

2010 NASCAR Modifieds Technical Rules

Revised 1/14/2010

FORWARD

The rules and procedures outlined herein do not in any way ensure the safety of any official, driver, team member or spectator. These rules and specifications are intended to promote safe and fair competition. It is the responsibility of every individual in attendance to make certain his or her own safety is provided for at all times.

The following technical rules and specifications are separated into 4 sections. The General Section applies to all cars in competition and each of the remaining sections applies to the respective *Base Engine Platform* as declared.

If there is ever a conflict between the General Section and a the respective *Base Engine Platform Section* the application of the rules shall be such that safety take the first precedence followed by the applicable *Base Engine Platform* section followed by the General Section.

The Technical Director has the right to adjust, amend or modify these rules and specifications at any time in the interest of equal and fair competition. The Technical Directors interpretation of these rules is binding and final. All competitors must conform to all Technical Inspection Tools and Gauges used by Track Officials.

VERY IMPORTANT

Prior to competition participants must declare a *Base Engine Platform* (i.e. Crate, 2 Barrel or Open). This is accomplished by placing a 3"x3" decal or 3"x3" permanent marking (i.e. paint, marks-a-lot, etc.) on the air cleaner lid that indicates the engine platform; a C for Crate, a 2 for 2 Barrel or an O for Open. If this indicator is not present after the race the car will be considered ineligible and disqualified.

The technical rules and specifications will be applied and interpreted based on this declaration.

GENERAL RULES

1. Safety Equipment (Suit, Helmet, Gloves, Seat, Belts, Net, etc.)

Safety is the responsibility of the car owner, driver and crew. This includes the quality, installation and operability of any and all safety equipment. No express or implied warranty of safety shall result from publication of, or compliance with these rules and regulations. They are intended as a guide for the conduct of the sport, and are in no way a guarantee against injury or death to participants, spectators or others in attendance.

Whenever there is a conflict between a safety provision provided herein and any other rule, the safety provision shall always take precedence.

The driver is required to have all of the following whenever the car is on the track under its own power. This includes during slow or shakedown laps, testing and practicing (private, open and organized sessions) as well as during racing:

- An approved fire retardant driver's suit required. Double layer or more, fire retardant driving suit of Nomex or equivalent material not required but strongly recommended. (Nomex underwear is strongly recommended also).
- Full-face racing type helmet with a minimum of SNELL 95 or SA 2000 rating. Date must be within last five years. (May be re-certified by manufacturer). (Nomex 'head sock' is strongly recommended also).
- Padded helmet support (neck collar) required. Hutchons, Hans, D-Cell or similar SFI approved helmet restraint strongly recommended.
- Racing gloves & racing shoes required.

The following items are required and are considered a safety item:

- Transponder, transponder must be on and operational whenever the car is on the track. Transponder location 16 inches forward from rear axle center line. **All cars no tolerance.**
- Two way radios, radios must be on and fully operational with a spotter on line whenever the car is on the track.
- All cars must have a quick release steering wheel
- The roll cage in the driver's area must be padded

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- The steering wheel center must be padded
- Approved aluminum racing seat complete with sufficient head support, mounted to roll cage (not the floor) with seat mounting bars using aircraft grade hardware not less than 3/8 inch diameter.
- Driver restraint system must be quick release racing type, with minimum 3 inch wide lap belts, 2 x 3 inch wide shoulder belts, plus submarine belt. The belts must be replaced five years after the date stamped on the SFI tag, regardless of the number of times the car has been raced, subject to condition. Seat belts must be mounted roll cage and/or seat mounting bars (not to the floor) with aircraft quality hardware, not less than 3/8 inch diameter.
- It is recommended that additional driver's head restraint net be mounted on the left side between window net and driver's head brace and on the right side next to the head brace.
- Carburetors must have minimum two external return springs and minimum one throttle stop.
- Driver's side NASCAR style quick release or push button window net (*S.F.I. approved*), mounted to cage, not to body. Maximum of five years old, subject to condition.
- Rear view mirror is mandatory. All mirrors must be installed within the boundaries of the body and roll cage.
- Every race car must have a fire extinguisher. All fire extinguishers and mounting brackets must be metal. Manual fire extinguishers must be within reach of the driver. Remote mount fire extinguisher must have triggering system within easy reach of driver and at least one nozzle in driver's compartment, fuel cell area, and engine area. This system is strongly recommended. (*This is Drivers responsibility*).

