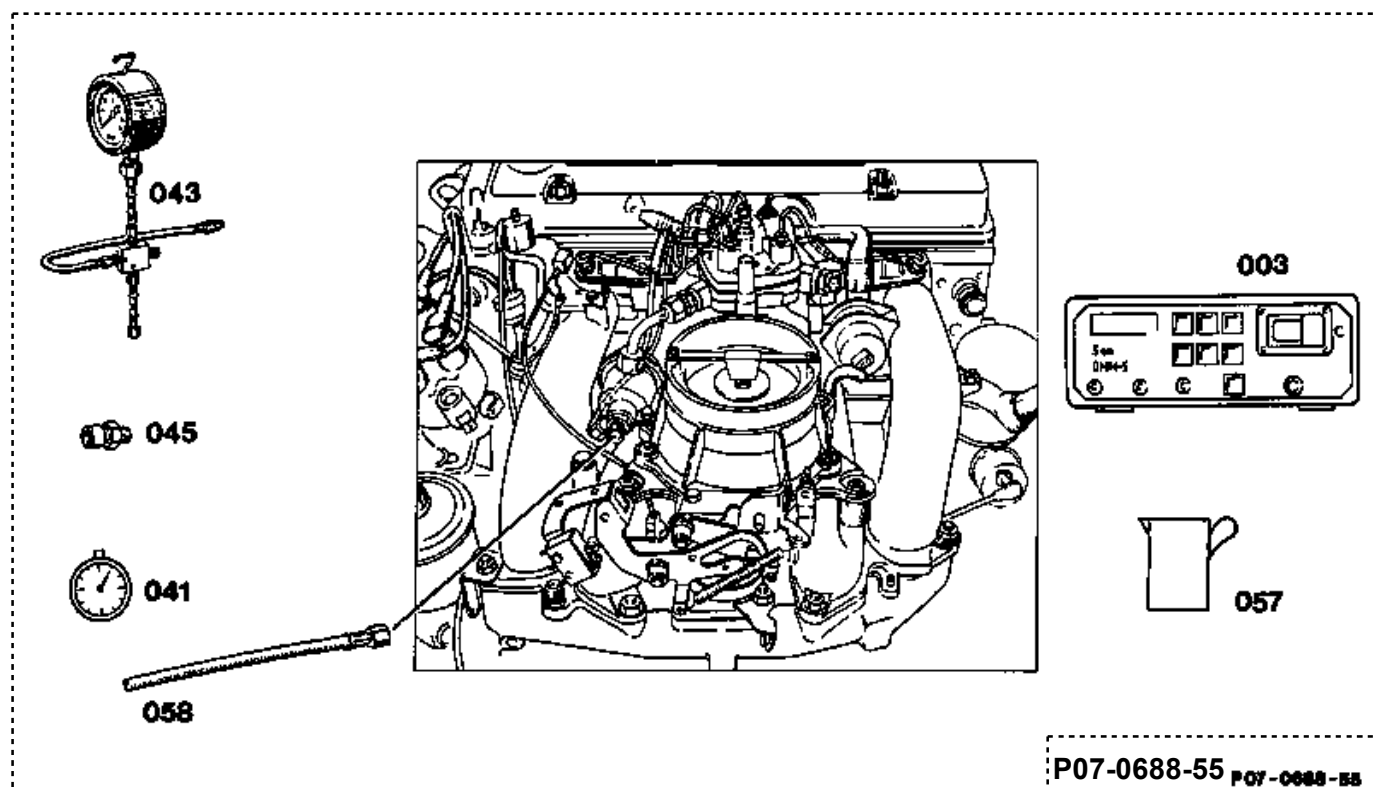


## Basic and national versions as of 1986



Current consumption.....	test. Specification 6 - 10 amperes (step 1). Use multimeter (003) for this test.
Fuel pressure in fuel tank.....	release by removing filler cap.
Fuel return line (51).....	unscrew.
Fuel hose (058).....	make in-shop and connect to diaphragm pressure regulator.
Delivery.....	test. Specification 1 litre in maximum 40 seconds: use measuring beaker (057), stopwatch (041) for this test.
Fuel pressure.....	test on vehicles with double pump version. Specification 2 - 4 bar gauge. Use pressure measuring device (043) 103 589 00 21 00, connection fitting (045) 103 589 02 63 00 for this test.

