

## XTREME PRO MOD

### **CLASS OVERVIEW:**

Xtreme Pro Mod is a 1/8<sup>th</sup> mile class designed for American production vehicles and is the most powerful class in the NMCA. Entries have the option to run either a 6cyl, small block or big block engine combination. All engine combinations are allowed to use gasoline or methanol fuel. The use of nitromethane is prohibited.

**Note:** This set of class rules is presented to all competitors under the assumption that any modifications not specifically written within these rules shall be deemed illegal, unless the competitor has the expressed written consent from the NMCA Tech Director.

### **RACING FORMAT:**

This class will be run on a 16 car qualified heads-up field, **NHRA Pro Style Ladder** on a .400 Pro Tree.

<u>ENGINE</u>	<u>POWER ADDER</u>	<u>BASE WEIGHT</u>
Import 6 CYL*	Turbo	2100
Small Block	Nitrous	2175
Small Block	Hi-helix/Roots	2250
Small Block	Centrifugal	2250
Small Block	Twin Turbo	2375
Small Block	Screw	2500
Big Block/Hemi	Nitrous 5.0 bore space	2175
Big Block/Hemi	Nitrous 5.2 bore space	2275
Big Block/Hemi	Nitrous 5.3 bore space	2375
Big Block/Hemi	Hi-helix/Roots	2400
Big Block/Hemi	Hi-helix/Roots 18-71	2450
Big Block/Hemi	Centrifugal 5.0 bore space	2425
Big Block/Hemi	Single Turbo (118mm limit)	2350
Big Block/Hemi	Twin Turbo 88mm	2450
Big Block/Hemi	Twin Turbo 94mm	2500
Big Block/Hemi	Twin Turbo 98mm	2600
Big Block/Hemi	Screw-Type D Rotor 92%	2500
Big Block/Hemi	Screw-Type C Rotor 70%	2425
Big Block/Hemi	Screw-Type C Rotor 92%	2550
Big Block/Hemi	Screw-Type C Rotor 110%	2675
Big Block/Hemi	Whipple Supercharger A980 75%	2425
Big Block/Hemi	Whipple Supercharger A980 92%	2500

\*Engine Power adder combination must be preapproved by NMCA Tech Committee.

**6 CYL:** Boosted combinations may use nitrous oxide as a second power adder. Nitrous oxide will always be considered a second power adder.

**Small Block:** Maximum bore space for all small block entries is 4.6 bore space. 400 cubic inch or smaller boosted engines may use nitrous oxide as a second power adder at a weight penalty. Nitrous oxide will always be considered a second power adder.

**Nitrous:** Big block engines are limited to 965 cubic inches. Maximum bore space is 5.3 inches.

**Hi-Helix/Roots Supercharger:** Maximum Hi-Helix/roots Supercharger permitted is 14-71, except as noted. Any overdrive permitted for 14-71 superchargers. Maximum bore space is 5.0 inches.

**Centrifugal Supercharger:** Any impeller inducer diameter permitted. Maximum bore space is 5.3 inches.

**Screw-Type Supercharger:** Hemi engines are limited to 111% overdrive. All other engines have no overdrive limitations. Maximum bore space is 5.0 inches.

**Twin Turbo:** Maximum turbocharger size is 98mm. Maximum bore space is 5.0 inches.

#### **WEIGHT ADDITIONS/DEDUCTIONS**

The use of secondary power adder is prohibited except. Except on Boosted small block engines 400 cubic inches or smaller are permitted the use of nitrous oxide as a second power adder and must add 100lbs to their original base weight.

Add 50lbs for Lockup Transmission or Converter. (Does not apply to Big Block Single Turbo, N/A, Nitrous or any small block combinations)

Add 100lbs for Centrifugal Supercharger Big block combinations larger than 5.0 bore space (max 5.3).

Deduct 50lbs for 899 cubic inch or smaller Big Block Nitrous combination.

