

COMPETITOR GUIDANCE

Roll Over Protection Systems (ROPS) for Single-Seater Racing Cars

Introduction

This guidance sets out to clarify the ROPS requirements for Single-Seater Racing Cars competing in Circuit Racing and Speed Events (Sprints and Hill Climbs).

What is a Single-Seater Racing Car?

A Single-Seater Racing Car is defined in Section (B), Nomenclature and Definitions, of the MSA Yearbook.

What regulations apply to my vehicle?

This is quite a complex answer as there are a number of different applicable regulations which have been amended over time. In principle, if the ROPS complied with relevant regulations at the time it was built, then it will remain acceptable today.

ROPS on Single-Seater Racing Cars will have had to comply with one of the following sets of regulations to be eligible to compete in MSA National events (i.e. all events run under MSA National A, National B and Clubman permits);

MSA Yearbook Regulations

The MSA Yearbook, provides the basic regulations for National events. The ROPS requirements for Single-Seater Racing Cars are found in the current edition in Section (K) Vehicle Safety regulation 1.6.3. The chapter and regulation reference has changed over the years of publication, but the safety section of the MSA Yearbook has detailed a ROPS requirement specific to Single-Seater Racing Cars since 1977. The current specification was introduced in the 1987 edition.

The MSA Yearbook regulations give a design and material specification to which anybody can construct a ROPS that will be accepted at MSA National Events without the need for any further certification or documentation.

MSA Certification

If a ROPS manufacturer wants to build a ROPS using an alternative material specification or design principle to that detailed in the MSA Yearbook, then they can apply for certification. To achieve certification, the ROPS is subjected to a physical static load test, or simulation by an FIA approved test house. The MSA holds records of all ROPS certificates previously issued by the MSA going back to when the system began in 1972. Unless specifically noted as withdrawn these certifications remain valid.

The MSA currently offers two levels of certification; (1) National which is valid for any MSA National events and (2) International which is recognised as valid for any event worldwide held under FIA regulations. The National certification is relatively recent and the majority of MSA certificates issued prior to 2009 are valid internationally.

The MSA may also accept certificates issued by other FIA recognised ASNs (National Sporting Association).

For a certification to be valid the ROPS on the vehicle must match the design detailed on the certificate. Modifications from the certified design will invalidate the certification. The only exception to this is that a harness bar may be fitted in accordance with MSA regulations for National Events only, without affecting the validity of the certification.

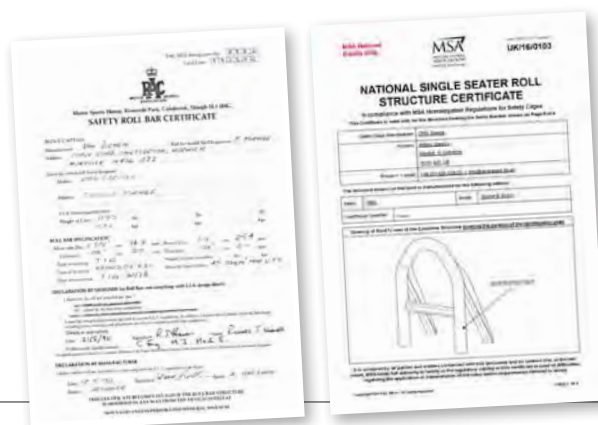
FIA Appendix J

Much in the same way as the MSA Yearbook provides the basic ROPS regulations for National Events, so too does FIA Appendix J for International events. In the current FIA Appendix J these regulations are found in Article 277, however this reference has also changed over the years of publication.

As an FIA recognised ASN, we accept vehicles built entirely to the FIA Appendix J for MSA National Events. However, to take advantage of the FIA Appendix J ROPS regulations, the vehicle as a whole will need to have complied with Appendix J, which covers many other aspects of the vehicle's construction, not only the ROPS.

FIA Formula Regulations

ROPS on a vehicle originally built for an FIA Single-Seater Formulae, for example; Formula 3, Formula 3000 etc. are accepted providing the ROPS remains unchanged from the original approved specification.





Do I need a ROPS certificate to present at Scrutineering?

If your ROPS is built to comply with the relevant MSA Yearbook regulations, FIA Appendix J regulations or certain FIA Formula regulations then no certification is required.

You will need to present a certificate at scrutineering if your ROPS is certified by either the MSA, FIA or an FIA recognised ASN.

Only official copies of certificates are valid for scrutineering purposes, official copies of MSA issued certificates are printed on MSA watermarked paper, or bear an MSA perforation.

To obtain an official copy of a certificate for a ROPS certified prior to 2008, please contact the MSA Sales department. For ROPS certified from 2008 onwards you will need to contact the ROPS manufacturer, they will be able to supply you with an official copy including an installation certificate unique to your vehicle.

More Info

If you have any queries regarding ROPS, please do not hesitate to contact the MSA Technical Department on 01753 765000 or technical@msauk.org.

How do I find out if my ROPS is certified

There are a few ways to find out, firstly any certified ROPS manufactured after 1st January 1997 is required to have an identity plate permanently affixed to the ROPS. From around 2008 this plate will detail the certification number.

If the identity plate does not detail the certificate number, then you can contact the MSA Technical Department and we can check for you.

