



Mercedes-Benz

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Date: December 5, 2003
 Order No.: T-B-18.00/21
 Supersedes:
 Group: 18

Revision: Procedure Updated

**SUBJECT: Inspection, Diagnosis and Repairs Of Engine Performance Complaints Due to Excessive Oil Consumption and/or Oil Sludging
 All Models with FSS or FSS+ Starting Model Year 1998**

iNote: In case of any complaints relating to oil sludging and sludging caused engine damage complaints relating to model year 1998 through model year 2001 (Sold through March 2001). Please also review and comply with O'Keefe Class Action Settlement and Service Guidelines Document available on May 9, 2003.

iNote: These guidelines must be strictly followed or warranty claims will be debited back to the dealer.

In case of engine performance complaints relating to excessive oil consumption and/or oil sludging, the vehicle must be inspected to verify the complaints and diagnosis must be performed in the following order.

1. The FSS history should be accessed via SDS. The FSS history read out should be used to confirm the maintenance history of the vehicle. If the FSS history read out shows that the vehicle was improperly maintained, i.e., the maintenance intervals were materially overdrawn; and in addition, if the review of all the customer's service records indicate that at the time of the subject oil change, engine oils not approved at the time the change was made were used, the vehicle is not covered by the Mercedes-Benz Limited Warranty. Additionally, the O'Keefe Class Action Settlement Service Commitment applies only where the oil used was one that was approved at the time of the oil change. Further, please note that under the O'Keefe settlement (1) there will be no coverage where there is evidence of vehicle abuse or neglect in failing to properly maintain the vehicle according to MBUSA's recommendations including the recommended service schedule; and (2) coverage shall not apply to vehicle's with other product alterations that would void warranty coverage on the vehicle. It should be further noted however that in addressing these issues with consumers that the O'Keefe settlement provides that if there is a **legitimate dispute** as to whether oil sludging or related engine damage was caused by the use of conventional motor oil during the times when it was recommended, MBUSA and thus, its authorized dealers, will err on the side of the customer class member in determining whether to provide coverage.

At this point, inspection and diagnosis of the vehicle are complete; do not proceed to Step 2. Advise the owner of the vehicle that the cost of repair will be at the owner's expense since the engine performance complaint is due to maintenance neglect.

iNote: For vehicles subject to O'Keefe Class Action, see accompanying service guidelines document for additional steps, including contacting MBUSA Market Team.

iNote: Prior to March 1, 2001, only engine oils with at least SH and/or SJ API classification were approved for use. Starting March 1, 2001, only engine oils with MB229.1 or MB229.3 certification were approved for use. Starting model year 2003, only engine oils with at least MB229.3 certification were approved for use.

For future model years, refer to the latest version of Factory Approved Service Products, Order No. S-0473.

If the FSS history read out indicates that the vehicle was properly maintained or if otherwise authorized by MBUSA pursuant to O'Keefe Class Action Settlement, proceed to Step 2.

2. Perform an oil consumption test. Reference WIS Doc. [AR18.00-P-0025AV](#) (using service calibrated dipstick) or 0025CB (using SDS)

iNote: One (1) oil consumption test is sufficient to verify if an engine has excessive oil consumption condition; and pursuant to the O'Keefe Class Action Settlement, MB will pay for one oil consumption test. Oil losses due to external leaks such as porous crankcase, porous cylinder heads, oil leakage through gaskets, seals, or o-rings are not considered oil consumption. As indicated in WIS Doc. [AR18.00-P-0025AV](#) or 0025 CB, you must perform repairs on these external leaks as outlined as the first step in any engine oil consumption test process as a normal repair; and for vehicles out of warranty this cost of repair is at the owner's expense.

If oil consumption is not excessive (< than one quart/660 miles), check for physical presence of oil sludging. Reference [S-B-18.00/16a](#) and any subsequent updates. If oil sludging is found, take corrective measures as identified in [S-B-18.00/16a](#) and any subsequent updates. If this corrects the condition, repair is complete; do not proceed to step 3.

iNote: Severe oil sludging, sticking piston rings, and scored cylinder walls will result in excessive oil consumption. If oil consumption is excessive (= or > than one quart/660 miles), check for oil sludging and/or oil sludging related engine damage. Reference [S-B-18.00/16a](#) and any subsequent updates. If oil sludging is found, perform tests and/or inspections as outlined in Steps 3 and 4 below to check for sticking piston rings or cylinder bore damage, respectively. If any or all of the above damages related to oil sludging are found, perform their respective remedies in Steps 3 and 4. Remedy the oil sludging by taking corrective measures as identified in [S-B-18.00/16a](#) and any subsequent updates. If these correct all these conditions, repairs are complete. If an engine has excessive oil consumption and only oil sludging is found, take corrective measures as identified in [S-B-18.00/16a](#) and any subsequent updates.

iNote: If an engine is replaced, solely due to excessive oil consumption and/or oil sludging, instead of the performance of the corrective measures as identified in [S-B-18.00/16a](#) and any subsequent updates, the engine will be debited back to the dealer.

