

Technical product information

Topic	Air suspension warning - Air hoses chaffing on rear subframe - Leaking
Market area	Bentley: worldwide (2WBE),Hongkong-Macau (5HK)
Brand	Bentley
Transaction No.	2054643/1
Level	EH
Status	Approval
Release date	

Event memory entries

Diagnostic address	Event memory entry	Fault type	Fault status
0074 - Chassis Control	C114707: Pneumatic spring / air line front left mechanical malfunction		Intermittent
0074 - Chassis Control	C114707: Pneumatic spring / air line front left mechanical malfunction		static
0074 - Chassis Control	C114807: Pneumatic spring / air line front right mechanical malfunction		Intermittent
0074 - Chassis Control	C114807: Pneumatic spring / air line front right mechanical malfunction		static
0074 - Chassis Control	C11E2F1: Front axle ride-height control system extremely low level detected		Intermittent
0074 - Chassis Control	C11E2F1: Front axle ride-height control system extremely low level detected		static
0074 - Chassis Control	C11AFF0: Level control pressure accumulator Leak detected		Intermittent
0074 - Chassis Control	C11AFF0: Level control pressure accumulator Leak detected		static

New customer code

Object of complaint	Complaint type	Position
running gear -> shock absorber/suspension control -> self-levelling suspension	functionality -> without function / defect	
running gear -> shock absorber/suspension control -> self-levelling suspension	functionality -> defective function sequence	
information, navigation, communication, entertainment -> symbolic warning indicators -> active-warning indicator	functionality -> does not activate	
information, navigation, communication, entertainment -> symbolic fault indicators -> shock absorber control system fault indicator	functionality -> activates	
running gear -> shock absorber/suspension control -> automatic shock absorber adjustment	functionality -> defective function sequence	

New workshop code

Object of complaint	Complaint type	Position
running gear -> adaptive suspension, pitch and roll compensation -> pressure line for air spring strut	leaks -> leaking	> not specified <

Vehicle data

Bentayga

Sales types

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

Chassis numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SJA	*	*	*	*	*	000001	019680		

Documents

Document name
master.xml

Customer statement / workshop findings

A warning regarding the air suspension system is shown within the instrument cluster, at least one of the following event entries is logged within the Chassis control unit (diagnosis address 0074):

- C114707: Front left air spring/air hose, mechanical fault
- C114807: Front right air spring/air hose, mechanical fault
- C11E2F1: Self-levelling suspension of front axle, extremely low level detected
- C11AFF0: Pressure accumulator of self-levelling suspension, leak detected

Technical background

The air hose cluster which connects to the solenoid block can contact the rear subframe resulting in air leaks from one or more air hoses



The use of safety glasses is recommended for the duration of this procedure

Production change

Air hose routing has changed from VIN SJA AF1ZV8JC019680

Measure

1) Position the vehicle on a ramp and place into "Jack" mode



Once the air has been discharged from the air suspension struts, the vehicle must NEVER be lowered and allowed to rest on its wheels which will compress the discharged air suspension struts. Failure to comply may result in internal damage of the air bellows leading to catastrophic failure of the air suspension strut/s

2) Remove the cover for the air supply unit - Refer to Rep.Gr 43

3) Referring to Figure 1 (circled) - Check the following air suspension hoses for air leaks due to contact/chaffing with the right hand side of the rear axle subframe/nearby components

- Red hose
- Green hose
- Both violet hoses
- Blue hose
- Black hose



Figure 1

NOTE: If there are issues relating to hoses contacting the subframe which result in an air leak carry out the following instructions from step 4

OR

If there are NO leaking hoses or NO hoses which have signs of damage/chaffing, Check the pneumatic components of the running gear with Guided Fault Finding and special tool VAS 751 001 - Refer to Repair manual Rep.Gr 43 Air suspension - To check

4) Discharge the complete suspension system Refer to "Air suspension system – To discharge and charge – Rep.Gr 43



Once the air has been discharged from the air suspension struts, the vehicle must NEVER be lowered and allowed to rest on its wheels which will compress the discharged air suspension struts. Failure to comply may result in internal damage of the air bellows leading to catastrophic failure of the air suspension strut/s

