

# Beaver Dam Raceway Karts 2020

## 1.1 DEFINITIONS

Terms which appear throughout this Rule Book have the following meanings:

**Raceway:** The name of Beaver Dam Raceway.

**Raceway Rules:** The rules in this Rule Book, as amended from time to time.

**Raceway Officials:** General Manager, Director of Competition, Race-day Coordinator, Scorers, Flagman, Pit Stewards, or any persons serving under the direction of the Raceway including track management and owners.

**Raceway Technical Officials:** Raceway officials responsible for determining whether a kart meets applicable specifications.

**Event:** A Raceway sponsored event, which includes registration; inspection; practice; qualifying; and races. Raceway Events also include awards banquet; shows; and any activity in which Raceway is a sponsor or supporter.

**Competitor:** A driver, kart owner, crew member, or other person who participates in a Raceway Event.

**Major Infraction:** Major infractions include: use of traction control; violation of cubic inch displacement, compression limit, using non-approved cylinder block, crankshaft, connecting rods, valves, valve lifters, rocker arms, cylinder heads, intake manifold, carburetor spacer or restrictor; carburetor, fuel; non-approved tires & wheels; non-approved frame & steering components; non-approved brake components; non-approved clutch & transmissions; non-approved rear axles; failure to tear down kart for inspection when requested; failure to surrender to Raceway any part and/or equipment found during an inspection that does not meet Raceway specifications; harassment, verbal abuse, or assault to any Raceway Official, Technical Official, or any persons serving under the direction of Raceway.

**Minor Infraction:** An infraction that is not a Major Infraction.

**Illegal Drugs:** Illegal drugs are those substances or drug substances defined and prohibited by state and/or federal laws.

## **1.2 EFFECTIVE DATE**

The Raceway Rules are effective on the date of adoption by Raceway, regardless of when published. Once adopted, the Raceway Rules are in effect until the end of the competition season or as amended and posted.

## **1.3 AMENDMENTS**

The Raceway Rules may only be amended by publication of a bulletin by Raceway. An amendment is effective on the date of publication by Raceway, regardless of when received by a Competitor.

## **1.4 APPLICABILITY**

The Raceway Rules are applicable to all events sponsored by the Raceway the 2019 Raceway Rules supersede all previous rules as of the Effective Date, unless previously allowed items are otherwise approved in writing by the Raceway Officials. Items previously approved must remain within the spirit of these rules. Items not addressed in previous rules will be considered illegal.

## **1.5 INTERPRETATION and APPLICATION**

Raceway Rules are intended to ensure that Raceway sponsored Events are conducted in a manner that is as fair as possible for all Competitors. If there is a dispute regarding the interpretation or application of Raceway Rules, the decision by Raceway Officials and Technical Officials, at the Event, is final. Raceway Officials may make minor corrections, adjustments, and accommodations in the spirit rules interpretation and application to ensure fair competition.

## **1.6 FINALITY of INTERPRETATION and APPLICATION**

The interpretation and application of the Raceway Rules by the Raceway Officials at the track are final. ALL RACEWAY COMPETITORS EXPRESSLY AGREE THAT DETERMINATIONS BY RACEWAY OFFICIALS AS TO THE INTERPRETATION AND APPLICATION OF THE RACEWAY RULES ARE NON-LITIGABLE, AND THAT THEY WILL NOT INITIATE OR MAINTAIN ANY KIND OF LITIGATION AGAINST THE RACEWAY, OR ANYONE ACTING ON BEHALF OF THE RACEWAY, TO REVERSE OR MODIFY DETERMINATIONS, OR TO RECOVER DAMAGES, OR TO SEEK ANY OTHER KIND OF RELIEF. A RACEWAY COMPETITOR WHO INITIATES OR MAINTAINS LITIGATION AGREES TO REIMBURSE THE RACEWAY FOR ALL COSTS OF LITIGATION, INCLUDING ATTORNEY'S FEES.

## **1.7 COMPETITOR REQUIREMENTS**

### **1.7.1 Eligibility**

Any individual is entitled to participate in a Raceway Event provided that the individual has signed all required forms, waivers, & releases, and paid the required fee(s). Any individual participating as a Competitor agrees to abide by Raceway Rules as described herein. A Competitor must participate in at least 75 percent of the scheduled Events, and display participating sponsors emblems, or decals, to be eligible for any end of season awards.

To enter the pit area of a Raceway Event, there is no minimum age. Minors under 18 must have an insurance waiver signed by a parent(s) or legal guardian(s). To compete in a Raceway Event a Competitor must be at least 5 years of age. Age is determined as of Jan. 1, 2020 for class placement. If the driver's birthday is after June 30, 2020, they may be required to move up in class. The track staff will make this determination. Competitors under 18 and entered in competition must meet the approval of the track staff. They may be required to start in the rear of any events for an unspecified period of time to be evaluated by the track staff. Competitors under 18 must have a notarized insurance waiver signed by a parent(s) or legal guardian(s). Competitors must meet the specific age requirements of the division that they compete in. The track staff and management reserves the right to move competitors to divisions that are best suited to their individual skill level.

### **1.7.2 Independent Contractor Status**

All Competitors are considered independent contractors and not representatives, or employees of the Raceway. A Raceway Official who participates in an Event is considered a Competitor while on the racetrack. The Competitor is responsible for compensation of, and for all actions of, their employees or representatives. The Competitor is responsible for reporting and paying all fees, expenses, or taxes, if any, on any funds received as a result of activities as a Competitor.

## **1.8 SAFETY**

Racing is an inherently dangerous sport. Each Competitor assumes the risk of injury or death when he/she participates in an Event. Competitors are solely, and directly, responsible for the safety of their race karts and racing equipment. THE RACEWAY IS NOT RESPONSIBLE FOR THE ADEQUACY OF A COMPETITORS KART OR RACING EQUIPMENT. NO EXPRESS, OR IMPLIED, WARRANTY SHALL RESULT FROM THE PUBLICATION OF, OR COMPLIANCE, WITH THESE RULES. These rules govern the conduct of an Event, and, by participating, Competitors are deemed to be in compliance with these rules. All ATV's and other power-driven vehicles used in the pit area must be registered with the Raceway and have proof of insurance. Raceway officials must approve any use of these vehicles

prior to their use. This type of vehicle is only permitted for handicap accessibility or other extenuating circumstances. Bicycles and motorcycles are prohibited from the pit area. Raceway uses a cold pit area for the kart events. No karts are to be driven under power in the pit area. They must be pushed or carried to the staging area, and from the post-race shut down area to your pit. Any karts that have their engine running in the pit must be on a stand and have a crewmember continuously apply the brake. Karts that are on stands may not be occupied. Consumption of alcoholic beverages is not permitted in the pit area during an event. Any individual riding a bicycle, scooter, or moped in the pit area will be suspended from entering the pits or competing in Raceway Events for a time period determined by Raceway Officials. Proper footwear required in the pit area. No unapproved cameras or recording devices permitted in the karts. The use on Raceway property of manned or unmanned aerial vehicles is not permitted unless approved in writing, prior to the race event and a certificate of liability insurance is provided. This applies to a minimum 1000 ft. altitude as mandated by the FAA.

## **1.9 DRUG POLICY**

### **1.9.1 General Prohibition**

Possession or use of illegal drugs or drug substances, as defined above, is prohibited in any form, by any Competitor, at a Raceway Event, either on the racetrack grounds or in any area used in the operation of the racetrack, such as parking lots or leased properties. Any Competitor found in the possession of, or under the influence of, any illegal drug, or drug substances, on the racetrack grounds, is subject to disciplinary action. Penalties will be imposed in accordance with SECTION 4 - PENALTIES.

### **1.9.2 Prescription Drugs**

If a Competitor is using prescription drugs on the advice of a physician, their use must be reported to the Competition Director prior to the entry into any race activities. Failure of a Competitor to notify of prescription drug use is subject to disciplinary action.

SECTION - 2

TRACK PROCEDURES

## **2.1 GENERAL**

### **2.1.1 Race Decisions**

All decisions by Raceway Officials involving track procedures are final, and non-appealable.

### **2.1.2 Rain Outs**

Raceway Officials will make the decision to determine if the Event will be postponed. In the event of a rain out prior to the opening of the pit gate, information can be obtained by calling the racetrack, text message via the rain out alert program, or checking the track website. The track phone number for Beaver Dam Raceway is 1-(920) 887-1600. The Website is [www.wismotorsports.net](http://www.wismotorsports.net)

In the event of a rain out after the pit gates are open, all qualifying races and B Main races must be completed in order to receive points. Completed races will receive full points. Uncompleted A Main races will receive total points for the race, divided equally among the race karts registered. Rains out passes (wrist band pit pass), if issued, are good only for the next two (2) scheduled Events.

### **2.1.3 Weigh In**

All drivers are encouraged to weigh their kart, prior to racing. Any kart under the allowable weight is subject to disciplinary action. Penalties will be imposed in accordance with SECTION 4 -PENALTIES. Random weight checks may be conducted at any time. Weights will be determined by the track scale, which is considered official. The top five race finishers in all divisions, or as designated, must report to the Inspection Area **immediately** after the race.

### **2.1.4 Order of Events**

The order of events is as follows:

5:00 PM Pit Gates Open

5:30 PM -6:00 PM Drivers Sign In

6:00 PM -6:40 PM Hot Laps- as determined by the race director

6:40PM- 6:50 Drivers Meeting, if needed

6:50 PM National Anthem

Racing Begins

10:00PM Curfew

The race order of events will be as posted on the line up board.

The order of events is subject to change at the discretion of Raceway Officials. Event order changes will be posted during the race.

### **2.1.5 Drivers Meeting**

All drivers, or a representative from each kart, must attend the drivers meeting. Attendance may be taken. If the driver, or car representative, is not present, the kart will start all events in the rear that the kart qualified for. Each kart will be exempt from this rule its first night at the track to accommodate newcomers.

### **2.1.6 Race Track**

Track entry is from turn one when directed by the steward. Entry is not permitted unless directed by the pit steward. Track exit is in turn one. Failure to exit when directed by track officials is not permitted. The cones define the inside of the racecourse. Driving below a cone, knocking a cone over or running off the approved racetrack area is not permitted. A two-position penalty per cone or per position advanced, may be accessed. This will be at the next caution or the completion of the event. Hitting two cones in an event will be an automatic disqualification from that event. Track officials will be judges in event of a competitor being forced down into the cones. They may decide not to apply the two-position rule at their discretion.

### **2.1.7 Qualifying races**

Qualifying events may be combined to meet time requirements. Heat race lap count eight (8) except for kid karts six (6) laps. Any division that does not meet the requirement of registered karts may not run the standard qualifying races, at the discretion of the Competition Director. Divisions may be combined for a single A Main race only, according to draw or points, with an invert of four (4) positions. The remainder of the A-main race will be lined up straight up.

#### **2.1.7.1 Qualifying Races- for karts**

A two-heat qualifying system will be used. Qualifying races will be lined up according to the starting position drawn by the driver. The second round of heats will be an invert of the finish of the first heat. The combined total of both heats will be used in setting the invert cars for the feature. Divisions not meeting the required minimum number of karts may be combined at the discretion of the competition director.

#### **2.17.2 Qualifying races for Junior Sprints.**

Junior Sprints will utilize the following qualifying system. The last hot lap session for the junior sprints will be a grand prix style qualifying event. This will generate the first round of heat races with the top four qualifiers being inverted. The rest of the field will be gridded straight up from their qualifying times. The second round of heat races will be lined up according to the Raceway average points with the top four drivers being inverted. The combined total of both heats will be used in setting the invert cars for the feature. Drivers without Raceway points will be placed in the last row of heat two. Any

competitor not assisting in packing the track when called will have their qualifying time deleted and be started last in the first heat Divisions not meeting the required minimum number of karts may be combined at the discretion of the competition director.

### **2.1.7.3 B Main and A Main Race**

A-Mains -If there are two qualifying races, the top three will make up the invert. With the balance of the field lined up behind them in the order of their points accrued in the heat races. If there are three (3) qualifying races, the top three (3) karts from the qualifying race point totals, and the B Main race, will transfer to the A Main race. If there are four (4) qualifying races, the top two (2) karts from the qualifying race point totals, and the top four (4) from B Main race, will transfer to the A Main race. If there are more than four qualifying races and one B Main race, the number of karts transferring to the A Main race will be determined by the Raceway Officials. The finishing positions in the heats are added up as you finished. If a four-position invert is rolled for the night, lowest point total starts fourth, second lowest starts third, and so on. If a six is drawn for the invert number, lowest point total starts sixth, second lowest fifth, and so on. Fourth or sixth lowest gets the pole depending on the invert drawn for the night. The prior week's feature winner starts at the back of the invert, if they make the invert. If they do not make the invert, they start in their earned starting position.

B Main races will be lined up straight up from the qualifying race point totals with the highest finishing non-qualifying drivers to the front. The remainder of the A Main race will be lined up straight up. Drivers without Raceway points that finish in an invert eligible position will be placed in the last invert position.

B Main race drivers transferring to the A Main race will be placed straight up behind the qualifying race drivers. Divisions that do not meet the required number of registered karts, at the discretion of the Competition Director, will compete in an A Main race only, according to the following predetermined car and lap configuration:

Twelve (12) Lap A Main

Ten (10) Lap A Main Kid Kart Division.

This configuration will be determined at the required deadline time of registration.

### **2.1.8 Race Lineup**

All karts must be lined up in the staging area in the proper position, when the white flag (1 to go) is displayed for the race prior to your event. Karts entering the staging area or race field after the white flag (1 to go) is displayed, must start the race at the rear in the order they join the field. Exceptions will be made for drivers competing in more than one division per night, or a Competitor who notifies a pit steward of extenuating circumstances.

### **2.1.9 Race Length**

All qualifying, B Main and A Main races subject to a time limit of one (1) minute per scheduled lap. If the race is not completed within the allotted time, the pink Time Limit flag may be displayed. The competition director may adjust race lengths or race times to accommodate curfew requirements. Any single driver intentionally causing a yellow flag will receive a disciplinary black flag. This does not apply to a driver that spins out to avoid a wreck. A driver that spins out to avoid a wreck and does not make contact with the wall or any other vehicle may receive their position back. The determination of whether a driver spins to avoid a wreck is a judgment call by the flagman, which is final.

If slowing down and preparing to exit the track, competitors must move to the outside lane and exit off turn 1. Drivers are required to signal this by raising their right hand their intention to exit.

### **2.1.10 Kart Repair**

All kart repairs must be performed in the pit area. Repair of karts on the track, infield, or other unapproved area, will result in disqualification at the determination of the track staff. Minor repairs may be made at the direction of the track staff on the track. When entering the pits, karts must slow to a reasonable speed. Failure to slow to a "reasonable speed" may result in disqualification. The determination of reasonable speed is a judgment call by Raceway Officials, which is final. A kart that enters the pit area, or infield, during an event may only return to the racetrack at the discretion of a track official. Karts illegally returning to the track, will receive a disciplinary black flag, and scored last in the event.

