

INSTRUCTIONS FOR ENGINE AND TURBO SEALING FOR RX1 CARS

ENGINE (RX 1):

- Regarding the limitation of “engine seals” as stated in Article 10.3.1 of the RX Sporting Regulations, seals should be fitted with the aim of preventing access to and the replacement of the:
 - cam cover;
 - cylinder head;
 - cylinder head gasket;
 - crankcase;
 - sump;
 - bedplate;
 - crank train;
 - valves;
 - camshaft;
 - valve actuation system; and
 - all associated bearings, guides and seals.

Engine ancillaries and camshaft drives are not included in the seal perimeter. For the avoidance of doubt, valve clearance checking and/or adjustment is not allowed.

If the engine construction is such that seals prevent access to parts that are normally outside the sealed perimeter (e.g. oil pump), access to these parts would be possible under FIA supervision.

Sealing the bottom of the engine:

The team must prepare the sealing as follows:

- **The wire must be mounted to go through two fixing bolts of the sump.** The wire must be wrapped as seen in the picture. After the last bolt, the wire must be wrapped over a **maximum of 20 mm**. Here the Team must affix **first** aluminium seal. Be careful that you put the aluminium seal on that way, that the wire **goes in** thru the side where are two holes in the seal and comes out from the side where is only one bigger hole (see the photos!)
- **After this seal wrap over the wire and affix the tag (number plate) and wrap over again.** Finally affix another aluminium seal as described before. The scrutineer will then check the numbers and squeeze the aluminium seals with the FIA pliers.
- It is the team's responsibility to check that **the aluminium seals** before and after the number seal **have been squeezed with the FIA sealing pliers.**



- **Correct, sealing wire connects two bolts together.**



- **NOT Correct , the wire is making a loop.**



An example how the top sealing should look like. The Team will do all except squeezing the ALU seals. See the correct position of the ALU seal: Wire in from side with two holes and out from side with one hole (wire to be wrapped over inside the ALU seal)

Sealing the top of the engine:

The team must prepare the wire for sealing as follows:

- **The wire must be mounted by going through two fixing bolts of the valve cover.** If there are two separate valve covers, both must be wired through two bolts and sealed. The wire must be wrapped as seen in the picture. After the last bolt, the wire must be wrapped over a **maximum of 20 mm**. Here the Team must affix **first** aluminium seal. Be carefull that you put the aluminium seal on that way, that the wire **goes in** thru the side where are two holes in the seal and **comes out** from the side where is only one hole (see the photos!)
- After this seal wrap over the wire and affix the tag (number plate) and wrap over again.** Finally affix another aluminium seal as described before. The scrutineer will then check the numbers and squeeze the aluminium seals with the FIA pliers.
- If it is possible to remove the cylinder head without breaking one or more seals, the cylinder head must also be sealed to the cylinder block. **In this case the team must consult the FIA technical delegate to find an acceptable solution for sealing.**
- It is the team's responsibility to check that **the aluminium seal** before and after the number seal **has been squeezed with the FIA sealing pliers.**



Correct. Sealing wire in valve cover is connecting two bolts together, preventing disassembly. If the engine has two separate valve covers, both covers must be sealed with separate sealing wires.

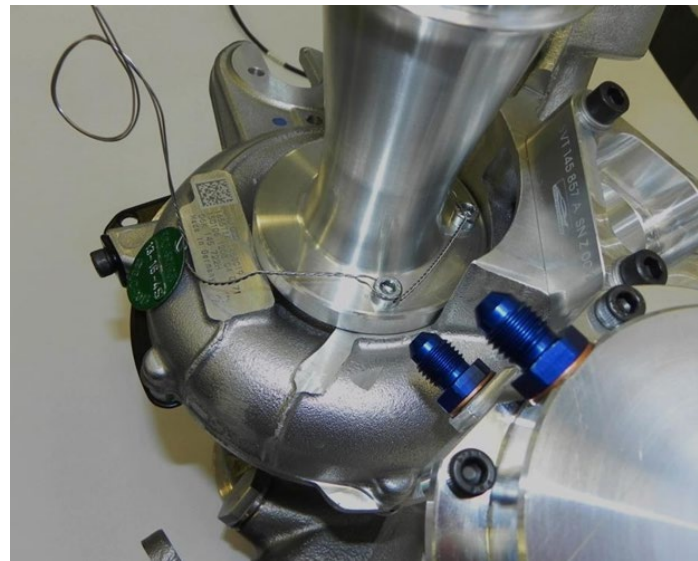
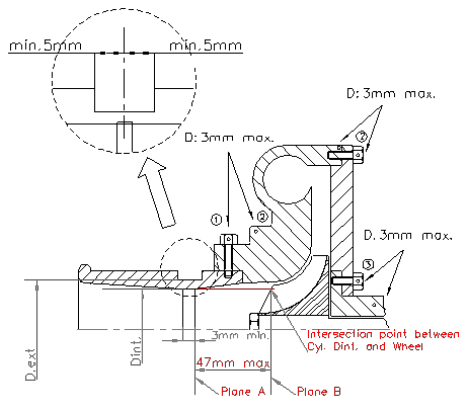
IMPORTANT!

