The Volvo F88 and its bogie version, the FB88, cover together gross vehicle weights from 19.5 to 23 tons. As a prime mover, the F88 is ideal for train weights up to maximum international figures (in Sweden, not less than 51.4 tons!). Thanks to a broad selection of chassis and a number of optional wheelbases, the trucks of the Volvo 88-series are adaptable to a very wide range of jobs. Two gearboxes, an eight-speed and a 16 speed, and two final drive options give additional versatility and enable the truck to be custom-built for any particular type of job within the fields of long-distance and heavy haulage.
The power line - the basis of profitable transportation

Volvo trucks have a very well matched power line which means that all major components - engine, gearbox and final drive - are designed to give a winning combination of economy and reliability.

An engine need not be over-dimensioned to be sure of sufficient power when it is needed. With the right type of gearbox and final drive you will always have sufficient tractive effort. And remember, an excessively powerful engine costs more - it weighs more, thereby reducing the payload - and it means quicker tyre wear and, of course, higher fuel consumption.

The TD100A is a direct-injected, in-line, six-cylinder turbo-charged diesel which, in likeness with other Volvo turbo-charged engines, features a low level of noise and clean exhaust gases. This engine is built to give good fuel economy and to simplify servicing and maintenance. Each cylinder has its own individual cylinder head with a steel gasket. The pistons are made of aluminium-alloy and replaceable wet-type cylinders are used. Both the camshaft and crankshaft have seven bearings.

Due to the three-point mounting system of the engine, it is not affected by frame twisting. The air compressor and servo pump are gearwheel driven to ensure functional reliability. Oil, fuel and air are cleaned in paper insert filters of disposable type. A special indicator shows when the air cleaner is blocked. For reliable operation in the hottest of climates, the engine has an oil cooler.

Volvo's well-tested TD100A in-line, six-cylinder turbo-charged diesel powers the P88-series.

The frame is of constant width and has straight sides and a flat top totally void of protruding pieces for easier superstructure work.

There are also two gearboxers to choose from, the right-speed H61 range gearbox or the H6-speed SM6.

There are also two final drive options, a double reduction unit or the single reduction unit with both reductions. Both final drives are of hypoid type and are available with a number of optional ratios to suit the particular type of work.
A perfect match - clutch and gearbox

The Volvo F88 has an immensely durable clutch which is air-assisted for ease of use. All models have a 16.5" single plate clutch with the exception of the F88 with hub reductions, which uses a 14" twin plate clutch.

To be able to use the full potential of engine speed, the gearbox must have a sufficient number of ratios to suit the type of service the truck will be used in. The Volvo F88 can be specified with either the eight-speed R61, or the SR61 which has 16 speeds.

Changes between the two speed ranges are easily accomplished by means of a toggle switch on the gear lever. A range interlock prevents inadvertent changes from High to Low should the speed of the outgoing transmission shaft be too high. Both gearboxes are available with three power take-off options: two rear-fitted, one side-fitted.

The SR61 comprises a four-speed basic gearbox with range section and an overdrive. This combination gives 16 fully synchronised ratios and is ideal for long-distance use. The ratios are well spaced, this enabling the driver to keep up high averages. When using the power take-offs, the SR61 gives two optional speeds.

Two strong rear axle options

In both cases, a two-stage change-down is used in the final drive. For trucks which work under the most demanding operating conditions or with very high train weights, benefits can be gained by using Volvo's bevel epicyclic hub reductions which are built into the driving wheel hubs. Since this reduction is carried out at the wheels themselves, stresses on the half shafts are reduced by 60%.

Both of these final drives incorporate a differential lock for use when the going is soft. It is operated from the dashboard and a warning lamp shows when it is engaged.

A Volvo rear axle in a laboratory test. The amazing strength and toughness of these axles is clearly illustrated by the fact that they can be twisted almost a complete turn without failing.

Like the Volvo engines and gearboxes, the rear axles are also manufactured in our own plants. This means that the same exceptionally high quality control standards apply to the entire power train. It also means that the engine, gearbox, and final drive are designed to match each other. Which is why operational economy, ease of use and reliability can always be taken for granted in a Volvo.

The finishing touches in adapting the power line to the work in hand - as far as starting torque, traction and cruising speed are concerned - are made by the rear axle and final drive. Here again, the Volvo F88 offers a choice: double reduction or single reduction with hub reductions.

The single reduction final drive with hub reduction is available with ratios of 4:95:1, 5:58:1 or 6:14:1.

