



## 2019 POWRi Lonestar 600's Jr Sprint Rules

### Table of Contents

<b>General Rules</b>	<b>p. 2</b>
Improper Language or Conduct	p. 2
Minimum Age Requirements	p. 2
Physical Condition of Driver	p. 2
Intoxicants or Drugs	p. 3
<b>General Race Procedures and Rules</b>	<b>p. 3</b>
Pill Draw	p. 3
Event Format	p. 3
Passing Points Format	p. 4
Qualifying Format	p. 4
Warm-Up Laps	p. 5
Flag Signals	p. 5
Method of Starting	p. 6
Starting Speeds	p. 6
Initial Starts	p. 6
Restarts	p. 7
Backup Cars	p. 7
Changing Drivers	p. 8
Work Area	p. 8
Stopping on the Track	p. 8
360 Spins	p. 9
Rough Driving	p. 9
Slide Jobs	p. 9
Retaliation	p. 9
Race Completion	p. 9
<b>Car Appearance</b>	<b>p. 10</b>
<b>Jr Sprint Specifications</b>	<b>p. 10</b>
Engine	p. 11
Weight	p. 12
Tires	p. 12
Car Design and Construction	p. 13
Tech	p. 14
Tech Failures	p. 15
Protests & Fees	p. 15
Safety Equipment	p. 16
Miscellaneous	p. 16
<b>Membership Requirements</b>	<b>p. 17</b>
<b>Rookie of the Year</b>	<b>p. 17</b>
<b>Points and Point Fund</b>	<b>p. 17</b>
<b>Provisional's</b>	<b>p. 18</b>
<b>Failure to Comply</b>	<b>p. 18</b>



## 2019 POWRi Lonestar 600's Jr Sprint Rules

### I. GENERAL RULES

#### A. Improper Language or Conduct

1. No participant will be allowed to use improper language to a race official at the track.
2. No participant shall strike or cause bodily harm to any person at the track.
3. No participant or member of his/her pit crew is to approach the flagman or scorers during a race. Any problem is to be taken to the Director of Competition.
4. Unsportsmanlike conduct or participating in any action or activity considered detrimental to POWRi or POWRi Lonestar 600, at any sanctioned event or on social media, by drivers, owners and/or pit crews shall be grounds for disqualification and/or suspension.
5. Guns or other weapons will not be allowed on any person at the track or at any organization activity.
6. All decisions at the race track will be left to the discretion of the Director of Competition.

#### B. Minimum Age Requirements: All drivers competing in POWRi Lonestar 600's Micro sanctioned events must be

##### 1. Jr Sprint Class

- a. 6 years of age to Twelve (12) years of age max. Exceptions to this rule may be made for drivers with adequate racing experience as determined by the Director of Competition.
- i. Once a Jr Sprint driver has moved up to the Restrictor class they may move back down to the Jr Sprint class to compete. But if the Director of Competition feels the move is of an unfair advantage then it will not be allowed.

#### C. Physical Condition of Driver

1. POWRi Lonestar 600's strongly encourages all drivers to get an annual physical exam before the first race of the season.
2. No participant will be allowed to compete if it is evident that he/she shows signs of exhaustion, intoxication, or other potential physical incapacities which make him/her a threat to the well-being of himself/herself or his/her fellow competitors. The Director of Competition may rule that a driver is not able to participate.

#### D. Intoxicants or Drugs: No owner, driver, or pit crew member shall be found to be under the influence of intoxicants or drugs while on the race course or in the pit area. No liquor or drugs will be used while in the pit area before or during a race program.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

Anyone found guilty of this infraction will be removed by security from the designated area.

### II. GENERAL RACE PROCEDURES AND RULES

A. Pill Draw: (\$20 Per Entry) All entrants must participate in pill draw in order to determine the heat race line ups or qualifying order. Pill draw will take place at the POWRi Lonestar 600's trailer.

1. The designated time for pill draw will be posted online and at the track.
2. If a participant fails to draw within the designated time:
  - a. The participant will not receive passing points if the event format calls for heat races. The participant will only receive finishing points from the heat race.
- OR
- b. The participant will qualify last if the event format calls for qualifying.
3. Only one pill may be drawn per entry.

B. Event Format: The event format will be left to the discretion of the Director of Competition and will be posted at the track.

1. Drivers Meeting
  - a. A drivers meeting will be held at a specific time per the track. This time will be listed on the website.
  - b. Drivers meetings will always be held at the POWRi Lonestar 600's trailer unless otherwise stated.
  - c. All drivers must attend the drivers meeting. There will be a horn blown when it is time for the drivers meeting.
2. All full race programs shall be run in the following order:
  - a. Option 1: Passing Points Format
    - ii. Pill Draw in lieu of qualifying to determine line up (No Qualifying)
    - iii. Heats
      - a. 8 cars max per heat
      - b. Unless 50 or more car then 10 cars max per heat
  - iv. Qualifiers (Optional)
  - v. Trophy Dash (Optional)
  - vi. Semi-Feature (Optional)
  - vii. Feature
- b. Option 2: Qualifying Format
  - i. Pill Draw in lieu of qualifying to determine line up (No Qualifying)
  - ii. Heats
    - a. 8 cars max per heat



## 2019 POWRi Lonestar 600's Jr Sprint Rules

- b. Unless 50 or more cars then 10 cars max per heat
- iii. Qualifiers (Optional)
- iv. Trophy Dash (Optional)
- v. Semi-Feature (Optional)
- vi. Feature

