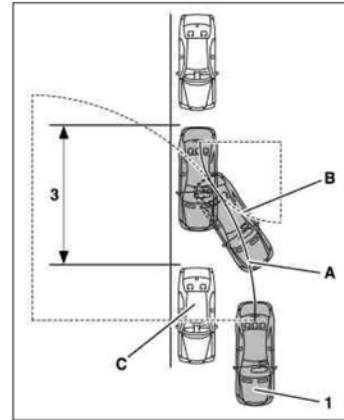


- Operating instructions for parallel parking
- Operating instructions for reverse parking
- Operating instructions for outside mirror parking (on model 204.9)

**Operating notes for parallel parking**

**Overview**

- 1 Start position
- 3 Parking space
- A First steering angle
- B Second steering angle
- C Vehicle parked ahead

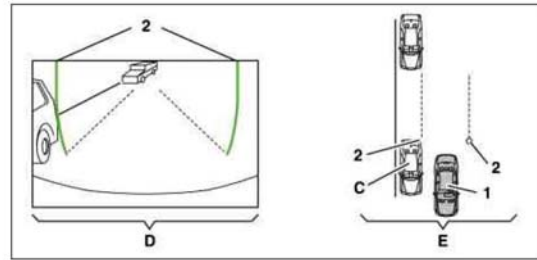


P54.65-2998-02

**Component Identification**

**Move to start position**

- 1 Start position
- 2 Guide lines
- C Vehicle parked ahead
- D Display
- E Example situation



P54.65-2999-80

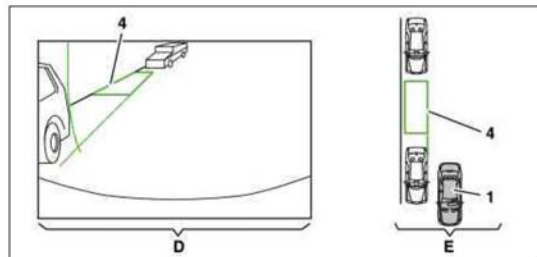
**Component Identification**

The start position is parallel with a distance of one meter to the vehicle parking in front. Furthermore the driver seat of the vehicle parking in front should be be at the level of the rear axle of the vehicle you are driving.

The two vertical guide lines represent the end of the vehicle rear of the vehicle parked in front. If this is not the case, the driver must first reset straight ahead until one of the guide lines touches the end of the vehicle rear.

**Determining final parking position**

- 1 Start position
- 4 Parking frame
- D Display
- E Example situation



P54.65-3000-80

**Component Identification**

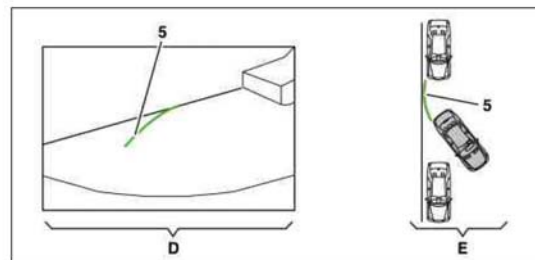
Once the start position for parking is defined, then the desired parking position must be set. For this purpose the driver with the vehicle at a standstill must firstly turn in the steering wheel. The Audio/COMAND display (A40/8) now shows a parking frame with which the driver must then define the target position. This parking frame moves relative to the steering angle, i.e. with the aid of the steering wheel the driver can define the position of the parking frame and thus the final parking position. The driver can also use the parking frame to determine whether the parking space is suitable for his/her vehicle.

Once the driver has defined the parking position with the aid of the parking frame, the reversing camera control unit (N66/2) then uses the collated data to define the parking position and the required steering angle for the subsequent first steering angle.

The color of the parking frame must be blue, if the parking space is to be successfully entered with the set steering angle. If the parking frame is colored red, then the steering angle must be continually adapted until the parking frame turns blue.

#### Transition from first to second steering angle

- 5 Guide line
- D Display
- E Example situation



P54.65-3001-80

### Component Identification

#### First steering angle:

Once the parking position has been defined, the driver moves the vehicle backwards. During this phase the driver must maintain the previously defined steering angle. A guide line appears in the Audio/COMAND display as soon as the vehicle approaches the edge of the road. This guide line can be used by the driver to determine when he/she should initiate the next steering maneuver. As soon as the guide line virtually touches the edge of the road, the driver stops the vehicle and turns the steering wheel up to the limit stop in the opposite direction.