3a. If an engine has excessive oil consumption and/or oil sludging as confirmed by the above two steps and, in addition, sticking piston rings are found to have been caused by oil sludging, as verified by performing a cylinder compression test per WIS Doc. # [BE01.00-Z-9999AZ](#); remove, install and replace piston rings, refer to WIS Doc. # [AR03.10-P-7311BV](#).

3b. Check for evidence of increased levels of dirt/dust entering through the vehicle's air intake system. Reference [DTB P-B-07.65/32](#). If the engine shows no such dirt/dust intake and cylinder walls are not scored as confirmed by performing test and inspection in step 4; remove, replace and install piston rings as per WIS Doc. No. [AR03.10-P-7311BV](#). If this corrects the condition, repair is complete.

iNote: Engine damage arising from dirt/dust entering through the vehicle's intake system is not covered by the O'Keefe Class Action Service Commitment. It is also not covered by the warranty unless the entry of dust/dirt resulted from some warrantable defect in the product.

4. If cylinder walls are found scored as verified by performing a cylinder compression test per WIS Doc. [BE01.00-Z-9999AZ](#) and further confirmed by borescope inspection, refer to various WIS document in group number 01.10; replace crankcase with long block. If long block is not available, replace with complete engine.

iNote: Engine damage arising from dirt/dust entering through the vehicle's intake system is not covered by the O'Keefe Class Action Service Commitment. It is also not covered by the warranty unless the entry of dust/dirt resulted from some warrantable defect in the product.

iNote: Any return long block or complete engine whose cylinder walls and it's components are found to be within specification will be debited back to the dealer

In Case of Warranty

Operation: Engine and oil filter, change (00-2080)
 Oil consumption test, prepare and evaluate (18-1020)
 Engine oil filler cap/gasket, R&R/repl. (01-5090)
 Spark plugs, R&R/repl. If required (15-101 0)
 Engine cylinder compression (spark plugs removed), check (01-1203)
 Engine cylinder bores - all, inspect with borescope (01-1321)
 Engine long, block, replace (01-4380)
 Engine without auto. transmission, R&R (01-2600)
 Disassemble engine, clean and reassemble (01-4210)
 Engine piston rings - on all pistons, replace (03-7311)

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
10020 01	00 2080	0.4 hrs.	K0
Case 1: Oil Consumption Test, No problem found vehicle within consumption specification with no evidence of oil sludging. No further action required. No further claims to be submitted.	18 1020	0.8 hrs.	00

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
10020 02	00 2080	0.4 hrs.	K0
Case 2: Minor oil sludging found. Oil consumption test within specification. No further action required. No further claims to be submitted.	18 1020	0.8 hrs.	00
	01 5090	0.1 hrs.	00
	00 2080**	0.4 hrs.	K0
	** - up to three times		
10020 03	00 2080	0.4 hrs.	K0
Case 3a: Severe engine oil sludging with excessive oil consumption.	18 1020	0.8 hrs.	00
	01 5090	0.1 hrs.	00
* If step 6 reveals that the cylinder walls are scored proceed directly to replacing Long Block.	15 1010	2.2 hrs. 2.3 hrs.	K1 K2
	01 1203	0.3 hrs.	K1, K2
No further action required. No further claims to be submitted.	01 1321	0.6 hrs.	K1, K2
	01 4380*	13.2 hrs. 13.9 hrs.	K1 K2
10020 03	00 2080	0.4 hrs.	K0
Case 3b: Severe engine oil sludging with excessive oil consumption.	18 1020	0.8 hrs.	00
	01 5090	0.1 hrs.	00
* If step 6 reveals that the cylinder walls are NOT scored disassemble engine, clean engine check piston rings.	15 1010	2.2 hrs. 2.3 hrs.	K1 K2
	01 1203	0.3 hrs.	K1, K2
Note : Vehicle MUST return in 6,000 miles for a follow up oil change (use damage code 10020 03 for follow up oil change)	01 1321	0.6 hrs.	K1, K2
	01 2600	9.8 hrs. 10.4 hrs.	K1 K2
	01 4210	18.0 hrs. 21.7 hrs.	K1 K2
No further claims to be submitted.	03 7311	1.5 hrs. 2.0 hrs.	K1 K2
	00 2080 ***	0.4 hrs.	K0
	*** post repair after 6000 miles		

i **Note:** Dealer text must include the case no. that was performed (1, 2, 3a or 3b), oil consumption results (quarts/per mile) and the complaint, cause and correction. Claims submitted without the required information are subject to denial. Each case no. (repair) includes all the allowable labor operations. Qualified vehicles are allowed 1 of the 4 case no. repairs (i.e. 1 or 2 or 3a or 3b).