



Volvo Trucks. Driving Progress

VOLVO VNX SERIES

SETTING THE STANDARD FOR HEAVY HAUL



Heavy haul's heavy hitter

The Volvo VNX is built specifically for the needs of heavy-haul trucking operations. Available with up to 605 hp and 2,050 lb-ft of torque, the VNX provides the power and performance demanded for heavy-haul applications such as logging, machinery transport, and long combination vehicles.

On the outside, it's as tough as they come. Approved Gross Combination Weight Ratings (GCWR) span from 125,000 to 160,000 pounds. Ratings of up to 225,000 pounds are available with application approval and appropriate components. Optional steer axles, lift axles, tridem drive axles, and longer fifth-wheel slides help you meet a diverse range of weight distribution requirements.

Inside, the VNX is built for comfort. Seating has been ergonomically optimized, while the dashboard and steering wheel bring controls and information efficiently to the driver. And our latest VNX sleepers are loaded with amenities to make your drivers feel at home on the road.





Rock solid

From end-to-end, every feature of the VNX is built to stand up to any heavy-haul job you throw at it. Improvements are easy to see throughout the VNX including the bumper, axles, suspensions, braking, powertrain, and more. Every detail has been examined to increase durability and ensure you've got the tools you need to move extreme loads.



Bumpers

The rugged VNX bumper features a heavy-duty tow pin and center tow frame that equalizes forces to the chassis. The tow beam is constructed of remarkably strong, 100 ksi steel. The bumper fascia is constructed from .25" thick, high-strength alloy aluminum for reduced weight and is supported by welded internal bracing. The fascia features a tough, black polyester powder paint finish, while all steel components are covered in urethane paint for extreme corrosion resistance.



Front axles

Volvo steer axles are specifically designed for the demands of heavy-duty applications with better control, easier handling, and less maintenance. The 16,000-lb. to 20,000-lb. capacity axles are the perfect choice for the heavy-duty Volvo VNX. The Volvo steer axle features a heavy-duty king pin with a tapered design. The Volvo axle provides improved handling, control, and stability, as well as enhanced bearing clearance. The smooth, firm ride is maintained even in tight wheel cuts. A newly designed steering arm allows up to a 40-degree wheel cut with wide-based tires.



Rear axles.

Our drive axles are designed for heavy-duty hauling or on/off-road applications with ratings up to 55,000 lbs. The drive axle is ideally suited for heavy line haul, logging, mining, and construction. A wide selection of axle ratios allows you to tailor the drive axle to specific load and terrain requirements.

Rear suspension

Our premium heavy-duty suspension is rated up to 52,000 lbs. The suspension design increases durability, reliability, and handling characteristics.

Brakes

Volvo Heavy Duty Air Disc Brakes offer safety and performance in demanding long-haul and vocational applications. A twin piston caliper design gives the VNX more controlled braking and a shorter stopping distance. Volvo Heavy Duty Air Disc Brakes utilize a 17" rotor with high level corrosion resistant calipers, increasing reliability, while working in conjunction with a friction couple (pad/rotor) longevity.

Ready to roll

Extreme loads can't move on just any tire setup. The VNX easily accommodates wide based steer tires for higher weight payloads. These aid in both grip and traction, without digging into the ground. An optimized casing strengthens the footprint while improving resistance to irregular wear and enhancing retreadability. The VNX also features specifically designed front fender extensions to allow for larger tires, while not creating additional tire spray or sacrificing maneuverability.

Learn more: USA: [VNX.volvotrucks.us](https://www.volvotrucks.us) | CAN: [VNX.volvotrucks.ca](https://www.volvotrucks.ca)

Wide tires

Tires bear a huge burden in heavy-haul applications. The VNX is engineered to handle rugged tires that must stand up to extreme loads on punishing roads and construction jobsites. The VNX can accommodate front axle tire sizes up to 445 mm.

Durable framerrails

VNX framerrails (side members) are constructed of 760 MPA heat-treated alloy steel with a yield strength of 120,000 psi. Several combinations of frame rail height, thickness, and liners are available to meet a wide variety of hauling requirements.

