

83–518 Cleaning of air conditioning system

| Tightening torques | | Nm | (kpm) |
|--------------------|---------------|-------|-----------|
| Thread connection | 5/8" – 18 UNF | 15–18 | (1.5–1.8) |
| | 3/4" – 16 UNF | 14–28 | (1.4–2.8) |
| | 7/8" – 14 UNF | 29–37 | (2.9–3.7) |

Conventional equipment

1 Cleaning unit R 11 e.g. made by Christof Fischer
Augsburger Straße 289
7000 Stuttgart-60
Order no.: 835–3900 DB

Scope of delivery: (mounted on cleaning unit)

- 2 PVC hoses, 1.6 m, 12 mm inside width with bead connection on both sides and coupling nut 3/4" UNF, 1 connection 45° offset.
 - 1 PVC hose for nitrogen 1.5 m, 5 mm inside width, with quickly closing 7/16" UNF/hose grommet for reduction valve.
 - 2 Reduction nipples 3/4" x 7/8" 601–2129
 - 2 Reduction nipples 3/4" x 3/4" 601–2103
 - 2 Reduction nipples 3/4" x 5/8" 601–2123
 - 2 Reduction nipples 3/4" x 1" 628–2400
 - 2 Seals 628–2401
 - 2 Reduction nipples 5/8" x 3/4" 628–2402
 - 1 Screw connection 3/4" x 5/8" 601–2165
 - 1 Screw connection 3/4" x 7/8" 601–2166
 - 1 Wrench for container lock
 - 1 Can of filling material for filter drier (KC dry pearls can: 1 kg) 731–9000
 - 1 15-kg container, filled with R 11 808–3902
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1 Nitrogen bottle

Conventional tool

Double open-end wrench 2 each
1/2 x 9/16", 5/8 x 3/4", 7/8 x 15/16", 1 x 1 1/8"

Note

Dirt or moisture (water) in air conditioning system may result in failure of system and considerable follow-up damage.

Failures in air conditioning system, particularly if refrigerant compressor is defective, e.g. by a blocking effect, will result in considerable contamination of system by burnt refrigerant oil or abrasives. Since there is a possibility that abrasives of refrigerant compressor may arrive in lines of air conditioning system, replace pipe line with hoses on refrigerant compressor in such a case.

If contamination of the air conditioning system is suspected or if parts of the air conditioning system have been stored in the open air for extended periods, clean entire air conditioning system according to extent of contamination.

If there is little contamination or moisture, blow out air conditioning system with nitrogen.

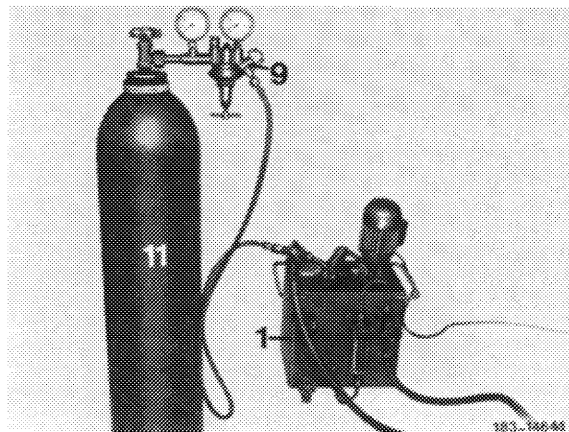
If the contamination is more pronounced, flush air conditioning system with R 11.

If cleaning of air conditioning system is required, always replace receiver dehydrator.

Cleaning with nitrogen

- 1 Drain air conditioning system (83–516).
- 2 Remove receiver dehydrator (83–520).
- 3 Unscrew hose lines on refrigerant compressor.

- 4 Connect tapping hose on reduction valve (9) of nitrogen bottle (11).
- 5 Blow out air conditioning system in two stages for approx. 2 minutes by means of tapping hose.
 - a) from hose line receiver dehydrator — evaporator to hose line evaporator — compressor.
 - b) from hose line refrigerant compressor — condenser.

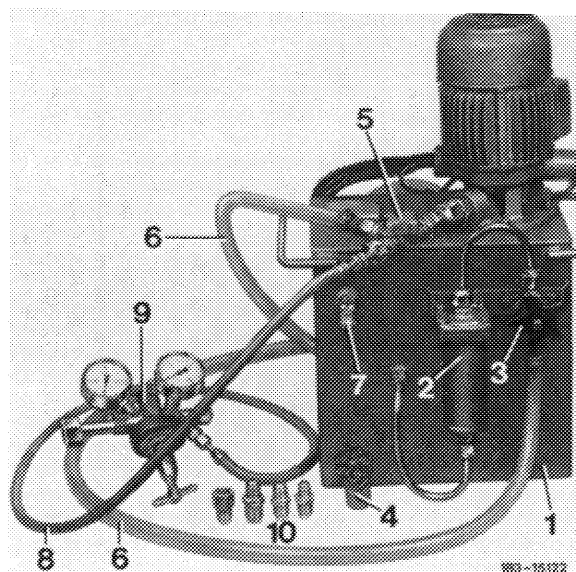


- 6 Install new receiver dehydrator. Then check oil level in refrigerant compressor (83–520).
- 7 Check sealing rings and connections on refrigerant compressor and moisten with cold-flowing oil.
- 8 Mount hose lines on refrigerant compressor or pipe line.
- 9 Evacuate air conditioning system, fill up and check for leaks.