Deduct 75lbs for 4.84 bore space and smaller Non-481X/Hemi supercharged or centrifugal combinations.

Deduct 100lbs for 4.40 Bore Space and smaller, small block V8 entries.

**NOTE: If actual displacement is more than what is listed, there will be a weight penalty of 2.5lbs per cubic inch assigned to the original base weight of that particular combination. All weights are with the driver and are rounded down to the 5lb increment.**

### **REQUIRMENTS & SPECIFICATIONS**

#### **ENGINE: 1**

##### **ENGINE**

Engine must be an internal combustion, 90-degree V-8 automotive type engine. Or Import six cylinder combinations that must be preapproved by NMCA Tech Committee.

##### **ENGINE SETBACK**

Maximum of 10% of total vehicle wheel base as measured from the centerline of the forward front spindle to center of front spark plug hole.

##### **HARMONIC BALANCER**

SFI Spec 18.1 balancer is required.

### **CYLINDER HEADS**

Hemi, canted valve or wedge heads permitted. Billet heads are permitted. Maximum of one spark plug per cylinder allowed.

### **INTAKE MANIFOLD**

Any intake manifold permitted and it is mandatory that all intake manifolds run a NMCA accepted burst panel.

### **NITROUS OXIDE**

Any NMCA accepted nitrous system allowed. Push systems are permitted. The use of water injection on nitrous assisted power adder combinations is permitted. Water is the only substance that may be used in water injection systems. The use of any agents other than nitrous oxide in the nitrous system is prohibited. Nitrous systems must only use gasoline for the fuel enrichment circuit. Nitrous systems must only be activated by a wide-open throttle switch. Maximum of two 15 pound nitrous bottles are allowed. All nitrous bottles must be stamped as meeting the minimum DOT 1800 pound rating.

### **CENTRIFUGAL SUPERCHARGER**

Supercharger impeller wheel must be constructed of only aluminum. Any other material used in the construction of the supercharger impeller is prohibited. Maximum supercharger air inlet is 6 inches. The injection of any substance in the compressor housing/volute air inlet of the supercharger is prohibited.

### **HI-HELIX/ROOTS SUPERCHARGER**

Hi-helix or standard helix Roots type supercharger is allowed. Manifold burst panel meeting SFI Spec 23.1 plus restraint system meeting SFI Spec 14.2, including injector restraint straps mandatory. Cast or billet cases permitted, except as noted.

### **SCREW-TYPE SUPERCHARGER**

All screw-type superchargers must have a SFI 34.1 certification. . Manifold burst panel meeting SFI Spec 23.1 plus restraint system meeting SFI Spec 14.2, including injector restraint straps mandatory. Cast or billet cases permitted.

### **TWIN TURBOCHARGER**

Turbochargers are allowed a maximum impeller inducer of 98mm/3.858 inches. Compressor wheel/impeller must only be constructed of cast or billet aluminum. Turbine wheels are only allowed to be constructed from Inconel material. Turbocharger is permitted a fresh air source from either the front bumper or grille area of the vehicle.

Turbocharger size will be verified by one or both of the following methods:

1. By measuring the housing bore at the leading edge of the impeller wheel. The maximum diameter of the housing bore at the leading edge of the impeller wheel may not exceed 2mm more than the maximum allowable turbocharger size permitted in this class.

By measuring the impeller inducer wheel where the leading edge of the inducer wheel meets the housing. The wheel/blade contour from the inducer to the exducer must be continuous without steps.

### **SINGLE TURBOCHARGER**

Single turbocharged entries are unlimited in turbocharger size.

### **INTERCOOLERS**

Intercoolers are only allowed on centrifugal and turbocharged entries. Air-to-Air or Air-to-Water intercoolers are the only intercoolers allowed. Air, water and ice are the only allowed substances in the intercoolers or the intercooler reservoirs. The use of any other agents is prohibited.

### **OIL SYSTEM**

Any oil system permitted. All pressurized flexible oil lines must pass a minimum 750 psi 30 second test.

