



2023 NHRA RULE AMENDMENTS

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(UNLESS OTHERWISE NOTED, RULE CHANGES BECOME EFFECTIVE IMMEDIATELY)

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SECTION 2: RACE PROCEDURES, PROPER USE OF SAFETY EQUIPMENT (Page 1) (12/6/2022)

Seat belts must be worn and adjusted in such a manner that the driver's torso and head cannot extend outside the parameters of the roll cage. The loosening and removal of seat belts, helmets, gloves, window nets, lifting of helmet shield, and removal of all other safety equipment is prohibited from the time the vehicle leaves the ready line until the vehicle is on the return road. Fire bottle safety pins/clips must be removed from fire bottle controls from the time the vehicle leaves the ready line until the vehicle is on the return road. Fresh air systems must be on and providing airflow to the driver's helmet from the time the vehicle leaves the ready line until the vehicle is on the return road. **All safety equipment must be operational if installed regardless of if the equipment is part of or in addition to the minimum required safety equipment per category.**

Violators will be subject to disciplinary action in the sole and absolute discretion of NHRA.

SECTION 2: RACE PROCEDURES, BURNOUTS (Page 2) (3/03/2023)

All pre-race burnouts are restricted to designated areas, using water only. If a contestant's vehicle should break on a burnout and cannot back up or be pushed back, it is not permitted to turn on the track and drive back to the starting line. Crossing the centerline during a burnout is not a disqualification. Fire burnouts are strictly prohibited. No person is permitted to hold or touch cars during burnouts.

At national events, Top Fuel, Funny Car, Pro Stock, Pro Stock Motorcycle, Pro Mod, Top Fuel Harley, Top Alcohol Dragster, Top Alcohol Funny Car, Comp, Super Comp, Top Dragster, and Top Sportsman drivers are allowed one burnout across the starting line under power. Length and time duration must be reasonable and in concert with the opponent's procedures. Super Stock, Factory Stock Showdown, Stock, Super Gas, and Super Street drivers may not cross the starting line on any burnout; stationary burnout limit is five seconds. Divisional event burnout limitations are at the discretion of the event director.

During the burnout process if a contestant's vehicle stalls and any portion of vehicle extends past 330' the opposing driver will be shut off. The vehicle extending past the 330' will be removed from the racing surface before the opposing vehicle will be allowed to make a run.

During the burnout process, if a contestant's vehicle is unable to back up or drive off the top end and any portion of the vehicle does NOT extend past the 330' an NHRA official will motion the driver to shut off the vehicle. The driver will need to exit the car and exit the racing surface. Out of respect to your fellow competitor we request everyone expeditiously exit the vehicle.

If a contestant is shutoff by NHRA prior to the run (i.e. due to weather, timing equipment malfunction, car on track, oil from a previous vehicle, etc.) the contestant will be afforded the opportunity to re-start and make their run immediately after the situation is rectified. TF, FC, PS, PSM, TAD, TAFC, PM, and Comp Eliminator contestants may be allowed time to cool down and/or re-fuel providing their run is completed prior to the conclusion of their category's session. If a contestant vehicle is shutoff and their the last pair, NHRA Officials may determine a reasonable time for cool down and/or refueling. Driver's shutoff due to problems with their vehicle, crew, starting line procedure, etc, will forfeit the qualifying run.

SECTION 2: RACE PROCEDURES, REPLACEMENT VEHICLES (Page 4) (3/06/2023)

1. The original vehicle is withdrawn from competition and cannot be reinstated.
2. Replacement vehicle cannot have been utilized by any other contestant at the same event.

3. NHRA Technical Officials must be notified of any vehicle, body or chassis change and it must be fully certified by NHRA before it can be utilized during an event.
 - a. TF, FC, PS, PSM, and PM: Online tech card will need to be updated.
 - b. All remaining categories: A new tech card will be required.
4. Driver must stay within original eliminator category and class entered (i.e., A/ED driver must remain in A/ED, G/SA to G/SA, etc.).
5. Checkout runs for replacement vehicles are not available.

TF, FC, PS, ~~PSM, PM~~, TFH, and MMPS categories: Driver retains qualifying times and standings as posted while driving the original entered vehicle. Any number of replacement funny car bodies may be utilized at any time during an event (including eliminations). Only one replacement chassis or vehicle may be utilized at any time during an event (including eliminations).

PSM, FSS, and FX categories: Driver retains qualifying times and standings as posted while driving the original entered vehicle. Only one replacement chassis or vehicle may be utilized at any time during an event (including eliminations). If an engine platform/combination change is made the following policy will be in place:

Engine platforms/combination changes will be determined by Make/Model: One engine platform/combination change will be allowed during the season without penalty. Engine platform/combination changes will not be allowed during an event once qualifying has started for the respective category. Additional engine platform/combination changes are allowed during the season. 20 points at the time of the change will be deducted from the competitors total for each additional engine platform/combination change. For PSM only, in the event of a rider changing teams, the point deduction would only apply if the new team changes engine platforms/combination after one change is made. Engine platform/combinations will be determined at NHRA's sole and absolute discretion.

PM: Driver retains qualifying times and standings as posted while driving the original entered vehicle. Only one replacement chassis or vehicle may be utilized at any time during an event (including eliminations). If an engine platform/combination change is made the following policy will be in place:

Engine platforms/combination changes will be determined by Power Adder: One engine platform/combination change will be allowed during the season without penalty. In addition, a contestant in PM may return their original power adder at the next subsequent event the contestant attends, without penalty. Engine platform/combination changes will not be allowed during an event once qualifying has started for the respective category. Additional engine platform/combination changes are allowed

during the season. 20 points at the time of the change will be deducted from the competitors total for each additional engine platform/combination change. In the event of a driver changing teams, the point deduction would only apply if the new team changes engine platforms/combination after one change is made. Engine platform/combinations will be determined at NHRA's sole and absolute discretion.

TAD and, TAFC, ~~Comp, SS, Stock, TD, and TS~~ categories: All previous event times are voided for the vehicles and drivers involved. Changes must be made and driver must re-qualify during the normal schedule, as posted for the event. No changes are permitted after qualifying has been completed. Only one replacement chassis or vehicle may be utilized at any time during an event. ~~Teams are limited to one replacement vehicle action per event.~~ If an engine platform/combination change is made the following policy will be in place:

Engine platforms/combination changes will be determined by Power Adder: One engine platform/combination change will be allowed during the season without penalty. Engine platform/combination changes will not be allowed during an event once qualifying has started for the respective category. Additional engine platform/combination changes are allowed during the season. 10 points at the time of the change will be deducted from the competitors total for each additional engine platform/combination change unless the driver changes teams. In the event a driver changes teams and the team changes engine platforms/combination but waives the event points, 10 points will not be deducted and the change in engine platforms/combination will not count. Engine platform/combinations will be determined at NHRA's sole and absolute discretion.

Comp, SS, Stock, TD, and TS categories: All previous event times are voided for the vehicles and drivers involved. Changes must be made, and driver must re-qualify during the normal schedule, as posted for the event. No changes are permitted after qualifying has been completed. Teams are limited to one replacement vehicle action per event.

SC, SG, and SST categories: All previous event times are voided for the vehicles and drivers involved. Changes must be made prior to first round of eliminations. No changes are permitted after first round of eliminations has been completed. Teams are limited to one replacement vehicle action per event.

SECTION 4A: SUPER PRO, PRO, SPORTSMAN, DESIGNATIONS, 7.50 (*4.50) seconds and slower (Page 2) (1/18/2023)

DESIGNATIONS

NHRA SUMMIT RACING SERIES NATIONAL CHAMPIONSHIP

SUPER PRO: 7.00 to 11.99

PRO: 9.00 to 13.99

SPORTSMAN: ~~12.00~~ 11.60 to 19.99

**SECTION 4A: SUPER PRO, PRO, SPORTSMAN, BODY: 7, BODY (Page 6)
(10/06/2023)**

Altered-body vehicles: May be chopped, channeled, sectioned, streamlined, etc. Sedan delivery, pickup trucks (maximum, one ton), or sedan pickups (Ranchero, El Camino) permitted. Fiberglass bodies permitted. Door hinges on any liftoff door must have safety pins or locks.

Convertibles: When a removeable hard top is used in lieu of a soft top, the vehicle still needs to meet requirements for convertibles (roll bar, roll cage, driver restraints, etc.).

Dragsters: Body and cowl must be constructed of metal, fiberglass, or carbon fiber and extend forward to firewall. Driver compartment must be designed to prevent driver's body or limbs from making contact with wheels, tires, exhaust system, or track surface should an incident occur. Subflooring independent of car body is mandatory in dragster that allows driver's legs to rest on belly pan or chassis. On front-engine cars, intake scoop may not extend more than 11 inches above height of carburetor top. Front wheel fairings prohibited.

Full-bodied vehicles: Must have full top and windshield. All full-bodied cars must have two driver exits. Four stock production fenders mandatory, fiberglass duplicates permitted. Fenders may be trimmed for tire clearance; altered fenders must have edges re-rolled or beaded.

**SECTION 4B: ADVANCED ET, ENGINE: 1, VENT TUBES, BREATHERS
(Page 10) (10/06/2023)**

VENT TUBES, BREATHERS
Permitted. See General Regulations 1:13.

**SECTION 4B: ADVANCED ET, SUPPORT GROUP: 9, FIRE EXTINGUISHER
SYSTEM (Page 12) (2/14/2023)**

Minimum 5-pound NHRA-accepted system mandatory on all cars, except rear-engine cars WITHOUT an enclosed cockpit. Minimum 20-pound NHRA-accepted fire extinguisher system mandatory on all front-engine open-bodied vehicles with supercharger or turbocharger(s) and all supercharged methanol-burning cars (full-bodied or Funny Car). System must be divided with a minimum one nozzle directed into the driver compartment and minimum one nozzle directed into the engine compartment. See General Regulations 9:3 for NHRA-accepted fire extinguishing agents.

SECTION 4H: ELECTRIC-POWERED VEHICLE

(5/16/2023)(7/19/2023)(8/23/2023)

7.50 (*4.50) seconds & slower

References in this section identify performance limits for various equipment and safety applications.

Any vehicle except E.T. Motorcycle running faster than 135 mph must meet minimum requirements for 9.99-second vehicles, including driver credentials and protective equipment. The 135- mph rule does not apply to E.T. Motorcycle. E.T. Motorcycle must comply with 9.99-second e.t. restrictions. Vehicles meeting Street Legal requirements are permitted to compete in the Summit E.T. Racing Series. (See NHRA STREET LEGAL located on page xiv of this rulebook.)

~~NOTE: Below rules applicable until replaced in their entirety in the 2023 online rulebook.~~

REQUIREMENTS & SPECIFICATIONS

MOTOR:1

MOTOR

Electric motor(s) only permitted. Any Hybrid EV vehicle that contains an Internal Combustion Engine (ICE) is prohibited from EV competition. A hybrid vehicle may participate under the ICE rules and requirements for Street Legal, Summit ET and other member track programs.

Location: In unmodified conversion vehicles, the Electric motor(s) must be in the original engine compartment in a similar location as the original gasoline engine or fixed mounted to chassis of vehicle at axle location as part of gearbox/transaxle/differential. In modified drag race vehicles, the motor can be in a purpose-built vehicle engine compartment.

Height: If multiple motors are used, they may be stacked horizontally up to two parallel (horizontal) stacks high. Maximum height of single motor/shaft output centerline must be under 24 inches off ground, maximum height of multiple motor/shaft output centerline must be under 36 inches off ground; or 1) within the OEM engine compartment factory hood for full bodied cars or 2) within purpose-built vehicle engine compartment, hood must be stock size with no scoop, bubbles or cowl or 3) no taller than the top of roll hoop in open bodied/dragster vehicles.

Vehicles with exposed motor(s) in open-frame, vented, or brush replacement window motors must install a motor shield, minimum .024-inch steel or .032-inch

aluminum or .120-inch Lexan, 360 degrees to provide protection from flying commutator bars, molten copper, plasma, etc. in event of motor failure.

Gearbox may use gears, chains or belts. Gearbox's that use chain or belt must have a chain guard constructed with minimum .125-inch steel or .250-inch aluminum covering width and top run of chain/belt to centerline of sprockets. Gearbox's that use meshing gear sets must be completely enclosed; no open gearbox allowed.

Wheel mounted motors prohibited.

FUEL SYSTEM

All conversion vehicles must remove fuel tanks and fuel system, including vapor storage equipment, from vehicle.

LIQUID OVERFLOW

If a radiator is utilized for cooling systems, a one-pint (16-ounce) minimum capacity catch can is required.

DRIVETRAIN: 2

CLUTCH, FLYWHEEL, FLYWHEEL SHIELD

Flywheel and clutch meeting SFI Spec 1.1 or 1.2 (two-disc maximum) mandatory on any car running 11.49 (*7.35) or quicker. Flywheel shield meeting SFI Spec 6.1, 6.2, or 6.3 mandatory on all cars running 11.49 (*7.35) or quicker. A motor plate, minimum 1/4-inch steel or 1/2-inch aluminum may be used to adapt traction motor to conventional transmission.

DRIVELINE

Driveline loop mandatory on any non-OEM vehicle running 16.00 seconds or quicker. Driveline 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. See General Regulations 2:4, 2:11.

REAR END

Chain-drive vehicles must be equipped with a chain guard constructed with minimum .125-inch steel or .250-inch aluminum, covering width and top run of chain to centerline of sprockets. Aftermarket axles and axle-retention device mandatory on any car running 10.99 (*6.99) or quicker or any car with locked differential. Cars running 10.99 (*6.99) or quicker that weigh more than 2,000 pounds with independent rear suspension without upper and lower (both) control arms must replace swing axle differential with conventional differential housing assembly. (Example: 1963-1982 Corvette). Cars with independent rear suspension using upper and lower (both) control arms may retain swing axle

assembly regardless of weight or e.t. Must have 360-degree, minimum 1-inch-wide by 1/4-inch-thick axle retention loop on each axle. See General Regulations 2:11.

BRAKES & SUSPENSION: 3

BRAKES

Four-wheel hydraulic brakes mandatory on any bodied car running 7.99 (*4.99) or quicker. Minimum two rear-wheel (one caliper per wheel) hydraulic brakes mandatory on dragsters, Funny Cars, and any car running slower than 8.00 (*5.00) seconds. Dragsters running slower than 10.99 (*6.99) with a total car weight of 1,000 pounds or less and a one-piece rear axle may use a single brake rotor with dual calipers. See General Regulations 3:1.

STEERING

See General Regulations 3:3, 4:1.

SUSPENSION, ALTEREDS, DRAGSTERS

Full automotive-type front suspension mandatory. Rigid mounted rear axles permitted. Minimum one hydraulic shock absorber per sprung wheel. Suspension optional on cars weighing 2,350 pounds or less with 100-inch or longer wheelbase. See General Regulations 3:2, 3:4, 3:5.

SUSPENSION, STOCK-BODIED CARS

Full automotive-type suspension mandatory. Minimum one operating hydraulic shock absorber per wheel. Lightening of stock components prohibited. Rigid mounted suspensions prohibited. See General Regulations 3:2, 3:4, 3:5.

WHEELIE BARS

Permitted. Wheels must be nonmetallic. See General Regulations 3:6.

FRAME: 4

BALLAST

Permitted. See General Regulations 4:2.

DEFLECTOR PLATE

Mandatory on rear-engine dragsters. A deflector plate of minimum 0.063" steel must be installed between roll cage and battery pack extending from lower frame

rail to the top of driver's helmet. Portion between lower and upper shoulder hoop must extend and attach to the body panel. Two-piece plate permitted with no gaps. Portion between shoulder hoop and top of helmet must be minimum 7 inches wide, may be narrowed or rounded above the helmet. Carbon fiber, titanium and all other materials prohibited.