Cleaning with R 11 cleaning unit

Note: The boiling temperature of the R 11 cleaner is at + 23.8° C. For this reason, store R 11 in cool place and keep container well closed.

R 11 in cleaning unit may evaporate through pressure relief valve (7) if its temperature is above 24° C. It is therefore recommended to return the contents of the cleaning unit to supply tank after flushing.



The R 11 cleaner can be used several times. As soon as the cleaner looks rather cloudy (showing up when flowing through PVC hoses (6), renew together with KC dry pearls in filter drier (2).

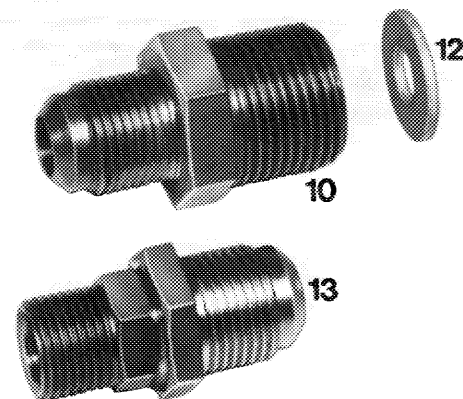
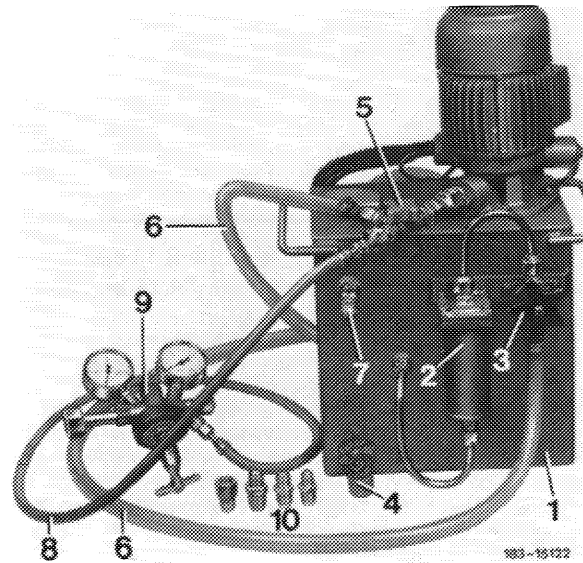
Attention!

Do not breath R 11 gas in high concentration. Vent closed rooms after flushing.

10 Drain air conditioning system (83–516).

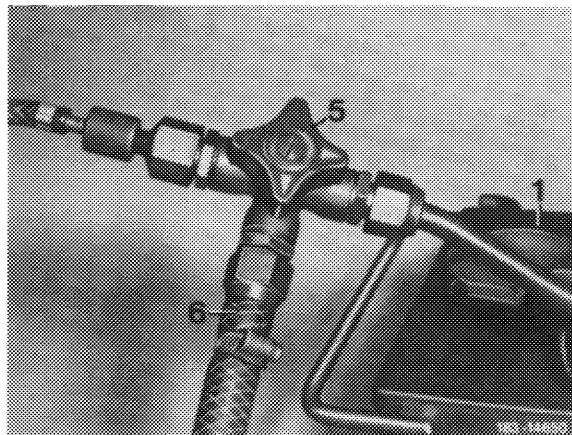
11 Disconnect all parts installed in refrigerant circuit such as expansion valve, receiver dehydrator and lines on refrigerant compressor.

12 Connect hose line from compressor to condenser with feed and return line and line connectors (10) (the hose line and the condenser are flushed first).



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13 Set three-way valve (5) to passage, cleaning unit (1) – PVC connecting hose (6).



14 Open shutoff valve (3) and engage flushing unit by inserting mains plug.

15 Disconnect cleaning unit and set three-way valve (4) to passage, pressure hose of nitrogen bottle – PVC connecting hose.

16 Close shutoff valve (3) and set pressure on pressure gauge (9) to approx. 3 bar. Open shutoff valve on pressure gauge.

17 The flushing compound which is still in connect-ed circuit is forced back into container of flushing unit (well visible through PVC hose).

18 Close valve on pressure gauge (9).

19 Disconnect flushing unit.

20 Also flush evaporator and hose line from eva-porator to compressor or pipe line as well as pressure hose from receiver dehydrator to E-valve (item 12 to 19).

21 Install new receiver dehydrator and new expan-sion valve. Then check oil level in refrigerant com-pressor (83–520).

22 Check gasket and threads on all components and moisten with cold-flowing oil. Connect hose lines to refrigerant compressor.

23 Evacuate air conditioning system, fill up again and check for leaks and function.

