



Connection offline

Technical product information

Topic	New Continental GT and GTC steering shimmy/vibration-21 Inch wheels only
Market area	Russische Föderation (5RU),China 796 VW Import Comp. Ltd (Vico), Beijing (6796),Russian Federation 935 Volkswagen Group RUS (6935),United Kingdom E01 Bentley UK (6E01),Germany E02 Bentley rest Europe (6E02),Japan E03 Bentley Japan (6E03),Australia E04 Bentley rest Asia and Australia (6E04),United States E05 Bentley USA and rest America (6E05)
Brand	Bentley
Transaction No.	2030348/3
Level	EH
Status	Draft
Release date	

New customer code

Object of complaint	Complaint type	Position
Running gear -> Wheels, tyres, tyre pressure monitoring -> Tyres -> Tyre tread	visual appeal / surface -> bump	> not specified <
Running gear -> Steering, power-assisted steering -> Steer	Noise, vibration -> vibrate	
Running gear -> Steering system	functionality	
Running gear -> Steering system	Noise, vibration	
Running gear -> Steering, power-assisted steering	functionality	

New workshop code

Object of complaint	Complaint type	Position
Running gear -> Wheels, tyres, tyre pressure monitoring -> Tyres	component / consumables -> unbalanced	rear right
Running gear -> Wheels, tyres, tyre pressure monitoring -> Tyres	component / consumables -> unbalanced	front right
Running gear -> Wheels, tyres, tyre pressure monitoring -> Tyres	component / consumables -> unbalanced	front left
Running gear -> Wheels, tyres, tyre pressure monitoring -> Tyres	component / consumables -> unbalanced	rear left
Running gear -> Steering system -> Steering gear	Noise, vibration -> noise	

Vehicle data

New Continental GT and GTC

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code

39**	2012	E		*	*	*
39**	2013	E		*	*	*

Chassis numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SCB	*	3W	*	*	C				
SCB	*	ZA	*	*	C				

Documents

Document name
master.xml



Connection offline

Technical product information

Transaction No.: 2030348/3

New Continental GT and GTC steering shimmy/vibration-21 Inch wheels only

Customer statement / workshop findings

This TPI is only applicable to New Continental GT and GTC vehicles fitted with 21 Inch wheels, This TPI is not applicable to vehicles fitted with 20 inch wheels, should 20 inch wheels be fitted please raise a DISS ticket.



This TPI also applies to all vehicles which are built and registered for use in the following countries listed below:

EGYPT – INDIA – LEBANON – SYRIA – SOUTH AFRICA

Should a customer complain of steering wheel shimmy/vibration constantly above 80 kph/50 mph and the condition does not improve when driven please proceed with this TPI, should the vehicle exhibit different symptoms other than described please raise a DISS ticket.



Should this be the first time the vehicle has been to your Dealership for steering shimmy/vibration issues please carry out Section 1 only.

In the event the vehicle is returning back to your Dealership with the same steering wheel/shimmy issue please carry out Sections 1 and 2.

NOTE: If conducting Sections 1 and 2 it is not a requirement to carry out the road test in Section 1 procedure 4

Technical background

We are aware that under certain conditions of shipment and storage, particularly involving large changes in ambient temperature, condition can occur where the tread surface of the tyre forming the footprint on the road surface or container floor partly retains the relatively flat form when driven and does not immediately restore to a constant radius. Hence the name of flat spotting which is generally given to this condition.

It should not be confused with out of balance, out of round or radial force variation. It is very important that the diagnosis and correction of these different conditions are not confused with each other. Attempting to correct flat spotting by rebalancing the assembly will not correct the problem and worse still, when the flat spots are removed the tyres will then be out of balance.

The Measure section of this TPI describes the procedure which should be followed to determine the root cause of the steering shimmy/vibration.

ATTENTION: During this TPI the workshop manual is quoted to help in carrying out various tasks, it is recommended that the procedures referenced are checked by the operative as the process within the workshop manual may have changed since last viewed.

Production change

Improved shipping, transportation and production procedures have been introduced.



