

2024

Microstock Racing Series Rules & Regulations

Microstocks are an open wheel modified stockcar inspired go-karts, MSRS on paved, dirt oval and road course tracks. They are larger than open style karts and feature bodies with full roll cages and seat belts. LO206 Briggs & Stratton Racing engines are used for power.

MSRS Contact Information

For more information please contact one of the below members of the MSRS.

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Disclaimer

The MSRS, this set of rules, its publisher and all contributors will not be held responsible for any injuries. Each car & equipment will be teched prior to the start of each racing season. This set of rules are the MSRS guidelines. Each track's racing may have slightly different rules, Tech procedures, and safety rules. Check with the local track and tech officials for more detailed information. By building and or racing any form of Microstock, the builder and driver will assume all responsibility and or liability.

Mission Statement

Microstock Racing presents an opportunity for men and women to share their passion for auto racing in an atmosphere of friendship and camaraderie. Rules and guidelines shall be established to provide fair competition at a reasonable cost. However, sportsmanship, friendship and fun shall be the primary goal of each race day with absolutely NO DRAMA.

Basic Rules

- State regulations shall be met in any State where a race is conducted.
- The only engine package allowed will be a stock Briggs L.O. 206 sealed motor w/ green 6100rpm Rev limiter.
- Minimum weight of car and driver shall be 475 LBS for Seniors and 385 LBS for Juniors.
- Minimum width of 37", Maximum width of 49" measured outside wheels and tires.
- Minimum length of 78", Maximum length of 104" bumper to bumper.
- Minimum height of 30", measured from the ground up, with tires on.
- Wheelbase may not be shorter than 52" or longer than 68"
- There will be no membership fees (More detailed rules to follow)

Local Group Procedures

The rules and procedures of the racetracks involved, shall prevail, if they meet the required rules & regulations set forth. However, the MSRS may score themselves separately and payout as they choose. Under no circumstances shall a visiting group exclude the local group from participation.

Racing

- To run with the MSRS, the car must have a sealed LO206 Briggs & Stratton racing motor and meet the Microstock Regulations set forth in this book.
- Participants will draw pills for starting positions in the heats.
- Feature line ups are determined by the heat race results
- If an invert is used, following the heat races, the pole driver shall pick a pill to decide whether there will be an invert. The pill choices are no invert, top 3 invert, top 6 invert or top 9 invert. Top 9 invert must have a minimum of 14 cars.
- When heats are split: Odd # Positions will be in Heat 1, Even Positions will be in Heat 2. Feature Lineup, Heat 1 will be on the inside row, Heat 2 will be on the outside row.
- Points System
- Feature finish order will be based off the timing system plus any penalties that will be assessed by the race director.
- Transponders will be used at all tracks that utilize electronic scoring. Transponders must always be on the cars to be scored. Transponders must be fastened utilizing a clip or pouch.

Entry Fees

- Standard Track entry fees for anyone racing.
- There is a no membership fee for those who wish to race with the MSRS
- Sponsorships are always welcome for special events to cover payout.

Rookies

A Rookie is a person with little to no racing experience. If a person is brand new to racing it is recommended to start in the rear of the field until they are comfortable. We also recommended putting a yellow stripe on the back of the car to denote you are rookie.

Flagging

- Track officials are always to be respected and their on-track rulings are to be accepted.
- The race procedure is to be in accordance to MSRS Officials and all track regulations, flags, and procedures. All competitors must understand and comply with flags and flagging rules.
- Red Flag: When displayed all cars must immediately come to a stop and await instructions from track officials. Failing to come to an immediate safe stop under the red, for any reason, disqualifies a car from completing that race (Practice, Heat or Feature).
- Yellow Flag: Caution flag is displayed when the track is not open for competition. Cars are to line up single file in starting or restarting position and proceed at a slow pace. It is recommended that if an on-track incident occurs that takes more time than expected the leader stops on the start finish line to allow track workers open working room.
- Rolled up White and/or Green Flag: means last lap before taking Green.
- Green Flag: Signifies the start of the race. Track officials will designate a starting line and when or where passing can begin.
- 2 Rolled Up Flags Creating an X: denotes halfway signal.
- 2 Rolled Up Flags Held Side by Side: means two laps to Go.
- White Flag: The white flag is the "one to go" signal.
- Checkered Flag: Indicates the end of the race.
- Blue flag with Yellow Stripe: This is the "move over" Flag to let a slower car know the leaders are approaching. The slower cars are to move high when the leaders are coming unless the track says otherwise. The track has the right to black flag a driver who does not abide by the "move over" flag.
- Black Flag: When this is given to a car, for whatever reason, determined by the track, the car must immediately stop competition and proceed to the designated area immediately. At some tracks this is the infield, at others there is an exit ramp that is safe to use during competition.

