

# **GK Machine Inc Machine Mania**

**Oregon State Fair**  
August 23 - September 3, 2018  
**Lawn Mower Racing**  
Saturday, Sept. 1, 2018

**Disclaimer:** Participation in Motorsports events of any kind involves inherent risk of property loss, injury or death. GK Machine Incorporated, The Oregon State Fair, Salem Indoor Speedway and any other persons or entities, specifically including but not necessarily limited to sponsors, drivers, crew members or officials, which are in any way involved in this event can assume no liability for any loss or harm that may result from participation in or attendance at this event. While the rules have been written with the safety of drivers, crews, officials and anyone else present in mind, NO guarantee or warranty, express or implied, can be made that following such rules may prevent any loss, injury or death to oneself or others. Drivers and crew members participate at their own risk and shall be required to sign a legally binding waiver prior to being granted participation in this event.

## **General Regulations**

On Track Regulations: Any deliberate actions to circumvent the safety features of a mower for the Lawn Mower race will result in disqualification of the driver. These sanctions will include a minimum of the following:

- a. No alcoholic beverages or illegal drugs are allowed within the controlled area of the racing activity, including the pit area. 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.
- b. 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.
- c. 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.
- d. Multiple mower blocking is not permitted.
- e. The racer that causes an incident will restart the race at the end of the field. This will be determined by the track officials.
- f. Flags will be used to communicate to the racers the following on track conditions:
  - **Green:** The race/practice is underway when displayed.
  - **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. On the third unassisted mower spin by the same driver, the driver will be black flagged and removed from the track. If a mower becomes disabled on the track the driver is to remain seated on the machine unless a safety issue (fire, etc.) prevents this. The golf cart will push the mower to the exit of the track.
  - Drivers not remaining on their mower during a caution will receive a black flag warning and be placed at the rear of the field. The second infraction will result in the loss of all points for the day for that class. Disabled drivers receiving assistance from any non-racing spectator who has entered the track area without permission will be

assessed the same penalty as drivers who fail to remain on their mowers. If a driver not racing in the class enters the track area uninvited he/she will receive the same penalty as the on track driver.

- **Yellow & White**: The field is not bunched up for restart. If this is displayed, close it up.
- **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.
- **Blue with Yellow Stripe**: Faster mowers are approaching, drivers should yield track position to race leaders and move to the top of the track.
- **Black**: This for driver or equipment infractions. The driver must safely exit the track and consult with the Chief Steward. A furled 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.
- **White**: One lap to go. Crossed white and green indicates race is halfway complete.
- **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.

g. 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.

h. 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.

i. If the mower stalls move the mower off the track to a safe place off course. Mowers may not be moved to the infield.

j. Unsafe off track driving will not be tolerated.

k. Drivers must attend all drivers meetings.

l. Starting positions will be determined by random draw.

m. Drivers are expected to report to the track in a timely manner. The Track Steward or his designee will signal mowers to move from the pit area to the start/finish line on the track. Once mowers are lined up, the class will be given two laps to circle the track. If a driver participating in a single racing class has not entered the track and his/her spot in the grid within these two laps he/she will start the race at the rear of the field. At the end of the two "grid up laps" the flagger will signal one to go and then start the race.

## **Pit Area and Track Regulations**

a. Mower pit speed is 5 MPH maximum.-Drivers will be warned of violations of pit speed. A second warning for excessive speed in the pits will result in the loss of points.

b. Long pants, closed shoes and shirts are required in the track area.

c. 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.

d. Mower must be completely stopped before driver dismounts.

e. Track crews are under the direction of the Track Steward at all times.

f. The driver is responsible for the conduct of his/her guests and crew, even while on the track.

g. Only authorized personnel and drivers shall enter the racing course during racing activity. This includes all individuals entering the pit area, including crew members and guests

h. No vehicles other than racing mowers and official vehicles such as tow mowers shall be on or near the track.

