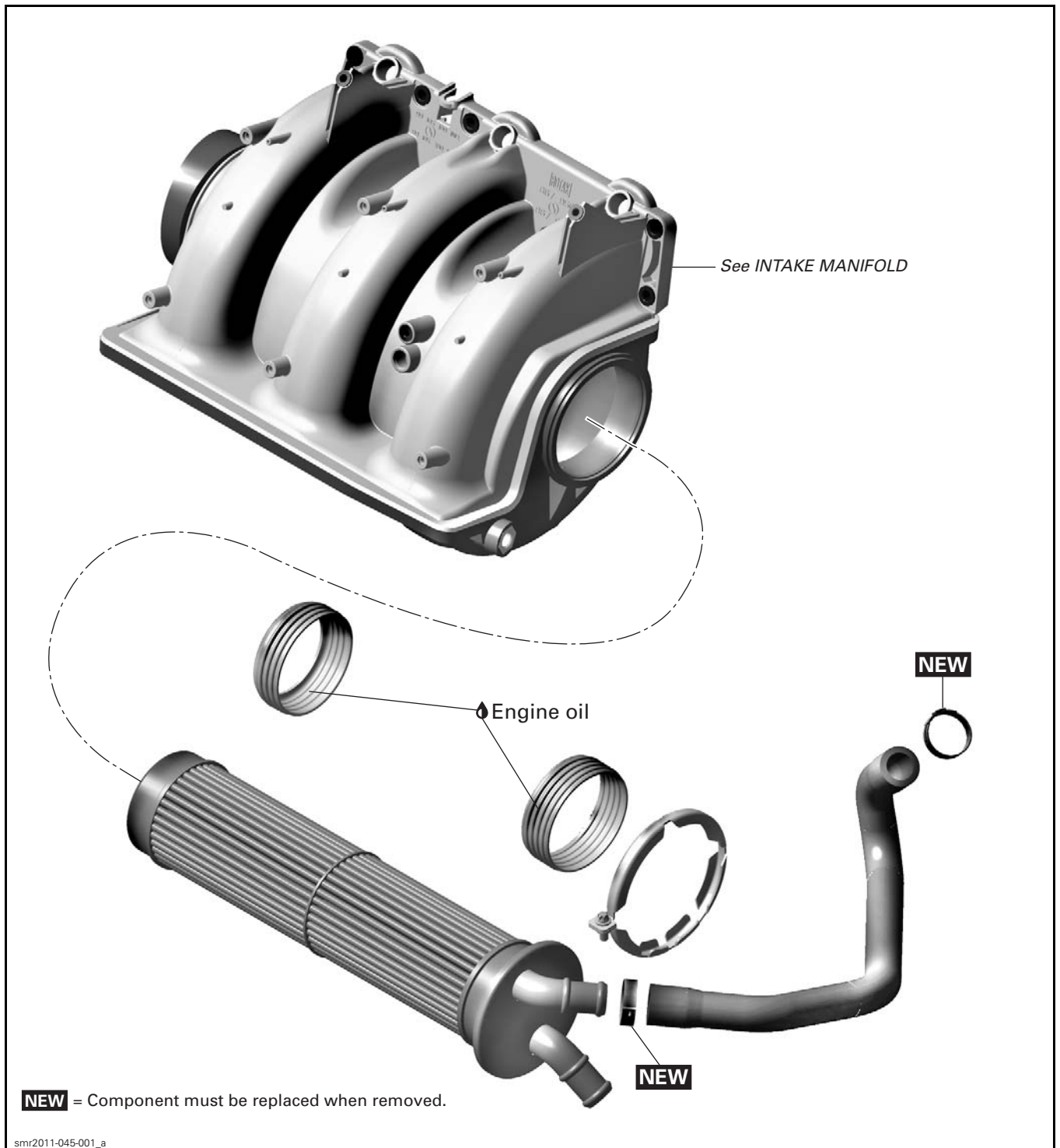


INTERCOOLER (215 ENGINE)

SERVICE TOOLS

Description	Part Number	Page
VACUUM/PRESSURE PUMP	529 021 800	2



PROCEDURES

INTERCOOLER

Intercooler Leak Test

Perform intercooler leak test when engine loses performance, when there is white exhaust smoke or when temperature in exhaust system is too high.



