Body

A

Contents:

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Body General Description and Construction

A

General

The two-door all-steel body is bolted to the platform-type frame. The air resistance is exceptionally low due to the curved front hood (bonnet), the inclined windshield, the convex roof panel and the stepless, evenly sloping rear end. All fenders (mudguards) are detachable and can easily be replaced. Sill panels between the front and rear fenders add to the practical appearance of the car.

Doors

The 950 mm (37.4") wide doors are attached to the body front pillars by hinges. The door locks are operated by pull-out type handles from the outside and by ordinary rotary-type handles from the inside. The left-hand door is locked from the outside, whereas the right-hand door is secured by raising the inside handle. The door fit in the body can be corrected by adjustable rubber buffers and door lock striker plates. The door check assembly allows the door to be opened 70°. A weatherstrip around the door prevents ingress of dust and water.

Hoods (Bonnets)

To make spare wheel and luggage theft-proof, the front hood latch is operated by a pull-knob situated below the instrument panel on the left-hand side of the steering column. The rear hood lock is manually operated by turning the T-handle. A spring holds the hood in the open position.

Windows

The undivided windshield inclines 30°. It offers an exceptionally wide field of vision. Defroster vents in the windshield frame bottom prevent condensation or freezing of moisture.

The window regulators require 3 1/4 turns for full travel of window. Vent wings in door windows permit draughtless control of fresh air; the spring-loaded pivot mechanisms hold the wings in any position required. The theft-proof wing locks are operated by handles and released by push buttons.

The rear side window glass panels are fixed. The oval rear view window has a slant of 53°.

All glass panels are of safety glass.

Note:

Up to Chassis No. 1-454 950, the rear view windows is divided by a center bar and its glass panels are of plain plate glass.

Seats

The backs of the adjustable front seats can be folded down .The seats of the De Luxe Model are held in seat runners, whereas those of the Standard Model are fixed by clamps and wing nuts. The coil springs are held in a tubular all-steel framework to which the paddings and upholstery are attached. Rubber hair paddings are used on the De Luxe Model.

The back of the bench-type seat can be folded down.

Interior Trim

The floor is covered with rubber mats. Carpets are used to trim front panel, front side panels, lower side members, and, with the De Luxe Model, the frame tunnel and the luggage space behind the rear seat.

The door trim panels and the rear quarter trim panels are covered with upholstery cloth. With the De Luxe Model, they are provided with mouldings and kick pads at the base.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

With the De Luxe Model, the hand brake lever is sealed at the frame by means of a rubber boot. Roof, roof side members, and the trim panel around the rear view window, are lined with cloth. The De Luxe Model is additionally provided with a door pocket on the driver's side and an armrest on the other side. A big built-in ash-tray is located in the right-hand rear quarter trim panel.

The rear view mirror — combined with a transparent sun vizor of tinted plastic in the De Luxe Model — is attached to the middle of the windshield frame.

The De Luxe Model is additionally provided with coat hangers and assist straps at the door lock pillars.

Sound Deadening and Insulation

Cotton waddings are used to plug up the roof side members. To provide heat insulation and also to exclude any engine noise, the engine compartment partition panel is covered with a trim panel heavily coated with sound-absorbing material. The other side of the partition panel is coated with cork-felt. Sound transmission at the frame fork and the floor under the rear seats is dampened by a sound-absorbing material sprayed permanently in place. The front luggage compartment is lined with cork-felt. Layers of felt wadding are cemented to the roof, rear quarter panels and door outer panels to absorb noise and provide insulation.

Heating

The interior of the car is heated by warm air. Warm air is guided through flexible metal pipes and the bottom side members of the body into the interior of the car through six openings, four ducts just above the floor and two defroster vents at the windshield.

Luggage Accommodation

A luggage space behind the rear seat back is accessible by folding down the rear seat back. Another space for luggage accommodation is under the front hood.

Exterior Trim

a - **Standard and De Luxe**

The sill panels are covered with ruber mats. The width of the front and rear bumpers is 90 mm (3.54″). The hight of the overriders amounts to 190 mm (7.5″).

The headlamp rims are chrome-plated.

b - **Standard**

Bumpers, overriders, hub caps, vent wing frames, door and hood handles, and the oval ring in front of the electrical horn are paint-coated.

c - **De Luxe**

All the windows are framed with highly-polished mouldings, as are the waist line, sill panels and front hood. The front hood exposes a VW sign and the emblem of the town of Wolfsburg, where the Volkswagen is manufactured.

Bumpers, overriders, hub caps, vent wing frames, door and hood handles are chrome-plated. The two oval rings on the front fenders are of highly-polished aluminum.

General

The two-door all-steel body is bolted to the platform-type frame. A rubber strip is interposed to guard against ingress of dust and water. The air resistance is exceptionally low due to the curved and dropping front hood, the inclined windshield, the curved roofline, and the stepless, evenly sloping rear end. All fenders (mudguards) are detachable and can easily be replaced. Sill panels between the front and rear fenders add to the practical appearance of the car.

Doors

The front-hinged doors offer a clear width of 950 mm (37.4"). From outside, the door locks are operated by pull-out handles and from inside by rotary handles. The left-hand door is provided with a cylinder lock incorporated in the outside handle, while the opposite door is locked from inside by pulling at the handle. The door check rod allows the door to be opened through an angle of 70°. A proper door fit is insured by a striker plate provided with a spring-loaded plastic wedge. A door weather strip of sponge rubber with a short lip provides a seal between body opening and door.

Hoods (Bonnets)

The front hood, giving access to fuel tank, spare wheel, and front luggage space, is provided with a lock that is released by a pull knob under the instrument panel on the driver's side. The hood is held open by an automatically engaging collapsible prop. The top-hinged engine compartment hood is unlocked manually by means of a T-handle. A strong balance spring holds the hood in the open position.

Windows

The undivided windshield inclines 30°. It offers an exceptionally wide field of vision. Defroster vents in the windshield frame bottom prevent condensation or freezing of moisture.

The window regulators require $3^1/_4$ turns of the handle for full travel of window. Vent wings in door windows permit draughtless control of fresh air; the frictional pivot mechanisms hold the wings in any position required. The theft-proof wing locks are operated by handles and released by push buttons.

The rear quarter window glass panels are fixed. The oval rear view window has a slant of 53°.

All glass panels are of heat-treated safety glass.

The windshield is provided with a clear vision area.

Front Seats

The seats of the De Luxe Model are held in slanting seat runners, whereas those of the Standard Model are fixed by clamps and wing nuts. On the De Luxe Model, the rake of the front seat backrests can be set at three positions. The coil spring base of the cushion and the corrugated springs of the backrest are held in a tubular steel framework. Rubber hair paddings are used on the De Luxe Model, the backrest edges are "piped" for increased lateral support.

Rear Seats

The tip-forward backrest of the rear seat bench is held in place by a detachable strap to avoid the luggage tumbling into the passenger compartment when the brakes are applied.

Interior Trim

The floor, the lower portion of the front panel, and the frame tunnel, are covered with rubber mats. On the Standard Model, the frame tunnel rubber matting is interrupted over a length extending from the gear lever to the rear edge of the front seats.

Haircord carpets are used to trim front panel, front side panels, body side members (sills), and, on the De Luxe Model, the luggage space behind the rear seat. Roof and, on the De Luxe Model, roof side members and the inner panel around the rear window, are lined with cloth.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Door and rear quarter trim panels are covered with upholstery cloth. On the De Luxe, the trim panels are supplemented by washable plastic material and mouldings at the waistline level; door trim panels have kick pads at the base, a pocket on the driver's side, and an armrest for the front passenger. The right-hand rear quarter panel carries a pull-out ash receiver.

The hand brake lever is sealed at the frame tunnel by a rubber boot.

Additional items on the De Luxe are coat hangers and assist straps at the door lock pillars.

The rear view mirror — combined with a transparent sun vizor of tinted plastic in the De Luxe — is attached to the center of the windshield frame upper side; the mirror is adjustable in a ball joint.

Sound Deadening and Insulation

Cotton waddings are used to plug up the roof side members. To provide heat insulation and to exclude any engine noise, the engine compartment partition panel and the wheel arches are lined with sound deadener. The inner side of the partition panel is coated with cork-felt. Sound transmission at the frame fork and at the floor under the rear seats is dampened by sprayed-on sound-absorbing material. On the De Luxe, also the frame tunnel has a coat of sound deadener. The front scuttle is lined with cork-felt. Layers of felt wadding are cemented to the roof, rear quarter panels, and door outer panels, to absorb noise and provide insulation.

Heating

Heated air, which is taken from the air flow warmed up by the engine, is guided through flexible metal pipes and the bottom side members (sills) of the body into the interior of the car through outlets at foot level in the front compartment and two defroster vents at the windshield.

Luggage Accommodation

Luggage space is provided behind the rear seat, which has its backrest hinged to facilitate loading. Another luggage space is under the front hood.

Exterior Trim

a - **Standard and De Luxe**

The sill panels are rubber-covered. The width of front and rear bumpers is 90 mm (3.54″). The hight of the overriders amounts to 190 mm (7.5″). Headlamp rims are chrome-plated. The VW sign is indented in the hub cap.

b - **Standard**

Bumpers, overriders, hub caps, vent wing frames, door, window and hood handles, and the oval ring in front of the electrical horn are paint-coated.

c - **De Luxe**

The mouldings on front hood, at body waist line and on door sill panels are of highly-polished light metal, as are the window mouldings and the ornamental rings on the front fenders.

Bumpers, overriders, hub caps, vent wing frames, door, window and hood handles are chrome-plated.

The front hood exposes a VW sign and the emblem of the town of Wolfsburg, where the Volkswagen is manufactured.

Sliding Roof

The sliding roof, make Golde, has a clear length of 690 mm (27.2″) and a clear width of 730 mm (28.7″) when fully opened. It can be locked in any open position desired.

General

The two-door all-steel body, having the sweeping lines of a pontoon, is bolted to the widened platform-type frame. Strong body sills below the doors provide maximum rigidity in conjunction with the tubular backbone and the platform. The fenders are welded to the body.

Doors

The doors are constructed as half doors without an upper frame and are 1000 mm wide (39.4″). The vertically curved door windows, when closed, come to bear directly against weatherstrips around the body opening.

The forward-hinged doors have a press-button handle and a hold-open mechanism. From inside, the doors are opened by means of handles placed well to the front. The armrest on the passenger's side is designed to serve also as a handle for closing the door, while the driver's door is provided with a hand strap.

Hoods (Bonnets)

Access to fuel tank, spare wheel, front luggage space, and the engine is provided by a rear-hinged hood, the lock of which is released by pulling at a knob located inside the car. The knob for the front hood is located on the driver's side under the instrument panel. When hood lock is released, the hood can be raised after the safety catch has been pushed back. The engine compartment hood is unlocked by means of a knob located on the vertical panel below the bench seat. The license plate light fitting serves as a handle for lifting the hood. Both hoods are held open by counter-balancing springs.

Windows

The curved windshield is set at an angle of 50 degrees and offers a clear space of 1.200 mm (47.2″) in width and 425 mm (16.7″) in height. The large wrap-around rear window inclines approx. 30 degrees, the clear space amounting to 1.100 mm (43.4″) in width and 430 mm (16.9″) in height. Door windows and rear quarter windows are curved to the vertical contour of the body. The door windows can be wound down, the rear quarter windows are fixed. Both front and rear occupants have an exceptionally good all-round view thanks to the slender pillars and the narrow side window division bars.

All windows are of safety-glass and the windshield is provided with a clear vision area.

Seats

The wide front seats with hinged backrests are adjustable forward and backward. The seats rise as they move forward, permitting short persons to sit higher. The framework of the seats is of tubular steel, while the base of the cushion and the backrest are of coil springs covered by rubber hair paddings. The horseshoe-shaped edges of the cushions and the vertical edges of the backrests are "piped" to provide a good lateral support.

In the back of the car are two children's or emergency seats of the bench type. These seats are also covered with rubber hair paddings. The backrest can be folded forward to add to the luggage platform area.

Instrument Panel

The two circular instruments are set directly in front of the driver. To the left of the electric clock is the speedometer, the dial of which includes the various warning lights. Both instruments have a diameter of 110 mm (4.3″). Space for radio installation is provided in the center of the panel. An ash receiver and a glove compartment with lid are in front of the passenger's seat. Ignition switch and choke control knob are located to the left of the speedometer, and the push-pull type lighting and windshield wiper switches to the right of the clock.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Interior Trim

Depending on the choice of the customer, either cloth or leather is used to upholster the seats and door trim panels. The floor is covered with rubber mats. Haircord carpets are used to trim kick panels and the luggage compartment in the back of the car. Each door is equipped with a pocket. The rear view mirror above the windshield is flanked by two sun vizors. Mounted on top of the instrument panel is a grab rail for the front seat passenger.

Heating and Ventilators

The heating system is identical with that used on the VW Passenger Car. The amount of heated air emitted through the openings at foot level and the windshield defrosters is controlled by means of the rotary knob on the frame tunnel. To ventilate the interior, fresh air enters the two openings adjacent to the headlights and is directed to the defroster vents at the windshield. Rotary knobs below the instrument panel allow a separate control of the two ventilators. This arrangement makes it possible to have either heated air or fresh air emitted through the defroster vents or both in the desired proportion.

Luggage Space

The luggage space is to be found behind the rear backrest and under the front hood. The space available in the rear is about 0.18 cbm. By pushing the backrest forward the space is augmented by 0.2 cbm. In the front there is about 0.08 cbm space available.

Exterior Trim

The main features of the exterior trim are:

Chrome-plated wrap-around bumpers with sturdy overriders.

Rims of headlights, direction indicator lights and tail lights are chrome-plated. Mouldings on side panels at bumper level, glass frames and air intake grilles at front are of polished light weight metal.

Chrome-plated door handles.

Chrome-plated tail pipes.

Chrome-plated rim embellishers and hub caps.

Body Removal and Installation

Removal

To facilitate the removal and installation of the body, it is recommended to adopt the following sequence of operations:

1 - Place car on trestles.

2 - Remove wheels.

3 - Remove front and rear seats.

4 - Disconnect battery and close fuel tap.

5 - Disconnect speedometer drive shaft from left-hand front wheel hub.

6 - Detach fuel hose from fuel tap.

7 - Remove cotter pin between operating rod and fuel tap and remove operating rod.

8 - Remove fuel tank.

9 - Disconnect choke control cable from instrument panel and withdraw it from the body.

10 - Detach steering column and withdraw it together with the steering wheel.

11 - Disconnect cable from stoplight switch and withdraw it to the spare wheel compartment.

12 - Pull off heating pipes after having released the clips.

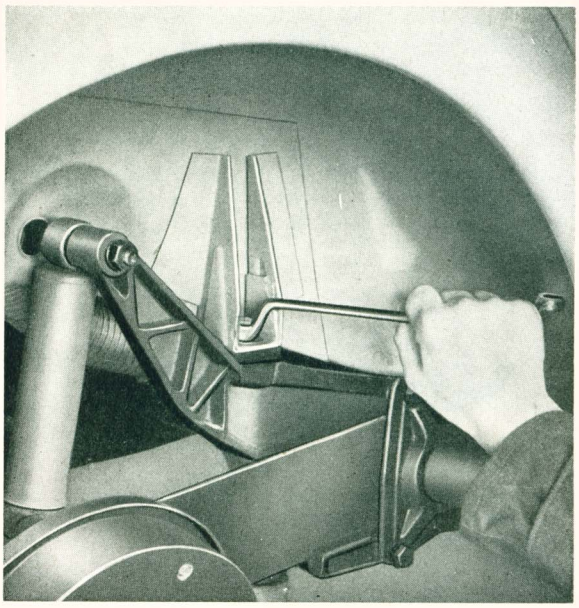
13 - Detach starting motor cable and cables 30 and 50 from starting motor.

14 - Disconnect cables 51 and 61 from the generator and cable 15 from the ignition coil. Also detach cable from oil pressure control switch.

15 - Remove the 18 body bolts (metric 8 mm).

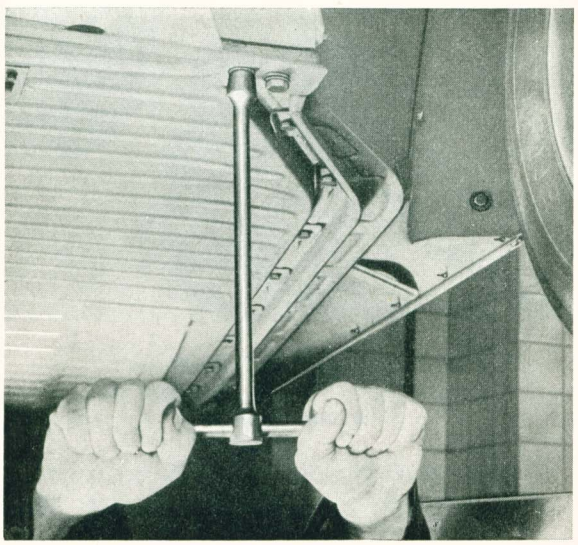
16 - Remove the 4 bolts (metric 10 mm) at the front crossmember.

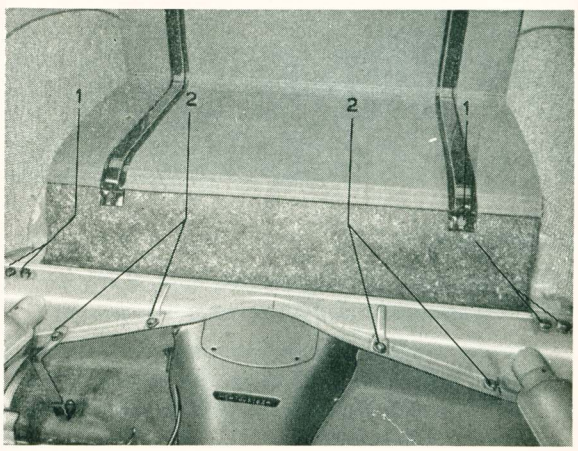
17 - Remove the bolts located at the rear quarter panel reinforcement, one on each side.



18 - Remove the 4 bolts (metric 10 mm) that attach the body to the rear cross tube.

19 - Remove the 4 bolts (metric 8 mm) at the rear crossmember.

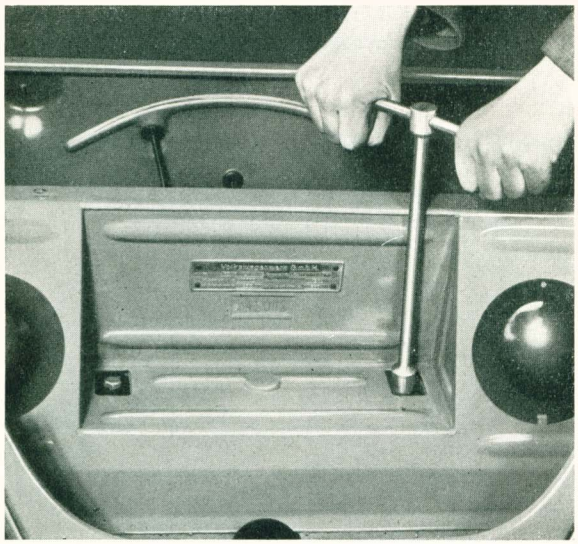




1 - Body attachment at rear cross tube.
2 - Body attachment at rear crossmember.

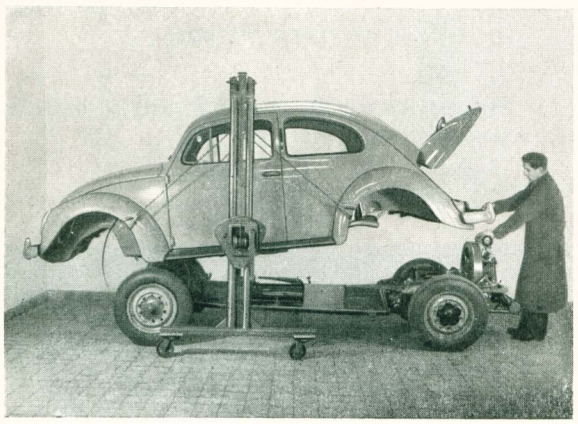
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

20 - Remove the two bolts (metric 10 mm) that attach the body to the front axle.



Note:
If it is intended to lift off the body by means of the gantry VW 301, reinstall the wheels and lower the car to the floor.

21 - Lift the body from the chassis and withdraw the chassis.

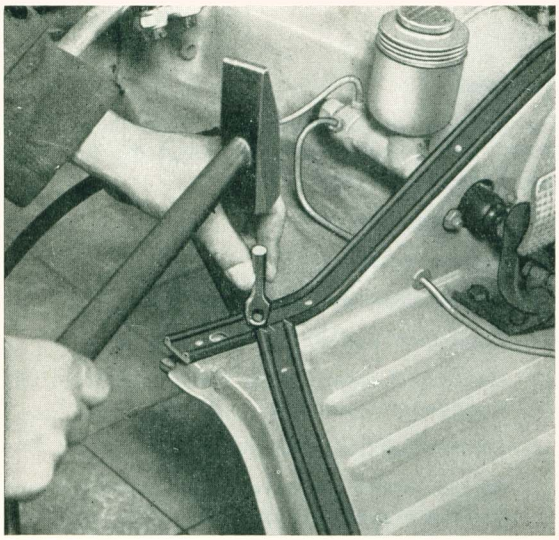


Installation

This is a reversal of the operations described above, but attention should be paid to the points below:

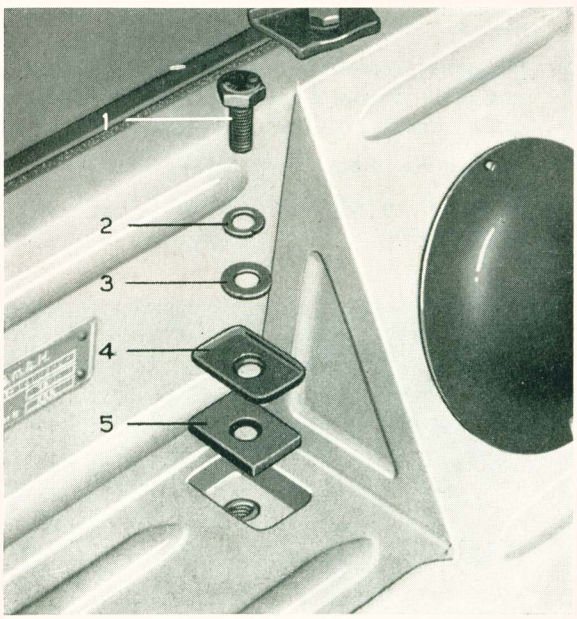
1 - Renew weather strip between body and frame. Tack the weather strip to the frame, using 36 tacks, and connect the ends at the corners by means of a stapler.

2 - Punch the weather strip with a 10 mm (.8″) punch above the 4 holes in the front cross-member.



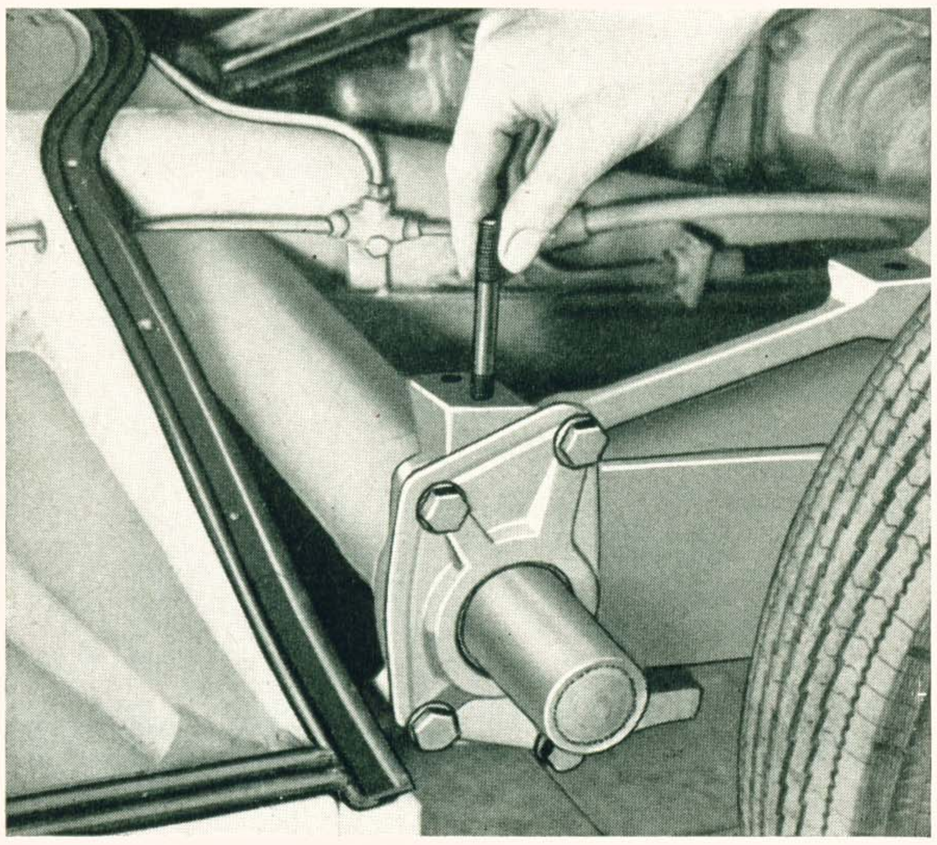
3 - Fill the gaps at the corners and the depression in the weather strip with Genuine VW Sealing Compound D 8. Prevent the weather strip from moving out of place when lowering the body into position and when inserting the body mounting bolts. If necessary, cement the weather strip into place.

4 - Place rubber packings on front axle and rear cross tube.



1 - Mounting bolt
2 - Lockring
3 - Washer
4 - Metal plate
5 - Rubber packing

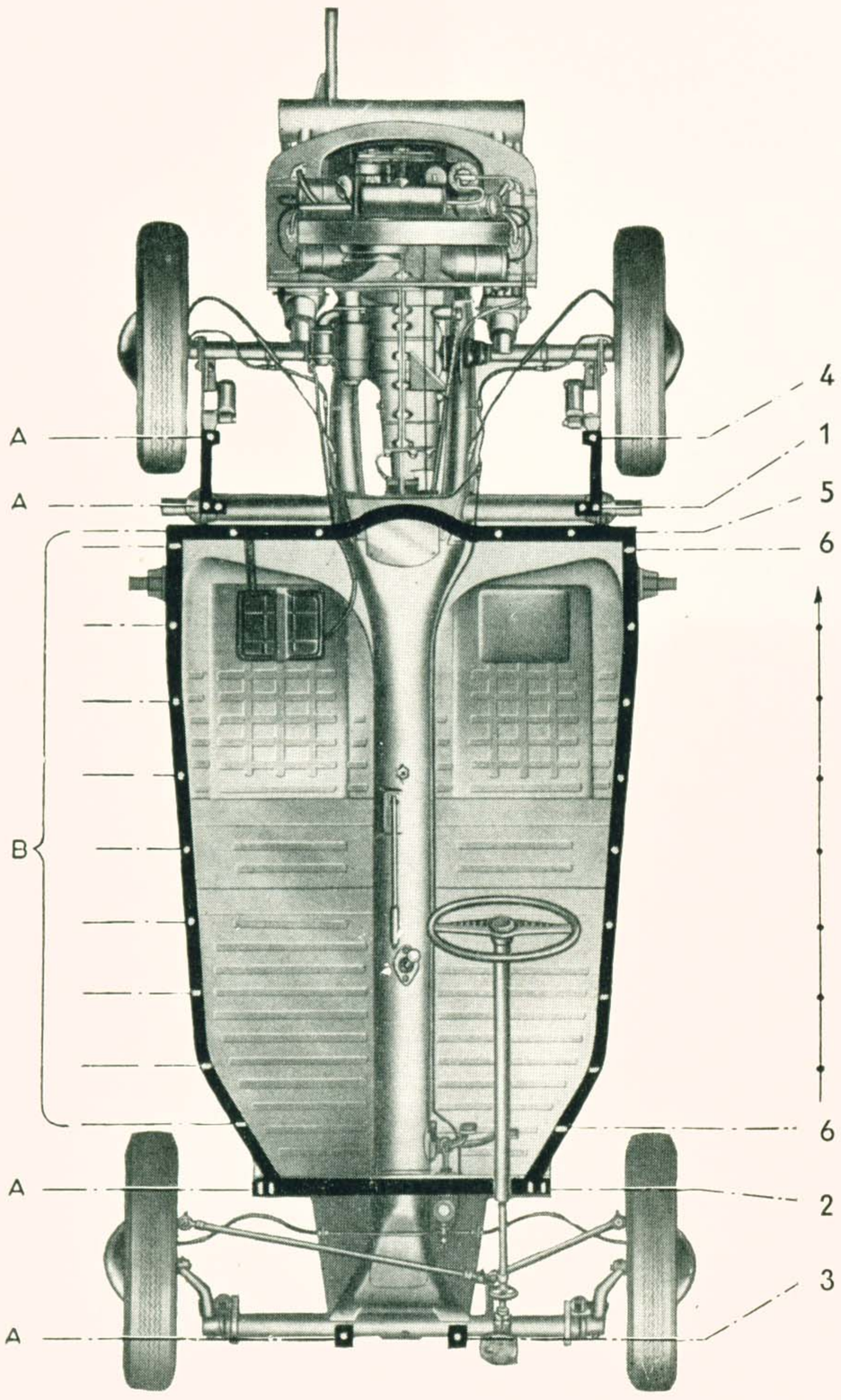
5 - To guide the body into place, it is recommended to screw studs into the holes at rear cross tube. Remove these studs after the body drop.



Note position of battery copper braid (ground). The bolts to be inserted through the front cross-member are screwed into a plate provided with two tapped holes. These plates are freely moving in metal guides which are welded to the body.

Note. — Should it be found that the heads of the front bolts M 8 do not sufficiently cover the slotted holes, it is recommended to fit locally-made rubber shims between body and frame to insure a perfect sealing.

6 - First lightly tighten all bolts M 10 and then all bolts M 8 opposite in turn in the below illustrated order.



A = Bolts M 10
B = Bolts M 8

7 - A possible gap at the mounting bolts on the front axle should be compensated by two rubber packings. The gap should never exceed 3 mm (.12″).

8 - Tighten all body mounting bolts to the following torques, using torque wrench VW 118:

Bolts M 10 ..... 3 mkg (22 ft. lbs)

Bolts M 8 ..... 2 mkg (14 ft. lbs)

9 - Install steering column, using a new clamp screw lock plate.

10 - Place upper lip of engine weather strip over the cover plate.

11 - Connect the battery and open the fuel tap.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Repair Hints

The exchangeability of the sheet metal parts is indicated by the drawings to assist in repairing the outer body shell. The parts marked with capital letters (A, B, C) constitute the outer body shell and are listed below with the corresponding part numbers. The weld seams indicated by heavy black lines show the outline of the spare parts, while those indicated by thinner lines show all further weld joints of the outer body shell.

Templates should be made in accordance with the drawings, using the dimensions as a guide. To obtain an accurate conformity of the templates with the shape of the body, these should be adapted to a new car.

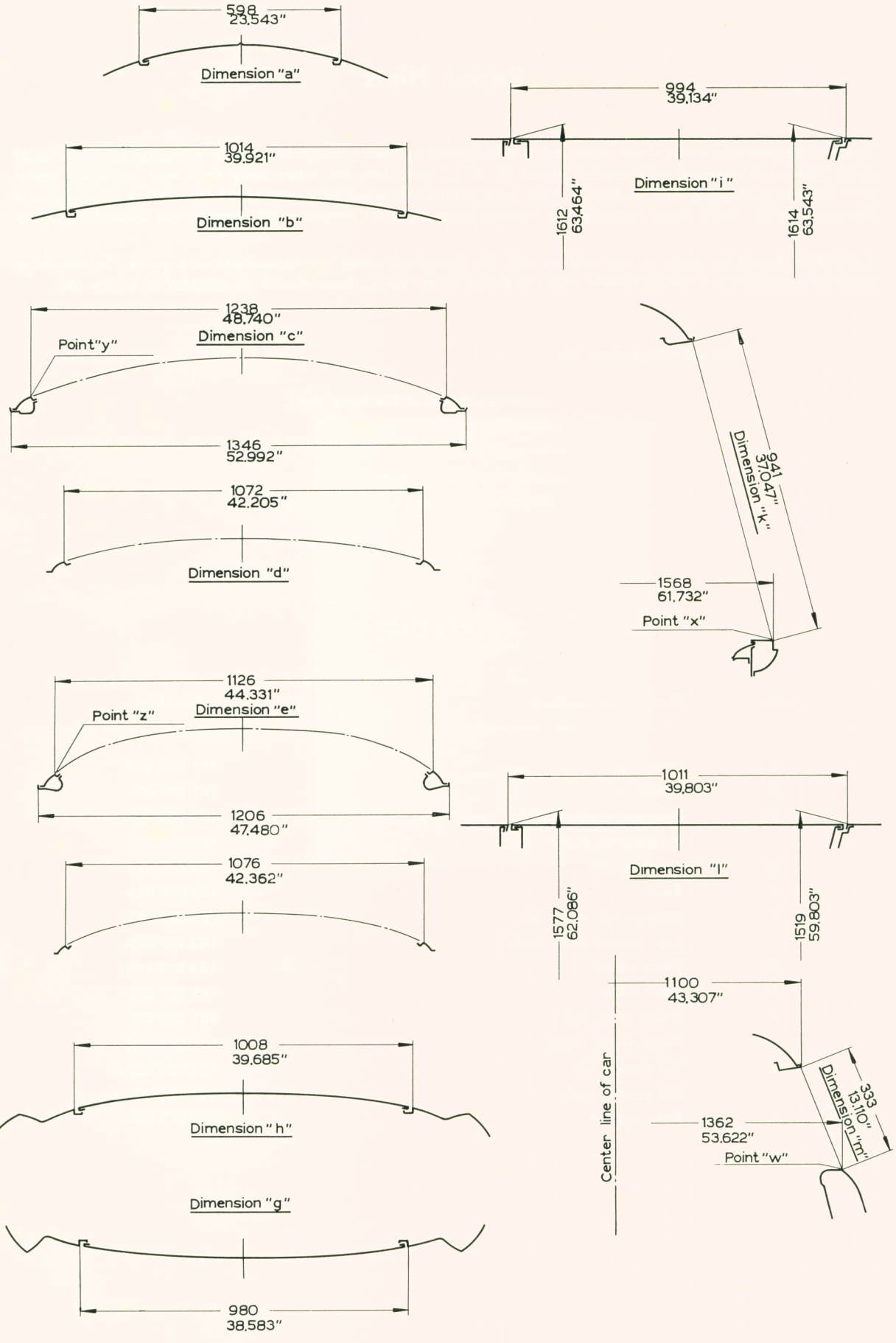
The drawings show the

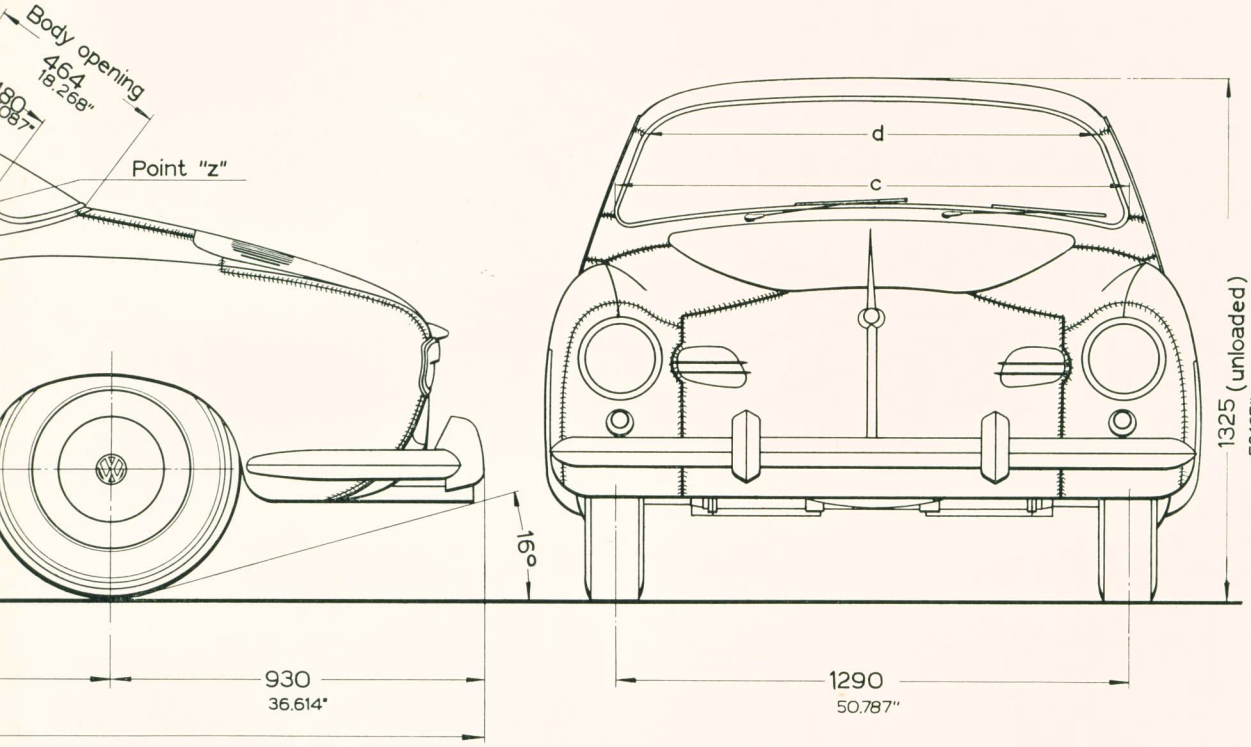
- individual parts of the body shell,
- the spare parts,
- all weld seams,
- body dimensions, and
- points of reference for measuring.

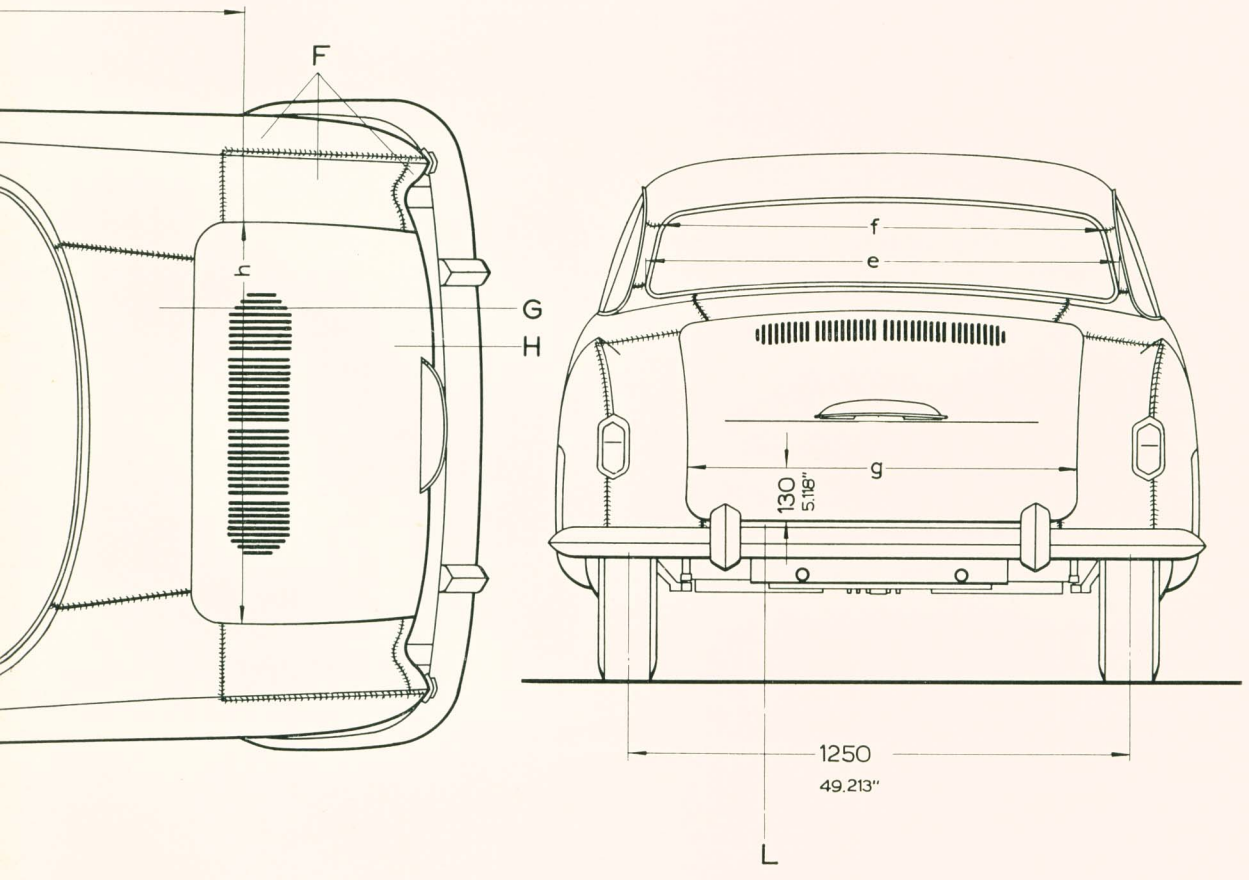
Parts List

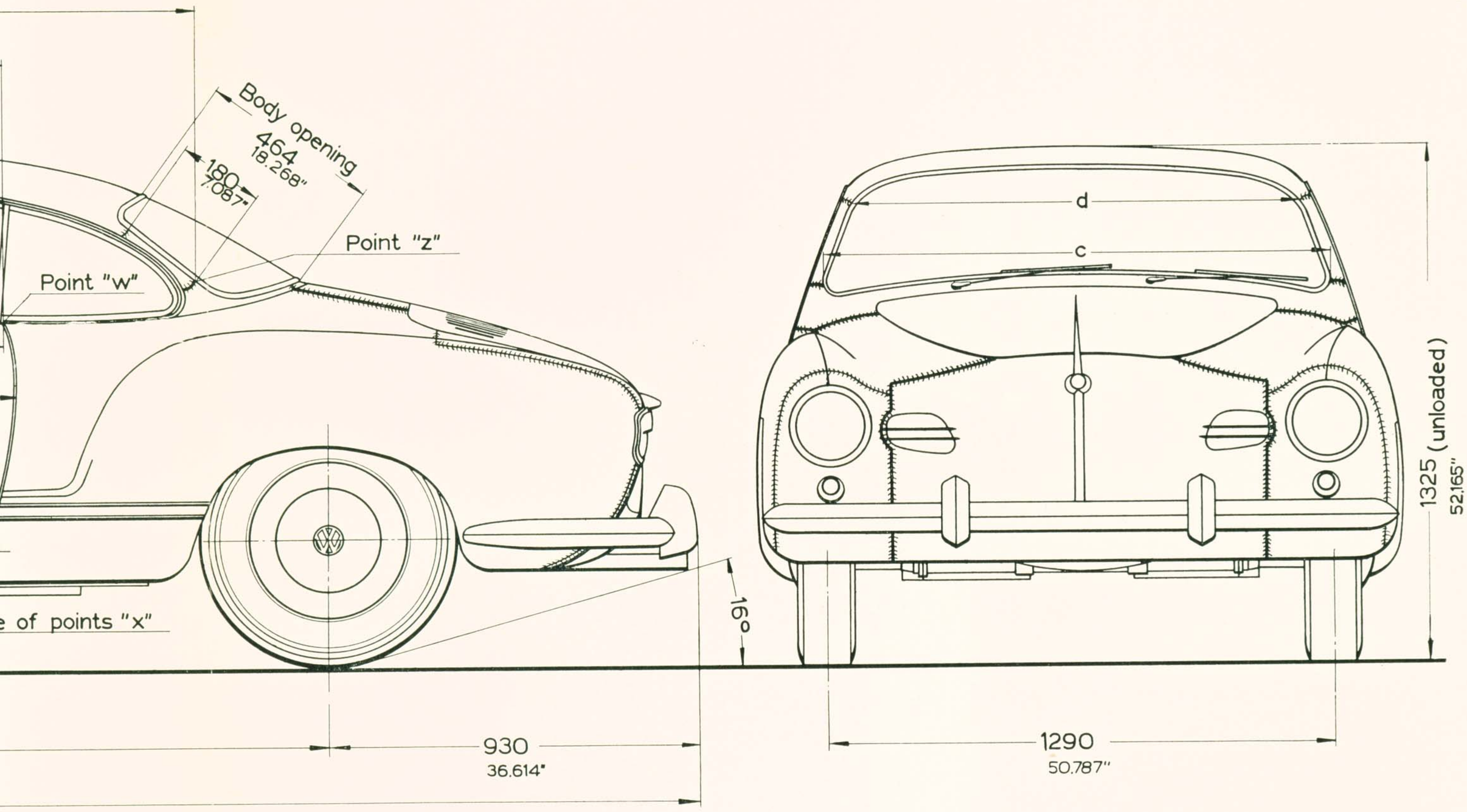
Letter	Description of Part	Part No.
A	Front panel	141 805 065
B	Front hood	141 823 031
C	Side panel, front, left	143 809 021
	Side panel, front, right	143 809 022
D	Cowl panel	443 805 095
E	Roof	143 817 021
F	Side panel, rear, left	143 809 085
	Side panel, rear, right	143 809 086
G	Deck panel	143 813 131
H	Rear hood	141 827 025
I	Door shell, left	141 831 051
	Door shell, right	141 831 052
K	Sill panel, left	143 801 025 A
	Sill panel, right	143 801 026 A
L	Rear apron	141 813 301

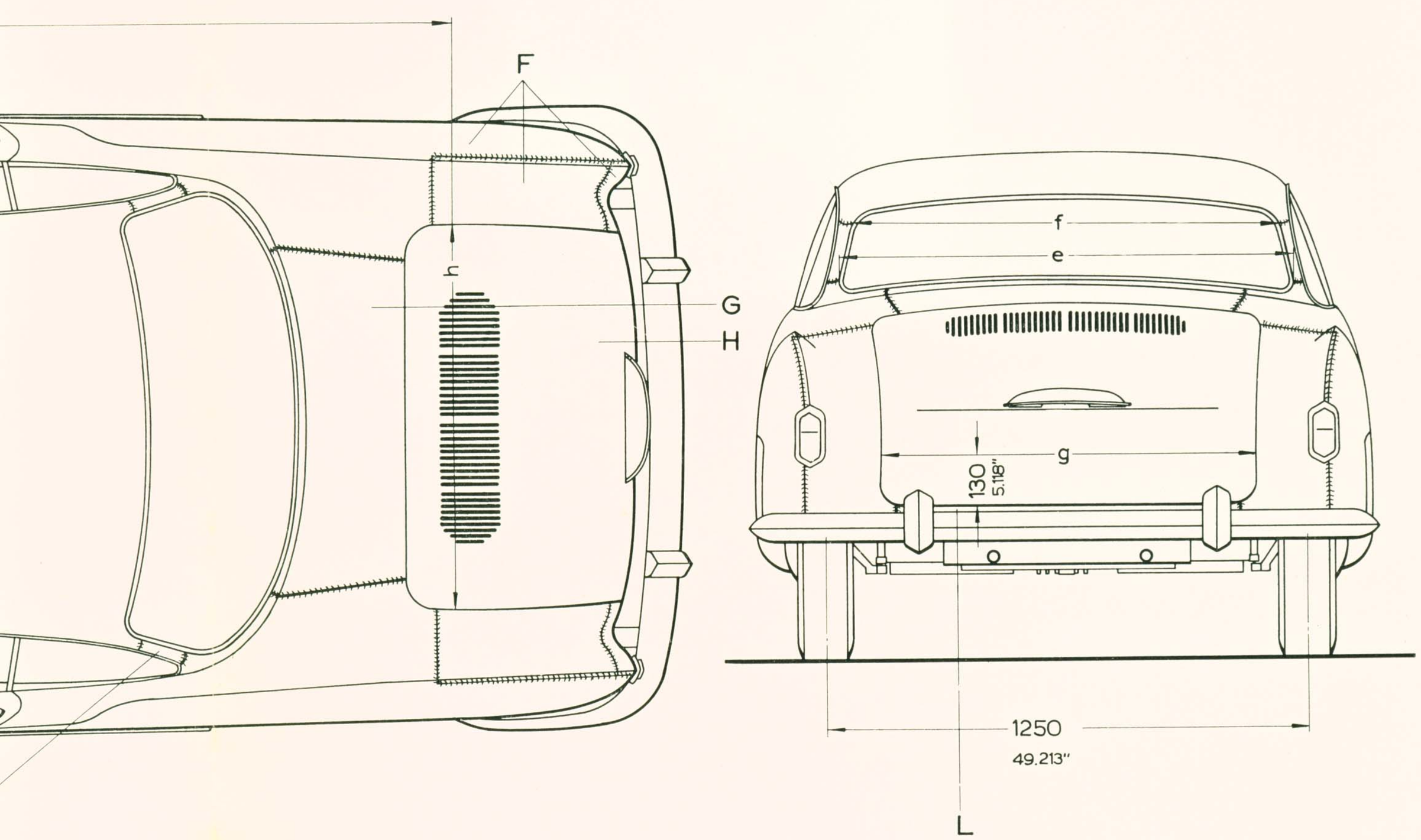
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

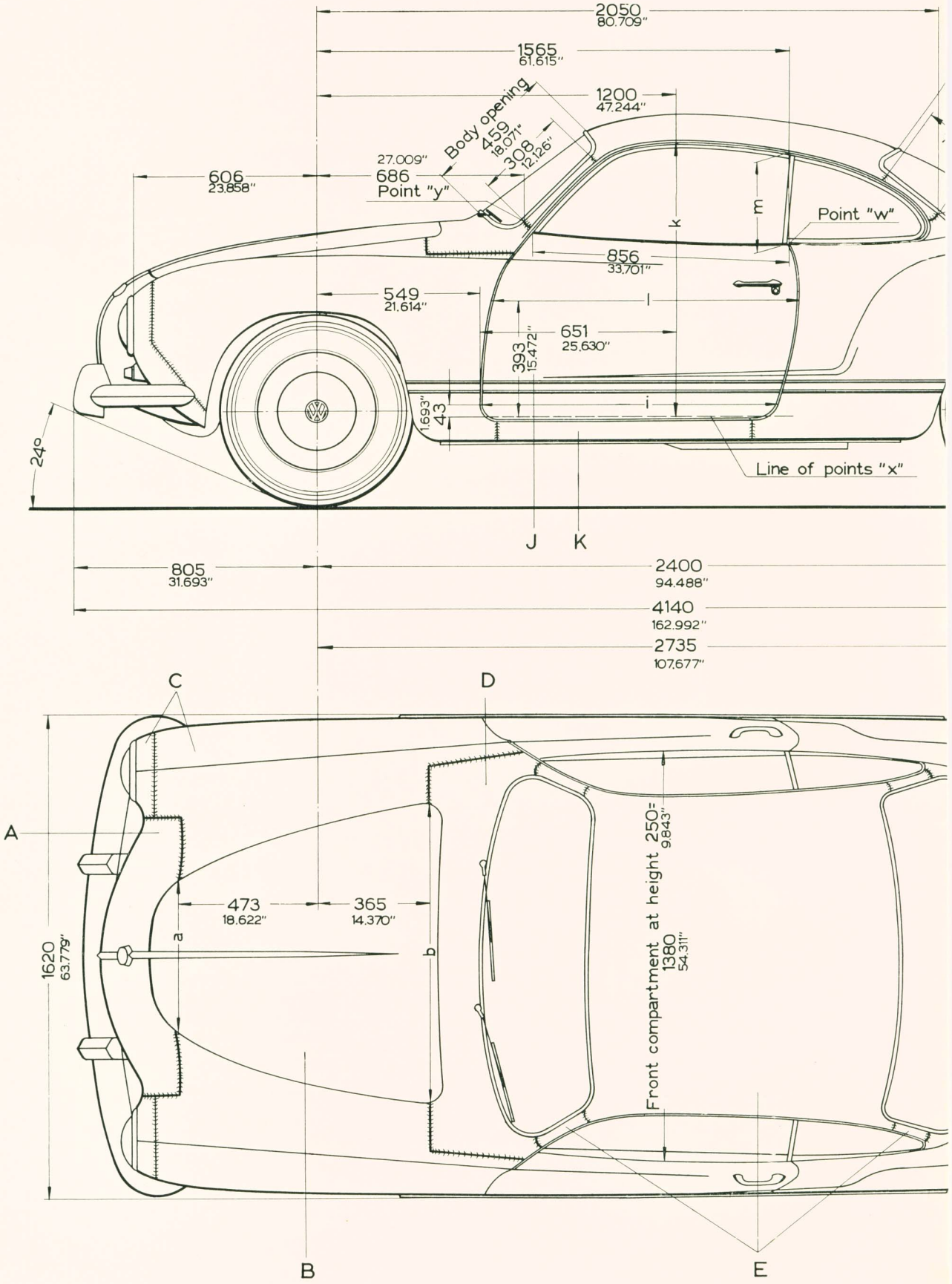

598
23.543"
Dimension "a"
1014
39.921"
Dimension "b"
994
39.134"
Dimension "i"
1612
63.464"
1614
63.543"
1238
48.740"
Point "y"
Dimension "c"
1346
52.992"
1072
42.205"
Dimension "d"
941
37.047"
Dimension "k"
1568
61.732"
Point "x"
1126
44.331"
Point "z"
Dimension "e"
1206
47.480"
1076
42.362"
1011
39.803"
Dimension "l"
1577
62.086"
1519
59.803"
1100
43.307"
Center line of car
333
13.110"
Dimension "m"
1362
53.622"
Point "w"
1008
39.685"
Dimension "h"
Dimension "g"
980
38.583"


Body opening
464
18.268"
Point "z"
d
c
1325 (unloaded)
52.165"
16°
930
36.614"
1290
50.787"


F
h
G
H
f
e
g
130
5.118"
1250
49.213"
L


Body opening
464
18.268"
180
7.087"
Point "z"
Point "w"
e of points "x"
16°
d
c
1325 (unloaded)
52.165"
930
36.614"
1290
50.787"


F
J
G
H
f
e
g
130
5.118"
1250
49.213"
L



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

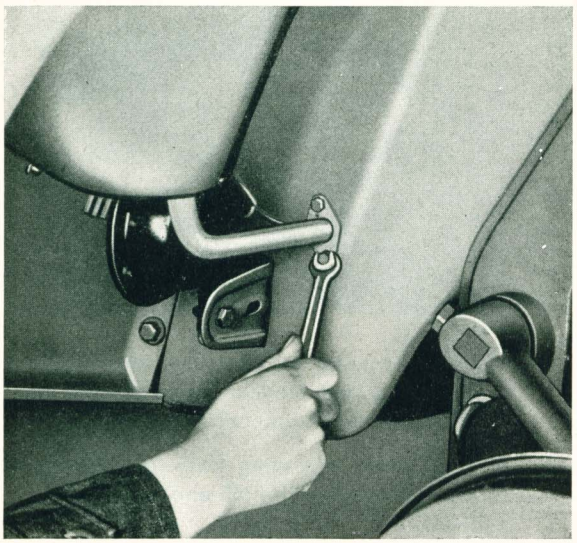
Front Fender Removal and Installation

Removal

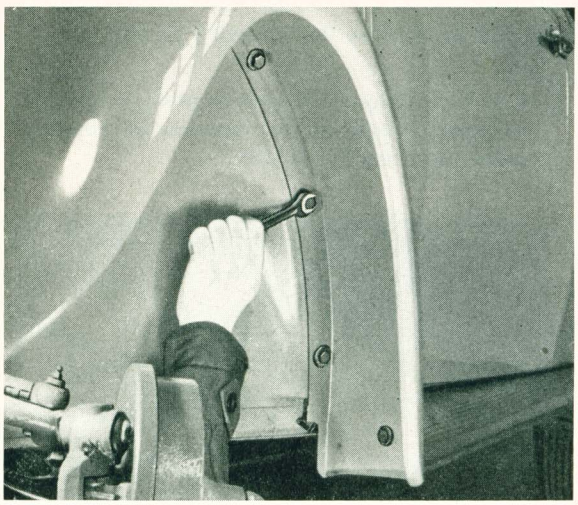
1 - Place front end of car on a trestle and remove front wheel.

