

# HOUSTON MOTORSPORTS PARK 2010 NASCAR LATE MODEL 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 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.

**Eligible Chassis:** Asphalt stock front clip, Tubular style, Offset, Perimeter, etc.

## **1. BODY STYLE**

American made sedans, 1997 to present. Minimum wheelbase 101 inches. Maximum tread width is 66 inches from center to center measured at spindle center line. ABC Bodies are optional. **NO** Downforce bodies.

## **2. APPROVED ENGINES AND LOCATION**

A. GM 400 HP - Sealed Crate Engine Part # 88958604

GM 350 HP - Sealed Crate Engine Part #88958602

B. McGunegill - Ford Part # ASA 425 LM

C. Blue Oval Ford Part # 36007-D347

D. Dodge Part # P5007958.

E. Engine must be installed in a normal, upright condition.

F. Engines shall be mounted so that the location of the Number 1 spark plug socket is 3 ½ inches behind the left upper ball joint. Maximum location tolerance is plus or minus ½ inch.

G. Aftermarket engine dampers are **not** permitted on non altered GM 350 HP or 400 HP Crate Engines.

H. Oil coolers are recommended.

I. Engines must be sealed by the manufacturer or certified engine rebuilder and must remain in "as shipped" condition.

J. 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**.

K. All engine mounts must be reinforced steel or aluminum.

L. Technical Director reserves the right to confiscate engine if seals have been tampered with. (*See Penalty*)

M. HMP will have replacement engines available.

N. All Ford engines must run 1.5 rocker arms. GM engines have the option of running 1.6 rocker arms with an upgraded valve spring and retainer kit available from Phil Harper Motorsports and Champ Oil pan part #CP106LTRB. **Due to the limited availability of GM approved 1.6 roller rockers, any 1.6 ratio, 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.**

O. Center of crankshaft to the ground will be no less than 10".

P. Engine must be located within 1" of the center of the frame.

## **3. IGNITION SYSTEM**

A. All cars must utilize the 6AL, 6T, 6ALN or 6HVC MSD ignition system. HMP will supply a 6300 rpm rev limiter chip that drivers will draw for.

B. MSD box must be mounted on the right hand side of dash panel and **NOT** accessible from driver's seat.

C. No Crane Ignition Systems allowed.

D. No Soft Touch Systems allowed.

E. All cars must have approved shielded ignition harness (see attached addendum)

F. **Only one ignition system permitted. One box. One coil.**

## **4. CARBURETOR**

Holley 650 CFM 4150 HP carburetor, part number 80541-1, "box-stock", is mandated. Carburetors are available for purchase directly from HMP. Carburetor must be securely fastened to the intake manifold and include one (1) .0625-inch (1/16") or smaller flange gasket. Drop-in spacers, alteration, physical changes, machining, re-shaping or

tampering with any part of the original parts, internal or external, is prohibited. Exception: **Only the General Motors 604 crate engine is permitted any one-inch (1) tall aluminum spacer and may be tapered. Spacers on all Ford engines are not permitted.** Aluminum spacers are subject to inspection by Tech Director.

Following is a listing of tuning and replacement parts permitted for use on the Holley 4150 HP Carburetor. Only genuine Holley replacement parts are permitted and must match exactly parts replaced.

- Jets
- Bleeds
- Needle and Seat
- Emulsion bleeds
- Power Valves
- Accelerator pump cam
- Floats include all offered by Holley for the HP 4150 650 CFM Carburetor.
- Floats may be modified/angle cut.
- Accelerator pump nozzles

**NOTE 1: The use of any type Epoxy on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is strictly prohibited.**

**NOTE 2: Coating of any type, or the use of coatings on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is strictly prohibited**

Tech Director reserves the right to impound or confiscate any carburetor at anytime during or after an event. Failure to comply with this will subject the driver to disqualification from the event. **NO TOLERANCE!** (*See Penalty*)

## **5. FUEL**

Unleaded pump gas or SUNOCO 260 GTX 98 Octane or equivalent are permitted. All must be NON oxygenated. Also, see rule 18F.

## **6. STARTER**

Self-starter must be in working order. Cars must be capable of starting under their own power.