The double reduction final drive is available with ratios of 4:92:1 or 4:95:1.
A truck must be fully adapted to its main task if maximum pay-off potential is to be reached. Thanks to the wide range of choice concerning the chassis and rear axle, a Volvo F88 can be purpose-built to suit practically any type of operation from the toughest of special transport to fast long-distance service. Add to this the fact that through wide experience gained in all parts of the world, Volvo can give you the best advice available for your particular transport application.
The F88 at work
Safety and comfort aren’t luxuries

A truck driver has a hard job, a job which is made easier in a Volvo. The driver deserves a practical, comfortable and safe cab. In a Volvo he gets one. There's quite a lot of research behind the Volvo cab. Studies involving ergonomics – the science of human engineering – laboratory tests and field trials, as well as noise level tests and much more lie behind the design of the new cab of the Volvo F88.

As far as down-to-earth safety is concerned, the Volvo cab conforms with the very stringent Swedish safety requirements. These call for the cab to withstand the dynamic impact of a 1,000 kg weight dropped from a height of three metres against both the windscreen posts and the rear wall of the cab. After this rough treatment, the roof of the cab must withstand a static load which is the equivalent of twice the service weight of the vehicle, up to a maximum of 15 tons. And the cab must survive these tests without sustaining any serious deformation and without the doors bursting open.

Although the Volvo cab has had an enviable reputation for many years, the new one is even better. It's quieter, the windows are of safety glass and the entry steps are improved. The seats are more comfortable and better sprung. In addition, the driver's seat is fully adjustable for driver height and weight to ensure his sitting comfort.

The heating and ventilation system is dimensioned for the Nordic winter climate. For warmer weather, a roof hatch is standard.

The F88 can be specified with either a short cab or our very comfortable sleeper cab. The sleeper cab has a hydraulic tilting system as standard. Interior trim is attractive yet hard-wearing, a very pleasing shade of brown being used throughout. All materials are fire-resistant. A bottle rack is incorporated by the door panel which on the driver’s side also has a special document holder and room for a first-aid kit. The sleeper cab has very comfortable bunks which are upholstered in the same attractive type of brown cloth as the seats.

The lighting system now has a relay which switches over automatically from dipped headlights to parking lights when the engine is switched off. Other improvements for greater safety and comfort are the large, vibration-free mirrors which on some markets are heated electrically, the two-speed windscreen wipers which incorporate an interval relay and the larger capacity turn indicator relay. For first-time winter starting, the engine has an automatically engaged starting heater.
Progressive springing

A correctly designed suspension means a lot to safety, to the condition of the goods carried and to the ride. Two major design innovations combine to give the F88 a very modern suspension system: The progressive action of the suspension and the use of parabolic springs. Progressive springing means that the active length of the spring alters in step with the load. This means that you get the correct stiffness of suspension whether the truck is running empty or loaded. The parabolic spring is characterised by a tapering off of thickness from the centre. The design gives the same amount of stress in each part of the spring as it is loaded. Parabolic springs are available on F88 prime movers and the FB88 (with a single drive bogie) has parabolic springs as standard on the bogie.

Front parabolic springs combined with double-acting telescopic shock absorbers.

Progressive rear suspension with helper springs.

Parabolic rear suspension with shock absorbers and stabilisers.

Parabolic springs and stabiliser on an F88 bogie. The balance arm of the trailing axle is supported by a steel roller.

Safer braking

The braking system of the F88 gives straight-line stopping every time. Thanks to the long stroke of the brake pedal, braking is smooth and easy. The service brakes have two separate circuits which also feed the trailer brakes when used. The trailer can also be braked by means of a separate hand control on the steering column. The parking brake is of spring type and is released by means of compressed air. A load sensitive valve and an exhaust brake complete the braking system. During the winter, the compressed air tank and brake lines are kept in full operational trim by means of an anti-freeze unit.

Separate trailer brakes
Service brakes, front wheel circuit
Service brakes, driven wheel circuit
Parking brake

Thanks to the very efficient power assistance, the F88 is easily steered in all situations and on all types of surfaces.

The instruments, controls and warning lamps are ideally positioned with regard to frequency of use and in addition to simplifying the driver's work, they also make it safer. The clutch, gear lever and also the range gear and overdrive controls are light and easy to use. The parking brake is mounted on the engine casing. All the control and warning lamps are grouped in front of the driver where they can be seen in an instant. A warning lamp and buzzer tell when a power take-off is engaged. The differential lock also has a warning lamp. Most of the fuses and relays are interchangeable and they are mounted inside the radio console for easy access.