5) Carry out an inspection of the air hoses to determine which hoses have air leaks, once clarified carry out the repair of the applicable hose/s

IMPORTANT: Should any of the remaining hoses have signs of contact with the subframe but are not as yet leaking it is advisable to conduct the same repair method to eliminate a repeat visit



If more than one air hose is damaged, a staggered repair of the air hoses is necessary this is to avoid contact of the new connection pieces, to achieve a staggered repair the pipe repair kit will be required as the hose/s will require lengthening by using the hose from the repair kit (see Parts information)

Air pipe repair

For clarity the onward repair instruction is detailed for the red pipe with a diameter of 4mm, the method of repair for the green, blue and black pipes (4mm diameter) is the same

For violet hoses the method of repair is the same although the hoses are larger in diameter (6mm)

6) Disconnect/unscrew both violet hoses from the solenoid block

7) Disconnect/unscrew the red and green hoses from the solenoid block

8) Referring to Figure 2 (Point A) - Fit replacement solenoid connectors to the solenoid block - 3 Nm **IMPORTANT:** Do not remove the white bungs until the air hoses are to be refitted

- Referring To (Point B) - Fit replacement solenoid connectors to the solenoid block - 3 Nm **IMPORTANT:** Do not remove the white bungs until the air hoses are to be refitted

- Carry out a visual check of the blue and black hoses to check/confirm they are not chaffing against the subframe or any other nearby component, should the hoses be damaged/chaffing on the subframe the hoses must be repaired as per the onward instructions, once repaired they must be secured away from the component in which the hose/s were in contact with

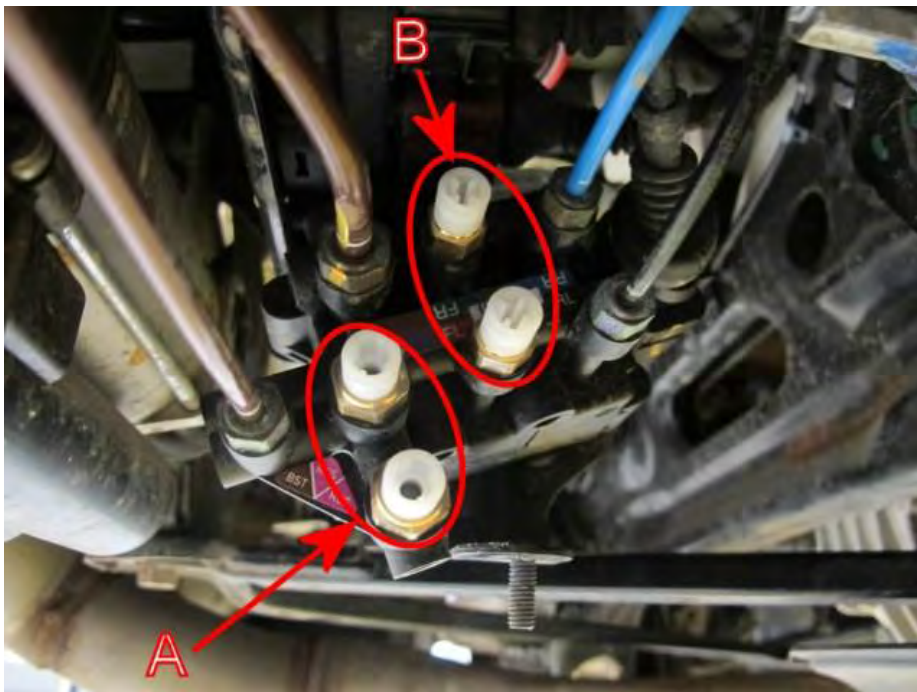


Figure 2

IMPORTANT: The next part of the procedure requires the hoses to be shortened and/or repaired to remove any risk of future contact between the subframe

