41 51 ... Aligning front doors



Doors are fitted and bolted to an unfinished body shell.

Unpainted surfaces become visible after subsequent movement. These surfaces must be touched up with paint in the body color.



Note:

These adjusting instructions generally apply to all body variations such as Saloon/Sedan, Coupé, Compact, Touring, Cabrio/Convertible.

On 4-door models, it is important to align the rear doors first.

The reason for this is that the rear doors must be aligned to the welded rear side walls.

The front doors must then be aligned to the rear doors.

The bolted front side walls can then be adapted if necessary the front doors.

On 2-door models, the doors are aligned to the welded rear side walls.

The bolted front side walls can then be adapted if necessary to the doors.

The illustrations therefore do not always correspond to the type of vehicle selected in the TIS.

The illustrations are therefore to be viewed as basic illustrations which are to be carried over to the relevant vehicle type.

Essentials:

Keep to the sequence of procedures for correct alignment of door Assemble doors completely with window regulators and door window glass.

Door settling behavior depends on weight!

Loosen strikers.

Gap measurements,

refer to 41 00 ... Gap measurements, doors/hood and rear lid E36 4-door

refer to 41 00 ... Window and door seams E36 4-door

refer to 41 00 ... Window and door seams E36 2-door

refer to 41 00 ... Window and door seams E36 Compact

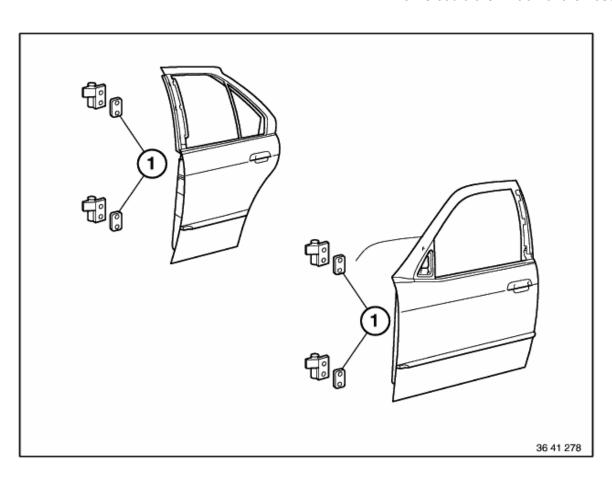
refer to 41 00 ... Window and door seams BMW E36 Touring

Always first adjust alignment of the rear door and then the front door. Remove door seals (hose seals) on front and rear doors as well as frame seals completely.

Caution!

Slight corrections by straightening are permitted if the existing adjustment options are insufficient.

Extensive straightening would lead to the doors becoming "soft" and cause them to lose their tension on a long term basis. At high road speed and with strong side wind, the door frame could then lift off of the hose seal.



Use shims (1) between doors and hinges when installing new doors.

Distance for rough adjustment:

Rear Door:

Lower hinge 3 mm

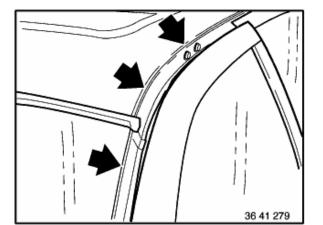
Upper hinge 2 mm

Front door:

Lower hinge 2 mm

Upper hinge 2 mm

Adjust to specified distance by installing shims in appropriate quantity and/or thickness.

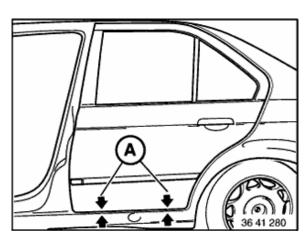


Caution!

The windshield and/or paint finish could be damaged when shutting front doors due to overlapping of unfavourable installation dimensions/tolerances.

Consequently always shut doors carefully and check whether the door frame touches the windshield or roof frame.

If necessary, paste cloth adhesive tape on the edge of the windshield.



