Midwest Motorsports LLC Lawn Mower Race Rules and Regulations

- All rules and regulations are based on various Local and Regional racing rulebooks, however not to their entirety.

- Any rule changes can and will be made as needed.
- Extra classes may be added if needed.
- NOTE: If the rules don't say you can do it, YOU CAN'T!

GENERAL COMPETITION REGULATIONS

I. RULES OF THE RACE TRACK & PIT AREA

- **A.** No driver who has consumed any alcoholic beverage on the day of an event may participate in a practice or race event.
- B. NO alcoholic beverages may be consumed by ANY driver, or race staff before the end of the last race or other on-track activity. NO illegal drugs or controlled substances shall be tolerated on the track premises AT ANY TIME. Violation will result in disqualification and will be asked to leave.
- C. No smoking on the track or track infield during the racing event.
- D. The following flag signals will be obeyed without question:

<u>GREEN</u>: The race/practice is underway when the green flag is waved.

YELLOW: Decrease your speed. Danger. NO PASSING ON THE ENTIRE TRACK. Drivers form a single line and close up with the leader, and follow the Flagman's directions. Very slow machines may signal the following machines to pass under yellow.

<u>GREEN AND YELLOW</u>: These two flags drawn together indicate that the field is not sufficiently bunched for the restart. If you see this signal, close it up!

WHITE & YELLOW: These two flags crossed signify halfway point.

<u>RED</u>: Stop racing immediately. Clear the track as much as possible.

BLACK: Generally, for a driving infraction or equipment violation. Driver must complete a lap and pull into the pits for consultation with the Race Official at the designated spot. A furled black flag means the driver must clean up his/her act or receive a full black flag.

WHITE & YELLOW: These two flags drawn together indicate 2 laps remaining in the race. **WHITE:** Indicates 1 lap remaining in the race.

<u>CHECKERED</u>: End of race or practice session. Driver must complete a lap and pull into pits or impound areas.

- **E.** All mowers must pass all safety requirements and inspections before being allowed to enter the track.
- F. NO bumping will be tolerated.
- **G.** The responsibility for a safe pass rests with the overtaking driver.
- **H.** Driver must keep both hands on the steering wheel, except to momentarily operate other controls.
- I. If a driver leaves the track, he/she must enter the track as close as possible to the same point the mower left the marked track.
- J. If a mower stalls on the course, the driver's first responsibility is to raise a hand to signify the driver is slowing down and to move the mower to a safe position at least 10 feet off the course. The driver must NEVER get off the mower unless directed by a Race Official. Pit Crew or guests may not go on the track at any time during a race unless specifically directed to do so by the Race Officiating Crew. This could lead to Driver Disqualification!
- **K.** Mower must be completely stopped before the driver dismounts, again only as directed by the Race Officiating Crew.

- L. Unsafe on-track/off-track driving practices may result in disqualification.
- **M.** All drivers must attend the driver's meeting before the race. There may be a roll call, and drivers may be penalized or disqualified for failure to attend. The Race Official may override this ruling on a case-by-case situation.
- **N.** Track positions will be determined on race day by random draw during registration.
- **O.** Laps will NOT be counted under the yellow flag. However, there will be a minimum of two laps, under green, after a yellow to finish the race (Green, White, and Checkered).
- **P.** Drivers involved in an incident must be inspected in the track area at the discretion of the Race Official/Technical Inspector.
- **Q.** All mowers involved/causing a caution/accident will be moved to the end of the racing order after it's determined that they are safe to continue.
- **R.** The first three finishers in each class of a Feature Race MUST return to the start/finish line for racer interviews and/or trophy presentation unless otherwise directed (victory laps are permitted upon Race Officials' discretion).
- **S.** Onboard communication devices or spotters on the side of the track are NOT allowed.
- **T.** Due to the extreme speeds and the width of the New FXS & FXT classes the Race Official will determine the number of mowers that will be allowed to race at one time.
- **U.** In All Classes, If a Yellow or Red Flag is thrown before the lead mower completes the first lap, the race will be restarted. And drivers will be lined up in the original starting position, but only once, if a second yellow/red flag is thrown before the completion of the first lap, the race order will be determined by the order that the mowers crossed the Start/Finish line at the beginning of the race and they will resume racing by using a rolling start. The racer causing the 2nd Caution goes to the rear. A racer causing (3) Cautions in the same race will be black-flagged and removed from that race.
- V. The Race Official shall have the right to remove from competition at any time any driver, crew member, or guest in the racing facility who does not comply with these Regulations, who fails Technical Inspection, or who, in the Race Official's sole discretion, is exhibiting behavior which is dangerous to participants or spectators.
- W. Protests against another driver or his/her mower must be in writing with the Race Official on our official Midwest Motorsports LLC protest form 30 minutes prior to the start of the final race. Enforcement of these rules depends on a protest being filed with the Race Official. The Race Official has the final say on all protests and drivers may be penalized or disqualified for failure to attend. The Race Official may override this ruling on a case-by-case situation.
- **X.** The pit speed is 5 mph maximum.
- Y. No pets are allowed on the race track or in the pits.
- **Z.** Refueling: The driver must dismount and the engine must be turned 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 engine.
- AA. Crews are under the direction of the Race Official at all times.
- **BB.** Persons 6 to 18 years of age may be in the pits as a Pit Crew Member along with a parent or legal guardian signed liability waiver release form on file with the Race Officials.
- **CC.** Drivers are responsible for the conduct of his/her guests and crew, even while on the track.
- **DD.** Unauthorized personnel shall not enter the race track or the pit area at any time. All individuals entering the controlled area which includes but is not limited to the race track and pit area, including drivers, crew members, and guests, MUST sign a liability waiver release form and display a wristband discharging the event representatives, race track, location (city and property owners), race promoters, race officials, race staff, safety crew, or anyone affiliated with the event from any liability. The wristbands are for the entire racing day. No exceptions will be made to this rule.

