

CUMMINS ENGINE WARRANTY Total Protection Round The Year

Bulletin No. 4072489-01

Cummins Engine Warranty

30 months from the date of despatch from the factory or 24 months from the date of commissioning or 5000 hours of operation, whichever occurs first.

The engines manufactured by Cummins India Limited are warranted to be free from any defects in workmanship and material under normal use and preventive maintenance service, our obligation under this warranty being limited to replacing or repairing at our factory in Pune, India, any part or parts returned to us with two-way transportation charges prepaid, which our examination shall disclose to our satisfaction to have been thus defective, within 30 months from the date of despatch of the engine from our factory at Pune to the original purchaser or 24 months from the date of commissioning or 5000 hours of operation, whichever occurs first, this warranty being expressly in supersession of all other warranties express or implied and of all other obligations or liabilities on our part. There are no warranties express or implied including warranties of merchantability or fitness for a particular purpose, regarding our engines except the warranty against defects in workmanship and material specified herein. We neither assume nor authorise any person to assume for us any other liability in connection with the sale of our engines. This warranty does not include engine removal and reinstallation expenses.

This warranty does not apply to:

- 1. any engine that shall have been subject to overspeeding, misuse, negligence or accident;
- 2. any damage resulting from improper shutdown;
- any engine that shall have been repaired or altered outside of our factory or by any one who is not authorised by us in such a way that, in our sole judgement its performance and reliability are adversely affected:
- 4. any engine or any part, component or accessory of the engine improperly applied or installed;
- 5. failure in any way resulting from use of parts, components or accessories not manufactured or approved by us;
- 6. normal maintenance services including but not limited to engine tune up and the repair or replacement of filters, and other normal maintenance spares.
- 7. any damage due to idle storage of engine beyond period of 6 months without treatment for long storage;
- 8. any damage due to use of lubricant, fuel and coolant of the quality and grade not recommended by Cummins India Limited.
- 9. engines purchased without performance related parts and accessories.
- 10. any damage resulting from Failure to get "NEW ENGINE PERFORMANCE INSPECTION" (N.E.P.I.) and other inspection checks done.

Any improper installation or application, or any substitution of parts, component or accessories not manufactured or approved by us shall void all warranties, express or implied. We make no warranty as to normal wear and tear, nor do we agree to be liable for loss of time to the user while the engine or other equipment is out of commission, nor for any labour or other expense, liquidated or unliquidated damages or loss occasioned, or claimed to be occasioned by such defective parts, component or accessories.

Any claim or obligation in connection with the sale of our engines shall be subject to the jurisdiction of the Courts in Pune only.

Cummins India Limited

Registered Office : Kothrud, Pune 411 038 (INDIA)

Published Warranty Policy:

The published warranty of Cummins India Limited is shown on Page 1. Practices described on the Succeeding pages are, in part, beyond the scope of the Company's legal liability and therefore, are not to be construed as legal obligations and further are subject to change by the Company at any time without notice.

Introduction:

This reference guide is published and distributed by Cummins India Limited (hereinafter referred to as "the Company") to provide owners with a brief but comprehensive summary of engine inspection and warranty service available to owners of Cummins engines.

The next few pages summarize Cummins India Warranty and related service policies.

Engine Inspection: 1.1

Four engine inspections are provided by Cummins India Limited for Cummins engines. 'A' inspection is referred to as the N.E.P.I. The purpose of this inspection is to assure the owner of Cummins powered equipment, a maximum of dependable and trouble-free service from his equipment. Engine inspection will be made by Cummins India Limited's Distributors or their authorised Dealers.

New Engine Performance Inspection : 1.2

N.E.P.I. is provided to permit necessary adjustments to be made to ensure that the engine is operating properly after specified hours of service. This inspection provides a chance to review maintenance procedures with the owner and discuss any questions which the owner may have in regard to the operation of his Cummins engine.

'A' Check

: Inspection Check at the time of putting engine in to service or within 50 hours after engine is put in to service. In any case 'A' check must be done within one month after the engine

is put into service.

Operating Inspection: 1.3

The operation inspection is to be made three times at the periods mentioned below.

'B' check

Inspection check-- at 300 hours (for NT/NTC-495-G N8 & QSK60 Genset Engines, the inspection check at 500 hrs.) or 6 months of Engine operation, whichever is earlier.

: To be done at first 1500 hours only.

First 1500

hours check

'C' check

: Inspection check-- at every 1500 hours or 1 year of Engine operation, whichever is earlier. : Inspection check-- at 6000 hours or 2 years of Engine operation, whichever is earlier.

'D' check

7500 hours

: To be done at 1500 hours after every 'D' check.

check

N.E.P.I. and Operating Inspections are must:

The owner would be well advised to avail of N.E.P.I., i.e. 'A' inspection to ensure trouble-free service of the engine. The adjustments is the early part of the engine life are essential to ensure long life and efficiency of the engine. In the event N.E.P.I. 'A' inspection and other operating inspections are not availed of by the owner, the Company will not be able to extend the warranty to the engine.

