

## **SECTION 15**

# **TOP ALCOHOL FUNNY CAR**

### ***Requirements and specifications for***

### ***Top Alcohol Funny Car***

#### **DESIGNATION**

T AFC, preceded by car number.

Reserved for alcohol-burning and injected

nitromethane/methanol-burning Funny Cars built specifically for drag racing competition. Cars are weighed at the conclusion of a run, including driver.

Supercharged with Roots-type supercharger, methanol: 2,200 pounds minimum weight.

Supercharged with screw-type supercharger, methanol: 2,300 pounds minimum weight.

Non-supercharged single engine, nitromethane: 2,400 pounds minimum weight.

5.00 or more pounds per cubic inch weight break; minimum displacement 410 cubic inches; maximum displacement 456 cubic inches;

95 percent nitromethane permitted at events contested at 3,500 feet of altitude or more. Maximum nitromethane content 85 percent at all other events. All fuels other than nitromethane and methanol prohibited.

## **REQUIREMENTS & SPECIFICATIONS**

### **CYLINDER HEADS**

Aftermarket billet heads permitted. Maximum two valves per cylinder; maximum two spark plugs per cylinder.

A current list of alcohol head specifications can be found on [NHRARacer.com](http://NHRARacer.com).

### **ENGINE**

Maximum 528-cid for Screw-type-supercharger-equipped cars.

Maximum 565-cid for Roots-type-supercharger-equipped cars.

Maximum 456-cid for Non-supercharged, nitromethane cars.

Any internal-combustion reciprocating, single-camshaft,

automotive-type engine permitted. Maximum bore center spacing 4.840 inches.

Dry-sump oil system permitted. OEM production line overhead cam engines permitted. Engine must be equipped with a

lower-engine-ballistic/restraint device meeting SFI Spec 7.1.

The lower-engine-ballistic/restraint device must be specific

for the oil pan and pump configuration being used and must fit

according to the requirements of SFI Spec 7.1 and be used as

appropriately designed for the specific application. A positive method

(flange, lip, etc.) must be attached to the intake manifold or engine

block to retain both the front and rear manifold to block gaskets in the event

the engine crankcase/lifter valley become over-pressurized.

The flange/lip must extend past the surface of the gasket and

be contoured to closely fit the block and manifold surfaces to prevent the gasket(s) from extruding. All large (valve covers, intake manifolds, superchargers, headers, heads, blocks, etc.) and all moving engine components are restricted to aluminum, steel, iron, titanium, magnesium, or other conventional alloys; carbon fiber, Kevlar, ceramics, composites, beryllium, or other extraordinary materials prohibited. Metal, fiberglass, or carbon fiber injector hats and/or injector scoops are permitted.

Any modifications or alterations to engine blocks, cylinder heads, and engine components are deemed to be a change in design and therefore prohibited. This includes any redesign, reconfiguration, and/or modification to existing components. Refer any development, redesign, reconfiguration, and/or modification questions to the NHRA Technical Department to determine whether permitted or prohibited.

All permitted engine combinations must adhere to the following criteria:

1. Maintain interchangeability of existing parts (i.e., cranks, cams, manifolds, valve covers, rocker assemblies, etc.)
2. Maintain general combustion-chamber configuration (e.g., Hemi, canted valve). Fuel injection directly into cylinder prohibited
3. Maintain original cylinder orientation in reference to centerline of crankshaft
4. Retain cylinder head, timing cover, intake manifold, exhaust manifold, valve-cover bolt pattern; additional bolts/studs/dowels may be used
5. Retain as cast/forged minimum block wall and web/rib thickness

#### **EXHAUST**

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

#### **FUEL SYSTEM**

Fuel cells recommended. Pressurized fuel tanks prohibited.

