

**Test program - Electrics Preconditions for test**

Preceding work:  
 Diagnosis - Fault memory ..... □ 11

**Preconditions for test**

1. Ignition: **OFF**
2. Remove LH control unit (N3 /1).
3. Connect socket box with contacting module 2 and contacting box to LH control unit (N3/1) according to connection diagram.
4. **Only for test steps 1.2, 1.3, 2.3 - 2.5, 4 and 37**

**Ignition: OFF**

Remove base module (N16/1) and connect socket box with contacting module 1 and contacting box (see Chassis Volume 1 - 1.0 □ 22).



- When performing test and adjustment operations, the engine speed must only be increased by operating the accelerator pedal.  
 If the engine speed is increased at the accelerator control linkage in the engine compartment, the emergency running properties will be activated and a fault will be stored in the electronic accelerator pedal fault memory and the ASR indicator lamp will come on.

- If the LH control unit from another vehicle is installed, the self-adaptation of the control unit must be reset to the average value, see □ 11.

**Reference to wiring diagrams**

See "Wiring Diagrams Model 124, Volume 4"  
 Model 140, Volume 1"

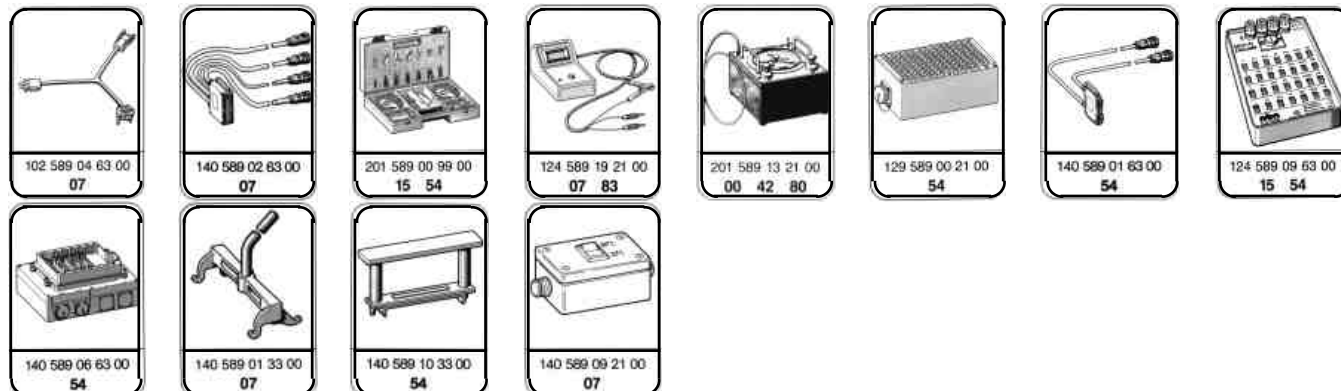
Designation: Group  
 Model 124 Wiring diagram 12  
 Model 140 07

**Note regarding column tester/test connection**

The numbers entered in parentheses, e.g. in ⇒ 1.0 (1.23) mean:  
 1 = Coupling 1 in wiring diagram  
 23 = Contact 23 in wiring diagram

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**Special tools**



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**Commercially available tools and testers, MB testers (see Workshop Equipment Manual)**

