

VOLVO N SERIES



VOLVO
A SAFE INVESTMENT.

Volvo leads the world in high efficiency diesel technology. Now intercooling extends that lead still further.

There are two basic choices to achieve diesel power and torque.

One is to build a huge multi-cylinder engine and depend on sheer size to do the job.

This tends to be wasteful of fuel and places a very heavy load over the front axle.

The alternative is the Volvo way.

Develop a weight-saving motor, apply high technology and achieve performance through efficiency.

POWER

This tends to be economical with fuel and places a much lighter load on the steering.

Volvo's choice of a high efficiency inline six brings many advantages in real life trucking.

The six is a compact balanced unit with good power to weight ratio.

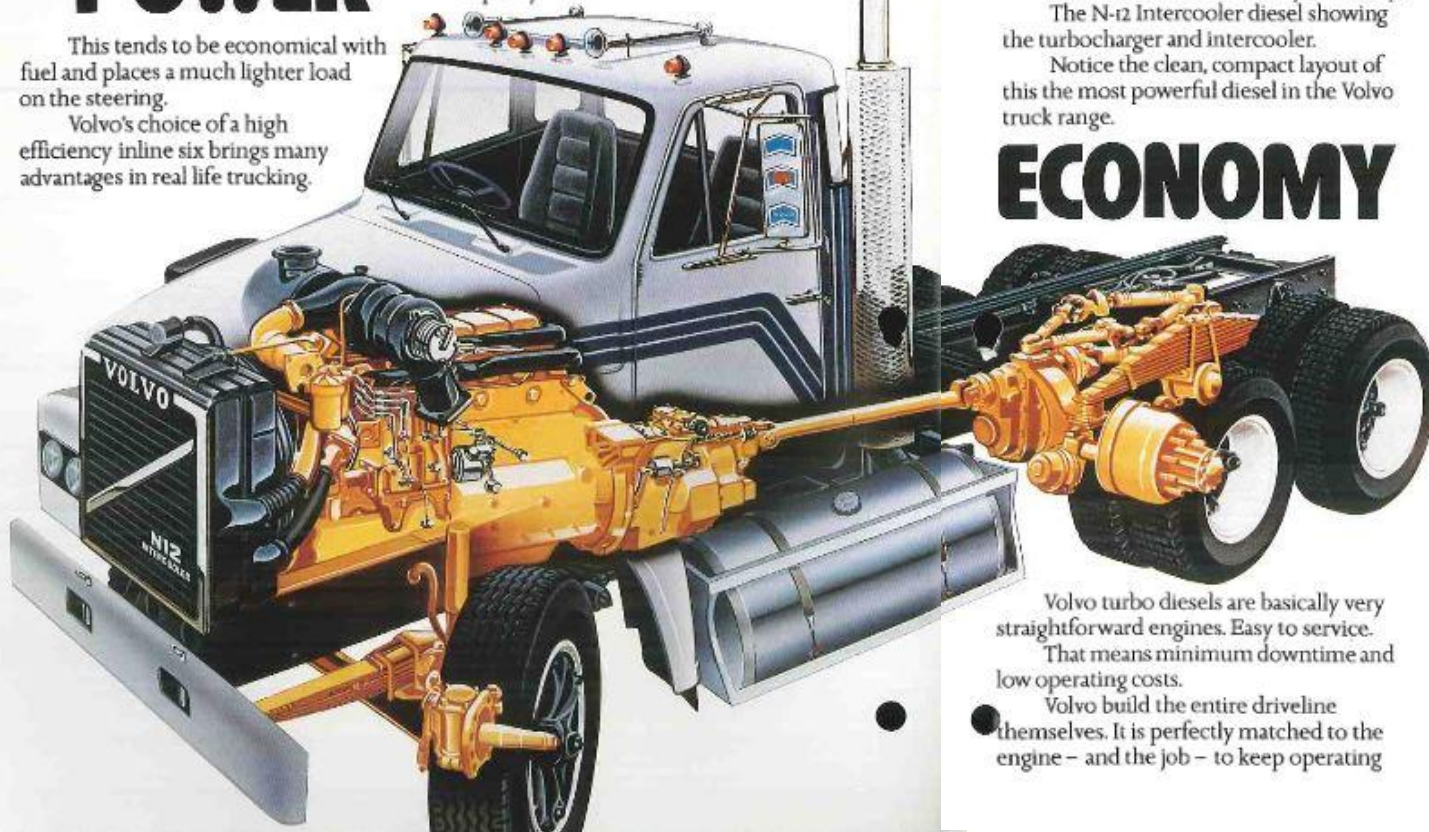
With fewer moving parts, friction and reciprocating power losses are minimised.

Volvo N-Series.

One of the most notable characteristics of Volvo turbocharged power units is their ability to deliver power and torque over a wide rev. range.

They also run very quietly with smoke-free exhaust.

The N-10 is powered by an inline six cylinder turbocharged diesel of 10 litres capacity.



This unit delivers outstanding economy on light throttle openings where most trucking is done.

The two N-12 power units are similar in-line sixes of 12 litres capacity.

Both are turbocharged but the Intercooled unit has an intercooler between the turbocharger and the intake manifold.

This intercooler lowers intake air temperatures by as much as 100°C, resulting in more power transmitted to the rear wheels.