GROUND CLEARANCE

Minimum 3 inches from front of car to 12 inches behind centerline of front axle, 2 inches for remainder of car. See General Regulations 4:5.

PARACHUTE

Mandatory on any car that runs 150 mph or faster. See General Regulations 4:8.

ROLL BAR

Roll bar mandatory in all cars (including T-tops) running 11.00 (*7.00) to 11.49 (*7.35), in convertibles running 11.00 (*7.00) to 13.49 (*8.25), and in all dune-buggy-type vehicles running 12.00 (*7.50) seconds and slower. Permitted in all cars. See General Regulations 4:10, 10:6.

ROLL CAGE

A roll cage is mandatory in cars running 10.99 (*6.99) or quicker or any car exceeding 135 mph. In full-bodied cars, with unaltered firewall, floor, and body (from firewall rearward, wheel tubs permitted), running between 10.00 (*6.40) and 10.99 (*6.99), roll bar permitted in place of roll cage. In convertibles running 10.99 or quicker or exceeding 135 mph, roll cage mandatory. See General Regulations 4:4, 4:11, 10:6. Must meet SFI Requirements if applicable.

ROLL-CAGE PADDING

Roll-cage padding meeting SFI Spec 45.1 mandatory on any vehicle running 9.99 (*6.39) and quicker. Padding must be used anywhere driver's helmet may come in contact with roll-cage components. See General Regulations 4:11, 10:6.

TIRES & WHEELS: 5

TIRES

Racing slicks permitted. Minimum diameter of 13 inches on front tires of any dragster. See General Regulations 5:1.

WHEELS

Must be automotive-type wheels suitable for street use. Minimum wheel size: 13

inches (unless originally equipped with smaller wheels and vehicle is equipped with original engine). The thread engagement on all wheel studs to the lug nut, or lug bolt to wheel hubs, must be equivalent to or greater than the diameter of the stud. Length of the stud/bolt does not determine permissibility; length of the engagement between the stud and lug determines permissibility. Automotive-type wire wheels or motorcycle wheels permitted on front axle only of dragsters weighing 1,800 pounds or less. See General Regulations 5:2.

INTERIOR: 6

SEATS

Properly braced, framed, and supported seats constructed of aluminum, fiberglass, carbon fiber, or double-layer poly (automotive accessory seats) permitted. See General Regulations 6:2.

INTERIOR PANELS

Driver-compartment interior must be aluminum, steel, fire resistant carbon fiber, or fiberglass. Magnesium prohibited.

UPHOLSTERY

Optional. See General Regulations 6:2.

WINDOW NET

A ribbon-type or SFI 27.1 mesh-type window net is mandatory for any full-bodied car running 7.50 (*4.50) to 9.99 (*6.39) or if vehicle runs 135 mph or faster. See General Regulations 6:3.

BODY: 7

AIRFOIL

Altered, dragsters: A positive-locking device mandatory on all airfoils. Side-mount canard-type wings permitted. No part of wing may be within 6 inches of a tire. Front overhang may not project more than 30 inches forward of front spindle.

Bodied vehicles: Non-OEM airfoils permitted, must be permanently attached to frame or roll cage, non-adjustable during run.

See General Regulations 7:1.

BODY

Altered-body vehicles: May be chopped, channeled, sectioned, streamlined, etc. Sedan delivery, pickup trucks (maximum, one ton), or sedan pickups

(Ranchero, El Camino) permitted. Fiberglass bodies permitted. Door hinges on any lift- off door must have safety pins or locks.

Dragsters: Body and cowl must be constructed of metal, fiberglass, or carbon fiber and extend forward to firewall. Driver compartment must be designed to prevent driver's body or limbs from making contact with wheels, tires, electrical system or track surface should an incident occur. Subflooring independent of car body is mandatory in dragster that allows driver's legs to rest on belly pan or chassis. Front wheel fairings prohibited.

Full-bodied vehicles: Must have full top and windshield. All full- bodied cars must have two driver exits. Four stock production fenders mandatory, fiberglass duplicates permitted. Fenders may be trimmed for tire clearance; altered fenders must have edges re-rolled or beaded.

FIREWALL

On full-body vehicles a firewall completely separating and sealing the driver from ANY battery pack with a minimum .032-inch aluminum or .024-inch steel. This includes the 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 belly pan. All battery packs located behind the driver or inside trunk also require a complete bulkhead of at least .024-inch steel or .032-inch aluminum to isolate driver compartment from trunk. All holes in firewall must be sealed with aluminum or steel. Use of magnesium prohibited.

All electrical system components (battery packs, converters, inverters, battery charger, Battery Management System, Electric Power Control Unit, or any other electrical components) must be installed no closer than 2 inches from the firewalls that separate the drivers compartment from these components.

Dragsters: All electrical system components (battery packs, converters, inverters, battery charger, Battery Management System, Electric Power Control Unit, or any other electrical components) must be installed no closer than 2 inches from the deflector plate.

FLOOR

Mandatory. See General Regulations 6:1, 7:5. If battery is located below the floor, the floor must be made of at least .024-inch steel or thicker.

HOOD

Optional.

TOW-STRAP HOOPS

All cars must have tow-strap hoops on the lower front of the chassis. Hoops must be capable of accepting a 2-inch tow hook without lifting the body or stressing the body when the car is being towed. Hoops must be clearly marked on the body with an arrow pointing down.

WINDSHIELD, WINDOWS

Altered, dragsters: Optional. Windscreen mandatory. See General Regulations 7:7, 7:8.

Full-bodied vehicles: Mandatory, must be in good condition and free from cracks. May be replaced with shatterproof material, 1/8-inch-minimum thickness. OEM windshield may not be cut for scoops, etc. Windshield/window tint must meet the applicable state requirements. Windows must be closed during races, need not be operable. Decals permitted on rear quarter and rear window only. See General Regulations 7:8

ELECTRICAL: 8

A list of all electrical components along with their specification information utilized in the build of car must be kept and available to a tech inspector upon request. This documentation must contain documentation from the battery cell/pack producer specifying safety relevant data. A contingency plan must also be provided describing how to handle the battery pack in the case of overheating and/or crash.

HIGH VOLTAGE:

EV systems will fall into one of two categories up to 600V or 601V – 1000V max. All vehicles with a voltage rating up to 600V must utilize components rated at a minimum of 600V. Vehicles with a voltage rating between 601V through a 1000V must utilize components rated at a minimum of 1000V.

CABLING

- All areas of the driver's compartment must be free of any high voltage wiring to provide safety personnel a safe area to cut around driver in the event of an accident.
- All cabling between motor inverter and battery and charger should be only what is needed and not have excessive coiled up cables.
- All high voltage cabling must be identified with the color orange.
- All electrical cables must be rated for the respective volt class and circuit current.

- All high voltage wiring must be isolated from vehicle chassis.
- Cabling must remain above lowest portion of vehicle frame and be protected from debris by a tin/steel/carbon enclosed channel orange in color.
- Dragsters may not have high voltage components running through the driver's compartment.
- Electrical cables and electrical equipment must be protected against any risk of damage (stones, corrosion, mechanical failure, etc.).

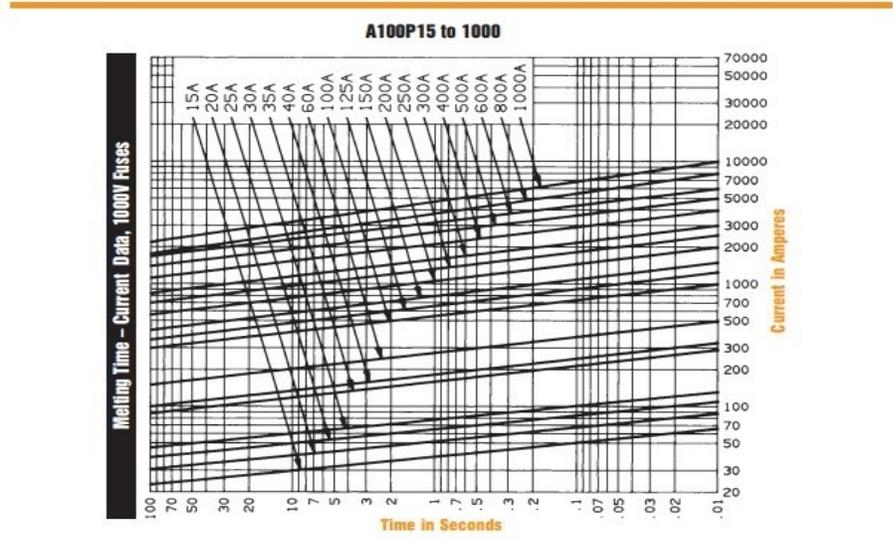
CABLE TERMINATIONS and TERMINALS

All cable terminations and splices must be properly terminated and covered with insulation at least equal to that of the cable insulation to protect against accidental contact.

FUSING

Each battery pack must be individually fused and located on or in the battery pack. Fuses must not be in parallel. Fuses must be properly rated for application. There must be a fuse between the disconnect and the battery cells.

SEMICONDUCTOR PROTECTION FUSES



Example: 800V system requires a 1000V “A100”-style fuse, if it’s a 10 second application of battery power at 1000amps, you require approximately a 300Amp battery fuse.

CONTACTORS

Pre-charge contactor and Main contactors must be used. For 601 to 1000-volt

vehicles an emergency, properly rated, main negative voltage contactor required. Contactors must not be placed in parallel. Each individual contactor must be independently fused.

HIGH VOLTAGE IDENTIFICATION

All high voltage components or their housings must be identified with the international symbol for high voltage, at least 1.5” wide at base or appropriately sized for the component. Cabling or bus bars must be covered in appropriately insulated orange insulation to indicate high voltage without a sticker.



ONBOARD BATTERY MANAGEMENT SYSTEM (BMS) MANDATORY

BMS is a battery management system that is connected to the battery cells and provides automatic charging and discharging control to maintain the battery system within the battery manufactures specifications. The onboard BMS system must at a minimum be capable of enabling and disabling charging based on the battery manufacturers specifications while monitoring the individual or parallel cell groups and battery temperatures in both charge and discharge modes. It must also have the capability of derating or disabling vehicle based on pack voltage limit by either BMS and/or controller. If BMS has a built in Insulation Monitoring Device (IMD), it may be utilized in place of a standalone system. The BMS must also have the proper pack and cell high/low voltages settings programmed per the battery manufacturer’s specifications.

BATTERY

The Battery may be comprised of one or more Battery Packs connected together with suitably protected cables/connectors/fuses between the packs. A battery pack may be comprised of multiple Battery Cells connected in series and parallel to form the total battery voltage and amperage required. The total battery voltage of all series cells will fall into two categories, 600V and below or 601V to 1000V.

Battery cells must be starved electrolyte having little to no free liquids in them whether they are Lead/Acid, Lithium Ion, or NiCad. No solid lithium metal battery cells permitted. The battery cell manufacturers maximum charged voltage and minimum sag voltage ratings must be kept in the vehicle log book for reference. Mounting: Battery packs must be securely mounted outside of or completely

sealed from the driver compartment. Each battery pack must be secured with bolts and/or straps commensurate with the size and weight of the pack and must be installed so as to withstand a force four times (vertical) and eight times (horizontal) the weight of the battery pack. (Contact NHRA for requirements) Battery packs may not be located above the top of rear or drive tires in open wheeled cars, nor outside body lines in bodied car, except for OEM-production-line electric-powered vehicles.

BATTERY CONTAINER DIMENSIONS

- Original OEM Battery packs/boxes maybe used if unaltered and utilizing original OEM battery pack/box components
- Purpose build battery box(es) dimensions must each be less than 5 cubic feet (8,640 cubic inches) in size.

All vehicles (with exception of dragsters and Opened Bodied Vehicles)

- All battery cells must be completely sealed and isolated from the drivers compartment in a solid vented battery container.
- Battery container construction requirements
 - Must be made of Lexan (min .120") or; aluminum (min .032") or steel (.024-inch) with a nonmetallic insulation lining
 - Water Access
 - Each sealed container must contain a water inlet located at both the drivers and passenger side of the vehicle. The sealed box must also contain a water outlet which must be vented to the bottom or rear of the vehicle. Each water inlet and the water outlet must utilize the Pyrotech billet flapper valve part number FV350 (<https://www.pyroprotectstore.com>) or an NHRA Accepted valve.
- Ventilation
 - All battery packs whether they are located underneath the floor, in front of the front firewall or behind a rear firewall must be vented to the bottom and outside of the vehicle away from the drivers compartment and rescue access.
 - All sealed boxes must be vented to the bottom or rear of the vehicle, must not be vented to either the driver or passenger side of the vehicle.
 - Ventilation tube must be a minimum of 2" diameter.
 - Vent must contain a one-way pressure relief valve or flap with a minimum opening size of 2".

Dragsters/Open Bodied Vehicles

- Batteries must be located behind the driver's compartment
- Driver deflector plate must be installed between driver and battery pack(s). See deflector plate under Frame:4
- Battery container construction requirements
 - Must be mounted between framerails and enclosed in a round tube frame, minimum 1 1/4-inch O.D. x .065-inch chromoly tubing
 - Must be made of Lexan (min .120") or; aluminum (min .032") or steel (.024-inch) with a nonmetallic insulation lining
 - Bottom and sides must be solid
 - Top cover must contain water access holes covering approximately 30% of the surface area.

BATTERY CHARGING

Batteries may be recharged in pits or other designated areas only. Batteries must be charged outside of trailers or enclosed areas and must not be left unattended during the charging process. Batteries must be charged utilizing either the original unaltered OEM Charger, or an unaltered commercially available charging system, that will watch individual cell levels and have redundant ways to shut off the charging system in case of an overcharged condition. All battery cells should be balanced prior to charging. All battery chargers must be equipped with an output fuse rated above the maximum charger voltage capability and at least 125 percent of maximum charger DC output. Charging systems must connect earth ground potential to vehicle ground. The BMS system must be utilized during all system charging events. Cars must not be stored, during an event, at top of charge.

INVERTER

All inverters must be individually fused. All inverters must have CAN/RS232 or analog communication capabilities. Must have capability to receive feedback from Battery Management System (BMS) and/or an Insulation Monitoring Device (IMD) to turn system off in the event of a fault. Must be isolated from the driver's compartment.

IMD

An IMD (Insulation Monitoring Device) is mandatory. The IMD monitors the chassis for high voltage shorting. The IMD may be stand alone or part of the electronic subsystem. The IMD must be capable of commanding, either directly or indirectly through the Vehicle Control Unit (VCU) or other computer systems, the vehicle status lights to turn red if high voltage is present on the chassis. The IMD must stay powered even when the Master Battery Disconnect is deactivated (pushed off) to alert track officials of a potential high voltage short on the vehicle. It is the responsibility of the owner/driver to understand the IMD system and have

the means to test and demonstrate its functionality upon request.

LOW VOLTAGE (12V):

High voltage system must be disabled in the event of loss of low voltage power. 12V standalone battery must be fused at the battery.

HIGH VOLTAGE SAFETY INDICATOR LIGHTS and AUDIBLE ALARM:

Mandatory – all cars must have an LED light visible from front, rear, left, right and to the driver on interior of the vehicle. The lights must illuminate GREEN in color if high voltage is active and all systems are functioning properly (SAFE). The LED lights must illuminate RED in color if the IMD or any other monitoring system has triggered a fault (DANGER). Safety Indicator lights must remain illuminated after 12V Master Battery Disconnect has been pushed off. A minimum of 1/2” LED required. LED lighting must be clearly visible at a minimum of 100 feet from vehicle in direct sunlight. Vehicles must also be equipped with an audible alarm, similar to an automobile back-up alarm with a minimum of 90 decibels. The audible alarm must be activated when the LED is illuminated RED and the systems has triggered a fault (DANGER).

