



Coolant fan, checking

Special tools and equipment

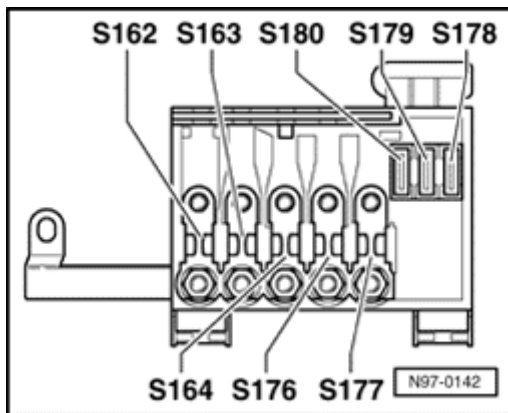
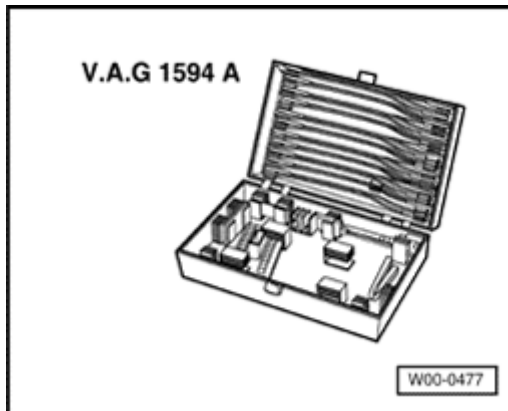
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- ◆ VAG 1594 A test kit
- ◆ Wiring diagram

Test conditions

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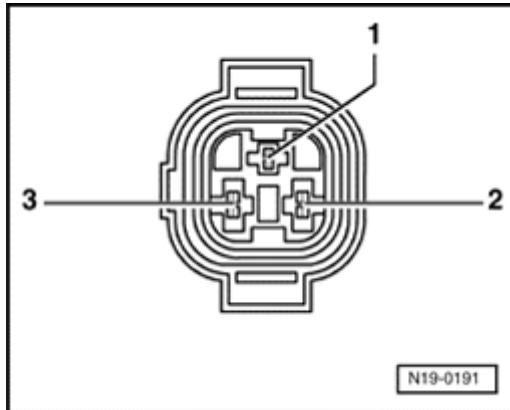
- ◆ Fuses S164 and S180 OK
- ◆ Coolant Fan Control (FC) Thermal switch -F18- OK





Checking

- Disconnect 3-pin electrical connector for Coolant Fan Control (FC) Thermal switch -F18-



- Bridge terminals -1- and -2- of connector with jumper wire from VAG test kit. Stage 1 of coolant fans -V7- and -V35- must run.
- Switch ignition ON.
- Bridge terminal -2- and -3- of connector with jumper wire from VAG test kit. Stage 2 of coolant fans -V7- and -V35- must run.

If stage 1 or stage 2 of coolant fans do not run:

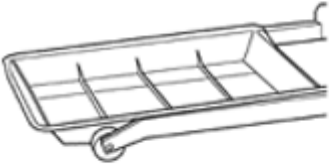


- Check for open circuit according to wiring diagram and repair.

⇒ *Electrical Wiring Diagrams, Troubleshooting & Component Locations*

If no open circuit:

- Replace coolant fan -V7- or -V35-.



<p>V.A.G 1306</p> 	<p>V.A.G 1331</p> 
<p>V.A.G 1921</p> 	
	<p>W19-0001</p>

Coolant pump, removing and installing

Special tools and equipment

- ◆ VAG 1306 Drip tray
- ◆ VAG 1331 Torque wrench 5 to 50 Nm (3.7 to 37 ft lb) or equivalent
- ◆ VAG 1921 Spring clip pliers
- ◆ Anti-freeze tester (not shown)



Coolant pump, removing

Note:

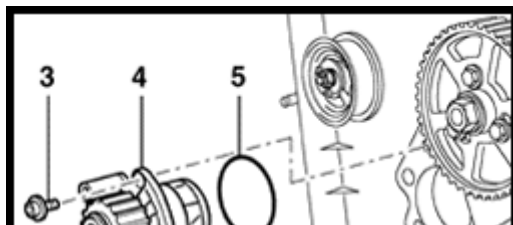
- ◆ *Always replace seals and gaskets.*
- ◆ *Lower section of toothed belt guard does not have to be removed.*
- ◆ *Leave toothed belt in position on crankshaft sprocket.*
- ◆ *Cover toothed belt with a cloth to protect it from coolant before removing coolant pump.*

- Drain coolant ⇒ [Page 19-13](#) .