## **7. WEIGHT**

- A. All cars will be weighed (with the driver in car) after main event with no top-off of fuel allowed.
- B. All eligible engines **EXCEPT** the McGunegill Ford Part # ASA 425 LM, Non-Altered 350 HP & Non-Altered 400 HP Crate Engine – Minimum weight 2,640 lbs. **NO TOLERANCE!**
- C. Non-altered GM 350 HP Crate Engine – Minimum weight 2,550 lbs. **NO TOLERANCE.**
- D. Non-altered GM 400 HP Crate Engine – Minimum weight 2,600 lbs. **NO TOLERANCE.**
- E. ALL CARS **EXCEPT** 350 HP CRATE ENGINE – MAXIMUM 58% LEFT SIDE WEIGHT. **NO TOLERANCE.**  
350 HP CRATE ENGINE – MAXIMUM 59% LEFT SIDE WEIGHT. **NO TOLERANCE.**
- F. McGunegill - Ford Part # ASA 425 LM – Minimum weight 2690 lbs. **NO TOLERANCE.**

NOTE: HMP reserves the right to make adjustments to overall weight, or left side weight percentage, in the interests of equal competition between the two engine options.

## **8. WHEELS AND TIRES**

- A. Steel racing type wheels only with a maximum of 10 inch width.
- B. The only tires allowed are as follows and must be supplied by Houston Motorsports Park:  
GOODYEAR D2902 27.0 x 10.0 - 15 Factory plated.  
GOODYEAR D2772 26.5 x 10.0 - 15 Factory plated.
- C. Tires may not be soaked or softened for testing, practice or racing. No chemical treatment is allowed. (*See Penalty*)
- D. Impound rule on wheels and tires if Tech Director suspects soaking.
- E. **Vehicles must start the Heat and Feature on the same set of tires. The only exception is replacement of a damaged tire at the discretion and pre-approval of Tech. Inspector.**

## **9. EXHAUST**

- A. **Mufflers are required.** Exhaust must be muffled to a maximum of 96 decibel sound level at 100 feet with the car under full acceleration.
- B. The exhaust pipes must extend past the driver and either turn down or exit out the right side door.
- C. Minimum 3 inch ground clearance. **NO TOLERANCE!**

## **10. RIDE HEIGHTS**

- A. Frame, body, weight box, etc. must maintain 3 inch minimum ground clearance, **WITH** driver in the car.

## **NO TOLERANCE!**

**B.** Fuel cell must maintain minimum 8 inch ground clearance. **NO TOLERANCE!**

**C.** Oil pan minimum 3 inch ground clearance. **NO TOLERANCE!**

## **11. TRANSMISSION AND DRIVETRAIN**

**A.** Transmission shall be either manual or clutch-less type automatic with a minimum of 2 and a maximum of 4 forward gears with a functioning reverse.

**B.** Drop out features where causing the disengaging of the cluster gear or auxiliary shaft are strictly prohibited.

**C.** Transmission must utilize a Tail shaft housing.

**D. Transmissions must remain as produced.** Thinning, cutting, lightening or drilling of gears is strictly prohibited. No aluminum sliders, idlers, or reverse gears. No "factory produced" thin or lightweight upgrade gears allowed. No aftermarket Gun Drilling of Main shaft allowed. All internal transmission parts are subject to disassembly and inspection.

**E.** All approved transmissions must have either an "as produced" internal clutch or utilize a multi-disc, steel racing clutch. External clutch must be a minimum disc diameter of 5.5 inches. Clutch must be contained by an approved for racing bellhousing. All bellhousing's must have a 2 ½ inch inspection hole at the bottom to insure a clear view of the clutch. All clutch types are subject to inspection. Carbon clutch discs are not permitted.

**F.** Direct drive couplers allowed only on transmissions factory produced with an internal clutch.

**G.** The use of ceramic coated bearings is strictly prohibited.

## **12. SUSPENSION**

**A.** Spindle type optional, must be all steel.

**B.** One shock per wheel.

**C.** Maximum rear camber is 1.5 degrees measured with the rear axle level.

**D.** Rear end must be floater style.

**E.** A 1/8 inch steel plate or 1/4 inch aluminum plate must be mounted between the front of fuel cell and back of rear end housing to prevent puncturing of cell.

## **13. BODY**

**A.** American made sedans template fit. (*Chevy Monte Carlo, Ford Taurus, Pontiac Grand Prix, Dodge Intrepid and Toyota Camry*).

**B.** Must be neat and tidy stock appearing asphalt style body, in the spirit of replicating original auto manufacturers design.

**C.** ABC Bodies are optional.

**D.** **NO** Downforce bodies.

**E.** Bodies must remain symmetrical (*no excessive offset bodies*).

**F.** Lexan windshield and rear window required minimum thickness 1/8 inch.

**G.** Entire interior must be enclosed with metal from front to rear firewall. Driver's tub and vertical pieces must be minimum 22 gauge steel.

**H.** Bumpers must be sufficient to push car.

**I.** Cowl air boxes allowed. No ram air devices. Hood must fit properly at front and rear with no humps to clear air cleaner. (Some exceptions to clear air cleaner will be made for chassis' with front stock clip). An opening not more than 3 inch x 20 inch may be cut in rear of hood for fresh air entry. You must leave a 2 inch strip of hood between opening and windshield.

