

#### Refrigeration System Test Program – Test

- Perform Function Test 11/1.
- Charge system with 950 g of refrigerant R134a (test quantity).
- Connect gauges to low and high pressure test connections.
- Engine at operating temperature.
- Center and side air outlets open.
- Test period > 3 minutes.
- Press **AUTO**.
- Vehicle should not be parked in the sun before or during the test.

Electrical wiring diagrams :  
 Electrical Troubleshooting Manual, Model 202.

#### Conventional tools, test equipment

Description	Brand, model, etc.
Multimeter <sup>1)</sup>	Fluke models 23, 83, 85, 87 with thermocouple Module 80TK
Manifold gauge set (for R134a only)	Local purchase
R134a Recovery/Recycling/Recharging Service Equipment	Local purchase

<sup>1)</sup> Available through the MBUSA Standard Equipment Program.

#### Refrigeration System Test Program – Test


- Display "LO"
- Blower in stage 4
- Press .
- Engine speed 1500 rpm.
- Read diagram.

Figure 1

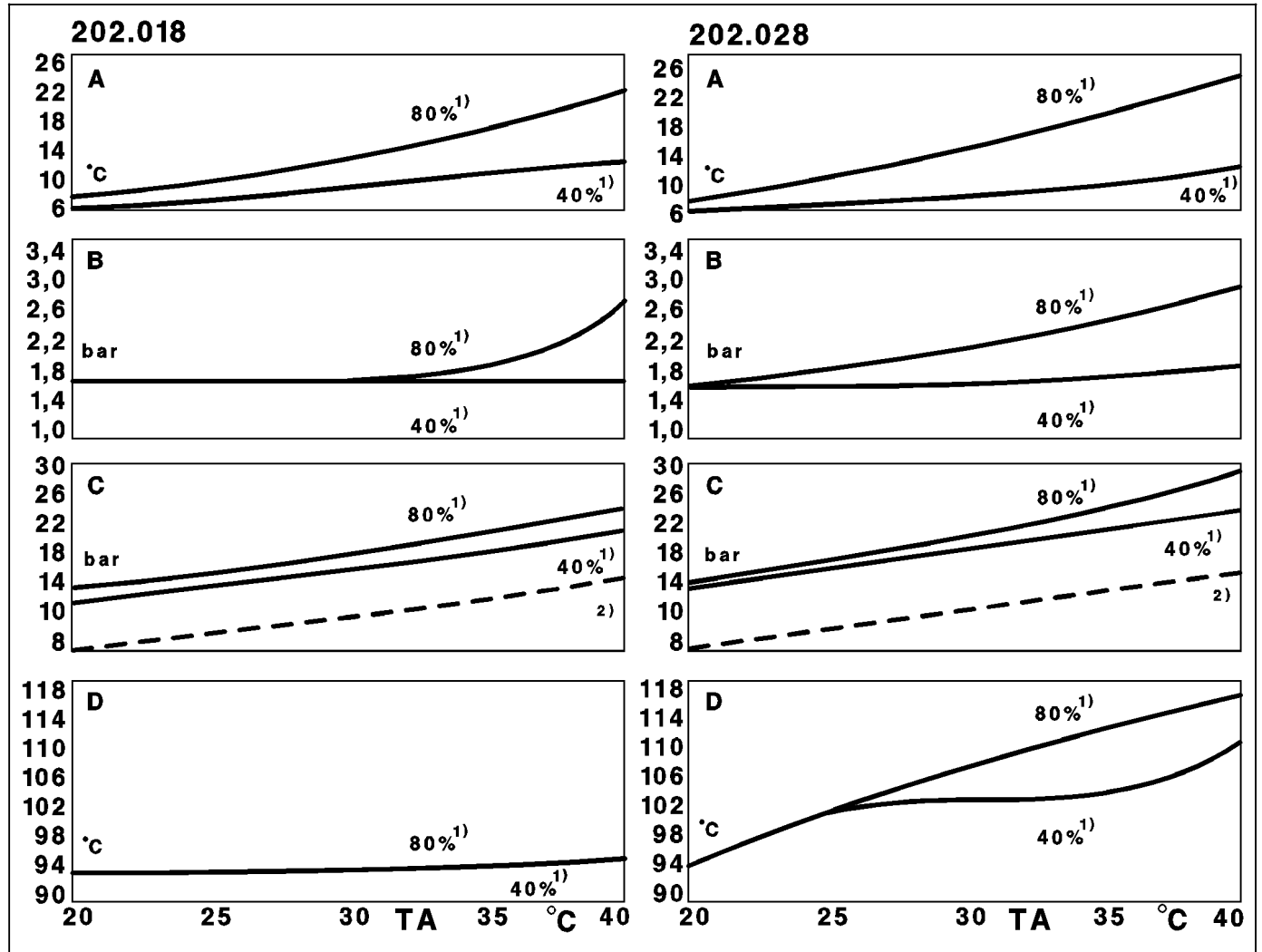
- 1) Relative humidity
- TA Ambient temperature (°C)
- A Center air outlet temperature (°C)
- B Low pressure
- C High pressure
- C<sup>2)</sup> 42/3 test step 2 high pressure (bar)
- D Refrigerant temperature (°C)

**Note:**

If the values such as




- Center air outlet temperature,
- Low refrigerant pressure,
- High refrigerant pressure,
- Refrigerant temperature

are obtained, the system is in order. Tolerances of ± 20% are permissible. If the deviations are larger, continue with the test program 42/3.



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Test condition	Low pressure (bar, B)	High pressure (bar, C)	Center air outlet temperature	Auxiliary fan	Damaged component (cause of failure)	Remedy
Display "LO", Blower stage 4, Center and side air outlets open, Engine speed 3000 rpm	1 bar higher as in diagram 42/2	As in diagram 42/2	> as in diagram 42/2	Possibly for a short period	A/C compressor (Insufficient delivery capacity)	AR83.30-5301E AR83.30-5302E
Display "LO", Blower stage 2, Press  Engine speed 1500 rpm	> as in diagram 42/2	17 – 22 bar	Starting at 5 – 8 °C then increasing depending on ambient temp.	I or II stage depending on pressure and temperature	Expansion valve (continuously open)	23 ⇒ 10.0 AR83.30-5520E
Display "HI", Blower stage 3, Press  Press  Engine speed 1500 rpm	As in diagram 42/2	< as in diagram 42/2	Heated air	Only via engine coolant temperature	Expansion valve (continuously closed) Low pressure lines (insufficient flow)	AR83.30-5520E

Note:  
Bubbles can appear occasionally in the sight glass.