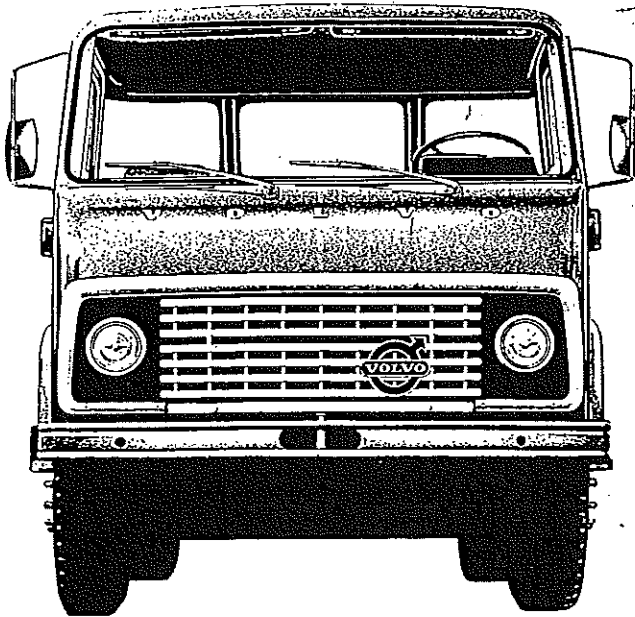


VOLVO F 86



- TRUCK WITH FIXED OR TIPPER PLATFORM WITH OR WITHOUT CRANE for cargoes consisting, for example, of general goods, milk, gravel and other building materials.
- TRUCK WITH SPECIAL SUPERSTRUCTURE for the transportation of, for example, petroleum products, milk and other foodstuffs, fodder, livestock, refuse, furniture.
- TRACTOR UNIT FOR SEMI-TRAILER for medium distance transportation of, for example, petroleum, milk, fodder crates, long or bulky cargoes.
- TRUCK PLUS TRAILER for the transportation of, for example, milk, petroleum, fodder, crates.
- Flexible — forward control — power steering — 43° wheel angle — tight turning circle — fully synchronized, eight-speed gearbox — manual differential lock.
- Safe all-steel cab — split-circuit compressed air brakes — exhaust brake — compressed air operated parking brake — large brake friction area.
- Driving comfort — effective heating and fresh air unit — sound-absorbing cab upholstery — spacious cab — sprung driving seat
- Economical — till cab — simplified servicing — low consumption Turbo Diesel engine — large payload — low running costs — revolution counter — wide range of gear ratios.

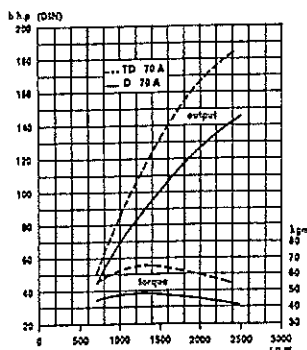
ENGINE

D 70 A engine

Output (DIN)	144 b.h.p. at 2,500 r.p.m.
Output (SAE)	160 b.h.p. at 2,500 r.p.m.
Torque (DIN)	48 kgm (347 lb.ft.) at 1,200 r.p.m.
Torque (SAE)	53 kgm (383 lb.ft.) at 1,200 r.p.m.

TD 70 A engine

Output (DIN)	185 b.h.p. at 2,400 r.p.m.
Output (SAE)	195 b.h.p. at 2,400 r.p.m.
Torque (DIN)	64 kgm (463 lb.ft.) at 1,400 r.p.m.
Torque (SAE)	64 kgm (463 lb.ft.) at 1,400 r.p.m.



DIN output is measured with the engine driving all its auxiliary equipment. This method permits visible exhaust gases. SAE output indicates the maximum engine output without any special demands being made on the exhaust smoke.

General specifications

Bore	104.77 mm (4.125 in.)
Stroke	130 mm (5.12 in.)
Cylinder capacity	6.7 litres (409 cu.in.)
Compression ratio	17:1 (D 70 A)
Compression ratio	15.5:1 (TD 70 A)
Valves	Overhead

Six-cylinder, four-stroke Diesel engine with direct injection and with the combustion chambers mainly located in the piston crowns.

Cylinder block. The cylinder block and crankcase are integrally cast. Stress in the cylinder head bolts resulting from combustion pressure is transmitted through stiffening sections in the walls of the cylinder block directly to the main bearings. The sump is of all-pressed sheet-metal with a stamped sealing flange.

The cylinder heads, each of which covers three cylinders, are interchangeable. The cylinder head gaskets are manufactured from solid steel and are fitted with rubber seal rings and guide sleeves for water and oil channels.

