Technical Service Bulletin

Topic	Misfiring, W12 TSI - Excessive carbon build up cylinder leakage
Market area	Bentley: worldwide (2WBE)
Brand	Bentley
Transaction No.	2049586/4
Level	EH
Status	Released for publishing
Release date	May 20, 2019

New customer code

Object of complaint	Complaint type	Position
information, navigation, communication, entertainment -> malfunction display symbols -> emissions control malfunction display	functionality -> activates	
engine -> engine operation -> engine output characteristic -> engine output	functionality -> irregular	

Vehicle data

W12 Bentayga - New Continental GT - New Continental GTC

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
3S3*	2018	E		*	*	*
3S3*	2019	E		*	*	*
3S3*	2020	E		*	*	*
3S4*	2019	E		*	*	*
3S4*	2020	E		*	*	*
4V14A9	2017	E		*	*	*
4V14A9	2018	E		*	*	*
4V14A9	2019	E		*	*	*
4V14A9	2020	E		*	*	*

Documents

Document name
master.xml

Condition

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 Solution

None

Service

1. Follow DISS best practice, 'POOR ENGINE RUNNING COMPLAINTS (MISFIRES),' 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, this action is part of DISS best practice but is an essential element of the investigation
3. Ensure cylinder compressions are tested and recorded, this action is part of DISS best practice but is an essential element of the investigation
4. Ensure cylinder leakage is checked and recorded, this action is part of DISS best practice but 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 Fuel additive (part number G001770A2) to the fuel load as specified on the bottle
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

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

Required Parts and Tools

Part number	Description	Quantity
G001770A2*	Additive	As required

*Part number correct at time of TPI publication