

Lower Intake Manifold with Fuel Rail

Special tools and workshop equipment required

Socket 14 mm -3150-

Torque wrench -V A G 1331-

Ratchet -V A G 1331/1-

Open end wrench socket 17 mm -V A G 1331/2-

SW 14 socket, open ring -V A G 1331/8-

Socket -T40055-

Hand vacuum pump -V A S 6213-

Removing



Note

The following removal and installation procedure is for the left intake manifold, lower. The procedure for the other side is identical.

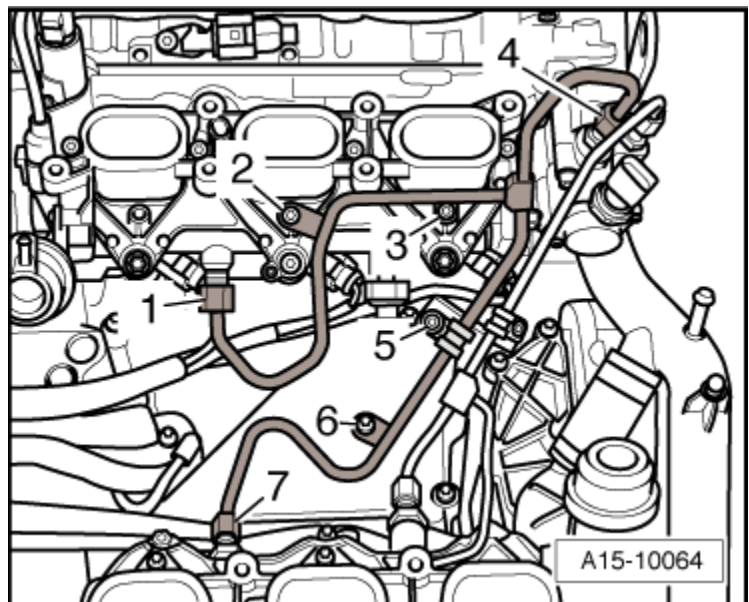


WARNING

Fuel system is under high pressure! Before opening high pressure components of the fuel injection system, pressure must be relieved to residual pressure → [Chapter](#).

Then wrap a clean rag around the connection and relieve residual pressure by carefully loosening the connection.

Remove intake manifold upper → [Chapter](#).



Remove high-pressure line, thereby removing bolts and union nuts -1 through 7-.

Disconnect electrical harness connectors:

1 - Intake manifold runner position sensor 2 -G 512-

2 - Fuel pressure sensor -G 247-

Remove bolts and nuts -arrows- and remove intake manifold lower with fuel rail.



Note

Plug intake ports of the cylinder head with clean rags.

Installing

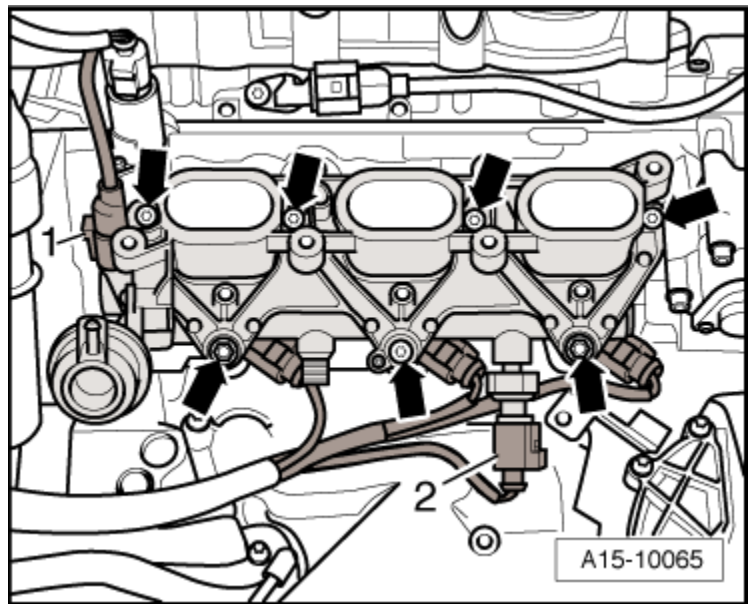
Installation is in reverse order of removal, note the following:



Note

Replace gaskets and O-rings.