2 - Remove headlamp.

3 - Remove retaining screws of headlamp housing support.



4 - Remove the 9 fender mounting bolts and the bolt between fender and sill panel.



5 - Take off fender and beading.

Installation

Reverse the removal procedure and observe the following points:

1 - Check condition of fender beading, replace if necessary. Note correct position of beading when installing the fender.

2 - If necessary, recut the threads of the holes for the fender mounting bolts. Grease the bolt.

3 - If necessary, replace rubber washer between fender and still panel.

4 - Aim the headlights.

5 - Tighten wheel mounting bolts to a torque of between 9 and 11 mkg (65 and 80 ft. lbs.).

Rear Fender Removal and Installation

Removal

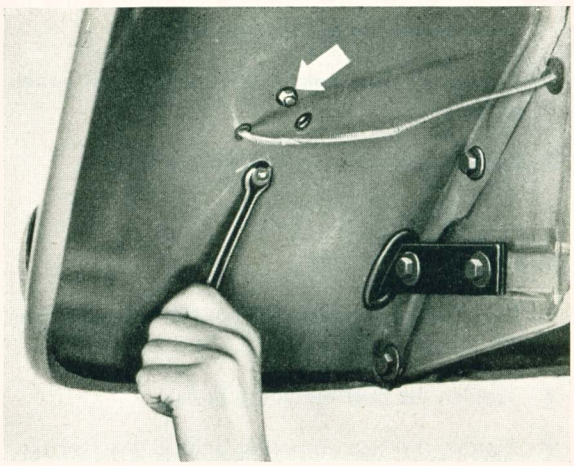
1 - Place rear end of car on a trestle and remove rear wheel.

2 - Remove tail and stop light casing, rubber seal and lamp holder from fender, and disconnect cable. Withdraw the cable from the fender.

3 - Pull out bumper bracket after having removed the bolts and nuts under the fender and at the bumper. Take off the rubber grommet.

4 - Remove the ten fender mounting bolts and the bolt between fender and sill panel.

5 - Take off fender and beading.

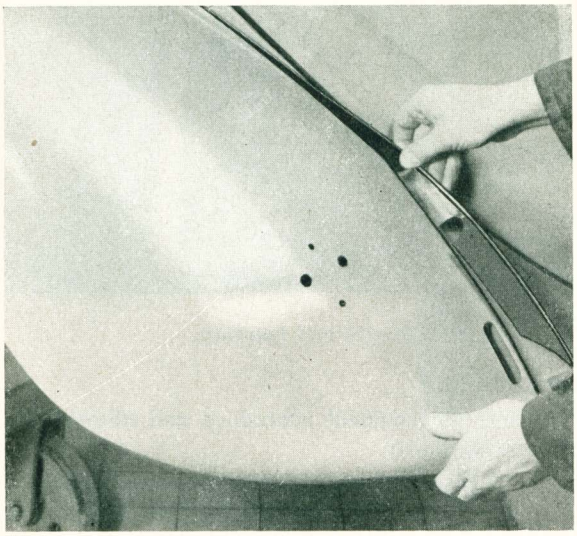


11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Installation

This is a reversal of the above operations, but it is important to observe the following points:

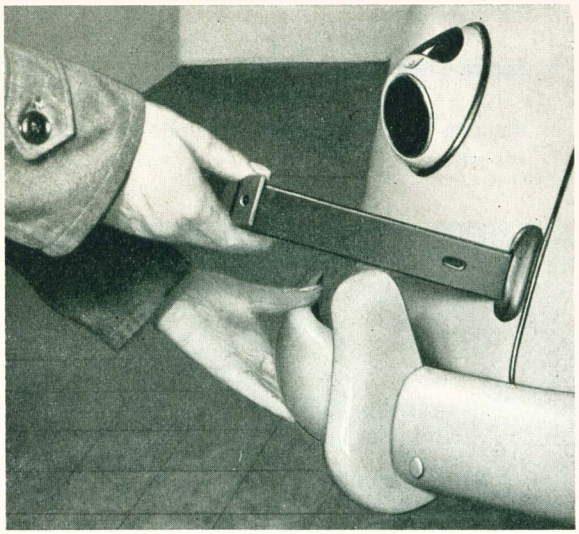
1 - Check condition of fender beading, replace if necessary. Note correct position of beading when installing the fender.



2 - If necessary, recut the threads of the holes for the fender mounting bolts. Grease the bolts.

3 - If necessary, replace rubber washer between fender and sill panel.

4 - Press bumper bracket grommet into the slot in the fender. Insert bumper bracket from the rear and screw it into place.



5 - Note proper position of rubber seal between lamp casing and fender, renew rubber seal if this should be considered necessary.

6 - Tighten wheel mounting bolts to a torque of between 9 and 11 mkg (65 and 80 ft. lbs.).

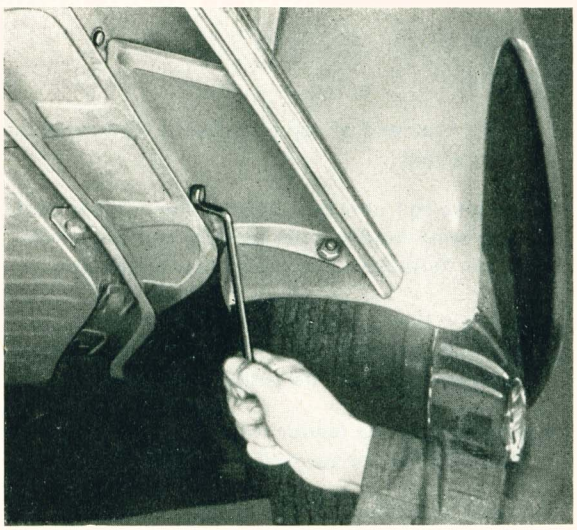
Sill Panel Removal and Installation

Removal

1 - Remove the bolts and nuts that attach the sill panel to the front and rear fenders.

2 - Loosen the four bolts that attach the sill panel to the body.

3 - Remove sill panel by lifting it upwards.



Installation

1 - Reinstall the sill panel so that the slots embrace the mounting bolts.

2 - Tighten the four mounting bolts.

3 - Tighten the two mounting bolts at the fenders.

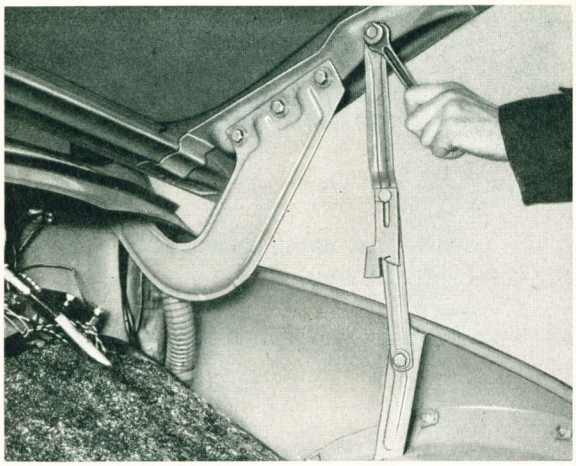
Front Hood Removal and Installation

Removal

1 - Open the hood.

2 - Remove two bolts from each hood hinge.

3 - Support the hood with one hand and screw out the upper bolt of the collapsible bracket.



4 - Remove the other hood hinge bolts.

5 - Take off the hood.

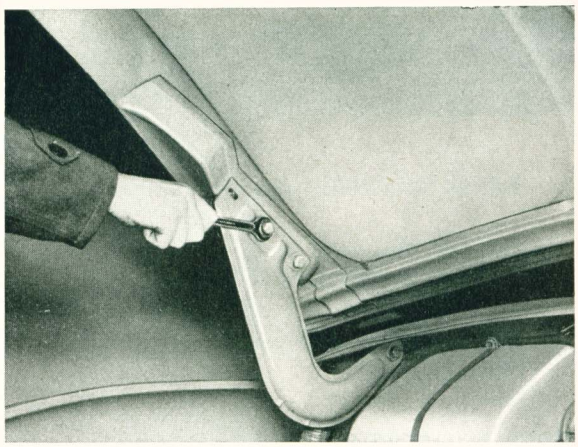
6 - If required, remove the rear hinge bolts and take off the hinges; remove the hood lock bolt assembly, moulding, emblem and VW sign.

Installation

Reverse the removal procedure, while observing the following points:

1 - Check condition of weather seal. If necessary, bend up the retaining flange and replace the weather strip.

2 - Loosely attach the hood to the hinges and adjust hood in the slotted holes until a perfect hood alignment is obtained. Tighten the hinge bolts.



3 - Check latch plate assembly for proper functioning by closing and opening the hood several times. If necessary, adjust position of the latch plate assembly by moving it in its slotted holes. Grease the lock.

Note:

From Chassis No. 1-0 929 746 the front hood and its prop have been modified.

The welded-in nut used for fixing the prop to the hood has been omitted. The prop is now attached to the front hinge bolt.

The new hood can be installed on earlier cars only in conjunction with the new prop.

Old type hoods and props have been discontinued in current production.

Front Hood Lock Removal and Installation

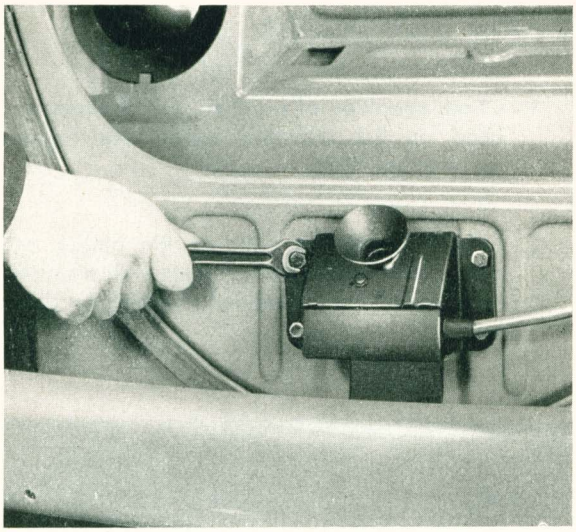
Removal

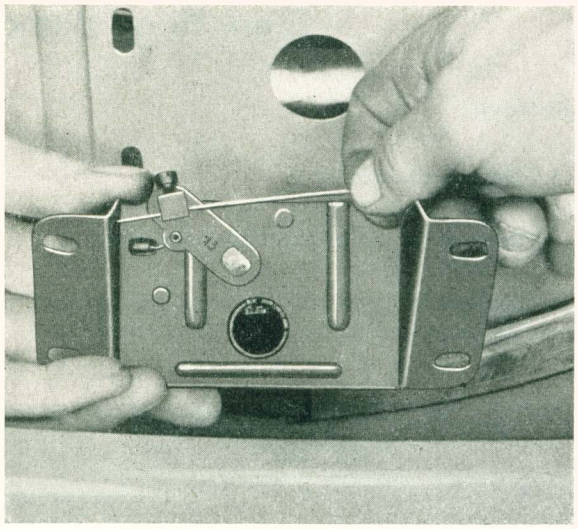
1 - Open the front hood.

2 - Remove the two retaining screws of the lock bolt bracket and take off handle and lock bolt assembly.

3 - Remove the mounting bolts and nuts of the latch plate assembly.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY





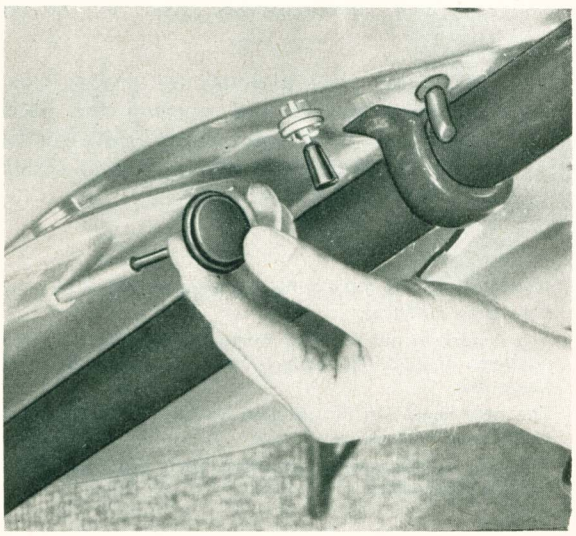
4 - Pull off latch plate assembly cover plate.

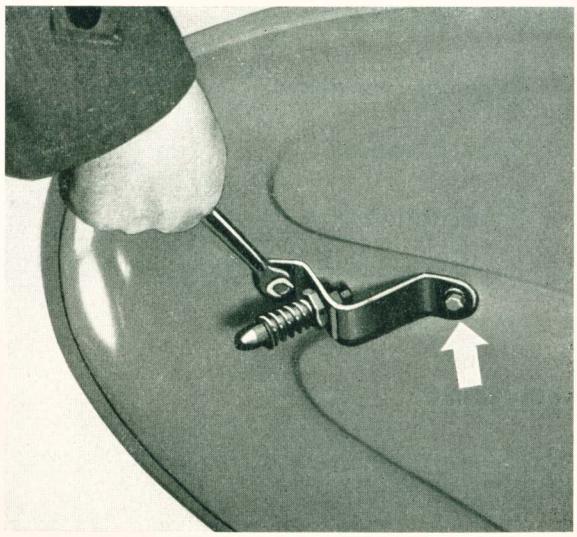
5 - Pull out the hood lock cable after having loosened the clamping screw.

6 - Pull out the hood lock cable from the conduit tube.

3 - Loosely attach latch plate assembly to the front apron of the body.

4 - Install hood handle and lock bolt assembly.





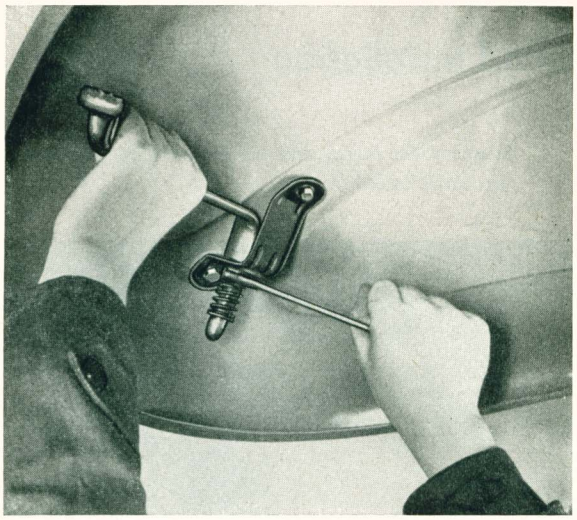
Installation

1 - Grease the hood lock cable and insert it into the conduit tube.

2 - Insert the cable end into the latch plate assembly and fix it in position by tightening the clamping screw. Bend down the projecting cable end.

5 - Check length of lock bolt and proper position of latch plate assembly by opening and closing the hood several times. If required, correct the length of the lock bolt at the adjusting nuts and adjust latch plate assembly by moving it in its slotted holes.

6 - Check adjustment of hood lock cable. If necessary, adjust the cable after having removed the cover plate.



7 - Fully tighten latch plate assembly mounting bolts.

8 - Grease lock bolt.

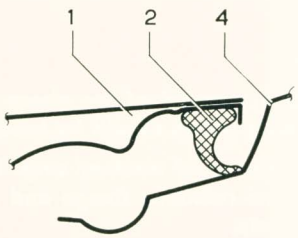
Note:

The condition of a sticking latch plate can generally be eliminated by applying a light hammer blow on the lower latch plate guide while keeping the latch plate in the foremost position.

Ingress of Water at Front Hood

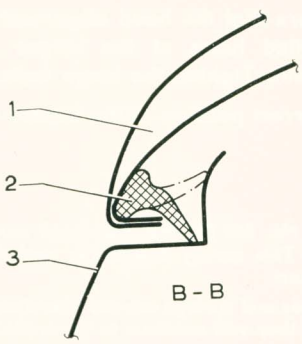
When driving at high speed in heavy rain, water may enter the body at the point indicated by the arrow.

A remedy is effected by installing a special rubber strip (Part No. 111 823 707 A), using Genuine VW Adhesive D 12 to secure it in position.

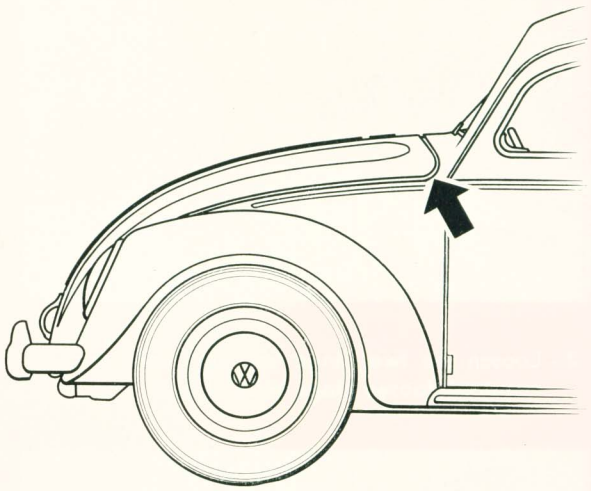


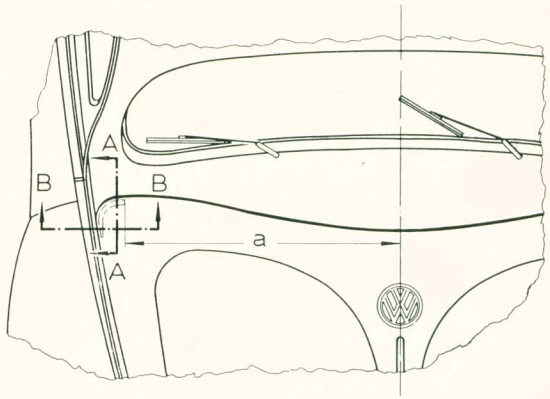
A - A

1 - Front hood
2 - Rubber strip
3 - Front side panel
4 - Roof



B - B





a = 532 mm (20.945")

The proper location of the rubber strip and the position of its lip is as shown on the drawings.

Should the lip turn upwards as indicated by the dotted line in section B-B, it is to be shortened appropriately.

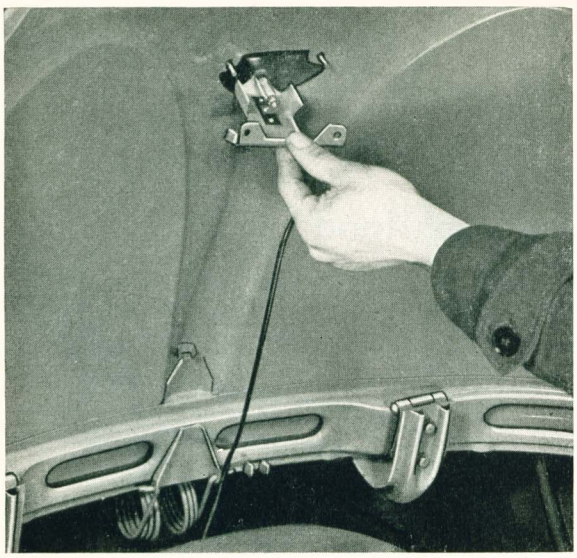
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Rear Hood Removal and Installation

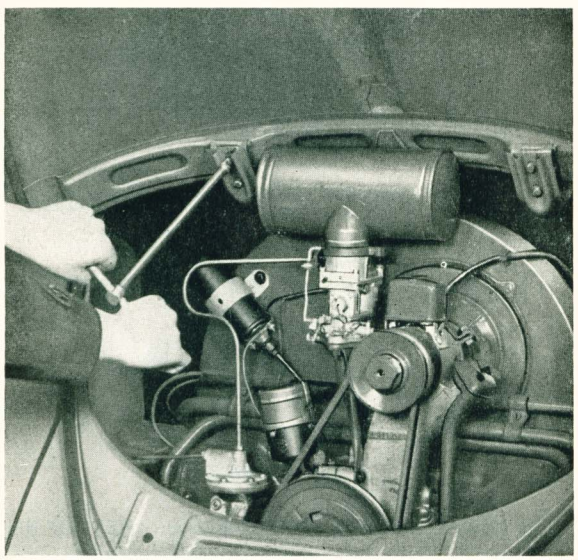
Removal

1 - Lift the rear hood.

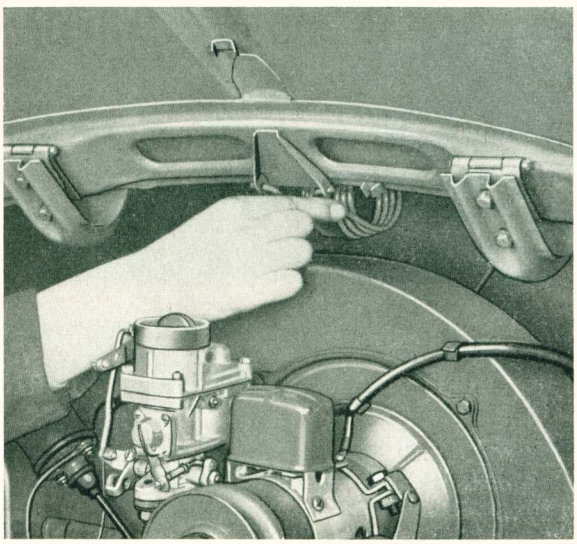
2 - Bend up the cable clips at the license plate light cable and remove the lamp housing and rubber seal.



3 - Loosen the two hinge bolts on each side. If required, loosen hinge bracket bolts.



4 - Unhook the counterbalancing spring from the hood bracket by compressing the two ends. Support the hood and unhook the spring from the body bracket.



5 - Remove hood hinge bolts or hinge bracket bolts and take off the hood.

6 - If required, remove the hood lock.

Installation

Installation is a reversal of the above procedure, but the following points should be heeded:

1 - Check condition of weather strip. If necessary bend up the retaining flange and replace the weather strip.

2 - Bolt the hood loosely into place and put the counterbalancing spring in the intermediate slot of the body bracket.

Note:
The tension of a weak spring is increased by placing it in the lower slot.

3 - Make sure that the hood alignment is perfect. The slotted holes at the hinges permit an adjustment. Tighten the hinge bolts.

4 - Note correct position of the license plate lamp seal.

Note:
From Chassis No. 869 851 the rear hood and spring has been altered. This spring is stronger and the windings are further apart.

As earlier hoods and springs are not interchangeable with the new ones, they will continue to be available as spare parts.

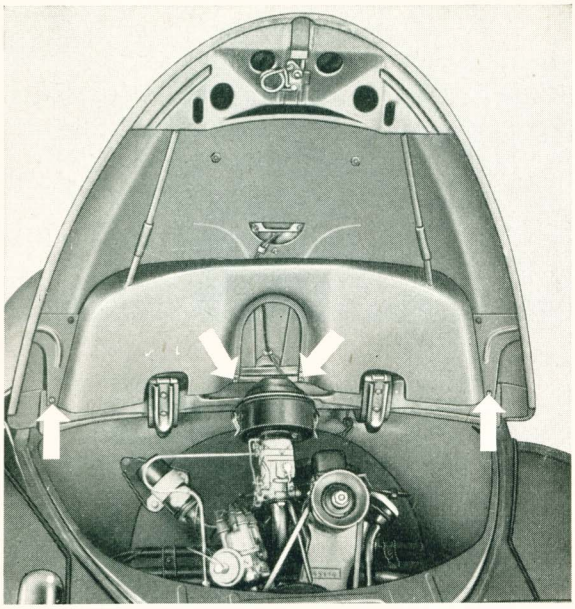
Rear Hood

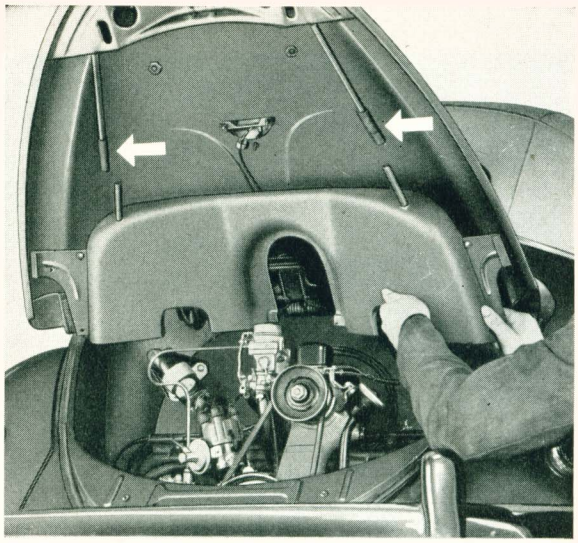
(from August 1957)

To improve the sealing of the engine compartment against ingress of water and the mounting and illumination of the license plate, the rear hood has been altered.

The air intake slots in the rear hood of the Convertible are now horizontally positioned. Any water getting through these slots flows via a tray, mounted under the hood, and two drain pipes to the lower edge of the hood where it is disposed of outside the weather strip.

If it becomes necessary to remove the tray, remove the four self-tapping screws after having taken off the air cleaner.





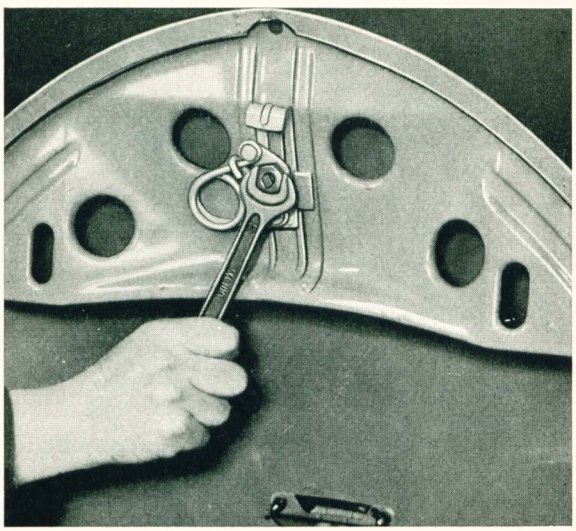
When removing the tray the two drain pipes must be pulled out of the two rubber sleeves.

When installing, it is important that the rubber buffers are properly seated to prevent rattling. Replace damaged rubber buffers.

Removal and installation of the rear hoods of Sedans and Convertibles is carried out as before.

As hoods of earlier types are not interchangeable with the new ones, they will continue to be available as spare parts.

Rear Hood Lock Removal and Installation



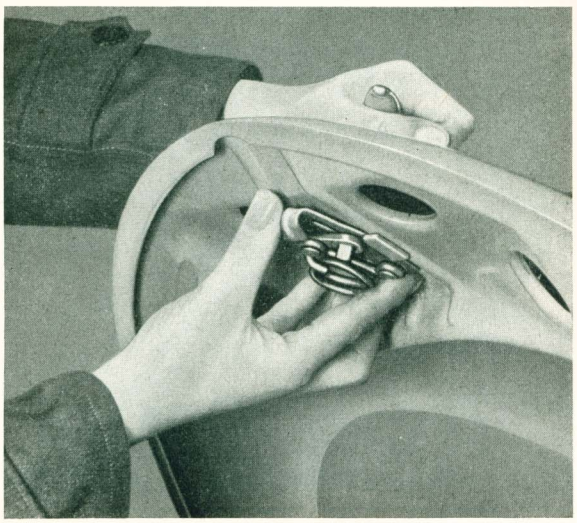
Removal

1 - Lift the rear hood.

2 - Remove retaining nut from inside of hood.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

3 - Hold the lock and pull out handle and escutcheon.



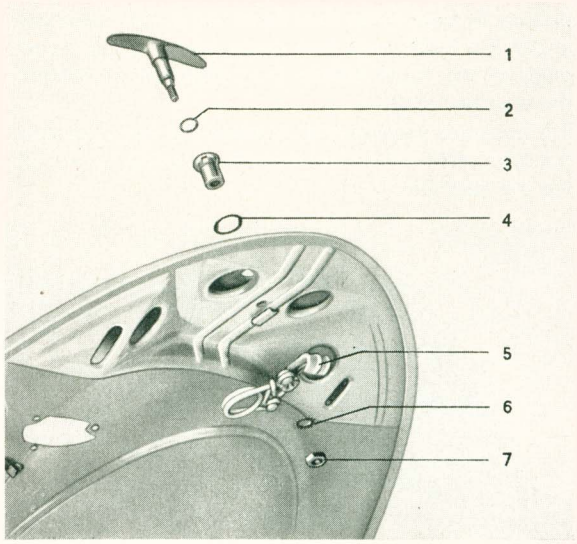
Installation

Installation is accomplished by reversing the removal procedure, but the following points should be observed:

1 - Check condition of gaskets and replace as required.

2 - Position hood lock in the guide on the inside of the hood and insert complete handle from the top.

3 - Do not overtighten the nut, allowing a free movement of the lock.



1 - Hood handle
2 - Gasket
3 - Escutcheon
4 - Gasket
5 - Hood lock
6 - Lock plate
7 - Nut

Rear Hood Weatherstrip

In cases where the weatherstrip lip does not make perfect contact with the rear hood, exhaust fumes are likely to pass into the engine compartment and thence into the interior of the Coupé when the heating is turned on.

From Chassis No. 998 255 onward, a weatherstrip with reinforced lip is used in current production which renders any ingress of exhaust fumes impossible. This weatherstrip, obtainable under Part No. 141 827 705, should be installed if found necessary.

In any case, the sealing of the weatherstrip lip against the hood should be checked. The sealing is perfect, if French chalk, spread along the hood gap at high engine speed, does not enter the engine compartment.

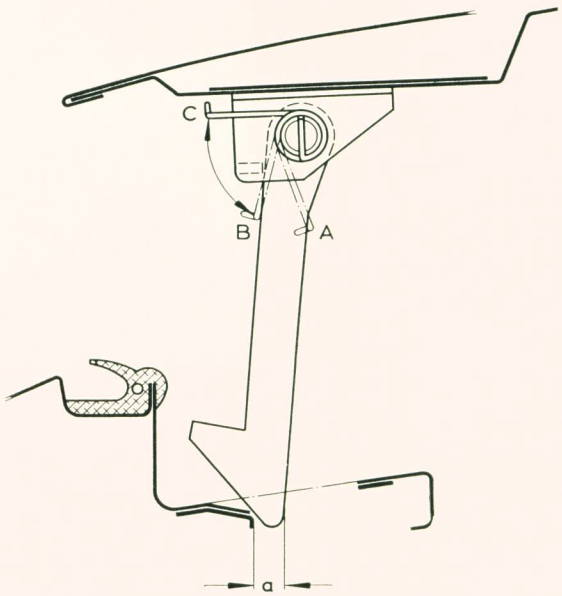
In this connection it is good practice to pull out the exhaust tail pipes to a length of 200 mm (7.9") as measured from their clamps; the standard length is about 170 mm (6.7"). Thus the air around the hood will be less contaminated with exhaust fumes.

Front Hood Safety Hook

Compliance with the following conditions will provide sufficient safety against an accidental opening of the front hood:

When the safety hook (Spare Part No. 141 823 485) is placed on the lock carrier, the distance between the front edge of the opening and the rear side of the hook is not to exceed a maximum of 7 mm (a).

Whenever this maximum is exceeded, the spring must be given a greater initial tension. This is done as follows:



a - Lift the spring (A) off the hook, thus relieving the tension (B).

b - Bend the spring upward until it is in a horizontal position, thus providing increased tension (C).

c - Cock the spring again and place it behind the safety hook (A).

Attention!
If in spite of this measure, dimension (a) is not reached on account of the safety hook movement being limited in front by the stop, this stop has to be filed down a little or else the safety hook has to be removed and recessed at the stop contact point. Furthermore, the hook bracket at the hood should be checked and, if necessary, bent into proper position.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Front Bumper Removal and Installation

Removal

1 - Remove the bumper bolts and nuts and take off bumper, reinforcement plates and overriders.

2 - Lift front hood and remove the spare wheel.

3 - Remove bumper bracket bolts on both sides and pull out the brackets from the front apron of the body.

4 - Take off bumper bracket grommets.

Installation

The following points should be observed when installing the front bumper.

1 - Check condition of bumper bracket grommets and replace as necessary. Position grommets in the front apron.

2 - Insert the bumper brackets at the correct sides and bolt them into place.

3 - Attach the bumper to the brackets. The overriders are attached to the outer bolts.

Rear Bumper Removal and Installation

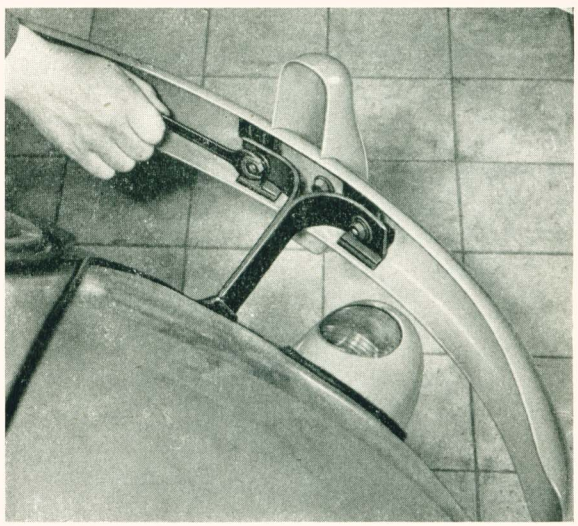
Removal

1 - Remove bumper bolts and nuts and take off bumper and the four reinforcement plates.

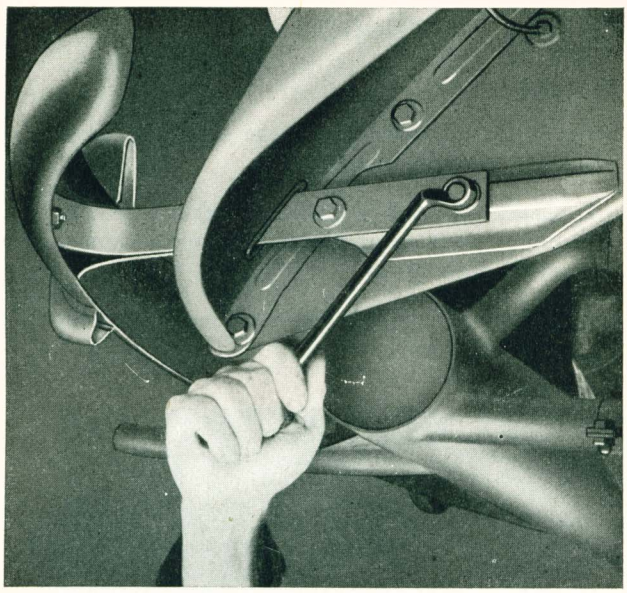
2 - Remove overrider mounting bolts.

3 - Remove bumper bracket bolts on both sides and withdraw the brackets.

4 - Remove bumper bracket grommets.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



Installation

The following points should be observed when installing the rear bumper:

1 - Check condition of bumper bracket grommets and replace as necessary. Position grommets in rear fenders.

2 - Insert the bumper brackets at the correct sides and bolt them into place.

3 - Attach the overriders to the bumper and install the bumper.

Bumpers

(Karmann Ghia Models)

From Chassis No. 1 158 165, Body No. 3930, three-piece bumpers are being used on the Karmann Ghia Coupé in place of those made in one piece. The overriders have been modified at the same time. They are now open toward the body and have only one welded-in mounting plate instead of two.

The following parts are required for the installation of the new type bumpers and overriders:

Front:

1 Bumper center piece, front	Part No. 141 707 109
1 Bumper outer piece, front left	Part No. 141 707 113
1 Bumper outer piece, front right	Part No. 141 707 114
4 Bolts for bumper connection	Part No. 11 707 191 a
4 Nuts M 8	Part No. N 11 008 3
4 Lockwashers B 8	Part No. N 12 008 2
1 Overrider, front left	Part No. 141 707 155 A
2 Spacers	Part No. 141 707 121
2 Screws BM 8 × 75	Part No. N 10 375 1
4 Rubber beads	Part No. 141 707 241
2 Bumper brackets, front	Part No. 141 707 135 a

Rear:

1 Bumper center piece, rear	Part No. 141 707 309
1 Bumper outer piece, rear left	Part No. 141 707 313
1 Bumper outer piece, rear right	Part No. 141 707 314
4 Bolts for bumper connection	Part No. 11 707 191 a
4 Lockwashers B 8	Part No. N 12 008 2
4 Nuts M 8	Part No. N 11 008 3
1 Overrider, rear left	Part No. 141 707 335 A
1 Overrider, rear right	Part No. 141 707 336 A
2 Spacers	Part No. 141 707 121
2 Screws BM 8 × 75	Part No. N 10 375 1
4 Rubber beads	Part No. 141 707 241
1 Bumper bracket, rear left	Part No. 141 707 335
1 Bumper bracket, rear right	Part No. 141 707 336

Installing new type overriders on earlier front bumper:

1 - Remove bumper.

2 - Remove overriders.

3 - Replace old bumper brackets by the new ones (Part No. 141 707 135 a).

4 - Hold the new overrider in position and mark the fixing hole on the bumper. Drill the hole.

5 - Insert the 2 spacers (Part No. 141 707 121) when attaching the overriders.

Except for point 3, the aforementioned procedure also applies to the installation of new type overriders on earlier rear bumpers.

Installing earlier overriders on new type bumpers (front and rear):

1 - Screw the new bumper together, using the intermediate holes only.

2 - Hold the earlier overriders in position and file the upper and lower fixing holes to register with those in the overriders.

3 - Attach the overriders.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Door Removal and Installation

Removal

1 - Remove the two check rod retaining screws from the door hinge pillar.

2 - Remove the rubber plugs from the door hinge to gain access to the inner hinge screws.

3 - Remove the door hinge attaching screws from the pillar.

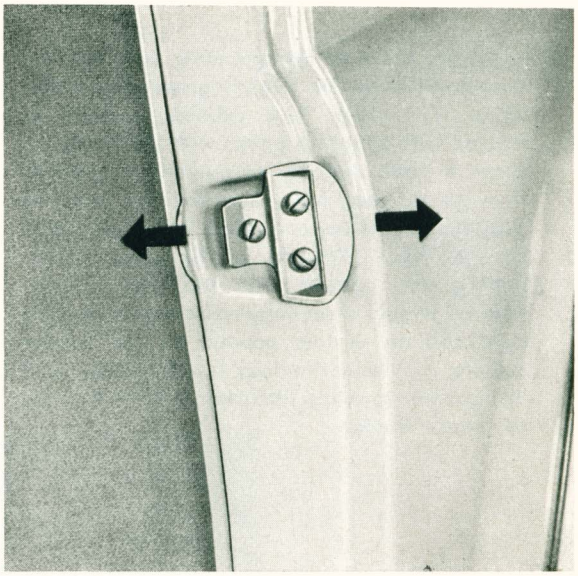
4 - Lift off the door.

Installation

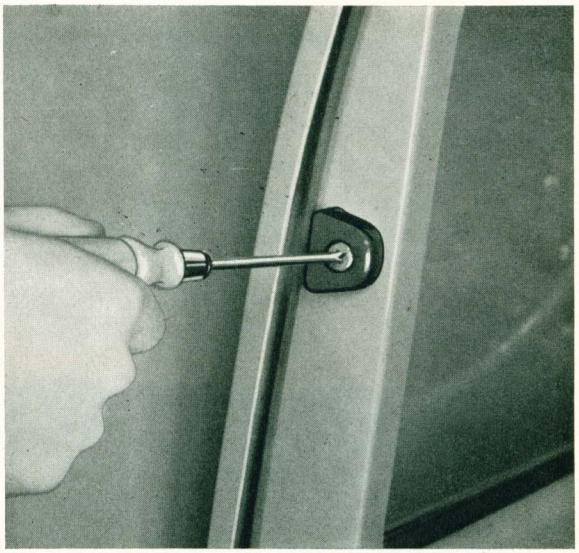
This is accomplished by reversing the removal procedure, but the following points should be observed.

1 - Check condition of door weather strips, replace as necessary. Cement the new weather strips into place, using VW Compound D 12.

2 - Attach the door to the pillar and make sure the door is properly aligned in the door opening. Do not adjust doors by springing or bending until it is determined that proper door fit cannot be obtained by adjustment at the rubber buffers and striker plate.



3 - Check door rubber buffers for wear, replace as necessary.



Note:
Adjustable rubber buffers are installed from:

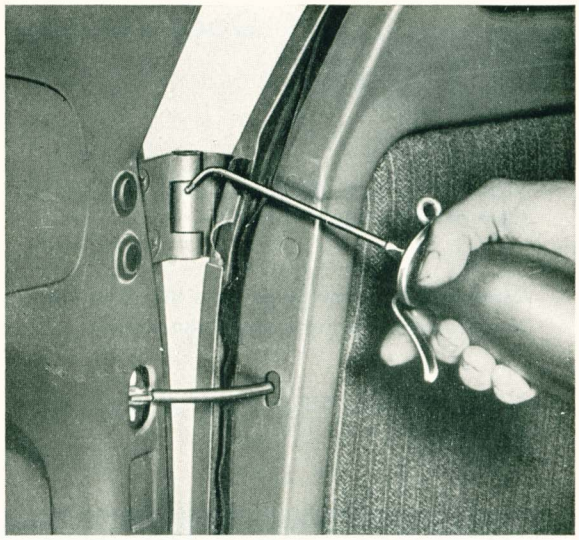
	VW Sedan	VW Convertible
Chassis No.	1-441708	1-448117
Body No.	380257	12410

The door rubber buffers are subject to natural wear, necessitating an adjustment by loosening the Philips head screws and horizontally shifting the buffers to the required position. With the screw tightened, the serrations in the mounting parts avoid an accidental movement of the buffers. The adjustable buffers cannot be installed in earlier cars.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

If an adjustment of the buffers no longer eliminates a door rattle, oversize buffers may be installed (obtainable from the factory).

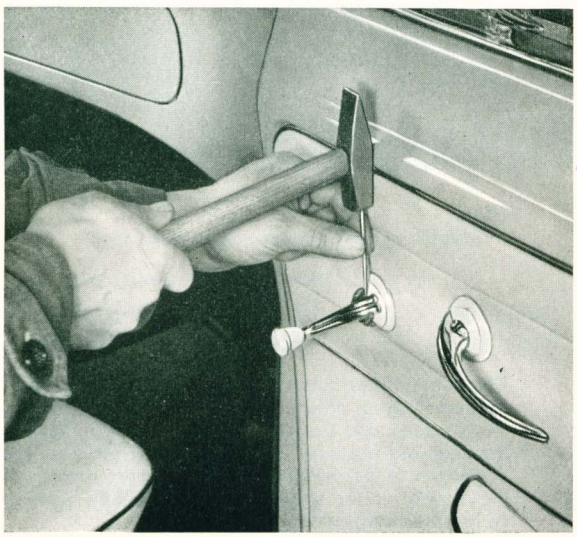
4 - Lubricate the door hinges after dust and soil have been removed. Slightly grease the striker plate. The door lock cylinder should be treated with graphite, never with oil or grease. Blow a small quantity of powdered graphite through the key hole. Dip the key into the graphite, insert key and move it back and forth several times. Prevent oil or grease from getting into contact with the door rubber buffers. Should a squeaky noise occur, apply a light coating of talc powder to the rubber buffers. Also treat the door weather strips with talc powder to retain the original flexibility and to reduce friction.



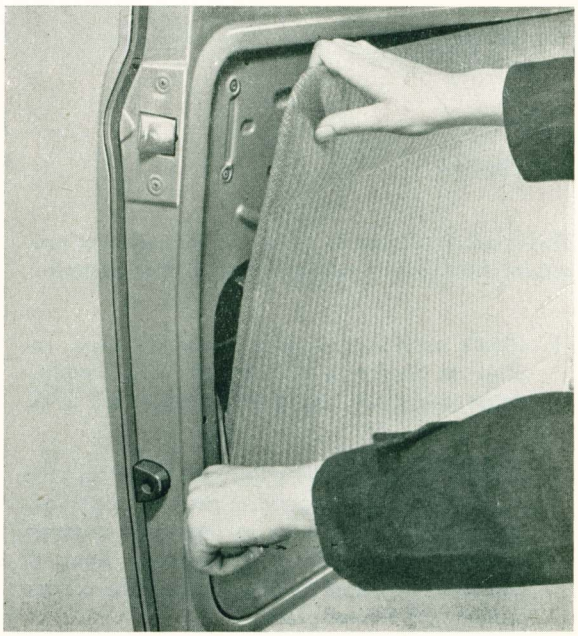
Door Check Rod Removal and Installation

Removal

1 - Press down the escutcheon plates of window regulator handle and door handle, drive out the pins and take off the handles.

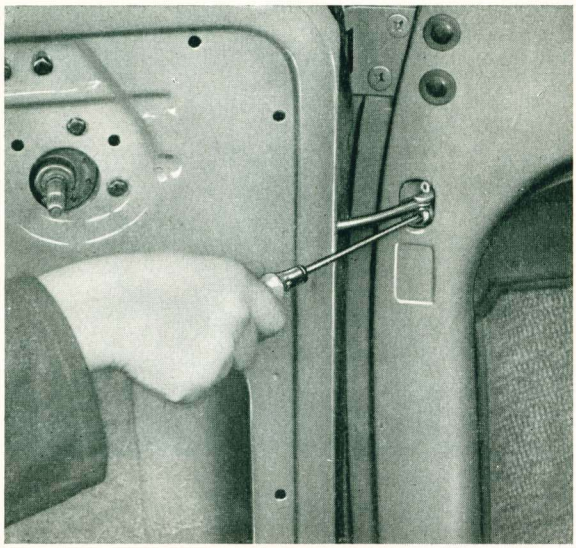


2 - To remove the trim panel, release the retaining clips by prying the panel away from the door. Care must be exercised not to damage the paint.

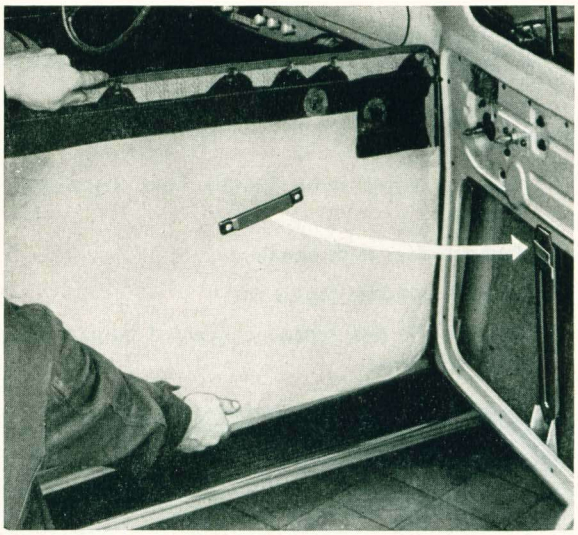


3 - Take off the escutcheon springs and rubber inserts.

4 - Remove the two check rod retaining screws from the door hinge pillar.

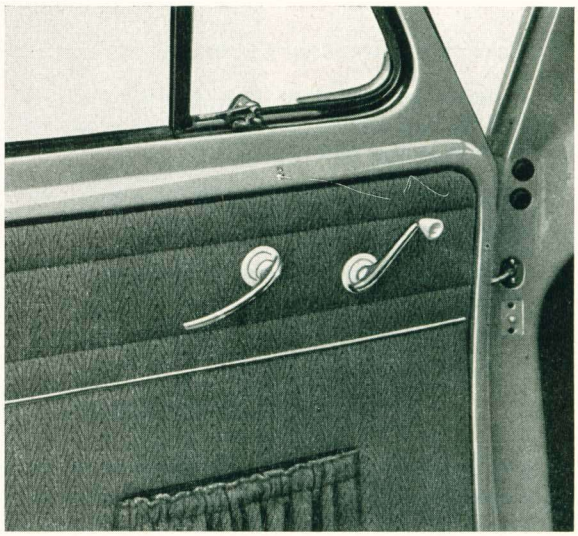


5 - Remove the cotter pin and take off check rod rubber cushion and washer.



3 - When reinstalling the door trim panel, make sure that the oiled paper at the bottom is placed over the edge of the inner door panel to allow water to drain.

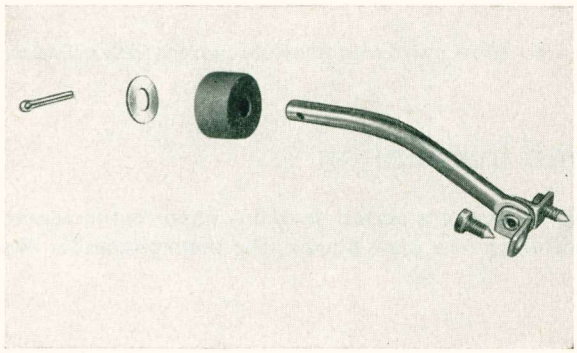
4 - Position the handles as shown below.



Installation

To reinstall the unit, proceed in reserve order and observe the following points:

1 - Insert the check rod through the slot in the door and fit the parts in the correct order.



2 - Engage the arm rest bracket with the door inner panel center bar as shown by the arrow.

5 - Lightly oil the door check rod joint. A few drops of oil on the check rod will eliminate a squeaky noise at the leather washer.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Door Lock Removal and Installation

Removal

1 - Remove inner door handle and regulator handle.

2 - Remove door trim panel.

3 - Remove window regulator.

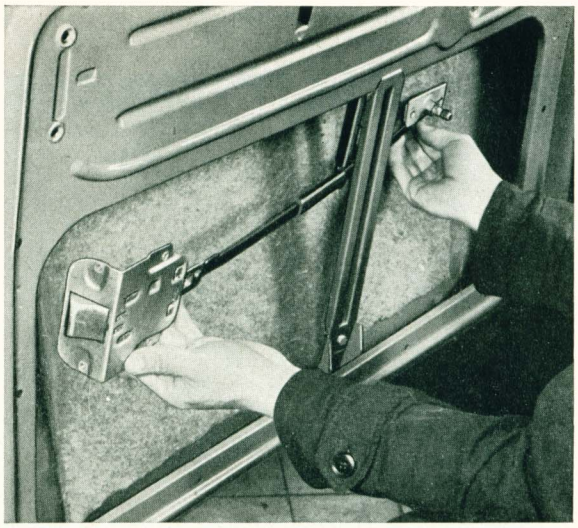
4 - Remove the two screws concealed behind the weather strip.

