Technical Service Bulletin

35 Gearbox warning comes on, various DTC memory entries in TCM
35 23 44 2070217/1 September 15, 2023.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A3, and RS 3	2017 – 2020 2022 – 2024	All	Not Applicable
S3	2018 – 2020 2022 – 2024		
TT, and TT Roadster	2018 – 2023		
TTS	2019 - 2023		
TT RS	2018 - 2022		

Condition

Customer states:

- The vehicle shudders while driving.

and

- The gearbox warning lamp is illuminated. 

and/or

- The message *"Gearbox Malfunction"* appears on the instrument cluster display.

and/or

- The gearbox only changes gear in Limp Home Mode; it is only possible to drive in the gears 1-3-5-7 or 2-4-6.

Workshop findings:

- One or more of the customer statements can be reproduced.
- One or more of the following DTC(s) may be stored in the transmission control module (TCM), -J217- (address word 0002):

DTC Entry	Symptom Code	Description	Gearbox Type
P173500	10666	Clutch position sensor 1, electrical malfunction	0GC/0DL
P173600	10668	Clutch position sensor 2, electrical malfunction	0GC/0DL

P175D00	10693	Clutch 1 opens unintentionally	0GC/0DL
P176E00	10694	Clutch 2 opens unintentionally	0GC/0DL
P175E00	10747	Clutch 1 closes unintentionally	0GC/0DL
P176F00	10748	Clutch 2 closes unintentionally	0GC/0DL
P060700	10658	Control module implausible	0GC/0DL
P060700	10660	Control module implausible	0GC/0DL
P060700	10662	Control module implausible	0GC/0DL
P060700	10664	Control module implausible	0GC/0DL
P176A00	10912	Gear selector 1 cannot be regulated	0GC/0DL
P176B00	10913	Gear selector 2 cannot be regulated	0GC/0DL
P176C00	10914	Gear selector 3 cannot be regulated	0GC/0DL
P176D00	10915	Gear selector 4 cannot be regulated	0GC/0DL
P176A00	10725	Gear selector 1 cannot be regulated	0GC/0DL
P176B00	10726	Gear selector 2 cannot be regulated	0GC/0DL
P176C00	10727	Gear selector 3 cannot be regulated	0GC/0DL
P176D00	10728	Gear selector 4 cannot be regulated	0GC/0DL
P071500	10753	Transmission Input Speed Sensor 1, electrical fault in circuit	0GC/0DL
P276500	10754	Transmission Input Speed Sensor 2, electrical fault in circuit	0GC/0DL
P174A00	10739	Valve 3 in partial transmission 1 electrical malfunction	0DL
P174E00	10740	Valve 3 in partial transmission 2 electrical malfunction	0DL
P173E00	10741	Valve 1 in partial transmission 1 electrical malfunction	0DL
P174C00	10742	Valve 1 in partial transmission 2 electrical malfunction	0DL
P173F00	10743	Valve 2 in partial transmission 1 electrical malfunction	0DL
P174D00	10744	Valve 2 in partial transmission 2 electrical malfunction	0DL

Technical Service Bulletin

Technical Background

Hardware issue in transmission control unit.

Production Solution

Not applicable.

Service

1. The Software part number and Software Version number and of the Transmission control unit must first be checked (Figure 1).

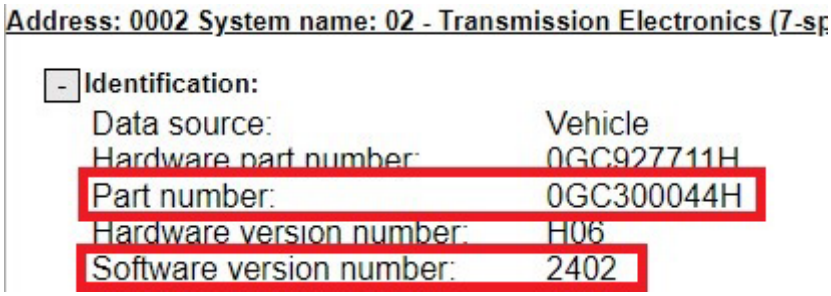


Figure 1. *Software part number and Software version number.*

2. If the installed Software part number and Software version number ***is not included*** in the table below, then this ***TSB does not apply***. Continue the diagnosis and repair outside of this TSB.

3. If the installed Software part number and Software version number ***is included*** in the table below continue with the TSB instructions.

Software Part Number	Software Version Number
0GC300042J	1402
0GC300012A	1403
0GC300012M	2308
0GC300013M	2401
0GC300013M	2402
0GC300013N	2404
0GC300014B	2405

0GC300014B	2406
0GC300043A	2303
0GC300044H	2402
0DL300012H	2111
0DL300012H	2112
0DL300013E	3020
0DL300013E	3023
0DL300013L	3104
0DL300013L	3101

Tip: Offboard Diagnostic Information System Service: In the Offboard Diagnostic Information System (ODIS), the baseline version (diagnosis data – didb_GFS-a) **2023.03.01 / 2.30.5** or higher must be installed (Figure 2).