## **Driver Eligibility**

- a. Drivers must be at least 18 years of age. Pit crew must be 16 years of age.
- b. All drivers must sign a release discharging the GK Machine Inc., and Oregon State Fair from liability.
- c. Drivers should conduct themselves in a professional, mature manner while on the track. If a driver feels there is an issue requiring attention, he/she will bring the issue to the Race Official in an appropriate manner.

## **Driver Safety Equipment**

- a. Every driver must wear an automobile racing or motorcycle-type full-face helmet- with chin guard approved by DOT or the Snell Foundation. The helmet must fit snugly and be securely buckled when driver is on the track.
- b. Goggles or a face shield are required. Glasses are not adequate protection.
- c. All drivers must wear long pants-without excessive rips and/or holes, long sleeved shirt, full-fingered gloves and leather over the ankle boots on the track. Tennis shoes are not acceptable. Chest protectors and other anti-abrasive suits are highly recommended. No loose clothing on the track.
- e. Each pit area must have liquid fire rated fire extinguisher.

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

## **Technical Inspection**

- a. All mowers entered in the event must inspected for compliance by the Technical Inspector prior to participating in practice or racing: Stock motor inspections, safety gear inspection, Stock flywheels, batteries that work, NO SHARP EDGES, paperwork in place ahead of time.
- 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. Initial build inspection will occur prior to the first round.

## **General Mower Specifications**

- a. Cutting blades must be removed.

- b. Cutting decks must be securely mounted in near stock location. Only Pro-X and Super Modified 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 and functional battery must be on board, either electric or pull rope in all classes.
- g. Rear wheels must be secured to the rear axle with shaft locks, center bolts or thru-bolts.
- h. 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" when fully extended. 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.
- i. Mower brakes on any open gear ratio mower must be upgraded to a brake system on the rear axle.
- j. Brakes may be hydraulic or mechanical- and must be axle mounted.
- k. Throttle and brake control may be relocated.
- l. The steering wheel, seat, body and frame must be centered between the right and left wheels. Seats must be forward facing and cannot be turned to either side of the mower. Offset is not permitted.
- m. Drive line may be modified from the engine pulley to the rear wheels. All classes must use a shift able lawnmower transmission or transaxle. Vari-drives may be used if originally equipped.
- n. No centrifugal or torque converter clutches permitted.
- o. Rear axle may use open differential, locked, live or solid axle. No single wheel drive. Aluminum rear axles are permitted.
- p. Wheels must be the same size on each axle, of any origin, but made of metal. Duel or tandem wheels are forbidden.
- q. 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. Foot guards should be no higher than 5" from the bottom of the bar to the top and be flush with the bottom of the frame. Bars should be 2" off the rear tire. With wheels turned to extreme position, there should be 2" of clearance between tire and bar.
- u. External ignition systems are authorized.

**IMPORTANT SAFETY NOTE:** There may be **NO** alterations to a stock flywheel. ***This is to include removing the magnets*** and/or removing metal from the flywheel in various locations. Altered flywheels are not tested under any standards for safety and may not withstand high rpms. Billet flywheels are required.

- 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.
- y. Mowers may only operate on pump gasoline or commercially available race fuel- maximum 114 octane. The addition of nitrous oxide, rocket fuel, alcohol or other oxidizers by a racer is not permitted. No combustion enhancing substances may be added to the crankcase oil or air cleaner assembly. No electric fuel pumps.
- z. All engines must be naturally aspirated. Blowers, turbochargers, and water injection systems are not allowed.

