

R Box

Ages 5-8

Min weight #285

All body, chassis, wing rules are the same as Jr Wing (see Below)

Open dry clutches only / drum or disc / No jackshafts allowed

* Engine rules 2023 NKA box stock rules will apply

* Clone 196cc ONLY

* ARC or Speed Karts 0.425 NO GO Green unaltered Restrictor plate only

**** Exceptions to NKA rules for R-BOX class engines****

* Big pipe w/ 4104 muffler required. No loop pipes, Header pipe and muffler must meet 2022 NKA rules for Adult Box Stock classes, must be inside the roll cage and must exit towards the rear of the kart or must be approved prior to event by tech inspector or race director

* Electric starter nut MAY BE used

* Box Stock cast rod or Billet rod allowed; NO Titanium rods allowed

* Hoosier tires grooved tires only. Must run D50 or D55 on Right rear only

* Tire soaking and tire prep is not allowed. Right Rear tire must durometer 50 or above.

Jr Wing (Jr BP Wing)

Ages 9-13

Min weight: 315lbs.

Open dry clutch only, NO jackshafts

Once the driver moves up from R Box, they cannot return to R Box, Driver May not compete in both classes.

Builder Prepared (BP) clone rules apply - NO PORTING allowed

Animal engine 2018 IKF / 2022 NKA rules, Gasoline only, .255 running lift maximum at retainer, No Duration checks, (Animal engines only) compression release cam NOT required if using electric starter only, compression lease cam must be used if using recoil starter, factory cast cam cores only. max main jet size .038, pilot jet .014 No go, no porting allowed, Electric start nut may be used in place of recoil starter on both engine packages.

Pump gas only 87-91 octane only, NO Race gas or oxygenated fuel will be allowed. i.e., VP/Turbo Blue etc. for both animal and BP clone engine packages

Hoosier tires only 2023 Grooved tires only must run 50 or 55 compound on RR only, other three corners are optional. Tire soaking and tire prep is not allowed. Right rear tire must durometer 50 or above.

* Hood or any part of the front nose of kart may not extend to the rear of the kart behind the vertical front down tubes of the cage more than 3". +/- 1" No sharp edges

* 2023 Box stock wing rules will be enforced! (R Box / BP Jr Wing / Intermediate and Pro classes)

Center panel 36" long x 32" wide, Right-side panel 40" long x 14" wide, Left panel 40" Long x 20" wide

All dimensions are +/- 3", No air deflecting metal or plastic/Lexan material may not be added to the wing. No sharp edges

* No cockpit adjustable wing sliders allowed electric or manual

* Must have a sprint car style tail tank cover, and rear bumper. No flat kart style rear bumpers.

* Roll cage tubing must be minimum 3/4" .083 chrome moly, 1" .060 chrome moly, or 1" .083 steel.

* No cage mounted shocks or dampening devices allowed without approval from race director prior to the event. Bungy cords are allowed.

BP Clone Engine rules 2023

6.5 OHV engines only / Spec GAS only / Approved engines: 6.5 -196CC clone engines ONLY. NO Kohlar, NO Honda, NO Predators

The Box stock Tillotson engine will be allowed the 68MM reinforced Tillotson block will be allowed in this class, will be teched the same as any other 196CC clone block

Description: Single cylinder, 2 valve overhead 4cycle engine. Aftermarket coatings of any type are not permitted on any part of the engine other than the rocker cover, blower housing, and shrouds. Unless noted within these rules. Figure guard, rear block tin, blower cover, recoil or blower fan cover are all required.

