

RETROFITTING CONSTANT RPM CONTROL

This retrofit consists of installing a constant rpm switch in the center stack and changing the version coding of the engine control module (ECM) to enable the constant rpm control feature.

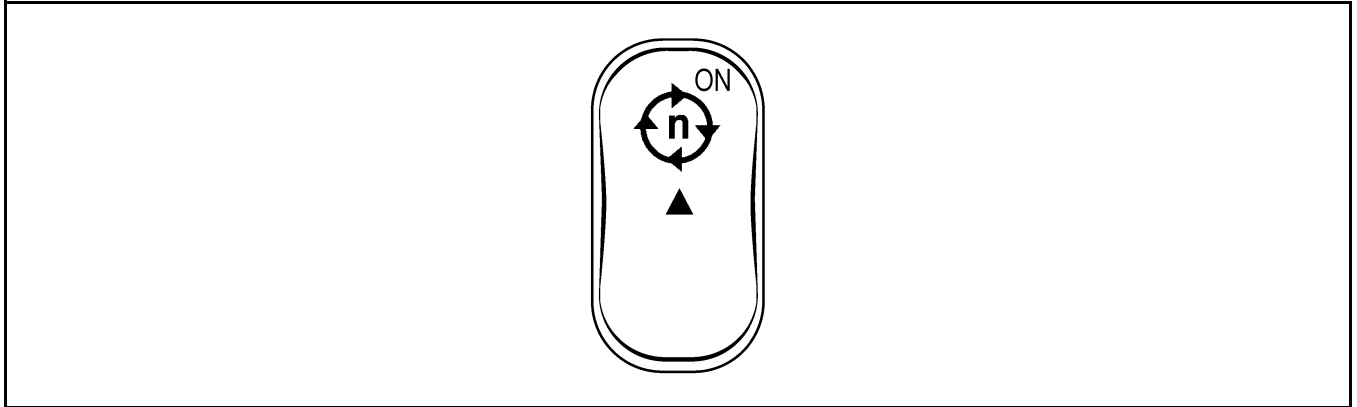


Figure 1 Constant RPM Switch

PARTS REQUIRED

Following is the list of parts:

Mopar Part Number	Description	Qty.
05120488AA	Constant rpm control switch	1
05120633AA	10-pin switch connector	1
05103882AA	Electrical terminal, 10-pin switch connector	5
05161275AA	Electrical terminal, ECM connector	1
	Splice and crimp connector w/heat shrink	1
	Ring terminal	1
	Brown electrical wire, 18 AWG	as needed
	Black electrical wire, 18 AWG	as needed
	Gray electrical wire, 18 AWG	as needed

Table 1 Parts List

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PROCEDURE

1. Disconnect the cable from the negative battery post.
2. Remove the shifter lever assembly frame trim (Figure 2) using a trim stick C-4755 or equivalent.

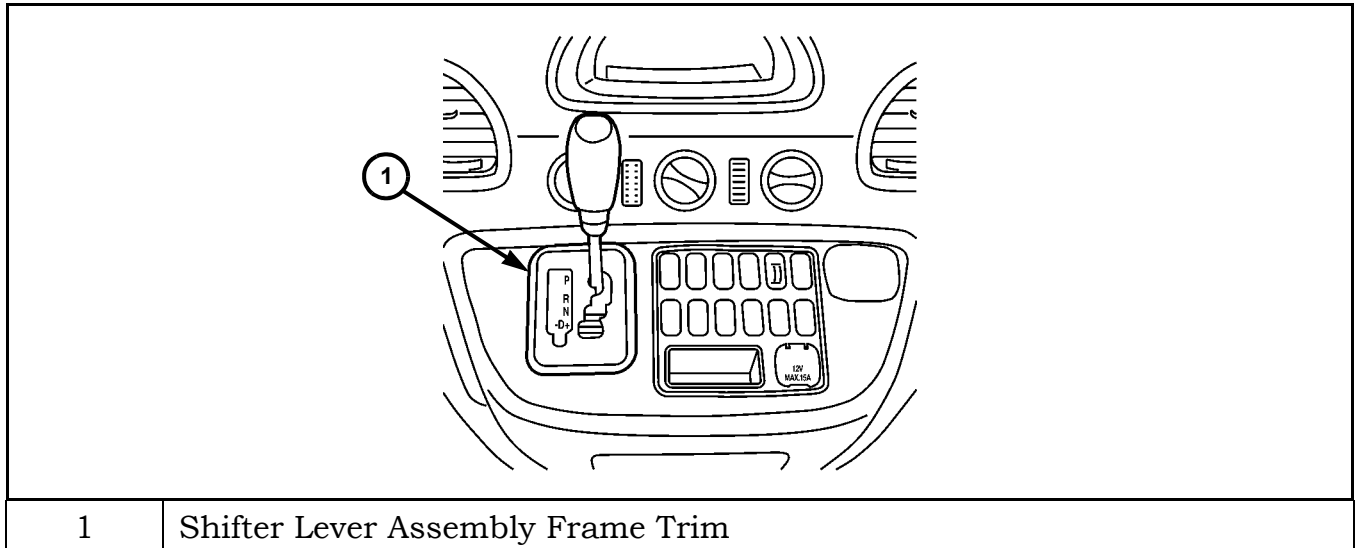


Figure 2 Shifter Lever Assembly Frame Trim

3. Remove the center stack storage compartment (Figure 3) using a trim stick C-4755 or equivalent.

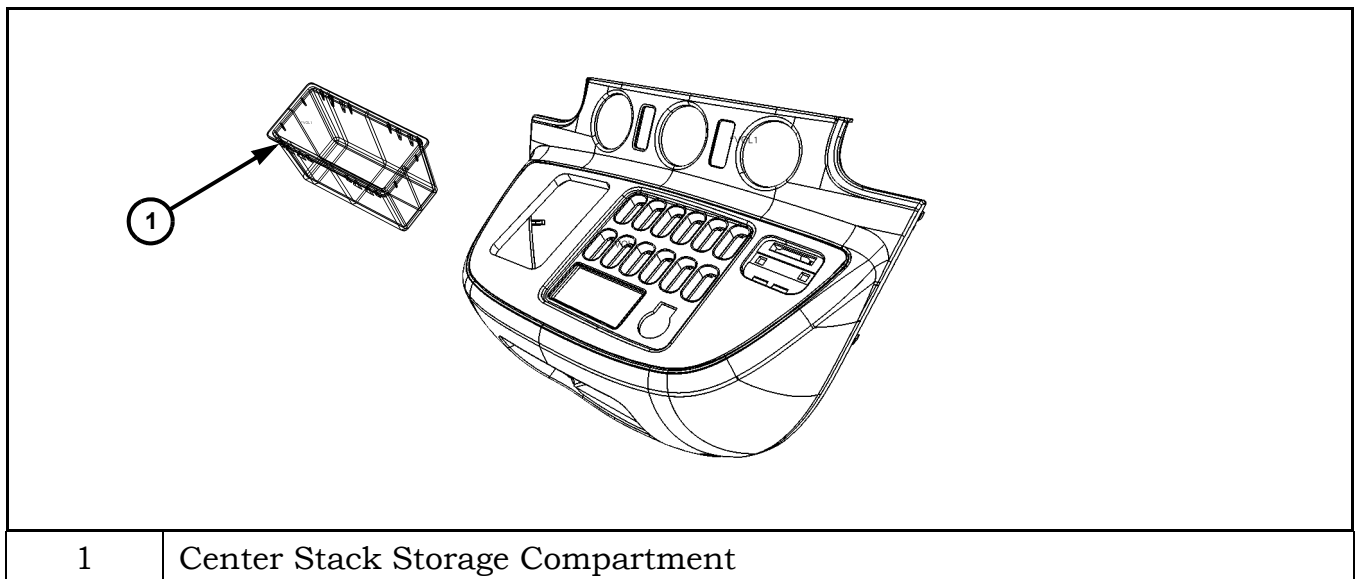


Figure 3 Removal of Center Stack Storage Compartment

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4. Remove center stack cover screw (Figure 4).

