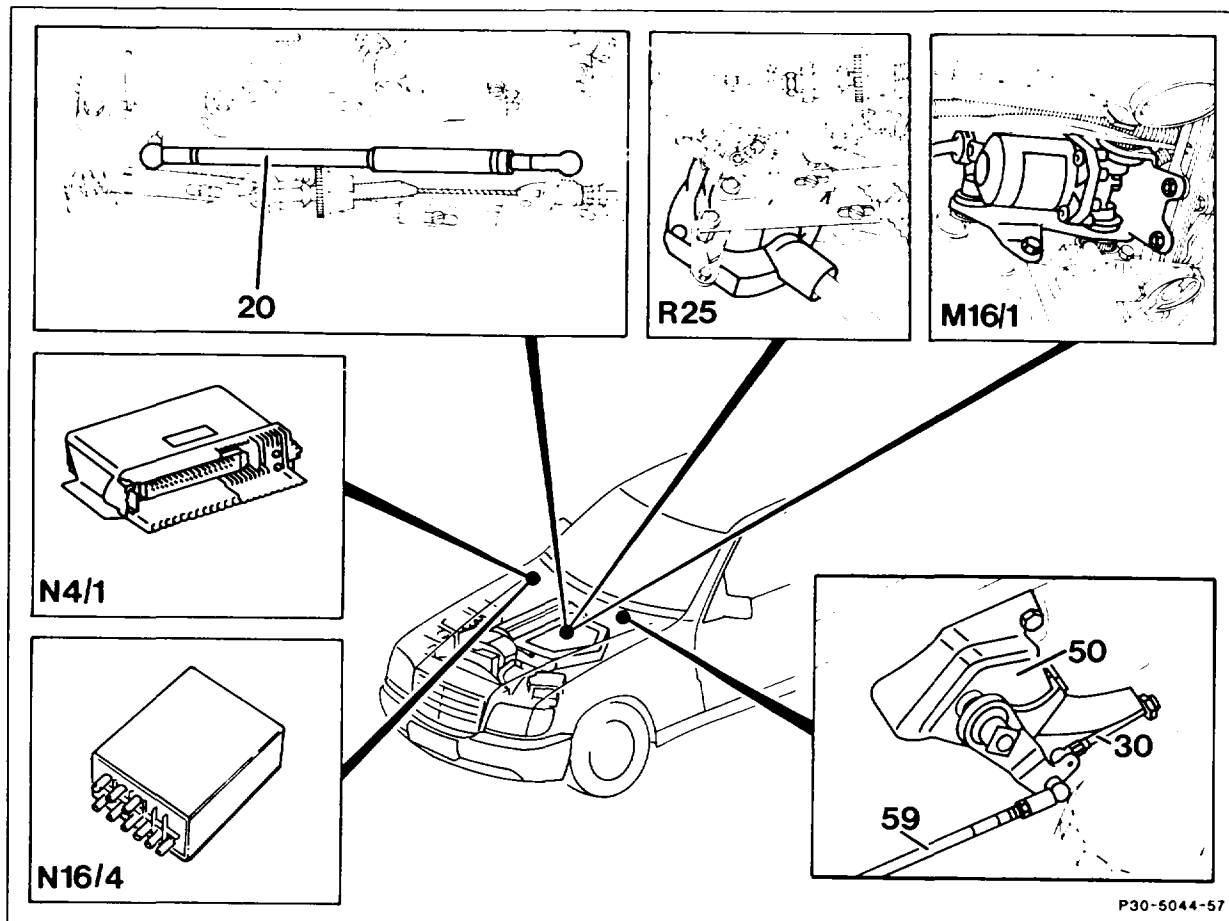


## 30-7300 Testing Tempomat cruise control, vehicles with ASR

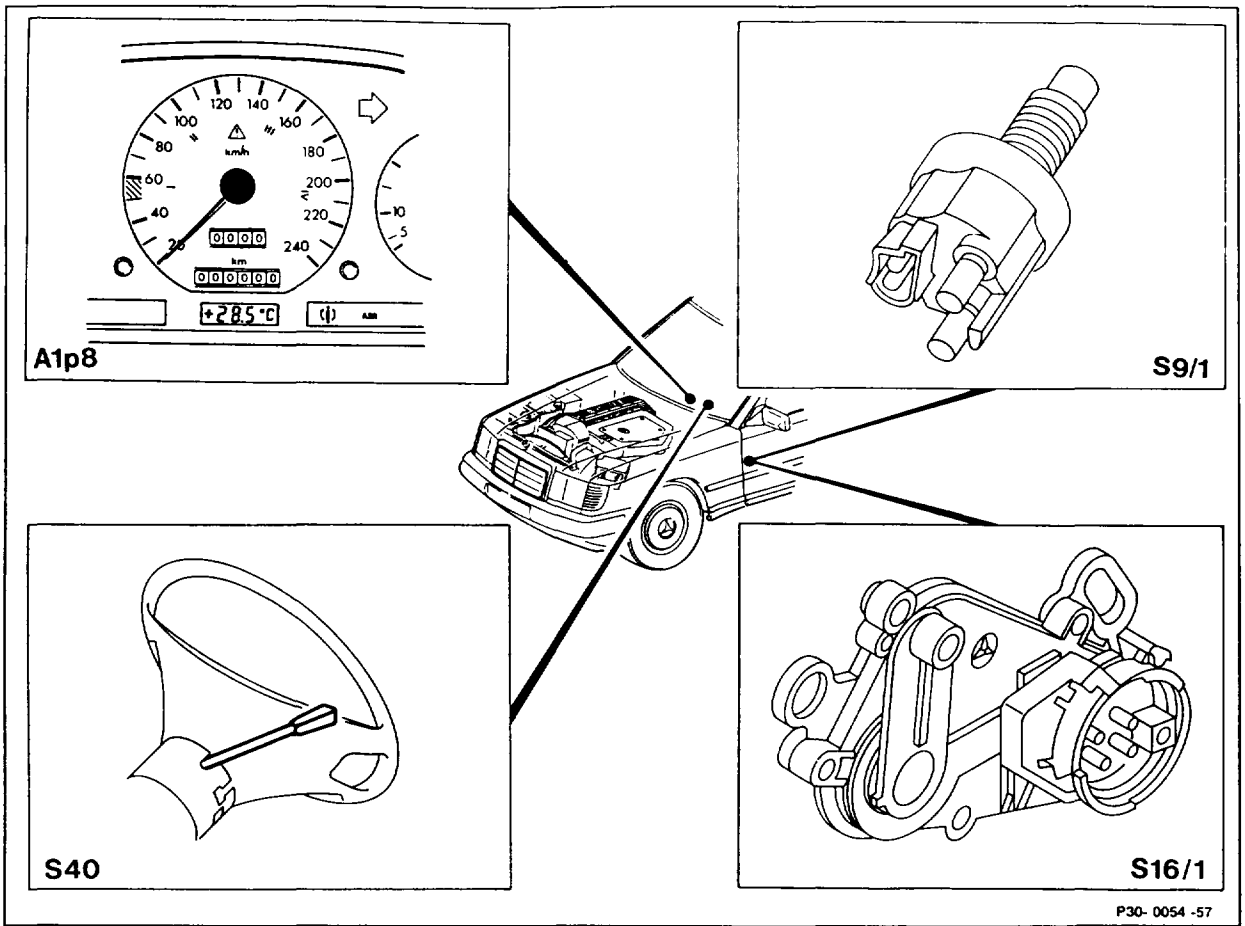
Operation no. of operation texts and work units or standard texts and flat rates:



P30-5044-57

### Model 124

M16/1	Electronic accelerator pedal (EFP) actuator	20	Idle travel rod (redundancy rod)
N4/1	Electronic accelerator pedal (EFP) control unit	30	Bowden cable (RHD, only models 126.024/025)
N16/4	Fuel pump and kickdown shutoff relay	50	Fire wall bearing (RHD, only models 126.024/025)
R25	Electronic accelerator pedal (EFP) position sensor	59	Connecting rod (RHD, only models 126.024/025)