Lightly lubricate fuel injector O-rings with clean engine oil.



Connect hand vacuum pump -VAS 6213- to intake manifold runner control vacuum actuator, as shown in illustration.

Generate vacuum using hand vacuum pump.

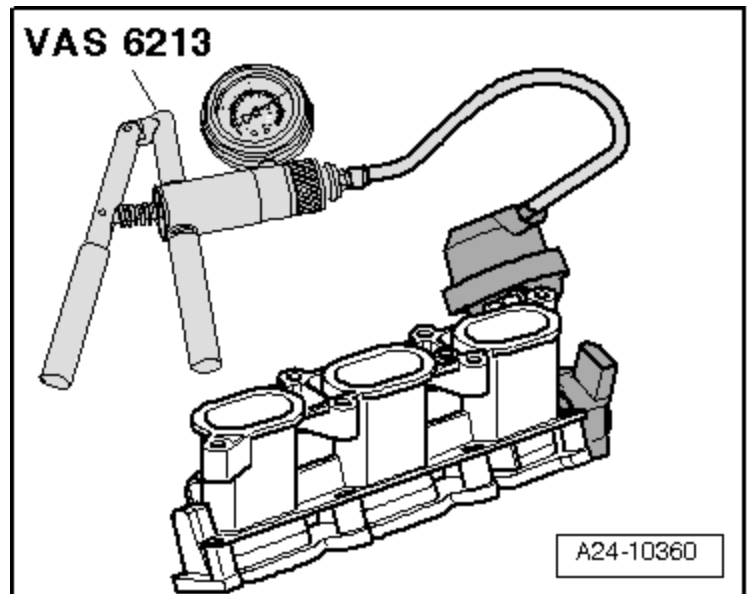
The intake flaps are opened.



Note

If the intake flaps are not opened, they could have seized when installing the intake manifold lower to the cylinder head.

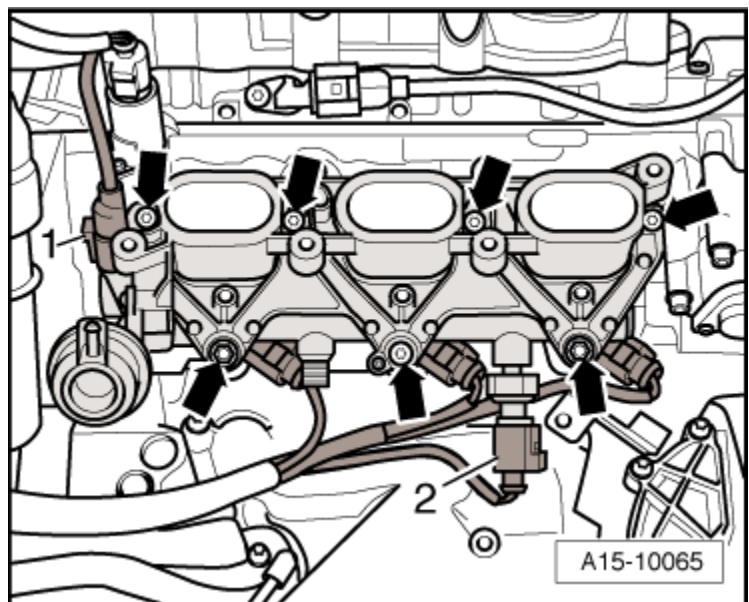
Install intake manifold lower and press fuel rail evenly onto fuel injectors.



