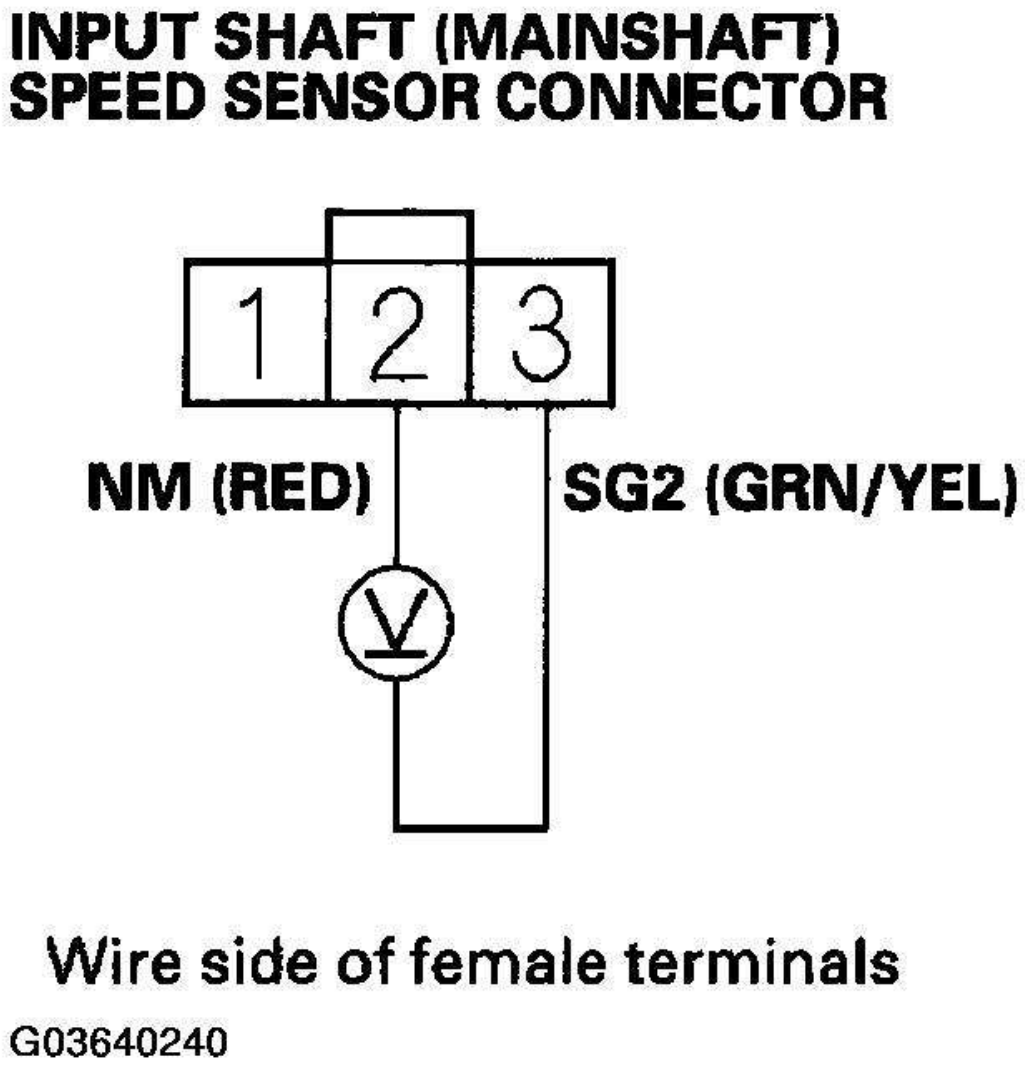


Fig. 105: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 26 .
NO - Go to step 23.

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23. Turn the ignition switch OFF.
24. Disconnect PCM connector A (73P).
25. Check for continuity between PCM connector terminal A48 and input shaft (mainshaft) speed sensor connector terminal No. 2.

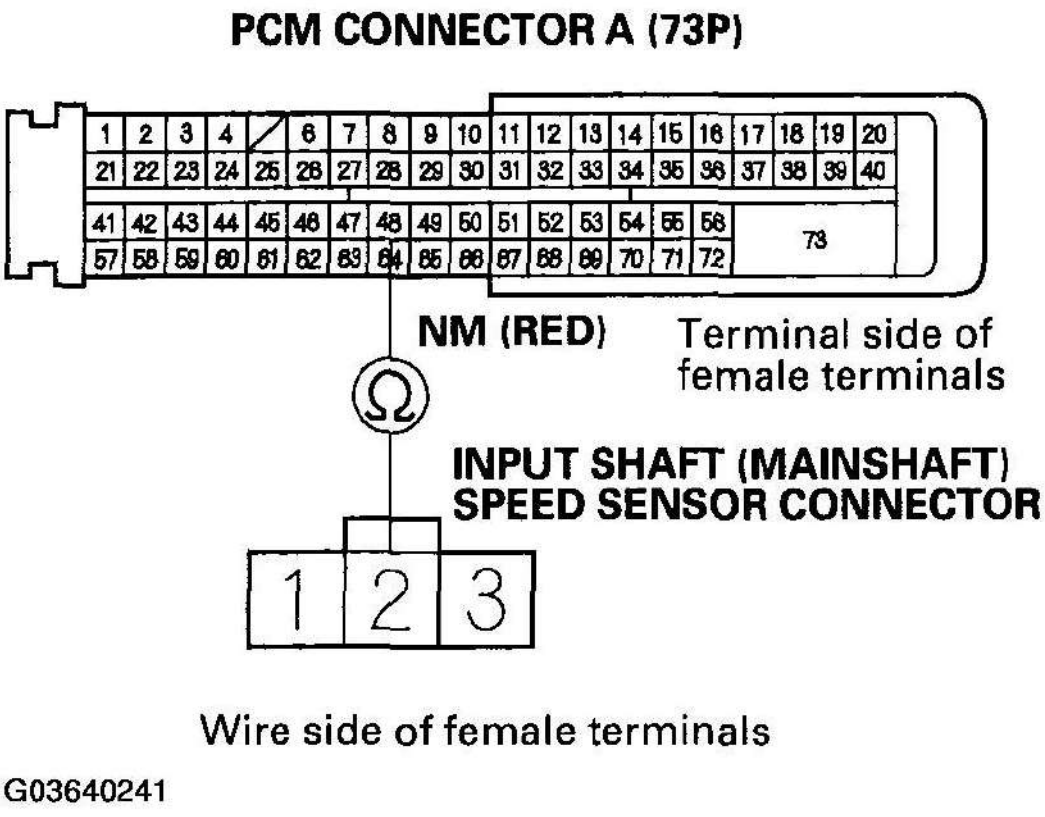


Fig. 106: Checking For Continuity Between PCM Connector Terminal A48 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wire between PCM connector terminal A48 and the input shaft (mainshaft), then go to step 30 .

26. Connect the input shaft (mainshaft) speed sensor connector.
27. Clear the DTC with the HAS.

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28. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.
29. 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 30.

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.

30. Clear the DTC with the HAS.
31. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.
32. 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 1 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. Clear the DTC with the HAS.
2. Check for proper input shaft (mainshaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
4. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 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 6.

NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

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6. Turn the ignition switch OFF.
7. Jump the SCS line with the HAS.
8. Disconnect PCM connector A (73P) and input shaft (mainshaft) speed sensor connector.
9. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body ground, and between A73 and body ground.

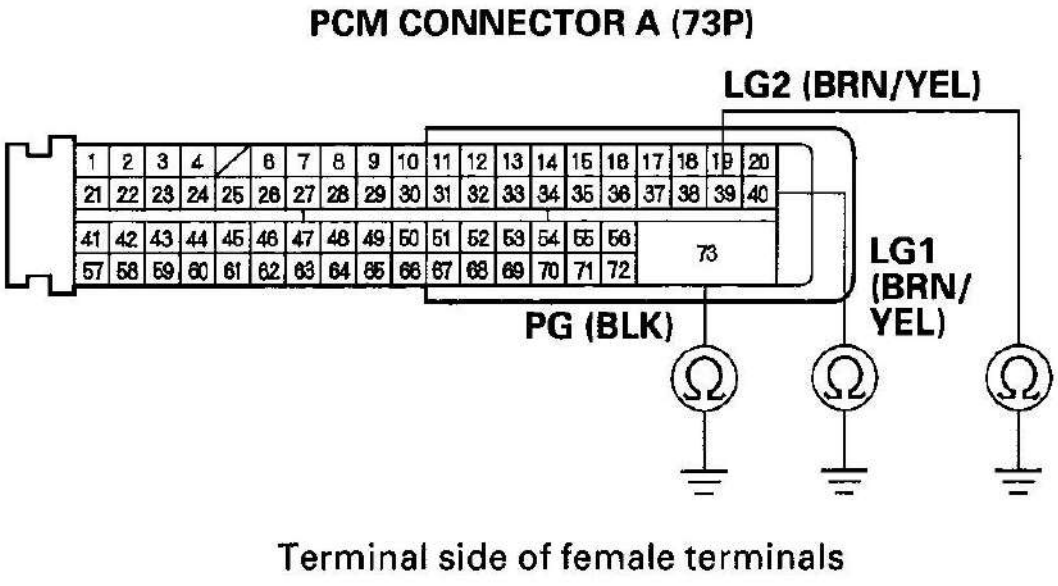


Fig. 107: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 30 .

10. Connect PCM connector A (73P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

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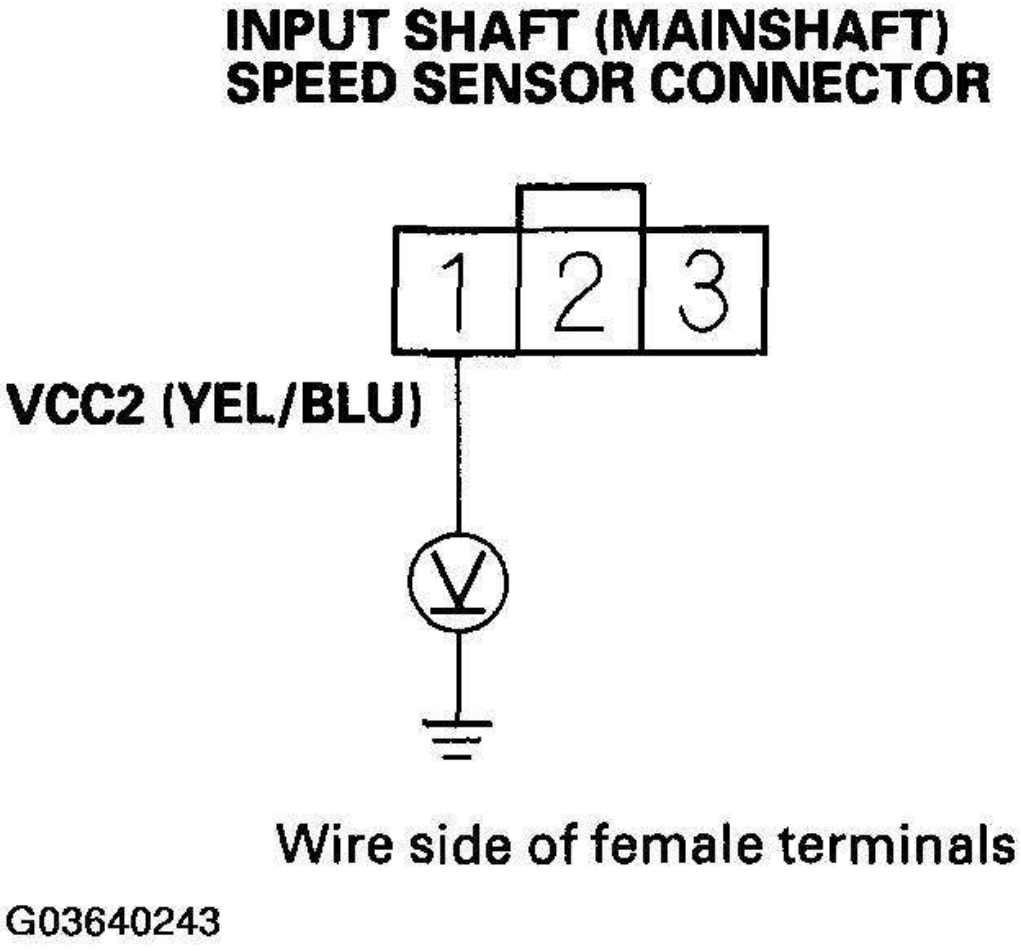


Fig. 108: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16 .

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A27 and input shaft (mainshaft) speed sensor connector terminal No. 1.

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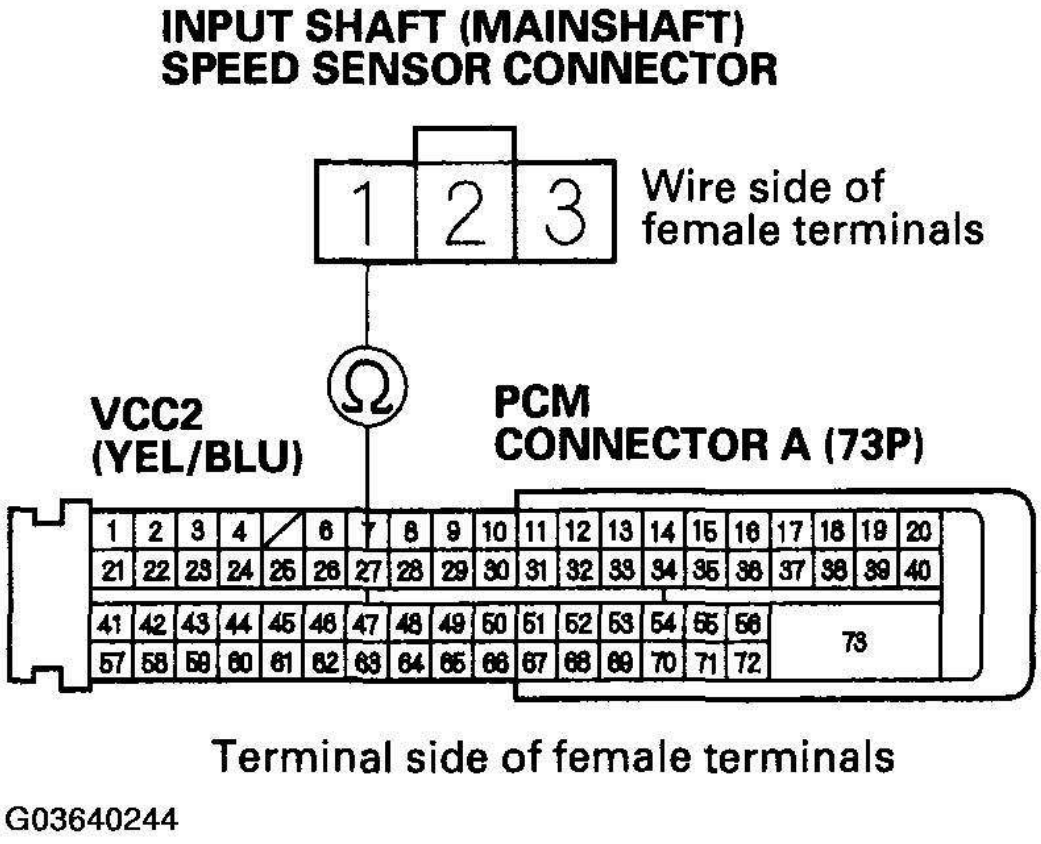


Fig. 109: Checking For Continuity Between PCM Connector Terminal A27 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal A27. 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 open in the wire between PCM connector terminal A27 and the input shaft (mainshaft) speed sensor, then go to step 30 .

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

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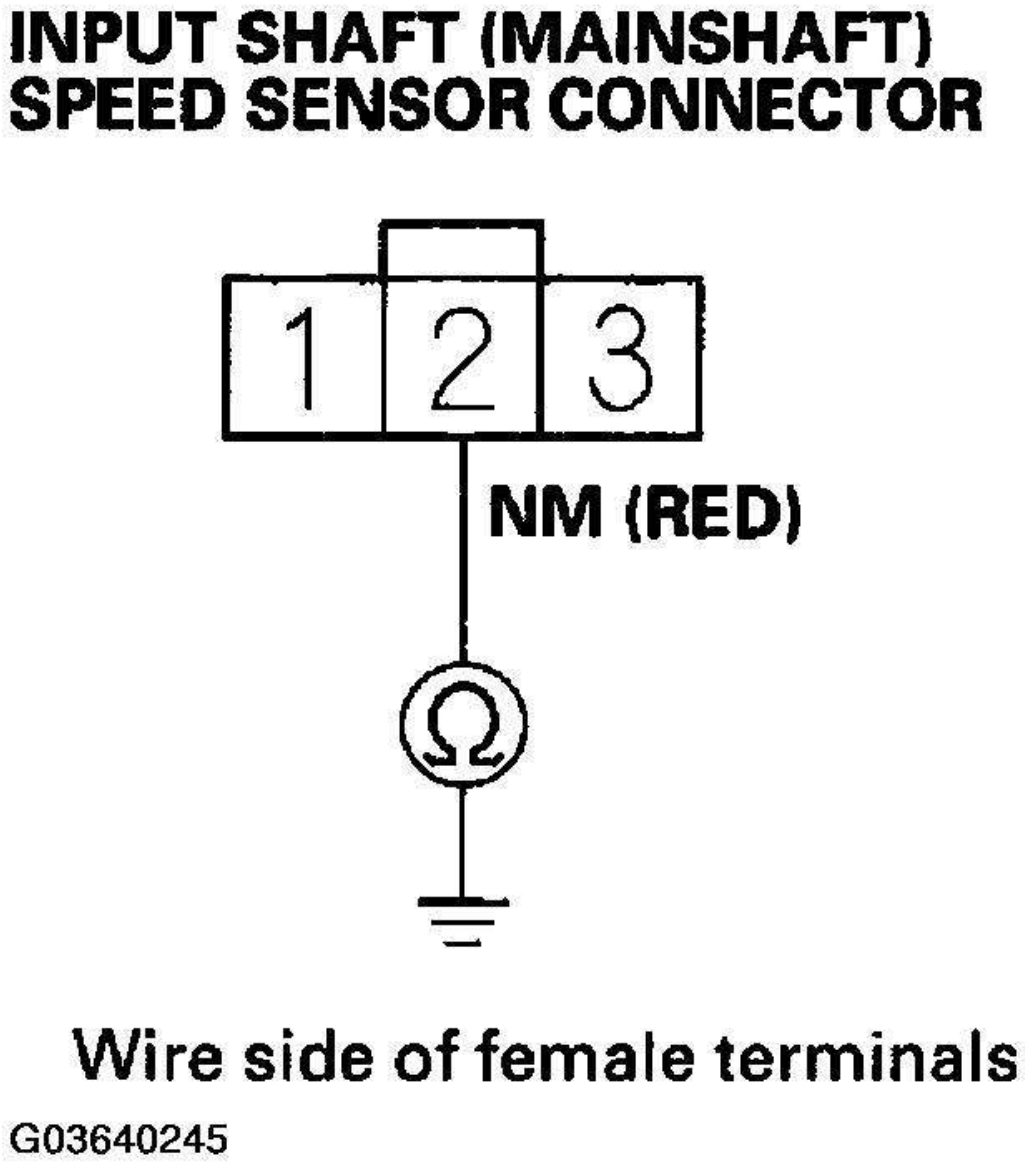


Fig. 110: Checking For Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A48 and input shaft (mainshaft) speed sensor connector, then go to step 30 .

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NO - Go to step 19

19. Check for continuity between PCM connector terminal A28 and input shaft (mainshaft) speed sensor connector terminal No. 3.

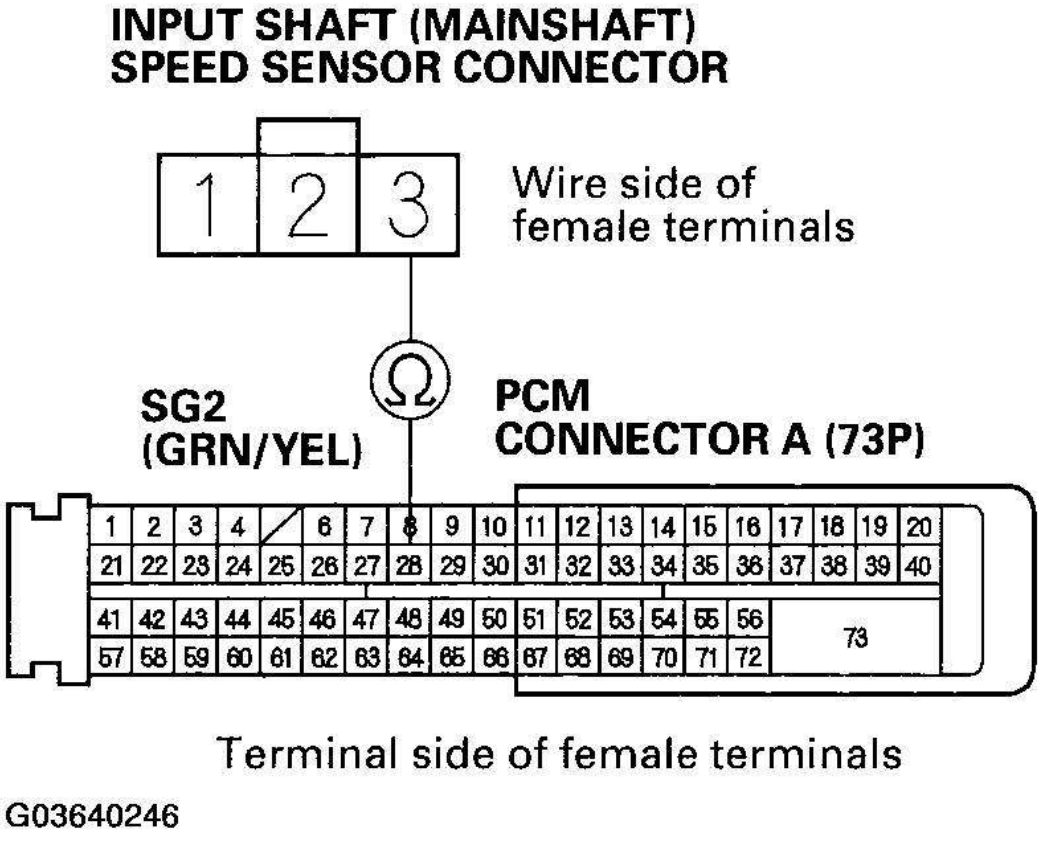


Fig. 111: Checking For Continuity Between PCM Connector Terminal A28 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the input shaft (mainshaft) speed sensor connector and PCM connector terminal A28, then go to step 30 .

20. Connect PCM connector A (73P).
21. Turn the ignition switch ON (II).
22. Measure the voltage between the No. 2 and No. 3 terminals of the input shaft (mainshaft) speed sensor connector.

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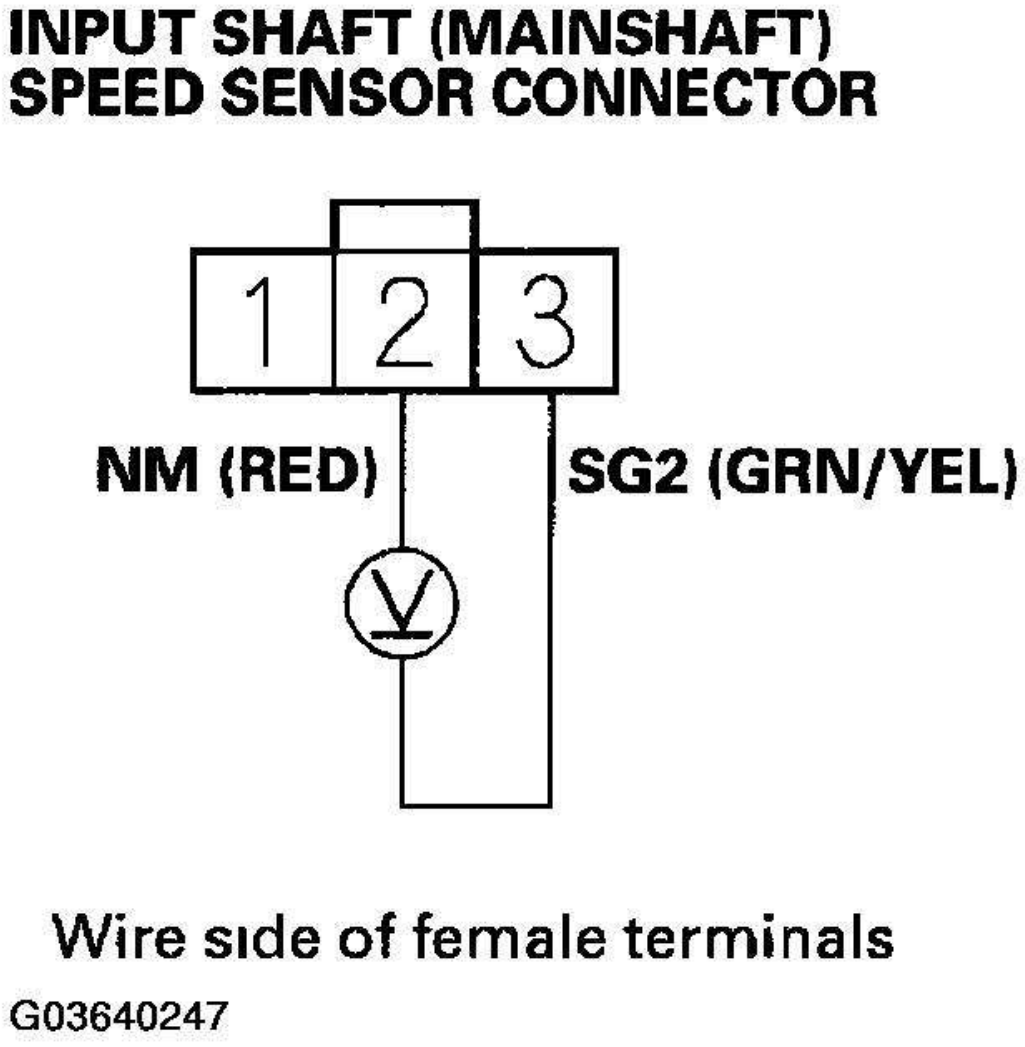


Fig. 112: Measuring Voltage Between No. 2 And No. 3 Terminals Of Input Shaft (Mainshaft) Speed Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 26 .
NO - Go to step 23.

23. Turn the ignition switch OFF.
24. Disconnect PCM connector A (73P).

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25. Check for continuity between PCM connector terminal A48 and input shaft (mainshaft) speed sensor connector terminal No. 2.

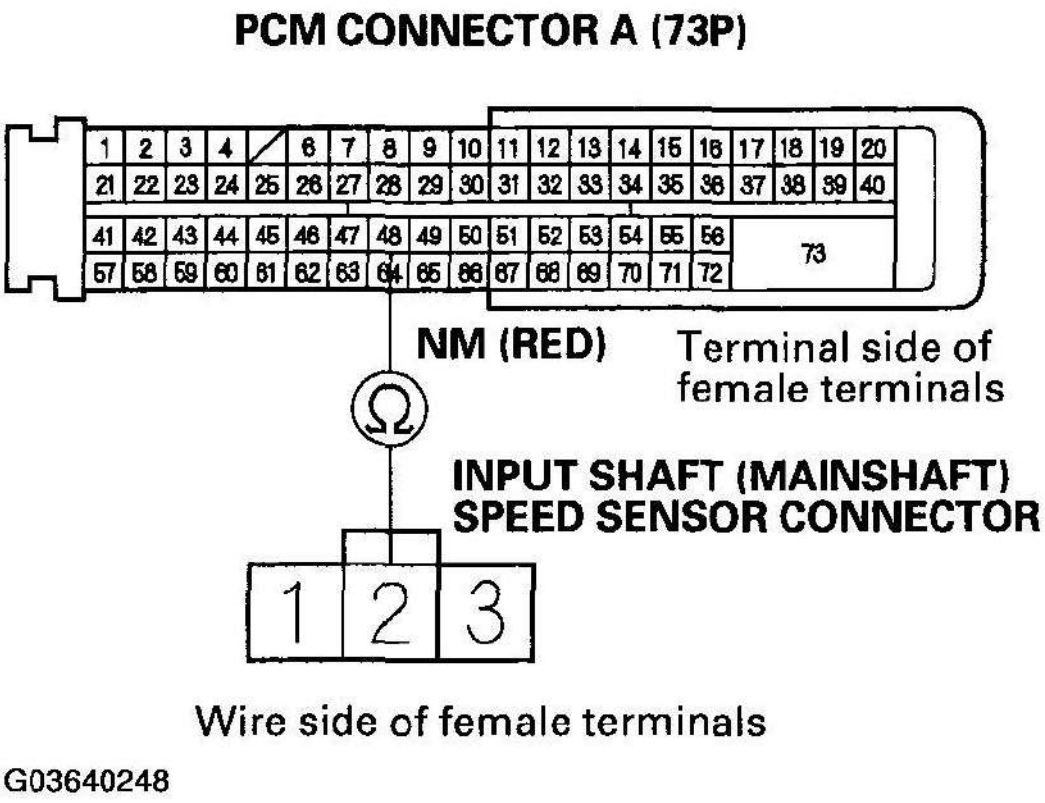


Fig. 113: Checking For Continuity Between PCM Connector Terminal A48 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wire between PCM connector terminal A48 and the input shaft (mainshaft), then go to step 30 .

26. Connect the input shaft (mainshaft) speed sensor connector.
27. Clear the DTC with the HAS.
28. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.

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29. 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 30.

    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.
30. Clear the DTC with the HAS.
31. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position, and hold the vehicle at speeds over 30 mph (48 km/h) for more than 10 seconds.
32. 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 1 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 HAS.
2. Test-drive the vehicle for several minutes in the D5 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 - 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?

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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 HAS.
10. Disconnect PCM connector A (73P).
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.

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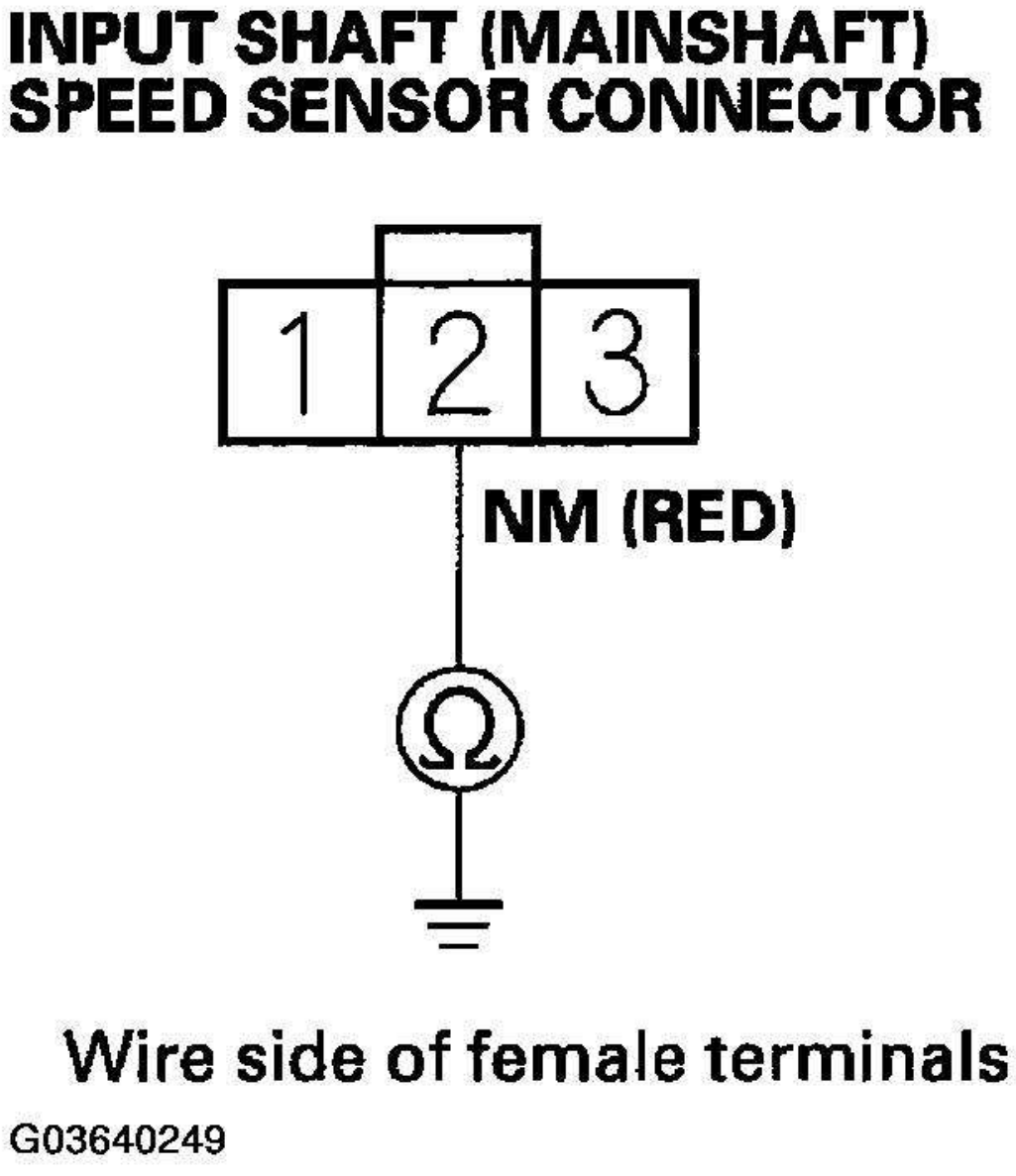


Fig. 114: Checking For Continuity Between Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

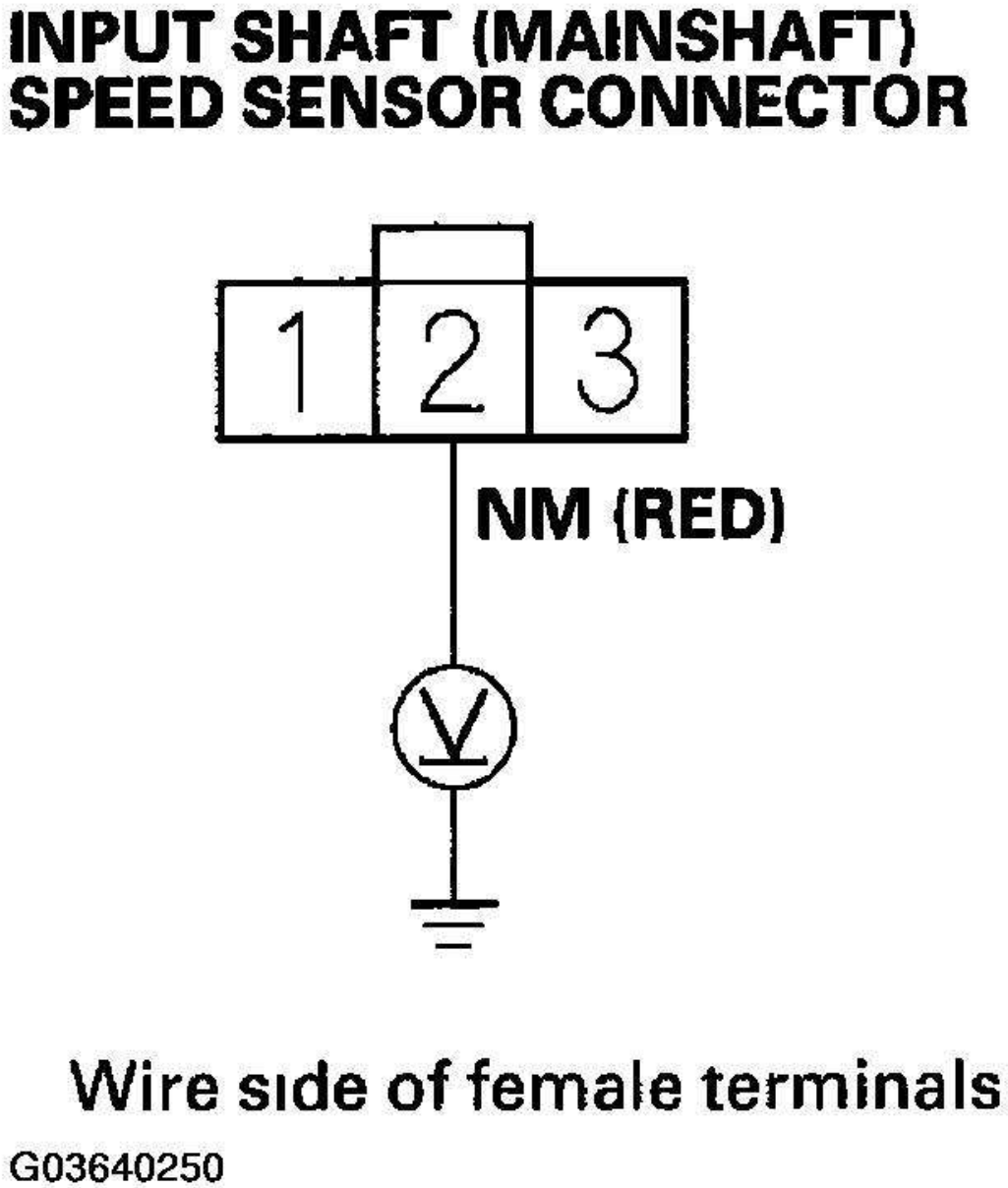
Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A48 and the input shaft (mainshaft) speed sensor connector, then go to step 19 .

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NO - Go to step 13.

13. Connect PCM connector A (73P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between input shaft (mainshaft) speed sensor (3P) connector terminal No. 2 and body ground.



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Fig. 115: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor (3P) 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 A (73P).
18. Check for continuity between PCM connector terminal A48 and input shaft (mainshaft) speed sensor connector terminal No. 2.

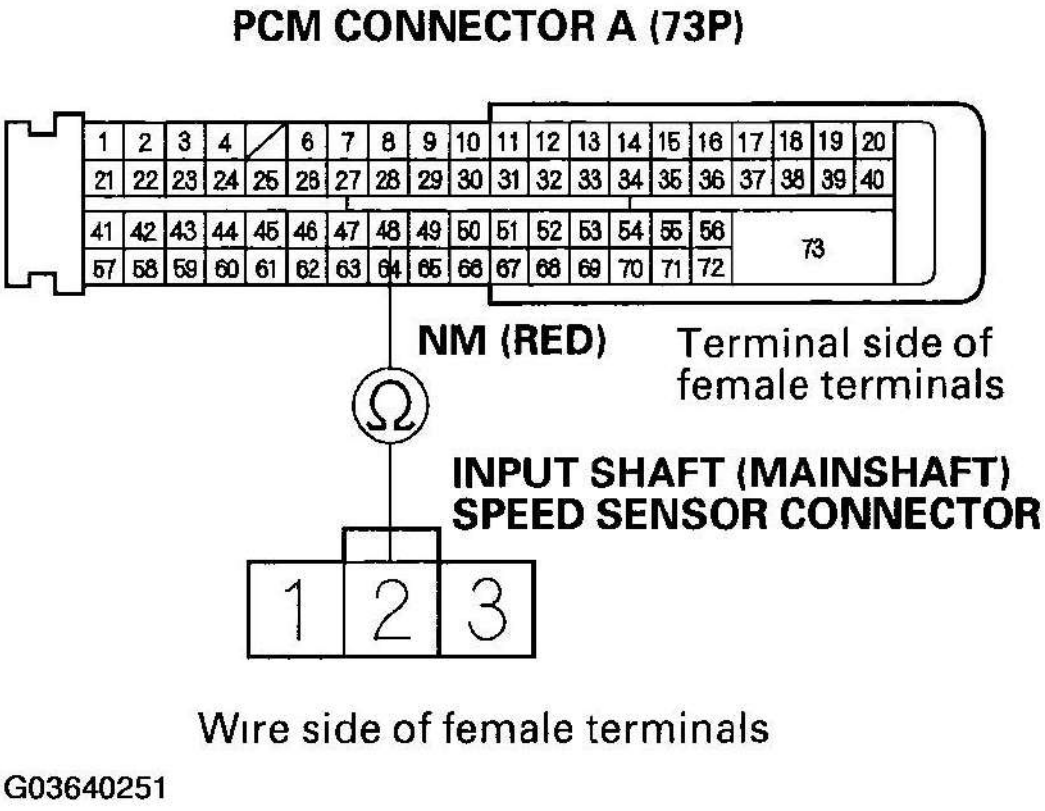


Fig. 116: Checking For Continuity Between PCM Connector Terminal A48 And Input Shaft (Mainshaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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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 open in the wire between PCM connector terminal A48 and the input shaft (mainshaft) speed sensor, then go to step 19.

19. Clear the DTC with the HAS.
20. Test-drive the vehicle for several minutes in the D5 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. Clear the DTC with the HAS.
2. Check for proper output shaft (countershaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
4. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 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 - Intermittent failure, the system is OK at this time. 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 HAS.
8. Disconnect PCM connector A (73P), and output shaft (countershaft) speed sensor connector.
9. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body

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ground, and between A73 and body ground.

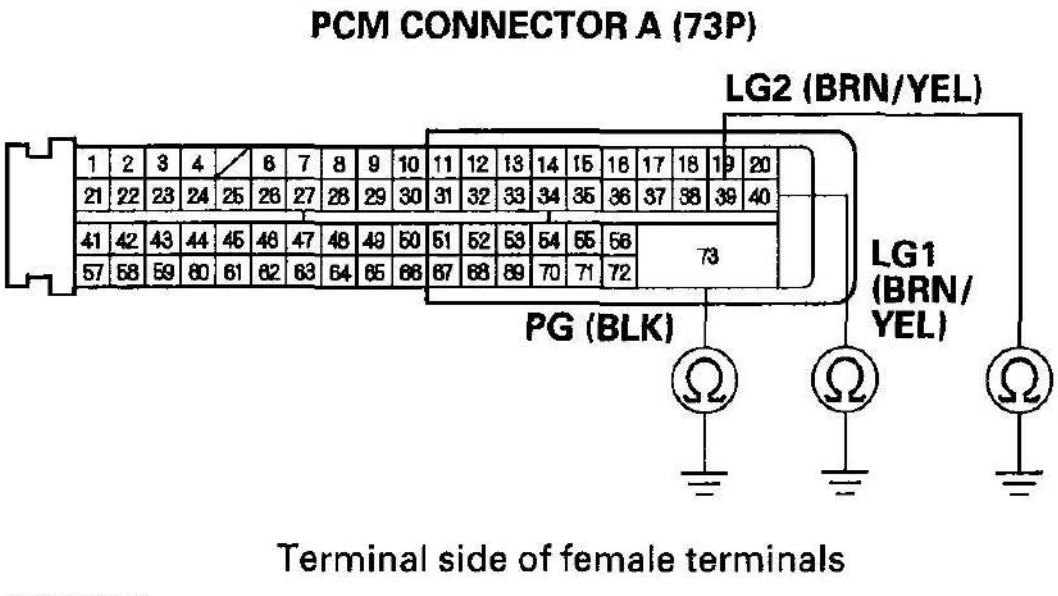


Fig. 117: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 30 .

10. Connect PCM connector A (73P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

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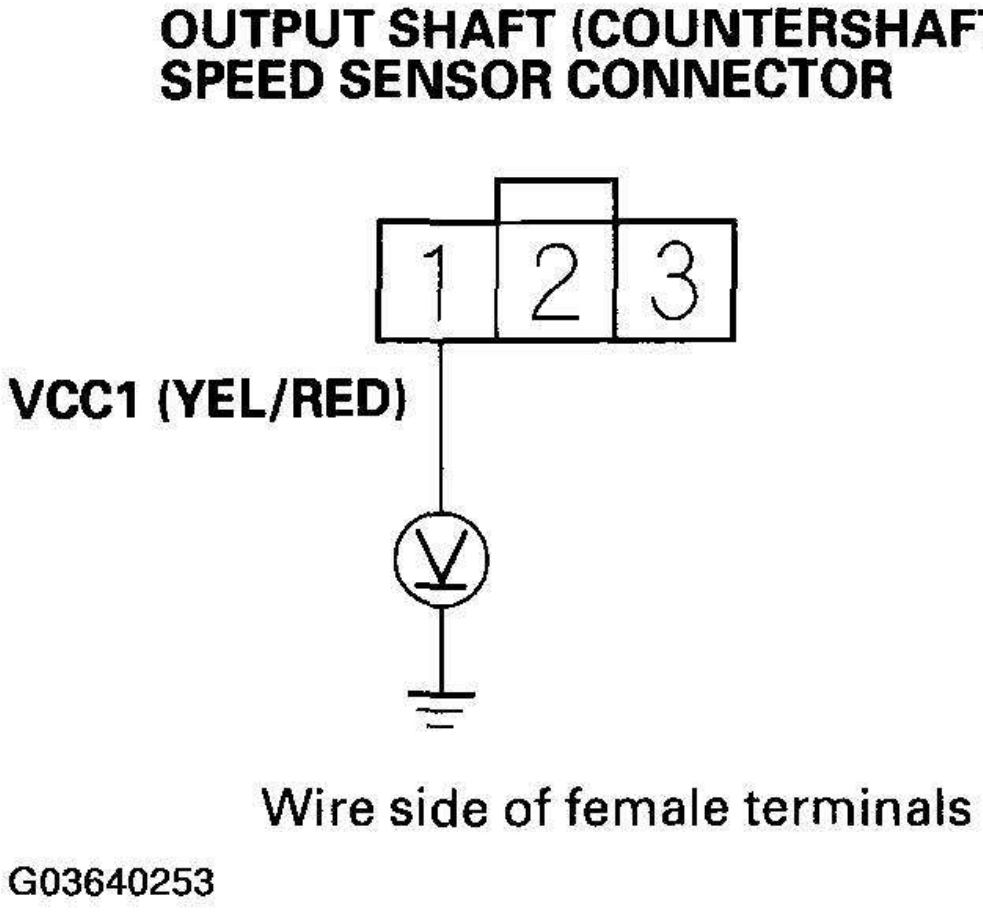


Fig. 118: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16 .
NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A7 and output shaft (countershaft) speed sensor connector terminal No. 1.

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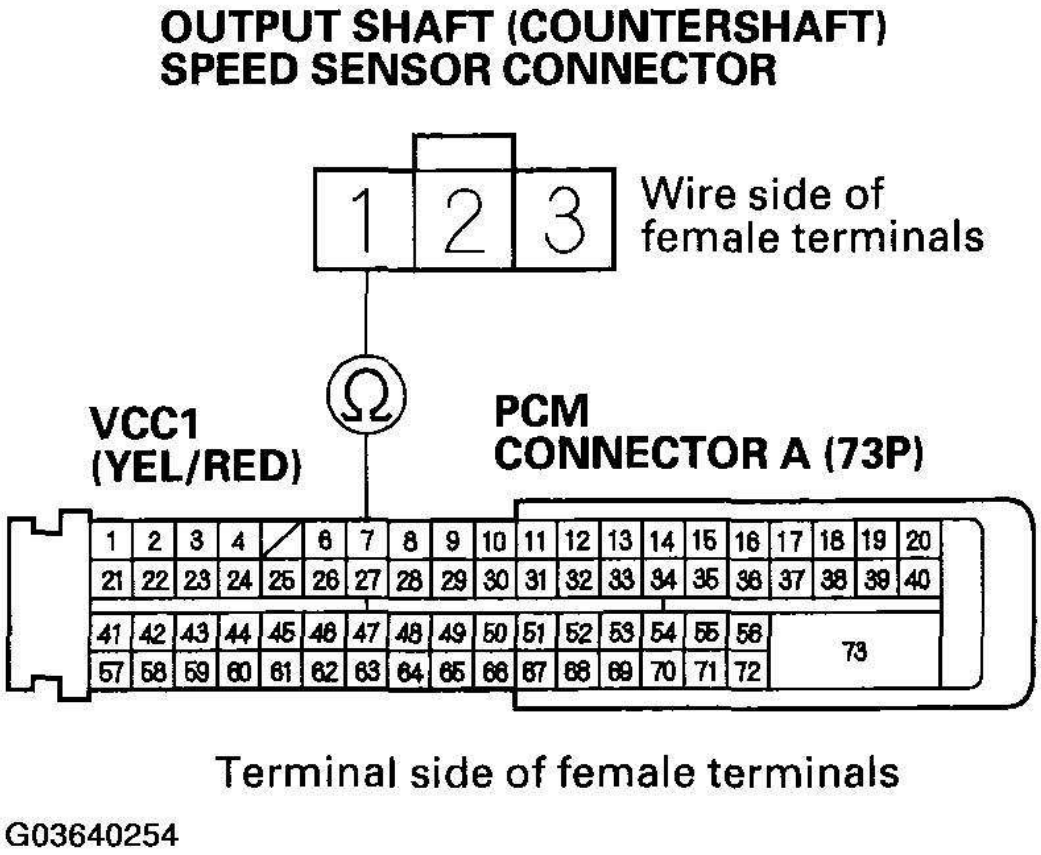


Fig. 119: Checking For Continuity Between PCM Connector Terminal A7 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal A7. 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 open in the wire between PCM connector terminal A7 and the output shaft (countershaft) speed sensor, then go to step 30 .

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

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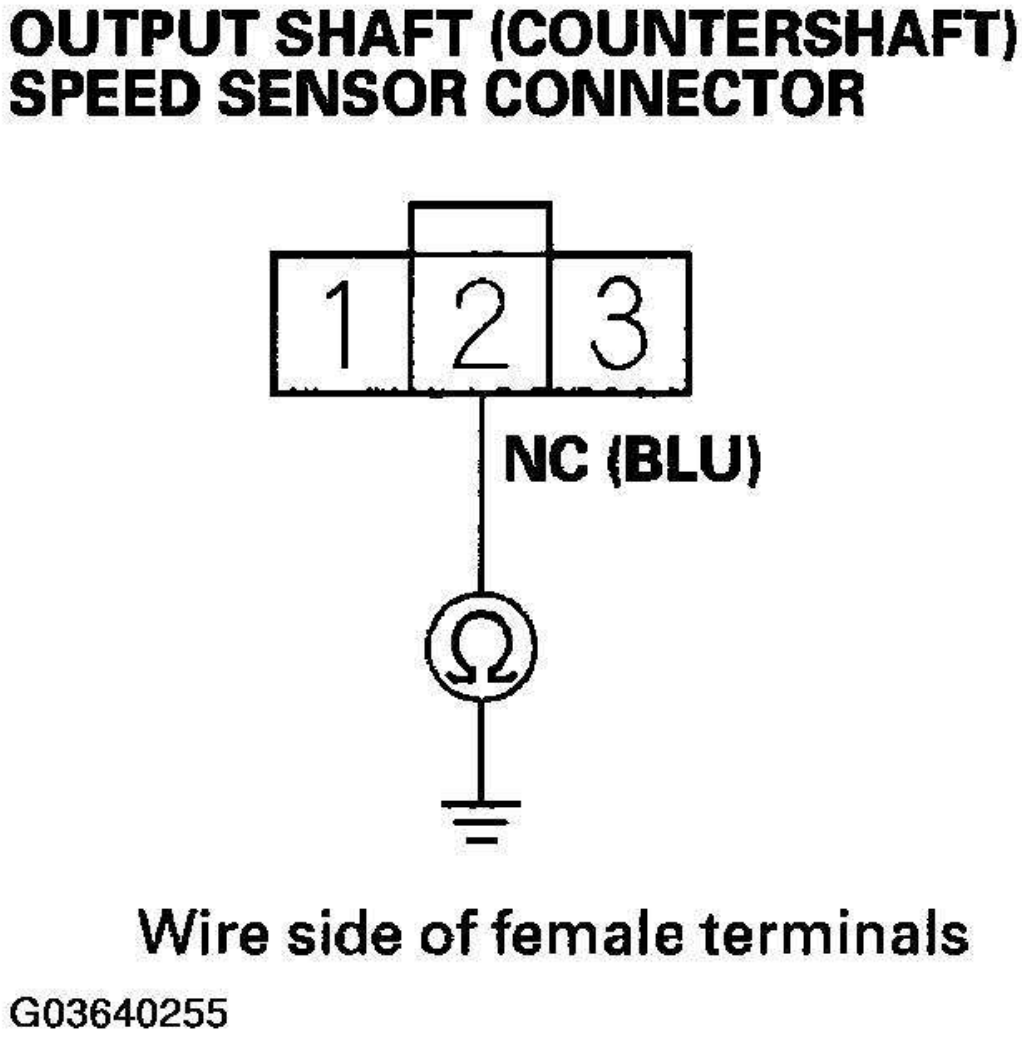


Fig. 120: Checking For Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A47 and output shaft (countershaft) speed sensor connector, then go to step 30 .

NO - Go to step 19.

19. Check for continuity between PCM connector terminal A8 and the No. 3 terminal of the output shaft (countershaft) speed sensor connector.

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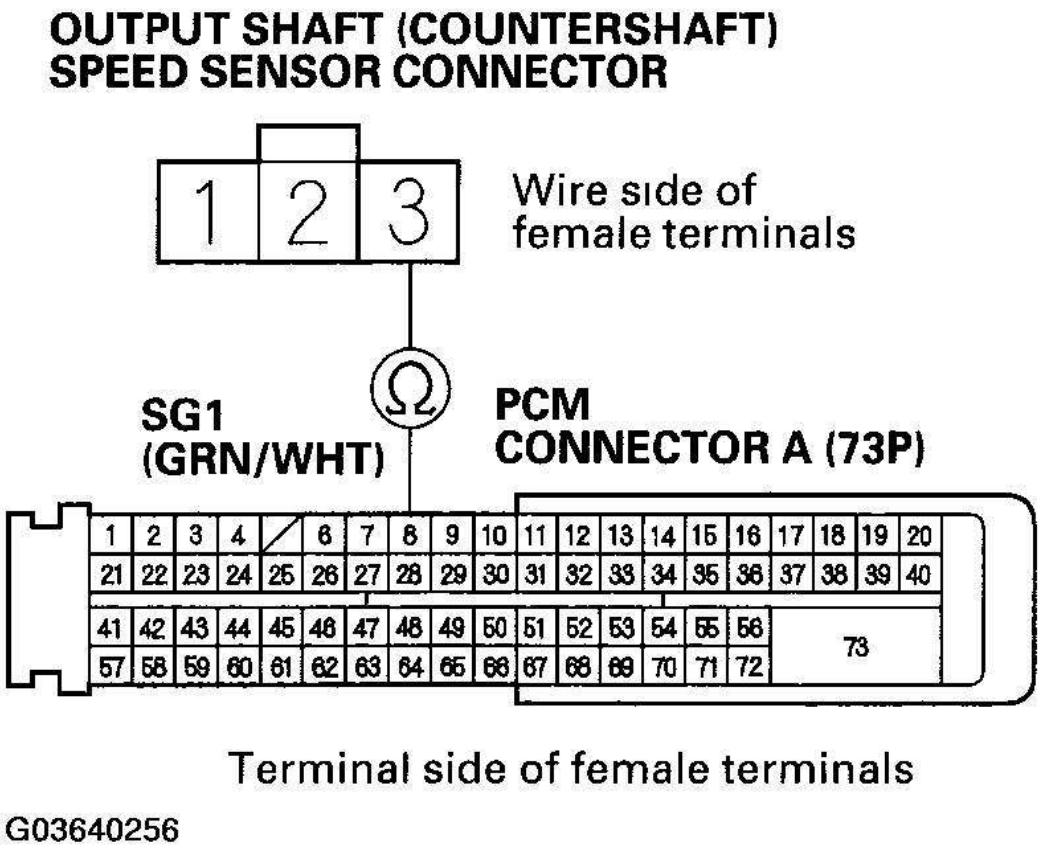


Fig. 121: Checking For Continuity Between PCM Connector Terminal A8 And No. 3 Terminal Of Output Shaft (Countershaft) Speed Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the output shaft (countershaft) speed sensor connector and PCM connector terminal A8, then go to step 30 .

20. Connect PCM connector A (73P).
21. Turn the ignition switch ON (II).
22. Measure the voltage between output shaft (countershaft) speed sensor connector terminals No. 2 and No. 3.

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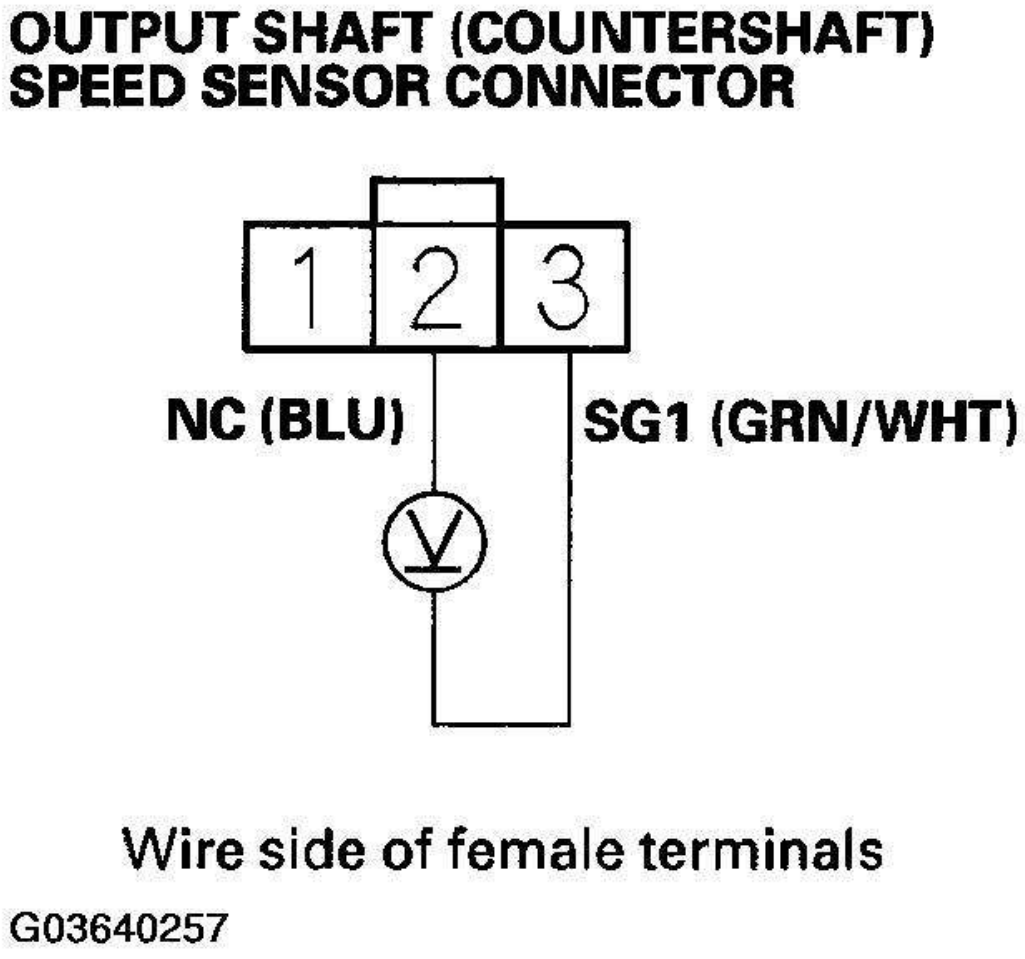


Fig. 122: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 26 .

NO - Go to step 23.

23. Turn the ignition switch OFF.
24. Disconnect PCM connector A (73P).
25. Check for continuity between PCM connector terminal A47 and output shaft (countershaft) speed sensor connector terminal No. 2.

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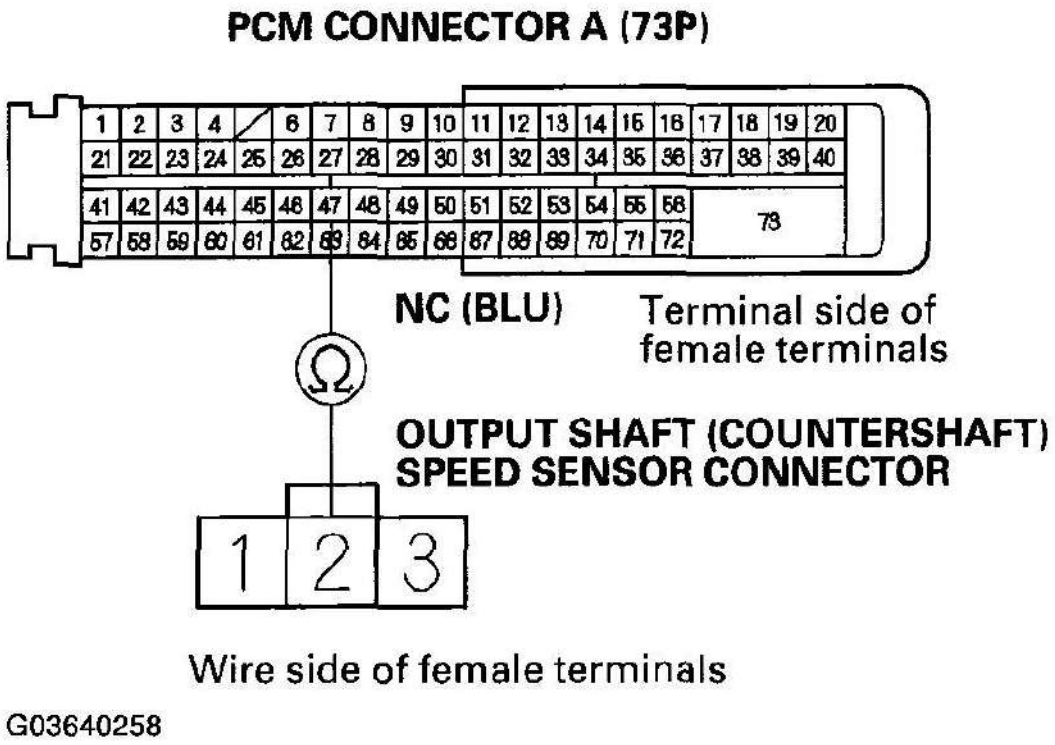


Fig. 123: Checking For Continuity Between PCM Connector Terminal A47 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wire between PCM connector terminal A47 and the output shaft (countershaft) speed sensor, then go to step 30 .

26. Connect the output shaft (countershaft) speed sensor connector.
27. Clear the DTC with the HAS.
28. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position with engine speed 2,000 RPM or higher for more than 10 seconds. Slow down and stop the wheels.
29. 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?

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YES - Replace the output shaft (countershaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then go to step 30 .

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.

30. Clear the DTC with the HAS.
31. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position with engine speed 2,000 RPM or higher for more than 10 seconds. Slow down and stop the wheels.
32. 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 1 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. Clear the DTC with the HAS.
2. Check for proper output shaft (countershaft) speed sensor installation (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**).
3. Raise the vehicle, make sure it is securely supported, and allow the all four wheels to rotate freely.
4. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 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 - Intermittent failure, the system is OK at this time. 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 HAS.
8. Disconnect PCM connector A (73P), and output shaft (countershaft) speed sensor connector.
9. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body

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ground, and between A73 and body ground.

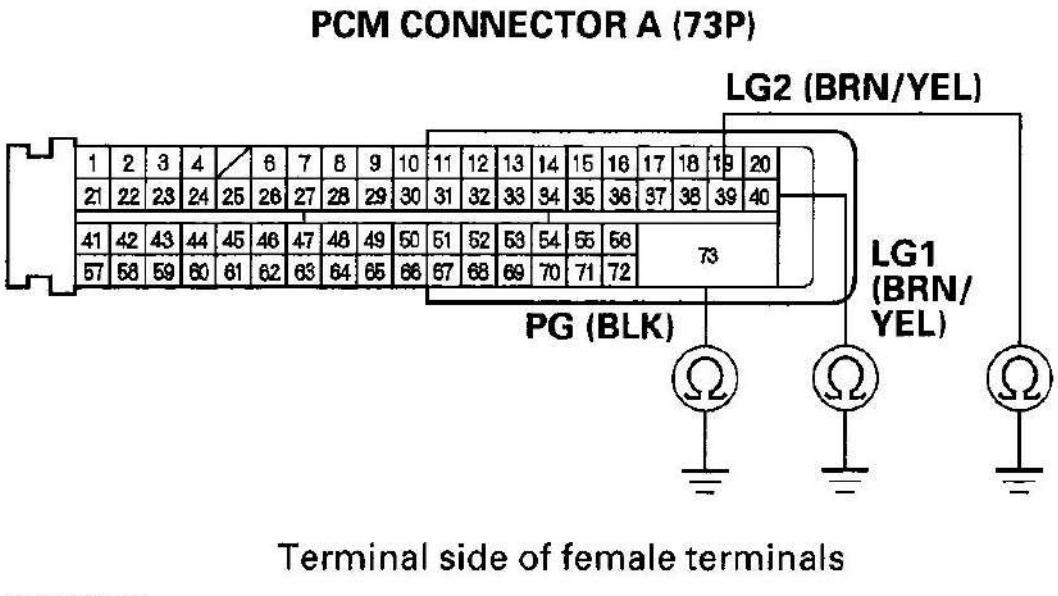


Fig. 124: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 30 .

10. Connect PCM connector A (73P).
11. Turn the ignition switch ON (II).
12. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

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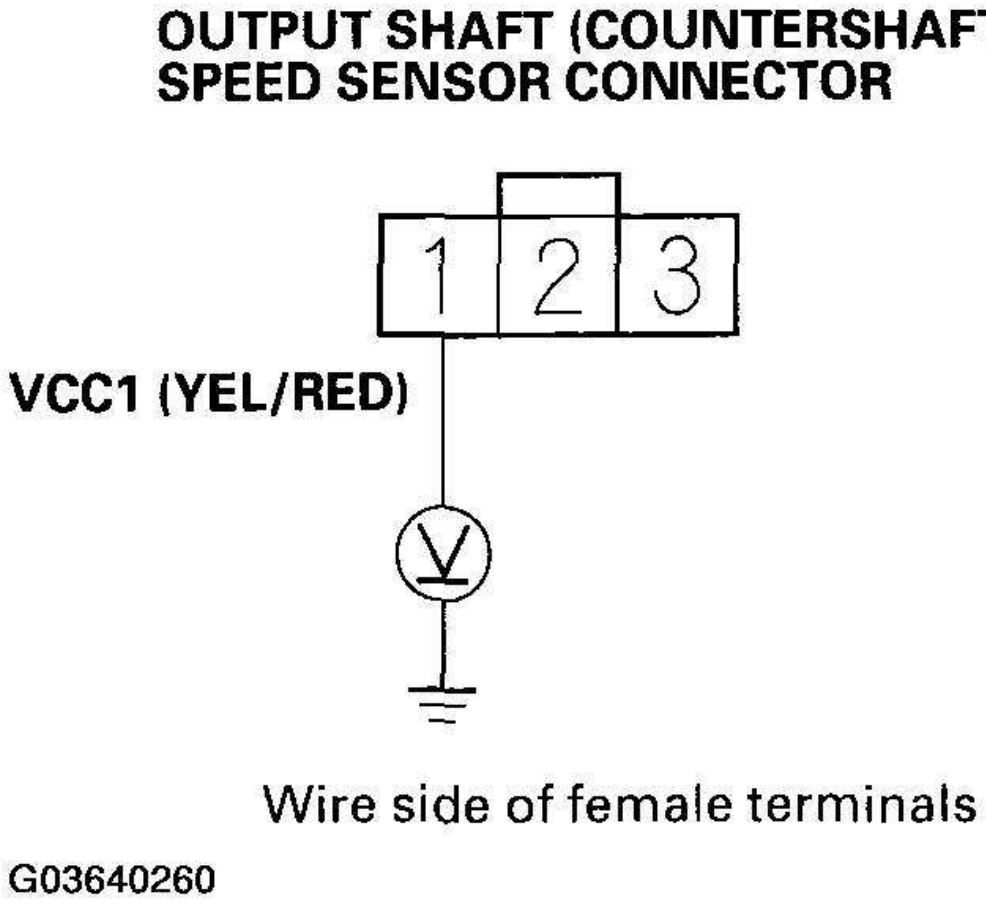


Fig. 125: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16 .

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A7 and output shaft (countershaft) speed sensor connector terminal No. 1.

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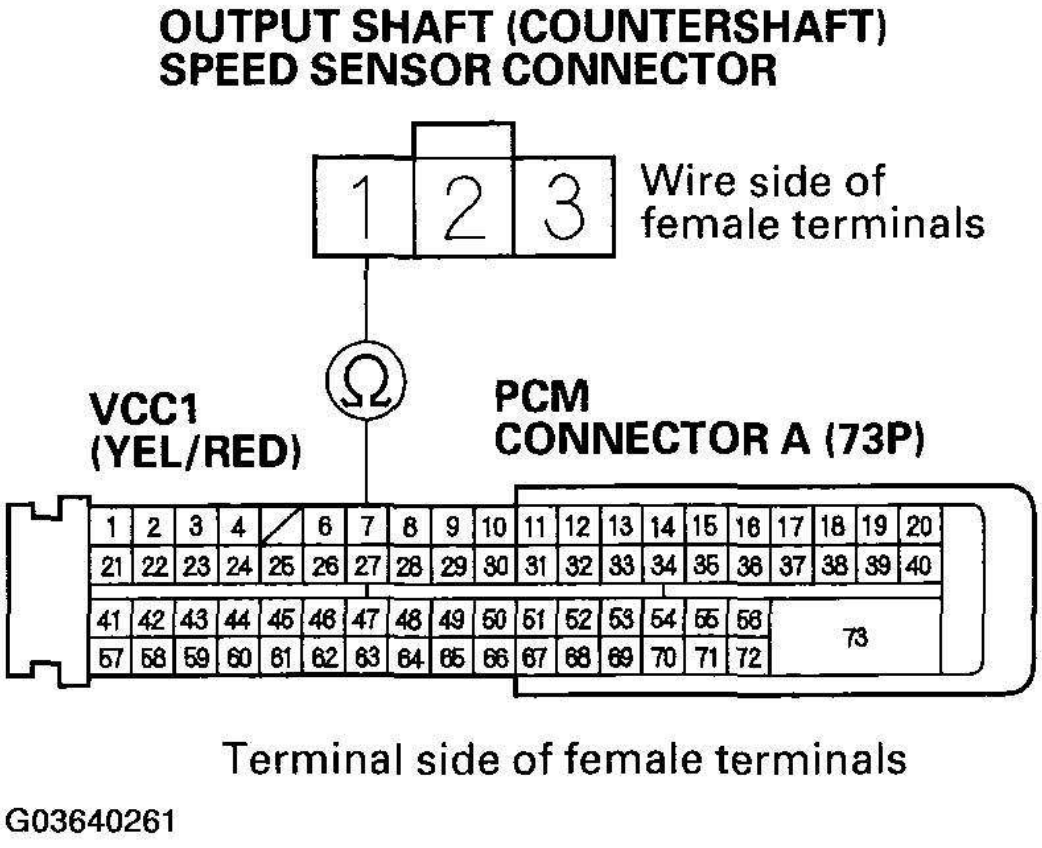


Fig. 126: Checking For Continuity Between PCM Connector Terminal A7 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for loose or poor connections at PCM connector terminal A7. 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 open in the wire between PCM connector terminal A7 and the output shaft (countershaft) speed sensor, then go to step 30 .

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

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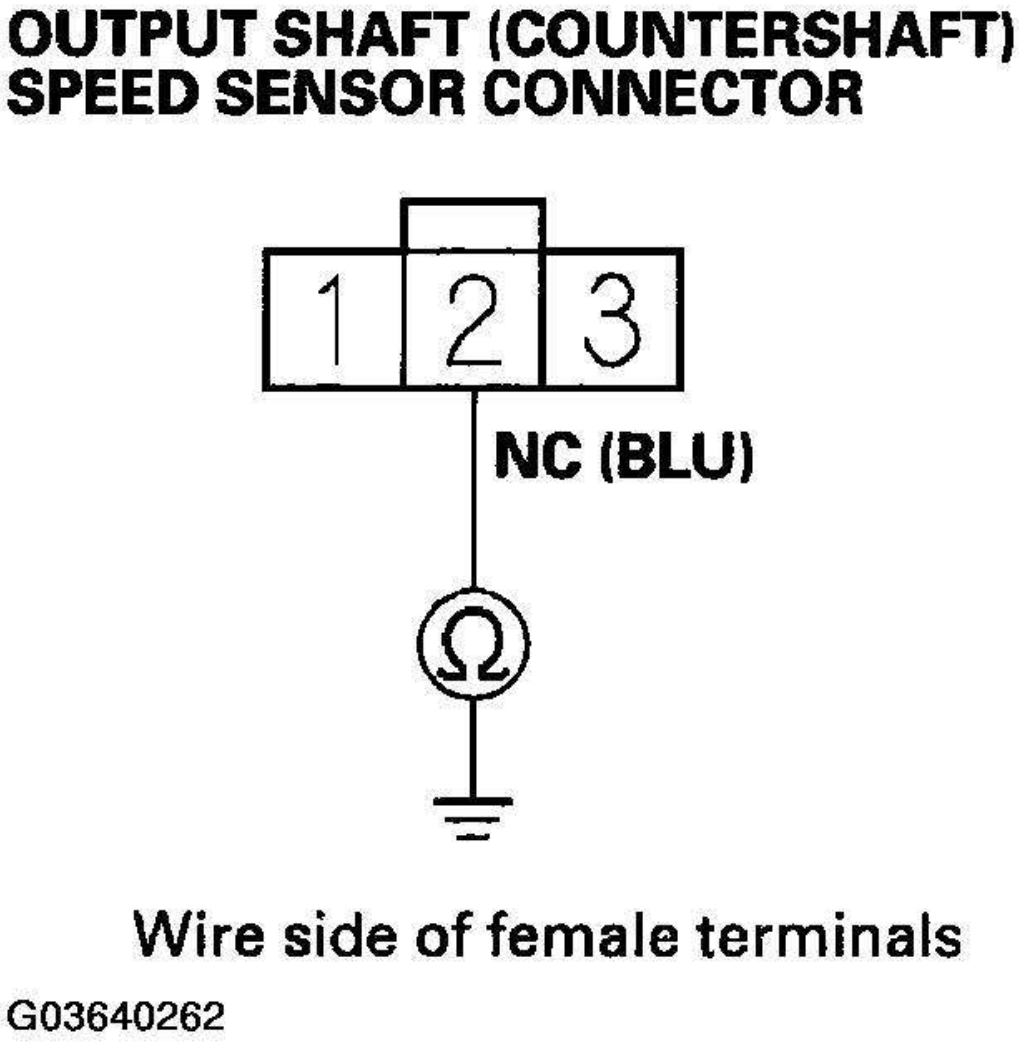


Fig. 127: Checking For Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A47 and output shaft (countershaft) speed sensor connector, then go to step 30 .

NO - Go to step 19.

19. Check for continuity between PCM connector terminal A8 and output shaft (countershaft) speed sensor connector terminal No. 3.

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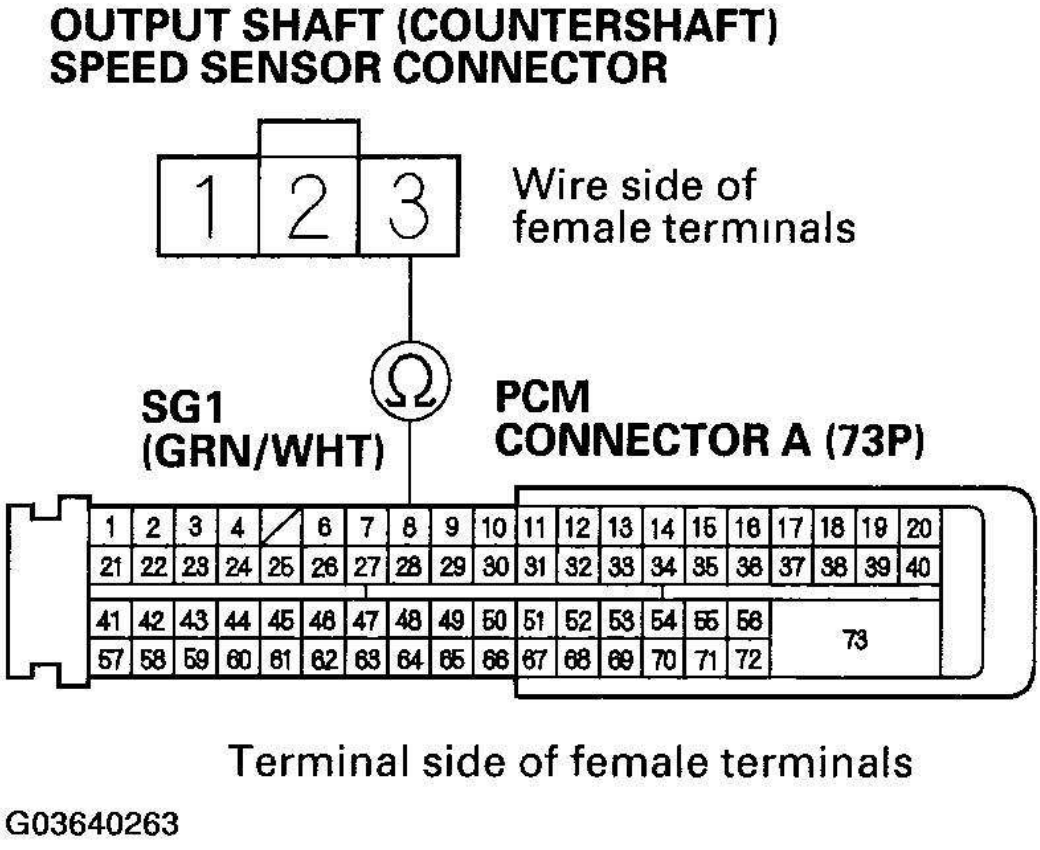


Fig. 128: Checking For Continuity Between PCM Connector Terminal A8 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the output shaft (countershaft) speed sensor connector and PCM connector terminal A8, then go to step 30 .

20. Connect PCM connector A (73P).
21. Turn the ignition switch ON (II).
22. Measure the voltage between output shaft (countershaft) speed sensor connector terminals No. 2 and No. 3.

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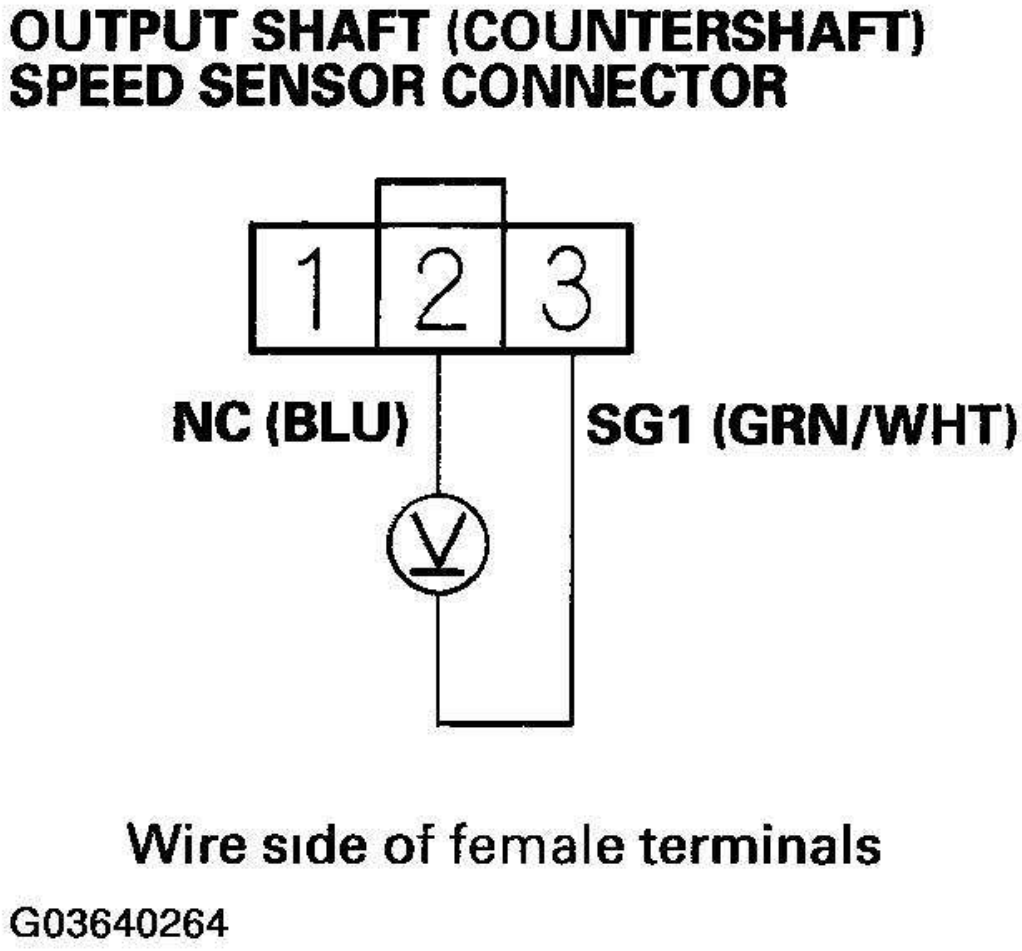


Fig. 129: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 26 .

NO - Go to step 23.

23. Turn the ignition switch OFF.
24. Disconnect PCM connector A (73P).
25. Check for continuity between PCM connector terminal A47 and output shaft (countershaft) speed sensor connector terminal No. 2.

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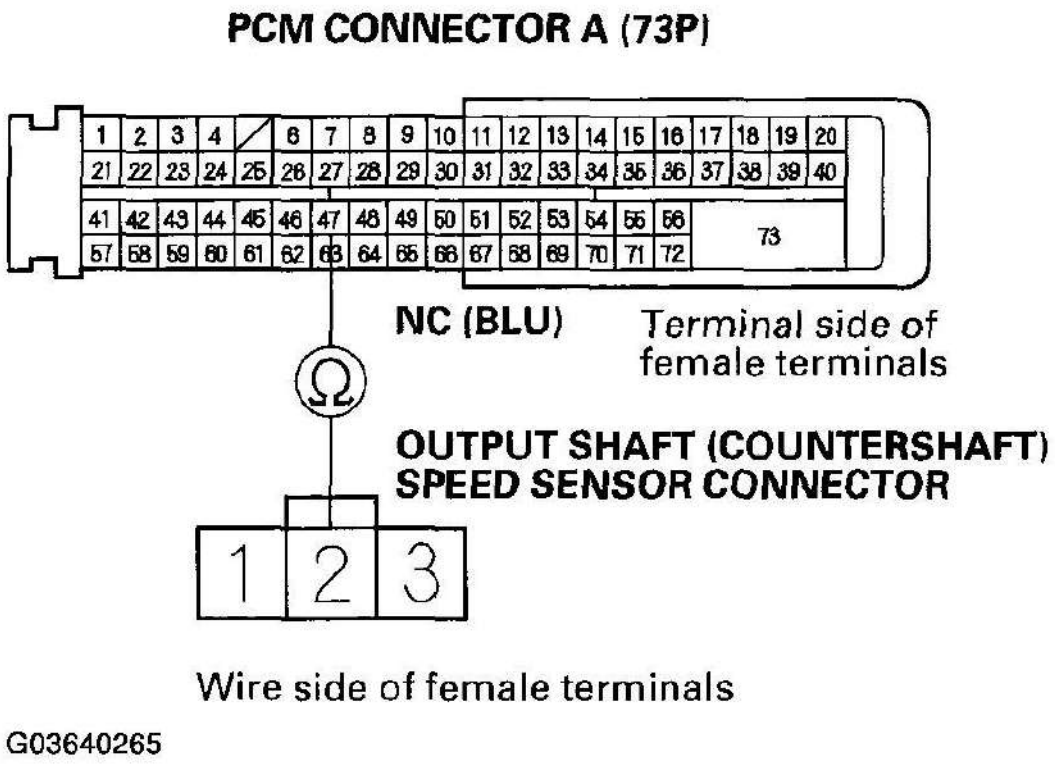


Fig. 130: Checking For Continuity Between PCM Connector Terminal A47 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wire between PCM connector terminal A47 and the output shaft (countershaft) speed sensor, then go to step 30 .

26. Connect the output shaft (countershaft) speed sensor connector.
27. Clear the DTC with the HAS.
28. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position with engine speed 2,000 RPM or higher for more than 10 seconds. Slow down and stop the wheels.
29. 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?

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YES - Replace the output shaft (countershaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then go to step 30.

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.

30. Clear the DTC with the HAS.
31. Start the engine and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in the D5 position with engine speed 2,000 RPM or higher for more than 10 seconds. Slow down and stop the wheels.
32. 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 1 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. Clear the DTC with the HAS.
2. Test-drive the vehicle for more than 10 minutes under the same conditions as those indicated by the freeze data. Slow down and stop the wheels.
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 - Intermittent failure, the system is OK at this time. 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.

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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 HAS.
10. Disconnect PCM connector A (73P).
11. Disconnect the countershaft speed sensor connector.
12. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

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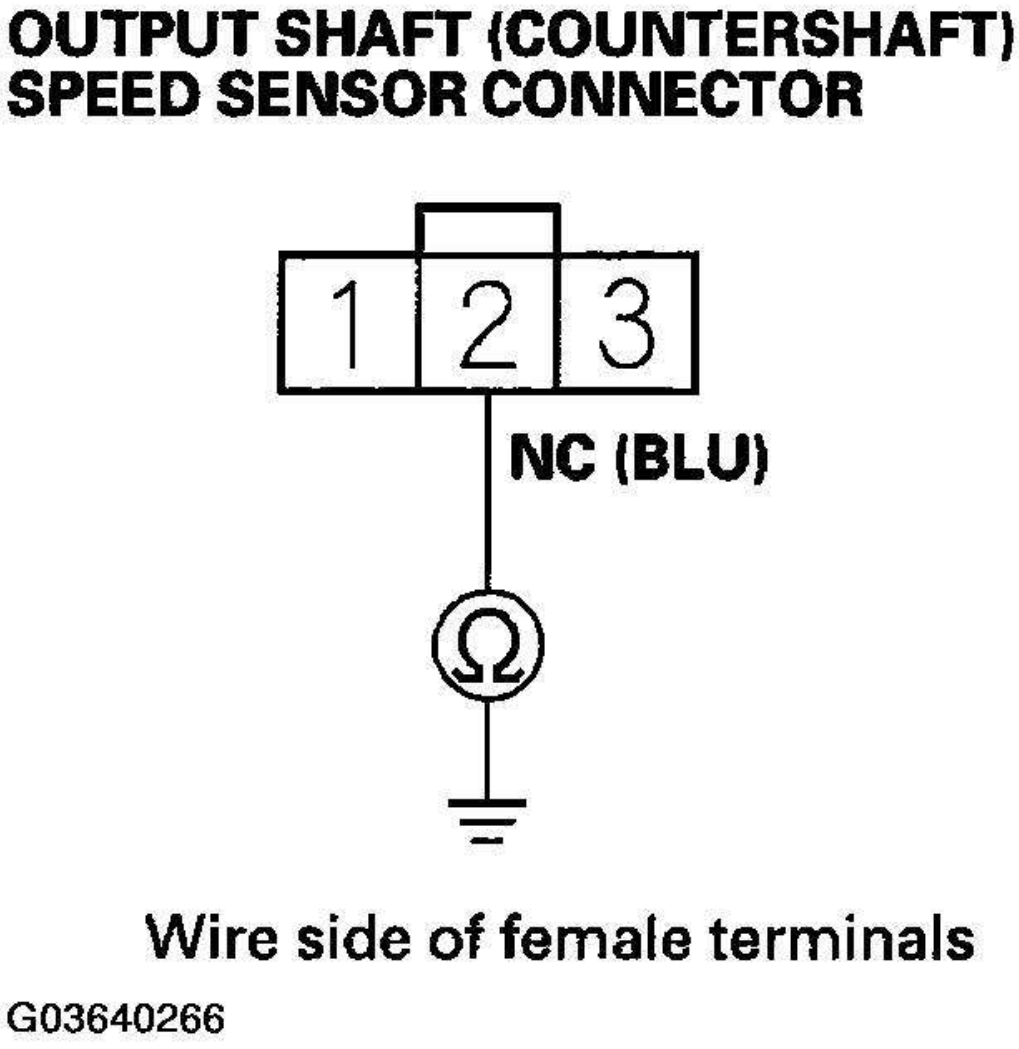


Fig. 131: Checking For Continuity Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A47 and the output shaft (countershaft) speed sensor connector, then go to step 19 .

NO - Go to step 13.

13. Connect PCM connector A (73P).
14. Turn the ignition switch ON (II).

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15. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

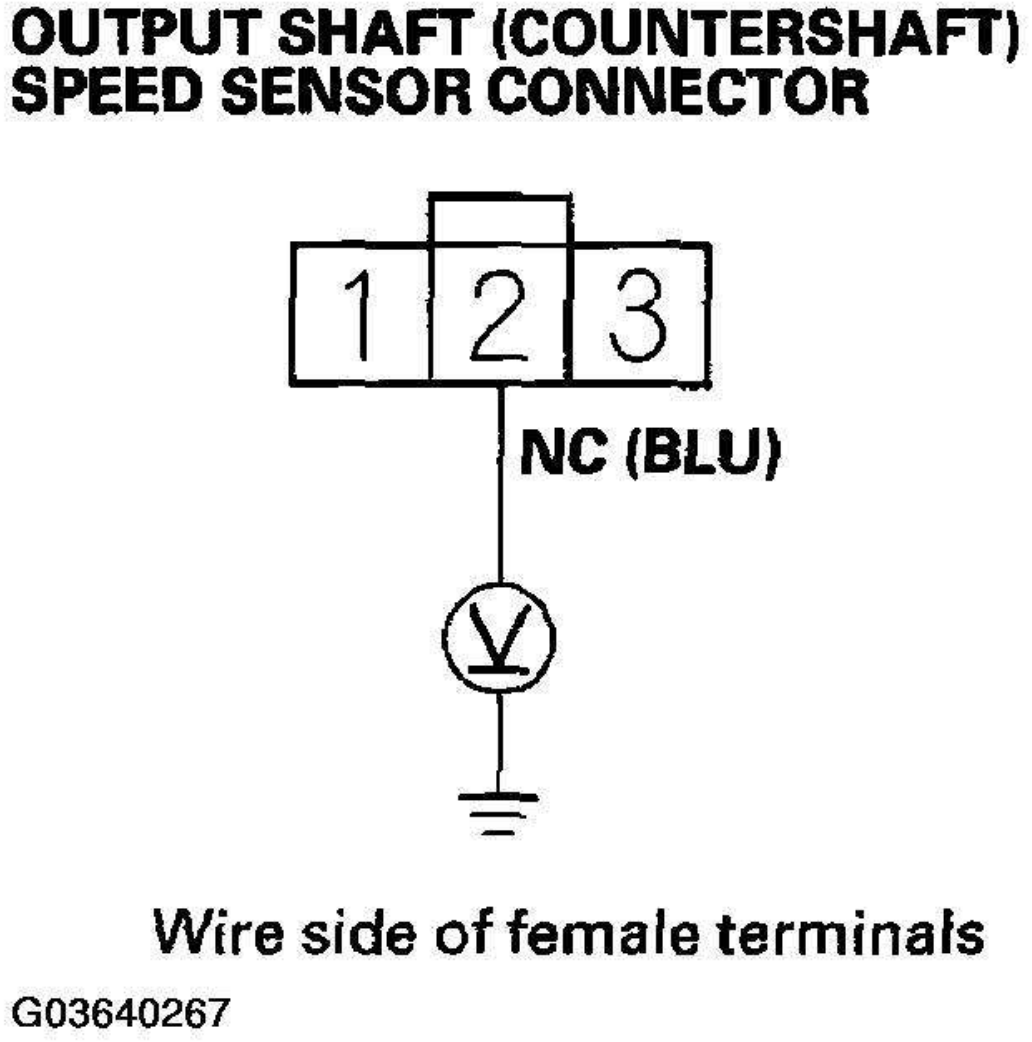


Fig. 132: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the output shaft (countershaft) speed sensor (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then go to step 19 .

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NO - Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Check for continuity between PCM connector terminal A47 and output shaft (countershaft) speed sensor connector terminal No. 2.

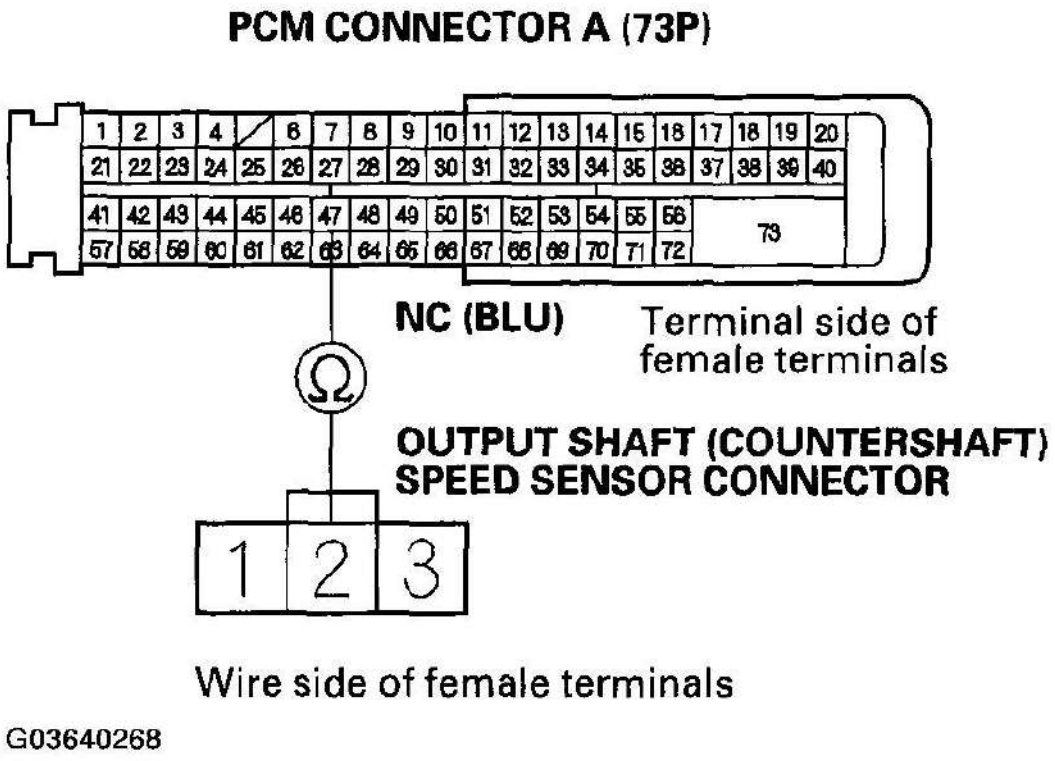


Fig. 133: Checking For Continuity Between PCM Connector Terminal A47 And Output Shaft (Countershaft) Speed Sensor Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wire between PCM connector terminal A47 and the output shaft (countershaft) speed sensor, then go to step 19.

19. Clear the DTC with the HAS.
20. Test-drive the vehicle for several minutes in the D5 position through all five gears.

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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 1 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

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

Is the line pressure within service limits?

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 limits?

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 HAS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in the 1st gear in the D5 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 - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED,

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

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Measure the line pressure (see **PRESSURE TEST**).

   Is the line pressure within service limits?

   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 limits?

   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 HAS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in the 2nd gear in the D5 position at speeds over 10 mph (16 km/h) for 20 seconds. Slow down and stop the wheels.
8. Turn the ignition switch OFF, then turn it ON (II) again.
9. 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 - 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

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

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), 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 limits?

   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 HAS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in the 3rd gear in the D5 position at speeds over 10 mph (16 km/h) for 20 seconds. Slow down and stop the wheels.
8. Turn the ignition switch OFF, then turn it ON (II) again.
9. 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 - 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.

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

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Measure the line pressure (see **PRESSURE TEST**).

   Is the line pressure within service limits?

   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 limits?

   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 HAS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in the 4th gear in the D5 position at speeds over 10 mph (16 km/h) for 20 seconds. Slow down and stop the wheels.
8. Turn the ignition switch OFF, then turn it ON (II) again.
9. 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 - 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 the transmission is filled to the proper level, and check for fluid leaks.

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3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Measure the line pressure (see **PRESSURE TEST**).

   Is the line pressure within service limits?

   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 limits?

   YES - Go to step 6.

   NO - Shift valves A, B, C, and D are stuck. Repair the shift valves and hydraulic circuit, replace the transmission.
6. Clear the DTC with the HAS.
7. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, or drive in the 5th gear in the D5 position at speeds over 10 mph (16 km/h) for 20 seconds. Slow down and stop the wheels.
8. Turn the ignition switch OFF, then turn it ON (II) again.
9. 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 - 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 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 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.

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Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

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

Is a clicking sound heard?

YES - Go to step 6.

NO - Replace torque converter clutch solenoid valve (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/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 HAS.

Is the system OK?

YES - Go to step 7.

NO - Follow instructions indicated on the HAS by test result, then go to step 10 .

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 HAS.
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 torque converter clutch hydraulic circuit, lock up shift valve, or lock up control valve, or replace the transmission.

NO - 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 HAS.
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

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

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Clear the DTC with the HAS.
5. Test-drive the vehicle for several minutes in the D5 position through all five gears.
6. 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 7.

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

   Is the system OK?

   YES - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

   NO - Follow instructions indicated on the HAS by test result, if the tester has not determined the cause of the failure, go to step 9. If any part was replaced, go to step 10 .
9. Inspect A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B 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 10.

   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 10.
10. Clear the DTC with the HAS.
11. Test-drive the vehicle for several minutes in the D5 position through all five gears.

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12. 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 5 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
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 HAS.

Is the system OK?

YES - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

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

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10. Inspect A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B 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 HAS.
12. Test-drive the vehicle in the D5 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 D5 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 5 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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?

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YES - Go to step 8.

NO - 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 HAS.
9. Choose Shift Solenoid A in Miscellaneous Test Menu, and check that the shift solenoid valve A operates with the HAS.

Is a clicking sound heard?

YES - Go to step 10.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .

10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves A and E, then go to step 13.

NO - 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 HAS.
14. Test-drive the vehicle in the D5 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 D5 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 5 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 the transmission is filled to the proper level, and check for fluid leaks.

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3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
9. Choose Shift Solenoid A in Miscellaneous Test Menu, and check that the shift solenoid valve A operates with the HAS.

   Is a clicking sound heard?

   YES - Go to step 10.

   NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .
10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves A and E, then go to step 13.

    NO - 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 HAS.
14. Test-drive the vehicle in the D5 position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.

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15. Retest-drive the vehicle in the D5 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 5 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
9. Choose Shift Solenoid B in Miscellaneous Test Menu, and check that the shift solenoid valve B operates with the HAS.

Is a clicking sound heard?

YES - Go to step 10.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE, TORQUE**

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CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT), then go to step 12 .

10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves B and E, then go to step 13.

NO - 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 HAS.
14. Test-drive the vehicle in the D5 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 D5 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 5 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.

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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 - 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 HAS.
9. Choose Shift Solenoid B in Miscellaneous Test Menu, and check that the shift solenoid valve B operates with the HAS.

   Is a clicking sound heard?

   YES - Go to step 10.

   NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .
10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves B and E, then go to step 13.

    NO - 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 HAS.
14. Test-drive the vehicle in the D5 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 D5 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 5 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.

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

   Does the strainer contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5), then go to step 4.
4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
9. Choose Shift Solenoid C in Miscellaneous Test Menu, and check that the shift solenoid valve C operates with the HAS.

   Is a clicking sound heard?

   YES - Go to step 10.

   NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .
10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves C and E, then go to step 13.

    NO - 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 HAS.

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14. Test-drive the vehicle in the D5 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 D5 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 5 and recheck.

DTC P0762: 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 the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 3) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

Does the strainer contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
9. Choose Shift Solenoid C in Miscellaneous Test Menu, and check that the shift solenoid valve C operates with the HAS.

Is a clicking sound heard?

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YES - Go to step 10.

NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .

10. Test-drive the vehicle in the D5 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 D5 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 hydraulic system related with shift valves C and E, then go to step 13.

NO - 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 HAS.
14. Test-drive the vehicle in the D5 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 D5 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 5 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 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 contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 position through all five gears at speeds over 12 mph (20 km/h) for more

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than 20 seconds, then slow down to a stop.

6. Retest-drive the vehicle in the D5 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 - 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 HAS.
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 HAS.

Is the system OK?

YES - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

NO - Follow instructions indicated on the HAS by the test result, if 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 A AND 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 HAS.
12. Test-drive the vehicle in the D5 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 D5 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 5 and recheck.

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

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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 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 contain metal debris or excessive clutch material?

   YES - Replace the transmission.

   NO - Replace the ATF (see step 5 on **ATF Replacement**), then go to step 4.
4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
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 HAS.

   Is the system OK?

   YES - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 8 and recheck.

   NO - Follow instructions indicated on the HAS by the test result, if 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 A AND 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.

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11. Clear the DTC with the HAS.
12. Test-drive the vehicle in the D5 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 D5 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 5 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 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 contain metal debris or excessive clutch material?

YES - Replace the transmission.

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

4. Clear the DTC with the HAS.
5. Test-drive the vehicle in the D5 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 D5 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 - 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 HAS.
9. Run the engine until the engine coolant temperature reaches 176 °F (80 °C).
10. Test-drive the vehicle in the D5 position through all five gears at speeds over 12 mph (20 km/h) for more than 20 seconds, then slow down to a stop.

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11. Retest-drive the vehicle in the D5 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 hydraulic system related with shift valve D, then go to step 13.

NO - 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 HAS.
14. Test-drive the vehicle in the D5 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 D5 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 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 5 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 HAS.
2. Check the 3rd PRES SWITCH signal with the HAS 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 D3 position for more than 5 seconds, then shift to the D4 position, and drive in 4th gear for about 5 seconds. Slow down and stop the wheels.
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?

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YES - Go to step 6.

NO - Intermittent failure, the system is OK at this time. 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 HAS 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 HAS.
12. Disconnect PCM connector A (73P).
13. Check for continuity between PCM connector terminal A31 and body ground.

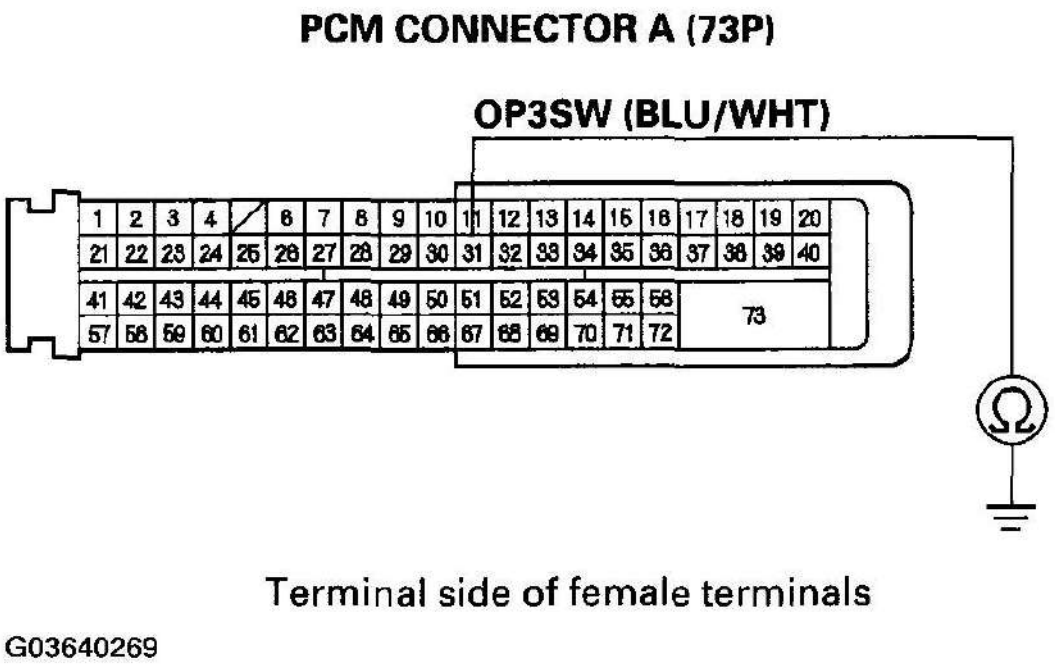


Fig. 134: Checking For Continuity Between PCM Connector Terminal A31 And Body Ground
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Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A31 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 HAS.
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 D3 position for more than 5 seconds, then shift to the D4 position, and drive in 4th gear for more than 5 seconds. Slow down and stop the wheels.
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 1 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 HAS.
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 D3 position, and verify that the SHIFT COMMAND indicates 3rd with the HAS in the A/T data list.
4. Check the 3rd PRES SWITCH signal with the HAS 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 D3 position for more than 5 seconds, then shift to D4 position, and drive in 4th gear for more than 5 seconds. Slow down and stop the wheels.
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?

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YES - Go to step 7.

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

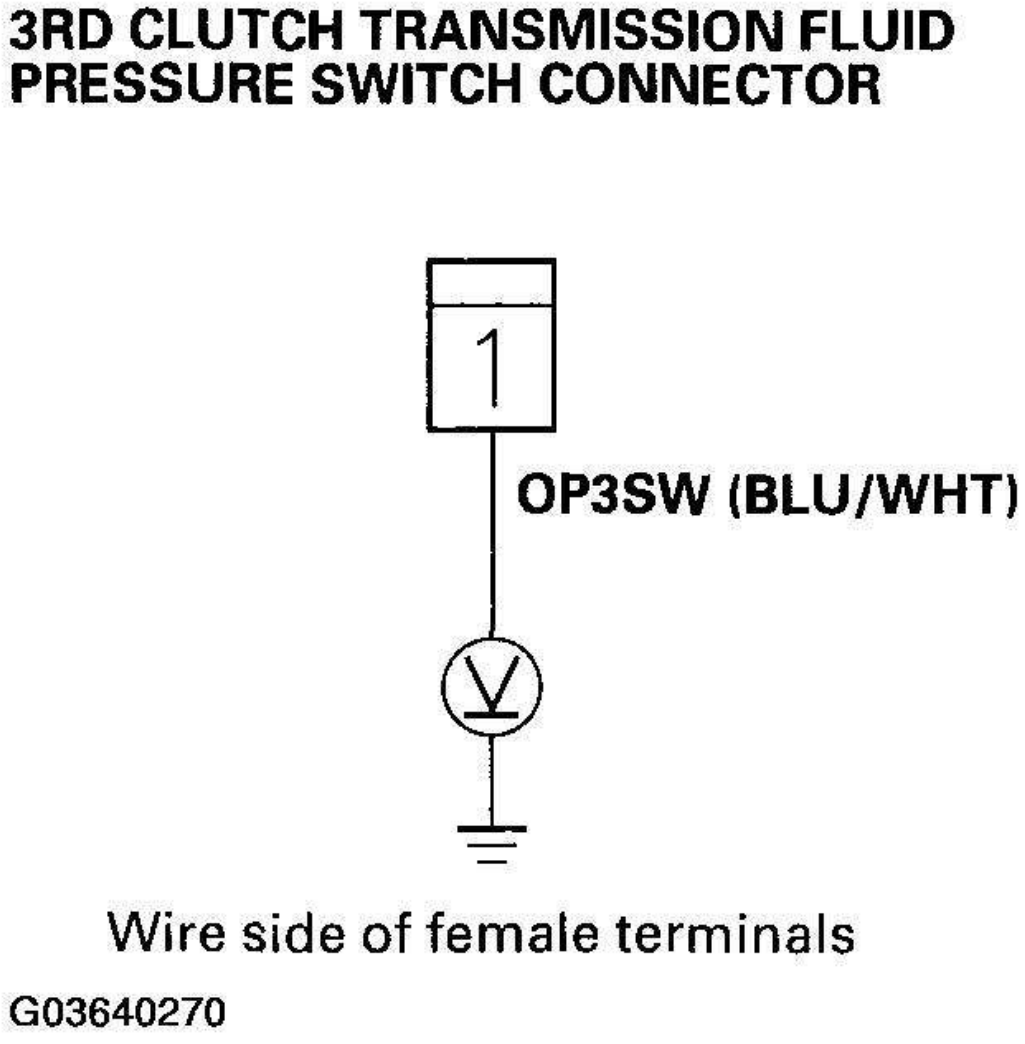


Fig. 135: Measuring Voltage Between 3rd Clutch Transmission Fluid Pressure Switch Connector

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Terminal And Body Ground
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Is there about 10 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 HAS.
13. Disconnect PCM connector A (73P).
14. Check for continuity between PCM connector terminal A31 and 3rd clutch transmission fluid pressure switch connector terminal.