Rear Door:

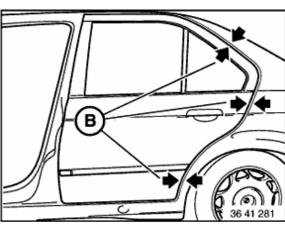
Lower door window.

Adjust height of door roughly when installing new doors.

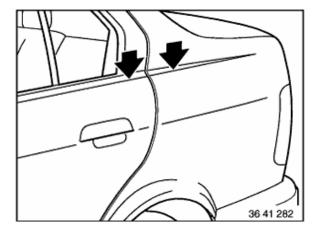
Gap (A): approx. 5 mm uniformly.

Tighten nuts on upper and lower door hinges.

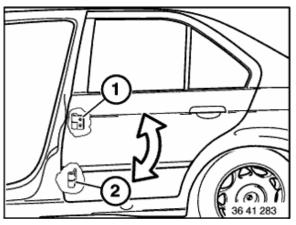
Tightening Torque = 21 Nm



Uniform gap (B) of approx. 5 mm.



Check and, if necessary, adjust door height - flush.



Correcting:

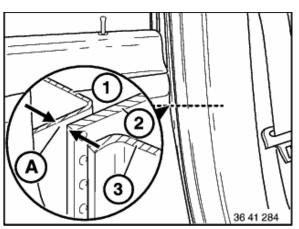
Loosen striker.

Loosen nuts on hinge (1) and turn door.

In case of considerable deviation, correct thickness of shim on hinge (2).

Tighten nuts.

Tightening Torque = 21 Nm



Shut the rear door.

Measure, and if necessary, correct sealing distance (A) in height cupper hinge.

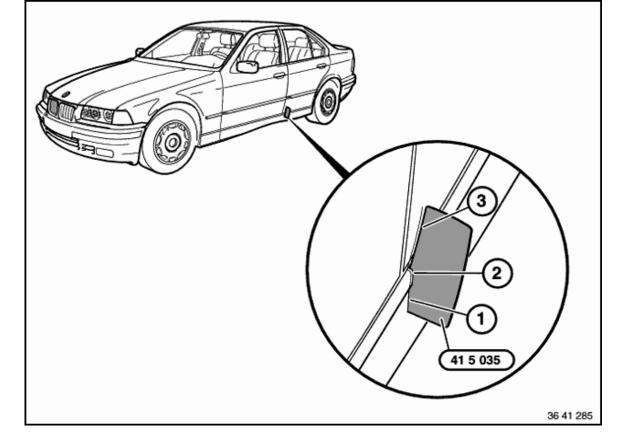
Sealing distance (A): approx. 14 mm.

- (1) Inner door sheet metal panel
- (2) Sheet metal flange
- (3) B-pillar trim panel

Correcting:

Correct the quantity and/or thickness of the shims.

Tighten nuts. Tightening Torque = 21 Nm



Place special tool 41 5 035 (gage) on sill and door, and check doo alignment, correcting if necessary.

Contact surface (1) must be fitted completely.

Gap (2) must continue uniformly between test surface (3) and doc

Note:

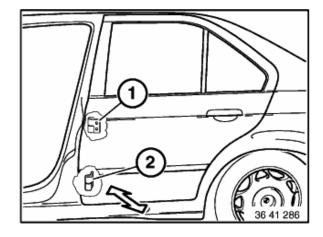
Gap (2) depends on the thickness of the PVC on the sill. For repair sheet-metal (sill without PVC coat) gap (2) = 0 mm.

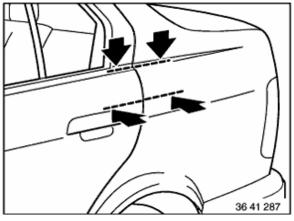
Caution!

Pay attention to the shape of the adjacent rear side panel when checking and correcting.

Correcting:

Loosen nuts on hinge (2) and move door outwards or inwards at bottom. Tighten nuts.

