



## ENGINE DEPARTMENT

## WARRANTY &amp; OPERATING CONDITIONS

## SECTION 1 – SUMMARY

Radical Motorsport Ltd engines have a limited warranty provided that the operating conditions are strictly adhered to. Radical Motorsport Ltd will warrant new engines against major defects for **40** hours, on condition that the engines meet the criteria set out below:

- This warranty **covers** the failure of major engine components in new engines against manufacturing defects or poor workmanship, including crankshaft, conrods, pistons, crankcase castings, oil pumps, cylinder blocks, cylinder heads and internals.
- This warranty **does not cover** the failure of components that have been fitted by Radical Motorsport Ltd new or old into **rebuilt** engines.
- This warranty **covers** third party cost provided such costs are **approved in advance** and the warranty claim number has been issued prior to the costs being incurred.
- The 40 hours warranty applies to **ALL new** hand-built RPE engine types (excl tuned variants), that Radical Motorsport Ltd supply.
- For hand-built RPE racing spec engines, the warranty **does not cover** the gearbox, clutch, clutch mechanism, starter motor, alternator, exhaust headers/ pipes or induction system.
- Only Factory OEM engine components comply with stated warranty conditions. The use of non-OEM components or ancillaries (e.g. exhaust, throttle bodies), or any alterations to the standard OEM components/ ancillaries (which include for example non-standard thermal coatings), will void engine warranty.

## SECTION 2 – WARRANTY CRITERIA

1. **Baseline Criteria:**

1. Warranty conditions only apply to new car/engine sales.
2. Warranty is valid up to a maximum of 40 hours of total running time (for newly supplied RPA, RPX TCX engines; and the GSX-R 1340cc & 1500cc engines), or 12 months from the first on-load recorded session, whichever is the sooner.
3. Post engine rebuild by Radical Motorsport Ltd, warranty conditions will no longer be applicable to component defects/failures, unless caused by poor workmanship.
4. This warranty will be void in any engine that exceeds the above criteria or is recorded as a failure to observe dashboard warnings e.g. running outside of operating limits.
5. To claim warranty a form must be completed and full ECU data provided. Failure to do so will automatically disqualify the warranty claim.
6. The warranty will not cover your engine against oil, fuel pressure and coolant temperature related failures.
7. The warranty will be void if the Engine factory seal is found to be 'broken'.

2. **Engine ECU:**

1. Only the designated Radical Motorsport Ltd 'locked' ECU may be used with the engine. Should the ECU malfunction, a replacement Radical Motorsport Ltd 'locked' ECU may be used with the approval of Radical Motorsport Ltd.
2. The complete data from the ECU and logging system showing every time the engine has run must be made available to Radical Motorsport Ltd when the engine is returned for inspection, re-build or warranty-related issue.
3. If the engine is cut due to any of the engine sensor cut out parameters being activated then the engine should not be restarted before the fault is located and rectified with data to support. Failure to do so will invalidate your warranty.
4. For the warranty conditions to apply, the ECU software level must be a minimum of V-405 and utilise Euro oil and fuel pressure sensors.

3. **Engine Speed:**

1. The engine speed is limited to 10,500rpm (9,500rpm for SR1 model). Persistent use of the limiter will damage the engine. If the engine data highlights greater than 400 limiter strikes within the warranty period, the warranty is void, and the engine must be returned to Radical Motorsport Ltd for repair at the customers cost before being run again.
2. If the engine is run over 11,250rpm for ANY period of time, the warranty is voided.

4. **Fluids:**

1. Engine Oil: Radical Motorsport Ltd will only warrant the engine provided one of the two following engine oil specifications is used: **MOTUL 300V Factory Line 4T 15W60** or Fuchs Titan Race ProR 10W60, and is changed every **8** running hours including the oil filters.
2. In the event of a claim, Radical Motorsport Ltd will conduct oil analysis to confirm the oil grade, type, and age.
3. If you do not maintain the correct oil level over the recommended minimum limit, then your warranty will be void.
4. Coolant system: 50% water and 50% antifreeze/summer coolant
5. Fuel: Minimum fuel is 98 Octane. If lower grade fuel is used this will cause irreparable damage to the engine, and your warranty will be void.



#### 5. Warming Up:

1. The engine should be started 45 minutes prior to going on track. Turn the engine off when the coolant temperature reaches 85°C and allow heat to soak into the engine. Restart 5 minutes before going on track and raise the coolant temperature back up to 75°C. Please refer to the Radical Motorsport Ltd Engine Operation Manual, for engine running temperatures.
2. The oil level should be checked after every hour of running, and it should be topped up as per the Radical Motorsport Ltd Engine Operation Manual.

#### 6. Operating Limits:

1. Engine under load parameters are as follows:
  - i. V8 Oil temperature needs to be within the parameters of 55°C to 125°C
  - ii. I4 Oil temperature needs to be within the parameters of 55°C to 115°C
  - iii. Water temperature needs to be within the parameters of 70°C to 100°C

Failure to comply with above parameters will invalidate your warranty.

Note, the ECU log book considers on load to be when the rpm exceeds 4000rpm with more than 25% throttle, or when the vehicle exceeds 30mph

#### 7. Rebuilds:

1. During the first 40 hour re-fresh the timing chains, piston rings, bearings, big end bolts and all gaskets are renewed. All major components such as crankcases, crankshafts, con rods and pistons are checked for excessive wear and fatigue, and if found to be suspect (outside of tolerance) they will be replaced under this warranty provided the engine meets the criteria set out above.
2. Once the engine has undergone the first rebuild by Radical Motorsport Ltd, **no** components replaced will be warranted for manufacturing defects. All subsequent component failures will be at the customer's expense.
3. Any damage caused, due to poor workmanship, will be warranted.

Rebuilds must be to Radical Motorsport Ltd required standard, and carried out by a Radical Motorsport Ltd trained Technician.

## SECTION 3 – APPLIES TO GSX-R ENGINES ONLY

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#### 9. Starter Motor Clutch

1. If the driver spins the car and the starter motor clutch is damaged, warranty is void. In this instance, the Engine needs to be returned to Radical Motorsport Ltd for inspection and rectification at Customer's cost.

#### 10. Clutch

1. If there is a failure of the clutch the warranty is void. In this instance, the Engine needs to be returned to Radical Motorsport Ltd for inspection and rectification at Customer's cost. Note: debris from the clutch plates can block the engine oil-ways and cause engine damage or failure.

## SECTION 4 – COMMUNICATION

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#### 10. Technical Bulletins:

1. It is the responsibility of the owner to read the technical bulletins published on: [www.radicalsportscars.com/downloads](http://www.radicalsportscars.com/downloads) and carry out any relevant upgrades to safeguard their warranty cover.

#### 11. Contact Details:

For more information or clarification on any of the points listed here please contact:

1. **Mail:** Radical Motorsport Ltd, 24-26 Ivatt Way Business Park, Westwood, Peterborough PE3 7PG United Kingdom
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