





**DTB** Date: May 12, 2009

Order No.: S-B-46.30/21b

Supersedes: S-B-46.30/21a dated Feb. 12, 2008

Group: 46

**Revision History** 

Revision Date Purpose

b 5/12/09 Parts Information Updated / Sound Files Included

a 2/12/08 Applicable Models, Content, Parts and Warranty Information Updated

4/6/06 Initial issue

SUBJECT: Model 163.154/157/172/174/175

Model 164.172/175/186/871/886

Model 171.454/456/473

Model 203.052/054/056/061/064/065/081/084/087/092/261/264/281/284

Model 209.356/365/372/375/456/465/472/475

Model 211.056/065/070/072/082/083/087/090/256/265/282/283/287

Model 215.373/374/375

Model 216.371

Model 219.372/375

Model 220.170/173/174/175/183/184

Model 221.171/186

Model 230.471/472/475 Model 251.156/165/175

Noise from the Area of the Steering System / Power Steering Pump

If you receive customer reports in the above model vehicles of grinding or gushing noises which may be heard from the area of the steering system/power steering pump, one of the possible causes may be in the A/C compressor belt drive.

This noise is similar to the noise produced by the power steering pump when ingesting air. This type of noise is present at both idle and higher engine speeds, can be heard whether the steering wheel is stationary or moving and the noise frequency increases with the engine speed. The noise intensity

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increases towards steering wheel end limit stops. Below sound files provide noise examples.

1. First noise example with engine running



2. Second noise example with engine running 👢

Note: The noise does not change by switching the A/C compressor on and off. Evacuating the refrigerant will not change the noise since the A/C compressor belt pulley runs continuously with the engine.

Note: Do not replace the A/C compressor belt pulley merely on suspicion. To ascertain whether the noise is caused by the A/C compressor, perform the following test using a shorter poly-V-belt. It is absolutely essential to follow in sequence the below procedure:

- 1. Detach the original poly-V-belt.
- 2. Install poly-V-belt part number A011 997 96 92 on vehicles with M112 / M113 engines or install poly-V-belt part number A011 997 04 92 on vehicles with M272 / M273 engines. With the shorter belt installed, the A/C compressor is not driven by the belt. The A/C compressor pulley is bypassed) (Figure 1, 1). Route the rest of the belt the same way as the original belt (Figure 1).

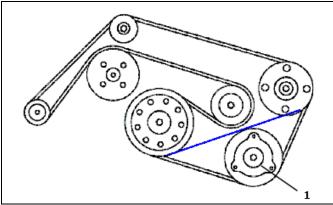


Figure 1 S-B-46.30/21a

- 3. Start the engine and listen for the complaint noise: Correction:
- 4. If the complaint noise is no longer present, replace the A/C compressor belt pulley refer to the latest version of DTB P-83.55/87 (latest version) for A/C compressor poly-v-belt pulley replacement.
- 5. If the complaint noise is still present, it is not due to the A/C compressor. Therefore, resolve the noise issue by following the procedure in Star TekInfo > EDAC > Diagnostic Guides > Power Steering Diagnostic Guide (latest version) > Start > Noises in steering system.
- 6. Reinstall original belt.

## **Parts Information**

Qty.	Part Name	Part Number
1	Poly-V-belt 1 (21.36 x 2315 mm) alternative	A011 997 96 92
1	Poly-V-belt 1 (21.36 x 2330 mm)	A011 997 04 92

<sup>&</sup>lt;sup>1</sup>Only one of each belt per workshop is necessary, as this is used for testing only.

Note: The following allowable labor operations should be used when submitting a warranty claim for this repair. This information has been generated on February 12, 2008. Please refer to Netstar → Star TekInfo → Star Time for the most current labor time allowance.

## In Case of Warranty

**Operation:** Poly V-Belt – single belt drive, replace (13-1202)

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
83421 36	13 1202*	0.4 hrs.	M1, M2, M5, M6, M7, N1
		0.5 hrs.	AA, AD, DA, N3, R1, S1, S2, S4, S5, S7, S8, TA, T1, T2, T4, T5, T7, T8, T9, U1, U3, U4, U6, U7, Y1, Y3
		0.6 hrs.	BA, BB, BE, EA, EC, P1, P2, P3, P4, QA, Q2, Q6, Q7, Q8, Q9, R5, SA, SB, T1, X2, Z1, Z2, Z5
		0.7 hrs	K1, K2, K3, K4, K5, P6, P7, P8, P9, X1, X3
		0.9 hrs.	M9, N5, R7

<sup>\* -</sup> Use operation code 13-1202 twice (Poly-V-Belt, replace for testing and Poly-V-Belt, replace for replace.