### C. Passing Points Format

1. Passing points will be based on finishing position and cars passed.
2. The participant will not receive passing points if he/she does not partake in pill draw. The participant will only receive finishing points from the heat race.
3. Highest in passing points from the heat races will automatically transfer to the A-main. The number of cars that automatically transfer to the A-main from the heat races will be adjusted by the Director of Competition per car count for the night.
4. The balance of the cars remaining will be lined up in subsequent consolation events based on passing points.
5. The top finishing cars based on their finish will be lined up behind the cars that have already qualified for the main event. The amount of cars taken out of each consolation event will be determined by the Director of Competition.
6. If driver starts on the pole of a heat race and that driver wins the race the said driver will automatically make the redraw.
7. Passing points table is posted in the POWRi Lonestar 600's trailer.

### D. Qualifying Format

1. Qualification order will be determined by pill draw.
2. Any participant that does not participate in pill draw will automatically qualify last.
3. Any participant not ready to qualify when it is their turn will be penalized one lap.
4. Participants not in the proper qualifying order will be moved to the rear of the field and penalized one lap.
5. Qualifying is based on two consecutive laps, the faster counted as the official time. Heat races are then to be lined up according to the official times in an inverted, staggered manner.
6. In the event of a tie, the tie will be broken using the second fastest lap time. Should the second fastest lap time also result in a tie, the result will be decided in the favor of the participant who qualified first.

- E. Warm-Up Laps: The Director of Competition will determine and explain warm-up procedures at the driver's meeting at each track. These will differ depending on





## 2019 POWRi Lonestar 600's Jr Sprint Rules

track conditions and Promoter's options.

### F. Flag Signals

1. Green Flag indicates START, course is clear.
  - a. **A DRIVER MAY NOT EXIT HIS/HER CAR WHILE ON THE TRACK DURING GREEN FLAG CONDITIONS.**
    - i. Exceptions to this rule may be made for safety issues.
    - ii. The Director of Competition will determine if the driver exited his/her car for a safety issue.
2. Yellow Flag indicates CAUTION, slow down and maintain one's position.
  - a. The yellow flag will be displayed in the event of an accident or an unfavorable condition on the course. In the event of the yellow flag being displayed, the leader of the race is required to slow down to parade lap speed and the balance of the field will close in behind him/her in the order in which they crossed the start-finish line on the last scored lap.
  - b. If a driver causes 2 yellows that driver will be black flagged from that race.
  - c. Work on a car will be permitted during a yellow in the designated work area. Pending a hot pit area is allowed at said track. The car must be ready to resume racing when given the order. Cars not back on the track before the one-to-go will not be permitted to resume the race.
  - d. The green flag will not be displayed until the field has been completely closed up and the course is clear. When the green flag is again displayed, the race will be resumed all around the course.
  - e. **A DRIVER MAY NOT EXIT HIS/HER CAR WHILE ON THE TRACK DURING YELLOW FLAG CONDITIONS.**
    - i. Exceptions to this rule may be made for safety issues.
    - ii. The Director of Competition will determine if the driver exited his/her car for a safety issue.
3. Red Flag indicates STOP, race is halted. The Director of Competition will determine whether the Red Flag condition is open or closed.
  - a. Closed Red: Work on a car will be not permitted during a closed red in the designated work area. However when the yellow is shown then the car may be worked on. Pending a hot pit area is allowed at said track. The car must be ready to resume racing when given the order and must start at the tail. Cars not back on the track before the one-to-go will not be permitted to resume the race.
  - b. Open Red: Work on a car will be permitted during an open red on both the track and in the designated work area, but the car must be ready to resume racing when given the order. Cars not back on the track before the one-to-go will not be permitted to resume the race.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

- i. Any work done on a car requiring a jack must be done in the work area during an open red.
- ii. If a car changes any tires the car will go to the tail
- iii. If the car needs to be refueled. The car must be in the work area to do so.

4. Black Flag indicates STOP AND EXIT TRACK. Car will not be scored if it does not stop on the next lap.
5. Royal Blue with Yellow Diagonal Stripe indicates a lapping competitor is attempting to pass, give him/her consideration.
6. White Flag indicates Entering the Last Lap.
7. Checkered Flag indicates Race Completion.

### G. Starting Speeds

1. No cars will hot lap or pass the designated pace car prior to the start of the race.
2. In the case of a start using a pace car, the pace car will leave the track before the starting lap and the lead pole car shall approach the starting line at a consistent speed, in accordance with track conditions and as required to keep the field in formation.
3. In the event a pace car is not used, the lead pole car will set the pace, which shall be slow and consistent, in accordance with track conditions and as required to keep the field in formation.
4. **NO DRIVER MAY DELIBERATELY IMPROVE HIS POSITION UNTIL THE GREEN FLAG IS DISPLAYED.**

### H. Initial Starts

1. Initial starts will be double file unless the Director of Competition specifies otherwise.
2. A pace truck will set the pace for a start. All starts occur in turn four. Driver may take off at any point in-between the 2 cones placed in turn 4. Pole sitter will be given no warning. If driver accelerates before the first cone the yellow will fly and the front row will switch positions. In the event the new pole sitter jumps the start as well. The pole sitter (1<sup>st</sup>) and the inside second row (3<sup>rd</sup>) car will switch.
3. Any participant failing to take his/her proper starting position, deliberately obstructing a fellow competitor from taking his/her proper starting position, or intentionally delaying the start of a race event will be moved to the last running position.