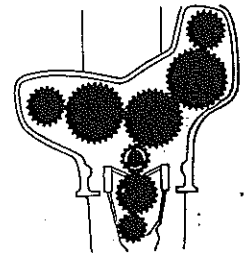
The wet-type cylinder liners are replaceable. Two sealing rings at the lower end of the liners and a third ring on the upper section provide good sealing.

The light-alloy pistons are each fitted with two oil scraper rings and three compression rings, the upper one of which is mounted in an integrally cast ring carrier of iron.

The crankshaft is drop-forged and extra-powerfully dimensioned. It is also statically and dynamically balanced and fitted with a fluid-type vibration damper. The crankshaft is fitted with seven main bearings.

The seven-bearing gear-train driven-camshaft ensures exact valve timing. The valve stem wear caps and valve seats are replaceable.

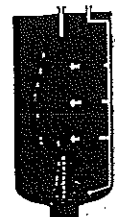
Timing gears. The camshaft, fuel injection pump, oil pump, air compressor and servo-pump are driven by gears from the crankshaft.



All the timing gears are manufactured of high quality steel. The gear drive ensures more reliable running and enables a more compact design.

Lubricating system. All bearings, gudgeon pins, valve mechanism, timing gears and injection pump are pressure lubricated. The oil pump provides excessive lubrication under all operating conditions. The oil system has a capacity of approximately 14 litres (3 imp. gals. = 3 3/4 US gals.).

The lubricating oil is cleaned in an oil strainer before passing through the oil pump and it is then forced through a replaceable full-flow filter of the paper type. A magnetic plug is also fitted.



The full-flow filter cleans the oil effectively under all operating conditions. It is easily changed and simplifies servicing.

Cooling system. A generously dimensioned tubular radiator with a pressure cap ensure effective cooling under all climatic conditions. The fan and coolant pump are driven by V-belts from the crankshaft. The cooler

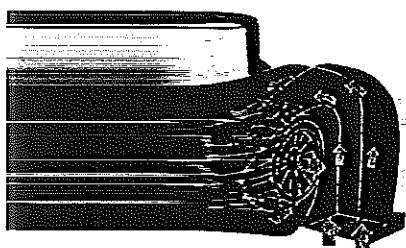
Imp through the cylinder
 the cylinder liners.
 through the calibrated
 der head and then via
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 water pump. This en-
 of cooling. The tem-
 by means of two wax
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 when the filter must

he Volvo Turbo is an
 ressor which supplies
 air. This means that
 the fuel more effec-
 higher output, lower
 and cleaner exhaust



pressor is obtained from
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 advantages: high output,
 clean exhaust gases.

ated on the left-hand
 nd has a capacity of
 gals = 47 US gals). Or
 s (66 Imp. gals = 80

ne-speed recorder, re-
 ined instrument with
 coolant temperature
 air gauge and am-

Control lamps for full headlights, traffic indicators, oil pressure, air pressure in brake system, differential lock, parking brake and power take-off when fitted.

ELECTRICAL EQUIPMENT

Number of batteries	2
Voltage	24 V
Battery capacity	114 Ah
Dynamo	450 W
Starter motor	4 h.p.

Alternative electrical equipment

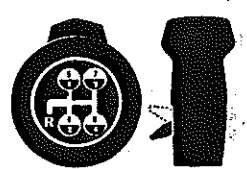
Alternator	980 W
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CLUTCH

Single dry disc	15 in.
Total friction area	1,650 cm ² (255 3/4 sq.in.)
Hydraulic operation with helper spring provides low pedal pressure.	

GEARBOX R 50

An eight-speed, fully synchronized unit with 8th gear as direct. The gearbox has a low-speed range (1-4) and a high-speed range (5-8) both of which include four gears. Change-over between the speed ranges is carried out by means of a toggle switch fitted to the gear lever. This means that the gear lever has only four positions for driving forward and one for reverse.



The R 50 gearbox is easily operated. The speed range change-over switch needs only to be used once for a gear change throughout the complete register. The low-speed range is used only for speeds of up to 20 k.p.h. (12 m.p.h.).

Gear ratios

1st gear	10.18:1
2nd gear	7.02:1
3rd gear	5.03:1
4th gear	3.78:1
5th gear	2.69:1
6th gear	1.86:1
7th gear	1.33:1
8th gear	1.00:1
Reverse	10.03:1

There are power take-off covers on both the right-hand side and the rear end of the gearbox.

Power take-off, rear

Speed	0.48 x engine speed
Torque	50 kgm (360 lb.ft.) (momentary 80 kgm = 580 lb.ft.)
Direction of rotation	Opposite to that of engine

Power take-off, rear, high-speed

Speed	0.85 x engine speed
Torque	25 kgm (180 lb.ft.) (momentary 35 kgm = 253 lb.ft.)
Direction of rotation	Same as that of engine

Power take-off, side

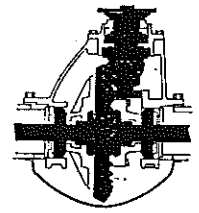
Speed	0.63 x engine speed
Torque	35 kgm (253 lb.ft.) (momentary 35 kgm = 253 lb.ft.)
Direction of rotation	Same as that of engine

The power take-off is compressed air controlled from the driving seat.