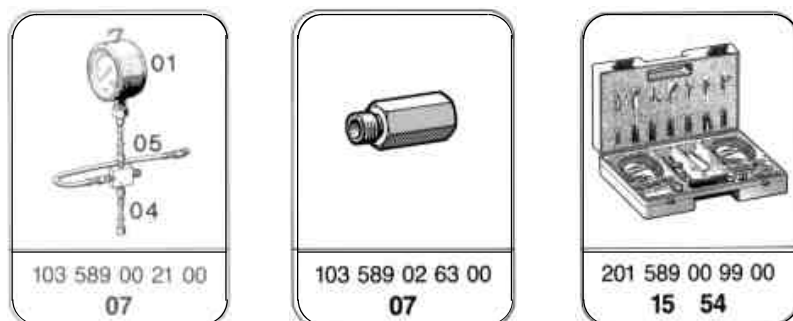
## Test data

Fuel pump (qty.)	1 pump	1 pump	2 pumps

Designation	EKP 6	EKP 4	EKP 6
Engine	102 up to approx. 02/86	102 as of approx. 03/86	102 for Station Wagon 102.99
MB Part No.	002 091 59 012)	002 091 97 01	002 091 59 012)
	0 580 254 951	0 580 254 943	0 580 254 951
Test specification	with engine running and voltage of min. 11.5 volts at delivery pump		
Delivery 1)	Test point	Fuel return line downstream of diaphragm pressure regulator	
	min. 1 litre in	40 seconds	
Current consumption	6-10 amperes 3)		

- 1) The fuel tank must be at least half full for measuring delivery.
- 2) If replacing, install Part No. 002 091 88 01.
- 3) KAT version up to 01/90 with oxygen sensor heater connection at terminal 87 at fuel pump relay: detach oxygen sensor heating coil plug connection (G3/2x1).

### Special tools



### Commercially available testers

Measuring glass or beaker (at least 1 litre),  
stopwatch

Multimeter

e. g. Sun, DMM-5

### Shop-made tools

Fuel hose

500 mm long

Tube with sealing cone

M14×1.5

Union nut

**Note**

For wiring diagrams see 07.3-128.

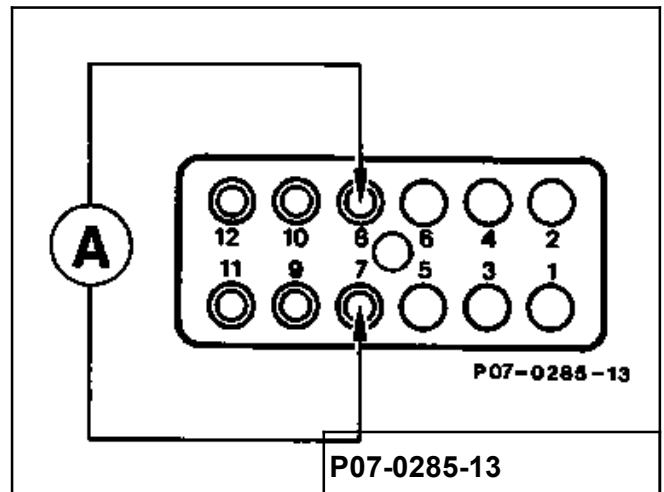
The fuel pump must run audibly for a short time (approx. 1 second) when the ignition is switched on.

**A. Delivery**

- 1 Detach fuel pump relay. Multimeter set to amperes. Test current consumption at contact 7 (terminal 87) and contact 8 (terminal 30).

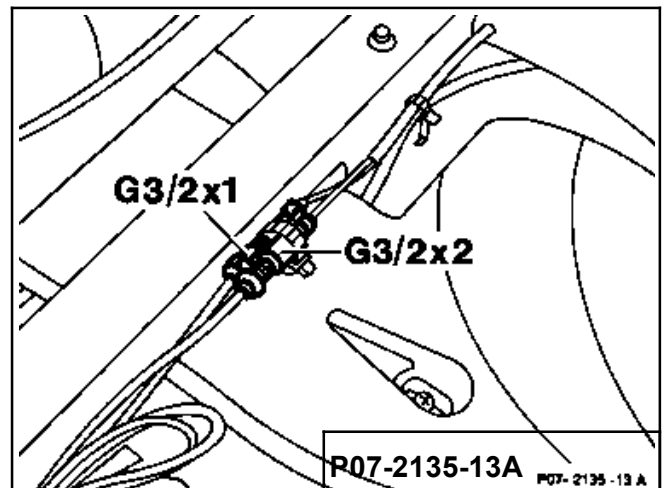
Current consumption 6 - 10 amperes.