Cylinder head:

Must be OEM casting only. All cylinder heads must be of the "JT" 4 bolt valve cover design. To include the Tillotson JT-207-cylinder head. The TG-1 Cylinder head will also be allowed. PORTING of the cylinder head is NOT permitted; this includes the valve guides in the port they may not be altered in any way. Port MUST be "as cast". Valve seats may have up to three angles, 45-degree face, 30-degree top relief, 60-degree bottom relief. Cutting of the valve seats allowed to insure proper seal. Intake seat maximum

ID .897, Exhaust seat maximum ID .862, Outside face of valve may not below the floor of the combustion chamber. (Cannot sink the valves). Stock type head bolts must be used (four), head bolt washers allowed, Head gaskets may be aftermarket, must be of stock type configuration, NO head studs allowed! No copper or aluminum head gaskets allowed. No predator head gaskets allowed. Gasket thickness is Non-Tech. Sealer "May Be" used to ensure proper seal of the head gasket, more than one head gasket may be used to meet minimum cc rule. Depth between the valves front to back may not vary more than .005 max. Any stock configuration exhaust gasket may be used, sealer permitted. Header may also be run without gasket, sealer may be used rather than a gasket. Allen head bolts or other bolts of similar design allowed to secure header to cylinder head.

Breather hole in rocker cover may be tapped with 1/4" pipe tap to accommodate breather fittings, no oversize drilling allowed. Factory stock internal pulse valve must be installed and operational in rocker cover. Rocker covers may be drilled and tapped for pulse fitting to fuel pump

Bore and stroke: Stock bore is 2.685 and may be over bored to 2.718 Stroke is 2.123 +0.010/-0.005

Connecting rod: MUST use billet rod, may or may not have insert. No Titanium rods. Rod length is non tech.

Combustion chamber volume: 25CC Minimum. With piston at TDC using prescribed procedure (NKA). The liquid procedure is the official check. It may be checked only Once. Engine should be at room temp with valves closed / rocker arms removed from valves.

Carburetor / intake requirements: Stock Huayi, stock RUXING, or Stock Tillotson PK1A only. Ventruri .625 NO GO, Rear of carb bore .751 NO GO. Carb bore and finish is NON-TECH. Throttle shaft .115 Minimum, Butterfly .037 Minimum, Butterfly and throttle shaft must be stock and unaltered. Throttle shaft screw lock washer not required; throttle shaft screw length is non tech. Throttle shaft / butterfly retaining screw is required but non tech for head type. Air filter adapter of 1.375 maximum length is allowed. Gasket between adapter and carb body is required. No tech on thickness of gasket. Pulse type fuel pump is required, pump must be pulsed from rocker cover or crankcase ONLY. No fuel bypass allowed. Fuel line must go directly from pump to carb inlet. Must be of a single line. Fuel filter may be installed between fuel pump and carburetor if desired. All fuel lines must be secured by using wire or plastic tie wrap. Any fuel line not secured will not be allowed to compete. This is a tech item! May be teched at any time during the race event or in tech after the race event. Failure to secure fuel lines will result in DQ. Black phenolic spacer must be used, minimum thickness .255, surface finish of bore and gasket surface is non tech. Choke assembly may be removed, hole for choke shaft must be plugged. Jets, air bleeds jets, and e-tube are Non tech. Stock intake runner gasket configuration only. One extra gasket must be used when using restrictor plate. No other alterations allowed. No additional holes may be drilled in carburetor body or phenolic spacer with the intent to change fuel or air delivery.

Ignition system: Ignition timing is Non tech. Stock ignition module (coil) must be used. Unaltered. No modifications allowed of any type. Stock factory sparkplug boot must be used as from factory. Timing key is not required

* Kill switch within drivers reach from seat while strapped in is recommended but not required in 2023

Piston: Must be stock dished piston with no modifications. Oversized clone or Honda dished pistons allowed up to .035 oversize. Rings must appear stock, all three rings must be installed. Piston may not pop out above block. NO piston pop out. Top of piston may not be machined or altered

Valve train: Stock valve train only in stock configuration except: Any single valve spring and spring shims allowed. No installed height check. Any 5.5mm stem steel or stainless-steel valve may be used. Intake valve head max diameter OD is .982 +/- .005, exhaust valve head maximum OD is .945 +/- .005, Valves must be one angle only, 45 degree, no knife edging of the valves, must have a minimum of 1mm top margin. Valve length is non tech. No additional support of rocker arms / studs is permitted. Champion rocker arms and valve cover are permitted but may not be modified in any way.

