

2001-02 AUTOMATIC TRANSMISSIONS

Shift Interlock Systems - MDX

DESCRIPTION & OPERATION

WARNING: Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See **AIR BAG DEACTIVATION PROCEDURES** article in **GENERAL INFORMATION**.

INTRODUCTION

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

Shift interlock system consists of brake pedal position switch, key interlock solenoid and switch, park pin switch, Powertrain Control Module (PCM) and shift lock solenoid. See **Fig. 1**.

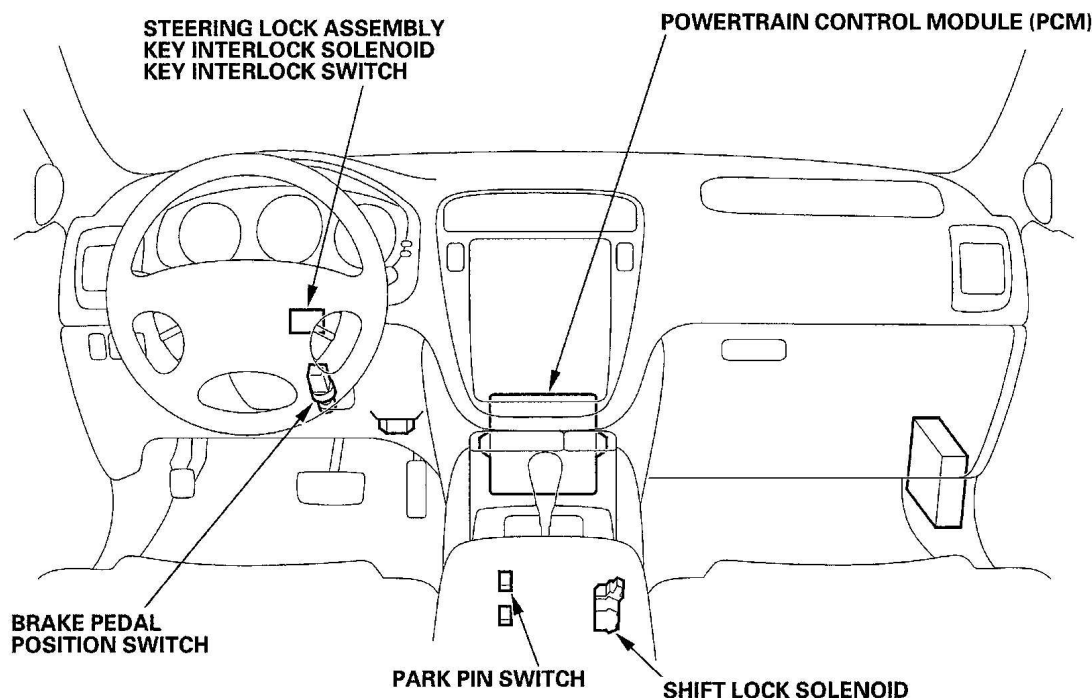


Fig. 1: Locating Shift Interlock System Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TROUBLE SHOOTING

PRELIMINARY INSPECTION

Diagnosis of shift interlock system should begin with a general visual inspection of related components, i.e., shift linkage, electrical connections, components, etc.

SYMPTOM DIAGNOSIS

NOTE: Use the following symptoms to aid in preliminary diagnosis. If a listed symptom matches the customer's concern, check the applicable items for possible cause.

NOTE: These symptoms do not trigger Diagnostic Trouble Codes (DTCs) or cause the "D5" indicator to flash. If the MIL was reported on or the "D5" indicator has been flashing, check for DTCs. See **SELF-DIAGNOSTIC SYSTEM** in MGHA DIAGNOSIS article. If vehicle has one of the symptoms listed, check the possible cause(s) in sequence listed.

Gearshift Lever Cannot Be Moved From "P" Position With Brake Pedal Depressed

Possible cause: Fault in shift interlock system. See **SHIFT INTERLOCK SYSTEM** under SYSTEM TESTS.

Ignition Key Cannot Be Moved From ACC To LOCK Position With Gearshift Lever In "P" Position

Possible cause: Fault in key interlock system. See **KEY INTERLOCK SYSTEM** under SYSTEM TESTS.

Gearshift Lever Cannot Be Moved From "N" To "R" Position With Brake Pedal Depressed

Possible cause: Fault in reverse interlock system. See **REVERSE LOCK SYSTEM** under SYSTEM TESTS.

SYSTEM TESTS

SHIFT INTERLOCK SYSTEM

NOTE: For shift interlock system circuit wire color and terminal identification, see **WIRING DIAGRAMS**.

1. Press the brake pedal. Are the brake lights on? If yes, go to next step. If no, repair faulty brake light circuit. See appropriate **EXTERIOR LIGHTS** article in ACCESSORIES & EQUIPMENT.
2. Turn ignition on. Shift gearshift lever to the "P" position.
3. Turn ignition off.

4. Disconnect the battery negative terminal.
5. Disconnect PCM connectors "A" (32 pin) and "B" (25 pin). PCM is located below instrument panel under front lower panel in center console area. See **Fig. 1** .
6. Reconnect the battery negative terminal.
7. Press the brake pedal and measure the voltage between PCM connector terminals A32 and B20 or B22. See **Fig. 31** . Is there battery voltage? If yes, release the brake pedal and go to next step. If no, repair open in the wire between PCM connector terminal A32 and the brake pedal position switch. For brake pedal position switch harness connector terminal identification, see **Fig. 2** .
8. Disconnect the battery negative terminal.
9. Reconnect PCM connectors "A" (32 pin) and "B" (25 pin).
10. Reconnect the battery negative terminal.
11. Turn ignition on.
12. Measure the voltage between PCM connector terminals C27 and B20 or B22. See **Fig. 31** . Is there about 0.5 volts (throttle fully closed)? If yes, turn ignition off, then go to step 17 . If no, go to next step.
13. Turn ignition off.
14. Disconnect the Throttle Position (TP) sensor connector. See **Fig. 3** .
15. Measure the voltage between the No. 1 and 3 terminals of the TP sensor connector. See **Fig. 4** . Is there about 5 volts? If yes, check for short or open in the wire between PCM connector terminal C27 and the TP sensor. See **WIRING DIAGRAMS** . If the wire is okay, replace the throttle body. See appropriate REMOVAL, OVERHAUL & INSTALLATION article in ENGINE PERFORMANCE. If no, go to next step.
16. Turn ignition off and disconnect PCM connector "C" (31 pin). Check for continuity between the TP sensor harness connector terminal No. 3 and ground. Is there continuity? If yes, check for a short to ground in the wire between the No. 3 terminal of the TP sensor harness connector and ground. If the wire is okay, replace the PCM. See **POWERTRAIN CONTROL MODULE** under REMOVAL & INSTALLATION. If no, go to next step.
17. Disconnect the shift lock solenoid connector. See **Fig. 5** . To access shift lock solenoid, see **SHIFT LOCK SOLENOID** under REMOVAL & INSTALLATION.
18. Turn ignition on.
19. Measure the voltage between the No. 1 terminal (Yellow/Red wire) of the shift lock solenoid connector and ground. See **Fig. 5** . Is there battery voltage? If yes, go to next step. If no, check for blown No. 8 (7.5 amp) fuse in the driver's underdash fuse/relay box. If the fuse is okay, repair open or short in the wire between the No. 1 terminal of the shift lock solenoid and the driver's underdash fuse/relay box. See **WIRING DIAGRAMS** .

CAUTION: Do not connect the shift lock solenoid No. 2 terminal to the battery positive terminal or you will damage the diode inside the solenoid.

20. Connect the No. 1 terminal of the shift lock solenoid connector to the battery positive terminal, and connect the No. 2 terminal to the battery negative terminal.
21. Check that the shift lock solenoid operates. Does the shift lock solenoid operate properly? If yes, check for open in the wire between PCM connector terminal A28 and the shift lock solenoid. If no, replace the

shift lock solenoid. See **SHIFT LOCK SOLENOID** under REMOVAL & INSTALLATION.

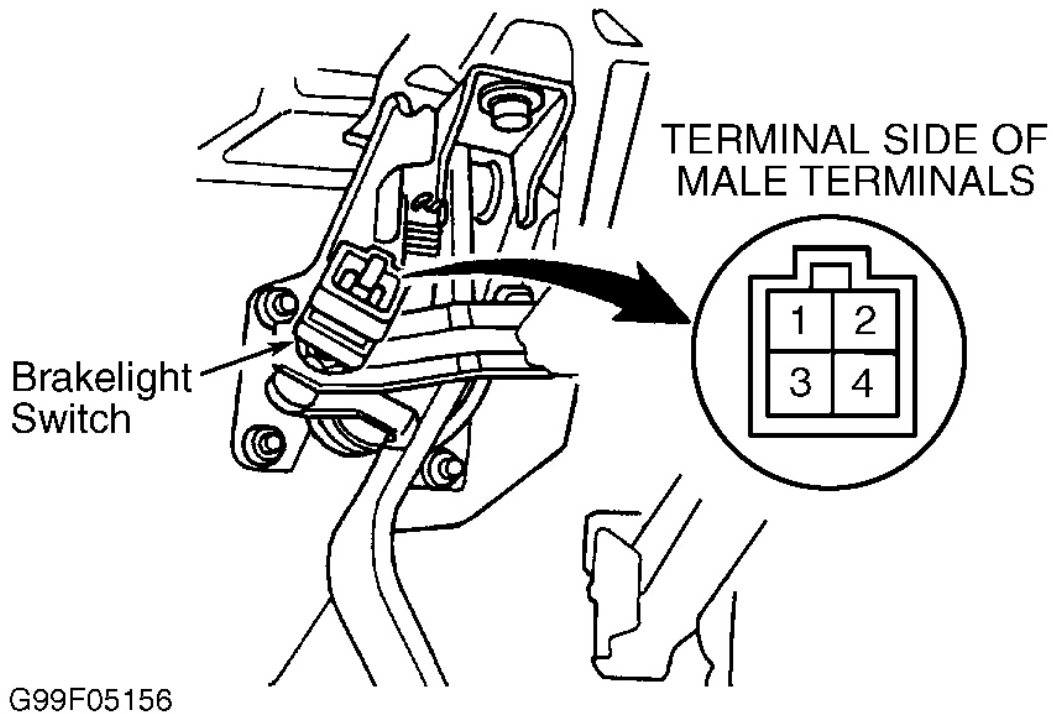
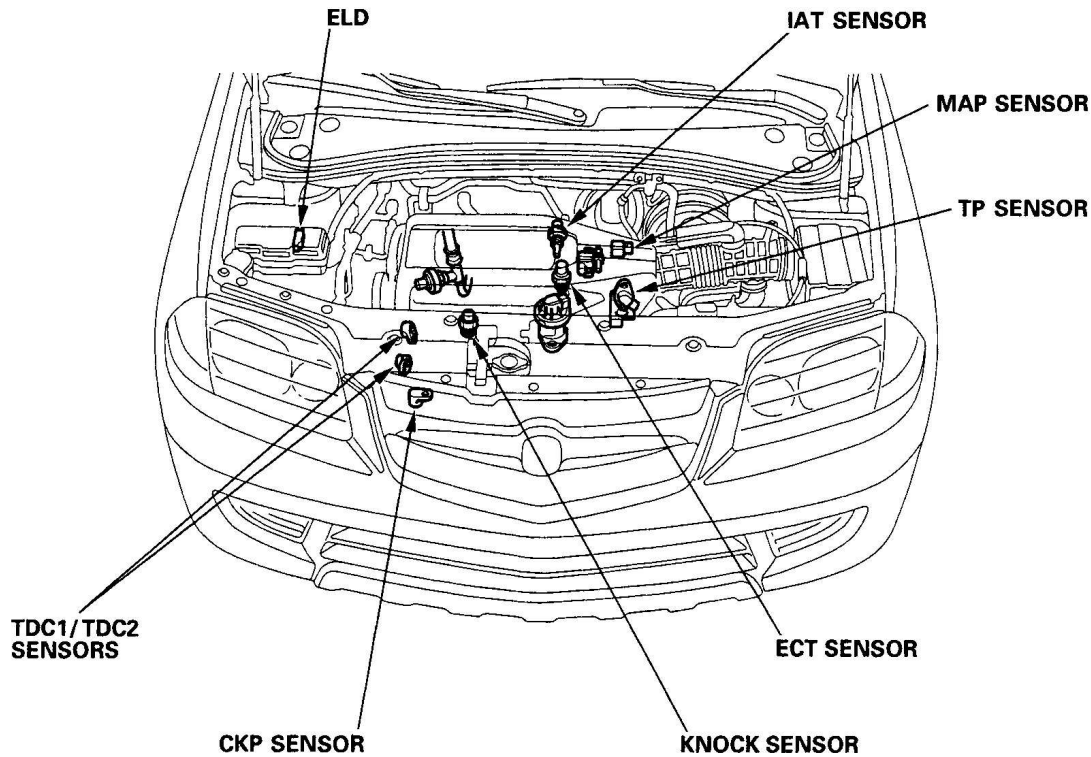


Fig. 2: Identifying Brake Light Switch Component Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