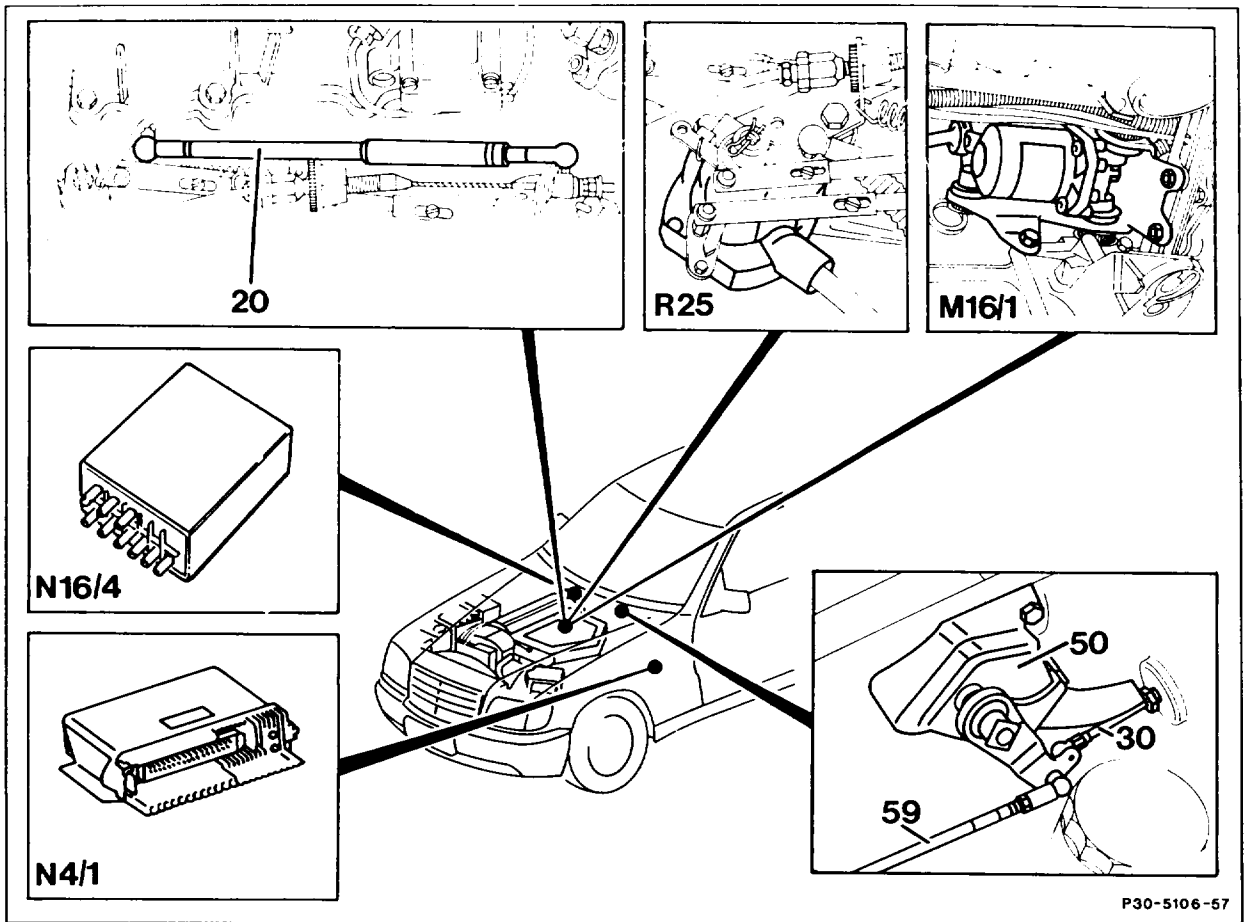


P30- 0054 -57

**Model 124**

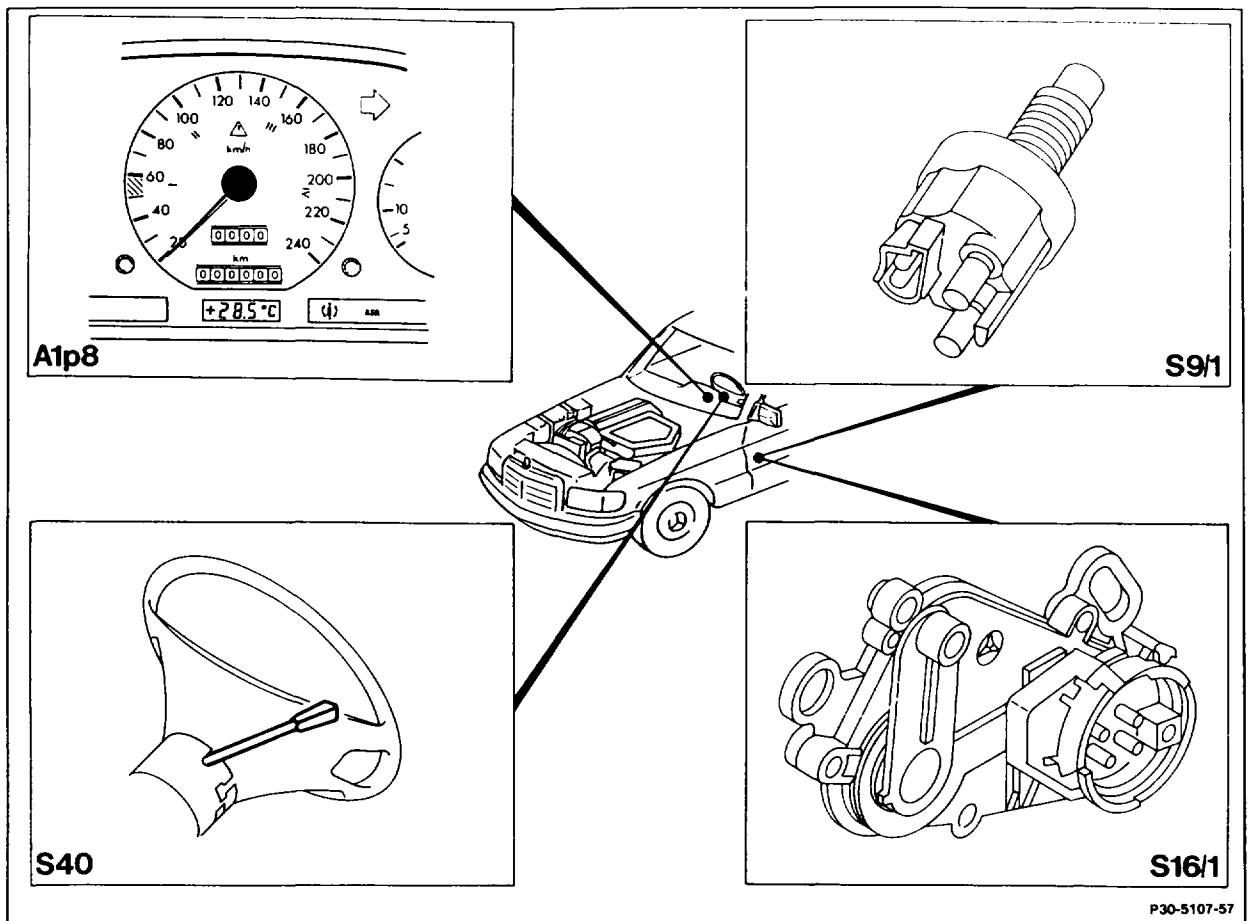
- A1p8 Electronic speedometer
- S9/1 4MATIC/ASD stop light switch
- S16/1 Starter lockout and reversing light switch

