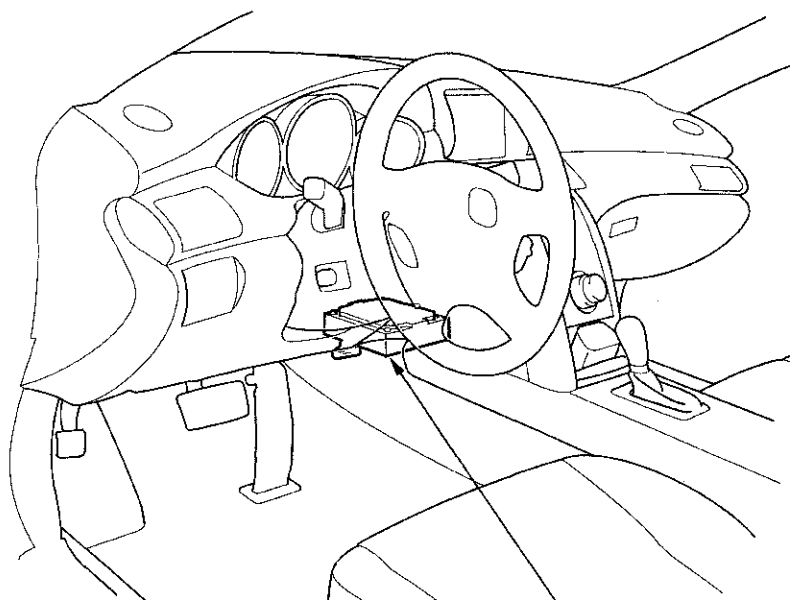
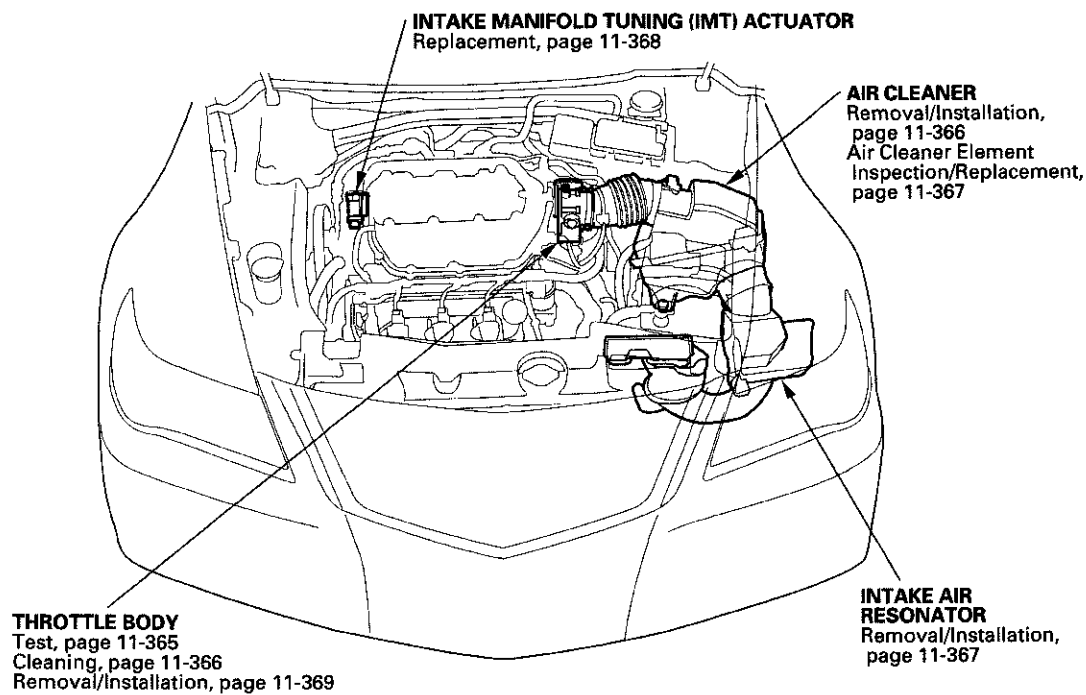


Intake Air System

Component Location Index



POWERTRAIN CONTROL MODULE (PCM)
Update, page 11-230
Substitution, page 11-7
Replacement, page 11-232



DTC Troubleshooting

DTC P1077: IMT Valve Stuck in High RPM Position

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle.
4. Make sure the IMT VALVE CMD is CLOSED in the DATA LIST with the HDS.