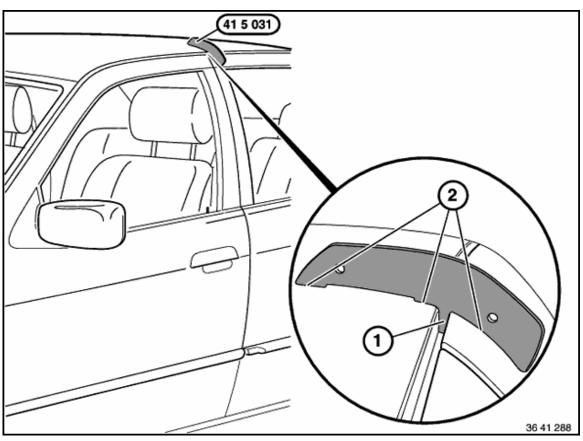




Preset striker.

Door height: flush

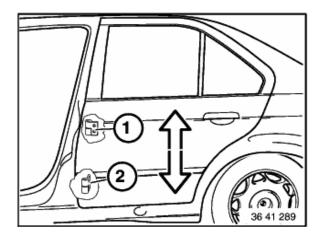
Door protrusion: 0 to 1 mm Tighten screws on striker. Tightening Torque = 28 Nm



Shut door.

Place special tool 41 5 031 (gage) in area of the B-pillar with tongue (1) between door frame and roof.

Door adjustment (tension and height) is correct if special tool 41 5 031 can be placed without play and contact surfaces (2) bear uniformly.



Correcting:

Tension:

Loosen nuts on hinge (1).

Correct the quantity and/or thickness of shims. Tighten nuts.

Tightening Torque = 21 Nm

Height:

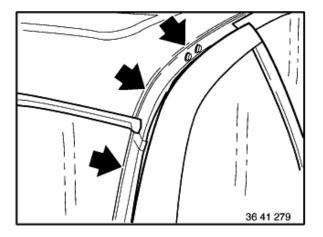
Loosen nuts on hinges (1 and 2) and move door upwards or downwards. Tighten nuts.

Tightening Torque = 21 Nm

Recheck and, if necessary, correct previously made adjustments.

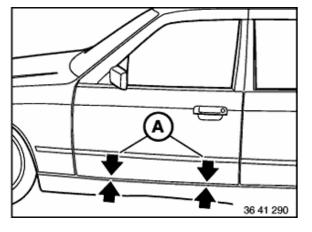
Caution!

The windshield and/or paint finish could be damaged when shutting front doors due to overlapping of unfavourable installation dimensions/tolerances.



Consequently always shut doors carefully and check whether the door frame touches the windshield or roof frame.

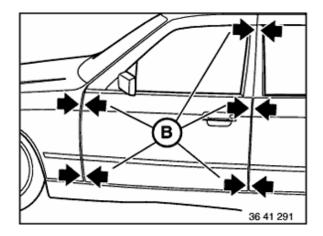
If necessary, paste cloth adhesive tape on the edge of the windshield.



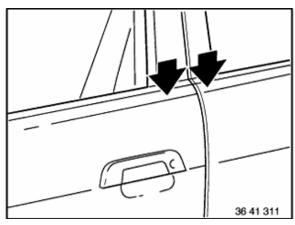
Lower door window. Adjust height of door roughly when installing new doors.

Gap (A): approx. 5 mm uniformly.

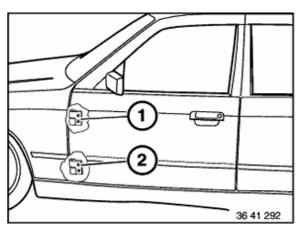
Tighten nuts on upper and lower door hinges.



Uniform gap (B) of approx. 5 mm.

