

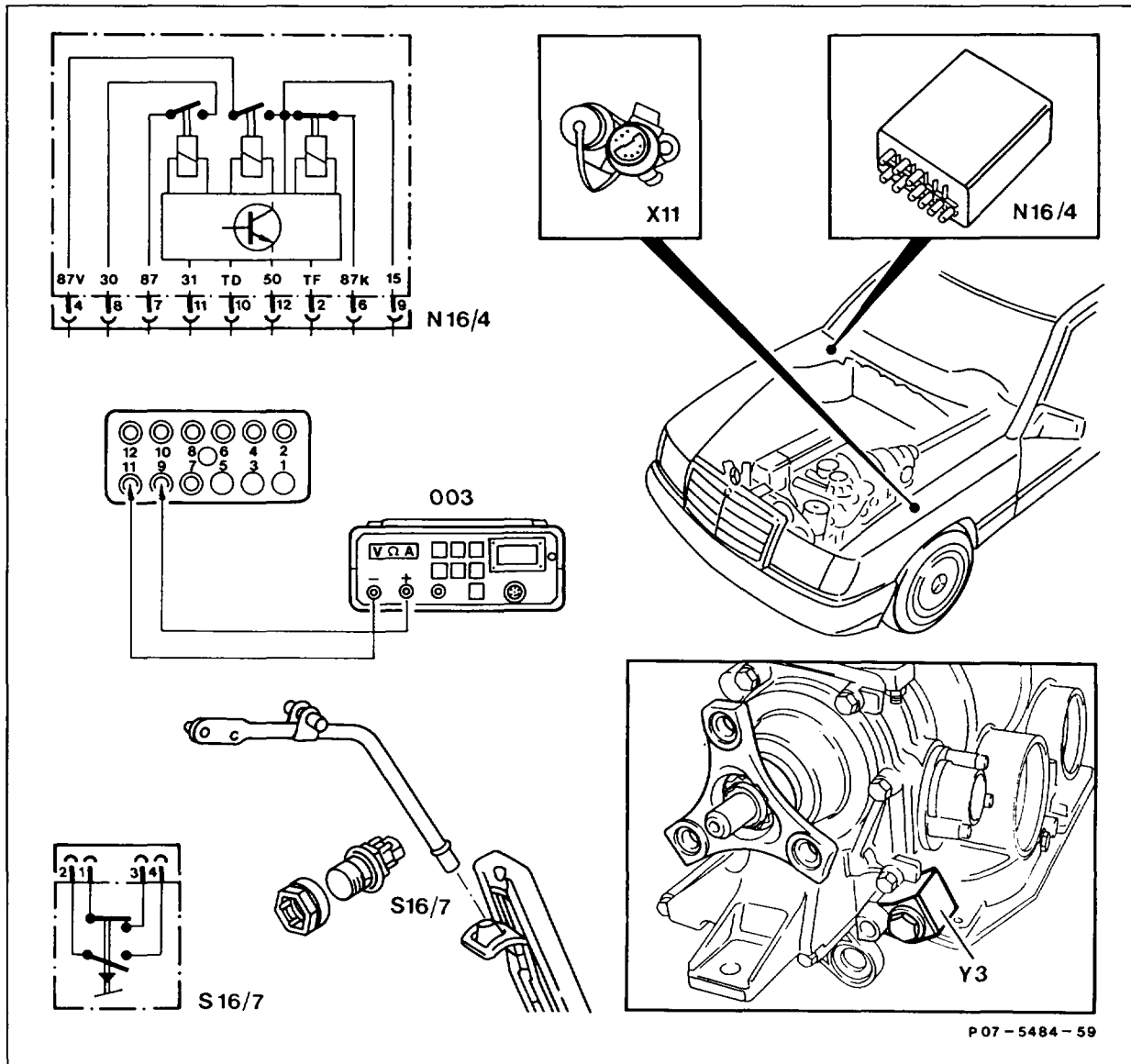


07.3-5792 Testing fuel pump relays (except engine 103.984 and   as of model year 1990)

Operation no. of operation texts and work units or standard texts and flat rates:
07-5792.



003 Multimeter
N16/4 Fuel pump relays

S16/7 Kickdown switch
X11 Diagnostic socket/terminal block terminal TD/TN
Y3 Kickdown valve, automatic transmission

Commercially available tools and testers (see Workshop Equipment Manual)

Designation	e.g. Make, order no.
Multimeter	Sun, DMM-5

Symbols for testers

	Multimeter
	Bridge
	Socket
	Connector

Symbols for test mode with multimeter

	Multimeter DC voltage mode
	Multimeter Resistance mode

Note

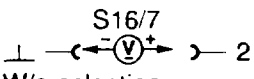

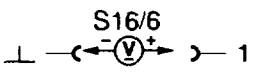
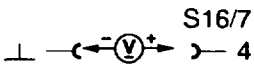

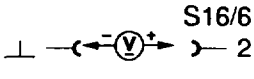


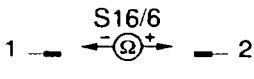
If the specification of e.g. step 1.0 is in order, it is not necessary to perform 1.1.
See appropriate wiring diagram volume for wiring diagrams.