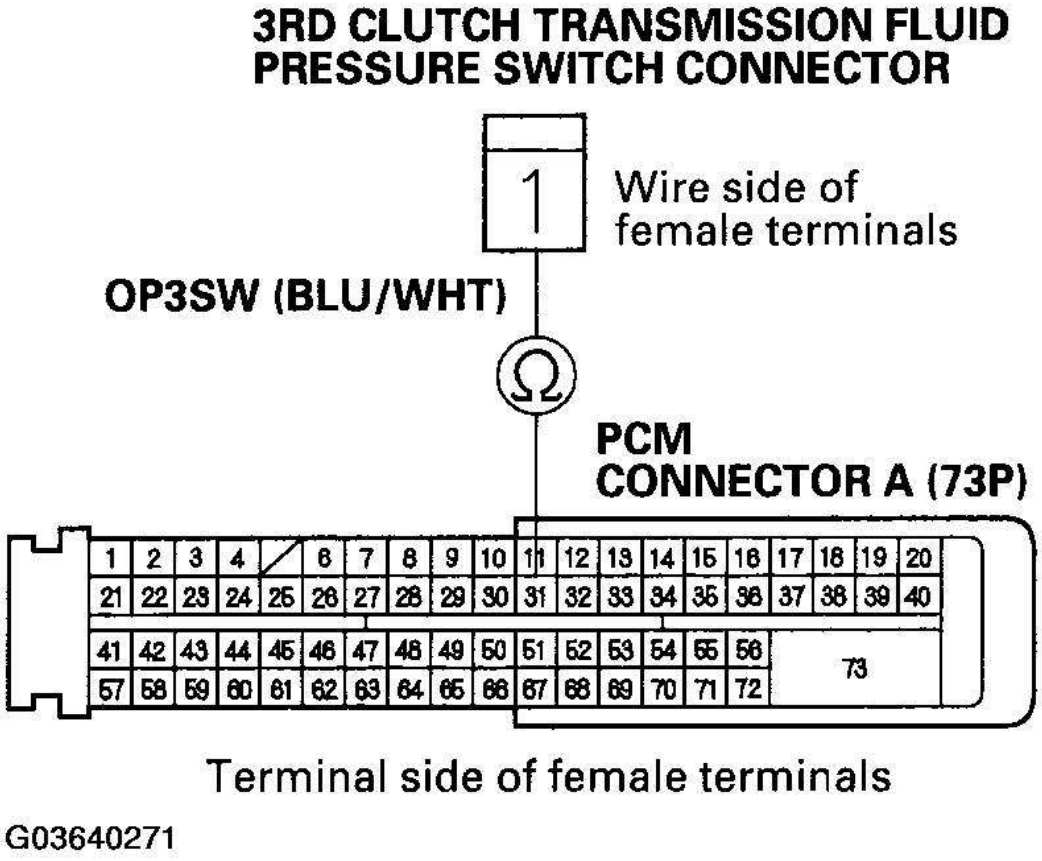


Fig. 136: Checking For Continuity Between PCM Connector Terminal A31 And 3rd Clutch Transmission Fluid Pressure Switch Connector Terminal
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Is there continuity?

YES - Check for loose or poor connections at PCM connector A31. 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 open in the wire between PCM connector terminal A31 and the 3rd clutch transmission pressure switch, then go to step 15.

15. Clear the DTC with the HAS.
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 D3 position for more than 5 seconds, then shift to the D4 position, and drive in 4th gear for more than 5 seconds. Slow down and stop the wheels.
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 1 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 HAS.
2. Check the 4th PRES SWITCH signal with the HAS 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 D4 position for more than 5 seconds. Slow down and stop the wheels.
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 - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED,

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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 HAS 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 HAS.
12. Disconnect PCM connector A (73P).
13. Check for continuity between PCM connector terminal A32 and body ground.

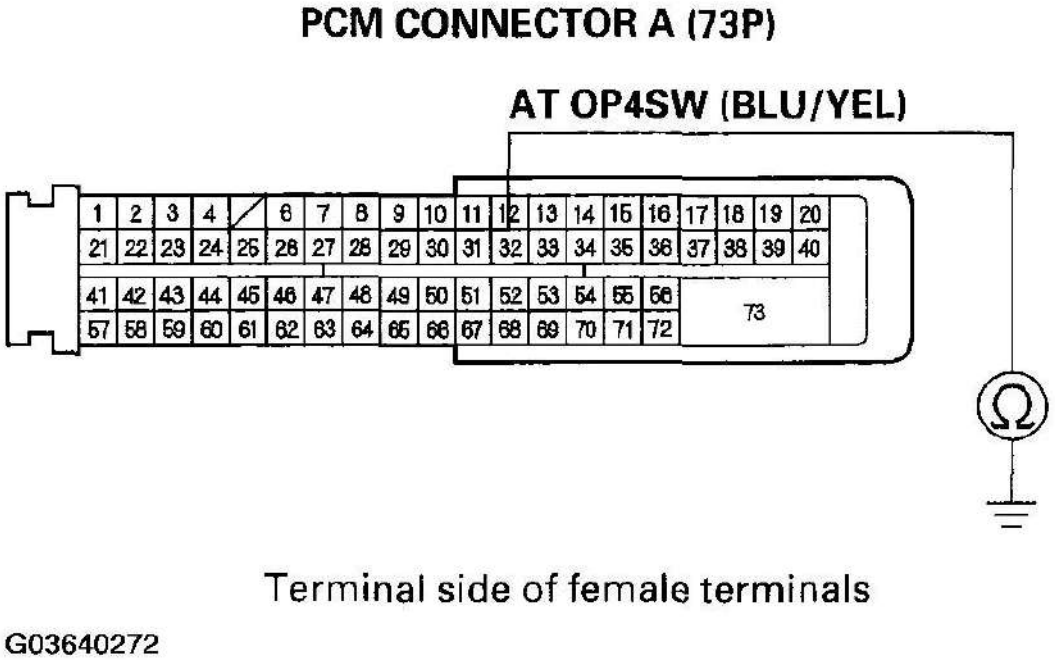


Fig. 137: Checking For Continuity Between PCM Connector Terminal A32 And Body Ground
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Is there continuity?

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YES - Repair short to ground in the wire between PCM connector terminal A32 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 HAS.
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 D4 position for more than 5 seconds. Slow down and stop the wheels.
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 1 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 HAS.
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 D4 position, and verify that the SHIFT COMMAND indicates 4th with the HAS in the A/T data list.
4. Check the 4th PRES SWITCH signal with the HAS 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 D4 position for more than 5 seconds, then slow down and stop the wheels.
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 - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED,

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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.

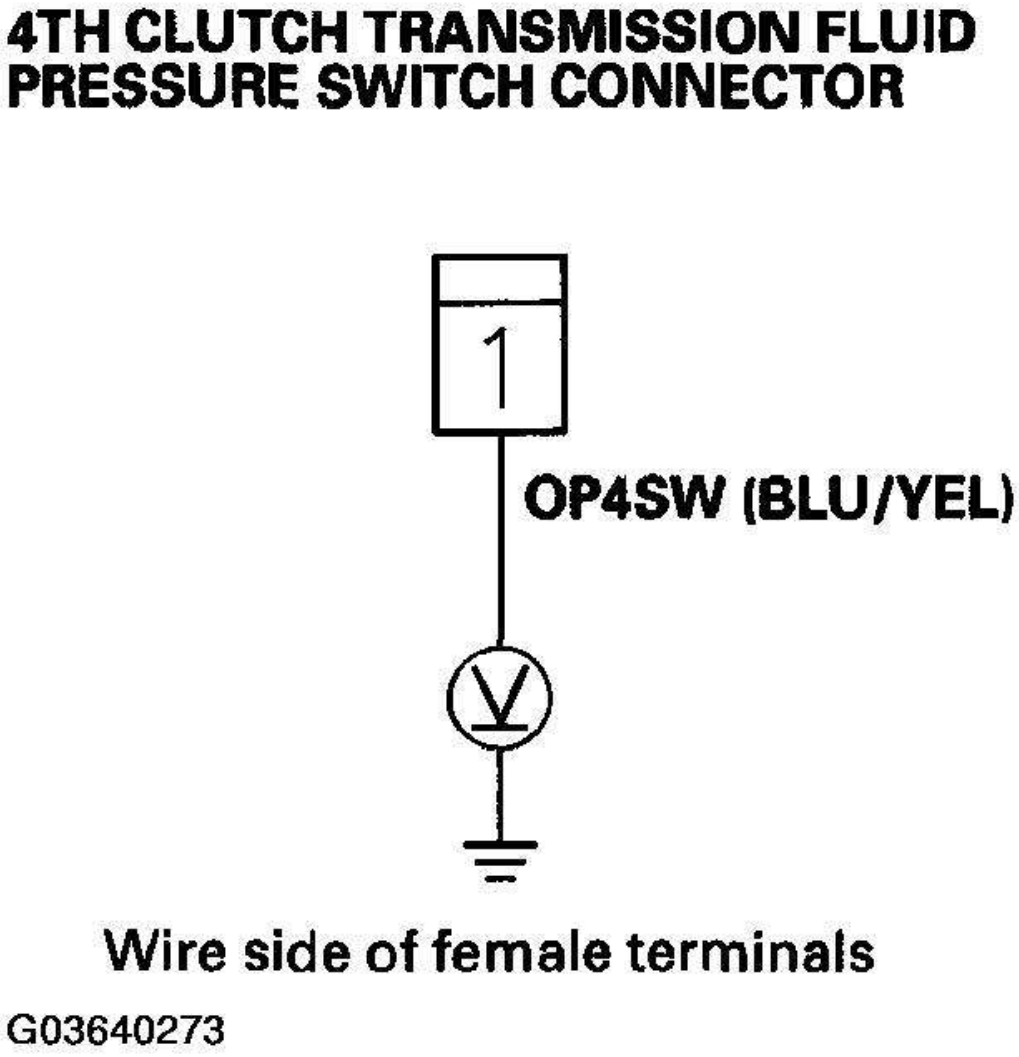


Fig. 138: Measuring Voltage Between 4th Clutch Transmission Fluid Pressure Switch Connector Terminal And Body Ground
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Is there about 10 V?

YES - Replace the 4th clutch transmission fluid pressure switch (see **4th 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 HAS.
13. Disconnect PCM connector A (73P).
14. Check for continuity between PCM connector terminal A32 and 4th clutch transmission fluid pressure switch connector terminal.

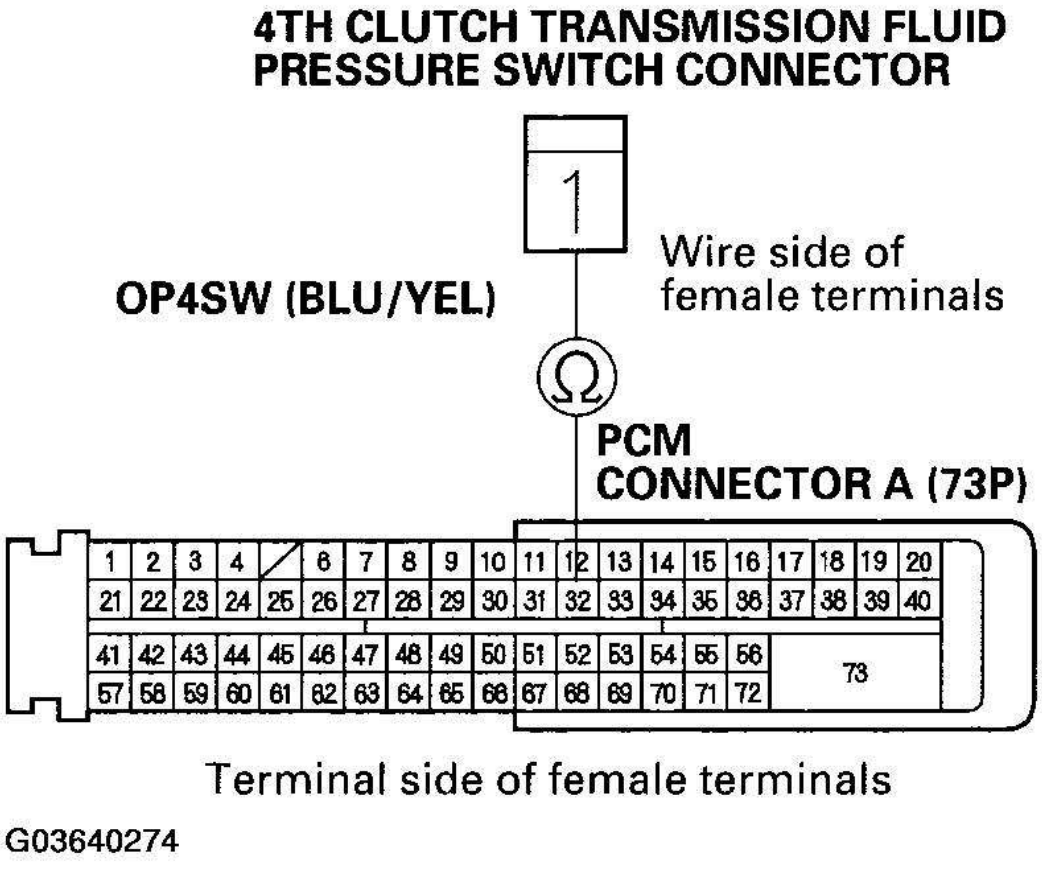


Fig. 139: Checking For Continuity Between PCM Connector Terminal A32 And 4th Clutch Transmission Fluid Pressure Switch Connector Terminal
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Is there continuity?

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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 open in the wire between PCM connector terminal A32 and the 4th clutch transmission fluid pressure switch, then go to step 15.

15. Clear the DTC with the HAS.
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 D4 position for more than 5 seconds, then slow down and stop the wheels.
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 1 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 HAS.
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 HAS.
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.

Does the result indicate FAILED?

YES - Go to step 6.

NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

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6. Turn the ignition switch OFF.
7. Disconnect the A/T clutch pressure control solenoid valve A connector.
8. Measure A/T clutch pressure control solenoid valve A resistance at the solenoid connector.

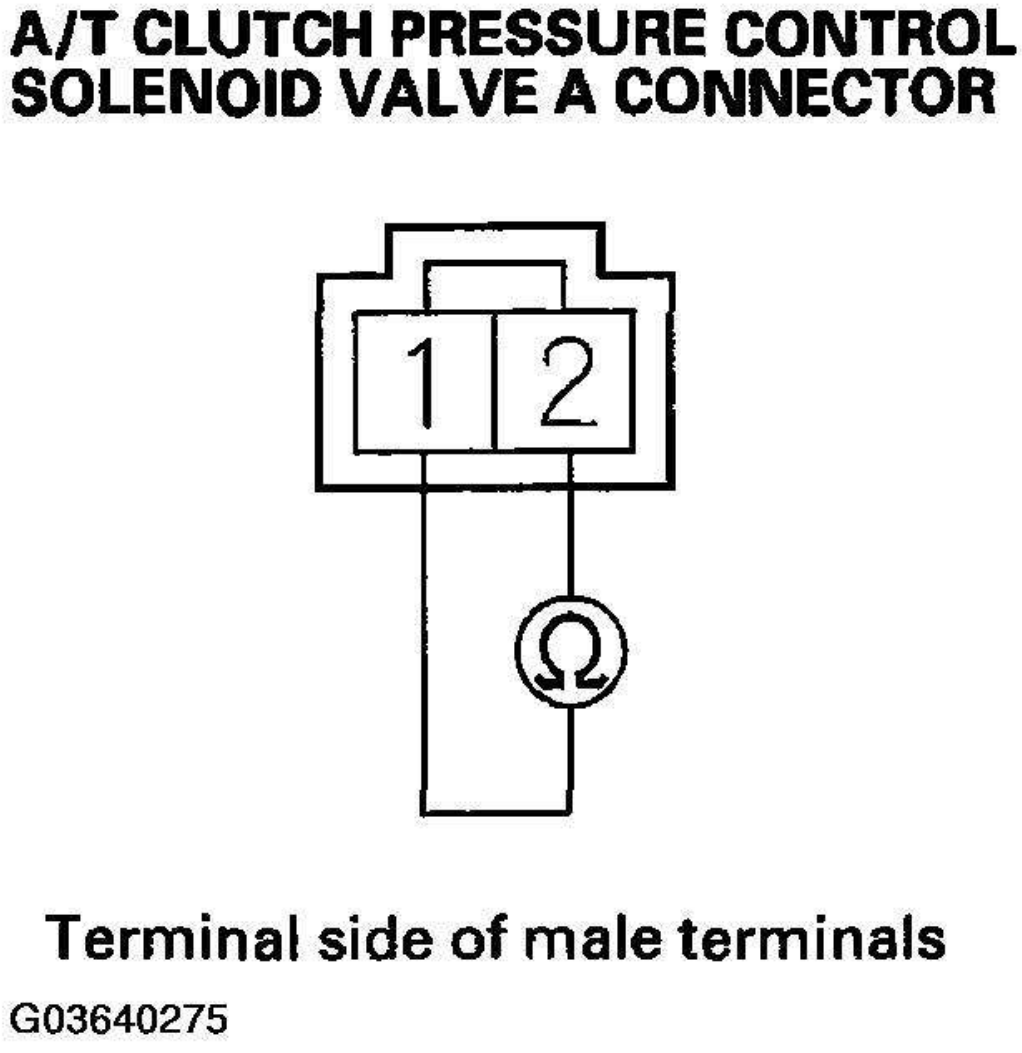


Fig. 140: Measuring A/T Clutch Pressure Control Solenoid Valve A Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3 - 10 ohm?

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YES - Go to step 9.

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 20 .

9. Jump the SCS line with the HAS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 1 and body ground.

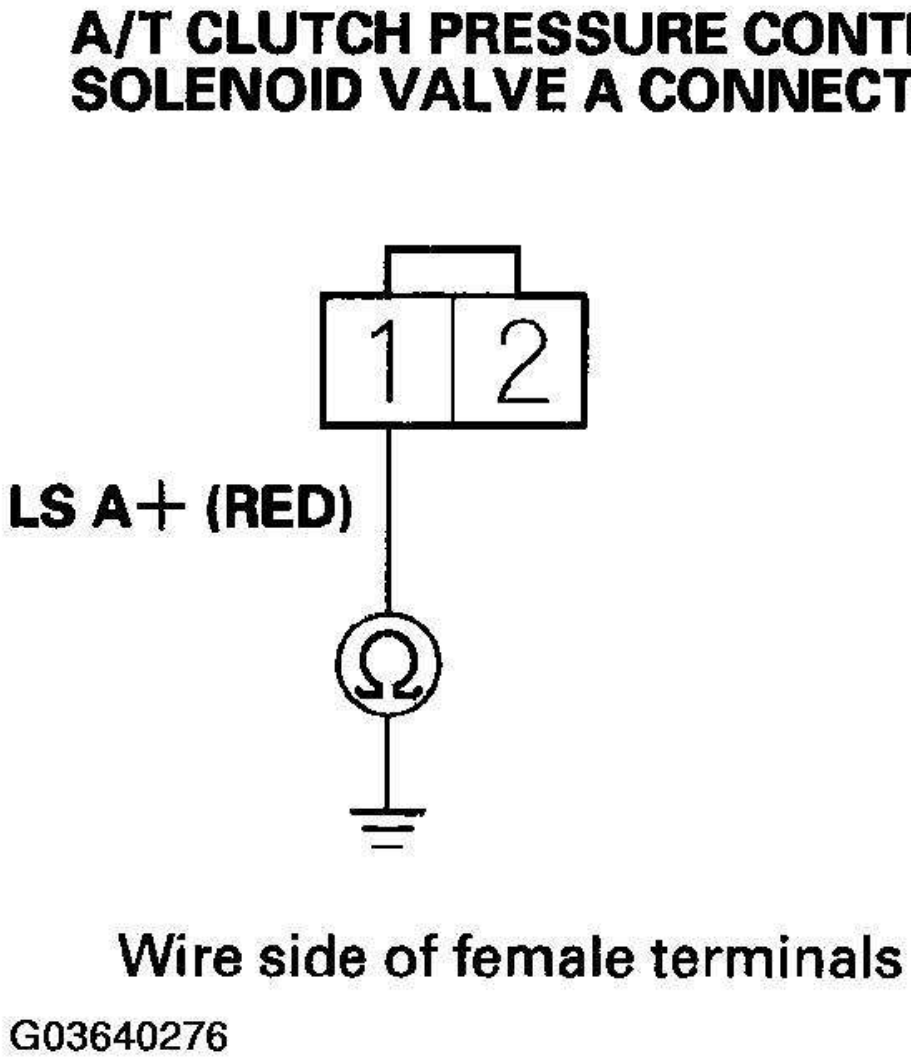


Fig. 141: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminal No. 1 And Body Ground

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal A67 and the A/T clutch pressure control solenoid valve A, then go to step 20 .

NO - Go to step 12.

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

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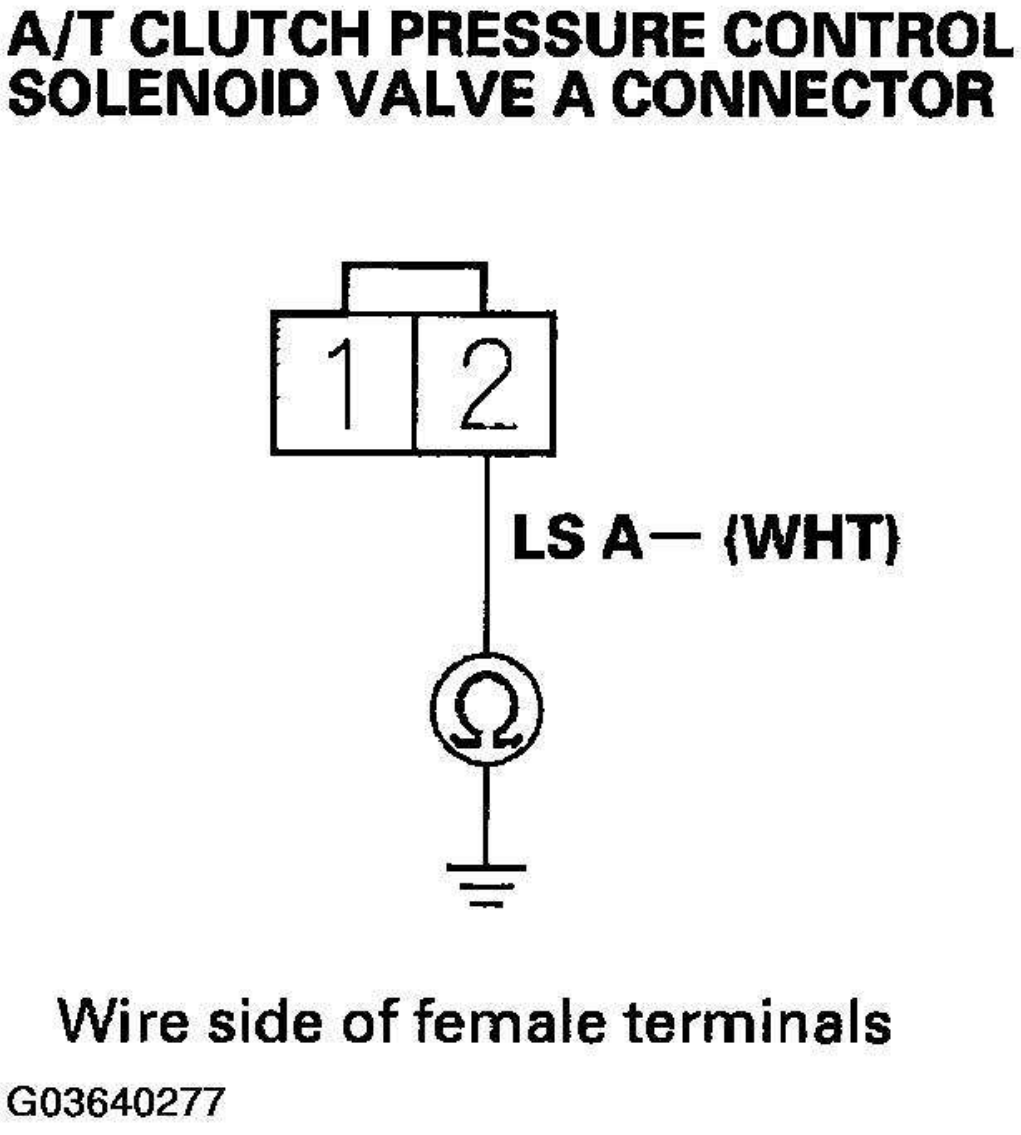


Fig. 142: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve A Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal A68 the A/T clutch pressure control solenoid valve A, then go to step 20 .

NO - Go to step 13.

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13. Connect PCM connector A (73P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between terminals of the A/T clutch pressure control solenoid valve A connector.

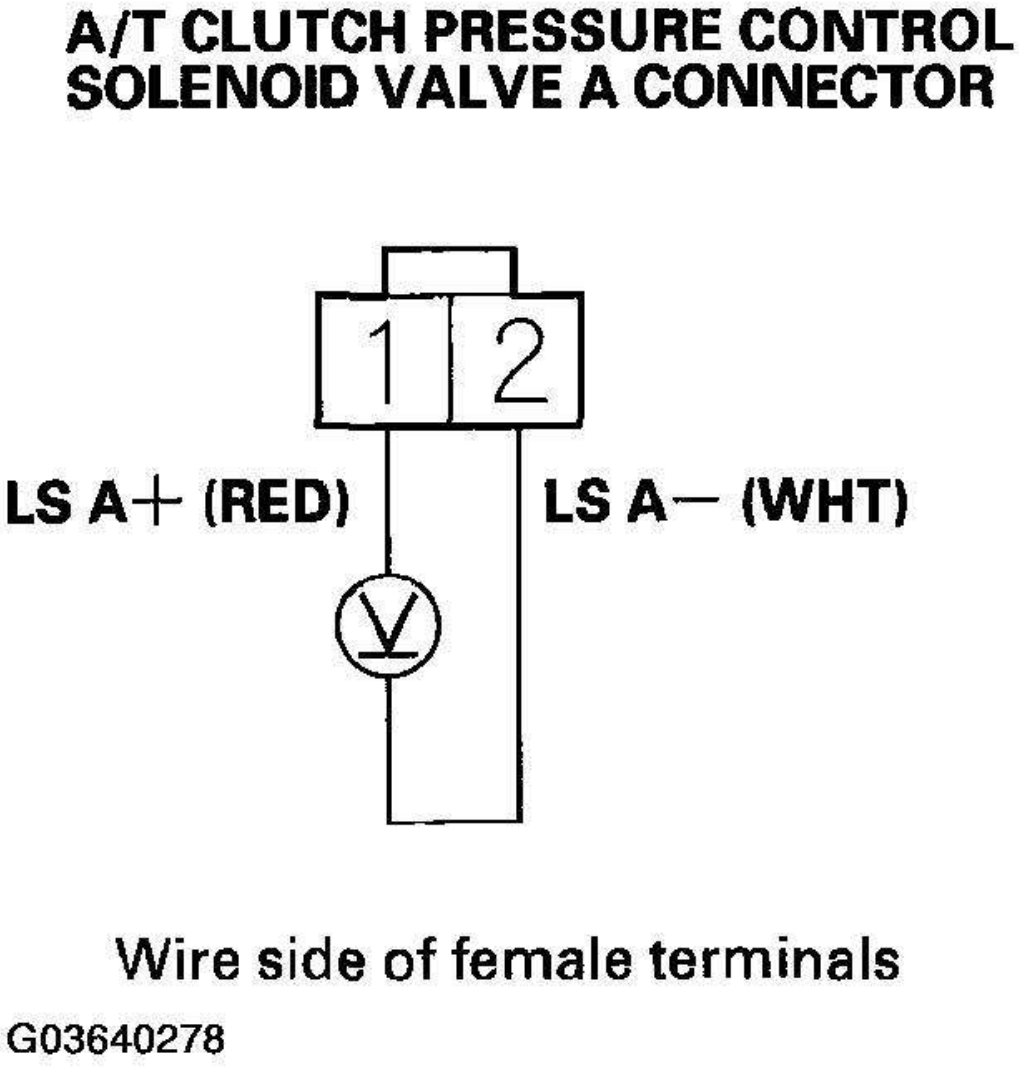


Fig. 143: Measuring Voltage Between Terminals Of A/T Clutch Pressure Control Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

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YES - Check for loose or poor connections at PCM connector terminals A67 and A68. If the connections are 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 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Turn the ignition switch ON (II).
19. Measure the voltage between PCM connector terminals A19 and A39 or A40.

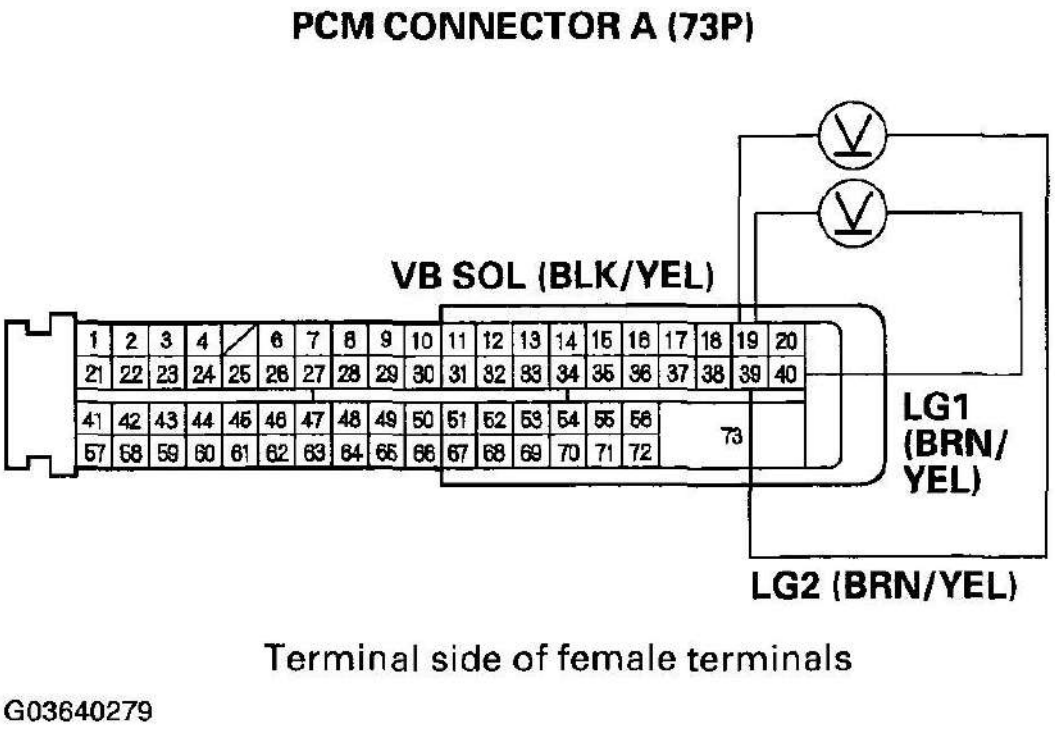


Fig. 144: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair open in the wires between PCM connector terminal A67 and the A/T clutch pressure control solenoid valve A, or between terminal A68 and the solenoid valve A, then go to step 20.

NO - Check for an open or a short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, and check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the wire or fuse was replaced, go to step 20. If the wire and the fuse are OK,

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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.

20. Clear the DTC with the HAS.
21. Test-drive the vehicle for several minutes in the D5 position through all five gears.
22. 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 1 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 HAS.
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 HAS.
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 - Intermittent failure, the system is OK at this time. 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 A/T clutch pressure control solenoid valve A resistance at the solenoid connector.

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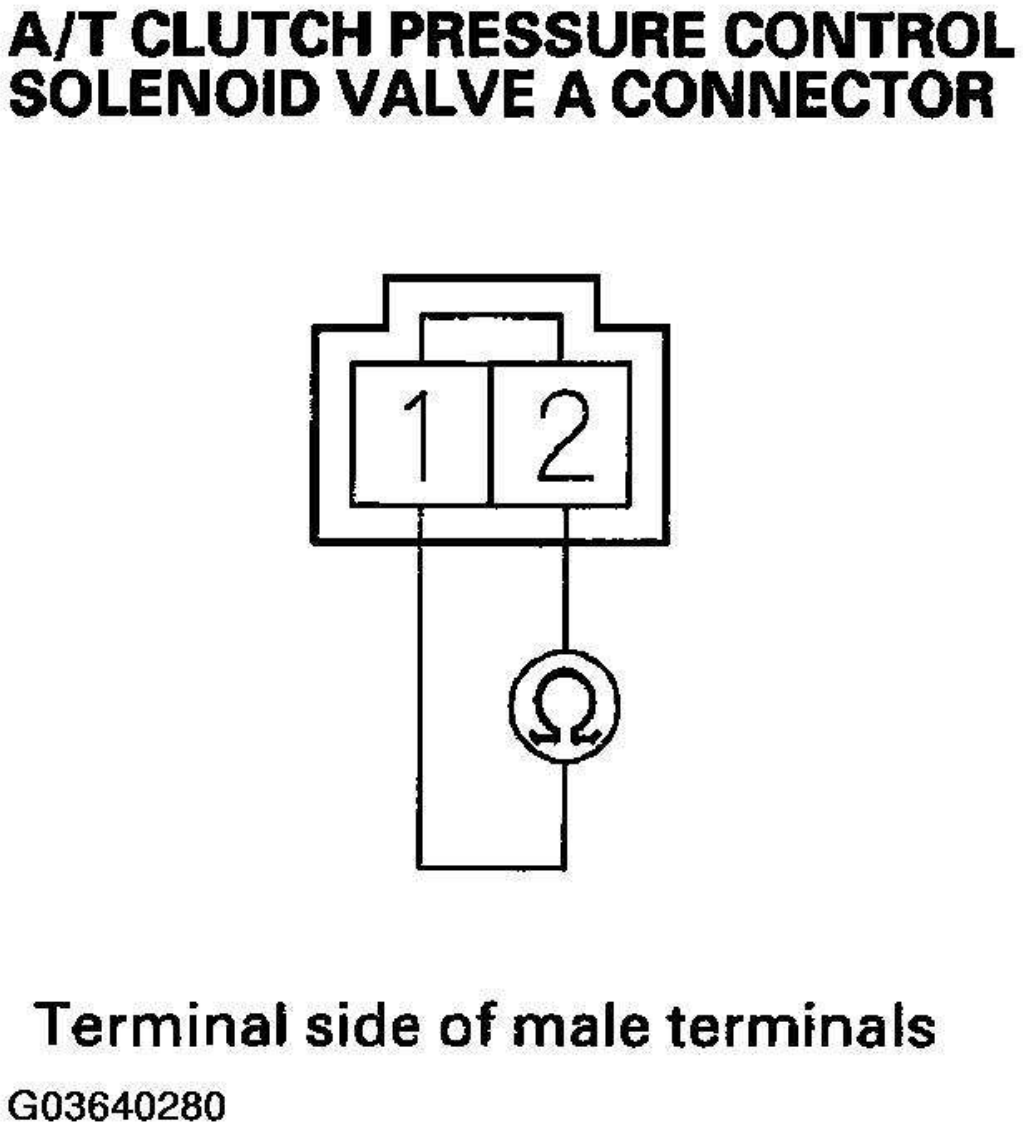


Fig. 145: Measuring A/T Clutch Pressure Control Solenoid Valve A Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 3 ohm ?

YES - Go to step 9.

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 12 .

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9. Jump the SCS line with the HAS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body ground, and between A73 and body ground.

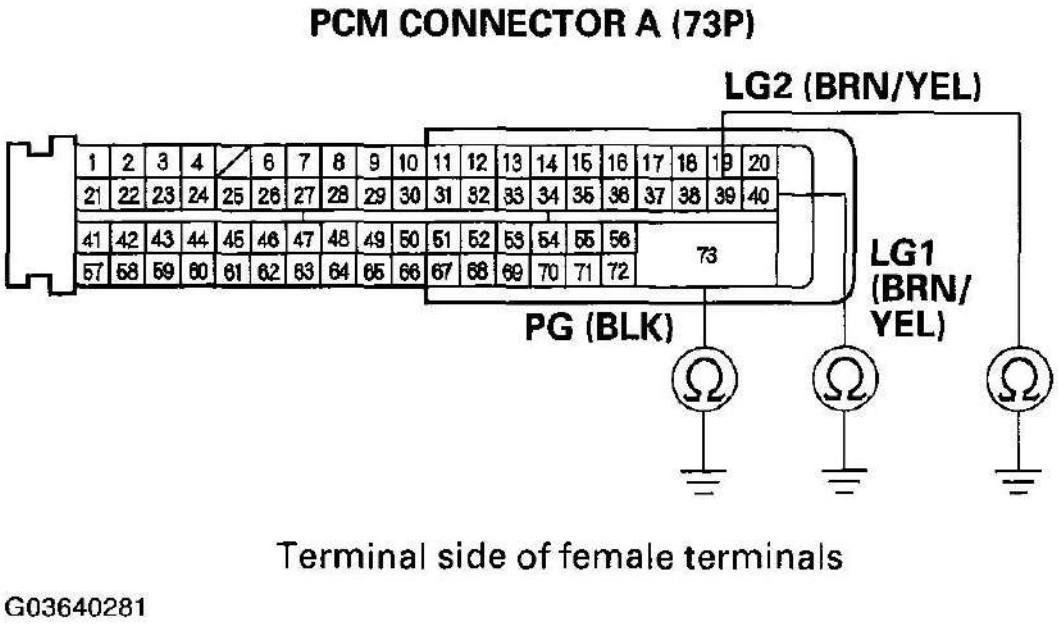


Fig. 146: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 12.

12. Clear the DTC with the HAS.
13. Test-drive the vehicle for several minutes in the D5 position through all five gears.
14. 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 1 and recheck.

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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 HAS.
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 HAS.
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 - Intermittent failure, the system is OK at this time. 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 A/T clutch pressure control solenoid valve B resistance at the solenoid connector.

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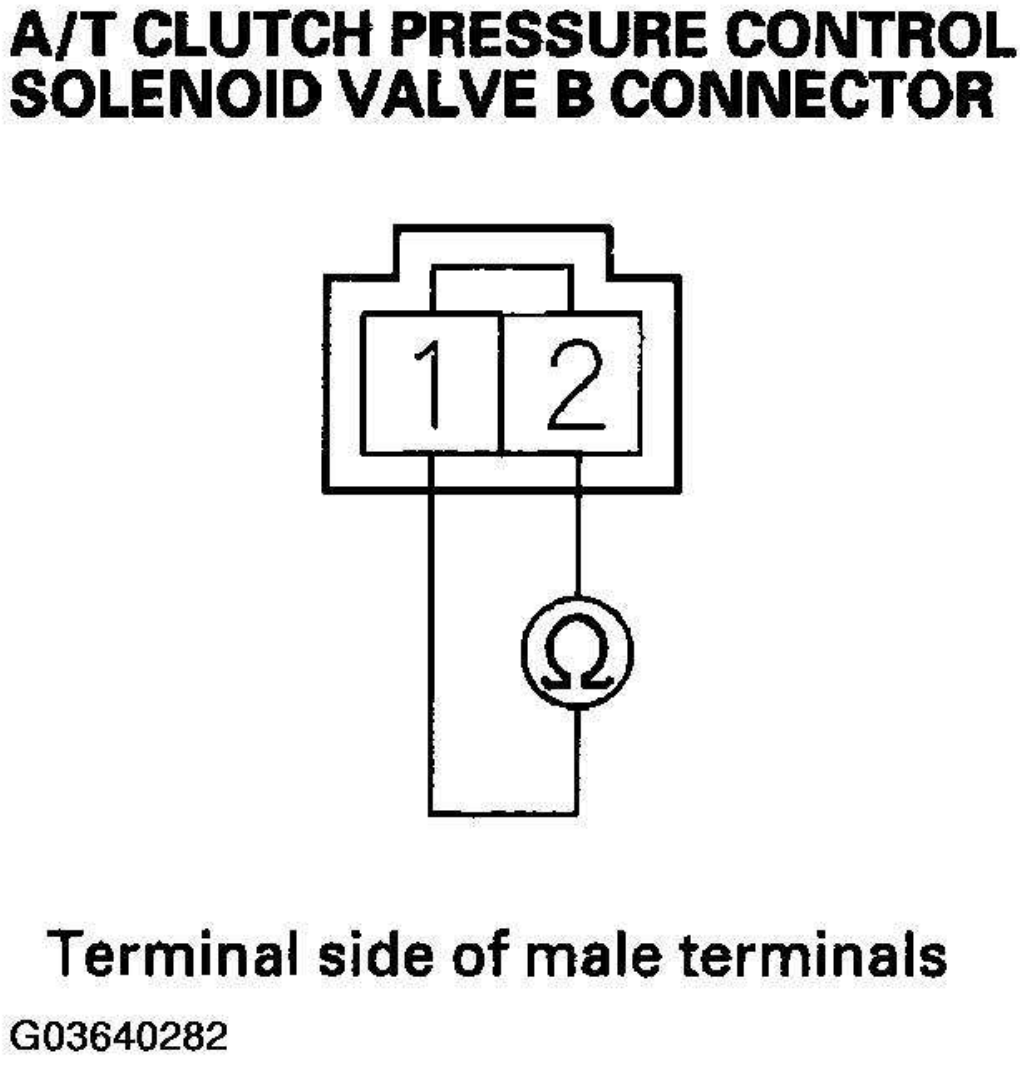


Fig. 147: Measuring A/T Clutch Pressure Control Solenoid Valve B Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3 - 10 ohm ?

YES - Go to step 9.

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 20 .

9. Jump the SCS line with the HAS.

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10. Disconnect PCM connector A (73P).
11. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 1 and body ground.

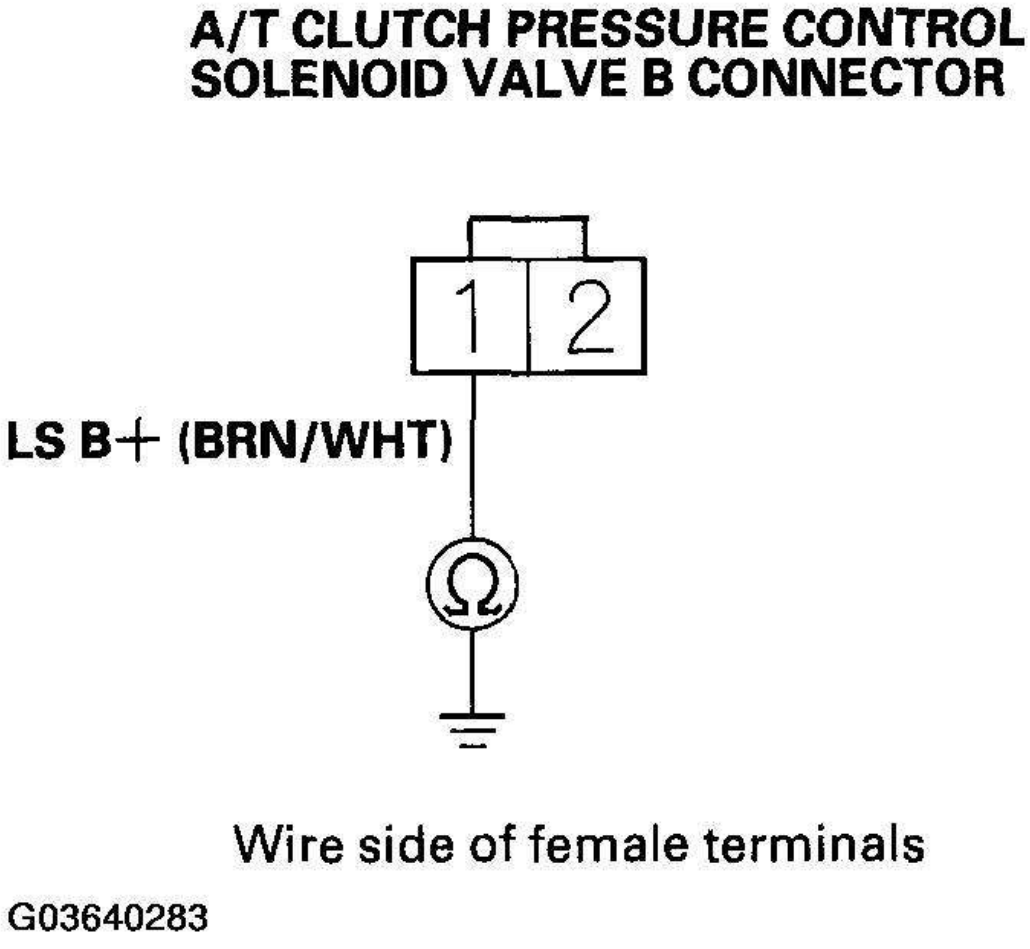


Fig. 148: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal A69 and the A/T clutch pressure control solenoid valve B, then go to step 20 .

NO - Go to step 12.

12. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and

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body ground.

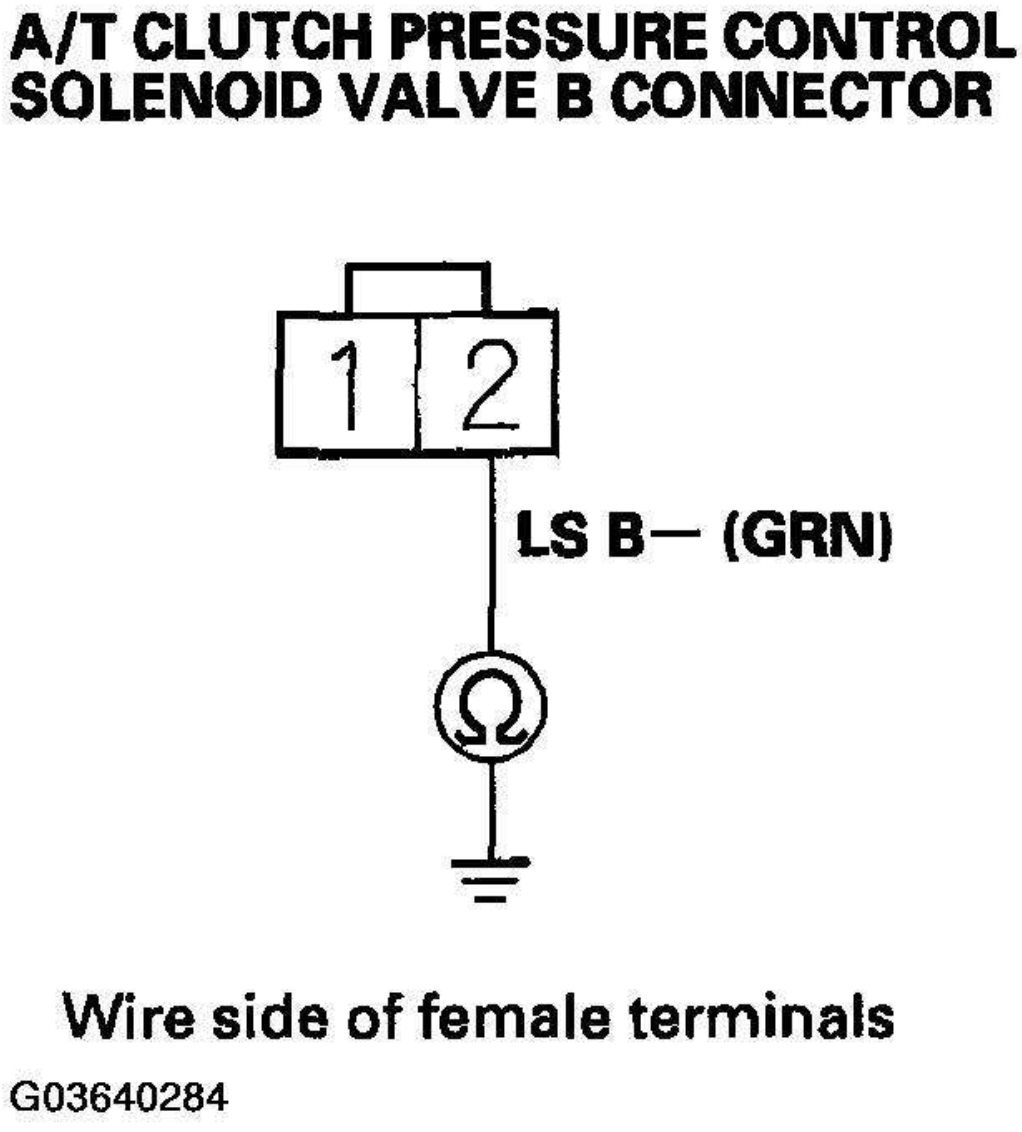


Fig. 149: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve B Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal A70 and the A/T clutch pressure

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control solenoid valve B, then go to step 20 .

NO - Go to step 13.

13. Connect PCM connector A (73P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between terminals of the A/T clutch pressure control solenoid valve B connector.

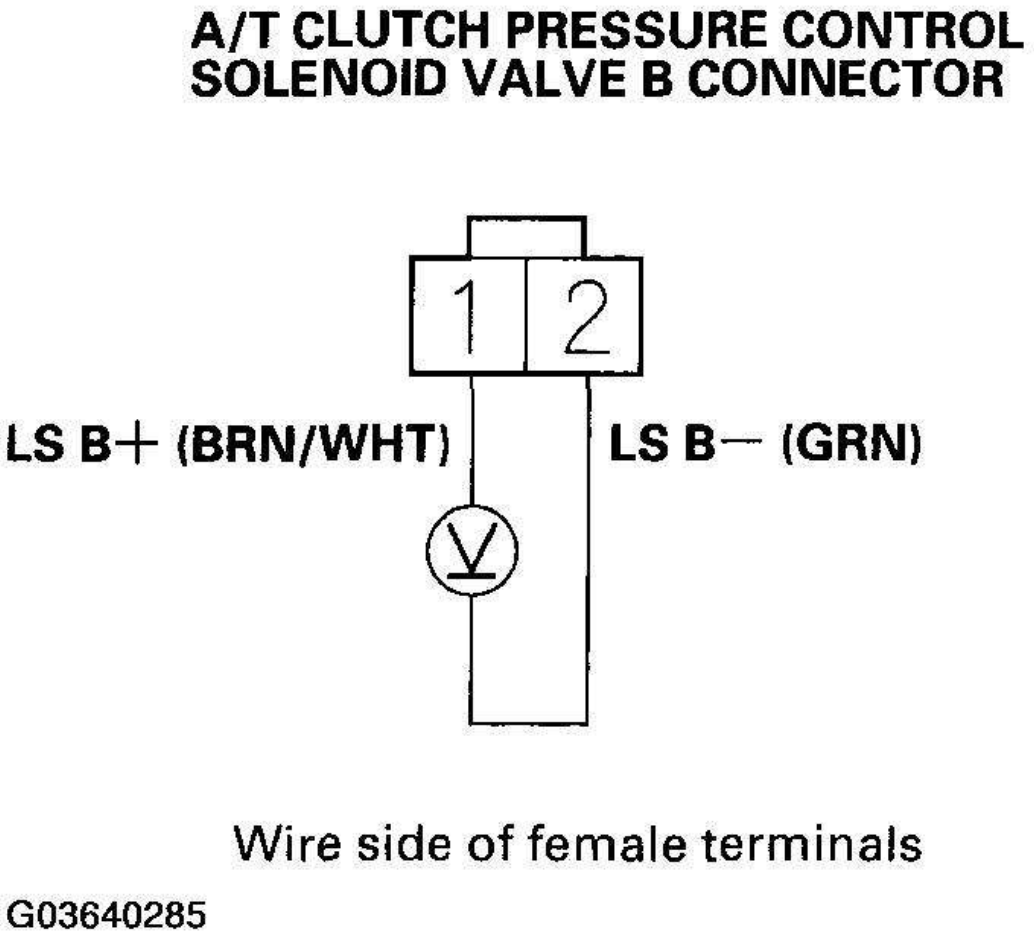


Fig. 150: Measuring Voltage Between Terminals Of A/T Clutch Pressure Control Solenoid Valve B Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminals A69 and A70. If the connections are OK, update the PCM if it does not have the latest software, or substitute a known-

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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 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Turn the ignition switch ON (II).
19. Measure the voltage between PCM connector terminals A19 and A39 or A40.

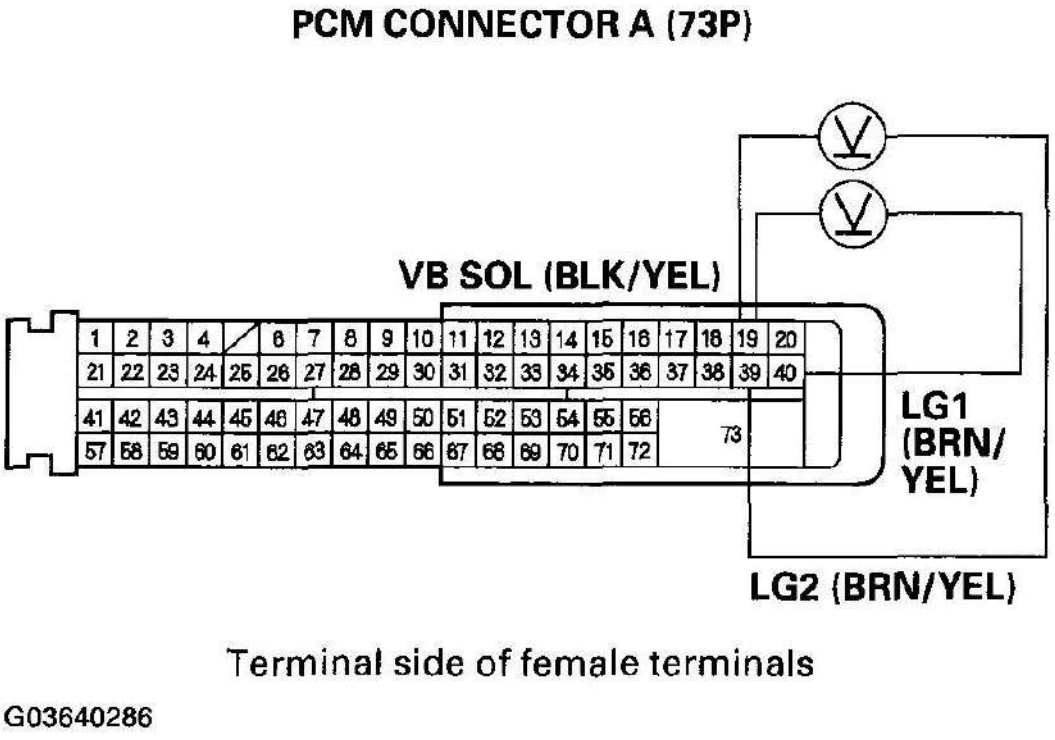


Fig. 151: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair open in the wires between PCM connector terminal A69 and the A/T clutch pressure control solenoid valve B, or between terminal A70 and the solenoid valve B, then go to step 20.

NO - Check for an open or a short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, and check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the wire or fuse was replaced, go to step 20. If the wire and the fuse are 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.

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20. Clear the DTC with the HAS.
21. Test-drive the vehicle for several minutes in the D5 position through all five gears.
22. 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 1 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 HAS.
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 HAS.
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 - Intermittent failure, the system is OK at this time. 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 A/T clutch pressure control solenoid valve B resistance at the solenoid connector.

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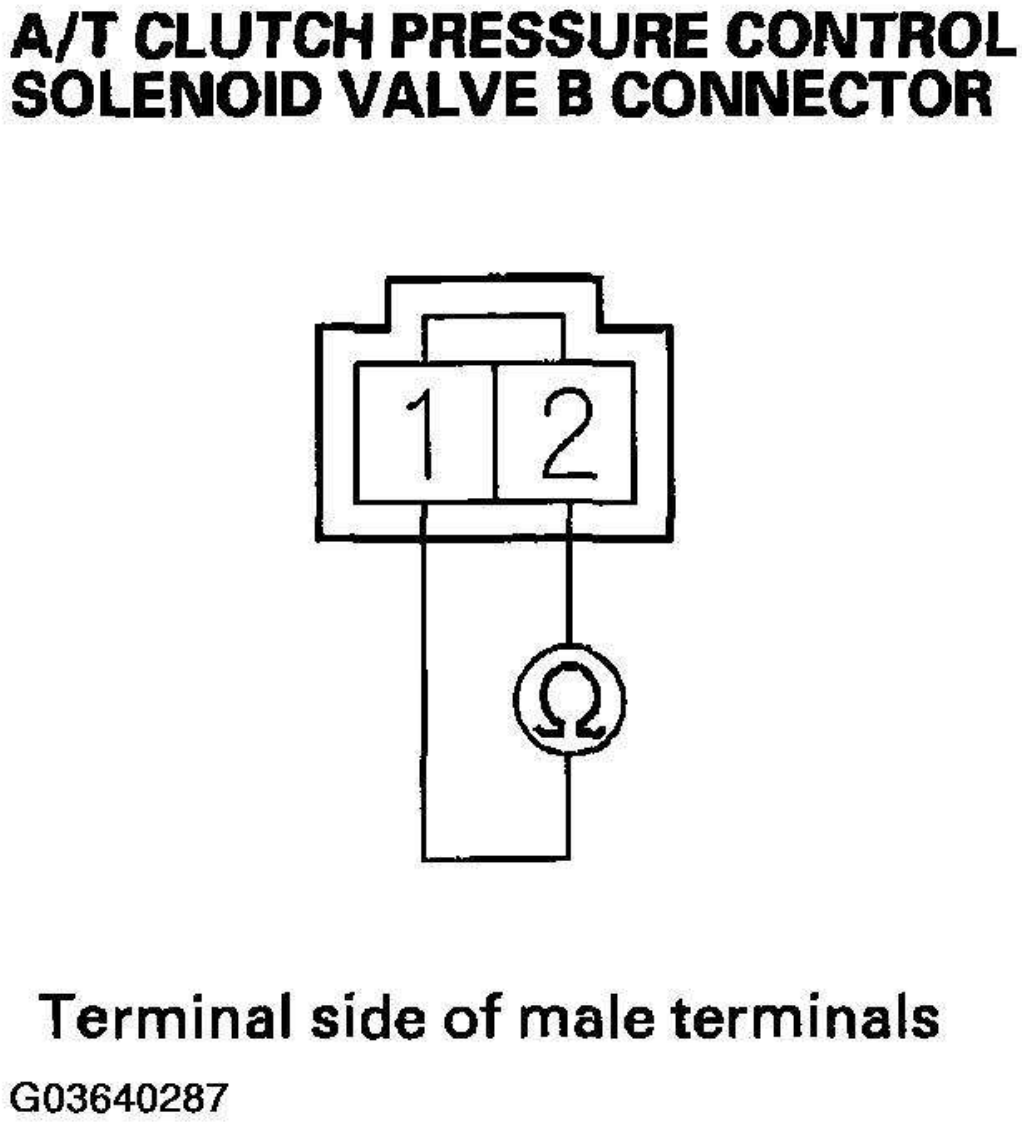


Fig. 152: Measuring A/T Clutch Pressure Control Solenoid Valve B Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 3 ohm?

YES - Go to step 9.

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 12 .

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9. Jump the SCS line with the HAS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body ground, and between A73 and body ground.

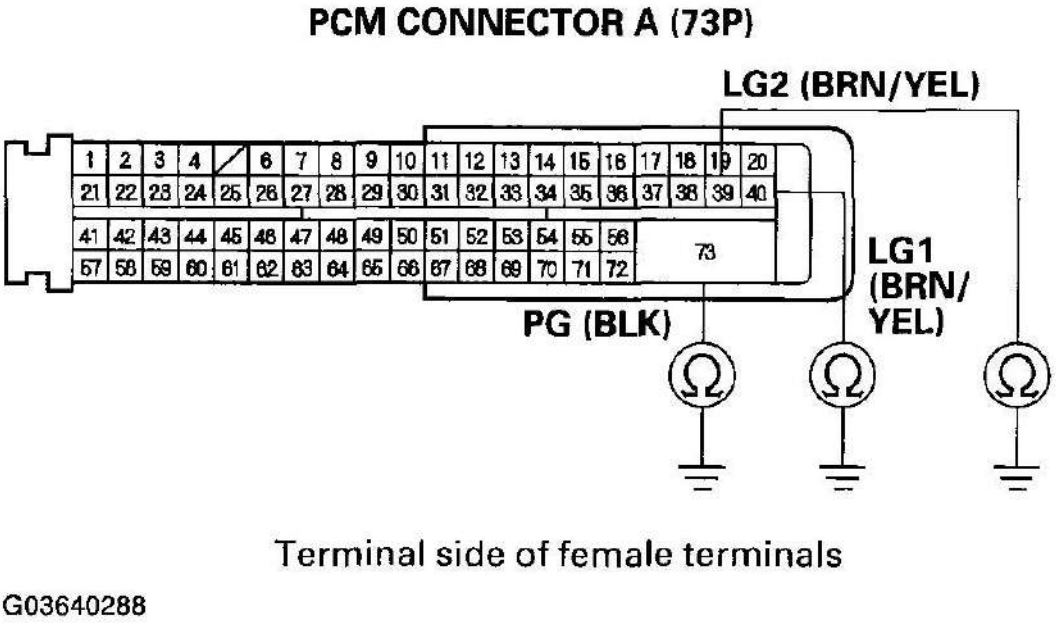


Fig. 153: Checking For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 12.

12. Clear the DTC with the HAS.
13. Test-drive the vehicle for several minutes in the D5 position through all five gears.
14. 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 1 and recheck.

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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 HAS.
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 HAS.
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 - Intermittent failure, the system is OK at this time. 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 A/T clutch pressure control solenoid valve C resistance at the solenoid connector.

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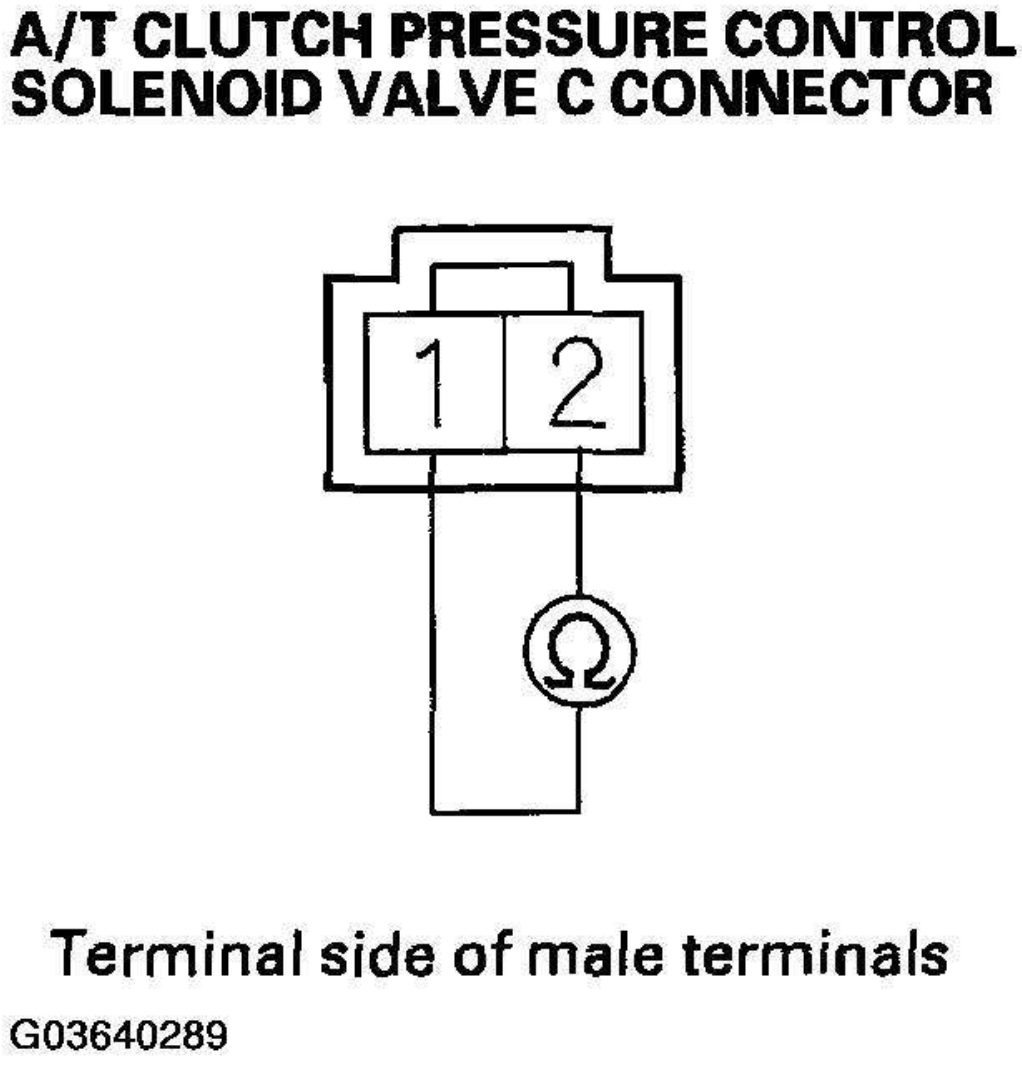


Fig. 154: Measuring A/T Clutch Pressure Control Solenoid Valve C Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 3 - 10 ohm ?

YES - Go to step 9.

NO - Replace A/T clutch pressure control solenoid valve C (see **A/T Clutch Pressure Control Solenoid Valve C Replacement**), then go to step 20 .

9. Jump the SCS line with the HAS.

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10. Disconnect PCM connector A (73P).
11. Check for continuity between A/T clutch pressure control solenoid valve C connector terminal No. 1 and body ground.

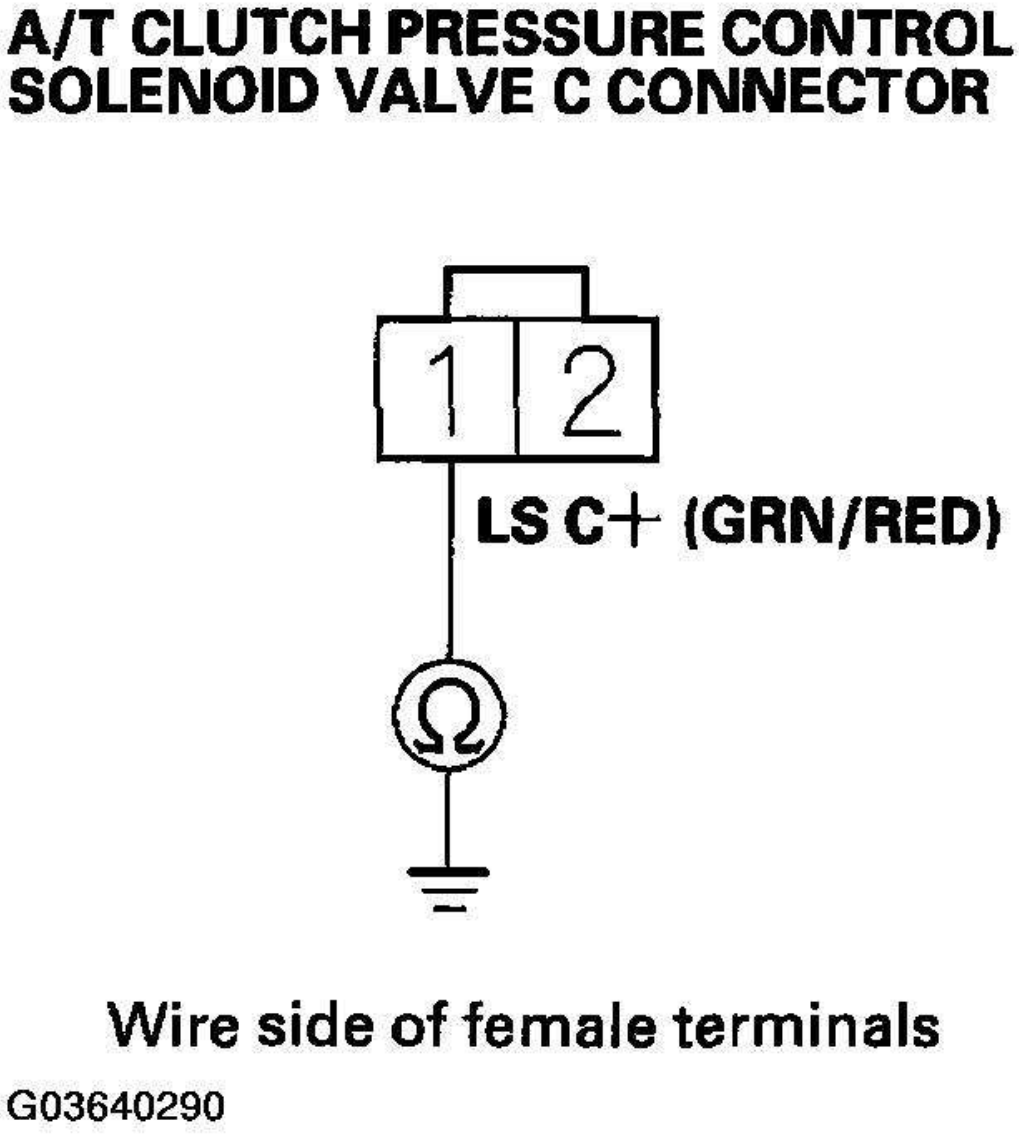


Fig. 155: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve C Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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Is there continuity?

YES - Repair short in the wire between PCM connector terminal A71 and the A/T clutch pressure control solenoid valve C, then go to step 20 .

NO - Go to step 12.

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

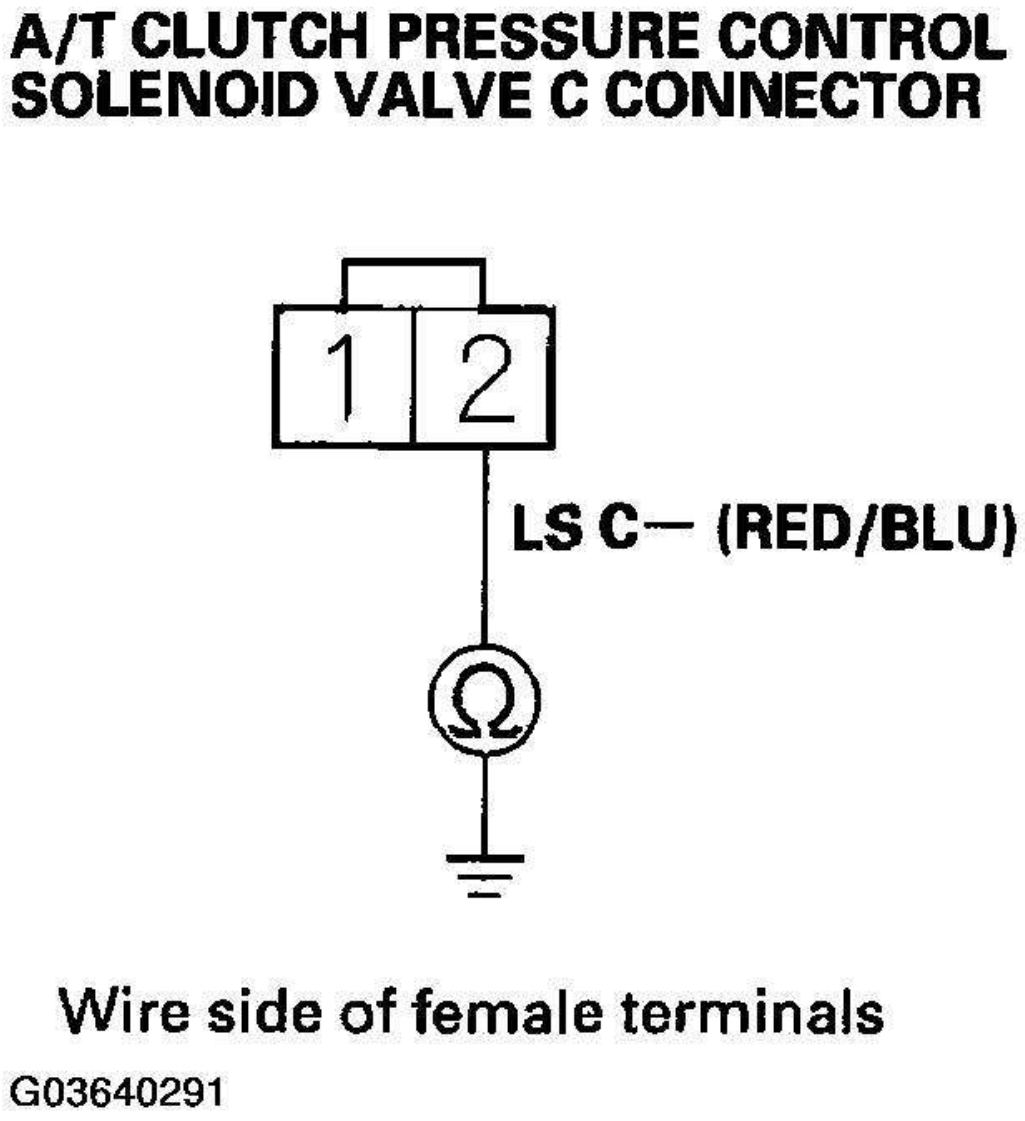


Fig. 156: Checking For Continuity Between A/T Clutch Pressure Control Solenoid Valve C

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Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal A72 and the A/T clutch pressure control solenoid valve C, then go to step 20 .

NO - Go to step 13.

13. Connect PCM connector A (73P).
14. Turn the ignition switch ON (II).
15. Measure the voltage between terminals of the A/T clutch pressure control solenoid valve C connector.

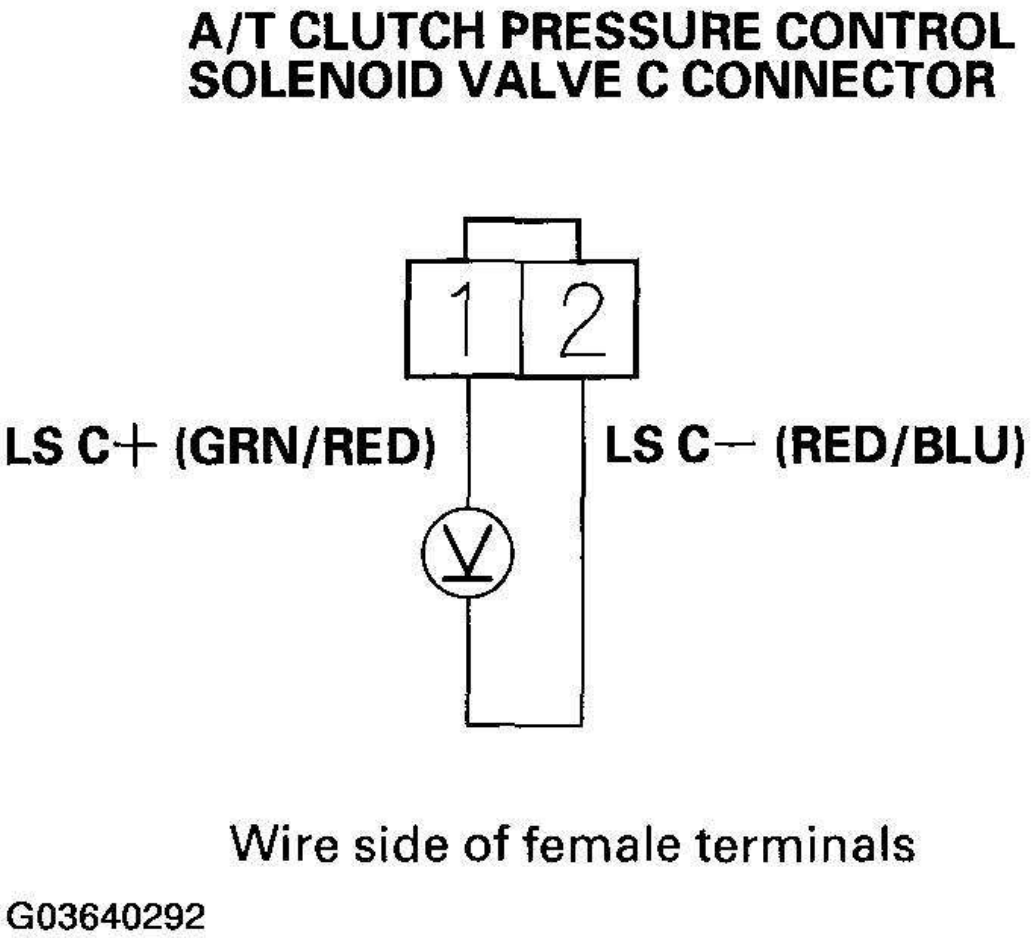


Fig. 157: Measuring Voltage Between Terminals Of A/T Clutch Pressure Control Solenoid Valve C Connector

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Check for loose or poor connections at PCM connector terminals A71 and A72. If the connections are 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 16.

16. Turn the ignition switch OFF.
17. Disconnect PCM connector A (73P).
18. Turn the ignition switch ON (II).
19. Measure the voltage between PCM connector terminals A19 and A39 or A40.

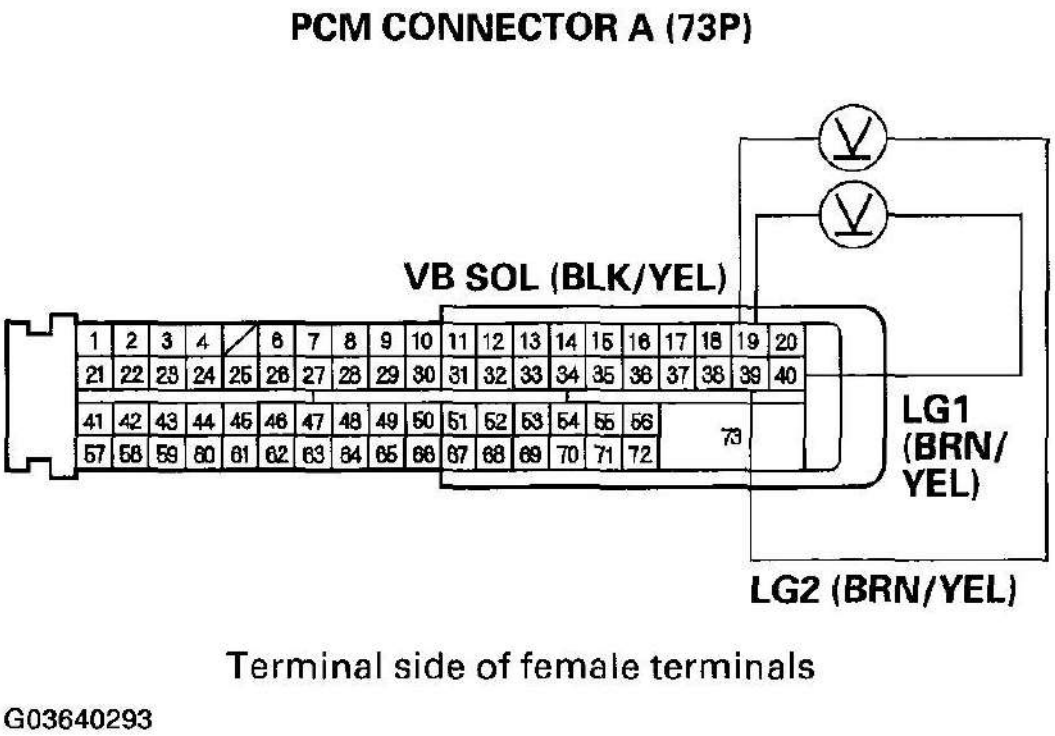


Fig. 158: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair open in the wires between PCM connector terminal A71 and the A/T clutch pressure control solenoid valve C, or between terminal A72 and the solenoid valve C, then go to step 20.

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NO - Check for an open or a short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, and check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the wire or fuse was replaced, go to step 20. If the wire and the fuse are 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.

20. Clear the DTC with the HAS.
21. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
22. 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 1 and recheck.

DTC P0971: Short 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 HAS.
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 HAS.
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 - Intermittent failure, the system is OK at this time. 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.

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8. Measure A/T clutch pressure control solenoid valve C resistance at the solenoid connector.

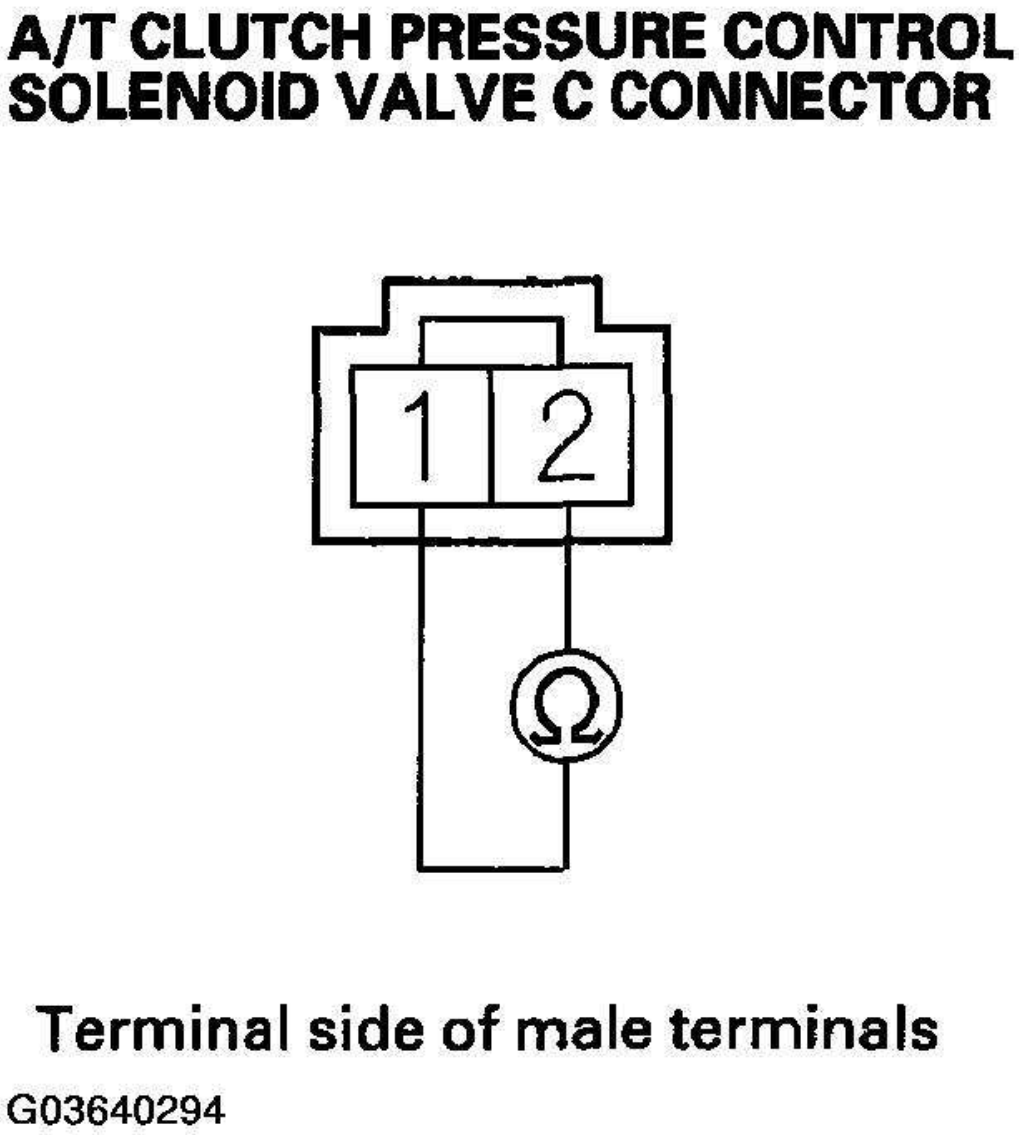


Fig. 159: Measuring A/T Clutch Pressure Control Solenoid Valve C Resistance At Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 3 ohm ?

YES - Go to step 9.

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NO - Replace A/T clutch pressure control solenoid valve C (see **A/T Clutch Pressure Control Solenoid Valve C Replacement**), then go to step 12 .

9. Jump the SCS line with the HAS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between PCM connector terminals A39 and body ground, between A40 and body ground, and between A73 and body ground.

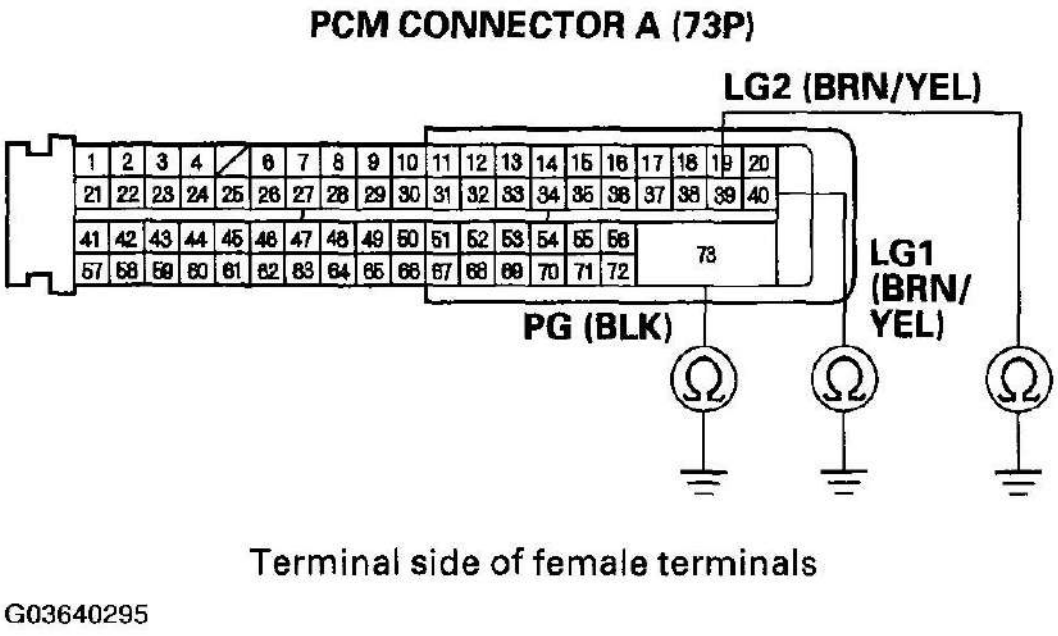


Fig. 160: Check For Continuity Between PCM Connector Terminals A39 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 open in the wires between PCM connector terminals A39, A40, A73, and ground (G101, G102), or repair poor ground (G101, G102), then go to step 12.

12. Clear the DTC with the HAS.
13. Test-drive the vehicle for several minutes in the D5 position through all five gears.
14. 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?

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YES - Troubleshooting is complete.

NO - Return to step 1 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 HAS.
2. Check that DTC P0973 recurs.

   Is DTC P0973 indicated?

   YES - Go to step 5 .

   NO - Go to step 3.
3. Choose Shift Solenoid A in Miscellaneous Test Menu, and test the shift solenoid valve A with the HAS.
4. Start the engine, and shift to the D5 position.
5. 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 6.

   NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Jump the SCS line with the HAS.
8. Disconnect PCM connector A (73P).
9. Measure the resistance between PCM connector terminals A11 and A39 or A40.

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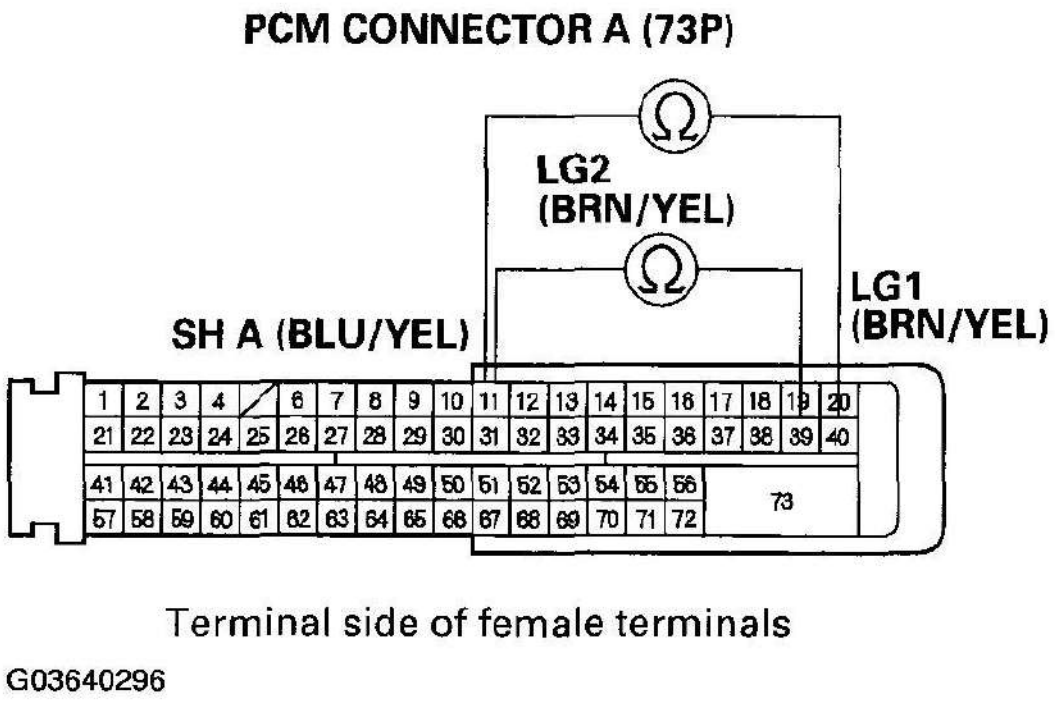


Fig. 161: Measuring Resistance Between PCM Connector Terminals A11 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm ?

YES - Go to step 10.
NO - Go to step 13 .

10. Disconnect the solenoid harness connector at the transmission housing.
11. Check for continuity between PCM connector terminals A11 and A39 or A40.

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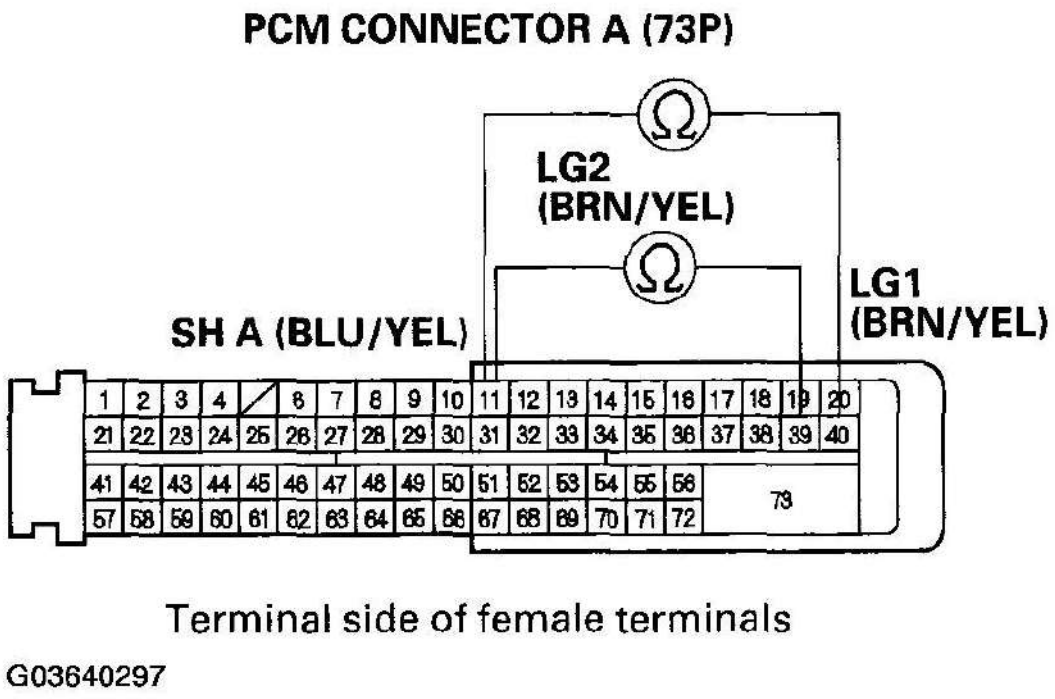


Fig. 162: Checking For Continuity Between PCM Connector Terminals A11 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A11 and solenoid harness connector, then go to step 15 .

NO - Go to step 12.

12. Inspect shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is shift solenoid valve A OK?

YES - Go to step 13.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 15 .

13. Turn the ignition switch ON (II).
14. Measure the voltage between PCM connector terminals A19 and A39 or A40.

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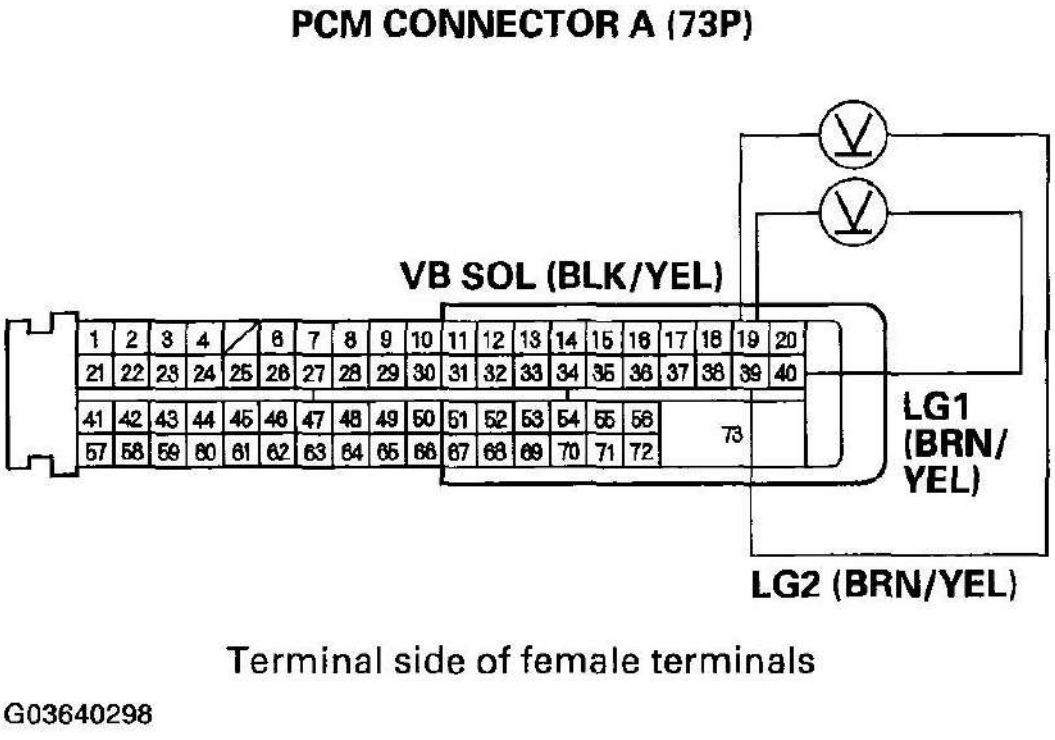


Fig. 163: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 - Check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, then go to step 15.

15. Clear the DTC with the HAS.
16. Start the engine, and shift to D5 position.
17. 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 1 and recheck.

DTC P0974: Open in Shift Solenoid Valve A Circuit

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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 HAS.
2. Check that DTC P0974 recurs.

   Is DTC P0974 indicated?

   YES - Go to step 5 .

   NO - Go to step 3.
3. Choose Shift Solenoid A in Miscellaneous Test Menu, and test the shift solenoid valve A with the HAS.
4. Start the engine in the P position.
5. 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 6.

   NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Jump the SCS line with the HAS.
8. Disconnect PCM connector A (73P).
9. Measure the resistance between PCM connector terminals A11 and A39 or A40.

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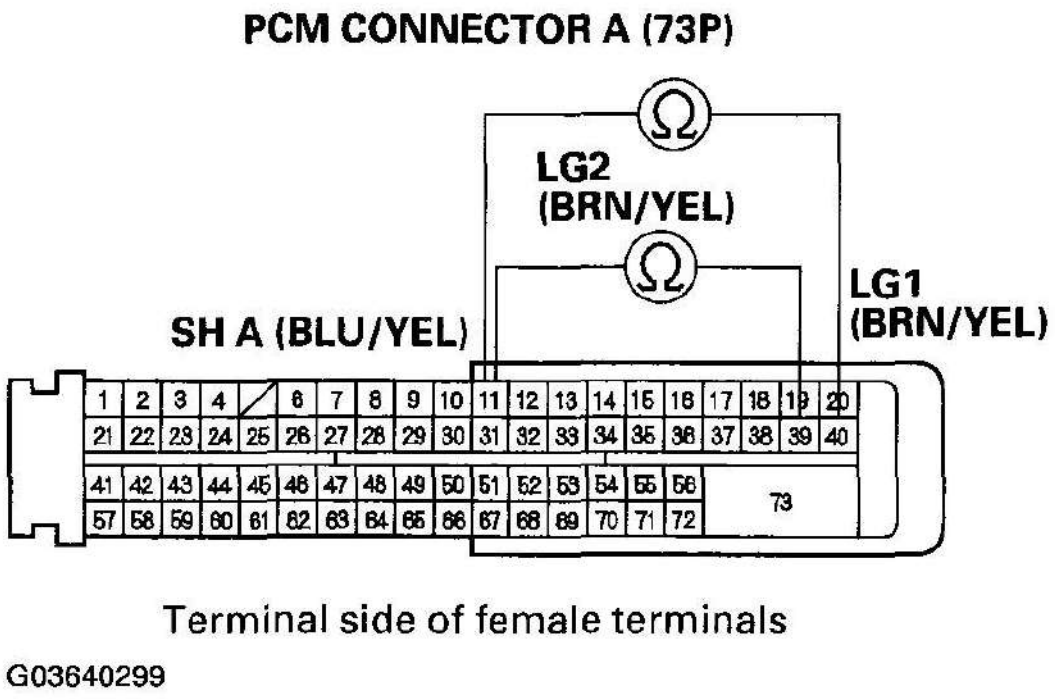


Fig. 164: Measuring Resistance Between PCM Connector Terminals A11 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12 - 25 ohm?

YES - Check for loose or poor connections at PCM connector terminal A11. If the connections are 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 10.

10. Inspect shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is shift solenoid valve A OK?

YES - Go to step 11.

NO - Replace shift solenoid valve A (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 13 .

11. Remove the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).
12. Check for continuity between solenoid harness connector terminal No. 4 and shift solenoid valve A connector terminal.

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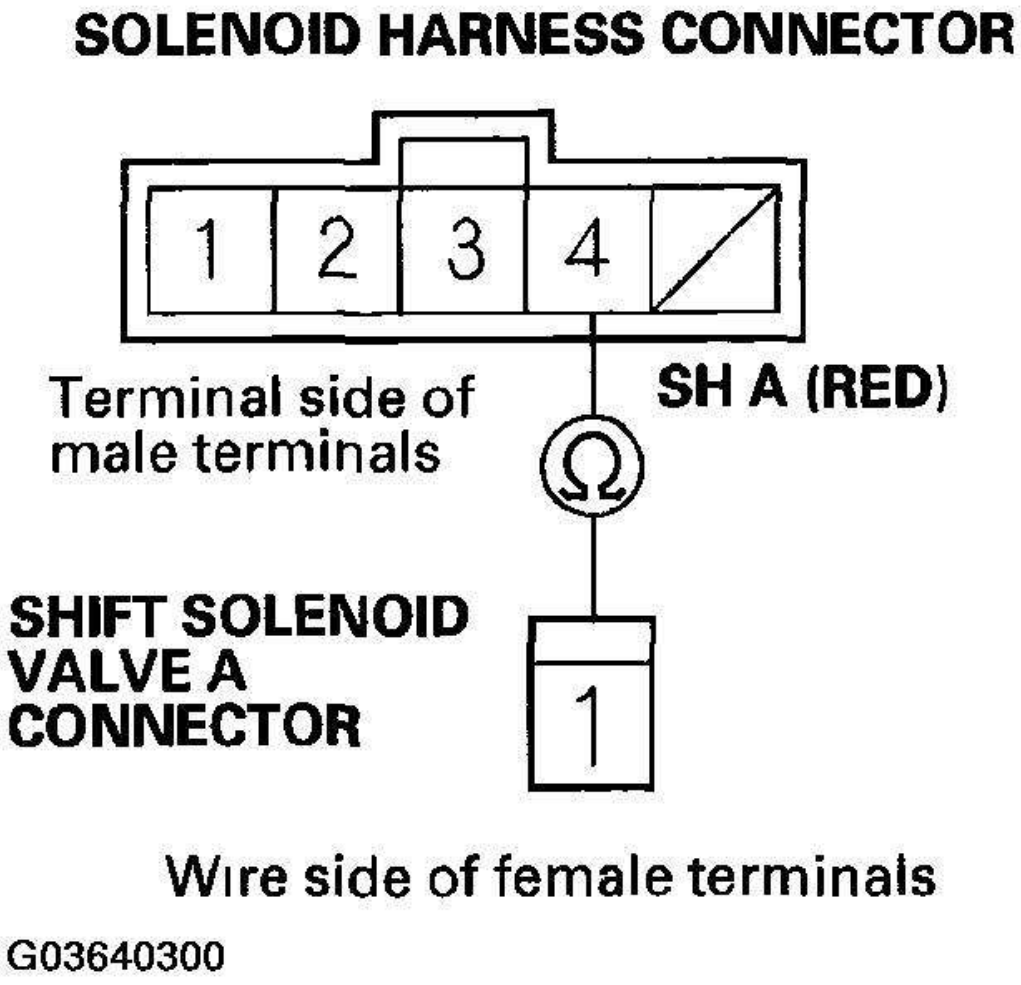


Fig. 165: Checking For Continuity Between Solenoid Harness Connector Terminal No. 4 And Shift Solenoid Valve A Connector Terminal
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair open in the wire between PCM connector terminal A11 and solenoid harness connector, then go to step 13.

NO - Replace the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 13.

13. Clear the DTC with the HAS.
14. Start the engine in the P position.

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15. 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 1 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 HAS.
2. Start the engine in the P position.
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 the shift solenoid valve B with the HAS.
5. Start the engine in the P position.
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 - Intermittent failure, the system is OK at this time. 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 HAS.
9. Disconnect PCM connector A (73P).
10. Measure the resistance between PCM connector terminals A12 and A39 or A40.

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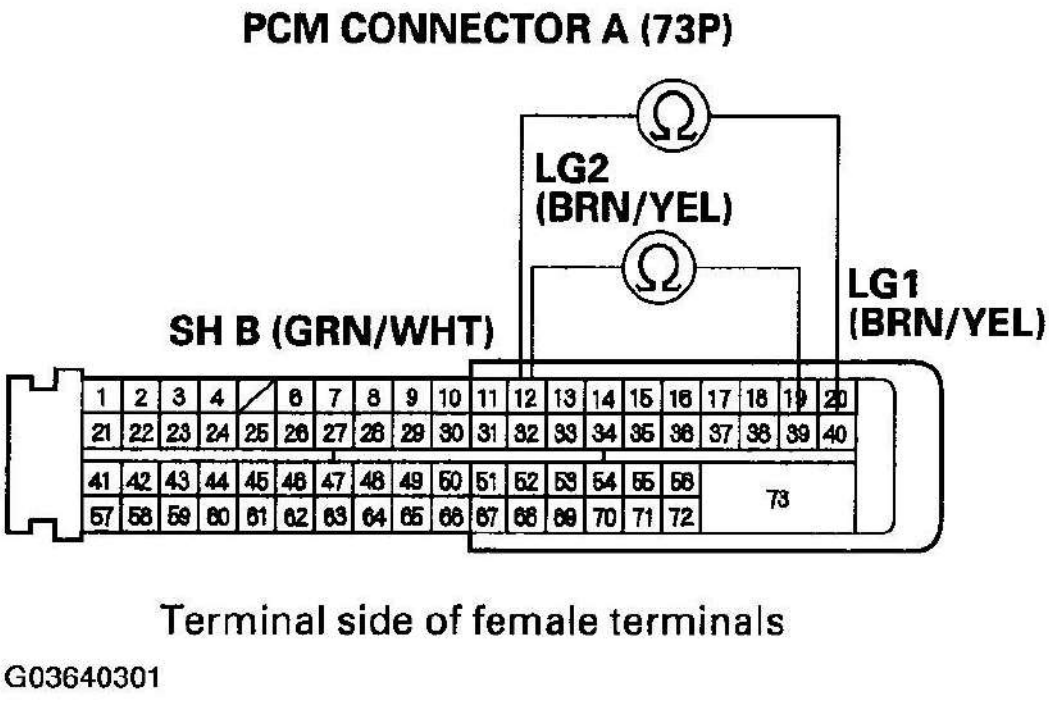


Fig. 166: Measuring Resistance Between PCM Connector Terminals A12 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm ?

YES - Go to step 11.
NO - Go to step 14 .

11. Disconnect the solenoid harness connector at the transmission housing.
12. Check for continuity between PCM connector terminals A12 and A39 or A40.

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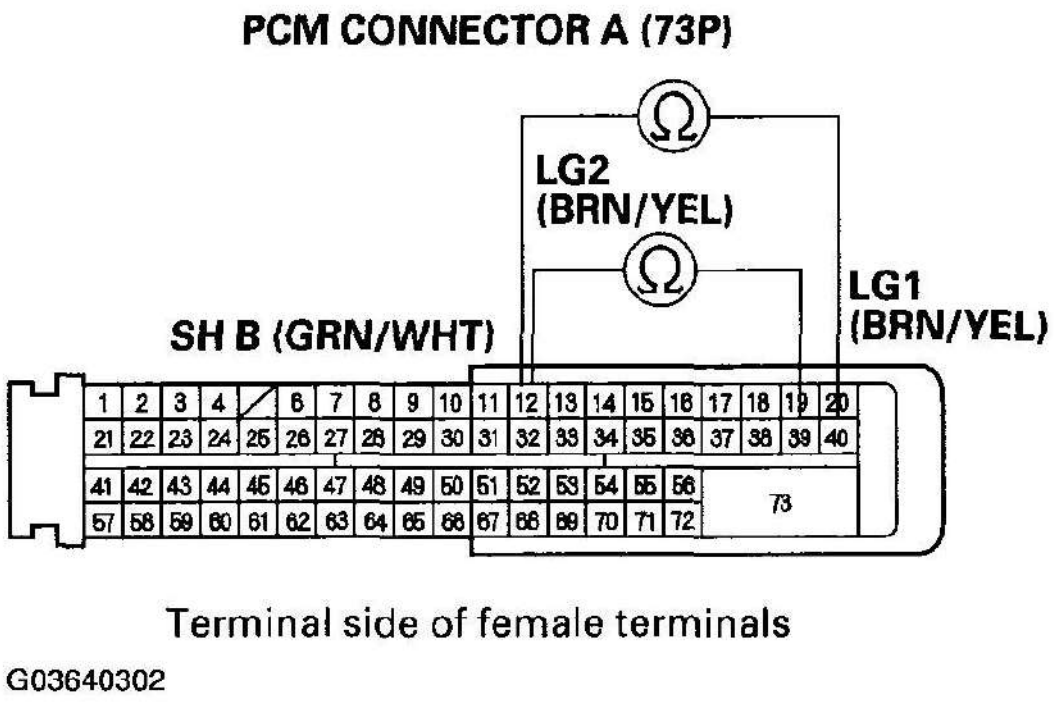


Fig. 167: Checking For Continuity Between PCM Connector Terminals A12 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A12 and solenoid harness connector, then go to step 16 .

NO - Go to step 13.

13. Inspect shift solenoid valve B (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is shift solenoid valve B OK?

YES - Go to step 14.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 16 .

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals A19 and A39 or A40.

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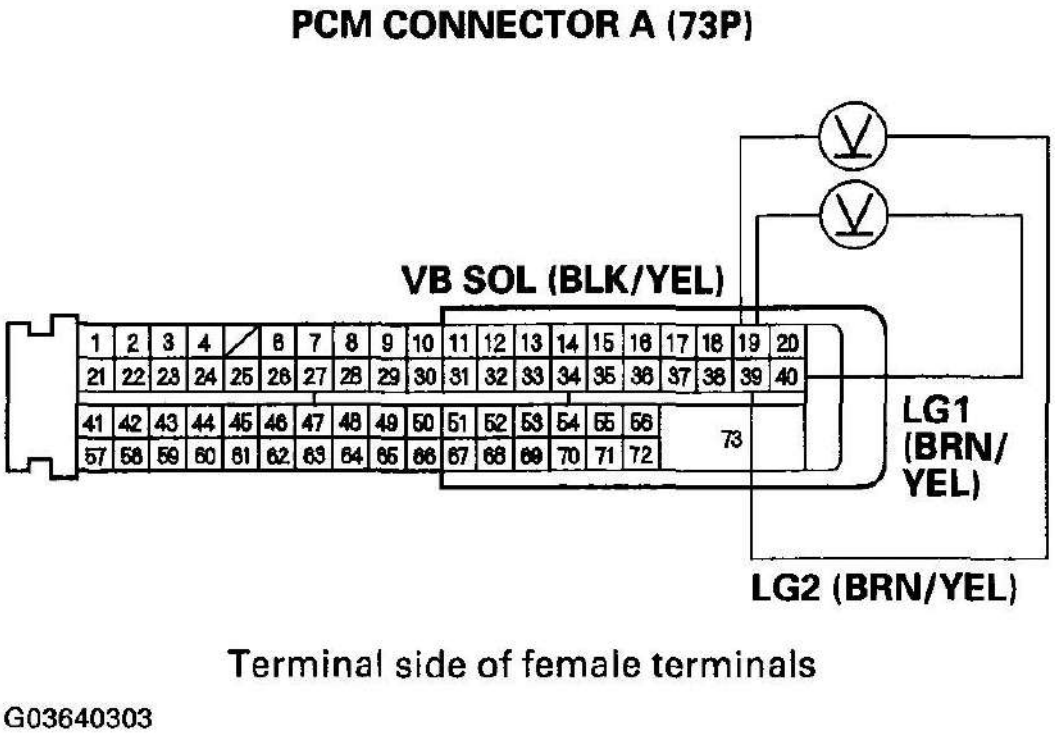


Fig. 168: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 - Check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the fuse is OK, repair open or short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, then go to step 16.

16. Clear the DTC with the HAS.
17. Start the engine in the P position.
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 1 and recheck.

DTC P0977: Open in Shift Solenoid Valve B Circuit

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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 HAS.
2. Test-drive the vehicle for several minutes in the D5 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 HAS.
5. Test-drive the vehicle for several minutes in the D5 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 - Intermittent failure, the system is OK at this time. 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 HAS.
9. Disconnect PCM connector A (73P).
10. Measure the resistance between PCM connector terminals A12 and A39 or A40.

