

Technical product information

Topic	Bentayga deployable sill step malfunction
Market area	Bentley: worldwide (2WBE),Hongkong-Macau (5HK)
Brand	Bentley
Transaction No.	2044536/8
Level	EH
Status	Approval
Release date	

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		*	*	*
4V1*	2019	E		*	*	*
4V1*	2020	E		*	*	*

Documents

Document name
master.xml
diagnostic.pdf

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

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Measure

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

Note: The following checks are the minimum information required when submitting any DISS query. Raising a DISS query is mandatory for all sill step concerns.

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.

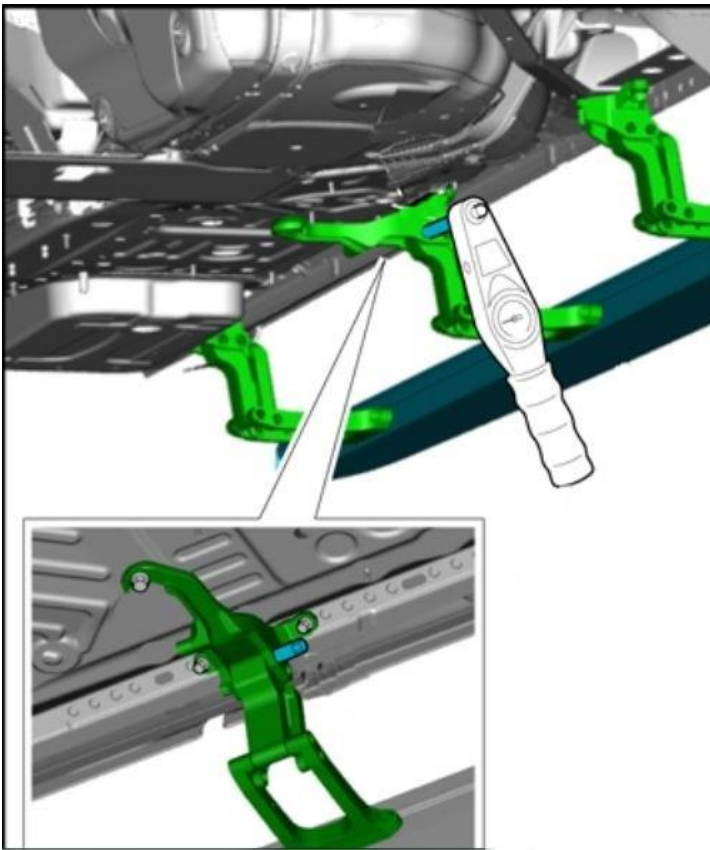


Figure 1

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 VAS6161 or similar Bentley approved tool, refer to *Repair Group 27 – Measure and record charging voltage*.

ASG Step Motor Controller
LED Diagnostics V0.93 - 0.95 28th Jan 2018 Copyright ASG Limited

Controller Status	LED Response
Connection to power is made or feature Mode 4 (Reset) is selected.	RED LED Flashes 3 times (200ms Duty cycle) System Reset completed.
CAN Activity / Pre-Sleep.	Green / RED LED's alternate (500ms Duty cycle) CAN activity is detected or Vehicle CAN has terminated (pre sleep)
No step operation, active over ride modes or faults. Pre Sleep while operations timer depleting.	GREEN / RED LED's alternate (250ms Duty cycle) Vehicle CAN has terminated (Pre Sleep) and the Over Work counter is timing down.
No step operation, active over ride modes or faults. No LED activity.	System is asleep or power is disconnected.
Normal Operation	
Left step deploying.	RED LED illuminated.
Left step stowing.	RED LED Flashes (100ms Duty cycle)
Right step deploying.	GREEN LED illuminated.
Right step stowing.	GREEN LED Flashes (100ms Duty cycle)
Fault and Over Ride Codes	
Start of code reporting.	GREEN LED Flashes x3 (300ms Duty cycle / Off time) 2 second pause prior to code reporting.
Fault code format.	RED LED Flash (300ms 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