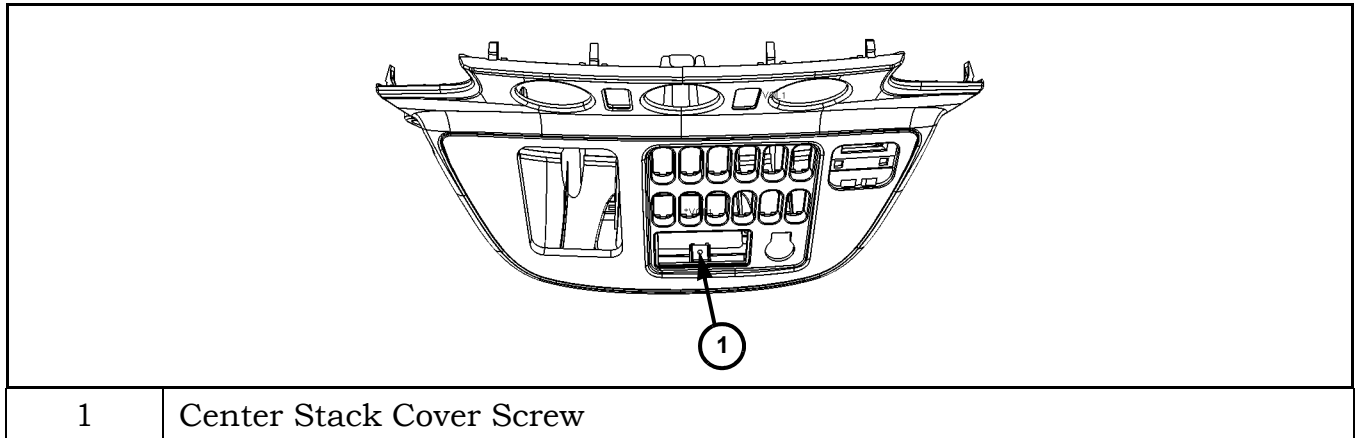


Figure 4 Center Stack Cover Screw Location

5. Carefully lift the center stack cover from the bottom to prevent breaking the upper tabs (arrow). See Figure 5.

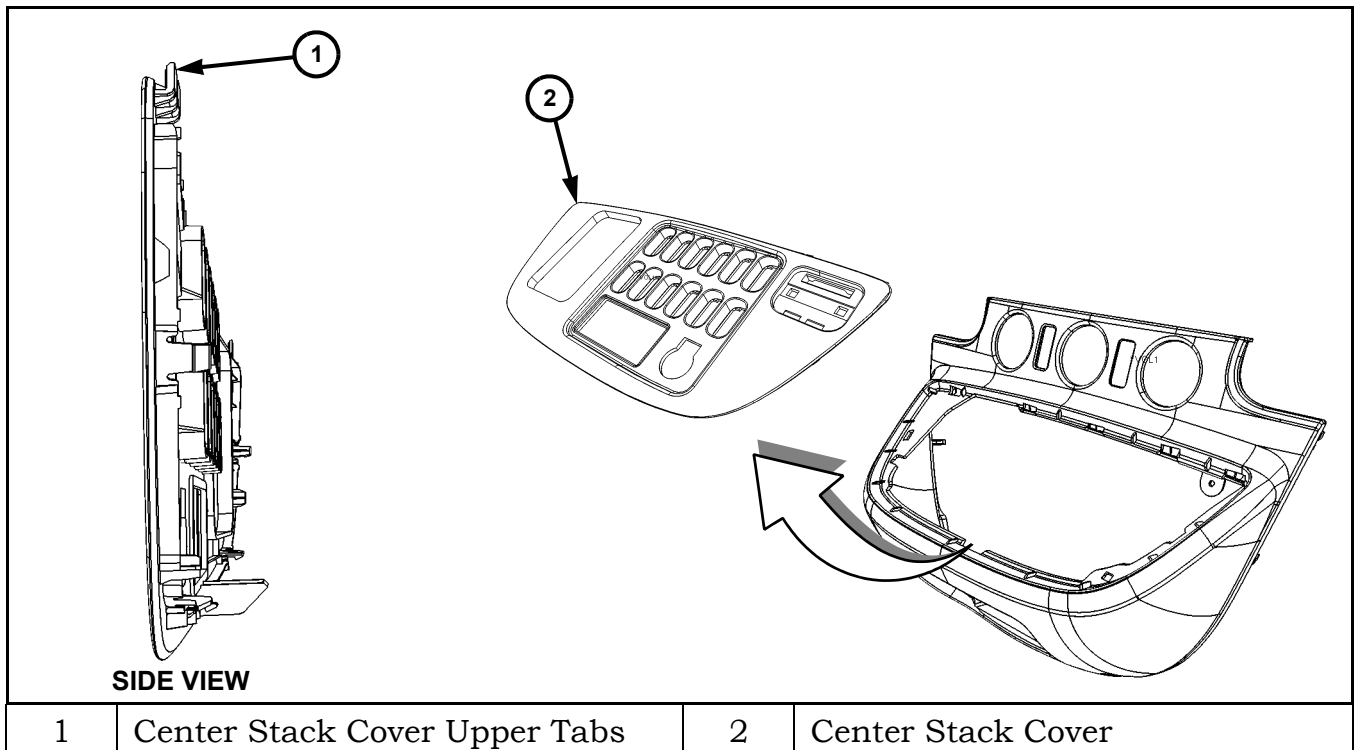


Figure 5 Removal of Center Stack Cover

6. Mark the position of the connectors and unplug the connectors from the center stack cover switches.

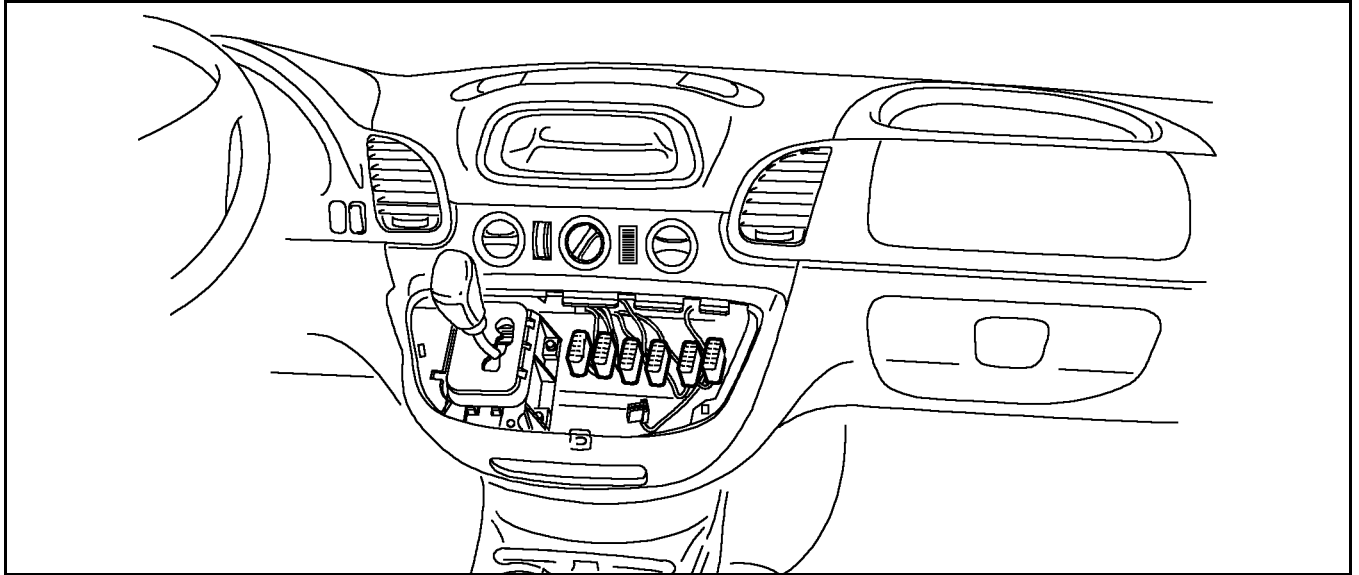


Figure 6 Center Stack Cover Removed

7. Remove the switch cover from the second unused position on the bottom row. The switch cover is released by pressing the tabs located behind the center stack cover.

