GENERAL REGULATIONS INDEX

SECTION 20 - GENERAL REGULATIONS

Throughout this Rulebook, a number of references are made for particular products to meet certain specifications (i.e., SFI Specs, Snell, DOT, etc.). It is important to realize that these products are manufactured to meet certain specifications, and upon completion, the manufacturer labels the product as meeting that spec. Therefore, except as outlined under SFI requirements, any change to the product voids that certification**.**

Under no circumstances may any certified product be modified, altered, or in any way vary from the "as manufactured" condition. Such a practice is in violation of the SFI, Snell, DOT, etc. program, voids such certification and therefore will not be accepted by NHRA.

NOTICE: It is the responsibility of the participant, not NHRA or any track, to ensure that all safety equipment is not modified or altered, is approved and is correctly installed, worn, maintained and used.

ENGINE: 1

1:1 COOLING SYSTEM

All cooling systems/radiators must be installed in the stock location for body style used. Front-engine dragsters must have system installed in front of engine. Rear-engine dragsters with radiator mounted in front of engine must install a deflector from framerail to framerail and to the top of the roll cage. Portion above shoulder hoop may be width of roll cage bars, unless radiator extends above top of shoulder hoop. If radiator extends above shoulder hoop, then deflector plate must maintain width of radiator. See 4:3 DEFLECTOR PLATE.

1:2 ENGINE

Classes limited to automotive engines only unless otherwise stated under Class Requirements. Contestants in weight-to-cubic-inch classes must claim cubic-inch displacement of engine used; under no circumstances may claimed displacement exceed actual displacement by more than 5 cubic inches. No allowance for overbore; any part of a cubic inch is rounded off to the next highest inch (i.e., 301.2 = 302). If engine size is changed during a race, competitor must report to Technical Department supervisor before a run is attempted. Crankshaft centerline must not exceed 24 inches from ground in any class, except trucks. Maximum height 36 inches for trucks running 12.00 and slower; 31 inches for trucks running 11.99 to 10.00; and 24 inches for trucks running 9.99 seconds and quicker. Engine must be mounted to frame by a minimum of two 3/8-inch-diameter Grade 5 bolts. Valvetrain must incorporate conventional automotive coil spring design; pneumatic-type valvetrains are prohibited in all classes. All classes, with the exception of Stock and E.T. cars slower than 10.99 seconds, harmonic balancer meeting SFI Spec 18.1 or solid metallic hub mandatory. All cars with pressed-on front harmonic balancers must have such installed to protect accidental loss (i.e., drilled and bolted). Ceramic bearings prohibited in all NHRA categories.

1:3 EXHAUST

All cars must be equipped with exhaust collectors, headers, or stacks installed to direct exhaust out of car body to rear of car, away from driver and fuel tank. Exhaust collectors/stacks must be securely fastened (i.e., metal connector straps, bolted, welded,

etc.) to prevent loss of collector/stacks during competition. Flexible tubing or "flex pipe" prohibited in all categories. If mufflers are used, they must be securely attached to exhaust system and car body or frame. Consistent with its endeavors to maintain drag racing's acceptance as a recognized sport and recreation, NHRA is enforcing maximum decibel levels for Super Street, Super Gas, and Super Comp vehicles competing at national events. NHRA may enforce the same or similar requirements on other categories in the future.

Part of NHRA's mission is to preserve the right to race. In many communities, the right to race is contingent upon reducing noise and complying with local noise and muffler laws, ordinances, regulations, or agreements. Therefore, all competitors must comply with any muffler rules applicable to his or her class in the Rulebook, and must comply with any noise-reduction requirements (including mufflers) mandated by any member track at which he or she races. Member tracks have the authority to impose muffler rules and noise regulations beyond those required by the NHRA Rulebook.

1:4 FLASH SHIELDS

Carburetor inlet must not be openly exposed. In lieu of hood, carburetors must be equipped with a flash shield or velocity stacks that cover the top, back, and sides, preventing fuel from being siphoned into the airstream or blown into driver's face. Additionally, any car that is driven, not towed, through the pits, with open stack(s) not protected by hood or scoop, must have screening installed on open stack(s) to prevent items from entering stack.

1:5 FUEL SYSTEMS

Location: All fuel tanks, lines, pumps, valves, etc. must be outside of the driver's compartment and within the confines of the frame and/or steel body. Cool cans, fuel-distribution blocks, etc. must be located at least 6 inches forward of the flywheel/bellhousing area on rear-wheel-drive (RWD) vehicles, and on opposite side of flywheel/housing area on front-wheel-drive (FWD) vehicles. Fuel pressure gauge isolators, with steel braided line, may be mounted on firewall.

Tanks: When permitted by class regulations, fuel tanks located outside body and/or frame must be enclosed in a steel tube frame constructed of minimum 1 1/4-inch O.D. x .058 chromoly or .118 mild steel tubing. All fuel tanks must be isolated from the driver's compartment by a firewall, completely sealed to prevent any fuel from entering the driver's compartment. All fuel tanks must have a pressure cap and be vented outside of body. A positive-locking screw-on fuel tank cap is mandatory on all open-bodied cars. Insulated fuel tanks prohibited. When used, fuel cells must have a metal box protecting the part of the fuel cell that is outside of body lines or trunk floor, excluding hose connection area in rear. The metal box must be constructed of minimum .024 steel or .032 aluminum. Nonmetallic fuel cells or tanks must be grounded to frame.

Lines: All non-OEM fuel lines (including gauge and/or data recorder lines) must be metallic, steel braided, or NHRA-accepted "woven or woven-pushlock." A maximum of 12 inches total (front to rear) of non-metallic or non-steel braided hose is permitted for connection purposes only; individual injector nozzle and motorcycle fuel lines are excluded. Fuel lines (except steel braided lines) in the flywheel/bellhousing area must be enclosed in a 16-inch length of steel tubing, 1/8-inch-minimum wall thickness, securely mounted as a protection against fuel-line rupture. Fuel lines may not be routed in the driveshaft tunnel. It is mandatory that fuel lines passing supercharger drive belts be steel braided, NHRA-accepted woven or woven-pushlock, or be enclosed in protective steel tubing. A current list of NHRA-accepted woven or woven-pushlock fuel lines is available on NHRA.com. All NHRA-accepted fuel lines must use

ends that are specifically designed for the type of fuel line being used. No hose clamps allowed on NHRA-accepted fuel lines.

Pumps/Valves: Cars with non-OEM-type mechanical fuel pumps must have a quick-action fuel-shutoff valve within easy reach of driver and located in the main fuel line between the fuel tank and the carburetor and/or injectors. Fuel recirculation systems not part of normal fuel/pump system prohibited. All cars in Stock, Super Stock, Competition, and Pro Stock must be equipped with a positive-lock drain valve located between the fuel tank and the carburetor(s) or fuel injector to facilitate removal of fuel samples for fuel-check purposes.

Fuel/Air: Any method of artificially cooling or heating fuel prohibited (i.e., cool cans, Freon, wet rags, etc.), except as noted in Class Requirements. Cool cans, wet towels, etc. are permitted in Super Stock, Stock, Super Comp, Super Gas, Super Street, and E.T. classes. Wet towels, rags, ice, etc. must be removed before vehicle leaves staging area. Ambient-temperature air only; cooling or otherwise changing the conditions of the intake air is prohibited. Spraying of intake with any artificial spray or coolant prohibited.

Alternative Fuels: Containers for alternative fuels must be permanently labeled by the manufacturer as suitable for CNG or propane. Tank must be vented outside of body. Alternative fuel systems must incorporate pressure-relief valve meeting standards listed in NFPA 52. Alternative fuel systems must incorporate a manual shutoff valve according to standards listed in NFPA 52 for CNG vehicular systems. All hoses/lines used for alternative fuels must be permanently and distinctively marked by the manufacturer as to manufacturer name or trademark, service identifier, and design pressure. Plastic, cast iron, galvanized, copper, or aluminum pipe or hoses prohibited.

1:6 FUEL

Racing Gasoline: A current list of NHRA-accepted racing gasoline is available on NHRA.com. For all categories using racing gasoline except Stock and Super Stock, racing gasoline is defined for purposes of this Rulebook as a mixture of hydrocarbons only. For Stock and Super Stock categories, racing gasoline is defined for purposes of this Rulebook as a mixture of aromatic and/or cyclic and/or paraffinic hydrocarbons. Non-cyclic olefinic hydrocarbons and non-hydrocarbons that do not increase the specific energy of the gasoline are allowed to the extent they do not exceed 1 percent (1%) by volume and are blended in the gasoline by the refiner or fuel manufacturer. Non-hydrocarbons that do not increase the specific energy of the gasoline are allowed to the extent that they do not exceed 0.15 percent by volume and are blended in the gasoline by the refiner or fuel manufacturer. Racing gasoline is a good electrical insulator, or dielectric, and its relative effectiveness as an insulator is represented by its Dielectric Constant. The average D.C. for the hydrocarbons that make up gasoline is 2.025. This is defined as a reading of “0” with the NHRA Fuel Check meter. Racing gasoline is tested and certified at NHRA events by the application of various chemical analyses as considered appropriate by Fuel Check personnel. Racing gasoline in a vehicle may be checked before use in competition.

Methanol: Methanol is a clear, colorless liquid with a mild odor at ambient temperatures. Methanol is sold in two U.S. Federal Grades: A and AA. Either grade is permitted for use in NHRA competition, and racers should ensure that the methanol they purchase meets federal standards of purity. The purity standards for each grade are shown in the table below.

SPECIFICATIONS FOR PURE METHANOL

Property	Grade A	Grade AA
Methanol content, wt percentage, min	99.85	99.85
Acetone and aldehydes, ppm, max	30	30
Acetone, ppm, max	20	
Ethanol, ppm, max	10	
Acid (as acetic acid), ppm, max	30	30
Water content, ppm, max	1500	1000
Specific gravity, 20C	.7928	.7928
Permanganate time, min	30	30
Odor	Characteristic	
Distillation range at 101 kPa (760mm Hg)	Not more than 1°C, including 64.6 +/- 0.1°C at 760mmHg	
Color, platinum-cobalt scale, mix	5	5
Appearance	clear-colorless	
Residual on evaporation, g/100 mL	.001	.001
Carbonizable impurities; color platinum-cobalt scale, max	30	30

Methanol is tested and certified at NHRA events by the application of various chemical analyses as considered appropriate by Fuel Check personnel. To be considered legal, methanol used in NHRA competition must meet the federal standards of purity. Any deviation from these standards because of impurities (beyond the limits established in the federal specification) in the fuel sample will result in disqualification. Because methanol is a hygroscopic substance, it readily absorbs moisture from the air, which rapidly renders methanol illegal as a fuel for use in NHRA competition. Racers are cautioned to keep methanol containers tightly capped at all times to minimize the absorption of water. Racers are encouraged to have Fuel Check personnel check samples of their methanol any time there may be doubt as to its purity.

Nitromethane: Only nitromethane from an NHRA-accepted on-site supplier may be present on-site or used on-site at any NHRA Full Throttle Drag Racing Series event ("NHRA National Event") or NHRA Lucas Oil Drag Racing Series event ("NHRA Divisional Event"). To be eligible for competition, any team using nitromethane must use nitromethane from an accepted on-site supplier. At this time, the only accepted on-site supplier is VP Racing Fuels. Fuel anywhere on-site at an NHRA National Event or NHRA Divisional Event, including without limitation, in the vehicle, transporter, pit area, or at the NHRA-accepted supplier's on-site location, may be checked at any time and for any reason, including compliance with this rule and with the Nitromethane specification. Any participant who violates any rule regarding nitromethane may be banned from competition at the applicable event, and shall be subject to such other penalty deemed appropriate by NHRA.

Specifications for Nitromethane as Used as a Fuel in the NHRA Full Throttle Drag Racing Series and in the Lucas Oil Drag Racing Series:

Chemistry

Note: All nitromethane is required to contain an active safety indicator that changes color when the nitromethane has been sensitized or contaminated.

Typical Physical Properties

Nitrous Oxide: Nitrous oxide permitted in E.T. classes and A/PM only. Push system permitted. All bottles must be securely mounted (may not use plastic brackets), stamped with minimum DOT-1800 pound rating, and identified as nitrous oxide. Nitrous oxide bottle(s) located in driver compartment must be equipped with a relief valve and vented outside of compartment. System must be commercially available and installed per manufacturer's recommendations. Commercially available, thermostatically controlled blanket-type warmer accepted. Any other external heating of bottle(s) prohibited.

Property	Minimum	Maximum
Nitromethane	99.5%	Not applicable
Water	Not applicable	0.5%
Specific Gravity @ 60º F	1.140	1.145
Acidity as Acetic Acid	Not applicable	0.20%
Amines	Not applicable	Not allowed
Heavy Metals (Pb, Hg)	Not applicable	Not allowed
Alcohols and products consistent with the manufacturing process	Balance	Balance
Color (light yellow) clear nitromethane not allowed	Not applicable	Not applicable
Odor (typical)	Not applicable	Not applicable
Methyl tert-butyl ether	Not applicable	0.1%
Dimethyl Sulfate	Not applicable	15 ppm

Propylene Oxide: The use of propylene oxide is prohibited in all categories.

Molecular Weight	61.04
Boiling Point	101ºC (214ºF)
Critical Temperature	315ºC (599ºF)
Critical Pressure	62atm, 915psia, 6282kPa
Vapor Pressure	
@ 20ºC/68ºF	27.3 mm Hg (3.6 kPa)
@ 40ºC/104ºF	74.8 mm Hg (9.9 kPa)
@ 60ºC/140ºF	177.8 mm Hg (23.7 kPa)
Density	
@0ºC/32ºF	1.162 g/ml
@20ºC/68ºF	1.138 g/ml
@30ºC/86ºF	1.124 g/ml
@50ºC/122ºF	1.098 g/ml
Approximate Coefficient of Expansion 1/ºC (1/ºF)	0.00122 (0.00068)
Solubility H_2O in NM@70ºC (158ºF)	19.3% by weight

1:7 LIQUID OVERFLOW

All cars in competition with any type of water overflow capable of spilling water must have a catch can to accumulate the excess liquids and prevent leaking onto the track. Minimum catch can capacity: 1 pint. Catch can must be securely fastened; i.e., bolted, clamped. Overflow may be routed into headers on cars that are supercharged or burn nitromethane or alcohol.

1:8 LOWER ENGINE CONTAINMENT DEVICE

In classes where specified, must utilize an NHRA-accepted lower engine oil-retention device. SFI Spec 7.1 or 7.2 Lower Engine Containment Device permitted. A properly fitting lower engine ballistic/restraint device mandatory. The NHRA Technical staff can accept or reject any device. Any device that fails to perform as required must be replaced or repaired to the satisfaction of the Technical staff prior to any furthur runs. When used, an SFI Spec 7.1 or 7.2 Lower Engine Containment Device must cover the sides of the block and pan up to within one inch of the head mating surface and extend to within 1 1/2 inches of the front and rear of the cylinder case area. SFI Spec 7.1 devices must be updated/recertified by the original manufacturer at one-year intervals. In classes where specified, a belly pan may be used in lieu of a device attached to the engine. The belly pan must extend from framerail to framerail and extend forward of the harmonic balancer and to the rear of the engine block and must incorporate a minimum 2-inch-high lip on all sides unless specified in Class Requirements. Minimum number of slots or holes in the walls to clear frame, steering, or lines permitted. A nonflammable, oil-absorbent liner mandatory inside of retention device.

1:9 OIL SYSTEM

Accu-sump, dry-sump tanks, oil filters, oil supply lines, etc. prohibited in driver compartment and outside of frame and/or steel body/fenders, except as noted in Top Fuel. Oil-pressure gauge and line permitted in driver compartment, metal or steel braided line mandatory, maximum 3/16-inch inside diameter. Power-enhancing additives prohibited.

1:10 SUPERCHARGER

Roots-type: 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. For Top Fuel and Funny Car, inlet/outlet cavity restricted to maximum 1 inch, measuring from face of bearing plate to the back of the cavity. For Top Fuel and Funny Car specifications, see Class Requirements. Rotor helix angle may not exceed that of a standard 71-series GM-type rotor (4 degrees per inch). Maximum overdrive may not exceed 1.70; for Top Fuel and Funny Car, overdrive may not exceed 1.50. Aluminum studs (supercharger to manifold) mandatory in Advanced E.T., Comp, Top Alcohol Dragster, Top Alcohol Funny Car, Funny Car, and Top Fuel. See Class Requirements for manifold burst panel and restraint specifications.

Roots-type high helix: Must adhere to same maximum case dimensions and maximum rotor cavity diameter as standard Roots. Rotor helix angle may not exceed 6.5 degrees per inch (123.5 degrees total over 19-inch maximum rotor length). Use of high-helix supercharger is restricted to Advanced E.T., Competition (Pro Mod only), Top Alcohol Dragster, and Top Alcohol Funny Car. Maximum overdrive may not exceed 1.70 percent. Aluminum studs (supercharger to manifold) mandatory. See Class Requirements for manifold burst panel and restraint specifications.

