

Noises from the steering system (guidelines for detecting noise)

Topic number	LI46.20-P-055943
Version	1
Design group	46.20 Steering gear
Date	04-24-2013
Validity	Model 164/251
Reason for change	
Reason for block	

Complaint:

- 1.) Rattling noises from the area of the steering column tube on rough roads or when driving over road bumps
- 2.) Cracking noises when braking or accelerating, which may also be perceptible at the steering wheel at the same time
- 3.) Rattling noises from the area of the steering gear on rough roads or when driving over road bumps

Cause:

- 1.) Play or incorrectly engaged firewall pivot point
- 2.) Play or incorrectly engaged firewall pivot point, or slip/stick effect of steering coupling
- 3.) Play between thrust piece and toothed rack of steering

Attachments	
File	Designation
001.jpg	Bearing insert for model 164, new type (1) and old type (2)
002.jpg	Bearing for model 251 with housing, new version (3) and old version (4)
003.jpg	Preassembled bearing and housing for model 164 (shown on LHD vehicle)
004.jpg	Left: Engaged bearing recognizable by white stripe (green circle). Right: When installing, make sure that the rubber grommet does not flip over (red).

Remedy:

For noise diagnosis the use of the STEELMAN ChassisEAR is helpful and it must always be used if there is any uncertainty in order to clearly identify the cause of the noise.

Re. causes 1 and 2:

Check version of firewall pivot point and check for play:

a) Check the version -> If an old version (see Figure 001 version "2" or Figure 002 version "4") is installed, the current version (see Figure 001 version "1" or Figure 002 version "3") must be installed.

The new version of the firewall pivot point is installed in production as of VIN 164.### - #A - 220353 or 251.### - #A - 053080.

b) Check that the bearing is installed without play and properly engaged -> A white stripe must be visible (see Figures 003 and 004).

Note: Also refer to the TIPS document "Cracking noises from the area of the steering shaft".

Re. cause 2:

Check steering coupling slip/stick effect:

- Remove steering coupling - Push steering coupling together in sliding piece and pull apart; if a pressure point can be felt, the coupling must be replaced

Re. cause 3:

Check play between thrust piece and toothed rack of steering, and adjust if necessary:

- Check steering effect with simplified test method, see TIPS document "Rattling/thumping noises from the area of the steering (simplified test method)" LI46.20-P-053398

- Adjust play between thrust piece and steering rack if necessary

Symptoms
Chassis/suspension / Chassis, noises / Cracking
Chassis/suspension / Chassis, noises / Knocking
Chassis/suspension / Chassis, noises / Thumping
Chassis/suspension / Steering system / Steering noise / Cracking
Chassis/suspension / Steering system / Steering noise / Chattering/knocking
Chassis/suspension / Steering system / Steering noise / Clattering
Chassis/suspension / Chassis, noises / Clattering

WIS-References			
Document number	Title	Note	Allocation
AR46.10-P-9000GZ	Remove/install firewall pivot point	Model 164	Remedy
AR46.10-P-9000RT	Remove/install firewall pivot point	Model 251	Remedy
AR46.10-P-8000GZ	Remove/install steering coupling	Model 164	Remedy
AR46.10-P-8000RT	Remove/install steering coupling	Model 251	Remedy
AR46.20-P-0600GZ	Remove/install rack-and-pinion steering	Model 164	Remedy
AR46.20-P-0600RT	Remove/install rack-and-pinion steering	Model 251	Remedy
AR46.20-P-0601TX	Adjust play between thrust piece and steering rack	Model 164/251	Remedy

Validity		
Vehicle	Engine	Transmission
GL (164)	*	*
M (164)	*	*
R (251)	*	*

Full model designation breakdown		
Vehicle	Engine	Transmission

XENTRY

164.120	642.940	722.902
164.121	642.820	722.902
164.122	642.940	722.902
164.124	642.820	722.902
164.125	642.820	722.902
164.128	629.912	722.903
164.156	272.967	722.906
164.172	273.963	722.904
164.175	113.964	722.901
164.177	156.980	722.907
164.182	272.945	722.999
164.186	272.967	722.906
164.195	272.973	722.550
164.822	642.940	722.902
164.823	642.822	722.903
164.824	642.820	722.902
164.825	642.820	722.902
164.828	629.912	722.903
164.871	273.923	722.904
164.886	273.963	722.904
251.020	642.950	722.902
251.021	642.872	722.903
251.022	642.950	722.902
251.023	642.872	722.903
251.026	642.950	722.902
251.054	272.945	722.999
251.056	272.967	722.906
251.057	276.958	722.906
251.065	272.967	722.906
251.072	273.963	722.904
251.075	113.971	722.901
251.077	156.980	722.907
251.122	642.950	722.902
251.123	642.872	722.903
251.124	642.870	722.902
251.125	642.870	722.902
251.126	642.950	722.902
251.154	272.945	722.999
251.156	272.967	722.906
251.157	276.958	722.906
251.165	272.967	722.906
251.172	273.963	722.904
251.175	113.971	722.901

XENTRY

251.177	156.980	722.907
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