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## Service Information Bulletin

| SUBJECT                 | DATE         |
|-------------------------|--------------|
| Cylinder Leak Down Test | January 2013 |

### Additions, Revisions, or Updates

| Publication Number / Title | Platform                 | Section Title           | Change                 |
|----------------------------|--------------------------|-------------------------|------------------------|
| DDC-SVC-MAN-0084           | ALL YEARS<br>DD Platform | Cylinder Leak Down Test | This is a new section. |



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## 2 Cylinder Leak Down Test

Table 1.

| Service Tools Used in this Procedure |                                                                       |
|--------------------------------------|-----------------------------------------------------------------------|
| Tool Number                          | Description                                                           |
| OTC 5609 or equivalent               | Cylinder Leakage Tester                                               |
| J-47411                              | Adapter, Compression Test HDE                                         |
| J-45982-7                            | Regulator and gauge set (part of J-45982, Head and Block Leak Tester) |

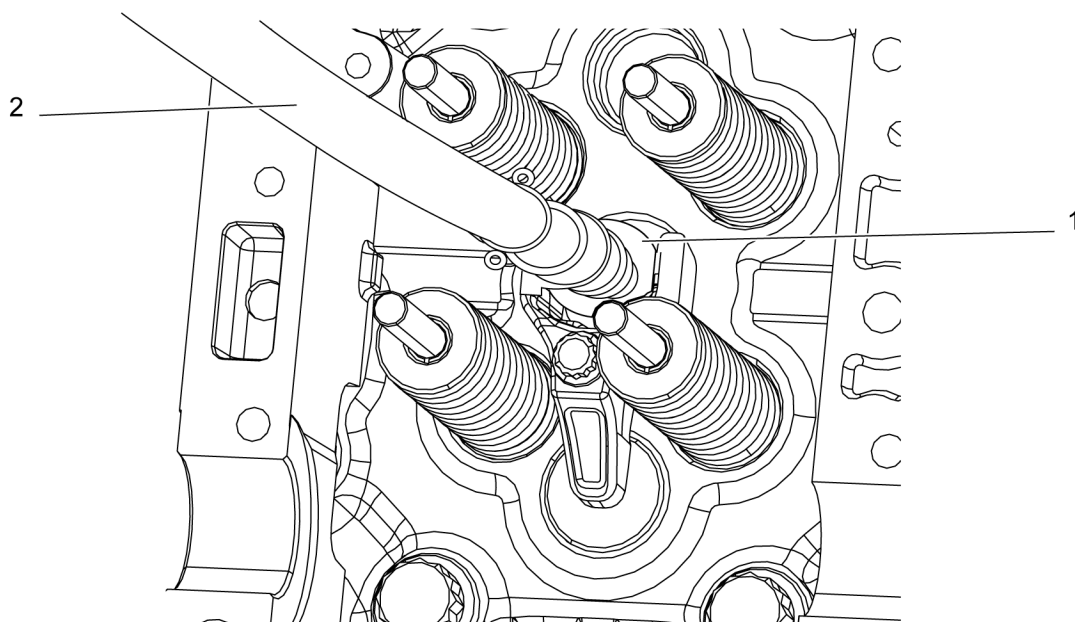
Test as follows:

1. Remove the intake and exhaust rocker arm shafts. Refer to section "Removal of Camshaft and Rocker Shaft/Engine Brake Assembly"
2. Remove the six fuel injectors. Refer to section "Removal of the Fuel Injector - Three-Filter System", or Refer to section "Removal of the Fuel Injector - Two-Filter System"

**NOTE:** Make sure the seal at the tip of the J-47411 Compression Test Adapter is installed and it does not fall out while installing the tool into the fuel injector cup.

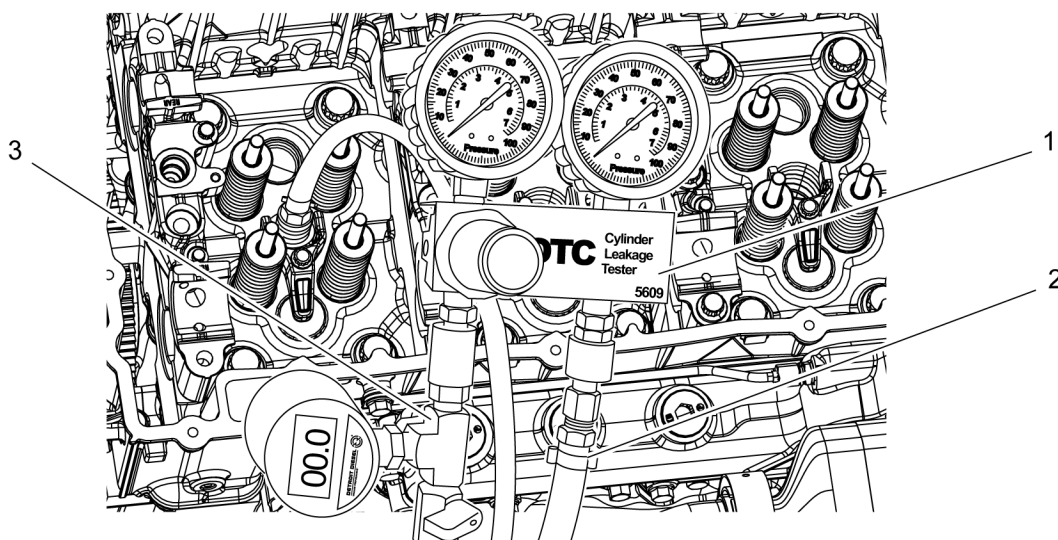
**NOTE:** Note: The original fuel injector hold-down clamp bolt can be re-used to install and secure the J-47411 Compression Test Adapter in place. Use new fuel injector hold-down clamp bolts when installing the new fuel injectors.

3. Using a fuel injector hold-down clamp and bolt, install J-47411 Compression Test Adapter in the in the fuel injector cap for cylinder number one.
4. Torque the fuel injector hold-down clamp bolt to 20 N•m (15 lb•ft) + 90 degree.
5. Connect a short air hose (2) to the J-47411 Compression Test Adapter (1).



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6. Connect the other end of the short air hose (2) to the output side of the Cylinder Leakage Tester (1).



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7. Connect the output side of the J-45982-7 Regulator and Gauge Set (3) to the input side of the Cylinder Leakage Tester (1).

**NOTE:** The shop air must be capable to continuously supply 689 kPa (100 psi) of air pressure.

8. Connect shop air to the input side of the J-45982-7 Regulator and Gauge Set.
9. Open the air shut-off valve and adjust the J-45982-7 Regulator and Gauge output to 689 kPa (100 psi).
10. Adjust the air regulator on the Cylinder Leakage Tester so the left side gauge on the Cylinder Leakage Tester indicates 620 kPa (90 psi).
11. Record the pressure indicated on the right side gauge of the Cylinder Leakage Tester.
12. Subtract the pressure recorded on the right side gauge from the pressure shown on the left gauge.

**NOTE:** The pressure difference between the two Cylinder Leakage Tester gauges indicates the pressure loss on that respective cylinder. A pressure loss greater than 103 kPa (15 psi) on any one cylinder, or a difference in pressure loss greater than 68 kPa (10 psi) from cylinder to cylinder, indicates a potential issue and further investigation to identify the source of leak is needed.

13. Repeat steps 3 through 12 for the all remaining cylinders.