

STANDARD ENGINE WARRANTY CERTIFICATE (EPA 17 AND NEWER)



Volvo Group North America LLC, d/b/a Volvo Trucks North America, ("Volvo Trucks") warrants certain individual components of each new Volvo D11, D13, and D16 EPA 17 and newer emission engine in a new Volvo truck to be free from defects in material and workmanship under normal use and service up to the periods specified, provided all Volvo Trucks maintenance and inspection requirements are followed. See your local authorized Volvo Trucks dealer for recommended maintenance and inspection procedures. All warranty periods are calculated from the date in service of the vehicle. All coverage is 100% for parts and labor subject to the qualifications, limitations, and exclusions as noted.

LIMITATIONS AND EXCLUSIONS TO THIS WARRANTY APPEAR ON THIS CERTIFICATE.
THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.

This warranty applies to only new Volvo D11, D13, and D16 engines meeting EPA 17 and newer emission requirements in new Volvo trucks operated in the United States and Canada.

Standard Volvo Engine Components Coverage: 24 months or 250,000 miles (402 336 km), whichever occurs first, unless otherwise noted.

Major Components Coverage: 60 months or 500,000 miles (804 672 km), whichever occurs first.

USE OF IMPROPER OR UNAPPROVED FUEL OR ENGINE OIL WILL VOID THE ENGINE AND AFTERTREATMENT SYSTEM (DIESEL PARTICULATE FILTER) WARRANTIES. EPA 17 EMISSION VOLVO ENGINES REQUIRE THE USE OF VOLVO SPECIFICATION VDS 4.5 HIGH PERFORMANCE DIESEL ENGINE OIL AND ULTRA LOW SULFUR DIESEL (ULSD) FUEL.

USE OF FLUIDS OTHER THAN API CERTIFIED DIESEL EXHAUST FLUID (DEF) WILL COMPROMISE AFTERTREATMENT SYSTEM PERFORMANCE, INCREASE EMISSIONS, AND MAY IMPACT THIS TRUCK'S PRODUCT WARRANTIES.

SEE FOLLOWING TABLE FOR SPECIFIC COVERAGES:

Covered Standard Components List: 24 Months or 250,000 Miles (402 336 km)	Qualifications and Limitations
Air Compressor	Includes: Sprocket and Mounting Bolts
Bearings	All internally lubricated bearings and bushings only.
Camshaft, Caps, and Bolts	Failures resulting from the valve and injector adjustments not being maintained properly are <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> covered.
Connecting Rods, Caps, and Bolts	
Coolant Duct Cover	
Crankcase Ventilation Assembly	
Crankshaft	
Crankshaft Hub	
Cylinder Block	Includes: Casting, Main Caps, and Bolts
Cylinder Block Heater	
Cylinder Head	Includes: Assembly, Casting, Bolts, Plugs, and Sleeves
Diesel Particulate Filter Assembly (DPF) / Diesel Oxidation Catalyst (DOC) / Selective Catalytic Reduction (SCR)	Includes: Aftertreatment Hydrocarbon Injector (AHI), Aftertreatment Wiring Harness, Aftertreatment Control Module, Diffuser Pipe (AHI Mounting), Fuel Lines to AHI Injector, AHI Shutoff Valve, AHI Fuel Pressure Sensor, Pre-Catalyst Temperature Sensor, Post-Catalyst Temperature Sensor, Downstream DPF Temperature Sensor, Differential Pressure Sensor, Particulate Matter (PM) Sensor, SCR Assembly, DEF Pump Assembly (Pump Reverting Valve, Pump Pressure Sensor), DEF Injector, DEF Tank Heating Control Valve, NOx (SCR Inlet and Outlet) Sensor
EGR (Exhaust Gas Recirculation) Components	All components including Clamps, Control Valve, Cooler, Fittings, Gaskets, Mixer, Pipes, and EGR Wiring Harness. Excludes: EGR Cooler Vibration Damper which is a maintenance item.
Electrical EA Harness Supplied with Engine	From EECU to Sensors and Injectors and Actuators
Engine Electronic Control Unit (EECU)	
Engine Brake Mechanism (VEB)	Factory Installed Only. Includes: VEB Control Valve and VEB Rocker Arms Turbo Compound (TC) Engine: Closed Loop Butterfly (CLB)

Continued on Page 2...