Greater clearance

The VNX chassis is designed with a high frame to offer the maximum clearance for off-road operations.

Premium fifth wheel

Fifth wheels on the VNX feature a load capacity of 55,000 lbs. or greater and pull capacity of 150,000 lbs. or greater, ideal for trailer applications from low-boys to b-trains and long combination vehicles.





VNX 300 daycab

The VNX 300 provides muscle and maneuverability for local heavy-haul applications. Custom frame lengths are available with the option of 6x4 tandem, 8x4 tandem, or 8x6 tri-drive axle configuration.



VNX 400 flat-roof

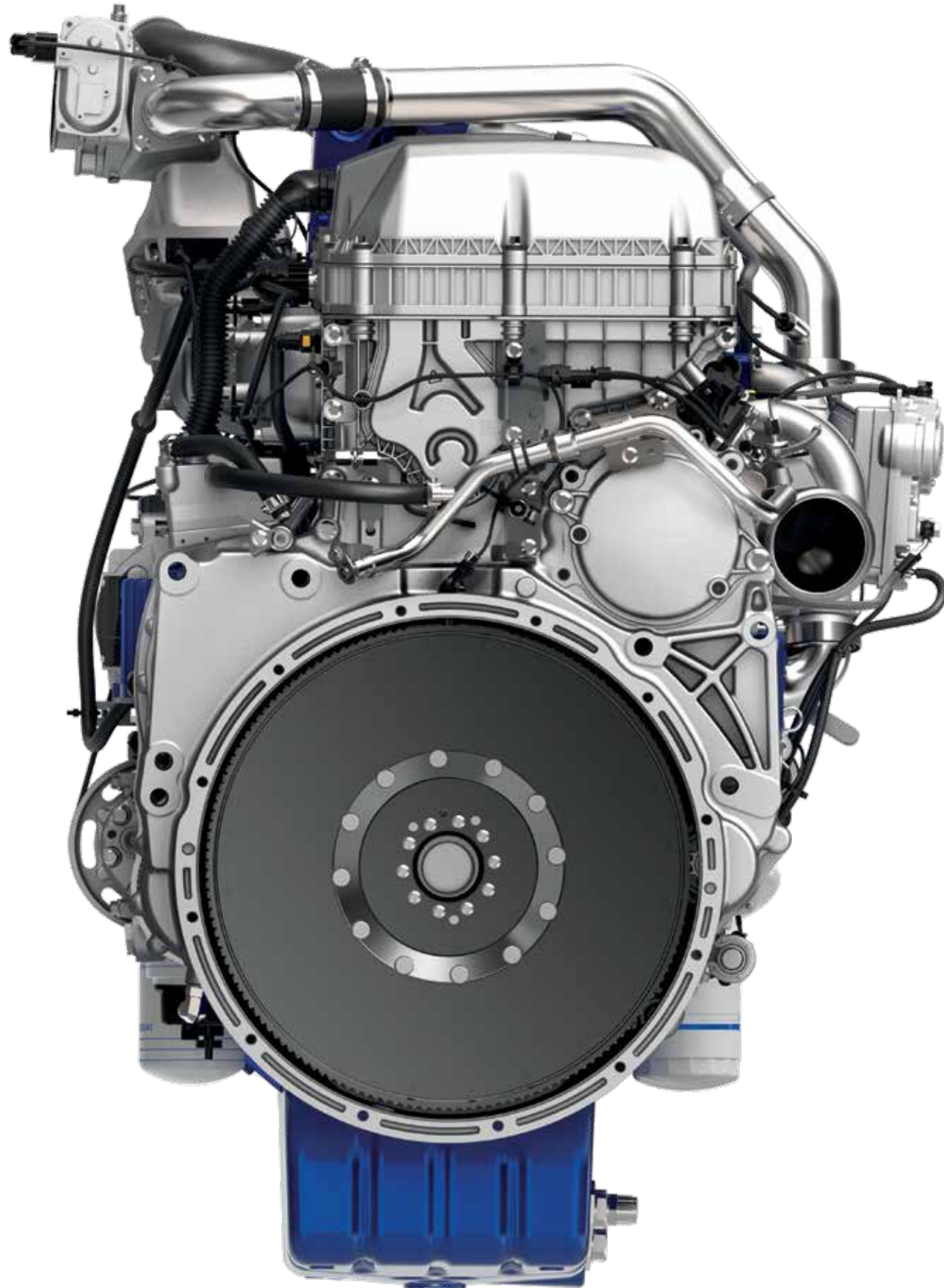
Our 42" sleeper is designed for maximum flexibility on regional heavy-haul runs. The bunk area features a premium, 36-inch Volvo mattress to make occasional overnights on the road more comfortable.



