

(2:421)

## DESCRIPTION

The F 7 cab is intended primarily for three main areas of use:

1. Heavy distribution.
2. Lighter, long-distance transport.
3. Construction work.

The cab has therefore been designed bearing all these applications in mind. The low height, the comfortable and non-slip entry, the good all-round visibility and the high heating and ventilation capacity are important details in a distribution vehicle or contractors' vehicle. A well-sprung cab, air conditioning and low noise level are important factors for long-distance transport.

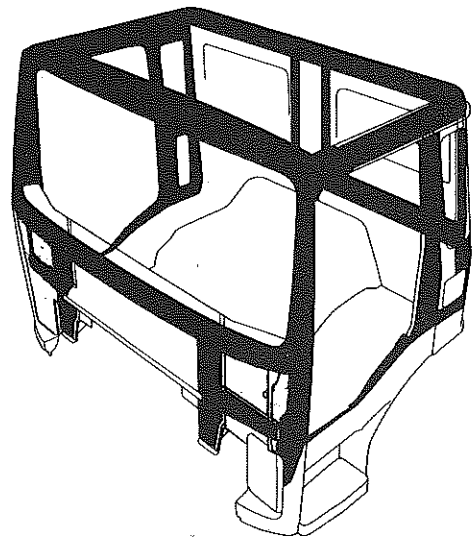
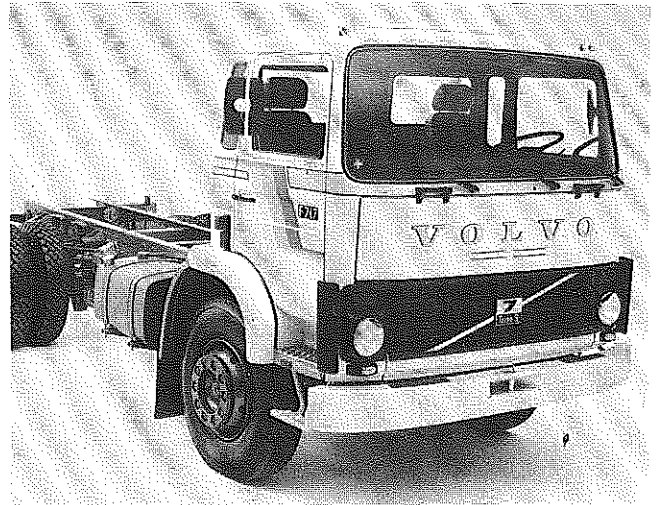
## Exterior

The cab is characterised by large glazed areas all round, particularly important for good visibility in urban traffic. The engine air intake is mounted at the rear of the cab above roof level to provide the engine with as clean air as possible. The bumpers are of aluminium. There are two handgrips on the front of the cab to facilitate cleaning the windscreen. Deflectors are fitted to guide the airstream along the sides of the doors to prevent dirt from the wheels being thrown up on to the doors and windows. A roof hatch is standard.

## Safety

Considerable emphasis has been laid both on preventing accidents and in reducing injury if an accident does occur. There are many details with this aim in mind: for example, the ability of the driver to keep as good an eye on the traffic as possible.

Many features of the cab design and its equipment are intended to reduce injuries in case of an accident. These features are in addition to the ability of the cab to satisfy the very severe impact test requirements specified by the Swedish authorities. These require that, with a



### Feature

- All-steel cab, impact tested
- Cab tilting angle 52°, revealing entire front end
- Unique surface treatment process, four coats
- Well insulated, dense bitumen material
- Big windows, minimum of blind angles, three windscreen wipers.
- High capacity heating and ventilation system, integrated air conditioning
- Carefully balanced suspension system
- Sprung driving seat
- Well appointed interior
- Sleeper cab with bunk optional
- Walk-through cab
- Door opening angle 90°
- Entry of low type (see dimensional drawing)
- Entry of elevated type (see dimensional drawing)

### Benefit

- Driver safety
- Service kindly
- High quality level, excellent resistance to corrosion, durable finish.
- Low noise level
- Excellent visibility
- Fast and efficient, draught-free ideal in-cab temperature.
- Excellent ride, also suitable for long-distance haulage
- A comfortable and efficiently designed delivery truck which gives a satisfying and rational place of work
- Higher ground clearance for construction site work.