IMPORTANT INFORMATION

Right Hand Drive

From VIN SCBFE63WXCC [REDACTED] the latest level higher friction steering rack and updated servotronic control units were fitted

Left Hand Drive

From VIN SCBFR7ZA3CC [REDACTED] latest level higher friction steering rack and updated servotronic control units were fitted

Right and Left Hand Drive

From VIN SCBFN63W8DC [REDACTED] latest specification wheel bearing housings were fitted at the time of production

Measure

Section 1

IMPORTANT: Do Not initially balance the wheel and tyre assemblies

- Check all wheels and tyres for damage
- Check that Bentley 21 inch approved wheels are fitted and the tyres are to the correct specification
- Check the front and rear suspension for any damage and wear
- Check all steering components for damage and wear

1. Ensure the tyres are set at Normal pressure and adjust if required, drive the car until the flat spots come out or the flat spotting condition improves, then drive for approximately 10 minutes at the lowest speed possible to allow cooling

- Within a maximum of two minutes of returning from the road test, raise the vehicle off the ground

2. Remove all four wheel assemblies Refer to Workshop manual Rep.Gr 44

3. Using the Hunter GSP 9712 (VAS 6230) vibration control balancer (or similar) force match and balance all four assemblies, the assembly Radial Force Variation (RFV) should not exceed 85N after the force matching process has been conducted.

- To seat the tyre beads to the rim inflate to 3.5 Bar, once satisfied that the tyre beads are fully seated readjust to the correct measuring pressure of 3.0 Bar – Refer to Workshop manual Rep.Gr 44 and also observe the following key points



Does the vehicle have accessory valve caps fitted as shown in Figure 1? If Yes please ensure the force match and balance process is always conducted with the accessory valve caps fitted.

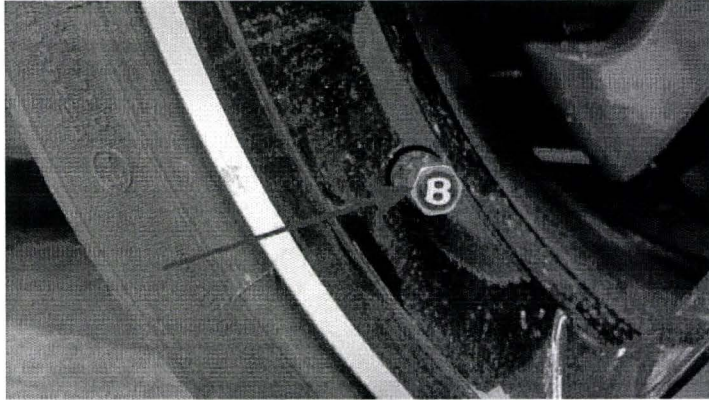


Figure 1

IMPORTANT: Apply a thin smear of silicon based grease for example Dow Corning high vacuum grease to the external threads of the valve stem prior to fitting the accessory valve cap. Grease should be applied any time the cap is removed and the grease is not evident

- For Hunter GSP 9712 (or similar) use the White faced adaptor cone with identification code 154 F+ shown in Figure 2, **NOTE:** If your Workshop does not have this particular adaptor please contact your local Hunter representative.

- The cone must be fitted on the spindle as shown in Figure 3 ensuring the White face of the cone is facing towards the end of the spindle

IMPORTANT NOTE: Should the initial RFV reading be above 85 N this does not necessarily mean the assembly cannot be adjusted to within the specified tolerance, please ensure that the force matching process is adhered to as instructed within the workshop manual Rep.Gr 44 - Tyres – checking condition and replacement.

All four tyres must not exceed 85N after force matching and balancing should this not be achievable replace the applicable tyres - Refer to Workshop manual Rep.Gr 44