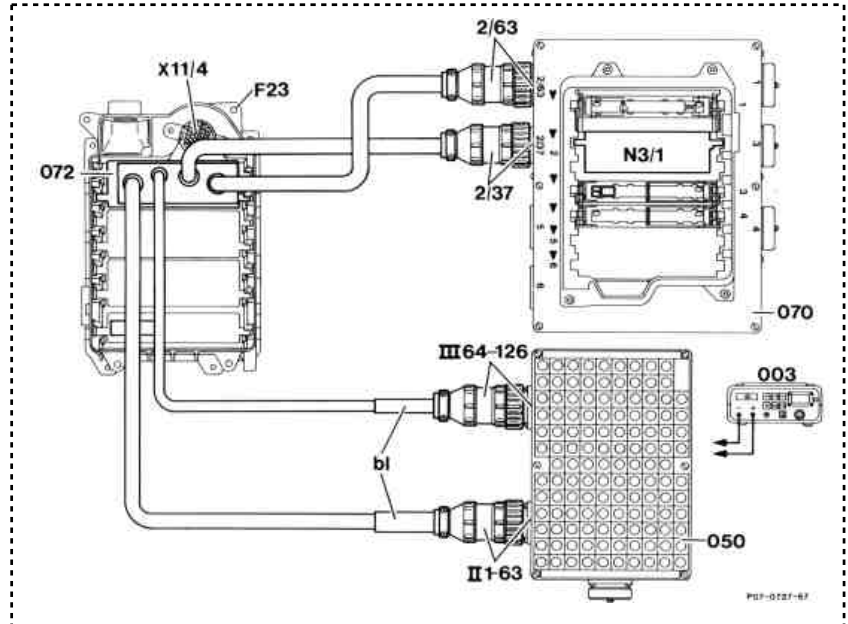
Designation	e.g. make, order no.
Multimeter	Fluke, 23-DB, 83, 88 SUN, DMM-5 Hermann, Avometer 2003
Lambda control tester	Hermann, L116 Bosch, KDJE-P600
Test and adjustment equipment, diagnostic tester	Baer DACE, Bosch, MOT 250/400 Hermann Datascope 960/980

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**Connection diagram of socket box, models 124 and 129**

Fig. 1

- 003 Multimeter
  - 050 Socket box, 126-pin
  - 070 Contacting box
  - 072 Contacting module
  - F23 Module box
  - N3/1 Control unit (LH)
  - X11/4 Test coupling for diagnosis, pulse signal (38-pin)
- bl= blue

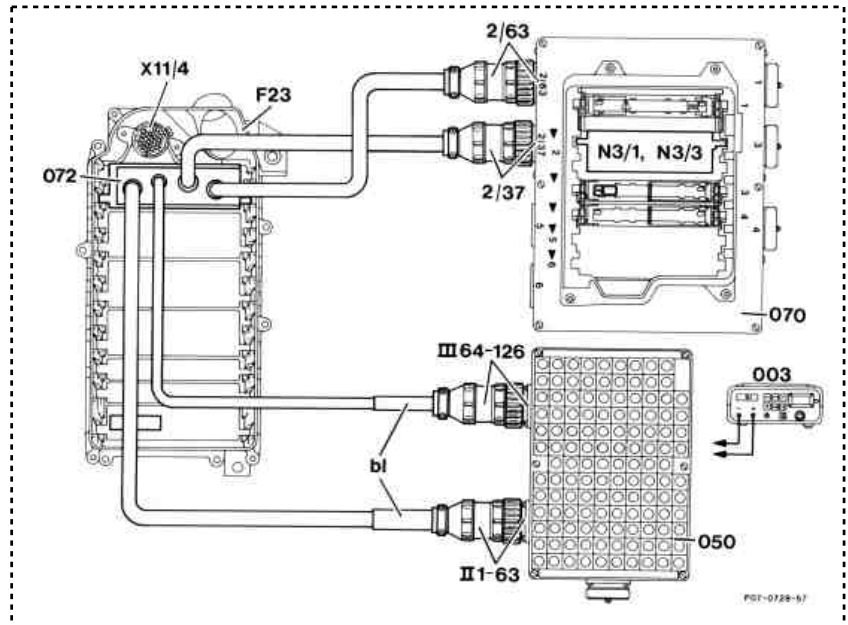


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**Connection diagram of socket box, model 140**

Fig. 2

- 003 Multimeter
  - 050 Socket box, 126-pin
  - 070 Contacting box
  - 072 Contacting module
  - F23 Module box
  - N3/1 Control unit (LH)
  - N3/3 Right control unit (LH) (on M120)
  - X11/4 Test coupling for diagnosis, pulse signal (38-pin)
- bl= blue

