



Technical Service Bulletin

37 Transmission malfunction, DTC P17F600, P17F500, P17F400, P18C400, U008000, and/or U010100 in the TCM or ECM

37 20 92 2058450/1 February 10, 2020.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A6, A7	2019 - 2020	All	Not Applicable

Condition

Customer states:

One or more of the following customer statements may be present:

- A transmission malfunction indicator is displayed in the instrument cluster.
- Multiple other warnings might be displayed in the instrument cluster.
- The parking lock cannot be engaged or disengaged.
- A drive position is unable to be selected.
- The fuse has blown for the transmission control module (TCM), J217 (address word 0002).

Workshop findings:

The customer concern can often be re-produced while manipulating the transmission harness near the cross brace.

One or more of the following DTCs may be stored in the TCM, J217 (address word 0002):

- **DTC P17F600** (Parking lock solenoid Electrical error).
- **DTC P17F500** (Parking lock solenoid Open circuit).
- **DTC P17F400** (Parking lock solenoid Short circuit to ground).
- **DTC P18C400** (parking lock solenoid, implausible signal).
- **DTC U008000** (Vehicle Communication Bus F).

The following DTC may be stored in the engine control module (ECM), J623 (address word 0001):

- **DTC U010100** (Lost Communication with TCM).

The following DTC may be stored in the data bus diagnostic interface, J533 (address word 0019):

- **DTC U11B000** (FlexRay data bus branch 2 faulty) as sporadic or static.
- **DTC U112100** (Data bus missing message).



Technical Service Bulletin

Technical Background

Due to routing deviations during production, the transmission harness may come in contact with the transmission crossmember and chafe over time.

OR

The body harness containing the FlexRay circuit to the transmission may rub against the mounting bracket of the driver assist systems control module, J1121 (address word 00A5).

Production Solution

Optimized transmission wiring harness and routing implemented in production.

Service

Before starting repairs, ensure the faults, symptoms and customer concern apply before proceeding. If the customer concern is related to the transmission harness chaffing, the symptoms or faults can usually be duplicated while moving the wire harness.

Inspection of the transmission and body harness:

1. Thoroughly inspect the transmission and body side wiring harness and routing near the areas depicted in Figures 1 and 2.



Note: Harness damage can be very subtle. Even a light chafing of the harness wrap can cause DTCs.

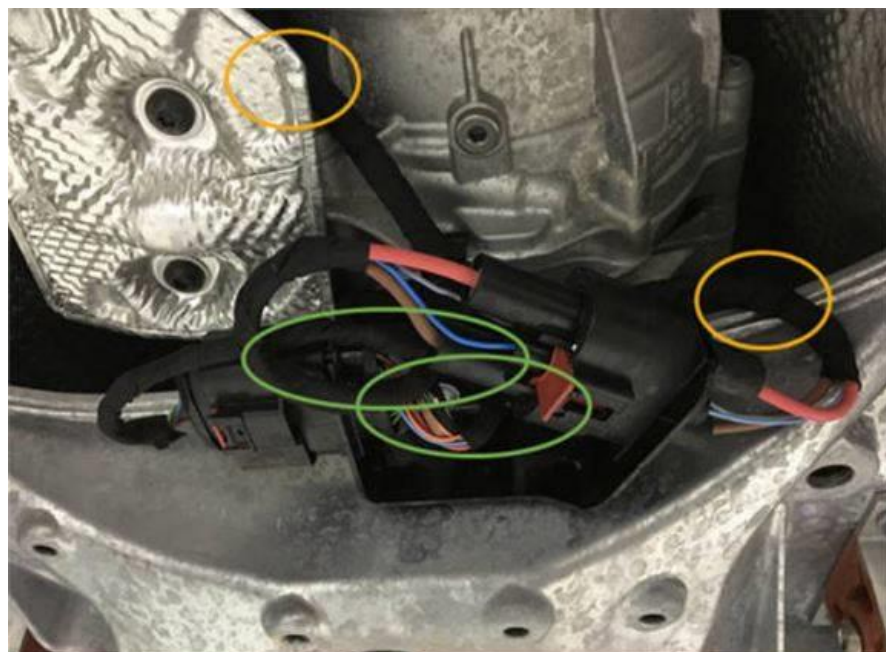


Figure 1. Common areas for harness damage. Also depicted is the original routing concept.



Technical Service Bulletin



Figure 2. Body harness inspection near the area of transmission connector.

