

Technical product information

Topic	Misfiring, W12 TSI - Excessive carbon build up cylinder leakage
Market area	Bentley: worldwide (2WBE)
Brand	Bentley
Transaction No.	2049586/2
Level	EH
Status	Released for publishing
Release date	07-Jun-2018

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 TSI engine vehicles

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
3S3*	2018	E		*	*	*
4V14A*	2018	E		*	*	*
4V14A*	2019	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 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 two 90 ml doses of Fuel additive (part number G001770A2) to the fuel load
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

Parts information

Part number	Description	Quantity
G001770A2	Additive	2