

A. Models 107, 124 and 126

The trip computer is available as optional equipment ex-factory. It provides 12 items of information regarding time, distance, speed and fuel consumption. This information is displayed on the display unit and can be called up using the keys on the keyboard.

a. Components and their functions

1. Clock

The clock with its digital 24-hour display and its release knob are located in the instrument cluster.

Setting the time

1. Pull right-hand knob on instrument cluster - the colon flashes.

2. Set the correct time using the keys

Ⓚ = hours, tens digit

■ = hours, units

Ⓛ = minutes, tens digit

Ⓛ = minutes, units



3. Pull right-hand knob on instrument cluster again - the colon stops flashing and the clock starts accurately to the second at the set time.

Setting according to time signal:

In the range of 1 min 59 s before or after any full hour, pull the right-hand knob on the instrument cluster on the last tone of the time signal - the clock will start on the hour, accurate to the second.

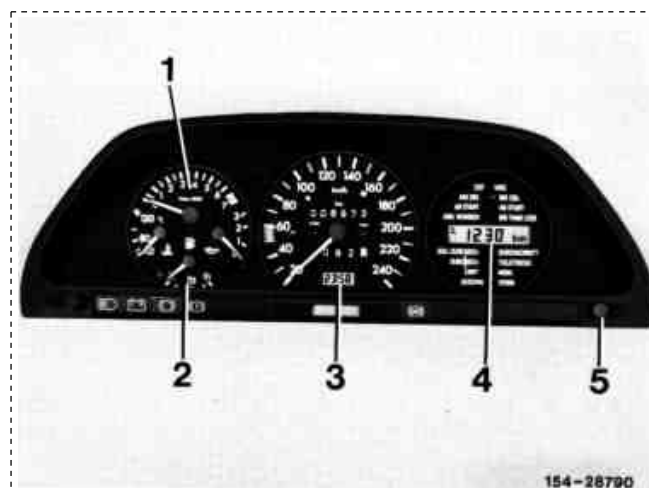
Note

All the values in the trip computer are cancelled if the operating voltage is interrupted.

When the circuit is connected again, the clock indicates 12:00 hours and the display flashes. The time must then be set so that the computer is operational again.

2. Instrument cluster

- 1 Tachometer
- 2 Fuel gauge
- 3 Digital clock
- 4 Trip computer display unit
- 5 Knob for digital clock



3. Display unit

The display unit in the instrument cluster is divided into 4 segments, each containing 3 pieces of information. It is fully illuminated throughout the day; when the lights are switched on it is continuously regulated in conjunction with the instrument illumination.

The information selected is indicated by the illuminated arrow. The value for the selected information appears in the display window.

The display includes:

K = short-distance operation or

L = long-distance operation,

numerical value and unit of measurement.



4. Keyboard

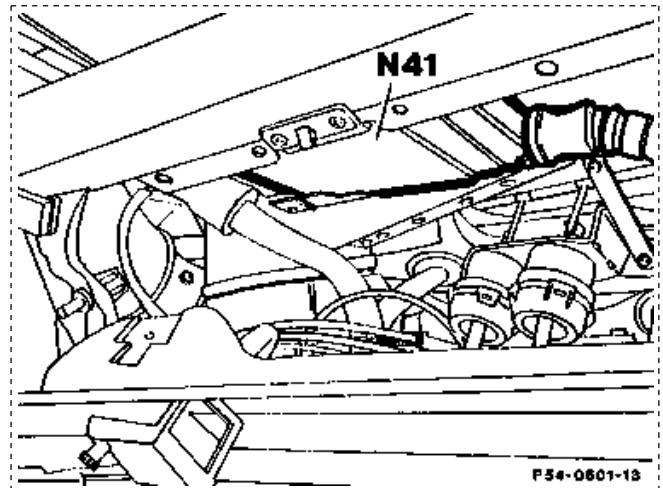
The keyboard with 8 keys is located on the center console. The upper keys have multiple functions.

- Ⓚ - Select short-distance operation
 - Cancel stored values
 - Enter thousands digit
 - Time: enter tens digit for hours
- - Call up TIME information
 - Enter hundreds digit
 - Time: enter units for hours
- ▢ - Call up DISTANCE information
 - Enter tens digit
 - Time: enter tens digit for minutes
- Ⓛ - Select long-distance operation
 - Cancel stored values
 - Enter units
 - Time: enter units for minutes