# F 7 Cab

static load of 15 tons on the cab roof, and after a blow against a forward corner pillar and rear wall of the cab of 29 500 Nm (3 000 kp), there should still be sufficient space in the cab for the driver to escape without serious injuries. Volvo also build substantial reinforcement into the front of the cab between the chassis and the windscreen to give better protection to the driver's and passenger's legs.

All surfaces in front of the driver are padded with, or made of, energy-absorbing material. The windscreen is of laminated glass, consisting of two sheets of glass bonded to a sheet of vinyl plastic. Adhesion between the three layers is extremely strong, and the risk of the driver cutting himself is considerably less than if toughened glass were used. The laminated windscreen prevents the passenger and driver from being thrown out of the cab even after a very hard impact. A further advantage of the laminated screen is that it remains clear even after cracking: there is no risk of loss of visibility after, say, impact by a stone.

All controls, instruments and switches have been designed with safety in mind.

The steering wheel is of the safety type.

The cab is fitted with seat belt anchorage points: seat belts are standard equipment for certain markets. All material in the cab is flame-retardant.

These are just some of the important details which ensure that a Volvo cab is a safe working place.

## Surface treatment

The surface treatment process is started by a unique combination of three different **pre-cleaning methods**: Alkalic dip degreasing, brush and spray emulsion degreasing, alkalic spray degreasing. This very thorough cleaning process with the subsequent **zinc phosphating** gives stronger protection against the effects of corrosion such as caused by flying stones or scratches in the paint work, and also provides a good foundation for the following coats of paint.

**Coating no. 1** (EC primer) is applied in a cathodic electro-dip plant. This method, which is entirely superior to previous (anodic) methods, gives above all a better penetration of the paint into body members and cavities.

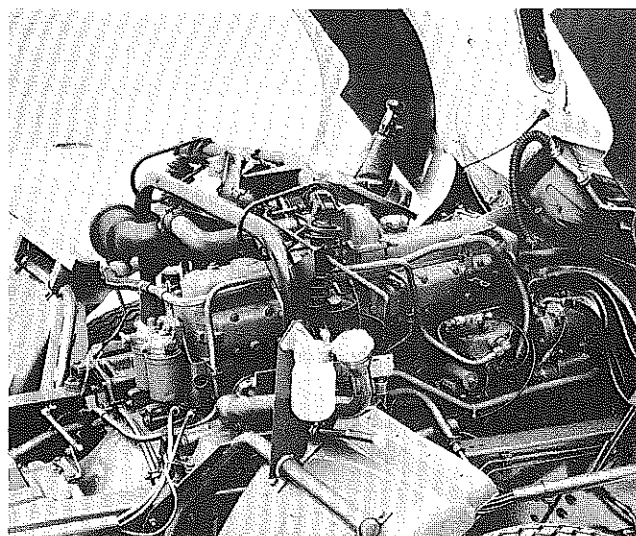
**Coating no. 2** consists of a special corrosion-resistant spray surfacer which is applied in a heated airless electro static process which results in a thicker coating than conventional spraying methods.

**Coating no. 3** is a sealer coating of paint which increases the total coat thickness and provides an excellent foundation for the 4th and final coating.

**Coating no. 4** is a high-gloss top coat.

**Underbody treatment** consists of a tixotropic rustproofing fluid. The tenacious adhesion and flexible consistency of this rust inhibiting fluid means that any damage or scratches in the surface are healed over.

**Rustproofing treatment** of body members, cavities and joints is provided by a penetrating rust inhibiting fluid.



## Cab tilting

The cab tilts forward for service, exposing the whole of the front suspension. The tilting angle is 52°. The cab is tilted hydraulically by a pump fitted on the right-hand side of the vehicle behind the cab (on the left-hand side for RHD vehicles).

