

Technical product information

Topic	Bentayga V8 Kovomo and V6 (Hybrid) - Fuel Pressure Regulation
Market area	Russische Föderation (5RU),Australia E04 Bentley rest Asia and Australia (6E04),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.	2062080/5
Level	EH
Status	Approval
Release date	

New customer code

Object of complaint	Complaint type	Position
information, navigation, communication, entertainment -> symbolic fault indicators -> fault indicator for fuel system	functionality -> activates	
information, navigation, communication, entertainment -> symbolic fault indicators -> emission control system fault indicator	functionality -> activates	

New workshop code

Object of complaint	Complaint type	Position
engine -> fuel supply -> low-pressure fuel pump (tank)	functionality -> uneven	
engine -> operation, engine control -> engine control unit	functionality -> misfire	
engine -> operation, engine control -> engine control unit	electrics -> ground connection damaged	
engine -> operation, engine control -> engine control unit	control units, services -> with event log entry	
engine -> operation, engine control -> engine control unit	control units, services -> measured value too high	
engine -> operation, engine control -> engine control unit	control units, services -> error message	

Vehicle data

Bentayga - V8 Kovomo and V6 (Hybrid)

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
4V14D9	2018	E		*	*	*
4V14D9	2019	E		*	*	*
4V14D9	2020	E		*	*	*
4V14D9	2021	E		*	*	*
4V14D9	2022	E		*	*	*
4V14F9	2019	E		*	*	*
4V14F9	2020	E		*	*	*
4V14F9	2021	E		*	*	*
4V14F9	2022	E		*	*	*

Chas is numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SJA	*	*	*	*	C	014527	039999		
SJA	*	*	*	N	C	011001	012885		

Documents

Document name
master.xml
measurement.pdf

Customer statement / workshop findings

Check Engine Lamp illuminated within the Driver Instrument Panel (DIP) with one or multiple DTC's as detailed below:

- "P310B00 with symptom code 2636 - Low Fuel Pressure Regulation" Low Fuel Pressure Regulation"
- "P014800 Fuel DeliverError"
- "P019100 Fuel Rail pressure Sensor 'A' Circuit Range/Performance
- "Misfire" DTC's

There may be multiple DTC's and symptoms present due to fuel pressure regulation or fuel supply issues

Technical background

In the event the customer complaint relates to the following:

- Customer experienced poor start up - proceed with the remaining instructions

NOTE: The operative must gather information regarding the Customer experience regarding when the issue occurred for example: Pre-conditions, warning lights and driveability at the time that the issue occurred, details when the vehicle was last refuelled and the grade of fuel used

The operative must now use the information contained within the "Measure" section to determine the correct analysis and repair procedure.

Production change

In the event the symptom is as described and the VIN is not within the applicable range (see TPI header data/chassis numbers) please raise a DISS query and await feedback before conducting any further work

Measure

Check Engine Lamp Illumination with DTC P310B00 and symptom code 2636 - Engine Running Concerns, Fuel system issues

- "P310B00 Low Fuel Pressure Regulation – symptom code 2636"
- "P014800 Fuel DeliverError"
- "P019100 Fuel Rail pressure Sensor 'A' Circuit Range/Performance
- "Misfire" DTC's

1) If not already done, raise a DISS query.

2) Check "Low fuel pressure, specified value" and "Fuel low pressure, actual value" within the fault memory, refer to ECU "01 – Engine Control Module 1" - From "Extended ambient conditions" note the values of the "Low fuel pressure, specified value" and "Fuel low pressure, actual value" as shown in Figure 1.

Diagnostic protocol - Internet Explorer

Address: 0001 System name: 01 - Engine Control Module 1 Protocol variant: UDS/ISOTP (Ereignisse: 7)

+ Identification:

- Event memory entries (Data source: Vehicle):

Entry in fault memory

Number:	P310B00: Low Fuel Pressure regulation Fuel pressure outside specification
Fault type 2:	passive/sporadic
Symptom:	2636
Status:	01100000

+ Standard ambient conditions:

- Extended ambient conditions:

Engine speed	1682.0	1/min
Normed load value	0.0	%
Vehicle speed	116	km/h
Coolant temperature	98	°C
Intake air temperature	17	°C
Ambient air pressure	1000	mbar
Voltage terminal 30	13.04	V
Dynamic environmental data	20 96 24 11 CE 15 7C 11 C8 0F 05 11 C9 01 12 11 A4 3A F2 12 8A B8 15 9F 80 D8 15 A0 81 D0	
Unlearning counter according OBD	36	
Low fuel pressure, specified value	550.0	kPa
Fuel low pressure, actual value	384.5	kPa
Adaptation of Fuel Pump (FP)	27.4	kPa
Fuel pump, specified value	23.025513	%
Fuel temperature	90.0	°C
Fuel high pressure, actual value	16.492	MPa
Fuel pressure rail 2	16.616	MPa

Entry in fault memory

Number:	P014800: Fuel Delivery Error
Fault type 2:	active/static
Symptom:	4178
Status:	11101101

+ Standard ambient conditions:

Figure 1

- If not already done, raise a DISS query, add the following results / information.

Note the “Low fuel pressure, specified value” and “Fuel low pressure, actual value” on the DISS query.

- Using ODIS *Measured values* check low fuel pressure when the vehicle is starting or idling – this should normally be 400 – 800 kPa
- Check the fuel system pressure at the fuel tank outlet with a pressure gauge, this should be the same as the figure measured with ODIS or approximately 100 kPa lower if the gauge is relative to atmospheric pressure
- After switching the engine off the pressure within the fuel system should remain at 400 kPa or above for at least ten minutes
- Check the fuel pump ECU electrical earth point condition, check for debris, cleanliness and tightness of earth point nut - if any issues were found - Rectify as required
- Record results on the DISS query, attach clear photograph(s)
- Check all fuel pump ECU connector pins for signs of contamination or damage. Check for any other concern that may lead to poor retention, high resistance or poor connection. Ensure issues noted during this inspection are corrected

3) Fit a new fuel pump control module with the part number of 4M4 906 121B

- Clear any fault codes that may be present and conduct a short road test, make a note of any fault codes that are logged during the road test
- Should any issues be evident from any previous technical checks/inspection or for example:

DTC's logged during the road test

The issue can be reproduced

Repeat visit for the same issue

Fuel level shown in the DIP does match the actual amount of fuel which is in the tank (as applicable MWB's)

- The Operative MUST add any relevant information to the DISS query

Or

- Should no issues be evident, the car can be returned to the customer

Warranty accounting instructions

Warranty type - 110 or 910

Damage Service Number 20 66

Damage Code 01 00

Time to remove and replace the fuel pump control unit (J538)

Labour Operation Code 20 70 19 50

Time 10 TU

Self Diagnosis

Labour Operation Code 01 50 00 00

Time 30 TU - Time taken from diagnostic log (Maximum 30TU)

Time to remove and refit the rear seats (4 seat)

Labour Operation Code 68 16 19 01

Time 190 TU

Time to remove and refit the rear seats (5 seat)

Labour Operation Code 72 48 20 05

Time 100 TU

Time to remove and refit the seat sill panel

Labour Operation Code 68 05 19 00

Time 20 TU

Time to remove and refit the boot side trim panel

Labour Operation Code 70 03 19 00

Time 40 TU

Parts information

Fuel pump control unit - 4M4 906 121B (x1)

Measurement Display Name	Value	ECU
Vehicle speed		Dashboard 0017
Engine speed		Dashboard 0017
Date		Dashboard 0017
Voltage terminal 30		Dashboard 0017
Coolant temperature		Dashboard 0017
Vehicle Distance Driven		EMS 0001
Engine speed		EMS 0001
Vehicle speed		EMS 0001
Fuel tank fill level		EMS 0001
Number of driving cycles since erasing DTC memory		EMS 0001
Number of manual engine starts		EMS 0001
Number of automatic engine starts		EMS 0001
Fuel consumption since DTC memory last erased		EMS 0001
Fuel, tank fill level		EMS 0001
Fuel high pressure, actual value		EMS 0001
Fuel temperature		EMS 0001
Terminal 15 status		Gateway 0019
Voltage terminal 30		Gateway 0019
Start-stop enabling		Gateway 0019
Start-stop conditions		Gateway 0019
Battery current		Gateway 0019
Battery voltage		Gateway 0019
Generator current		Gateway 0019
Generator DF signal		Gateway 0019
Generator voltage		Gateway 0019
12 V elec. system, error status		Gateway 0019