

# *SOLTRA MANDATE*

SOLTRA is a Not-for-Profit organization, dedicated to lawn tractor racing in a safe, but competitive manner. We are a family oriented organization that races for entertainment purposes only and to support our charities. We are also dedicated to retaining the integrity of the sport of lawn tractor racing as a grass roots sport, which is affordable and fun for all.

We are not interested in the design and build high cost machines. Although we encourage build modifications to modified and super modified classes, we understand that we race lawn tractors and all machines must look like, and be built on lawn tractors. We do not race go-carts or mini sprint cars and will not accept tractors that have been modified as such, or to look as such.

The rules have been written with this mandate in mind. Although every effort has been made to cover all aspects of building a tractor, there may be unintentional omissions or gray areas. If an oversight is discovered, do not assume that modifications may be made in this particular area until consulting with a member of the technical team for direction.

The Association's Executive Committee reserves the right to refuse the acceptance of any build that they feel is unsafe, unlawful, or is otherwise deemed detrimental to the sport and the Association as a whole. Their decision will be final.

The SOLTRA Executives

## Race Day Protocol

- All drivers must arrive a minimum of 2 (two) hours before the posted race time, unless previous arrangements have been made.
- All members must show membership card at all venues. Failure to do so may result in having to pay to enter.
- One membership card allows 2 people entrance to venue.
- All drivers must register before unloading their tractors.
- Any tractor in need of a **re-tech.** inspection has until one hour before the posted race time to do so.
- Any tractor either being speed or R.P.M. tested must be done on the dyno with the **driver** seated on the tractor.
- All drivers racing the stock modified and/or Super-Stock classes must take their tractors to a specified quarantine area to have their tractors re-tech'd immediately **following** their respective feature races. Failure to do so will result in disqualification.
- Each member will be allowed one guest in the pits.
- Each member will be responsible for his or her guest.
- Each guest must sign a waiver, at which time they will be given a guest membership card that must be worn at all times.
- There will be a "ZERO TOLERANCE" to alcohol consumption before or during a race. This includes all members and their guests.
- Anyone (members or guests) found consuming, or suspected of consuming alcohol before or during a race will be removed from the pit area and will have their membership revoked without refund, and will be banned from racing for a period of one year from the date of the offence.
- Registration will end **one hour** before posted race time.
- Drivers meeting will be called immediately following the closing of registration.
- All drivers and track workers will attend drivers meeting.
- Any driver that does not attend the drivers meeting for **any** reason, will be put to the last place starting\_position of his/her heat, Exceptions may be allowed at the discretion of the Executive.

- **If time allows**, there may be hot laps **after** the drivers meeting. No driver will be allowed on any track without prior permission from an Executive Member.
- In the event of a "difference of opinion" occurring on **or** off the track, members must not confront other members.
- Any "difference of opinion" must be brought to the attention of the members of the Executive at the registration table, only **after** all racing is completed. At which time the Executive Members will work together to reconcile the "difference of opinion".
- In the event of a driver experiencing problems with his/her tractor, or sees a problem with the track or another tractor, that driver must raise his/her hand so that a caution can be called.
- If one or more track officials, or driver(s) feel that the track conditions have become unsafe, there will be a conference between track officials and drivers and a decision will be made whether or not to resume racing.
- **All decisions made by the Executive will be final!**

## General Rules

The following rules are subject to change without prior notice.