2. If there is no damage found as described above and/or the harness rework as described below has already been performed, proceed with standard diagnosis and repair procedures.

If there is no damage found and DTC U11B000 (FlexRay data bus branch 2 faulty) is stored, inspect for chafing near the J1121 mounting bracket shown in Figure 3.



Note: If damage is found as shown in Figure 3, please create a TAC case, include photos, and a clear description of your findings.



Figure 3. The area where the body harness may rub.



Technical Service Bulletin



Tip:

The J1121 is located under the driver's seat. For this reason, thoroughly inspect the harness as described in step 1 before inspecting the location in Figure 3.

3. If the customer concern, faults and damage are found as described above in step 1, proceed with the remainder of this TSB.

Transmission harness repair and re-work instructions:

1. Repair the damaged sections of the transmission or body harness as needed per the repair manual (Figure 4).

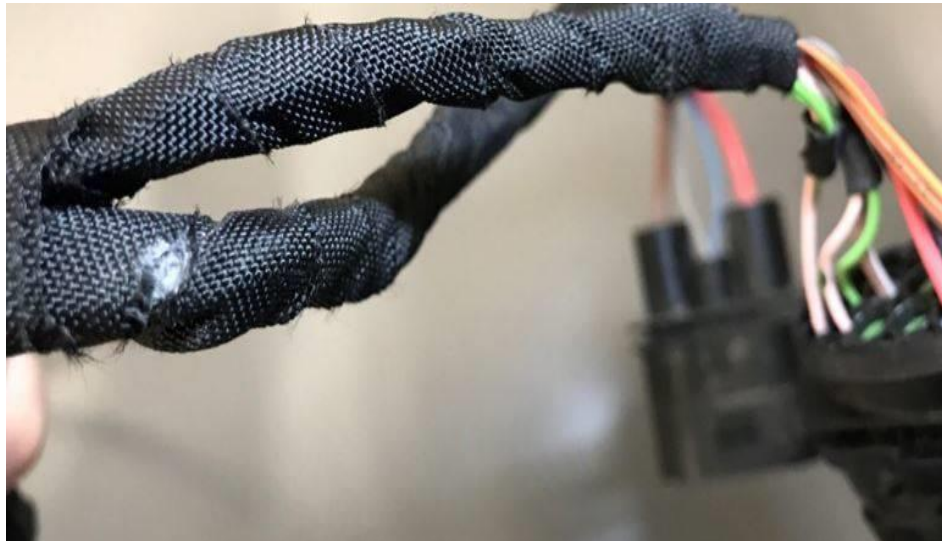


Figure 4. Close-up of transmission harness rub through against the transmission brace.



Note: Ensure the repairs are staggered as needed to avoid large bunches in the harness or that repairs are not made at critical flex points.

2. Remove the transmission harness from the vehicle.

Measure 195mm from the forward branch towards the rear of the transmission harness. Fit a new clip, part number N 106 598 01 at this location (Figure 5).



Figure 5. New clip fitted 195mm from the forward branch of the transmission harness.



Technical Service Bulletin

3. Measure 200mm from the center of the newly fitted clip towards the rear of the harness. Install a new clip with part number N 106 598 01 at this location

The opening of both clips should point in the same direction as the original clips (Figure 6).

The old clips can now be removed.

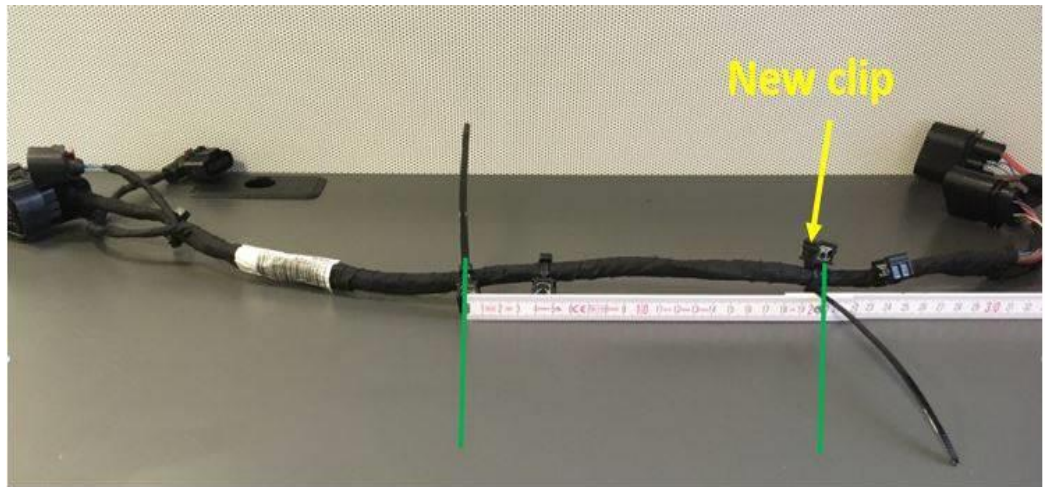


Figure 6. Second new clip shown installed near the rear of the transmission harness.



