

# **1. APPENDIX G – RallyMoto™ REGULATIONS**

## **1.1 Motorcycle Eligibility**

### **1.1.1 Motorcycle Registration**

Each motorcycle entered in a NASA Rally Sport event must have a current and valid motorcycle registration.

### **1.1.2 Street Legality**

Every motorcycle must carry all the equipment required by State and Federal laws to operate on the public highways of the state within which the rally is occurring. Required equipment must remain in working operation throughout the running of the event. Any modifications authorized by these rules must still be street legal.

### **1.1.3 Motorcycle Insurance**

All motorcycles entered must have coverage meeting or exceeding the minimum insurance coverage levels required by the state in which the motorcycle is registered.

### **1.1.4 Motorcycle Eligibility**

Motorcycles eligible for events must be production based two wheel vehicles. Custom bikes specially built from the ground up for competition use are prohibited. To this end, the frame must remain original but may be modified to accommodate authorized additional equipment. Exterior panels, including fenders and cowlings, must be present and visually similar to the original components.

In addition to the class definition, all motorcycles must meet the safety requirements of the GRR RallyMoto™ Appendix 1.3.

## **1.2 Vehicle Class and Preparation Regulations**

Motorcycle class and preparation regulations will be per the requirements of the individual event organizer and/or series, but all motorcycles must meet these NASA Rally Sport RallyMoto™ Regulations.

### **1.2.1 General Requirements**

Checks may occur at any time during the rally for the proper functioning of any equipment listed in these General Requirements. At any moment during the event it is each competitor's responsibility to prove to technical stewards or sporting stewards that their motorcycle conforms to the regulations in their entirety.

### **1.2.1.1 Lights**

- a. One headlight minimum.
- b. A red rear light with a minimum of a single 21 watt or greater bulb, or multiple lights adding up to 21 watts or more. The use of halogen bulbs recommended.
- c. A FIM-homologated rear stop light is recommended.

Lights and red rear lights must be switched on throughout the race so as to facilitate overtaking of and by other competitors or organizers vehicles. Failure to respect this regulation will result in a one minute penalty per stage or transit where it is observed. All competitors are expected to carry necessary spares.

### **1.2.1.2 Wheels and Tires**

#### **1.2.1.2.1 Wheels**

- a. The wheels are free, regarding the maximum and minimum diameter and width.
- b. Wheels made from forged magnesium are forbidden (including OEM magnesium wheels).

#### **1.2.1.2.2 Tires**

- a. The choice of tire is free.
- b. Inner tubes are allowed.
- c. The use of studded tires is forbidden.
- d. The use of any device for maintaining the performance of the tire with an internal pressure equal to or less than the atmospheric pressure is forbidden. Mousse, Tireballs, or other non-standard inflation systems are prohibited.
- e. The interior of the tire (either within the inner tube or the space between the rim and internal part of the tire) must be filled only with air or nitrogen.
- f. Tires for tarmac events will be limited by the supplemental regulations of the event.

### **1.2.1.3 Exhaust System**

Even where the GRRs for a class authorize the replacement of the original silencer or complete exhaust system, motorcycles participating on an event run on public roads must always be fitted with an exhaust silencer that conforms to the State and Federal regulations.

Any hot tubes must be efficiently protected so as to not to cause burns.

Exhaust systems must not be of a temporary nature. Exhaust gases must exit at the extremity of the system.

Parts of the frame may not be used to carry exhaust gases.

The maximum permitted noise level from the exhaust system shall be 94 db (A scale) with the engine idling at 3500 RPM. The measurement will be taken at a distance of 50 feet from the bike in an area 45 degrees either side from the centerline of the exhaust outlet. The test shall be on level ground and free from obstruction.

USFS approved spark arrestors (Title 36 Code of Federal Regulations 261.50) are required for all motorcycles.

#### **1.2.1.4 Identification**

Each motorcycle shall provide a 5" high by 8.5" wide space on each side of the motorcycle for identification numbers. The organizer will provide numbers to be affixed to these spaces. Any other large numbers on the bike must be covered.

No indication of class is required.

#### **1.2.1.5 Miscellaneous**

- a. A horn with a 90 Db minimum noise level is required.
- b. A rear mirror is required.

### **1.2.2 Super Production Class**

#### **1.2.2.1 Definition**

This group is comprised of machines derived from motorcycles to which certain modifications have been made and / or parts added that make them no longer eligible for the Production group, as well as machines produced in small numbers.

#### **1.2.2.2 Engine**

The displacement of the engine defines the sub-class. Two-stroke motorcycles must multiply their displacement by 2.0 when using the following chart.

<b>Class</b>	<b>Minimum Displacement (cm3)</b>	<b>Maximum Displacement (cm3)</b>
Super Production 1	650.001	none
Super Production 2	450.001	650
Super Production 3	250.001	450
Super Production 4	0	250

For Super Production classes 2, 3, and 4 preparation, repairs, and changes are free.

