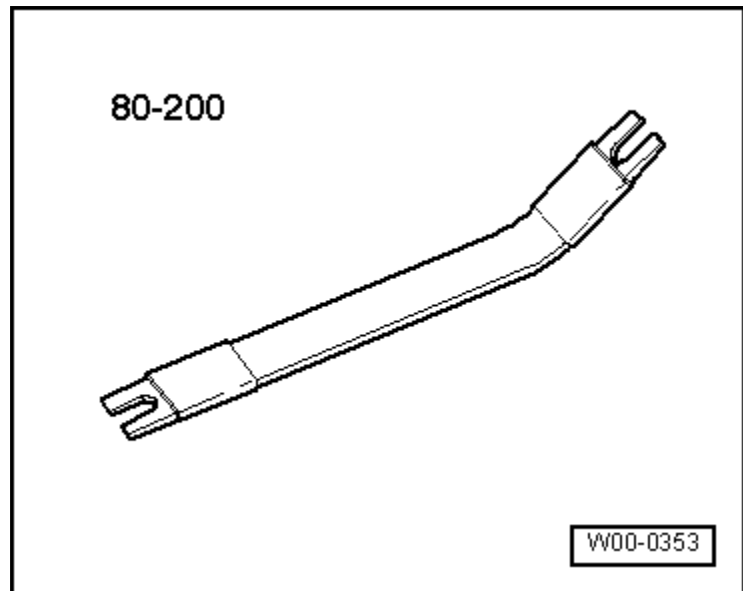


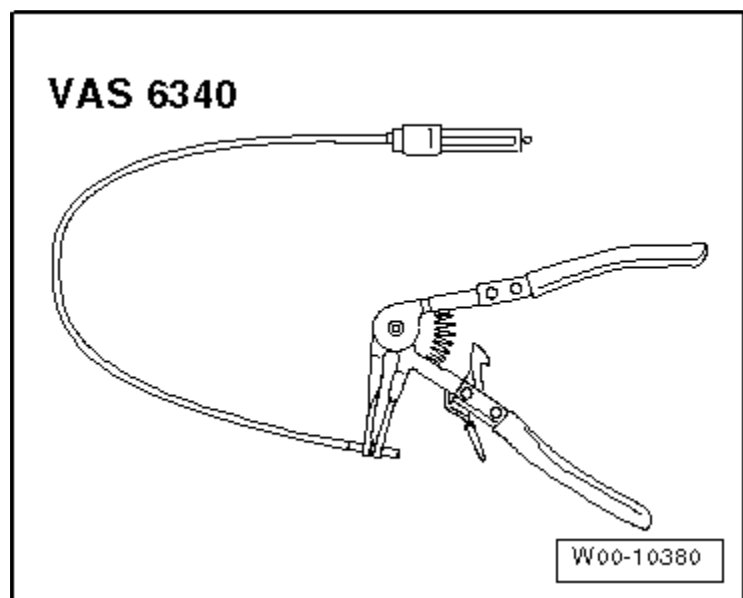
## Removing and installing 4/2-way valve

