

Technical Service Bulletin

Topic	Mulsanne - 8 Speed Transmission - Harsh Gear Shift
Market area	Worldwide Bentley (1WBE)
Brand	Bentley
Transaction No.	2035309/2
Level	EH
Status	Released for publishing
Release date	Dec 9, 2013

New customer code

Object of complaint	Complaint type	Position
Transmission -> Operation, shift and power distribution control	Functionality	
Transmission -> Transmission control operation -> Gear/driving position change -> Automatic gear/driving position change	Noises, vibrations -> Cracking	
Transmission -> Transmission control operation -> Gear/driving position change	Noises, vibrations -> Jerking	
Transmission -> Transmission control operation -> Gear/driving position change	Functionality -> Too slow	
Transmission -> Transmission control operation	Functionality	
Transmission -> Transmission control operation -> Gear/driving position change -> Gear synchronization	Functionality -> partially out of order	
Vehicle service -> Vehicle diagnosis -> Guided Fault Finding (GFF)	Control modules, services -> With fault stored in the DTC memory	

New workshop code

Object of complaint	Complaint type	Position
Transmission -> Operation, shift and power distribution control -> Transmission control module	Control modules, services -> Measured value too high	
Transmission -> Operation, shift and power distribution control -> Transmission control module	Control modules, services -> Measured value too low	
Transmission -> Operation, shift and power distribution control -> Transmission control module	Functionality -> No function	

Vehicle data

Mulsanne

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
3Y2*	2011	E		*	*	*
3Y2*	2012	E		*	*	*
3Y2*	2013	E		*	*	*
3Y2*	2014	E		*	*	*

Chassis numbers

Manufacturer	Filler	Type	Filler	MY	Factory	From	To	Prod from	Prod to
SCB	*	ZH	*	*	C	000001	999999		
SCB	*	3Y	*	*	C	000001	999999		

Documents

Document name
master.xml

Condition

The gear shift performance when in 'D' mode (Figure 1) is harsh and not smooth as expected.



Figure 1

This TPI is only applicable to Mulsanne vehicles which are experiencing harsh gear shift performance.

Technical Background

During Pre Delivery Inspection (PDI) or after the customer has taken ownership of the vehicle harsh gear shifts have been reported.

Should harsh gear shift be experienced when the transmission changes up or down gear in 'D' mode only, it is imperative that the Dealer does not initially carry out the Transmission adaption process.

Full details of the process which must be followed are detailed within the Measure section of this TPI.

Production Solution

The transmission adaption process within Bentley Motors is currently under review to help eliminate complaints of harsh gear shift from Customers and our Dealer network.

Service

1. Connect a suitable approved battery charger (Figure 2) Refer to Workshop Manual Rep.Gr 27 - Starter-current supply- CC - Batteries - To charge

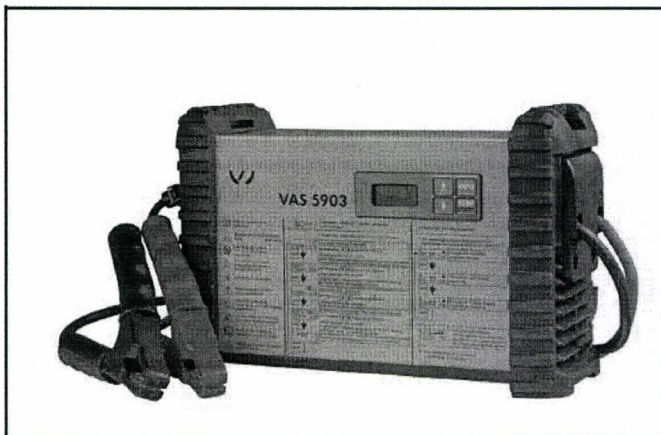


Figure 2

2. From the Desktop launch the Offboard Diagnostic Information System Service using the Diagstarter icon (Figure 3 Point A)

-Select **Offboard Diagnostic Information System Service** (Figure 3 Point B) and follow all on screen prompts