### **2.1.11 Testing**

No in-race kart testing without the permission of the pit steward. The test driver must exit the track when directed by the flagman. Failure to follow testing provision may result in the driver starting the next race in the last row or disqualification from their scheduled event.

### **2.1.12 Flags**

Raceway Officials will use flags and/or light signals to provide information to the drivers.

#### **2.1.12.1 Green Flag**

The green flag, and/or green light, indicates the start of the race or the restart of the race after a caution period. The green flag and green light will be displayed as the lead kart(s) pass the cone line at the beginning of the front straight exit of Turn 4.

All race starts will be double file, nose to tail. (\_Nose to tail\_ means staying in the tire tracks of the kart ahead of you.) The kart on the inside of the first row controls the start of the race. A cone will be placed across the track at the beginning of the front straight



exit of Turn 4. At the start of the race, all karts must maintain their assigned starting position and may not accelerate until the front row karts have passed the cone. If the front row karts are not within 1 kart length, the race will not start. After two (2) false starts, the two front row karts will be moved to the rear of the field and the next row of karts will be given the opportunity to properly start the race. This procedure will be repeated until the race is started properly or the Competition Director decides to start the race single file. Guest divisions will be started in accordance with instructions given at that night's drivers meeting

The first two restarts, except Kid Karts and JR Sprints, will be double file, except for the leader who will be alone in the first row. All restarts, after the second double file restart, will be single file. Events that only have three competitors will line up their restarts single file. Kid Karts and JR Sprints will always restart single file. The kart leading the race controls the restart. A restart cone will be placed at the beginning of the front straight exit of Turn 4. All karts must pass this cone on the right side. After the \_one lap to go\_ signal is given, all karts must stay nose to tail. Lagging back is prohibited. On all restarts, all karts must maintain their position and may not pass or begin to pass until the lead kart passes the restart cone. Any kart lagging back prior to the restart, passing prior to the lead kart passing the restart cone, hitting the cone, or passing to the left of the restart cone, will be penalized two positions on the next caution or at any successive caution. This is two positions per position advanced penalty. If no caution occurs, the driver will be penalized two positions at the end of the race.

#### **2.1.12.2 White Flag**

The white flag indicates that there is one lap remaining. If the leader takes the white flag, and a caution occurs, the race is considered complete. The scoring from the white flag lap is the finish with the karts involved in the caution placed at the rear. If in the determination of the track staff, there is one driver primarily responsible for the caution, and multiple drivers involved, the primary driver may be scored behind the other drivers in the finishing order.

#### **2.1.12.3 Checkered Flag**

The checkered flag indicates that the race is complete. Once the checkered flag is displayed to the race leader, the race is considered complete. All karts receiving this flag must slow to a reasonable speed and, with the exception of the winner, return to the pit area. Failure to slow to a "reasonable speed" may result in disqualification. The determination of reasonable speed is a judgment call by Raceway Officials, which is final. If the yellow flag occurs after the checkered flag is displayed to the race leader, all karts that have passed the start/finish line will be scored as they crossed the start/finish line. All remaining karts, except those involved in the incident, will be scored according to their last completed lap. The karts involved in the incident will be scored at the end of

their last completed lap. If in the determination of the track staff, there is one driver primarily responsible for the caution, and multiple drivers involved, the primary driver may be scored behind the other drivers in the finishing order. Race winners will report to the winners circle for post-race ceremonies when directed. The number of laps completed, whether the kart is running or not, will determine finishing positions.

#### **2.1.12.4 Yellow Flag**

The yellow flag, and/or yellow light, indicates caution on the track. All karts receiving this flag, and/or light, must slow, hold their position, and form a single line behind the lead kart. Absolutely no racing back to the yellow flag. The penalty for racing back to the yellow flag, as determined by the flagman, is restarting the race at the rear or disqualification. If a pace vehicle is used, the leader must line up behind it. Karts will be lined up as they were scored on the last completed lap. The karts involved in the incident will be scored at the end of their last completed lap. If in the determination of the track staff, there is one driver primarily responsible for the caution, and multiple drivers involved, the primary driver may be scored behind the other drivers in the finishing order. Lapped karts must maintain their track position as directed by track officials. Any karts entering the pits during the caution period may re-enter the racetrack if approved by a track official. Those karts will restart the event at the rear in the order they return to the track. Re-entry under the yellow flag is not permitted until the lineup is complete. If the yellow flag occurs before the completion of one lap, the karts will be lined up in their original starting order except those karts involved in the incident, which must restart the race at the rear. Determination of karts involved in the yellow is the discretion of track officials. Bump and run tactics, diving inside and moving drivers off the line will not be tolerated. Any driver, as determined by the flagman, or track officials of intentionally causing a yellow flag (such as spinning out another kart, stopping on the track, or capable of resuming the race after a spin but does not) will receive either a one-lap penalty or a disciplinary black flag at the discretion of track officials. No kart may pass the pace vehicle unless directed by a Raceway Official. Any kart illegally passing the pace vehicle is subject to the black flag. Prior to restarting the race, the flagman will signal one lap to go, or the corner workers will indicate that the race is going green.

#### **2.1.12.5 Red Flag**

The red flag, and/or red light, indicates that the race must stop immediately, regardless of the position of the karts on the track. During a red flag, pit crew members are not allowed on the track. Drivers may exit their kart for inspection purposes only. All kart repairs must be done in the pits unless directed by a track official. Any karts entering the pits during a red flag must restart the race at the rear, in the order they return to the track. If the red flag occurs before the completion of one lap, the karts will be lined up in their original starting order except those karts involved in the incident, which must

restart the race at the rear. If the red flag occurs after one complete lap, the karts will be lined up in single or double file according to the last completed lap. Lapped karts must maintain their track position. Prior to restarting the race, the flagman will signal one lap to go, or the corner workers will indicate that the race is going green.

#### **2.1.12.6 Blue Flag with Diagonal Yellow Stripe (Faster Traffic Approaching)**

The blue flag with the diagonal yellow stripe indicates that faster traffic is approaching. Karts receiving this flag must prepare to yield to faster traffic. Karts should move to the outside lane on the track and allow the faster traffic to pass. If the slower karts are running side by side, they must form a single line at the top of the racetrack. Failure to obey a faster traffic approaching flag is subject to a disciplinary black flag.

#### **2.1.12.7 Black Flag**

The black flag means go to the pit area or infield immediately. A kart that receives the black flag will stop being scored immediately. Failure to obey a black flag is subject to disciplinary action.

#### **2.1.12.8 Pink Flag (Time Limit)**

The pink flag means that the time limit for the race has expired. This flag will be displayed. Once this flag has been displayed, the race will continue to completion, or the next caution period, whichever occurs first. If the race ends on a caution flag, finish positions will be as the karts were scored on the last completed lap, with the karts involved in the caution moved to the end of their last completed lap.

#### **2.1.13 Kart Penalties and Disqualification**

If a kart is penalized for a post-race infraction, karts below the penalized kart will move up in position, and points. If the penalized kart is the race winner, the kart and driver will forfeit the race win and return any awarded trophies. If a kart is disqualified during a race, or for a post-race infraction, karts below the disqualified car will move up in position, and points. If the disqualified kart is the race winner, the kart and driver will forfeit the race win and return any awarded trophies.

#### **2.1.14 Kart and Driver Changes**

Race karts may compete in only one division per night unless approved prior to the race event by the Raceway technical officials. Drivers may compete in any or all divisions as long as the driver has paid an entry fee for each division. Any driver wishing to change karts must be qualified to compete in the race for which he/she is changing karts and must start that race at the rear of the field. The kart that the driver wishes to transfer to must have competed in at least one race during the season. A driver will not be allowed to transfer to a kart that did not compete in a race. All driver and kart changes must be

reported to the Competition Director or Team Leader Raceway Technical Official. Once a driver has changed to another kart, he/she must finish the program in that kart. The driver may not switch back to a kart previously run.

#### **2.1.15 Conduct**

The driver, or in the case of minor drivers their guardian, is the sole spokesman for the kart in any and all matters pertaining to an Event and is responsible for the actions of the pit crew, and owner. Determination of crew affiliation will not be limited to the pit sign in sheet. It will be a determination made by the track staff. Harassment or abuse of Raceway Officials will not be tolerated and is subject to disciplinary action. Penalties will be imposed in accordance with SECTION 4 - PENALTIES.

#### **2.1.16 Injuries**

All injuries must be reported to a Raceway Official prior to leaving the race premises. Track insurance will not cover any unreported injuries. Any driver involved in a roll over, or severe accident, must be checked and cleared by the safety staff prior to returning to the track.

#### **2.1.17 Track Radio Frequency**

The track radio frequency (151.6250 MHz) is not to be used by any race team. Any race team found to be using radios on the racetrack frequency may have their radios impounded and be subject to disciplinary penalties. Radios are not permitted in any class for use by competitors.

#### **2.1.18 Pit Closing Time**

The pit area will be closed 45 minutes after the last race is completed. Failure to clear the pit area within this three-quarter hour period will result in the loss of points. The amount of that will be lost is the decision of the Competition Director, and/or track management, which is final.

## 2.2 POINTS

Points, for any Raceway Event are awarded to the driver, regardless of the kart he/she is driving. Points for Raceway Events will be awarded as follows:

Finish Position A-Main/ B-Main

- 1 40/ Transfer
- 2 39 /Transfer
- 3 38 / Transfer
- 4 37 / Transfer
- 5 36 / 16
- 6 35 / 15
- 7 34 / 14
- 8 33 / 13
- 9 32 / 12
- 10 31 / 11
- 11 30 / 11
- 12 29 /11

Junior Sprint Qualifying Position Points

- 1 5
- 2 4
- 3 3
- 4 2
- 5 1

A kart must take the green flag in a race in order for the driver to receive points, unless there are extenuating circumstances. Drivers will be allowed to discard their lowest night's points in their season championship totals. You are not allowed to throw out the championship night of August 13. Full discretion of allowing discarded nights is given to the track staff. The raceway scoring staff will not calculate the discarded nights until the completion of the full season schedule. Any nights that a competitor receives a disqualification may not be used as a throw out night.

If a kart qualifies for the A Main through the qualifying races and cannot start the A Main due to mechanical problems, or other difficulties, the driver will receive last place points for the A Main. With the exception of the division championship, ties in point totals at the end of the season will be split between the drivers involved. Tie breakers for the division championship will be in the following order: A Main race wins; A Main second place finishes; etc. Only A Main race finishes will be counted for tiebreakers.

Full discretion of allowing discarded nights is given to the track staff. The raceway scoring staff will not calculate the discarded nights until the completion of the full season

schedule. Any nights that a competitor receives a disqualification may not be used as a throw out night.

If a kart qualifies for the A Main through the qualifying races and cannot start the A Main due to mechanical problems, or other difficulties, the driver will receive last place points for the A Main. With the exception of the division championship, ties in point totals at the end of the season will be split between the drivers involved. Tie breakers for the division championship will be in the following order: A Main race wins; A Main second place finishes; etc. Only A Main race finishes will be counted for tiebreakers.

## **SECTION – 3 INSPECTIONS**

### **3.1 TIME and MANNER**

All karts are subject to inspection by Raceway, at any time and in any manner, as determined by Raceway Technical Officials. All decisions by Raceway Technical Officials regarding the timing and manner of inspection, as well as which cars will be inspected, are final. All Karts must be safety inspected each night and display the nightly inspection sticker. Junior Sprints must display their inspection band and are not required to have a nightly inspection sticker. They are subject to random inspections by the track technical officials.

### **3.2 INSPECTION AREA**

Only those persons authorized by Raceway Technical Officials are permitted in the inspection area. Authorization is limited to the Owner, Driver, and one crewmember.

### **3.3 KART ELIGIBILITY**

Raceway Technical Officials will determine whether a kart meets the applicable specifications as set forth in the Rule Book, as amended from time to time. Only karts meeting the applicable specifications are eligible to compete in Raceway events. Raceway equipment, gages, and measuring devices will be used to determine whether a kart meets the applicable specifications. The scales at the track are considered the “official” scales and will be used to determine whether a kart meets the applicable weight requirements. Any kart black flagged for mechanical reasons or involved in an accident requiring assistance off the track by the safety crew, must pass inspection before returning to the racetrack.

A Competitor must take whatever steps are required by a Raceway Technical Official to accommodate inspection of the cart.

### **3.5 INSPECTIONS PRIOR to the RACE**

All karts must be inspected prior to competition. Any kart that has not been inspected or does not have a current year and nightly Raceway inspection sticker, will not be allowed on the track. If a Raceway Technical Official determines that a kart does not meet the applicable specifications, the kart will not be allowed to compete unless the deficiency is corrected. However, the kart may be allowed to compete in the event if, in the determination of the Raceway Technical Official, the deficiency (a) is not safety related, (b) will not adversely affect the orderly conduct of the event, (c) cannot be corrected prior to the start of the event and, (d) will not provide the Competitor with a noticeable advantage over the competition, and (e) is insignificant. The kart will not be allowed to compete in future events until the deficiency is corrected.

### **3.6 INSPECTIONS AFTER the RACE**

The individual(s) representing the kart during post-race inspection may not consume any alcoholic beverages, or be under the influence of alcohol, until the post-race inspection of the kart is complete. Raceway Officials may impose a penalty for any individual(s) in violation of this requirement Penalties will be imposed in accordance with SECTION 4 - PENALTIES.

The Competitor will be given a “reasonable amount of time” to remove components from the kart for post-race inspection. The Competitor will be notified as to what is considered a “reasonable amount of time” at the beginning of the inspection. If the removal of the components is not completed in this time period, the kart will be disqualified. The kart’s crew and or driver will perform the actual tear down with their own tools and equipment. Only two (2) of the kart’s crew and the driver will be allowed in the inspection area. If a Raceway Technical Official determines after the race that a kart does not meet the applicable specifications, Raceway Officials may impose a penalty. Penalties will be imposed in accordance with SECTION 4 - PENALTIES.

A kart that fails post-race inspection may be impounded for additional inspection. Raceway Officials and Technical Officials will determine the time and location of inspection of the impounded kart.

The decision of the Raceway Technical Official regarding any inspection is final, non-appealable, and non-litigable.

### **3.8 EQUIPMENT or PARTS FAILING INSPECTION**

Raceway has the right to impound any parts and/or equipment that do not meet Raceway specifications, for the purpose of further inspection and for a reasonable amount of time.



## **SECTION – 4 PENALTIES**

### **4.1 GENERAL PROCEDURE**

If a Raceway Technical Official observes, or is made aware of, a violation of the Raceway Rules, by a Competitor, Raceway Officials can impose an appropriate penalty.

### **4.2 EMERGENCY ACTION**

If an act by a Competitor is determined by Raceway Officials, Raceway Technical Officials, or persons serving under Raceway direction, to threaten the orderly conduct of an Event, the Raceway Officials can take emergency action against the Competitor. Such action may include arrest; ejection from the racing premises; suspension from competition; or any other action to remove the threat created by the Competitor. Examples of conduct warranting emergency action include, but are not limited to: consumption of alcoholic beverages in pit area before or during an Event; use of illegal drugs before or during an Event; harassment, verbal abuse, or assault of any Raceway Officials, Raceway Technical Official, or Competitor; fighting; reckless driving; and failure to obey a black flag or directions of an Raceway Official. The emergency action will remain in effect for the period of time determined by the Raceway Officials, except for an ejection, which is final, and non-appealable.

