
Rattling noise after engine start for several seconds

Topic number	LI05.10-P-056435
Version	9
Design group	05.10 Timing chain drive, toothed belt drive
Date	10-15-2015
Validity	Engine 157: Up to engine 1579xx 60 022333 Engine 2768: Up to engine 2768xx 30 001280 Engine 2769: Up to engine 2769xx 30 406602 Engine 278: Up to engine 2789xx 30 103674 Dealer MUST involve PTSS before performing this LI for engine #'s outside of the identified ranges above
Reason for change	Validity extended to all engines 276, 278 and 157.
Reason for block	

Complaint:

Engine rattling after engine start for several seconds.

Attachments	
File	Description
Rasselgeräusch nach Motorstart.mp3	Rattling noise after engine start

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 in cylinder heads.

Engine 157:

Up to engine 1579xx 60 022333, install chain tensioners and check valves.

From engine 1579xx 60 022334 to engine 1579xx 60 047752, install chain tensioners only.

Engine 2768:

Up to engine 2768xx 30 000790, install chain tensioners and check valves.

From engine 2768xx 30 000791 to engine 2768xx 30 001281, install check valves only.

Engine 2769:

Up to engine 2769xx 30 365996, install chain tensioners and check valves.

From engine 2769xx 30 365997 to engine 2769xx 30 406603, install check valves only.

Engine 278:

Up to engine 2789xx 30 103675, 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

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

Symptoms
Power generation / Engine noise / Knocking/clacking
Power generation / Engine noise / Chattering
Power generation / Engine noise / Clanking
Power generation / Engine noise / Rattling
Power generation / Engine noise / Clattering
Power generation / Engine noise / Pounding

Parts						
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	

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
01-5702	LEFT FRON COVER		05131 36	
05-7806	RIGHT TENSIONER AND CHECK VALVE		05131 36	
01-5703	RIGHT FRONT COVER		05131 36	
05-7807	LEFT TENSIONER AND CHECK VALVE		05131 36	
01-6853	FOR SOME ENGINE 278 ONLY- ADDITIONAL OP		05131 36	This is for the oil cooler. Some M278 & M157 opcodes include this work in 015702

Validity

Vehicle	Engine	Transmission
*	276	*
*	278	*
*	157	*

Full model designation breakdown

Vehicle	Engine	Transmission
166.055	276.955	722.906
166.056	276.821	722.904
166.056	276.821	725.031
166.057	276.955	722.906
166.057	276.955	725.031
166.058	276.955	722.906
166.058	276.955	725.031
166.062	276.821	722.904
166.063	276.821	724.204
166.063	276.821	725.041
166.064	276.821	722.904
166.073	278.928	722.909
166.073	278.928	725.031
166.073	278.928	725.032
166.073	278.928	725.033
166.074	157.982	722.905
166.074	157.982	722.931
166.075	157.982	722.905
166.075	157.982	722.931
166.856	276.821	722.904
166.856	276.821	725.031
166.864	276.821	722.904
166.864	276.821	725.031
166.871	278.912	722.909
166.871	278.912	725.031
166.872	278.928	722.909
166.872	278.928	725.031
166.872	278.928	725.032
166.872	278.928	725.033
166.873	278.928	722.909
166.873	278.928	725.031
166.873	278.928	725.032
166.873	278.928	725.033
166.874	157.982	722.905
166.874	157.982	722.931

XENTRY

166.875	157.982	722.905
166.875	157.982	722.931
172.457	276.956	722.906
204.055	276.957	722.906
204.057	276.957	722.906
204.080	276.957	722.960
204.088	276.957	722.960
204.257	276.957	722.906
204.357	276.957	722.906
204.388	276.957	722.960
204.957	276.957	722.906
204.988	276.957	722.960
204.990	276.957	722.960
205.064	276.823	722.961
205.064	276.823	722.972
205.064	276.823	725.041
205.066	276.823	722.961
205.066	276.823	725.041
205.264	276.823	722.961
205.264	276.823	722.972
205.264	276.823	725.041
205.266	276.823	722.961
205.266	276.823	725.041
207.355	276.957	722.906
207.359	276.957	722.906
207.361	276.850	722.904
207.362	276.820	722.904
207.365	276.820	722.904
207.367	276.820	722.961
207.373	278.922	722.909
207.388	276.957	722.960
207.455	276.957	722.906
207.459	276.957	722.906
207.461	276.850	722.904
207.462	276.820	722.904
207.465	276.820	722.904
207.473	278.922	722.909
212.055	276.952	722.906
212.059	276.952	722.906
212.061	276.850	722.904
212.065	276.820	722.904
212.067	276.820	722.961
212.073	278.922	722.909