9) Disconnect the clip shown in Figure 3 from the air supply unit/solenoid block



Figure 3

- Once disconnected carefully manoeuvre the air pipes away from air supply unit/solenoid block **NOTE:** Do Not disconnect any further air pipe securing clips
- 10) Clean the area of the hose in which the air leak is evident **NOTE:** Any dirt entering the system can cause malfunctions or failure
- Using VAS 6228 or similar (Figure 4) cut the hose (at a right angle) as shown in Figure 5, take care not to unnecessarily shorten the hose as it may then be too short when refitting back into the solenoid block
 - **CAUTION:** Ensure that the damaged section of the hose is removed, should the hose/s require lengthening the same instructions apply, Repair kits containing replacement hose and connections are available - see Parts information



Figure 4

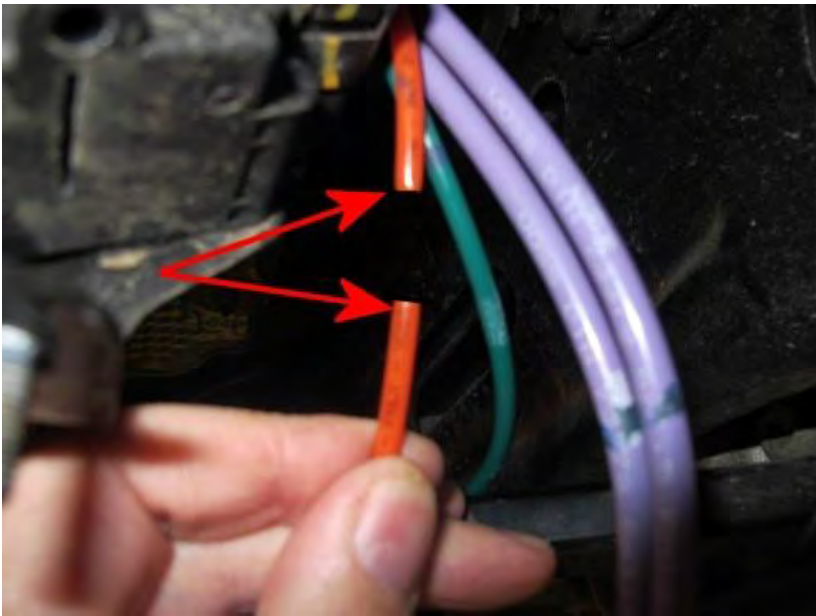


Figure 5

11) Fit the connection piece/lengthen applicable hose/s as described within the next steps

- A maximum of two repair locations are permissible per pipe
- On integrated pipe sections, only one repair location per pipe is permissible
- The repair location must be recorded and added to the vehicles documentation
- Use a waterproof pen to mark the end of the two sections of the previously cut pipe, use 17mm/22mm marks (Figure 6) to confirm the pipes have been properly inserted into the connection piece

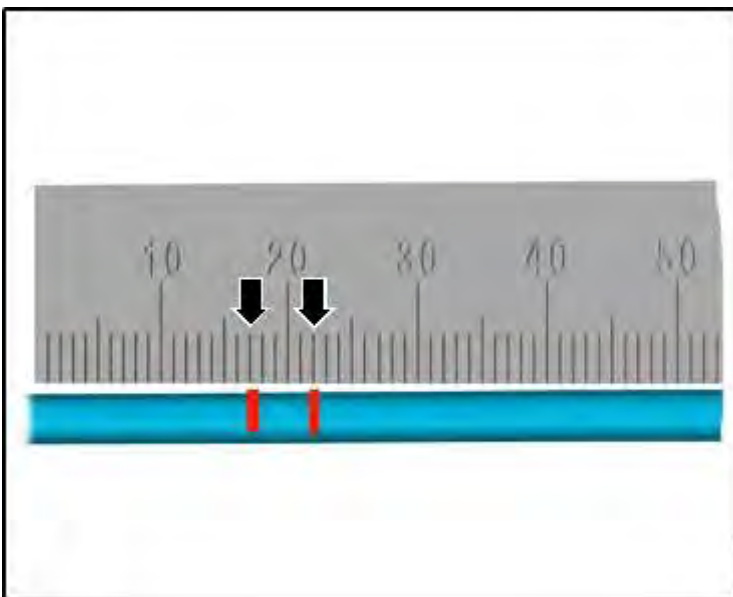


Figure 6

- Referring to Figure 7 - Exerting moderate pressure, push the air pipes all the way into both ends of the connection piece -1-.
- Air pipes have been properly fitted if only one of the two marks is visible -arrow A-.