VNX 740 mid-roof

The spacious 70" mid-roof sleeper features all of Volvo's latest interior improvements, including our full-sized, reclining mattress. Combined with our high-efficiency, high-torque powertrain options, the VNX 740 is the perfect tool for long-distance heavy haul.

Rugged runs in the family



Never compromise

The performance and reliability of Volvo Power has been proven through billions of miles driven on jobsites and highways around the globe. Volvo's engine architecture provides a solid, reliable foundation that keeps trucks on the road, producing revenue.

For the oversize, overlength, and overweight loads that are so common with heavy-haul jobs, we've selected a 13-liter beast that delivers power and efficiency for your application.

Volvo D13 500 hp, 1850 lb-ft

Volvo's family of engines builds on a foundation of proven, mature architecture leveraging innovative hardware to maximize efficiency. Our ultra-reliable D13 delivers the power and torque needed to move large payloads with ease, even on steep grades.

Dynamic duo

The D13 is designed to pair with our innovative I-Shift with Crawler Gears. This rugged, automated manual transmission features upgraded engaging sleeves, clutch durability, and torsional dampening to withstand the rigors of heavy payloads. Together D13 and I-Shift keep fuel costs down, slow driveline wear, reduce noise, extend powertrain life, and lower maintenance costs.

Powerful and precise engine braking

The intelligent Volvo Engine Brake (VEB) is an enhanced engine braking system that gives drivers precise control over engine braking, and saves the truck's brakes for when they're needed most. The result is phenomenal retarding horsepower at low rpm, where the engine spends most of its time and where braking is needed most.



Performance meets profitability

Heavy hauls require brute force and sharp wits. You'll need power to get the load moving and fuel efficiency to make a profit doing it. At Volvo, fuel efficiency is a vital part of our commitment to your business and the planet we all share. That's why we're constantly challenging ourselves to find better ways to make even large loads more fuel-efficient. We believe that fuel efficiency is more than a single feature; it's a combination of customized solutions working together in perfect harmony. The result is fuel efficiency custom-built to help you cut operating costs, whatever the load.



Common-rail fuel injection
The unique design of Volvo's common-rail fuel system delivers multiple benefits. Finer control allows quicker, more accurate fuel injection for improved fuel efficiency, while a clean installation improves reliability and dramatically reduces engine noise.



One-box aftertreatment
Volvo's "one-box" exhaust aftertreatment system offers smaller system packaging and reduces weight by 17 pounds compared to two-piece systems. The one-box configuration saves frame rail space, provides better thermal encasing of exhaust energy, and improves muffler efficiency. The use of Copper Zeolite (Cu-Z) catalyst coatings improves both low-temperature NOx conversion and long-term system robustness. Diesel Exhaust Fluid (DEF) allows the engine to use less EGR and maintain higher oxygen levels for better combustion.



Wave piston design
Improvements in surface finishing of the piston skirt area significantly reduce parasitic losses from friction between the piston and the cylinder bore, benefitting both power output and fuel efficiency. Our patented wave design on the face of the piston also increases cylinder efficiency by optimizing flame propagation toward the center of the cylinder for an ultra-clean burn.

Power to spare

Cummins is a valued partner in developing engines that deliver everything from better fuel economy to improved reliability and durability. Every critical component—including the power cylinder, camshaft, turbo, and fuel system—has been scrutinized, modified, upgraded, and improved.

The result is the Cummins X15 Performance Series Engine, featuring enhancements that improve air handling for faster throttle response plus even stronger braking power at lower rpm. Together these improvements make the X15 Performance Series Cummins' best on-highway engine.