XENTRY

212.073	278.922	725.011
212.073	278.922	725.032
212.073	278.922	725.033
212.074	157.981	722.931
212.075	157.981	722.931
212.076	157.981	722.971
212.080	276.952	722.960
212.088	276.952	722.960
212.091	278.922	722.967
212.091	278.922	725.021
212.092	157.981	722.971
212.095	276.952	724.206
212.095	276.960	724.206
212.099	276.850	722.960
212.099	276.850	722.961
212.162	276.820	722.904
212.165	276.820	722.904
212.167	276.820	722.961
212.168	276.820	722.961
212.195	276.952	724.206
212.255	276.952	722.906
212.259	276.952	722.906
212.261	276.850	722.904
212.265	276.820	722.904
212.267	276.820	722.961
212.273	278.922	722.909
212.273	278.922	725.011
212.273	278.922	725.032
212.273	278.922	725.033
212.274	157.981	722.931
212.275	157.981	722.931
212.276	157.981	722.971
212.280	276.952	722.960
212.288	276.952	722.960
212.291	278.922	722.967
212.291	278.922	725.021
212.292	157.981	722.971
212.299	276.850	722.960
212.299	276.850	722.961
216.373	278.920	722.909
216.374	157.980	722.931
216.394	278.920	722.967
217.364	276.824	722.961

XENTRY

217.377	157.985	722.931
217.378	157.985	722.971
217.382	278.929	722.909
217.382	278.929	725.011
217.384	278.910	722.967
217.385	278.929	722.967
217.385	278.929	725.041
218.355	276.952	722.906
218.355	276.952	725.011
218.359	276.952	722.906
218.359	276.952	725.011
218.361	276.850	722.904
218.361	276.850	725.011
218.362	276.820	722.904
218.362	276.820	725.011
218.365	276.820	722.904
218.365	276.820	725.011
218.367	276.820	722.961
218.368	276.850	722.961
218.373	278.922	722.909
218.373	278.922	725.011
218.374	157.980	722.931
218.374	157.981	722.931
218.375	157.981	722.931
218.376	157.981	722.971
218.391	278.922	722.967
218.391	278.922	725.041
218.392	157.981	722.971
218.959	276.952	722.906
218.959	276.952	725.011
218.961	276.850	722.904
218.961	276.850	725.011
218.965	276.820	722.904
218.965	276.820	725.011
218.967	276.820	722.961
218.968	276.850	722.961
218.973	278.922	722.909
218.973	278.922	725.011
218.974	157.981	722.931
218.975	157.981	722.931
218.976	157.981	722.971
218.991	278.922	722.967
218.991	278.922	725.041

XENTRY

218.992	157.981	722.971
221.057	276.950	722.906
221.073	278.932	722.909
221.074	157.980	722.931
221.082	276.950	722.960
221.094	278.932	722.967
221.157	276.950	722.906
221.173	278.932	722.909
221.174	157.980	722.931
221.182	276.950	722.960
221.194	278.932	722.967
222.057	276.960	724.206
222.057	276.960	725.011
222.067	276.824	722.961
222.067	276.824	725.041
222.077	157.985	722.931
222.082	278.929	722.909
222.082	278.929	725.011
222.085	278.929	722.967
222.085	278.929	725.041
222.157	276.960	724.206
222.157	276.960	725.011
222.162	276.824	722.904
222.162	276.824	725.011
222.163	276.824	724.204
222.165	276.824	722.904
222.165	276.824	725.011
222.167	276.824	722.961
222.167	276.824	725.041
222.177	157.985	722.931
222.178	157.985	722.971
222.182	278.929	722.909
222.182	278.929	725.011
222.184	278.910	722.967
222.184	278.910	725.041
222.185	278.929	722.967
222.185	278.929	725.041
222.967	276.824	722.961
222.967	276.824	725.041
222.982	278.929	722.909
222.982	278.929	725.011
222.984	278.910	725.041
222.985	278.929	722.967

XENTRY

222.985	278.929	725.041
231.457	276.954	722.906
231.465	276.825	722.904
231.465	276.825	725.011
231.473	278.927	722.909
231.473	278.927	725.011
231.474	157.983	722.931
251.057	276.958	722.906
251.157	276.958	722.906
251.163	276.826	722.904
251.166	276.826	722.904
292.356	276.821	722.904
292.356	276.821	725.031
292.362	276.821	722.904
292.362	276.821	725.031
292.364	276.821	722.904
292.364	276.821	725.031
292.373	278.928	722.909
292.373	278.928	725.031
292.373	278.928	725.032
292.373	278.928	725.033
292.373	278.951	722.909
292.373	278.951	725.031
292.373	278.951	725.032
292.373	278.951	725.033
292.374	157.982	722.905
292.374	157.982	722.931
292.375	157.982	722.905
292.375	157.982	722.931
463.272	157.984	722.905
463.273	157.984	722.905