

Component Procedures: Compression Check

Table of Contents

1. Parts and Labor (itype_189)
2. Pressure, Vacuum and Temperature (itype_29)
3. Compression Inspection (Article 1386029)

Component Procedures: Compression Check

Parts and Labor (itype_189)

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Diagnose/Test	Compression, Test	C	1.3	0.0

Pressure, Vacuum and Temperature (itype_29)

[LF, L3]

Compression [LF]

Standard: 1,400 kPa (14.28 kgf/cm2, 203.1 psi) [300 rpm]

Minimum: 980 kPa (10.0 kgf/cm2, 142.2 psi) [300 rpm]

Maximum difference between cylinders: 196.1 kPa (2.0 kgf/cm2, 28.5 psi)

Compression [L3]

Standard: 1,372 kPa (14.00 kgf/cm2, 199.1 psi) [290 rpm]

Minimum: 960 kPa (9.79 kgf/cm2, 139.2 psi) [290 rpm]

Maximum difference between cylinders: 196.1 kPa (2.0 kgf/cm2, - 28.5 psi)

[L3 With TC]

Compression

Standard: 1,280 kPa (13.1 kgf/cm2, 185.65 psi) [250rpm]

Minimum: 896 kPa (9.14 kgf/cm2, 129.96 psi) [250rpm]

Compression Inspection (Article 1386029)

COMPRESSION INSPECTION [LF, L3]

Warning: Hot engines and oil

can

cause severe burns. Be careful not to burn yourself during removal/installation of each component.

1. Verify that the battery is fully charged.

^ Recharge it if necessary.

2. Warm up the engine to the normal operating temperature.

3. Perform "

Fuel Line Safety Procedures

". Leave the

fuel pump relay

removed.

Warning:

^ Fuel vapor is hazardous. It can very easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel.

^ Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage.

Fuel can also irritate skin and eyes. To prevent this, always complete the "Fuel Line Safety Procedure". (See BEFORE SERVICE PRECAUTION [LF, L3].)

See: Fuel Pressure Release > Procedures > Before Service Precaution

4. Remove the plug hole plate.

5. Remove the

ignition coils

.

6. Remove the

spark plugs

7. Connect a compression gauge into the

spark plug

hole.

8. Fully depress the

accelerator pedal

and crank the engine.

9. Note down the maximum gauge reading.

10. Inspect each cylinder as above.

^ If the measured value is less than the limited value, or there is a cylinder whose compression value varies from that of other cylinders by 196.1 kPa (2.0 kgf/cm2, 28.5 psi) or more, add a small amount of engine oil

through the spark plug hole. Then measure the compression pressure and perform the respective operations for the following cases.

^ If the compression increases, the piston

, the piston ring

s, or cylinder wall may be worn and overhaul is required.

^ If the compression stays low, a valve may be stuck or improperly seated and overhaul is required.

^ If the compression in adjacent cylinders stays low, the cylinder head gasket

may be damaged or the cylinder head

distorted and overhaul is required.

Compression [LF]

Standard: 1,400 kPa (14.28 kgf/cm², 203.1 psi) [300 rpm]

Minimum: 980 kPa (10.0 kgf/cm², 142.2 psi) [300 rpm]

Maximum difference between cylinders: 196.1 kPa (2.0 kgf/cm², 28.5 psi)

Compression [L3]

Standard: 1,372 kPa (14.00 kgf/cm², 199.1 psi) [290 rpm]

Minimum: 960 kPa (9.79 kgf/cm², 139.2 psi) [290 rpm]

Maximum difference between cylinders: 196.1 kPa (2.0 kgf/cm², - 28.5 psi)

11. Disconnect the compression gauge.

12. Install the following parts.

1) Spark plug.

2)

Ignition coil

s.

3)

Fuel pump

relay

4) Plug hole plate.