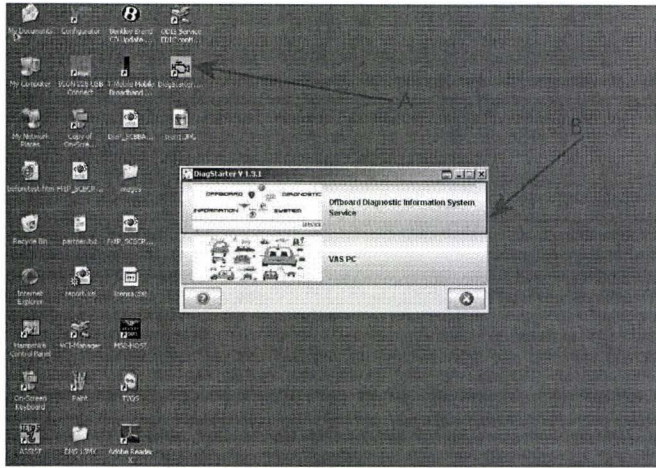


Figure 3

- Ensure the Using guided fault finding box is ticked (Figure 4) - follow all on screen prompts and allow the guided fault finding control module sweep to complete

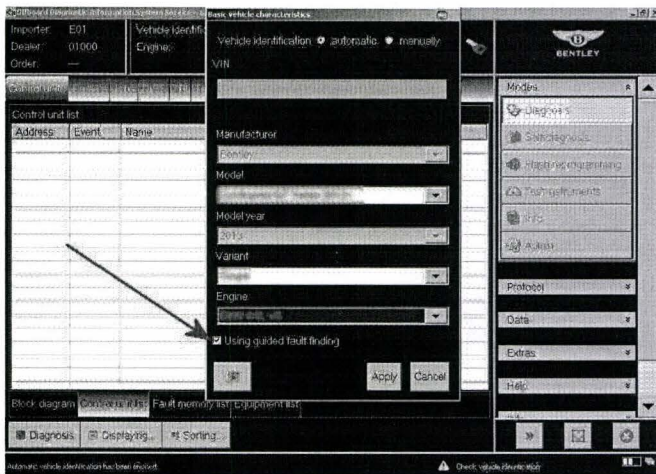


Figure 4



The (CDA) cylinder deactivation fuse must be removed during the transmission adaptations process to enable the adaption process to fully complete in particular clutch B

Altogether there are 5 clutches which require adaption, clutch B is the only change down adaption which is from 6th to 5th. Clutch B can prove difficult to adapt with the CDA system active.

"To adapt clutch B in the 6-5 downshift, the driver must allow the car to decelerate in D in 6th gear with no brake and allow the transmission to shift from 6th to 5th there must be no application of the brake or the accelerator"

3. Remove the main engine cover Refer to Workshop Manual Rep.Gr 10

- Remove the left hand under bonnet trim panel (Figure 5) to gain access to the fuse box (Figure 6)



Figure 5

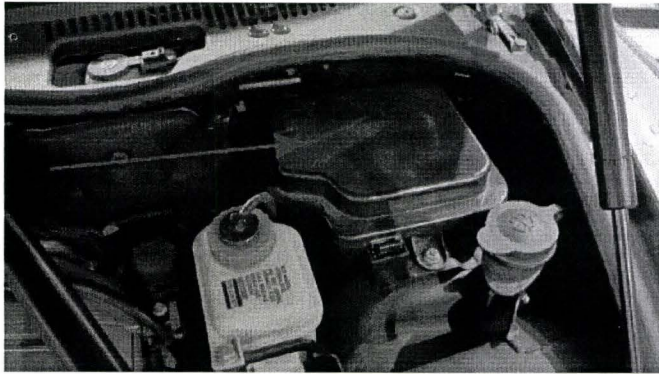


Figure 6

- Remove the fuse box lid and remove the CDA fuse which is the 7.5 Amp fuse (number 3) which is positioned towards the rear of the fuse box (Figure 7) **IMPORTANT:** Please leave the fuse out until instructed to refit later in the TPI

