

## Technical product information

<b>Topic</b>	Bentayga deployable sill step malfunction
<b>Market area</b>	Bentley: worldwide (2WBE),Hongkong-Macau (5HK)
<b>Brand</b>	Bentley
<b>Transaction No.</b>	2044536/5
<b>Level</b>	EH
<b>Status</b>	Approval
<b>Release date</b>	

### New customer code

Object of complaint	Complaint type	Position
whole vehicle -> accessories -> sill tube	component / consumables -> cracked/broken	
body fixtures and fittings -> special vehicles: equipment -> entry step for door aperture	functionality -> defective function sequence	

### New workshop code

Object of complaint	Complaint type	Position
body fixtures and fittings -> special vehicles: equipment -> entry step for door aperture	component / consumables -> deformed	front left
body fixtures and fittings -> special vehicles: equipment -> entry step for door aperture	component / consumables -> deformed	rear left
body fixtures and fittings -> special vehicles: equipment -> entry step for door aperture	component / consumables -> deformed	front right
body fixtures and fittings -> special vehicles: equipment -> entry step for door aperture	component / consumables -> deformed	rear right

## Vehicle data

### Bentayga

#### Sales types

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

## Documents

Document name
<a href="#">master.xml</a>
<a href="#">led-diagnostic.pdf</a>

## Customer statement / workshop findings

Deployable sill step accessory malfunctions.

## Technical background

This TPI is specifically written to record key information, reach a logical diagnosis and ultimately a problem resolution when presented with a deployable sill step malfunction. Please report via DISS all findings during your investigation and rectification process.

## Production change

## Measure

When presented with a deployable sill step malfunction the following should be incorporated into your diagnosis procedure.

Perform checks 1-10 and record results, this should be done prior to carrying out any rectification work.

**Note: The following checks are the minimum information required when submitting any DISS query.**

**Raising a DISS query is mandatory for sill step concerns.**

Record the current status of the system.

1. Detail of existing or reported failure mode, please also try to obtain information of the failure from the customer (Did the step try to stow? Where was the vehicle? Was the ground level? Was the door fully closed? Etc.)

- No function
- Fails to stow: left side / right side / both
- Fails to deploy: Left side / right side / both
- Noise or rough action
- Rattle
- Incomplete stow (drop / loose at centre linkage)
- Other

2. Quantify the level of grit and road debris in or on the hinge systems with a description and **Photographs** of all hinges.

3. Note any mechanical damage, supply **Photographs** if damage is present.

4. Security of system, is everything correctly secured? Over-check fastener torque of hinges, motor and steps.

**Note: Refer to Repair Group 66 - Exterior equipment – Accessories – Deployable sill steps – to fit, for current torque figures.**

Description	Size	Torque
Sill step to hinge	M8 x 25mm	22 Nm
Hinge to body	M8 x various	14 Nm
Rear hinge bolt through body brace	M10 x 35mm	49 Nm
Drive motor to centre hinge	M6 x 10mm	8 Nm
Drive spindle wedge key centre hinge	M6	12 Nm

5. Measure electrical current draw at motors.

- During deployment – attach **Photograph** showing result on meter.
- During stow – attach **Photograph** showing result on meter.

6. Remove both sill step motors and measure the deployment resistance – figure 1 - Refer to **Repair Group 66 - Exterior equipment – Accessories – Deployable sill steps – to fit. Video** the procedure and provide results.