### **OIL RETENTION DEVICE**

All entries must be equipped with a properly fitting lower engine ballistic/restraint device or a belly pan. The pan may be constructed from composite or metal. It must have vertical walls of at least 2 inches in height. Pan must extend from frame rail to frame rail and must extend from front of the engine mounting plate to the rear of the engine block. Pan must be attached with a minimum of three attachment points per side.

### **COOLING SYSTEM**

Any radiator, water pump and electrically driven fan are permitted.

### **EXHAUST SYSTEM**

Any exhaust system permitted. All exhaust systems must be directed out of body and away from driver and fuel tank.

### **FUEL SYSTEM**

Any electronic, mechanical or belt driven fuel pumps are allowed. Electronic fuel pumps must shut off with the master electric cut-off switch. Fuel cell must have a pressure cap and be vented to the outside of the body. Front mounted fuel cells must meet SFI Spec 28.1 and be mounted between the frame rails and enclosed in a round tube frame. A round tube frame must be constructed of a minimum of 1 ¼-inch O.D. x .065-inch chrome moly tubing. Artificial cooling or heating of fuel (i.e., cool cans, ice, Freon, etc.) prohibited. Circulating systems that are not part of the normal fuel pump system are prohibited.

## **FUEL INJECTION**

Any aftermarket electronic or mechanical fuel injection may be used. Fuel injector size and or type are unlimited.

## **THROTTLE BODY**

Any number and/or type of throttle body permitted.

## **INJECTOR SCOOP**

Any injector scoop permitted.

## **CARBURETOR**

Any number and/or type of carburetors may be used.

## **THROTTLE LINKAGE**

Throttle must be manually operated by the driver's foot.

## **FUEL**

The use of propylene oxide or nitromethane is prohibited. Gasoline, as defined by the NMCA, is a mixture of hydrocarbons only. The use of methanol fuel is only for naturally aspirated, turbocharged and supercharged engine combinations. Methanol must be pure U.S. federal grades A and AA without the addition of chemicals additives, masking agents or any other substances. NMCA reserves the right to inspect fuel at any time during competition. Failure to pass Fuel Check is grounds for disallowance of the run during competition and disqualification from the event during eliminations. Fuel is checked using various means. Samples given to Fuel Check Technical Inspectors are compared to data taken from known fuel samples, adjusted for temperature, and within a tolerance determined by NMCA. Failure occurs when the sample readings fall outside those tolerances. Methanol (M1) is a clear, colorless liquid meeting U.S. Federal Grade A or AA. Methanol must meet federal standards of purity. Top lube is not permitted.

## **DRIVETRAIN: 2**

### **CLUTCH, FLYWHEEL & FLYWHEEL SHIELD**

Flywheel and clutch meeting SFI Spec 1.3, 1.4, or 1.5 is mandatory. Lock-up style clutches are permitted. Flywheel shield meeting SFI Spec 6.2 or 6.3 is mandatory.

### **TRANSMISSION**

Aftermarket planetary, clutch less, OEM or aftermarket automatic transmission permitted. All transmissions must be equipped with a SFI Spec 4.1 transmission shield. OEM or aftermarket automatic transmissions must use a SFI Spec 30.1 flex plate shield and a SFI Spec 29.1 flex plate. Aftermarket converter drive units permitted. All entries using a torque converter must be equipped with a neutral safety switch and a reverse lockout. Lock-up style torque convertors

are permitted with weight adder (see weight add/deduct list). Automated, electric, or pneumatic shifting devices permitted on all transmission types.

### **DRIVELINE**

Driveshaft meeting SFI Spec 43.1 is mandatory. Each end of the driveshaft must have round 360-degree driveshaft loops within 6 inches of U-joints. A full 360-degree driveshaft tube is mandatory over the yoke, and needs to extend from the transmission tail shaft a minimum length of 12 inches. Minimum thickness of tube housing is .050 inch chrome moly or titanium. Two-piece accepted with minimum 6 3/8 inch Grade 8 bolts.