FINAL DRIVE

Single reduction of hypoid type. Change-down takes place in a hypoid bevel gear. Large 14 1/2" crown wheel. The pinion is fitted with two support bearings and one pilot bearing. The crown wheel and pinion have helically-cut teeth to provide a large mesh area.

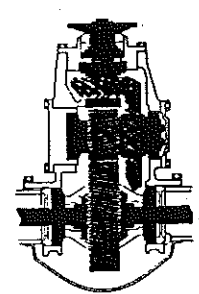
Ratios	4.9:1 or 5.4:1 6.1:1 (only with D 70 A)
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The Volvo Single Reduction is robustly dimensioned and has a capacity for train weights of up to 32 tons.

Double reduction rear axle. Change-down takes place in two stages. First in a hypoid-type gear and then in a cylindrical gear. Large 13" crown wheel. The pinion has two support bearings and a pilot bearing. The cylindrical gear has helically-cut teeth which provide a large mesh area.

Ratio	5.4:1 or 6.1:1
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The Volvo F 88 with Double Reduction has the capacity for high momentary stresses. It is recommended for both high-speed long-distance transportation and for normal building construction work.

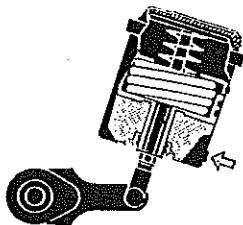
Differential lock. Compressed air operated. Control is by means of a toggle switch on the dashboard. It can be engaged while running. A control lamp lights up when actual engagement has taken place.

BRAKE SYSTEM

Footbrake. Split-circuit compressed air brakes with separate circuits for the rear and front wheels.

Brake system working pressure	7.0–8.0 kg/cm ² (100–114 lb./sq.in.)
Compressor capacity at working pressure	200 or 280 litres/min. (7 or 10 cu.ft./min.)
Brake area, front axle	2,010 cm ² (312 sq.in.)
Brake area, rear axle	2,675 cm ² (415 sq.in.)
Brake area, total	4,685 cm ² (727 sq.in.)

Parking brake. A compressed air controlled spring brake system operating directly on the rear wheel brakes when compressed air is evacuated from the system. The brake control is located on the dashboard.



Application and disengagement of the parking brake is infinitely variable. This simplifies, for example, smooth starting on an incline.

Trailer brakes are connected to the front wheel circuit of the vehicle and are controlled by the footbrake. A manual control makes possible separate braking of the trailer.

Load-sensitive valve. This is fully-automatic and controlled by the setting of the vehicle springs and adapts the braking effect on the rear wheels in accordance with the load carried. An eventual trailer or semi-trailer must also be fitted with this valve in order to avoid "jack-knifing".

Exhaust brake. This is electro-pneumatically operated and is controlled by a foot switch. It almost doubles the braking effect of the engine.

STEERING GEAR

Servo-steering, of the cam and roller type with the servo cylinder operating directly on the steering arm. The servo-pump is gear train driven – an extra safety factor. The steering column is adjustable to different positions.

Turns of steering wheel	approx. 5.6
Wheel angle, inner wheel	43°
Steering wheel diameter	500 mm (20 in.)

RUNNING EQUIPMENT

Steel disc wheels. Dual rear wheels. Spare wheel in spare wheel holder. (Excl. F 86-34).

	Wheels	Tyres
F 86	7.5×20"	11.00–20

Alternative disc wheel equipment

Wheels	Tyres
7.5×20"	10.00–20"
8.0×20"	11.00–20"

Alternative spoke wheel equipment

Wheels	Tyres
7.5×20"	10.00–20"
7.5×20"	11.00–20"
8.0×20"	11.00–20"

The choice of tyre dimension must take into consideration the load-bearing capacity required.

FRAME

The frame and side members are of pressed U-section. The cross-members are riveted to the webs of the side-members.

Frame width	800 mm (31½ in.)
Web height, constant	245 mm (9.6 in.)
Flange width	85 mm (3.3 in.)
Material thickness	6.35 mm (¼ in.)

The side-member flanges are fitted with 6×63 mm (¼×2½ in.) reinforcements.

SPRINGING

Front springs. Semi-elliptical leaf springs.

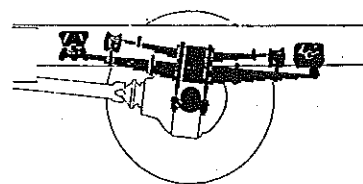
Length	1,380 mm (54¼ in.)
Width	76 mm (3 in.)