2. The following are not allowed under any circumstance:

If any of the following are found the penalty is forfeiture of all points for the season and suspension

- Carbon fiber parts
- Magnesium parts (quick change center section OK)
- Titanium parts (some engine parts for 2 Barrel and open option OK)
- Any cockpit adjustable suspension device (brake bias OK)
- Any cockpit adjustable engine device
- Fuel additives or oxygen bearing compounds
- Nitrous
- Alcohol/methanol – except Open Engine Option which may run alcohol/methanol.
- On-board timing or data gathering equipment (transponder OK)

If any of the following are found the penalty is a minimum of one year suspension

- Any type of anti-locking brake system (ABS); includes electric, hydraulic, or manual systems
- Any electronic device that modifies, controls, enhances, assists, limits, inhibits or otherwise alters traction for a competitive advantage (i.e. Traction Control)
- Possession of chemicals that are specifically designed for treating tires for a performance advantage.
- The application of any kind of foreign substance or compound onto or into the tire for the purpose of enhancing tire performance (Nitrogen is OK).

3. Fuel System

- All fuel systems must be installed and operate in a manner that is acceptable to the Technical Inspector, cars with unsafe appearing fuel systems will not be allowed to compete.
- Cars that have fuel systems which appear to be damaged, defective or of shoddy construction will not be permitted to race if. This includes fuel cells, containers, check valves, lines, filters, brackets and/or braces.
- Fuel lines should be run such that they avoid all heat sources and any sharp edges of the chassis or body work which may pinch or puncture the line.
- A fuel cell vent pipe with check valve is mandatory, vent line must exit car at left rear (radiator overflow right rear)
- The use of a commercially manufactured fuel cell is mandatory.
- The maximum fuel cell capacity is 22 gallons.
- Fuel cell must be encased in a container of no less than 22-gauge steel.
- Fuel cell and fuel cell container must be secured in a manner that is acceptable to the Technical Inspector. Recommended installation includes using 1 inch x 1 inch steel square tubing and either bolting or welding the assembly to the frame rails.
- Fuel cell must maintain an 8 inch ground clearance and have a minimum of 2 2 inch by 1/8 inch solid steel straps or 1 inch square tubing (recommended) completely enclosing the fuel cell.
- Fuel pump must be a mechanical OEM stock type fuel pump mounted on the engine block in the stock location

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- No electric pumps allowed.
- No fuel cooling devices are allowed.
- The installation of an automatic fire suppression system dedicated to the fuel cell area is recommended
- Fuel filter is optional and if installed cannot retain more than 8 ounces of fuel
- If running a quick change rear end, a 1/8 inch steel plate must be mounted between the front of fuel cell and back of rear end housing to prevent puncturing of cell.

4. Chassis

- Any factory produced 1960 or later American made rear wheel drive sedan chassis
- No sports car frames allowed.
- No front wheel drive allowed.
- Both side frame rails must be parallel to each other on both sides.
- Frames must remain as manufactured and may not be widened or narrowed
- Frame must be able to support roll cage on both sides.
- Front cross member may be notched for radiator and fuel pump clearance only
- Rear of frame may be cut off at 36 inches before rear end axle tube centerline. This may be replaced with minimum 1-1/2 inch round or 2 inch by 2 inch square tubing.
- Rear of frame may be constructed to accept leaf or coil springs
- No fiberglass springs allowed.
- A minimum wheel base of 107 inches. Wheelbase is measured from the rear of the front wheel to the rear of the rear wheel at spindle height.
- Maximum tread width is 70 inches front and rear. Tread width is measured from center of tire to center of tire at spindle height (no tolerance).

