

STANDARD VOLVO 2007 EMISSION ENGINE WARRANTY CERTIFICATE



Volvo Group North America, Inc., d/b/a Volvo Trucks North America, warrants certain individual components of each new Volvo D11F, D13F and D16F 2007 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 North America maintenance and inspection requirements are followed. See your local authorized Volvo Truck 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.

SEE THE FOLLOWING PAGES FOR IMPORTANT LIMITATIONS AND EXCLUSIONS.

Standard Volvo Engine Components Coverage: 24 months, or 250,000 miles (402,000 kilometers), or 6,250 engine hours, whichever occurs first, unless otherwise noted.

Major Components Coverage: 60 months, or 500,000 miles (805,000 kilometers), or 12,500 engine hours, whichever occurs first.

Emissions Components Coverage: 60 months, or 100,000 miles (161,000 kilometers), or 3,250 engine hours, whichever occurs first.

USE OF IMPROPER OR UNAPPROVED FUEL OR ENGINE OIL WILL VOID THE ENGINE AND AFTER TREATMENT SYSTEM (DIESEL PARTICULATE FILTER) WARRANTY. 2007 EMISSION ENGINES REQUIRE THE USE OF EO-O PREMIUM PLUS (OR VDS-4) SPECIFICATION HIGH PERFORMANCE DIESEL ENGINE OIL AND ULTRA LOW SULFUR DIESEL (ULSD) FUEL.

Emission Control System Warranty

Engine emission controls manufactured by Volvo Trucks North America are warranted to 60 months or 100,000 miles (161,000 kilometers) or 3,250 engine hours, whichever occurs first. Vehicles sold for use in California must have the Operator's Manual in the vehicle for a copy of the California Emission System Warranty.

LIMITATIONS AND EXCLUSIONS TO THIS WARRANTY APPEAR ON THE FOLLOWING PAGES.

This warranty applies to new Volvo D11F, D13F, and D16F engines meeting USEPA 2007 emission requirements in new Volvo trucks operated in the United States and Canada and placed in service on or after **January 1, 2007**. This certificate does not cover D12D or D16D 2004 emission engines. (See certificate PV839-097B for these engines.) Volvo Trucks North America 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 commercial vehicles previously built.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES AND REPRESENTATIONS OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THESE LIMITATIONS 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. In the case of acknowledged defective assemblies, exchange with factory rebuilt units may occur. The defective parts or assemblies replaced shall become the property of Volvo Trucks North America. Warranty repairs performed by the dealer's shop in accordance with the terms of the warranty set forth herein are free of charge. Warranty repairs do not constitute an extension of the original warranty period for the engine or any part thereof. Purchased coverage consideration can only be given if the deficiency is brought to the attention of an authorized Volvo Truck dealer upon discovery and the engine must be made available, in a timely fashion during the coverage period, for repair.

NO PAYMENT OR OTHER COMPENSATION WILL BE MADE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL EXPENSES OR DAMAGES OF ANY KIND.

EMISSIONS COMPONENTS: 60 Months or 100,000 Miles or 3,250 Hours				
MAJOR COMPONENTS: 60 Months or 500,000 Miles or 12,500 Hours				
STANDARD COMPONENTS: 24 Months or 250,000 Miles or 6,250 Hours				
Covered Components	Qualifications and Limitations	Standard Components	Major Components	Emissions Components
Air Compressor		A		
Air Compressor Sprocket		A		
Bearings	All internal lubricated bearings and bushings only.	A		
Camshaft, Caps and Bolts	Failures resulting from the valve and injector adjustments not being maintained properly will <u>NOT</u> be covered. Normal maintenance adjustments are <u>NOT</u> covered.	A	A	
Connecting Rods, Caps, and Bolts		A	A	
Coolant Duct Cover		A		
Crankcase Ventilation Assembly		A		A
Crankshaft		A	A	
Crankshaft Hub		A		
Cylinder Block Casting, Main Caps & Bolts		A	A	
Cylinder Block Expansion Plugs		A		
Cylinder Block Heater		A		
Cylinder Head Casting and Bolts		A	A	
Cylinder Head Expansion Plugs		A		
Cylinder Head Gasket		A		
EGR (Exhaust Gas Recirculation) Components	All components including pipes, clamps, fittings, & gaskets. Excludes: EGR cooler vibration damper is a maintenance item.	A		
EGR Control Valve		A		A
EGR Cooler		A		A
EGR Mixing Chamber		A		A
EGR System Wiring Harness		A		A
Electrical EA Harness Supplied with Engine	(From ECU to sensors and injectors)	A		
Electronic Control Unit (ECU)	For the failure to be covered under <u>Emissions Components</u> , the failure must effect the emissions of the unit.	A		A
Engine Brake Mechanism (VEB)	Includes: VEB Control valve and VEB Rocker arms. Factory installed only.	A		
Exhaust After-Treatment System Arvin Meritor (ARM) Emissions Related Components	Includes: Diesel Particulate Filter (DPF), Air Solenoid Valve, Air Check Valve, Atomization Block, Cold Junction Block, Control Module, Ignition Coil, Fuel Pump, Pre Thermal Regen. Temp. Sensor, Post Thermal Regen. Temp. Sensor, Downstream DPF Temp. Sensor, Internal Thermal Regen. Temp. Sensor, and the DPF Differential Pressure Sensor.	A		A
Exhaust After-Treatment System Fleetguard Emissions Solutions (FES) Emissions Related Components	Includes: Diesel Particulate Filter (DPF), After-Treatment Hydrocarbon Injector (AHI), AHI shutoff valve, Discharge Recirculation (Heat Mode) Valve, Pre Catalyst Temp. Sensor, Post Catalyst Temp. Sensor, DPF Differential Pressure Sensor, and the Downstream DPF Temp. Sensor.	A		A
Exhaust Manifold Casting		A	A	
Exhaust Manifold Joint Seals, Gaskets, Wraps or Rings		A		
Fan Belt Tensioner Assembly & Bracket	Excludes fan belt.	A		
Flywheel		A		
Flywheel Housing		A	A	
Flywheel Ring Gear	Excludes failures caused by starter failure.	A		
Fuel Filter Housing		A		
Fuel Injector Sleeves	Seals included.	A		
Fuel Injectors	Adjustments <u>NOT</u> covered.	A		A
Fuel Pressure Regulator Valve		A		

