

Technical Service Bulletin

Topic	Bentayga - Stop Start System - Intermittent Failure
Market area	Bentley: worldwide (2WBE),Hongkong-Macau (5HK)
Brand	Bentley
Transaction No.	2048860/2
Level	EH
Status	Released for publishing
Release date	May 20, 2019

New customer code

Object of complaint	Complaint type	Position
engine -> Start/Stop system -> engine stop via Start/Stop system	functionality -> faulty	
engine -> Start/Stop system -> engine start via Start/Stop system	functionality -> faulty	
engine -> Start/Stop system -> engine stop via Start/Stop system	functionality -> does not switch off/disconnect	
engine -> Start/Stop system -> engine start via Start/Stop system	functionality -> no function	
engine -> Start/Stop system -> engine start via Start/Stop system	functionality -> does not switch on/connect	
engine -> Start/Stop system -> engine start via Start/Stop system	functionality -> does not switch off/disconnect	
engine -> Start/Stop system -> engine stop via Start/Stop system -> Start/Stop engine start - neutral gear detection	functionality -> does not switch off/disconnect	
information, navigation, communication, entertainment -> indicator display symbols -> Start/Stop system indicator display	functionality -> activates	
information, navigation, communication, entertainment -> indicator display symbols -> Start/Stop system indicator display	functionality -> does not activate	
information, navigation, communication, entertainment -> indicator display symbols -> Start/Stop system indicator display	functionality -> activates without cause	
information, navigation, communication, entertainment -> indicator display symbols -> Start/Stop system indicator display	functionality -> does not switch off/disconnect	
engine -> Start/Stop system -> engine stop via Start/Stop system	functionality -> no function	
engine -> Start/Stop system -> engine stop via Start/Stop system	functionality -> operation sequence incorrect	

New workshop code

Object of complaint	Complaint type	Position
entire vehicle -> assemblies -> vehicle	design -> functionality design error	

Vehicle data

Bentayga

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
4V1*	2017	E		*	*	*
4V1*	2018	E		*	*	*
4V1*	2019	E		*	*	*
4V1*	2020	E		*	*	*

Chassis numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SJA	*	*	*	*	C	000001	999999		

Documents

Document name
master.xml
startstop.pdf
startstop.docx

Condition

"Start/Stop" system intermittently fails to operate.

The engine does not always stop or start automatically.

The following symbol is displayed on Driver Instrument Panel.



No faults relating to the "Start/Stop" system are present.

Technical Background

There are a number of factors that prevent the "Start/Stop" system from automatically switching the engine off or on although the driver may expect it.

It is possible that the "Start/Stop" system may start the engine automatically although the driver may not expect it.

Start Stop system Overview

The "Start-Stop" system can help to reduce fuel consumption and CO2 emissions.

The "Start-Stop" system is automatically activated with each ignition cycle and will switch off the engine automatically when the vehicle stops, e.g. at traffic lights.

The ignition remains on during this stop phase and the engine is automatically started on demand when the vehicle is ready to move off.

For the Start-Stop system to function, the following basic conditions must be met:

- The driver's door must be closed.
- The driver's safety belt must be fastened.
- The bonnet must be closed.
- The vehicle must have been moving at over 2 mph (4 km/h) since the last stop.
- The automatic gearbox must be in **D**-Drive, **N**-Neutral or **P**-Park.

The "Start-Stop" system is **not** available when any of the following Drive Dynamics modes have been selected: Sport, Snow & Grass, Dirt & Gravel, Mud & Trail, Sand.

The "Start-Stop" system may also be inactive when the **Custom** profile has been selected, depending upon the settings applied to the **Custom** profile.

The "Start-Stop" system will be deactivated if any of the following occur: Hill Descent Control, Electronic Stability Control (ESC) or All-Terrain mode are activated, also when the Electronic Stability Control (ESC) system is switched off.

The "Start-Stop" will only be active if the automatic gearbox is in **D**-Drive, **N**-Neutral, or **P**-Park.

The engine will start if the gear selector lever is moved to position **R**-Reverse during a stop phase.

It is possible to control whether or not the engine is switched off automatically by varying the amount of pressure on the brake pedal. For instance, when braking gently in stop-and-go traffic, the engine will remain on while the vehicle is at a standstill. As soon as the brake pedal is pressed harder, the engine will switch off.


The "Start-Stop" feature can start the engine if you leave the vehicle during a stop phase, provided you have left the vehicle for less than 30 seconds, and the following conditions have been met:

- The driver's door is closed, the driver's safety belt is fastened and the brake pedal is depressed,
- or:
- The driver's door is closed, the brake pedal is depressed and a gear is engaged.
- Depress the brake pedal during a stop phase to prevent the vehicle from moving.
- If the engine "Start/Stop" button is pressed during a stop phase, the ignition will be switched off.

System limitations

The "Start-Stop" feature will behave differently depending upon the operating conditions of the vehicle.



If the symbol  is shown one or more of the following may apply.

- The engine has not reached the minimum temperature required for the Start-Stop system to operate.
- The temperature selected on the climate control system has not been reached.
- The exterior temperature is very high or low.
- The windscreen is being defrosted.
- The Park Assist function is switched on.
- The battery charge is too low.

- The steering wheel is close to full lock or the vehicle is being steered.
- **R**-Reverse has been selected.
- The vehicle is on a steep gradient.
- The vehicle is at high altitude.

The engine will start automatically during a stop phase if:

- The vehicle starts to roll (e.g. on a steep gradient).
- The interior temperature deviates from the climate control system setting.
- The windscreen is being defrosted.
- The brake pedal is pressed several times in succession.
- The battery charge drops to an insufficient level.
- Electrical power consumption is high.

The engine will switch off when the conditions for Start-Stop mode are met.

To prevent the battery from being discharged, the ignition will be switched off automatically if:

- The Start-Stop system has switched off the engine,

and:

- The vehicle is stationary,

and:

- The driver has left the vehicle and the engine has not been restarted within approximately 30 seconds.

The message "Ignition will be switched off automatically" will be displayed in the driver instrument panel and the side lights will be switched on instead of the dipped headlights.

After approximately 30 minutes, or when the vehicle is locked, the side lights will be switched off.

The ignition is also switched off if the vehicle is locked from the outside during a stop phase. If the Start-Stop system has not stopped the engine or if you have switched off the Start-Stop system manually, the engine will continue running and the ignition will not be switched off automatically.

Important

If **D**-Drive or **N**-Neutral are selected after selecting **R**-Reverse, the vehicle must have been moving at over 6 mph (10 km/h) before the system can switch off the engine again.

Although the engine is switched off shortly before the vehicle comes to a halt, the foot brake servo and power steering will still function.

Production Solution

Not applicable.

Service

With a Customer complaint of incorrect "Start/Stop" functionality, use Guided Fault Finding to interrogate for Diagnostic Trouble Codes (DTC's) or any concern that may be influencing the "Start/Stop" system.

If relevant DTC's are not present and there are no other factors stopping the "Stop/Start" system from operating correctly, then the customer should be informed that the "Stop/Start" system is operating correctly, any variation in "Start/Stop" operation is due to the complex nature of the system and conditions that may affect its functionality.

A comprehensive list showing the various systems that may influence the "Start/Stop" system is attached.