

MORR Short Course Kart Technical Specifications

DEFINITION

- Spec mini race trucks, with Briggs & Stratton spec engine, driven by children ranging in age from 7-13 years. All Short Course Karts raced, must be 100% spec to ensure quality racing between drivers with no mechanical advantage. All kids should have a chance to win based on ability.
- Please refer to the MORR General Rules for driver "Age In" and "Age Out" requirements.
- ALL PARTS MUST REMAIN STOCK AS DELIVERED FROM MANUFACTURER UNLESS OTHERWISE NOTED IN THIS RULEBOOK.

CHASSIS/ROLLCAGE

- Kart chassis are spec. No material may be removed. The following are examples that cannot be changed or removed:
 - All pivot points.
 - All chassis and roll cage tubing.
 - Engine mounts.
 - Axle housing.
 - All control arms.
 - All Shock mounts.
 - Front spindles and tie rod mounts.
 - Steering rack location.
 - Body mounts.
- New spec chassis may be purchased from Ehren Precision Speed Products in Green Bay, WI.
- The only modification allowed to the original chassis is by making the down tube that is directly in front of the clutch assembly removable. An interlocking tube connector must be used for the lower connection and a two-bolt flange for the upper assembly.
- Additional tubing, plate, gussets, weld washers etc. may be added to strengthen Spec Chassis design.
- The removal of any original material is not allowed.
- In the event a Kart is damaged and spec areas need to be rebuilt, series officials may require Kart to return to an authorized chassis builder for repair.
- All repairs to chassis mounts/control arms must be approved by series officials.
- Must use factory replacement parts when replacing damaged components.
- Roof latches must be metal on metal. No bungee latches will be allowed.

MEASUREMENTS & WEIGHT

- All measurements will be taken with driver in kart at both pre and post-race technical inspection.
- Wheelbase will be measured from center of the front wheel to the center of the rear wheel.
 - Wheelbase length is 73" ± 1 ".
- Track width will be measured from outside of tire to outside of tire at widest point.
 - Front Track width is 58" ± 1 ".
 - Rear Track Width is 55" $\pm 1/2$ ".
- Minimum Kart weight is 780 lbs, measured pre and post-race.
- Minimum weight includes driver.
- Additional weight may be added to meet minimum weight requirement.
- Any weights added must be mounted within the centerline (front to back) of the Kart seat.
- Any added weight must be painted white, and marked with kart number.
- All weights must be mounted securely using 3/8" Grade 8 Bolts.
- All mounting methods must meet approval of series officials.

- Weight may not be carried on driver's person.
- All measurements will be taken as raced (i.e. tire pressures & ride height).

ENGINE & CLUTCH ASSEMBLY

- Engine, clutch, and mounts are spec.
- The entire engine package must remain as delivered by Briggs & Stratton and must remain sealed, including start & ring gear.
- Engine will be sealed by approved engine sealer. Karts will not be allowed to race with a broken engine seal.
- While not required, engines without an approved seal on the head may be subject to teardown at the tech director's discretion.
- Approved engine:
 - Briggs and Stratton World Formula 11.5 HP engine Briggs and Stratton World Formula.
- Engines must be rebuilt by authorized builder. Jim at Faster Motors is an approved engine rebuilder & sealer. (Faster Motors, W3201 County Road MM, Elkhart Lake, WI 53020, (920) 207-9180)
- Engine boring from the builder is allowed up to 0.030" over stock. Must use Briggs and Stratton piston. No other modifications to the cylinder, piston, or head are allowed.
- Must use stock Briggs and Stratton head gasket.
- Muffler is allowed to be gutted (only removing internal baffles), but must retain the complete factory outer case. No other modifications allowed.
- The following exhaust system is available from Faster Motors as an option, but may not be modified in length from the exhaust flange to the last size expansion step:
 - P/N EXF5952: World Formula Pipe and Silencer Kit
 - P/N MNT5908: RLV Silencer Mount for WF Silencer
- Only JR Race Car Clutch P/N: FI-4995-k may be used.
- Tuning of clutch is allowed. MUST USE TUNING PARTS FROM JR RACE CAR ONLY. NO MODIFYING OF STOCK PARTS OR CUSTOM-MADE PARTS.
- Only use factory supplied drive belt.
- Approved drive belt:
 - JR Racecar P/N: 34583 or 34584
 - Comet P/N: 203583
- Jet sizes may be changed, but must use unaltered OEM jets available from Briggs and Stratton.
- No additional adjusting or tuning to the engine is allowed.
- No modifications to the carburetor, intake, or any engine components are allowed.
- Tech may impound any engine deemed illegal along with possible suspension.
- Must use factory replacement parts when replacing damaged components.

CLUTCH SHIELD

- A clutch scatter shield is required.
- The clutch shield should be, at minimum, the width of the clutch assemblies.
- The clutch shield must completely guard the top and front of the clutches.
- Clutch shield minimum thickness is 0.090" aluminum.

BODY & FENDERS

- Five Star Short Course Kart body is required.
- Mounting methods must remain stock using existing brackets.
- Body must be complete and in good condition at start of competition.
- Removal or modification of any existing body mounts is not allowed.
- Must use factory replacement parts when replacing damaged components.

- A rock guard to protect the driver's feet is required.

MUD FLAPS

- All Mod Karts must be equipped with mud flaps behind the rear tires.
- Mud flaps must be at least 1" wider than the widest part of the rear tires.
- Mud flaps must be a maximum of 2" from the ground at ride height.
- Mud flaps must be securely fastened to the frame or mud flap loop with bolts or screws with washers and locknuts.
- Mud flaps cannot be attached to the body.

