

EUROPEAN FEDERATION
of RADIO OPERATED
MODEL
Automobiles



APPENDIX 8
HANDBOOK
2013

APPENDIX 8

HOMOLOGATION OF MUFFLERS

1. GENERAL

Each motor must be equipped with an exhaust system and an inlet silencer to reduce the amount of noise generated by the car. The maximum noise level for a muffler with INS box is 83 dB's, measured at ten (10) metres distance and one (1) metre high for a single car. EFRA's definition of a noise level is always final.

For 1/8 th IC track races only EFRA homologated 3-chamber mufflers from the 2011 list are allowed on EFRA sanctioned events with or without an extra silencing unit or any new designed muffler with the 3100 number that meets the better specifications. The EFRA homologation number must be engraved on the sidewall of the muffler.

For 1/8th Off Road, only EFRA homologated 3-chamber mufflers from the 2011 list are allowed on EFRA sanctioned events or any new designed muffler with the 3100 number that meets the better specifications. The EFRA homologation number must be engraved on the sidewall of the muffler.

For 1/10th IC track, only EFRA homologated 2-chamber mufflers from the 2011 list are allowed on EFRA sanctioned events or any new designed muffler with the 2800 number that meets the specifications. The EFRA homologation number must be engraved on the sidewall of the muffler.

The sections will use a so called "noise trap" to check noise level on the events. Depending on the track layout the noise trap will be installed and used to take out cars that make too much noise. The final noise limit for an event must be set prior to timed practice.

The old 2011 list will not be valid anymore after 2013. From 2014 only new 3100 mufflers and 2800 mufflers will be allowed for on road racing.

The homologation time will be limited to 2 years and needs to be renewed after that period. The homologation fee and re-homologation fee will be reviewed.

2. HOMOLOGATION FEE

will be: see General Rules 3.5.7.

If a second test is necessary an additional cost of: see General Rules 3.5.7..

3. HOMOLOGATION NUMBER:

every accepted muffler is issued with an EFRA homologation number which must be indelibly pressed or milled on de sidewall.

4. TECHNICAL DETAILS

A very important factor in the control of the noise level of a muffler is the design of the mandatory 2nd chamber and the total length of the outlet pipe.

The first cone may be trimmed by the individual user within a small range to set up the best total system length.

5. TOLERANCES

Recognising that the component parts of a muffler are joined together, it is quite clear, that there may be some slight differences in total measurements.

This will not lead to dramatic noise level variation, but one important point must be mentioned:

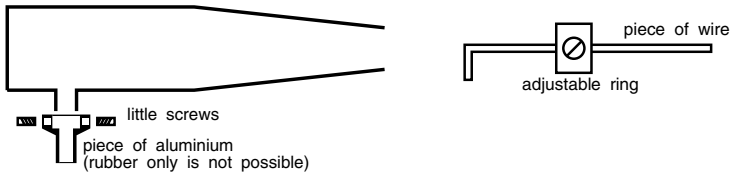
The 2nd cone must be in line with the outlet pipe, if this is a feature of the original design. To check this, refer to the drawings.

The outlet pipe may have a minus-tolerance of 2 mm.

To the total length of the outlet pipe use a tool similar to that shown below.

6. PRACTICAL TIP

Some drivers cut the outlet pipe, because they fear damage during the race. Of course this is not allowed. To help in such a case, here is a tip:



7. EFRA APPROVED MUFFLER

Updated lists of mufflers which do comply with the noise rules will be found on the EFRA-website.

8. INS box dimensions.

The performance of the INS box is based on its form and measurements. Therefore it is strictly forbidden to change anything on its internal dimensions. The INS box for 1:8 and 1:10 are the same, only the foam filter has another dimension to fit the carburetor.

A list of the approved INS-Box will be published on the EFRA webpage.

9. Muffler lists

Lists of the approved mufflers will be published on the EFRA webpage.