

2023 WKA Tech Manual Approved Changes
October 1, 2022



100 – GENERAL REGULATIONS

101.3 RESPONSIBILITIES

The WKA serves to provide the important link between the participant and the track by making available regulations and technical specifications for the orderly conduct of ^ kart racing events.

ADD: “WKA sanctioned” kart racing events.

101.4.5 TECHNICAL MANUAL ORGANIZATION

FORMAT: National Road Racing to separate, just like the other series

ADD: **Electric Series** – Competes on karting specific, paved indoor and outdoor courses, traditional karts, electric motors, (specific regulations supplemented with each program).

101.5 SPIRIT AND INTENT

This manual provides ^ technical specifications and inspection procedures...

ADD: This manual provides “*sporting regulations*”, technical specifications and inspection procedures...

While these rules are intended to be a guide for ^ technical inspectors...

ADD: While these rules are intended to be a guide for “*competition officials*”, technical inspectors...

103.1.2 DRIVING CAPABILITY

Minor drivers must satisfactorily demonstrate their driving capability...

DELETE: “*Minor*”

106.2.1 UNSPORTSMANLIKE DRIVING

Unsportsmanlike driving is defined as bumping, crowding, chopping, blocking, or pushing other karts.

CHANGE TO: Unsportsmanlike driving is defined as bumping, crowding, chopping, “*impeding a passing maneuver, or forcing another kart offline or off track*” or pushing other karts.

106.9 PRACTIING OUT OF CLASS

If a driver participates in an unassigned practice session ^....

ADD: If a driver participates in an unassigned practice session “*without Race Official approval*” ...

106.12 COMBINING CLASSES

The Race Director may combine classes; classify entrants into groups according to driver experience, lap times, or other factors for purposes of safety or event expediency, but not by age.

DELETE: “*but not by age.*”

106.20.5 PENALTIES

Overall finish position penalties may be issued to a competitor(s) by the Race Director for improper driving, jumping starts, etc.

CHANGE TO: Overall finish position penalties may be issued to a competitor(s) by the Race Director “*for infractions of these regulations.*”



107.8 PERSONAL VEHICLES

Vehicles for personal transportation, machine or human powered, may be restricted from the restricted pit area at the discretion of the Officials in charge.

DELETE: " from the restricted pit area"

Protes & Appeal Fees

110.2 Protest \$100

110.2.1 Appeal of Protest Loss at Track, additional \$50

110.2.1 Appeal to Board of Trustees, \$200

CHANGE: \$200, \$100, \$400 RESPECTIVELY

115.1.1- HEAD GEAR

Add:

The following Snell certifications are approved for WKA competition:

- K2015, valid through 2026
- K2020, valid through 2031
- SA2015, valid through 2026
- SA2020, valid through 2031
- M2015, valid through 2026
- M2020, valid through 2031
- CMS2016, valid through 2027

115.1.1- HELMET CAMERAS

Change to:

Cameras may not be mounted on helmets in any way, if the helmet has been manufactured (OEM) without a camera.

Cameras embedded in helmets during the manufacturing process are permissible ONLY if the helmet is FIA Homologated and listed in FIA Presentation Forms for Advanced Helmets, Standards 8858, 8859, and 8860.

115.3 HELMET SUPPORTS

All drivers in all series must wear an unaltered collar-type helmet support designed for motorsports use when on track (except in Road Racing laydown style karts).

CHANGE TO: "When helmet supports are required, supports must be unaltered, OEM manufacturer specified collar-style helmet supports designed for motorsports use when on track (except in Road Racing laydown style karts)."

200 – MANUFACTURERS CUP REGULATIONS (2-CYCLE SPRINT RACING)



202.1.1 RAIN TIRES

Delete: Bridgestone

Change to: Vega Rain Tires

208.7.1 WKA Kart Numbers

Delete

211.11 – FREE PRACTICE

Add: Non-Event Practice at a scheduled Manufacturers Cup Facility, if authorized, will be “event-specific”, and indicated on each individual event supplement.