Screw-type: Must meet SFI Spec 34.1. Maximum case length 16 inches; maximum case width 16 inches; minimum case and front-plate thickness 1/4-inch; minimum rear-plate thickness .300-inch. Overdrive limits for Top Alcohol Dragster are found in Section 11, Top Alcohol Funny Car is found in Section 12. Under no circumstances may a screw supercharger overdrive exceed the following overdrive limits:

Engine Displacement	PSI Maximum Overdrive
500 cubic inches or larger	2.25
450 to 499 cubic inches	2.15
less than 450 cubic inches	2.04

Manifold burst panel meeting SFI Spec 23.1 (in addition to supercharger panel) and restraint device meeting SFI Spec 14.21 mandatory. PSI screw supercharger permitted to use a tandem burst panel kit, installed per PSI instructions on superchargers only. Any other use of double burst panels on any supercharger or manifold prohibited. Aluminum studs (supercharger to manifold) mandatory. Overdrive limits, as determined appropriate by NHRA, are subject to adjustment at any time as dictated by performance. Variable multi-speed supercharger devices prohibited regardless of supercharger type. Any changes to any screw supercharger design, materials, construction, etc. after Jan. 1, 1997, are subject to NHRA acceptance before being permitted to run.

ALL SUPERCHARGERS: For all Top Fuel, Funny Car, Top Alcohol Funny Car, Top Alcohol Dragster, Comp, Super Comp, and Advanced E.T. cars, and E.T. cars running 9.99 seconds or quicker, fuel and/or oil lines must be shielded wherever they pass the supercharger drive belt. Either a belt guard or fuel/oil line guard may be used.

1:11 SUPERCHARGER RESTRAINT DEVICE

Supercharger restraint system meeting SFI Specs mandatory per Class Requirements. Restraint system must be updated at two-year intervals from date of manufacture. 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. See Class Requirements.

1:12 THROTTLE

Regardless of class, each car must have a foot throttle incorporating a positive-acting return spring attached directly to the carburetor/injector throttle arm. A positive stop or override prevention must be used to keep linkage from passing over center and sticking in an open position. In addition to return springs, some means of manually returning the throttle to a closed position by use of the foot must be installed on all altered linkage systems except hydraulically or cable-operated systems. Per Class Requirements throttle control must be manually operated by driver's foot; electronics, pneumatics, hydraulics, or any other device may in no way affect the initial throttle operation. In Super Street, Super Gas, Super Comp, and certain E.T. bracket classes, timed throttle stops are permitted that use pneumatics and or electronics to modulate the throttle after initial launch. Cable throttle systems permitted. NHRA-accepted hand controls for the physically challenged permitted. Choke cables and brazed or welded fittings on steel cable prohibited. No part of throttle linkage may extend below framerails.

1:13 VENT TUBES, BREATHERS

Mandatory as outlined in Class Requirements; permitted on all cars. Where used, the tubes must terminate into an acceptable, permanently attached catch tank with a minimum capacity of one gallon per engine (except as noted in Class Requirements). The catch tank must be baffled to keep overflow off track. Breather/vent tubes must be mechanically secured (tie-wraps prohibited) to the fittings and the fittings locked at both ends.

DRIVETRAIN: 2

2:1 ANTI-BLOWBACK DEVICE

If mandated by class requirements, a brace or device must be installed that will prevent the bellhousing or adapter shield from being blown rearward in the event of flywheel and/or clutch explosion. Material required is 4130 chromoly, minimum size is .875-inch O.D. x .083-inch wall tubing with 3/8-inch fasteners. Ball-lock pins prohibited.

2:2 AXLE-RETENTION DEVICES

All cars, except Stock and some E.T. cars as noted in Class Requirements, must be equipped with a satisfactory means of rear-

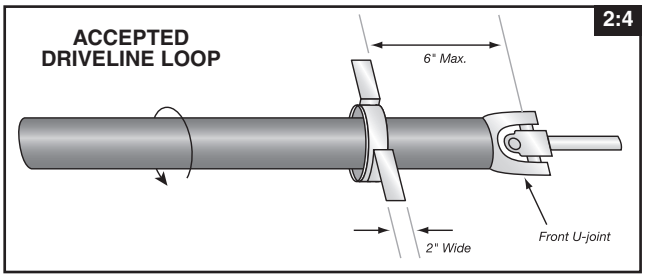
axle retention; minimum .120-inch aluminum or .090-inch steel bearing retainer mandatory. Stock “C”-clip axle retention prohibited as outlined in Class Requirements.

2:3 CLUTCH

Each car in competition, except those with automatic transmissions, must be equipped with a foot-operated clutch incorporating a positive stop to prevent clutch from going over center or past neutral, as in the case of centrifugal units. All pedals must be covered with non-skid material. NHRA-accepted hand controls for the physically challenged permitted. All slider clutches must meet SFI Spec 1.2, 1.3, or 1.4 as outlined under Class Requirements. In Class Requirements that call for an SFI Spec 1.2 clutch, an SFI Spec 1.5 clutch can be used. Multi-disc clutch assembly for non-OEM supercharged, nitrous-oxide injected, and non-OEM turbocharged vehicles must meet SFI Spec 1.3, 1.4, or 1.5 and must utilize an SFI Spec 6.2 or 6.3 flywheel shield, except as noted in Class Requirements.

2:4 DRIVELINE

On any car in which the driver sits over or behind the rear-end center section, a suitable protective shield of .120-inch minimum thickness steel plate must be installed for units with universal joints, securely mounted to the rear-end center section and the bellhousing adapter. For straight couplers, the minimum shield requirement is .063-inch aluminum, which must contain an inspection cover for removal and inspection of the coupler securely mounted to the rear-end center section and the bellhousing adapter, or as noted in Class Requirements. In place of a crossmember, in the vicinity of the front universal joint, all cars in competition using open driveshafts must have a retainer loop 360 degrees of enclosure, 1/4-inch minimum thickness and 2 inches wide, or 7/8-inch x .065-inch welded steel tubing, securely mounted and located within 6 inches of the front universal joint for support of the driveshaft in event of U-joint failure. Open drivelines passing any part of the driver’s body must be completely enclosed in 1/8-inch minimum thickness steel plate, securely mounted to the frame or frame structure. Driveshaft loop required on all cars running 13.99 (*8.59) or quicker and utilizing slicks; except vehicles running 11.49 (*7.35) seconds or slower equipped with street tires.



2:5 FLYWHEEL

The use of stock-type cast iron flywheels and/or pressure plates prohibited. The use of aluminum flywheels in Top Fuel and Funny Car is prohibited. Units meeting SFI Spec 1.1, 1.2, 1.3, 1.4, or 1.5 mandatory except as noted in Class Requirements.

2:6 FLYWHEEL SHIELD & MOTOR PLATE: General

The use of aluminum bellhousing is permitted in all categories and applications. The aluminum bellhousing must meet applicable SFI Specifications. Absolutely no modifications to as-manufactured design are permitted on SFI Spec 6.1, 6.2, 6.3, or 9.1 flywheel shields and/or liners. An SFI Spec 6.1W bellhousing is also acceptable wherever an SFI Spec 6.1 bellhousing is mandatory or

permitted. All 6.2 and 6.3 titanium bellhousings must be reinspected and recertified yearly. SFI 6.1 titanium and aluminum bellhousings and SFI 6.2 or 6.3 steel bellhousings must be reinspected and recertified every two years (or as specified by the manufacturer). SFI 6.1 or 9.1 bellhousings must be reinspected and recertified every five years (6.1) or every two years (9.1). Where SFI Spec bellhousings are mandatory, all applicable liners, large mounting fasteners, motor plates, etc., as required by SFI Specs or the manufacturer, must be properly installed.

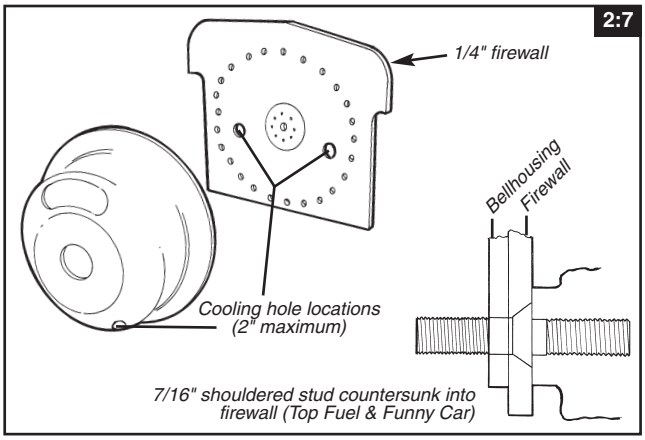
Where an SFI 6.1, 6.3, or 9.1 bellhousing is mandatory, a full, one-piece motor plate is also mandatory at the rear of the engine block. The motor plate must be constructed of steel or 6061-T6, 7075-T6 or 2024-T3 wrought heat-treated aluminum alloy plate, minimum 1/8-inch thick for 6.1 or 9.1 applications, minimum 3/16-inch thick for 6.3 applications. In addition to the fastener requirements noted below, the SFI 6.3 flywheel shield must be fastened to the motor plate with four 1/2-inch-diameter Grade 5 shoulder bolts or high strength steel (or titanium) fasteners and nuts, one in each quadrant. Where an SFI 6.2 bellhousing is mandatory, see Section 2:8 for motor plate and fastener requirements.

The flywheel shield must be fastened to the engine and motor plate with a full complement (all available engine bolt holes or as specified by the manufacturer) of Grade 8 bolts or high strength studs. The use of Allen bolts to fasten the shield to engine or motor plate, to fasten covers, etc. is prohibited. All bolts (not studs or nuts) used for flywheel shield mounting, covers, etc. must be identifiable as to grade; all nuts and bolts associated with flywheel shield mounting, covers, etc. must be full standard depth, width, etc. (reduced thickness bolt heads, hollow bolts, half nuts, thin wall nuts, etc. prohibited). Maximum depth of flywheel shield is 8 5/8 inches, except Top Fuel, Funny Car, TAD, TAFC, and Advanced E.T., maximum depth 9.4 inches (inside). Maximum thickness of all motor plates, mid-plates, and mounting plates installed between engine and flywheel shield is 1/2-inch, except SFI 6.1 which may be 1 1/4-inch maximum. All covers and fasteners associated with the flywheel shield must be installed prior to starting engine at any time, including warm-ups. Maximum spacing between flange fasteners in the flywheel shield is 7 inches. Chemical milling or any other structure-weakening procedure is prohibited. Welding to repair a flywheel shield is prohibited unless it is performed by the manufacturer and recertified by the manufacturer prior to use.

For cars equipped with an SFI 7.1 lower engine ballistic/restraint device, a maximum of two holes, each no larger than two inches in diameter (or 3.14 square inches equivalent area) are permitted. The holes must be located entirely below the horizontal centerline of the crankshaft. The holes must be at least 0.5-inch from any bellhousing bolt hole and be separated by at least two inches. SFI 6.2 flywheel shields may have one two-inch maximum diameter hole in the bottom of the back face of the shield. The opening in the motor plate for the crankshaft flange may not exceed the crankshaft flange diameter by more than one inch (except as noted for Top Fuel and Funny Car).

2:7 FLYWHEEL SHIELD: Top Fuel and Funny Car

Top Fuel and Funny Cars equipped with a clutch must have a flywheel shield (bellhousing) that meets SFI Spec 6.2 and is labeled accordingly. A one-piece motor plate constructed of 1/4-inch minimum thickness 4130 chrome-moly steel and fitting between the engine and flywheel shield according to the requirements of SFI Spec 2.2B, 2.3M, or 10.1E is required. The motor plate must be attached to the chassis at the four corners with at least two welded mounting points using minimum 3/8-inch-diameter Grade 8 bolts and full nuts. The remaining two motor plate mounting points must be at least saddles fitting around the framerails and secured with aircraft-type clamps or bolts (hose clamps prohibited).



The flywheel shield and motor plate are to be fastened to the engine by at least seven high strength steel (or titanium) 7/16-inch-diameter shouldered studs countersunk (3/4-inch outside diameter) into the engine side of the motor plate and threaded into the engine (3/4-inch minimum) and nuts of a similar material above the centerline of the crankshaft. The motor plate must be fastened to the flywheel shield with at least eight 7/16-inch-diameter Grade 8 bolts or high strength steel alloy (or titanium) studs and nuts below the centerline of the crankshaft. The flywheel shield must also be fastened to the motor plate by four 3/4-inch-diameter Grade 5 shoulder bolts or high strength steel (or titanium) fasteners and nuts; one in each quadrant as required by SFI Spec 2.3M or 10.1E. A minimum .090-inch 4130 steel or titanium liner (or as required by the manufacturer) must be fitted to the flywheel shield that is the width of the round body surface of the shield. It must be welded together so that it will fit into the body of the flywheel shield and rotate to absorb energy. A 1/4-inch aluminum bolt may be threaded into the body of the flywheel shield to secure the liner(s) from movement during normal use. The opening in the motor plate to accommodate the crankshaft flange cannot exceed 7.000 inches.

At least five fasteners, 3/8-inch-diameter minimum, must be used to secure aftermarket planetary transmissions (and/or reversers) to flywheel shield. 1/2-inch-thick rings, bosses, or nuts must be welded or otherwise secured inside the back face of the flywheel shield through which the fasteners must be secured.

As described in Section 2:6, any modifications or alterations to the bellhousing by anyone other than the original manufacturer are prohibited. Bellhousing must be recertified by original manufacturer following modification. Clutch adjustment slots, maintenance holes and covers, etc. must be installed by the original manufacturer. See General Regulations 2:6.

2:8 FLYWHEEL SHIELD: Top Alcohol Dragster and Top Alcohol Funny Car

Top Alcohol Dragsters and Top Alcohol Funny Cars equipped with a clutch must have a flywheel shield (bellhousing) that meets SFI Spec 6.2 and is labeled accordingly. All requirements for Top Alcohol Dragster and Top Alcohol Funny Car bellhousing installations are the same as for Top Fuel and Funny Car with the following exceptions:

A one-piece motor plate constructed of 1/4-inch minimum thickness 2024 T3, 6061 or 7075 T6 aluminum and fitting between the engine and flywheel shield according to the requirements of SFI Spec 2.2B, 2.1, or 10.1E is required. The motor plate must be attached to the chassis at the four corners with at least two welded mounting

points utilizing minimum 3/8-inch-diameter Grade 8 bolts and full nuts. The remaining two motor plate mounting points must be at least saddles fitting around the framerails and secured with aircraft-type clamps or bolts (hose clamps prohibited).

The flywheel shield and motor plate are to be fastened to the engine by at least seven 3/8-inch-diameter Grade 8 bolts or high strength steel or titanium studs threaded into the engine (3/4-inch minimum) and nuts of a similar material, above the centerline of the crankshaft. The motor plate must be fastened to the flywheel shield with at least eight 3/8-inch-diameter Grade 8 bolts or high strength steel alloy (or titanium) studs and nuts below the centerline of the crankshaft. The flywheel shield must also be fastened to the motor plate by four 3/4-inch-diameter Grade 5 shoulder bolts or high strength steel (or titanium) fasteners and nuts; one in each quadrant as required by SFI Spec 2.1 or 10.1E. Top Alcohol Dragster and Top Alcohol Funny Car: The opening in the motorplate for the crankshaft flywheel flange may not exceed the crankshaft diameter by more than one inch. See General Regulations 2:6.

2:9 FLYWHEEL SHIELD: Pro Stock and Comp

As described in Section 2:6, any modifications or alterations to the bellhousing by anyone other than the original manufacturer are prohibited. Bellhousing must be recertified by the original manufacturer following modification. Clutch adjustment slots, maintenance holes and covers, etc. must be installed by the original manufacturer.

See Section 2:6 for motor plate and general requirements. The flywheel shield must be fastened to the engine and motor plate with a full complement (all available engine bolt holes or as specified by the manufacturer) of minimum 3/8-inch-diameter Grade 8 bolts or high strength steel studs above the centerline of the crankshaft. The motor plate must be fastened to the flywheel shield with at least eight 3/8-inch-diameter Grade 8 bolts or high strength steel alloy (or titanium) studs and nuts below the centerline of the crankshaft. An opening in the motor plate for an alternative starter location is permitted but it may not exceed 2 inches in diameter and when such an opening is present only one cooling hole is permitted in the motor plate.

2:10 FLYWHEEL SHIELD: Other Classes

All other cars using a clutch and running 11.49 or quicker must be equipped with an SFI 6.1, 6.2, 6.3, or 9.1 flywheel shield. See Section 2:6 for motor plate and general requirements. There shall be a minimum of seven 3/8-inch-diameter Grade 8 bolts or high strength steel studs in the top half of the bellhousing. There shall be a minimum of eight 3/8-inch-diameter Grade 8 bolts or high strength steel studs in the bottom half of the bellhousing used to fasten the bellhousing to the motor plate. Modifications or repairs to the flywheel shield prohibited except if performed and recertified by manufacturer.

Exceptions to this rule: Volkswagen and Porsche engine cars are not required to have a shield when the engines are normally aspirated and gasoline burning. Porsche engines must use a steel billet flywheel. All other RWD cars running 11.49 or quicker for which an SFI 6.1, 6.2, 6.3, or 9.1 flywheel shield is not commercially available may use an SFI 6.1, 6.2, 6.3, or 9.1 flywheel shield from another application and mount it to a motor plate that is mounted to the engine block at all available bolt holes; or must be equipped with a flywheel shield made of 1/4-inch minimum thickness steel plate, securely mounted to the frame or frame structure and completely surrounding the bellhousing 360 degrees. The flywheel shield shall not be bolted to either the bellhousing or engine. The flywheel shield must extend forward to a point at least 1 inch ahead of the flywheel and 1 inch to the rear of the rotating components of the clutch and pressure plate.

