

V O L V O

VOLVO FM 500 6X4 PULLER

Volvo Trucks. Driving Progress



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The first choice for over-dimensional cargo movement

Safety always remains the prime value pillar

Volvo is synonymous with safety and we have always focused on taking safety one step ahead. That is why the new FM 500 Puller gets slimmer A-pillar, larger windscreen and lower door lines have improved direct visibility by 10%. Also, Tinted windshield helps reduce glare. The new and improved electrically controlled rear view mirrors gives the best views and are easy to adjust. With improved visibility driver is more confident and chances of accidents are minimized. Power windows and central door locking secures the truck. A glass roof hatch is provided which improves cabin aesthetics due to more light coming in, while also acting as an emergency exit. Volvo cabs have been subjected to the toughest tests including the Swedish crash test.

Puller application is one which requires precise control and high safety standards. This is why the new FM 500 Puller gets Electronic braking system which gives all the more confidence while driving with heavy loads. Downhill cruise control maintains a set speed when the loaded truck is going down the slopes using auxiliary brakes (Volvo Engine Brake). This also reduce brake wear and improve service life. In a revolutionary move, Stretch brakes have been provided which prevents jack-knifing if the trailer is also provided with electronic braking system, by applying the brakes on the trailer before the tractor.



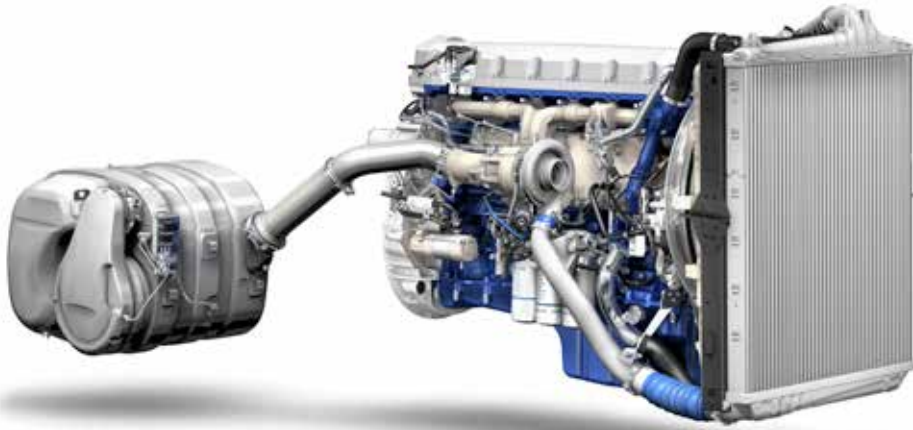
Most Comfortable cab

Drivers are the most important part of the trucking industry and their comfort is directly proportional to the productivity. The new FM500 cab has been designed keeping this in mind. With 1000 ltr more cabin space, climate control with enhanced thermal insulation, 2dB quieter cab, excellent internal and external storage space, comfortable bunk bed, soft closure of doors and better vibration arresting on air suspended cab... drivers need this comfort when they spend months together on the road.



More efficient

The cabin aerodynamics are improved to give better fuel economy. Volvo has been improving their Euro 6 technology since 2013. The latest engine management system, better gear shift programming over and above subtle design improvements in the engine like smoother cylinder liners, oil scraper ring, turbo impeller with inverse design, new low viscous VDS 5 oil with longer change intervals will help save some more liters of fuel in the long run without compromising on performance.



EURO 6

Convenience redefined

The new Volvo FM500 has the state of the art I-Shift 14-speed automated manual transmission which chooses the best gear in the interest of power and fuel economy. 12 forward and 4 reverse gears are provided along with 2 Ultra low crawler gears. The ergonomically designed new gear control lever fits snugly in palm. Switch between drive modes like economy, standard, performance, off-road and heavy duty with a push of a button. With I-Shift your driver has one less activity to focus on.

Add to this cruise control and downhill cruise control to maintain speed.

Pre-trip check diagnoses all the vital parameters of the truck and alerts if something needs your attention with pop up message on the driver information display. If not, just turn the ignition and keep rolling.



Ultra-modern displays & controls

The Driver Information Display on the new cabin is a fully digital 12" unit which is dynamic to suit the preferences of the driver. Choose between the classic analogue or digital view using buttons on the steering wheel. All vital statistics of the truck, alerts, driver timers, alerts etc... become part of the display. What's more – connect your phone to the truck and drive safe with hands-free comfort.