BUMPERS & NERF BARS

- Must use stock nerf bars, front bumpers, and rear bumpers as provided from manufacturer.
- Must have front and rear bumper secured to frame.
- No objects protruding from karts are permitted.
- Front bumper must extend beyond front of grill so safety crews can have easy access to a tow hook.
- Additional tubing, plate, gussets, weld washers etc. may be added to strengthen the spec bumper design.
- Material may be added but not removed. Any additions must be approved by Tech and must not change the original design.
- Must use factory replacement parts when replacing damaged components.

PIVOT POINTS

- All pivot points must be the same material and grade as manufactured.
- Must use factory replacement parts when replacing damaged components.

FRONT SUSPENSION & STEERING

- All front-end parts are spec, including but not limited to:
 - Pivot points.
 - Lower A-arm.
 - Upper A-arm.
 - Spindle.
 - Steering rack and location.
 - Hubs.
 - Bearings.
 - Shock mounts.
 - One coil over shock per wheel.
- Front Shocks may be any manufacturer.
- ~~Adjustments to the shocks are allowed. Must use shock manufacturer components for adjustments. No custom-made components.~~
- No external shock adjusters allowed besides spring tension. No external or internal bypass. Internal floating pistons are allowed.
- Front coil springs may be any manufacturer.
- Front wheel travel is limited to 12 inches.
- Limit straps are allowed.
- No remote or piggy back reservoirs.
- No dual rate or variable rate springs.
- A maximum of two springs of different rates may be used per shock.
- No secondary suspension.
- No hydraulic or pneumatic bump stops.
- No custom suspension parts.
- Must use factory replacement parts when replacing damaged components.

REAR SUSPENSION

- All rear end parts are spec, including but not limited to:
 - Pivot points.
 - Track arms and wishbone.
 - Axle housing and all mounts.
 - Hubs.
 - Bearings.
 - Axle.
 - Brake caliper.
 - Brake rotor.
 - Brake pads.
 - Sprocket holder.
- Must use and retain the factory sway bar as provided by manufacturer.
- One coil over shock per wheel.
- Rear shocks may be any manufacturer.
- ~~• Adjustments to the shocks are allowed. Must use shock manufacturer components for adjustments. No custom-made components.~~
- No external shock adjusters allowed besides spring tension. No external or internal bypass. Internal floating pistons are allowed.
- Rear coil springs may be any manufacturer.
- A maximum of two springs of different rates may be used per shock.
- Limit straps are allowed.
- Rear wheel travel is limited to 13 inches.
- No remote or piggy back reservoirs.
- No secondary suspension.
- No hydraulic or pneumatic bump stops.
- Must use factory replacement parts when replacing damaged components.

STEERING

- Must use stock steering rack as provided by Manufacturer.
 - Manufacturer P/N: FI-AC425150.
- Location and position is spec.
- Steering stops are allowed.
- No power steering.
- No steering quickeners.
- Must use factory replacement parts when replacing damaged components.

BRAKE

- Master cylinder, caliper, rotor, and brake pads are spec.
- Must retain factory mounts as provided by manufacturer.
- Location may be changed by using the adjustable settings provided by manufacturer.
 - If there is not enough adjustability, approval from series official is required.
- Brakes must be in safe working condition and be able to apply adequate force to lock up tires.
- Brakes must be in safe operating condition during the entire event. If brake system problems do occur during the event they must be repaired before continuing in competition.
- Front brakes are optional.
- Must use factory replacement parts when replacing damaged components.

FUEL CELLS

- Fuel cell, location, and mounts are spec.
- Vent line must be routed above cell to opposite side of vehicle, then down to a point lower than the bottom of cell.
- Fuel cell foam is permitted.
- No pressurizing of fuel tank.
- Must use factory replacement parts when replacing damaged components.

FUEL

- Spec fuel is required and must be purchased at the track.
- The spec fuel is VP MS98L.
- Fuel can be tested at any time during the event.
- Cooling of fuel is not permitted.
- Penalties for use of hazardous chemicals will be severe and may include a fine, and/or reduction of points, disqualification, and/or suspension.
- If series officials suspect maskers in fuel, chemical testing will be conducted at possible expense to competitor.

GEARING & DRIVE PARTS

- Gearing/sprocket sizes are spec.
 - Clutch shaft (12T) to main driveshaft (26T) = 2.17:1
 - Main driveshaft (12T) to axle shaft (48T) = 4:1
 - Final drive ratio 8.68:1
- Shaft locations and materials are spec. Shafts as provided from manufacturer must be used.
- Approved drive shaft bearings:
 - Two bolt flange bearing: 3/4" bore
- Sprockets must be chain driven.
- Must use stock gears and shafts as provided by manufacturer.
- No custom or different manufacturer gears and shafts.
- Any manufacturer chain is allowed as long as it works with the stock gears.
- Must use factory replacement parts when replacing damaged components.

REAR AXLE

- Axle must retain original parts, mounting points, and configuration.
- Axle shaft must be the same size and material as original axle from manufacturer.
- Must use factory replacement parts when replacing damaged components.

WHEELS & TIRES

- Tire and wheel size must remain as delivered.
 - Front Wheels PIN: FI-ASOS-02
 - Rear Wheels PIN: FI-ASOS-03
 - Front Tires PIN: FI-532040
 - Rear Tires PIN: FI-532035
- Tire grooving is allowed.
- No inner liners, tire balls, foam, or other inserts allowed.
- No bead lock wheels allowed.
- One tire per corner permitted.
- No wheel covers, or caps are allowed.

- Welded wheel bead reinforcement rings are allowed.
- Must use factory replacement parts when replacing damaged components.

EXOTIC MATERIALS

- No titanium, magnesium, carbon fiber, or any other exotic materials may be used anywhere in the vehicle.

HOSES

- All fuel and brake line hoses, including metal lines must be securely fastened.