Technical product information

Topic	Bentayga - Engine oil pressure warning
Market area	Bentley: worldwide (2WBE),Hongkong-Macau (5HK)
Brand	Bentley
Transaction No.	2045686/2
Level	EH
Status	Approval
Release date	

Event memory entries

Diagnostic address	Event memory entry	Fault type	Fault status
0001 - Engine Control Module 1	P15AA00: Engine oil pressure Lower limit not reached		static
0001 - Engine Control Module 1	P15AA00: Engine oil pressure Lower limit not reached		Intermittent

New customer code

Object of complaint	Complaint type	Position
vehicle service -> vehicle diagnosis -> guided fault finding	control units, services -> with event log entry	
engine -> lubrication system	electrics	
information, navigation, communication, entertainment -> instrument displays -> engine oil pressure indicator	functionality -> increases	

Vehicle data

Bentayga

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
4V1*	2017	E		*	*	*
4V1*	2018	E		*	*	*

Chassis numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SJA	*	*	*	H	C	000001	021025		

Documents

Document name
master.xml

Customer statement / workshop findings

Low oil pressure warning illuminated in the driver instrument panel as shown in Figure 1 and event code P15AA00 is evident in one or both of the Engine Control Modules

Figure 1

Technical background

One failure mode for the oil control valve (item 1 Figure 2) results in low engine oil pressure when engine rpm is above 3500 and as with any low oil pressure occurrence the *Oil pressure too low* warning will be displayed in the driver instrument panel. Obviously this warning is legitimate and when it is the case that the oil control valve has failed then a replacement valve will rectify the issue, but other causes of low engine oil pressure will trigger this warning and these should not be overlooked. It is therefore critical that the root cause of the low oil pressure is identified.

Production change

Not applicable

Measure

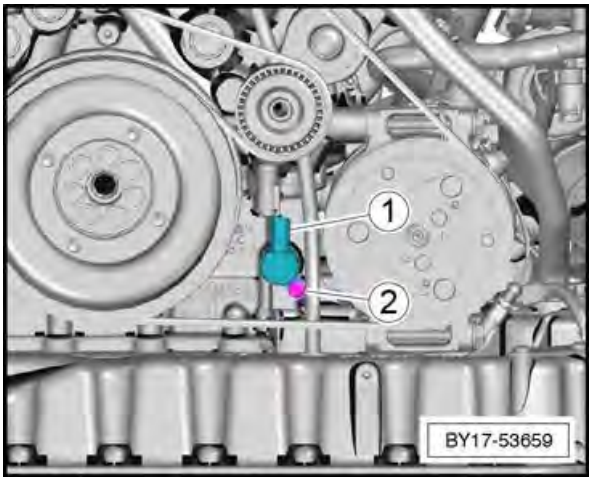

Figure 2

In the event of *Oil pressure too low* warning displayed in the driver instrument panel as shown in Figure 1 and event code P15AA00 evident in one or both of the engine control modules then carry out the following checks to confirm the diagnosis is correct before considering replacing the oil control valve (item 1 Figure 2)

Primary Checks

1. Confirm engine oil level is correct, if not then correct and retest car
2. Drain and inspect engine oil and engine oil filter for debris (Refill with new engine oil and fit new engine oil filter). If debris is present investigate cause. If required raise a DISS concern for Product Support assistance.
3. Check the function of the suspect solenoid by using the following process:

▪

The oil control valve is switched (off) at approximately 3500rpm to give a substantial and affectively instant increase oil pressure to meet expected engine demand. When this is functioning correctly the increase in oil pressure can be observed in the measured values as an instant increase in pressure by at least 100kPa.