If the readout is greater than 10 amperes, proceed as follows:

**a) Vehicle with KAT (up to 01/90)**

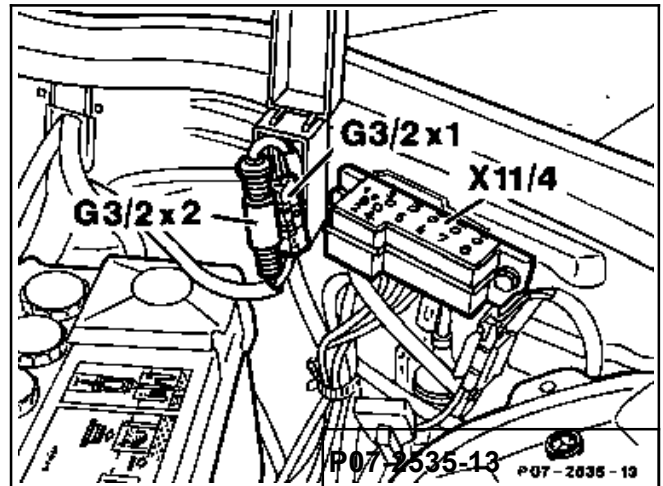
Detach oxygen sensor heating coil plug connection (G3/2x1) and repeat measurement. Located in right footwell (arrow), as of 09/89 next to battery.

Test current consumption of oxygen sensor, 0.5 - 1.3 A; test oxygen sensor if necessary (see 07.3-121, test programme with contact box, on/off ratio 50%).



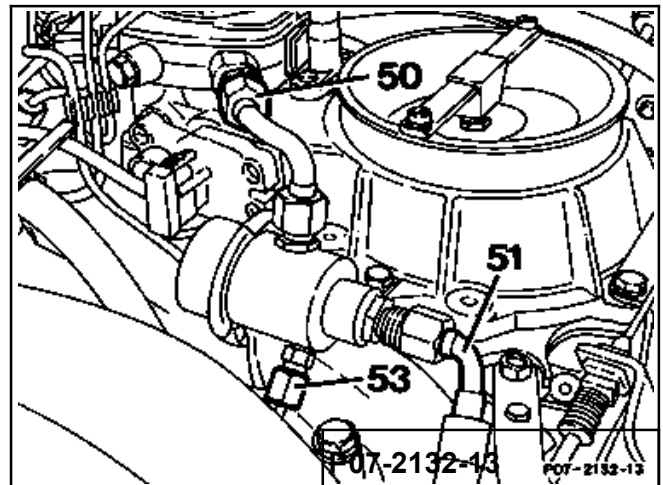
**b) Vehicles with two fuel pumps**

Test fuel pressure (see section "B").

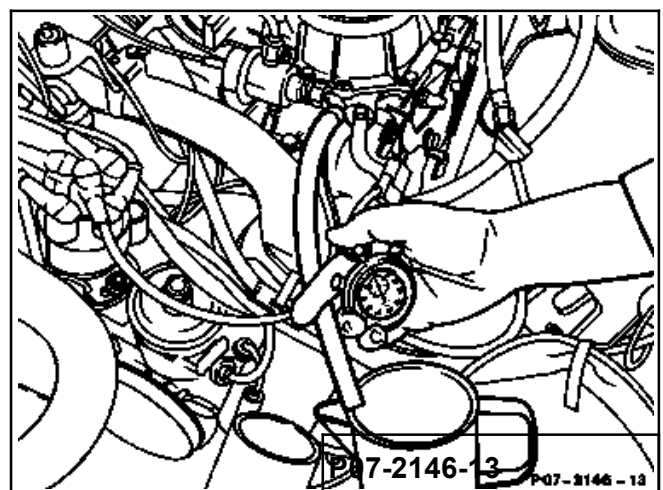


- 2 Detach wiring from multimeter. The delivery of the fuel pump should be tested in the fuel return. Release fuel pressure in fuel tank by removing filler cap. Unscrew fuel return line (51) at the diaphragm pressure regulator and plug.

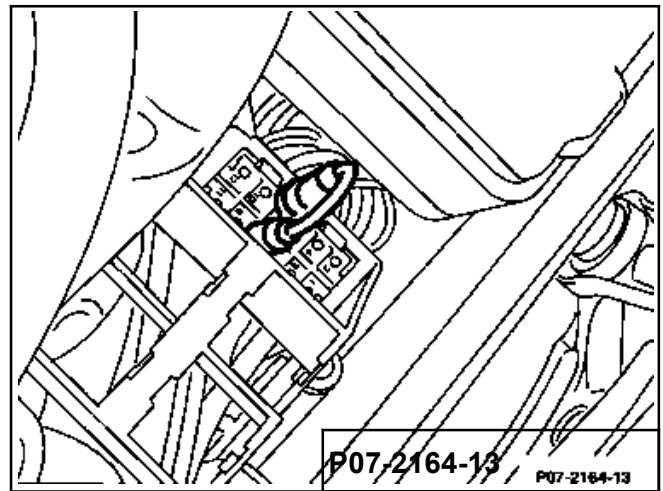
- 50 System pressure feed
- 51 Fuel return
- 53 Fuel distributor return



- 3 Screw shop-made fuel hose onto diaphragm pressure regulator and hold in measuring glass or beaker.