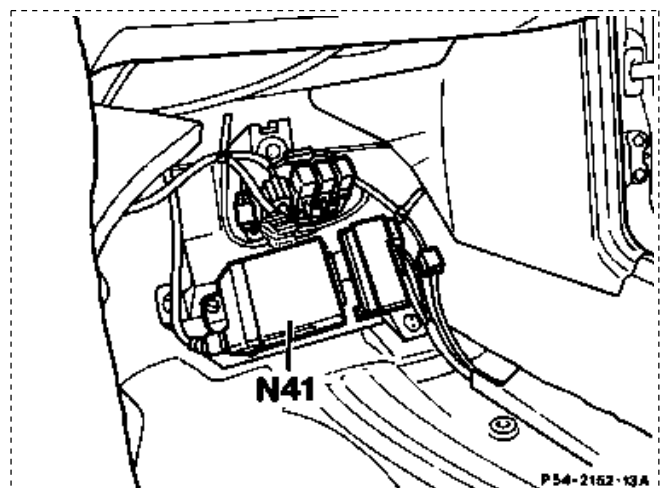


- E** - Input enter key
press after entering numbers

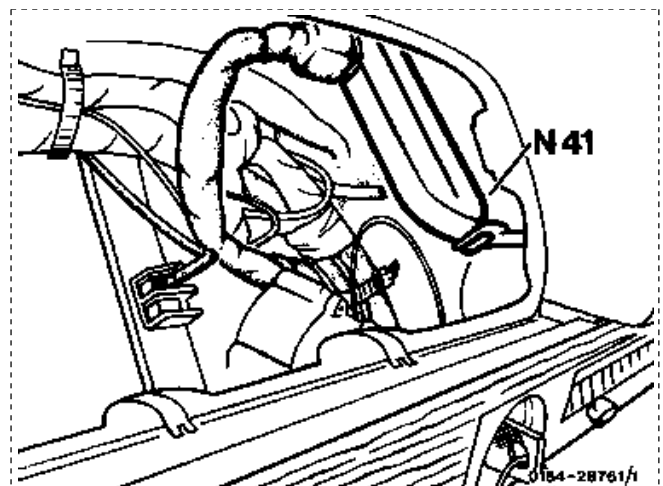
**Arrangement of trip computer control unit
(N41), model 107**
Behind glove box



**Arrangement of trip computer control unit
(N41), model 124**
Behind right-hand footwell covering



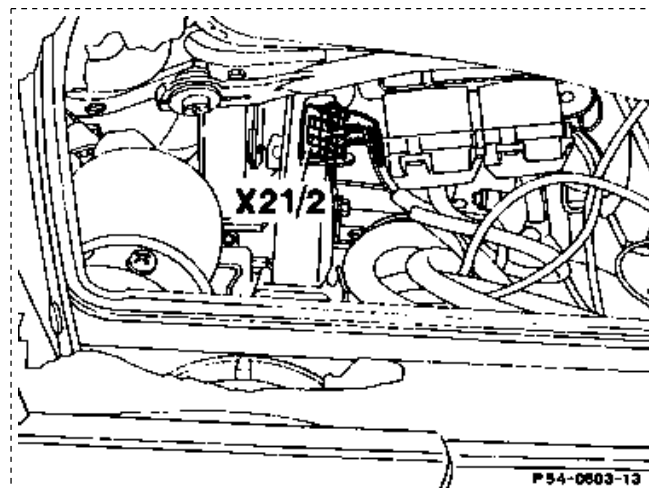
**Arrangement of trip computer control unit
(N41), model 126**
Behind instrument cluster



2. The time is specified via the digital clock in the instrument cluster.
3. The signal for the distance driven or speed is taken from the electronic speedometer in models 107 and 126, and from the Hall-effect road speed sensor in model 124. The computer bases its calculations on the effective speed, i.e. without the lead of the speedometer.

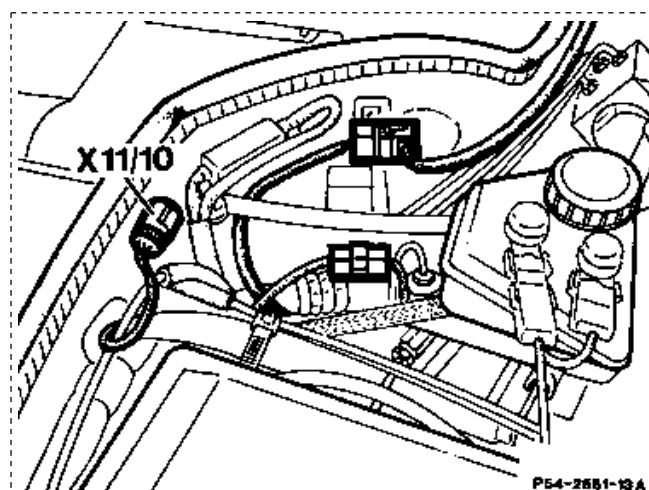
Arrangement of terminal block, stop lamp switch/electronic speedometer (X21/2), model 107

Behind instrument cluster.

