

# **Texas Sprint Race Series, Inc.**

## **World Formula Pro Stock Class**

### Overall Program Description

**Rules Primer:** The ultimate goal of this spec/inspect/seal program is to grow the class and the series by providing fair, affordable, competitive, fun racing for beginners and experts. The World Formula engine package is designed to be fast, low maintenance and reliable in its box-stock configuration. The intent of these rules is to preserve that proven design and ensure all engines are built with stock parts to stock specifications to make winning about driving. We have made every effort to eliminate all gray areas. Unless the rules say you can – you can't! If you are reading these rules looking for loopholes – stop. You are breaking the first rule:

**Deliberate and Active Compliance:** Competitors are expected to be deliberate and active in complying with these rules. An unintentional violation may still be considered a violation when effort to adhere to the rule is not clearly evident. For example: A racer has a part that is not in direct violation of a spec but for whatever reason is not in clear conformance. He chooses to run that part rather than a new stock part, and it gets flagged in post-race tech. While the legality of the part might be in question, that question is answered by the fact that the driver deliberately chose not to run a clearly legal new part, and is now subject to disqualification.

### **Program Engine Supplier:**

Any Briggs and Stratton Racing Engine Dealer.

**Engine Rebuilds:** When required, the world formula engines must be rebuilt to stock configuration using only genuine B&S parts unless specifically noted in these specs.

### ENGINE COMPONENTS – Information for Competitors

**Unaltered Stock Parts Only:** Unless specifically noted in these specs, all engine parts must be Briggs & Stratton stock parts made for the World Formula package. Parts are listed in “Version 7/10]” of Briggs and Stratton’s “Formula Racing Performance Catalog & Reference Guide,” available at <http://www.briggsandstratton.com/engines-racing>.

**Measurements:** Measurements are listed only as reference of Briggs & Stratton stock part manufacturing tolerances.

**No Alteration of Parts:** No modification or machining of parts to bring them to stated minimum/maximum manufacturer tolerances (or for any reason) unless specifically noted in these specs. Any part that shows evidence of alteration – even if within listed tolerances – will be grounds for disqualification.

**Inspection Method:** All parts are subject to comparison with a known stock part, and/or measured to confirm conformity to Briggs & Stratton manufacturing tolerances. Parts that these rules specifically allow to be altered are measured. Measurements are taken with dial indicators, micrometers and/or calipers; all tolerances  $\pm .001$ ” due to calibration variance.

**Piston Pop Up Measurement:** The piston pop up (center of Piston) is limited to 25 thousandths above the block deck. Nominal from the factory is 22 thousandths. This is

## **Texas Sprint Race Series, Inc.**

### **World Formula Pro Stock Class**

measured from the top of the piston to the block head deck with the head removed. Decking is allowed to remedy engines with pop up clearance less than nominal during a rebuild but may not exceed the maximum.

**Cylinder Head:** Gasket surface may be machined. Deft from gasket surface to head surface between valves must be a minimum of .319. No angle cutting of head. Hard carbon may be scraped off before measurement is made.

**Head Gasket:** Aftermarket head gasket is permitted. Tech head gasket for .040 minimum thickness, (check halfway between head bolt holes).

**Billet Rod:** Aftermarket billet rod is permitted. Any unmodified, series produced aluminum alloy rod that is available to the karting industry is allowed. Rod length, measure from bottom of wrist pin hole to top of crank journal hole, is 2.419" minimum to 2.429" maximum as measured with caliper at narrowest point of jaws.

**Shrouds and Covers:** All shrouds and covers must be stock and mounted in the stock location. Cylinder shield may be slightly bent or drilled around spark plug hole to allow clearance for a head temperature lead and/or coil ground lead.

**Header:** Stock header only (part #557045). Any or no exhaust gasket is allowed. Sealer on header is allowed. Safety wiring of header nuts is required. Bottom bracing must be bolted to head. Wrapping or coating the stock header is required from the header connection down past the header bracing. Wrapping if the silencer pipe is optional. Welded repairs and addition of exhaust gas temperature sensor are allowed.