Exiting During a Race

- Any car brought back to the pits, will not be permitted to re-enter that race.
- You are not allowed to exit a vehicle unless instructed by an official or if there is an emergency (ex. Fire)
- Any driver exiting his vehicle during a race, unless instructed by track officials, shall not be allowed to complete that race. (Practice, Heat or Feature)
- Any driver losing his chain after 1st completed lap during competition is not allowed to re-enter the race. Before Initial Green you will have 4 pace laps to fix.

2024 Season Pre-Race Technical Inspection

- Pre-race technical inspection will include coil type verification, brake check, along with weight rule checks and all bolts must be cotter pinned or safety wired. Additional items may be chosen by track officials and or technical inspector if provided.
- In the event of a wreck or roll-over, the MSRS needs to re-inspect the car before the next MSRS race.
- Race Day Timeline
 - Pre-Race Sign In: All competitors are to sign in as required by the track. All competitors must also check in with the MSRS representative.
 - MSRS Drivers Meeting: Pre-race driver's meeting is mandatory. If a driver misses the meeting, he/she starts in the rear of the feature, no matter what position he/she qualifies for. Attendance will be taken at all drivers meeting.
 - Heat lineup: Participants will draw pills for starting positions in the heats.
 - Multiple Heat Races: When the field of competitors exceeds 10 cars the heat races are to be split in two, odd starting positions to heat one and even starting positions to heat two.
 - Post Heat Race: If track scales are available, all competitors are to cross the scales immediately. If there are no track scales, then the competitor proceeds to the post-race technical area designated at the drivers meeting.
 - If any of the driver returns to the pit area without weighing in, that person starts at the rear of the feature.
 - Pay attention to track rules. Most tracks require every driver to scale following each race. Competitors are responsible for following the rules set forth by the MSRS as well as the track.
 - Feature lineup: Feature lineups will be done as per the heat finishing order with the invert.

Post-Race Technical Inspection:

- All cars w/ drivers, after the feature are to be weighed.
- Top 5 fuel will be tested.
- Top 5 will be teched accordingly- Seals, Ignition Timing, cam profile, spark plug, valve lift, etc.
- We reserve the right to add more tech items as needed.
- Technical Inspectors will be supplied by the MSRS. The top five cars will be available after the feature race for tech inspection which will be done and supervised by an appointed person.
- Technical Offence levels: The technical infraction found, if argued, will be decided by the board as necessary and appropriate action taken.
- If you fail tech you will lose money for the night.
- Post-Race Inspections may change from race to race at the discretion of the Race Director

Protest and Tear Down Procedures

- The protest and cash must be given to the tech inspector within 10 minutes of the end of the feature.
- The protesting party involved in a protest shall put up front money in the amount of \$ 250.00 cash.
- If the motor in question is found to be legal, the protestor's funds are used to pay for the cost of the rebuild.
- If the owner's motor is found to be illegal, the money returns to the protesting party.
- The owner of the illegal motor will also be disqualified from that day's races.
- Both parties are allowed to be present during the tear down.

Driver Safety Gear Requirements

- All drivers must always wear the required safety gear during competition.
- All drivers, along with their cars will be inspected prior to the first race.
- Any infractions found will have to be corrected prior to racing.
- If a minor infraction is addressed, it must be corrected prior to the next race.
- Fire suits: A one-piece (required for racing in NJ) or two- piece SFI rated fire resistant suit, SFI rated flame-retardant gloves covering their bodies, arms, legs and hands.
- Helmets: A full Face SA2015 or SA2020 helmet must be worn for competition.
- Head Restraints: Neck Collars, and or head & neck restraints are required, as well as arm restraints unless your car is equipped with window nets.

Car Body Specifications

- Must be complete at the beginning of competition.
- All cars bodies must be fiberglass, metal (minimum 0.032" thick) or polycarbonate, enclosing a minimum of 70% of driver's area.
- All cars must have an opening large enough to provide rapid exit for the driver from vehicle.
- Body panels must not impair driver's side vision.
- Cars must have a closed roof that can be opened from both the inside and the outside.
- Roof must be secured with a mechanism that prevents accidental opening.
- Cars must have a recognizable Dirt Modified, Asphalt Modified or sedan body style.
- Car numbers must be a minimum of 10" tall and placed on both sides of the car. All numbers must be legible for scoring purposes. If a track scorer requests a change in your number scheme, you must comply.
- No wings allowed.
- Any roll bar within 3" of the driver's head or torso must be padded.
- Large openings between the floor pan and body must be covered by steel ½"x ½" screening to prevent debris from entering driver compartment. This does not include side window openings that are to remain free of obstruction.

