

GSR LAWN MOWER RACING RULEBOOK

This rulebook provides the standards that regulate the racing lawn mowers at GSR Kartway, Clintonville, WI. Maintaining safe, competitive racing is the primary purpose of this document and with the cooperation of all members, we can collectively keep this sport as it was intended, FUN. A lot of time, money, and energy have been spent on mower fabrication, engine building, and traveling to and from race venues. Keep that in mind when racing and race clean and safe. Although mishaps will happen from time to time on the track, let's look out for each other and keep ourselves and our mowers in the same conditions when we started the race as when we leave.

Point System:

** In order to receive points for completing a race the mower must cross the finish line under mechanical power. An exception to this rule occurs if a mower experiences mechanical problems on the white flag lap. Then the mower may be pushed by the driver across the finish line.

Points are awarded for both heats and features using the GSR kart point system. Heat points are used to determine starting positions for the feature. Feature points are used to determine the track championship

General Regulations

1. On Track Regulations:

- a. GSR on track rules apply.
- b. No bumping will be tolerated.
- c. Driver must keep both hands on the steering wheel, except to momentarily operate other controls.
- d. Driver's body may not be intentionally positioned out of the mower seat onto or over the mower fender.
- e. Completing a safe pass is the responsibility of the overtaking driver. This means if you initiate a pass and during execution you realize you cannot complete the pass in a safe manner then it is up to the overtaking driver to return to a safe position on the track while avoiding contact with other racers. You will gain more respect by taking yourself out then placing the other racers in an unsafe situation causing personal injury and mower damage. Also, if you are being overtaken by another racer and it is clear that they are faster make room for the overtaking racer and let them pass. Blocking is part of racing but not to the point where it causes a crash.
- f. Any deliberate actions to circumvent the safety features of a mower will result in sanctions for the driver.

These sanctions will include a minimum of the following:

Disqualification from the event and loss of any points for that event.

Not allowed to participate until all infractions are corrected.

Based upon the severity of the incident sanctions may be increased at the discretion of GSR track officials..

2. Flags:

Flags will be used to communicate to the racers on track conditions.

Mowers will follow GSR flag rules.

3. Pit Area and Track Regulations:

GSR rules apply.

4. Driver Eligibility:

a. Drivers must be at least 16 years of age. Drivers under 18 years of age may compete with the approved parent's consent form on file.

b. All drivers must sign a release discharging GSR from liability.

c. GSR eligibility will also apply.

5. Safety Equipment:

GSR rules apply.

6. Mower Eligibility:

a. All riding type lawn mowers and garden tractors (with tires 20" or less) that were mass-produced and commercially available to mow residential lawns. Zero turn riders are not permitted. The mower may be

modified from its original configuration as noted in General Mower Specifications.

b. Final determination of eligibility is up to the technical inspector.

c. Organizers reserve the right to reject at any time any mower, which in their opinion, represents an attempt to defeat the spirit of these rule, even though it complies with the letter of them.

7. Technical Inspection

a. All mowers entered in any GSR event must inspected for compliance by the Technical Inspector prior to participating in practice or racing.

b. Drivers must complete the registration process and sign insurance releases prior to entering the tech line.

c. Drivers may be questioned on the content of this document and must pass in order to practice or race.

d. All required safety equipment must be present at technical inspection.

e. Any driver, guest, crew member or official that displays behavior that is considered dangerous to other drivers, guests, crew members or spectators may be removed from the event by authorized event officials.

f. Contact a staff member for clarification of any item mentioned above.

8. General Mower Specifications:

a. Cutting blades must be removed.

b. Cutting decks, if used, must be securely mounted. Decks may extend no wider than the tire sidewalls.

c. Nerf bars between the wheels are permitted but shall not stick out past the tire sidewalls.

d. Mowers must maintain a minimum of 2" (+/- 1/4") ground clearance under the lowest point of the deck.

e. Mowers must maintain a minimum of 4" (+/- 1/4") of ground clearance under the lowest point of the frame.