### Special tools and workshop equipment required

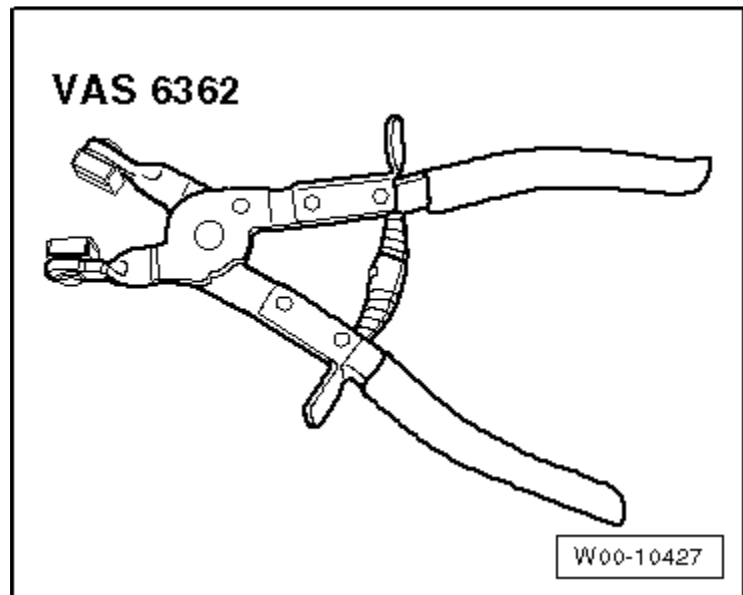
- ♦ Removal lever -80 - 200-



- ♦ Hose clip pliers -VAS 6340-

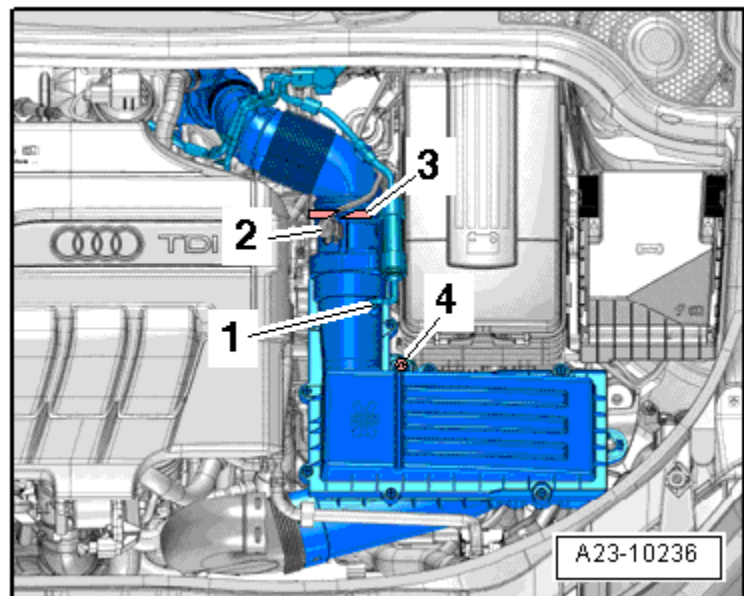


- ◆ Hose clip pliers -VAS 6362-

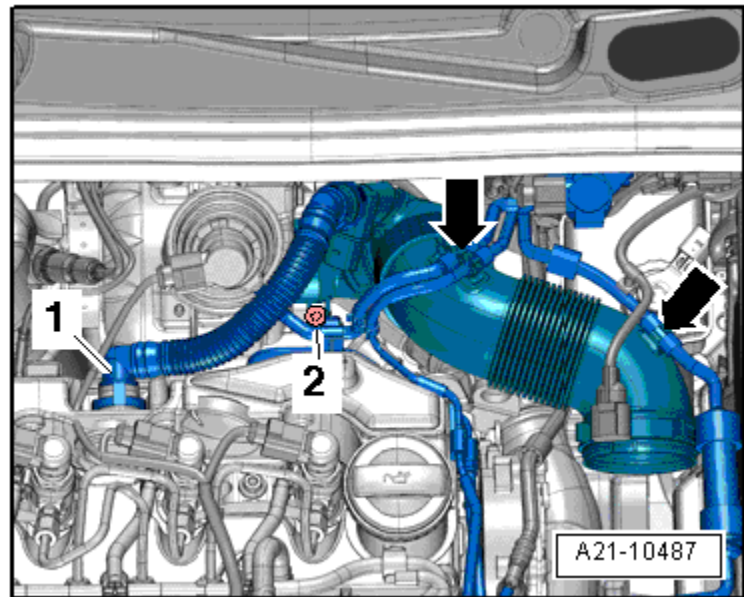


### Removing

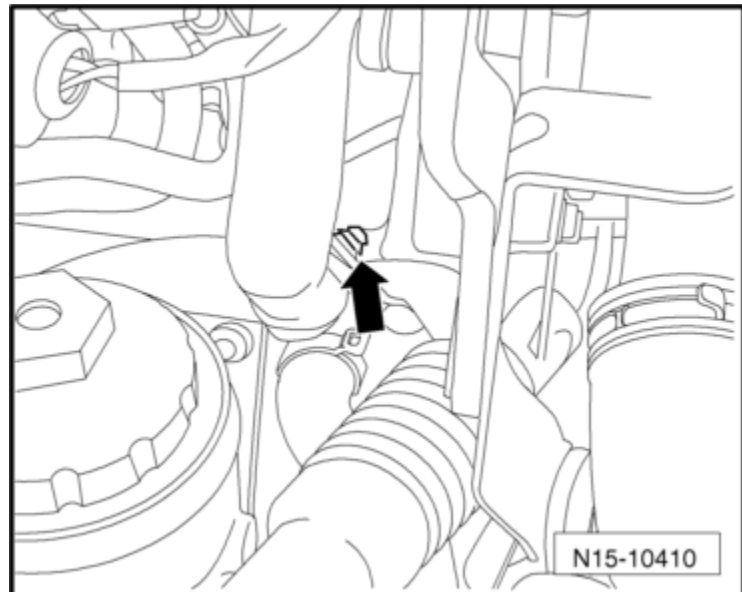
- Drain coolant → Chapter.
- Remove air cleaner housing → Rep. gr.23.



- Press release tabs and disconnect crankcase breather hose -1- from cylinder head cover.
- Move clear vacuum hoses -arrows- at air pipe.