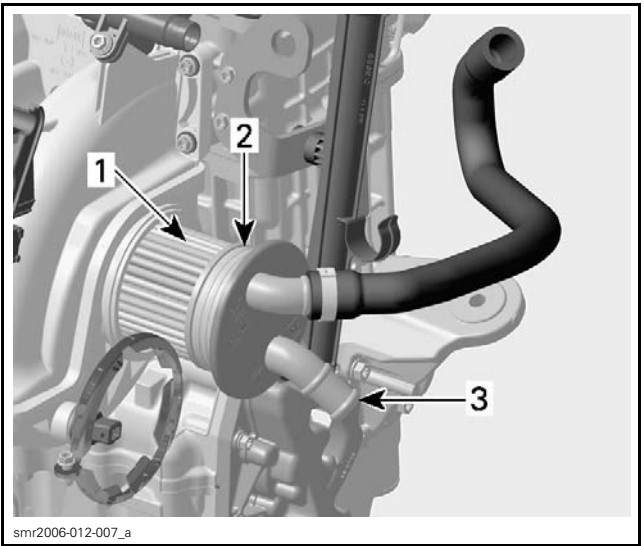
WARNING

Let engine cool down prior to perform leak test. Direct contact with hot engine may result in skin burn.

NOTE: The inspection can be done while intercooler remains installed in intake manifold.

Remove:

- Outlet hose from exhaust manifold
- Inlet hose from intercooler.



INTERCOOLER PULLED OUT FOR CLARITY PURPOSE ONLY

- 1. Intercooler
- 2. Outlet hose
- 3. Inlet nipple

Plug intercooler inlet nipple.

Install an adapter on the outlet hose to connect a pressure pump.

REQUIRED TOOL
VACUUM/PRESSURE PUMP (P/N 529 021 800)



Pressurize the intercooler as follows:

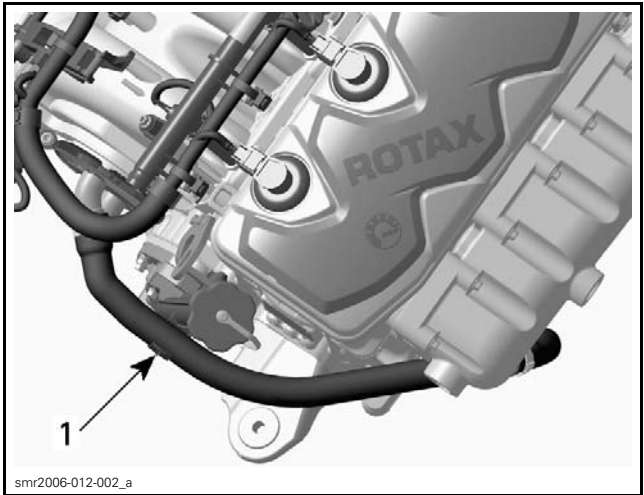
PRESSURE TEST
69 kPa (10 PSI) for 10 minutes minimum

If there is a pressure drop, first spray hoses and adapters with a soapy solution to ensure they are not leaking.

Otherwise, remove intercooler from manifold to spray soapy water on it. If air bubbles are present, replace the intercooler. Refer to procedures further in this subsection.

Properly reinstall removed parts.

Make sure the intercooler outlet hose is installed in the holding device (located on the oil filler tube) otherwise the hose will scuff on the engine block.