DELAY BOX/DEVICE

Permitted in Super Pro only. See General Regulations 8:2.

INSTRUMENTS

One tachometer allowed. Driveshaft sensor may be connected to either the tachometer OR the data recorder, but not both. Must be one single wire, with no splices, and easily traceable.

MASTER BATTERY DISCONNECT

Mandatory on all cars, the push off mechanism of the master cutoff switch, must be installed on the rearmost part of each vehicle and be easily accessible from outside the car body. The push off mechanism of the master cutoff switch must be placed in such a manner as to give a safety personnel an unobstructed view of the mechanism from the rear of the vehicle. The push off master cutoff switch / mechanism must be RED in color and have a minimum 4” contrasting background color centered around it. The off position must be clearly indicated with the word “OFF.” For “push/pull” type switch, “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. Keyed switches prohibited. Any activation of the fire suppression system must also activate the master cutoff switch. When the master battery disconnect is enabled vehicle must be equipped with a circuit breaker of sufficient capacity to disable all high voltage systems. When master battery disconnect is enabled all system contacts must be opened and the high voltage removed. The low voltage system must, at

a minimum, continue to illuminate the high voltage safety indicator lights, audio alarm, VCU and IMD.

12 VOLT DISCONNECT VIA PULL PINS OR CUT LOOPS:

Vehicle must be equipped with minimum of two pull pins or cut loops located on the 12v ground. They must be accessible to safety personnel in order to disable high voltage power in the event of an emergency. The pull pins or cut loops must be located near the 12v battery and in the drivers compartment and well-marked (marking requirement). No high voltage cut loops permitted! When 12 volt pull pins or cut loops are removed or cut respectively, all system contacts must be opened and the high voltage removed. The low voltage system must, at a minimum, continue to illuminate the high voltage safety indicator lights, VCU and IMD.

TAILLIGHTS

One functional taillight mandatory. Flashing, blinking, or strobe lights prohibited. See General regulations 8:6.

SUPPORT GROUP: 9

DATA RECORDER

Data recorders are permitted in Advanced E.T., Super Pro, and Pro only. Data recorders (except for “playback”-type tachometers) are prohibited in all other E.T. classes. See General Regulations 9:2.

FIRE-EXTINGUISHER SYSTEM

Mandatory –ABC type extinguisher require, must be securely mounted. See General Regulations 9:3.

PUSH BAR

Push bar must be designed to prevent push car from riding up on rear wheel of open-wheeled race cars. See General Regulations 9:9.

TOW VEHICLES

Permitted in Super Pro only. See General Regulations 9:12.

WARM-UPS

See General Regulations 9:5, 9:14.

DRIVER: 10

ARM RESTRAINTS

Mandatory in open-bodied cars running 11.99 (*7.49) or quicker. See General Regulations 6:3, 10:3.

CREDENTIALS

Valid NHRA competition license mandatory for cars running 9.99 (*6.39) or quicker. Valid state- or government-issued driver's license beyond a learner's-permit level mandatory for cars running 10.00 (*6.40) or slower. See General Regulations 10:4.

DRIVER RESTRAINT SYSTEM

Seat belt mandatory in all cars. Driver restraint system meeting SFI Spec 16.1 mandatory in any car running 11.49 (*7.35) or quicker, in convertibles running 13.49 (*8.25) or quicker, and all dune-buggy-type vehicles running 12.00 (*7.50) or slower. SFI 16.1 restraint system, when required, includes crotch strap and must be updated at two-year intervals from date of manufacture. See General Regulations 10:5, 10:11.

HEAD PROTECTOR

Mandatory on any car with a roll bar or roll cage. See General Regulations 10:6.

HELMET

For all 10.00 to 13.99 closed-bodied cars, either an open-face or a full-face Snell: M2015, M2020, SA2015, SA2020, SFI: 31.1/2015, 31.1/2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet with or without a shield is mandatory.

For all 10.00 and slower dune-buggy-type vehicles and all 10.00 to 13.99 open-bodied front-motor or rear-motor cars, a full-face Snell: M2015, M2020, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited).

For all 9.99 and quicker closed-bodied cars, a full-face Snell: M2015, M2020, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet mandatory; shield permitted (goggles prohibited). For all 9.99 and quicker open-bodied front-motor or rear-motor cars, a full-face Snell: SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited).

For all 9.99 or quicker open-bodied front-motor or rear-motor cars, a full-face Snell: M2015, M2020, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited). See General Regulations 10:7.

NECK COLLAR

Neck collar meeting SFI Spec 3.3 mandatory in all cars 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. See General Regulations 10:8.

If SFI Spec 3.3 neck collar is required and driver opts to use head and neck restraint system instead, then SFI Spec 3.3 head sock or SFI Spec 3.3 skirted helmet mandatory.

Beginning January 1st, 2024, A head and neck restraint device/system meeting SFI 38.1 is mandatory for any vehicle running 150 mph or faster for 1/4 or 1/8 mile or running 7.49 (*4.49) E.T. or quicker or by Class Requirements. An SFI 38.1 head and neck restraint device can be used with, or without, a neck collar; when a neck collar is not used, an SFI 3.3 head sock or SFI Spec 3.3 skirted helmet is required.

PROTECTIVE EQUIPMENT

Driver's suit meeting SFI Spec 3.2A/20, long sleeve underwear shirt meeting SFI 3.3, long underwear pants meeting SFI 3.3, SFI Spec 3.3/20 gloves, glove underliners made of flame-retardant material, SFI Spec 3.3/20 boots, socks meeting SFI 3.3, SFI Spec 3.3 head sock, and SFI Spec 3.3/10 helmet skirt mandatory. A shoe meeting SFI Spec 3.3/20 constructed such that the flame-retardant material is at least six inches above the heel may be used in lieu of a 3.3/20 boot. All jacket/pants or suits meeting SFI Spec 3.2A/20 must be recertified on a five-year interval. All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex etc.) are prohibited. All jewelry prohibited. See General Regulations 10:10.

GLOSSARY AND TERMINOLOGY

Amp

Short for ampere, an amp is a unit of electricity used to measure the strength of an electrical current.

Amp-hours (Ah)

An amp-hour (Ah) is the number of amps a battery can deliver in an hour. Amp hours are used to determine the battery's capacity. For example, the Tesla Model 3 Long Range has a 230 amp-hour reading, meaning it can deliver 230 amps in an hour.

Battery Composition

Generally, an EV battery comprises three components: cells, modules, and a pack. Simply put, these three components are units of gathered batteries. A series of battery cells make up a module. Then, one form of battery composed of many modules and various control and protection systems — i.e., the pack — is installed into the electric car.

- Battery cell — A lithium-ion battery that exerts electrical energy by charging and discharging.
- Battery module — A group of battery cells placed into a frame to protect the cells from heat, vibration, and external shocks.
- Battery pack — The final piece of the battery system composed of several modules and control and protection systems such as a battery management system and cooling system.

Battery Management System (BMS)

A battery management system (BMS) manages an electric vehicle's rechargeable battery by monitoring its status, reporting data, and protecting it from overcharging and other potential issues.

CAN (AKA CANbus)

CAN = Controller Area Network. A CANbus network is a standard designed to allow devices to communicate with each other and the VCU.

Charging

Charging is the process of delivering electricity to an electric vehicle using EV equipment.

Charging Station

A charging station is a piece of equipment that provides electricity to an electric vehicle.

Connector

A connector is a device attached to the charging station that connects to an electric vehicle so it can charge.

Contactor Box

Opens and closes High voltage from Battery Packs to Inverter

Electric Power Control Unit (EPCU)

The electric power control unit comprises the inverter, vehicle control unit, and low voltage converter to regulate the flow of power within the electric vehicle.

Internal Combustion Engine (ICE)

The engine used in gas or diesel burning vehicles. The term is used frequently in the EV community to describe our vehicle counterparts

Insulation Monitoring Device (IMD)

The IMD monitors the chassis for high voltage shorting.

Inverter

An inverter is a device that converts a battery's direct current into an alternating current.

Kilowatt (kW = 1,000 Watts)

A kilowatt is the measurement of an electric vehicle's power that's generated by its batteries.

Kilowatt-Hour (kWh)

A kilowatt-hour is a measurement of an electric vehicle's energy that determines how much power a battery can supply over a period of time.

Lithium-Ion Battery

A lithium-ion battery is the standard battery used for most electric vehicles. It offers high energy density and reliable rechargeability.

Low-Voltage DC-DC Converter (LDC)

A low-voltage DC-DC converter is a component that takes DC power from the EV battery, converts it, and sends it to supplementary systems within the vehicle — e.g., the headlights.

On-Board Charger (OBC)

An on-board charger converts alternating current to direct current to charge an electric vehicle's batteries.

VCU (Vehicle Control Unit)

EV Vehicle Control Unit, the overall supervisory device coordinating control and data across all devices critical to the drive, safety, creature comfort and reliability systems.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, DESIGNATION 3rd Paragraph (Page 1) (12/6/2022)(5/05/2023)(6/29/2023)(7/19/2023)

PM, preceded by car number. Classes of competition within Pro Modified are for supercharged, methanol-burning, turbocharged methanol or gasoline-burning, or nitrous-assisted, gasoline-burning full-bodied cars.

Minimum weight at the conclusion of run, including driver:

Nitrous-assisted entries (910 cid) - 2,515 pounds

Nitrous-assisted entries (960 cid) - ~~2,545~~ 2,565 pounds

Roots supercharged entries (526 cid) – ~~2,640~~ 2,620 pounds

Centrifugal supercharged entries (526 cid) - ~~2,775~~ 2,740 2,775 pounds

Screw Supercharged entries (526 cid) – ~~2740~~ 2700 ~~2,675~~ 2640 pounds

Turbocharged entries (526 cid) - 2,590 pounds

Nostalgia body styles (1937-1938 Chevy, 1941 Willys, 1949-50 Mercury, 1953 Studebaker, 1953-1962 Corvette, 1955-1957 Chevy and Buick and 1968-1972 Chevelle) may deduct 50 pounds from minimum weight.

NHRA reserves the right to amend rules as performance dictates. Any competitor who causes an oildown while participating at an NHRA Camping World event will be subject to fines and penalties as outlined in Section 2 – Oildown Penalties.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, ENGINE: 1, INDUCTION (Page 3) (12/6/2022)

Any number and type of carburetors or throttle bodies may be used. Electronic fuel injection permitted. For centrifugally supercharged and turbocharged applications, fuel injectors must be placed in either the intake manifold runner or intake manifold plenum. Auxiliary injectors placed in any other location prohibited. EFI entries must have an NHRA accepted ECU, software, and firmware. Centrifugally supercharged applications must utilize the most recent version of NHRA Approved Centrifugal ~~FuelTech~~ firmware and software to control all EFI related functions. Centrifugal supercharged applications are limited to a 10,000 rpm maximum rev limiter. A current list of NHRA-accepted ECUs,

software, and firmware can be found on NHRARacer.com. See General Regulations 9:1, 9:11.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, ENGINE: 1, SUPERCHARGER (Page 3) (12/6/2022)(5/10/2023)(6/29/2023)(8/23/2023)

Screw-type, Centrifugal hi-helix or standard helix Roots-type superchargers only. [Add ~~25~~ 20 lbs for any 4.9 bore space supercharged combination.](#)

For Screw-type supercharger: PSI 210-C part number 210A009-1

NHRA accepted, Screw-type, C rotor, supercharger permitted and must meet SFI Spec 34.1 and be reinspected by the manufacturer every three years. Manifold burst panel meeting SFI Spec 23.1 (in addition to panel in supercharger) plus restraint system meeting SFI Spec 14.21 mandatory. Supercharger restraint straps must be covered with a fire-resistant material. The blower restraint straps and fuel lines must be installed such that when the restraint straps are fully extended no load is placed on any of the fuel lines. Maximum overdrive limit for screw supercharger is ~~65~~ 60 percent. Variable multi-speed supercharger devices prohibited. Placement of any object/device below the upper mating surface of the screw-type supercharger intended to alter air flow characteristics is prohibited (e.g. inserts/shoes, dividers, etc.).

For Centrifugal Supercharger: ~~Procharger F3R/X-140 head unit (PC314A-140/PC316A-140) paired with 4CD-BAE-3-1.20, 4CDTFX-3-1.20, 4CD-NON-3-1.20, 4CD-BBC-3-1.20 gear drive units or Procharger F4X-140 head unit (PC318A-140) paired with 4CD-BAE-3-1.421 1.35, 4CD-TFX-3-1.421 1.35, 4CD-NON-3-1.421 1.35, 4CD-BBC-3-1.421 1.35 gear drive units only. AF006A-027 inlet bell mouth only. Must be unmodified and factory sealed. Color of factory seal on head unit must match that of gear drive. Intercoolers prohibited.~~ [Restraint system meeting SFI Spec 4.1 mandatory.](#)

For roots supercharger restraint system meeting SFI Spec 14.2, including injector restraint straps mandatory. Cast or billet cases permitted. Maximum supercharger overdrive limit is ~~14.55 16.5~~ 18.6% percent ~~for 4.9 Bore Space engines on all roots combinations. Maximum supercharger overdrive limit is 16.5 percent for 4.8 Bore Space engines.~~ Intercoolers, variable multispeed supercharger devices prohibited. The top opening of the supercharger may not exceed 12 inches in length or 5 inches in width. The entire inlet opening must be on/in the upper surface only. The maximum length from the front of the supercharger drive pulley to the leading edge of the rotor is 15 inches. Offset drive pulleys, spacers, modified cases, or attaching methods may not be used to add to the 15-inch maximum. All manifold configurations, supercharger modifications and locations must be accepted prior to competition. The rotors must be driven from the front (both the external drive and the internal gearing. Any inlet/outlet cavity in front of the rotors is restricted to a maximum of 3.000 inches measuring from the face of the bearing plate to the front of the cavity.

Supercharger openings must be fixed from the water box until the conclusion of the run. See General Regulations 1:10, 1:11.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, ENGINE: 1, TURBOCHARGER (Page 4) (12/6/2022)

Twin turbochargers limited to 88mm each. Turbocharger size will be verified by measuring the housing bore at the leading edge of the impeller wheel. The maximum diameter of the housing bore at the leading edge of the wheel may not exceed 2mm more than the maximum allowable turbocharger size permitted. All turbochargers must meet SFI Spec 61.1. Air-to-air or water-to-air intercoolers prohibited.

Boost controller manufactured by Hyperaktive Performance Solutions, part No. PMBL mandatory. No other boost controller or form of boost control permitted. Must be installed per manufacturer's instructions as documented on NHRARacer.com: NHRA Accepted Products, NHRA Accepted Product Specifications, Pro Mod, Hyperkontrol Boost System Installation and Operation Manual. Any modification to or any attempt to disable or defeat the boost controller is prohibited. Any attempt to corrupt or delete data associated with the boost controller is prohibited. Maximum boost may only be set by NHRA officials.

Boost Pressure Limit: ~~33~~ 34psi

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, DRIVETRAIN: 2, REAR END (Page 5) (8/23/2023)

Aftermarket full-floating axle assembly mandatory. Aftermarket axles with minimum 5/8-inch-diameter studs and axle-retention device mandatory. Maximum (numeric) rear-end gear ratio 4.57- to-1 for roots supercharged and turbocharged entries. Centrifugally supercharged maximum (numeric) rear-end gear ratio 4.29. Screw supercharged maximum (numeric) rear-end gear ratio ~~3.90 to-1~~ 4.11 to-1. See General Regulations 2:11.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, DRIVETRAIN: 2, TRANSMISSION (Page 5) (5/10/2023)(6/29/2023)

Aftermarket planetary, clutchless, or automatic transmission permitted. All transmissions must be equipped with an SFI Spec 4.1 transmission shield.

