

Air conditioning inoperative

Topic number	LI83.30-N-055607
Version	1
Design group	83.30 Air conditioning
Date	02-21-2013
Validity	Model 906
Reason for change	Model 639 restricted and part number of A/C parts kit added
Reason for block	

Complaint:

Air conditioning inoperative.

Cause:

- Refrigerant circuit clogged
- Refrigerant in refrigerant circuit below minimum
- Refrigerant compressor blocked or torque limiter blocked

Remedy:

1. Check whether the refrigerant circuit is clogged..

Note: In order to find clogged components, feel along the A/C lines and check whether there are any areas with major temperature differences. Temperature differences are an indication of possible clogging.

2. Replace clogged components.

3. Determine refrigerant quantity in refrigerant circuit.

Note: If there are black particles (photo 1) in the refrigerant, replace all components in the refrigeration circuit. On model 639 with engine 646 and without code (HZ7) Regulated air conditioning (Tempmatic) in passenger compartment, the air conditioning parts kit (see parts list) can be used for this.

4. If the refrigerant level in the refrigerant circuit is too low (refrigerant below 80% of standardized filling quantity), perform a leak test. Then refill and check the system.

5. Check whether the limiter is damaged.

6. If the limiter is damaged, remove the belt pulley and check the shaft of the refrigerant compressor for unrestricted movement.

7. If the movement is not restricted, replace the belt pulley.

Note:

If the limiter breaks again while the shaft movement is not restricted, as well as replacing the belt pulley/refrigerant compressor, also replace the tensioner pulley of the tensioning device, all guide pulleys for the poly-V belt and the belt pulley of the alternator.

8. If the movement is blocked, replace the refrigerant compressor.

Note: Further assistance can be obtained from the "Technology Guide - Vehicle Climate Control" !!!

Attachments	
File	Designation
1.jpg	Black particles in oil

Symptoms

Body / Air conditioning / Air conditioning / Insufficient cooling output

Body / Air conditioning / Air conditioning / Temperature differences

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A0002342512			Belt pulley	1	For engines 646, 272	X	
			Technology Guide – Vehicle Climate Control		The "Technology Guide – Vehicle Climate Control" is available in PDF format in SDmedia via DAS or Intranet (http://s00hud37.de-str.corpintra.net/sdmedia/(S(qqphx5mmkjpmxc55y5w3fe45))/htm/aktuelles_release.html).		X
A0002342612			Belt pulley	1	For engine 642	X	
A 001 230 32 11			HH9 Compressor	1		X	
A 001 230 71 11			HH9+HH5 Compressor	1		X	
A 001 230 71 11			H08+HH4 Compressor	1		X	
A 642 150 06 60			Alternator Pulley	1		X	
A 642 202 03 10			Belt Tensioner Pulley	1		X	

Work units

Op. no.	Operation text	Time	Damage code	Note
			83421 53	Insufficient effect/power from refrigerant compressor

WIS-References

Document number	Title	Note	Allocation
AR83.30-D-1760D	Empty/evacuate/refill air conditioning system and check for proper operation and leaks	Model 906	Remedy
AR83.55-D-5300NG	Remove/install refrigerant compressor	Model 906 with engine 271	Remedy
AR83.55-D-5300US	Remove/install refrigerant compressor	Model 906 with engine 272, 642, 651 with CODE (HH9) Regulated air conditioning, (Tempmatic)	Remedy
AR83.55-D-5300WE	Remove/install refrigerant compressor	Model 906 with engine 642 or 651 with CODE (H08) High-performance air condi-	Remedy

		tioning system with 2nd refrigerant compressor	
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Validity		
Vehicle	Engine	Transmission
Sprinter III	*	*