- Remove bolt -2-, swivel air pipe with connection to rear and detach from turbocharger.



- Unclip wiring harness from retainer -arrow-.



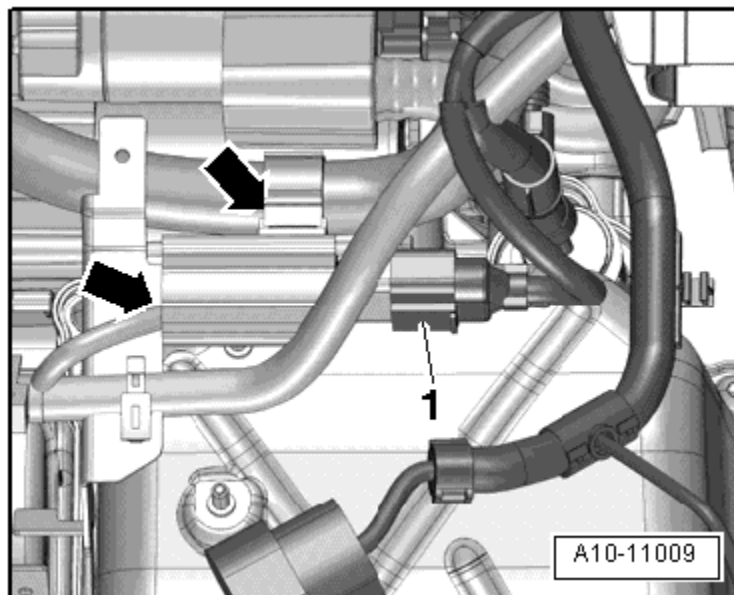


# **WARNING**

**Risk of injury as the radiator fans may start up automatically.**

**Even when the ignition is switched off, the radiator fans can start up without warning due to accumulated heat in the engine compartment, etc.**

- Move clear wiring harnesses -arrows- and electrical connector -1- at bracket.