Tanks must be vented outside of body lines to prevent fire from being drawn into tank through vent. Fuel tank vent, maximum 1-inch-diameter hole in front of body to vent fuel tank outside of body only. A failure to pass the minimum fuel temperature check in the staging lanes prior to a run will result in the forfeiture of that run, and the racer must return to the racer's pit. A failure to pass the minimum fuel-temperature check after a run will cause that run to be disqualified. Outside of the pit area, insulated fuel lines and tanks prohibited with the exception of a temporary one-piece flexible blanket-type material, maximum 1 inch thick, that wraps one time around the outside of the body panels in the vicinity of the fuel tank. The

wrap must be quick release and require no additional work on the body or any tools to remove and be no more than 12 inches longer than the fuel tank. Any temporary insulation must be removed prior to and without delaying the starting of the engine. Fuel gauge lines in the driver's compartment must be steel or steel braided with steel fittings. Flexible gauge lines in the driver's compartment must be hydrostatically pressure tested at 750 psi for 30 seconds and labeled. Label must be impervious to fuel and brake cleaner. See General Regulations 1:5 and 1:6. Maximum two fuel pumps. The use of propylene oxide and/or nitrous oxide is prohibited. Insulated fuel lines and fuel tanks prohibited. Minimum temperature of fuel in the staging lanes to the completion of the run and subsequent NHRA fuel check is 50°F. See General Regulations 1:5.

#### **HEADERS**

Minimum Funny Car header angle 32 degrees. Maximum header pipe O.D. 2.75 inches. O.D. and I.D. must remain constant beginning 8 inches below the header flange to the exit of the header.

#### **INJECTOR SCOOP**

Injector scoop may not extend more than 18 inches forward of the center of the forward engine cylinder, may not extend more than 12 inches behind the center of the rear engine cylinder, may not be higher than the top of the windshield, may not have more than 1 square foot of opening area, and may not be more than 24 inches wide.

#### **OIL LINES**

All flexible-pressure oil lines, excluding return lines and any line 30psi or lower in pressure, must use a factory-crimped connection and be pressure-tested and labeled. All testing must be hydrostatic for minimum 30 seconds at 750psi. Label must indicate date, PSI, and tester ID. Labeling must be impervious to fuel and brake clean. Quick disconnect, plastic, and nylon lines are prohibited. The lines must be tested and tagged to indicate that they have been tested within two years. Test and tag services are available at national events. All of the lines must be routed in such a way that they are not directly in line with cylinder head gaskets at the front, rear, or side of the cylinder heads.

#### **OIL-RETENTION DEVICE**

Engine oil-retention device mandatory. Minimum material, .050-inch aluminum or .040-inch carbon fiber/Kevlar. Pan must extend forward a minimum of one inch from the front face of the lower pulley and may not extend rearward past the crossmember under the pinion flange. Pan may be no wider than outside edge of the bottom framerails and must extend to the top of the upper framerails. Pan must be either a one-piece design or constructed as to be sealed as a retention device to retain oil. Must have minimum four-inch-high bulkheads for oil retention during

acceleration and deceleration. Front bulkhead must be forward a minimum one inch of the lower blower pulley, and rear bulkhead must be behind the rear of the bellhousing. Bulkheads must be "coved" toward oil pan to assist oil in staying within the confines of the bulkheads. A nonflammable, oil-absorbent liner mandatory inside of retention device. Minimum number of slots or holes in the walls to clear frame, steering, or lines permitted.

### **SUPERCHARGER**

Maximum overdrive limits are 1.92 PSI and 1.70 Roots.

Placement of any object/device below the upper mating surface of the supercharger intended to alter air flow characteristics is prohibited (e.g. inserts/shoes, dividers, etc.).

**Roots-type superchargers** maximum size: 14-71, 22 1/4-inch case length,

11 1/4-inch case width, 19-inch rotor length; maximum rotor diameter: 5.840 inches including fixed stripping. The case must be one piece with removable front and rear bearing end plates; rotor must be contained within one-piece case. Helix is restricted to a maximum rotor spiral of 6.5 degrees per inch of rotor length. Manifold burst panel meeting SFI Spec 23.1 plus restraint system meeting SFI Spec 14.2 mandatory. The rotors must be driven from the front (both the external drive and the internal gearing). The entire inlet opening must be on/in the upper surface only. Any inlet/outlet cavity in front of the rotors is restricted to maximum 2.150 inches, measuring from the face of bearing plate to the back of the cavity. Billet cases prohibited. The maximum length from the front of the supercharger drive pulley to the leading edge of the rotor is 15 inches. The use of spacers, modified cases, offset drive pulleys, or attaching methods to move the supercharger rearward in excess of the specified amount is prohibited. All manifold configurations and supercharger modifications and locations must be accepted prior to competition. Variable multispeed supercharger devices prohibited. Supercharger must be in conventional location above the intake manifold and cylinder heads, and supercharger restraint device may not be modified.