If there is any possibility of touching, adjusting or replacing any engine parts described on the above list without breaking one or more seals, this location must also be sealed with an extra seal using a similar method (wire through two bolts...) In this case the team must always consult the FIA technical delegate

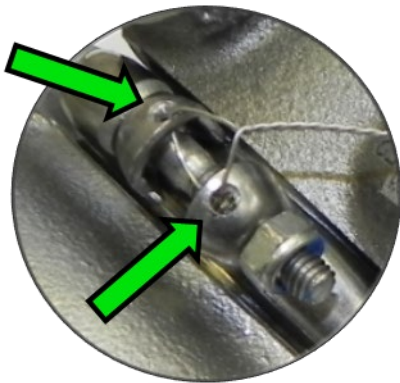
Sealing the turbo:

All supercharged cars must be fitted with a restrictor fixed to the compressor housing. The mounting of the restrictor onto the turbocharger must be carried out in such a way that two screws have to be **entirely** removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor. Attachment by means of a needle screw is not authorised.

For the installation of this restrictor, it is permitted to remove material from the compressor housing, and to add it, for the sole purpose of attaching the restrictor onto the compressor housing. The heads of the screws must be pierced so that they can be sealed. The restrictor must be made from a single material and may be pierced solely for the purpose of mounting and sealing, which must be carried out **between the mounting screws, between the restrictor (or the restrictor/compressor housing attachment), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment)** (see drawing).



The above pictures show how to fit the sealing wire between all necessary parts of the turbo. IT MUST NOT BE POSSIBLE TO DISMOUNT ANY SEALED PARTS WITHOUT BREAKING A SEAL.



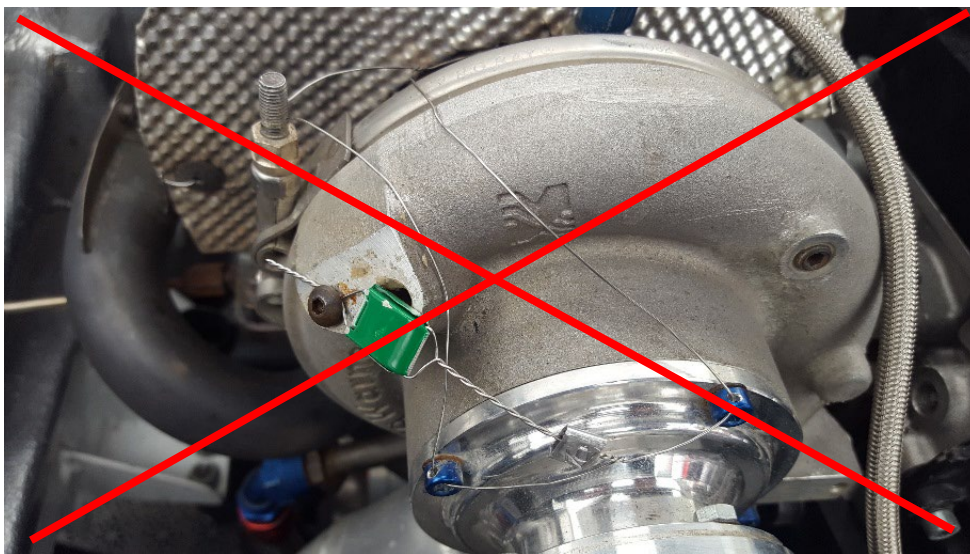
Correct, (not possible to open AND remove)