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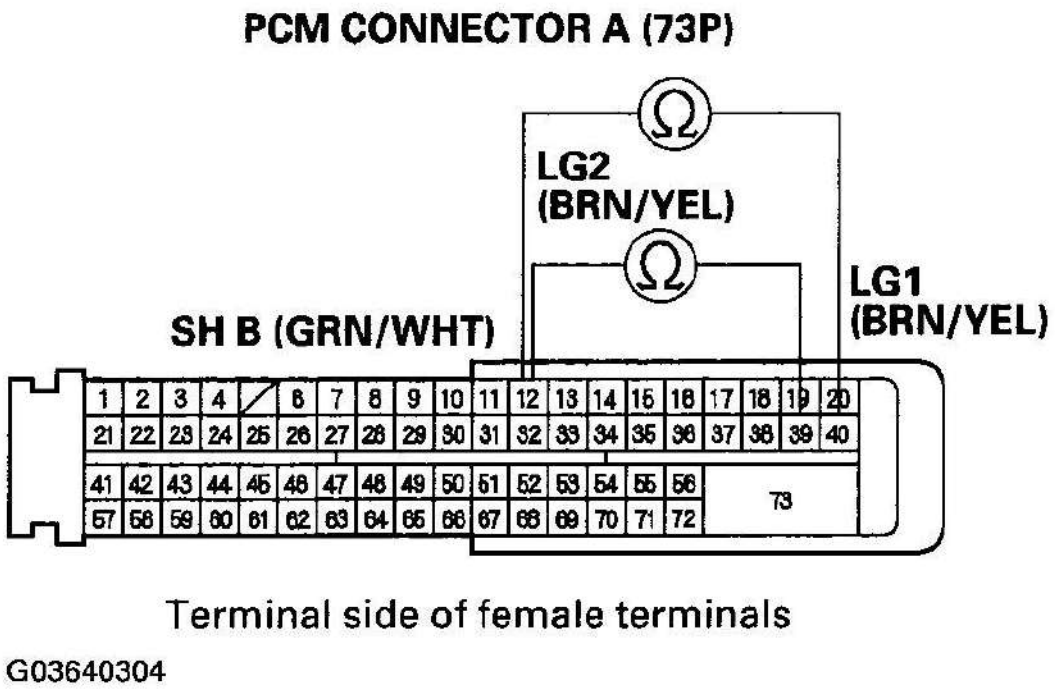


Fig. 169: Measuring Resistance Between PCM Connector Terminals A12 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12 - 25 ohm ?

YES - Check for loose or poor connections at PCM connector terminal A12. If the connections are 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. Inspect shift solenoid valve B (see page 14-181).

Is shift solenoid valve B OK?

YES - Go to step 12.

NO - Replace shift solenoid valve B (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 14 .

12. Remove the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).
13. Check for continuity between solenoid harness connector terminal No. 1 and shift solenoid valve B connector.

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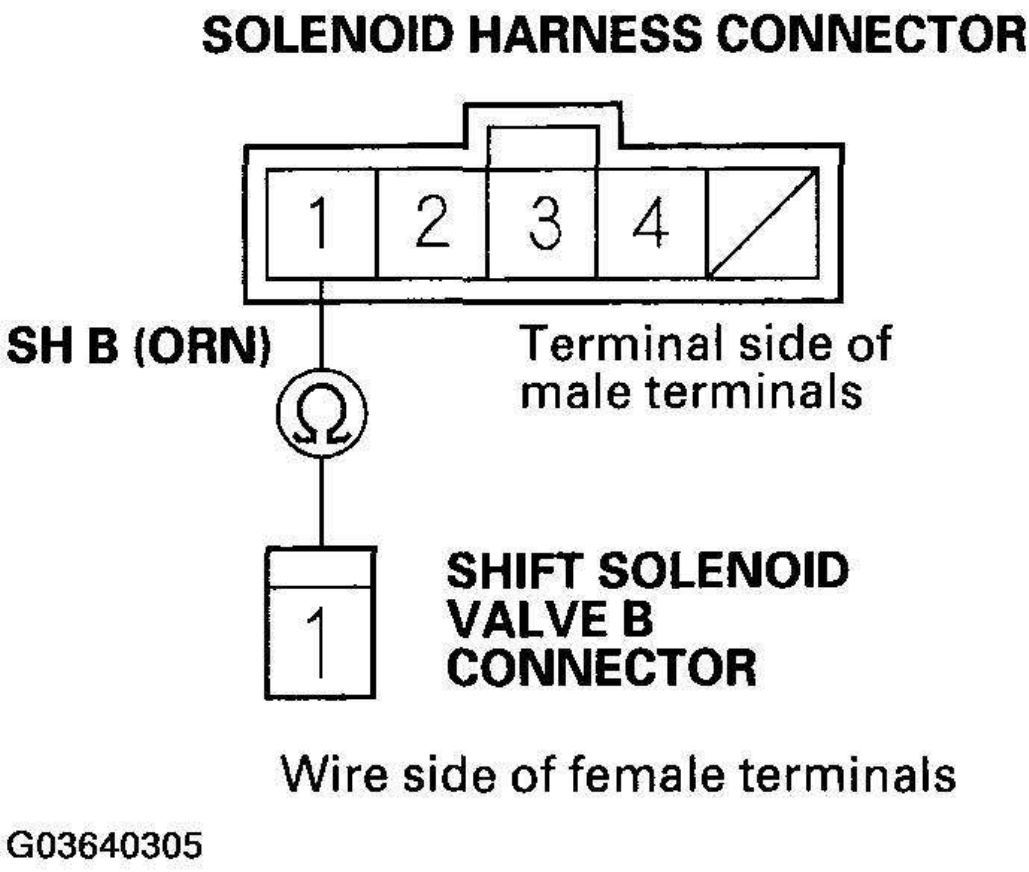


Fig. 170: Checking For Continuity Between Solenoid Harness Connector Terminal No. 1 And Shift Solenoid Valve B Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair open in the wire between PCM connector terminal A12 and shift solenoid valve B, then go to step 14.

NO - Replace the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 14.

14. Clear the DTC with the HAS.
15. Test-drive the vehicle for several minutes in the D5 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?

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YES - Troubleshooting is complete.

NO - Return to step 1 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 HAS.
2. Start the engine in the P position.
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 HAS.
5. Start the engine, and shift to the D5 position.
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 - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Jump the SCS line with HAS.
9. Disconnect PCM connector A (73P).
10. Measure the resistance between PCM connector terminals A13 and A39 or A40.

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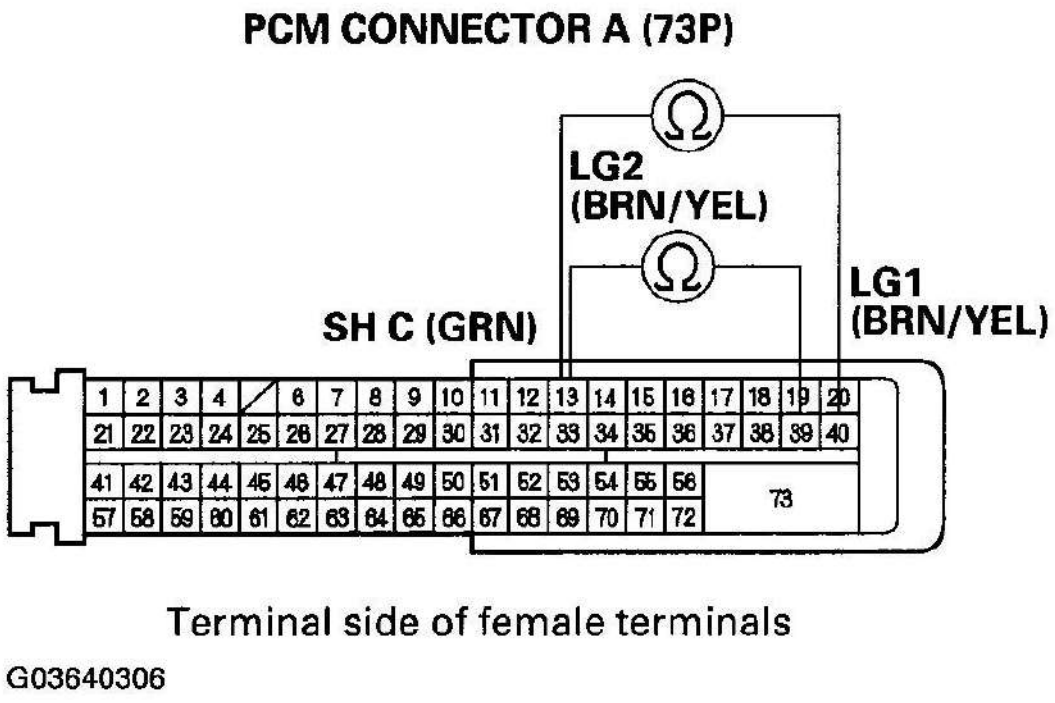


Fig. 171: Measuring Resistance Between PCM Connector Terminals A13 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm ?

YES - Go to step 11.
NO - Go to step 14 .

11. Disconnect the solenoid harness connector at the transmission housing.
12. Check the continuity between PCM connector terminals A13 and A39 or A40.

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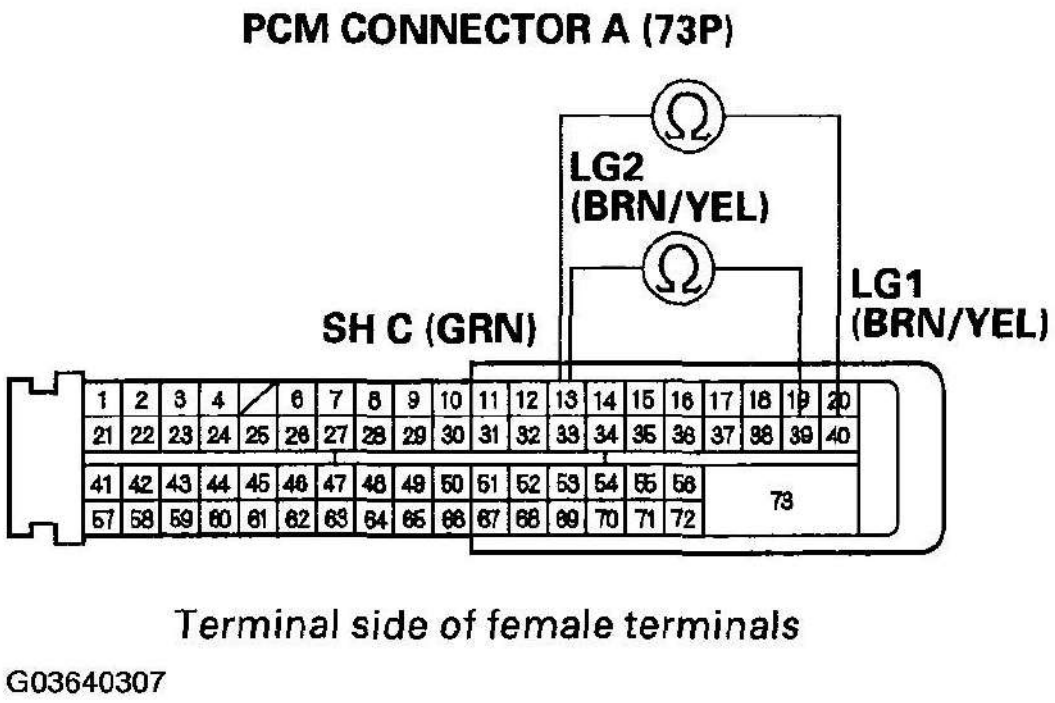


Fig. 172: Checking Continuity Between PCM Connector Terminals A13 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A13 and solenoid harness connector, then go to step 16 .

NO - Go to step 13.

13. Inspect shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is shift solenoid valve C OK?

YES - Go to step 14.

NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 16 .

14. Turn the ignition switch ON (II).
15. Measure the voltage between PCM connector terminals A19 and A39 or A40.

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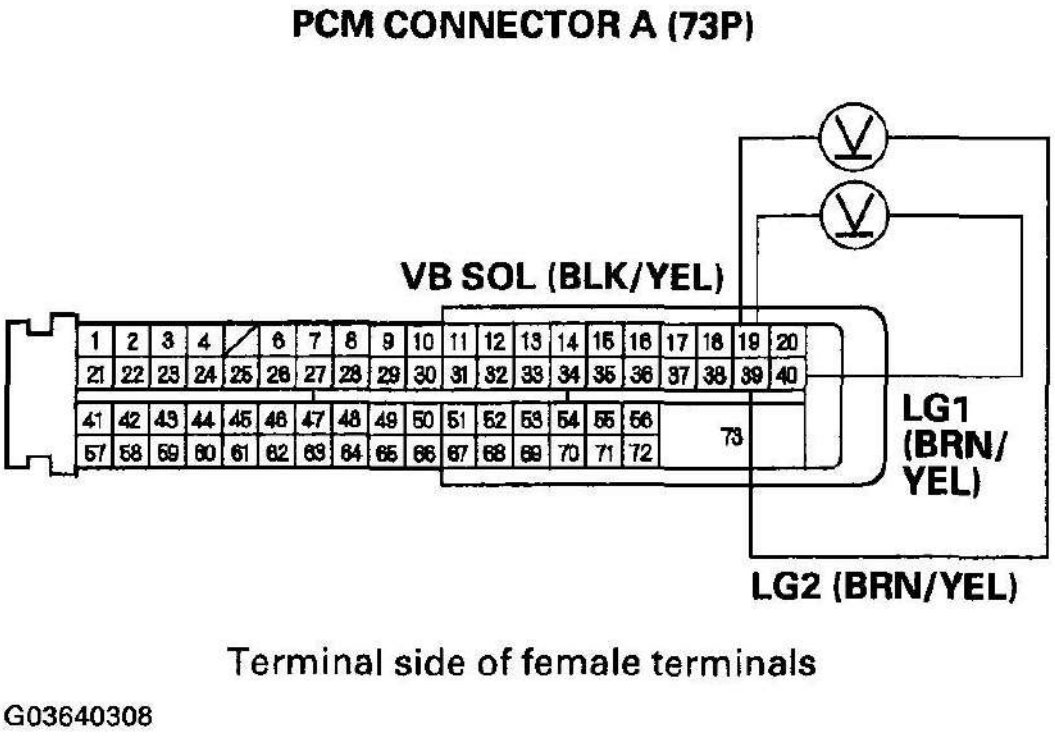


Fig. 173: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 - Check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the fuse is OK, repair open or short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, then go to step 16.

16. Clear the DTC with the HAS.
17. Start the engine, and shift to the D5 position.
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 1 and recheck.

DTC P0980: Open in Shift Solenoid Valve C Circuit

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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 HAS.
2. Start the engine, and shift to the D5 position.
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 HAS.
5. Start the engine, and shift to the P position.
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 - Intermittent failure, the system is OK at this time. 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 HAS.
9. Disconnect PCM connector A (73P).
10. Measure the resistance between PCM connector terminals A13 and A39 or A40.

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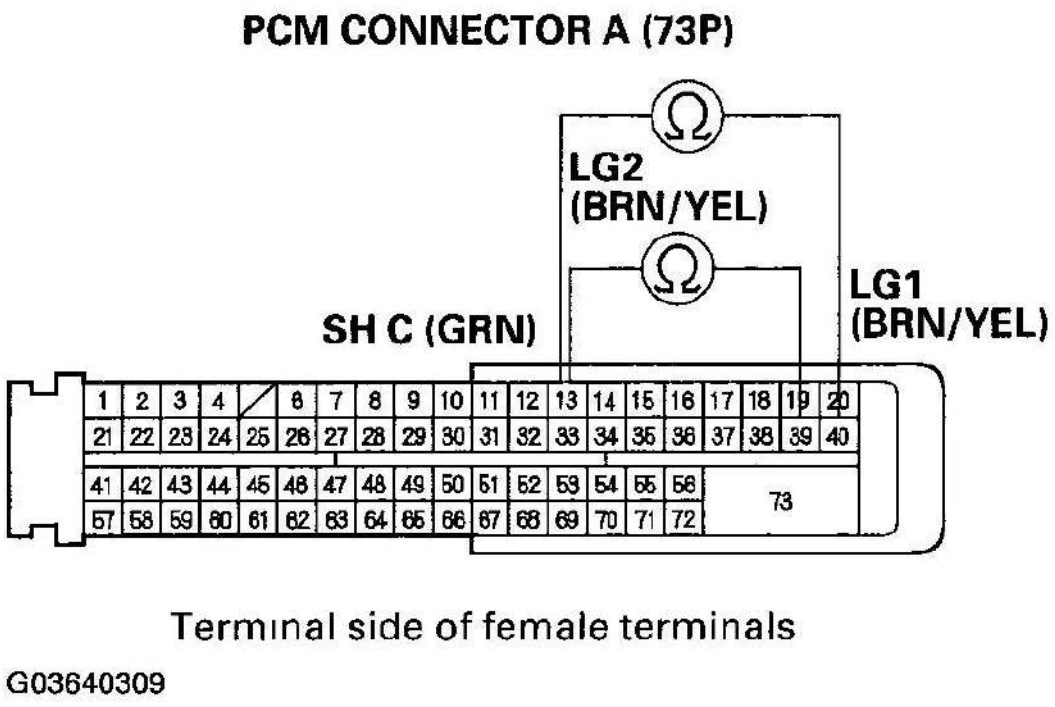


Fig. 174: Measuring Resistance Between PCM Connector Terminals A13 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12 - 25 ohm ?

YES - Check for loose or poor connections at PCM connector terminal A13. If the connections are 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. Inspect shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is shift solenoid valve C OK?

YES - Go to step 12.

NO - Replace shift solenoid valve C (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 14 .

12. Remove the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).
13. Check for continuity between solenoid harness connector terminal No. 2 and shift solenoid valve C

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connector.

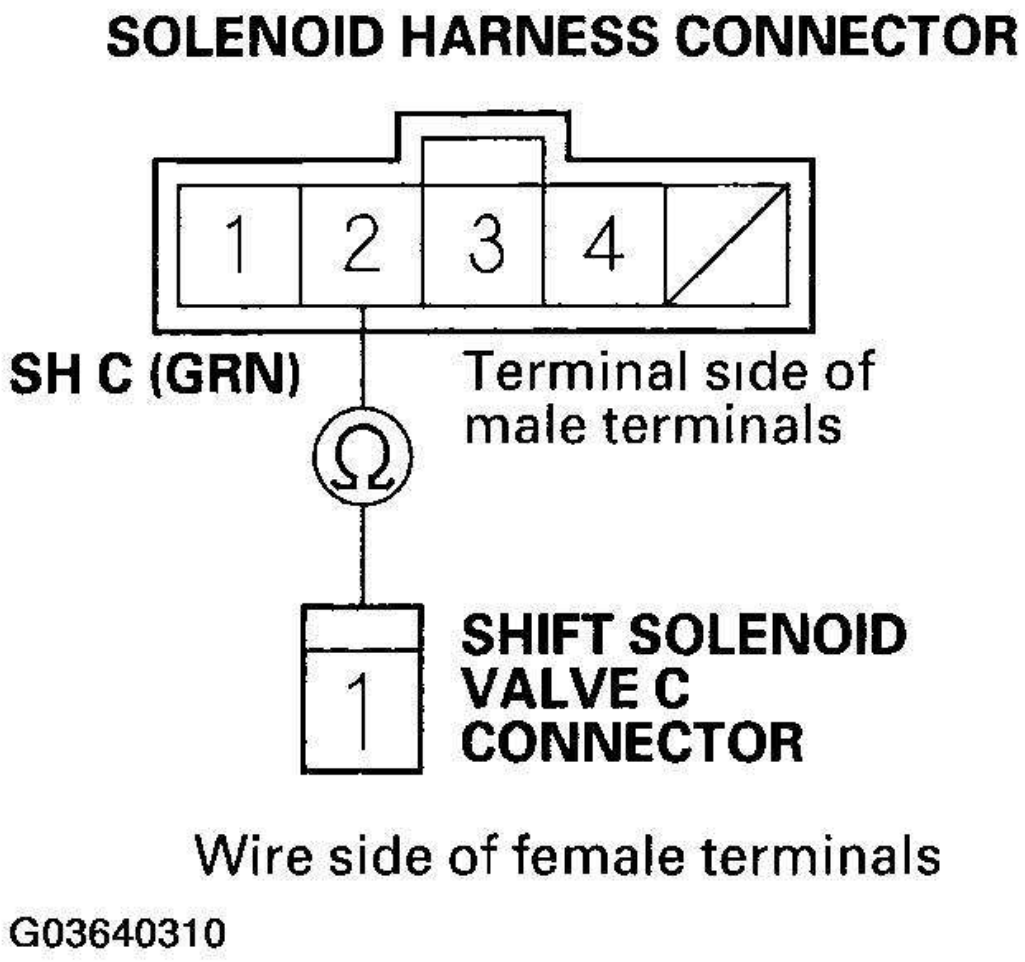


Fig. 175: Checking For Continuity Between Solenoid Harness Connector Terminal No. 2 And Shift Solenoid Valve C Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair open in the wire between PCM connector terminal A13 and shift solenoid valve C, then go to step 14.

NO - Replace the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 14.

14. Clear the DTC with the HAS.

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15. Start the engine in the P position.
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 1 and recheck.

DTC P1710: 1st-hold Switch Stuck ON or Short in 1st-hold 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. Shift to the 2 position, and verify the LOW HOLD SWITCH input with the HAS in the A/T data list.

Is LOW HOLD SWITCH OFF?

YES - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 1 and recheck.

NO - Go to step 2.

2. Remove the console panel and center console (see **CENTER CONSOLE REMOVAL/INSTALLATION**).
3. Disconnect the switch assembly connector (6P).
4. Check for continuity between switch assembly connector (6P) terminals No. 1 and No. 3 when the shift lever in the 1 position, and when the shift lever is out of 1.

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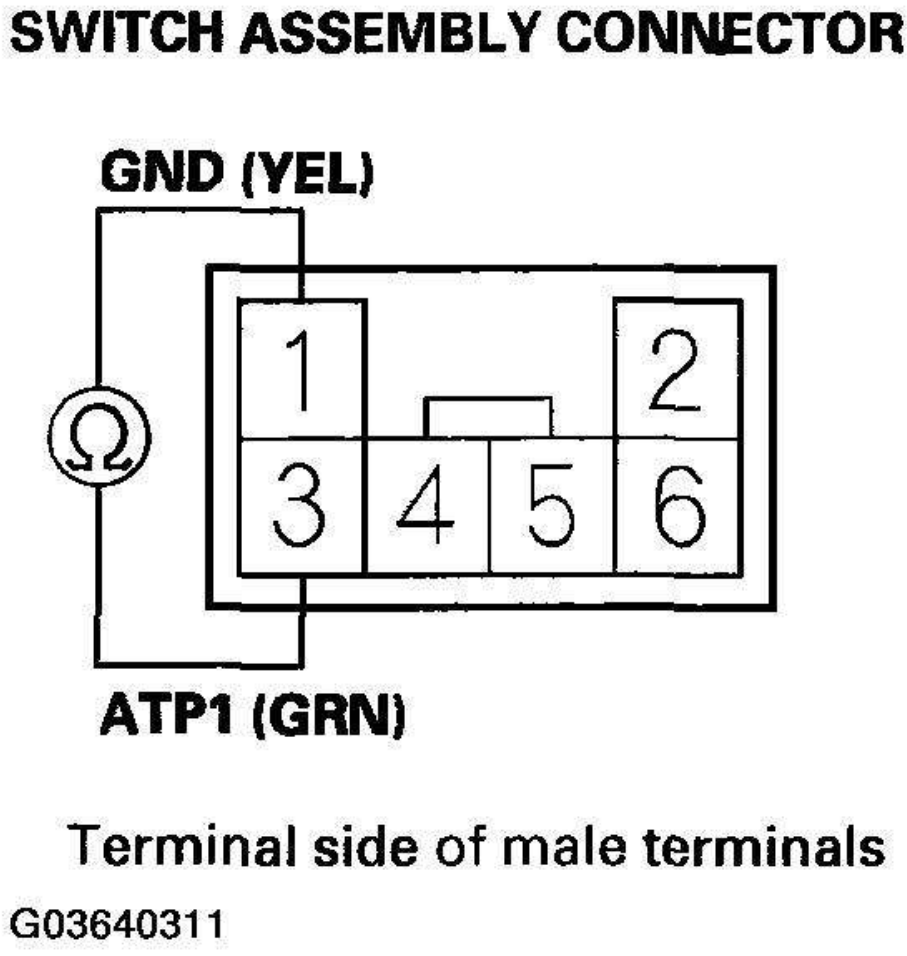


Fig. 176: Checking For Continuity Between Switch Assembly Connector (6P) Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity when the shift lever in 1 position, and no continuity when the shift lever in other than 1 position?

YES - Go to step 5.

NO - Replace the 1st-hold switch (see **Indicator Bulb Replacement**), then go to step 6 .

5. Turn the ignition switch ON (II), and check the voltage between switch assembly connector (6P) terminals No. 1 and No. 3.

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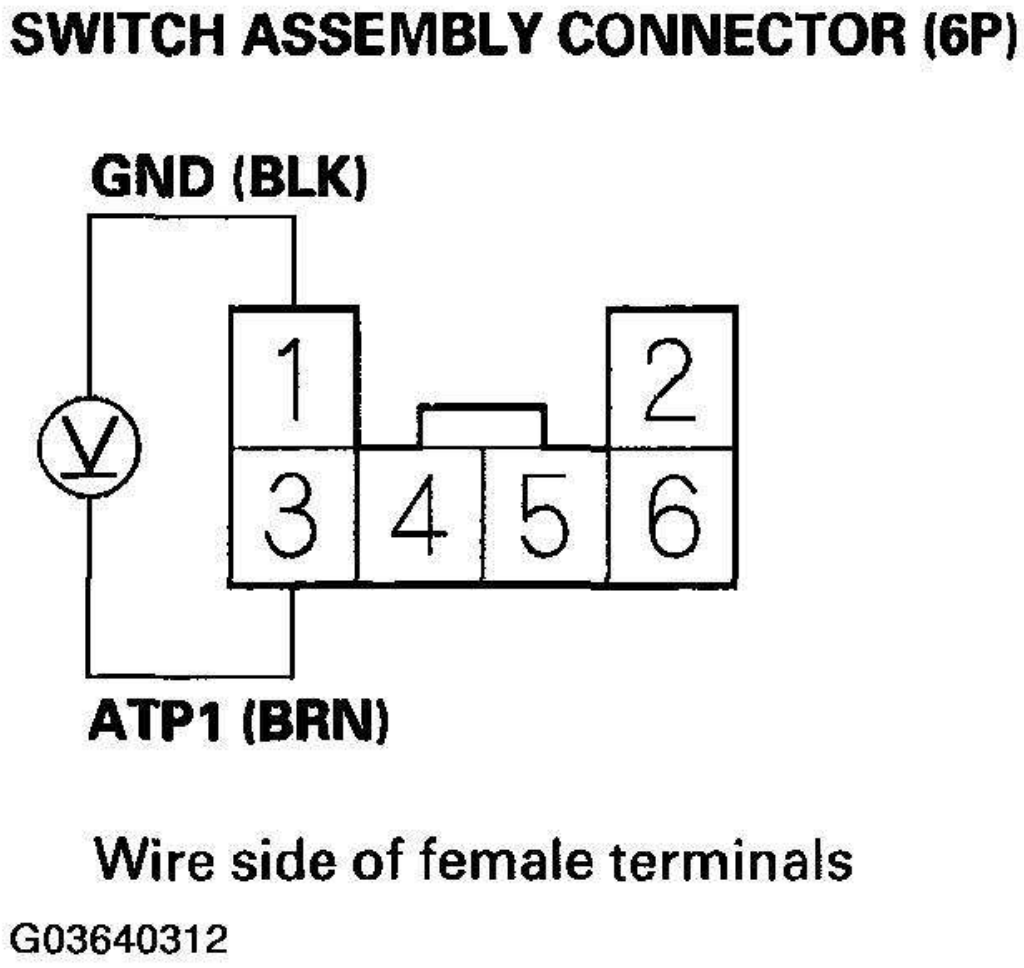


Fig. 177: Checking Voltage Between Switch Assembly Connector (6P) Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 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 short to ground in the wire between the 1st-hold switch and PCM connector terminal B32 or the A/T gear position indicator, then go to step 6.

6. Clear the DTC with the HAS.
7. Start the engine in the P position.
8. Monitor the OBD status for P1710 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

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Does the result indicate PASSED?

YES - Troubleshooting is complete.

NO - Return to step 1 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 HAS.
2. Check that DTC P2769 recurs.

Is DTC P2769 indicated?

YES - Go to step 5 .

NO - Go to step 3.

3. Choose Lockup Solenoid Test in Miscellaneous Test Menu, and test the torque converter clutch solenoid valve with the HAS.
4. 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 5.

NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 3 and recheck.

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HAS.
7. Disconnect PCM connector A (73P).
8. Measure the resistance between PCM connector terminals A14 and A39 or A40.

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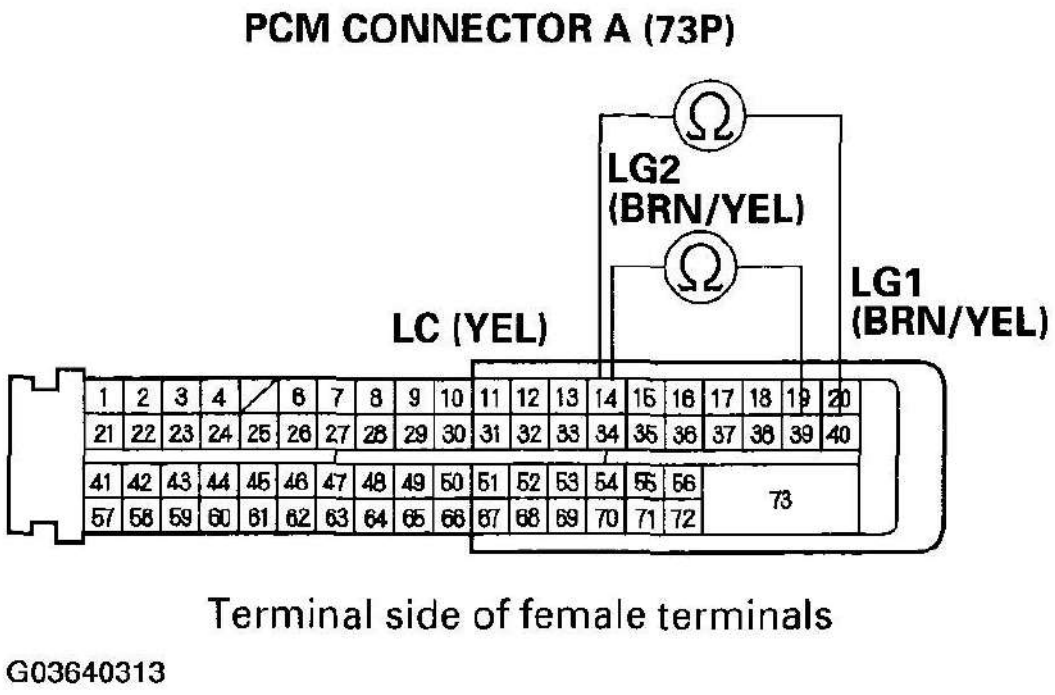


Fig. 178: Measuring Resistance Between PCM Connector Terminals A14 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 12 ohm ?

YES - Go to step 9.
NO - Go to step 12 .

9. Disconnect the solenoid harness connector at the transmission housing.
10. Check for continuity between PCM connector terminals A14 and A39 or A40.

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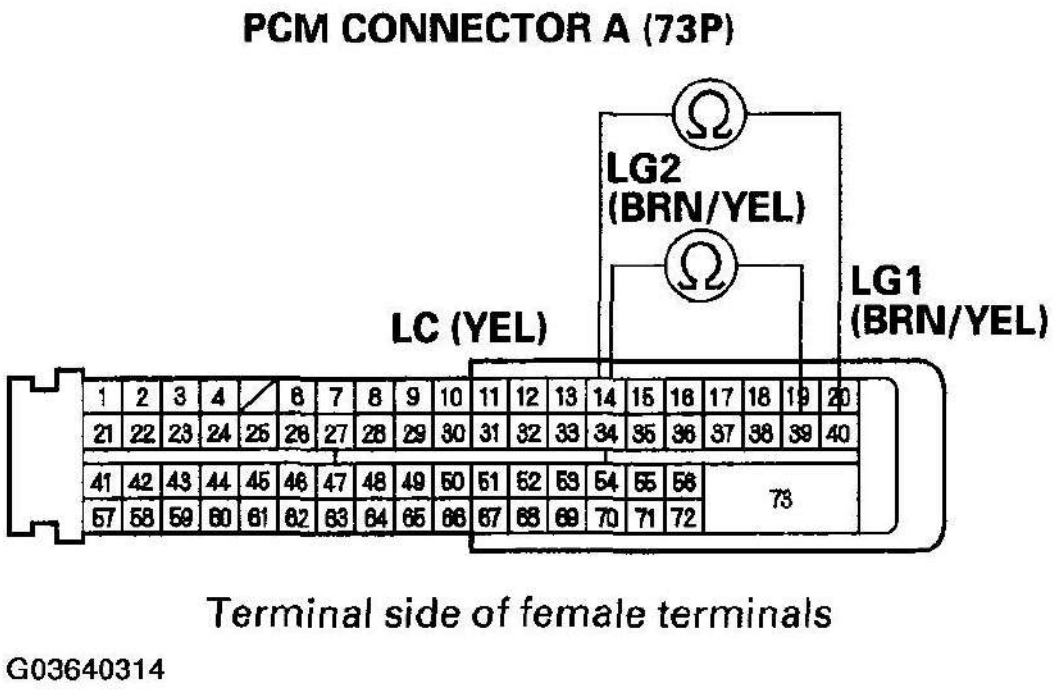


Fig. 179: Checking For Continuity Between PCM Connector Terminals A14 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM connector terminal A14 and solenoid harness connector, then go to step 14 .

NO - Go to step 11.

11. Inspect torque converter clutch solenoid valve (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is the torque converter clutch solenoid valve OK?

YES - Go to step 12.

NO - Replace the torque converter clutch solenoid valve (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 14 .

12. Turn the ignition switch ON (II).
13. Measure the voltage between PCM connector terminals A19 and A39 or A40.

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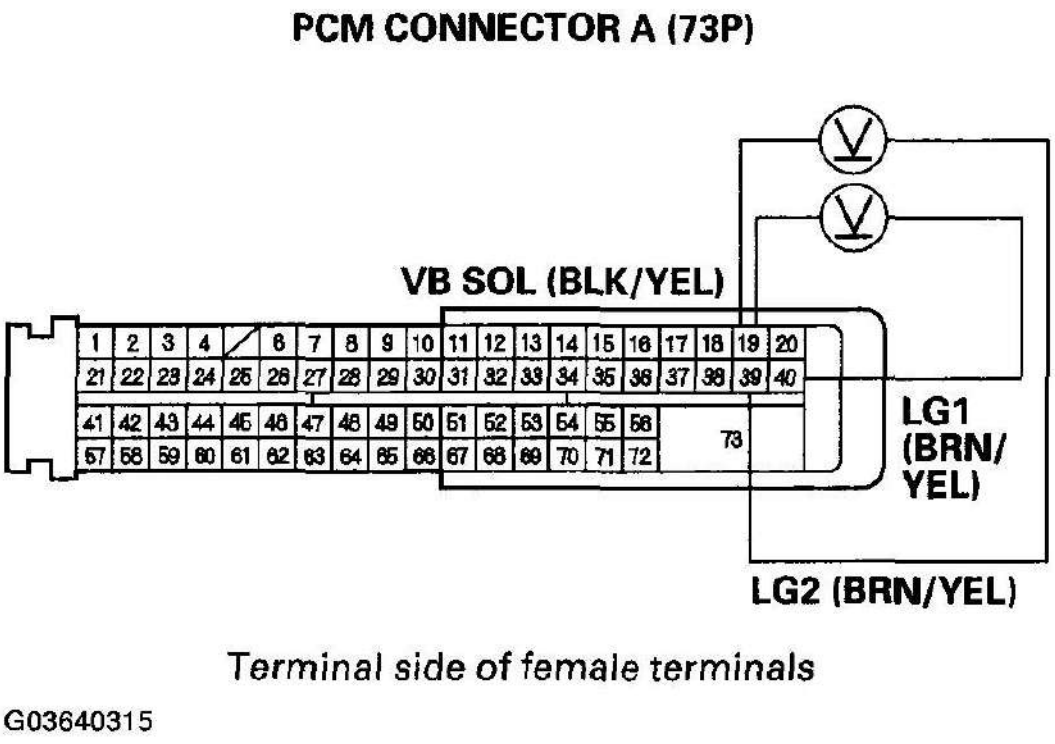


Fig. 180: Measuring Voltage Between PCM Connector Terminals A19 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 - Check for blown No. 6 fuse in the driver's under dash fuse/relay box. If the fuse is OK, repair open or short in the wire between PCM connector terminal A19 and the driver's under dash fuse/relay box, then go to step 14.

14. Clear the DTC with the HAS.
15. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.
16. 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 1 and recheck.

DTC P2770: Open in Shift Solenoid Valve C Circuit

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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 HAS.
2. Check that DTC P2770 recurs.

   Is DTC P2770 indicated?

   YES - Go to step 5 .

   NO - Go to step 3.
3. Choose Lockup Solenoid Test in Miscellaneous Test Menu, and test the torque converter clutch solenoid valve with the HAS.
4. 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 5.

   NO - Intermittent failure, the system is OK at this time. If the tester indicates NOT COMPLETED, return to step 3 and recheck.
5. Turn the ignition switch OFF.
6. Jump the SCS line with the HAS.
7. Disconnect PCM connector A (73P).
8. Measure the resistance between PCM connector terminals A14 and A39 or A40.

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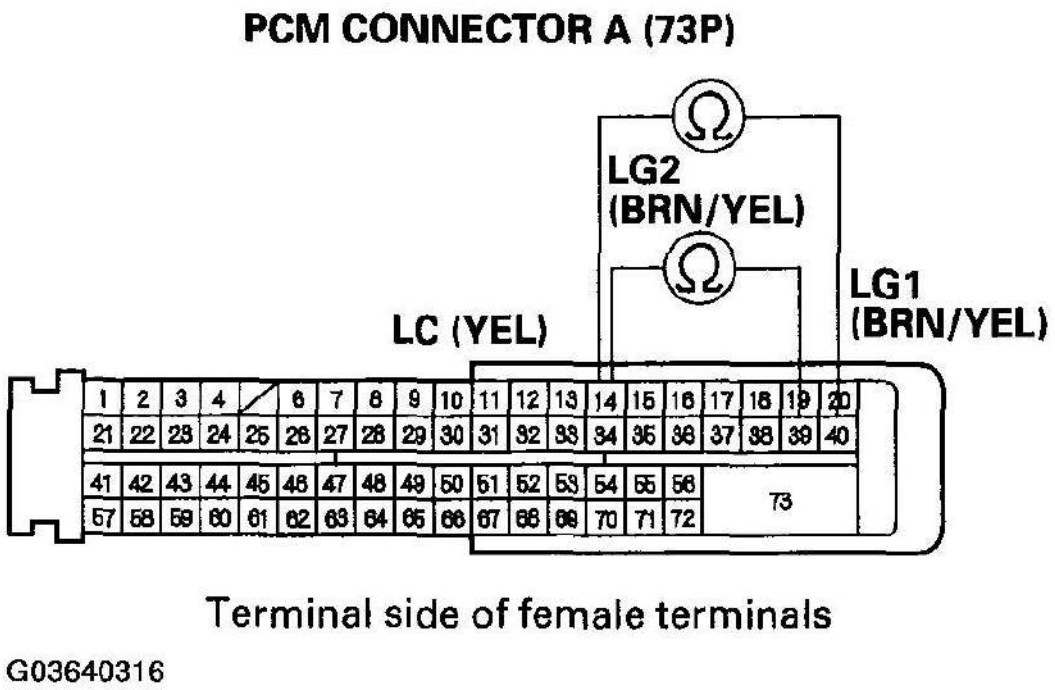


Fig. 181: Measuring Resistance Between PCM Connector Terminals A14 And A39 Or A40
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 12 - 25 ohm ?

YES - Check for loose or poor connections at PCM connector terminal A14. If the connections are 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 9.

9. Inspect torque converter clutch solenoid valve (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).

Is the torque converter clutch solenoid valve OK?

YES - Go to step 10.

NO - Replace the torque converter clutch solenoid valve (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12 .

10. Remove the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**).
11. Check for continuity between solenoid harness connector terminal No. 3 and torque converter clutch

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solenoid valve connector.

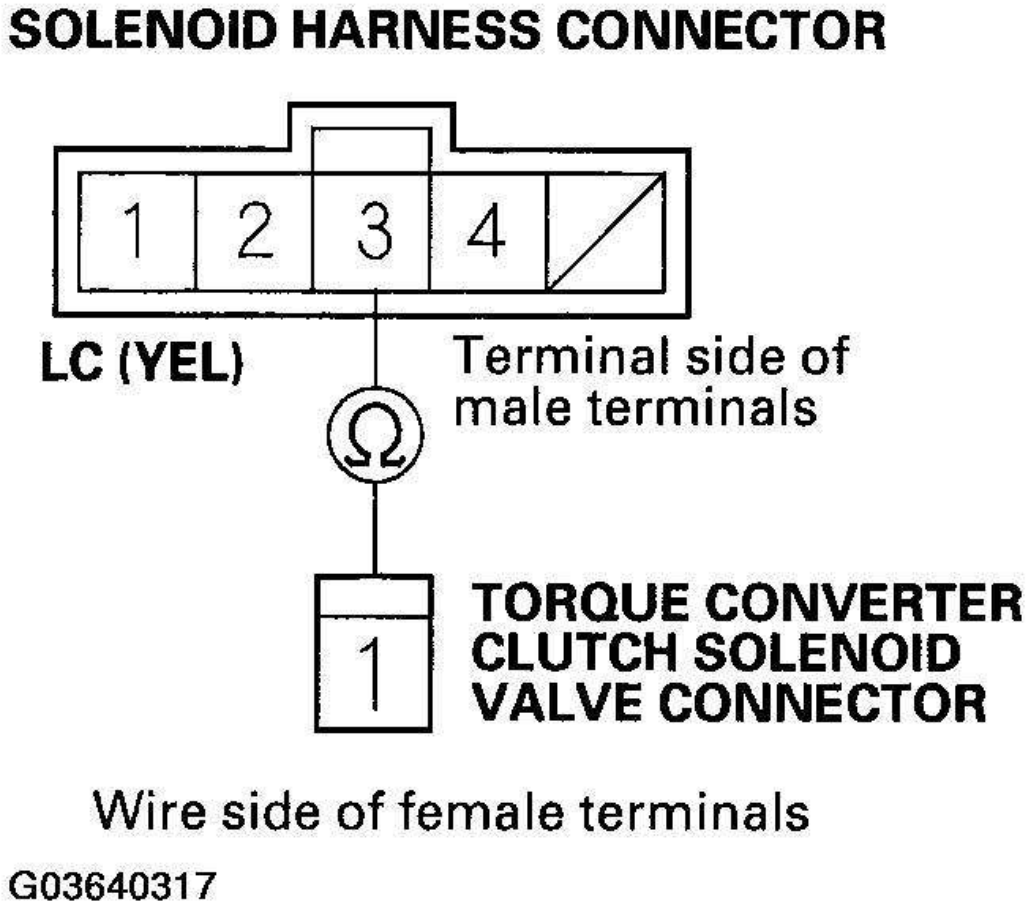


Fig. 182: Checking For Continuity Between Solenoid Harness Connector Terminal No. 3 And Torque Converter Clutch Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair open in the wire between PCM connector terminal A14 and torque converter clutch solenoid valve, then go to step 12.

NO - Replace the solenoid harness (see **SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT**), then go to step 12.

12. Clear the DTC with the HAS.
13. Test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.

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14. 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 1 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 D5 position while pressing the brake pedal. Press the accelerator pedal, and release it suddenly. The engine should not stall.
3. Repeat step 2 in all shift lever positions.
4. Connect the HAS to the DLC (A), and go to the A/T data list.

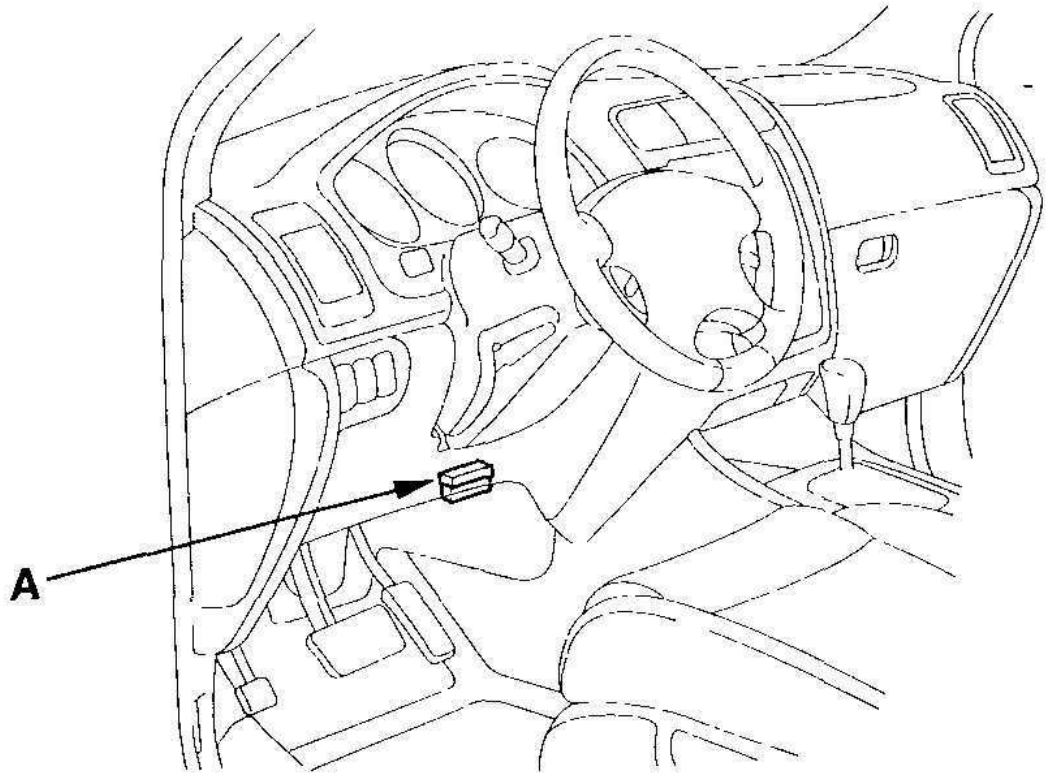


Fig. 183: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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5. Test-drive the vehicle on a flat road in the D5 position. Check for abnormal noise and clutch slippage. While driving, check that the shift points occur at the proper speeds by monitoring the throttle position sensor voltage with the HAS and comparing your shift point speeds and voltage to those in the table. (The Accelerator pedal position sensor voltage represents the throttle opening.)

Upshift: D5 Position

UPSHIFT - D5 POSITION

Accelerator pedal position sensor voltage: 0.8 V	
1st->2nd	13-14 mph (21-23 km/h)
2nd->3rd	19-21 mph (30-34 km/h)
3rd->4th	25-29 mph (40-46 km/h)
4th->5th	45-48 mph (72-78 km/h)
Lock up ON	48-51 mph (78-82 km/h)
Accelerator pedal position sensor voltage: 2.25 V	
1st->2nd	28-30 mph (45-49 km/h)
2nd->3rd	45-49 mph (73-79 km/h)
3rd->4th	67-71 mph (108-114 km/h)
4th->5th	88-92 mph (142-148 km/h)
Lock up ON	89-93 mph (144-150 km/h)
Fully-opened throttle Accelerator pedal position sensor voltage: 4.5 V	
1st->2nd	38-42 mph (61-67 km/h)
2nd->3rd	68-72 mph (110-116 km/h)
3rd->4th	105-109 mph (169-175 km/h)

Downshift: D5 Position

DOWNSHIFT - D5 POSITION

Accelerator pedal position sensor voltage: 0.75 V	
Lock up OFF	45-48 mph (73-77 km/h)
5th->4th	36-39 mph (58-62 km/h)
4th->3rd	17-19 mph (29-33 km/h)
3rd->1st	9-11 mph (12-16 km/h)
Throttle position sensor voltage: 2.25 V	
Lock up OFF	78-82 mph (127-133 km/h)
Fully-opened throttle Accelerator pedal position sensor voltage: 4.5 V	
5th->4th	-
4th->3rd	88-92 mph (142-148 km/h)
3rd->2nd	58-61 mph (93-99 km/h)
2nd->1st	29-33 mph (47-53 km/h)

6. Accelerate to about 35 mph (57 km/h) so the transmission is in 4th or 5th, then shift from the D5 position

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to the 2 position. The vehicle should immediately begin to slow down from engine braking.

7. Check for abnormal noise and clutch slippage in the following positions.
    1. (1st Gear) Position

       Accelerate from a stop at full throttle. Check that there is no abnormal noise or clutch slippage. Upshifts should not occur with the shift lever in this position.

    2. (2nd Gear) Position

       Accelerate from a stop at full throttle. Check that there is no abnormal noise or clutch slippage. Upshifts and downshifts should not occur with the shift lever in this position.

       R (Reverse) Position

       Accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage.

8. 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 upper level (see **ATF LEVEL CHECK**).
2. Apply the parking brake, and block all four wheels.
3. Connect the HAS to the DLC (A), and go to the A/T data list.

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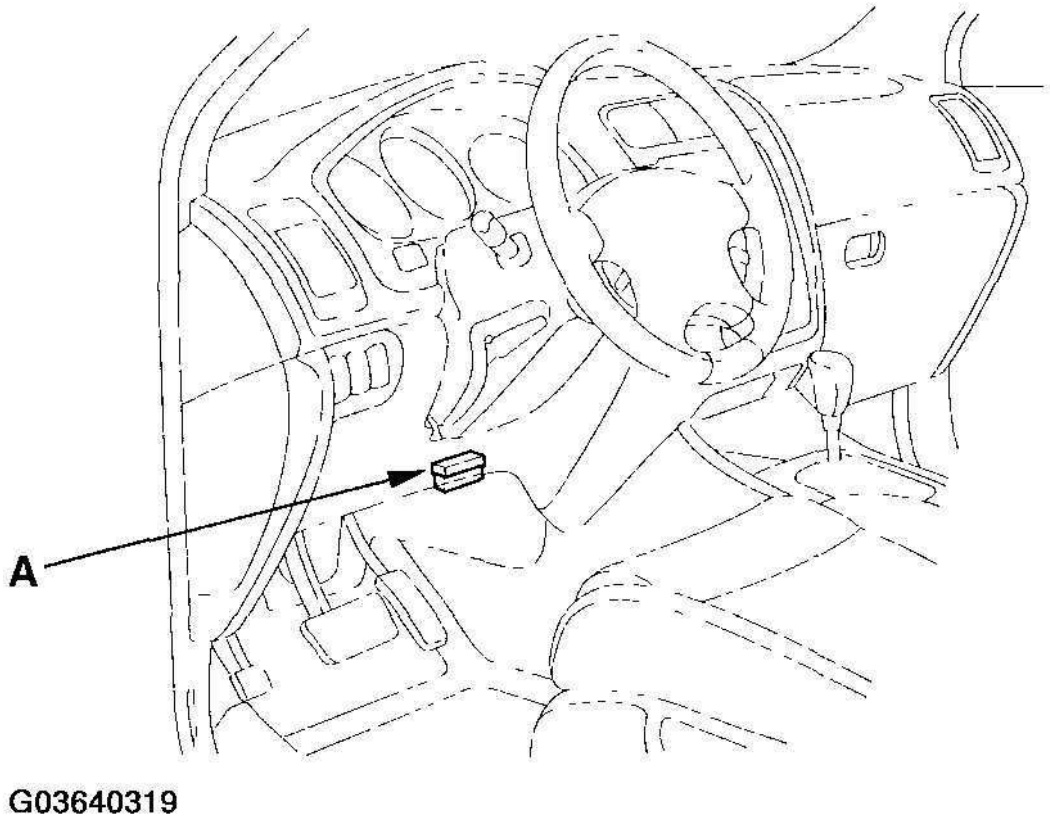


Fig. 184: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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. Fully press the brake pedal and accelerator pedal for 6 to 8 seconds, and note engine speed. Do not move the shift lever while raising engine speed.
7. Allow 2 minutes for cooling, then repeat the test in the D5, 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 should be the same in D5, 2, 1, and R positions.**
- **Do not test stall speed with the A/T pressure gauges installed.**

Stall Speed RPM:

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Specification: 1,950 RPM

Service Limit: 1,800-2,100 RPM

8. If the measurements are out of the service limit, problems and probable causes are listed in the table.

SERVICE LIMIT PROBLEMS AND PROBABLE CAUSES

Problem	Probable causes
Stall speed RPM high in the D5, 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
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 RPM low in the D5, 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 clutch pressure gauge set

  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. Raise the vehicle, and make sure it is securely supported.
3. Allow all four wheels to rotate freely.
4. Connect the HAS to the DLC (A).

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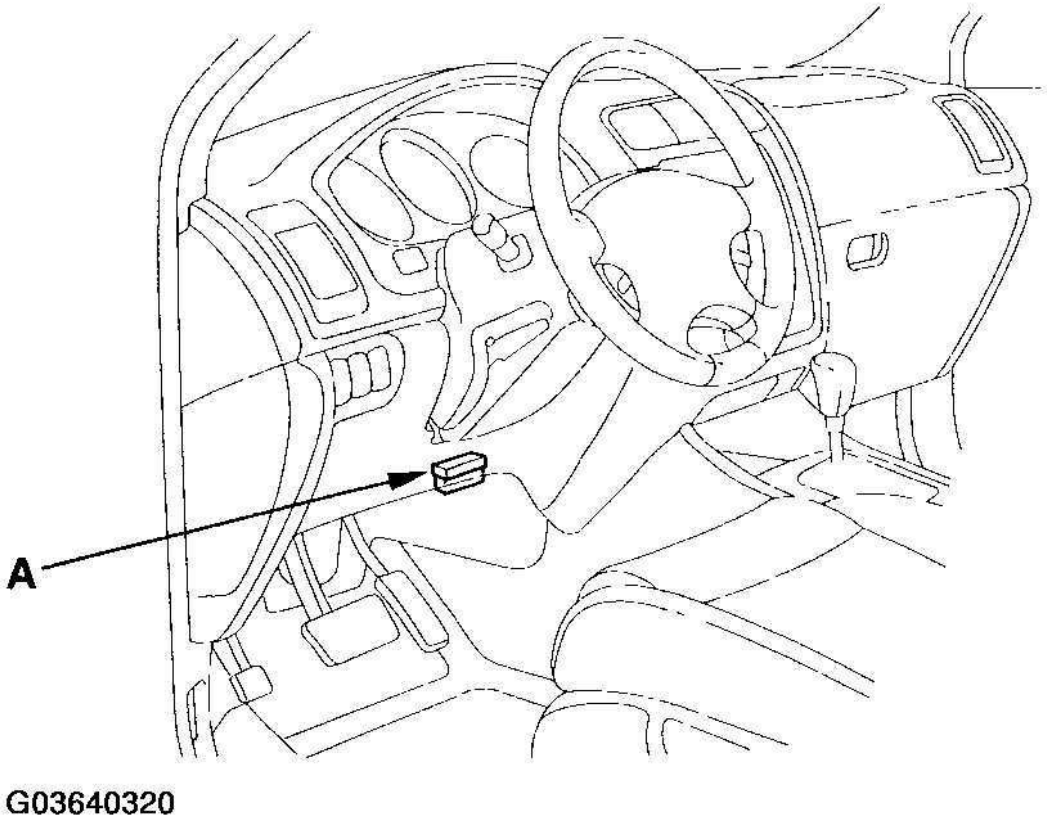
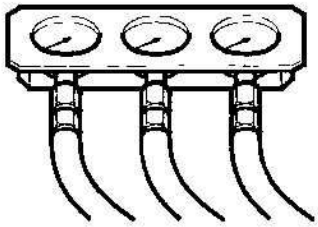


Fig. 185: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the splash shield.
6. Connect the oil pressure gauges to the line pressure inspection port (A), 5th clutch pressure inspection port (B), and 3rd clutch pressure inspection port (C) at the front lower of the transmission. Do not allow dust or other foreign particles to enter the ports while connecting the gauges.

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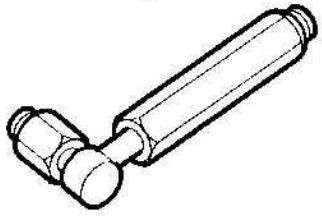
A/T OIL PRESSURE GAUGE SET W/PANEL
07406-0020400 or 07406-0020401

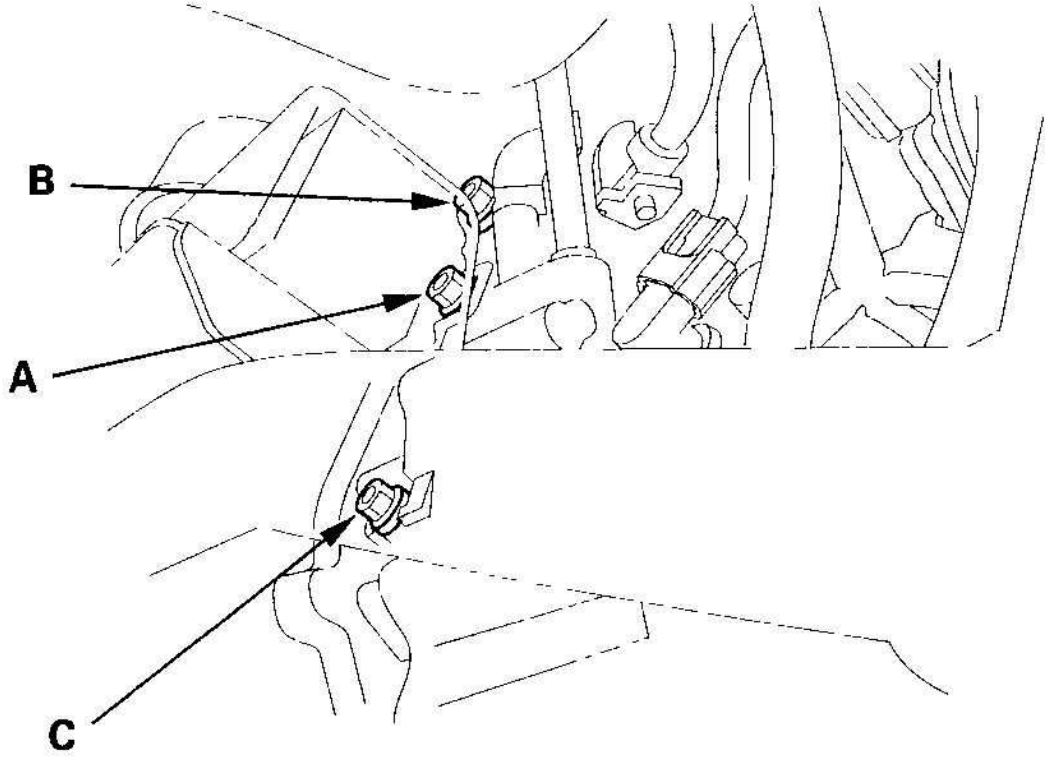


A/T PRESSURE HOSE, 2,210 mm
07MAJ-PY4011A
(3 Required)



A/T PRESSURE HOSE ADAPTER
07MAJ-PY40120
(3 Required)





C0304028A

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Fig. 186: Connecting Oil Pressure Gauges To Line Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Warm up the engine (the radiator fan comes on), then stop it.
8. Remove the intake air duct, and connect the oil pressure gauges to the 2nd clutch pressure inspection port (D) and 4th clutch pressure inspection port (E). Then temporarily install the air cleaner housing and intake air duct.

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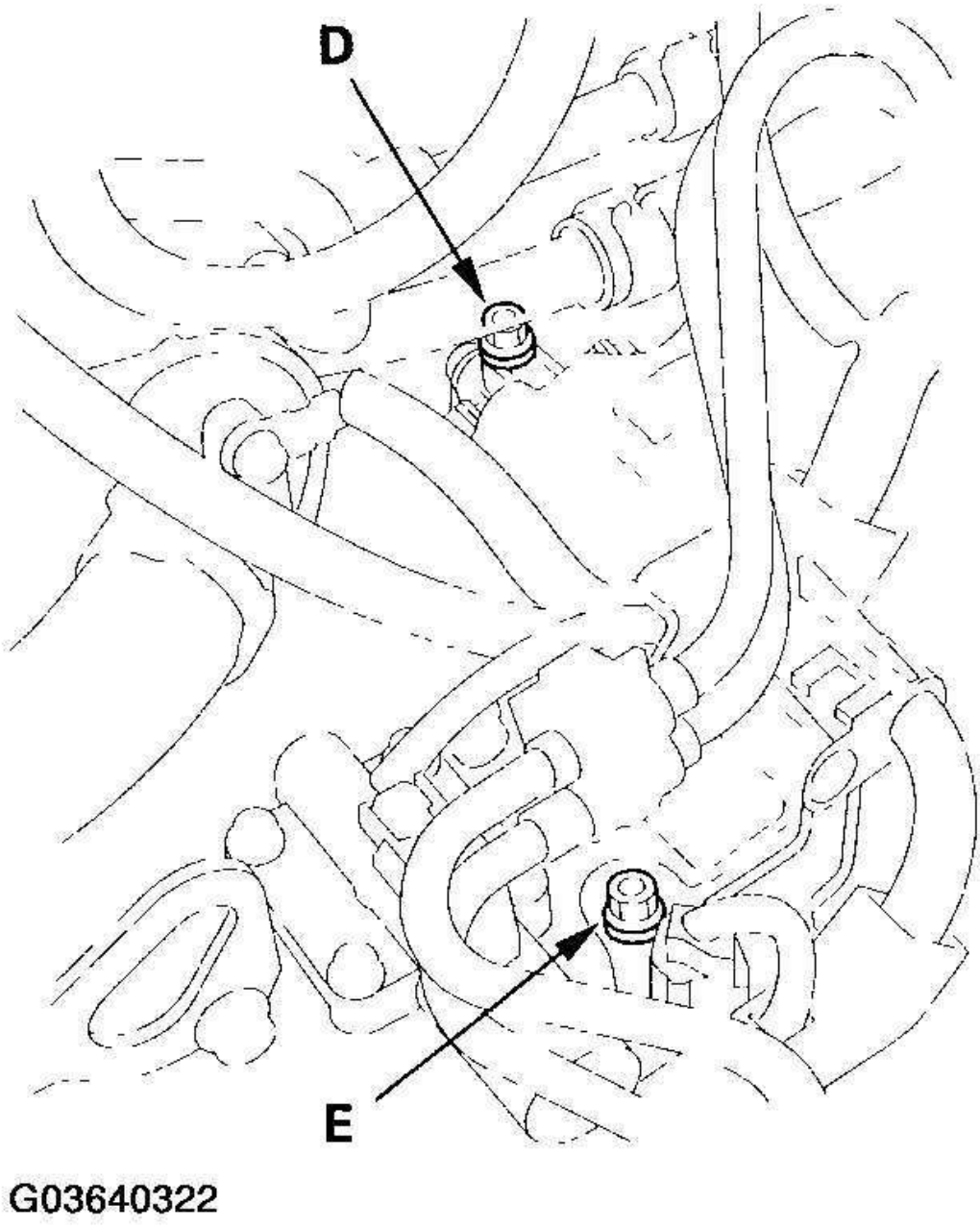


Fig. 187: Connecting Oil Pressure Gauges To 2nd Clutch Pressure Inspection Port And 4th Clutch Pressure Inspection Port
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9. Connect the oil pressure gauge to the 1st clutch pressure inspection port (F), and 1st-port clutch pressure

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inspection port (G) at the transmission end cover.

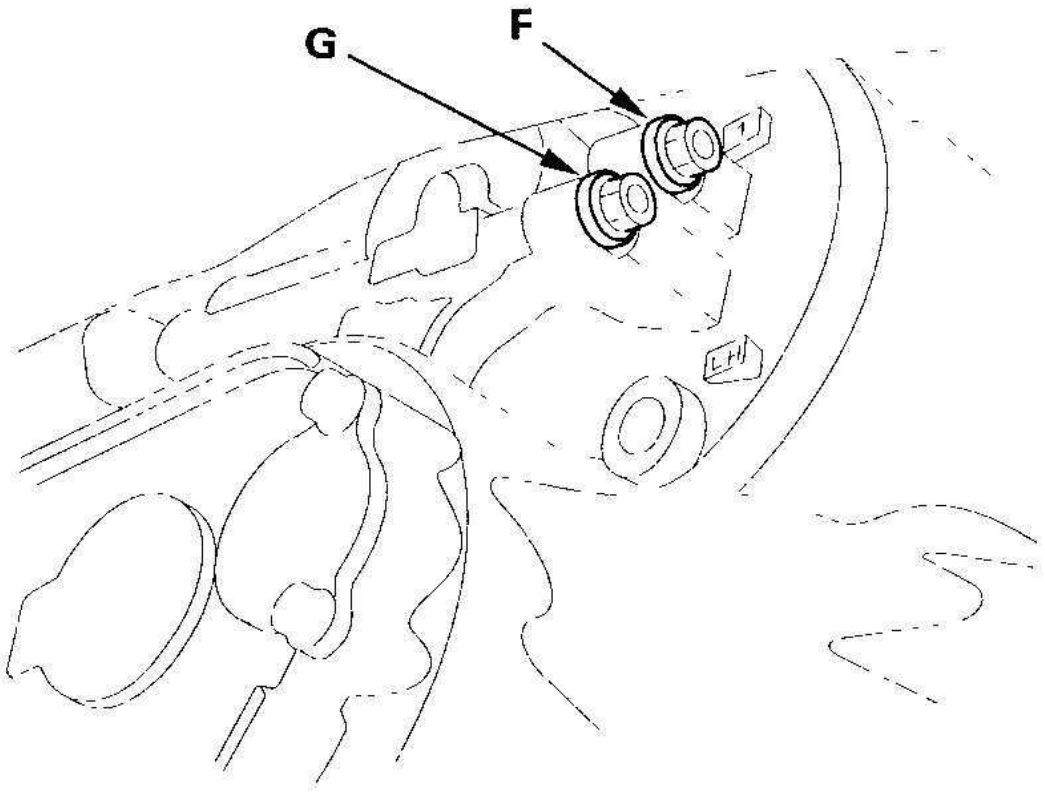


Fig. 188: Connecting Oil Pressure Gauge To 1st Clutch Pressure Inspection Port, And 1st-Port Clutch Pressure Inspection Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Start the engine, and run it at 2,000 RPM in the P or N position.
11. Measure the line pressure at the line pressure inspection port (A).

NOTE: Higher pressure may be indicated if measurements are made in shift lever position other than N or P.

FLUID PRESSURE

Pressure	Fluid Pressure	
	Standard	Service Limit
Line (A)	900-960 kPa (9.2-9.8 kgf/cm^2 , 130-140 psi)	850 kPa (8.7 kgf/cm^2 , 120 psi)

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12. Shift to the 1 position, and measure the 1st clutch pressure at the 1st clutch pressure inspection port (F) and 1st-hold clutch pressure at the 1st-hold clutch pressure inspection port (G).
13. Shift to the 2 position, and measure the 2nd clutch pressure at the 2nd clutch pressure inspection port (D).
14. Shift to the P position, then press the brake pedal and hold it.
15. Shift to the D3 position, and release the brake pedal; the transmission is in 1st gear.
16. Press the accelerator pedal to increase the engine speed to 2,500 RPM; the transmission shifts to 2nd gear.
17. Release the accelerator pedal to close fully the throttle over 5 seconds; the engine speed decrease to 1,000 RPM with the transmission in 2nd gear.
18. Press the accelerator pedal very slowly to increase the engine speed 2,000 RPM over 5 seconds, and hold the accelerator; the transmission shifts to 3rd gear. Measure the 3rd clutch pressure at the 3rd clutch pressure inspection port (C) while holding engine speed at 2,000 RPM.
19. Shift to the D4 position (the transmission will shift to 4th gear at about 2,500 RPM), reduce the engine speed to 2,000 RPM, and measure the 4th clutch pressure at the 4th clutch pressure inspection port (E).
20. Shift to the D5 position (the transmission will shift to 5th gear at about 2,500 RPM), reduce the engine speed to 2,000 RPM, and measure the 5th clutch pressure at the 5th clutch pressure inspection port (B).
21. Bring the engine back to an idle, then apply the brake to stop the wheels from rotating.
22. Shift to the R position. Raise the engine RPM to 2,000 RPM, and measure the 5th clutch pressure at the 5th clutch pressure inspection port (B).

FLUID PRESSURE

Pressure	Fluid Pressure	
	Standard	Service Limit
1st-hold clutch (G)	760-830 kPa (7.7-8.5 kgf/cm^2 , 110-120 psi)	710 kPa (7.2 kgf/cm^2 , 100 psi)
1st clutch (F)	890-970 kPa (9.1-9.9 kgf/cm^2 , 130-140 psi)	840 kPa (8.6 kgf/cm^2 , 120 psi)
2nd clutch (D)		
3rd clutch (C)		
4th clutch (E)		
5th clutch (B)		

23. If the measurements are out of the service limit, problems and probable causes are listed in the table.

PROBLEMS AND PROBABLE CAUSES

Problem	Probable causes
No or low line pressure	• Torque converter • ATF pump • Regulator valve • Torque converter check valve • Low fluid level • Clogged ATF strainer

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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 the R position	• Servo valve • 5th clutch • O-rings
No or low 1st-hold clutch pressure	• 1st-hold clutch • O-rings

24. Install the sealing bolts with the new sealing washers, and tighten the bolts to 18 N.m (1.8 kgf.m, 13 lbf.ft). Do not reuse old sealing washers.

    Torque: 18 N.m (1.8 kgf.m, 13 lbf.ft)

25. Install the air cleaner housing and intake air duct.
26. Install the splash shield.

SHIFT SOLENOID VALVE, TORQUE CONVERTER CLUTCH SOLENOID VALVE TEST/REPLACEMENT

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

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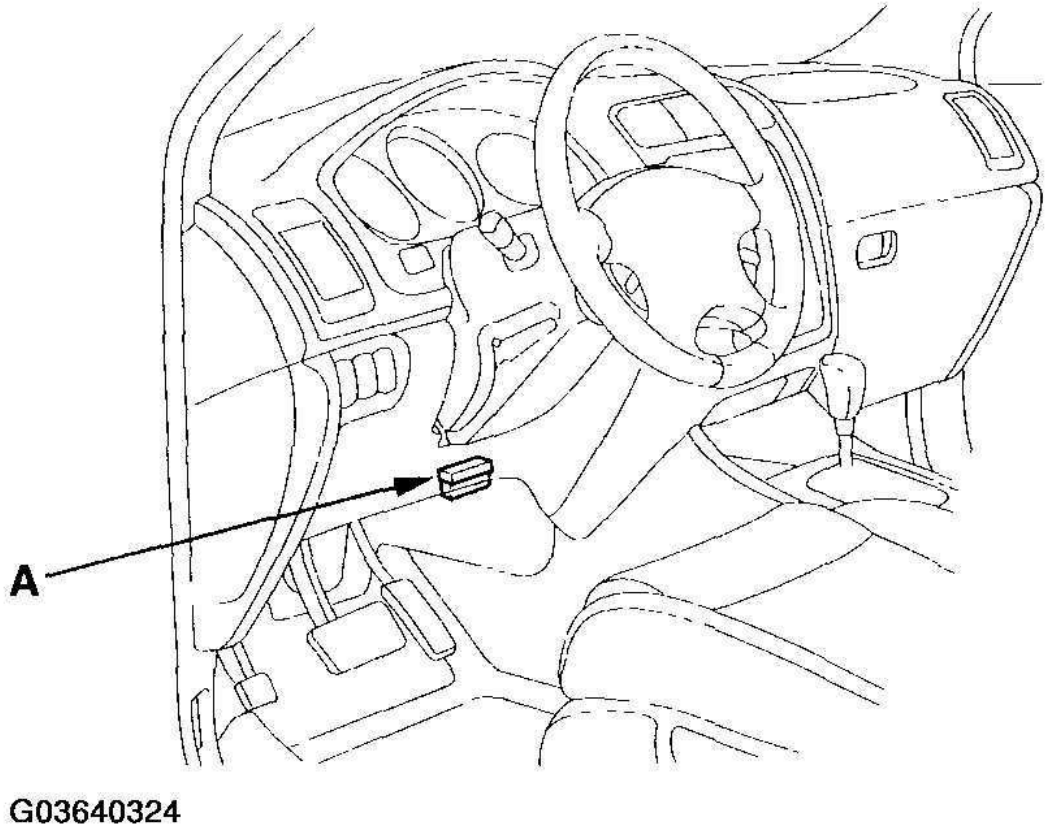


Fig. 189: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Shift Solenoid A, B, C, and Lock up Solenoid Test in Miscellaneous Test Menu on the HAS.
3. Check that the shift solenoid valve A, B, C, and the torque converter clutch solenoid valve operate with the HAS. A clicking sound should be heard.
   - If a clicking sound is heard, the valves are OK.
   - If no clicking sound is heard, go to step 4.
4. The solenoid test has finished if the tests are OK. If no sound is heard, remove the solenoid valve, and test the solenoid valve.
5. Remove the intake air duct.
6. Get the audio and navigation anti-theft codes, and write down the audio presets and disconnect the battery negative terminal, then remove the battery positive terminal.
7. Remove the battery hold-down bracket, then remove the battery and battery tray.
8. Remove the four bolts securing the battery base in the engine compartment, then remove the battery base.
9. Remove the nuts securing the shift cable bracket (A).

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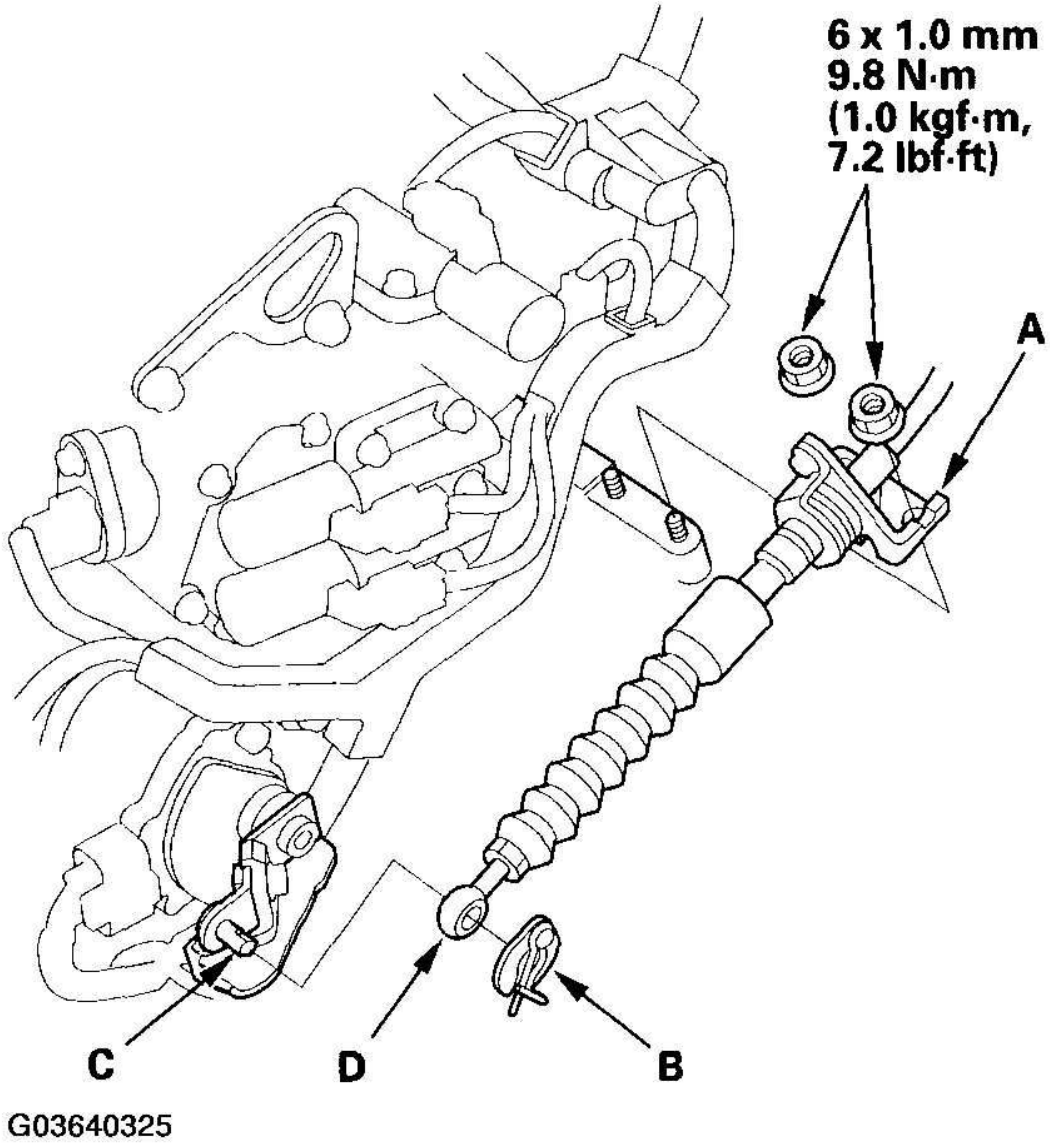


Fig. 190: Disconnecting Shift Cable End From Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the spring clip/washer (B) from the control lever (C), and disconnect the shift cable end (D) from the control lever.
11. Remove the bolts securing the harness cover (A).

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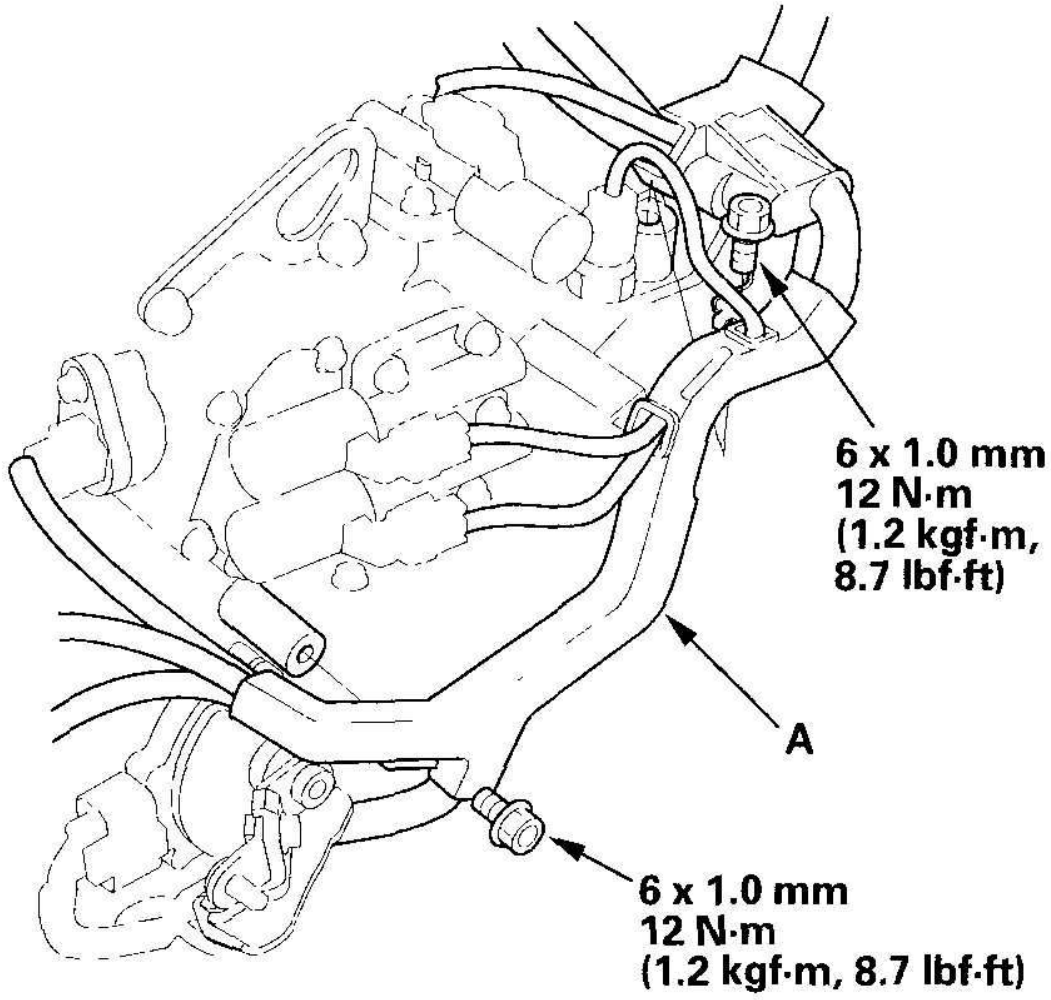


Fig. 191: Removing Bolts Securing Harness Cover (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Disconnect the connectors from A/T clutch pressure control solenoid valve A and B, and remove the solenoid valves, ATF pipes (C), and gasket (D).

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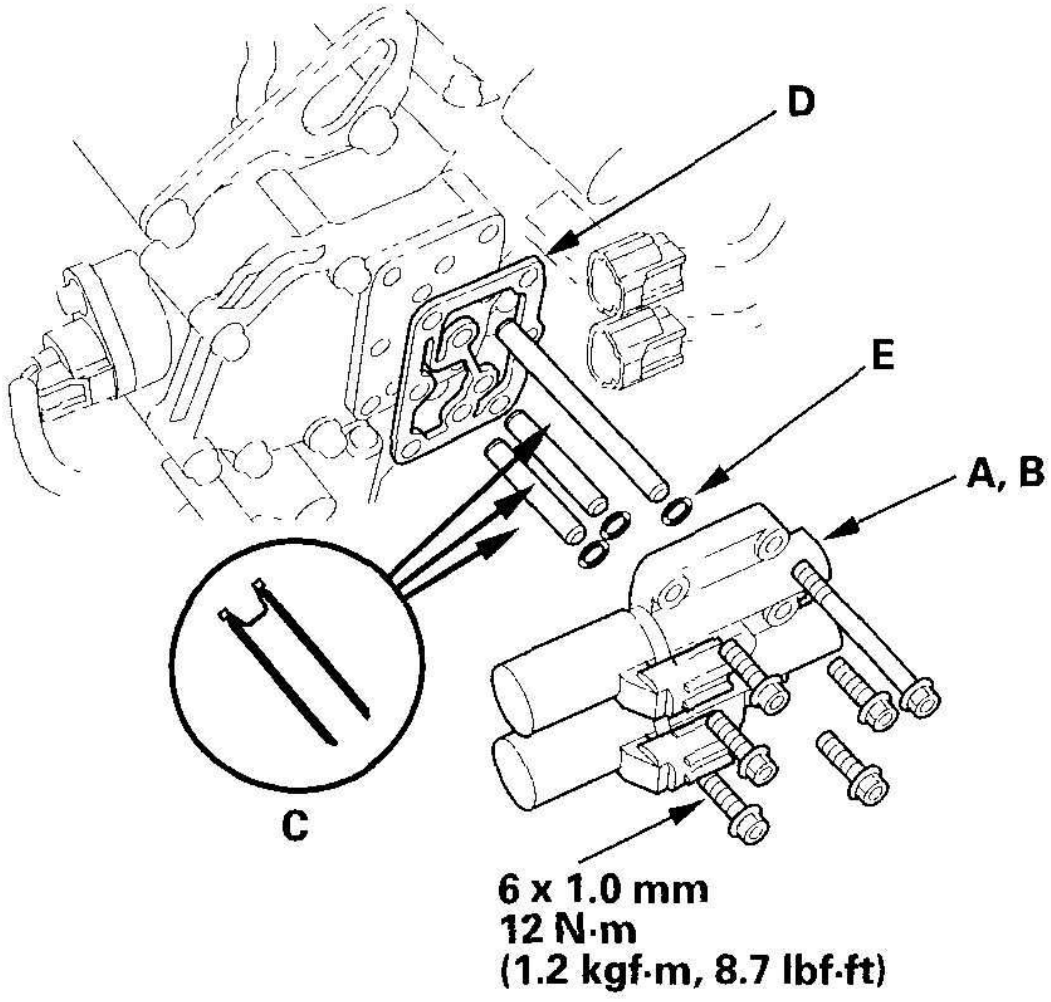


Fig. 192: Disconnecting Connectors From A/T Clutch Pressure Control Solenoid Valve A And B, And ATF Pipes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Replace the gasket and O-rings (E) with new ones when installing the A/T clutch pressure control solenoid valve A and B.
14. Remove the solenoid valve cover (A), dowel pins (B), and gasket (C).

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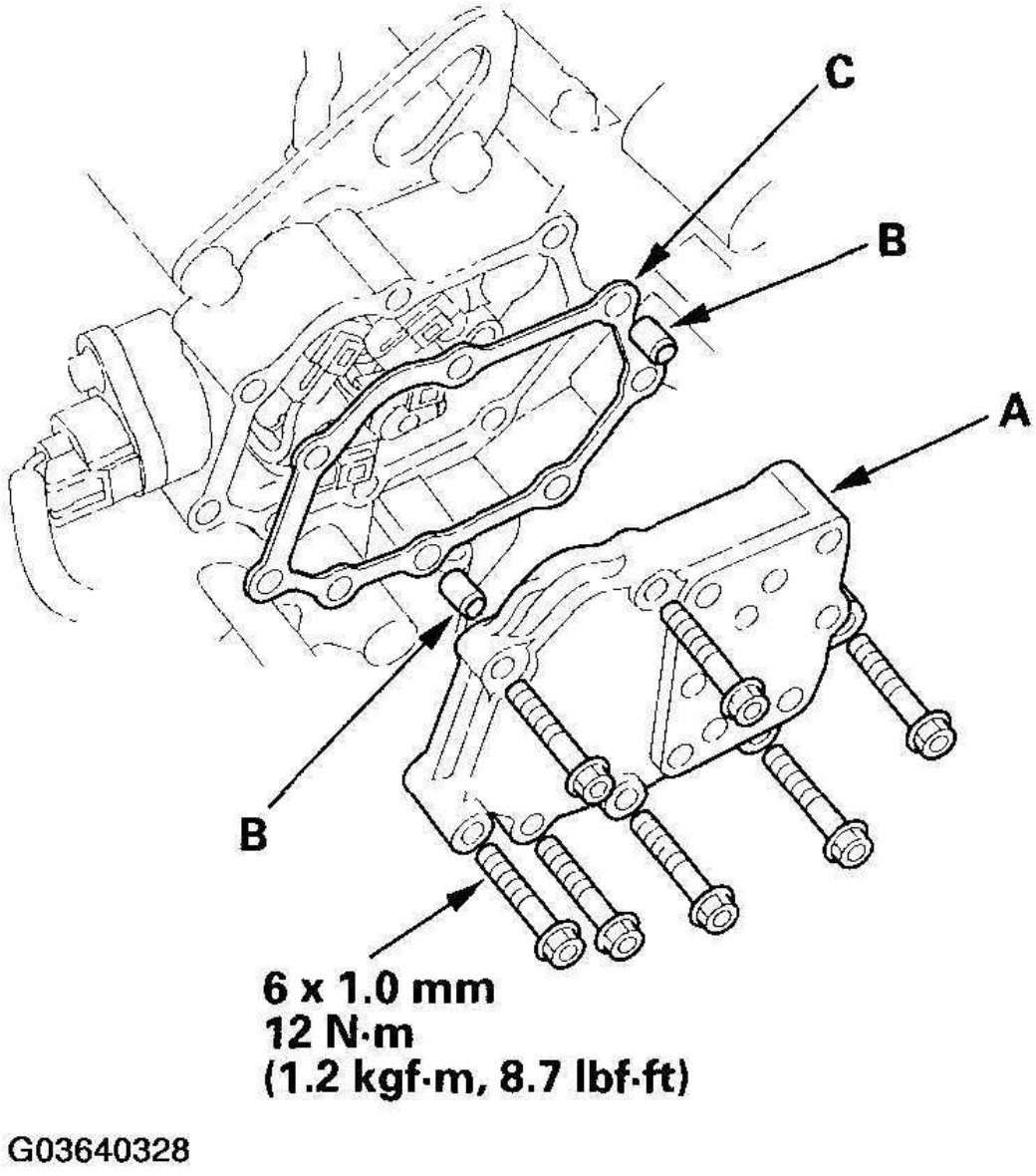


Fig. 193: Removing Solenoid Valve Cover (A), Dowel Pins (B), And Gasket (C)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Replace the gasket with new one when installing solenoid cover.
16. Disconnect each solenoid valve connector.

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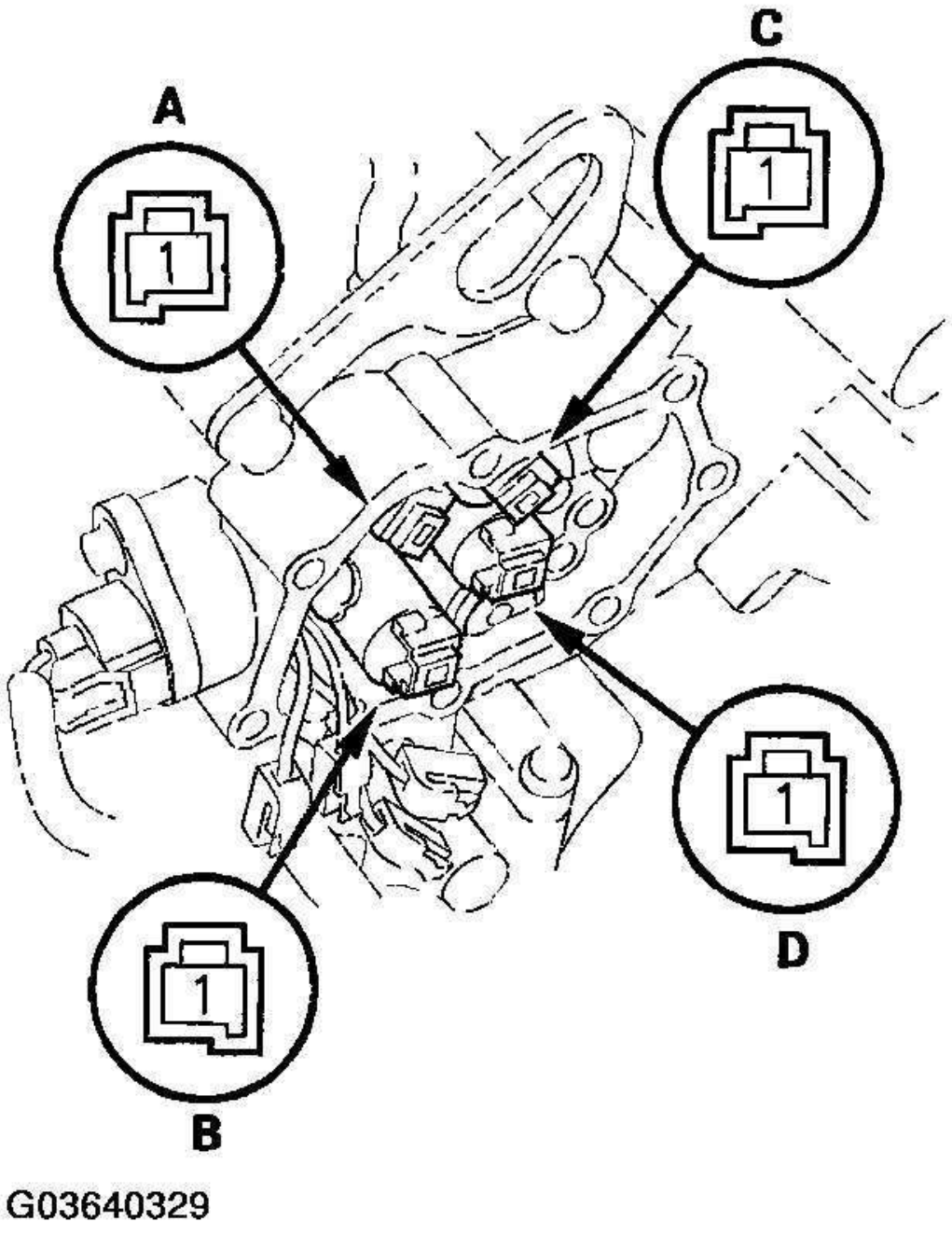


Fig. 194: Disconnecting Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Measure the resistance of shift solenoid valve A, B, C, and torque converter clutch solenoid valve (D)

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between each connector terminal and body ground.

Standard: 12-25 ohm

- Replace the solenoid valve if the resistance is out of standard.
- If the resistance is within the standard, go to step 18.

18. Connect the battery negative terminal to body ground, then connect the battery positive terminal to each solenoid terminal individually.
    - If a clicking sound is heard, go to step 19 and replace the solenoid harness.
    - If no clicking sound is heard, go to step 20 and replace the shift solenoid valve.
19. Install a new O-ring (A) on the solenoid harness connector (B), and install the connector in the transmission housing.

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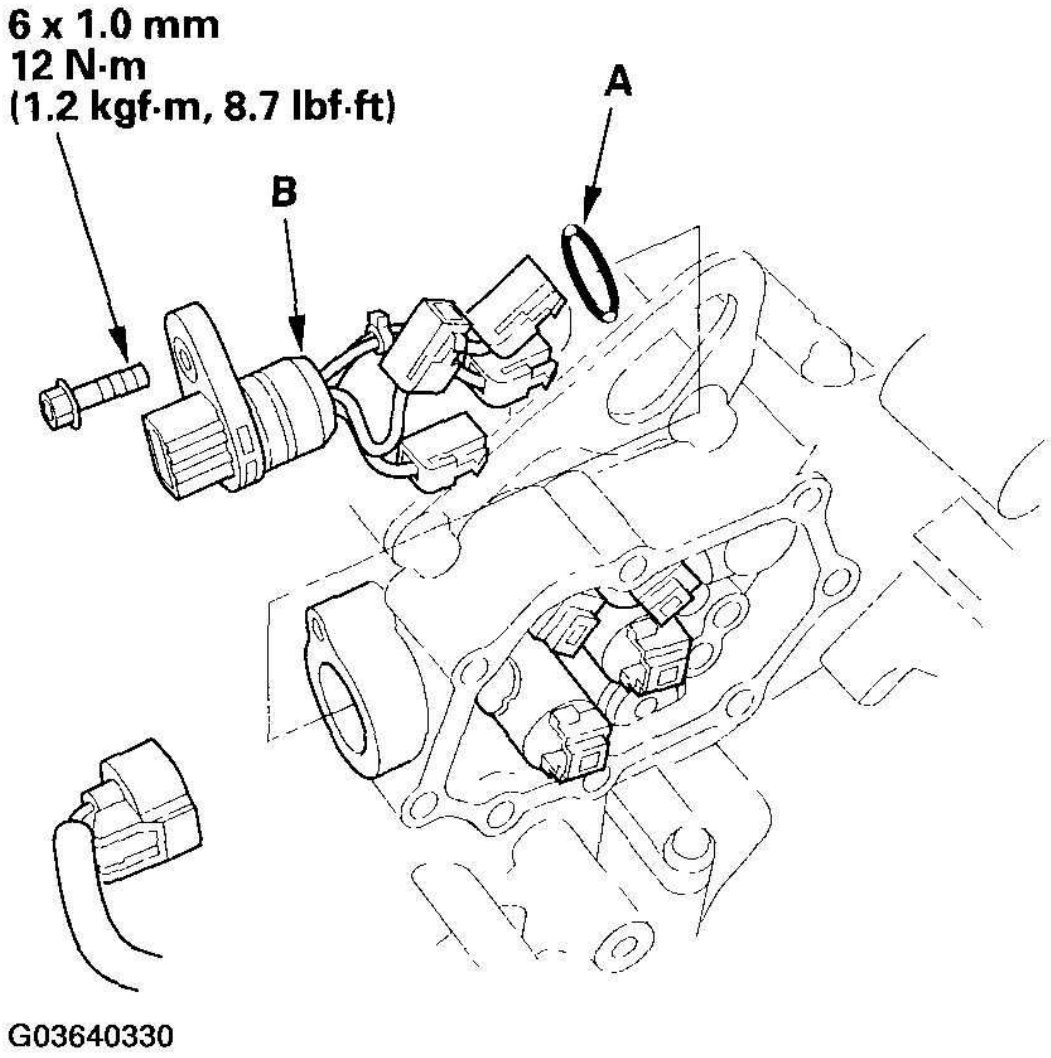


Fig. 195: Installing O-Ring (A) On Solenoid Harness Connector (B)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Remove the mounting bolts, then remove the solenoid valves.
21. Install the new O-rings (two O-rings per solenoid valve) (E) on the reused solenoid valve.

NOTE: A new solenoid valve comes with new O-rings. If you install a new solenoid valve, use the O-rings provided on it.

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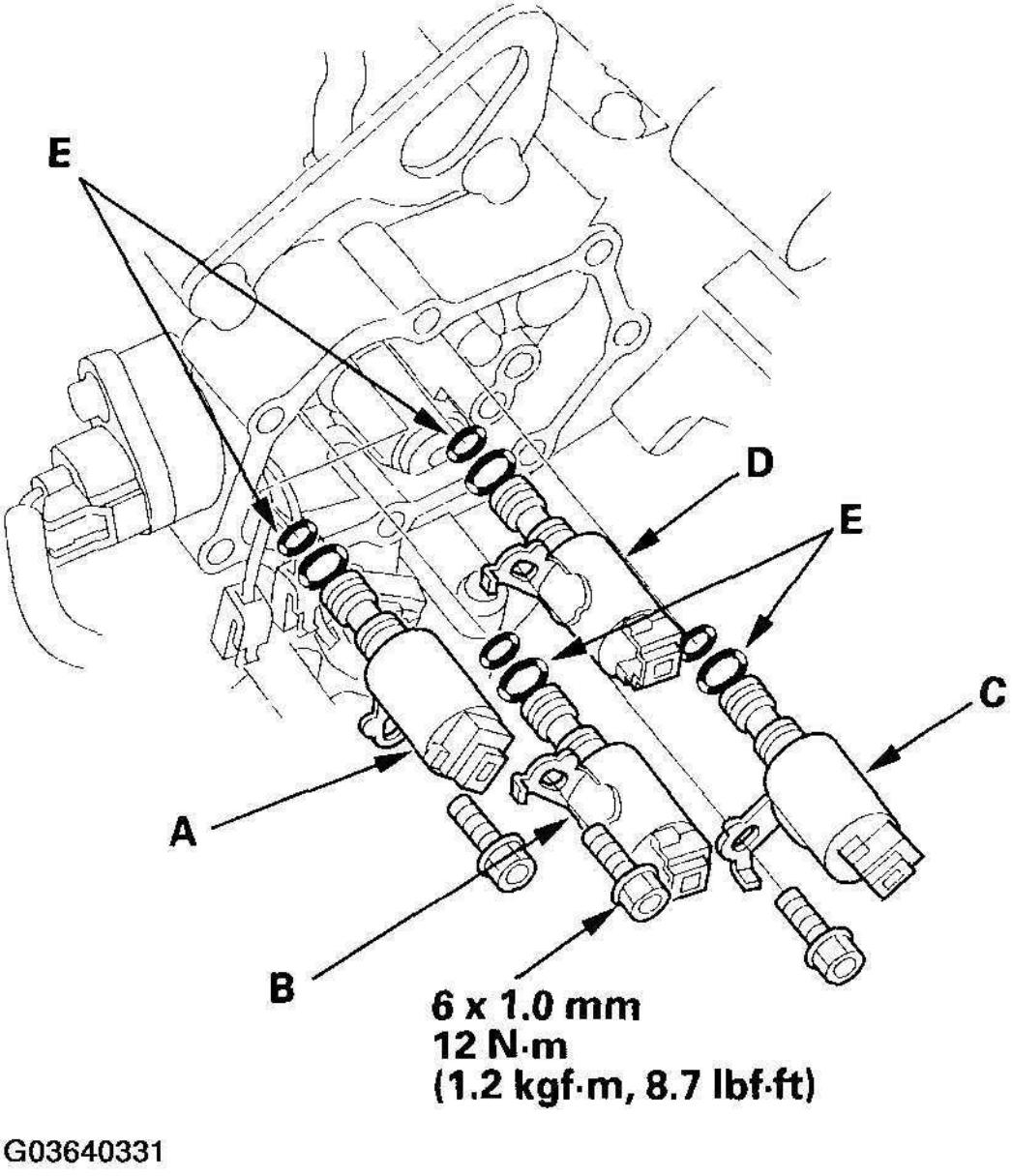


Fig. 196: Installing O-Rings (E) On Reused Solenoid Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Install shift solenoid valve B (black connector) by holding the shift solenoid valve body; be sure to install mounting bracket contacts to the accumulator body.

NOTE:

- **Do not hold the solenoid valve connector to install the solenoid**

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valve. Be sure to hold the solenoid valve body.

- **Do not install the shift solenoid valve C before installing the torque converter clutch solenoid valve (D). If solenoid valve C is installed before torque converter clutch solenoid valve, it may damage to hydraulic control system.**

23. Install torque converter clutch solenoid valve (black connector) by holding the solenoid valve body; be sure to install mounting bracket contacts to the accumulator body.
24. Install shift solenoid valve C (brown connector) by holding the shift solenoid valve body; be sure to install mounting bracket contacts to the bracket of torque converter clutch solenoid valve.
25. Install shift solenoid valve A (brown connector) by holding the shift solenoid valve body; be sure to install mounting bracket contacts to the accumulator body.
26. Connect RED harness to shift solenoid valve A, ORN harness to shift solenoid valve B, GRN harness to shift solenoid valve C, and YEL harness to torque converter clutch solenoid valve (D).
27. Install the shift solenoid valve cover, dowel pins and a new gasket.
28. Install the new solenoid valve body gasket on the solenoid valve cover, and install the ATF pipes with their filter side into the transmission housing. Install the new O-rings over the ATF pipes.
29. Install A/T clutch pressure control solenoid valves A and B.
30. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors securely.
31. Secure the harness cover with the bolts.
32. Connect the shift cable end to the control lever, and secure the cable end with the spring clip/washer.
33. Secure the shift cable bracket with the nuts.
34. Install the battery base and intake air duct.
35. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.
36. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
37. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
38. Enter the audio and navigation codes, anti-theft, then enter the presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B TEST

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

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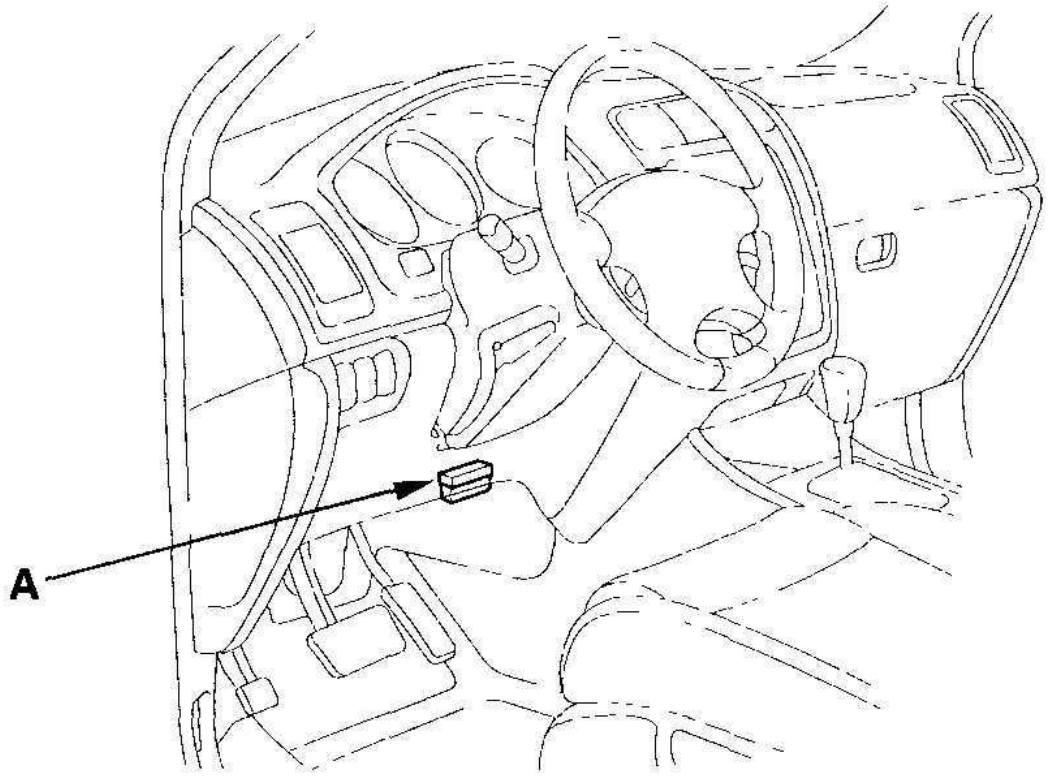


Fig. 197: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Clutch Pressure Control (Linear) Solenoid A and B in Miscellaneous Test Menu on the HAS.
3. Test the A/T clutch pressure control solenoid valve A and B with the HAS.
   - If the valve tests OK, the test is complete. Disconnect the HAS.
   - If the valve does not test OK, follow the instructions on the HAS.
   - If the valve does not test OK, and the HAS does not determine the cause, go to step 4.
4. Remove the intake air duct.
5. Get the audio and navigation anti-theft codes, and write down the audio presets and disconnect the battery negative terminal, then disconnect the battery positive terminal.
6. Remove the battery hold-down bracket, then remove the battery and battery tray.
7. Remove the four bolts securing the battery base in the engine compartment, then remove the battery base.
8. Disconnect the A/T clutch pressure control solenoid valves A and B connectors.

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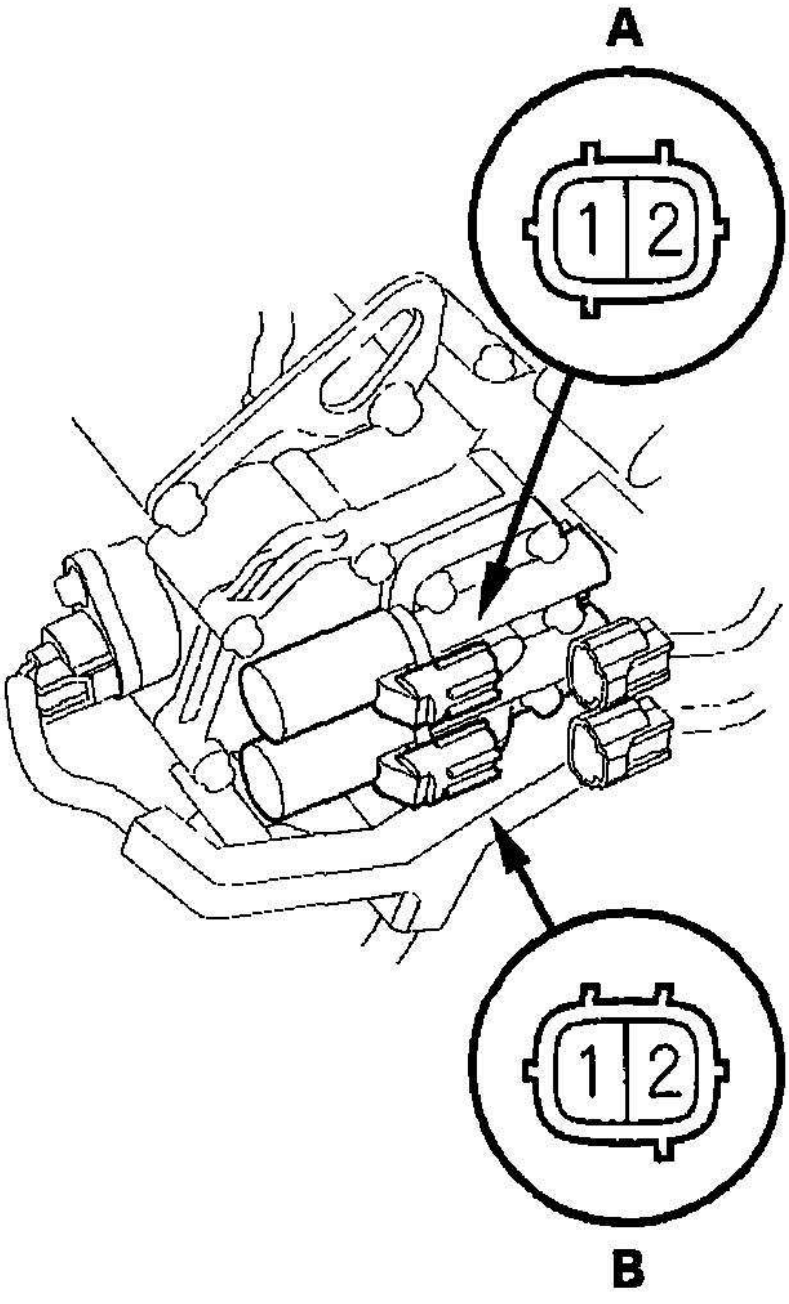


Fig. 198: Disconnecting A/T Clutch Pressure Control Solenoid Valves A And B Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Measure resistance between A/T clutch pressure control solenoid valve A terminals No. 1 and No. 2, and

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measure resistance between A/T clutch pressure control solenoid valve B terminals No. 1 and No. 2.