Unused brackets and non-structural material may be removed to gain clearance.

f. Exhaust design is open, but must terminate away from the driver and competitors, in a rearward and downward direction without creating a safety hazard.

g. Starter and functional battery must be on board.

h. Rear wheels must be secured to the rear axle with shaft locks, center bolts or thru-bolts.

j. All mowers shall have an automatic, throttle closing device.

k. Kill switch lanyard length shall be as short as necessary to effectively stop the mower as quickly as possible. Lanyard length shall not exceed 40". This device must be commercially available for racing and/or recreational vehicles such as ATVs, jet skis snowmobiles, etc. Homemade and/or magnetic switches are not allowed.

l. Mower brakes must be operable, cart type brakes recommended.

m. Brakes may be hydraulic or mechanical.

n. Throttle and brake control may be relocated.

o. The steering wheel, seat, body and frame must be centered between the right and left wheels.

p. Drive line may be modified from the engine pulley to the rear wheels. All mowers must use a lawnmower transmission or transaxle.

q. Front spindles are to be a minimum of 5/8" in diameter.

r. Wheels or rims may be of any origin but must be the same size on each axle. All wheels or rims are to be of

steel or aluminum construction. Rim size will be Ø6" min. front and Ø8" min. in the rear. Rear wheels or rims

may be reinforced on the inside. Duel or tandem wheels are forbidden.

s. Front axle and steering may be modified or fabricated. Front axles may be pinned, bolted or welded into

place. No suspension allowed. All modifications and fabrications are subject to the judgment of the technical

inspector.

t. All steering linkage must be ball-type or spherical threaded rod ends.

u. Footholds and seat side boosters must be minimally designed so as not to entangle body parts.

v. All steering and wheel retention fasteners must terminate with locking nuts, castellated nuts with cotter pins,

washers with new cotter pins, shaft locks, or locking bolts. Cotter pins, E-rings and C-rings alone, bent nails,

hitch pins, over center pins and quick-release pins are not permitted.

w. Mowers may reach a maximum width of 40" sidewall to sidewall.

x. Carburetors must be of lawnmower origin.

y. All mowers will operate on pump gasoline. No nitrous oxide, rocket fuel, alcohol or other oxidizers are permitted.

z. Tires must be lawn tractor tires. Front tires may be 13"-16" in diameter. Rear tires will be 16"-20" diameter.

aa. Substituted steering wheels are permitted. They may not be mounted offset unless originally mounted

offset. Steering "wheel" consists of a 360 degree circular device. This wheel may not be pegged or have

steering devices attached to them. Hand throttle and brake controls are permitted.

bb. All positively charged terminals must be insulated with a cover or heavy tape. Battery must be well secured

and protected on the mower.

cc. All mowers must be safe and complete with all parts and panels in places with no missing fasteners.

Machines that have been involved in a on-track incident resulting in removal of body parts will only be allowed

back on the track after the mower has been inspected to determine if its return would present a safety issue.

dd. All exposed sprockets, chains, rotating shafts and pulleys must be fitted with metal guards deflecting a

broken chain downward and preventing entanglement with mower parts.

ee. Mowers must be free of sharp edges, projections and protrusions.

ff. A rear bumper is highly recommended and should be no wider than the rear tire width, fabricated from ¾"

outer diameter tubing with radius bends. A recommended height of 6"no higher than 10". The bumper should

be centered on the rear axle. The intent of the bumper is to prevent mowers from "climbing" the rear tires and

making contact with a driver.

gg. Seats must be present and of lawn mower origin. Seat is defined as being a separately attached device

on which the driver will place his body during racing competition. They should be securely mounted to the

mower, on the center of the frame.

hh. Seats may be adjusted more towards the front or rear of the mower along the center line to help achieve

better weight balance for handling. The lowest portion of the seat pan should not be mounted lower than the top

of the rear tires. r.

- ii. Race numbers should be a minimum of 4" high and of a sharply contrasting color from its background, and be visible from all four sides of the mower. Mowers without numbers or mower with same number will be assigned one during registration.
- jj. All mowers must have a functioning mechanical clutch. No chain drive from engine to transmission is allowed.
- kk. Mowers must present a neat and clean appearance.
- ll. No profanity, vulgarity or nudity is allowed on mowers.
- mm. Min. width 42" (+/-1/4") Max. width 54" (+/-1/4").
- nn. Minimum weight with driver is 500lbs.

9. Sheet Metal Specifications:

Sheet metal should be as delivered from the factory with the following exceptions:

Substitutions:

Where original factory sheet metal is not available or is damaged in a way that renders it unsafe or unusable sheet metal from another similar model mower that would otherwise be eligible to race may be used.

