

# 600cc Micro Sprint Universal Engine Rules

## 1. Terms and conditions

a) Internal Stock parts – must use stock original manufacturer parts for the particular year and make engine, these parts can not be modified except where noted, if the rules do not state that you can do it, you can not do it. No mixing of parts from different year and make engines, even if made by the same manufacturer. Non stock or modified stock external bolt on parts may be used (example: billet oil pan, starter, water pump cover, oil cooler, pipes, valve covers, etc.)

## 2. Overall Engine

- a) Must be a Production Motorcycle Engine, 4 cylinders, 4 stroke. No limited production race motors allowed, only US street legal bike motors are allowed.
- b) Current year engines allowed
- c) No Titanium anywhere in or on the engine, unless it comes stock form manufacturer of engine on the production bike
- d) Must have engine, clutch, and transmission all in one unit
- e) Must be Chain Drive
- f) Manual cam chain tensioners are allowed.

## 3. Bore and stroke

- a) 600cc Maximum for engine model that was new in 2006 and up. Other engines are 637cc maximum. Engine model is defined as a manufacturer redesign of overall engine. See Specification list.
- b) Standard Stroke only (no strokers)

## 4. Head and cams

- a) NO PORTING or Blending the bowls.
- b) Valve jobs, valve grinding, valve seating, valve seal modification and valve seat cutting are allowed.
- c) Valve seat inserts may be reworked or replaced with any seat of original dimensions. Any dimensional thickness of the stock inserts may not be increased. Valve seats can be ground with multiple angles. Blending of the valve seat into the head is permitted but cannot extend more than ¼" into the aluminum head measured from where the seat meets the head.
- d) Cams do not need to be stock, but the lift must be no greater than stock. (duration is open)
- e) Cam timing may be adjustable
- f) May use any valves (no titanium), but they may be no larger than stock valves.
- g) Head may be resurfaced
- h) Any head gasket may be used

## 5. Pistons

- a) Any piston, piston rings, and wrist pin, may be used, must be within cc limit specified under bore and stroke.
- b) After market coatings are allowed on pistons only.

## 6. Bottom End

- a) No machining to remove weight from the crank (no after-market cranks) (no lightweight cranks)
- b) The stock unmodified connecting rods must be used (no after-market rods)
- c) Aftermarket rod bolts may be used
- d) Modifications to oil pump system, oil pick up and oil passages are allowed
- e) No dry sump systems are allowed unless it comes from the motorcycle manufacturer as original equipment.

## 7. Clutch/Transmission

- a) The clutch does not need to remain stock, but must remain operable
- b) Transmission gears must be stock, no close-ratio gears or nonstandard gear-ratios
- c) All gears must remain in transmission, no removing any gears. No lightweight or modified stock gears.

## **8. Ignition**

- a) Stock Rev Limiter must remain intact at all times (ex: no switched or gear specific limiters). No hot ECU boxes, no physically modified ECU boxes. Factory race boxes are ok, but must have the rev limit set to the street bike stock rev limit. If a computer is hooked up to check the ECU it must be set to factory stock specifications, no tolerance. See specifications list for RPM limits.
- b) All cars must have the PA standard connector for the track to check engine rpm rev limit. These are available from the chassis manufactures and engine builders, and at the track. All cars must leave intact the rpm wire coming from the ECU.
- c) Stock appearing ignition must be used (no after-market ignition systems, factory race ignitions are ok) may use different year ignitions from same manufacturer as long as stock rev limit of engine (not ignition) is retained.
- d) No aftermarket coils
- e) Engines that came with stock fuel injection may use an after-market add on components (example: Power Commander, Dim Sport) to adjust the fuel curve and/or timing (essentially the same as adjusting jetting and using an ignition advancer).
- f) Ignition advancers may be used
- g) No gear position sensor may be used. The sensor may be in place on the engine, but can not have any wires connected to it. Gear position wire from ECU may not be switchable.
- h) No traction control device.
- i) Only one ECU box present in or on car.
- j) A 350 rpm over rev tolerance for the purpose of tech inspection is acceptable. (Note: this does not mean you can turn up the rpms in any ECU by any amount, this is information for the tech inspector only)

## **9. Induction system**

- a) No mechanically forced induction (turbo charging, supercharging)
- b) Any carburetors may be used on any engine, regardless of year of engine.
- c) If the engine did not come from the factory with fuel injection, fuel injection may not be used.
- d) If the engine came with factory fuel injection, the fuel injection may be used and may be converted for use with alcohol. The stock fuel injection throttle bodies must remain, but may be modified for use with alcohol. Any number of injectors may be used regardless of stock number of injectors.

## **10. Exhaust**

- a) Any exhaust may be used, as long as there is a muffler included with the system that will keep noise levels within individual track limits.

## **11. Charging system**

- a) The stock original factory charging system may not be removed, and must remain in complete working order. No factory racing charging systems.
- b) Flywheels can be modified.

## **12. Self Starting**

- a) The engine must self-start at the beginning of the event. If it does not self-start, the car may be pushed off and must start at the rear of the event as the penalty.

## **13. Fuel**

- a) Only alcohol, gasoline, and/or top lube may be used. Non flammable top lube only, no exotic fuel additives, no oxidizers, no fuel enhancer top lube.

## **14. Minimum weight**

- a) Minimum weight at all times is 775 pounds, car and driver. If weight is added it must be firmly bolted in place.