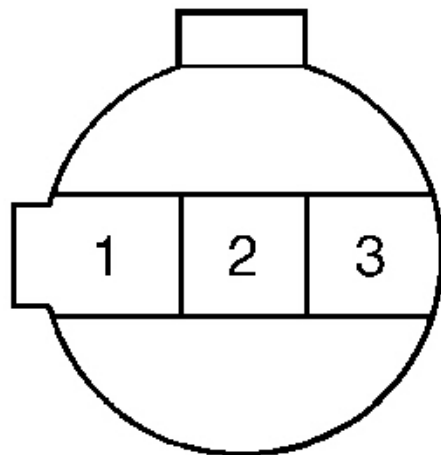
2002 Acura MDX

2001-02 AUTOMATIC TRANSMISSIONS Shift Interlock Systems - MDX



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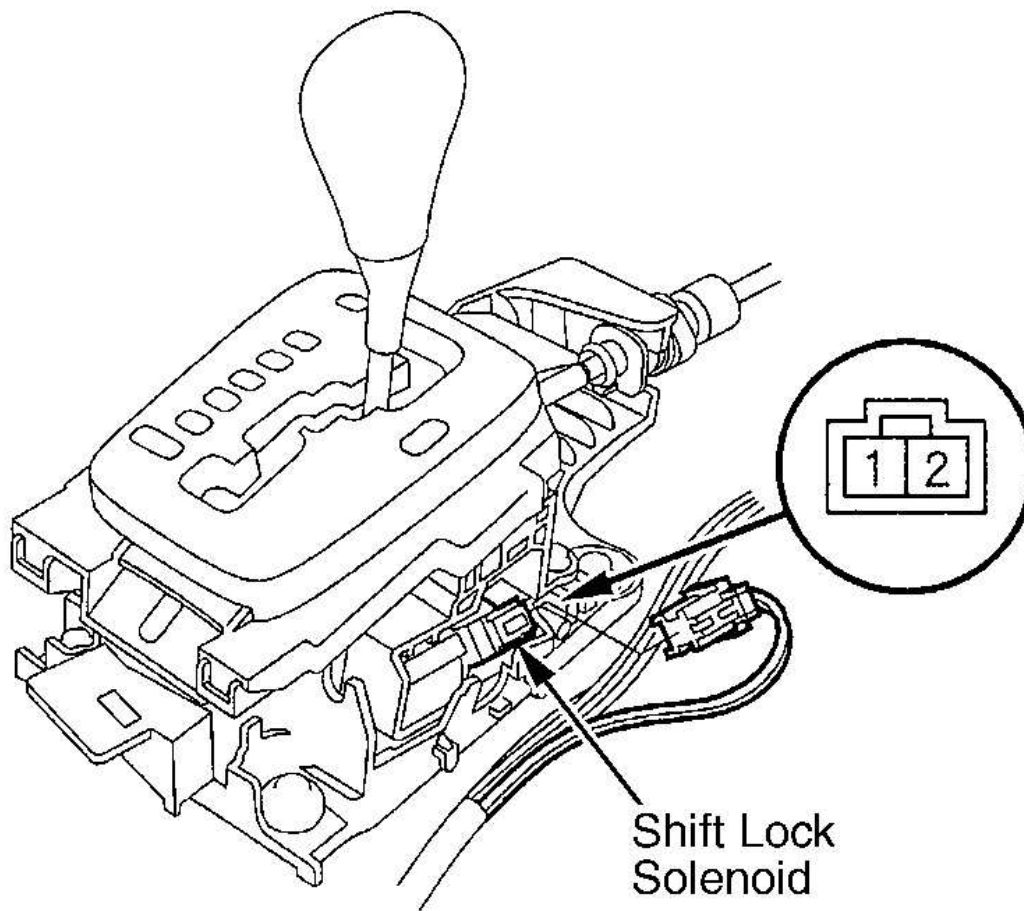
Fig. 3: Locating Engine Performance Related Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 4: Identifying TP Sensor Harness Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 5: Locating Shift Lock Solenoid

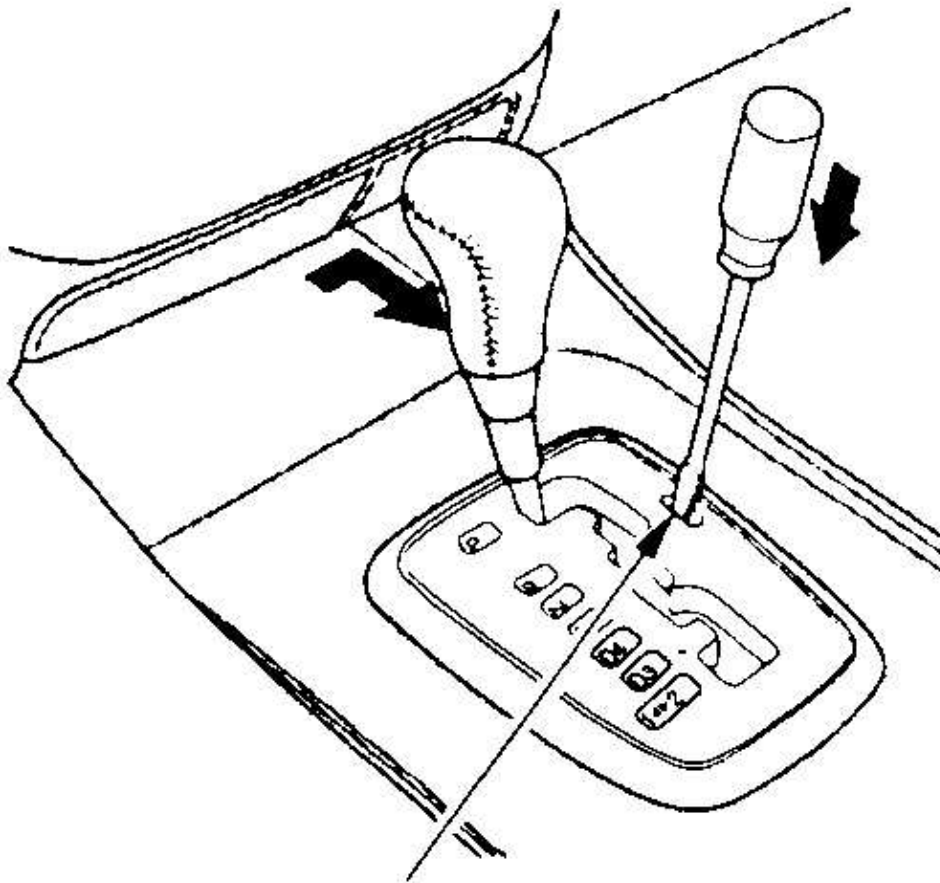
Courtesy of AMERICAN HONDA MOTOR CO., INC.

REVERSE LOCK SYSTEM

1. Check whether the scan tool indicates DTCs P1705 or P1706. Does the scan tool indicate either DTC? If yes, diagnose and repair indicated DTCs. See **SELF-DIAGNOSTIC SYSTEM** in MGHA DIAGNOSIS article. If no, go to next step.
2. Turn ignition off.
3. Shift the gearshift lever into the "P" position while pushing the shift lock release button. See **Fig. 6**.
4. Turn ignition on.
5. Press the brake pedal, and do not press the accelerator pedal.
6. Shift the gearshift lever out of the "P" position to check that the shift lock solenoid operates. Does the

gearshift lever shift out of the "P" position? If yes, go to next step. If no, go to **SHIFT INTERLOCK SYSTEM** .

7. Turn ignition off.
8. Remove the shift lock relay. See **Fig. 7** .
9. Check for continuity between the No. 1 and No. 4 terminals of the shift lock relay while connecting the battery positive terminal to the No. 5 terminal of the shift lock relay and connecting the negative terminal to the No. 3 terminal. See **Fig. 8** . Is there no continuity when connecting the battery terminals, and continuity when disconnecting the battery terminals. If yes, go to next step. If no, replace the shift lock relay.
10. Shift the gearshift lever to the "N" position.
11. Check the continuity between the No. 4 terminal of the shift lock relay socket and ground. See **Fig. 9** . Is there continuity? If no, repair open in the wire between the No. 4 terminal of shift lock relay and transaxle range switch. If yes, go to next step.
12. Shift the gearshift lever out of the "N" position.
13. Check for continuity between the No. 4 terminal of the shift lock relay socket and ground. Is there continuity? If yes, repair short to ground in the wire between the No. 4 terminal of the shift lock relay and the transaxle range switch. If no, go to next step.
14. Check for continuity between the No. 1 terminal of the shift lock relay socket and the No. 2 terminal (White/Green wire) of the shift lock solenoid connector. See **Fig. 5** and **Fig. 8** . Is there continuity? If yes, check for loose terminal fit in the connectors. Repair the reverse lock mechanism. If no, repair open in the wire between the No. 1 terminal of the shift lock relay and the shift lock solenoid connector.



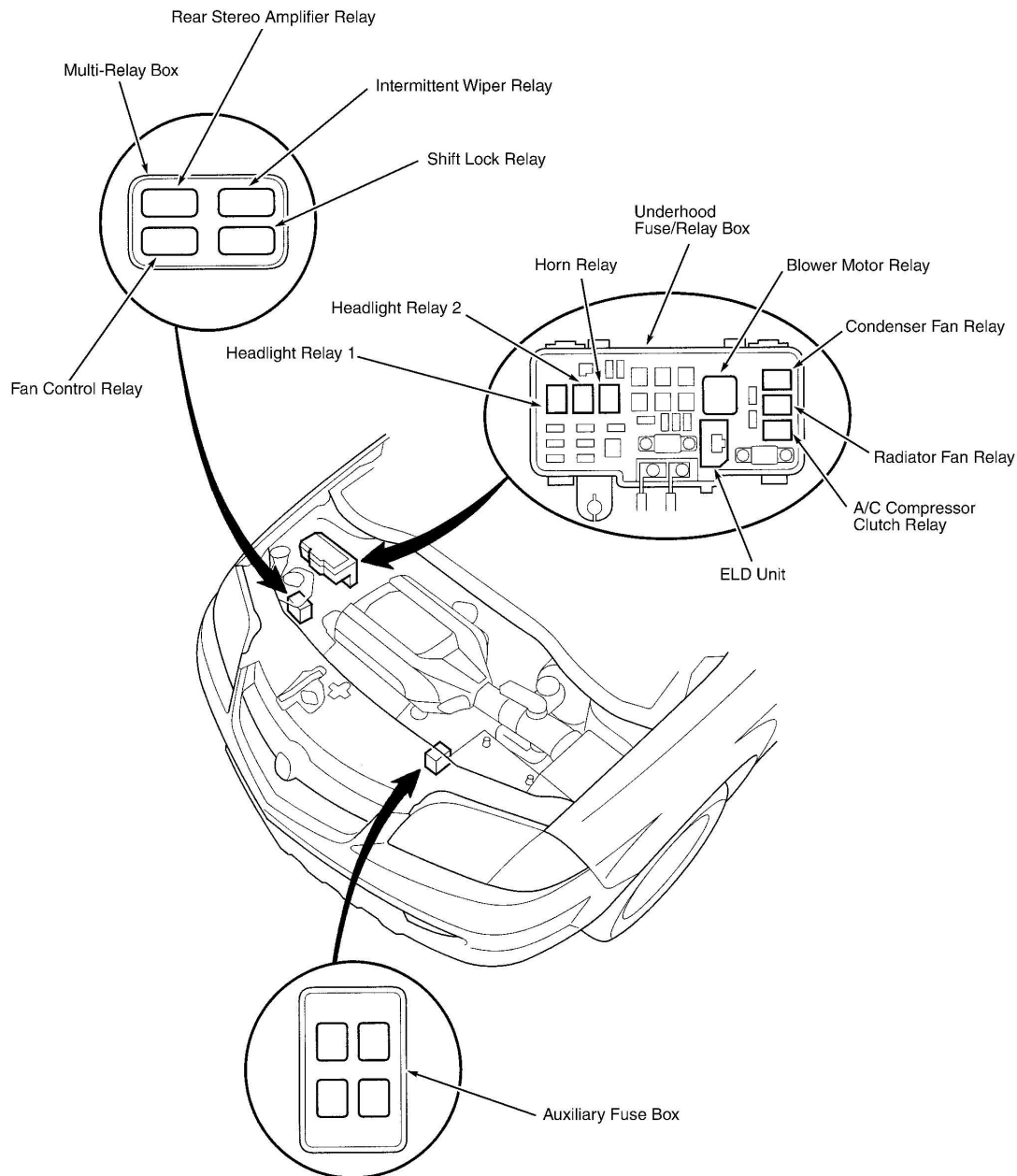
SHIFT LOCK RELEASE SLOT

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Fig. 6: Depressing Shift Lock Release Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

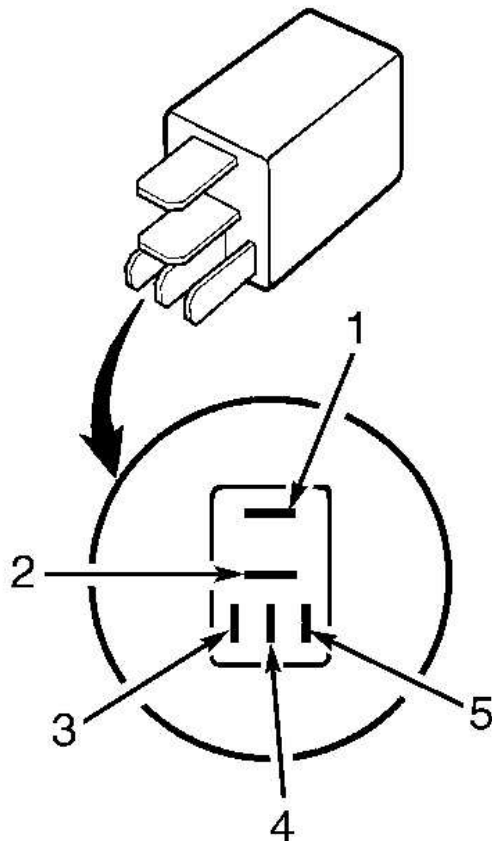
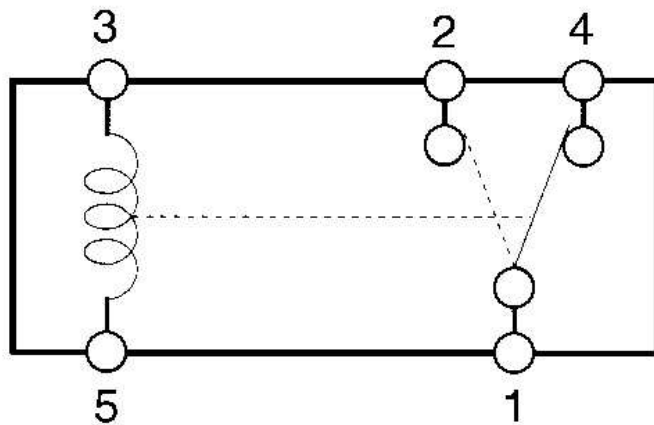
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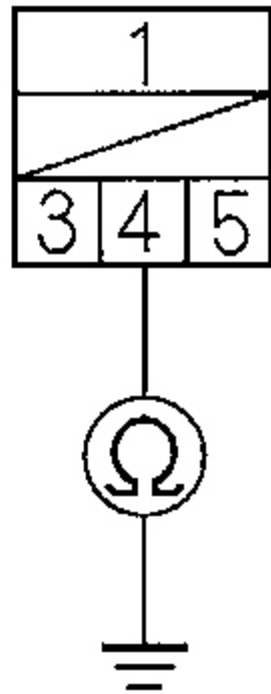
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Fig. 7: Locating Underhood Relays
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 8: Shift Lock Relay Schematic
 Courtesy of AMERICAN HONDA MOTOR CO., INC.



