

CLONE TECHNICAL MANUAL
AND RULES

UPDATED MARCH 2010

For information on the Box Stock Project LLC contact **Jimmy Sims @ office 386-938-4211 or cell 386-249-0122 Email to sims1@windstream.net.**

Box Stock Project LLC

Box Stock Project Engine Rules

For Use In Box Stock Project Classes

Box Stock Project yellow engine: 6.5hp OHV 196cc must have the stamped "Box Stock Project" on the front of the block.

All Engine parts must be stock OEM parts unless otherwise spelled out. All gaskets must conform to stock configuration. Using more than one gasket for side cover clearance is acceptable. Allow plus or minus .005" tolerance on all measurements except for stated minimum, maximum or no-go dimensions when comparing to a stock oem part.

Fuel will be gasoline. 87-93 octane maximum. No aftermarket coatings of any type are permitted on any part of the engine.

Fuel tank must be removed from engine for safety reasons.

Floor mounted fuel tank can be pulsed from crankcase or valve cover. Any pulse type fuel pump permitted.

Carburetor: Huayi or Rui*ing allowed. All stock carb gaskets must be present. One extra gasket must be used with restrictor plates. Choke assembly must be functional. Choke bore must be cast. Venturi .615" No-Go. Back carb bore .751" No-Go. Emulsion tube (E-tube) must remain stock .064" No-Go. Main jet Non-Tech. Low Speed idle jet .019" No-Go.

After market air filter is OK for use (K&N style filter) maximum length: 1.375.

Block must remain stock. Maximum bore is 2.685". Stroke is 2.123" plus or minus .005".

Governor and governor components are non-tech.

Use of multiple gaskets is okay (gaskets must be stock configuration).

Combustion chamber minimum: 26.5cc with piston at TDC. To be measured using prescribed technique.

Block may be welded for repairs as long as the repair does not constitute a functional modification to the block. No welding to block above cooling fins.

Cylinder Head: No porting, grinding or modification. Valve seats must have two angles: single 45° bottom and single 30° top. Head gasket must be stock configuration.

Valve train will remain stock. No polishing. No grinding. No Alterations. Stock 1:1 ratio OEM rocker arms only. Stock valve springs only. Maximum spring wire diameter is .0705". Maximum spring pressure is 10.8 lbs. at an installed height of .850". Springs must be wound in same direction as compared to known Box Stock spring

Stock rod only; no modifications. Stock crankshaft only; no modifications.

Stock piston only. Stock rings only.

Camshaft: Maximum running lift on exhaust is .242" taken on valve spring retainer with zero lash. Maximum running lift on intake is .238" taken on valve spring retainer with zero lash. Camshaft base circle measurement: .865" - .005 "+ .010". (.860 - .875) Duration check for Intake and Exhaust lobes. Intake duration of 218.5 degrees max. at .050 lift/85.5 degrees at .200 lift. Exhaust duration of 221.5 degrees max. at .050 lift and 96.5 degrees max. at .200 lift. (All checks will allow +2 degrees for wear and

gauge variances.)

Flywheel and ignition coil must be stock. NO alterations, NO machining. Timing must be stock with stock flywheel key. Plastic fins must remain stock.

Header and Muffler. Maximum length on header and muffler is 14" and minimum length is 10". Header must be single stage maximum .750" outside diameter. Muffler must be the Weiner type, part #89966 (Rotary stocks these mufflers, also can be purchased at most lawnmower shops). Muffler must be screwed on and unscrewed for technical inspection. Muffler must be stock and unaltered.

Pull starter must be present and remain stock. You may rotate pull starter for a better angle to crank from.

Engine oil recovery system mandatory (oil catch can).

The above rules are written with the idea of simple tech in justifying the winner and runners up. ***Do Not Read Into The Rules What Is Not There!***

Jimmy Sims, BSP