ADD 211.6.1 – GRID ADJUSTMENTS

No working on karts on the grid, except for checking tire pressure with a tire gauge. If adjustments need to be made, the Grid Steward must be notified to seek permission.

ADD 211.8 – TRANSPONDER MOUNTING

Transponders are to be mounted safely on kart and located no less than 9” to the rear of the centerline of the top of the kingpin to leading edge of the transponder. Only one properly mounted transponder is allowed.

212.11- PASSING

ADD:

A Driver may make one move to defend their line, however it is prohibited to make a move to prohibit a pass on them in any way, or in any other way to prohibit a pass.

ADD 212.1.3 – PRE-FINAL

If Pre-Final is used during an event, it will be published in the Event Supplement with specific times on track. Starting positions for the Pre-Final will be determined by posted results of Qualifying or Heat Race as outlined by the Event Supplement. Pre-Final race distances will be posted in the Event Supplement.

250 – GOLD CUP REGULATIONS (4-CYCLE SPRINT RACING)

251.3 – WHEELBASE

ADD: Cadet Kart maximum 41”, minimum 35”

251.6 – OVERALL MAXIMUM LENGTH

Delete

Change to WKA TM 201.6

251.7 – HEIGHT

ADD: Maximum Height includes Steering Fairing

251.10 – WEIGHT BALLAST

Change “NOTE” to “NOTE” in WKA TM-201.10



251.11 – DRIVER WEIGHT AND WEIGH-IN

Change to WKA TM 201.11

252.1 – TIRES

Change “NOTE” to “NOTE” in WKA TM-202.1

252.1.1 – RAIN TIRES

ADD: WKA TM 202.1.1 RAIN TIRES

252.2.2 – MAX WHEEL WIDTHS

DELETE

DELETE Graph

253.3 – AXLES AND HUBS

Change to WKA TM 203.3 – AXLES AND HUBS

254.3 – STEERING WHEEL

Change to WKA TM-204.3

DELETE: Graph 254.5

255.1 – BRAKES GENERAL

Change to WKA TM-205.1

255.3 – BRAKE MOUNTING

Change to WKA TM-205.3

ADD: 256.6.1 – HAND BRAKES

Traditional foot operated brakes only; karts with hand brakes are illegal.

NOTE: WKA may approve handbrakes on an individual basis to compensate for driver disabilities, See Section WKA TM-103.7

256.2 - CHAIN GUARDS

DELETE

256.3 - EXPOSED SPROCKETS

Change to WKA TM-206.3, with associated graph/image

258.2 - SIDE PANELS / PODS

Change to WKA TM-208.5

DELETE Figure 258.15

258.2.1 – SIDE PANEL DIMENSIONS

Change to WKA TM-208.5.1

258.7 – GOLD CUP AND CIK BODYWORK

DELETE, (EXCEPT WKA TM-258.8 – NUMBERS AND NUMBER PANELS)

259 – BUMPERS AND NERF BARS

Change to WKA TM-209 – BUMPERS AND NERF BARS

260 – SEAT

Change to WKA TM-210 – SEAT



261.4 – COMMUNICATIONS

Change to:

Drivers may not utilize any type of radio communication devices, to include ear-buds.

300 – ROAD RACING LAYDOWN REGULATIONS (2-CYCLE NATIONAL ROAD RACING)

313 – SUPERKART

313.1 – DIVISION 1 SUPERKART

DRIVER REQ: Age 18+, Road Race Class 1 License

ENGINE(S):

- 1) Twin Cylinder, 2-cycle, maximum 250cc, weight 490-lbs.
- 2) Single Cylinder 250cc, (GasGas, Viper SK, DEA, THR), weight 460-lbs.