Is CLOSED indicated?

YES—Go to step 5.

NO—Go to step 29.

5. Check the IMT VALVE SW in the DATA LIST with the HDS.

Is OPEN indicated?

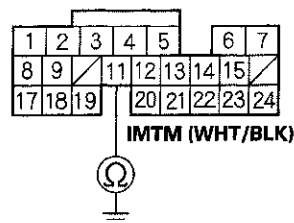
YES—Go to step 6.

NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the IMT actuator and the PCM. ■

6. Turn the ignition switch to LOCK (0).
 7. Disconnect the IMT actuator 5P connector.
 8. Turn the ignition switch to ON (II).
 9. Check the IMT VALVE SW in the DATA LIST with the HDS.
- Is CLOSED indicated?*
- YES**—Go to step 14.
- NO**—Go to step 10.
10. Turn the ignition switch to LOCK (0).
 11. Jump the SCS line with the HDS.
 12. Disconnect PCM connector B (24P).

13. Check for continuity between PCM connector terminal B11 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

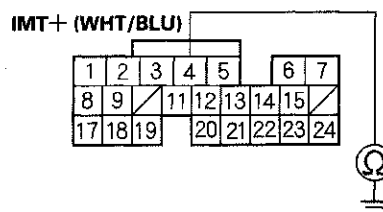
Is there continuity?

YES—Repair short in the wire between the PCM (B11) and the IMT actuator, then go to step 25.

NO—Go to step 31.

14. Turn the ignition switch to LOCK (0).
15. Jump the SCS line with the HDS.
16. Disconnect PCM connector B (24P).
17. Check for continuity between PCM connector terminal B4 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B4) and the IMT actuator, then go to step 25.

NO—Go to step 18.

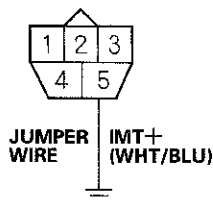
(cont'd)

Intake Air System

DTC Troubleshooting (cont'd)

18. Connect IMT actuator 5P connector terminal No. 5 to body ground with a jumper wire.

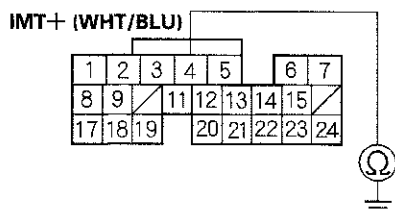
IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals

19. Check for continuity between PCM connector terminal B4 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

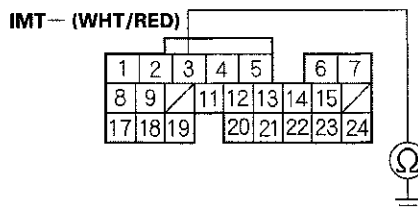
Is there continuity?

YES—Go to step 20.

NO—Repair open in the wire between the PCM (B4) and the IMT actuator, then go to step 25.

20. Check for continuity between PCM connector terminal B3 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

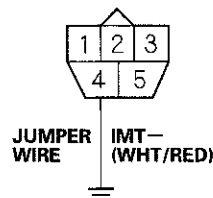
Is there continuity?

YES—Repair short in the wire between the PCM (B3) and the IMT actuator, then go to step 25.

NO—Go to step 21.

21. Connect IMT actuator 5P connector terminal No. 4 to body ground with a jumper wire.

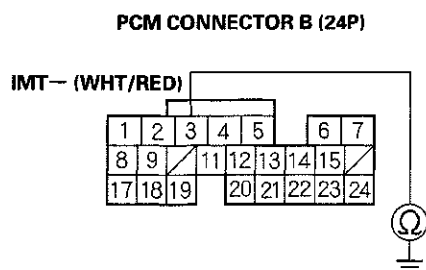
IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals



22. Check for continuity between PCM connector terminal B3 and body ground.



Is there continuity?

YES—Go to step 23.

NO—Repair open in the wire between the PCM (B3) and the IMT actuator, then go to step 25.

23. Remove the IMT actuator (see page 11-368).

24. Move the IMT valve by hand.

Does it move smoothly?