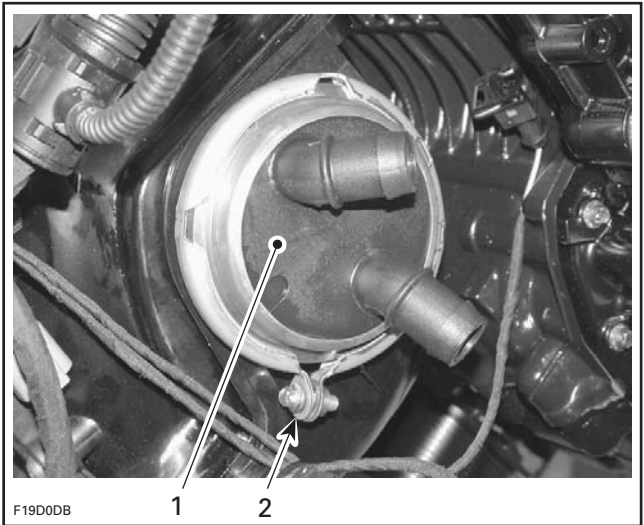


1. Intercooler outlet hose holding device

Intercooler Removal

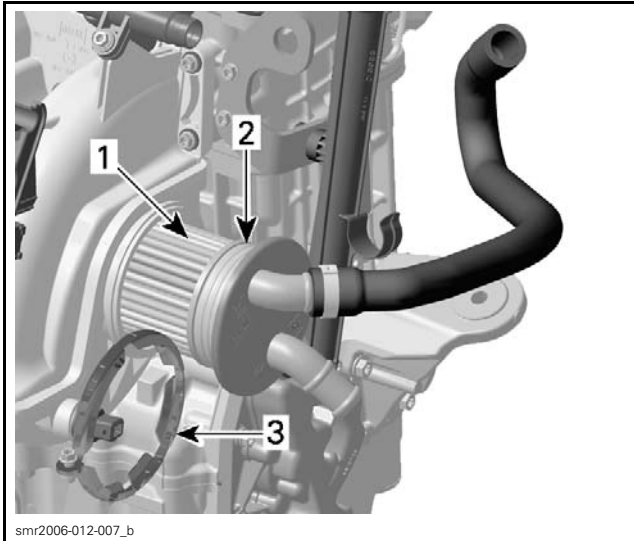
Remove intake manifold. Refer to *INTAKE MANIFOLD* subsection.

Remove collar from intercooler.



- TYPICAL**
- 1. Intercooler
 - 2. Collar

Carefully pull intercooler out of intake manifold.



1. Intercooler
2. Profile ring
3. Collar

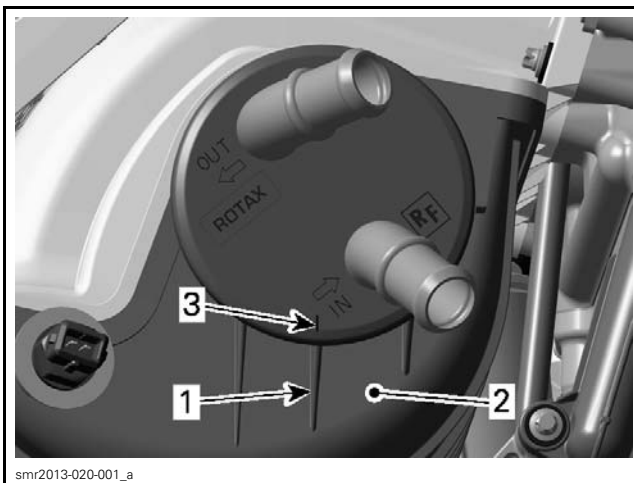
Intercooler Installation

Installation is essentially the reverse of removal procedures. However pay particular attention to the following.

Ensure profile rings are properly installed on intercooler and apply engine oil on them to ease installation.

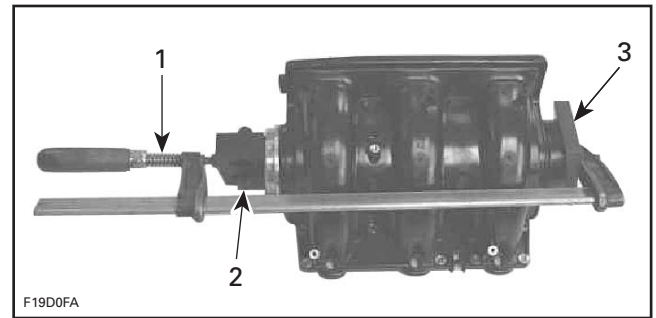
While properly aligning the inner end of intercooler in intake manifold, gently push intercooler until it bottoms.

Align mark on intercooler with middle rib of the intake manifold.



1. Middle rib
2. Intake manifold
3. Mark on intercooler

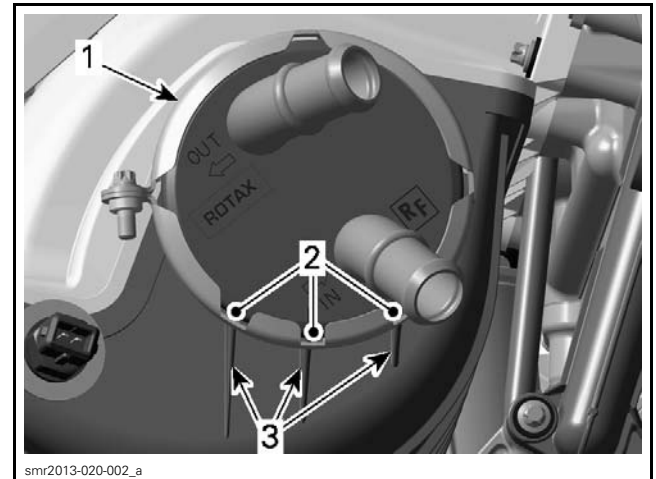
NOTE: If intercooler is hard to push in, a clamp can be used to press intercooler in.



1. Clamp
2. Plastic block between nipples
3. Plastic block

Reinstall collar.

Align recess of collar with ribs on intake manifold.



1. Collar
2. Recess
3. Ribs

Reinstall intake manifold.