



## CHALLENGE of the AMERICAS

### 2013 Technical Supplemental Regulations & Procedures

#### Hierarchy of Rules:

- 2013 Challenge of the Americas Supplemental Technical Regulations/Procedures
- 2012 Rotax Mojo Max Challenge Technical Regulations
- For the purpose of this document – Event as it relates to equipment usage, event is defined as a three day event consisting of Friday official practice including possibility of official timed last sessions of the day. Official practice, a timed qualifying session, pre final and final elements on each day Saturday and Sunday inclusive of EVENT.
- Rules contained within this document apply equally to all classes unless otherwise specified.
- Quiet Pit Rule will be in effect beginning 6:00 am Friday @ each event. A designated area will be provided to start engines. Please see Quiet Pit Rule procedure posting at each venue.
- Equipment is subject to inspection with possible penalty as presented on grid.

#### Categories

- |                   |               |  |
|-------------------|---------------|--|
| • Rotax Micro Max | Age 7-10      | Combined driver/ Kart weight 235 lbs. Gear ratio 14/73 |
| • Rotax Mini Max  | Age 9 -12     | Combined driver / Kart weight 265 lbs.                 |
|                   |               | <i>Gear ratio 13/82</i>                                |
| • Rotax Junior    | Age 13 – 16   | Combined driver / Kart weight 320 lbs.                 |
| • Rotax Senior    | Age 15 +      | Combined driver / Kart weight 364 lbs.                 |
| • Rotax Masters   | Age 15+ / 32+ | Combined driver / Kart weight 405lbs.**                |
| • Rotax DD2       | Age 15+       | Combined driver / Kart weight 382bs.                   |

- **Rotax DD2 Masters      Age 32+      Combined driver / Kart weight 397lbs.**  
 \*\* Driver age 15+ must weigh 190 lbs with normal safety equipment less helmet

**Data Acquisition** gauges must be mounted such that protrusion above the plane of the steering wheel is kept to a minimum, specific control of this dimension per CIK regulations does not apply.

**Data Acquisition** per 2012 Max Challenge / CIK regulations – RPM @ high tension plug lead – two (2) temperatures – speed of one (1) wheel – X/Y acceleration – lap times – *location (GPS)* Lambda sensor not allowed in competitive elements.

**Radios** – electronic communication with drivers, either one way or two way is not allowed.

**Scoring Transponder** body must be located as follows: Transponder may not be located forward of the tangent point defined by the radius transitioning to side of the seat and seat back. Every effort should be made not to mount transponder directly above any solid material between transponder and track surface

**Cameras** mounted on chassis other than described in this document, will not be permitted without prior written permission of both event Technical & Race Directors.

**Mounting Procedures** – *Only after use of cameras has been allowed, mounting procedures must be followed. Only one (1) camera per kart is permitted; all camera mounting shall be subject to inspection and shall be subject to removal by technical personnel at any time during event.*

**Go-Pro** type cameras, only approved mounting location is on front number panel directly below numbers, and be fixed in a horizontal forward facing position.

**“Smarty Cam Mounting”** or similar type may be mounted on welded main frame rail seat strut only. Camera mounted in this position must be level or below highest portion of seat.

Only mounting hardware supplied with “Smarty Cam” are permitted. Camera must be facing forward. Images of these mounting kits are available at

<http://www.smartycam.com/on-board-camera/installation-kart-no-radiator.htm>

**All cameras must have a tether retention system! Cameras may never be mounted on driver’s helmet or driver’s person. Violation may result in position penalty and or fines.**

*We encourage competitors name and contact information be on camera.*

**Ambient temperatures** – fuel, tires must be ambient temperatures when presented to grid. When quiet pit rules are in effect, engines must be ambient temperature when presented on grid

### **Equipment usage /declarations**

- On Friday each class will have a designated time to declare all equipment. These times will be posted Thursday morning at each event. Class specific declaration times will change at each event. No equipment may be declared after class designated time has passed.
- Two engines and one chassis only may be declared for event.
- Micro Max & Mini Max will be allowed one set (4) tires for event
- Junior Max, Rotax International, Rotax Masters , DD2 and DD2 Masters will be allowed one set (2 front 2 rear) tires each for Saturday and one set (2 front 2 rear) Sunday.