EE."EFFECTIVE IMMEDIATELY": Only one person shall be allowed on a racing lawn mower. This will include parade laps, sanctioned races, and/or any occasion-sponsored or administrated races. The person on the mower must be registered as a racer for the event."

II. DRIVER ELIGIBILITY

- **A.** Drivers must be at least 6 years of age.
- **B.** All drivers 6 to 18 years of age MUST have a consent form filled out by a parent or legal guardian and on file with the Race Official prior to competing at any event.
- **C.** Parents or Legal Guardians must be in attendance at each event.

III. DRIVER SAFETY EQUIPMENT

- **A.** Every driver is required to have a DOT Approved Full-face helmet with eye protection, neck collar, Approved race suit OR, long pants, long-sleeved shirt or jacket, closed-toe shoes, and gloves before being allowed on the race track. No loose clothing (un-tucked or unbuttoned shirts, etc.).
- **B.** The helmet must fit snugly and be securely buckled when the driver is on the track. Long hair must be kept tucked inside the helmet.
- C. Goggles or a face shield are required. Glasses are not sufficient.
- **D.** It is suggested to have a full 1 OBC-rated fire extinguisher in his/her equipment.
- **E.** It is highly recommended but not mandatory that Drivers wear Chest Protectors of their choice for their safety.

IV. TECHNICAL INSPECTION

- **A.** Every mower entered in the event must be approved for competition by Technical Inspection before practicing or racing at any event. Note: Race Officials also perform the Technical Inspectors' duties.
- **B.** The final determination of eligibility and classification is up to the Race Officials.
- **C.** Drivers may be tested by race officials at any time for knowledge of flag procedures and these Regulations. Drivers must pass all tests in order to practice or race.
- **D.** Drivers must show their personal safety equipment at Technical Inspection before practicing or racing at any event.

V. GENERAL MOWER REQUIREMENTS

NOTICE

All mowers will be classified as registered.

These general requirements apply to ALL racing classes. Any EXCEPTIONS to these requirements are listed in the individual class build rules.

A. Engine:

- i. Overhead cam engines are not allowed in any Class.
- ii. No liquid-cooled engines in any class.
- **iii.** All mowers that do not have the top of the engine completely covered by the hood must have the flywheel covered by either the recoil housing, the stock wire housing, or racer made protective cover.
- **iv.** All positively charged terminals must be insulated with a cover or heavy tape, and the battery must be well secured.
- v. Fuel lines must be clamped at all joints.
- vi. BILLET FLYWHEELS ARE MANDATORY for all Ungoverned Prepared, FXS, and FXT Class racing mowers.

- vii. All governed class racing mowers (JP, GPK, IMOW, GPS, and GPT) must have original stock flywheels.
- **viii.** All non-stock mowers MUST be equipped with an automatic throttle closing device. Stock mowers MAY be so equipped if desired.
- **ix.** All mowers must be equipped with a kill switch, which will turn off the ignition if the driver leaves the mower.
- **x.** Nonstock mowers shall use a tether, mechanically attached to the mower and driver. Velcro is not acceptable.
- **xi.** Pressure switches are not allowed.
- **xii.** The kill switch must remain in a closed position (engine not running) until the driver mounts the mower.
- **xiii.** Additional switches that can bypass the kill switch are not allowed under any circumstance.
- **xiv.** The ignition interrupter kill switch and cap/prong must be commercially available for racing-type vehicles such as jet skis, snowmobiles, 4-wheelers, etc.
- **xv.** Magnetic or any other form of homemade switch is not allowed.

B. Controls:

i. Throttle and brake controls may be relocated.

C. Brakes:

- i. Brakes may be improved in any way.
- ii. Rear Brake rotors may not be mounted on jackshafts, only on rear axles.
- iii. Brakes must be in good condition, easily operated, and must operate on at least two rear wheels.

D. Throttle:

- i. All mowers in all classes MUST be fitted with sturdy double return springs mounted at two separate mounting points on both ends to help eliminate the throttle from sticking or failing to completely close when released. This way if for any reason one breaks you will still have one spring attached.
- **ii.** For V-twins and different-style carburetors used on FXs, the same principle must be used. For example, FX's using Mikuni or the CV style Keihn Carburetors the Slide Spring can count as one return spring and you must have a separate external spring attached as the safety spring.

E. Frame:

- i. Discrete strengthening is allowed.
- **ii.** Front and rear axles must use the original frame as the primary mounting point.
- **iii.** The original frame can be used and can be reinforced.
- **iv.** Minimum 4" ground clearance to frame, 2-1/2" ground to deck unless otherwise stated in the Class Build Section.
- v. No offset or stagger. The body must be mounted in the center of the wheels.
- vi. Again, no staggering is allowed or exposed rear tires and on the centerline.
- vii. Offset measured from centerline to the outside of tire sidewall.
- viii. Wheels may not be mounted off-center unless originally mounted offset.

F. <u>Wheelbase</u>:

- i. Wheelbase may not be altered.
- **ii.** You will be allowed, but not required, a maximum width of 40" sidewall to sidewall unless otherwise stated in the class build section

G. Wheels:

- i. See Class Rules for minimum diameter.
- ii. Wheels must be the same size on each axle, or any origin, made of metal.
- iii. No dual or tandem wheels.

H. <u>Tires</u>:

- i. Tires must match in size, brand, and tread design per axle.
- ii. The tires must be lawn mower tires.
- **iii.** No Snow Hog, tiller, A.T.V., commercial mower, performance compound, or competition kart tires.
- iv. Tires must be of the same tread design and size on each axle (front tires the same, rear the same).
- v. Flat tires will be black-flagged!
- vi. No slick tires in any class.

I. <u>Rear Axle</u>:

i. Mowers must be free of projections, which could injure the driver or a competitor, or damage another mower. No axle or wheel mounting bolts may protrude beyond the face of the tire sidewall.

