

SERVICE MANUAL

TRUCKS

L 385

Export Service Department

AKTIEBOLAGET

VOLVO

GÖTEBORG, SWEDEN

PART 11

BODY

DESCRIPTION

The body consists of the cowl unit and toe-plates, front fenders with wheel housing plates, side plates, front end with radiator grille, hood and cab.

All chassis parts are connected with the frame through the medium of rubber blocks.

In all work on the chassis, it is particularly important to ensure that all rubber insulators and rubber bushings are arranged so that the chassis is not in direct contact with the frame. Damaged or deformed rubber components should be replaced immediately.

COWL UNIT

The cowl unit (13, Fig. 11-1) forms the bulkhead between the driving compartment and the engine. It is attached to the frame by means of bolts on each side. The cowl unit is insulated from the frame by means of vibration-eliminating rubber insulating washers. The cowl is permanently attached to the cab.

There are two holes in the sides of the cowl for the fitting of the ventilators. The instrument panel is fitted on the upper rear side of the cowl unit and is welded to the upper section of the cowl. The instruments, controls and switches are fitted on the instrument panel.

The toe-plate forms part of the floor in the cab and serves as a foot rest. It is welded to a curved edge on the lower part of the cowl. The toe-plate has recesses for the pedals and the accelerator pedal attachment.

FRONT FENDERS

The front fenders (10, Fig. 11-1) are pressed and are welded to the wheel housing plates.

The front fenders are not permanently attached to the unit consisting of the front end - side plates - cowl unit - cab but are separately attached by means of brackets bolted to the frame. The fenders are attached to these brackets by means of rubber insulators. The fenders are fitted with rubber-insulated bracing stays between the upper part of the fenders and the cowl unit.

SIDE PLATES

The side plates are fitted between the hood and the fenders. The lower parts of these side plates are fitted with rubber weatherstrips between them and the front fenders. Where the side plates are attached to the cab and the front end, rubber insulating washers are fitted.

FRONT END

The front end (6, Fig. 11-1) is form-pressed and consists of a number of components which are welded together. The radiator unit is attached to the front end. The radiator core is attached by means of rubber mountings in a special radiator support which is attached to the front end.

The front end which is connected with the cowl unit over the side plates has rubber insulating blocks fitted where it meets the frame. The upper section of the front end is connected with the cowl by means of two bracing stays.

HOOD

The hood (2, Fig. 11-1) consists of a single unit which opens towards the rear on two hinges. The hood is balanced by means of coil springs which retain it in its opened position. When it is closed it is held securely in position by means of a catch fitted to the front end. The lever to the hood catch is fitted to the right under the center part of the front end.

