

KWIK SHOP

PREDATOR HEMI CLASS

- These rules are intended to keep the engine as Stock Out Of The Box As Possible. There are no gray areas. If they do not specifically state that something is allowed, it will automatically be illegal. All parts must be Factory Predator parts.
- Should any parts that are in question arise that are not clearly addressed in these rules, it is the duty of the racer to obtain clearance from Local Tech Inspector prior to entering the class. If in the opinion of the LTI the intent of the modification was a performance gain, the racer will be DQ'd from all classes entered that night.
- Officially the Spirit And Intent discretion will override all rules mentioned below. If there is not a measurement given below, It Must Remain Stock. If it does not say below you can add or take off or modify, it must remain Stock.
- All OEM casting marks must be visible. All OEM Factory Stampings must be visible at time of inspection, NO TUMBLING OR POLISHING.
- No interchanging parts from different Serial # or generation groups of engines.
- Local track reserves the right to swap any part/Complete engine off the engine being raced with a known OEM part/complete engine.

- Track has option of updating the rules if any parts are found to be OEM updates that are not covered in this manual, Anytime during season.
- Original Fuel tank cap must be completely sealed. Drilled 1/8 hole allowed in cap to vent, fuel pick up tube must be in stock location. Fuel line must remain ¼" id.
- Fuel pump can only be pulsed off of valve cover, Not side cover. Approved fuel pump only.
- Blower housing OEM. Pull start must be in original location at end of race.
- Stock air box. Air can only enter carb through OEM filter. Must pass combustible spray test. Air can only enter air box from 4 square holes at bottom and end of stock air box. No adding or removing material.
- HEADER: Pipe can be wrapped but not muffler. 10-15" long .685 max id nipple. .750 od pipe max. RLV B-91 mini only Part#4117 5.470-5.600. Muffler not mandatory but if raced must meet OEM specs. MUST be able to unscrew from pipe to measure inside baffles. Muffler must be completely tight against pipe and braced. No sealer permitted. Must meet height rules of 14.5" to surface. Aftermarket studs are allowed for clearance of Doubled Nuts, safety wired coupling nuts allowed. If muffler not attached, pipe 5" max from top of flange, .500 flange allowed. A spec muffler will be screwed into pipe being raced. If race is started with muffler, it must be intact at completion of race. Broken pipe (2pcs) warrants DQ(Safety) from that class.

Carburetor:----- 2016 AKRA rules Except as noted----- Look on Original Predator rules. No sealer allowed anywhere on carb. Phenolic Plate= No altering finish. No altering Bore finish or shape. Bolt Holes to remain stock

- .021 No Go on Small Jet and .031 No Go on Main Jet.
- TIMING: 15 degrees (-5 +1)
- Ignition: 11 ohms max and must show a reading. Resistor must be present and functional.
- SPRINGS: 2016 AKRA rules with addition of: Height cannot be more than .015 difference at any location from a confirmed starting point. Must pass ¼" coil bind check on one side of block. Max OD of .800
- CC 28 must stay in Plug
- CAM : .550 Journal Compression Relief must be fully functional. Base Circle .870 DURATION: Exhaust .050=207-210max .200= 79-81max DURATION : INTAKE .050=204-207max .200=72-75max. VALVE LIFT: .240 based off 1:1 ratio on Max Lift for individual lobes.

INTAKE : .050= 11 ATDC

- .100= 28 ATDC
- .150= 49 ATDC
- .200= 77 ATDC
- .225 max
- .200= 30 BBDC
- .150= 2 BBDC
- .100= 19 ABDC
- .050= 37 ABDC

EXHAUST: .050= 25 BBDC

- .100= 8 BBDC
- .150= 11 ABDC
- .200= 38 ABDC
- .225 max
- .200= 64 BTDC
- .150= 34 BTDC
- .100= 14 BTDC
- .050= 3 ATDC

+3 -3 Tolerance is allowed on each reading

- HEAD: Gasket surface to area between valve seats .420- .430. Sealer Allowed on gasket area. .891 no go on X seat, .971 no go on Intake seat. 68 mm chamber minimum. Gasket OEM material only: NO Aluminum or Copper, .009 min. Depth of bowl on both ports .9375 DO NOT SINK VALVES. Spring Pocket cannot be altered.
- NO DEBURRING allowed anywhere.
- VALVE TRAIN: No sealer allowed on valve cover. Stock angle on valves with dish only, OEM. Stock material only. VALVES: 2.520 long .214 diameter stem. Intake .986 .055 dish Exhaust 1.064 .071 dish.

No Shims Allowed. One OEM seal allowed on each valve, seal material must be functional. ROCKER PIN= 1.025 length, .314 dia. Valve guides= .216 max id, 1.090 min length on X, and 1.220 min. length on Intake. PUSH ROD= 5.550" .157 diameter .194 Ball Diameter Rocker Arm Length 1.850". No grinding of any parts of rocker arms. Installed height .900 Min.

Piston to remain in block minimum .020. Lip on block must be visible.

- Bore: 2.756 max
- Stroke: 2.161 max (-.005)
- Flywheel: OEM, Must weigh 5.100 lbs. Flywheel fins must be plastic and original length and shape. No offset keys allowed. No grinding of keys. Stock key must be present.
- Rod: 2.365 long .710 ID Wrist Pin(41g min.) 1.190 Crank Bore(60 oz. min)
- RINGS : OEM ring tension cannot be altered. Diameter of OEM ring to be comparison. Ring gap mandatory on all rings. Piston must held in cylinder by individual rings in stock location. Top ring .039 x .092 Middle ring .039 x .109 Bottom ring .018 x .089 Corrugated .098 x .090
- Bearings: 9 Balls total per. Balls, race and housing must be magnetic Cannot be Ceramic

CLUTCH: Steel Drum with centrifugal shoe type

TIRES: Maxxis EL WHEELS: 10" Maximum

No Skip Tooth gears allowed on any part of drive train

34.5" max circumference on Right Rear