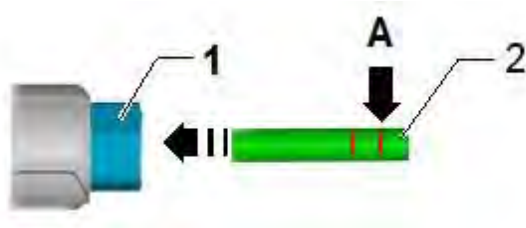


Figure 7

- Figure 8 shows the connection piece fitted



Figure 8

12) Fit rubber insulation or suitable cloth insulation tape around the connection (Figure 9)

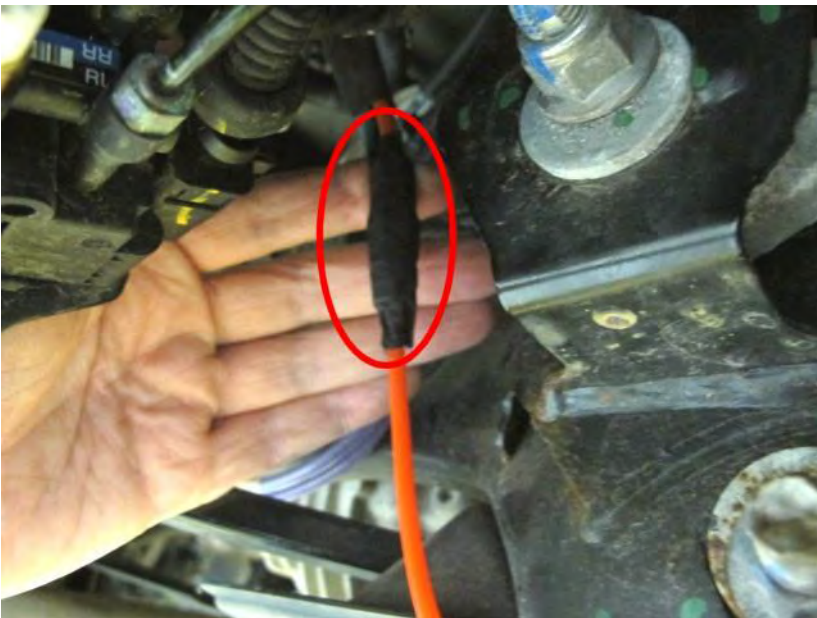


Figure 9

NOTE: Protection should also be applied to any hoses in which the newly fitted connector may contact, the hoses should also be secured with a suitable cable tie (Source locally) to prevent any movement

13) Referring to Figure 10 - Shorten/cut the red air hose (at a right angle) to the specified length using VAS 6228 or similar

The measurements quoted within the onward instructions, should be used as a guideline only – Please ensure the specified length can be achieved prior to cutting the hose otherwise the hose will require lengthening

There are no recommend dimensions for the blue and black hose the operative must ensure that when a repair has been conducted the hoses should be suitably protected and secured to avoid future contact with the subframe or nearby components

