B. Delco refrigerant compressor

Data

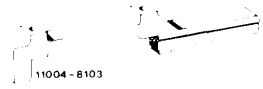
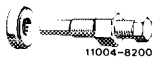
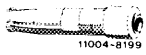
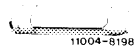
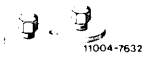
Designation	Delco (Frigidaire) Radial 4-cylinder
Max. speed 1/min	7000
Required input at max. compressor speed kW (HP)	approx. 6.3 (8.5)
Volume of cylinders	164 cc

Oil filling capacity

Oil type cold-flowing oil (for approved cold-flowing oils refer to Specifications for service products page No. 362)	
Oil filling capacity new in refrigerant compressor	170 cc

Tightening torques	Nm	(kpm)
Screws (8) belt pulley/clutch	11	(1.1)
Screw M 10 x 30 pipeline to refrigerant compressor	50 ± 3	(5 ± 3)
Nut (1) on drive shaft	13	(1.3)
Screws (5 and 6) M 12 refrigerant compressor to carrier	60 + 10	(6 + 1)
Hose line (14) from evaporator to pipeline 7/8"	29–37	(2.9–3.7)
Hose line (15) from pipeline to condenser 3/4"	24–28	(2.4–2.8)

Special tools

Holding device for refrigerant compressor	 11004-8103	116 589 14 31 00
Holding wrench for clutch	 11004-8104	116 589 04 40 00
Disassembling tool with spacer for spring plate	 11004-8201	000 589 07 35 00
Assembling tool with spacer for spring plate	 11004-8200	000 589 49 43 00
Guide piece	 11004-8203	116 589 05 63 00
Double-claw removing tool	 11004-7201	000 589 88 33 00
Knocking-out mandrel		115 589 02 35 02
Disassembling and assembling tool for slip ring	 11004-8199	000 589 21 61 00
Disassembling and assembling tool for shaft sealing	 11004-8198	000 589 65 63 00
Pressing-off plate for refrigerant compressor	 11004-7632	109 589 00 25 00

Conventional tools

Socket 14 mm, 3/8" square	e.g. made by Hazet, 5630 Remscheid
Feeler gauge (set)	e.g. made by Hazet, 5630 Remscheid order No. 2147
Langbeck pliers 72 A (Internal lock)	e.g. made by Hazet, 5630 Remscheid order No. 1846 a-1
Pliers for retaining ring J 2 (external lock)	e.g. made by Hazet, 5630 Remscheid order No. 1846 c-2
Double open-end wrench 1/2" x 9/16", 5/8" x 3/4", 7/8" x 15/16", 1" x 1 1/8"	

Self-made tool

Disassembling tool for O-ring

a) Replacing shaft sealing of refrigerant compressor

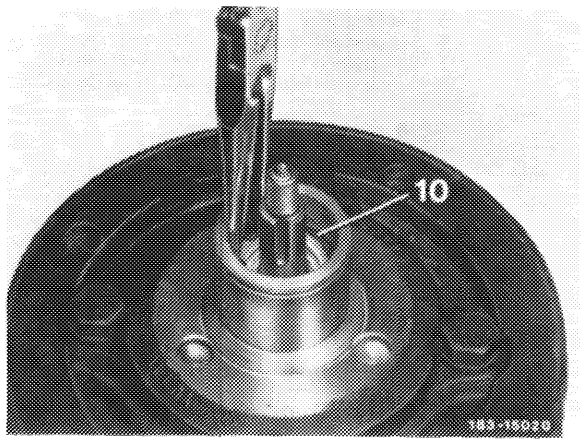
Removal

1 Evacuate air-conditioning system (83–516).

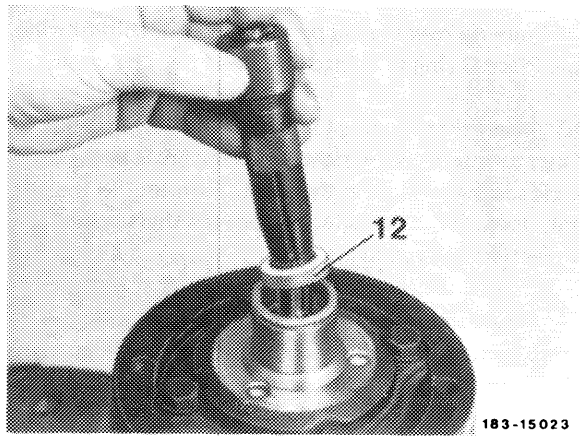
2 Remove refrigerant compressor (83–522).

3 Remove spring plate (83–526).

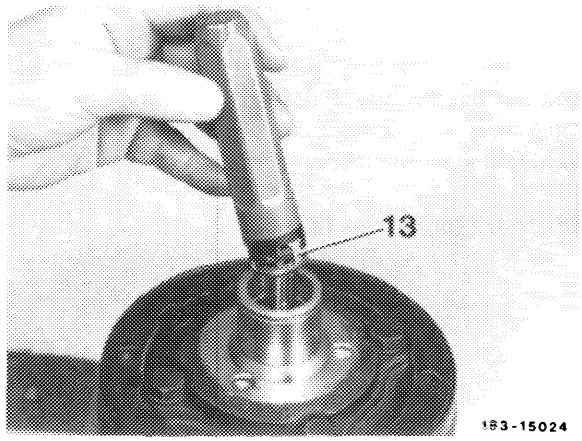
4 Remove retaining ring (10) for shaft sealing.