Using Bentley diagnostic tool access Engine Control Module 1 (01)

Within engine control module select the following measured values

- Oil temperature in sump IDE06570
- Oil pressure actual value IDE02742
- Engine speed IDE00021

Drive the vehicle in manual mode in order to keep the vehicle speed down whilst a colleague monitors the above pre-selected measured values

With the oil temperature in the sump below 100°c observe the oil pressure value change as the engine rpm increases through approximately 3500 rpm. If the oil pressure significantly rises as the engine rpm passes through 3500 rpm then the oil control valve is functioning correctly. If an instant raise is not seen and the *Oil pressure too low* warning is displayed in the driver instrument panel then replace the oil control valve with new part, part number 07P115243. Reference workshop manual Rep.Gr.17 - Valve for oil pressure control (N428) - To remove and fit.

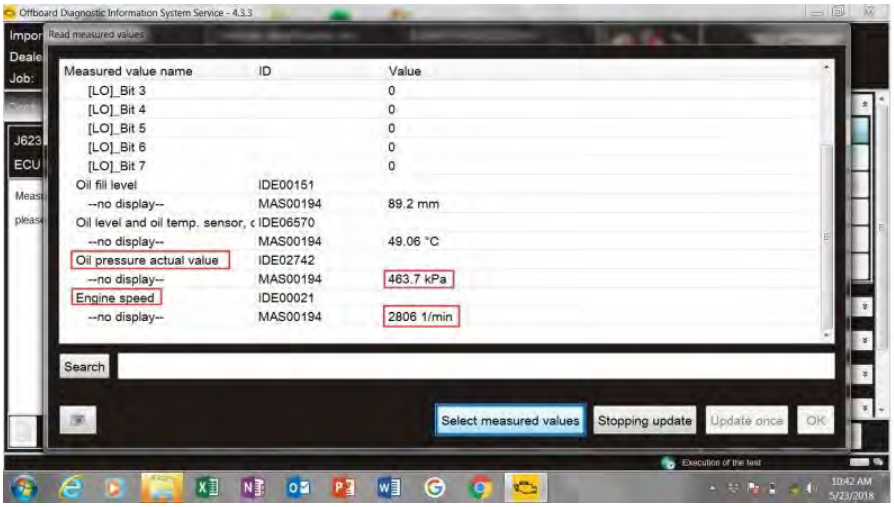

Figure 3

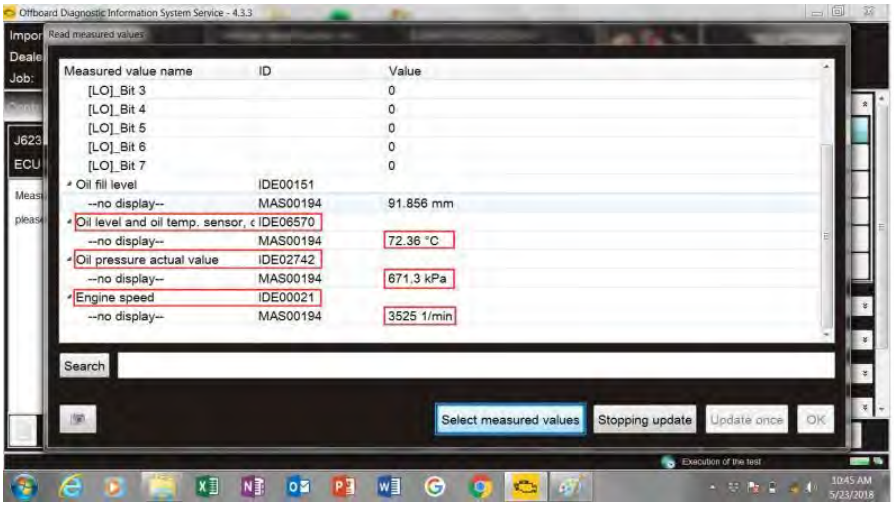

Figure 4

Figure 3 displays a 483kPa reading just below the 3500 rpm (2806 1/min) switching point and figure 4 displays the instant and substantial increase to 671kPa observed on a correctly functioning valve as engine rpm raises through 3500 (3525 1/min). Note: the pressure readings shown in the measured value are 'absolute'

If as a result of the above tests no root cause is found then raise a DISS query with Product Support

Parts information

Part number	Description	Quantity
07P115243	W12 oil control valve	1