Standard: 3-10 ohm

- If the resistance is out of standard, replace the A/T clutch pressure control solenoid valve A (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT**).
- If the is resistance is within the standard, go to step 10.

10. Connect the battery positive terminal to the No. 1 terminal of the A/T clutch solenoid valve A and B connectors, and connect the battery negative terminal to the No. 2 terminal. A clicking sound should be heard.
    - 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 nuts securing the shift cable bracket (A).

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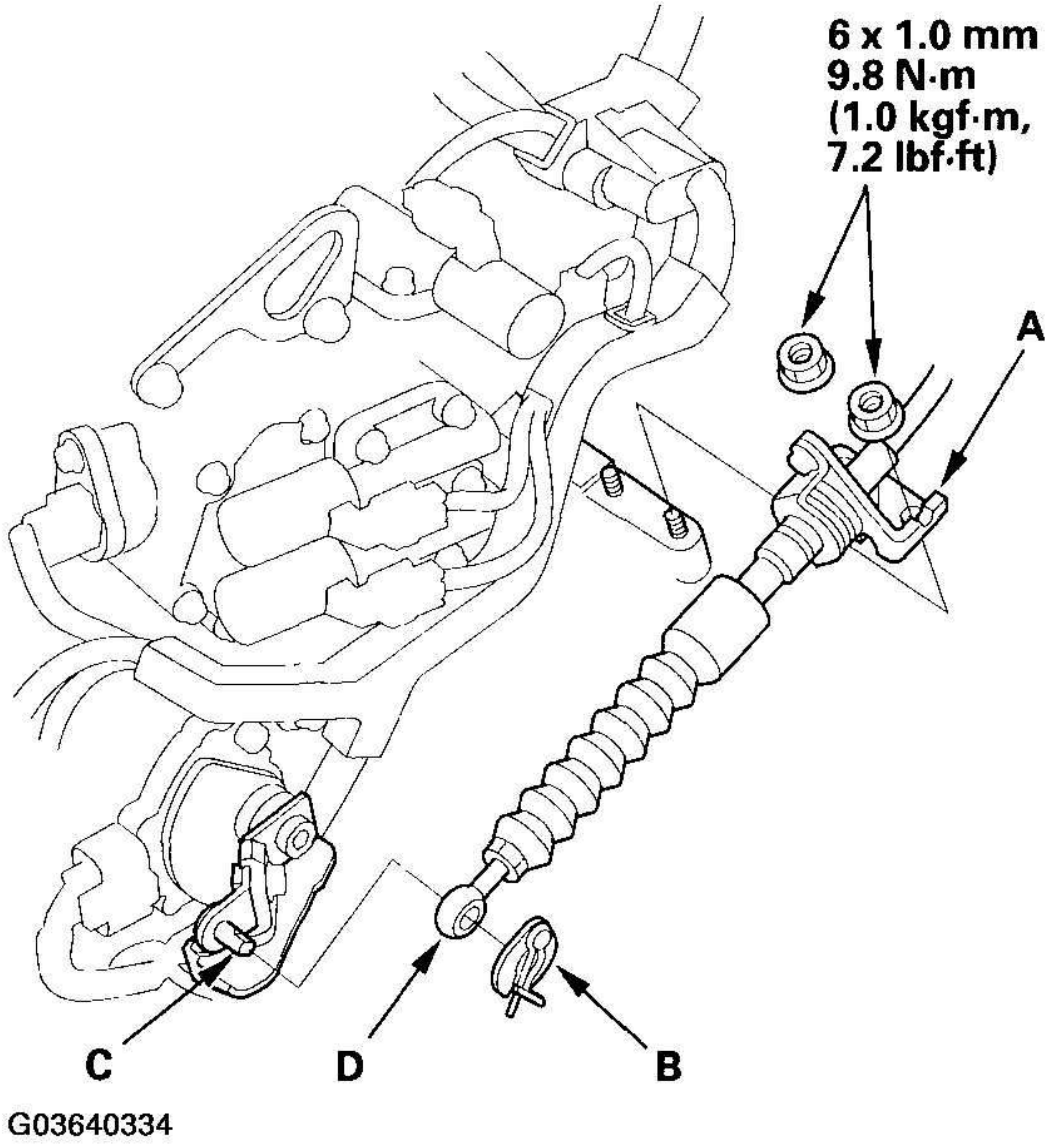


Fig. 199: Disconnecting Shift Cable End (D) From Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the spring clip/washer (B) from the control lever (C), and disconnect the shift cable end (D) from the control lever.
13. Remove the bolts securing the harness cover (A).

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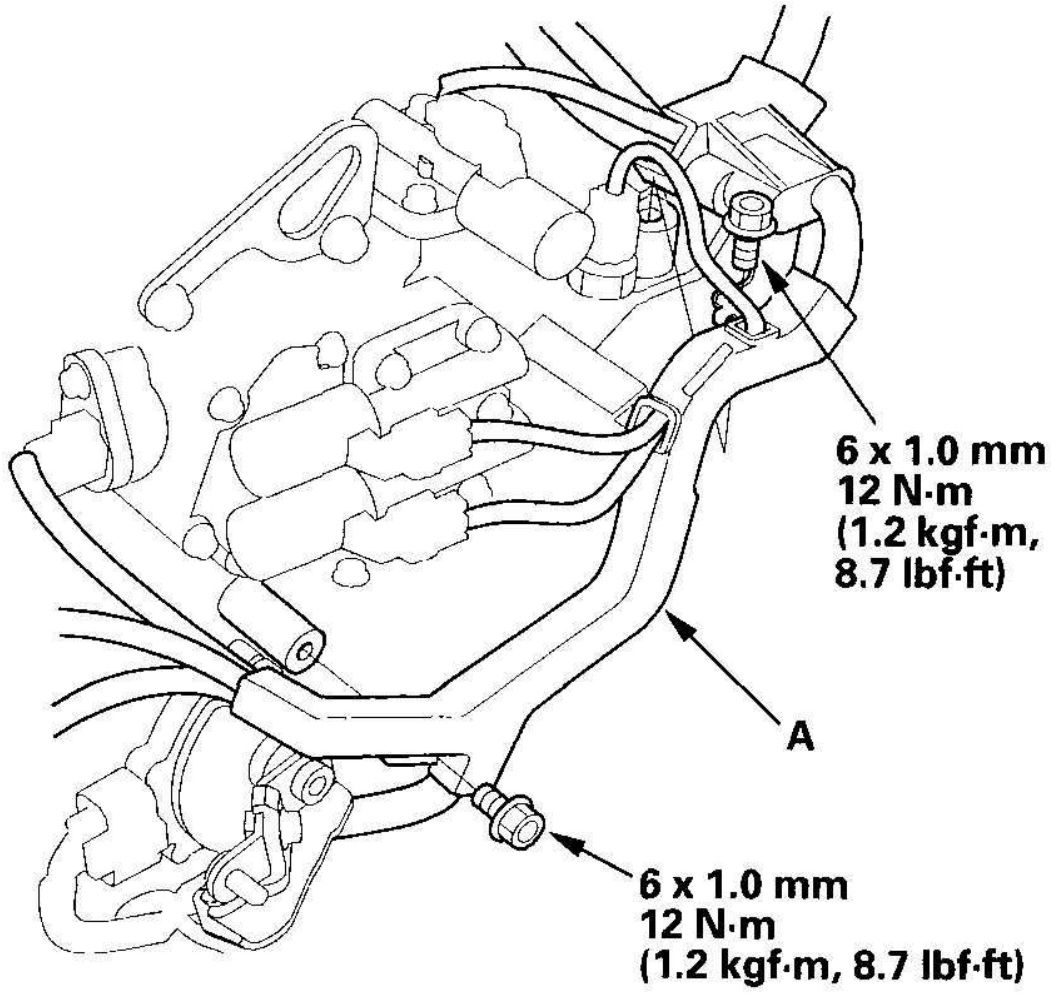


Fig. 200: Removing Bolts Securing Harness Cover (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the A/T clutch pressure control solenoid valve A and B, ATF pipes (C), O-rings (D), and gasket (E).

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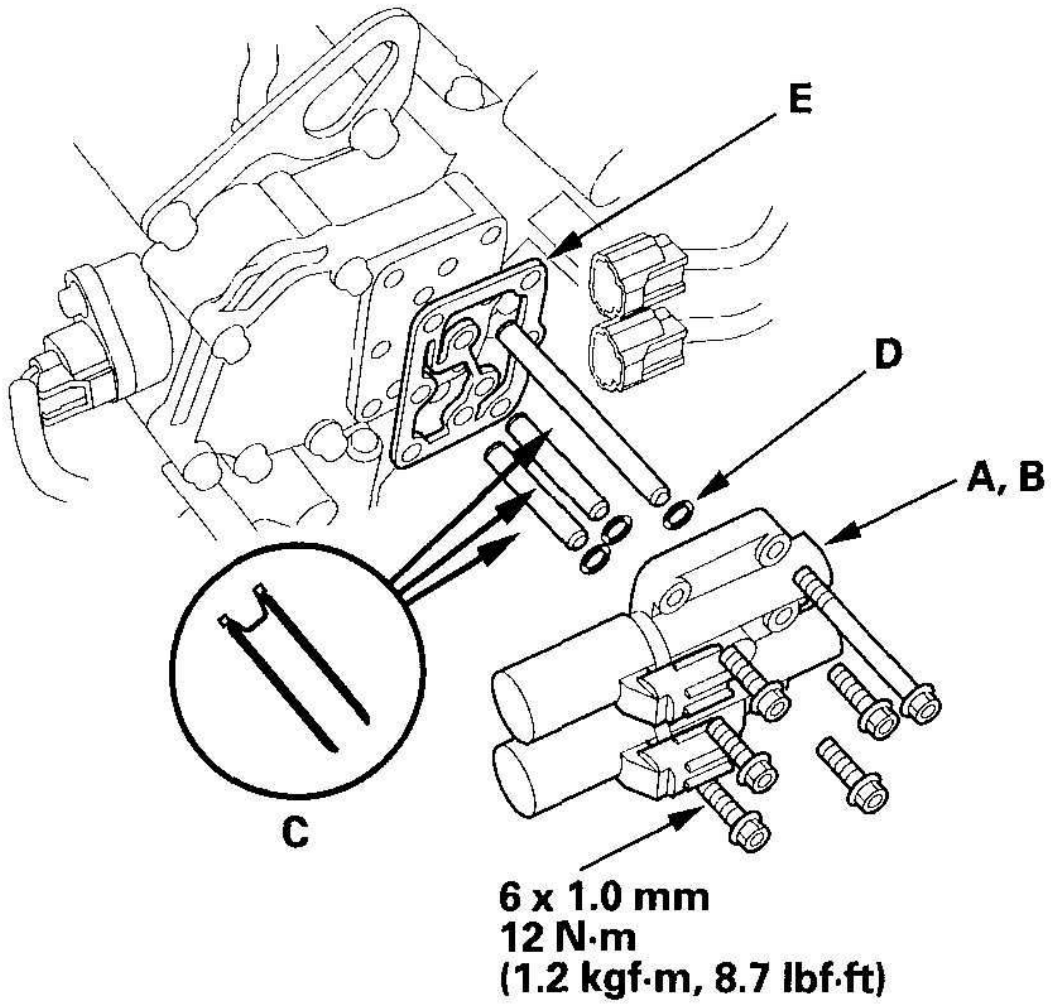


Fig. 201: Removing A/T Clutch Pressure Control Solenoid Valve A And B, ATF Pipes (C), O-Rings (D), And Gasket (E)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check the fluid passage of the solenoid valves for contamination.
16. Connect the battery positive terminal to the No. 1 terminal of the A/T clutch solenoid valve A and B connectors, and connect the battery negative terminal to the No. 2 terminal. Make sure that the solenoid valve A and B move.

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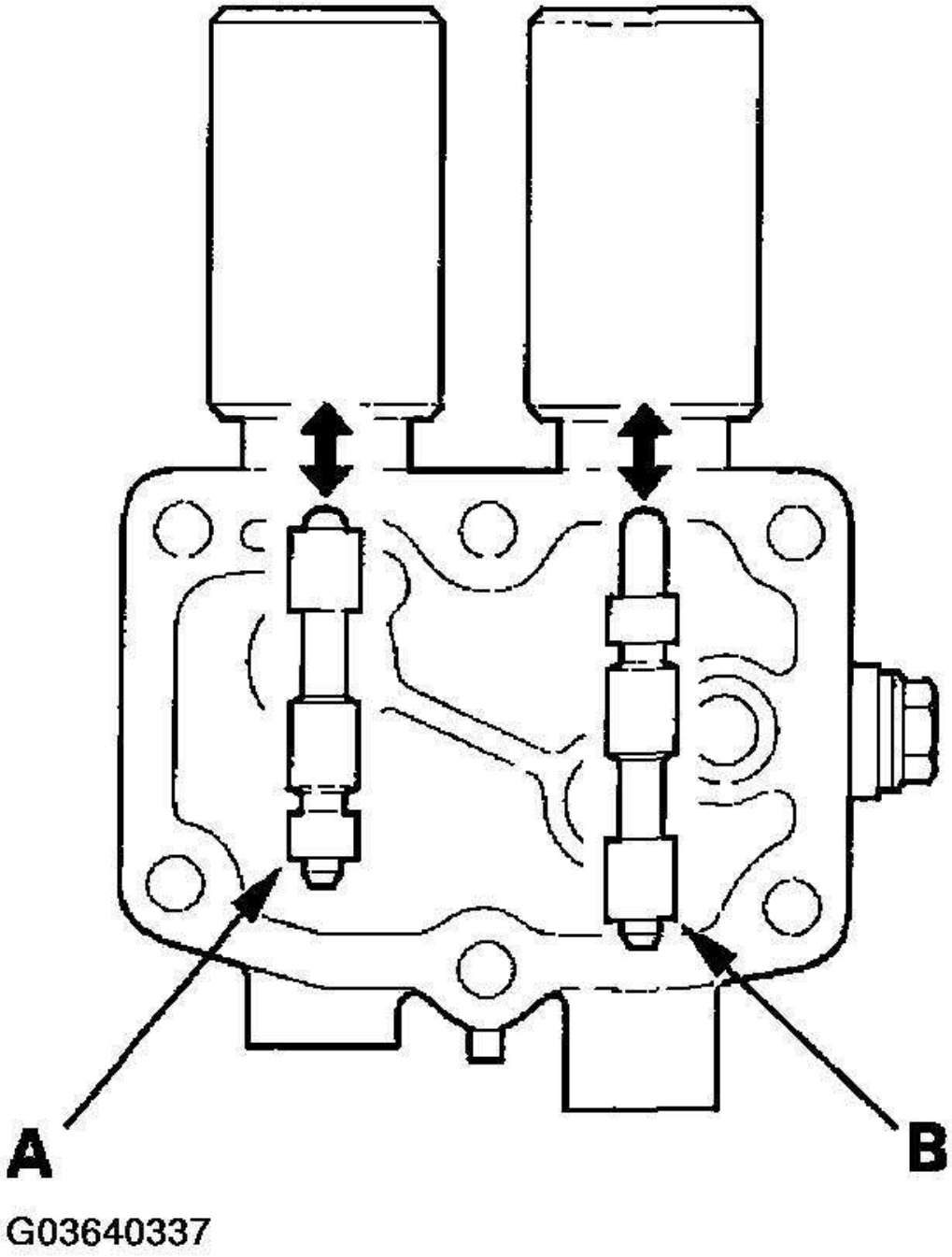


Fig. 202: Connecting Battery Positive Terminal To No. 1 Terminal Of A/T Clutch Solenoid Valve A And B Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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17. Disconnect one of the battery terminals, and check valve movement.

NOTE: You can see valve movement through the fluid passage in the mounting surface of the A/T clutch pressure control solenoid valve A and B body.

18. If either valve binds or moves sluggishly, or if the solenoid valve does not work, replace the A/T clutch pressure control solenoid valves A and B.
19. Clean the mounting surface and fluid passages of the solenoid valve and solenoid valve cover.
20. Install the new gasket on the solenoid valve cover, and install the ATF pipes with their filter side into the transmission housing.
21. Install the new O-rings over the ATF pipes.
22. Install the new A/T clutch pressure control solenoid valve A and B.
23. Check the connectors for rust, dirt, or oil, then connect the connectors securely.
24. Secure the harness cover with the bolts.
25. Connect the shift cable end to the control lever, and secure the cable end with the spring clip/washer.
26. Secure the shift cable bracket with the nuts.
27. Install the battery base, then install the intake air duct.
28. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.
29. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
30. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
31. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A AND B REPLACEMENT

1. Remove the intake air duct.
2. Get the audio and navigation anti-theft codes, and write down the audio presets and disconnect the battery negative terminal, then remove the battery positive terminal.
3. Remove the battery hold-down bracket, then remove the battery and battery tray.
4. Remove the four bolts securing the battery base in the engine compartment, then remove the battery base.
5. Remove the nuts securing the shift cable bracket (A).

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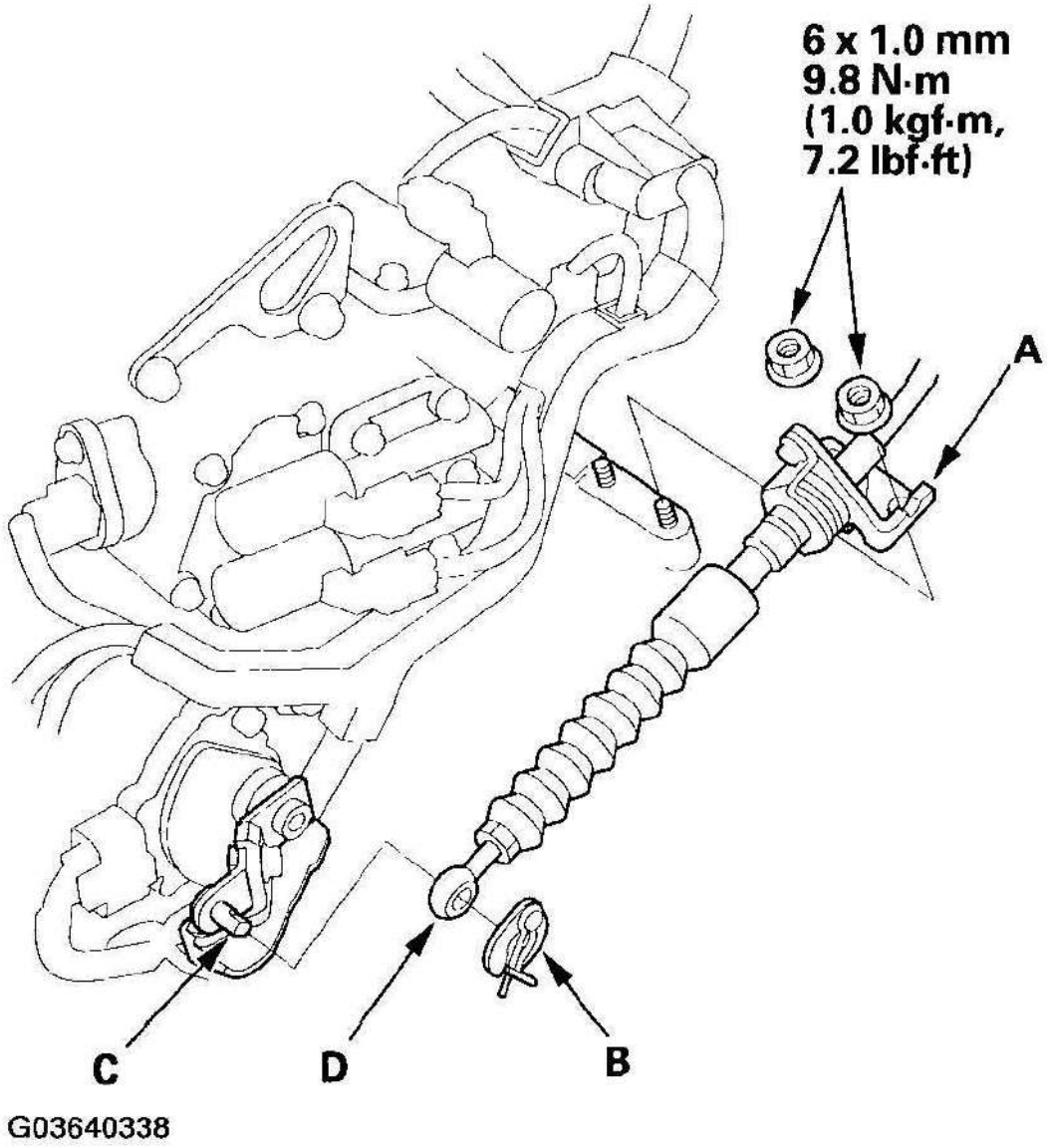


Fig. 203: Disconnecting Shift Cable End (D) From Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the spring clip/washer (B) from the control lever (C), and disconnect the shift cable end (D) from the control lever.
7. Remove the bolts securing the harness cover (A).

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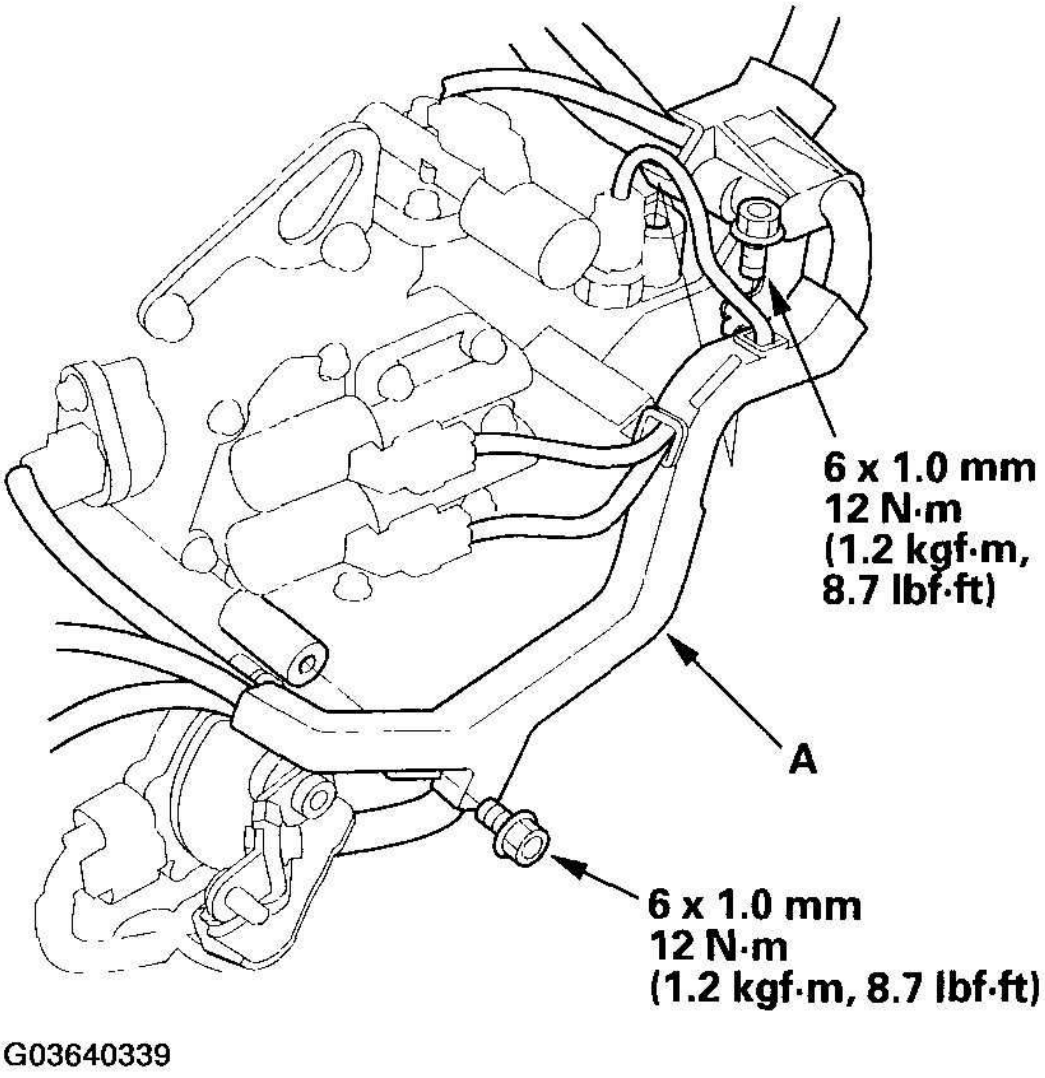


Fig. 204: Removing Bolts Securing Harness Cover (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Disconnect A/T clutch pressure control solenoid valve A and B connectors.

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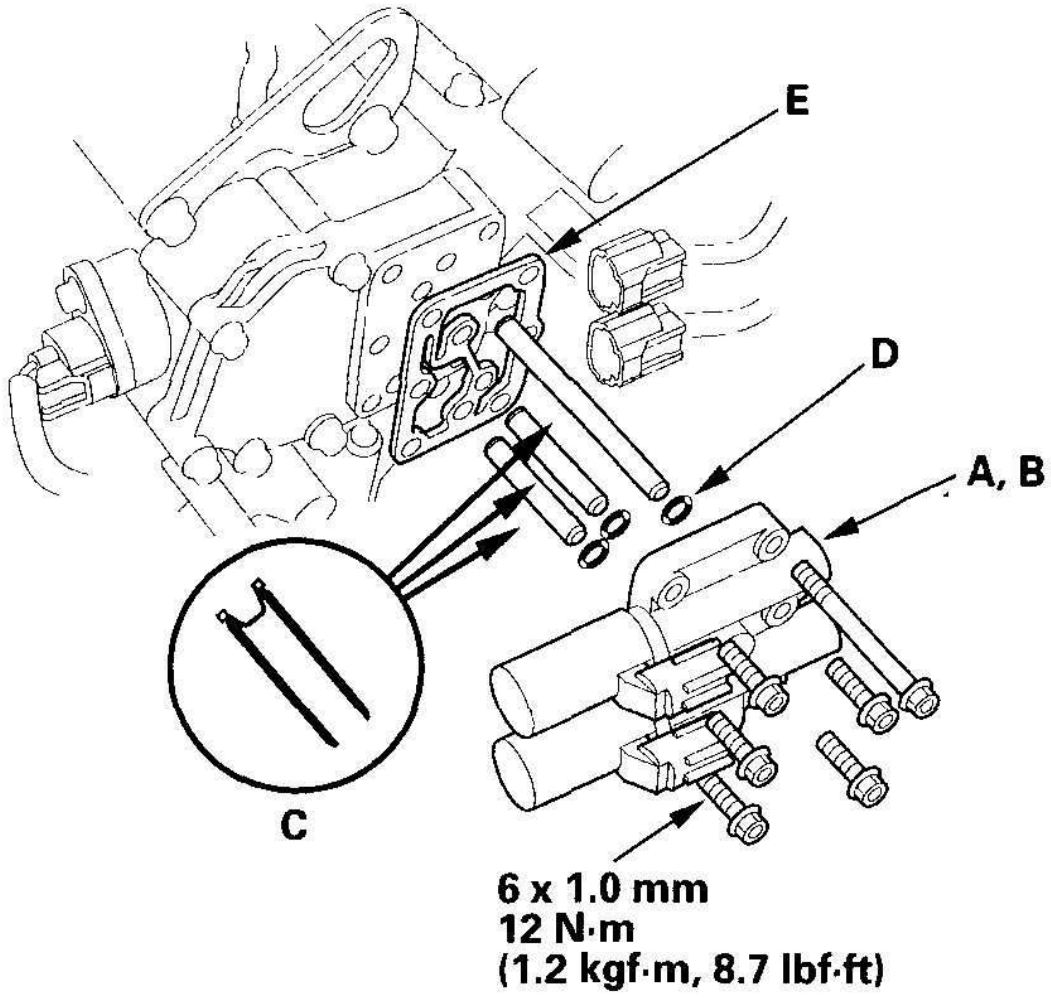


Fig. 205: Disconnecting A/T Clutch Pressure Control Solenoid Valve A And B Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the A/T clutch pressure control solenoid valve A and B, ATF pipes (C), O-rings (D), and gasket (E).
10. Clean the mounting surface and fluid passages of the solenoid valves and solenoid valve cover.
11. Install the new gasket on the solenoid valve cover, and install the ATF pipes with their filter side into the transmission housing.
12. Install the new O-rings over the ATF pipes.
13. Install the new A/T clutch pressure control solenoid valve A and B.
14. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors

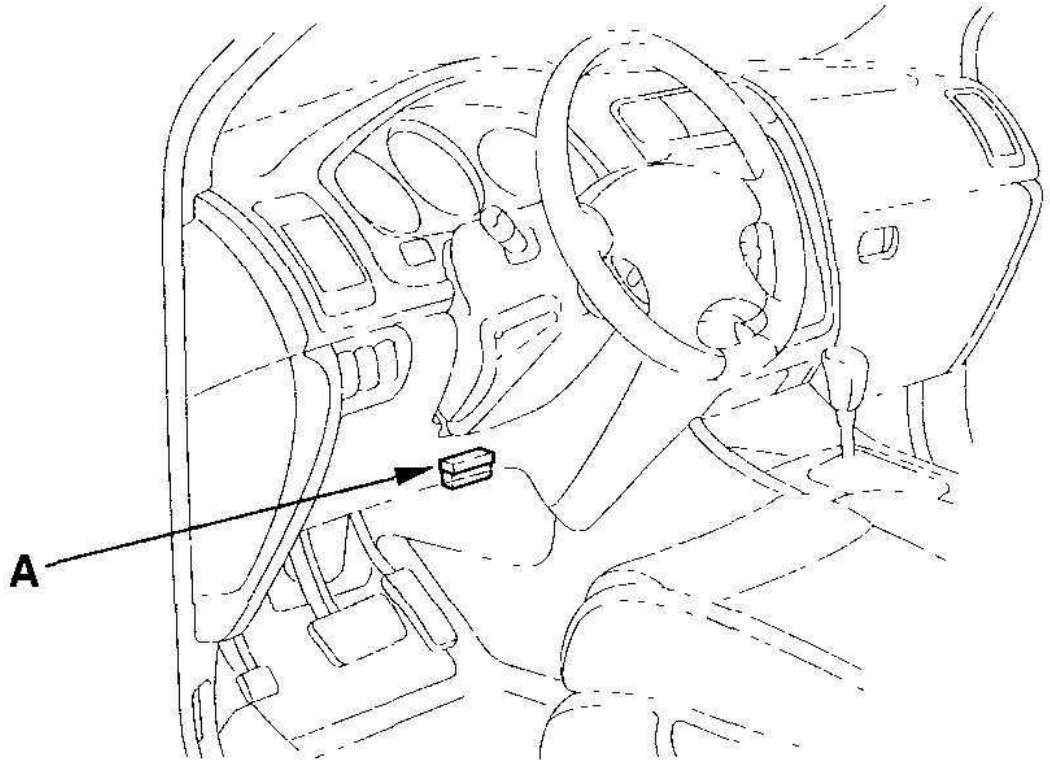
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securely.

15. Secure the harness cover with the bolts.
16. Connect the shift cable end to the control lever, and secure the cable end with the spring clip/washer.
17. Secure the shift cable bracket with the nuts.
18. Install the battery base and intake air duct.
19. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.
20. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
21. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
22. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C TEST

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



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Fig. 206: Identifying DLC Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Choose Clutch Pressure Control (Linear) Solenoid C in Miscellaneous Test Menu on the HAS.
3. Test the A/T clutch pressure control solenoid valve C with the HAS.
    - If the valve tests OK, the test is complete. Disconnect the HAS.
    - If the valve does not test OK, follow the instructions on the HAS.
    - If the valve does not test OK, and the HAS does not determine the cause, go to step 4.
4. Remove the intake air duct.
5. Get the audio and navigation anti-theft codes, and write down the audio presets, and disconnect the battery negative terminal then disconnect the battery positive terminal.
6. Remove the battery hold-down bracket, then remove the battery and battery tray.
7. Remove the four bolts securing the battery base in the engine compartment, then remove the battery base.
8. Disconnect the A/T clutch pressure control solenoid valve C connector.

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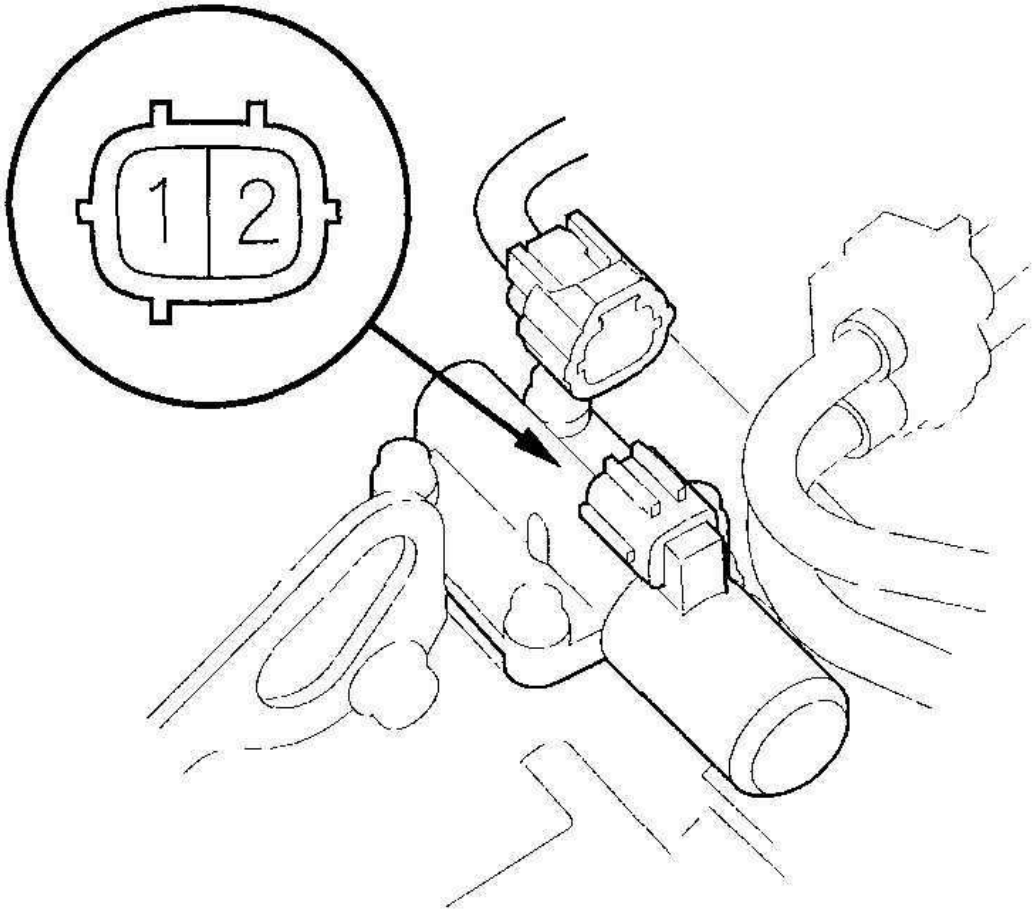


Fig. 207: Disconnecting A/T Clutch Pressure Control Solenoid Valve C Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Measure A/T clutch pressure control solenoid valve C resistance at the solenoid valve connector.

   Standard: 3-10 ohm

   - If the resistance is out of standard, replace the A/T clutch pressure control solenoid valve C (see **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT**).
   - If the resistance is within standard, go to step 10.

10. Connect the battery positive terminal to the No. 1 terminal of the solenoid valve connector, and connect the battery negative terminal to the No. 2 terminal. A clicking sound should be heard.
    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all remove parts.

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- If no clicking sound heard, go to step 11.

11. Remove the A/T clutch pressure control solenoid valve C.

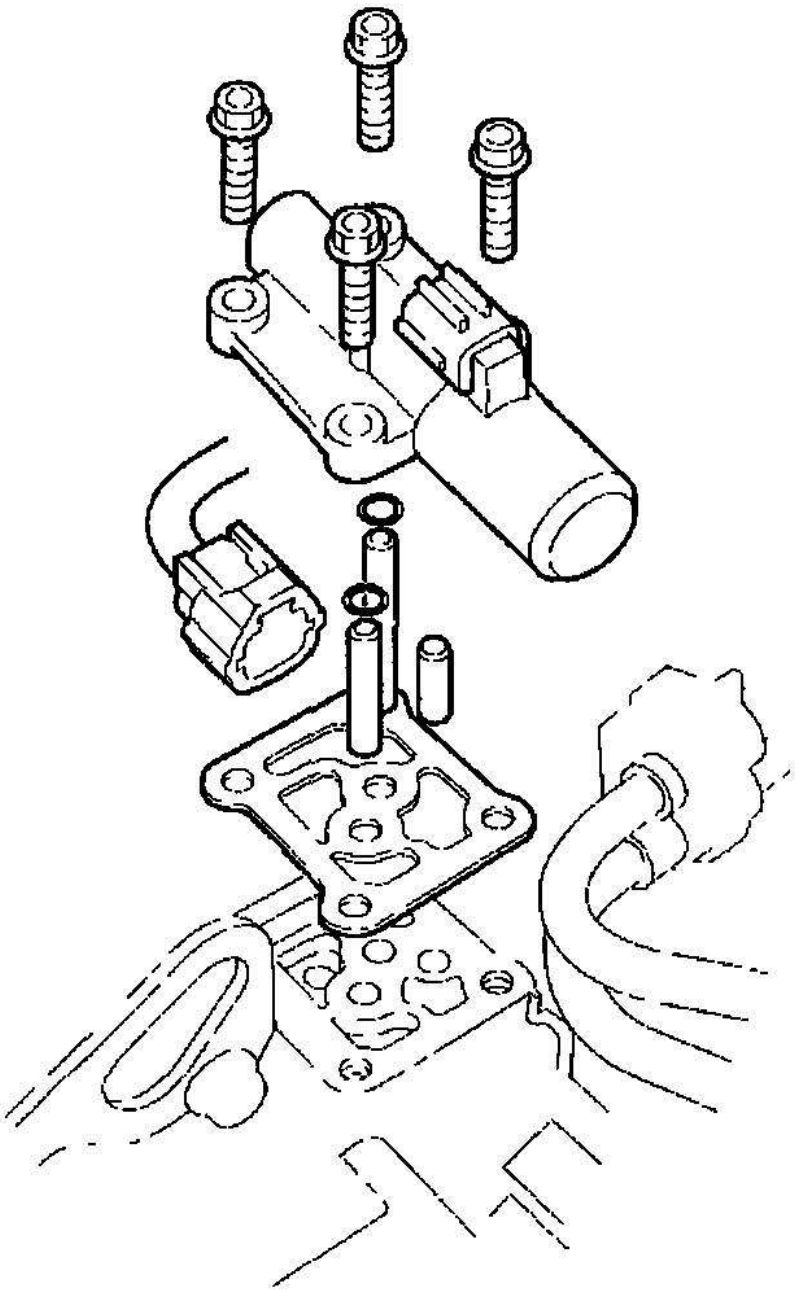


Fig. 208: Removing A/T Clutch Pressure Control Solenoid Valve C

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the ATF joint pipes, O-rings, ATF pipe, and gasket.
13. Check the fluid passage of the solenoid valve for contamination.
14. Connect the battery positive terminal to the No. 1 terminal of the solenoid valve connector, and connect the battery negative terminal to the No. 2 terminal. Make sure that the solenoid valve C moves.

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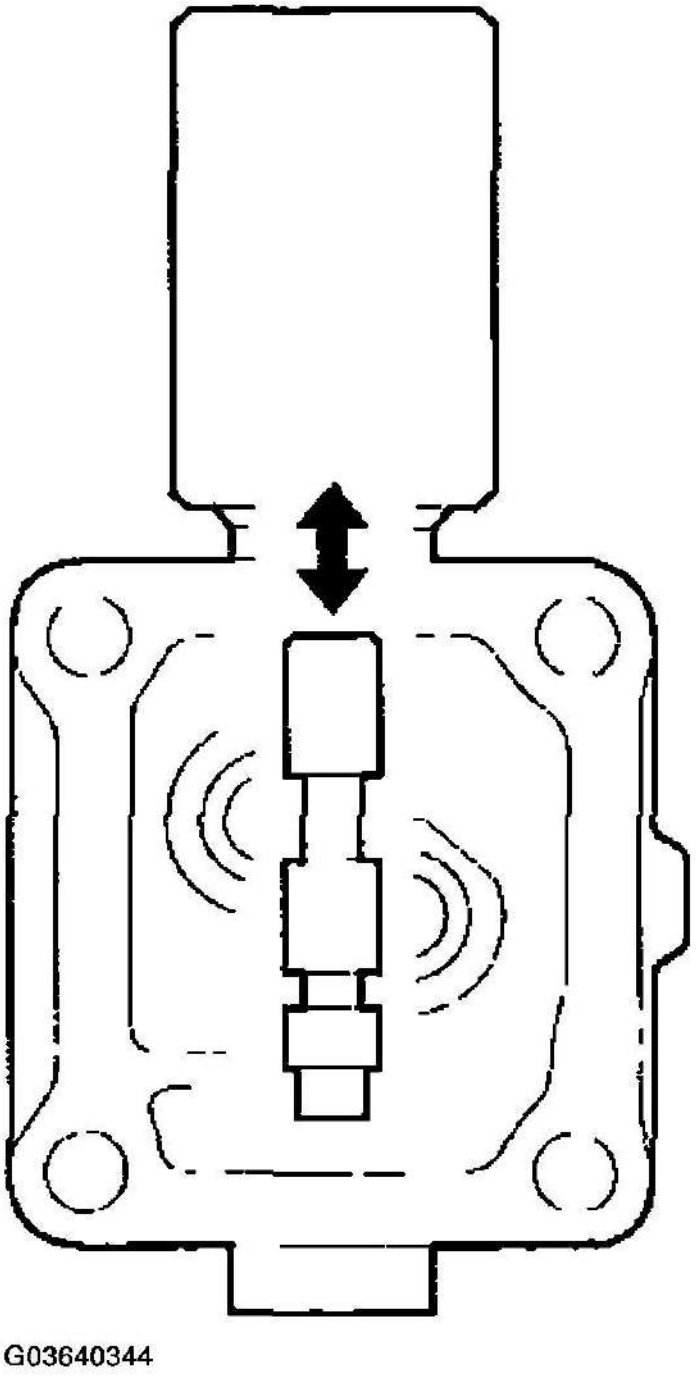


Fig. 209: Connecting Battery Positive Terminal To No. 1 Terminal Of Solenoid Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Disconnect one of the battery terminals, and check valve movement.

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NOTE: You can see valve movement through the fluid passage in the mounting surface of the solenoid valve body.

16. If the valve binds or moves sluggishly, or if the solenoid valve does not work, replace the A/T clutch pressure control solenoid valve C.
17. Clean the mounting surface and fluid passages of the solenoid valve and transmission housing.
18. Install the 8 x 53 mm ATF joint pipe (A) with the filter side into its mounting hole (B).

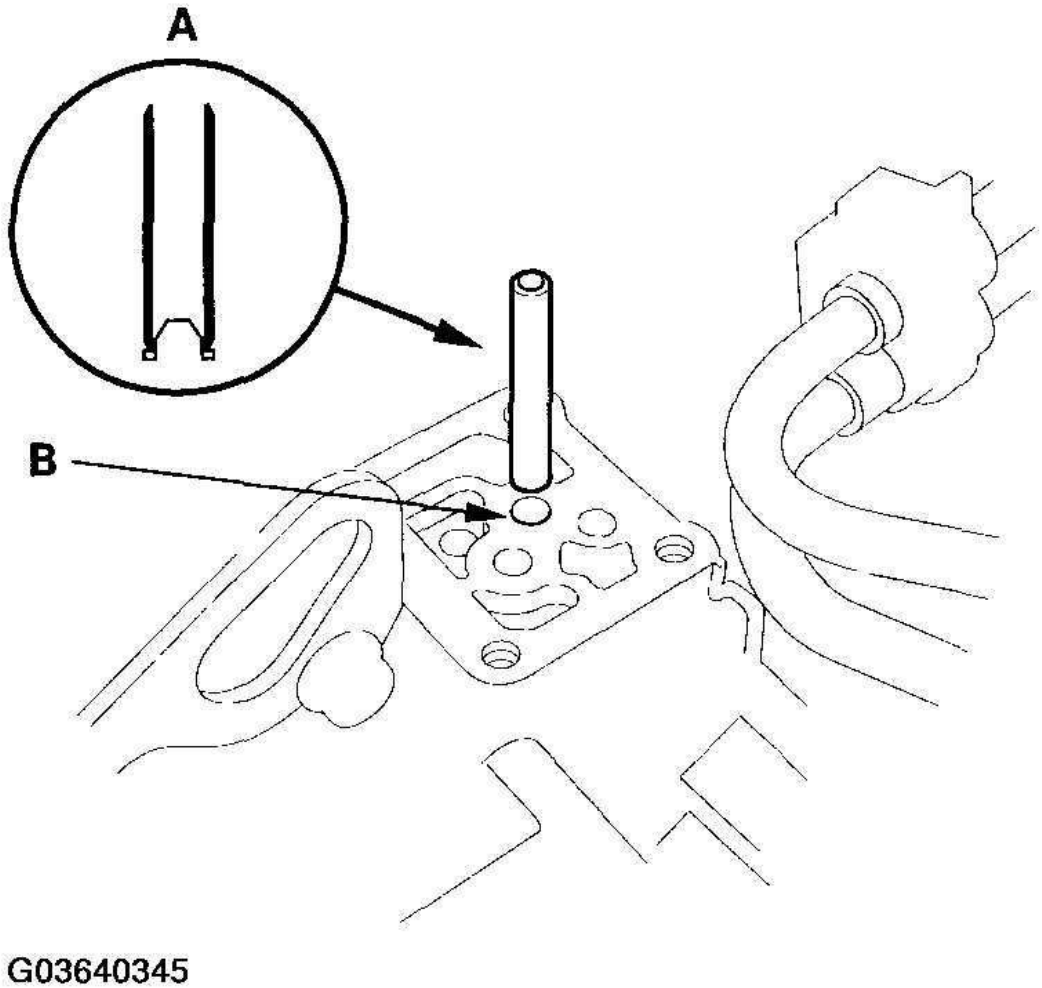


Fig. 210: Installing 8 X 53 mm ATF Joint Pipe (A) With Filter Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Check the height (A) of the 8 x 53 mm ATF joint pipe (B) between the top (C) of the pipe and solenoid valve body mounting surface (D). The height is about 7 mm (0.3 in.) If the height is over 7 mm (0.3 in.),

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install the pipe securely until it stops in the accumulator body.

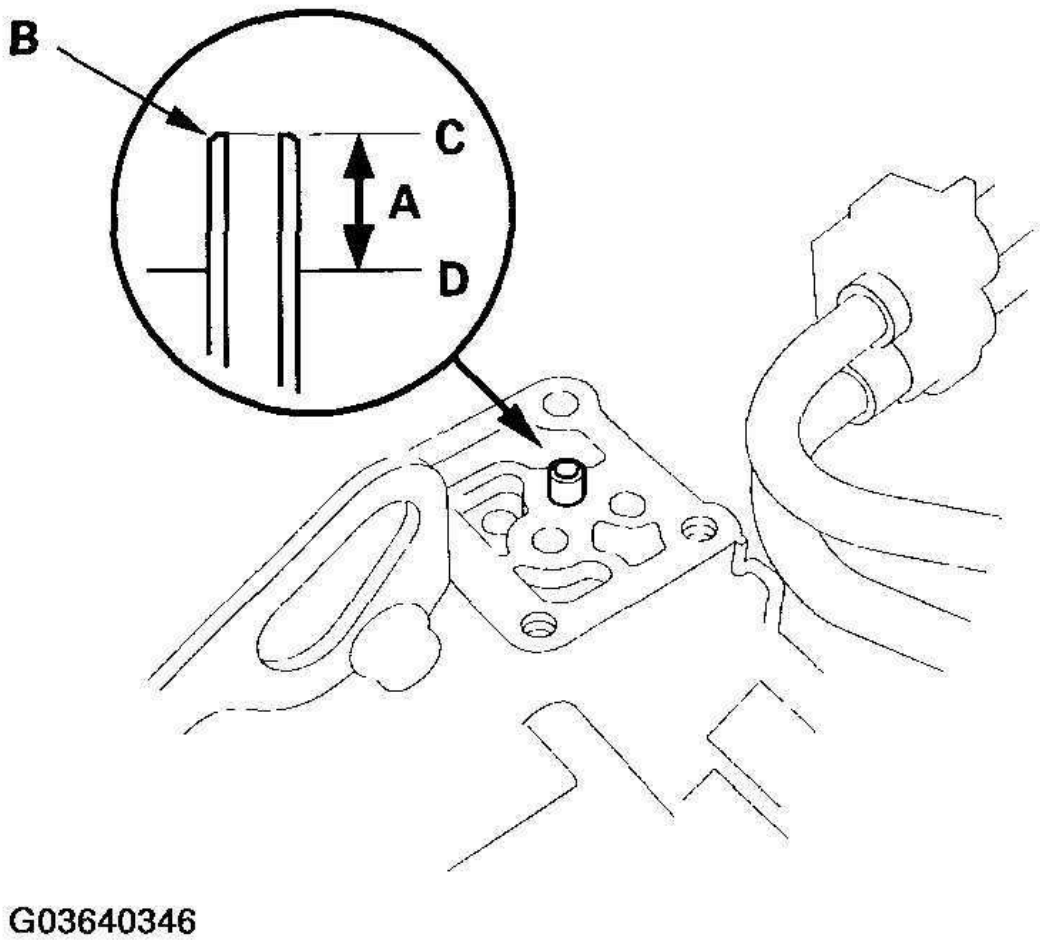


Fig. 211: Checking Height ATF Joint Pipe Between Top Of Pipe And Solenoid Valve Body Mounting Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Install the new gasket (A) on the transmission housing, and install the 8 x 34.5 mm ATF joint pipe (B) with the filter side into the transmission housing and 8 x 25.2 mm ATF pipe (D).

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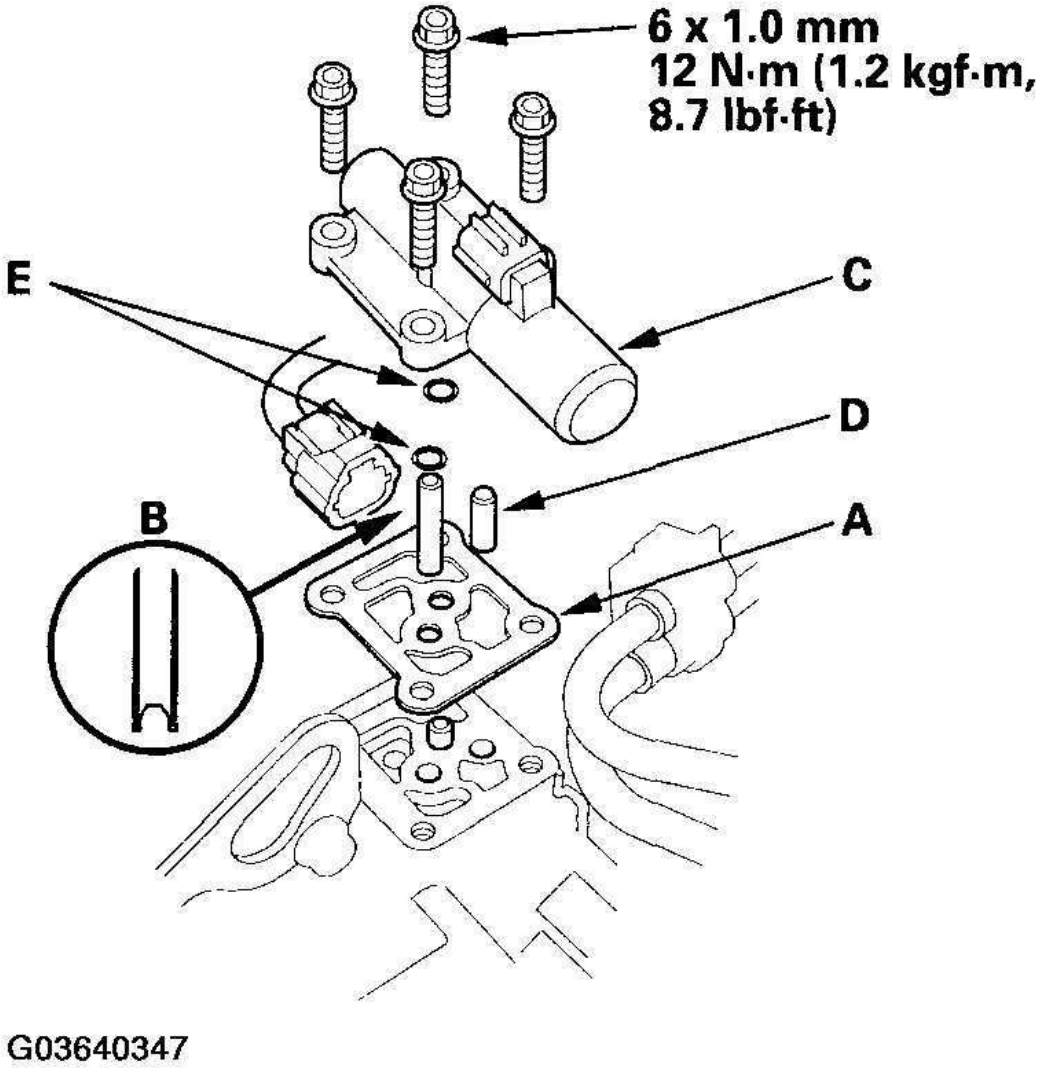


Fig. 212: Installing Gasket On Transmission Housing, And ATF Joint Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Install the new O-rings (E) over the ATF joint pipes.
22. Install the new A/T clutch pressure control solenoid valve C.
23. Check the connector for rust, dirt, or oil, clean or replace if necessary, then connect the connector securely.
24. Install the battery base and intake air duct.
25. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.

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26. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
27. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
28. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C REPLACEMENT

1. Remove the intake air duct.
2. Get the audio and navigation anti-theft codes, and write down the audio presets and disconnect the battery negative terminal, then disconnect the battery positive terminal.
3. Remove the battery hold-down bracket, then remove the battery and battery tray.
4. Remove the four bolts securing the battery base in the engine compartment, then remove the battery base.
5. Disconnect the A/T clutch pressure control solenoid valve C connector.

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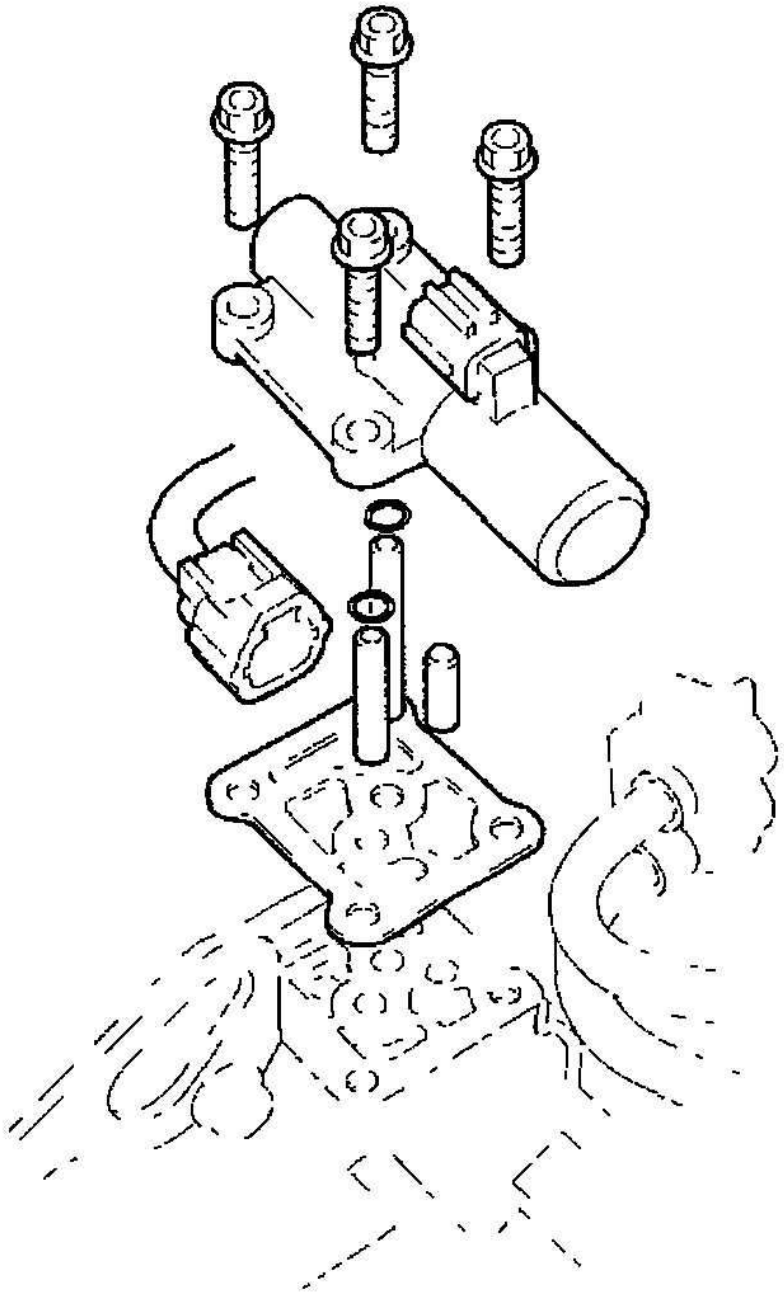


Fig. 213: Disconnecting A/T Clutch Pressure Control Solenoid Valve C Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the A/T clutch pressure control solenoid valve C.

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7. Remove the ATF joint pipes, O-rings, ATF pipe, and gasket.
8. Clean the mounting surface and fluid passages of the solenoid valve and transmission housing.
9. Install the 8 x 53 mm ATF joint pipe (A) with the filter side into its mounting hole (B).

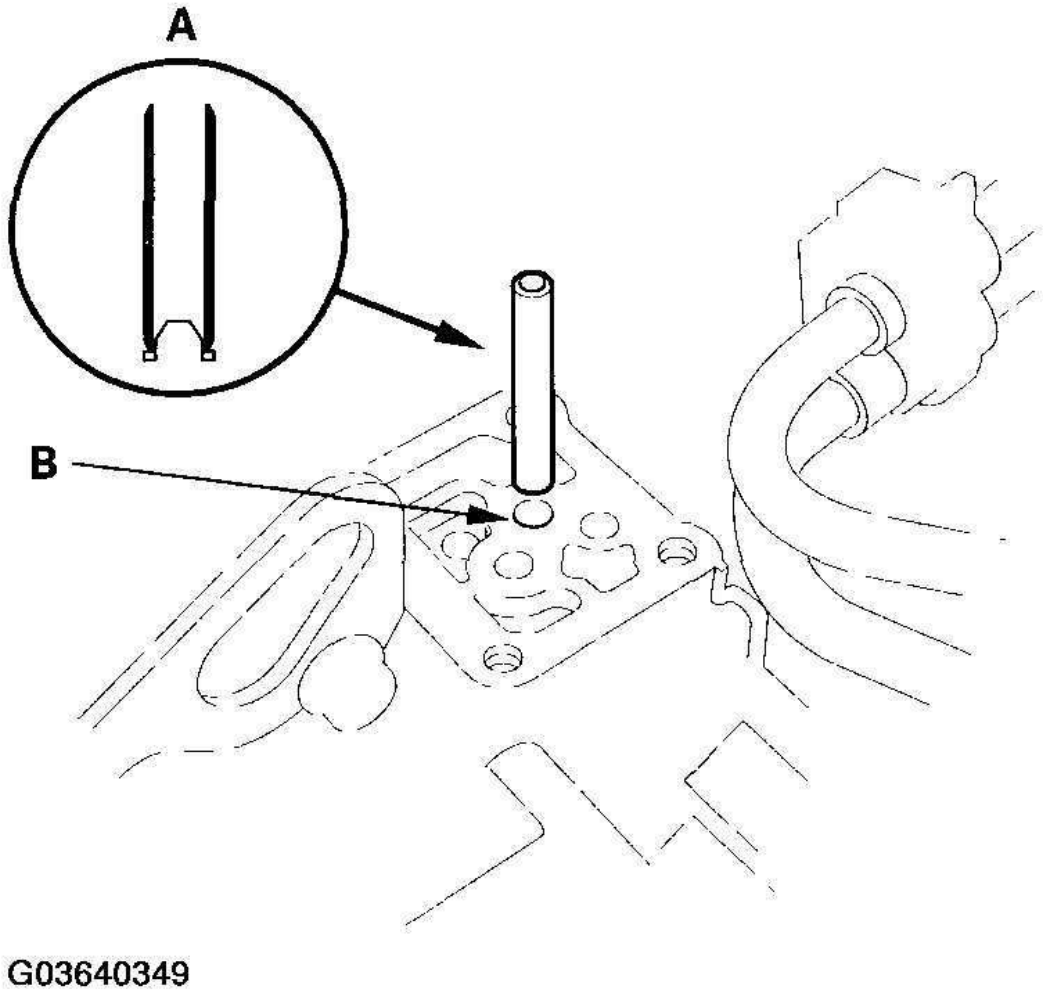


Fig. 214: Installing ATF Joint Pipe With Filter Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check the height (A) of the 8 x 53 mm ATF joint pipe (B) between the top (C) of the pipe and solenoid valve body mounting surface (D). The height is about 7 mm (0.3 in.) If the height is over 7 mm (0.3 in.), install the pipe securely until it stops in the accumulator body.

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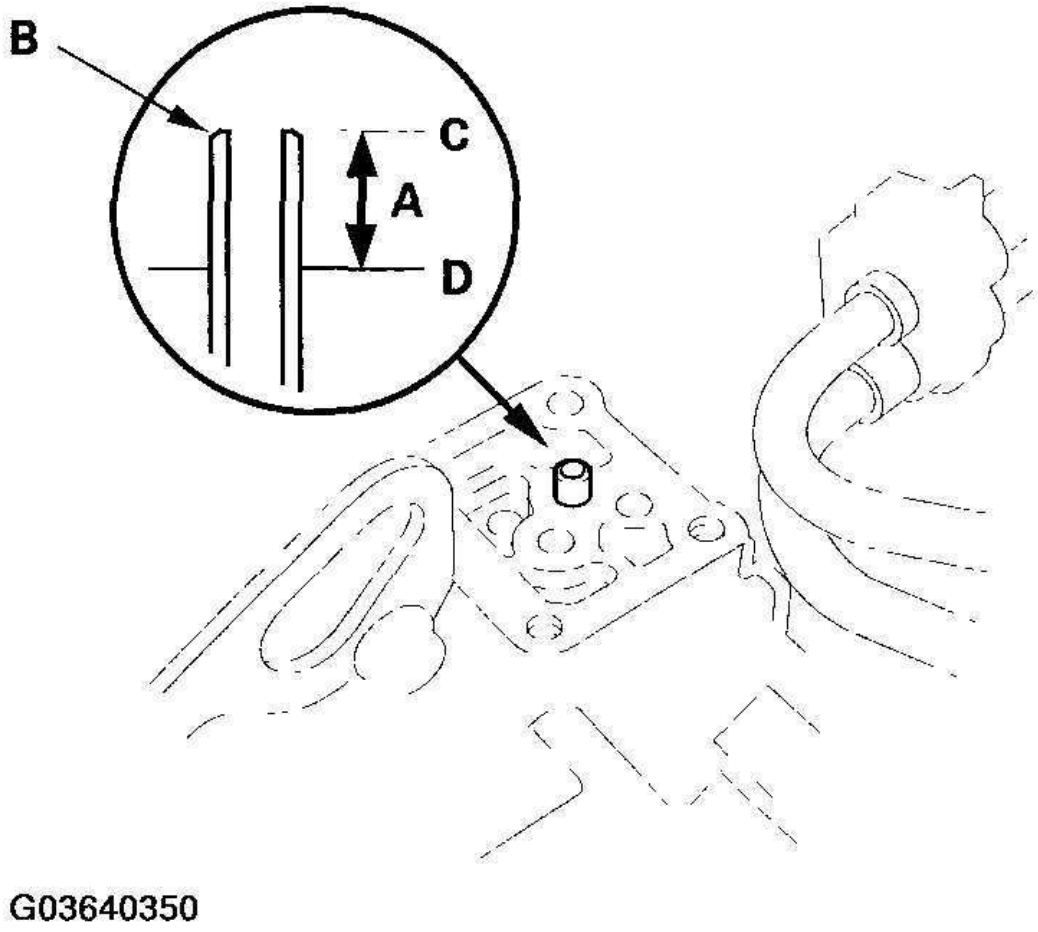


Fig. 215: Checking Height Of ATF Joint Pipe Between Top Of Pipe And Solenoid Valve Body Mounting Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Install the new gasket (A) on the transmission housing, and install the 8 x 34.5 mm ATF joint pipe (B) with the filter side into the transmission housing and 8 x 25.2 mm ATF pipe (D).

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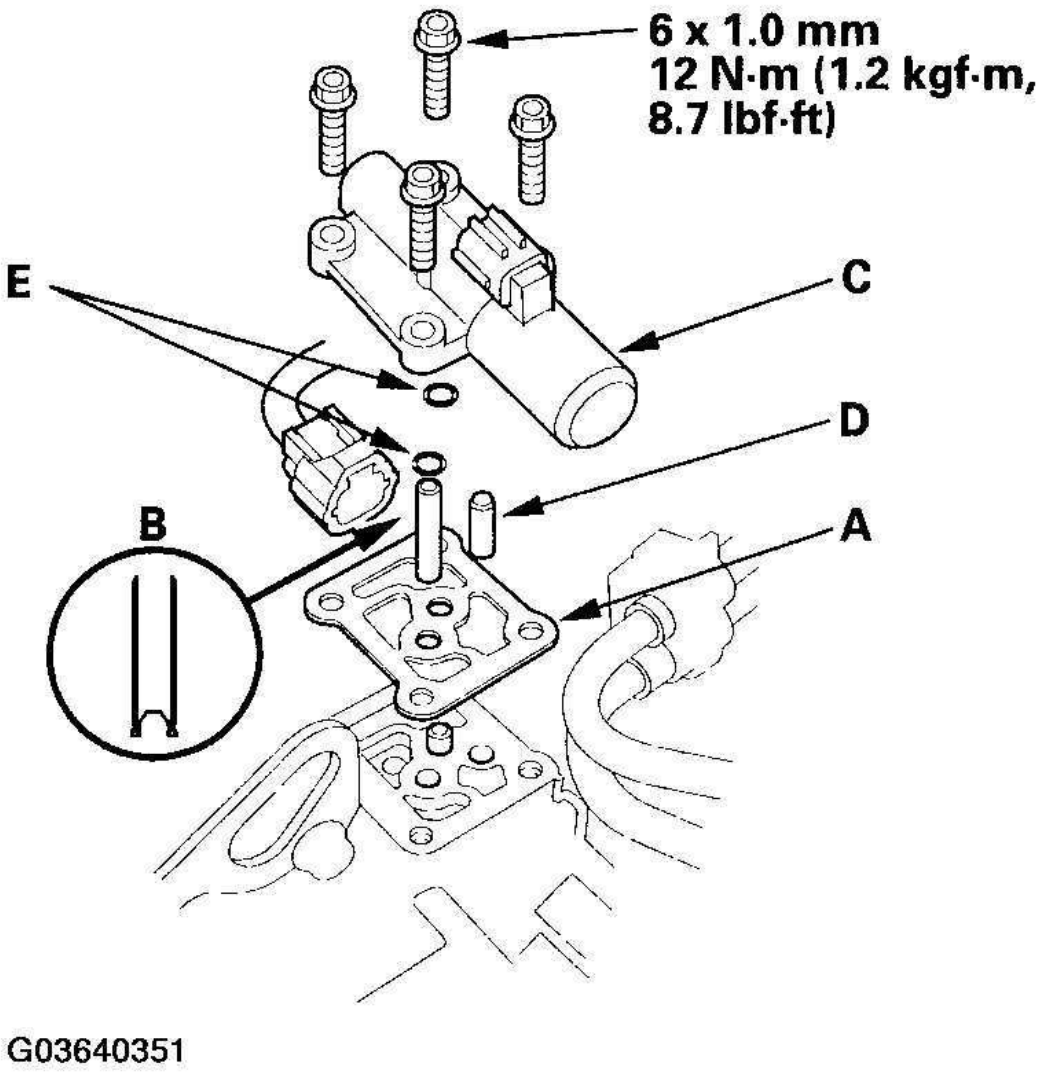


Fig. 216: Installing Gasket On Transmission Housing And ATF Joint Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Install the new O-rings (E) over the ATF joint pipes.
13. Install the new A/T clutch pressure control solenoid valve C.
14. Check the connector for rust, dirt, or oil, then connect the connector securely.
15. Install the battery base and intake air duct.
16. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.
17. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to

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prevent corrosion.

18. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
19. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT

1. Remove the splash shield.
2. Disconnect the input shaft (mainshaft) speed sensor connector, and remove the input shaft (mainshaft) speed sensor.

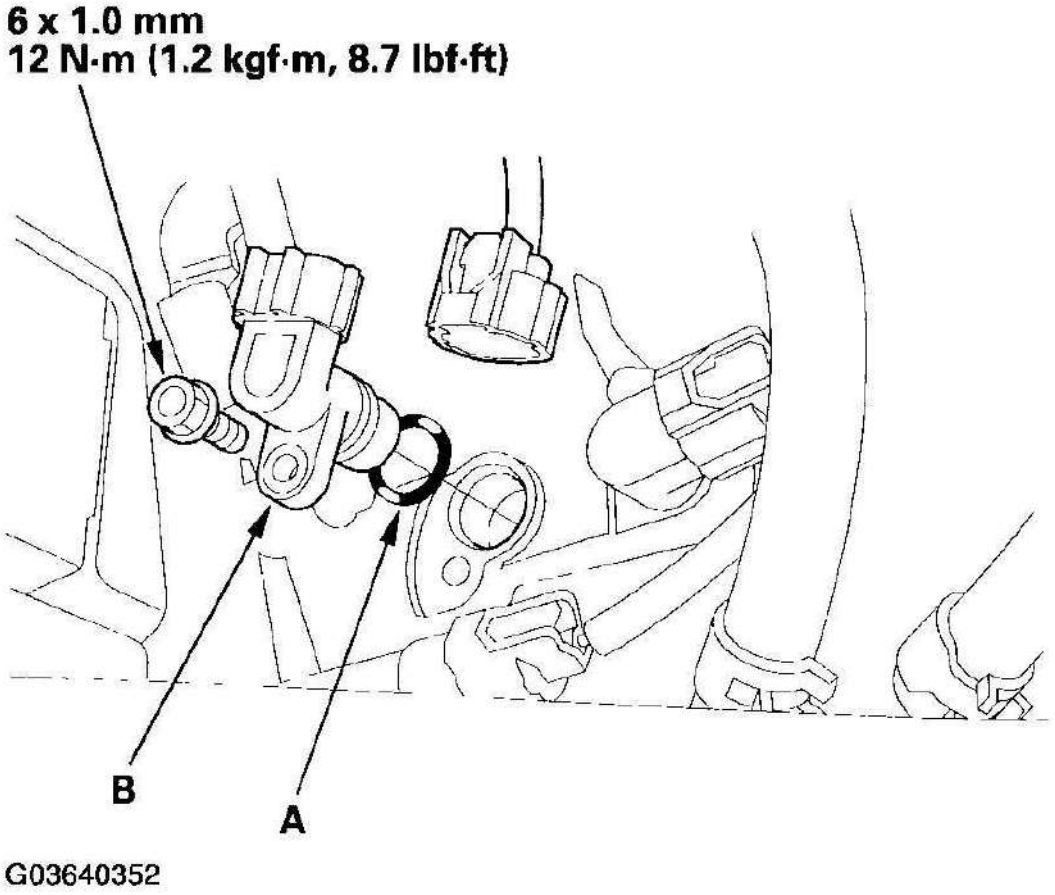


Fig. 217: Removing Input Shaft (Mainshaft) Speed Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the new O-ring (A) on the new input shaft (mainshaft) speed sensor (B), then install the input shaft (mainshaft) speed sensor in the transmission housing.

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4. Check the connector for rust, dirt, or oil, then connect the connector securely.
5. Install the splash shield.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT

1. Remove the splash shield.
2. Disconnect the output shaft (countershaft) speed sensor connector, and remove the output shaft (countershaft) speed sensor.

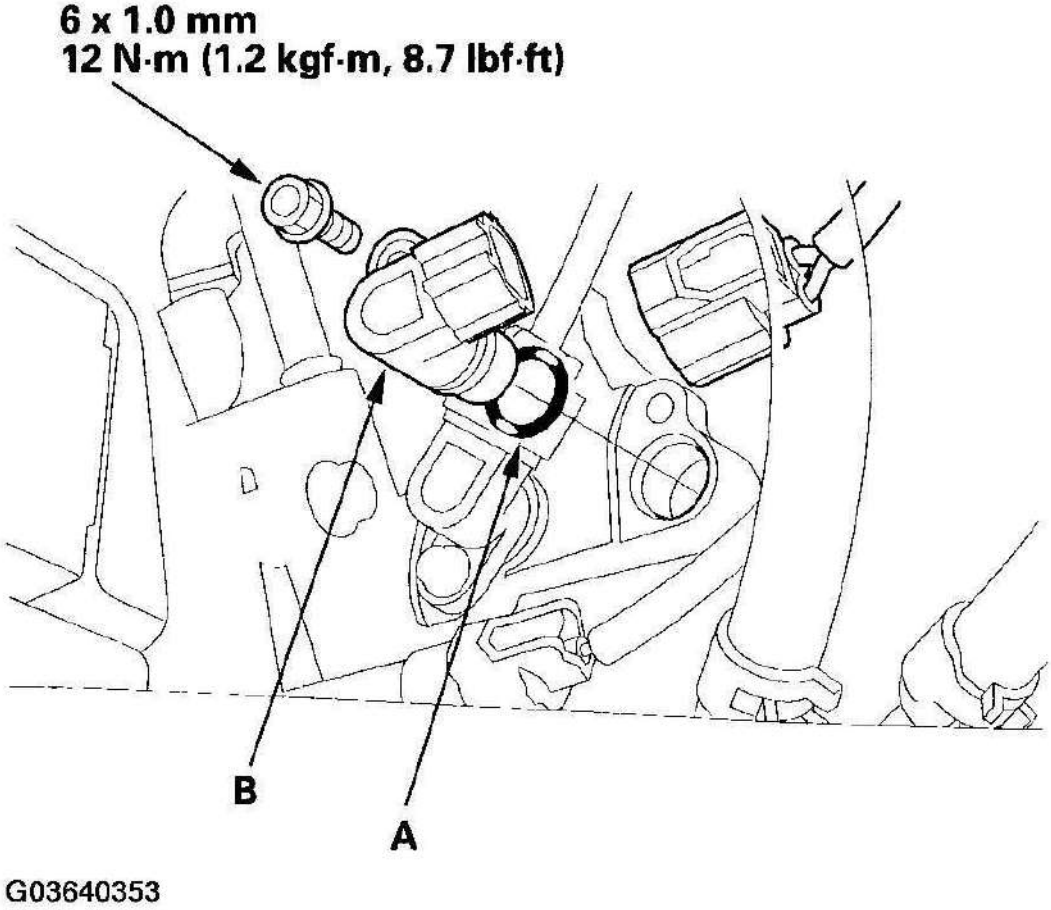


Fig. 218: Removing Output Shaft (Countershaft) Speed Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the new O-ring (A) on the new output shaft (countershaft) speed sensor (B), then install the output shaft (countershaft) speed sensor in the transmission housing.
4. Check the connector for rust, dirt, or oil, then connect the connector securely.

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5. Install the splash shield.

3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT

1. Remove the splash shield.
2. Disconnect the 3rd clutch transmission fluid pressure switch connector.

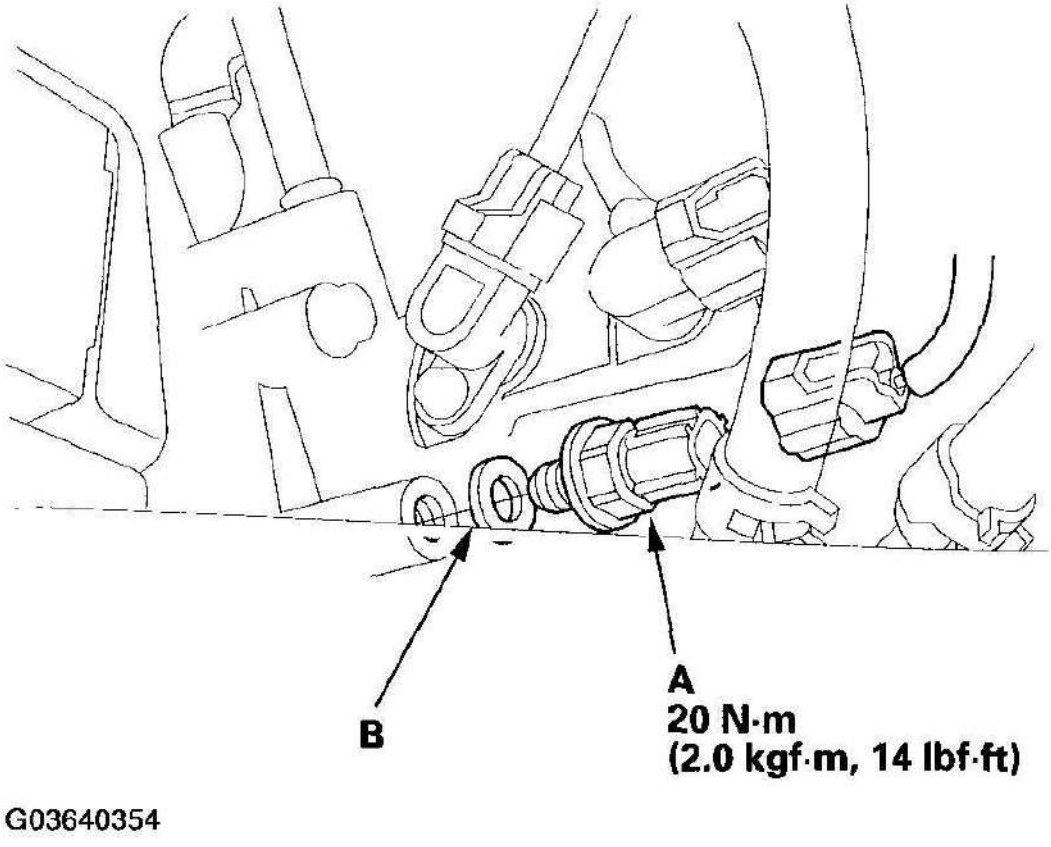


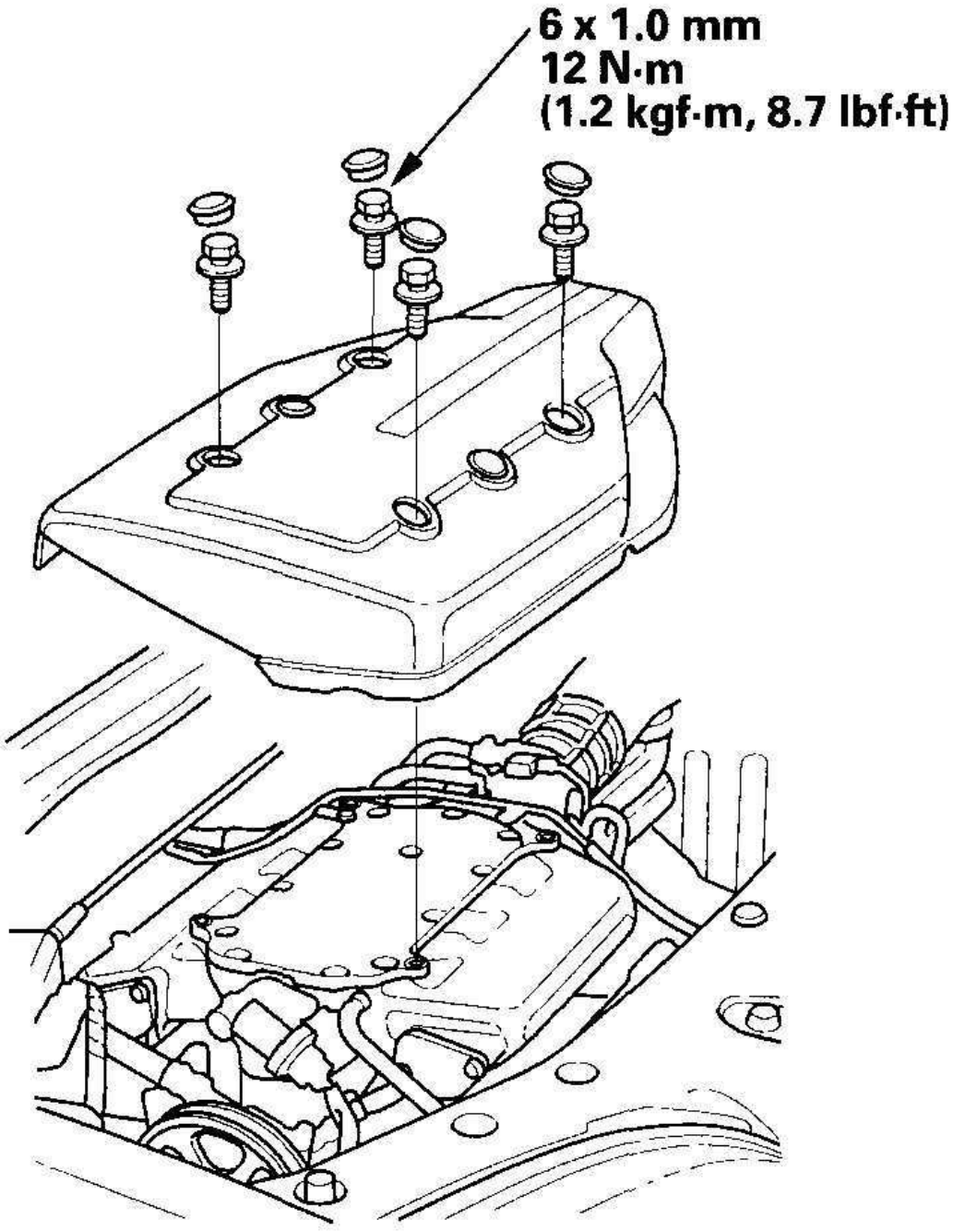
Fig. 219: Disconnecting 3rd Clutch Transmission Fluid Pressure Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Make sure there is no water, oil, dust, or foreign particles inside the connectors.
4. Install the new 3rd clutch transmission fluid pressure switch (A) with a new sealing washer (B), and tighten the switch to the specified torque.
5. Connect the connector securely.
6. Install the splash shield.

4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH REPLACEMENT

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1. Remove the intake manifold cover.



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Fig. 220: Removing Intake Manifold Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the 4th clutch transmission fluid pressure switch brown connector.

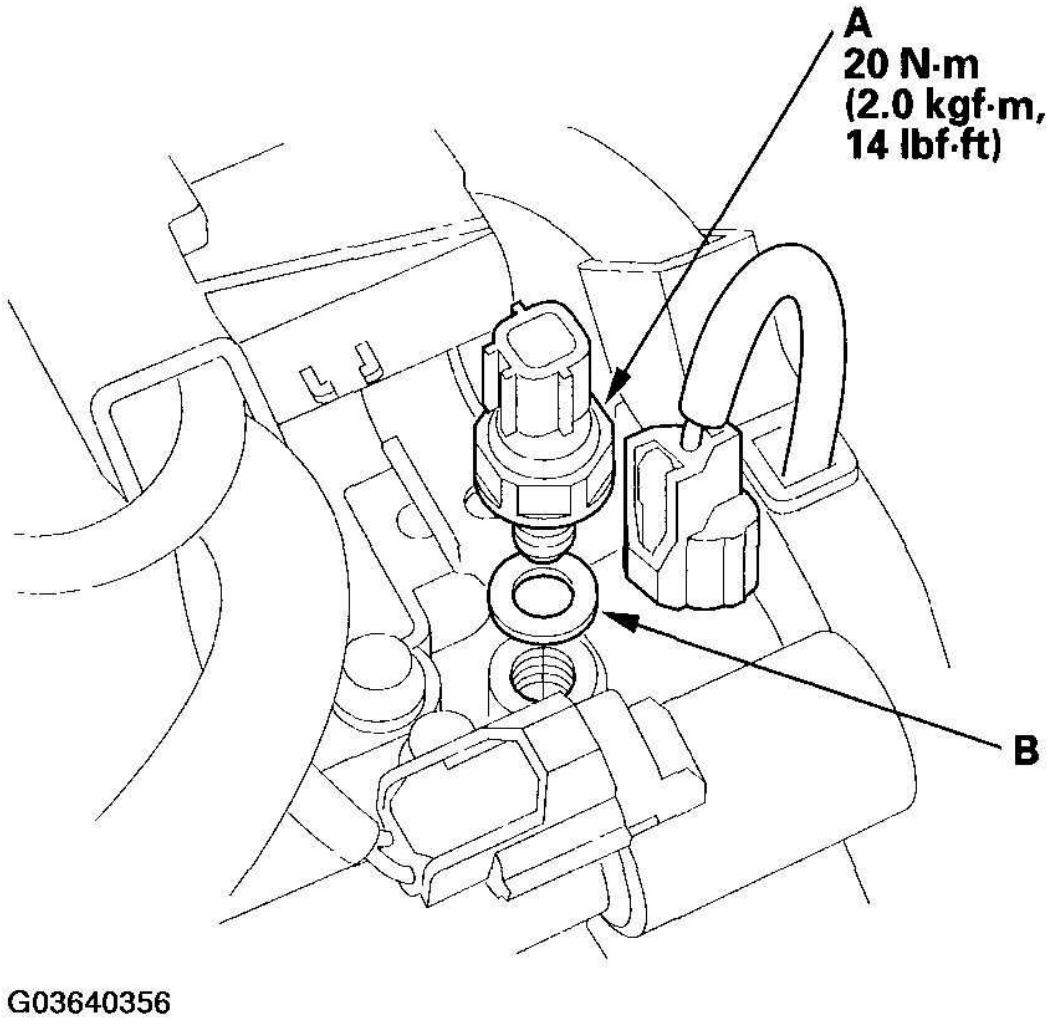


Fig. 221: Disconnecting 4th Clutch Transmission Fluid Pressure Switch Brown Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Make sure there is no water, oil, dust, or foreign particles inside the connectors.
4. Install the new 4th clutch transmission fluid pressure switch (A) with a new sealing washer (B), and tighten the switch to the specified torque.
5. Connect the connector securely.
6. Reinstall the intake manifold cover.

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ATF TEMPERATURE SENSOR REPLACEMENT

1. Remove the splash shield.
2. Disconnect the ATF temperature sensor connector (A), then remove the connector from the connector bracket (B).

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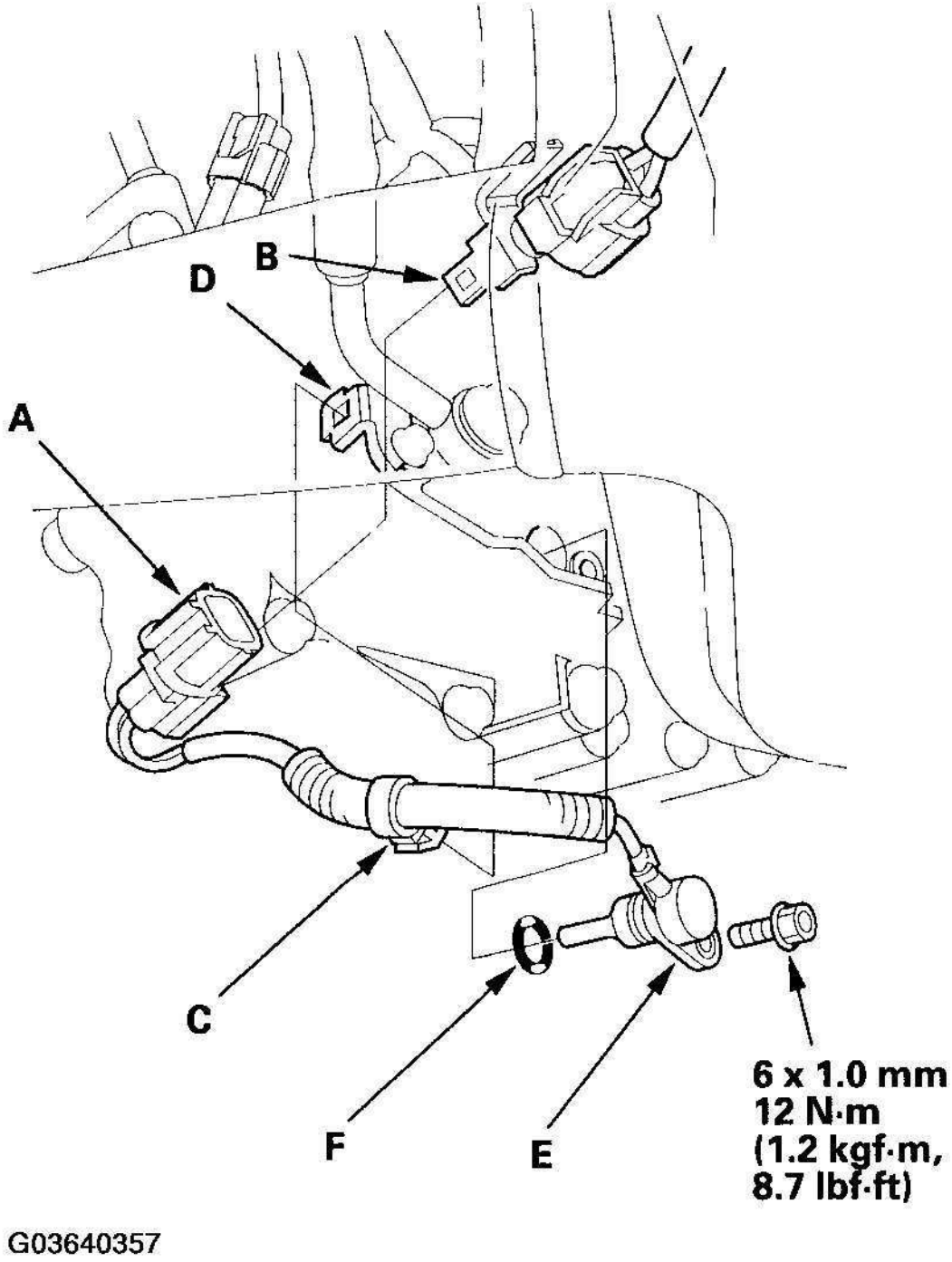


Fig. 222: Disconnecting ATF Temperature Sensor Connector (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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3. Remove the harness clamp (C) from its bracket (D).
4. Remove the ATF temperature sensor, and replace with new one.
5. Install the new ATF temperature sensor (E) and a new O-ring (F).
6. Install the ATF temperature sensor connector to the connector bracket, then connect the connector.
7. Install the harness clamp on its bracket.
8. Install the splash shield.

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 level ground, and turn the engine off.

NOTE: Check the fluid level within 60-90 seconds after turning the engine off.

3. Remove the dipstick (yellow loop) (A) from the ATF dipstick guide pipe, and wipe it with a clean cloth.

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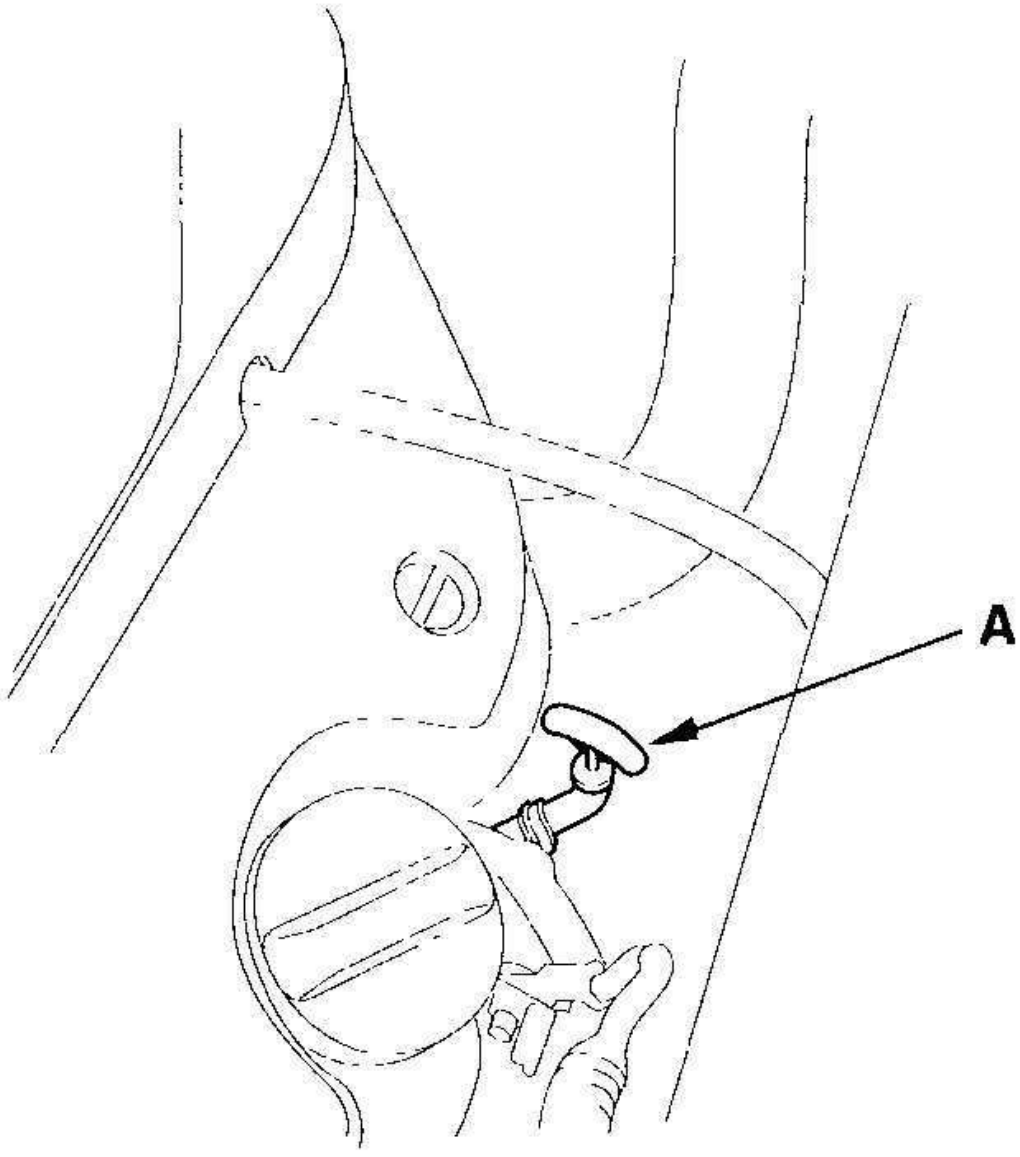


Fig. 223: Identifying Dipstick
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Insert the dipstick into the dipstick guide.
5. Remove the dipstick (A) and check the fluid level. It should be between upper mark (B) and lower mark (C).

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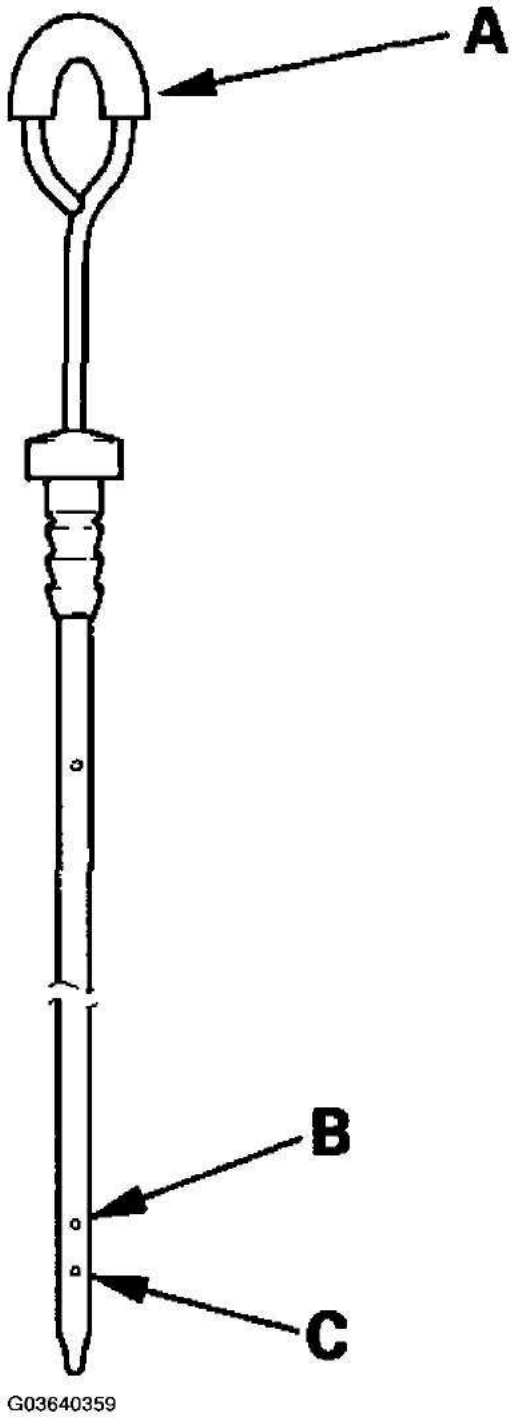


Fig. 224: Checking Fluid Level On Dipstick
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. If the level is below the lower mark, check for fluid leaks at the transmission, hose and line joints, and

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cooler lines.

If a problem is found, fix it before filling the transmission. If necessary, remove the dipstick and fill the transmission through the dipstick guide pipe opening (A) to bring the fluid level up to the upper mark. Always use Acura ATF-Z1 automatic transmission fluid (ATF). Using a non-Acura ATF can affect shift quality.

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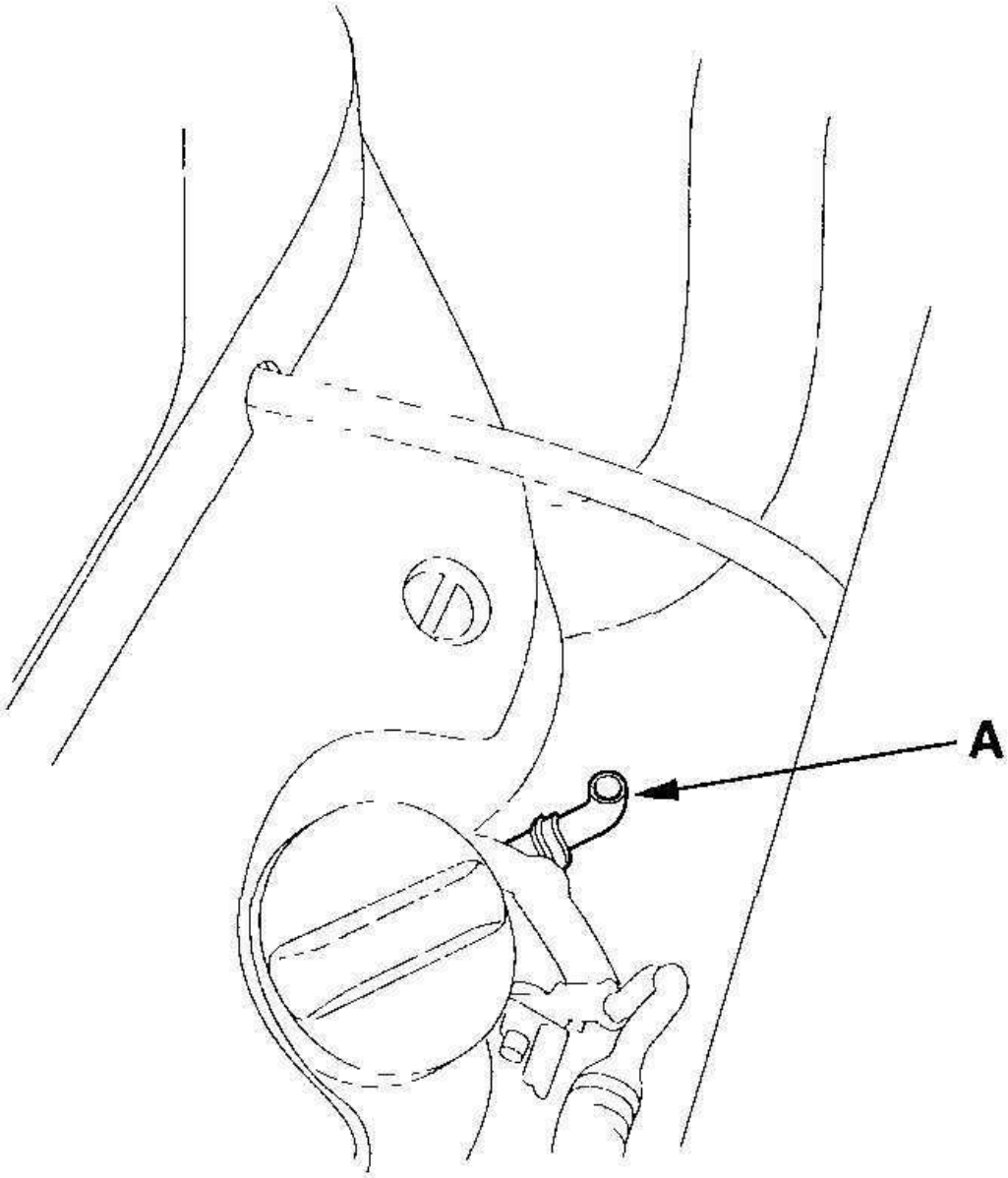


Fig. 225: Identifying Dipstick Guide Pipe Opening
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. If the level is above the upper mark, drain the ATF to proper level (see step 3).
8. Insert the dipstick back into the dipstick guide.

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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 cleaning the transmission cooler is necessary, refer to ATF cooler cleaning (see ATF COOLER CLEANING).

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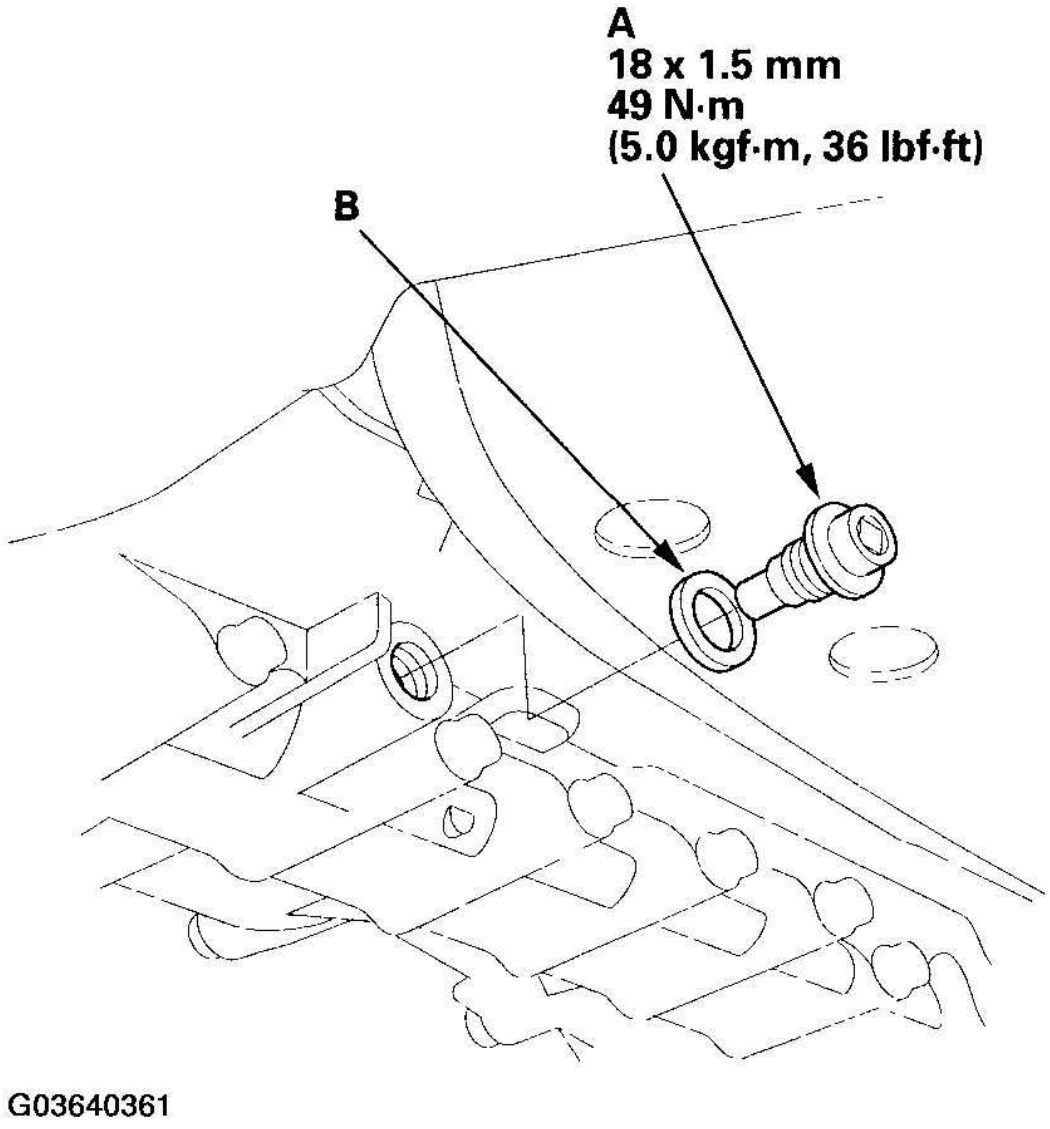


Fig. 226: Removing ATF Filler Bolt And Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Reinstall the drain plug with a new sealing washer (B).
5. Refill the transmission with the recommended fluid into the filler hole (A) to the upper mark on the dipstick. Always use Acura ATF-Z1 automatic transmission fluid (ATF). Using a non-Acura ATF can affect shift quality.

Automatic Transmission Fluid Capacity:

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2.7 L (2.9 US qt) at change

7.3 L (7.7 US qt) at overhaul

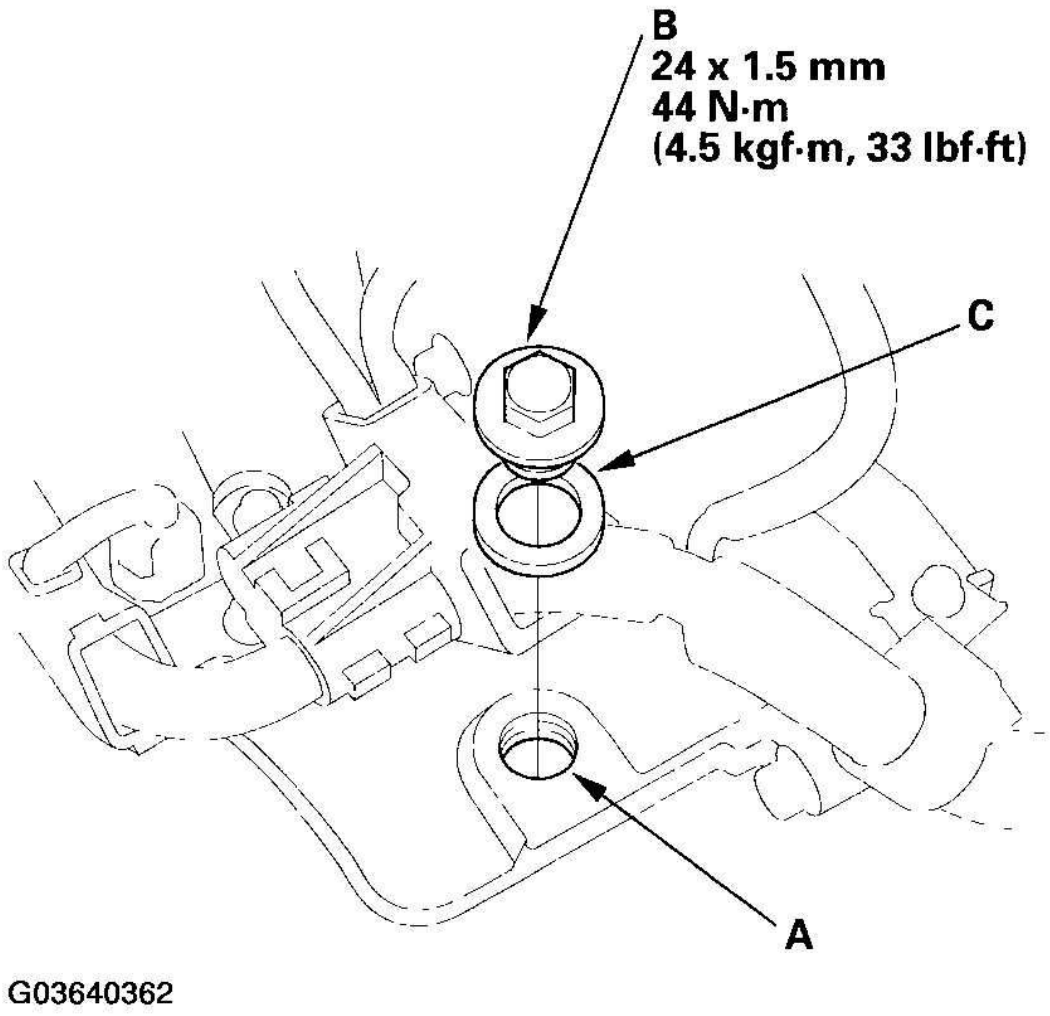


Fig. 227: Removing Filler Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the filler bolt (B) with a new sealing washer (C).