5. Roll Cage

- All roll cages must be installed in a manner that is acceptable to the Technical Inspector, cars with unsafe appearing cages will not be allowed to compete.
- Basic cage should be typical four post design with horizontal door bars and crush zones front and rear.
- Roll cage must be welded securely and mounted with bracing and other supports at all junctions. Tubing junctions should be notched, welded and gusseted. No brazing or soldering allowed.
- **Recommended 1.75 inch x .095. Minimum 1.5 inch x 0.095 round, low carbon, mild seamless steel tubing roll bars are mandatory for the basic roll cage.** Aluminum and/or other soft metals are not allowed.
- Driver's head must not protrude above cage with helmet on and strapped in the driver's seat; an 11-gauge steel plate above driver's head is highly recommended.
- Foot protection bars are mandatory.
- A minimum of 3 driver side door bars, at least 1.5 inch O.D., .095 wall, installed parallel with the ground are required. All door bars must be located so as to provide maximum protection for the driver. The bars must be welded to the front and rear of the main roll cage members. It is mandatory that a steel door plate 1/8 inch in thickness be securely welded to outside of door bars on driver side. Plating should cover from the top door bar to the bottom door bar.
- Passenger side must have at least 3 bars either horizontal or angled, welded to the front and rear of the main roll cage members.

6. Bumpers

- Bumpers must be used both front and rear.
- Bumpers must be made of minimum 1.25" steel tubing and must be able to support car if lifted by wrecker.
- Front bumper should attach to the left and right frame horn.
- Rear bumper should attach to the rear frame rails and be constructed such that it provides protection for the fuel cell.
- Front and rear bumpers should provide a bottom loop that is parallel to the ground. Rear bumper bottom loop should be no more than 8 inches above the ground.
- Front and rear bumpers should be constructed such that they provide a protection zone from between 12 inches to 24 inches above the ground and protrude outward no further than 24 inches from the attachment point to the chassis.
- Rear bumper must be constructed such that there is a wrap around nerf bar connecting to the frame.
- No straight or open ended bumpers allowed

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- Side nerf bars are optional. If installed side nerf bars must wrap around and connect to the frame.
- All tubing ends must be capped

7. Body

- All bodies must be painted and neat appearing.
- Any damage incurred during a racing event must be repaired prior to the next race meeting.
- Metal, fiberglass, OEM, handmade or aftermarket bodies allowed.
- Roofline of vehicle must maintain a maximum 3 inch drop rear to front and side to side.
- The minimum roof size is 38" wide x 42" long
- Roof must be centered over the roll cage halo.
- Rear of body (tail) must be a solid panel a minimum of 8 inches in height measured from the top of the rear deck (bottom of spoiler) and completely enclosed to both rear quarters
- One non-adjustable spoiler may be attached to the rear of the car provided the following specifications are observed:
 - Clear Lexan only
 - Not exceeding six (6) inches in height and 60 inches in width
 - Must be attached at the rear most point of the rear deck lid
 - Must be straight, no curves, contours or bends (no wicker)
 - No decals or sponsor logos allowed
 - Spoiler braces may be used in front or rear (not both), no more than 4 allowed
- Engine compartment will remain open, no side panels, hood sides may have a maximum 4 inch drop
- Bodies must not extend farther forward than back of engine block.
- **Body sides must be a maximum length of 120 inches starting from back of engine, a maximum width of 66 inches at the very front and very rear of body and may be a maximum of 72 inches at the body's widest point. Maximum body rake is 6 inches.**
- Nose piece cannot be any wider than the frame horns.
- No vertical or horizontal wings or rudders placed inside or outside of the car are allowed
- Windshield and rear windows are optional. If used, the front windshield and/or rear window must be clear polycarbonate Lexan and must be affixed securely as to not let air in our out. Partial front windshields will be allowed in front of the driver only. If a partial windshield or no windshield is used there must be a minimum of 4 upright bars no more than 4 inches apart in front of driver.
- Interior slope is 6 inches maximum front to rear. If front half of interior is flat, 50% of the 6 inches is used. Therefore, only 3 inches of slope is permitted from behind driver to rear of deck. The 3 inches of slope behind the driver to the rear of the deck must be flat.

8. Interior

- The floor pan and firewalls must be at least 22-gauge steel sheet metal
- The floor pan and the firewalls must be completely sealed using a quality high temperature sealant. Minor use of duct tape will be allowed at the Technical Inspectors discretion.
- A dashboard is optional
- The interior may be sheet metal or aluminum

9. Engine (General)

- *See applicable section for specific engine requirements by platform (Crate, 2 Barrel and Open)*
- All engine blocks must be eight (8) cylinders
- Gasoline engines only except for Open Engine Option which may run alcohol/methanol.
- The allowable engine set back is for the bell housing flange to be a minimum of 72" forward of the center line of the rear axle
- The allowable engine offset is for the engine centerline to be within 2" of cross member centerline
- Stock or after market mounts are allowed
- Rubber or steel mounts are allowed
- The engine manufacturer used does not have to match the chassis or body
- Standard OEM magnetic steel elastomeric type harmonic balancers are permitted.
- No aluminum harmonic balancers allowed
- Fluid Damper™ type harmonic balancer allowed.