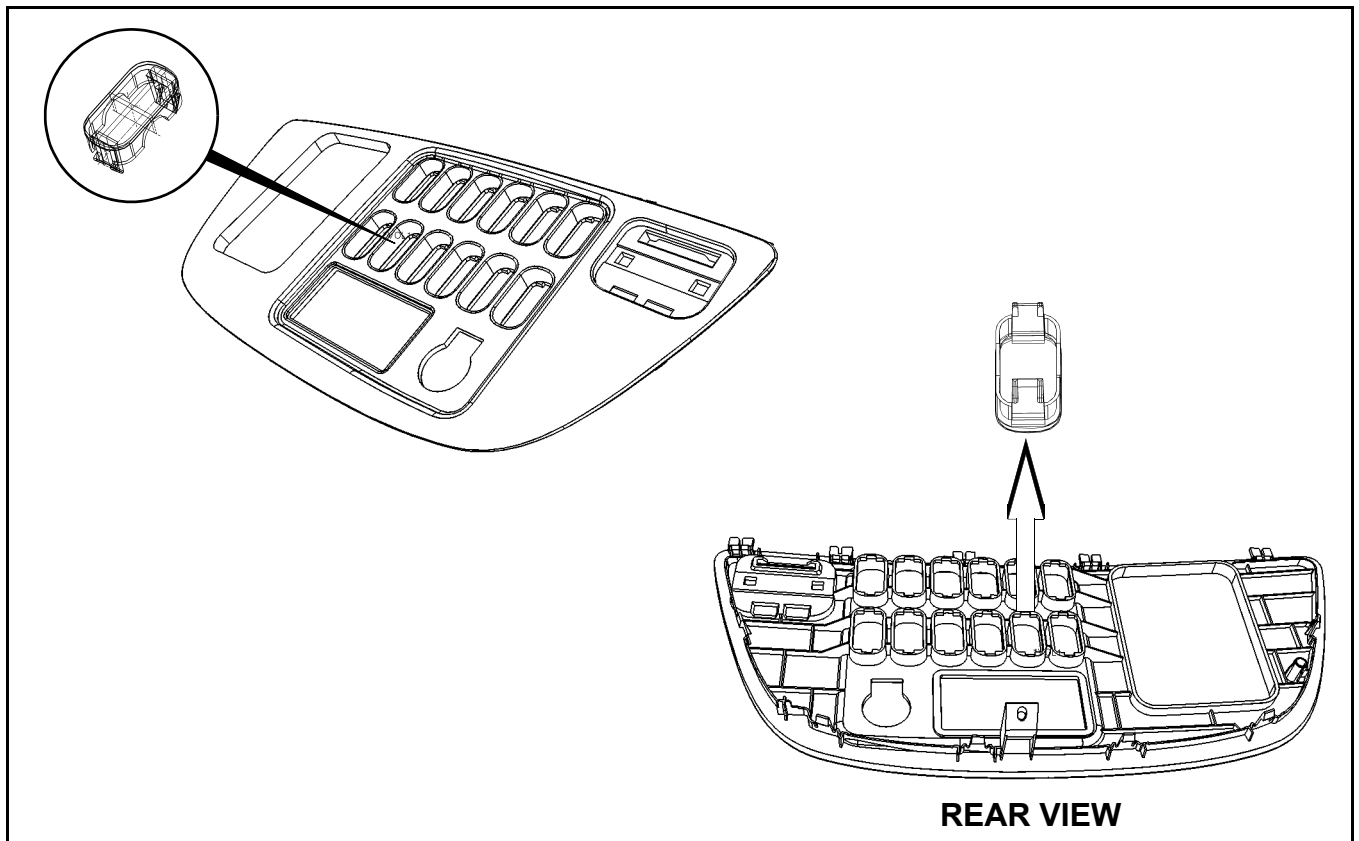


Figure 7 Switch Cover Removal

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8. Insert constant rpm switch 05120488AA into the empty slot. Press the switch until an audible click indicates the switch tabs are locked in place.

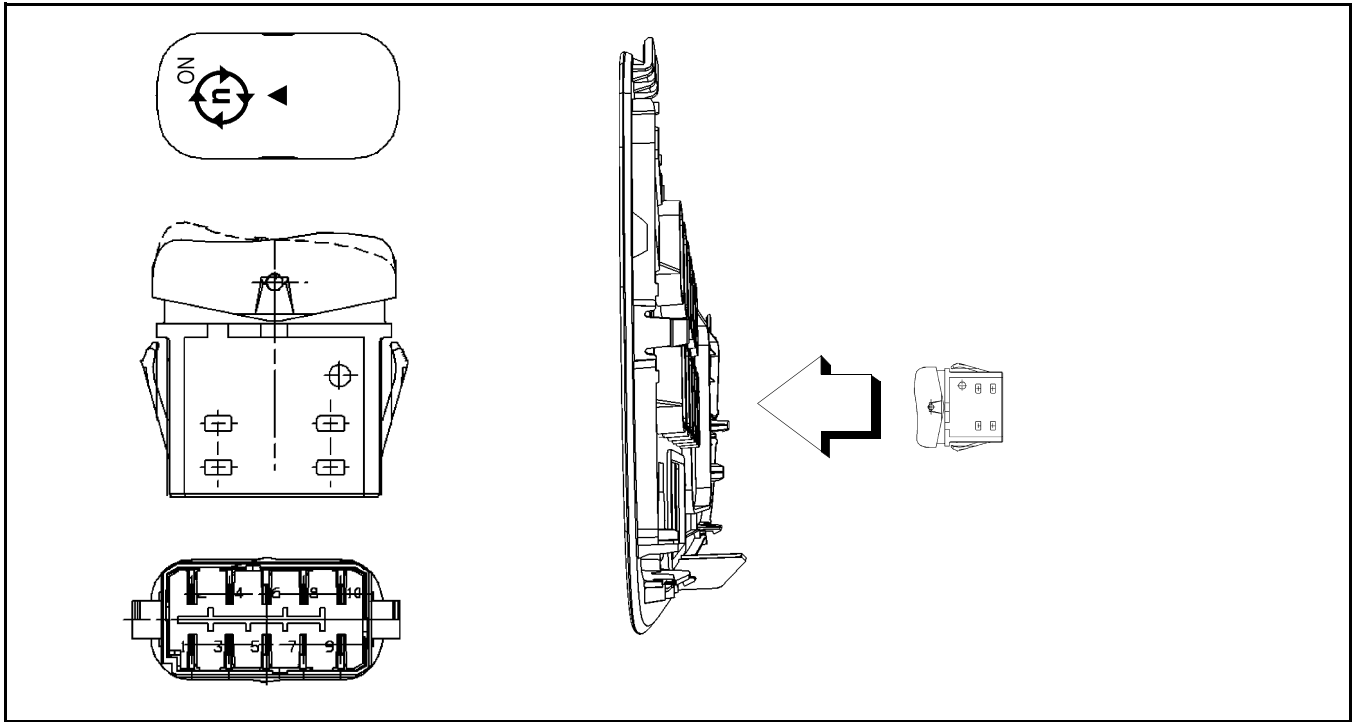


Figure 8 Installing the Constant RPM Switch

9. Ensure the constant rpm switch is located as shown on Figure 9. Do not install the center stack cover yet.

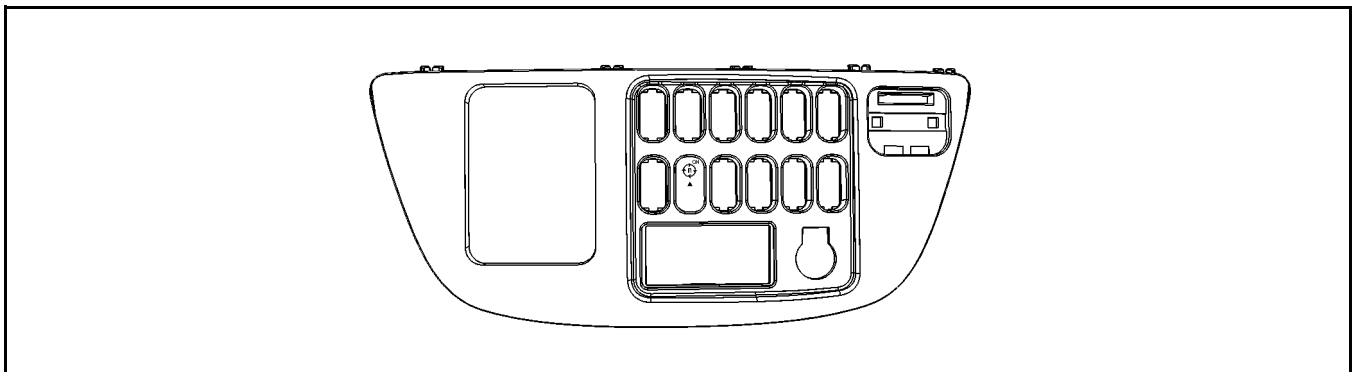


Figure 9 Constant RPM Switch Location

10. Remove the instrument cluster bezel (Figure 10). Unscrew both screws and separate the bezel using a trim stick C-4755 or equivalent. Disconnect the electrical connectors and remove bezel.