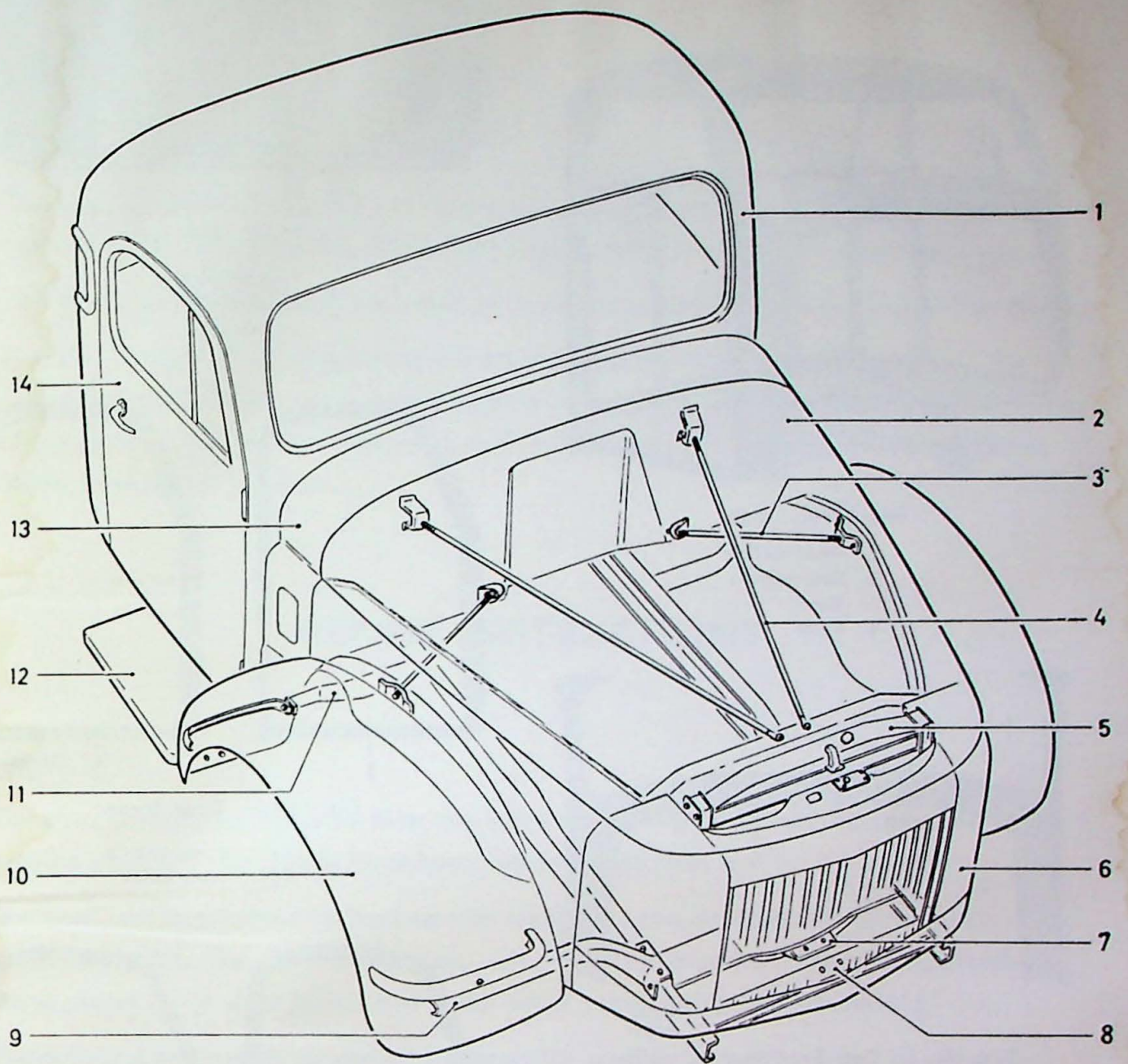
CAB

The cab consists entirely of form-pressed steel plating. The various component parts are welded together.

The cab may suitably be divided up into the following main parts: Front section, rear section, roof section, floor section and doors.

The front section of the cab consists of the right and left side plates, the cross-plate as well as the right and left windshield pillars. The door frames and hinges are attached to the side plates. The cross-plate is welded between the right and left side plates. The windshield pillars are welded above the side plates.

The rear section is built up on five horizontal strips and one vertical strip which are externally covered with plating and internally with sheets of insulating material. Thick layers of heat-insulating Wellite are fitted in the space between the ribs. There is a powerful reinforcement in the lower part of the rear section to which the rear cab attachment is fixed.



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Fig. 11—1. Body mounting.

- | | |
|---------------------------------|----------------------------------|
| 1. Cab | 8. Rubber mounting for front end |
| 2. Hood | 9. Bracket for fender |
| 3. Fender bracing stay | 10. Front fender |
| 4. Slay for front end | 11. Rear bracket for fender |
| 5. Radiator | 12. Running-board |
| 6. Front end | 13. Cowl |
| 7. Rubber mounting for radiator | 14. Door |

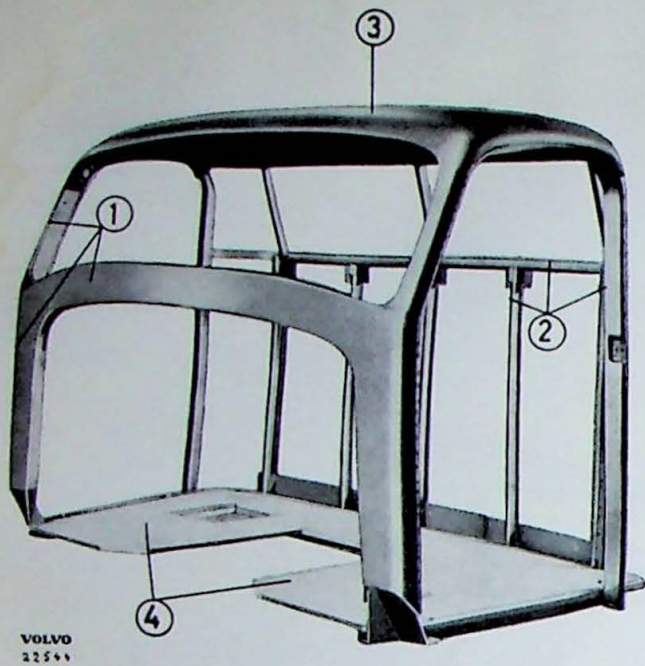


Fig. 11-2. Cab.

1. Front section
2. Rear section
3. Roof
4. Floor

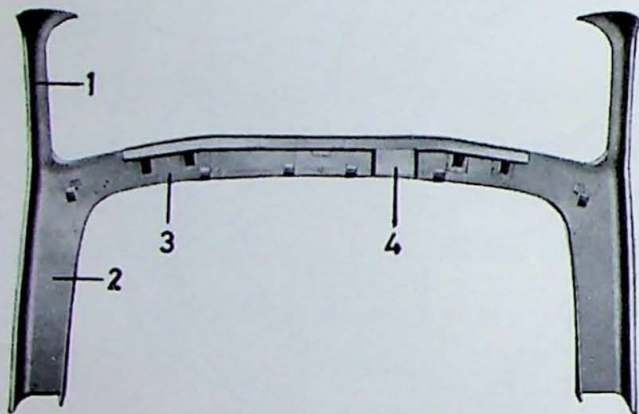


Fig. 11-3. Cab front section, inside.