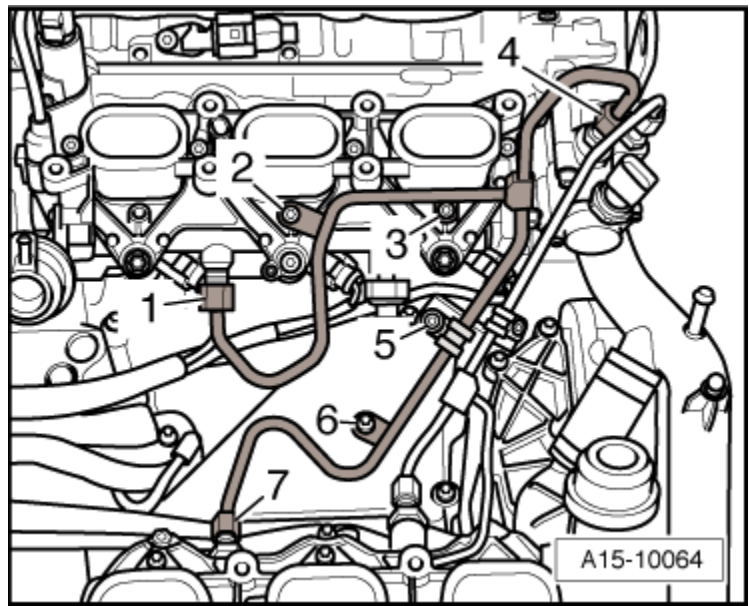
Fasten bolts -arrows- for intake manifold lower in a diagonal sequence and in stages.

Remove hand vacuum pump from intake manifold runner control vacuum actuator.

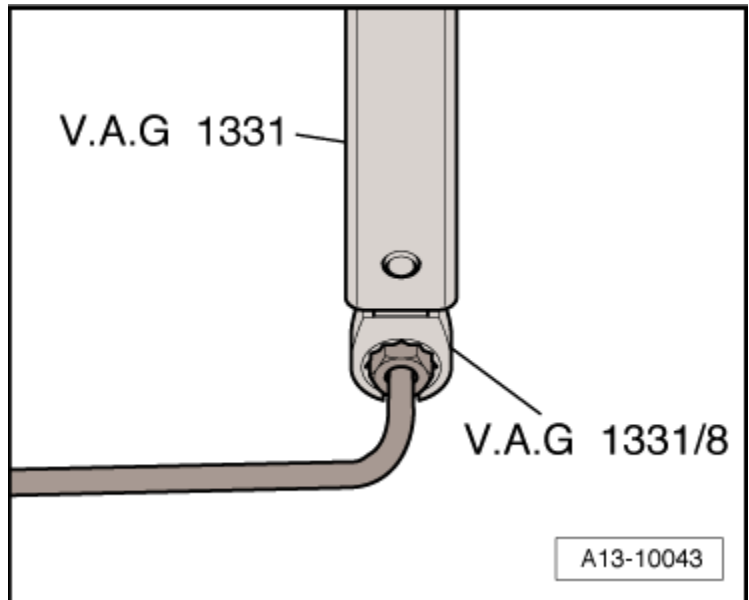
Connect electrical harness connectors -1- and -2-.



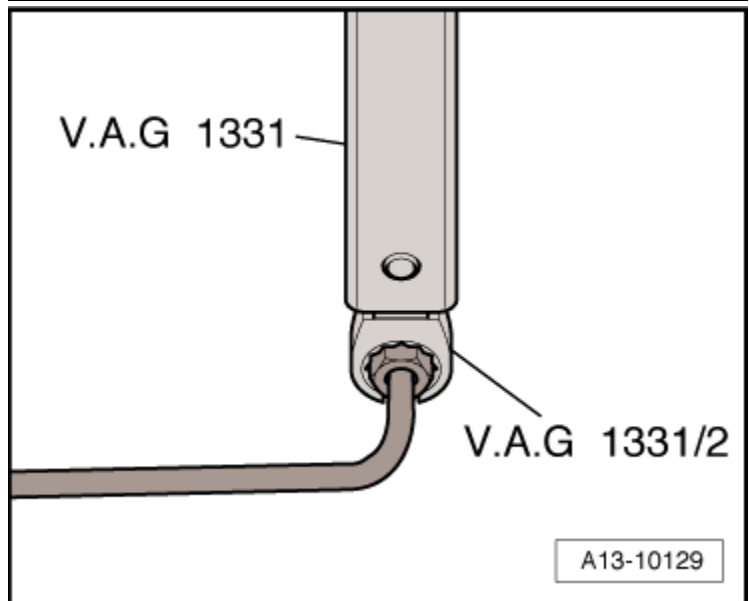
- Hand-tighten union nuts of high-pressure lines -1-, -4- and -7-.
- Make sure high-pressure lines are seated free of stress.