Tip:

It is helpful to mark the harness with a yellow tire crayon at the location to install the new cable ties. This way, the cable tie can be left slightly loose and then tightened at the end of the procedure. This will aid in orientation of the harness.

4. Add the 100mm protective sleeve, part number N 108 705 01 to the transmission harness.

Place the sleeve 10mm from the new rear clip then fully wrap the sleeve with tape N 105 920 02.

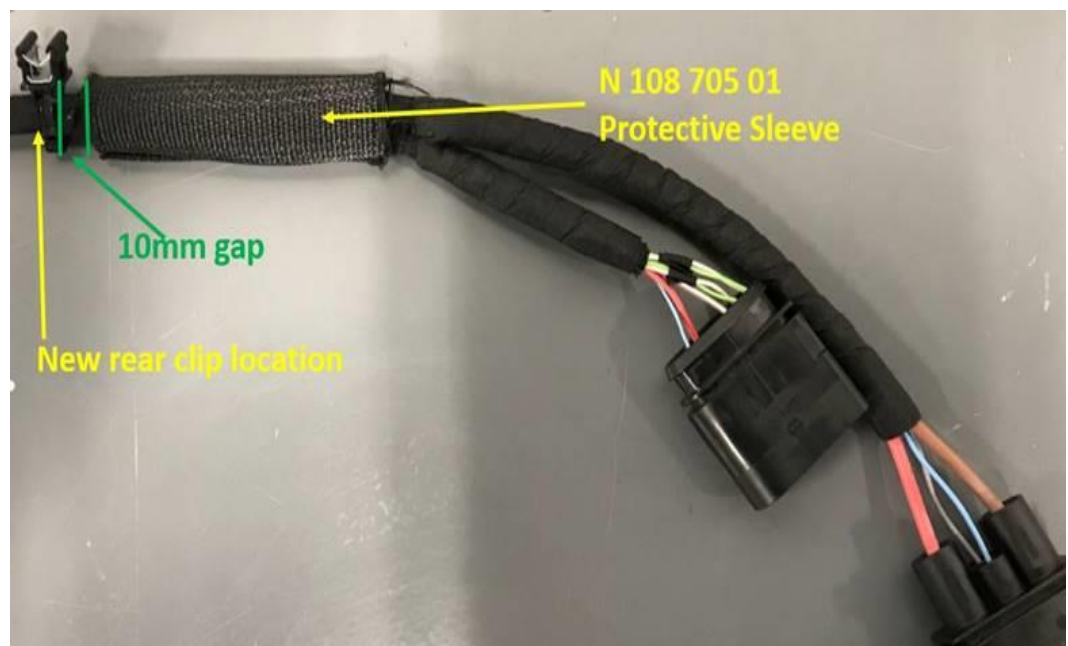
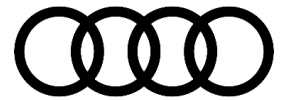


Figure 7. Installation location of protective sleeve.



Technical Service Bulletin

Wrap the sleeve up to the rear branch of the transmission harness between the green lines (Figure 8).

A moderate to firm pressure should be used while wrapping the harness.