- All classes must qualify on “sticker/non-scuffed” tires on Saturday.
- Jr Max, Rotax International, Rotax Masters, DD2, DD2 Masters must qualify on “sticker/non-scuffed” tires on both days.
- Friday practice, all equipment must be in full compliance with RMC regulations, including fuel/oil, weight, gear ratio, tire compound and tire size.
- As class designated declarations times close, competitors in each class must use only declared equipment.
- Damaged chassis may be replaced with like brand and model with no penalty. Must demonstrate damage to event Technical Director prior to replacement.

## **CHASSIS**

### **Ballast**

- Over 5 lbs. must be secured with two (2) minimum dia. 6mm bolts with double lock nuts. 5 lbs or less may use one minimum 6 mm dia. bolt with double lock nut.

**Chain Guards** - Minimum requirements are single plastic strap (2 ½ in. wide). Minimum coverage from axle centerline at rear of axle sprocket, continuing forward above axle sprocket to clutch.

It is encouraged to use full coverage clutch / chain guard coverage such as OTK, KG, Tillet or similar chain/clutch guards. One of several aluminum clutch guards on the market is also encouraged. Event Technical Director has final approval of chain/clutch guard system; event Technical Director Decision is final.

- **Per 2012 Max Challenge Technical Regulations** – IRMCE, RMCGF require chassis with valid CIK – FIA Homologation.

### **Micro Max Class**

- Maximum wheelbase 950 mm Minimum 900 mm
- Maximum over all width including all body work 50 inches.
- The highest point at the center of the seat back shall be no lower than 12 inches (30.5 cm) from track surface.
- CIK axle wall thickness requirements are not applicable in Micro Max.

### **Mini Max Class**

- Wheelbase – 41 inches (1041.4) maximum.
- Maximum overall width 52.75 inches including side protection
- *Minimum rear track width 42”*
- The highest point at the center of the seat back shall be no lower than 12 inches (30.5 cm) from track surface.
- CIK axle wall thickness requirements are not applicable in Mini Max class.

### **Body work – bumpers – nerf bars**

- **All classes – CIK rule 2.5.3 rear wheel protection**
- In all conditions, rear protection must at no time protrude beyond the external plane of the rear tires.
- **Junior Max, Senior Max, Rotax Masters**
- **CIK Rule 2.7.1.4**
- Side pod protrusion rule outboard of the quadrilateral formed by the four wheels is applicable.

### **“Wet Conditions”**

- Side body work may not be located outside the plane passing through the outer edge of rear tires.
- Rain shield may be used to protect intake silencer and brake systems. Intake, shield may not be attached to engine/engine components or body work. Brake system, shield may be attached to seat struts and or chassis.

### **CIK Rule 2.5.3 Rear wheel protection**

- In all conditions, the rear protection must at no time protrude beyond the external plane of the rear wheels.

### **Rear Protection- Side Body Work**

- CIK Homologated plastic rear protection system required.
- Modification of body work is limited to right side for radiator clearance only.
- No alteration of front or side bumper system is permitted. In this instance, bumper is defined as “steel tubing elements.”

### **Micro Max – Mini Max**

- All regulations previously described apply equally to Mini Max and Micro Max class unless specified otherwise in this section.
- Side pods may protrude maximum of ½ inch past outer edge of rear wheels in all conditions, including “wet” conditions
- Micro Max-Maximum over all width including all body work 50 inches.
- Mini Max-Maximum overall width including side pods is 52.75 inches
- *Minimum rear track width 42 inches*
- Cadet nose cone may be of full size design with maximum outboard protrusion of 40 mm per side.
- Full coverage rear bumper is mandatory. Full coverage is defined as covering inside half of each rear tire at all times, may not protrude outboard of outer edge of rear tires, under all conditions.
- CIK type plastic rear protection system is preferred. Industry standard is also accepted, with closed loop “elephant ear” design also preferred.
- Bottom bar between frame rails is required.
- Top bar may not be located lower than height of rear axle, nor higher than plane of rear tires.
- Minimum bar outside diameter 16mm.
- **Technical Director Decision is final acceptance of rear bumper design.**

### **Tires**

- All tires “wet” and “dry slicks” must be mounted and used according to rotational markings.
- No tire warmers, tires must be ambient temperature upon presentation on pre grid, and are subject to verification at that time.
- No tire treatments of any kind allowed. *Upon verification of violation, competitor will be suspended from The Challenge of the Americas and all RMC events under USRMC jurisdictions for a period of 12 months. No appeals.*