### I. Restarts

1. Restarts will be single file unless the Director of Competition specifies otherwise.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

2. In the event of a yellow flag, cars will restart according to the last completed lap.
3. In the event of a red flag, cars will restart according to the last completed lap.
4. Stopping on the Track: A car that stops for any reason under green flag conditions will be placed at the tail of the field for the restart. Exceptions to this rule will be made for safety issues. The Director of Competition will determine if the stop was made for a safety issue.
5. 360 Spins: The offender will be sent to the tail of the field for the restart.
6. Accidents: All cars involved in an accident will restart at the rear of the field according to the running order they were in on the last completed lap.
7. Exiting the Track: If a participant exits the track for any reason during the race, he/she will not be able to resume the race. Exceptions to this rule will be made for safety issues. The Director of Competition will determine if the stop was made for a safety issue.
8. If two or more competitors engage in any combination of the events named in numbers 4 through 7 immediately above on the same lap, the participants will restart at the rear of the field according to the running order they were in on the last completed lap.
9. Any participant failing to take his/her proper restart position, deliberately obstructing a fellow competitor from taking his/her proper restarting position, or intentionally delaying the restart of a race event will be moved to the last running position.
10. The leader sets the pace for a restart. All starts and restarts occur between the 2 cones in turn 4.
11. Participants cannot pass other competitors until they pass the cone on the front stretch. If a participant passes another competitor before the cone, the participant will lose two positions on the next restart or at the end of the race.
12. Competitors cannot hit the cone. If a participant brings out the yellow flag because he/she hit the cone. The offender will be sent to the tail of the field for the restart.

### J. Backup Cars

1. The use of a backup car must be approved by the technical director.
2. A backup car does not have to be part of a team's original equipment. However, the backup car cannot have already competed or been registered to compete in the event.
3. If a driver changes cars prior to his/her scheduled heat race, that driver will start in the position designated to him/her on the official heat line-ups.
4. If a driver changes cars at any point after his/her scheduled heat race, that driver will start at the tail of the next scheduled event. If there is a B-Main then said driver will start at the tail of the B-Main. If there is no B-Main then said driver will start at the tail of the A-Main.





## 2019 POWRi Lonestar 600's Jr Sprint Rules

5. Once a race has commenced, a driver cannot change cars for that race after one scored lap has passed.
6. If a backup car is utilized, a driver change will not be permitted for the remainder of the event.

### K. Changing Drivers

1. If a car changes drivers prior to its scheduled heat race, that car will start in the position designated to it on the official heat line-ups.
2. If a car changes drivers at any point after its scheduled heat race, that car will start at the tail of the next scheduled event. If there is a B-Main then said driver will start at the tail of the B-Main. If there is no B-Main then said driver will start at the tail of the A-Main.
3. If a car changes drivers, the use of a backup car will not be permitted for the remainder of the event.

### L. Work Area: The designated work area will be determined by the Director of Competition at each track. The designated work area may be utilized under yellow or red flag conditions. Under yellow or closed red conditions, once a car arrives in the work area, the car must begin its return to the track within sixty seconds or before the one-to-go of the same lap in which the car exited the track.

1. The car will restart at the tail of the field.
2. If a car exits the track and does not return before the one-to-go of the same lap in which it exited the track, the car will not be permitted to resume the race.
3. If a car exits the track and one or more laps are completed in its absence, that car will not be permitted to resume the race.
4. The number of times a car utilizes the work area will be 3. If the car impedes 3 times the said car will be prohibited from completing the race.

### M. Stopping on the Track

1. A car that stops for any reason after leaving the grid and impedes the start of the race will be placed at the tail of the starting field. Exceptions to this rule will be made for safety issues. The Director of Competition has the discretion to determine if the stop was made for a safety issue.
2. A car that stops for any reason under green flag conditions, including for an accident, will be placed at the tail of the field for the restart. Exceptions to this rule will be made for safety issues. The Director of Competition has the discretion to determine if the stop was made for a safety issue.
3. If the Director of Competition determines that a participant is continuously impeding a race, the participant will not be permitted to resume the race.

### N. Spins:





## 2019 POWRi Lonestar 600's Jr Sprint Rules

1. Spins are not permitted and will not be tolerated. The director of competition has the discretion to determine if the spin does not impede the race to maintain racing.
- O. Rough Driving:
1. 1st Offense: Driver will be sent to tail.
  2. 2nd Offense: Driver will be disqualified, receive no points and no pay.
- P. Slide Jobs: A participant's attempt to clear the car he/she intends to pass must be made in good faith. The good faith determination will be made by the Director of Competition.
- Q. Retaliation: If a participant engages in retaliation before, during, or after a race, the participant will be disqualified and will receive no points or pay
1. Unsportsmanlike conduct or participating in any action or activity considered detrimental to POWRi or POWRi Lonestar 600, at any sanctioned event or on social media, by drivers, owners and/or pit crews shall be grounds for disqualification and/or suspension.
- R. Race Completion
1. A race will be considered complete when the checkered flag has been displayed or whenever the scheduled distance is finished, whichever occurs first. All feature races must be completed by a green, white, and checkered flag unless the discretion of the Promoter states otherwise.
  2. If the scheduled distance of a feature event has not been covered, it is within the Director of Competition's discretion to decide if the race is complete.
  3. Races which are completed on subsequent dates will complete the unfinished portion of the scheduled distance.
  4. The white flag will be displayed to the leader as he/she completes his/her last lap, and will continue to be displayed to each successive car during that lap of the race, indicating one more lap to be run.
  5. The checkered flag will be displayed to the leader as he/she completes his/her last lap and to each successive car until all cars running have been signaled that the race has been completed.
  6. If a race is stopped by a red flag after the leader and/or other cars have taken the checkered, those taking the checkered prior to the showing of the red flag will be scored according to how they crossed the start-finish line. Cars passing the start-finish line after the showing of the red flag will be scored according to their last scored lap (green). Those involved in the accident will be scored at the rear of the field.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