J. Mower Safety:

- **i.** Mowers must be safe and complete, with all parts and panels in place, with no missing nuts, bolts, cotter keys, etc.
- **ii.** All exposed chains and sprockets must be fitted with metal guards, which will direct a broken chain downward.

K. Mower Appearance:

i. Mowers should be neat and clean, with paint in new or very good condition. No excess dirt, oil, grease, rust, or primer. Sponsor graphics must not interfere with the mower's racing numbers or class letters.

L. Body:

- i. All Prepared Classes and JP, GPK, and GP must have a factory-type deck, not a home design.
- **ii.** All mowers must have a cutting deck securely mounted in the stock position, with a minimum of 2.5" ground clearance under the lowest point of the deck.
- **iii.** The deck must be at least as wide as either running boards or body edge whichever is wider.
- iv. Decks may not extend any more than 2" beyond the tire sidewalls on each side.
- v. Deck halves may be mounted to running boards.
- vi. Decks must be secure.
- vii. Cutting blades must be removed completely from all mowers.
- viii. Glass headlights must be taped or removed.
- ix. Mowers must be safe and complete, with all parts and panels in place, with no missing nuts, bolts, cotter keys, etc.
- **x.** Footholds must be discrete, and no more than 2" high, made of flat or "L" stock (no rod stock) and made such that the foot cannot become entangled in a rollover.
- xi. Mowers must be neat and clean, with paint in new or very good condition.
- **xii.** No excess dirt, oil, grease, rust, or primer.

- **xiii.** Sponsor graphics must not interfere with the mower's racing numbers or class letters.
- **xiv.** Front bumpers or not permitted in prepared classes, see exceptions in FX Class
- xv. Rear Bumpers are allowed, but not required. If used, they must be built to standards
- **xvi.** Single Pipe Bumpers may NOT be used.

M. Numbers:

- **i.** Race numbers should be a minimum of 3" high and of a sharply contrasting color from their background, and should be visible from all four sides of the mower.
- ii. All mowers must have their number visible from ALL four (4) sides.
- **iii.** Racing numbers will be pre-registered at the drivers' registration location.
- iv. Machines without numbers will have them assigned on race day.
- v. Duplicated numbers will need to change if that number has previously been registered. This can be done simply by adding a letter to the number.
- vi. It is recommended that you carry tape in the same color of your mower numbering in case your mower number has to change by adding a possible "letter" before or after your number to make the mower number unique.
- vii. Class letters should be a minimum of 3" high, and be shown on both sides of the mower.
- viii. Sponsor graphics must not interfere with the mower's racing numbers or class letters.

N. Kill Switch:

- **i.** All mowers must be equipped with a kill switch, which will turn off the ignition if the driver leaves the mower.
- **ii.** Non-stock mowers shall use a tether, mechanically attached to the mower and driver.
- iii. Velcro is NOT acceptable.
- iv. Pressure switches are not allowed.
- v. Kill switches must remain in a closed position (engine not running) until the driver mounts the mower.
- vi. Additional switches that can bypass the kill switch are not allowed under any circumstance.
- **vii.** The ignition interrupter kill switch and cap/prong must be commercially available for racing-type vehicles such as jet skis, snowmobiles, 4-wheelers, etc.
- viii. Magnetic or any other form of homemade switch is not allowed.

O. Front Axle and Steering:

- i. Steering wheels may be replaced with any commercially available pieces, but not substituted for each other.
- ii. Steering Wheels may not be mounted off-center unless originally mounted offset.
- **iii.** Steering columns must pass through the original hole in the hood or dash at the original angle.
- **iv.** All Nuts and bolts attaching the steering assembly (tie rods and spindles) must be secured with lock nuts, castle nuts with cotter pins, or close pins.
- v. Handlebar-type grips may not be added to steering wheels in any class.
- vi. No push-pull steering in any prepared classes. See FX rules for this exception and requirements.

P. Driveline:

- **i.** All exposed chains and sprockets must be fitted with metal guards to direct a broken chain downward. b. All mowers must utilize a clutch.
- **ii.** Centrifugal and/or torque converter clutches are allowed only in FXS and FXT or Open Classes.
- iii. No centrifugal and/or torque converter clutches except in FXS and FXT or Open Classes.
- **iv.** Prepared Class mowers with horizontal engines that are factory built with such, will be permitted to have drive shafts as long as the mower has an operational clutch.
- v. The driveshaft will be covered and go to a shiftable transmission and the transmission will connect to the rear axle by either chain or belt.

Q. Flywheels:

- i. Billet Flywheels are mandatory in all classes with the exception of Junior Prepared Class, IMOW, G/PK, and G/P.
- **ii.** Flywheels are a major safety issue. As RPMs and speeds increase, it is also highly recommended that in all ungoverned classes, a scatter shield be built and mounted for added safety protection.
- iii. Fuel lines must be clamped at all joints.

R. Bumpers:

- i. Rear bumpers will be allowed but not required.
- ii. Rear single-pipe bumpers are NOT of Standard Value and will not be allowed.
- **iii.** The bumper should be constructed of 1-inch round or hex tubing in a rectangular shape no wider than the outer sidewall of the two rear tires. 6 inches minimum height between the top and bottom of the bumper bars.

S. Fenders:

- i. You will now be allowed to discreetly move, modify and alter Fenders so that the driver can lower the seat assembly. The following guidelines are given:
- **ii.** Trimming fenders so that a ¹/₂" of clearance between the fender edge and the top of the tire.
- iii. Flaring the fender so that a $\frac{1}{2}$ " of clearance remains between the fender edge and the top of the tire.
- **iv.** Trimming should follow the contour line of the fender, not merely remove sheet metal in the immediate area.
- v. Trimming or flaring that results in sharp edges will not be allowed
- vi. Fender should retain its original look
- vii. Modification to the fender assembly will be permitted to allow the lowering of the seat; however certain guidelines are given. The seat bottom will be no lower than 13" from the ground. Fender cutouts are permitted but must have protective trimming to eliminate the possibility of having sharp edges.