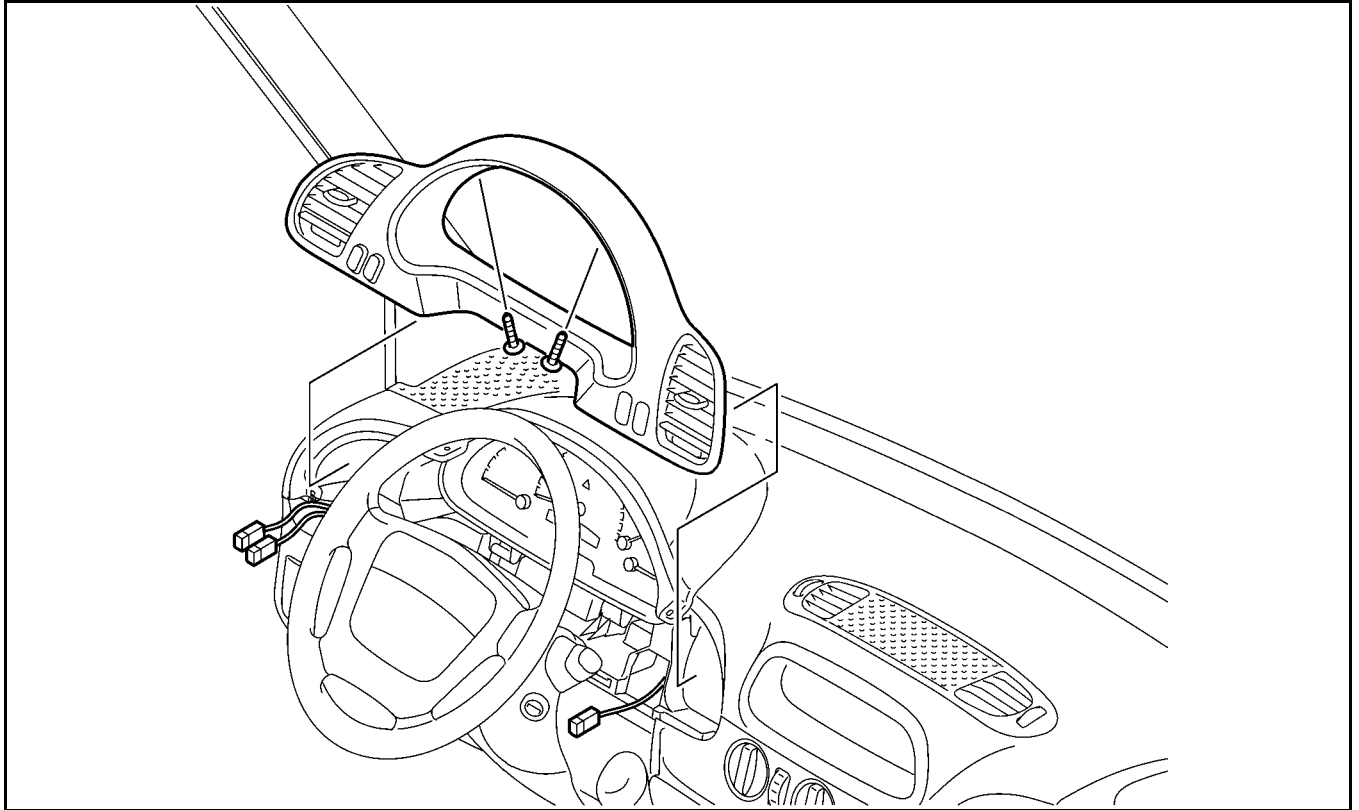


Figure 10 Removal of Instrument Cluster Bezel

11. Remove the cluster top cover and instrument cluster screws (Figure 11). Release the SKREEM module from the back of the instrument cluster. Depress the release (Arrow A) and lift the lever arm (Arrow B) to disconnect both harness connectors. Lift the instrument cluster upward to disengage the pivot loops from the pivot hooks on the instrument panel. Remove the instrument cluster from the instrument panel.

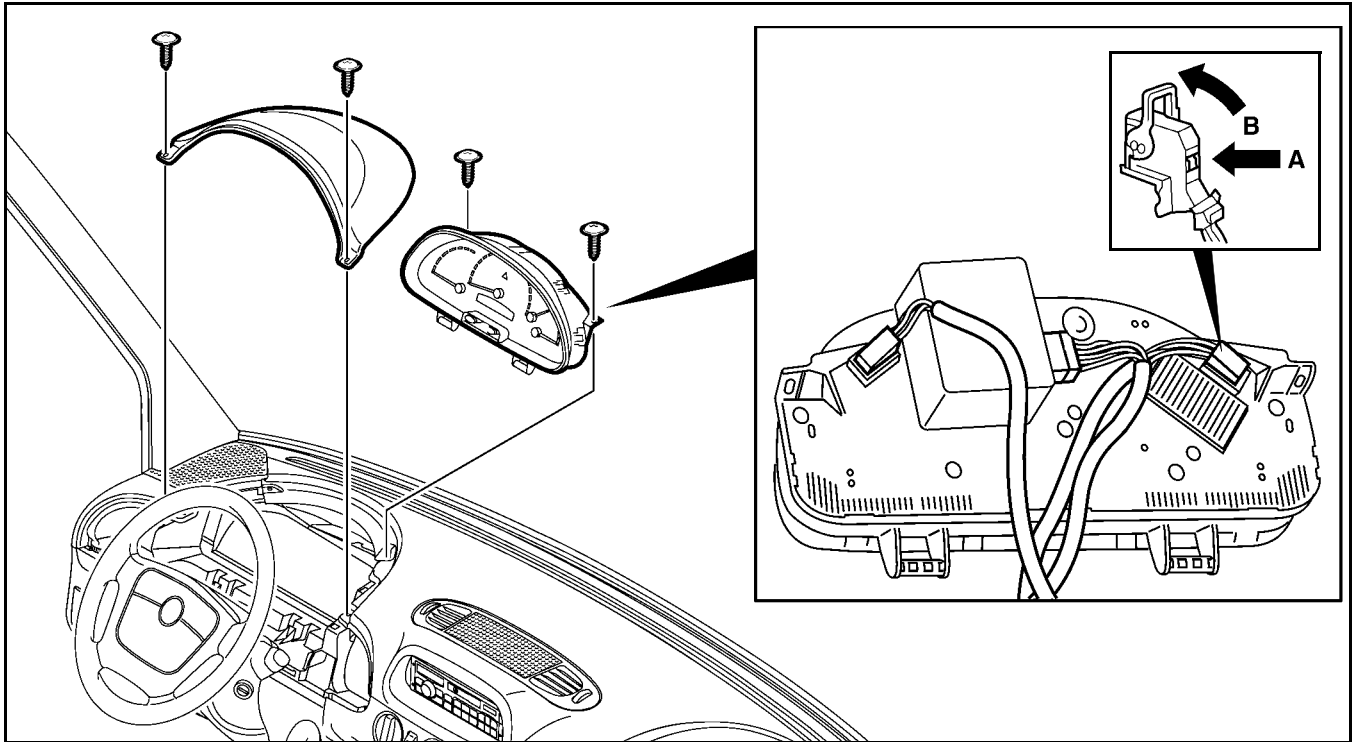


Figure 11 Instrument Cluster Removal

12. Locate Ground G203 behind the instrument cluster. You will need to run a separate wire from Ground G203 to the constant rpm switch. Select a brown wire from the terminal repair kit and calculate the length of wire required. Cut the wire to the proper length and remove one-half (1/2) inch of insulation. Insert a ring terminal to the bare wire end and crimp and solder the terminal. Remove nut from ground stud G203. Install the ring terminal on ground stud and tighten the ground stud nut.

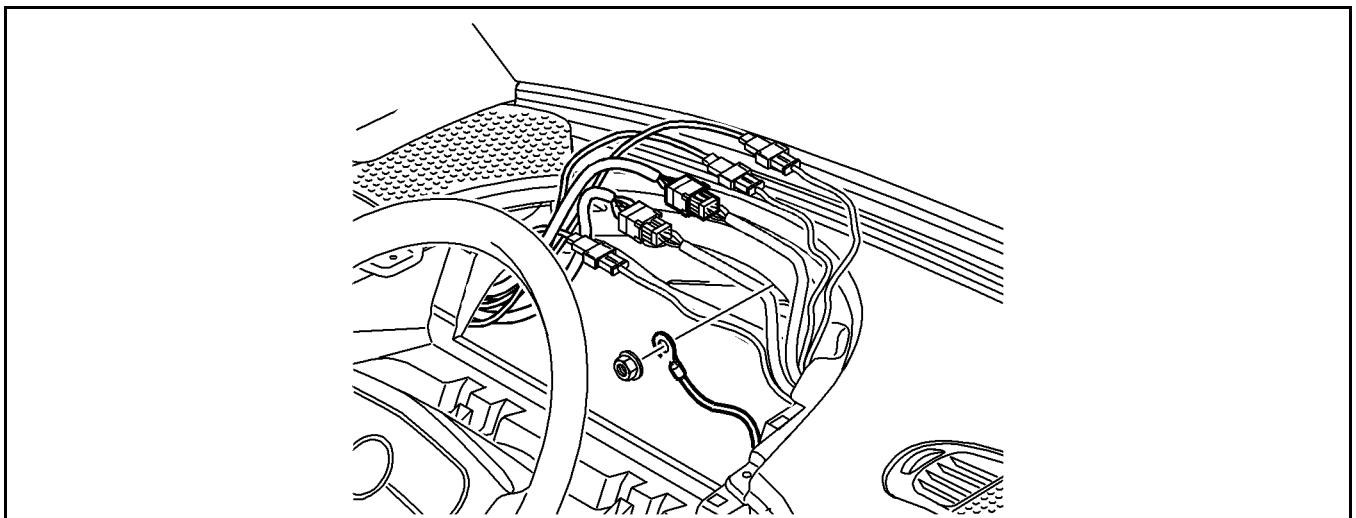


Figure 12 Location of Ground G203

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13. Route the ground wire to the center stack. Crimp an electrical terminal 05103882AA to the end of the wire (Figure 13).