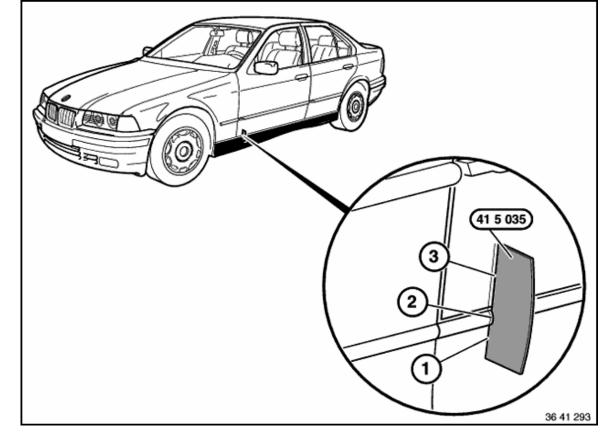


Check and, if necessary, adjust door height - flush.



Correcting:

Loosen nuts on hinge (1) and/or hinge (2) and turn/reposition doo Tighten nuts.



Place special tool 41 5 035 (gage) on sill and door, and check doo alignment, correcting if necessary.

Contact surface (1) must be fitted completely.

Gap (2) must continue uniformly between test surface (3) and doc

Note:

Gap (2) depends on the thickness of the PVC on the sill. On repair sheet metal (sill without PVC coat) - gap (2) = 0 mm.

Caution!

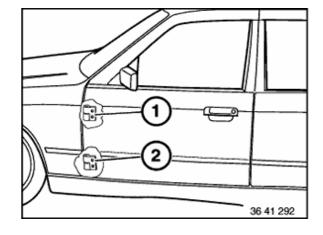
Pay attention to the shape of the adjacent rear side panel when checking and correcting.

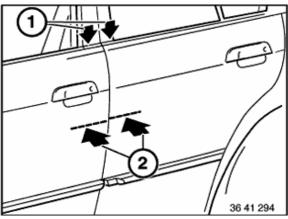


Loosen nuts on hinge (2).

Correct the quantity and/or thickness of shims.

Tighten nuts.





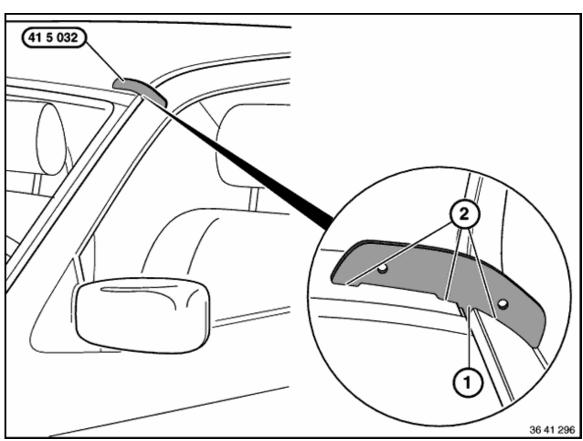
Preset striker.

Door height (1): flush

Door protrusion (2): 0 to 1 mm

Tighten screws on striker.

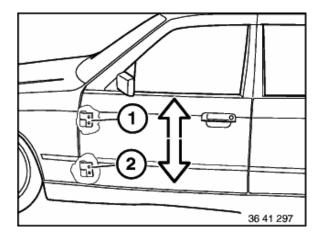
Tightening Torque = 28 Nm

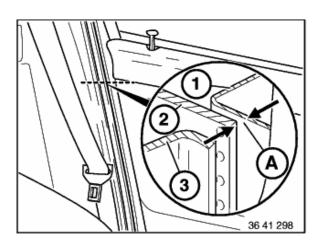


Shut Door:

Place special tool 41 5 031 (gage) in area of the B-pillar and special tool 41 5 032 (gage) on roof joint (parallel to windshield rubber frame) with tongue (1) between roof frame and roof.

Door adjustment (tension and height) is correct if both gages can be placed without play and contact surfaces (2) bear uniformly.







Loosen nuts on hinge (1).

Tension:

Correct the quantity and/or thickness of shims on hinge (1). Tightenuts.

Tightening Torque = 21 Nm

Height:

Loosen nuts on hinges (1 and 2) and move door upwards or downwards. Tighten nuts.

Tightening Torque = 21 Nm

Recheck and, if necessary, correct previously made adjustments.

Shut door.