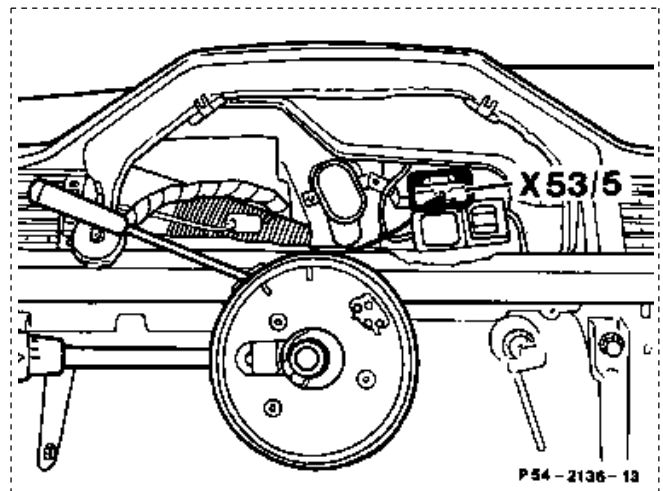


Arrangement of terminal block, stop lamp switch/electronic speedometer (X21/2), model 126

Behind instrument cluster



**Arrangement of multipoint connector,
Hall-effect sensor (X53/5), model 124**
Behind instrument cluster



4. The signal for the fuel supply is taken from the fuel gauge sensor; this is the same signal that controls the fuel gauge in the instrument cluster. The trip computer uses this information to determine the driving range.
5. The control unit receives the signal for the fuel consumption from the CIS-E control unit via the trip computer connector (X61).

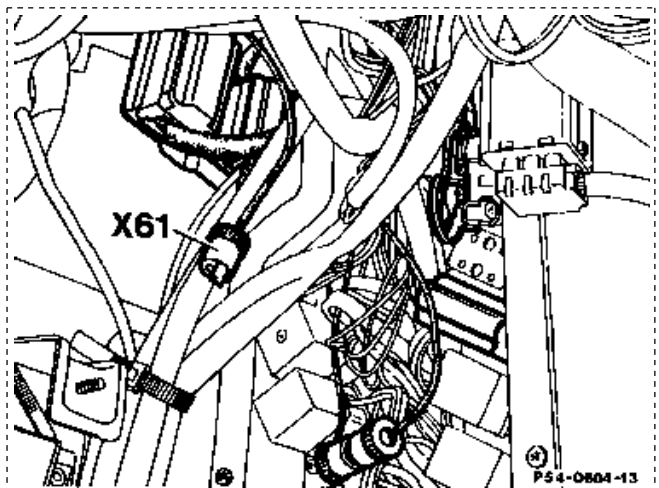
Note

In model 126 with CIS fuel injection (up to approx. 08/85), the consumption signal is taken directly from the mixture formation system. A potentiometer is used to convert the position of the air flow sensor into an electrical signal proportional to the fuel consumption.

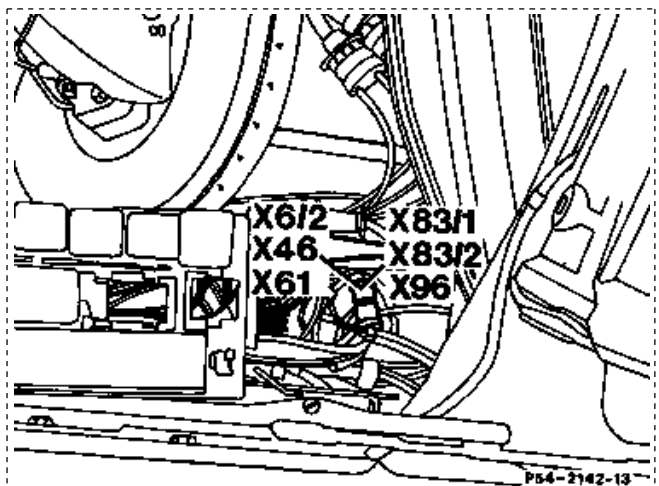
Arrangement of air flow sensor position indicator (B2), model 126 with CIS fuel injection (up to approx. 08/85)



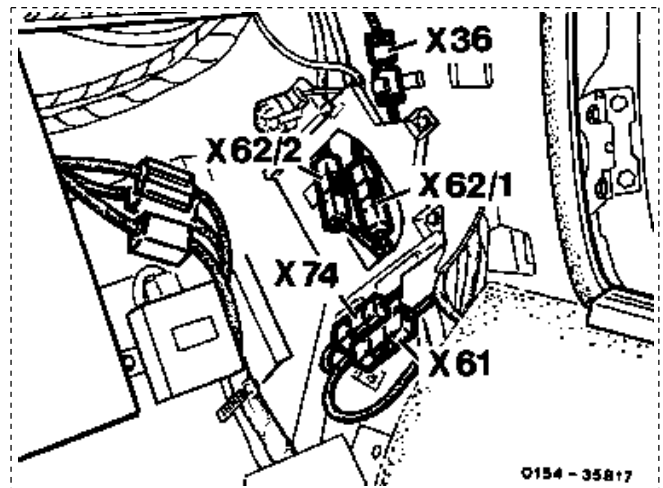
Arrangement of trip computer connector (X61), model 107
Above the fuse box



