

Technical product information

Topic	W12 Engine management light on - Turbocharger speed sensor DTC's stored
Market area	Bentley: worldwide (2WBE)
Brand	Bentley
Transaction No.	2053348/9
Level	EH
Status	Released for publishing
Release date	09-Nov-2022

Event memory entries

Diagnostic address	Event memory entry	Fault type	Fault status
0001 - Engine electronics	P257900: Turbocharger Speed Sensor "A" Circuit Range/Performance		static
0011 - Engine Electronics 2	P257900: Turbocharger Speed Sensor "A" Circuit Range/Performance		static
0001 - Engine electronics	P259400: Turbocharger Speed Sensor "B" Circuit Range/Performance		static
0011 - Engine Electronics 2	P259400: Turbocharger Speed Sensor "B" Circuit Range/Performance		static
0001 - Engine electronics	P259500: Turbocharger Speed Sensor "B" Circuit Low		static
0011 - Engine Electronics 2	P259500: Turbocharger Speed Sensor "B" Circuit Low		static
0001 - Engine electronics	P259600: Turbocharger Speed Sensor "B" Circuit High		static
0011 - Engine Electronics 2	P259600: Turbocharger Speed Sensor "B" Circuit High		static

New customer code

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

Vehicle data

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

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	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:

- Engine management light is evident within the DIP

Workshop findings:

- Engine management light is evident within the DIP

DTC P259400 - Turbocharger Speed Sensor "B" - Circuit Range/Performance are stored within address 01 - Engine Control Module 1 or address 11 - Engine Control Module 2 could be evident with the following symptom codes

- 23179 (only)

Or

- 23179 with 32790

Or

- 32790 (only)

Or

One or a combination of the following DTC's may also be evident (with no specific symptom codes)

- P259500: Turbocharger Speed Sensor "B" - Circuit low
- P259600: Turbocharger Speed Sensor "B" - Circuit High
- P257900: Turbocharger Speed Sensor "A" - Circuit Range/Performance

Technical background

Refer to the instructions within the Measure section of this TPI ensuring the correct method of repair is followed depending on the DTC and symptom code

Revision history

2053348/6

- Additional DTC's/symptom codes added within the Measure section

2053348/7

- Warranty accounting instructions are now included
- Measure section amended to include detail regarding the requirement to raise a Technical DISS query (depending on symptom)

Production change

Not applicable

Measure

▪

The operative should lease with the customer to clarify the driving conditions in which the issue occurs, see examples below:

- *Duration the vehicle was driven before the issue was evident*
- *Throttle load (harsh or light acceleration)*
- *What gradient they were driving on (uphill/downhill/flat road surface etc)*
- *Speed of the vehicle when the issue occurred*
- *Road conditions for example: City driving with traffic queues*

Comments



IMPORTANT: The operative should include the customer feedback to a new or existing Technical DISS query

[P259400: Turbocharger Speed Sensor "B" – Circuit Range/Performance with the following symptom codes](#)

- 23179

(only) Or

- 23179 and 32790

Or

- 32790 (only)

NOTE: Step 1 only applies to New Continental GT/GTC and New Flying Spur

1) Referring to Rep.Gr 24 - Remove the air filter top cover New Continental GT/GTC and New Flying Spur Only

- Inspect for damage or missing components NOTE: The example in Figure 1 shows an air filter box divider that has become detached, causing DTC-P259400: Turbocharger Speed Sensor "B" - Circuit Range/Performance
- Reattach the divider and retest the vehicle if this particular fault is found



Figure 1

- Should no issues be found within the air filter box please continue with the remaining instructions from step 2

2) All Models

Road test the vehicle to attempt to reproduce the complaint TIP: Carry out an extensive road test if required

IMPORTANT: Drive the vehicle under the same driving conditions as when the customer experienced the complaint, using light and hard acceleration cycles

3) Referring to Rep.Gr 24 - Air/vacuum system - Leak diagnostic process using smoke machine - Check the intake and exhaust systems for air leaks

NOTE: If a leak is detected the operative should feedback the findings via a new or existing Technical DISS query, once a response is received the operative should rectify the leak as required

4) Carry out all applicable test plans for the affected Turbocharger speed sensor, if wiring checks are suggested the operative must also carry out the following manual wiring checks for the affected sensor:

- Open circuit
- Short circuit to ground

- Short circuit to B+
- Short circuit of the wires to each other

If the wiring tests are to specification refer to the information as below depending on the DTC which is evident:

[P259400: Turbocharger Speed Sensor "B" Circuit Range/Performance with symptom code 23179 \(only\)](#)

Question: Is this the first complaint received regarding P259400 with symptom code 23179?

