



LIMITED WARRANTY

FOR

NorthTrends Remanufactured Diesel Engines

SCOPE AND DURATION OF WARRANTY

PERKINS PACIFIC (“PPI”), remanufactures diesel engines under the name NorthTrends, from here on referred to as (“Engine”). PPI warrants to each purchaser that the Engine will be free from defects in materials and workmanship under normal use and service for a period of “ONE YEAR” from the documented date on which the Engine is installed by the purchaser. This Warranty is limited to the repair of the engine or replacement of parts needed to correct any malfunction or defect in the Engine that exists at the time the Engine is sold to the purchaser. This Warranty is also limited in that it is given only to those purchasers who use the Engine for an industrial purpose and given said application in the equipment has not been altered from the original intent.

WARRANTY PERIOD	
Application - Industrial	Limitations - 12 Months Hrs / No Limit

****WARRANTY INSTRUCTION****

PROCEDURE FOR WARRANTY SERVICE

To obtain warranty service under this Warranty, the purchaser shall, within the one-year warranty period, notify **PPI** immediately of the need for warranty service. Have the engine serial number, date of installation, date of failure and a brief description of failure. If **PPI** authorizes the warranty service, the purchaser will allow **PPI** (or another qualified facility approved by **PPI**) a reasonable time in which to perform the warranty service. Any replacement parts authorized by **PPI** will be new or original engine manufacture (O.E.M.) remanufactured parts only.

ENGINE REMOVAL AND REINSTALLATION

Warranty R & R will apply only to an Engine that is sold by and installed by **PPI** or another authorized Perkins Pacific service outlet. In the event that an engine has been authorized to be removed for the repair of a warrantable failure and/or a replacement engine, PPI will pay a maximum of 15 hours labor for the engine removal and installation.

DIAGNOSTIC AND REPAIR TIMES

Diagnostic and repair times must be authorized by **PPI**.

SERVICE SUPPLIES

PPI will replace any service supplies, including coolant, oil, and filters, which are removed from the Engine during the warranty service/repair and which were damaged in the course of the failure.

WARRANTY

Continued

THIS WARRANTY DOES NOT COVER:

- A. Damage to or defects in the Engine caused by or resulting from modification by the purchaser.
- B. Damage to or defects in the Engine caused by or resulting from repair of the Engine by someone other than **PPI** or a qualified and authorized service facility.
- C. Damage to or defects in the Engine caused by or resulting from the use of ETHER or other starting aids not approved by PERKINS PACIFIC.
- D. Damage to or defects in the Engine caused by or resulting from the purchaser's failure to perform normal maintenance services on the Engine or to use Fuel, Oil, or Genuine Fuel & Oil Filters or the O.E.M.'s supplied filters, or coolants in the Engine that do not meet O.E.M. recommended specifications.

DISCLAIMER OF WARRANTIES AND LIMITATION OF REMEDY

The Warranty described previously is in lieu of any other warranty, expressed or implied, including but not limited to any warranty of merchantability or fitness for a particular purpose, which are disclaimed. Obtaining repairs and/or replacement parts is the purchaser's sole and exclusive remedy under this warranty and does not extend the warranty period stated previously. Under no circumstances shall PPI be liable to the purchaser for any incidental, consequential, or punitive damages arising out of or resulting from breach of this warranty. Any action by a purchaser for breach of this warranty must be commenced within one year after the cause of action accrues. Any such action must be commenced and tried in a state or federal court in Clark County, WA.

DO NOT MAKE REPAIRS WITHOUT AUTHORIZATION

When returning an engine for warranty evaluation, **DO NOT** remove oil filters, intake manifolds, thermo starts, heat tabs, atomizers, injection pumps or water pumps. **DO NOT** drain the oil or add fresh oil to the engine. Warranty will be **VOID** if any of the previously described items have been removed. Warranty will be **VOID** if the oil has been drained or there has been fresh oil added. For PPI to make an accurate and fair assessment of the failure the preceding conditions must be met on engines returned for failure analysis.

Please read the accompanying Warranty Disclaimer for critical information on circumstances that will not be covered by warranty. These items are not caused by nor are they a result of

DEFECTIVE PARTS OR WORKMANSHIP.

All NorthTrends Remanufactured Diesel engines are assembled using only the highest quality parts. They have been machined to exacting factory specification utilizing only premium crack free cores. They have also been tested on one of two Dynamometers in our facility to insure you will receive the same quality and longevity, if installed and maintained properly, as you received from your original engine.