Wire side of female terminals

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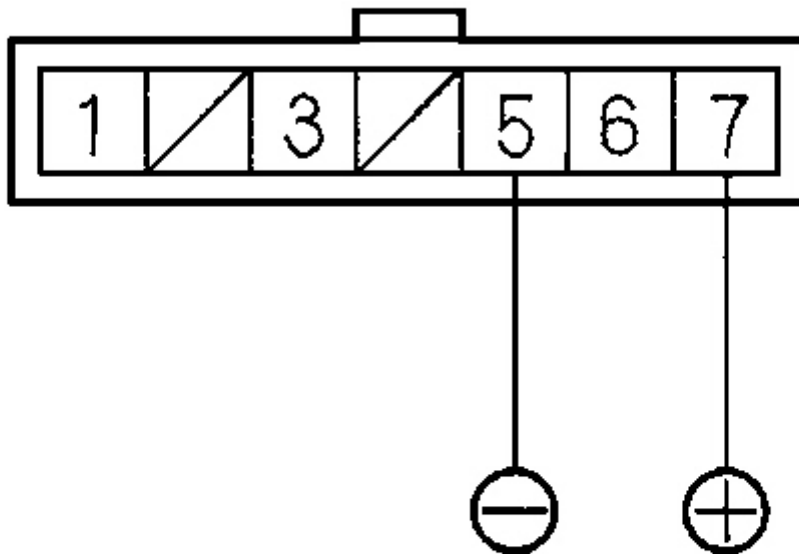
Fig. 9: Checking Continuity Of Shift Lock Relay Ground Circuit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

KEY INTERLOCK SYSTEM

1. Remove screws from lower steering column cover. Remove upper and lower steering column covers. Disconnect the key switch connector (7 pin) from the steering lock assembly.
2. Connect the No. 7 terminal of the key switch connector to the battery positive terminal, and connect the No. 5 terminal to the battery negative terminal. See **Fig. 10**.
3. Turn the ignition switch to ACC position, then push the ignition key.
4. Check the key interlock solenoid operation. A clicking sound should be heard while pushing the ignition key. You should not be able to turn it to the OFF position. Does the key interlock solenoid operate

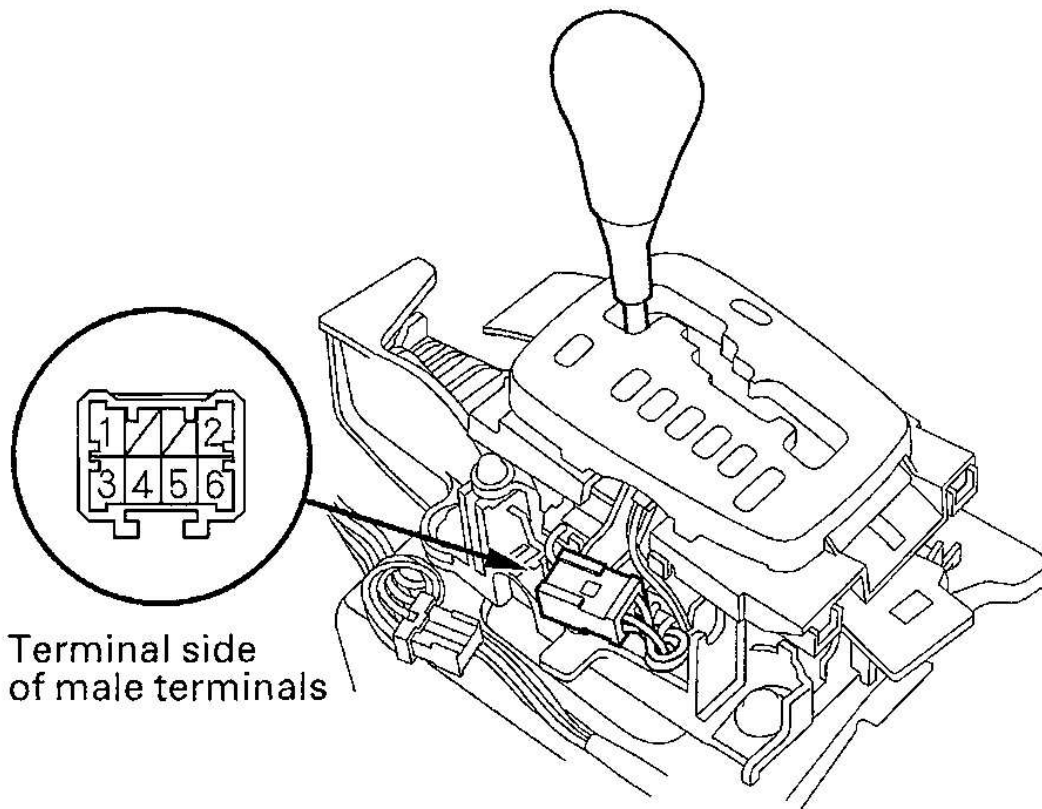
properly? If yes, go to next step. If no, the key interlock solenoid/switch is faulty. Replace the ignition key cylinder/steering lock assembly. See appropriate STEERING COLUMNS article in STEERING.

5. Measure the voltage between the key switch harness connector No. 7 terminal and ground. Is there battery voltage? If yes, go to next step. If no, check for a blown No. 47 (20 amp) fuse in the underhood fuse/relay box. If the fuse is okay, repair open or short in the wire between the No. 7 terminal of the key switch harness connector and underhood fuse/relay box.
6. Disconnect the A/T shift switch assembly connector (6 pin) on the rear of the gearshift lever. See **Fig. 11** . To gain access to A/T shift switch assembly connector (6 pin), remove center console. See **CENTER CONSOLE** under REMOVAL & INSTALLATION.
7. With the gearshift lever in Park and pushed to the right, check for continuity between the No. 2 and 4 terminals of the A/T shift switch assembly component connector (6 pin). Is there continuity? If yes, go to next step. If no, repair open in the wires between the park pin switch and the A/T shift switch assembly connector (6 pin). See **WIRING DIAGRAMS** . If the wires are okay, replace the detent bracket assembly (park pin switch is not available separately). See **Fig. 12** .
8. Check for continuity between the No. 4 terminal of the A/T shift switch assembly harness connector (6 pin) and the No. 5 terminal of the key switch connector. See **Fig. 10** and **Fig. 11** . Is there continuity? If yes, go to next step. If no, repair open in the wire between No. 4 terminal of the switch assembly connector (6 pin) and the No. 5 terminal of the key switch connector. See **WIRING DIAGRAMS** .
9. Check for continuity between the No. 2 terminal of the A/T shift switch assembly harness connector (6 pin) and ground. Is there continuity? If yes, check for loose terminal fit in the key switch connector and A/T shift switch assembly connector (6 pin). If necessary, substitute a known-good steering lock assembly. If no, repair open in the wire between the No. 2 terminal of the A/T shift switch assembly connector (6 pin) and ground or repair poor ground.



Terminal side of male terminals
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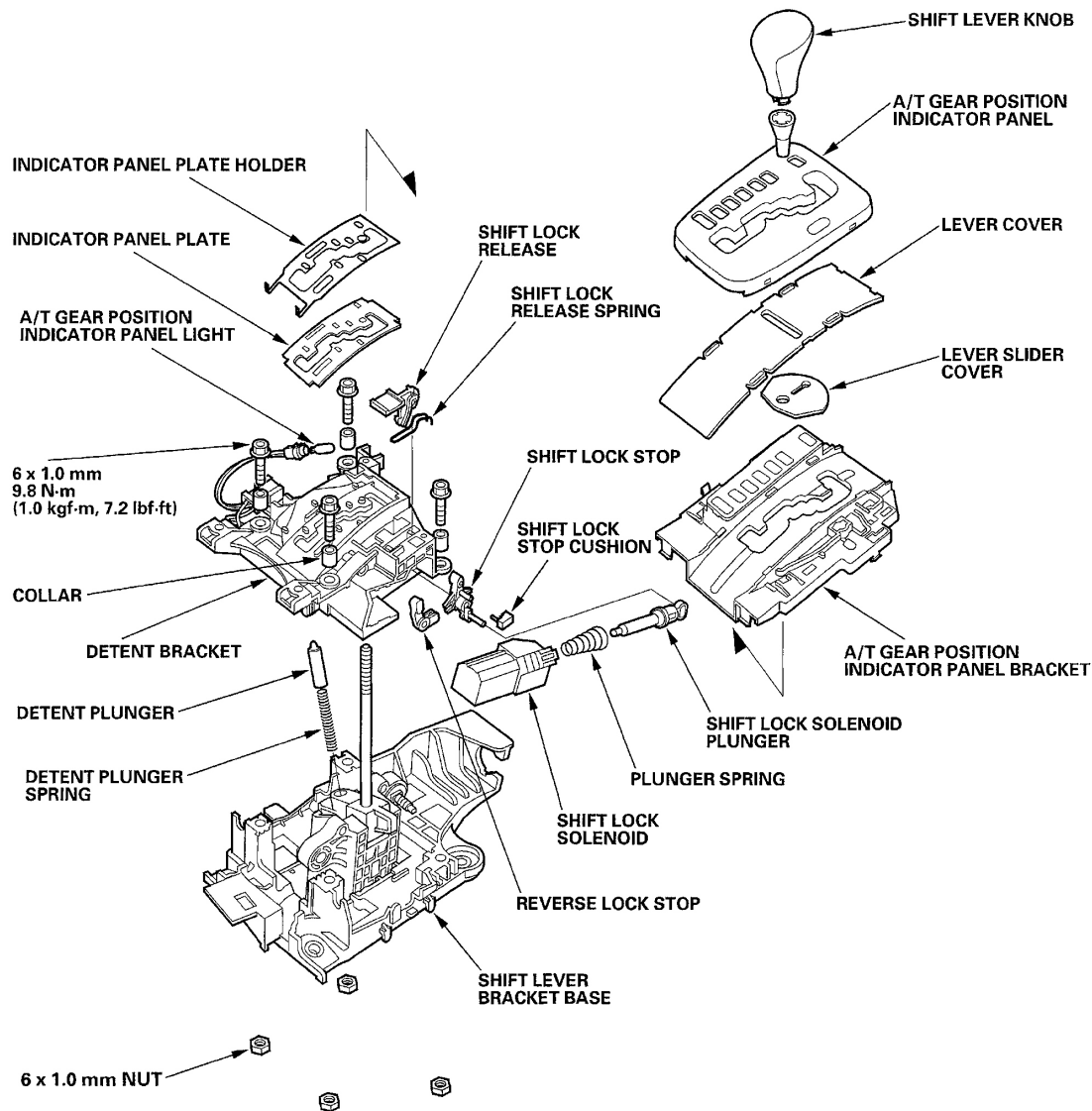
Fig. 10: Identifying Key Switch Component Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.



Terminal side
of male terminals

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Fig. 11: Identifying A/T Shift Switch Assembly Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 12: Exploded View Of Gearshift Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

COMPONENT TESTS

WARNING: Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See AIR BAG DEACTIVATION PROCEDURES article in GENERAL INFORMATION.

KEY INTERLOCK SOLENOID/SWITCH

1. Remove the driver's dashboard lower cover. See **DASHBOARD LOWER COVER** under REMOVAL & INSTALLATION.
2. Remove screws from lower steering column cover. Remove upper and lower steering column covers. Disconnect the key switch connector (7 pin) from the steering lock assembly.
3. Check for continuity between the key switch component connector No. 5 and 7 terminals when the key is pushed. See **Fig. 10** . Check for no continuity when the key is released.
4. Check that the key cannot be removed with power connected to the key switch component connector No. 7 terminal and ground connected to the No. 3 terminal.
 - If the key cannot be removed, the key interlock solenoid is okay.
 - If the key can be removed, replace the steering lock assembly (the key interlock solenoid is not available separately). See appropriate STEERING COLUMNS article in STEERING.

PARK PIN SWITCH

1. Remove the console panel and center console. See **CENTER CONSOLE** under REMOVAL & INSTALLATION.
2. Disconnect the A/T shift switch assembly connector (6 pin). See **Fig. 11** .
3. Shift the gearshift lever into the "P" position, then check for continuity between the A/T shift switch assembly component connector No. 2 and 4 terminals. There should be continuity.
4. Shift the gearshift lever out of the "P" position, and check for continuity between the A/T shift switch assembly component connector No. 2 and 4 terminals. There should be no continuity.
5. If the park pin switch is faulty, remove the gearshift lever assembly. See **GEARSHIFT LEVER ASSEMBLY** under REMOVAL & INSTALLATION. Replace the detent bracket (park pin switch is not available separately). See **Fig. 12** .

