

Harsh Engagement Possibly Followed by Droning/Buzzing Noises During Light Acceleration Between Engine Speed of 1200 – 2500 RPM (P-B-27.55/50g, March 6, 2008)

Topic number	LI27.55-P-045683
Version	1
Function group	27.55 Transmission-oil cooling
Date	01-21-2009
Validity	Model 203.040/061/064/065/081/084/261/264/281/284/ 740/747/764 Model 209.365/375/376/465/475 Model 211.065/070/076/083/265/283 Up to Production Date 09/2003
Reason for change	

Complaint:

Harsh Engagement Possibly Followed by Droning/Buzzing Noises During Light Acceleration Between Engine Speed of 1200 – 2500 RPM

Cause:

If you receive customer reports in the above model vehicles of humming/buzzing noises or noticeable harsh engagement during gentle acceleration between engine speed of 1200 – 2500 rpm; this may be caused by incomplete adaptation of the torque converter, the transmission (EGS) ECU software or glycol contamination of the automatic transmission fluid.

Remedy:

Follow the below repair procedures to resolve.

[i] Note: The condition is not intermittent and can be reproduced at all times.

[i] Note: The Glycol test must be performed only if:

- a. the vehicle was produced before 09/2003,
- b. the radiator is manufactured by "Valeo", refer to Figure 1 for identification,
- c. old crimping method used to assemble the radiator end tanks resembles Figure 2.

[!] Caution! It is mandatory to follow the process steps in sequence.

1. Clear all adaption values.
2. Verify if condition is still present
3. If condition is still present after clearing all EGS ECU adaption values, perform glycol test.

[i] Note: Steps 4 and 5 do NOT apply to AMG Vehicles (203.065, 209.376 and 211.076).

4. If condition is no longer present after clearing all EGS ECU adaption values, replace the EGS ECU with updated software with part number listed in the parts information table.

5. If condition reappears after EGS ECU software updates, perform glycol test.

Instructions for Glycol Test

[!] Caution! Ensure that safety glasses and rubber gloves are worn when performing glycol test. This test should be performed in a clean and well ventilated area away from organic materials (rags, cardboard, oils and other chemicals). Refer to the Material Safety Data Sheets (MSDs) for additional safety measures.

1. Fill 0.5 ml of ATF with the pipette in the small glass container (Figure 4, 1).

XENTRY TIPS

2. Fill with distilled water to 5 ml (Figure 4, 2).

3. Add 1 drop of "Tenside" (Figure 4, 3).

4. Add 1 micro spoon of "Periodic acid" and rock the small glass container (Figure 4, 4).

5. Allow to stand for 5 minutes (Figure 4, 5).

[i] Note: It is essential to comply with the specified standing time in step 5; otherwise the measured value result may be distorted.

6. Add 10 drops of "Natronlauge" or Caustic Soda Solution (Figure 4, 6).

7. Allow to stand for 3 minutes (Figure 4, 7).

[i] Note: It is essential to comply with the specified standing time in step 7; otherwise the measured value result maybe distorted.

8. The sample is now divided into 2 layers; an upper and a lower layer. Immerse the syringe so that the end tip is into the lower layer of the sample and take up approximately 4 ml. of the lower layer using the syringe (Figure 4, 8).

9. Pour the fluid taken up through the filter into a clean small glass container (Figure 4, 9).

10. Immerse test sticks into the filtered solution for approximately 2 seconds, shake the stick and wait for a reaction time of one minute (Figure 4, 10).

11. Compare the color of the test sticks with the color chart on the test stick tube (Figure 4, 11).

[i] Note: The colors of the color chart tube correspond to the amount of glycol contamination of the ATF. After completion of the test, the liquid in the two glass containers should be handled as a hazardous waste. Store in a sealed container and dispose of in accordance with all Federal, state and local hazardous waste regulations.

Perform repair based on the test result:

1. Up to 100 mg/liter of glycol contamination do not perform any repair (considered normal due to condensed water and not a leak).

2. As of 100 mg/liter of glycol contamination, replace radiator. Clean and flush the transmission with the torque converter and transmission oil cooler lines. Refer to WIS Document AR27.55-P-0100A.

3. If the condition is still reproducible after the flush routine, replace the torque converter.

[i] Note: This repair is only valid for the models listed above up to a production date of 09/2003. Also, operation "Glycol test, perform (00-9151)" is not valid on any repairs outside of this document. Failure to comply will result in actions up to and including claim debits.

[i] Note: The following allowable labor operations should be used when submitting a warranty claim for this repair. This information has been generated on March 24, 2006. Please refer to Netstar -> Star TekInfo -> Star Time for the most current labor time allowance.