Number of pump strokes for maximum tilting,

Sleeper cab approx. 30 kp

Pump force required

Sleeper cab approx. 27 kp

The cab is locked in its running position by means of a spring loaded catch in the centre of the rear edge. If the cab is not correctly locked, a warning lights on the instrument panel.

## Entry

The door has a 90° opening angle. The step is wide and non-slip. Entry and exit are eased by a well-positioned handgrip at the side of the instrument panel. There are two different entry layouts, one high and one low. The low level is intended specially for delivery and short-haul work in which the driver repeatedly enters and leaves the cab.

The high level version is intended for construction site work in which there is a need of high ground clearance. Step heights is subject to the tyre size (see dimension drawing on the last page). As the cab is low and there are two steps up, entry and exit are particularly easy. A further detail is that the steps are illuminated by the light in the roof of the cab when the door is open. The free floor space in front of the engine makes it easier for the driver to leave the cab on the passenger side.

## Cab suspension

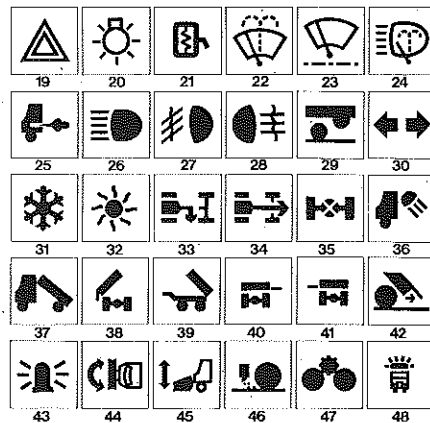
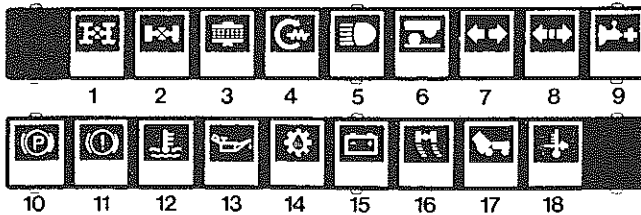
One of the main aims in the design of the F 7 cab has been to provide first-class driver comfort. The cab is therefore particularly well insulated from the chassis. At its forward edge it is carried in two rubber bushes, and supported at the rear by two coil springs. Spring motion is damped by three telescopic shock-absorbers, one in each spring and one at right-angles to damp sideways movements.



The tray on top of the engine casing includes the three cushions which are used to prepare the bunk. The space behind the passenger seat is the most easily reached due to the two-part design of the bunk. We recommend that the driver uses this area for his personal belongings. The wardrobe is available as an optional extra. The cab has curtains for the rear windows and another which can be pulled to screen off the rear side windows and to divide the driving area from the bunk area. A lamp is fitted above the bunk.

## Instruments and controls

The controls are positioned partly directly in front of the driver and partly around the gear lever. Indicating and warning lamps are fitted in the top of the panel in front of the driver, individually marked with picture symbols. (See below).