Brake Systems

- Brake Systems must be operational prior to competition.
- Must be foot-operated by pedal.
- Mechanical or hydraulic disc brake only.
- Both rear wheels must brake. If brakes are also mounted on front wheels, both front and rear must work together.
- If the Caliper has shim packs the brake caliper halves must be wired together to keep the shim packs in place.
- Brake caliper, along with brake rotors must be bolted with bolts being cotter keyed or wired.

Bumpers

- All welds must be complete: top, sides and bottom.
- All cars shall be equipped with bumpers on the front and rear of the vehicle. Bumpers to be welded or bolted to the frame to secure properly.
- All bumpers must be constructed as not to hook or catch on to another competitor's bumper.
- Bumpers must be made of 16-gauge (.065) minimum " steel, tubular or square stock or a minimum of 1" diameter (.100) wall thickness aluminum. Channel bumpers are not permitted.
- Must be 3"-5" from the ground to the bottom of the lowest rail and at least 6" from the bottom of the lowest rail to the top of the top rail. Must have a minimum of 3 connecting bars spaced evenly.
- The rear bumper must cover the full width of the vehicle to at least the center of the rear tires, but not to extend beyond the outer edge of the tires.
- Rear bumpers which are straight must have a loop running into the frame to prevent a competitor's tire from wedging between the rear bumper and rear tire.
- The front bumper shall be a minimum of 12" and a maximum of 24" wide, centered between the main frame rails where they attach to the front of the frame.
- All bumper ends must be radiuses or boxed to prevent hooking other cars.
- All bumpers shall return within 4 inches of the rear tires within its slide mounting.

Exhaust System

- Exhaust system must be complete.
- The exhaust system on all cars must be a minimum of 3" from any tire and is not included in measurements of the overall length of car.
- The exhaust must exit to the outside of car body (must not exhaust into an enclosed portion or in a method to trap the gasses near the driver).
- Clamped on muffler must have a tether and must be in place.
- Welding of the muffler to the tail pipe is not permitted.
- Losing a muffler or exhaust pipe during a race is an automatic DQ.

Fire Wall and Flooring

- Full Rear & Side Engine Fire walls and flooring must always be complete.
- All cars must have a minimum of .040" thickness firewall completely sealing driver engine compartment.
- All cars must have a minimum of .040"thickness metal floor pan with no openings between the driver and ground. The floor pan must cover the complete underside of the driver's compartment from nose to behind seat or beginning of firewall, in order to shield driver's body from the ground.
- Any large openings between floor pan and body must have steel ½" x ½" screening or protective covering to prevent track debris from entering driver compartment.

Fuel Lines and Fuel Tanks

- Tank must be approved for carrying fuel.
- As of 2014 a roll over valve is required.
- Fuel lines must be 3" from any exhaust system.
- They may not extend outside of the car and must be protected from impact with a steel bar.
- Fuel lines must be clamped, or safety wired.

Frames

- All frame welds must be complete: top, sides and bottom.
- All frames (chassis) must be made of a minimum of 16-gauge (.065) 1" diameter tubular or (.065) 1" square stock, seamless wall or welded wall, steel or better quality.
- Cars must have at least two bars (0.65) minimum ¾" diameter, positioned above and outside the driver' feet and legs to prevent a car from landing on them.
- Stub axles and full axles must be rigidly mounted (bolted or welded) to the chassis such that there is only UNSPRUNG weight. No SPRUNG weight allowed.
- Hydraulic or pneumatic shock absorbers affecting motion of axles or stub axles are not permitted.
- Floating front axles are NOT permitted. These axles must have lock down bolts and must be locked down that there is no travel, in either direction.
- A visual check should reveal no springs controlling rotative axle or stub axle motion.
- All cars must have a footrest or heel stop to prevent feet from sliding out the nose of the vehicle.
- Side roll cage protection must be made of a minimum of 16-gauge (.065) 1" diameter tubular, or (.065) ½" square stock, seamless wall or welded seamed wall, steel or better quality.
- Sidebars must be placed to prevent intrusion by another vehicle into the cockpit area.
- All cars must have minimum of sidebars, placed horizontally, vertically or diagonally. Nerf bars cannot substitute for bar protection.