Arrangement of trip computer connector (X61), model 124
In the fuse/relay box



Arrangement of trip computer connector (X61), model 126 with CIS-E fuel injection (as of approx. 09/85)
In right side of footwell



From the constant data stored in the electronic control unit, and the variable data supplied by the sensors in the vehicle or entered by the user as required, the trip computer continuously calculates the current values - values updated max. once per second - stores them in memory and displays these values as information for the user.

b. Individual functions

1. Time

TIME - AT DESTINATION

Press key ■

Expected arrival time calculated by the computer. This is based on the average speed over the last 10 minutes (ignition on). No value is displayed in the window if

- no value has been entered for DISTANCE UP TO DESTINATION,
- the set value for DISTANCE UP TO DESTINATION was reached before arrival at the destination,
- the journey took more than 24 hours.

TIME - FROM START

Press key ■

Driving time in hours and minutes determined by the computer since the stored values were last cancelled.

After 99:59 h the clock starts again at 0:00 h.



TIME - DESIRED ARRIVAL

Press key **■**

Desired time of arrival to be entered into the computer by the driver.

The desired driving time should be less than 24 hours.

If no value is stored, 4 hyphens appear in the display window.

To enter digits, first press key **P** until four zeros appear in the display window, then enter the digits using the keys **K**, **■**, **□** and **L** and finally press key **E**.

2. Distance

DISTANCE - UP TO DESTINATION

Press key **□**

Distance to the destination to be entered into the computer by the driver.

If no value is stored, 4 hyphens appear in the display window.

If the value entered is exceeded during the journey, 0 km is displayed.

To enter digits, first press key **P** until four zeros appear in the display window, then enter the



digits using the keys , ,  and  and finally press key .


DISTANCE - FROM START

Press key 

Distance covered by the vehicle and determined by the computer since the stored values were last cancelled.

After 9 999 km the count starts again at 0 km.

DISTANCE - UNTIL TANK EMPTY

Press key 


Driving range with existing tank contents determined by computer. The calculation is based on the CONSUMPTION PER SECTION over the last 10 minutes. The displayed value changes as the driving conditions change (e.g. driving at full throttle or on gradients). When the vehicle comes to a standstill, the value displayed last is stored. When the battery is connected, a model-specific fixed value for the consumption per section is used as the basis for calculating the driving range.

Note

When filling up, withdraw the key from the steering lock or turn it to position 0 or 1.

3. Speed

SPEED - NOMINAL AVERAGE

Press key 

Average speed determined by the computer to be driven in order to arrive at the destination at the desired time.

For this, the values must be entered for
DISTANCE UP TO DESTINATION and TIME
DESIRED ARRIVAL.




No value is displayed in the window if one of the programmed values was reached before arrival at the destination.

SPEED - AVERAGE

Press key 

Average speed calculated by the computer since the stored values were last cancelled.

SPEED - LIMIT


Press key 

Speed to be entered into the computer by the driver.

If this speed is exceeded, the entered value flashes in the display window and a warning buzzer sounds.






This is based not on the speedometer display, but on the speed determined by the trip computer.

The warning buzzer stops after approx. 4 seconds and the display returns to the information selected last.

The warning buzzer also stops if another key is pressed within this 4-second period. This switches off the warning. A new warning sounds only when LIMIT is selected and the key  is pressed.

LIMIT arrow flashes=warning buzzer not activated.

LIMIT arrow not flashing=warning buzzer activated.

To enter digits, first press key  until three zeros appear in the display window, then enter the digits using the keys ,  and  and finally press key .

4. Consumption

CONSUMPTION - AVERAGE

Press key 

Average fuel consumption determined by the computer since the stored values were last cancelled.


The average fuel consumption cannot be calculated if the vehicle is at a standstill and the engine is running. The window displays the maximum value 40l/100 km.

CONSUMPTION - PER SECTION

Press key 

Average fuel consumption determined by the computer over the last 10 minutes of a journey. When the stored values are cancelled, an engine-specific value programmed in the computer appears.

The average fuel consumption may also be measured over a given distance or a given period of time:

1. Press key  - the computation starts.



2. Press key **P** again - the computation stops.
The calculated value appears in the display window.

To cancel this value, press the key **E** or select another type of information.

CONSUMPTION - MOMENTARY

Press key **Q**

Momentary fuel consumption determined by the computer during driving. No value is displayed at speeds below 20 km/h.

c. Operation

Short-distance and long-distance operation

(K and L-operation)

One of 2 operating modes may be selected.