5 - Take off the outer door handle and rubber seal.

6 - Remove the four door lock attaching screws and the two screws holding the remote control bracket to the door panel.

7 - Remove the rear glass-run channel attaching screw.

8 - Lift up the glass and take off door lock and remote control assembly.



Installation

To install the door lock, reverse the preceding operations. Observe the following points:

1 - Check all components, replace damaged parts.

2 - Clean the lock and grease all moving parts with Universal Grease VW - A 052.

3 - Make sure the rubber sleeve on the remote control rod is at the point where the rod is guided in the inner door panel. The guide plate should bear slightly preloaded on the remote control rod to avoid a rattling during operation.

4 - Blow powdered graphite into the lock cylinder.

Glass Removal and Installation

All glass panels are of safety glass and can be replaced. To assure a perfect seal, it is important to repair or straighten damaged or bent window frames before installing new glass panels. The seating faces for the weather strips and seals must be smooth and clean.

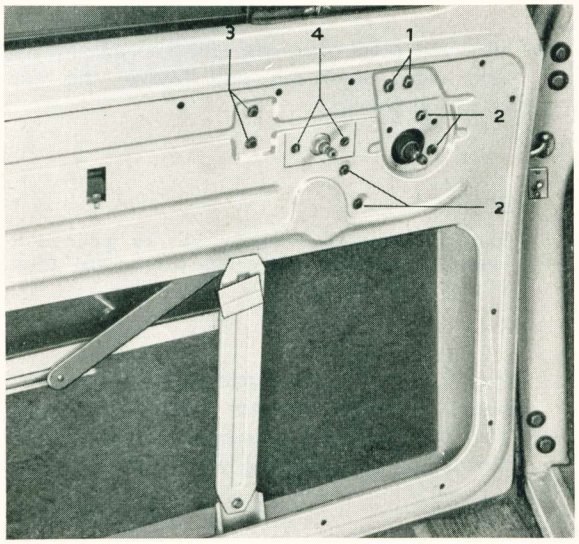
Vent Wing Removal and Installation

Removal

1 - Remove inside door handles.

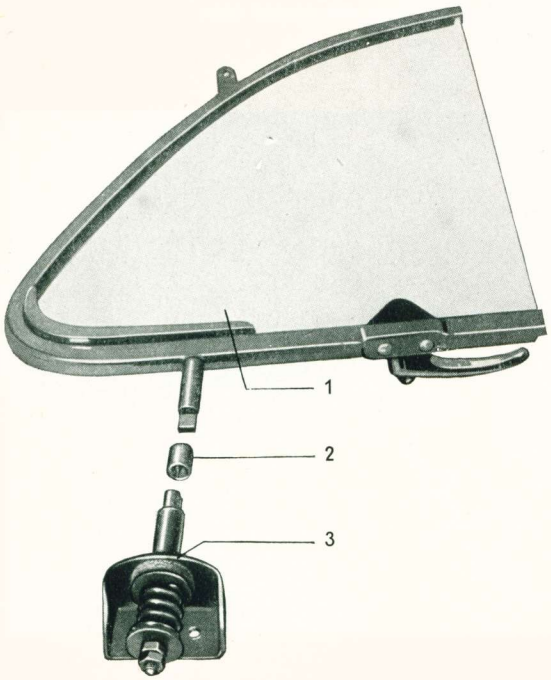
2 - Take off the escutcheon springs and rubber inserts.

3 - Remove the two screws holding the vent wing check-stay in place.



1 - Vent wing check-stay screws
2 - Window regulator screws
3 - Front glass-run channel screws
4 - Door lock remote control screws

4 - Draw the check-stay and clutch sleeve down and out through opening in bottom of door panel.



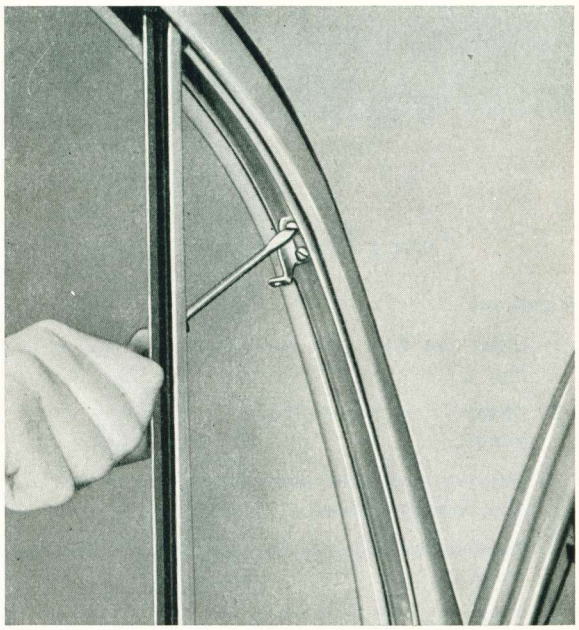
1 - Vent wing
2 - Clutch sleeve
3 - Check-stay

5 - Remove the rivet at the vent wing upper retaining bracket.

6 - Turn up the vent wing handle and remove the vent wing.

7 - Remove the vent wing weather strips from the door window frame.

8 - Remove screws from vent wing upper retaining bracket and take off the bracket.



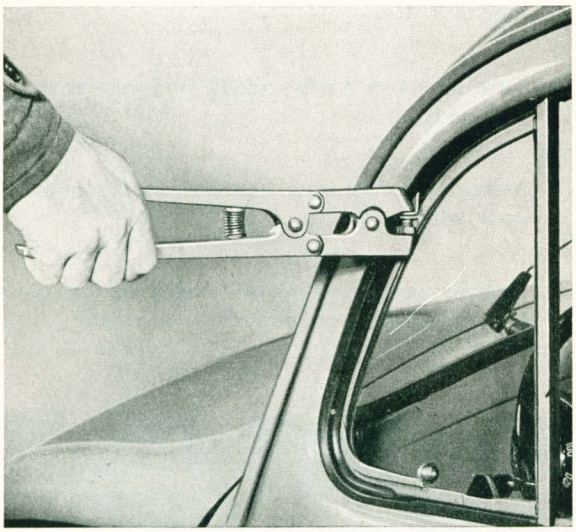
Installation

1 - Install the vent wing retaining bracket.

2 - Check condition of weather strips and place them into position.

3 - Place the vent wing in the door window frame and rivet it to the upper retaining bracket, using an ordinary riveting tool, as shown on the next page.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



4 - Slide the check-stay and clutch sleeve on the vent wing pivot pin and tighten the two attaching screws.

Note:

The spring-loaded check-stay can be adjusted to ensure that the vent wing can be opened and closed without excessive force.

5 - Install rubber inserts, escutcheon springs, trim panel, window regulator handle and inner door handle. Check all mechanisms for proper functioning by operating the handles.

Door Vertical Sliding Glass Removal and Installation

Removal

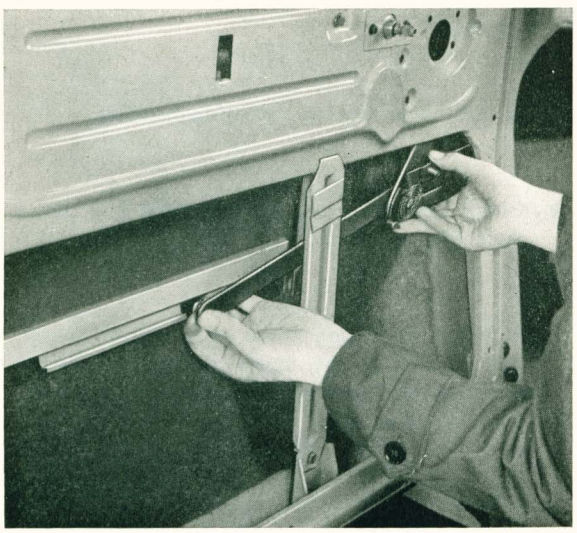
1 - Open the door and run window all the way down.

2 - Remove regulator handle and inner door handle.

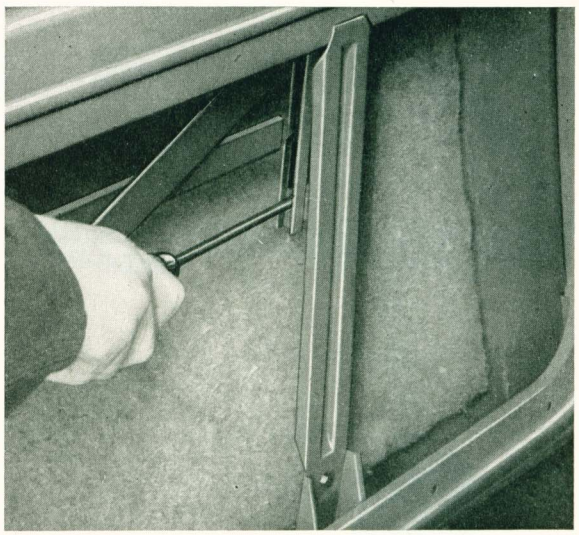
3 - Remove door trim panel, escutcheon springs and rubber inserts.

4 - Remove the four window regulator attaching screws.

5 - Press the regulator towards the door outer panel and pull it out through opening in bottom of inner door panel, after having detached the roller arm from the retainer channel.

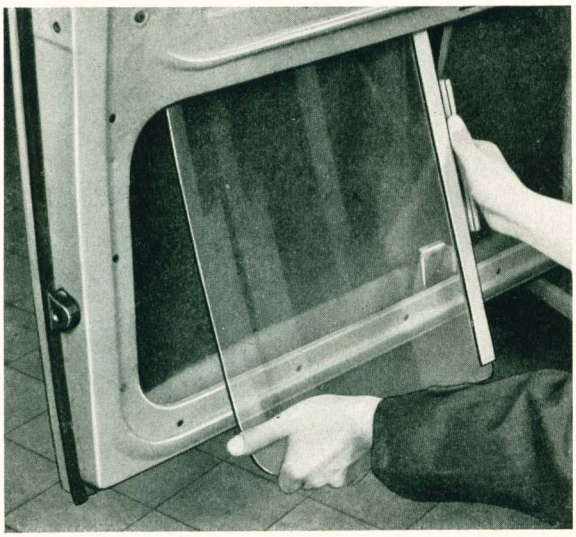


6 - Remove the screw that attaches the front glass-run channel to the inner panel center bar. Remove the screw at the bottom of the center bar and take off center bar.



7 - Remove the two screws that attach the front glass-run channel to the inner door panel.

8 - Slide the glass down and tilt it for removal as shown on the following picture.



Installation

1 - Insert the door window glass vertically, turn it 90 deg. and slide it up in the glass-run channels.

2 - Install the door inner panel center bar and insert and tighten all front glass-run channel attaching screws.

3 - Grease all moving joints of the regulator mechanism, using Universal Grease VW-A 052.

4 - Lower the glass 2/3 of its travel and connect the roller arm to the glass retainer channel.

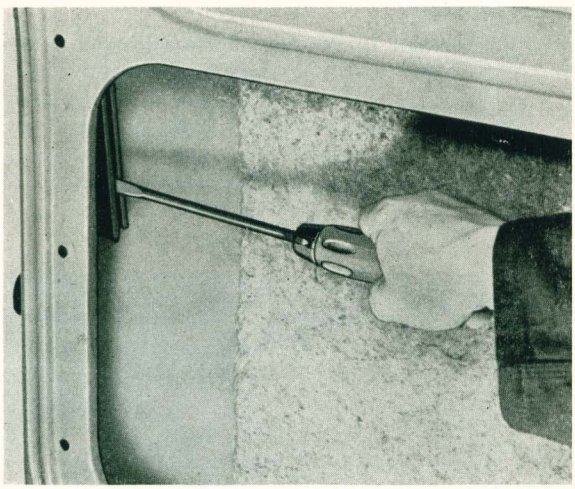
5 - Install the regulator and screw it into place.

Removal and Installation of Glass-run Channel Retainers

Removal

1 - Remove door vertical sliding glass.

2 - Remove the rear glass-run channel and retainer attaching screws and take off glass-run channel and retainer.



3 - Remove the front glass-run channel retainer attaching screws and pull down the glass-run channel and retainer.

4 - Lift off the weather strip clips at the window compartment opening by means of a screwdriver and remove the weather strip and clips and, with the De Luxe Model, also the garnish moulding as an assembly.

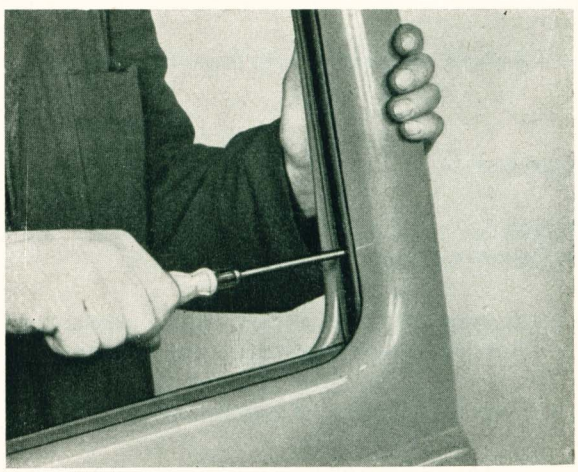
Installation

1 - Check the condition of the weather strip for the window compartment opening. Replace should it be found necessary.

2 - Attach the front glass-run channel and retainer to the door.

3 - Clip the weather strip to the window compartment opening (with the De Luxe Model also the garnish moulding).

4 - Install the rear glass-run channel and retainer.



5 - Install the vertical sliding glass.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Windshield Removal and Installation

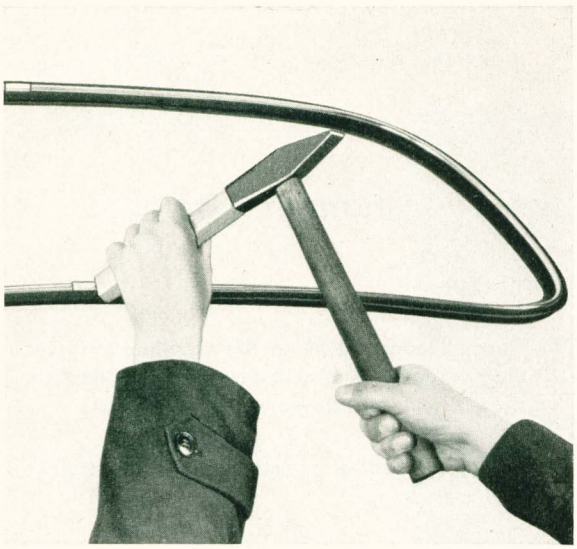
Removal

1 - Fold the windshield wiper arms forward.

2 - Remove windshield and windshield weather strip by pushing outward, beginning at one of the upper corners.

De Luxe only

3 - Drive the upper and lower sleeves from the garnish moulding ends.



4 - Remove the garnish moulding halves from the weather strip.

Standard and De Luxe

5 - Remove the weather strip from the windshield.

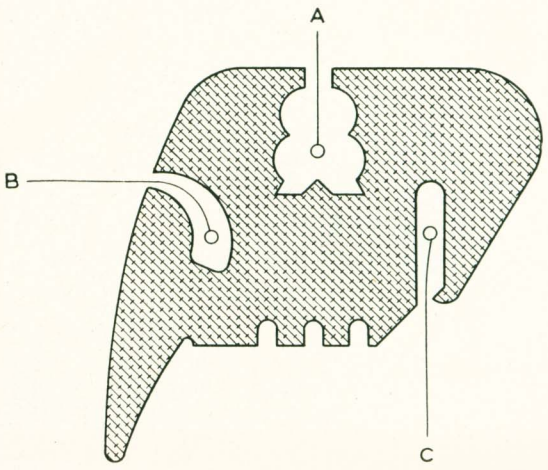
Installation

Installation is accomplished in reverse order, but the following points should be observed:

1 - Remove all traces of old sealing compound from the windshield frame, using benzine.

2 - Examine condition of weather strip.

3 - Place weather strip around windshield edge. The ends of the weather strips should meet in the center of the upper windshield side.



Section of windshield weather strip

A - Windshield channel

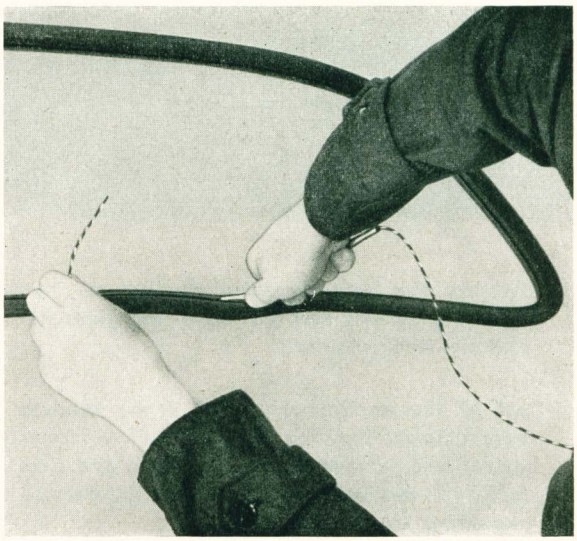
B - Garnish moulding channel

C - Windshield frame channel

Installing Garnish Moulding (De Luxe)

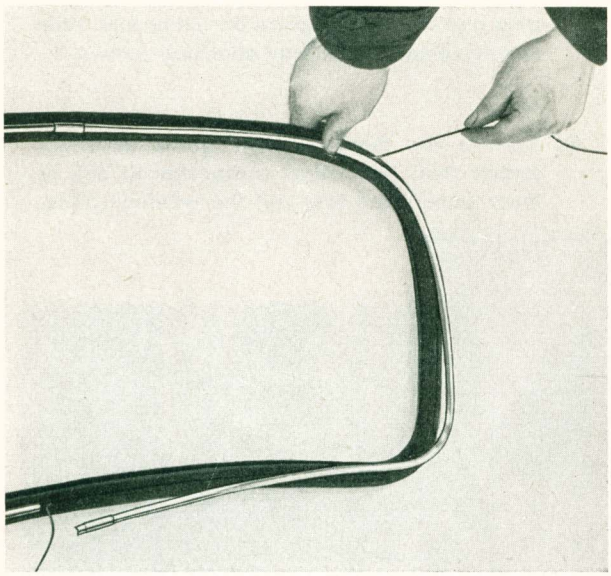
4 - Fit a strong cord around the channel for the garnish moulding.

This is done by means of a piece of tube, one end of which should be flattened. Insert the flat end into the channel and move it completely around the windshield as shown below. The cord, passing through the tube, is thus embedded in the channel as the tube is moved.



The cord should cross in the center of the upper or lower windshield side.

5 - First push one of the two moulding halves completely into place and then the other. Starting at the point where the cord ends cross, slowly pull out the cord while pushing the garnish moulding into place by hand until operation is complete.



6 - Install the two garnish moulding sleeves.

Windshield Installation

7 - Fit a strong cord around the outer channel of the strip. The cord ends should cross in the center of the bottom windshield side.

8 - Coat the outer circumference of the weather strip with VW Window Cement D 10.

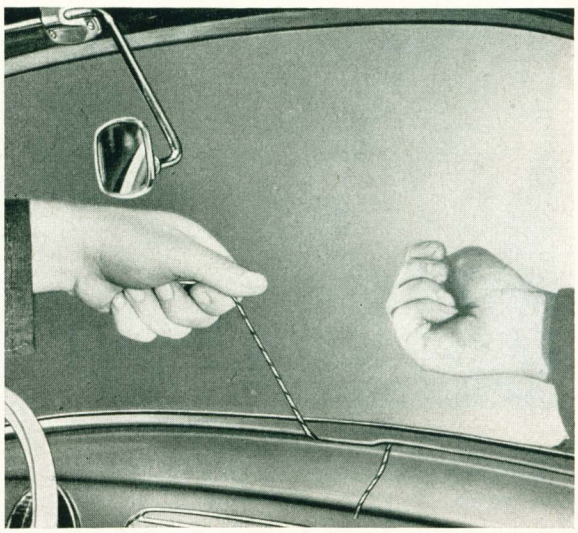
9 - Coat the bottom corners of the windshield frame with VW Window Cement D 10.

10 - Position the glass against the windshield frame from outside the body. The cord ends must hang out inside the body.

11 - The installation of the glass requires two persons.

A helper inside the body pulls at one end of the cord parallel to the glass and around the frame to force the lip of the weather strip over the frame.

During this operation, the glass must be tapped into place from outside the body, following the pull of the cord.



12 - Remove excess sealing compound and clean the windshield glass. Test the windshield for leakage.

Note:

From August 1957 an enlarged windshield is installed. The front door pillars are narrower. The installation procedure remains the same as with the previous windshield.

Removal and Installation of Side Window and Rear Window

These operations are nearly the same as those outlined under "Windshield Removal and Installation". The garnish mouldings are of one piece.

From Chassis No. 1-454 951 the rear window center bar has been omitted and the curved glass panel is of safety glass (formerly plain plate glass).

Note:
If multiple sheet is used in lieu of single sheet glass, the windows should be pushed into place. The use of a rubber hammer may damage the glass.

Note:
From August 1957 an enlarged rear view window is installed. The installation procedure remains the same as with the previous rear view window.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

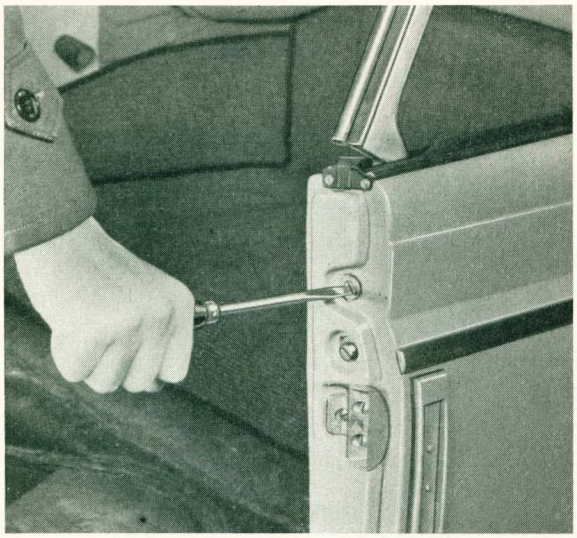
Rear Side Window and Regulator Assembly on Convertible

Removal

1 - Raise the top.

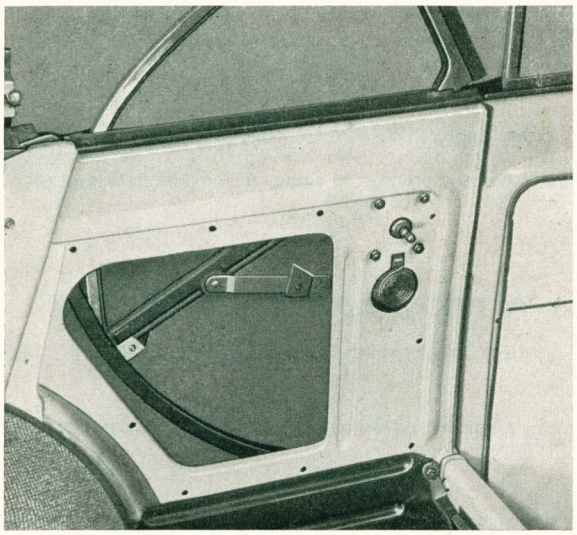
2 - Remove rear seat and back.

3 - Take off the rubber plug above the striker plate and remove the two window anchor bracket screws.



4 - Lower the window by two or three handle turns.

5 - Remove regulator handle and trim panel.

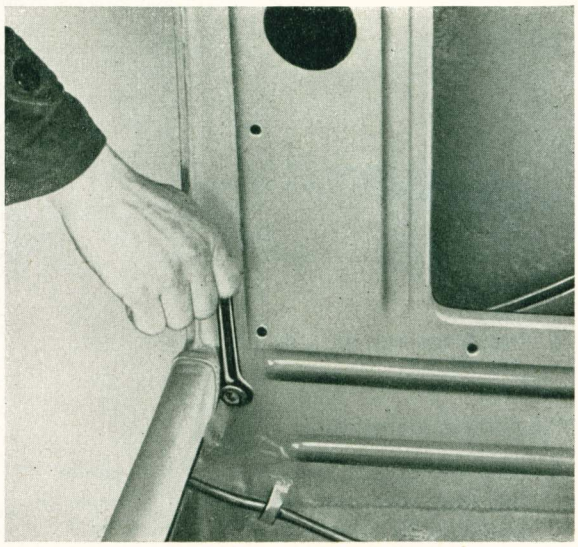


6 - Remove the four window regulator attaching screws. Press the regulator towards the outer panel and pull it out through opening in bottom of inner panel, after having detached the roller arm from the glass retainer channel.

7 - Lift out the window glass.

8 - Remove the window compartment weather strip and the rubber piece on either end after having released the three attaching screws.

9 - Remove the three window guide attaching screws (two in window compartment, one at inner panel) and take out the window guide.



Installation

Installation is a reversal of the above procedure, but the following points should be heeded.

1 - Check weather strips and replace when damage is apparent.

2 - Clean and grease window regulator.

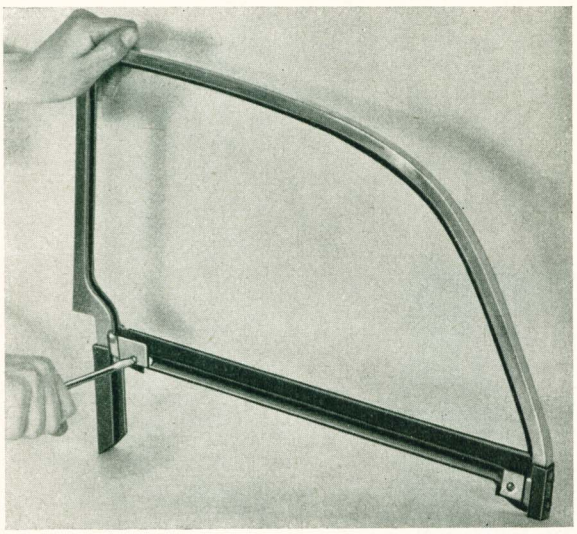
3 - Raise and lower the window to insure that the window travels freely in the channel and that the weather strips seal perfectly.

4 - Coat the weather strips with talc powder.

Rear Side Window Disassembly

1 - Take off the weather strip from the vertical side of the window.

2 - Remove the anchor bracket retaining screws and take off the bracket. Remove the window lift channel and pull out the glass.



3 - Take off the glass weather strips.

Rear Side Window Assembly

Reverse the removal procedure and observe the following points. Check condition of weather strips and replace as considered necessary.

Note:

A - If the window cannot be raised sufficiently so that there is a gap at the door window, proceed as follows:

1 - Remove regulator handle and rear side trim panel.

2 - Lower the rear side window half its travel.

3 - The stop at the roller arm should be shortened (by means of a file) until the window frame is fully aligned to the door window frame. Reinstall trim panel and regulator handle.

B - If the vertical side of the window can be moved too far toward the front when raising the window, proceed as follows:

1 - Remove regulator handle and rear quarter trim panel.

2 - Lower the rear side window half its travel.

3 - Screw a nut (metric 6) on the rear upper regulator attaching screw. If the window then cannot be raised sufficiently, proceed as detailed under A.

4 - Reinstall trim panel and regulator handle.

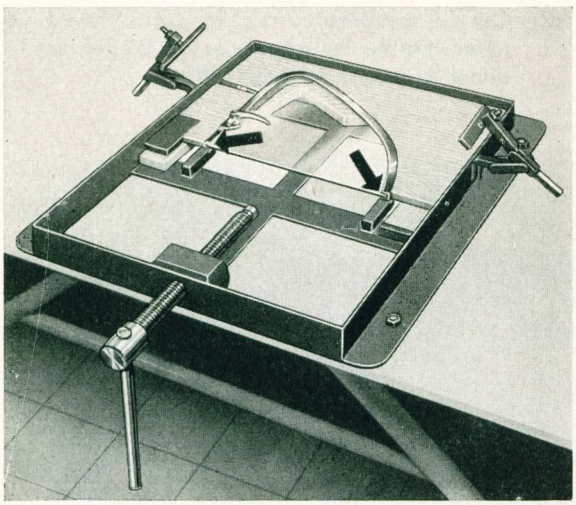
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Removal and Installation of Vent Wing Glass

(Vent Wing Removed)

Removal

1 - Place vent wing in appliance VW 737 so that the glass frame ends come to rest against the shoulders of the supports (see arrows).



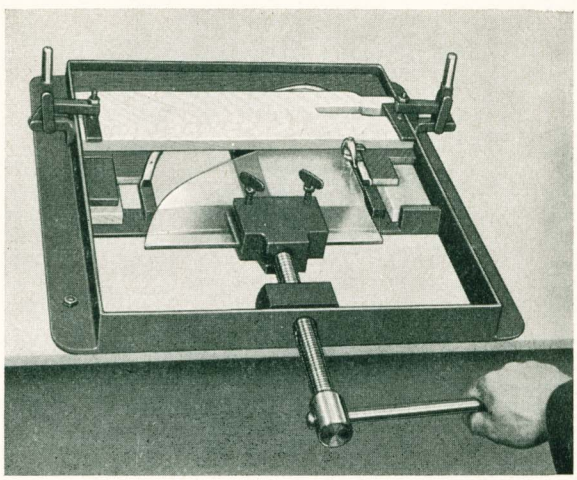
2 - Place glass clamp on the spindle and turn the spindle toward the glass as far as it will go.

3 - Place rubber packings between glass and clamp, one on each side. Insert the pressure plate so that the wing screw ends come to rest in the two sinkings.

4 - Fully tighten the two wing screws by hand.

5 - Place the wooden thrust plate on the vent wing and tighten it in position by means of the two clamps.

6 - Withdraw the vent wing glass by turning the spindle anticlockwise.



7 - Loosen the wing screws and remove the glass.

8 - Release the clamps, take off thrust plate and vent wing frame.

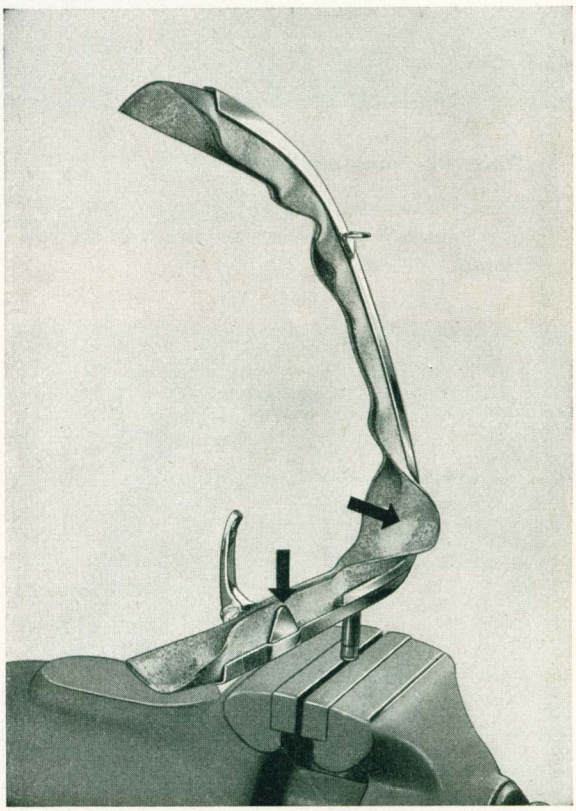
Installation

1 - Remove all traces of old cement at the vent wing handle.

2 - Coat the frame channel at the handle (see left-hand arrow) with VW Cement D 10.

3 - Coat both sides of the weather strip with powdered talc.

4 - Clamp vent wing pivot pin in a vise and place the weather strip in the frame channel as shown below.

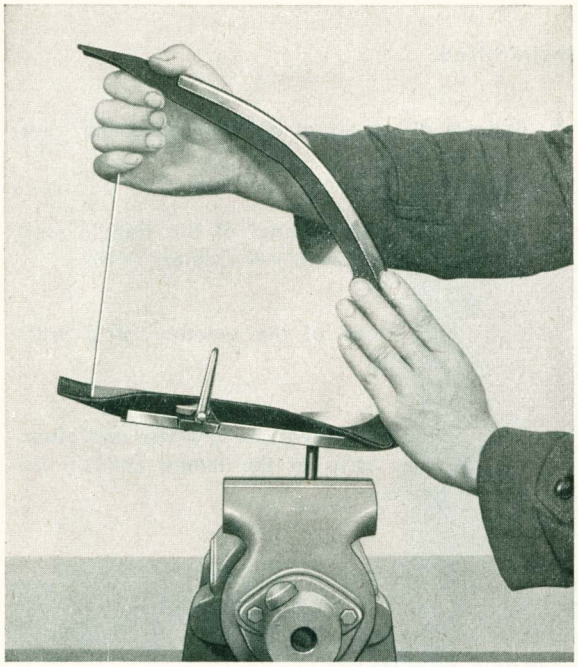


11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Note

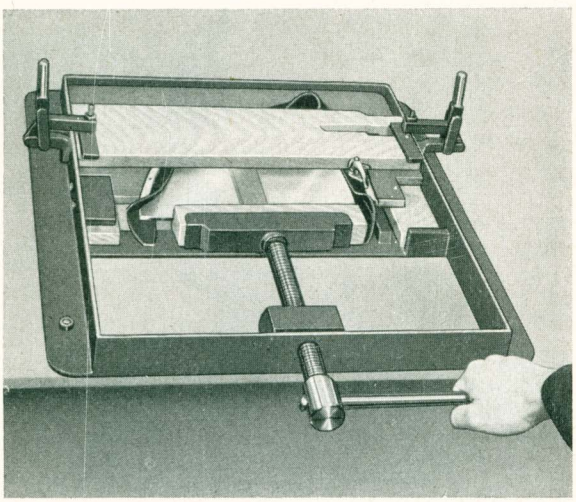
Special care should be taken that the weather strip is not pushed in the channel at the point indicated by the right-hand arrow to avoid the forming of folds when pressing in the glass. It should be made sure that the two triangular plates at the vent wing handle are fully covered by the weather strip.

5 - Slide in the glass as far as it will go by hand pressure. When doing this, support the frame with one hand.



6 - Place vent wing appliance VW 737.

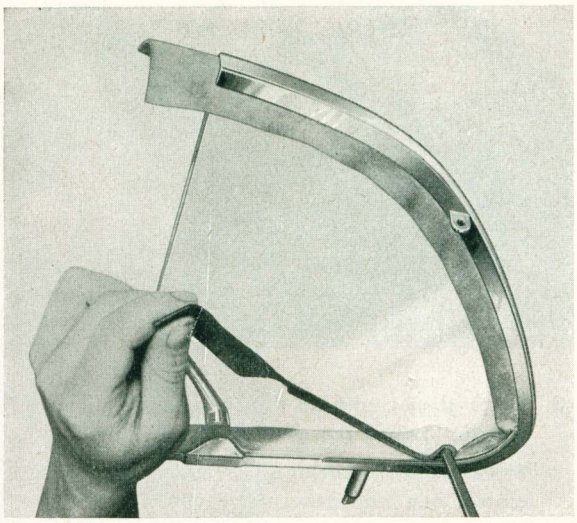
7 - Place the wooden thrust plate on the vent wing and tighten it in position by means of the two clamps.



8 - Place the wooden thrust channel against the glass and press in the glass by turning the spindle clockwise.

9 - Back off the spindle and remove thrust channel. Release the clamps and take off thrust plate and vent wing.

10 - Cut off the surplus rubber. Care should be taken that the cut edge is below 90 degrees to allow the water to drain off.



11 - Check for proper seal by spraying water against the vent wing.

Note

The two adaptors are to be turned by 180 degrees when removing and installing the glass of the opposite vent wing.

Windshield Glass Removal and Installation

(Laminated safety glass)

Removal

1 - Fold the windshield wiper arms forward.

2 - Use a wedge-shaped fiber or hardwood tool to loosen weather strip from body, at the same time spraying glycerin between weather strip and body edge. Carefully push out the windshield together with weather strip, starting at one of the upper corners.

De Luxe only

3 - Drive the upper and lower sleeves from the garnish moulding ends.

4 - Remove the garnish moulding halves from the weather strip.

5 - Work the weather strip off the glass.

Installation

Installation is accomplished in reverse order, but the following points should be observed:

1 - Remove all traces of old sealing compound from the body edge, using a solvent.

2 - Examine condition of weather strip, replace if found necessary.

3 - Work weather strip over the glass. The ends of the weather strip should meet half way between the upper corners.

Note:
Laminated safety glass is marked Sigla, Kinon, or Delog. The glass should be installed so that the designations can be read from outside the car.

Installing Garnish Moulding (De Luxe)

4 - Fit a cord around the channel for the garnish moulding.

This is done by means of a piece of tube, one end of which should be flattened. Insert the flat end into the channel and move it completely around the windshield. The cord, passing through the tube, is thus embedded in the channel as the tube is moved. The cord should cross in the center of the upper or lower windshield side.

5 - First push one of the two moulding halves completely into place and then the other. Starting at the point where the cord ends cross, slowly pull out the cord while pushing the garnish moulding into place by hand until operation is complete.

6 - Install the two garnish moulding sleeves.

Installing Windshield Glass

7 - Insert a cord (about 2—3 mm dia./.08—.12") into the outer groove around the weather strip. The cord ends should hang out in the middle of the lower side.

8 - Coat the outer circumference of the weather strip with VW Window Cement D 10.

9 - Coat the lower corners of the body edge with VW Window Cement D 10.

10 - Coat weather strip lip and body edge with glycerin.

11 - First position the lower edge of the glass against the body opening from outside and exert equal pressure with both hands against the glass to seat it in the body opening. Care should be taken to avoid one-sided pressure.

A helper inside the body pulls at one end of the cord parallel to the glass and around the edge to work the lip of the weather strip over the edge of body opening.

12 - Wipe off surplus cement with alcohol. Check windshield for tightness.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

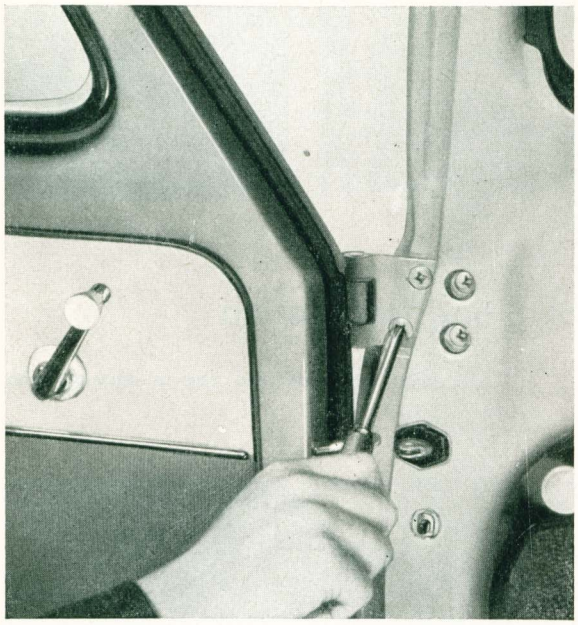
Door Removal and Installation

Removal

1 - Disconnect the check rod from the door hinge pillar by removing the pin.

2 - Remove the rubber plugs from the door hinges to gain access to the inner hinge screws.

3 - Remove the door hinge screws from the pillar.



4 - Lift off the door.

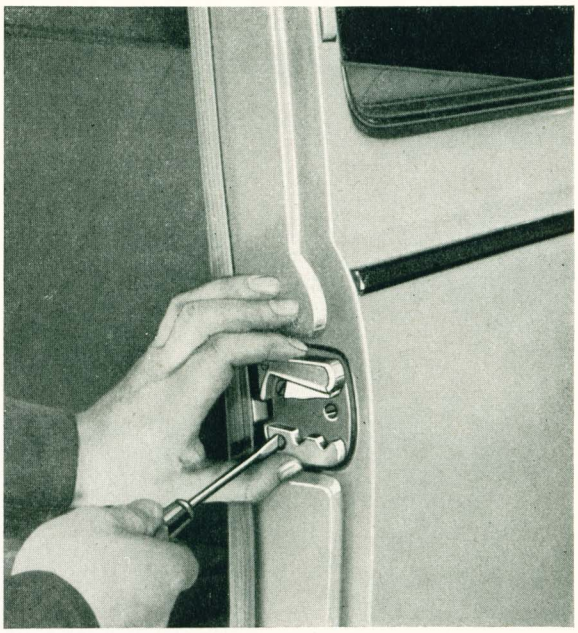
Installation

This is accomplished by reversing the removal procedure, but the following points should be observed.

1 - Check condition of door weather strips, replace as necessary. Cement the new weather strips into place, using VW Compound D 12.

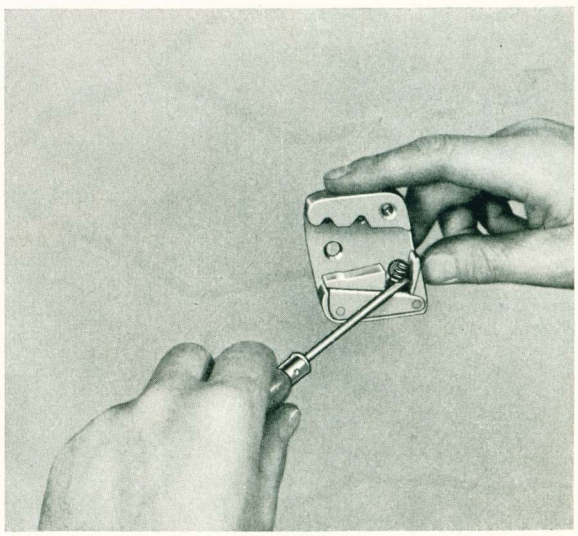
2 - Attach the door to the pillar and make sure the door is properly aligned in the body opening. Do not adjust doors by springing or bending until it is determined that proper door fit cannot be obtained by adjustment at the striker plate.

3 - Adjust striker plate to align door rear edge with rear quarter panel and to assure an easy closing of the door.



Note:

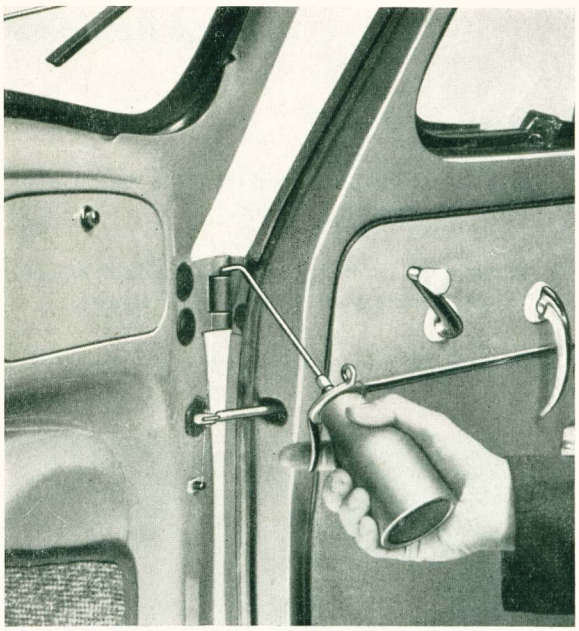
The plastic wedge is wear-resistant and requires no maintenance attention. The plastic wedge spring is replaceable. A new spring should be amply provided with grease before installation.



4 - Lubricate the door hinges after dust and soil are removed. Spread a thin film of grease over the striker plate. The door lock cylinder should

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

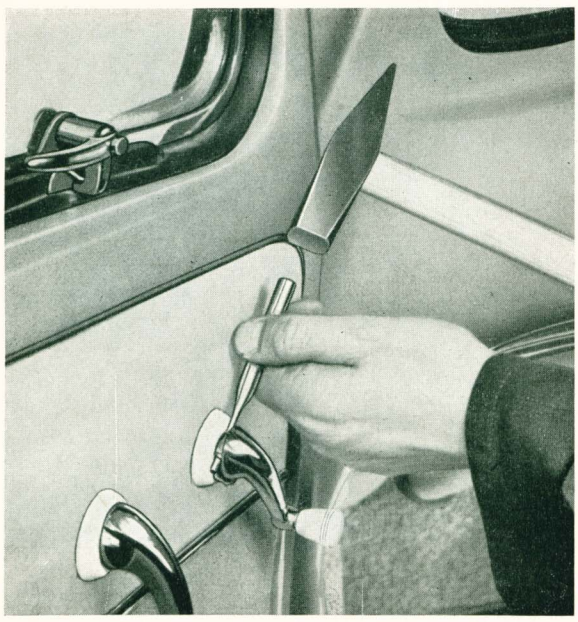
be treated with graphite, never with oil or grease. Blow a small quantity of powdered graphite through the key hole. Dip the key into the graphite, insert key and move it back and forth several times.



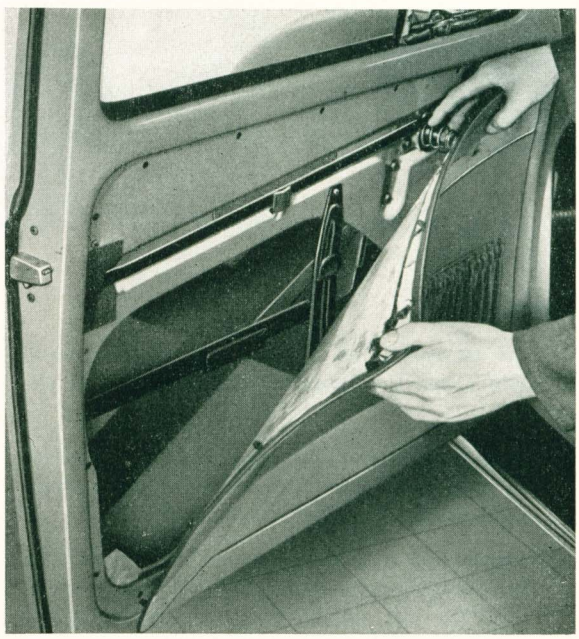
Door Check Rod Removal and Installation

Removal

1 - Press down the escutcheon plates of window regulator handle and door handle, drive out the pins and take off the handles, and escutcheon plates.

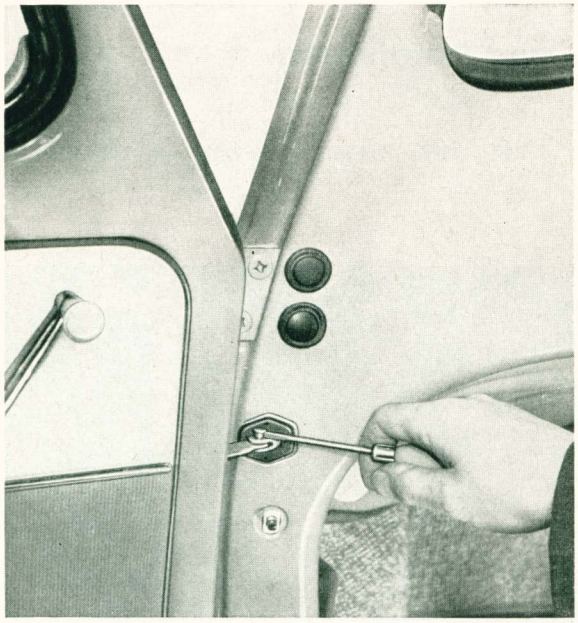


2 - Remove the trim panel by prying it away from the door, unsnapping the concealed fasteners. Care must be exercised not to damage the paint.



3 - Take off the escutcheon springs and rubber inserts.

4 - Remove the check rod pin retaining ring and take off the pin.

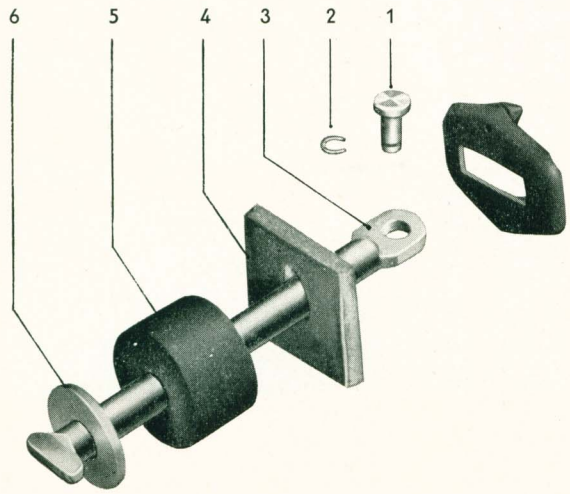


5 - Turn check rod 90° and withdraw rod and rubber cushion from the door shell through the slot in the leather guide plate.

Installation

To reinstall the unit, proceed in reverse order and observe the following points:

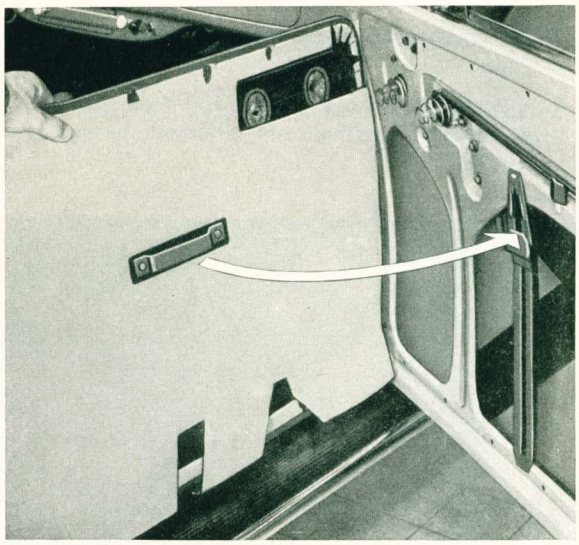
1 - Insert the leather plate from inside the door, slide washer and rubber cushion to check rod end, and push the rod through the leather plate slot.



1 - Check rod pin
2 - Pin retaining ring
3 - Check rod
4 - Leather plate
5 - Rubber cushion
6 - Washer

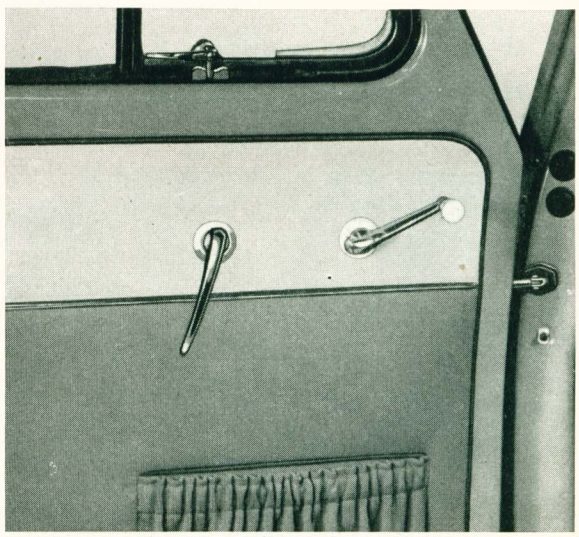
2 - When reinstalling the door trim panel, make sure that the oiled paper extends over the bottom edge of the inner door panel to allow water to drain.

3 - On the nearside door, engage the arm rest bracket with the door inner panel center bar.



4 - Install rubber inserts, escutcheon springs, and door trim panel.

5 - Position the handles as shown below (door handle 16° toward the rear when in the unlocked position). Check for proper functioning by operating the handles.



6 - Lightly oil the door check rod pivot point. A few drops of oil on the check rod will eliminate a squeaky noise caused by friction in the leather plate.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Door Lock Removal and Installation

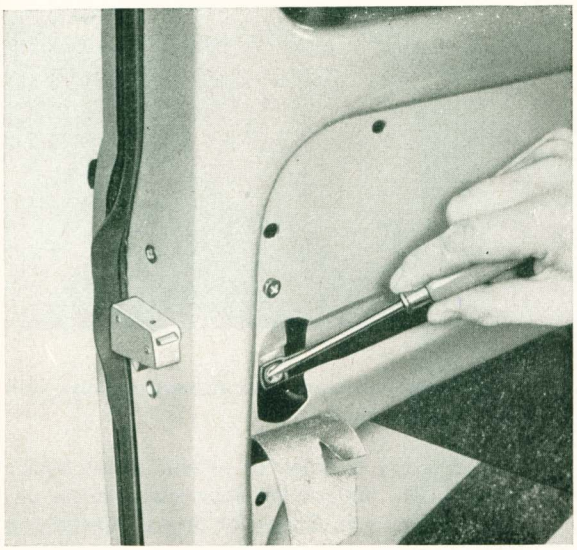
Removal

1 - Remove inner door handle and window regulator handle.

2 - Remove door trim panel.