Fixations of the carburetor(s), ignition coil, exhaust and engine may be modified. No limit on carburetor size, electronic/manual powerjets, or EFI.

DATA ACQUISITION: Open

FUEL: Open

TIRES: Open, 6" wheels

CHASSIS: Wheelbase: 106-127 cm. Track: at least 2/3 of the wheelbase used. Overall length: 210 cm maximum, without rear bumper, front fairing and rear fairing, maximum 230 cm with bodywork. Overall width: 140 cm maximum. Height: 65 cm maximum from the ground, without the seat. The chassis must respect at all times the dimensions given. No part may protrude beyond the quadrangle formed by the front. Minimum Steering Wheel Height 19" from ground.

BODYWORK: Bodywork must be constructed of fiberglass, carbon fiber, high strength plastic or other advanced non-metal components, no transparent bodywork. It must consist of a minimum of 2 side pods, a rear wing, a front nose cone and a steering fairing. All rounded edges or corners must be a minimum radius of 5mm. Must be in general conformance with current industry standards, clearance from steering wheel to any bodywork is 2" minimum. Nose Cone width is 38" minimum, 50" maximum. Height from ground is 10" minimum. Any tuning veins/winglets, must be within the maximum requirements. Side pod height is 10" minimum, width is 8" minimum and the length 24" minimum. Rear wing is 36" minimum width, 50" maximum width, height/thickest of wing to be 1" minimum, with multiple wings "must total" at least 1". Minimum wing area of 250 square inches. Wing end plate must have all corners radiused. Steering wheel- top of steering wheel must be at least 19" above ground level. Race number to be displayed on at least 3 sides, (front, right side and left side) Belly pans can be full width and not pass the rear bumper, construction is open. Wheels to be 6", front wheels cannot be completely covered. Rear wheels can be covered on the top but not the sides.



313.2 – DIVISION 2 SUPERKART

DRIVER REQ: Age 18+, Road Race Class 1 License

ENGINES: Single Cylinder, maximum 250cc MOTO 4-cycle

Fixations of the carburetor(s), ignition coil, exhaust and engine may be modified. No limit on carburetor size, electronic/manual powerjets, or EFI.

DATA ACQUISITION: Open

FUEL: Open

TIRES: Open, 6" wheels

CHASSIS: Wheelbase: 106-127 cm. Track: at least 2/3 of the wheelbase used. Overall length: 210 cm maximum, without rear bumper, front fairing and rear fairing, maximum 230 cm with bodywork. Overall width: 140 cm maximum. Height: 65 cm maximum from the ground, without the seat. The chassis must respect at all times the dimensions given. No part may protrude beyond the quadrangle formed by the front. Minimum Steering Wheel Height 19" from ground.

BODYWORK: Bodywork must be constructed of fiberglass, carbon fiber, high strength plastic or other advanced non-metal components, no transparent bodywork. It must consist of a minimum of 2 side pods, a rear wing, a front nose cone and a steering fairing. All rounded edges or corners must be a minimum radius of 5mm. Must be in general conformance with current industry standards, clearance from steering wheel to any bodywork is 2" minimum. Nose Cone width is 38" minimum, 50" maximum. Height from ground is 10" minimum. Any tuning veins/winglets, must be within the maximum requirements. Side pod height is 10" minimum, width is 8" minimum and the length 24" minimum. Rear wing is 36" minimum width, 50" maximum width, height/thickest of wing to be 1" minimum, with multiple wings "must total" at least 1". Minimum wing area of 250 square inches. Wing end plate must have all corners radiused. Steering wheel- top of steering wheel must be at least 19" above ground level. Race number to be displayed on at least 3 sides, (front, right side and left side) Belly pans can be full width and not pass the rear bumper, construction is open. Wheels to be 6", front wheels cannot be completely covered. Rear wheels can be covered on the top but not the sides.