1. Tractors must use all factory-manufactured parts (i.e. hood, grille, and chassis); with the exception of rear fenders which may be fabricated, but are at the discretion of the tech committee.
2. Every driver must have and wear a DOT approved racing helmet, (i.e. snowmobile or motorcycle) with goggles or face shield. Half helmets are not permitted (must cover ears). Full-faced helmets with neck collar are recommended.
3. All drivers must wear long pants, shirts, and closed toe, leather, **over ankle** shoes or boots. **NO** shorts, tank tops/sleeveless shirts, or sandals will be allowed.
4. All tractors must run on pump fuel only (not to exceed 96 Octane). No alcohol or other additives will be allowed.
5. A) All tractors **MUST** and **WILL** go through a tech. inspection on at least one of two test and tune dates, and receive an inspection sticker before being allowed to race. If a failure occurs on either of these dates, drivers **must** make arrangements with their respective tech. directors to have their tractor re-tech'd.  
B) All shields and guards must be in place as determined by the tech inspector. **NO** open debris screens on rear-engine tractors. Tractors must have a device in place to keep fingers, hair etc. from coming into contact with debris screen. All gaps between seat and fenders must be filled. Any exhaust pipes exiting **outside** the tractor chassis must be covered with a suitable heat shield.
6. **NO** seat, on **ANY** tractor, shall be mounted below the top of chassis tunnel!!
7. All drivers are asked to be at the track **two hours before** race time and must be registered at least **one hour prior** to start of race. This allows the officials time to prepare heat race starting positions and allows for some practice laps. **If not registered by said time, driver may not race.** (Subject to SOLTRA Executive.)
8. Only **paid members** will be eligible to draw for their starting positions and receive points and plaques to reflect their finishing positions. All **non-members** will start at the rear in both their heats and features.
9. All tractors must have a number (black number on white background, or white number on black background, a minimum of 3" high). Must be placed on both top, front corners of hood; may also have number on rear of tractor. Numbers must not exceed two (2) digits.
10. Burnouts and unnecessary speed off track will not be tolerated. The first offense will result in offending driver not being allowed to race for the remainder of that day, and a one full race day suspension which will be served at the next race offending driver attends. The 2nd offense will

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result in a suspension of two races and the 3rd offense will result in a suspension for remainder of season with a review of racing eligibility at end of suspension.

11. Any driver exhibiting any signs of impairment (either drugs or alcohol) will not be permitted to race. No alcohol will be permitted at the track at any time during race event.
12. SOLTRA will not tolerate misconduct of any kind, on any website by members of SOLTRA which is disrespectful or detrimental to the sport of lawn tractor racing. If a member or members are disrespectful, as deemed by the SOLTRA Executive, that member or members will have his/her/their membership(s) revoked for the duration of one year. The reinstatement of the memberships of these individuals will be subject to Executive approval after this time.
13. Any tubing used for bumpers or "Norbert Bars" must not be smaller than 1¼", and must not be larger than 2" sq. or in diameter.
14. All engines, in all classes, must be a naturally aspirated, air-cooled, gasoline powered, vertical shaft engine (L-head or over-head design OHV) with an onboard starter (either pull type or electric) and not to exceed 18 HP unless otherwise specified. All mufflers (if equipped) must not protrude excessively beyond any sheet metal (i.e. hoods).
15. Any switches on tractors must not allow the engine to run without the tether cord attached.
16. The organizers of any race event can and will remove anyone who is not complying with these rules. Anyone who exhibits reckless, careless, or dangerous driving will also be removed, at the discretion of the SOLTRA executive.

## Racing Rules

1. Flag colours and what they mean;
  - A) Red - all drivers must stop and shut down their tractors immediately and hold their position.
  - B) Yellow - all drivers must slow down and hold their position (no passing).
  - C) Black - this flag is shown when a driver commits an infraction on the racetrack (rough driving, unnecessary bumping, etc.) A rolled flag, when shown to a driver, means that driver has one (1) lap to correct his/her performance on the track. If that driver does not correct his/her performance, he/she will be shown the full black flag, and must take his/her tractor to the pits immediately.
  - D) Green - signals all drivers to **GO! GO! GO!**
  - E) White - indicates one lap to go.
  - F) Crossed yellow and green flags – race is at half way point.
  - G) Checkered - the race has been won and is over. All drivers must pass by the checkered flag in order to be counted as completing the race.
2. The driver(s) who are a lap (or more) down should stay to the inside of the track at all times, allowing the faster tractors to get around the track. Blocking by lapped tractors will not be tolerated.
3. Any tractor that leaves the track during a race will draw an automatic caution. That tractor will go to the back of the field.
4. On the original green flag, a driver is **not** permitted to pass until that driver has crossed the start/finish line. Failure to do this may result in that driver getting the black flag.
5. In the event of a caution, re-start positions will be determined by the track officials. The driver causing the caution, and all others involved, will re-start at the rear of the field. Passing on a re-start is not permitted until the lead tractor has crossed the start/finish line, and only then you are permitted to pass on the outside.
6. "The Rookie Rule" - All rookie drivers, no matter what age or class, will **not** draw for position. These drivers will start at the rear of the field of their heat races in their respective classes with a yellow stripe across their shoulders and will continue to do so until deemed, by the executive, ready to draw for their position. Also, all rookie drivers will have a yellow stripe taped across the rear of their tractor for one full season.
7. In the event of a tractor break down, driver must remain on the tractor until yellow caution flag is shown, at which time the tractor must be removed from the track. Repairs must be made in the pits after which tractor may return to the track. **(No repairs to be made in centre of racetrack.)**
8. If an engine is suspected to be illegal, an inspection of that engine may be done, including a tear down.