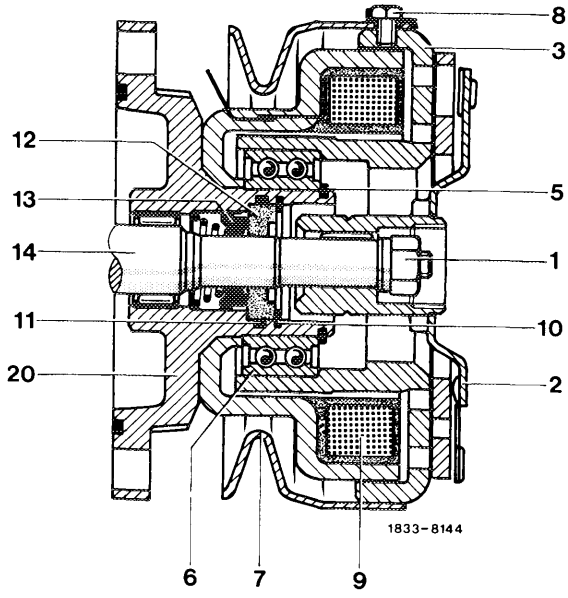
5 Remove slip ring (12) by means of disassembling and assembling tool.



6 Remove shaft sealing (13) by means of disassembling and assembling tool. For this purpose press on tool, then turn tool to the right in order to grip projection on shaft sealing by means of the locking tongues on the tool. Completely remove shaft sealing from shaft by pulling in straight-forward direction.



7 Take out O-ring (11) from inside of bore in housing cover. For this purpose, a wire bent in the shape of a hook may be used.



1 Nut on drive shaft
2 Spring plate
3 Clutch
5 Locking ring
6 Support for clutch
7 Belt pulley
8 Screw with lock
9 Magnet coil
10 Locking ring
11 O-ring
12 Slip ring
13 Shaft sealing
14 Drive shaft
20 Housing cover

Installation

8 Check whether parts of the old shaft sealing have been left in the bore of the housing cover. Prior to inserting new sealing, clean bore.

9 Immerse new sealing parts into clean, cold-flowing oil. Place O-ring (11) into groove of housing cover.

10 Insert shaft sealing (13) into tool and slip on shaft. Then turn tool to the right up to the point when the shaft sealing engages in the shaft. Turn tool to the left only then, for disengaging it from the shaft sealing projection and removing it.

11 Insert slip ring (12) by means of tool into bore up to contact with shaft sealing. Make sure that O-ring (11) is not pushed out of groove.

Attention!
The sealing surface of slip ring (12) must be protected against any damage, e.g. scratches.

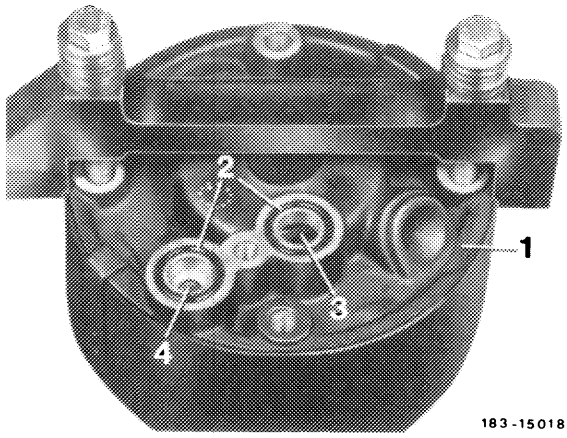
12 Insert locking ring (10) with its flat face directed downwards up to the point when it rests on slip ring. Then press with locking pliers or a screw driver on locking ring so that it springs into groove.

13 Install spring plate (83–526).

b) Checking refrigerant compressor for external leaks

Note: When working on the shaft sealing, it is recommended to drain all cold-flowing oil from refrigerant compressor. Determine the quantity of cold-flowing oil flown off and fill-in same quantity of new cold-flowing oil into refrigerant compressor. For details refer to "Check oil level in refrigerant compressor" (83–520).

14 Check condition of sealing rings (2) installed in refrigerant compressor and renew, if required, and provide with cold-flowing oil.



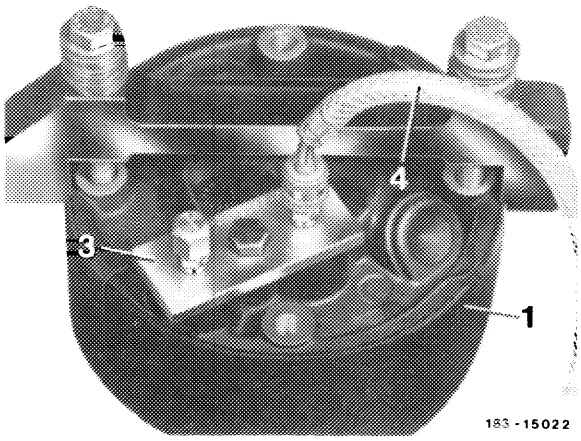
1 Refrigerant compressor
2 Sealing ring
3 Exhaust connection
4 Pressure connection

15 Screw pressing-on plate (3) by means of the existing hex. screw to refrigerant compressor.

16 Connect hose line (4) from service unit to internal connection of pressing-on plate.

17 Let refrigerant vapour stream into refrigerant compressor. A bottle or filling cylinder pressure of over 4 bar gauge pressure is required.

18 Rotate in direction of rotation compressor shaft in installation position of refrigerant compressor several times by hand.



19 Test refrigerant compressor for leaks by means of leak testing device.

20 Close valve on service unit, that is, on filling cylinder again and remove hose line at pressing-off plate.

21 Remove pressing-off plate again, however only immediately before connecting pipeline.

22 For details on oil filling capacity of refrigerant compressor refer to "Oil level in refrigerant compressor" (83–520).

23 Install refrigerant compressor (refer to section "Removal and installation of refrigerant compressor" 83–522).