

Thank you for your interest in PALMRA's CPR class. Essentially, these mowchines are based upon a prepared CP class mower with a FEW restrictions. So with that being said, lets get into the rules of the class. Hopefully you have downloaded and read through a copy of the USLMRA rule book. It can be found here on PALMRA's yahoo group, in the files section, or [www.letsnow.com](http://www.letsnow.com). You can also find a copy of PALMRA's build clinic book, also in the files section of the PALMRA yahoo group.

## ***NOW, GET SET FOR THE HEART STOPPING EXCITEMENT OF THE CPR CLASS.***

### **First, lets cover mower eligibility.**

- A) Events are open to all self-propelled rotary or reel type lawn mowers; the main provision being that the mower must originally have been designed, mass produced, and sold commercially through a dealer network to mow residential lawns. It must remain suitable for lawn cutting, apart from the modifications permitted below or in the supplementary regulations of an event.
- B) The generally accepted category is riding mowers and lawn tractors with rear tires 20 inches diameter and under. Mowers from England (with trailer seats) may compete. Grass catchers are not permitted. **See class rules for engine size limits.**
- C) Final determination of eligibility and classification is up to the Chief Technical Inspector. **Note: Race Day Chief Steward if the Chief Technical Inspector is not available.**
- D) A STA-BIL Fuel Stabilizer and/or a STA-BIL Series sticker **must be displayed in clear view on the right side and front of mower.**
- E) Organizers reserve the right to reject at any time any mower, which in their opinion represents an attempt to defeat the spirit of these Regulations, even though it complies with the letter of them.

### **Next we will cover general mower requirements.**

#### **\*\*\*NOTICE\*\*\***

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

- A) CUTTING BLADES MUST BE REMOVED COMPLETELY FROM ALL MOWERS. 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. Decks cannot have no type of bumper/Guard around it unless it is Factory designed. All prepared classes and JP/IMOW must have a factory type deck not home design.
- B) No overhead cam engines allowed except in the stock class. No liquid cooled engines in any class.
- C) All non-stock mowers MUST be equipped with an automatic throttle closing device. Stock mowers MAY be so equipped if desired.
- D) All mowers must be equipped with a kill switch, which will turn off the ignition if the driver leaves the mower. Non-stock mowers shall use a tether, mechanically attached to mower and driver. Velcro is **not** acceptable. Pressure switches are not allowed. Kill switch must remain in closed position (engine not running) until driver mounts mower. Additional switches that can by-pass the kill switch are not allowed under any circumstance.  
**The ignition interrupter kill switch and cap/prong must be commercially available for racing type vehicles such as jet skis, snowmobiles, 4-wheelers etc. Magnetic or any other form of homemade switch is not allowed.**

- E) Mower brakes must be in good condition, easily operated and operating on at least two rear wheels.
- F) Brakes may be improved in any way.
- G) Throttle and brake controls may be relocated.
- H) **FRAME: Discrete strengthening is allowed. Front and rear axles must use original frame as primary mounting point.**
- 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) Mowers must be safe and complete, all parts and panels in place, with no missing nuts, bolts, cotter keys, etc.
- K) All exposed chains and sprockets must be fitted with metal guards, which will direct a broken chain downward.
- L) Mowers must 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 mower's racing numbers or class letters.
- M) No bumpers, nerf bars or push bars.
- N) ***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 cover.***
- O) 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. All mowers must have their number visible from the front for grid line up and scoring purposes. **It is recommended that racing numbers be pre-registered with the RACE NUMBER COORDINATOR.** Machines without numbers will have them assigned on race day. Racing numbers are "owned", and will force unregistered duplicates to change. Class letters, should be a minimum of 3" high, and be shown on both sides of the mower.
- P) **All** positively charged terminals must be insulated with a cover or heavy tape, and battery must be well secured.
- Q) No offset or stagger. Body must be mounted in the center of the wheels. **Tires must match in Size, Brand and tread design per axle (with the exception of FX class).** Lawn mower seats only, in the stock location, no lower than the tops of the fenders or exposed rear tires and on centerline. Offset measured from centerline to the outside of tire sidewall. Wheelbase may not be altered.
- R) Glass headlights must be taped or removed.
- S) Maximum width 38" sidewall to sidewall unless otherwise stated in the class build section.
- T) Steering wheels and handlebars may be replaced with any commercially available pieces, but not substituted for each other. Steering Wheels may not be mounted off center unless originally mounted offset. Steering columns must pass through the original hole in hood or dash at the original angle. All Nuts and bolts attaching the steering assembly (tie rods and spindles) must be secured with Lock Nuts, castle nuts with carter pins, or close pins. **Handlebar type grips may not be added to steering wheels in any class.**
- U) Tires must be lawn tractor tires. No Snow Hog, tiller, A.T.V, commercial mower or performance compound or competition kart tires. **Flat tires will be black-flagged!**
- V) No centrifugal and/or torque converter clutches except in FX.
- W) Minimum 4" ground clearance to frame, 2 1/2" ground to deck unless otherwise stated in class build section.
- X) All mowers must utilize a clutch.**
- Y) **Flywheels**

***FOR THE CPR CLASS, YOU MUST RUN THE STOCK FLYWHEEL.***

There will be **no aluminum flywheels** allowed in this class, even if the flywheel came stock on the motor.