**Silencer:** RLV silencer Kit #5447S-K-8 (this kit includes (1) RLV #5447S pipe and (1) RLV #4108 silencer & (2) RLV #0564 Springs) is required. Silencer may not have any loose, rattling, altered or removed baffles. Springs attaching silencer to header must be safety wired. The pipe and silencer must be secured to the chassis via RLV Pipe mount # 0516 or other alternate method that satisfies the Tech Director.

**Electric Starter:** Starter motor assembly (part #557068) must be stock and mounted in the stock location if used. Battery, wiring, button and hardware to make electric starter operational are optional and open. Pull start assembly must be present, complete and operational. Note: The Electric starter may be removed if the racer does not wish to use electric start. Part #555702 Flywheel guard must be used if the electric starter assembly is removed.

**Rev Limiter:** Stock PVL ignition coil with integrated rev limiter only (part #557125 "magneto armature"). Rev limit is 7100 rpm +/- 50 rpm.

**Inspection Method:** Rev limiter may be checked at any point during an event with a suitable memory-capable tachometer attached to the plug lead. Engine is accelerated on stand, measurement is taken at point of rev limiter engagement; that point of engagement must be within 100 rpm when re-checked with the same instrument. Each competitor is allowed one courtesy check of their rev limiter with the instrument to be used at that event.

## **Texas Sprint Race Series, Inc.**

### **World Formula Pro Stock Class**

**Spark Plug:** Champion RG4HC plug only. No other plug may be used. Indexing washers allowed. Removal of factory sealing washer is not allowed unless using head temperature sensor ring.

**Fuel Pump:** Must be Briggs part #808656. Must be mounted in stock location and pulsed from intake manifold. Fuel filter optional and open.

**Air Filter:** Air Filter is required. The Stock green air filter (part #698973) or aftermarket air filter is allowed. Must be attached directly to carburetor; no extensions or adapters allowed. Non-air-channeling water-repellant cover is optional in wet conditions.

**Carburetor:** Stock Walbro PZ carburetor only (part #557006). No alterations of any kind Allowed other than listed in this rule set. Stock measurement of venturi: .979"-.984" vertical, .719"-.728" horizontal. Stock mounting boot is required (part 557130 "Carburetor Spacer"). Choke assembly should be removed completely and the open hole for the choke shaft to be sealed with silicone.

**Slide & Needle:** Unaltered stock slide and stock needle marked "CDB" only.

**Jets:** Jets and needle are the only parts that may be changed in carb. Jet selection limited to those available in kit 557012: Pilot jets 36, 38, 40; Main jets 90, 93, 96, 98, 100, 102. No drilling of jets allowed. Float height may be adjusted.

**Clutch:** Open to any drum type dry centrifugal clutch with a maximum of 9 springs and 6 shoes. No alteration to clutch allowed, except springs. Clutch coolers are not allowed. Clutch must be engine mounted. No Jackshafts allowed. Only #219 or #35 sprocket/chain are allowed. Gear ratio is open. No belt drive allowed.

**Fuel:** VP – MS93 Race Fuel only. No additives or oils allowed.

**Oil:** Any crankcase oil is allowed but must pass the burn test and/or the Sniffer test. (TIFF Industries Sniffer is recommended.) No additives allowed.

**Inspection Method:** Fuel may be checked by any means as part of post-race tech. When done with a Digitron gas meter, the meter is zeroed in a sample of source gasoline, +/-5 points deviation from zero is allowed. Each competitor is allowed one courtesy check of fuel in their tank with the method to be used at the event.

**Tires and Wheels:** EVINCO Blue only - 5" diameter wheels only. Rear tire width 6.0", front tire width 4.50" only. Rain tires are MG WT only.

**No Tire Softener or Prep:** Absolutely no tire softener or tire prep of any kind allowed. Anyone caught with any at an event will be immediately disqualified from that event.

**Inspection Method:** Tires may be checked at any point during an event with a durometer.

**Texas Sprint Race Series, Inc.**  
**World Formula Pro Stock Class**

**Data Systems:** Data systems are open and optional. RPM, head temperature and exhaust temperature sensors only.

**Updates:** In response to observations and feedback, these rules may be updated at any time to ensure fairness and the best possible racing experience. We will make every effort to enforce these rules and make updates in a timely and diplomatic fashion.