7. If a race is stopped by use of the red flag and is ruled complete by virtue of more than 50% of the race event having been run, the finishing positions will be paid according to the last official scored lap by the leader, previous to the red flag being displayed. Any cars involved in the accident which resulted in the red flag being displayed, will be scored at the rear of the field.
8. If a feature race stopped by the use of the red flag is ruled incomplete by virtue of not having completed 50% of the race event, all race participants of that event will share equally in purse money paid for that event.

### III. CAR APPEARANCE

- A. All cars must pass a technical/safety inspection by the Director of Competition before being allowed to race.
- B. All cars must present a neat appearance to the Promoter and the crowd.
- C. Pit crews must be in a presentable condition.
- D. Each car will be required to have a number that is prominently painted on the nose, each side of the tail, and each side of the wing. Duplicate numbers at any track may require the alteration of the number by adding a number or letter to the car.
- E. After a number is assigned to a particular car and owner, it will remain with the owner until the end of the racing season.

### IV. JR SPRINT SPECIFICATIONS

#### 2019 Kid Sprint Engine Rules Briggs World Formula

All parts must be Briggs & Stratton factory production parts unless otherwise noted in these rules. No machining, polishing or alteration of any parts is permitted unless specifically noted in these rules.

***All parts are subject to comparison with a known stock part. All tolerances are +/- .001 inch***

**CYA Rule: If the rules does not say you can - You can't!!!!!!**

717.1: Shrouds and covers: All shrouds and covers must be run as supplied. Cylinder shield may be bent slightly or drilled around spark plug hole to allow fitting cylinder head temperature lead and clearance for Coil Ground lead. Flywheel Cover, Top Cover and Plate are non tech items. They are replaced by Part # 555699.

717.2 : Header and silencer

717.2.1: Factory header or RLV part number 5442S. Any exhaust gasket or no exhaust gasket allowed. Sealer allowed on header. Header nuts are not required to be safety wired. Bottom bracing must be bolted to head. Factory header may be cut and turned to fit car as long as the overall length and tube size remains the same as the stock factory header: OAL 20.5" OD .9375" x .065 wall (ID .807 +/- .005) Coating the pipe is allowed.

717.2.2: Exhaust gas temp sensor is optional.

717.2.4: RLV Silencer #4100 required. Baffle rattle is allowed however if baffles have been



## 2019 POWRi Lonestar 600's Jr Sprint Rules

altered or removed, the muffler will be deemed illegal. Baffle holes are .128 inch(#30 drill bit) no go gauge. Coating is allowed

717.2.5: Springs attaching Silencer to header must be safety wired. Silencer must be attached and functional to header or car at the end of the race or driver and car will be DQ'd

717.3 : Electric starter: Starter motor must be operational and capable of starting engine.

Battery must be minimum of 8 AH rating and capable of starting warm engine. Recoil starter and flywheel starter cone optional. Starter support bracket P\N 557119 is optional.

717.4: Air filter must be Green Brand 40 X 75 filter attached directly to Carb. No Extensions or Adapters.

717.5 : Spark plug: Any commercially available, 10 mm thread, spark plug allowed. Spark plug must be stock. Indexing washers allowed. Removal of factory sealing washer is not allowed unless using head temp sensor ring.

717.6: Fuel pump must be B&S part 557033. Must be pulsed from intake manifold only.

717.7: Clutch: May be engine and/or Jackshaft mounted. Belt or chain drive from engine to jackshaft. May use #219 or #35 sprocket.

717.8: Rev Limiter: Rev Limit is 7100 rpm +/- 50 rpm. Rev limiter may be checked at any point in the race program. Rev limit will be checked with a suitable memory capable tachometer attached to the plug lead and the motor accelerated until the rev limiter begins to function. All rev limiters must function within 100 rpm when checked with the same instrument. Each competitor is allowed one courtesy check of the rev limiter with the instrument to be used at the event.

717.9: Fuel: **KSUSA FUEL WILL BE METHANOL IN 2019** Specific Gravity for Methanol is 0.7913@68 degrees F. Use a Temperature Correction Chart to determine exact SG. Legal Methanol Corrected Specific Gravity is 0.760 to 0.800. VP M1 Methanol is the standard for Zeroing a Digitron or any device for testing Methanol for power enhancing additives. VP M3 and M5 and other brands of like chemistry are illegal.

717.9.1: OIL: Any crankcase oil is allowed BUT MUST PASS THE BURN TEST AND/OR THE SNIFFER TEST. (Recommend Tiff Industries Sniffer)

717.10 Carburetor: Stock Walbro PZ carburetor only. No alterations allowed; choke excluded. Carb mount boot Briggs #557130 is required. New Carburetor may have different color and exterior appearance.