To prevent the driver relying solely on the Audio/COMAND display and as a result ignoring the immediate environment, no guide lines are displayed in the parking space during the first steering maneuver.

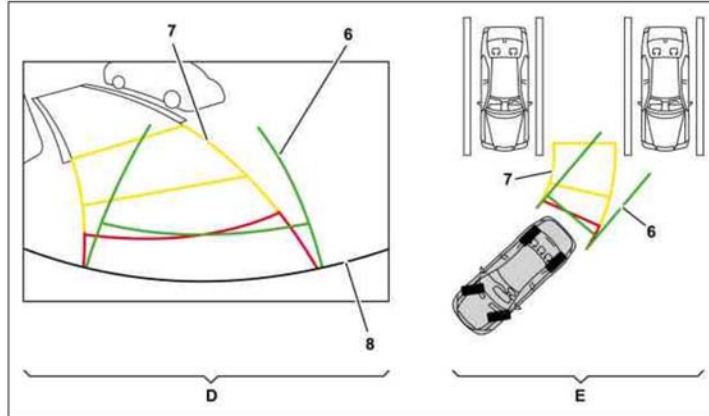
#### Second steering angle:

As soon as the steering wheel is on the limit stop, the distance lines, which are already familiar from reverse parking, appear again in the Audio/COMAND display. These lines can be used by the driver to maneuver the vehicle such that the best parking position is achieved.

**Reverse parking operating instructions**

**Display of guide lines**

- 6 Virtual extension of vehicle's longitudinal axis
- 7 Virtual steering angle
- 8 Virtual bumper
- D Display
- E Example situation



P54.65-3658-75

**Component Identification**

Virtual extension of vehicle longitudinal axis (blue guide lines): The blue guide lines represent a virtual extension of the vehicle. The distance between the blue guide lines is slightly greater than the vehicle width.

Virtual steering angle (yellow guide lines):

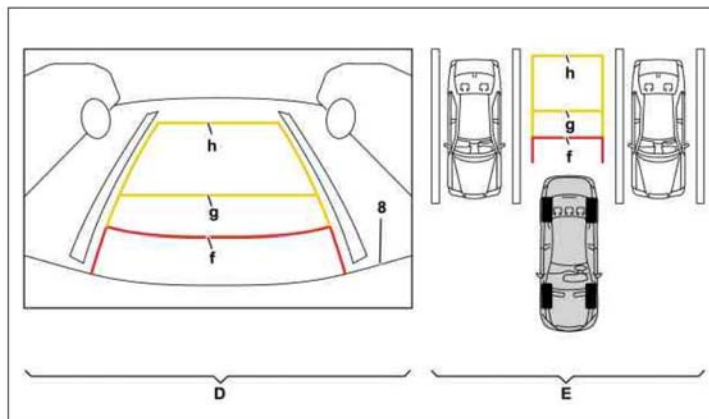
The yellow guide lines are shown as soon as the driver turns the steering wheel. They indicate to the driver the path which the vehicle would follow with the currently applied steering angle. This curve is automatically adapted to the situation as the steering angle changes. The distance between the yellow guide lines is slightly more than the vehicle width.

Parking procedure:

In order to park the driver must now adapt the steering angle until an outer line of the yellow guide lines in the Audio/COMAND display virtually touches the parking space marking. This parking space marking can, e.g. be another vehicle or a line on the asphalt. The driver must then continue reversing and adapting the steering angle until the displayed parking space limits run parallel to the current direction of travel. Next the driver must turn the steering wheel back into the straight-ahead position in order to drive in a straight line up to the final parking position in the parking lot.

**Display of distance lines**

- 8 Virtual bumper
- D Display
- E Example situation
- f Distance line 0.25 m
- g Distance line 1.0 m
- h Distance line 4.0 m



P54.65-3659-75

**Component Identification**

In the straight-ahead position of the steering (steering angle = 0°) the yellow guide lines are congruent with the blue guide lines. As soon as the lines are congruent, the blue guide lines are no longer

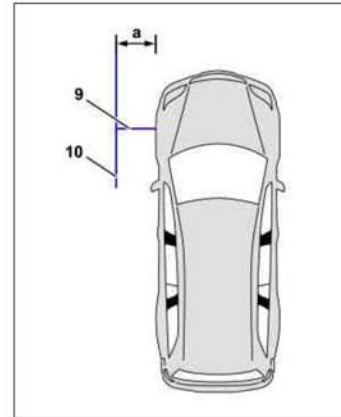
displayed.

By means of distance lines the driver is informed about the distances from the virtual bumper to the obstacles.