Covered Standard Engine Components List: 24 Months or 250,000 Miles (402 336 km)	Qualifications and Limitations
Exhaust Manifold	Includes: Casting, Joint Seals, Rings, and Wraps
Fan Belt Tensioner Assembly and Bracket	Excludes: Fan Belt
Flywheel	Includes: Housing and Ring Gear
Fuel Filter Housing	Excludes: Filters
Fuel Injection System	Includes: Injectors and Common Rail Assembly (Electronic Fuel Pressure Regulator and Pressure Sensor)
Fuel Transfer Pump	
Gaskets, Seals, O Rings, and Silicon Sealant	
Gears	All internally lubricated gears only (Timing and Idler Gears)
Hoses and Lines Supplied with Engine	Fluid carrying. Engine to engine mounted
Idler Pulleys	
Intake Manifold and Throttle Assembly	
Ladder Frame	
Oil Cooler	Engine Oil Cooler Only
Oil Fill Tube and Cap	
Oil Filter Housing	Excludes: Oil Filters
Oil Pan	
Oil Pump	
Piston Assembly	Includes: Cooler Nozzles, Liners, Pistons, and Rings
Pneumatic Control System	TC Engine: Air valve unit, buffer valve unit, and check valve
Power Steering Pump	
Pre-Heater	Factory Installed Only. Includes: Preheat Relay, Terminals, and Power Cables
PTO Drive / REPTO (Rear Engine Mounted PTO Drive)	Factory Installed Only. Excludes all Pumps or Driven Gears
Rocker Arm Assembly and Shafts	Includes: VEB Rockers and non-VEB Rockers. Failures resulting from the Valve and Injector Adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Sensors (On Engine)	Includes: Coolant Temperature, Crankcase Pressure, Crankshaft (Engine Timing), EGR Temperature and Pressure, Engine Oil Level and Temperature, Engine Oil Pressure, Engine Position (Camshaft), Fuel Pressure and Temperature, Intake Boost Pressure and Temperature, Inlet Manifold Air (Temperature and Pressure)
Starter Motor	
Thermostat (Coolant)	Includes: Thermostat Side Cover
Timing Gear Cover and Mounting Plate	
Towing	Towing/Road Service on warrantable engine failures is limited to 24 months or 250,000 miles (402 336 km), whichever occurs first, and to a single tow per incident to the nearest authorized Volvo Trucks service center. Charges in excess of \$1,000.00 are not covered unless Volvo Action Service is contacted and approves additional amounts prior to tow.
Turbocharger Assembly	Includes: VGT Actuator Module Turbo Compounding (TC) Assembly, if included
Valve Assembly	Includes: Guides, Keepers, Rotators, Seats, Springs, and Valves. Failures resulting from the Valve Adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Valve Cover	
Valve Yokes (Bridge) and Pins	Failures resulting from the Valve Adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Vibration Dampers and Bolts	
Water Pump Assembly	
Covered Major Engine Components List: 60 Months or 500,000 Miles (804 672 km)	Qualifications and Limitations
Camshaft, Caps, and Bolts	Failures resulting from the valve & injector adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Connecting Rods, Caps, and Bolts	
Crankshaft Forging	
Cylinder Block Casting, Main Caps, and Bolts	
Cylinder Head Casting and Bolts	
Exhaust Manifold Casting	
Flywheel Housing	
Gears	All internally lubricated gears only (Timing and Idler Gears)
Intake Manifold Housing	
Ladder Frame	
Thermostat Housing	
Timing Gear Cover and Mounting Plate	

Continued on Page 3...

THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.

LIMITATIONS - Volvo Trucks North America's obligation is limited to, at its sole option, repair or replacement of parts which are acknowledged by it to be defective. The defective parts or assemblies replaced shall become the property of Volvo Trucks North America. Warranty repairs performed by an authorized Volvo trucks dealer in accordance with the terms of the warranty set forth herein are free of charge. Warranty consideration can only be given if the deficiency is brought to the attention of an authorized Volvo Trucks dealer upon discovery and the vehicle must be made available, in a timely fashion during the coverage period, for repair.

EXCLUSIONS:

1. **REPAIR:** In the case of acknowledged defective Covered Parts, exchange with factory remanufactured parts may occur. Warranty repairs do not constitute an extension of any warranty period for any vehicle, component or part.
2. **DAMAGES:** Damages due to misapplication, misuse, accidents, negligence, improper operations, alterations, storage or transport, operation at excessive speeds, loading beyond the factory rated load capacity, failure to follow Volvo Trucks' recommended inspection, maintenance, and service procedures, and improper or insufficient maintenance services are not covered.
3. **PROGRESSIVE DAMAGE:** Damages due to failure of operator to take reasonable precautions to mitigate damage are not covered. Damages to a Covered Part due to failure of non-covered part are not covered. Coverage is limited to failure of a Covered Part directly causing failure of a non-covered part, where reasonable precautions were taken to mitigate damages.
4. **APPLICATION:** The selling dealer is responsible for designating the correct application and/or specification for a vehicle sold to a customer. Damages due to misapplication, including but not limited to, failures of component parts of vehicles being operated in excess of factory rated load capacities, or the use of a vehicle, component or part for a purpose for which it was not intended are not covered.
5. **ALTERATIONS:** Any vehicle, component or part repaired, altered, or inspected in any way, so as to adversely affect, in Volvo Trucks' sole judgment, its stability, durability, or reliability, is not covered.
6. **NON-ORIGINAL EQUIPMENT:** Any part of the vehicle that fails, malfunctions, or does not perform as a result of improper conversion or installation of bodies or equipment by other manufacturers or suppliers is not covered.
7. **MAINTENANCE AND PARTS CONSUMED:** Maintenance and inspection requirements found in the Operator's Manuals and service manuals/instructions, including, but not limited to, engine tune-up, fuel system cleaning, replacement of lubricants and filter elements, adjustments of the engine injection pump/transmission/brakes/linkages, as well as diagnosis, test time and all other adjustments must be followed and are not covered. Parts which are normally consumed or worn out during the vehicle's normal service life and customarily replaced during usual maintenance service, including, but not limited to, mud flaps and brackets, brake linings, clutch brake, and clutch linings, are not covered.
8. **PERFORMANCE COMPLAINTS:** Performance complaints are not covered (including, but not limited to, low power and/or poor fuel economy). Coverage is limited to defects in material and workmanship of a Covered Part directly causing the performance issue.
9. **WEAROUT:** Volvo Trucks does not cover normal wear of Covered Parts. Failures attributable to wear are excluded. For example and without limitation, the wear rate of parts in any engine or transmission, and especially those parts within the combustion area and clutch housing area, will vary depending upon operating conditions and environment. Conditions, such as load, trailer configuration, road speed and road conditions, as well as the quality of fuel, lubrication oil, and all filters bear a direct relationship to the wear rate and resulting life of parts. Depending upon the severity of these various conditions, parts wear and resulting failure could occur within the time limit of the coverage.
10. **NON-GENUINE PARTS:** Any failure of any vehicle, component or part caused by the use of parts and accessories, or major assemblies and exchange units, which do not meet factory standards is not covered.
