

# Computers and Control Systems: Diagnostic Trouble Code Tests and Associated Procedures

## P2263

### DTC P2263: Turbocharger Boost System Performance Problem

**NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information.
- If DTC P0229 is stored at the same time as DTC P2263, troubleshoot DTC P0229 first, then recheck for DTC P2263.

1. Inspect the air cleaner element.

Is the air cleaner element clogged?

**YES** - Replace the air cleaner element, then go to step 26.

**NO** - Go to step 2.

2. Check for leak or damage at these parts.

- Intake air duct (turbocharger outlet pipe)
- Intake air duct (charger air cooler inlet hose)
- Intake air duct (charger air cooler outlet tube)

Are the parts OK?

**YES** - Go to step 3.

**NO** - Repair or replace the damaged parts, then go to step 26.

3. Turn the ignition switch ON (II).

4. Check the TURBOCHARGER BOOST SENSOR and BARO SENSOR in the DATA LIST with the HDS.

Does the value of TURBOCHARGER BOOST SENSOR and BARO SENSOR differ **6.8 kPa (2.0 in.Hg, 50 mmHg)** or more?

**YES** - Replace the turbocharger boost sensor, then go to step 26.

**NO** - Go to step 5.

5. Clear the DTC with the HDS.

6. Select TURBOCHARGER BYPASS CONTROL SYSTEM TEST in the INSPECTION MENU with the HDS.

Is the result OK?

**YES** - Go to step 12.

**NO** - Go to step 7.

7. Select TURBOCHARGER BYPASS CONTROL SOLENOID VALVE ON in the INSPECTION MENU with the HDS.

Do you hear the solenoid operating?

**YES** - Go to step 8.

**NO** - Replace the turbocharger bypass control solenoid valve, then go to step 26.

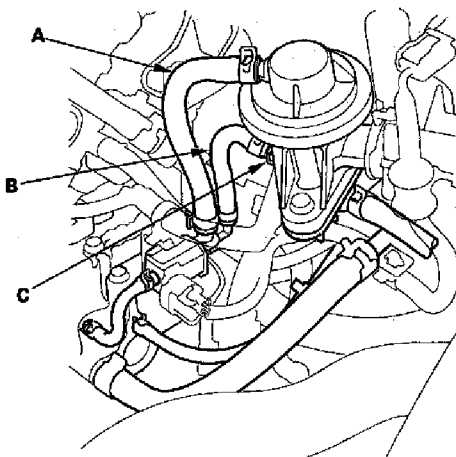
8. Turn the ignition switch OFF.

9. Remove the charge air cooler cover.

10. Check for poor connections, blockage, or damage at these parts.

- Hose (A) between the turbocharger bypass control solenoid valve and the turbocharger bypass control valve
- Hose (B) between the turbocharger bypass control solenoid valve and the turbocharger bypass control valve
- Turbocharger bypass control valve base port (C)





Are the parts OK?

**YES** - Go to step 11.

**NO** - Repair or replace any damaged parts, then go to step 26.

11. Inspect the turbocharger bypass control solenoid valve.

Is the solenoid valve OK?

**YES** - Inspect the turbocharger bypass control valve. If the turbocharger bypass control valve is faulty, replace the turbocharger bypass control valve, then go to step 26. If the turbocharger bypass control valve is OK, go to step 12.

**NO** - Replace the turbocharger bypass control solenoid valve, then go to step 26.

12. Select the TURBOCHARGER WASTEGATE CONTROL SYSTEM TEST in the INSPECTION MENU with the HDS.

Is the result OK?

**YES** - Go to step 18.

**NO** - Go to step 13.

13. Select the TURBOCHARGER WASTEGATE CONTROL SOLENOID VALVE ON in the INSPECTION MENU with the HDS.

Do you hear the solenoid operating?

**YES** - Go to step 14.

**NO** - Replace the turbocharger wastegate control solenoid valve, then go to step 26.

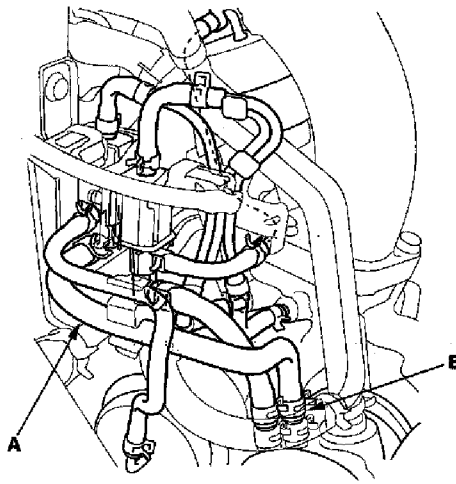
14. Turn the ignition switch OFF.

