

2014 Mercedes Benz E 350 4MATIC Sedan (212.088) V6-3.5L (276.952)

Vehicle > Engine, Cooling and Exhaust > Engine > Timing Components > Timing Chain Tensioner > Technical Service Bulletins

ENGINE- RATTLING NOISE AFTER STARTING FOR SEVERAL SECONDS

Rattling noise after engine start for several seconds

Topic number LI05.10-P-062031 Version 1 Design group 05.10 Timing chain drive, toothed belt drive Date 08-12-2015 Validity Engine 157: Up to engine 1579xx 60 022333 Engine 2768: Up to engine 2768xx 30001280 Engine 2769: Up to engine 2769xx 30 406602 Engine 278: Up to engine 2789xx 30103674 Dealer MUST involve PTSS before performing this LI for engine # 's outside of the identified ranges above Reason for change

Complaint:

Engine rattling after engine start for several seconds.

Cause:

The secondary chain tensioners produce a rattling noise until the engine oil pressure has built up. No consequential damage is to be expected.

Remedy:

Replacement of secondary chain tensioners on left and right and installation of a check valve in the oil supply bore of each secondary chain tensioner in the cylinder head on left and right.

Order the chain tensioners from the parts service according to the engine number as per EPC.

Order the check valves from the parts service after checking the diameter of the oil supply bore.

Engine 157:

Up to engine 1579xx 60022333, install chain tensioners and check valves.

From engine 1579xx 60022334 to engine 1579xx 60 047752, install chain tensioners only.

Engine 2768:

Up to engine 2768xx 30000790, install chain tensioners and check valves.

From engine 2768xx 30000791 to engine 2768xx 30 001281, install check valves only.

Engine 2769:

Up to engine 2769xx 30365996, install chain tensioners and check valves.

From engine 2769xx 30365997 to engine 2769xx 30 406603, install check valves only.

Engine 278:

Up to engine 2789xx 30103675, install chain tensioners and check valves.

From engine 2789xx 30 103676 to engine 2789xx 30 191843, install chain tensioners only.

If the noise problem is not rectified after installing the new chain tensioners and check valves, or if the engine

number of the affected engine is higher than the corresponding engine listed under Validity, report the complaint via the PTSS system with the current quick test results.

File	Description
Rückschlagventil montieren.pdf	Installation instructions for check valve
assembling of check valve.pdf	Installation instructions for check valve



Kettenspanner demontieren.
Kettenschacht so abdecken dass keine Teile in den Motor fallen können.
Prüfung des Durchmessers der Ölversorgungsbohrung mit Bohrer-Schaft $\varnothing 8,0\text{mm}$.
Lässt sich Schaft des Bohrers in die Ölversorgungsbohrung stecken, dann Rückschlagventil A278 050 33 00 verwenden, sonst Rückschlagventil A278 050 40 00 verwenden.

Dargestellt Zylinderkopf links



Rückschlagventil leicht beölen und bis zum Anschlag in die Ölbohrung einschieben (Geschlossene Seite mit Kugel zeigt nach hinten, die offene Seite mit Gewinde nach vorn).

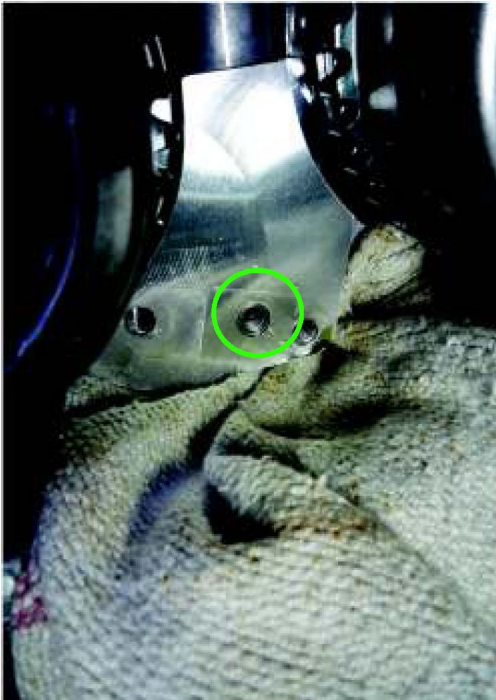
Dargestellt Zylinderkopf ohne Stufenbohrung



Einpresswerkzeug W276 589 00 33 00 in den Befestigungsbohrungen für den Kettenspanner verschrauben.
Drehmoment 5 Nm



Einpressen des Rückschlagventils durch drehen der Druckspindel des Einpresswerkzeugs bis Druckplatte bündig am Zylinderkopf anliegt (Rückschlagventil darf nicht überstehen).



Nach Demontage des Einpresswerkzeugs prüfen ob das Rückschlagventil bündig mit der Zylinderkopffläche abschließt.

Kettenspanner montieren.



Remove the chain tensioner.

Cover the area to prevent objects falling into engine. Check the diameter of the oil bore with a stem of a drill bit $\text{\O}8,0\text{mm}$. If the stem of the drill can be inserted into the bore, use the check valve A278 050 33 00, otherwise use the check valve A278 050 40 00.

Cylinder head left side



Oil outside surface and insert the check valve into the oil bore, the ball side first. The thread side of the check valve will be facing out.

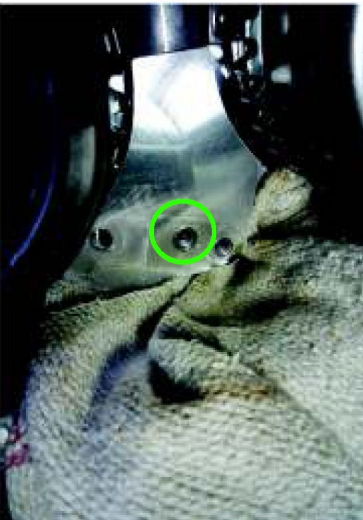
Cylinder head without counter sink bore



Fasten the special tool - Installer W276 589 00 33 00 to threaded holes of the chain tensioner.



Press in the check valve by turning the pressure screw on the special tool. The special tool pressure plate will push the check valve flush with the cylinder head surface.



Ensure that the check valve is flush with the cylinder head surface - after installation.

Install the chain tensioner.

Attachments

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 278 050 33 00			Check valve	2	This check valve may only be installed in cylinder heads with a stepped oil supply bore. Please check the bore in accordance with the instructions.	X
A 278 050 40 00			Check valve	2	This check valve may only be installed in cylinder heads with an oil supply bore that is not stepped. Please check the bore in accordance with the instructions.	X
W27658900330 0			Press-in tool	1	Special tool	

Parts

Op. no.	Operation text	Time	Damage code	Note
54-7989	D/C GROUND		05131 36	
01-5702	LEFT FRONT COVER		05131 36	
05-7807	LEFT TENSIONER		05131 36	
01-5703	RIGHT COVER		05131 36	
05-7806	RIGHT TENSIONER		05131 36	

Operation numbers/damage codes