Stock type valve retainers with lash cap on exhaust side only or automotive type retainers with two valve keepers per valve may be used. Lash caps not required but may be used with automotive type retainer and keepers. No minimum weight check on valves, retainers, or lash caps. NO TITANIUM valve train parts allowed. i.e., valves, retainers, keepers, or lash caps.

Camshaft requirements: Stock / factory camshaft cores only, EZ spin must remain functional and as stock. Duration check for intake and exhaust lobe taken off the push rod. Intake duration of 248 degrees at .050 lift/107 degrees at .200 lift, exhaust duration 247 degrees at .050 lift, 116 degrees at .200 lift. Max lift at the valve retainers (as raced) Intake .238, exhaust .242. Retainer may not be rotated.

Crankshaft requirements: Stock factory crankshafts only. Must have stock factory crank gear installed in stock location. May Not be welded to crank shaft. No modifications to crankshaft allowed. Aftermarket steel crankshaft bearings allowed. Must be of the non-self-aligning type. With or without seal installed. NO Ceramic bearings allowed. Crankshaft journal diameter is 1.180-1.168 Min. Journal rod surface finish is NON tech.

Block requirements: Stock as cast block and produced with no modifications or alterations other than those specifically permitted in these rules. Block head mating surface may be machined; however, no piston pop out is allowed. Block may be welded or epoxied for repairs only. Under the flywheel or the front of the block only, no welding to the cylinder head mating surface is allowed. All bolt bosses in block may be drilled and tapped for repairs or other uses, Additional side cover gaskets as required for crankshaft thrust are permitted. All parts associated with the governor and low oil sensor may be removed and plugged. Side cover bolts are non tech. No studs and nuts allowed on the side cover. Solid dowel pins are allowed but must be of the OE size.

Flywheel: Any Legal 2022 NKA/ SFI approved billet flywheel manufactured for the 196cc Clone engine only is allowed. No machining or alterations allowed. Minimum weight is 3.3lbs. Any timing key or no key at all is allowed. A flat washer or spacer may be used and is recommended between the flywheel nut and flywheel. Handheld electric starter may be used but the compression release mechanism must remain on the camshaft and functional.

If flywheel is manufactured with a removable fan the fan must be unaltered attached, and functional. Missing or damaged fins may result in a DQ in tech.

Header and muffler requirements: Silencer (muffler) must be (B91XL) round hole muffler. Muffler must be unaltered and must meet tech spec for stock class clone. Exhaust pipe / Header must be double nutted or retaining bolts must be drilled and safety wired. Header must be supported by a minimum of one support brace. No loop pipes allowed. Header may be ceramic coated but must meet all requirements for 2022 NKA big pipe headers in the Box Stock adult clone rules. Muffler may not be welded to header pipe, muffler may not be painted or coated, Muffler does not need to be safety wired, muffler must be tight to header at post race inspection.

All readings +/- 0.0005 or 2 degrees to allow for gauge variances and wear.

Driver Safety Equipment

Raceway tech official approved 5 Point safety restraint system (seat belts) required. Restraints must be dated 2018, 2019, 2020, 2021, 2022, or 2023 as posted for expiration by the manufacturer. Restraints must be installed as required by the manufacturer.

Arm restraints required. Arm restraints must be adjusted to keep all parts of the driver's arms below the top of the roll cage.

Drivers must wear SFI rated full driver's suit. SFI rated gloves, shoes, and socks mandatory. Nomex head sock recommended. Head nets (rated 3.2.1 or higher) or neck brace/support required.

Aluminum high back seats with head supports on both sides are required. Full containment seats are highly recommended.

Full face helmet meeting SA 2015, SA2020 or higher required.

All safety equipment must meet the approval of Raceway officials.

All other rules, non-specific to one particular class, in the "2022 Beaver Dam Kart Rules" document apply to these 2 new wing kart classes as well.