1. Windshield pillar
2. Side plate
3. Cross plate
4. Defroster duct

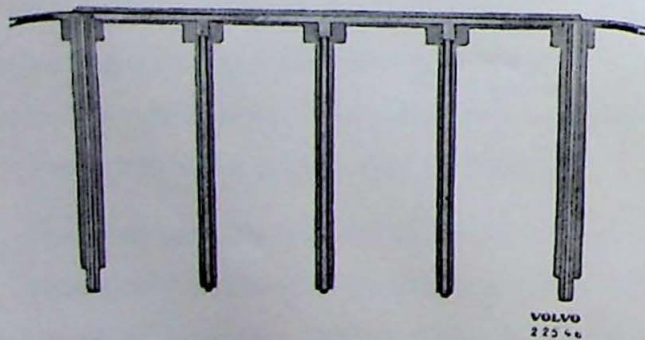


Fig. 11-4. Cab rear section.

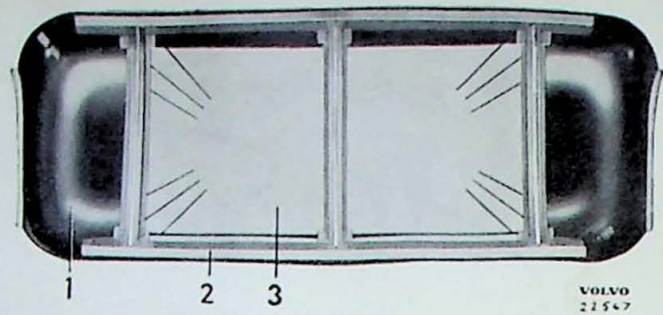


Fig. 11-5. Cab roof.

1. Roof plating
2. Roof ribs
3. Masonite

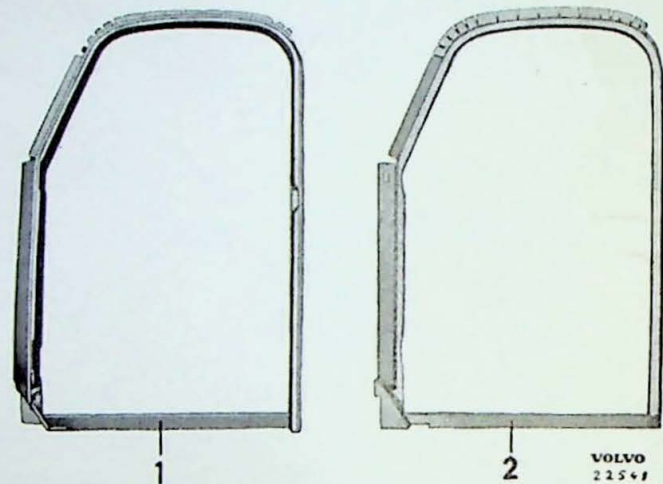


Fig. 11-6. Door frame.

1. Door frame, outside
2. Door frame, inside

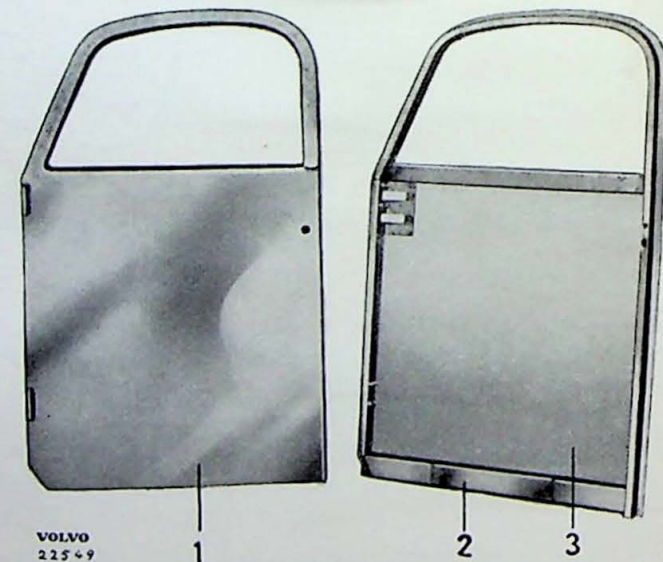


Fig. 11-7. Door.

1. Outside, exterior plating
2. Door skeleton
3. Masonite

The roof is pressed in one unit and is internally reinforced with both longitudinal and transverse ribs. On the inside of the roof plating there is a sheet of masonite.

The floor consists of resined laminated plywood attached to a powerful angle-iron frame.

The doors consist of self-supporting skeletons covered with sheet-metal plating. The skeletons and the plating are welded together. There is a layer of masonite on the inside of the plating. The window regulators and the door control mechanism units are fitted in the thickness of the door.