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- A) If a tear down is required, it will be done by an unbiased third party with the owner/driver of the suspect tractor and at least one SOLTRA director present. If the suspect engine is found to be legal, it will be reassembled at the expense of the association. However, if the suspect engine is found to be illegal, it will be the responsibility of the owner/driver to reassemble that engine.
- B) A tear down will take place, if concerns are brought forward at no less than three consecutive races about the same tractor by no less than two different members.
9. All technical complaints must be taken to the Executive for consideration after the completion of **ALL** racing. If a competitor complains about a winning tractor the, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place tractors will be inspected.
10. **All NEW super-modified** drivers must be 18 years of age, unless they have previously competed (and completed) a minimum of twelve (12) race dates in the modified class and be at least 16 years of age. The Tech. Committee will be responsible for monitoring **ALL** new Super-modified drivers, and will take all necessary action(s) required to insure the safety of all drivers.
11. If any driver is caught without having their safety equipment (tether cord, helmet, boots, etc...), attached or done up correctly, that driver will be suspended for that race. A second offence will result in suspension for one complete race day.

## SOLTRA Tractor Classifications

**Junior:** for drivers 5 – 9 years of age (must not be older than 10 at time of registration)

**Engine:** 6.75 HP maximum, vertical shaft engine. (No horizontal shaft engines)

**Drive Train:** Must utilize a FWD/REV gearbox (No multi-speed transmissions). Must use a centrifugal belt driven clutch; 3" centrifugal belt clutch to a 5 1/2" pulley on the bottom of transmission, 9 tooth gear on transmission output shaft to a 36 tooth gear on the rear axle. Straight axle allowed and recommended.

**Brakes:** Must be intact and working. Rotor and caliper type brake set up on rear axle is highly recommended.

**Body:** Can be custom fabricated to scale down build but must retain the appearance of a lawn tractor.

**Frame:** You may use a small 37"-38" wheel base frame, early MTD / HUFFY small riders used this type. Fabrication is allowed using the following dimensions: a rectangle measuring 42" x 13" outside using 1" x 2" rectangle tubing. The front axle if fabricated will have a centre of kingpin to centre of kingpin dimension of 16" – 17 3/4". Axle is to be mounted at one end of the rectangle frame.

**Wheelbase/Width:** Wheelbase is 37"- 38" centre line of front axle to centre line of rear axle; width no wider than 36".

**Wheels/Hubs:** Must use 6" rear rims with a 15" x 6" x 6" tire. Front wheels can be 5" or 6" rims. Turf tires only, can use steel or aluminum rims.

**Bumpers/Sidebars:** Bumpers can be made of 1" round tube, rear mandatory and no wider than the rear tires (double tube/loops strongly recommended). Front bumper optional, if equipped, must not exceed further than the front face of the tires, nor extend in front of the tread face, or must not be further than 2" from the leading edge of hood to leading edge of bumper. Sidebars are mandatory, to be mounted between front and rear tires enough to protect the driver feet and legs. Sidebars can be fabricated from round or square stock 3/4" minimum. All bumpers and sidebars to be at a standard height of 7" measured from the ground to the centre of bumper / sidebar. All tractors must have running boards.

