

Technical product information

Topic	HVAC refrigerant leakage suspected or reports of a damp/musty smell within the cabin - Diagnosis guidelines
Market area	Australia E04 Bentley rest Asia and Australia (6E04),China 723 Volkswagen (Anhui) Automotive CO (6723),China 796 VW Import Comp. Ltd (Vico), Beijing (6796),Germany E02 Bentley rest Europe (6E02),Japan E03 Bentley Japan (6E03),Korea, (South) E08 Bentley South Korea (6E08),United Arab Emirates E06 Bentley Middle East and Africa (6E06),United Kingdom E01 Bentley UK (6E01),United States E05 Bentley USA and rest America (6E05)
Brand	Bentley
Transaction No.	2069806/5
Level	EH
Status	Approval
Release date	

New customer code

Object of complaint	Complaint type	Position
air conditioning -> heating, cooling -> automatic A/C mode	functionality -> cannot be activated	
air conditioning -> heating, cooling -> manual A/C mode	functionality -> without function / defect	
air conditioning -> cooling	component / consumables	

New workshop code

Object of complaint	Complaint type	Position
air conditioning -> cooling -> evaporator	leaks -> leaking	front
air conditioning -> cooling -> evaporator	leaks -> leaking connection	front

Vehicle data

All Models

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
***	2004	E		*	*	*
***	2005	E		*	*	*
***	2006	E		*	*	*
***	2007	E		*	*	*
***	2008	E		*	*	*
***	2009	E		*	*	*
***	2010	E		*	*	*
***	2011	E		*	*	*
***	2012	E		*	*	*
***	2013	E		*	*	*
***	2014	E		*	*	*
***	2015	E		*	*	*
***	2016	E		*	*	*
***	2017	E		*	*	*
***	2018	E		*	*	*
***	2019	E		*	*	*
***	2020	E		*	*	*
***	2021	E		*	*	*
***	2022	E		*	*	*
***	2023	E		*	*	*
***	2024	E		*	*	*

Documents

Document name
master.xml
attachment2069806.pdf
hvacword.doc

Customer statement / workshop findings

HVAC not cooling / HVAC cooling less than expected / HVAC refrigerant leakage confirmed

Or

The customer reports a damp/musty smell within the cabin **Note: For this scenario please see the pre requisites below**



- **Should no HVAC leak be evident and a damp/musty smell has been reported/identified the operative should first confirm that water is not leaking into the cabin please refer to all VIN applicable TPI's**
- **Should there be no water leaks evident, the operative should check the HVAC and body drains for blockages, in the event the drains are blocked the drains must be unblocked, once this has been completed the operative should confirm if the damp/musty smell is still evident**

Hint: Should the damp/musty smell still be evident after the drains have been cleaned and/or water leaks have been repaired, the operative should consider the smell could be related to accumulation of algae, fungus and/or mold on and around the evaporator, in this scenario the operative must raise a DISS query requesting permission to clean the HVAC system

NOTICE

NOTICE:

In the event that HVAC cleaning products are required, these MUST be sourced locally. Before using the cleaner the operative must inform the customer of the product which will be used, a neutral fragrance cleaner should be used as the customer may not like the smell of the cleaner should a fragranced product be used

Please ensure all supporting information is included within the DISS query when requesting permission to clean the HVAC system including clear photographs and/or videos showing the reported issue, should the required information not be supplied the warranty claim could be cancelled

Note: The retailer can conduct the cleaning process or a local HVAC specialist may be used to conduct the cleaning process, however this would require permission via DISS before being conducted

CAUTION

Do Not replace the evaporator for this issue, if the issue is still evident after the HVAC system has been cleaned, the operative must raise a new DISS query or respond via the existing query

NOTICE

In the event that no HVAC leaks/issues were found and the damp/musty smell was evident resulting in the requirement to clean the HVAC system, this would not be covered by warranty and must be paid by the customer as this related to a maintenance issue and not a HVAC functionality issue

Technical background

CAUTION

DO NOT UNDER ANY CIRCUMSTANCES INSTALL TRACER ADDITIVES INTO THE HVAC SYSTEM



Before conducting any work on the HVAC system the operative MUST refer to the following within Rep.Gr 87