YES—Substitute a known-good IMT actuator (see page 11-368), then go to step 25 and recheck. If DTC P1077 is not indicated, replace the IMT actuator (see page 11-368), then go to step 25. If DTC P1077 is indicated, go to step 33.

NO—Remove the engine cover (see step 2 on page 9-3), and repair the stuck valve. If needed, replace the intake manifold (see page 9-2), then go to step 25.

25. Reconnect all connectors.
26. Turn the ignition switch to ON (II).
27. Reset the PCM with the HDS.

28. Do the PCM idle learn procedure (see page 11-313).

29. Check for Pending or Confirmed DTCs with the HDS.

Is DTC P1077 indicated?

YES—Check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

NO—Go to step 30.

30. Monitor the OBD STATUS for DTC P1077 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-232). If any other Pending or Confirmed DTCs were indicated in step 29, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

31. Turn the ignition switch to LOCK (0).
32. Reconnect all connectors.
33. Update the PCM if it does not have the latest software (see page 11-230), or substitute a known-good PCM (see page 11-7).

(cont'd)

Intake Air System

DTC Troubleshooting (cont'd)

34. Check for Pending or Confirmed DTCs with the HDS.

Is DTC P1077 indicated?

YES—Check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

NO—Go to step 35.

35. Monitor the OBD STATUS for DTC P1077 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-232). If any other Pending or Confirmed DTCs were indicated in step 34, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P1078: IMT Valve Stuck in Low RPM Position

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed above 4,000 rpm.
4. Make sure the IMT VALVE CMD is OPEN in the DATA LIST with the HDS.
5. Check the IMT VALVE SW in the DATA LIST with the HDS.

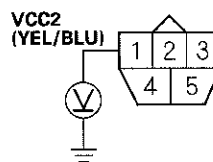
Is CLOSED indicated?

YES—Go to step 6.

NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the IMT actuator and the PCM. ■

6. Let the engine idle, then turn the ignition switch to LOCK (0).
7. Disconnect the IMT actuator 5P connector.
8. Turn the ignition switch to ON (II).
9. Measure the voltage between IMT actuator 5P connector terminal No. 1 and body ground.

IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals



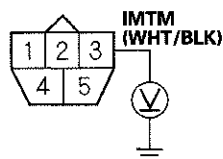
Is there about 5 V?

YES—Go to step 10.

NO—Repair open in the wire between the PCM (C14) and the IMT actuator, then go to step 27.

10. Measure the voltage between IMT actuator 5P connector terminal No. 3 and body ground.

IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals

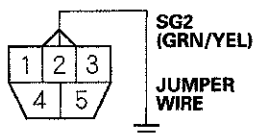
Is there about 5 V?

YES—Go to step 11.

NO—Go to step 16.

11. Turn the ignition switch to LOCK (0).
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (22P).
14. Connect IMT actuator 5P connector terminal No. 2 to body ground with a jumper wire.

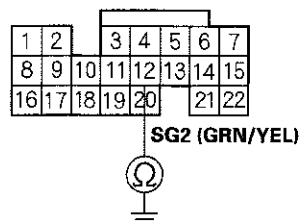
IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals

15. Check for continuity between PCM connector terminal C12 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

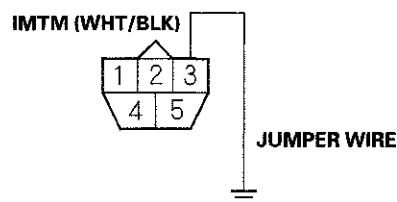
Is there continuity?

YES—Go to step 21.

NO—Repair open in the wire between the PCM (C12) and the IMT actuator, then go to step 29.

16. Turn the ignition switch to LOCK (0).
17. Jump the SCS line with the HDS.
18. Disconnect PCM connector B (24P).
19. Connect IMT actuator 5P connector terminal No. 3 to body ground with a jumper wire.

IMT ACTUATOR 5P CONNECTOR



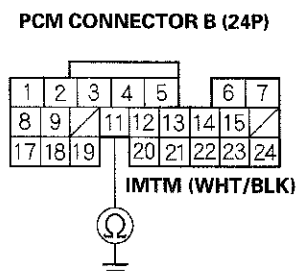
Wire side of female terminals

(cont'd)

Intake Air System

DTC Troubleshooting (cont'd)

20. Check for continuity between PCM connector terminal B11 and body ground.



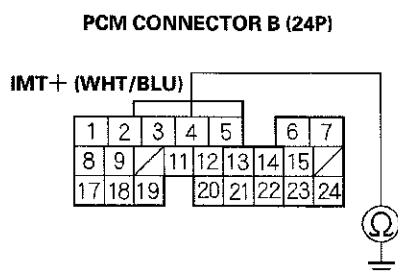
Wire side of female terminals

Is there continuity?