Cummins X15 Performance Series 505-605 hp, 1850-2050 lb-ft

The X15 Performance Series upholds Cummins' long tradition of innovation and dependability. It features Cummins' powerful engine brake with up to 600 bhp and the improved VGT turbocharger with an actuator that's more than four times stronger than previous versions.

Single-module aftertreatment

Cummins' single-module aftertreatment is designed to be up to 60% smaller and 40% lighter than preceding Cummins systems. The compact size enables better heat management and retention for improved fuel economy, while the single-pass exhaust flow design delivers low back pressure. The system achieves a more efficient atomization of urea and minimized urea deposits, requiring fewer regeneration events.

Fuel system components

The extreme pressure injection system (XPI) is one example of Cummins' commitment to innovation. The XPI system delivers superior performance, regardless of engine rpm. Multiple injection events per cycle improve fuel efficiency and enable smoother, quieter operation. Steel plungers and diamond-like coated roller tappets make this the toughest XPI fuel system to date.



Make the shift to low-speed startability

Heavy loads often require steep-grade startability and low-speed maneuverability before they reach the highway. The I-Shift with Crawler Gears is the answer for maximum Gross Combined Weight (GCW) loads. The crawler option adds either one or two gears to the I-Shift, a low gear and ultra-low gear, for low-speed control.

Once rolling, I-Shift still makes the most fuel-efficient decisions possible for your heavy load. The I-Shift with Crawler Gears' weight capacity is among the industry's highest for automated manual transmissions. Volvo's proprietary powertrain software optimizes shifting for high GCW applications, allowing shifting to occur at higher revs and enabling drivers to control downshifts.



Makes heavy haul more fuel efficient

Our newest I-Shift makes every load more productive, using intelligent electronics to continuously monitor grade, speed, weight, and engine load, shifting when necessary or holding a gear—whichever saves more fuel. So regardless of experience, training, or application, I-Shift helps every driver become more fuel efficient.



Eaton Fuller Advantage

The Cummins X15 Performance Series engine is paired with Eaton's Ultrashift-Plus or Eaton's manual transmission. Eaton transmissions feature precision lubrication technology which reduces oil churning losses and eliminates the need for a transmission cooler.



Brains, brawn, and value

I-Shift with Crawler Gears has a 1,900 lb-ft. torque rating. It includes upgraded hardware and software, including a new countershaft brake for improved performance and smoother shifting. And the electronic control unit can handle any load and any road, shifting perfectly every time.



Design changes save time and money

I-Shift's transmission cooler optimizes fluid temperature in cold and warm climates, improving fuel efficiency even on heavy-haul loads. Connections throughout the transmission are also upgraded for faster maintenance stops.

Day after day, year after year

When payloads are extreme, smooth and accurate shifts are most critical. Whether running at tare weight or maximum GCW, Volvo's I-Shift optimizes gear selection to maximize performance and minimize fuel consumption, allowing the driver to remain focused on the surroundings.

I-Shift's close integration with the Volvo powertrain ensures that shifts are made smoothly, at the ideal engine speed, reducing much of the drivetrain and chassis wear typically associated with heavy-haul applications.



Output torque

Every VNX comes standard with I-Shift with Crawler Gears and our highest available output torque rating. This increased torque improves startability which provides advantages for takeoff on soft terrain, steep grades, and with heavy loads. Increased torque also helps the vehicle accelerate faster, make easier upshifts, and improve grade climbing with heavy loads.



Heavy-haul software

Our heavy-haul software package offers features specialized for extreme loads, specifically Heavy Duty (HD) mode. HD mode optimizes clutch timing and shifting strategy for loads more than 135,000 lbs. In HD mode, I-Shift remembers the weight of the load even after the truck has been turned off.



I-See® with Mapping

Volvo's enhanced I-See® predictive cruise can enhance fuel savings even for heavy haul, thanks to the addition of on-board mapping technology. The self-learning system conserves fuel by looking at the topography ahead and selecting the optimal gear and speed for the upcoming hills and valleys.



