



DTB

Date: January 23, 2009
Order No.: S-B-05.20/20b
Supersedes: P-B-05.20/20a and T-B-05.20/21a
dated December 21, 2007
Group: 05



Revision History

Revision	Date	Purpose
b	1/23/09	Applicable Models Updated and Technical Content Updated
a	12/21/07	Applicable Models and Warranty Information Updated
-	01/04/07	Initial issue

SUBJECT: **Model 164.177**
Model 204.077
Model 209.377/477
Model 211.077/277
Model 216.377
Model 219.377
Model 221.177
Model 230.470
Model 251.177
AMG Vehicles Equipped with Engine M156
Sporadically Occurring Noise on Engine Start in Area of the Chain Drive

If you receive customer reports in the above model vehicles of a sporadically occurring noise when first starting the engine, this may be due to the intake camshaft adjusters or valve tappets. Use the following sound recordings to assist in fault tracing.

Camshaft Adjuster Sound Recording

- Rattling sound with one malfunctioning camshaft adjuster. 
- Rattling sound with two malfunctioning camshaft adjusters. 

Valve Tappets Sound Recording

- Clattering noise/valve tappets. 

This bulletin has been created and maintained in accordance with MBUSA-SLP S423QH001, Document and Data Control, and MBUSA-SLP S424HH001, Control of Quality Records.

Models 209, 211 and 219, Equipped with M156 Engine up to Serial Number 60 001177: For vehicles with camshaft adjuster rattling sound, replace the intake camshafts and intake camshaft adjusters, use repair kit A156 060 3147. Refer to WIS document number AR05.20-P-6992AMG. The exhaust camshaft adjuster should not require replacement on this range of engines unless confirmed to be noisy.

i **Note:** It is essential to replace both the intake camshafts and intake camshaft adjusters. Holding device part number W156 589 00 61 00 and locating plate part number W156 589 00 32 00 are absolutely necessary to perform this repair.

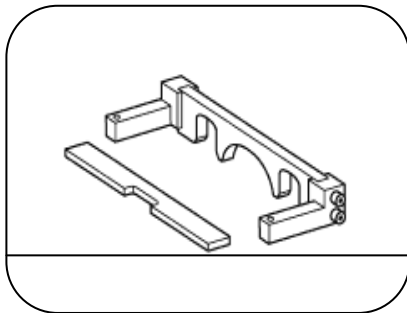
Vehicles Equipped with M156 after Serial Number 60 001178:

Remedy 1: For vehicles with camshaft adjuster rattling sound, replace the camshaft adjuster(s) found noisy. For testing and repair information refer to WIS Group 05.20.

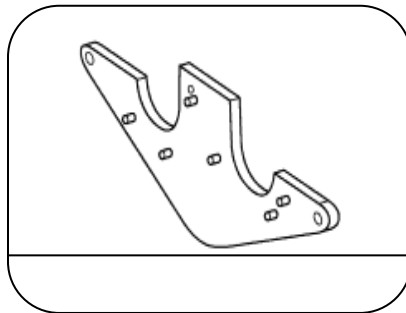
i **Note:** Even if only one camshaft adjuster is replaced it is absolutely imperative to set cam timing on both cylinder banks. Repair kit A156 050 31 47 should not be used for engines after the serial number break. Order individual parts as needed.

Remedy 2: For vehicles with valve tappet(s) sound, replace valve tappet(s) found noisy. For testing and repair information refer to WIS Group 05.20

Special Tools



156 589 00 61 00



156 589 00 32 00

i **Note:** These two required Special Tools have been automatically released and shipped to all dealers in September 2006.

Parts Information

Qty.	Part Name	Part Number
1	Camshaft adjuster repair kit (up to eng. no. 60 001177)	A156 050 31 47
As needed	Adjuster, camshaft, intake	A156 050 30 47
As needed	Adjuster, camshaft, exhaust	A156 050 28 47
As needed	Valve tappet	A156 050 02 25

i **Note:** The following allowable labor operations should be used when submitting a warranty claim for this repair. This information has been generated on January 23, 2009. Please refer to Netstar → Star TekInfo → Star Time for the most current labor time allowance.

In Case of Warranty

- Operation:** Short test perform (54-1011)
 Camshaft B – (valve cover(s) removed), replace (05-6492)
 Camshaft C – (valve covers removed), R&R (05-6632)
 Camshaft adjuster for camshaft A, remove/install, replace if necessary (cover removed from front of cylinder head) (05-7264)
 Camshaft timing adjuster on right cyl. head (B), R&R/repl (valve cover removed) (05-7251)
 Camshaft timing adjuster – on left cyl. head (C), R&R/repl. (valve cover removed) (05-7261)
 Camshaft adjuster for camshaft D, remove/install, replace if necessary (cover removed From front of cylinder head) (05-7267)
 Camshaft(s) timing adjuster – all, R&R/repl. (valve covers removed) (05-7211)
 Valve cover – left bank, R&R/reseal (01-5012)
 Valve cover – right bank, R&R/reseal (01-5013)
 Valve cover – left and right bank, R&R/reseal (01-5011)
 Valve lifters (all) on CAM "A" - (after test), replace (05-2322)
 Valve lifters (all) on CAM "B" - (after test), replace (05-2327)
 Valve lifters (all) on CAM "C" - (after test), replace (05-2332)
 Valve lifters (all) on CAM "D" - (after test), replace (05-2337)
 Valve lifters, all – (valve cover removed), replace (05-2313)
 Valve lifters, all – (valve cover removed), replace (05-2312)