Used diagnostic data:	
GFF DIDB brand:	A
GFF DIDB version:	2023.05.01
GFF DIDB language:	en_US
GFF technical version:	2.31.1
Base DIDB version:	2023.5.2.AutoGenerated
Base DIDB language:	en_US
DTC_Exclusion Version:	339.0.0

Figure 2. *ODIS Version.*

4. It is only possible to deliver the correct control unit if 89 values are read out and transmitted in the global variables under the address DA0002 at the start of the diagnostic session. To check this, save the diagnostic protocol (Figure 3) to the desktop of the scan tool and open it

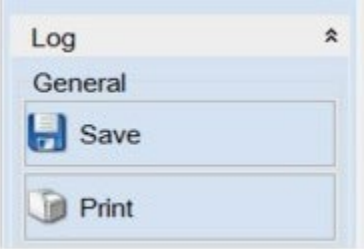


Figure 3. *Save Diagnosis Log.*

5. Click the + to expand the "Global Variables" (Figure 4).

Figure 4. *Global Variables.*

6. With the "Global Variables" expanded (Figure 5), there should be a long list of values.

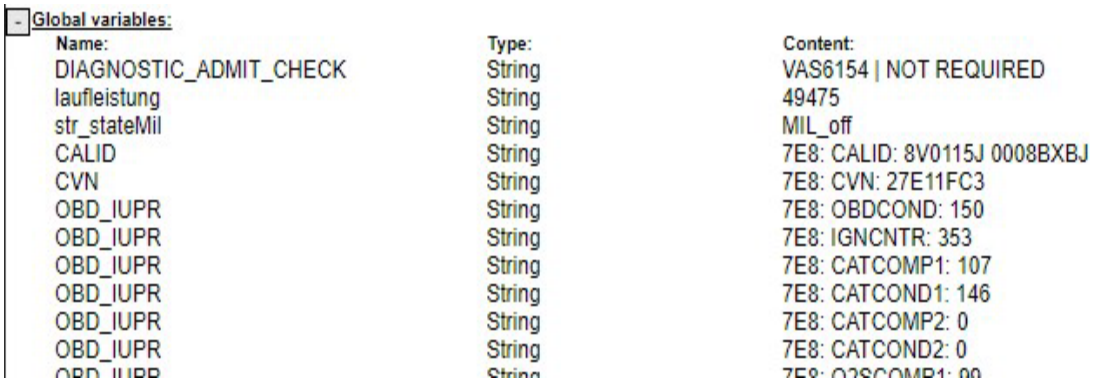


Figure 5. *Global Variables Expanded*

7. Check the global variables; there should be a long list of values with the title DA0002 ending with the values "STOPP".

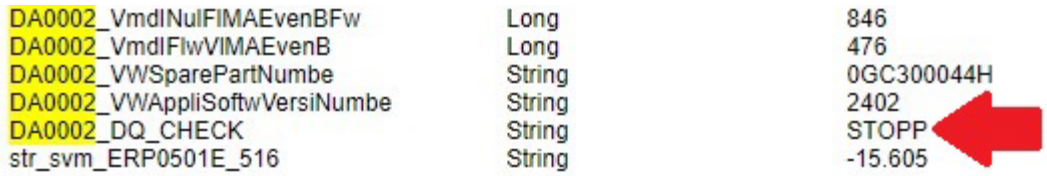


Figure 6. *Global Variables DA0002.*

There should be 89 values stored with the title DA0002. Quickly check if there are 89 values by performing a "Search text" or "Find" (Control +F) in the browser window; search for DA0002 to verify that the number of results is 89 (Figure 7).

