

# *Nostalgia Funny Car*

## **DESIGNATION**

N/FC, preceded by number.

Reserved for pre-1980 Automobile bodied, nitro-burning Funny Cars built specifically for all-out drag racing competition. Minimum weight at conclusion of run: 2,250 pounds, including driver.

Speeds of 250 mph and/or elapsed times in the 5.90-second range will require a Re evaluation of performance restrictions.

## **REQUIREMENTS & SPECIFICATIONS**

### **ENGINE**

Any internal-combustion, OEM-type engine permitted. Maximum cubic inches 500; maximum bore centre spacing 4.840 inches, must maintain bore centres +/- .015-inch from stock. Blocks and cylinder heads must retain all physical characteristics of stock-production components. Billet blocks permitted. Any new block design must be submitted to NHRA Technical Services Department for acceptance. Alloy and billet heads allowed. Accepted billet heads and block must remain as manufactured. Machining of billet heads or billet blocks to reduce weight is prohibited. OEM cylinder-head bolt pattern mandatory for all cylinder-head types. Cylinder heads must retain stock OEM-valve angles.

### **LOWER CONTAINMENT**

Engine must be equipped with an SFI Spec 7.1 lower-engine-ballistic/restraint device. In addition it is advised that an engine oil-retention pan is utilised; minimum material .050-inch aluminium or .040-inch carbon fiber/Kevlar. Pan must extend from framerrail to framerrail and extend from the rear motorplate to minimum 1 inch forward of the front face of the lower pulley and must incorporate minimum 4-inch-high vertical folded-up walls on the sides and minimum 2 inches on front and rear. Front and rear walls must be "coved" toward oil pan to assist oil in staying within the confines of the oil-retention pan. Pan must be either a one-piece design or constructed as to be sealed as a retention device to retain oil. Minimum number of slots or holes in the walls to clear frame, steering, or lines permitted. A non-flammable, oil-absorbent liner advised inside of retention device.

### **EXHAUST SYSTEM**

Double-pipe insulated exhaust headers mandatory. Double tube must extend to start of bend at bottom of body.

### **FUEL**

Nitromethane and methanol permitted (65% minimum nitromethane). All other fuels prohibited.

### **FUEL SYSTEM**

Single fuel pump mandatory. Fuel pump must be of an accepted design - accepted fuel pumps: Enderle 1200, 1270, and 1380, Settles Nitro Gerotor, Waterman 320950N or 320950, Aeromotive 11935 and 11936 and Rage Racing 1400N-FC. Fuel pumps must retain as-manufactured gear or rotor outside diameter, depth, and tooth/lobe count.

Fuel pumps with a second outlet must have one of the outlets capped or routed back to the fuel tank or return system.

Fuel pump restricted to a total fuel delivery limited to 21.0 gpm at 4,000 rpm pump speed measured through a 0.300-inch orifice.

Fuel tank and fuel lines must be within the confines of the frame and be protected from coming in contact with the track surface. Fuel lines in the driver's compartment prohibited except for a fuel-pressure gauge; lines must be steel or steel-braided with steel fittings.

Must have fuel shutoff operable from the driver's seat. Fuel tank must be equipped with a positive locking screw-on cap.

Maximum number of nozzles 24 (maximum 8 in injector hat, 16 in manifold). Y nozzles may be used in lieu of individual nozzles in the manifold; limited to 16 nozzle jets. Down nozzles prohibited. Maximum fuel injector air inlet opening: 45 square inches measured at butterfly or throttle bodies, excluding cross shaft in fully open position.

No composite materials (i.e., carbon fibre/Kevlar, graphite, etc.) can be used in injector

hat and/or scoop. Hat/scoop must be nostalgic in appearance, internal modifications allowed. Scoops limited to 12 1/2 inches above throttle body as measured from centreline of throttle shaft to top of scoop. The use of electric, pneumatic, or any other automatic way of switching or sequencing of fuel system is prohibited. Fuel system must operate on its own pressure as far as adding or subtracting fuel volume. Manual high-speed fuel system allowed.

## **NITROUS OXIDE**

Prohibited.

## **SUPERCHARGER**

Restricted to Roots-type supercharger; rotor helix angle not to exceed that of standard 71-series GM-type rotor. High-helix prohibited. Limited to a single, Roots-type 6.71 blower. Specification limits: 15-inch rotor length, 18.250-inch case length, and 5.840-inch rotor cavity diameter. Rotors must be driven from the front; both external drive and internal gearing. Rotor helix angle limited to standard 71 series GM-type rotor (60 degrees). Maximum overdrive: 18.99 percent. Blower setback may not allow any portion of blower to extend behind bellhousing mounting surface on cylinder block. Spacer or components between top of supercharger case and bottom of fuel injector hat restricted to 2-inch maximum. Supercharger restraint system meeting SFI Spec 14.3 mandatory. Aluminium studs required. Manifold burst panel meeting SFI Spec 23.1 mandatory. Manifolds are limited to a maximum manifold height of 8 inches as measured from valley gasket surface to blower mounting surface. Supercharger belt guard mandatory. Fuel and/or oil lines must be shielded wherever they pass the supercharger drive belt. Either a belt guard or fuel/oil line guard permitted. Turbochargers, screw-type superchargers, and centrifugal-type superchargers prohibited.