Not just workspace, a space that works

The dashboard on the VNX has been optimized to reduce distraction by displaying the critical information a driver needs at a quick glance and by grouping frequently used controls within easy reach.

A configurable, five-inch color driver information display with improved graphics works with steering wheel-mounted controls providing key operating information, as well as the ability to choose your preferred diagnostic data.

A dash-top tray with multiple USB and 12V connections provides a safe, convenient home for a driver's many gadgets, which can also be linked to the optional in-dash infotainment system.

Always in view, the instrument cluster's clean, symmetrical layout and diffused, light-green backlighting makes it easy to read, reducing eyestrain and fatigue.



Configurable LCD Driver Information Display

At the heart of the new and improved instrument cluster is a color LCD display. A full five inches wide, it can be configured to provide trip information, performance data, and a wide range of vehicle diagnostics.



Additional control cluster

Volvo integrates a wide selection of standard switches and gauges in every VNX. But because each application is unique, we've conveniently allocated space on the dash for you to customize an additional control cluster for your specific loads.



To improve your sleep, we improved our sleeper

The VNX sleeper area was designed to offer the driver a calm, restful space for their hours off the road. The VNX lineup now includes a full 70" sleeper option, providing an efficient, yet spacious living area. Volvo is proud to offer the first integrated, reclining bunk in a sleeper. Fully adjustable, it's like putting your favorite easy chair in the cab.

The bunks are broader and more stable, featuring pocketed spring mattresses surrounded by an extra layer of foam. Cabinets taper at the rear for a balanced space between storage and the bunk. Even the cupholders were upgraded by making them modular so they can be adjusted to the most convenient position.

Volvo has long been known for comfort, but one step inside this sleeper and you'll see that it's the finest living environment we've ever produced.



At your fingertips

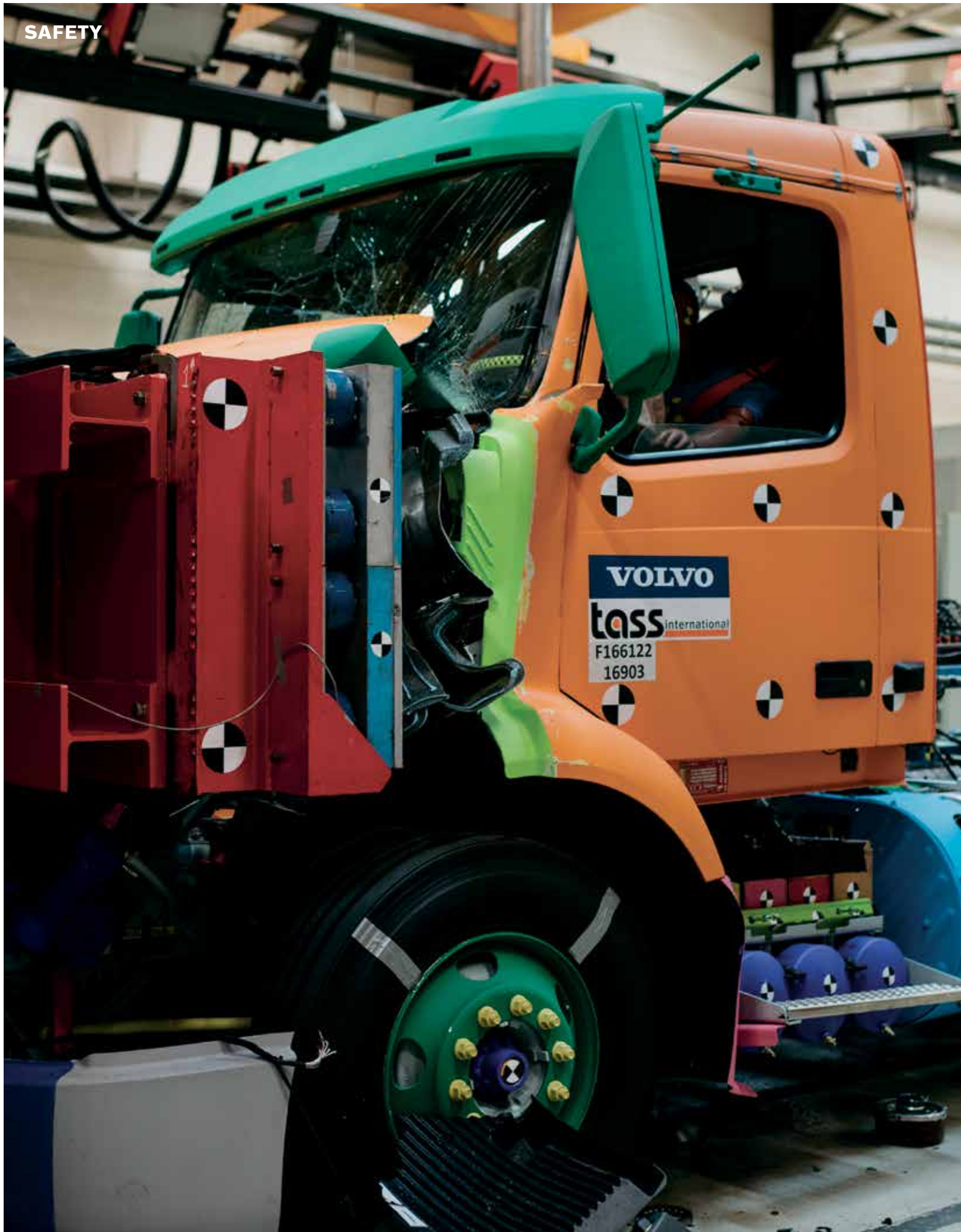
The sleeper control panel can be used to lock the doors, adjust bunk heating and cooling, and set audio levels. An available adjacent desk top swivels off the back wall for meals or laptop use on the bunk. Need assistance? Just press the "panic" button to call attention to your vehicle.