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10. Oil Pan

- Oil pan must be magnetic steel
- Wet sump pans only
- All pans must be manufactured based on OEM type pan with a sump reservoir in the bottom
- Dry sump systems are not allowed
- Engine oil coolers may be used and may be either an oil to air or an oil to water exchanger
- Remote mount oil filter is allowed but must remain outside the driver compartment.

11. Cooling Systems

- Conventional air to water cooling systems only; closed systems allowed.
- All heat exchangers and radiators must be mounted toward the front of the car and outside the driver compartment
- Fan blades cannot protrude above radiator
- Electric fans allowed
- Approved catch can on radiator overflow required
- Plain water only, no ethyl glycol based additives or antifreeze/coolant permitted (water wetter is ok)
- Engine oil coolers may be used and may be either an oil to air or oil to water heat exchanger
- Cooling system overflow line should exit the car at the right rear (fuel vent at the left rear)
- Mechanical water pump only, may be steel or aluminum
- Transmission and rear end cooling systems are allowed but the heat exchanger must be mounted outside the driver compartment and as far forward and to the passenger side as possible

12. Air Filtration

- A round unaltered air filter element is required
- Air filter maximum diameter is fourteen (14) inches
- Air filter minimum diameter is twelve (12) inches
- All air entering the carburetor must pass thru the air filter
- Hood must be removable with air filter assembly installed on carburetor
- Hood opening surrounding air filter must be 2 inches larger than air filter being used
- A shield may be placed on the front side of the air filter
- No performance enhancing compounds may be added to air filter element
- No air cooling devices allowed
- No funnel or ram air devices allowed
- No cowl induction allowed

13. Clutch / Bellhousing

- Single or multiple disc clutches are permitted.
- No minimum or maximum clutch size.
- Stock type clutch assemblies require a steel explosion proof bell housing
- Steel bell housings are not required with multi-disk racing clutches or clutch type transmission such as Bert or Brinn
- A foot protection plate measuring 1/8 inch thick by a minimum of 6 inches wide welded in place covering the area of the starter ring and mini clutch in the foot box is highly recommended.

14. Drive Line

- Three (3) or four (4) speed manual or automatic transmissions only.
- Stock production or aftermarket transmissions will be allowed.
- Transmission must have at least (2) forward gear and a reverse gear with a neutral position and must be able to be shifted by the driver.
- No five (5) speed transmissions or in and out boxes or direct drive couplers allowed.
- A clutch type transmission is permitted.
- With engine running and car in a stationary position, driver must engage transmission gears and move forward and backward without assistance at time of inspection.
- Drive shaft may be steel or aluminum and painted white if of steel construction
- One drive shaft loop is required and must be constructed of at least 1/8" x 2" steel. An additional 1/8 inch thick plate above the front universal joint is highly recommended.

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- Any passenger car or truck type rear end may be used,
- Quick Change type rear end with full floating hubs or 9 inch Ford type allowed
- Aluminum axle shafts or axle tubes are not allowed.
- Gun drilled or solid axle shafts are allowed
- Aluminum or any other lightweight materials are not allowed in any part of the rear end (except QC center section 9 inch Ford center section and spools)
- No cambered rear-ends

15. Exhaust

- Mufflers are required
- Maximum of 96 decibel sound level at 100 feet with the car under full acceleration
- Exhaust system must be mounted in such a way to direct gasses away from driver
- Header wrap on the header tubes is not allowed, header coating is allowed
- Two into one, cross over, X and H pipes are allowed
- No temperature sensing devices
- One (1) header per head only
- Conventional crossover headers allowed
- 2 into 1 systems allowed
- 180 degree headers not allowed

