



# Oglethorpe Speedway Park

## 2021 Predator Rules

### Model# 60363 Only

- 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 disqualified 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 OR DEBURRING.
- 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.
- (OPTIONAL) 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. **Vertical Face of Pull Start can be taped or a sticker applied. Angled vent holes must remain exposed.**
- 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 IS MANDATORY.** 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. Flange: .500 flange (MAX) allowed. Muffler must be connected to pipe at completion of race. Broken pipe (2pcs), not connected by bracing warrants Disqualification (Safety) from that class.
- **SPRINGS and RETAINERS:** **Springs will not be flipped to pass dead weight check.**
- Height cannot be more than .040 difference at any location from a confirmed starting point. Must pass ¼" coil bind check on one side of block. Max OD of .800 must Pass Track's 10.8 and 18# check. .071 Max Wire Diameter. Max 4 coils. Length will be compared to known stock spring. Maximum Length: 1.225". Springs must be made of a magnetic material.

- Retainers: Must be OEM for Series of Engine raced.
- Spring Pocket cannot be altered.
- TIMING: 15 degrees (-5 +1)
- Ignition: 11 ohms max and must show a reading. Resistor must be present and functional.
- CC 28 must stay in Plug
- VALVE TRAIN: No sealer allowed on valve cover. Stock angle on valves with dish only, OEM. Stock material only.
- OEM GASKET MATERIAL ONLY/No Copper No aluminum. Minimum .009"
- Do Not Sink Valves.
- No Sealer on Crankcase Cover
- BEARINGS: Steel Balls only (9) No ceramic bearings. Balls, race and housing must be magnetic.
- **CARBURETOR**: No Sealer allowed on complete carb assembly
- HUAYI or RUI\*ING or SP. There must be a factory edge, not rounded or smoothed over, all the way around the entrance and exit to the bore of carburetor. No extra holes drilled in carburetor anywhere. Choke assembly must be in place and functional. Bore .608" Must-Go. .615" NO GO Bore. Throttle bore .751" No-Go. **Emulsion Tube**: Minimum length is 1.092". No Drilling of Air Holes. Bottom holes can be either 2 or 4 holes. The minimum diameter is 0.154". Main Fuel Hole .066 NO GO (Cannot Enter Either Side) **Phenolic Plate**: Bolt holes stock. No altering finish. No altering Bore finish or shape. Fuel bleed off slot must be unaltered. Thickness must be maintained at .257" minimum. Plate must be flat and maintain consistent thickness at all points. Gaskets: Only one gasket is allowed between the carburetor and phenolic spacer, and if a restrictor plate is used a total of two gaskets are required.
- Low Speed hole In Carb. .092 no go
- Hole in LOW Speed Jet Holder: .103 NO GO
- LOW Speed Jet: .021 No GO
- Both O Rings in stock location.
- MAIN Jet .031 NO GO Length .340(+-.005) Must Be Tight against E Tube
- 245 No Go @ .610 depth in casted Low Speed Jet holder on carb
- Pick up Hole @ Main Jet .091 NO GO
- Hole @ Float Seat .061 NO GO
- Holes behind welch plug on low speed side exit .024 max
- Throttle Shaft .115 min @ butterfly .231 shaft min. (NO REAR OFFSET)
- Butterfly: Part# on right side/Must be present. 037 min thickness.
- Screw in Butterfly shaft .274 minimum length
- Air Bleeds to remain unaltered per model number.
- CLUTCH: 16 Tooth Steel Drum with centrifugal shoe type
- TIRES: Maxxis EL WHEELS: 10" Maximum
- No Skip Tooth gears allowed on any part of drive train
- 62 gear only.
- 33.75"-34.5" circumference on Right Rear.



# Oglethorpe Speedway Park

## 2021 Predator Rules

### HEMI PREDATOR CLASS 2021

No Shims or seals under Valve Springs. Mechanical Seals may be removed

- HEAD: Gasket surface to area between valve seats .415 minimum. Sealer Allowed on gasket area. .891 no go on X seat, .971 no go on Intake seat. 68 mm chamber minimum. Depth of bowl on both ports .9375
- VALVES: 2.520 long .214 diameter stem. Intake .986 .055 dish Exhaust 1.064 .071 dish. 24 GRAMS
- RETAINERS: Lash Caps on Intake and Exhaust retainers. Retainer 6 grams
- ROCKER PIN= 1.025 length, .314 dia.
- Valve guides= .216 max id, 1.090 min length on X, and 1.220 min. length on I
- PUSH ROD= 5.550" oal .157 diameter .194 Ball Diameter 13.9 Grams (Stock)
- Rocker Arm Length 1.850". No grinding
- CAM : .550 Journal Compression Relief must be fully functional.
- VALVE LIFT: .245 based off 1:1 ratio on Max Lift for individual lobes.

INTAKE : .050= 11 ATDC

EXHAUST: .050= 25 BBDC

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|-----------------|-----------------|
| • .100= 28 ATDC | • .100= 8 BBDC  |
| • .150= 49 ATDC | • .150= 11 ABDC |
| • .200= 77 ATDC | • .200= 38 ABDC |
| • .226.5 max    | • .226.5 max    |
| • .200= 30 BBDC | • .200= 64 BTDC |
| • .150= 2 BBDC  | • .150= 34 BTDC |
| • .100= 19 ABDC | • .100= 14 BTDC |
| • .050= 37 ABDC | • .050= 3 ATDC  |

+3/-3 Tolerance is allowed at each reading on each side of max lift on each lobe.

- Piston to remain in block minimum .020. Lip on block must be visible.
- Bore: 2.756 max
- Stroke: 2.161 max (-.005)
- Lifters: .922 HEAD .314 STEM 1.368 OAL 19.8 GRAMS
- 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 41 gram min.
- Crank Bore 1.190 Crank (60 oz. min)
- Rings: OEM rings, 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