### **4.3 PAYMENT of FINES**

Fines must be paid to Raceway and will be deposited in the Charter discretionary fund. Failure to pay fines may result in suspension from competition. All unpaid fines may be collected, by Raceway, using any means available. If the Competitor is not a driver, the fine may be assessed against the driver or legal guardian or parent they are associated with at the time of the violation. Any unpaid fines remaining at the end of the racing season will be carried over to the next racing season and be collected by any means available.

### **4.4 SCOPE of PENALTIES**

Penalties for violation of Raceway Rules are determined by the severity of the violation. Penalties include but are not limited to fines; loss of points; loss of purse; disqualification; suspension of driving privileges. Raceway will use the following guidelines for determining penalties. A greater or lesser penalty may be imposed depending on the circumstances.

#### **4.4.1 General**

Any Competitor who performs an act or participates in an act deemed by Raceway as detrimental to motor racing or Raceway: a fine determined by Raceway Officials; and/or suspension; and/or loss of points and money for Event; and/or loss of accumulated points for current year.

Any Competitor who signs the release sheet for anyone else: ejection. Any parent or legal guardian that falsifies an insurance waiver for a minor Competitor: ejection of the minor Competitor; and/or suspension of the minor Competitor; and/or loss of points and money for Event; and/or loss of accumulated points for current year; and a fine determined by Raceway Officials.

Any Competitor who harasses, verbally abuses, or assaults any Raceway Official, Technical Official, or persons serving under Raceway direction: ejection; a fine determined by Raceway Officials; and/or suspension; and/or loss of points and money for Event; and/or loss of accumulated points for current year.

Any Competitor who participates in fights on the racing premises: ejection; a fine determined by Raceway Officials; and/or suspension; and/or loss of points and money for Event; and/or loss of accumulated points for current year.

Any Competitor who, while participating in a Raceway Event, consumes any alcoholic beverages and/or illegal drugs, or is under the influence of alcohol and/or illegal drugs: a fine determined by Raceway Officials; ejection & disqualification; and suspension for a period of time determined by Raceway Officials.

Any Competitor who stops on the track to argue with a Raceway Official: a fine determined by Raceway Officials; and/or suspension; and/or loss of points and money for Event; and/or loss of accumulated points for current year.

Any Competitor who fails to correct an unreadable car number: stop scoring of the car until the number is corrected; and/or a fine determined by Raceway Officials.

Any driver not wearing a full driver's suit and/or gloves and/or other mandated driver safety equipment during an event: "disciplinary" black flag; and/or a fine of \$25.00.

Any Competitor who leaves tires in the pit area or at the anywhere on the track property: a fine of \$25.00/tire.

#### **4.4.2 Inspection Procedures**

Any Competitor who fails to tear down a kart for inspection when requested to by a Raceway Technical Official: a fine determined by Raceway Officials; suspension; and/or disqualification.

Any kart after a race that is 1 or more pounds under minimum weight: loss of points and money for race. A kart will be allowed to be repositioned on the scale a maximum of two times to make minimum weight.

#### **4.4.3 Race Procedures**

Any driver receiving a "mechanical" black flag: last place in the race.

Any driver receiving a "disciplinary" black flag: loss of points and possible fine commensurate for their actions.

Any karts passing prior to the leader passing the restart cone, or to the left of the restart cone: loss of two positions, per position advanced, at next caution flag. If no caution occurs, the driver will be penalized two positions at the end of the race.

Any driver, as determined by the flagman, intentionally causing a caution flag (such as by stopping on the track or capable of resuming the race after a spin but does not): one lap penalty; or "disciplinary" black flag.

#### **4.4.4 Bodies, Parts, and Equipment**

Any part and/or equipment found during an inspection that does not meet Raceway specifications: impound of non-approved parts for a reasonable period of time for further inspection; loss of points and possible fine commensurate for the level of the infraction; and/or accumulated points for current year.

Any Competitor who fails to surrender to Raceway any part and/or equipment found during an inspection that does not meet Raceway specifications: loss of points and possible fine commensurate for the level of the infraction; and/or accumulated points for current year. Any Competitor found using any traction control device, system, or sub-system, whether found in the kart, or in the possession of the driver, or in the possession of a crew member: impound of traction control device, system, or sub-system; a fine determined by Raceway ; loss of points ; and accumulated points for current year.

Any engine that exceeds the maximum allowable cubic inch displacement, compression limit, or that is using non-approved cylinder block, crankshaft, connecting rods, valves, valve lifters, rocker arms, rev-kits, cylinder heads, intake manifold, carburetor spacer; carburetor: loss of points and possible fine commensurate for the level of the infraction; and/or accumulated points for current year.

Any non-approved tires & wheels; non-approved frame & steering components; non-approved brake components; non-approved clutch; non-approved rear axle: loss of points and possible fine commensurate for the level of the infraction; and/or accumulated points for current year.

Any kart with noise levels that contribute to a violation of the community noise limit: loss of points and/ or accumulated points for current year.

Any weight that falls off a kart during competition: first offense - a fine of \$1.00 per pound of weight lost; second offense - a fine of \$2.00 per pound of weight lost; third offense, disqualification.

#### **4.4.5 Fuel**

Use of a fuel that does not meet Raceway specifications: loss of points and money for Event; and/ or accumulated points for current year. Fuel pump around will be utilized on some events. Failure to comply will be a disqualification. Failure to provide a fuel sample during an event will subject the kart to disqualification.

#### **4.4.6 Non-Approved Chemicals**

Any competitor that spills any non-approved chemical, on the track or in the pit area, will be held responsible for all investigation and clean-up costs.

## **SECTION – 5 KART SPECIFICATIONS GENERAL 2020**

Open to two-wheel drive un-sprung karts provided they comply with, and adhere to, specifications as outlined for this division.

**NOTICE: ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF RACEWAY OFFICIALS. NO EQUIPMENT WILL BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THRU INSPECTION UNNOTICED. EFFORTS TO TAKE ADVANTAGE OF “LOOP HOLES” IN THESE RULES WILL NOT BE TOLERATED. ALL RACE KARTS SUBJECT TO INSPECTION BY TRACK OFFICIALS AT ANYTIME.**

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events and by participating in these events, all participants are deemed to have complied with these rules. No expressed or implied warranty of safety shall result from publications of, or compliance with, these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official. The race director shall be empowered to permit reasonable and appropriate deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alteration of specifications. Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final.

Numbers are required on the front, and sides and readable by the scoring staff. Numbers on the front and back of kart for ease of lineups. **NO METALLIC OR HOLOGRAPHIC NUMBERS WILL BE ALLOWED.** Numbers need to be of contrasting color to the main color scheme. Numbers must be unique. If there are double numbers a letter will be issued to you by the track to go with your number. If a letter is required with the car number, the letter must be at least fifty percent (50%) of the height of the number.

**IT IS THE RESPONSIBILITY OF THE DRIVER TO ENSURE THAT THE SCORERS CAN READ THE KART NUMBER. IF YOUR KART NUMBER IS NOT READABLE FROM THE SCORING TOWER, THE KART WILL NOT BE SCORED UNTIL THE NUMBER IS CORRECTED.**

Transponders are required for scoring purposes. It is the driver's responsibility to rent or own and properly secure the transponder in the approved mounting location. Failure to have a working properly mounted transponder may result in disqualification from that event. Drivers must follow rental contracts and procedures.

Raceway reserves the right to assign car numbers, and to assign or restrict the display of graphics and advertising on race karts. Offensive graphics or slogans are not permitted. All Competitors agree to accept Raceway's decision in this matter. Where required, participating sponsor's emblems, or decals will be placed in the position designated by Raceway Officials. Karts that do not display all sponsors emblems, or decals, may not be eligible for trophies or awards.

A full face, helmet and face shield, Snell-rated M2010 or SFI 31.1/2010, 2015 or newer,

required. Helmet and face shield must be worn at all times kart is on the track and must accompany vehicle at time of inspection. SFI-approved full fire suit, or leather jacket with full-length abrasion resistant pants, or abrasion resistant jacket and pants and fire-retardant gloves, and shoes required. Fire retardant neck brace required. Recommended: SFI Fire retardant head sock and underwear Elbow, knee, shoulder pads highly recommended. Chest protector, SFI 201.1, required for drivers less than 13 years. All safety equipment is subject to approval by Raceway officials.

## **Division overview rules: 2020 Kart Classes and Specifications**

### **KID KARTS Ages 5-7**

4 cycle class includes Engines: Briggs JR206, or Spec Clone

2-cycle class includes Engines: Comer C-50 or C-51

Comer: Engine stock per WKA rules, 10/89 gear

Briggs JR206: Briggs LO206 rules, 4100 RPM rev limiter, 0.285" max carb opening, must use slide #555732, 15/56 gear.

Clone: AKRA, stock components only, 4100 throttle stop RPM limit, red restrictor plate (0.375" opening), 15/58 gear, must run tiny tach to verify rpm setting.

Tires: Max tire circumference is 33.75"

Minimum Weight: 155 lb.

Note: Clone specs may be adjusted to achieve competitive balance.

### **Briggs Sealed Box Stock Ages 7-12**

Engine: LO206 with factory seals, Briggs rules (except any air filter allowed), Purple slide part number #555735, 0.342" max opening, unaltered Briggs legal carb

Tires: Any Burris 33

Clutch: Drum only

Fuel: 91 Octane or less "Pump Gas" only

Minimum Weight: 265 lb.

### **Briggs Junior 2 Ages 8-15**

Engines: Sealed Briggs LO206 or Briggs stock Animal 6.5 HP

LO206: LO206 with factory seals, Briggs LO206 rules (except any air filter allowed), 91 Octane or less "Pump Gas" only

Yellow slide part number #555741, 0.570" max opening, unaltered Briggs legal carb, drum clutch.

Briggs Animal: Briggs stock Animal 6.5 HP, WKA specs, alcohol fuel, turquoise restrictor (top hole 0.275", bottom hole 0.325"), open clutch

Tires: Any Burris 33

Minimum weight: 290 lbs.

**Sportsman Ages 12+** Engines: LO206 with factory seals (Briggs LO206 rules except any air filter allowed), or AKRA/NKA Spec Clone

Tires: Burris 33 or 33A slicks only on LO206 powered karts. Hoosier treaded tires only on clone powered karts. –

Clutch: Drum clutch only

Fuel: 91 Octane or less “Pump Gas” only

Minimum Weight: (this weight is based on matching hp/weight ratios of both engine combinations.) Weight may be adjusted to achieve competitive balance.

AKRA/NKA Clone – 360 lb.

AKRA/NKA Clone with .575 restrictor--320lbs

LO206 – 320 lb.

**\*\*WEIGHT CLASS BEING RUN MUST BE DISPLAYED ON TOP OF SIDE PANELS IN MIN. 1" NUMBERS**

### **SUPER Pro Heavy Ages 14+**

Driver eligibility - Drivers should be age 14 and above, unless prior approval from the track staff.

Engines: Stock Appearing Clone, Briggs LO206, or WKA Briggs Animal

S/A Clone: 196CC Max. Drum clutch only (except GX390 option), Pull start only, Pump gas, Stock carbs only, any flywheel

Briggs LO206: Sealed LO206, 6100 RPM Limiter, Pump gas, Briggs rules (except air filter), drum clutch

Briggs Animal: WKA Briggs animal, alcohol, open clutch

Weights:

Briggs:

Briggs LO206 sealed, no restrictor – 300 lb.

WKA Briggs Animal – 360 lb.

S/A CLONE:

0.500” restrictor and .750 pipe - 300 lb.

0.550” restrictor and open pipe – 325 lb.

Stock bore carb, no restrictor, and open pipe – 365 lb.

Stock appearing carb, no restrictor, open pipe – 375 lb.

Tilley carb, GX390, no restrictor, open clutch, open pipe – 475 lb.

**\*\*WEIGHT CLASS BEING RUN MUST BE DISPLAYED ON TOP OF SIDE PANELS IN MIN. 1" NUMBERS**

Tires: Open tire rule but slicks only. No treaded tires.

Notes:

Refer to Section 8 of the Beaver Dam rule book for STOCK APPEARING CLONE ENGINE SPECS.

These weights may need to be adjusted to insure competitive balance in this class.



Other engine combinations may be eligible - check with the track staff.

### **Junior Sprints:**

Must meet all specs of 2020 Beaver Dam Raceway Rulebook

### **NOTE:**

Competitors may utilize one kart in multiple classes, providing it meets all class rules and has been pre-approved by the track staff and management

## **5.2 FRAME**

All frames must be of an approved design meeting the following criteria: 1.0" Minimum O.D., Maximum 1.400" O.D. If using 1.00" O.D., Min. wall thickness shall be 0.078". If using 1.125" O.D. or larger Min. wall thickness shall be 0.600". Tubing shall be minimum electric welded steel tubing or stronger approved material. Oval tube material is not permitted. All bends shall be of a design to be smooth, and kink free, and of a design that does not reduce the strength of the material.

## **5.3 WHEELBASE**

Must be minimum 40.0", maximum 43.0" measured center to center from true axle centers.

## **5.4 WIDTH-LENGTH SPECIFICATIONS**

The minimum tread width shall be no less than 28.0" measured from outside of tire to outside of tire. The maximum width shall be no more than 50.0" The maximum length shall be no more than 74.0". The maximum height shall be less than 26.0". The driver, while seated in the normal, as raced position must conform to the length and width requirements. The entire driver's body shall be within these dimensions.

## **5.5 BODY**

Floor pan must be of a design that prevents any portion of the driver's body from passing through the frame and contact the track surface. All bodywork must be neat and in good condition. Body parts that come loose during an event and are judged to be a hazard to the driver or other competitors will result in a mechanical disqualification. Mounting style is left open to the kart builder but must secure the body in a manner acceptable to Raceway officials.

Nose cones required at all times. No CIK style nose cones. Nose cones must be a minimum of 8" high and a maximum of 17" high. The Briggs Jr. class can be no more than 14" high. No air inlets of any type allowed in the nose cone. All nose cones must have a tire opening equal to or greater than the tire size being utilized. No covering the sides of the tire. Nose cone will be measured 6" vertically and 1" horizontally from front edge. There is a .250" tolerance in the horizontal dimension. Nose dimensions will be in the as

raced condition. No fasteners of any type may be used to add parts to the nose cone. Tape is permitted on the nose cone but must conform to the proper dimensions. Decals are permitted. Rubber or skirt molding is permitted on the lower 6" of the nose cone. No fiberglass or other rigid skirt material is permitted. Skirts must be mounted in a manner acceptable to Raceway tech officials. If the bottom of the nose cone is used as a belly pan the following applies. The bottom of the nose cone may extend to the rear edge of the front tires. Any part of the nose cone behind this must be between the main frame rails. Nose cone must allow for easy driver ingress and egress from the kart. It may cover an area not to exceed 3" behind both pedal controls in the relaxed position. It must not interfere in the driver's ability to safely operate the controls.