These are indicated by a K or an L in the display window:

K=short-distance operation

L=long-distance operation

During K-operation the displayed values refer to the current journey, unless the values from the previous journey are included in the computation by pressing the key **K** at the start of the journey.

During L-operation the values of previous journeys are automatically compiled with those of the current journey to form an overall display.

The values are computed for both K and L-operation.

In this way, for example, the entire distance during a one-day trip, during a vacation or during a month can be subdivided into several sections. Properly programmed, the values for the total distance can be computed and displayed during L-operation and the values for a section during K-operation.

K-operation

When the key in the steering lock is turned to position 2, the trip computer is initially switched to K-operation (a K flashes in the display window) and the DISTANCE UP TO DESTINATION arrow lights up.

If the key **K** is not pressed, any stored values are cancelled automatically in K-operation after driving 1000 m; during L-operation they continue to be stored. New values are computed from the start of the journey.



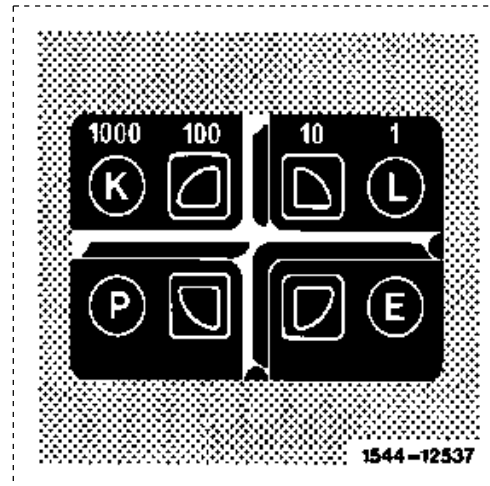
Certain items of information can be called up already.

If all the information is to be computed, numerical inputs must be made for

DISTANCE - UP TO DESTINATION

TIME - DESIRED ARRIVAL

SPEED - LIMIT.



Stored values are not cancelled if the key **K** is pressed momentarily or when the key **P** is pressed prior to entering the digits (the K in the display window stops flashing).

Note


If the journey is interrupted, the key **K** must be pressed before continuing or the values stored so far will be cancelled automatically.


The values stored during K-operation may also be cancelled manually. To do this, press the key **K** until 0:00 h appears in the display window and the TIME FROM START arrow lights up.

The values must be cancelled manually if the computations are to be made from the start of the journey and when numbers are entered for TIME - DESIRED ARRIVAL and DISTANCE UP TO DESTINATION.

The inputs for DISTANCE UP TO DESTINATION or TIME - DESIRED ARRIVAL can also be corrected individually during the journey without losing the information. The computer then continues using the new data.

L-operation

When the key in the steering lock is in position 2, the computer can be switched over to L-operation by tapping the key .

Values stored during L-operation are not automatically cancelled. They are combined with the values for the current journey. Manual cancellation of the values stored during L-operation may be used to specify the time from which new calculations are started. To do this, press the key  until 0:00 h appears in the display window and the TIME FROM START arrow lights up.

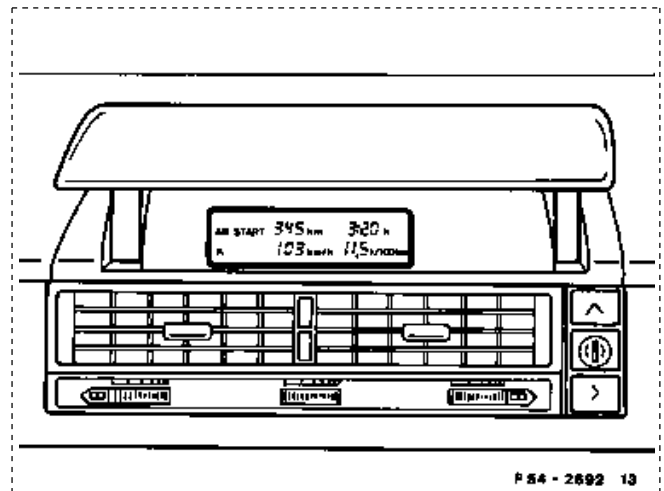
B. Models 129 and 140

The trip computer is available as optional equipment ex-factory. It provides information on the time, distance, speed and fuel consumption. The information can be called up using the keys on the keyboard and appears on the display in the dashboard.