YES—Go to step 36.

NO—Repair open in the wire between the PCM (B11) and the IMT actuator, then go to step 27.

21. Check for continuity between PCM connector terminal B4 and body ground.



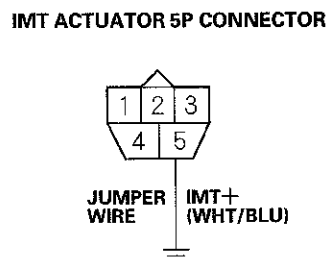
Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B4) and the IMT actuator, then go to step 29.

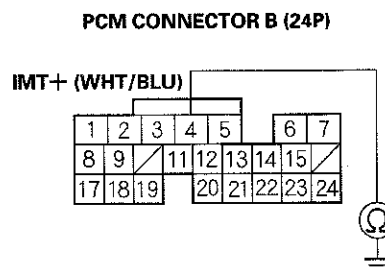
NO—Go to step 22.

22. Connect IMT actuator 5P connector terminal No. 5 to body ground with a jumper wire.



Wire side of female terminals

23. Check for continuity between PCM connector terminal B4 and body ground.



Wire side of female terminals

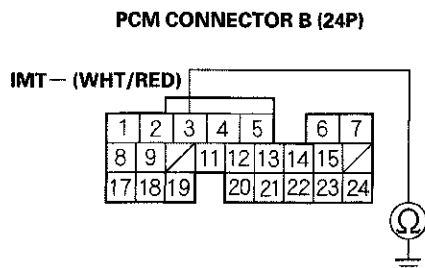
Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between the PCM (B4) and the IMT actuator, then go to step 29.



24. Check for continuity between PCM connector terminal B3 and body ground.



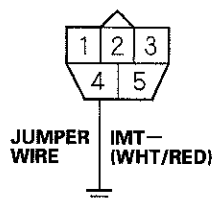
Is there continuity?

YES—Repair short in the wire between the PCM (B3) and the IMT actuator, then go to step 29.

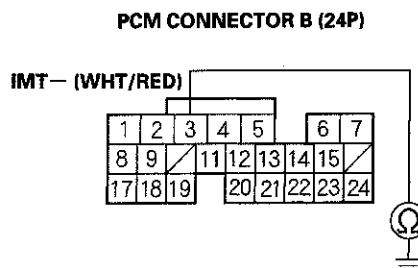
NO—Go to step 25.

25. Connect IMT actuator 5P connector terminal No. 4 to body ground with a jumper wire.

IMT ACTUATOR 5P CONNECTOR



26. Check for continuity between PCM connector terminal B3 and body ground.



Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the PCM (B3) and the IMT actuator, go to step 29.

27. Remove the IMT actuator (see page 11-368).

28. Move the IMT valve by hand.

Does it move smoothly?

YES—Substitute a known-good IMT actuator (see page 11-368), then go to step 29 and recheck. If DTC P1078 is not indicated, replace the IMT actuator (see page 11-368), then go to step 29. If DTC P1078 is indicated, go to step 37.

NO—Remove the engine cover (see step 2 on page 9-3), and repair the stuck valve. If needed, replace the intake manifold (see page 9-2), then go to step 29.

29. Reconnect all connectors.

30. Turn the ignition switch to ON (II).

31. Reset the PCM with the HDS.

(cont'd)

Intake Air System

DTC Troubleshooting (cont'd)

32. Do the PCM idle learn procedure (see page 11-313).

33. Start the engine. Hold the engine speed at 4,000 rpm for 10 seconds, then let it idle.

34. Check for Pending or Confirmed DTCs with the HDS.

Is DTC P1078 indicated?

YES—Check for poor connections or loose terminals at the IMT actuator and the PCM, then go to step 1.

NO—Go to step 35.