REPAIR INSTRUCTIONS

COWL UNIT

The cowl unit can be removed after the cab has been lifted off and the hood, fender bracing stays and side plates have been disconnected from it.

The cowl unit is attached to the frame by means of bolts on each side of the plate over the transmission. The cab and the cowl unit are bolted together. The bolts are under cover plates in the door pillars and under cover plates below the windshield.

There are rubber insulating washers between the cowl unit and the frame as shown in Fig. 11-8. There is also an insulating strip between the cowl unit and the cab.

The component parts of the ventilators are shown in Fig. 11-8. The springs and hinges should be regularly lubricated.

FRONT FENDERS

Before removing the fenders, disconnect the cables to the headlamps. If the fender is to be lifted off, the headlamp should be removed from the fender. The fender is then unbolted from the brackets at the front and at the rear on the frame (9 and 11 in Fig. 11-1) and the bracing stay between the fender and the cowl (3, Fig. 11-1) is unbolted.

The fenders are adjustable by reason of the fact that the holes in both brackets are oval. The bracing stay between the cowl and the fender can be adjustable by means of nuts. All fender attaching points are rubber-insulated. Details can be seen in Fig. 11-9.

FRONT END

The front end can be removed in one unit together with the radiator unit. Both the bracing stays between the cowl and the front section should be loosened, the nuts to the side plates and both the rubber-insulated connections 7 and 8 on Fig. 11-1 between the front end and the frame and the radiator frame. The radiator grille is attached to the front end by means of bolts.

The hood catch is attached to the front end with bolts. The component parts of the hood catch should be regularly lubricated. Details are shown in Fig. 11-10.

SIDE PLATES

Side plates are removed by removing the bolts in the front end and the cowl unit. The bolts in the cowl unit are accessible from the inside of the cab.

The rubber packing between the side section and the fender is fitted on the side section. The packing is held in position by means of two screws. When assembly is being carried out, the side section should be free from the fender and the space between should be filled with rubber packing. Rubber washers should be fitted between the side plates and the front end as well as between the side plates and the cowl as shown in Fig. 11-11.

HOOD

The hood is removed by removing the bolts retaining the hood to the hinges. The holes in the hinges are oval allowing adjustment of the hood position longitudinally. The hood hinges are riveted and are replaced as one complete unit when damaged. The hinges are attached to the cowl unit by means of bolts from the inside of the cowl. The hinge pivots should be regularly lubricated with oil. Lubricate the hood catch lock pin with grease. Details are shown in Fig. 11-11.

CAB

General

If the cab has been damaged in any way, welding work may not be carried out before the cab fittings are removed when necessary. The cab is internally heat-insulated with masonite in both the doors and the roof, the rear section is insulated with Wellite, and these materials are inflammable. The Wellite insulation in the rear section is accessible after the covering material has been removed. The masonite in the doors can be removed after the window regulator and the door control mechanism have been taken out.

The roof insulation can be removed by pulling it out of the guide strips in the roof.

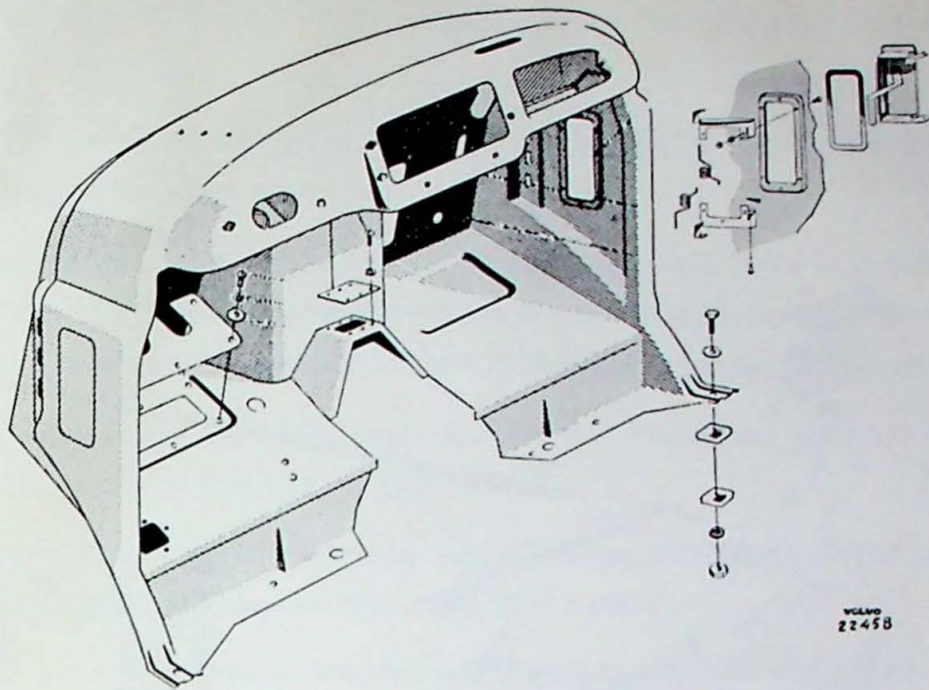


Fig. 11—8. Cowl unit with ventilators.