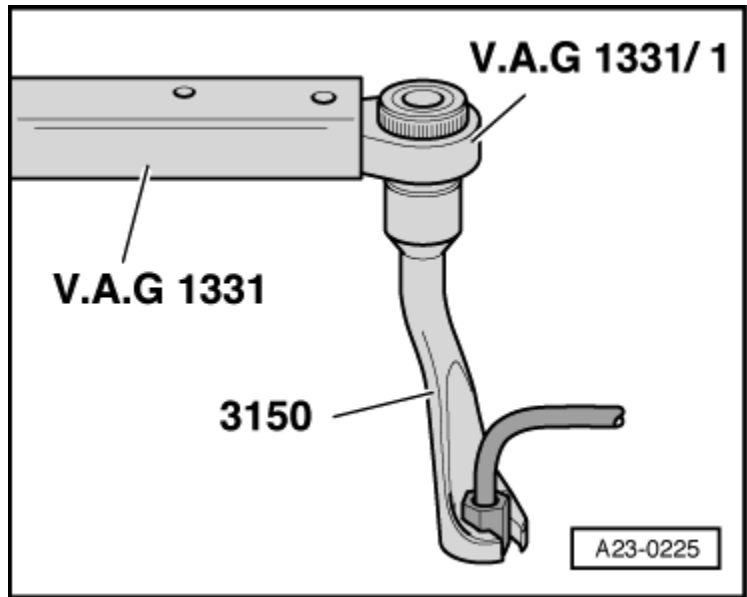
- To tighten SW 14 high pressure line at fuel rail, use torque wrench V A G 1331 with socket insert AF 14, open ring V A G 1331/8-.



- To fasten high-pressure line (17 mm) to fuel rail, use torque wrench V A G 1331 with Socket Insert AF 17 V A G 1331/2-.

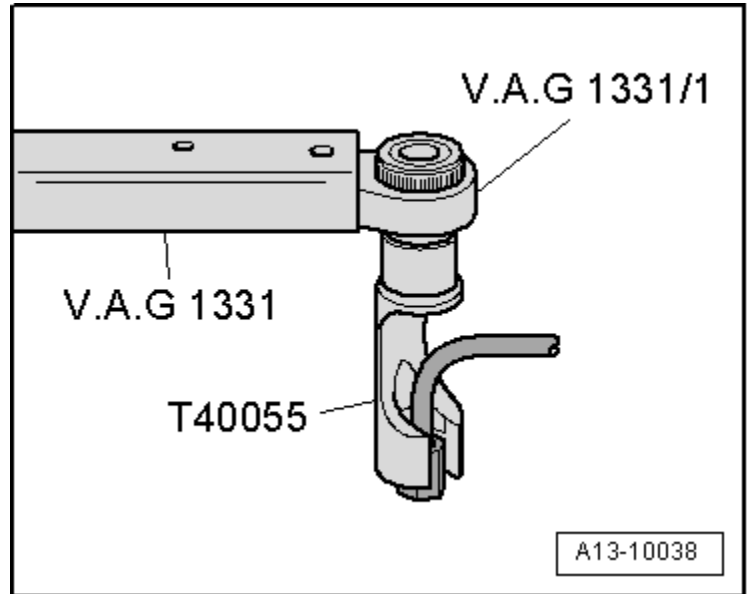


To fasten high-pressure line (14 mm) at
 - high pressure pump use torque wrench -
 V A G 1331-w ith ratchet-V A G 1331/1-
 and socket 14 mm -3150-.



To fasten high-pressure line (17 mm) to
 - high pressure pump , use torque wrench -
 V A G 1331-w ith reversible ratchet -
 V A G 1331/1-and socket -T40055-.

Tightening Specifications



Component	Nm	
Intake manifold lower-part to cylinder head	10	
High pressure lines to	High pressure pump	25
	Fuel rail	25