a. Components and their functions

1. Trip computer control unit with display.

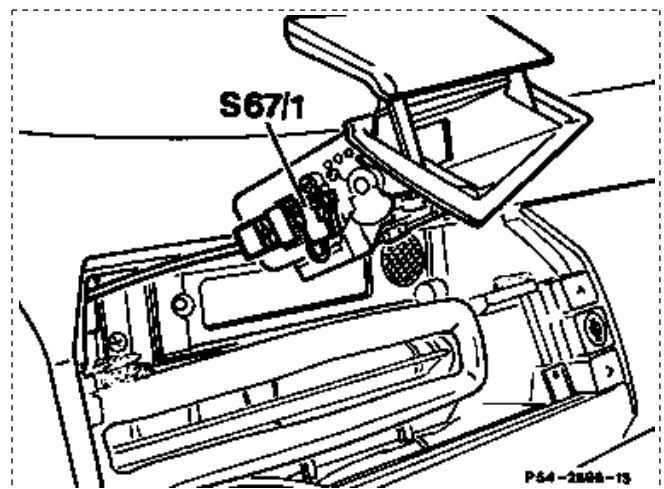
The control unit and display are combined into a single unit installed in the dashboard. From constant basic data and variable data supplied by the sensors in the vehicle via the instrument cluster or entered by the user, the control unit continuously computes current values, e.g. for fuel consumption, driving time and average speed, stores them and displays them on the display.



Closing the storage compartment switches off the display via microswitch S71/1 (switch, trip computer cover).

Computations continue internally even when the storage compartment is closed.

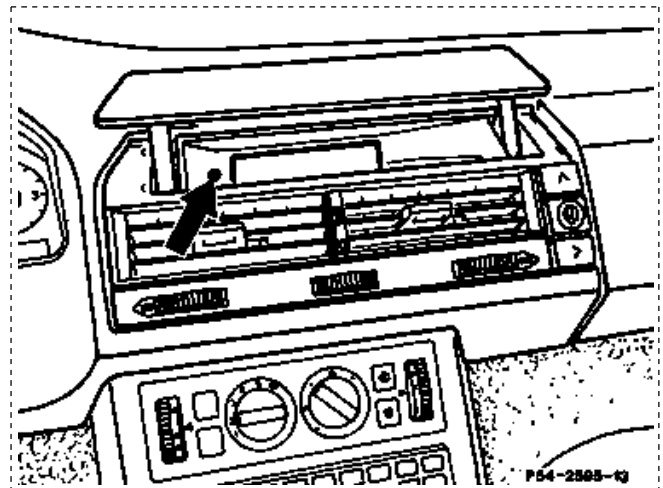
Monitoring of the limit speed continues.



2. Illumination

The illumination of the trip computer display can be regulated by way of the rheostat in the instrument cluster.

In addition, the brightness is controlled automatically via a sensor (arrow) which regulates the illumination of the display according to the light conditions. This occurs with the instrument illumination either on or off.



3. Clock

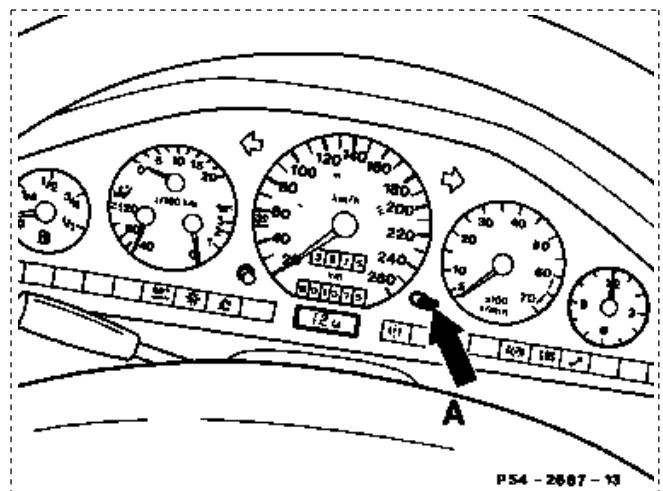
The time appears automatically on the display whenever the time on the instrument cluster clock is adjusted.

Display range 0:00 to 23:59

Synchronizing/setting the time

Synchronizing the times of the instrument cluster and trip computer clocks.

1. Turn key in steering lock to position 0.
2. Set instrument cluster clock to 12:00.
3. Hold down clock synchronization key "A" for at least 5 seconds.
4. 12 u appears in the display.
5. Then set the instrument cluster clock to the appropriate time.



4. Keyboard

The **keyboard** consists of:

Three function keys

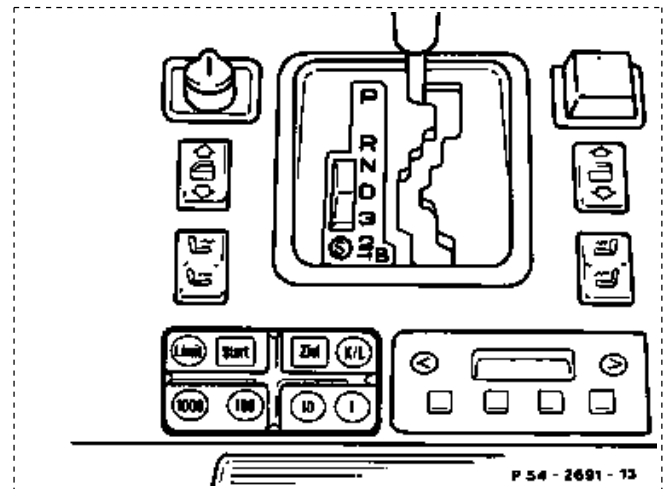
- Limit
- Start
- Destination

Four keys for entering digits

- 1
- 10
- 100
- 1000

One switchover key

- K=short-distance operation
- L=long-distance operation



The K/L switchover key can be used to select operating mode K or L.