## **THROTTLE**

Throttle control must be manually operated by driver's foot; electronics, pneumatics, hydraulics, or any other device may in no way affect the throttle operation. Throttle must incorporate a positive-action return system.

## **VALVE COVERS**

Cast or fabricated metal valve covers using all attachment bolts mandatory. Carbon fibre/composite valve covers prohibited.

## **VENT-TUBE BREATHERS**

Vent tubes must be double clamped at each connection. Minimum diameter, 1 1/4 inches for all breather tubes. All quick connections in the system must have a secondary locking system (tape, wire ties, etc. not allowed). Minimum catch-can(s) capacity is an 8-quart sump. Catch can(s) must have adequate internal baffling to prevent oil from being deposited on racing surface. See General Regulations

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

Flywheel and clutch meeting SFI Spec 1.3 or 1.4 and flywheel shield meeting SFI Spec 6.2 mandatory. Clutch management system prohibited. Maximum number of discs three, maximum number of fingers six. Release of clutch must be the result of a manual operation by the driver's foot. No staged systems allowed.

## **DRIVELINE COVER**

Driveline must be covered in .024-inch steel or .0625-inch aluminium 360-degree full cover. Couplers mandatory. Rear cover must surround the coupler. Front cover must surround the driveshaft from the back of the reverser to the end of the splicer sleeve in the area of the driver's leg. All covers must be securely mounted to frame, either by a suitable crossmember or third member.

## **REAR END**

Rear-end gear ratio minimum (numeric) 3.90:1. Aftermarket full-floating or live axle assembly mandatory.

## **TRANSMISSION**

Two-speed transmission and reverser required. Transmission must be planetary-type design. OEM or Powerglide-type units prohibited. A ballistic shield covering all units mandatory; must meet SFI Spec 4.1.

## **BRAKES**

Four-wheel hydraulic brakes mandatory. Application and release of brakes must be a function of the driver; electronics, pneumatics, or any other device may in no way affect or assist brake operation. Hand brake, if used, must be located inside body or driver compartment. Steel brake lines mandatory, fireproof brake-line covering mandatory on all (front and rear) flexible connection lines.

### **STEERING**

Conventional automotive-type rod ends must be a minimum of 3/8-inch shank diameter and must be installed with washers to prevent bearing pullout. Removable steering wheel, if used, must meet SFI Spec 42.1.

### **BALLAST**

Permitted. Must be secured with minimum of two 3/8-inch, Grade 8 fasteners, per 100 pounds.

### **GROUND CLEARANCE**

Minimum 3 inches from front of car to 12 inches behind centreline of axle; 2 inches for the remainder of the car, except oil pan and headers.

### **PARACHUTE**

Dual parachutes mandatory. Two separate shroud-line mounting points mandatory with sleeved 1/2-inch-minimum Grade 8 steel bolts with self-locking nuts or with nuts welded onto parachute brackets. Shroud-line mounting brackets must be constructed of minimum 3/16-inch 4130 steel. Fire-resistant protective covers must be on all parachute packs and unpacked shroud lines.

### **ROLL CAGE**

Chassis must have manufacturer's name, serial number, and date of manufacture. Chassis must meet SFI Spec 10.1E. Plating of chassis prohibited; painting permitted. Chassis must be inspected yearly and have serialized sticker affixed to frame before participation. Roll-cage padding meeting SFI Spec 45.1 mandatory where driver's helmet may come in contact with roll-cage components. Additional padding, mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, advisory. Additional padding must be NHRA-accepted, securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. A current list of NHRA accepted lateral head supports is available on [NHRARacer.com](http://NHRARacer.com). Pressurization of framerails in lieu of air bottles is prohibited.

### **SUSPENSION**

Rigid rear suspension mandatory. Front suspension optional.

### **WHEELBASE**

Minimum: 112 inches; maximum: 125 inches, measured on long side. Maximum wheelbase variation from left to right: 2 inches.

### **TIRES**

Race-only spec tires on front mandatory. Size of rear tires limited to 34.6-inch diameter x 17-inch wide.

### **REAR WHEELS**

Must be either beadlock design or use of a liner mandatory on non-beadlock wheels. Minimum SFI spec 15.1.

### **SHEET METAL**

Driver-compartment interior, firewall, seat, etc. must be aluminium or steel. Magnesium or carbon fibre prohibited.

### **UPHOLSTERY**

Minimum one-layer, flame-retardant-material mandatory as seat upholstery.