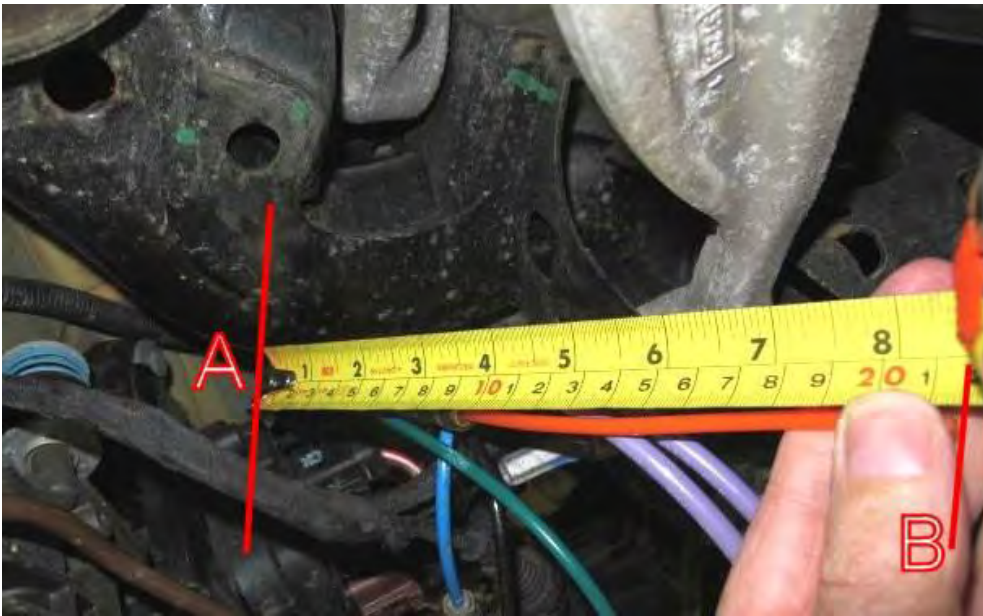


Figure 10

- The Red hose is shown after cutting. The measurement to the end of hose must be **216 mm** from (Point A existing clip Refer back to Figure 3) to the end of the hose
- Green hose - After cutting - The measurement from the existing clip to the end of the hose must be **195 mm**
- Prior to cutting the violet hoses take note which of the violet hoses has the white identification mark as after cutting this will no longer be evident
TIP: Apply masking tape to the pipe prior to cutting see Figure 11 as an example of the masking tape applied

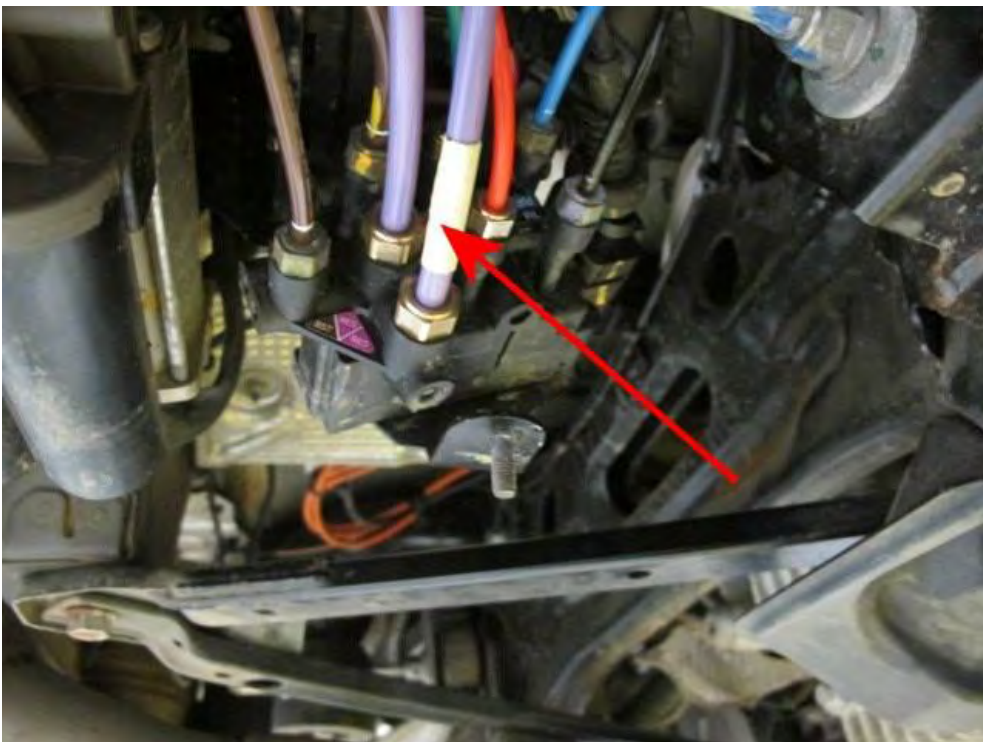


Figure 11

- Both violet hoses - After cutting - The measurement from the existing clip to the end of the hose must be **226 mm**

14) Figure 12, Shows the four hoses cut to their specified lengths



Figure 12

15) Remove the caps from the solenoid block connectors (Figure 13)