- S40 Tempomat cruise control switch
  - V Decelerate/set
  - B Accelerate/set
  - SP Memory
  - A Off



**Model 126**

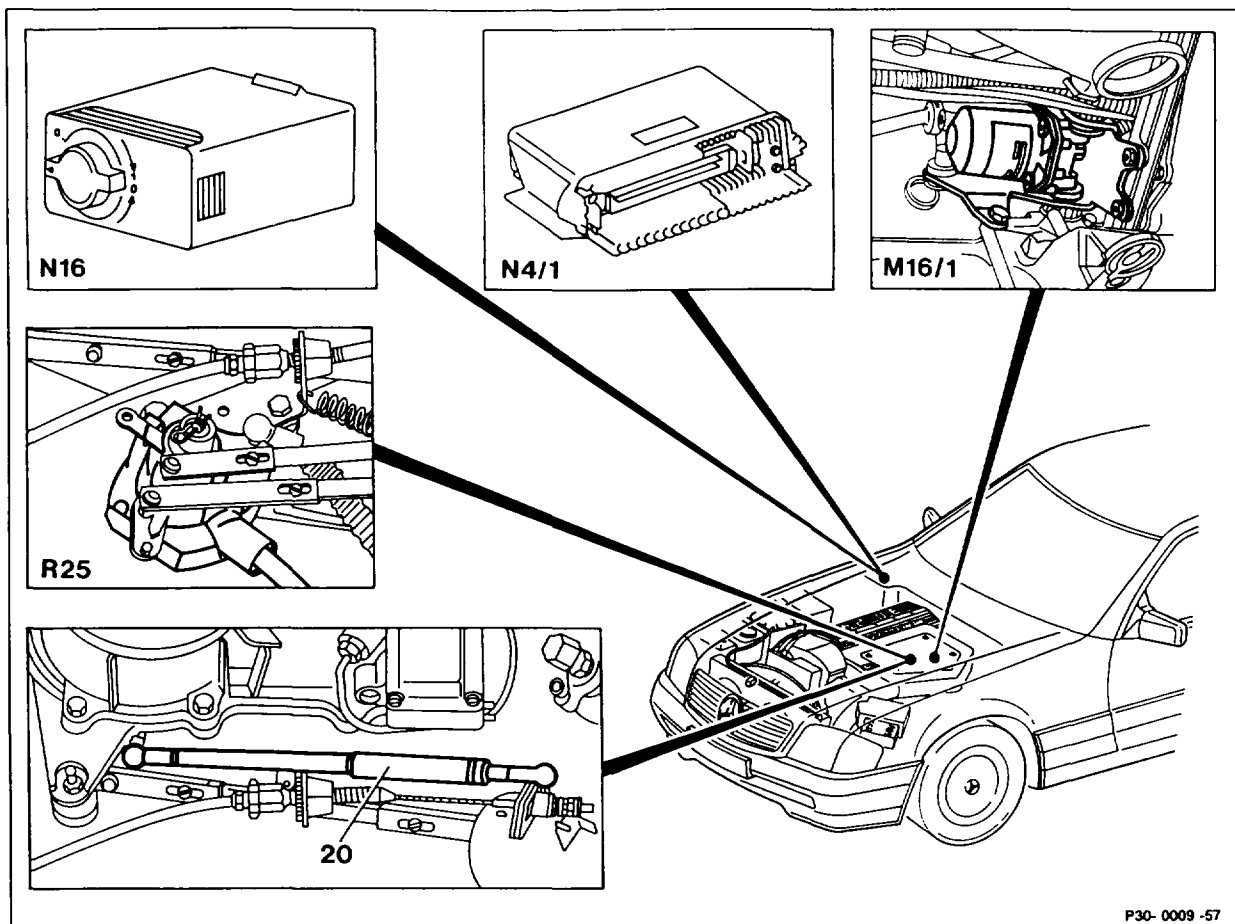
M16/1	Electronic accelerator pedal (EFP) actuator	20	Idle travel rod (redundancy rod)
N4/1	Electronic accelerator pedal (EFP) in left footwell	30	Bowden cable (RHD, only models 126.024/025)
N16/4	Fuel pump and kickdown shutoff relay	50	Fire wall bearing (RHD, only models 126.024/025)
R25	Electronic accelerator pedal (EFP) position sensor	59	Connecting rod (RHD, only models 126.024/025)