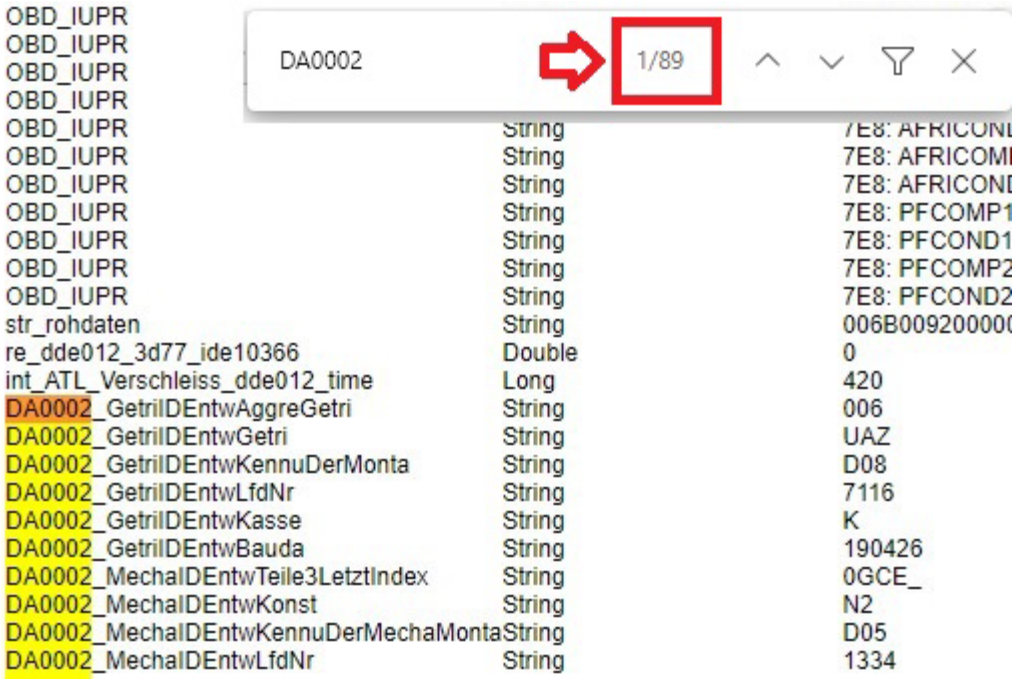


Figure 7. *Search Text / 89 Values.*

Tip: It is only possible to receive the correct control unit if the diagnostic log was sent with the relevant event memory entry, the completed test plan, and the 89 values shown in the Global Variables.

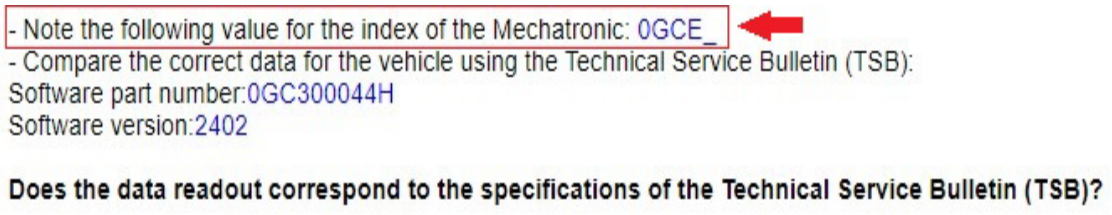
8. **If there are less than 89 values this TSB repair will not work, and it does not apply to the vehicle. Repairs should be made outside this TSB according to ODIS test plans and the repair manual.**

9. Perform Guided Fault Finding for the relevant event memory entry and follow the instructions.

10. Answer 'YES' to the question "Could you locate relevant Technical Service Bulletin (TSB)" or "Could you locate relevant Technical Product Information (TPI)?"

    If the test plan requests a TSB or TPI number enter: **2058356**

11. Continue with the test plan, and the following message will come up with important information you need for parts ordering (Figure 8). Make note of the 4 letter index of the Mechatronic and compare it to the parts list table in this TSB. If the index shown in the test plan is available in one of the parts list below answer the test plan question with "Yes" if the 4 letter index of the Mechatronic is not shown available in one of the parts list below answer the test plan question with "No" and this TSB doesn't apply to the vehicle.



- **Figure 8.** Index of the Mechatronic and test plan question.

12. If the index shown in the test plan is available in one of the parts lists below, and the test plan was finished correctly, **upload the GFF log to GFF paperless and order the correct parts from one of the tables below**. Read all notes in the parts information section of this TSB.

    Tip: The immobilizer must be readapted after replacing the control unit. For this purpose, it is essential that all vehicle keys are present at the time of the repair.

13. After receiving the required genuine parts, remove mechatronics unit from gearbox according to the repair manual.

14. The sensors are on the back of the mechatronics unit and must not be touched/damaged. The mechatronic unit must not be placed down on its sensors (Figure 9, red markings).

Figure 9. *Mechatronics Sensors*

Note:

For this repair the special tool VAS 6613 ESD Work Surface is required

Touch a suitable earthed object (VAS 6613 ESD Work Surface) before working on electrical components of mechatronic unit. Do not touch the contacts or electronic components directly

Note:

You must ensure the highest levels of cleanliness for all work on the mechatronic unit. Even the smallest dirt particles or hairs in the system can lead to restricted functions and ultimately to failure of the mechatronic unit.

15. After removing the mechatronic unit, place it in the assembly aid to protect the sensors. The assembly aid comes with the new control unit. First take the control unit out of the assembly aid and store it safely in the packaging. Place the mechatronic unit in the assembly aid (Figure 10) with sensors facing downwards.