The operating mode selected is indicated on the display.

K=short-distance operation

L=long-distance operation

During K-operation the displayed values refer to the current journey.

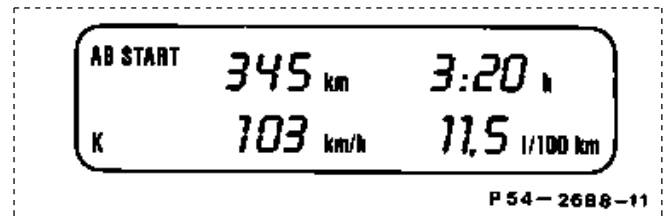
During L-operation the values of previous journeys are compiled with those of the current journey to form an overall display.

The values are computed both for K and L-operation.

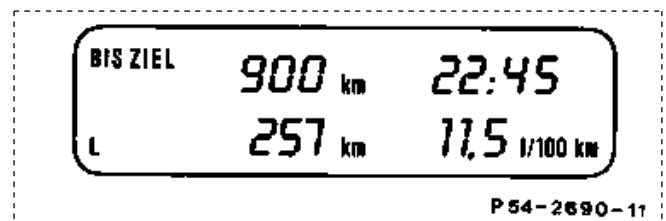
5. Display

Three different display blocks may be selected:

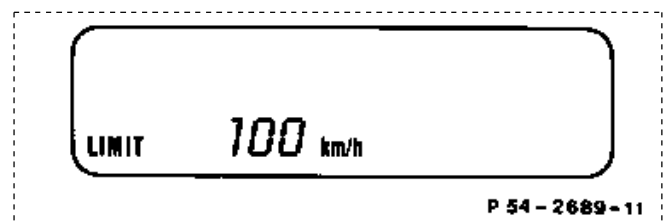
- From start



- Up to destination



- Limit

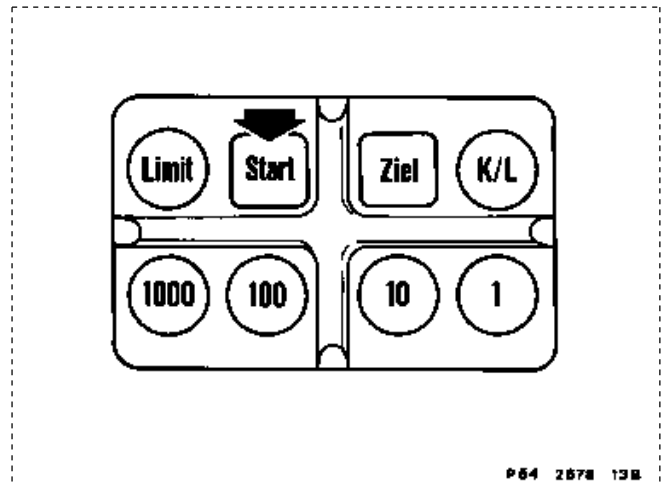


b. Operation

Turn the key in the steering lock to position 2.
The display block FROM START appears on the display and the "K" for short-distance operation flashes.

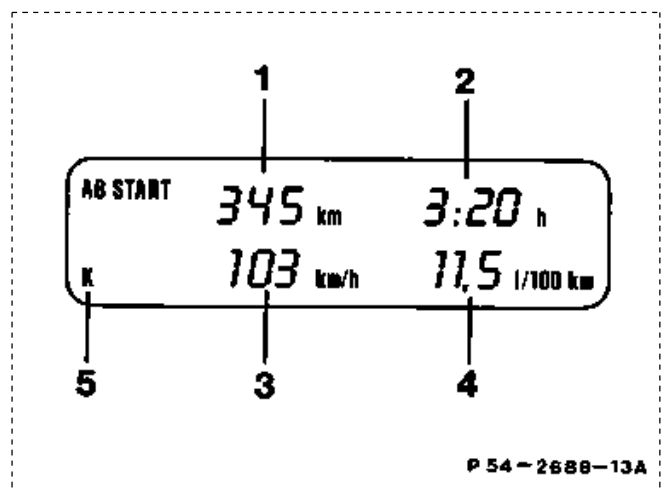
The user can now select one of the 3 different display blocks.

FROM START



The following information is displayed:

1. Distance from start (km).
2. Time from start (h and min).
3. Average speed (km/h).
4. Average fuel consumption (l/100 km).
5. Short or long-distance operation.