717.10.2: Slide must remain unaltered. Unaltered Stock needle marked CDB is required,

717.10.3: Choke assembly is optional and may be removed and shaft holes plugged with silicon. If choke is retained choke lever may be fastened open with spring, rubber band or tie wrap.

717.10.4: Methanol Jets : Drilling or reaming of gas carb jets is allowed: Nozzle .111" no go; pilot/slow jet .026" no go; Main jet .072" no go. NOGO Gauge must NOT pass thru. No drilling of main jet diffuser tube. No tolerance allowed.

717.10.6: Venturi measurement

717.10.6.1: Vertical .9902" max

717.10.6.2: Horizontal .7382" max

717.11: Camshaft: No alteration of the camshaft by machining, polishing, or altering is allowed. Must compare to stock Briggs part. First camshaft check will be taken at the valve spring retainers. With the lash set at zero, the movement of the valve spring retainer may not exceed .3085". Any camshaft with a measurement at the push rod of less than .306 should be removed and measured on the grind and checked for alteration. Camshaft must be as supplied with Stock Profile and compression relief.

717.11.1: Install degree wheel, using positive stop method.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

717.11.2: Check ignition timing. With the right edge of the magnet (not the magnet holder) aligned with the right edge of the notch on the bottom of the right leg of the coil. The degree wheel must indicate between 23 and 29 degrees BTDC. Flywheel key must have BS logo. Minimum key width is .182 inch.

717.11.3: Tech camshaft at pushrods. Push gently down on dial indicator stem to ensure that there is no lash when pushrods are going down. Exhaust Lobe Lift Intake Lobe 75-71 BBDC .020 34-30 BTDC 57-53 BBDC .050 18-14 BTDC 39-35 BBDC .100 2BTDC-2ATDC 25-21 BBDC .150 13-17 ATDC 9-5 BBDC .200 29-33 ATDC 12-16 ABDC .250 49-53 ATDC 25-29 ABDC .275 63-67 ATDC .3085 MAX .3085 MAX 70-66 BTDC .275 31-28 BBDC 57-53 BTDC .250 18-14 BBDC 37-33 BTDC .200 2-6 ABDC 21-17 BTDC .150 18-22 ABDC 6-2 BTDC .100 33-37 ABDC 11-15 ATDC .050 49-53 ABDC 29-33 ATDC .020 66-70 ABDC

717.12: Deck/Piston Clearance: Machining of deck surface is permitted. There will be no knife edge finishes allowed, Smooth finish only. Piston pop up cannot exceed .035" above block surface in the center of the piston. When measuring piston pop up, use the backside of the Sox pushrod gauge or set flat bar stock across piston parallel to wrist pin. Use dial indicator to check pop up on center of this bar. Carbon may be removed from the top of the piston prior to measuring. Top of piston may be filed to relieve protrusions left by number stamp on top of piston.

717.13: Bore: Maximum bore 2.725". Factory oversize pistons allowed.

717.14: Stroke: Maximum stroke is 2.204". Push piston down to take up rod play.

717.15: Head gasket: Any commercial available head gasket may be used but must maintain same configuration of shape of standard Briggs World Formula gasket. Minimum thickness is .040 measured with a micrometer from inside of cylinder hole of gasket at 4 points between the head bolts. Fire Ring B&S gasket is legal. Current engines using .010 and thicker will be legal to 01/5/2019. Any engine built after 7/15/2017 will use the .040 head gasket. This will allow those engines that are fresh to be used til 1/5/2019 then rebuilt to .040 spec. All engines used in 2018 will require the .040 gasket.

717.16: Head: Head may not be altered in any way from factory specifications. NO PORTING OF ANY SHAPE OR WAY! Heat sink PN 555690 is allowed.

717.16.05: Cylinder head gasket surface may be machined. Remove Carbon first. Depth from gasket surface to head surface between valves must be a minimum of .319". Measure by using a depth micrometer. No knife edges or angle milling of head.

717.16.1: Rocker Arms / Push Rods: rocker arms must be as produced. Length must be 2.820 inches minimum. Push rod length 5.638" no go to 5.656 must go. Push rod diameter is .185 to .190".

717.16.5.1: Intake port and manifold: No media blasting of any type allowed on intake port in/on the head or manifold. Must be as cast. Maximum diagonal measurement is 1.101". Maximum vertical measurement is 1.044".

717.16.5.2: Exhaust port: No media blasting of any type allowed on exhaust port. Must be as cast. Maximum I.D. of shoulder in bottom of exhaust port is .854"

717.16.6: Valve seats - one 45° angle only

717.16.6.1: Intake valve seat diameter is .966" - .972".

717.16.6.2: Exhaust valve seat diameter is .844" - .850".

717.16.7: Valves

717.16.7.1: Intake valve head diameter is 1.055" - 1.065".

717.16.7.2: Exhaust valve head diameter is .935" - .945".

717.16.7.3: Valve stem diameter is .232" - .238".

717.16.7.4: Valve face must have one 45° sealing surface only.





## 2019 POWRi Lonestar 600's Jr Sprint Rules

### 717.17.8 Valve springs

717.17.8.1: Dual valve springs as supplied by factory are required.

717.17.8.2: Inner spring wire diameter is .066" - .068".