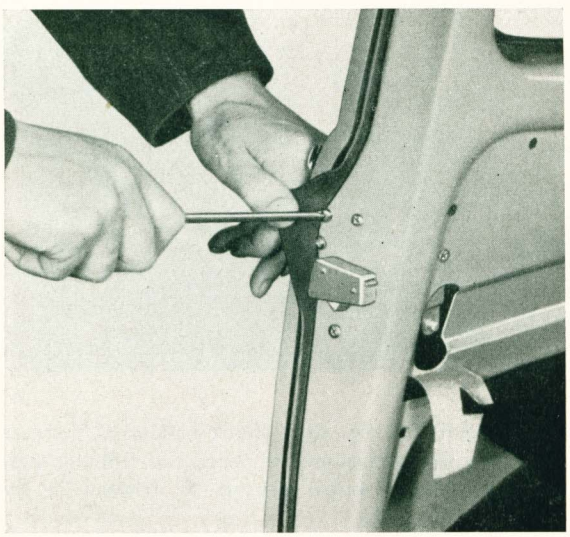
3 - Remove window regulator and lift out sliding glass.

4 - Disconnect remote control rod from lock by removing C-washer, and take off the spring washer.

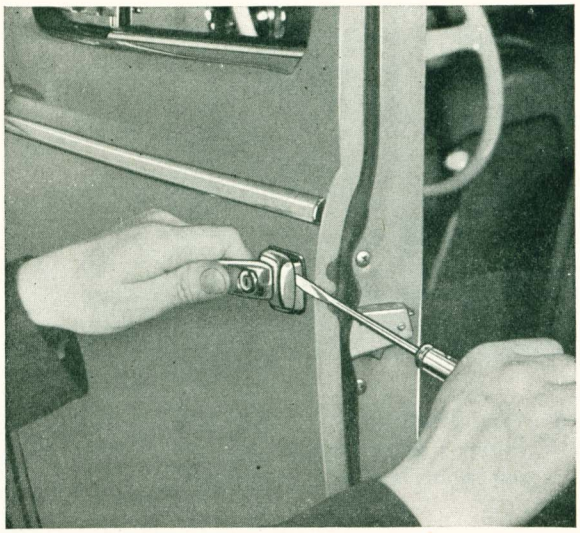


5 - Remove the two screws holding the remote control bracket to the door panel and take off remote control assembly.

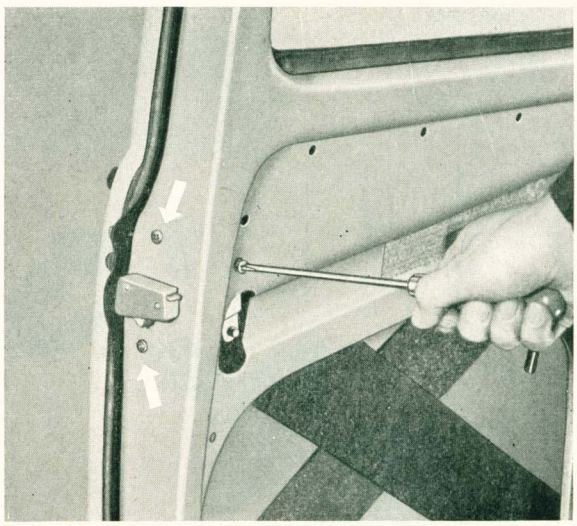
6 - Remove the two outer door handle attaching screws.



7 - Pry off the outer door handle and rubber seal.

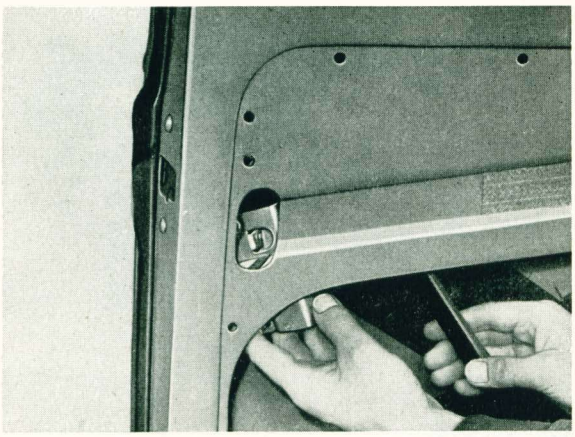


8 - Remove the three door lock attaching screws.



9 - Remove the lowest rear glass-run channel attaching screw.

10 - Take off door lock.



Installation

To install the door lock, reverse the preceding operations and observe the following points.

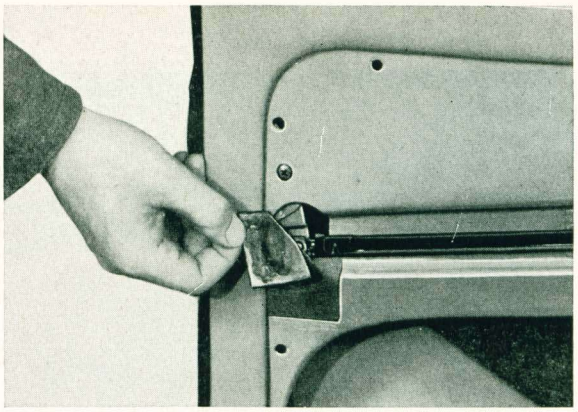
1 - Check all components, replace as necessary.

2 - Clean the lock and remote control and grease all moving parts with Universal Grease VW — A 052.

3 - Place remote control rod in rubber-covered support.

4 - Install spring washer prior to connecting remote control rod to door lock.

5 - Do not forget to cement leather protection cover over the door lock opening.



6 - Blow powdered graphite into the lock cylinder.

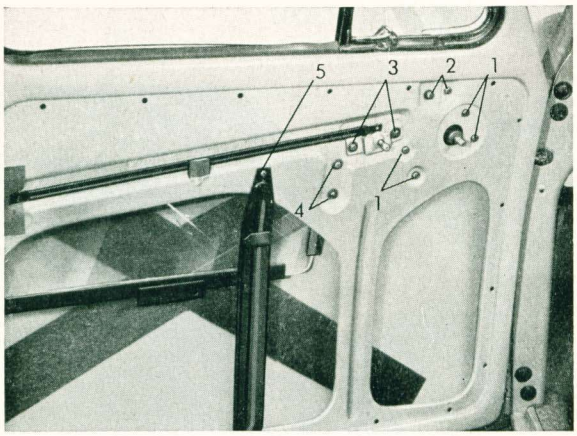
Door Vertical Sliding Glass Removal and Installation

Removal

1 - Run window down two-thirds of its travel.

2 - Remove regulator handle and inner door handle.

3 - Remove door trim panel, escutcheon springs and rubber inserts.



1 - Regulator screws

2 - Vent wing check-stay screws

3 - Door lock remote control screws

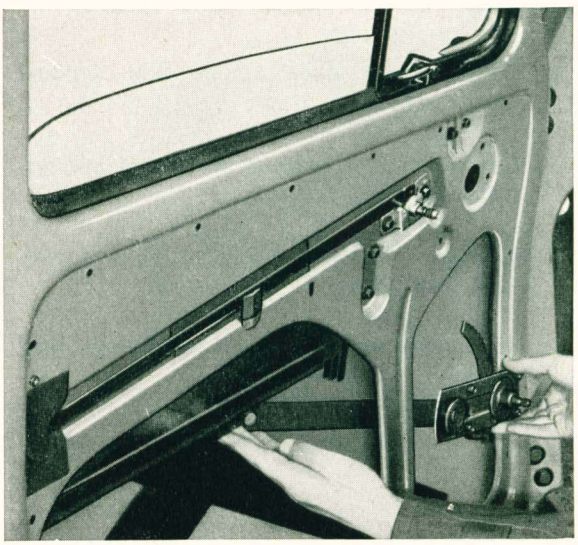
4 - Front glass-run channel screws

5 - Center bar screw

4 - Take off center bar after removal of screw with Phillips screwdriver.

5 - Release the four regulator attaching screws.

6 - Press the regulator towards the door outer panel and pull it out through opening in bottom of inner door panel, after having detached the roller arm from the glass retainer channel.

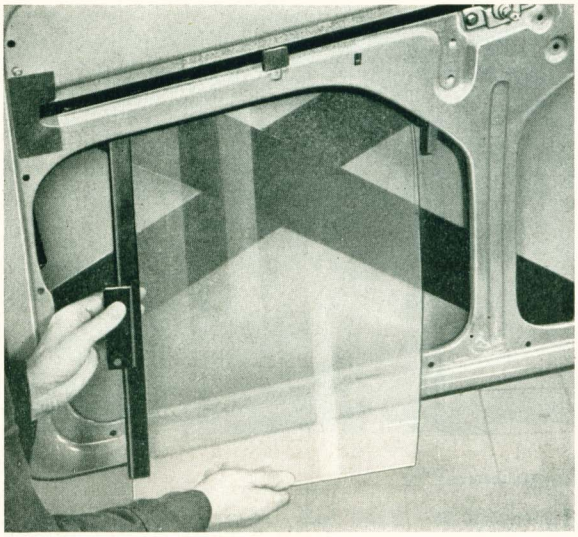


11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

7 - Remove the two front glass-run channel screws.

8 - Remove the lower rear glass-run channel screw with a Phillips screwdriver.

9 - Slide the glass down and tilt it for removal as shown in the following picture.



Installation

1 - Insert the door window glass vertically, turn it 90 deg. and slide it up in the glass-run channels.

2 - Grease all moving parts of the regulator mechanism, using Universal Grease VW — A 052.

3 - Lower the glass two-thirds of its travel and connect the roller arm to the glass retainer channel.

4 - Install the regulator and screw it into place.

5 - Insert and tighten all glass-run channel attaching screws and install the center bar.

Vent Wing Removal and Installation

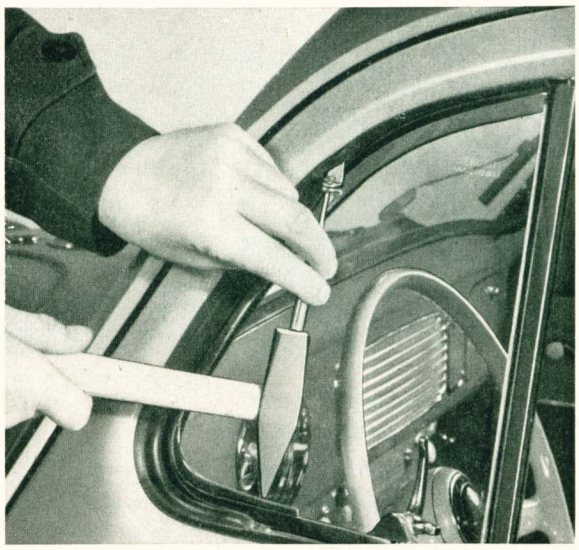
Removal

1 - Remove inner door handle and window regulator handle.

2 - Take off door trim panel, escutcheon springs, and rubber inserts.

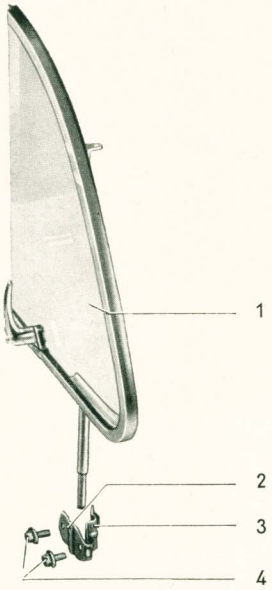
3 - Remove the two screws holding the vent wing check-stay in place.

4 - Remove the rivet at the vent wing upper pivot point.



5 - Partially open the vent wing and lift it out.

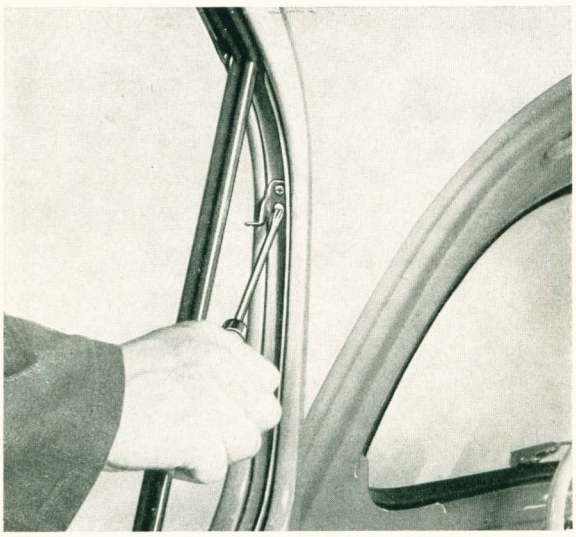
6 - Take off vent wing check-stay from inside the door.



1 - Vent wing
2 - Check-stay base
3 - Check-stay cover
4 - Attaching screws

7 - Remove the vent wing weather strip from the door window frame.

8 - Remove vent wing upper pivot bracket and vent wing lock plate.



Installation

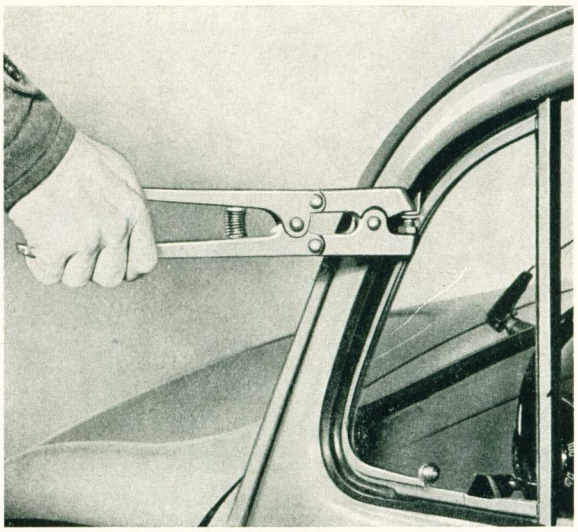
1 - Install upper pivot bracket and vent wing lock plate.

2 - Check condition of weather strip and place it into position.

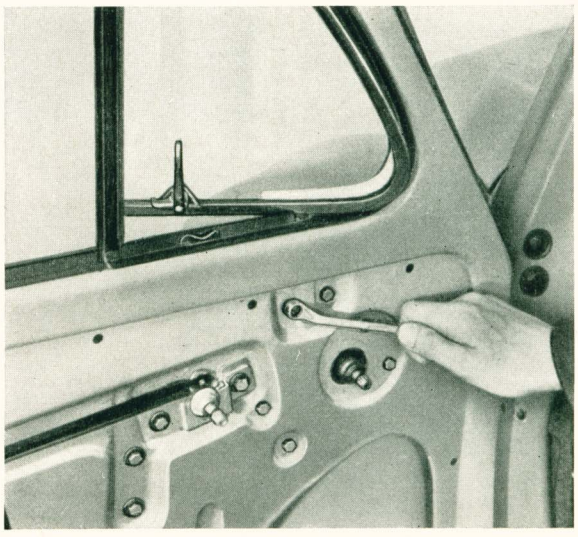
3 - Hook check-stay cover to check-stay base and hold the assembly against the inner door panel from inside the door shell — the joint of the check-stay must be toward the door hinges —, tighten the check-stay screws a few turns.

4 - Place the vent wing in the door window frame, taking care that the shaft passes through the check-stay.

5 - Rivet the vent wing to the upper pivot bracket.



6 - The amount of frictional resistance can be adjusted by tightening or loosening the rear screw.



7 - Install rubber inserts, escutcheon springs, trim panel, window regulator handle, and inner door handle. Check all mechanisms for proper functioning by operating the handles.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

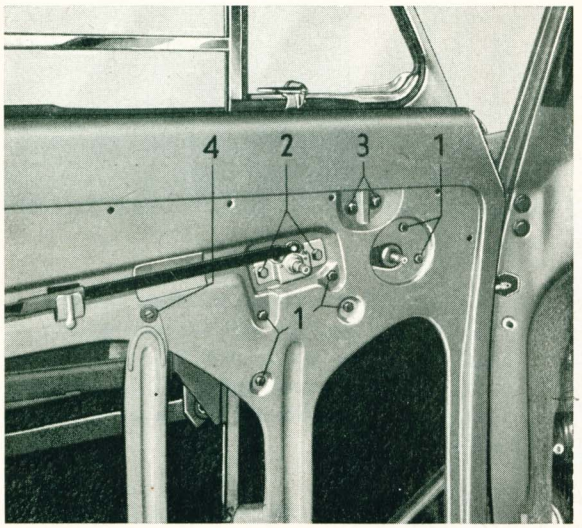
Door Vertical Sliding Glass Removal and Installation

Removal

1 - Run window down 3/4 of its travel.

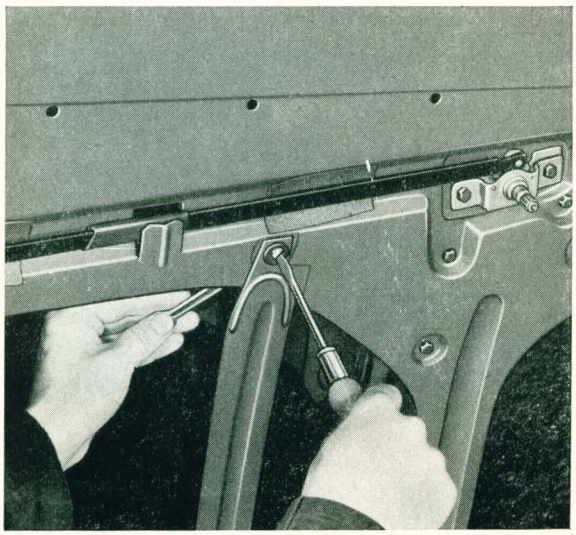
2 - Remove regulator handle and inside door handle.

3 - Remove the door trim panel, escutcheon springs, and rubber inserts.

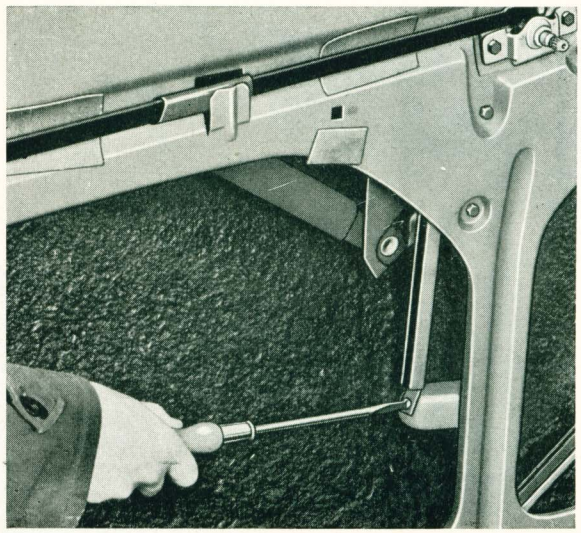


1 - Regulator screws
2 - Door lock remote control screws
3 - Vent wing check-stay screws
4 - Center bar screw

4 - Take off center bar after removal of screw.

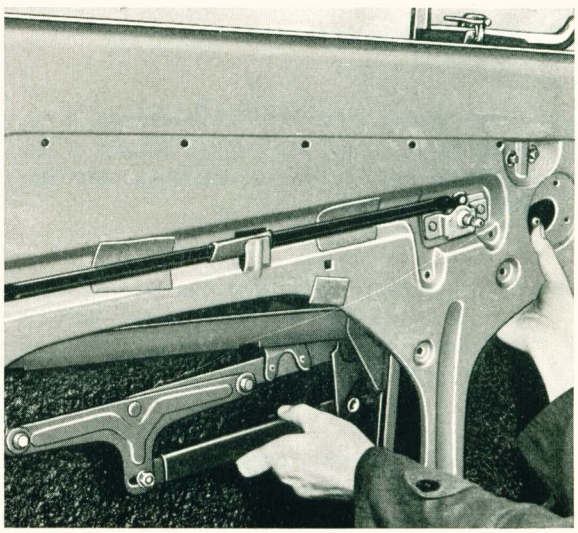


5 - Remove the screw at the bottom of the front glass-run channel.



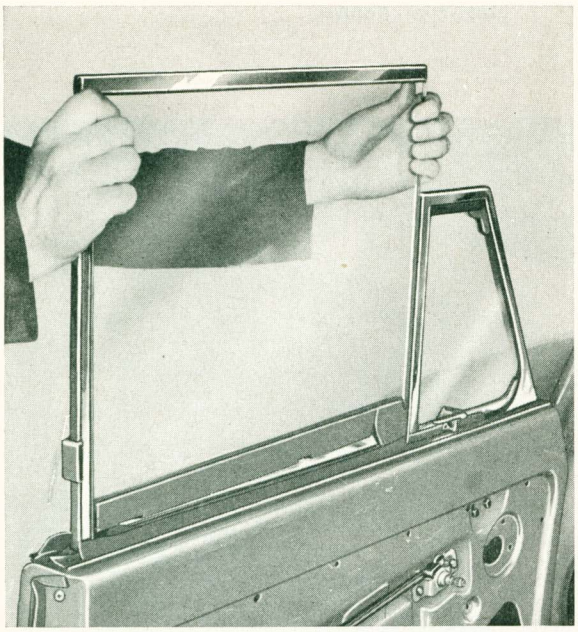
6 - Remove the six window regulator attaching screws.

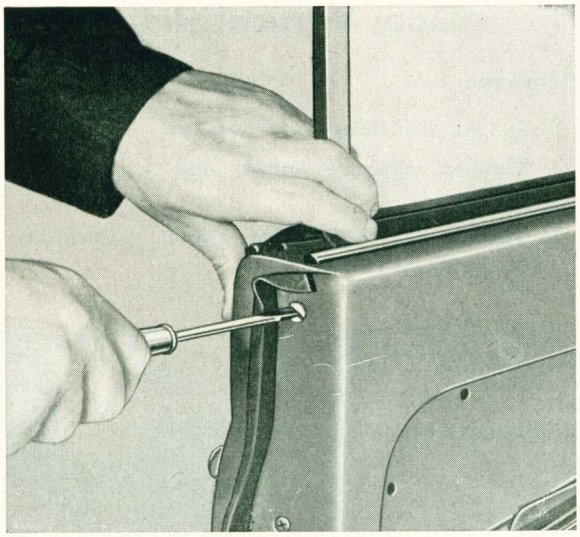
7 - Push the regulator towards the door outer panel and pull it out through opening in bottom of inner door panel, after having detached the roller arm from the glass retainer channel.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

8 - Remove screw at the top of the rear glass-run channel and lift out the glass.





6 - A vertical adjustment of the door windows is effected by a stop (1) which bears against an adjusting screw (2) located behind the door inner panel. The lock nut (3) of the adjusting screw is to be loosened before a correction is made.

The adjustment is correct when the window is flush with the upper edge of the vent wing.

Installation

1 - Take care not to damage the weather strip when inserting the glass into its channels.

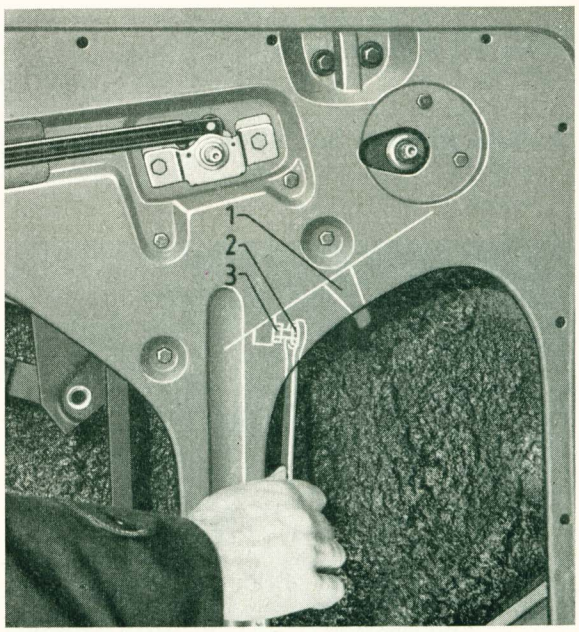
2 - Prior to installation, grease all moving parts of the regulator mechanism, using Universal Grease VW — A 052.

3 - Install the regulator and screw it into place.

4 - Check sliding glass for free movement. If the glass binds, loosen the bottom screws of the channels and move the channels sidewise. Retighten the screws.

5 - Care should be taken that the door window glass is in line with the rear quarter glass so that there is a perfect seal at the door window frame weather strip.

The position can be corrected after the screw at the top of the door rear glass-run channel has been loosened.



7 - Tighten glass-run channel screws and install the center bar.

An accurate adjustment of the striker plate for the new door lock on VW Passenger Cars delivered since August 1955 calls for the study of some pecial instructions. A proper door fit is the first requirement to be met.

Door Fit

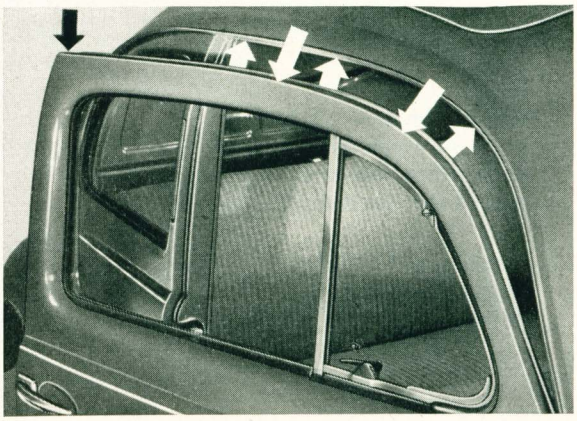
The door is properly aligned in the door opening, if:

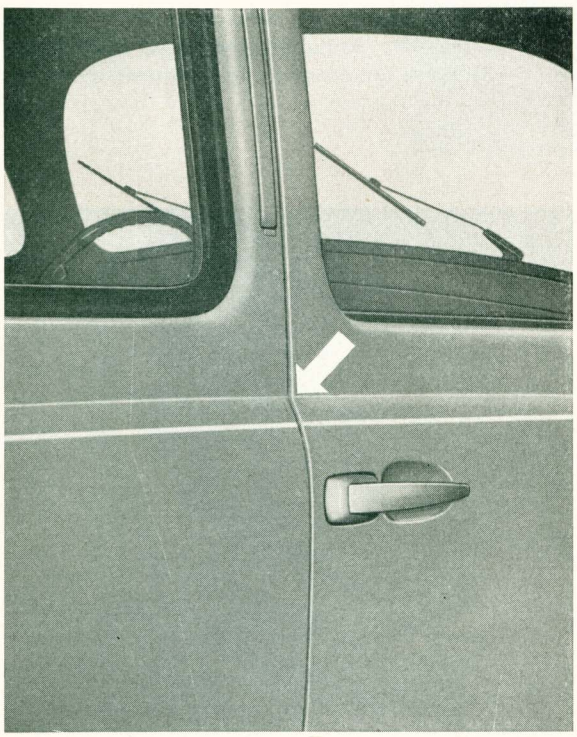
1 - the amount of gap at the roof and at the door lock pillar is nearly equal,

2 - the door is flush with the side panel,

3 - the belt lines of door and side panel properly align,

4 - the door neither binds at the top nor at the bottom,





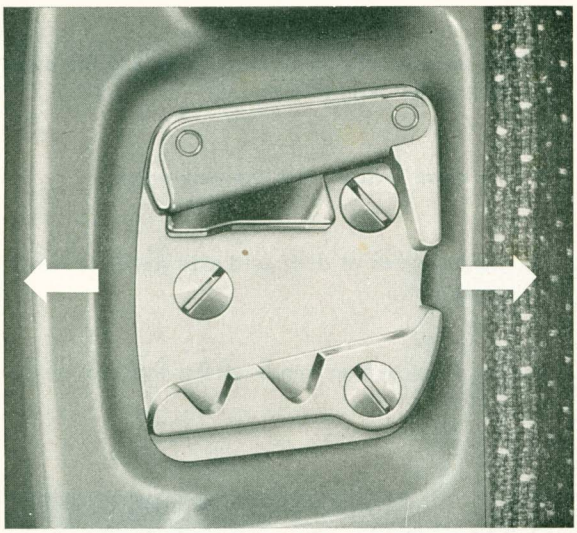
5 - the door weatherstrip evenly bears against the body at sufficient tension.

The door must open and close without bind. The best possible door fit should be approached by considering the points 1, 2, 3 and 5. If the conditions given under 1 and 3 cannot be coordinated, the equal space is preferable to the alignment of the belt line. Springing or bending the doors necessitates a check of the striker plates.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

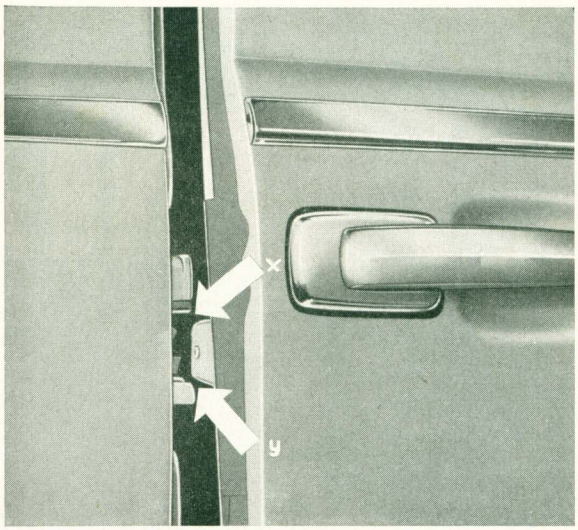
Adjustment of Door Lock Striker Plate

1 - Adjust striker plate "in" or "out" to obtain a flush fit of the door rear edge to the body. If, in exceptional cases, the tightness of the door against the body is then insufficient, suitable strips of pasteboard may be cemented to the door frame (top and rear edges of the door) behind the weatherstrip.



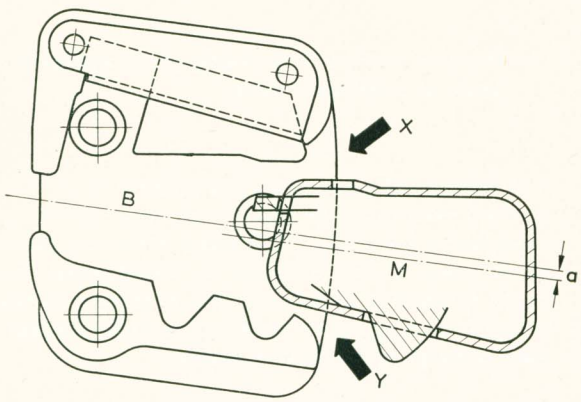
2 - "Up" and "down" adjustment of the striker plate should be done as indicated in the drawing.

The "up" and "down" adjustment of the striker plate can be checked when pulling back the weatherstrip lip with the door nearly closed.

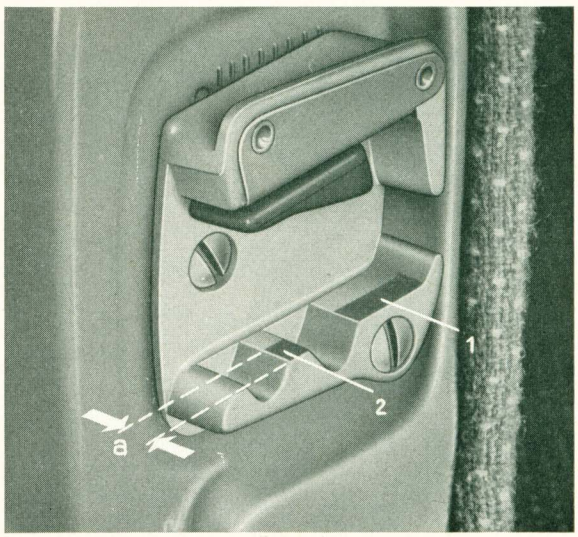


The space "x" should be slightly larger than space "y".

3 - If correctly adjusted, the door latch should bear on the points marked 1, 2 and 3. The width of the contact (a) should be about 8 mm (.31") and should never be less than 5 mm (.2").



B = Line of movement
M = Center line
a = 1.5 mm (.06")



4 - Check impression of door latch contact and correct where necessary.

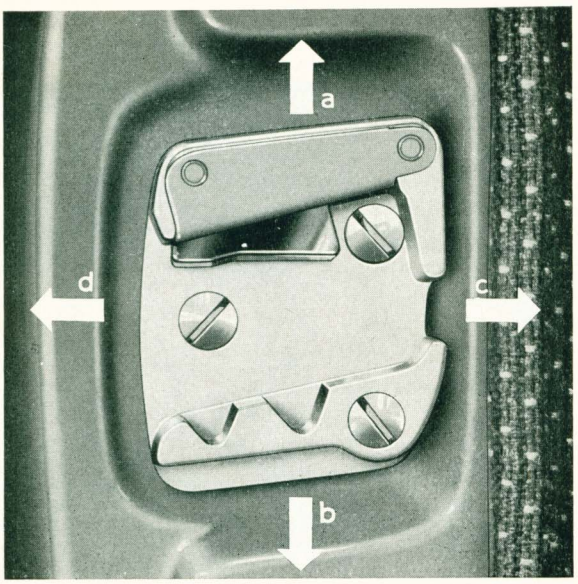
a - Door latch hitting the narrow face of the plastic wedge when closing the door:

Plastic wedge excessively worn.

Striker plate positioned too low.

b - Too tight a contact between door latch bottom and grooved face of striker plate:

Striker plate positioned too high.



c - Door latch contacting the edge **above** the end radius of the striker plate grooved face:

Move the striker plate inward; if necessary, turn it somewhat clockwise.

The edge above the end radius only serves as a stop when slamming the door.

d - Door latch does not bear **in** the end radius of the striker plate:

Move the striker plate outward; if necessary, turn it somewhat anticlockwise.

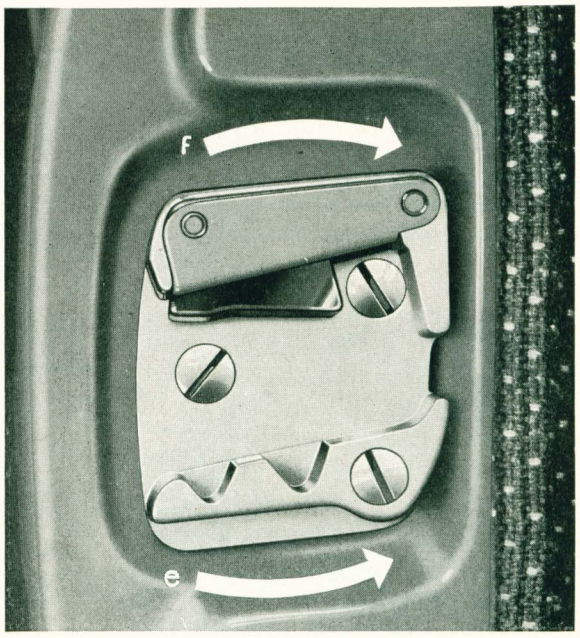
In isolated cases it may become necessary to improve the impression of the door latch contact by removing metal from the striker plate with a triangular scraper.

e - Door latch does not bear, or insufficiently bears, on the face in front of the end radius.

Turn striker plate as found necessary to improve the contact.

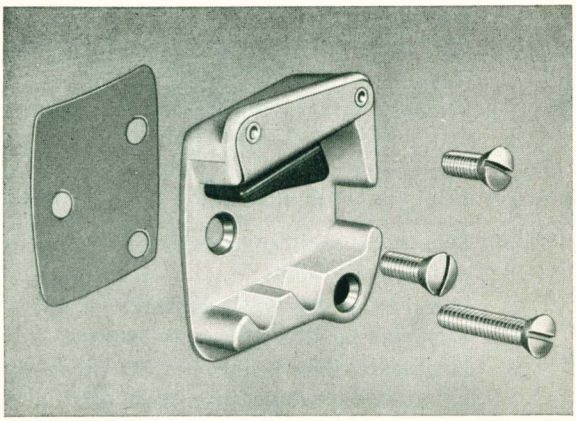
f - Door latch does not bear, or insufficiently bears, on the face between the two grooves.

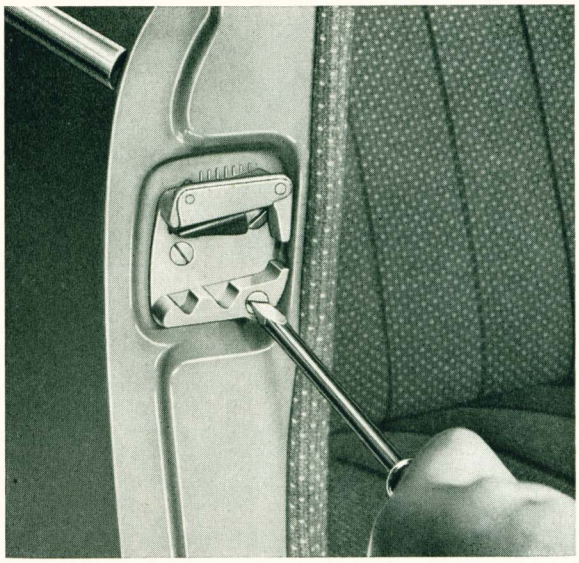
Turn striker plate as found necessary to improve the contact.



5 - If the width of the contact is less than 5 mm (.2″), fit a plastic shim (Part No. 111 837 293) between striker plate and pillar. Too narrow a contact causes burr and wear on the door latch which will develop noises.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY





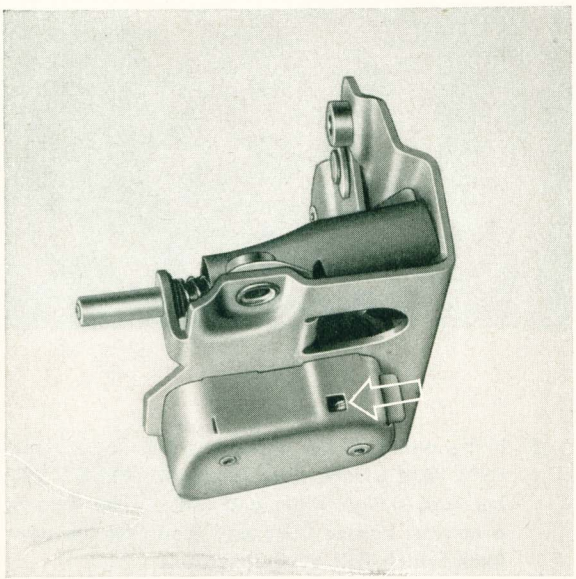
6 - Securely tighten the street countersunk screws (0.6—0.7 mkg / 4—5 ft. lbs.).

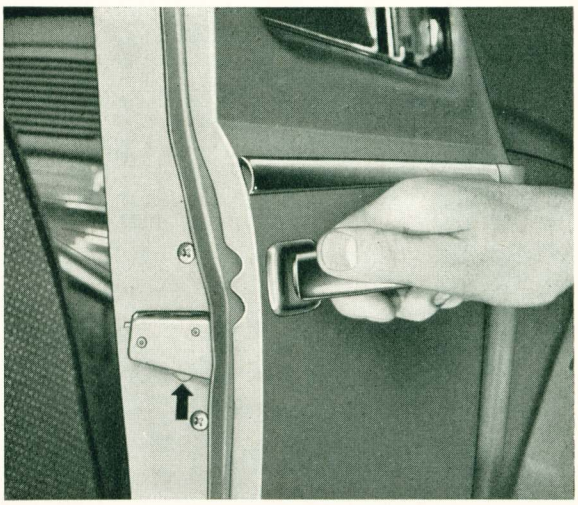
Inspection of Door Latch and Striker Plate

Whenever adjusting the striker plate, it should be inspected in connection with the door latch as detailed below:

1 - The top and bottom surfaces of the latch must be smooth. The edges of the hole above the locking plate and those of the hole for the striker must not stick up from the door latch surface.

2 - Check the door lock mechanism for proper operation. The striker must fully retract when pulling the handle to assure an easy opening of the door.





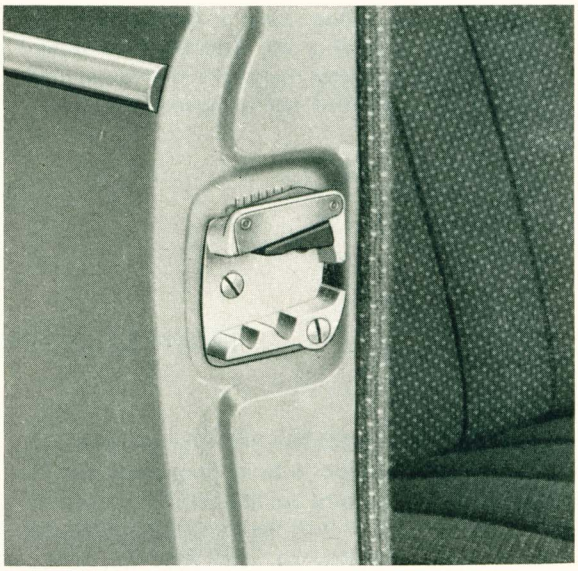
3 - The door latch contact face must be free from burr at the edges. Smooth down if necessary.

4 - Striker plates showing excessive wear at the lock housing contact faces or at the latch contact faces must be replaced.

5 - If the wedge after opening of the door remains in its end position check whether the head of the upper mounting screw for the striker plate prevents the wedge from moving forward. If this is not the case replace the striker plate.

6 - The pre-loaded wedge is supposed to exert a certain amount of pressure on the lock. Therefore check the tension of the spring. With the wedge in its extreme rear position the tension should be:

2.8 ± 0.5 kg (6.2 ± 1.1 lbs.)



Door Lock Striker Plate with adjustable Wedge

From Chassis No. 1 371 328 modified striker plates are installed in current production. With these new striker plates displacement of the wedge owing to impacts of the vehicle has been counteracted by means of an adjustable contact face. A screw with contact bush is adjusted in such way that the wedge is practically stationary with the door closed.

The following points should be observed during installation:

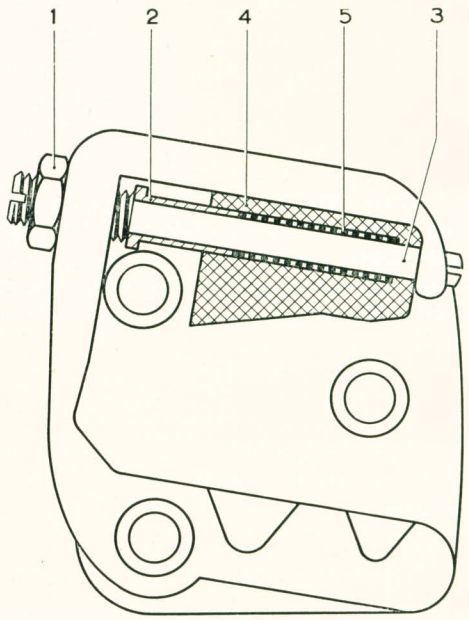
1 - Install striker plate of new design. Adjustment as to height and to side is carried out as previously. The striker plate must be a tight fit in the door pillar.

2 - Tighten securing screws for striker plates.

3 - Loosen lock nut (1) at the adjusting screw (3). Hold adjusting screw with the screw driver.

4 - Move the contact bush (2) toward the wedge (4) by turning the adjusting screw to the left until an increased resistance can be felt when opening the closed door.

If the resistance on opening the door is too great or the door jumps open on its own the adjusting screw must be turned in until the door closes properly.



1 - Lock nut
2 - Contact bush
3 - Adjusting screw
4 - Wedge
5 - Spring

5 - Hold adjusting screw with the screw driver and tighten lock nut.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

6 - With a new striker plate a contact face will first tend to give a bit. Therefore, a second adjustment becomes necessary after some time. Procede as pointed out in figures 3, 4 and 5.

7 - The latch contact faces at the striker plate and those for the wedge should only be slightly coated with Vaseline or with paste for this purpose.

Door Locks for RHD Vehicles

From Chassis No. 1 222 269 RHD Sedans and Convertibles are provided with a door lock on the driver's side as standard equipment. If it is intended to install this kind of lock the two locks in the car must be exchanged for two new ones.

The following points should be observed:

1 - Remove both door locks inclusive of pull rods, remote control locks and exterior door handles.

2 - Remove rivets for pull rods at the remote control locks and take off pull rods.

3 - Rivet new remote control locks to the old pull rods. Install the old spring washer between the pull rod and remote control lock.

4 - Install new locks with remote control locks and pull rods.

5 - Interchange both outer door handles, so that the lockable door handle is on the right.

Keys and Locks

Since January 1954 the door locks and the ignition/starting switch can be operated with one key. If a lockable handle is subsequently installed on the rear hood the lock can be adapted to the tumbler combination used on the door lock and ignition/starting switch.

Whenever exchanging a lock cylinder for a new one it is possible to restore the uniform tumbler combination.

As a keeping in stock of the entire range of locks would be too complex our Parts Department will supply disassembled lock cylinders as SP sets.

When replacing a door handle or a lock cylinder, the tumblers can be arranged in the desired combination in accordance with the code list, which our Spare Parts Department will supply. If replacement of the ignition/starting switch becomes necessary the tumbler combination of the door and rear hood locks, if provided, should be adapted to that of the new ignition/starting switch. It is not possible to remove the lock cylinder of ignition/starting switches.

Our Parts Department no longer supplies locks with pre-set tumbler combinations. In future the desired assembly of lock cylinders is to be carried out by VW Distributors or General Importers.

Orders for code lists and the corresponding SP sets should be placed with the Parts Department.

Door Lock and Remote Control

Difficulties experienced in opening and closing the door can be eliminated by a careful adjustment of the remote control rod and of the outer door handle.

Adjustment should be effected as follows:

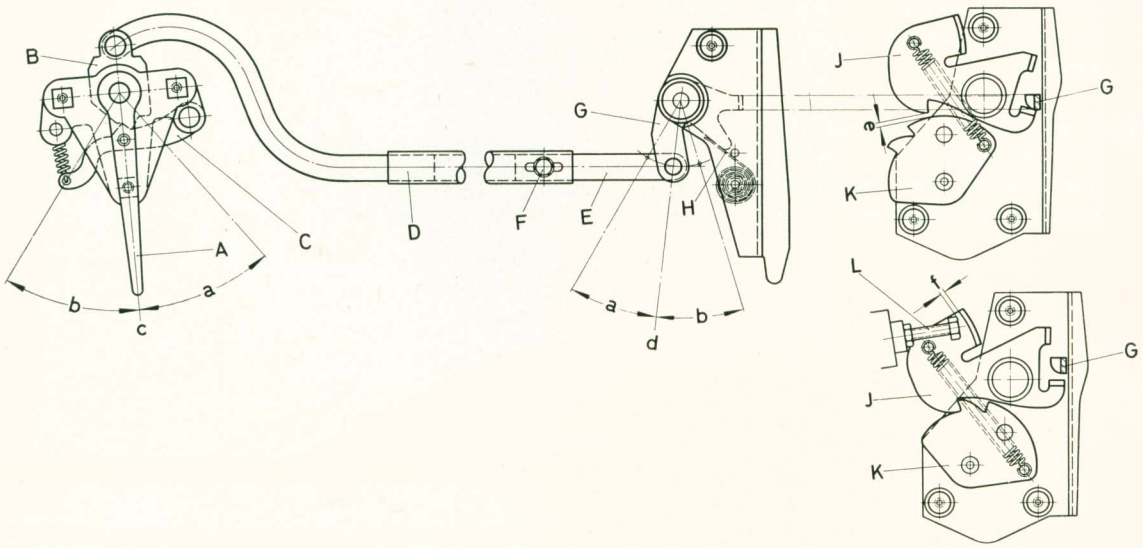
1 - Loosen the locking screw (F) for the remote control rod (D).

2 - Set the inside handle (A) into neutral position (c). This position is obtained by bringing the mating surfaces of levers (B) and (C) into contact.

3 - Connect the remote control rod (D) to the link (E) by means of the lock screw (F) so that the release lever (G) is brought into contact with the spring (H) and, with the inner door handle (A) in opening position (a), there is a play (e) of 2 mm between the stop (J) and the counterstop (K).

4 - A distance (f) of 1 mm is required between the head of the outer door handle adjusting screw (L) and the carrier of stop (J). If the play is too large, the stop (J) will not disengage properly and opening the door from the outside will become quite difficult. If the play is not large enough, the stop (J) will not engage the counterstop sufficiently to ensure proper operation.

5 - After adjustment, check door lock and remote control for proper functioning and oil all pivot points.



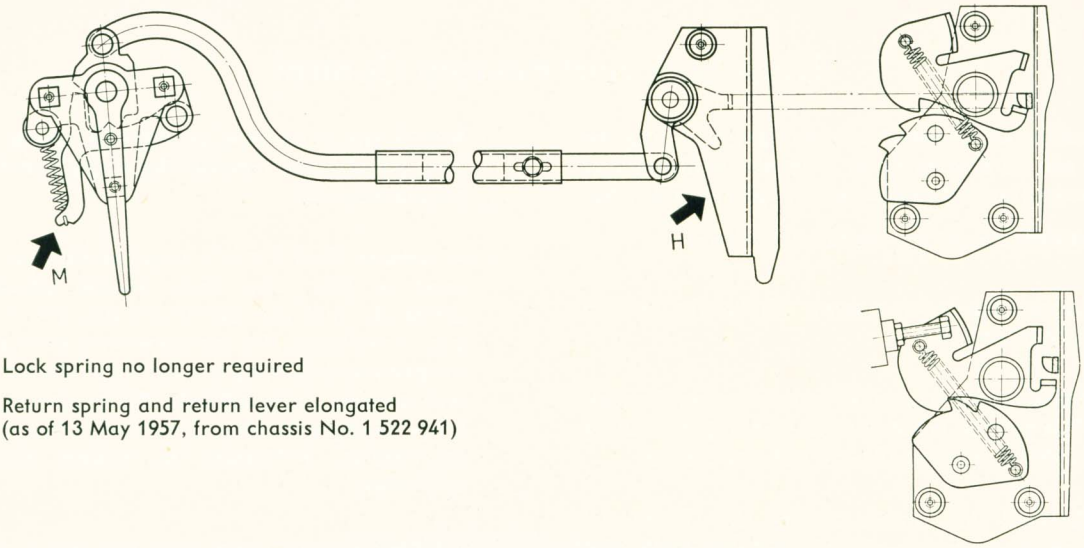
A - Inner door handle
B - Handle lever
C - Remote control lever
D - Remote control rod
E - Connecting link
F - Lock screw

G - Release lever
H - Lock spring
J - Stop
K - Counterstop
L - Adjusting screw with lock nut at the cylinder lock

a - To open the door
b - To lock the door
c - Neutral position of handle

d - Neutral position of release lever
e - 2 mm
f - 1 mm

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



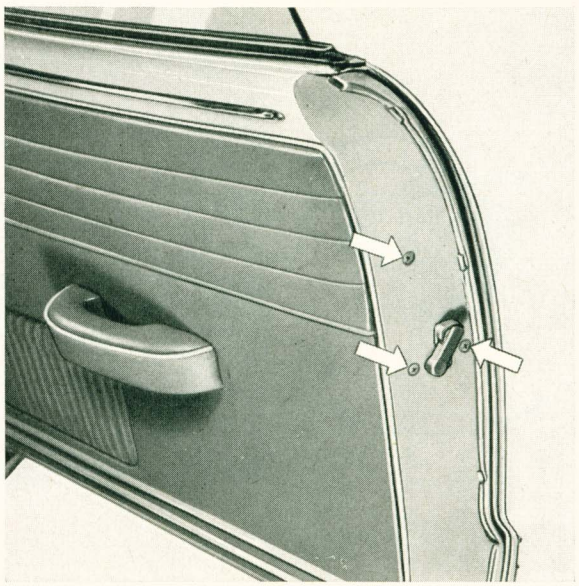
H - Lock spring no longer required

M - Return spring and return lever elongated
(as of 13 May 1957, from chassis No. 1 522 941)

Door Lock mounting

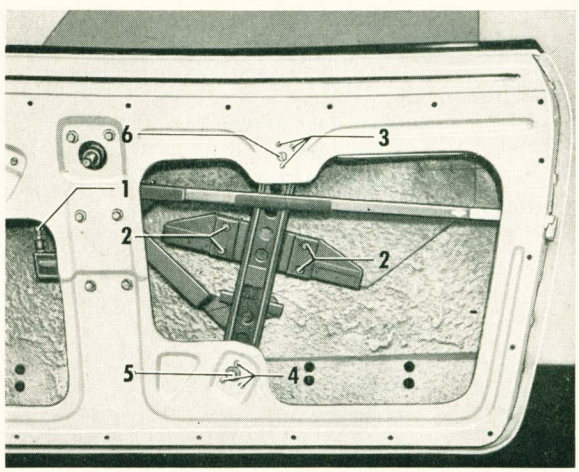
1 - If the door lock is found to be loose, the three Philips head screws AM 5×12 (Part No. N 14 265 1) should be replaced by slotted screws AM 5×15 DIN 91 (Part No. N 11 960 1) and toothed washers V 5.3 DIN 6798 (Part No. N 12 113 1). Carefully tighten the lock attaching screws.

2 - If the door fit needs adjustment, release the three Philips head screws M 8 in the striker plate and adjust the plate. Carefully tighten the screws after adjustment.



Door Window Adjustment

The door window glass can be adjusted vertically, longitudinally and in or out. Access to the window regulator is obtained by removing the regulator and inside door handles, the trim panel, and the glued-in cloth lining.



1 - **Vertical adjustment**

Loosen adjusting screw lock nut (1). Vertical adjustment is made by turning the adjusting screw.

Anti-clockwise = glass is lowered
Clockwise = glass is raised

Be sure to retighten the lock nut afterwards.