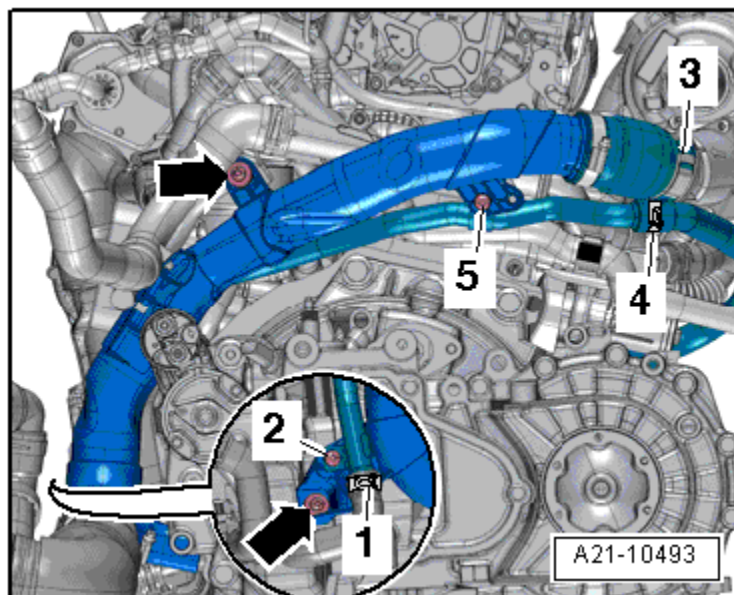


- Remove bolts -2, 5- and -arrows-.
- Using removal lever -80 - 200-, move clear electrical wiring and hoses at air pipe (left-side).
- Loosen hose clip -3- and detach air pipe (left-side).



# **Note**

Disregard -items 1, 4-.

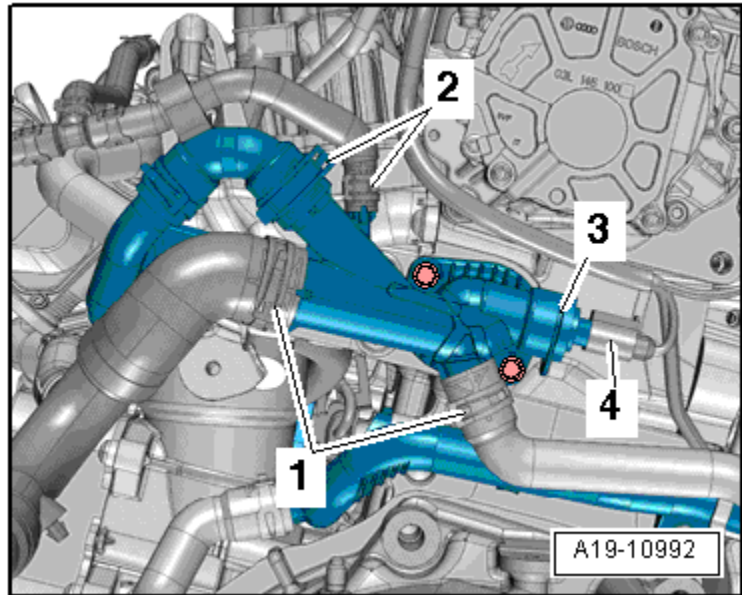


- Release hose clips -1- and detach coolant hoses.



**Note**

Disregard -items 2, 3, 4-.

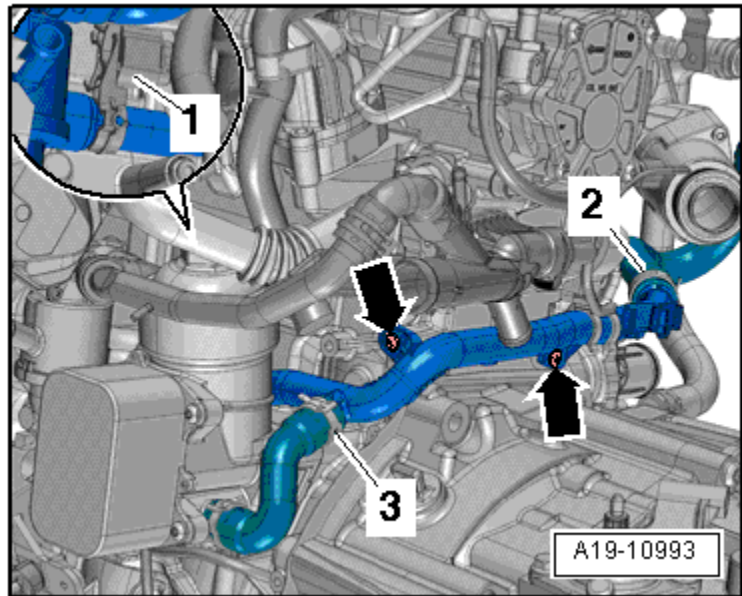


- Take electrical connector -1- for Hall sender -G40- out of retainer.
- Remove bolts -arrows-, pull off coolant pipe (front) from 4/2-way valve to left side and leave in installation position.