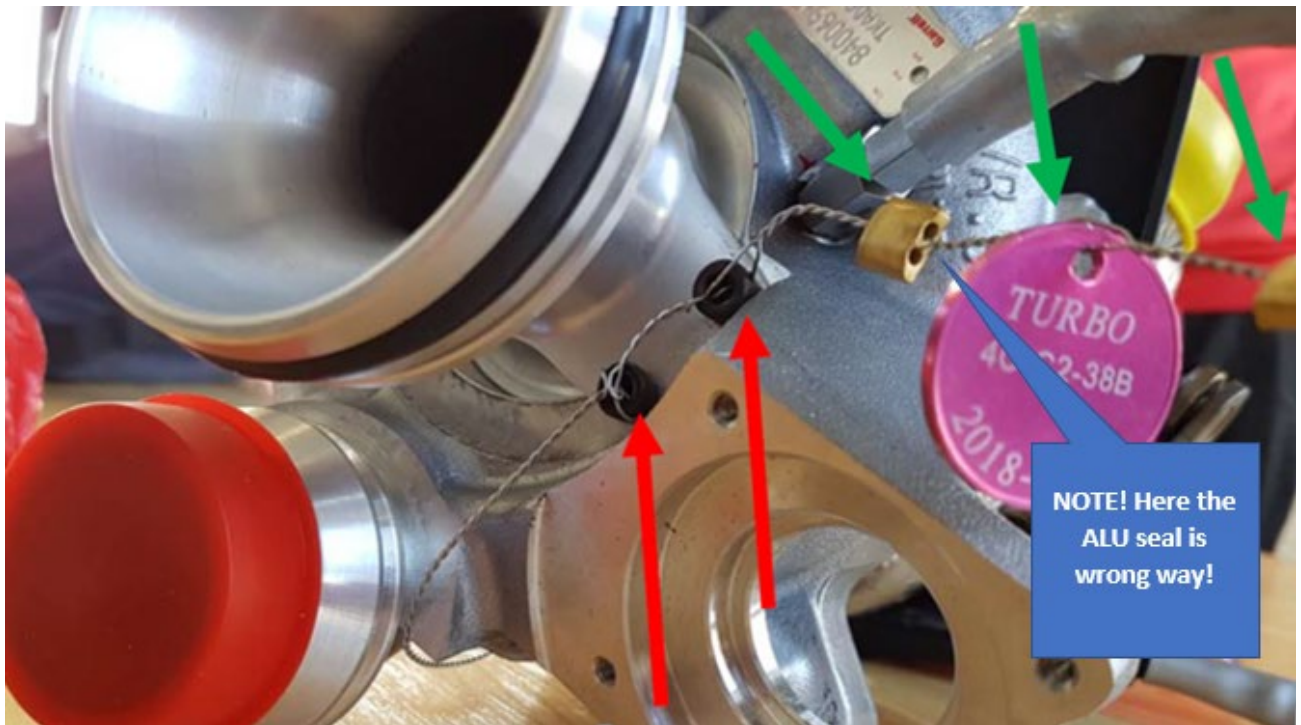
Correct, (not possible to open AND remove)



Correct, the wire will start from one point and end after the last bolt (the wire will not make a loop)



NOT correct, the wire will make a loop.



An example how the turbo sealing should look like. The Team will do all except squeezing the alu seals. See the correct position of the ALU seals below:



Wire in from side with two holes and out from side with one hole (wire to be wrapped over inside the ALU seal)

PAY SPECIAL ATTENTION:

Please read Article 10.3.3 of the FIA World and European Championship Sporting Regulations:

10.3.3 Any breaking of one or more seals must be approved beforehand by the FIA technical delegate for the Championship or the FIA Technical Department or risk being sanctioned, which may go as far as exclusion. The breaking of any seal will be considered as a change of engine or turbo. The scrutineers may check the seals at any time and at the end of any Competition may disassemble the parts to check their conformity.

Therefore, the seals cannot be broken at any point during the entire period between initial scrutineering for the first event and final scrutineering for the last event. Even if the engine is broken, the seals cannot be broken without the permission of the FIA technical delegate or the FIA Technical Department (represented by Matteo Repetto). The FIA reserves the right to be present when the engine is dismantled.

Please remember that the regulation for the maximum number of engines and turbos has been changed:

10.3.1 A Driver may use up **two (2)** engines (or sets of seals) in a Championship season. Engines will be sealed and a Driver may present up to **two (2)** at scrutineering during the Championship year. The penalty for any breach of this rule, the use of **three (3)** or more engines in the Championship year, will be the deduction of fifteen (15) Championship points for each offence. These points will be deducted from the Driver's Championship total. **In exceptional circumstances (accident generating serious damage to the engine), a joker may be granted at the discretion of the FIA.**

10.3.2 A Driver may use two (2) turbos in each Competition **and three (3) turbos during the Championship year.** The penalty for any breach of this rule, the use of more than two (2) turbos in any Competition or more than **three (3)** turbos during the Championship year, will result in ten (10) Championship points being deducted for each offence. These points will be deducted from the Driver's Championship total. Competitors must present their spare turbo at initial scrutineering for identification and sealing.

With the exception of the engine, the turbo seals cannot be broken at any point between initial scrutineering and final scrutineering for each competition. The FIA gives an approval to break the turbo seals after every competition without further notice.