The weight savings pay off, too.

Weight saved on the front axle becomes extra payload within legal limits.

High power. Wide torque. Excellent

fuel economy and weight saving, too.

That's what Volvo means by efficiency.

The N-12 Intercooler diesel showing the turbocharger and intercooler.

Notice the clean, compact layout of this the most powerful diesel in the Volvo truck range.

ECONOMY

Volvo turbo diesels are basically very straightforward engines. Easy to service.

That means minimum downtime and low operating costs.

Volvo build the entire driveline themselves. It is perfectly matched to the engine - and the job - to keep operating

at peak efficiency and deliver maximum fuel economy.

The Gearbox.

Volvo gearboxes are designed with two principal objectives in mind.

They must offer the right choice of ratios to ensure the engine can always operate within its most efficient rev. range.

They must also be easy and straightforward in use to minimise the possibility of driver error.



The N-Series can be fitted with a choice of gearboxes. They are all close ratio, fully synchronised gearboxes which eliminate the anxiety and effort of double declutching.

The N-10/12 Series feature the SR-62, and the R-62 which comprises an all synchro, four-speed gearbox with high and low range, the SR-62 with the additional splitter on every gear.

The choice of SR-62 or R-62 will depend on individual application but they are the key to efficient economical operation of the N-10 models.

All this translates into lively performance on the road.

This is revealed in easy cruising on the level, better pulling on hills, fewer gearshifts and more in reserve under full load; all achieved with outstanding economy.

The N-12 Intercooler Series feature the latest Volvo SR-70 gearbox.

This remarkable unit not only improves performance and economy, it also makes life easier for the driver.

For durability all gears are induction hardened and driveshafts are heat treated.

Volvo's world-wide reputation for ruggedness, durability and dependability stems from the policy of making every component stronger than it needs to be.



COMFORT

A safe, commanding place for the man at the wheel.

Volvo research has proven that a relaxed, comfortable driver is a better driver.

This cab is the result of that research. The seating position, relationship of seat to wheel, the layout of the controls are all arranged to lessen fatigue and keep the driver alert on the job.

The Volvo Seat.

The driver's seat has a wide range of adjustment for height, backrest, angle and distance from wheel.

Spring mounting allows adjustment for driver's weight.

Electrical Distribution Centre.

All relays and circuit breakers are easily accessible under the glovebox - a great benefit on a wet night.

Safety Testing.

Swedish safety tests are the toughest of all and the Volvo cab takes them in its stride.

Two tonnes swung against a screen pillar, fifteen tonnes sitting on the roof leave the cab structure intact and the occupants safe.

Outstanding Visibility.

With that short, sloping bonnet the N-Cab provides excellent close-up visibility for manoeuvring in close quarters.

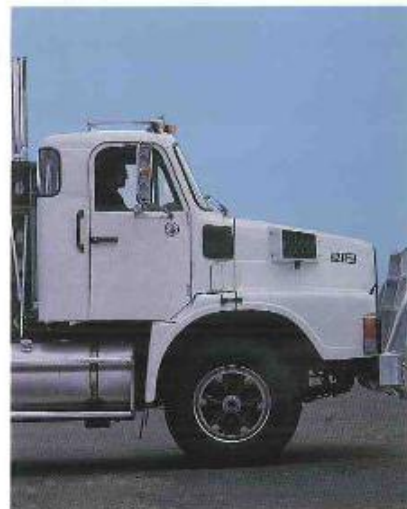
The cab also happens to be very good aerodynamically - a factor which pays off in fuel savings at high speeds.

Sprung Mounting.

The rear of the cab is supported on two resilient coil springs with shock absorbers.

These not only protect the cab and its occupants from road shocks transmitted through the frame, they also protect the cab structure from twisting forces as the chassis frame flexes during rough going.

Not only does this make the cab a comfortable place to work, it reduces driver fatigue levels.



The basic SR-70 gearbox has three forward speeds.

A switch on the gear lever operates the range box to double this to six speeds.

A splitter switch also on the gear lever doubles this again to twelve speeds.

For extreme conditions two super low speeds bring the total to fourteen.



This choice of gears ensures that the engine is always operating in its most effective range.

The SR-70 offers a spread from very high tractive effort for starting, to direct drive for high-speed cruising.



The gear lever showing how the SR-70 achieves 14 speeds with just three forward and one reverse positions.

The Power Assisted Clutch.

The air assisted Twin Plate clutch lightens the pedal pressure and assists in smooth engagement and reduced shock loading on the drive train.

STRENGTH

Volvo N-Series chassis are engineered for hard work and plenty of it.

Every component is built with massive strength in reserve.

The Frame.

The chassis frame is formed of cold rolled U-profile steel rails with increased thickness flanges.

This design permits great strength with the flexibility so necessary to maintain traction on uneven surfaces.

Main frame rails taper at the rear to simplify trailer coupling.

The Final Drive.

The Volvo final drive bogie features twin hypoid axes with single reduction hubs.

Optional for N-12 intercooler is hub reduction for extra heavy work.

For extreme conditions, two-stage diff locks provide maximum tractive effort to both sides of each driven axle.

These axles are suspended by progressive multi-leaf springs which permit long travel and exceptional articulation for traction in rough and off-road operation.



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