

Humming/howling/droning noise from drivetrain.

Topic number	LI28.00-P-060078
Version	1
Design group	28.00 General
Date	10-24-2014
Validity	Affects all rear-wheel drive vehicles and 4MATIC vehicles
Reason for change	
Reason for block	

Complaint:

Humming/howling/droning noise from drivetrain.

Cause:

Overlaid vibrations excited by the engine, suspension and drive train.

Remedy:

Release stress in drivetrain

When relieving the stress in the drivetrain, make sure that the vehicle is standing with all four wheels on the ground.

Front engine mounts:

1. Visual inspection of positions of the front engine mounts. They must be correctly seated in the engine support.
2. Unscrew the engine mount bolts. The thread in the engine mount must line up with the hole in the integral carrier.
3. If this is not the case, lift the engine/transmission assembly approx. 10 mm and lower it again. Note: The threads in the engine mount must line up with the holes in the integral carrier.
4. If the bolt is crooked, slacken the upper threaded connection of the engine mount on the engine support and position both engine mounts so that the thread in the engine mount lines up with the hole in the integral carrier.
5. Tighten the lower mounting bolts to the specified torque, lower the engine onto the engine mounts and tighten the bolts to the specified torque.

Unstressing the rear engine mount:

1. Unscrew bolted connection between rear engine mount and engine support
2. Detach exhaust system transmission bracket at exhaust system pipe and in the area of the engine support, and look for stresses! (e.g. exhaust system slipping upwards).
3. Raise engine/transmission assembly in the area of the transmission so that the rear engine mount lifts off the engine support. Then lower the rear engine mount onto the engine support. The threads in the engine mount must line up with the holes in the engine support (in the same way as the front engine mounts). If this is not the case, continue with step 4
4. Unscrew the rear engine support mounting bolts on the body and align the rear engine support in the longitudinal and transverse directions so that the holes in the engine support and engine mount line up. Then tighten the bolts to the specified torque in the following sequence: a) Engine support to body b) Engine mount to engine support c) Exhaust system transmission bracket in area of rear engine mount and on exhaust system pipe (the transmission bracket in the area of the exhaust system pipe fastening bolt must not be tilted and must not rub).

Check the bolted connections of the propeller shaft:

1. Are all the bolts present?
2. Are all the bolts the same length?
3. Do all bolted connections have washers?
4. Check the tightening torques (see WIS)

Change the positioning of the rear axle differential flange relative to the propeller shaft:

Three-arm flange: Twist through 120 degrees

Four-arm flange: Twist through 90 degrees

Relieve stress in the exhaust system, flexible coupling and propeller shaft center support bearing

Check flexible coupling for cracks and replace if necessary

Relieve stress in propeller shaft center support bearing: With the bolts of the propeller shaft center support bearing slackened, rock the vehicle forwards and back or turn the propeller shaft to "shake" it into place. Then retighten the bolts to the specified tightening torque (AR41.10-P-100CW).

Measure propeller shaft alignment using electronic propeller shaft inclinometer and correct if necessary. (See WIS)

Symptoms
Power transmission / Power transmission, noise / Throbbing/intermittent humming
Power transmission / Power transmission, noise / Howling/whistling
Power transmission / Power transmission, noise / Humming/droning

Validity		
Vehicle	Engine	Transmission
124 (124)	*	*
190 (201)	*	*
205.002	*	*
205.003	*	*
205.004	*	*
205.008	*	*
205.009	*	*
205.012	*	*
205.036	*	*
205.037	*	*
205.040	*	*
205.042	*	*
205.045	*	*
205.049	*	*
205.066	*	*
205.140	*	*
205.142	*	*
205.145	*	*
205.204	*	*
205.208	*	*
205.209	*	*
205.212	*	*
205.236	*	*
205.237	*	*
205.240	*	*
205.242	*	*
205.245	*	*
205.266	*	*

222.004	*	*
222.032	*	*
222.033	*	*
222.057	*	*
222.067	*	*
222.077	*	*
222.082	*	*
222.085	*	*
222.104	*	*
222.123	*	*
222.132	*	*
222.133	*	*
222.157	*	*
222.162	*	*
222.163	*	*
222.165	*	*
222.167	*	*
222.176	*	*
222.177	*	*
222.178	*	*
222.179	*	*
222.182	*	*
222.184	*	*
222.185	*	*
C (202)	*	*
C (203)	*	*
C (204)	*	*
CL (140)	*	*
CL (215)	*	*
CL (216)	*	*
CLK (208)	*	*
CLK (209)	*	*
CLS (218)	*	*
CLS (219)	*	*
E (207)	*	*
E (210)	*	*
E (211)	*	*
E (212)	*	*
GL (164)	*	*
GL (166)	*	*
GLA (156)	*	*
GLK (204)	*	*
M (163)	*	*

M (164)	*	*
M (166)	*	*
R (251)	*	*
S (126)	*	*
S (140)	*	*
S (217)	*	*
S (220)	*	*
S (221)	*	*
SL (107)	*	*
SL (129)	*	*
SL (230)	*	*
SL (231)	*	*
SLK (170)	*	*
SLK (171)	*	*
SLK (172)	*	*