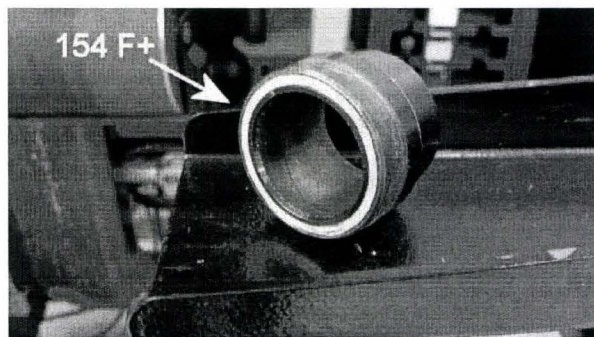


Figure 2

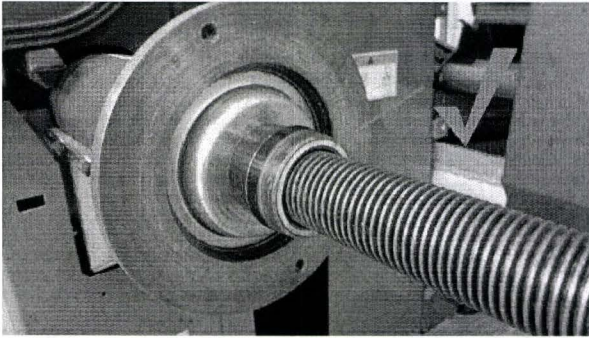


Figure 3

IMPORTANT: When conducting the wheel and tyre force matching process or should the tyres require replacing, a specific tyre fitting lubricant should be used. The lubricant is Rema Tip Top Anti Gliss Lube with the Bentley Part Number of RH 14530. On drying the Anti Gliss has adhesive properties that increases friction between the tyre and wheel rim to prevent slippage. Please Refer to Workshop manual Rep.Gr 44 Tyres - Checking Condition and Replacement - Radial force variation - Best fit practice.

- The assembly high spot is identified with a brown dash (Figure 4).

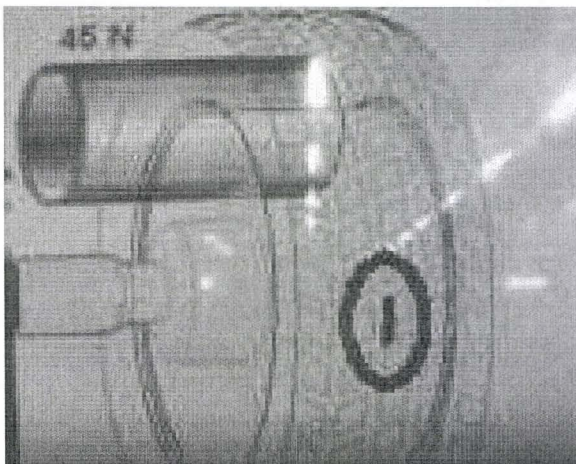


Figure 4

- Rotate the assembly on the spindle until the high point is at 12 o'clock and the Brown dash turns to Green (Figure 5).

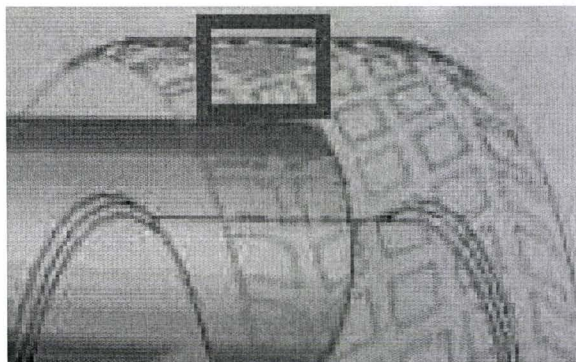


Figure 5

- Mark the RFV high point with a paint pen or similar (Figure 6) this will be required when refitting the wheels as detailed within the Workshop manual Rep.Gr 44 Tyres – Checking Condition and Replacement – Radial force variation – Best fit practice



Figure 6

4. Carry out a road test and reassess. Should the steering shimmy/vibration condition not improve please complete Section 2.