TRANSFER ASSEMBLY FLUID REPLACEMENT

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.

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3. Remove the drain plug (A), and drain the transfer fluid (hypoid gear oil).

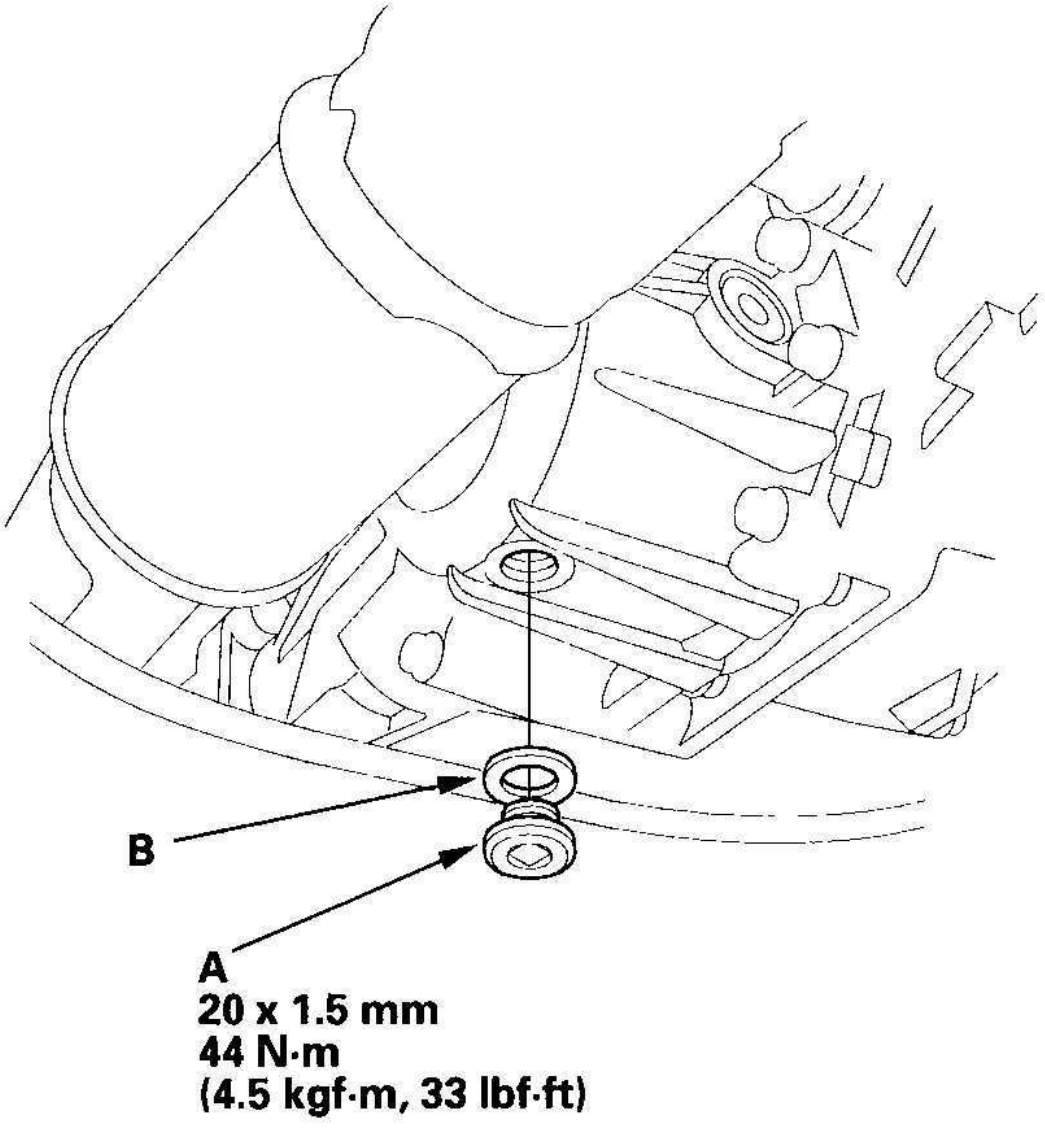


Fig. 228: Removing Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Reinstall the drain plug with a new sealing washer (B).
5. Remove the filler plug (A) and sealing washer (B).

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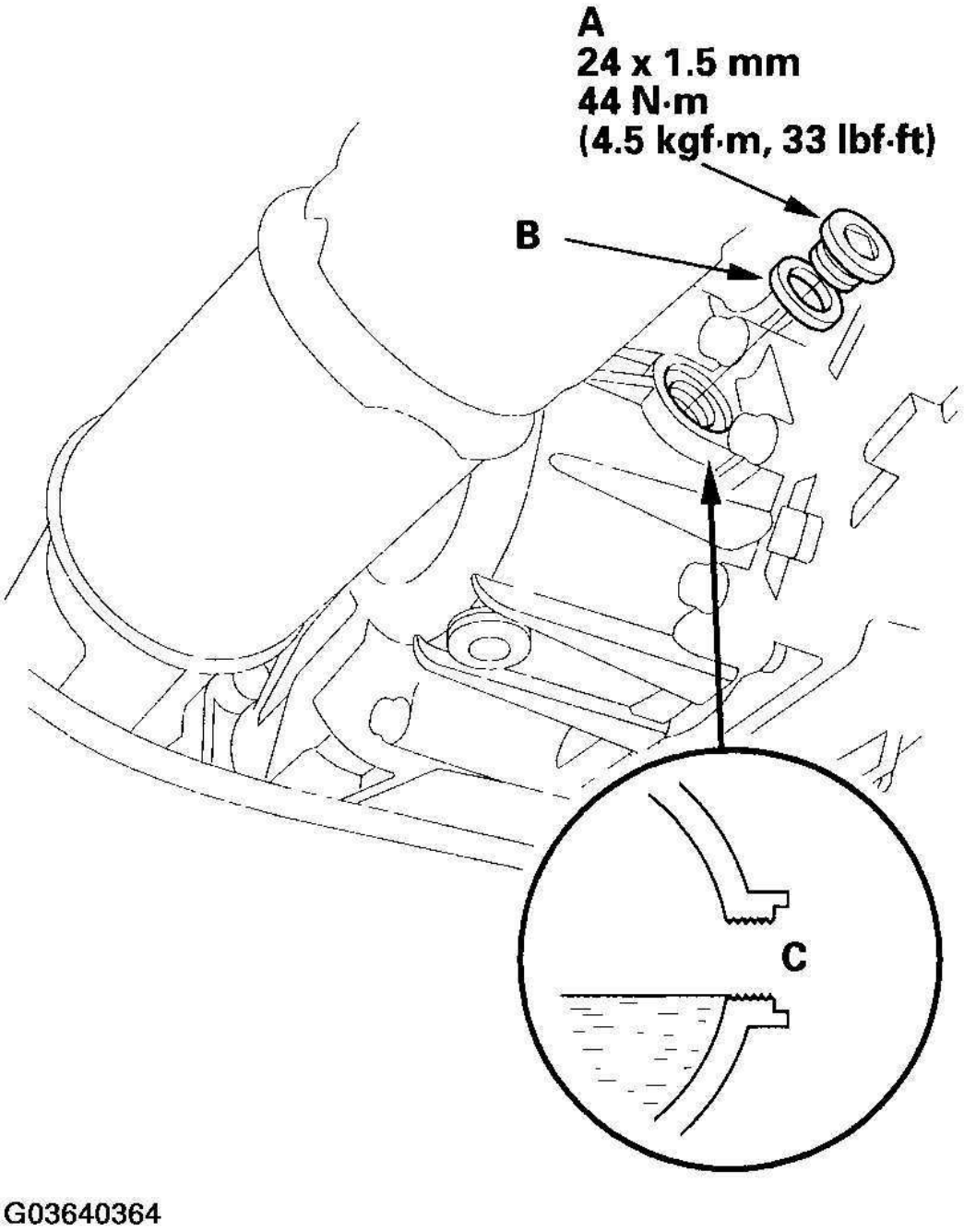


Fig. 229: Filling Transfer Assembly With Recommended Fluid To Correct Level
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Refill the transfer assembly with the recommended fluid (hypoid gear oil) into the filler hole (C) until the fluid from flowing out. Use a SAE 90 or SAE 80W-90 viscosity hypoid gear oil, API classified GL4 or

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GL5 only.

Viscosity

SAE 90: Above 0 °F (-18 °C)

SAE 80W-90: Below 0 °F (-18 °C)

Transfer Fluid (Hypoid Gear Oil) Capacity:

0.43 L (0.45 US qt) at fluid change

7. Install the filler plug with a new sealing washer.

TRANSFER ASSEMBLY INSPECTION

1. Raise the vehicle, and make sure it is supported securely.
2. Shift the transmission into the N position.
3. Make a reference mark (A) across the propeller shaft (B) and the transfer companion flange (C).

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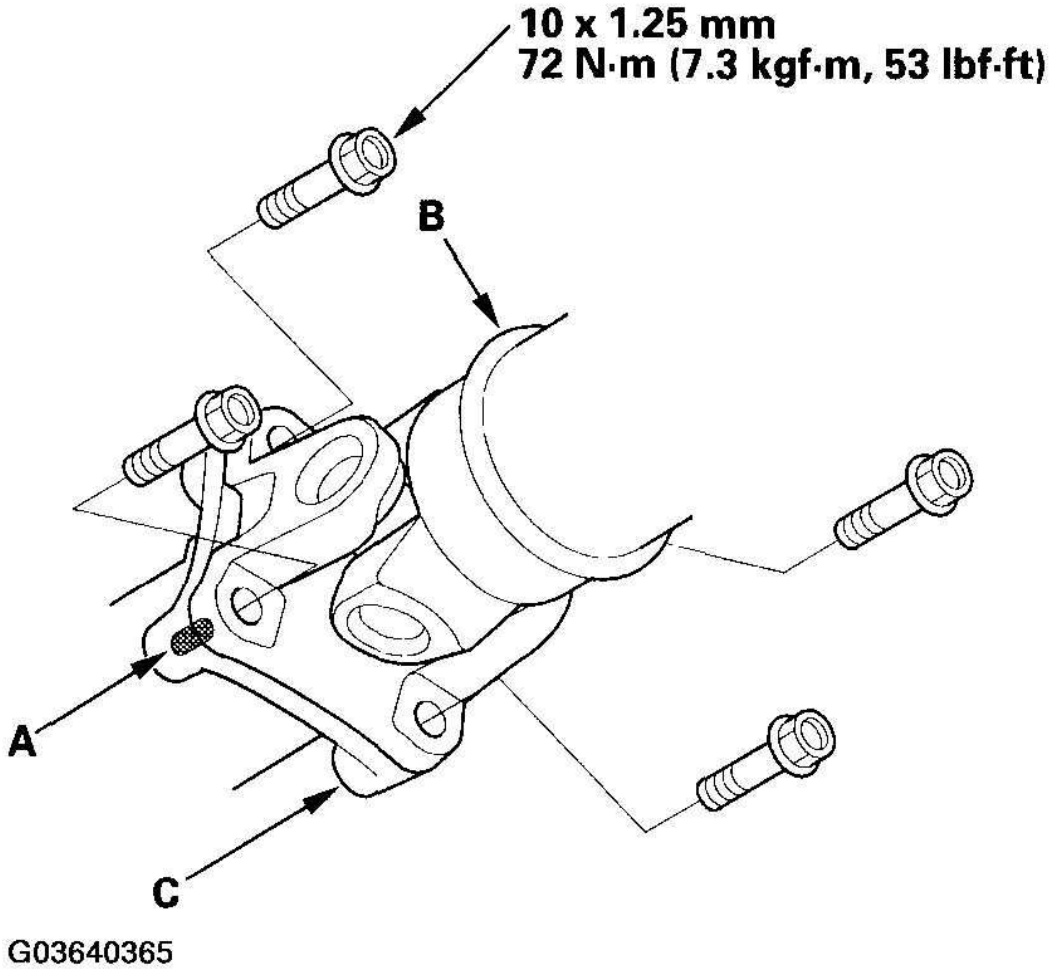


Fig. 230: Marking Reference Mark Across Propeller Shaft And Transfer Companion Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Separate the propeller shaft from the transfer companion flange.
5. Set a dial indicator (A) on the transfer companion flange (B); position dial indicator tip (C) on the direct extension of the bolt hole center (D).

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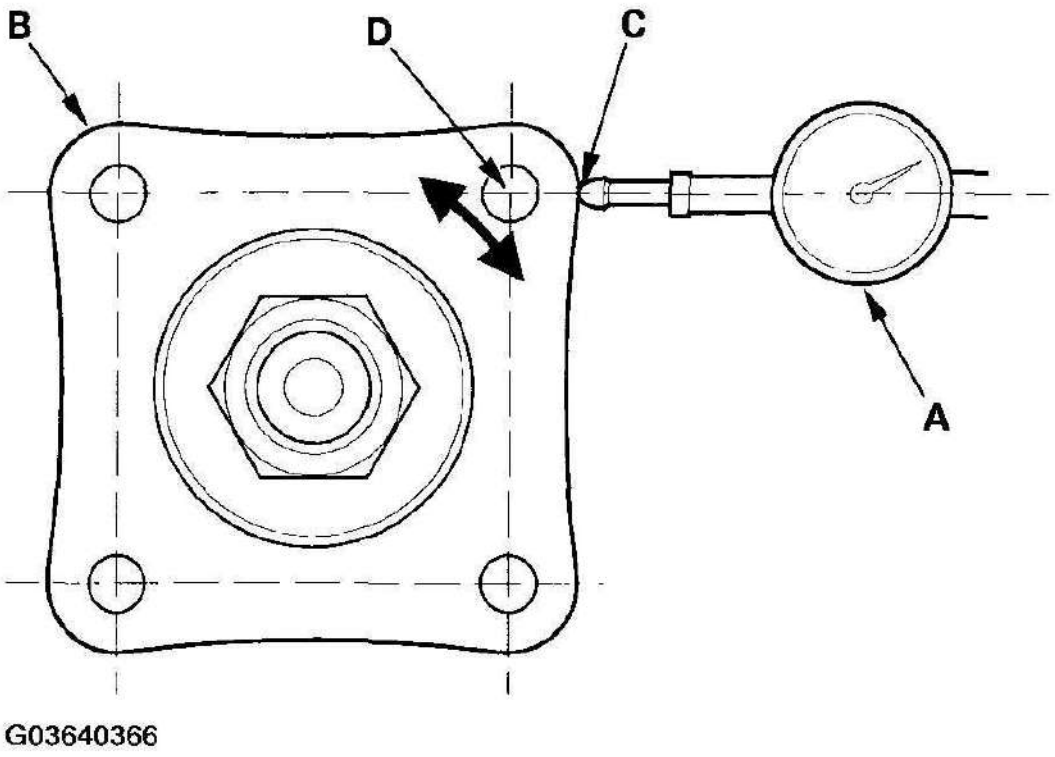


Fig. 231: Measuring Transfer Gear Backlash
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Measure the transfer gear backlash.

   Standard: 0.06-0.17 mm (0.002-0.007 in.)

7. If the measurement is out of standard, remove the transfer assembly, and adjust the transfer gear backlash (see **REASSEMBLY**).
8. Check for fluid leaks between the mating faces of the transfer assembly and transmission.
9. If there is a leak, remove the transfer assembly, remove the transfer cover, and replace the O-ring.
10. Check for leaks between the transfer companion flange and transfer oil seal.
11. If there is a leak, remove the transfer assembly from the transmission, and replace the transfer oil seal and O-ring on the transfer output shaft (hypoid gear). If oil seal and O-ring replacement is required, you will need to check and adjust the transfer gear tooth contact, transfer gear backlash, the tapered roller bearing starting torque, and the total starting torque (see **REASSEMBLY**). Do not replace the oil seal with the transfer assembly on the transmission.

TRANSFER ASSEMBLY REMOVAL

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1. Raise the vehicle, and make sure it is securely supported.
2. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).

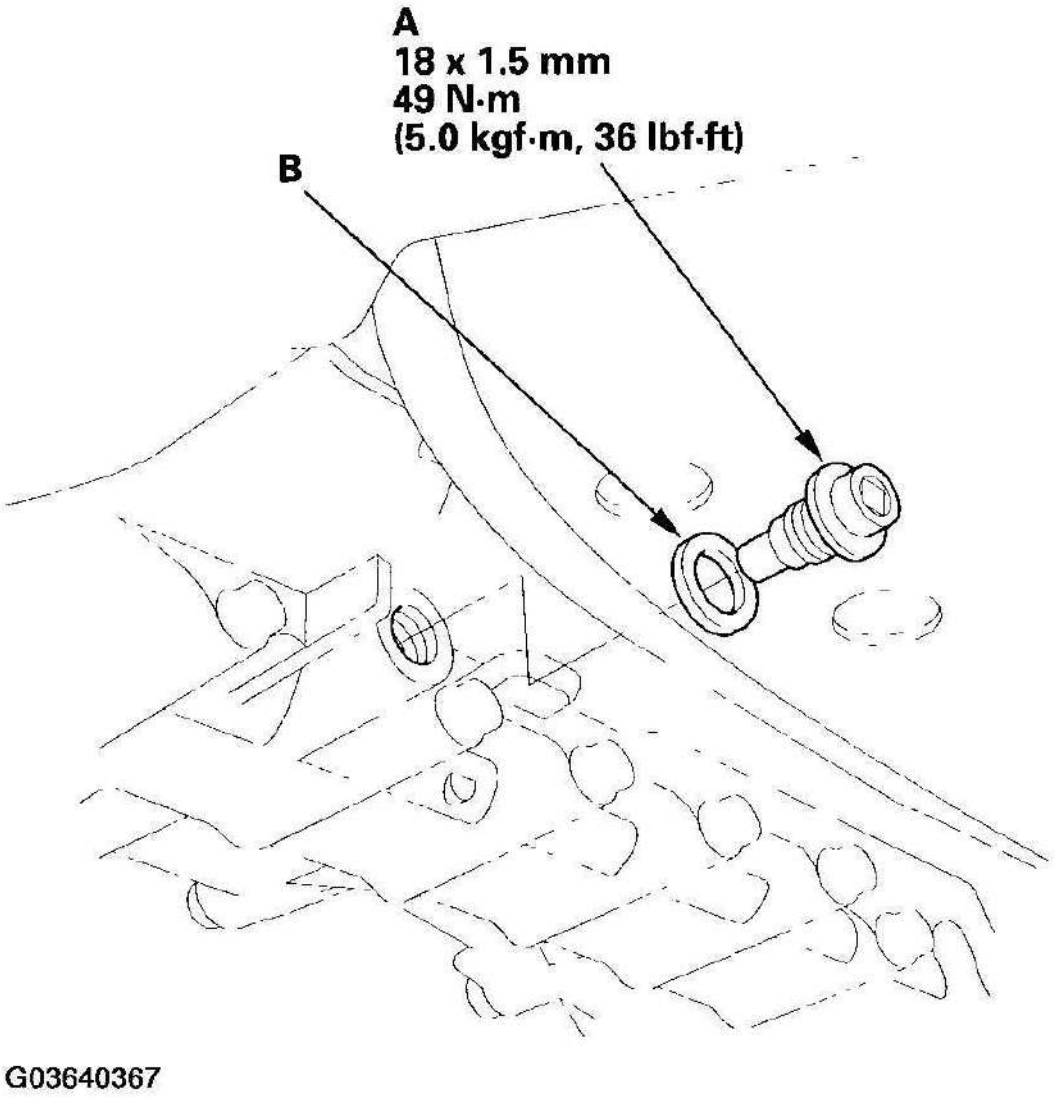


Fig. 232: Removing Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Reinstall the drain plug with a new sealing washer (B).
4. Remove the front subframe stiffener.

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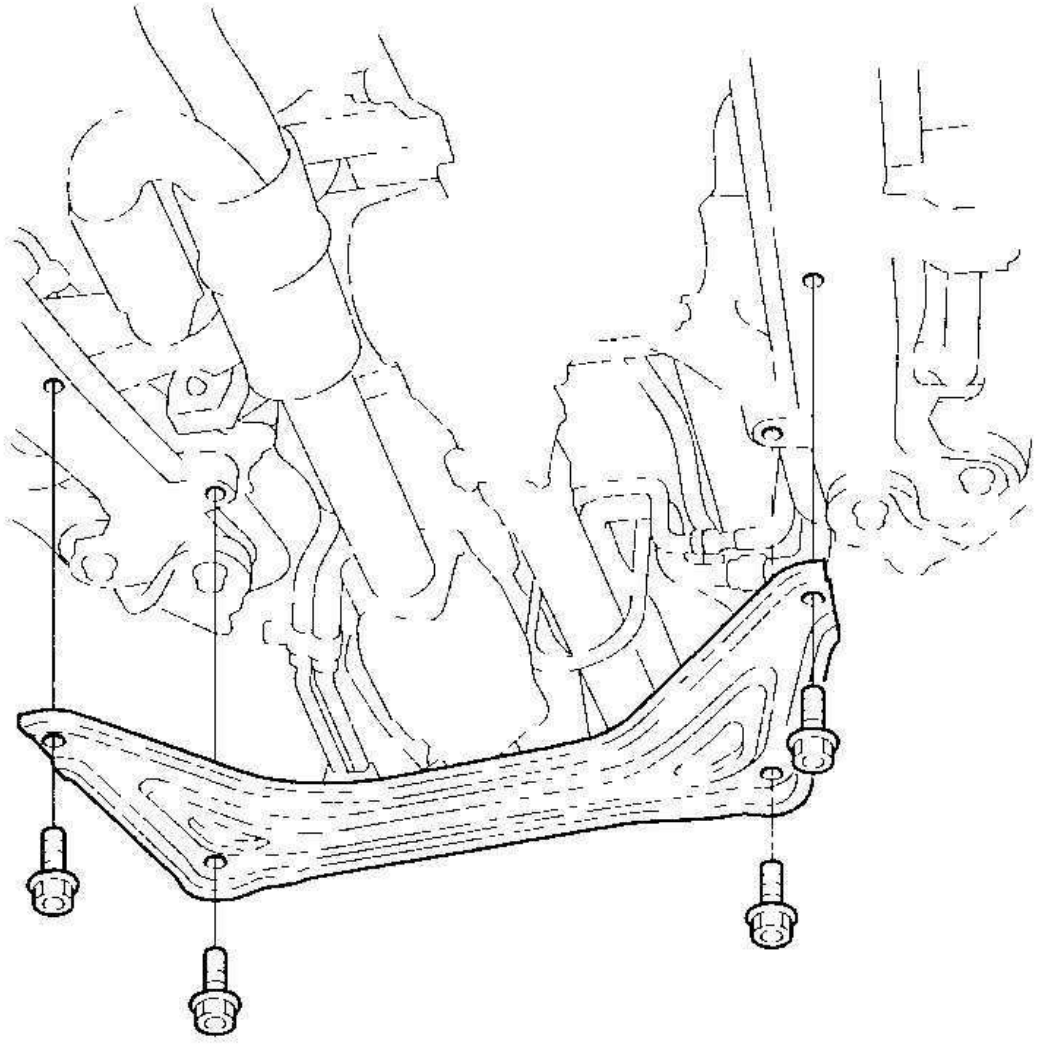


Fig. 233: Removing Front Subframe Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove exhaust pipe A.

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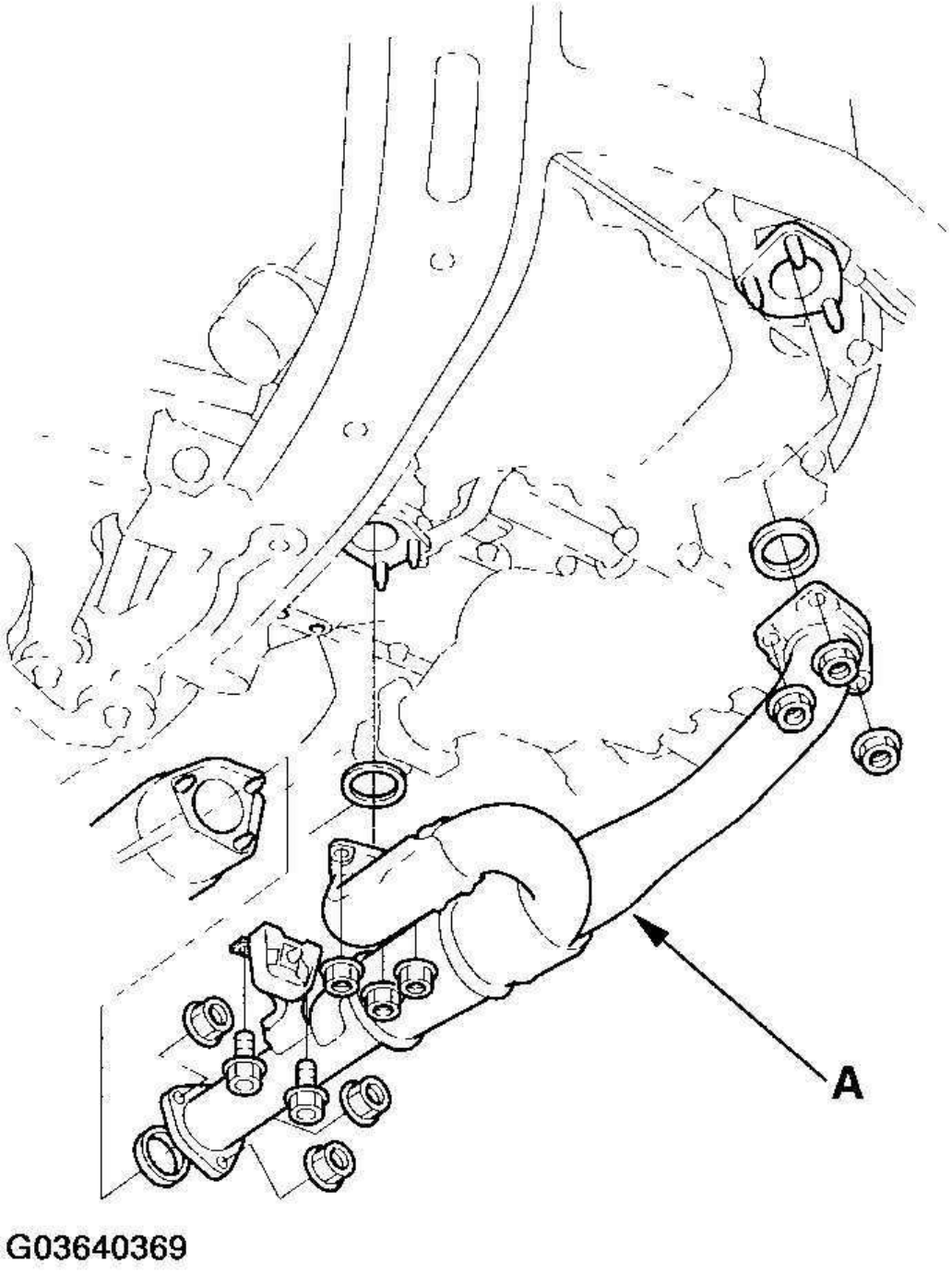


Fig. 234: Removing Exhaust Pipe A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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6. Remove the bolt securing the transfer breather tube bracket (A), and disconnect the breather tube (B) from the breather pipe (C) on the transfer assembly.

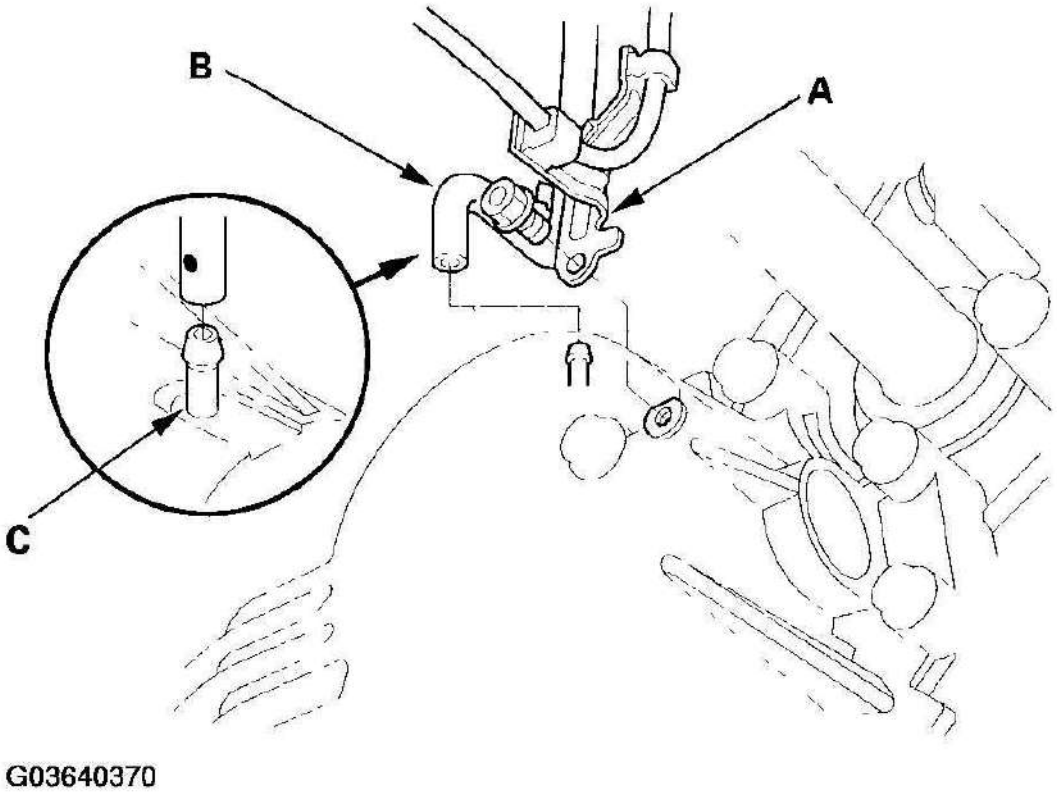


Fig. 235: Disconnecting Breather Tube From Breather Pipe On Transfer Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Make a reference mark (A) across the propeller shaft (B) and the transfer companion flange (C).

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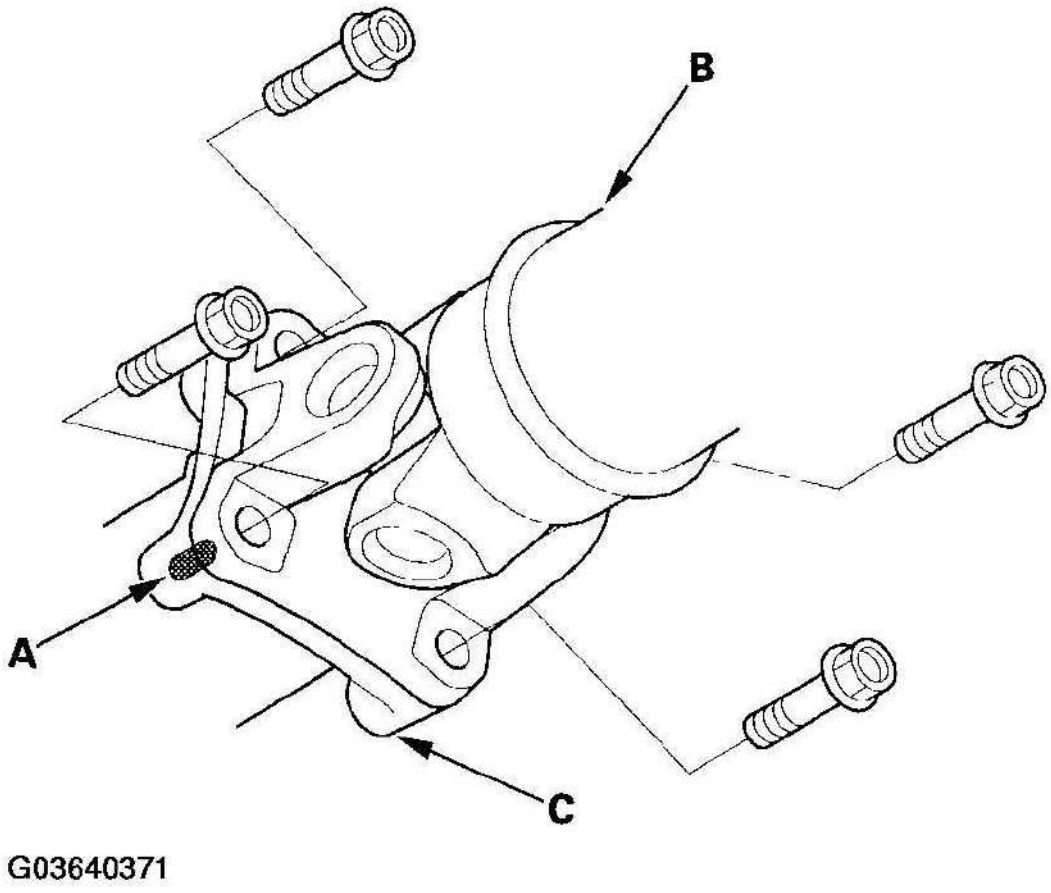
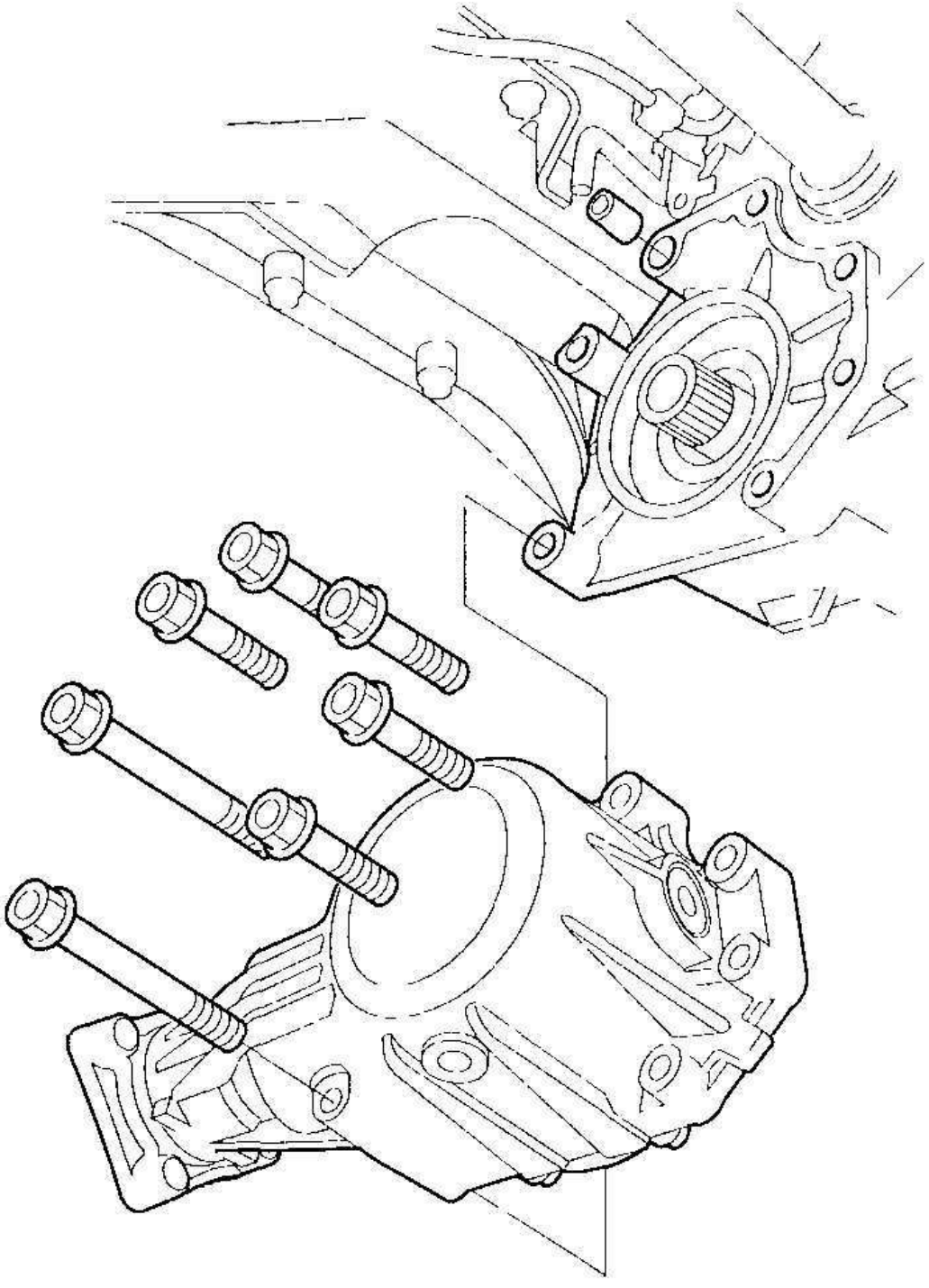


Fig. 236: Marking Reference Mark Across Propeller Shaft And Transfer Companion Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Separate the propeller shaft from the transfer assembly.
9. Remove the transfer assembly from the transmission.

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Fig. 237: Removing Transfer Assembly From Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TRANSFER ASSEMBLY INSTALLATION

1. Clean the areas where the transfer assembly contact the transmission with solvent or carburetor cleaner, and dry with compressed air. Then apply transmission fluid to the contact areas.
2. Install the dowel pin (A) in the transmission, and install the transfer assembly (B) on the transmission.

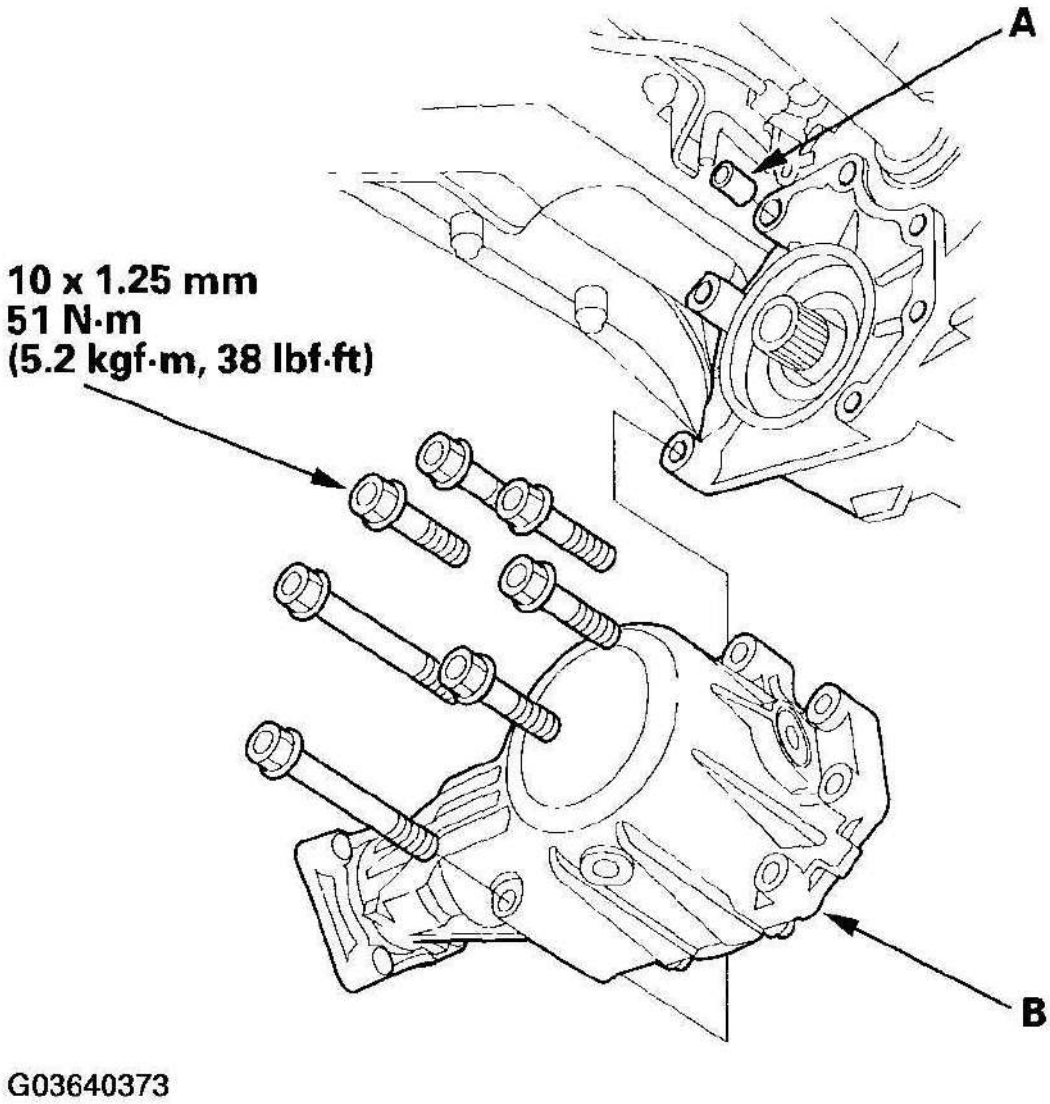


Fig. 238: Installing Transfer Assembly On Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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3. Install the propeller shaft (A) to the transfer companion flange (B) by aligning the reference mark (C).

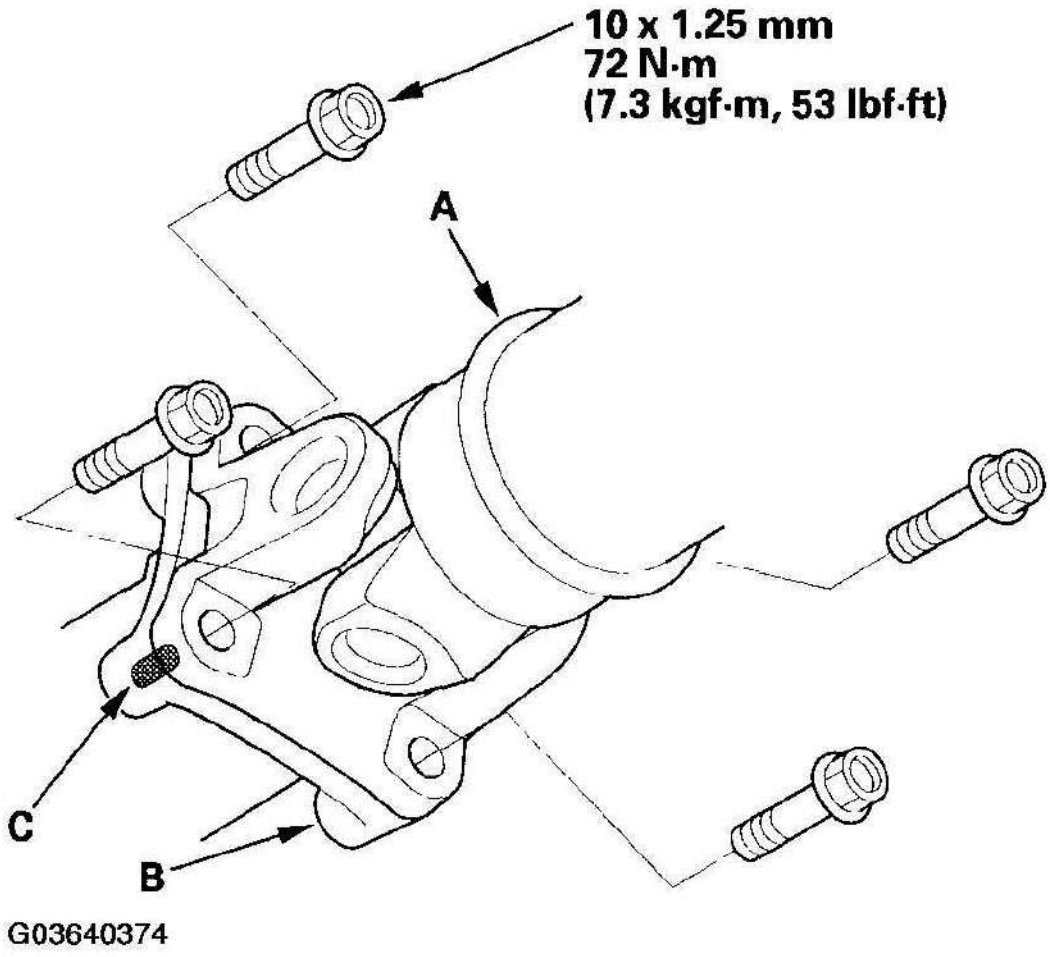


Fig. 239: Installing Propeller Shaft To Transfer Companion Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Secure the transfer breather tube bracket (A) on the transfer assembly with the bolt, and install the breather tube (B) over the breather pipe (C) with the dot (D) on the tube facing out.

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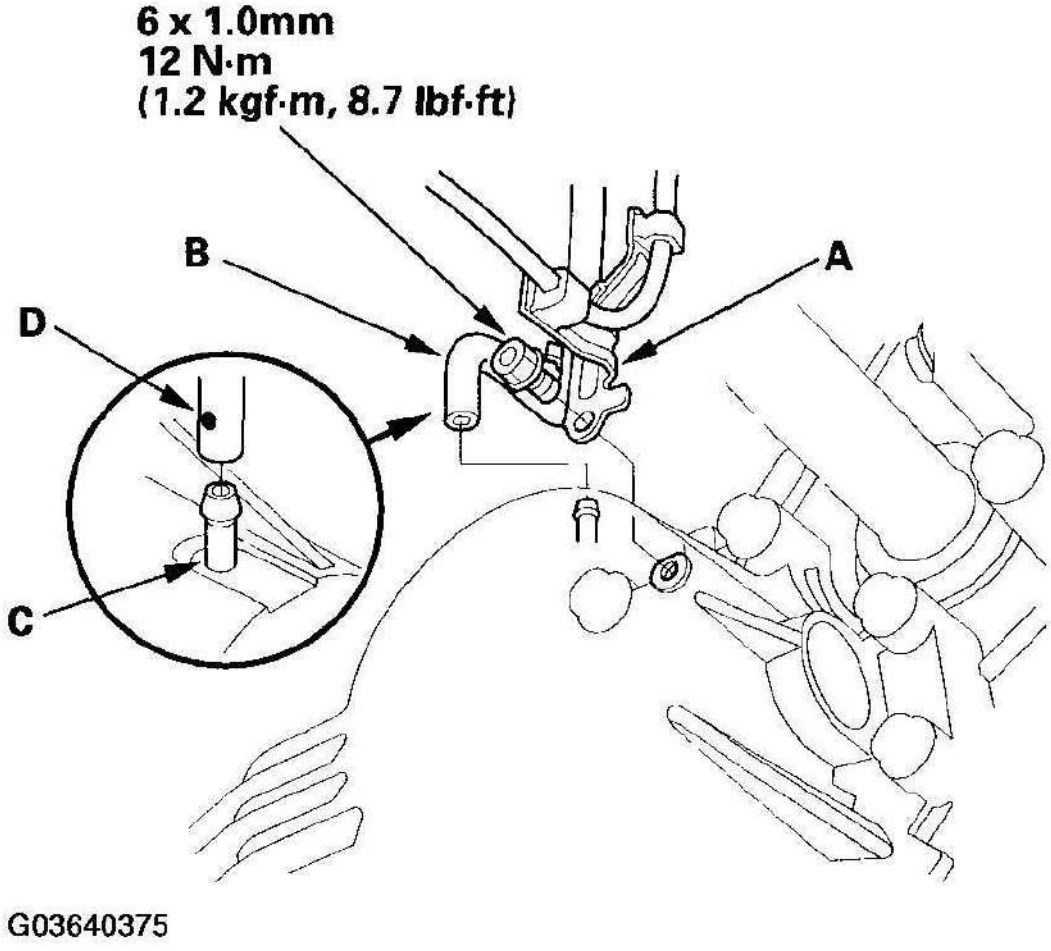


Fig. 240: Installing Breather Tube Over Breather Pipe With Dot On Tube Facing Out
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the exhaust pipe A and the new gaskets (B).

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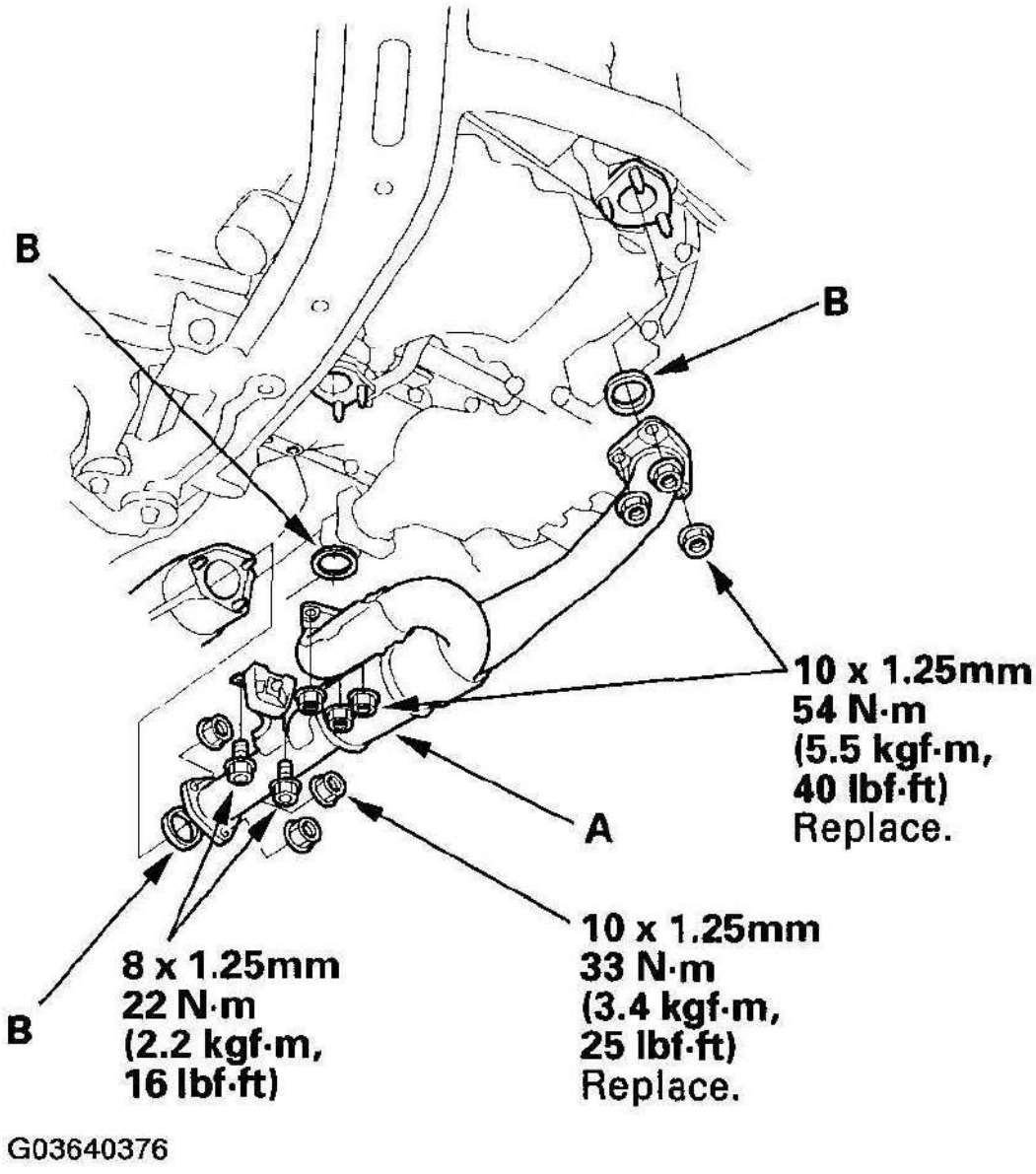


Fig. 241: Installing Exhaust Pipe A And Gaskets
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the subframe stiffener with the new mounting bolts.

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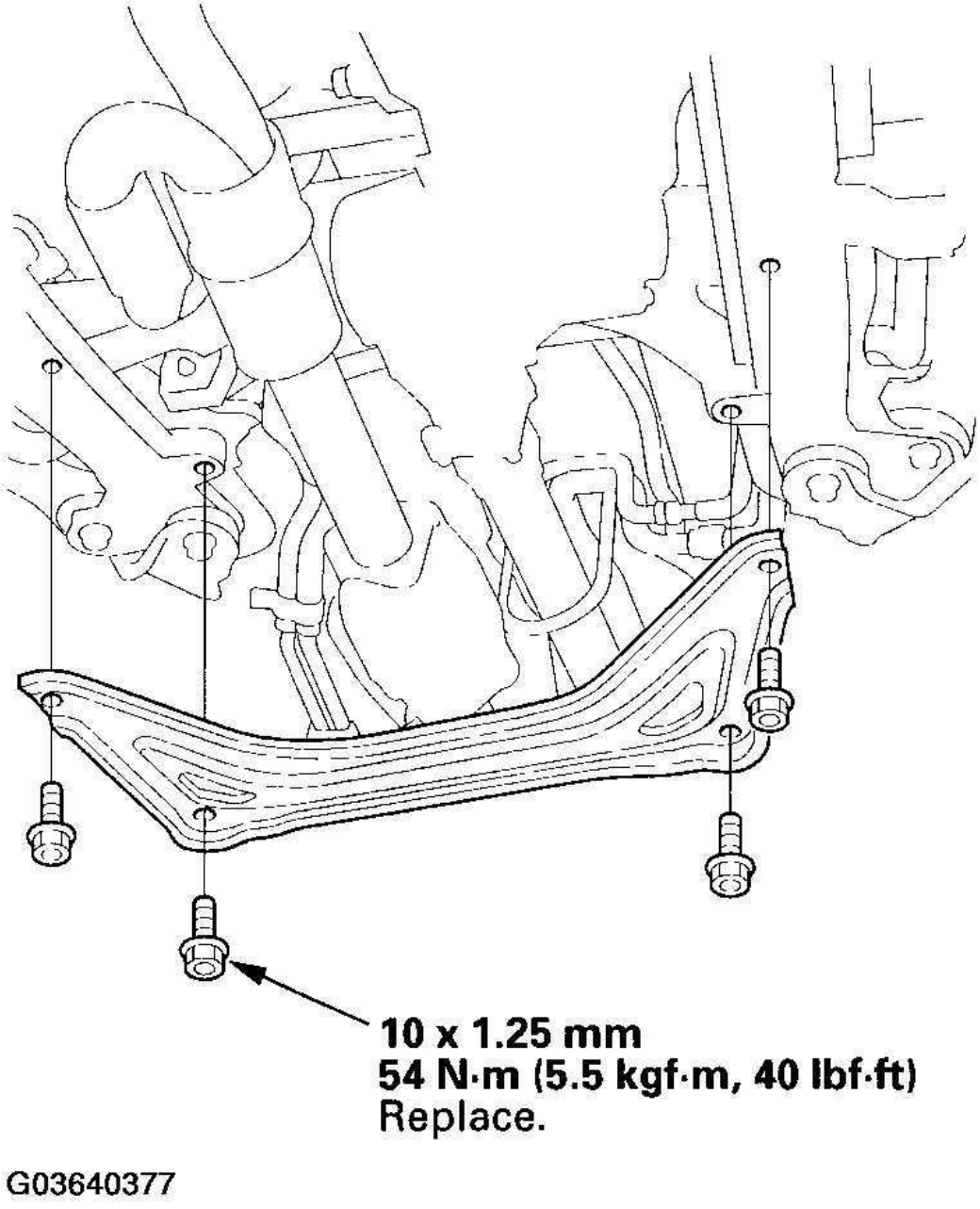


Fig. 242: Installing Subframe Stiffener With Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Refill the transfer with transfer fluid (hypoid gear oil), if necessary (see **TRANSFER ASSEMBLY FLUID REPLACEMENT**).
8. Refill the transmission with ATF (see step 5).

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TRANSMISSION REMOVAL

Special Tools Required

- Engine hanger support bar 07AAK-S3VA000
- Engine hanger balance bar VSB02C00019
- Engine hanger, A and Reds AAR-T-12566
- Front subframe adapter EQS02BMDXSB0

These tools are available through the Acura 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. Drain the power steering system fluid from the reservoir (see **FLUID REPLACEMENT**).
2. Remove the center console lower panel (driver side), and pull the carpet to expose the steering joint cover.
3. Remove the steering joint cover (A).

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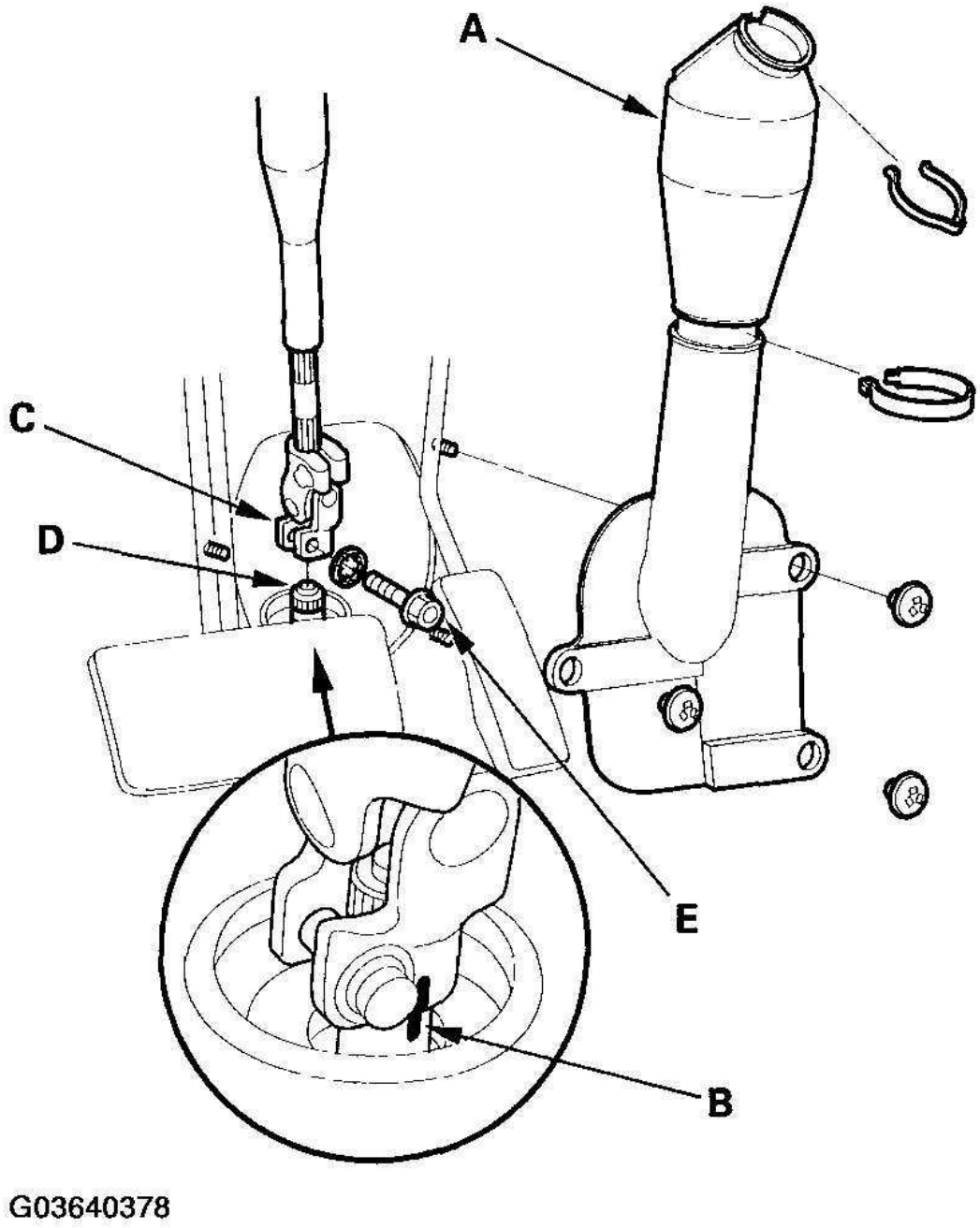


Fig. 243: Removing Steering Joint Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Make a reference mark (B) across the steering joint (C) and steering gearbox pinion shaft (D). Remove the steering joint bolt (E), and disconnect the steering joint from the steering gearbox pinion shaft.

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5. Get the audio and navigation anti-theft codes, and write down the audio presets.
6. Raise the vehicle, and make sure it is securely supported. Remove the splash shield.
7. Remove the support struts at the ball joints on both sides hood. Secure the hood in a vertical position with reinstalling the strut ball joint and bracket.

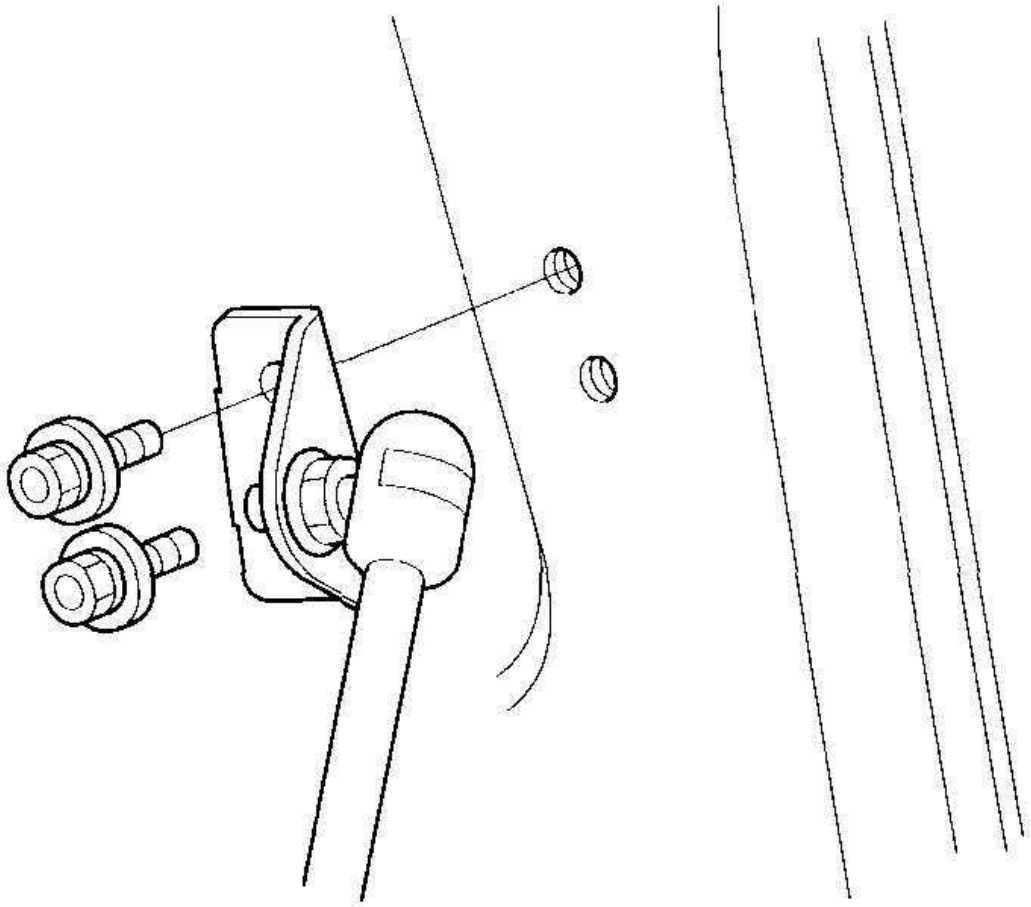


Fig. 244: Removing Support Struts At Ball Joints On Both Sides Hood
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Disconnect the battery negative terminal, then disconnect the battery positive terminal.
9. Remove the intake air duct and engine covers.
10. Remove the battery hold-down bracket, then remove the battery cover, battery, and battery tray.
11. Remove the four bolt securing the battery base in the engine compartment, then remove the battery base.

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12. Remove the power steering pump outlet hose (A) at the pump (B), and remove the hose clamp bolt (C).

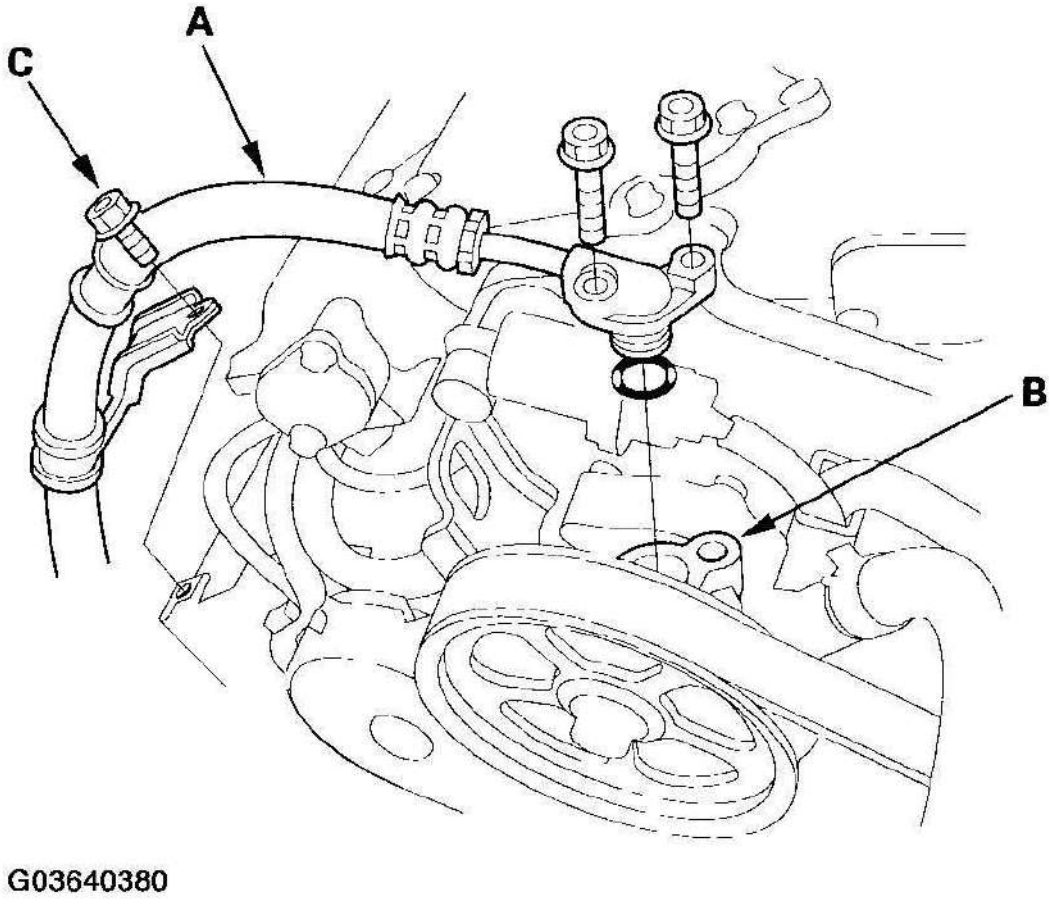


Fig. 245: Removing Power Steering Pump Outlet Hose At Pump
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).

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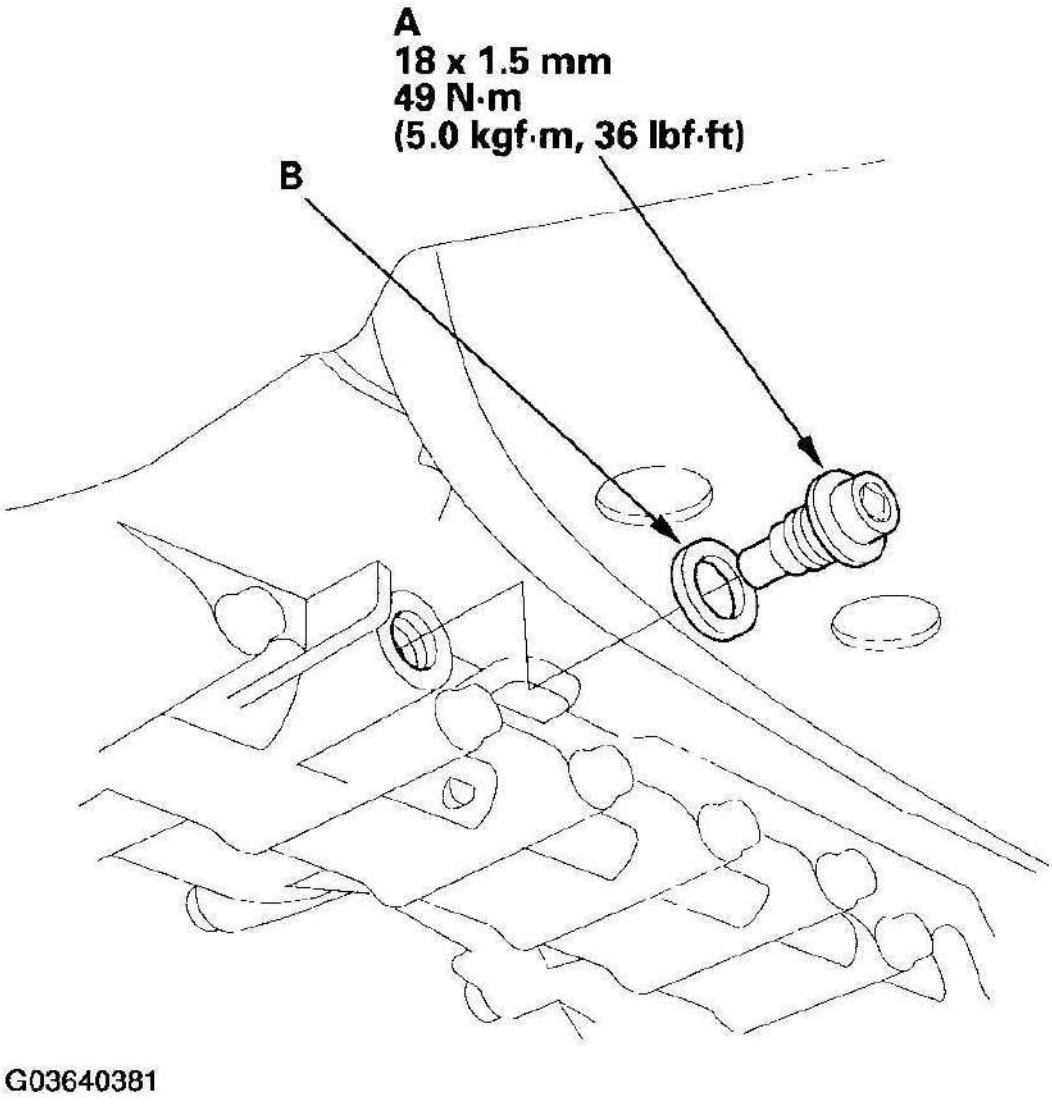


Fig. 246: Removing Drain Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Reinstall the drain plug with a new sealing washer (B).
15. Remove the transmission breather tube (A) from the breather pipe (B) at the transmission housing.

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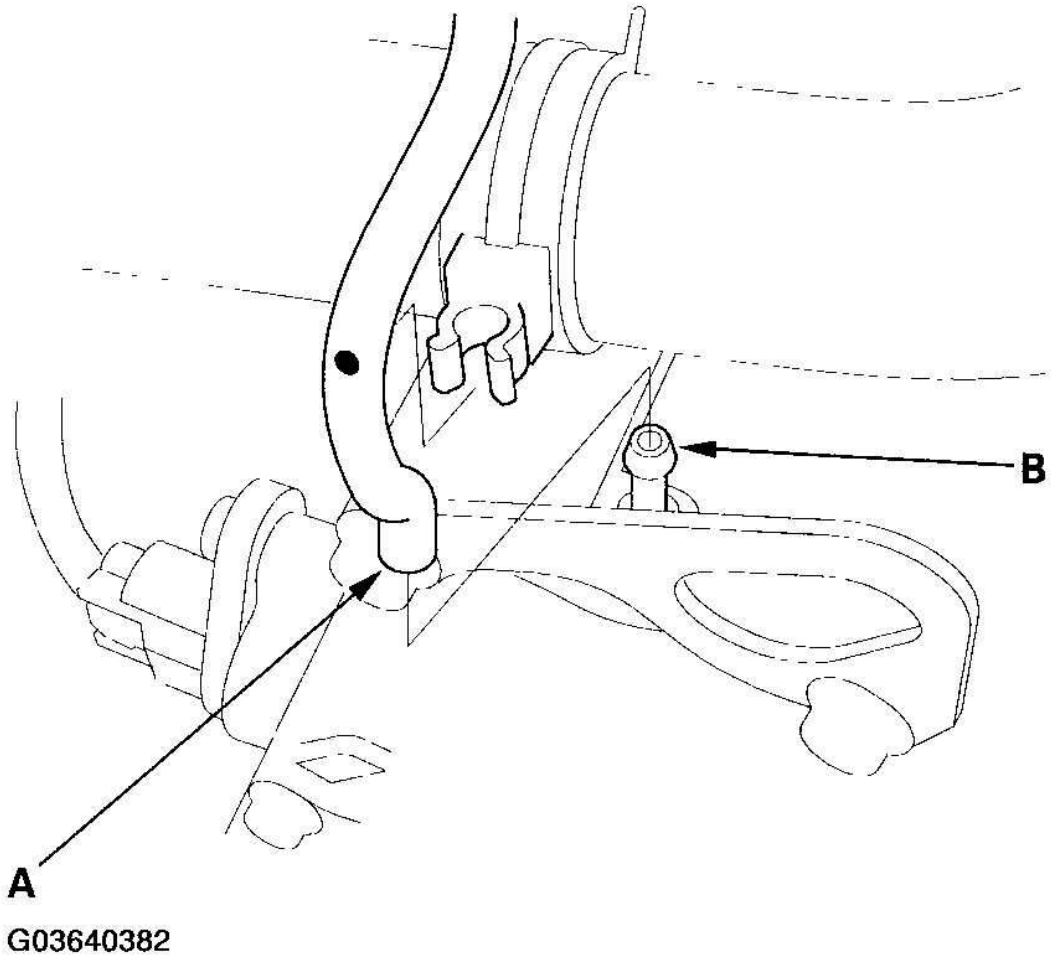


Fig. 247: Removing Transmission Breather Tube From Breather Pipe At Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Disconnect the solenoid harness connector (A), and remove the harness clamp (B) from the clamp bracket (C).

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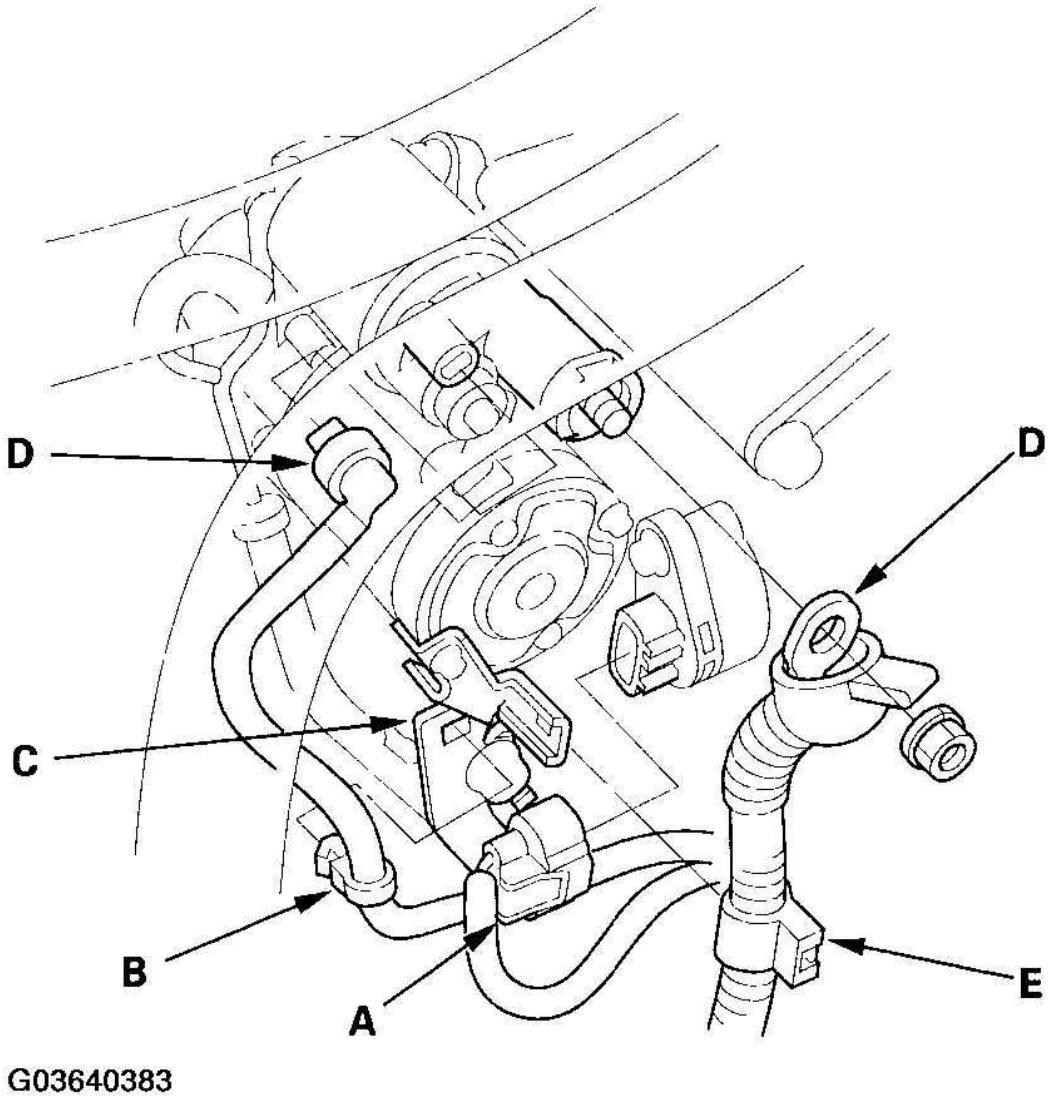


Fig. 248: Removing Harness Clamp From Clamp Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Remove the starter cables (D) from the starter, and remove the harness clamps (E) from the clamp bracket.
18. Remove the nuts securing the shift cable bracket (A).

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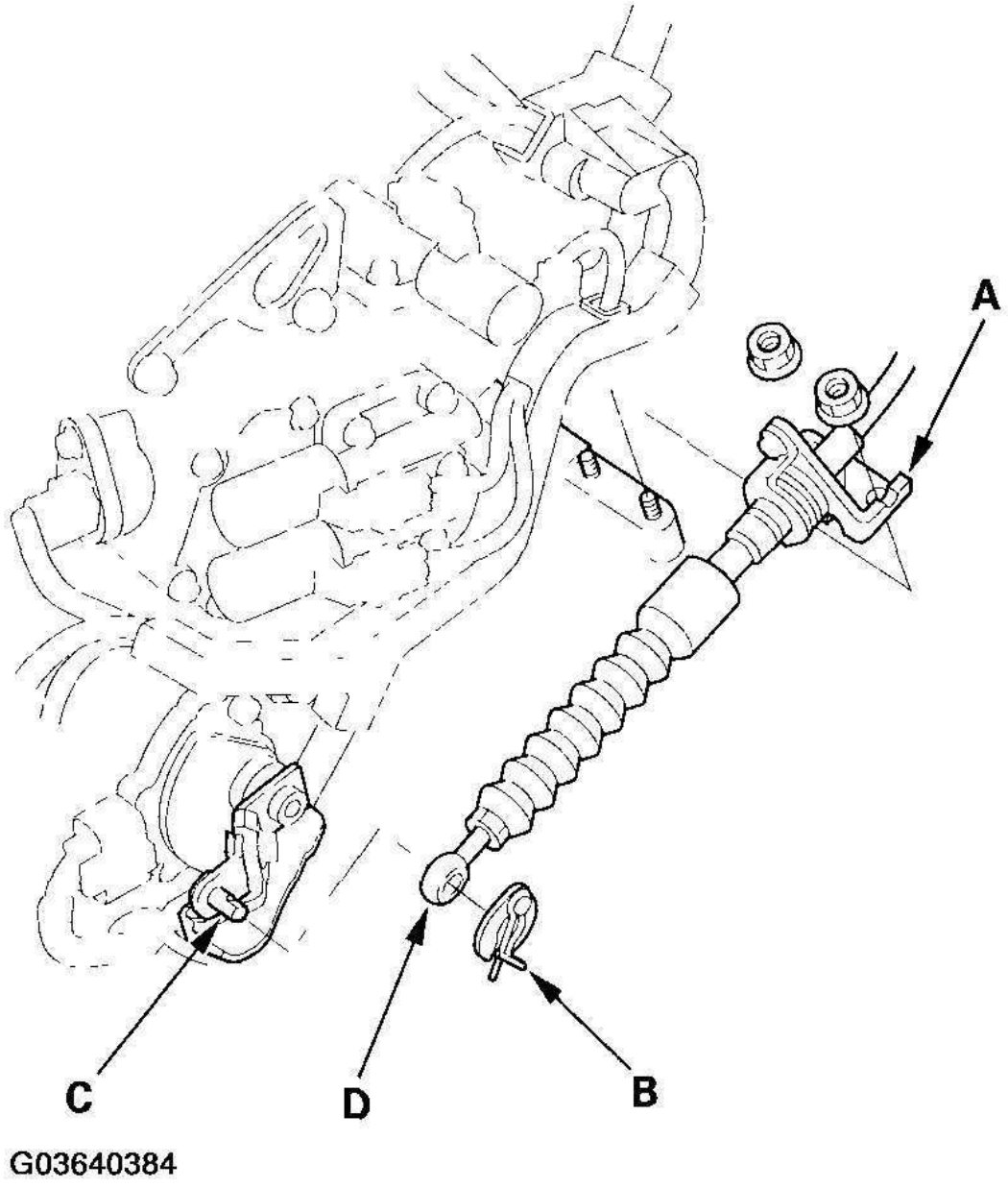


Fig. 249: Disconnecting Shift Cable End From Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Remove the spring clip/washer (B) from the control lever (C), and disconnect the shift cable end (D) from the control lever.
20. Remove the bolts securing the harness cover (A).

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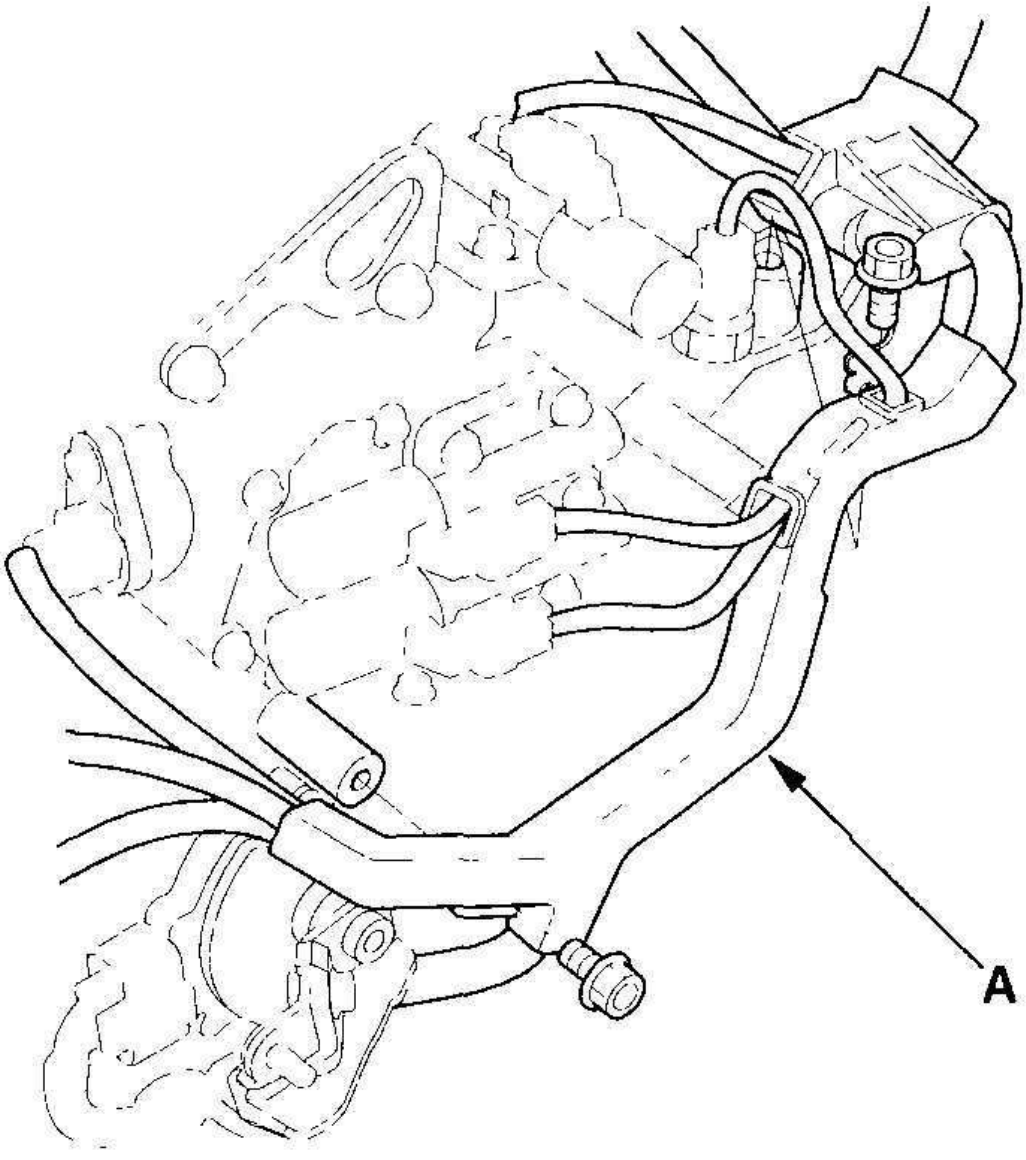


Fig. 250: Removing Bolts Securing Harness Cover (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Disconnect A/T clutch pressure control solenoid valve A connector, B connector, C connector, and 4th clutch transmission fluid pressure switch connector (D).

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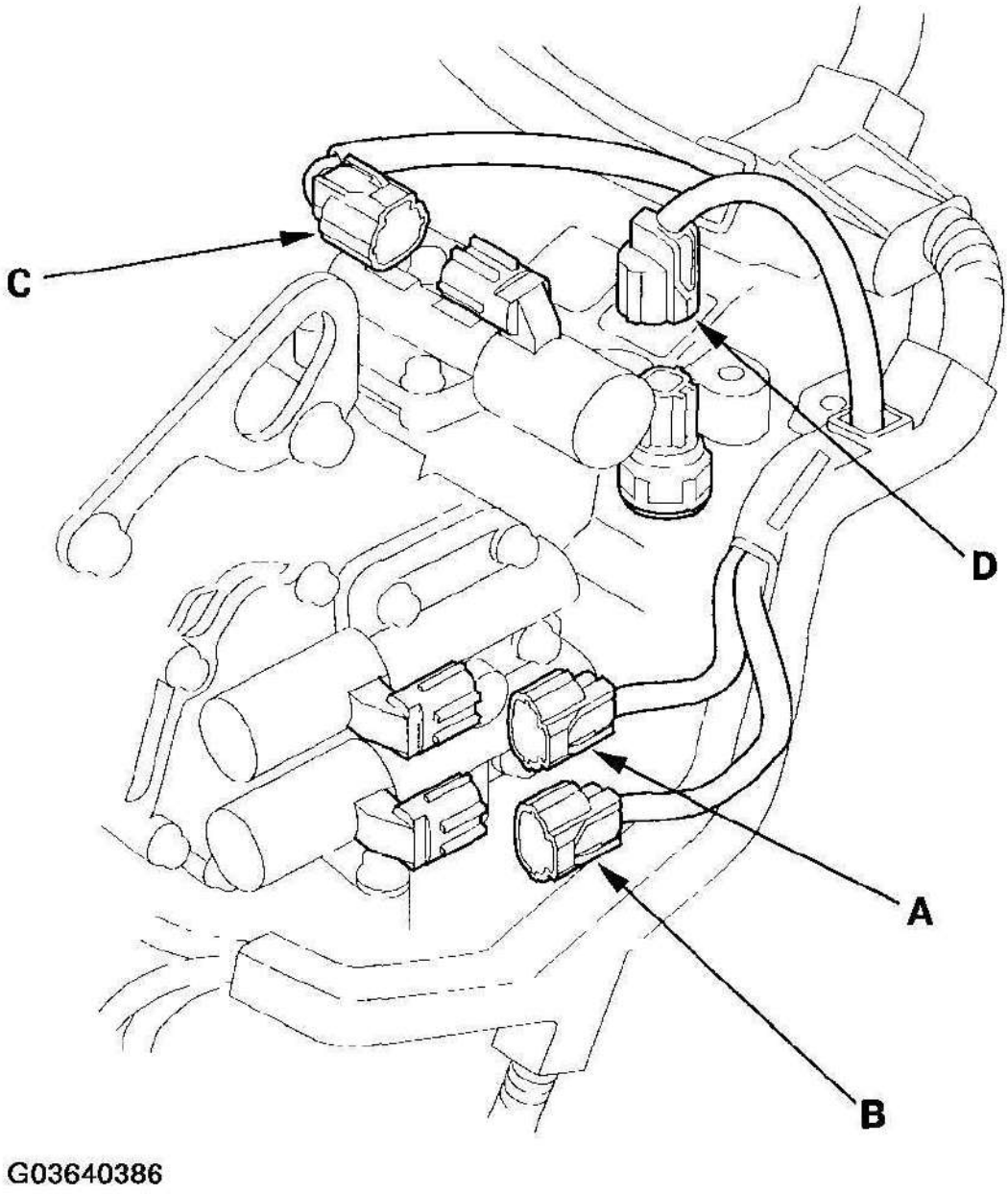


Fig. 251: Disconnecting A/T Clutch Pressure Control Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Remove the transmission ground cable (A).

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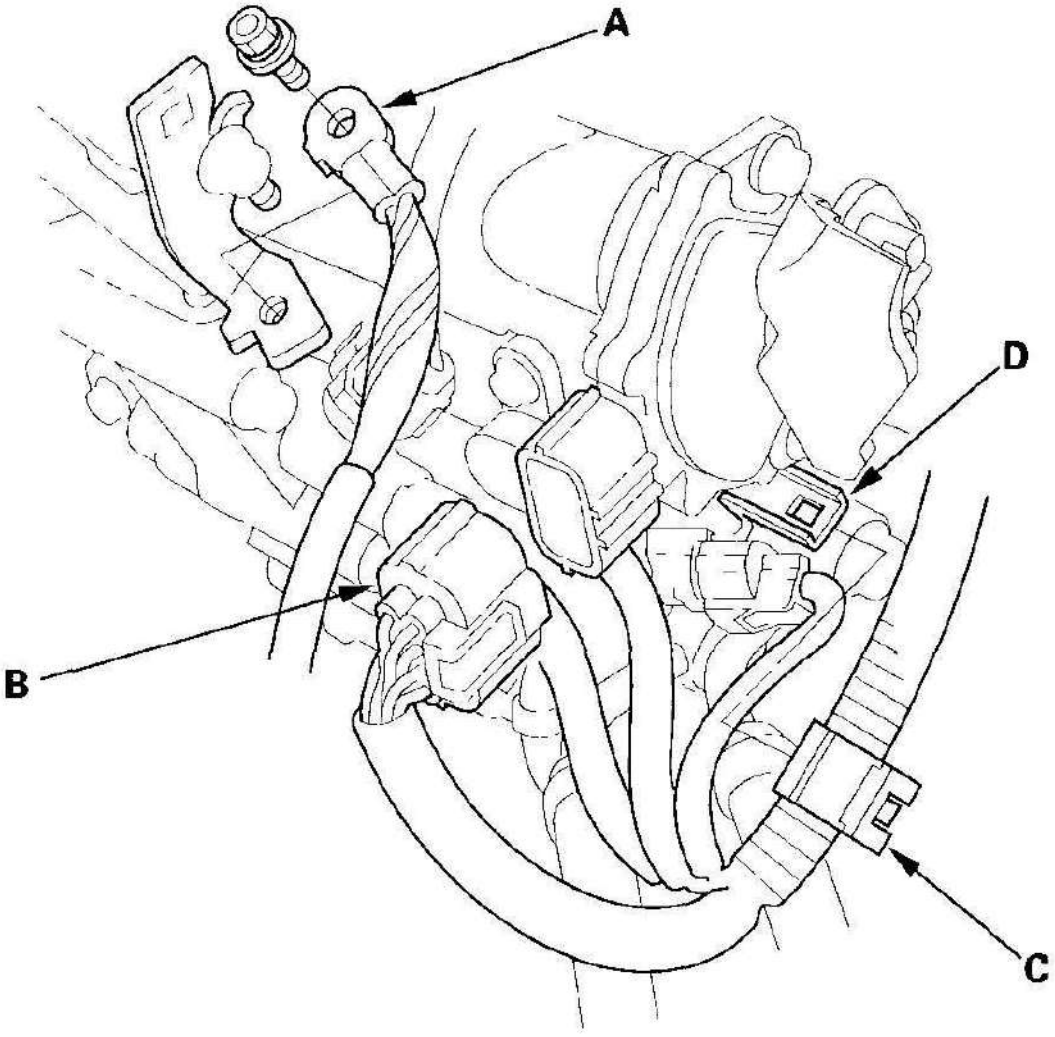


Fig. 252: Removing Transmission Ground Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Disconnect the transmission range switch connector (B), and remove the harness clamp (C) from the clamp bracket (D).
24. Remove the ATF cooler hoses (A) from the ATF cooler lines (B). Turn the ends of the cooler hoses up to prevent ATF from flowing out, then plug the cooler hoses and lines.

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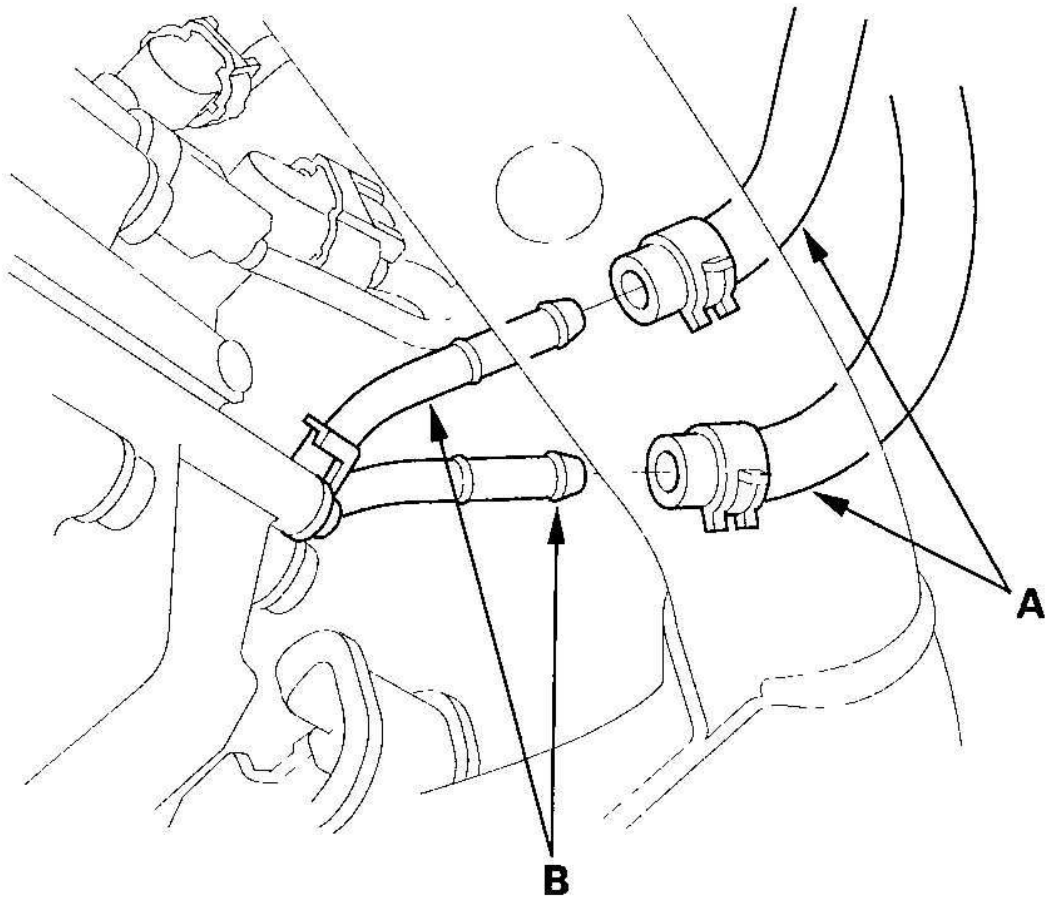


Fig. 253: Removing ATF Cooler Hoses From ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Check for any signs of leakage at the hose joints.
26. Disconnect the input shaft (mainshaft) speed sensor connector (A), output shaft (countershaft) speed sensor connector (B), 3rd clutch transmission fluid pressure switch connector (C), and ATF temperature sensor connector (D).

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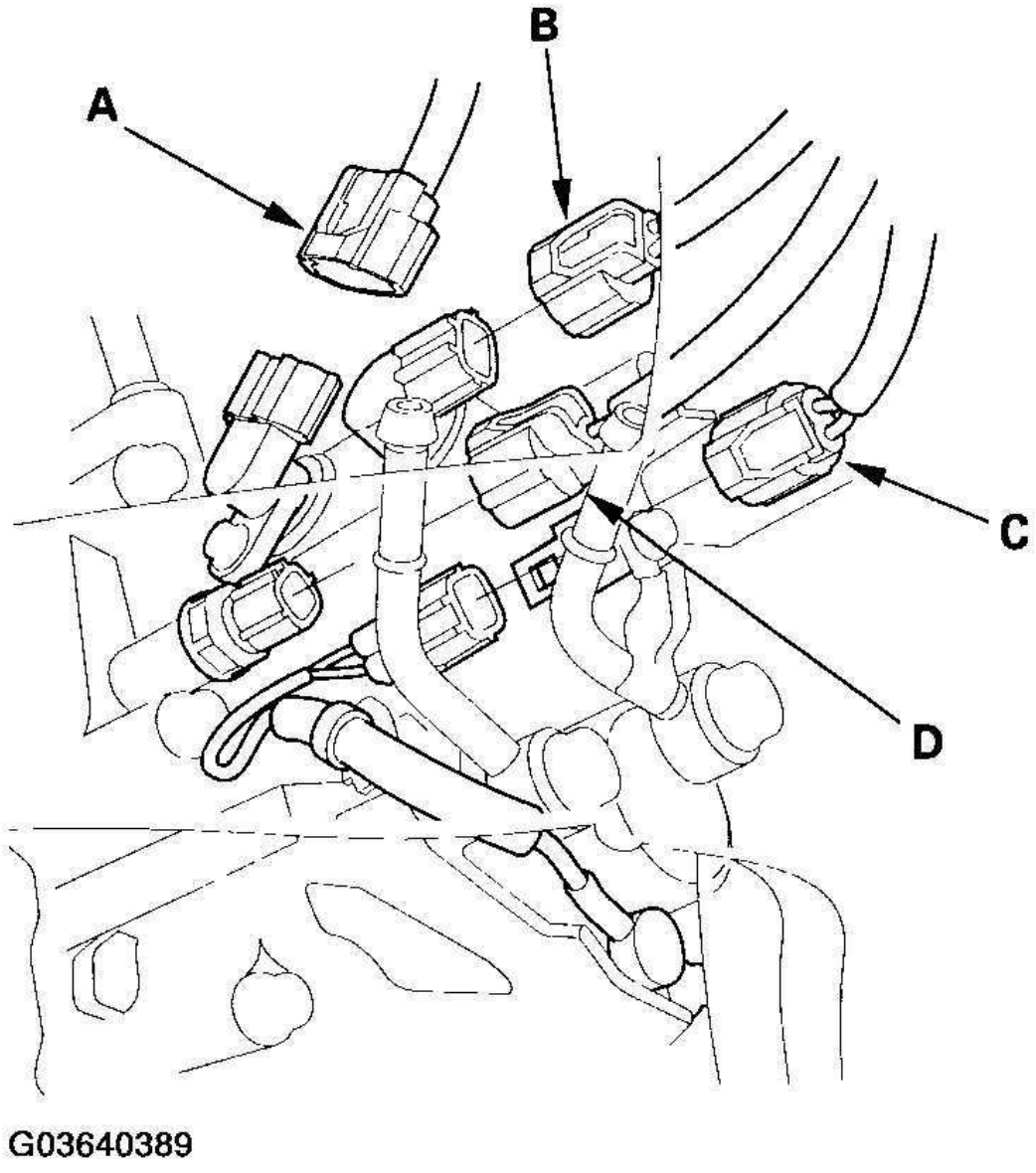
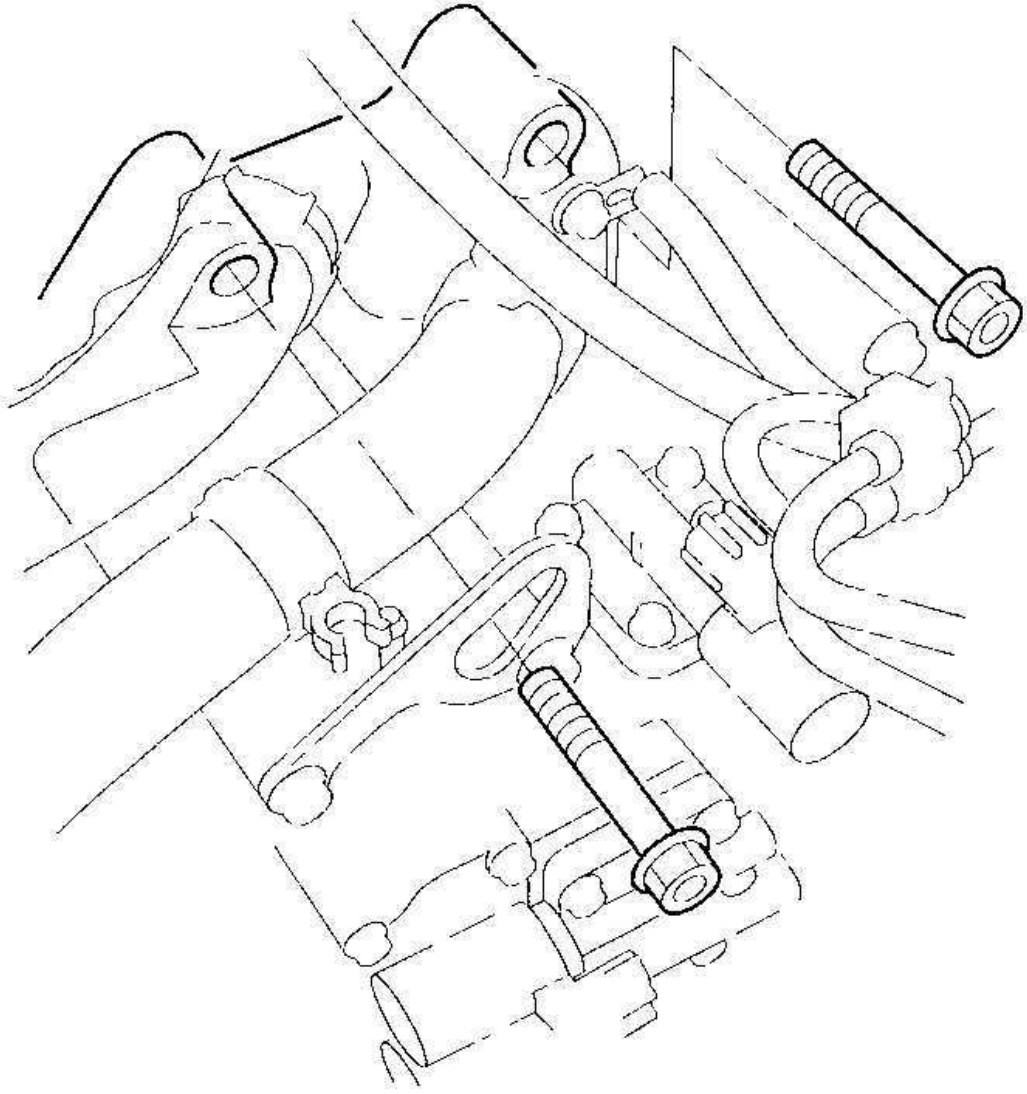


Fig. 254: Disconnecting Input Shaft (Mainshaft) Speed Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Remove the upper transmission housing mounting bolts.

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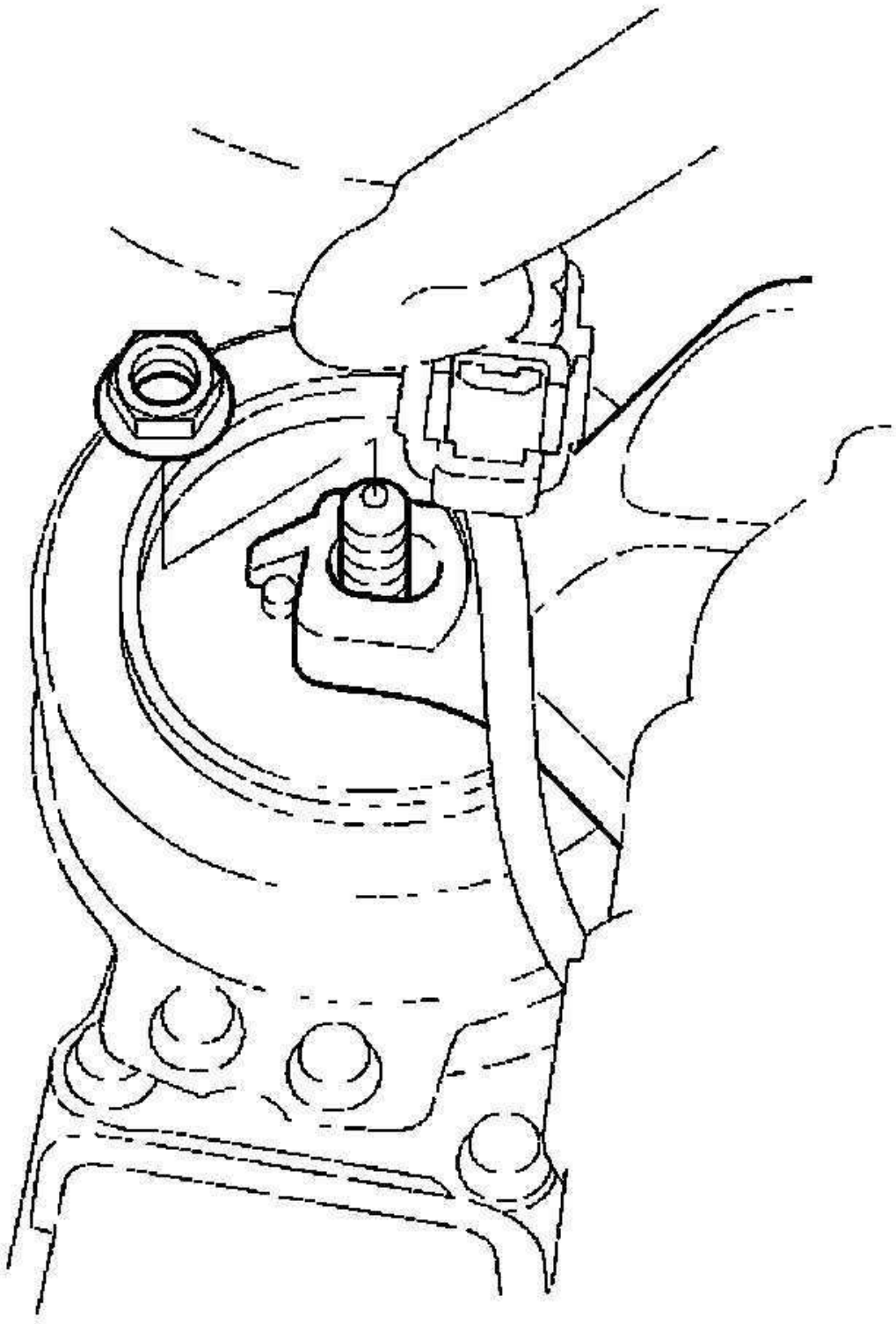


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Fig. 255: Removing Upper Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Remove the front mount nut.

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Fig. 256: Removing Front Mount Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Remove the connector bracket from the engine front cylinder head; use the bracket bolt to attach engine balancer bar front arm.