**Model 126**

- A1p8 Electronic speedometer
- S9/1 4MATIC/ASD stop light switch
- S16/1 Starter lockout and reversing light switch

- S40 Tempomat cruise control switch
  - V Decelerate/set
  - B Accelerate/set
  - SP Memory
  - A Off

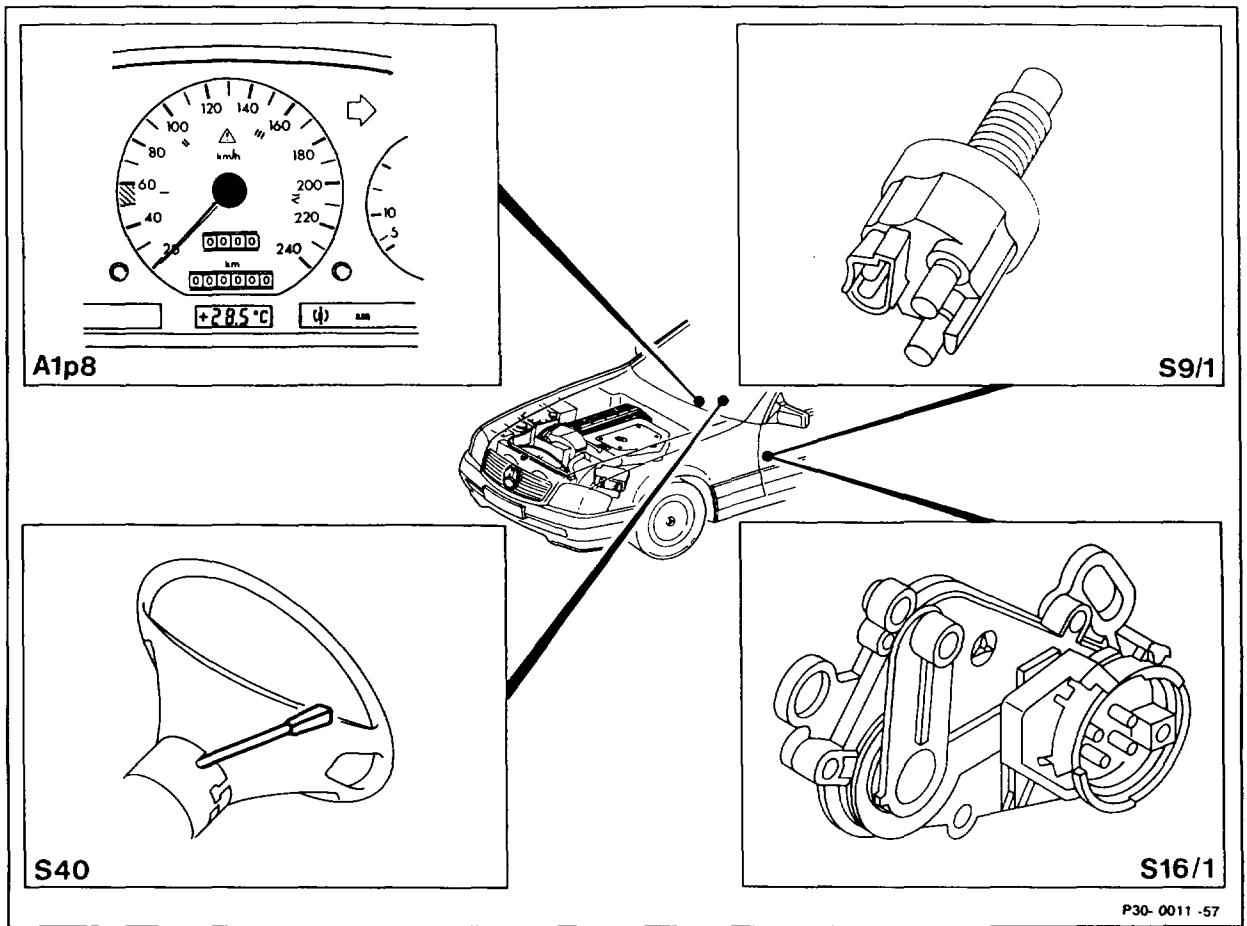


P30- 0009 -57

**Model 129**

M16/1 Electronic accelerator pedal (EFP) actuator  
 N4/1 Electronic accelerator pedal (EFP) control unit  
 N16 Engine systems control unit MAS