16. Brakes

- See applicable section for specific brake requirements by platform (Crate, 2 Barrel and Open)
- After market brake systems are allowed.
- Any style aftermarket brake master cylinders allowed
- Brakes must be installed and operational on all four (4) wheels.
- Only one brake caliper per wheel
- Two brake pads per caliper.
- Brake calipers may be single or dual piston.
- Brake calipers may be steel or aluminum only must mount in OEM caliper bracket.
- Brake rotors must be magnetic cast iron or magnetic steel.
- Brake rotors must maintain a minimum of 3/4 inch thickness.
Air is the only approved brake cooling method for the brake caliper and rotor assembly
- Brake fluid recirculation and/or other fluid cooling systems not allowed
- Brake proportioning adjustments are permitted from inside the car
- Electronic wheel speed sensors or brake actuators not allowed
- Power assisted braking systems not allowed

17. Steering / Suspension

- Front suspension and steering must be stock type configuration
- OEM type steering box is required and steering must remain on left side in OEM location in original mounting holes for frame being used
- Rack and pinion steering systems are not allowed
- Steering quickener is allowed
- Aluminum tie rods and racing heim joints permitted, minimum 5/8 diameter.
- Stock passenger car spindles, steel fabricated spindles and after market spindles are allowed
- Aluminum spindles are not allowed.
- Aluminum hubs are allowed
- Lower control-arms must maintain stock OEM mounting location. Stock type Lower control-arms and tubular fabricated lower control-arms allowed
- Upper control -arms mounting location may be moved from stock location. Stock type Upper control-arms and Tubular fabricated control –arms allowed.
- Weight jacks are allowed but they cannot be adjusted from inside the car
- The minimum coil spring diameter is 5-inches outside diameter.
- Leaf or coil springs may be used in the rear
- A three-point or four-point rear suspension is allowed

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- Truck type trailing arms are allowed.
- Front sway bar may be aftermarket spline or OEM type
- Rear sway bar allowed
- Sway bar cannot be adjusted from inside driver compartment
- No fiberglass suspension parts permitted (front or rear)
- No covers on suspension parts (front or rear)

18. Electrical System

- All electrical systems must be installed and operate in a manner that is acceptable to the Technical Inspector.
- All cars must be capable of starting under their own power
- A maximum of one battery is allowed and it should be mounted in the rear of the car behind the driver in a steel frame
- 12 volt battery systems only
- Gel cell or dry type batteries are permitted
- All electrical wiring should be grounded and properly insulated to prevent short circuit. Wiring should be routed to avoid heat sources and any sharp edges of the chassis or body work.
- All electrical switches must be located on the dash panel or within easy reach of the driver.
- A master on-off switch must be located for easy and immediate access to safety personnel. Switch should be located either on center of dash or behind driver seat. This switch must be highly visible and clearly marked on & off.
- An alternator/generator is optional

19. Ignition System

- Ignition system must be installed in a manner that is acceptable to the Technical Inspector.
- The ignition switch must be mounted within easy reach of the driver and be easily accessible from outside the car.
- Distributor must be stock type camshaft driven equipped with a magnetic pick-up and mounted in stock location.
- No computerized or crank trigger systems permitted.
- No Magnetos permitted.
- Adjustable timing control boxes and/or other after market external ignition systems are not permitted.
- All cars must utilize the 6-AL-6T-6ALN-6HVC Multiple Spark Discharge (MSD) ignition system.
- **MSD box must be mounted on the right hand side of dash panel with all wiring in plain sight**
- **MSD box and coil must not be accessible by the driver when buckled into the seat.**
- Ignition wiring must utilize weather connectors as designated.
- Ignition wiring must utilize wiring shielding as designated (Tach, MAG+ and MAG-)
- ~~Ignition wiring must be in compliance with 2006 ASA Challenge Division rule book illustration CC.5 and CC.5.1 (attached).~~
- All cars running must have approved shielded ignition harness (see attached addendum)
- **Only one ignition system permitted. One box. One coil.**

20. Weight (General)

- *See applicable section for specific weight requirements by platform (Crate, 2 Barrel and Open)*
- All cars must maintain minimum and/or maximum weights at all times
- All cars must weigh as-is pre and post race, there are no weight allowances
- No post race fuel top off or burn off allowance, car must weigh as-is after the race
- No race damage allowance, car must weigh as-is after the race
- All added weight must be painted white and labeled with the car number in a contrasting color
- All added weight must be bolted to the frame with two (2) bolts ½ inch minimum diameter.
- All added weight must be in solid block form not less than 10 lbs.
- No added weight allowed in the driver compartment.
- No weight shifting devices are permitted; all weight must be affixed such that it cannot move by any means.
- Any ballast weight lost during a race event will not be permitted to be returned to the car for weighing after the race.