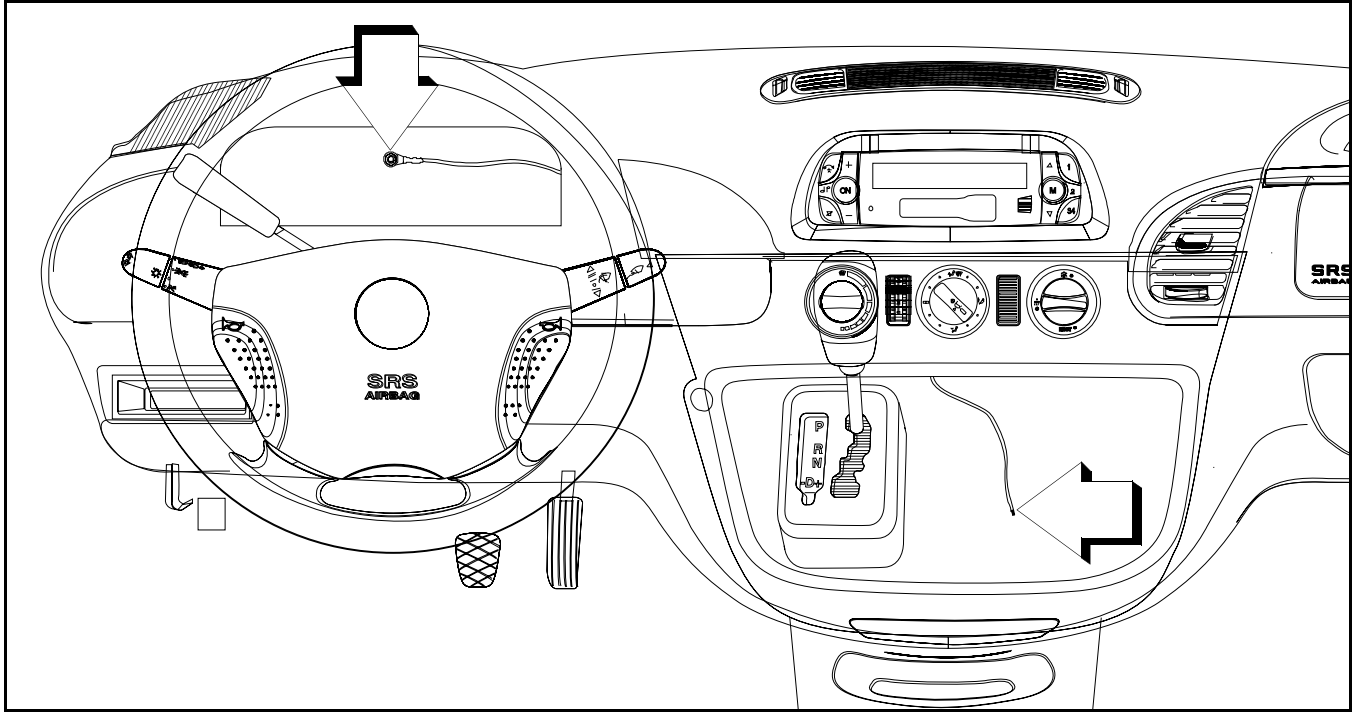


Figure 13 Routing of Ground Wire

14. Locate the engine control module (ECM) below the left knee protection next to the steering column (Figure 14). You will need to run a wire from the ECM to the constant rpm switch. Pull the ECM down at the connection side until it releases. Pull it forward and out of the mounting bracket.

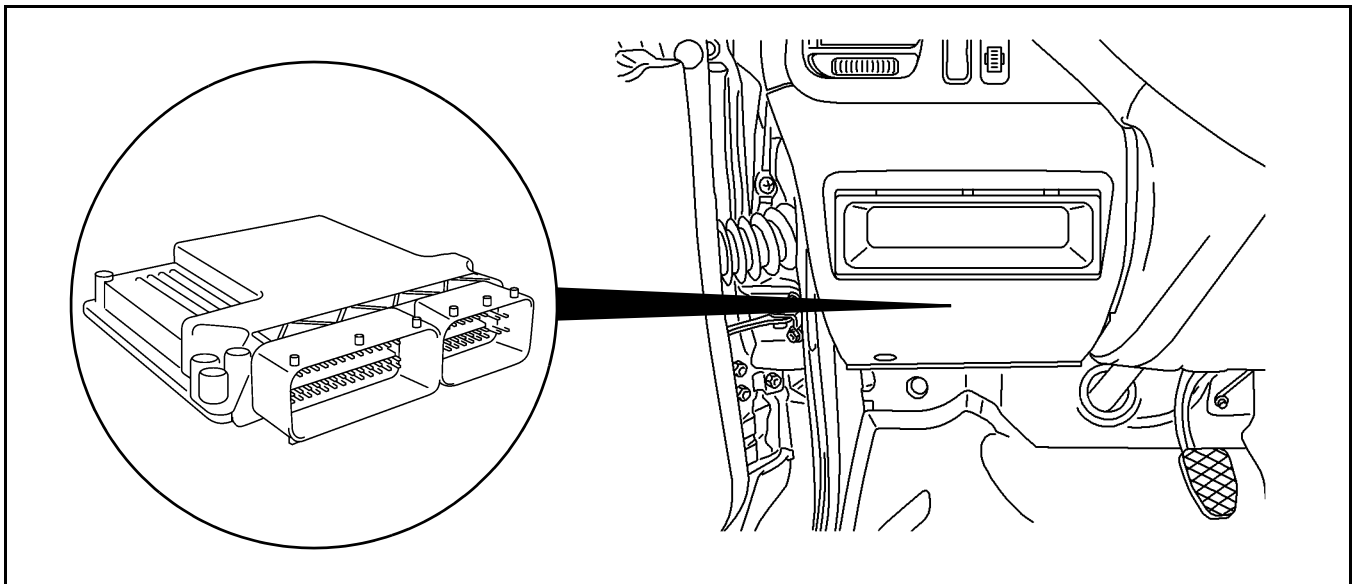


Figure 14 Location of the Engine Control Module (ECM)

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15. Remove the 58-pin plug-in connector (marked F) from the ECM. To remove the plug-in connector, pull the slide lock sideways to the end of its travel and lift the plug-in connector.