Double-acting hydraulic telescopic shock absorbers.

Rear springs. Semi-elliptical leaf springs and helper springs. Double spring leaves wrap round the forward spring pins.

Main springs	
Length	1,500 mm (59 in.)
Width	89 mm (3½ in.)
Helper springs	
Length	1,020 mm (40 in.)
Width	89 mm (3½ in.)

The rear springs can be reinforced with hollow rubber springs. Designation MGF

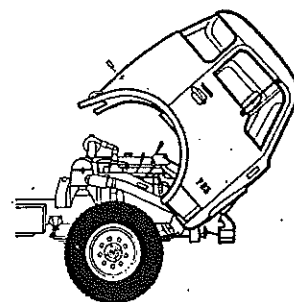


The system provides excellent suspension whether the truck is running at full load, partly loaded or even empty.

CAB

The Volvo cab is a Wellit-insulated, tilt all steel cab for driver and passengers. Thermostatically controlled heating, defroster and fresh air unit.

Windscreen wipers, windscreen washer, two internal sun visors, rearview mirror, and traffic indicators are standard. Low location entry step and courtesy handle on the inside of the doors and on the dashboard facilitate entering and alighting from the cab. The cab is primer painted.



The Volvo cab is all-welded and satisfies the Swedish safety regulations by a wide margin. The doors are fitted with safety locks. The tilt cab simplifies servicing and shortens standstills.

ALTERNATIVE EQUIPMENT

D 70 A engine
Double reduction final drive
Alternative running equipment
300 litre fuel tank
Alternative compressor.
Without exhaust brake Alternator

EXTRA EQUIPMENT

Power take-off
Load sensitive valve
Hollow rubber springs
Time-speed recorder

Weights kg (lb.)	F 86-34	F 86-38	F 86-42	F 86-49
Chassis weight, front axle	3,135 (6,910)	3,145 (6,930)	3,160 (6,960)	3,195 (7,040)
Chassis weight, rear axle	1,855 (4,090)	1,895 (4,170)	1,925 (4,240)	1,955 (4,310)
Chassis weight, total	4,990 (11,000)	5,040 (11,110)	5,085 (11,210)	5,150 (11,350)
Max. front axle pressure	6,000 (13,200)	6,000 (13,200)	6,000 (13,200)	6,000 (13,200)
Max. rear axle pressure	16,000 (35,300)	16,000 (35,300)	16,000 (35,300)	15,700 (35,300)
Max. gross laden weight	11,000 (24,300)	11,000 (24,300)	10,900 (24,000)	10,800 (23,800)
Payload, incl. superstructure	11,000 (24,300)	11,000 (24,300)	11,000 (24,300)	11,000 (24,300)
Max. rear axle pressure (special rear axle)	16,500 (36,400)	16,500 (36,400)	16,500 (36,400)	16,500 (36,400)
Max. gross laden weight (special rear axle)	11,500 (25,300)	11,400 (25,100)	11,400 (25,100)	10,900 (24,000)
Payload, incl. superstructure (special rear axle)				

Max. axle pressure and gross laden weight apply on condition that they are approved by the transport authorities concerned.

Chassis weights include: TD 70 A engine, six disc wheels 7.5x20" with 11.00-20" tyres, tilt cab and water, oil, 175 litre full tank with fuel, tools but not spare wheel or spare wheel holder.

Weight modifications kg (lb)	Front	Rear	Total
D 70 A engine	- 20 (44)	-	- 20 (44)
Power take-off rear	+ 10 (22)	-	+ 10 (22)
Power take-off side	+ 10 (22)	+ 5 (11)	+ 15 (33)
Fuel tank 300 litres with fuel	-	-	+ 125 (276)
Hollow rubber springs	-	+ 30 (66)	+ 30 (66)
Spare wheel with tyre 11.00-20" incl. spare wheel holder	-	-	+ 130 (287)