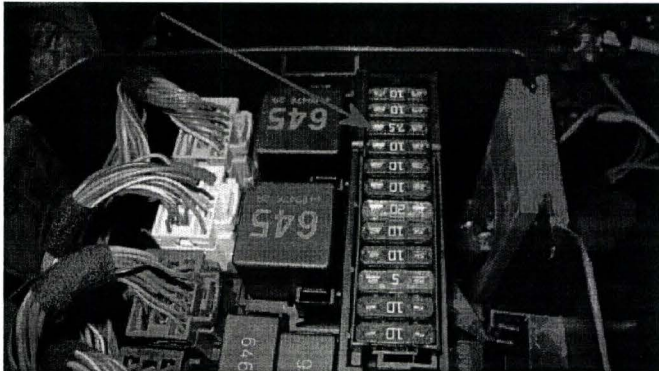


Figure 7

4. Navigate to the Block diagram screen and select Transmission Control Module - GET_02 as shown in Figure 8 (Point A)

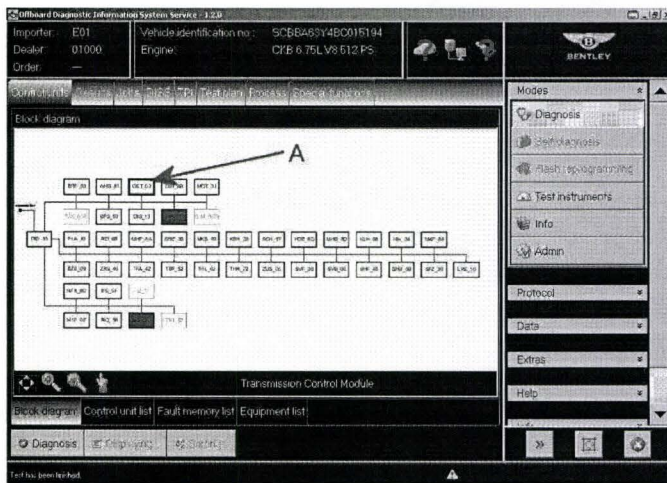


Figure 8

- From the drop down menu shown in Figure 9 select - Guided functions

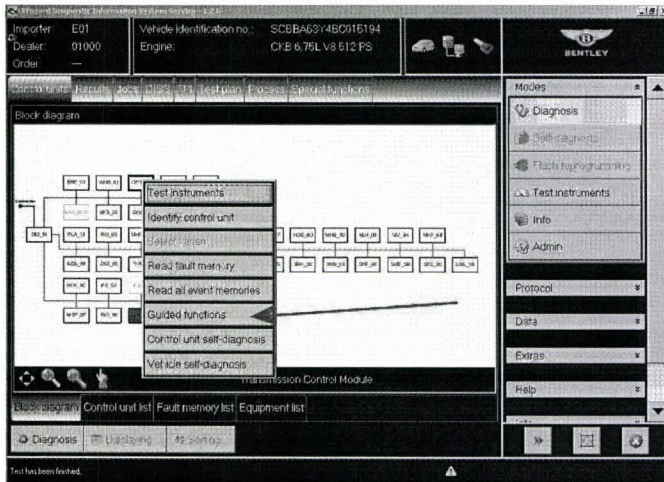


Figure 9

- From the Guided functions menu as shown in Figure 10 (point A) select 02 – Read measured values (Rep.Gr.36) and then select Execute (Point B)

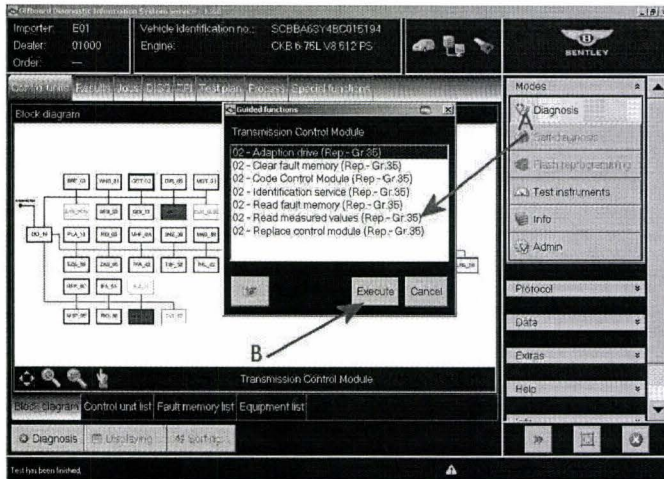


Figure 10

- Referring to Figure 11, It is a requirement to tick and select the 20 boxes as shown, this is to ensure all relevant information is captured before and after the Adaptions process/road test is conducted, please ensure that all of the ID numbers/Measured values shown are selected