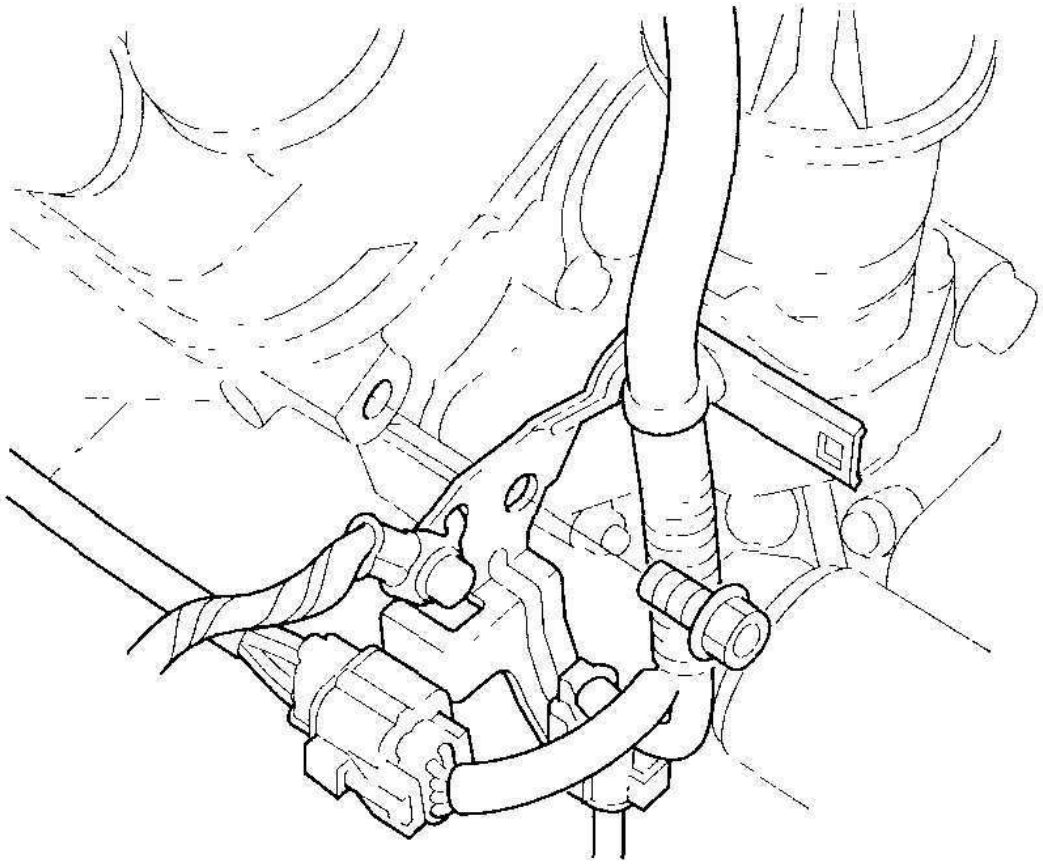


Fig. 257: Removing Connector Bracket From Engine Front Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Remove the harness clamp bracket from the engine rear cylinder head; use the bracket bolt to attach engine balancer bar rear arm.

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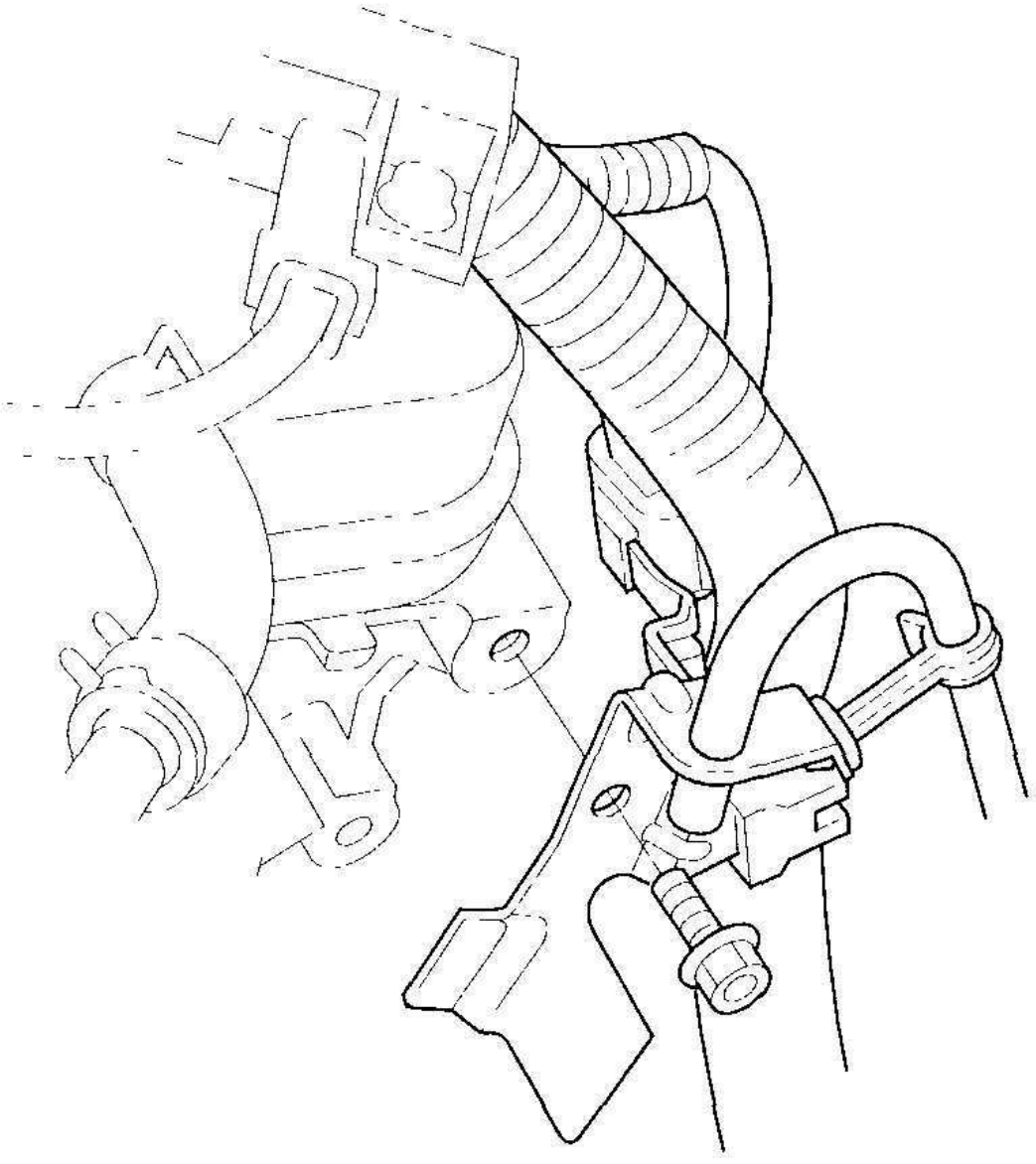


Fig. 258: Removing Harness Clamp Bracket From Engine Rear Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

31. Lift and support the engine with engine hanger (A) and engine balancer bar (B).

    Attach the front arm (C) to the front cylinder head with a spacer (D) and the connector bracket bolt (10 x 1.25 mm) (E). Attach the rear arm (F) to the rear cylinder head with the harness clamp bracket bolt (8 x

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1.25 mm) (G).

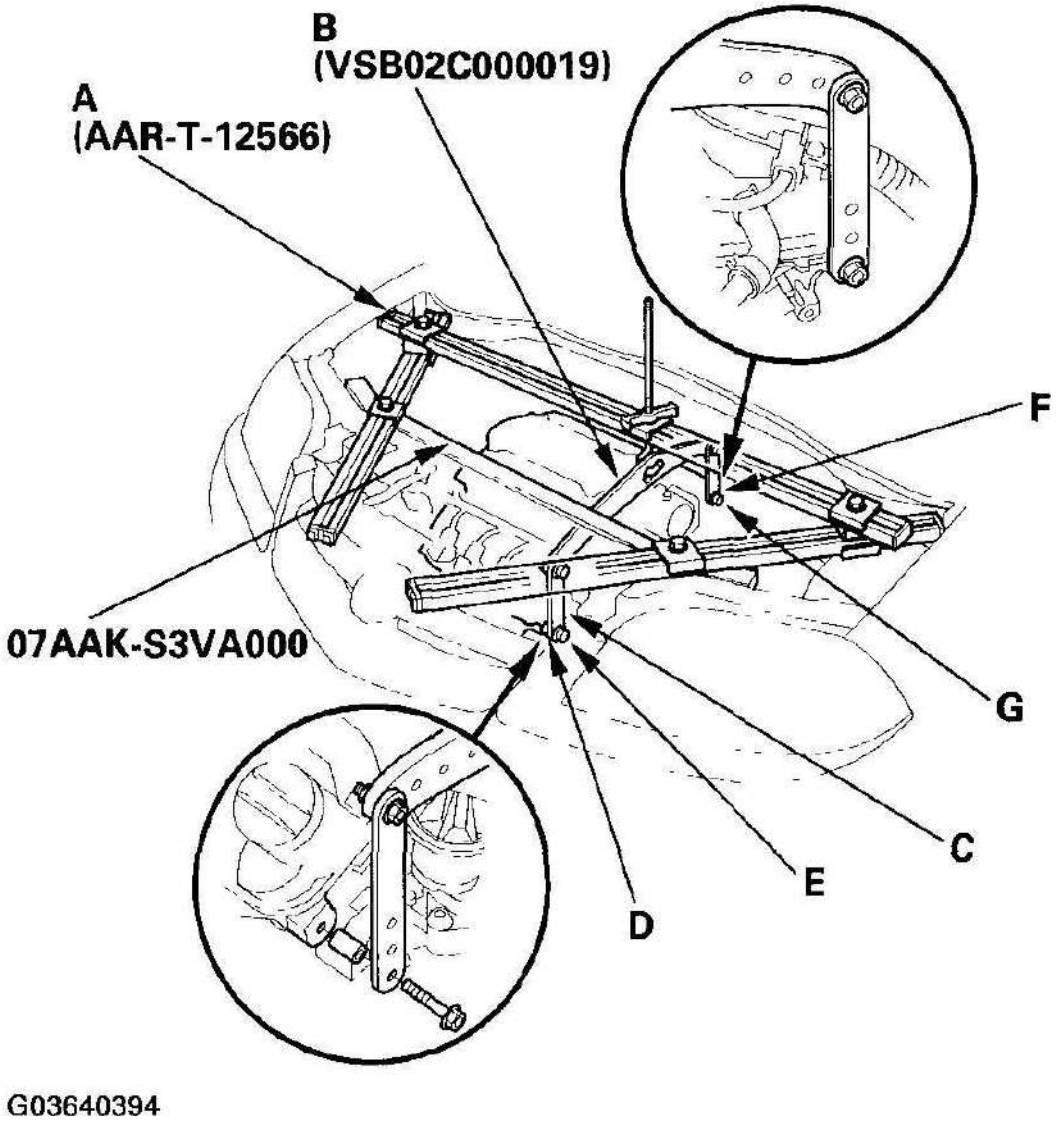


Fig. 259: Lifting And Support Engine With Engine Hanger And Engine Balancer Bar
Courtesy of AMERICAN HONDA MOTOR CO., INC.

32. Remove the front subframe stiffener.

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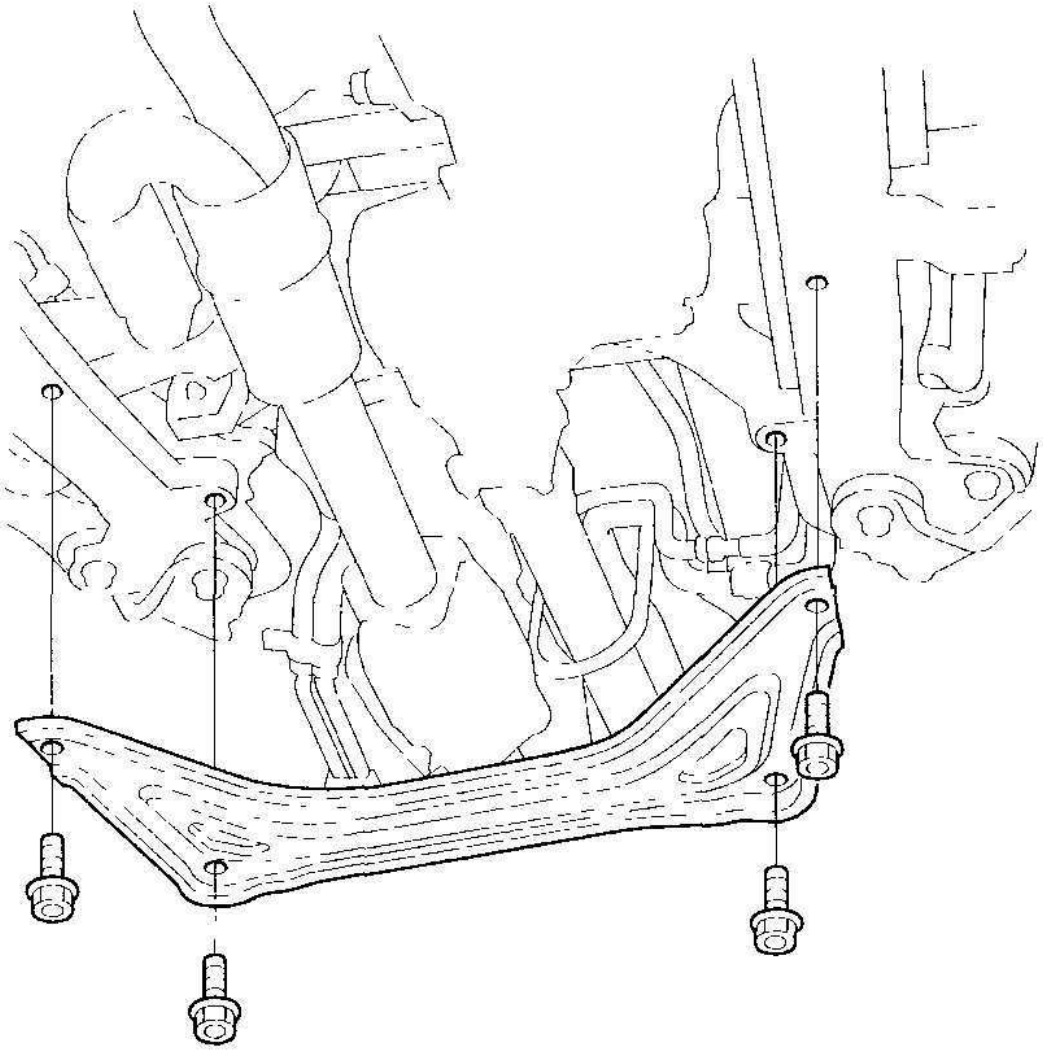


Fig. 260: Removing Front Subframe Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

33. Remove exhaust pipe A.

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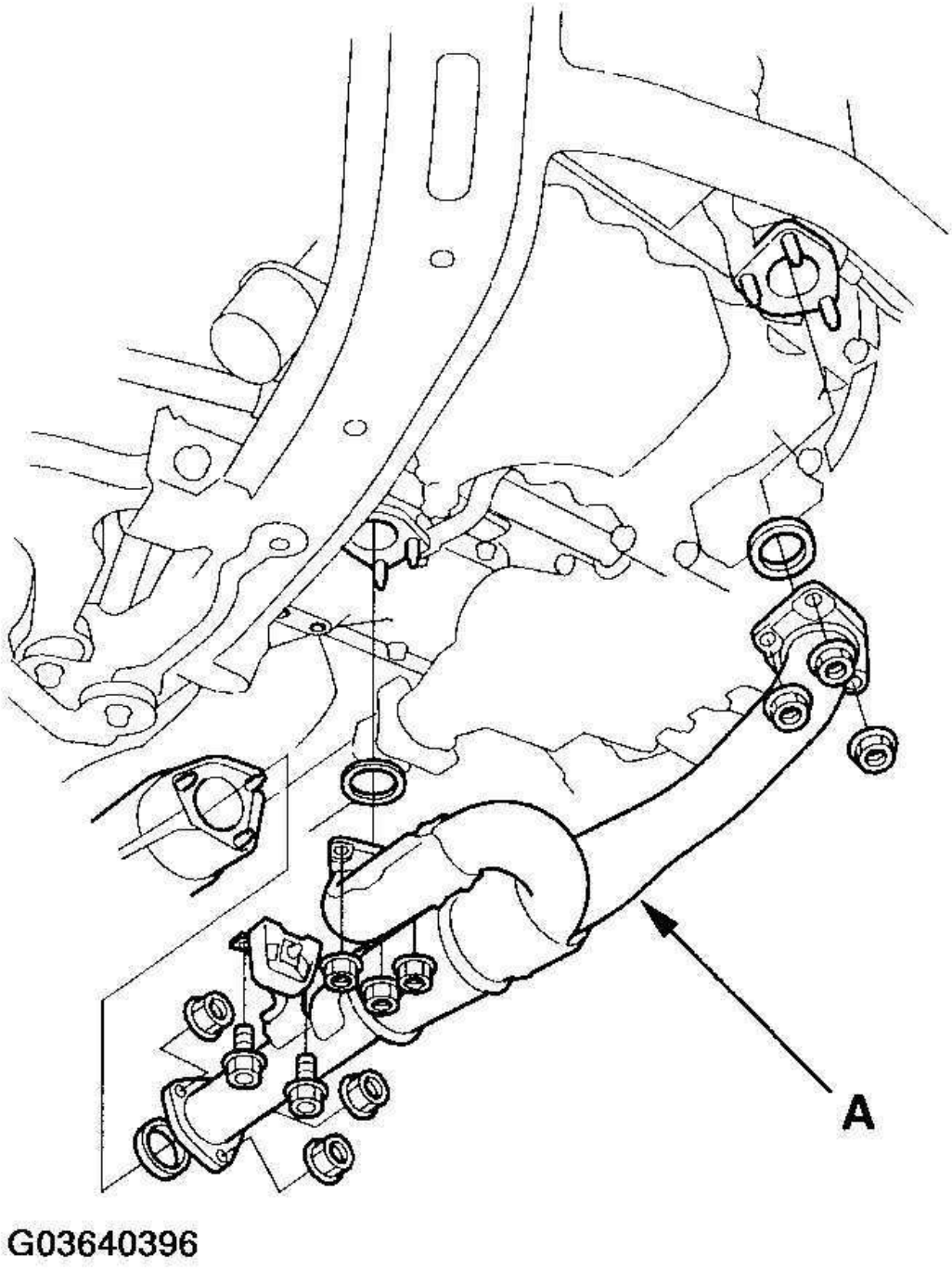


Fig. 261: Removing Exhaust Pipe A
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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34. Remove the spring clips (A) and castle nuts (B), and separate the lower arms (C) from the knuckles (D) (see step 13).

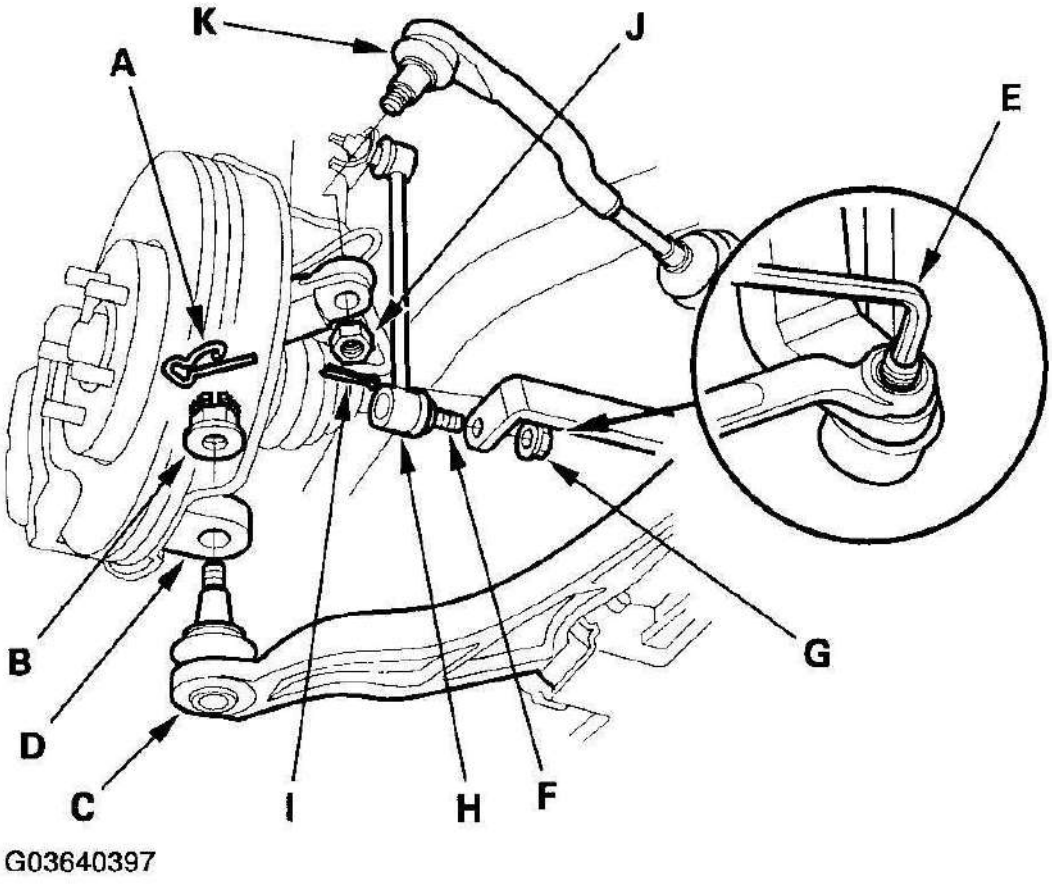


Fig. 262: Separating Lower Arms From Knuckles
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Insert a 6 mm Allen wrench (E) in the top of the ball joint pin (F), and remove the nut (G), then separate the stabilizer link (H).
36. Remove the cotter pins (I) and nuts (J), and separate the tie-rod end ball joints (K) from the knuckles (see step 11).
37. Pry the left driveshaft out of the differential and the right driveshaft from the intermediate shaft (see step 10 on **LEFT DRIVESHAFT**).
38. Remove the bolt securing the transfer breather tube bracket (A), and disconnect the breather tube (B) from the breather pipe (C) on the transfer assembly.

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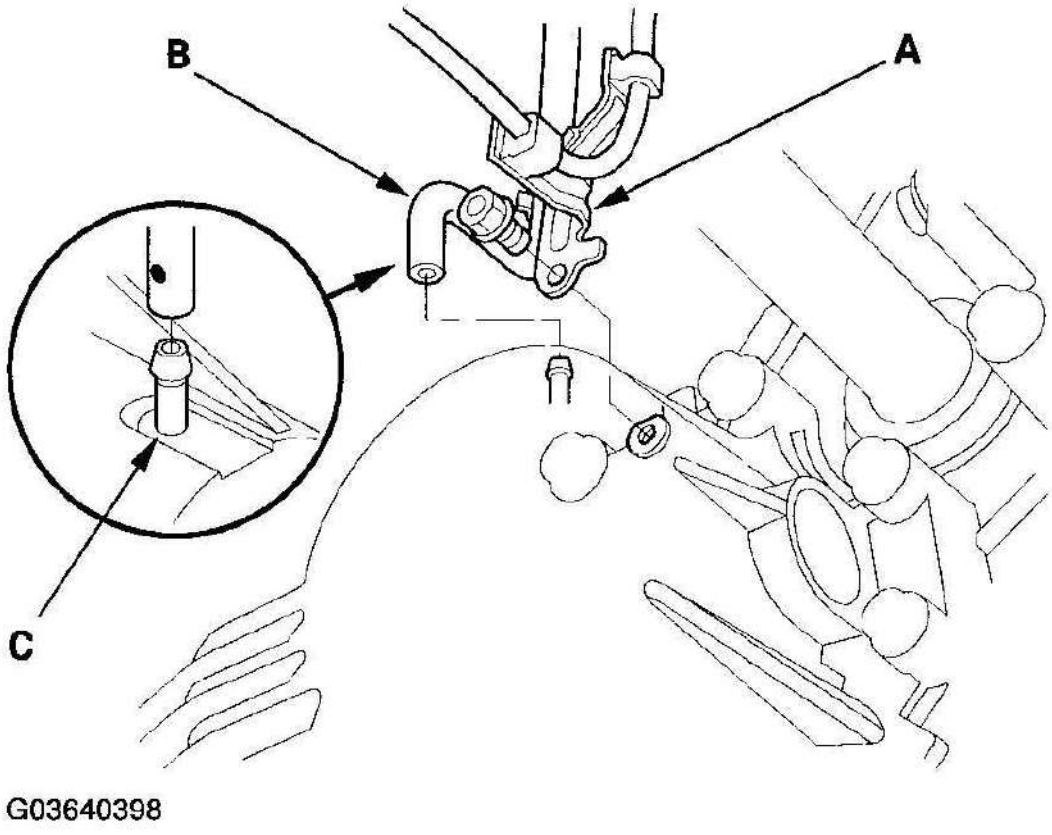


Fig. 263: Disconnecting Breather Tube From Breather Pipe On Transfer Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

39. Make a reference mark (A) across the propeller shaft (B) and the transfer companion flange (C).

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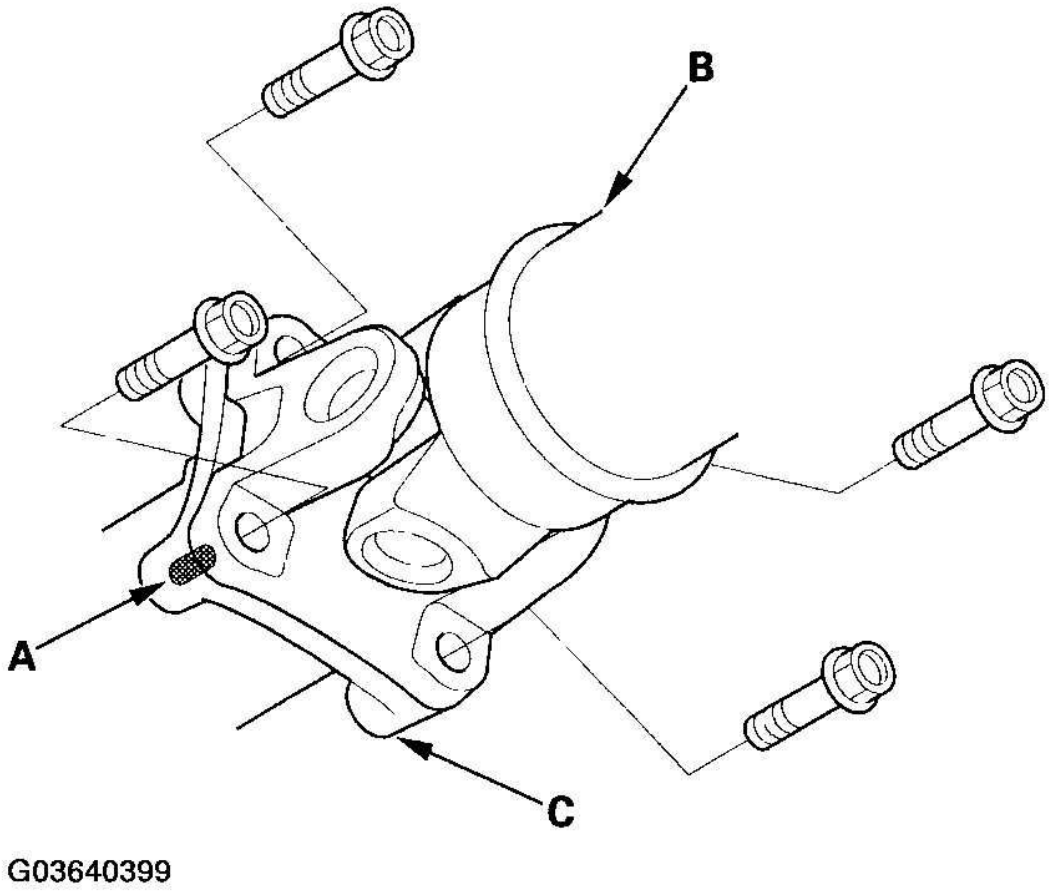
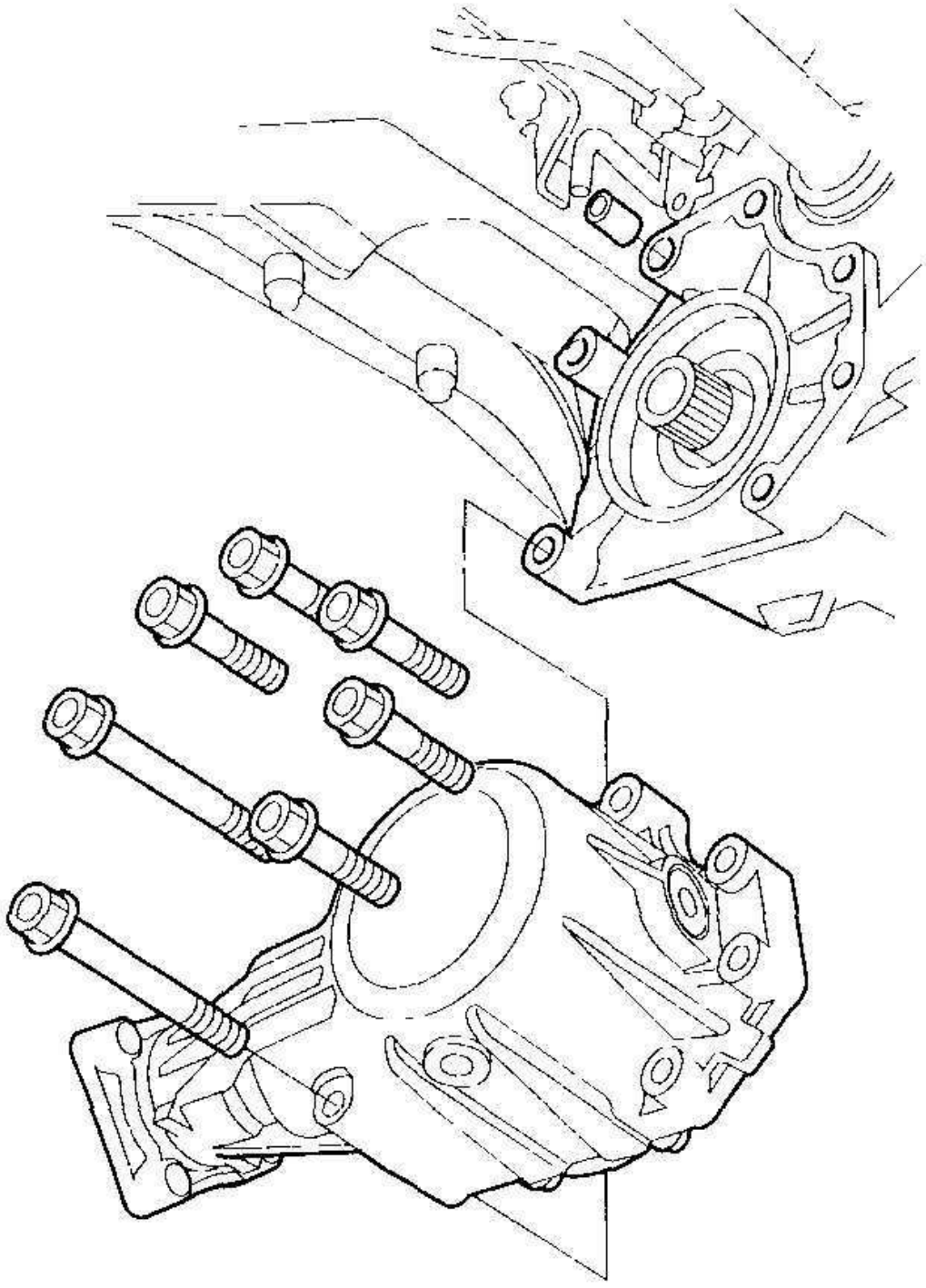


Fig. 264: Marking Reference Mark Across Propeller Shaft And Transfer Companion Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

40. Separate the propeller shaft from the transfer assembly.
41. Remove the transfer assembly from the transmission.

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Fig. 265: Removing Transfer Assembly From Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Remove the torque converter cover (A), then remove the eight drive plate bolts (B) one at a time while rotating the crankshaft pulley.

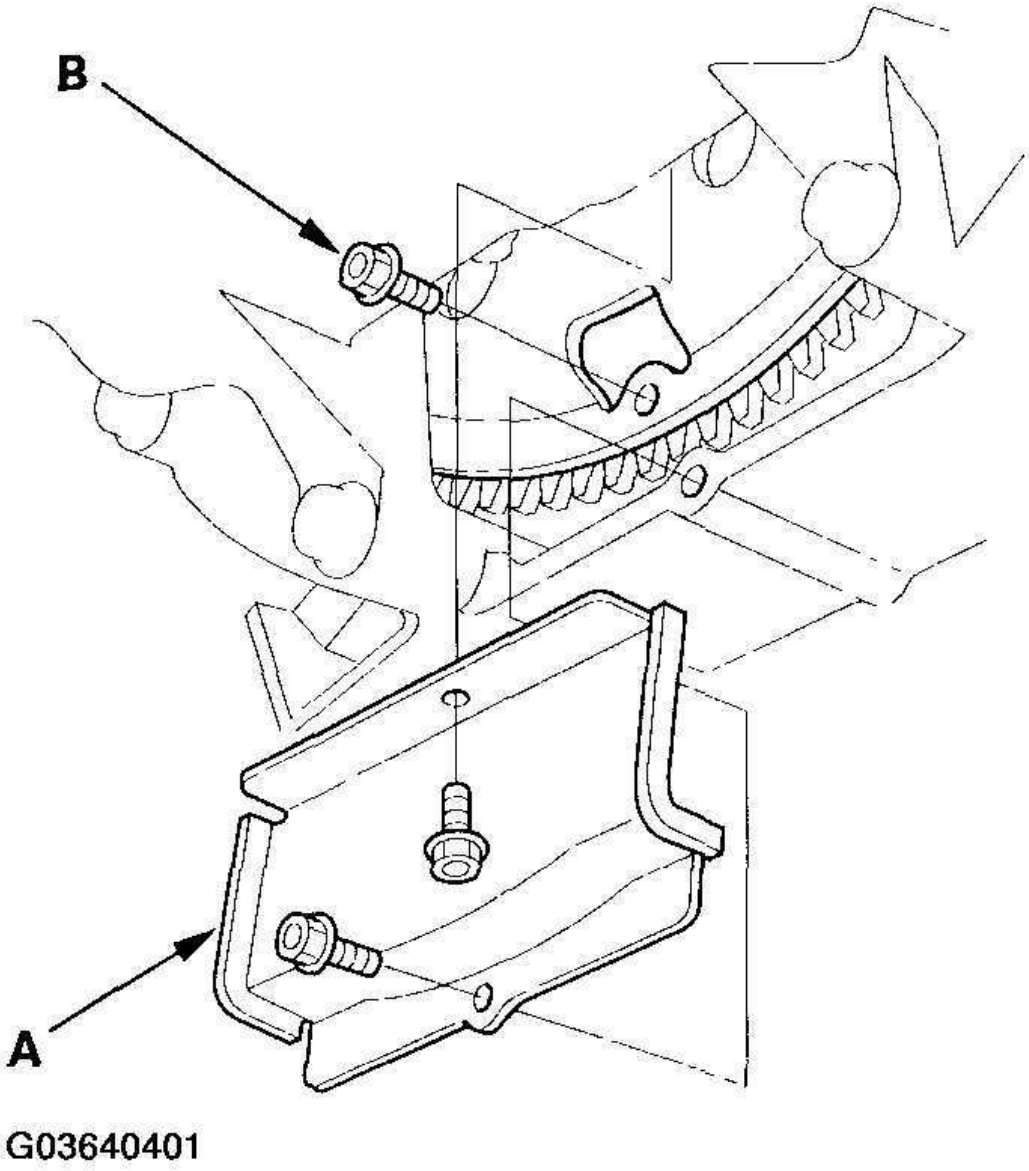


Fig. 266: Removing Torque Converter Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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43. Disconnect the power steering pressure switch connector.

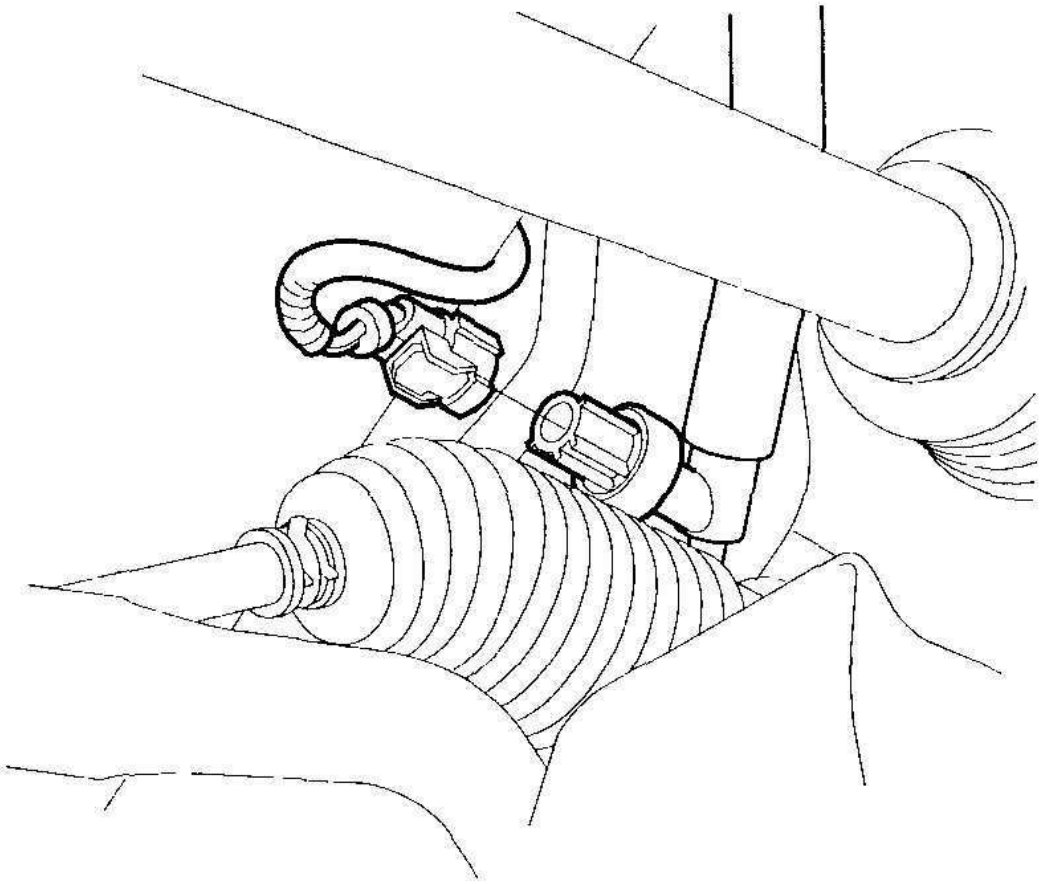


Fig. 267: Disconnecting Power Steering Pressure Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Remove the power steering hose clamp (A), then disconnect the hose (B) from the line (C) at the right front of the subframe (D).

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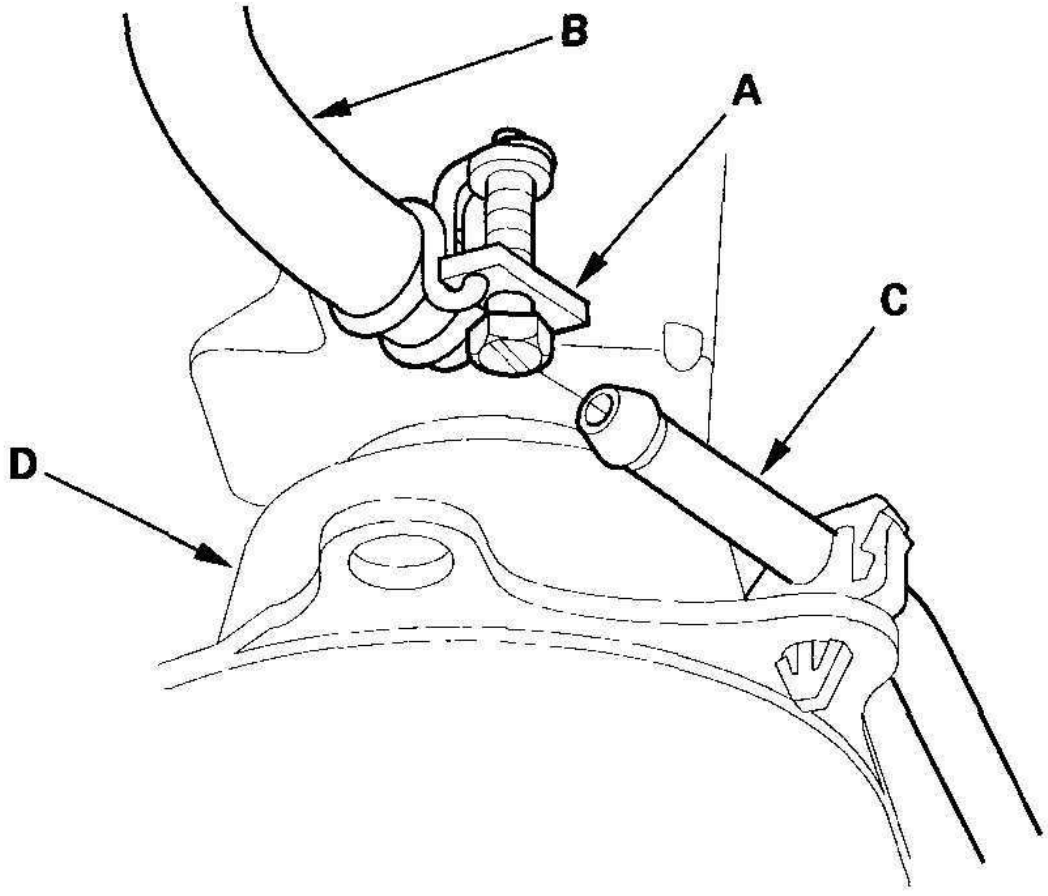


Fig. 268: Disconnecting Hose From Line At Right Front Of Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Disconnect the vacuum tube (A) from the vacuum line (B) at the front mount.

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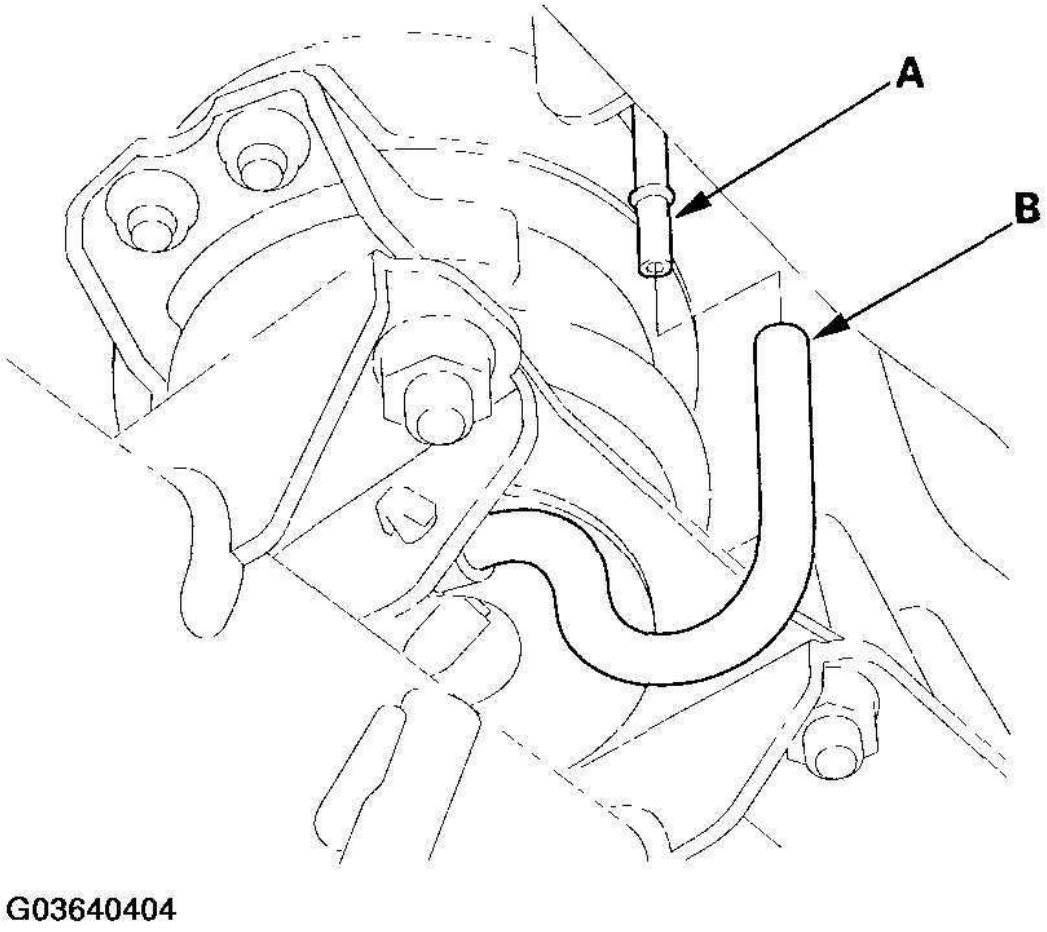


Fig. 269: Disconnecting Vacuum Tube From Vacuum Line At Front Mount
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Remove the transmission lower mount nuts (four).

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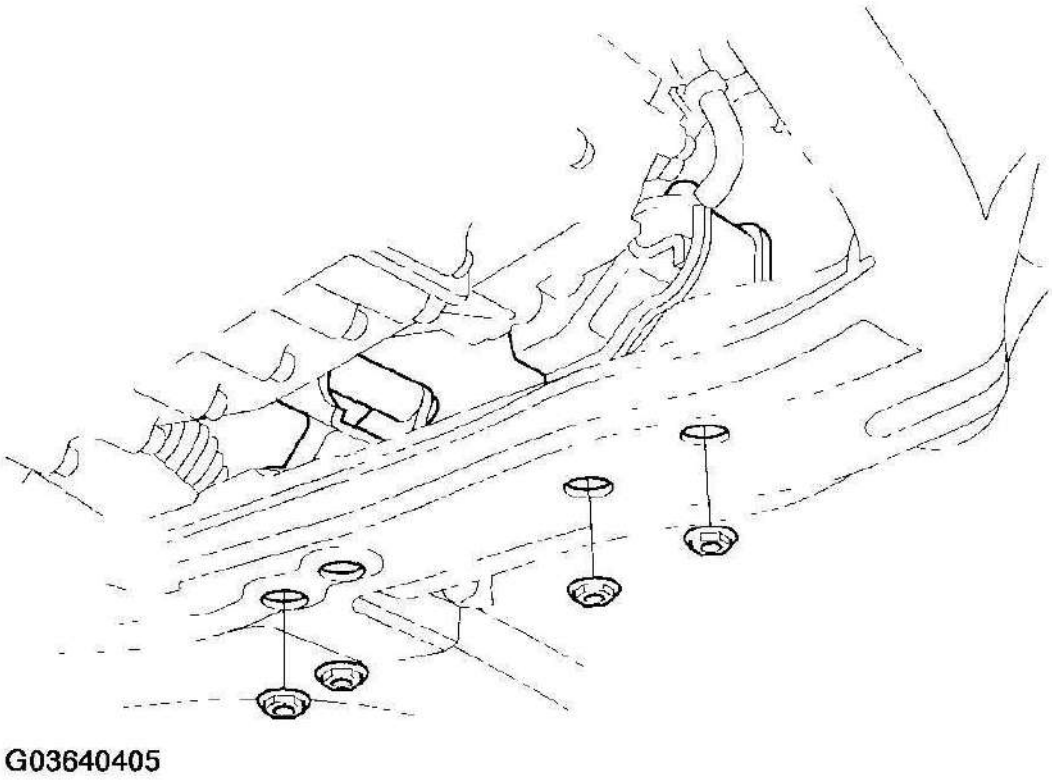


Fig. 270: Removing Transmission Lower Mount Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Make reference marks (A) on the body across the marks (B) on the edge of the front subframe (C).

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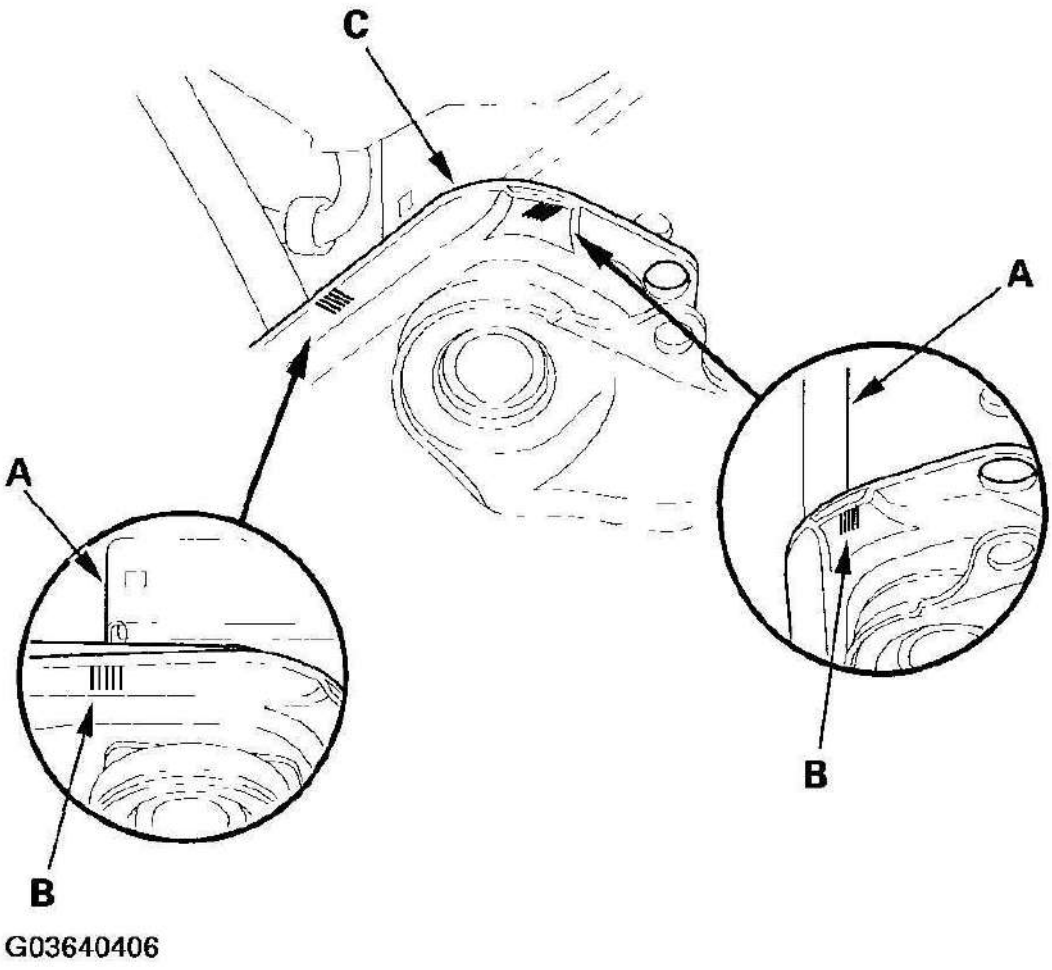


Fig. 271: Marking Reference Marks On Body Across Marks On Edge Of Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Remove the rear mount bracket bolts (three).

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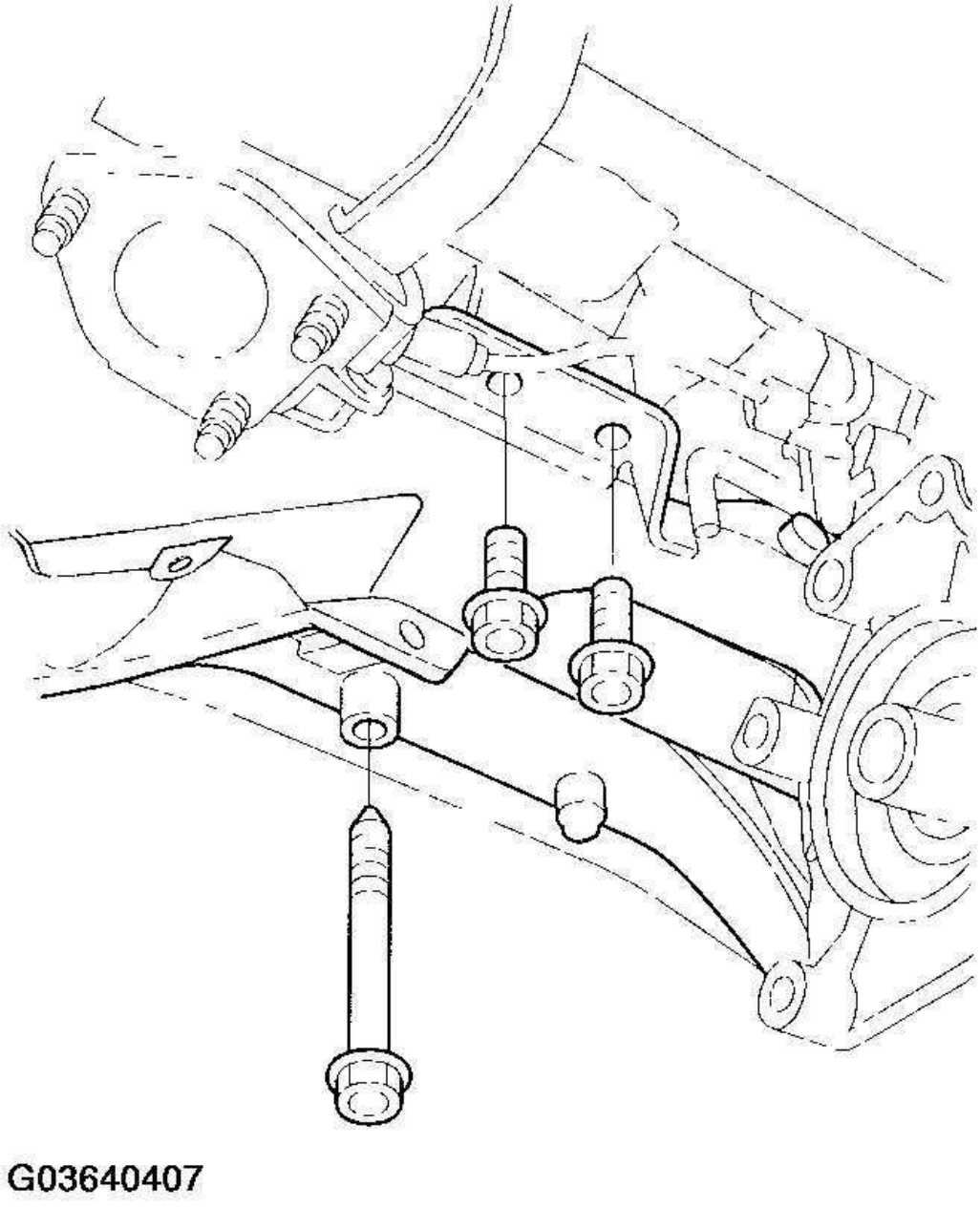


Fig. 272: Removing Rear Mount Bracket Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

49. Loosen the four bolts (A) holding the adjustable arms (B) of the front subframe adapter (T/N EQS02 BMDXB0) to its center plate.

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NOTE: The adapter is designed to be used the Acura transmission jack (model number LSL-W 93714) or powertrain lift (model number OTC-1585), both available through the Acura Tool and Equipment Program. It will also work with most commercially available transmission jack.

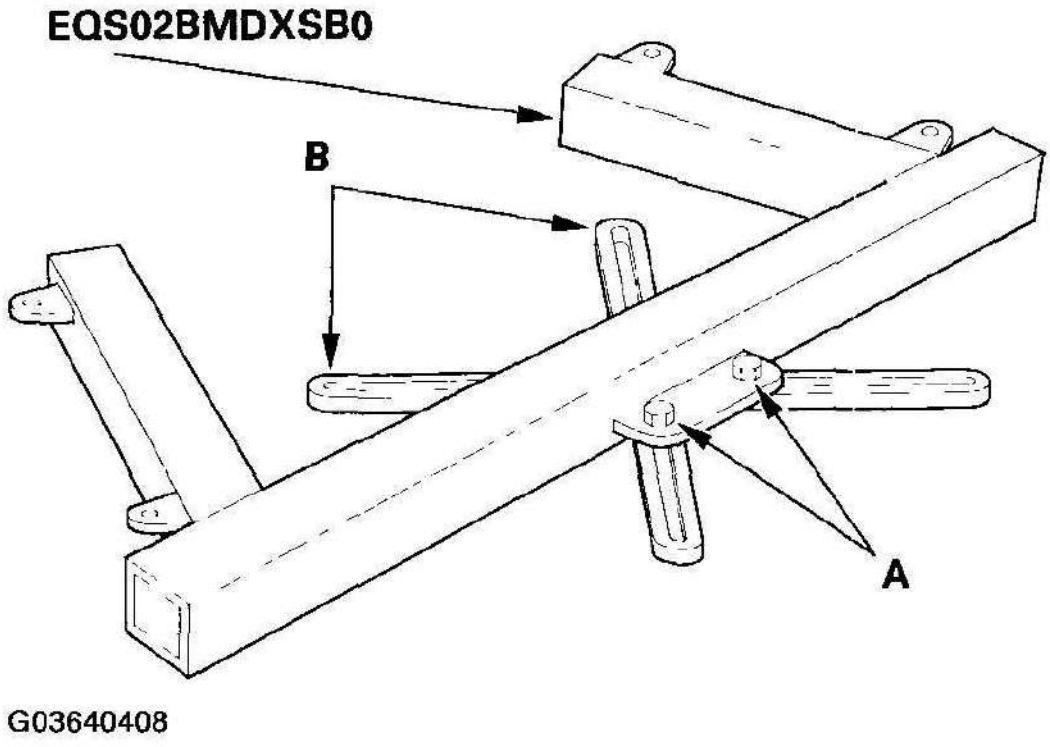


Fig. 273: Identifying Front Subframe Adapter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Line up the slots in the arms with the bolt holes on the corner of the jack base, then attach the adapter to the jack base with the bolts (A) that came with the jack. Tighten all bolts securely.

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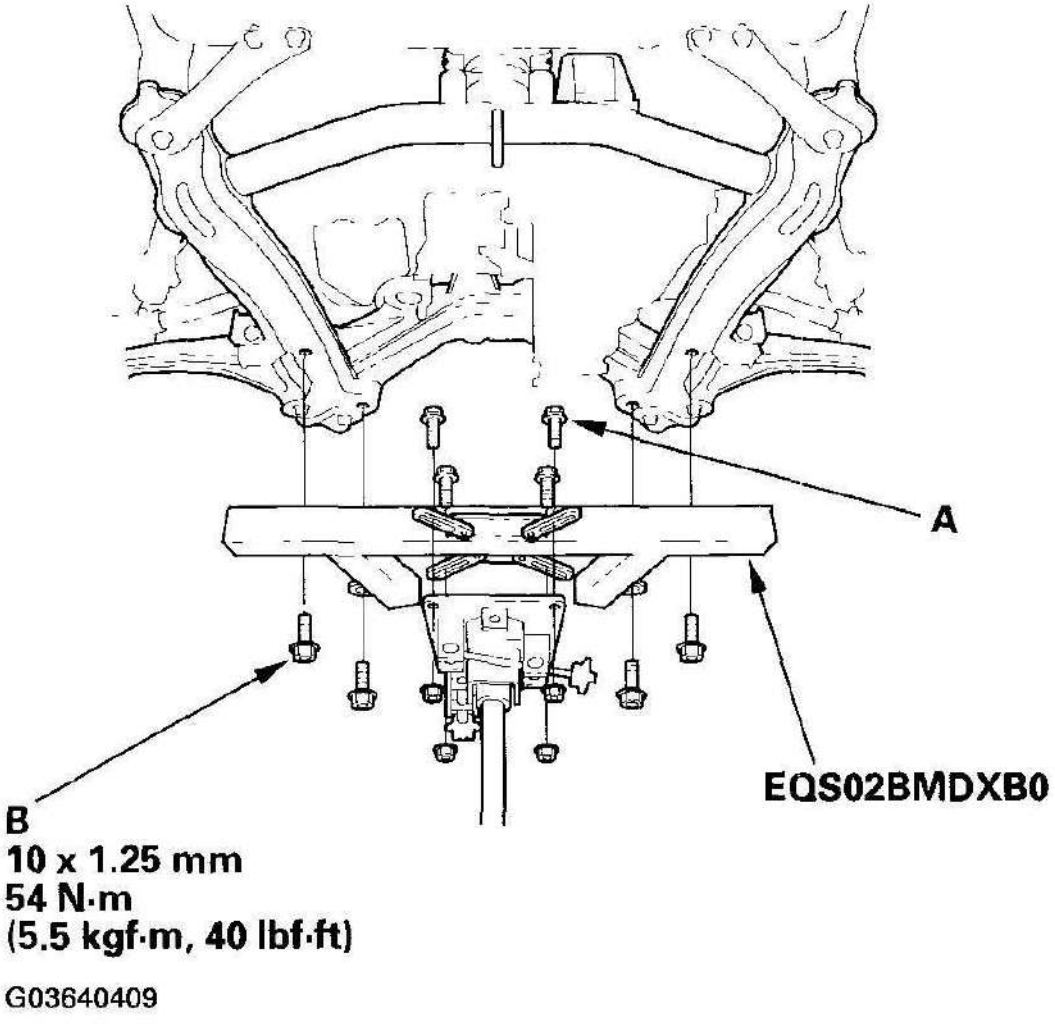


Fig. 274: Attaching Adapter To Jack Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

51. Raise the jack to vehicle height, then attach the adapter to the front subframe using the subframe stiffener mounting bolts (B) and bolt holes.
52. Remove the 12 x 1.25 mm bolts (six) (A) securing the subframe stiffeners (B), the four front subframe mounting bolts (C), and the stiffeners, then lower the front subframe (D).

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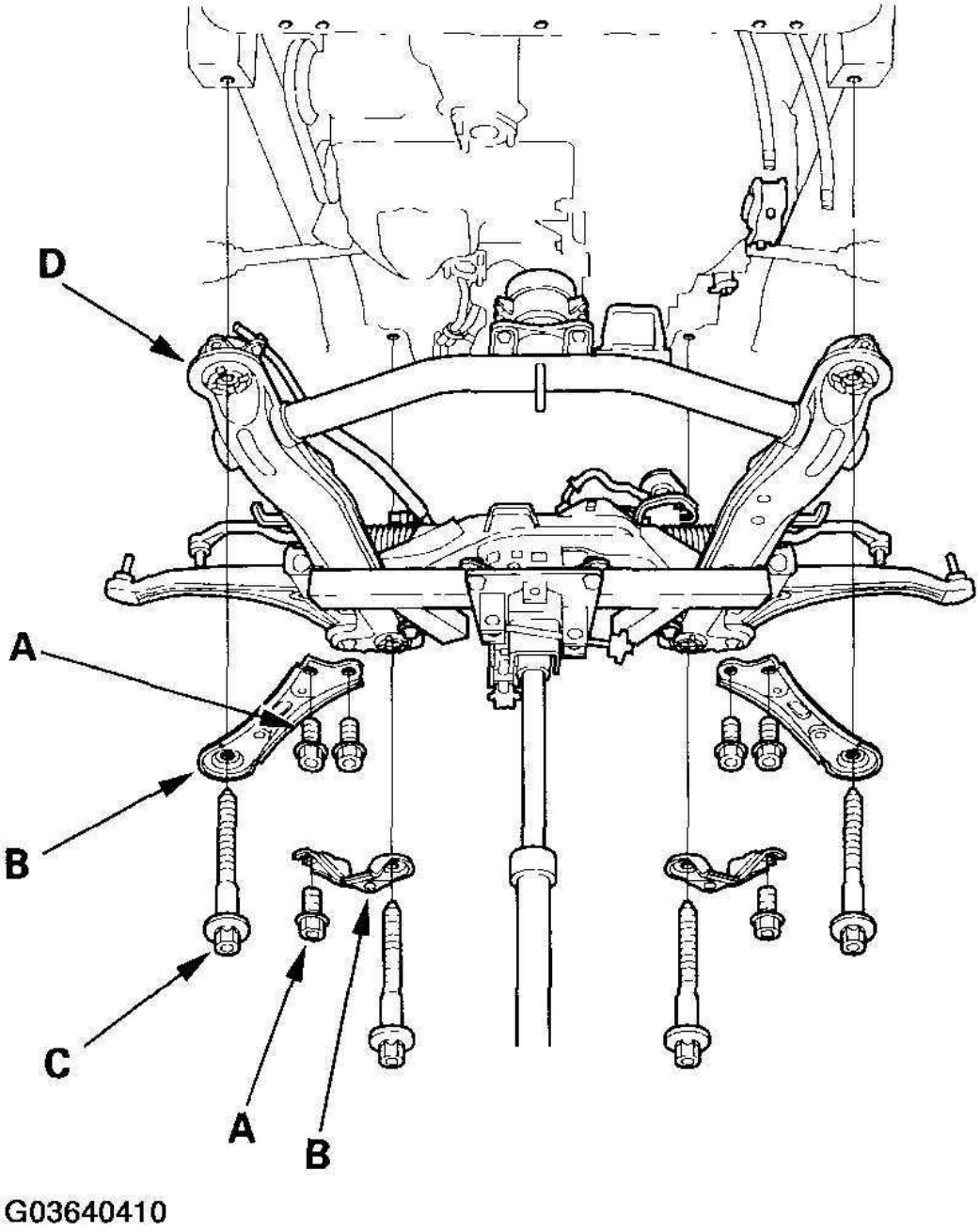


Fig. 275: Attaching Adapter To Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

53. Remove the transmission lower mounts.

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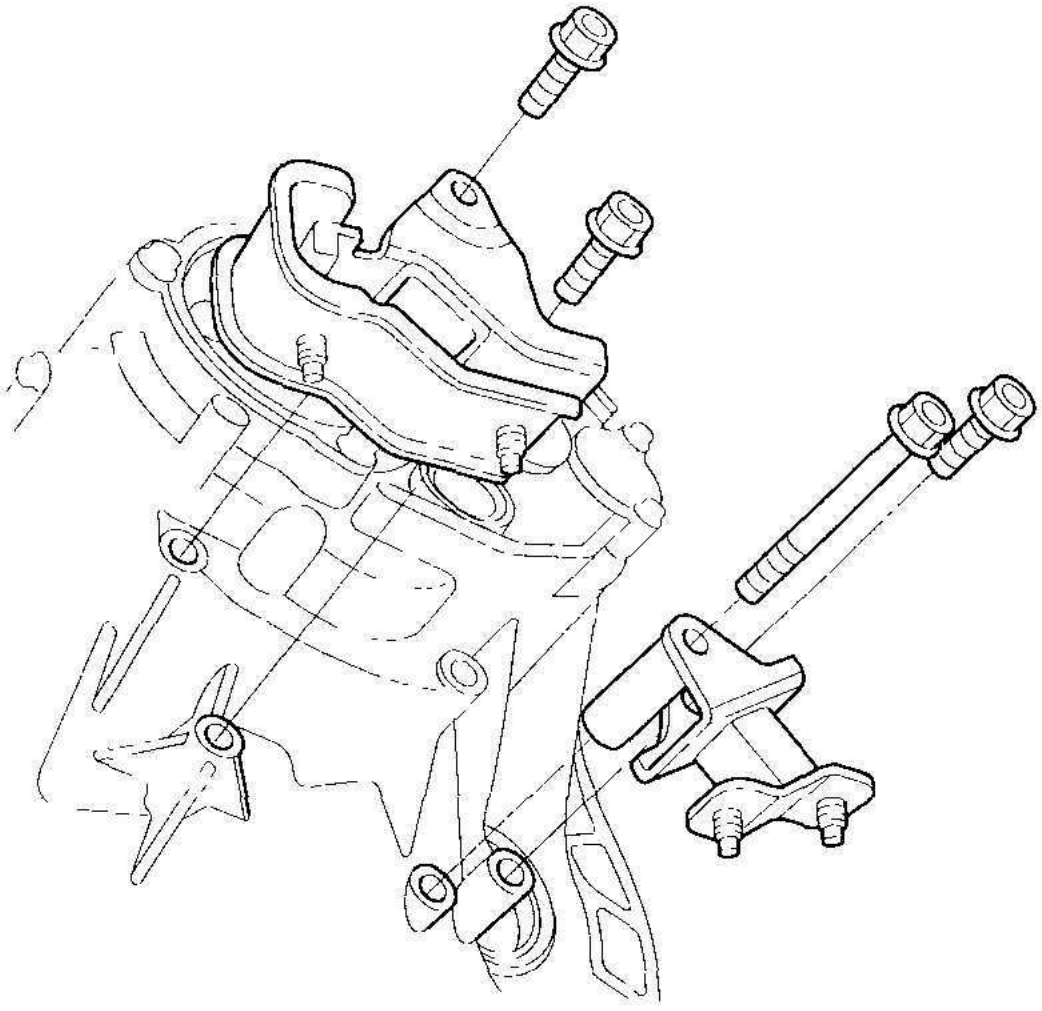


Fig. 276: Removing Transmission Lower Mounts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

54. Remove the driveshaft from the differential and the intermediate shaft. Coat all precision finished surfaces with clean engine oil, then tie the plastic bags over the driveshaft ends.

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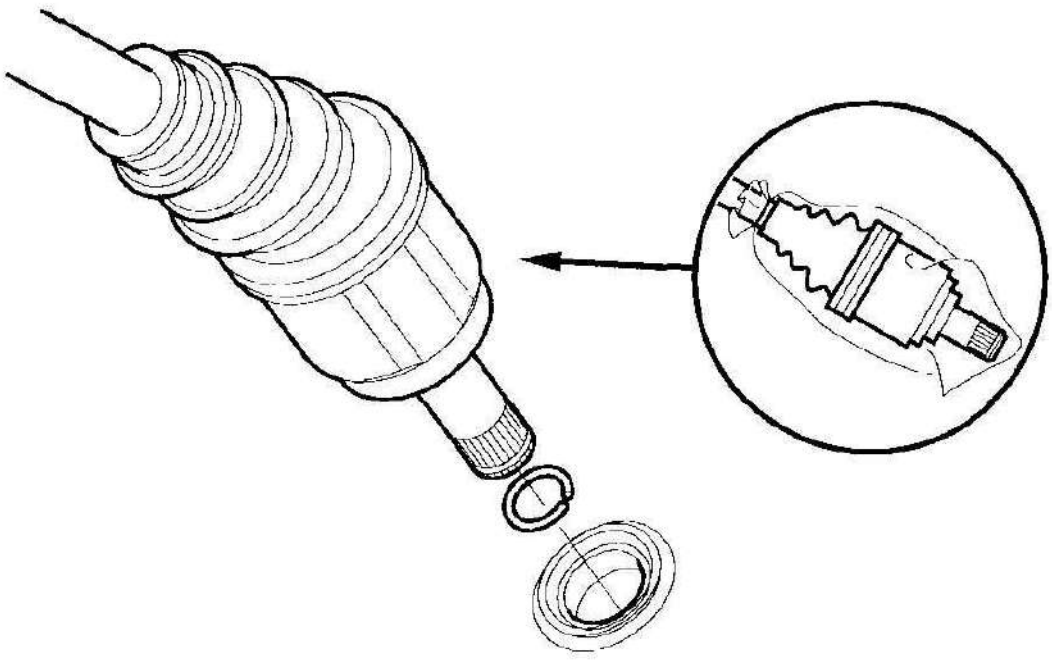


Fig. 277: Tying Plastic Bags Over Driveshaft Ends
Courtesy of AMERICAN HONDA MOTOR CO., INC.

55. Move the left driveshaft to the front side.
56. Remove the heat shield (A), then remove the intermediate shaft (B).

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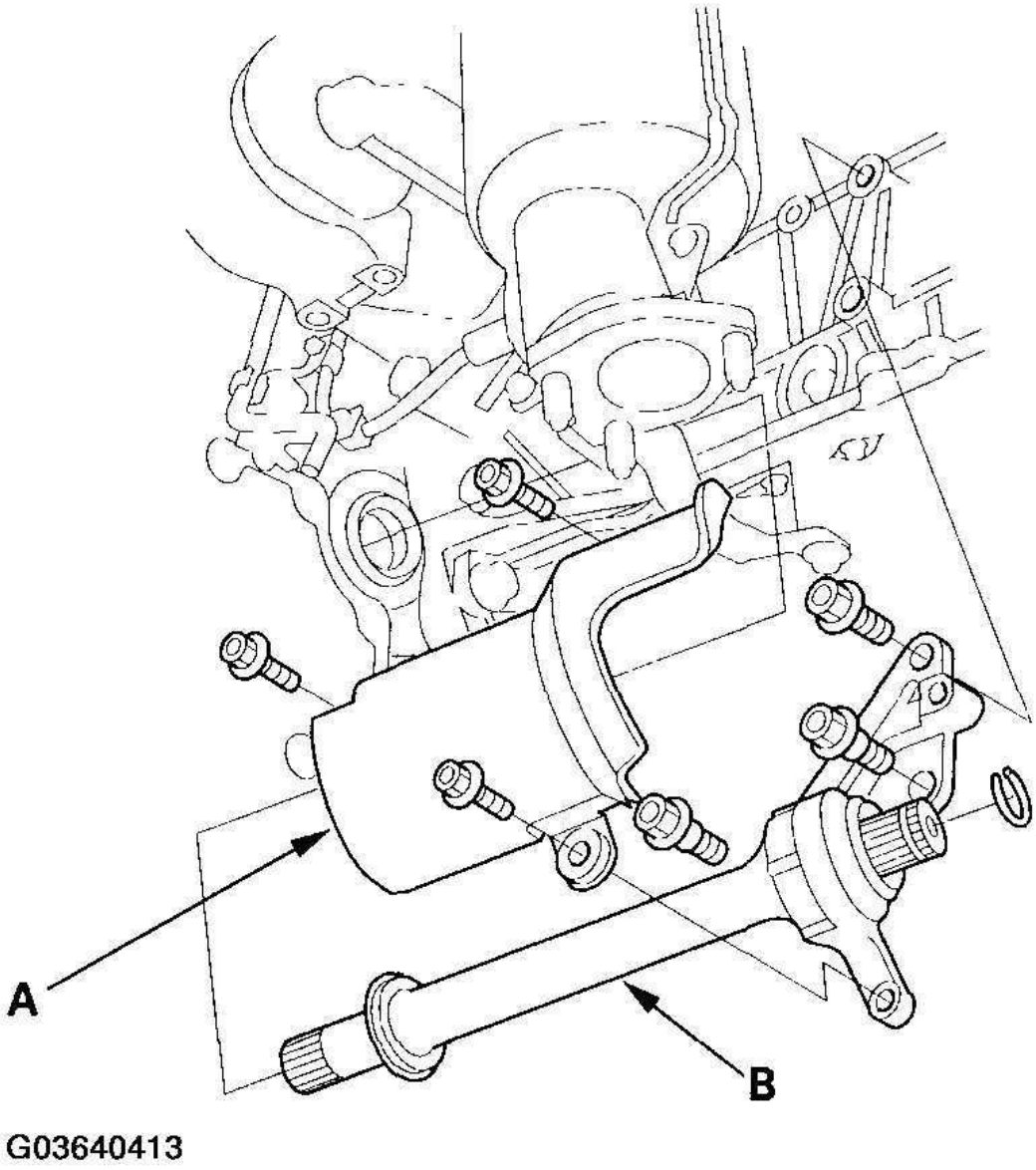


Fig. 278: Removing Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

57. Coat all precision finished surfaces with clean engine oil, then tie plastic bags over both ends of the intermediate shaft.
58. Remove the front mount bracket (A).

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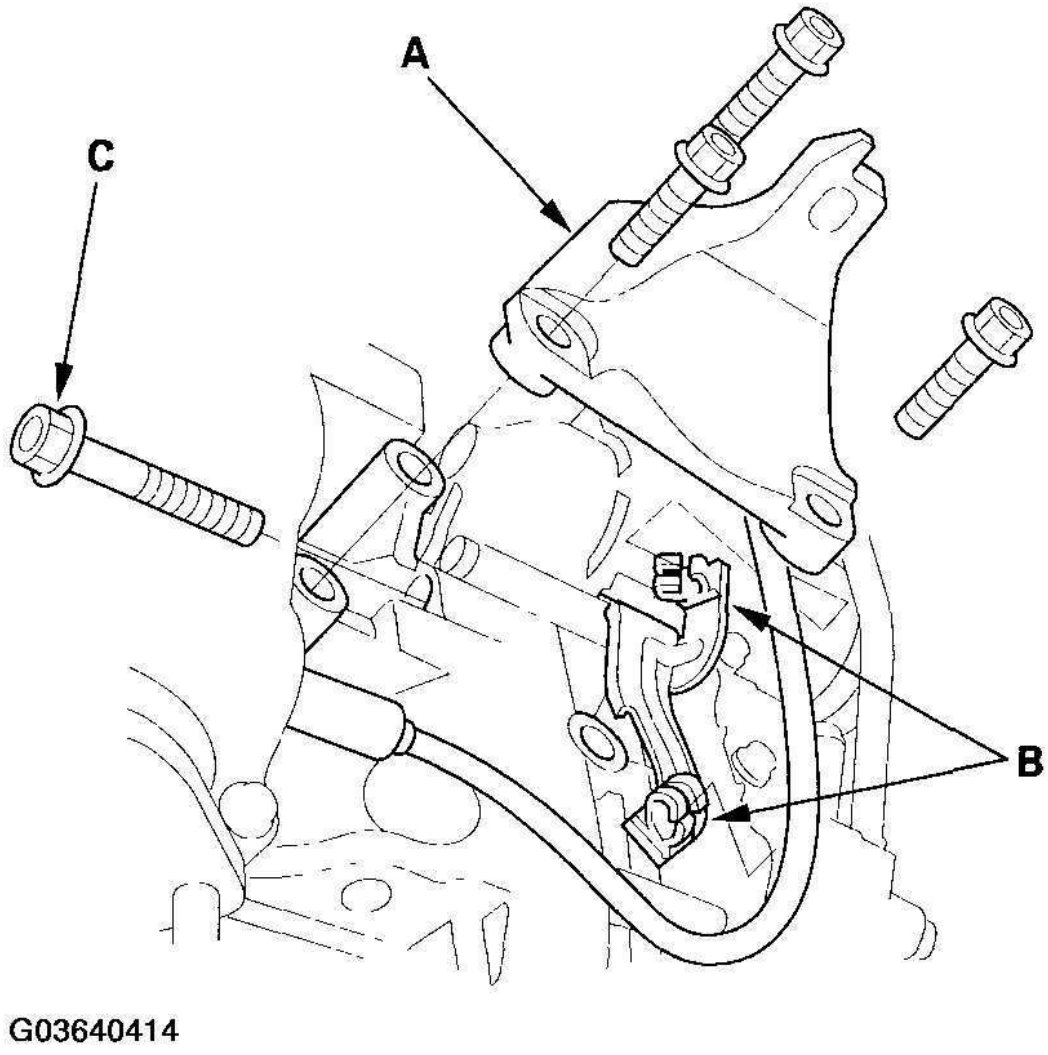


Fig. 279: Removing Front Mount Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

59. Remove the sensor harness from the harness clamps (B).
60. Remove the transmission housing mounting bolt (C) using a socket 22 mm in length.
61. Remove the rear transmission housing mounting bolts.

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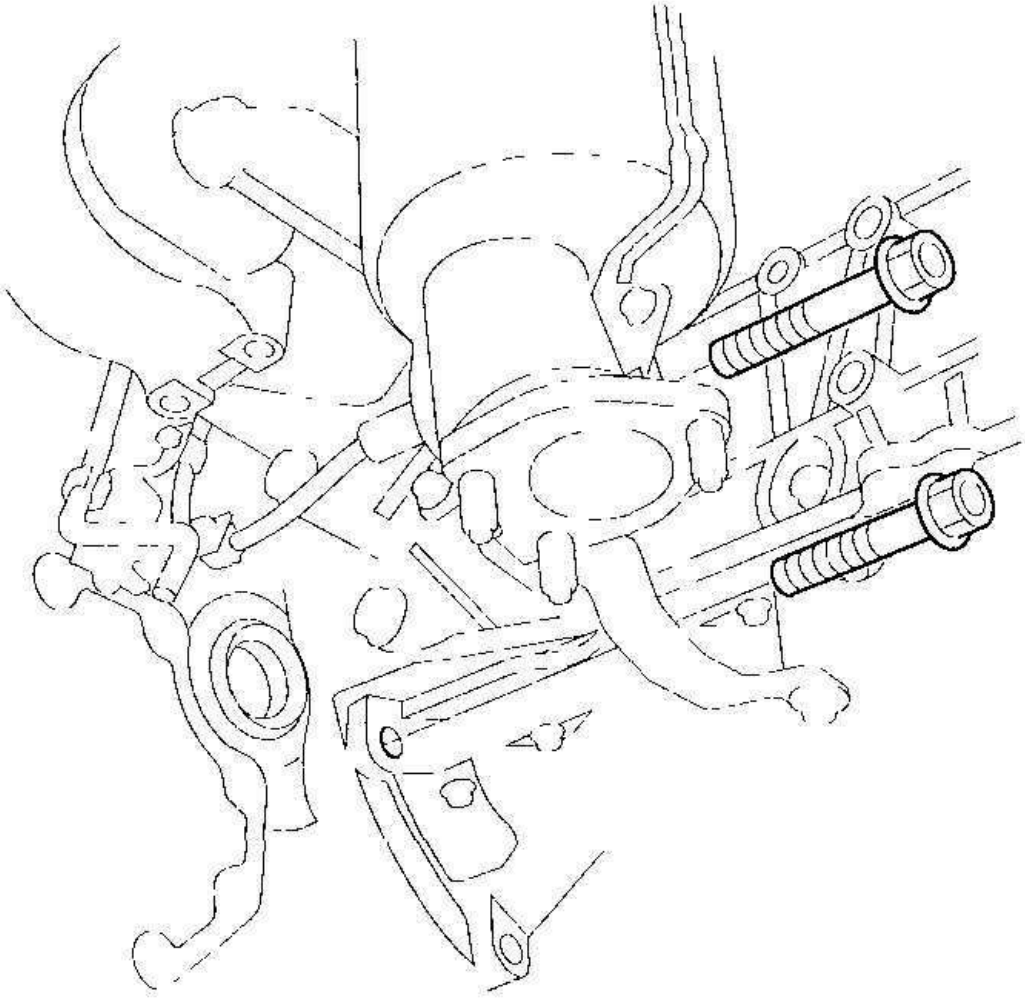


Fig. 280: Removing Rear Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

62. Remove the lower transmission housing mounting bolts.

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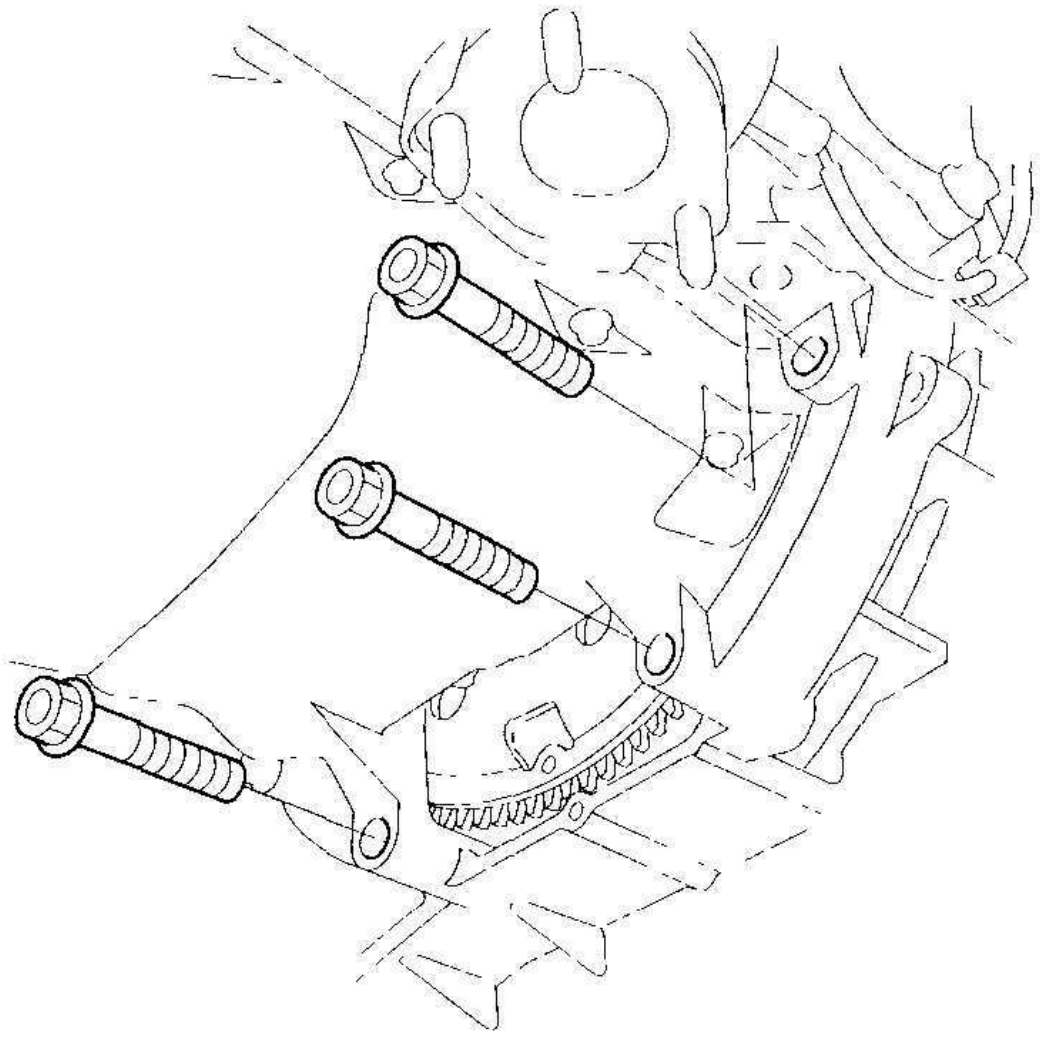


Fig. 281: Removing Lower Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

63. Lower the transmission, and tilt the engine just enough for the transmission to clear its end cover from the side frame.
64. Place a jack under the transmission.
65. Pull the transmission away from the engine until it clears the dowel pins, then lower it on the jack.
66. Remove the starter from the transmission.

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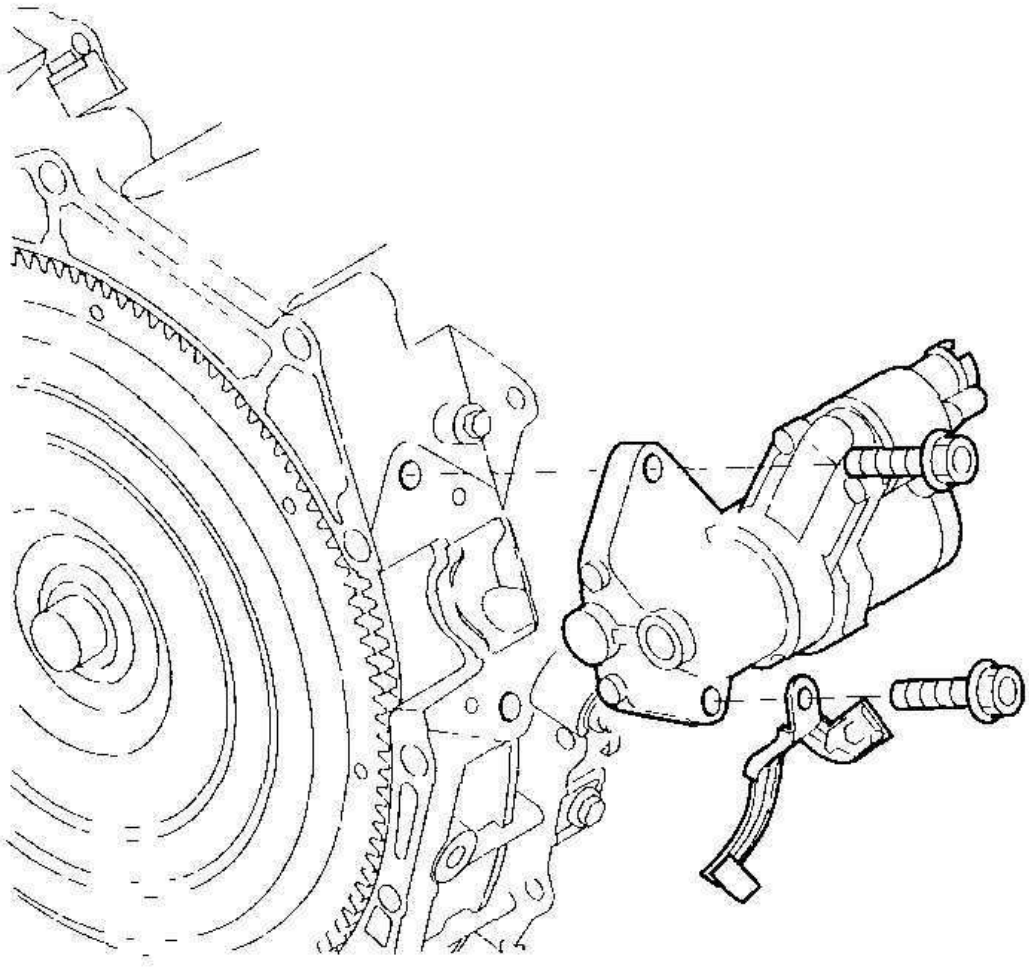


Fig. 282: Removing Starter From Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

67. Remove the torque converter assembly from the transmission.

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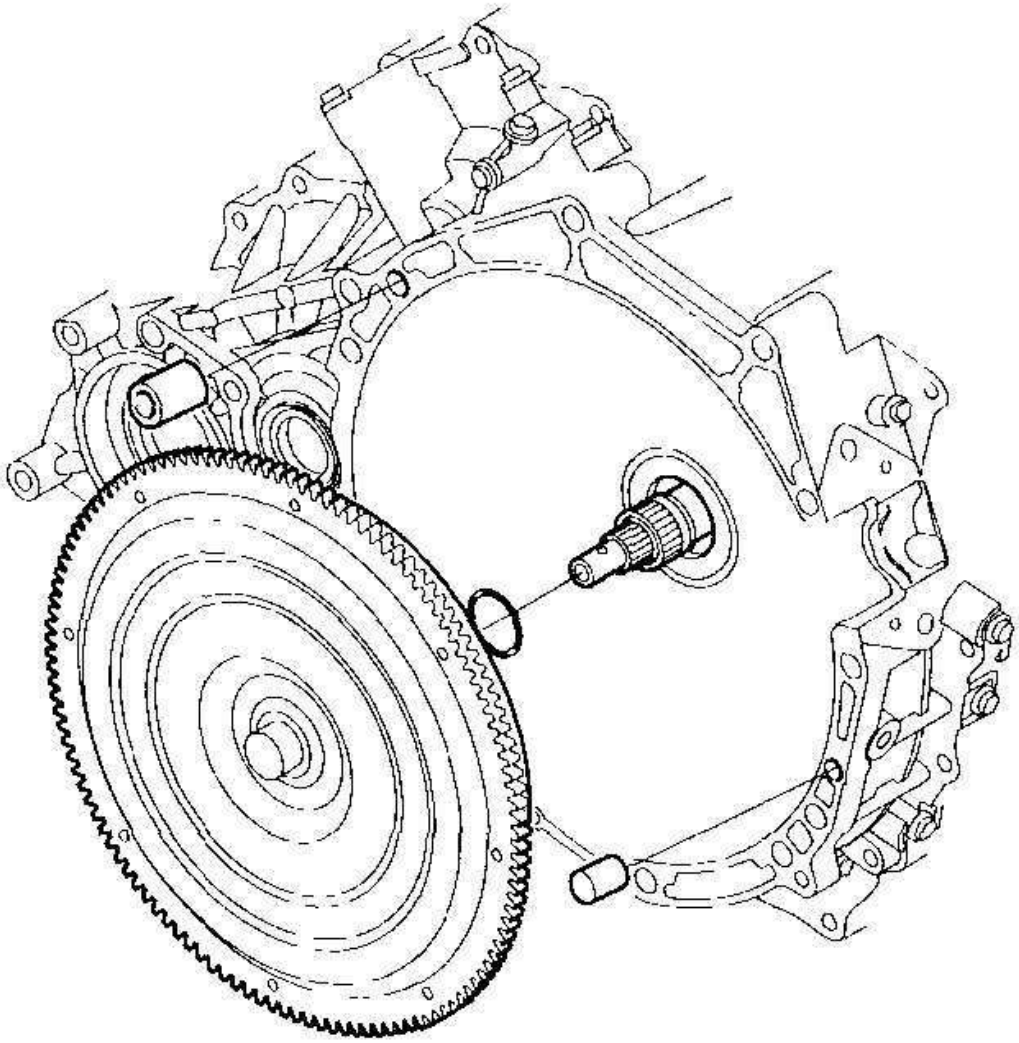


Fig. 283: Removing Torque Converter Assembly From Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

68. Remove the clamp bracket.

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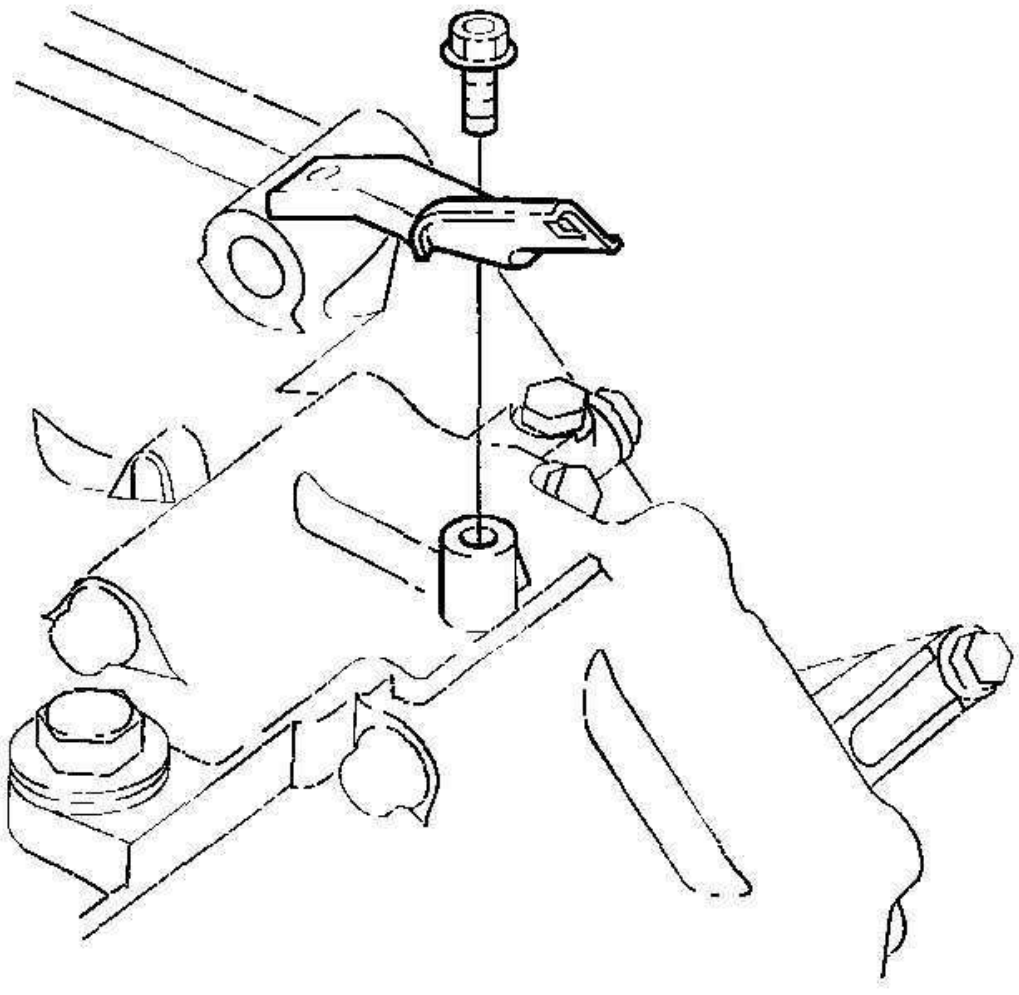


Fig. 284: Removing Clamp Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

69. Inspect the drive plate, and replace if it's damaged.

DRIVE PLATE REMOVAL AND INSTALLATION

1. Remove the transmission assembly (see **TRANSMISSION REMOVAL**).
2. Remove the drive plate (A) and washer (B) from the engine.

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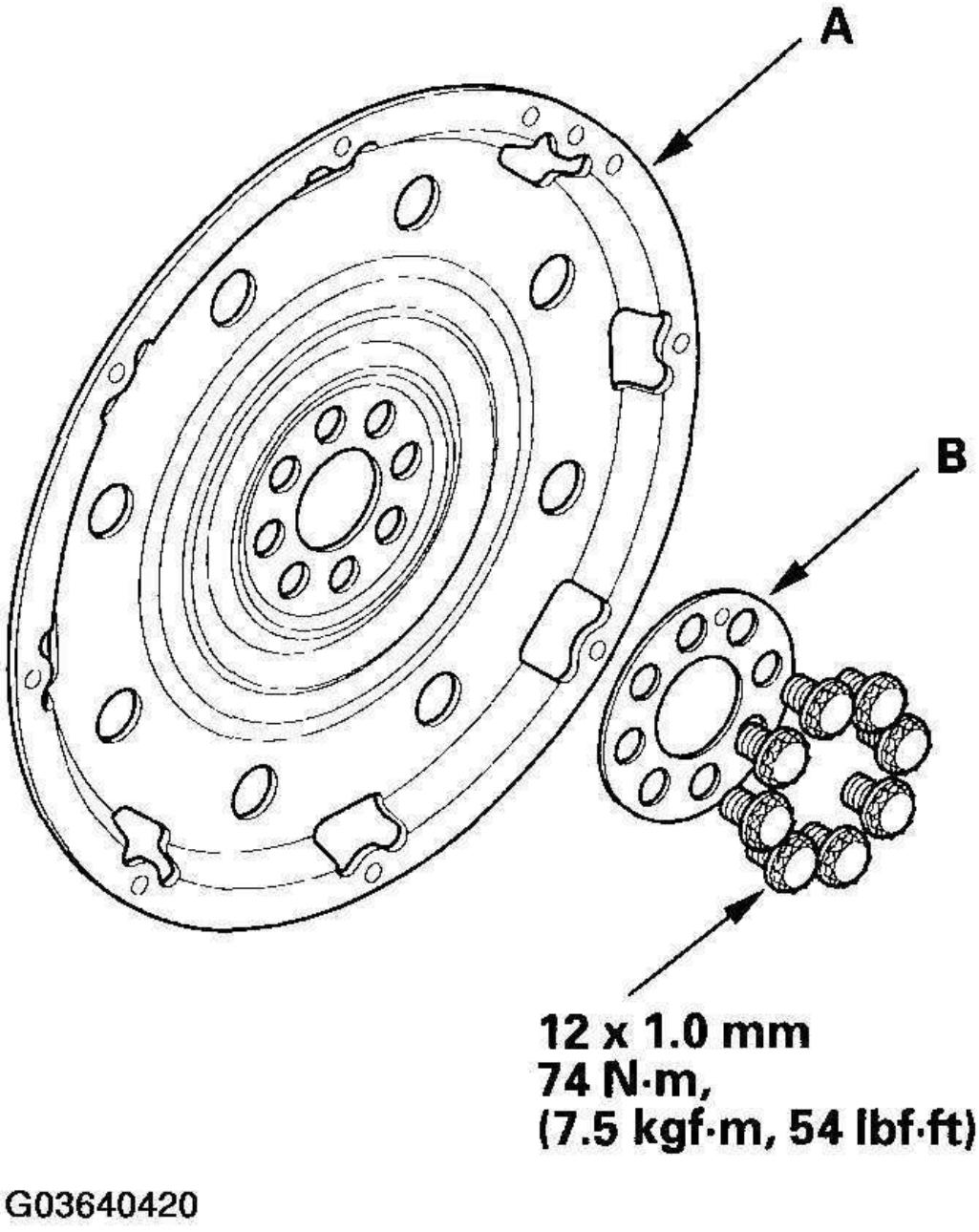


Fig. 285: Removing Drive Plate And Washer From Engine
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the drive plate and washer on the engine crankshaft, and tighten the eight bolts in a crisscross pattern.

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4. Install the transmission assembly (see **TRANSMISSION INSTALLATION**).

TRANSMISSION INSTALLATION

Special Tools Required

- Engine hanger support bar 07AAK-S3VA000
- Engine hanger balance bar VSB02C00019
- Engine hanger, A and Reds AAR-T-12566
- Front subframe adapter EQS02BMDXSB0

These tools are available through the Acura 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 clamp bracket.

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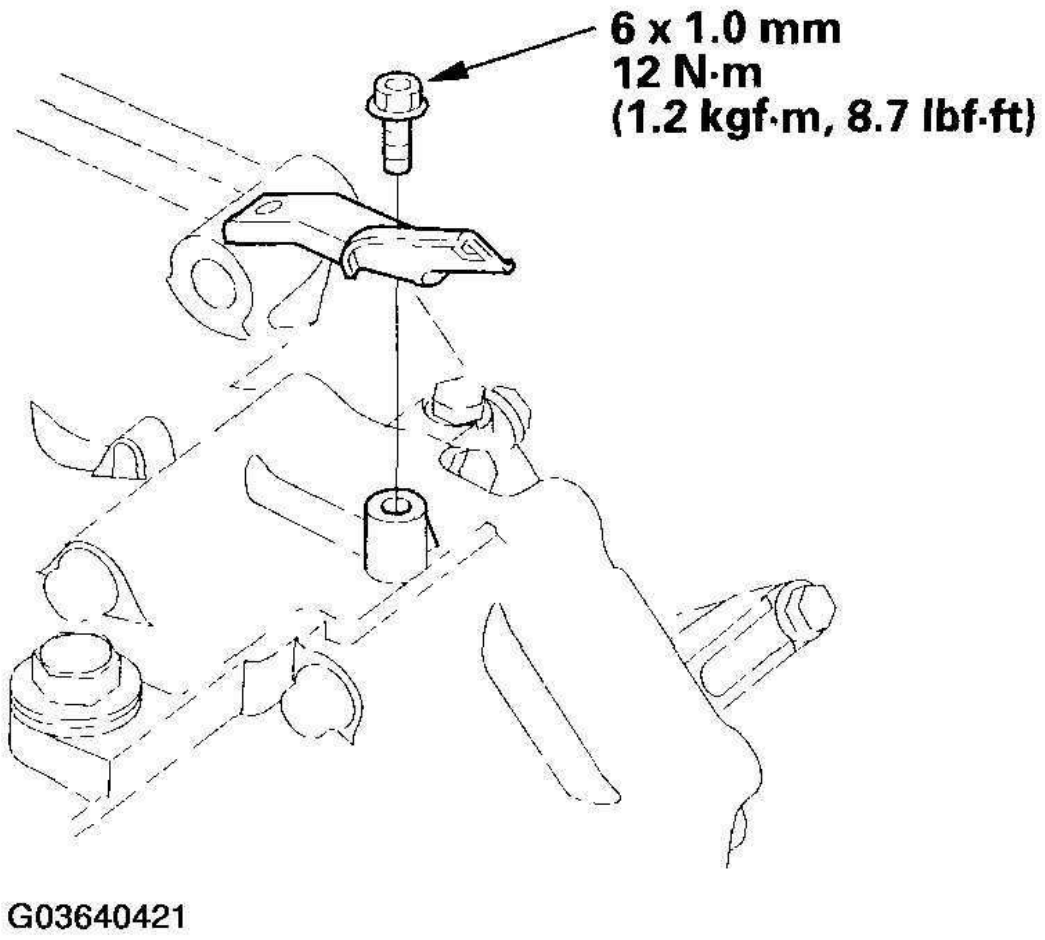


Fig. 286: Installing Clamp Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the torque converter assembly (A) on the mainshaft (B) with a new O-ring (C).

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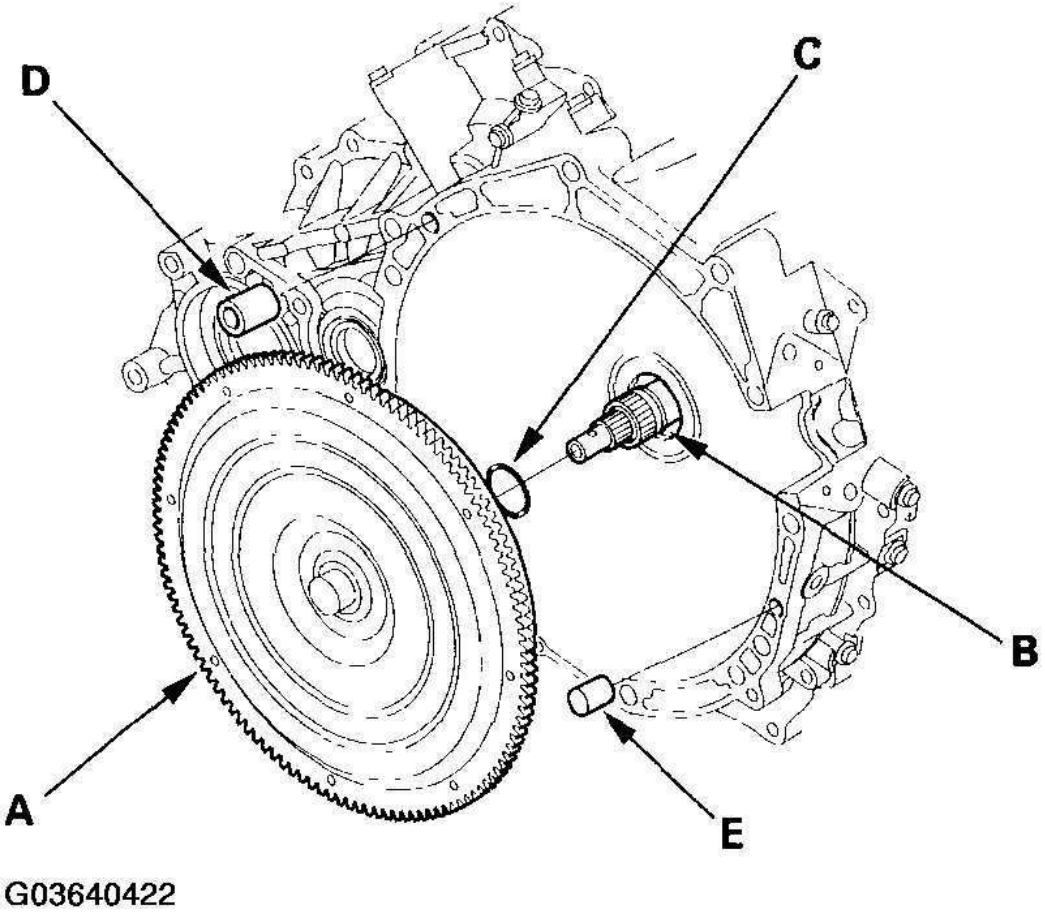


Fig. 287: Installing Torque Converter Assembly On Mainshaft With O-Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the 14 mm dowel pin (D) and 10 mm dowel pin (E) in the torque converter housing.
5. Install the starter (A) and clamp bracket (B) on the transmission.

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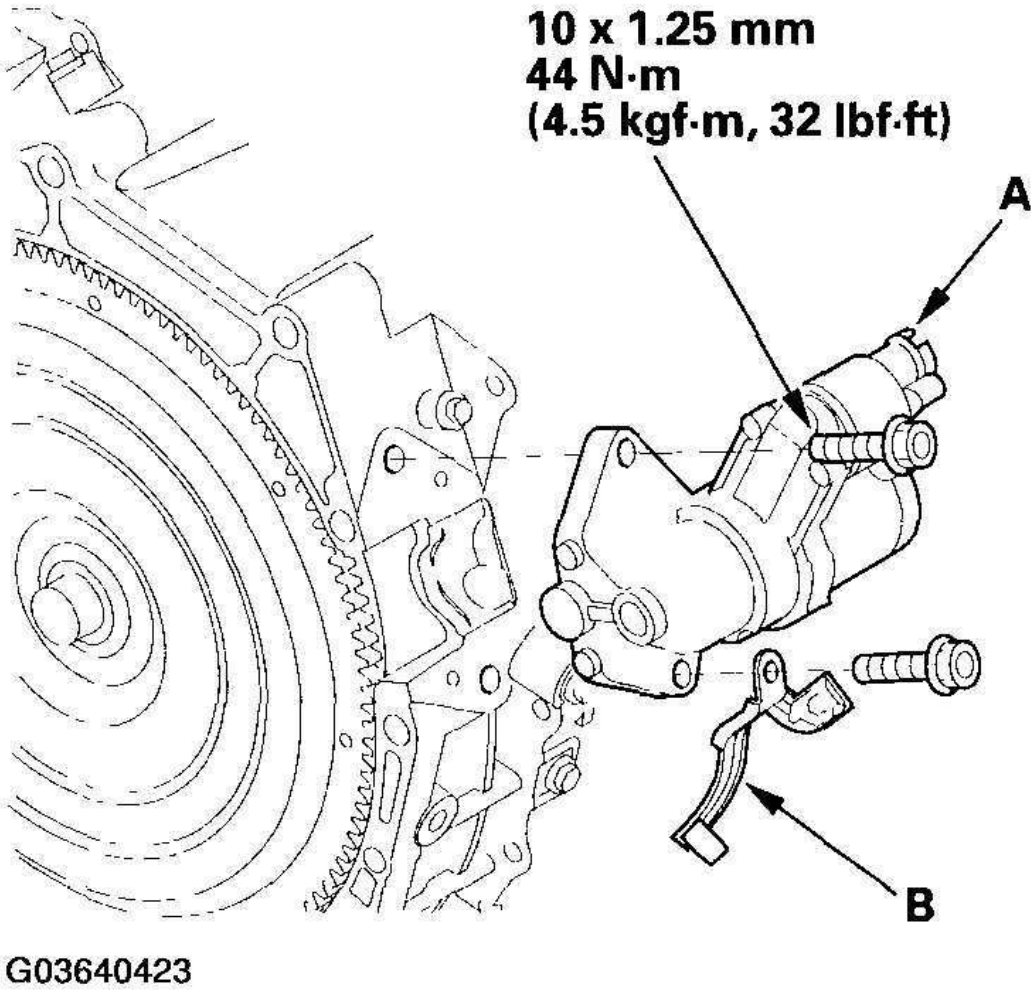


Fig. 288: Installing Starter And Clamp Bracket On Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the transmission lower mounts.

