

# 2009 Replicast Challenge

## 2009 Replicast Team Racing Challenge

### APRILIA RS125 TECHNICAL SPECIFICATIONS (2009)

**EVERYTHING THAT IS NOT AUTHORIZED AND DEFINED IN THESE RULES IS FORBIDDEN**

#### **1. MACHINES**

Aprilia RS 125 production models, as produced from 1<sup>st</sup> May 2008. Must be full US specification models

The machines used are allowed only limited modifications. Most modifications are allowed only on safety and cost control grounds.

All motorcycles must comply in every respect with all requirements for Road Racing as specified in the Challenge regulations.

The appearance from both front, rear and profile of machines must (except when otherwise stated) conform to the homologated shape. The appearance of the exhaust system is excluded from this rule.

#### **2. DISPLACEMENT CAPACITY**

The displacement must remain at 124.9cc and the bore and stroke (54 x 54.5) must remain as originally produced.

#### **3. MINIMUM WEIGHT**

The minimum weight at post race control must not be less than 224lbs, this includes oil and water but excludes fuel.

At any time during the event, the weight of the whole machine (including the tank) must not be less than the minimum weight, with a tolerance of 2lbs.

#### **4. NUMBER PLATE COLORS**

The background colors and figures for Replicast Challenge and Team Challenge are:

**FRONT**

Red background with white numbers

White background with black numbers

**REAR**

White background with black numbers – Both Classes

Placed in accordance with the CCS regulations.

#### **5. CARBURETION INSTRUMENTS**

Carburetion instruments must remain as homologated. Carburetor jets and needles may be Replaced.

No modification, polishing or cutting is allowed.

Only the 28mm bodied standard carburetor is permitted.

Electronic or mechanical enriching devices must remain installed and active (If the Carburetor is changed from one model to another, the appropriate wiring loom must also be Installed and be operative).

Bell mouths must be as originally produced by the manufacturer for the homologated machine.

Throttle must be standard, quick action throttles are not permitted.

## **6. FUEL**

All machines must function on unleaded fuel.

## **7. FRAME BODY AND REAR SUBFRAME**

Frame must remain as originally produced by the manufacturer. The sides of the frame body

may be covered by a protective part made of composite material.

Nothing can be added by welding or removed by machining from the frame body.

Engine mounting brackets or plates must remain as originally produced by the manufacturer.

## **8. FRONT FORKS**

Forks structure (spindle, stanchions, bridges, stem etc) must remain as originally produced by the manufacturer.

Standard original internal parts of the forks may be modified.

After market damper kits or valves may be installed.

The fork caps can be modified or changed to add spring preload/compression and damping adjusters.

Dust seals can be modified, changed or removed providing the fork remains totally oil sealed.

Any quantity or quality of oil can be used in the front forks.

The height and position of the front fork in relation to the fork crowns is free.

A steering damper may be added but may not act as a steering lock device.

## **9. REAR FORK (Swing Arm)**

Every part of the rear fork must remain as originally produced (including rear fork pivot bolt and rear axle adjuster).

Rear wheel stand positioning (support) brackets may be added by welding or bolts.

Brackets

must have rounded edges viewed from all sides. Fastening screws must be recessed.

## **10. REAR SUSPENSION UNIT**

Rear suspension unit (shock absorber) may be modified , but the original attachments to the frame and rear fork must be used and the rear suspension linkage must remain as originally produced.

Rear suspension spring may be changed.

## **11. WHEELS**

Wheels must remain as originally produced by the manufacturer (any wheel from eligible models may be used).

The speedometer drive may be replaced with a spacer.

The cushion drive for the rear wheel must remain as originally produced for the standard wheel.

No modification of the wheel axles or any fixing or mounting points for front brake caliper are authorized. Spacers can be modified. Modifications to the wheels to keep spacers in place are permitted.

## **12. BRAKES**

Brake discs must remain as originally produced by the manufacturer.

The front and rear caliper (mount, carrier, hanger) must remain as originally produced.

The front and rear master cylinders must remain as originally produced, but the reservoirs may be changed for aftermarket products.

Front and rear hydraulic lines may be changed for after market braided hoses.

Front and rear brake pads may be changed.

Air scoops are not permitted.

## **13. TYRES**

The control tire for the series is the XXXXXX supplied by XXX Competition.

Any modification (cutting, grooving) is forbidden.

The use of tire warmers is allowed.

## **14. FOOT RESTS / FOOT REST CONTROLS**

Foot rests / Foot rest controls may be relocated but brackets must be mounted to the frame at

the original mounting points.

## **15. HANDLE BARS AND HAND CONTROLS**

Handle bars may be replaced (does not include brake master cylinder).

Handle bars and hand controls may be relocated.

Unused switches can be removed but electric starter switch and engine stop switch must be located on the handle bars in accordance with CCS Standing Regulations.

## **16. FAIRING / BODYWORK / FUEL TANK COVER**

Fairing, seat, bodywork and fuel tank cover, may be replaced with cosmetic duplicates for racing purposes. The use of carbon fiber or exotic materials is forbidden.

(PAINTWORK MUST BE WHITE WITH THE SERIES LOGOS IN THE CORRECT POSITIONS AS IN DIAGRAM (a) attached) FRONT MUDGUARD MAY BE ANY COLOUR.

The original combination instrument cluster and bracket must remain standard. All other fairing brackets may be altered or replaced. Exotic materials are forbidden.

The original air ducts must remain standard. Particle grills (if installed) may be removed.

Front mudguards may be replaced with a cosmetic duplicate of the original and may be spaced to allow correct tire clearance.