21. Heights (No Tolerance / Without driver)

- 11 inch minimum crank shaft height
- 8 inch minimum fuel cell ground clearance

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- No minimum/maximum roof height (see body rake rules)
- No minimum/maximum spoiler height (see body rake rules)

22. Wheels & Tires

- The only tires allowed:
 - GOODYEAR GROOVED SLICKS D2863 27.0 x 8.0 - 15 Factory plated.
 - GOODYEAR GROOVED SLICKS D2862 26.5 x 8.0 - 15 Factory plated.
- **No camber cutting, shaving, grooving, altering, chemical coating, treating, or soaking is allowed. Tires will be subject to inspection by Track Officials**
- Tires may be confiscated or impounded.
- All wheels must be steel racing type, maximum of 8-inch width, measured bead-to-bead
- Any wheel type and any wheel offset is allowed anywhere on the car
- If wheel weights are used they must be glued to the wheel
- Air pressure relief valves are not allowed
- **Vehicles must start the Heat and Feature on the same set of tires. The only exception is replacement of a damaged tires at the discretion of Tech. Inspector.**

23. Shocks

- Shock absorbers used must be readily available to all competitors
- A maximum of one steel bodied, racer re-buildable, shock absorber per wheel is permitted
- Nitrogen and gas pressurized shocks are allowed
- External Schrader valve type allowed.
- **No other external adjustments are allowed. This is external adjustments of any kind including external adjustments located under the heim, a cap or any other component concealing the adjusting mechanism, nut, knob. etc. The only external adjustments permitted are those specifically listed in the rules (i.e. Schrader valves).**
- No external reservoir or canister type shocks allowed
- No aluminum shocks allowed
- No coil over shocks allowed, but IMCA approved type rear coil over is allowed.
- The following type shock models are examples for competition: AFCO 1900 series, Bilstein SM, SZ and SL series, Carrera 3100 series, Pro TA series, & QA1-50-55-70 series.
- No double adjustable shocks allowed.
- All shocks are subject to approval by Technical Director.

**IF THE RULES DON'T SAY YOU CAN, THEN YOU CAN'T
UNLESS YOU GET APPROVAL FROM HMP'S TECH DIRECTOR!**

Engine Option 1 -- CRATE ENGINE

1. Penalties / Allowances

- **Minimum weight 2500 pounds for GM 400 HP Sealed Crate Engine part # 88958604.**
- **Minimum weight 2400 pounds for GM 350 HP Sealed Crate Engine part # 88958602.**
- **Maximum left side weight is 59% for GM 350 HP Sealed Crate Engine part # 88958602.**
- **Maximum left side weight is 58% for GM 400 HP Sealed Crate Engine part # 88958604.**
- Single piston disc brakes with steel stock type calipers will be permitted front and rear
- Aluminum brake caliper and multi piston brakes allowed
- Hubs may be steel or aluminum
- Magnesium hubs are not allowed

NOTE: HMP reserves the right to make further adjustments to overall weight, or left side weight percentage, in the interests of equal competition during the 2010 season.

2. Approved Crate Engines

- **GM 400 HP Sealed Crate Engine part # 88958604 or GM 350 HP Sealed Crate Engine part # 88958602.** The following upgrades will be allowed: After market crank shaft dampener, 1 inch four hole carburetor spacer straight bore no tapers aluminum material only & maximum hole size 1.750, General Motors approved 1.6 roller rockers and Champs oil pan #CP106LTRP. **Due to the limited availability of GM approved 1.6 roller rockers, any 1.6 ratio,**

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self aligning, stud mounted, non adjustable, roller rocker arm may be substituted. Must be readily available at retail to all competitors. Should have rocker arm ratio stamped on rocker arm.