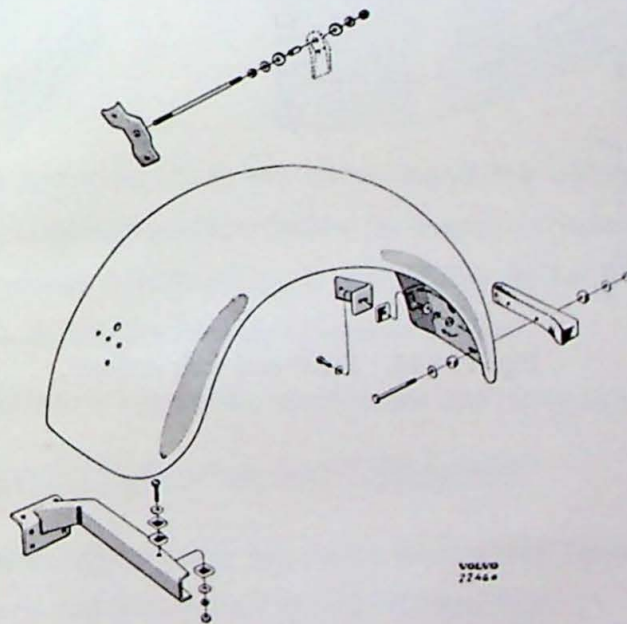
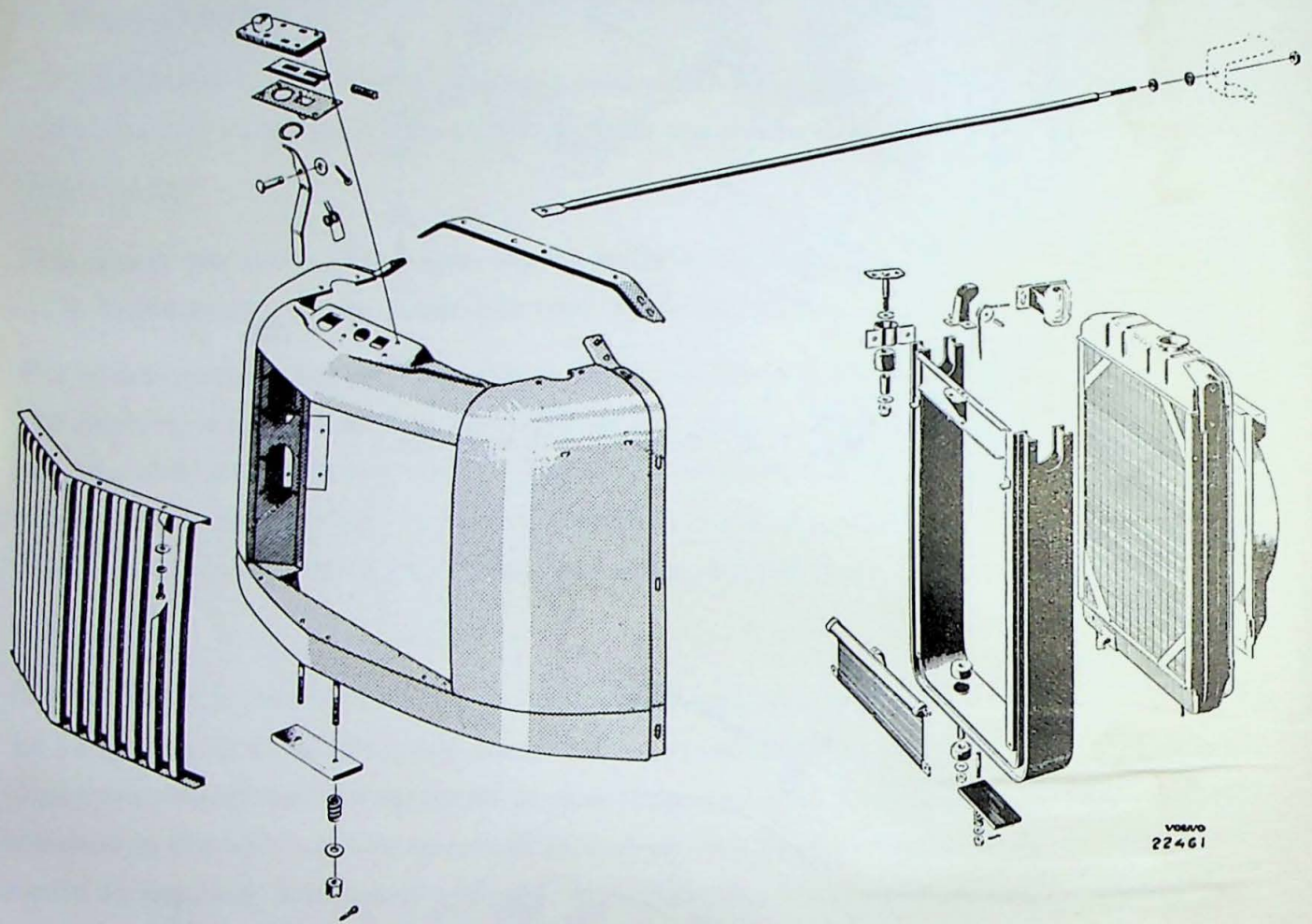


Fig. 11—9. Front fender with mountings.