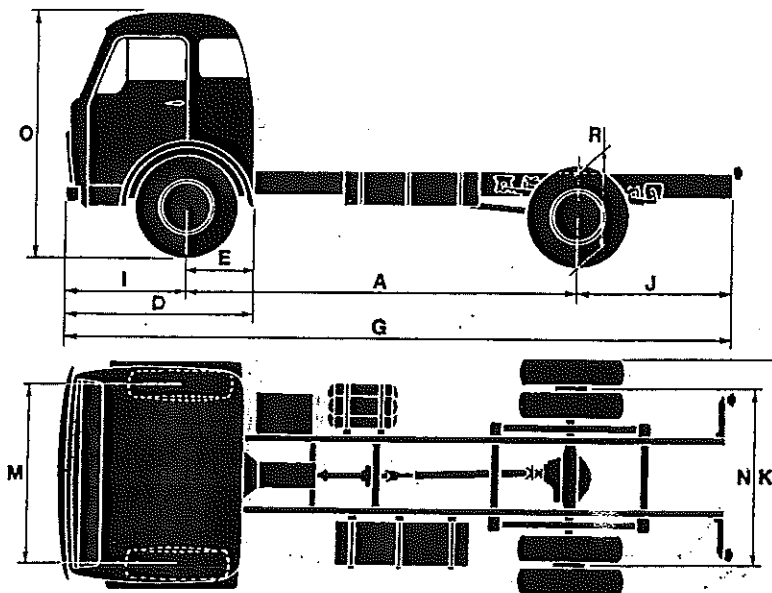
Length measurements mm (in. appr.)	F 86-34	F 86-38	F 86-42	F 86-49
A Wheelbase	3,400 (133 ³ / ₄)	3,800 (150)	4,200 (165 ¹ / ₂)	4,900 (193)
D Front bumper - rear edge of cab	1,910 (75 ¹ / ₄)	1,910 (75 ¹ / ₄)	1,910 (75 ¹ / ₄)	1,910 (75 ¹ / ₄)
E Front axle centre - rear edge of cab	665 (26 ¹ / ₄)	665 (26 ¹ / ₄)	665 (26 ¹ / ₄)	665 (26 ¹ / ₄)
G Overall chassis length	5,995 (236)	6,545 (257 ³ / ₄)	7,455 (311)	8,850 (369)
I Front overhang	1,245 (49)	1,245 (49)	1,245 (49)	1,245 (49)
J Rear overhang	1,350 (53)	1,500 (59)	2,010 (84)	2,705 (113)
Platform length, approx.	3,900 (163)	4,550 (190)	5,200 (217)	6,300 (263)
Turning circle diameter	12,700 (41 ¹ / ₂ ft.)	14,020 (46 ft.)	15,180 (49 ¹ / ₂ ft.)	17,200 (56 ¹ / ₂ ft.)

Height measurement mm (in. appr.)	Tyres	10.00-20"	11.00-20"
O Cab roof - ground*		2,515 (99)	2,540(100)
R Frame - ground*		1,045 (41)	1,070 (42)
R Frame - ground**		940 (37)	955 (38)

* At total chassis weight.
** At max. gross laden weight.

Width measurements, disc wheels mm (in. appr.)	Wheels	7.5x20"	7.5x20"	8.0x20"
	Tyres	10.00-20"	11.00-20"	11.00-20"
Maximum width, front		2,347 (92 ¹ / ₂)	2,347 (92 ¹ / ₂)	2,347 (92 ¹ / ₂)
K Maximum width, rear		2,340 (92)	2,350 (92 ¹ / ₂)	2,402 (94 ¹ / ₂)
M Track, front		1,918 (75 ¹ / ₂)	1,918 (75 ¹ / ₂)	1,897 (74 ¹ / ₂)
N Track, rear		1,740 (68 ¹ / ₂)	1,740 (68 ¹ / ₂)	1,768 (69 ¹ / ₂)

Width measurements, spoke wheels mm (in. appr.)	Wheels	7.5x20"	7.5x20"	8.0x20"
	Tyres	10.00-20"	11.00-20"	11.00-20"
Maximum width, front		2,302 (90 ¹ / ₂)	2,302 (90 ¹ / ₂)	2,302 (90 ¹ / ₂)
K Max. width rear		2,340 (92)	2,350 (92 ¹ / ₂)	2,388 (94)
M Track, front		1,943 (76 ¹ / ₂)	1,943 (76 ¹ / ₂)	1,931 (76)
N Track, rear		1,743 (68 ¹ / ₂)	1,743 (68 ¹ / ₂)	1,754 (69)

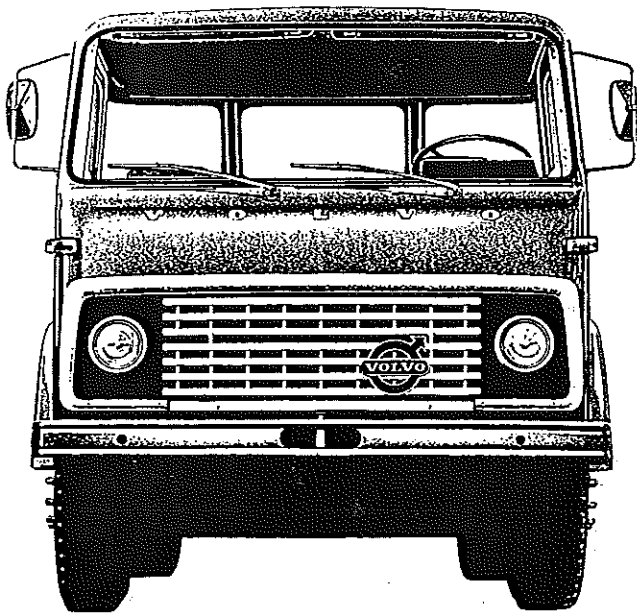


The factory reserves the right to modify design and equipment without previous notification.