- Select OK and follow all on screen prompts

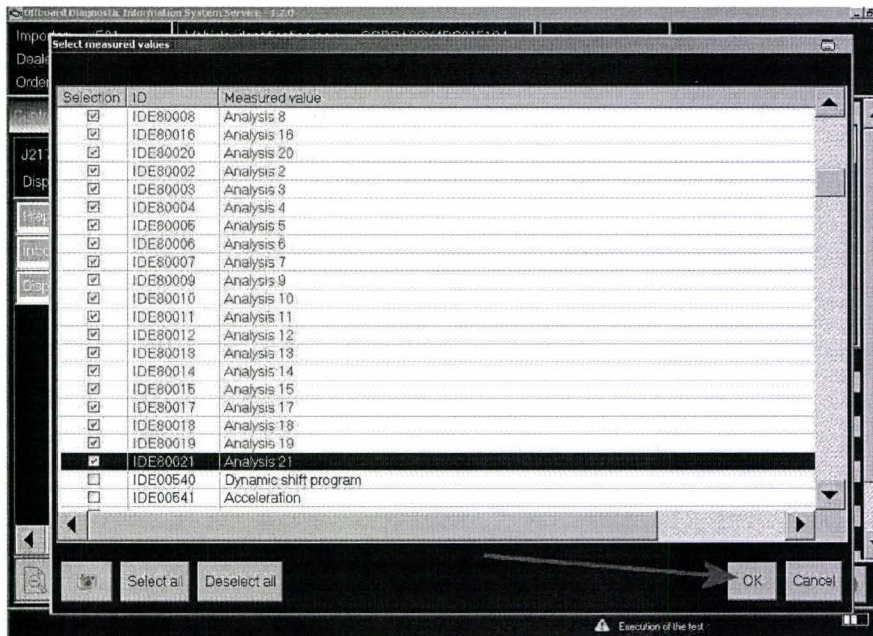


Figure 11

-Once at Figure 12 select OK

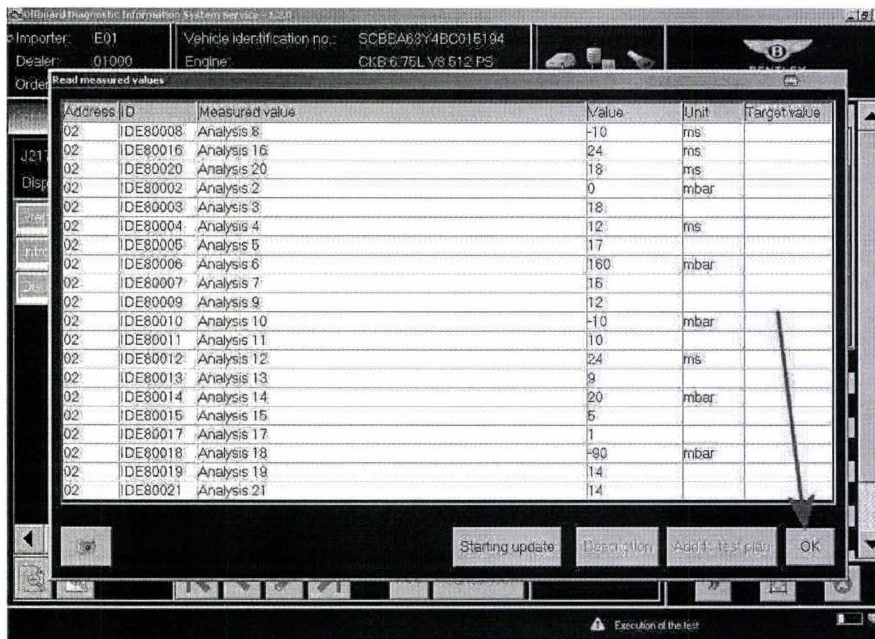


Figure 12

5. Carry out the Adaptions process as detailed in the onward instructions

- Referring to Figure 13 (Point A) - Select Transmission Control Module - GET_02

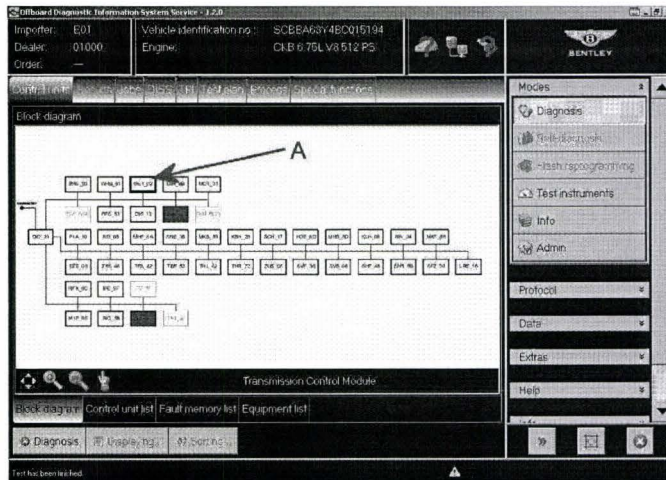


Figure 13

- Referring to Figure 14 – Select Guided Functions