350 – ROAD RACING SPRINT REGULATIONS (2 AND 4-CYCLE NATIONAL ROAD RACING)

362.1 CADET SPORTSMAN LO206 (FINAL 1 AND 2)

NON-NATIONAL – LOCAL OPTION CLASS

BODYWORK: Per 358.6, 359 and 360. Exceptions-Steering Fairing allowed, but may not extend above steering wheel parallel to racing surface, no radio communications may be used.

CHANGE TO:

Driver Age 8-12

Engine: Briggs and Stratton with green slide(555470-0.490" (and lock cap

Fuel: Unleaded Gas WKA will specify source

Minimum Weight: 230 lbs

Body Work: CIK only

No radio communications allowed

Clutch: Any rim centrifugal clutch. Clutch coolers not allowed

Header Pipe: Pipe must be inside rear bumper LO 206 header RLV

5506 or 5507 EGT may not be installed in header. Muffler: RLV B with

0.1285 no go holes Also see 708.2.1.1

362 NATIONAL ROAD RACE SPRINT CLASSES

362.18 KA100 SPRINT (FINAL 1 & FINAL 2)

Change Class Name to 100cc Air Cooled TAG Senior

362.19 KA100 SPRINT JUNIOR (FINAL 1 & FINAL 2)

Change Class Name to 100cc Air Cooled TAG Junior



362.18 100cc AIR COOLED TAG SENIOR

DRIVER REQ: Age 16 and over. Road Race Class 3 License.

ENGINES: Stock IAME KA100 per TM 626 and Vortex VLR per TM 500, both OEM, scored together.

AIR BOX: Stock OEM

FUEL: Spec Fuel

MINIMUM WEIGHT: 370 lbs.

TIRES: Open Tires, Rear Tires Minimum Width 7"

OTHER: (1) CIK Style Bodywork only, either conforming to all dimensions listed in TM 200 (except the forward C dimension or CIK approved bodywork that is readily available at least 90-days prior to the beginning of the racing season. Carbon Fiber, Kevlar and metal are not legal construction materials for nose, side pods, or steering fairing. (2) Chain drive only. (3) Dual brake system is not required. Rear disc minimum diameter 7" minimum, 3/16" width. (4) All karts must use rear bumper rule TM 359.3. (5) Kart must meet all 125 Sprint Chassis requirements. (6) Rear Track Width must be a minimum of 50" and a maximum of 55 1/8". (7) Must use the 125 Sprint Shifter seat rule described in TM 360.4.3.1, figure TM 360.4.4.1. (8) No butterfly style steering wheels. (9) Standing Start Procedure utilized.

362.2 – JUNIOR LO206 (N) (FINAL 1 AND 2)

NON-NATIONAL – LOCAL OPTION CLASS

BODYWORK: Per 358.6, 359 and 360. Exceptions-Steering Fairing allowed, but may not extend above steering wheel parallel to racing surface, no radio communications may be used.

CHANGE TO:

Driver Age 13-15

Engine: Briggs and Stratton LO 206 Yellow Slide 555741-0570"

Fuel: Unleaded gas WKA will specify source

Minimum Weight: 205 lbs

Body Work CIK only

No radio communications allowed

Clutch: Any rim centrifugal clutch Clutch coolers not allowed

Header Pipe Pipe must be inside rear bumper Lo206 header RLV 5506 or 5507 EGT may not be installed in header Muffler RLV B with 0.1285 no go holes Also see 708.2.1.1

600 – 2-CYCLE ENGINE SPECIFICATIONS AND REGULATIONS

607.2 – BORE/STROKE

Remove maximum more bore on controlled stock motors homologated prior to 98 ICA Motors.

