

Technical product information

Topic	Engine Overheating - Warning in the DIP V8 Kovomo
Market area	Bentley: worldwide (2WBE),China 723 Volkswagen (Anhui) Automotive CO (6723),China 796 VW Import Comp. Ltd (Vico), Beijing (6796)
Brand	Bentley
Transaction No.	2061369/13
Level	EH
Status	
Release date	

New customer code

Object of complaint	Complaint type	Position
engine -> cooling system -> engine cooling fan	noise, vibration -> too loud	
engine -> cooling, lubrication -> engine coolant temperature control	functionality -> faulty	
engine -> cooling system	functionality	

Vehicle data

V8 Kovomo Engine

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
3S32CB	2020	E		*	*	*
3S32CB	2021	E		*	*	*
3S32CB	2022	E		*	*	*
3S32CB	2023	E		*	*	*
3S32CB	2024	E		*	*	*
3S34CB	2023	E		*	*	*
3S34CB	2024	E		*	*	*
3S42CB	2020	E		*	*	*
3S42CB	2021	E		*	*	*
3S42CB	2022	E		*	*	*

3S42CB	2023	E		*	*	*
3S42CB	2024	E		*	*	*
3S44CB	2023	E		*	*	*
3S44CB	2024	E		*	*	*
4V14D9	2018	E		*	*	*
4V14D9	2019	E		*	*	*
4V14D9	2020	E		*	*	*
4V14D9	2021	E		*	*	*
4V14D9	2022	E		*	*	*
4V14D9	2023	E		*	*	*
4V14D9	2024	E		*	*	*
4V14D9	2025	E		*	*	*
4V14D9	2026	E		*	*	*
4V15D9	2024	E		*	*	*
4V15D9	2025	E		*	*	*
4V15D9	2026	E		*	*	*
ZG22CB	2021	E		*	*	*
ZG22CB	2022	E		*	*	*
ZG22CB	2023	E		*	*	*
ZG22CB	2024	E		*	*	*
ZG24CB	2023	E		*	*	*
ZG24CB	2024	E		*	*	*
ZV14D9	2023	E		*	*	*
ZV14D9	2024	E		*	*	*
ZV14D9	2025	E		*	*	*

Documents

Document name
master.xml

Customer statement / workshop findings

One or a combination of the following symptoms are evident

- Engine overheat warning in the DIP (Engine overheating)
- Unusual cooling fan operation at high temperatures
- P19F700: Low engine coolant temperature indicator lamp coolant too warm
- Signs of coolant in the vacuum hoses for switch valve N649

Technical background

To allow the engine coolant to heat as quickly as possible (from cold start) coolant delivery from the mechanical coolant pump is interrupted by switch valve N649

Figure 1 - Bentayga

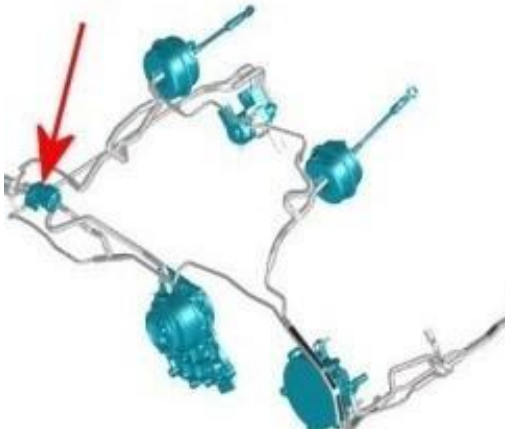


Figure 1

Figure 2 - New Continental GT/ GTC and Flying Spur



Figure 2

NOTICE

The correct operation of N649 (Figure 3) is as follows

Un-energised state (Ignition off) - Coolant pump connected to vent connection (red arrows)

Energised state (Ignition on) - Engine vacuum connection to coolant pump (yellow arrows)

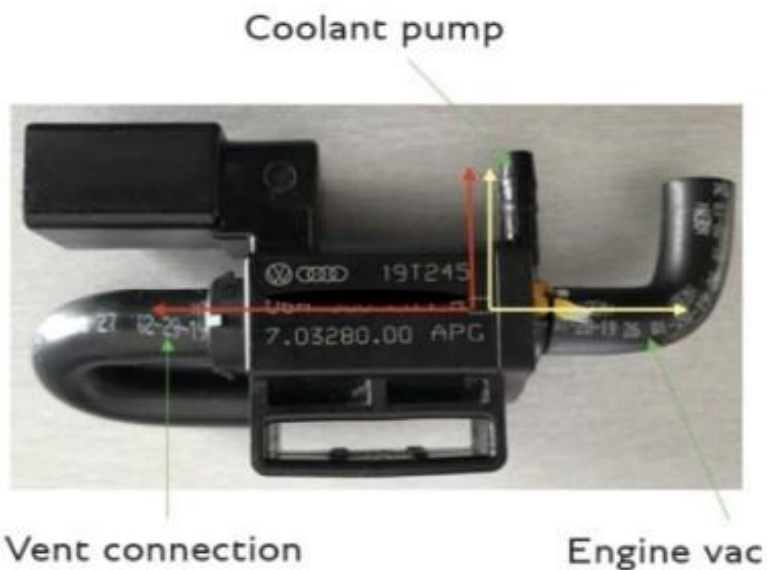


Figure 3

Revision history

2061369/13 – The warranty instructions have been revised. The damage service number has changed from 21 69 to 19 50.