Steering fairing; may extend rear from the nose cone at an angle parallel to the steering shaft. Maximum width is 10.0" This is a chord measurement, not the rounded surface. No part of the fairing may be within 3" of any part the steering wheel. The mounting components of the fairing must of a manner easily bendable. There will be no sharp edges exposed to the driver. The fairing may be mounted with a strip not to exceed 6" wide connected to the nose cone as viewed from the top. This may not cover any portion of the driver's legs, ankles or feet.

All other body components must maintain a 6" clearance to the steering fairing. No steering fairings allowed in Junior 1 and Junior 2. Side pods; Side panels or CIK style side pods permitted. Must be mounted securely in a manner acceptable to Raceway tech officials.

Side panels must have rolled or radiused edges in the tire openings if it extends past the tire as presented for inspection. If flat vertical panels only are used, top edge must be radiused. Maximum 1" lower lip permitted on any style side panel. No metallic side panels permitted. 90-degree panels may not exceed 14" in height in all areas. Minimum of 22" forward of rear bumper edge of front tires must be left open. Panels may connect to front nose cone. Side panels may be wider than outside edge of tires. Side panels may be no more than 1" narrower than outside edge of tires. Maximum overall width may not exceed 50" at any point. Side panel may not extend past rear edge of rear tires.

A full floor or belly pan is permitted. It must be within the main frame rails. It may be no higher than the centerline of the rear axle. Floor pan is required in the front foot area of the kart. No body work, except the steering fairing, shall be less than 6" from the steering wheel when the front wheels are in the straight-ahead position. All karts shall be of an open cockpit design. No body components may be driver adjustable.

## **5.6 DRIVER SEAT**

Must have sprint style purpose built racing seat. Seat must secure driver laterally and longitudinally. Seat must be a one-piece design. Must comply with the minimum seat height requirements of each class. Minimum seat height requirements are sportsman class (8-12 age group) 10.0" Juniors (12-15 age group) 12.0" All other classes 14.0". Height will be measured as raced. Seat angle must meet class specs. Seat must be securely mounted to frames. Seats may not be adjustable while kart is being raced. No portion of the seat may be behind a vertical line projected from the back of the rear axle.

## **5.7 SUSPENSION**

Use of suspension components of any design (springs, rubbers, air shock devices, torsion bars) will not be permitted. Any attempt to circumvent this rule will be an immediate disqualification.

## **5.8 STEERING**

Steering shall be a direct mechanical design. All steering fasteners must be safety wire or cotter keyed. All fasteners shall be of a minimum 14,000 lb. tensile strength (GRADE 5) and be a minimum of ¼" diameter or greater. All rod ends shall be of a universal swivel design. All steering components must meet the approval of Raceway tech. Officials. Steering shaft shall be a minimum of .625 or greater diameter magnetic steel. Wheel attachment shall be with a nut or cap screw in the axial position with the centerline of the shaft. Welding the steering to the hub not permitted, Quick release steering hubs not permitted. No shaft extensions permitted.

## **5.9 STEERING WHEEL**

Steering wheels shall be completely circular, minimum 10" in diameter. Must be a minimum of a three spoke design. Butterfly wheels permitted minimum 10" wide. 5" minimum grip-able surface on each side. No tiller style steering permitted.

## **5.10 FRONT/ REAR HUBS AND SPINDLES**

Hubs must be made of metallic material. Must utilize ground ball or roller ball bearings only. Split race bearings not permitted. Wheels and hubs must be kept adjusted as to not have excessive wheel play. Front spindle nuts must be cotter keyed. Berry clips or cir-clip style safety fasteners permitted. Use of castle nuts suggested. All bolts must be secured in a manner to prevent any movement of fastener or nut without key or safety wire removal. Any fastener that is utilized in the securing or adjusting of spindles must be safety wired or keyed. All fasteners must meet the approval of Raceway officials. No part of the front spindle may protrude past the outside edge of rim or tire.

### **5.11 REAR AXLE**

Rear axle may be solid or tubular in design. Minimum diameter shall be no less than 1" O.D. Maximum Diameter shall be no more than 1.250" O.D. No carbon fiber or composite designs permitted. Both rear hubs must be secured to the rear axle creating a live axle design. Self-clamping hubs are permitted. Securing with snap ring, or nuts permitted. Snap rings, or other safety stops required at the axle ends. No grooves between the hubs permitted on the axle. If the wheel hub protrudes past the axle; the hub must be pinned or tethered. Axle stiffeners permitted if they are secured by cir-clips, cotter keys, or through bolts. No axle may protrude past the outside edge of the rim or tire.

### **5.12 FRONT BUMPER**

Front bumper must be constructed of minimum .750" O. D. (3/4") x.065" wall thickness steel tubing. The top of the top loop shall be no less than 7.75" (7 3/4") above the track in the as raced condition. The upper hoop must be supported in minimum of two location be .750"x .065" vertical uprights connected to lower hoop. These upright tubes must be within .500" of vertical as measured 3.00" down from the upper tube. Uprights must be welded to upper hoop and welded or bolted to lower hoop. No weights on an exposed front bumper. Weights that are mounted to bumpers behind a nose cone must meet Raceway official's approval. Any bumpers that have pedal mounts on them must be through bolted, securely welded, or through pinned. These must be safety wired or cotter keyed, pinned.

### **5.13 BUMPERS/NERF BARS**

Rear bumper must be constructed of minimum .750" (3/4") x.065" wall O.D. tubing. The maximum height as raced can be no more than 7.50" (7 1/2"). Minimum height as raced can be no less than the bottom of the rear axle. Rear bumper can be no wider than tires. Minimum width can be no less than the center of the rear tires. No oil reservoir or catch cans on permitted on the rear bumper. Mounting style must meet the approval of Raceway Officials. Nerf bars must be constructed of .750" (3/4") x .0650 wall O.D. tubing. Must be attached with .250" (1/4") or larger bolts. Overall length must be a minimum of 24.0" measured from the back of the nerf closest to the rear tire to the front in a straight line, where it attaches to the main frame. The rear of the nerf bar may not extent past the rear tires. Nerf barf must be of a double hoop design and must meet the approval of Raceway officials. Rear bumpers must be full width on all classes except clone pro. Catch cans are not permitted on nerf bars.

## **5.14 TIRES/WHEELS**

Must use unaltered Burris SS-33 or SS-33A tires only (except Kid Karts, Jr Clone, Sportsman, and Pro Heavy classes). New karts are allowed three race night to switch to track spec tires. No points are awarded until switch is complete. Tires may be ground in accordance with Wisconsin Dirt Kart track specifications. No grooving siping, recapping or warming of the tires. Chemical prepping of tires on raceway grounds is permitted. Any prep solutions must be in original manufacturer's containers. Must have MSDS forms for all chemicals and provide to Raceway officials upon request. No open flames on Raceway grounds. Any competitor not utilizing the spec tire must get prior authorization from Raceway officials. Tires must be dry when kart is presented in staging area. Any kart not having dry tires in staging area will be required to return to their pit area to correct the problem and will be started at the rear of that event.

Wheels shall be of a proven and approved design capable of supporting the tire bead and seal in competition. Material type is open but must meet approval of Raceway officials. The permitted rim size is 6" only. No G rings or lateral supported wheels permitted. Maximum wheel and tire width is 10.375". The dished opening of the wheel may not be covered. No mud plugs, hubcaps, or any covers of any design permitted. Wheel weights may not exceed ¼ oz. per weight. Clip on or self-adhesive permitted. Stick on weights should be taped over for security.

## **5.15 BRAKES**

Must be approved operative system. Brakes must be fully functional and capable of stopping kart in an acceptable manner. No scrub or band style brakes permitted. All brake components must be secured with approved fasteners. Fasteners must be safety wired or keyed to prevent loosening of component.

Brake pedal must be secured to the frame with appropriate fasteners and be safety wired or keyed. The linkage from the pedal to the brake cylinder may be no less than .0236" in diameter. Any bias linkage must meet the same requirements. Link rod must have clevis, heim joints, or approved OEM brake rod connection fittings. All master cylinder, caliper brake rotor or drum mounting fasteners must be castellated, cotter keyed or safety wired. Steel lock nuts or castellated nuts that are and keyed permitted on the rotor mounting only. When dual brakes are used kart will utilize dual master cylinders. Each system must operate independently of the other. Bias control may not interfere in the proper operation of either system. Pad mounting must be in a manner acceptable to Raceway officials. Brake lines are to be routed and secured in a safe manner, be leak free, and be in danger of being snagged or rubbed while in competition. Brake rotors must be of a round design.

No carbon fiber components permitted. Brake disc guard required between the back of the seat and rotors. Raceway officials must approve all brake components.

## **5.16 EXHAUST**

WKA approved or round tube headers only. All classes must run the proscribed muffler for their class. Mufflers mandatory at all times kart is on the track. Loss of muffler is an automatic mechanical disqualification. A 95-decibel limit 100 feet from kart will be enforced. All exhaust must go through mufflers.

## **5.17 FUEL SYSTEM**

Stock tanks permitted. If utilizing stock tank must be in as manufactured condition and meet the approval of Raceway officials. All other tanks must meet the following specifications. Maximum capacity shall be no more than 2.38 US gallon. (Nine liters). Tank must be constructed of a puncture resistant material. Tank shall be leak free and have a secure leak proof cap and vent. Tank must be secured to the primary frame, floor pan, or steering column. Fuel tank must be mounted between main rails and be behind the steering shaft. Fuel lines must be of adequate length to reach carburetor. No excessive fuel lines permitted. Fuel lines must be safety wrapped and properly secured at all times. No pressurized fuel systems permitted. No axle, or electric fuel pumps permitted. Must utilize the standard pulse, engine driven style fuel pump.

## **5.18 FUEL**

Gasoline, E85, E98 or alcohol only as per class and engine requirements. No nitrous or propylene oxide. No blending of exotic fuels to meet specific weight requirements. No performance-enhancing additives. Upper cylinder lube allowed. Fuel sample maybe taken from any kart at any time. Fuel must meet the class appropriate specifications Penalty for illegal fuel is disqualification from event and \$250 fine – first offense. Alcohol must meet the specific gravity of .800. Fuel pump around method may be used by Raceway tech officials to ensure all competitors are using approved fuel.

## **5.19 WEIGHT**

Minimum kart weight limit of 85 pounds, no tolerance, after race without driver in kart. All karts must meet their specific class weight requirement with the driver. Minimum weight is with driver as they exit the racetrack. No components lost during an event will be added to a kart to meet the weight requirement.

No weights and/or loose objects in driver compartment or outside body. Weights must be securely mounted to kart and painted white with car number on it. Must be attached with at least 5/16-inch bolts. Any fasteners must be cotter keyed, double nutted or fastened in a manner acceptable to Raceway officials. Weights exceeding 7 pounds must utilize a minimum of two fasteners. No titanium, magnesium or carbon fiber products. Raceway approved fasteners only. Mounting of weights to rear bumper and nerf bars is prohibited. Any weights mounted to front bumper must be contained behind the nose cover. No added weights on driver permitted.

The top four or those directed by Raceway officials in an event are required to weigh in post-race. Failure to weigh in post-race is a violation and will receive the penalty proscribed in the penalty section.

**5.20 TRANSPONDERS** must be Westhold transponders must be utilized. Transponders must be mounted on the right side fairing or be mounted to the floor pan. It must be parallel to the ground with the silver side down. It behind the front tire and in front of the rear tire. No metal (steel or aluminum) may be under the transponder for proper pickup to occur. It is the racers responsibility to rent, and properly mount the transponder. Failure to rent or improper mounting will result in the kart not being scored. Kart drivers or their guardians will be responsible for lost or damaged rental transponders.

### **5.21 GAUGES/ELECTRONICS**

Upon request from a Raceway Technical Official, a driver must surrender any ignition component for inspection and certification by the original manufacturer.

### **5.22 CLUTCH/ DRIVE CHAIN**

Dry clutch systems are mandatory. No wet clutches permitted. No axle clutches permitted. Chain or gear guards required. Guard must be constructed in such a manner as to contain the chain or gear being covered. Any kart utilizing an outboard drive system must cover the entire chain and or gear system, top sides, front and rear. No transmissions, torque converters, or other gear ratio devices permitted that change the gear ratio while the kart is moving or sitting. Gear ratio changes must be completed in the pit area. Karts may not have any unused exposed sprockets. Any sprocket being used must covered by an appropriate chain guard. Rear sprocket may free wheel in the reverse direction. Chain oilers are prohibited. The only permitted chain size will be #35 (except Kid Karts). No belt drives permitted.

### **5.24 ENGINE SPECIFICATIONS**

Engines must meet all the specifications for the class being run.

### **5.26 EIRI (Except in rare instances)**

Decisions of Official(s) are final and binding without exception. In some cases, track safety rules may take precedence over rules - any discrepancy between track rules should be brought to the attention of Beaver Dam Raceway. Any rule changes or clarifications during the course of the year will be published and will be considered as an official part of these rules.

**WARNING:** The rules and or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. By participating in these events, all participants are deemed to have complied with these rules.

NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF OR COMPLIANCE WITH THESE RULES AND OR REGULATIONS.

They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator, or official. Interpretation or amendments to these rules may be made at any time. The rules and or regulations set forth herein are designed to provide orderly conduct and to establish minimum requirements for the racing events. All participants are deemed to have complied with these rules upon participating in these events. No expressed or implied warranty of safety shall result from publication or compliance with these rules or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to participants. The Raceway Technical Inspector shall be empowered to permit deviations from any specifications herein or to impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from alterations of specifications. All interpretations or deviations of these rules are left to the Raceway Park Officials. THEIR DECISION IS FINAL!



## SECTION - 6

### **KART DIVISION SPECIFIC RULES – 2020**

All section five rules apply to all karts, unless specifically stated.

NOTICE: ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF RACEWAY OFFICIALS. NO EQUIPMENT WILL BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THRU INSPECTION UNNOTICED. EFFORTS TO TAKE ADVANTAGE OF “LOOP HOLES” IN THESE RULES WILL NOT BE TOLERATED. ALL RACE CARS WILL BE SUBJECT TO INSPECTION BY TRACK OFFICIALS AT ANYTIME.

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events and by participating in these events, all participants are deemed to have complied with these rules. No expressed or implied warranty of safety shall result from publications of, or compliance with, these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official. The race director shall be empowered to permit reasonable and appropriate deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alteration of specifications. Any interpretation or deviation of these rules is left to the discretion of the officials. **Their decision is final.**

#### **6.1 KID KART**

This class is open to participants age 5 through 7. It is intended as a starter class to familiarize the participants and their parents about racing. It gives them an opportunity to learn the driving skills necessary to compete in upper levels of karting. It also familiarizes them with the mechanical aspects of karting. Kid karts are intended to be a demonstration class. All competitors in this class are considered winners. All drivers and parents are required to attend the driver's meetings. All competitors are required to wear a SFI specification 20.1-chest protector.

