

(2:432)

## RANGE OF USE

The trend in the development of the long distance and inter-continental market shows that the percentage of super-long distance haulage is on the increase. Cabs which are capable of satisfying the very special requirements which the drivers of this type of rig make are therefore in great demand. As the traffic increases, so do waiting times at the border crossings and ferry terminals. A cab that is spacious enough to provide a good environment under such conditions and can be fitted out with equipment that enables the crew to eat and live in the cab for a longer period of time means that much of the stress and unpleasantness of such working conditions can be avoided. The driver and crew become independent of the environment outside of the cab on their long journeys away from home base.

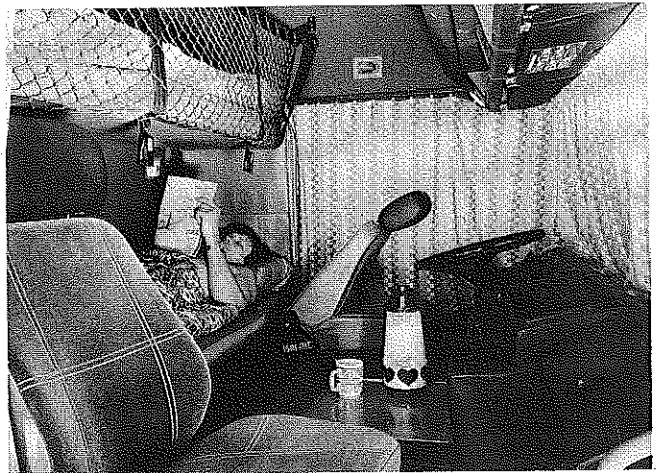
## DESCRIPTION

### Exterior

The Globetrotter cab is 370 mm higher than the standard cab and has tinted glazing to reduce heat glare from the sun. In the brow of the cab is space for a signboard. It is prepared for backlighting. The cab has an automatic levelling system which, with the help of compressed air, compensates any backward lean of the cab caused by heavy equipment, acceleration forces or luggage. The levelling system is based on special shock absorbers with air pockets. The levelling pressure is provided by a valve which senses the cab rake. The air is provided by the compressed air system of the vehicle.

### Interior

**Bunks:** The cab has a full head height of 1970 mm. This makes it possible to stand up when changing clothes etc. The cab has two bunks, both with 100 mm thick mattresses. Spacing between the bunks is 570 mm and height above the top bunk is 660 mm. This satisfies the legislative requirements currently in force on all markets. An optional extra is a safety net which can be suspended in front of the bunks.



Features	Benefits
<ul style="list-style-type: none"> <li>● Many optional extras</li> </ul>	<ul style="list-style-type: none"> <li>● Enable the cab to be tailor made to suit individual preferences.</li> </ul>
<ul style="list-style-type: none"> <li>- Basic version for extra roominess</li> <li>- Basic version can be specified with optional extras to suit every requirement</li> </ul>	<ul style="list-style-type: none"> <li>● Plenty of space for super-long distance haulage.</li> <li>● Practical, luxurious fittings designed for comfort and safety</li> </ul>
<ul style="list-style-type: none"> <li>● Full standing height 1970 mm</li> </ul>	<ul style="list-style-type: none"> <li>● For driver convenience, easy changing etc.</li> </ul>
<ul style="list-style-type: none"> <li>● Safety cab</li> </ul>	<ul style="list-style-type: none"> <li>● Impact tested to the strictest requirements</li> </ul>
<ul style="list-style-type: none"> <li>● Generous luggage and stowage space</li> </ul>	<ul style="list-style-type: none"> <li>● Everything needed on a trip can be taken along with ease.</li> </ul>