AB VOLVO
GÖTEBORG - SWEDEN

VOLVO FB 86



- **TRUCK WITH FIXED OR TIPPER PLATFORM WITH OR WITHOUT CRANE** for cargos consisting, for example, of general goods, milk, gravel and other building materials.
- **TRUCK WITH SPECIAL SUPERSTRUCTURE** for the transportation of, for example, petroleum products, milk and other foodstuffs, fodder, livestock, refuse, furniture.
- **TRACTOR UNIT FOR SEMI-TRAILER** for medium distance transportation of, for example, foodstuffs and agricultural products.
- **TRUCK PLUS TRAILER** for the transportation of, for example, general goods, petroleum and bulk transportation of powders.
- **Flexible** — forward control — power steering — 44° wheel angle — tight turning circle — fully synchronized, eight-speed gearbox — manual differential lock.
- **Safe all-steel cab** — split-circuit compressed air brakes — exhaust brake — compressed air operated parking brake — large brake friction area.
- **Driving comfort** — effective heating and fresh air unit — sound-absorbing cab upholstery, sprung driving seat.
- **Economical** — low consumption Turbo Diesel engine — large payload — low running costs — revolution counter — wide range of gear ratios.

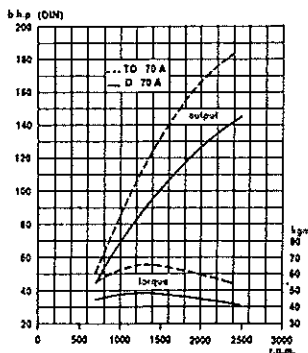
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General specifications

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Stroke	130 mm (5.12 in.)
Cylinder capacity	6.7 litres (409 cu. in.)
Compression ratio	17:1 (D 70 A)
Compression ratio	15.5:1 (TD 70 A)
Valves	Overhead

Six-cylinder, four-stroke Diesel engine with direct injection and with the combustion chambers mainly located in the piston crowns.

Cylinder block. The cylinder block and crankcase are integrally cast. Stress in the cylinder head bolts resulting from combustion pressure is transmitted through stiffening sections in the walls of the cylinder block directly to the main bearings. The sump is of all-pressed sheet-metal with a stamped sealing flange.

The cylinder heads, each of which covers three cylinders, are interchangeable. The cylinder head bolts are manufactured from solid steel and are fitted with rubber seal rings and guiding sleeves for water and oil channels.

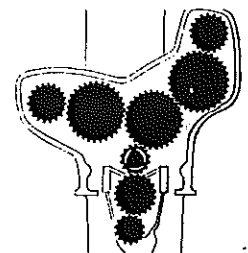
The wet-type cylinder liners are replaceable. Two sealing rings at the lower end of the upper section provide good sealing.

The light-alloy pistons are each fitted with two oil scraper rings and three compression rings, the upper one of which is mounted in an integrally cast ring carrier of iron.

The crankshaft is drop-forged and extra powerfully dimensioned. It is also statically and dynamically balanced and fitted with a fluid-type vibration damper. The crankshaft is fitted with seven main bearings.

The seven-bearing gear-train driven camshaft ensures exact valve timing. The valve stem wear caps and valve seats are replaceable.

Timing gears. The camshaft, fuel injection pump, oil pump, air compressor and servopump are driven by gears from the crankshaft.



All the timing gears are manufactured of high-quality steel. The gear drive ensures more reliable running and enables a more compact design.

Lubricating system. All bearings, gudgeon pins, valve mechanism, timing gears and injection pump are pressure lubricated. The oil pump provides surplus lubrication under all operating conditions. The oil system has a capacity of approximately 14 litres (3 3/4 imp. gals. = 3 3/4 US gals.).

The lubricating oil is cleaned in an oil strainer before passing through the oil pump and it is then forced through a replaceable full-flow filter of the paper type. A magnetic plug is also fitted.



The full-flow filter cleans the oil effectively under all operating conditions. It is easily changed and simplifies servicing.

Cooling system. A generously dimensioned tubular radiator with a pressure cap ensures effective cooling under all climatic conditions. The fan and coolant pump are driven by V-belts from the crankshaft. The coolant is forced from the pump through the cylinder block and round the cylinder

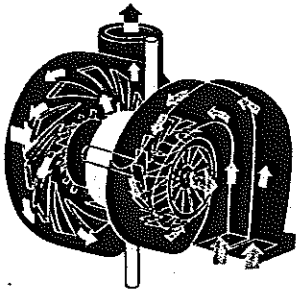
liners. It then passes up through the calibrated openings to the cylinder head and then via the thermostat housing through the radiator and back to the water pump. This ensures an even degree of cooling. The temperature is regulated by means of two wax thermostats. These contribute to rapid engine warmup and an even engine temperature. The cooling system capacity is approximately 27 litres (6 Imp. gals = 7 1/4 US gals.).

