

AMERICAN RACING MOWER ASSOCIATION RULEBOOK

American Racing Mower Association



MOWER RACING SERIES

2008 RACING SEASON

Rules that differ from the 2007 rulebook have been highlighted in bold faced print

Additional rule changes may be implemented as needed. Please monitor the National website- www.golawnmowerracing.com- or your local chapter for updates.

The American Racing Mower Association (ARMA) is an organization designed for lawn mower racers by lawn mower racers. This sport provides racers, their families and friends the opportunity to get involved with competitive racing that is affordable.

This rulebook provides the standards that regulate the operations within ARMA. 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.

General Regulations

1. On Track Regulations

Any deliberate actions to circumvent the safety features of a mower at either a Local Chapter or National Points Series race will result in sanctions for the driver. These sanctions will include a minimum of the following:

Total loss of points for said event

Suspension from 2 race events immediately following the incident

Based upon the severity of the incident sanctions may be increased at the discretion of either the Local Chapter representatives and/or their board of directions or the ARMA National Board of Directors (dependent upon where the incident occurred).

Actions to deliberately violate the rules for any mower class will result in the same sanctions found above.

- a. No alcoholic beverages or illegal drugs are allowed within the controlled area of the racing activity, including the pit area.
- b. Any person who is actively participating in a race event (at any level) who has consumed alcoholic beverages, illegal drugs, or controlled substances that is mind and/or motor skills altering may not participate in any capacity.
- c. Completing a safe pass is the responsibility of the overtaking driver. No bumping will be tolerated. 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.
- d. 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.
- e. Blocking is part of racing but not to the point where it causes a crash.
- f. The racer that causes an incident will restart the race at the end of the field. This will be determined by the track officials.
- g. Flags will be used to communicate to the racers the following on track conditions:
 - 1) **Green:** The race/practice is underway when displayed.
 - 2) **Yellow:** CAUTION, DANGER. No passing on the entire track and the drivers will form a single line at a safe pace speed and close up to the leader and follow the starter's directions.

- 3) **Yellow & White:** The field is not bunched up for restart. If this is displayed, close it up.
- 4) **Red:** Stop all racing action immediately and shut off your engine. This flag is used in emergency situations where personal injury has occurred or the track is blocked.
- 5) **Black:** This for driver or equipment infractions. The driver must safely exit the track and consult with the Chief Steward. A furlled black flag is a warning to a driver to clean up his/her act or receive the full black flag indicating he/she needs to exit the track.
- 6) **White:** One lap to go. Crossed white and green indicates race is **halfway** complete.
- 7) **Checkered:** End of race or practice session. Winner may choose to make a victory lap with the checkered flag. The remaining drivers will complete the lap and safely exit the track to the pit area.
- h. Driver must keep both hands on the steering wheel, except to momentarily operate other controls. Driver's body may not be intentionally positioned out of the mower seat onto or over the mower fender.
- i. If you leave the course during the race re-enter the track as close as possible to the exiting point. Exiting the course and reentering in order to gain position will result in the driver being placed at the rear of the field.
- j. If the mower stalls move the mower to a safe place at least 10 feet off course.
- k. Unsafe off track driving will not be tolerated.
- l. Drivers must attend all drivers meetings. If an unforeseen circumstance forces a driver to miss the meeting they shall begin at the rear of the field after meeting with the Chief Steward for a briefing on the day's racing information.
- m. Starting positions will be determined by random draw for a rolling start

2. Pit Area and Track Regulations

- a. No person under 16 years of age shall be on the grid. Those 16 years of age and older are permitted with an approved parents consent form on file.
- b. Mower pit speed is 5 MPH maximum.
- c. Long pants, closed shoes and shirts are required in the track area.
- d. Refueling: Driver must dismount and engine must be shut off when fuel is added. A fire extinguisher (Liquid Fire Rated) must be in the hands of a crew member any time fuel is added to a hot machine.
- e. Mower must be completely stopped before driver dismounts.
- f. Track crews are under the direction of the Track Steward at all times.
- g. The driver is responsible for the conduct of his/her guests and crew, even while on the track.
- h. Only authorized personnel and drivers shall enter the racing course during racing activity. All individuals entering the pit area, including crew members and guests, must sign a release discharging ARMA from liability. All individuals entering the track area must have a wrist band.
- i. No pets are allowed on the racing course.
- j. ARMA reserves the right to limit pit space. Campers and RV's may be permitted on race day only if space permits.
- k. No vehicles other than racing mowers and official vehicles such as tow mowers shall be on or near the track.