Section 2

1. Remove and discard the original front left and right hand side wheel bearing housing (Figure 7 point A) and replace with 3W0 407 245A – left hand front and 3W0 407 246A – right hand front – Refer to workshop manual Rep.Gr 40 Front suspension, Drive shafts

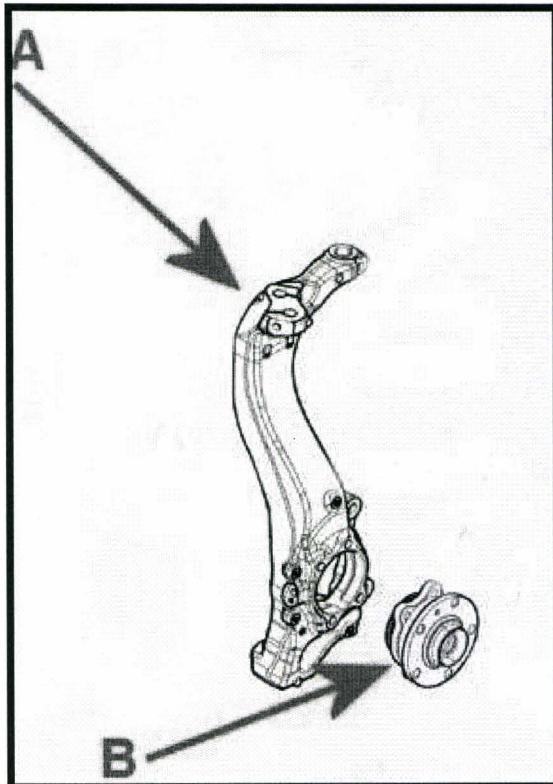


Figure 7

- Fit new front hub bearing assemblies and fixings (Figure 7 point B) - Refer to workshop manual Rep.Gr 40



Have the steering rack and servotronic control unit been previously replaced using the latest specification parts? Or fitted at the time of production? (See Production change section of this TPI for VIN information)

Please also look for the Blue paint completion mark as shown in Figure 8 (for steering rack) and Figure 10 for (servotronic control unit), also check "Repair history" (in Elsa pro) should it be evident that the rack and servotronic control unit have not been previously replaced proceed from procedure 2, should it be evident the rack and servotronic have been replaced go to procedure 5

2. Replace the steering rack – Refer to Workshop manual Rep.Gr 48
3. Place a small blue paint completion mark on the power steering reservoir as shown in Figure 8 to confirm the steering rack has been replaced.



Figure 8

4. Ensure the ignition is switched off then remove the L/H boot panel and locate the servotronic control unit (Figure 9)

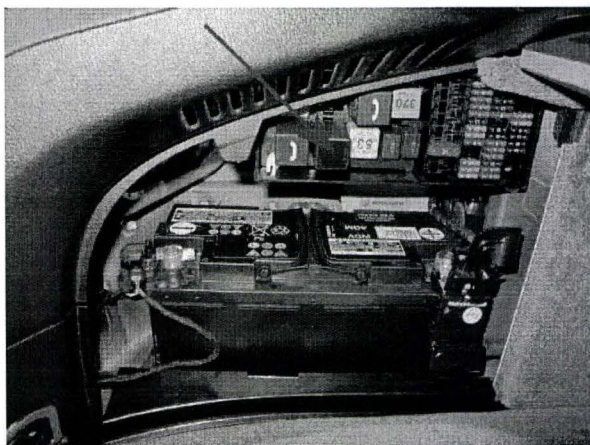


Figure 9

- Remove and discard the original control unit
- Fit the replacement servotronic control unit with part number 3W0 907 307L
- Place a Blue paint completion mark on the new servotronic control unit to confirm the unit has been replaced (Figure 10)



Figure 10

- Place a Yellow paint completion mark on the Right and Left hand wheel bearing housing as shown in Figure 11 to confirm replacement