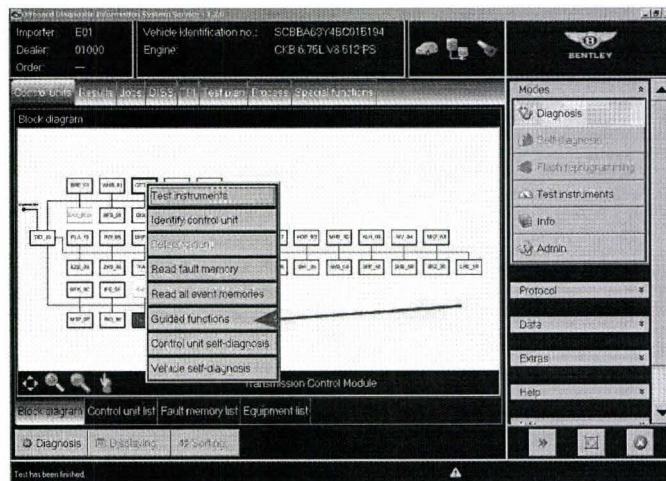


Figure 14

- Referring to Figure 15 Select – (Point A) 02 Adaption (Rep.Gr 35)

- Select (Point B) Execute

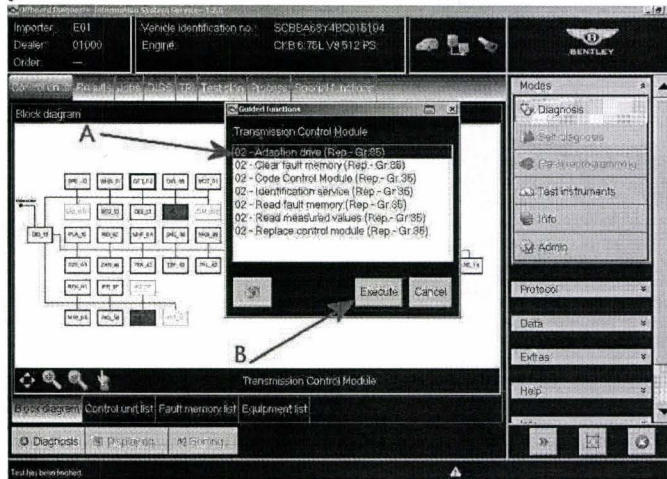


Figure 15



WARNING!

When carrying out any road test, please ensure the diagnostic system is securely attached to the rear seat of the vehicle.

A second person must operate the diagnostic system on the seat.