Supercharged and turbocharged entries limited to maximum of three forward speeds and reverse; nitrous-assisted entries limited to maximum of five forward speeds and reverse.

Aftermarket converter drive units permitted. When an automatic transmission or converter drive is utilized the following items are mandatory: an SFI Spec 6.1 or 6.3 flywheel shield and an SFI Spec 29.1 or 29.2 flexplate, a neutral safety switch and a reverse lockout, a bolt together torque converter using minimum Grade 8

bolts, and a belly pan (see BODY:7, BELLY PAN). Transmission brake permitted on all converter-equipped entries.; electric transbrake release system only.

Lockup converters are prohibited on supercharged and turbocharged combinations. Lockup converters are permitted on nitrous-assisted combinations. Overdrive units are prohibited on all combinations. A 1-to-1 relationship is mandatory in high gear for all transmission types. Automated electric, or automated pneumatic shifting devices permitted on all transmission types. When utilizing automated shifting, a minimum time of 0.6 seconds must be used between shifts for any 3 speed and 0.4 seconds for any 5 speed transmission. Automated shifting may also utilize preset engine RPM functions in addition to this time requirement. Iterative transmission staging device permitted on converter cars. Manipulation of transmission or converter pressure or volume other than at the starting line is prohibited. Pressure manipulation control must be disarmed upon the release of the transbrake or any other device used when launching the vehicle. [Pressure manipulation devices must be wired directly to the transbrake and cannot be connected to the ECU. Converter pressure must be recorded each pass and visible in the data logger. See NHRA Accepted Products for transbrake button wiring diagrams.](#) See General Regulations 2:12, 2:13, 2:14.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, FRAME: 4, ROLL-CAGE PADDING (Page 8) (1/18/2023)

Roll-cage padding meeting SFI Spec 45.1 mandatory anywhere the driver's helmet may come in contact with roll-cage components. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory. Additional padding must be ~~NHRA-accepted~~, securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. ~~A current list of NHRA-accepted lateral head supports is available on NHRARacer.com.~~ See General Regulations 4:11.

SECTION 6: NHRA PRO MOD DRAG RACING SERIES, BODY: 7, HOOD SCOOP & INJECTOR SCOOP (Page 10) (4/24/2023)

Hood scoops permitted. May not extend above the roof line. Must be finished and painted to follow body paint scheme. Sensors, transducers, vents, wiring, hoses, etc. prohibited inside hood scoop. Nitrous-assisted entries must utilize either a hood scoop or cowl hood to completely cover carburetors. Throttle bodies only may be exposed on fuel-injected nitrous-assisted entries. On supercharged entries, injector scoop may not extend more than 16 inches forward of the center of the forward engine cylinder, may not extend more than 10 inches behind the center of the rear engine cylinder, and the top of the injector scoop may not be more than 1.50 inches above the roof. [Beginning May 19, 2023, each throttle blade must have a contrasting color located on the forward outside face. The throttle blades must be clearly identified from a distance and cannot be all black. Contrasting colors can be represented by a sponsor's logo, color of the throttle blades, decals placed on throttle blade, etc.](#)

SECTION 6: PRO MOD, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 12) (2/14/2023)(6/29/2023)

One Piece driver's suit meeting SFI Spec 3.2A/20, SFI Spec 3.3/20 gloves, and SFI Spec 3.3/20 boots mandatory for entries. An SFI 3.3 head sock or SFI 3.3 skirted helmet is required on all cars. Fresh-air breathing system mandatory.

~~Beginning August 1, 2022, Glove under-liners made of flame retardant material and socks meeting SFI 3.3 mandatory. Additionally, beginning August 1, 2022, when utilizing a two-piece driver's suit, long-sleeve underwear shirt meeting SFI 3.3 and long-underwear pants meeting SFI 3.3 are required.~~ All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex, etc.) are prohibited. **All metallic jewelry prohibited, with the exception of a high temperature rated silicone wedding band.** ~~Beginning January 1, 2023, a one-piece driver's suit will be is mandatory in addition to above requirements.~~ See General Regulations 10:10.

SECTION 7A: TOP SPORTSMAN, DESIGNATIONS (Page 1) (1/18/2023)

DESIGNATION

TS followed by car number. Number must be at least 4 inches high. ~~Minimum weight at the conclusion of run, including driver:~~

~~Small-block combinations~~

- ~~— Naturally aspirated: 1,900 pounds~~
- ~~Nitrous assisted: 2,000 pounds~~
- ~~Supercharged or turbocharged: 2,100 pounds~~

~~Big-block combinations~~

- ~~Naturally aspirated: 2,200 pounds~~
- ~~Nitrous assisted: 2,450 pounds~~
- ~~Supercharged or turbocharged: 2,600 pounds~~

~~Six-cylinder vehicles~~

- ~~Supercharged or turbocharged: 2,100 pounds~~

~~Four-cylinder vehicles~~

- ~~Supercharged or turbocharged: 1,900 pounds~~

SECTION 7A: TOP SPORTSMAN, ENGINE: 1, SUPERCHARGER (Page 2) (1/18/2023)

~~All supercharged entries may utilize a 14-71 (or smaller) standard or hi-helix supercharger. Centrifugal superchargers permitted, all others prohibited. Roots-type, high-helix roots-type, centrifugal or screw-type supercharger permitted. Screw-type supercharger must meet SFI Spec 34.1 and be reinspected by the manufacturer every three years. Manifold burst panel meeting SFI Spec 23.1 (in addition to panel in supercharger) plus restraint system meeting SFI Spec 14.2.1 mandatory on all screw-type superchargers.~~ OEM-type screw supercharger permitted, OEM-type screw superchargers do not require a supercharger restraint. "OEM-type" in this case means that it must have originally come with

the production engine being used. All cars using 12-71 or 14-71 superchargers must have an SFI 14.2 or 14.3 Supercharger Restraint with approved bag from same manufacturer. All other superchargers require an SFI 14.1, 14.2 or 14.3 Supercharger Restraint. Belt guards shielding both fuel and oil lines are mandatory. 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. Aluminum studs (supercharger-to-manifold) mandatory. See General Regulations 1:10, 1:11.

SECTION 7A: TOP SPORTSMAN, ENGINE: 1, VENT TUBE/BREATHERS (Page 3) (10/06/2023)

Mandatory for all supercharged engines. Two 1-inch-diameter connections. All breathers must be positive locking. [See General Regulations 1:13.](#)

SECTION 7B: TOP DRAGSTER, DESIGNATION (Page 7) (1/18/2023)

DESIGNATION

TD followed by car number. Numbers must be at least 4 inches high. ~~Minimum weight at the conclusion of run, including driver:~~

~~**Small-block dragster or altereds**~~

~~Naturally aspirated: 1,450 pounds~~

~~Nitrous-assisted: 1,550 pounds~~

~~Supercharged or turbocharged: 1,650 pounds~~

~~**Big-block dragster or altereds**~~

~~Naturally aspirated: 1,500 pounds~~

~~Nitrous-assisted: 1,700 pounds~~

~~Supercharged or turbocharged: 1,800 pounds~~

~~**Four- or six-cylinder dragsters or altereds**~~

~~Naturally aspirated: 1,400 pounds~~

~~Nitrous-assisted: 1,500 pounds~~

~~Supercharged or turbocharged: 1,600 pounds~~

SECTION 11A: STOCK CARS, DRIVETRAIN: 2, TRANSMISSION, AUTOMATIC (Page 6) (6/15/2023)

of three forward speeds (unless OEM equipped with more than three forward speeds). O.D. gear not required, reverse permitted. Transmission case must be OEM or aftermarket OEM replica from a standard, automotive application as found in the Official NHRA Stock Car Classification Guide. Aftermarket case must meet SFI Spec. 4.1. NHRA-accepted adapter plates permitted. Modifications to shifting patterns are permitted, provided full shift pattern is retained. Full shift pattern must include park and reverse. Any gear change must occur as a result of an internal function of the transmission or from direct action by the driver. Lockup converter permitted if OEM-equipped with lockup converter and OEM transmission is used. Otherwise, lockup converters prohibited. Electronic transmission controls for the electric shifting of automatic

transmissions to shift via internal function of the valve body only permitted in computer-controlled vehicles only; may shift by RPM or time only, wires for line lock, wheel speed, driveshaft speed or GPS signal prohibited. Otherwise, any gear change must occur as a result of an internal function of the transmission or from direct action by the driver. Pneumatic, electric, etc. controls in all noncomputer-controlled electronic-fuel-injected vehicles prohibited. The use of air assisted or electric shifter is prohibited in all Stock applications. Deepened stock or aftermarket transmission oil pans permitted. Drilling of transmission case or rear of engine block to adapt incompatible units prohibited. Functional neutral safety switch mandatory. Transmission brake prohibited. Tailshaft modifications for bushing replacement, or NHRA-accepted aftermarket tailshaft, permitted. Any car running quicker than 10.99 must be equipped with a transmission shield meeting SFI Spec 4.1. [Beginning January 1, 2024, SFI 29.1 flexplate mandatory on all V-8 vehicles.](#) Any car running quicker than 9.99, SFI 29.1 automatic transmission flexplate and SFI 30.1 flexplate shield mandatory. See General Regulations 2:12, 2:14.

SECTION 11A: STOCK CARS, BODY: 7, WINDSHIED, WINDOWS (Page 11) (1/18/2023)

All windows and windshields must be clear except for factory tinted safety glass and be in good condition. Windows must be operative but closed during competition. Factory back glass on a truck may be replaced with Plexiglas, Lexan, or other shatterproof material, minimum 1/8-inch thick, to permit the use of the back brace bars on a roll bar or roll cage. [Temporary or permanent shielding, that obstructs the driver's vision \(e.g., blinders, staging aids\) is prohibited; Unaltered OEM sun visor mounted in OEM location permitted.](#) See General Regulations 7:8.

SECTION 11A: STOCK CARS, DRIVER: 10, HELMET (Page 12) (2/28/2023)

For all 10.00 and slower cars, either an open-face or a full-face Snell: M2015, M2020, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet mandatory; shield permitted (goggles prohibited). [Taping or similar modifications to the helmet or helmet shield that reduces the driver's field of vision prohibited. A maximum 1-inch wide visor strip measured from the top of the visor/shield permitted.](#)

For all 9.99 and quicker cars, a full-face Snell: M2015, M2020, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet mandatory; shield permitted (goggles prohibited). [Taping or similar modifications to the helmet or helmet shield that reduces the driver's field of vision prohibited. A maximum 1-inch wide visor strip measured from the top of the visor/shield permitted.](#) See General Regulations 10:7.

SECTION 11B: FACTORY STOCK SHOWDOWN, DESIGNATION (Page 13) (3/03/23)(5/05/2023)(7/19/2023)(10/06/2023)

Requirements and specifications for **Constant Aviation Flexjet** NHRA

**Factory Stock Showdown are the same as those for Stock
– Section 11A with the following exceptions:**

DESIGNATIONS

Designation: FSS

Reserved for 2008 and newer Chevrolet COPO, Dodge Drag Pak, and Ford Cobra Jet with the following factory production engine of the same make. Year of engine optional. Only those engines and/or bodies listed in this section are eligible for the Constant Aviation NHRA Factory Stock Showdown.

Minimum weight for all pre-2019 Chevrolet COPO and Ford Cobra Jet combinations 3,450 lbs. except for all Ford Cobra Jet combinations with 2.3L Eaton superchargers 3,275 lbs.

Minimum weight for the 2015 Drag Pak combination 3,500 lbs.

Minimum weight for ~~all 2019, and 2020 and 2022 Chevrolet COPO,~~ 2021 Drag Pak ~~and 2019 Ford Cobra Jet~~ combinations ~~3,575~~ 3525 pounds.

Minimum weight for ~~all~~ 2019, 2020, 2022, and 20223 Chevrolet COPO and 2019 Ford Cobra Jet combinations 3,525 pounds.

Maximum weight on all combinations 3,600 lbs.

Note: NHRA may make adjustments to (minimum weights, supercharger pulley ratios, etc.) at any time to control performance and maintain parity within the category.

Permitted Combinations:

All previously approved ~~Constant Aviation~~ Flexjet NHRA Factory Stock Showdown bodies are eligible to be used with the approved engine combinations listed below. Engine must be same make as body.

2017-2018 Camaro COPO 350

- 590 HP Supercharged 2.9L Whipple

2019 Camaro COPO 350

- 630 HP Supercharged 2.65L Magnuson
- Upper supercharger pulley size: ~~(3.125)~~ (3.250) inches
- Supercharger rear jack shaft cog pulley 32 teeth
- Supercharger rear cog pulley 34 teeth

2020 Camaro COPO 350

- 630 HP Supercharged 2.65L Magnuson
- Upper supercharger pulley size: ~~(3.125)~~ (3.250) inches

- Supercharger rear jack shaft cog pulley 32 teeth
- Supercharger rear cog pulley 34 teeth

2022-2023 Camaro COPO 350

- 630 HP Supercharged 2.65L Magnuson
- Upper supercharger pulley size: ~~(3.125)~~ (3.250) inches
- Supercharger rear jack shaft cog pulley 32 teeth
- Supercharger rear cog pulley 34 teeth

2015 Challenger Drag Pak 354

- 540 HP Supercharged 2.9L Whipple
- Upper supercharger pulley size: (3.000) inches

2021 Challenger Drag Pak 354

- 630 HP Supercharged 3.0L Whipple
- Upper supercharger pulley size: ~~(3.375)~~ ~~(3.500)~~ (3.750) inches
- Lower engine pulley (8.000) inches

2010 Mustang Cobra Jet 330

- 435 HP Supercharged 2.3L Eaton

2012 Mustang Cobra Jet 330

- 450 HP Supercharged 2.3L Eaton

2016 Mustang Cobra Jet 302

- 575 HP Supercharged 2.9L Whipple

2019 Mustang Cobra Jet 327

- 610 HP Supercharged 3.0L Whipple
- Upper supercharger pulley size ~~(3.750)~~ 3.500 inches
- Upper supercharger pulley size with iron block: (3.750) inches
- Lower engine pulley 6.938 inches

2019 Mustang Cobra Jet 351

- 570 HP Supercharged 2.9L Whipple
- Upper supercharger pulley size: (3.500) inches

SECTION 11B: FACTORY STOCK SHOWDOWN, ENGINE: 1, FUEL INJECTION (Page 15) (12/6/2022)

Electronic fuel injection permitted. Larger fuel injectors permitted, provided no modification or re-drilling of manifolds is performed. Only one injector per cylinder permitted. All entries must have an NHRA accepted ECU, software and firmware. All entries are limited to a 10,200 rpm maximum rev limiter. A current list of NHRA-accepted ECUs, software, and firmware can be found on NHRARacer.com. ~~See NHRARacer.com: NHRA Accepted Products for approved fuel injection units.~~ See General Regulations 9:1, 9:11.

SECTION 11B: FACTORY STOCK SHOWDOWN, ENGINE: 1, OIL SYSTEMS (Page 15) (6/15/2023)

Dry-sump oil systems prohibited. External single-stage oil pumps permitted; no additional pump stages permitted. Remote mounted oil filter permitted.

**SECTION 11B: FACTORY STOCK SHOWDOWN, DRIVETRAIN: 2,
DRIVELINE (Page 15) (10/06/2023)**

DRIVELINE

Beginning January 1st, 2024, driveline meeting SFI Spec 43.1 mandatory, any material permitted. Driveline loop mandatory. See General Regulations 2:4.