620 – STOCK HONDA

620.7 – CYLINDER AND CYLINDER HEAD

Delete: No Replating

621 – COMER C51
ADD: COMER C52



621.0 COMER C51 AND COMER C52

Engine is to remain stock as supplied by the manufacturer. No grinding or aftermarket accessories permitted except those specified. The only changes permitted are those that will promote equality among competitors rather than increasing performance. The Comer C-50 engine is no longer allowed. No C-50 parts are allowed in C-51 or C-52 engines. Divisional series and local clubs wishing to allow the C-50 engine can refer to the 2012 WKA Technical Manual

The relevant specifications are somewhat different for the C-51 and C-52 engines because of the difference in the stroke length. The C-51 engine has a stroke length of 1.486" (38mm) and the C-52 has a stroke length of 1.575" (40mm). The C-51 has a displacement of 48cc and the C-52 a displacement of 50cc. The stroke of the crankshaft is the factor that positively identifies which engine it is. Only C-51 crankcase, cylinder and piston may be used with a C-51 crankshaft. Only C-52 crankcase cylinder and piston may be used with a C-52 crankshaft.

To positively determine which engine is being teched, use a dial indicator fitted to the spark plug hole to measure the stroke. Zero the dial indicator at bottom dead center then measure the stroke. The C-51 engine stroke will be at or just under 1.486". The C-52 will be at or just under 1.575".

Some of the specified measurements are different for the C-51 and C-52 engines. In order to maintain parity in performance, some modifications are allowed to the C-51 cylinder and piston that are not allowed for the C-52.

621.1 Carburetor:

Dell'Orto model SHA-14-12L only. All parts must be "as cast". No repairs to broken carburetor bodies. Stripped screw holes may be repaired with thread inserts or the next larger machine screw may be installed.

621.1.1 Venturi: 0.475" No-go venturi.

621.1.2 Jet Size: Non-tech

621.1.3 Atomizer Tube: Bottom hole, (float bowl side) 0.035" No-Go. Top hole (slide side) 0.049" No-Go.

621.1.4 Intake Pipe (Manifold): Intake pipe must be stock. No polishing.

621.1.5 Intake Pipe Restrictor: Intake pipe restrictor to be issued by WKA in Gold Cup, Dirt and Pavement Series. In manufacturer's Cup, on those tracks with very long straights where a higher than desired top speed is anticipated, the race director may require the use of a restrictor pill as well. The restrictor pill is to have 0.276" id NO-GO.

621.2 Air Filter: An aftermarket fabric and wire mesh type filter may be used to replace the factory air filter. Flange inside diameter 57mm. Filter base diameter 89mm. Filter length 102mm. Flange length 16mm. Flange style centered. Filter must remain unmodified.



621.3 Combustion Chamber: OEM shape. Volume to be checked using a LAD cc measuring plug, the .310 washer, glass burette and Marvel Mystery oil. Combustion chamber to remain as manufactured. All threads are to be intact. If a thread insert is used it must be full length. Any attempt to bypass the intent of this rule is illegal.

C-51 minimum combustion chamber volume is 7.4 cc

C-52 minimum combustion chamber volume is 7.7 cc

(Please note that this will give both engines a 6.49:1 compression ratio.)

621.4 Cylinder: With only the exception listed below, the cylinder liner and aluminum cylinder must remain "as cast".

C-51 engines only; the top of the exhaust port may be ground in order to obtain the minimum allowable exhaust port height. Only the top edge of the port may be ground and the top edge must be straight across and shaped identical to the original cast port. The port may not be widened.

621.5 Port height check: Install dial indicator onto cylinder head and zero at Top Dead Center. Insert 3mm rod, no longer than 3" long approximately .25" (6mm) into appropriate port. Rotate crankshaft until piston makes gentle contact with the rod. Release the 3mm rod. It is to remain supported. Read dial indicator.

C-51; Exhaust 1.204" minimum (112 degrees ATDC with 3mm rod), Intake 0.417" maximum (17 degrees ATDC with 3mm rod)

C-52; Exhaust 1.206" minimum (114 degrees ATDC with 3mm rod), intake 0.435" maximum (17 degrees ATDC with 3mm rod)

621.6 Cylinder base gasket: A gasket must be in place. There is no minimum thickness and multiple gaskets may be used to adjust tolerances.