Any such operation of the front seat, or indeed without any secure attachment, shall not be permitted for safety reasons for example the deployment of the airbag

- Once at the screen shown in Figure 16, Select option **C**. Guided adaption drive (All existing adaptions are cleared first) and follow all on screen prompts until the Number of successful adaptions in all required fields have passed as shown in Figure 17

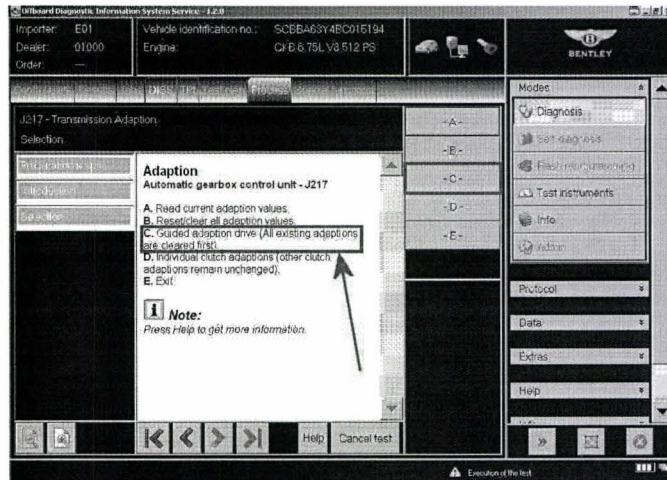


Figure 16

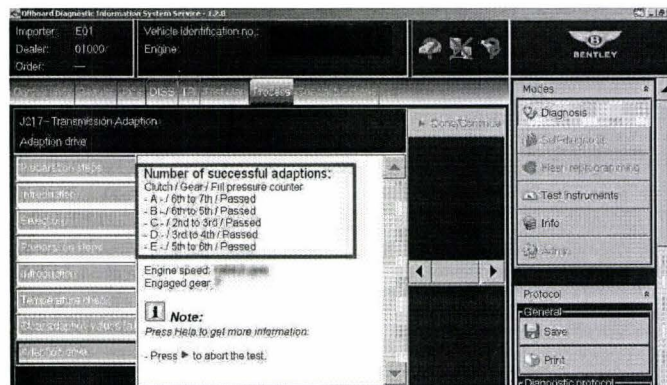


Figure 17

6. Repeat procedure 4, this is to capture the required Measured values after the Adaptions process has been conducted

Save the full Offboard Diagnostic Information System Service log as detailed in the onward instructions

- Referring to Figure 18 (Point A) select Save
- Select Long protocol (Point B)
- Select OK (Point C)

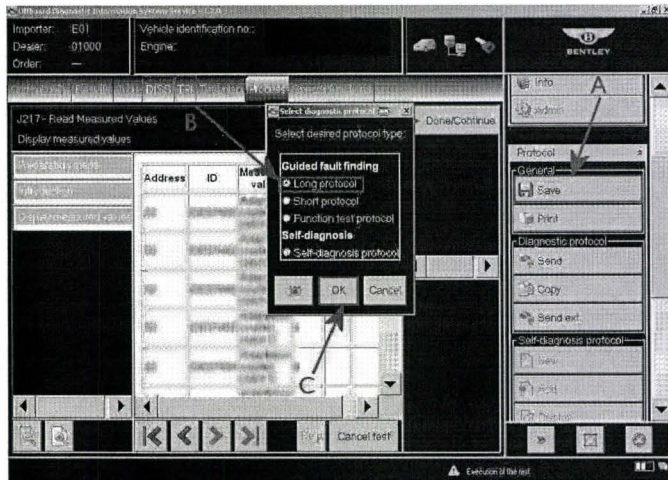


Figure 18

7. Raise a DISS ticket and attach the Offboard Diagnostic Information System Service log

IMPORTANT NOTE: To summarise the log should include the following

- The 20 requested Measured Values - prior to road test
- The successful Adaption process
- The 20 requested Measured Values – post road test

Please give as much information as possible relating to the harsh shift issue for example - harsh shift between 2nd and 3rd gear, please also include if the adaption process eliminated the original harsh gear shift issue

8. Refit the CDA fuse and associated parts and erase any related DTC's

Warranty

Normal Warranty policies are applicable

Warranty type 110 or 910

Labour Operation Code 01 29 00 15

Damage Service Number 37 35

Damage Code 02 02

Time 150 TU (x2 Offboard Diagnostic Information System Service logs and road test to carry out Adaptions process)