Head Rests

- All cars must have either a high back aluminum racing seat with integral head rest or a separate head rest cushion.
- Head Rest with Aluminum Seat: The integral head rest on the aluminum seat must be at the approximate height of the center of the driver's helmet. It must be within the main roll-cage, as viewed from the rear and sides. When in driving position, the back of the driver's helmet must rest against the headrest.
- Head Rest Cushion: If the seat does not have an integral headrest a cushioned headrest must be mounted directly behind the driver's head. The cushion shall be mounted so that it is at the approximate height of the center of the driver's helmet. It must be a minimum of ½" thick. It must be within the roll-cage, as viewed from the rear and sides. When in driving position, the back of the driver's helmet must rest against the headrest.

Dimensions

- Height: A car may not be lower than 30", measured from the ground up (with tires on), to the highest point on the body. Additional roll cages exterior to the body are not included.
- Width: May not be narrower than 37" or wider than 49", measured from left tire or rim to right tire or rim whatever is widest, measured on both front and rear of the car.
- Length: A car may not be shorter than 78" or longer than 104", measured from bumper to bumper. length does not include air cleaner or exhaust.
- Weight: Minimum weight of car and driver after each race run shall be no less than 475 pounds.
- Removable ballast must be secured to the welded chassis or other part of the car with bolts and cotter key/safety wire. Ballast must be painted white.

Ignition Safety Kill Switch

- Cars must be equipped with a safety kill switch that will shut off the motor.
- Switch must be accessible within driver's compartment.
- Must be conspicuously labeled ON and OFF.

Transponders, Mirrors, and Radios

- No mirrors or two-way radios allowed in cars.
- Track scanners are required at all tracks. Frequency is 454.000 MHz. If running locally check with the track to ensure you have the proper frequency.
- Transponders are to be placed 4ft back from the leading edge of the front bumper.

Nerf Bars

- All welds must be complete: top, sides and bottom.
- Must be made of Steel or aluminum.
- Steel bars must be made of a minimum of $\frac{3}{4}$ " (.065) tubular or square stock steel and have a minimum of $\frac{3}{4}$ " over rider bar welded on top or a minimum of $\frac{3}{4}$ " (.065) tubular or square stock steel or under-rider bar welded on bottom.
- Aluminum bars must be a minimum of 1" diameter (.100) tubular and have a minimum of 1" over rider bar welded on top or a minimum of 1", (.100) tubular or square stock steel or under-rider bar welded on bottom.
- Must extend within 2" of, but not more than 1" beyond, the outside edge of the rear tires.
- Must be a minimum of half the length of the wheelbase.
- Must be welded or bolted securely to the frame.

Oil & Fuel Catch Can

- Catch can must be in place prior to competition.
- An oil catch can, must be mounted inside the body constructed such that oil blow-by cannot leak onto the track.
- All oil blow-by from the engine breather system must be routed to an Oil Catch Can.
- The oil catch can must be vented only to outside air. No connection to carburetor or exhaust system permitted.
- Must not leak oil on track.

Roll-Over Bars

- All welds must be complete: top, sides and bottom.
- All cars must have a roll-cage with sidebar protection. The main roll-cage must be made of a minimum of 16-gauge (.065) 1" diameter tubular or (.065) 1" square stock, seamless wall or welded seamed wall, steel or better quality.
- Roll-cage bars must have steel gussets welded in at the four top main joints.
- All roll-cages must be welded to the main chassis of the car, with gussets at all welded structural joints as appropriate.
- The roll-bar must clear the driver's helmet by a minimum of 3", measuring from a line between the bottom of the roll-bar and the top front of the roll-cage.
- Driver's head and body must be entirely enclosed within the roll-cage and car body.

Safety Belts

- Cars must be equipped with double over-the-shoulder harness, 3" Lap belt and sub strap, with a single quick release. They must be in good condition and no older than five years.
- Belts must be fastened to the frame of the vehicle at both ends of lap belt and end(s) of shoulder harness and sub strap.
- Shoulder belts are to be fastened to the frame according to manufacturer's recommendation and mounting to be within 6" of the driver's shoulders.
- All fittings and connections on belts must be metal and bolts, if used, must be grade 5 or better.
- If bolts are used, they must be cotter keyed.
- "Cam-Lock" type seat releases will not be permitted.
- Belts must comply with local regulations regarding age from date of manufacture.
- **Reference - 5 years in Pa. and 2 years in N.J.**

Seats

- Seats shall be attached to the frame of the vehicle, the roll-cage or to a metal plate attached to the frame, base or front of the seat, no more than 4" from the outside edge of the seat at the two most practical widely-spaced points. Bolts shall be installed at the two practical widely spaced points at the top of the back of the seat. The use of a fiberglass seat requires a metal strap or fender washer at least 1" in width connecting every 2 bolts on the inside of the seat.
- All bolts must be a minimum 5/16" diameter grade 5 or better.
- Vehicles with metal seats do not need required straps but do require larger washers at each bolt.
- Only approved racing seats, or karting seats with rib protection are allowed.