# F 10 and F 12 Globetrotter

and optional extras for standard cab

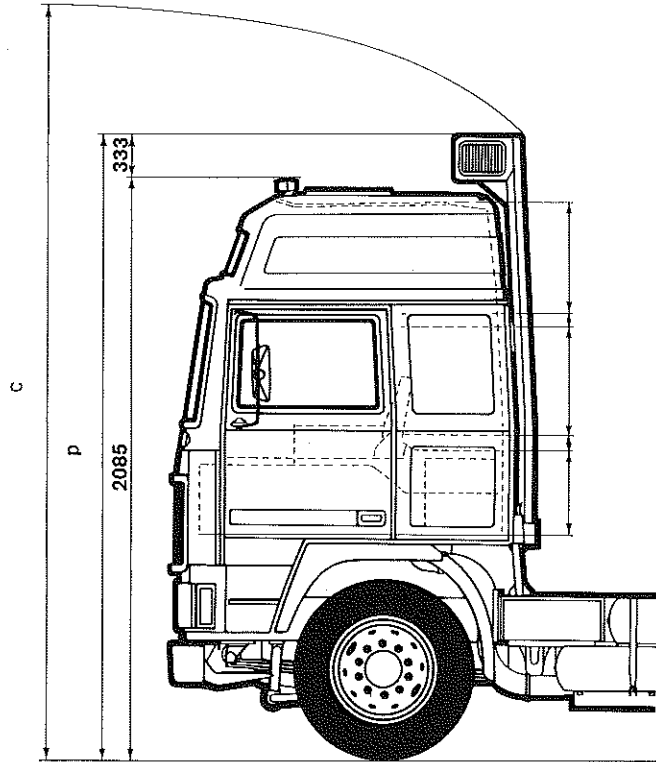
**Stowage space:** There are three storage compartments with top-hung doors above the radio shelf.  
Stowage: 3 x 50 litres.

The centre storage compartment below the bottom bunk holds 125 litres. This storage space is ideal for dry food-stuffs etc. Otherwise, storage space is the same as in the standard cab.

In front of the crew seat is an adjustable footrest with three positions. The angle of the footrest adjusts automatically to the user's feet.

A powered window on the crew side of the cab is standard.

Tyre dimensions	P	C
12R22.5		
Unladen	3,790	4,390
Loaded	3,740	4,340
13R22.5		
Unladen	3,810	4,410
Loaded	3,760	4,360



## EXTRA CAB EQUIPMENT FOR F 10/F 12 STANDARD CAB

The following items are **standard on the Globetrotter** and available as optional extras on the other cabs:

- Sun visor
- Levelling system
- Safety net for bunks
- Adjustable footrest for crew member
- Tinted glazing
- Air Flow System (except Globetrotter)

## EXTRAS FOR F 10/F 12 GLOBETROTTER AND STANDARD CABS

- Speakers and aerial
- Pantry
- Chest type fridge
- Inertia reel seat belts



## Optional cab equipment F 10/12 and Globetrotter

### DESCRIPTION OF EXTRA EQUIPMENT

#### Speakers, transducer and aerial

The speakers are of the same type as featured by the Volvo 760 car and have a 15 Watt rating (variant) or 20 Watt (extra equipment) and a large element for very good reproduction, particularly in the bass register. These speakers are fully comparable to those used in the best stereo equipment.

There are two sizes of transducer. One for radios which require a maximum of 3 amps, and for equipment which requires more than 3 Amps, including CB-rigs, etc, there is a 6A transducer.

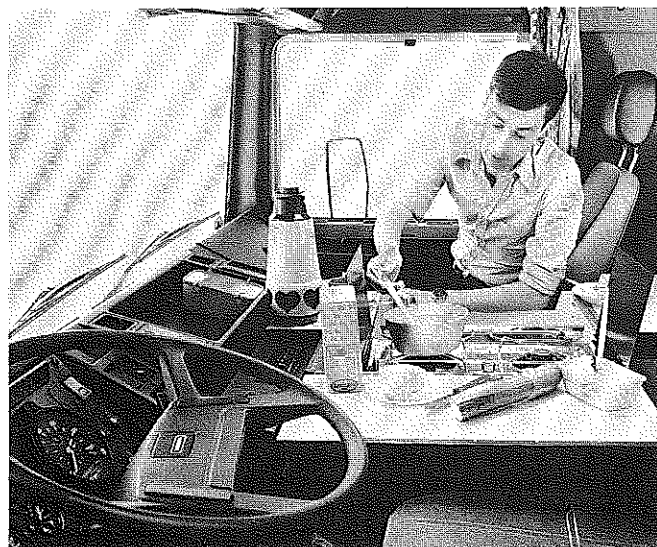
The transducers are current-limiting which implies that they are insensitive to overloading. The radio and transducer are both supplied complete with multi-pin contacts which ensures correct and easy connections. All necessary wiring is included as standard. The radio aerial is of glassfiber type.

#### Fridge

The fridge, which is of chest type, is installed under the bunk behind the crew member seat. The high cab and the single bunk version of the standard cab can both be specified with a 32 litre fridge while the standard cab with two bunks can have a fridge of 24 litres capacity.