All front-wheel-drive or transverse-mounted applications using a clutch and running 11.49 or quicker, for which an SFI Spec 6.1, 6.2,

6.3, or 9.1 flywheel shield is not commercially available, must be equipped with a flywheel shield made of 1/4-inch minimum thickness steel plate. Shield must surround the bellhousing completely except for area of bellhousing adjacent to differential and axle shaft. Shield may be multi-piece, with pieces bolted together using minimum 3/8-inch-diameter Grade 5 or M10 class 8.8 bolts; may be attached to engine and/or bellhousing.

Titanium flywheel shields are permitted only in Top Fuel, Funny Car, Pro Stock, Top Alcohol Dragster, Top Alcohol Funny Car, Comp, Super Comp, Super Gas, Advanced E.T., and E.T.

2:11 REAR END
Welded spider gear rear ends prohibited in all classes. Four-wheel drive permitted per class requirements. Aftermarket axles and axle-retention device mandatory on Top Fuel, Funny Car, Pro Stock, Top Alcohol Dragster, Top Alcohol Funny Car, Comp, Super Comp, Super Gas, Super Street, and 10.99 or quicker E.T. cars; also mandatory on any car (regardless of class or E.T.) with a spool.

2:12 TRANSMISSION
All cars and trucks in competition except motorcycle- or snowmobile-powered dragsters must be equipped with a reverse gear.

2:13 TRANSMISSION, Aftermarket Planetary
A transmission shield covering transmission and reverser that meets SFI Spec 4.1 is mandatory if engine burns nitromethane; or engine burns methanol or nitrous oxide and runs 9.99 seconds or quicker; or vehicle runs 7.49 seconds or quicker; or engine is supercharged or turbocharged; or on any overdrive unit. Air shifter bottles must be stamped with DOT-1800 pound rating (minimum) and be securely mounted (i.e., no tie-wraps or hose clamps).

At least three bolts, 3/8-inch minimum, must be used to secure aftermarket planetary transmissions to bellhousing, except as noted in Top Fuel, Funny Car, Top Alcohol Dragster, and Top Alcohol Funny Car.

2:14 TRANSMISSION, Automatic/NHRA-Accepted
All cars running 10.99 (*6.99) seconds and quicker must have an NHRA-accepted locking-type dipstick on the transmission.

Any non-OEM automatic floor-mounted automatic transmission shifter must be equipped with a spring-loaded positive reverse lockout device to prevent the shifter from accidentally being put into reverse gear. Functional neutral safety switch mandatory. All transmission lines must be metallic or high-pressure-type hose. All vehicles running quicker than 10.99 seconds (*6.99) or faster than 135 mph (except some Stock and Super Stock classes as noted under Class Requirements) and using an automatic transmission must be equipped with a transmission shield meeting SFI Spec 4.1 and labeled accordingly. ("Blanket"-type shield, appropriately labeled as meeting SFI Spec 4.1, permitted.) All non-blanket-type shields must incorporate two (or one, per manufacturer's instructions) 3/4 x 1/8-inch straps that bolt to the shield on each side and pass under the transmission pan, or transmission pan must be labeled as meeting SFI Spec 4.1. Permitted in all classes where an automatic transmission is used.

Comp, Super Comp, Super Gas, 9.99 or quicker E.T. cars, and 135-mph or faster E.T. cars using an automatic transmission, Lenco Drive, or BRT must be equipped with a flexplate meeting SFI Spec 29.1 and covered by a flexplate shield meeting SFI Spec 30.1. Transmission that can utilize a high-gear transbrake must be supported by the use of two momentary buttons (one to arm the system, second as the main transbrake). Air shifter bottles must be stamped with DOT-1800 pound rating (minimum) and be securely mounted (i.e., no tie wraps or hose clamps).

BRAKES & SUSPENSION: 3

3:1 BRAKES

Brakes on each car, regardless of class, must be in good working order with two-wheel hydraulic brakes on rear wheels as a minimum requirement. Four-wheel hydraulic brakes are recommended, or as specified under Class Requirements. Lightening of backing plates, brake drums, and/or brake shoes by cutting or trimming metal prohibited. Cooling or lightening holes may not be drilled in cast iron disc brake rotors. Aluminum rotors prohibited. If hand brake is used, brake handle must be inside car body or driver compartment and connected to footbrake. Brake lines must be steel, steel braided, or DOT-approved flexible and routed outside the framerail, or enclosed in a 16-inch length of 1/8-inch minimum wall thickness steel tubing securely mounted where line(s) pass the flywheel bellhousing area and not routed in the driveline tunnel. All brake lines must be attached to chassis as per OEM style; hoses must have mounting brackets; no tie wraps, tape, etc. All brake lines on any rear-engine car must be protected inside of tubing or be braided steel construction where they pass the engine. All pedals must be covered with non-skid material. Secondary braking systems are permitted as long as the hand brake and foot brake are connected such that any movement of either engages both master cylinders and all calipers. NHRA-accepted hand controls for the physically challenged permitted. Automated braking systems prohibited; application and release of brakes must be a direct function of the driver; electronics, pneumatics, or any other device may in no way affect or assist brake operation. NHRA-accepted mechanical ABS systems permitted in all classes; contact NHRA Technical Department headquarters. If brake system includes a differential pressure switch, line-loc installed on front brakes must have solenoid installed after the differential switch. All line-locs (electric or hydraulic) must be self-returning to normal brake operating mode.

3:2 SHOCK ABSORBERS

Each car in competition must be equipped with one operative shock absorber for each sprung wheel. Shock absorbers may be either hydraulic or friction type, securely mounted, and in good working order. See Class Requirements.

3:3 STEERING

Each car's steering system must be secure and free of defects. All butt-welded parts must have additional visible reinforcement. Only conventional automotive steering systems are permitted; flexible steering shafts prohibited. Rear-wheel steering prohibited, unless vehicle was originally manufactured with an OEM system. An OEM system may not be modified, altered, or used in any manner inconsistent with manufacturer's specifications. All rod ends must be a minimum of 3/8-inch shank diameter and must be installed with flat washers of sufficient outside diameter to prevent bearing pullout. All steering boxes, sectors, and shafts must be mounted to the frame or suitable crossmember and cannot be mounted in any case to the bellhousing and/or bellhousing adapter shield, or motor plate. A secondary steering shaft stop must be installed to prevent long steering shaft from injuring driver in case of frontal impact (i.e., collar or U-joint pinned at crossmember, bracket, etc.). Commercially available quick-disconnect steering wheels permitted (except as noted in Class Requirements). Adapter must be welded to shaft. All fasteners must be of a positive nature; no roll or pressed pins, no ball-lock pins, set screws, etc. NHRA-accepted swing-away steering column permitted with removable steering wheel.

3:4 SUSPENSION

All cars must have a full suspension system of the type produced by an automobile manufacturer (i.e., springs, torsion bars, etc.). Rigid-mount front and/or rear axles are permitted when so indicated in Class Requirements. All rod ends must be installed with flat washers

of sufficient outside diameter to prevent bearing pullout. Hollow rod ends are prohibited. **Three-wheel vehicles are not eligible for competition in any class.** Radius rods are not required on front axles that are rigidly mounted 18 inches or less from kingpin axis. Any front suspension using a beam or tubular axle must have radius rods attached to frame.

3:5 TRACTION BAR ROD ENDS

Minimum requirement for rod ends on the front of all ladder-type traction bars is 3/4-inch steel. A rod end strap to keep ladder bar secured in event of rod end failure mandatory in all classes. All traction devices that are not attached at front (i.e., slapper bars, etc.) must have a U-bolt or strap to prevent them from coming in contact with track.

3:6 WHEELIE BARS

Some classes limit length of wheelie bar — see Class Requirements. All wheelie bars, regardless of class, must have non-metallic wheels (i.e., rubber, plastic). Wheelie-bar wheels must turn freely at starting line, any preload prohibited. Wheelie bars must be fixed. Hydraulics, pneumatics, electronics, etc. or any adjustment or movement during run prohibited. Using wheelie-bar wheels as "fifth wheel" sensing device prohibited.

FRAME: 4

4:1 ALIGNMENT

Each car in competition, regardless of class, must have sufficient positive front-end alignment to ensure proper handling of car at all speeds.

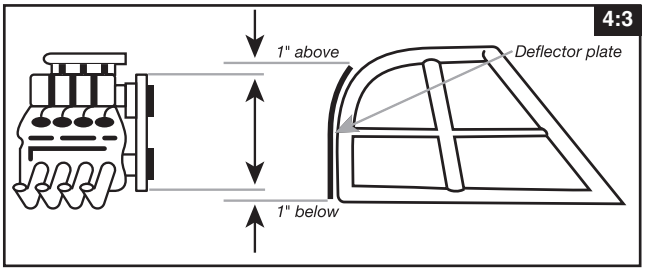
4:2 BALLAST

As permitted in Class Requirements. Any material used for the purpose of adding to a car's total weight must be permanently attached to the car's structure and must not extend in front of or behind the rear of the car's body or above the rear tires. No liquid or loose ballast permitted (i.e., water, sandbags, rocks, shot bags, metal weights, etc.). Discovery of loose or disguised ballast will result in disqualification from the event, regardless of whether infraction occurs during qualifying or eliminations. Additional penalties may be imposed in the sole and absolute discretion of NHRA. Weight boxes (two maximum) made of 1/8-inch material may be constructed to hold small items such as shot bags, lead bars, etc., as long as box and contents do not weigh more than 100 pounds or as outlined in Class Requirements. The box must be securely fastened to the frame or crossmember with at least two 1/2-inch-diameter steel bolts. Any liquid other than engine fuel being used, located behind the front firewall (on a front-engine car), is considered ballast and is prohibited, except for intercooler tanks that contain water and/or ice only. Tank must be securely mounted to frame, frame member, or OEM floorpan. To permit "making a class" due to a difference in scale calibration, a maximum removable weight of 100 pounds (or as outlined in Class Requirements) is permitted. Removable weight must be securely mounted to the frame or frame structure by a minimum of two 1/2-inch-diameter steel bolts per 100 pounds, or one 3/8-inch steel bolt per 5 pounds; all other weight bars, pucks, etc. must use minimum 1/2-inch-diameter SAE grade 8 bolts for attachment. Hose clamps, wire, strapping, tape, tie wraps, etc. for securing weight or ballast prohibited. Acceptable forms of ballast are 1) Heavier gauge steel floors (i.e., 16- or 18-gauge, heavier gauge and/or plate steel prohibited); 2) Frame reinforcing cross members; or 3) the addition of protective equipment such as roll bars, flywheel shield, etc. If additional ballast is needed and is permitted by Class Requirements, it must be permanently attached to frame, bolted with two 1/2-inch-diameter bolts per 100 pounds, with nuts welded to bolts. Maximum amount of removable and/or permanent ballast,

unless otherwise stated under Class Requirements, is 500 pounds. Cars running 8.49 and quicker are limited to 250 pounds maximum, per SFI chassis specification.

4:3 DEFLECTOR PLATE

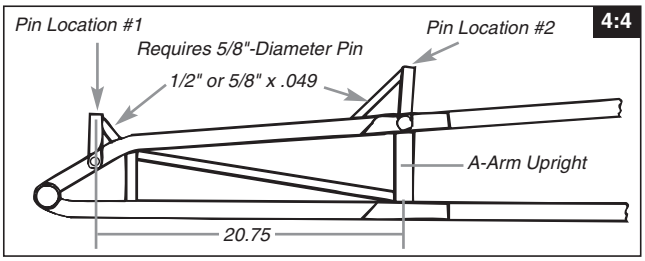
All rear-engine cars must have a deflector plate to protect driver and fuel tank from engine. For Top Fuel and Top Alcohol Dragster specifications, see Class Requirements. Plates must be made of minimum 1/8-inch aluminum or .060-inch steel or titanium. Must extend from top blower pulley to bottom pulley and be at least 1 inch wider than each pulley for supercharged cars. Other cars must have plate covering from shoulder height to bottom of chassis. On any enclosed engine/driver configuration, a full bulkhead must be



installed, completely sealing the driver from the engine. Minimum attachment for any plate is four 5/16-inch, Grade 5 bolts. See 1:1 COOLING SYSTEM for additional requirements.

4:4 FRAMES

Top Fuel, Funny Car, Pro Stock, Top Alcohol Dragster, Top Alcohol Funny Car, Comp, Super Stock, Super Comp, Super Gas, and 9.99 or quicker E.T. chassis (see Class Requirements) must have a serialized chassis sticker affixed to frame before participating in any NHRA event. Certifications are available at NHRA Full Throttle Drag Racing Series national events, NHRA Lucas Oil Drag Racing Series events, or by making prior arrangements through a division office. Grinding of welds prohibited. All butt welds must have visible reinforcement (i.e., sleeve and rosette welds). Pressurization of framerails, roll bar, or roll cage in lieu of air bottles is prohibited. Visible reinforcement around any hole in any SFI Spec chassis (not just the roll cage) mandatory. Reinforcement must be of at least the same cross sectional area as the hole, at least .049-inch-thick chromoly and completely welded around the outside. All Top Alcohol Dragster and Top Fuel dragster chassis must incorporate standardized tow hookup tube (see illustration) for ease of removal in the event vehicle does not clear the racetrack under its own power. See also 4:10 ROLL BAR and 4:11 ROLL CAGE.



4:5 GROUND CLEARANCE

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 where permitted. When permitted under Class

Requirements, devices used for anti-rotation purposes (i.e., wheelie bars) are exempt from the 2-inch clearance rule.

4:6 MAGNAFLUX CERTIFICATES

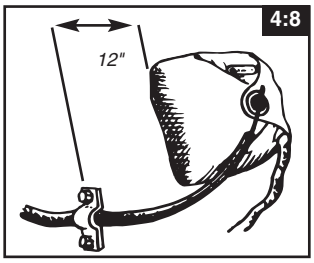
Magnaflux certificates may be required by the technical inspector on any altered or welded parts.

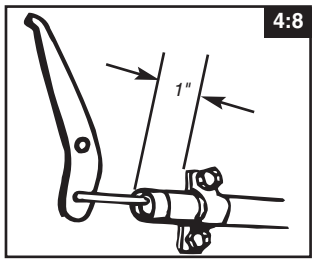
4:7 MOUNTING HARDWARE

Hose clamps and tie wraps may be used only to support hoses and wires; all other components must be welded, bolted, aircraft clamped, etc. All self-locking fastener buttons must be metallic. All self-locking fastener buttons may be painted any color on their face, but must be WHITE or SILVER ONLY under the face. This rule applies to ALL cars in ALL classes. All electrical, instrumentation, etc. connection boxes (e.g., exhaust temperature sensor/data recorder boxes and similar components) must either be securely (no wire ties, hose clamps, Velcro, etc.) attached to the engine, frame, bellhousing, etc. OR be constrained by a .060-inch-diameter stainless-steel multi-strand cable/lanyard such that it will not drop to the ground or contact a tire if any of the connecting wires break, OR be located such that they will fall into the body/bellypan if any of the connecting wires break.

4:8 PARACHUTES

If outlined in Class Requirements, it is mandatory to have a braking parachute produced by a recognized drag racing parachute manufacturer. Tech inspectors may observe the proper operation of the parachute and inspect for worn or frayed shroud lines, ripped or dirty canopies, and worn or ragged pilot chutes. Parachute cable housings should be mounted solidly to frame tube or other suitable member no farther back than 1 inch. The release housing must be attached within 12 inches of the parachute pack and in a manner that will allow the inner cable to release the parachute. When





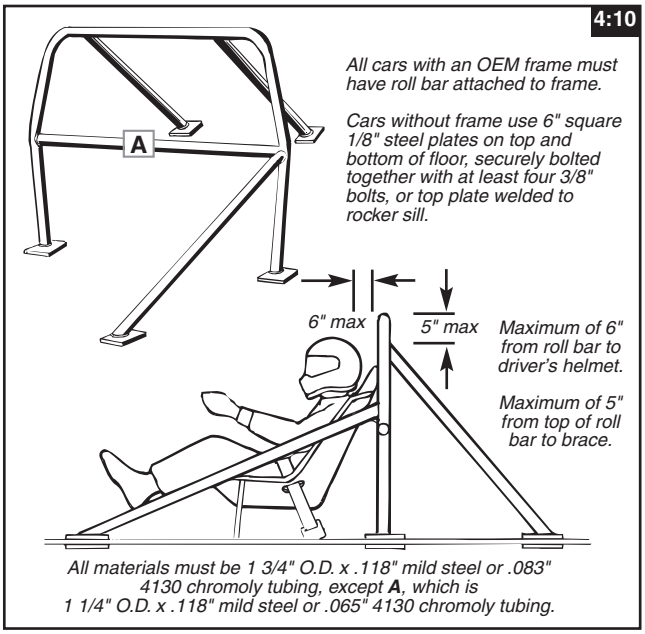
supercharged or using nitromethane as a fuel, it is mandatory that the parachute pack and unpacked shroud lines be protected with fire-resistant material from the mounting point to the pack. Parachutes must have their own independent mounting with sleeved 3/8-inch minimum steel bolts or steel pins required for all applications unless otherwise stated in Class Requirements. Shroud-line(s) mounting brackets must be constructed of minimum .090-inch steel unless otherwise stated in Class Requirements. Safety pins must be red flagged and removed prior to burnout. The use of ball-lock pins for parachute mounting prohibited. See Class Requirements regarding use of two parachutes. Such applications require separate shroud-line mounting points for each parachute system.