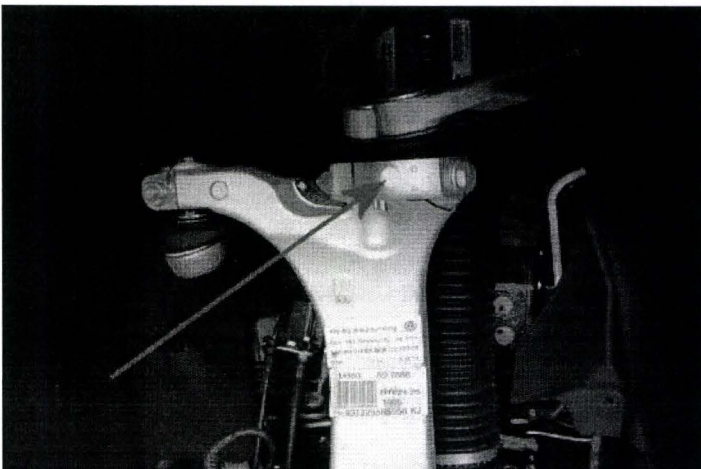


Figure 11

5. Refit all four road wheels, Refer to Workshop manual Rep.Gr 44 Tyres - Checking Condition and Replacement – Radial force variation – Best fit practice
6. Carry out a full geometry check and adjust as required - Refer to workshop manual - Rep.Gr 44 Wheels, tyres. axle align
7. Road test the vehicle and reassess

NOTE: Should the condition still be evident please raise a DISS ticket and wait for further instruction from TSC before commencing with any other work.

Warranty accounting instructions

Please Note: Normal Warranty policies are applicable.

Time to carry out the initial flat spot recovery process and force match and balance all four assemblies

Warranty Type 910 or 110
Labour operation code 44 40 94 00 (Use 44 40 94 99 for New GTC only)
Damage Service Number 44 40
Damage code 00 13
Time Shop Time

Time to replace steering rack.

Warranty Type 910 or 110
Labour operation code 48 40 19 00
Damage Service Number 48 40
Damage Code 00 13
Time 270 Time units

Time to replace the Left and Right hand wheel bearing housings and Wheel bearings

Warranty Type 910 or 110
Labour operation code 40 50 56 00
Damage Service Number 40 50
Damage Code 00 13
Time 370 Time units

Time to replace servotronic control unit

Warranty Type 910 or 110
Labour operation code 48 69 19 00
Damage Service Number 48 69
Damage Code 00 13
Time 10 Time units

Time to check and set the vehicle geometry without ACC

Warranty Type 910 or 110
Labour operation code 44 95 03 00
Damage Service Number 44 95
Damage Code 00 13
Time 80 Time units

Time to check and set the vehicle geometry with ACC

Warranty Type 910 or 110
Labour operation code 44 95 03 10

Damage Service Number 44 95
 Damage Code 00 13
 Time 150 Time units

Parts information

Description	Part Number	Quantity
Steering Rack (LHD)	3W1 422 061D	1
Steering Rack (RHD)	3W2 422 061D	1
Servotronic control unit	3W0 907 307L	1
Left front wheel bearing housing	3W0 407 245A	1
Right front wheel bearing housing	3W0 407 246A	1
Wheel hub bearings	3W0 407 613E	2
Hub bolt	8E0 407 643A	2
Hub carrier fixings	WHT 000 237	8
Bolt	N10 211 202	2
Bolt	N10 625 601	1
Steering column bolt	N10 518 404	1
Bolt	N90 966 002	2
Lock screw	WHT 001 480	2
Nut	N10 272 302	2
Nut	N90 892 302	2
Bolt	N10 491 802	2
Washer	N10 406 105	2
Steering fluid	JNV 862 564F	2 Litres
Seal washer	N01 384 94	2

Seal washer	N01 384 86	2
Anti Gliss	RH 14530	1 x 500 Gram tin can be used for multiple applications



Should tyres be required, please ensure the new tyres are of the correct specification as detailed within the Workshop Manual Rep.Gr 44 - Tyres - Checking Condition and Replacement

Customer information

The customer may notice an initial difference in the feel of the steering, however this is normal, the difference is due to the fitment of the latest level higher friction steering rack.

Bentley branded Tyre Cradles are available as an approved accessory.

The tyre cradles have been designed and manufactured specifically for Bentley providing simple and effective tyre protection.

Tyre flat spotting can be caused by medium to long term storage or from parking after a long drive, especially where the tyre experiences large changes in temperature.

To prevent flat spotting, tyres need to be cooled in a controlled manner to enable the tyre to restore to a constant radius.

Made from a unique polymer that moulds to the shape of the tyre the new Bentley Tyre Cradles maintain the tyre shape whilst cooling and in storage.

The tyre cradles are easy to use, simply drive the car onto them in the desired parking area.