621.7 Piston: Must be OEM and stock appearing. A C-51 piston must be used in C-51 engines and a C-52 piston must be used in C-52 engines.

C-51 engines only; the intake side of the piston skirt may be ground or filed in order to achieve the maximum allowable intake timing. No other alterations are permissible.

C-52 engines only: The minimum length from the bottom of the lower ring land to the bottom of the piston is 1.155".

621.8 Rings: Maximum ring gap is 0.040". Rings cannot fall through cylinder. Both rings must be installed.

621.9 Crank pin and wrist pin: OEM

621.10 Main bearings: Brand is non tech. Must be same size as OEM. Self-aligning and nylon cage bearings are permitted.

621.11 Seals: Must be installed as OEM. Brand is non-tech.

621.12 Ignition: Timing shall be checked with a dial indicator as per published procedure. The flywheel key is non-tech. Timing for C-51 and C-52 engines is as follows;

C-51 engines; 0.050" to 0.063" (approximately 19 to 21 degrees BTDC)

C-52 engines; 0.055" to 0.067" (approximately 19 to 21 degrees BTDC)



621.13 Spark plug boot: non-tech

621.14 High Tension lead (Plug Wire): non-tech

621.15 Spark Plug: Spark plug brand is non tech. Plug reach must be OEM.

621.16 Muffler: OEM C-50, C-51 or C-52. Exit holes maximum height is 0.110 no go and maximum width is 0.475" no go. One OEM exhaust gasket. Machine screws must be tight.

621.17 Clutch: Clutch must be run as manufactured. Shoes must have "Comer" name cast into them. Shoes must be stock appearing. No polishing or removing of metal. Minimum allowed width of shoes and assembly 0.065". Shoe length maximum diameter 0.430" and 9 coils. Wire diameter 0.075" to 0.080".

621.17.1 Chain and gearing: A comer 10 tooth clutch drum for use with 219 chain is required. The axle sprocket is non-tech (any size permissible) in order to allow new tuners to learn how to match the gearing to the power curve of the engine, track size and configuration as in any other class

621.18 Blower housing (shroud): Taping of blower housing is permissible. Replacement fasteners allowed.

621.19 Gear Ratio: Open

Section TM-626 IAME KA100 REED VALLVE 100cc

626.10 IGNITION

ADD:

Indexing washer or temp gauge washer allowed, in replacement of stock spark plug washer, provided the plug reach does not exceed 18.5mm.

700 – 4-CYCLE ENGINE SPECIFICATIONS AND REGULATIONS

Section TM-706, (Archived at worldkarting.com)

706 BRIGGS & STRATTON MODIFIED ENGINE

706.7 VALVE COVER

Stock valve cover as from factory, that includes the breather hole for the tube that runs to the catch can (no threading of hole allowed). The breather by-pass kit part # 555687 or # 555688 may be used. If by-pass kit is used a 0.625" hole must be drilled in the opposite size of the valve cover from the existing breather hole.

706.7.1

Breather by-pass kit part # 555687 or # 555688 may be used. If by-pass kit is used a 0.625" hole must be drilled in the opposite size of the valve cover from the existing breather hole.

UPDATE: Substitution part CPG-0716, (from CPG Motorsports), is permissible to replace Briggs part #555687 and #555688.



800 – NATIONAL AND DIVISIONAL/REGIONAL POINT SYSTEM

801.2.2 GOLD CUP YEAR-END AWARDS PROVISIONS

Will be provided in a WKA 2022 Tech Update

802.1.2 NATIONAL ROAD RACE YEAR-END AWARDS PROVISIONS

Will be provided in a WKA 2022 Tech Update

800.3 NATIONAL POINTS SCHEDULE

Delete: “ + # of Entries ”