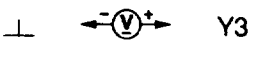
Test step	Test scope	Test connection	Operation/Requirement	Specification	Possible cause/Remedy
1.0	Fuel pump relay (N16/4) ¹⁾	N16/4) ¹⁾ 7 — — — 8	Remove fuel pump relay (N16/4) ¹⁾	Fuel pump runs	Fuse F1, Fuel pump (M3m1 or M3m2), Open circuit in wiring
1.1		N16/4) ¹⁾ 11 — — 9	Remove fuel pump relay (N16/4) Ignition: ON	11–14 V	Open circuit in wiring
1.2		N16/4) ¹⁾ 11 — — 10	Remove fuel pump relay (N16/4) Ignition: ON Engine: start	≥ 10 V	Open circuit in wiring, Test EZL ignition control unit (N1/2)

¹⁾ Test step/test scope for fuel pump relays (N16/1 to N16/4) identical.

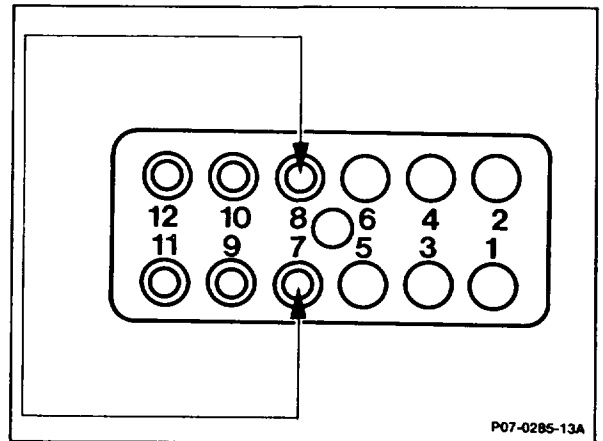
Test step	Test scope	Test connection	Operation/ Requirement	Specifi- cation	Possible cause/Remedy
1.3		<p>N16/4</p>	Ignition: OFF Remove fuel pump relay	11-14 V	Open circuit in wiring
1.4		Install fuel pump relay (N16/4) ¹⁾	Ignition: ON	Fuel pump briefly runs	Replace fuel pump relay (N16/4) ¹⁾
2.0	Kickdown shutoff	<p>With selection program:</p> <p>Without selection program:</p> <p>(AUS) (J) (USA)</p>	Unplug coupling from kickdown switch (S16/6) or (S16/7) Ignition: ON Engine: start	11-14 V 11-14 V	Rectify open circuit according to wiring diagram Rectify open circuit according to wiring diagram

¹⁾ Test step/test scope for fuel pump relays (N16/1 to N16/4) identical.

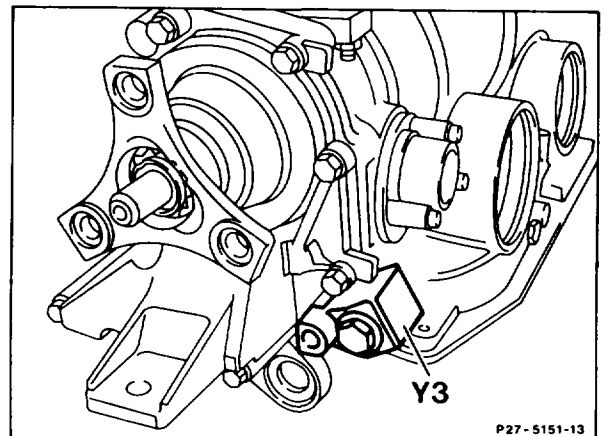
Test step	Test scope	Test connection	Operation/ Requirement	Specifi- cation	Possible cause/Remedy
2.1		<p>With selection program:</p>  <p>W/o selection program:</p>  <p>S16/6</p> 	<p>Ignition: ON Engine: start</p>	<p>11–14 V</p> <p>11–14 V</p>	Open circuit in wiring
2.2		<p>With selection program:</p>  <p>W/o selection program:</p>  <p>S16/6</p> 	Increase engine speed	Voltage must drop approx. 200/min before governed speed reached	Replace fuel pump relay
2.3	Kickdown switch	<p>With selection program:</p>  <p>Without selection program:</p>  <p>S16/6</p> 	<p>Ignition: OFF</p> <p>Kickdown switch operated</p> <p>Kickdown switch not operated</p>	<p>0 Ω</p> <p>∞</p>	Replace kickdown switch