For Super Production class 1, the lower engine cases and crankshaft must be from a production engine available on a motorcycle that would be eligible for Production class. Preparation is free. Repairs during the race are free.

### 1.2.2.3 Frame

The materials for frame construction are free, with the exception of titanium being excluded. Titanium is allowed for the rear sub-frame and seat support if originally specified by the manufacturer.

## 1.2.3 Production Class

### 1.2.3.1 Definition

- a. Motorcycles generally available for purchase by the general public, with limited modifications to make them more suitable for competition with respect to safety and reliability only.
- b. There must be at least 200 units of the specific make and model and of a specific model year commercially available in the United States. Commercially available shall be interpreted as meaning that the general public is able to obtain a price and reasonable delivery date for the specific make and model.
- c. Machines in the Production class must be standard, as delivered by the manufacturer. Machines must conform in all ways to the commercial catalog issued by the manufacturer and be freely available for sale.
- d. Following a report by the Stewards, the event reserves the right to accept or not a machine in this group.
- e. Parts may be removed by Stewards so as to be checked at any time during the event.

### 1.2.3.2 Engine

The displacement of the engine defines the sub-class. Two-stroke motorcycles must multiply their displacement by 2.0 when using the following chart.

<b>Class</b>	<b>Minimum Displacement (cm3)</b>	<b>Maximum Displacement (cm3)</b>
Production 1	650.001	None
Production 2	450.001	650
Production 3	250.001	450
Production 4	0	250

The engine must be stock, along with fuel system (carburetor or EFI) and accessories (alternator, starter, and the complete ignition system). It must remain as originally constructed.

### **1.2.3.3 Frame**

The materials for frame construction are free, with the exception of titanium being excluded.

### **1.2.4 General Requirements**

All technical modifications are forbidden if they are not expressly authorized.

The original repair manual (as used by dealers – no photocopies accepted) must be presented at the same time as the machine during scrutineering. Riders presenting bikes of questionable legality without documentation will be moved to Super Production class.

Changing parts during the event with standard parts is free.

#### **1.2.4.1 Authorized Modifications**

All items, which are not specifically allowed or referred to as free below, must be of original manufacturer's specification. Minor changes (such as a hole in the fairing, etc) resulting from authorized modifications are permissible.

It is the entrant's responsibility to provide specification documents, where necessary, to substantiate the eligibility of all components, which were added under the following authorized modifications and might have an influence on performance. The specification documents must demonstrate both function and capability of the component.

The following items are free and may be modified:

##### **1.2.4.1.1 Free Mechanical Items**

- a. The presence of the speedometer and rev counter, provided that their location is used to fit navigation accessories and that the speed of the machine can be checked by the rider.
- b. The handlebar along with levers, handlebar clamps and cables, if they are featured in the constructor's catalog. If the diameter of the handlebar is different from that of standard, only handlebar mounts sold for this type are acceptable. All modification or machining of clamps is forbidden.
- c. The choice of exhaust silencer is free, but if changed during the event must be replaced with an identical model.
- d. The fitting of a steering damper.
- e. Fuel tanks.
- f. Water tanks (but not the means of engine cooling).
- g. The air filter. The air box and its layout must remain standard. The location of the air intake is free and may be moved.
- h. The seat.
- i. One rear mirror may be removed if two are fitted as standard.

- j. The luggage rack.
- k. Stand cut out switches.
- l. The size of the foot pegs (if featured in the constructor's catalog).
- m. The dimensions of the brake pedal (if featured in the constructor's catalog).
- n. The reinforcement of the standard kick start.
- o. Secondary transmission (engine sprocket, rear sprocket, chain). Only the width of the chain may be changed, not the throw.
- p. Brake pads, brake hoses and brake fluid.

#### **1.2.4.1.2 Free Suspension Items**

- a. Valving within the shock absorbers. The shock body must remain stock.
- b. Fork springs (the stanchions, tubes and fork yokes must be standard).
- c. The rims and spokes of the wheels may be changed for reinforced parts provided the hub remains standard.
- d. Competitors are allowed to fit a kick start, in addition to an electric starter, providing there is the possibility to do so within the model range and that the parts are featured in the manufacturer's catalog.

#### **1.2.4.1.3 Free Protections Items**

- a. The presence of a headlight protection grill.
- b. The engine bash plate.
- c. The presence of hand protectors.
- d. The presence of fork protectors.
- e. The presence of brake protectors.

#### **1.2.4.1.4 Free Electrical Items**

- a. The headlight and rear light.
- b. Modifications to the electrical system, so as to fit the headlight.
- c. Modifications to the electrical system, so as to fit the indicators.
- d. Modifications to the electrical system, so as to fit the rear light.
- e. Indicators may be removed.
- f. Spark plugs.

