

RalliSpec Ltd.

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Warranty Information

Standard Limited Warranty: RalliSpec warrants that this short block, long block, or complete engine is free from manufacturer's defect due to imperfect material or workmanship. If it is received in defective condition due to imperfect material or workmanship and is reported as such within 90 days of receipt (date of delivery), then a return authorization will be issued and the item can be returned to RalliSpec for repair or replacement (at RalliSpec's discretion). RalliSpec's liability shall be limited to the repair or replacement of only the item or items sold by RalliSpec. RalliSpec shall not be responsible for reimbursement of any associated costs. Return shipping is the responsibility of the purchaser.

Extended Limited Warranty: RalliSpec will extend the warranty period to 1 year from date of receipt (date of delivery) provided either of the following conditions are met:

1. Final assembly, installation, and tuning of the engine is completed at RalliSpec. Exclusive use of Motul engine oil of the correct viscosity during the warranty period (allowable oils after break-in: Motul 8100, Motul Sport, Motul 300V) changed at proper intervals.
2. Final assembly, installation, and tuning of the engine is completed by a professional mechanic and an extended warranty registration form and supporting information is provided within 90 days of receipt. Exclusive use of Motul engine oil of the correct viscosity during the warranty period (Motul Break-in Oil required during break-in mileage and after break-in: Motul 8100, Motul Sport, Motul 300V) changed at proper intervals.

Warranty Information: This is a limited warranty that covers only defects in craftsmanship and materials. Engine failure that results from any of the following conditions will void this warranty:

- a. Engine overheating
- b. Inadequate oil supply for any reason (oil pump failure, oil pickup breakage, high cornering forces, low oil level, etc.)
- c. Exceeding the engineering limitations of the components
- d. Poor tuning (excessively rich or lean conditions, over advancing the ignition timing, overboost conditions, etc.)
- e. Used of the incorrect oil type or viscosity
- f. Failure to perform proper maintenance at recommended intervals
- g. Oil contamination (such as re-using parts that have not been properly cleaned of metal or other contamination)
- h. Exceeding the rpm limits of the engine (over-rev due to missed shift or any other reason).
- i. Disassembly or modification of the supplied short, long, or complete engine

Running-in Instructions for RalliSpec Engine

RalliSpec recommends the following break-in procedure for your new engine:

- 1) After assembly fill the engine with a high quality mineral (non-synthetic) oil. An oil formulated specifically for break-in will provide optimum results. Rallispec suggests Motul 10W40 Break-In Oil. If cams and lifters are already broken in then a standard mineral oil is acceptable. Do not overfill oil level.
- 2) Ensure cooling system is fully bled of any air pockets before starting. If possible fill system with hot coolant and allow 20 minutes for engine temperatures to stabilize before initial start.
- 3) With spark plugs removed and fuel/ignition systems disabled crank engine until oil pressure comes up (or oil pressure light goes out). Reinstall spark plugs and enable fuel and ignition systems.
- 4) Start engine. If new camshafts are fitted then immediately bring engine to 2000 rpm and hold for 15 minutes for proper cam lobe break-in (or follow cam manufacturer's instructions). Otherwise run at high-idle until fans cycle on. Check for leaks.
- 5) It is strongly suggested that the engine is run on wastegate spring pressure only during the break-in period. Extreme care should be taken if ECU mapping is performed during the break-in process.

- 6) Find a suitable location to perform the following (can be done on dyno):
Accelerate in 3rd or 4th gear at light throttle from 2500 to 4500rpm and immediately transition to full engine braking allowing revs to come back down to 2000rpm. Perform this 10 times allowing 30 seconds between runs. Then perform 20 more runs between 2500rpm and 5500rpm starting at light throttle and progressing to full throttle with the last 5 runs at full throttle. Allow 1 minute between each run at neutral throttle to allow internal temperatures to stabilize.

- Note: If performed on the dyno make sure engine acceleration rate is similar to normal driving conditions on flat ground.

- 7) Drain oil and change filter.
- 8) The engine is now 80% broken in. Street engines should be restricted to no more than 5500rpm for the next 1500 miles. Boost pressures may be returned to normal but avoid extended periods of continuous rpm or continuous high load. Road race engines should be run in on the track at at 50-75% of race loads and rpms for another 100 to 200miles before subjected to full race rpm and load.

- 9) At 1500 miles of street driving break-in is complete. Change oil and filter. For competition vehicles or highly tuned street vehicles a high quality ester-based synthetic oil is strongly suggested. Motul 300V is preferred for competition use and Motul Sport is preferred for road use. A 5W40 is the minimum suggested oil viscosity. For extreme duty conditions in warmer temperatures a 15W50 (competition) or 5W50 (street) is preferred. Motul 8100 synthetic oils are acceptable for typical street applications when running lower ethanol content fuel. Change the oil regularly with intervals based on severity of use and type of fuel. When running E85 reduce the oil change interval by half.