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Fig. 11—10. Front end with radiator.

Fitting the Cab

If the cab has been removed or if it is to be replaced the following procedure is carried out:

1. Check that the cowl unit is fitted at right angles to the chassis frame. If this is not the case, adjust the cowl.
2. Place the cab on the chassis frame making sure that there is a space of 15-20 mm ($19/32''$ - $25/32''$) at the front between the frame and the cab floor. The correct dimensions are obtained at the rear of the cab by means of the attachment.
The space stated above between the cab and the chassis frame is necessary if the mountings are to function as they should.
3. The cab is then bolted into position beginning with the bulkhead, an insulating strip being fitted between the cab and the cowl.
4. The rear attachments on the cab are then adjusted and tightened.
5. The floor unit round the transmission is then adjusted so that there is a sufficient clearance to allow for transmission vibrations. A rubber strip is fitted between the transmission cover plate and the cab floor after which the cover plate is tightened.

DOORS

Removing Door Inner Panel

When the door is to be removed, first the armrest and the window regulator handle are taken off. The armrest is attached from below by means of screws. The window regulator handle is held in position by means of a pin which should be driven out. The inner door panel is then removed, it is attached by means of screws.

The lock mechanism, window regulator mechanism and door stop are then accessible.

Door Lock Mechanism and Window Regulator Mechanism

The door lock mechanism and window regulator mechanism form one combined unit on a common support. Details are shown in Fig. 11-12 and Fig. 11-13. In case of severe wear, the complete unit should be replaced. The unit is attached to the door by means of screws. The lock mechanism and the window regulator should be lubricated with grease.

Door Stops

The door stops Fig. 11-15, are adjusted with respect to the relative stiffness of the door when opened. The door stops should be lubricated generously with grease when being checked.

Dovetails

The door dovetails (1, Fig. 11-14) are made of rubber with a floating nut washers and can be adjusted vertically.

Hinges

The hinges (2, Fig. 11-14) are attached to the door by means of screws and nuts, the door pillar attachment consisting of a floating nut plate. This allows adjustment of the door both vertically and laterally.

Striker Plates

The striker plates (3, Fig. 11-14) are fitted on the rear door pillars and can be adjusted both vertically and laterally.

HEATER

The heater is a combined warm air and fresh air system. The incoming fresh air is forced by means of a fan through the heater. A further fan fitted under the instrument panel delivers the warm air through the windshields. The temperature of the heater is controlled by means of a heater control valve which can be regulated from the instrument panel.

The function of the heater is shown in Fig. 11-16.