717.17.8.3: Outer spring wire diameter is .112" - .114".

717.17.8.4: Valve Guides: Replacement of valve guides with B&S factory part 555645, is allowed.

717.18: Ignition: Unaltered B&S stock coil #557040 w\External Limiter or #557125 with Internal RPM Limiter is mandatory. Attachment bolts or bolt holes may not be altered.

717.18.1: Spark plug connector must be stock factory type.

717.18.2: Rubber plug boot is allowed.

717.18.3: There must be resistance from plug wire to ground on coil #557040. Resistance must be between 3000 ohms, minimum, to 6000 ohms, maximum. Coil resistance may be rechecked after a minimum of 10 minutes if correct reading is not attained upon first check. No spec available on P\N #557125.

717.18.4: Coil air gap is non tech.

717.19: Flywheel: Only stock Cast Iron or Cast Aluminum Briggs #557126 flywheel is permitted. Starter ring gear and all cooling fins must be in place. No machining, glass beading, sandblasting, painting or coating of flywheel is allowed. Minimum Flywheel Weight with starter ring, cooling fins, and attachment bolts 4 pounds 3 oz.

717.19.1: Chipped fins due to poor casting are legal. Completely broken off fins are not allowed. Minimum 1.750 inch Flywheel cover opening inch allowed.

717.19.2: Stock flywheel key with B & S logo is required and will determine Aluminum flywheel ignition timing. The flywheel key may be aluminum or steel. .182 minimum width. NO offset keys permitted.

717.20: One or two stock crankcase gaskets are required. minimum

717.21: Valve Lifters: Must be stock. No Polishing allowed.

717.21.1: Lifter head diameter must be .964" - .984".

717.22: Connecting Rod: Stock B&S part #557005 or 557117 **You may also run inserted after-market rods (stock size)**. Rod may not be altered or polished. Rod may be clearanced providing that it is in stock configuration and finish, with no dimpling or media blasting. Rod ends must be concentric with crank journal and wrist pin with no chamfer or breaking of edges.

717.22.1: Rod length, measured from bottom of wrist pin hole to top of crank journal hole, is 2.419" minimum to 2.429" maximum.

717.22.2: Oil hole opening is .185" no-go. Crank end of oil hole is chamfered.

717.23: Wrist pin:

717.23.1: Maximum I.D. is .414".

717.23.2: O.D. is .624"-626".

717.23.3: Minimum length is 1.901".

717.24: Piston rings: Three rings mandatory. Top compression ring must have chamfer or O toward top of piston. Second scraper ring must be installed with inside chamfer down and O toward top of piston. Oil ring must be installed as from factory. No alteration of rings allowed except end gapping and lapping. Maximum RING GAP of Rings .050. Rings must be self supported in the cylinder bore of the engine being inspected. Rings must remain flat. Rings must be in one piece when removed from block. Aftermarket rings are allowed if they meet the Specifications listed below.

717.24.1: Minimum width of top two rings is .095".

717.24.2: Thickness of top two rings is .059" - .064".

717.24.3: Minimum width of oil ring is .065". Ring groove must be present. Expander must be



## 2019 POWRi Lonestar 600's Jr Sprint Rules

installed but may be trimmed in overall length.

717.24.4: Thickness of oil ring is .098" - .102".

717.25: Piston: Stock "kidney bean" piston required. No alteration, polishing or machining allowed. Only piston skirts are coated and coating cannot be removed and skirts or any part of piston be polished. Factory finish only.

717.25.1: Minimum from top of piston to top of wrist pin on circlip side is .658".

717.25.2: Minimum piston length is 1.768".

717.25.3: Factory oversize World Formula pistons are allowed.

717.26: Crankshaft: Stock B&S crankshaft casting #772 and #052 only allowed, all finishes being as factory supplied, with stock timing gear installed in stock location only. No alteration or polishing in any manner allowed. Offset crankshafts not permitted. Stock bearings required. Side cover may be peened to retain side cover bearing.

717.26.1: Shim(s) if used, must be installed as from factory.

717.26.2: Crankshaft journal diameter is 1.094" - 1.100".

717.27: Block: Must be stock with no alterations, except blocks may be repaired from broken rod damage, providing that repair does not constitute a functional modification of original block. No welding is permitted from the cooling fins upward. CYB rule: Unless the rules say you can; you can't!!!

717.28 All Tolerances +/- .001 measured with dial indicators, micrometers or calipers due to calibration variance.

### A. Weight:

1. Jr Sprint Class will weigh a minimum of 400 pounds; including water, oil, fuel and the driver. Cars may be weighed prior to and/or following any event. Cars weighed at the completion of an event may not add fuel or ballast to satisfy the minimum weight requirement.

### B. Tires

1. Any Hoosier Right Rear Tire may be used as long as it is made for a Jr Sprint. 8" in size American Racer right rear tires may be used until July 1<sup>st</sup>. To allow burn off time.
2. Left Rear and Fronts may be any brand, compound and size.
3. The altering of any tire compound, by any means will not be permitted. Chemical alteration of the tread carcass and/or tread compound, such as tire 'soaking' and/or the introduction of tread 'softener' and/or physical defacement (removal, altering and/or covering) of tire sidewall markings in any manner will not be permitted. If any competitor is found to have altered their tires a disqualification will be issued for that night's race. Driver will not receive points or pay. First offense will result in that night's disqualification. Second offense will result in a suspension for the rest of the year.
4. Tire Inspection



## 2019 POWRi Lonestar 600's Jr Sprint Rules

Any tire may be inspected and/or analyzed for alteration at any time. This will consist of a process as determined by the independent laboratory that performs the analysis. The analysis process will require a sample shipment of the tire to the selected laboratory. Additional race event(s) may be completed before a determination is made. If a penalty is issued, the event(s) that fell into the analysis time period while the tire(s) were being analyzed will be considered as part of the penalty time period.