SHIFT LOCK SOLENOID

1. Remove the console panel and center console. See **CENTER CONSOLE** under REMOVAL & INSTALLATION.
2. Disconnect the shift lock solenoid connector. See **Fig. 5** .

CAUTION: Do not connect the shift lock solenoid No. 2 terminal to the battery positive terminal or you will damage the diode inside the solenoid.

3. Connect the No. 1 (Yellow/Red wire) terminal of the shift lock solenoid connector to the battery positive terminal, and connect the No. 2 (White/Green wire) terminal to the battery negative terminal.
4. Check that the gearshift lever can be moved from the "P" position. Release the battery terminals from the shift lock solenoid connector. Move the gearshift lever back to the "P" position, and make sure it locks.
5. Check that the shift lock releases when the release button is pushed, and check that it locks when the release button is released. See **Fig. 6** .
6. If the solenoid does not work, replace the shift lock solenoid. See **SHIFT LOCK SOLENOID** under

REMOVAL & INSTALLATION.

REMOVAL & INSTALLATION

WARNING: Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See AIR BAG DEACTIVATION PROCEDURES article in GENERAL INFORMATION.

CAUTION: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION before disconnecting battery.

CENTER CONSOLE

NOTE: When prying with a flat-tip screwdriver, wrap it with protective tape, and apply protective tape around the related parts, to prevent damage. Take care not to scratch the front seat, dashboard, and related parts.

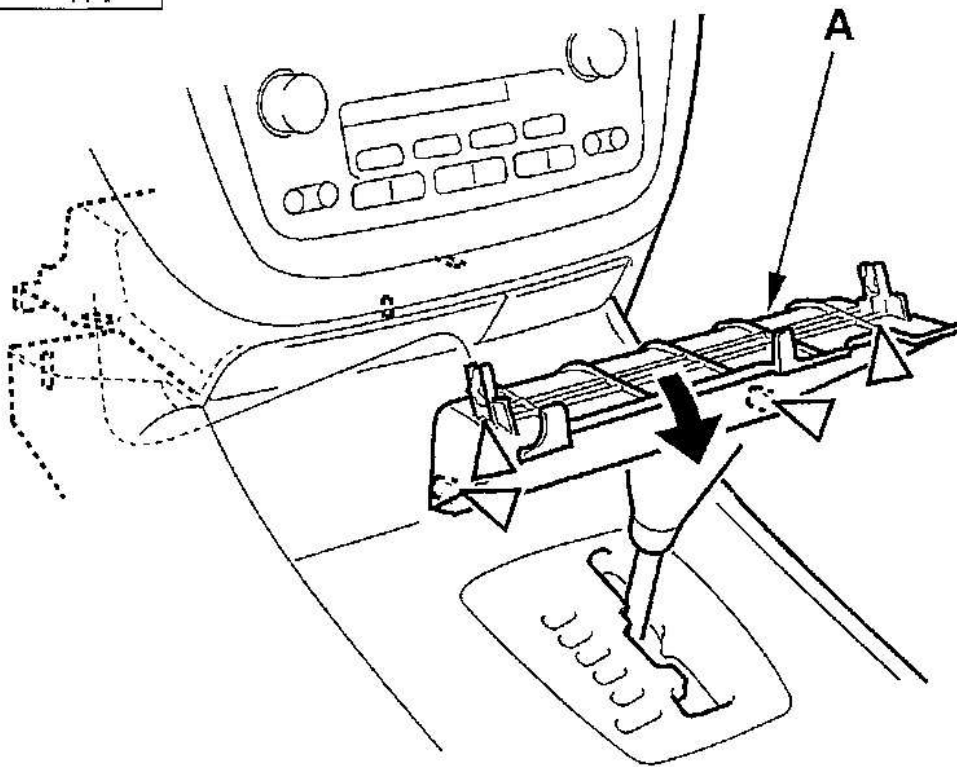
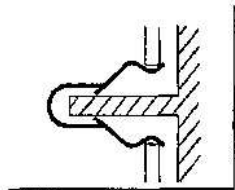
NOTE: Letter references in parenthesis in the following steps, are found in illustrations. See Fig. 13 -Fig. 17 .

Removal & Installation

1. Detach the clips by hand and remove the center panel lower trim (A). See Fig. 13 .
2. Remove the console panel (A). See Fig. 14 . Detach the clips (B) by pulling the beverage holder (C) up, then remove it. Remove the shift indicator trim ring (D). Gently detach the clips (E), then remove the console panel. Disconnect the seat heater switch connectors (F).
3. Detach the clips and release the hooks (A), then remove the driver's console side trim (B) and passenger's console side trim (C). See Fig. 15 .
4. Gently pull out the console rear trim (A) to detach the clips and to release the hooks (B), then disconnect the rear heater-A/C passenger's control panel-unit connector (C). See Fig. 16 .
5. Remove the center console (A). See Fig. 17 . On both sides, remove the bolts (B) and screws (C). Detach the harness clip (D). Pull the center console back to detach the clips (E). While lifting up on the console, disconnect the accessory socket connector (F), and remove the console.
6. Install the center console in the reverse order of removal, and note these items:
 - Replace any damaged clips.
 - Make sure all the connectors are plugged in properly.

Fastener Locations

▷ : Clip, 4

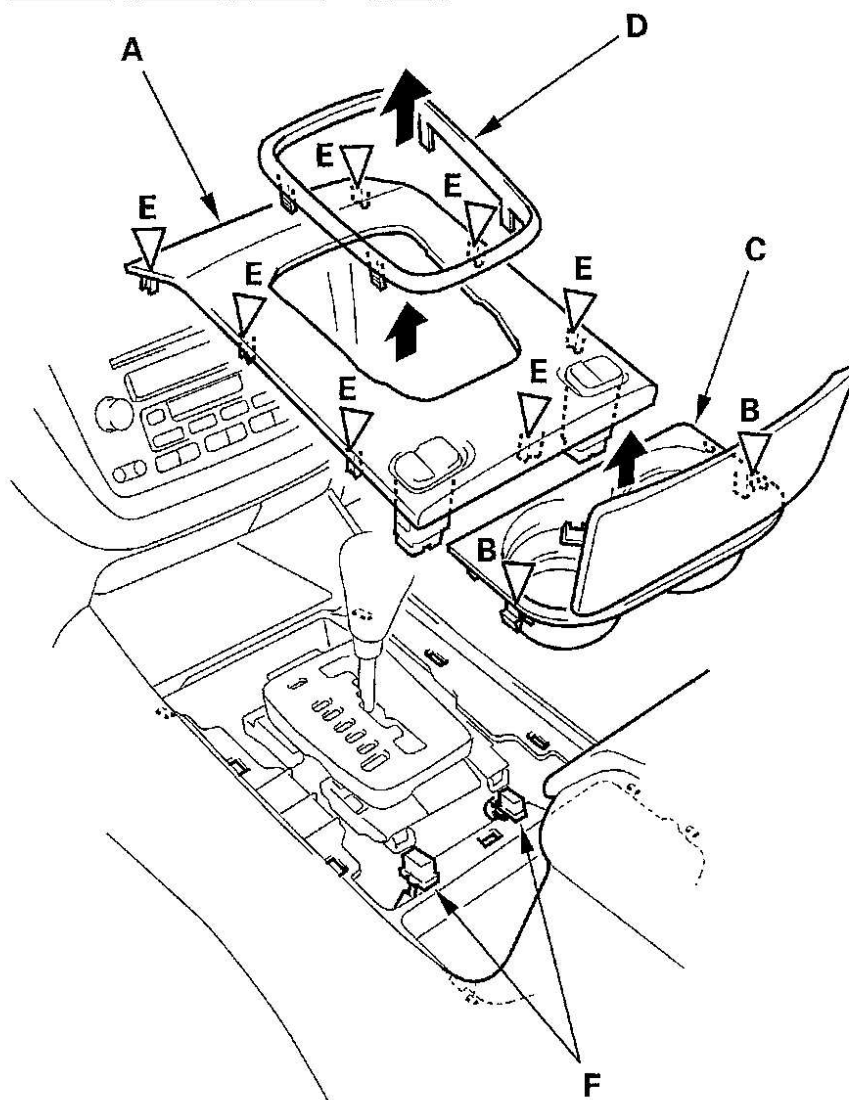


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Fig. 13: Removing Center Panel Lower Trim
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Fastener Locations

B ▷ : Clip, 2 E ▷ : Clip, 7



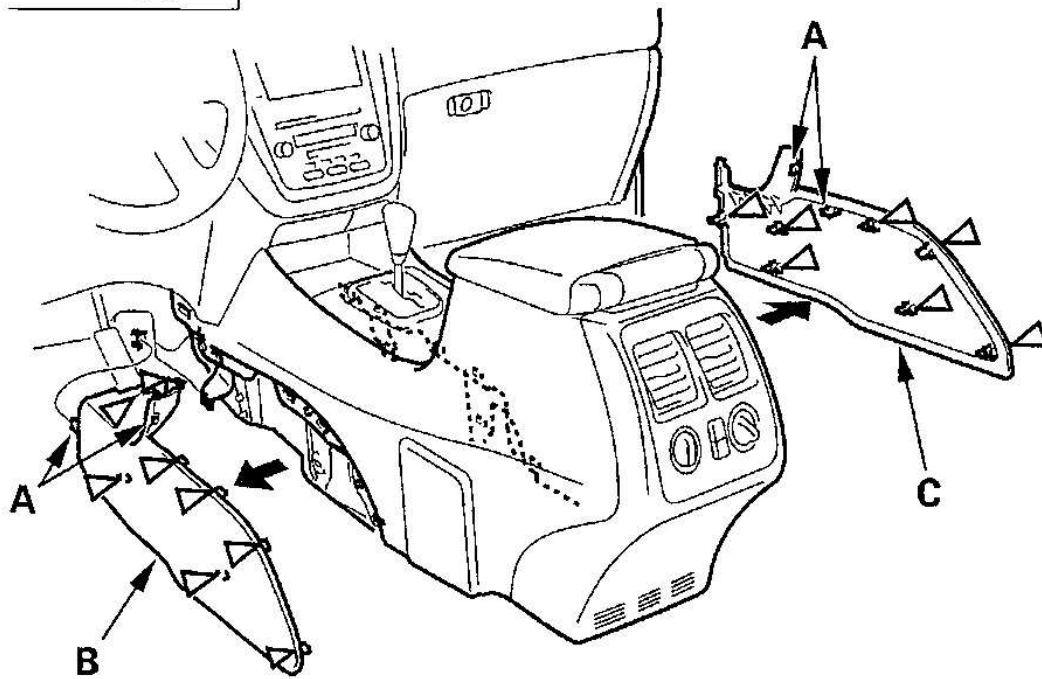
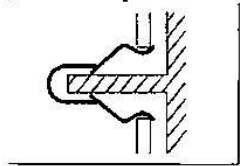
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Fig. 14: Removing Console Panel

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Fastener Locations

▷ : Clip, 15

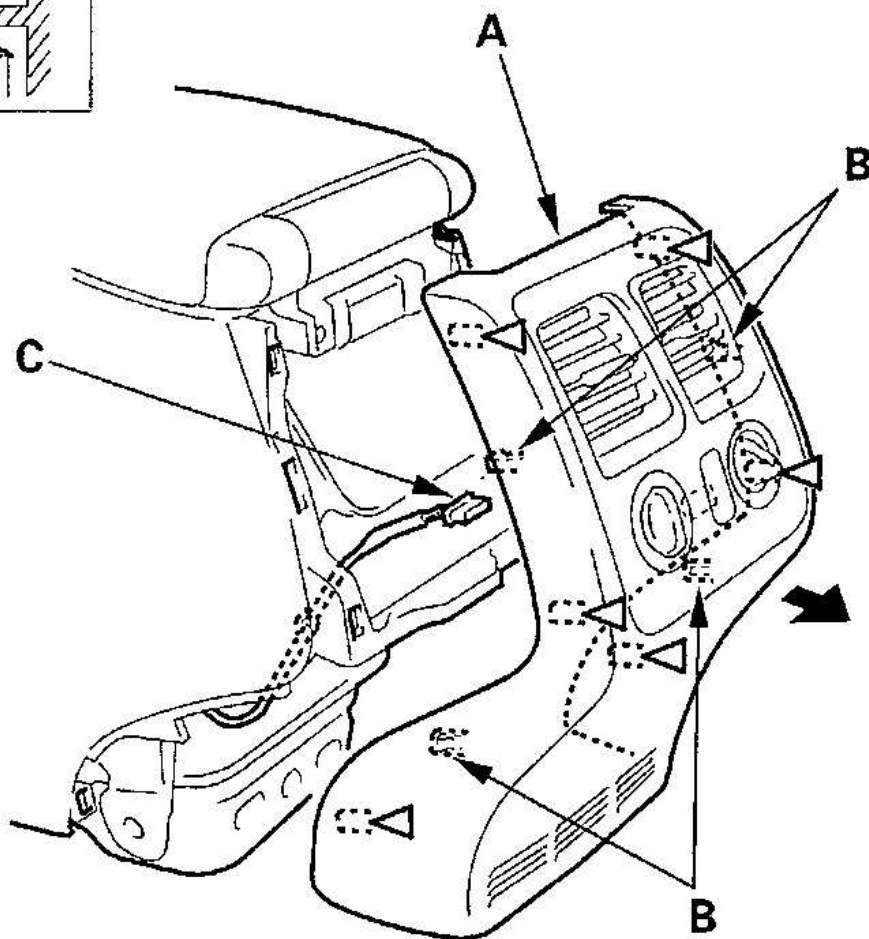
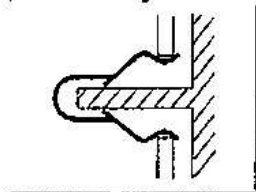