K-operation: The stored values are retained by tapping the Start key. If the Start key is not pressed, any stored values are automatically cancelled after driving 2 km. New values are computed from the start of the journey.

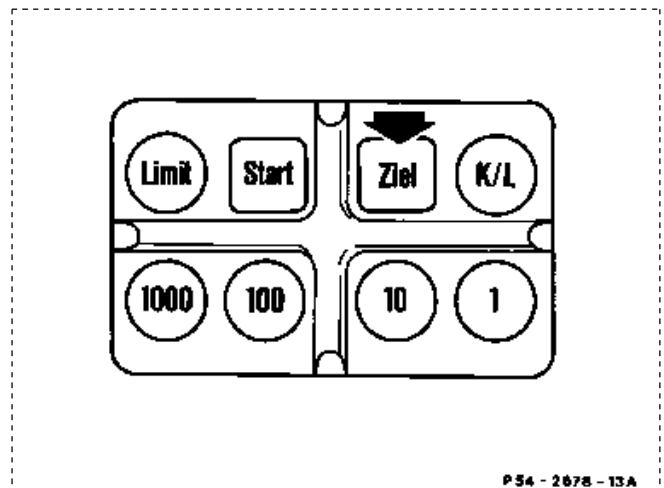
L-operation: Stored values are not automatically cancelled but are combined with the values for the current journey.

K and L stored values: May be cancelled by holding down the Start key (until the signal tone sounds).

Note

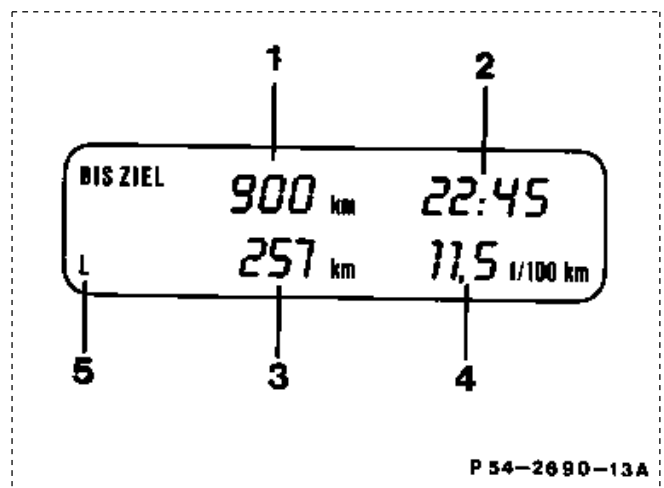
In the LIMIT display block, only the input speed can be changed.

UP TO DESTINATION



The following information is displayed:

1. Distance up to destination (programmable).
2. Arrival time at destination.
3. Driving range until tank empty.
4. Average fuel consumption.
5. Short or long distance.



In order to be able to calculate the "Time at destination" function, the computer requires the input of the distance (km) to the destination before the start of the journey.

Different destination distances can be stored in "K" and "L". This cancels any existing data.

Input:

1. Press the Destination key until the signal tone sounds. ("L" or "K" and "Destination")

flash until the input is complete.)

2. Enter the desired distance in the short or long-distance memory using the keys 1000, 100, 10 and 1.
3. Confirm the input: tap the Destination key.

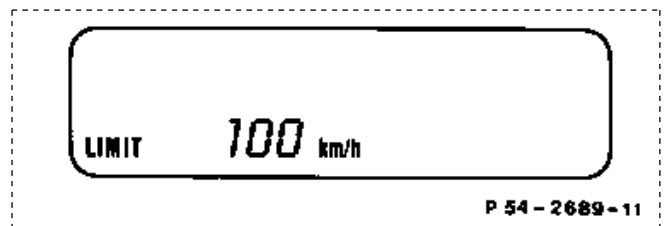
The "Time at destination" function is computed from the time that "Distance up to destination" is entered according to the current driving situation.

Note

If no destination information is entered, a question mark (?) flashes for approx. 20 seconds when the destination block is selected (requesting input).

LIMIT

1. Speed limit (programmable).



Input:

1. Press the Limit key until the signal tone sounds.
2. Entered desired speed using the keys 100, 10 and 1.
3. Confirm the input: tap the Limit key.

Note

There is no alarm if the input limit speed is below 10 km/h.

Alarm:

When the input speed is exceeded, there is an approx. 4-second warning in the form of gong tones and the input speed flashes synchronously. If the compartment cover is closed the alarm is acoustic only.

Switching off the acoustic alarm signal:

Press any key during the alarm.

Switching the acoustic alarm signal back on:

1. Manually: tap the Limit key.
2. Automatically: when the journey is interrupted and the key is withdrawn from the steering lock.

Note

The Limit function is calculated on the basis of the effective speed, i.e. not including the legally stipulated lead of the speedometer.