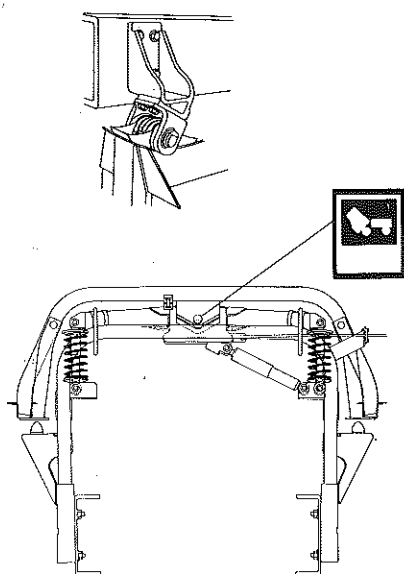
## INDICATING LAMPS AND SWITCHES

### Indicating and warning lamps

1. Differential lock between axles.
  2. Differential lock between wheels.
  3. Blocked air filter
  4. Pre-heating (electric starting heater)
  5. Main beam
  6. Bogie lift or Robson drive (6x2 vehicles only)
  7. Turn indicators, tractor
  8. Turn indicators, trailer
  9. Overdrive engaged (SR62)
  10. Parking brake
  11. Brake system (footbrake)
  12. High coolant temperature or low coolant level
  13. Oil pressure
  14. Not connected (only certain markets.)
  15. Charging
  16. Anti-skid
  17. Cab lock
  18. Exhaust temp. warning lamp (optional)
- 1, 2, 11, 12 and 13 combined with buzzer

### Switch symbols

19. Hazard warning lights
20. Headlights and instrument lighting
21. Electrically-heated rear-view mirror
22. Windscreen washers and wipers
23. Intermittent windscreen wiper
24. Headlight washers and wipers
25. Exhaust pressure regulator
26. Main beam/spotlight
27. Foglights, front
28. Foglights, rear
29. Bogie lift
30. Turn indicators
31. Air conditioning
32. Engine heater
33. Power take-off, side
34. Power take-off, rear
35. Differential lock between wheels
36. Load light
37. Rear tip
38. Side tip
39. Trailer tip
40. Dropside release, right
41. Dropside release, left
42. Tailboard release
43. Rotating warning light
44. Plough: set angle
45. Plough: raise/lower
46. Sanding
47. Robson drive
48. Roof sign light



## Interior

The working environment affects the driver's driving style and thus also the running costs of the vehicle. It is therefore important that the cab is comfortable, spacious, airy and pleasant. The engine casing is fitted with a brown textile covering, and the seats and walls have brown upholstery.

## Insulation

The cab is carefully insulated against noise, heat and cold. The underside is covered by a layer of bitumen ( $7 \text{ kg/m}^2$ ) about 4 mm thick. The engine casing is covered with two layers of insulation under the textile covering, one of them being massive insulation and the other being foam plastic ( $8 \text{ kg/m}^2$ ).

The floor is covered with bitumen ( $7.5 \text{ kg/m}^2$ ) and a rubber mat, backed by  $8 \text{ kg/m}^2$  foam plastic. There is about a further 12.5 kg of sound-deadening material inside the cab in the form of a 2–3 mm thick layer on doors, sides and roof. The rear wall is insulated with self-adhesive bitumen, while the front of the cab is insulated with foam plastic. The door and side panels consist of hardboard covered with foam rubber and PVC. The inner roof lining is made of formed cotton fibre, covered with fabric and with a foam plastic backing.

## Driver and passenger seats – driving position

A sprung driver's seat is standard. The passenger seat is not spring-loaded, but a spring loaded seat is available as extra equipment.

The seats have a wide range of adjustment:

Fore-and-aft adjustment 135 mm

The backrest can be lowered until it touches the bunk or the rear wall of the cab and can also be tipped forward for easy access to the area behind the seats. The cushion height and angle can be adjusted to seven different positions. The adjustment range is 65 mm at both front and rear edges. The spring-loaded seat can be adjusted to the driver's weight over a range of 60–130 kg. The steering

wheel is adjustable in two positions, about 20 mm ( $2^\circ$ ) forward and back, although this requires tools. An electrically heated seat is available.