Replacement sheet metal must fit properly and be as close in shape to the factory panel as possible.

Substitute sheet metal should be attached to the frame in as close to the original position as possible.

All panels must be securely fastened so as not to create a safety hazard.

Substituted panels must be modified to fit properly and safely.

Minimal under hood mounting brackets are acceptable.

Panel substitution is provided in order to give the opportunity for a racer to run a mower that might otherwise be

sidelined. Panels may not be substituted simply to modify or customize a mower's appearance. Panel

substitutions that make a mower look radically different than other mowers will not be allowed.

Modifications:

The hood and/or its components may be modified to provide clearance to allow tires to turn and steer without contact with sheet metal.

Sheet metal maybe bent or cut to allow for clearance of modifications otherwise allowed such as air cleaners, exhaust, brakes, clutches or other controls.

Openings cut in sheet metal shall not be more than 2 inches from the obstruction.

Fenders may be modified to allow for tire clearance issues due to chassis lowering as well as for handling

purposes. Allowable modifications include:

- v Trimming fenders such that there remains 1/2" of clearance between the fender edge and the top of the tire.

- v Flaring of the fender such that there remains 1/2" of clearance between the fender edge and

the top of the tire.

v Fender trimming should follow the contour line of the fender, not merely remove sheet metal in the immediate area.

v Fender trimming or flaring that results in sharp edges will not be permitted.

Removal:

Any sheet metal originally on a mower may not simply be removed. A mower originally delivered with fenders must have fenders. A mower originally delivered with a hood must have a hood.

10. Motor and Transmission Rules and Specifications: ALL MOTORS MUST BE OF LAWN MOWER ORIGIN

Motors may be single or two-cylinder valve-in-block (flathead) or overhead valve (ohv) engines with a 700cc maximum displacement.

Aftermarket air cleaners, air filters and velocity stacks permitted.

Open exhaust permitted.

Engine may be internally modified.

All engines must be naturally aspirated. Blowers, turbochargers, and water injection systems are not allowed.

External ignition systems and aluminum flywheels are authorized. (See safety note below for altered and aluminum flywheels.)

Transmission or transaxle must be shiftable and of lawnmower origin. Vari-drives are not permitted.

Racer-fabricated axles will be reviewed by the Tech Inspector to determine their apparent safety for racing.

Aluminum is not permitted as the material for the front axle.

No centrifugal or torque converter clutches permitted.

Rear axle may use open differential, locked, live or solid axle. No single wheel drive. Aluminum rear axles are permitted

IMPORTANT SAFETY NOTE

An approved scatter shield must be installed on all engines that are operating with ANY alterations to the stock flywheel. This is to include removing the magnets. There have been incidents of altered stock flywheels exploding and causing serious personal injury. It is not recommended that any alterations be made to a stock flywheel. These are not tested under any standards for safety. Appropriate scatter shields are commercially available.

Aluminum flywheels must also have an approved scatter shield. Non-commercial or hand built scatter shields should be of sufficient size and construction to prevent flying pieces from exiting the shroud.

SUPER MOD SP Rules

Class Intent: these (gsr) rules are designed to run in sync with 920 Freemont and MowKart rules so racers can

run multiple races per week. Check there rules for any variances.

- DRIVER REQUIREMENTS: Drivers must be at least 16 years of age. Drivers under 18 years of age may compete with the approved parent's consent form on file.

Age exception: A driver between the ages of 11 and 15 who has at least one year's experience in kart/mower racing will be eligible for potential promotion to the Super mod SP class. Drivers interested in promotion will contact Super modified SP class rep and if he sees fit he may nominate a driver for promotion by contacting GSR promoter.

• ENGINE:

billet flywheel will be required for any engine that is not governed. Engines that are governed will be Max 4000 RPM with use of oem flywheel. ANY alterations to the stock flywheel are unsafe and forbidden.

Engine option 1

Full stock Engine: Lawn equipment type 4 cycle engines vertical or horizontal shaft. No rebuilding of engine.

No internal or external modifications except the following.

1. After market aluminum billet flywheel
2. exhaust modifications open
3. removal of governor.

Engine option 2

Open flathead: 12hp BRIGGS MODEL 28 FLATHEAD vertical shaft mower engine. open internal and external modifications. Must Adhere to all A.R.M.A. limitations.