**Perkins Pacific
6100 South 6th Way
Ridgefield WA, 98642**

877-877-3311



WARRANTY DISCLAIMER

For

NorthTrends Remanufactured Diesel Engines

The following is a list of items and or failures which will not be covered by the PPI warranty.

1. **Bearing and/or Crankshaft failure:** due to swapping location of Oil filter from right to left or vice-versa after shipment from our plant.
2. **Gear train failure:** which primarily remove teeth from the Idler gear and or Air Compressor gear on units where the air compressor is mounted to timing case or from auxiliary drive shaft. (This type of failure is due to an air compressor & or unloader valve on the brake system malfunctions.)
3. **Water in the Oil:** due to erosion of block parent bores from aeration of cooling system. (This type of failure is common in lift trucks with cab heaters and or any part of the cooling system higher than the radiator that has no provision to bleed the air from the system at that point.)
4. **Piston ring land failure:** Broken ring lands are the result of a violent combustion process almost exclusively caused by the use of ether (starting fluid) and can sometimes be the result of gasoline being accidentally introduced into the fuel system of a diesel engine.
5. **Bearing & or Crankshaft Failures:** due to inadequate lubrication on initial startup. On initial start up of a remanufactured engine, which has had all of its oil drained for shipping and has possibly been on the shelf for a week or more, has likely lost all oil remaining in the oil pump and could probably suffer bearing damage from a dry start. This type of failure may not be evident immediately but show up later as a knock. Once the bearing has been scuffed from metal to metal contact, its ability to support the necessary oil film is reduced, consequently resulting in a premature bearing failure later. This type of failure can be avoided by pre-lubing the engine prior to initial start up with a pressurizing tank. (Available through PPI or any Atlas shop supply Dist. Part# APL-5)
6. **Bearing & or Crankshaft failures:** Bearing failures can and will occur if oil level in sump drops to or below pick up level for any reason, oil leaks, loss of filter seal after an oil change, etc. It is the CUSTOMER'S RESPONSIBILITY to verify proper oil level at all times. Leaks of any type resulting in this type of failure, without the customer contacting PPI to remedy the leak, will not be warranted. (PPI has the ability to diagnose a bearing failure due to low oil level resulting in loss of oil pressure.) **DO NOT USE REMOTE MOUNT OIL FILTERS OR OIL FILTERS OTHER THAN THE EQUIPMENT O.E.M. SUPPLIED FILTER**
7. **Customer Modification failures:** any failure due to modification, or disassembly of a remanufactured engine within the one-year warranty period without prior authorization by PPI will not be covered under said warranty.
8. **Overheating failures:** Every remanufactured PPI engine has a Heat tab installed at time of dyno testing. It is the customer's responsibility to insure the engine does not overheat. Operator error and or gauge malfunction are not the responsibility of PPI. Under our Warranty, removal of heat tabs will VOID the Warranty. It is not unusual that when a hose leaks or breaks overheat may occur prior to or without indication on a temperature gauge because when coolant is absent, the sender cannot register coolant temperature properly. This type of condition is out of PPI's control and is therefore the customer's responsibility. Failures resulting from said condition will not be warranted by PPI.
9. **Equipment Components:** It will be the customer/end user responsibility to ensure that the equipment components are in good working order as not to cause or contribute to engine failure included but not limited to:
 - Cooling systems components i.e. radiator, hoses, fans, belts, clamps
 - Fuel system components i.e. fuel tank, fuel lines, pre-filters, intake heaters (cold start aid), clamps
 - Air system components i.e. air cleaner, air charge cooler, filters, hoses, clamps
 - Fasteners i.e. flywheel bolts, intake manifold bolts, exhaust manifold bolts
 - Exhaust system i.e. muffler, exhaust manifold
 - Electrical system i.e. wiring, alternator, starter, electronic control module

All operators of the equipment should be made aware of their responsibility to notify the appropriate personnel whenever they notice something unusual about the operation of their engine. Perkins Pacific has absolutely no control over what happens to an engine once it leaves our plant. It is the sole responsibility of the customer to provide adequate maintenance and inspection (daily, weekly, monthly etc.) to insure the engine's continued life. Manufacturer's service intervals should be followed given the operational environment would be considered normal. Hostile environments obviously dictate increased and more frequent service and inspection intervals.