Industry leading

Softer, more consistent LED lighting creates a more peaceful environment and keeps power consumption low. When it's time to rest, integrated window shades block light with one simple motion. The new double-sided, 100% blackout curtain slides easily into place, while ambient lighting for the footwell allows night movement without an overhead light.





Volvo is safety

Volvo stays on the cutting edge of safety technology, ensuring that our trucks are the safest on the road. Built to exceed the demanding Swedish Cab Safety Test, our high-strength steel (HSS) cabs have the industry's highest strength-to-weight ratio, protecting the driver by absorbing as much crash energy as possible.

Volvo is the only Class 8 manufacturer to make a driver's side airbag standard equipment in every truck. For added rollover protection, Volvo offers the Rolltek® seat, combining seat belt pre-tensioners, automatic seat lowering to increase survival space, and an integral side airbag that deploys for head and neck protection.

Volvo combines advanced engineering with active and passive safety systems, exactly what you'd expect from the inventors of the three-point safety belt.



Volvo Active Driver Assist

Our next generation collision avoidance system integrates radar and camera capabilities with a variety of on-board safety features. Optional on VNX models, our industry-leading Volvo Active Driver Assist helps drivers maintain a safe following distance and can even bring the vehicle to a complete stop in emergency braking situations.



Signature headlights

To improve visibility and reduce maintenance, Volvo employs LED bulbs for all exterior lighting. All models feature LED high/low beam headlights, as well as LED turn, marker, and parking lamps. The premium headlamp also features our signature LED daytime running light.



Volvo Enhanced Stability Technology (VEST)

By continually monitoring operating parameters, VEST detects imminent loss of control, jackknife, or rollover events. The system automatically reduces engine torque and selectively applies braking to help the driver keep the truck on course.

With you every minute, every day

Remote Diagnostics can help avoid unexpected downtime with 24/7 monitoring of your Volvo engine, I-Shift, and aftertreatment. Standard in every Volvo-powered truck, Remote Diagnostics offers a range of unique benefits, including enhanced proactive diagnostics, detailed analysis of critical fault codes for repair planning, immediate communication if actions are required, and streamlined service procedures. It's a powerful service that reduces average diagnostic times by 70% and average repair times by 22%.