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Fig. 15: Removing Console Side Trim Panels
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Fastener Locations

▷ : Clip, 6

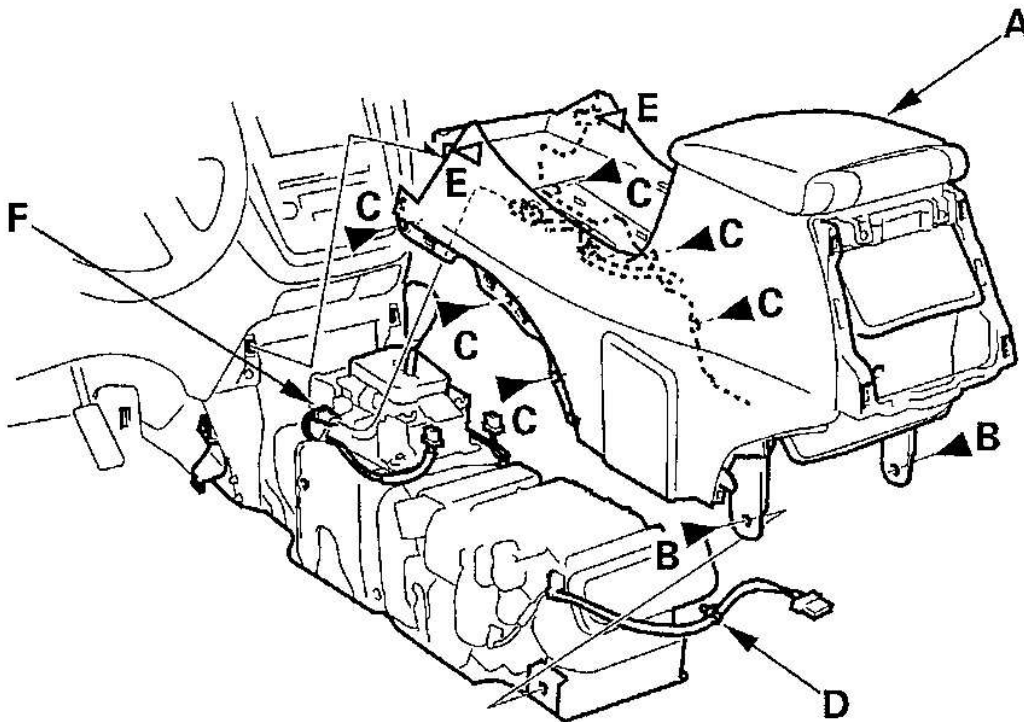
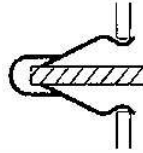
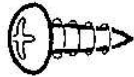
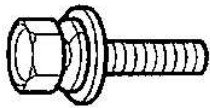


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Fig. 16: Removing Rear Heater-A/C Control Unit Panel
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Fastener Locations

B ▶ : Bolt, 2 C ▶ : Screw, 6 E ▶ : Clip, 2



G00153612

Fig. 17: Removing Center Console

Courtesy of AMERICAN HONDA MOTOR CO., INC.

DASHBOARD LOWER COVER

NOTE: When prying with a flat-tip screwdriver, wrap it with protective tape, and apply protective tape around the related parts, to prevent damage. Take care not to scratch the front seat, dashboard, and related parts.

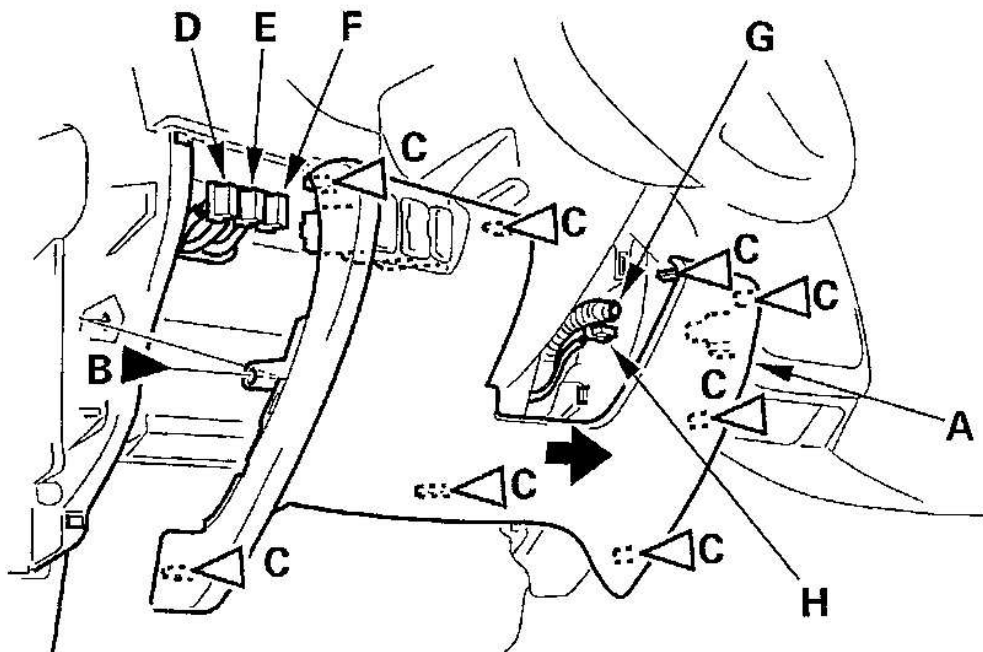
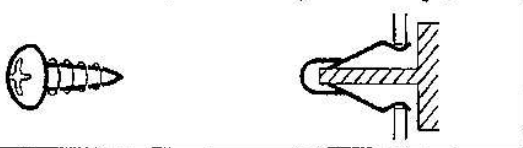
NOTE: Letter references in parenthesis in the following steps, are found in illustration. See Fig. 18 .

Removal & Installation

1. Remove the driver's dashboard side cover. See **DASHBOARD SIDE COVER** . Disconnect the cruise control main switch connector (D), moon roof switch connector (E), fog light switch connector (F), air hose (G), and in-car temperature sensor connector (H), then remove the cover. See **Fig. 18** .
2. Remove the dashboard lower cover (A). Remove the screw (B). Gently pull down on the lower cover to release the clips (C).
3. Install the dashboard lower cover in the reverse order of removal, and make sure each connector is plugged in properly, and the air hose is connected properly.

Fastener Locations

B ► : Screw, 1 **C** ► : Clip, 8



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Fig. 18: Removing Dashboard Lower Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DASHBOARD SIDE COVER

NOTE: When prying with a flat-tip screwdriver, wrap it with protective tape, and apply protective tape around the related parts, to prevent damage. Take care not to scratch the front seat, dashboard, and related parts.

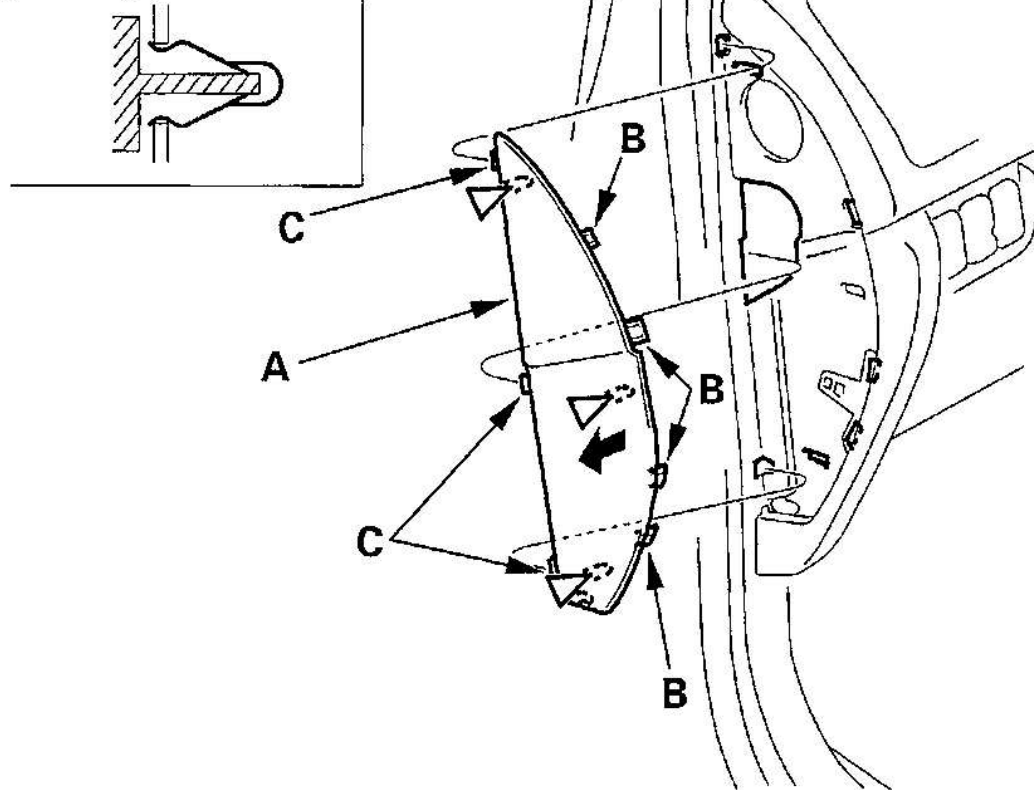
NOTE: Letter references in parenthesis in the following procedure, are found in illustration. See Fig. 19 .

Removal & Installation

From outside of the front door, remove the dashboard side cover (A). See Fig. 19 . Gently pull out along the rear edge to release the clips and the hooks (B). Gently pull out on the side cover to release the top and bottom clips and the hooks (C), then remove the side cover. Install in the reverse order of removal. Push the clips into place securely.

Fastener Locations

▷ : Clip, 3



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Fig. 19: Removing Dashboard Side Cover

Courtesy of AMERICAN HONDA MOTOR CO., INC.

GEARSHIFT LEVER ASSEMBLY

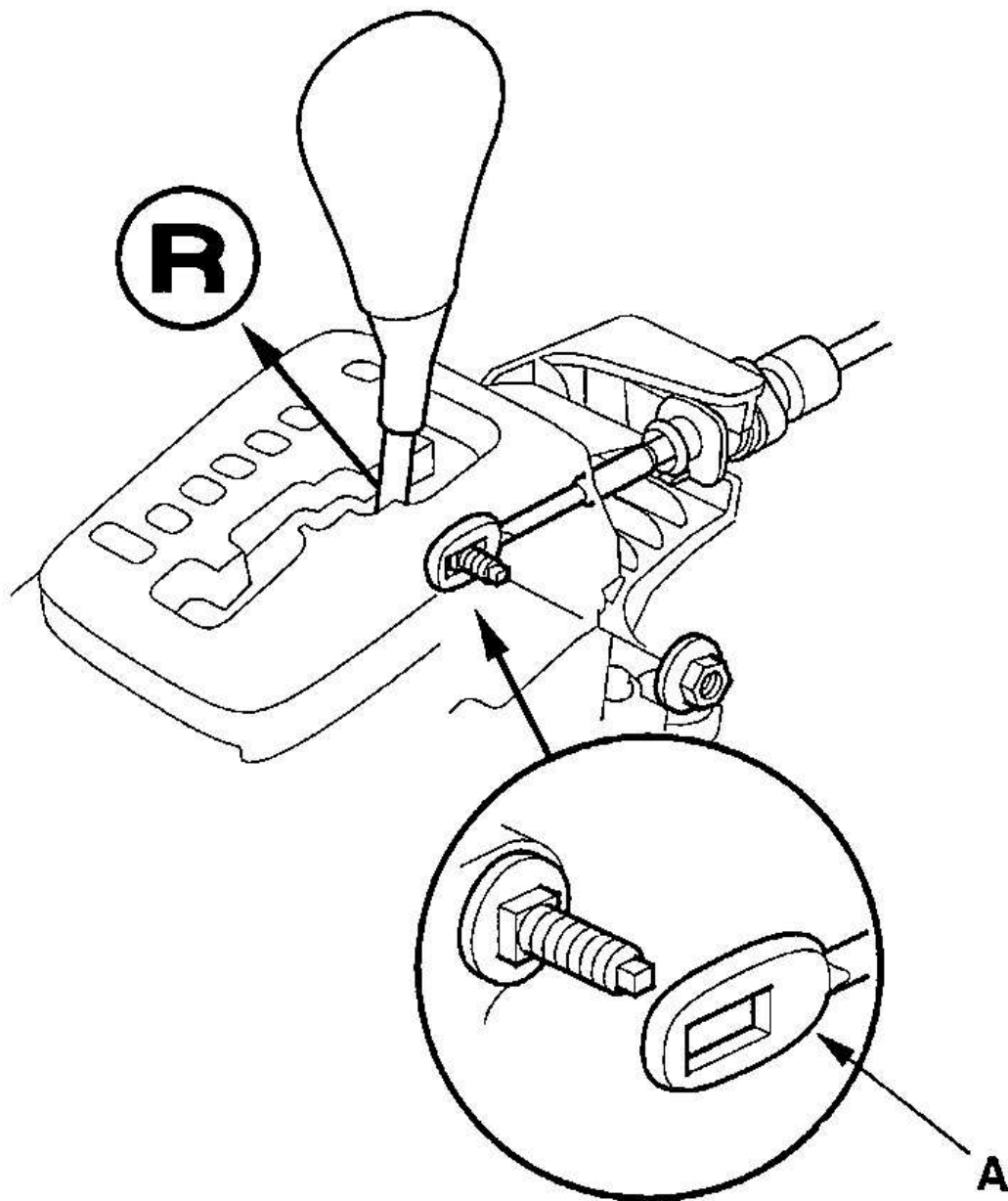
NOTE: Letter references in parenthesis in the following steps, are found in illustrations. See Fig. 20 -Fig. 27 .