R25 Electronic accelerator pedal (EFP) position sensor  
 20 Idle travel rod (redundancy rod)



P30-0011-57

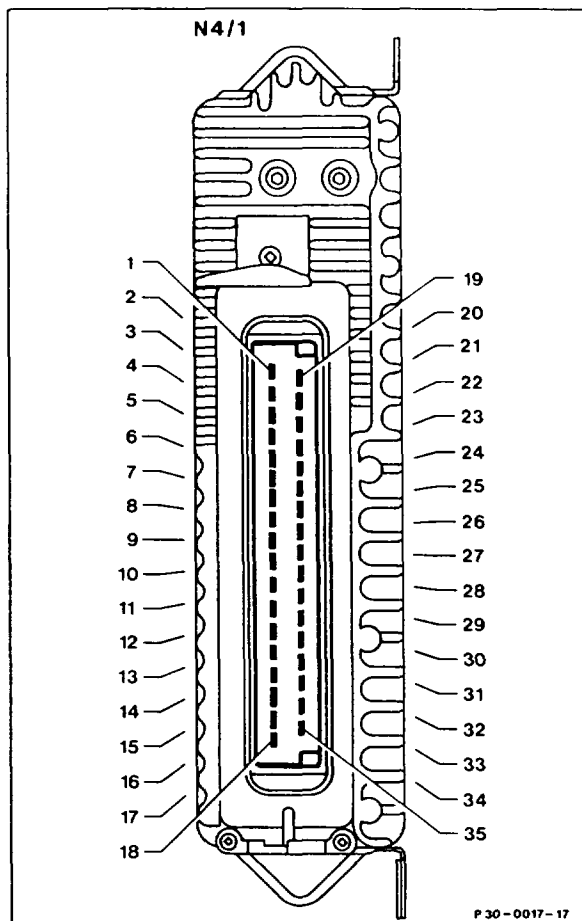
**Model 129**

- A1p8 Electronic speedometer
- S9/1 ASD/ASR stop light switch
- S16/1 Starter lockout and reversing light switch

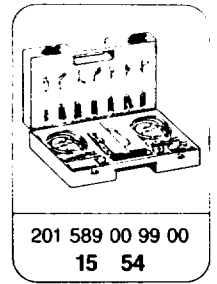
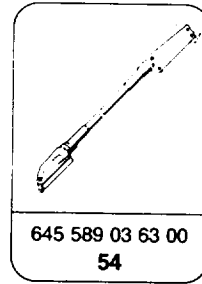
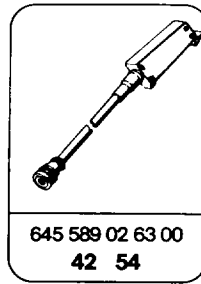
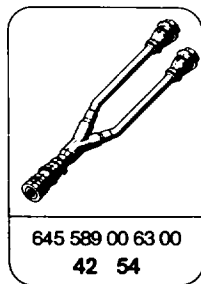
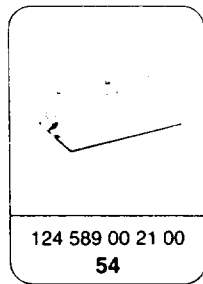
- S40 Tempomat cruise control switch
  - V Decelerate/set
  - B Accelerate/set
  - SP Memory
  - A Off

Contact assignment at electronic accelerator pedal control unit

- 1 Voltage supply terminal 15 unfused
- 2 Voltage supply terminal 15 unfused
- 3 Electronic accelerator pedal actuator (engine)
- 4 Electronic accelerator pedal actuator (engine)
- 5 Position sensor potentiometer (ground)
- 6 Actuator, electronic accelerator pedal potentiometer (ground)
- 7 Do not create contact!
- 8 Idle switching signal to KE control unit (N3)
- 9 Position sensor potentiometer voltage supply ( + )
- 10 Not assigned
- 11 Battery ground (W10)
- 12 Electronic speedometer, road speed signal
- 13 Safety switch position sensor
- 14 Stop light switch
- 15 Position sensor potentiometer (wiper signal)
- 16 Tempomat cruise control switch (decelerate/set)
- 17 Not assigned
- 18 Tempomat cruise control switch (memory)
- 19 Do not create contact
- 20 Electronic accelerator pedal actuator (engine)
- 21 Electronic accelerator pedal actuator (engine)
- 22 Battery ground (W10)
- 23 Battery ground (W10)
- 24 Not assigned
- 25 Not assigned
- 26 Actuator, electronic accelerator pedal potentiometer (voltage supply)
- 27 Not assigned
- 28 Actuator, electronic accelerator pedal potentiometer (wiper signal)
- 29 Electronic accelerator pedal actuator (safety switch)
- 30 Fuel pump relay terminal 15, contact 9 or engine systems control unit terminal 15u, contact 10
- 31 To ABS/ASR control unit (throttle valve actual value)
- 32 Tempomat cruise control switch (accelerate/set)
- 33 Starter lockout and reversing light switch, Drive mode "R"
- 34 From ABS/ASR control unit (throttle valve set value)
- 35 Tempomat cruise control switch (OFF)