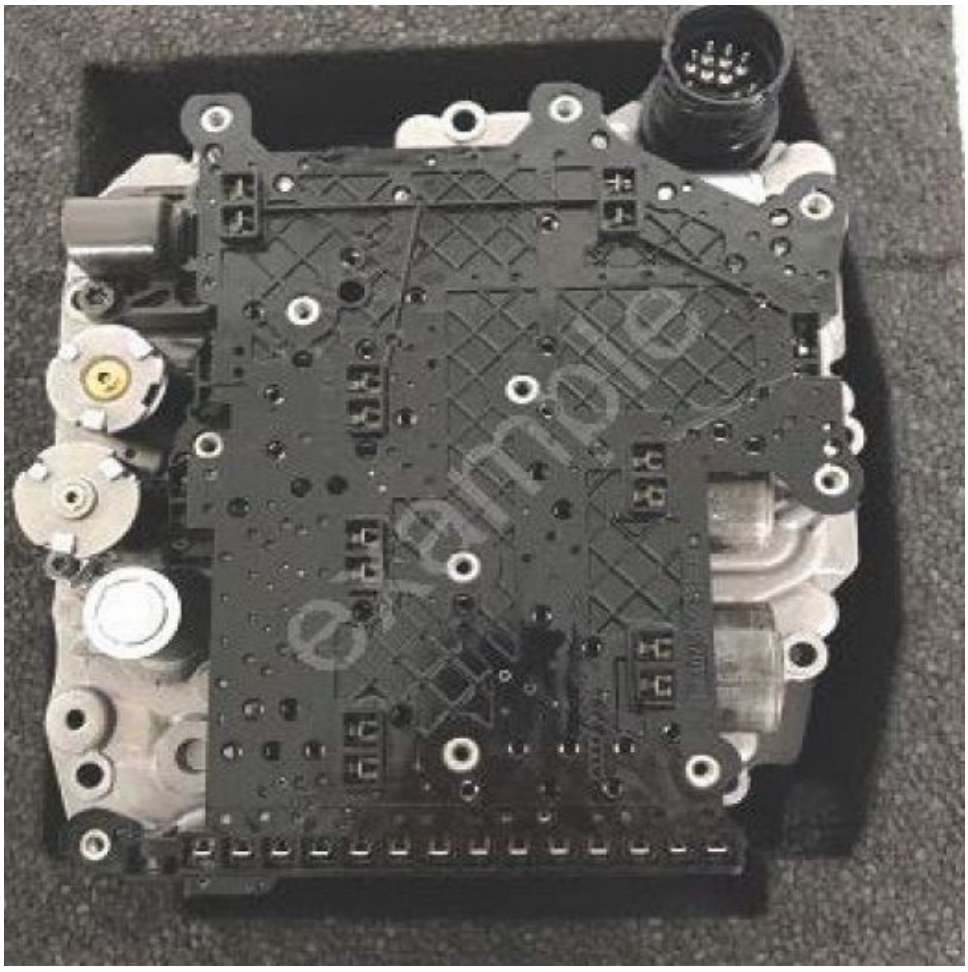


Figure 10. *Mechatronics unit in the assembly aid.*

16. The contact plate must be detached from the mechatronic unit. To do so, loosen and remove the bolts (Figure 11 - 0GC Transmission or Figure 12 - 0DL Transmission).

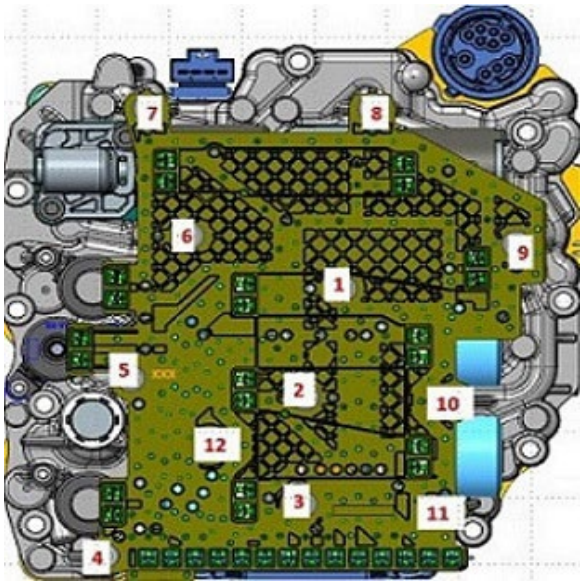


Figure 11: *Contact plate bolts – 0GC transmission.*

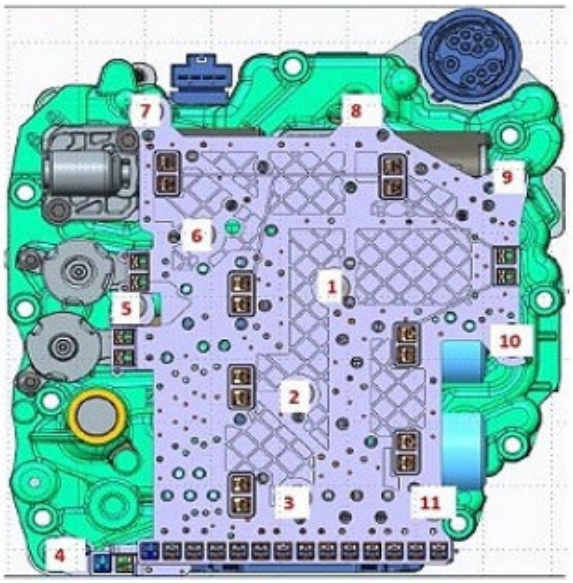


Figure 12: *Contact plate bolts 0DL transmission.*

17. Starting at the top corners, detach the contact plate (figure 13, red marking) carefully and evenly (without levering it upwards) from the mechatronic unit. It is essential to ensure that the contacts on the valves are not bent or damaged.

Figure 13. *Removing contact plate.*

18. Take the mechatronic unit out of the assembly aide, turn the mechatronic unit over, and place it back in the assembly aid (Figure 14). When doing so, take care not to damage the valve contacts and the sensors.