Removal

1. Shift the transaxle into the "R" position.
2. Remove the console panel and center console. See CENTER CONSOLE .
3. Remove the nut securing the shift cable end (A), then separate the end from the gearshift lever assembly. See Fig. 20 .

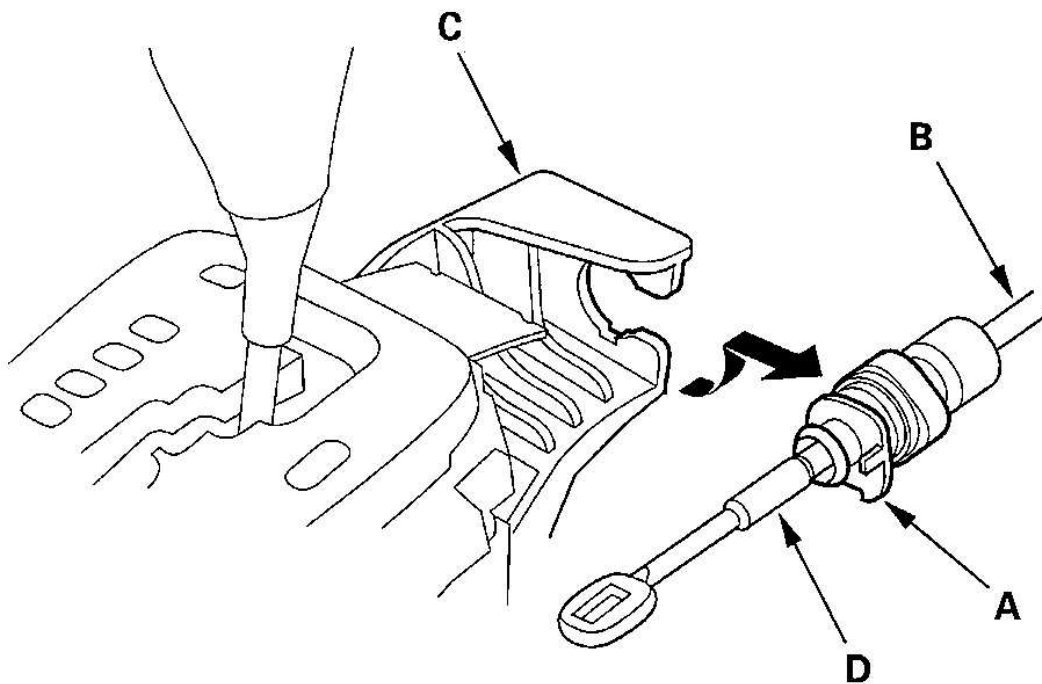
NOTE: **Do not remove the shift cable by twisting shift cable guide (D). See Fig. 21 .**

4. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide holder to remove the shift cable from the gearshift lever bracket base (C).
5. Disconnect the shift lock solenoid connector (A) and the A/T shift switch assembly connector (6 pin) (B). See **Fig. 11** and **Fig. 22** .
6. Remove the 4 bolts (C) securing the gearshift lever bracket base, then remove the gearshift lever assembly.



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Fig. 20: Removing/Installing Shift Cable From Gearshift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 21: Removing Shift Cable From Bracket Base
Courtesy of AMERICAN HONDA MOTOR CO., INC.

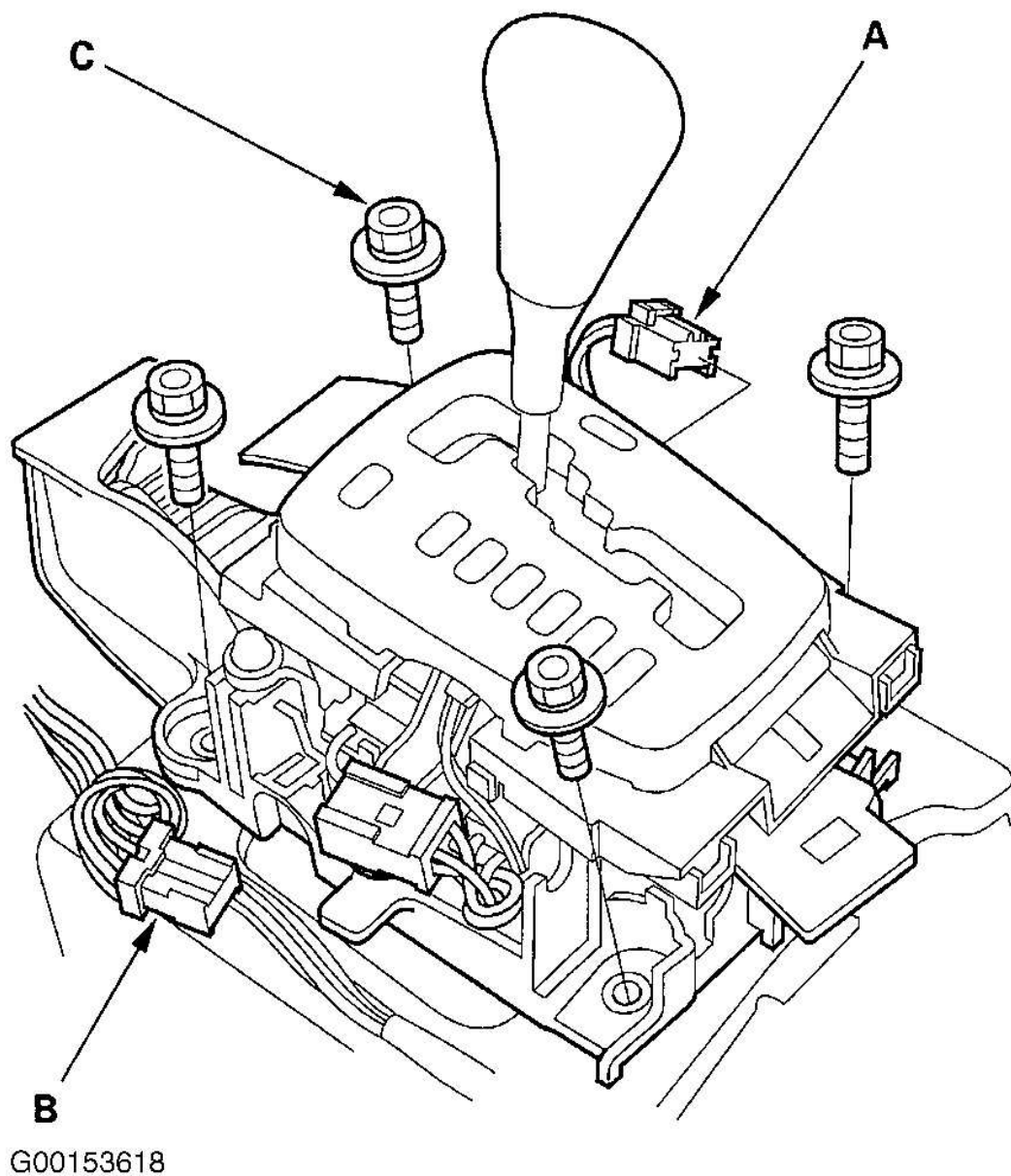


Fig. 22: Removing Gearshift Lever Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Installation

1. Install the gearshift lever assembly.
2. Turn the ignition switch ON, and verify that the "R" position indicator comes on. See **Fig. 23**.
3. If necessary, push the shift cable until it stops, then pull the shift cable back one step so that the transaxle

shift position is in "R" position. See **Fig. 24** .

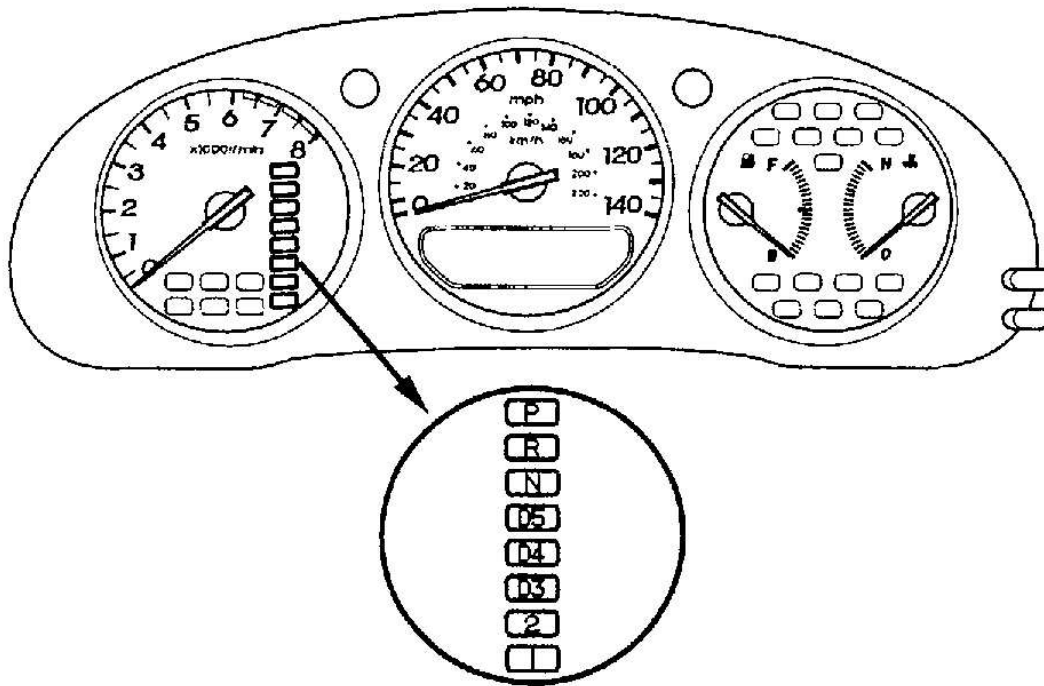
4. Turn the ignition off.
5. Insert a .24" (6.0 mm) pin (A) into the positioning hole (B) on the bracket base through the positioning hole on the gearshift lever. See **Fig. 25** .

NOTE: **Do not install the shift cable by twisting the cable guide (H). See Fig. 26 .**

6. Rotate the socket holder (A) on the shift cable (B) counterclockwise a quarter turn, then slide the holder onto the 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. See **Fig. 26** . Rotate the holder clockwise a quarter turn to secure the shift cable.
7. Verify that the shift cable end (A) is properly installed on the mounting stud (B). Cable end rides on the bottom of the mounting stud. See **Fig. 27** .
8. If cable is improperly installed, remove the shift cable from the bracket base, and reinstall the shift cable. Do not install the shift cable end on the mounting stud while the shift cable is on the shift cable bracket base.
9. Install and tighten the nut. See **Fig. 20** .
10. Remove the .24" (6.0 mm) pin that was installed to hold the gearshift lever.
11. Connect the shift lock solenoid connector and the A/T shift switch assembly connector (6 pin). See **Fig. 11** and **Fig. 22** .
12. Move the gearshift lever to each gear position and verify that the A/T gear position indicator follows the transaxle range switch.
13. Push the shift lock release, and verify that the gearshift lever releases.
14. Reinstall the center console, console panel, and related parts. See **CENTER CONSOLE** .

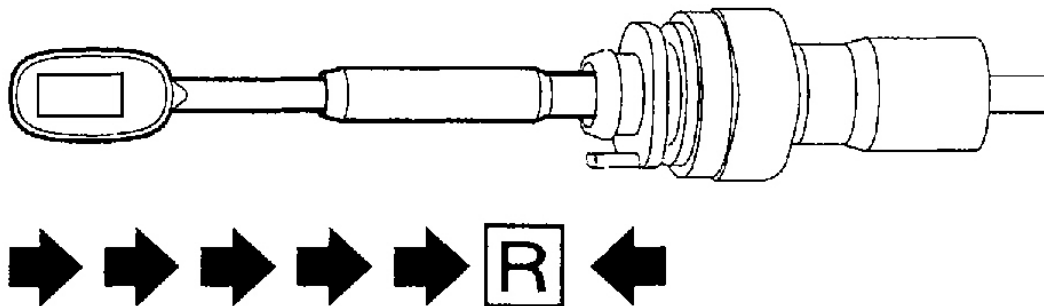
2002 Acura MDX

2001-02 AUTOMATIC TRANSMISSIONS Shift Interlock Systems - MDX



G00153619

Fig. 23: Identifying Gearshift Lever Position Indicator Display
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 24: Placing Shift Cable In "R" Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