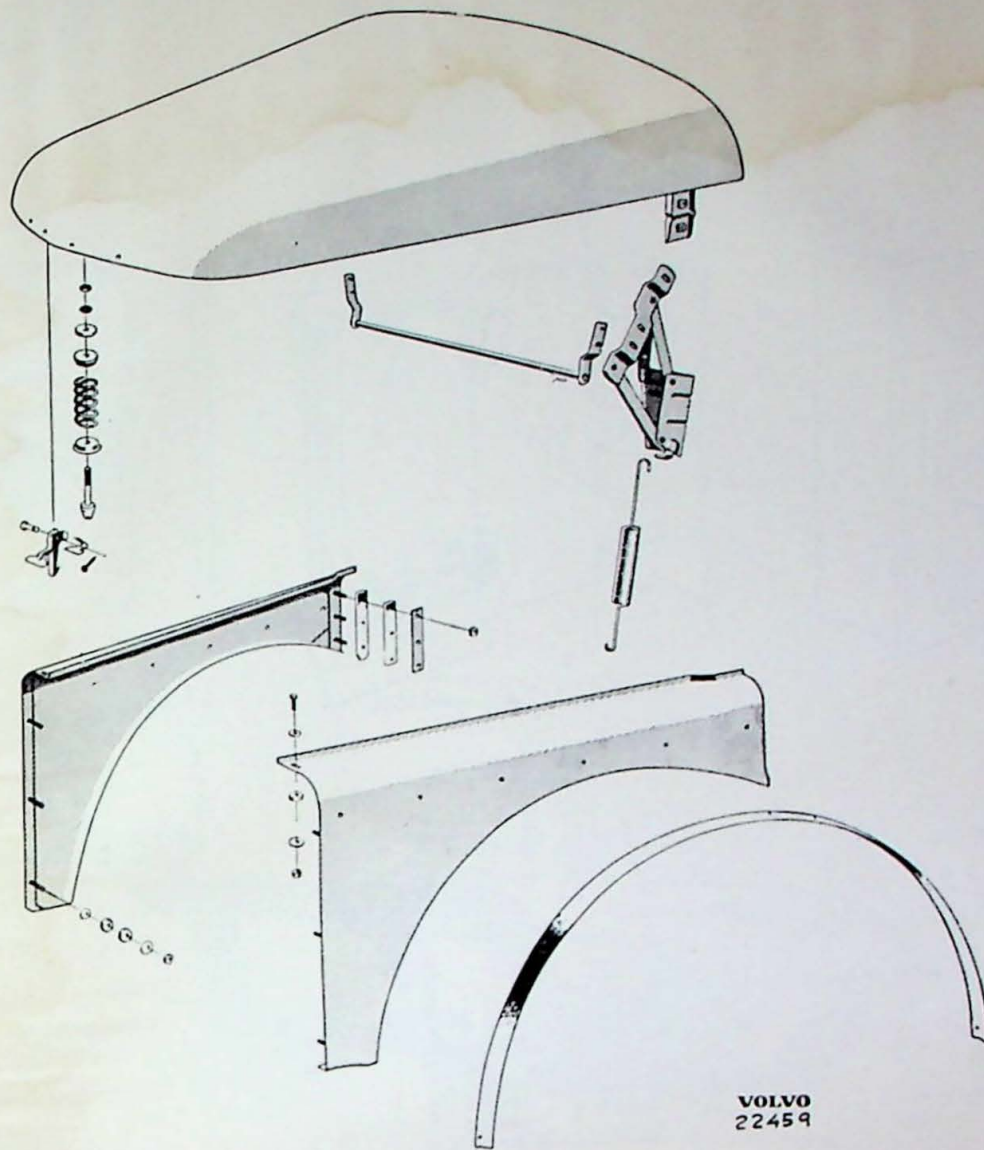


Fig. 11—11. Side sections and hood.

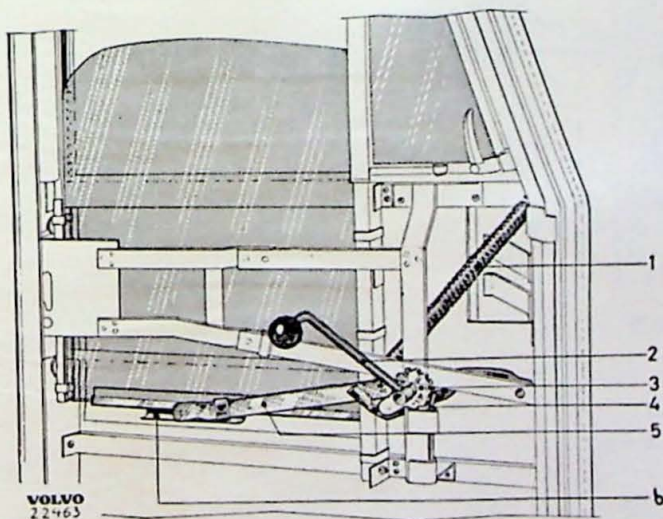


Fig. 11—12.

1. Coil spring
2. Window regulator handle
3. Ratchet
4. Ratchet spring
5. Window lift arm
6. Lift rail

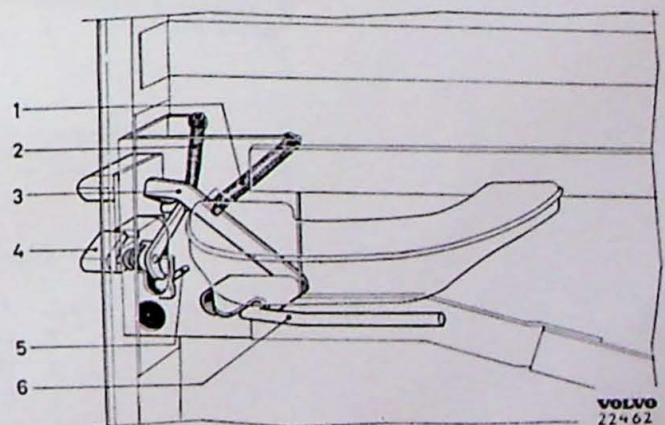
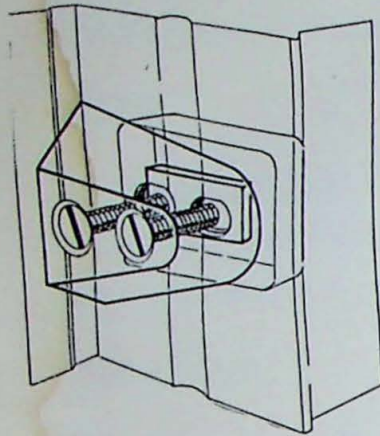


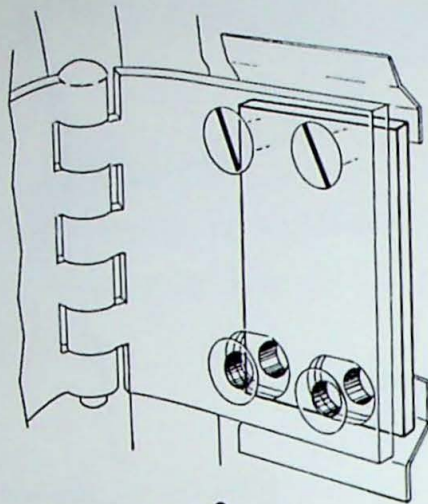
Fig. 11—13.