VI. FUEL AND FUEL DELIVERY

A. The only acceptable fuel is pump gasoline. Additives, other than STABIL Fuel Stabilizer are prohibited. Any apparatus other than the carburetor which can be used to introduce any gaseous or liquid substance into the induction flow, whether connected or not, is prohibited and will result in disqualification. Such devices include but are not limited to, Nitrous Oxide, alcohol or water injection systems, turbo or superchargers, and/or the associated hardware consistent with these systems. Any attempt to conceal or disguise such apparatus will be

considered a flagrant violation and may result in ejection. Electric fuel pumps are not allowed.

VII. RACING CLASSIFICATIONS

A. Race Mowers will only be allowed to enter and race in the class that they were built for, i.e. MM, JP, AP, SP is no longer so it will run in CP, CP, BP, FX, FXS, & FXT. The Junior Prepared Class is the only two that the same mower can run in both classes' races.JP, GPK, IMOW, and GP Classes are the only mowers that can make modifications at the races and run in all three (4) classes. This allows parents and other drivers to run in these classes.

B. Mini Mow:

- i. Ages 6-8 years old
- ii. Must be stock, complete, and not to exceed a factory rating of Box Stock Legal.
- iii. 3.650 rpm maximum
- iv. 6:1 final drive ratio
- v. 5-inch to 6-inch diameter aluminum wheels
- vi. 12-inch maximum rear tire diameter
- vii. Centrifugal clutch only
- viii. Cutting blades must be removed

C. Junior Prepared Class (JP)

i. Class designation: (for Ages 9-15) and **IMOW** (Adult) The intent is to have the mowers be as identical as possible so drivers can gain experience and develop the skills needed to advance to another class. This allows racers to gain race experience at speeds that will reach approximately 15-20 mph but with a more stable platform that can easily be upgraded to another class. These machines are essentially a Prepared Chassis (IMOW, AP, CP, and BP).

D. Special requirements:

- i. All Junior Prepared drivers are 9-15 years old (the beginning age is eight (8) years old as long as they will be nine (9) years old by December 31st of that race year).
- ii. For IMOW the age is 16 years old and Up.

iii. <u>Type</u>:

 Must be a full-size lawn tractor, front-engine, stamped steel frame, and manufactured as such, as delivered except for the modifications listed below. Mid-engine frames are not allowed.

iv. Engine:

- 1. 33 ci and under (stock)
- **2.** Governed at 3,650 RPM maximum with no load (foot off the clutch in neutral).
- **3.** Single-cylinder, overhead valve engines or old-style L-head (flathead) engines must be stock, complete, and not to exceed a factory rating of Box Stock Legal.
- **4.** Aftermarket consumable parts such as air filters and spark plugs may be used as long as they are a direct stock replacement.
- 5. Mowers MUST have original stock flywheels.

v. Exhaust:

1. Design is open, but must face away from the driver and competitors in a rearward and/or downward direction and present no obvious safety hazard.

vi. Driveline:

- 1. The transmission or Transaxle must be shiftable and of Lawnmower origin.
- 2. The highest gear ratio is no less than 8 to I. <u>For example:</u> while in the highest gear, the rear wheels can turn no more than one revolution every time the engine rotates eight times.
- 3. No Variable-Drives, No centrifugal and or torque converter clutches.
- **4.** Mowers using a chain drive type transmission must use an axle-mounted brake system.
- 5. This Reminder that all chains MUST have metal chain guards installed.

vii. <u>Body:</u>

- **1.** Must be stock, without external alterations, although discrete strengthening is allowed.
- 2. The hood must be secured.
- **3.** Hoods must be hinged or a hole in the grill to access the spark plug wire for "RPM" checks.
- **4.** Minimum 4" ground clearance to frame, and 2 ½" from the ground to the bottom of the deck.
- **5.** Footholds must be discrete, and no more than 2" high, made of flat or "L" stock (no rod stock) and made such that the foot cannot become entangled in a rollover.

viii. <u>Deck:</u>

- **1.** Mowers must have the appearance of a deck.
- **2.** The deck must be at least as wide as either running boards or body edge whichever is wider.
- **3.** Decks may not extend any more than 2" beyond the tire sidewalls on each side.
- 4. Deck halves may be mounted to running boards.
- 5. Decks must be secure.

ix. Front and rear axles

 Must remain in stock location. Front spindles are to be mm. 5/8" in diameter. All steering linkages must use ball-type or spherical threaded rod ends. Shaft locks, center drilled axle with locking bolts, and castellated nuts with cotter pins are acceptable for securing front wheels. The rear axle should use shaft locks, center bolts, or thru bolts to secure the rear wheels. Cotter pins, E-rings, C- rings alone, bent nails, hitch pins, over-center pins, and quick-release pins are not sufficient for wheel retention and are not approved. Rear axles may use open differential, locked, "live" or solid axle. No single-wheel drive.

x. Steering;

 The Front axle and steering may be reinforced, substituted, or fabricated. In the case of racer-fabricated axles, these will be subject to the judgment of the Race Official/Technical Inspector as to their apparent safety for racing. Aluminum may not be used as the material for the one-piece axle.

xi. <u>Wheelbase:</u>

- 1. Minimum 39" unaltered Width
- 2. Maximum 40" sidewall to sidewall.

xii. <u>Wheels:</u>

- 1. Metal rims 5" minimum front wheels, 8" minimum rear wheels.
- **2.** The rear tire's maximum is 16" in diameter as written on the sidewall of the tire.
- 3. Actual Diameter may not exceed 16".
- 4. Maximum 15 PSI tire pressure.
- 5. Wheels must be the same size on each axle, of any origin, made of metal.
- **6.** No dual or tandem wheels.

xiii. Kill Switch:

 Mowers must be equipped with an automatic throttle-closing device. All mowers must be equipped with a kill switch, which will turn off the ignition if the driver leaves the mower. Velcro is not acceptable. Pressure switches are not allowed. The kill switch must remain in a closed position (engine not running) until the driver mounts the mower. Additional Switches that can bypass the kill switch are not allowed under any circumstance.

xiv. <u>Throttle</u>:

1. All mowers using hand throttles that are adjustable must disable them so that they cannot be adjusted or moved by the driver at any time during competition. Cables must also be secured so that the engine RPM will not be affected by moving the cable in any way, or at any time.