**Steering:** Any improvement in steering is recommended.

**Throttle:** Foot type, spring return throttle only. Tether kill switches mandatory and tether cords to be shortened to accommodate scaled down build.

**Speed:** Will be set by SOLTRA Technicians at Test & Tune days.



## SOLTRA Tractor Classifications

**Stock Modified:** for drivers 10 years old and up

**Modifications not listed below are not permitted. All tractors must look like lawn tractors, and must start and finish each race with all sheet metal intact (hoods, fenders, and grilles.)**

1. All tractors must have been a **lawn** tractor, (no garden tractors) with a rim size of a maximum 8" on the rear and 6" on the front. Rear fenders **may** be modified, but only to allow seat installation on to **top** of tunnel.
2. Either, blades, belts or mower decks must be removed so that accidental engagement of blades does not occur. Batteries and fuel tanks must be securely fastened to the inside of tractor chassis. Bungee cords are not sufficient.
3. Tractor **may** be as it originally came from the factory. No modifications, of any nature, are allowed to the engine (including governors and carburetor), or transaxle, with the exception of the addition of running boards. All tractors **must** have running boards (foot pegs are not allowed). Engines will have a maximum of 4000 RPM.
4. Tractors **may** be lowered by any means necessary to achieve minimum height of **6"** from ground to bottom of chassis. Drive belts and pulleys may be changed to achieve maximum speed (**10.0kph**) in high gear. If high gear allows for over-speed, a permanent gear lock must be installed to not allow tractor to exceed maximum allowable speed.
5. Front axle may be fabricated (may use "L", "J" or "C" type spindles) but must be installed in original location, and must be of one-piece design. If "C" type spindles are used, kingpins must be a minimum 1/2" diameter, installed with a minimum 5/8" diameter spindle. **Hyme joints** must be used in any steering component if a manufactured front axle is used. Front wheels **must** turn fully to the left **and** right.
6. All trans-axles and transmissions must retain **ALL** gears and remain unlocked.
7. Axle width with tires, front and rear, cannot exceed 36". All wheels **must** be held on to axles with center-drilled axle with locking bolts, oversized cotter pins and washers, lock nuts or castellated nuts with cotter pins. Visitors will be exempt from this rule.
8. After market air filters may be used if stock filters cannot be fitted.
9. Brakes must be intact and working (cannot drill cooling holes in brake disc).
10. Horizontal shaft engines will be permitted. Centrifugal clutches are not allowed. Mufflers are optional. If removed, exhaust must be routed to the outside of tractor chassis, directed horizontally and covered with a **suitable** heat shield.
11. Tether cords **are** mandatory, as are spring return **foot** throttles, for members only.

## SOLTRA Tractor Classifications

**Super-stock:** for drivers 12 years old and up

**Modifications not listed below are not permitted. All tractors must look like lawn tractors, and must start and finish each race with all sheet metal intact (hoods, fenders, and grilles.)**