#### **1.2.4.1.5 Additional Accessories**

All accessories, which have no influence on the motorcycle's behavior, for example equipment that improves the aesthetics or comfort of the motorcycle, are allowed without restriction. In no case may these accessories increase the engine power or influence the steering, transmission, brakes, or road holding, even in an indirect fashion. All controls must retain the role laid down for them by the manufacturer. They may be adapted to facilitate their use and accessibility, for example a longer brake lever, an additional flange on the clutch pedal, etcetera. The following items are explicitly allowed:

- a. Measuring instruments such as speedometers, GPS, gauges, etcetera may be added.
- b. Fasteners and their locking mechanism are free.
- c. Any locking system may be used for the cap of the petrol tank.

#### **1.2.4.2 Forbidden Modifications**

Any modification not authorized above is implicitly forbidden. In addition to any implicitly forbidden modifications, the following modifications are explicitly forbidden:

- a. All modifications increasing the performance of the engine, clutch, or primary transmission. The cooling system, in its entirety, and the original starting system must be conserved.
- b. All modifications to the electrical circuit other than those mentioned as free.
- c. All modifications to the braking system other than those mentioned as free.
- d. All modifications or reinforcing of all or part of the frame, as well as all change of materials, except reinforcement designed to carry extra tanks or luggage racks.
- e. All changes of material, on whatever parts (even if these feature in the manufacturer's catalog) which do not correspond to that fitted as standard to the model in question. The year of reference being not that of registration as featured on the registration documents but that given by the manufacturer and corresponding to the series number.
- f. All changes to appearance, dismantling or taking off of parts, accessories or equipment other than those mentioned as free.

### **1.3 Safety Requirements**

#### **1.3.1 Road Worthiness**

All competing vehicles must be roadworthy and, the following items in particular must be adequate and functioning properly:

- a. All brakes
- b. Horn
- c. All legally required exterior lights
- d. Tires, including all spares
- e. Exhaust system

Note that the laws of the state in which the motorcycle is registered supercede these regulations. Example: Indicator removal is allowed by these GRRs. If your state requires them, you must have them.

#### **1.3.2 Transporting Items**

It is understood that within these rules, when referring to items, the word "carry" can mean any of the following:

- stowed within a compartment attached to the motorcycle

- attached to the motorcycle
- carried within the clothing worn by the rider
- carried within a pack worn by the rider

If the item is not to be stowed within a compartment or affixed to the motorcycle, the rider must present at scrutineering all clothing or packs to be used.

### **1.3.3 First Aid Kit**

A comprehensive first aid kit shall be carried. The first aid kit at a minimum must include:

- a. Antiseptic (ointment or liquid)
- b. Gauze pads or rolls
- c. Adhesive tape
- d. Arm sling
- e. Safety pins
- f. Scissors
- g. one "space blanket"
- h. First aid manual.

### **1.3.4 Warning Devices**

The rider must carry one standard, full-sized, warning triangle meeting Federal Motor Vehicle Safety Standard #125.

Each rider must carry a full color laminated 8.5"x11" "Green OK / Red Cross" paper. The design must meet GRR Appendix A11 and A12, and is to be supplied by the rider.

### **1.3.5 Helmets**

Each rider must wear at a minimum a FIM spec helmet. Certifications that meet this specification are:

- a. USA SNELL M 2000
- b. Europe ECE 22-04
- c. Europe ECE 22-05 'P'
- d. Great-Britain BS 6658 GRADE A
- e. Japan JIS T 8133 : 2000

### **1.3.6 Body Protection**

Each rider must wear a back brace/protector. It is strongly recommended that full "body armor" also be worn.

### **1.3.7 Boots**

Motocross-style boots must be worn. Construction boots, road boots, touring boots, road racing boots, or similar are not acceptable.



## **1.4 GRR Applicability**

The entirety of the GRR, excluding Section 3 (the technical regulations for four wheeled automobiles), shall apply to RallyMoto™ competitors. It is to be understood that where the GRRs mention a “car” that this shall mean “motorcycle” to RallyMoto™ competitors. It is to be understood that the single RallyMoto™ competitor is also the driver and the navigator, as applicable, when considering Section 1 and Section 2.

Common sense exceptions:

2.5 – Registration. RallyMoto™ competitors aren't required to present log books at registration or scrutineering.

2.16 – Special stages. As motorcycles don't have safety harnesses or window nets, these devices are not required to be in use.

2.16.7.1 Warning Triangles. As the rider has only one triangle, the rider must place their only triangle 150' behind the bike.

2.14 – Route Book. In addition to the normal route book, an additional route book will be provided in a format that is 2¼ inches wide for use in a standard route roll chart holder.