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Canadian Karting Regulations
BULLETIN 09-01
Book 2 Technical Regulations

SUBJECT: 2009 Technical Regulation Changes

EFFECTIVE DATE: January 1, 2009

Bulletin 09-01 is being issued in advance of the publication of the 2009 Canadian Karting Regulations Book 2 Technical Regulations primarily to enable competitors in Honda classes to start preparing their engines for the upcoming season. The final and complete Book 2 Technical Regulations will be posted on the ASN Canada FIA web site on or before March 2006. At that time this bulletin is superseded.

20. GENERAL HONDA FOUR-CYCLE ENGINE REGULATIONS

a) The following engines are eligible for competition:

Honda Original Equipment Manufacture: **GX-120, GX-160/K-1, GX-160/T-1, GX-160cc, GX-200, GX-200cc**

Note: The GX-140 and GX-160 are no longer eligible for competition.

21. AUTHORIZED HONDA FOUR-CYCLE CHANGES AND ADDITIONS

21.3. Fasteners

e) Carburetor retention studs must be Honda OEM diameter, length is non-tech. **Thread locking products may not be used with the retention nuts. Threads cannot be knurled.**

21.5. Fuel Pump and Mounting Bracket

a) Any vacuum operated fuel pump may be used.

There shall only be one continuous, unaltered piece of tubing connecting the fuel pump pulse fitting to the engine crankcase with a maximum **nominal** inside diameter of 0.250".

It shall be of the minimum length required to reach the pulse opening and the fuel pump.

There shall be a maximum of 2 openings on the pulse side of the fuel pump.

One shall be used for the connection to the engine and the other as a pulse chamber vent. The diameter of this orifice must conform to the normal size for that manufacture of pump.

22. HONDA FOUR-CYCLE ENGINE PREPARATION

i) **Pistons/Rings:** Re-sizing, knurling, or lightening of pistons is not permitted.

The use of piston button(s) is not permitted.

Coating of pistons is not permitted. Anodizing of pistons is not permitted.

All three piston rings must be used, installed correctly, with the identification marks toward the head. Ring tension may not be changed by heating or other means.

Ring gaps are not subject to Technical Inspection. The ends of each piston ring may only be altered in a way that appears to be the same as a known, stock, unaltered, Honda ring for the appropriate type/ model of engine.

The piston oil control ring (third ring) may be either single or 3-piece design, provided that it (they) are stock OEM rings, appropriate for the type/model of engine used.

Piston rings and pistons (dished or flat top) are interchangeable between the GX-160/K-1, GX-160/T-1 and GX-200.

23. HONDA GX-160/K-1, GX-160/T-1, GX-160CC SPECIFICATIONS

c) **Piston Length**: **1.920" minimum.**

d) **Piston Dish**: Dished pistons must remain as cast.

f) Combustion Chamber Volume: **21.00 cc. minimum.**

t) **Carburetor:** Venturi: 0.515" GO – 0.525" NOGO.

Emulsion Tube Heights: 0.408" GO – 0.432" NOGO.

Maximum main jet size: 0.031" NOGO

24. HONDA GX-200, GX-200CC SPECIFICATIONS

c) **Stroke:** 2.118" minimum. – **2.130**" maximum.

f) **Combustion Chamber Volume: 28.00 cc. minimum.**

25. HONDA EXHAUST SYSTEMS

25.1. Mufflers In Classes Requiring Stock Muffler

e) The top muffler plug may be tig-type tack welded to the muffler body in 3 places spaced around the plug. The height of the plug in the muffler must compare to other mufflers and must be visible in the un-welded areas of the plug joint.

25.2. Exhaust Header/Silencer In All Other Cases

w) **Kinked, cracked, loose or broken headers:** At any time during the event the entrant will NOT lose their starting position for the next session or the Final Race **when any of the following procedures are accomplished under the scrutiny of the Technical Official, and the exhaust header retainer is re-sealed:**

Replacement of a broken, kinked, or cracked header.

Re-tightening of the header retainer nuts.

Replacement of a stripped exhaust header stud or bolt.

Repair of the exhaust threads in the head.

A kink is defined as a sharp deflection of the normal configuration caused by contact during an on-track session, and does not include an oval bend manufactured into the header or a manual bend.

A cracked header is defined as one that contains a crack but still maintains its original configuration and specification.

A kinked or cracked header must still pass post-race Technical Inspection.

A kinked header is exempt from the bend area diameters in regulation 24.b) in the actual kinked area only, and from regulation 24.j) if bent upward.

A cracked header must still be in a condition that will pass all **post-race** Technical Inspection. If not, the entrant is excluded.

A broken header will pass post-race Technical inspection provided that the entire header/silencer is still attached to the Kart by the support brace and/or the tether, AND the entire exhaust system is in compliance with the Regulation. **If the header and silencer are separated and cannot be presented as a complete unit to Technical inspection, the entrant is excluded.**

27. HONDA FOUR-CYCLE CARBURETOR AND RESTRICTORS

27.2. Emulsion Tubes

The emulsion tube for **the** GX-160/K-1, GX-160/T-1, GX-160cc, GX-200, GX-200cc **has** the part number is 16166-ZE1-005. **This applies to** all Honda engines except the GX120. The tube may be new or old, must conform to the dimensions listed and must comply with the configuration of a standard, new emulsion tube.

27.3. Honda Inlet Restrictor Plates

The mounting holes must be round and may not be larger than **0.270**" on any axis.

28. HONDA FOUR-CYCLE INSPECTION PROCEDURES

28.7. Camshaft Inspection

The crankshaft gear may be rotated to change the camshaft timing, except on the GX-120, but the parameters listed in FOUR-CYCLE CAMSHAFT SPECIFICATIONS in these Regulations always stay the same as they are based on a fixed position of the camshaft at a given point (.020", valve UP)

a) Checking An Installed Camshaft:

Attach a dial indicator to the deck surface. Place the dial indicator over the exhaust camlift portion. Attach a degree wheel to the crankshaft loosely.

Position the crankshaft so that the exhaust lobe is UP 0.020", and set the degree wheel pointer at 135 degrees.

Turn the wheel to TDC, the indicator should read 0.000". Read the appropriate lifts.

Switch the dial indicator to the intake camlift portion. Set the lobe UP 0.020" and read. Determine overlap.

With the intake lobe still "UP" at 0.020", change the degree wheel to read 357 degrees and take the intake readings.

All readings should fall within the parameters set up in the FOUR-CYCLE CAMSHAFT SPECIFICATIONS in these Regulations. A variant from allowable specification of more than one degree is allowed only TWICE on each lobe. If one or more of the parameters including overlap, duration, and maximum lift are NOT met. This is a situation where Technical Inspection does not end when an illegality is found, and the camshaft should visually be checked.

b) Checking Rocker Arm Ratio:

Actual valve lift at the retainer with zero lash may be determined using the appropriate tool. Maximum actual valve movement is 0.248" maximum.

c) Checking A Removed Camshaft:

If the camshaft is removed from the engine for visual check, lobe height measurements, as found in the FOUR-CYCLE CAMSHAFT SPECIFICATIONS in these Regulations should be measured, as well. No tolerance is given on these measurements.

Camshafts may be further checked for standard lobe base circle, on a centering device, especially if a ramp is on the edge of the specification when checked within the engine.

29. HONDA FOUR-CYCLE REPAIR PROCEDURES

Allowable piston and ring overbore sizes for **all eligible Honda GX series engines** are: 0.25 mm, 0.50 mm and 0.75 mm **either thick or thin ringed.**