The electrical system is generously dimensioned with plenty of capacity for extra equipment. The powerful headlights incorporate parking lights. The tail light cluster has separate bulbs for the turn indicators and brake lights. Halogen headlights are available as an extra on some markets.
Maintenance and economy

Volvo trucks are built to last. But they do require service which is why they're also designed to facilitate workshop operations. When the cab is tilted, the engine, transmission and entire front end are fully accessible. Powerful torsion springs assist in lifting the cab. The sleeper cab has, as standard, a hydraulic tilt mechanism. Day-to-day inspections do not require the cab to be tilted. Opening a service hatch in the front discloses the oil dipstick and the oil filler pipe. And all the fuses and relays are mounted in the radio console inside the cab.

System Service
We all know that a truck must be economical to be worthwhile. Regular maintenance at a Volvo workshop can reduce running costs and cut standstills to a minimum...
This is what System Service is all about. This project consists of a mileage-based section for regular lubrication, etc., and a time-based section which includes two basic inspections annually. In this way, the road condition of the truck is safeguarded. The basic inspection calls for the checking of no less than 150 points on your Volvo.

Contract Maintenance
A fleet owner can avoid many risks in his trucking operations if he signs for Contract Maintenance when he buys his new Volvo. This system means that the owner pays a fixed service cost at regular intervals and in a way it means that he is almost making the authorised Volvo workshop his own.

Service is not an expense— it's an investment!
Invest in regular maintenance. Fix the small faults before they get bigger and more expensive. If you do so, you can plan your transport schedules weeks and months ahead. With Volvo Service behind you, you can draw up accurate long-term plans for your fleet. But there's much more to win. Unexpected breakdowns will become very rare to say the least. Your vehicles can be utilised more economically. And an improvement in reliability means better goodwill for your company.

Standstills and reliability
Cutting standstills gives a considerable saving. A standstill cost between about £50 and £210 per vehicle and day. With regular preventative service, they will become a thing of the past. Your trucks will be on the road longer, bringing back more profit. The difference between conventional and preventative service can mean a time saving of up to 40 hours per truck and year. And time is money.

Road safety
A truck that's looked after feels safer and is safer. The inbuilt safety of your Volvo will be maintained and looked after as it should be through our regular preventative service schemes.

Trade-in value
A well cared for truck is a valuable truck, a truck which will bring you a higher trade-in price.

Total economy
The name of the game is economy. Spread out over the longer operational life of the truck, costs are considerably lower when preventative service is used. In fact, they can be cut almost in half.

Replacement parts and exchange service
Using Genuine Volvo Parts, your truck will be kept like new. And using our Exchange System, costs can be kept at rock-bottom. These factory reconditioned parts are covered by the same warranties and quality requirements as all Genuine Volvo Parts.
**Accessories**

**Parking heater**
Heats both the engine and the cab. Runs off the engine fuel. Can be pre-set by means of a timer up to 22 hours previously. Thermostatically controlled.

**First-aid kit**
A must in any truck, this first-aid kit means you are always equipped - just in case...

**Radio**
FM/AM, MW/LW or FM/MW/LW, Push button controls. Complete with installation kit and loudspeaker. 24-month warranty.

**Radio/Stereo tape player**
Volvo A stereo player with FM/MW, MW/LW radio or FM/AM/MPX stereo radio. Complete with installation kit and loudspeaker. 24-month warranty.

**Exiva bunk**
Fits above the standard bunk. Folding type. Steel frame with wood base. Thick foam rubber mattress. Cloth upholstery in brown or blue.

**Air conditioning**
Hot and dusty? Fit a Volvo air conditioning system and you can keep cool with the windows closed and dust and exhaust fumes where they should be - on the outside.

**Front Runner seat covers**
Available for both the driving and passenger seats. Three different colours (brown, red, blue). 100% nylon, hard-wearing, machine-washable, fire-resistant.

**Refrigerator box**
Capacity 54 litres. Rinnai of vehicle's 24-volt system. Manufactured of plastic and has stainless steel lid. Separate compressor.

**Loading lamp**
Adjustable height and fully-swinging. Very practical.

**Dirt deflectors**
Let the wind do the work for you. Fitted to the front corners of the cab, these deflectors form a cushion of air which prevents road dirt from covering the side-windows.

**Rubber floor mats**
Tailor-made. Easily fitted for cleaning.

**Mudflaps**

**Compressed air horn**
A very powerful horn which penetrates even the loudest of traffic noise. For safety's sake.

**Back-up warden**
Engaging reverse gear automatically switches on an alarm which warns pedestrians and other road users that the truck is reversing.

**Electrically heated rearview mirrors**
Always clear at mists and frost whatever the weather.
VOLVO F88

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