1. All tractors must have been a **lawn** tractor (no garden tractors) with a maximum rim size of 8" and a minimum of 6" front or rear. Minimum tire size of 15" and maximum of 20" on rear. **NO plastic wheels allowed.** Rear fenders **may** be modified, but only to allow seat installation on to **top** of tunnel.
2. Either, blades, belts or mower decks must be removed so that accidental engagement of blades does not occur. Batteries and fuel tanks must be securely fastened to the inside of tractor chassis. Bungee cords are not sufficient.
3. Tractor **may** be as it originally came from the factory. No modifications, of any nature, are allowed to the engine (including governors and carburetor), or transaxle, with the exception of the addition of running boards. All tractors **must** have running boards (foot pegs are not allowed). Engines will have a maximum of 4000 RPM.
4. Tractors **may** be lowered by any means necessary to achieve minimum height of **5"** from ground to bottom of chassis. Drive belts and pulleys may be changed to achieve maximum speed (**20.0 KPH**) in high gear. If high gear allows for over-speed, a permanent gear lock must be installed to not allow tractor to exceed maximum allowable speed.
5. Axle width with tires, front and rear, cannot exceed 36". Wheels to be held on to axles with center-drilled, axle with locking bolts, oversized cotter pins and washers, lock nuts or castellated nuts with cotter pins.
6. Steering linkage may be discretely reinforced, or replaced with other lawn tractor steering components.
7. Front axle may be fabricated (may use "L", "J" or "C" type spindles), but must be installed in original location, and must be of one-piece design. If "C" type spindles are used, kingpins must be a minimum 1/2" diameter, installed with a minimum 5/8" diameter spindle. **Hyme joints** must be used in any steering component if a manufactured front axle is used. Front wheels **must** turn fully to the left **and** right.
8. Foot-type, spring return throttles and tethered kill switches are mandatory.
9. All tractors must have running boards (foot pegs not allowed). Rear bumpers are **mandatory**. Must be made of square or round tubing, a minimum 1 1/4", but not to exceed 2" O.D. or 2" Sq. (all sharp corners/edges to be removed). Bumper must be mounted so that it is aligned with center of rear wheels. Optional bars may be added above or below this bumper. Bumpers are

not to be wider than overall width of axles (outside of tire to outside of tire). Sidebars are highly recommended (refer to rule #18 in modified for specs.)

10. Tractor body must be stock looking. All tractors may have a grab handle attached to left rear fender, but must have a hip bar mounted on right side of seat. The hip bar must be mounted at the driver's belt line (waist height), when driver is seated on tractor. This device may be made of tubing (round or square) or flat bar, but is at the discretion of the tech committee. Seat springs/spacers may be removed to achieve lower center of gravity.
11. Brakes must be intact and working (cannot drill cooling holes in brake disc). When applied, brakes must stop the rear axle.
12. All trans-axles and transmissions must retain **ALL** gears and remain unlocked. Centrifugal clutches will not be allowed. Mufflers are optional. If removed, exhaust must be routed to the outside of tractor chassis, directed horizontally and covered with a **suitable** heat shield.

## SOLTRA Tractor Classifications

**Modified:** for drivers 14 years old and up

**Modifications not listed below are not permitted. All tractors must look like lawn tractors, and must start and finish each race with all sheet metal intact (hoods, fenders, and grilles.)**

1. All tractors must have been a **lawn** tractor (no garden tractors). Rims can be no smaller than 6" and no larger than 8". Must have a minimum 15" tire on both rear wheels. Wheels to be held on to axles with center-drilled axle with locking bolts, oversized cotter pins and washers, lock nuts or castellated nuts with cotter pins. **Steel or aluminum go-cart type wheels will be allowed. NO plastic wheels.**
2. Brakes must be intact and working (cannot drill cooling holes in brake disc). Any improvement in brakes in this class will make for safer racing. Only one brake assembly will be allowed, and when applied must stop the rear axle.
3. Direct steering will be permitted. Handlebars are **not** permitted.
4. Foot or hand controlled, spring return throttles and tethered kill switches are mandatory. **If hand throttles are used, direct steering is mandatory!!**
5. Mower decks may be removed. If left intact, it must be solidly in place and must have a minimum ground clearance of 2.5" (from lowest point on deck to ground). Deck must not exceed overall width of tractor, a maximum of 40".
6. Mufflers are optional. If removed, exhaust must be routed to the outside of tractor chassis, directed horizontally and covered with a **suitable** heat shield.
7. Batteries and fuel tanks must be securely fastened to tractor chassis. If battery is mounted on the outside of chassis, it must be fully enclosed, with a **metal** box and vented. Bungee cords are not sufficient.
8. **NO** engine modifications will be allowed. All single cylinder flat head design engines to be governed no higher than 4200 RPM. All other engines are to be governed no higher than 3850 RPM.
9. Drive pulleys and/or sprockets may be changed. Centrifugal clutches will not be allowed.
10. Chassis cannot be widened, narrowed, lengthened or shortened by any means, with the exception of adjustable chassis pans, and then chassis must not be more or less than original manufacturer's dimensional length. Discrete holes or slots may be cut into **chassis** to facilitate in the fabrication of the tractor. All tractors must have running boards (foot pegs are not allowed). All machines must have a tunnel, and it must have come from a stock lawn tractor.