A indicates component is covered if within time / mileage / hours limits.

EMISSIONS COMPONENTS: 60 Months or 100,000 Miles or 3,250 Hours				
MAJOR COMPONENTS: 60 Months or 500,000 Miles or 12,500 Hours				
STANDARD COMPONENTS: 24 Months or 250,000 Miles or 6,250 Hours				
Covered Components	Qualifications and Limitations	Standard Components	Major Components	Emissions Components
Fuel Transfer Pump		A		
Gaskets, Seals, O Rings, Silicon Sealant		A		
Gears	All internally lubricated gears only.	A	A	
Hoses and Lines, Supplied with Engine	Fluid carrying. Engine to engine mounted.	A		
Intake Manifold		A	A	
Ladder Frame		A	A	
Oil Cooler Core	Engine oil cooler.	A		
Oil Fill Tube and Cap		A		
Oil Filter Housing		A		
Oil Pan		A		
Oil Pump		A		
Pistons, Rings and Liners	Wear out NOT covered.	A		
Power Steering Pump		A		
Pre-heater	Factory installed only.	A		
PTO drive/REPTO (Rear engine mounted PTO Drive)	Factory installed only. Excludes all pumps or driven devices.	A		
Rocker Arm Assembly and Shafts	Includes VEB Rockers and non-VEB rockers. Failures resulting from the valve and injector adjustments not being maintained properly will NOT be covered. Normal maintenance adjustments are NOT covered.	A		
Sensor, Cam (Engine Position)		A		A
Sensor, Coolant Temperature		A		A
Sensor, Crankshaft (Engine Timing)		A		A
Sensor, EGR Temp. and Pressure		A		A
Sensor, Engine Oil Level and Temp.		A		
Sensor, Engine Oil Pressure		A		
Sensor, Fuel Pressure and Temperature		A		
Sensor, Humidity		A		A
Sensor, Intake Boost Pressure and Temperature		A		A
Sensor, Nox/O2		A		A
Sensors, DPF Temp. and Pressure		A		A
Starter Motor		A		
Thermostat (Coolant)		A		
Thermostat Housing (Coolant)		A	A	
Thermostat Side Cover (Coolant)		A		
Timing Gear Cover and Plate		A	A	
Towing	Covered 24 months or 250,000 miles (402,000 kilometers) or 3,600 hours. Limited to US\$600 per incident.	YES		
Turbocharger Assembly	Includes the VGT Actuator Module.	A		A
Valve Assembly	Includes the valves, springs, keepers, guides, rotators and seats. Failures resulting from the valve adjustments not being maintained properly will NOT be covered. Normal maintenance adjustments are NOT covered.	A		
Valve Cover		A		
Valve Yokes (Bridge) and Pins	Failures resulting from the valve adjustments not being maintained properly will NOT be covered. Normal maintenance adjustments are covered.	A		
Vibration Dampers and Bolts	Attached to the crankshaft or camshaft.	A		
Water Pump Assembly		A		
Water Pump Housing		A	A	

A indicates component is covered if within time / mileage / hours limits.

THESE EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.