1. Spring
2. Spring
3. Intermediary arm
4. Lock latch
5. Thrust pin
6. Inside door handle



1

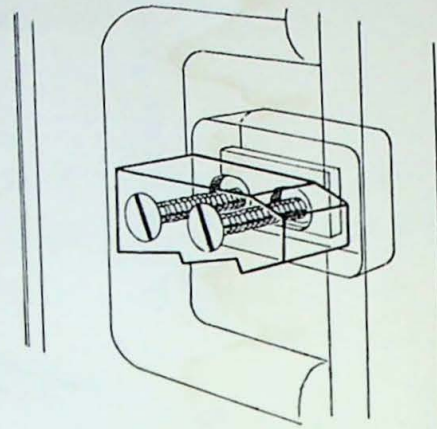
1. Dovetail



2

Fig. 11—14.

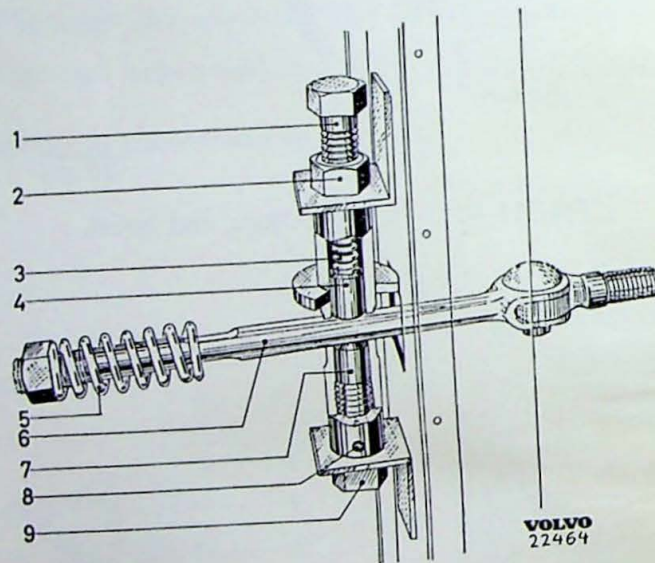
2. Hinge



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3. Striker Plate



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Fig. 11—15.

- 1. Adjuster bolt
- 2. Stop nut
- 3. Thrust spring
- 4. Catch
- 5. Coil spring
- 6. Rod
- 7. Catch
- 8. Lock pin
- 9. Bolt

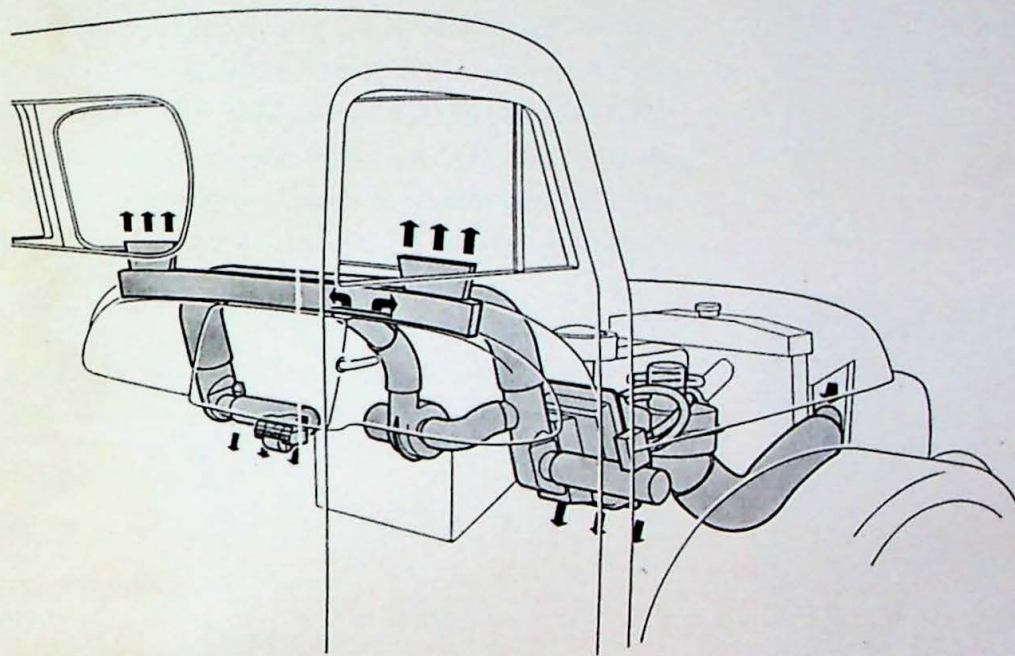


Fig. 11—16. Heater system.