3. Driver Eligibility

- a. Drivers must be members of the American Racing Mower Association.

- b. 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.
- c. **Drivers participating in Junior Prepared must be at least 10 years old and no older than 15 years old.**
- d. All drivers must sign a release discharging the ARMA from liability.

4. Safety Equipment

- a. Every driver must wear an automobile racing or motorcycle-type full-face helmet approved by the U. S. Department of Transportation or the Snell Foundation.
- b. The helmet must fit snugly and be securely buckled when driver is on the track.
- c. Goggles or a face shield are required. Glasses are not adequate protection.
- d. All drivers must wear long pants, long sleeved shirt, neck brace, full-fingered gloves and leather over the ankle footwear on the track. Chest protectors and other anti-abrasive suits are highly recommended. No loose clothing on the track.

5. Mower Eligibility

- a. Events are open to 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 section 7 **General Mower Specifications Modified Classes.**
- b. Final determination of eligibility and classification 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.

6. Technical Inspection

- a. All mowers entered in any ARMA 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.
- g. **If it is the opinion of an ARMA official designee (Local Chapter President or other officer, ARMA Board of Directors member) that a Super Stock or Junior Prepared mower is out of compliance with rules for these classes said mower may be internally examined. This may include removal of cylinder heads, opening of transmissions, etc.**

7. General Mower Specifications- Modified Classes (All classes except Stock)

- a. Cutting blades must be removed.
- b. Cutting decks must be securely mounted in near stock location. Only Pro-X mowers may simulate a cutting deck. Decks may extend beyond the tire sidewalls a maximum of 2". Decks must be as wide as the body edge or running boards whichever is wider.
- c. Mowers must maintain a minimum of 2.5 " ground clearance under the lowest point of the deck.

- d. Mowers must maintain a minimum of 4" of ground clearance under the lowest point of the frame. Unused brackets and non-structural material may be removed to gain clearance.
- e. Exhaust design is open, but must terminate away from the driver and competitors, in a rearward and downward direction without creating a safety hazard.
- f. Starter must be onboard, either electric or pull rope.
- g. Rear wheels must be secured to the rear axle with shaft locks, center bolts or thru-bolts.
- h. All non-stock mowers shall have an automatic, throttle closing device.
- i. 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.
- j. Mower brakes on any Sportsman or X series mower must be upgraded to a brake system on the rear axle.
- k. Brakes may be hydraulic or mechanical.
- l. Throttle and brake control may be relocated.
- m. The steering wheel, seat, body and frame must be centered between the right and left wheels. Offset is not permitted.
- n. Drive line may be modified from the engine pulley to the rear wheels. All classes except Pro-X must use a shiftable lawnmower transmission or transaxle. vari-drives may be used if originally equipped.
- o. No centrifugal or torque converter clutches permitted in any class except Pro-X.
- p. Rear axle may use open differential, locked, live or solid axle. No single wheel drive. Aluminum rear axles are permitted.
- q. Wheels must be the same size on each axle, of any origin, but made of metal. Duel or tandem wheels are forbidden.
- r. 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.
- s. All steering linkage must be ball-type or spherical threaded rod ends.
- t. Footholds and seat side boosters must be **minimally** designed so as not to entangle body parts.
- u. External ignition systems and aluminum flywheels are authorized.

IMPORTANT SAFETY NOTE

It is highly recommend that a scatter shield 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.

- 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 38" sidewall to sidewall.
- x. Carburetors must be of lawnmower origin and from the same manufacturer as the engine block.

Prepared mowers participating in the Mini-Sportsman class and above will

be required to have dual return springs on the throttle.