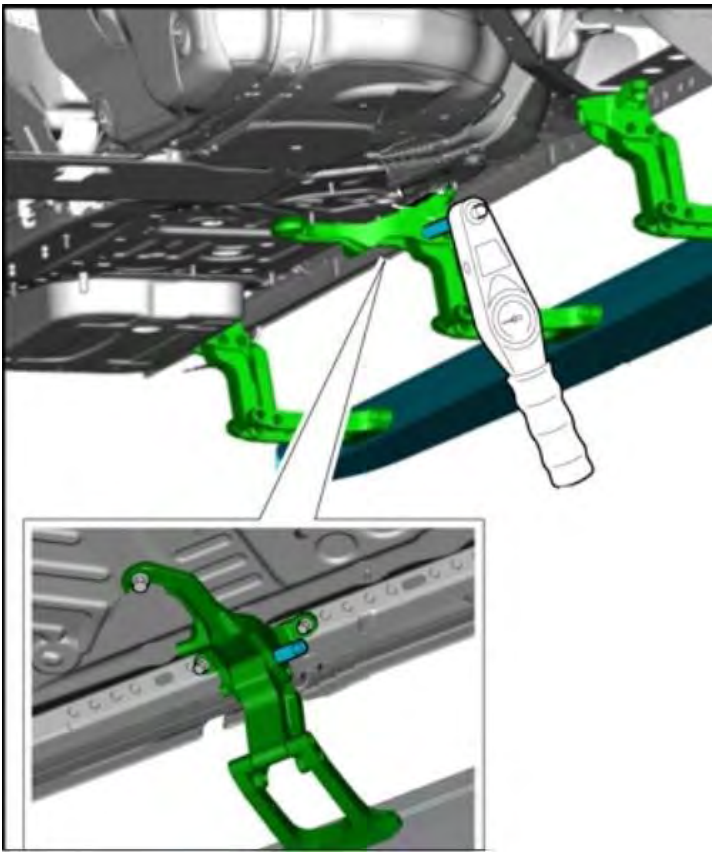


Figure 1

7. Confirm installation process, provide Six **Photographs** showing hinge fitment to sills.

8. Log position of all shims, **Photograph.**

9. Check and record Sill Step Control Module audible fault and LED blink codes (see attached document)

10. Check vehicle battery condition using battery tester VAS 6161 or similar Bentley approved tool, refer to *Repair Group 27 – Measure and record charging voltage.*

<b>Controller Status</b>	<b>LED Response</b>
Connection to power is made or Feature Mode 4 (Reset) is selected.	RED LED Flashes 3 times (200 mS Duty Cycle). System reset completed.
CAN Activity / Pre Sleep No step operation, active over ride modes or faults	GREEN / RED LED's alternate (500 ms Duty Cycle). CAN activity is detected or Vehicle CAN has terminated (pre sleep)
Pre Sleep While Operations Timer Depleting No step operation, active over ride modes or faults	GREEN / RED LED's alternate (250 ms Duty Cycle). Vehicle CAN has terminated (pre sleep) and the Over Work counter is timing down.
No LED activity.	System is asleep or power is disconnected.
<b>Normal Operation</b>	
Left Step Deploying	RED LED Illuminated
Left Step Stowing	RED LED Flashes (100 mS Duty Cycle)
Right Step Deploying	GREEN LED Illuminated
Right Step Stowing	GREEN LED Flashes (100 mS Duty Cycle)
<b>Fault &amp; Over Ride Codes</b>	
Start Of Code Reporting	GREEN LED Flashes x 3 (300 mS Duty Cycle / Off Time) 2 S Pause prior to code reporting
Fault Code Format	RED LED Flash (300 mS Duty Cycle / S)
Over Current Detected	x 1
Over Working Inhibit	x 2
Cleaning Mode	x 3
Off Road Mode	x 4

Battery Guard Mode / Low Voltage Inhibit	x 5
Ambient Temperature Inhibit	x 6
Transport Mode	x 7
Service Mode	x 8
Critical Failure Due To Over Current / Jammed	x 9
Suspension Low Inhibit	x 10
Critical Failure - Operation Cycle Time Exceeded	x 11

The code reporting procedure detailed above is displayed via the Green and Red LED's that are visible through the clear lens on the top face of the control module. If Feature Mode 3 (Code Recall) is selected, an audible tone accompanies each LED flash and the last stored code is repeated 3 times before the mode is exited.

If Code Recall is selected and no code is stored, the Green LED flashes 3 times and 3 sounder tones are produced. The feature mode is then automatically exited (10 short sounder tones are issued) and normal operation resumes.

If the module power is reset (power disconnection for 10 seconds) or Feature Mode 4 (Reset) is selected, the code memory is cleared.