



## PRO NITROUS



### Pro Nitrous

Pro Nitrous is a Pro Modified category with only nitrous oxide engines permitted, meeting the specific rules of the category as listed below. Pro Nitrous (PN) is contested on a .400 pro tree and is qualified based off of elapsed time, from quickest to slowest. 16-car qualified field, with a professional pairing ladder.

#### DESIGNATION

PN followed by car number. Number must be at least four inches high. Competition number must be located on both side windows, windshield and rear window. PDRA mandates the class sponsor decals and PDRA decals on all entries, in all classes. If you choose to apply to our contingency program, those decals are required as well and available at the PDRA registration trailer. The sponsor and PDRA decals must be on the vehicle at the time of technical inspection and will stay on the car for the entirety of the event. Contingency stickers also must be on the vehicle at the time of technical inspection and will be viewed before the final round of eliminations for verification by a PDRA official.

All rules are subject to change at any time given the sole discretion of the PDRA Technical Services Department.

*Updated: January 19, 2023*

## MINIMUM WEIGHT REQUIREMENTS ALL WEIGHTS INCLUDE DRIVER AT CONCLUSION OF RUN

Pro Nitrous, over 966 cubic inch maximum – 2,440 lbs.

Pro Nitrous, 965 cubic inch maximum – 2,425 lbs.

Pro Nitrous, 900-910 cubic inch maximum – 2,350 lbs.

Pro Nitrous, less than 900 cubic inches – 2,300 lbs.

### Weight Additions/Reductions:

- Add 25 lbs. for Transmission with Four (4) or More Forward Gears, automatic transmission only. Addition does not apply to clutch combination.

- Deduct 25 lbs. for Nostalgia Body Style, see body section for clarification.

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## REQUIREMENTS & SPECIFICATIONS

### ENGINE: 1

#### COOLING SYSTEM

Radiator permitted, electrically driven fan and water pump is permitted.

#### CYLINDER HEADS

Billet heads are permitted. Maximum one spark plug per cylinder.

Maximum two valves per cylinder.

#### CYLINDER BORE SPACING

Bore spacing is set at maximum of 5.300-inches.

#### DECK HEIGHT

Engine deck height is set at maximum of 12.600-inches.

#### ENGINE CONTAINMENT SYSTEM

SFI 7.1 lower engine containment system required. If a flexible 7.1 system is utilized, it must be accompanied by a carbon fiber or aluminum belly pan with a minimum 2-inch vertical lip.

#### ENGINE SETBACK

Maximum of 10-percent of total vehicle wheelbase as measured from the centerline of the forward front spindle to center of front spark plug hole.

#### EXHAUST

Automotive type system designed specifically for racing required. Exhaust gasses must be directed out of the body towards the rear of vehicle and away from the driver and fuel system. All removable multi-piece exhaust collectors/stacks must be securely fastened with either an NHRA-accepted header tether, a minimum .050-inch (half-inch) stitch weld located on each primary tube or be permanently attached to the vehicle or frame with positive fasteners (i.e., exhaust hangers, support brackets, bolts/nuts, etc.) such that they require tools for removal.

#### FUEL

Racing gasoline permitted. The use of nitromethane and/or propylene oxide is strictly prohibited.

### FUEL SYSTEM

Fuel cell/tank must have pressure cap and be vented to outside of body. Where fuel cells are used, they must meet SFI Spec 28.1. Fuel cells/tanks must be mounted between framerails and enclosed in a round tube frame, minimum 1.25-inch O.D. x .065-inch chromoly or titanium tubing. Extra tank(s) prohibited. Artificial cooling or heating systems prohibited. Circulating systems, not part of normal fuel-pump system, prohibited. Water injection permitted on nitrous oxide entries; only water permitted in water injection system.

### HARMONIC BALANCER

SFI 18.1 certification required.

### INDUCTION

Any number and type of carburetors or throttle bodies may be used. Electronic fuel injection permitted.

### INTAKE MANIFOLD

A PDRA accepted burst panel is required on all vehicles.

### NITROUS OXIDE

Permitted. All nitrous bottles must be stamped as meeting minimum DOT-1800-pound rating. Maximum of two bottles, fifteen pounds per bottle. Commercially available blanket-type warmers are accepted while the use of a torch or any other external heating of bottle(s) is prohibited.