The new Traction Control unit gathers everything to do with Traction Control in one place. This gives you a better overview, making it easier to handle demanding situations while carrying heavy cargo both on and off-road. The more you turn the knob, the more traction you get. You also get visual feedback of the traction status in the instrument display.



Productivity at its best

With the 500 hp engine and I-Shift with ULC (Ultra Low Crawler gear), the truck can easily pull Gross combination weight (GCW) of 155T with 36T Gross vehicle weight (GVW including ballast weight) and Gross combination weight (GCW) of 195T with 46T Gross vehicle weight (GVW including ballast weight).



Technical specifications

ENGINE

Six-cylinder, in-line direct injection diesel engine

Overhead camshaft with four valves per cylinder

Electronically regulated common rail fuel injection with unit injectors

Heavy duty turbocharger and intercooler

Engine management system with driving information and diagnosis

Exhaust after treatment by Selective Catalytic Reduction (SCR) technology with additional AdBlue tank

Exhaust Gas Recirculation (EGR)

Displacement 12.8 litre

Bore x Stroke 131 x 158 mm

Compression Ratio 18.0 : 1

Max. power 500hp @ 1530-1800 rpm

Max. Torque 2500 Nm @ 980-1270 rpm

Economy Speed Range 950 - 1400 rpm

Emissions* BS VI/Euro 6

Max. Engine Brake Power 503 hp (VEB+) @ 2300 rpm

*Emission requirements conform to ECE/EEC regulations and AIS 137 as notified by MoRTH vide GSR 889(E) dated 16.09.2016.w.e.f 01 April, 2020.

CLUTCH

Power assisted push-type single plate friction disc

Plate diameter 430 mm

GEARBOX

I-Shift with Ultra Low Crawler (ULC) gears (Automated range / splitter gearbox)

Heavy duty transmission oil cooler with additional radiator

Enhanced software for Heavy Duty (HD) high gross combination weights

Economy, Standard, Performance, Off-road, Heavy duty drive modes

No. of gears 14 forward + 6 reverse

FRONT AXLE

Heavy duty steerable front axle with high ground clearance

Capacity 9000 kg

REAR AXLE

Drive tandem hub reduction axle with four planetary gears

Differential locks - inter wheels and inter-axles, Differential Lock Control (DLC)

Traction Control System (TCS)

Ratio 6.18:1

Capacity (Tandem Axle) 33000 kg

SUSPENSION

Front

Parabolic suspension with S-shaped leaf geometry

Double action shock absorbers and stabilizers

No. of leaves 3

Rear

Heavy duty bogie with conventional multi leaf springs

Rubber journalled V-stays, reaction rods, stabilizer and two shock absorbers

No. of leaves 11

WHEELS AND TYRES

Tyre size 12.00R20, Radial

Wheel rim size 8.5" x 20"

Total number of wheels fitted 10

1no. spare wheel rim and tyre mounted on the front side of the ballast body

CHASSIS FRAME

'C' channel section side members made of high strength steel

Cross Section 300 x 90x 8 mm

Full length inner reinforcement

Inner reinforcement thickness 5 mm

STEERING

Hydraulic power steering with fixed displacement pump

Tilt and telescopic adjustable steering wheel

Steering wheel diameter 450 mm

FUEL AND ADBLUE TANK

Steel fuel tank mounted on the left and right side of the chassis

Right fuel tank capacity 275 liters

Left fuel tank capacity 405 liters

AdBlue Tank Capacity 64 litres

EXHAUST SYSTEM

Horizontal muffler, vertical exhaust outlet on right-hand side

BRAKES

Electronic Brake System (EBS)

Dual-line air brake system with ABS

Hill start aid

Z-cam drum brakes with automatic adjustments

Automatic low speed trailer brake activation (stretch brake) to avoid jack-knifing

Electronic parking brake activation

Spring type parking brake chambers on front and both rear axles

PNEUMATICS

Gear driven, double-cylinder reciprocating air compressor

Max. compressor capacity 1100 l/min

Electronically controlled Air Production Modulator (APM)

Total air tank capacity 101 litres

ELECTRICAL

System voltage 24V

Volvo enhanced flooded batteries (2 nos.) with battery reconditioner

Battery voltage 12 V

Battery capacity 170 Ah

Alternator capacity 110 A

TELEMATICS

Volvo Connect on-board telematics collects and transmits all the vital statistics and performance parameters of the truck