- Remove ribbed belt ⇒ [Page 13-12](#) .

- Remove toothed belt guard upper and center sections.

- Remove toothed belt from coolant pump sprocket ⇒ [Page 13-16](#) .



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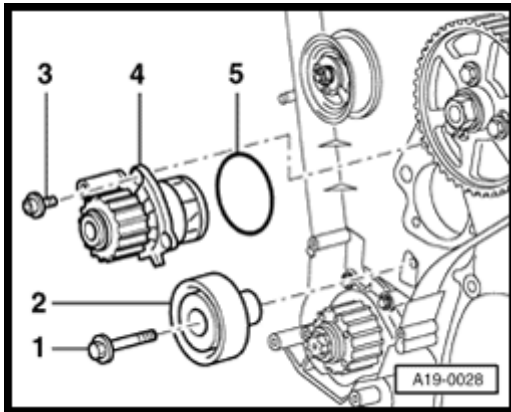
- Remove bolt -1- from pulley -2- and remove pulley -2-.

- Remove bolt -3- for coolant pump-4- and remove coolant pump carefully between engine mount and rear toothed belt guard.



Coolant pump, installing

Install in reverse order of removal but note the following:



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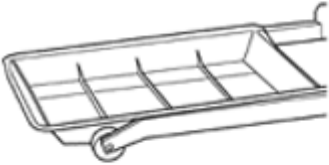


- Moisten new O-ring -5- with clean engine coolant.
- Insert coolant pump -4- into engine block and tighten bolts -3-. Tightening torque: 15 Nm (11 ft lb).

Note:

Coolant pump plug points downward.

- Install pulley -2- and tighten bolt -1- (replace). Tightening torque: 40 Nm (30 ft lb) + 90° (1/4 turn).
- To install and tension toothed belt ⇒ [Page 13-16](#) .
- Install ribbed belt ⇒ [Page 13-12](#) .
- Fill engine with coolant ⇒ [Page 19-13](#) .



<p>V.A.G 1306</p> 	<p>V.A.G 1331</p> 
<p>V.A.G 1921</p> 	
	<p>W19-0001</p>

Thermostat, removing and installing

Special tools

- ◆ VAG 1306 Drip tray
- ◆ VAG 1331 Torque wrench 5 to 50 Nm (3.7 to 37 ft lb) or equivalent
- ◆ VAG 1921 Spring clip pliers
- ◆ Anti-freeze tester (not shown)



Removing

Note:

Always replace seals and gaskets.

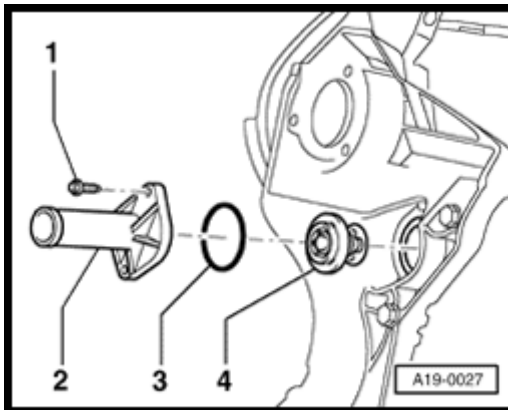
- Drain coolant ⇒ [Page 19-13](#) .

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- Remove coolant hose from connection -2-.

- Remove bolts -1- of connection -2- and remove connection -2- along with thermostat -4- .

- Turn thermostat -4- $\frac{1}{4}$ turn (90°) to left and remove from connection -2-.



Installing

Install in the reverse order of removal but note the following:

- Moisten new O-ring -3- with coolant.

- Insert thermostat -4- in connection -2- and turn $\frac{1}{4}$ turn (90°) to right.

Note:

The brace on the thermostat must be almost vertical.

- Install thermostat -4- into engine block.

- Tighten bolt -1-. Tightening torque: 15 Nm (11 ft lb).

- Fill engine with coolant ⇒ [Page 19-13](#) .