#### **6.2 KID KART SPECIFICATIONS**

Basic chassis design only no offset karts. Seat must not be offset beyond outside edge of left mainframe rail. Wheelbase maximum 31", minimum 29". Width as measured outside of widest part of rim or tire.

Front maximum 40", no minimum front width, Rear 42", minimum 39".

Chain guard is required to completely cover the chain when viewed from above. Gearing/chain – 219 Comer chain, 10-tooth drive sprocket, 89-tooth axle sprocket. Briggs JR206 gearing to be 15tooth driver 56 tooth final. Clone gear is 15 tooth driver, 56 tooth final. Clone gear is 13 tooth driver, 58 tooth final.

Rear bumper must be continuous loop design. Must have minimum two vertical connection tubes between upper and lower portion of loop. Bumper must protect rear tires.

Steering height maximum 20". Seat height minimum 12". Side pods or double nerf bars are required. Nose cones are required.

Tires open compound Permitted size 10x4.50 or 4.60x5 Maximum rear tire circumference 33.75". Minimum weight to be established per driver's weight and class competitiveness. 120 to 155lbs.suggested

### **6.3 KID KART ENGINES**

Comer C-50 or Comer C-51 or Briggs and Stratton Junior 206 #1243328202-01, or Beaver Dam approved Clone only permitted. Must be run stock as manufactured by Comer or Briggs. Kart will run in the 4 cycle or 2cycle classes as designated by the track staff.

Briggs engine must retain factory seals and comply with carburetor slide inspection, ignition inspection. JR206 must meet Briggs LO206 engine rules. Briggs must run class approved carb. Briggs must run 15/56 gear set.

Clone must meet the track specified throttle stop 4800 rpm. Also, must run red restrictor, .375 hole dia. Clone must use 15/58 gear set.

#### **6.3.1 COMER ENGINE RULES:**

For the Comer no grinding or performance enhancements permitted. No aftermarket accessories (including fasteners) permitted. Carburetor model 14-12L all parts must remain as cast. No enhancements of any type permitted. 0.475" no go venturi. Jet size #54-#58. No repairs to damaged carburetor bodies. Stripped casting may be repaired with Heli-coils or bolts of next larger size. Extra return spring required for safety. Must utilize manifold restrictor issued by WKA. (I'm not sure these have been run at BD?) Air filter required. Must be O.E.M. stock. (BD allows aftermarket filters on the Comers) Flange inside 57mm. Filter top 51mm. Filter base 89mm. Filter length 102mm. Flange length 16mm. Flange must be centered. Filter must not be modified in any manner. Unmodified O.E.M. combustion chamber. Volume 7.3cc when using WKA cylinder head volume check procedure. All threads must be intact. No alterations permitted. Liner and aluminum cylinder must be utilized as cast. No grinding or alterations permitted. Port height exhaust 1.200" minimum intake .370" Maximum. Base gasket must be in place. No maximum thickness. Piston must be O.E.M. stock and stock appearing. Both skirts must be the same length with a .015" tolerance. Minimum piston length 1.210" measured from bottom of ring land to bottom of piston. Rings must be O.E.M. Ring gap maximum is .040" Rings may not fall through cylinder. Crank pin and wrist pin must remain stock O.E.M. Main bearings must be O.E.M. SIZE AND TYPE. May be aftermarket manufacturer. Ceramic or other exotic bearings not permitted. Seals must be installed, as O.E.M. Tampering with seals to reduce drag is not permitted.

Ignition must be within factory specifications. Flywheel key must be unaltered and in correct location. Ignition timing and flywheel key subject to inspection. Spark plug boot and plug are open to aftermarket parts. Spark plug must be O.E.M reach. Spark plug wire must be O.E.M.

Muffler must be O.E.M comer C50 or C51 only. One O.E.M. gasket only. Muffler must be unmodified. All exhaust must go through muffler.

Clutch must be run as manufactured. Clutch shoes must have Comer name cast in. Shoes may not be altered. No grinding or polishing permitted. Minimum width of shoes 0.065" Shoe minim chord measurement is 2.500". Spring maximum diameter is .0.430and 9 coils. Wire diameter permitted is 0.075" to 0.080".

No taping of shrouds permitted Shrouds must be O.E.M. stock.

## **6.6 WKA STOCK ANIMAL ENGINE**

All parts must be Briggs & Stratton series 12 engine model # 124332 factory production parts unless otherwise specified in this manual. No machining or alteration of parts is permitted unless specifically noted. All parts are subject to be compared to a known stock Briggs and Stratton part. No reading between the lines. If it is not in the rules, it must remain, stock.

UNLESS OTHERWISE STATED ENGINE WILL BE TECHED AS RACED.

### **6.611 SHROUDS & COVERS**

Engine shroud and covers and control bracket must be intact and not modified, except control cover which can be modified to attach fuel pump (fuel pump must be visible) and throttle bracket also cylinder cover maybe cut for thermal coupler, intake manifold, and exhaust flange clearance. New Briggs & Stratton air shield/guard Part #555680 may replace plastic control cover and control bracket. All flywheel guards must be bolted to blower housing. Taping of flywheel guard allowed. Tape on block disallowed. No part of flywheel guard may protrude inside of the flat plane of the blower housing. NO revolving flywheel guards allowed. Any bolt utilized to secure sheet metal, shrouding, etc., with the exception of sheet metal secured by the head bolts, may be replaced with larger diameter bolt(s). Stock kill switch is allowed and is no longer a tech item.

### **6.612 HEADER/SILENCER**

Exhaust pipe/header must not extend past rear bumper (including silencer, where applicable) and have no exposed sharp edges. Header shall have a maximum length of 24" to be measured in the ID using a .250" wide tape measure. Measurement to be made with silencer off of pipe and tape tight. If any part of the pipe is less than maximum the pipe is legal. Loop header pipes NOT ALLOWED. Header/exhaust pipe MAY NOT PROTRUDE inside of exhaust port. Header pipes MUST be wrapped to protect driver from burns.

\*Gasket and/or silicone allowed to seal the header.

\*Header must be of fixed design. NO SLIPPY PIPES allowed. No extra tubes or extra holes allowed except hole for heat sensor probe if sensor is used.

\*All header pipes must be of continuous length from flange to end of pipe with stages or butt welds permitted (no chamber, infusers, or covers of any type allowed on silencer etc.). Silencer must be visible when viewed from any angle. Header tube and silencer only legal parts.

\*Extra Heat Shield above chain guard is allowed.

\*All header pipes must be of continuous length from the flange to end of pipe with stages or butt welds permitted (no chamber, infusers, or covers of any type allowed on muffler, etc.) A Header support brace and safety wiring of header bolts or studs is required to ensure header bolts remain tight. It is required that the safety wire wrap around pipe to ensure that bolts remain with pipe in case they are stripped out of block. Silencer must be tight, secure, and completely intact on the header throughout the entire event.

Silencer must be clamped to header tube and no welding of silencer in any area. Silencer must be visible when viewed from any angle. Header tube and silencer only legal parts.

\*Silencer baffle holes .1285" maximum all baffles. SILENCER: In events where silencing device is mandatory, use of RLV-91 silencer is mandatory. Silencer must be utilized as produced, with no modifications or alterations permitted.

\*The flange that bolts the header to the block cannot be thicker than 0.312" Max.

### **6.613 AIR FILTER**

Any air cleaner permitted. Must be installed directly to carburetor. No filter adapter allowed. Filter may not be used as an air ram and must filter from all areas as raced. Any open areas in filter must be covered with a filter sock. (No open areas allowed.)

### **6.614 CARBURETOR**

PZ Model 22 Carburetor only. Must be stock as from the factory except any parts that are inside the float bowl or that can be removed through the float bowl are non-tech items. Any 1/4" bolts may be used to attach Carburetor to intake. No studs allowed. Carburetor to intake sealer is by O-Ring only. No sealer allowed. Air must enter carburetor at air horn only. Choke must be stock as manufactured from factory except choke maybe secured in open position. Adapter will be allowed on end of fuel inlet of carburetor for attachment of 1/4" fuel line.

\*Maximum throttle bore inside dimension is .874" (A7) NO-GO. Must be as cast.

### **6.615 CHOKE BORE**

1.149" (A7) NO-GO. Must be as cast.

### **6.616 VENTURI**

Vertical .792" No-Go (A7), this measurement shall be made with the NO-GO held parallel to the bore of the carburetor. Horizontal .615" NO-GO (A8) for top and bottom of venturi (widest part), and .602"

NO-GO (A20) will be the horizontal check for the narrowest part of venturi, and this NO-GO may not enter slide area. Air pick off hole maximum .061" No-Go (A9).

### **6.617 SLIDE**

Minimum length top edge of slide to deepest part of cut away 1.148" NO-GO (A10). Must be stock as from factory.

### **6.618 NEEDLE JET**

1.690" maximum length and 1.680" minimum length. Taper on needle must remain stock and will be checked at .500" from the tip of the needle and must not be smaller than .070" NO-GO (A4).

### **6.619 RESTRICTOR PLATE**

Must be stock as manufactured. NO ALTERATIONS ALLOWED. Single hole restrictor plate will be used for the 2010 racing season. .505 to be checked with 0.506" NO-GO (A24) gold restrictor will be used for the Briggs Jr. classes. A 0.575" to be checked with a 0.576" NO-GO (A24) Restrictor plate must be flat and placed between carburetor and intake and sealed within gasket area. There must be one gasket between the restrictor plate and the intake manifold. Addition of material or funneling of gasket(s) not allowed. Any attempt to bypass, modify restrictor is prohibited.

Anodizing may not be removed from restrictor plate. Horstman lettering must be present, and tab on plate must be on right side when looked at from the carburetor side. Intake restrictors are to be unaltered and must be as originally manufactured. Along with WKA Tech No-Go gauges, officials may use a known factory plate, or any other tool necessary to determine legality of part. Restrictor plate violations subject competitor to disqualification and possible suspension.

### **6.620 INTAKE**

Stock animal intake as supplied from the factory. No modifications allowed except machining of gasket surface is permitted to meet rule specs. However, the gasket surface must remain flat for proper gasket seal the intake to block, and one intake carburetor mounting hole may be drilled out and checked with a 0.328" NO-GO, and the width of the intake to carburetor slotted hole will be checked with the same NO-GO.

\*Length: 1.740" NO-GO 1.760" MUST GO (A12)

\*Inside I.D. 0.885" MUST GO 0.905" NO-GO (A11)

\*Intake to block gasket: after-market gaskets are allowed. No sealants are allowed.

Maximum Gasket thickness .070".

### **6.621 FUEL PUMP**

Auxiliary pulse-type fuel pump allowed. Fuel pump must be externally mounted. Fuel pump must be pulsed only from the crankcase upper oil fill cap.

### **6.622 VALVE COVER**

Stock valve cover as manufactured from factory that includes the breather hole for the tube that runs to the catch can (no threading of hole allowed).

\*Valve cover gasket must meet stock configuration. No sealer allowed.

### **6.623 ROCKER ARMS**

Must be stock as from the factory.

\*Minimum length is 2.865" NO-GO (A13).

### **6.624 CAMSHAFT**

All cam profile readings must be taken with zero valve lash and degree wheel at top dead center (TDC) of compression stroke. Readings shall be measured from push rods. Set dial indicator at zero and do not reset during the profile process. Only stock factory camshaft cores from Briggs & Stratton are permitted, part numbers 555532 and 555584. Lobes may be ground, but not to exceed .870 base circle.

Mechanical compression relief non-tech. Camshaft lobes must remain flat and of original width.

\*Maximum valve lift of 0.255" taken directly off the valve assembly at zero valve lash.

Place dial indicator on valve keeper then tighten ball rocker till you see indicator move 0.001" to 0.002" this will assure that all the lash is taken out of the valve. Set dial indicator to zero and then check lift. When checking the lift off the valve keeper the only dial indicator holder that will be used is three leg holder Sox holder #AT320A or similar indicator

#### **6.624.1 CAMSHAFT PROFILE LIMITS:**

Intake Lift Degrees

0.020" 18 to 13 BTDC

0.050" 0 TDC to 4 ATDC

0.100" 16 ATDC to 20 ATDC

0.150" 33 ATDC to 37 ATDC

0.175" 42 ATDC to 46 ATDC

0.200" 53 ATDC to 57 ATDC

0.225" 67 ATDC to 71 ATDC

Min. Min. lift is .252"

Max Max. lift is .257"

0.225" 39 BBDC to 35 BBDC  
0.200" 25 BBDC to 21 BBDC  
0.175" 15 BBDC to 11 BBDC  
0.150" 5 BBDC to 1 BBDC  
0.100" 12 ABDC to 16 ABDC  
0.050" 28 ABDC to 32 ABDC  
0.020" 44 ABDC to 49 ABDC  
Exhaust Lift Degrees  
0.020" 61 BBDC to 56 BBDC  
0.050" 44 BBDC to 40 BBDC  
0.100" 27 BBDC to 23 BBDC  
0.150" 11 BBDC to 7 BBDC  
0.175" 1 BBDC to 3 ABDC  
0.200" 10 ABDC to 14 ABDC  
0.225" 24 ABDC to 28 ABDC  
Min Min lift is .252"  
Max Max lift is .257"  
0.225" 78 BTDC to 74 BTDC  
0.200" 64 BTDC to 60 BTDC  
0.175" 53 BTDC to 49 BTDC  
0.150" 43 BTDC to 39 BTDC  
0.100" 27 BTDC to 23 BTDC  
0.050" 10 BTDC to 6 BTDC  
0.020" 5 ATDC to 10 ATDC

#### **6.625 BALL ROCKER**

Stock as manufactured from factory.

\*0.590" NO-GO - 0.610" MUST GO (A16)

#### **6.626 PUSH ROD**

Stock as manufactured from factory.

\*.185" - .190" diameter.

\*Length 5.638" NO-GO - 5.656" MUST-GO (A5).

#### **6.627 HEAD BOLTS**

Stock head bolt must be utilized and four are mandatory. All other external metric bolts may be replaced with American standard bolts of appropriate size.

#### **6.628 HEAD GASKET**

Briggs & Stratton and after-market head gaskets are allowed of stock design. Gasket

sealer cannot be utilized on head gasket. No aluminum or copper head gaskets allowed. \*.049" Min. thickness measured in four places between head bolts. Measurement to be made from inside of gasket. Measurement to be made with a micrometer.

\*Briggs & Stratton fire ring head gasket part # 555698 allowed. Minimum thickness 0.042" on metal fire ring part of the gasket.

### **6.629 CYLINDER HEAD PLATE**

Must be stock as from the factory.

\*Cylinder head plate gasket must be stock configuration. Maximum thickness .055".

### **6.630 ROCKER ARM STUDS**

Must be in stock as manufactured from the factory.

### **6.631 VALVES**

Stock valves ONLY. Must be one angle. Valves may not be polished or lightened. If working area (that portion of the valve stem translating with the valve guide area) of valve stem is cleaned, no material may be removed, such as linear grooves, cross-hatching, etc. Minimum intake and exhaust valve length 3.372" + or - 0.010"

### **6.632 INTAKE VALVE**

45 degrees (A22). Intake valve minimum diameter is 1.055" NO-GO too 1.065" MUST-GO (A17).