VII. MODIFICATIONS NOT LISTED ARE NOT APPROVED:

A. To provide a safe opportunity to demonstrate the driver's ability when in competition with essentially identical mowers. This is a highly regulated class to ensure uniformity between Junior Prepared machines. As you can see, these machines are essentially Stock Chassis (AF. SF. CF. & BP) with IMOW drive trains. This allows young racers to gain race experience speeds which will approximately reach 15-20 mph, but with a more stable platform.

VIII. PREPARED CLASSES: (In General, check class build):

- **A.** Engine must be originally manufactured for use in lawn mowing equipment and be stock in appearance, with the exception of air filter, air cleaner, or velocity stack. The crankshaft must be in the original orientation and clearance hole in the frame. The engine may be internally modified.
- **B.** Exhaust design is open, but must face away from driver and competitors, in a rearward and/or downward direction, and present no obvious safety hazard.
- C. Starters must be onboard, either electric or pull-rope.
- **D.** Driveline may be modified from the engine pulley to the rear wheels but must utilize a shift-able lawn mower transmission or transaxle.
- E. Rear axles may use open differential, locked, "live" or solid axle. No single-wheel drive.
- F. No centrifugal and or torque converter clutches.
- **G.** The rear axle should use shaft locks, center bolts, or thru bolts to secure the rear wheels.
- **H.** All steering linkages must use ball-type or spherical threaded rod ends.

- I. The Front axle may be pinned, bolted, or welded into the stock position. No suspension, and no shock absorbers. Axles must be a 1- piece beam design.
- J. The Front axle and steering may be reinforced, substituted, or fabricated. In the case of racer-fabricated axles, these will be subject to the judgment of the Technical Inspector as to their credible safety for racing. Aluminum may not be used as the material for the one-piece axle.
- **K.** Shaft locks, center-drilled axle with locking bolts and castellated nuts with cotter pins, are acceptable for securing front wheels. Cotter pins, E-rings, and C-rings alone, bent nails, hitch pins; over-center pins, and quick-release pins are not sufficient for wheel retention and are not approved.
- L. Wheels must be the same size on each axle, of any origin, made of metal. No dual or tandem wheels.
- **M.** Lawn Mower tires must be used.
- **N.** Footholds must be discrete, and no more than 2" high, made of flat or "L" stock (no rod stock), and made such that the foot cannot become entangled in a rollover.
- **O.** Class is determined by the OEM factory rating of the lawn mower engine.

IX. <u>CLASSES DEFINED:</u> (based on OEM BLOCK designation)

A. <u>GPK, GPS, GPT CLASS</u>:

- i. GPK drivers age is 11-15 years old with at least one (1) race year in the JP Class.
- **ii.** There must be a total of four (4) races (including Heats and Features) in that year.
- **iii.** GPS and GPT drivers are 16 years old and up.
- iv. Parents or Legal guardians must be present on race day.
- v. All governed classes are required to stay on the track with the engine continuing running at the finish line after the Feature Race for RPM and tire pressure check. Leaving the track and shutting off the engine will result in disqualification.

B. ENGINE:

- i. Governed at 3,650 RPM maximum with no load (foot off the clutch in neutral).
- **ii.** Single-cylinder, overhead valve engines, or L-head (flathead) must be stock, complete, and not to exceed the factory rating.
- iii. Twin-cylinder, overhead valve engines, or L-head (flathead) must be stock, complete, and not to exceed a factory rating of 810cc, 49 cubic inches.
- iv. No Big Block Engines.
- v. Must have stock air filter assembly and filter.
- vi. Aftermarket consumable parts such as air filters and spark plugs may be used as long as they are a direct stock replacement.
- vii. The engine MUST have the original stock flywheel.

C. <u>WHEELBASE</u>:

i. The center of the front axle to the center of the back axle is a 42" minimum unaltered wheelbase.

D. <u>AP</u>:

- 4 stroke engines 10.5 hp and under with a factory maximum stock original displacement of 22 cubic inches must provide specs (This includes all engines both Valve-in-Block L Head and Over Head Valve with a maximum displacement of 22 cubic inches).
- **ii.** The crankshaft must be in its original orientation.
- iii. Billet flywheels are MANDATORY.

- iv. Engine plate may be welded to frame rails as close to the original location as possible.
- v. The center of the front axle to the center of the back axle is a 34" minimum unaltered wheelbase.
- vi. Width; Maximum 40" sidewall to sidewall
- vii. 4" minimum, front wheels, 6" minimum rear wheels
- viii. Minimum 4" ground clearance to frame.
- ix. Must appear stock.