Monies won in an event may be held until the final determination is made by the independent laboratory.

### C. Car Design and Construction

#### Wing

- a) Right side board, maximum 42" x 20". Left side board, 42" x 20". Minimum size is 6 sq. ft. The wing cannot be mounted outside the centerline of the tires. Side boards may not extend more than 3" beyond center section and sides must cover center section. All wings must have 1/16" radius edges or edging. No raw edges. No wood except for ribs or spars inside center section. Lower front corner of the wings sides cannot be more than 4" below top of roll cage. Nose wings cannot exceed 24"x 18", and must carry car number. Top wings are mandatory to enter a night's event. Cars may finish without a wing if no replacement is available but must still meet the minimum weight requirement.
2. All cars must have a metal firewall between Driver and engine compartment. Minimum 24 gauge or .0625 thickness aluminum.
3. Chain guards will be installed on all cars using a minimum of .090 aluminum material or equivalent.
4. On and off switches must be on the dash and labeled.
5. Roll cages shall be at least 1 inch .083 wall thickness mild steel, or 1 inch .065 wall thickness chromoly steel minimum. The front section of the cage shall be no further back than the steering wheel. Roll cage shall have sufficient fore and aft bracing and strength to support the weight of the car & driver in case of an upset. Bends must have at least 3-inch radius. No square or pointed corners allowed. Roll cage must be a minimum of 3 " Above the drivers helmet to the top of the cage at any point above the drivers helmet. It is mandatory to install a cross brace behind the seat to support the shoulder harness at a point not lower than 1 1/2 " below or above the top of the drivers shoulders.
6. Roll cages must have sufficient fore and aft bracing.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

7. All cages shall be made of chromoly steel or equivalent.
8. All cars must be equipped with nerf bars and not exceed beyond the rear tires.
9. All cars must have bumpers extending beyond the front and rear tires.
10. Minimum wheel-base of 50 inches. Maximum wheel-base of 52 inches center of front axle to center of rear axle. Maximum width from outside left rear tire to outside right rear tire is 55".
11. Cars must have floor pans extending from the Driver's feet to the front of the seat.
12. Any cars with a frame that does not enclose the front axle must have the front axle tethered with "seat belt" material that is securely attached.
13. All wet cell batteries mounted in the cockpit area must be covered and vented outside the cockpit area.
14. All cars will have fuel cell bladders.
15. No cockpit adjustments of any kind.

### D. Tech

1. Top 3 placement in the A main will report to tech after the races are over.
2. Tech area will be pointed out in the drivers meeting

### E. Tech Failures

1. Any driver/car owner that refuses to be teched will be DQ'd from the event, forfeiting all points and money from the event and will be suspended for 2 additional races.
2. Any driver/car owner that fails tech at an event will be DQ'd from the event, forfeiting all points and money from the event and will be subject to pre-race tech for the same infraction at the next event. Any driver/car owner failing post-race tech a second time for the same infraction within the season will be suspended for 2 additional race nights. Any driver/car owner that fails post-race tech and wants to protest the infraction they can do so by Tues at 8pm the following week. If not protested by Tues at 8pm then call stands.
3. Any driver/car owner that fails tech for any infraction three times within a season will be suspended for the remainder of the season. Three strikes and you are out!

### F. Protests and Fees

1. A formal protest will be verbally accepted by the POWRi Lonestar 600's from a car owner or driver. Protesting party can only protest if his/her car was in the feature race with the car being protested. Protests can only come from drivers/owners that have finished in the Top 5. Can only protest the winner of the race. Money (Protest Fee and Filing Fee) must be accompanied with a written protest no longer than 15 minutes after completion of the race





## 2019 POWRi Lonestar 600's Jr Sprint Rules

program. No protest of any type will be allowed after post race inspection has been completed. One item per protest – per event – only. Meaning driver/owner that is protesting can only pick one single item that they feel is illegal. That item is the only thing that will be checked. Drivers/Owner may not protest more than one car per event. Driver/Owner can only submit one protest per year.

2. Motor tear down \$1000 deposit + (\$300 Nonrefundable filing fee). This deposit will be used towards the mechanics fee. Any unused deposit will be returned. This deposit includes the fee of \$85 per hour with 4 hr. min for tear down and possible rebuild. Time is determined by mechanic doing work. If the motor is determined legal then the hourly charge will continue until motor has been put together fully. Meaning if the cost to put motor back together is more than the \$1000 deposit then the protesting party must finish paying the mechanic. If the motor is determined to be illegal then the time stops after it is found to be illegal and will not be put together. The remaining unused deposit will be returned.
3. Fuel Test \$500 (\$300 Nonrefundable filing fee). This will only be used in the event that fuel test positive and the owner/driver want to protest the findings. The sample will be sent off for further testing to determine if performance enhancers have been used.
4. Tire Test \$500 (\$300 Nonrefundable filing fee). This will only be used in the event a Top 5 drive wants to protest the winner to have the tires tested. The sample will be sent off for further testing to determine if performance enhancers have been used.
5. Other technical protest: \$200 (\$300 Nonrefundable filing fee).
6. A driver/owner refusing to let his/her engine be inspected will be disqualified from that event and will not receive points or money for that race and is suspended for the rest of the year.