### **REAREND**

Any automotive type rear end permitted. Full floating or live axle type rear ends are mandatory on all supercharged and turbocharged entries. Fabricated flange rear ends with miss/self-aligning bearings are only permitted to be used with naturally aspirated and nitrous assisted combinations. Aftermarket axles with a minimum of 5/8 inch diameter studs and axle retention device are mandatory. Titanium wheels studs are prohibited.

## **BRAKES, STEERING & SUSPENSION: 3**

### **BRAKES**

Automated brakes are prohibited. The application and release of the brakes must be a function of the driver. Four wheel hydraulic disc brakes are mandatory. Steel brake lines are mandatory. Brake lines must be out of flywheel and driveline areas. Line-lock is permitted only on the front wheels. One line-lock solenoid with one button is permitted. Dual master cylinder is mandatory and must be mounted above the lower frame rails.

### **STEERING**

Any automotive type steering system permitted. Commercially available quick disconnect steering wheel meeting SFI Spec 42.1 is mandatory. Minimum steering wheel diameter is 11 inches.

### **SUSPENSION**

Full automotive type systems are mandatory. A minimum of one hydraulic shock absorber per wheel is mandatory. Fabricated units are permitted. Rigid mounted suspensions or straight front axles are prohibited

### **WHEELIE BARS**

Wheelie bars are required with nonmetallic wheels.

## **FRAME: 4**

### **CHASSIS**

Chassis must have a SFI 25.1E or 25.2 certification and have either a NHRA or IHRA serialized sticker attached to the roll cage before competition. A valid NHRA serialized sticker is mandatory at an NHRA Member Track.

## **WHEELBASE**

Minimum wheelbase is 100 inches and maximum is 115 inches. Combinations with original OEM wheelbase exceeding 115 inches permitted but may not exceed OEM wheelbase. Full-sized trucks are allowed a maximum of 140 inches. Mid-sized trucks (i.e., S-10, Ranger, and Dakota) are allowed a maximum of 125 inches. Maximum wheelbase variation from left to right is 2 inches.

## **GROUND CLEARANCE**

A minimum of 3 inches from the front of the vehicle to 12 inches behind front spindle centerline is mandatory. A minimum of 2 inches for the rest of the vehicle is mandatory (except for oil pan and exhaust headers).

## **TIRES AND WHEELS: 5**

### **TIRES**

Tires may not extend outside the body line. All tires must have the manufacturer, model and size information clearly designated on the tire.

### **WHEELS**

SFI Spec 15.1 or 15.3 rear wheels measuring 16x16 inches with double bead locks or liners mandatory. Lightening or any other modification to rear wheels is prohibited. Wheels discs or covers are prohibited.

## **INTERIOR: 6**

### **UPHOLSTERY**

Driver's seat must be a minimum height of 24 inches.

### **SHEET METAL**

Driver compartment interior must be aluminum, steel or carbon fiber. The use of magnesium is prohibited. Sheet metal may not extend into rear window or be higher than the wheel tubs. The trunk must be completely separate from driver's compartment using a firewall.

## **BODY: 7**

### **BODY**

Only American production body styles permitted. One piece funny car bodies are prohibited. Lightweight aftermarket replica body components are permitted as long as they have the same appearance as the body being used. Both doors must be functional from inside and outside of the vehicle. Front overhang is limited to 45 inches measuring from the front spindle. If the body selected has an overhang of less than 45 inches, a NMCA accepted extension may be used to reach the maximum length. All entries must have a metal deflector or firewall extension between the fenders and the leading edge of the doors so that fire, liquids, etc. cannot come into the driver's compartment.

### **HOOD & HOOD SCOOP**

Hood scoops are permitted and are allowed to have one opening. Vehicles that are equipped with an EFI system are not required to run a hood scoop. Carburetors must be completely covered by the hood or hood scoop.

