

DETROIT DIESEL



DDEC[®] VI Troubleshooting

NUMBER: 08 DDEC VI-57 S.M. REF.: 8.3 ENGINE: DD15 DATE: October 2008


SUBJECT: IMPROPER VALVE CLEARANCE, ENGINE BRAKE ADJUSTMENT, WORN OR DAMAGED CAMSHAFT LOBES AND ROLLERS


PUBLICATION: DDC-SVC-MAN-0029

Improper Valve Clearance, Engine Brake Adjustment, Worn or Damaged Camshaft Lobes and Rollers has been revised.

8.3 IMPROPER VALVE CLEARANCE, ENGINE BRAKE ADJUSTMENT, WORN OR DAMAGED CAMSHAFT LOBES AND ROLLERS

Check as follows:

 WARNING: PERSONAL INJURY
To avoid injury when working near or on an operating engine, remove loose items of clothing and jewelry. Tie back or contain long hair that could be caught in any moving part causing injury.

 WARNING: PERSONAL INJURY
To avoid injury, use care when working around moving belts and rotating parts on the engine.

 WARNING: ENGINE EXHAUST
To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

1. Shut off engine and apply the parking brake, chock the wheels, disconnect vehicle battery power, and perform any other applicable safety steps.

2. Check for improper valve clearance, engine brake adjustment, worn or damaged camshaft lobes and rollers. Refer to section "Valve Lash Adjustments" in the *DD13/DD15 Workshop Manual (DDC-SVC-MAN-0002)*.
3. If found, repair the valve clearance, worn or damaged camshaft lobes and rollers.
4. Start and run the engine.
5. Run the engine at idle for approximately five minutes, allowing the engine coolant to reach normal operating range.
6. Visually inspect exhaust for excessive white smoke.
 - [a] If the engine exhaust emission appears normal, no further troubleshooting is required. Shut down the engine.
 - [b] If the engine exhaust emission is excessively white, perform a cylinder cut-out on three cylinders at a time; cut out the front three then cut-out the rear three.
 - [c] If the engine shuts down with one bank cut-out, replace the engine brake solenoid on the opposite bank, if not; go to next step.
7. If the engine continues to run with both banks of injectors cut out separately, check the ISB and compression to determine a poor injector or a damaged cylinder. Refer to section 16.11 "Checking ISB Values and Compression Test."

ADDITIONAL SERVICE INFORMATION

Additional service information is available in the DD15 Troubleshooting Guide (DDC-SVC-MAN-0029).

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