E. <u>SP</u>: (Is No Longer, so will run as a CP)

- i. Valve-in block single-cylinder 4 stroke engines over 8.5hp
- ii. Mid-engine frames are not allowed
- iii. Billet flywheels are MANDATORY.
- **iv.** The center of the front axle to the center of the back axle is a 39" minimum unaltered wheelbase.
- v. Width, Maximum 40" sidewall to sidewall,
- vi. 5" minimum front wheels, 8" minimum rear wheels.
- vii. 4" minimum ground clearance to frame.
- viii. 2 ¹/₂" minimum ground clearance to the deck.
- **F.** <u>GP</u>: (Ages 11 and up)
 - i. ENGINE: 33 ci and under (stock)
 - ii. Governed engines, 3650-RPM max. (No Load).
 - iii. Single-cylinder Overhead Valve & Valve in block flat head ("L" Head")
 - iv. Engines must be Factory stock, complete, and not to exceed the factory rating.
 - v. MUST have the original stock flywheel.
 - vi. Aftermarket consumable parts such as air filters and spark plugs may be used as long as they are a direct stock replacement.
 - vii. 42" minimum unaltered wheelbase
 - viii. 5" minimum front wheels, 8" minimum rear wheels
 - ix. Width; Maximum 40" sidewall to sidewall
 - **x.** 16" maximum rear tire diameter
 - **xi.** 4" minimum ground clearance to frame.
- G. <u>GPK</u>:
 - i. Build requirements will be identical to the adult GP build requirements.
- Н. <u>СР</u>:
 - i. All single-cylinder overhead valve or two-cylinder valve in the block, 4 stroke engines, 20hp and under
 - ii. Billet flywheels are MANDATORY
 - iii. Mid-engine frames are not allowed
 - iv. 42" minimum unaltered wheelbase
 - **v.** Width; Maximum 40" sidewall to sidewall.
 - vi. 6" minimum front wheels, 8" minimum rear wheels.
 - vii. 4" minimum ground clearance to frame.
 - viii. 2 ¹/₂" minimum ground clearance to the deck.
 - ix. Must appear stock.

- I. <u>BP</u>:
 - i. All overhead valve V-twin 4 stroke engines, 20 hp and under
 - ii. Billet flywheels are MANDATORY
 - iii. Mid-engine frames are not allowed
 - iv. 42" minimum unaltered wheelbase
 - v. Width; Maximum 40" sidewall to sidewall.
 - vi. 6" minimum front wheels, 8" minimum rear wheels.
 - vii. 4" minimum ground clearance to frame.
 - viii. Minimum ground clearance to the deck.
 - ix. Must appear stock.

X. FACTORY EXPERIMENTAL.

- A. <u>FX</u>: These are mowers as delivered from the factory except for the modifications listed below.
 - **i.** Maximum engine displacement (465cc) single cylinder. 4-cycle, originally manufactured for use in lawn mowing equipment.
 - ii. They may be internally and externally modified.
 - iii. The exhaust is open as long as it faces away from the driver and presents no obvious hazard.
 - iv. Driveline choice is open.
 - **v.** Wheels may be of any origin, made of metal, 10" diameter maximum.
 - vi. Kart tires are allowed; Snow hogs are allowed on the front only.
 - vii. The rear axle should use shaft locks, center bolts, or thru-bolts to secure the rear wheels.
 - viii. All steering linkages must use ball-type or spherical threaded rod ends.
 - **ix.** The Front axle may be pinned, bolted, or welded into position. No suspension, and no shock absorbers. Axle must have a 1-piece beam. Center-pivoted axles may be dampened.
 - x. The Front axle and steering may be reinforced, substituted, or fabricated. In the case of racer-fabricated axles, these will be subject to the judgment of the Race Official/Tech Inspector as to their obvious safety for racing.
 - xi. Shaft locks, center drilled axle with locking bolts, castellated nuts with cotter pins, and washers with new cotter pins are acceptable for securing front wheels. Cotter pins, E-rings, C-rings alone, bent nails, hitch pins, over-center pins, and quick-release pins are not sufficient for wheel retention and are NOT approved.
 - xii. Throttle and brake controls may be relocated.
 - **xiii.** Must use axle-mounted brakes, no lawn mower transaxle or transmission-mounted brakes.
 - **xiv.** The cutting deck may be simulated, to extend no more than 2" beyond the tire sidewall.
 - **xv.** Stagger is allowed; however, the offset is not.
 - **xvi.** Footholds must be discrete, and no more than 2" high, made of flat or "L" stock (no rod stock) and made such that the foot cannot become entangled in a rollover.
 - xvii. Handlebar grips cannot be added to steering wheels!
 - **xviii.** Mid-engine frames may be updated but must retain the form of the original factory frame. Mid-engine frame updates must follow the following specifications:
 - **xix.** 15-inch maximum width outside to outside of the frame (rails).
 - **xx.** The frame may not exceed an overall length of 48 maximum.
 - **xxi.** 42-inch maximum wheelbase center front to center rear axles, Width, Maximum 40" sidewall to sidewall.

- **xxii.** Must be replaced with steel only. Round tubing is not allowed.
- **xxiii.** Hoods, grills, and fenders must be original or retain the original form.
- **xxiv.** Pan chassis frames may be altered to shorten the wheelbase. The minimum wheelbase on altered pan chassis frames is 42 inches center front to center rear axles. They must retain the original pan chassis and body parts.
- **xxv.** Engine must remain in its original position (front, mid or rear) in reference to the steering column and the seat.

B. FXS & FXT Class (Basic Rules)

i. <u>ENGINES</u>:

- 1. Each Class has a specific maximum Horsepower rating (OEM rating) and max cubic inch displacement. Any allowable modifications will be stated for that class, if it does not say you can do it, it's not allowed.
- **2.** Engines must be lawnmower engines or direct replacement engines, For example, Clone engines.
- **3.** Single-cylinder (FXS) OEM rated overhead valve (OHV) or L-head (flat head) 33ci.
- 4. Billet flywheels are MANDATORY
- **5.** Billet/aftermarket valve covers can be used to allow clearance for roller rockers.
- **6.** Opposed twin (L-Head, 46ci maximum) flat head, coming from the lawn equipment origin, 4 cycle engines.
- V-twin cylinder (FXT) vertical or horizontal, Small Block Engines Only, 810cc 49 ci.
- 8. Internal and external modifications are allowed for all engines.
- 9. Modification to block and heads are open.
- **10.** Original engine block assemblies must be used.
- **11.** Billet side covers and sumps are allowed. Aftermarket cylinder heads, forged or billet NOT allowed.
- 12. All Rotating assemblies MUST be covered
- **13.** All cooling fins and safety shields must be intact
- **14.** No diesel or liquid-cooled engines in any class.
- **15.** NO Big Block OEM-rated 4-cycle lawn equipment engines.