35. Monitor the OBD STATUS for DTC P1078 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Pending or Confirmed DTCs were indicated in step 34, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

36. Reconnect all connectors.

37. Update the PCM if it does not have the latest software (see page 11-230), or substitute a known-good PCM (see page 11-7).

38. Start the engine, and hold the engine speed at 4,000 rpm for 10 seconds, then let it idle.

39. Check for Pending or Confirmed DTCs with the HDS.

Is DTC P1078 indicated?

YES—Check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 38. If the PCM was substituted, go to step 1.

NO—Go to step 40.

40. Monitor the OBD STATUS for DTC P1078 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-232). If any other Pending or Confirmed DTCs were indicated in step 39, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 38. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 38.

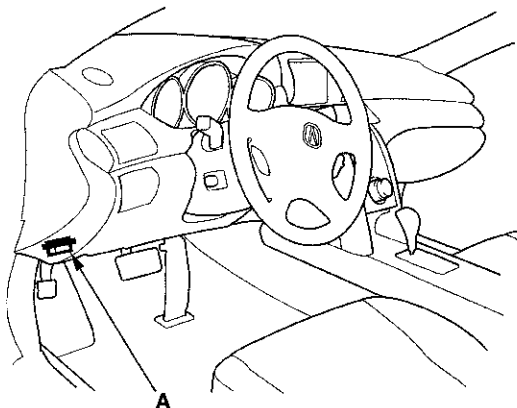


Throttle Body Test

Carbon Accumulation Check

NOTE: If the malfunction indicator lamp (MIL) has been reported on, check for diagnostic trouble codes (DTCs).

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

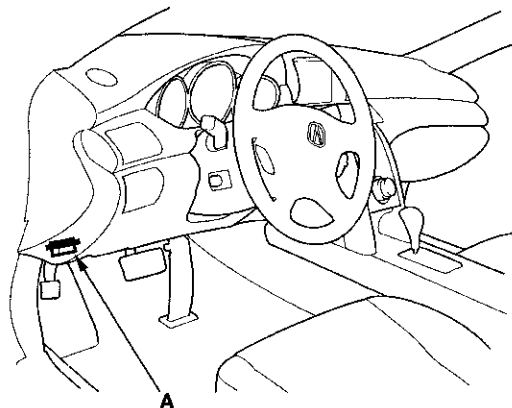


2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-211).
4. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle.
5. Check the REL TP SENSOR in the DATA LIST with the HDS. The reading should be below 2.46 deg. If it is not, clean the throttle body (see page 11-366).

Throttle Position Learning Check

NOTE: If the malfunction indicator lamp (MIL) has been reported on, check for diagnostic trouble codes (DTCs).

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-211).
4. Select the INSPECTION MENU with the HDS.
5. Do the TP LEARNING CHECK in the ETCS TEST. If needed, clean the throttle body (see page 11-366).

Intake Air System

Throttle Body Cleaning

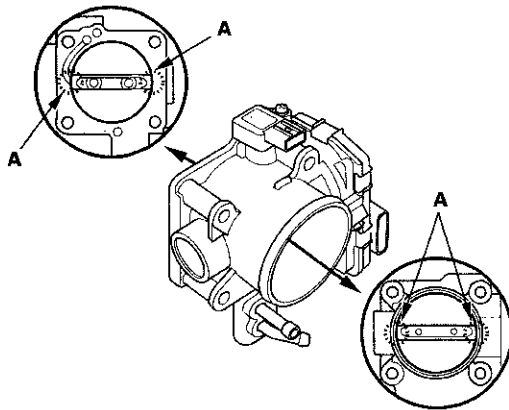
⚠ CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is in ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

1. Check for damage to the air cleaner element. If the air cleaner element is damaged, replace it (see page 11-367).
2. Remove the throttle body (see page 11-369).
3. Clean off the carbon from the throttle valve and inside the throttle body with a paper towel soaked in throttle plate cleaner.