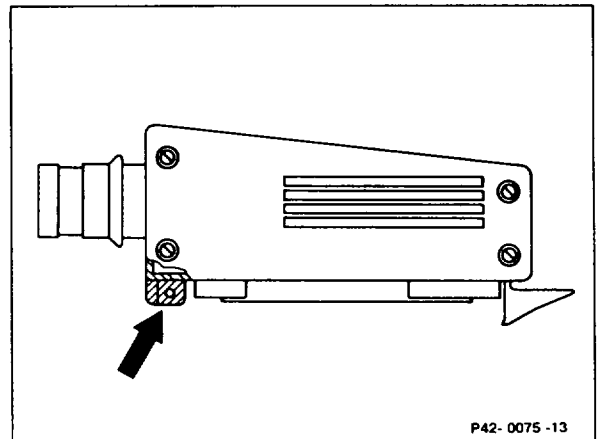
## Special tools



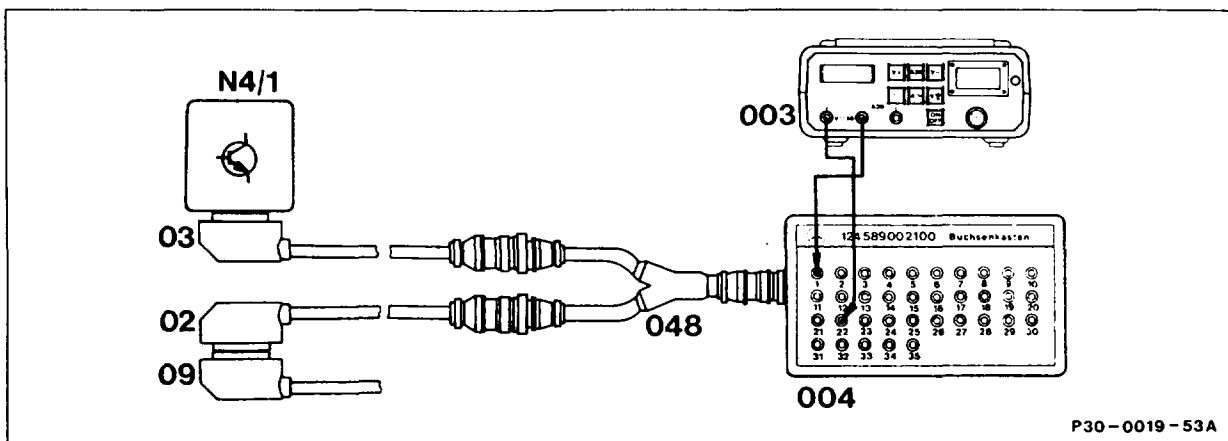
### Commercially available tools and testers (see Workshop Equipment Manual)

Designation	e.g. Make, order no.
Multimeter	Sun, DMM-5
Frequency generator	Sun, DTR-8416

The stud (arrow) on the test cable  
645 589 02 63 00 must be sawn off.