**Screw-type superchargers** must meet SFI Spec 34.1 and be Reinspected by the manufacturer every three years. Manifold burst panel meeting SFI Spec 23.1 (in addition to panel in supercharger) plus restraint system meeting SFI Spec 14.21 mandatory. Billet cases prohibited. Supercharger restraint straps must be covered with a fire-resistant material. The blower restraint straps and fuel lines must be installed such that when the restraint straps are fully extended no load is placed on any of the fuel lines. Variable multi-speed supercharger devices prohibited. Turbocharger(s) prohibited. Cars with a supercharger/intake manifold burst panel in the rear must have a .024-inch steel, or .032-inch aluminum ducting, or carbon fiber ducting lined with an NHRA-accepted flame-retardant covering or coating, 4-inch

minimum diameter, installed to relieve burst pressure from the burst panel(s) vicinity through the firewall and out the side window. A NHRA approved burst panel deflector can be used in lieu of ducting. See General Regulations 1:10, 1:11.

### **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. Dual throttle springs, one on each end of all injector throttle shafts that extend through both ends of the injector body, mandatory. A mechanical device for controlling engine rpm during burnouts may be attached to the injector or throttle linkage but may not be driver-controlled. See General Regulations 1:12.

### **VALVE COVERS**

Cast or fabricated metal valve covers using all attachment bolt holes mandatory. Valve-cover restraints meeting SFI Spec 14.4 mandatory on all non-supercharged, nitromethane-burning engines. Valve-cover gaskets, O-rings, etc. must be completely bonded/glued to either the valve cover or cylinder head sealing surface. Vent tube adapters on the valve covers must either be fully welded to the valve covers or incorporate a gasket or O-ring that is bonded/glued to either the adapter or the valve cover. Valve covers must be fastened to the cylinder heads with studs and nuts in lieu of bolts where possible. Spark-plug tubes that penetrate the valve covers must have a restraining device to contain the spark-plug tube in the valve cover in the event the spark plug is discharged.

### **VENT TUBE BREATHERS**

Catch can/vent tube system mandatory. Twist-on/quick-disconnect fittings between the vent tube hoses and the valve cover vent tube adapters must incorporate a secondary locking device such as a hasp pin; ball lock pin prohibited. Tape is not a satisfactory primary or secondary locking device. Double clamps are required on each end of all hoses used in the vent system, including the dry-sump vents. Minimum 1 1/4-inch inside diameter hoses are required from each valve cover to the catch can inlets and/or frameroils and from each frameroil outlet to both catch can inlets. Minimum catch can(s) capacity is a 1-gallon sump (i.e., below the bottom baffle) when the valve cover discharges are routed through the upper frameroils; otherwise, a 2-gallon sump capacity is mandatory. Minimum catch can inlet and outlet/discharge configuration is two 1 1/8-inch inside diameter openings (or equivalent area). NHRA accepted vent tubes/hoses are mandatory for all connections; see [NHRARacer.com](http://NHRARacer.com) for a list of accepted vent tubes/hoses. Vent tubes must be unobstructed from the interior of the valve cover to the interior of the catch can; i.e., no orifices, reduced areas, filler materials, etc. Pan/crankcase vacuum systems, of any description, are prohibited. See General Regulations 1:13.

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

Flywheel and clutch meeting SFI Spec 1.3 or 1.4 and flywheel shield meeting SFI Spec 6.2 mandatory on all cars. Three discs maximum on supercharged, methanol-burning cars. Four discs maximum on injected nitromethane cars. Maximum depth of flywheel shield: 9.4 inches (inside). Clutch must be manually operated by driver's foot: Electronics, pneumatics, hydraulics, or any other device may in no way affect the clutch system. Throw-out bearing must release all fingers, levers, stages, etc. simultaneously. Staged or variable release clutches of any description prohibited. Clutch/bellhousing exhaust filter mandatory. See General Regulations 2:3, 2:5, 2:6, 2:8.

### **DRIVELINE**

Anti-blowback device mandatory. See General Regulations 2:1.