SECTION 12A: SUPER STOCK, (Page 1) (1/18/2023)

DESIGNATIONS

FSS/A, FSS/B, FSS/C, FSS/D, FSS/E, FSS/F, FSS/G, FSS/H, FSS/I, FSS/J, FSS/K, FSS/L, FSS/M, SS/AH, SS/A, SS/B, SS/C, SS/D, SS/E, SS/F, SS/G, SS/H, SS/I, SS/J, SS/K, SS/L, SS/M, SS/N, SS/O, and SS/P **SS/Q** preceded by car number (manual transmission). SS/AA, SS/BA, SS/CA, SS/DA, SS/EA, SS/FA, SS/GA, SS/HA, SS/IA, SS/JA, SS/KA, SS/LA, SS/MA, SS/NA, SS/OA, and SS/PA **SS/QA** preceded by car number (automatic transmission).

CLASS WEIGHT BREAKS

(based on pounds per NHRA-factored horsepower)

FSS/A: 5.00 to 5.49	FSS/K: 10.00 to 10.99	G: 9.00 to 9.49
FSS/B: 5.50 to 5.99	FSS/L: 11.00 to 11.99	H: 9.50 to 9.99
FSS/C: 6.00 to 6.49	FSS/M: 12.00 or more	I: 10.00 to 10.99
FSS/D: 6.50 to 6.99	AH: 6.00	J: 11.00 to 11.99
FSS/E: 7.00 to 7.49	A: 6.00 to 6.49	K: 12.00 to 12.99
FSS/F: 7.50 to 7.99	B: 6.50 to 6.99	L: 13.00 to 13.99
FSS/G: 8.00 to 8.49	C: 7.00 to 7.49	M: 14.00 to 14.99
FSS/H: 8.50 to 8.99	D: 7.50 to 7.99	N: 15.00 to 15.99
FSS/I: 9.00 to 9.49	E: 8.00 to 8.49	O: 16.00 to 16.99
FSS/J: 9.50 to 9.99	F: 8.50 to 8.99	P: 17.00 or more to 17.99
		Q: 18.00 or more

SECTION 12B: SUPER STOCK/GT, DESIGNATIONS (Page 11) (12/6/2022)

FGT/A, FGT/B, FGT/C, FGT/D, FGT/E, FGT/F, FGT/G, FGT/H, FGT/I, FGT/J, FGT/K, FGT/L, FGT/M, FGT/N, GT/A, GT/B, GT/C, GT/D, GT/E, GT/F, GT/G, GT/H, GT/I, GT/J, GT/K, GT/L, GT/M, GT/N, GT/O, GT/P, and GT/Q, preceded by car number (manual transmission). GT/AA, GT/BA, GT/CA, GT/DA, GT/EA, GT/FA, GT/GA, GT/HA, GT/IA, GT/JA, GT/KA, GT/LA, GT/MA, GT/NA, GT/OA, GT/PA, and GT/QA, preceded by car number (automatic transmission).

Reserved for foreign and domestic factory-production coupes, sedans, sports cars, convertibles, or station wagons with any production V-8 engine of the same make. Year of engine optional, engine/body platform combinations that fit base Super Stock not eligible. Only those engines and/or bodies listed in the Official NHRA Stock Car Classification Guide are eligible for competition. Also see WEIGHT. Cars will be classified using the class weight break multiplied by the horsepower or performance rating of the engine used. Minimum weight with driver: 2,670 pounds.

Front-wheel-drive conversions permitted. Minimum weight with driver: 2,670 pounds. Only engines and/or bodies listed in the Official NHRA Stock Car Classification Guide are eligible for competition.

SECTION 12D: MODIFIED STOCK, ENGINE: 1, ENGINE (Page 17) (6/29/2023)

OEM aftermarket small-block Chevrolet (SBC) engines with bore centers greater than 4.420 inches are not permitted. Engine must be same corporate make as body, naturally aspirated. Displacement unlimited in AS, limited to 366-cid original production in BS and CS. Engine setback or raising engine prohibited. Motor plates and mid-mounts permitted. Timing-belt covers optional. Harmonic balancer meeting SFI Spec 18.1 mandatory. In Section [912A](#), Connecting Rods, Gaskets, Intake Manifold, Oil Pan, Pistons, Superseded/Replacement Parts do not apply in Section [912D](#). See General Regulations 1:2.

SECTION 13: COMP, ENGINE: 1, CYLINDER HEADS (Page 1) (3/03/2023)

The following Competition eliminator classes have cylinder head restrictions: All Econo Dragsters (13B), I/A, IAA, K/A, K/AA, L/A, L/AA (13D) all street roadsters (13D), all Altered Trucks (13E), all Econo Altered (13F), and all Super Modified classes (13G). For all classes see the appropriate class requirements for any additional requirements.

The above listed classes are restricted to OEM or aftermarket cast iron or cast aluminum, generally available cylinder heads. Billet heads are prohibited. OEM heads must have OEM number cast into the head. Aftermarket heads must have manufacturer's logo and/or number cast or marked into the head. Casting logos/numbers must be unaltered and visible. Maximum one spark plug per cylinder. All classes except G/ED, L/A, LA/A, F/EA, and H/EA are restricted to two valves per cylinder. For G/ED, L/A, LA/A, F/EA, and H/EA see the appropriate Class Designation for the number of valves permitted

Porting, polishing permitted; header plates permitted. Exhaust port plates that protrude into port prohibited except Altered Trucks. For Altered Trucks exhaust port plate permitted, may be higher than head, no wider than 1 1/2 inches, may not be recessed into port more than plate width. Any size valves permitted. Angle milling and/or rolling permitted. External modifications permitted. Combustion-chamber modifications permitted. The valve cover rail may be modified. Heads may be cut for larger pushrods and springs. Any size valves permitted. Spark plug holes may be relocated.

~~For those classes that require true wedge cylinder heads (with inline and parallel valves only) the valves may be tilted and/or canted The following Competition~~

~~eliminator classes have cylinder head restrictions: All Econo Dragsters (13B), I/A, IAA, K/A, K/AA, L/A, L/AA (13D) all street roadsters (13D), all Altered Trucks (13E), all Econo Altered (13F), and all Super Modified classes (13G). For all classes see the appropriate class requirements for any additional requirements.~~

~~The above listed classes are restricted to OEM or aftermarket cast iron or cast aluminum, generally available cylinder heads. Billet heads are prohibited. OEM heads must have OEM number cast into the head. Aftermarket heads must have manufacturer's logo and/or number cast or marked into the head. Casting logos/numbers must be unaltered and visible. Maximum one spark plug per cylinder. All classes except G/ED, L/A, LA/A, F/EA, and H/EA are restricted to two valves per cylinder. For G/ED, L/A, LA/A, F/EA, and H/EA see the appropriate Class Designation for the number of valves permitted~~

~~Porting, polishing permitted; header plates permitted. Exhaust port plates that protrude into port prohibited except Altered Trucks. For Altered Trucks exhaust port plate permitted, may be higher than head, no wider than 1 1/2 inches, may not be recessed into port more than plate width. Any size valves permitted. Angle milling and/or rolling permitted. External modifications permitted. Combustion chamber modifications permitted. The valve cover rail may be modified. Heads may be cut for larger pushrods and springs. Any size valves permitted. Spark plug holes may be relocated.~~

For those classes that require true wedge cylinder heads (with inline and parallel valves only) the valves may be tilted and/or canted +/- 1.0 degrees from parallel.

~~For those classes listed above all other cylinder head modifications are prohibited. 1.0 degrees from parallel.~~

For those classes listed above all other cylinder head modifications are prohibited.

SECTION 13: COMP, DRIVETRAIN: 2, TRANSMISSION MANUAL (Page 4) (12/6/2022)

Where permitted by class regulations, a manual transmission must meet the following criteria: any aftermarket planetary or clutchless manual transmission, maximum of five forward speeds. Reverse gear mandatory. Lenco drive, Quickdrive or BRT drive unit using a manual transmission behind a converter and transbrake are permitted. A manual transmission behind a converter without a transbrake is also permitted. Acceptable transbrake wiring and pneumatic

schematics for the BRT drive, Lenco drive and Quickdrive units are available in the Accepted Products list on NHRARacer.com. Maximum one transmission brake solenoid permitted. Automated shifters and/or timertype shifting devices prohibited; each individual shift must be a function of the driver. Shifting must be controlled by manual or pneumatic means only (driver pulls the lever or pushes the button); electric or electronics may in no way affect the [forward speeds](#) shifting mechanism. [Electric-over-air actuation of reverse permitted.](#) See General Regulations 2:12, 2:13, 2:14.

SECTION 13: COMP, DRIVER: 10, [NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM](#) (New Section after HELMET) (Page 6) (12/6/2022)

[A head and neck restraint device/system meeting SFI 38.1 mandatory and must display a valid SFI label. At all times that the driver is in the race vehicle, from the ready line until the vehicle is on the return road, driver must properly utilize an SFI 38.1 head and neck restraint device/system, including connecting the helmet as required for full functionality of the device. 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. Modification of the device is prohibited. An SFI 38.1 head and neck restraint device can be used with, or without, a neck collar; when a neck collar is not used, an SFI 3.3 head sock or SFI Spec 3.3 skirted helmet is required.](#)

SECTION 13A: GAS DRAGSTER, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 11) (12/6/2022)

~~Head and neck restraint device/system meeting SFI 38.1 mandatory in A/D, A/DA, B/D, B/DA, C/D, C/DA, D/D, D/DA, E/D, E/DA, J/D, J/DA, H/D, and I/D. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13B: ECONO DRAGSTER, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 15) (12/6/2022)

~~Head and neck restraint device/system meeting SFI 38.1 mandatory in A/ND and B/ND. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13C: NOSTALGIA DRAGSTER, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 15) (12/6/2022)

~~Head and neck restraint device/system meeting SFI 38.1 mandatory in A/ND and B/ND. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13D: ALTERED & STREET ROADSTER, ENGINE: 1, FUEL (Page 20) (12/6/2022)

NHRA-accepted racing gasoline only. Methanol mandatory in AA/AM and BB/AM. Methanol permitted in AA/AF, BB/AF, AA/AT, [CC/A](#), BB/AT, CC/AT. and DD/AT. Propylene oxide and/or nitrous oxide prohibited. See General Regulations 1:6.

SECTION 13D: ALTERED & STREET ROADSTER, ENGINE: 1, SUPERCHARGER (Page 20) (12/6/2022)

Restricted to Roots-type supercharger, rotor helix angle not to exceed that of standard 71-series GM-type rotor. 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. The rotors must be driven from the front (both the external drive and the internal gearing). The entire inlet opening must be on/in the upper surface only. Any inlet/outlet cavity in front of the rotors is restricted to maximum 2.150 inches, measuring from the face of bearing plate to the back of the cavity. Billet cases prohibited. The maximum length from the front of the supercharger drive pulley to the leading edge of the rotor is 15 inches. Offset drive pulleys may not be used to add to the number listed above. All manifold configurations and supercharger modifications and locations must be accepted prior to competition. Variable multispeed supercharger devices prohibited. OEM-type screw supercharger permitted, all others prohibited. OEM- type screw superchargers do not require a supercharger restraint. "OEM type" in this case means that it must have originally come with the production engine being used. All AA/AM, BB/A, and BB/ AM vehicles using 12-71 or 14-71 superchargers must have an SFI 14.2 or 14.3 Supercharger Restraint with approved bag from same manufacturer. All other superchargers require an SFI 14.1, 14.2 or 14.3 Supercharger Restraint. Air-to-air intercooler permitted on supercharged vehicles. Supercharger must be in conventional location above the intake manifold and cylinder heads, and supercharger restraint device may not be modified. Ambient air only, i.e., the flow of ambient air through the intercooler and any associated ducting must be only a result of the movement of the vehicle. For CC/A only, a 5.150-inch centrifugal supercharger limited to inlet diameter internal O.D. 5.250 maximum; impeller inducer diameter 5.150-inch maximum; impeller exducer diameter 8.000-inch maximum; discharge diameter 4.000-inch maximum; housing diameter (external diameter of housing not to include discharge) 12.000-inch maximum. Supercharger drive must be belt, NHRA-accepted chain drive or NHRA-accepted gear drive. Aftermarket intercooler permitted (air-to-air or air-to-water/ice). [CC/A if methanol is used as a fuel intercooler prohibited](#). Maximum 3-gallon-capacity reservoir permitted, must be constructed of steel or aluminum, or an SFI 28.1 fuel cell. See General Regulations 1:10, 1:11.

SECTION 13D: ALTERED & STREET ROADSTER, ENGINE: 1, TURBOCHARGER (Page 21) (12/6/2022)

Air-to-air or water-to-air intercooler permitted on turbocharged vehicles. Maximum ~~one supercharger or~~ two turbochargers (~~not both~~). CC/AT: Single turbocharger limited to 74mm; twin turbocharger limited to 58mm. DD/AT: Single turbocharger limited to 76mm; twin turbocharger prohibited on 4-cylinder applications. BB/AF: Ecotec engine limited to single 68mm turbo; all others limited to single 74mm turbo.

SECTION 13D: ALTERED & STREET ROADSTER, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 27) (12/6/2022)

~~Head and neck restraint device/system meeting SFI 38.1 mandatory in AA/AM, AA/AT, BB/AT, CC/AT, A/AP, A/A, A/AA, B/A, B/AA, CC/A, BB/A, BB/AM, DD/AT, B/AP, C/A, C/AA, and AA/AF. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13E: ALTERED TRUCK, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 32) (12/6/2022)

~~Head and neck restraint device/system meeting SFI 38.1 mandatory in PST. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13F: ECONO ALTERED, DRIVER: 10, ~~NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM~~ (Page 38) (12/6/2022)

~~Head and neck restraint meeting SFI 38.1 in A/EA mandatory. Neck collar meeting SFI Spec 3.3 mandatory in all other classes. See General Regulations 10:8.~~

SECTION 13G: SUPER MODIFIED, DRIVER: 10, ~~NECK COLLAR~~ (Page 45) (12/6/2022)

~~Neck collar meeting SFI Spec 3.3 mandatory. See General Regulations 10:8.~~

SECTION 13I: SS/AH (HEMI CARS), (Page 45) (3/03/2023)

DESIGNATION

AH/SM (Hemi cars: SS/AH) All rules for SS/AH will apply. In addition, competitors will need to acquire a Competition eliminator license.

All rules for SS/AH will apply. In addition, competitors will be need to acquire a Competition eliminator license. [AH/SM not eligible for records, records must be set in SS/AH.](#)

SECTION 13J: FSS/SM (FACTORY STOCK SHOWDOWN CARS), (Page 45) (3/03/2023)

DESIGNATION

FS/SM (Factory Stock Showdown Cars: FSS) Minimum weight 3575. All rules for FSS will apply. In addition, competitors will need to acquire a Competition eliminator license. All Comp race procedures will apply. [FSS/SM not eligible for records, records must be set in Stock or Super Stock.](#)

SECTION 13K: FACTORY X, (Page 45) (10/18/2023)



DESIGNATION

FX preceded by car number.

Reserved for Late Model Manufactured Automobiles-with Factory production engine of the same make. Manufacturer engines and bodies not listed in this section may be submitted for acceptance in Factory X.

Currently Accepted makes/models:

Chevrolet 2016 & up (6th Gen Camaro – COPO) – minimum weight 2,650 lbs.

Chevrolet 2014 - 2019 (Corvette) - minimum weight 2,650 lbs.

Dodge 2015 & up (Challenger – Drag Pak) – minimum weight 2,650 lbs.

Ford 2015 & up (Mustang – Cobra Jet) – minimum weight 2,650 lbs.

All minimum weights listed above include driver.