2 - **Longitudinal adjustment**

Loosen the four screws M 6 (2) and shift the glass backward or forward. Be sure to fully tighten the four screws afterwards.

3 - **"In" and "out" adjustment**

Loosen hex. screw M 8 (5) and countersunk screw M 8 (6) that attach the window glass guide. Correct the position by screwing the three grub screws at the upper end of the guide (3) and at the lower end (4) in or out as required. The three-point adjustment at either end of the guide allows the window glass to be brought into perfect alignment with the body. Be sure to retighten the two attaching screws.

Free Sliding Action of Door Window Glass

Should the door window glass be found to bind or to foul the clips of the two brush-type sealing strips in the door aperture, the following steps should be taken to effect a remedy:

a - Remove the door lock remote control handle, window regulator handle, and trim panel.

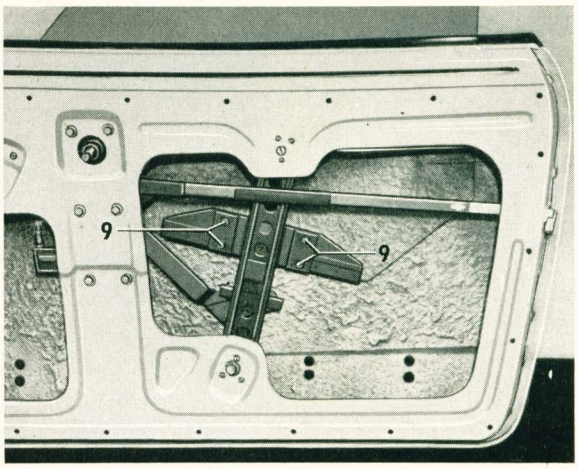
b - Pull off the cloth lining cemented to the door inner panel.

c - Remove the four screws (9) and lower the glass as far as possible.

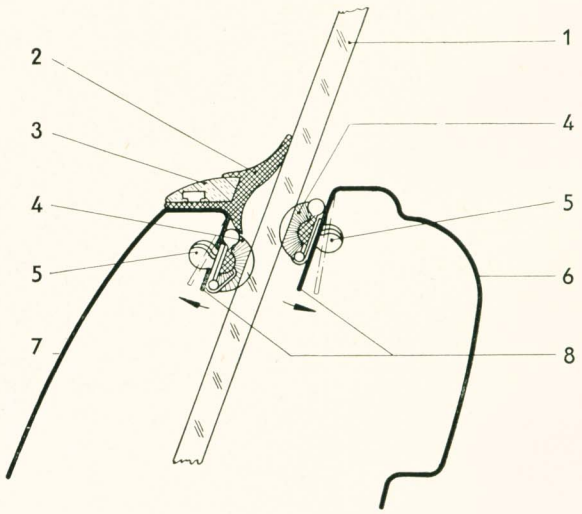
d - Withdraw brush-type sealing strips (4) and compress the clips (5). Replace sealing strips, if unduly damaged.

e - Enlarge the door aperture by prying apart the flanges (8) of the inner and outer panels as indicated by the dotted lines.

f - Install brush-type sealing strips.



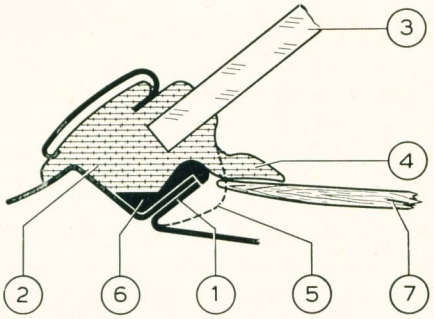
g - Install the door window glass and, if found necessary, adjust its position as detailed in Workshop Bulletin A/51.



1 - Door window glass
2 - Rubber sealing strip
3 - Moulding
4 - Brush-type sealing strips
5 - Clips
6 - Door inner panel
7 - Door outer panel
8 - Door panel flanges

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Leaks at Windshield and Rear Window



1 - Body flange
2 - Weatherstrip
3 - Glass
4 - Lip raised by wooden wedge
5 - Normal position of lip
6 - Cement
7 - Wooden wedge

Leaks at the windshield and at the rear window of the Coupé can be eliminated in the following manner:

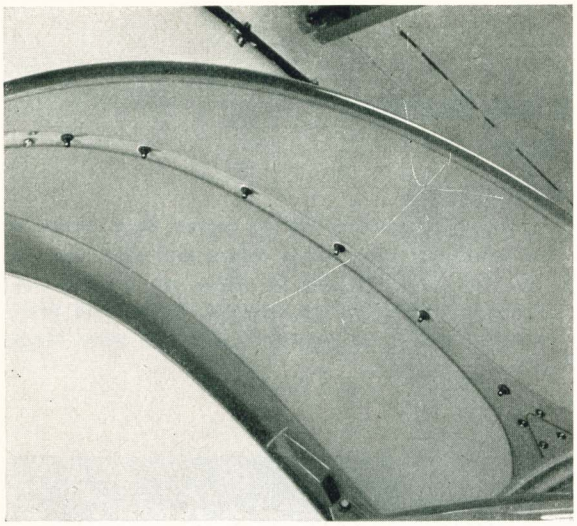
Use a wooden wedge to lift the weatherstrip lip inside the car as far as possible and force Genuine VW Window Cement between weatherstrip and the body flange. Remove any surplus cement with denatured alcohol.

Removal and Installation of Front Hood Moulding, Emblem and VW Sign

Removal

1 - Remove the moulding clip gaskets.

2 - Push the clips through the holes from underneath the body and take off the moulding.



3 - Bend up the emblem retaining tongues and take off gaskets, emblem and base plate.

4 - Bend up the three VW sign retaining tongues, pull off the gaskets and remove VW sign.

Installation

Reverse the preceding operations, while observing the following points:

1 - Replace bent or damaged moulding clips. Replace VW sign and emblem if retaining tongues have broken off.

2 - Cement the VW sign and emblem gaskets into place under the hood using VW Compound D 12, and bend down the retaining tongues.

3 - Push the gaskets over the moulding clips and cement them into place, using VW Compound D 12.

Moulding on Cowl Side Panel

Removal

1 - Raise the front hood and remove the moulding clip gaskets. Push the clips through the holes from the inside and take off the moulding.

Installation

1 - Bent or damaged moulding clips should be replaced.

2 - Push the gaskets over the moulding clips and cement them into place, using VW Compound D 12.

Door Moulding

Removal

1 - Remove regulator and door handles.

2 - Remove door trim panel.

3 - Pull off moulding clip gaskets.

4 - Push out moulding clips through the holes from inside and take off the moulding.

Installation

1 - Bent or damaged moulding clips should be replaced.

2 - Push the gaskets over the moulding clips and cement them into place, using VW Compound D 12.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Rear Quarter Panel Moulding

Removal

1 - Remove rear quarter trim panel.

2 - Pull off moulding clip gaskets.

3 - Push the clips through the holes from inside and take off the moulding.

Installation

1 - Damaged or bent moulding clips should be replaced.

2 - Push the gaskets over the moulding clips and cement them into place, using VW Compound D 12.

Outside Rear View Mirror

(Passenger Cars)

From Chassis No. 1 329 017 each Passenger Car for the inland market is provided with an outside rear view mirror as standard equipment. The mirror is placed in the glove compartment to avoid damage on transit.

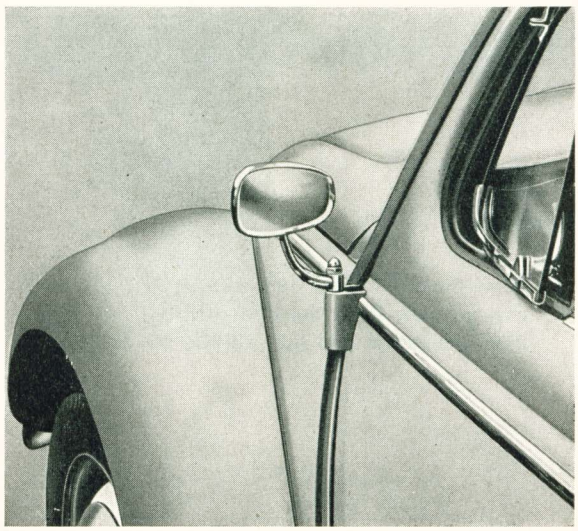
Prior to delivery, the mirror should be mounted on the left-hand door hinge pin so that the mirror rod is approx. at right angles to the longitudinal car axis. The cap nut should never be tightened to a torque of more than 1 mkg (7 ft. lbs.).

The following SP Sets are available for subsequent installation:

VW Sedan SP 96; VW Convertible SP 97.

It is recommended to insert the hinge pin for the mirror with a hollow drift or a piece of suitable tube to prevent damage to the threaded end.

Left-hand drive cars that go for export are not provided with an outside rear view mirror as standard equipment, but the upper door hinge of the left-hand door has a hinge pin with cap nut (Part No. 113 831 433) to allow an easy installation of the mirror on request. Right-hand drive cars continue to be provided with the usual hinge pins.



Outside Rear View Mirror

(Karmann Ghia Models)

Commencing at Chassis No. 1 323 910 each Karmann Ghia Coupé and Convertible for the inland market is provided with an outside rear view mirror as standard equipment. The mirror is placed in the glove compartment to avoid damage on transit.

Prior to delivery of the Coupé, the mirror should be mounted above the left-hand front fender where two holes are provided for the studs.

1 - To gain access to the fixing holes from below the car, remove the cover plate at the left-hand wheel arch.

2 - Place the mirror in position, interposing the rubber seal between the mirror base and the body.

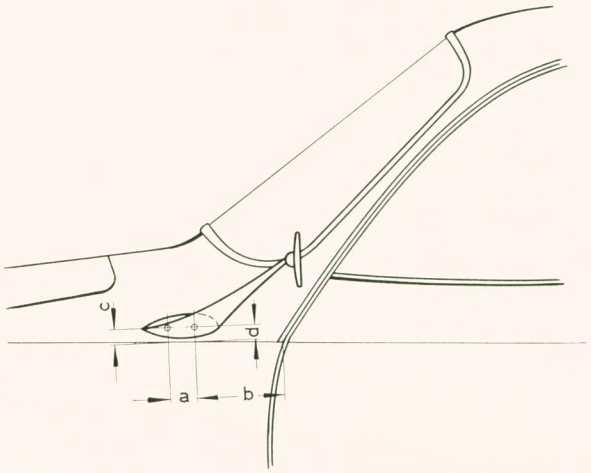
3 - From below the car, place the reinforcement plate over the studs and tighten the nuts against the lock washers.

4 - When reinstalling the cover plate at the wheel arch, care should be taken that the rubber strip is properly positioned to insure a perfect seal.

SP Set 98 includes all parts required for a service installation:

Outside mirror	Part No. 141 857 513
Rubber seal	Part No. 141 857 539
Reinforcement plate	Part No. 141 857 541
2 Nuts	Part No. N 11 006 2
2 Lock washers	Part No. N 12 006 2

For a service installation, two 6.5 mm (.26″) dia. holes are to be drilled at right angles to the body panel as specified on the drawing. Mount the mirror as detailed above after having removed the burr from the hole edges.



a = 45 mm (1.77″) c = 32 mm (1.26″)
b = 96 mm (3.78″) d = 33 mm (1.30″)

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Front Seat Removal and Installation

Removal

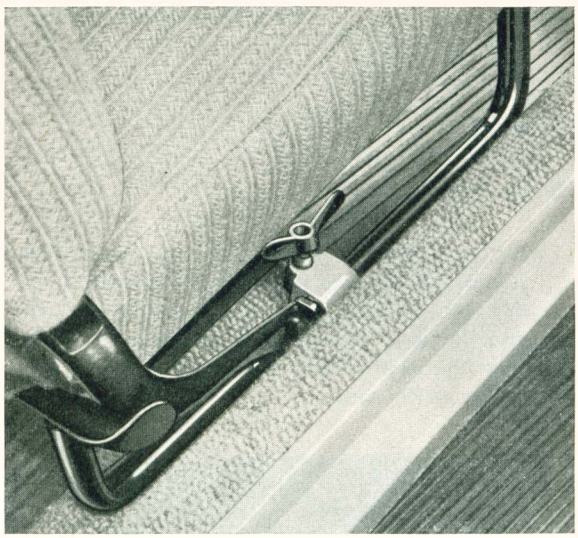
De Luxe Model

1 - Lift the adjusting handle and slide the seat forward until it can be lifted from the seat runners.

2 - Take out the seat.

Standard Model

1 - Remove the two wing nuts and take off the seat clamps.



2 - Take out the seat.

Installation

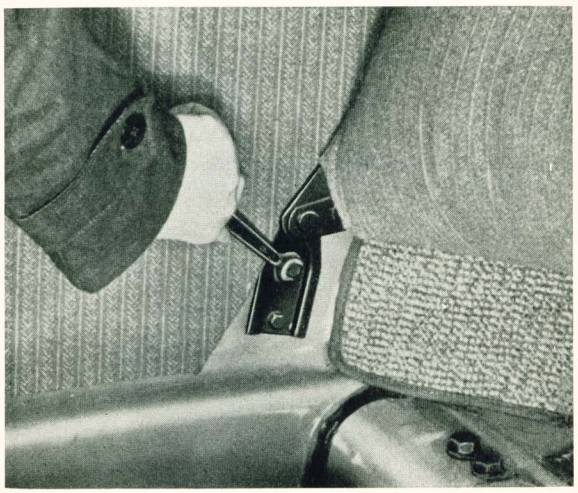
Reverse the preceding operations.

With the De Luxe Model, grease the seat runners with VW Universal Grease A - 052 prior to installing the seat.

Rear Seat Removal and Installation

Removal

1 - Raise the seat cushion at the front and tilt it for removal.



2 - Remove the four attaching screws at the seat back anchor points and lift out the back toward the front.

Installation

Reverse the removal procedure while observing the following points:

1 - Check condition of the rear seat back rubber buffers, replace as necessary.

2 - Check condition of rubber strips on the support brackets, renew as necessary.

3 - Push the rear seat cushion as far toward the rear as is necessary to position the retaining plates behind the support brackets.

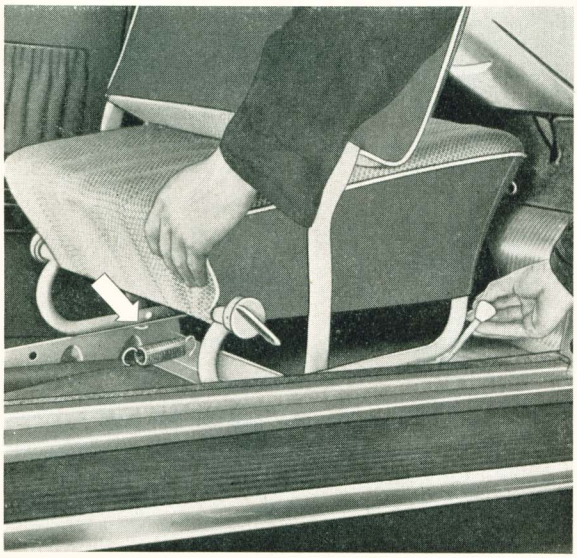
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Front Seat Removal and Installation

Removal

De Luxe Model

1 - Lift up locking mechanism on the right hand side of the seat and slide the seat forward until the retaining spring on the left side of the seat and the seat frame can be disengaged. Then push the seat further forward and take it out of the guide rails.



2 - Take out the seat.

Note:

When interchanging the front seats the adjusting mechanism must also be taken out and reinstalled at the proper side. The adjusting cams with wings must always point outward. Grease the seat runners with VW Universal Grease A-052 prior to installing the seat.

Standard Model

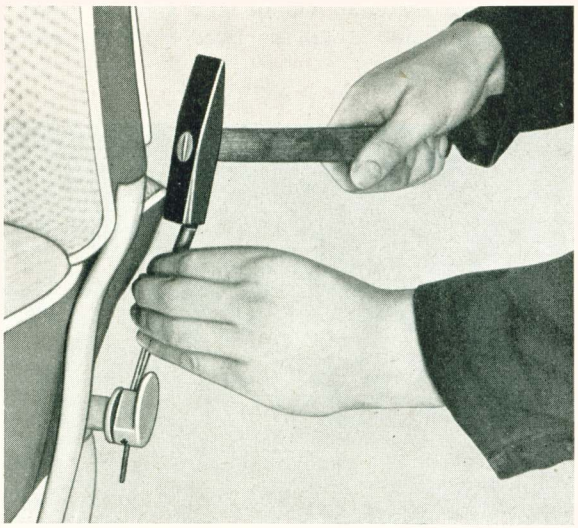
1 - Remove the two wing nuts and take off the seat clamps.

2 - Remove the seat.

Removal and Installation of the adjusting cams

1 - Remove seat.

2 - Remove the pin from the left or right hand adjusting cam by means of a punch.



3 - Remove cam.

4 - Remove the opposed cam with connecting tube from the guide tube.

Note:

The adjusting cams of the front seats are not interchangeable.

Installation is a reversal of the preceding operations. Prior to installation the cams should be lightly greased on the friction side to the guide tube with Genuine VW Universal grease A - 052.

Note:

The stop plates for the front seat back rests on the Standard Model are also secured by a pin at the rear cross tube.

Rear Seat Removal and Installation

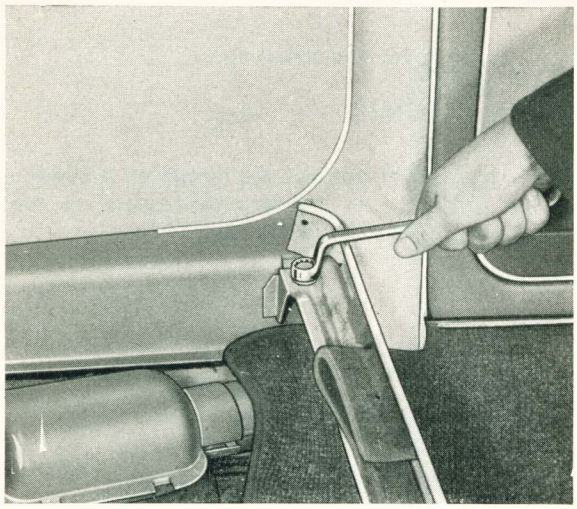
(From August 1955)

Removal

1 - Push the seat cushion slightly backward, raise it and take it out from its support.

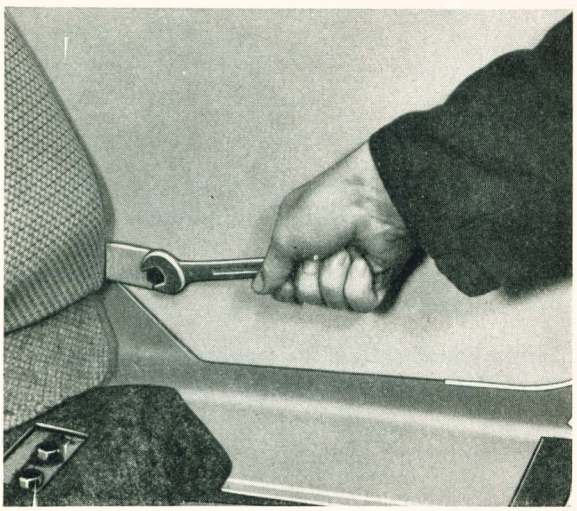
2 - Remove seat cushion diagonally.

3 - To remove the seat cushion support, raise the felt strip at the two ends of the rail and remove the two hex. screws.



4 - Disengage the loop at the right hand top corner of the backrest.

5 - Remove the two back rest securing screws and take out back rest towards front.



Installation

Reverse the removal procedure while observing the following points:

1 - Check condition of rubber buffers on the backrest stops, replace if necessary.

2 - Check condition of the felt strip and the three felt pieces at the inside of the cushion support and replace if necessary. The three felt pieces prevent the seat cover from chafing against the support.

3 - When installing the rear seat cushion, it must be pushed back until its lower edge fits behind the vertical portion of the support. Push seat cushion down until it squarely fits in the support. Do not apply force as the seat covers will get damaged.

Attention!

Rear seat cushion and backrest of previous design (before August 1955) cannot be exchanged for those produced at a later date.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Seats

(Karmann Ghia Models)

Front seat cushion frame

From October 2nd, 1950, Chassis No. 1304088 the sturdiness of the seat cushion frame has been improved by the following alterations:

1 - The length of the reinforcement tube in the seat cushion frame has been increased from 100 to 300 mm (3.937" to 11.811").

2 - The welded joint at the seat frame is no longer situated 20 mm (.787") in front of but below the backrest.

Subsequent installation of a reinforcement plate for the seat cushion frame (up to Body No. 9 199).

When repairing a bent or broken seat frame (at the point indicated by "e" on the drawing) proceed as follows:

1 - Remove backrest.

2 - Loosen cover and spring assy.

3 - Remove spring assy with padding and cover.

4 - Straighten seat frame.

5 - Weld reinforcement plate (A) to the inside of the seat frame as specified on drawing.

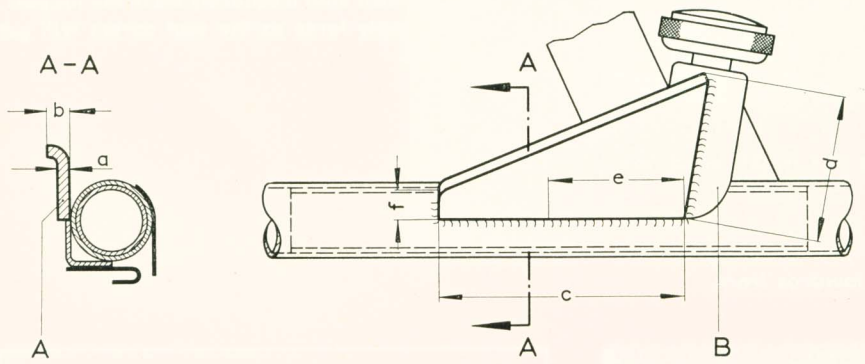
6 - Paint welded spots and reinforcement plate.

7 - Fasten spring assy with padding and cover to seat frame.

8 - Fasten cover and sew it up.

9 - Install backrest.

Be careful not to damage the thread on the inside when welding the reinforcement plate to the backrest adjustment support "B".



a = 3 mm (.118")
b = 6 mm (.236")
c = 65 mm (2.559")
d = 40 mm (1.575")
e = approx. 35 mm (approx. 1.378")
f = 7 mm (.276")
A = Reinforcement plate
B = Support

Front seats

W. e. f. September 16th, 1957, Chassis No. 1649253, the Karmann Ghia Coupé has been provided with three-position rake adjusting cams for the front seats in place of the screws used previously. Thus easy rake adjustment is possible even while driving.

The upholstery at the front edge of the seats has been strengthened for better leg support. To improve seating comfort, the front seats have been provided with a synthetic foam padding.

Seats of previous design may be exchanged for those of new design.

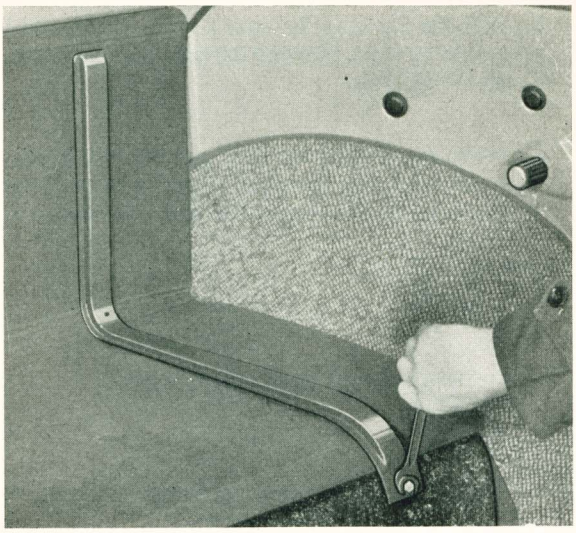
Service installation of the new rake adjustment on seats of previous design is not possible.

Removal and Installation of Luggage Compartment Lining and Sound-Absorbing Pad

Removal

1 - Remove rear seat and rear seat back.

2 - Remove the two lining retainer screws.



3 - Unhook the lining retainers.

4 - Take off the luggage compartment lining. (De Luxe: Carpet. Standard: Cardboard.)

5 - Remove the sound-absorbing pad. The pad is cemented in place and will generally suffer damage during removal. If welding jobs are to be carried out, all traces of the pad and the cement should be removed, as those materials are burnable.

Installation

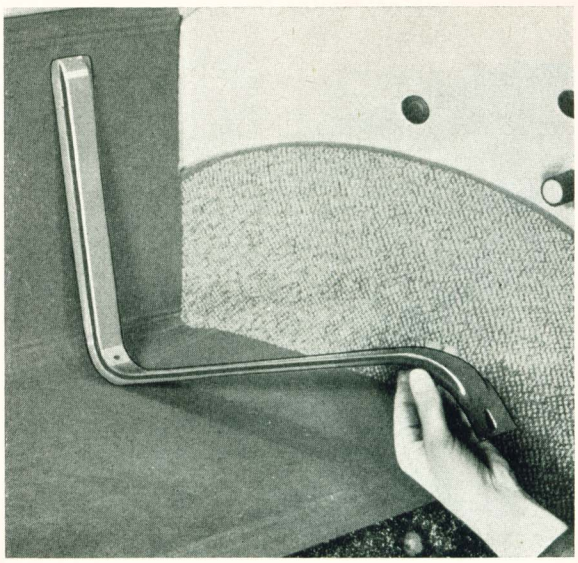
Installation is effected by reversing the removal procedure but the following points should be observed:

1 - Before cementing the sound-absorbing pad into place, thoroughly remove all traces of the old pad and cement. It is recommended to use benzine as a solvent.

2 - Cement the sound-absorbing pad into place, using VW Compound D 12. Best results are only obtained, if the pad makes complete contact with the luggage compartment panel.

3 - Push the luggage compartment lining behind the upper edge of the sound absorbing pad.

4 - Engage the retainers with the noses provided on the luggage compartment panel.



Rear Wheel Housing Carpet

Removal

1 - Remove rear seat and rear seat back.

2 - Carefully pull off the carpet to avoid damage.

Installation

Reverse the removal procedure while observing the following points:

1 - Before cementing the carpet into place, thoroughly remove all traces of the old cement. It is recommended to use benzine as a solvent.

2 - Cement the carpet into place, using VW Compound D 11.

De Luxe Model: The luggage compartment lining (carpet) must overlap the wheel housing carpet.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Rear Quarter Trim Panel Removal and Installation

Removal

1 - Prise off the rear quarter trim panel from the rear quarter inner panel.

2 - The moulding on the De Luxe can be removed after having bent up the clips.

3 - If required, remove the insulation pad.

Installation

This is a reversal of the operations described above, but attention should be paid to the points below:

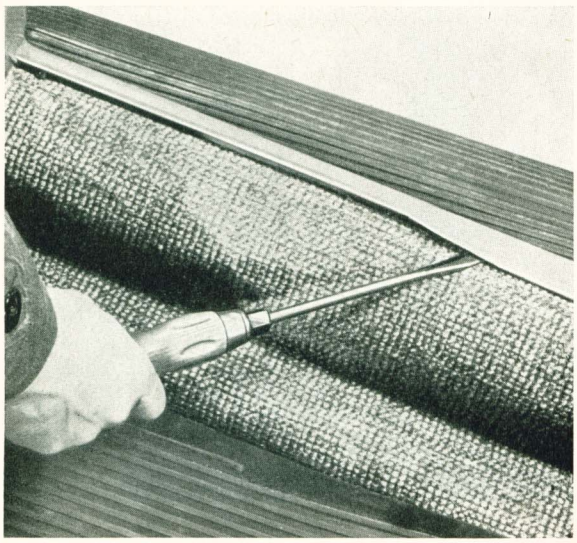
1 - Prior to cementing the insulation pad into place, carefully remove all traces of the old cement. It is recommended to use benzine as a solvent.

2 - Cement the insulation pad into place, using VW Compound D 11.

3 - With the De Luxe: Remove damaged or broken moulding clips. Reinstall the moulding and bend down the clips.

4 - When reinstalling the rear quarter trim panel, make sure that the oiled paper at the bottom overlaps the inner panel to allow the water to drain.

Body Side Member Carpet Removal and Installation



Removal

1 - Pry up the carpet retaining flange.

2 - Remove the tacks and pull off the carpet.

Installation

1 - Prior to cementing the carpet into place, carefully remove all traces of the old cement. It is recommended to use benzine as a solvent.

2 - Cement the carpet into place, using VW Compound D 11.

3 - Bend down the carpet retaining flange.

4 - Apply a tack at the front end of the carpet.

Cowl Panel Carpet Removal and Installation

Removal

The three cowl panel carpets are tacked in position at the upper corners. For removal of the right and left carpets, the tacks at the front end of the side member carpets should also be removed.

Installation

1 - Prior to cementing the carpets into place, carefully remove all traces of the old cement. It is recommended to use benzine as a solvent.

2 - Cement the carpets into place, using VW Compound D 11. Be sure the carpets make perfect contact with the cowl panel.

3 - Apply tacks at the upper corners.

Frame Tunnel (Backbone) Carpet Removal and Installation

Removal

1 - Lift up the rear seat cushion.

2 - Take out the rubber mats.

3 - Remove heating control knob.

4 - Pull off the frame tunnel carpet (Standard Model: rubber mat at front, carpet at rear end).

5 - De Luxe Model: If necessary, also remove the hand brake lever boot.

Installation

This is a reversal of the operations described above, but attention should be paid to the points below:

1 - Prior to cementing the carpet into place, carefully remove all traces of the old cement. It is recommended to use benzine as a solvent.

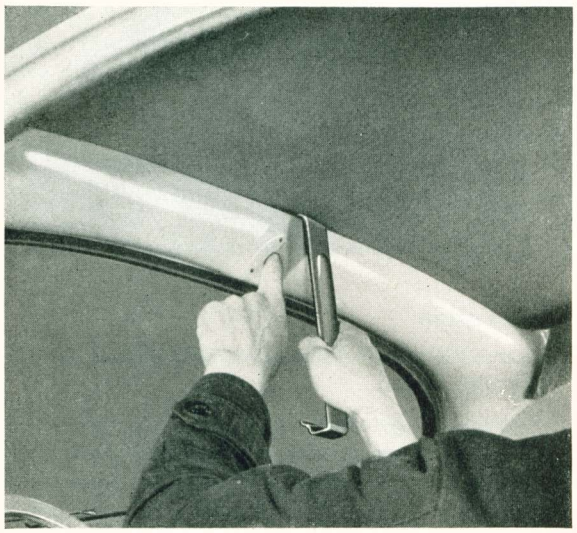
2 - Cement the carpet into place, using VW Compound D 11.

Headlining Removal and Installation

Removal

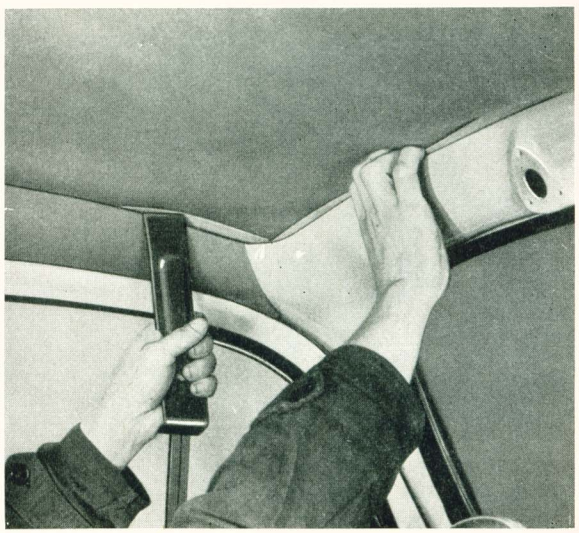
1 - Remove rear view mirror.

2 - Push the cardboard strip at the headlining front end towards the front to allow the tool VW 366 to be inserted between the roof member and the headlining. This can be done with one finger through the hole in the roof member.



3 - Move the tool VW 366 along the front roof member, at the same time lifting out the front edge of the headlining.

4 - Reinsert the tool behind the corner of a door hinge pillar and move it up to the first bow. Lift the bow with one hand and continue to move the tool along the roof side member up to the rear end.



5 - After the headlining has been released on one side, pull out the bows on this side.

6 - Insert the tool behind the corner of the other door hinge pillar and repeat the above operation.

7 - In the same manner, move the tool along the rear side of the headlining and remove the headlining and bows as one unit.

8 - If necessary, remove the roof insulation.

Installation

This is a reversal of the preceding operations, but attention should be paid to the points below:

1 - Prior to cementing the roof insulation pad into place, carefully remove all traces of the old felt and cement. It is recommended to use benzine as a solvent.

2 - Cement the roof insulation pad into place, using VW Compound D 11.

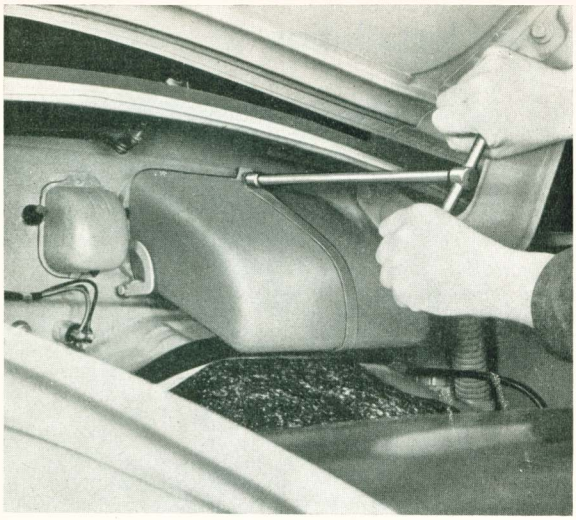
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

3 - Reinstall the headlining and bows starting from the, rear. Position the tool VW 366 between the cardboard strip and the headlining cloth and press down the cardboard strip until it is held back by the roof member flange.

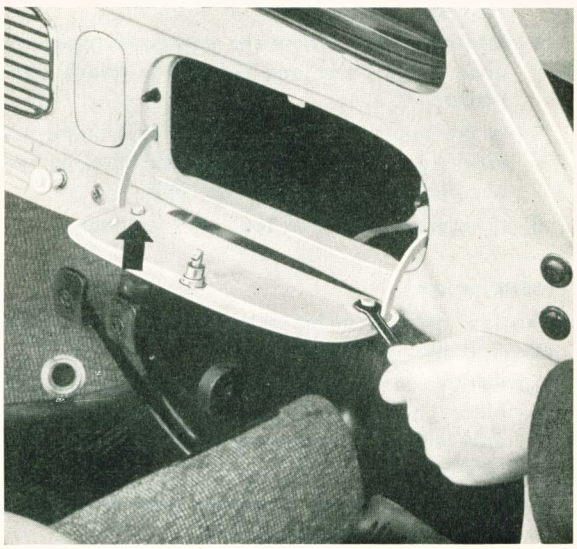
Glove Compartment Removal and Installation

Removal

1 - Raise the front hood and remove the retaining strap screw. Take off the glove compartment.



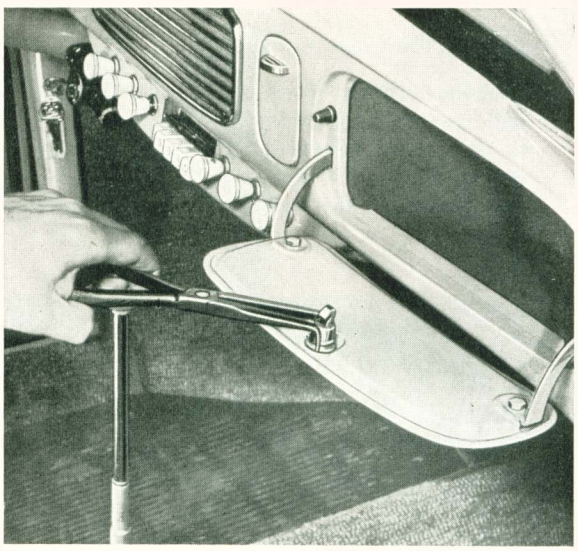
2 - Remove the two screws at the lid check straps and take off the lid.



3 - Remove the two screwed rivets of the lid check straps and pull out the check straps toward the front.

4 - Remove the two rubber plugs from the glove compartment frame.

5 - Screw out the lid lock, using the circlip pliers VW 122 b.



Installation

Reverse the removal procedure while observing the following points:

1 - When tightening the glove compartment retaining strap, take care that the glove compartment is correctly positioned against the instrument panel. Leaks between the glove compartment and the instrument panel should be eliminated by means of sticky tape.

2 - Check condition of rubber plugs. Replace if necessary.

3 - Check the lid alignment by opening and closing the lid repeatedly.

4 - Apply a few drops of oil to the lid lock.

5 - Should it be found necessary, bend the lock plate into the required position.

Sound Proofing

(Karmann Ghia Models)

On 19. 6. 1957, Chassis No. 1 649 153, two measures were introduced to improve sound deadening on the Karmann Ghia Coupé. A glass wool mat of 12 mm (.472") thickness has been placed between the engine compartment partition panel and the sound deadening cardboard. The sound deadening cover on the two rear wheel arches in the luggage compartment has been replaced by a more thickly impregnated felt cover with a special sound absorbing layer.

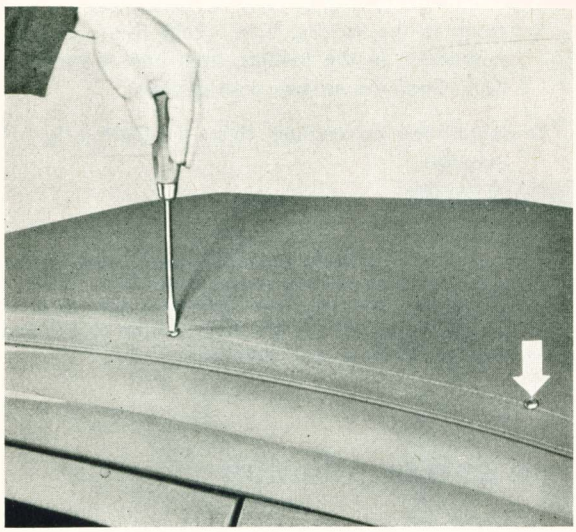
Vehicles of older version may be provided with the glass wool mat (Part No. 141 813 803) and the two covers (Part No. 141 813 821/822) if desired.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

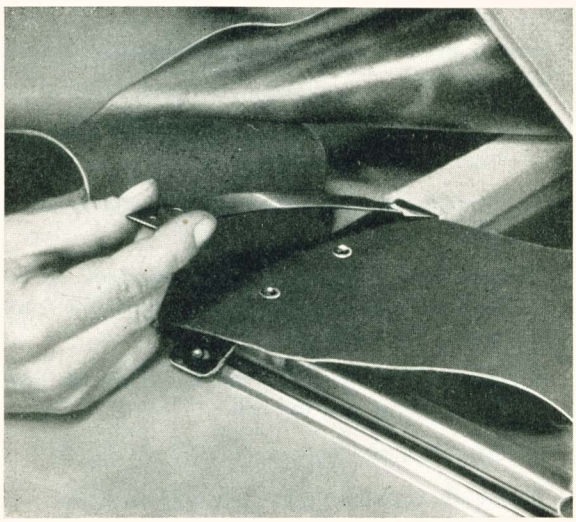
Top Cover Removal and Installation

Removal

1 - Remove the four countersunk screws and washers.

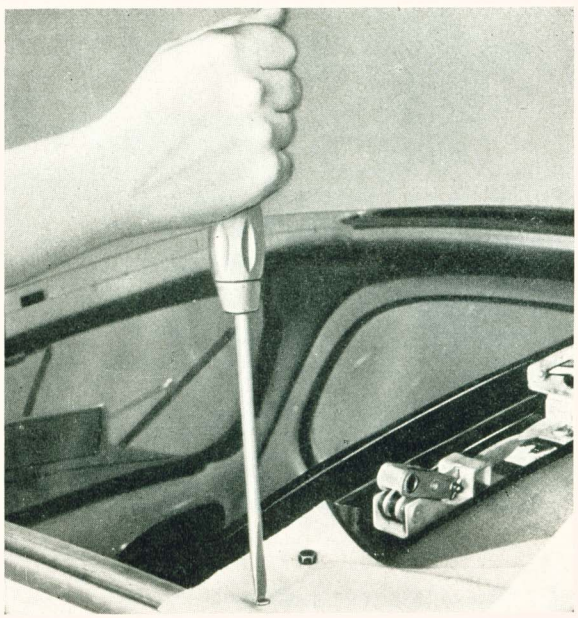


2 - Remove the four concealing strips from the guide bows.



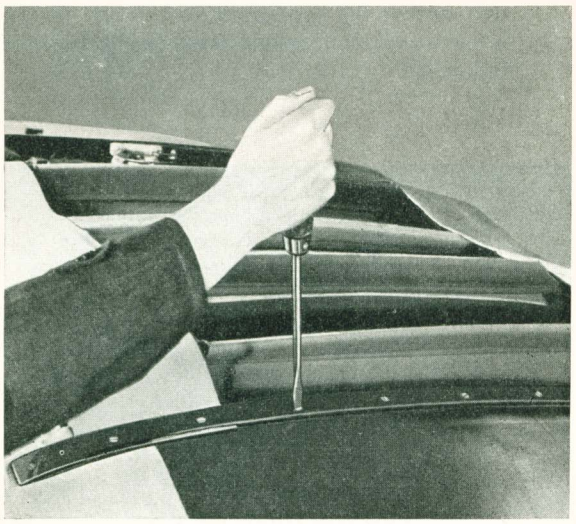
3 - Push the sliding roof to the half-open position and remove the two screws that attach the top cover bow to the locking bow. Swing back the top cover.

4 - Swing back the two side straps after having removed the strap retaining screws on the locking and guide bows.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

5 - Remove the 11 countersunk screws from the top cover and side strap retainer at the rear and take off top cover and side straps.



Installation

Installation of the top cover is effected by reversing the removal procedure, but attention should be paid to the following points:

1 - Apply some vaseline to the side guide rails and sliding roof lock.

2 - Make sure the side straps are fitted correctly. The black sides of the straps must face downward.

3 - When using new screws for attaching the top cover to the locking bow, check them for free movement in the locking bow before installation. Coat the screws with grease.

4 - Install the concealing strips in their original position.

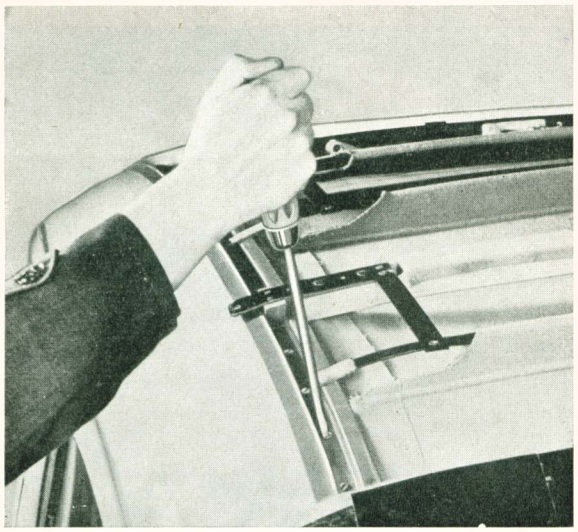
Note:

To adjust the tension of the top cover, open the sliding roof a bit and loosen the retainer screws at the back. Push the top cover a few millimeters toward the rear and retighten the retainer screws. Check top cover tension by opening and closing the sliding roof repeatedly.

Side Guide Rail Removal and Installation

Removal

1 - Push the sliding roof to the half-open position and remove the 10 screws from the front guide rail and the two screws from the rear guide rail.



2 - Take off the rear guide rail.

3 - Fully open the sliding roof so that the front side rail is free.

4 - Pull off the front guide rail and the plastic bead toward the front.

5 - Bend up the nose at the front end of the guide rail and pull out the bead.

6 - Remove the weather strip.

Installation

The installation is accomplished by reversing the removal procedure, but the following points should be observed:

1 - Removal all traces of the old cement from the edge of the roof opening.

2 - Cement new weather strip into place, using VW Compound D 11.

3 - Check the guide rail bead for damage. Install the bead and bend down the nose at the front end of the guide rail.

4 - Install the front guide rail and slide the bow guide pieces into the rail.

5 - Install the rear guide rail.

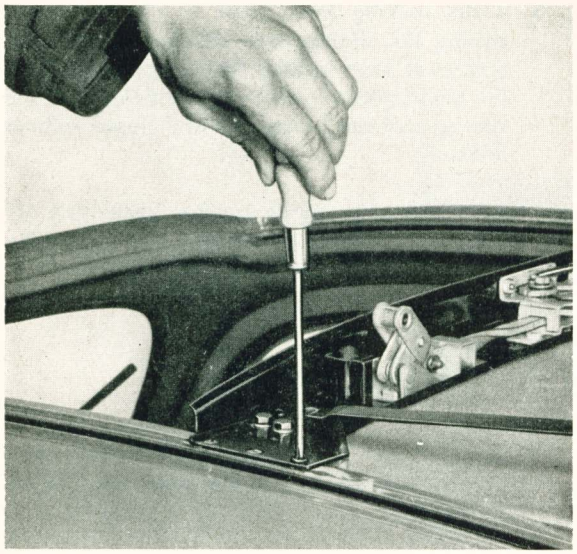
6 - Lightly coat the guide rails with vaseline.

Lock and Stretcher Mechanism Removal and Installation

Removal

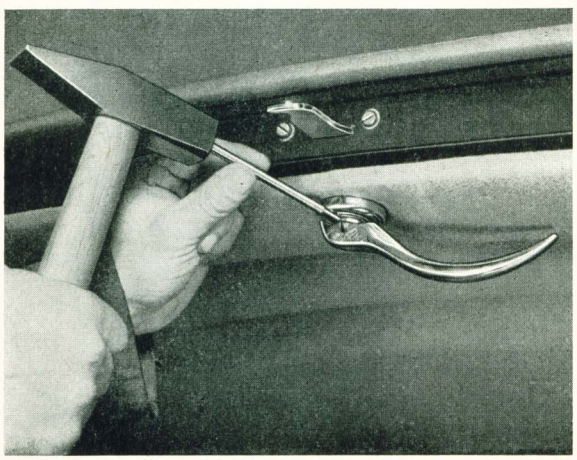
1 - Remove the screws that attach the top cover and side straps and swing back top cover and side straps.

2 - Remove the three countersunk screws from each locking bow guide plate and take off the guide pieces.

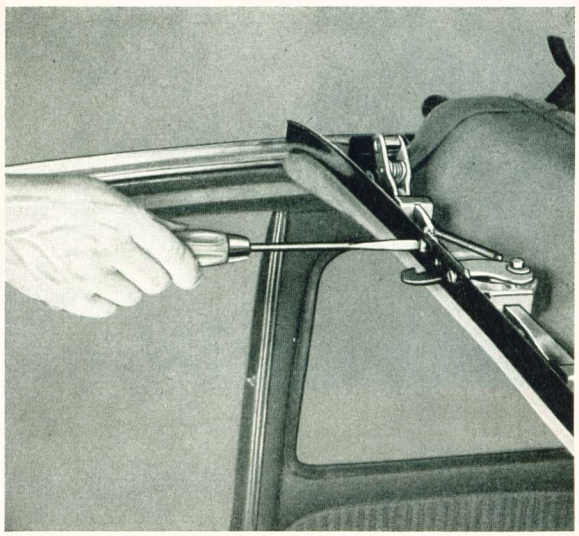


3 - Remove the two hex. screws from each locking bow guide plate and swing back the locking bow guide plates.

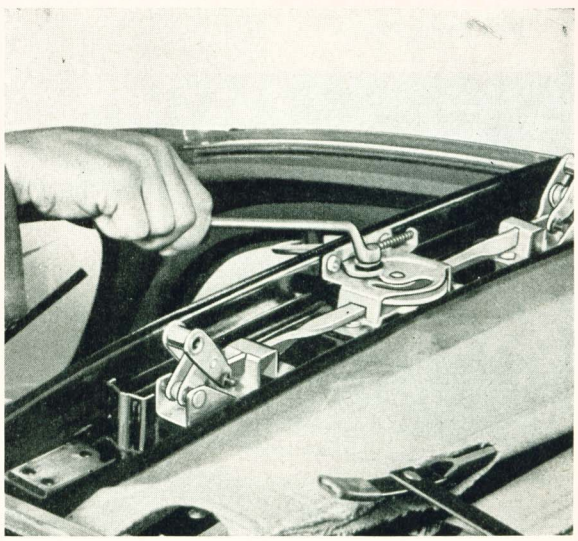
4 - Press the escutcheon plate against the locking bow and drive out the pin. Take off handle, escutcheon plate, spring and rubber insert.



5 - Remove the two cylindrical screws at the lock.



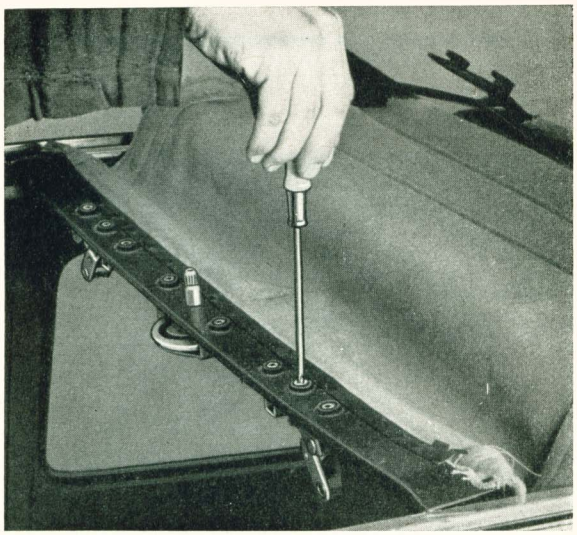
6 - Remove the screw at the locking hook, lift the hook and push it rearward.



7 - Turn the locking bow by 180 deg. and remove the eight countersunk screws holding the lock

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

and stretcher mechanisms. Take off the lock and stretcher mechanisms.



Installation

The installation is a reversal of the removal procedure, but the following points should be observed.

1 - Grease all moving parts of the lock with vaseline.

2 - Do not overtighten the locking hook screw to ensure a free movement of the hook.

3 - If the locking hook jams in the slot when closing the sliding roof, loosen the two hex. screws at each locking bow guide plate. Shift the guide plates in their slotted holes until the sliding roof can be opened and closed without difficulty.

4 - After assembly, check locking mechanism for proper functioning by opening and closing the sliding roof repeatedly.

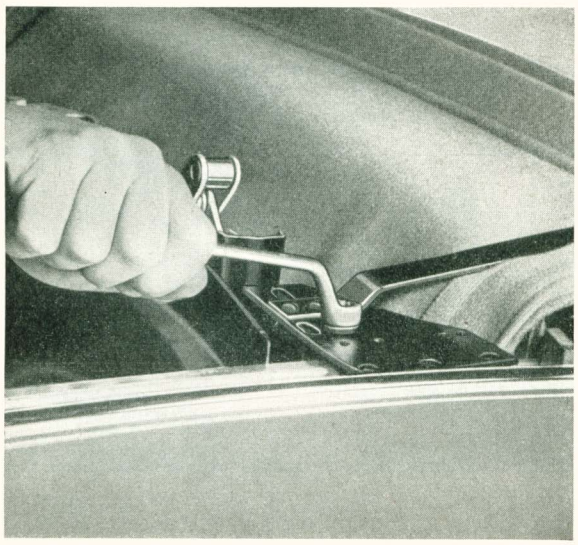
Headlining Removal and Installation

Removal

1 - Remove the screws that attach the top cover and side straps and swing back top cover and side straps.

2 - Remove the three countersunk screws from each locking bow guide plate and take off the guide pieces.

3 - Remove the two hex. screws from each locking bow guide plate and swing back the locking bow guide plates.

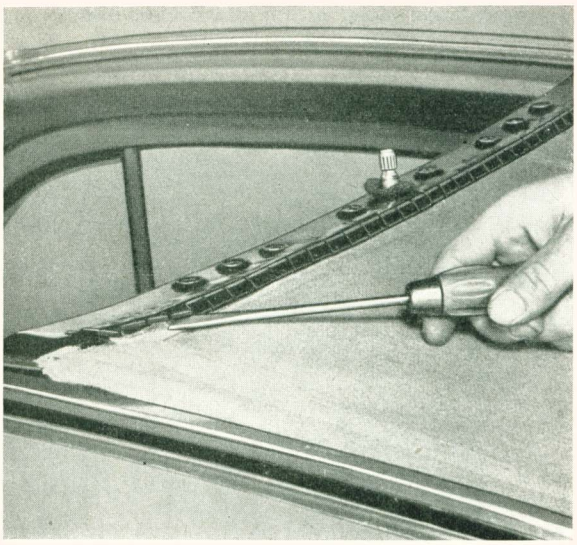


4 - Remove handle and escutcheon plate, spring and rubber insert.