### **DRIVETRAIN DRIVELINE COVER**

Each end of driveshaft must have a full 360-degree cover of Minimum 1/16-inch steel or 1/8-inch aluminum. 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 legs. All covers must be securely mounted to frame, suitable crossmember, reverser, or third member.

### **REAR END**

Aftermarket full-floating or live axle assembly mandatory. Maximum (numeric) gear ratio 4.30 for screw-type supercharger-equipped cars, 4.58 for Roots-type-supercharger equipped cars. Minimum (numeric) gear ratio, 2.90 for non-supercharged, nitromethane-burning cars. See General Regulations 2:11.

### **TRANSMISSION**

Transmission prohibited in non-supercharged, nitromethane burning cars. OEM or OEM-modified transmissions prohibited in all classes. Aftermarket planetary transmission permitted in supercharged classes, limited to two units (three speeds). Lockup converters prohibited. Overdrive transmission prohibited. Final drive ratio must be 1:1. Clutch hold-down device recommended on all cars. Reverser mandatory. Automated shifters and/or timer-type shifting devices prohibited; each individual shift must be a function of the driver. Air shifter bottles must be stamped as meeting DOT-1800 pound rating and permanently mounted (hose clamps or tie wraps prohibited). For the supercharged-methanol combinations only, the use of a transmission consisting of an aftermarket torque converter and an aftermarket planetary transmission (three-speed maximum) with an electric-only transbrake is permitted. The unit must be NHRA-accepted. Contact NHRA Technical Services for accepted list. The use of a delay box/device is prohibited. An aftermarket SFI 29.1 flexplate (with no starter ring gear) or a solid-steel converter driveplate, an SFI 6.1, 6.2, or 6.3 flywheel shield, and an aftermarket SFI 4.1 one-piece transmission shield

(covering the transmission units and the reverser) are required.

### **TRANSMISSION SHIELD**

A one-piece ballistic shield covering all units mandatory. Must meet SFI Spec 4.1. See General Regulations 2:13.

### **BRAKES**

Four-wheel disc brakes with dual master cylinder mandatory.

Carbon-fiber brake rotors used in conjunction with carbon-fiber specific brake pads (front and rear) mandatory; all other materials prohibited. NHRA-accepted fireproof brake line covering mandatory on all (front and rear) flexible connection lines. A current list of NHRA-accepted fireproof brake line coverings is available on NHRARacer.com. Hand brake, if used, must be located inside body or driver compartment. Steel brake lines mandatory. Hand-brake handle must be constructed of minimum 5/16-inch-thick by 1-inch-wide aluminum, steel, or titanium. Lightning of hand-brake handle (i.e., holes, machining, etc.) prohibited.

### **STEERING**

Commercially available quick-disconnect steering wheel meeting SFI Spec 42.1 or removable (via quick-release pins) steering box crossmember mandatory. Use of a pinned steering crossmember in lieu of an SFI quick-disconnect steering wheel prohibited.

Plating of steering components prohibited on all cars.

### **SUSPENSION**

Front suspension optional. Plating of front suspension components prohibited on all cars. See General Regulations 3:4.

### **WHEELIE BARS**

Mandatory; must be functional. Maximum height 4 inches measured from racing surface to bottom of wheel. Wheels must be nonmetallic. See General Regulations 3:6.

### **BALLAST**

Permitted. Maximum total ballast (welded or bolted), 250 pounds. See General Regulations 4:2.

### **HELMET SHROUD/DEFLECTOR PLATE**

All vehicles in Top Alcohol Funny Car must have a rear roll-cage shroud. A multipiece shroud is permitted. The shroud must be constructed of minimum .075-inch Grade 2 ASTM-B-265 titanium or .090-inch 4130 steel or be of NHRA-accepted composite construction and must be shaped to conform to the roll cage.

The shroud must be attached to each of the side bars with a minimum of three 1/4-inch-minimum-diameter Grade 8 bolts and bosses per side, to the top with one 1/4-inch-minimum-diameter Grade 8 bolt and boss, and to the rear bars with a minimum of two 1/4-inch-minimum-diameter Grade 8 bolts and bosses per side. Tabs with bolt and nut, where the nut is welded to the tab, may be used in place of the bosses. Three-piece shields must be made with two side shields and a center section.