Rear mudguard fixed on the swing arm can be modified or changed but the original profile must remain. Exotic materials are forbidden.

## **17. FUEL TANK**

Fuel tank must remain as originally produced with an operable petcock as installed at the factory.

Fuel tank cover may be replaced with a cosmetic duplicate.

Fuel tanks with a breather must discharge into a catch tank made of a suitable material.

### **18. SEAT AND SUPPORT**

Seat, seat base and associated bodywork may be replaced with parts of similar appearance. The seat may be modified to lower the seat height for smaller riders, under no circumstances may the sub-frame be altered to accommodate such changes. The appearance from both sides and rear must conform to the original silhouette.

### **19. WIRING HARNESS**

The original wiring loom may only be modified as follows:  
The unused wire loom elements supplying current to indicators, horn, ignition contact and lights etc may be unplugged and or removed (no cutting is allowed).  
The wiring loom may be relocated on the machine but no cutting of any wires is permitted.

### **20. BATTERY**

The battery may be replaced but must remain in the standard location.

### **21. RADIATOR AND COOLING SYSTEM**

The radiator must remain standard and no additional radiators may be added. Protective meshes can be added in front of the radiator. The radiator tubes to and from the engine can be changed, but the system must be maintained, with its original tanks. Thermal switches, water temperature sensor and thermostat can be removed from the cooling system.

### **22. AIRBOX**

The airbox must remain as originally produced by the manufacturer (no modifications are permitted).  
The air filter element may be modified, removed or replaced.

### **23. CYLINDER HEAD**

Must remain the original unit.

### **24. CRANKSHAFT**

No modifications are allowed (including polishing and lightening).

### **25. CONNECTING ROD**

No modifications are allowed (including polishing and lightening).

### **26. PISTONS**

May be modified using the original Aprilia genuine parts for this model.

### **27. PISTON RINGS**

No modifications are allowed.

### **28. PISTON PINS AND CLIPS**

No modifications are allowed.

### **29. CYLINDER**

May only Use the original Aprilia genuine part for this model.

### **30. REED BLOCK**

This part is supplied under a single part number (0224387) and the Reed Petals are supplied as a separate part (number 0224430). The petals must remain standard and the cage must remain complete with no parts cut away or any material added.

### **31. CRANKCASE AND ALL OTHER ENGINE CASES**

No modifications to these parts are allowed except polishing and matching.

### **32. TRANSMISSION / GEARBOX**

No modifications to the gearbox or selector mechanism are allowed. Countershaft, sprockets, chain pitch and size may be changed. The sprocket cover can be modified or removed. No quick shifters or ignition interruption systems are permitted.

### **33. CLUTCH**

No modifications are allowed, except for replacing the friction and drive plates (the number of plates and their ratio must remain as the standard model). Clutch springs may be replaced.

### **34. IGNITION / ENGINE CONTROL SYSTEM (Cdi)**

Must remain the standard unit and may only be modified as in diagram (b) and this may only be carried out by Joker Racing Products The unit must remain standard in every other respect.

### **35. GENERATOR, ALTERNATOR & ELECTRIC STARTER**

The ONLY part which may be modified is the ignition pick up (part no. 0265157). No other modifications are permitted. The electric starter must operate normally and always be able to start the engine throughout the event. The standard connections must be maintained to both the starter and generator.

### **36. IGNITION SWITCH AND KEY**

These parts must remain on the bike and in working order.

### **37. EXHAUST SYSTEM**

The exhaust system may only be changed for the Arrow system as supplied by JRP. The main part may not be altered or cut in any way, but the manifold stub may be machined to any length from either of the Arrow units supplied. Wrapping of the exhaust system is not permitted.

### **38. FASTENERS**

Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners may not be used. The strength and design of any replacement must be at least equal to the original part. Fairing/bodywork fasteners may be changed to the quick connect type, but aluminum

fasteners may only be used in non-structural locations.

**39. AUTOLUBE SYSTEM**

Autolube or pre-mix is allowed, however the autolube system (including the oil tank and pump) must remain.

**THE FOLLOWING ITEMS MAY BE ALTERED OR REPLACED FROM THOSE FITTED TO THE HOMOLOGATED MOTORCYCLE.**

- Any type of lubrication, brake or suspension fluid may be used.
- Any type of spark plug.
- Any inflation valves.
- Wheel balance weights may be discarded, changed or added to.
- Gaskets and gasket materials.

**THE FOLLOWING ITEMS MAY BE REMOVED**

- Upper chain guard.
- Bolt on accessories on the rear sub-frame.

**THE FOLLOWING ITEMS MUST BE REMOVED**

- Headlamp, rear lamp and turn signal indicators.
- Rear view mirrors.
- Horn.
- License plate bracket.
- Tool box.
- Helmet hooks and luggage carrier hooks.
- Passenger foot rests.
- Passenger grab rails.
- Safety bars, centre and side stands (fixed frame brackets must remain).

**ADDITIONAL EQUIPMENT**

Additional equipment not on the original homologated motorcycle may not be added (ie data acquisition, computers, recording equipment etc). Telemetry is not allowed. The only potentiometers and sensors allowed are those fitted as original equipment on the motorcycle as homologated.

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*I have read and understood the technical regulations for the series and agree to be bound by them. If at any time a technical issue arises that is unclear to me or any of those responsible for the preparation of my machine, I will seek written clarification from IN Competition BEFORE altering, removing or otherwise modifying any part of the motorcycle.*

*Signed ..... (Competitor)*

*Print Name.....*

*Signed .....(Parent or Responsible Adult)*

*Print Name.....*

*Date .....*

*(A signed copy of this document must be returned with the series registration documentation*