Allowed Depth of dish in valve .099" to .119". Minimum height from angle of valve face to top of valve 0.057" using gauge (A26) (check using a depth micrometer from top of valve to the gauge)

### **6.633 EXHAUST VALVE**

45 degrees (A22). Exhaust valve diameter is .935" NO-GO to .945" MUST-GO (A18). Allowed Depth of dish valve .084" to .104". Minimum height from angle of valve face to top of valve 0.060" using gauge (A27) (check using a depth micrometer from top of valve to top of gauge)

### **6.634 VALVE SPRINGS**

Stock Briggs and Stratton valve springs and keepers are mandatory. Springs must remain unaltered as supplied from factory.

### **6.635 INTAKE AND EXHAUST SPRING**

Maximum valve spring length is .930" NO-GO (A15) .103" - .107" wire diameter, measured in three places on spring. Inside diameter of spring .615" minimum, .635" maximum.



### **6.636 VALVE SPRING RETAINERS**

Stock as manufactured from factory.

\*.060" - .070" thickness permitted.

### **6.637 CYLINDER HEAD**

Stock Briggs and Stratton cylinder head part #555635. Machining of gasket surface only allowed. No machining of ports allowed. Bosses on head may be tapped to allow for the attaching of a header brace.

\*Depth of head at shallow part of head .011" minimum. The measurement on the shallow side of the combustion chamber will be taken with a depth gauge on the push rod side of an imaginary line drawn from dowel pin to dowel pin on valve side of the dowel. It will also be taken over the spark plug area. The rest of the recess area in the head has no depth dimension, but the recess must remain visible. Depth at floor of head .319" min.

\*Depth to top of valve seat: .360" maximum. .335" minimum. \*Head thickness measured from head gasket surface to head plate gasket surface is 2.420" (A29). Head thickness to be checked in four places through the valve guides and the push rod holes with gauge. Not calipers.

\*Width of combustion chamber at the widest part across the valve seats area checked with a 2.640" NO-GO (A30) at a depth of 0.200" in the combustion chamber.

### **6.638 VALVE SEATS**

Must be one angle ONLY on valve seats. Stock Briggs and Stratton valve seats are mandatory.

\*Intake seat inside diameter, .966" MUST-GO - .972"(A2) NO-GO.

\*Exhaust seat inside diameter, .844" MUST-GO - .850" (A1) NO-GO.

\*Exhaust and intake seat 45-degree angle.

### **6.639 PORTS**

Must have stock configuration. No porting or modifications of any kind allowed.

\*Intake inlet: .918 No-Go (A6) when checking 90 degrees to stud pattern No-Go will be straight, when checking in line with stud pattern No-Go will set on floor port at bottom and stop at upper edge of port on top. \*0.864" NO-GO (A28) cannot touch the valve guide of the intake port. 0.860" (A28) Plug gauge will be used as a visual check of the eyebrow area this is not a no-go but a visual assist tool. Exhaust Outlet: .980 No-Go (A6).

## **6.640 VALVE GUIDES**

Stock valve guides as supplied from factory. Stock replacement guide part #555645 allowed. Maximum depth from cylinder gasket surface to top of valve guide is 1.255.

## **6.641 DECK/PISTON CLEARANCE**

Machining of deck surface is permitted. No peak decking allowed. Piston pop-up CANNOT exceed .005" above block surface in the center of the piston. When measuring piston pop-up, it should be accomplished with bar stock (A25) on a parallel with the piston wrist pin and, using a dial indicator check the piston pop-up in this area. Then without moving the dial indicator rotate the bar 90 degrees on the center line of the piston and check the popup it should not exceed 0.005"

## **6.642 CYLINDER BORE**

No circular or machined grooving of cylinder is allowed in any position of cylinder.

\*Stock cylinder is 2.690" and overbore is permitted providing it does not exceed 2.725" (approximately .035" overbore).

## **6.643 STROKE**

Stroke is 2.204" Max. Check with stroke pin (A21) or dial indicator. Stroke is checked by pushing piston down to take up play of rod clearance. Stroke is checked from bottom dead center (BDC) to top dead center (TDC).

## **6.644 IGNITION**

If stock flywheel part # 555625 is used, the coil must be stock Briggs coil part #557040 must be utilized in unaltered form. No slotting of mounting holes or machining of attaching bolts is permitted. There must be resistance from ground to the plug wire. Spark Plug Connector must be stock factory type. Rubber plug boot allowed. Note: Coils may be rechecked for correct ohms reading after a minimum of 10 minutes.

\*Resistance from plug wire must be 3,000 ohms minimum and 6,000 ohms maximum.

NOTE: Coils may be rechecked for correct ohms reading after a minimum of 10 minutes.

## **6.645 STARTER**

Recoil starter may be retained as produced and intact, if recoil is removed, starter cup must also be removed. Any style nut and use of electric starter allowed.

### **6.646 FLYWHEEL**

Stock flywheel Briggs part # 555625 or STOCK PVL flywheel Briggs part # 555683. Any flywheel key or No flywheel key is allowed. No machining, glass beading or sandblasting of flywheel is allowed. Flywheel washer must be stock.

Weight of flywheel: 4 lbs. and 8 oz. MINIMUM. (PLV FLYWHEEL WEIGHT-4lbs. 4 oz. No modifications allowed)

### **6.647 CRANKCASE SIDE-COVER**

Side-Cover must remain stock.

### **6.648 CRANKCASE SIDE-COVER GASKET**

After market gaskets approved, however must be of same size material as stock gasket(s). One or two crankcase gaskets are allowed.

### **6.649 VALVE LIFTERS**

Stock lifter as supplied from factory.

\*Head lifter have a minimum .820" NO-GO - .860" MUST-GO (A19).

\*Maximum length of lifter 1.515" NO-GO - 1.525" MUST-GO (A14).

### **6.650 CONNECTING ROD**

Stock or wka approved aftermarket connecting rod ONLY. Connecting rod may not be lighter in weight than known stock component. No under-sizing of connecting rod is permitted, however, 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 crankshaft journal and/or wrist pin with no chamfer or breaking edges. The use of all first and second generation, and new Briggs stock rod bolts part # 555654 are allowed. Minor grinding of crankcase allowed for clearance of new rod bolts.

\*Stock rod length is 2.419" minimum, 2.429" maximum. Measured from bottom of wrist pin to top of crankshaft journal.

\*Oil hole opening, new or old-style rod, is .185" No-Go (B16).

### **6.651 WRIST PIN**

Wrist pin must not be altered.

\*Maximum inside dimension of wrist pin is .414".

\*Outside dimension is .624" - .626".

\*Minimum length, 1.901.

### **6.652 RINGS**

Three rings are MANDATORY. Compression, or top ring, chamfer or O must face up, and must remain as manufactured. Scraper ring must be installed with inside chamfer down and O up. Stock oil ring must be installed as from factory. Rings must be self-supporting in the cylinder bore of the engine being teched. Ends of ring must remain flat. Excessive end gapping of rings not allowed. Rings must conform to all listed factory specifications and be of stock configuration. Known, standards for piston/ring configurations are B&S factory approved parts. No machining of rings allowed. Exception; lapping and end gapping allowed. Rings must be in one piece when removed from block.

\*Minimum width top two rings .095".

\*Thickness top two rings .059" - .064".

\*Oil ring minimum width .065", ring groove must be present. Expander ring must be installed.

\*Oil ring thickness .098" - .102".

### **6.653 PISTON**

Stock, unaltered B&S Animal piston MANDATORY. Wrist pin hole must not be altered or relocated except minimum honing of wrist pin bore allowed. New style Briggs & Stratton piston with cir-clip on both sides of wrist pin bore allowed. Deck above top ring must not be altered. No machining is allowed on piston. Arrow must point toward flywheel.

\*From top of piston to wrist pin bore .658" minimum measurement. Check on circlip side of piston.

\*Minimum piston length is 1.768".

### **6.654 CRANKSHAFT**

Stock factory crankshaft mandatory. Stock factory timing gear mandatory and must be installed properly. Lightening, polishing of counterweights, addition of metal or other material is not permitted. Offset crankshafts are not permitted. After-market bearing of non-self-aligning type, with or without, shield is permitted. Shims if used must be installed as from factory. No ceramic bearings allowed.

\*Crankshaft journal diameter is 1.094" - 1.100".

### **6.655 BLOCK**

Must be as produced, with no alterations or reworking. Blocks repaired from broken rod damage, are permitted providing that repair does not constitute a functional modification of original block. No bushings of any kind allowed except for bushings approved in this Tech Manual. The repair of one coil post is allowed, as long as the remaining post is factory and unaltered. No KNURLING of guides allowed.

### **6.656 WELDING**

No welding can be done to an engine from the cooling fins upwards. Cam boss repair or welding not allowed. External welding of block is only allowed to repair damage from broken rod.

### **6.657 CLUTCH**

Dry clutches are mandatory (same clutch used in all other Briggs & Stratton classes).

### **6.658 ENGINE SEALS**

The engine will be sealed with two wires. One wire will run between a valve cover bolt and an intake to an engine bolt to the nut side of a carburetor to intake bolt. The other wire seal will seal the front side of the cover bolt.

### **6.659 FUEL LINES**

Fuel lines must be safety-wrapped at all connecting points.

## **6.8 BRIGGS AND STRATTON LO206**

Refer to the Briggs LO206 rules. –

BRIGGS LO206 engine rules apply for this motor. Engines must retain original Briggs factory seals. For 2020 both new and old-style seals will be allowed to be used. In 2021 only the new style Briggs sealed LO206 with the security thread will be allowed to be used. For specific rules on this motor refer to Briggs LO206 technical manual.

## **United States Rule Set**

### **Effective January 1, 2019**

(Last updated 03/15/19)

The 206 engine platform was designed and engineered exclusively for racing. Each engine is hand-built in Milwaukee, Wisconsin using dedicated tooling and dies to provide a level of consistency unmatched in the industry today. The 206 is intended to simplify racing, from hitting the track to the tech process needed to ensure a level playing field at the end of the day. In combination with Briggs & Stratton Racing's slide restriction system a complete racing ladder can be developed by simply changing a carburetor slide and/or by a slide and ignition change. With the base engine the basis for today's 'box stock' classifications, the 206 engine gives racer's and tracks the ability to have one engine, from start to finish. All Briggs & Stratton (B&S) racing engines are manufactured solely for sanctioned

racing only. B&S does not recommend the products referenced herein to be used for an application outside of sanctioned racing as serious injury or death could result. This rule package has been prepared by Briggs & Stratton Racing and is intended to establish the sole basis for technical control of the 206 engine in competition. For all supplemental

rules contact your sanctioning body.

**This rule package covers all engine related technical specifications.**

**For all other regulations beyond the engine please refer or contact your sanctioning body.**

### **Briggs Sealed Box Stock Ages 7-12**

Engine: LO206 with factory seals, Briggs rules (except any air filter allowed), Purple slide part number #555735, 0.342" max opening, unaltered Briggs legal carb

Tires: Any Burris 33

Clutch: Drum only

Fuel: 91 Octane or less "Pump Gas" only

Minimum Weight: 265 lb.

Cadet, Novice, Junior 1, Junior 2 and National Junior classifications require the installation of the locking cap Part #555726 on the carburetor slide cover. It is not permitted to run the classes without the specified slide and locking cap. Locking cap and carburetor cap MUST be tight. A seal can be utilized at the discretion of the organizer, or alternatively painted by the technical officials. Opening verified by pulling on the throttle cable, not pedal, to determine maximum opening.

Optimization of the slide opening in Briggs & Stratton is permitted. The only allowable method of slide optimization is by removing material from the throttle cap area highlighted in RED. The use of multiple gaskets and/or machining of the slide is prohibited.

Slide opening must not exceed the appropriate No-Go specification as per class regulations. For information on slide optimization see video section at [www.BriggsRacing.com](http://www.BriggsRacing.com)

**CAUTION – The risk of pushing the limit on the slide opening is an unnecessary DQ. For every .010" of slide opening, due to the efficiency limitations of this engine, is less than .1 hp. Give yourself a buffer because it makes no measurable performance differences.**

## **2. These Regulations Are the Only Regulations**

- a. Only the B&S Racing Department in Milwaukee can make changes to the technical specifications herein.
- b. B&S dealers and their agents are not authorized to alter, verbally or otherwise, any technical specifications or competition rule herein.
- c. Should any B&S literature, catalogues, manuals, videos, etc. be different than these regulations, these regulations take precedence.
- d. Changes, corrections, addendums, etc. will be submitted to sanctioning bodies and posted at [www.karting.com](http://www.karting.com) for republication and will become effective on a date specified.

## **2.5. The 3 Core Rule Set Technical Inspection Principals:**

- a. Unless these rules state that you can do it, you cannot do it.
- b. Spirit and Intent (Syd White rule): Covered, stated, restated, or unstated any change or action with the sole intent to wrongfully create a performance advantage is grounds for disqualification.
- c. All parts are subject to comparison with a known stock part. This includes specified and mandated aftermarket parts. Example: RLV exhaust and silencer.

## **3. Briggs & Stratton 206 Product Availability**

The 206 engine products and service parts are available only through the authorized Briggs & Stratton Racing dealers. A list of authorized dealers can be found at [www.karting.com](http://www.karting.com)

## **4. General Rules**

- a. The terms stock, original equipment, OEM, unaltered, etc., refer to Original Equipment supplied by Briggs & Stratton.
- b. Only the original equipment Briggs & Stratton 206 #124332-8201 or Junior 206 #124332-8202 engines are allowed in the classes recommended herein.
- c. All parts must be unaltered Briggs & Stratton 206 parts specifically made for this engine by Briggs & Stratton. No aftermarket parts to be used unless specified in these regulations.
- d. All parts are subject to comparison with a known stock part. This includes specified and mandated aftermarket parts. Example: RLV exhaust and Silencer.
- f. The tech official, at their sole discretion, may at any time replace a competitor's sealed engine, carburetor, or head assembly with another sealed engine or known stock part. Failure to comply is grounds for disqualification.
- g. **IF** a competitor's part is replaced per 4f it must be drilled or reconfigured in a way that prohibits the reuse of that part.
- h. All Briggs & Stratton 206 classes must have a serialized block. Blocks without a factory serialization on the front base next to the oil drain are illegal in competition.
- i. Standard organizational protest procedures can allow for short block inspection (seal removal) if a *new*, replacement short block, p/n 555715 is offered in replacement. Competitor short block to be forfeited to the series or club as terms of this procedure.

## **5. Things That Are NOT Permitted**

- a. Tampering of the factory installed engine seals (2).
- b. Addition or subtraction of material in any form or matter.
  - a. Exception – Valve maintenance (valve job). Valve seats must remain with the factory specification of 30 and 45 degree angles only. Valve seats of additional angles and/or angles not comparable to the factory stock of 30 and 45 degrees are not permitted. Grinding of valve stem or excessive material removal prohibited.