With a dedicated team of professionals available around the clock at Volvo's world-class Uptime Center in Greensboro, NC, Volvo goes beyond diagnostic technology to deliver actionable solutions.



The Volvo Uptime Center

Real people. Real solutions. Real fast. The Volvo Uptime Center offers around-the-clock assistance anywhere in the United States and Canada. Within minutes, your driver is connected to a member of Volvo Action Service, a team of highly trained uptime experts who can quickly manage service, schedule repairs, and tackle any other issue that happens on the road.



Updates on the fly

Volvo's new Remote Programming feature means you'll no longer have to take your vehicle out of service to perform certain software and parameter updates. Drivers simply pull over, connect to the Volvo Uptime Center, and the upgrade is completed over the air in a matter of minutes.



ASIST service management platform

ASIST is a simple-to-use, web-based tool that lets you monitor vehicle status, receive electronic estimates, approve repairs, issue purchase orders, and communicate directly with your dealer—regardless of your truck's location.



Premium Maintenance Plan

For best results, plan ahead. Preventive maintenance plans improve vehicle uptime, increase productivity, and provide peace of mind by making sure all required maintenance is done efficiently and done right. Choose from a full menu of services and get access to Genuine Volvo Parts, warranty adjustments, service programs, and performance updates at pre-planned maintenance intervals.



Volvo Protection Plans

The road can be unpredictable. Always know you're covered. Take the worry and stress out of unforeseen repairs and effectively manage costs over the life of your truck with an extended warranty through a Volvo Protection Plan. We offer a variety of plans covering the engine or chassis that can be customized to your needs—you choose the length and extent of coverage that best suits your specific application.





No matter where, we're there

Our world-class dealer network means your trucks are never far from the quality care and maintenance you expect when you buy a Volvo truck. With more than 400 dealers and thousands of service locations across North America, Volvo Trucks Uptime Services help you through every step of a service event and make sure your trucks stay where they belong—on the road.

Repairs are done fast and accurately by highly trained Volvo specialists. Our parts-expediting team locates the parts you need quickly—making sure they are there when you need them.

Your time means money. Volvo Trucks Uptime Services are here to save you both.



Certified Uptime Dealers

Certified Uptime Dealers expedite critical repairs. A technician can immediately diagnose the truck. If the repairs require less than four hours of service time, the truck is fast-tracked with the goal of having it back on the road within 24 hours.

SPECIFICATIONS



	<input type="checkbox"/> VNX 300	<input type="checkbox"/> VNX 400	<input type="checkbox"/> VNX 740
	Daycab designed to provide outstanding performance for shorter heavy-haul deliveries.	Flat-roof sleeper designed for longer hauls requiring overnight rest to maintain hours of service compliance.	Spacious midroof sleeper designed for hauls requiring multiple overnight stays.
	Local/Regional Heavy Haul Low-Bed, Oilfield, Gravel Train Length-Sensitive	Regional Heavy Haul LCV Doubles/Triples HOS Compliant	Regional/National Heavy Haul Machinery Transport, Specialized Carriers Team
	Daycab	42" Sleeper	70" Sleeper
	61"	61.5"	75.2" Between seats, 80.7" Rear of sleeper
	83.5" Door to door	83.5" Door to door with 75"x36" mattress	83.5" Door to door with 81"x39" mattress
	3	3	3
	6x4, 8x4, 8x6 Tridem	6x4, 8x4, 8x6 Tridem	6x4, 8x4, 8x6 Tridem
	60,600-88,000 lbs.	60,600-88,000 lbs.	60,600-94,000 lbs.
	125,000-160,000 lbs.*	125,000-160,000 lbs.*	125,000-160,000 lbs.*
	16,000-20,000 lbs./ 46,000-55,000 lbs.*	16,000-20,000 lbs./ 46,000-55,000 lbs.*	16,000-20,000 lbs./ 46,000-55,000 lbs.*
	Volvo Parabolic Leaf Spring/ Hendrickson Primaxx	Volvo Parabolic Leaf Spring/ Neway ADZ	Volvo Parabolic Leaf Spring/ Neway ADZ
	13,000-20,000 lbs. Lift axle	13,000-20,000 lbs. Lift Axle	13,000-20,000 lbs. Lift Axle

* Heavier weights available with application approval. Please check with your Volvo Trucks dealer.