#### Pantry

A pantry which also doubles as a table is mounted on the engine casing. It comes complete with the necessary utensils to enable simple meals to be prepared in the cab. The pantry includes a stainless steel sink unit dimensioned 340x300x120 mm with running water for washing up. A two-burner paraffin cooker (Optimus 155) enables meals to be prepared easy and quickly (a paraffin cooker is safer than a gas cooker). The equipment also includes two saucepans (1.17 and 2.16 litres) and a frying pan ( $\varnothing$  200 mm, depth 45 mm).



#### Water tank

The water tank is mounted in the storage compartment behind the driver. It holds 40 litres. If a larger water capacity is required, a tank can be mounted on the engine casing underneath the bunk. Filling up the standard storage tank with water is easy since the tank is accessible from the outside. The tank is complete with a water pump which has a capacity of 8 litres/min.

#### Strongbox

A lockable, fireproof strongbox for documents can be mounted permanently in the storage compartment below the bottom bunk above the engine casing. This is an ideal place for documents, cash etc.

# Extra cab equipment F 10/F 12

## AERODYNAMICS

From an aerodynamic point of view, it is not possible to design a cab which is ideal for all types of rig with different gaps between the cab and the platform and varying platform heights. Volvo cabs (F 10/12) are aerodynamically suitable for low loads. If the load carrier is higher (approx 3.4 m with a 0.65 m gap) the cab should be equipped with the Volvo Air Flow System. This equipment means that the cab will always have the aerodynamically most efficient shape for every type of rig.

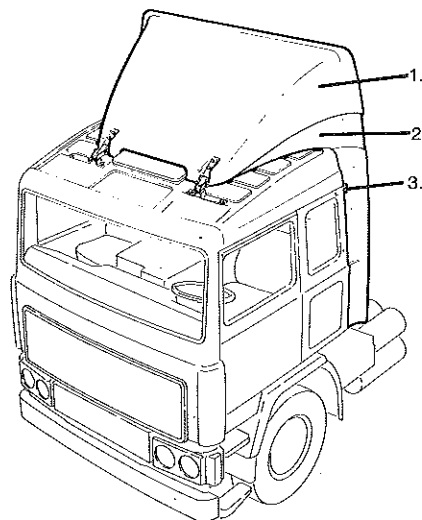
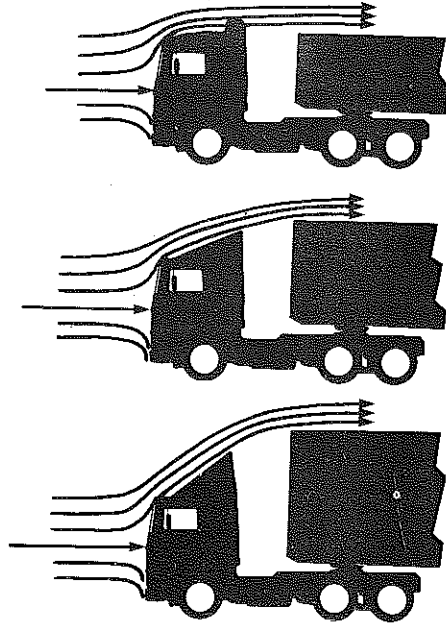
### Designed by Volvo for Volvo

The Volvo Air Flow System consists of a roof-mounted air deflector with side walls and side deflectors on the trailing edge of the cab. The roof deflector is prepared for the incorporation of a backlighted name panel. Complete lighting kits for the nameboard are available as an optional extra. The cab roof is reinforced and prepared for the equipment. The complete Air Flow System is intended for and adjustable to suit semi-trailer tractors and trucks with different gaps to the superstructure and different load carrier heights. The design of the Air Flow System is carefully adapted to match the styling of the Volvo cabs.

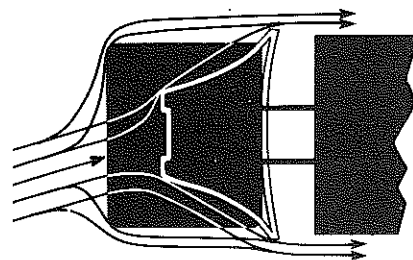
The Air Flow System is a perfect fit to the Volvo cab, following the rounded shape of the cab with perfect precision. The side deflectors are scooped outwards to lead the headwind outwards, past the gap between cab and superstructure. This also keeps the side of the cab cleaner. The flow of air along the rig is smoother, which results in less buffeting of the tarp and thereby gives it a longer service life.