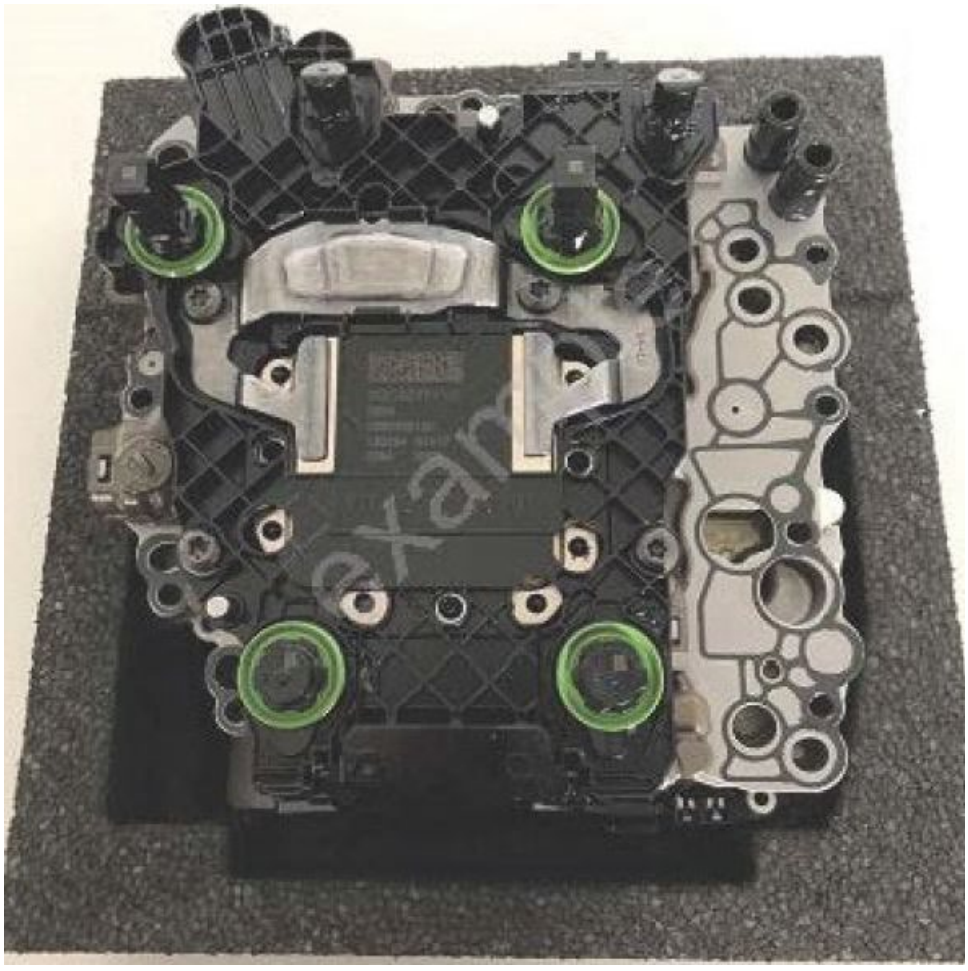


Figure 14. *Mechatronic unit with the control unit in the assembly aide facing upwards.*

19. Move the connecting tab between the contact plate and the control unit in the direction of the arrow (less than 10°) (Figure 15, red arrow). When it is in place, the connecting tab engages in the correct position with an audible click.