- 4 Bridge contacts 7 and 8 at fuel pump relay.  
This supplies voltage to the fuel pump.  
Arrangement of fuel pump relay in right of  
component compartment.  
Engine 102.961: in front of electrical centre  
(see ill.).



Detach jumper after 40 seconds or before  
measuring glass/beaker runs over.  
Specification:  
1 liter in maximum 40 seconds at a minimum  
voltage of 11.5 volts at the fuel pump.

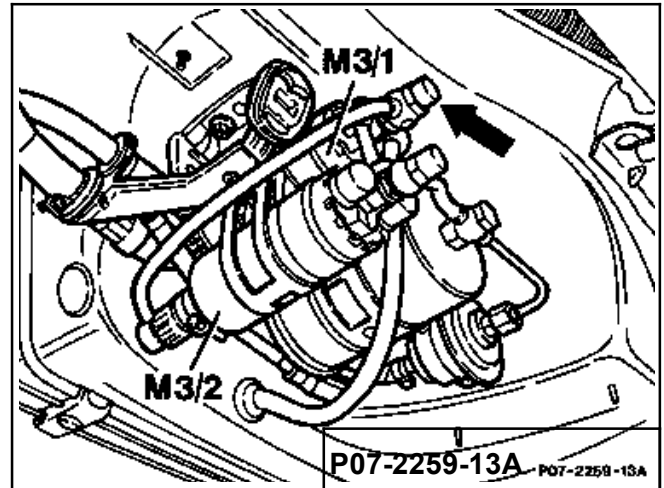
- 5 If the delivery is less than 1 litre in 40  
seconds, test the following points:
- a) Test voltage at the fuel pump.  
Specification at least 11.5 volts.
  - b) Check that strainer in supply line fitting  
of fuel distributor is not blocked.
  - c) Check fuel lines for restriction points  
(pinched lines).
  - d) Clamp off leak line between fuel  
accumulator and fuel suction hose. Re-  
check fuel delivery. If the specified  
delivery quantity is reached, replace fuel  
accumulator.
  - e) Replace fuel filter.

- 6 If the delivery is still insufficient, replace fuel pump.
- 7 Connect fuel return hose, install fuel pump relay.

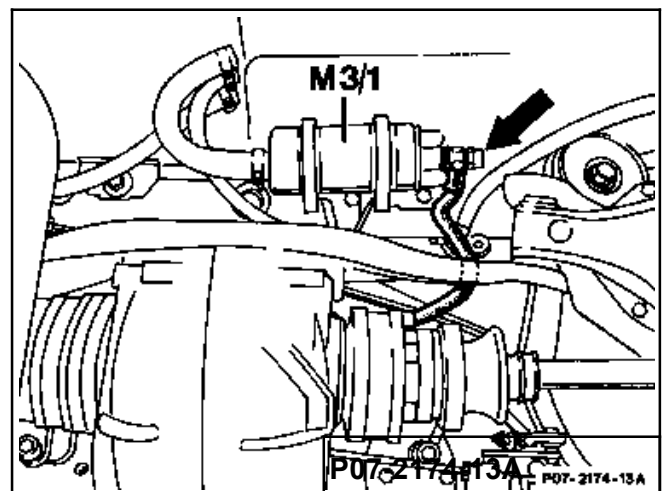
If the delivery is not reached, the faulty fuel pump on vehicles with double pump version should be determined by measuring the pressure (section "B").

## **B. Fuel pressure**

- 1 Take off protective box.
- 2 Unscrew cap nut (arrow) at fuel pump (M3/1). Connect fitting, Part No. 103 589 02 63 00 and pressure measuring device, Part No. 103 589 00 21 00.
- 3 Detach fuel pump relay and jumper the two contacts 7 and 8 (terminals 30 and 87).



- 4 Take reading on pressure gauge. The pressure must be between 2 - 4 bar. If it is below 2 bar, the fuel pump (M3/1) is faulty. If it is above 4 bar, the fuel pump (M3/2) is faulty.
- 5 Disconnect pressure measuring device, connect cap nut, install fuel pump relay and check for leaks.



- 6 Install protective box.