Figure 13

- Use a waterproof pen to mark the ends of the x4 pipes, use 17mm/22mm marks (Figure 14) to confirm the pipes have been properly inserted into the connection piece

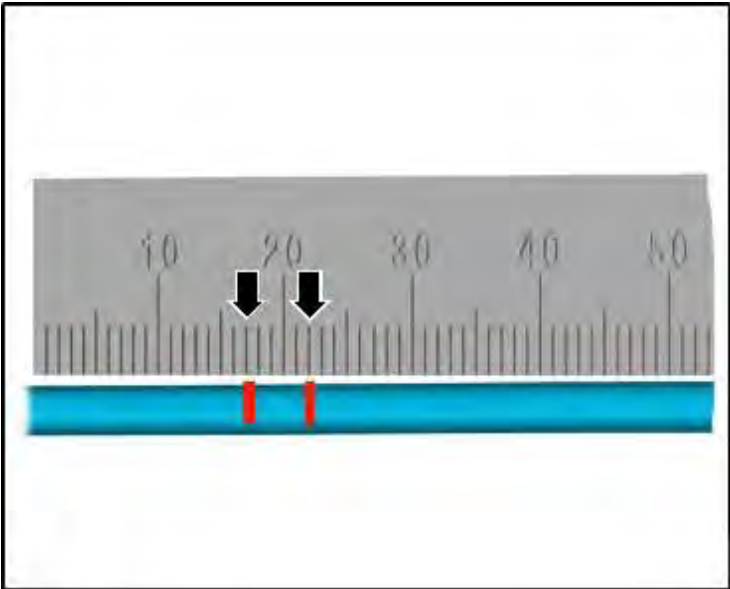


Figure 14

- Referring to Figure 15 - Exerting moderate pressure, push the x4 air pipes -1- all the way into the solenoid block connector -1- **IMPORTANT:** *Ensure the hoses are fitted back into the correct locations within the solenoid block*
- All x4 pipes have been properly fitted if only one of the two marks is visible -arrow A-

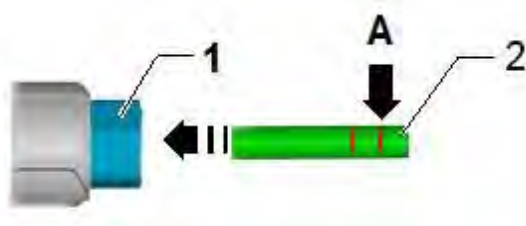


Figure 15

16) Should witness marks be evident on the subframe (due to contact with the air hoses) clean away any marks and apply suitable black anti corrosion protective paint to the affected area

17) Charge the complete suspension system Refer to "Air suspension system – To discharge and charge – Rep.Gr 43

- Check/confirm there are no air leaks from the repaired air hoses and solenoid block
- Refit the cover for the air supply unit Refer to Rep.Gr 43

⚠ Check and confirm the air suspension system is fully charged, the vehicle must NEVER be lowered and allowed to rest on its wheels which will compress the discharged air suspension struts. Failure to comply may result in internal damage of the air bellows leading to catastrophic failure of the air suspension strut/s

Warranty accounting instructions

Time to conduct instruction with x1 hose repaired

Warranty Type	110 or 910
Labour Operation Code	43 24 41 00 (Use 43 24 41 99 until 06/06/19)
Damage Service Number	43 24
Damage Code	00 50
Time	60TU

Time to conduct additional hose repairs

Warranty Type	110 or 910
Labour Operation Code	43 24 42 00 (Use 43 24 42 99 until 06/06/19)
Damage Service Number	43 24
Damage Code	00 50
Time	10TU

Parts information

Part Number	Quantity
7L0 616 829 - Repair connector (6mm Pipe)	As Required
4F0 616 241 - Repair connector (4mm pipe)	As Required
7L0 616 758 –Connector (6mm pipe)	2
4B0 616 751 –Connector (4mm pipe)	2
4M0 698 141A - 6mm pipe repair kit	1 (only use if the air hose/s requires lengthening)
4M0 698 141 – 4mm pipe repair kit	1 (only use if the air hose/s requires lengthening)