11. **ODOMETER READING:** Any vehicle on which the actual mileage or hours cannot readily be determined, or on which the odometer, hour meter, or Electronic Control Unit has been disconnected, disabled, or altered, may not be covered by this warranty.
12. **ACCESS TO INFORMATION:** Owner must allow Volvo Trucks full access to all data stored in all Electronic Control Modules; failure to do so may result in the loss of warranty coverage.
13. **LABOR:** Labor to remove and install a Covered Part is included only if a Volvo Trucks authorized dealer originally installed the Covered Part. Labor for overtime and/or shift differential is not covered. Excessive labor for a warrantable repair due to the prior installation of equipment or body is not covered.
14. **MISC. EXPENSE:** Meals, lodging, communications charges, travel time and expense, loss of cargo, downtime, loss of profit/revenue, rental vehicles, driver's wages and other miscellaneous expenses are not covered. Shop supplies, lube oil, lubricants, sealers, anti-freeze, filter elements and labor performed by a non-approved location are not covered.
15. **ADDITIONAL COMPONENTS:** Components or parts that are not installed by Volvo Trucks, including winches, power take-offs, dumper, mixer and refuse assemblies, hoists and bodies or other special equipment are not covered. During a warrantable repair, additional time to remove any customer installed components will not be covered under warranty. Volvo Trucks' factory manufacturing records will be determinative as to factory installed components.
16. **TOWING:** Unless expressly provided in this Warranty Certificate, expenses for towing or road service are not covered. Failures caused by improper towing technique are not covered.
17. **SUSPENSION PARTS:** Suspension parts, including but not limited to rubber bushings, torque rod bushings, spring pins and bushings, and greased lubrication points that fail due to improper maintenance, abnormally severe service or abuse are not covered.
18. **CAB STRUCTURE AND CORROSION:** Cab structural defects or cab corrosion that occurs in areas of the cab that previously were damaged, repaired, altered or modified are not covered. Cab corrosion where metal is perforated from the outside to the inside is not covered.
19. **VENDOR ENGINES, ALLISON AUTOMATIC TRANSMISSIONS and ALTERNATE FUEL STORAGE AND DELIVERY SYSTEMS:** Vendor engines, Allison automatic transmissions and alternate fuel (CNG/LNG/DME) fuel storage/delivery components used in Volvo trucks are warranted by their respective manufacturers and not by Volvo Trucks. Refer to the manufacturers' warranty statements.
20. **OIL CONSUMPTION:** Before a claim based upon excessive oil consumption will be considered, the owner must provide proof that all recommended maintenance has been performed and submit adequate documentation to show that oil consumption exceeds Volvo Trucks' published standards. Under no circumstances will warranty pay for repairs related to excessive oil consumption after the earlier of 24 months, 250,000 miles, 402 000 kilometers, or 6,250 engine hours.
21. **ENVIRONMENTAL DAMAGE:** Parts made out of cloth, leather, wood, rubber, synthetics, paint or chrome which have been affected by exposure to the elements or chemical influence including, but not limited to, road salt/chemicals, industrial fall-out or the use of improper cleaners, polishes and/or waxes are not covered.
22. **ALIGNMENT:** Alignment of axle(s), balance of tires, changing of axle camber, caster, toe and thrust angle are not covered.
23. **GLASS:** Glass breakage and scratches are not covered unless physical proof of manufacturing responsibility is established.
24. **TIRES:** Tires are not covered by this warranty, but may be covered by separate warranties given by their respective manufacturers.
25. **CHANGES:** Volvo Trucks reserves the right to make any changes in design, or make additions to or upon its products, without incurring any obligations to install the same changes on vehicles previously built.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS, STATUTORY OR OTHERWISE EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION OR LIABILITY ON THE PART OF THE MANUFACTURER INCLUDING, WITHOUT LIMITATION OF THE FOREGOING, CONSEQUENTIAL, INDIRECT, AND INCIDENTAL DAMAGES. MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.



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