The shroud must be installed flush with or be filled/sealed to the upper roll-cage bars and shoulder hoop so that protective equipment cannot catch between the shroud and the roll-cage

components. Absolutely no components may be mounted to the helmet shroud above the top of the shoulder hoop. Bolt heads must be 1/2-inch hex-style head.

#### **GROUND CLEARANCE**

At any time, minimum 3 inches from front of car to 12 inches behind centerline of front axle, 2 inches for remainder of car, except oil pan and exhaust headers.

#### **PARACHUTE**

Dual parachutes mandatory. Pilot chutes must be made of a bright color, not black, to be visible

on the racing surface if detached from the main chute. 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. Two NHRA-accepted parachute tethers are required and must be routed through each shroud line end loop and be attached using the rear end mounting bolts on each side. The mounting attachments on each end of both tethers must attach to either separate rear end mounting bolts or opposite ends of a single bolt (one under the head of the bolt and the other under the nut). NHRA-accepted parachute tethers: Amick Race Car Restraints PARA-101REV1, Future Fibres FF30MLB-P-MB, or Taylor Motorsports 108. When Future Fibres FF30MLB-P-MB is used, only one tether is required and must be routed through each shroud line end loop and be attached using the rear end mounting bolt on each side. All tethers must be covered with a fire-resistant material. The parachute floor must be flat and may not extend more than 6 inches rearward or beyond the parachute pack, whichever is less. The measurement will be taken from the mounting point on the rear of the body. The use of a wicker prohibited. See General Regulations 4:8.

#### **ROLL CAGE**

Chassis must meet SFI Spec 10.1. All wiring must be external of the frameroils; routing of cables, hydraulic, or pneumatic lines inside the chassis is permitted. Chassis must be recertified yearly by NHRA and have serialized sticker affixed to frame before participation. See General Regulations 4:4, 4:11, 10:6.

#### **ROLL-CAGE PADDING**

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, mandatory. Additional padding must be NHRA-accepted (with manufacturer's name displayed), 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. See General Regulations 4:11.



**WHEELBASE**

Minimum 100 inches; maximum 125 inches on long side.

Maximum wheelbase variation from left to right: 2 inches. Rear tread width cannot be outside of body line nor more than 3 inches inside body line. Front tread width must be no more than 6 inches inside body line. Measurements will be taken from outside edge of tire to inside edge of body.

**TOW-STRAP HOOPS**

All cars must have tow-strap hoops on the lower front of the chassis. Hoops must be capable of accepting a 2-inch tow hook without lifting the body and not stressing the body when the car is being towed. Hoops must line up with the centerline of the car below the body-release rod and clearly marked on the body with an arrow pointing down.

**TIRES**

Tires must be specified for racing use by manufacturer.

Maximum rear tire: 18 inches wide x 118 inches maximum circumference. Minimum rear tire circumference: 108 inches.

Tires are to meet size requirements when installed and ready to run at manufacturer's recommended operating pressures.

See General Regulations 5:1.

**WHEELS**

Must be completely isolated from driver compartment.

Rear wheels meeting SFI Spec 15.3 mandatory; maximum width: 16 inches. Wire wheels prohibited. Rear-wheel discs or covers prohibited. Use of a liner mandatory on non-beadlock wheels. See General Regulations 5:2

**INTERIOR:****SHEET METAL**

Driver compartment interior, firewall, seat, etc. must be aluminum or steel. Magnesium or carbon fiber prohibited; carbon fiber injector "doghouse" permitted.

**SEAT**

Seats must be foamed with energy-absorbing material and formed to the driver's body. Minimum one-layer, flame-retardant material mandatory as seat upholstery. No magnesium permitted.

**AIRFOILS, WINGS**

Prohibited.

**BODY**

Any modification to body not expressly permitted in this Rulebook is prohibited. Any body that meets the Funny Car (Section 18) body requirements in their entirety is acceptable for Top Alcohol Funny Car competition. These bodies must be run as they come from the NHRA-accepted molds. Any modification not expressly permitted in the Funny Car (Section 18) body requirements is prohibited. Otherwise, all bodies must be 1969 or later model year NHRA-accepted sports car, coupe, or sedan body of a type originally mass-produced by automobile manufacturer (domestic or foreign). Must have originally

measured 63 inches wide or more at centerline of front and rear axle. Maximum body and/or roof width cannot exceed stock dimensions. Duplications of production bodies of fiberglass or carbon fiber permitted. Body may be lengthened or shortened. Front and rear contour of body must resemble same configuration and design for specific body used; holes for air passage prohibited.

