

## ENGINE SPECIFIC TECH FOR: BUILDERS REPAIRED-STOCK/**Florida bp rules 2020 (Rev 12-28-2019)**

The intent of this class is to give those who want to make an incremental move up from Box Stock or a change from stock or a change from stock flathead a class of their own with horsepower similar to the flathead "stock" classes that are becoming increasingly expensive. The rules allow a builder into the engine but with the intent of making it possible for the average guy to build his own engine.

BP (Builder Prepared) 6.5 OHV – Fuel Methanol ONLY – Approved Engine: 6.5 OHV 196cc clone engine modified only according to BP OHV Engine Spec. Tires are track/series option.

### ENGINE SPEC SHEET FOR BP 6.5 OHV CLASS

**Description:** Single-cylinder, 2-valve overhead 4-cycle engine. No aftermarket coatings of any type are permitted on any part of the engine.

**Cylinder Head Requirements:** Stock cylinder head only. Machining of gasket surface is allowed. No addition of material in ports or to cylinder head allowed. Porting and/or grinding permitted. Valve seats may have three angles, 45-degree valve face and 30 degree top relief and 60 degree bottom relief. Inside diameter of valve seats must be stock (Into .897" max ID and Ex .862" max ID). Valve seats must appear stock and must be in stock position and depth. Stock head bolts are required and all four are required. Head gasket/s may be after market, must be of stock configuration, and gasket thickness non-tech. Depth check between the valves, front to back and side to side may not vary by more than .005" max. (Champion Rocker Arm assembly, no roller tips and valve cover allowed). No other alterations to the stock head are permitted.

**Bore and Stroke:** Stock bore is 2.685" and may be over bored to 2.725".040 over bore Stroke is 2.123" + .010"-.005".

**Connecting Rod:** Stock or Billet aluminum rods, with or without bearing inserts allowed. No titanium rods allowed. Rod length is a non-tech item.

**Combustion Chamber Volume:** 25 cubic centimeter minimum with piston at TDC. **The CC check is the official check.**

**Carburetor/Intake Requirements:** Stock Huayi or Rui\*ING carb. NO TILLOTSON PUMPER CARBS. Venturi .625" NO-GO. **Air filter adapter 1.375 max length air filter cannot be used as a ram air** . Pulse-type fuel pump is mandatory Fuel pump must be pulsed from either the crankcase or the valve cover. Black phenolic carb insulator must be used. Choke assembly may be removed. Jets, air bleeds jets, and emulsion tubes are non-tech. Throttle shaft, washer and butterfly is non-tech. Stock intake runner gasket configuration only. One extra gasket may be used with restrictor plates. No other alterations are permitted.

**Ignition system:** Ignition timing is non-tech. Stock ignition module only. No modifications of any type allowed. Spark plug connector must be stock as from factory. Spark Plug non-tech.

**Piston Requirements:** Any oversized Stock and Honda ZOT dished piston or Wisco flat top piston up to .040" oversize. **Min gram on piston without the rings is 120 grams** Rings must appear stock and all rings must be installed. Piston may not pop out above cylinder deck.

**Valve Train:** Stock valve-train only in stock configuration and stock size valves (Stainless Valves Allowed). Any single valve springs and valve spring shims are allowed. No additional support for rocker studs permitted. Valves must be one angle only, 45 degree. No polishing, lightening or knife edging of valves. Valve length is non-tech. Outside face of valve head may not be below the combustion chamber floor. (i.e. don't sink the valves). Push Rod Guide Plate may be removed. **Any 3- piece pushrod** that meets standard length **5.285 must go 5.230 no go** **Valve cover gasket is non-tech and valve cover spacer allowed for champion rocker assembly**

**(Champion Rocker Arm assembly, 1:1 ratio only no roller tips allowed).**

**Camshaft Requirements:** Stock camshaft cores ONLY. Duration check non-tech. Max lift at the valve retainer intake .238" and exhaust .242" taken on valve spring retainer. This will be checked at running lift. (Taking off pushrod, Max intake lift .225". Max exhaust lift .232". Compression release may be removed.

**CRANKSHAFT Requirements:** Stock factory crankshaft only with stock, factory timing gear in factory location. No modifications to crankshaft allowed. After-market steel, main bearings of non self aligning type, with or without seal are allowed. No ceramic bearings. Crankshaft journal diameter is 1.180", 1.168" minimum.

**Block Requirements:** Stock Block, as cast and produced with no alterations or modifications other than those specifically permitted. Block head matting surface may be machined, however; no piston pop out is allowed. Blocks may NOT be welded for repairs. No addition of material to block, (i.e. welding, jb weld, etc). All bolt bosses in block may be drilled and tapped for repairs or other uses. Additional side covers gaskets as required for crankshaft thrust are permitted. All parts associated with the governor and the low oil sensor may be removed, plugging any associated holes. **.375 solid dial pins in side cover allowed**

**Flywheel:** Approved SFI certified billet aluminum flywheel only. No machining or alteration of any kind allowed. Minimum weight for flywheel is 3.3lbs. Any timing key or no key at all may be used. A flat washer or spacer may be used and is recommended between the flywheel and the nut. Handheld electric starter may be used. Current Approved Flywheels: ARC 6619, ARC 6618, Raceseng Flywheels RSP-13-075, Rewheel NF-S1 & RSP-13-077, Rewheel F-S1, Speed Karts Aluminum Billet.

**Header and Muffler Requirements:** Header Pipe Length: Minimum 16 ½"-Maximum 20 ½". (measured on inside of pipe with ¼" steel tape). Silencer must be a RLV 91\_L type with .1285 no-go hole. All 4 baffles must be in place. Header must be securely wrapped from flange to muffler prior to the race. Exhaust Pipe must be doubled nutted or safety wired and silencer must be supported by clamped on brace to secure it in place.