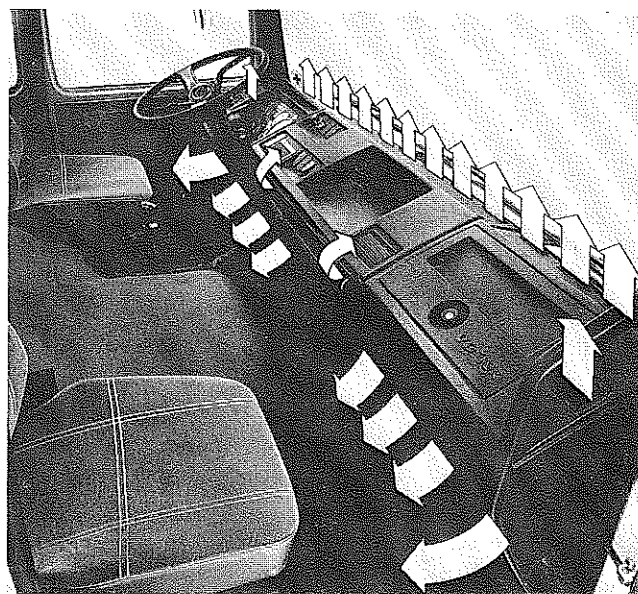
## Heating and ventilation system

The cab is equipped with a particularly effective heating and ventilating system. This is important in distribution duties involving frequent opening and closing of the doors. The fan capacity is about  $8.5 \text{ m}^3/\text{min}$ , giving an air change rate of about 2 per minute. The controls for heating and ventilation are mounted in the middle of the instrumental panel. Provision is made for the fitting of integral air-conditioning. There are 12 defroster outlets at the bottom of the windscreen. There are four fresh air outlets in the instrument panel, capable of being individually directed or shut off. A further four air outlets are provided in the footwell area on each side for both driver and passenger. Air is cleaned before entering the cab by a paper filter with  $1 \text{ m}^2$  surface area. The filter should be cleaned once a month and replaced every year. It is easily accessible in the front of the cab. Air is evacuated through outlets in the rear wall of the cab. The heating system is controlled by four levers: Temperature, Recirculation/Fresh Air (REC/FRESH), Min/Max Defroster and Min/Max Floor air outlet.

The REC position is used for rapid heating or defrosting, or to prevent the relative humidity in the cab from becoming too low.

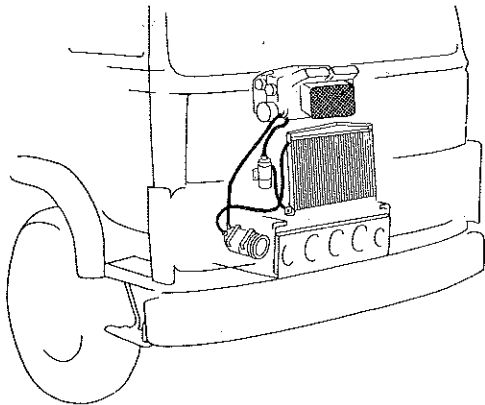
The fan has three speeds. Normally, the lowest speed, i.e. Position 1, is sufficient. The fan should always be running for the following reasons:

- Overpressure in the cab prevents draughts and the entry of dust.
- Fresh air is provided even at slow speeds or standstill.
- The heater thermostat valve cannot work properly if it cannot sense the temperature of the heat exchanger by means of a steady air flow past it.



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Position 2 of the fan control does not need to be used until the external temperature drops below  $-10^{\circ}\text{C}$ . If maximum heating is required for very low outdoor temperatures, Fan Position 2, rather than Fan Position 3, should be used. Position 3 is used for defrosting the glazed areas or, if air conditioning is fitted, for rapid cooling. The roof hatch enables the temperature in the cab to be kept down when the vehicle is parked.



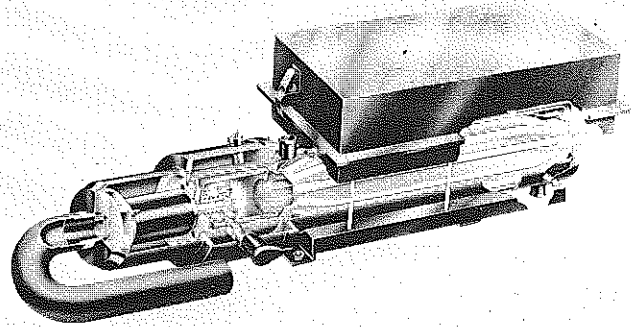
## Air-conditioning equipment (extra equipment)

The air entering the heating and ventilating system can also be cooled if the integral-type cooling system is specified. This provides complete air-conditioning control. At an outdoor temperature of  $+40^{\circ}\text{C}$  the air-conditioning equipment can reduce the cab temperature by  $10-20^{\circ}$ . (The efficiency depends on the air humidity.) With normal outdoor temperatures the cooling facility can be used to lower the humidity of the air entering the cab. The air is first cooled so that excess moisture condenses out, and then the air is heated again by the heating system.