Maximum body width variation from front to rear is 6 inches. Minimum body width is 60 inches when mounted. Bodies are measured at centerline of front and rear axles. Enclosing the wheel-wells or the use of wheel fairings is prohibited. Fender flares or lips (maximum 1 inch) not on original factory-produced bodies will not be considered in any width measurement.

Wheelwell openings: front, minimum 5 inches measured vertically from centerline of the front axle to wheelwell opening; rear, minimum 8 inches measured vertically from centerline of rear axle to wheelwell opening. Trailing edge of rocker minimum of 18 inches measured directly from centerline of rear axle. Front overhang not to exceed 40 inches from centerline of front axle. Beltline moldings (if on stock vehicle), headlight and taillight housings or indentations must be incorporated into body. Headlights and taillights must be painted or decaled to simulate OEM appearance and configuration. Taillight area may be hinged (top only) for air venting, maximum 100 square inches per side; any other holes in rear of body prohibited.

Hood scoops prohibited; injector must protrude through hood. Maximum dimensions of hood cowling, 26 inches wide by 5 inches high. Opening for blower hat must have a minimum 2.500-inch clearance between body and throttle linkage. Wicker permitted on front and sides of blower opening: maximum height 1 inch. Wicker must be installed 90 degrees to body. Rocker panel extensions may not be more than 1 inch wide. Ground effects of any description prohibited. Ground effects include, but are not limited to, rocker skirts, belly pans, sheetmetal work under the body that produces a "tunnel" for the passage of air, rub bar/splitter cannot extend beyond the inside body line, etc. All bodies run in competition must be run as they come from the respective molds. Final determination on all body modifications rests with NHRA Technical Services Department.

Bodies must be removable from a rear-release mechanism that must be accessible in the taillight panel area. The rear-release mechanism may be of any mechanical design. The mechanism must be unobstructed and easily visible and not located within 3 inches of any other opening. Release handle must be of a T-handle design with a minimum measurement of 3 inches in length. Contact NHRA Technical Services Department for acceptable design, operation, and installation.

Body (hood) burst panel, minimum 288 square inches, mandatory on all screw-supercharger-equipped cars. Body burst panel must

be secured with plastic screws and two NHRA-accepted body burst panel tethers, with separate body pads for each of the two tethers bolted with a plate on both sides of panel. NHRA accepted body burst panel tethers: Amick Race Car Restraints part number JF-101. Any new body designs or concepts must receive approval from NHRA prior to competition. Plans, drawings, pictures, etc. must be submitted to the NHRA Technical Department for approval. Body specifications may vary for certain exhibition vehicles; prior NHRA approval necessary. Underside of body, including any roof area and all the composite components such as timer boxes, etc., must be covered with SFI Spec 54.1 flame-retardant covering or coating. Must be applied according to the manufacturer's specifications and recommendations, and must be applied externally. All bolts and fasteners on body, windows, etc. must have button heads toward outside of body. All stiffeners must be placed on the inside of the body, whether on windows, spoiler, etc. Mounting trees for body may not be adjustable. The framing must be a permanent fixture, with no adjustments. Any method used to allow the body to move (e.g., springs, dampers, etc.) during the run is prohibited.

#### **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.

#### **FENDERS**

Four stock-type fenders mandatory. Alterations to accommodate axle relocation permitted. Front fender bubbles may not exceed 2 1/2 inches as measured from flat portion of fender line to top of bubble.

#### **FIREWALL**

Must be aluminum or steel; magnesium prohibited. V-shaped firewall (see diagram) constructed of a Minimum .040-inch aluminum permitted; otherwise, portion of the firewall between skin of the body and the chassis can be no higher than 12 inches, as measured from the bottom of the rocker panel to the bottom of the firewall. Must be equipped with "fire windows" measuring no greater than 25 square inches on either side of firewall in vicinity of valve covers to warn driver of fire. Laminated safety glass or fire-resistant plastics such as Lexan or Plex 70 mandatory. See General Regulations 7:4.