11. Tractors **may** be lowered by any means necessary to achieve minimum height of **4"** from ground to bottom of chassis.
12. Both front and rear axles can be widened to 42" (outside of tire to outside of tire) **without** offset. Transaxles can be locked for posi-traction. Front axle may be fabricated, but must be installed in original location, and must be of one-piece design. Kingpins must be a minimum 1/2" diameter, installed with a minimum 5/8" diameter spindle. **Hyme-joints** must be used in any steering component. Front wheels **must** turn fully to the left **and** right.
13. Rear axles may be of "live axle" design, but must go through a shift able gearbox. All trans-axles and transmissions must retain **ALL** gears. To enhance stability and safety of the tractor, it is suggested that both axles be at least 40" wide.
14. All tractors must have turf tires only. Cutting of tires will not be allowed.
15. All tractors may have a grab handle attached to left rear fender, but must have a hip bar mounted on right side of seat. It is suggested that the hip bar be mounted at the driver's belt line (waist height), when driver is seated on tractor. This device may be made of tubing (round or square) or flat bar, but is at the discretion of the tech committee.
16. Rear bumpers are **mandatory** (fronts are optional), must be made of square or round tubing, a minimum 1 1/4", but not to exceed 2" O.D. or 2" Sq. (all sharp corners/edges to be removed). Bumper must be mounted so that it is aligned with center of wheel. Optional bars may be added above or below this bumper. Bumpers are not to be wider than overall width of axles, outside of tire to outside of tire.
17. A device **must** be in place that will **sufficiently** protect the drivers back from other tractors (i.e. a "hoop" attached to the rear bumper). This will be left to the discretion of the tech inspector. This device should not exceed any higher than the middle of driver's back when seated on tractor.
18. "The Norbert Rule" - **Sidebar**s are **mandatory!!** Must have a metal device mounted between front and rear tires, no higher or lower than axle centers (additional bars may be added above or below this bar), sufficient enough to prevent wheel-to-wheel contact of a competitors tractor. Width of sidebar is not to exceed the outside edge of the tires, but can be inside the edge by 1 1/2". If sidebar are made of rectangular steel all corners must be rounded (**no sharp corners**). [See General Rule #13]
19. Front bumpers, if equipped, must not exceed further than the front face of the tires, nor extend in front of the tread face, **or** must not be further than 2" from the leading edge of hood to leading edge of bumper. [See General Rule #13.]

## SOLTRA Tractor Classifications

**Super Modified:** for drivers 18 years old and up

**Modifications not listed below are not permitted. All tractors must look like lawn tractors, and must start and finish each race with all sheet metal intact (hoods, fenders, and grilles.)**

1. All tractors must have been a lawn tractor (no garden tractors) and must be powered by a lawn tractor engine of flat or overhead design, not to exceed 18 HP, twin cylinder. Flat head/L-head engines may be modified and repaired using only O.E.M. parts. Absolutely no internal or external modifications may be made to overhead valve design engines except to the exhaust system. Any repairs made to overhead valve engines must be made with O.E.M. parts. [See Rule #17 concerning flywheels.]
2. Foot or hand controlled, spring return throttles and tethered kill switches are mandatory. **If hand throttles are used, direct steering is mandatory!!**
3. Brakes must be intact and working. Brakes can be modified such as go-cart disc or any other braking design system. (IN SHORT, ANY IMPROVEMENT IN BRAKES IN THIS CLASS WILL MAKE FOR SAFER RACING!!!!) Only one brake assembly will be allowed, and when applied, must stop rear axle.
4. Mufflers are optional. If removed, exhaust must be routed to the outside of tractor chassis, directed horizontally and covered with a **suitable** heat shield.
5. Batteries and fuel tanks must be securely fastened to tractor chassis. If battery is mounted on the outside of chassis, it must be fully enclosed and vented with a **metal** box. Bungee cords are not sufficient.
6. Cutting of tires will not be allowed. Rims can be of unequal size such as 8" on the outside & 6" on the inside. Rims can be no smaller than 6" and no larger than 8". Wheels to be held on to axles with center-drilled, axle with locking bolts, oversized cotter pins and washers, lock nuts, or castellated nuts with cotter pins. All other methods will be subject to executive approval. **Steel or aluminum go-cart type wheels are allowed. NO plastic wheels.** Must use turf tires only (no ATV or go-cart tires.)
7. Front axles may be fabricated or reinforced, but must be mounted in the original location, and must be of one-piece design. Kingpins must be a minimum 5/8" diameter, installed with a minimum 3/4" diameter spindle. Hyme joints must be used in any steering component. Front wheels **must** turn fully to the left **and** right.
8. Axles, front and rear, may be widened (up to 42" outside of tire to outside of tire), and may have offset. Rear axle may be of trans-axle or live axle design, chain or belt driven and consist of aluminum hubs, aluminum wheels, and hollow axle shaft. To enhance stability and safety of the tractor, it is suggested that both axles be at least 40" wide.