4:9 PINION SUPPORT

All cars using an open driveline must have radius arms, traction bars, or some suitable pinion support to prevent rear-end housing rotation.

4:10 ROLL BAR

All roll bars must be within 6 inches of the rear, or side, of the driver's head, extend in height at least 3 inches above the driver's helmet with driver in normal driving position or be within 1 inch of the roof/headliner in the area above the driver's helmet, and be at least as wide as the driver's shoulders or within 1 inch of the



driver's door. Roll bar must be adequately supported or cross-braced to prevent forward or lateral collapse. Rear braces must be of the same diameter and wall thickness as the roll bar and intersect with the roll bar at a point not more than 5 inches from the top of the roll bar. Crossbar and rear braces must be welded to main hoop. Sidebar must be included on driver's side and must pass the driver at a point midway between the shoulder and elbow. Swing-out sidebar permitted. All roll bars must have in their construction a cross bar for seat bracing and as the shoulder harness attachment point; cross bar must be installed no more than 4 inches below, and not above, the driver's shoulders or to side bar. All vehicles with OEM frame must have roll bar welded or bolted to frame; installation of frame connectors on unibody cars does not constitute a frame; therefore it is not necessary to have the roll bar attached to the frame. Unibody cars with stock floor and firewall (wheeltubs permitted) may attach roll bar with 6-inch x 6-inch x .125-inch steel plates on top and bottom of floor bolted together with at least four 3/8-inch bolts and nuts, or weld main hoop to rocker sill area with .125-inch reinforcing plates, with plates welded completely. All 4130 chromoly tube welding must be done by approved TIG heliarc process; mild steel welding must be done by approved MIG wire feed or approved TIG heliarc process. Welding must be free of slag and porosity. Any grinding of welds prohibited. See illustration. Roll bar must be padded anywhere driver's helmet may contact it while in driving position. Adequate padding must have minimum 1/4-inch compression or meet SFI Spec 45.1. Beginning June 1, 2011, all cars running 9.99 (*6.39) or quicker, SFI Spec 45.1 mandatory.

4:11 ROLL CAGE

All cage structures must be designed in an attempt to protect the driver from any angle, 360 degrees. All 4130 chromoly tube welding must be done by approved TIG heliarc process; mild steel tube welding must be approved MIG wire feed or TIG heliarc process. Welding must be free of slag and porosity. Any grinding of welds prohibited. Plating of chassis prohibited for all cars manufactured after Jan. 1, 2003, unless otherwise noted in Class Requirements;

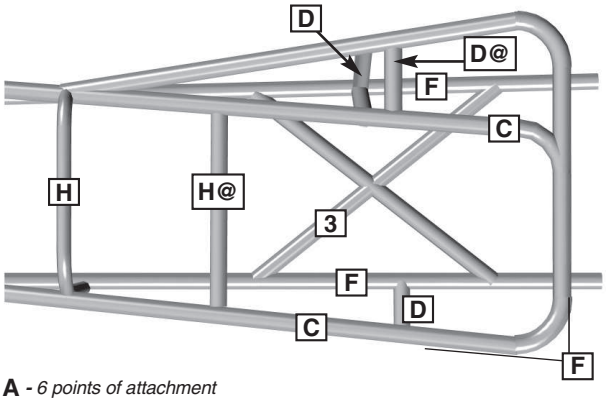
painting permitted. Additionally, roll cage must be padded anywhere the driver's helmet may contact it while in the driving position. Beginning June 1, 2011, all cars running 9.99 (*6.39) and quicker, padding must meet SFI Spec 45.1. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory in Pro Mod, Top Alcohol Dragster, Top Alcohol Funny Car, Pro Stock, Funny Car, and Top Fuel. Additional padding must be NHRA-accepted (with manufacturer's name displayed), securely mounted using bolts or locking fasteners, and must include flame-retardant covering. A current list of NHRA-accepted lateral head supports is available on NHRA.com. Refer to illustrations in Section 4:11 as well as specific Class Requirements for the applicable e.t. and body-style roll-cage requirements. Open-bodied cars running 9.99 and quicker and/or faster than 135 mph must

STREET ROADSTER

(10.00 seconds E.T. and slower)

TOP VIEW FROM ABOVE

(roll cage removed from drawing for clarity)



A - *6 points of attachment*

D@ - *Horizontal, 1 1/4" x .058" used to tie inner and outer upper frame, only when no other support exists*

F - ***Lower frame -*** *needs extension on left side when driver's seat is overhanging lower framerail*

H - *Foot box support 1" x .058"*

H@ - *Retention for driver's legs, also can be a dash mount 1" x .058"*

3 - *Single diagonal 3/4" x .058"*
X or K design 5/8" x .058"

*When 1 5/8" x .083" is used for upper **C** and lower **F** frame and uprights **D**, eliminates the need for inner frame diagonals **3**. Diagonals **3** along outer frame and uprights still mandatory*

Street Roadster Tubing Code			
	O.D.	**Chromoly**	**Mild Steel**
A	1 1/2	.065	.118
C	1 1/2	.058	.118
D	1 1/4	.058	.118
	1 1/8	.065	.118
F	1 1/4	.058	.118
	1 3/8	.049	.118
I	1 1/4	.049	.118

meet applicable SFI Specification for e.t. (see Class Requirements). Full-bodied cars running 8.49 and quicker and/or exceeding 180 mph must meet applicable SFI Specification for e.t. and weight (see Class Requirements). SFI Specifications may be purchased from the SFI Foundation (sfifoundation.com, 858-451-8868); SFI Specifications are not available from NHRA Technical Services.

Open-Bodied Cars

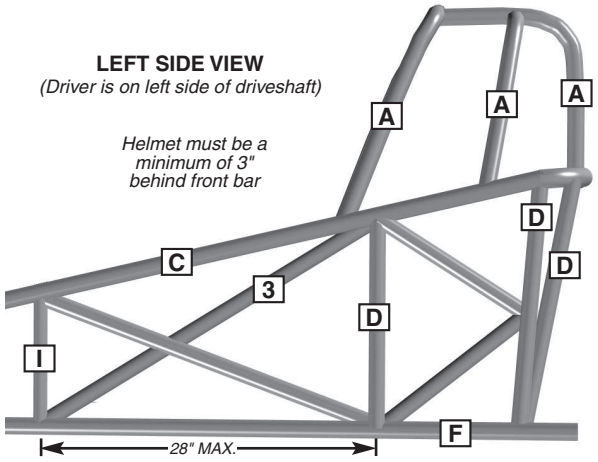
When driver is in driving position in an open-bodied car, roll cage must be at least 3 inches in front of helmet. Cars without crossmember above driver's legs must have a strap or device to prevent legs from protruding outside chassis. On front-engine dragster, seat uprights and back braces must be arranged such that a flat surface passed over any two adjacent members will not contact the driver's seat or containment.

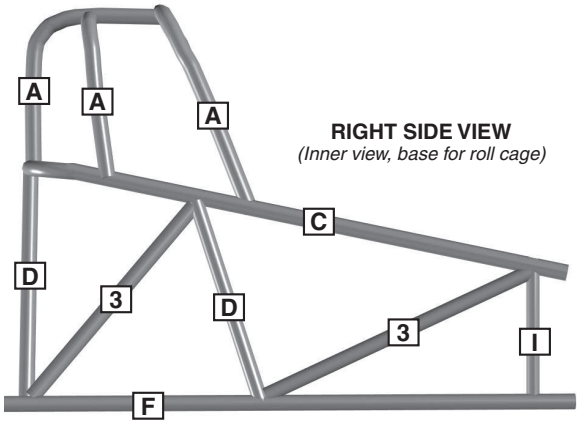
STREET ROADSTER

(10.00 seconds E.T. and slower)

LEFT SIDE VIEW
(Driver is on left side of driveshaft)

Helmet must be a minimum of 3" behind front bar





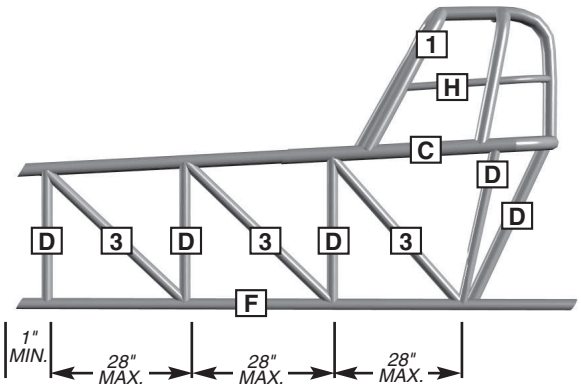
RIGHT SIDE VIEW
(Inner view, base for roll cage)

When this design is used for the inner structure, adjacent to the driver, then the outer structure has no minimum requirements.

Mild steel construction requires .118" minimum wall thickness. Lower frame of square tubing minimum is 2" x 2" x .058".

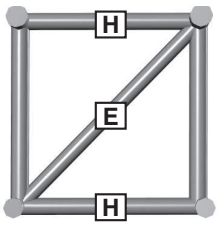
REAR-ENGINE DRAGSTERS

10.00 seconds E.T. and slower

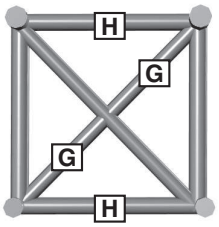


All dimensions apply to driver's compartment only

FRONT VIEWS
(Dragster; rear engine)

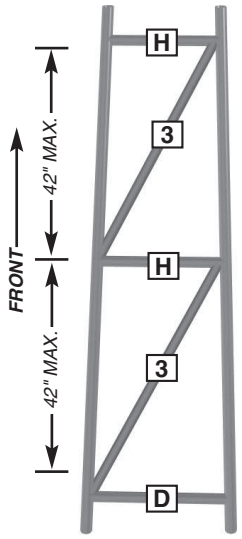


OPTION #1



OPTION #2

BOTTOM VIEW



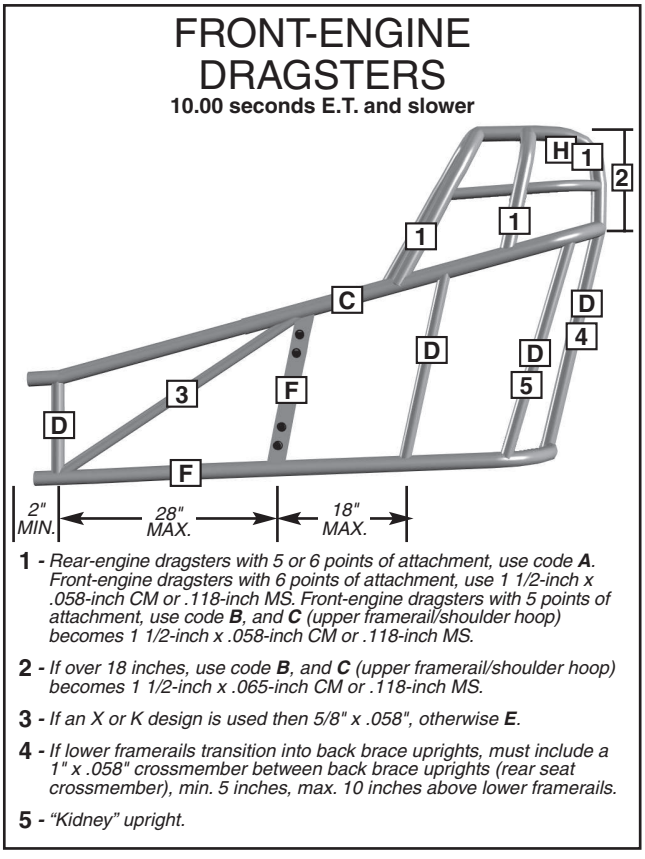
RED, FED, Altered, and Funny Car Tubing Code			
	O.D.	**Chromoly**	**Mild Steel**
A	1 1/2	.065	.118
B	1 5/8	.065	.118
C	1 3/8	.058	.118
D	1 1/4	.058	.118
	1 1/8	.065	.118
E	3/4	.058	.118
	1	.049	.118
F	1 1/4	.058	.118
	1 3/8	.049	.118
G	5/8	.058	.118
H	1	.058	.118
I	1 1/4	.049	.118

Additional uprights, max 30 degrees from vertical, must be added until this requirement is satisfied. When non-vertical upright or "running W" side bay designs are used (i.e., uprights installed at greater than 30 degrees from vertical), adjacent roll-cage diagonals must be the same size as that required for the upright. Motor mount and/or rear-end uprights (except rear-engine dragster) may be rectangular tubing, 1 3/4-inch x 1-inch x .058 CM or MS minimum.

For all vehicles required to meet SFI Specification 2.1, 2.2B, 2.3M, 2.4B, 2.5B, 2.6, 2.7B, 10.1E and 10.4 the upper roll-cage members must have head/helmet guards of one-inch by .058-inch round tube on all new chassis or at scheduled recertification. Effective Jan. 1, 2007, all new Street Roadsters must conform to SFI Spec 10.4. Existing Street Roadsters must meet SFI Spec 10.4 at their next scheduled recertification effective Jan. 1, 2008. No existing cars will be recertified early to delay compliance.

Full-Bodied Cars

On full-bodied cars with driver in driving position, helmet must be in front of main hoop. If helmet is behind or under main hoop, additional tubing same size and thickness as roll cage must be added to protect driver. Main hoop may be laid back or forward, but driver must be encapsulated within the required roll-cage components. On unibody cars with stock floor and firewall (wheel tubs permitted), the roll cage may be bolted or welded to the floor/rocker box via 6-inch x 6-inch x .125-inch steel plates similar to the roll-bar attachment requirements of paragraph 4:10 in this section. Unless attaching to OEM floor or frame, the minimum



1 - *Rear-engine dragsters with 5 or 6 points of attachment, use code **A**. Front-engine dragsters with 6 points of attachment, use 1 1/2-inch x .058-inch CM or .118-inch MS. Front-engine dragsters with 5 points of attachment, use code **B**, and **C** (upper framerail/shoulder hoop) becomes 1 1/2-inch x .058-inch CM or .118-inch MS.*

2 - *If over 18 inches, use code **B**, and **C** (upper framerail/shoulder hoop) becomes 1 1/2-inch x .065-inch CM or .118-inch MS.*

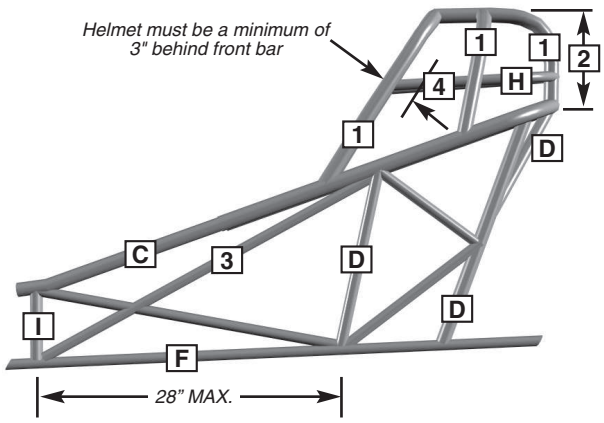
3 - *If an X or K design is used then 5/8" x .058", otherwise **E**.*

4 - *If lower framerails transition into back brace uprights, must include a 1" x .058" crossmember between back brace uprights (rear seat crossmember), min. 5 inches, max. 10 inches above lower framerails.*

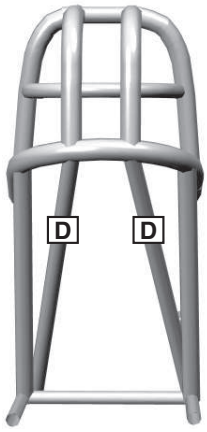
5 - *"Kidney" upright.*

ALTEREDS, FUNNY CARS

10.00 seconds E.T. and slower



REAR VIEW
(Altereds, Funny Cars, Rear-Engine Dragsters)



1 - *Funny Car and altered with 6 points of attachment, use 1 1/2-inch x .058-inch chrome moly (CM) or .118-inch mild steel (MS). Funny Car and altered with 5 points of attachment, use code **B**, and **C** (upper framerail/shoulder hoop) becomes 1 1/2-inch x .058-inch CM or .118-inch MS.*

2 - *If over 18 inches, use code **B**, and **C** (upper framerail/shoulder hoop) becomes 1 1/2-inch x .065-inch CM or .118-inch MS.*

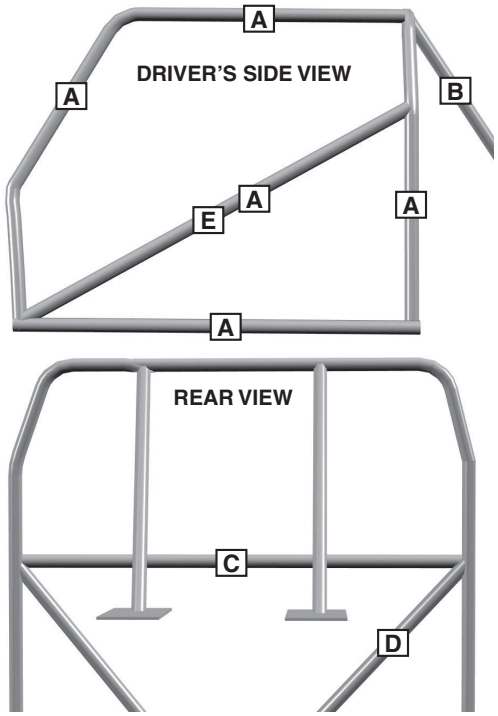
3 - *If X or K design is used then 5/8" x .058", otherwise **E**.*

4 - *For Altereds and Funny Cars, the **H** bar permitted.*

RED, FED, Altered, and Funny Car Tubing Code			
	O.D.	**Chromoly**	**Mild Steel**
A	1 1/2	.065	.118
B	1 5/8	.065	.118
C	1 3/8	.058	.118
D	1 1/4	.058	.118
	1 1/8	.065	.118
E	3/4	.058	.118
	1	.049	.118
F	1 1/4	.058	.118
	1 3/8	.049	.118
G	5/8	.058	.118
H	1	.058	.118
I	1 1/4	.049	.118

FULL-BODIED CARS

8.50 seconds E.T. and slower



All cars with an OEM steel frame must have roll cage welded to frame. For 1997 and later Z06 and ZR1 Corvettes only with aluminum frames, the acceptable roll-cage mounting is shown in the next drawing.