### OIL SYSTEM

All pressurized flexible oil lines must pass a minimum 750psi, 30-second test and be tagged to indicate successful testing.

### STARTER

Required. All entries must be self-starting. The use of remote-mounted battery packs permitted for starting purposes only. No push-starts allowed.

### SUPERCHARGER

The use of any type of supercharger is strictly prohibited.

### THROTTLE

Throttle control must be manually operated by driver's foot. Electronics, pneumatics or hydraulics is permitted for starting line/staging RPM limiters only.

### TURBOCHARGER

The use of any type of turbocharger is strictly prohibited.

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## REQUIREMENTS & SPECIFICATIONS

### DRIVETRAIN: 2

#### CLUTCH, FLYWHEEL, FLYWHEEL SHIELD & MOTOR PLATE

Clutch and flywheel meeting SFI 1.3, 1.4 or 1.5 certification required. SFI 29.1 flex plate required on all torque converter equipped cars (SFI 29.2 recommended). The motor plate must be attached to the chassis using at least two welded mounting points with a minimum 3/8-inch Grade 8 bolts and full nuts. At least two additional welded mounting points (using the motor plate, front block plates, etc.) are required to secure the engine to

the chassis also with minimum 3/8-inch Grade 8 bolts and full nuts.

**DRIVELINE**

Driveshaft meeting SFI Spec 43.1 mandatory. Each end of driveshaft must have round 360-degree driveshaft loops within 6 inches of the U-joints. A full 360-degree driveshaft tube mandatory over the yoke, extending from the transmission tail shaft rearward, a minimum length of 12 inches. Minimum thickness of the driveshaft tube housing is .050-inch chromoly or titanium. Two-piece design accepted with minimum 6 3/8-inch Grade 8 bolts. See General Regulations 2:4. The use of "quick pins" in driveline tube or driveshaft loops is strictly prohibited.

**FLYWHEEL SHIELD**

SFI 6.3 certification required.

**TRANSMISSION**

Aftermarket planetary, clutch less, or automatic transmission permitted. All transmissions must be equipped with an SFI Spec 4.1 transmission shield. Aftermarket converter drive units permitted. When an automatic transmission or converter drive is utilized, an SFI Spec 6.1 or 6.3 flywheel shield and an SFI Spec 29.1 or 29.2 flexplate are mandatory. All entries utilizing a converter must be equipped with a neutral safety switch and a reverse lockout. Bolt together torque converters must be through bolt design using a minimum Grade 8 bolt with locking nut. Transmission brake permitted on all converter-equipped entries, electric transbrake release system only. All entries using a torque converter must utilize a belly pan. Lockup converters are permitted. Overdrive units are prohibited on all combinations. A 1-to-1 relationship is mandatory in high gear for all transmission types. Automated, electric, or pneumatic shifting devices permitted on all transmission types; must be controlled by preset engine rpm and/or time functions only.

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**REQUIREMENTS & SPECIFICATIONS****BRAKES & SUSPENSION: 3****BRAKES**

Four-wheel brakes with dual master cylinder mounted above the frame rails is required.

**REAR END**

Automotive type, full-floater rear end required. Titanium wheel studs prohibited. Mark Williams EV4 axle system or Strange STRL-5500SBB accepted.

**SUSPENSION**

Race car type suspension required. Solid suspension is prohibited. Shock absorbers required on all four wheels.

**WHEELIE BARS**

Permitted. Wheels must be non-metallic.

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**REQUIREMENTS & SPECIFICATIONS****FRAME: 4**

### **BALLAST**

Permitted. Any ballast mounted on, or in front of, forward crossmember is limited to 30 pounds maximum, including bracket. Maximum length of bracket is 12-inches, measured from the front of the crossmember. Weight bars, pucks, etc., must use minimum .500-inch-diameter SAE Grade 8 bolts for attachment.

### **CHASSIS**

SFI 25.1 E or 25.2 certification required.

### **DRIVER**

Must be in stock location, on the left side of the vehicle.