The cab cooling system is engaged by a special switch to the left of the heater controls. When in operation, the REC/FRESH control should be set at REC. This causes the system to draw about 80 % of its air from inside the cab, making up the rest with fresh air. All windows and the roof hatch should be closed when the cooling system is in operation.

## Parking heater (extra equipment)

A parking heater is built into the heating and ventilating system. The heater warms the engine coolant, and the cab is then heated using the ordinary heating system. The parking heater is controlled by a thermostat. Using the whole of the engine cooling system as a heat reservoir increases the thermal inertia so that the parking heater does not need to switch on and off as frequently as a straight air heater when the system has warmed through. The fans provide a gentle breeze by means of a time-switch which can be set up to 20 hours in advance.



## Space and visibility

The driver has a well-planned working place with all controls within easy reach. There is plenty of space in the cab (see dimensions sketch on the last page), contributing to driver comfort. There is a large locker on the passenger side. The middle of the instrument panel is so shaped that papers etc. may be placed there, and a further document pocket is provided on the rear wall of the cab. The high seat position and the very deep glazed areas give excellent visibility close to the vehicle. All-round visibility is very good. The roof pillars and the air intake block only about  $75^{\circ}$  of  $360^{\circ}$  in plan (short cab). The driver in the dimensions diagram is drawn in accordance with SAE standards. Dirt deflectors are provided to reduce dirt on the side windows and rear-view mirrors.

Three windscreen wipers keep the windscreen clean. The washer jets are fitted to each wiper arm, giving effective screen washing and reducing wear and tear on the wiper blades. The screen washer container holds 10 litres of liquid, and is easily filled from the front of the vehicle. Headlight wipers and washers are available, working automatically when the windscreen is washed and the headlights are lit.

Electrically heated rear-view mirrors are available, and are standard for certain markets.

A near-view mirror is available as extra equipment.

## Sleeper cab

The sleeper cab version is equipped with a bunk. The bunk is 1900 mm long, 610 mm wide except immediately behind the seats where the width is restricted to 510 mm. The bunk width is adjustable 100 mm by sliding it forwards and fitting specially tailored cushions between the bunk and the rear wall. The bunk is well upholstered and the padding is not less than 100 mm thick. Distance bunk-headlining: 710-740 mm.

The bunk has been divided into two sections to give easier access to the storage compartment beneath it. It is divided behind the passenger seat.

The dimensions of the storage bins are as follows:

	Length	Width	Depth
Behind passenger seat, mm	495	440	450
Behind driving seat, mm	495	440	450
On top of engine casing, mm	380	720	100

The tools are stored behind the driving seat. The wardrobe also takes up some of this space.

# F 7 Cab

## Controls by the gear lever

- Gear lever
- Engine stop
- Parking brake
- Blocking valve
- Tyre pump valve

## Controls on the steering column

Left-hand side:

- Turn indicator switch automatic cancellation and main/dipped beam control.
- Windscreen washers and wipers.

Right-hand side:

- Trailer handbrake

## Tools

The tool set includes the following:

1 hammer, 1 par of pliers, 2 adjustable spanners, 4 screwdrivers, 1 ring spanner, jack and compressed air hose. The jack is stored behind the left-hand seat.

## Cab prepared for extra equipment

The cab is supplied with cables installed to facilitate fitting of radio, two-way radio and extra lights on the cab roof (illumination of company sign etc.) Mounting points are provided for fitting Volvo's roof rack and sun visors.