15. Remove the charge air cooler.

16. Check for blockage or clogging at these parts.

- Hose (A) between the turbocharger wastegate control solenoid valve and Intake air duct (turbocharger inlet connecting tube)
- Intake air duct (turbocharger inlet connecting tube) port (B)





Are the parts OK?

**YES** - Go to step 17.

**NO** - Repair or replace any damaged parts, then go to step 26.

17. Inspect the turbocharger wastegate control solenoid valve.

Is the solenoid valve OK?

**YES** - Check the turbocharger, and turbocharger wastegate control actuator. If the turbocharger or the turbocharger wastegate control actuator is faulty, replace the faulty parts, then go to step 26. If the turbocharger and the turbocharger wastegate actuator are OK, go to step 18.

**NO** - Replace the turbocharger wastegate control solenoid valve, then go to step 26.

18. Clear the DTC with the HDS.

19. Select the TURBOCHARGER BOOST CONTROL SYSTEM TEST in the INSPECTION MENU with the HDS.

Is the result OK?

**YES** - Go to step 20.

**NO** - Go to step 21.

20. Check for clogging or damaged in these parts.

- Turbocharger.
- Warm up TWC
- Under-floor TWC
- Exhaust pipe

Are the parts OK?

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

**NO** - Repair or replace any damaged parts, then go to step 26.

21. Select TURBOCHARGER BOOST CONTROL SOLENOID VALVE ON in the INSPECTION MENU with the HDS.

Do you hear the solenoid operating?

**YES** - Go to step 22.

**NO** - Replace the turbocharger boost control solenoid valve, then go to step 26.

22. Turn the ignition switch OFF.

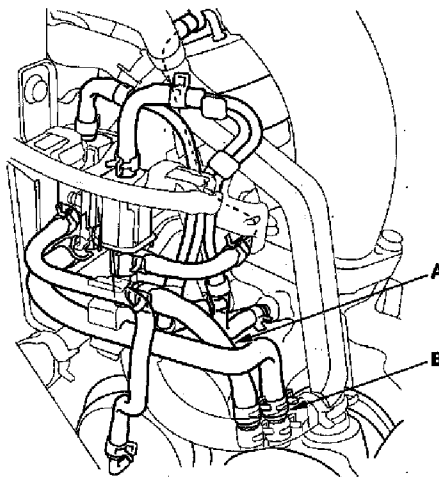
23. Remove the charge air cooler.

24. Check for blockage or clogging at these parts.

- Hose (A) between the turbocharger boost control solenoid valve and intake air duct (turbocharger inlet connecting tube)



- Intake air duct (turbocharger inlet connecting tube) port (B)



\*: This view is from the rear of the engine compartment.

Are the parts OK?

**YES** - Go to step 25.

**NO** - Repair or replace any damaged parts, then go to step 26.

25. Inspect the turbocharger boost control solenoid valve.

Is the solenoid valve OK?

**YES** - Check the turbocharger, and turbocharger boost control actuator. Replace the turbocharger or turbocharger boost control actuator if they are faulty, then go to step 26.

**NO** - Replace the turbocharger boost control solenoid valve, then go to step 26.

26. Reinstall all parts.  
 27. Turn the ignition switch ON (II).  
 28. Reset the PCM with the HDS.  
 29. Do the PCM idle learn procedure.  
 30. Start the engine. Hold the engine speed at **3,000 rpm** without load (in Park or neutral) until the radiator fan comes on, then let it idle.  
 31. Test-drive under these conditions:

- Engine coolant temperature (ECT SENSOR 1) above **158 °F (70 °C)**
- Engine speed above **1,500 rpm**
- Accelerate for **2 seconds** or more (under half throttle) at least 10 times

32. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2263 indicated?

**YES** - Check the turbocharger boost sensor, the turbocharger bypass control solenoid valve, the turbocharger wastegate control solenoid valve, the turbocharger boost control solenoid valve, and its connecting hose and port, then go to step 1.

**NO** - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