## **Tires, Steering, Bumpers & Seats**

- a. Tires must be lawn tractor tires in all classes.
- b. Substituted steering wheels are permitted. They may not be mounted offset unless originally mounted offset. Steering "wheel" consists of a **360** degree circular device. This wheel may not be pegged or have steering devices attached to them. Hand throttle and brake controls are permitted.
- c. All positively charged terminals must be insulated with a cover or heavy tape. Battery must be well secured on the mower. Any battery mounted outside of the frame must have the sides encased in steel a minimum of 1/8" thick 2/3 of the way up the sides of the battery and must include an additional hold down support.
- d. All mowers must be safe and complete with all parts and panels in places with no missing fasteners. Machines that have been involved in an 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.
- e. All exposed sprockets, chains, rotating shafts and pulleys must be fitted with metal guards 1/8 inch thick minimum deflecting a broken chain downward and preventing entanglement with mower parts.
- f. **Mowers must be free of sharp edges, projections and protrusions.**
- g. A rear bumper is required for ALL classes. Bumpers must be no wider than the rear tire width, fabricated from either 1" or 3/4" outer diameter round tubing with radius bends and installed a maximum of 2" from closest surface of the rear tire. Recommended height of bumper from bottom bumper loop to top bumper loop 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.
- h. Seats must be present and of lawn mower origin. Seat is defined as being *a separately attached device* on which the driver will place his body during racing competition. They should be securely mounted to the mower, on the center of the frame, facing the front of the mower. 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.

## **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 1/2" of clearance between the fender edge and all sides of the tire.
- Flaring of the fender such that there remains 1/2" of clearance between the fender edge and the top of the tire.
- 1" of vertical material must remain 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.
- Fender trimming or flaring resulting in sharp edges will not be permitted.
- Removal: Any sheet metal originally on a mower may not simply be removed. A mower originally delivered with fenders must have fenders. A mower originally delivered with a hood must have a hood.

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

- All mowers must have a functioning mechanical clutch. No chain drive from engine to transmission is allowed.
- Mowers must present a neat and clean appearance. No written profanity is allowed.

#### **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.

50 points for 5<sup>th</sup> place finishing position

100 points for 4<sup>th</sup> place finishing position

150 points for 3<sup>rd</sup> place finishing position

200 points for 2<sup>nd</sup> place finishing position

250 points for 1<sup>st</sup> place finishing position

## TRACK PROCEDURES

1. Whenever possible the track will be set up with Head Flag Person located at the entry to the track.
2. The Track Steward will be the last communication with the Head Flagger who will declare the race ready to begin.
3. Once the starting grid for a class is on the track, the entry will be closed and a red cone placed at this point. If a driver misses line up, they will pull up to the cone and WAIT to be invited onto the track by the Track Steward. Every attempt will be made to permit the driver to race. If during ANY racing activity you leave the track, do not reenter the track until you are invited by one of the flaggers or Track Steward. Any unauthorized entry will be black flagged.
4. Incidents such as bumping, cutting racers off and other unsportsmanlike behaviors will be monitored by the track personnel. The flagger who has the best view of an incident may **black flag drivers as deemed necessary**.
5. When a call is made regarding a line up or a driver is sent to the rear, no discussion about the call will transpire on the track or from the pits. All calls are final, not responding to a call will result in a black flag to the driver.
6. Races will begin with a side-by-side rolling start. Two attempts (including the original start) will be made to start the race. If after two attempts a flag is thrown, the line-up will be single file. The driver causing the restart will move to the back of the pack. At that point everyone will simply move up one spot (if the person in front of you caused the flag he/she goes to the back and you move up, same with the person on your side.)
7. Any mower involved in an accident will be inspected and approved by an official before being permitted to return to the track and competition.
8. Know your flags! Red means stop as soon as it is safe to do so, not slow down. Drivers will be given one warning for an on track incident. They will be shown the black flag in a rolled up position. If a driver is shown it a second time in the unfurled position, they must exit the track.
9. Drivers breaking down on the track will be provided two caution laps to make repairs. Once the mower is repaired it will be placed at the rear of the field. If after two laps repairs will not permit the mower to continue it must leave the track (racing area). When drivers see a yellow flag flown they should raise their hand so others know mowers are slowing down. Drivers should use the same sign anytime they leave the track.
10. When the race is over take a cool down lap and then exit the track at a safe speed, maintaining appropriate speed in the pit area.
11. Any time that mowers are in motion on the track, the flagger & official will communicate **ONLY** with other track officials. Any other communication will need to wait until the track is clear and mowers are no longer moving.

**Flaggers:** As we do not have designated flaggers, we welcome anyone who wants to help. However, we ask that you conduct yourself in a professional manner and stay off the main track and behind the bales/barriers. Please only go on the track to assist someone under yellow, black or red flag.