Fuel system. The fuel injection pump on the Turbo-engine version is fitted with a centrifugal governor, otherwise a vacuum governor. The feed pump can be hand-primed.

The fuel oil is cleaned in three filters. These consist of a pre-filter at the feed pump, a paper filter and a rod-type filter in each injector. A strainer is also fitted to the fuel tank.

The air cleaner is fitted with a replaceable paper filter. A pressure-drop indicator (on TD 70 only) shows when the filter must be replaced.

Turbo compressor. The Volvo Turbo is an exhaust-driven compressor which supplies the engine with extra air. This means that the engine can burn the fuel more effectively, which results in higher output, lower fuel consumption and cleaner exhaust gases.



Power to drive the compressor is obtained from the energy in the exhaust gases. The Volvo Turbo provides many important advantages: high output, low fuel consumption and clean exhaust gases.

FUEL TANK

The fuel tank is located on the right hand side of the frame and has a capacity of 175 litres (38 1/2 Imp. gals = 47 US gals) or 300 litres (66 Imp. gals = 80 US gals.).

INSTRUMENTATION

Speedometer, revolution counter, combined instrument with fuel, oil pressure, coolant temperature gauge, compressed air gauge and ammeter.

Control lamps for full headlights, traffic indicators, oil pressure, air pressure in brake system, differential lock, parking brake and power take-off when fitted.

ELECTRICAL EQUIPMENT

Number of batteries	2
Voltage	24 V
Battery capacity	114 Ah
Dynamo	450 W
Starter motor	4 h.p.

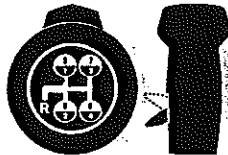
CLUTCH

Single dry disc	15 in.
Total friction area	1,650 cm ² (255 3/4 sq.in.)

Hydraulic operation with helper spring provides low pedal pressure.

GEARBOX R 50

An eight-speed, fully synchronized unit with 8th gear as direct. The gearbox has a low-speed range (1-4) and a high-speed range (5-8) both of which include four gears. Change-over between the speed ranges is carried out by means of a toggle switch fitted to the lever. This means that the gear lever has only four positions for driving and one for reverse.



The R50 gearbox is easily operated. The speed range change-over switch needs only to be used once for a gear change throughout the complete register. The low-speed range is used only for speeds of up to 20 k.p.h. (12 m.p.h.).

Gear ratios

1st gear	10.18:1
2nd gear	7.02:1
3rd gear	5.03:1
4th gear	3.78:1
5th gear	2.69:1
6th gear	1.86:1
7th gear	1.33:1
8th gear	1.00:1
Reverse	8.88:1

There are power take-off covers on both the right-hand side and the rear end of the gearbox.

Power take-off, rear

Speed	0.52 x engine speed
Output	Equal to that of engine
Direction of rotation	Opposite to that of engine

Power take-off, side

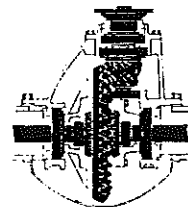
Speed	0.63 x engine speed
Output	75 h.p. at 1,500 r.p.m.
Direction of rotation	Same as that of engine

The power take-off is compressed air controlled from the driving seat.

FINAL DRIVE

Single reduction of hypoid type. Change-down takes place in a hypoid bevel gear. Large 16 1/2" crown wheel. The pinion is fitted with two support bearings and one pilot bearing. The crown wheel and pinion have helically-cut teeth to provide a large mesh area.

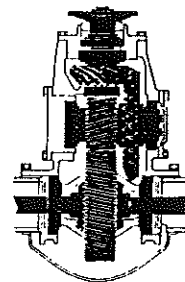
Ratios	4.9:1 or 5.4:1 6.1:1 (only with D 70 A)
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The Volvo single reduction is robustly dimensioned and has a capacity for train weights of up to 32 tons.

OPTIONAL EXTRA
Double reduction rear axle. Change-down takes place in two stages. First in a hypoid-type gear and then in a cylindrical gear. Large 13" crown wheel. The pinion has two support bearings and a pilot bearing. The cylindrical gear has helically-cut teeth which provide a large mesh area.

Ratio	5.4:1 or 6.1:1
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The Volvo F88 with double reduction rear axle has a capacity for train weights of up to 40 tons. It is recommended for both rapid long-distance transportation and for medium heavy building site work.