## Widths

Cab with mudguards	2 490 mm
Cab without mudguards	2 300 mm

## Interior dimensions

Floor covering – headlining	1 390 mm
Door – door	2 090 mm
Instrument panel – rear wall	905 mm
Steering wheel adjustment, forward – back	Approx. 20 mm (2°)

## Driver's seat

Fore-and-aft adjustment	135 mm
Vertical adjustment, front and rear edges	65 mm

## Exterior dimensions, mm

### Low execution

B <sub>1</sub> Height, ground–1:st step	433	(508 unloaded)
B <sub>2</sub> Height, 1:st–2:nd step	360	
B <sub>3</sub> Height, 2:nd–floor	327	

### High execution

B <sub>1</sub>	529	(604 unloaded)
B <sub>2</sub>	264	
B <sub>3</sub>	327	
P. Height, ground-air intake	3043	
C. Height, cab tilted		
short cab	407 <sup>1)</sup>	
sleeper cab	757 <sup>1)</sup>	

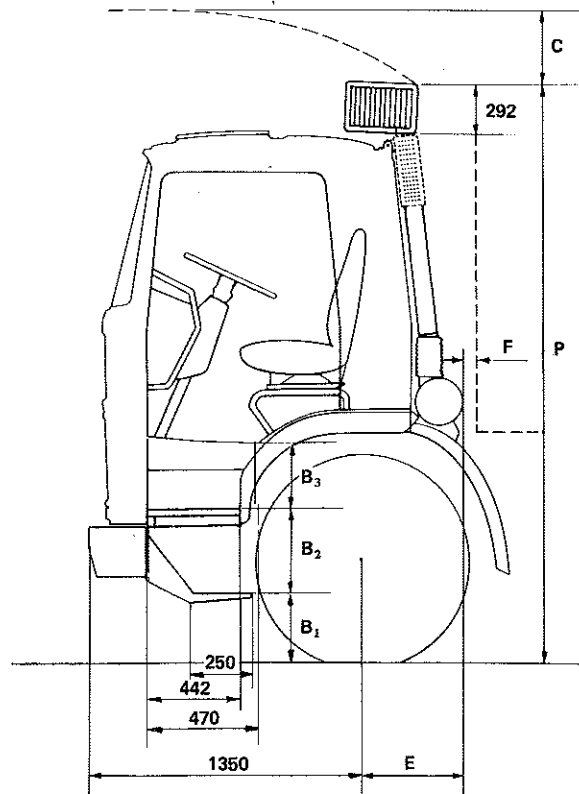
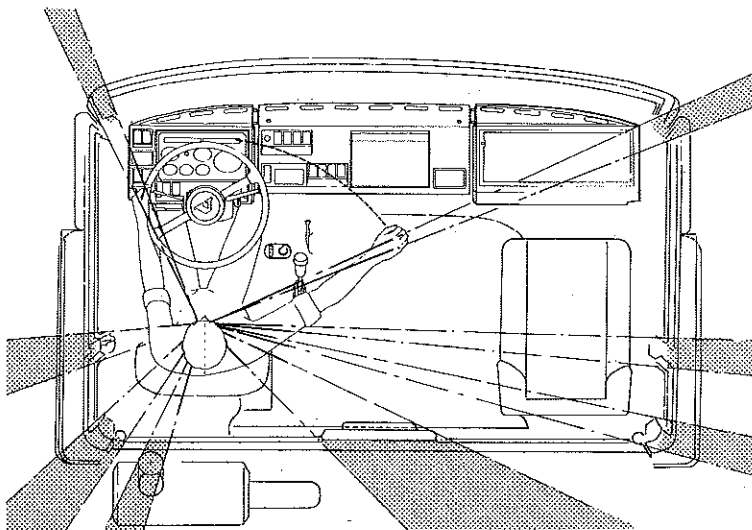
### E. Distance, centre of front wheel-air intake

short cab	500
sleeper cab	910

### F. Rec. distance, air intake-superstructure

short cab	30
sleeper cab	50

<sup>1)</sup> with FFJ K1 springs +13 mm.



Dimensions, fully loaded