

SECTION 12 - CLONE TECHNICAL SPECIFICATIONS

- 12.1 Rules & Intent: The intent of this engine package is to provide a low cost out of the box power source to attract new or budget minded karter's to local and regional level karting. That being said, it has to be acknowledged that there are certain convenience and/or safety modifications that have to be allowed as well as some dimensional guide lines to verify the engines legality should there be a need to inspect internal components. The following are recommended areas of inspection should it become necessary.
- 12.2 Approved engines – OHV engines generally referred to as Clones with a maximum displacement of 200 cc's. (Current legal engines include the Lifan, Grey Hound, Harbor Freight Blue & Yellow, Jaing Dong, Yamakoyo, Blue Max)
- 12.3 Engine Components: Must be original OEM items in their stock state unless otherwise specified. Removal of unnecessary OEM items such as exhaust system, air cleaner, fuel tank, governor, low oil sensor, etc is permitted. Welding or epoxy repair permitted to the block, head and side cover provided they don't enhance performance.
- 12.4 Exhaust System: Non tech except header must be round and a constant diameter (no multi stage) and the end may be expanded to accommodate an RLV type B91 or other muffler/silencer. No loop type exhaust. **Silencers are strongly recommended.** If a silencer is not used the end of the pipe must be flared or have a protective washer welded on.
- 12.5 Carburetor: Huayi type carb only. Choke assembly must be in place and functional. Choke bore .810" dia max, venturi .615" max and throttle bore .751" max. Main metering jet is non-tech. (Since the amount of air flow is controlled as well as the fuel teching the jet size is unnecessary) Filter adapter and filter non tech. Any pulse type fuel pump permitted and can be pulsed from the crankcase, side cover or valve cover.
- 12.6 Fuel Tank: Non Tech. (It is recommended that for safety reasons remote/floor mounted tanks be used.)
- 12.7 Fuel: 93 Octane (max) Pump Gas. See rule 8.1 and 8.1.2 for details.
- 12.8 Clutch: Any engine mounted disk or shoe clutch allowed. (There are many used disc clutches available for a reasonable price) (Shoe/drum clutches only can be a local option)
- 12.9 Connecting Rods: OEM cast rods only. No modifications allowed.
- 12.10 Pistons: OEM Std bore (68mm or 2.677") only. Three ring design and all rings to be intact and functional. (Oversize's to be permitted at a later date.)
- 12.11 Crankshaft: Standard OEM item with stock stroke length of 54mm or 2.126" (plus or minus .005"). No alterations permitted.
- 12.12 Flywheel and Ignition Coil: OEM stock/unaltered flywheels and plastic fins only. (no machining allowed) Flywheel key is non tech but must be installed. (Due to the variations of the OEM keys they will be non tech to allow optimum timing with a minimum of cost.) Plastic fins must be intact and have their full depth. Minimum (bare) flywheel weight is 5.0 lbs.
- 12.13 Cylinder Head: OEM heads only with no modifications allowed. Valve seats to be a single 45° only with a top angle relief of 30°. No porting, grinding or matching allowed to the ports or combustion chamber. Spark plug to be 14mm X .75 reach only. Minimum combustion chamber volume when mounted on engine @ TDC is 27.5 cc's using prescribed procedure as noted in rule 8.5. This is to be done after the event and when the engine has cooled down to a reasonable temperature. Head gasket to be .010" minimum thickness and can be either steel or aluminum.

- 12.14 Valve Train: OEM push rods, push rod guide plates, retainers, springs, keepers, rocker arms and adjusters only. OEM valves with 45° seat angle only and no lightening or polishing. Stock 1:1 ratio OEM rocker arms only. OEM valve springs only with a maximum spring diameter of .798" (wire diameter .073" max) and a maximum tension of 10.8 lbs at .850" compressed height.
- 12.15 Camshaft: Maximum (actual running) lift to be .245" measured at valve retainer. This is to be done after the event and when the engine has cooled down to a reasonable temperature. No twisting or altering of the cam. Note – The camshaft has a compression release and it needs to be taken into account when zeroing the indicator on the exhaust lobe. The compression release must be intact and functional. Cam and crank gear cannot be altered or moved to change timing. (Note: Due to the changing specs from the various engines there may be some adjustments to the lift specs at some future date.)
- 12.16 Fasteners: Non-tech, but must retain their original factory size. Heli-coils, studs, etc allowed for repair purposes.
- 12.17 Gaskets & Sealer: Gaskets are non-tech and sealer may be applied unless otherwise specified.
- 12.18 Bearings: Crankshaft bearings shall be of metallic (magnetic steel) construction (excluding retainers) and be of conventional design and the same dimensions as the OEM bearings. This includes inner and outer races as well as the balls and rollers. No other materials allowed.
- 12.19 Coatings: Internal performance coatings of any type not allowed.
- 12.20 Crankcase breathers are to be routed internally through the valve cover as originally intended in OEM configuration. No additional breathers allowed.
- 12.21 Tires: See Section 4.1 for Oval specifications and 4.50 for Sprint.
- 12.22 Claiming: Claiming is a Local Option and prices and conditions (such as what accessories are exempt from the claim, who gets to claim the engine in question, etc) are to be set by those entities.
- 12.23 Pull Starter: The pull starter is non tech and optional. It may be removed to allow the use of an auxiliary (hand held) starter or different brands of pull starters can be used on any the approved engines.