



## EUROPEAN FEDERATION OF RADIO OPERATED MODEL AUTOMOBILES

### The EFRA numbers in mufflers

Historically EFRA has been homologating mufflers (pipes) for more than 15 years. The reference has been always the noise level of an standard engine with the muffler attached, but that reference has moved lowering the standard noise level due to environmental reasons, EFRA has been always very keen and dedicated to control the noise level making our sport more friendly to public and neighbours.

At the beginning the numbering of the mufflers at EFRA was easy, 3 number figures, starting with 001 and numbers went up to 089 at least.

Then at 1998 the EFRA standard figure in regards of noise was revised and a new standard was settled, so that all existing mufflers were subject to a re-homologation process (voluntary one). That re-homologation process meant to clean up the list (it was of at least 89 mufflers as said) leaving only those which produce a lower noise level, out of those 89 only 11 passed that process.

To be submitted for re-homologation only 11 pipes has had 2 reasons, first the new lower EFRA noise standards and second one the existence of the product, some of those old numbers were no longer manufactured and even some companies were disappeared.

Those re-homologated mufflers were authorised to be engraved with a new number with the figure "98" in front instead of the old "0" in front, so that EFRA 9869 and EFRA 069 are the same muffler, both numbers were legal and valid.

At the same time the standard procedures of homologation took place with the new noise EFRA standard level so new numbers were given with the 98 figure in front (for the year 98) and 99 figure in front for the following year.

Then at the year 1999 a revolution came to the muffler scene, the 3 chamber mufflers, the first of those came in the market showing that technology was possible and the noise level went down not causing a lack of performance.

So that 3 chamber mufflers came to the scene and a new standard of noise level was settled in EFRA for the On Road racing.

New numbering came out starting with the 2001 figure and now all homologated numbers keep in correlative order from 2001 up to 2039 by this moment.

At year 2001 there were different 3 chamber mufflers available so that all the old 2 chamber mufflers were banned for the use in EFRA On Road racing.

The rhythm of homologation is around 10 mufflers per year showing the interest of manufacturers in this EFRA procedure.

The 2 chamber mufflers were still valid in Off Road racing but that has been up to this year 2005, at 31 December all those old mufflers will become illegal.

There has been only one 2 chamber muffler homologated from year 2000, it is the EFRA 2008 which will become illegal as well at the end of the year.

From 1-1-2006 situation will be very simple, all valid homologated for EFRA racing mufflers will be on the 2000 series of numbering but the 2008 muffler.

At the 1/10 On Road scenario homologation of pipes started later, and it is related to different standards with allowance of the 2 chamber mufflers, logically those mufflers are smaller and easy to be recognised, the numbering has 2 series, 2500 and 2600, both series combined give us a total of 18 homologated mufflers allowing the EFRA drivers a wide range of choice for this challenging class.

Historically there has been a mutual recognising system among the EFRA Bloc and the FEMCA Bloc, the reason was that standards at both blocs were similar and procedures for homologation as well.

This agreement disappeared at 1996 due to the high noise level reached by the FEMCA mufflers from 1995. At the off road scene, the FEMCA mufflers contained in their list of the year 1995 were still valid for some years at EFRA races but those went illegal by year 2000 here in EFRA racing.

In respect of the ROAR homologation, it does not exist as such, so no mutual recognition has ever took place.

The procedure for EFRA homologation is easy, the period for submission ends the 1<sup>st</sup> of December, from 1<sup>st</sup> December to 28 February mufflers goes on track and bench test, and if approved those are included in the racing list for the racing season and published on the EFRA web page by the 1<sup>st</sup> of March.

The submission itself is easy as well, 2 samples of the muffler and a drawing must be submitted to the EFRA Homologation Officer before the mentioned date.

The homologation fee is established at the EFRA AGM by democratic decision of the member countries and it is for the year 2005 of 250 € with a second fee, if needed, of 125 €.

Please feel free to submit your mufflers/pipes for homologation, you are always welcome at EFRA!

EFRA's Homologation Officer for Mufflers is:

Sander de Graaf  
his address can be found  
on the 1/8<sup>th</sup> IC track page