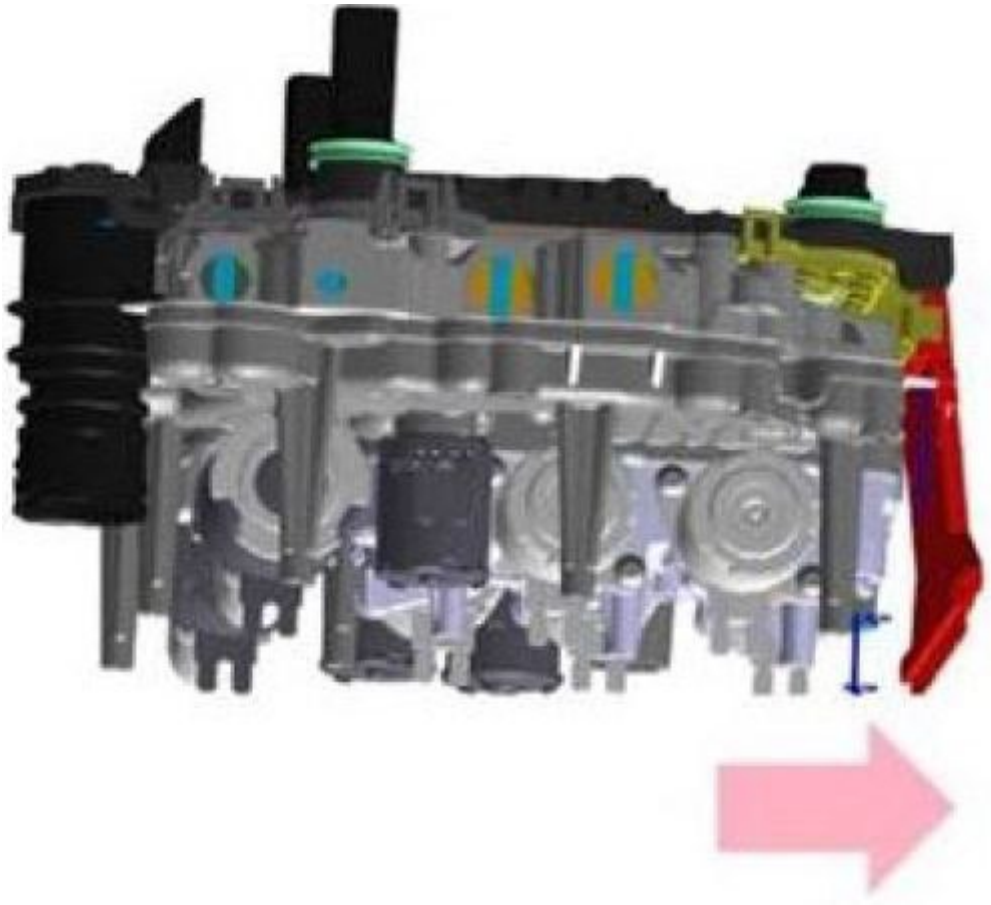


Figure 15. *Connecting tab between the contact plate and the control unit.*

20. Unscrew the 4 bolts (Figure 16) (A, D short and B, C long), then carefully detach the gearbox control unit upwards from the mechatronic unit.

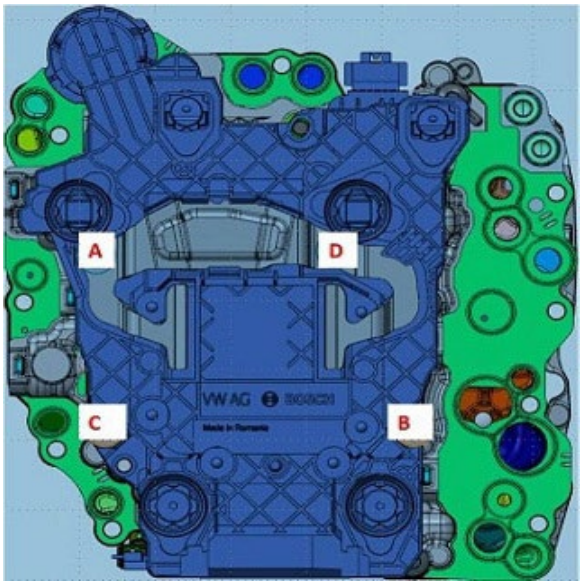


Figure 16. Bolts for the transmission control unit.

21. Replace the seals for the pressure sensors (Figure 17). When doing so, ensure that the seals are seated correctly.

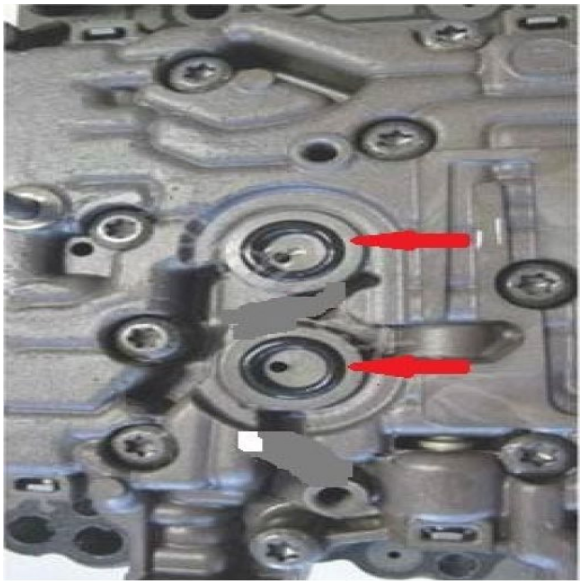


Figure 17. *Seals for the pressure sensors.*

22. Remaining assembly is performed in reverse sequence.

Tighten the control unit with new bolts in 2 stages (Figure 16).

Stage 1:

- Bolts A and D (short): 6 Nm

- Bolts B and C (long): 4.5 Nm

Stage 2:

- Bolts A and D (short): 8 Nm + 30°
- Bolts B and C (long): 5 Nm + 25°

23. Fit the new contact plate, making sure it engages audibly on the contacts.

When pressing the contact plate on, it is essential to ensure that all of the contacts are inserted in the intended/correct connector and do not get bent (Figure 18 and Figure 19).