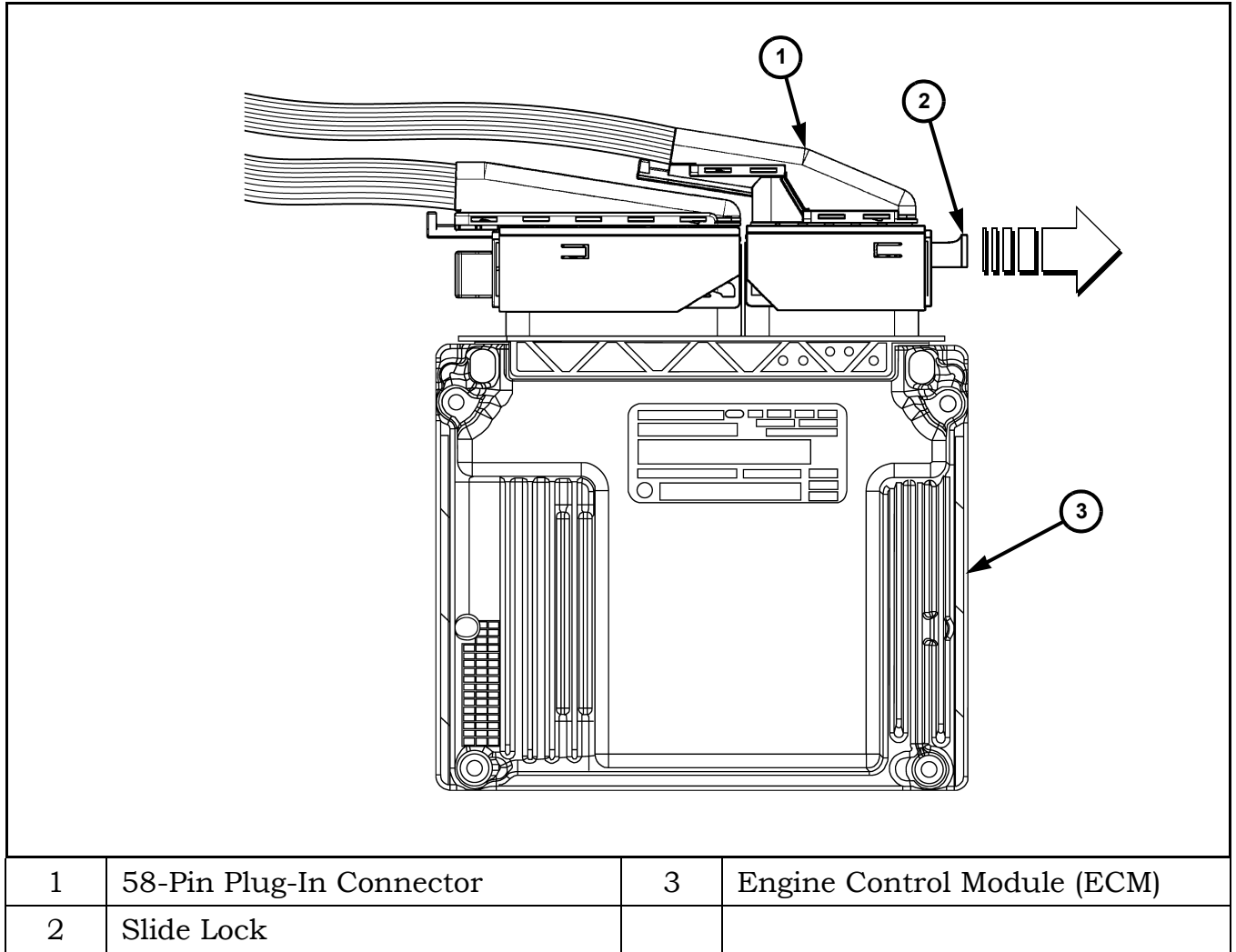


Figure 15 Vehicle Harness 58-Pin Plug-In Connector

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16. Carefully disassemble the plug-in connector to expose the wire insertion end of the connector. Remove the protective cap by inserting a wide blade screwdriver in the wedged area between the connector housing and protective cap (arrow). Alternating between both sides of the connector, gently twist on the screwdriver handle to separate the protective cap from the connector housing. Slide the protective cap away from the housing (Figure 16).

NOTE: If you require additional clearance for inserting the electrical wire with terminal, you may remove the electrical terminal holders. The electrical terminal holders are held in place with two locking pins. Carefully remove both locking pins with a small screwdriver and pull them out.

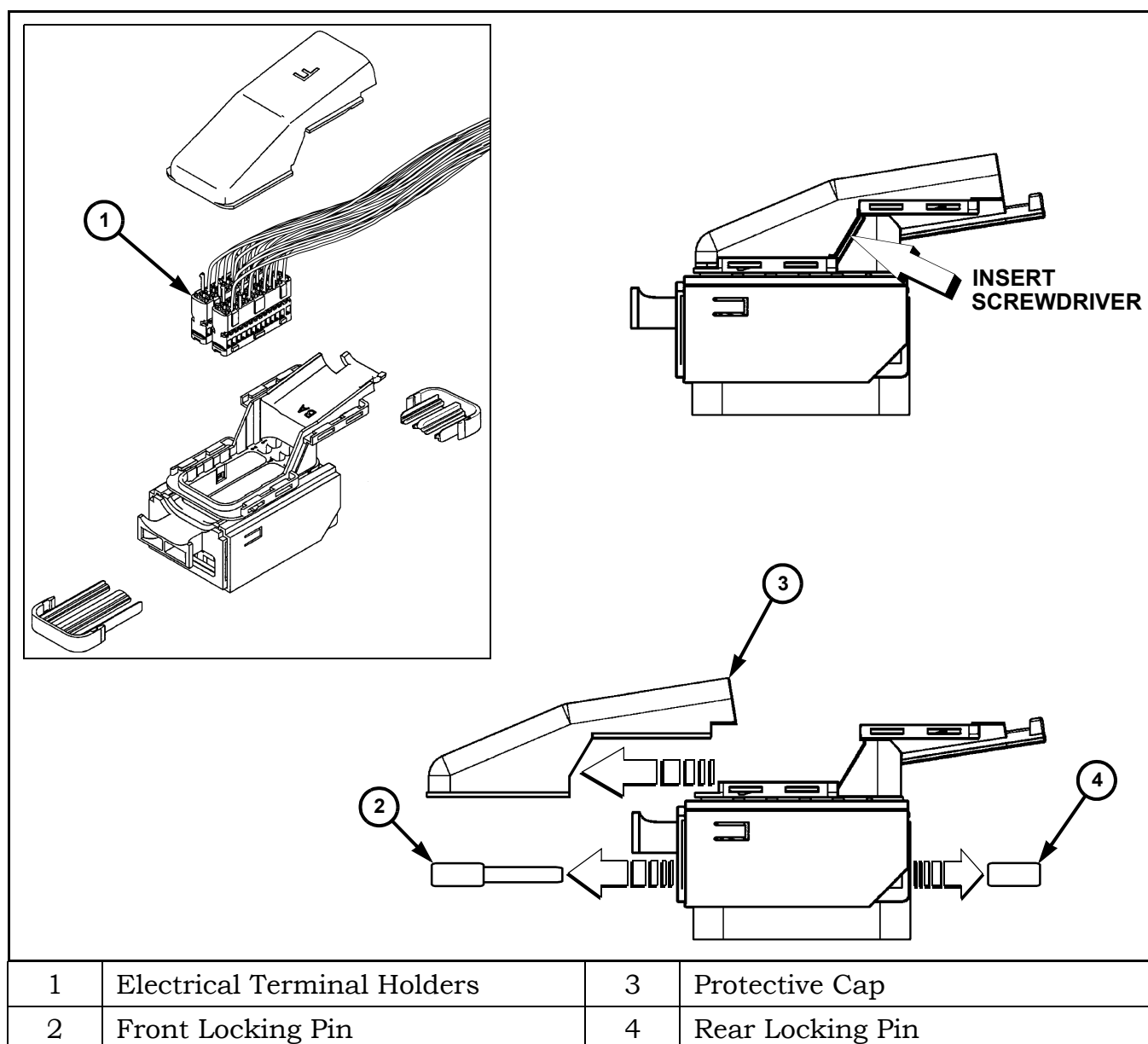


Figure 16 Vehicle Harness Connector Disassembly

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17. Select a brown wire from the terminal repair kit and calculate the length of wire required. Cut the wire to the proper length and remove one-half (1/2) inch of insulation. Attach a terminal, part 05103882AA, to the end of the wire.
18. Insert the end of the wire with terminal part 05161275AA into cavity # 8 of the 58-pin connector of the engine control module (ECM). Insert the wire until it clicks into place. Gently tug on the wire to make sure it is secure.

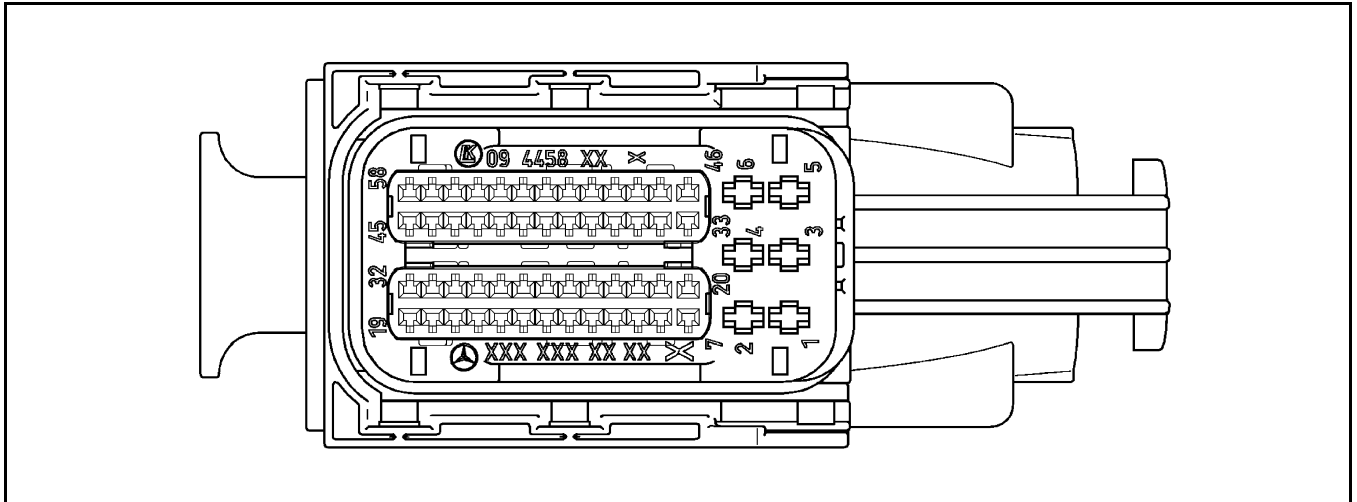


Figure 17 Vehicle Harness 58-Pin Connector Front View

19. Reassemble the 58-pin connector. Install the connector back to the engine control module (ECM) and push the module back into its mounting bracket. Ensure the ECM is properly held in place by means of the tensioning spring clips.