- Z) Fuel lines must be clamped at all joints.**

## FUEL and FUEL DELIVERY

The only acceptable fuel is pump gasoline. Additives, other than STABIL Fuel Stabilizer are prohibited. Any apparatus other than the carburetor or fuel injector, 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 attendant hardware consistent with these systems. Any attempt to conceal or disguise such apparatus will be considered a flagrant violation and may result in expulsion from the USLMRA.

ALL FUEL IS SUBJECT TO TESTING WITH DIGITRON. BE ADVISED THAT WE WILL BE CALIBRATING WITH LOCALLY OBTAINED FUEL, AND IT IS STRONGLY RECOMMENDED THAT RACERS PURCHASE FUEL LOCALLY TO AVOID POSSIBLE FUEL VIOLATIONS DUE TO REGIONAL DIFFERENCES IN FUEL BLENDS.

Electric fuel pumps are not allowed on closed-course machines.

### **Here we will discuss the rules of building a prepared chassis.**

D) **PREPARED:** Class designation: **A/P, S/P, C/P, CPR,** and **B/P.** These mowers are as delivered from the factory except for the modifications listed below.

1) 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. Crankshaft must be in original orientation and clearance hole in the frame. Engine, *except CPR*, may be internally modified.

2) Exhaust design is open, but must terminate away from driver and competitors, in a rearward and/or downward direction and present no apparent safety hazard.

3) Starter must be onboard, either electric or pull-rope.

4) Driveline may be modified from the engine pulley to the rear wheels, but must utilize a shiftable lawnmower transmission or transaxle. Vari-drivers may only be used in an original installation. ***NO VARI-DRIVES in the CPR class.***

5) Rear axle may use open differential, locked, “live” or solid axle. No single wheel drive.

6) No centrifugal and or torque converter clutches.

7) Rear axle should use shaft locks, center bolts, or thru-bolts to secure the rear wheels.

8) All steering linkages must use ball-type or spherical threaded rod ends.

9) Front axle may be pinned, bolted or welded into stock position. No suspension, no shock absorbers.

**Axles must have a 1-piece beam.**

10) 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 apparent safety for racing.** **Aluminum may not be used as the material for the one-piece axle**

11) Shaft locks, center-drilled axle with locking bolts, 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.

12) Wheels must be the same size on each axle, of any origin, made of metal. No dual or tandem wheels.

13) **DECK:** Mowers must mount steel factory decks: The deck must be at least as wide as either running boards or body edge whichever is wider. Decks may not extend any more than 2” beyond the tire sidewalls on each side. Deck halves may be mounted to running boards. Decks must be secure.

14) SAE-rated trailer or lawnmower tires must be used.

15) 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 can not become entangled in a rollover.

16) Class is determined by the OEM factory rating of the lawn mower engine.

17) All parts should be of lawn mower origin with the exception of those specifically mentioned above or otherwise allowed under *General Mower Requirements*.

18) Hoods and body parts such as fenders may be upgraded from year to year only if the parts are from the mother company and any subsidiary company of said mother company.

19) External ignition Systems are allowed. ***Except CPR.***

20) Aluminum Flywheels are allowed. ***Except CPR.***

21) **Fenders may be discreetly moved but not altered.**

22) **Must use axle mounted brakes, no lawnmower transaxle or transmission mounted brakes.**

## **What makes a C/P a C/P?**

**C/P:** All single-cylinder overhead valve and two cylinder valve in block, 4 stroke engines, **20hp and under**. 42" minimum unaltered wheelbase. Mid engine frames are not allowed. 6" minimum front wheels. 8" minimum rear wheels.

## **How do I make a C/P a CPR?**

LEAVE THE ENGINE STOCK! We will allow single cylinder flatheads up to 20hp to race in this class as well as the CP motors. All motors must run a cast flywheel, no aluminum flywheels will be allowed in this class. A CPR motor will be governed at 3650 rpm. You may alter your air filter, and the exhaust, BUT no further alterations will be allowed on these motors. This is not the IMOW class, there are no ratio restrictions. The purpose of this class is to make a racer learn how to set up and race a racing lawn mower. The driver will have to learn the following to be a winner in this class.....

A. How gear ratios affect speed and acceleration.

B. How to properly adjust the mower to make it go through a corner.

C. How to drive with his or her head, and not rely on a credit card or check book to buy horsepower controlled by the foot.

PALMRA points will be given just like all the other classes, however, if your RPM's are not 3650 or lower, you will be disqualified from that event and receive no points for that race day. If this happens again, you will not be allowed to race with the CPR class for the rest of the season, you will be placed in the CP class. RPM's will be checked during the tech inspection and also coming off the track after the feature event.

If there are any questions please feel free to contact Tom Lavalette at [toms580@yahoo.com](mailto:toms580@yahoo.com) and [trrace@webtv.net](mailto:trrace@webtv.net) or Dean Schopf Jr. at [dtschopf2003@yahoo.com](mailto:dtschopf2003@yahoo.com)