- Blue Oval Ford Part # 36007-D347. Must run 1.5 rocker arms. No Carburetor spacer allowed.
- McGunegill Ford NOT permitted.
- Engine must be sealed by the manufacturer or certified engine re-builder and must remain in "as shipped" condition.
- The technical inspector will supply a 6300 rpm rev limiter chip by random draw prior to each race. Failure to pass post-race RPM check will result in disqualification.
- Use of or installation of an open or closed loop vacuum system, to evacuate air from the engine, is a speed enhancing alteration and is prohibited.

3. Carburetor

- Box stock Holley 650cfm 4150 HP Carburetor, part # 80541-1.
- Carburetor must pass test gauges.
- Only Holley carburetor replacement parts are permitted for use and any replacements must be original part replacements available from Holley. This includes but is not limited to jets, bleeds, needle and seat, emulsion bleeds, power valves, accelerator pump nozzles, accelerator pump cams, metering block, etc.
- Alteration, physical changes, machining, re-shaping or tampering with any part of the original parts, internal or external is prohibited.
- Carburetor must be securely fastened to the intake manifold with (1) .0625-inch (1/16") or smaller flange gasket.
- The Tech Director reserves the right to impound, confiscate and/or trade out any carburetor at any time. Failure to comply will result in immediate disqualification.

Engine Option 2 -- 2 BARREL

1. Penalties / Allowances

- Minimum weight 2,525 lbs.
- Maximum left side weight is 57%.
- Single piston disc brakes with steel stock type calipers will be permitted front and rear.
- Optional Aluminum brake caliper and multi piston brakes allowed.
- Hubs may be steel or aluminum
- Magnesium hubs are not allowed
- Use of or installation of an open or closed loop vacuum system, to evacuate air from the engine, is a speed enhancing alteration and is prohibited.

2. Block

- No aluminum blocks
- Deck height of block cannot be below zero.
- The piston cannot protrude above deck height of block.
- Engine size and configuration:
 - GM products will be permitted to use an engine size up to 360 cu. in.
 - Ford products will be permitted to use an engine size up to 364 cu. in.
 - Chrysler products will be permitted to use an engine size up to 364 cu. in.

3. Crankshaft & Connecting Rods

- Only standard magnetic steel or cast iron production design crankshafts will be permitted.
- Minimum weight of crankshaft must be 48 lbs with timing chain gear.
- Knife edging, contouring or stream lining is not allowed.
- Manufactures stoke required
 - GM: 3.480 inches
 - FORD: 3.500 inches
 - Dodge: 3.580 inches
- The stroke may be a maximum of 0.020 inches over or under stock stroke
- Only solid magnetic steel connecting rods and piston pins
- Any flat top round aluminum three (3) ring pistons with three (3) rings in place will be permitted.

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4. Camshaft, Lifters and Rocker Arms

- No roller camshafts, roller lifters or mushroom lifters allowed
- No rev kits allowed.
- Only steel hydraulic or solid lifters of original size for engine being used without are allowed
- Only OEM (stock) type timing gears and chain allowed. Dual roller chains allowed. Timing advance or retard buttons allowed.
- No belt drives allowed
- Roller rocker arms and stud girdles are permitted.
- Rocker must be independent stud type.

5. Carburetor

- A stock Holley Model 4412, 500-cfm carburetor or a 80583-1 500-cfm will be the only carburetors permitted.
- Must remain as produced by the manufacturer, unless otherwise stated here.
- All carburetors are subject to conforming to Inspection tools and Gauges used by Track Officials.
- Choke horn may not be removed.
- Venturi area must not be altered or reshaped in any way.
- The casting ring may not be removed
- Base plate must not be altered in any way.
- No additional air to be picked up below the opening of the venturi such as altered gaskets, baseplate, or holes drilled into the carburetor.
- The metering block idle circuit bleeds may be re located.
- No other additional holes or screw in or pressed in bleeds are allowed.
- Carburetor booster type may not be changed and booster size and shape must not be altered. Height and location of the booster must remain as manufactured.
- Throttle shaft must remain stock and must not be thinned or cut in any manner.