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20. Route the ECM wire to the center stack. Crimp a splice connector to the wire and add a wire, as shown on Figure 18. Apply heat shrink tubing to the splice.

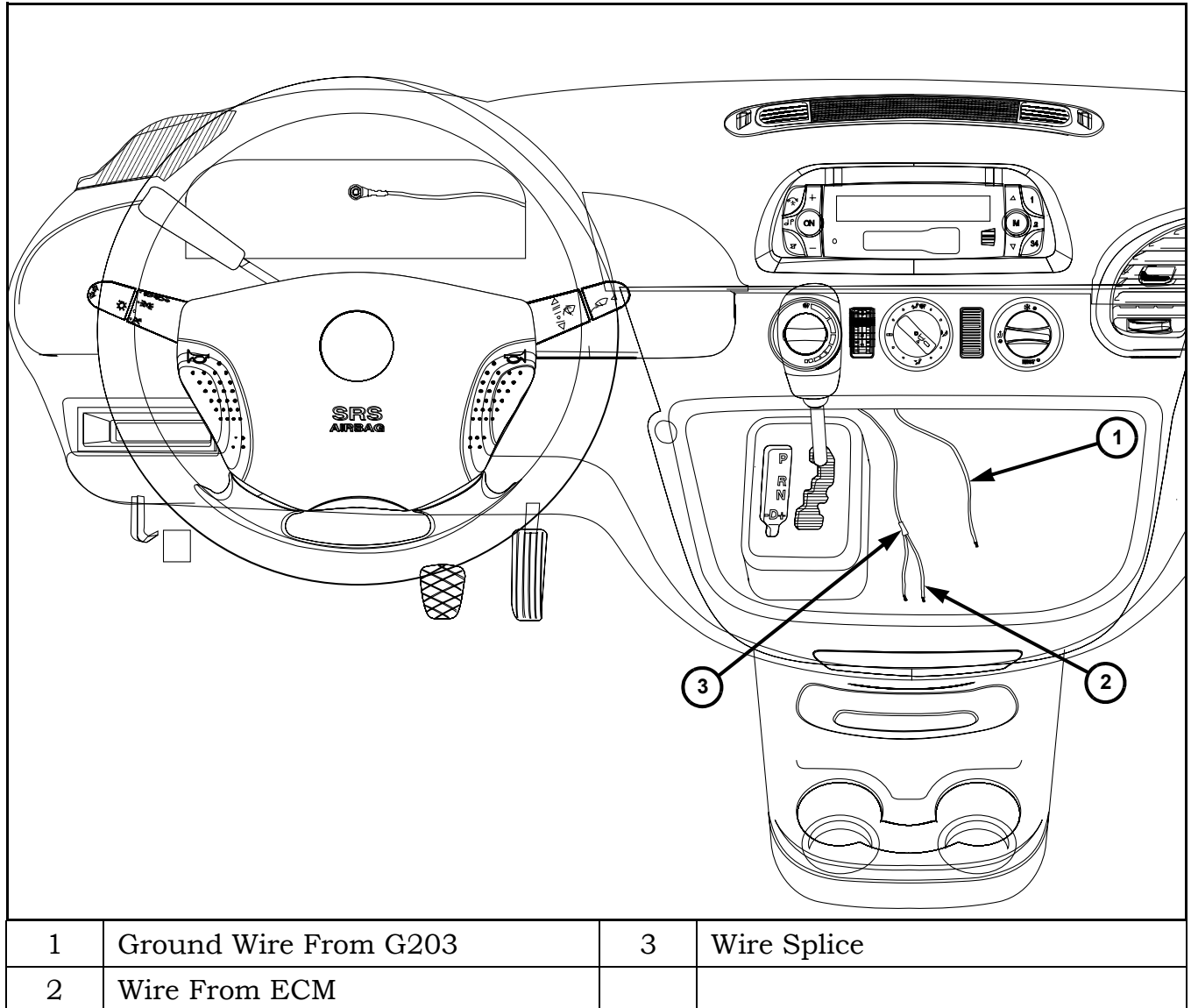
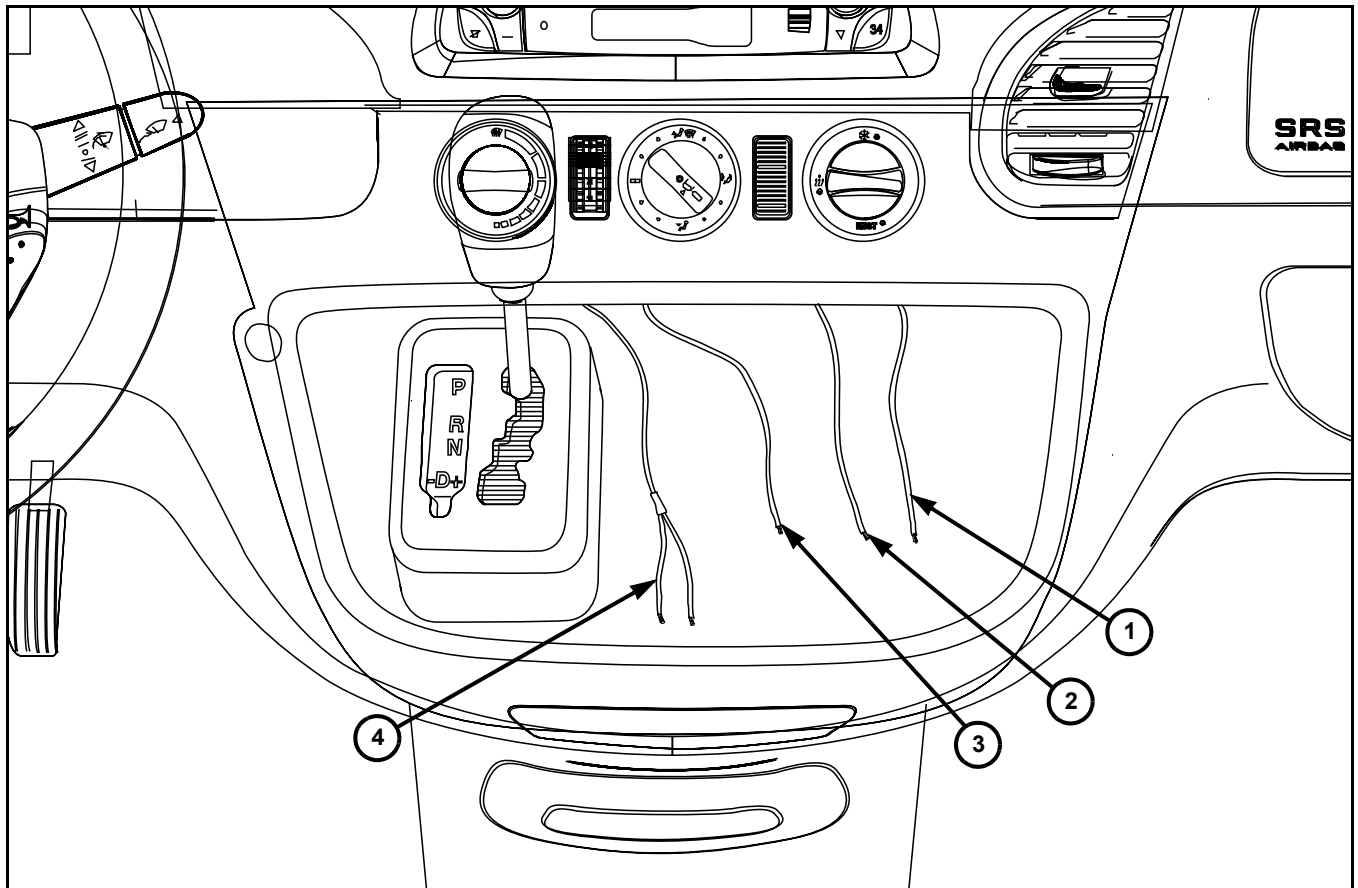


Figure 18 Wire Splice Location

21. Locate the ignition powered circuit splice (wire color) and dash illumination circuit splice (wire color) in the harness that runs behind the A/C control unit. Verify the circuits with a voltmeter. The ignition splice should have power when the ignition is switched on. The dash illumination circuit should have power when the dash illumination lights are turned on. You will need to splice into these circuits and run the wires to the center stack (Figure 19). Solder the splices and use heat shrink tubing.



1	Wire From Illumination Circuit	3	Wire From Ground G203
2	Wire From Ignition Power Circuit	4	Wire From ECM

Figure 19

22. Install electrical terminals to each wire. Insert the terminals into the constant rpm switch harness connector 05120633AA as follows: Ground wire to pin 7, one branch of the ECM wire to pin 3 and the other branch to pin 4. The illumination circuit wire to pin 1 and the ignition circuit power to pin 9. Insert the switch harness connector into the constant rpm switch.