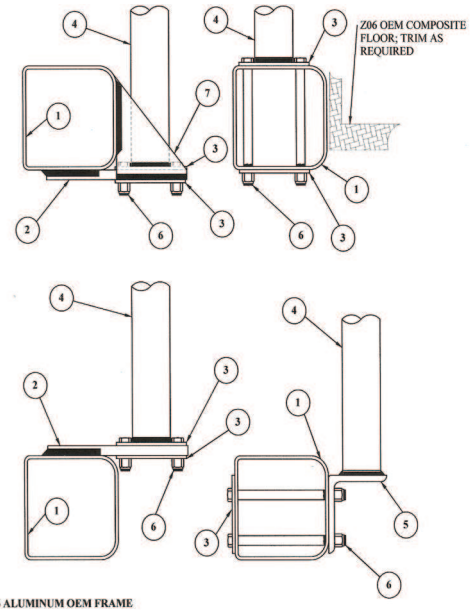
B - *If **A**, two bars any length.*
*If **B1**, two bars, 30" or less; must attach within 5 inches from top of main hoop.*
*If **B2**, minimum 4 bars. At least 2 bars must attach to horizontal portion of main hoop.*
*If **B3**, minimum 6 bars. At least 2 bars must attach to horizontal portion of main hoop.*

D - *1 1/4" x .058" CM (.118" MS) mandatory when main hoop is welded to plates on floor and/or rocker/sill in lieu of frame; D-bars must be attached to frame, subframe, subframe connectors, or OEM driveshaft tunnel. Refer to text in this section for specific criteria.*

E - *May substitute an "X" brace of 1 1/2 by .065-inch 4130 chromoly or 1 1/2 by .118-inch mild steel.*

Tubing Code			
	O.D.	**CM**	**MS**
A	1 5/8	.083	.118
B-1	1 1/2	.058	.118
B-2	1 3/8	.049	.118
B-3	1 1/4	.049	.118
C	1 1/4	.065	.118
D	1 1/4	.058	.118
CM	4130 Chromoly		
MS	Mild Steel		

ROLL CAGE MOUNTING; Z06/ZR1 OEM ALUMINUM FRAME



1. Z06 ALUMINUM OEM FRAME
2. 6" x 6" x .375" ALUMINUM PLATE; FULLY WELD TO OEM FRAME
3. 3" x 6" x .125" STEEL PLATE
4. 1 5/8" OD ROLL CAGE TUBE OR REAR SUPPORT TUBE; FULLY WELD TO PLATE OR ANGLE SUPPORT
5. 2 1/2" x 2 1/2" x .125" STEEL ANGLE; MINIMUM 6" LONG
6. 3/8" SAE GRADE 5 BOLTS AND LOCK NUTS (4).
7. 3" x 3" x .250" MINIMUM ALUMINUM PLATE GUSSET (2); FULLY WELD TO OEM FRAME AND LOWER PLATE.

requirements for a frame member to which a roll-cage member is attached are 1 5/8-inch x .118-inch MS or .083-inch CM round and/or 2-inch x 2-inch x .058 MS or CM rectangular.

All cage structures must have in their construction a cross bar for seat bracing and as the shoulder harness attachment point; cross bar must be installed no more than 4 inches below, and not above, the driver's shoulders, or to side bar. All required rear braces must be installed at a minimum angle of 30 degrees from vertical and must be welded in. Side bar must pass the driver at a point midway between the shoulder and elbow.

Unless an OEM framerail is located below and outside of driver's legs (i.e., '55 Chevy, '65 Corvette, etc.) a rocker or sill bar, minimum 1 5/8-inch x .083 CM or .118 MS or 2-inch x 2-inch x .058-inch CM or MS rectangular, is mandatory in any car with a modified floor or rocker box within the roll-cage uprights (excluding 6 square feet of transmission maintenance opening). Rocker bar must be installed below and outside of driver's legs and must tie into the main hoop, the forward hoop, frame, frame extension, or side diagonal. Rocker bar may not tie into swing-out side bar support. If rocker bar ties into side diagonal more than 5 inches (edge to edge) from forward roll-cage support or main hoop, a 1 5/8-inch x .083 CM or .118 MS brace/gusset is mandatory between the diagonal and forward roll-cage support or main hoop.

"D" bar installation for full-bodied cars: For front-wheel-drive cars, with complete OEM floor (from the firewall to the rear of the trunk)

and rocker/sill boxes, the 1 1/4-inch x .058-inch CM (.118-inch MS) "D" bars (when required; i.e., when the main hoop is not welded to the frame) may be welded to a 1 5/8-inch x .083-inch CM (.118-inch MS) crossmember welded to the rocker/sill box via conventional 6-inch x 6-inch x 1/8-inch-thick plates. For rear-wheel-drive cars, with neither a frame nor subframe connectors, but with complete OEM floor (from the firewall to the rear of the trunk; exception: the rear inner wheelwells may be tubbed with steel or aluminum), the 1 1/4-inch x .058-inch CM (or .118-inch MS) "D" bars may be welded to conventional 6-inch x 6-inch x 1/8-inch formfitted/contoured plates attached to the driveshaft tunnel. Otherwise, the "D" bars must be attached to frame, subframe, or subframe connectors.

Swing-out side bar permitted on OEM full-bodied car 8.50 e.t. and slower. The following requirements (a through d) apply:

a. 1 5/8-inch O.D. x .083-inch CM or .118-inch MS minimum. Bolts/pins must be 3/8-inch-diameter steel, minimum and in double shear at both ends.
b. Male or female clevis(es) permitted. Male clevis must use two minimum 1/8-inch-thick brackets (CM or MS) welded to each roll-cage upright; female must use minimum 1/4-inch-thick bracket (CM or MS) welded to each roll-cage upright. Pins must be within 8 inches of the vertical portion of both the forward and main hoops. A half-cup backing device must be welded to the vertical portion of the main hoop (inward side) or the upper end of the swing-out bar (outward side), minimum .118-inch wall (CM or MS) extending at least 1 5/8 inches past the center of the pins. A clevis assembly using a minimum .350-inch-thick male component and two minimum .175-inch-thick female components may use a 1/2-inch-diameter Grade 5 bolt and does not require a half-cup backing device.
c. Sliding sleeves of 1 3/8-inch x .083 CM or .118 MS, with minimum 2-inch engagement, are permitted in lieu of the upper pin/cup.
d. All bolt/pin holes in the swing-out bar must have at least one-hole diameter of material around the outside of the hole.

Steel-bodied pickup trucks (7.50 seconds and slower), roll cages are permitted with no back braces if the roll cage satisfies SFI 25.1E, 25.2, 25.4, or the roll cage consists of a 4-point (door car) cage with a complete SFI 2.4B, 2.5B, 2.6, 2.7A dragster, SFI 10.2, 10.3 altered, or SFI 10.4 street roadster roll cage/driver's compartment incorporated into and attached to the 4-point roll cage. An upper windshield bar is mandatory.

Non-steel-bodied pickup trucks (7.50 seconds and slower), roll cages are permitted with no back braces if the roll cage satisfies SFI 25.1E, 25.2, 25.4, or the roll cage satisfies the requirements for SFI 2.4B, 2.5B, 2.6, 2.7A dragster, SFI 10.2, 10.3 altered, or SFI 10.4 street roadster roll cage/driver's compartment. No 4-point (door car) cage is required and no upper windshield bar is required.

On all cars requiring a roll cage, if the OEM firewall has been modified (in excess of 1 square foot for transmission removal, not including bolted in components) a lower windshield or dash bar of 1 1/4 x .058-inch 4130 chromoly or 1 1/4 x .118-inch mild steel is mandatory connecting the forward cage supports.

All joints indicated as tube-to-tube joints/intersections must be fabricated by properly notching the components to fit with minimum clearance unless otherwise noted. Crushing the end of a tube to oval in lieu of properly notching/fitting the tube is not acceptable. Welding a plate to the side of one tube and butt welding the other tube to the plate surface in lieu of properly notching/fitting the tube is not acceptable.

For Sportsman full-bodied cars that require a roll cage (7.50 seconds and slower, including cars inspected to SFI 25.4 or 25.5): If

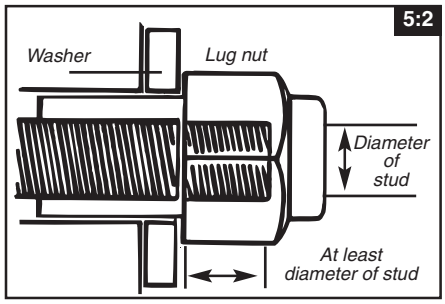
the windshield/roof bars are interrupted by the dash bar, then either the entire dash bar must be minimum 1 1/2-inch x .058-inch CM (.118-inch MS) or the entire dash bar must be minimum 1 1/4-inch x .058-inch CM (.118-inch MS) and must be braced with gussets to both the upper and lower sections of each windshield/roof bar. The gussets may be either 1.75-inch x 1.75-inch x .110-inch (with one 1/2-inch-diameter and two 5/16-inch-diameter holes maximum) 4130 CM or MS plate (triangle shaped) or 3/4-inch x.049-inch CM (.118-inch MS) tubing at least 4 inches long. An interrupted windshield/roof bar is defined as one that has been completely severed into upper and lower sections/pieces and then the sections/pieces are welded to the dash bar.

4:12 WHEELBASE
Minimum 85 inches, unless OEM was less and vehicle is equipped with OEM engine and drivetrain. Maximum wheelbase variation from left to right is 1 inch, unless otherwise noted in Class Requirements.

TIRES & WHEELS: 5

5:1 TIRES
Tires will be visually checked for condition, pressure, etc. and must be considered free of defects by the technical inspector prior to any run. All street tires must have a minimum of 1/16-inch tread depth. Temporary spares, space saver spares, farm implement or trailer tires prohibited. Metal, screw-in valve stems mandatory in tubeless tires, front and rear, on vehicles running 11.99 or quicker.

5:2 WHEELS
Hubcaps must be removed for inspectors, who will check for loose lugs, cracked wheels, worn or oversize lug holes, and condition of spindles, axle nuts, cotter pins, etc. Snap-on hubcaps are prohibited on any class car. The use of “spinner” style wheels or any wheel design that incorporates movable pieces while vehicle is in motion or stationary are prohibited. Each car in competition must be equipped with automotive-type wheels with a minimum 12 inches of diameter unless Class Requirements stipulate otherwise. Motorcycle wheels or lightweight automotive wire wheels must be equipped with .100-inch minimum diameter steel spokes, properly cross-laced to provide maximum strength. All spoke holes in rim and hub must be laced. Omissions to lighten wheels prohibited. The thread engagement on all wheel studs to the lug nut, or lug bolts to wheel hubs, must be equivalent to or greater than the diameter of the stud/bolt. Length of the stud/bolt does not determine permissibility. (Example: A 7/16-inch stud must be thoroughly engaged through the threads in the hex portion of the lug a minimum of 7/16-inch.)



Wheel spacer permitted. Spacer to be either hub-centric or lug-centric and must fit with minimal clearance to retain concentricity. The wheel spacer must not reduce the minimum permitted thread engagement below the limits established by fastener diameter. (See example as stated above.) No stacking of wheel spacers allowed. Maximum rim width on any car: 16 inches. No rear wheel discs or covers permitted in any category. Top Fuel and Funny Car rear wheels must meet SFI Spec 15.3. Pro Stock, Top Alcohol Dragster, Top Alcohol Funny Car, and Pro Modified (Comp) must meet a minimum of SFI Spec 15.1.

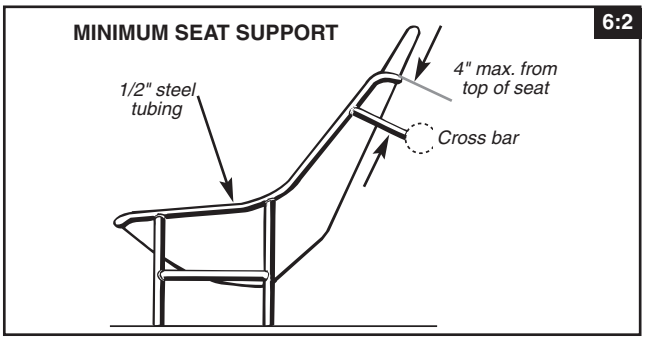
INTERIOR: 6

6:1 DRIVER COMPARTMENT

Both doors must be functional from inside and outside on all full-bodied cars. All interior panels (firewalls, floors, wheel tubs, doors, etc.) within the driver compartment of enclosed-cockpit cars where the driver is located behind the engine must be constructed of materials other than magnesium. Driver compartment of any enclosed or full-bodied car must be totally sealed from engine and transmission. Openings around all linkages, lines, wires, hoses, etc. must be minimized.

6:2 UPHOLSTERY, SEATS

The driver's seat of any car in competition must be constructed, braced, mounted, and upholstered to provide full back and shoulder support. The driver's seat must be supported on the bottom and back by the frame or crossmember. Except as noted in SFI Specifications, seats must be bolted with four bolts (and nuts and washers) on the bottom and one bolt in the rear into crossbar; all



bolts must go into frame or crossbraces. Ball-lock pins for seat attachment prohibited in all classes. All seats must be upholstered, or as noted under Class or SFI Requirements. All front-engine, open-bodied, supercharged or turbocharged (gasoline or methanol) cars running 7.49 seconds and quicker must have a flame-retardant-material-upholstered seat.
Properly braced, framed, supported, and constructed seats of aluminum, fiberglass, carbon fiber, or double-layer poly (accessory seats) permitted. Single-layer fiberglass seats must have steel tube framework, 1/2-inch-minimum O.D., for support. Aftermarket aluminum seats must have reinforced head rest. Magnesium seats prohibited.

6:3 WINDOW NET

A ribbon-type or SFI Spec 27.1 mesh-type window net is mandatory on any full-bodied car required by the rules to have a roll cage. Window net must be securely mounted on the inside of the roll cage, with the permanent attachment at the bottom. All attachment points must be designed in an attempt to protect the driver and avoid contact with track surface or guardwall. Eyelet clips, dogleash hardware, hose clamps, etc. prohibited. Penetration of webbing, except as performed by manufacturer, prohibited. Any modification to net must be performed by manufacturer.

BODY: 7

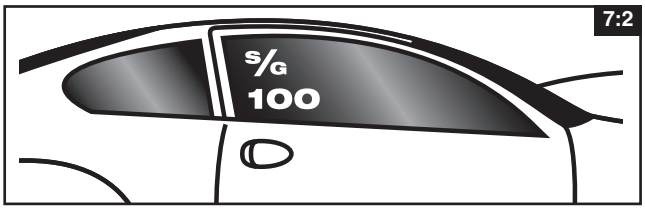
7:1 AIR FOILS, WINGS

Air foils, canards, wings, and spoilers other than original factory equipment are permitted only in open-bodied class cars (e.g., Dragster, Street Roadster, or open-wheel Altered) or as noted in Class Requirements. A positive locking device to prevent movement mandatory. No part to be within 6 inches of rear tires. Spring-loaded

spoilers, wings, or canards prohibited. Adjustment of air foils, wings, or spoilers during run prohibited. NOTE: A spoiler is mounted directly to the deck lid of the vehicle such that air passes only on the top side of the device. An air foil or wing is mounted on stands, struts, or pedestals such that air passes over the top and underneath the device. Minimum fastener size on all front wings, canards, etc. is 1/4-inch. Ball-lock pins prohibited.

7:2 COMPETITION NUMBERS

All contestants are required to display a permanent driver number at all NHRA Full Throttle Drag Racing Series national events, NHRA Lucas Oil Drag Racing Series divisional events, divisional NHRA Summit Racing Series Finals, and divisional National Open events. Numbers on side windows must be a minimum 6 inches high and 1 1/2 inches wide. Class designation letters must be a minimum 3 inches high and 1 inch wide. Driver's competition number and class designation must be displayed in a legible manner in a contrasting color to the vehicle's background color, or light color on windows, in a prominent position, and be clearly visible to the tower personnel. Class and numbers must be in the form of permanent decals or paint. The use of shoe polish in any form is prohibited.