### **BODY**

Limited to 1965 to 1979 Automobile bodies. Bodies must resemble the original mass-produced make and model. Corvette roadster and Jeep bodies permitted. Bodies may be made of fiberglass or composite material. Body must lift off as a one Piece unit. Minimum body width is 60 inches, measured at the centreline of the front and rear axle. Maximum lowering of roof height: 2 inches. Front fender bubbles allowed, maximum 2 1/2 inches. The body may be shortened or lengthened a maximum of 15 percent of original dimensions. Opening for blower hat must have a

minimum 2.500-inch clearance between body and throttle linkage. Injector box in windshield cannot exceed 50 percent of windshield height. Any modifications to body not described are prohibited. Side windows prohibited. Exception: Vent windows permitted, may not extend 2 inches rearward where the A-pillar meets the roof line. Window must be perpendicular to the bottom of the side window frame. A means of relieving excess pressure under the body mandatory, either a sufficient opening in the area around the manifold burst panel is required or by means of a Body (hood) burst panel, minimum 288 square inches, mandatory. Body burst panel must be secured with plastic screws and two 1/8-inch stainless-steel wires, with body pad bolted with plate on both sides of panel. Fireproof body undercoating required. Body rear mount must be a quick release type operated by a "T" handle on the rear of the car to aid body removal in the event of an accident.

### **ESCAPE HATCH**

A working escape hatch must be installed in top of body to permit easy driver exit; see-through types prohibited. Minimum size, 18 inches x 17 inches. Roof hatch must be permanently attached and hinged at front. Must have release mechanism, operable from both inside and outside of car.

### **FIREWALL & FLOORS**

Must be constructed of .032-inch aluminium or .024-inch steel, magnesium or composite materials prohibited. Firewall must completely seal driver from engine compartment per NHRA specs and be equipped with fire windows measuring no greater than 25 square inches on either side of the firewall in the vicinity of the valve covers to warn driver of fire. Laminated safety glass or fire resistant plastics such as Lexan or Plex70 mandatory.

### **SPOILER**

Rear spoiler limited to roof height and body width (modern-type spoilers or spill plates prohibited). Spill plates may not extend forward of the bottom of the rear window or extend past the trailing edge of the rear deck lid. Spill plates cannot be above the roof line. Front spoiler limited to overall overhang measurement of 40 inches, measured from the centreline of the forward most front spindle. The front and rear spoilers are the only aerodynamic devices permitted; any other wings, spoilers, or canards prohibited.

### **COMPUTERS**

Computers prohibited.

### **DATA RECORDERS**

Data recorders permitted. Cannot perform any function in fuel, clutch, or driver management.

### **IGNITION**

Single mag limited to point-type only and single coil (no electronic mags or mag amp boxes allowed). Timing retard must be a function of the driver by mechanical or pneumatic means only. A positive ignition shutoff within the reach of the driver is mandatory.

### **FIRE SYSTEM**

Fire extinguishing system must meet SFI Spec 17.1. Minimum 20-pound or more fire extinguishing system mandatory. System must be divided so that a minimum of 15 pounds is directed into engine compartment by means of nozzled outlets placed in front of each bank of exhaust headers. Remaining 5 pounds or more should be dispersed in driver compartment by means of an atomizing nozzle placed at driver's feet. Must be installed per manufacturer's specifications. Fire-bottle activation cables must be installed inside framerail where cable passes engine/bellhousing area. Carbon-fibre bottles prohibited.

### **JACKS AND JACK STANDS**

No work may be done under any car in the pits while supported by a jack. No car may be fired while on a jack. Jack stands are required while work is performed or while car is being warmed up; a licensed driver must be in the seat anytime the motor is being run. Jack-stand devices must provide a minimum ground clearance of 7 inches from bottom of rear tire to ground while car is running.

### **WARM-UPS**

When starting vehicle in the pit area, vehicle must be fully within the confines of the assigned space. No part of the car may extend past the trailer.

## **ARM RESTRAINTS**

Mandatory.

## **CREDENTIALS**

Valid MSA or equivalent license mandatory.

## **DRIVER RESTRAINT SYSTEM**

Minimum 5-point, 3-inch driver restraint system meeting SFI Spec 16.1 or FIA 8853/98b mandatory. All belts and mounting points must be covered with a fire-resistant material. Restraint systems must be updated at the specified year intervals from date of manufacture.

## **HELMET**

Full-face helmet with shield meeting Snell SA2005 or SFI 31.2A, or 31.1/2005 Specs mandatory. Helmet must meet applicable SFI and/or Snell specs, fresh air system advised using compressed air only. Air can be supplied on demand or by constant pressure.

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

At all times that the driver is in the race vehicle, from the ready line until the vehicle is on the return road, driver must properly utilize a head and neck restraint system, this can either be a fully homologated FIA device or an SFI-approved head and neck restraint device/system, including connecting the helmet as required for full functionality of the device. The device/system must meet the appropriate FIA specification or SFI Spec 38.1 and must display a valid label. The head and neck restraint device/system, when connected, must conform to the manufacturer's mounting instructions, and it must be configured, maintained, and used in accordance with the manufacturer's instructions.

## **PROTECTIVE CLOTHING**

Driver's suit meeting SFI Spec 3.2A/20, gloves 3.2A/20 boots 3.2A/20 and head sock 3.3 mandatory. All jacket and pants or driver suits that meet SFI Spec 3.2A/20 must be recertified on a five-year interval. A head sock is not mandatory when helmet is manufactured with a skirt labelled as meeting SFI Spec. 3.3.