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
Repair 1 (up to Engine # 54 1011 * 60 001177) 05050 36		0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3
	01 5011	2.1 hrs.	AE, CD, DC, S9, SC, TB, U8, Y4, Z3
		2.2 hrs	BC
		2.3 hrs.	R8
	05 6492	1.5 hrs.	BC, S9, SC, TB, U8, Z3
		2.0 hrs.	AE, DC, Y4
		2.4 hrs.	CD
		2.8 hrs.	R8
	05 6632	1.5 hrs.	BC, S9, SC, TB, U8, Z3
		2.0 hrs.	AE, DC, Y4
		2.4 hrs.	CD
		2.7 hrs.	R8
Repair 1 (after Engine # 54 1011 * 60 001177) 05052 36 (Camshaft A)		0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3
	01 5013	1.3 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.4 hrs.	R8
	05 7264	1.1 hrs.	BC, S9, SC, TB, U8, Z3
		1.5 hrs.	AE, DC, Y4
		1.9 hrs.	CD
		2.2 hrs.	R8
05050 36 (Camshaft B)	54 1011 *	0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3

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In Case of Warranty

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
	01 5013	1.3 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.4 hrs.	R8
	05 7251	1.3 hrs.	BC, S9, SC, TB, U8, Z3
		1.6 hrs.	AE, DC, Y4
		2.0 hrs.	CD
		2.4 hrs.	R8
05050 36 (Camshaft C)	54 1011 *	0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3
	01 5012	1.4 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.5 hrs.	R8
	05 7261	1.3 hrs.	BC, SC, S9, TB, U8, Z3
		1.6 hrs.	AE, DC
		2.0 hrs.	CD
		2.4 hrs.	R8
05052 36 (Camshaft D)	54 1011 *	0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3
	01 5012	1.4 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.5 hrs.	R8
	05 7267	1.1 hrs.	BC, S9, SC, TB, U8, Z3
		1.5 hrs.	AE, DC, Y4
		1.8 hrs.	CD
		2.1 hrs.	R8
05050 36 (All Adjusters)	54 1011 *	0.3 hrs.	AE, BC, CD, DC, R8, S9, SC, TB, U8, Y4, Z3
	01 5011	2.1 hrs.	AE, CD, DC, S9, SC, TB, U8, Y4, Z3
		2.2 hrs.	BC
		2.3 hrs.	R8
	05 7211	1.7 hrs.	AE, BC, DC, S9, SC, TB, U8, Y4, Z3
		2.1 hrs.	CD
		2.4 hrs.	R8
Repair 2	01 5013	1.3 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
05319 36 (Camshaft A Lifters)		1.4 hrs.	R8
	05 2322	1.3 hrs.	BC, S9, SC, TB, U8, Z3
		1.7 hrs.	AE, CD, DC, Y4
		2.0 hrs.	R8
05319 36 (Camshaft B Lifters)	01 5013	1.3 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.4 hrs.	R8

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In Case of Warranty

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
	05 2327	1.3 hrs.	BC, S9, SC, TB, U8, Z3
		1.7 hrs.	AE, CD, DC, Y4
		2.0 hrs.	R8
05319 36 (Camshaft C Lifters)	01 5012	1.4 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.5 hrs.	R8
	05 2332	1.3 hrs.	BC, S9, SC, TB, U8, Z3
		1.7 hrs.	AE, CD, DC, Y4
		2.0 hrs.	R8
05319 36 (Camshaft D Lifters)	01 5012	1.4 hrs.	AE, BC, CD, DC, S9, SC, TB, U8, Y4, Z3
		1.5 hrs.	R8
	05 2337	1.3 hrs.	BC, S9, SC, TB, U8, Z3
		1.7 hrs.	AE, CD, DC, Y4
		2.0 hrs.	R8
05319 36 (All Lifters)	01 5011	2.1 hrs.	AE, CD, DC, S9, SC, TB, U8, Y4, Z3
		2.2 hrs.	BC
		2.3 hrs.	R8
	05 2313	3.7 hrs.	BC, Z3
	05 2312	3.4 hrs.	CD
		3.6 hrs.	AE, DC, Y4
		3.7 hrs.	S9, SC, TB, U8
		3.9 hrs.	R8

*Please note that 54-1011 is claimable only once per Repair Order. When claiming any of the above repairs please be aware of potential overlapping labor (i.e. **Camshaft adjusters A and D were noisy. 54-1011 is only claimable once and please use 01-5011 to R&R both Valve Covers instead of 01-5012 for the Left and 01-5013 for the Right.**). The warranty info provided is based on individual repair scenarios and not for vehicles that require more than one of the above repair scenarios.