### **FRAME**

Chassis must meet SFI Spec 25.1. Chassis must be recertified yearly by the PDRA and have a specialized sticker affixed to the roll cage before participation (see General Regulations 4:4, 4:11, 10:6). A panel of .032-inch aluminum, .024-inch steel or carbon fiber must be installed on the inside portion of the roll cage anywhere the driver's legs can come into contact with the roll cage. Panels must be installed in the front and lower portion of the drivers-side X-brace. Panels must attach to the interior side of the tubing or no further than the middle of the tubing, with "impact-type" padding attached to the panels. Padding must extend to be flush with X-brace. Minimum padding thickness is .025-inch. An additional panel(s) of .032-inch aluminum, .024-inch steel or carbon fiber must be installed in the roll cage roof area. The panel(s) must, at minimum, extend from the driver's side roof bar to the centerline of the vehicle. The panel(s) in the funny car cage area must be removable for proper chassis certification processes.

### **GROUND CLEARANCE**

A minimum of 3-inches of ground clearance is mandatory from the front of the vehicle to 12-inches behind the centerline of the front axle. A minimum of 2-inches of ground clearance is mandatory for the remainder of vehicle, except oil pan and exhaust headers.

### **STEERING**

SFI 42.1 steering wheel disconnect is mandatory.

### **WHEELBASE**

Minimum wheelbase of 100-inches, maximum wheelbase of 115-inches. The particular body styles of S-10, Ranger, Dakota trucks are maximum of 125-inches. Maximum stagger variation is 2-inches from side-to-side.

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## **REQUIREMENTS & SPECIFICATIONS**

### **TIRES & WHEELS: 5**

#### **TIRES**

Automotive type tires designed specifically for racing are required. Tires cannot be located outside of the body line. Manufacturer, model and size information must be clearly designated.

### WHEELS

Wheels meeting SFI Spec 15.1 or 15.3 with bead locks or liners mandatory. Maximum width of 18-inches. Modification and/or lightening prohibited. Wheel discs or covers are prohibited.

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## REQUIREMENTS & SPECIFICATIONS

### INTERIOR: 6

#### DRIVER COMPARTMENT

Driver compartment interior must be aluminum, steel or carbon fiber. Magnesium prohibited. Sheet metal may not extend into rear window any higher than wheel tubs. Rear wheel wells must be separate for each tire. Maximum height of rear wheel tubs from ground, 40-inches. Transmission case must be SFI certified or utilize a transmission blanket meeting SFI 4.1. Trunk must be a completely separated from driver compartment with a firewall.

#### SEAT

Driver's seat must be minimum 24-inches high. Seat must be foamed with energy-absorbing material and formed to the driver's body and covered with a minimum one-layer, flame-retardant material. Seat frame must be installed as a permanent part of the chassis.

#### WINDOW NET

SFI 27.1 window net is mandatory. Mechanism for release must have red label and in visible sight for track officials to use externally.

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## REQUIREMENTS & SPECIFICATIONS

### BODY: 7

#### BODY

Funny car or one-piece bodies not allowed even if equipped with doors. Maximum front end overhang of 45-inches as measured from centerline of front spindles. A PDRA/NHRA-accepted extension may be used to reach 45-inches if the front-end overhang of the body is less than 45-inches. All bodies must originate from a production vehicle. No holes permitted in rear of body. Two hinged openings are permitted. All new cars must be accepted by the PDRA Competition Department prior to construction. All vehicles must be professional finished, painted, lettered, numbered and decaled.

#### BELLY PAN

Permitted on all cars; mandatory on all entries using a torque converter. Pan must extend from framerail to framerail and extend from the bellhousing/engine mounting surface to the end of the transmission tail shaft. Nonflammable, oil-absorbent liner is mandatory inside of belly pan.

#### DOORS

Required. Doors must be functional and able to be opened from both the inside and outside of the vehicle. Doors may be fabricated from carbon fiber, fiberglass or metal. A metal deflector between the fenders and the leading edge of the doors is required.

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### **FIREWALL**

Magnesium, aluminum or composite not allowed. All firewalls must be made of steel or titanium of .024-inch minimum thickness.

### **FLOOR**

Replacing stock floors with .024-inch steel or .032-inch aluminum is allowed. Driver's side floor pan must be .024-inch steel and must be welded in place extending from firewall to back of the driver's seat. Carbon fiber or aluminum may be utilized in the passengers' portion of the flooring in the driver's compartment.

### **HOOD SCOOP**

Permitted, one opening only. Must be finished and painted to follow the bodies paint scheme. Nitrous-assisted entries must utilize either a hood scoop or cowl induction hood to completely cover carburetors. Throttle bodies only may be exposed on fuel injected, nitrous assisted entries.