NOTE:

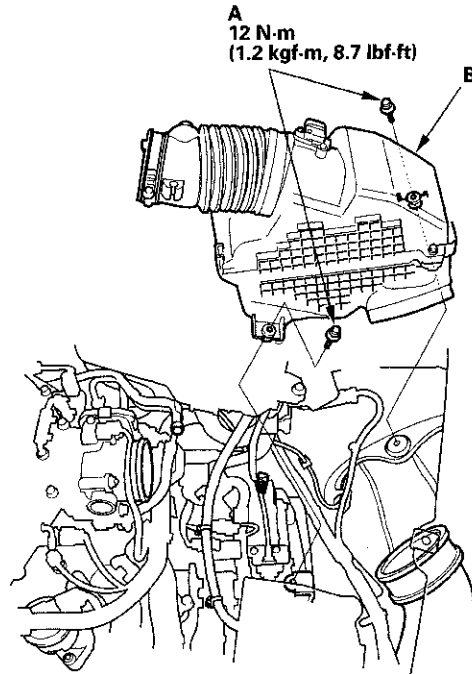
- Remove the throttle body to clean it.
- Be careful not to pinch your fingers.
- To avoid removing the molybdenum coating, do not clean the bearing area of the throttle shaft (A).
- Do not spray throttle plate cleaner directly on the throttle body.
- Use Acura genuine throttle plate cleaner.



4. Install the throttle body (see page 11-369).
5. Reset the PCM with the HDS.
6. Turn the ignition switch to ON (II), and wait 2 seconds.
7. Do the PCM idle learn procedure (see page 11-313).

Air Cleaner Removal/Installation

1. Remove the battery trim (see step 2 on page 20-162), and the left upper fender trim (see step 3 on page 20-163).
2. Disconnect the MAF sensor/IAT sensor connector.
3. Remove the bolts (A) and the air cleaner (B).

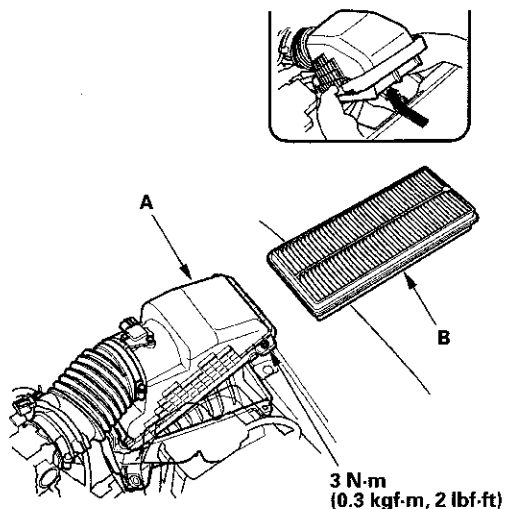


4. Install the parts in the reverse order of removal.



Air Cleaner Element Inspection/Replacement

1. Remove the battery trim (see step 2 on page 20-162), and the left upper fender trim (see step 3 on page 20-163).
2. Open the air cleaner housing cover (A).



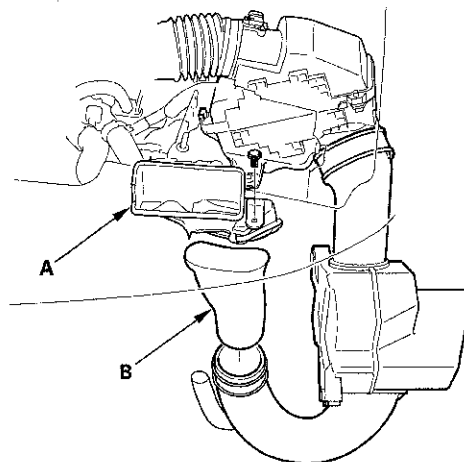
3. Remove the air cleaner element (B) from the air cleaner housing cover.
4. Check the air cleaner element for damage or clogging. If it is damaged or clogged, replace it.

NOTE: Do not use compressed air to clean the air cleaner element.

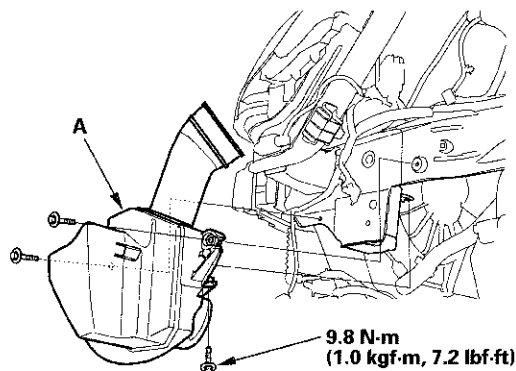
5. Clean and remove any debris from inside the air cleaner housing.
6. Install the parts in the reverse order of removal.
 - If you did not replace the air cleaner element, this procedure is complete.
 - If the maintenance minder required air cleaner element replacement, reset the maintenance minder (see page 3-4).
 - If you replaced the air cleaner element, reset the PCM (see page 11-4), and do the PCM idle learn procedure (see page 11-313).
 - If the idle speed fluctuates, do the idle speed inspection (see page 11-312).

