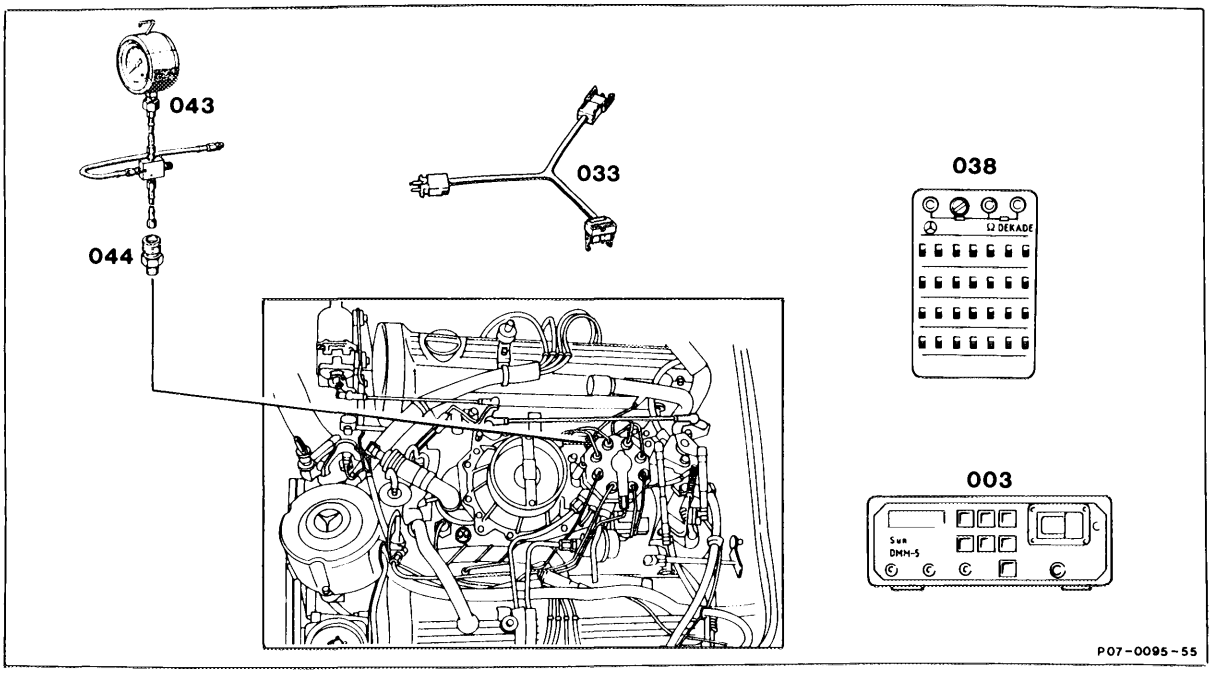
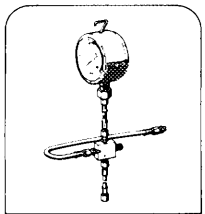
07.3-124 Testing starting device

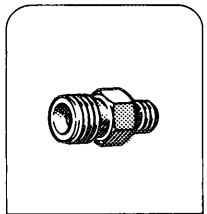


Testers	connect: Pressure measuring device (043) 103 589 00 21 00, Double union (044) 102 589 06 63 00, Multimeter (003), Ω decade (038) 124 589 09 63 00 Test cable (033) 102 589 04 63 00.
Fuel pressures and internal leakage	test (07.3-120).
Starting valve	check for operation and leaks.
Post-start enrichment	test.

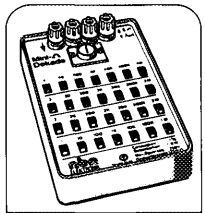
Special tools



103 589 00 21 00

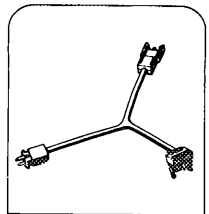


102 589 06 63 00



124 589 09 63 00

201 589 00 99 00



102 589 04 63 00

Commercial testers

Multimeter	e. g. Sun, DMM-5
Lambda tester	e. g. Hermann L 115

Note

Wiring diagrams (07.3-128).

Test step	Test connection	Operation/ Requirement	Specification	Possible cause/ Remedy
1.0 Check operation of starting valve	Detach fuel line at starting valve (arrow). Remove starting valve and reconnect fuel line.	**2-pole coolant temperature sensor (B11/2):** Connect Ω decade into circuit at coolant temperature sensor (B11/2) and simulate 10 kΩ resistance. **4-pole coolant temperature sensor (B11/2):** Connect lambda tester to diagnostic socket (X11). Switch on ignition. Readout 70 %. Detach coolant temperature sensor connector (B11/2), readout 30 %. Simulate 10 kΩ at coolant temperature sensor connector (B11/2) with Ω decade, connect into circuit diagonally until lambda tester indicates 70 %. Hold starting valve in a vessel.		
		Start engine	Starting valve must eject a finely atomized spray.	Test starting valve, starting valve control (07.3-126).
1.1 Test starting valve for leaks		**Ignition: OFF** Dry off nozzle of starting valve.	Starting valve must not leak.	Renew starting valve.

Testing post-start enrichment

Test data

Post-start at + 20 °C	mA	5 – 9
End of start	approx. seconds	13
Warm-up base value	mA	0

Test step/ Test scope	Test connection	Operation/Requirement	Specification	Possible cause/ Remedy
1.0 Test current at electro-hydraulic actuator (Y1)		Connect test cable (033) 102 589 04 63 00 to electrohydraulic actuator (Y1) and multimeter. **2-pole coolant temperature sensor (B11/2):** Create contacts with Ω decade at coolant temperature sensor (B11/2) and simulate 2.5 kΩ resistance. **4-pole coolant temperature sensor (B11/2):** Connect lambda tester to diagnostic socket (X11). Switch on ignition. Readout 70 %. Detach coolant temperature sensor connector (B11/2), readout 30 %. Simulate 2.5 kΩ with Ω decade at coolant temperature sensor connector (B11/2), create intermediate contacts diagonally until lambda tester indicates 70 %. Start engine.	refer to table	Ground supply of CIS-E control unit (N3), power supply of CIS-E control unit (N3) (refer to 07.3-121, test steps 1, 2). Coolant temperature sensor (B11/2) (refer to 07.3-121, test step 7). Air flow sensor potentiometer (B2) (07.3-121, test step 8), TD/TN signal (07.3-121, test step 10).