ii. <u>CHASSIS</u>:

 Frames, and parts, must retain the original manufacturers' (OEM) specifications (no chopping) regarding wheelbase length unless modifications are specified in a particular class. Material (steel) may be added for structural strength. It is recommended that front axles be bolted or welded rigid eliminating the stock pivoting. No rear engine lawn mowers must be front engine traditional style lawn tractors with a hood covering the engine and rear fenders. No handlebars, to prevent a racer from being pierced in the event of a rollover. All tractors must have been factory-built lawn cutting tractors Frame width is 15" max.

iii. <u>BODYWORK</u>:

1. Can be customized (where allowed) but must retain some resemblance to a lawn tractor. All parts must be securely fastened to the chassis i.e., fuel tanks, batteries, bodywork, etc.

iv. <u>FUEL</u>:

1. Only pump gas unless specified in that class.

v. BRAKES/CLUTCHES:

1. Must be intact and working. If not equipped with a neutral gear all tractors must have a clutch lockout so the machine can be pushed by hand. When running a centrifugal clutch, the driver must be seated on a machine to have it started or the rear wheels securely off the ground.

vi. <u>THROTTLE</u>:

1. No fixed throttles. Foot and trigger throttles will have the two return springs as mandated in ALL CLASSES. No solid throttle cables. Must be braided cable like a bicycle brake cable.

vii. <u>KILL SWITCH</u>:

1. The tractor must have a working commercially manufactured tethered kill switch and be fastened to the driver when on track in BOTH CLASSES.

viii. <u>EXHAUST</u>:

1. Is open, as long as it points down and away from the driver and presents no obvious hazard No stacks.

ix. <u>SPINDLES/AXLES</u>:

1. Front spindles must be drilled and cotter pinned or safety pinned Rear axles must be locked up with axle lock collars Rear axles must be in stock location and if a custom front axle is allowed it must be located close to the original location and not on top of chassis.

x. <u>MOWER DECKS</u>:

1. If the mower deck is left on, the blades must be removed and the deck must be securely fastened to the chassis.

xi. <u>SEATS</u>:

1. Must be mounted in the center of the frame from one side of the frame to the other side. Go-kart seats are allowed.

xii. <u>BUMPERS/NERF BARS</u>:

1. Max width front: Inside tires not to cover the front face of the tire. Side Nerf bars are flush with the outside of the tires. No sharp edges. Rear bumpers and side bars when equipped must stay in from the outside of the tires 1/2" on each side. Rear bumpers must be of round tube design to prevent climbing. A closed or continuous loop bumper is the only authorized bumper on the rear. Side crash bars/Nerf bars, when equipped must be installed no more than 1.5" in from the outside of the tires. They must have a kart-style secondary hoop that can withstand side impact.

xiii. <u>NUMBERS</u>:

1. All tractors must have a visible number. A minimum 3" height is recommended, on a contrasting background.

xiv. <u>WHEELS/TIRES</u>:

1. Though offsetting of axles is permitted, tire sizes will be of the same size per axle, for example: from the left and right the same size for the front and left and right the same size for rear axles.

C. Factory Experimental Single(FXS) CLASS:

i. <u>AGE GROUP</u>:

1. 18 years old and older

ii. <u>ENGINE</u>:

- 1. Single cylinder Max I8hp or 33ci OEM rated OHV or Opposed twin Flat Head 46 ci maximum flathead coming from the lawn equipment origin (4 cycle engines).
- **2.** No fuel injection.
- 3. Internal and external modifications are allowed for all engines.
- **4.** Carburetors size/type open
- 5. Custom intake manifolds allowed
- 6. External ignition devices are allowed
- 7. Cross brands of lawn tractor OEM ignition systems allowed
- 8. External shields must remain in stock.
- 9. Billet flywheel MANDATORY

iii. FLATHEAD TWIN ENGINES:

- 1. 46 ci max displacement
- 2. Factory oversize pistons used to repair engine accepted
- 3. Internal modifications allowed
- 4. Carburetors size/type open
- **5.** Custom intake manifolds allowed
- **6.** External ignition devices are allowed, cross brands of lawn tractor OEM ignition systems allowed

iv. <u>FUEL</u>:

- **1.** Pump racing fuel allowed.
- **2.** No electric fuel pumps

v. DRIVE TRAIN:

- 1. centrifugal clutch
- **2.** Traditional belt clutches are allowed.
- **3.** 90-degree gearboxes
- 4. jackshaft setups allowed
- 5. All chain guards must be a minimum thickness of 1/8" aluminum or steel.

vi. <u>STEERING</u>:

1. Direct steering is mandatory, and must use lock nuts on all connections.

vii. <u>WHEELBASE AND MAXIMUM WIDTH</u>:

- **1.** 39" mm wheelbase. 42" max width.
- **2.** No more than 4" of total offset.
- Offsetting of axles, the center of the frame to the outside of the right tire is to be 23" and from the center of the frame to the outside of the left tire is to be 19" giving a total offset of 4".

viii. <u>FRAME</u>:

- 1. Firewall protection is recommended.
- Discrete chopping of chassis to install after-market clutches, gearbox, seats, and axles allowed must retain original OEM wheelbase Frame width is 15" max.

ix. <u>BRAKES</u>:

1. Hydraulic Brakes are mandatory. Front brakes optional

x. <u>WHEELS/HUBS</u>:

- 1. Go Kart dirt tires are allowed, min 6" rims on the rear and 5" on the front.
- 2. Lawn Mower tires, kart dirt tires, and mini sprint tires are allowed.
- 3. Custom steel or aluminum rims allowed
- 4. No Stock Lawn Mower Wheels.
- **5.** Custom hubs or spindles must have lock collars, lock nuts, or new HD cotter pins to prevent movement.

xi. <u>BUMPER/SIDEBARS</u>:

- 1. Side/crash bars are mandatory, see general rules.
- 2. Closed loop rear bumper mandatory
- **3.** Front bumpers are optional in this class, see general rules.

xii. <u>MINIMUM WEIGHT</u>:

1. 450 lbs with driver.