Test step	Test scope	Test connection	Operation/Requirement	Specification	Possible cause/Remedy
2.4	Solenoid valve (Y3)	Unplug coupling from solenoid valve (Y3) 	Operate kickdown switch by hand	11–14 V	Replace solenoid valve

Fuel pump relay test connection (N16/4)



Arrangement of kickdown valve (Y3)



Y3 Kickdown valve, automatic transmission

Note

If the engine is not governed when top speed is reached, replace fuel pump relay.

The governed speed for the engine is stamped on the fuel pump relay.

Test start valve actuation, see 07.3-1607.

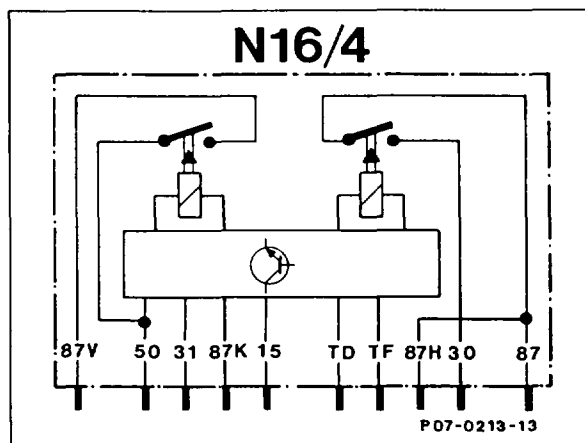
Engine 103.984 and (USA) (J) as of model year 1990 with engine systems control unit MAS (without fuel pump relay): test, see 07.3-1121 A, Sections e and j or B, Sections i and m.

The function in the fuel pump relay has been supplemented as 09/89 in two stages by a separate oxygen sensor cable.

Version 09/89 up to approx. 12/89

The fuel pump relay is provided with an additional connector for the oxygen sensor heater with the designation 87H.

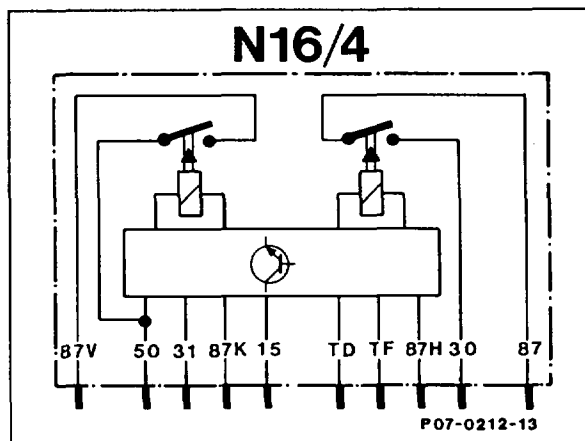
This also results in modification of the cable assignment at the relay. Actuation is performed as before as the additional connector 87H is connected as before via a bridge to the connector of designation 87.



Version as of 01/90

From this date the bridge between terminals 87 and 87H has been eliminated.

This has resulted in a modification in the electronic circuitry in the relay. The cut-in temperature for the oxygen sensor heater is + 20 °C and is determined by the coolant temperature sensor



Fuel pump relay engine 103

Version	up to 08/88	09/88 – 08/89	09/89 – 12/89	01/90 –
automatic transmission	002 545 52 05	002 545 92 05	003 545 17 05	003 545 24 05
manual transmission	002 545 51 05	002 545 93 05	003 545 16 05	003 545 23 05

Note**Fuel pump relay****Models 107, 124, 126, 201****Modifications:**

- Governed speed 6450/min (previously 6650/min).
- Actuation of cold start valve +60°C (previously +15°C), cold start properties improved.

Production breakpoint

Model	Engine	Month/ year	Vehicle ident end no. Manual transmission A	Vehicle ident end no. Automatic transmission A	Vehicle ident end no. Automatic transmission F
107.041	103.982	10/88 01/89	095202 -	- 098340	- -
124.026/030	103.940/983	10/88 11/88	866321 -	- 905796	- -
124.050	103.983	09/88 10/88	863710 -	- 880789	- -
124.090	103.983	09/88 06/88 (USA)	- -	- -	087456 081421
124.226/230	103.943/985	10/88 11/88	866321 -	- 905796	- -
124.290	103.985	09/88	-	-	087456
126.020/024/025	103.981	10/88 02/89	440990 -	- 462906	- -
201.029	103.942	10/88 07/88	460383 -	460383 -	- 522661

