



This Service Information bulletin supersedes SI B24 01 08 **dated May 2010**.

NEW designates changes to this revision

SUBJECT

ZF 6HP - Diagnosis for EGS FC 4F81

MODEL

E60, E61 with N52K or N54 and ZF 6HP19TU (6HP21) or 6HP19X TU from SOP up to 02/08

E65, E66 with N62TU or N73 and ZF 6HP26, produced from 03/05 up to 10/06

E70 (X5) with N52K and ZF 6HP19X TU (6HP21X) produced from SOP up to 02/08

E90, E91, E92, E93 with N52K or N54 and ZF 6HP19TU (6HP21) or 6HP19X TU from SOP up to 02/08

SITUATION

“Transmission warning light” is illuminated and the transmission enters failsafe mode. Fault code 4F81 (Ratio monitoring, clutch A), in some cases combined with the subsequent faults 507B/507C (Parking gear sensor implausible signal) or 507D (Parking gear incorrectly disengaged), are stored in the EGS control module.

CAUSE

Possible causes:

- a. Low transmission fluid level; or
- b. Internal transmission pressure leak caused by a defective adapter seal (rectangular) between the transmission housing and the Mechatronic.

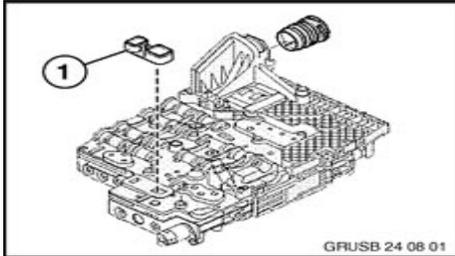
CORRECTION

Follow the procedure below:

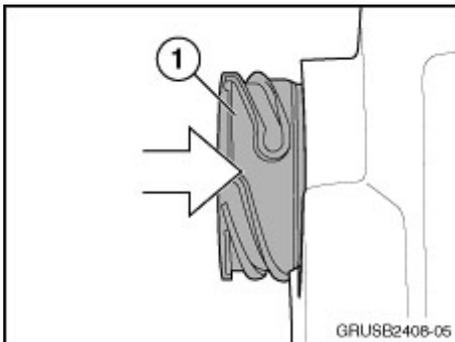
1. Check the transmission fluid level and top up, if needed, using transmission fluid Shell M-1375.4 (P/N 83 22 0 142 516). For the filling procedure, refer to TIS RA 00 11 500.
2. Clear the EGS code fault memory and test-drive the vehicle after the transmission fluid level has been corrected. If the fault codes listed above do not return again after the test-drive, release the vehicle to the customer.
3. If the initial transmission fluid level was correct, or the fault codes listed above returned after topping up and test-driving, remove the transmission’s Mechatronic and check its adapter seal (black, rectangular shaped) for cracks. Refer to REP 24 34 561 for instructions on removal and reinstallation of the Mechatronic. **IMPORTANT:**

IMPORTANT:

Prior to the transmission oil pan removal, drain and save the long-fill transmission fluid.

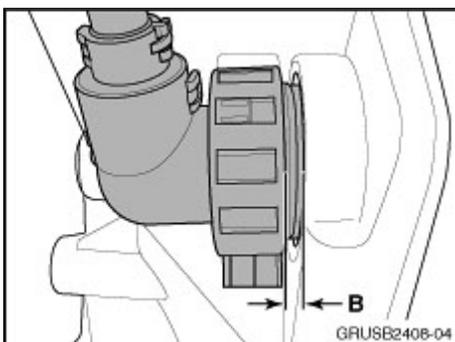


4. If the Mechatronic adapter seal (rectangular) (1) is found to be defective (cracks, seal damage, etc.), replace it with the new part.
5. Reinstall the Mechatronic and an oil pan, using a new oil pan gasket, a new Mechatronic sealing sleeve (round), and a new drain plug. **The oil pan should NOT be replaced.**
6. Fill and adjust the transmission fluid, using the previously saved Shell M-1375.4 (P/N 83 22 0 142 516). For the filling procedure, refer to REP 00 11 500

**Important:**

Make sure to push the sealing sleeve firmly into the housing assembly before closing the white locking tab of the Mechatronic.

To ease the sleeve installation, use some lubrication (e.g., transmission fluid) on both sleeve's o-rings.



After installation, the correct distance between the transmission harness connector and the housing surface (B) should not exceed 3 mm.

In case the sealing sleeve is not inserted correctly, an intermittent connection problem between the Mechatronic and the vehicle harness connector will occur, resulting in various EGS communication faults (e.g., FC 5079 "Serial wire message missing"; FC 507A "Serial line signal plausibility"); "Gearbox Emergency Program" light illumination; and the transmission entering failsafe mode.

7. After repair, the EGS adaption values must be cleared using the following path in ISTA/D:

From the main menu, go to Vehicle Test and choose EGS from the control unit tree (the EGS box will change color from green to blue).

Open the Control Unit Function.

Select Component Activation and then Reset/Learn Values.

From the menu, select Reset all Adaption Values, and then click on Activate Component.

8. If the internal Mechatronic adapter seal does not exhibit any signs of damage, contact Automatic Transmission Enhanced Technical Support (TeileClearing) for further diagnostic instructions. Submit the “regular technical support” PuMA case, referencing SI B24 01 08 in its title.

PARTS INFORMATION

Part Number	Description	Quantity
24 34 7 588 727	Mechatronic adapter seal (rectangular) for 6HP26	1
24 34 7 588 724	Mechatronic adapter seal (rectangular) for 6HP19TU/19XTU	1
24 34 7 588 725	Mechatronic sealing sleeve (round)	1
24 11 7 520 712	Oil pan gasket for 6HP26	1
24 11 7 571 235	Oil pan gasket for 6HP19TU/19X TU	1
24 11 7 520 713	Drain plug	1

WARRANTY INFORMATION

NEW Covered under the terms of the BMW New Vehicle/SAV Limited Warranty as applicable, or the Certified Pre-Owned Limited Warranty for the repair of cause (b) only.

Defect Code:	24 00 30 66 00	
Labor Operation:	Labor Allowance:	Description:
NEW 00 00 006*		Refer to KSD2
NEW 24 34 561+		Refer to KSD2
NEW Sublet 4		Sublet 4 Topping off transmission fluid with \$4.00 Shell M-1375.4

NEW * Main Work – Only one main labor operation (ending with 000-499) may appear on any claim or group of claims (warranty, maintenance or campaigns) that are generated from the same repair visit.

NEW All other labor operations on the same line or other lines must be claimed using plus code labor operations (KSD2 labor operations that have a (+) prefix and the last three digits are 500 or a higher number).