D. Factory Experimental Twin(FXT) CLASS:

i. <u>AGE GROUP</u>:

1. 18 years old to race in the Stock class to race in FXT.

ii. ENGINE OPEN:

- 1. V-Twin vertical or horizontal Small Block Engines Only 810cc 49 ci in. rated 4 cycle lawn equipment engines.
- 2. NO Big Block OEM-rated 4 cycle lawn equipment engines.
- 3. Internal and external modifications allowed for all engines.
- 4. Aluminum billet flywheels are MANDATORY.
- **5.** Modification to block and heads are open.
- **6.** Original engine block assemblies must be used. Billet side covers and sumps are allowed. Aftermarket cylinder heads, forged or billet NOT allowed.
- 7. Ignition is open.

iii. <u>FUEL</u>:

- **1.** Pump racing fuels permitted.
- **2.** Fuel pumps: no electric fuel pumps are allowed.

iv. DRIVE TRAIN:

- 1. Is open to live axle, belt or chain drive custom gearboxes or transaxles.
- **2.** Centrifugal clutches are allowed.
- **3.** Where custom drivetrains may be hazardous to the driver, protective shields must be installed, all chain guards must be a minimum thickness of 1/8" aluminum or steel.

- 4. ATV drivetrain and suspension are not allowed.
- 5. No all-wheel drive machines allowed.

v. <u>STEERING</u>:

1. Direct steering is mandatory. No plastic steering wheels unless it is the type that is reinforced with steel.

vi. WHEELBASE AND MAXIMUM WIDTH:

- 1. 42" minimum wheelbase. 42" maximum width.
- **2.** No more than 4" of total offset.
- **3.** Offsetting of axles, the center of the frame to the outside of the right tire is to be 23" and from the center of the frame to the outside of the left tire is to be 19" giving a total offset of 4".

vii. <u>FRAME</u>:

- **1.** It is recommended that engines are separated by a safety shield or stock cowling from the driver.
- **2.** Discreet chassis modifications allowed for axle installation and reinforcement.
- **3.** Scalloping of frame allowed in getting seat down on tunnel type chassis Frame width as 15" maximum.

viii. <u>BRAKES</u>:

1. Hydraulic brake is mandatory. Front brakes are highly recommended.

ix. <u>WHEELS/HUBS</u>:

- **1.** Go Kart dirt tires are allowed, min 6" rims on the rear and 5" on the front.
- 2. Lawnmower tires, kart dirt tires, and mini sprint tires are authorized.
- **3.** Custom steel or aluminum rims allowed, No Stock Lawn Mower Wheels.
- **4.** Custom hubs or spindles must have lock collars, lock nuts, or new HD cotter pins to prevent movement.

x. <u>BUMPER/SIDEBARS</u>:

- **1.** Closed-loop rear bumpers and left-side crash bars are mandatory and right-side crash bars are recommended.
- 2. Front bumpers are optional in this class.

xi. <u>BODY</u>:

1. The body can be homemade but must resemble a lawn tractor. No sharp edges. Rear fenders must not be wider than the bulge or widest part of the rear tires.

xii. <u>MIN WEIGHT</u>:

1. Min weight with the driver is 500 lbs.

XI. <u>CODE OF CONDUCT</u>:

Midwest Motorsports LLC expects its staff, volunteers, all drivers, drivers crews, spectators, and anyone that is involved in the event in any capacity, to always act in a courteous, professional manner for the benefit and growth of lawnmower racing. The driver is responsible for the conduct of his/her guests and crew, even while on the race track. Should anyone attending the event be found committing any

detrimental act that person will be removed from the premises, and the member driver will be held responsible for the conduct of that guest/crew member and will be subject to disqualification without prior notice. Actions or conduct that may lead to disqualification include but are not limited to:

- **A.** A conscious effort by a member to ignore or circumvent in any way, Midwest Motorsports LLC rules as defined in this Rulebook.
- **B.** Verbal assault, either public or written, of any Midwest Motorsports LLC member, volunteer, or any other affiliates.
- **C.** Physical assault of any Midwest Motorsports LLC member, volunteer, or any other affiliates.
- **D.** Persistent on-track violations, including, but not limited to rough driving, passing under yellow, and failure to follow on-track instructions.
- **E.** Any conscious effort to undermine the integrity of Midwest Motorsports LLC, its staff, volunteers, and fellow affiliates.
- **F.** Any conscious effort to undermine the ability of the Midwest Motorsports LLC, its staff, volunteers, and fellow affiliates to conduct their activities at any race venue hosting a Midwest Motorsports LLC event.
- **G.** Any disruptive behavior, which, in the opinion of Midwest Motorsports LLC track officials and staff, interferes with the orderly conduct of sanctioned and/or affiliated lawnmower races. Any member of the Midwest Motorsports LLC Staff may give reasons for suspension, revocation, or probation verbally and/or in writing, to all offenders, at his or her discretion. The appeal of any suspension or revocation of probation will be handled on an individual basis. However, the right to appeal may not be granted in every case. Any request for appeal must be submitted, in writing, to the Midwest Motorsports LLC Staff, stating the specific reason(s) for the appeal.

XII. Our Vision:

A. We invite all drivers to race at our tracks. Please remember that Midwest Motorsports LLC strives to maintain professionalism in our appearance and conduct. Our goal is to keep the racing competitive, fair, safe, exciting, and fun for everyone involved.

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