- **Refrigeration system - Safety and general information**

It has been observed that some HVAC components have been incorrectly diagnosed and replaced, after the components were returned for inspection no faults were found

CAUTION

The leaks in these scenarios were repaired after component replacement however as the parts were not at fault the actual fix of the leak would have been resolved by replacing O-rings only

NOTICE

IMPORTANT NOTICE: Before proceeding the operative should check to confirm there are no VIN applicable HVAC/refrigerant leak related TPI's

Workshop diagnosis based on the customer complaint could be as follows:

- HVAC is not cooling or the HVAC is not effective due to leakage of the refrigerant
- Refrigerant recovered from the system shows a low volume or no refrigerant at all
- Leakage is suspected from the compressor as no other leakage source was found

! NOTICE

please refer to the examples shown below (Figures 1,2 and 3) of leaks found on the HVAC compressor



Figure 1



Figure 2



Figure 3

⚠ CAUTION
CAUTION: In the event the HVAC sniffer tool traces a HVAC leak from any of the outlets (Figure 4)



Figure 4

Or

A complaint is received that refrigerant is evident within the cabin the operative MUST first ensure that a leak is not evident within the plenum chamber or around the centre console (Figures 5 and 6) as refrigerant could be leaking into the plenum chamber/cabin and recirculated back into the cabin as this could lead to misdiagnosis and/or incorrect part replacement



Figure 5



Figure 6



In the event that leakage is suspected from the thermal expansion valve (TXV) the thermal expansion valve can be replaced when the HVAC unit is fitted within the car

- The operative must first refer to the attached flow chart before proceeding with any diagnosis or parts replacement

TIP: The attached document is for assistance in diagnosing the HVAC leak for issue relating to damp/musty smells within the cabin please refer to the Customer statement/Workshop findings section of this TPI

- Before conducting any work on the HVAC system the operative MUST refer to the following within Rep.Gr 87
- Refrigeration system - Safety and general information
- Refrigerant oil - Special instructions
- Refrigeration system - To discharge and charge

IMPORTANT TIP: When a HVAC line/connection has been opened the operative MUST always cap/bung the applicable port using a suitable cap/bung

⚠ CAUTION

In the event the evaporator or compressor is suspected to be at fault the operative must raise a Technical DISS query before conducting any further work ensuring the following is attached:

- Photograph and video of the refrigerant quantity and the actual leakage location

Or

In the event the evaporator or compressor is not suspected as being at fault and the issue can be successfully diagnosed and repaired, please raise a non technical DISS query stating the issue which was evident and how the issue was resolved

Production change

-

Measure

Refer to the Technical background section

Warranty accounting instructions

Time to conduct the initial checks within the Measure section

Warranty Type	110 or 910
Damage Service Number	87 01
Damage Code	00 50
Labour operation code	87 01 01 20
Time	50 TU



In the event that any parts are required to be replaced please refer to the warranty accounting instructions with Elsa pro this is due to the numerous vehicle specification and symptom scenarios

NOTICE

In the event that no HVAC leaks/issues were found and the damp/musty smell was evident resulting in the requirement to clean the HVAC system, this would not be covered by warranty and must be paid by the customer as this related to a maintenance issue and not a HVAC functionality issue

NOTICE

Please ensure all supporting information is included within the DISS query including clear photographs and/or videos showing the reported issue, should the required information not be supplied the warranty claim in some cases could be cancelled

NOTICE

All HVAC related claims will be checked by the Warranty team, any claims which are not deemed as applicable will be cancelled

– In the event that parts are replaced parts without the required attachments or the parts are found to be not at fault warranty claims will be liable for rejection

Parts information

Refer to the ETKA parts catalogue for any additional parts requirements

NOTICE

In the event that HVAC cleaning products are required, these **MUST** be sourced locally. Before using the cleaner the operative must inform the customer of the product which will be used, a neutral fragrance cleaner should be used as the customer may not like the smell of the cleaner should a fragranced product be used