6. Intake

- Any generally available manufactured intake allowed
- Intake must be made of steel or aluminum and must be one-piece.
- No fabricated or custom intakes.
- Maximum depth of intake including spacer or adapter and gasket will be no more than 6 inches.
- All manifolds must remain as manufactured, no port matching, flow work, grinding, or polishing permitted.
- No coating of any type is allowed

7. Heads

- Any unmodified straight plug stock production cast iron cylinder head can be used
- No Bowtie Vortec heads allowed
- All cylinder heads are limited to minimum 62 cc combustion chambers.
- All cylinder heads are limited to a maximum valve size: intake 2.02, exhaust 1.60
- All cylinder heads are limited to a maximum 200cc intake runner size
- No angle milling will be allowed.
- No porting or polishing of intake or exhaust ports permitted.
- No substances permitted which would alter ports or runners (acid dipping).
- No titanium valves permitted.
- Factory valve angle is required.
- Three angle valve job permitted. When cutting the valve seat guides no stone grinding marks are permitted above the bottom of the valve guide. Surfaces where the stone or cutter has touched above the valve seat must be polished. No hand polishing or grinding permitted on any part of the head.
- The following heads and specifications will be allowed:
 - GM Bowtie part number 10134392, 14011058, or 12480034 with casting number 14011034.
 - Dart Iron Eagle part number 10120010, straight plug, 64cc combustion chamber, 180 cc intake port volume, intake valve 2.02, exhaust valve 1.60.
 - Dart Iron Eagle part number 10110010, angle plug, 64cc combustion chamber, 180 cc intake port volume, intake valve 2.02, exhaust valve 1.60.
 - Dart Iron Eagle cylinder head part number 10320010 and 10320010P, straight plug, 64 cc combustion chamber, 200 cc intake volume, intake valve 2.02 exhaust valve 1.60

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- Dart Iron Eagle cylinder head part number 10310010 and 10310010P, angle plug, 64 cc combustion chamber, 200 cc intake volume, intake valve 2.02 exhaust valve 1.60.
- World Product cylinder head part number 1115, 1125, 1215, 1225, 1226, Casting Number 1-037, 200 cc intake volume, intake valve 2.02 exhaust valve 1.60.
- Ford World Products cylinder head part number 053040, casting number WOR-061 with 200cc intake runners with 2.02 intake valves and 1.60 exhaust valves
- Ford part number M-6049-N351
- Ford part number M-6049-N352
- Chrysler W2 heads will be allowed.

Engine Option 3 -- OPEN ENGINE

1. Penalties / Allowances

- Minimum weight 2625
- Maximum left side weight 56%
- Single piston disc brakes with steel stock type calipers will be permitted front and rear.
- Aluminum brake caliper and multi piston brakes allowed
- Hubs must be steel or aluminum.
- Magnesium hubs are not allowed

2. Engine

- Maximum carburetor cfm 750
- Alcohol/Methanol is allowed. Car must be clearly labeled, "ALCOHOL" on both sides of vehicle rear quarters.
- See General Engine rules for other restrictions

**IF THE RULES DON'T SAY YOU CAN, THEN YOU CAN'T
UNLESS YOU GET APPROVAL FROM HMP'S TECH DIRECTOR!**

ADDENDUM

REQUIRED SHIELDED IGNITION HARNESS

The distributor, tachometer, coil, and switched ignition wires must pass through a 6-conductor "weatherpack" connector within 6 inches of the main ignition box (MSD, Crane, Etc). The tachometer wire and the distributor wire must be covered with a braided or solid metallic overlay sufficiently dense to absorb all electro-magnetic impulses created by the ignition system. Aluminum foil or foil backed wire molding are not acceptable. Both braided overlays must have a ground wire attached to the roll cage or frame, not sheet metal or aluminum. The braided overlay will extend the full distance between connectors on both wires. Any type of connector may be used for tach and distributor ends, but must be within 6 inches of the tach or distributor.

In addition to visual inspection the harness must pass an "ohm" test. When an ohm or continuity meter is placed between chassis and any part of the braided shielding a "direct short" or full continuity must be read on the meter. In other words a direct connection from the braided overlay to the chassis must be maintained.

MSD model 6ALN has the correct connector. All other MSD boxes must be retrofitted with the Weatherpack female contact connector.

Retrofitting of MSD boxes available from:
MSD Autotronic Controls, El Paso TX
American Radio, Houston TX, Robbie Davidson (713)473-8888

Ready-made approved harnesses are available from:

Nelson Specialties Inc in Mooresville NC
American Radio, Houston TX, Robbie Davidson (713)473-8888