9. Chassis cannot be widened, narrowed, lengthened or shortened by any means, with the exception of adjustable chassis pans, and then chassis must not be more or less than original manufacturer's dimensional length. Tubular steel may be added for structural strength. Chassis may be altered only to allow installation of transaxle or live axle. Discrete holes or slots may be cut into **chassis** to facilitate the fabrication of the tractor. All tractors must have running boards (foot pegs are not allowed). All machines must have a tunnel, and it must have come from a stock lawn tractor.
10. **The use of centrifugal clutches will not be allowed.** Chain drive systems will be allowed. All other pulleys/sprockets may be changed.
11. All tractors may have a handle mounted on left rear fender, but **must have** a hip bar mounted on right side of seat. It is suggested that the hip bar be mounted at the driver's belt line (waist height), when driver is seated on tractor. This device may be made of tubing (round or square) or flat bar, but is at the discretion of the tech committee.
12. Rear bumpers are **mandatory** (fronts are optional), must be made of square or round tubing, a minimum 1 1/4", but not to exceed 2" O.D. or 2" Sq. (all sharp corners/edges to be removed). Bumper must be mounted so that it is aligned with center of wheel. Optional bars may be added above or below this bumper. Bumpers are not to be wider than overall width of axles (outside of tire to outside of tire).
13. "The Norbert Rule" - **Sidebars are mandatory!!** Must have a metal device mounted between front and rear tires, no higher or lower than axle centers (additional bars may be added above or below this bar), sufficient enough to prevent wheel-to-wheel contact of a competitors tractor. Width of sidebars is not to exceed the outside edge of the tires, but can be inside the edge by 1 1/2". If sidebars are made of rectangular steel all corners must be rounded (**no sharp corners**). [See General Rule #13]
14. Front bumpers, if equipped, must not exceed further than the front face of the tires, nor extend in front of the tread face, **or** must not be further than 2" from the leading edge of hood to leading edge of bumper. [See General Rule #13]
15. A device **must** be in place that will **sufficiently** protect the drivers back from other tractors (i.e. a "hoop" attached to the rear bumper). This will be left to the discretion of the tech inspector. This device should not exceed any higher than the middle of driver's back when seated on tractor.
16. The use of direct steering may be used (and is **strongly** recommended). If handlebars are used, direct steering **must** be implemented, and **must** have come from a motorcycle, snowmobile, or an ATV.
17. A certified aluminum (billet) flywheel may be used in any and all engines in super-modified only, but must be inspected by the tech committee for wear, corrosion and certification **before installation**, and must be set at the stock timing of 0 degrees. **All other flywheels must remain in an unaltered, stock condition.** When acquiring a new flywheel, it must be examined

for wear, fatigue or corrosion. **DO NOT USE IF THERE ARE ANY SIGNS OF WEAR, FATIGUE OR CORROSION.** Scatter shields and magna-fluxing of flywheels are highly recommended, but are optional.