7:3 FENDERS

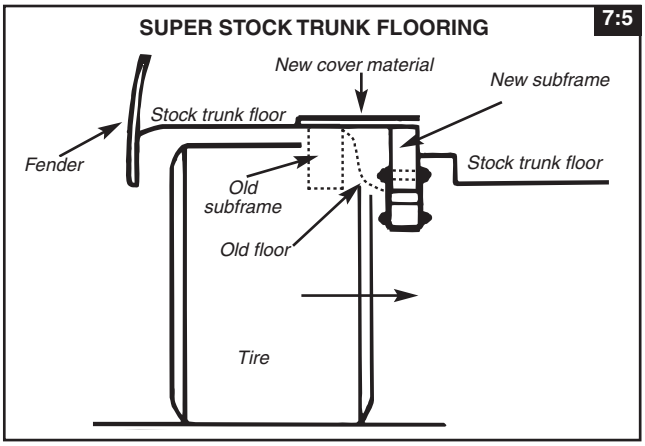
In Super Stock and Stock, the leading and trailing edges of fender openings may be trimmed for tire clearance, maximum 2 inches. All vehicles in all classes must have re-rolled or beaded edges on altered fenders. Flaring or spreading external fender lines prohibited, except as noted in Class Requirements. Front fenders may not be "drooped" on full-fendered car except as noted in Class Requirements.

7:4 FIREWALL

Each car in competition must be equipped with a minimum .032-inch aluminum or .024-inch steel firewall, extending from side to side of the body and from the top of the engine compartment's upper seal (hood, cowl, or deck) to the bottom of the floor and/or bellypan. Firewall must provide a bulkhead between the engine and/or fuel tank and driver compartment. All holes in firewall must be sealed with aluminum or steel. In certain instances, fiberglass, carbon fiber, or other composites may be used. See Class Requirements or consult NHRA. Use of magnesium prohibited.

7:5 FLOOR

All cars without floors must be equipped with floor pans made of steel or aluminum that must extend the full length and width of the driver compartment to the rear of the driver's seat. Cars equipped with floors or bellypans made of fiberglass or other breakable material must have metal subfloors. In all cars with OEM fiberglass floors, a crossmember (minimum 2 inches x 2 inches, .083-inch wall thickness square tubing) must be installed between framerails for proper driver's seat, seat belt, shoulder harness, and crotch strap installation. Bellypans and subfloors enclosing engine or driver compartment must contain suitable drain holes so that liquids and foreign matter cannot collect, thus creating a fire hazard. Minimum .032-inch aluminum or .024-inch steel. In certain instances, an NHRA-accepted panel made of composite material may be substituted for steel or aluminum. Contact the NHRA Technical



Department for list of accepted composite panels. Use of magnesium prohibited.

7:6 HOOD SCOOP

On full-bodied cars, where permitted, hood-scoop opening may not extend more than 11 inches above height of original hood surface as measured from the top of the opening directly down to the hood surface. On open-bodied, front-engine cars, scoop may not extend more than 11 inches above height of carburetor top. Scoop must have one opening only in Professional categories, and Top Alcohol Dragster, Top Alcohol Funny Car, Comp, and Super Stock. All other classes, multiple scoop openings permitted. Sensors, transducers, vents, wiring, hoses, etc. prohibited inside hood scoop. See Class Requirements for additional restrictions.

7:7 WINDSCREEN

On open-bodied cars, or any other class car without a windshield, a metal or other fireproof deflector must be installed. Minimum size on Street Roadster and Altered class cars is 5 inches x 12 inches. The deflector should divert wind, liquids, and foreign matter over the driver's head, be securely mounted, and installed in such a manner that it does not obstruct the driver's frontal view in any way.

7:8 WINDSHIELD, WINDOWS

Windshields and/or windows on all cars, when called for under Class Requirements, must be of safety glass, Plexiglas, Lexan, or other shatterproof material, minimum 1/8-inch thick. In all Full Throttle Drag Racing Series and Lucas Oil Drag Racing Series vehicles, windshields and/or windows must be clear, without tinting or coloring, except factory-tinted safety glass. In all other applications, windshield/window tint must meet the applicable state requirements. Competition number decals are permitted on any window, windshield or backlite, except as noted in Class Requirements. Tape of any kind prohibited on any windshield or window. The use of any temporary or permanent shielding, including paint, that obstructs the driver's vision (e.g., blinders, staging aids) and that is attached to the helmet, window or windshield is prohibited. Permitted shielding not to exceed 4 inches by 8 inches is permitted at this time provided that (a) it has a permanent attachment to the vehicle, such that it requires tools for removal, and (b) that the shielding is deemed safe by the driver in the driver's judgment and so long as the driver can demonstrate to technical inspectors that the purpose of the modification is to reduce distraction in the driver's field of vision. By using such a shield, the driver acknowledges and agrees that the driver deems such modification safe in the driver's judgment consistent with the driver's obligations in Section 1, Participant Agreements and

Administrative and Procedural Rules, set forth above, and that the shield does not impair or interfere with the safe operation of the driver's vehicle. Tape, tie straps, binder clips, hook-and-loop fasteners, glue, etc. are prohibited for attachment purposes. Vehicle-mounted shielding is allowed to pivot as long as it remains permanently attached. See General Regulations 10:7.

ELECTRICAL/CONTROL: 8

8:1 BATTERIES

All batteries must be securely mounted; must be of sufficient capacity to start vehicle at any time. Batteries may not be relocated into the driver or passenger compartments. Rear firewall of .024-inch steel or .032-inch aluminum (including package tray) required when battery is relocated in trunk. In lieu of rear firewall, battery may be located in a sealed .024-inch steel, .032-inch aluminum, or NHRA-accepted poly box. If sealed box is used in lieu of rear firewall, box may not be used to secure battery and must be vented outside of body. Relocated battery(s) must be fastened to frame or frame structure with a minimum of two 3/8-inch-diameter bolts. OEM located batteries without complete OEM hold-down hardware must be secured to OEM battery box/tray using the same 3/8-inch-diameter bolt hold-down method described in previous sentence. ("J" hooks prohibited or must have open end welded shut.) Metal battery hold-down straps mandatory. Strapping tape prohibited. A maximum of two automobile batteries, or 150 pounds combined maximum weight (unless otherwise specified in Class Requirements), is permitted. Maximums may vary according to Class Requirements.

8:2 DELAY BOXES/DEVICES

Prohibited in Top Fuel, Funny Car, Pro Stock, Pro Stock Motorcycle, Top Alcohol Dragster, Top Alcohol Funny Car, Comp, Super Stock, and Stock; permitted in all other categories (E.T. rules may vary by division; contact division office). A delay box or delay device is defined as any device (electric, electronic, pneumatic, hydraulic, mechanical, etc.) built for the express purpose of creating a delay between the release of transbrake line-loc, or two-step button, or release of foot or hand brake, or release of clutch pedal/lever, or release of any other device and the resultant action of the vehicle, or as otherwise determined by NHRA.

In categories that prohibit delay devices: Changeable vehicle components, legal unto themselves (solenoids, throttle-linkage components, hoses, springs, etc.), even though the removal and replacement of that component may affect the reaction time of the vehicle in relation to the driver action, is not considered a delay device. Wiring may consist of a single (i.e., "one" or "1") continuous wire from a power source to a switch (or button), and a single continuous wire from the switch to the transbrake or line-loc solenoid. One splice (no quick-disconnect) is permitted from the two-step to the solenoid (i.e., between the switch and the solenoid). All switches, buttons, wiring, solenoids, etc. must be for normal automotive use; i.e., not intended to create a delay (adjustable or non-adjustable) between release of the button and the resultant action of the solenoid. All line-loc/transbrake wiring before and after the switch must be separate from any other wiring and fully visible. Computer wiring, sensors, relays, and the like may not be wired to the solenoid wiring. Two-steps or other rev limiters that are adjustable by thumbwheel, replaceable chips, and the like may not be within the driver's reach and will preferably be located outside the driver compartment.

Any system that does not fit the above description is prohibited and must be corrected before the vehicle will be passed through pre-event technical inspection. Further, discovery of a delay device, adjustable or non-adjustable, at any time following pre-event technical inspection will be grounds for immediate disqualification

from the event, loss of all NHRA Full Throttle Drag Racing Series points for the season, and suspension from all NHRA Championship Drag Racing events for remainder of season. Additional penalties may be imposed at the discretion of NHRA.

In categories that permit a delay device: Delay device may display only delay amount dialed in; analog or digital display permitted. See Class Requirements for number of boxes/devices permitted. Delay device may serve only to create a preset delay between release of transbrake, line-loc, etc. and resultant action of vehicle. Delay device may be connected only to systems; i.e:, transbrake and/or line-loc, and/or clutch, dependent on vehicle, shift timer and throttle stop. Delay device connected to data recorders or any other equipment prohibited. No other wiring shall be connected directly or indirectly between any other part of the ignition system or any other devices (such as data recorders, tachometers, suspension components, fuel-injection system, etc.) and the delay box/device. The rpm-based automatic shifters that are incorporated into some delay boxes/devices may not be used for any purpose. The built-in tachometer that is incorporated into some delay boxes/devices may not be used for any purposes.

Prior to use, all delay boxes/devices manufactured after Jan. 1, 2003, must be NHRA-accepted. Any delay device other than those specified above, must be NHRA-accepted prior to usage. All wiring associated with the delay device, throttle stop, ignition system, automatic shifter, and electronic fuel injection must be fully visible, labeled, and traceable. Delay devices and components must be utilized in an unaltered manner consistent with the manufacturer's installation and instruction books unless otherwise approved. The use of any visual, audible, etc. indications that are transmitted to the driver in any form that provide on-track data are prohibited.

Any system that does not fit the above description is prohibited and must be corrected before the vehicle will be passed through pre-event technical inspection. Further, discovery of a prohibited device at any time following pre-event technical inspection will be grounds for immediate disqualification from the event, loss of all NHRA Full Throttle Drag Racing Series points for the season, and suspension from all NHRA Championship Drag Racing events for remainder of season. Additional penalties may be imposed at the discretion of NHRA (see 9:1 COMPUTER, 9:2 DATA RECORDERS).

8:3 IGNITION

Each car in competition must have a positive-action on/off switch, capable of de-energizing the entire ignition system, in good working order, located within easy reach of the driver. "Momentary contact" switch prohibited. Magneto "kill button"-type switches are prohibited.

All ignition systems and/or components wiring harnesses and attachments must utilize those supplied by the ignition system manufacturer. The wiring harness must be used in an unaltered manner consistent with the manufacturer's installation and instruction books.

All removable or pin-type timing devices are prohibited.

The use of any programmable multi-point rev limiter and/or a rate-of-acceleration rpm limiter, either by themselves (e.g., MSD 7561) or integrated into the ignition system (e.g., MSD 7531), are prohibited in NHRA competition.

8:4 MASTER CUTOFF

Mandatory when battery is relocated, or as outlined in Class Requirements. An electrical power cutoff switch (one only) must be installed on the rearmost part of each vehicle and be easily accessible from outside the car body. This cutoff switch must be connected to the **positive** side of the electrical system and must

stop all electrical functions including magneto ignition. The off position must be clearly indicated with the word "OFF." If switch is "push/pull" type, "push" must be the action for shutting off the electrical system, "pull" to turn it on. Any rods or cables used to activate the switch must be minimum 1/8-inch diameter. Plastic or keyed switches prohibited. Switches and/or controls must be located behind rear wheels on rear-engine dragsters.

8:5 STARTERS
All cars must be self-starting. Rollers and/or push starts prohibited.

8:6 TAILLIGHTS
All vehicles from E.T. up to and including Competition, one functional taillight mandatory. Strobe, flashing, high intensity, laser, infrared, photo sensitive, or other light-emitting/receiving device prohibited. See also Class Requirements.

8:7 SWITCHES & BUTTONS
Transbrake and/or line-loc switches must be NHRA-accepted for use in all classes that prohibit delay devices. All switches and/or buttons must be standard, mechanical connection type. Infrared, laser, retinal scan, fingerprint, light source, or any other non-mechanical-type switch and/or button prohibited in all NHRA classes.

8:8 SHIFT LIGHT
Shift light may only be triggered by tachometer output or ignition output.

SUPPORT GROUP: 9

9:1 COMPUTER
The National Hot Rod Association has established its policy with regard to the use of onboard computers on race cars competing pursuant to the NHRA Rulebook. Except those computers installed on stock vehicles by the new-vehicle manufacturers for the proper operation of such vehicles, no vehicles may be equipped with computers that in any way affect the operation of the vehicle. Per Class Requirements, OEM or aftermarket OEM-type electronic fuel injection permitted. Electronic fuel injection must be closed, OEM-type system; i.e., may monitor only engine functions. Monitoring of vehicle performance criteria, wheel speed, driveshaft speed, vehicle acceleration, etc. by fuel-injection system prohibited. All aftermarket OEM-type electronic fuel injection must be NHRA-accepted. A current list of NHRA-accepted electronic-fuel-injection systems is available on NHRA.com. All related wiring, sensors, etc. must be identifiable to the tech inspector. A computer is defined as any device (electrical, mechanical, pneumatic, hydraulic, etc.) that activates any function of, or in any way affects the operation of, the vehicle based on measurement, sensing, processing, etc. of any data related to the performance of the vehicle. For non-OEM data recorder applications, the transmission or display of any vehicle performance data gathered or processed by the data recorder, to the driver or any remote location during the run, is prohibited**.** (See 9:2 DATA RECORDERS).

During NHRA competition, no portable computer (e.g., laptop, PDA, Palm Pilot, programmer, etc.) may be installed or located in a vehicle at any point beyond the staging area ready line. All functions or values must be pre-set prior to this point.

Per class requirements, timed or rpm-activated shifters and the like permitted, but all automated functions must be preset before the run. Timer may display only timer amount dialed in; analog or digital display permitted. Devices may be removed at any time at discretion of NHRA Technical Department.

Ride height sensors permitted in Top Fuel and Funny Car only; prohibited in all other classes.

9:2 DATA RECORDERS

Data recorders may be used (per Class Requirements) to record functions of a vehicle so long as they do not activate any function on the vehicle. All data recorders manufactured after Jan. 1, 2006, must be NHRA-accepted. Data recorder may not be activated by the throttle, clutch, brake, mechanisms, etc., nor by the Christmas Tree, radio transmitters, sensing of wheel speed, inertia, laser device, or transmission of track position. The data recorder must be activated by a separate switch that requires a separate action (with respect to all other devices) by the driver or crewperson. The switch may neither be connected to nor be incorporated into any other device or component. Fifth-wheel sensing devices prohibited on all vehicles (includes wheelie-bar wheels). All lines sensing flow, pressure, etc. of fuel or oil must be metallic or steel braided. For non-OEM data recorder applications, the transmission or display of any vehicle performance data gathered or processed by the data recorder, to the driver or any remote location, during the run, is prohibited. Data may be reviewed (printout, replay, etc.) only after the run.

Any device (mechanical, hydraulic, pneumatic, electrical, optical, etc.) other than OEM-type that assists in determining track location of the competitor's own vehicle or opponent's vehicle is prohibited. Only OEM-style mirrors, mounted in conventional fashion, permitted.

Discovery of a device that displays, indicates, or transmits "on track," "track location," or "elapsed time"-type data will be grounds for immediate disqualification from the event, loss of all NHRA Full Throttle Drag Racing Series or Lucas Oil Drag Racing Series points for the season, and suspension from all NHRA Championship Drag Racing events for remainder of season. Additional penalties may be imposed at the discretion of NHRA. Devices may be removed at any time at the discretion of the NHRA Technical Department. Contact NHRA Technical Department for a list of accepted data loggers.

9:3 FIRE EXTINGUISHER

An onboard fire extinguisher system is mandated under certain Class Requirements. Must be installed per manufacturer's specifications with all gauges clearly visible; viewing window(s) may be required for some applications. In other classes, it is recommended that each contestant and/or his or her crew have a loaded, serviceable fire extinguisher and a fire blanket in their possession, carried in the tow vehicle, race car, or otherwise available for immediate use. Dry chemical or CO_2-type extinguishers, 2 1/2-pound minimum size, are recommended. When installed in a race car, must be mounted in a secure manner; use of flip-open-type clamps prohibited.

When required, Top Fuel, Funny Car, Pro Stock, Top Alcohol Dragster, and Top Alcohol Funny Car, fire extinguishing system must meet SFI Spec 17.1 and installed and utilized per manufacturer's installation requirements. All front-engine, open-bodied supercharged or turbocharged (gasoline or methanol) cars running 7.49 seconds or quicker must be equipped with an SFI-rated 20-pound fire system.