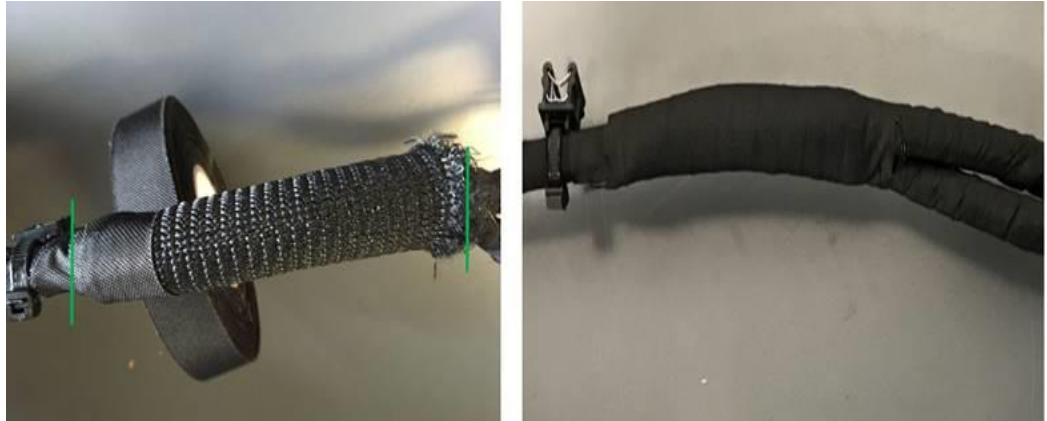


Figure 8. Protective sleeve and final wrapping.

Transmission cross brace deburring:

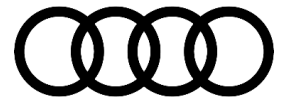
1. Using a half-round file, lightly chamfer and smooth out the transmission cross brace at the locations indicated by the red line in Figure 9.



Note: Cross brace is shown removed for clarity, **do not** remove the brace during service.



Figure 9. Red line depicts areas to be de-burred.



Technical Service Bulletin

2. Avoid removing excessive amounts of material or deforming the cross brace during re-work.

Ensure the areas at the red lines in Figure 9 are smooth and free of any burrs before proceeding.



Tip:

It is not necessary to remove the transmission harness connector bracket when using the half round file.



Figure 10. Deburring of the transmission cross brace.

Transmission Harness Routing:

1. Route the transmission harness back over the cross brace.

Reconnect the forward connectors of the transmission harness



Note:

Cross brace is shown removed for clarity, **do not** remove the brace during service.



Figure 11. New harness routing and clip locations.



Technical Service Bulletin

2. Secure the cable with the newly attached clips (Figures 11–13).

Front clip attachment point on the cross brace (Figure 12).



Figure 12. Attachment point of forward clip.



Technical Service Bulletin

3. Attach the rear clip to the cross brace at the location (Figure 13).



Figure 13. New routing and clip location.



Technical Service Bulletin

4. Install both transmission harness connectors into the brackets.

Ensure the harness is routed as depicted in Figure 14.



Figure 14. New transmission harness routing.

5. Install harness clip 3D0 971 838 L to the transmission wiring harness.

Attach the new clip to the bottom center of the connector bracket.



Tip:

Install the clip at the central point of the connector bracket first, position the harness and then tighten the cable tie. This will aid in orientation of the harness.

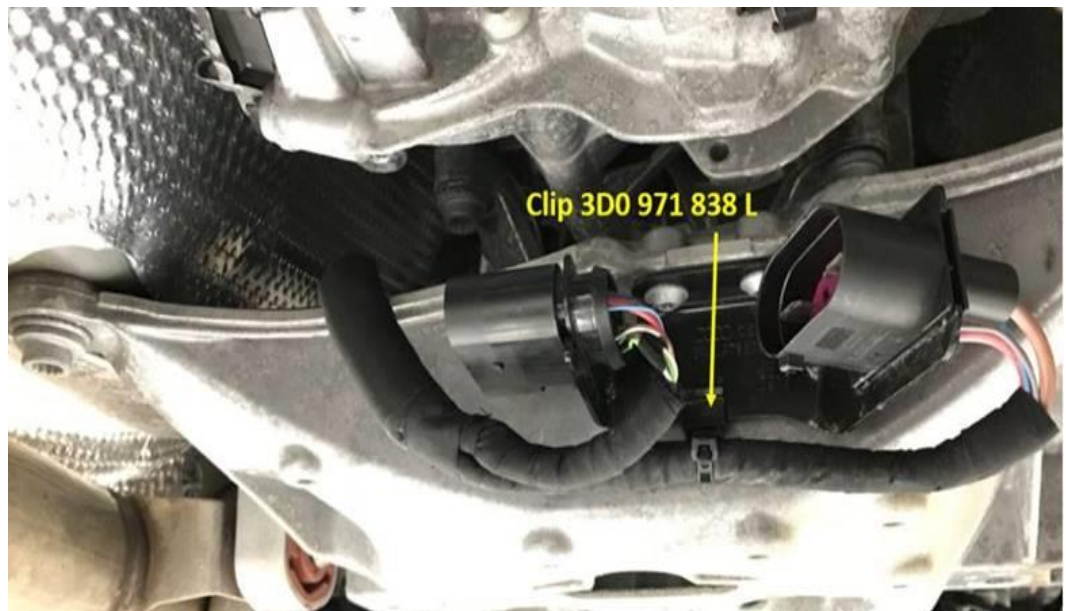


Figure 15. Installation of clip 3D0 971 838 L.



