Technical product information

Topic	Misfiring, W12 TSI - Excessive carbon build up cylinder leakage
Market area	Bentley: worldwide (2WBE)
Brand	Bentley
Transaction No.	2049586/11
Level	EH
Status	Released for publishing
Release date	09-Nov-2022

New customer code

Object of complaint	Complaint type	Position
information, navigation, communication, entertainment -> symbolic fault indicators -> emission control fault indicator	functionality -> activates	
engine -> engine operation -> power development -> engine power	functionality -> uneven	

Vehicle data

W12 Bentayga - New Continental GT/C - New Flying Spur

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
3S31BB	2018	E		*	*	*
3S31BB	2019	E		*	*	*
3S31BB	2020	E		*	*	*
3S31BB	2021	E		*	*	*
3S31BB	2022	E		*	*	*
3S31BB	2023	E		*	*	*
3S31EB	2021	E		*	*	*
3S31EB	2022	E		*	*	*
3S31EB	2023	E		*	*	*
3S41BB	2018	E		*	*	*
3S41BB	2019	E		*	*	*
3S41BB	2020	E		*	*	*
3S41BB	2021	E		*	*	*
3S41BB	2022	E		*	*	*
3S41BB	2023	E		*	*	*
3S41EB	2021	E		*	*	*
3S41EB	2022	E		*	*	*
3S41EB	2023	E		*	*	*
4V14A9	2017	E		*	*	*
4V14A9	2018	E		*	*	*
4V14A9	2019	E		*	*	*
4V14A9	2020	E		*	*	*
4V14A9	2021	E		*	*	*
4V14A9	2022	E		*	*	*
4V14A9	2023	E		*	*	*
4V14G9	2020	E		*	*	*
4V14G9	2021	E		*	*	*
4V14G9	2022	E		*	*	*
4V14G9	2023	E		*	*	*
ZG21BB	2020	E		*	*	*
ZG21BB	2021	E		*	*	*
ZG21BB	2022	E		*	*	*
ZG21BB	2023	E		*	*	*
ZG26BB	2023	E		*	*	*

Documents

Document name
master.xml

Customer statement / workshop findings

Customer statement: Emission control warning signal displayed, engine misfire

Workshop findings: Event entries in engine control unit relating to cylinder misfires – excessive carbon build up to leading to cylinder leakage and spark plug foul

Technical background

Deviations in the country-specific fuel specifications can lead to carbon deposits on the injectors. If pronounced these deposits can lead to spark plug fouling, cylinder leakage and fouled injectors all influencing combustion in the cylinder. As a result the above event entries are logged in the engine control unit

Production change

None

Measure

1. Follow the Misfire best practice TPI 2051187 in order to confirm that the root cause of the misfire is excessive cylinder carbonisation leading to excessive cylinder leakage/fouling.

2. Raise a DISS query with your findings, this action is an essential element of the investigation

3. Ensure cylinder compressions are tested and recorded, this action is an essential element of the investigation

4. Ensure cylinder leakage is checked and recorded, this action is an essential element of the investigation

5. From two of the cylinders that have recorded misfires take borescope images of each inlet valve stem

6. Note: The following operations should only be carried out if excessive carbonisation is confirmed

7. Check and if necessary correct all engine and transmission fluid levels

8. Fill fuel tank

9. Add the relevant dose of G17 Fuel additive to the fuel load as specified on the bottle (refer to ETKA)

10. Run the engine at idle for 8 hours – Periodically check to ensure engine coolant temperature is within safe limits – do not allow engine to overheat

11. Repeat operations 3 through 5 and compare results if improvement is noted repair is complete

12. If no or little improvement is recorded then the condition of the spark plugs and low pressure injectors will need to be confirmed and replaced where necessary

13. If this repair procedure is not successful report back via DISS query

14. On successful completion check and if required drain any excess oil from the intercoolers reference TPI 2050222

15. Before returning vehicle to customer top up to fill the fuel tank

Warranty accounting instructions

To carry out the Injector cleaning process (points 8-10)

Warranty type	110 or 910
Labour operation code	24 40 29 00
Damage Service Number	24 40
Damage Code	00 10
Time	20 TU

Refer to ElsaPro for all other labour operation times

Parts information

Part number	Description	Quantity
Refer to ETKA	Additive	As required