- y. Mowers may only operate on pump gasoline. No additives or additions to the fuel are allowed. No nitrous oxide, rocket fuel, alcohol or other oxidizers are permitted. Any attempt to circumvent this rule will result in disqualification from the event.
- z. All engines must be naturally aspirated. Blowers, turbochargers, and water injection systems are not allowed.
- aa. Tires must be lawn tractor tires in all classes except Pro-X.
- bb. 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 handles or other objects attached to them.**
- cc. All positively charged terminals must be insulated with a cover or heavy tape. Battery must be well secured on the mower.
- dd. 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.
- ee. All exposed sprockets, chains, and pulleys must be fitted with metal guards deflecting a broken chain downward.
- ff. Mowers must be free of sharp edges, projections and protrusions.
- gg. A rear bumper is highly recommended and should be no wider than the rear tire width, fabricated from 3/4” outer diameter tubing with radius bends and installed a maximum of 2” from closest surface of the rear tire. Recommended height of 6”, no higher than 8”. 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. No other bumpers are permitted, even those offered as factory options.
- hh. Seats should be securely mounted to the mower, on the center of the frame.
 - ii. 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.
- jj. The lowest portion of the seat pan should not be mounted lower than the top of the rear tires.
- kk. 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 in a class will not be allowed.

Modification:

- 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:
 - ❖ Trimming fenders such that there remains ½” of clearance between the fender edge and the top of the tire.
 - ❖ 1” of vertical material remaining on the fender. This will ensure the structural integrity of the fender.
 - ❖ Fender trimming should follow the contour line of the fender, not merely remove sheet metal in the immediate area

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.

- ll. 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. Mowers without numbers or mower with same number will be assigned one during registration. Duplicate numbered mowers will be assigned based on the order of arrival.
- mm. All mowers must have a functioning mechanical clutch. No chain drive from engine to transmission is allowed.
- nn. Mowers must present a neat and clean appearance.
- oo. No written profanity is allowed on mowers.

MOWER CLASS REQUIREMENTS ON NEXT PAGE

8. Mower Class Requirements and Designations

Mower Specifications

ALL MOTORS MUST BE OF LAWN MOWER ORIGIN

Class Designation	Engine Type (of lawn mower origin)*	Original Factory Rated Horsepower	Wheelbase	Front Rim Size	Rear Rim Size
Stock	Governed engine	3650 RPM	Factory Stock	Stock	Stock
Super Stock and J/P (Junior Prepared)	Governed engine- Single cylinder VIB or OHV 465 cc and under	3650 RPM 15 HP and under	Factory Stock	13"-15" tires 15 psi max	16" tires 15 psi max
Mini-Sportsman	Valve in block 4 stroke	8.5 and under 19 ci and under **	34" unaltered minimum	4" minimum	6" minimum
Sportsman	Valve in block single cylinder 4 stroke	8.5 and over	39" unaltered minimum	5" minimum	6" minimum 8" maximum
Mod X	Single OHV and Twin Opposed VIB	20 and under or unlimited	39" unaltered minimum	5" minimum	6" minimum 8" maximum
Super Sportsman	All overhead valve and 2-cylinder 4 stroke	25 and under	42" unaltered minimum	6" minimum	6" minimum 8" maximum
Pro-X	Single cylinder 4 stroke	Unlimited	42" maximum on mid-engine chassis 45" maximum on pan style chassis	4" minimum 8" maximum	4" minimum 8" maximum

* No overhead cams allowed

** Addresses the current usage of the same engine block covering several horsepower ranges.

STOCK MOWERS:

- This class will be held as requested by individual race venues. Results from races in this class will not count towards World Finals.
- These are "as manufactured" riding lawn mowers with governed engines that do not exceed 3,650 RPM.
- Any replacement parts must be exact replacement for the originals. They may not offer any performance improvements over the stock part.
- Tech inspection will be for general operating condition, brakes, safety issues, RPM, and blade removal. Tech inspectors may sanction modifications to ensure safety.

SUPER STOCK and JUNIOR PREPARED:

- Must be a full-size lawnmower with a 39" unaltered wheelbase, front engine origin, stamped steel frame, and have a steering column located behind the motor.
- Mowers will use a governed engine with a 3650 RPM maximum (no load).

- Motors may be any single-cylinder valve-in-block (flathead) or overhead valve (ohv) engines 15 horsepower and under with a 465 cc maximum in the original factory location.