Technical Service Bulletin

Body harness re-work:

Additional insulation is needed on the **body side** of the transmission harness.

1. Install approximately 130mm of corrugated pipe N 107 327 01 to both ends of the **body harness** sections that connect to the transmission harness (Figure 16).

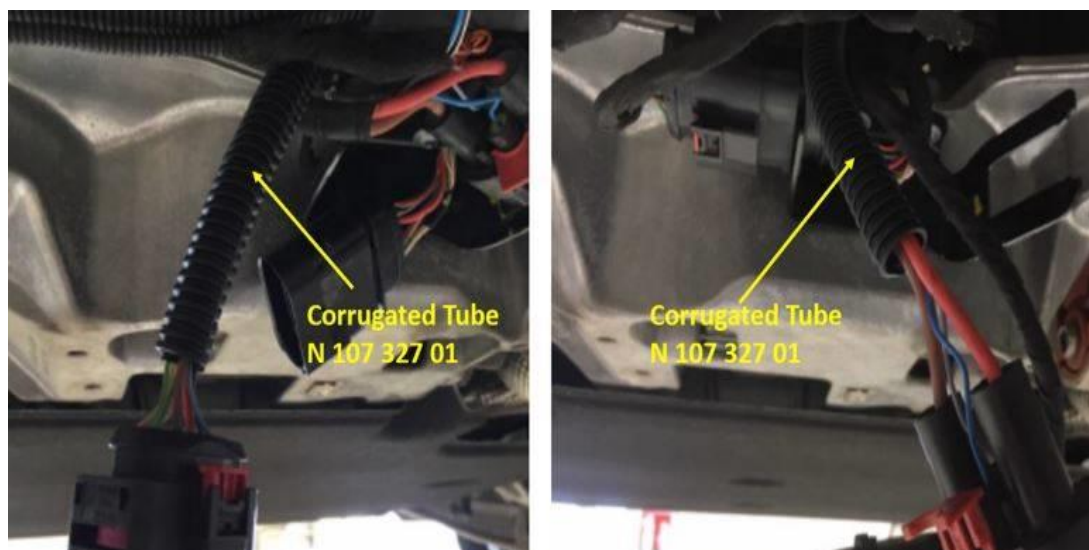


Figure 16. Corrugated pipe N 107 327 01 added to body harness.



Technical Service Bulletin

2. Using harness tape N 105 920 02, wrap both corrugated tubes to the body harness leaving a gap between the windings (Figure 17).

Ensure the pipe is fixed to the harness with the tape to prevent the tube from sliding on the harness.

Ensure the body harness is routed as depicted in Figure 17.



Figure 17. Fully wrapped corrugated tub and final harness routing.



Tip:

Double check that all cable ties are tight before returning the vehicle to the customer.

Warranty

Claim Type:	<ul style="list-style-type: none">• 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:	9781		
Damage Code:	0024		
Labor Operations:	Remove and install noise insulation	1082 1900	See SRT
	Central wiring harness repair	9709 41XX	See SRT (depends on number of wire repairs needed)



Technical Service Bulletin

	Repair wiring harness for gearbox control unit	9781 4199	80 TU
Diagnostic Time:	GFF	0150 0000	Time stated on the diagnostic protocol (Max 50 TU)
	Road test prior to the service procedure	0121 0002	10 TU
	Road test after the service procedure	0121 0004	10 TU
Claim Comment:	As per TSB #2058450/1		

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.

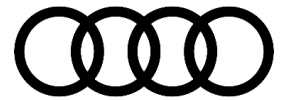
Required Parts and Tools

The part numbers mentioned in this TSB are different than the ones listed in ETKA. Only use parts listed in this TSB, this includes superseding part numbers!		
Part Number	Part Description	Quantity
See ETKA	Fasteners, Bolts, Nuts, and Screws as needed per the Repair Manual	See ETKA/ELSA
N10659801	Harness Clip	02
3D0971838L	Harness Clip	01
N10870501	Protective Sleeve	01
N10592002	Harness Tape	2000mm
N10732701	Corrugated Pipe	130mm

Additional Information

All parts and service references provided in this TSB (2058450) are subject to change and/or removal.

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