Note: NHRA may adjust (minimum weights, supercharger pulley ratios, etc.) at any time to control performance and maintain parity within the category.

Currently Accepted Combinations:

All accepted FACTORY X bodies are eligible to be used with the accepted engine combinations listed below. Engine must be same make as body.

2020 Camaro COPO 350

- 630 HP Supercharged 2.65L Magnuson
- Upper supercharger pulley size: (3.125) inches
- Supercharger rear jack shaft cog pulley 32 teeth
- Supercharger rear cog pulley 34 teeth
 - Lower Engine Pulley (8.000) inches

2021 Challenger Drag Pak 354

- 630 HP Supercharged 3.0L Whipple
- Upper supercharger pulley size: (3.375) inches
 - Lower Engine Pulley (8.000) inches

2019 Mustang Cobra Jet 327

- 610 HP Supercharged 3.0L Whipple
- Upper supercharger pulley size: (3.750 Iron Block) (3.500 Alum Block) inches
- Lower engine pulley 6.938 inches.

Body, drivetrain, chassis, etc. may not be altered, modified, or relocated, except as outlined in Requirements & Specifications.

Minimum weight on the rear axle at conclusion of run: 1,300 pounds, including driver. Once an engine is used in a vehicle at an event, that engine cannot be used in another vehicle for the duration of the event. Engine shall consist of short block and heads which must be serialized or otherwise identified at each event.

REQUIREMENTS & SPECIFICATIONS

ENGINE: 1

AIR INLET TUBE

Optional. If used, air inlet tube must be OEM style. Air inlet tube may be cut, trimmed, or epoxied for fitment. Air inlet tube must be accepted by NHRA Technical Services before use.

CYLINDER HEADS

Must be correct casting number for year engine combination claimed, per NHRA Technical Bulletins. CNC porting of Intake runner, exhaust runner, and combustion chamber is permitted. Relocation of intake or exhaust port opening prohibited. Welding, epoxying any part of the intake or exhaust port is prohibited. Spark-plug hole must maintain stock location, size, and angle as machined by the OEM; spark plug adapters prohibited. Intake and exhaust manifold adapter plates prohibited. Valve-guide centerlines must maintain the stock lateral and front-to-back location as machined by the OEM. Cylinder heads are additionally restricted in that they must retain original size valves at original angles +/- 1 degree and must be able to hold original cylinder-head volume per NHRA Specifications. Runner volumes may not exceed the current Super Stock cylinder-head volumes as listed on www.NHRARacer.com. External modifications beyond normal repair prohibited. Final acceptance as determined by NHRA in NHRA's sole and absolute discretion. Intake side of head may not be cut into any part of valve cover bolt holes or intake mounting holes. Valve-cover bolt holes must remain unaltered and in their original location. The following are permitted: polylocks, jam nuts, screw-in larger-diameter rocker studs or pinned studs, bronze-wall valve guides, cylinder head studs. Valve spring umbrellas optional. Cylinder head may have all of the seats replaced. Any valve-job permitted, O-ringing head prohibited.

ENGINE

Must be same make as car used, NHRA-accepted aftermarket engine blocks permitted. Cylinder bores must not exceed .080-inch overstock. Normal balance job (i.e., one piston/rod assembly untouched) permitted. Otherwise lightening of component parts prohibited. All throttle bodies, manifolds, heads, etc. must be tightened to prevent any air or fuel leaks. Vacuum lines must be securely

connected or blocked off. Stroke tolerance is +/- .015- inch. Stock OEM or NHRA accepted aftermarket crankshaft mandatory. Aftermarket crank must retain OEM configuration. Lightening of crankshaft other than normal balance job prohibited. Engine blocks may be sleeved. O-ringing engine blocks is prohibited. Aftermarket SFI Spec 18.1 harmonic balancer mandatory. See General Regulations 1:2. Manifold covers are prohibited. Use of "smog pump" or air pump for crankcase evacuation prohibited. Engine blueprint specifications found at Nhracer.com

STARTER

Starter must remain in stock location. Starter may be modified to align with starter ring. Minimum diameter for starter ring gear 12.800 inches.

OIL SYSTEM

Wet sump, single stage external, oil pump permitted.

FUEL INJECTION

Only accepted ECU: Holley Hp and Dominator. All other ECUs prohibited. All entries are limited to a 10,200 rpm maximum rev limiter. A current list of NHRA – accepted ECU's, software, and firmware can be found on NHRARacer.com. Larger fuel injectors permitted, provided no modification or re-drilling of manifolds is performed. Only one injector per cylinder permitted. See General Regulations 9:1, 9:11. External RPM / Speed / Ride Height / InfraRed etc., input connections prohibited in ECU.

OIL CONTAINMENT DEVICE

All vehicles must utilize an NHRA-accepted lower engine oil-retention device; may use a belly pan in lieu of device attached to the engine. Pan must be constructed of composite material with vertical folded-up walls, at least 4 -inches tall. Pan must run from in front of the front motor plate to in front of the rear motor plate and to just inside or outside of the lower framrails. Front and rear walls must be "coved" toward oil pan a minimum of 1/2-inch to assist oil in staying within the confines of the oil-retention device. Pan must be attached with a minimum of three attachment points per side. A nonflammable, oil-absorbent liner mandatory inside of retention device.

THROTTLE BODY

Must be correct year, make and model specified for cars engine. Sandblasting, grinding, flash removal, dry film coating, or any other modification to throttle body prohibited. Throttle body must utilize mechanical throttle linkage with dual return springs. Cable linkage permitted. Throttle control must be manually operated by driver's foot: Electronics, pneumatics, hydraulics, or any other device may in no way affect the throttle operation. See General Regulations 1:12.

SUPERCHARGERS

Must be correct year, make and model specified & accepted for cars engine. Sandblasting, grinding, flash removal, dry film coating, or any other modification to Supercharger, intake manifold or intercooler prohibited.

INTERCOOLER TANK

OEM style and size intercooler tank permitted and must be mounted forward of firewall.

ENGINE SETBACK

Maximum 92.0 inches; minimum setback 90.0 inches for Camaro / Mustang entries. Maximum 102 inches; minimum 100 inches for Challenger entries. Measured from centerline of rear axle to rear of engine block. Modification of the block to allow further setback prohibited.

CRANKSHAFT HEIGHT

Minimum 13.0 inches. Measured from front crankshaft centerline.

EXHAUST SYSTEM

Open exhaust with headers permitted. Exhaust must exit under vehicle. Side exit exhaust prohibited. See General Regulations 1:3.

FUEL

NHRA-specified racing gasoline only. Dielectric Constant, as per NHRA DC meter, must match reading from baseline of specified gasoline. The use of additives is prohibited. See General Regulations 1:6.

FUEL SYSTEM

All fuel cells must be maximum 1 1/2-gallon fuel cell meeting SFI Spec 28.1 mounted forward of firewall; if mounted outside of framerails, fuel cell must be enclosed in a round tube frame, minimum 1 1/4-inch O.D. x .065-inch chromoly or Docol R8 tubing. The round tube frame must be attached to a cross member constructed of minimum 1 1/4-inch O.D. x .065-inch chromoly or Docol R8 tubing. Must have pressure cap and be vented. Extra tank(s) prohibited. Artificial cooling or heating systems (i.e., cool cans, ice, Freon, etc.) prohibited. Circulating systems not part of normal fuel-pump system prohibited. See General Regulations 1:5.

DRIVETRAIN: 2

TRANSMISSION, MANUAL CLUTCH, FLYWHEEL, FLYWHEEL SHIELD

Flywheel and clutch meeting SFI Spec 1.5 mandatory. Flywheel shield meeting SFI Spec 6.3 mandatory. Maximum 3 discs. Minimum disc diameter 8 inches. Clutch release must be manually operated by driver's foot: Electronics, pneumatics, hydraulics, or any other device may in no way affect the clutch system. Multi-stage, variable release, lockup-type clutch of any description prohibited. Throwout bearing must release all fingers, levers, stages, etc. simultaneously. Flywheel shield cannot be welded into the car and/or frame

(used as a crossmember). Frame and/or body braces cannot be welded to flywheel shield. See General Regulations 2:3, 2:5, 2:6, 2:9.

DRIVELINE

Driveshaft must meet SFI Spec 43.1. Each end of driveshaft must have round 360-degree driveshaft loops within 6 inches of U-joints. Additionally, driveshaft must be covered by 360-degree tube, covering the front U-joint and extending rearward a minimum 12 inches. Minimum thickness of tube is .050-inch chromoly, Docol R8, or titanium. Driveshaft tube must utilize a minimum of four attachment points to the chassis, either bolted with minimum 5/16 SAE bolts or welded or 1/4-inch push/pull pins. See General Regulations 2:4.

REAR END

Aftermarket axles mandatory. Full-floating or live axle units permitted. Minimum 40 spline axles mandatory. See General Regulations 2:11.

TRANSMISSION, MANUAL

Aftermarket planetary or clutchless transmission with a maximum of five forward speeds and reverse permitted. Automatic transmission prohibited. Automated, timer-type, pneumatic, electric, electronic, hydraulic, etc. shifting mechanism prohibited; each individual shift must be a function of the driver and controlled manually.

RADIATOR

Only one automotive radiator in front location, with only one water pump mandatory in engine compartment. Remote water pump permitted. External plumbing from water pump to block and/or cylinder head(s) permitted. Water pump and fan may be electrically driven.

BRAKES & SUSPENSION: 3

BRAKES

Automated brakes prohibited; application and release of brakes must be a function of the driver. Four-wheel hydraulic disc brakes mandatory. Carbon-fiber brake rotors used in conjunction with carbon-fiber specific brake pads (front and rear) permitted. Brake lines must be out of flywheel and driveline area. Line-loc permitted on front wheels only, must be driver activated. Any other electrical, pneumatic, hydraulic, etc. switch prohibited in brake system. See General Regulations 3:1.

STEERING

Stock-type steering in conventional location mandatory. Commercially available quick-disconnect steering wheel meeting SFI Spec 42.1 mandatory. Minimum steering-wheel diameter 11 inches O.D. Maximum 2 buttons allowed on steering wheel. See General Regulations 3:3.

SUSPENSION

Full automobile production systems mandatory. 4-link suspension systems permitted. One hydraulic damper required per wheel, for a maximum of four per vehicle. Fabricated units permitted. Rigid-mounted suspensions or straight front axles prohibited. Active suspension of any kind prohibited. Any ability to make on-track setting/rate changes based on "real time" data or input from any source, including the shock/strut itself (i.e., magnetically charged fluid), is prohibited. Electrically and / or external CO2 controlled, hydraulic shocks and/or struts are prohibited. Digressive spring devices and digressive springs prohibited. Inerter shocks/struts prohibited. Electrical connections of any kind to or from the shock/strut prohibited. External shock/strut travel sensors permitted but may ONLY be connected to the vehicle standalone data recorder. Shock/strut control boxes prohibited. See General Regulations 3:4.

WHEELIE BARS

Permitted. Wheels must be nonmetallic. Maximum length 66 inches, measured from the center of the rear axle to the center of the bolt in the wheelie-bar wheel. See General Regulations 3:6.

FRAME: 4

BALLAST

Permitted. Any ballast mounted on, or in front of, forward crossmember is limited to 30 pounds maximum, including bracket. Maximum length of bracket 12 inches, measured from the front of the crossmember. Width of bracket may not exceed width of lower frameraills. Weight bracket may not extend beyond the limits of the inside of the front facia. Bracket may be constructed of either minimum 1 1/4-inch x .058-inch wall round chromoly or Docol R8 tubing with minimum four (4) 3/8-inch-diameter SAE Grade 8 bolts for attachment, or of minimum 1/4-inch 6061 T6 aluminum plate with minimum four (4) 1/2-inch SAE Grade 8 bolts for attachment, or NHRA-accepted design. All other weight bars, pucks, etc. must use minimum 1/2-inch-diameter SAE Grade 8 bolts for attachment. Ballast may not be mounted higher than the top of the wheel tubs. Disguised ballast prohibited (this includes solid tubing, etc. welded to chassis above the top of the rear wheel tubs). See General Regulations 4:2.

GROUND CLEARANCE

Minimum 3 inches from front of car to 12 inches behind centerline of front axle, 2 inches for remainder of car, except exhaust headers.

HELMET SHROUD (OPTIONAL)

If a Funny Car style helmet shroud is used, all bolts retaining panels to the roll cage need to be a 1/2-inch hex-style head that is easily accessible with the door open. Any portions of the paneling that are not accessible with the door open must be of tongue and groove or similar style retention in order to allow removal once accessible front hex head bolts are removed.

PARACHUTE

Dual parachutes mandatory. Parachutes must be mounted such that the maximum measurement between the outside edge of the two parachutes does not exceed 24 inches. Parachute packs may not be enclosed. Parachutes must be assisted by a launcher system – either air or spring. A pilot spring does not constitute a launcher but is acceptable as a secondary launch unit. No more than 3.5 inches of any portion of the parachute pack can be located under the rear of the spoiler. Measured from the parachute pack backing plate to the rear tip of the spoiler. Pneumatic parachute must use minimum 3/8-inch O.D. line; cannot use separate air supply from other pneumatic functions. A bushing is mandatory over the shroud-line mounting bolt(s). Lower parachute mounting supports must be bolted; upper mounts may be pinned. See General Regulations 4:8.

ROLL CAGE

Chassis must meet SFI Spec 25.1, 25.2 or 25.3. Chassis must be certified by NHRA and have serialized sticker affixed to roll cage before participation. See General Regulations 4:4, 4:11, 10:6. A panel of .032-inch aluminum, .024-inch steel, or carbon fiber must be installed on the inside portion of the roll cage anywhere the driver's legs can come in contact with the cage (chassis tubing). Panels must be installed in the front and lower portion of the driver's-side X brace. Panels must attach to the interior side of the tubing. Panels must not be attached to rocker bar (7A), Windshield/Roof bar (12A) or Main Hoop (10). Optional padding may be attached to the panels. See General Regulations 4:4, 4:11, 10:6.

ROLL-CAGE PADDING

Roll-cage padding meeting SFI Spec 45.2 mandatory anywhere driver's helmet may come in contact with roll-cage components. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory. Additional padding must be NHRA-accepted (with manufacturer's name displayed), securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. A current list of NHRA-accepted lateral head supports is available on NHRARacer.com. See General Regulations 4:11.

WHEELBASE

Must retain stock wheelbase, +/- 3/4-inch for car model and year of body used per manufacturer's nominal specifications. Maximum variation from left to right: 1 inch. Relocation of rear axle location greater than +/- 1/4-inch prohibited.

TIRES & WHEELS: 5

TIRES

Restricted to 10.5W x 33 - 16 rear tires only, as specified by NHRA. Required height of front tire is 26 inches. See General Regulations 5:1.

WHEELS

Rear wheels 16x16 inches; double beadlock design mandatory. All rear wheels must meet a minimum SFI Spec 15.1 Any SFI Spec wheel must be used in an

unaltered manner consistent with the manufacturer's installation and instruction books. Modification and/or lightening prohibited. Wheel discs or covers prohibited. See General Regulations 5:2.

INTERIOR: 6

SHEET METAL

Driver compartment interior must be aluminum, steel, or carbon fiber. Magnesium prohibited. Sheet metal may not extend into rear window any higher than wheel tubs. Transmission case and lines must be fully enclosed in a tunnel constructed of aluminum, steel, or carbon fiber. Trunk must be completely separated from driver compartment with firewall. See General Regulations 6:1.

SEAT / DASH

Driver's seat must meet SFI 39.2, FIA Spec 8855-1999, 8855-2021 or 8862-2009 and installed per manufacture recommendations. Removal of passenger seat permitted. Seat frame must be installed as a permanent part of the chassis. Dashboard must retain OEM exterior appearance. Fiberglass / composite replica of original permitted. Gauges may be painted in or simulated. Headliner area must have a finished appearance.