### G. Safety Equipment

1. The following safety items are strongly recommended:
  - Helmet must be Snell SA 2010 or Snell SA 2015
  - Name brand flame retardant uniform
    - a) Minimum 2 layers NOMEX suit 3.2A/5
    - b) NOMEX underwear is highly recommended
  - iii. Five point racing style harness
  - iv. Racing style shoes
  - v. Arm restraints
  - vi. Flame retardant gloves
  - vii. Helmet restraint must be used i.e. Hans, Nexgen, Simpson Hybrid

### H. Miscellaneous



## 2019 POWRi Lonestar 600's Jr Sprint Rules

1. The use of in-car radio transmitting devices are prohibited.
2. Only one-way communication from POWRi Lonestar 600's Race Control will be allowed and is mandatory.

Channel #1 Frequency: 454.0000

3. The use of electronic logic processor to control any function of the race car and/or system for gathering continuous data from any functions of the race is strictly prohibited. (Note: This rule does not include electronic ignition and/or electronic tachometers).

### V. MEMBERSHIP REQUIREMENTS

- A. No person shall be discriminated against because of sex, race, religion, or national origin.
- B. Levels of Membership are as follows:
  1. Full Membership: (\$100) Will earn POWRi Lonestar 600's championship points, be eligible for any contingency awards if all requirements are met, and have coverage under the secondary insurance plan (with the exception of Associate Membership, which is a non-competition membership). Driver will also secure his/her number for the year. (First come first serve basis)

- VI. ROOKIE OF THE YEAR: In order to qualify for Rookie of the Year, a participant must be approved by the Director of Competition. The definition of "rookie" will be determined by the Director of Competition. If a driver races 3 or more times in one given year then said driver will not be able to participate in the Rookie of The Year race for the following year.

### VII. POINTS AND POINT FUND

- A. All competitors will start each race season with zero points.
- B. **Points will be awarded only to registered POWRi Lonestar 600's members and are non-transferable.**
- C. POWRi Lonestar 600's points will be given for each sanctioned event in the following manner:

<u>Feature</u>	
1 <sup>st</sup>	150
2 <sup>nd</sup>	142
3 <sup>rd</sup>	135
4 <sup>th</sup>	130
5 <sup>th</sup>	125
6 <sup>th</sup>	122
7 <sup>th</sup>	119
8 <sup>th</sup>	116
9 <sup>th</sup>	113



## 2019 POWRi Lonestar 600's Jr Sprint Rules

10 <sup>th</sup>	110
11 <sup>th</sup>	108
12 <sup>th</sup>	106
13 <sup>th</sup>	104
14 <sup>th</sup>	102
15 <sup>th</sup>	100
16 <sup>th</sup>	98
17 <sup>th</sup>	96
18 <sup>th</sup>	94
19 <sup>th</sup>	92
20 <sup>th</sup>	90
21 <sup>st</sup>	89
22 <sup>nd</sup>	88
23 <sup>rd</sup>	87
24 <sup>th</sup>	86

- D. Any driver not transferring to the main event that runs the semi-feature will receive 65 points each. No semi-feature points will be awarded to any driver that transfers to the main event from the semi-feature.
- E. In the event of a rain out after a feature field has been set, all drivers in the feature field will be awarded 65 points each. Any driver not transferring to the feature event that runs the semi-feature will receive 65 points each.
- F. Any driver attending the race but fail to make any laps will be awarded 50 points
- G. A point fund and other awards will be presented during the annual Awards Banquet to be held at the completion of the race season. In order to be eligible to receive an award from the point's fund, a member must participate in at least 75% of the completed events during the season.

### VIII. PROVISIONALS

- A. In order to be eligible for a provisional, the driver must be a current series member at the time the provisional is to be taken.
  - 1. Drivers who are current members are eligible for one provisional starts per season.
  - 2. In order to qualify for a provisional, the driver must be in the top twenty in points at the time the provisional is to be taken and must have registered to participate in the event at which the provisional is to be used.
- B. The eligible and qualified driver that is highest in the current point standings will be the first entitled to a provisional. If that driver elects not to use a provisional, the eligible and qualified driver that is next highest in the point standings will then be entitled to a provisional. A provisional will pay the car's finish position minus last place money.
- C. Prior to the first two races of the current season, provisionals will be based on the season ending points from the previous season. After the first two races of the current season, provisionals will be based on the current point standings.



## 2019 POWRi Lonestar 600's Jr Sprint Rules

### IX. ALTERNATE DRIVER

- A. There will be an alternate driver for each race A Main. The driver that will be the alternate will be the first car that did not qualify.
  - a. The alternate will drive to infield when all other cars come onto the track. If a car falls out before the original green flag has dropped. Then the alternate will be allowed on the track and start at the tail of the field.
  - b. If the green flag has dropped then the alternate driver will not be allowed on the track.

### X. FAILURE TO COMPLY WITH THESE RULES WILL LEAD TO PUNISHMENT DETERMINED BY THE DIRECTOR OF COMPETITION.

