

## Honking/squeaking noises or knocking from area of ABC suspension

Topic number	LI32.50-P-056781
Version	2
Design group	32.50 Active body control (ABC)
Date	11-05-2013
Validity	MODEL 231 with CODE 487 (Active Body Control)
Reason for change	Remedial action described with assembly instructions
Reason for block	

**Complaint:**

- Honking, whistling, squeaking noises while driving - primarily in warm state (ABC oil)

The noise can usually be reproduced while stationary using the Rodeo program (Xentry). Refer to example sound 1 in attachment.

- Knocking - generally only when cold (ABC oil)

Occurs primarily while driving on uneven roads. The problem diminishes as the oil temperature rises, and then disappears altogether. Refer to example sound 2 in attachment (00:07 - 00:12 s).

Attachments	
File	Designation
1_Noise_RVV.mp3	Example 1: Honking, squeaking, whistling noise
2_Noise_RVV.mp3	Example 2: Knocking

**Cause:**

Pressure surges in the oil of the ABC system

**Remedy:**

1.) Check:

The ABC system can be switched to a passive state by unplugging a connector to an acceleration sensor (B24/3, B24/4 or B24/5).

If the noises described above no longer occur, continue with 2.).

If noises continue to occur with the connector unplugged, they are not attributable to the ABC system and must be sought elsewhere.

2.) Replace return pressure valve (valve element) in valve block of front axle (see arrow in Figure 1) with modified version.

Size 15, tightening torque  $15 \pm 3$  Nm

Assembly instructions:

# XENTRY

Ensure utmost cleanliness: No contaminants whatsoever (particles/other fluids) must be allowed to enter the ABC system!

1. Switch off engine and wait approx. 20 minutes until the system pressure in the ABC system has dropped.
2. Remove left front wheel and wheel well lining, clean area around valve on valve block.
3. Clamp off ABC intake hose between valve block and pump (Figure 2).
4. Clamp off ABC return hose between valve block and oil reservoir (Figure 3).
5. Loosen return pressure valve in front axle valve block and unscrew.
6. Extract return pressure valve using magnet and insert new return pressure valve using magnet.
7. Use socket wrench and extension to screw in by hand (without ratchet). Make sure that the valve is screwed in straight.
8. Tighten to torque  $15 \pm 3$  Nm.
9. Start engine briefly. Check oil level in ABC reservoir and correct if necessary.
10. Run XENTRY Rodeo program and leave vehicle to stand for 2 hours.

Note: The idle period is necessary to ensure that any air trapped in the ABC system can escape.

11. Repeat step 10.

Attachments	
File	Designation
Manual_1.jpg	Figure 1: Front axle valve block with return pressure valve
Manual_2.jpg	Figure 2: Location for clamping off ABC intake hose
Manual_3.jpg	Figure 3: Location for clamping off ABC return hose

Symptoms
Chassis/suspension / Chassis, noises / Thumping
Chassis/suspension / Suspension/Dampening / Suspension system noises / Whistling and hissing noises
Chassis/suspension / Steering system / Steering noise / Tooting sound
Power transmission / Power transmission, noise / Howling/whistling
Chassis/suspension / Suspension/Dampening / Suspension system noises / Thumping noise
Chassis/suspension / Suspension/Dampening / Active body control / ABC Noise / Thumping/rumbling
Chassis/suspension / Suspension/Dampening / Active body control / ABC Noise / Whistling/hissing/flowing
Chassis/suspension / Chassis, noises / Whistling
Chassis/suspension / Chassis, noises / Howling/whistling/squeaking

Parts							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A 231 327 00 25			VALVE ELEMENT	001	Return pressure valve with narrower compensating port	X	

Validity		
Vehicle	Engine	Transmission
SL (231)	*	*

Full model designation breakdown		
Vehicle	Engine	Transmission
231.457	276.954	722.906
231.473	278.927	722.909
231.474	157.983	722.931
231.479	279.981	722.932