



4-stroke Internal Combustion Engine



Job – Compression Check

Introduction

Good compression is essential for optimum engine performance. Fuel mixture must be tightly compressed to insure proper ignition and maximum power. Poor compression can be caused by worn piston rings, bad valves, worn or warped cylinders, leakage through the head gasket, or leakage around the spark plug. Poor compression is a common trouble, especially with older engines that are in need of overhauling.

If an engine starts with difficulty, or lacks power and is sluggish, a troubleshooter might suspect poor compression as the possible cause. Checking the engine's compression is a part of most tune-up procedures.

Task

You are to perform a compression check on your engine.

Procedure

1. Use the 'bounce back method' as demonstrated to determine whether or not sufficient engine compression is present.

Sharp rebound when tested (check one)

yes

no

/1

2. Use a compression gauge to determine accurately the engine's ability to compress.

- Remove spark plug lead from the spark plug
- Remove the spark plug
- Screw a compression gauge (use appropriate thread adapter) into the spark plug hole.
- Pull the engine's starting cord several times as if you were trying to start it
- Once the gauge has reached maximum achievable value, observe this value.
- For engine's of this type, readings between 40 and 60 psi "generally" indicate good compression.

Engine Compression: _____ psi. Is this within the acceptable range? _____

/2

3. Name some of the engine parts whose failure can cause poor compression.

/1

4. What are some of the common troubles that can be traced to poor compression?

/1

5. Does correcting a condition of poor compression always require a major repair job or overhaul? Explain your answer.

/2