#### **GRILLE**

Must be equipped with a simulated grille of same configuration and design for specific body used; holes for air passage prohibited.

#### **REAR BUMPER**

Must be equipped with rear bumper consisting of a minimum Vertical surface of 3 inches; maximum permitted cutout for Parachute shroud lines, 4 inches by 30 inches. The trailing edge

of rear bumper may not extend more than 54 inches from the centerline of the rear axle. Maximum measurement from trailing edge of rear bumper to ground, 29 inches at rear tire pressure of 4.5 PSI. Maximum 1-inch lip permitted on rear bumper as a stiffener; not included in overall measurement.

### **SPOILERS**

Permitted front and rear on supercharged entries only.

Rear spoiler cannot be “built in” to body. For Nitromethane entries rear spoiler prohibited. Rear deck relocation cannot extend more than one-third of the as-produced replica body’s rear window.

Side surfaces of elevated decks must be completely covered by spoiler spill plates. Maximum rear spoiler width, including spill plates and attachment points, 54 inches. Rear spoiler spill plates cannot be located forward of the centerline of the rear axle and onto rear quarter. Spill plates cannot be more than 5 inches above the roof line. Rearmost point of spill plate may not exceed 60 inches past the centerline of the rear axle. Spill-plate supports permitted on one side of spill plate only, not both. Lip on rear edge of spill plate (vertical) .5-inch maximum.

The trailing edge of rear spoiler may not extend more than 56 inches past the centerline of the rear axle, may not be more than 3 inches above the roof line, and the forward and trailing edge may not be mounted so as to preclude a “wing” configuration. Wicker on spoiler not to exceed 2 inches forward or back. Installation of vortex generators is permitted on the spoiler assembly only; prohibited on car body. Any adjustment or movement during run prohibited. Airflow through spoiler or past the underside of spoiler, other than hinged taillight area, prohibited.

### **WINDOW**

Windshield mandatory. Side windows optional. If windows are used, they must be clear. Rear window and quarter windows (if stock equipped) must be defined by actual route line in body and painted (or decaled) to simulate glass. Side windows must have a minimum 6-inch-diameter opening adjacent to driver.

See General Regulations 7:8.

### **ELECTRICAL COMPONENTS**

Electrical and electronic components are restricted to ignition systems, data recorders, electrical gauges or indicators, automated fire extinguisher, and engine shutoff system components only. The use of electrical/electronic timers to control pneumatic fuel-system valves and/or electric fuel control solenoid valves is permitted. The fuel control system may use only movement of the throttle or clutch pedal, a transmission shift, electric/electronic timers, and/or an engine rpm switch to control the fuel-system valves and/or to start the timers that control the fuel-system valves.

## **IGNITION**

Programmable ignition permitted. Only preset times, throttle position, engine rpm, other internal engine data (temperatures, flow rates, and pressures), and transmission shifts may be processed with regard to control of the ignition system. Any ignition system that incorporates any programmable multi-point rev limiter and/or any rate-of-acceleration rpm limiter in any form is prohibited. Any ignition system that incorporates vehicle performance data via measurement, sensing, processing, inference, etc. to activate or deactivate any function or capability of the ignition system is prohibited. Any sensor or wiring that connects or transmits vehicle performance data directly, or indirectly, to the ignition system is prohibited. Ignition system components must be utilized in an unaltered manner consistent with the manufacturer's installation and instruction manuals unless otherwise approved. The use of any automated rpm-control device during the staging/launching process is permitted only in vehicles with a fully automatic transmission with a converter. See General Regulations 8:3.

## **IGNITION SYSTEM**

All microprocessor ignition components prohibited.  
See General Regulations 8:3.

## **MAGNETOS**

Maximum two magnetos; two spark plugs per cylinder, not to exceed 44 amps per magneto. Magnetos limited to the following models: MSD Pro Mag Systems, 12 or 20 amp, 8109, 8139, 8149, 7908, 7910, 7915, 7916, 8150, 8160; MSD Pro Mag Systems, 44 amp, 8130, 8140; Mallory Super Mag Series 3, 4, 6, 7, 11.