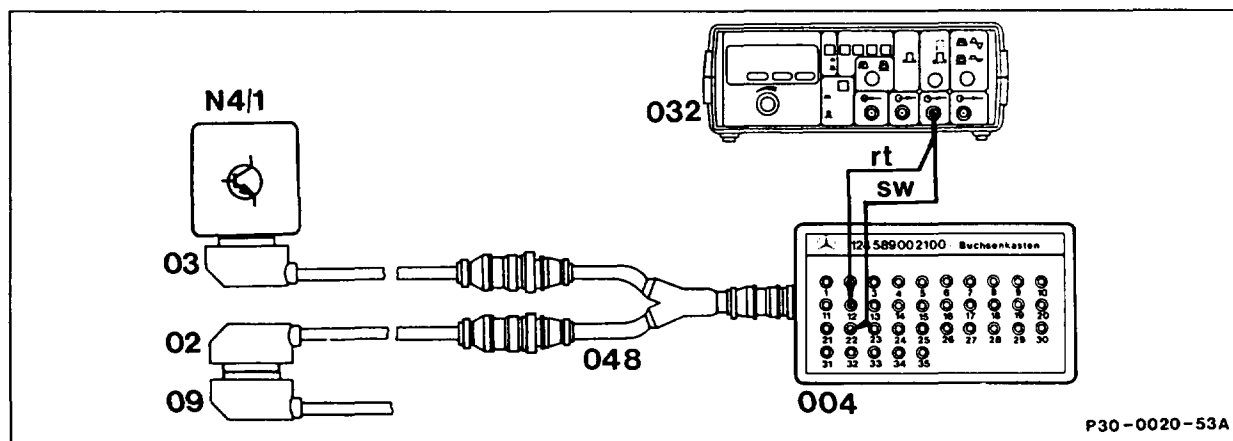






P30-0019-53A

Connection diagram with multimeter for Tempomat cruise control test program



P30-0020-53A

Connection diagram with frequency generator for Tempomat cruise control test program

02	Test cable	645 589 02 63 00	003	Multimeter	
03	Test cable	645 589 03 63 00	004	Contact box	35-pin
09	Vehicle cable harness (electronic accelerator pedal control unit)		048	Test cable	645 589 00 63 00
			N4/1	Electronic accelerator pedal (EFP) control unit	

### Symbols for testers

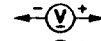


35-pin contact box



Contact

### Symbols for test mode with multimeter



Multimeter DC voltage mode



Function generator square-wave signal shape.

### Preconditions for test

- Accelerator control linkage correctly set and check for ease of movement (30–1010).
- Battery voltage 11–14 V.

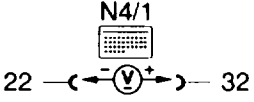
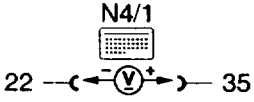
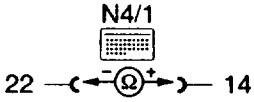
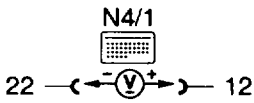
### Note

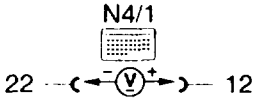
If the specification of a main test step, e.g. test step 1.0, is in order, continue with the next main test step, e.g. test step 2.0.

See appropriate wiring diagram volume for wiring diagrams.

Test step	Test scope	Test connection	Operation/ Requirement	Specifi- cation	Possible cause/Remedy
1.0	Tempomat cruise control pushbutton (S40)		Ignition: <b>ON</b> Pushbutton not pressed.	< 1 V	Open circuit in wiring, Tempomat cruise control pushbutton (S40)
			Position "decelerate."	11–14 V	
1.1			Ignition: <b>ON</b> Pushbutton not pressed.	< 1 V	Open circuit in wiring, Tempomat cruise control pushbutton (S40)
			Position "store."	11–14 V	



Test step	Test scope	Test connection	Operation/ Requirement	Specifi- cation	Possible cause/Remedy
1.2			Ignition: <b>ON</b> Pushbutton switch not pressed.  Position "accelerate."	< 1 V  11-14 V	Open circuit in wiring, Tempomat cruise control pushbutton (S40)
1.3			Ignition: <b>ON</b> Pushbutton switch not pressed.  Position "off."	11-14 V  < 1 V	Open circuit in wiring, Tempomat cruise control pushbutton (S40)
2.0	<b>Stop light switch (S9/1)</b>		Ignition: <b>OFF</b> Brake pedal not pressed.  Brake pedal pressed.	< 10 Ω  > 500 kΩ	Open circuit in wiring, Stop light switch (S9/1)
3.0	<b>Road speed signal</b>		Ignition: <b>ON</b> Drive on dynamometer (> 20 km/h)	> 1 V	Open circuit in wiring, Electronic speedometer (A1p8) or Hall-effect sensor (B6) on models 124, 201

Test step	Test scope	Test connection	Operation/ Requirement	Specifi- cation	Possible cause/Remedy
4.0	<b>Actuator function with Tempomat</b>		<p>Remove instrument cluster (A1), Unplug connector "1" (only in model 129). Connect frequency generator, set <math>f &gt; 150</math> Hz <math>U_S = 5</math> V. Ignition: <b>ON</b></p> <p>Position "accelerate"</p> <p>Position "decelerate"</p> <p>Position "off"</p>	<p>Elec- tronic accelera- tor pedal actuator move to full load direction.</p> <p>Elec- tronic accelera- tor pedal actuator move to idle direction.</p> <p>Elec- tronic accelera- tor pedal actuator must move into idle position.</p>	<p>Electronic accelerator pedal control unit (N4/1)</p> <p>Electronic accelerator pedal control unit (N4/1)</p> <p>Electronic accelerator pedal control unit (N4/1)</p>