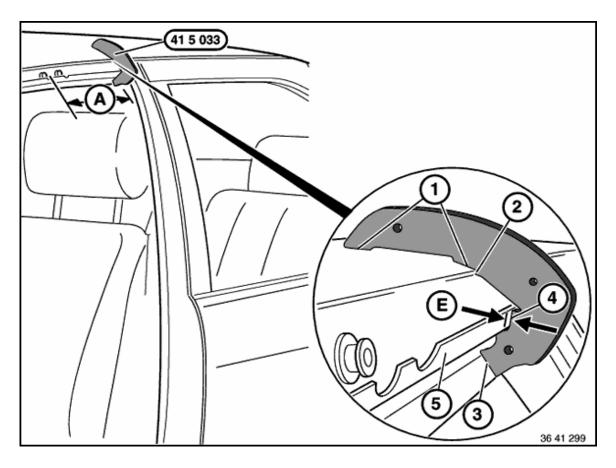
Check and, if necessary, correct sealing distance (A) in height of striker (shutting force).

Sealing distance (A): approx. 14 mm.

- (1) Inner door sheet metal panel
- (2) Sheet metal flange
- (3) B-pillar trim panel

Correcting:

Correct striker adjustment in area of door protrusion (0 to 1 mm). Straighten sheet-metal flange to specified size in case of considerable deviation.



Open Front Door:

Place special tool 41 5 033 (gage) in area (A) and check flange inclination, correcting it if necessary.

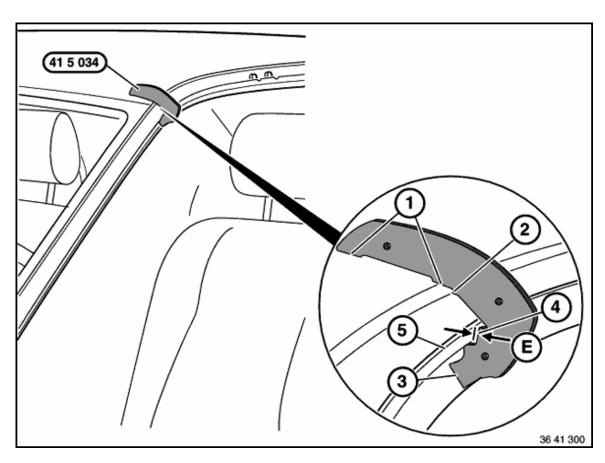
Contact surfaces (1 and 2) and test surface (3) must bear uniformly. Sheet-metal flange (5) must run parallel to test surface (4).

Distance (E): approx. 2 mm

If necessary, straighten the sheet metal flange using a hard wood block.

Caution!

Touch up damaged paint finish!



Place special tool 41 5 034 (gage) on roof joint (parallel to windshield rubber frame) and check flange inclination, correcting if necessary. Contact surfaces (1 and 2) and test surface (3) must bear uniformly.

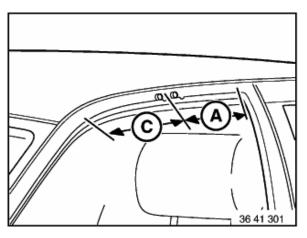
Sheet-metal flange (5) must run uniformly to test surface (4).

Distance (E): approx. 2 mm

If necessary, straighten the sheet metal flange using a hard wood block.

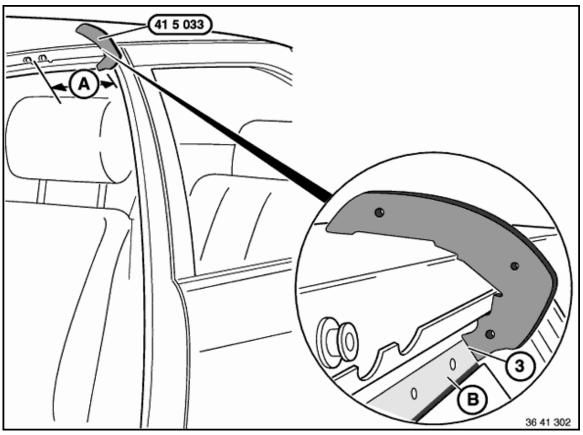
Caution!

