Automotive Technology 6th Edition Chapter 90 - Scan Tools and Engine Performance Diagnosis Chapter 90
Name
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.
1) Explain the procedure to follow when diagnosing a vehicle with stored DTCs using a scan tool.
2) Explain why a bulletin search should be performed after stored DTCs are retrieved.
3) Explain the difference between a type A and type B OBD-II diagnostic trouble code.
4) Discuss what the PCM does during a drive cycle to test emissions-related components.
5) List three things that should be checked as part of a thorough visual inspection.

Answer Key

Testname: SHORT 90

1) Using a scan tool, check the ECT equals IAT to KOED and look carefully at all major sensors and compare the readings to the normal reading that would be accepted.

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- 2) Many TSBs refer to problems that could have certain diagnostic trouble codes (DTCs). Page Ref: 1031
- 3) TYPE A CODES. A type A diagnostic trouble code is emissions related and causes the MIL to be turned on at the first trip if the computer has detected a problem. Engine misfire or a very rich or lean air–fuel ratio, for example, causes a type A DTC. These codes alert the driver to an emissions problem that may cause damage to the catalytic converter.
 - TYPE B CODES. A type B code is stored and the MIL is turned on during the second consecutive trip, alerting the driver to the fact that a diagnostic test was performed and failed.
- 4) The vehicle must be driven under a variety of operating conditions for all active tests to be performed. A trip is defined as an engine-operating drive cycle that contains the necessary conditions for a particular test to be performed. For example, for the EGR test to be performed, the engine has to be at normal operating temperature and decelerating for a minimum amount of time. Some tests are performed when the engine is cold, whereas others require that the vehicle be cruising at a steady highway speed.

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- 5) Check for obvious problems
 - Check everything that does and does not work.
 - Look for evidence of previous repairs.
 - Check oil level and condition.
 - Check coolant level and condition.

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