**J.** All deck lids must open for inspection and be fastened down during competition.

**K.** No cockpit adjustable body adjusters (*working or not*).

**L.** Mandatory rearview mirror. All mirrors must be installed within the boundaries of the body and roll cage.

**M.** Windshield must maintain minimum of 24 degrees at the center and must have three braces with no flex at race speed.

**N.** One non-adjustable clear LEXAN spoiler must be installed on the rear of vehicle. This spoiler must be 6.5 inches x 60 inches and have no rudders, forward braces or wires, etc. Spoiler must not flex. Spoiler will be measured from the top corner to the top corner in the front. It must be mounted on rear deck lid and not extend further at the base than the end of the rear deck lid.

**O.** Body and spoiler must maintain the following heights:

1. Top of vehicle must maintain a minimum of 47 inches measured 10 inches back from windshield.

2. Quarter panel height at spoiler mounting point must not exceed 35 inches on the right side from the ground and 34 inches on the left side.

3. If the top of the vehicle measurement exceeds 47 inches, the measurement for the quarter panel height may exceed their measurements by the same amount.

## **14. CAR NUMBERS AND DECALS**

**A.** Registered numbers will be assigned.

**B.** Door numbers must be at least 20 inches tall on both sides of the car in the center of the door.

- C. Roof number must be at least 24 inches tall.
- D. Front and rear numbers must be at least 6 inches tall.
- E. Vehicle must display sponsors decals as supplied by the track where car is competing, in positions stipulated by the sponsor and or track official.

#### **15. Timing and Scoring (Transponders)**

Scoring is done by transponder only, which is to be mounted not forward of the rear bulk head (*typically in the vicinity of the battery.*) **IT IS MANDATORY TO HAVE AN OPERATIONAL TRANSPONDER DURING ALL ON TRACK SESSIONS.**

#### **16. SAFETY EQUIPMENT FOR DRIVERS**

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. Whenever there is a conflict between a safety provision provided herein and any other rule, the safety provision shall take precedence. Every driver is required to wear when on the track for slow laps, practice or racing:

- A. 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***).
- B. 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***).
- C. Padded helmet support (neck collar) required. Hutchons, Hans, D-Cell or similar SFI approved helmet restraint strongly recommended..
- D. Racing gloves & racing shoes required.

#### **17. VEHICLE SAFETY EQUIPMENT REQUIRED**

- A. Two way radios with spotter, mandatory at all times while car is on the track.
- B. Quick release steering wheel.
- C. Approved aluminum racing seat complete with headrest, mounted to roll cage and seat mounting bars.
- D. 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. Belts must not be older than 5 years, subject to condition. Must be securely mounted to the roll cage, not to the floor, with aircraft quality hardware, no less than 3/8 inch diameter.
- E. Driver seat head braces are strongly recommended.
- F. 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.
- G. An additional driver's head restraint net must be mounted on the left side between window net and driver's head if no left side head brace is installed.
- H. Carburetors must have minimum two external return springs and minimum one throttle stop.
- I. 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***).
- J. Fuel cell must be bladder type with foam interior and enclosed in a minimum 20 gauge metal container, and have rollover check valves on filler neck and vent. 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. Fuel cell (***maximum 22 gallons***) must be cradled with a minimum of four 1/8 inch x 1 inch steel straps. (***Two on top and two underneath***).
- K. Battery must be mounted in a safe and secure manner. If mounted in driver's compartment it must be fully encased in a non-conductive container.
- L. Steel front and rear roll bars must be welded at top and bottom on both sides, and welded to frame at bottom. Driver's side door must have four horizontal bars of 1¾ inch minimum outside diameter seamless tubing, plated with 1/8 inch minimum steel plate to cover drivers area and foot box area.

#### **18. LIST OF ITEMS NOT ALLOWED**

- A. No carbon fiber parts (***hood and roof OK***).
- B. No magnesium parts (***hubs and quick changes OK***)
- C. No Titanium parts.
- D. No cockpit adjustable suspension device allowed (***brake bias OK***).
- E. No holes drilled in body or openings to let underbody air escape (***drive and brake vents OK***)
- F. No fuel additives or oxygen bearing compounds. No nitrous. No alcohol. (***See Penalty***)
- G. No electronic ABS systems or Traction Control Devices allowed. (***See Penalty***)

- H. No on-board timing or data gathering equipment.
- I. No electric fuel pump.
- J. No fuel cooling devices

**Penalty - Car and driver will be banned for entire season, points and money will be forfeited.**

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

#### ADDENDUM

#### 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