Touch up damaged paint finish!



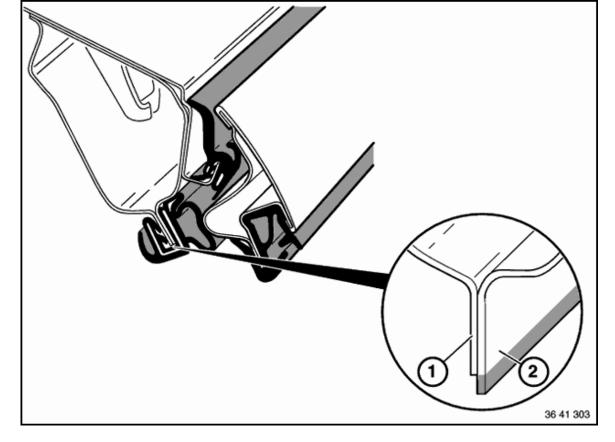
Correct the sheet-metal flange in area (C), if necessary, to run uniformly with the flange inclination in area (A) and the flange inclination on the roof joint.

Have flange inclination on A- and B-pillars run out downwards uniformly.



Caution!

Replace the hose seal if sheet-metal flange (B) is more than 1.5 mm longer than test surface (3).



If separate sheet-metal panels (1 and 2) are displaced on the sheet-metal flange, shorten sheet-metal panel (2). The distance to test surface (3) of special tool 41 5 031 may not be less than the specified distance!

Note:

Use a sheet-metal cutter or slow-rotation angle grinder (sparks) to shorten the sheet-metal flange.

Cover inside of car, door and neighbouring cars.

Touch up damaged paint finish after cutting the sheet-metal flange to prevent corrosion.

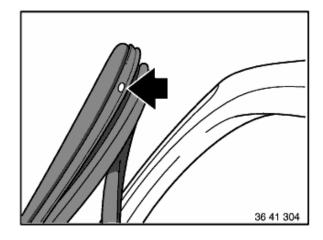
Note:

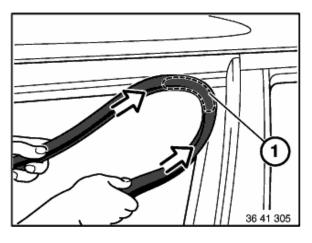
Door seals are marked with a dot of paint at top close to B-pillar.

Red = left door seal

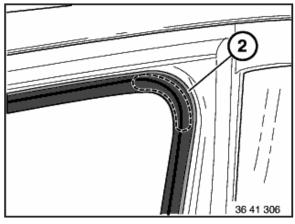
Yellow = right door seal

Replace damaged door seals.



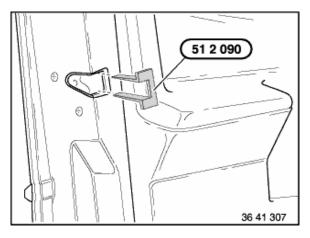


Filler (1) can be felt with the fingers in area of the dot of paint. Filler (1) must seat centered in the radius of the B-pillar.



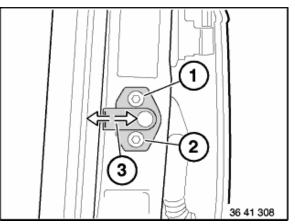
Push door seal into the radius until lip (2) bears uniformly in the radius area.

Install door frame seal.



Adjustment of front and rear strikers:

Place special tool 51 2 090 (gage) in door lock.



Loosen screw (1).

Loosen screw (2) only enough that the striker can just barely be moved with moderate hand force.

Caution!

Do not alter striker depth adjustment (3).

Lift door handle, hold tight and shut the door. Striker height and inclination are adjusted by the gage.

Open door. Tighten screws (1 and 2). Tightening Torque: 28 Nm.

Note:

Adjusting closing wedge with gauge remedies the problem of "grating on closing wedge"..