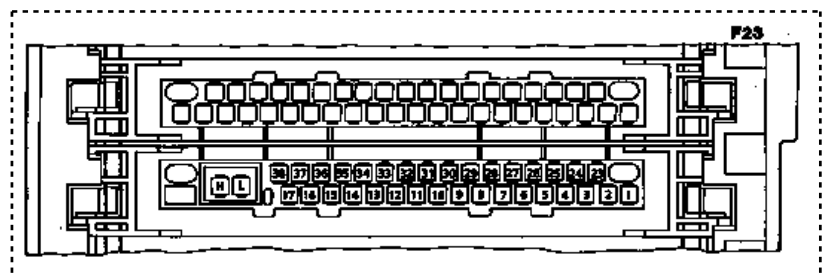


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**Pin assignment at coupling "1", interior for LH control unit**

Fig. 3

- 1-8 -
- 9 Fuel consumption display
- 10 Catalytic converter overheating warning lamp (only Ⓟ)
- 11 Idle speed recognition from EFP control unit, LLR control unit or TPM/LLR control unit
- 12 -
- 13 Diagnostic cable
- 14 Diagnostic cable insulation
- 15-22 -
- 23 Ground, component compartment (W16) model 124  
Ground, module box bracket (W27) model 129  
Ground, power ground (W15) model 140
- 24 Voltage supply, terminal 87
- 25 Fuel pump relay
- 26 Voltage supply, terminal 30
- 27 Ground coding (only Ⓟ)
- 28 TN speed signal (output)
- 29 Immobilizer signal (as of 12/94)
- 30 Safety fuel cutoff from EFP/TPM control unit
- 31 -
- 32 Exhaust temperature signal, ground (only Ⓟ)
- 33 Exhaust temperature signal (only Ⓟ)
- 34 Starter signal, terminal 50
- 35 Ground, module box bracket (W27) model 124  
Ground, electronics, right footwell (W15/1) model 129 and 140
- 36 Voltage supply, terminal 87
- 37 Ground component compartment (W16) model 124



Ground, module box bracket (W27) model 129  
 Ground, power ground (W15) model 140

- 38 -
- L CAN data line  
(LH, EZL, ASR, EFP, TPM control unit)
- H CAN data line  
(LH, EZL, ASR, EFP, TPM control unit)

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**Pin assignment at coupling "2", engine compartment for LH control unit**

Fig. 4

- 1 Fuel injection valve 2 (only M119)
- 2 Fuel injection valve (engine 104 (4), engine 119 (3))
- 3 Fuel injection valve (engine 104 (6), engine 119 (8))
- 4 Fuel injection valve 5
- 5 TN speed signal (input) up to 11/94
- 5 CO potentiometer (only without CAT) as of 12/94  
with immobilizer stage 2
- 6 Camshaft position sensor signal up to 11/94
- 6 Intake air temperature sensor as 12/94 with immobilizer stage 2
- 7 CO potentiometer (only without KAT) up 11/94
- 7 TN speed signal (input) as of 12/94 with immobilizer stage 2
- 8 Intake air temperature sensor up to 11/94
- 8 Camshaft position sensor signal as 12/94 with immobilizer  
stage 2
- 9 Oxygen sensor heater
- 10-12 -
- 13 Oxygen sensor cable insulation
- 14 Oxygen sensor
- 15 Oxygen sensor ground
- 16 Sensor ground
- 17 Air mass sensor signal
- 18 Coolant temperature sensor, circuit 2
- 19 Air pump relay (only CAT)
- 20 Shiftpoint retard actuation (only AG)
- 21 -
- 22 Right camshaft timing actuator (only M119)

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**Pin assignment at coupling "2", engine compartment for LH control unit (continued)**

Fig. 4

- 23 Air mass sensor voltage supply
- 24 Fuel injection valve 7 (only M119)
- 25 Fuel injection valve (engine 104 (2) engine 119 (6))
- 26 Fuel injection valve (engine 104 (3) engine 119 (4))
- 27 Fuel injection valve 1
- 28 -
- 29 -
- 30 Resistance trimming plug (except USA) or ground coding (only  
USA)
- 31 Coolant temperature sensor, circuit 1
- 32-33 -
- 34 Air mass sensor ground
- 35 -
- 36 Test output, lambda control
- 37 Cleaning signal for air mass sensor
- 38 Regeneration switchover valve
- 39 Exhaust gas recirculation switchover valve
- 40 -
- 41 Left camshaft timing actuator

