



TClinic

COMPRESSION CHECK

ENGINE – TUNE-UP – COMPRESSION CHECK

Occasionally, a compression check should be made as part of your procedure. This check gives you a good indication of the condition of your engine, for it tells you if your rings are performing properly and whether or not your valves are defective and giving trouble.

The compression check should be done with the engine at operating temperature. Remove one spark plug and insert the compression gauge. Turn the engine over with the starter (key off) for about three revolutions to obtain a maximum reading (a helper comes in handy here). Replace that spark plug and repeat the procedure for the other three cylinders, noting the readings. If the readings fall in around 120-135 and do not differ by more than 5 psi between cylinders, you can be assured that your valves and rings are in good order.

COMPRESSION DEFECTS

Low Compression in One Cylinder:

If a low reading is obtained in one cylinder, this indicates valve or ring trouble. To determine which, squirt some oil into the cylinder, turn the engine over once to clear the excess oil and insert compression gauge again. If compression returns to normal, this indicates that the valves are good, but the rings are defective. If the addition of oil does not raise the compression, the trouble is most likely in the valves and a valve job is in order.

Low Compression in Two Adjacent Cylinders:

This condition is an indication that the head gasket has blown between the two cylinders, and the gasses are leaking from one to the other. This may be remedied by a head gasket replacement. Note: Closely examine the valves while head is off—you are already halfway through a valve job.

Rough running of the engine and failure to respond to a tune-up are indications of low compression—this must be corrected before optimum performance can be achieved.

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2002 Update

Rather than cranking three revolutions, crank till you get three pulses on the gauge. Don't fool yourself by cranking the engine over more. Maybe you will get slightly higher readings but you should go by the 3rd pulse.