- b. Exception – Optimization of the slide opening in Briggs & Stratton Cadet, Novice, Junior 1, Junior 2 and ASN National Junior classes are permitted per section 1 guidelines.
- c. “Blueprinting” unless stated herein.
- d. Modification to or the machining of any parts in order to bring them to stated minimum/maximum specification, (or for ANY reason).
- e. A tech official may use additional means of measuring components to compare against a known stock part.
- e. Machining or alteration of any kind to the engine or replacement parts unless specifically stated herein.
- f. Deburring, machining, honing, grinding, polishing, sanding, media blasting, etc.
- g. Sandblasting or glass-beading any interior engine surfaces.
- h. No device may be used that will impede, or appear to impede, airflow to the engine cooling system.

## **6. Engine Sealing**

There are two custom security seals with matching serialization installed from the factory. Tampering of the seals is not permitted. Should the seals be tampered with, the engine is no longer eligible for competition. Should an engine require dismantling for any reason that requires breaking of the seals, contact Briggs & Stratton at: Briggs & Stratton Racing – Email: [Briggsracing@basco.com](mailto:Briggsracing@basco.com)

Beginning on January 1st, **2021** only security seals with a black integrated thread wire or the red/black wire and the orange seal housing will be legal for competition.

Each competitor is responsible for the condition of their seal. We recommend that each seal be wrapped (plastic bag, etc.) to prevent exposure from harsh cleaners, degreasers, and oils.

## **7. Technical Inspection Tools**

Briggs & Stratton have made available a number of tools for the convenience of technical checking of components when necessary. They are indicated throughout the rule thusly:

**Tech Tool #.** See Section 38 for tool description. The tools are available from: Sox Racing • 2223 Platt Springs Rd. • West Columbia, SC 29169 • (803) 791-7050

## **8. Engine Ignition Switch**

The B&S ignition switch and wires must remain in stock location. It is not permitted to alter the OEM wiring.

## **9. Engine Air Filter**

The only air filter permitted is the Briggs & Stratton Green Air Filter Part #555729. No modification to the filter element is permitted.

A protective shield may be attached for wet-weather competition.

It is not permitted for the protective shield to create any ram-air effect. A fabric prefilter is allowed as long as it does not create a ram-air effect. Foam or any other prefilter material is NOT legal for use.



A racer **MUST** start each race with the air filter properly attached but will **NOT** be penalized if the air filter falls off during the race. If air filter falls off during a race, it is **STILL** subject to tech.

### **10. Engine Fuel Recommendations**

Premium Gasoline no greater than 94 octane sold at normal roadside fuel stations open to the public. The addition of fuel additives in any manner is not permitted. Fuel dispensing location may be specified in Event Supplementary Regulations. Specific gravity and hydrometer testing are acceptable tests when used in accordance to sanctioning body guidelines.

### **11. Engine Oil**

High-quality synthetic oil within a 10W-20 range recommended. No oil additives are permitted. Briggs & Stratton **only** recommends the use of Briggs & Stratton 4T Synthetic Racing Oil. 4T was engineered exclusively for the rigors of high revving, air-cooled racing engines (available through both Briggs Racing and Amsoil dealers). The use of 'karting' or 'automotive' oils is **not** recommended as many are hydroscopic in nature (attract water), offer limited protection over time, and/or were engineered for pressure, not splash lube systems. The use of these oils can induce engine failure and/or accelerate wear. Engine oil testing/verification procedure is per standard sanctioning body guidelines.

### **12. Oil Breather**

Oil breather must vent to a catch container.

### **13. Oil Catch Container**

An oil overflow catch system is mandatory. Overflow tube must run from the crankcase breather to a catch container. The catch-container must be vented to atmosphere.

### **14. Carburetor Overflow (updated 11/28/2018)**

Carburetor overflow must be vented to a catch container. The catch-container must be vented to atmosphere.

### **15. Fuel Pump**

Only fuel pump, B&S part number 808656 or 597338, is legal for competition. This fuel pump can be identified by the Briggs & Stratton diamond logo on the pump face. All other pumps are prohibited. It is prohibited to pulse from the intake manifold. Relocation of the fuel pump is legal as long as it is spaced to less than 3/4 inch off of the control plate, B&S #555699, in a similar location that is both safe and secure. Measurement is from the base of the control plate to the bottom of the fuel pump. Vertical mounting or mounting the fuel pump upside down is **NOT** allowed. The fuel pump must be pulsed from a pulse fitting mounted on the oil fill fitting located on the engine side cover. Aftermarket one-piece filler/pulse fittings such as shown on the right are permitted. Check valves prohibited. The use of silicone sealant on the brass vent **IS** permitted and recommended. A fuel pump return line to the fuel tank is prohibited. A fuel filter is not required but highly recommended to ensure that dirt and contamination

within your fuel system does not impact your carburetors performance.

The fuel filter itself is not a tech item but only one fuel filter is legal for use and it can only be located between the fuel tank and fuel pump inlet (not between the pump outlet and carburetor).

### **16. Cooling Shrouds, Covers and Blower Housings**

All pieces of the engine cooling shroud/blower housing and control panel must be stock B&S and properly installed. Rewind housing and cooling shroud (air guard) must remain stock as painted from the factory.

Engine Shroud may be painted any color. Any bolt, with the exception of the head bolt, that is used to secure sheet metal shrouds and covers may be replaced with larger diameter bolts.

No taping, covering, or restricting of air to the rewind shroud is permitted.

### **17. Damaged Thread Repair**

It is permitted to use Heli-coil, Time-sert or a similar thread repair insert for shrouds, valve cover, oil drain, oil fill holes, blower housing, and exhaust pipe attachment studs on the head and lower brackets.

### **18. Carburetor & Intake Manifold**

The B&S stock carburetor part #555658 is the only carburetor permitted. 'Walbro', 'Briggs' diamond logo and/or #590890 etched in the body are additional visual indicators. No alterations allowed unless stated below. All parts will be compared to a stock known B&S part for eligibility. This includes the nozzle, emulsion tube, jets, float, float needle and all other carb parts. It will be allowed however to adjust the float height by means of bending the small tab on the float arm. A slight chamfer around the choke bore ID (air horn) may be present. 1.149" no go **Tech Tool A7**.

Both idle and main jet must remain stock, as shipped from the factory.

Slide must remain B&S stock unaltered. Slide cutaway to be measured on flat surface. .075 no go **Tech Tool A10**. ALL intake manifold fasteners to remain factory stock. The use of studs, etc. are illegal.

All individual carburetor components must be tight, as shipped from the factory. B&S stock unaltered aluminum needle is required part number 555602 marked #BGB. Needle to be inspected using **Tech Tool A4**. Needle, when placed in tool A4, should not protrude through the other side. If needle protrudes through the block it is out of specification.

Throttle cable cap on the top of the carburetor must be properly installed and secured in the fully tight position.

Metal choke cover must remain in place but may be secured with silicone or epoxy sealer. Additional pin punching is allowed to tighten choke cover.

Air must only enter the engine from the natural air filter horn of the carburetor. Air entering through any other method is illegal. An approved spray test method can be used for tech validation.

**NOTE: Slide openings should be measured only with the Briggs & Stratton slide tool listed on the tool reference chart.**

**Main Nozzle -**

Stock, Unaltered

.101" Go (.101" Class Z Go)

.104" No-Go

(Use .104" Class Z No-Go)

**Idle Pilot Jet -**

Stock, Unaltered

.0130" No-Go (Use

.0130" Class Z No-Go)

**Technical Item Description Tech Tool**

a. Needle Jet C-Clip

Needle Jet C-clip must be properly installed but may be installed at any of the 5 factory settings on the needle jet.

b. Throttle Cable Cap

Throttle cable cap on the top of the carburetor must be used and properly installed in tight position.

c. Choke

Choke: OEM unaltered, but lever may be fastened open with a spring, rubber band, wire, etc.

d. Idle Pilot Jet Idle Pilot Jet – Stock, Unaltered .0130" No-Go (Use .0130" Class Z No-Go)

e. Idle Circuit Air Hole

No drilling, reaming, elongating of the hole allowed. .119" max. diameter. A small chamfer at the outer edge, as compared to a stock part, can be present. The measurement of that chamfer is subject to sanctioning

body guidelines. **.1195" Pin gauge**

f. Main Jet Main jet – Stock, Unaltered .0365" Go (Use .0365" Class Z Go), .039" No-Go (Use .039 Class Z No-go)

g. Emulsion Tube Main nozzle – OEM stock unaltered hole size = .101, .104"

Small holes – .018 Go (Use .018" Class Z GO) .021" No-Go (Use .0215" Class Z No-Go)

Big Holes - .026" Go (use .026" Class Z Go), .029" No-Go (Use .029" Class Z No-Go)

h. Venturi

Measurement Venturi Measurement: Vertical: .792 max inches. **A8**

Horizontal: .615 max inches at widest part **A8**

Horizontal: .602 max inches at narrowest part. **A20**

i. Air Pick Off

Hole Air pick off hole - .057 go .061 no go **A9**

j. Throttle Bore Throttle bore – Must be as cast and bore max diameter = .874 inches. **A7**

k. Venturi Idle Fuel Hole

Venturi idle fuel hole =.039" No-Go (Use .039" Class Z Nogo) **A12**

l. Air Filter Air filter: Only GREEN air filter, part # 555729 is allowed. Filter adapters are not allowed, filter must attach directly to carburetor air horn

m. Carburetor

Overflow Carburetor overflow: Must be vented to a catch container.

n. O-Ring O-Ring part number B&S part # 555601 is required and must be unaltered.

o. Intake Manifold Intake manifold – max length = 1.740 inches min to 1.760 inches max  
Intake manifold – bore diameter = .885 inches min to .905 inches max **A11**

p. Choke

Bore/Air Horn 1.149 no-go **A7**

q. Carb Slide

Cutaway .075 no-go **A10**

r. Widest part of Combustion Chamber 2.640 **A30**

### **19. Cylinder Head (Updated 2/18/19)**

a. The ONLY head casting for the B&S 206 herein is the 'RT-1', cast into the head just off the head gasket surface (towards the rear of the engine, PTO side). The overall head minimum thickness is 2.431".

b. Cylinder head must be "as cast". Factory machining marks left on the head gasket surface is NOT a tech item.

c. Hard carbon may be scraped from head before measuring.

d. Depth of shallow area of combustion chamber must be .031 inch minimum. This measurement to be taken with a depth gage on both the combustion side and spark plug side of cylinder head.

e. Depth of the combustion chamber is .342" inches minimum.

f. Inspect retainers for alterations that would increase valve spring pressure -.055 to .075 maximum flange thickness. Both intake and exhaust must have OE stock B&S valve keepers.

g. Unaltered B&S part #555552 (exhaust) and #555551 (intake) can be checked for appearance, weight, and dimensions. No machining, polishing, easing, or alterations of any kind allowed. Valve surface must remain as factory, with one single 45-degree face. No other additional angles allowed on any part of the valve. **Tech Tool A22.**

h. Valve Guides: Replacement of valve guides with B&S part #555645 only is allowed. Maximum depth from the head gasket surface to the intake valve guide is 1.255".

i. Briggs & Stratton heat disperser, p/n 555690 can be installed in the exhaust bolt boss per factory instructions.

## 20. Head Gasket

- a. Unaltered B&S part #555723 is the only head gasket allowed.
- b. Minimum thickness allowed is .047". Measurement must be performed using a micrometer. Readings are taken from inside the cylinder hole of the gasket closest to the combustion chamber (see diagram). Four measurements are to be taken in the four defined quadrants with 3 meeting the minimum thickness of .047".

## 21. Ports

- a. No de-burring, machining, honing, grinding, polishing, sanding, media blasting, etc.
- b. The transition from intake bowl to port must have factory defined machining burr at this junction. No addition or subtraction of material in any form or matter. No alterations of any kind may be made to the intake or exhaust ports.
- c. Intake Port: Maximum diameter measurement = .918 inches max. **Tech Tool A6.**
- d. Exhaust Port AS CAST. Exhaust Outlet -.980 – **Tech Tool A6.**
- e. Valve Seats. Intake and exhaust: Must remain factory specification with one 30 and one 45-degree angle only. Valve seats of additional angles and/or angles not comparable to the factory stock are not permitted.
- f. Valve maintenance permitted (valve job). Valve seats must remain with the factory specification of 30 and 45 degree angles only. Valve seats of additional angles and/or excessive material removed when compared to the factory stock is prohibited.
- g. Intake valve seat diameter inside = maximum .972 inches. **Tech Tool A2.**
- h. Intake port pocket bowl (area just below valve seat) = .952 no go **Tech Tool A2**
- i. Exhaust valve seat diameter inside = maximum .850 inches. **Tech Tool A1.**

## 22. Valves

- a. Intake valve

Minimum Weight of Valve 27.8 grams

Diameter of valve stem .246 to .247 inches

Diameter of valve head 1.055 to 1.065 inches

### **Tech Tool A17**

Diameter of valve seat .972 inches ID maximum

Valve length Minimum 3.3655 inches

Height from angle of valve face to top of the valve .057 inches minimum

### **Tech Tool A26**

- b. Exhaust valve

Minimum Weight of Valve 27.2 grams

Diameter of valve stem .246 to .247 inches

Diameter of valve head .935 to .945 inches

### **Tech Tool A18**

Diameter of valve seat .850 inches ID maximum

Valve length Minimum 3.3655 inches

Height from angle of valve face to top of the valve .060 inches minimum

## **Tech Tool A27**

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### **23. Valve Springs**

a. Valve Springs are single coil stock, unaltered B&S part #26826. Must be identical in appearance to factory part and have 4.00 to 4.75 coils in stack.

b. Spring Wire Diameter: .103 to .107 inches

c. Valve spring length: .940 max inches **Tech Tool A15**

Inside diameter: .615" Go (Use .615 Class Z Go), .635" No-Go (Use .635" Class Z No-Go)

### **24. Rocker Arms, Rocker Ball and Rocker Arm Studs**

a. Rocker arm must be stock B&S part #555711 (US) or #797443 (METRIC) and may not be altered in any way.

b. Rocker studs must be stock, unaltered B&S part #694544 US (1/4-28 thread) or #797441 Metric (M8x1.00 thread) and in stock location.

Rocker arm #555711 (US) must be used with rocker stud #694544 (US).

Rocker arm #797443 (Metric) must be used with rocker stud #797441 (Metric).

c. Rocker Ball must B&S stock. Diameter .590-inch min. to .610 inch maximum.

### **Tech Tool A16.**

d. Rocker arm mounting positions may not be altered in any manner. No helicoiling of mounting holes. No bending of studs.

e. Rocker arm stud plate must be bolted to the head with one, OEM stock B&S gasket only – no alterations. Maximum thickness of gasket is .060 inches. Rocker plate to head fastener holes must remain stock, .289" max.

f. Rocker arm – overall length 2.820 inch minimum. Can be checked with a pair of dial calipers.