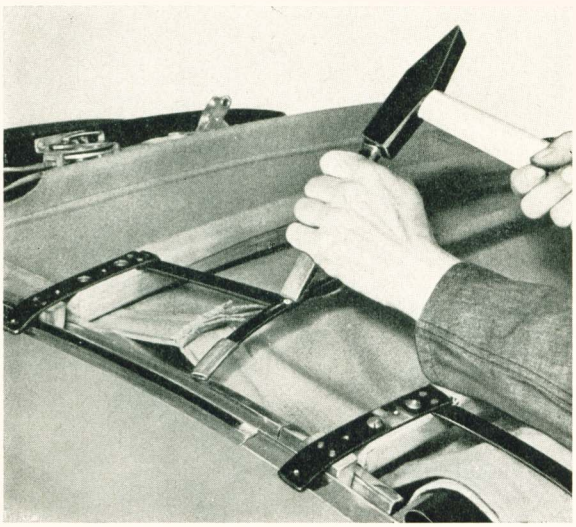
5 - Remove the four countersunk screws that attach the headlining to the guide bows of the sliding roof.

6 - Turn the locking bow by 180 deg. and remove the two hollow rivets, one on each end of the locking bow.

7 - Bend up the headlining retaining strip and withdraw the headlining from the locking bow.

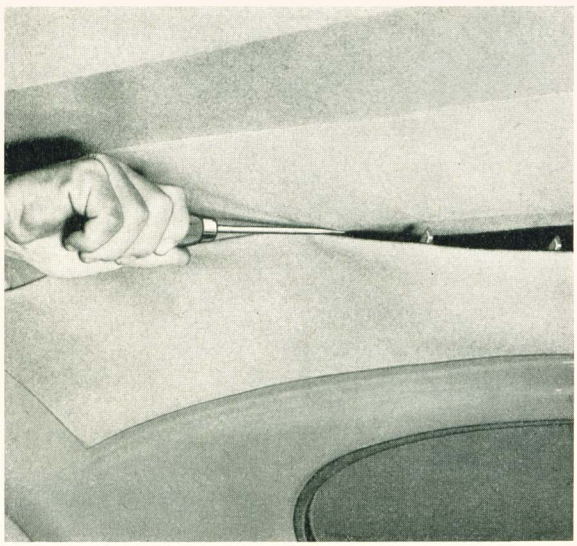


8 - Remove the rivets that attach the struts to the flat bows and pull out the flat bows.



9 - Remove the two hollow rivets, one at each rear corner of the roof opening.

10 - Pry off the rear trim panel and tear off the headlining from the rear edge of the roof opening.



Installation

Install the headlining in the reverse order while observing the following points:

1 - Remove all traces of the old cement from the rear edge of the roof opening, using benzine as a solvent.

2 - Cement the headlining to the rear edge of the roof opening, using VW Compound D 11.

3 - After the headlining has been attached to the locking bow, first check the tension of the headlining by closing the sliding roof. If found necessary, again detach the headlining from the locking bow and position the headlining further forward or rearward.

Guide Bow Removal and Installation

Removal

1 - Remove the screws that attach the top cover and side straps and swing back top cover and side straps.

2 - Remove the two screws that attach the headlining to the guide bow.

3 - Remove the female screws on each end of the guide bow. Lift the struts a bit and remove guide bow, guide plate, anti-rattle and rubber cushion.

Installation

The guide bow is installed in the reverse order, but the following points should be observed:

1 - Position the guide plates on the correct sides.

2 - Place two rubber rings into the guide plate.

3 - Adjust at the female screws if the guide bows rattle of the pressure on the rubber cushions is excessive.

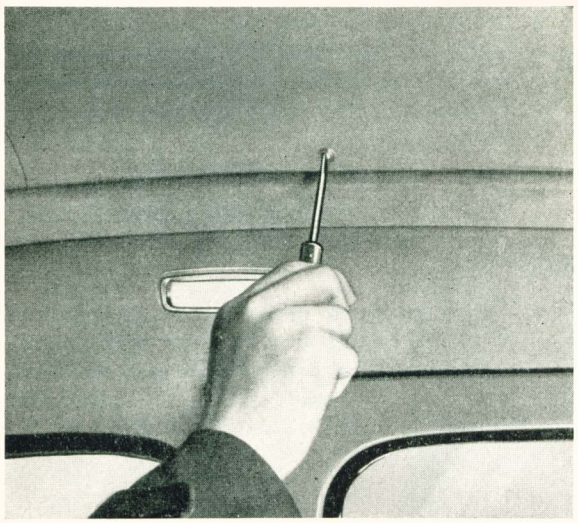
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Roof Cover Removal and Installation

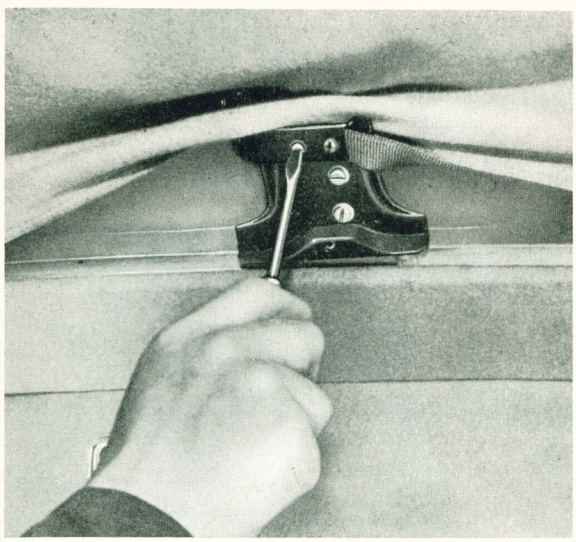
Removal

1 - Release the roof lock.

2 - Remove the two screws at the headlining, one screw on each side.

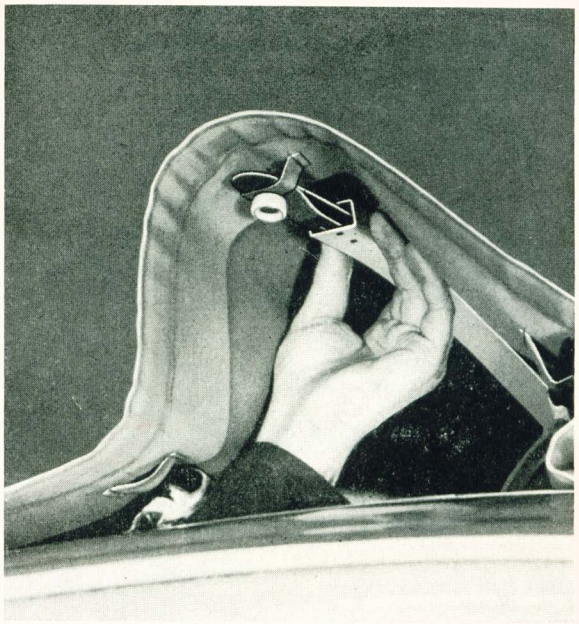


3 - Pull the headlining away from the roof edge and remove the two bow link screws from the roller plate.



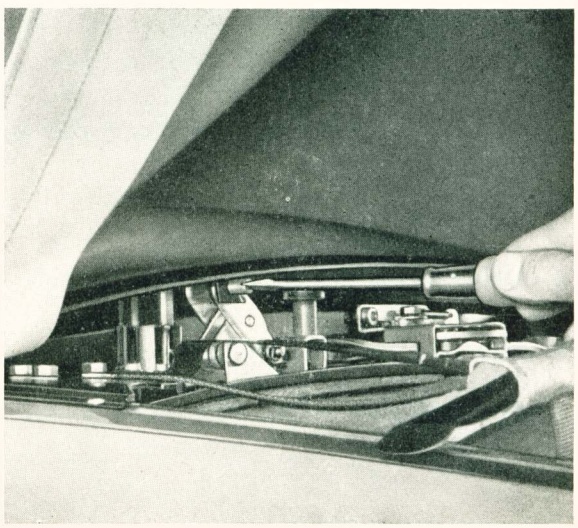
4 - Remove the two roller plate attaching screws and take off the roller plate, one on each end of the guide bow.

5 - Push the roof half open. Pull the single rollers from the roof cover and remove the guide bow.



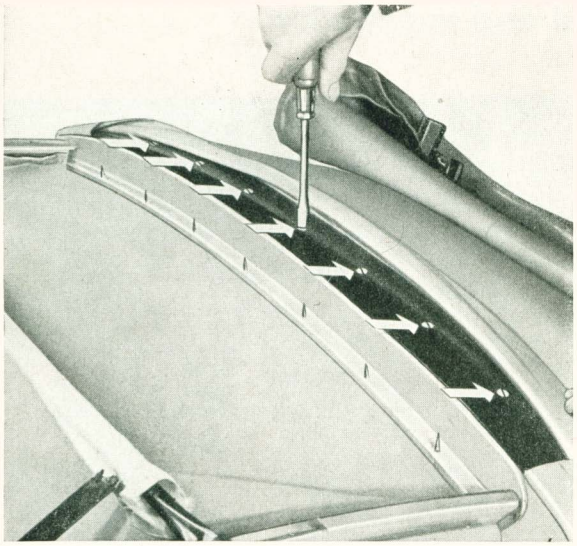
6 - Detach the ends of the two flat bows from the roof cover.

7 - Remove the two roof cover bow anchor bolts from roof locking bow. Lift up the roof cover bow and fold the roof cover rearward.

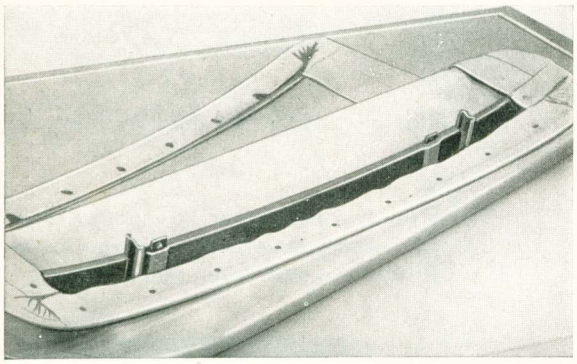


8 - Remove the nine countersunk screws (two of them being concealed by the cover) from the roof cover slat iron at the rear of the roof opening, and take off roof cover and roof cover bow.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



9 - Remove the rivets that attach the roof cover to the roof cover bow.



Installation

Reverse the removal procedure and observe the following points:

1 - Apply some vaseline to the moving parts of roof locking mechanism.

2 - When using new roof cover bow anchor bolts, make sure they freely move in the roof cover bow and the corresponding holes in the locking mechanism before installing them. Grease the anchor bolts.

3 - Properly insert flat bows and guide bow rollers into the roof cover flaps.

4 - Attach the roller plates slightly preloaded to the guide bow so that the single rollers (vertically pivoted) and the roller pairs (horizontally pivoted) freely run in the guide rail without perceptible play.

Note:

1 - The plastic material of the roof cover renders a readjustment of the roof cover tension unnecessary.

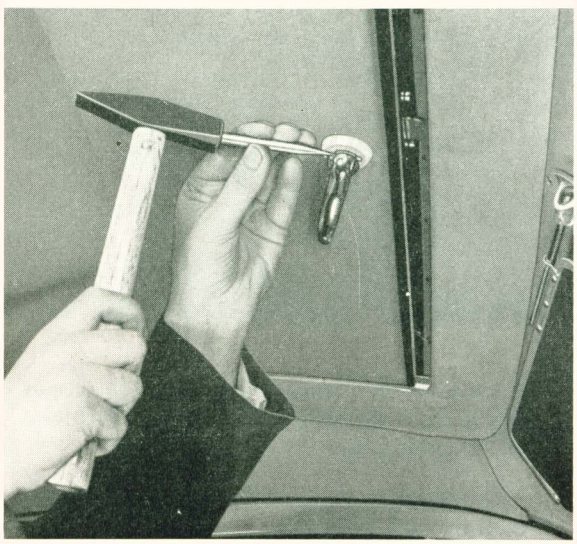
2 - The sliding roof of the type installed from August 1955 requires no service attention. Prior to installing the sliding roof, it is, however, recommended to apply a drop of oil to the roller pivots. The guide rails must **not** be greased.

Locking Mechanism Removal and Installation

Removal

1 - Release the roof lock and slightly open the roof.

2 - Press the escutcheon plate against the locking bow and drive out the pin. Take off handle, escutcheon plate, spring, and rubber inserts.

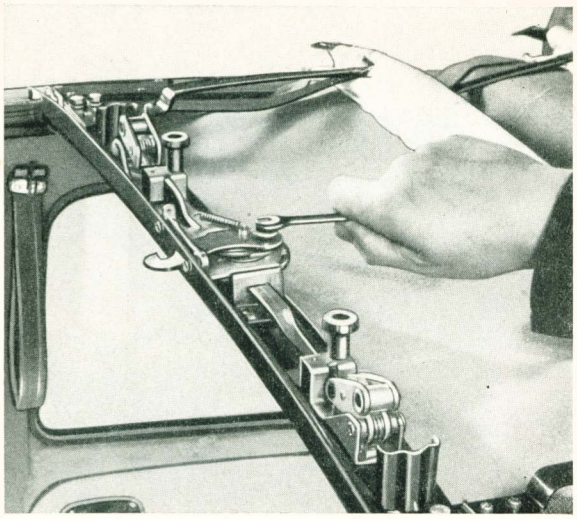


3 - Remove guide and flat bows.

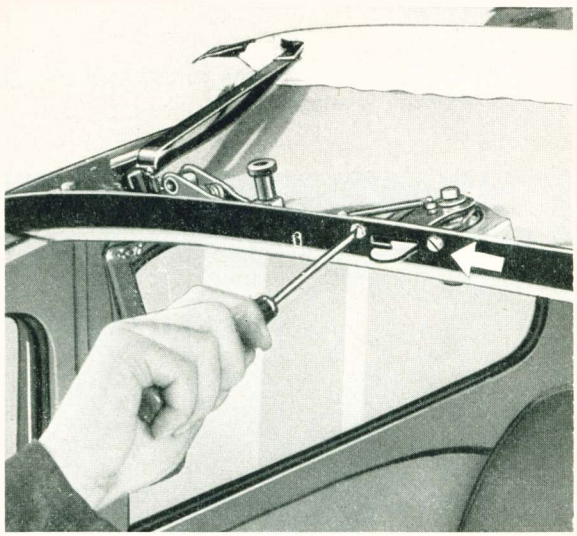
4 - Detach roof cover bow from locking bow and fold the roof cover rearward.

5 - Unhook the roof lock spring.

6 - Remove the locking hook screw, lift the hook off its pivot and push it rearward for removal.

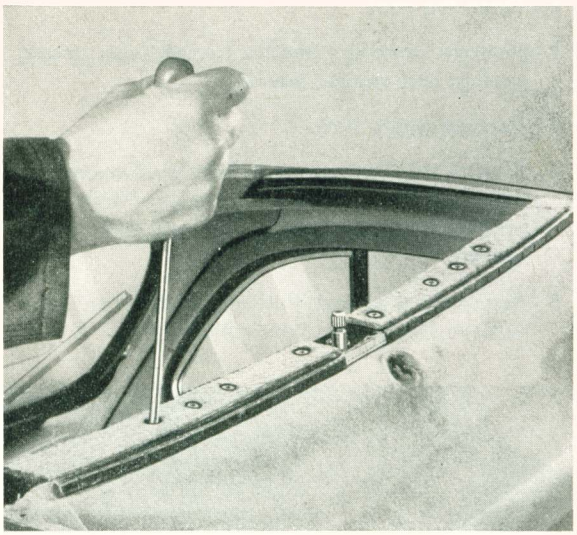


7 - Remove to two lock attaching screws.



8 - Detach locking bow from the roller plates on both sides and turn the locking bow 180 degrees (upside down).

9 - Remove the eight screws holding the locking mechanism and take off complete locking mechanism.



Installation

Reverse the removal procedure and observe the following points:

1 - Apply some vaseline to the moving parts of roof locking mechanism.

2 - Tighten locking hook screw to a degree which assures a free movement of the hook.

3 - If the locking hook jams in the slot when closing the sliding roof, loosen the hex. screws of the roller plates. The locking bow can then be moved laterally in the slotted holes of the roller plates to enable the sliding roof to be locked and unlocked without difficulty.

4 - New roof cover bow anchor bolts are to be checked for free movement in the corresponding holes of roof cover bow and locking bow. Lightly grease the anchor bolts.

5 - Properly install guide and flat bows and make sure the rollers move freely in the guide rail without perceptible play.

6 - The locking handle must point toward the right-hand door (at right angles) when the roof is locked.

7 - After installation, check locking mechanism for proper functioning by opening and closing the sliding roof repeatedly.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Headlining Removal and Installation

Removal

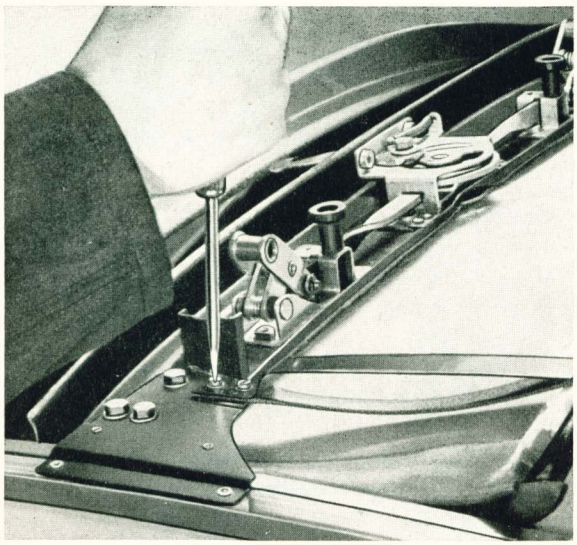
1 - Open the roof.

2 - Remove locking handle, escutcheon plate, spring, and rubber insert.

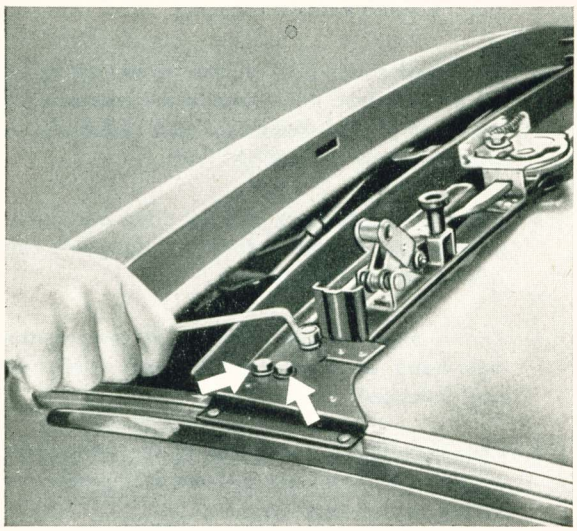
3 - Remove guide bow.

4 - Detach the flat bow ends from roof cover. Remove the two roof cover bow anchor bolts from roof locking bow and fold the roof cover rearward.

5 - Remove the screws that attach the front bow links to the locking bow roller plates.



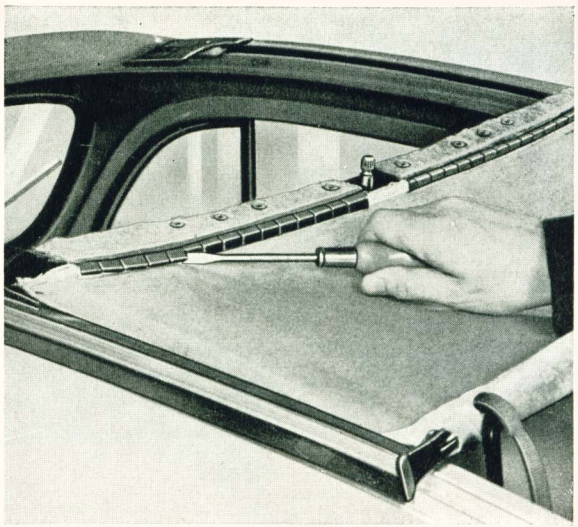
6 - Remove the screws that attach the roller plates to the locking bow.



7 - Turn the locking bow 180 degrees (upside down).

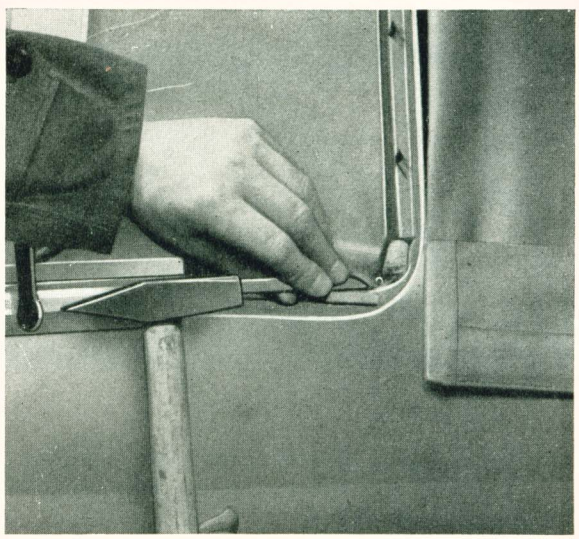
8 - Remove the two rivets, one on each end of the locking bow.

9 - Pry up the headlining retaining strip and pull the headlining away from the locking bow.

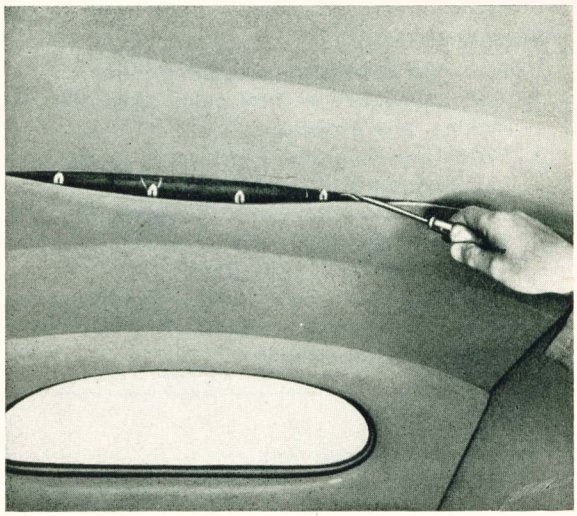


10 - Remove the rear guide rails.

11 - Remove the two rivets, one in each rear corner of the roof opening.



12 - Pry off the rear trim panel and tear off the headlining from the rear edge of the roof opening.



13 - Lift off the headlining and remove the rivets that attach the bow links to the flat bows. Pull out the bows.

Installation

Install the headlining in the reverse order, while observing the following points:

1 - Remove all traces of the old cement from the rear edge of the roof opening and from the locking bow, using benzine as a solvent.
2 - Cement the headlining to the rear edge of the roof opening, using VW Compound D 11.
3 - After the headlining has been attached to the locking bow, first check the tension of the headlining by closing the sliding roof. If found necessary, again detach the headlining from the locking bow and position the headlining further toward the front or rear.
4 - Cement the headlining to the locking bow, using VW Compound D 11, bend down the retaining strip, and rivet the headlining corners to the locking bow.
5 - Apply vaseline to the moving parts of the locking mechanism.
6 - New roof cover bow anchor bolts are to be checked for free movement in the corresponding holes of roof cover bow and locking bow. Lightly grease the anchor bolts.
7 - Properly install flat bows and guide bow and make sure the rollers move freely in the guide rails without perceptible play.
8 - After assembly, check locking mechanism for proper functioning by opening and closing the sliding roof repeatedly.

Guide Rail Removal and Installation

Removal

1 - Open the roof.

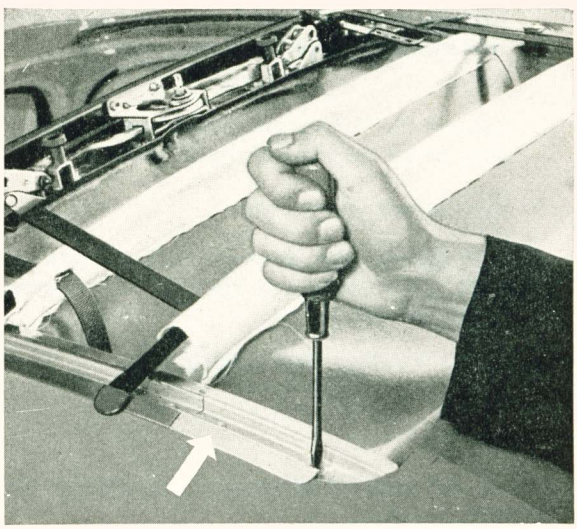
2 - Remove locking handle, escutcheon plate, spring, and rubber insert.

3 - Remove guide bow.

4 - Detach the flat bow ends from roof cover. Remove the two roof cover bow anchor bolts from roof locking bow and fold the roof cover rearward.

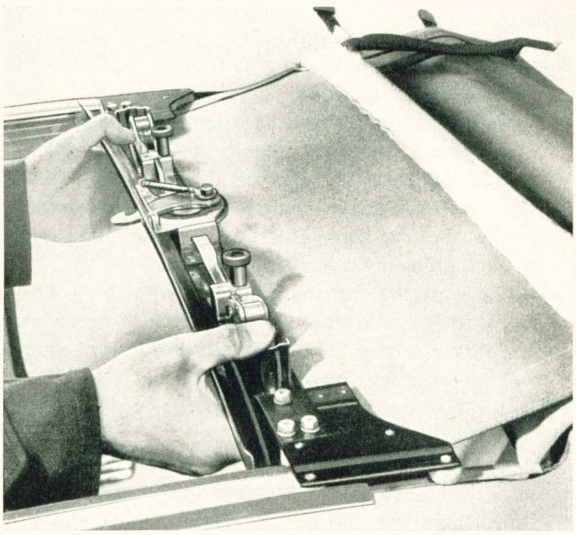
5 - Remove the screws that attach the front bow links to the locking bow roller plates.

6 - Remove the countersunk screws which hold the rear guide rails, and take off the rails.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

7 - Push locking bow and headlining rearward and lift locking bow out of the roof opening.



8 - Remove the countersunk screws which hold the front guide rails, and take off the rails and anti-squeak strips.

Installation

Reverse the removal procedure and observe the following points:

1 - Place the anti-squeak strips in position.
2 - After installation of front guide rails, slide the locking bow forward.
3 - When installing rear guide rails, make sure that they are flush with the front guide rails.
4 - Properly install flat bows and guide bow and make sure the rollers move freely in the guide rails without perceptible play.
5 - After assembly, check locking mechanism for proper functioning by opening and closing the sliding roof repeatedly.

Important

Never grease guide rails.

Locking Bow Removal and Installation

Removal

1 - Open the roof.

2 - Remove locking handle, escutcheon plate, spring, and rubber insert.

3 - Remove guide bow.

4 - Detach the flat bow ends from roof cover. Remove the two roof cover bow anchor bolts from roof locking bow and fold the roof cover rearward.

5 - Remove the screws that attach the front bow links to the locking bow roller plates.

6 - Remove rear guide rails.

7 - Push locking bow rearward until it clears the front guide rails and turn it 180 degrees (upside down).

8 - Detach headling from locking bow.

Installation

Reverse the removal procedure and observe the following points:

1 - When attaching the headlining to the locking bow, note proper tension of headlining.

2 - Make sure the rear guide rails are flush with the front guide rails.

3 - Apply vaseline to the moving parts of the locking mechanism.

4 - If the locking hook jams in the slot when closing the sliding roof, loosen the hex. screws of the roller plates. The locking bow can then be moved laterally in the slotted holes of the roller plates to enable the sliding roof to be locked and unlocked without difficulty.

5 - New roof cover bow anchor bolts are to be checked for free movement in the corresponding holes of roof cover bow and locking bow. Lightly grease the anchor bolts.

6 - Properly install guide and flat bows and make sure the rollers move freely in the guide rails without perceptible play.

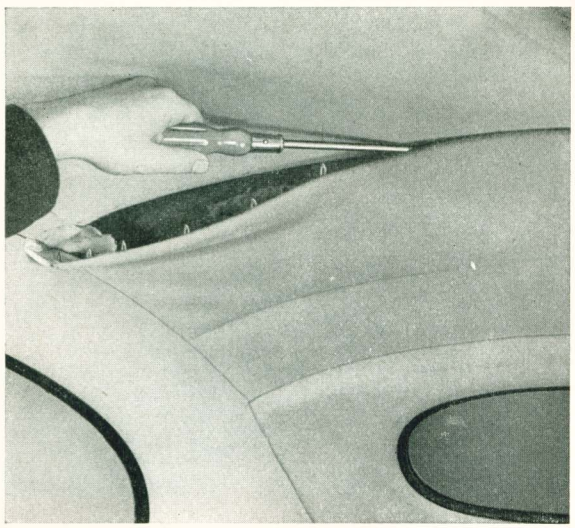
7 - After installation, check locking mechanism for proper functioning by opening and closing the sliding roof repeatedly.

Adjusting Roof Cover Tension

From Chassis No. 1 181 041, also the rear corners of the sliding roof cover are rounded off, and the cover retainer (slat iron) is provided with studs in lieu of the countersunk screws held by nuts welded to the inner side of the roof panel. The studs pass through slotted holes in the roof panel to allow the retainer and cover to be moved in the fore and aft direction. The retainer is fixed in position with nuts and lock washers from inside the car, a reinforcement strip being interposed between the washers and the roof.

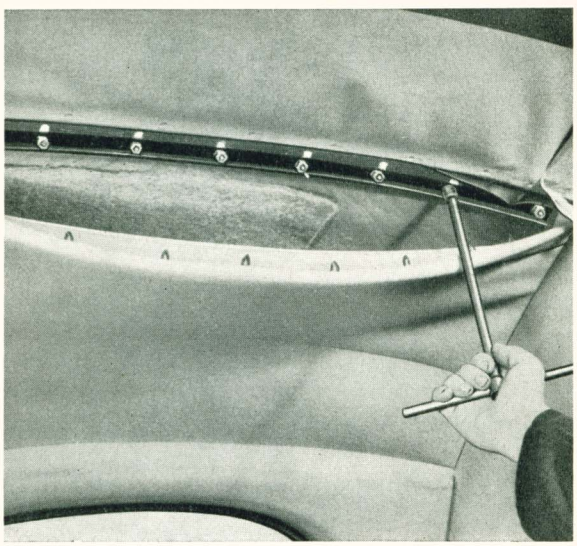
Working order

1 - Loosen rear headlining.

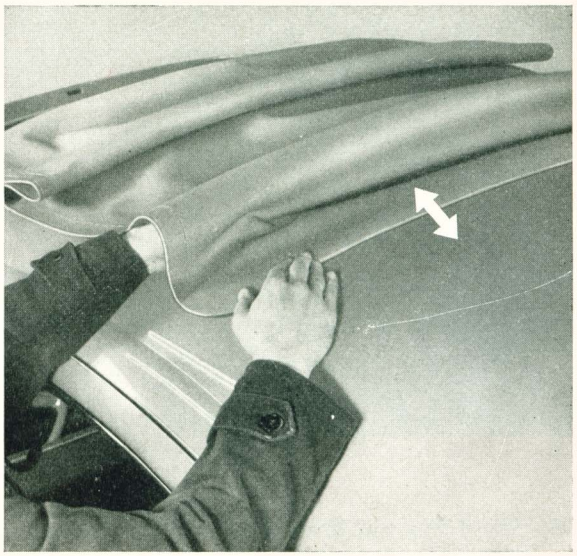


2 - Open sliding roof.

3 - Remove nuts from cover retainer studs.



4 - Move retainer forward or rearward to obtain a sufficient and equal tension of the cover.



5 - Tighten nuts to some degree.

6 - Close sliding roof and check tension of roof cover.

7 - Fully tighten nuts when cover is found to be in proper tension.

8 - Attach rear headlining.

Note:

When exchanging earlier bodies or roofs for new ones (from Chassis No. 1 181 041) the sliding roof cover and the corresponding retainer can be re-used. The only adaption to be made is to drill two new holes into the roof to register with the outer holes in the retainer. The retainer is fixed with the earlier screws and the corresponding washers and nuts.

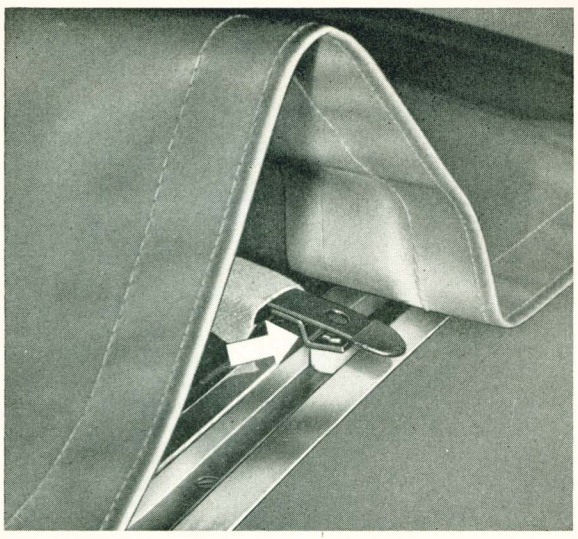
11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Rattle

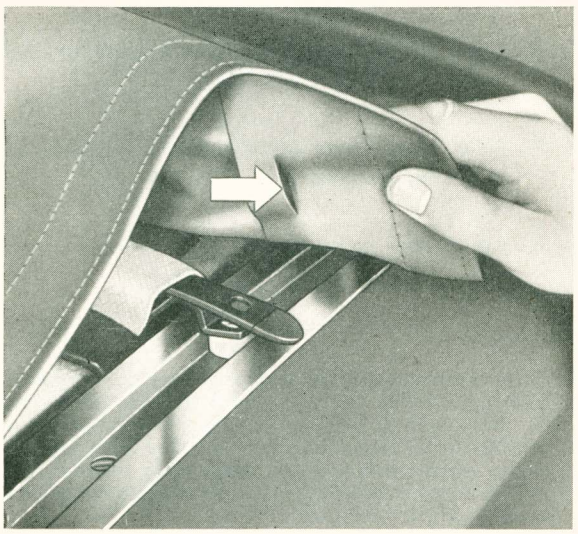
a - Eliminate vertical play by bending the roller bracket (see arrow) until the two lower rollers come to bear against the guide rail and no play is perceptible.

Note:

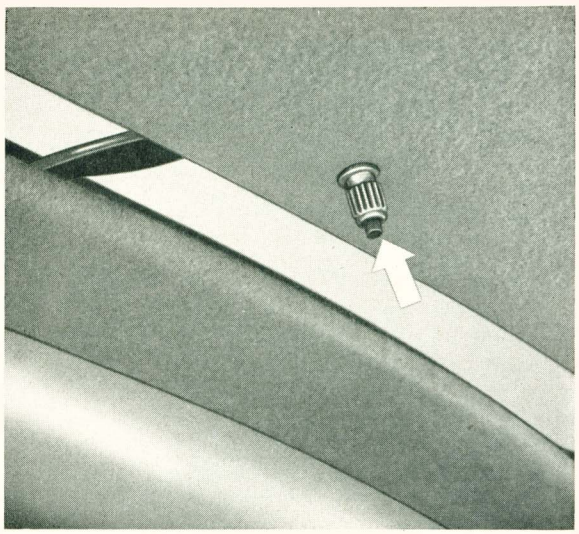
From Chassis No. 1 084 942 washers are provided as standard equipment between rollers and rivet head to decrease the clearance.



b - The sliding roof bows are inserted into pockets of the now glued (D 12) cover flaps. This renders a rattling of the bows at the guide rails impossible and the cover properly folds when pushing the roof backward.

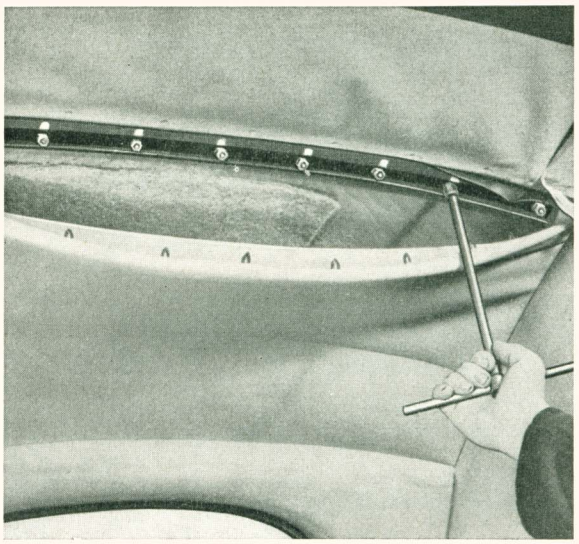


c - In the case of a rattling handle, make sure the rubber insert is not missing. If found necessary, interpose a felt washer between bow and spring.



Stiffness

If undue force is required to turn the handle to the locked position, lessen the tension of the roof cover at the slat iron.

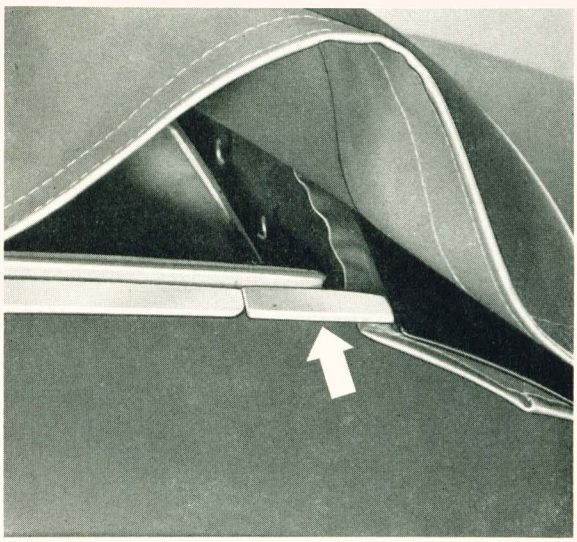


Leaks

a - Leaks at the front edge of the sliding roof are attributable to the cover being in too much tension or the rubber strip under the cover bow front edge not correctly positioned. Excessive tension causes the cover bow to lift when closing the roof, leading to leaks. Lessening the tension of the top cover at the slat iron or regluing the rubber strip under the cover bow in position will cure the defect.

It may become necessary to straighten locking bows which are bent as a result of undue force applied in turning the handle to the locked position.

b - A piece of foam rubber is glued between the end of the guide rail and the slat iron on either side to prevent ingress of water. Install these foam rubber pieces if found to be missing.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

The Convertible Top

General

The Convertible top is supported by two frame side members, linkage and bows. The bows consist of wood and tubing. The top support is fastened to the body by two hinges at the two pillars.

The outer cover is of special water-proof cloth with rubberized underside. For interior trim and shape as well as for insulation against warmth and cold rubber hair matting is sewn on linen and fastened to the top support. All curves on the top have been rounded off with additional padding. The underside of the support is covered with a taut lining of tricot cloth.

When folded down the top is to be secured by two snap hooks.

Lubrication

Regular lubrication as specified in the lubrication chart is of great importance for easy operation of the support linkage. All points to be lubricated should first be cleaned of dust and dirt.

Care of the Convertible Top

The appearance and life of the top greatly depends on a proper care and maintenance.

The top must always be perfectly dry before lowering. When having driven the car on dusty roads, slightly beat out the top and brush the fabric in line with the lay of the thread by means of a soft brush, as the sharp foreign particles harm the top fabric if not quickly removed.

Damage due to friction may occur when the lowered top is not tightly held in position by the catches which engage in the slots cut in the side rails. In such cases, the catches should be screwed further into their retainers. To do this, the lock nuts are to be loosened before and tightened after the adjustment.

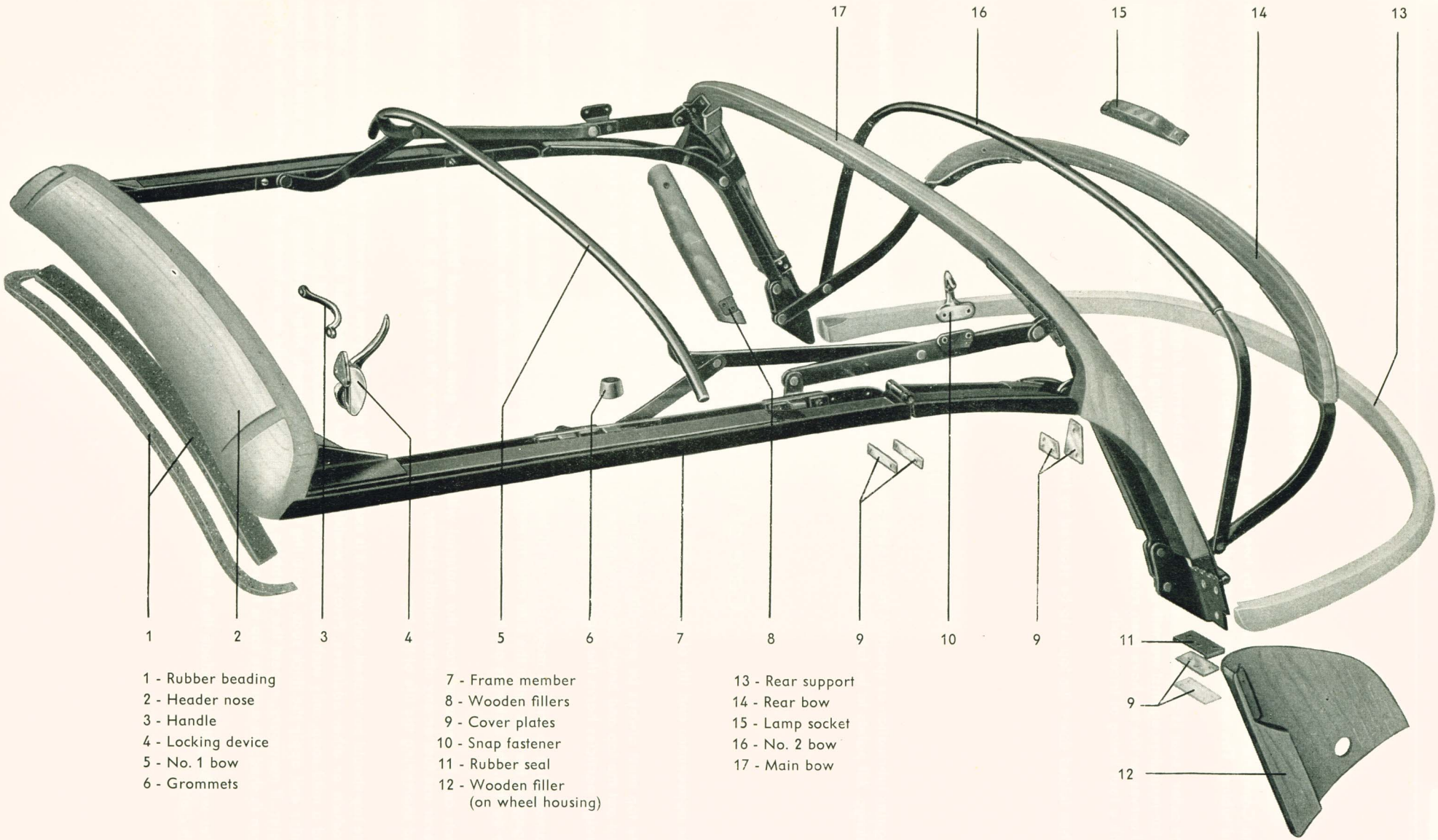
Spots can be removed from the material with an "art" gum eraser and brushed off with a whisk broom. Never use fuel or any other volatile cleaner, as they destroy the rubber ply in the top cover, leading to leaks and shortening the life of the top.

The top should be washed only when it is exceptionally dirty. Only use clear water which is free from chemical products or other additives. Prior to washing, beat out the top and then brush it off. Use luke-warm water and a mild soap, only such soap as castile or olive oil base soaps should be used. Moisten the top with clear water and apply the thick suds. Scrub the top with a soft brush. After scrubbing, flush off the suds with clear water. If necessary, repeat the scrubbing with suds. There should be no traces of the suds when the top has been flushed. Be sure the top is thoroughly dry before lowering.

After washing the top, clean the finish of the car by flushing with clear water and rubbing dry with a clean, soft cloth.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Convertible Top Frame



1 - Rubber beading
2 - Header nose
3 - Handle
4 - Locking device
5 - No. 1 bow
6 - Grommets
7 - Frame member
8 - Wooden fillers
9 - Cover plates
10 - Snap fastener
11 - Rubber seal
12 - Wooden filler (on wheel housing)
13 - Rear support
14 - Rear bow
15 - Lamp socket
16 - No. 2 bow
17 - Main bow

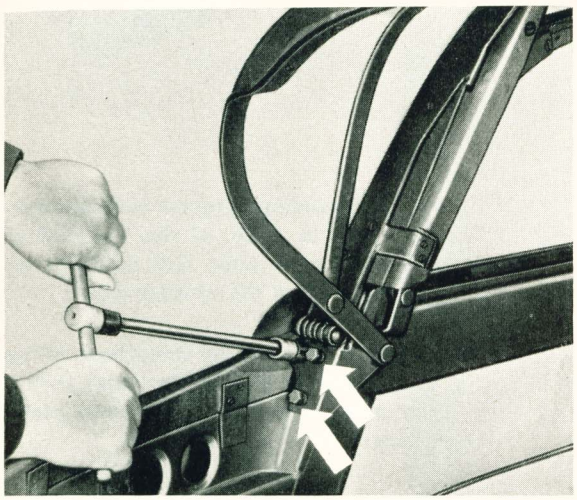
Installation of the Top

The following is a general description of the installation procedure. Work should in each case be carried out by an expert. Installation will be greatly facilitated if the job is carried out by two people. It is possible to install separate parts of the top individually.

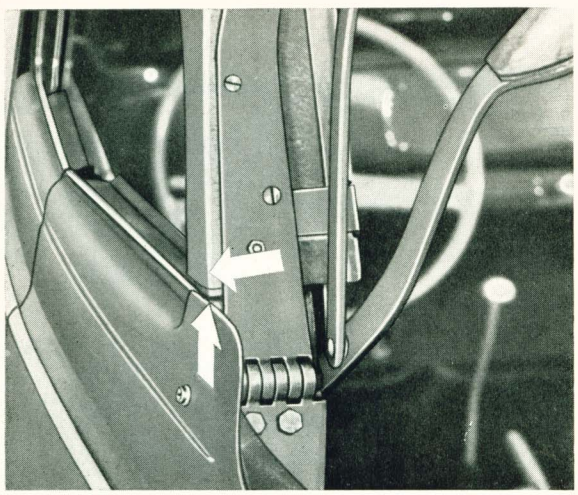
Installation of the Convertible top frame:

1 - Before installation of the top the carpets for the luggage compartment and rear wheel housings as well as all the seats must be removed. Lower the side windows.

2 - Put the frame for the top into position and fasten it loosely to the two pillars by 3 hex. screws at each side.



3 - Move the frame so far to the side that the wooden main bow is in line with the upper edge



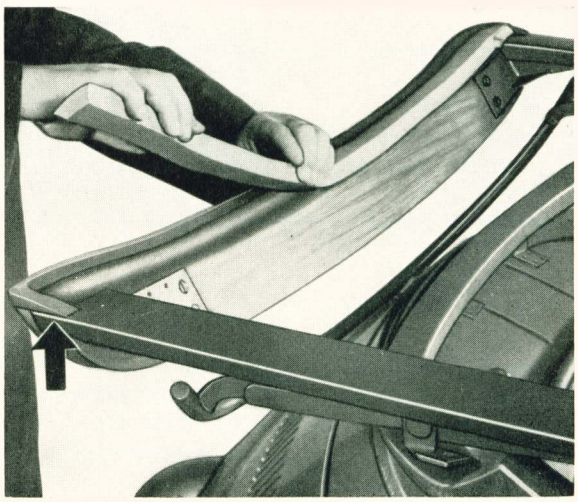
of the body on the left and right, otherwise leaks might occur at these points. If the main bow cannot be brought in line with the body it should be re-machined accordingly.

4 - Check for proper contact of the header nose on the windshield roof member. The rear part of the header nose should protrude by about 4 mm (.15″) over the inner edge of the roof member toward the front as after installation and tightening of the top cover the frame becomes arched, thus pulling the header nose backward.

5 - Remove lamp socket for interior light and both wooden fillers from the main bow.

6 - Push the top frame toward the back.

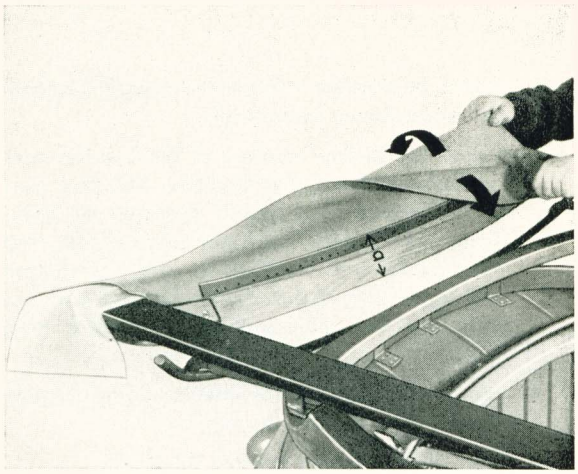
7 - Cover the inside of the header nose with adhesive. Stick the sponge rubber (10 × 14 × 1350 mm) into the recess at the front edge and a strip of foam rubber (20 × 40 × 1250 mm) into the recess at the underside of the header nose. Cut the square sponge rubber piece so that it is slightly pointed at both ends.



8 - Nail a strip of top and head-lining material of about 1250 × 150 mm to the foam rubber covered underside of the header nose. Make sure that it is pulled tight towards the sides and nailed on about 60 mm away from the inner edge of the header nose. When doing this ensure that the outer sides of the folded cloth strips point outward.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

9 - Nail 15—20 mm wide cardboard strips onto the cloth, strips, spacing them 80 mm apart. Coat header nose with adhesive. Fold the headlining to the inside and the top material to the outside.



a = 80 mm

10 - Tighten headlining and top material, stick it on and nail it down. Slightly cut the headlining at the left and right corners to facilitate installation. Cut off the protruding cloth strips.

Important!
In order to protect the covers and strips from rust use tacks or pins made of brass only.

Note:

From Chassis No. 1 283 328
14 mm tacks, Part No. 151 871 473 and
12 mm pins, Part No. 151 871 471
made of brass are used as standard equipment.

This eliminates rust patches which were occasionally apparent on light-coloured tops.

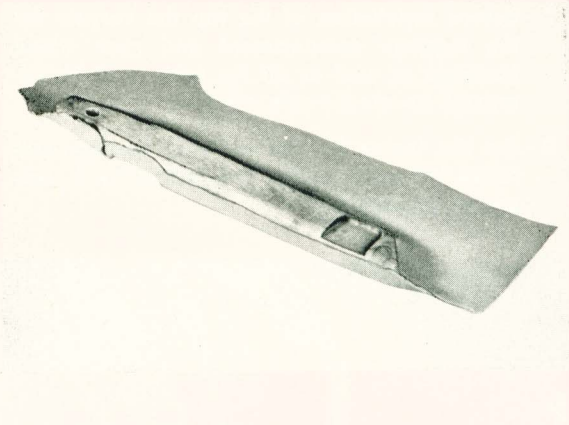
If necessary, replace the tacks used previously by brass tacks.

Rust patches can be romoved as follows:

Mix one part of oxalic acid with 100 parts of warm water (70° C). In order to remove all acid from the fabric thoroughly rinse with clean water.

11 - Screw locking devices and handles left and right into the holes provided.

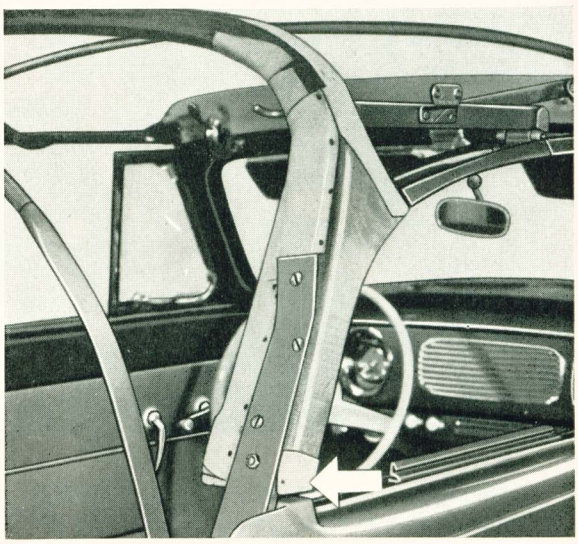
12 - Stick a piece of headlining (about 500 × 200 mm/ 19.68″ × 7.87″) to the outside of each of the removed wooden filler pieces.



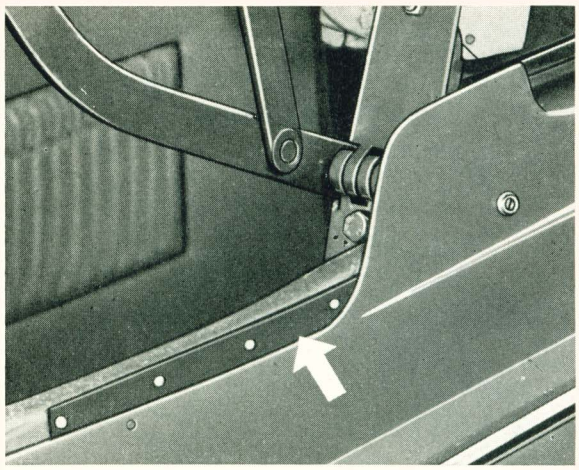
13 - Stick a piece of headlining (about 600 × 300 mm/ 23.62″ × 11.81″) to each of the rounded-off sides of the wooden bow. Cut openings for the angle supports of the wooden fillers.