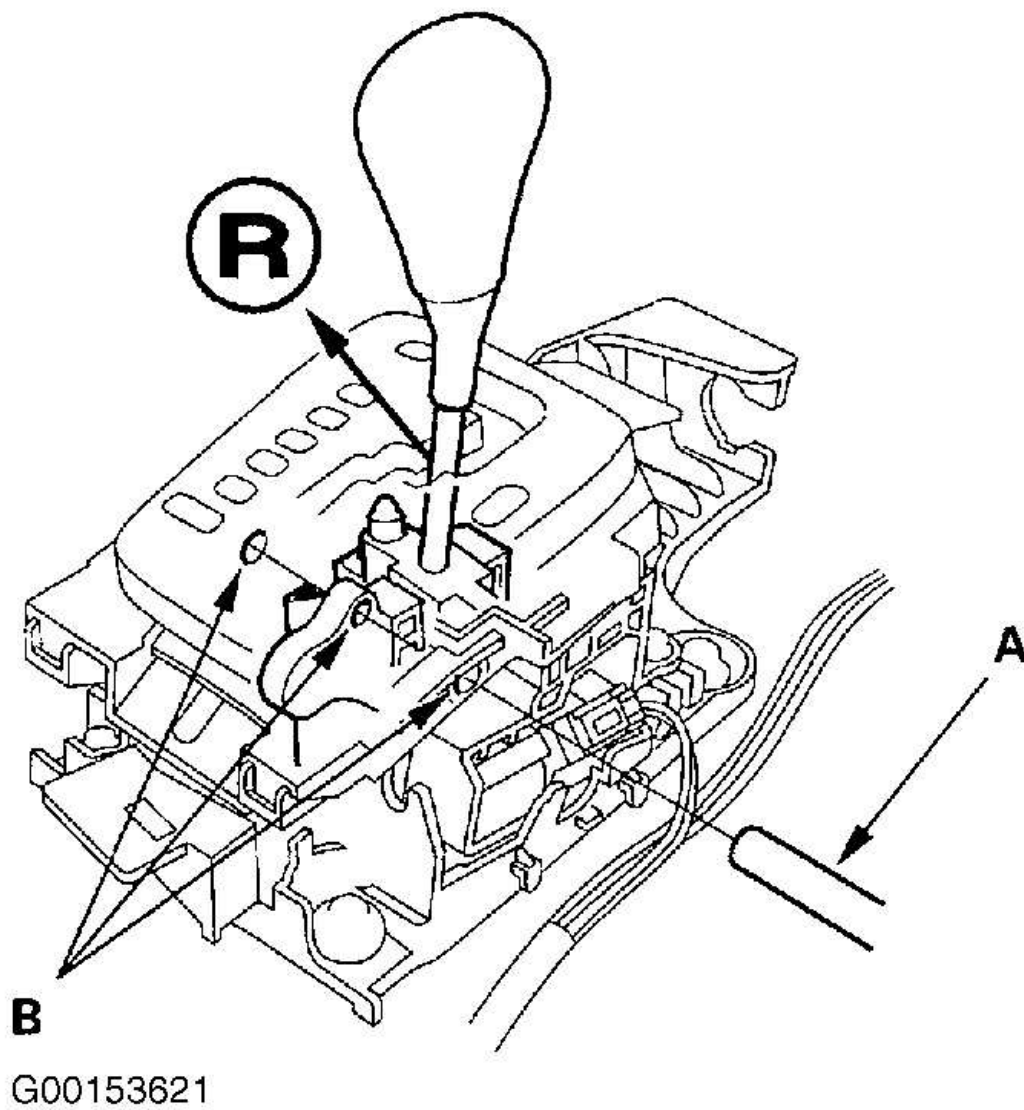
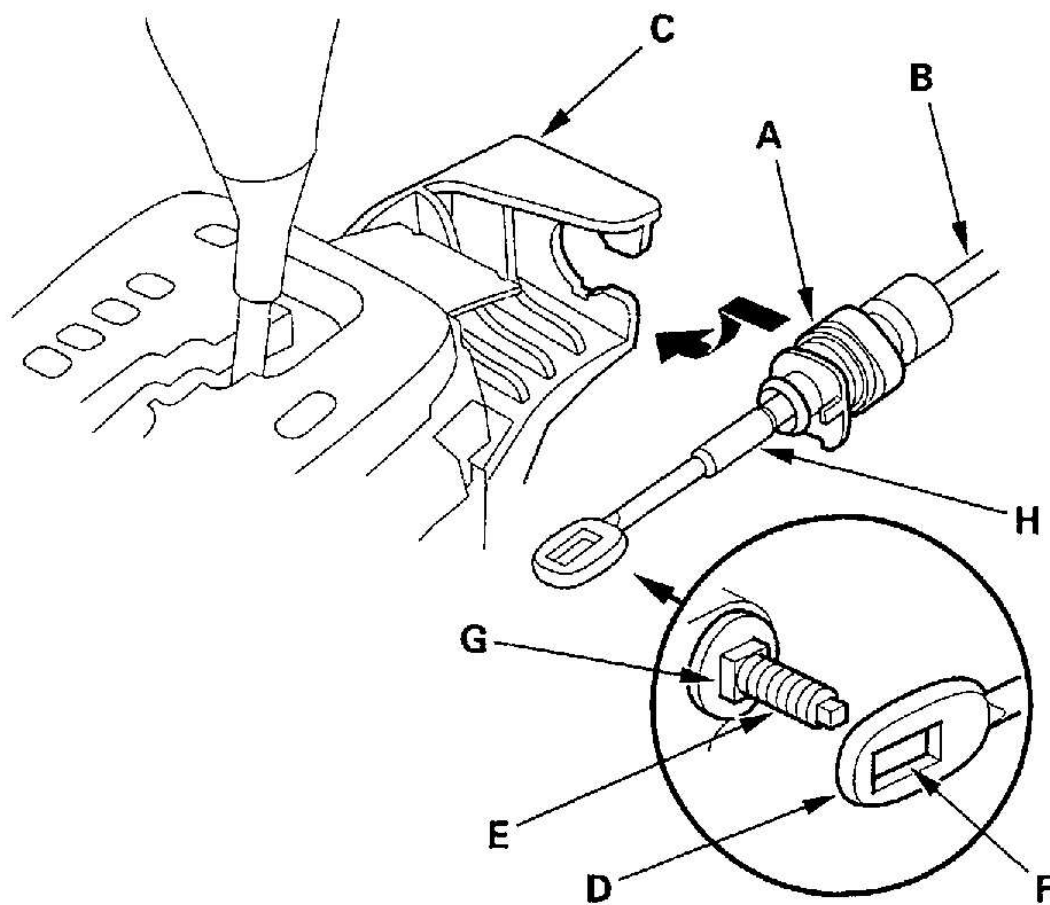


Fig. 25: Aligning Gearshift Lever Assembly In "R" Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

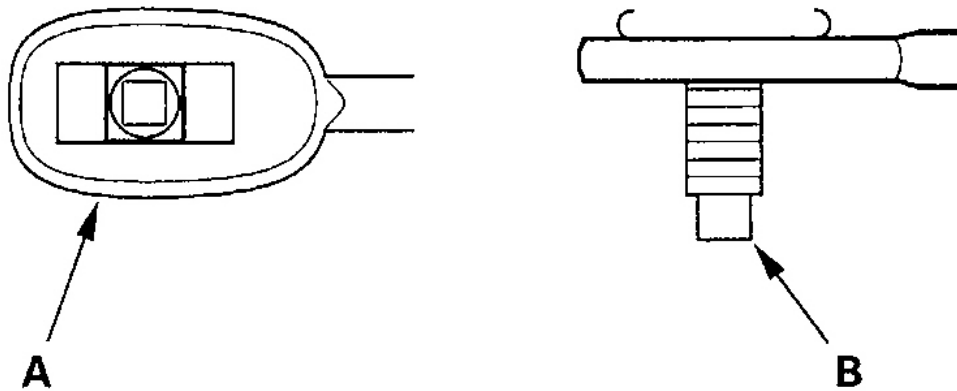


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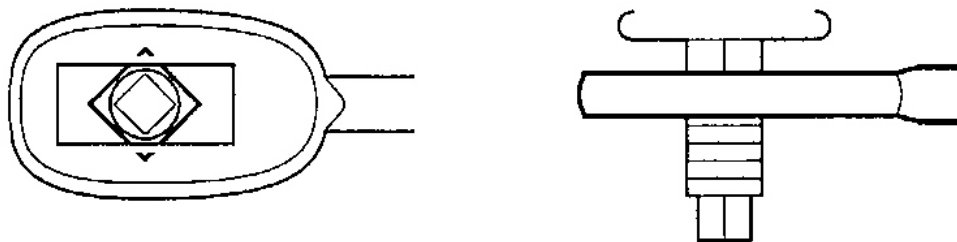
Fig. 26: Installing Shift Cable

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Properly Installed:



Improperly Installed:



Cable end rides on the bottom of the mounting stud.

A- Cable End
B- Mounting Stud

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Fig. 27: Identifying Properly Installed Shift Cable End
Courtesy of AMERICAN HONDA MOTOR CO., INC.

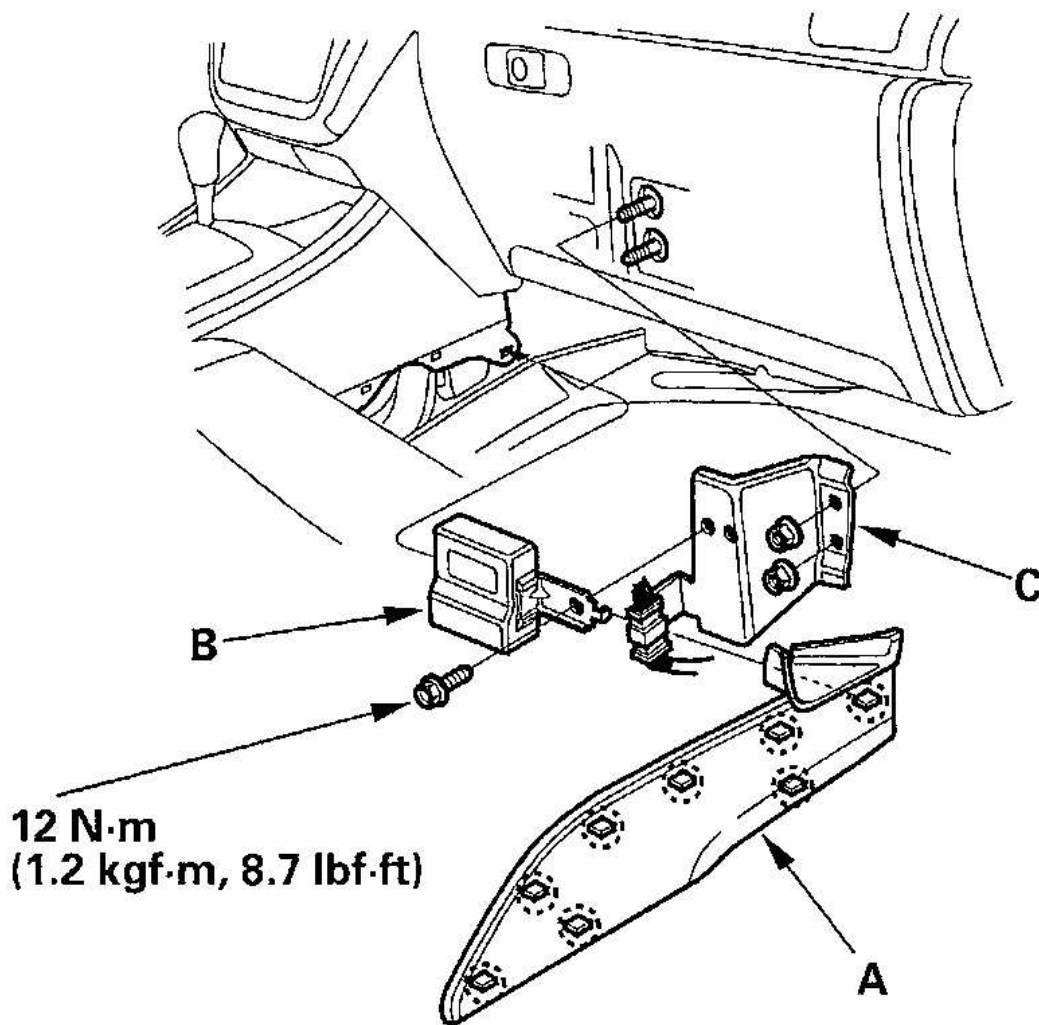
POWERTRAIN CONTROL MODULE

NOTE: PCM is located in front and to right of console.

NOTE: Letter references in parenthesis in the following steps, are found in illustration.
See Fig. 28 .

Removal & Installation

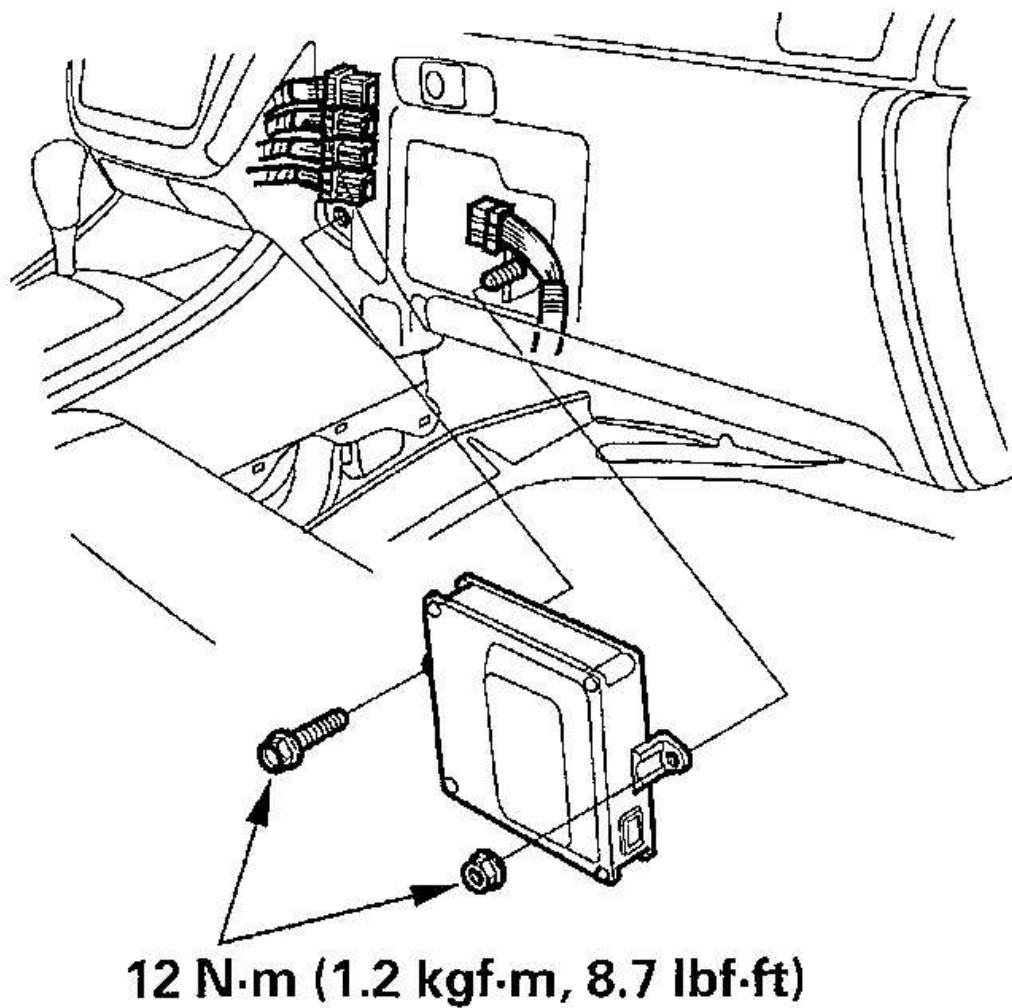
1. Disconnect negative battery cable. Remove the passenger's center console side trim (A). See **Fig. 28**.
2. Remove the bolt from the Intake Manifold Runner Control (IMRC) module (B).
3. Remove the two nuts from the bracket (C).
4. Remove two nuts holding IMRC module bracket.
5. Remove bolt and nut from PCM. See **Fig. 29**. Disconnect PCM harness connectors. Remove PCM. To install, reverse removal procedure.