Intake Air Resonator Removal/Installation

1. Remove the front bumper (see page 20-149).
2. Remove the air cleaner (see page 11-366).
3. Remove the intake air duct (A) and the tube (B).



4. Remove the bolts and the intake air resonator (A).

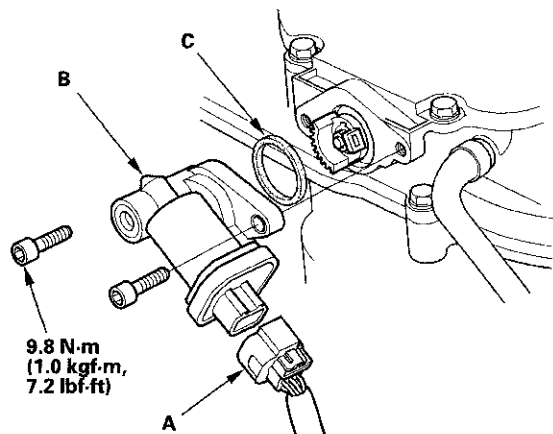


5. Install the parts in the reverse order of removal.

Intake Air System

IMT Actuator Replacement

1. Remove the engine cover (see step 2 on page 9-3).
2. Disconnect the IMT actuator 5P connector (A).



3. Remove the bolts and the IMT actuator (B).
4. Install the parts in the reverse order of removal with a new O-ring (C).



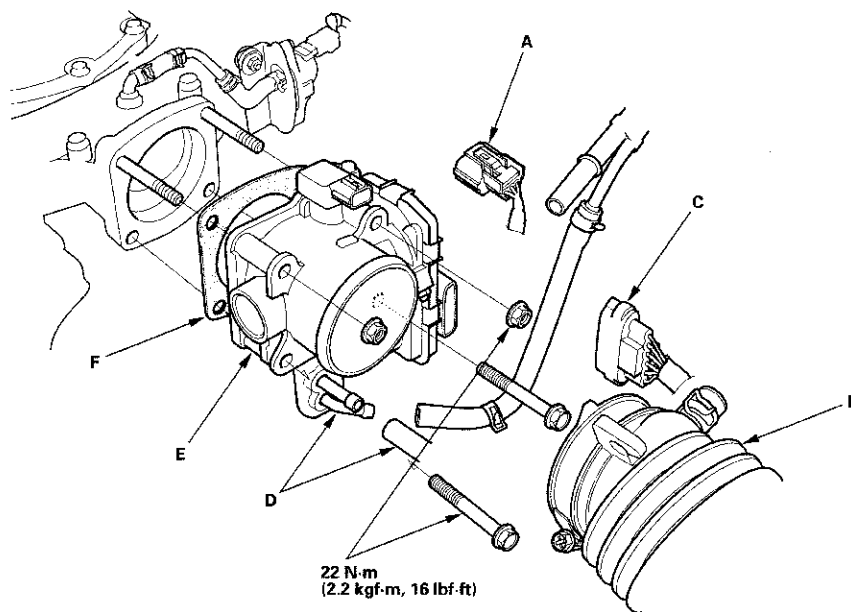
Throttle Body Removal/Installation

⚠ CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: If you are replacing the throttle body, begin at step 1. If you are removing the throttle body temporarily, begin at step 4.

1. Connect the HDS while the engine is stopped.
2. Select the INSPECTION MENU with the HDS.
3. Do the TP POSITION CHECK in the ETCS TEST.
4. Turn the ignition switch to ON (II).
5. Disconnect the MAP sensor connector (A).



6. Remove the intake air duct (B).
7. Disconnect the throttle body connector (C).
8. Disconnect and plug the water bypass hoses (D).
9. Remove the throttle body (E).
10. Install the parts in the reverse order of removal with a new gasket (F), then do this:
 - Refill the radiator with engine coolant (see page 10-6).
 - Do the PCM idle learn procedure (see page 11-313).