## **COMPUTER/DATA RECORDERS**

See General Regulations 9:1, 9:2. **GROUP: 9**

## **FIRE EXTINGUISHER SYSTEM**

Fire extinguishing system must meet SFI Spec 17.1. Minimum 20-pound NHRA-accepted 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 cables pass engine/bellhousing area. See General Regulations 9:3.

Manually activated extinguishing system mandatory. Manual system may additionally be activated pneumatically or thermally.

## **SHUTOFF DEVICE**

Properly installed and operational Electrimotion Top Alcohol Funny Car Shutoff Controller Kit (part number SB001T AFC) and Electrimotion Shutoff Receiver (part number RF001) mandatory. The Electrimotion Top Alcohol Funny Car Safety Shutoff Controller Kit must be properly installed per the manufacturer's instructions. Modification of or tampering with the Electrimotion

Top Alcohol Funny Car Safety Shutoff Controller Kit prohibited. The Electrimotion Crew Alert Box, part number CB001 and the Motorsports Safety Electronics Shutoff System part number MS1150, may be used in conjunction with the Shutoff Device to illuminate a dash light for driver notification, disengage throttle and/or enable the shutoff device. Any other use of the Electrimotion Crew Chief Alert box or the Motorsports Safety Electronics Shutoff System is prohibited.

#### **TOW VEHICLES**

Permitted. See General Regulations 9:12.

#### **WARM-UPS**

See General Regulations 9:5, 9:14.

#### **ARM RESTRAINTS**

Mandatory. See General Regulations 10:3.

#### **CREDENTIALS**

Valid NHRA competition license mandatory. See General Regulations 10:4.

#### **DRIVER: 10**

#### **DRIVER RESTRAINT SYSTEM**

All belts must be covered with a fire-resistant covering. Minimum 6-point driver restraint system meeting SFI Spec 16.1 mandatory. All shoulder, lap, and leg straps may be wrapped around a frame or chassis tube, provided the belt is properly aligned toward the direction of pull. When fastened with driver in position, absolutely no "folds" are permitted in any belt(s). Otherwise, all belts must be mounted to the chassis via mounting brackets that are bolted or welded to the chassis per the manufacturer's instructions. If the bracket is bolted through framerail or chassis tube, the hole in framerail or chassis tube must be bushed, with both ends of the bushing completely welded to the tube. Whether mounted directly to frame or to a tab welded to the frame, the mounting bracket attachment bolt must be in double shear and of shoulder bolt design so as to permit the bracket to pivot and align toward the direction of pull. Shoulder belts may utilize two individual straps, each with its own mount and mounting point; for a single strap, it must wrap a minimum of 540 degrees around the shoulder hoop. Mounting points must be covered with either sheet metal or an acceptable fire-resistant material. See General Regulations 10:5.

#### **FRESH AIR SYSTEM**

Fresh-air breathing system mandatory. System must be manufactured and installed by the original helmet manufacturer or with written authorization of the original helmet manufacturer. Helmet must meet applicable SFI and/or Snell Specs with fresh air system installed. Compressed air only. Air must be supplied by constant pressure (see General Regulations 9:8).

#### **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 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 SFI Spec 38.1 and must display a valid SFI 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.

#### **HELMET**

For all cars, a full-face Snell: SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited). Eject Helmet Removal System (part number SDR 890-01-30) mandatory and must be installed per manufacturer instructions. A Stand 21 Lid Lifter head sock meeting SFI 3.3 may be used in lieu of the Eject Helmet Removal System. See General Regulations 10:7.

#### **PROTECTIVE EQUIPMENT**

Driver's suit meeting SFI Spec 3.2A/20, gloves 3.3/20, boots 3.3/20, 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. **Beginning August 1, 2022**, glove under-liners made of flame retardant material and socks meeting SFI 3.3 mandatory. **Additionally, beginning August 1, 2022**, when utilizing a two-piece driver's suit, long sleeve underwear shirt meeting SFI 3.3 and long underwear pants meeting SFI 3.3 are required. All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex, etc.) are prohibited. All metallic jewelry prohibited. **Beginning January 1, 2023, a one-piece driver's suit will be mandatory in addition to above requirements.** See General Regulations 10:10.