14 - Screw wooden fillers to the main bow. Wrap the protruding cloth around the lower part of the main bow, tighten and nail into place. Cut off surplus cloth strips.

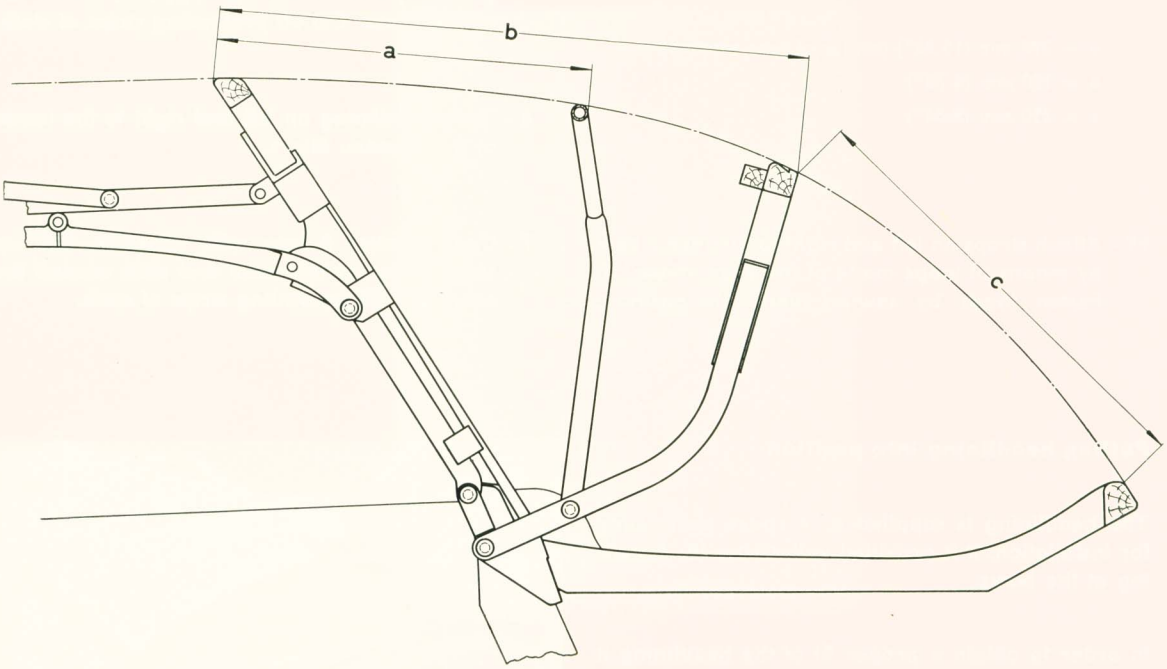
15 - Stick a patch of artificial leather to the underside of each of the two main bow corners and nail into position. These leather patches protect the head lining material from water.



16 - To establish a better matching of the front parts of the rear support with the body two small leather strips should be nailed to the left and right of the rear support.



17 - Lock the top frame by means of the locking devices. Adjust number 2 bow and rear bow to the dimensions given.



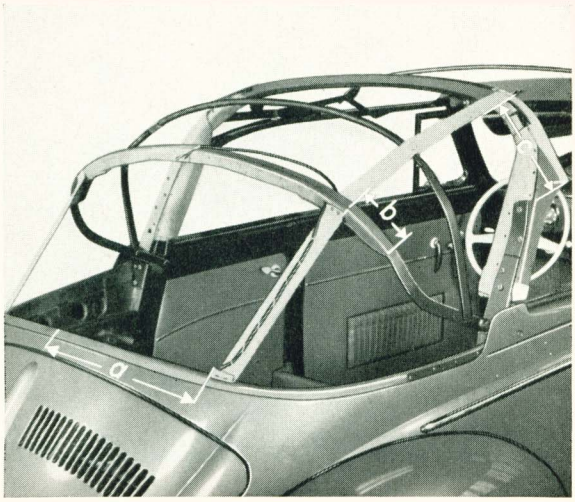
a = 350 mm (13.77″)
b = 610 mm (24.01″)
c = 455 mm (17.89″)

Important!
These dimensions should be closely adhered to as proper fitting of the headlining and folding of the top depend on them.

18 - Nail straps on the left and right under slight tension to the rear support, rear and main bow, observing the dimensions given. Sew cable for interior light to the right-hand lower strap and pull it through the hole in the rear bow.

The two rear bow straps are to be nailed to the sides as otherwise during installation the ends of the garnish moulding on the top material will lie too high and will stick out.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



a = 390 mm (15.35″) (center of rear support)
b = 120 mm (4.72″)
c = 250 mm (9.84″)

19 - Attach straps on left and right to number 2 bow by means of loops made of the same material. Fasten loops by sewing them into position.

2 - Pull up headlining at each strap until the seam of the cover touches the lower side of the main bow. Stick strap into place and nail it to the top side of the main bow. Cut off protruding cloth strips.

3 - Attach headlining strap at the rear bow in the same way as described above.

4 - Nail strap to the back of the rear support. Cut openings for the straps on the left and right.

5 - Nail headlining under even tension into the groove provided at the upper side of the header nose. Cut off protruding strips of cloth.

6 - Tack headlining on left and right to the inside of the wooden fillers.

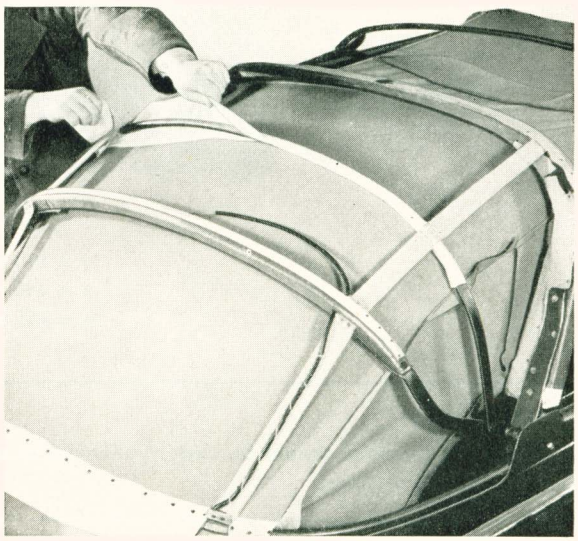
7 - Coat number 2 bow with adhesive. Pull up strap as far as the seam and stick around the bow. Cut off protruding strips of cloth.

Putting headlining into position

The headlining is supplied as a spare part ready for installation. It is provided with straps for fastening at the bows.

In order to obtain a proper fit of the headlining it should be fastened to the individual bows in the following succession with the top closed:

a = Main bow
b = Rear bow
c = Rear support
d = Header nose
e = Wooden fillers
f = No. 2 bow
g = No. 1 bow



Proceed as follows:

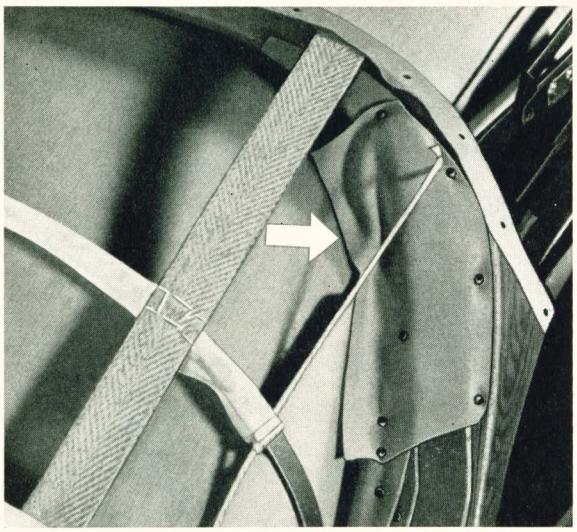
1 - Coat front and upper side of main bow with adhesive.

8 - Stick the appropriate strap to number 1 bow and sew it up at the outer edges. It should be observed that the headlining at the sides hangs about 10 mm below the two frame members.

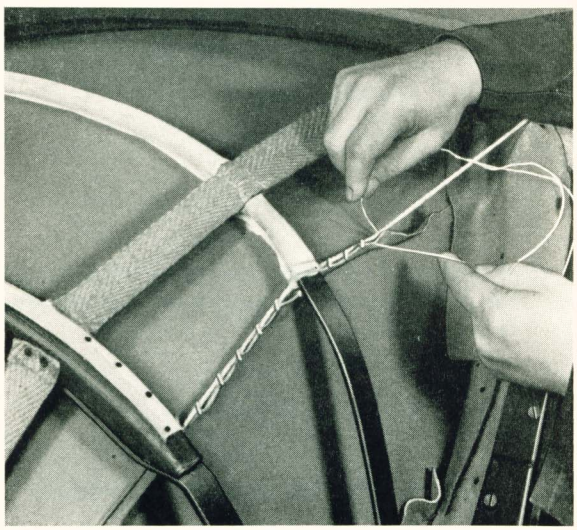
After this work has been carried out check for wrinkles in the headlining and see that the seams of the straps are straight. If necessary adjust the bows.

9 - Nail two 4 mm thick pieces of cord to the left and right of the main bow in line with the headlining seams at the side, wrap once around number 2 bow and under tension nail taut to the side of the rear bow.

10 - Nail a piece of headlining material to each of the rounded parts on the left and right of the main bow.



11 - Sew the side seams of the headlining under tension to the cord.



Check from inside whether the side seams of the top are straight. If wrinkles are apparent it is absolutely necessary to re-tighten the headlining.

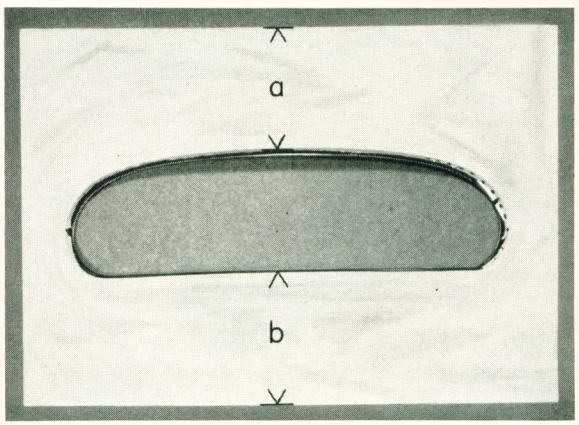
12 - Reposition the lamp socket in the holes provided at the rear bow. Pull the interior light cable through the hole in the lamp socket and through an opening cut into the headlining.

Installation of rear view window frame

When the frame for the rear view window is installed the top must be in a closed position.

1 - Stick a piece of muslin (650 × 850 mm) into the wooden frame so that it protrudes by about 200 mm at top and bottom.

2 - Cut a piece of muslin to the size of the frame allowing it to protrude by about 15 mm (.59″) all round on the inside. Stick this protruding border to the inside of the wood frame and nail it into position.

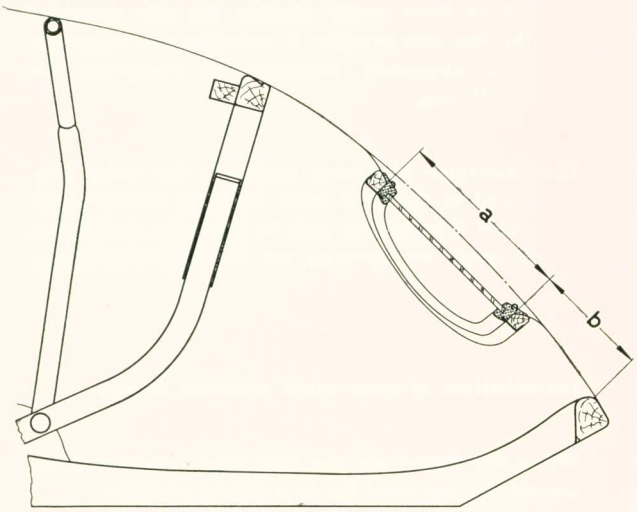


a = 250 mm (9.84″)
b = 200 mm (7.87″)

3 - Mark the center of the rear support, the rear bow and the center of the window frame on the muslin.

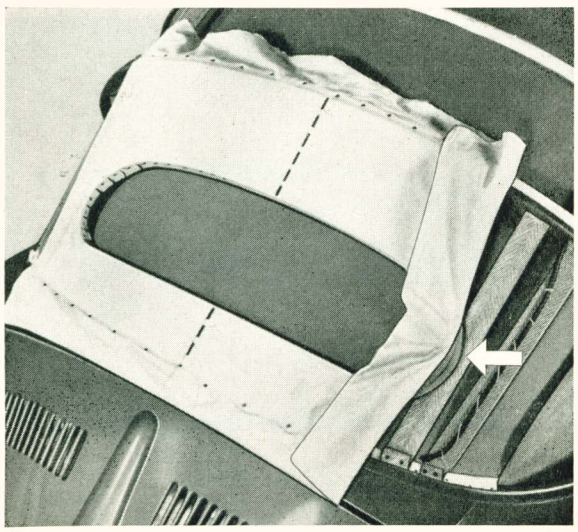
4 - Then nail muslin with window frame in line with the markings to the rear bow and the rear support, pulling it taut the whole time.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



a = 192 ± 2 mm
b = 98 mm

5 - Nail two additional straps under tension to the left and right sides of the rear bow and rear support so that the wooden frame of the rear view window comes to rest on the straps. See that the size of the opening for the window is not decreased.



Important!
Check whether the window frame is in a horizontal position and in the center. If necessary adjust.

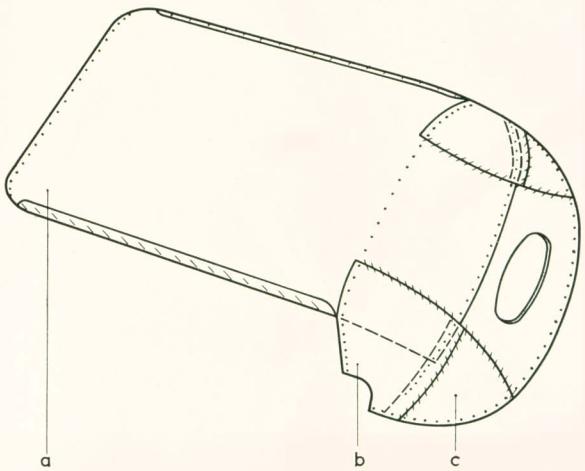
6 - Cut off protruding muslin strips.

7 - Coat the inside of the wooden frame with adhesive.

8 - Cut headlining to size of the wooden frame allowing for a 15 mm/.59″ border and stick it on making sure that there are no wrinkles.

Installation of linen cover

Before installation of the linen cover cut out 5 pieces of linen cloth to the following dimensions:



a = 1370 × 1700 mm / 53.94″ × 66.93″
b = 450 × 650 mm (twice)/17.71″ × 25.59″
c = 450 × 480 mm (twice)/17.71″ × 18.90″

..... = nailed
~~~~~ = stitched

1 - Pulling taut, nail side pieces (c) on left and right to rear support and rear bow. Cut off protruding cloth strips.

2 - Nail roof piece (a) to rear bow.

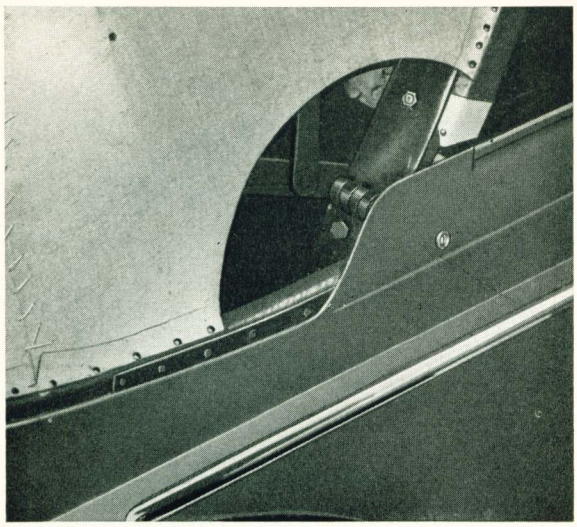
3 - Tack roof piece to header nose, keeping it free of wrinkles.
~~~~~

4 - Nail roof piece to main bow. There should be no wrinkles.

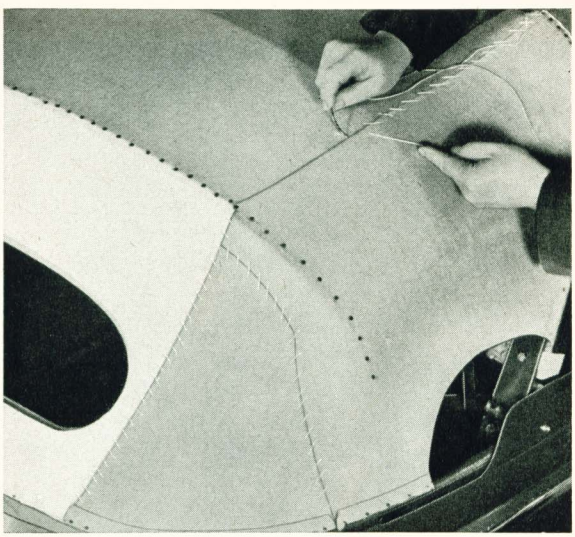
5 - Linen hanging over the sides of the roof should be hemmed over up to the roof frame and should later be sewn to the rubber hair mat.

6 - Nail side pieces (b) on left and right to main bow, rear bow and rear support, keeping free of wrinkles.

7 - Cut a semicircle of about 150 mm/5.91" radius into side pieces (b) for main hinges.

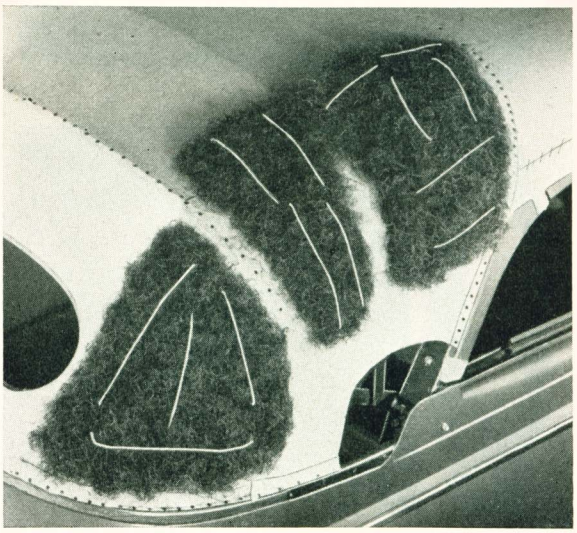


8 - Sew side pieces (c) to rear window frame muslin and side pieces (b) pulling taut. Sew side pieces (b) to roof piece (a) also keeping tightly stretched.



9 - Make loose stitches of approximately 10—15 cm along the rounded sides of the linen cover between main and number 2 bow, between number 2 bow and rear bow and between rear bow and rear support.

10 - Insert padding—horse hair if possible—of even thickness under the stitches between the bows.



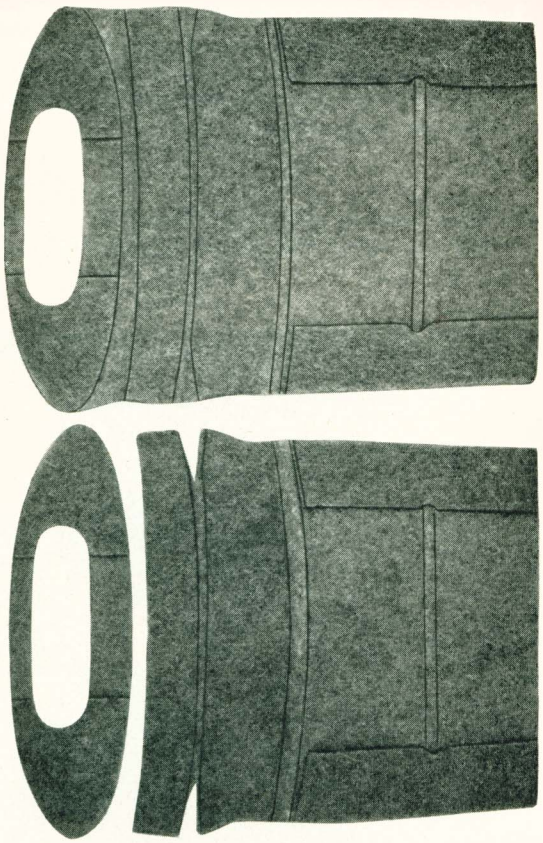
Important!
The padding determines the shape and smoothness of the rear of the top. If it is either too thick or too thin in places the top will be uneven.

Sewing on rubber hair mat

This mat can be obtained in one piece as a spare part. Before sewing it on, the strip which is positioned between the part for the rear view window and the large part for the roof, and which can be recognized by its particular seating depth, should be cut out. After this, two wedge-shaped pieces should be cut out on the left and right to make the folding back of the top easier. If necessary the outer pressed edges of the rubber mat can be cut off.

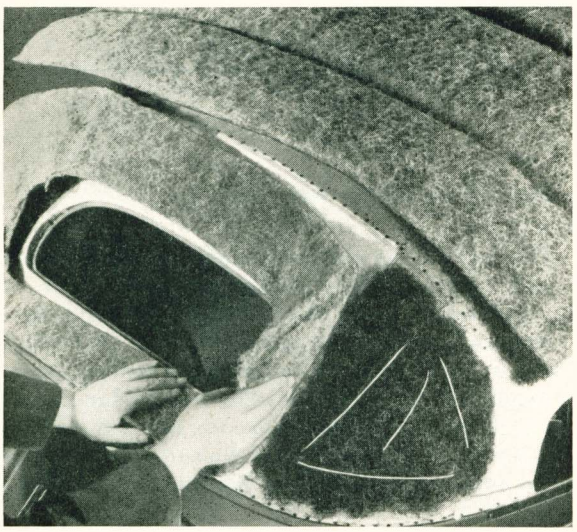
On the left in the picture you can see the rubber hair mat as delivered and underneath the underside of the mat cut ready for installation.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY



1 - Slightly pull out the hair on the cut edges of the rubber hair mats to insure proper matching at the roof edges.

2 - Put both pieces of the rubber hair mats into position.

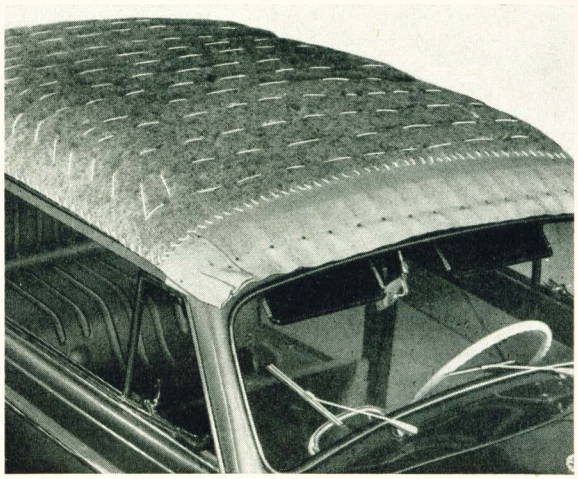


3 - Pull rubber hair mat at the rear view window from the rear bow toward the rear support and attach it to the linen cover with rough stitches.

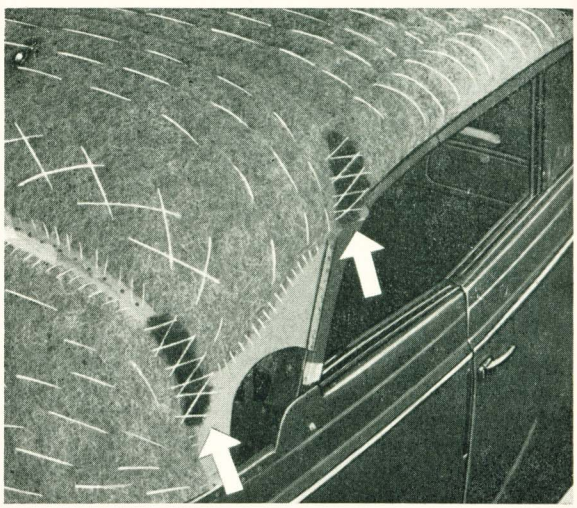
4 - Sew roof part of the rubber hair mat at a short distance from the rear bow to the linen cover by cross stitches, pull it approximately as as far as the rear edge of the header nose and sew it with small tight stitches to the linen cover.

5 - Sew rubber hair mat with long stitches to the linen cover so that the seams are at right angles to driving direction allowing for a distance of approximately 100 mm/3.94″ between the seams.

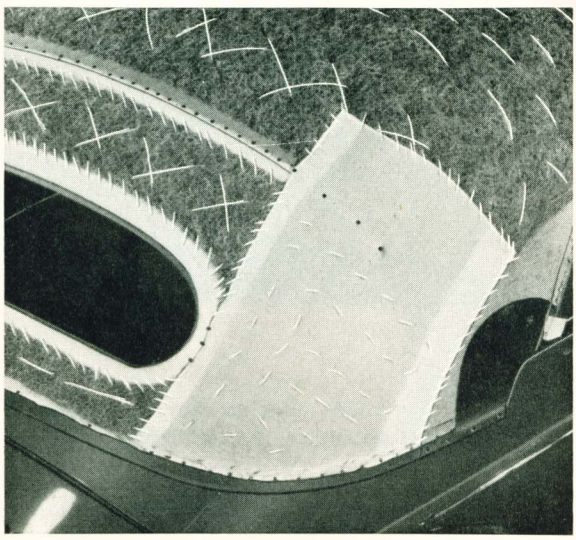
6 - Sew the outer edges at the sides with small tight stitches to the border of the linen cover.



7 - Pad out the wedge-like cuts in the rubber hair mat near the main bow and the cavities on the outer edges between roof mat and rear wall mat to obtain smooth areas. Sew wadding into place with long stitches.



8 - Cover the left and right rear corners with a piece of muslin (550 × 400 mm/21.65″ × 15.75″), pull tight and sew it with small stitches to the side linen cover and to the rubber hair mat. Nail the muslin to the rear bow and rear support.

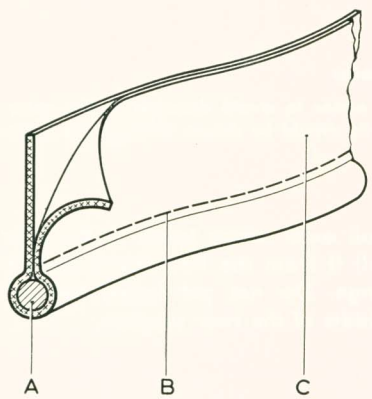


Installation of outer cover

For installation of the outer cover the top must be closed.

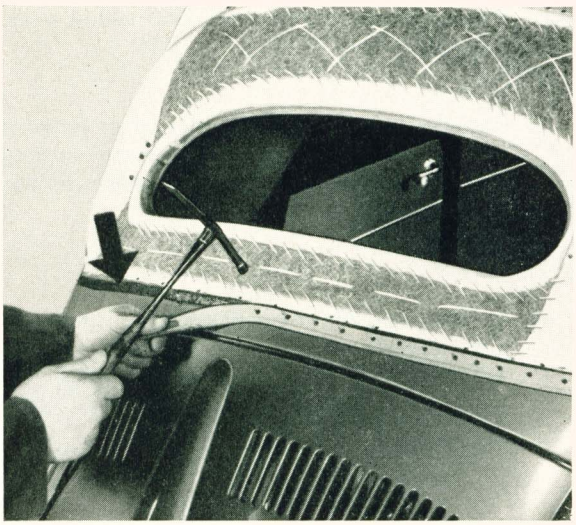
A linen cover is sewn to both sides under the outer cover. Pull the rubber hair mat through the outer and the linen cover after loosening it at the header nose.

1 - Cut a piece of moulding 50 × 1850 mm/ 1.97″ × 72.83″ as specified in drawing. The colour of the moulding should be the same as that of the top.



A = Textile cord stiffener 4 mm dia./.157″
B = Seam
C = Top material

2 - Coat rear support with sealing compound. Nail moulding into place - under tension to the sides - so that the beading comes to rest on the nails in the rear support.

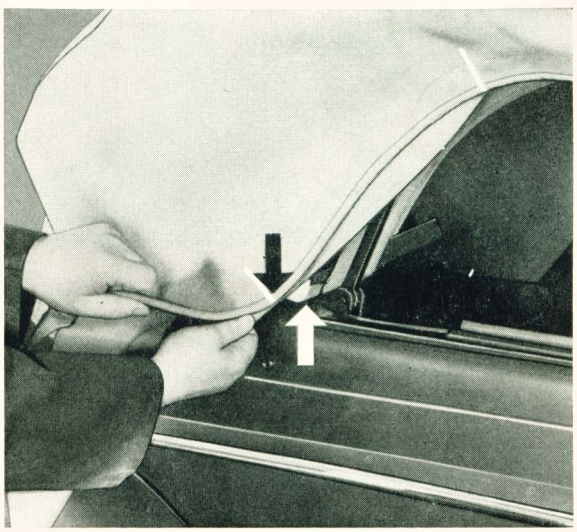


3 - Loosen linen cover with sewn-on rubber hair mat from the header nose and fold it backward.

Important!
Do not loosen the linen cover at the main bow.

4 - Place outer cover onto the top.

5 - The outer cover is marked at both sides near the main bow by two white lines. First pull the cover to the right side so that the lower



white line touches the lower edge of the wooden main bow.

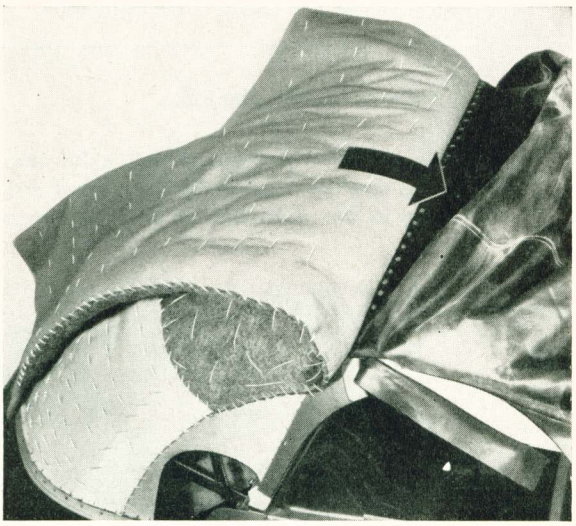
6 - Tack protruding strip on the inside to the right-hand side of the main bow with 4 nails.

7 - Fold the rear part of the outer cover forward and nail the linen cover under tension working from the right-hand side as far as the middle, to the wooden main bow.

8 - Loosen the outer cover strip on the right-hand side and repeat the same procedure on the left-hand side.

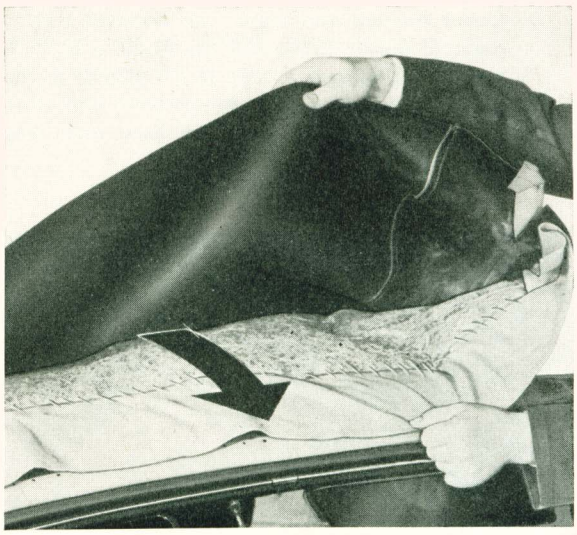
Observe the markings on the outer cover and side tension!

9 - Loosen the strip of the outer cover at the left side of the main bow. Apply some talc powder to the rubberized upper side of the outer cover and push rubber hair mat forward as indicated by arrow.



10 - Push the folded-over outer cover back and tack strips on the left and right to the main bow.

11 - Pull rubber hair mat tight toward the header nose.



12 - Pull outer cover back so that the cut in the cover lies exactly on the rear bow.

13 - Nail outer cover under side tension to both sides of the main bow with a nail for each side.

Important!
The seams of the outer cover must be straight.

14 - Pull outer cover backward and, stretching taut, nail to the left and right of the rear support.

Note:
In order to avoid damage to the outer cover both nails should be driven through the seams.

15 - Nail outer cover tautly to the rear side rail, pull it from the two seams toward the main hinge. Do not yet fasten the cover to the middle of the rear support.

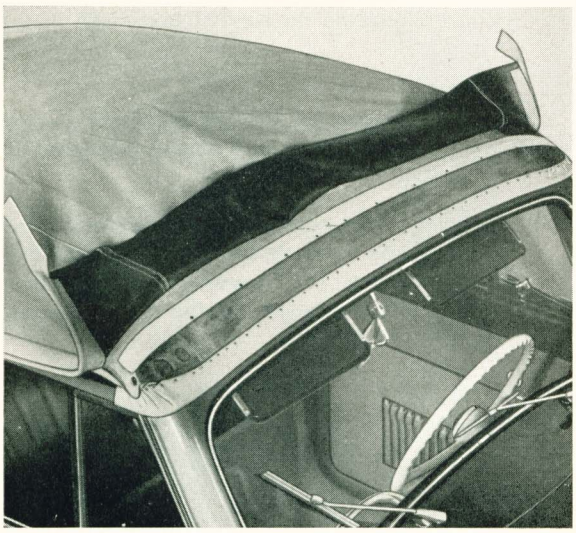
16 - Pull outer cover tight toward the front and nail linen cover under tension to the header nose corners.

17 - Nail linen cover with sewn-on rubber hair mat into the recess in the header nose under tension, taking care to avoid wrinkles. Cut off protruding strips.

Important!

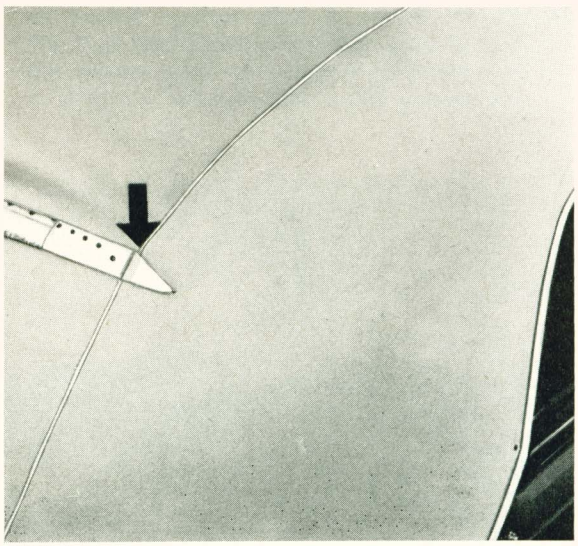
The linen cover and lining must be a neat fit in the header nose. Otherwise a sharp edge will be apparent on the header nose.

18 - Stick and nail a broad sealing strip over the recessed part of the header nose to obtain a smooth area between edge and rounded part.



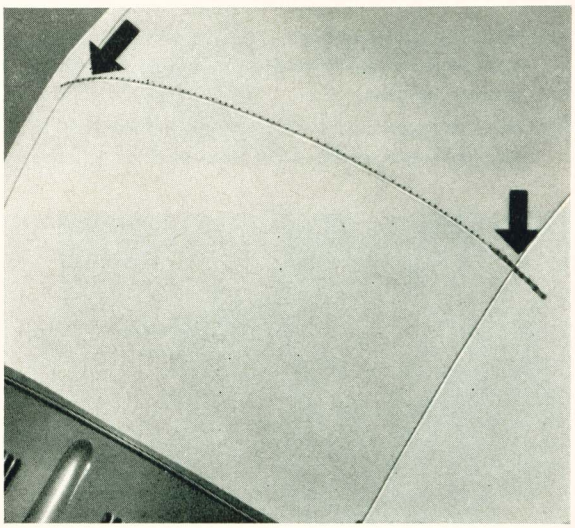
19 - Enlarge the cut in the outer cover at both sides of the rear bow by about 40 mm/1.57" toward the outside. The purpose of this cut is to avoid wrinkles in the outer cover.

20 - Cut a groove of about 3 mm/.12" depth into the rear bow for the two side seams of the cover. This is to insure proper seating of the garnish moulding to be nailed on later.



21 - Nail outer cover under even tension and without wrinkles to the rear bow. First nail on the lower part and on top of that the upper part to prevent ingress of water through the cut.

22 - Coat the corners of the nailed-on cover with gum solution.



23 - Nail the cover to the rear support under tension and without wrinkles. Make sure that the beading is evenly spaced from the cover. Cut off protruding strips.

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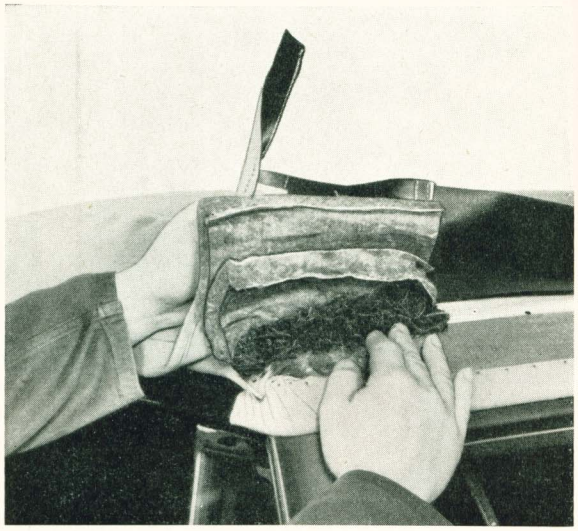
24 - Fill the cover at both corners behind the header nose with some horse hair and with two pieces of wadding for each corner (approximately 150 × 200 mm/5.91″ × 7.87″).

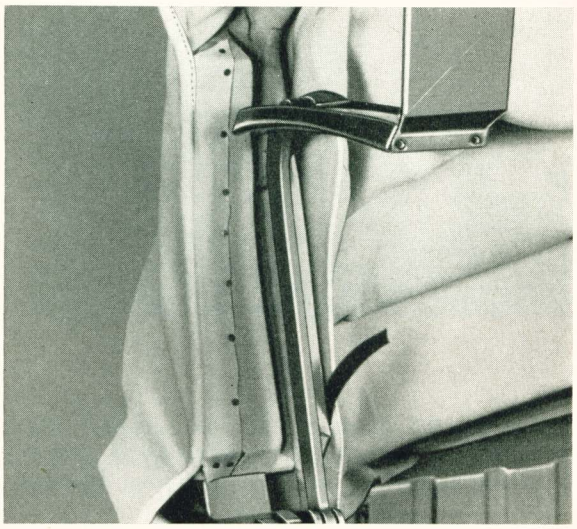


Important!
The amount of wadding and horse hair used determines the evenness and shape of the header nose corners. Too much or too little uphostering material will result either in bulges or wrinkles.

25 - Open the top by about 180 mm/7.09″.

26 - Nail the outer cover to the sides of the header nose with three nails for each side. Check for proper tension.

27 - Nail the tacked-on cover under tension to the left and right of the main bow so that the cover touches the headlining and the seam comes to rest on the front outer edge of the main bow. Cut off protruding strips.



28 - Tack the cover at the two seams on the left and right with two nails on each side to the header nose ensuring proper tension.

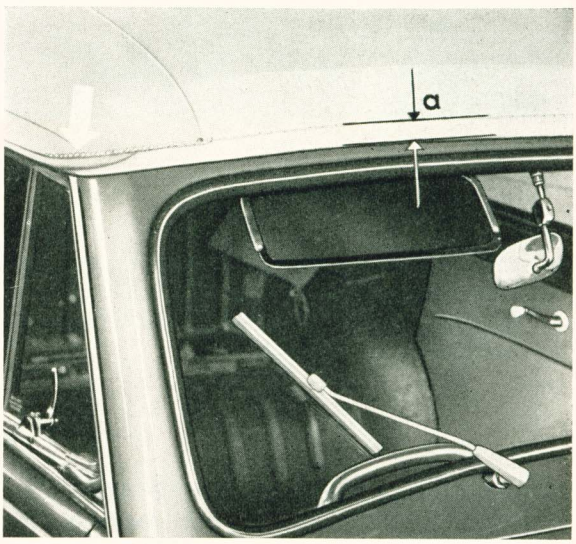
29 - Close the top, wind up the windows and check for obstructions when opening the doors.

The door window frames must not come into contact with the cover. The cover should, however, come down as low as possible. Check for side tension of the cover. Insufficient tension will result in noise. Should the cover come into contact with the door window frames — or if there is not enough side tension — the cover must be loosened again at the sides of the header nose and should be adjusted with the top open.

30 - Close the top and make small cuts at the sewn-in beading on the left and right in the front.

31 - Put the beading on the left and right around the header nose and nail it tautly into position.

32 - Nail the cover evenly from the corners of the header nose towards the middle so that it is above 20 mm/.787″ away from the cloth-covered lower edge of the header nose, avoiding wrinkles.

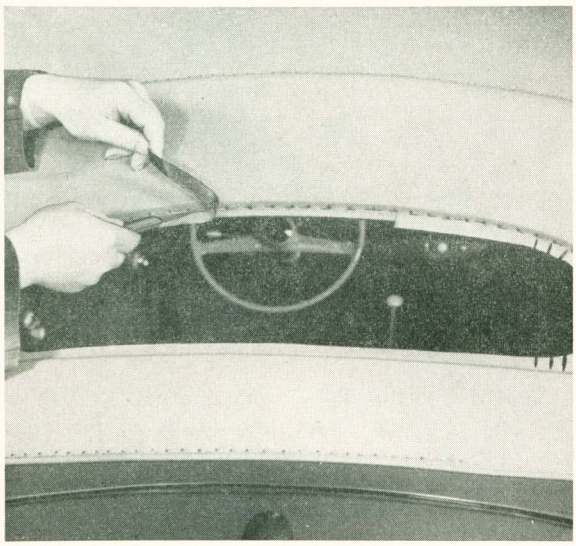


a = 20 mm

33 - Neatly cut off protruding strips.

34 - Cut opening for rear window into cover. Stick and nail the cover to the rear view window frame.

35 - Check for even tension and absence of wrinkles around the nails. If necessary stretch the cover again and nail it back into place.

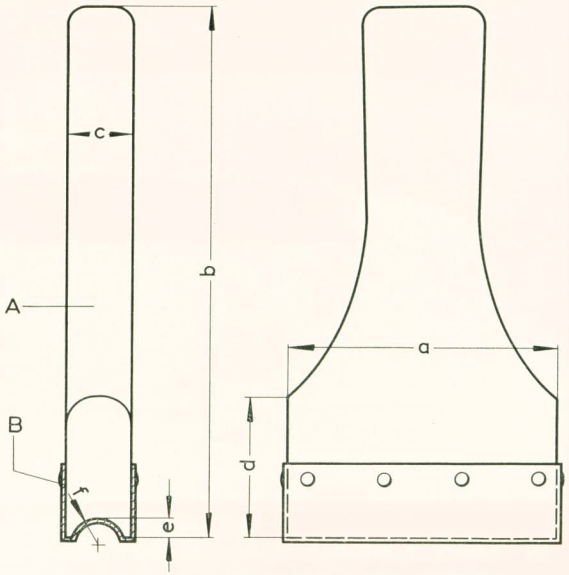


36 - Neatly cut off the protruding strip.

37 - Nail a sealing strip of 8 mm (.314") over each of the rows of nails on the rear support, rear bow and header nose.

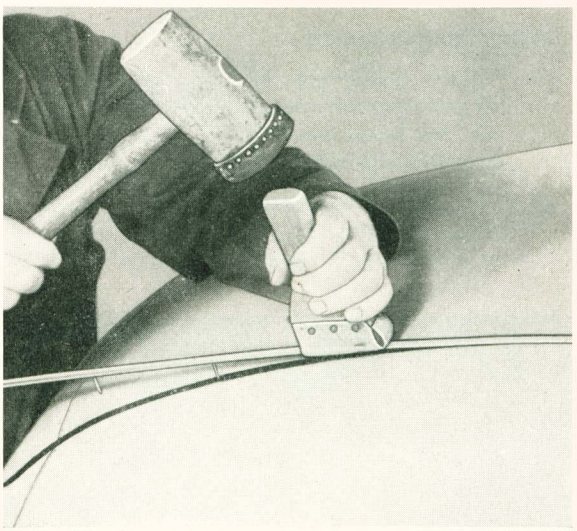
38 - Nail garnish mouldings with the aid of the wooden tool into position as shown in drawing and straighten them if necessary.

Important!
In order to ensure faultless installation it is absolutely necessary to use the wooden tool shown in the drawing.



A = Installation tool
B = Leather covering (1 mm/.039")

a = 70 mm/2.75"	d = 35 mm/1.37"
b = 140 mm/5.51"	e = 5 mm/.196"
c = 17 mm/.669"	f = 7 mm/.275"



The garnish moulding on the rear support must be in exact line with the rounded part of the beading.

39 - Install chromium screws with washers. In order to prevent the screws from rusting they should be painted to match the colour of the top.

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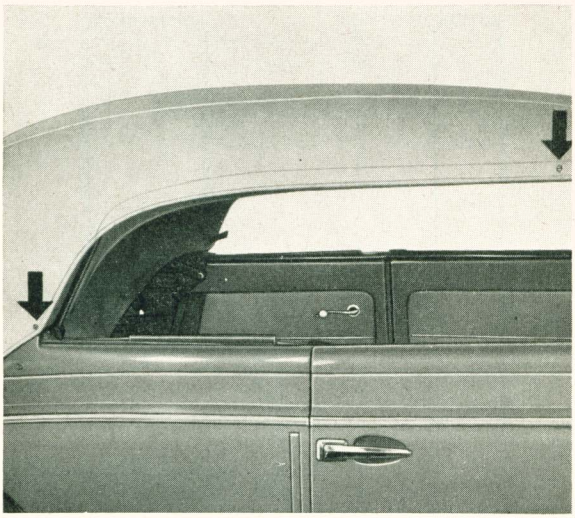
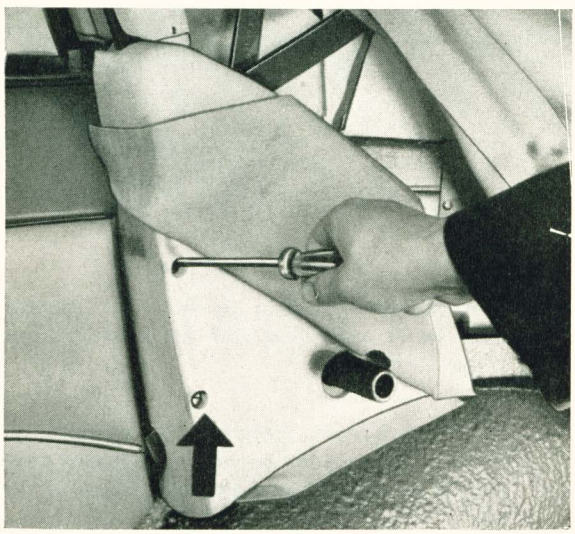


40 - Before installation of the assembled rear view window check for proper fit in the window opening without sealing compound. Then apply a thin coat of sealing compound to the nailed area in the wooden frame and install window. In order to prevent the linen piece at the rear view window frame from getting torn during installation owing to the pressure applied from outside an assistant should support the wooden frame from inside the car.

Installing headlining

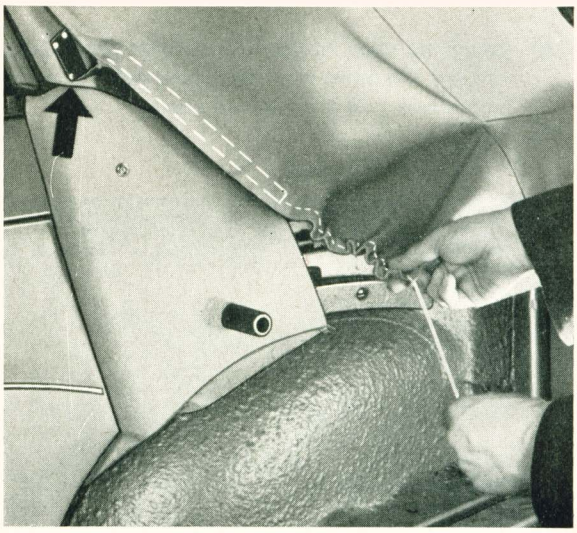
1 - Put the headlining securing screws at front left and right sides near the locking mechanisms into the holes provided in both frame side members and tighten them.

2 - Fasten the two pieces of wood covered with headlining material for the two boot pillars on the left and right in the holes provided.

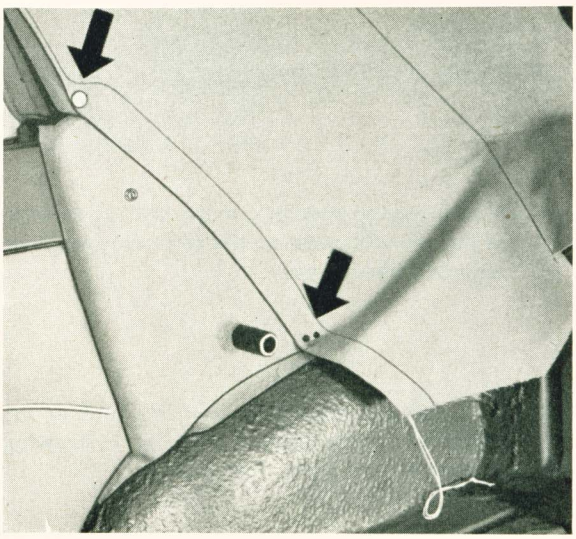


3 - Loosen the cover and stick it to the pieces of wood and to the body underneath the rear side trimmings. Then fasten side trimmings.

4 - Nail rubber band to the left and right wooden fillers and stretch it.



5 - Nail the headlining with one nail to each of the wooden fillers (the heads of the nails should be covered with cloth). Then nail the headlining with the tightened rubber band to the underside of the wooden pieces.

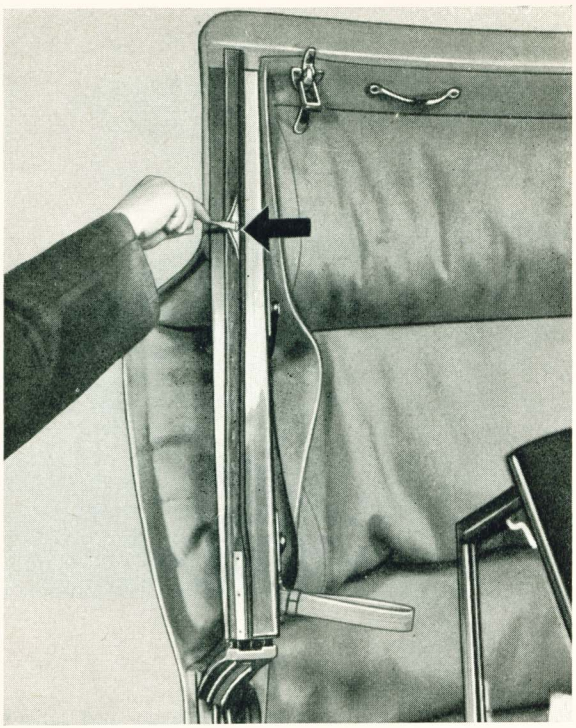


6 - Fasten the interior roof light on the lamp socket and connect it up.

7 - Fix carpets in luggage compartment and on wheel housings by gluing them on.

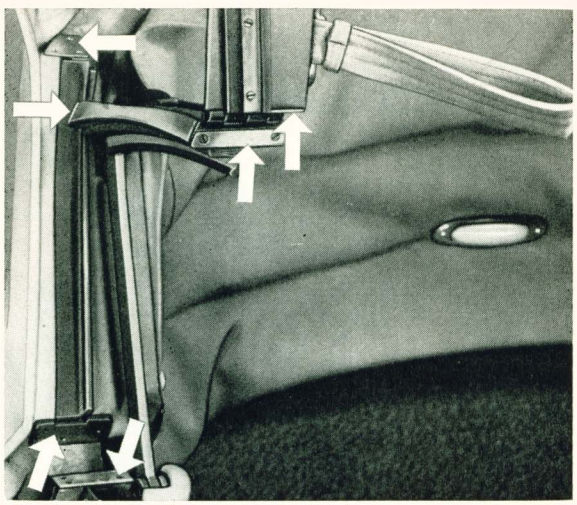
8 - Screw assist straps on left and right with brackets into the holes provided in the roof side members.

9 - Screw three rubber seals together with the appropriate rails to each of the two roof side members on the left and right so that the windows, when closed, come to rest on the rubber lips on the inside.



The rails should be under the rubber lip. In the case of a new roof supporting frame the holes must be drilled according to the holes in the rails.