### **25. Push Rods (updated 01/15/2018)**

a. Push rods must be unaltered stock B&S part #555531.

b. Push rod diameter .183 minimum inches to .190 maximum inches. Push rod length 5.638 minimum inches to 5.658 maximum inches. **Tech**

### **Tool A5.**

c. Push rod diameter to be checked 3 points along the length and must pass two planes on each 360 degrees of rotation.

### **26. Engine Block**

a. Engine block must be unaltered "as cast" B&S factory machined condition. There must be no addition or subtractions of metal or any substance to the inside or outside of the cylinder block.

b. Both (2) B&S engine seals must be present with both the fastener and seal in "as and must pass two planes on each 360 degrees of rotation.

## 26.5 Engine Block

- a. Engine block must be unaltered “as cast” B&S factory machined condition. There must be no addition or subtractions of metal or any substance to the inside or outside of the cylinder block.
- b. Both (2) B&S engine seals must be present with both the fastener and seal in “as shipped” from the factory location and condition. Any defined tampering with the fasteners or damage to the wire/seal itself (example: delaminated hologram) are grounds for disqualification. Take proper care of your seals to ensure their integrity. It is recommended that you wrap your seals (using a plastic bag, etc.) to prevent exposure to harsh solvents such as carb cleaner, etc
- c. Deck gasket surface finish is not a tech item. Piston pop up can be .0035” maximum. Piston pop-up to be checked with flat bar in center of piston parallel to piston pin and then again checked 90 degrees to piston pin. Push piston down to take up rod play. **Tech Tool A25**. Angle milling or peak decking is not allowed.
- d. Carbon build-up can be removed before pop-up is measured as long as material is not removed from the piston. Exception – Competitors can deburr the manufacturing part number/marks IF needed as long as:
  - Removal does not extend beyond the defined script area.
  - De-burring does not extend below the original piston surface area.
  - The original part numbers and script are still clearly visible.
- e. Cylinder bore will not be bored oversize
- f. Cylinder bore will not be re-sleeved.
- g. Cylinder bore position is not be moved or angled in any manner.
- h. Cylinder bore dimension: - Briggs & Stratton stock bore is 2.690”. Allowance for wear is permitted up to 2.693” maximum for entire length, top to bottom.
- i. Maximum stroke is 2.204”. Push piston down to take up rod play. Check stroke on BDC to TDC. **Tech Tool A21**.

## 27. Valve Lift

- a. Maximum valve lift is checked from the top of the valve spring retainer. Valves must be adjusted to zero clearance.
- b. Valve Lift: Camshaft check is taken at the valve spring retainers. With the lash set at zero, the movement of the valve spring retainers may not exceed the following: Intake and exhaust: .255 inches maximum.

## 28. Camshaft Profile Limits (measured at the push rod)

Push gently down on dial indicator stem to ensure that there is no lash when push rods are going down.

**NOTE:** Due to the extended life of the engine, a single ppoint on each lobe can be off by a maximum of 2 degrees without issue, the exception being on the .006” check, both intake and exhaust.

**Intake lift**

0.006

59 TO 51 BTDC

**Exhaust lift**

0.006

101 TO 93 BBDC

0.020 16 TO 12 BTDC 0.020 59 TO 55 BBDC

0.050 .5 TO 4.5 ATDC 0.050 43 TO 39 BBDC

0.100 17 TO 21 ATDC 0.100 26 TO 22 BBDC

0.150 33.5 TO 37.5 0.150 9 TO 5 BBDC

0.175 43 TO 47 ATDC 0.175 1 TO 5 ABDC

0.200 54 TO 58 ATDC 0.200 11.5 TO 15.5

0.225 68 TO 72 ATDC 0.225 25 TO 29 ABDC

MAX LIFT 0.257 MAX LIFT 0.259

MIN LIFT 0.252 MIN LIFT 0.252

**Intake lift**

0.225

38 to 34 BBDC

**Exhaust lift**

0.225

76 TO 72 BTDC

0.200 24.5 TO 20.5 0.200 62.5 TO 58.5

0.175 14 TO 10 BBDC 0.175 52 TO 48 BTDC

0.150 4.5 TO .5 BBDC 0.150 42 TO 38 BTDC

0.100 12 TO 16 ABDC 0.100 25.5 TO 21.5

0.050 29 TO 33 ABDC 0.050 8.5 TO 4.5 BTDC

0.020 45.5 TO 49.5 0.020 8 TO 12 ATDC

0.006 83 TO 91 ABDC 0.006 47 TO 55 ATDC

**29. Flywheel**

a. No modifications are allowed to the flywheel.

b. The minimum weight of the flywheel, fins and attachment bolts is 4 pounds 1 ounce.

c. Stock B&S part #555683 only. No machining, glass beading, sand blasting, painting or coating of flywheel is allowed.

d. A flywheel fan, B&S part #692592, with broken fins must be replaced.

e. Stock, unaltered B&S flywheel key with the B&S logo is required. Width of the key allowed is .1825"-.1875". No offset keyways allowed.

**30. Ignition System**

a. **Unaltered B&S stock ignition** part #555718 is mandatory. Only "GREEN" ignition module allowed. Maximum RPM: 6,150.



**Exception** – Cadet Junior 206 class requires the use of unaltered B&S stock ignition part #555725 (BLACK in color). Maximum RPM: 4,150.

b. **Coil or its position**, other than air gap may not be altered in any way. Coil mounting bolts must be stock and cannot be altered in any way to advance or retard timing. Attachment bolts and/or bolt holes may not be altered.

c. **Spark plug**: Only the B&S unaltered factory spark plug part number #555737 - Champion RC12YC is permitted. Spark plug must have the “Champion” and Briggs & Stratton logo as well as the RC12YC identification on the insulator. Sealing washer must be in place, unmodified as from the factory. Temperature thermocouple permitted as long as sealing washer and/or air guard are not modified.

d. **Spark plug connector**: Only the OEM B&S part #555714 is permitted.

e. **Magneto air gap** is non-tech (recommended clearance of .016”)

f. **Static check for timing**:

- Install a degree wheel using a positive stop method.

- With the left edge of the first magnet aligned with the start of the lead leg of the ignition (refer to photo), the engine must not exceed 26 degrees with air gap set at .016”. Timing checked in the direction the engine operates.

### **31. Crankcase**

Crankcase and cover must be Briggs & Stratton stock, unaltered, “as cast in factory” condition. No alterations or subtractions of metal or any other substance to crankcase cover.

### **32. Clutch**

a. Novice class must run the supplied Max-Torque clutch, part #555727. No alteration to the clutch is allowed, except springs, driver (when applicable), driver conversion and clutch key are non-tech.

b. Sportsman, Junior 1, Junior 2, Senior, and Masters Classes can run any rim centrifugal clutch with a maximum of 9 springs and 6 shoes. Clutch must be used as shipped from the ORIGINAL manufacturer. Mixing of parts between clutch lines or manufactures or removing parts (i.e. Grease guard, etc.) is ILLEGAL. No alteration or machining to the clutch allowed. Springs, driver, driver conversion, clutch key, and crankshaft fastener kit are non-tech. Springs MUST remain OEM. Clutch coolers are not allowed. The use of aftermarket coatings is illegal.

c. Clutch drums must be stamped single-piece steel only. Clutch hubs must be single-piece steel, other alloys not allowed.

d. Clutch claim rule - Per standard sanctioning body guidelines, claiming can be implemented, Maximum of \$160.00.

### **33. Starter**

Recoil starter, B&S part #695287, must be retained, as produced and intact. Starter maybe rotated.

### **34. Exhaust Header**

- a. Header must be RLV Model 5507 or 5506 for all classes.
- b. Header length:
  - a. 5507 will measure 18.75" +/- .25" along the short side using a 0.250" wide tape measure.
  - b. 5506 will measure 17.50" +/- .25" along the short side using a 0.250" wide tape measure.
- c. Gasket and/or silicone are allowed to seal header to head. (One gasket maximum)
- d. Studs or bolts are permitted to fasten header to head. Bolts or nuts must be safety wired.
- e. Helicoiling of the exhaust is allowed.
- f. Supplied header support brace is mandatory. The addition of a mechanical support bracket (no welding involved) is allowed provided that there are no alterations to the shape or dimensions of the exhaust configuration.
- g. Any modification for or use of an O2, EGT, CO2 sensor is **prohibited**.

### **35. Exhaust Silencer**

Silencer must be RLV B91XL (part number 4104) with round baffle holes only. Safety wiring of the silencer to header is mandatory. All 4 baffles must remain unaltered and the hole size can be verified using a no-go pin of .1285. Exhaust gases may only exit through the muffler baffles. Muffler must be mounted on the header in a way that does not allow exhaust to leak at this joint. The exception, if a header becomes loose (header bolts loosen) during a race but remains mounted to the head this not grounds for disqualification.

### **36. Exhaust Protection**

The header must be completely wrapped (360 degrees) with a non-asbestos, approved insulation material or sleeve starting approx. 3 inches from the exhaust flange but **MUST** extend to where the stock supplied RVL support (welded or clamped) meets the header.

### **37. Technical Inspection Tools**

A complete video of the 206 inspection tools and process is available at [www.BriggsRacing.com](http://www.BriggsRacing.com).

### **38. IMPORTANT online support resources**

Please refer to [www.Briggsracing.com](http://www.Briggsracing.com) for a host of resources. Due to the sealed nature of this engine we highly recommend reading and viewing important documents and videos to insure a great racing experience.

Located online:

- a. 206 Engine tips and guide supplement – A must to print out and read **BEFORE** installing your engine!
- b. Carburetor tuning guide – Understand your carburetor to get the most out of your 206.
- c. Videos:
  - a. Proper clutch installation – Properly installing your clutch will prevent

the possibility of crankshaft damage.

b. Setting the float height – A simple video highlighting a necessary technique to insure a properly tuned carburetor.

c. Setting, measuring, and optimizing your junior slide restrictor.

#### **TOOL REFERENCE**

##### **Exhaust Valve Seat**

Diameter Max: 0.850

Tool: A1

##### **Intake Valve Seat**

Diameter Max: 0.972

##### **Intake Port Pocket Bowl Gauge**

Max: 0.952

Tool: A2

##### **Needle Jet**

Diameter Max: 0.070

Tool: A4

##### **Push Rods**

Length Max: 5.658

Min: 5.638

Tool: A5

##### **Intake Inlet**

Diameter Max: 0.918

Tool: A6

##### **Exhaust Outlet**

Diameter Max: 0.980

Tool: A6

##### **Throttle Bore**

Diameter Max: 0.874

Tool: A7

##### **Choke Bore**

Diameter Max: 1.149

Tool: A7

##### **Venturi Measurement**

Vertical Max: 0.792

Horizontal Max: 0.615

Tool: A8

##### **Air Pick Off Hole Tool: A9**

Diameter

.057" Go (Use .057" Class Z Go)

.061" No-Go (Use .061" Class Z No-Go)

### **Slide Cutaway**

Max: .075

No go

Tool: A10

### **Intake Manifold**

Diameter Max: 0.905

Min: 0.885

Tool: A11

### **Intake Manifold**

Length Max: 1.760

Min: 1.740

Tool: A12

### **Rocker Arm**

Length

Min: 2.820

Tool: A13

### **Valve Spring**

Length Max: 0.930

Tool: A15

### **Rocker Ball**

Length Max: 0.610

Min: 0.590 Tool: A16

### **Intake Valve Head**

Diameter Max: 1.065

Min: 1.055 Tool: A17

### **Exhaust Valve Head**

Diameter Max: 0.935

Min: 0.945 Tool: A18

### **Venturi Measurement**

Horizontal

Min: 0.602 Tool: A20

### **Stroke**

Length Max: 2.204

Tool: A21

### **Valve Angle**

Angle Max: 45°

Min: 45° Tool: A22

### **Piston Pop Out**

Length Max: .0035

Tool: A25

**Intake Valve** - Height from angle of valve face to top of the valve

Length Min: 0.057 Tool: A26

**Exhaust Valve** - Height from angle of valve face to top of the valve

Length Min: 0.060 Tool: A27

**Width of Widest Part of Combustion Chamber**

Length Max: 2.640 Tool: A30

**Slide Tool**

**ASN Canada FIA**

**National Class Structure**

**Class Max. Slide Opening**

Junior 570" 'Yellow'

**Briggs & Stratton**

**Jetting**

Idle Pilot Jet – Stock, Unaltered .0130" No-Go

(Use .0130" Class Z No-Go)

Main Jet – Stock, Unaltered .0365" Go (Use .0365"

Class Z Go), .039" No-Go (Use .039 Class Z No-go)

**Emulsion Tube**

Main nozzle – OEM stock unaltered hole size = .101,  
.104"

Emulsion Tube - Small holes – .018 Go (Use .018"

Class Z GO) .021" No-Go (Use .0215" Class Z No-Go)

## Section 8

### STOCK APPEARING CLONE ENGINE SPECIFICATIONS

#### 8.1 STOCK APPEARING CLONE ENGINE SPECS

Any 6.5hp clone block allowed (i.e. "blue, yellow, red")

Any fly wheel allowed.

Engine must run on 91 octane or less pump gas. NO methanol- UNLESS running a higher weight limit.

Drum clutch ONLY if running under 475 lbs. Open above 475lbs.

Exhaust must not extend past the rear bumper. Pipe dia. must be correct for weight limits. Must use an approved/functional muffler. It appears that this class has allowed open mufflers in the past.

Pull start or starter boxes permitted. Starter box will be used on an experimental basis for the balance of the 2017 season. Starter box must use stock type cam without compression release. Final version of clone starter box rules to be determined after review of the results of 2017 testing.

Block Requirements:

Stock cylinder bore is 2.685". Max bore allowed is 2.705"

May use 2 side cover gaskets of stock configuration.

Stub for governor may be removed and hole plugged.

Welding to the block shall be for rod damage repair only and may not constitute a functional modification.

Clearancing for after-market rod permitted.

Blower Housing Assembly: Pull starter must be present and remain stock. Pull starter may be rotated for a better crank angle. This might be able to come out if this class allows starter boxes

Carburetor/Intake Requirements:

Stock appearing Huayi or RUI\*ING carb permitted.

Rear carb bore .752" NO-GO. Carb bore finish, non tech. No air rams. Black phenolic carb insulator must be used.

Choke assembly must be installed

Jets, air bleeds jets, and emulsion tubes are non-tech.

One extra intake gasket may be used with restrictor plates.

Ignition system:

Ignition timing is non tech. Stock type ignition module only. Spark plug connector must be stock as from factory.

Piston Requirements:

Stock or aftermarket pistons permitted. Flat top or dish style permitted. Pistons must be of a three-ring design and all three rings must be installed. Piston may not pop out above cylinder deck.

### Crankshaft Requirements:

Stock stroke 2.123" max-min +0.010 - .0005

Aftermarket steel main bearings of non self-aligning type, with or without seal are allowed. No ceramic bearings.

Crankshaft Journal diameter is 1.180", 1.168" minimum.

Head and valves:

196 cc maximum displacement

Exhaust valve dia. 25 mm. Intake valve dia. 27mm.

No material (weld or epoxy) may be added to the head