ENGINE RULE INTENT: engine limitations may be modified or removed at the end of any given race season.

Decision will be based on other track rules, driver input, and racer participation.

- FUEL DELIVERY: No fuel injection, blower or turbo's. NO electric fuel pumps allowed.

•Carburetors must be of lawnmower origin and from the same manufacturer as the engine block. mowers will be required to have dual return springs on the throttle or cable.

- IGNITION: Open.

- SAFETY SHIELDS: Cowling or safety shields (blower housings) must remain, subject to safety inspection. Engines must be separated by a safety shield or stock cowling (blower housing) from the driver.

- CHASSIS: ENGINE MUST BE IN THE FRONT. Frames and parts, must originate as a lawn mower

chassis and retain original manufacturers (OEM) specifications (no chopping) re: wheel base and

length. Material (steel round or square) may be added for structural strength. front axles must be bolted or welded rigid eliminating the stock pivoting.

- RIDE HEIGHT: 1.5" minimum from lowest point of chassis. 4" maximum height.

- WHEEL BASE: 42" minimum.

- OVERALL WIDTH: Wheel width max 42" wide. Offset allowed and measured from center of chassis.

Maximum offset is center of chassis to outside right tire 23" and center of chassis to outside left tire 19"

- BODY WORK: MUST USE MOWER BODY WORK . Can be customized but must retain some resemblance to a lawn tractor. All parts must be securely fastened to chassis i.e. fuel tanks, batteries, bodywork, etc.

- FUEL: Only pump gas, 114-octane max (no additives). N.O.S is not permitted. No fuel injection, blowers or turbo's. No electric fuel pumps permitted.

- THROTTLE: Foot or trigger throttles with automatic spring return mandatory. Dual return springs are mandatory.

- KILL SWITCH: Tractor must have a working tethered kill switch and be fastened to driver any time engine is running. Kill switches cannot be homemade.

- EXHAUST: Is open, as long as it points down and away from driver and presents no apparent hazard.

- **MOWER DECKS:** May be fabricated but must appear to be a deck to and must maintain a minimum 1.5" ground clearance.

- **SEATS:** Can be of Kart origin and must be mounted in center of tractor. Must be securely mounted, on the center of the frame, facing the front of the mower. While some degree of inclination is expected with kart seats, drivers should not be seated in a "lay down" position. lawn mower origin seat Needs provisions on right side of seat to keep driver from sliding off.

- **BUMPERS/NERF BARS:** Not mandatory BUT highly recommended. If installed, they should meet the following specifications- height within 2" of the centerline of axles, not to protrude 2" beyond the furthest point of body or tires. Maximum width of rear bumper is 38". Maximum width front should remain inside tires and not cover the face of the tire. Side crash bars must remain 1.5" in from outside of tires. No sharp edges.

- **BRAKES:** operational Hydraulic brakes mandatory, front brakes highly recommended

- **DRIVE TRAIN:** Is open to live axle, belt or chain drive custom gearboxes or transaxles. Chain guards must be made of at least 1/8" thick material. Centrifugal clutches are permitted. In instances where custom drive train may be hazardous to driver (exposed) protective shields must be installed. Discreet chassis modifications are allowed for axle installation and reinforcement, but must maintain OEM stock wheelbase. ATV drive trains and suspensions are not permitted.

- **STEERING** any improvements or modifications to steering are allowed and recommended. NO stock steering allowed. All steering components must be double nutted or drilled and safety wired for maximum safety.

Commercially constructed pads must be added to the center of the steering wheel. Substituted steering wheels are permitted. They may not be mounted offset unless originally mounted offset. Steering "wheel" consists of a 360 degree circular device. This wheel may not be pegged or have steering devices attached to them. Hand throttle and brake controls are permitted.

- **TIRES:** Go kart dirt slicks or grooved tires are allowed, (no snow hogs or deep lug tires).

- **WHEELS:** Must be made of metal. 6" front wheels and 6 or 8" rear wheels. All wheels must have wheel retention in the form of castle nut with cotter pins, lock collars, and snap rings, thru bolts or center bolts. Cotter pins alone are not permitted.

- **Race numbers** should be a minimum of 3" high and of a sharply contrasting color from its background, and be visible from all four sides of the mower including the rear. Mowers without numbers or mower with same number will be assigned one during registration. Mowers will also have class designation letters of the same size. See individual rules for class abbreviations.