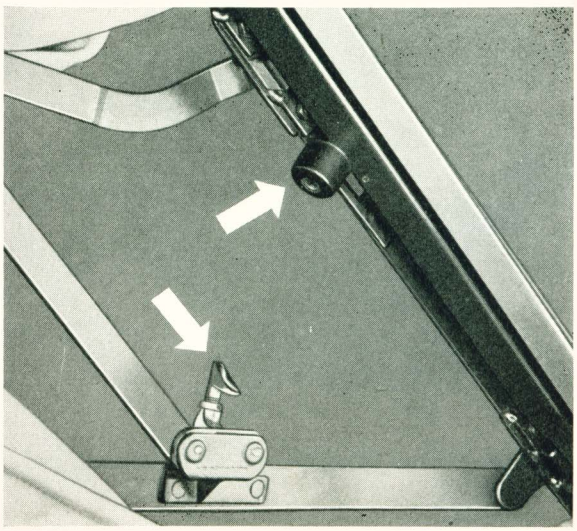
10 - Screw 6 chrome-plated cover plates to the main bow and roof frame at both sides. Place a piece of sealing rubber under each of the cover plates at both ends of the main bow. With new top linkage the holes must first be drilled in some cases.



Note:

With a new top cover the top linkage tends to arch resulting in excessive clearance between window and roof frame. Put something under the cover plates of the front hinges on the roof frame near the assist straps and the linkage will come lower down. If the linkage comes down too low (older top covers) it can be raised by grinding off the cover plates.

11 - Screw snap fasteners and grommets into the holes provided.



After the installation has been completed check for proper opening and closing of the top.

12 - Install seats.

Clean the outer cover with a soft brush and rinse it with clean water. Allow the top to dry in the closed position.

With a new top a certain amount of tension is normal. It is therefore not necessary to try to decrease the tension in any way. After the vehicle has been used for some time the cover will expand to a certain degree thus allowing easy closing of the top.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

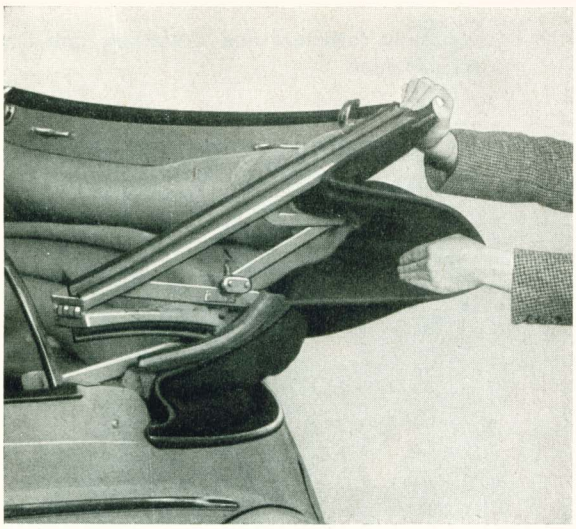
Lowering and Raising the Top

To Lower the Top

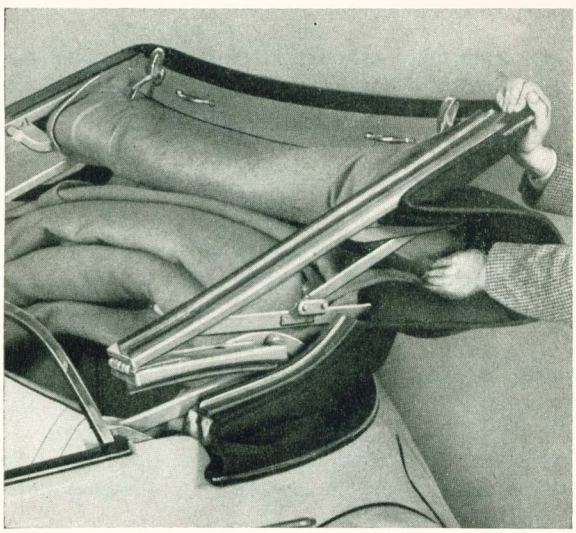
1 - Pull the two clamps above the windshield downward to unfasten the top.

2 - Raise the header slightly and fold back the top.

3 - Withdraw top cover from the linkages on both sides.

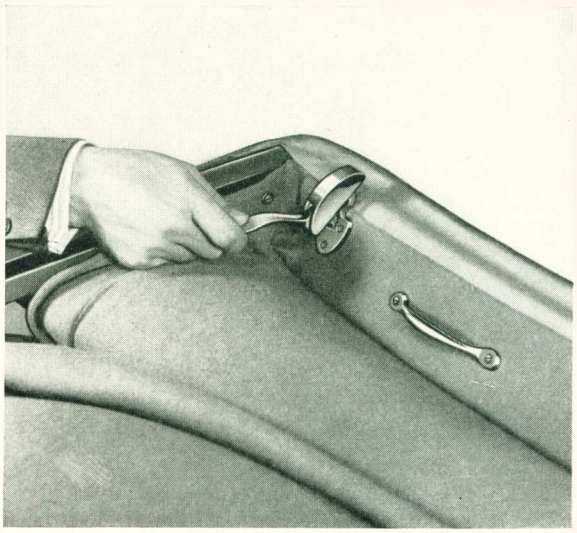


4 - Push the top lining inward so that the linkages are free.

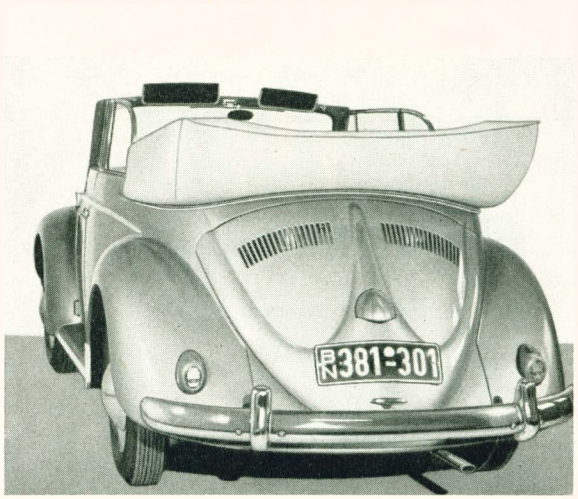


5 - Press down the top until the spring-loaded catches (one on each side) engage in the slots cut in the side rails.

6 - Place the caps of the top clamps on the guides and press down the levers.



7 - Install the top boot from the rear and secure it with the snap fasteners. The top cover should be perfectly concealed by the boot, paying particular attention to the bottom part of the boot. The ornamental strip at the top cover rear edge should be visible.

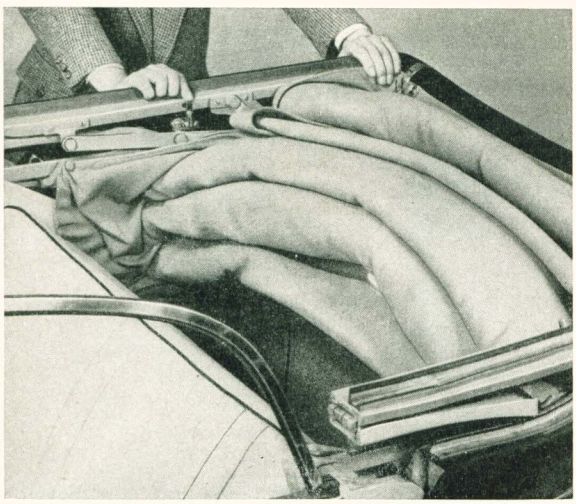


To Raise the Top

1 - Unfasten the press buttons of the top boot and remove the boot toward the rear. The boot is best stored in one of the two luggage compartments.

2 - Turn back the clamp levers.

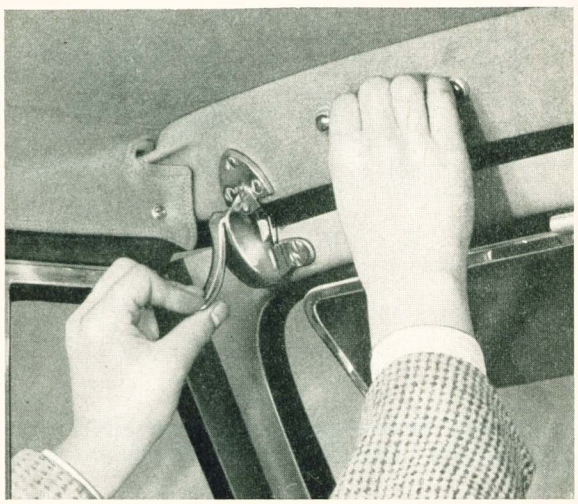
3 - Press down the top and disengage the catches.



4 - Raise the top.

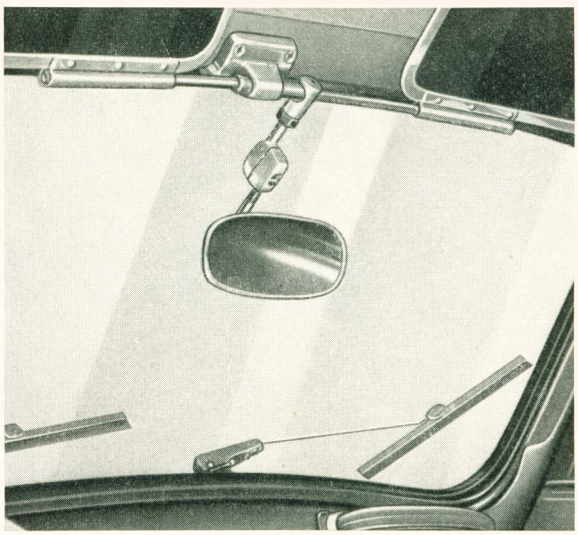
5 - Pull down the top until the header guides have entered the slots of the brackets.

6 - Place the clamp caps over the noses of the brackets and clip the levers over.

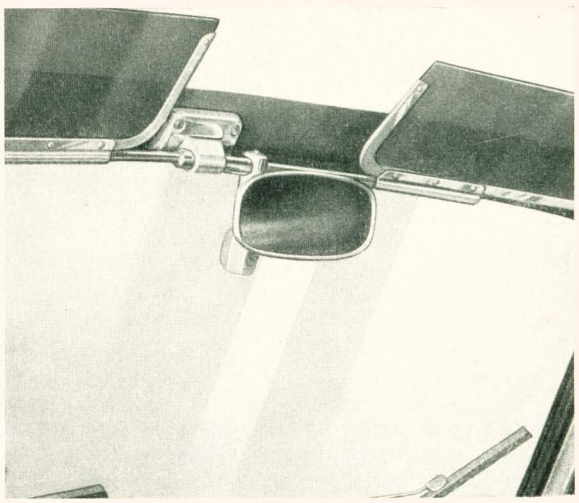


Rear View Mirror

The rear view mirror of the Convertible is adjustable to insure a perfect view no matter if the top is lowered or raised. With the top in the raised position, turn the mirror holding rod down by 180° and push the mirror toward the windshield until the stop can be felt.



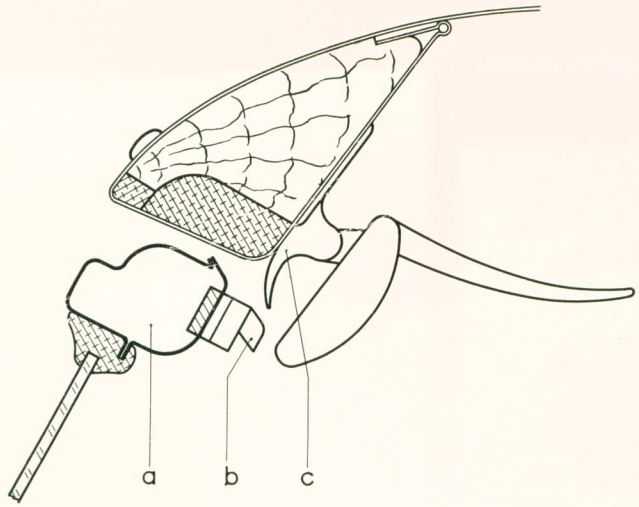
By turning the mirror to the vertical position, an additional adjustment is obtained to suit individual requirements.



11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Adjusting the Convertible Top

A - The guide pins of the two roof locking mechanisms hit against the lower part of the bracket noses.

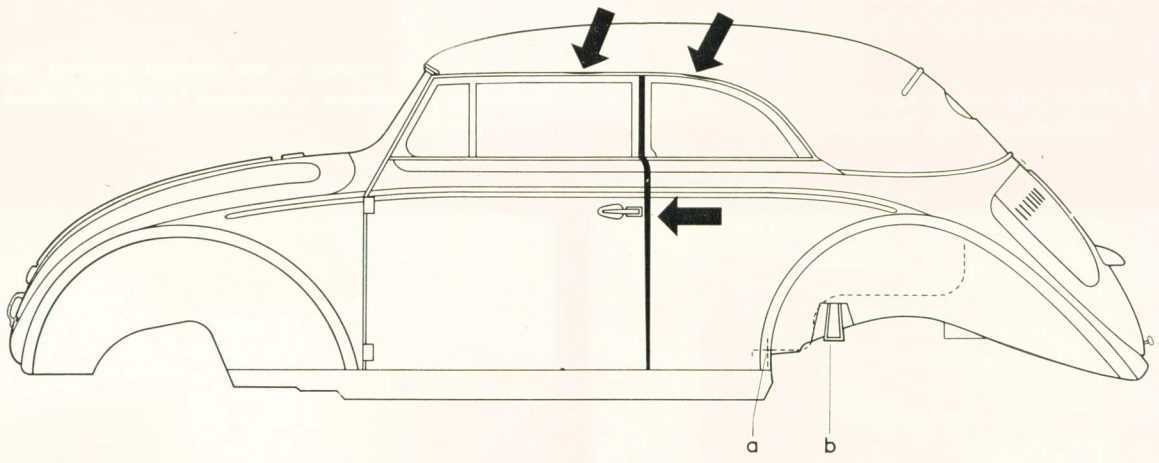


a = Roof member

b = Bracket nose

c = Guide pin

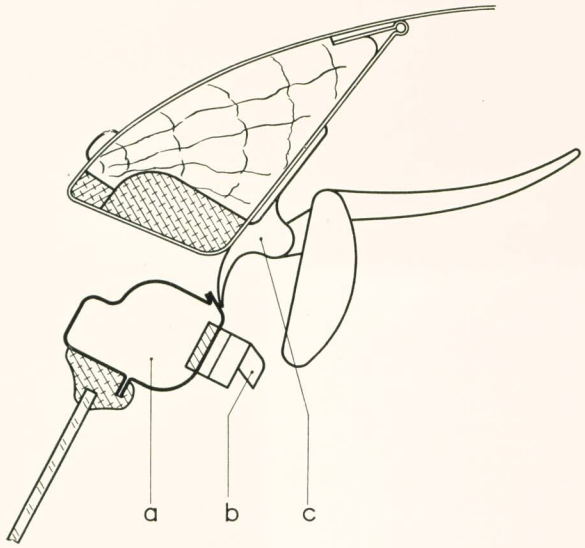
If a guide pin on closing the top hits against the bracket nose check whether both frame side members on left and right are resting on the window frames with the top in the closed position and whether there is a wedge-shaped opening between the doors and the rear side panels which is widening out toward the top.



If the two frame side members are resting on the window frames it would appear that the roof support rods have got bent during opening. Close the top, and, by means of a lever, bend the side members up so far that the guide pins will slip into the bracket noses.

If a wedge-like opening is apparent between the doors and rear side panels remove the mounting screws at the points a and b in the body. Place a hard rubber plate of 3 mm thickness under the body supports on the left and right. Tighten the body screws. Should the gaps not be of normal width yet use thicker rubber plates.

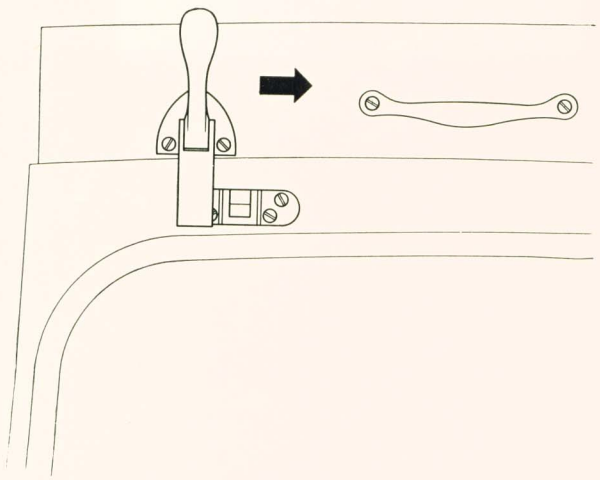
B - Guide pins of both locking mechanisms hit against the windshield cross member.



a = Roof member
b = Bracket nose
c = Guide pin

If the guide pins of the two locking mechanisms hit against the windshield cross member put small pieces of leather under the upper parts of the mechanisms until the guide pins will engage. (See arrow.)

C - Guide pins of the two locking mechanisms come to rest beside the lower parts.



If the guide pins come to rest on the left and right beside the lower parts close the top but do not lock it. It should only rest lightly on the cross member of the windshield. Adjust roof linkage if necessary and pull it into position until the guide pins will easily engage.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Painting with Genuine VW Paints of the Groups LKL, LK and L

General

The paint finish of all current production VW models consists of oven-dry Genuine VW Synthetic Resin Undercoats and Finish Coats, the normal drying time being 45 minutes at a temperature of 125° C (257° F).

The advantages of such paint materials lie in their high resistance to weathering, impact, discoloration and to the effects of the common solvents such as fuel, lacquer and enamel thinners, cleaners, etc.

Retaining these properties when performing repair jobs calls for the application of special paint materials as detailed in this section.

Paint Materials

The following materials are to be used for refinishing or repair jobs:

a - air-dry synthetic resin enamels of the group LKL (referred to in the text as "LKL Paints").

b - oven-dry synthetic resin enamel of the group LK (referred to in the text as "LK paints").

c - nitro-combination lacquers of the group L (referred to in the text as "L Paints").

1 - By using LKL and LK paints, the same effect and quality of the finish is obtained as with the factory-applied ovendry enamels.

The only variation from the original painting is the air-drying time of LKL paints ("dust dry" after 3—4 hours, depending on the atmospheric temperature, and "tack free" after about 12 hours). When using a source of heat, which should not heat up the refinished area in excess of 80—85° C (176—185° F), the paint is "tack dry" within 45 or 60 minutes.

The LK enamels (often referred to as 80° C/176° F enamels) can be polished (to remove nibs caused by inclusion of dust) or resprayed (to correct flaws) immediately after the body has cooled down, as the finish is then completely hard.

2 - A perfect finish repair job calls for a careful matching of the repair material with the exact shade of color of the original finish on the body.

Note:

There will always be a slight variation in the color shade of the original finish, necessitating the repair material to be tinted for an exact matching.

As the practice of adding mixing enamels to the refinish paints in volumes of 100 grams has proved not to be the ideal solution, these enamels have been discarded in favour of Genuine VW Mixing Paints of the groups LKL and L, each group comprising 12 tinting colors. Thus matching is easier and more accurate.

The LK enamels are mixed with the tinting colours of the group LKL for matching purposes.

3 - To facilitate refinish or repair jobs and to simplify paint stock keeping, the undercoat materials have been standardized.

Undercoat materials of the group LKL have been abolished in favour of those of the group L (nitro paints). These Genuine VW Combination Lacquers have been developed to offer the same high quality, while facilitating and speeding up paint jobs.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

4 - As to the choice between the two groups of material for the finish coat, preference should be given to LK or LKL paints (synthetic resin enamels) in order to obtain a finish similar to that originally applied to the body.

The group L comprises nitro-combination lacquers that, although drying faster than enamel and being easy to polish, have completely different characteristics, which make them vary from the color shade and gloss of the original finish. The painted spot can be distinguished from its surrounding area even after a short time, calling for very frequent repolishing. It is therefore strongly recommended to use paint of the group L for quick spotting jobs in obscure places on the vehicle only, and no attempt should be made to match the color in a prominent spot. On no account should lacquers of the group L be used for touch-up jobs at spots which come into contact with the sliding roof cover made of PVC, as this would have a softening effect on both paint and roof cover.

Fundamental Notes

1 - Absolute cleanliness in spray booths and ovens is essential to a satisfactory application of the paint. Another important point is to keep the booth free from drafts or excessive movement of the air and to provide for an effective exhaust. The floor is to be kept sufficiently wet and the temperature inside the booth should be within 18° and 25° C (64° and 77° F). It is impossible to get a fine finish without the use of a good oil and water extractor in the compressed air line and a precision air pressure control. In addition to the usual painting equipment not yet mentioned, a mobile bank of infra red lamps should be available. The air compressor should have a capacity of 400 liters per minute at 6 kg/cm² (12 cu. ft. at 85 lbs./sq. in.).

2 - Nitro paint spray tends to explode on contact with synthetic resin spray. As an alternate spraying of both paint materials cannot be avoided in one booth, it is essential to clean the booths, including the paint spray filter systems and the exhaust passages, at least once a week. Any heavy accumulation of paint spray **must** be avoided, unless the aforementioned equipment parts are kept moist with water (depending on filtering and exhaust systems in use).

3 - LKL enamel should not be hand-rubbed until after it has thoroughly hardened. This will be after 1—1.5 hours at 70—75° C (158—167° F) in an oven and a subsequent air-drying time of 12—24 hours, or after 96 hours when air drying only.

Oven-dry synthetic resin enamels of the group LK have the advantage of providing complete hardness of the film after 50 or 60 minutes of "baking" at a temperature of 80° or 90° C (176° or 194° F). The minimum baking temperature of 80°—90° C (176°—194° F) should be given at all points of the body (also at the sill panel). Oven-dry enamels will not dry in the air after the car has left the oven. If not sufficiently "baked", the film will remain soft or even tacky. However, the temperature at roof level should not exceed 90° (194° F), as this would cause damage to, and accelerate the aging of, rubber and plastic parts, adhesives, and sealing compounds. It is advisable to remove accessories of the materials mentioned. The sun vizor should always be removed.

In the case of a poor paint job with LKL enamel due to dust having settled in the finish, no attempt should be made to polish off the nibs immediately. If there is no time available to wait until the finish has thoroughly hardened, another coat is applied after wet-sanding the repaired area. This coat should be as thin as possible.

4 - To improve the scratch-resistance of the LKL finish, it is recommended to wax the body with preservative L 190 immediately after the specified air-drying or oven-drying time. Apply the preservative with soft cotton and let it dry for 20 minutes. Then rub down with a soft cotton until iridescent colors can no longer be seen when standing at an angle to the polished area.

5 - A good paint job mainly depends on the cleaning and the preparation of the body or parts of the body for refinish or repair jobs. Water should be liberally applied while cleaning.

To avoid water spots, the water should not be dried off in an oven, but should be removed with a chamois skin, followed by cleaning all cracks and crevices with compressed air.

6 - A complete refinishing of the body should be done with the help of a pressure tank having a capacity of 5—8 liters of paint (5—8 quarts). The fluid (paint) pressure is 1.2—1.4 kg/cm² (17—20 lbs./sq. in.) for both undercoat and finish coat materials. This allows the spraying to be done in the shortest possible time, which is a decisive factor in obtaining a flawless finish.

a - The paint can be sprayed without interruptions, as a replenishing of spray gun cups is rendered unnecessary.

b - The flow of the paint to the spray gun is more constant, assuring a better atomizing and a uniform paint film.

c - The spray gun is easier to handle because of the absence of a cup, making for a speedy and uniform application of the paint.

d - The pressure tank allows two painters to refinish the body without calling for additional facilities, as the pressure tank connections provide for feeding two guns.

7 - To obtain a good matching, it is of paramount importance to thoroughly stir both the refinish and the tinting paints to dissolve even the faintest trace of solid matter that may have settled.

The paints must be thinned to the required consistency or viscosity for spraying with the appropriate thinner only.

Paint Repair Jobs

1 - Spot painting with LKL and LK enamels is so difficult that painting of the entire panel, roof, hood, or fender and "masking" the surrounding parts with tape and paper is recommended.

Such practice avoids more or less detectable spots that do not harmonize with their surrounding areas. It should be made clear to the customer that the somewhat greater demand for paint and masking materials will be more than compensated by saving polishing times and polishes.

If ovens are not available, the drying time of the enamels can be reduced substantially by using mobile banks of infra-red heating lamps. It should be noted, however, that the banks are positioned at a distance from the body which will prevent the painted surface from being heated up in excess of 80—85° C (176—185° F).

2 - Qualified painters can perform spot painting with LKL and LK enamels so skillfully that the newly painted spot cannot be distinguished from its surrounding area. Spot painting is preferably applied on such large areas as the roof. Here is the procedure: Featheredge the old finish around the spot with No. 360 sandpaper. When spots have been sanded down to the metal, apply Genuine VW Primer (reddish-brown) and then, after an air-drying time of 1—2 hours, Genuine VW Surfacer (grey). Should the repair call for the use of glazing putty (also called "filler"), apply Genuine VW Putty (greyish-green) over the sprayed-on primer. After the subsequently sprayed-on surfacer has dried for 2 hours, wet-sand the spot, extending over the edge by the width of a hand, with No. 600 sandpaper and soapy water. Wipe dry and spray the spot with the matched finish enamel, taking care that the outer circumference of the featheredge remains visible over a width of 1 in. Immediately afterwards, mist coat the edges of the spot with 1 part enamel thinned by 3 parts thinner. After the paint has dried, infra-red lamps **must** be used for spot painting, the newly painted spot and its surrounding area should be rubbed with Genuine VW Paste Polish L 180 and then polished with Genuine VW Liquid Polish L 170.

11 - 59 LA55e 1Nd39 PRINTED IN GERMANY

3 - The spot painting method described under "2" is **not** applicable to metallic lustre finishes. Repair jobs should be carried out as recommended under "1".

Due to their perlescent effect, metallic finishes are more difficult to repair than those of normal paints. If the spray coats are not applied at the proper wetness, the color will not match. Even the slightest variations in the thickness of the finish coat or in the color shade of the undercoat will result in a mismatch. To obtain the exact color shade of the original finish calls for all the skill of a well qualified painter. Metallic repair paint is tinted with Genuine VW Combination Lacquer LM 90 or Enamel LKM 90 and sprayed on a test panel coated with Genuine VW Surfacer L 141, grey, to obtain a faithful reproduction of the original finish. The proper spraying viscosity for metallic paints is 21—22 seconds in the 4 mm DIN efflux viscosity cup.

The spray coats should be light wet to prevent "floating" (coming to the surface) of the perlescent particles. To obtain light-wet spray coats, the gun should be held at a greater distance from the surface to be painted. Spraying is completed with a light mist coat.

Finishing and Refinishing Jobs

A - Finishing a primed body or primed body parts (Spare Parts):

1 - Sand the primer with No. 360 sandpaper, taking care not to sand down to the metal.

2 - Spray Genuine VW Surfacer L 141, grey, over the primer:

Thinning:	Genuine VW Thinner L 160.
Viscosity:	about 22 seconds at 20° C (68° F) in 4 mm DIN efflux viscosity cup.
Air pressure:	4—5 kg/cm² (57—71 lbs./sq. in.).
Fluid-control nozzle:	1.0 mm.
Application:	3 successive coverings.
Air-drying time:	1—2 hours.
Oven-drying time:	30—40 minutes at 40—60° C (104—140° F).

3 - When dry, wet-sand this surfacer with No. 400 sandpaper. After all traces of water have evaporated and the sanding residue has been removed, the finish paint of the groups LKL or L is applied.

a - When using enamels of the group LKL, the following should be observed:

Thinning:	Genuine VW Thinner LKL 160.
Viscosity:	about 20—22 seconds at 20° C (68° F) in 4 mm DIN efflux viscosity cup.
Air pressure:	about 5 kg/cm² (71 lbs./sq. in.).
Fluid-control nozzle:	1,0 mm.
Application:	2 or 3 successive coverings (any further covering will result in wrinkling).
Air-drying time:	10—12 hours.
Oven-drying time:	1—2 hours at 60—70° C (140—167° F).

b - When using lacquers of the group LK, the following should be observed:

Thinning:	Genuine VW Thinner LKL 161.
Viscosity:	about 20—22 seconds at 20° C (68° F) in 4 mm DIN efflux viscosity cup.
Air-pressure:	about 5 kg/cm² (71 lbs./sq. in.).
Fluid-control nozzle:	1 mm.
Application:	2 or 3 successive coverings.
Oven-drying time:	50—60 min. at 80°—90° C (176°—194° F).

c - When using lacquers of the group L, the following should be observed:

Thinning:	Genuine VW Thinner L 160.
Viscosity:	about 22 seconds at 20° C (68° F) in 4 mm DIN efflux viscosity cup.
Air pressure:	4—5 kg/cm² (57—71 lbs./sq. in.).
Fluid-control nozzle:	1.0 mm.
Application:	3—4 successive coverings.

After the finish coat has thoroughly hardened, rub the entire surface with Paste Polish L 180 and finally with Liquid Polish L 170.

Note:

If bare metal is exposed after having sanded the primer, apply Genuine VW Primer, reddish-brown, to the bare spots by following the instructions given under "a" and "b", but using the same thinner as for the surfacer.

B - Painting new finish coat over old finish.

Note:

This can only be done, if the old finish is free from damage such as hairlines, checking, scaling, blistering or any indication of rust spreading underneath the paint film.

1 - Carefully examine condition of old finish. Loose paint must be removed by scraping and sanding.

2 - To remove all wax and grease, the complete body should be carefully cleaned with benzine and sanded with No. 360 or 400 sandpaper until shiny spots on the old finish can no longer be seen.

3 - If, after cleaning and sanding, no bare metal is exposed, the finish coat can be applied as detailed under A, point 3, but care should be taken that the surface is completely dry. Small spots of bare metal (up to 2" in dia.) should be sprayed with Genuine VW Primer L 140, and if larger areas of bare metal are concerned, additionally with Genuine VW Surfacer L 141.

To obtain a uniform gloss, it is good practice to spray a thin coat of Genuine VW Surfacer L 141, having a viscosity of 18—20 minutes in the 4 mm DIN efflux viscosity cup, over the complete body. Then dry-sand the dried surfacer lightly with No. 360a sandpaper.

C - Complete refinishing (removing old paint).

1 - Remove old paint by means of a caustic solution. Thoroughly remove all traces of paint, caustic, rust, and water.

2 - The body is refinished by applying

Genuine VW Primer.
Genuine VW Surfacer.
Genuine VW Lacquer or Enamel.

To carry out these jobs, refer to the data given under A.

If the application of putty is found necessary, this should be done in a number of thin layers, allowing each layer to dry for 20—30 minutes to insure a thorough hardening.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

List of Materials

In addition to the chapter "Fundamental Notes" the following should be observed:

To reduce the paints to the required spraying viscosity, which is particularly important in obtaining a satisfactory repair with enamels of the group LKL and LK, a 4 mm DIN efflux viscosity cup and a stop-watch are required. All materials required for refinishing and repair jobs are obtainable from the Spare Parts Department of the Volkswagenwerk.

Available are:

a - Undercoat materials.

Genuine VW Primer L 140, reddish-brown.
Genuine VW Surfacer L 141, grey.
Genuine VW Combination Putty L 142, greyish-green.
Genuine VW Thinner L 160.

b - Finish coat materials.

1 - Genuine VW Synthetic Resin Enamels of the group LKL in all colors of finishes on Sedans, Convertible, Coupé, and Transporter models.

Following are the corresponding tinting enamels, which are not delivered automatically with the finish enamels, but should be ordered separately. They are delivered in 1-kg tins.

white	LKM 80	yellow	LKM 60
black	LKM 40	fire-red	LKM 50
ocher	LKM 61	ruby	LKM 51
reddish-brown	LKM 70	maroon	LKM 52
green	LKM 10	dark green	LKM 11
aluminium	LKM 90	medium blue	LKM 30

Genuine VW Thinner LKL 161 is used for reducing LKL paints for spraying.

2 - Genuine VW Synthetic Resin Enamels in all colors of Factory applied finishes on VW Sedans, Convertibles and Coupés as mentioned in the Circular, Spare Parts Service No. 10 of 25th March 1958.

The LKM tinting colors mentioned under "1" are used for matching purposes. Genuine VW Thinner LKL 161 is used to reduce the paint for spraying.

3 - Genuine VW Combination Lacquers of the group L in all colors of finishes on Sedan, Convertible, Coupé, and Transporter models.

Following are the corresponding tinting enamels, which are not delivered automatically with the finish enamels, but should be ordered separately. They are delivered in 1-kg tins.

white	LM 80	yellow	LM 60
black	LM 40	fire-red	LM 50
ocher	LM 61	ruby	LM 51
reddish-brown	LM 70	maroon	LM 52
green	LM 10	dark green	LM 11
aluminium	LM 90	medium blue	LM 30

Genuine VW Thinner 160 is used for reducing L paints for spraying.

c - Polishes and Preservatives.

Genuine VW Liquid Polish L 170.
Genuine VW Paste Polish L 180.
Genuine VW Preservative L 190.

Note:

The Liquid Polish L 170 and the Preservative L 190 are also available in 1/2-kg tins, which are designated L 170.5 and L 190.5.

Spot-Welding Compound and Paint

A - **Spot-Welding Paste**

To obtain water-proof seams, the overlapping edges are to be coated with sealing compound which is resistant to welding.

Manufacturer: Bonaval-Werk, Bonn am Rhein, Brühler Straße 2—20, Germany — Designation: Spot-Welding Compound 59852 or 60506

Teroson-Werke G.m.b.H., Heidelberg, Hans-Bunte-Straße 4, Germany — Spot-Welding Compound 2257

These products can be obtained directly from the manufacturers.

The compound is applied prior to welding and should not be allowed to flow off, either during or after the welding process. It provides a corrosion preventive and sealing film along the welds which is not affected either by degreasing agents or the paints applied to the body.

Sealing compound that bursts into flame during welding should cease to burn immediately on removal of heat imposed on it by the spot welder.

Spot-welding paste should only be used at points where water-proof seams are required and where a subsequent application of sealing compound is difficult or even impossible.

B - **Spot-Welding Paint**

Spot-welding paint is used as a protection against corrosion on hollow parts which make it impossible for paint to be applied after spot-welding due to inaccessibility.

Manufacturer: Teroson-Werke G.m.b.H., Heidelberg, Hans-Bunte-Straße 4, Germany — Designation: Spot-Welding Paint 2273

The paint is applied by either a brush or a spraying gun prior to spot-welding.

General Hints

The spot-welding operation itself is not facilitated by the use of the aforementioned products. In fact it is necessary to adjust the current for fusing the metals to a higher value, depending on the thickness of the material applied.

Any surplus of the applied compound or paint should be removed whenever the exterior of the spot-welded part requires a perfect paint finish. Neither spot-welding paint nor compound can be used as primer for an exterior paint finish.

Care of the body

Care and Cleaning of Artificial Leather Covers manufactured on PVC Basis

Artificial leather covers are provided with a very efficient dust-repellent surface. No special preservatives are needed. These only bind dust and dirt and are liable to soil the clothing of the passengers. They also rob the surface of its natural beauty and may even have an adverse effect on the durability of the material.

The following may be used for removing ordinary dirt:

a - soft water (rain water or hard water which has been softened);

b - soap suds free of alkaline (soft water with soap flakes);

c - soap suds, made of soft water and a commercial detergent.

A soft brush will facilitate removal of dirt from scarred surfaces.

Always remove dirt of all kinds as soon as you notice it. Cleaning agents especially suited for removing certain stains can be found on the following pages. Be careful not to pour benzine, spirit, or thinners onto the area to be cleaned but rub it on with a moist rag in order to prevent it from penetrating into the seams or upholstery. It is advisable not to allow the liquid used for cleaning work on the surface for any length of time as the transparent, dirt-repellent protective film of the artificial leather might suffer.

After **each** cleaning of the artificial leather it should be rubbed dry with a soft rag, especially at the seams.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Stains	Removal of	
	new stains	older stains
Oil or grease	Remove with dry, soft cloth, turning this several times. Do not make the stain larger by rubbing. Any discoloration on the surface can be dabbed off with a rag moistened with benzine. Rub dry with a clean, soft cloth	Moisten a clean, soft cloth with benzine or spirit, rub over carefully and then rub dry. Turn the cloth several times in order not to spread the stain over a wider area
Shoe polish	The same applies as desaibed under oil or grease Besides benzine or spirit turpentine may also be used	
Artificial resin, nitro or oil paints	Remove with dry, soft cloth in the same manner as with oil and grease. Remove the remaining stains with a rag moistened in water or with a piece of rubber	Moisten a cloth with artificial resin or nitro thinner, turpentine or benzine, rub over carefully and then rub until dry. For artificial resin stains use artificial resin thinner, for nitro stains nitro thinner and for oil stains turpentine or benzine
Blood	Moisten a cloth in cold or, even better, in lukewarm water and dab the stain off. Do not make it worse by rubbing	
Rust	Moisten a soft rag with acidified water (1 part of hydrochloric acid to 10 parts of water), dab rust spots carefully but do not spread them by rubbing. The acidified water must not soak into crevices, corners or seams, as otherwise more rust will be created. After this treatment wipe off with a rag, moistened with clean water to remove all traces of acidified water. The rags used should be destroyed	

Cleaning of Roof Covers

1 - **Cleaning the plastic (PVC) sun roof**

a - Remove normal accumulations of dirt by washing with lukewarm water and a brush.

b - If warm water fails to effect satisfactory cleaning, use a solution of clean, mild soap suds and then rinse with clear water until all soap has been washed off. Make sure to wash the soap completely off the paintwork of the vehicle, too, and especially from between roof cover and paintwork.

c - Spots caused by tar, soot, oil, grease or paint which cannot be cleaned off with water or soap solution, should be removed with organic compounds such as, for example, trichloroethylene or gasoline. Do not pour the detergent on the spot to be removed but apply it with a damp cloth. Let it act for a short moment only, then wipe it off and treat the spot first with soap solution and then with clear water. If allowed to remain on the material for too long, organic detergents tend to make the plastic hard or brittle. Be sure that the paintwork and the interior do not come into contact with the detergents.

2 - **Cleaning of the fabric sun roof**

a - In all events, keep the wet sun roof closed until it is completely dry. With the wet roof opened, the material may become damp-stained and it would then be impossible to remove these stains.

b - Dusty sun roofs should be brushed with a soft brush only.

c - Normally, clean the fabric by spraying or rinsing with clear water only.

d - Spots which cannot be removed with clear water are to be treated with a mild, clean solution of soap suds and with a soft brush. Clean the entire sun roof to avoid spotting and follow up by rinsing with clear water. This method should be used not more than once every six months.

e - Spots caused by tar, soot, oil, grease, paint etc. which cannot be cleaned off in the above-described manner, should be carefully treated with trichloroethylene or gasoline. Apply the detergent only with a damp cloth. If applied more heavily or even more so if poured on, detergent will damage the structure of the fabric.

The water-proofing of the fabric will lose some of its water repellent qualities when treated with organic compounds and washing solutions. Essentially, however, it depends on the condition of the rubber layer underneath the textile fabric. As a result, the fabric very seldom requires new impregnation. Yet even a new impregnation will not fully restore the original water-repellent characteristics.

3 - **Re-impregnation of the fabric sun roof**

The following water-proofing preparations are recommended:

a - "Happich-Viktoria-Imprägnierung", made by Gebr. Happich GmbH., Wuppertal-Elberfeld, Germany;

b - "Imprägnol M-Extra", made by Pfersee GmbH., Augsburg, Germany;

c - "Primenit VS", made by Farbwerke Höchst, Höchst (Main), Germany, to be used in conjunction with "Ramasit", made by Bad. Anilin- u. Sodafabriken, Ludwigshafen, Germany.

Please comply with the manufacturer's instructions which are supplied with the product.

4 - **Dyeing of the fabric sun roof**

Fabric sun roofs that have become bleached or too light in color through frequent washing or the influence of the weather, may be dyed. Sometimes, however, stripes and paint spots in the fabric may remain more or less visible even after dyeing.

The textile dyes of

Messrs. Artekobin-Gesellschaft Gerhard & Co., Oberntorwall 14, Bielefeld, Germany,

are suitable for dyeing the textile sun roof. The sun roof has to be closed during treatment. Newly dyed sun roofs need not be impregnated again as the dyes already contain an impregnating agent.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Cleaning the Windshield

Some fluid or pasty preservatives contain silicon for greater efficiency. If such preservatives come into contact with the windshield, the silicon contents will cause streaks and clouding within the range of the wiper blade when it rains, thus impairing visibility and driving safety.

Normal cleaning agents and solvents are not suitable for removing these effects of the silicon from the windshield and we should, therefore, like to recommend the following measures:

1 - Use "SIDOL" manufactured by Messrs. Siegel & Co., Cologne, Western Germany. For the indicated purpose it is easiest to apply it as a paste. Rub it over the windshield, let it dry and then wipe it off. Be most careful, however, that "SIDOL" does not come into contact with the paintwork.

2 - Instead of using "SIDOL", you may apply a home-made paste consisting of 2 weight-parts of Vienna lime and 3 volume-parts of water. Adding a few drops of liquid ammonia will further improve the cleaning efficiency of the paste but it will also give it a somewhat unpleasant smell. This type of paste must not come into contact with the paintwork, either. It is applied as described under point 1.

3 - A third way to remove the above-described streaks or cloudiness is to wipe the windshield with cleaning gasoline and to treat it subsequently with acidulated water. Acidulated water consists of 1 volume-part of muriatic acid and 9 volume-parts of water. Afterward, rinse carefully with clear water.

The wiper blades should be cleaned at the same time. Sometimes, however, new blades have to be fitted to keep the windshield clear afterward.

In this connection we should like to draw your attention to the following points:

1 - When using any agents containing silicon, the brushes, sponges, chamois and rags used to clean the paintwork may not be used for the windshield.

2 - Whenever the paintwork is to be sprayed with preservatives containing silicon, be sure to cover first windshield and windows with cardboard or other suitable material.

The Genuine VW Preservative L 190 contains silicon.

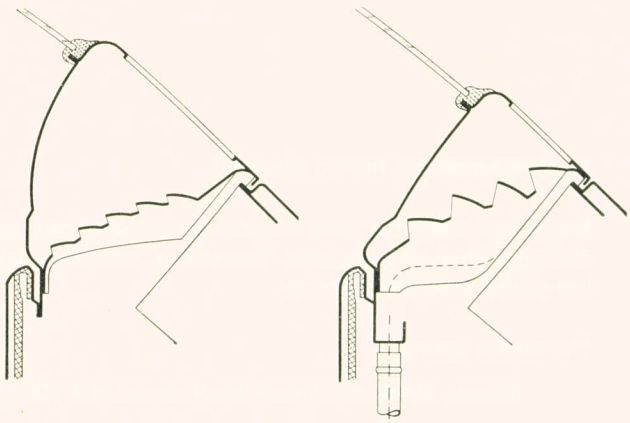
Body Modifications

(Passenger Cars)

Cooling Air Intake

From Chassis No. 1 600 440, August 1st, 1957, the cooling air intake below the rear view window is of an improved version, and the engine compartment is better protected against ingress of water. The cover plate below the cooling air slots permits a better entry of cooling air into the engine compartment because of larger openings.

Water entering through the cooling air slots is collected on the cover plate from where it flows towards the sides into a gutter on the engine compartment front panel and runs from here via hoses to the underside of the vehicle. Water entering at the upper gap of the hood beside the solts is collected on deflector plates at both upper corners of the engine compartment opening from where it drains off.



earlier type

new type

These measures reduce possible ingress of water into the engine compartment to a minimum.

Installation of new roofs in vehicles of earlier design, even in connection with the new instrument panel, is not possible. Body parts of previous design will still be available in future.

Complete bodies of earlier design will only be available until stocks have been used up.

Heating

On December 19th, 1956, Chassis No. 1 385 974, the hot air passage on the VW Sedan and VW Convertible was modified to make the heating system more effective.

The heated air is now guided through a duct enclosed in each of the two body side members (sills) up to the junction of the windshield defroster vents and the outlets at foot level in the front compartment. The ducts, consisting of two halves, are dip-coated for rust protection prior to being spot-welded into the body side members.

The improved heating can be identified externally by the outlets in the front being arranged further towards the rear.

The new body side members incorporating heating ducts are obtainable under the Part Nos.

111 801 041 B (151 801 023 B), left

111 801 042 B (151 801 024 B), right.

Service Installation

A subsequent installation on earlier cars is advisable only if both body side members call for a replacement to insure that the two outlets are exactly opposite each other. When assembling new side members with earlier cowl side panels, care should be taken to insure that there is sufficient free space between flexible heating pipe and instrument panel pillar (Part No. 111 805 115/116). Bend the pillar inward, as found necessary.

Earlier side members are still obtainable under the old part numbers.

Karmann Ghia Coupé

Heating

Commencing with Chassis No. 1 128 610, Body No. 3001, the heating vents in the side members are positioned further toward the rear as illustrated by the drawing overleaf. If required, this modification can be incorporated in earlier cars as recommended below.

1 - Remove mat from front end of body side member.

2 - Mark the hole to be cut for the new louver plate (4).

3 - Insert the guide plate (1), with a strip of felt (2) cemented to it, into the side member, drill two 1.7 mm (.07″) holes and fix the plate with the tapping screws I and II (Note dimension "b". From Body No. 1 - 1440 onwards, shorten the deflector plate for the windshield defroster duct by "c" = 30 mm/1.18″, using an electric drill).

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

4 - Attach louver plate (4) by drilling two 1.7 mm (.07″) holes and using tapping screws III and IV.

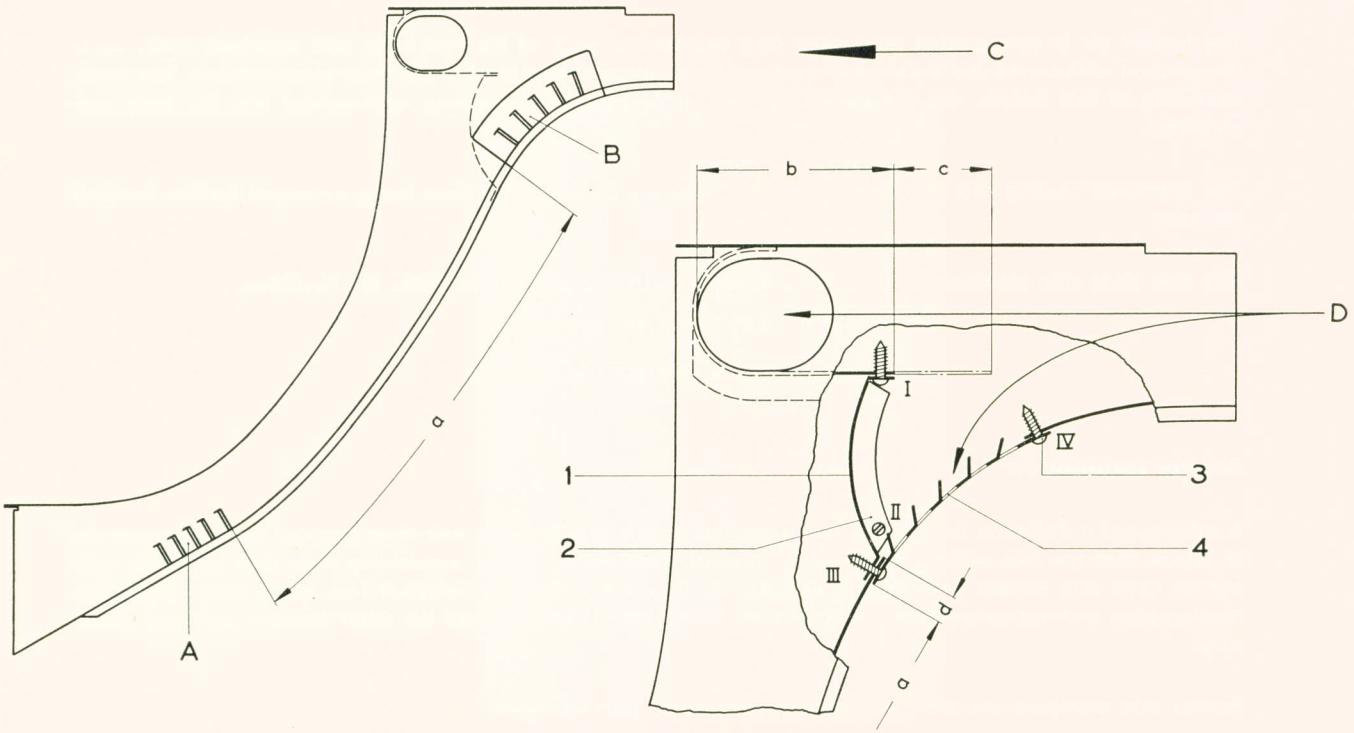
Note. - Instead of using tapping screws I, III, IV, the plates can be spot-welded in position.

5 - Blank off old outlet hole with imitation leather.

6 - Cut hole for new outlet into mat and bind the edge.

7 - Cement mat to side member.

The parts required for the modification should be ordered from the manufacturer: Karmann GmbH., Fahrzeugbau, Osnabrück, Germany.



A = Earlier outlet
B = New outlet
C = Front of car
D = Air flow

a = 270 mm (10.63″)
b = 64 mm (2.52″)
c = 30 mm (1.18″)
d = 10 mm (0.79″)

1 = Deflector plate
2 = Felt strip
3 = Round-head tapping screw S 2.2×9.5
4 = Louver plate

Gauze Screen for Ventilator Intakes

From Body No. 6951 onwards, the ventilator intake openings are additionally provided with gauze screens (Part Nos. 141 255 971/972) of the fine mesh of 1 mm (.04″) to guard against the ingress of insects and dirt.

The new screens can be installed on all earlier Coupés behid the grilles at the air intake openings.

Defroster Vent

With effect from Sept. 16th, 1957, Chassis No. 1 649 253, Body No. 22 922, the Karmann Ghia Coupé is additionally provided with a defroster vent at the rear view window. This will prevent the rear view window from misting up. The warm air is taken from the right-hand heater pipe below the rear seat. The warm air supply is switched on with the car heating.

Service installation in vehicles of older version is possible if a flange is welded to the right-hand heater pipe and an opening cut into the sheet metal of the tray below the rear view window. The following parts are needed:

Number	Designation	Part No.
1	Baffle	143 255 651
1	Heating tube	143 255 655
1	Vent	143 255 659

For details as to service installation see Technical Bulletin A 12.

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Tools and Appliances

A

1 - VW Special Service Tools

VW 122b	Circlip Pliers

2 - VW Workshop Equipment for Local Manufacture

VW 602	Body Trolley
VW 603/1/2	Vehicle Trolley
VW 605	Gantry Crane
VW 700	Tank Mounting Template
VW 701	Engine Compartment Template
VW 702	Front Wing Template
VW 703	Rear Wing Template
VW 704	Body Front End Template
VW 705	Rear Bumper Bracket Template
VW 706	Rear Side Panel Bracket Template
VW 730	Door Hinge Pin Removal Tool
VW 730/1	Door Hinge Pin Drift
VW 731	Expander for Body Straightener
VW 732	Body Parting Tool
VW 733	Body Parting Tool (Pneumatic)
VW 734	Rain Drip Mould Deflanging Tool
VW 735	Lever Jack
VW 736	Headlining Tool
VW 737	Vent Wing Glass Removing and Installing Tool

3 - Normal Hand Tools

Screwdriver, 6 mm
Screwdriver, 8 mm
Combination pliers
Pipe wrench
Cold chisel
Cape chisel
Prick punch (center punch)
Punch, 2 mm
Punch, 4 mm
Mechanic's hammer, 300 grams
Mechanic's hammer, 500 grams
Rubber mallet, 85 × 50 mm
Aluminum mallet
Triangular scraper
Flat scraper
Flat file, 180 mm in length
Round file, 180 mm in length
Half-round file, 180 mm in length
Socket wrench, 14 mm
Socket wrench, 17 mm
Phillips screwdriver, 3 mm
Phillips screwdriver, 5 mm
Open-end wrench, 14 mm
Box wrench, 14 mm
Wire brush
Oil-can
Can for derusting fluid
Grease container
Scratch awl

11 - 59 LA55e 1Nd59 PRINTED IN GERMANY

Caliper square, 300 mm in length, measuring 1/50 mm
Tap M 6
Tap M 8
Tap M 10
Tap wrench, size 1, adjustable
Tap wrench, size 2, adjustable
Die M 6
Die M 8
Die M 10
Die stock, size 1
Die stock, size 2
Drill, 5.0 mm
Drill, 6.7 mm
Drill, 7.0 mm
Drill, 8.5 mm
Drill, 9.0 mm
Inspection lamp with cable and plug
Electric drill, 0—12 mm
Torque wrench, 0—6 mkg
Set of body tools (incl. hammers, spoons, file holders, and dolly blocks)
Pneumatic tool

4 - Supplementary Workshop Equipment

Spot welding plant
Spot gun, 120 mm range
Spot gun, 300 mm range
Spot gun, 550 mm range
Spot gun, 650 mm range
Portable grinding machine
Sanding disc
Gas welding plant with torches of various sizes