Attachments

File	Description
figure_1.jpg	Figure 1
figure_2.jpg	Figure 2
figure_3.jpg	Figure 3
figure_4.jpg	Figure 4

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A000 989 00 09 15			Glycol Test Kit Part #1	1	Sufficient for 30 vehicles, Submit as Local Purchase – GLC01594, Qty 1, handling is included	
A000 989 00 14			Glycol Test Kit Part #2	1	Sufficient for 30 vehicles, Submit as Local Purchase – GLC01594, Qty 1, handling is included	
W000 589 49 98 00			ATF Sample Container	1	The special tool, W000 589 49 98 00, will be stocked in the PDC and can be ordered at the descretion of the dealer. It is not an automatically released item.	

XENTRY TIPS

A034 545 41 32			EGS ECU (211 MY 2003)	1	Does not apply to AMG Vehicles (203.065, 209.376 and 211.076), verify part no. is EPC before ordering.	
A034 545 44 32			EGS ECU (211 MY 2004)	1	Does not apply to AMG Vehicles (203.065, 209.376 and 211.076), verify part no. is EPC before ordering.	
A034 545 42 32			EGS ECU (209 MY 2004)	1	Does not apply to AMG Vehicles (203.065, 209.376 and 211.076), verify part no. is EPC before ordering.	
A035 545 30 32			EGS ECU (203 MY 2004)	1	Does not apply to AMG Vehicles (203.065, 209.376 and 211.076), verify part no. is EPC before ordering.	

Operation numbers/damage codes					
Op. no.	Operation text	Time	Damage code	Note	
54-1011	SHORT TEST, PERFORM	0.3 hrs.	27431 04	Model Indicators: P1, P2, P3, P4, P5, P6 P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S3, S4, S5, T1, T2, T3, T5, U1, U3	
54-0992	CONTROL UNIT....CODE (AFTER TEST), PERFORM	0.1 hrs.		If necessary Model Indicators: P1, P2, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S4, S5, T1, T2, T5, U1, U3	
00-9151	ROAD TEST, PERFORM	0.3 hrs.		Model Indicators: P1, P2, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S4, S5, T1, T2, T5, U1, U3	
27-2351	CONTROL MODULE – FOR ELECTRONIC TRANSMISSION (722.6), REPLACE	0.3 hrs.		Model Indicators: P1, P2, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S4, S5, T1, T2, T5, U1, U3	
02-4609	GLYCOL TEST, PERFORM	0.5hrs.		Model Indicators: P1, P2, P3, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4	
02-4609	GLYCOL TEST, PERFORM	0.6 hrs.		Model Indicators: S1, S2, S3, S4, S5, T1, T2, T3, T5, U1, U3	
00-9151	ROAD TEST, PERFORM	0.3 hrs.		Model Indicators: P1, P2, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S4, S5, T1, T2, T5, U1, U3	
20-4000	RADIATOR, REPLACE	1.6 hrs.		Model Indicators: S1, S2, S4, S5, U3	
20-4000	RADIATOR, REPLACE	1.7 hrs.		Model Indicators: T1, U1	
20-4000	RADIATOR, REPLACE	1.9 hrs.		Model Indicators: P3, S3	
20-4000	RADIATOR, REPLACE	2.1 hrs.		Model Indicators: T2, T5	
20-4000	RADIATOR, REPLACE	2.2 hrs.		Model Indicators: P1, P2, P4, P6, P7, P8, P9, Q2, Q4, T3	
20-4000	RADIATOR, REPLACE	3.3 hrs.		Model Indicator: P5	
20-4000	RADIATOR, REPLACE	3.6 hrs.		Model Indicators: Q1, Q3	

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20-4300	ADDL. TO OPERATION NO. 3865/4000 – VEHICLES WITH AUTO. TRANS.	0.2 hrs.		Model Indicators: P5, Q1, Q3
20-4300	ADDL. TO OPERATION NO. 3865/4000 – VEHICLES WITH AUTO. TRANS.	0.3 hrs.		Model Indicators: P1, Q2, Q4
27-4863	AUTOMATIC TRANSMISSION AND TORQUE CONVERTER, FLUSH	2.4 hrs.		Model Indicators: P1, P2, P3, P4, P5, P6, P7, P8, P9, Q1, Q2, Q3, Q4, S1, S2, S3, S4, S5, T1, T2, T3, T5, U1, U3
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	3.7 hrs.		Model Indicators: T1, T2, U1
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	4.0 hrs.		Model Indicator: T3
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	4.2 hrs.		Model Indicators: S1, S4
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	4.8 hrs.		Model Indicators: T5, U3
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	5.1 hrs.		Model Indicators: P1, P2, P3, P4, P5, Q2, Q4, S2, S5
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	5.2 hrs.		Model Indicator: S3
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	6.3 hrs.		Model Indicators: Q1, Q3
27-2028	AUTOMATIC TRANSMISSION (722.6- ELECTRONIC), R&R	6.6 hrs.		Model Indicators: P6, P7, P8, P9

WIS-References			
Document number	Title	Note	Allocation
AR27.55-P-0100A	Flush out automatic trans- mission and torque conver- ter		Remedy