For all other vehicles, onboard fire extinguisher systems must be manually controlled Cold Fire 302, Fire X plus, Halon FE1211 or 1301 or FM200, or F500, or DuPont FE-36 or FE-227, and mounted per manufacturer's specifications with the primary nozzle(s) directed in an attempt to protect the driver. Other agents, classified on the EPA SNAP list as Acceptable Total Flooding Agents (Feasible for Use in Occupied Areas) and NHRA accepted, may be used. Bottles and lines must be mounted above the bottom of the adjacent framerails. Fire bottle activation cables must be installed inside framerail where cables pass engine/bellhousing area. Bottles must be DOT approved or meet SFI Spec 17.1 and permanently mounted (no hose clamps or tie wraps). In the case of more than

one bottle, each bottle must have its own distribution tubing and nozzles. The use of bottles, nozzles, or tubing other than that recommended by the manufacturer is prohibited. Upon activation of the system, the contents of the bottle(s) must be totally discharged; partial-discharge systems prohibited. The bottles must be mounted in such a manner that should an explosion or failure of any mechanical component of the vehicle occur, the bottles will be protected from flying parts. When installed in/on a race car, must be mounted in a secure manner; use of flip-open-type clamps, hose clamps, tie wraps, snaps, etc. prohibited. They should be protected from excessive temperature and mounted rigidly to the vehicle. Remote cables must be metallic (plastic or plastic-wrapped cables prohibited) and installed so they are protected in the event of an upset or collision. Follow the manufacturer's recommendations regarding installation, especially on bend radius, and protection from crimping or kinking. All fire systems must use steel lines, steel or aluminum distribution nozzles, and must be equipped with a pressure gauge. **All bottles must be identified with a gross loaded weight figure.** It is the responsibility of the competitor to weigh the bottle prior to each event.

9:4 GENERATORS
All generators, air compressors, etc. that are powered by an internal combustion engine must have the exhaust directed up and above the top of the trailer, truck, RV, tent/awning, etc. and clear of other people's pits.

9:5 JACKS & JACKSTANDS
No work may be done under any car in the pit area while the car is supported by only one jack. Additional safety devices such as jackstands are mandatory to provide additional protection in the event of jack failure. Failure to observe this rule is grounds for immediate disqualification. Top Fuel, Funny Car, Pro Stock, Top Alcohol Dragster, and Top Alcohol Funny Car must use cradles/jackstand devices that attach to the frame (conventional jackstands prohibited) when working on and/or running engine in pits with vehicle in a raised position. Jackstand devices must be constructed as to provide a minimum ground clearance of 7 inches as measured from the ground to the outer diameter limit of the rear tires.

9:6 LIFTING DEVICES
Any form of mechanical, hydraulic, or other leverage-type device for raising a car's driving wheels off the starting-line surface is prohibited.

9:7 OVERSIZE TRAILERS
Contestants using lift-gate-type rear door must allow door to be open only during active unloading/loading. Further, contestants must take steps to prohibit anyone from passing underneath any part of the lift-gate-type door during the unloading/loading procedure. Also, all extended ramps must be stowed after use. Maximum width of trailer and awning combination not to exceed 22 feet.

9:8 PRESSURIZED BOTTLES
All pressurized bottles, excluding SFI Spec 17.1 Onboard Fire Extinguishing Systems (i.e., air, CO_2, nitrous, etc.), used for air shifters, clutches, etc. must meet, and be engraved as meeting, DOT-1800 pound minimum Spec. All bottles must be securely mounted (hose clamps and/or tie wraps prohibited). Any pressurized bottle used for pneumatic operation must be filled with compressed air, nitrogen, or CO_2. All other materials prohibited.

9:9 PUSH BARS
Push bar must be designed to prevent push car from riding up on rear wheel of open-wheeled race cars. Push or tow starts prohibited.

9:10 TELEMETRY DEVICES
Telemetry transmission of certain Professional-category vehicle parameters intended for the sole purpose of national event television

coverage, which meet applicable NHRA criteria, permitted. Application for telemetry transmission(s) must be submitted in writing to NHRA Technical Services, National Headquarters, Glendora, Calif. Final, written authorization from applicable event Technical Services Crew Chief mandatory. Discovery of any unauthorized telemetry device, or unauthorized transmission of data, in any category, will result in disqualification from the event, loss of all season points, plus suspension of competition privileges for the remainder of the season. Additional penalties may be imposed at the sole and absolute discretion of NHRA.

9:11 TRACTION CONTROL

Any type of traction-control device, electronic or mechanical, is prohibited. A traction-control device is any unit or system that uses live data to control functions of the vehicle, such as tire slip, which are not controlled by the driver. These devices are, but not limited to, timing control based on wheel, driveline, or engine acceleration, braking control, throttle control, tire-shake meters, vertical acceleration meters, misfire control, stutter box, relays, and/or rpm-activated chips. See 9:10 TELEMETRY DEVICES, 8:2 DELAY BOXES/DEVICES, 8:3 IGNITION, 9:1 COMPUTER.

9:12 TOW VEHICLE

Any vehicle used as a tow vehicle must have the driver's competition number displayed on the tow vehicle. Limit of six crewmembers in tow or push vehicle. Crewmembers must be inside cab or completely inside bed or truck, not to be seated on tailgate, standing on running boards, or otherwise not completely inside vehicle. Generators or other external power supplies, extension cords, support equipment other than the tow vehicle, etc. are prohibited outside the pit area. Once a race vehicle leaves the pit, it must be in race-ready condition, and the only support equipment permitted is the tow or push vehicle until the vehicle returns to the assigned pit area. (Exceptions for engine start-up equipment needed in Top Alcohol Funny Car, Top Alcohol Dragster, Pro Stock Bike, Funny Car, and Top Fuel.) Competitors in Super categories and Super Stock classes may use portable generators while stationary in the staging lanes.

9:13 TWO-WAY RADIO COMMUNICATION

The use of two-way radios for the purpose of voice communication between driver and crew is permitted in all classes. Telemetry may in no way be used for gathering data or performing control functions. When radio is mounted in driver's compartment, must be secured in holder by some type of strap or device when car is moving.

9:14 WARM-UPS

It is mandatory that a driver be seated in the car in the normal driving position anytime the engine is running, unless coupler or driveline is removed from vehicle. **The practice of transbrake testing, converter stalls, line-loc testing, and/or transmission warming is prohibited in all classes, in all areas of the event except in starting-line approach areas beyond staging, or unless vehicle is on jackstands. Non-compliance is grounds for disqualification or such other and/or action as deemed appropriate by NHRA.**

TOP FUEL & FUNNY CAR: When starting these categories of vehicles in the pit area, the car must be fully within the assigned space. Race teams may not back car out of the pit space to start the engine. NO PART OF THE REAR TIRE MAY EXTEND PAST THE END OF THE ASSIGNED PIT SPACE. When occupying the "end spot" pit space or if the neighboring trailer does not completely shield your car, it is mandatory to park a tow truck/car alongside the race car while the engine is running.

DRIVER: 10

10:1 APPAREL
Each member of a participant crew must be fully attired when present in the staging, starting, and competition areas of the racetrack. Shoes are mandatory. Shorts, bare legs, tank tops, or bare torsos are prohibited when driving in any class. See Class Requirements.

10:2 APPEARANCE
Vehicles participating in drag racing events must be presentable in appearance at all times; those considered improperly prepared may be rejected by the technical inspector. The appearance of personnel attending contestant vehicles is equally important and is subject to the same considerations.

10:3 ARM RESTRAINTS
Where mandated by Class Requirements, arm restraints must be worn and adjusted in such a manner that driver's hands and/or arms cannot be extended outside of roll cage and/or frame rails. Arm restraints shall be combined with the driver restraint system such that the arm restraints are released with the driver restraints. Refer to manufacturer for instructions.

10:4 CREDENTIALS
Each driver of a vehicle entered in any event conducted at an NHRA member track must have a valid state or government-issued driver's license beyond a learner's-permit level or NHRA Competition License subject to inspection by officials at any time.

In addition, a current NHRA membership is required for participation in any divisional or national NHRA-sanctioned event, obtaining a new permanent competition number or renewing a permanent competition number, and obtaining a new competition license or renewing an existing competition license.

All competitors at NHRA Full Throttle national events must be a minimum of 18 years of age. A 17-year-old may apply for a Professional-category license if all the following criteria are met: 1) applicant's 18th birthday falls during the regular NHRA national event schedule; 2) applicant was an active participant in another NHRA license category (9.99 E.T. or quicker) the previous year; 3) applicant holds a valid NHRA competition license (9.99 E.T. or quicker).

Jr. Dragster participants must be 8 to 17 years old.

Drivers of the following type vehicles are mandated to have a valid NHRA competition license.

	Type A wheelbase over 125"	**Type B wheelbase up to 125"**	**Type C**	**Type D Motorcycle**
Class 1	Top Fuel	Funny Car	Pro Stock	PSM
Class 2	TAD	TAFC	Pro Modified	AD/MX (6.00-7.49)
Class 3	Comp-Advanced ET (6.00-7.49)	Comp-Advanced ET-SPTC (6.00-7.49)	N/A	ET/MX (7.50-9.99)
Class 4	Comp-SC-ET (7.50-9.99)	Comp-SC-ET-SG-SS-SST-SPTC (7.50-9.99)	N/A	Snowmobile-ATV (7.50-9.99)
Class SP	NTF/SPF	NFC/SPF	N/A	Nitro MC

License applicants for Top Fuel, Funny Car, Pro Stock, Pro Stock Motorcycle, Top Alcohol Dragster, Top Alcohol Funny Car, and Pro Modified must complete two runs at or above the requested class(es)' minimum e.t. and mph standard. The class standards are:

Class	Standard
Top Fuel	Two runs of 5.20 or quicker and two runs of 260 mph or faster
Funny Car	Two runs of 5.50 or quicker and two runs of 250 mph or faster
Pro Stock	Two runs of 7.40 or quicker and two runs of 175 mph or faster
Pro Stock Motorcycle	Two runs of 7.90 or quicker and two runs of 165 mph or faster
TAD/TAFC	Two runs of 6.20 or quicker and two runs of 205 mph or faster
Pro Modified	Two runs of 6.90 or quicker and two runs of 190 mph or faster

All license applicants are required to have a physical examination before making any test runs. Physical forms and license applications are available from NHRA headquarters or your division office. (Physical expires every two years. License expires with physical.) Likewise, the vehicle used for test runs must be current with respect to rules and regulations for the class/license being applied for.

WHEEL-DRIVEN CATEGORIES

A new driver who has not previously held a competition license will be given a special cockpit-orientation (blindfold) test, and will be required to make a minimum of six runs under the observation of two licensed drivers and a designated NHRA official. Witnessing drivers must hold a competition license equal to or greater than one being applied for. A driver who is upgrading or crossgrading (bodied category to/from open-wheel category) is required to take the cockpit-orientation test and make three runs (per license application instructions). A licensed driver may drive a car classed under his or her license limitation. It is prohibited to cross over to or from the long wheelbase category to short wheelbase, dragster to bodied, motorcycle to car, etc. unless specifically licensed for each.

JET EXHIBITION CATEGORIES

New driver must notify NHRA of intention to obtain a license and receive all required forms and rules for the category. Applicant must be minimum 18 years of age. All new drivers will pay a $200 application fee with the submission of a physical-exam form. Proof of car must be submitted and inspection must be performed prior to NHRA issuing a permit, which will include NHRA membership and insurance, to begin initial licensing runs.

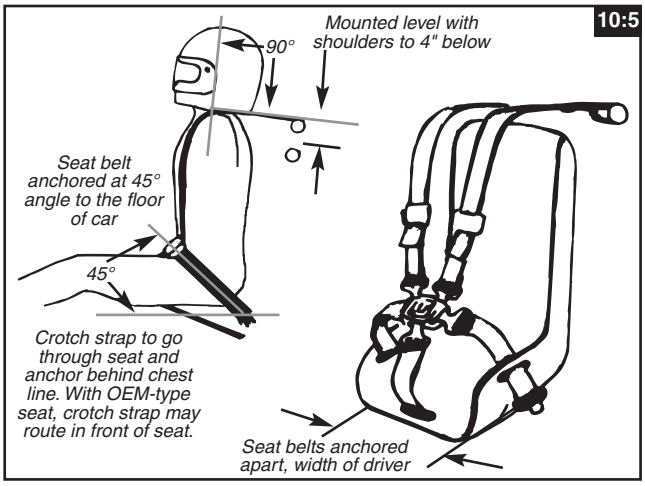
New driver, or driver cross grading from Funny Car to dragsters, etc. will be given a cockpit-orientation (blindfold) test. New driver must make a minimum of 12 test runs over a two-day (minimum) period. Blindfold test and test runs must be witnessed by two currently licensed jet exhibition drivers with at least three years' experience, a track official, and an NHRA-designated person. Test runs are typically divided into three sessions, as follows:

Session 1: Three half passes, one moderate pass.
Session 2: Four moderate passes.
Session 3: One moderate pass, three full passes.

Driver crossgrading from one jet exhibition category to another must complete a blindfold test and minimum three full test runs in front of standard witnesses. (A driver with an NHRA competition license in any whee-driven category may not crossgrade to a jet exhibition license, regardless of experience.) **In all categories, competition license will be granted or denied in NHRA's discretion.**

10:5 DRIVER RESTRAINT SYSTEMS

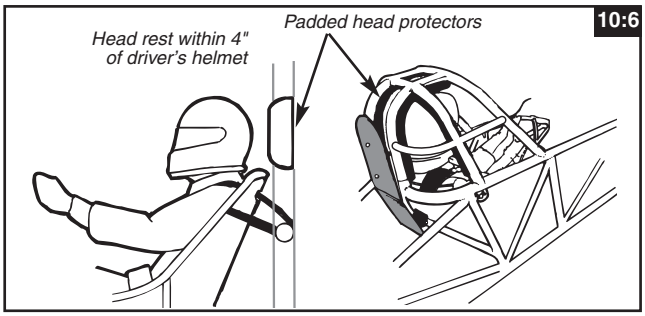
A quick-release, 3-inch driver restraint system, with a 2-inch crotch strap, meeting SFI Spec 16.1 is mandatory in all cars in competition required by the rules to have a roll bar or a roll cage. (Permitted in all other classes.) A 3-inch SFI Spec 16.5 driver restraint system is also acceptable wherever an SFI Spec 16.1 is mandatory or permitted. Driver restraint system must be clearly labeled as meeting SFI Spec 16.1 and be dated by manufacturer. See Class Requirements for additional requirements for Top Fuel and Funny Car. SFI Spec 16.1 Y-type belts prohibited. (In cases where the



class does not require an SFI 16.1 driver restraint system, the two-year recertification does not apply.) System must be updated at two-year intervals from date of manufacture. All seat-belt and shoulder harness hardware must be originally designed to be used with each other and produced by the same manufacturer. For harness installation, see illustration. Cars using OEM or OEM-type seat may route crotch strap in front of seat instead of through seat. Only units that release all five attachment points in one motion are permitted. When arm restraints are worn with a restraint system that utilizes a "latch lever," a protective cover must be installed to prevent arm restraint from accidentally releasing the latch lever. Protective cover not required if system utilizes "duck-bill" latch hardware. All harness sections must be mounted to the frame, crossmember, or reinforced mounting, and installed to limit driver's body travel both upward and forward. Seat belts may not be wrapped around lower framerails. Under no circumstances are bolts inserted through belt webbing permitted for mounting. Check manufacturer's instructions.

10:6 HEAD PROTECTOR

In any car where a roll bar or roll cage is installed, a padded head protector must be provided at the back of the driver's head and constructed in an attempt to prevent whiplash upon impact. The roll bar or cage must be padded wherever it may come in contact with the driver's helmet. Adequate padding should permit minimum 1/4-inch compression or meet SFI Spec 45.1. The use of weather stripping and similar thin or low impact resisting materials is prohibited. A padded roll bar or cage alone is not acceptable as a padded head protector unless it is within 4 inches of the driver's helmet. A seat that incorporates a reinforced head rest is permitted.



10:7 HELMET

As outlined under Class Requirements, drivers in all classes, including motorcycles, must wear a helmet meeting Snell or SFI Specifications.

SFI Spec 31.1A = Snell SA, open-face helmet
SFI Spec 31.2A = Snell SA full-face helmet
SFI Spec 41.1A = Snell M, open-face helmet
SFI Spec 41.2A = Snell M full-face helmet

Full-face helmet mandatory on all cars 9.99 or quicker. See individual Class Requirements for additional requirements. Shield mandatory 7.49 and quicker.

Drivers of NHRA Lucas Oil Drag Racing Series and E.T. cars (13.99 or quicker) must use a helmet meeting Snell SA2000, M2000, SA2005, M2005, SA2010, M2010, or SFI 31.1A, 31.2A, 31.1/2005, 41.1A, 41.2A, or 41.1/2005 Specs. Drivers in supercharged, front-engine, open-bodied cars and Funny Cars must wear a helmet meeting Snell SA2000, SA2005, SA2010, or SFI 31.1A, 31.2A, or 31.1/2005 Specs. See Class Requirements.

NHRA Helmet Expiration Dates

Label	Expires	Label	Expires
Snell 2000	1/1/2012	SFI 41.1A	1/1/2014
Snell 2005	1/1/2017	SFI 41.2A	1/1/2014
Snell 2010	1/1/2022	SFI 31.1/2005	1/1/2017
SFI 31.1A	1/1/2014	SFI 41.1/2005	1/1/2017
SFI 31.2A	1/1/2014	SFI 24.1 (JDRL only)	1/1/2015
		SFI 24.1/2005	1/1/2017

Structural modifications to helmet/shield are prohibited. Cutting of helmet or helmet shield prohibited. Helmet must remain as manufactured, except for paint scheme/graphics and permitted non-structural driver modifications to helmet shield as set forth below. Taping or similar modifications to the helmet shield made by the driver that reduce the driver's field of vision, and are deemed safe by driver in the driver's judgment, are permitted at this time so long as the driver can demonstrate to technical inspectors that the purpose of the modification is to reduce distraction in the driver's field of vision. By using such a modification to the helmet shield, the driver acknowledges and agrees that the driver deems such modification safe in the driver's judgment consistent with the driver's obligations in Section 1, Participant Agreements and Administrative and Procedural Rules, set forth above, and that the modification does not impair or interfere with the safe operation of the driver's vehicle. See General Regulations 7:8.