Production change

Not applicable

Measure

1) Inspect the engine bay for any coolant residue

When inspecting the engine bay coolant residue can sometimes be seen around the reservoir when the engine has overheated (figure 4).



Figure 4

If this condition is found, the coolant may also be below the minimum level.



NOTICE

If coolant residue is found in the engine bay, please raise a full technical DISS query and attach a photograph of the coolant residue. If the coolant level is below the minimum level please also attach photographic evidence of this.

2) Using ODIS check to confirm that no DTC's are evident relating to low coolant or overheating issues in particular

- Save the current ODIS log online
- Take a photo of any coolant related warnings which are evident within the DIP
- Take a photo of any suspected coolant leaks

3) Perform a block (hydrocarbon) test



CAUTION

Before performing the block test ensure the test liquid is within its expiry date and is deep blue in colour

Note: Take photographs or record a video both before and after the block test.



If the test liquid changes colour the block test has failed, please raise a full technical DISS query with the photographs or videos attached.

4) Disconnect each vacuum hose from N649 - Check for traces of coolant within the hoses - Refer also to the video on the Bentley Hub referencing TPI 2061369/-

Note: Take photos or record a video of any coolant in the vacuum hoses or N649 and attach them to a new or existing DISS query for reference purposes



CAUTION

DO NOT use compressed air to attempt to remove moisture from the vacuum lines (allow the moisture to evaporate) damage to other components and unintentional disconnection of vacuum hoses can occur if compressed air is used

Should moisture be evident or N649 does not hold vacuum the symptoms described are related to a defective coolant pump. To eliminate a repeat repair the operative must conduct the remaining instructions to completion

- Referring to Rep.Gr 19 - Replace parts listed below



NOTICE

ONLY REPLACE THE COOLANT REGULATOR (THERMOSTAT) IF THE CURRENT PART NUMBER FITTED TO THE VEHICLE IS 0P2.121.115.B OR EARLIER

Coolant pump

Coolant regulator (Thermostat)

Switch valve for mechanical coolant pump N649



Ensure all procedures within the repair manual are followed regarding wheel alignment and calibrations to driver assist systems (Depending on vehicle specification)

- On completion conduct a road test to confirm the issue is resolved

Warranty accounting instructions

Warranty type 110 or 910

Damage service number 19 50

Damage code 00 17

All Models

Time to replace the switch valve for mechanical coolant pump solenoid N649

Labour operation code 19 85 19 22

Time 30 TU

Time to replace the Coolant regulator (Thermostat)

Labour operation code 19 58 19 71

Time 40 TU

Road test

Labour operation code 01 21 00 00

Time 50 TU

Time to replace the coolant pump (Depending on model)

Bentayga

87 34 19 20 - 860 TU - HVAC compressor remove/install (Includes front end module remove/install)

13 75 19 70 - 40 TU - Crank pulley remove/install

19 50 19 70 - 120 TU - Coolant pump remove/install (Includes regulator housing remove/install)

21 41 19 71 - 30 TU - Pressure pipe remove / install

24 34 19 71 - 20 TU - Throttle valve remove / install

Continental GT / C

19 08 19 20 – 120 TU - Radiator fan remove/install

19 55 19 70 - 210 TU - Regulator housing remove/install

19 50 19 70 - 110TU - Coolant pump remove/install

Flying Spur

19 08 19 20 – 120 TU - Radiator fan remove/install

19 55 19 70 - 210 TU - Regulator housing remove/install

19 50 19 70 - 110TU - Coolant pump remove/install



Due to various vehicle types and specifications the operative must refer to the Labour operations section within Elsa pro for Labour operation codes for the Wheel alignment and the alignment/calibration of all applicable Driver assist systems

Parts information

Continental GT / GTC and New Flying Spur

Description	Part number	Quantity
Switch valve N649	06H 906 283B	1

Bentayga

Description	Part number	Quantity
Switch valve N649	7PP 906 283F	1

All models

Description	Part number	Quantity
Coolant pump	0P2 121 014H	1
Coolant regulator (Thermostat)	Refer to ETKA	1
Coolant	Refer to ETKA	As required (Refer to Elsa Pro for quantities)



All part numbers listed are correct at the time of publishing, please always refer to the ETKA parts catalogue for latest part number information