EXCLUSIONS:

1. **REPAIR:** Warranty consideration can only be given if the deficiency is brought to the attention of an authorized Volvo Truck dealer upon discovery and the engine must be made available, in a timely fashion during the warranty period, for repair. Failures resulting from the user's unreasonable delay in making the engine available after being notified of a potential product problem are not covered.
2. **REPEAT REPAIRS:** The term "repeat repair" only refers to the repair or replacement of the exact same part or component more than once. Repair or replacements of different components within the same system does not constitute a repeated repair.
3. **DAMAGES:** Damages due to accidents, misuse, negligence, improper operations, improper storage or transport, operation at excessive speeds, loading beyond the factory rated load capacity, and improper or insufficient maintenance service are not covered. Damages due to failure to follow Volvo Trucks North America service procedures are considered damages due to improper maintenance services.
4. **PROGRESSIVE DAMAGE:** Damages due to failure of operator to take reasonable precautions to mitigate damage are not covered. Damages to covered part due to failure of non-covered part are not covered. Coverage is limited to failure of covered part directly causing failure of non-covered part, where operator took reasonable precautions to mitigate damages.
5. **APPLICATION:** The responsibility of supplying the correct application or specification information for a vehicle sold to the customer belongs at the selling location. Engine application problems, including but not limited to, replacement of incorrect axle or transmission ratios, failures of component parts of vehicles being operated in excess of factory rated load capacities, or the use of an engine for a purpose for which it was not intended are not covered.
6. **ELECTRICAL AND AIR SYSTEM COMPONENTS:** Any electrical or air system components, unless specifically stated, are not covered by this certificate. Some components may be covered by Volvo Trucks North America's Standard Truck Warranty Certificate. The user must allow Volvo Trucks North America full access to all electronic data stored in all of the Electronic Control Modules. Failure to do so may result in loss of warranty coverage.
7. **FUEL INJECTORS:** Repair or replacement of fuel injectors must be mechanical in nature and not from erosion caused by fuel quality.
8. **ALTERATIONS:** Any engine repaired and/or altered in any way so as to adversely effect, in Volvo Trucks North America's sole judgment, its stability or reliability, is not covered. This includes software alterations.
9. **OPTIONAL EQUIPMENT:** Any part of the engine that fails, malfunctions, or does not perform as a result of the improper conversion or installation of special bodies is not covered.
10. **MAINTENANCE:** Normal maintenance services including, but not limited to, replacement of oil and filters, adjustments to the engine, injection pump, as well as all adjustments, diagnosis and test time are not covered.
11. **PERFORMANCE COMPLAINTS:** Performance complaints are not covered (for example, low power and poor fuel economy) unless caused by the failure of a qualified part.
12. **OIL CONSUMPTION:** Before a claim for 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 North America published standards. Under no circumstances will warranty pay for excessive oil consumption after 24 months, 250,000 miles (402,000 km), or 6,250 engine hours.
13. **WEAROUT:** Volvo Trucks North America does not cover normal wear of covered parts. Cylinder liner, piston and piston rings failures attributable to wear are specifically excluded from this warranty. The wear rate of parts in any engine, and especially those parts within the combustion 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.
14. **PARTS CONSUMED ("Consumables"):** Parts which are normally consumed or worn out during the engine's normal service life and customarily replaced during usual maintenance service including but not limited to filters are not covered after the first 30 days from the in-service date.
15. **NON-GENUINE PARTS:** Any engine which has been repaired by the use of parts and accessories, as well as major assemblies and exchange units, which are substandard to genuine Volvo replacement parts and which cause an engine component or system to fail is not covered.
16. **ODOMETER READING:** Any engine in a vehicle in which the odometer has been disconnected or the mileage reading has been altered and the engine's actual mileage cannot be readily determined is not covered.
17. **ACCESS TO INFORMATION:** The user must allow Volvo Trucks North America full access to all data stored in all Electronic Control Modules; failure to do so may result in the loss of warranty coverage.
18. **PREMIUM LABOR:** Labor for overtime and/or shift differential is not covered.
19. **EXCESSIVE LABOR:** Excessive labor for a warrantable repair due to installation of equipment or body by the customer is not covered except in the event the dealer sells the complete chassis and body as a package. Excessive labor for a warrantable repair due to installation of equipment or body by the customer is not covered.
20. **MISC. EXPENSE:** Meals, lodging, telephone calls, travel time, loss of cargo, downtime, loss of revenue, rental vehicles, or 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.
21. **ADDITIONAL COMPONENTS:** Components or parts that are not installed by Volvo Trucks North America are not covered. Volvo Truck factory manufacturing records will determine Volvo Trucks North America installations.
22. **TOWING:** Towing and/or road service is limited to \$600 USD per incident when a vehicle is inoperable or continued operation would result in additional component damage due to a defective component listed in the Plan's component coverage list. Towing and/or road service charges due to a failure of a non-covered component or from the result of an accident are not covered. Towing coverage is limited to a single tow per incident for covered vehicles that are accessible from a MAJOR paved highway and towed to the nearest authorized Volvo truck service center.

VOLVO

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