Differential lock. Compressed air operated. Control is by means of a toggle switch on the dashboard. It can be engaged while running. A control lamp lights up when the switch is on.

BRAKE SYSTEM

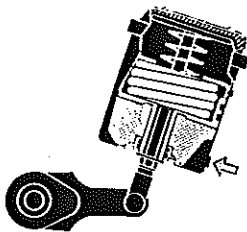
Footbrake. Split-circuit compressed air brakes with separate circuits for the rear and front wheels.

BRAKE SYSTEM

Footbrakes. Split-circuit compressed air brakes with separate circuits for the driving wheels and front wheels plus trailing wheels.

Brake circuit working pressure	6.7–7.7 kg/cm ² (96–110 lb./sq.in.)
Compressor capacity at working pressure	280 litres/min. (10 cu. ft./min.)
Brake area, front axle	2,010 cm ² (312 sq.in.)
Brake area, driving axle	2,675 cm ² (415 sq.in.)
Brake area, trailing axle	2,010 cm ² (312 sq.in.)
Brake area, total	6,695 cm ² (1,039 sq.in.)

Parking brake. A compressed air controlled spring brake system operating directly on the rear wheel brakes when compressed air is evacuated from the system. The brake control is located on the dashboard.



Take up and disengagement of the parking brake is infinitely variable. This simplifies, for example, smooth starting on an incline.

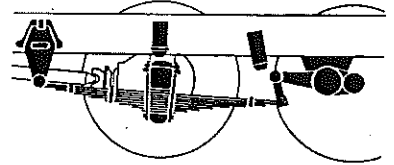
Trailer brakes are connected to the front wheel circuit of the vehicle and are controlled by the footbrake. A manual control makes possible separate braking of the trailer.

Exhaust brake. This is electro-pneumatically operated and is controlled by a foot switch. It almost doubles the braking effect of the engine.

STEERING GEAR

Servo-steering, of the cam and roller type with the servo cylinder operating directly on the steering arm. The servo-pump is gear train driven – an extra safety factor. The steering column is adjustable to different positions.

Turns of steering wheel	approx. 5.6
Wheel angle, inner wheel	43°
Steering wheel diameter	500 mm (20 in.)



The trailing axle is coupled to the driving axle by means of a balance arm which, on starting from standstill, increases the pressure of the driving wheels against the road surface and so provide improved traction.

RUNNING EQUIPMENT

Steel disc wheels. Dual rear wheels. Spare wheel in spare wheel holder. (Excl. FB 86–34).

Wheels	Tyres
7.5×20"	11.00–20"

Alternative disc wheel equipment

Wheels	Tyres
7.5×20"	10.00–20"

The choice of tyre dimension must take into consideration the load-bearing capacity required.

FRAME

The frame and side members are of pressed U-section. The cross-members are riveted to the webs of the side-members.

Frame width	800 mm (3 1/2 in.)
Web height, constant	245 mm (9 1/4 in.)
Flange width	85 mm (3 1/2 in.)
Material thickness	6.35 mm (1/4 in.)

The side-member flanges are fitted with 6×63 mm (1/4×2 1/2 in.) reinforcements. Double frame above bogie unit. Total material thickness 12.7 mm (1/2 in.).

SPRINGING

Front springs. Semi-elliptical leaf springs.

Length	1,380 mm (54 1/4 in.)
Width	76 mm (3 in.)

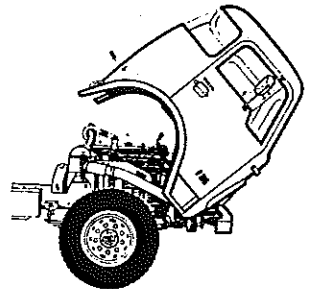
Double-acting hydraulic telescopic shock absorbers.

Rear springs. Semi-elliptical leaf springs which extend to a position forward of the driving axle and have threaded spring pins.

Length	1,650 mm (65 in.)
Width	89 mm (3 1/2 in.)

CAB

The Volvo cab is a Wellite-insulated, tilt all-steel cab for driver and one passenger. Sprung driving seat. Thermostatically controlled heating, defroster and fresh air unit. Windscreen wipers, windscreen washer. Two internal sun visors, rearview mirror and traffic indicators are standard. Low located footstep and courtesy handles on inside of doors and on dashboard facilitate entry and exit. The cab is primer painted.



The Volvo cab is all-welded and satisfies the Swedish safety regulations by a wide margin. The doors are fitted with safety locks. The tilt cab simplifies servicing and shortens workshop standstills.

ALTERNATIVE EQUIPMENT

D 70 A engine
Double reduction
Alternative running equipment
Spring driving seat
Alternative compressor.
300 litre (66 Imp. gal = 80 US gal) fuel tank

EXTRA EQUIPMENT

Power take-off
Time-speed recorder