About Warranty: 2.1

Engines manufactured by Cummins India Limited are warranted to be free of defects in material and workmanship for 30 months from the date of despatch of engine from our factory at Pune to the original purchaser or 24 months from the date of commissioning or 5000 hours of operation, whichever occurs first, provided engines are supplied along with all performance related parts and accessories such as radiators, heat exchangers silencers, air-cleaners, filters, safety controls, instruments, etc.

On page 1 is shown the text of the Company's legal warranty.

2.2 Engine Despatch Notification:

It is incumbent upon the Original Equipment Manufacturer to notify the Company the date of despatch of equipment within 7 days of its despatch to the end user.

2.3 Conditions Precedent to Warranty:

The Company recommends every Cummins engine owner to familiarise himself with this warranty document. The warranty is explicitly subjected to certain conditions precedent, being met by purchaser/owner to the satisfaction of the Company, without which the warranty claims, if any, would involve inordinate delays for settlement and sometimes even rejection. These are summarized here for the benefit of the owner.

The warranty is subject to fulfillment inter alia of the following obligations by the purchaser/owner of the engine:

- (i) proper installation of the engine. This is sole responsibility of the purchaser.
- (ii) normal use and preventive maintenance as recommended (Please refer Schedule 1) by the engine owner's Operation & Maintenance Manual supplied along with each engine.
- (iii) In case any defects are noticed, it would be a worthwhile effort on the owner's part to satisfy himself in the first instance that the defect could be reasonably deemed to be of workmanship or material and that the engine was never subjected to conditions in respect of which the warranty has been expressly negated.
- (iv) Any part claimed to be defective should be returned to the Company's factory at Pune with the twoway transportation charges prepaid. If such part is replaced by the Company under warranty, the part returned by the owner shall automatically become property of the Company.
- (v) It would save the owner's considerable time and expenses to avail of the services of authorised distributors on paid basis to have such parts checked in advance and in matters of doubt to have the parts replaced (if available from his stocks) or else order for them by work order on payment basis from the authorised distributors. Any payments on account of parts which upon the Company's examination and to its satisfaction shall disclose to be defective, will be adjusted by the Company or the authorised distributors on the basis of the procedure detailed under warranty practices applying to new engines.
- (vi) Any attempt to tamper with, or interchange any parts between engines shall void the warranty. Most of the precision parts such as the injectors, fuel pumps are specially calibrated to suit owner's requirements and the Company has a record of each engine and parts utilised thereon duly coded.
- (vii) No warranty is made in respect of normal wear and tear, loss of time to users while the engine or other equipment is out of the commission nor for any labour or other expenses, damage or loss occasioned by any such defective parts. Any improper installation or application, or any substitution of parts not manufactured or approved by the Company shall void all warranties, express or implied on the Company's part.

3. Warranty Practices applying to New Engines:

The Company allows credit for parts required in the warranty repair of new engines only (engine within the warranty period) when the cause of failure is determined to its satisfaction to be defective material or factory workmanship.

4.1 General Warranty Practices:

The Company makes NO warranties express or implied relating to the sale of genuine Cummins replacement parts.

The Company's warranty practice with respect to allowances made for material, labour or miscellaneous expenses associated with the repair of a failure involving genuine Cummins replacement parts is beyond the Company's legal obligation.

4.2 Warranty coverage on engine accessories :

The warranty coverage for, all accessories, all electrical and electronic components, rubber components, hoses and belts supplied along with the engine by Cummins India Limited will be the same as that of the engine warranty.

Maintenance Schedule

CUMMINS DIESEL ENGINES (OTHER THAN INDUSTRIAL FIRE PUMP ENGINES)