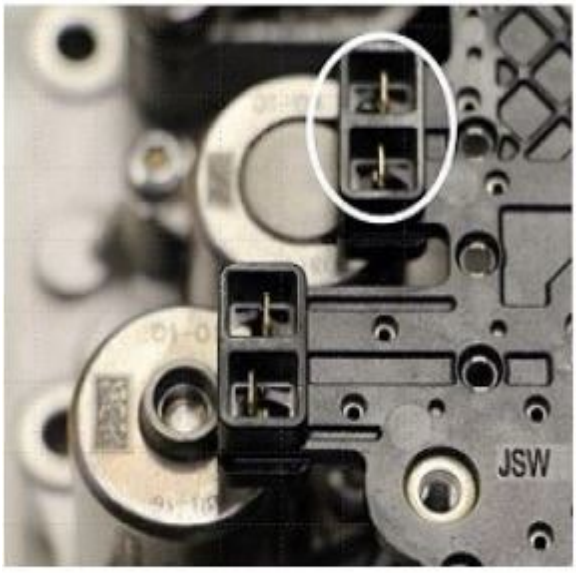


Figure 18. *Correct contact, circled.*

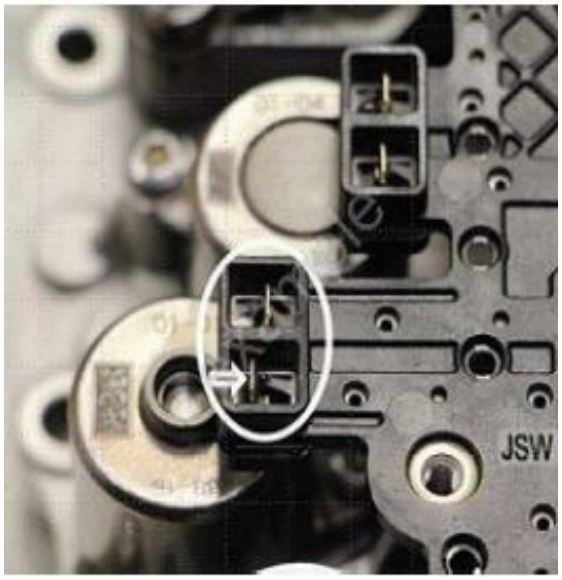


Figure 19. *Bent contact, circled.*

24. Tighten the contact plate with new bolts in specified sequence in 2 stages.

- **For 0GC Transmission (figure 20):**
  - Stage 1: 2 Nm
  - Stage 2: 3 Nm + 30°
  - Tightening sequence: 1 -> 2 -> 3 -> 12 -> 5 -> 4 -> 11 -> 10 -> 9 -> 8 -> 6 -> 7
- **For 0DL Transmission (figure 21):**
  - Stage 1: 2 Nm
  - Stage 2: 3 Nm + 45°
  - Tightening sequence: 1 -> 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10 -> 11

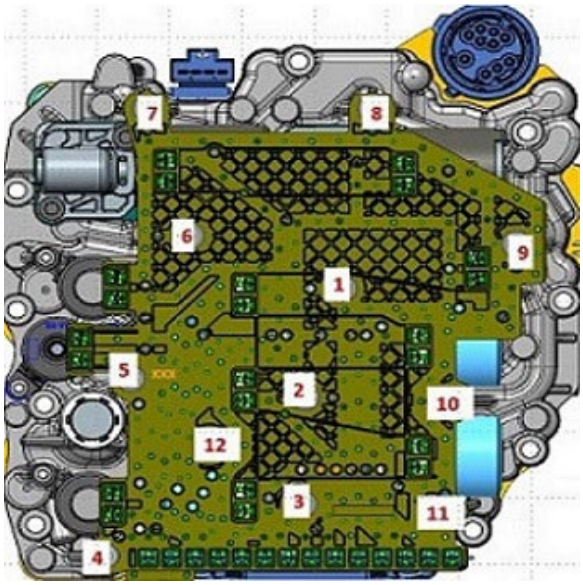


Figure 20. *Contact Plate Bolts 0GC Transmission.*

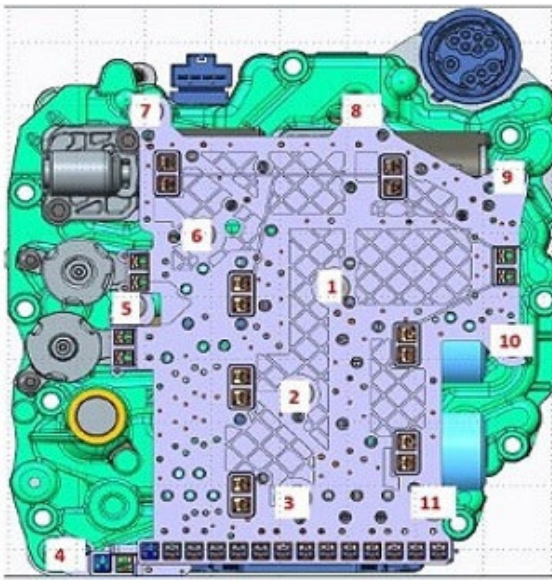


Figure 21.*Contact Plate Bolts 0DL Transmission.*

25. Reassemble the mechatronics unit with new cover into the transmission, including refilling the transmission with oil according to the repair manual.

26. Activate the new control unit using the Guided Function “0002 - Replace mechatronic unit (control unit)”.

27. Perform basic setting for gearbox.

Warranty

Claim Type:	• 110 up to 48 Months/50,000 Miles. • G10 for CPO Covered Vehicles – Verify Owner. • If the vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
Service Number:	3511		
Damage Code:	0040		
Labor Operations:	Remove and install mechatronic unit	3511 19xx	See SRT(s) with associated operation.
	Repair mechatronic unit	3511 4199	50 TU

Diagnostic Time:	GFF	0150 0000	Time stated on diagnostic protocol (Max 120 TU)
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	No allowance	0 TU
Claim Comment:	As per TSB 2070217/1		

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.

Required Parts and Tools

Note:

Parts cannot be ordered until Step 11 of this TSB has been completed and the index of the Mechatronics unit is shown in one of the lists below! It is only possible to deliver the correct control unit if the diagnostic log was sent online with the relevant DTC entry and the completed test plan.