WINDOW NET

Window net meeting SFI Spec 27.1 mandatory. Window nets must be ribbon type. Window net system must be NHRA-accepted. See NHRA Accepted Products on NHRARacer.com for a list of accepted window net systems. Mechanism for release must have red label and in visible sight for track officials to use externally. See General Regulations 6:3.

BODY: 7

BODY

NHRA accepted body mandatory. OEM dimensional steel roof, steel quarter panels, A pillars and rockers mandatory. Chopping, channeling, sectioning, or other alterations to contour, length, or width, of any body panel, prohibited. Modification to NHRA-accepted body components prohibited, except for minor trimming to fit. Front end overhang may not exceed 40 inches, via stripe taker. Stripe taker maximum height 6 inches tall. All measurements must remain within the tolerances found on the NHRA FACTORY X Body Measurement Legend sheets. All cars must successfully pass NHRA body inspection prior to competition. Contact NHRA Technical Services Department headquarters for body dimensions. NHRA approval required for all body styles and body components regardless of manufacturer. All body mounts must be nonadjustable. Any front-end body part made with carbon fiber must be covered with SFI 54.1 flame retardant coating. Must be applied according to the manufacturer's specifications and recommendations. Ground effects of any description prohibited. Ground effects include but are not limited to rocker skirts, belly pans, sheetmetal work to the underside of the car that produces a "tunnel" for the

passage of air, etc. For body modifications, final determination rests with NHRA Technical Services Department, as determined by the NHRA Technical Services Department in its sole and absolute discretion.

DOORS

Must be functional and operable from inside and outside. Doors must be OEM dimension. Doors must utilize operable OEM exterior door handles in working order. Must have sheet-metal deflector plate between fenders and leading edge of doors.

BUMPERS

Complete stock appearing bumper covers, (front and rear) mandatory, consistent with make, model, year claimed. Rear bumper cover or valance may be notched, trimmed, or slotted for clearance around wheelie bars. Clearance is to allow for wheelie-bar movement only. Rear bumper notch width for wheelie bars is 23 inches.

FIREWALL

Moving stock firewall location rearward for engine installation permitted. Minimum .024-inch steel firewall mandatory. See General Regulations 7:4.

FLOOR

Driver's-side floor pan must be steel and must be welded in place. Remainder of stock floors may be replaced with .024-inch steel, or .032-inch aluminum or carbon fiber permitted. Subfloors and/or belly pans prohibited with the following exception: Floor area between the center framerrails extending from the rear crossmember to the bellhousing may be enclosed from the bottom side. Must use minimum .024- inch steel, .032-inch aluminum, or carbon fiber for material. Magnesium prohibited. Maximum width for enclosure is 24 inches. Material may not extend more than halfway around on outside of center framerrails and may be two pieces. May be either welded in or removable. Floor supports acceptable; maximum total width of material for supports 4 inches. Chassis must be below floor. Driveline tunnel behind driver's seat may be higher for proper clearance. Magnesium interior panels prohibited. See General Regulations 7:5.

GRILLE

Must be equipped with a stock grille of same configuration and design for specific body used; hole for air intake tube permitted. Any air inlet must be pre-approved by NHRA Technical Services Department prior to use in competition.

SPOILERS

Rear spoiler mandatory; length 14 inches mandatory; Spoiler will be measured from the body line/spoiler transition point to rear of spoiler. A 90-degree wicker is mandatory across the full width of the spoiler. Minimum wicker height is 1-inch. This measurement will be taken on the inside of the wicker. Wicker must be constructed of carbon fiber, aluminum, steel, or stainless steel with a minimum

thickness of .050-inch. Wicker must be nonadjustable and permanently attached to the rear of the spoiler, so it remains 90 degrees to the spoiler at all times during the run. Height of the wicker is not included in the total length of the spoiler measurement. Rear spoiler may not be molded into deck lid. All spoilers must be painted to match paint scheme. Minimum angle of the rear spoiler may not be lower than horizontal. Roof-mounted spoilers prohibited. Air foils prohibited. Any adjustment or movement during run prohibited. A straight edge will be placed on the spoiler, perpendicular to the centerline of the car and level to the ground. Distance between level and lowest part of spoiler not to exceed 2 inches. Mandatory height of spill plate 6 inches (+/- 1/8-inch variance); must be attached to spoiler so that a mandatory 1 inch (+/- 1/8-inch variance) extends above edge of spoiler; must be vertical to the spoiler. Spill plate may not extend more than 2 inches past rear of spoiler, measured from where it attaches to the spoiler. Spoiler and fill area combined may not be more than 23.5 inches in total length; spill-plate may not extend forward of the spoiler fill area or more than 2 inches past rear of spoiler or be more than 26 inches long. When the quarter panel and deck lid follow different contours, a maximum 6.5-inch-long filler area is permitted on front edge of the spoiler to permit spoiler to follow contour of deck lid. Filler area must follow quarter panel contour and may not be fashioned to permit air to pass underneath it.

STREET EQUIPMENT

Complete headlight and taillight assemblies must be retained in stock original Factory location. Two functional OEM style headlights and OEM style taillights mandatory. Parking and stop lights, cannot be painted on body. Side marker lights optional. Any other street equipment that does not affect external appearance may be removed.

WHEELWELLS

Rear wheel wells must be separate for each tire. Maximum height of rear wheel tubs from ground, 40 inches.

WINDSHIELD, WINDOWS

Full windows mandatory, side and rear windows, 1/8-inch minimum-thickness polycarbonate material permitted. Windshield, 3/16-inch-minimum-thickness polycarbonate material required. Must match original contour and mount in stock location. Front windshield and rear window may be flush mounted. Side door windows must have a minimum 4-inch diameter openings adjacent to the driver. Windows must be closed. Windshields and/or windows must be clear, without tinting or coloring. Side windows, including quarter windows, limited to driver's name, car number, car builder name, class designation, and decals only. Paint scheme may not extend into these windows. Decals may not completely cover these windows. Outer edge of windows must remain uncovered. NHRA reserves the right to accept or prohibit placement of decals on windows as deemed necessary to comply with this rule. See General Regulations 7:8.

ELECTRICAL: 8

BATTERY

Maximum two batteries; total weight wet, fully charged, including battery box: 100 pounds. Mounting of battery in driver compartment prohibited. See General Regulations 8:1.

IGNITION

See NHRARacer.com: Factory X Electronic Fuel Injection Requirements.

MASTER CUTOFF

Mandatory. Rear bumper switch must be located on the driver's side of the lower rear tail panel. The push button of the master cutoff switch must be placed in such a manner as to give a safety official an unobstructed view of the button from the rear of the vehicle. The master cutoff button must be red in color and must have a 4-inch diameter contrasting background color around it.

SYSTEM AIR PRESSURE SHUTOFF SWITCH

A 120 psi normally open-air switch must be installed to prevent the car from starting if system air pressure is below 120 psi. In the event the car is losing air pressure during a run, the switch must open when system air pressure goes below 120 psi. The switch must run in series with the ignition "run enable" wire. The switch may also trigger the fuel shutoff but is not mandatory. The switch must be wired to not remove power from the Electrimotion Safety Device at any time.

SUPPORT GROUP: 9

COMPUTER/DATA RECORDERS

Data recorders permitted; must be standalone, NHRA accepted, and used for information gathering only. See NHRARacer.com: NHRA Accepted Products, Data Recorders. Digital dash displays acceptable. Ride-height sensors permitted; may only be connected to standalone data recorder. See General Regulations 9:1, 9:2.

FIRE EXTINGUISHER SYSTEM

Fire extinguishing system must meet SFI Spec 17.1. Minimum 20-pound NHRA-accepted fire extinguishing system mandatory. System must be divided with one nozzle on driver's side and one nozzle on engine. If fire bottle is mounted in front of the firewall, it must be connected to the nozzle system with a flexible steel braided line. All cars are required to have a pneumatic cylinder, pressurized by the fire system, that will activate the master kill switch and shut off the engine when fire system is activated. Minimum pneumatic cylinder size 5/8 inches. See General Regulations 9:3 for NHRA-accepted fire extinguishing agents. Fire pins must be removed before the run.

PRESSURIZED BOTTLES

Maximum one pressurized container per vehicle. See General Regulations 9:8.

SHUTOFF DEVICE

Properly installed and operational Electrimotion Shutoff Controller Kit (RF001PS) mandatory. The Electrimotion Shutoff Controller Kit must be properly installed per the manufacturer's instructions. Modification or tampering with the Electrimotion Shutoff Controller Kit prohibited. The Electrimotion Crew Alert Box, part number CB001 and the Motorsports Safety Electronics Shutoff System part number MS1150, may be used in conjunction with the Shutoff Device to illuminate a dash light for driver notification, disengage throttle and/or enable the shutoff device. Any other use of the Electrimotion Crew Chief Alert box or the Motorsports Safety Electronics Shutoff System is prohibited.

TOW VEHICLES

Golf cart or four-wheeled, Quadrunner/ATV-type tow vehicle permitted. Full-size tow vehicle prohibited. See General Regulations 9:12.

WARM-UPS

See General Regulations 9:5, 9:14.

DRIVER: 10

CREDENTIALS

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

DRIVER RESTRAINT SYSTEM

A minimum seven-point driver restraint system meeting SFI Spec 16.1 or 16.5 mandatory. Restraint system must be updated at two-year intervals from date of manufacture. See General Regulations 10:5.

HEAD AND NECK RESTRAINT DEVICE/SYSTEM

At all times that the driver is in the race vehicle, from the ready line until the vehicle is on the return road, driver must properly utilize an SFI-accepted 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. See General Regulations 10:8.

HELMET

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

PROTECTIVE EQUIPMENT

Jacket and pants or suit meeting SFI Spec 3.2A/15, gloves meeting SFI Spec 3.3/5, and shoes meeting SFI Spec 3.3/5 mandatory. An SFI 3.3 head sock or SFI 3.3 skirted helmet is required on all cars, where a neck collar is not used. See General Regulations 10:10.

SECTION 14: TOP ALCOHOL DRAGSTER, FRAME: 4, ROLL-CAGE PADDING (Page 7) (1/18/2023)

Roll-cage padding meeting SFI Spec 45.1 mandatory where driver's helmet may come in contact with roll-cage components. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory. Additional padding must be ~~NHRA-accepted (with manufacturer's name displayed)~~, securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. ~~A current list of NHRA-accepted lateral head supports is available on NHRARacer.com.~~ See General Regulations 4:11.

SECTION 14: TOP ALCOHOL DRAGSTER, ELECTRICAL: 8, EFI (Page 9) (5/10/2023)

Electronic Fuel Injection permitted only on blown alcohol combinations. EFI entries must have an NHRA-accepted ECU, software, and firmware. A current list of NHRA-accepted ECUs, software, and firmware can be found on NHRARacer.com See General Regulations 9:1, 9:11.

SECTION 14: TOP ALCOHOL DRAGSTER, ELECTRICAL: 8, IGNITION (Page 9) (5/10/2023)

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

SECTION 14: TOP ALCOHOL DRAGSTER, DRIVER: 10, HELMET (Page 11) (5/05/2023)

Full-face helmet meeting Snell: SA2015, SA2020, FIA: 8860-2010, ~~8860-2015~~ [8859-2015](#) or 8860-2018 helmet and shield mandatory. Eject Helmet Removal System (part number SDR 89001- 30) mandatory and must be installed per manufacturer instructions. A Stand 21 Lid Lifter head sock meeting SFI 3.3 may be used in lieu of the Eject Helmet Removal System. See General Regulations 10:7

SECTION 14: TOP ALCOHOL DRAGSTER, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 11) (2/14/2023)(5/05/2023)(5/16/2023)

[One piece](#) driver's suit meeting SFI Spec 3.2A/15, gloves 3.3/15, boots/shoes 3.3/15, and head sock 3.3 mandatory. ~~All jacket and pants or driver suits that meet SFI Spec 3.2A/15 or 3.2A/20 must be recertified on a five-year interval.~~ Drivers of supercharged front-engine cars must use suit meeting SFI Spec 3.2A/20, gloves 3.3/20, [boots/shoes](#) 3.3/20, and head sock 3.3 mandatory. ~~Beginning August 1, 2022, Glove under-liners made of flame retardant material and socks meeting SFI 3.3 mandatory for all cars. Additionally, beginning August 1, 2022, when utilizing a two-piece driver's suit, long sleeve underwear shirt meeting SFI 3.3 and long underwear pants meeting SFI 3.3 are required.~~ All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex, etc.) are prohibited. **All [metallie](#) jewelry prohibited, with the exception of a high temperature rated silicone wedding band.** ~~Beginning January 1, 2023, a one-piece driver's suit is mandatory in addition to above requirements.~~

SECTION 15: TOP ALCOHOL FUNNY CAR, CLASS WEIGHTS (Page 1) (6/15/2023)

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

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

Non-supercharged single engine, nitromethane: 2,300 pounds minimum weight.

5.35 pounds per cubic inch; minimum displacement 410 cubic inches; maximum displacement 456 cubic inches.

~~95~~[100](#)% nitromethane permitted at events contested at 3,500 feet of altitude or more. Maximum nitromethane content ~~90~~[95](#)% at all other events. All fuels other than nitromethane and methanol prohibited.

Any competitor who causes an oildown while participating at an NHRA Camping World event will be subject to fines and penalties as outlined in Section 2 - Oildown Penalties.

**SECTION 15: TOP ALCOHOL FUNNY CAR, ENGINE: 1, FUEL SYSTEM
(Page 2) (1/18/2023)**

Fuel cells recommended. Pressurized fuel tanks prohibited. Tanks must be vented outside of body lines to prevent fire from being drawn into tank through vent. Fuel tank vent, maximum 1-inch-diameter hole in front of body to vent fuel tank outside of body only. A failure to pass the minimum fuel temperature check in the staging lanes prior to a run will result in the forfeiture of that run, and the racer must return to the racer's pit. A failure to pass the minimum fuel-temperature check after a run will cause that run to be disqualified. ~~Outside of the pit area, insulated fuel lines and tanks prohibited with the exception of a temporary one-piece flexible blanket-type material, maximum 1 inch thick, that wraps one time around the outside of the body panels in the vicinity of the fuel tank. The wrap must be quick release and require no additional work on the body or any tools to remove and be no more than 12 inches longer than the fuel tank.~~ Insulated fuel tanks permitted. Insulation is permitted on the main fuel line only from the fuel tank to the fuel pump. Any temporary insulation must be removed prior to and without delaying the starting of the engine. Fuel gauge lines in the driver's compartment must be steel or steel braided with steel fittings. Flexible gauge lines in the driver's compartment must be hydrostatically pressure tested at 750psi for 30 seconds and labeled. Label must be impervious to fuel and brake cleaner. See General Regulations 1:5 and 1:6. Maximum two fuel pumps. The use of propylene oxide and/or nitrous oxide is prohibited. ~~Insulated fuel lines and fuel tanks prohibited.~~ Minimum temperature of fuel in the staging lanes to the completion of the run and subsequent NHRA fuel check is 50°F. See General Regulations 1:5.