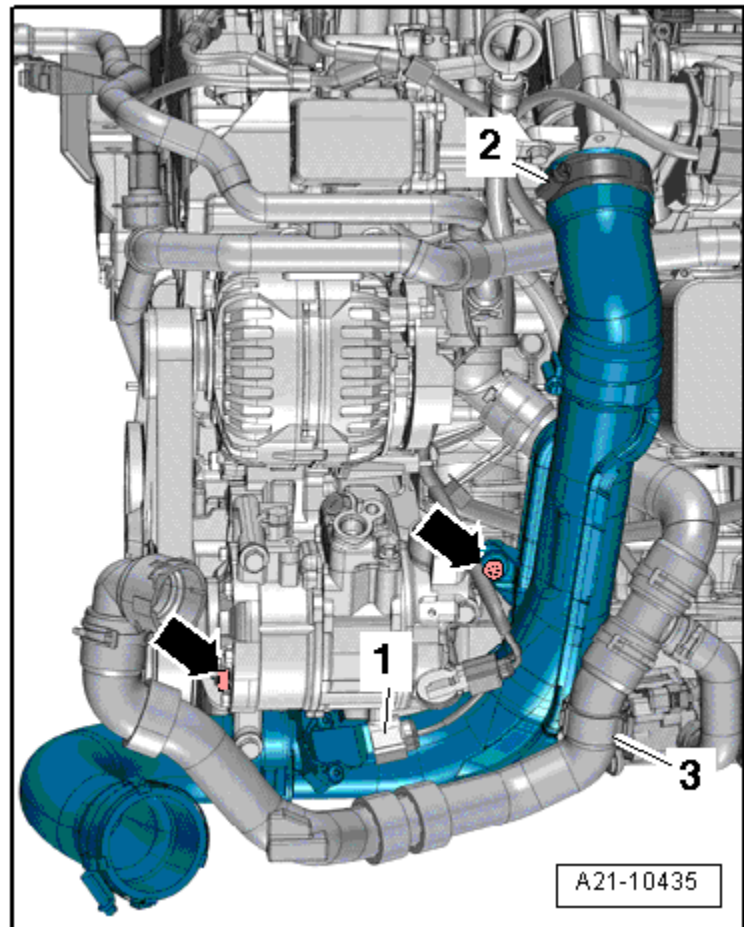


**Note**

Disregard -items 2, 3-.