10:8 NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM

Neck collar must be commercially produced and designed for racing. Two different types of collars are commercially available: a full 360-degree "donut" type or a pull-together "horseshoe" type. Modification according to manufacturer's recommendations to fit helmet and driver's neck/shoulder spacing permitted. Must be worn as per manufacturer's recommendations. Must meet SFI Spec 3.3 as per class rules.

Neck collar meeting SFI Spec 3.3 mandatory in all open-bodied cars and any car running 9.99 (*6.39) or quicker or cars exceeding 135 mph. A head and neck restraint device/system may be used in lieu of a neck collar.

A head and neck restraint device/system is mandatory for any vehicle running 200 mph or faster or by Class Requirements. Beginning Jan. 1, 2012, a head and neck restraint device/system is mandatory for any vehicle running 7.49 (*4.49) or quicker or by Class Requirements. When using a 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 the 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.

A head and neck restraint device/system may be used with or without a neck collar.

10:9 OCCUPANTS

No more than one person is permitted in any car during any run, except one co-driver permitted in 14-second and slower E.T. cars; co-driver must be a minimum of 16 years old. All occupants of tow vehicles must be inside of car or pickup in a seated position while tow vehicle is in operation. Any time a car is started, whether in the pits, staging lanes, with self-starter, or anywhere else on the race facility, a competent driver must be in the driver's seat unless coupler or driveline is removed. Non-compliance is grounds for disqualification from the event.

10:10 PROTECTIVE CLOTHING

"Protective Clothing" includes suit (one-piece suit or jacket and pants); head sock; gloves; and boots or shoes.

Driver must meet all Protective Clothing requirements stated under Class Requirements for vehicle being driven.

SEE CLASS REQUIREMENTS.

Protective Clothing requirements stated are minimum requirements; drivers are free to upgrade Protective Clothing.

Each item of Protective Clothing must meet applicable specifications. Each item must be properly labeled and in good condition. All jackets/pants or suits for SFI Spec 3.2A/15 or 3.2A/20 must be recertified on a five-year interval.

All gloves must have a full layer of flame-retardant material inside the glove. Leather palm gloves without a full layer of flame-retardant material separating leather from driver's hand prohibited.

An SFI 3.3 head sock or SFI 3.3 skirted helmet is required on all open-bodied cars or all cars 7.49 and quicker, where a neck collar is required but has been substituted with a head and neck restraint device. See Class Requirements.

If no specific Protective Clothing requirements are stated for a particular class, then the minimum requirements are as follows: full-length pants; short- or long-sleeved shirt; closed shoes; and socks. No shorts. No bare legs. No bare torsos. No tank tops. No open-toe or open-heel shoes or sandals. Synthetic clothing not recommended.

10:11 SEAT BELTS

All cars not required by Class Requirements to use SFI 16.1 driver restraint systems must be equipped with an accepted quick-release-type driver seat belt. Belts must be securely fastened to the frame,

crossmember, or reinforced mounting so that all fittings are in a direct line with the direction of pull. Seat belts may not be wrapped around lower framerails. Steel castings of the type recommended by FAA or U-bolt-type mounts are permitted. If used for installation, flat steel plates must be a minimum of 1/4-inch thickness and have rounded edges to prevent cutting seat belts. Under no circumstances can belts be installed with bolts through webbing. In all cars with fiberglass floors, a crossmember (minimum 2-inch x 2-inch x .083-inch wall thickness square tubing) must be installed between framerails for proper driver's seat-belt installation.

GENERAL: 11

11:1 ADVERTISING AND OTHER MATERIAL/DISPLAYS

NHRA reserves the right to regulate any advertising or other material that is present on site at any NHRA event including without limitation any material appearing on any participant, on the body or any other visible part of any vehicle or transporter participating in NHRA events including on support vehicles, in any pit area, in any area of the dragstrip from the staging lanes to the end of the dragstrip, and any item or material on site that may constitute a product placement. Participants and vehicles may be excluded from competition and from event facilities if, in NHRA's discretion, any advertising or other material displayed on a person, race or support vehicle, or in a pit area or otherwise is not in the best interests of NHRA and the sport of drag racing, and/or is or may be in conflict with any applicable law.

Moreover, NHRA will require compliance with all guidelines and requirements of any telecaster for events that will be telecast. In addition, NHRA may require certain indicia to be visible on a vehicle as a condition of participation in competition if NHRA determines that such requirement is in the best interests of NHRA and the sport of drag racing.

By way of illustration and without limitation, online gambling is an activity deemed by NHRA to be not in the best interests of NHRA and the sport of drag racing, and an activity that NHRA will not allow to be displayed or advertised on site at any NHRA event or in connection with NHRA in any manner whatsoever. Websites that allow gaming that is entirely free and for fun may be permitted pursuant to further guidelines that may be requested from NHRA. Violation of any part of any such guideline will be treated as violation of the NHRA Rulebook.

SFI SPECIFICATIONS

Following is a list of all SFI Specifications applicable to NHRA Championship Drag Racing, with respective expiration periods. An item with an expiration period must be returned to the original manufacturer for inspection and recertification at the end of this period before it can be permitted for further use at an NHRA event.

SFI SPEC	DESCRIPTION	EXPIRATION PERIOD
1.1	Single-Disc Clutch & Flywheel Assembly	2 years
1.2	Multi-Disc Clutch & Flywheel Assembly E.T. through Comp, PS	2 years
1.3	Multi-Disc Clutch and Flywheel Assembly TAD, TAFC, TF, and FC	1 year
1.4	Multi-Disc Clutch and Flywheel Assembly TAD and TAFC	1 year
1.5	Multi-Disc Clutch Assembly (with Power Adders)	1 year
2.1	Rear-Engine Dragster Chassis Spec, TAD (Includes Wing and Rear-End Mounting)	1 year
2.2B	Front-Engine Dragster Chassis Spec, NTF, TAD	1 year
2.3N	Rear-Engine Dragster Chassis Spec, TF (Includes Wing and Rear-End Mounting)	1 year
2.4B	Front-Engine Dragster Chassis Spec, Advanced E.T., A/D, B/D, C/D, A/ED, B/ED, A/ND, & B/ND	3 years
2.5B	Rear-Engine Dragster Chassis Spec, Adv. E.T.	3 years
	A/D, B/D, C/D, D/D, A/ED, B/ED, C/ED, & D/ED (Does Not Include Wing or Rear-End Mounting)	3 years
2.6	Front-Engine Dragster Chassis Spec, 7.50 and Slower	3 years
2.7B	Rear-Engine Dragster Chassis Spec, 7.50 and Slower	3 years
3.2A/1	Jacket (and Pants Where Applicable)	
3.2A/5	Jacket (and Pants Where Applicable)	
3.2A/15	Jacket and Pants or Suit	5 years, including the year on the tag
3.2A/20	Driver's Suit	5 years, including the year on the tag
3.2A/25	Driver's Suit	5 years, including the year on the tag
3.2A/30	Driver's Suit	5 years, including the year on the tag
3.3	Neck Collar and Head Sock	
3.3/1	Gloves, Shoes	
3.3/10	Helmet Skirt	
3.3/5	Gloves, Shoes, Boots	
3.3/15	Gloves, Boots	
3.3/20	Gloves, Boots	
4.1	Automatic Transmission Shield, Rigid	5 years
4.1	Automatic Transmission Shield, Flexible	2 years
6.1	Flywheel Shield, Spec 1.1 & 1.2 (2-Disc Max, or 3-Disc, 8-inch dia. Max)	5 years
6.2	Flywheel Shield, Spec 1.2, 1.3, 1.4 & 1.5 Clutch (Check with Manufacturer; May Be Only 1 Year)	2 years
6.3	Flywheel Shield, Spec 1.2, 1.3 & 1.4 Clutch (Check with Manufacturer; May Be Only 1 Year)	2 years
7.1	Lower Engine Ballistic/Restraint Device	1 year
7.2	Lower Engine Ballistic/Restraint Device	5 years
9.1	Flywheel Blanket, Spec 1.1 & 1.2 (2-Disc Max) Clutch	2 years

SFI SPEC	DESCRIPTION	EXPIRATION PERIOD
10.1E	Altered & F/E Dragster Chassis Spec, TAFC	1 year
10.2	Altered Chassis Spec, 6.00 to 7.49	3 years
	Adv. E.T., AA/A, BB/A, AA/AT, BB/AT, A/A, B/A	3 years
10.3	Altered Chassis Spec, 7.50 and slower	3 years
10.4	Side-Steer Roadster Chassis Spec., 9.99 and quicker	3 years
10.5	Funny Car Chassis Spec, FC	1 year
14.1	Supercharger Restraint (Roots)	2 years
14.2	Supercharger Restraint (Roots)	2 years
14.21	Supercharger Restraint (Screw-Type)	2 years
14.3	Supercharger Restraint (Top Fuel)	2 years
14.4	Valve Cover Restraint	2 years
15.1	Rear-Drive Wheels, TAD, TAFC, and PS	
15.2	Front Wheels	
15.3	Rear-Drive Wheels, TF and FC	
15.4	Rear-Drive Wheels, TF and FC	2 years
16.1	3-Inch Driver Restraint System	2 years
16.5	3-Inch Driver Restraint System	2 years
17.1	Onboard Fire Extinguishing Systems	2 years
18.1	Harmonic Balancer	
23.1	Manifold Burst Panel	
24.1	Youth Full-Face Helmet (for JDRL only)	1 year
25.1E	SFI Full Body Chassis Spec, Pro Stock	1 year
	Adv. E.T.	3 years
25.2	SFI Full Body Chassis Spec, 3,200-Pound Maximum	3 years
25.3	Full-Bodied Car, Tube Chassis Roll Cage 6.50-7.49, 3,600-Pound Maximum	3 years
25.4	Full-Bodied Car, Tube Chassis Roll Cage 7.50-8.49, 3,600-Pound Maximum	3 years
25.5	Full-Bodied Car, with OEM Frame 7.50-8.49, 3,600-Pound Maximun	3 years
27.1	Window Net (Mesh)	2 years
28.1	Fuel Cell: Pro Stock, Pro Modified, Advanced E.T.	
29.1	Automatic Transmission Flexplate	3 years
30.1	Automatic Transmission Flexplate Shield	5 years
31.1/2005	Full-Face Helmet	exp. 1/1/2017
31.1A	Open-Face Helmet (Snell SA Rating)	exp. 1/1/2014
31.2A	Full-Face Helmet (Snell SA Rating)	exp. 1/1/2014
34.1	Supercharger, Screw-Type	3 years
38.1	Head and Neck Restraint System	
40.1/1, 40.1/2	Motorcycle Rider's Suit	
41.1/2005	Open-Face Helmet	exp. 1/1/2017
41.1A	Open-Face Helmet (Snell M Rating)	exp. 1/1/2014
41.2A	Full-Face Helmet (Snell M Rating)	exp. 1/1/2014
42.1	Steering-Wheel Hub	
43.1	Driveshaft	
45.1	Roll-Bar/Cage Padding	
49.1	Top Fuel Rear Wing Assembly	1 year
49.2	Top Fuel Front Wing Assembly	1 year
54.1	Nonflammable, Thermal Barrier/Fire Extinguishing Coatings	

NHRA E.T. QUICK REFERENCE CHART

Y = Required C = Convertibles
Number Refers to General Regulations
In no way is this Quick Reference Chart intended to supersede or replace the current NHRA Rulebook

Quarter-Mile e.t.s	6.00 to 7.49	7.50 to 9.99	10.00 to 10.99	11.00 to 11.49	11.50 to 13.99	14.00 & Slower
Aftermarket Rear Axles	Y	Y	Y	2:11	2:11	2:11
Arm Restraints (Open Cars)	Y	Y	Y	Y	10:3 11.99	10:3
Auto Trans Flexplate (SFI 29.1)	Y	Y	2:14	2:14	2:14	2:14
Auto Trans Locking-Type Dipstick	Y	Y	Y			
Auto Trans Reverse Lockout	Y	Y	Y	Y	Y	Y
Bellhousing (SFI 6.1/6.2)	Y	Y	Y	Y	2:10	2:10
Driver Restraint System (SFI 16.1)	Y	Y	Y 10:5	Y 10:5	C 10:5	10:5 10:11
Driveshaft Loop	Y	Y	Y	Y	2:4	2:4
Electric 16.00 & Quicker	Y	Y	Y	Y	Y	2:4
Flexplate Shield (SFI 30.1)	Y	Y	2:14	2:14	2:14	2:14
Flywheel/Clutch (SFI 1.1/1.2)	Y	Y	Y	Y	2:5	2:5
Harmonic Balancer (SFI 18.1)	Y	Y	Y	Permitted	Permitted	Permitted
Helmet (Snell 2000 or SFI 41.1A min.)	Y	Y	Y	Y	Y	10:7
Liquid Overflow	Y	Y	Y	Y	Y	Y
Master Electrical Cutoff	Y	Y	8:4 135 mph	8:4	8:4	8:4
Neck Collar	Y	Y	10:8	10:8	10:8	10:8
NHRA Competition License	Y	Y	10:4	10:4	10:4	10:4
NHRA Chassis Sticker	Y	Y	4:4	4:4	4:4	4:4
Padding Roll Bar/Cage	Y SFI	Y SFI	Y	Y	10:6 135 mph	10:6 135 mph
Parachute	Y	Y	4:8 150 mph	4:8	4:8	4:8
Pressurized Bottles DOT (1800)	Y	Y	Y	Y	Y	Y
Protective Clothing	Y	Y	Y	Y	10:10	10:10
Roll Bar			Y	Y	C/13.49	4:10
Roll Cage	Y	Y	Y 135 mph	4:11	4:11	4:11
SFI Chassis Specification	Y	4:4 180 mph	4:4	4:4	4:4	4:4
Supercharger Restraints	Y	1:11	1:11	1:11	1:11	1:11
Taillight	Y	Y	Y	Y	Y	Y
Transmission Shield (SFI 4.1)	Y	Y	Y	2:14	2:14	2:14
Window Net (Full-Bodied Cars)	Y	Y	6:3 10:3	6:3 10:3	6:3 10:3	6:3 10:3

Handy Charts and Formulas

- **Cubic Inch Displacement**
  CID = bore x bore x stroke x 0.7854 x number of cylinders
- **Horsepower** = (RPM x torque)/5,252
- **Torque** = (5,252 x HP)/RPM
- **Valve Area** = valve diameter x valve diameter x .7854
- **Rod Ratio** = rod length/crank stroke length
- **Average Piston Speed** = crank stroke x RPM/6
- **Rear Gear Ratio** = (RPM at finish line x tire diameter)/(MPH x 336)
- **Volume (cc's) of deck clearance**
  = bore x bore x 12.87 x depth of deck clearance
- **Volume (cc's) of head gasket**
  = bore x bore x 12.87 x thickness of head gasket

$$\textbf{Compression Ratio} = \frac{\text{comb chamber cc's + gasket cc's + deck CI cc's + (displacement x *2.0483)}}{\text{comb chamber cc's + gasket cc's + deck CI cc's}}$$

** 2.0483 for 8-cyl. * 2.7311 for 6-cyl. * 4.0967 for 4-cyl.*

- **Circumference =** π x diameter
- **Area of circle =** π x radius^2
- **Volume of cylinder =** π x radius^2 x height

π = pi π = 3.1416 radius^2 = radius x radius

Weights:

Oil	1 gallon = 7.0 pounds	1 quart = 1.75 pounds
Gas	1 gallon = 6.2 pounds	1 quart = 1.55 pounds
Water	1 gallon = 8.4 pounds	1 quart = 2.10 pounds

Metric and Standard Conversion

The metric system is a decimal system of measurements used in scientific work for measuring length, weight, and volume. These basic units are modified with prefixes to express the units as larger or smaller quantities. Some of the common prefixes are:
Kilo: one thousand (1000)
Deci: one-tenth (0.1)
Centi: one-hundredth (0.01)
Milli: one-thousandth (0.001)
Micro: one-millionth (0.000001)

Length

1 kilometer (km) = 1,000 meters = 3,280.83 feet = .6215 mile
1 meter (m) = 100 centimeters = 39.37 inches = 1.09 yards
1 decimeter (dm) = 3.937 inches
1 centimeter (cm) = .3937-inch

1 mile = 1.609 kilometers	1 inch = 2.54 centimeters
1 yard = .91 meters	1 inch = 25.4 millimeters

Mass

1 kilogram (kg) = 1,000 grams (g) = 2.2045855 pounds

1 pound = 453.6 grams	1 ounce = 28.35 grams
1 gram = 1,000mg	
kilograms x 2.20 = pounds	pounds / 2.20 = kilos

Volume

1 liter (l) = 1,000 cubic centimeters (cc) = 61.025 cubic inches
1 cubic inch = 16.387 cubic centimeters