### **Junior Max, Senior Rotax, Rotax Masters**

- Bead locks (3) required per CIK requirements with dry slicks.
- Front slicks Mojo D1 or D2 4.50 x 10-5      Rear slicks Mojo D1 or D2 7.10 x 11-5
- Front “wet” Mojo W2 4.0 x 10-5      Rear “wet” Mojo W 2 6.00 x 11-5
- Maximum mounted front tire width is 140mm.
- **Junior Max TIRE COMPOUND IS D1, Senior Max and Rotax Masters TIRE COMPOUND IS D2.**

### **DD 2 & DD 2 Masters**

- Bead locks (3) required pre CIK requirements with dry slicks.
- Front slicks Mojo D3 4.50 x 10-5      Rear slicks Mojo D3 7.10 x 11-5
- Front “wet” Mojo W2 4.0 x 10-5      Rear “wet” Mojo W2 6.0 x 11-5
- Maximum mounted front tire width is 140mm

### **Micro Max – Mini Max**

- No bead locks required
- Front & Rear Slicks Mojo D1 4.50 x 10-5
- Front & Rear “WET” Mojo W2 4.0 x 10-5
- Maximum mounted tire width 145mm
- Maximum tire circumference at any temperature 32.25 inches  
Maximum tire circumference is measured on tire center line with flat tape measure, track “pick up” to be removed with rag or gloved hand only.

### **SAFETY EQUIPMENT**

- **Safety equipment is a post race tech item.**

#### **Helmets**

- Snell 2005 or later, *Snell K-98 and Snell M 2000 NO LONGER ACCEPTED*
- Current Snell, British Standards, CIK, WKA, IKf accepted helmets unless otherwise stated.
- Junior Helmets - Under 15 yrs of age, CIK CHM 2007 or any approved WKA or IKF helmets
- Neck “braces” mandatory in *Micro Max, Mini Max and Junior Max* classes. Unaltered!
- Event organizer or track officials may require senior classes to use “unaltered” neck “braces”
- Micro Max, Mini Max – *SFI 20.1 or 20. 1/2* Certified chest protector must be presented at pre-tech inspection and worn at all times while on track. Must be presented upon request at any time during event.

#### **FUEL AND OIL**

- Spec oil will be 2013 ROTAX XPS full synthetic. Ratio between 32 to 1 and 50 to 1.
- Official fuel is VP 93 Must be purchased at track from event promoter.

- Technical inspection of fuel is not limited to Digatron test only.

### Engines

- Per 2012 Max Challenge Regulations.
- **PULSE LINE** - Must be one single unit. No reducers or restrictors allowed. Must be attached as a single unit to pulse fitting.

### Spark Plug

- NGK BR \_\_\_EG of any heat range is allowed, in addition to Denso spark plugs listed in 2012 Max Challenge regulations
- Spark plug washer must be in place. Exception thermal couple for temperature gauge in use.

### Carburetors

- All classes, inner pilot jet must be completely seated (tight)
- Micro Max must use combination #2 - 8.5 insert – 3.6 floats - #60 idle jet # 60 inner idle jet
- Micro Max main jets limited to those supplied in Rotax Micro Max jet package, 115-118-120-122-125-128-130. 132 is not allowed.
- **Micro Max – Mini Max** –Event organizers may specify single main jet or choice of main jets for events.
- **Mini Max must use combination #1 - 12.5 insert -5.2 floats – #30 idle jet #30 inner idle jet**
- Mini Max intake restrictor Blue or Black anodized Rotax part # 267 535, unaltered.

### Exhaust system

- Use of (4) four Rotax exhaust springs allowed.
- Silicone or like substance may be used for sealing exhaust connection and dampening of exhaust springs.
- *Lambda sensor not allowed in competitive elements.*

### Micro Max

- Exhaust packing must be unaltered, original single matt with no more than 20% loss of original length due to burn back along longitudinal axis.
- Matting is measured at its shortest length for this measurement.
- On Friday after last timed practice all Micro Max entries will be called to Technical inspection for supervised installation of new exhaust matting. After installation, exhaust will be sealed for remainder of event. **Competitor's responsibility to provide new matting, both steel and fiber.**
- PN 297983 is a steel exhaust wrap used in addition to current wrap/packing. Please contact your Rotax service center for installation procedures. 2 clamps required!
- Any attempt to circumvent this rule will be considered a violation of this rule.