#### Operating notes for parking using outside mirror

##### Marked points on vehicle

- 9 Front axle
- 10 Orientation line
- a Distance  $s = 0.35 \text{ m}$



P54.65-3631-72

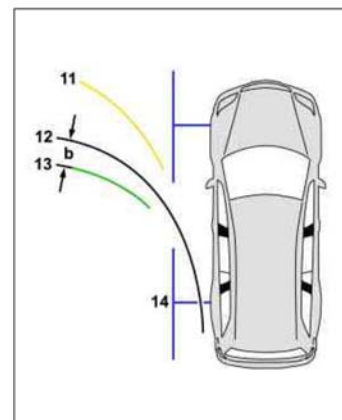
### Component Identification

The picture shows the important points of the vehicle for orientation purposes.

The orientation line running parallel to the vehicle is a distance line. It is displayed virtually at a distance of  $s = 0.35 \text{ m}$ . The reference line running vertically relative to the distance line indicates the front axle.

##### Virtual tracks

- 11 Virtual track with current steering angle
- 12 Vehicle boundary
- 13 Virtual track with maximum steering angle
- 14 Rear axle
- b Distance  $s = 0.30 \text{ m}$



P54.65-3632-72

### Component Identification

These orientation lines are displayed when the driver turns the steering wheel towards the front passenger side and the steering angle is greater than  $> 90^\circ$ .

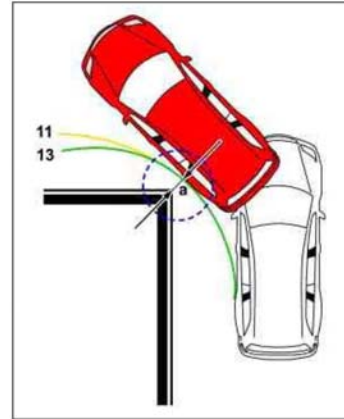
The virtual track with current steering angle indicates the virtual track that the vehicle would follow with the current steering angle. This help line is automatically adapted to the situation as the steering angle changes.

The virtual track with maximum steering angle additionally indicates the track that the vehicle would follow with the steering wheel at full lock.

This line is calculated with a safety distance to the vehicle boundary of  $s = 0.30 \text{ m}$  and displayed.

#### Driving around an obstacle using the guide lines

- 11 Virtual track with current steering angle
  - 13 Virtual track with maximum steering angle
- a Distance  $s = 0.35 \text{ m}$



P54.65-3633-72

#### Component Identification

When driving around obstacles, the camera image and the virtual guide lines assist the driver to complete the maneuver without damaging his/her own vehicle.

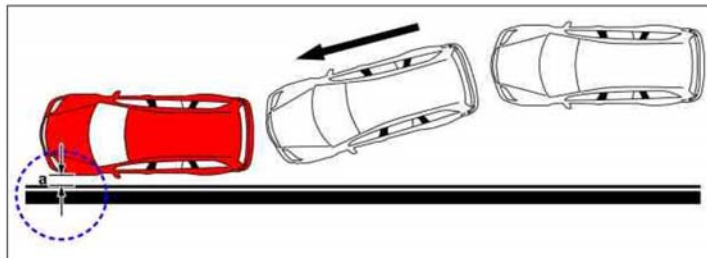
The driver can see the distance to the obstacle using the virtual distance lines running parallel to the vehicle (plus  $s = 0.35 \text{ m}$  safety distance). The vehicle is safe as long the obstacle remains outside the lines.

When turning in two other orientation lines are also shown on the Audio/COMAND display.

The virtual track with maximum steering angle indicates the track that the vehicle would follow with the steering wheel at full lock. On the other hand, the virtual track with current steering angle indicates the virtual track that the vehicle would follow with the current steering angle plus safety distance of  $s = 0.35 \text{ m}$ . This line is automatically adapted to the situation as the steering angle changes. However, the guide lines are no longer displayed when a steering angle of  $< 90^\circ$  is received by the reversing camera control unit.

#### Parking lengthwise in the direction of travel alongside an obstacle

- a Distance  $s = 0.35 \text{ m}$



P54.65-3508-74

#### Component Identification

The driver can see the distance to the obstacle using the virtual distance lines (not pictured) running parallel to the vehicle displayed on the Audio/COMAND display (plus  $s = 0.35 \text{ m}$  safety distance).

The driver stops the vehicle when this distance line in the Audio/ COMAND display virtually touches the obstacle and the parking position has then been reached.