	<input type="checkbox"/> VOLVO D13	<input type="checkbox"/> CUMMINS X-15 PERFORMANCE SERIES
Ratings:	500 hp / 1,850 lb-ft.	505-605 hp / 1,850-2,050 lb-ft.
Base Engine Configuration	4 cycle / Inline Six	4 cycle / Inline Six
Emissions	SCR Selective Catalytic Reduction	SCR Selective Catalytic Reduction
Aspiration	Sliding Nozzle Variable Geometry Turbocharger	Sliding Nozzle Variable Geometry Turbocharger
Cam / Valve Configuration	SOHC / 4 Valves per Cylinder	SOHC / 4 Valves per Cylinder
Cylinder Head	One Piece Rigid Deck Cylinder	One Piece Rigid Deck Cylinder
Injection System	Common-Rail	Common-Rail
Maximum Fuel Injection Pressure, psi (bar)	35,000 (2,400)	35,000 (2,400)
Rating Uprateability	Software Only, Throughout Range	Software Only, Throughout Efficiency Series Range (400-500) hp
Displacement, cu. in. (L)	780 (12.8)	912 (14.9)
Compression Ratio	17:1	19.6:1
Bore & Stroke, in. (mm)	5.16 x 6.22 (131 x 158)	5.29 x 6.65 (137 x 169)
Cylinder Spacing, in. (mm)	6.61 (168)	6.61 (168)
Full Dress Dry Weight, lb. (kg)	2,605 (1,182)	N/A
Fuel and Lubrication:		
Fuel Specification	Ultra Low Sulfur Diesel, 15 ppm	Ultra Low Sulfur Diesel, 15 ppm
Fuel Filters	Primary plus Secondary	Primary plus Secondary
Total Lube Oil Capacity, qts. (L)	38 (36)	55.9 (52.9)
Oil Filtration	Two Full Flow, One Bypass	One Full Flow
Oil Drain Interval, Normal Service, miles (km)	60,000 (96,561)*	50,000 (80,000)
Oil Specification	Volvo VDS-4.5, SAE 10W-30	CK-4
FLOCS Oil Drain Kit	Optional	Optional
Engine Equipment:		
Air Compressor, CFM	Two Cylinder, 31.8	Single Cylinder, 18.7
Retarder	Volvo Engine Brake (VEB)	Cummins Engine Brake
Engine Brake Rating at 2200 rpm	500 hp @ 2,200 rpm	527 hp @ 2,100 rpm
Engine Brake Rating at 1500 rpm	350 hp @ 1,500 rpm	473 hp @ 1,500 rpm
Engine Brake Weight, lbs. (kg)	25 (12)	15 (7)
PTO Port for Live Rear PTO Pump or Shaft	Optional	Optional Flywheel Housing available
Preheater, Electrical	Optional	Optional Ether Injection

* Volvo branded VDS4.5 oil and > 6mpg.

SPECIFICATIONS



	<input type="checkbox"/> I-SHIFT FOR SEVERE DUTY I-SHIFT WITH CRAWLER GEARS	<input type="checkbox"/> EATON ULTRASHIFT-PLUS EATON MANUAL
Description	Automated Manual Transmission	Manual and Automated Manual Transmission
Dry Weight w/ clutch and oil cooler (lbs.)	720 or 805	541 to 978
Max Torque Capacity (ft-lb) / (NM)	1,900 (2,600)	2,050 (2,779)
Transmission Housing Body	Aluminum	Aluminum/Cast Iron
Max Highway Weight (lbs)	225,000*	140,000*
Software based upgrades available	Yes	Yes
Overall gear ratios	14.94 to 41.08	14.80 to 19.72
Forward Gears	12, 13, or 14	13 or 18
Reverse Gears	2 to 6	2 to 4

* Requires application approval for higher GCW's





VOLVO

Volvo Trucks

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Del. Cuajimalpa Ciudad de Mexico
CP05340

Some vehicles shown with optional equipment.

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