Another way to find out would be to contact the vehicle or ROPS manufacturer, who will be able to tell you if the ROPS was certified. Or again, you can contact the MSA Technical Department and we can check for you.

What do I do if my ROPS does not comply?

If you have found that your vehicle does not comply with the relevant regulations and no certification exists, or it is certified but has been modified from its certified form, then your vehicle may not be eligible for MSA National Events. In this situation the ROPS manufacturer may be able to certify the ROPS, the manufacturer can contact the MSA Technical Department for more information on how to do this. If certification cannot be achieved then the ROPS may need to be replaced, updated or modified to be compliant with the regulations.

UPDATE AS OF APRIL 2017

MSA Regulations

Further to our recent publications and guidance on the approach taken to Single-Seater Racing Car ROPS, we are now circulating this additional clarification. The Sprint & Hill Climb regulation relevant to Single-Seater ROPS (post Period E/1960) is (S)10.1.6., which refers directly to (K)1.6.3 and the Circuit Racing regulation is (Q)19.14.1 which refers to section (K). Nowhere within these regulations does it refer to allowance for the ROPS to remain in accordance with period requirements, and nor for Sprints & Hill Climbs does it make allowance for a homologated ROPS. With this in mind, the following clarification details what is acceptable, and is issued to all competitors and officials alike.

As we have highlighted previously, any ROPS built in accordance - and still in compliance - with the relevant MSA regulations of the period remains acceptable. Primarily this applies to Chromoly ROPS from between 1977 and 1987, which were subject to the smaller dimensions of 35 x 2.0mm min. Note that the CDS ROPS requirements of 42.4 x 2.6mm min. have not changed since their introduction into the MSA regulations.

There is a further anomaly for clarification, which is Single-Seater Racing Cars falling into the gap between Period E (ROPS exempt) and 1977 (when ROPS regulations first appeared in the MSA Yearbook). Again, for such cars the ROPS is acceptable if it complies with the requirements that it was subject to in period, for example Championship or Formula regulations. Remember that the onus remains on the competitor to prove such compliance if there is any doubt. And note also that aluminium alloy ROPS are prohibited in all circumstances.

In all cases a ROPS complying with current MSA Yearbook regulation (K)1.6.3., relevant FIA Appendix J regulations, or with a valid ROPS homologation is of course also acceptable.

Please note that this sets out the approach to be taken with Single-Seater ROPS from this point forwards, and we intend to clarify the MSA Yearbook regulations to reflect these points more clearly for the future.

Head rests

Another point that has arisen is regarding the second paragraph of (K)1.6.3. and the requirement for the ROPS to incorporate a cross brace as a restraint for the driver's head.

Many single seater ROPS, particularly more recent ones, do not incorporate such a cross brace as a suitable headrest is provided on the chassis/car itself. We have advised MSA officials to adopt a common-sense approach on this point. If the car incorporates an effective headrest not attached to the ROPS, then the requirement for a further cross brace on the ROPS is not necessary. Again, we intend to clarify this aspect for the future.

ROPS extensions

We are aware that there are many Single-Seaters that have at some point had their ROPS extended, most commonly by addition of a hoop on top of the original main rollbar. Please note that such extensions have never been catered for in MSA regulations.

If an extension is present on a Single-Seater ROPS, the advice given to competitors and officials alike is as follows: If the original main rollbar (without extension) is level or higher than the top of the helmet - so as to act as an effective rollbar - then the presence of the extension above this is not a concern. However, if the extension is used to achieve the height for this helmet clearance, then it is not compliant. The only exception being a design fully complying with a valid ROPS homologation.

Single-Seater ROPS homologations

Since December 2016, we have issued more than 20 Single-Seater National ROPS homologations, many of which are retrospective to bring the ROPS in line with MSA requirements. If you require a copy of any of these please contact the relevant manufacturer directly.

At the point of publication, the list of newly issued Single-Seater National ROPS homologations is as follows:

Homologation Number	Manufacturer	Model
UK/16/0088	DJ	Firehawk, Firestorm, Wildfire
UK/16/0092	Jedi	Universal
UK/16/0094	OMS	25
UK/16/0095	OMS	28
UK/16/0096	OMS	3000M
UK/16/0097	Prototype Car Designs	S1100 Saxon
UK/16/0098	Johnny Walker	JW4 Formula IV
UK/16/0100	Mygale	FF200 Ecoboost (SJ01)
UK/16/0101	OMS	Hornet
UK/16/0102	OMS	CF
UK/16/0103	OMS	2000M
UK/16/0104	Force	PC, MV8
UK/16/0105	Force	WH
UK/16/0107	Pilbeam	MP62, MP72, MP82, MP86, MP87
UK/16/0109	Pilbeam	MP88, MP97
UK/16/0111	OMS	PR
UK/16/0112	OMS	25, 28, 3000M (Factory)
UK/16/0113	OMS	C2
UK/16/0114	Empire	Wraith
UK/17/0117	Empire	Evo
UK/17/0118	Medina Sport	J.L. (Formula Ford)
UK/17/0122	GWR	Raptor

Please note that list is not exhaustive and more models may be added at any time. There are also many older ROPS homologations covering Single-Seaters, queries relating to those should be directed to the MSA Technical Department.