Performance and health of the truck can be monitored from the convenience of your home

CAB

New FM sleeper cabin fully suspended by four coil springs and shock absorbers

Crash-tested steel welded structure

Accommodation 1 driver + 1 co-driver

Cabin tilt angle 70°

Interiors

12" fully dynamic digital instrument cluster with Home & Focus views

Slimmer A-pillar, larger windscreen & lower door lines enhances direct visibility

Ergonomically designed new dashboard with easy-access stalks, switches & controls

Electrical manually controlled climate unit

Central door locking and power windows

Additional road speed limiter (ARSL) switch on dashboard for limiting vehicle speed while pulling loads

Air suspended driver's seat with adjustment of fore-aft, height, backrest, lumbar support, shoulder, seat cushion extension, seat tilt

Cushioned foldable co-driver seat

Cruise control + Downhill cruise control

Red safety belt

Exteriors

Aerodynamically designed with smooth surfaces and rounded corners at the front

Two LED warning lights on the cab front

Distinct V-shape daytime running light (DRL)

New heavy duty headlamp unit with higher illumination main beam

Electrically operated roof hatch as emergency exit

TOOLS AND ACCESSORIES

Standard tool kit, first-aid kit, two warning triangles, bulb and fuse kit

20 ton hydraulic jack

* When coupled to suitable hydraulic axle trailer and subject to special approval from MoRTH.

BALLAST BODY

All steel welded construction body made of high yield strength

Sub-frame as per Volvo Body builder Instructions (VBI)

Concrete blocks provided as ballast weight

Tie rods to tighten the concrete blocks together

Winch type mechanism for mounting and demounting the spare wheel tyre

Platform for standing at the rear of the ballast body

Ladder on the rear left side, front right side and rear of the ballast body for ease of climbing

Tool box at the rear

TOW HOOK

Front and Rear tow hooks fitted on heavy-duty end cross member

Usable draw bar eye diameter

VEHICLE DIMENSIONS, mm – AS PER CMVR

Wheel base	4085
Overall length (excluding front and rear tow hooks)	7420
Overall width	2534
Overall height	3938
Turning circle diameter (Solo truck)	15900
Minimum ground clearance	295

VEHICLE WEIGHTS

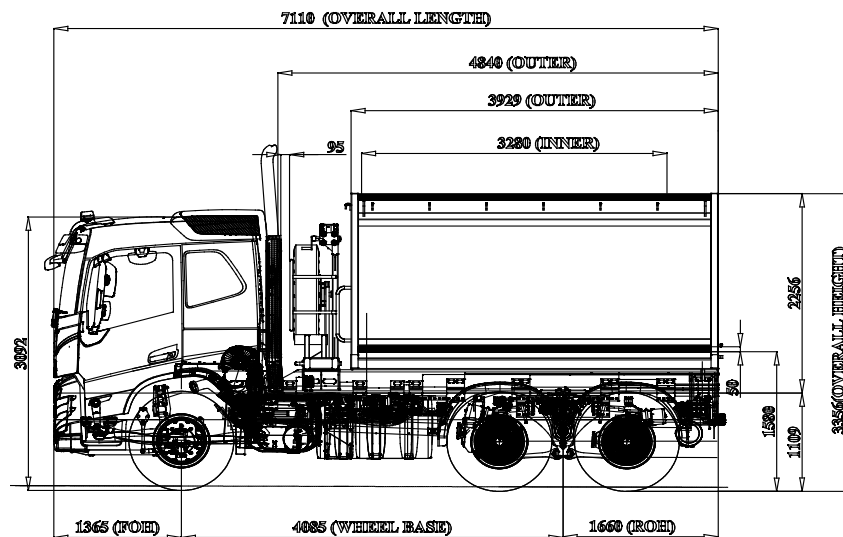
Laden weight, kg (as per CMVR limits)

Front axle	7000
Rear axles (Bogie)	28500
Gross vehicle weight	35500
Gross Combination Weight*	155000

PERFORMANCE DATA

Technical Gross Combination Weight*	195000 kg
Max. speed (Limited)**	25 kmph

** Limited by additional road speed limiter (ARSL) switch in dashboard, while pulling loads



Caution: Do not drill or weld on the frame. Note: Volvo has a policy of continual product improvement. The specifications / images shown here are indicative and are subject to change without prior notice. Performance parameters are subject to stability of the vehicle.

V O L V O

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