| A-CHECK | B-CHECK | FIRST 1500 HRS CHECK | C-CHECK | D-CHECK | 1500 HRS. AFTEF EVERY "D" CHEC |
|--|---|--------------------------------------|--|---|--|
| A-CHECK Daily / Weekly Lubrication Check Engine Oil Level Fuel System Drain Sediment from Fuel Tanks Air System Clean Pre-Cleaner Dust Pan Weekly Check Air Cleaner Restriction Clean / Change Air Cleaner Element if required Cooling System Check Coolant Level Other Maintenance Drain Air Tank Check & Correct Leaks Drain Fuel Filter / Water Separator Daily Check Oil Level of Marine Gear & Raw Water pump Check belts, adjust if required. | □ Repeat "A" Lubrication □ Change Engine Oil □ Change Engine Full-Flow Oil Filter □ Change By-Pass Filter □ Change Marine Gear Oil □ Record Oil □ Pressure Fuel System □ Check Aneroid Oil □ Check Hyd. Gov. Oil □ Check Throttle Linkage □ Lubricate ball joints of the throttle linkage of Hyd. Governor □ Clean Fuel Tank Breather □ Change Fuel Filter Air System □ Clean / Change Crankcase Breather □ Check Air Piping Cooling System □ Check Coolant inhibitor. Add coolant concentrate, if required. □ Check Heat exchanger Zinc | | C-CHECK Repeat "A" and "B" Lubrication (None) Fuel System Change Hyd. Gov. Oil Change Aneroid Adjustment Replace Aneroid Breather Clean Fuel Tank from inside Cooling System Clean Radiator / Charge Air Cooler externally Check Fan Hub / idler and Water Pump / idler Other Maintenance Inspect following Parts and Replace as required. (Alternator / Starter, etc.) Check air Cleaner, Evacuator valve. Change if required. | D-CHECK Repeat "A", "B" and "C" Lubrication (None) Fuel System Clean and Calibrate injectors if required Replace rocker cover gaskets Replace Fuel Pump Filter Screen and Magnet Check Fuel Pump Calibration Replace Aneroid Belows & Calibrate Air System Check Turbocharger Compressor Wheel and Diffuser if required. Check Turbocharger bearing clearance Tighten Manifold Nuts or Capscrews Cooling System Change Coolant Descale cooling system Other | |
| Engine Interval Series All (except Hours NT/NTC-495-G, Calendar N-8-Genset | B Every 300 hours Every 6 months | To be done at first 1500 hours only. | C Every 1500 hours Every 1 year | Maintenance Check Vibration Damper Check Air Compressor Check Safety Controls D Every 6000 hours Every 2 years | To be done at 150 hours after ever "D" Check |
| Engine) NT-495-G Hours NTC-495-G, Calendar N8 & QSK60 Genset Engine | Every 500 hours Every 6 months | To be done at first 1500 hours only. | Every 1500 hours Every 1 year | Every 6000 hours Every 2 years | To be done at 150 hours after ever "D" Check. |

Under extremely dusty conditions, perform at more frequent intervals.

Maintenance Schedule

CUMMINS DIESEL ENGINES FOR INDUSTRIAL FIRE PUMP ENGINES ONLY

| A-CHECK | B-CHECK | FIRST 1500 HRS CHECK | C-CHECK | D-CHECK | 1500 HRS. AFTER EVERY "D" CHECK |
|--|--|--|---|--|---|
| □ Daily Lubrication □ Check Engine Oil Level Fuel System □ Drain Sediment from Fuel Tanks □ Drain Water from the Water separator □ Check Fuel Supply Air System □ Check Air Cleaner Cooling System □ Check Coolant Level Other Maintenance □ Check Leaks and Correct □ Check Engine Lubricating Oil and Water Heater □ Check Raw Water Strainer □ Check Starting Batteries □ Check belts, adjust if required. | □ Repeat "A" Lubrication □ Change Engine Oil □ Change Engine Full-Flow Oil Filter □ Record Oil Pressure Fuel System □ Check Throttle Linkage □ Clean Fuel Tank Breather □ Change Fuel Filter Air System □ Clean / Change Crankcase Breather □ Check Air Cleaner Restriction Cooling System □ Change Water Filter / Water Softener ² □ Check coolant inhibitor. Add coolant concentrate, if required. □ Record Water Temperature □ Record RPM | ALL STEPS OF C-CHECK AND ADDITIONAL STEPS Adjust Injectors and Valves Replace rocker cover gaskets | Cooling System Check Heat Exchanger Core Check Water Pump Fuel System Clean Fuel Tank from inside Other Maintenance Inspect following items and replace as reqd. (Alternator / Starter, etc.) Check air Cleaner, Evacuator Valve. Change if required. | Repeat "A", "B" and "C" Fuel System Clean and Calibrate injectors, if required Replace rocker cover gaskets Replace Fuel Pump Filter Screen and Magnet Air System Tighten Manifold Nuts or Capscrews Check Turbocharger Compressor and Turbine Wheel Check Turbocharger bearing clearance Other Maintenance Steam Clean Engine Tighten Mounting Bolts and Nuts (as required) Check Crankshaft End Clearance Check Vibration Damper Check Safety Controls | ALL STEPS OF C-CHECK AND ADDITIONAL STEPS Adjust Injectors and Valves Replace rocker cover gaskets. |
| Engine Interval Series All Hours | B Every 300 hours | To be done at first | C Every 1500 hours | D Every 6000 hours | To be done at 1500 hours after every |

Notes: 1. Perform checks on operating basis of interval that occurs first.

3. It is suggested to operate the engine (at operating temperatures) once in a week, for minimum five minutes.

^{2.} Any time cooling system is completely drained and / or flushed, check coolant using coolant checking kit.