### **NOSTALGIA BODY STYLE**

The following body styles may deduct 25 pounds from their minimum weight: 1937-1938 Chevy, 1937-1942 Willys, 1949-1950 Mercury, 1953-1959 Studebaker, 1953-1962 Corvette, 1955-1957 Chevrolet, 1955-1957 Buick, 1968-1972 Chevelle. Full size truck bodies (Silverado, F-Series, Ram, etc.) are also eligible for the body deduction.

### **PARACHUTES**

Dual parachutes required. Separate shroud-line mounting points with 0.500-inch sleeved grade-8 bolts required. Safety pins must be red flagged and must be removed prior to burnout.

### **WINDSHIELD, WINDOWS**

Mandatory. May be replaced with 1/8-inch thick lexan, plexiglass or other shatterproof material. An opening with a 4-inch diameter minimum is required on side windows adjacent to the driver.

### **WING, SPOILERS**

Any style rear wing and/or spoiler is permitted. Adjustment during the run is prohibited.

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## **REQUIREMENTS & SPECIFICATIONS**

### **ELECTRICAL: 8**

#### **BATTERY**

Maximum of two batteries allowed. All batteries must be securely fastened.

#### **IGNITION**

Maximum one magneto or distributor. Maximum one spark plug per cylinder. Electronic starting line RPM limiters (two-steps) are permitted.

#### **MASTER CUT-OFF**

Mandatory. An external master electrical shut-off is required, must be clearly labeled, "PUSH OFF."

**TAILLIGHT**

Functional rear tail light is required. Tail light must be permanently mounted and controlled from the driver's compartment.

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**REQUIREMENTS & SPECIFICATIONS****SUPPORT GROUP: 9****COMPUTER**

Permitted.

**DELAY BOX**

Permitted.

**DATA RECORDER**

Permitted.

**FIRE SUPPRESSION SYSTEM**

SFI 17.1 system required. System must contain a minimum of 20-pounds of fluid or gas fire suppression agent. One nozzle required inside driver's compartment must be directed at driver's feet. Two or more nozzles must be directed at front of engine and fuel cell. All fire suppression must be released with a single actuation (i.e., single handle, button or lever).

**TOW VEHICLES**

Permitted. Tow/push bars must be labeled with reflective tape and/or bright color or striping for safety precautions. A valid driver's license is required to operate any type of tow vehicle. All passengers must be seated inside of the vehicle with all doors closed. Riding in open hatchback, trunk or cargo area is not allowed. ATVs are allowed with a maximum of one passenger who must always be seated. Golf carts are allowed with a maximum of four passengers who must always be seated. Posted pit speeds must always be obeyed. If pit speed is not posted, maximum pit speed will be 10 miles per hour.

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**REQUIREMENTS & SPECIFICATIONS****DRIVER: 10****CREDENTIALS**

NHRA or PDRA competition license is required.

**DRIVER RESTRAINT SYSTEM**

Driver restraint system meeting SFI Spec 16.1 certification required (7-point system recommended). Restraint system must be updated at two-year intervals from date of manufacture.

**HEAD AND NECK RESTRAINT**

SFI 38.1 required. An aluminum skid plate located above driver's head is recommended.

**HELMET**

For all cars, a full-face Snell SA2015, or SA2020 helmet and shield mandatory (goggles prohibited). Eject Helmet Removal System (Part # SDR 890-01-30) mandatory and must be installed per manufacturer

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instructions. A Stand 21 Lid Lifter head sock meeting SFI 3.3 may be used in lieu of the Eject Helmet Removal System.

### **HEAD AND NECK RESTRAINT DEVICE/SYSTEM**

A head and neck restraint device/system meeting SFI Spec 38.1 is mandatory.

### **PROTECTIVE CLOTHING**

A driver's suit meeting SFI 3.2A/15, gloves meeting SFI 3.3A/15, shoes meeting SFI 3.3/15 and a head sock meeting SFI 3.3 mandatory. A head sock is not required when a helmet manufactured with a skirt meeting SFI 3.3 is used. **3.2A/20 fire suit is recommended.**

### **RF SHUTDOWN RECEIVER**

Properly functioning Electrimotion shut-off device (Part # SB001 and RF001) recommended. PDRA will utilize Electrimotion safety shut-off device at all PDRA national events.

### **ROLL BAR PADDING**

SFI 45.1 required.