NO - Raise a new or respond via the existing Technical DISS query

HINT: To assist with further diagnosis the operative must include all required information, including -

- Current ODIS log
- Include all relevant information relating to the failure mode
- Photographs or videos of any issues found

YES - Clear the applicable DTC and retest to confirm if the issue has been rectified (Parts replacement not required). If issue repeats, raise a new or respond via existing Technical DISS query

IMPORTANT: Drive the vehicle under the same driving conditions as when the customer experienced the complaint, using light and hard acceleration cycles

NOTE: Should any of the following DTC's and symptom codes be evident Referring to Rep.Gr 21 - Replace the applicable Turbocharger speed sensor

HINT: Please ensure that the instructions within the applicable Rep.Gr are strictly followed including the replacement of any single use items

NOTE: Please also ensure that for Betayga models the alignment of applicable driver assist systems is conducted including four wheel alignment (Depending on vehicle specification)

- P259400: Turbocharger Speed Sensor "B" Circuit Range/Performance with symptom code 23179 and 32790
- P259400: Turbocharger Speed Sensor "B" Circuit Range/Performance with symptom code 32790 (only)
- P259500: Turbocharger Speed Sensor "B" Circuit Low
- P259600: Turbocharger Speed Sensor "B" Circuit High
- P257900: Turbocharger Speed Sensor "A" Circuit Range/Performance

IMPORTANT: In the event the issue is still evident after replacing the applicable Turbocharger speed sensor, the operative should raise a new or respond via the existing Technical DISS query and await feedback before conducting any further work

When replacing the Turbocharger speed sensor take extreme care not to damage the component, DO NOT discard of the sensor as it may be requested back for analysis

IMPORTANT: Please ensure the new or existing Technical DISS query detailing the method of repair is submitted

Warranty accounting instructions

Warranty type	110 or 910
Damage service number	21 59
Damage code	00 40

Bentayga

Time to replace Bank 1 Turbocharger speed sensor (G688)

Labour operation code	21 59 19 02
Time	960 TU's

Time to replace Bank 2 Turbocharger speed sensor (G689)

Labour operation code	21 59 19 01
Time	540 TU's

Alignment of applicable driver assist systems (Depending on vehicle specification)

- Vehicle front + rear measured wheel alignment checked - 44 95 03 00 - 110 TU

- Rear wheel camber adjust - 44 94 15 50 - 30 TU
- Rear wheel track adjust - 44 93 15 50 - 30 TU
- Front wheel camber adjust - 44 89 15 50 - 40 TU
- Front wheel track adjust - 44 88 15 50 - 20 TU
- (ACC) - Radar sensor checked + adjusted - 91 63 05 51 - 30 TU
- Overhead view camera adjusted - 90 83 15 00 - 40 TU
- Driver assist camera adjusted - 96 38 15 50 - 120 TU
- Control unit for (Lane change assist) adjusted - 96 35 15 00 - 50 TU
- Night vision system calibration - 90 80 15 50 - 40 TU
- Headlamps to adjust - 94 15 16 00 20 TU

New Continental GT/GTC and New Flying Spur

Time to conduct air filter box check

Labour operation code 24 24 01 00 (Use 99 index until 29/09/22)
 Time 10 TU's

Time to replace Bank 1 Turbocharger speed sensor (G688)

Labour operation code 21 59 19 02
 Time 160 TU's

Time to replace Bank 2 Turbocharger speed sensor (G689)

Labour operation code 21 59 19 01
 Time 160 TU's

All Models

Road test

Labour operation code 01 21 00 00
 Time 50 TU's

Wiring integrity checks

Labour operation code 97 09 01 00
 Time Must not exceed 50 TU's

Parts information

Refer to the ETKA parts catalogue