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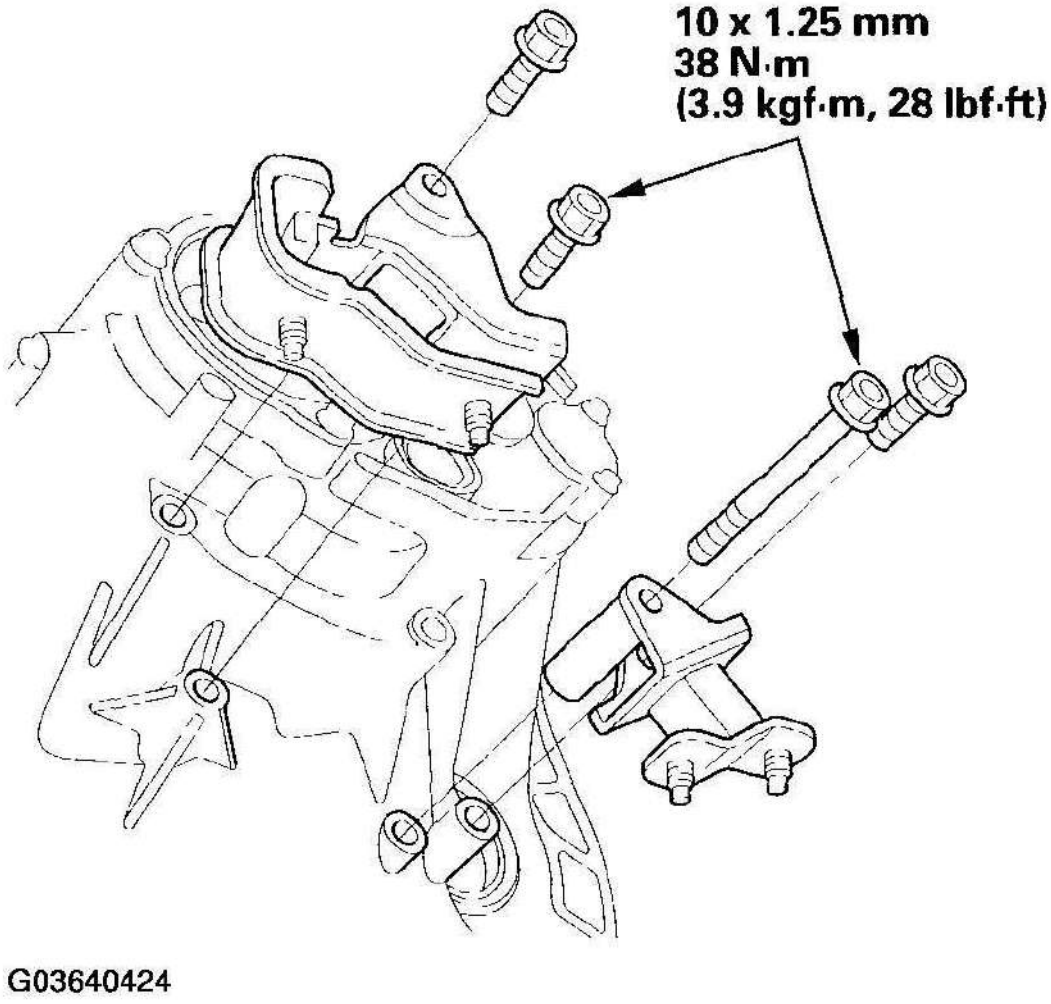


Fig. 289: Installing Transmission Lower Mounts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Place the transmission on a jack, and raise it to engine level.
8. Attach the lower transmission to the engine, then install the transmission housing mounting bolts.

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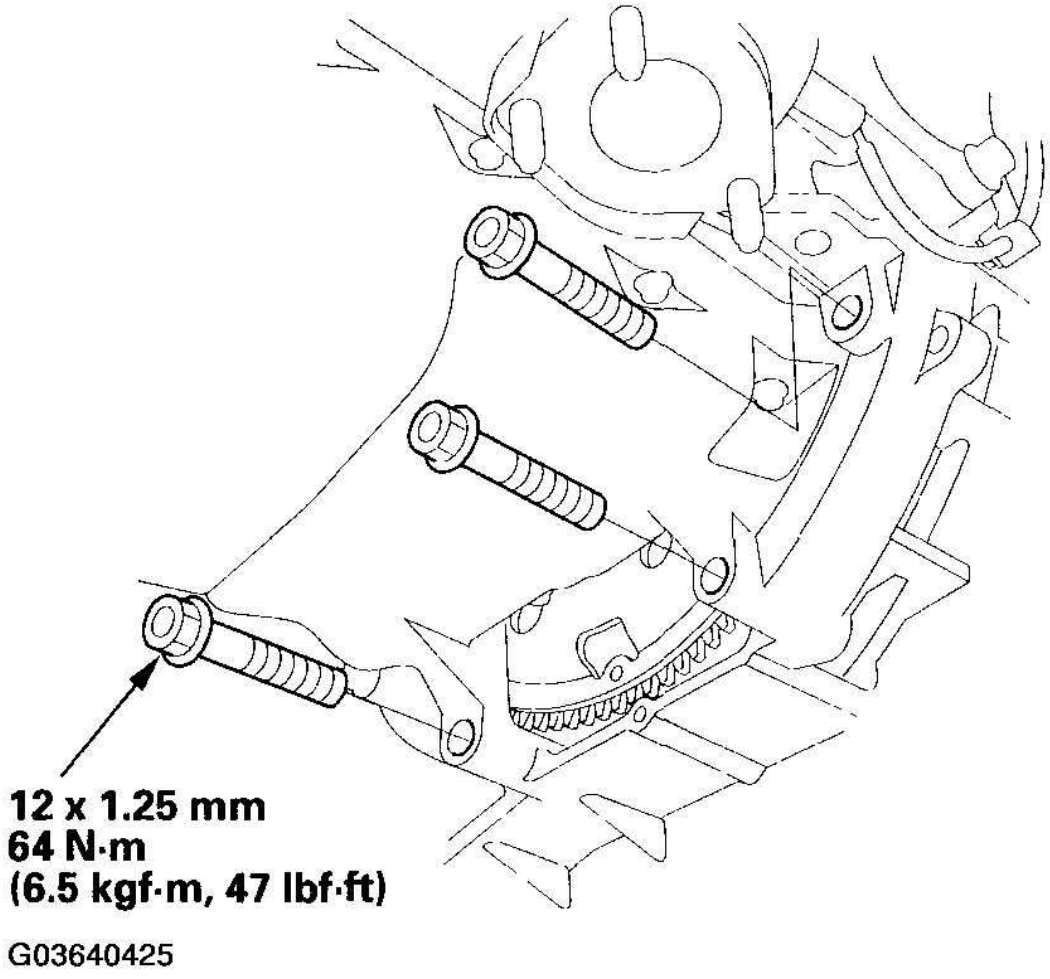


Fig. 290: Installing Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the rear transmission housing mounting bolts.

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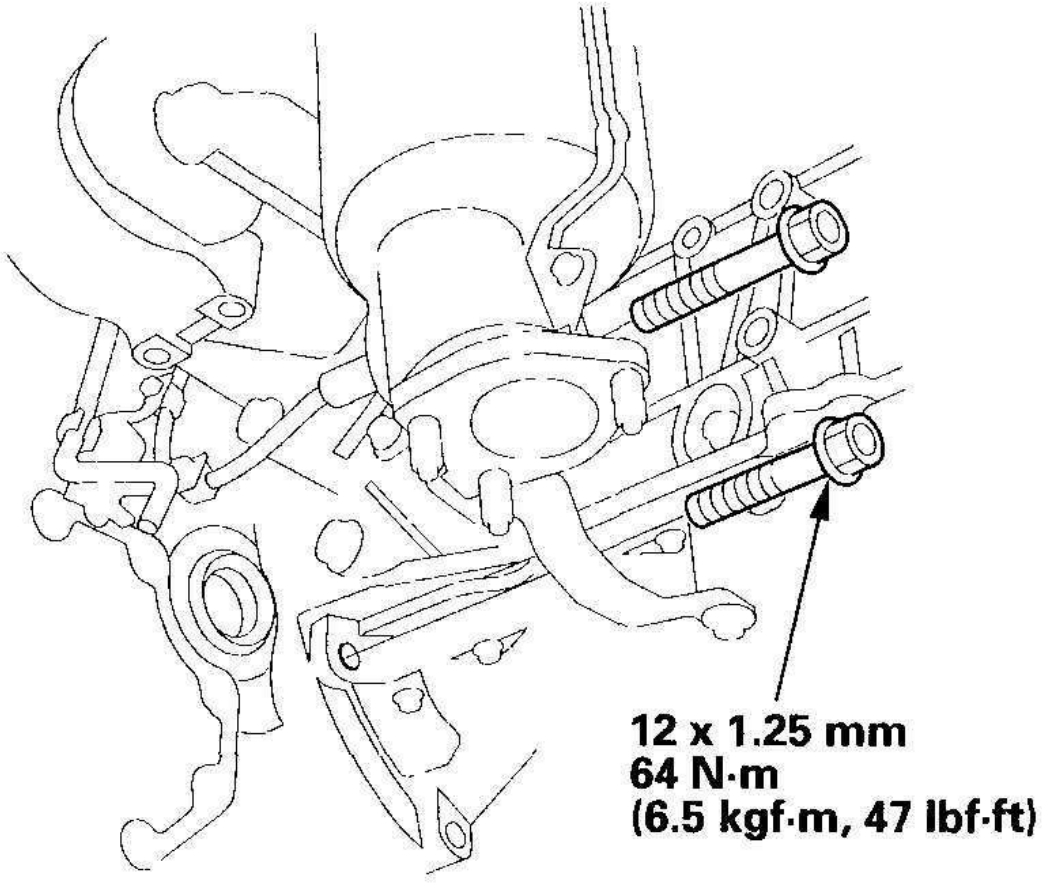


Fig. 291: Installing Rear Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Install the upper transmission housing mounting bolts.

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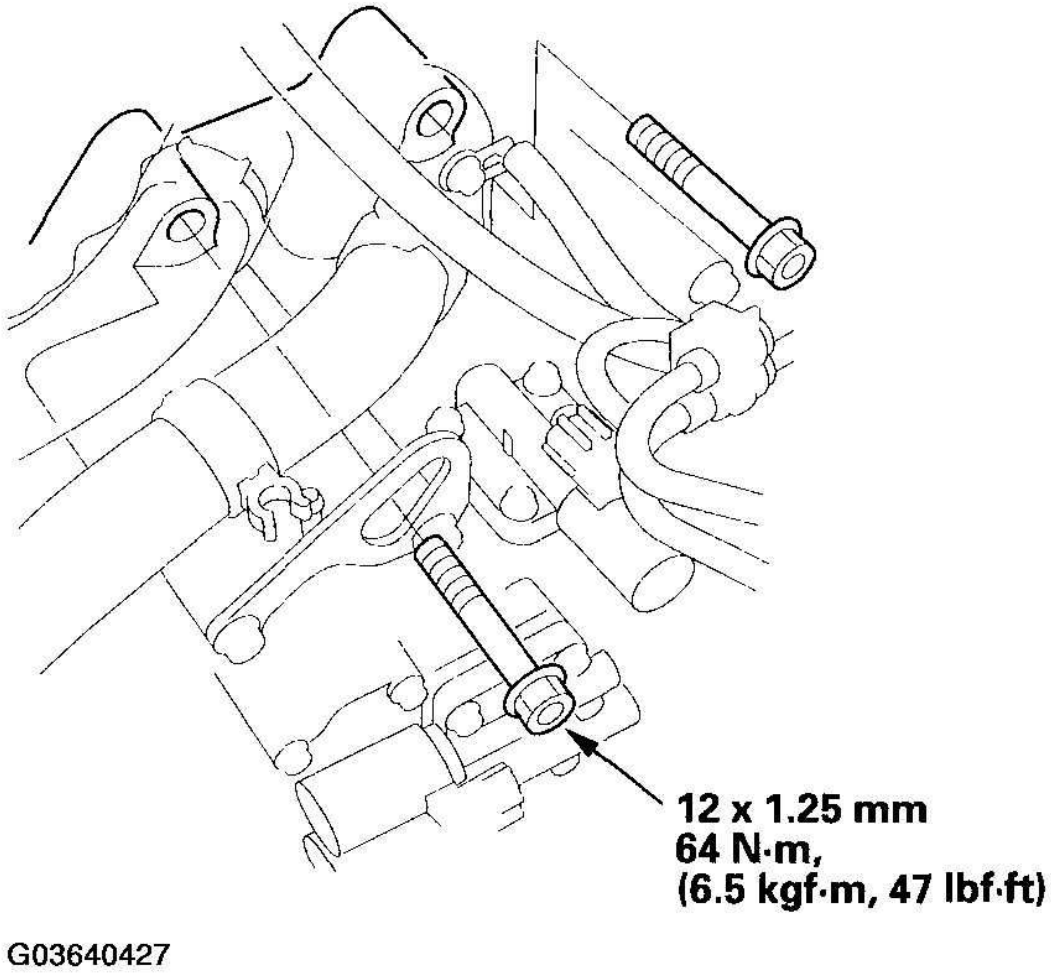


Fig. 292: Installing Upper Transmission Housing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Install the transmission housing mounting bolt (A) using a socket 22 mm in length and a torque wrench.

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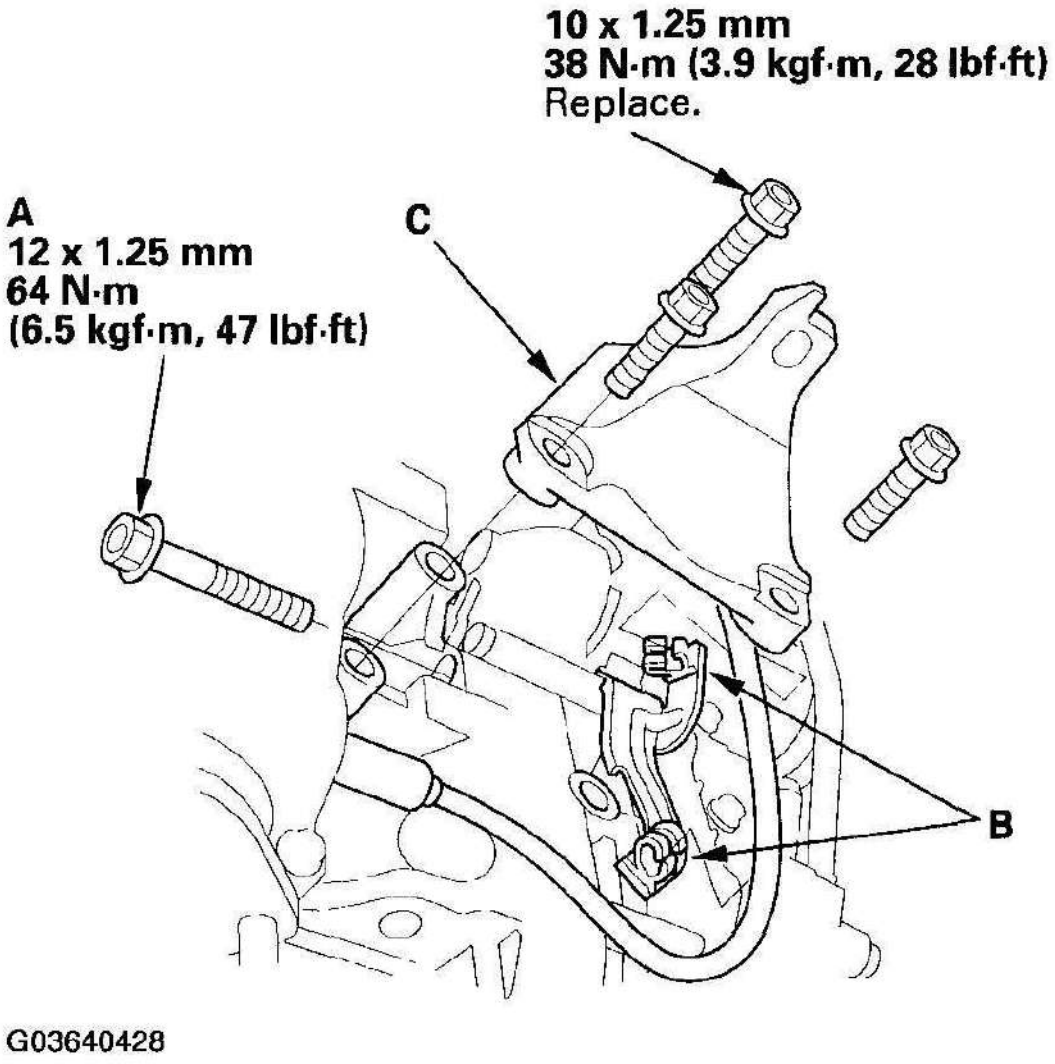


Fig. 293: Installing Transmission Housing Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Install the sensor harness on its clamps (B).
13. Install the front mount bracket (C) with the new mounting bolts.
14. Install the new set ring (A) on the intermediate shaft (B), and install the intermediate shaft.

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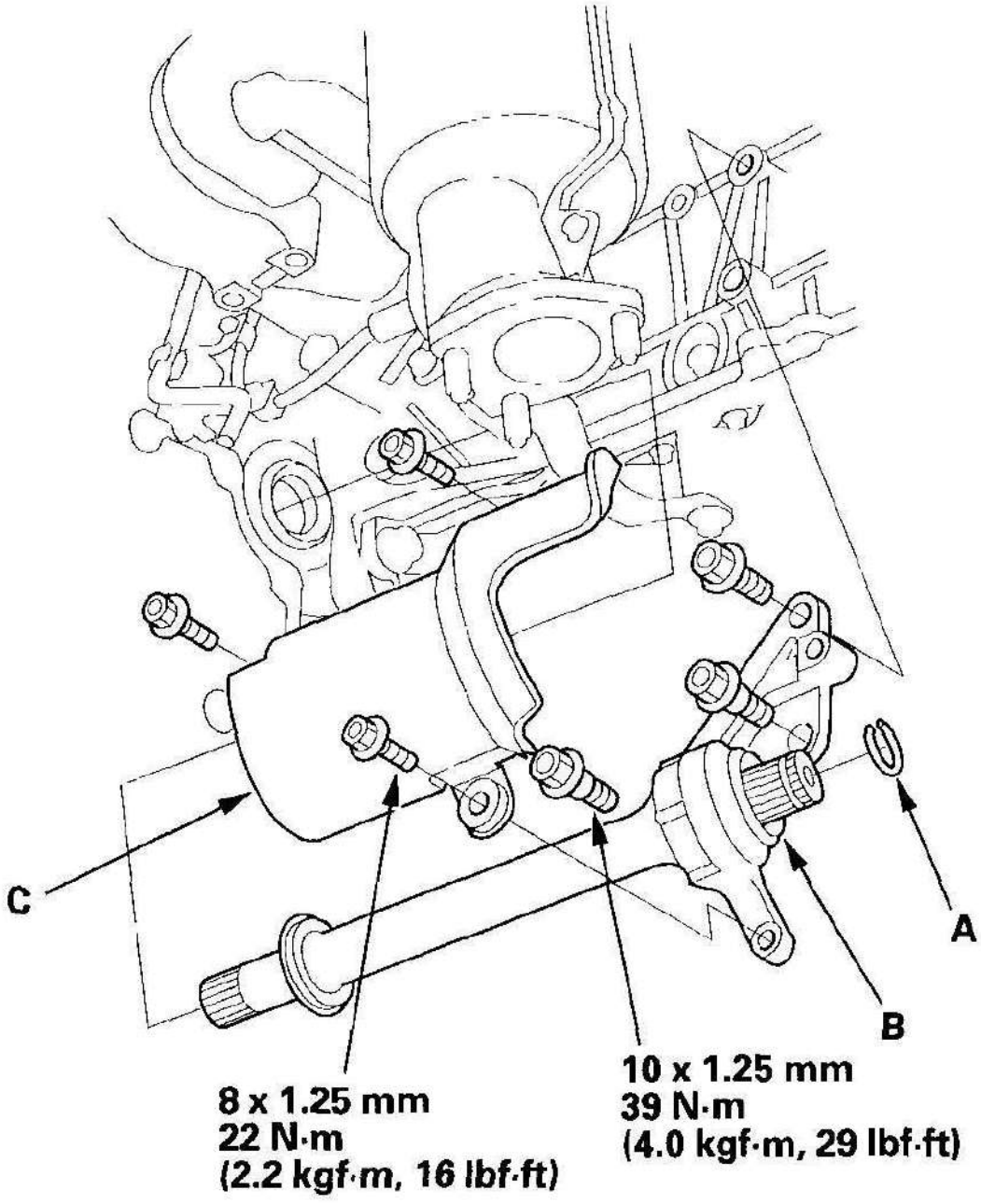


Fig. 294: Installing Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Install the heat shield (C).

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16. Install the new set ring on the left driveshaft, then install the left driveshaft in the differential. 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:

- **Clean the areas where the driveshaft and intermediate shaft contact the transmission (differential) with solvent or carburetor cleaner, and dry with compressed air.**
- **Turn the right and left steering knuckle fully outward, and slide the driveshaft and intermediate shaft into the differential and intermediate shaft until you feel its set ring engages the side gear.**

17. Support the front subframe with the front subframe adapter (T/N EQS02BMDXB0) and a jack, and lift it up to the body.

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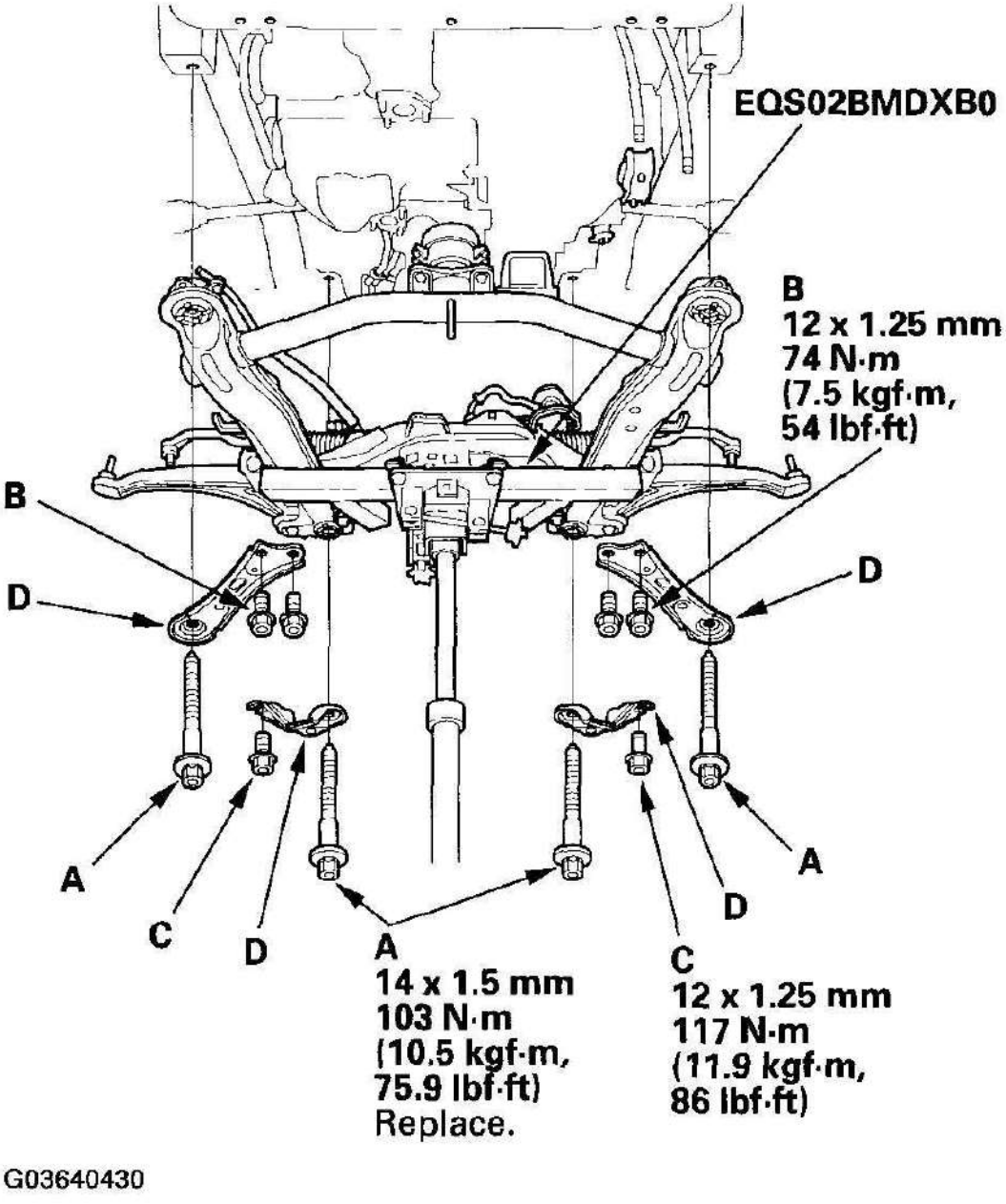


Fig. 295: Supporting Front Subframe With Front Subframe Adapter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Loosely install the new front subframe mounting bolts (four) (A), the 12 x 1.25 mm bolts (six) (B) (C), and the stiffeners (D).
19. Align all reference marks (A) on the front subframe (B) with the body, then tighten the bolts on the front subframe to the specified torque.

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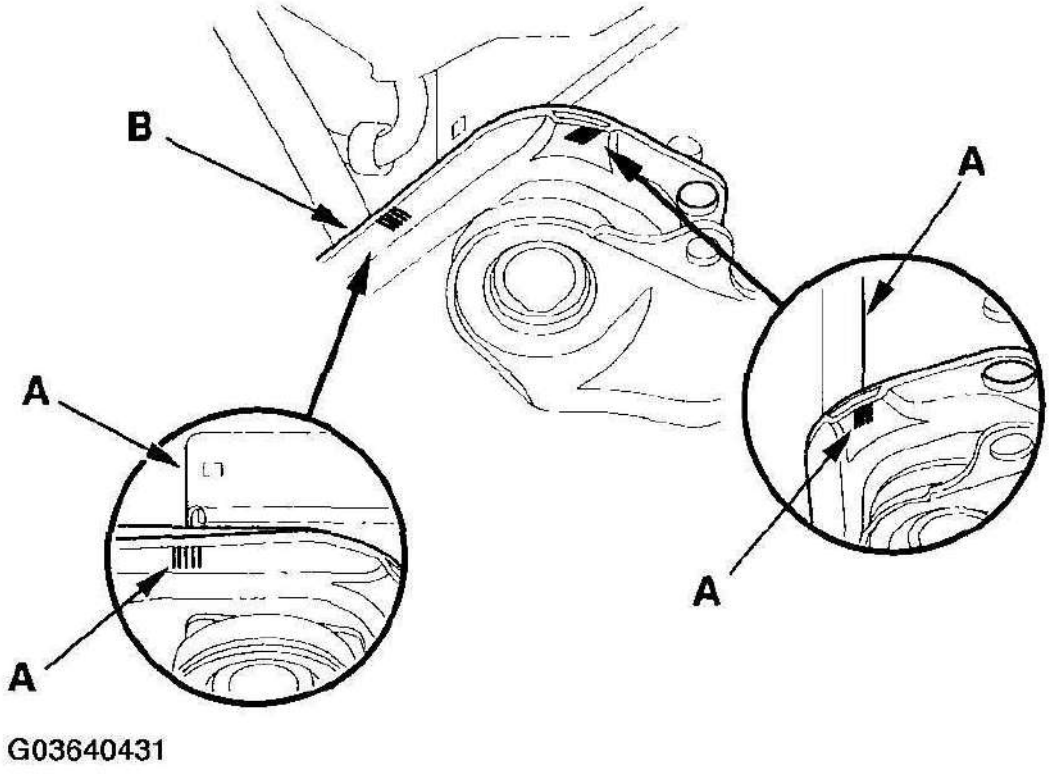


Fig. 296: Aligning All Reference Marks On Front Subframe With Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Remove the front subframe adapter and the jack.
21. Install the rear mount bracket bolts.

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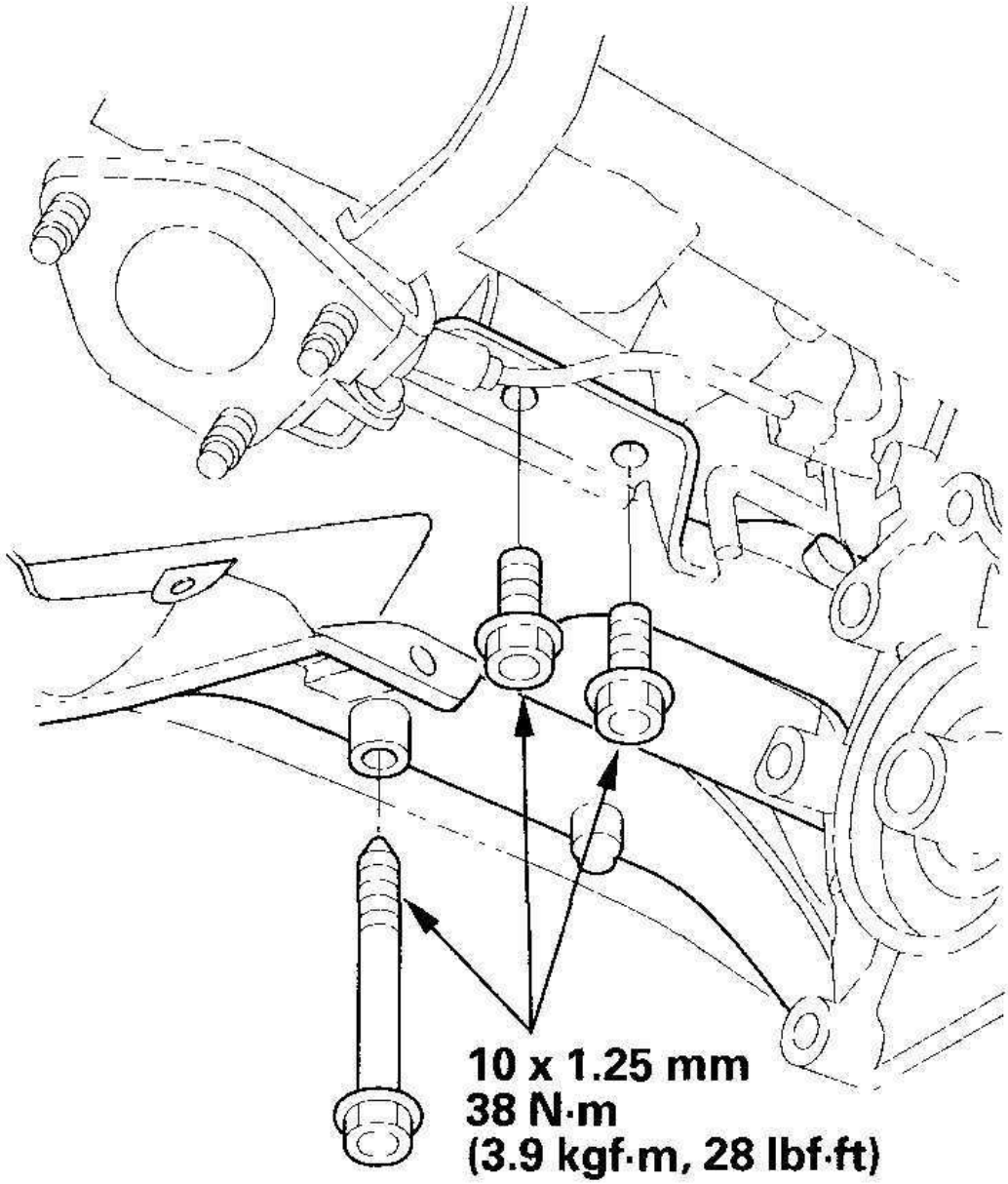


Fig. 297: Installing Rear Mount Bracket Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Install the transmission lower mount nuts.

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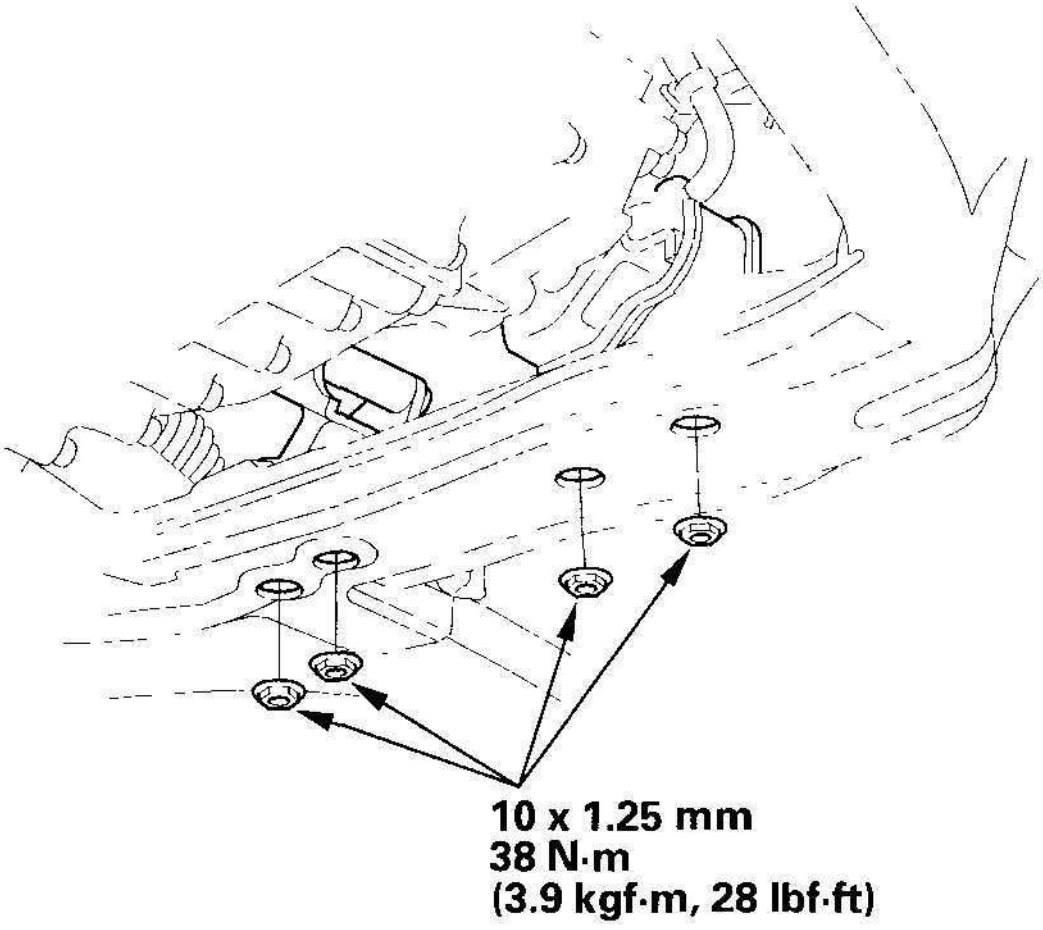


Fig. 298: Installing Transmission Lower Mount Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Connect the vacuum tube (A) on the vacuum line (B) at the front mount.

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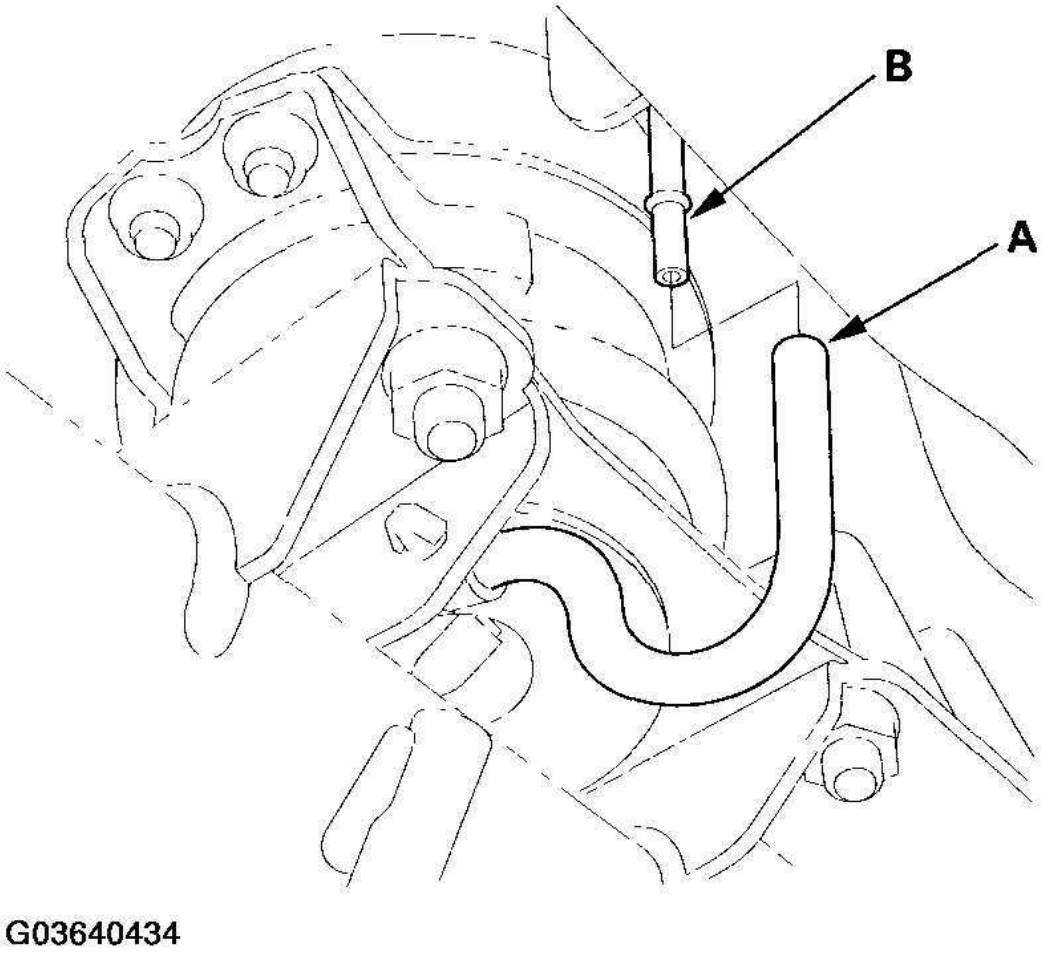


Fig. 299: Connecting Vacuum Tube On Vacuum Line At Front Mount
Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Connect the power steering fluid hose (A) to the line (B) at the right front of the front subframe (C), then secure the hose with its hose clamp (D).

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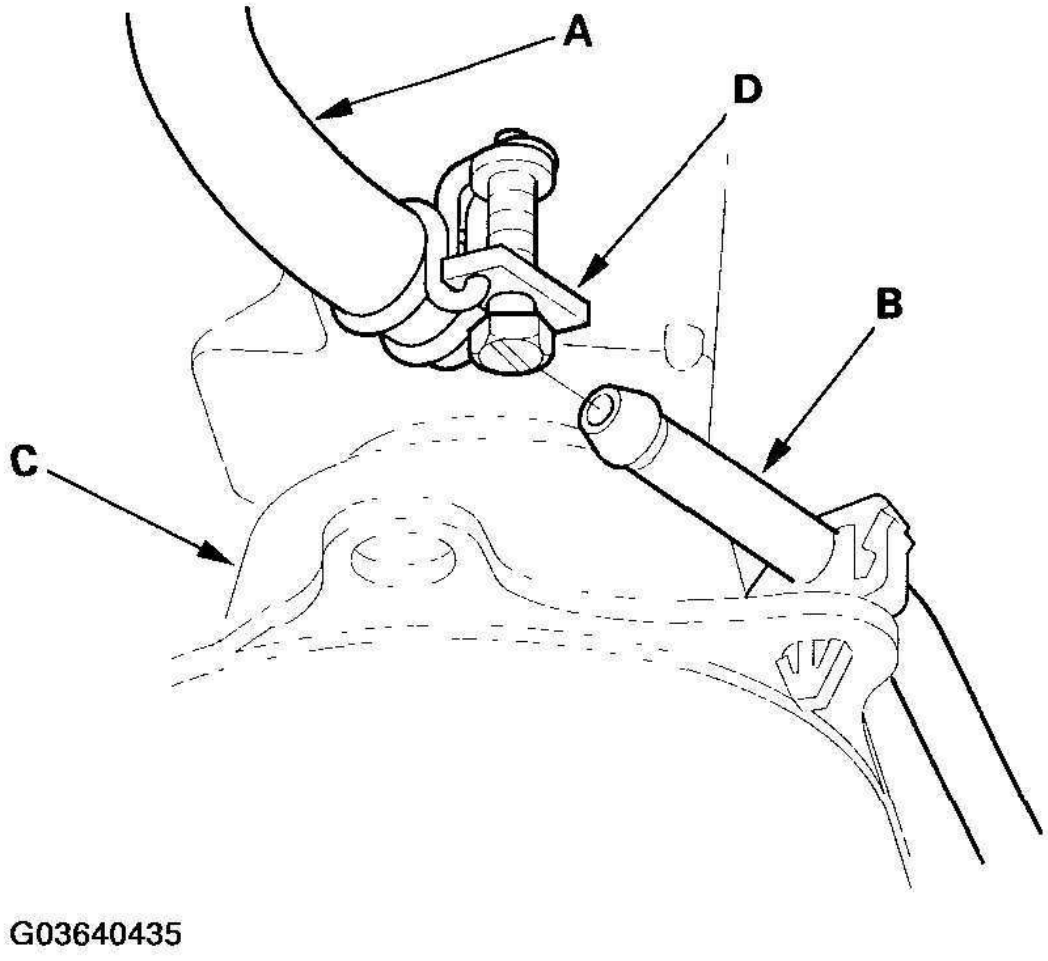


Fig. 300: Connecting Power Steering Fluid Hose To Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Connect the power steering pressure switch connector.

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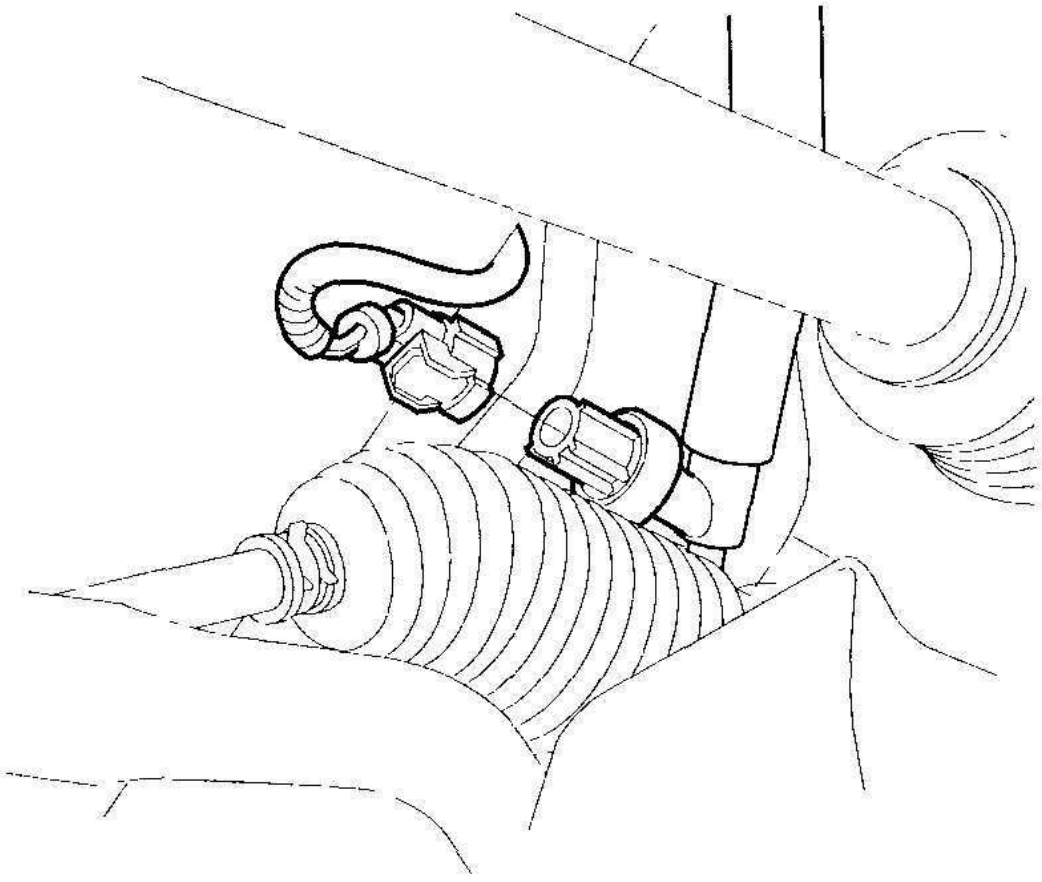


Fig. 301: Connecting Power Steering Pressure Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Attach the drive plate to the torque converter with eight bolts (A). Rotate the crankshaft pulley as necessary to tighten the bolts to 1/2 of the specified torque, then to the final torque, in a crisscross pattern. After tightening the last bolt, check that the crankshaft rotates freely.

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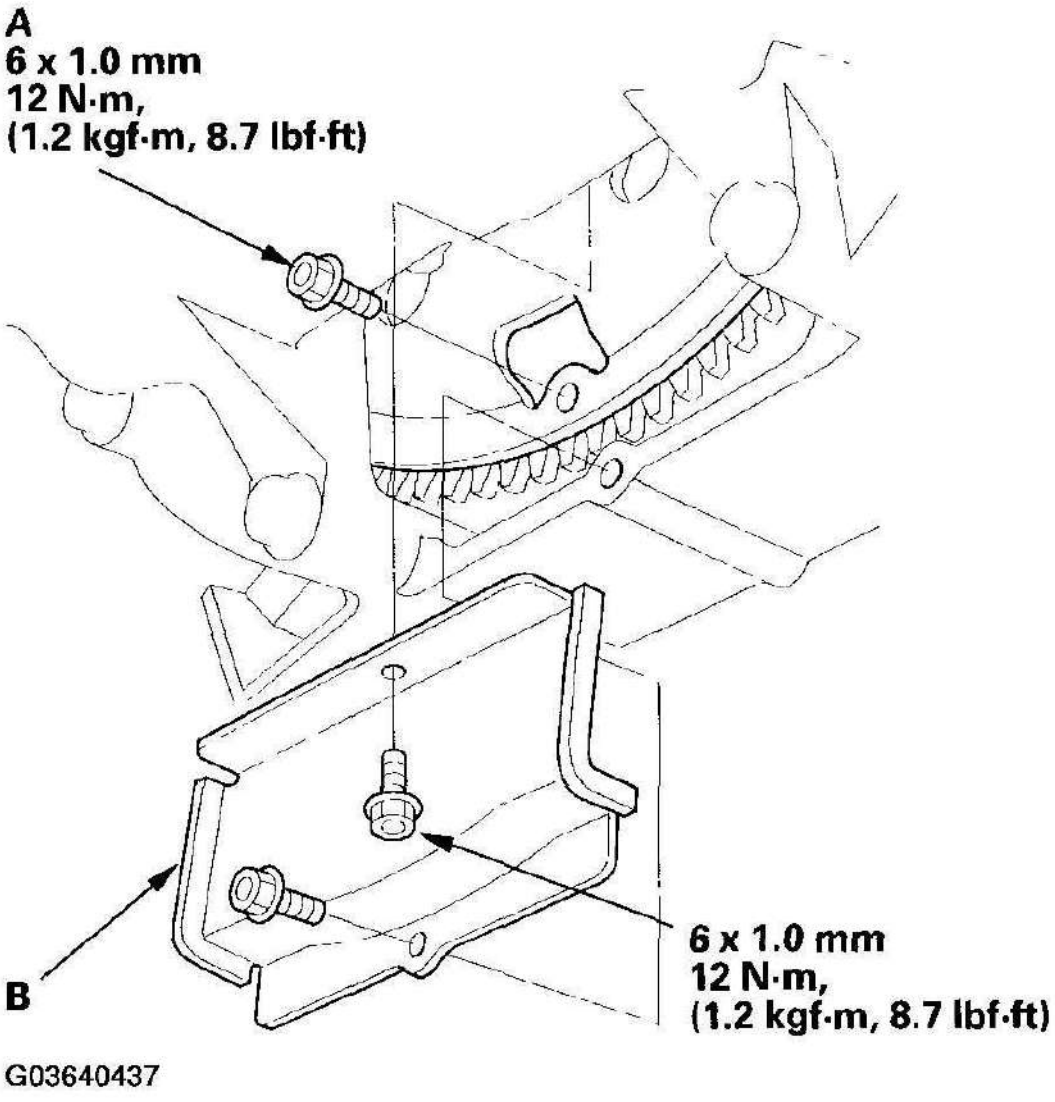


Fig. 302: Installing Torque Converter Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Install the torque converter cover (B).
28. Install the dowel pin (A) in the transmission, and install the transfer assembly (B) on the transmission.

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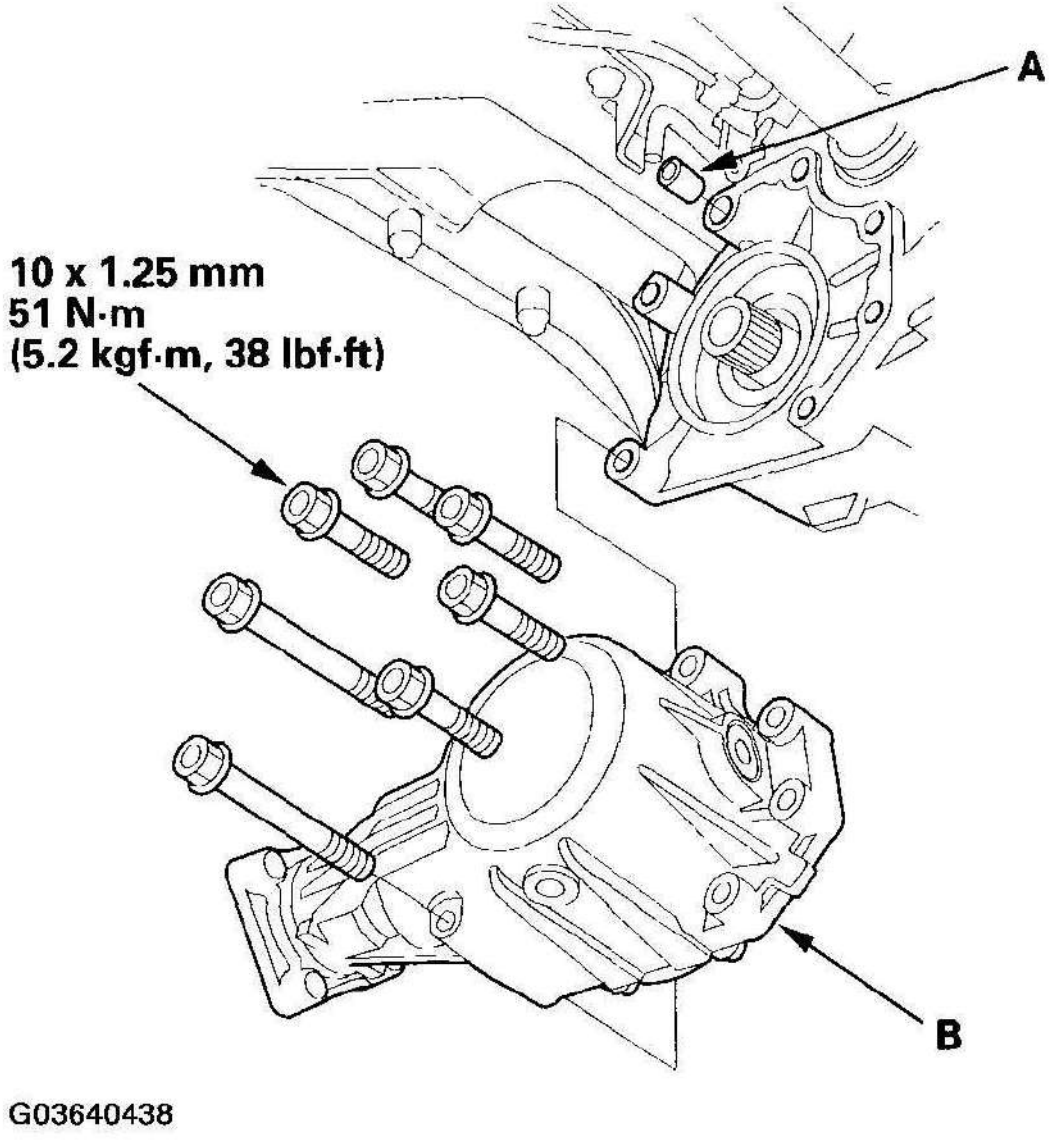


Fig. 303: Installing Transfer Assembly On Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Secure the transfer breather tube bracket (A) on the transfer assembly with the bolt, and install the breather tube (B) over the breather pipe (C) with the dot (D) on the tube facing out.

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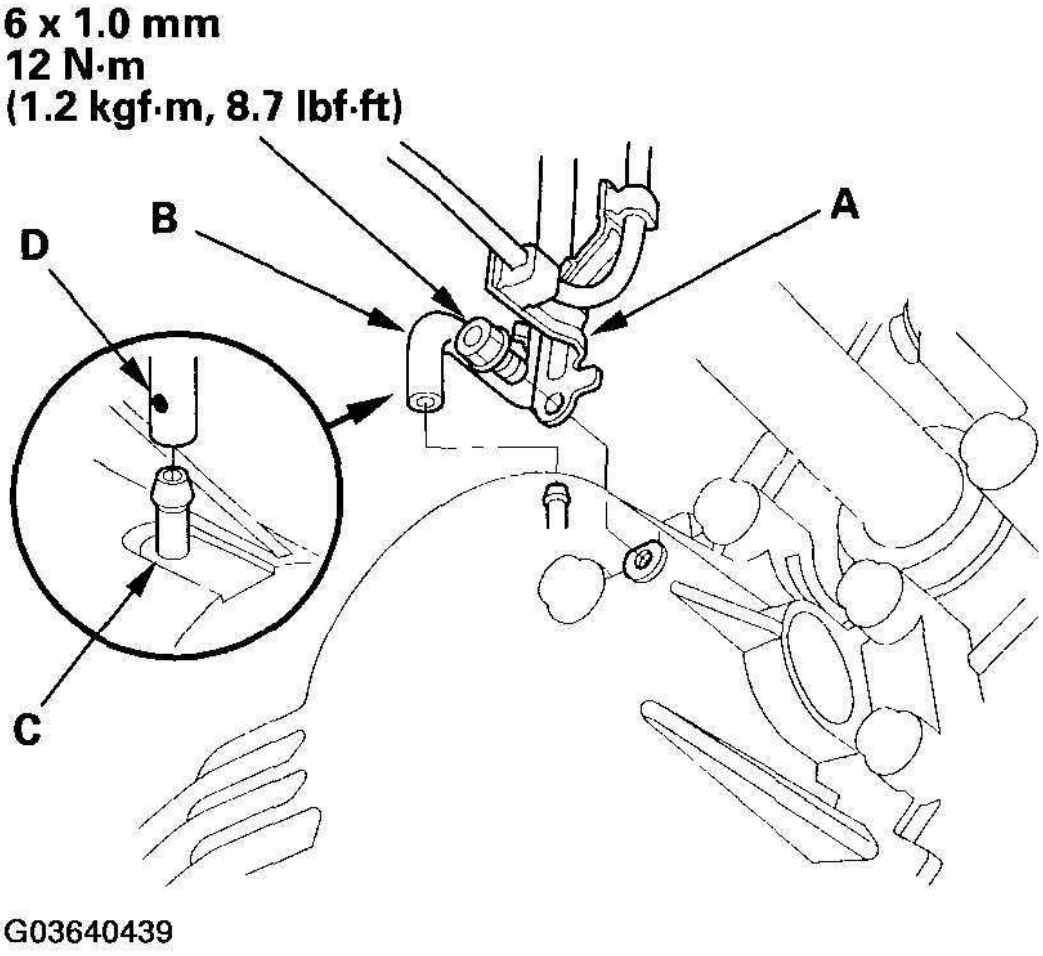


Fig. 304: Installing Breather Tube Over Breather Pipe With Dot On Tube Facing Out
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Install the ball joints on each lower arm (A) to each knuckle (B) with the castle nuts (C) and spring clips (D).

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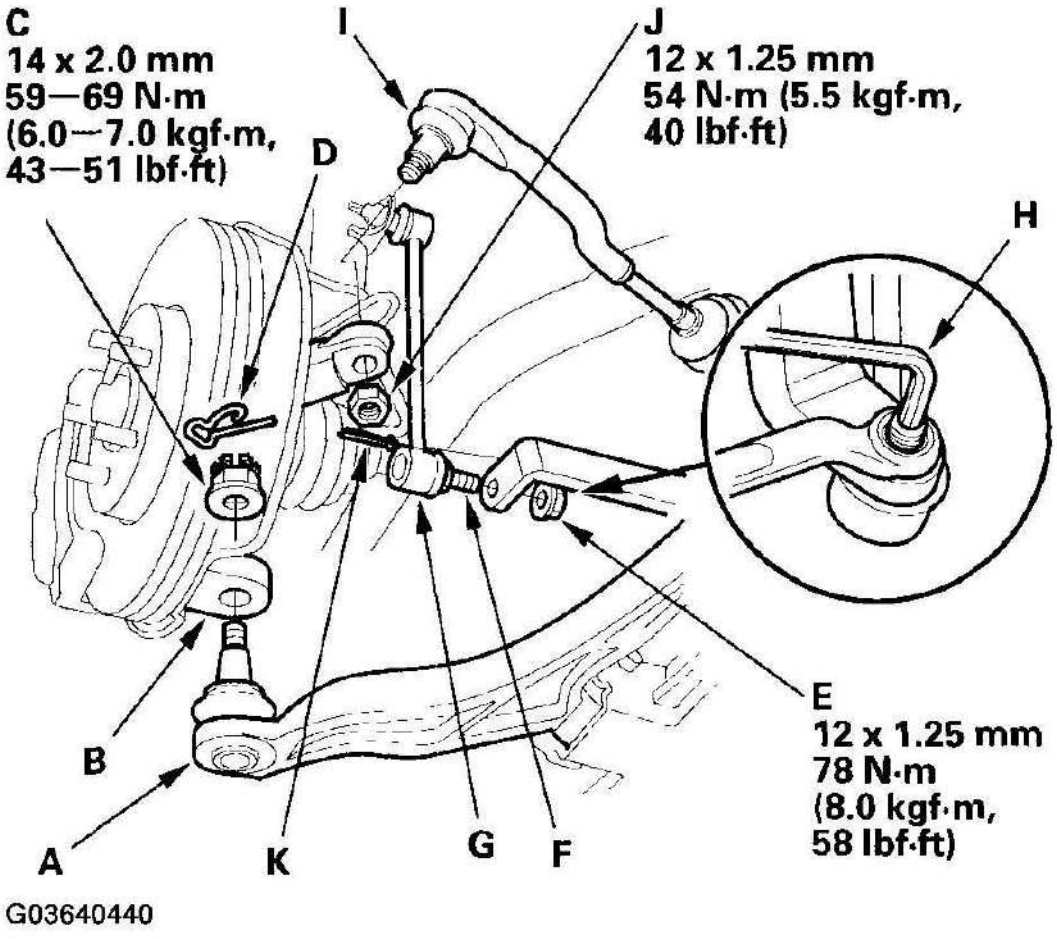


Fig. 305: Installing Ball Joints On Each Lower Arm To Each Knuckle
Courtesy of AMERICAN HONDA MOTOR CO., INC.

31. Install the nuts (E) to the ball joint pin (F) on each stabilizer link (G). Insert a 6 mm Allen wrench (H) in the top of the ball joint pins, and tighten the nuts to the specified torque.
32. Install the tie-rod end ball joints (I) to each knuckle with the nuts (J) and new cotter pins (K).
33. Install the propeller shaft (A) to the transfer companion flange (B) by aligning the reference mark (C).

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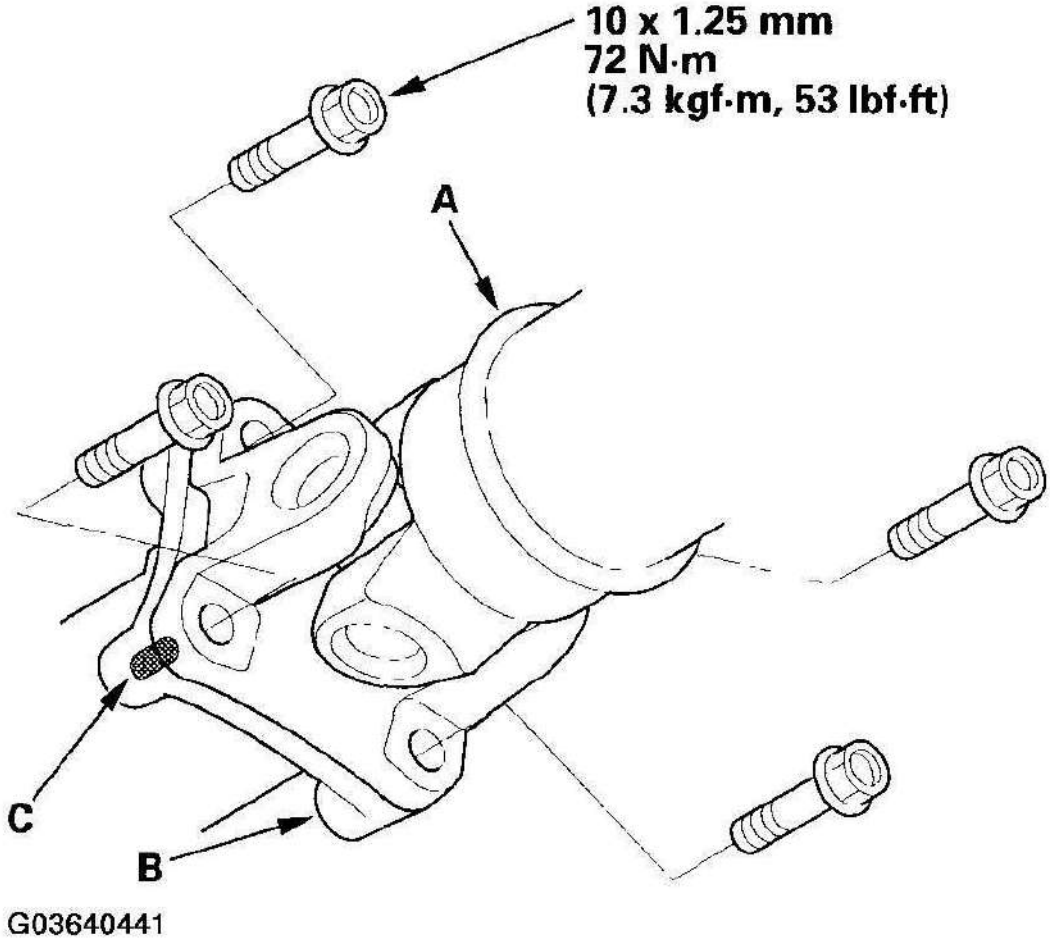


Fig. 306: Installing Propeller Shaft To Transfer Companion Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Install the exhaust pipe A and the new gaskets (B).

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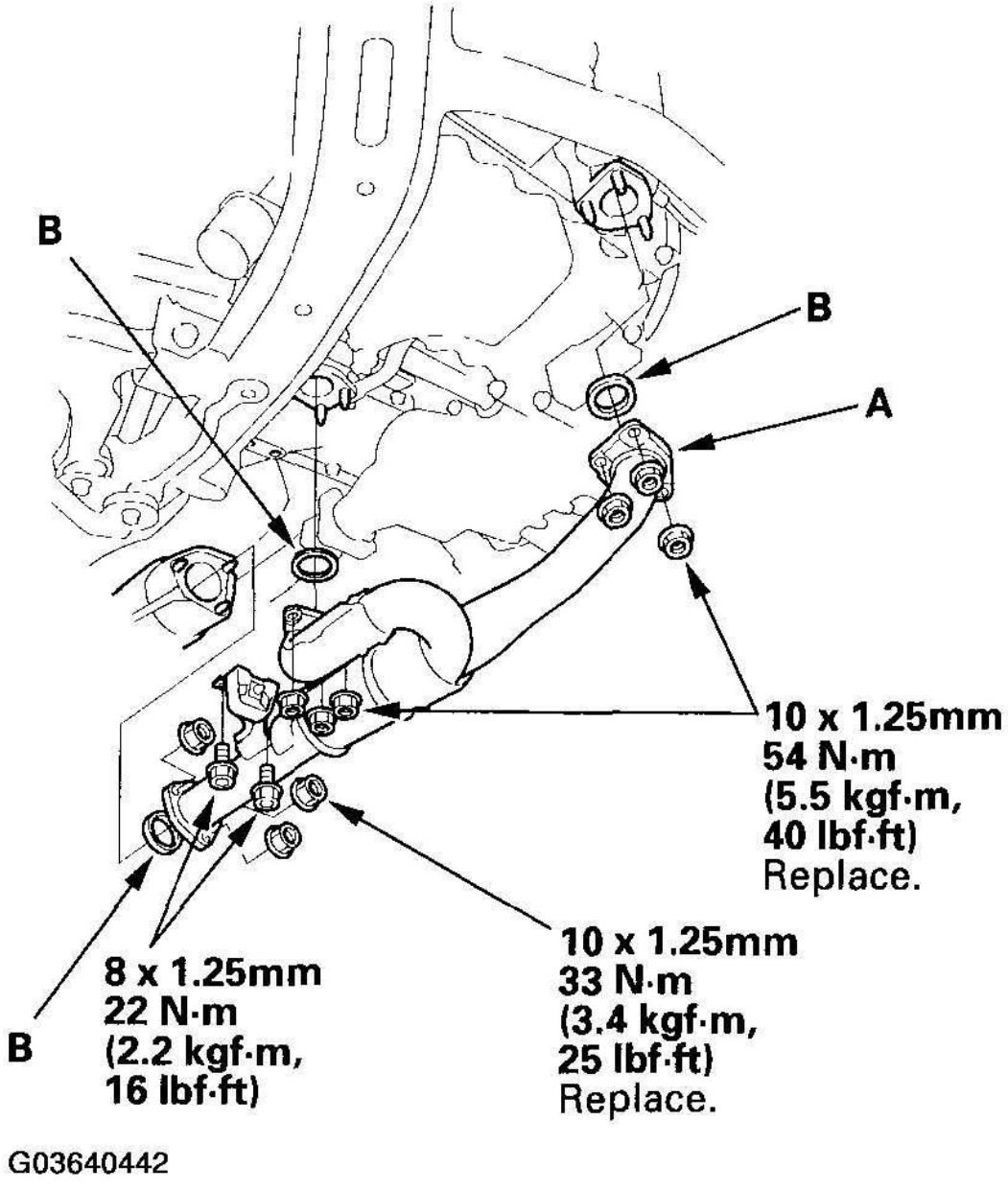


Fig. 307: Installing Exhaust Pipe A And Gaskets
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Install the front subframe stiffener with the new mounting bolts.

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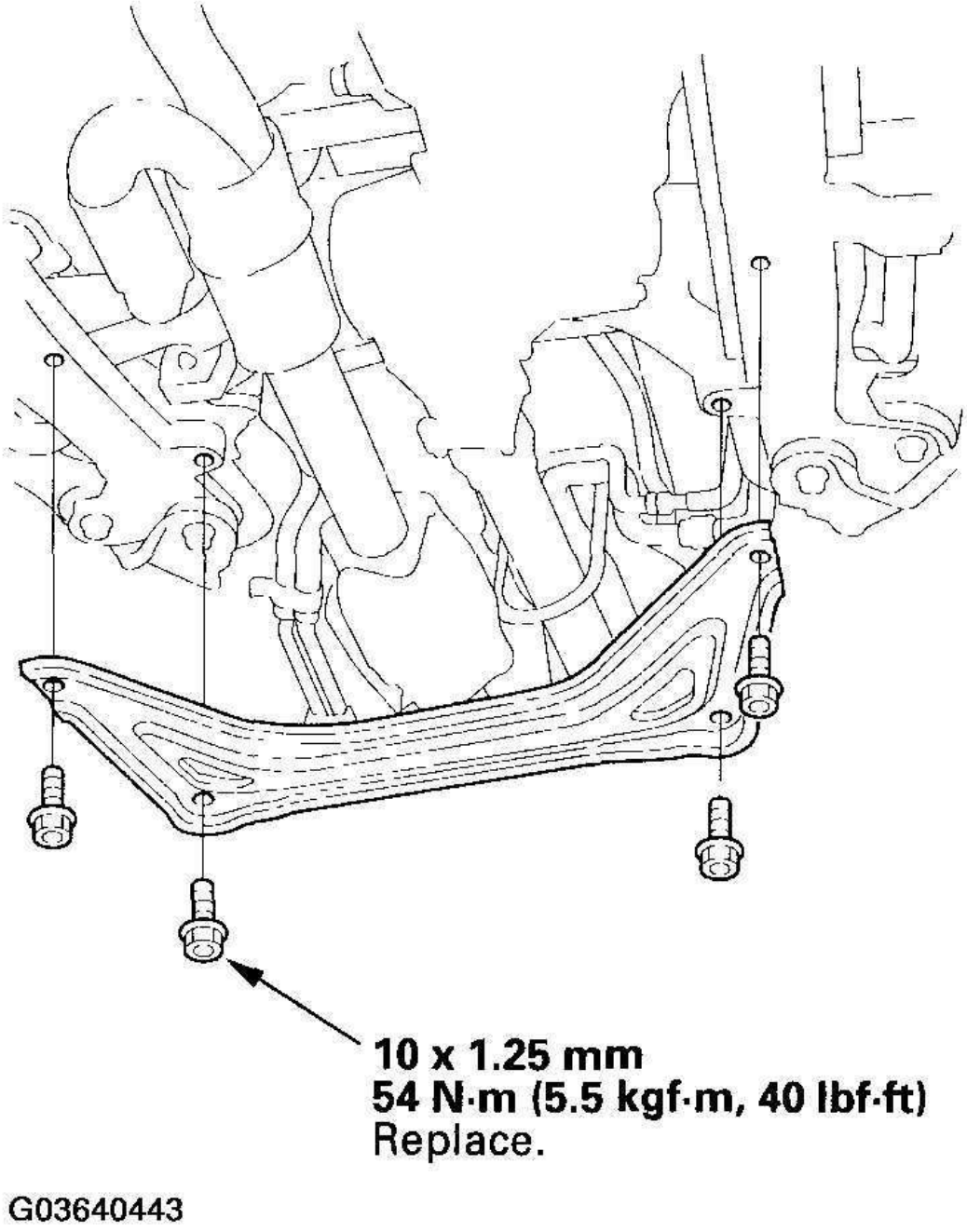


Fig. 308: Installing Front Subframe Stiffener
Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Install and tighten the front mount nut.

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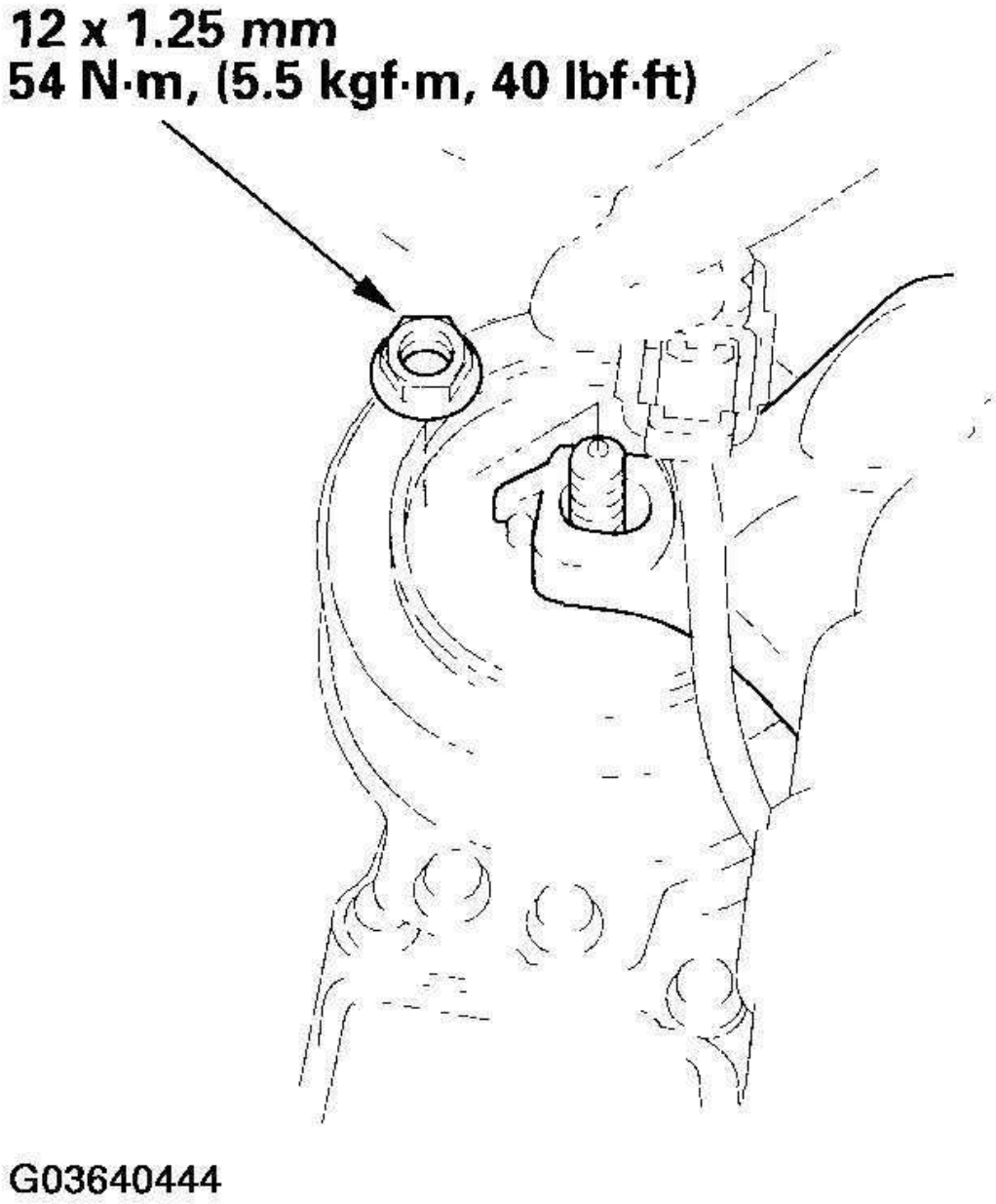


Fig. 309: Installing And Tighten Front Mount Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

37. Remove the engine hanger and support bar.
38. Remove the hanger plates from the engine cylinder head, and install the connector bracket and harness clamp bracket.

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39. Connect the input shaft (mainshaft) speed sensor connector (A), output shaft (countershaft) speed sensor connector (B), 3rd clutch transmission fluid pressure switch connector (C), and ATF temperature sensor connector (D). Do not allow water, fluid, oil, dust, or other foreign particles to enter any of the connectors.

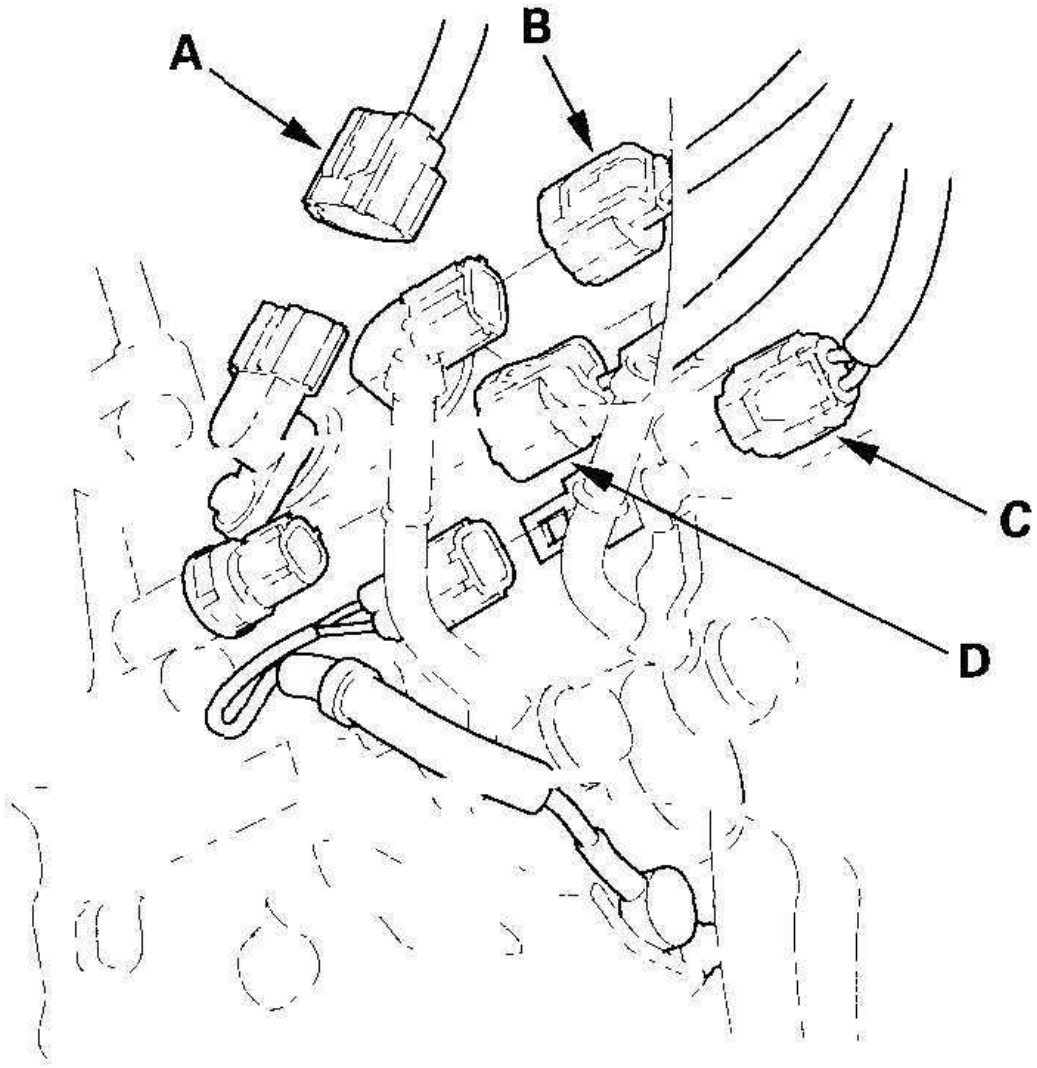


Fig. 310: Connecting Input Shaft (Mainshaft) Speed Sensor Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

40. Connect the ATF cooler hoses (A) to the ATF cooler lines (B), then secure the hoses with the clips (C)

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(see **ATF COOLER HOSE REPLACEMENT**).

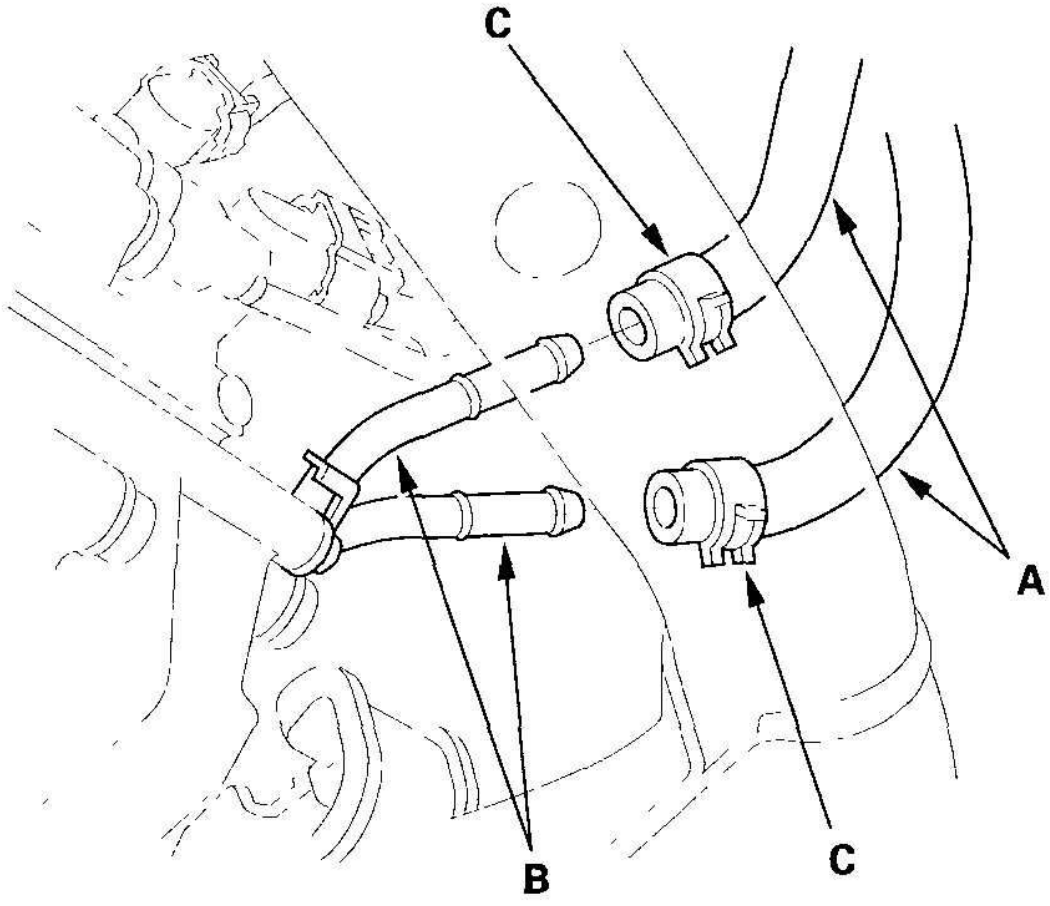


Fig. 311: Connecting ATF Cooler Hoses To ATF Cooler Lines
Courtesy of AMERICAN HONDA MOTOR CO., INC.

41. Connect the transmission range switch connector (A), and install the harness clamp (B) on the clamp bracket (C).

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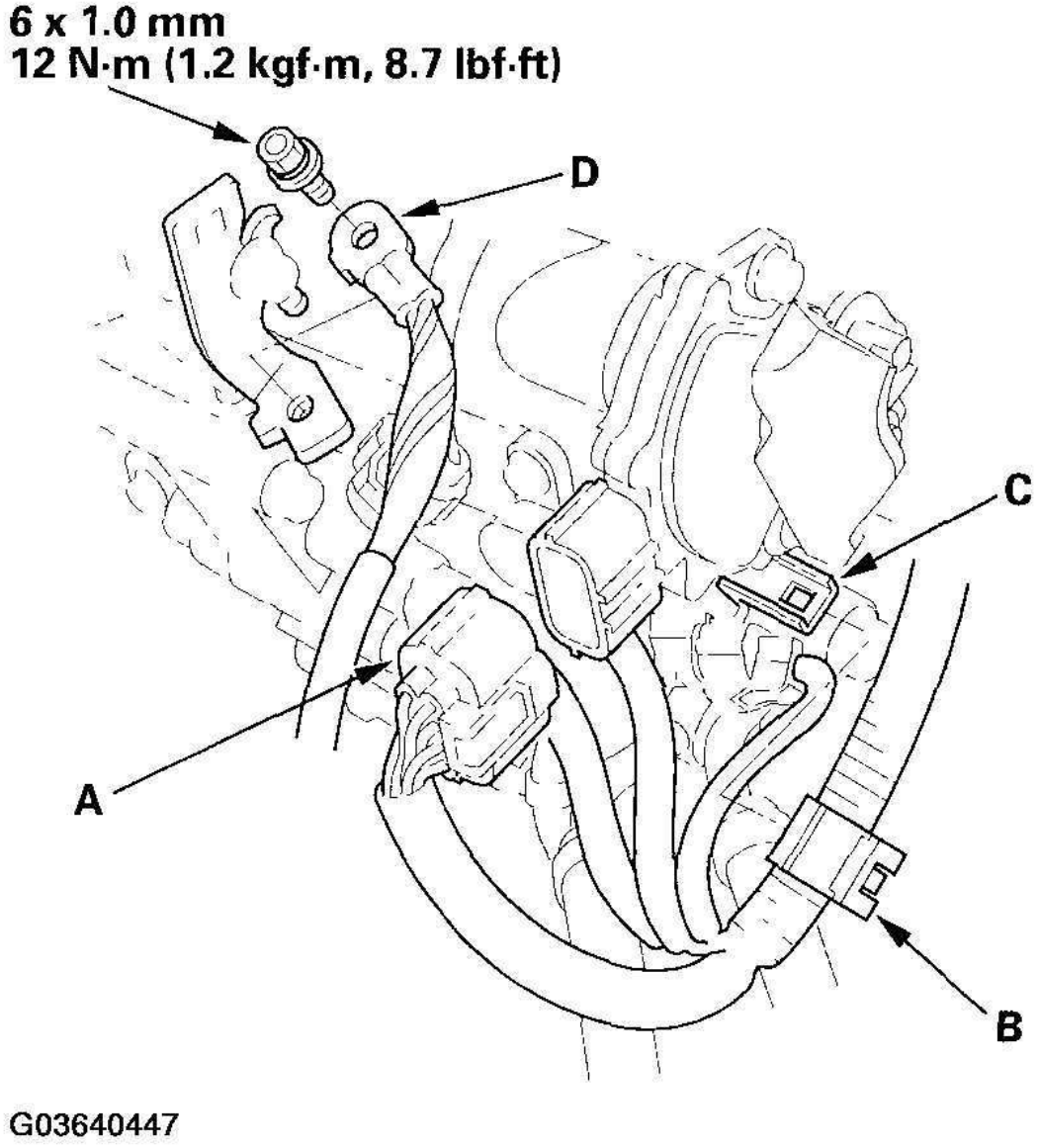


Fig. 312: Connecting Transmission Range Switch Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Install the transmission ground cable (D).
43. Connect A/T clutch pressure control solenoid valve A connector, B connector, C connector, and 4th clutch transmission fluid pressure switch connector (D). Do not allow water, fluid, oil, dust, or other foreign particles to enter any of the connectors.

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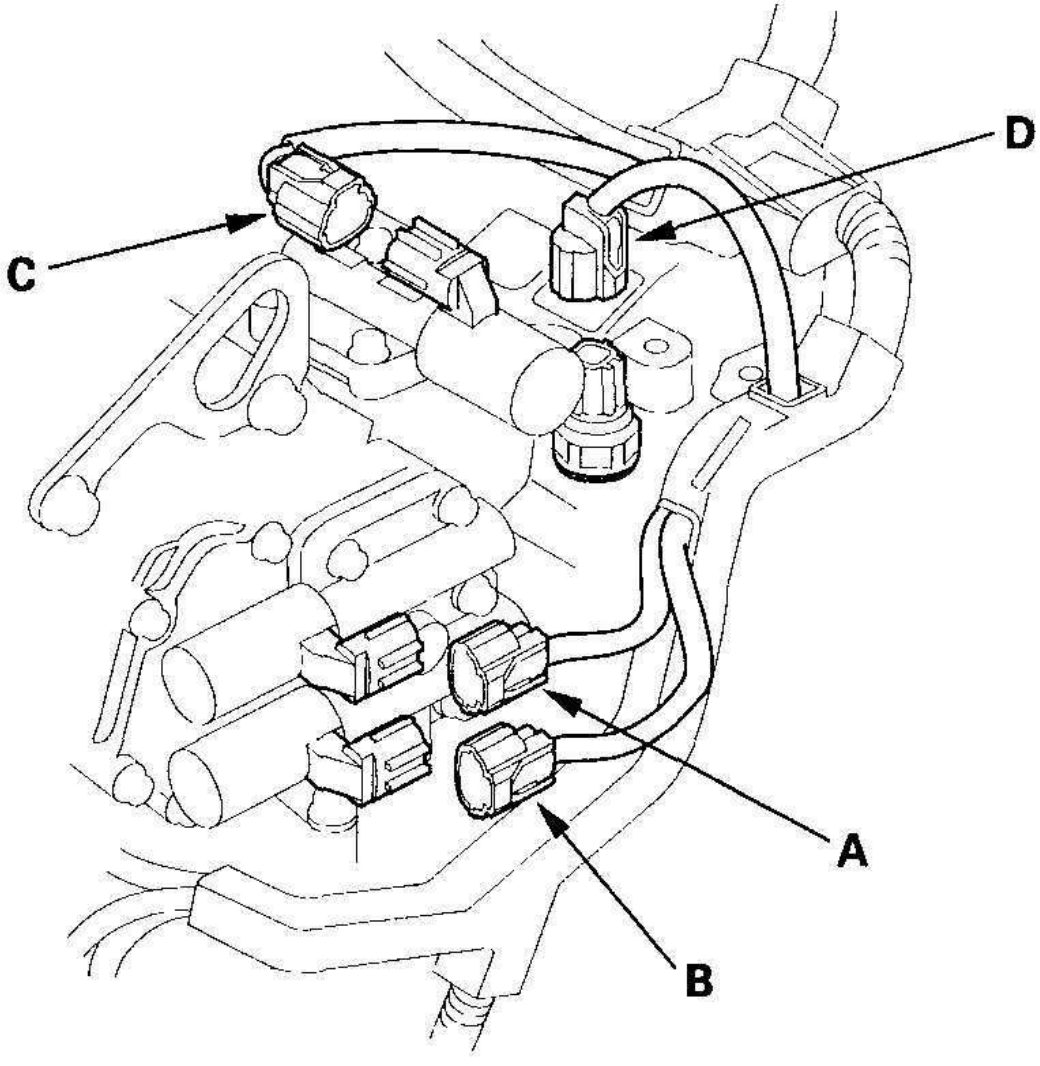


Fig. 313: Connecting A/T Clutch Pressure Control Solenoid Valve A Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Secure the harness cover (A) with the bolts.

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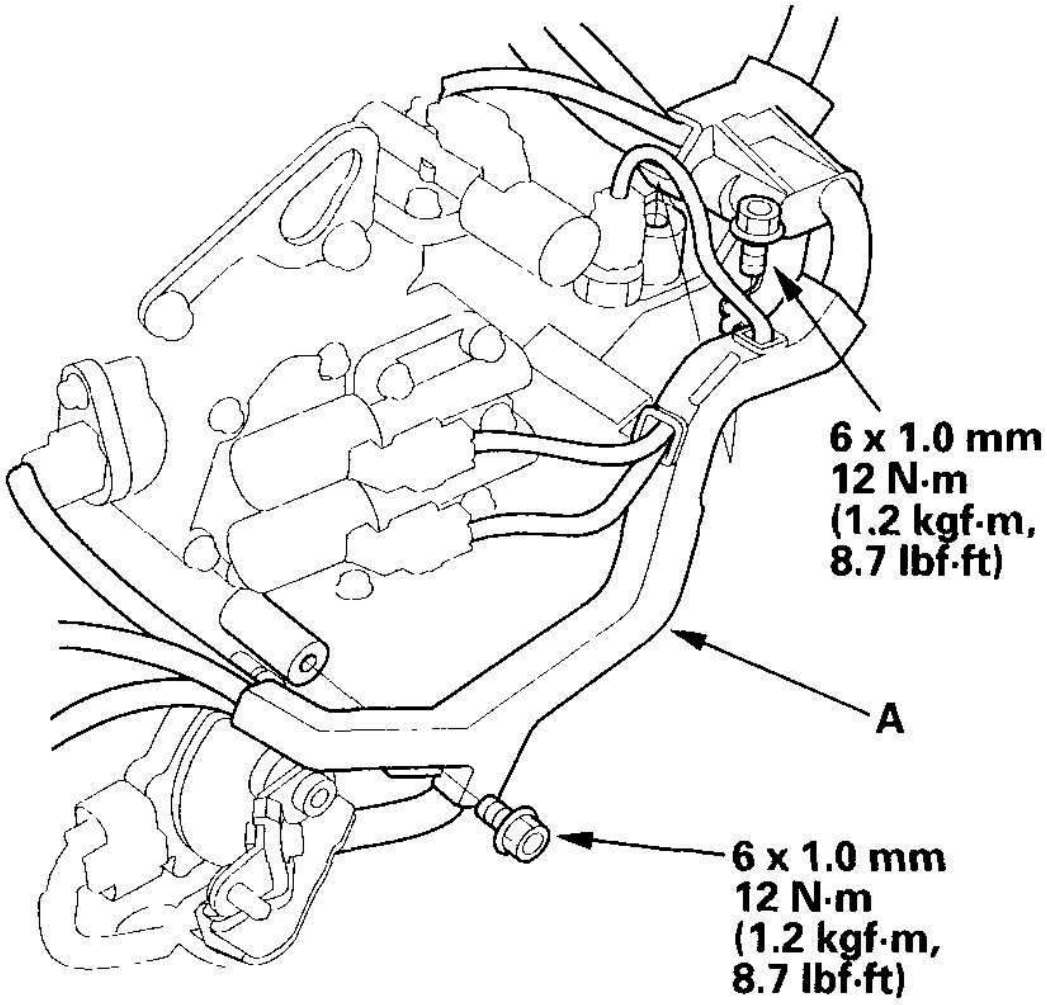


Fig. 314: Securing Harness Cover (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Connect the shift cable end (A) to the control lever (B), and secure the cable end with the spring clip/ washer (C).

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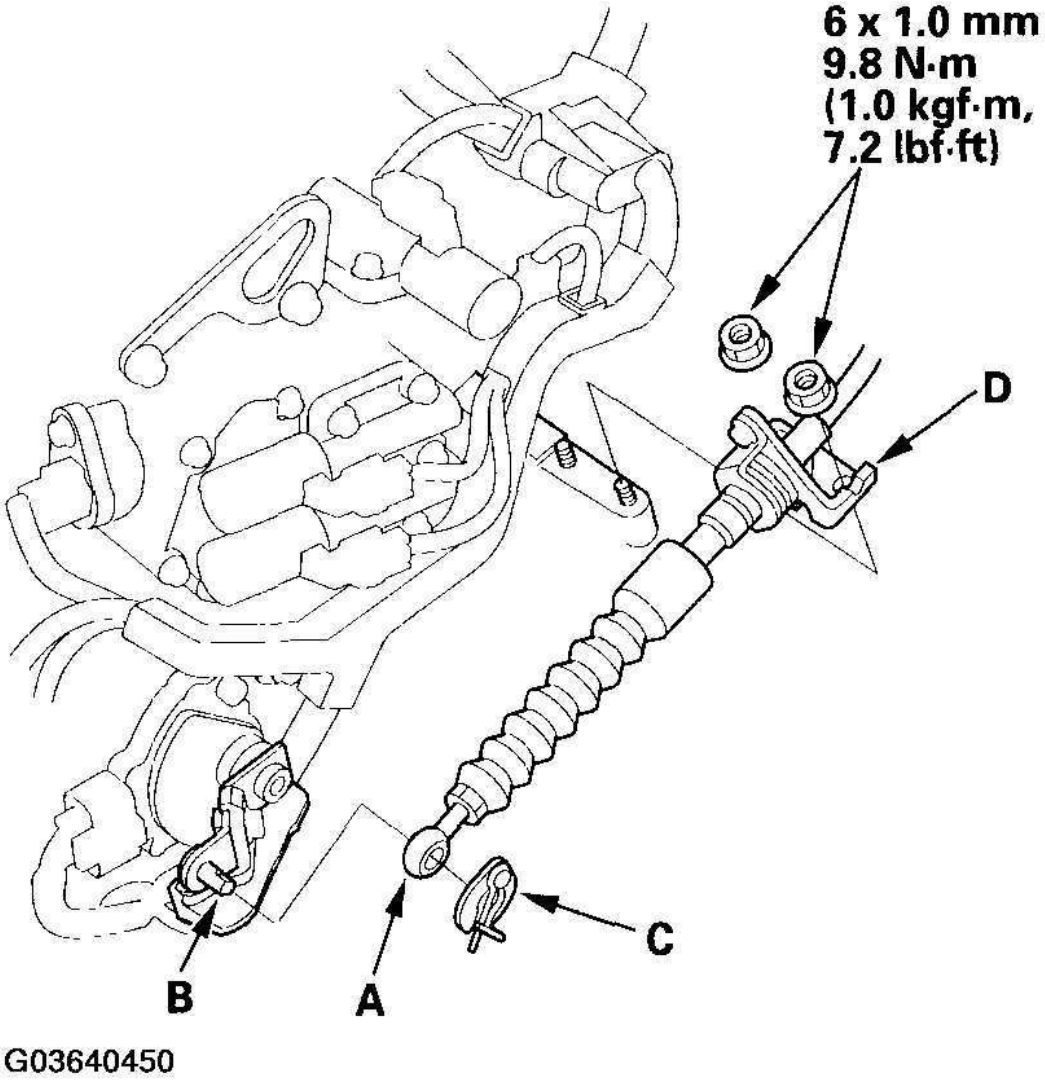


Fig. 315: Connecting Shift Cable End To Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Secure the shift cable bracket (D) with the nuts.
47. Connect the starter cables (A) to the starter, and install the harness clamp (B) on the bracket (C).

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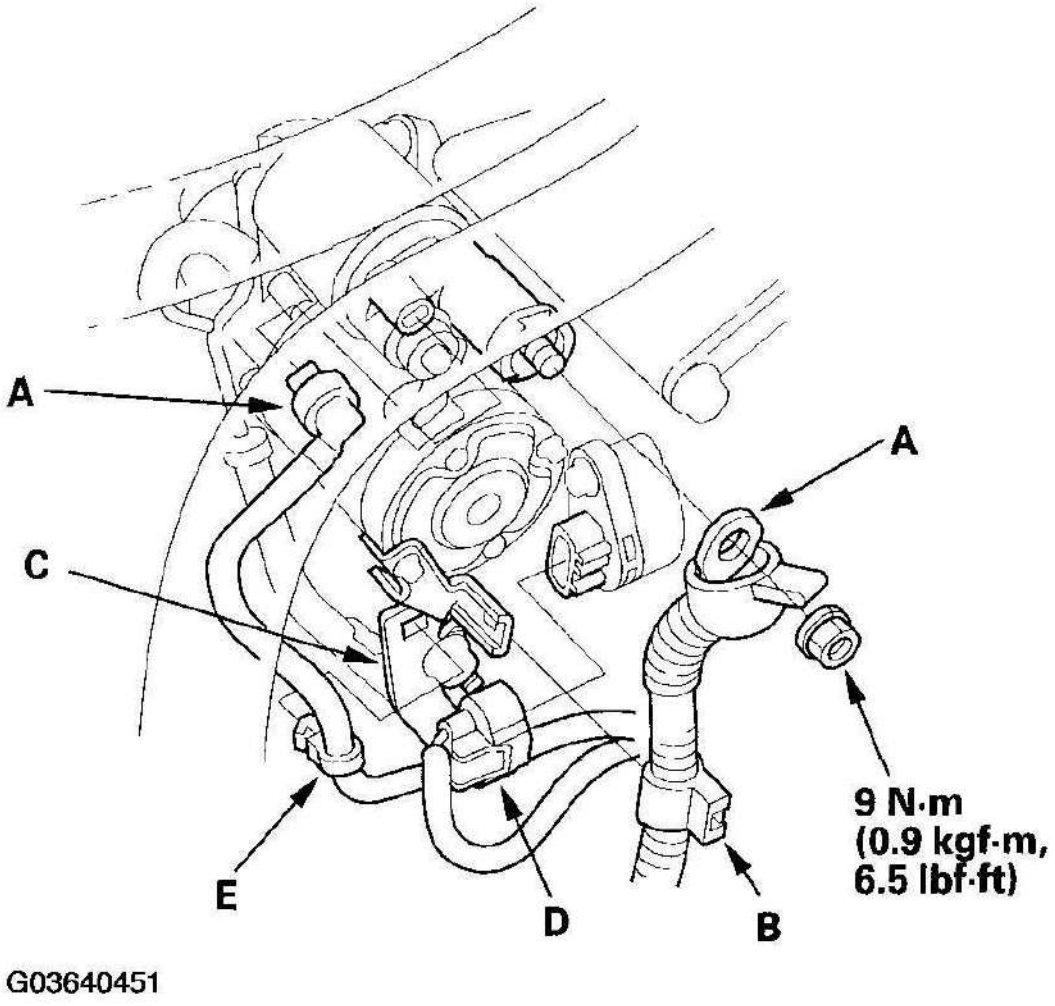


Fig. 316: Connecting Starter Cables To Starter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Connect the solenoid harness connector (D), and install the harness clamp (E) on the clamp bracket.
49. Connect the transmission breather tube (A) to the breather pipe (B) at the transmission housing, and install the tube in the clamp (C) at the dot (D) on the tube with facing out.

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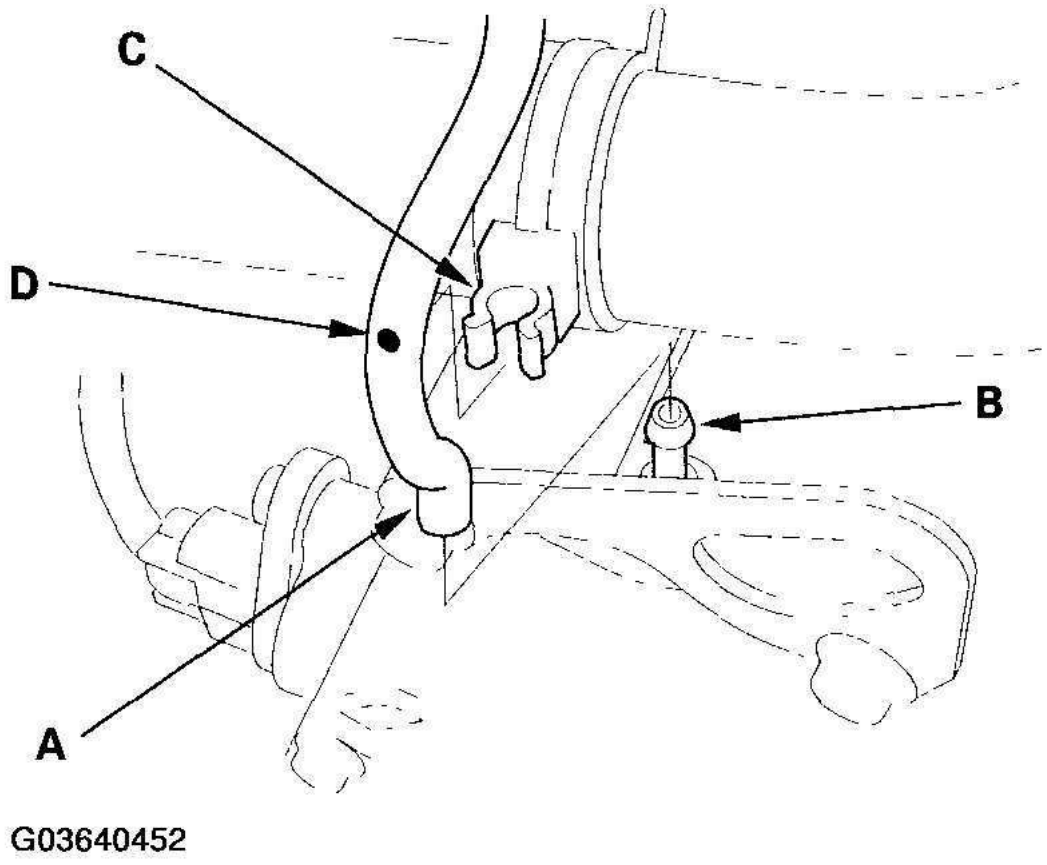


Fig. 317: Connecting Transmission Breather Tube To Breather Pipe At Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Install the battery base.
51. Install the battery tray and battery, then secure the battery with its hold-down bracket on the battery.
52. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
53. Install the power steering pump outlet hose (A) with a new O-ring (B) to the pump (C), and secure the hose clamp (D) with the bolt.

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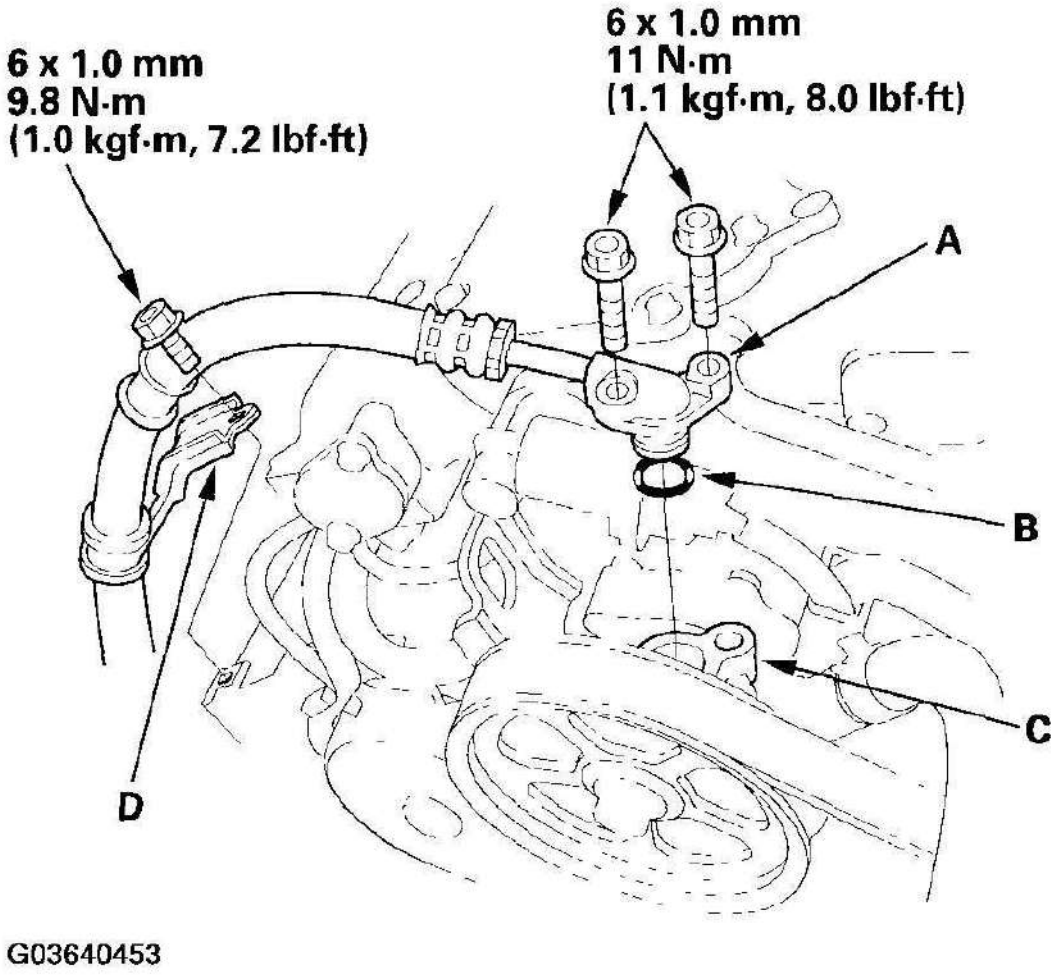


Fig. 318: Installing Power Steering Pump Outlet Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

54. Install the intake air duct and engine covers.
55. Connect the steering joint (A) to the steering gearbox pinion shaft (B) by aligning the reference mark (C), and secure them with the steering joint bolt.