Note:

Only order parts for the correct index of the Mechatronics unit! If the installed mechatronics unit does not have index that matches one of the parts tables below this TSB does not apply to the vehicle!

Note:

Red Order all parts using the VIN of vehicle when ordering!

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.

Transmission Service Code: 0GC (A3 and TT)

Index of Mechatronics unit 0GCB, 0GCC or 0GCD Parts list:

Part Number	Part Description	Quantity
See ETKA	Fasteners, Bolts, Nuts and Screws as needed per the Repair Manual	See ETKA/ELSA
0GC 927 711 G VI1	Control unit	01
0GC 927 709 A	Contact plate	01
N 101 243 04	Bolt for control unit (short)	02
N 104 057 05	Bolt for control unit (long)	02

N 904 552 02	Bolt for contact plate	12
WHT 004 007 B	O-ring for pressure sensor	02
0GC 325 201 H	Cover for mechatronic unit	01
N 105 540 02	Bolt for mechatronic unit	09
N 910 327 02	Bolt for cover for mechatronic unit	04
0BH 325 147	Retaining clip	01
N 043 809 2	Oil seal	01
G 055 529 A2	Gear oil	07

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.

Transmission Service Code: 0GC (A3 and TT)

Index of Mechatronics unit 0GCE or 0GCH Parts list:

Part Number	Part Description	Quantity
See ETKA	Fasteners, Bolts, Nuts and Screws as needed per the Repair Manual	See ETKA/ELSA
0GC 927 711 H VI1	Control unit	01
0GC 927 709 A	Contact plate	01
N 101 243 04	Bolt for control unit (short)	02
N 104 057 05	Bolt for control unit (long)	02
N 904 552 02	Bolt for contact plate	12
WHT 004 007 B	O-ring for pressure sensor	02
0GC 325 201 H	Cover for mechatronic unit	01
N 105 540 02	Bolt for mechatronic unit	09
N 910 327 02	Bolt for cover for mechatronic unit	04
0BH 325 147	Retaining clip	01
N 043 809 2	Oil seal	01
G 055 529 A2	Gear oil	07

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.		
Transmission Service Code: 0DL (RS3 and TTRS) **Index of Mechatronics unit 0GC* (*Any 4th digit) Parts list:**		
Part Number	**Part Description**	**Quantity**
See ETKA	Fasteners, Bolts, Nuts and Screws as needed per the Repair Manual	See ETKA/ELSA
0GC 927 711 H VI1	Control unit	01
0GC 927 709 A	Contact plate	01
N 101 243 04	Bolt for control unit (short)	02
N 104 057 05	Bolt for control unit (long)	02
N 904 552 02	Bolt for contact plate	12
WHT 004 007 B	O-ring for pressure sensor	02
0GC 325 201 H	Cover for mechatronic unit	01
N 105 540 02	Bolt for mechatronic unit	09
N 910 327 02	Bolt for cover for mechatronic unit	04
0BH 325 147	Retaining clip	01
N 043 809 2	Oil seal	01
N 013 813 2	Oil seal	01
G 052 182 A2	Gear oil	07

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.		
Transmission Service Code: 0DL (RS3 and TTRS) **Index of Mechatronics unit 0BH* (*Any 4th digit) Parts list:**		
Part Number	**Part Description**	**Quantity**
See ETKA	Fasteners, Bolts, Nuts and Screws as needed per the Repair Manual	See ETKA/ELSA
0GC 927 711 H VI1	Control unit	01

0BH 927 709 A	Contact plate	01
N 101 243 04	Bolt for control unit (short)	02
N 104 057 05	Bolt for control unit (long)	02
N 904 552 02	Bolt for contact plate	11
WHT 004 007 B	O-ring for pressure sensor	02
0GC 325 201 H	Cover for mechatronic unit	01
N 105 540 02	Bolt for mechatronic unit	09
N 910 327 02	Bolt for cover for mechatronic unit	04
0BH 325 147	Retaining clip	01
N 043 809 2	Oil seal	01
N 013 813 2	Oil seal	01
G 052 182 A2	Gear oil	07

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.

Transmission Service Code: 0DL (RS3 and TTRS)

Index of Mechatronics unit 0DL* (*Any 4th digit) Parts list:

Part Number	Part Description	Quantity
See ETKA	Fasteners, Bolts, Nuts and Screws as needed per the Repair Manual	See ETKA/ELSA
0GC 927 711 H VI1	Control unit	01
0BH 927 709 A	Contact plate	01
N 101 243 04	Bolt for control unit (short)	02
N 104 057 05	Bolt for control unit (long)	02
N 904 552 02	Bolt for contact plate	11
WHT 004 007 B	O-ring for pressure sensor	02
0GC 325 201 H	Cover for mechatronic unit	01
N 105 540 02	Bolt for mechatronic unit	09

N 910 327 02	Bolt for cover for mechatronic unit	04
0BH 325 147	Retaining clip	01
N 043 809 2	Oil seal	01
N 013 813 2	Oil seal	01
G 052 182 A2	Gear oil	07

Special Tools Required:

- **VAS 6613 ESD Work Surface**

Additional Information

All parts and service references provided in this TSB (**2070217**) are subject to change and/or removal.