SUPER STOCK and JUNIOR PREPARED:

- The engine must be as delivered from the factory, internally and externally, with the following exceptions; air cleaner, air filter or velocity stack, open exhaust and the removal of the debris screen covering the flywheel to allow quick and easy access to the flywheel nut while checking the 8 to 1 gear ratio.
- Transmission or transaxle must be shiftable and of lawnmower origin-**no vari-drives.**
- The gear ratio in the highest gear must be 8 to 1- **lockouts are not permitted.**
For example, while in the highest gear, the rear wheels can turn no more than one revolution every time the engine rotates eight times.
- Body must be stock, without external alterations.
- Discreet frame strengthening is allowed. The front axle may be reinforced, substituted or fabricated. 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 axle.
- Front spindles are to be a minimum of 5/8" in diameter.
- Metal rims are to be used both front and rear. Rim size will be 6" diameter in the front and 8" diameter in the rear. Rear rims may be reinforced on the inside.
- Front tires may be 13"-**15"** in diameter. Rear tires will be 16" diameter.
- **Tire pressure may not exceed 15 psi. This will be checked immediately following the feature race.**
- Mowers must have steel factory decks.

MINI-SPORTSMAN:

- Engines must maintain stock outward appearance with the exception of the air filter, air cleaner or velocity stack.
- Crankshaft must be in original orientation and clearance hole in the frame.
- Engine may be internally modified.
- 34" minimum wheelbase
- 4" minimum front wheels, 6" minimum rear wheels.

SPORTSMAN and MOD X:

- Engine must maintain stock outward appearance, with the exception of the air filter, air cleaner or velocity stack.
- Crankshaft must be in original orientation and clearance hole in the frame.
- Engine may be internally modified.
- 39" minimum wheelbase
- Mid-engine frames not allowed
- 5" minimum front wheels, 6" minimum rear wheels
- Crankshaft must be in original orientation

SUPER SPORTSMAN:

- Engine must maintain stock outward appearance, with the exception of the air filter, air cleaner or velocity stack.
- Crankshaft must be in original orientation and clearance hole in the frame.

- Engine may be internally modified.
- 42" minimum wheelbase
- Mid-engine frames are not allowed
- 6" minimum front wheels, 6" minimum rear wheels

PRO-X:

- Engine may be internally and externally modified.
- Engine location may be modified.
- Maximum wheelbase 42" on mid-engine chassis, 45" on pan style chassis.
- Mid-engine frames and pan chassis may be altered to shorten wheelbase to a minimum of 37".
- Pan chassis frames must maintain the original pan chassis and body parts.
- Mid-engine frames may be updated, but must retain the form **and substance material** of the original factory frame.
- Mid-engine frames are limited to a maximum width of 15" and length of 48".
- Round tubing, **chrome molley and aluminum are not permitted.**
- Drive train does not require a shiftable transmission.
- Drive line is open.
- Wheels 4" minimum 8" maximum front and rear.
- Kart tires are allowed. Snow Hogs limited to the front end only.
- Stagger is allowed, offset is not.

ARMA Point Structure

Drivers participating in ARMA sanctioned national points races will receive points for their participation and finishing position. These points will be recorded with the national office on a database that covers all ARMA racers. Points will accumulate through the racing season. **The United States will be divided into two regions based upon where the majority of National Points races are held right now. An imaginary line will run through Richmond, VA. Racers living in northern Virginia, Maryland, Delaware, Pennsylvania, New Jersey, West Virginia will compete in the Northern Series Points. Racers living below Richmond, North Carolina, South Carolina, Georgia, Tennessee, Alabama, and Florida will compete in the Southern Series.** Plans are in the works to add a Central/West series as well that would include Texas, California, Montana and other mid-west chapters that are in the planning stages. In order to compete in the National Points Series a driver must race in at least two local chapter races. At the end of the season, drivers would be awarded full points for their top 5 races. Drivers who traveled outside of their geographic region to attend races could bring points back to their region with them. These points could be used to replace points they received at one of the their regional races where they didn't place so well. These points would be used to crown a Northern, Southern, and Central/West Series points champion (also second through fifth place drivers) in each class. This would enable points winners in the top 5 positions from each class in both regions to go to finals and race it out to determine an overall champion, second and third in each class. At the finals the top fifteen drivers in each class (5 Northern series drivers , 5 Southern series drivers, 5 Central/West) will have starting positions secured in the front of the grid. The top fifteen drivers will draw for positions 1-15 on the grid for their class (number may change if less than all eligible drivers travel to compete in finals.) Other drivers in the same class will draw for the remaining

positions. After that all accumulated points for the year would be removed. The winner of each class at finals would be declared the champion of that class.

Point Values:

50 points for registration

50 points for starting the race

50 points for finishing the race

** 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.

50 points for 5th place finishing position

100 points for 4th place finishing position

150 points for 3rd place finishing position

200 points for 2nd place finishing position

250 points for 1st place finishing position