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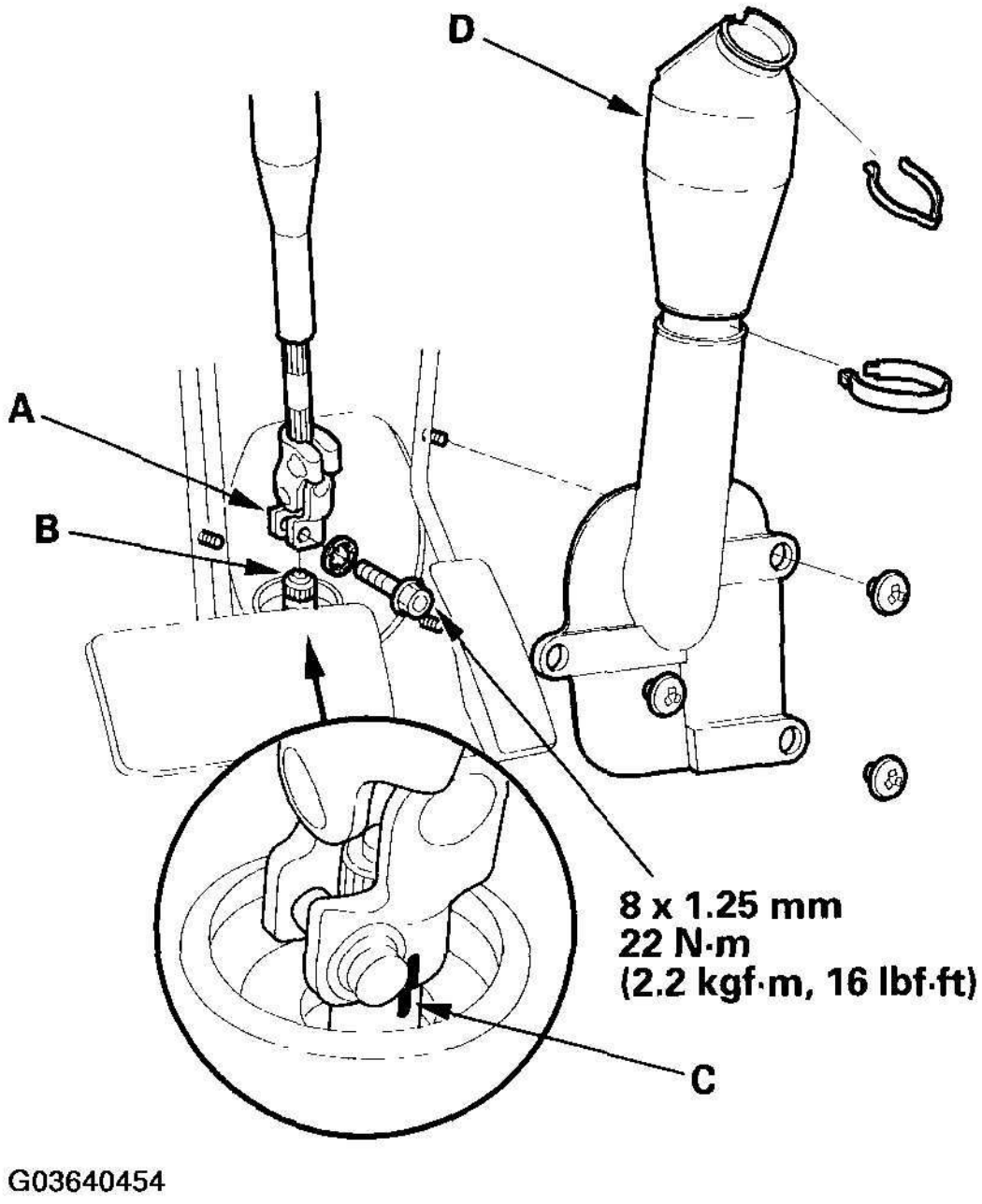


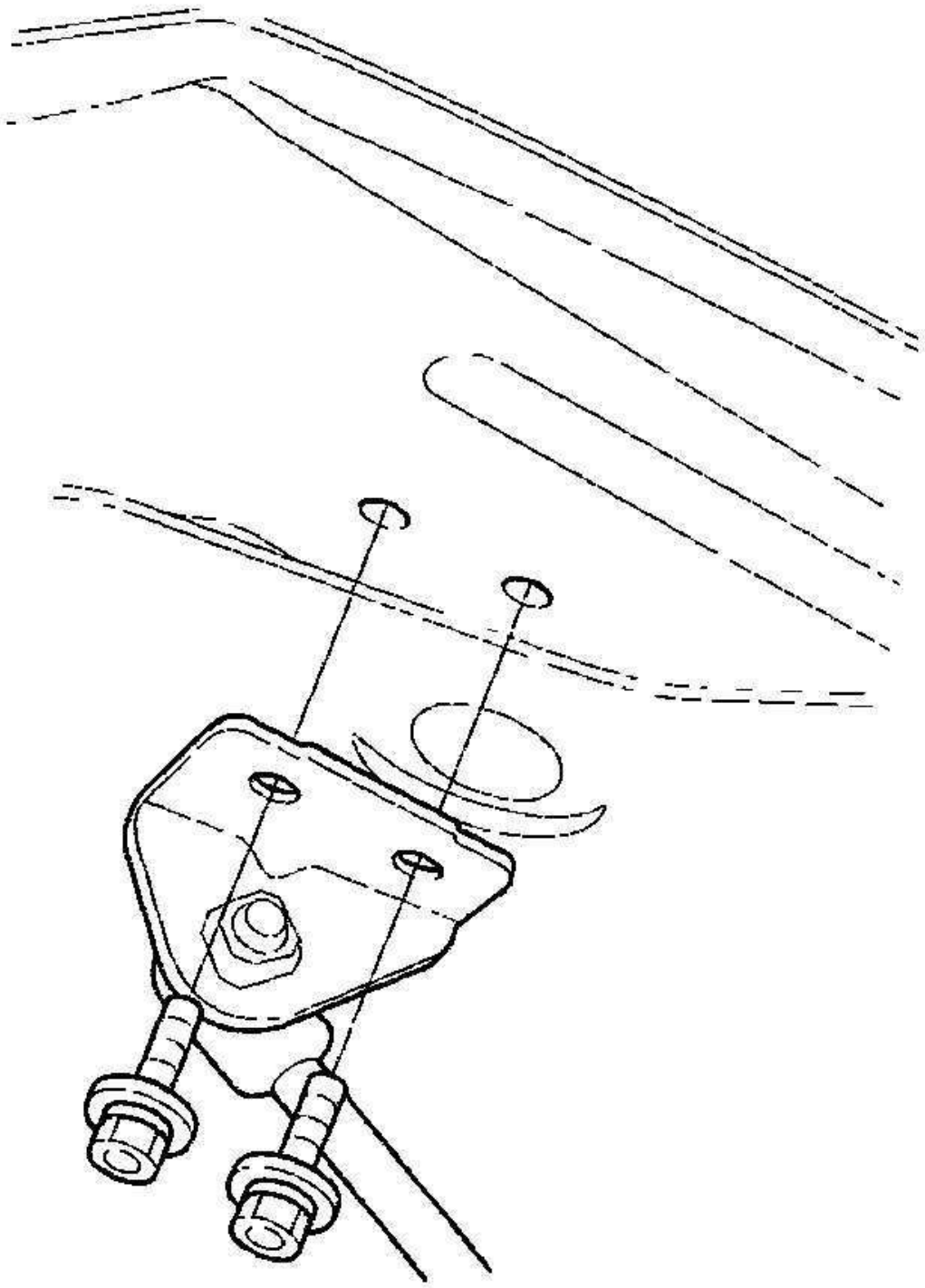
Fig. 319: Connecting Steering Joint To Steering Gearbox Pinion Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

56. Install the steering joint cover (D), and put the carpet back.
57. Remove the steering wheel (see **STEERING WHEEL REMOVAL**).
58. Center the SRS cable reel and install the steering wheel (see **STEERING WHEEL INSTALLATION**).

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59. Refill the power steering system with fluid (see **PUMP REPLACEMENT**).
60. Refill the transmission with ATF (see step 5).
61. Install the splash shield.
62. Connect the battery positive terminal, then connect the negative terminal. Apply grease to the terminals.
63. Set the parking brake. Start the engine, and shift the transmission through all gears three times.
64. Check the shift lever operation, A/T gear position indicator operation, and shift cable adjustment.
65. Check and adjust the front wheel alignment (see **WHEEL ALIGNMENT**).
66. Reattach the right and left hood support struts.

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Fig. 320: Installing Hood Support Struts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

67. Start the engine, and let it reach normal operating temperature (the radiator fan comes on) with the transmission in the P or N position, then turn it off and check the ATF level (see **ATF LEVEL CHECK**).
68. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
69. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
70. Confirm that all systems work properly.
71. Do the road test (see **ROAD TEST**).
72. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.
73. Loosen the front mount nut after the road test, then retighten the nut to the specified torque.

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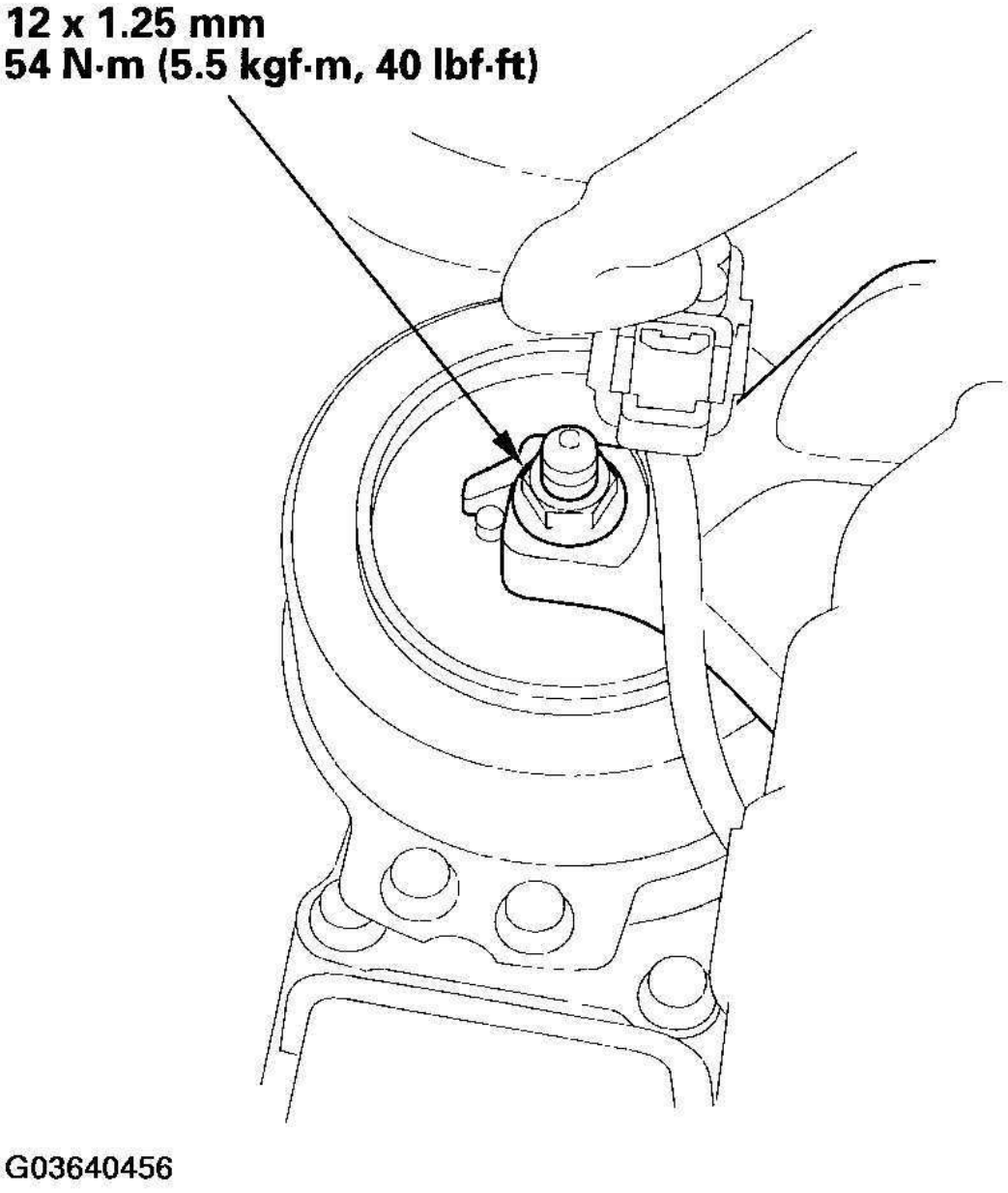


Fig. 321: Tightening Front Mount Nut To Specified Torque
Courtesy of AMERICAN HONDA MOTOR CO., INC.

ATF COOLER CLEANING

Special Tools Required

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- ATF Cooler Cleaner GHTTTCF6H
- Magnetic Non bypass Spin-on Filter GTHGNBP2

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-Z1 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 Acura ATF-Z1; do not use any additives.

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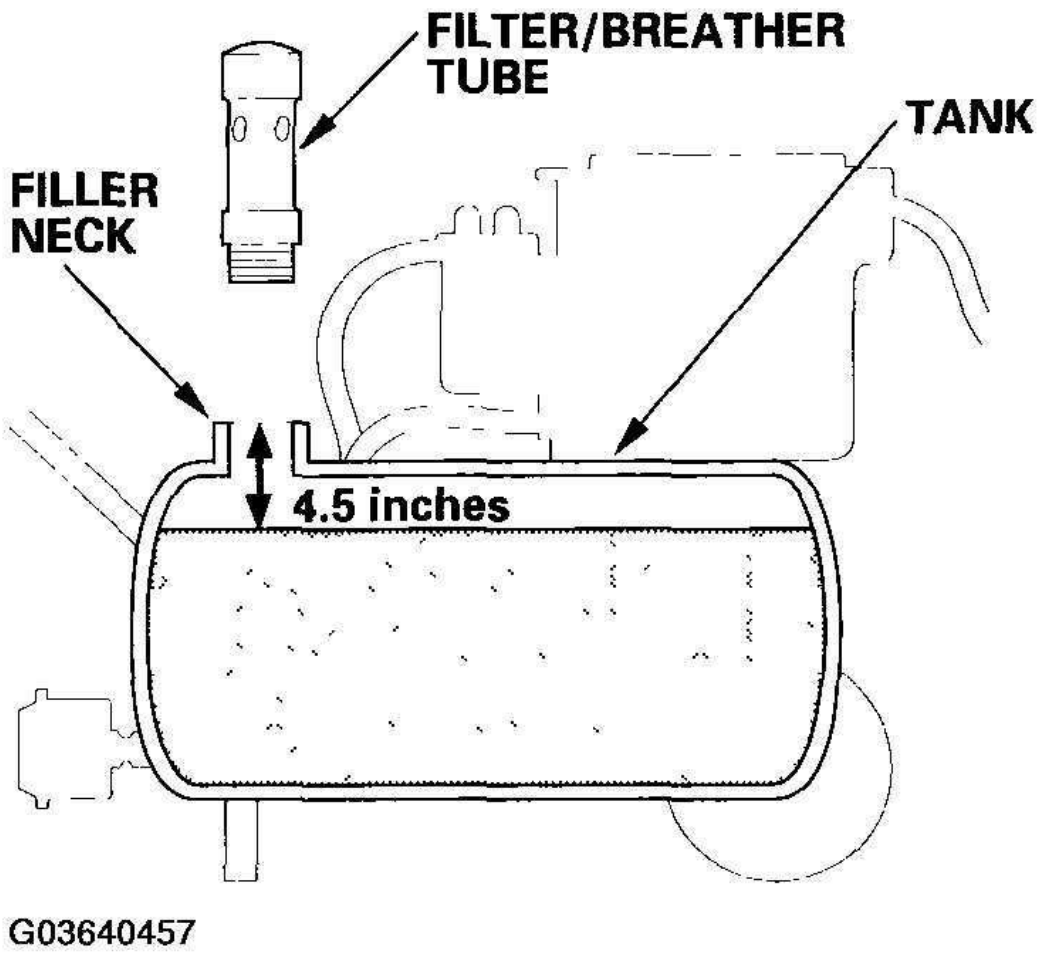


Fig. 322: Checking Fluid In Cooler Cleaner Tank
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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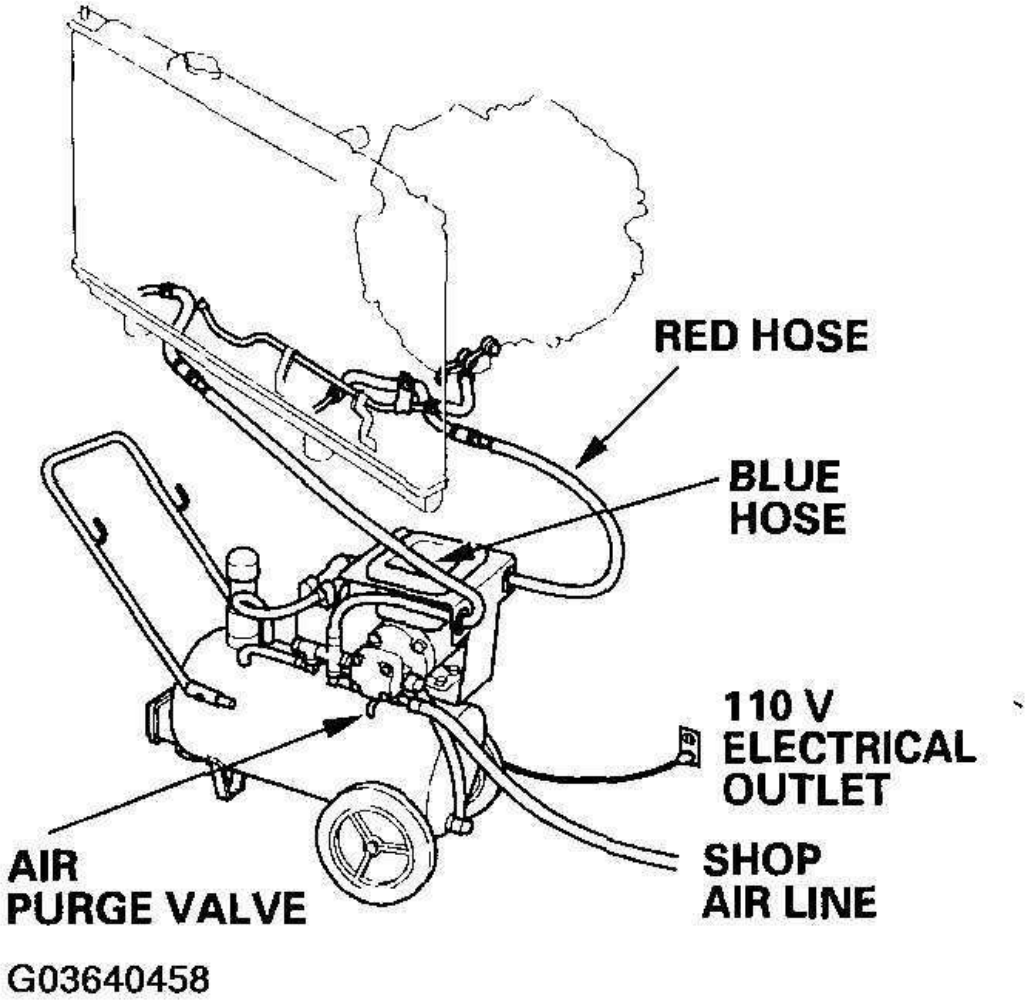


Fig. 323: Checking Radiator For Leak
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Flip the HEAT toggle switch to ON; the green indicator above the toggle switch comes on. Wait 1 hour for the cooler cleaner to reach its operating temperature. (The cooler cleaner is ready to use when the temperature gauge reads 140° to 150°F.)

NOTE: If the red indicator above the HEAT toggle switch comes on, the fluid level in the tank is too low for the tank heater to work (see step 1 of this procedure).

4. Select the appropriate pair of fittings, and attach them to the radiator, to the hoses, or to the banjo bolts

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for flow through the ATF cooler cleaner.

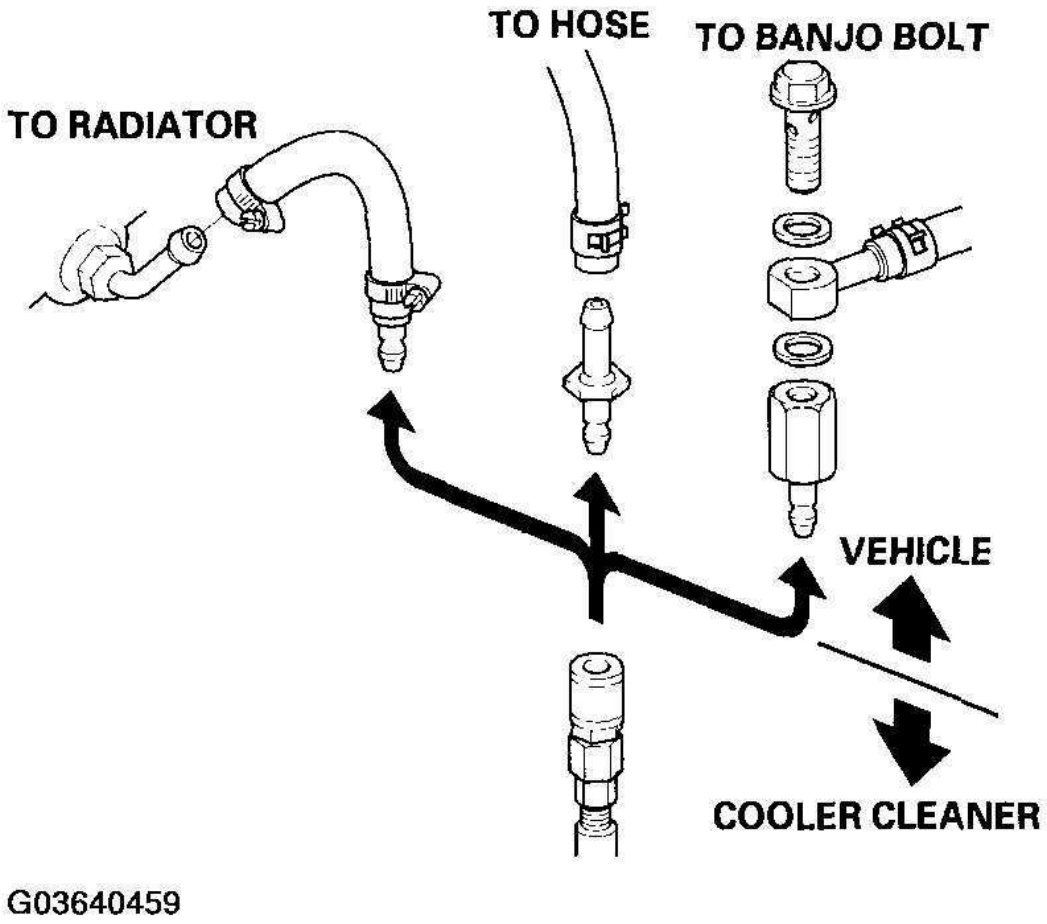


Fig. 324: Selecting Appropriate Pair Of Fittings And Attaching Them To Radiator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Connect the red hose to the cooler outlet line (the line that normally goes to the external filter on the transmission).
6. Connect the blue hose to the cooler inlet line.
7. Connect a shop air hose (regulated to 100 to 125 psi) to the air purge valve.

NOTE: The quick-connect fitting has a one-way check valve to keep 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.

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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.

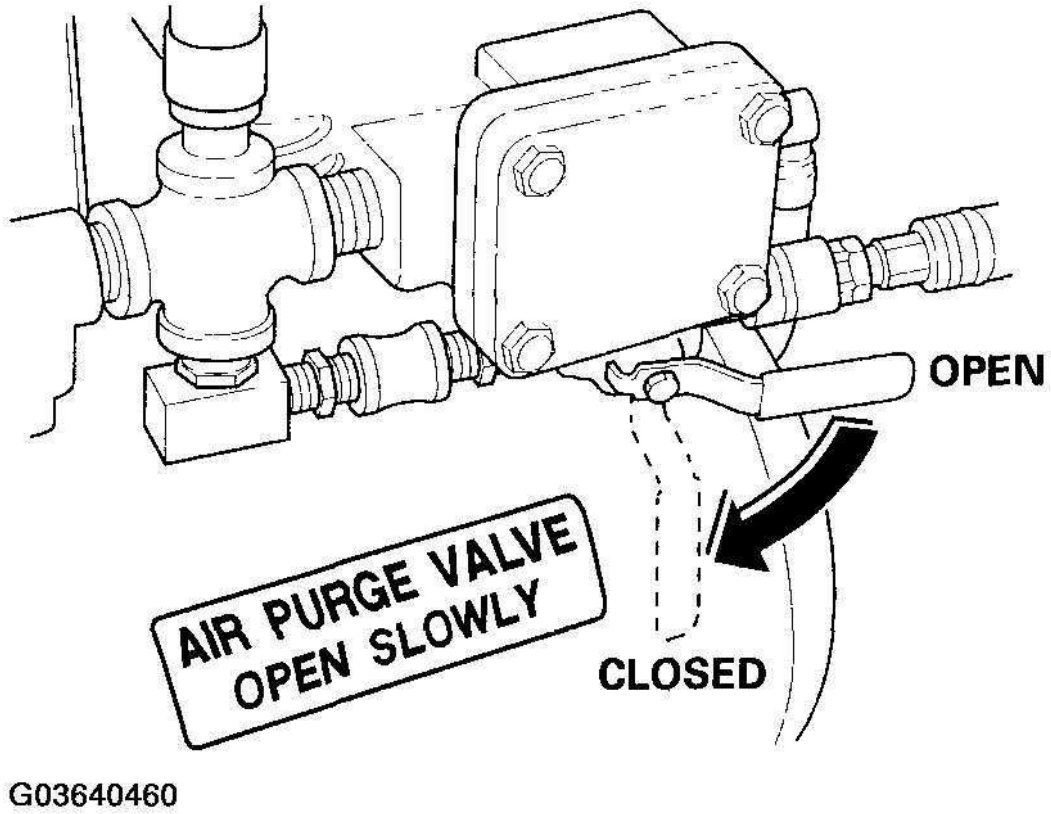


Fig. 325: Identifying Closing Direction Of Air Purge Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. With the air purge valve open, flip the MOTOR toggle switch to OFF; the green indicator goes off. Leave the air purge valve open for at least 15 seconds to purge the lines and hoses of residual 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-

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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 non bypass 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.

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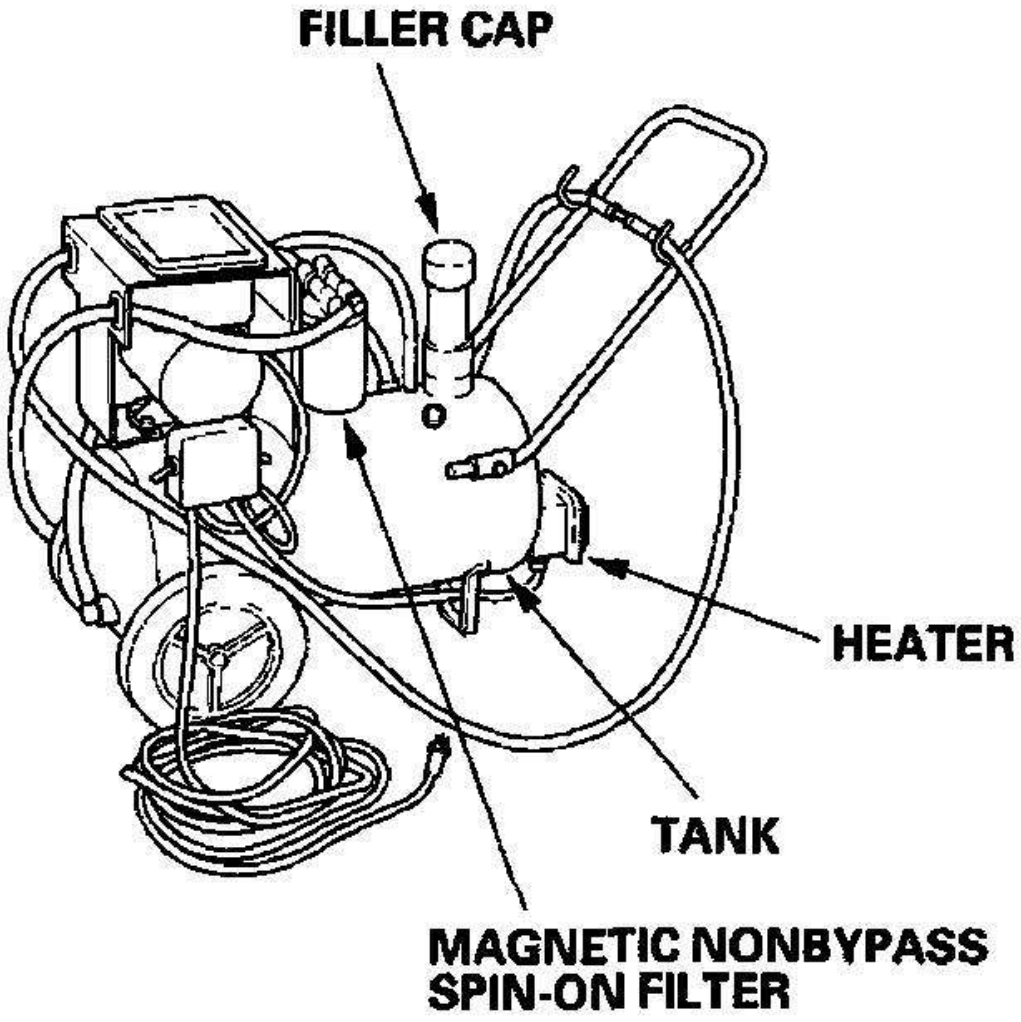


Fig. 326: Identifying ATF Cooler Cleaner
Courtesy of AMERICAN HONDA MOTOR CO., INC.

ATF COOLER HOSE REPLACEMENT

1. Connect the cooler hoses (A) to the ATF cooler lines (B) and ATF cooler, and secure them with the clips (C).

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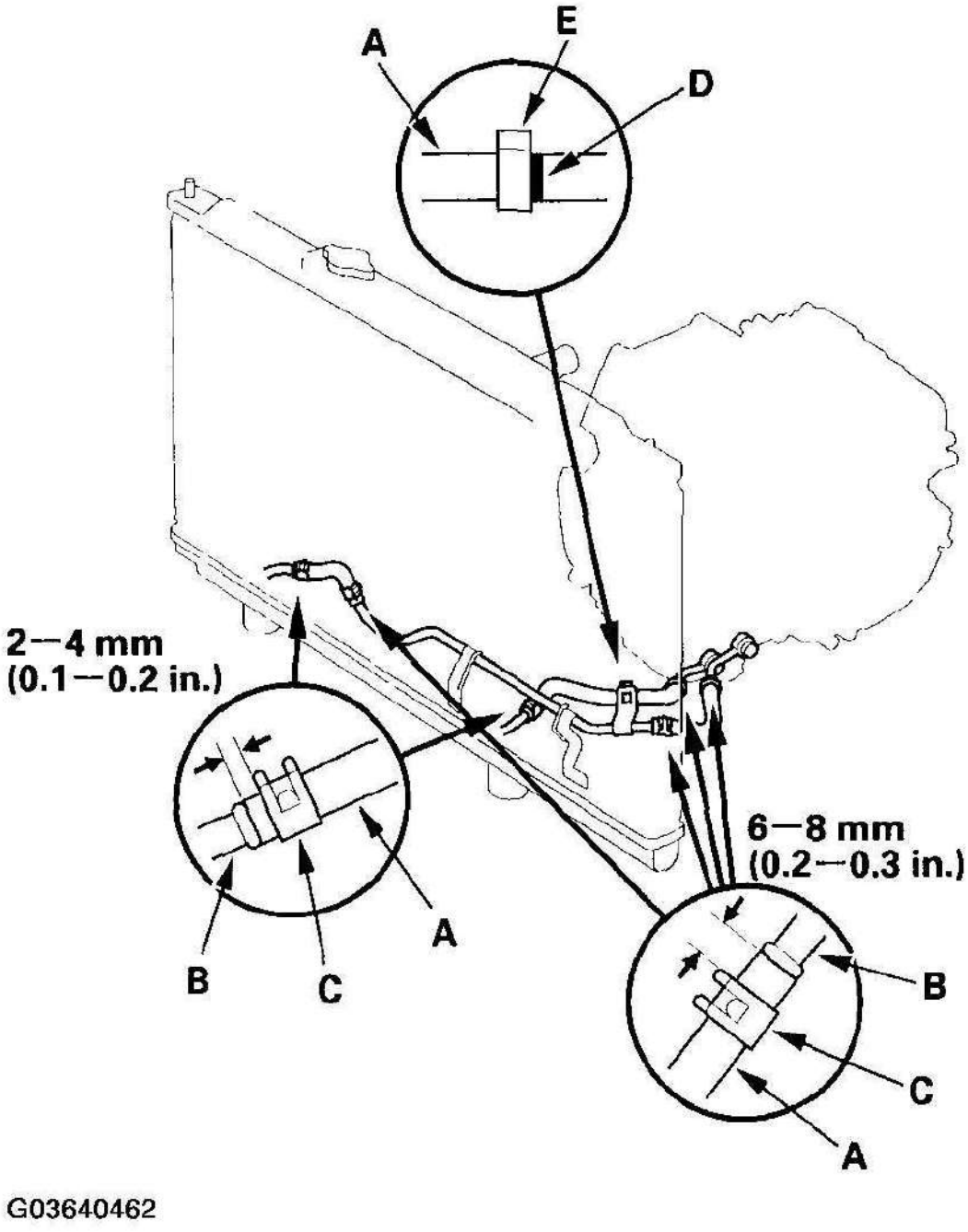


Fig. 327: Connecting Cooler Hoses To ATF Cooler Lines And ATF Cooler
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Clamp the ATF cooler hose with the yellow mark (D) on the clamp (E).

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SHIFT LEVER REMOVAL

1. Shift the transmission into the R position.
2. Remove the console panel and center console (see **CENTER CONSOLE REMOVAL/INSTALLATION**).
3. Remove the nut securing the shift cable end (A), then separate the end from the shift lever assembly.

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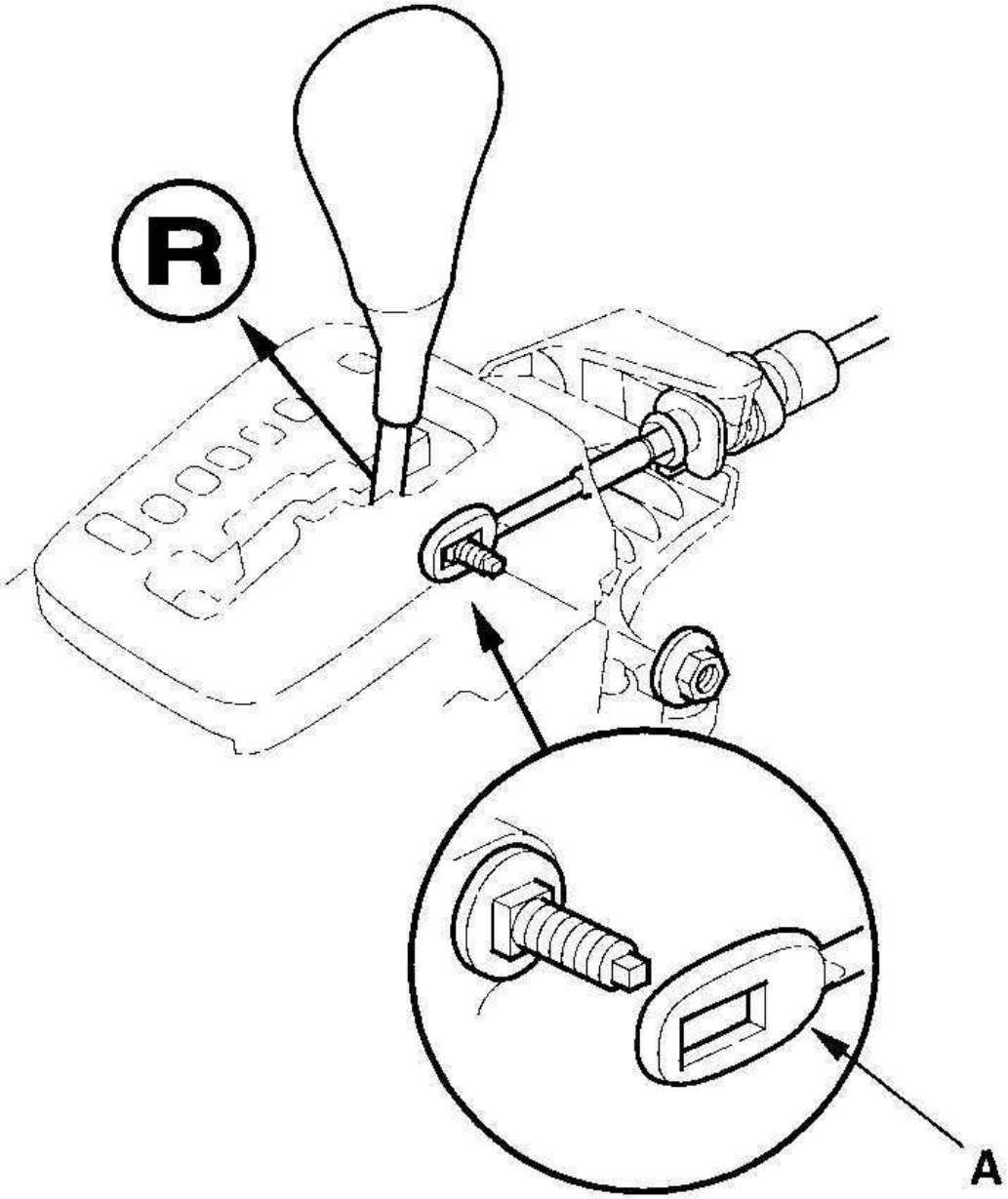


Fig. 328: Removing Shift Cable End
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder to remove the shift cable from the shift lever bracket base (C).

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NOTE: Do not remove the shift cable by twisting the shift cable guide (D) and damper (E).

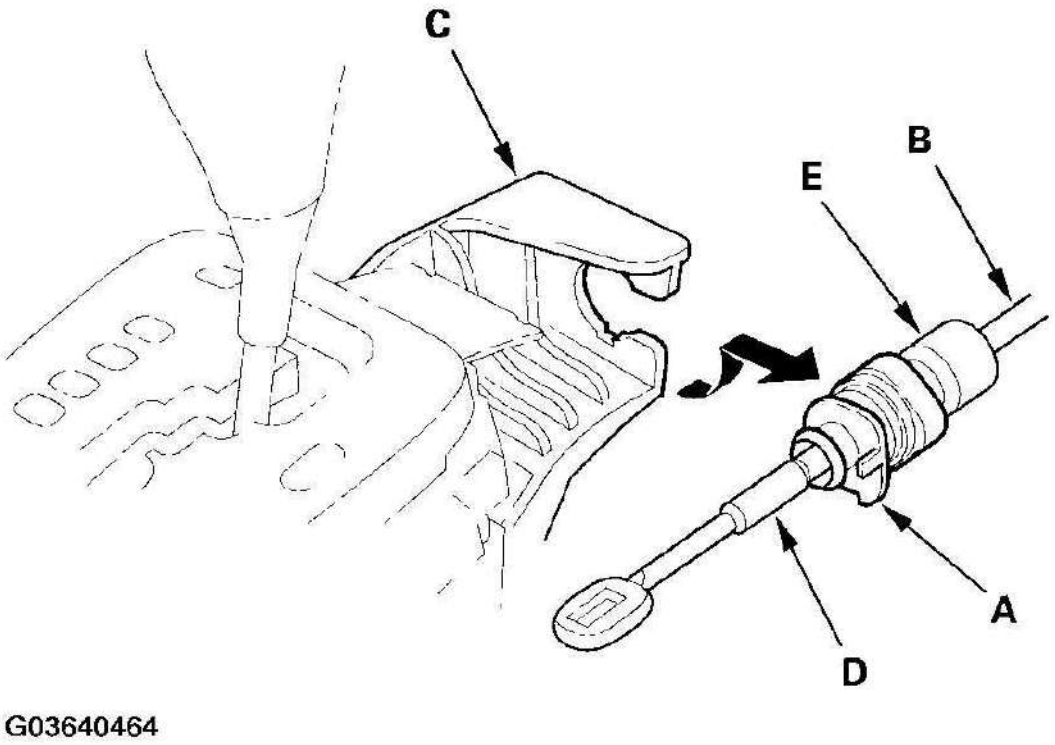


Fig. 329: Removing Shift Cable From Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the shift lock solenoid connector (A) and the switch assembly connector (6P) (B).

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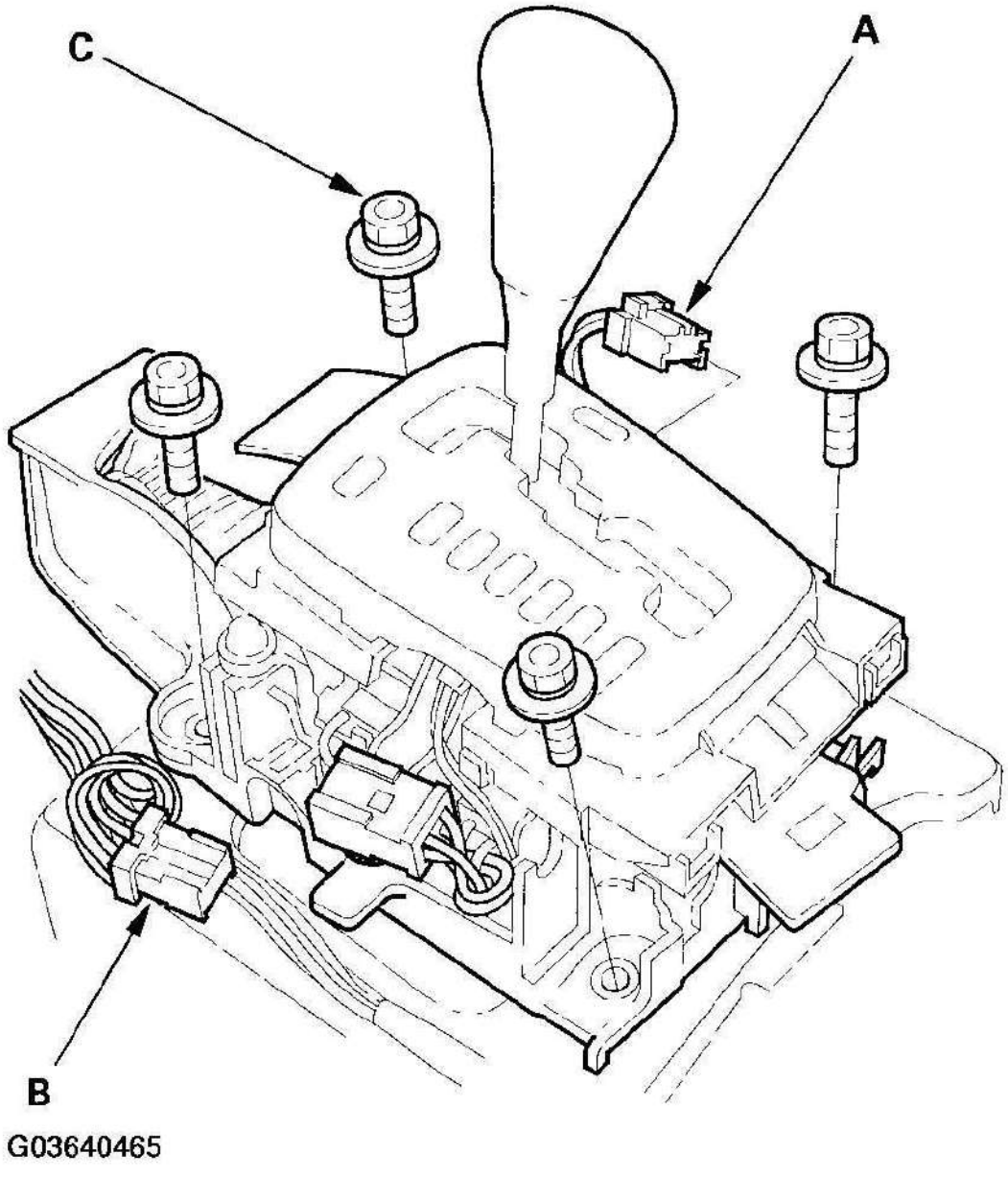


Fig. 330: Disconnecting Shift Lock Solenoid Connector And Switch Assembly Connector (6P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the four bolts (C) securing the shift lever bracket base, then remove the shift lever assembly.

SHIFT LEVER INSTALLATION

1. Install the shift lever assembly.

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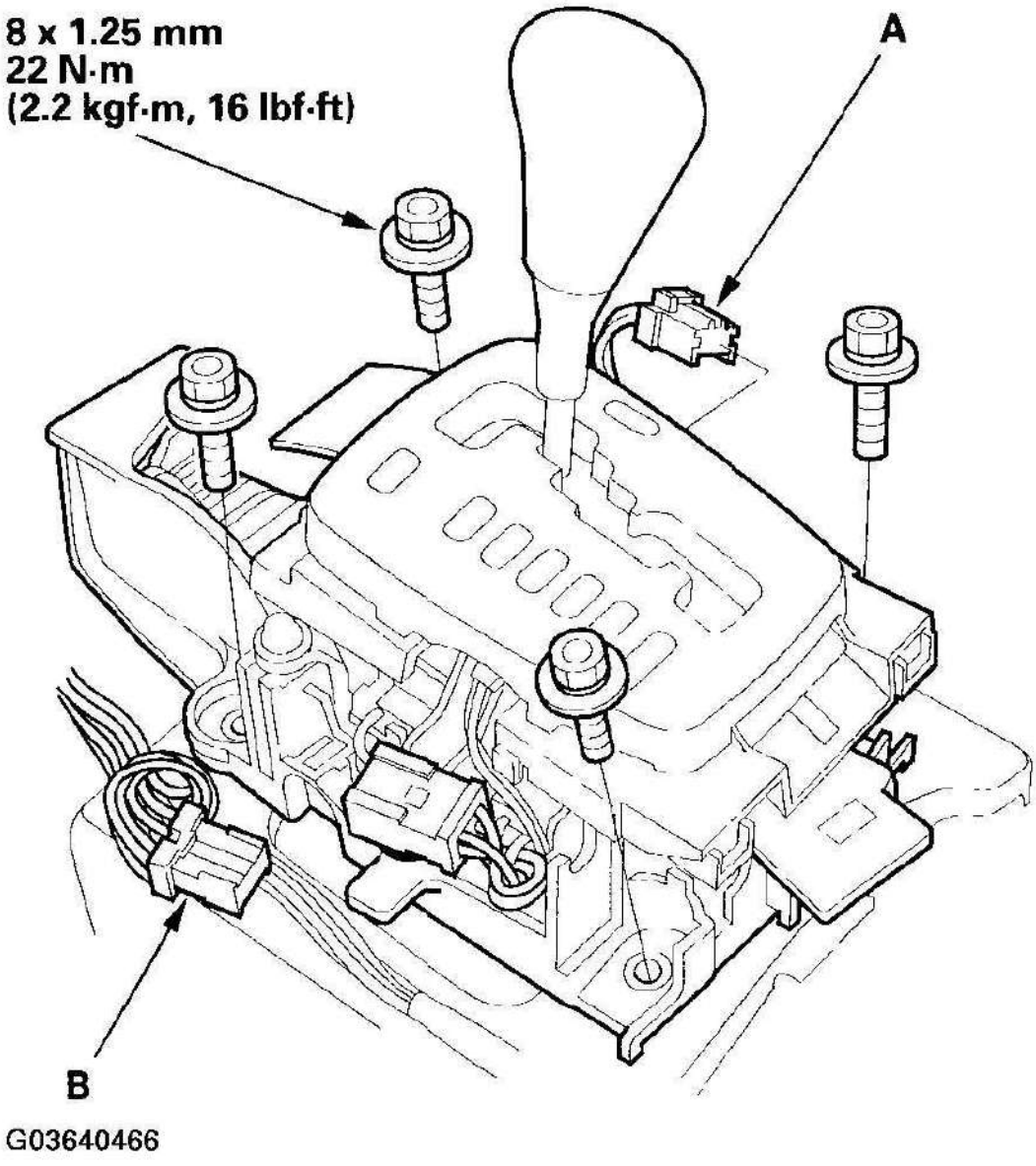


Fig. 331: Connecting Shift Lock Solenoid Connector And Switch Assembly Connector (6P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Connect the shift lock solenoid connector (A) and the switch assembly connector (6P) (B).
3. Turn the ignition switch ON (II), and verify that the R position indicator comes on.

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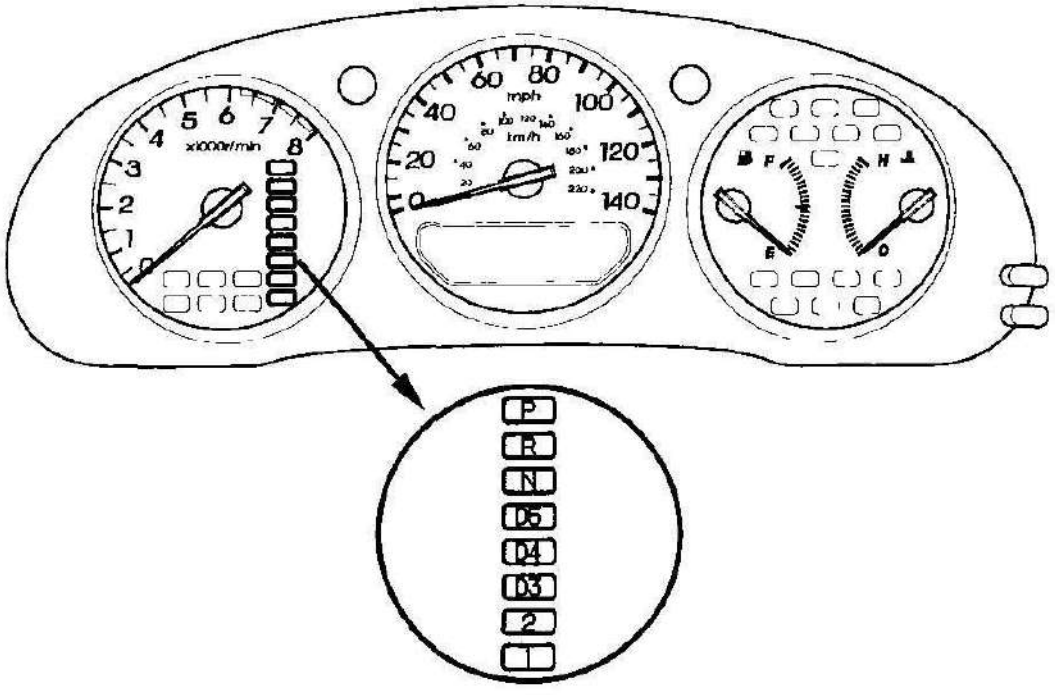


Fig. 332: Identifying R Position Indicator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. If necessary, push the shift cable unit it stops, then release it. Pull the shift cable back one step so that the shift position is in R. Do not hold the shift cable guide (A) and damper (B) to adjust the shift cable (C).

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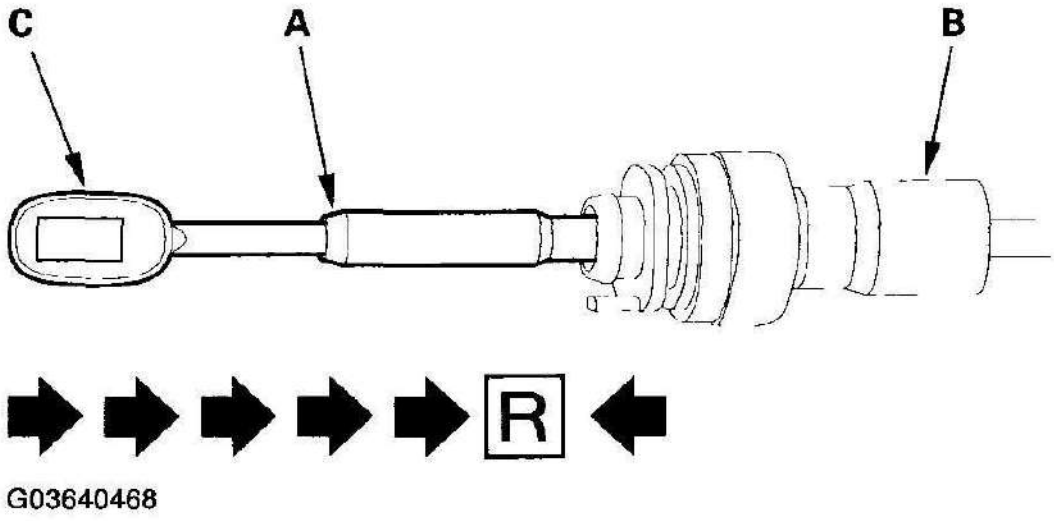


Fig. 333: Adjusting Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Turn the ignition switch OFF.
6. Place the shift lever in the R position, then insert a 6.0 mm (0.24 in.) pin (A) into the positioning hole (B) on the shift lever bracket base through the positioning hole on the shift lever assembly, and into the positioning hole. The shift lever is secured in the R position.

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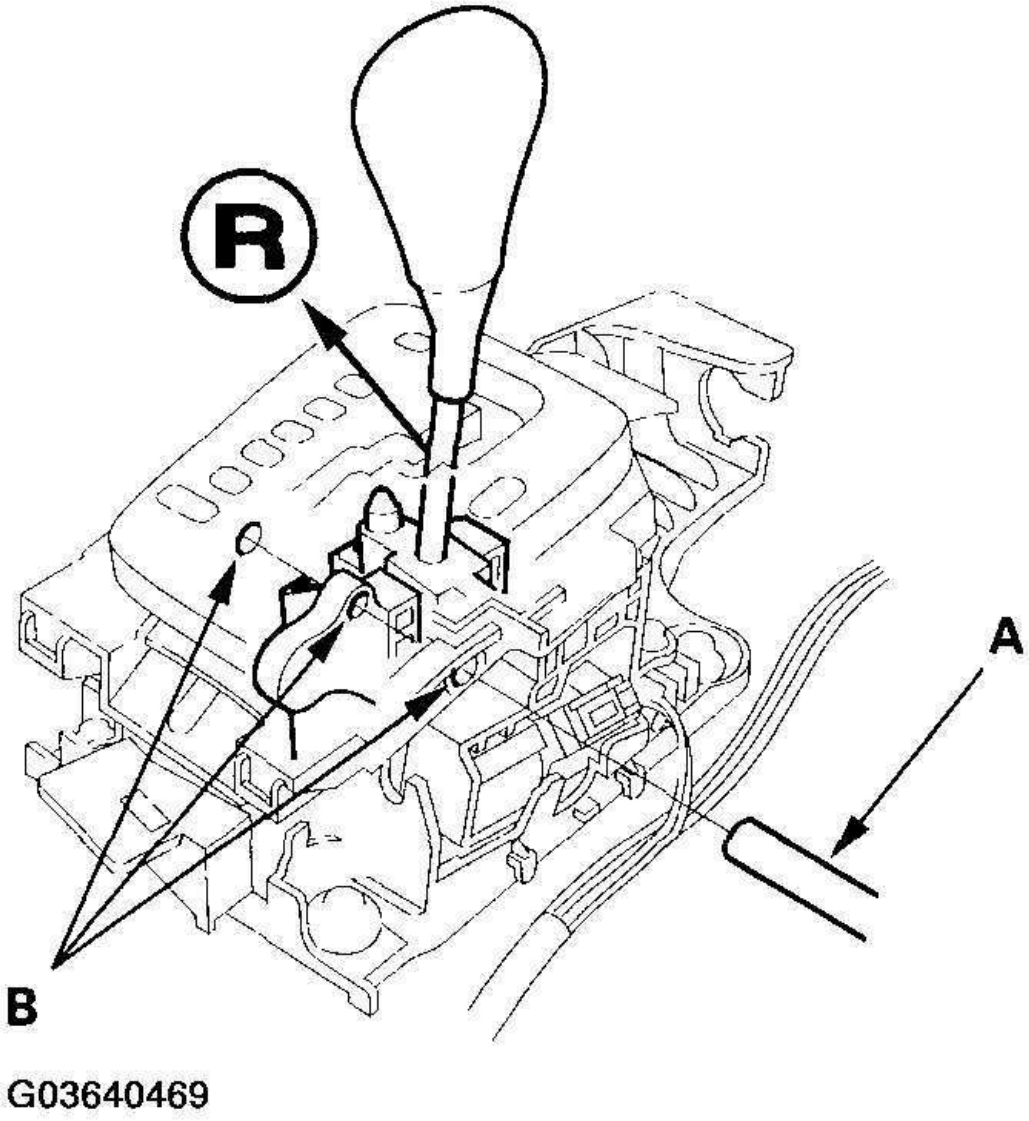


Fig. 334: Inserting Pin Into Positioning Hole On Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder onto the shift lever bracket base (C). Install the shift cable end (D) over the mounting stud (E) by aligning its square hole (F) with the square shape (G) at the bottom of the stud. Rotate the holder clockwise a quarter turn to secure the shift cable.

NOTE: Do not install the shift cable by twisting the shift cable guide (H) and

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damper (I).

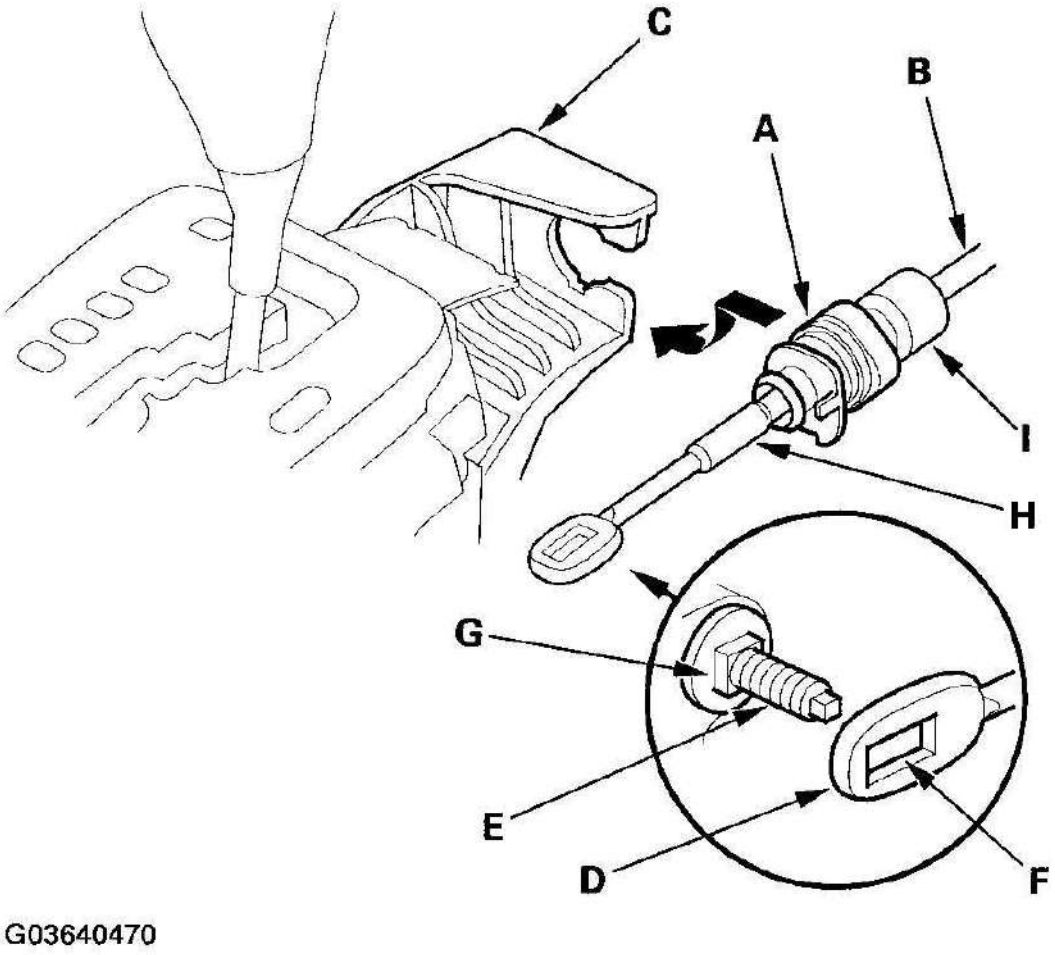


Fig. 335: Installing Shift Cable End Over Mounting Stud
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Verify that the shift cable end (A) is properly installed on the mounting stud (B).

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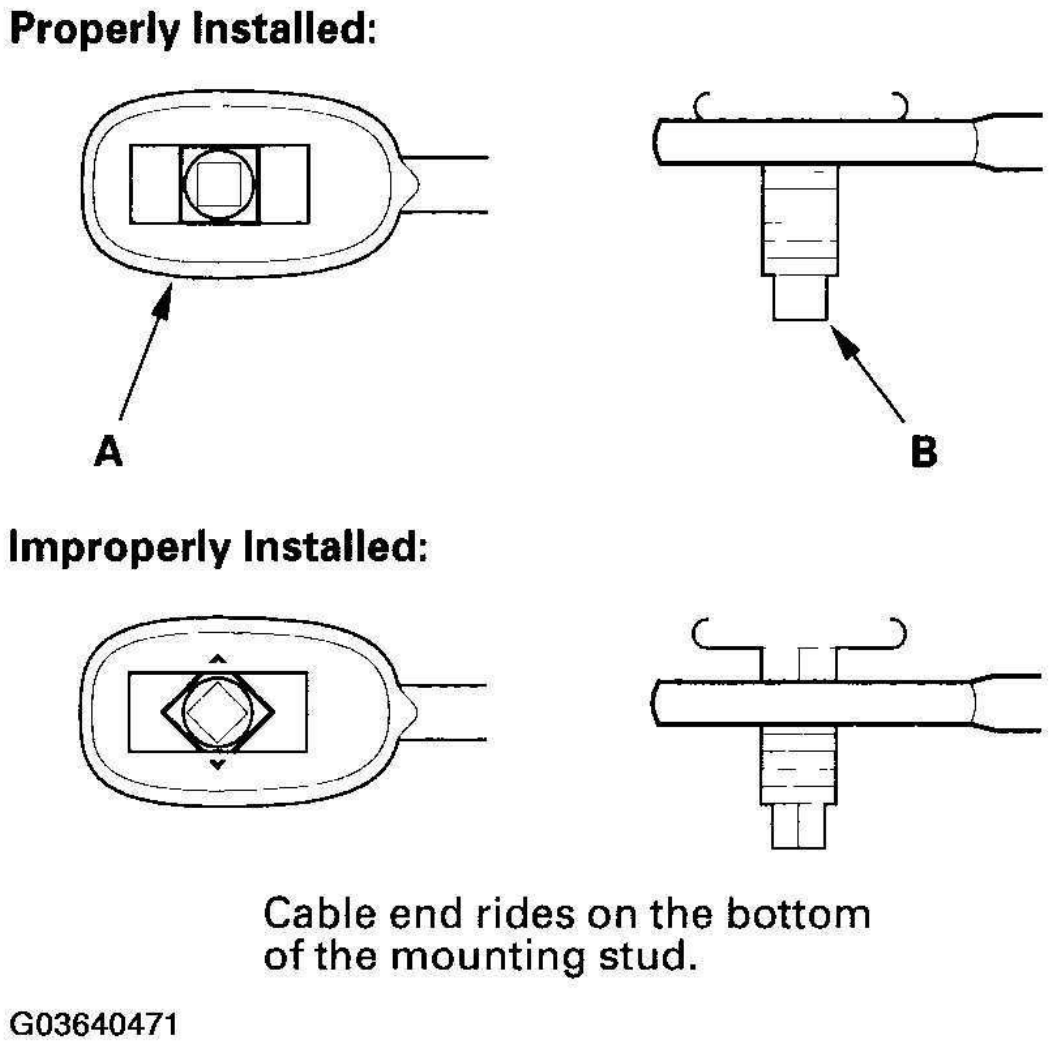


Fig. 336: Inspecting Shift Cable End Is Properly Installed On Mounting Stud
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. If improperly installed, remove the shift cable from the shift lever bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
10. Install and tighten the nut.

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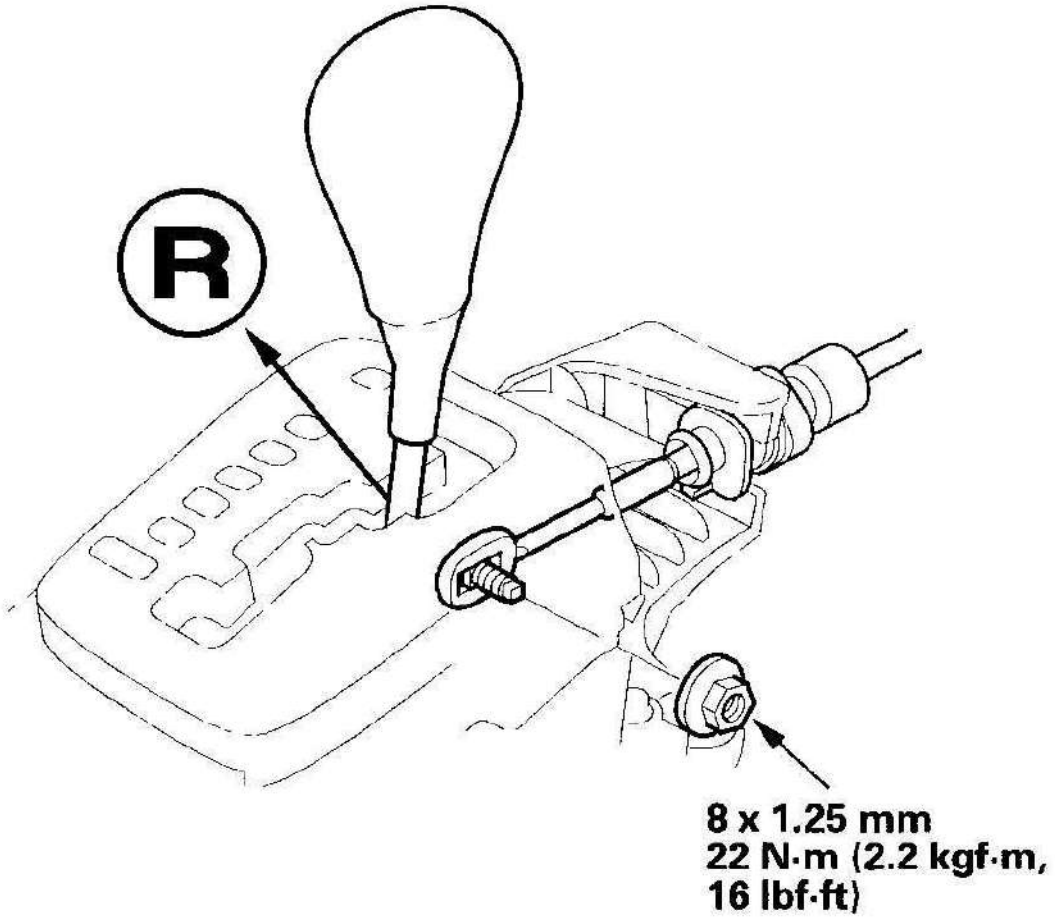


Fig. 337: Tightening Shift Cable Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 gear, and verify that the A/T gear position indicator follows the transmission range switch.
13. Push the shift lock release, and verify that the shift lever releases.
14. Reinstall the center console, console panel, and related parts (see **CENTER CONSOLE REMOVAL/INSTALLATION**).

SHIFT LEVER DISASSEMBLY/REASSEMBLY

Apply silicone grease to these parts:

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- Movable parts of the shift lever.
- Movable parts of the shift lock/reverse lock mechanism.
- Sliding surfaces on the opening of the indicator panel and panel holder.
- Sliding surfaces on the detent plate.
- Contact surfaces between the shift lever assembly and the shift lock stop.
- Detent plunger and detent plunger spring.

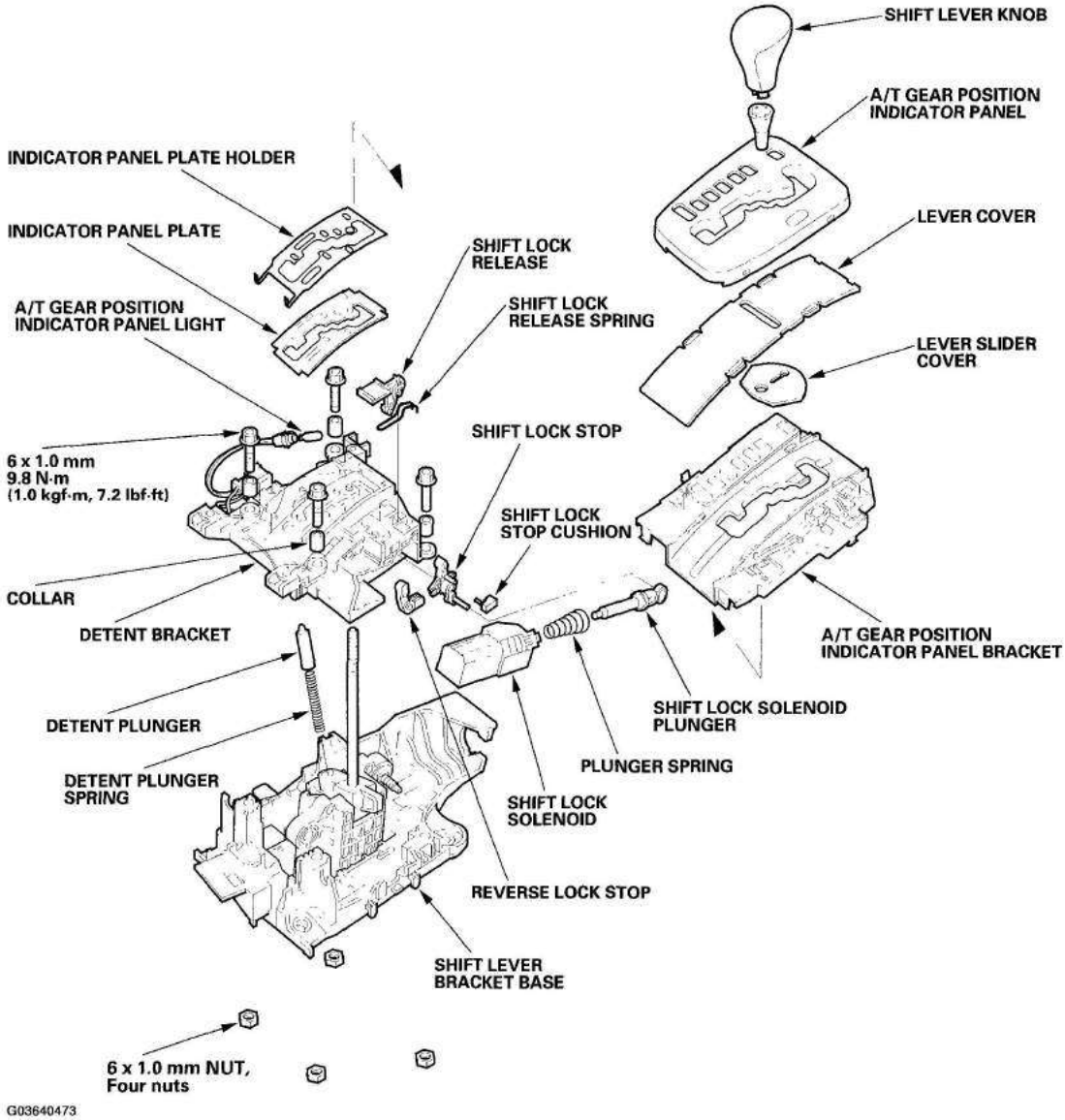


Fig. 338: Exploded View Of Shift Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT CABLE REPLACEMENT

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1. Raise the vehicle, and make sure it is securely supported.
2. Shift the transmission into the R position.
3. Remove the console panel and center console (see **CENTER CONSOLE REMOVAL/INSTALLATION**).
4. Remove the nut securing the shift cable end (A), then separate the end from the shift lever assembly.

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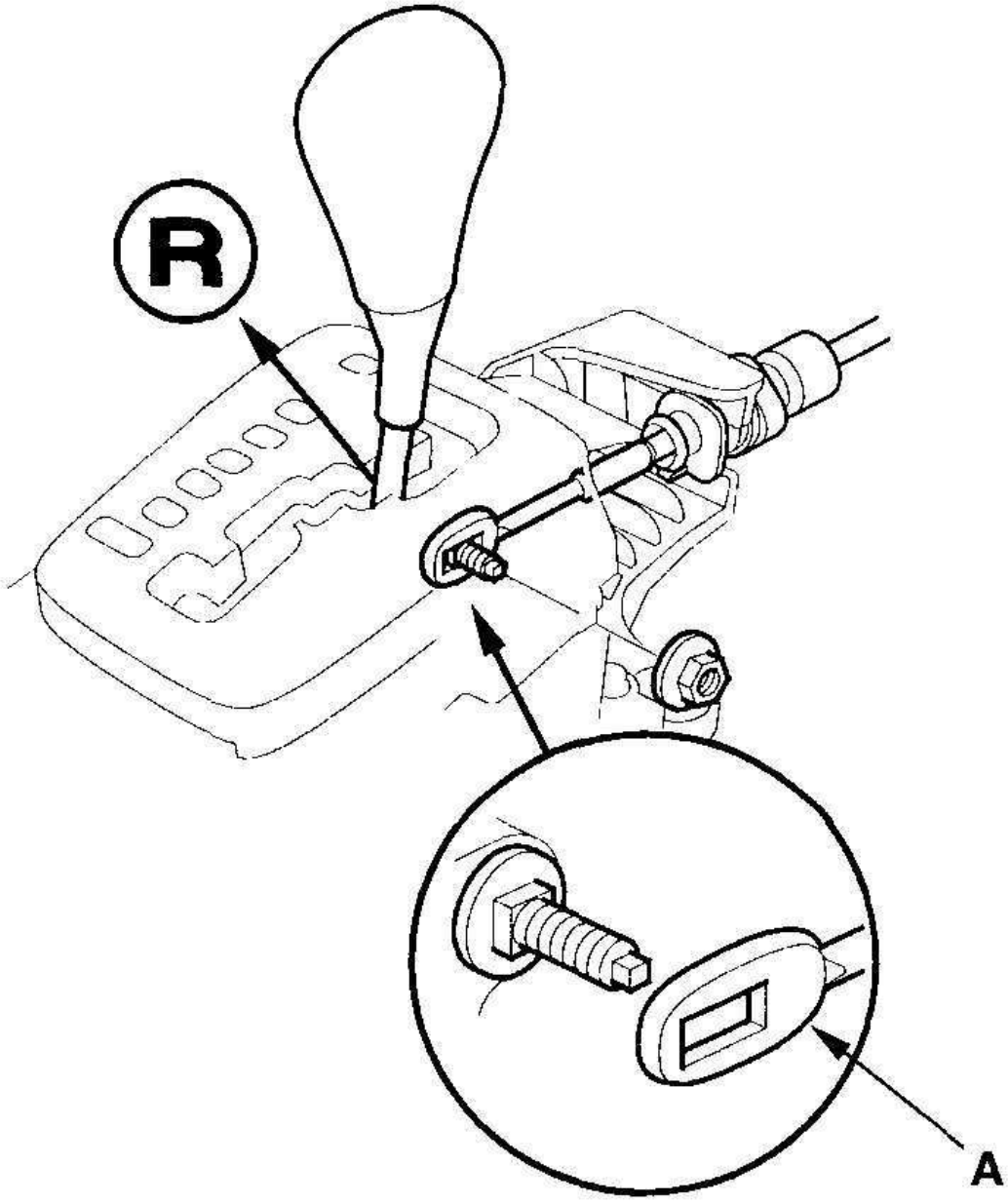


Fig. 339: Separating End From Shift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder to remove the shift cable from the shift lever bracket base (C).

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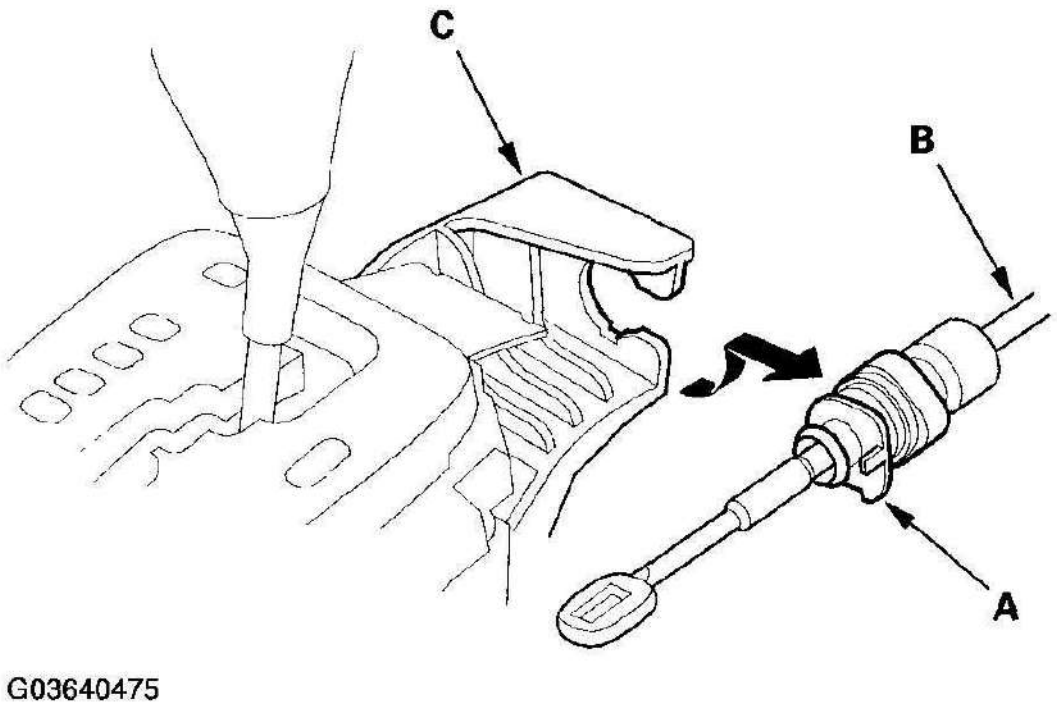


Fig. 340: Removing Shift Cable From Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the shift cable guide bracket (A) and grommet (B).

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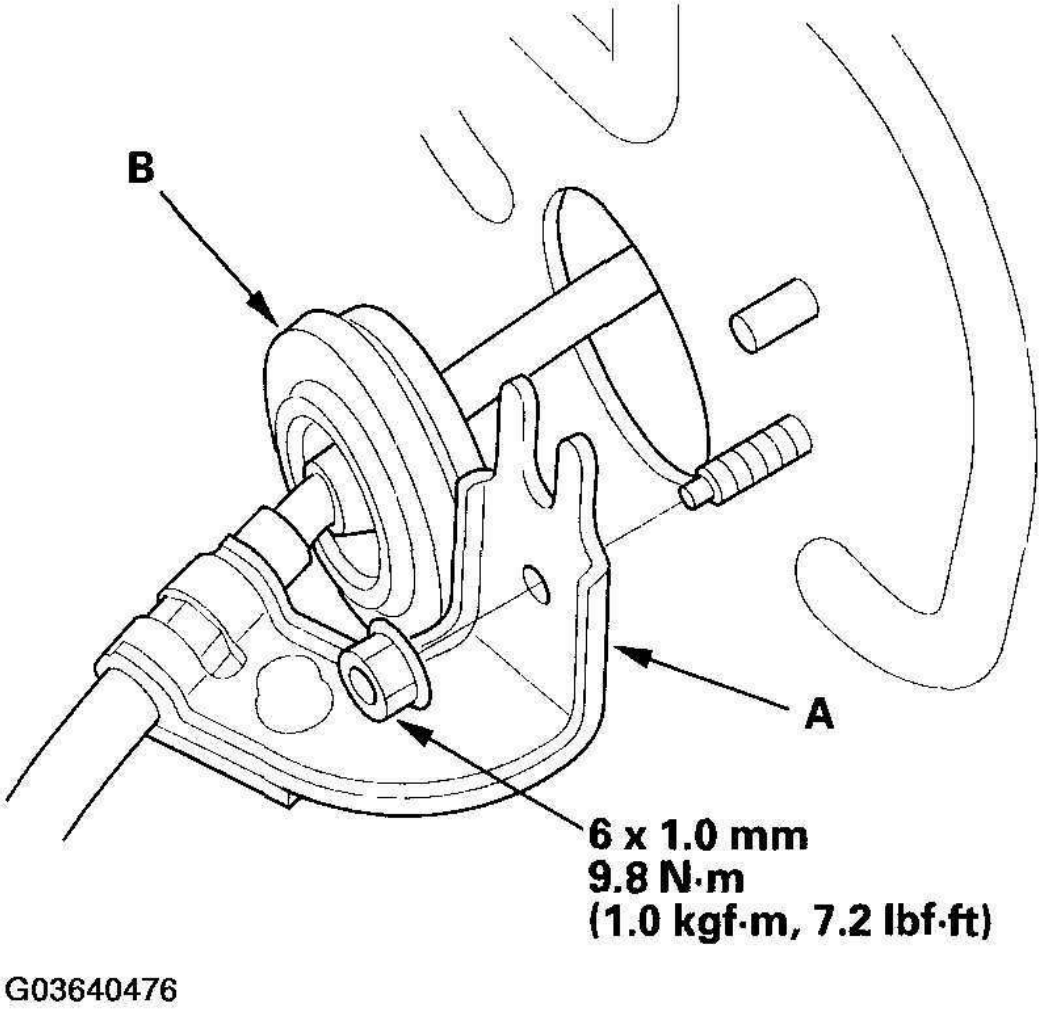


Fig. 341: Removing Shift Cable Guide Bracket And Grommet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Get the audio and navigation anti-theft codes, and write down the audio presets and disconnect the battery negative terminal, then disconnect the battery positive terminal.
8. Remove the intake air duct.
9. Remove the battery hold-down bracket, then remove the battery and battery tray.
10. Remove the four bolt securing the battery base in the engine compartment, then remove the battery base.
11. Remove the nuts securing the shift cable bracket (A).

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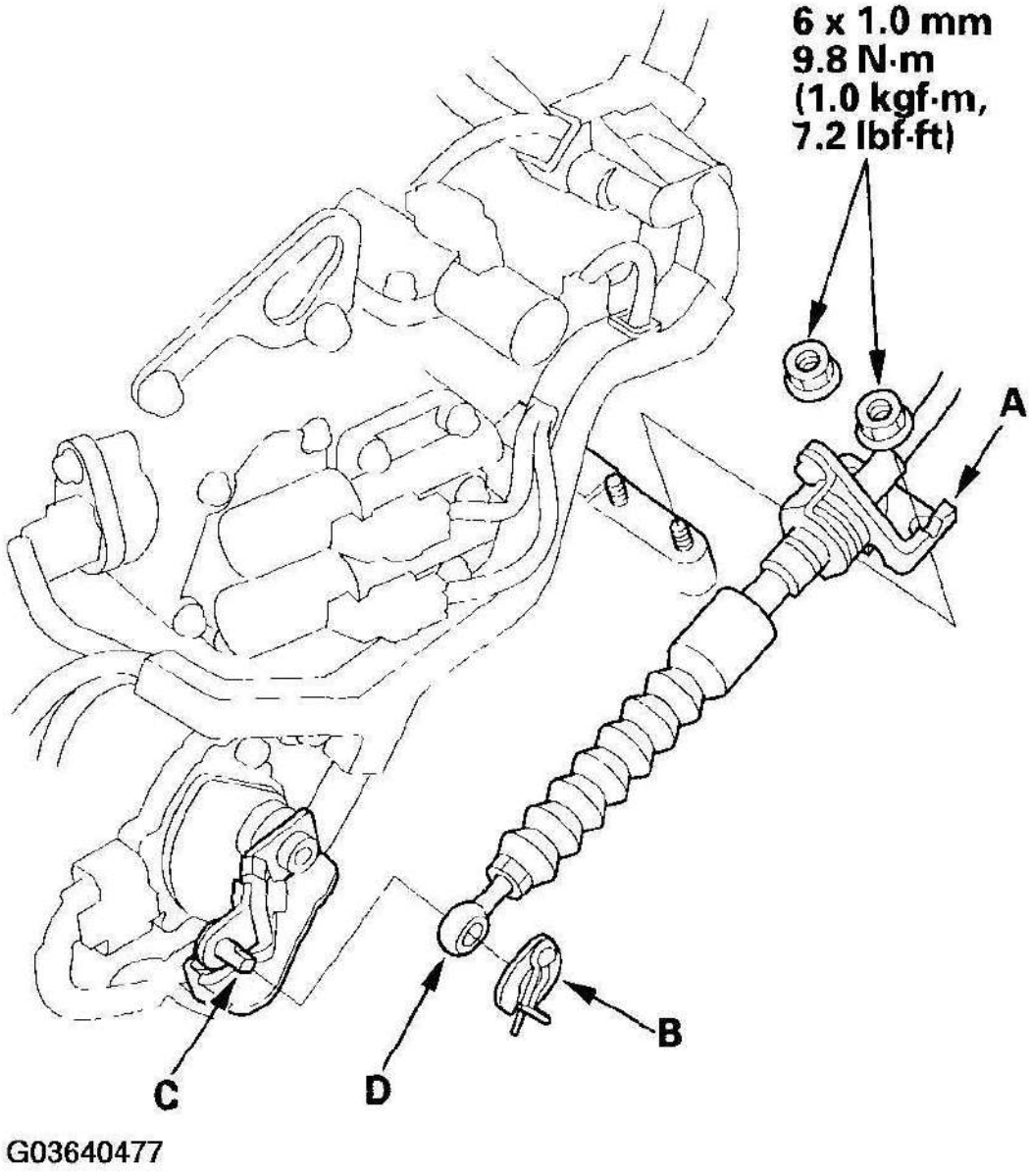


Fig. 342: Removing Nuts Securing Shift Cable Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the spring clip/washer (B) from the control lever (C), and disconnect the shift cable end (D) from the control lever.
13. Remove the shift cable, insert the new shift cable through the grommet hole, then install the shift cable guide bracket.
14. Verify that the transmission is in the R position on the control lever.

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15. Connect the shift cable end to the control lever, and secure the cable end with the spring clip/washer.
16. Secure the shift cable bracket with the nuts.
17. Install the battery base, then install the intake air duct.
18. Install the battery tray and battery, then secure the battery with its hold-down bracket. Connect the battery terminals.
19. Clean the battery posts and cable terminals with sandpaper, then assemble them and apply grease to prevent corrosion.
20. Install the shift cable on the shift cable bracket base, refer to the shift cable adjustment (see **SHIFT CABLE ADJUSTMENT**).
21. Do the power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT**).
22. Enter the audio and navigation anti-theft codes, then enter the presets, and set the clock.

SHIFT CABLE ADJUSTMENT

1. Shift the transmission into the R position.
2. Remove the console panel and center console (see **CENTER CONSOLE REMOVAL/INSTALLATION**).
3. Remove the nut securing the shift cable end (A), then separate the end from the shift lever assembly.

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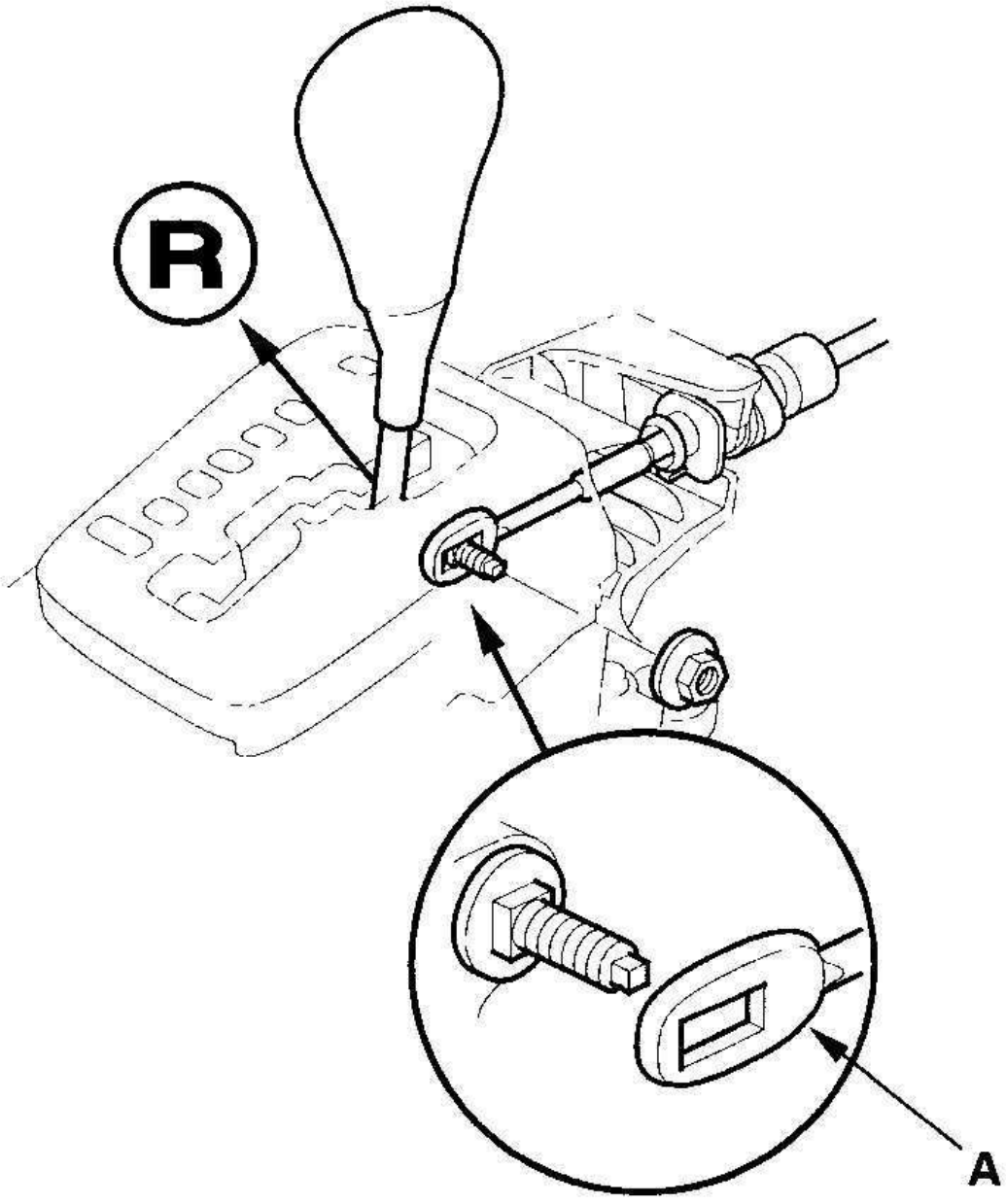


Fig. 343: Separating End From Shift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder to remove the shift cable from the shift lever bracket base (C).

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NOTE: Do not remove the shift cable by twisting the shift cable guide (D) and damper (E).

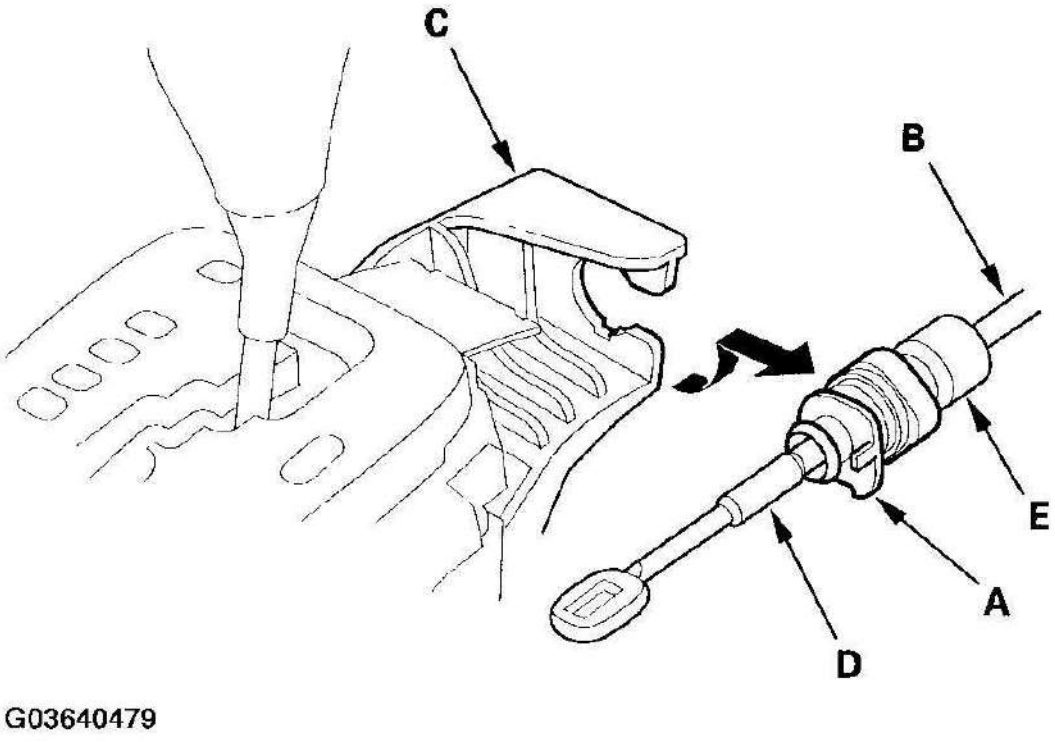


Fig. 344: Removing Shift Cable From Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Push the shift cable until it stops, then release your hand. Pull the shift cable back one step so that the shift position is in R. Do not hold the shift cable guide (A) and damper (B) to adjust the shift cable (C).

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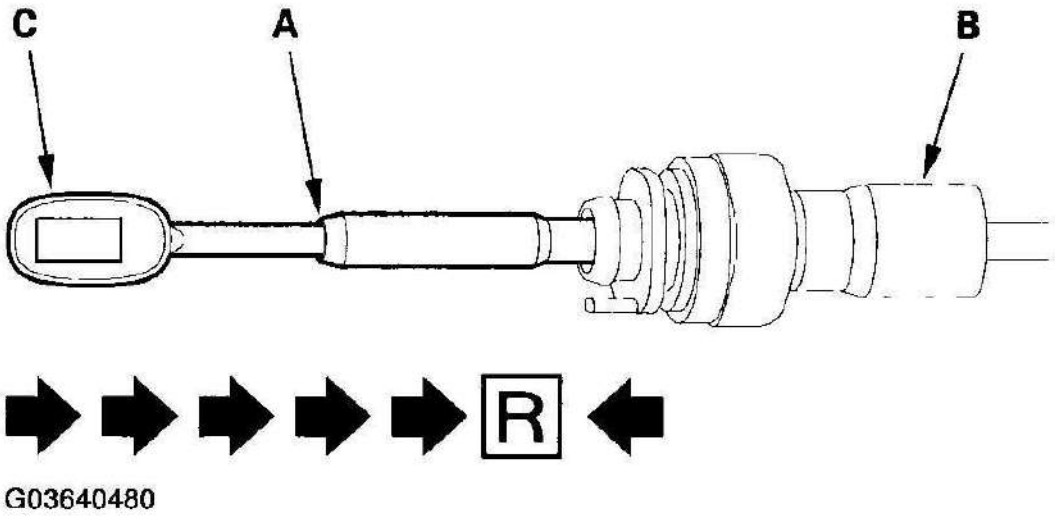


Fig. 345: Adjusting Shift Cable
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II), and verify that the R position indicator comes on.
7. Turn the ignition switch OFF.
8. Insert a 6.0 mm (0.24 in.) pin (A) into the positioning hole (B) on the shift lever bracket base through the positioning hole on the shift lever assembly, and into the positioning hole. The shift lever is secured in the R position.

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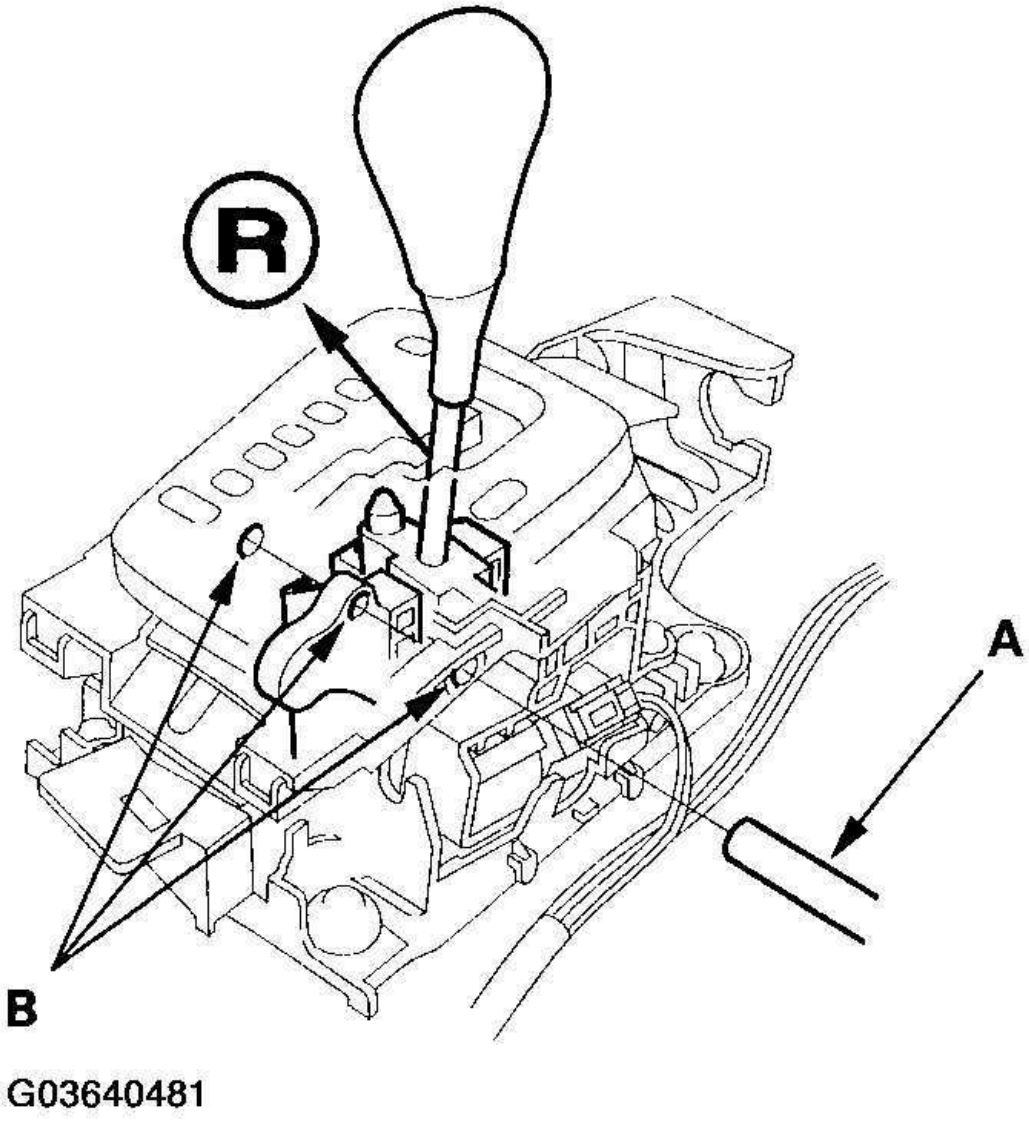


Fig. 346: Inserting Pin Into Positioning Hole On Shift Lever Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder onto the shift lever bracket base (C). Install the shift cable end (D) over the mounting stud (E) by aligning its square hole (F) with the square shape (G) at the bottom of the stud. Rotate the holder clockwise a quarter turn to secure the shift cable.

NOTE: Do not install the shift cable by twisting the shift cable guide (H) and

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damper (I).

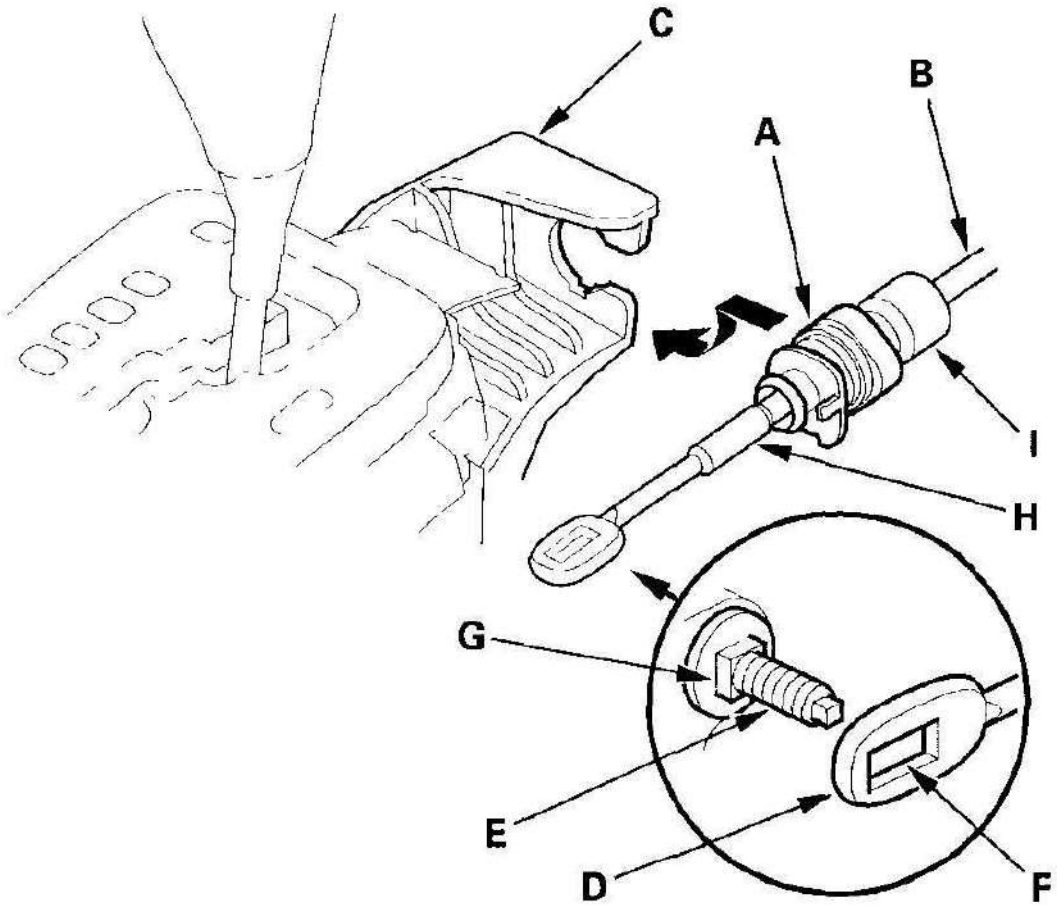


Fig. 347: Installing Shift Cable End Over Mounting Stud
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Verify that the shift cable end (A) is properly installed on the mounting stud (B).

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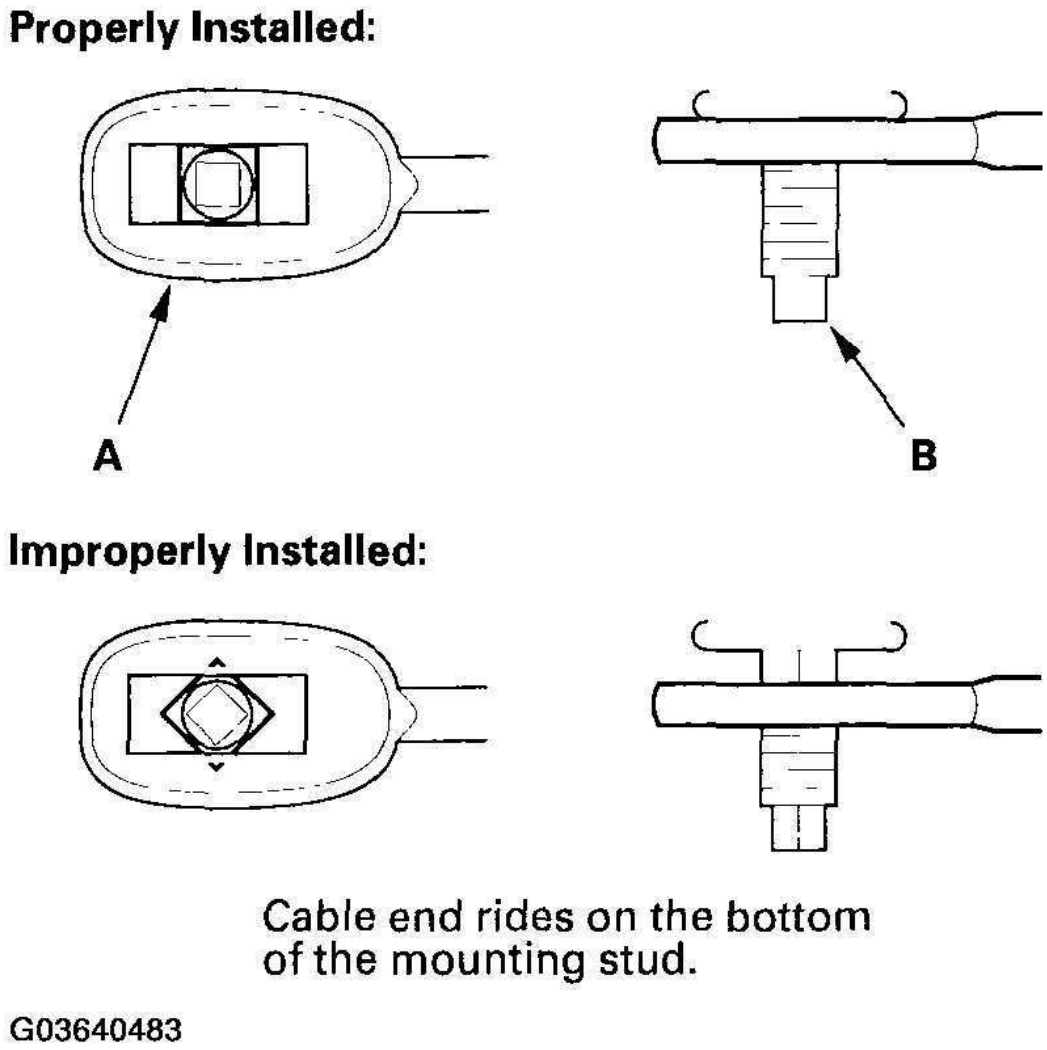


Fig. 348: Inspecting Shift Cable End Is Properly Installed On Mounting Stud
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. If improperly installed, remove the shift cable from the shift lever bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
12. Install and tighten the nut.

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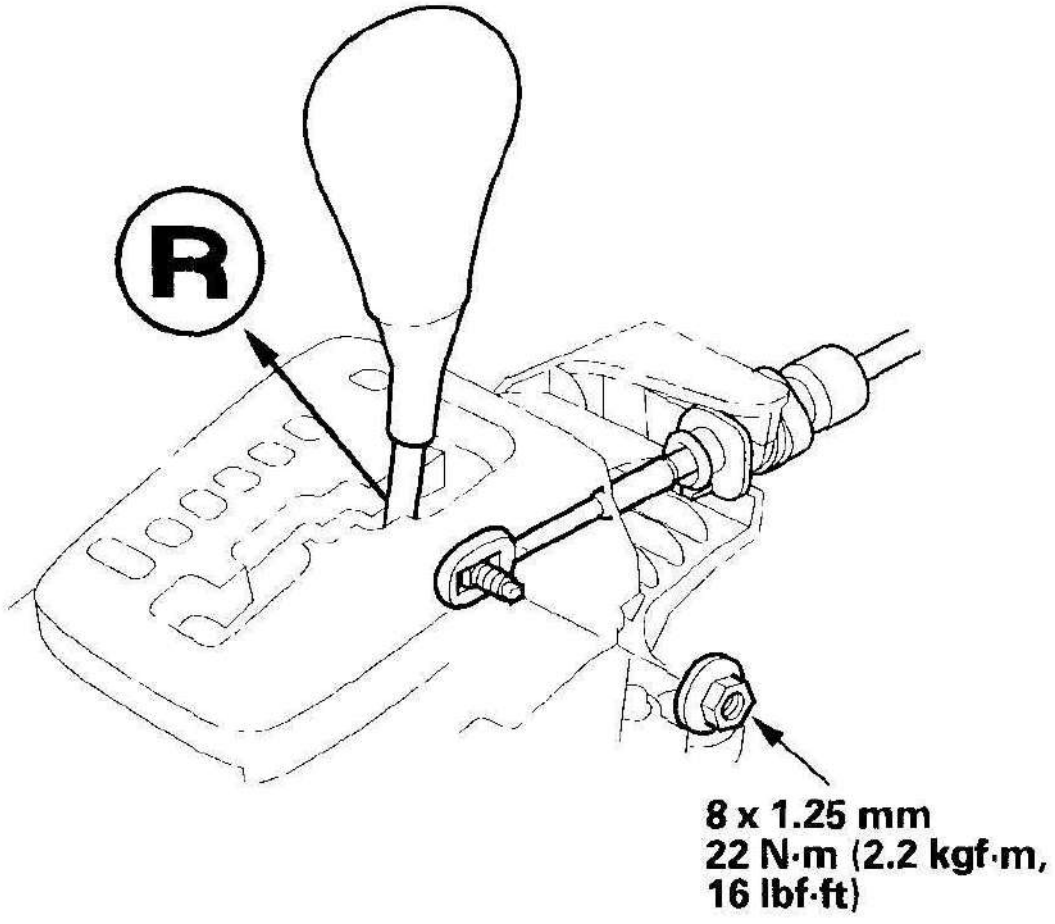


Fig. 349: Tightening Shift Cable Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the 6.0 mm (0.24 in.) pin that was installed to hold the shift lever.
14. Move the shift lever to each gear, and verify that the A/T gear position indicator follows the transmission range switch.
15. Push the shift lock release, and verify that the shift lever releases.
16. Reinstall the center console, console panel, and related parts (see **CENTER CONSOLE REMOVAL/INSTALLATION**).

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