### **FIREWALL**

A minimum of .024 inch steel or titanium firewall is mandatory. The use of aluminum, magnesium or carbon fiber in the construction of a firewall is prohibited.

### **WINDSHIELD & WINDOWS**

Full windows are mandatory. Windows must be closed and not operative. Cutting or notching of windshield permitted if covered by the hood or hood scoop. Minimum of a 4 inch diameter opening on side windows is mandatory. Windows can be made from 1/8<sup>th</sup> inch polycarbonate material.

### **FLOOR**

Driver's side floor pan must be steel and welded into place. The remainder of the floor section can be .024 inch steel, .032 inch aluminum, or carbon fiber. The use of magnesium is prohibited.

### **WHEEL WELLS/TUBS**

Rear wheel wells/tubs must be separate from each tire.

### **WING/SPOILERS**

Any style of rear wing/spoiler is permitted. Any adjustments to the wing/spoiler during a run are prohibited.

### **TAILLIGHT**

One functional taillight is mandatory.

### **APPEARANCE**

All cars in competition must be painted or wrapped. Advertising graphics are permitted on the body. In order to be eligible for the NMCA official contingency program, all contingency sponsors' decals must be easily visible and located on the outside of the vehicle. Failure to do so can result in the driver **forfeiting** all claimed contingencies for that particular event. The NMCA requires that all entries run the following decals:

1. NMCA Windshield Banner: Decal needs to be located on the top of the windshield or just above the windshield located on the body.
2. NMCA Drag Racing Series: Decals (2) must be located on each side of vehicle. Either on the side windows or decals can be located on the body right beside the side windows.
3. Class Sponsor: Decal must be located on the passenger's side lower portion of the windshield.
4. VP Racing Fuels: Official Fuel decals (2) required. Must be located on each side of vehicle. (In a contingency decal manner)



5. Aerospace Winners Circle: Decals (2) must be prominently displayed on each side of vehicle. Failure to do so can result in the winning driver forfeiting his/hers Winner's Trophy & Payout.
6. Class & Competition Numbers: Numbers must be easily visible/legible and located on the front, back, and both side windows.

## **ELECTRICAL: 8**

### **BATTERY**

Maximum of two batteries are allowed.

### **IGNITION**

Maximum of one magneto and or distributor is allowed. Maximum of only one spark plug per cylinder is allowed. Magneto systems are limited to using a single 44 amp maximum output system. The use of multiple ignition coils (one per cylinder) instead of using a magneto or distributor is allowed. Any electronic ignition system is allowed.

### **STARTER**

On board or remote starters permitted.

### **MASTER CUTOFF SWITCH**

A master cutoff switch is mandatory.

## **SUPPORT GROUP: 9**

### **COMPUTER/DATA RECORDERS**

Computer/data recorders are permitted and must standalone and to be only used for information gathering purposes.

### **TOW VEHICLES**

The use of tow vehicles is permitted.

### **CREW MEMBERS**

Each crew member must have the proper starting line credentials and must wear matching attire.

## **DRIVER: 10**

### **DRIVER**

The driver when in the vehicle, from the ready line until the vehicle is safely stopped on the return road, **is required to have all safety restraint systems (including the helmet) on and be securely fastened in the vehicle at all times**

### **CREDENTIALS**

A Valid state or government issued driver's license beyond a learner/s permit level is mandatory for cars running 10.00 or slower. A valid NHRA competition license is mandatory for

cars running 9.99 or quicker, at a NHRA Member Track. A valid NHRA or an IHRA competition license is mandatory at an IHRA Member Track.

**Note:** It is ultimately the competitor's responsibility to familiarize themselves with the NMRA class requirements as well as ***all NHRA safety requirements***. The competitor agrees they bear the ultimate responsibility when it comes to safety and how it complies with the NMRA and NHRA rule books. The competitor also agrees that no one else other than the competitor is in the best position to know about how their particular race car has been constructed and how to safely operate it.