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Fig. 28: Removing Intake Manifold Runner Control Module

Courtesy of AMERICAN HONDA MOTOR CO., INC.



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Fig. 29: Removing PCM

Courtesy of AMERICAN HONDA MOTOR CO., INC.

SHIFT LOCK SOLENOID

Removal

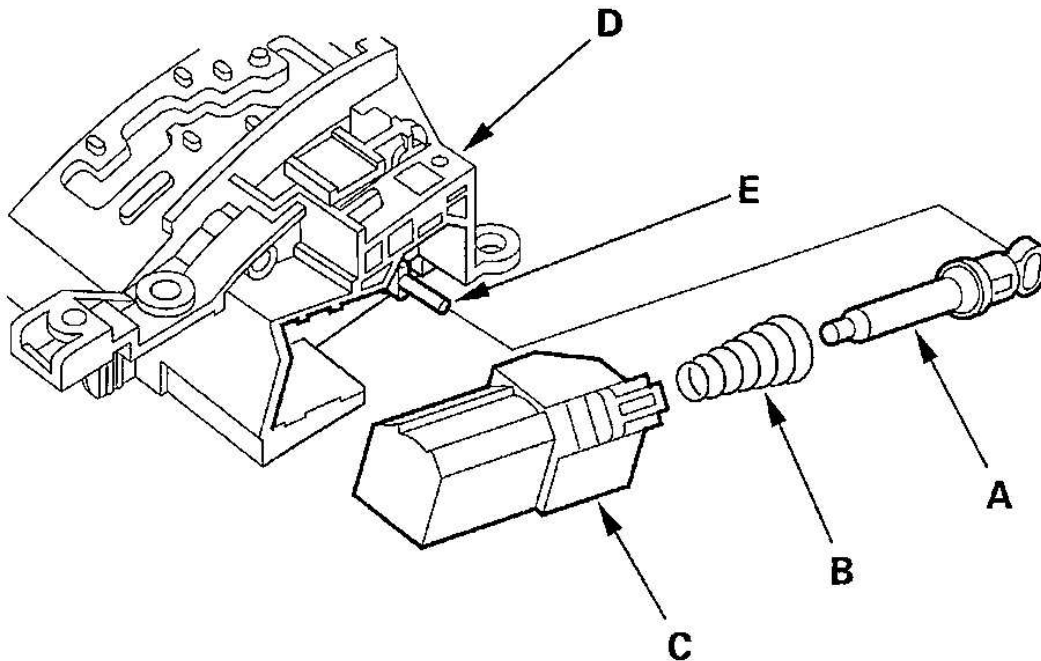
1. Remove the console panel and center console. See **CENTER CONSOLE** .
2. Remove the gearshift lever assembly. See **GEARSHIFT LEVER ASSEMBLY** .

3. Remove the shift lever knob and A/T gear position indicator panel/bracket assembly. See **Fig. 12** .
4. Remove the bolts (four) securing the detent bracket and the bracket base, then separate them.
5. Remove the shift lock solenoid from the detent bracket.

Installation

NOTE: Letter references in parenthesis in the following steps, are found in illustration. See **Fig. 30** .

1. Install the shift lock solenoid plunger (A) and plunger spring (B) in the new shift lock solenoid (C). See **Fig. 30** .
2. Install the shift lock solenoid on the detent bracket (D) by aligning the joint of the shift lock solenoid plunger with the tip of the shift lock stop (E).
3. Install the detent bracket on the bracket base with the bolts and nuts.
4. Install the A/T gear position indicator panel/bracket assembly and shift lever knob. See **Fig. 12** .
5. Install the gearshift lever assembly. See **GEARSHIFT LEVER ASSEMBLY** .
6. Install the center console, console panel, and related parts. See **CENTER CONSOLE** .



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Fig. 30: Removing Shift Lock Solenoid
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR IDENTIFICATION

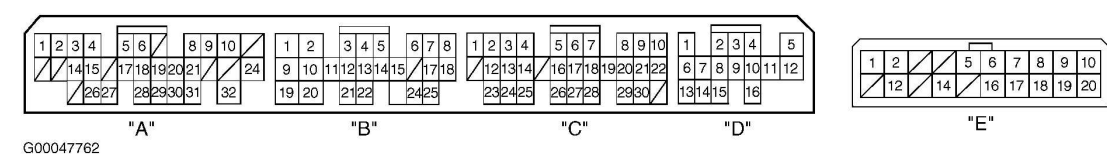
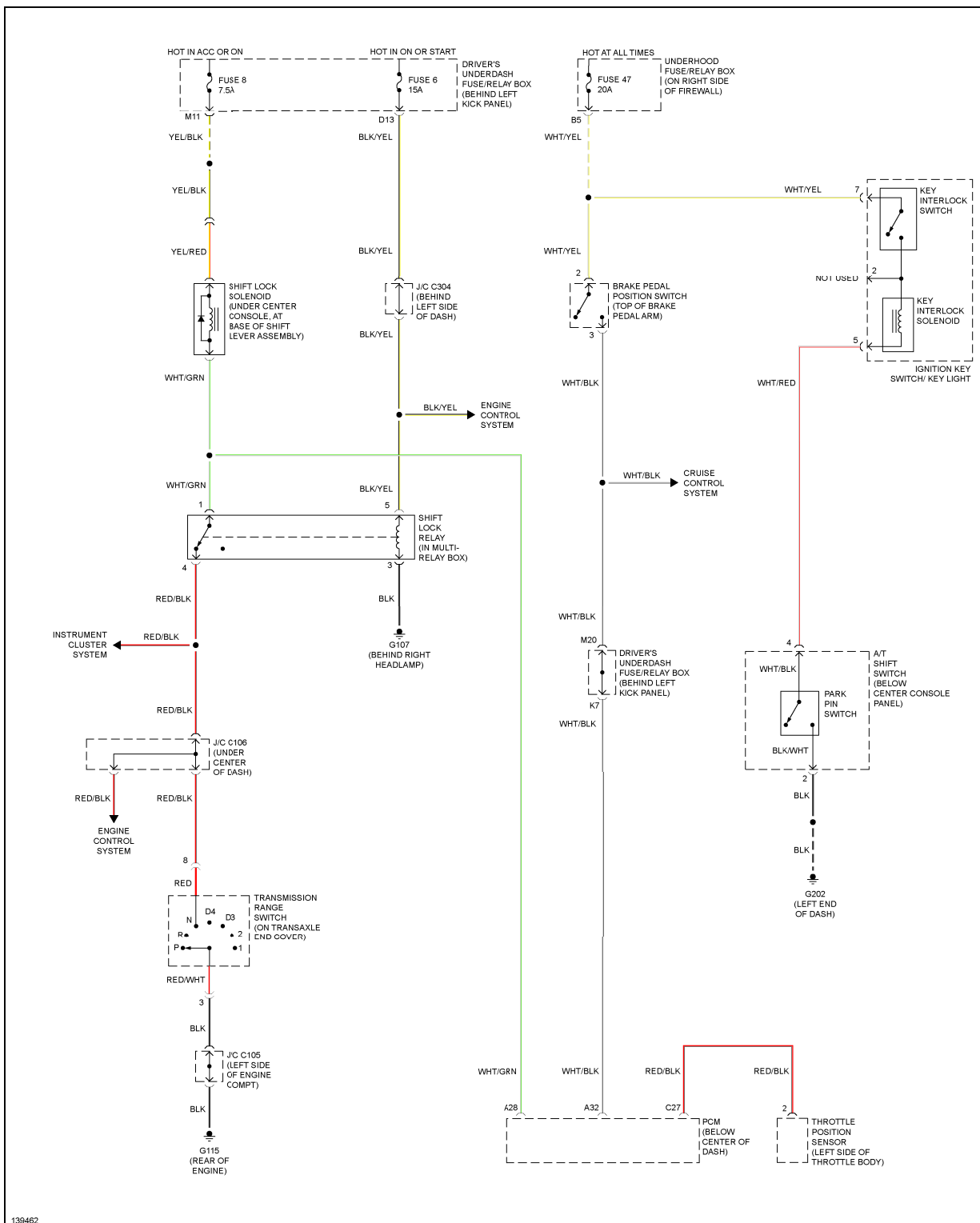


Fig. 31: Identifying PCM Harness Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

WIRING DIAGRAMS

2002 Acura MDX

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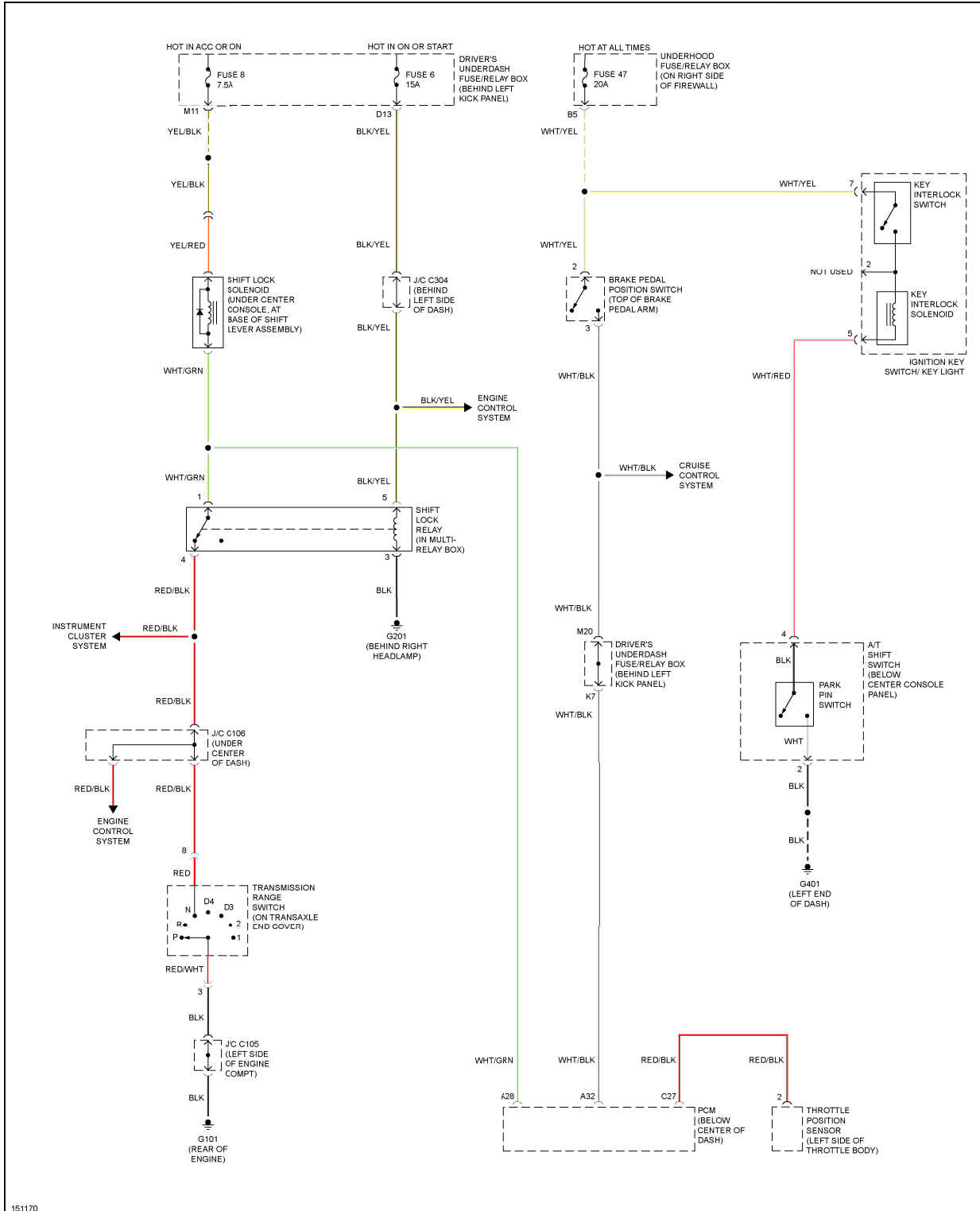


2002 Acura MDX
2001-02 AUTOMATIC TRANSMISSIONS Shift Interlock Systems - MDX

Fig. 32: Shift & Key Interlock System Wiring Diagram (2001 Acura MDX)

2002 Acura MDX

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2002 Acura MDX
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Fig. 33: Shift & Key Interlock System Wiring Diagram (2002 Acura MDX)