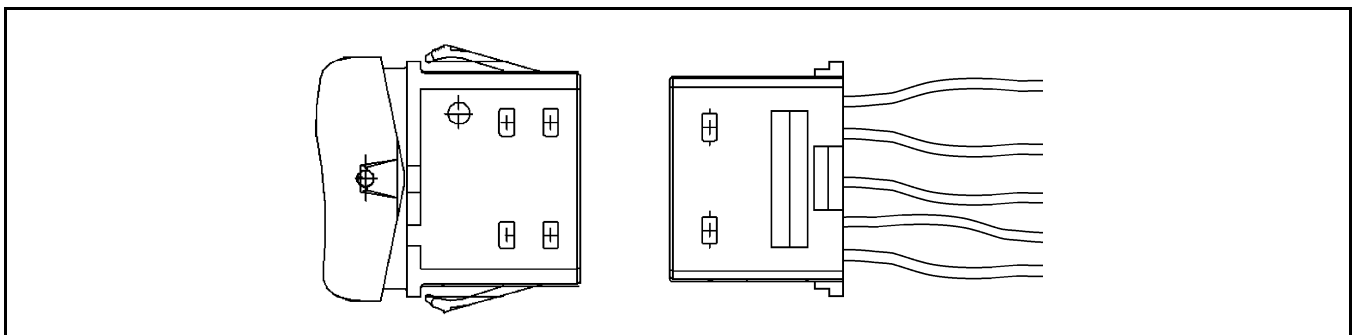


Figure 20 Wiring Diagram, Speed Control Circuit

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23. Verify the position of the wires with the schematic on Figure 21.

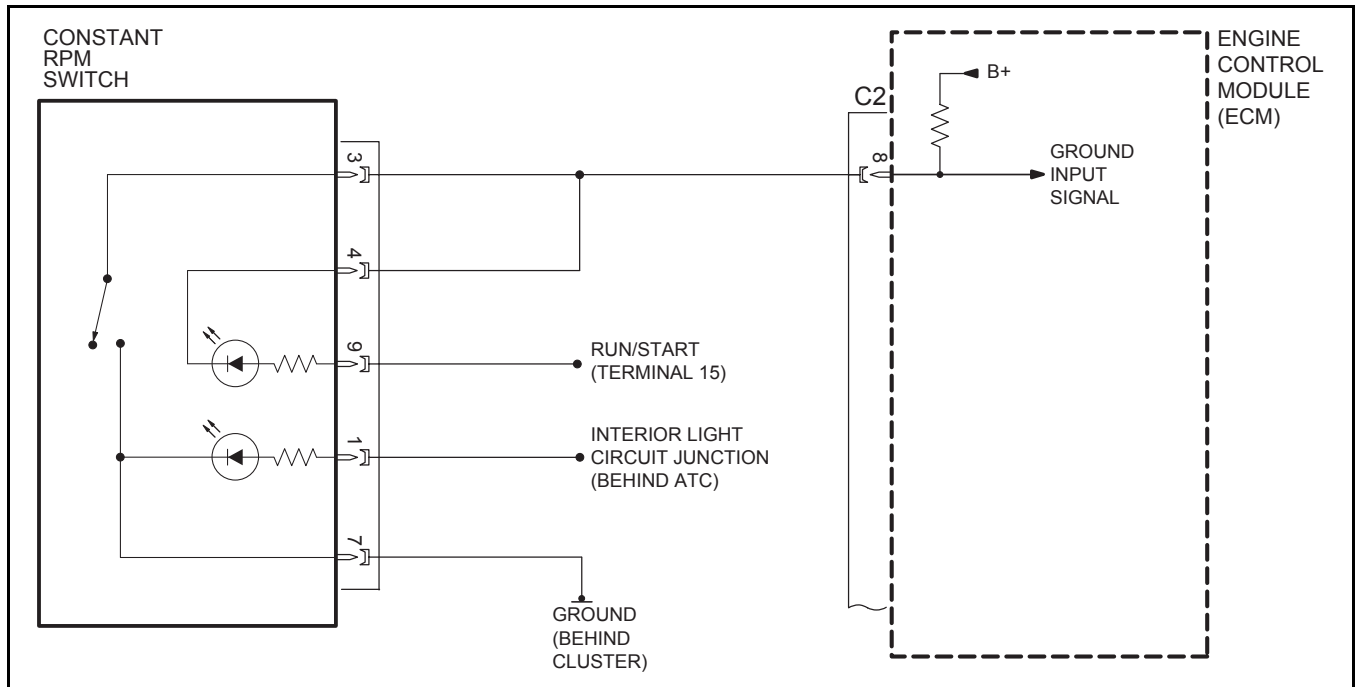


Figure 21 Constant RPM Switch Wiring Diagram

24. Reinstall the center stack cover.
25. Reconnect the battery and code the radio if necessary. Connect the diagnostic scan tool to the vehicle.

NOTE: The following steps are for changing the ECM version coding with the DRB III scan tool.

CHANGING THE ECM VERSION CODING WITH DRB III

1. Choose Engine in the System Select screen and Miscellaneous Functions in the Select Function screen (Figure 22).

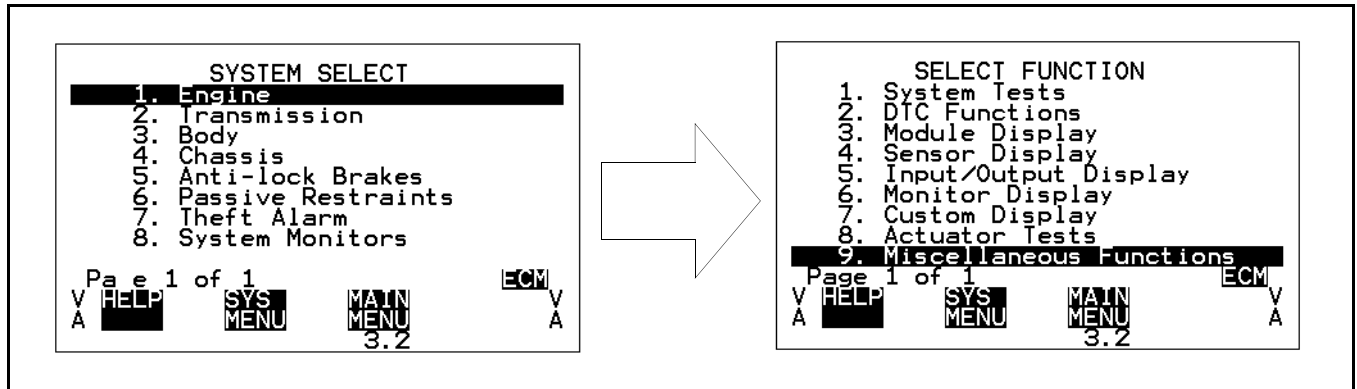


Figure 22 Selecting Engine and Miscellaneous Functions

2. Select Configuration in the Miscellaneous Functions screen. When asked, select ADR Installed (Figure 23).

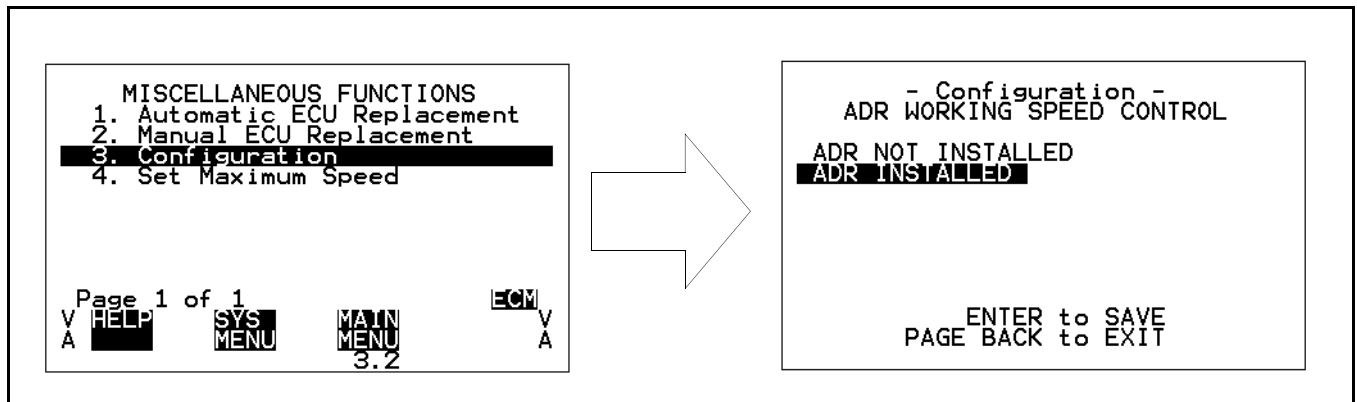


Figure 23 Selecting Configuration