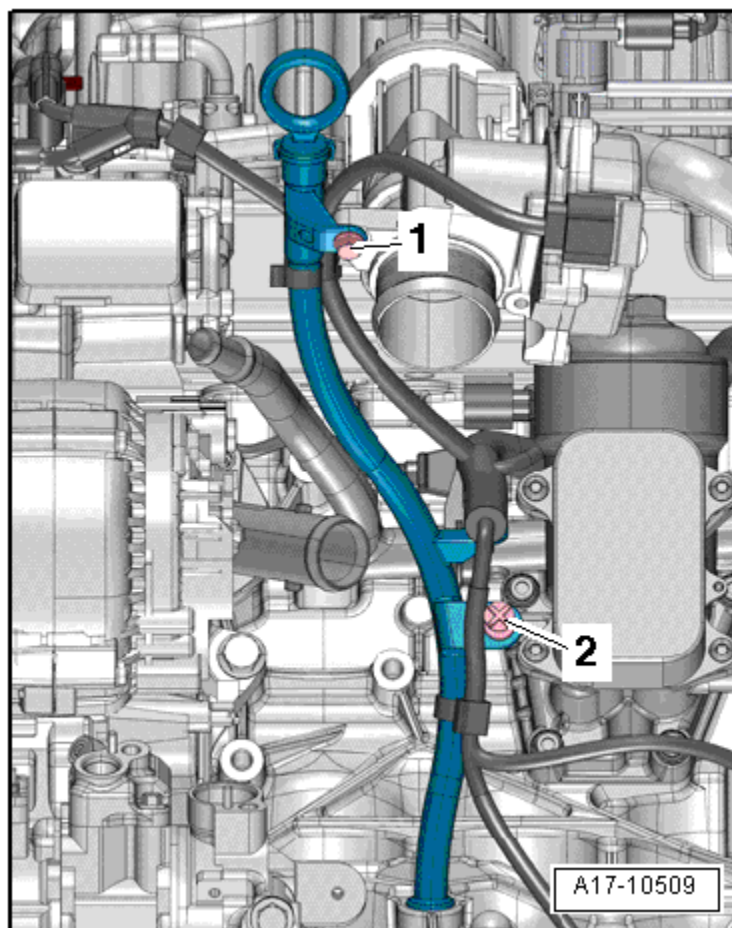


- Remove bolts -arrows-.
- Move coolant hose -3- clear.
- Loosen hose clip -2-.
- Unplug electrical connector -1- at charge pressure sender -G31-/intake air temperature sender -G42- and detach air pipe (right-side).





- Pull oil dipstick out slightly and remove bolt -1-.
- Release clip -2- with removal lever -80 - 200-.
- Pull guide tube for oil dipstick upwards out of cylinder block and push to one side.

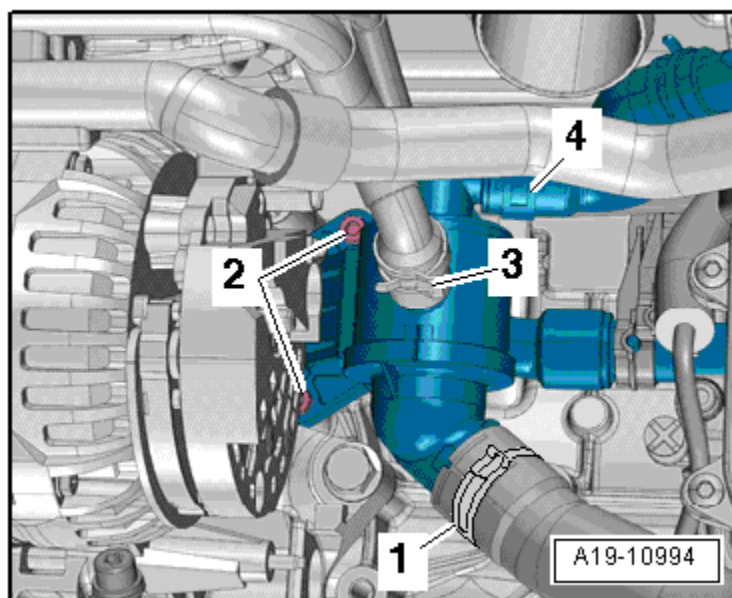


- Remove bolts -2-.
- Loosen hose clips -1, 3, 4-, detach coolant hoses and remove 4/2-way valve.

### Installing

Installation is carried out in the reverse order; note the following:

- Tightening torque → Chapter „Coolant pump and 4/2-way valve - exploded view“
- Install dipstick guide tube → Chapter.
- Install coolant pipe (front) → Chapter.
- Install air pipes → Chapter.
- Install intake connecting pipe → Chapter.
- Electrical connections and routing  
→ Current flow diagrams, Electrical fault finding and Fitting locations.
- Install battery mounting and battery  
→ Electrical system; Rep. gr.27.
- Install air cleaner housing → Rep. gr.23.



- Install air hoses with screw-type clips  
→ Fig..
- Fill up with coolant → Anchor.