Steering

- Steering wheel must have a quick disconnect and bolts are to be safety wired.
- Front axle is to have no moving parts.
- Cars must have direct mechanical steering with all axle linkage bolts and nuts cotter-keyed or safety-wired.
- All rod ends must have aircraft quality universal-type swivel joints.
- Universal joint steering systems must be welded, except where it bolts to a rack and must be secured safely to rack.
- Hollow steering shafts must be made of a minimum of (.065) steel or better-quality tubing.
- Tie rods may be hollow aluminum or steel or solid steel. Solid tie rods must have a minimum diameter of 5/16" and may have threaded ends.
- Tie rods made entirely from threaded rods are not allowed.
- All bolts used on steering components must be cotter keyed.
- An optional 4" diameter 2" thick foam pad may be used on the center of the steering wheel, but not required.

Tires and Wheels

- Tires and wheels must be manufactured specifically for racing competition.
- There must always be 4 tires on a car.
- Maximum wheel diameter is not to exceed 6". Max Wheel Width not to exceed 10" measured on the inside of the rim.

- Maximum tire diameter not to exceed 15".
- Any approved for racing competition tire brand may be run.
- All wheels must be made of quality construction and material approved for racing competition.
- All wheel axles must be cotter-keyed or C-clipped.
- Live rear only. No slipper or ratchet hubs-both rear wheels must be fixed.
- Wheelbase: may not be shorter than 52" or longer than 68", measured between the centers of the front and rear axles.
- Tire Rule: An open tire rule will be used unless specified by the track (ex. Snydersville – Burriss Tires Only).

Windshields

- Required to be made metal screening with a maximum spacing of steel ½ inch x ½ inch, or clear Polycarbonate, covering entire windshield area. No glass may be used on any car.

Clutches

- Centrifugal dry clutches only (#35 chain only).

Car Safety Items

- All Steering linkages are to be cotter keyed, safety wired or "safety clipped".
- Steering wheel bolts are to be wired.
- Brake rotor bolts are to be wired or cotter pinned.
- Caliper bolts are to be wired or cotter pinned.
- Caliper halves are to be wired together in such a way that the shims do not fall out (if applicable).
- Kingpins are to be cotter keyed or safety clipped.
- Rear axle clips are required to be safety wired.
- All cars are to have a head rest approximately in the center of the driver's helmet, a high backed. Aluminum seat is to be considered a head rest for cars with such a seat.

Motor Rules

- The MSRS will utilize the latest Briggs and Stratton Lo206 Rules (current: 2024) issued by Briggs with the follow addendums. Reference: <http://www.briggsandstratton.com/engines-racing/>
- Alterations: No alterations to the internal parts of the motor, except for lapping or adjusting valves or changing of valve springs. Any parts changed in these procedures must be done as per spec sheets supplied in the Briggs & Stratton motor regulations appendix. No exceptions. No Blue-Printed motors are allowed. Modification of stock parts is prohibited.
- Camshaft check: In addition to the various cam profile checks specified in the Briggs and Stratton rule set, Tech inspectors will verify that the intake lobe center is between 105°-107°. Any camshaft measuring outside of this specification will result in disqualification.
- Animal quick change throttle plate may be added.
- Manual pull starter may be removed, and screen installed.
- Aftermarket air filter with the correct inlet flange may be used (no adaptor).
- Header and muffler may be altered to fit the type of engine mounting. RLV 4104 and 4106 Muffler Permitted
- Starter: All motors may use either the factory recoil pull start or the use of electric starters.
- Fuel: The Animal 206 motor is to be run on Pump Gas of 87 Octane. No fuel additives or combustible oil additives are allowed. No Methanol is allowed, except for special open motor races. Fuel must be within +/- 10 points on the fuel test meter.
- Seals for the LO 206 Animal motor will be done only by Briggs & Stratton.
- No competitor may have the seal tool or unclipped seals in their possession at any time.
- Seals done by competitors are illegal and competitors seals are to be considered void and the motor illegal.
- Unsealed motors will not be allowed to run an MSRS race.
- Everything under a sealed portion of a motor is to be considered inspected and passed.
- Anything deemed a tech item by the Briggs Rulebook is subject to inspection.
- **Jr. Microstocks** must run a Red Slide in the carburetor and have the locking cap. Gear Ratio (unless specified different by the track) is 13/54 for the Jr. Microstocks.