The Air Flow System is designed for maximum efficiency, even in a side wind. This is particularly important since a head wind which comes directly from the front is very rare. (Almost 80 % of all driving is done in a side wind.)

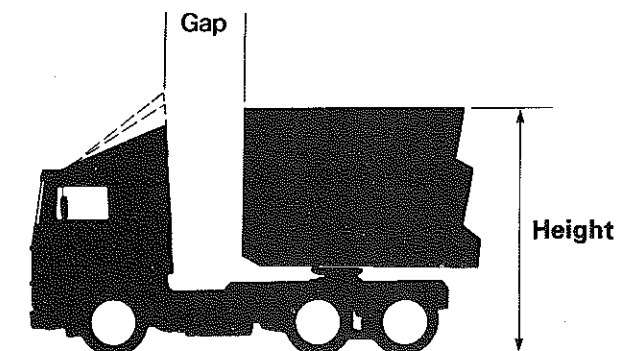
It is very important that the Air Flow System is correctly installed and set up according to the Volvo recommendations for various superstructure heights and gap distances to ensure the highest efficiency and lowest fuel consumption.



1. Roof deflector
2. Side walls
3. Side deflector



A cleaner flow of air past gap.



# Extra cab equipment F 10/12

## Full scale wind tunnel testing

To ensure the very best results in the assessment work which lead up to the Volvo Air Flow System, full scale wind tunnel tests were carried out. This meant the use of a "real" truck and the actual wind velocities involved. These measurements were carried out by aerodynamic experts from Volvo in Europe's largest facility of its kind, the DNW wind tunnel in Holland.

A great many tests were carried out, from a "naked" cab to a cab with the complete AFS. Various types of superstructures and trailers were also attached to the tractor and tests were also run from various angles and wind velocities to achieve the effects of side winds and get as close to real life as possible. The resulting drag figures, as given in the table, are so-called weighted values ( $C_D$ ) with consideration taken to meteorological statistics, wind velocities and wind directions.

Depending on the gap distance and height, the air flow system gives a reduction in drag of approximately 11 to 23 %. The higher the superstructure and the wider the gap, the more the benefit of the Volvo Air Flow System.

## Air flow tests and fuel consumption

To enable a correct appraisal to be made, the trucks must of course be tested in the field. Air flow tests and fuel consumption measurements were carried out at the Volvo proving ground. The result of this work has been used as the basis for the setting recommendations for the Air Flow System.

The test rig for the fuel consumption tests was an F 12 4x2 semi with a gross weight of 38 tons and a tarp height of 3.9 m. The gap distance between the cab and semi was 1 m. The weather conditions were ideal, i.e. calm and dry.

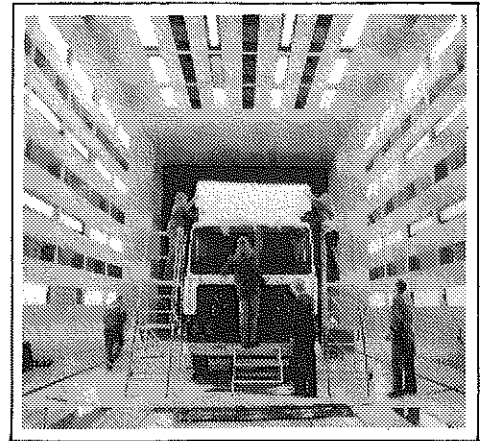
With the complete Air Flow System fitted and at a constant speed of 80 km/h, the fuel saving was 4 litres/100 km.

The amount of fuel to be saved by using the Volvo Air Flow System depends of course on various factors.

The many variables involved which have an influence on fuel consumption are:

Cab shape and frontal area, design of aerodynamic equipment etc, gap distance, and the superstructure/trailer's shape, frontal area and length, road conditions, topography, cruising speed, driving technique, traffic, and finally the weather with variations of rain, snow and wind at various directions and velocities.

Computer simulation of test roads of various types show that outer factors such as topography and cruising speed give variations in the saving available through the Air Flow System of between 2 and 4 litres/100 km.



REDUCTION IN DRAG ( $C_D \times A$ ) USING VOLVO AIR FLOW SYSTEM