**SECTION 15: TOP ALCOHOL FUNNY CAR, ENGINE: 1, SUPERCHARGER
(Page 4) (1/18/2023)**

Screw-type superchargers must meet SFI Spec 34.1, PSI brand limited to 206D model ("D" rotor) supercharger, PSI brand 210C ("C" rotor) prohibited, and be reinspected by the manufacturer every three years. Manifold burst panel meeting SFI Spec 23.1 (in addition to panel in supercharger) plus restraint system meeting SFI Spec 14.21 mandatory. Billet cases prohibited. Supercharger restraint straps must be covered with a fire-resistant material. The blower restraint straps and fuel lines must be installed such that when the restraint straps are fully extended no load is placed on any of the fuel lines. Variable multi-speed supercharger devices prohibited. Turbocharger(s) prohibited. Cars with a supercharger/intake manifold burst panel in the rear must have a .024-inch steel, or .032-inch aluminum ducting, or carbon fiber ducting lined with an NHRA-accepted flame-retardant covering or coating, 4-inch minimum diameter, installed to relieve burst pressure from the burst panel(s) vicinity through the firewall and out the side window. A NHRA approved burst

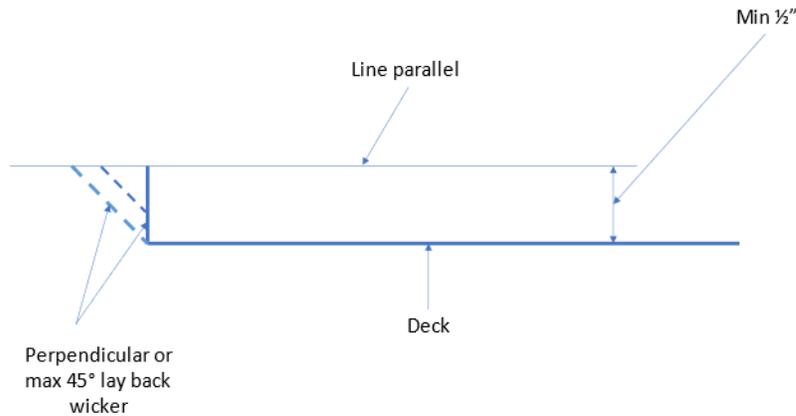
panel deflector can be used in lieu of ducting. See General Regulations 1:10, 1:11.

SECTION 15: TOP ALCOHOL FUNNY CAR, FRAME: 4, ROLL-CAGE PADDING (Page 7) (1/18/2023)

Roll-cage padding meeting SFI Spec 45.1 mandatory where driver's helmet may come in contact with roll-cage components. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory. Additional padding must be ~~NHRA-accepted (with manufacturer's name displayed)~~, securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. ~~A current list of NHRA-accepted lateral head supports is available on NHRA Racer.com.~~ See General Regulations 4:11.

SECTION 15: TOP ALCOHOL FUNNY CAR, BODY: 7, SPILL PLATES/WICKERS (Page 10) (1/18/2023)(5/16/2023)(7/13/2023)

Rear spill plates cannot be "built in" to body. Rear deck relocation cannot extend more than one-third of the as-produced replica body's rear window. Side surfaces of elevated decks must be completely covered by spill plates. Must have two (2) spill plates, one above each rear quarter panel. Minimum 380 square inches of surface area. Maximum 5 inches above roof line. Must run parallel to each other along entire surface, no less than 50 inches apart and no more than 54 inches apart. Rear spill plates cannot be located forward of the centerline of the rear axle and onto rear quarter. Rearmost point of spill plate may not exceed 60 inches past the centerline of the rear axle. Spill-plate supports permitted on one side of spill plate only, not both. Lip on rear edge of spill plate (vertical) .5-inch maximum. ~~All entries~~ 6th Generation Camaro bodies (2016 and newer) must have the following wickers: must use a Minimum 1/2-inch ~~tall 90-degree vertical~~ wicker along the trailing edge of rear deck surface, between the spill plates. ~~Top edge of wicker may terminate with a rearward facing angle; Wicker may have up to a 45-degree angle from vertical. but the overall height of wicker may not exceed 2 inches tall.~~ All wickers must span the entire width.



~~Installation of vortex generators is prohibited on car body. Any adjustment or movement during run prohibited.~~ Wickers required on front wheel openings, minimum 1/2-inch wide, 1.5 inch maximum. Must run from front lower splitter up to within 1 inch of axle centerline on body. Cannot extend past axle centerline. Wicker may be used on rear wheel opening. Wheel opening wickers only allowed on front half of opening. 1-inch tall blower/injector opening wicker required. Any other wicker, spoiler, or wing not permitted. [Installation of vortex generators is prohibited on car body. Any adjustment or movement during run prohibited.](#)

SECTION 15: TOP ALCOHOL FUNNY CAR, ELECTRICAL: 8, EFI (Page 11) (5/10/2023)

Electronic Fuel Injection permitted [only on blown alcohol combinations.](#) EFI entries must have an NHRA-accepted ECU, software, and firmware. A current list of NHRA-accepted ECUs, software, and firmware can be found on NHRAracer.com See General Regulations 9:1, 9:11.

SECTION 15: TOP ALCOHOL FUNNY CAR, ELECTRICAL: 8, IGNITION (Page 11) (5/10/2023)

Programmable ignition permitted. [Multi-coil \(coil on plug/coil near plug\) systems permitted only on blown alcohol combinations.](#) Only preset times, throttle position, engine rpm, other internal engine data (temperatures, flow rates, and pressures), and transmission shifts may be processed with regard to control of the ignition system. Any ignition system that incorporates any programmable multi-point rev limiter and/or any rate-of-acceleration rpm limiter in any form is prohibited. Any ignition system that incorporates vehicle performance data via measurement, sensing, processing, inference, etc., to activate or deactivate any function or capability of the ignition system is prohibited. Any sensor or wiring that connects or transmits vehicle performance data directly, or indirectly, to the ignition system is prohibited. Ignition system components must be utilized in an unaltered

manner consistent with the manufacturer's installation and instruction manuals unless otherwise approved. The use of any automated rpm-control device during the staging/launching process is permitted. See General Regulations 8:3.

SECTION 15: TOP ALCOHOL FUNNY CAR, DRIVER: 10, DRIVER RESTRAINT SYSTEM (Page 12) (5/16/2023)

All belts must be covered with a fire-resistant covering. Minimum 6-point driver restraint system meeting SFI Spec 16.1 mandatory. All shoulder, lap, and leg straps may be wrapped around a frame or chassis tube, provided the belt is properly aligned toward the direction of pull. When fastened with driver in position, absolutely no "folds" are permitted in any belt(s). Otherwise, all belts must be mounted to the chassis via mounting brackets that are bolted or welded to the chassis per the manufacturer's instructions. If the bracket is bolted through frame rail or chassis tube, the hole in frame rail or chassis tube must be bushed, with both ends of the bushing completely welded to the tube. Whether mounted directly to frame or to a tab welded to the frame, the mounting bracket Section 14, page 11 Top Alcohol Dragster attachment bolt must be in double shear and of shoulder bolt design so as to permit the bracket to pivot and align toward the direction of pull. Shoulder belts may utilize two individual straps, each with its own mount and mounting point; for a single strap, it must wrap a minimum of 540 degrees around the shoulder hoop. Mounting points must be covered with either sheet metal or an acceptable fire-resistant material. See General Regulations 10:5.

SECTION 15: TOP ALCOHOL FUNNY CAR, DRIVER: 10, HELMET (Page 12) (5/05/2023)

For all cars, a full-face Snell: SA2015, SA2020, FIA: 8860-2010, 8859-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited). Eject Helmet Removal System (part number SDR 890-01-30) mandatory and must be installed per manufacturer instructions. A Stand 21 Lid Lifter head sock meeting SFI 3.3 may be used in lieu of the Eject Helmet Removal System. See General Regulations 10:7.

SECTION 15: TOP ALCOHOL FUNNY CAR, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 12) (2/14/2023)(5/05/2023)

One piece driver's suit meeting SFI Spec 3.2A/20, gloves 3.3/20, boots 3.3/20, and head sock 3.3 mandatory. All ~~jacket and pants or~~ driver suits that meet SFI Spec 3.2A/20 must be recertified on a five-year interval. ~~Beginning August 1, 2022, Glove under-liners made of flame retardant material and socks meeting SFI 3.3 mandatory. Additionally, beginning August 1, 2022, when utilizing a two piece driver's suit, long sleeve underwear shirt meeting SFI 3.3 and long underwear pants meeting SFI 3.3 are required.~~ All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex, etc.) are prohibited. **All metallic jewelry prohibited, with the exception of a high temperature rated silicone wedding band.** ~~Beginning January 1, 2023, a one-piece driver's suit is mandatory in addition to above requirements. See General Regulations 10:10.~~

**SECTION 16: PRO STOCK MOTORCYCLE, DESIGNATION, (Page 1)
(12/6/2022)(5/05/2023)(6/15/2023)(8/07/2023)**

PRO, preceded by motorcycle number.

Reserved for 1998 or later production stock-appearing, gas-burning, naturally aspirated motorcycles. Minimum weight at conclusion of run, including rider:

S and S (must be NHRA-accepted)

Gen 1 (up to 160 cid; 60-degree angle, 2-valve, pushrod) – ~~635~~ 625 pounds

Gen 2 (up to 160 cid; 60-degree angle, 2-valve, pushrod) – ~~635~~ 625 pounds

VTwin: VH160VT

(up to 160 cid; 60-degree angle, 2-valve, pushrod) – ~~635~~ 625 pounds

Kawasaki (must be NHRA-accepted)

(up to 107 cid, 2- or 4-valve) – 575 pounds

Suzuki (must be NHRA-accepted)

(up to 107 cid, 2-valve) – 580 pounds

(up to 107 cid, 4-valve) – 610 pounds

Suzuki (must be NHRA-accepted)

(up to 113 cid, 2-valve) – ~~590~~ 570 pounds

(up to 113 cid, 4-valve V&H head) – ~~630 625 635~~ 640 pounds

(up to 113 cid, 4-valve Monster head) – 630 pounds

NHRA reserves the right to adjust weights as performance dictates.

Once an engine is used in a motorcycle at an event, that engine ~~C~~ cannot be used in another motorcycle for the duration of the event. Engine shall consist of engine cases, crankshaft, block, and cylinder heads. Cases and heads will be serialized or otherwise identified at each event.

Serial number or identification mark on cases must be visible with body removed.

Any competitor who causes an oildown while participating at an NHRA Camping World event will be subject to fines and penalties as outlined in Section 2 - Oildown Penalties.

SECTION 16: PRO STOCK MOTORCYCLE, ELECTRICAL: 8, IGNITION (Page 5) (10/06/2023)

All ignition systems and/or components must be NHRA-accepted. A current list of NHRA-accepted ignition systems is available on NHRARacer.com. Any other attachment prohibited. Ignition systems and/or components must be utilized in an

unaltered manner consistent with the manufacturer's installation and instruction books unless otherwise approved. See General Regulations 8:3.

External belt-drive magneto ignitions prohibited. Must be equipped with a positive ignition cutoff switch attached to the rider with a **nylon** lanyard. Switch must be on low-voltage side of ignition circuit.

SECTION 16: PRO STOCK MOTORCYCLE, RIDER: 10, PROTECTIVE EQUIPMENT (Page 6) (2/14/2023) (3/25/2023)(3/29/2023)

Full all-leathers or non-leather suits meeting SFI Spec 40.1/2 mandatory, leather boots that completely cover the ankle, and leather gloves are mandatory. Gloves must be Kevlar-lined or equipped with slide buttons. Suits may be one-piece design or joined with a metal 360-degree zipper at the waist. Beginning January 1st, 2024, all-leathers must have the manufactured date sewn into the suit, and will have an expiration period of 5 years, including the year on the tag. All jewelry prohibited, with the exception of a high temperature rated silicone wedding band. See General Regulations 10:10.

SECTION 17: PRO STOCK, FRAME: 4, ROLL-CAGE PADDING (Page 7) (1/18/2023)

Roll-cage padding meeting SFI Spec 45.1 mandatory anywhere driver's helmet may come in contact with roll-cage components. Additional padding mounted on flat stock and fastened to the roll cage on both sides of the driver's helmet, mandatory. Additional padding must be ~~NHRA-accepted (with manufacturer's name displayed)~~, securely mounted using bolts or locking fasteners, and must include a flame-retardant covering. ~~A current list of NHRA-accepted lateral head supports is available on NHRA Racer.com.~~ See General Regulations 4:11.

SECTION 17: PRO STOCK, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 12) (2/14/2023)

Jacket and pants or suit meeting SFI Spec 3.2A/15, gloves meeting SFI Spec 3.3/5, and shoes meeting SFI Spec 3.3/5 mandatory. An SFI 3.3 head sock or SFI 3.3 skirted helmet is required on all cars, where a neck collar is not used. **Beginning August 1, 2022**, socks meeting SFI 3.3 mandatory. **Additionally, beginning August 1, 2022**, when utilizing a two-piece driver's suit, long sleeve underwear shirt meeting SFI 3.3 and long underwear pants meeting SFI 3.3 are required. All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex, etc.) are prohibited. **All metallic jewelry prohibited, with the exception of a high temperature rated silicone wedding band. Beginning January 1, 2023, a one-piece driver's suit or a two-piece driver's suit with the undergarments as described above ~~will be is~~ mandatory in addition to the other requirements listed in this section.** See General Regulations 10:10.

SECTION 18: FUNNY CAR, ENGINE: 1, INJECTOR HAT (Page 3) (1/18/2023)

Each throttle blade must have a contrasting color located on the forward outside face. The throttle blades must be clearly identified from a distance and cannot be all black. Contrasting colors can be represented by a sponsor's logo, color of the throttle blades, decals placed on throttle blade, etc. Maximum permitted fuel injector air inlet opening: 65 square inches, excluding cross shaft in fully open position. The maximum accepted height from the crankshaft centerline to the top of the injector hat is 34.000 inches. The injector hat shall extend forward no more than 10.375 inches from the front of the injector hat to the front bolt on the blower case opening. Electronic or electrically controlled fuel injection prohibited. Any NHRA-approved modification must be performed by the original manufacturer only.

SECTION 18: FUNNY CAR, ENGINE: 1, INTAKE MANIFOLD (Page 3) (2/28/2023)

Accepted setback manifolds: AJPE Stage III 25A-103 or 25A-110, JFR FAM1174 and TBS-500. All other setback manifolds prohibited. Non-setback manifolds permitted if approved by NHRA. Manifold studs must be manufactured per NHRA specifications. Refer to NHRARacer.com for minimum requirements. If using the TBS-500 a tether is required connecting the two halves of the manifold. A current list of NHRA-accepted manifold restraints is available on NHRARacer.com. Manifold burst panel(s) meeting SFI Spec 23.1 mandatory. Any active burst panel(s) must be covered with a safety shutoff tether. Minimum of 2 separate hold down or tether anchor points must be used to attach or contain tether over each burst panel. Tether must be installed to minimize the distance between the face of the burst panel and the tether cable/ connector. A minimum of 1 tether connection must be installed over the face of each burst panel. Tape can be used over the tether connection to prevent accidental separation if kept to a minimum. Only one burst panel per opening allowed. When using AJPE Stage III 25A-103 manifold, one or both of the 10.75 square-inch round openings may be blocked off. Only one round opening may be blocked off when using AJPE Stage III 25A-110. When a block off plate is utilized on any round opening, a minimum of 12 each (24 each effective July 1, 2023) ¼-20 steel studs with locking nuts must be utilized to secure the blocking plate(s) to the manifold. ~~When a block off plate is utilized, only the front round opening can be blocked off, all other openings must be active. All hardware securing burst panels and burst panel block off plates to the intake manifold must use steel studs and self-locking nuts.~~ See General Regulations 1:10.

SECTION 18: FUNNY CAR, FRAME: 4, GROUND CLEARANCE, (Page 7) (2/28/2023)(5/10/2023)

~~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. See General Regulations 4:5.~~

3" minimum from front of car to 12 inches behind centerline of front axle, 2 inches for remainder of car while body is static. ~~If utilizing body mount springs, the body may exceed the minimum ground clearance rules, only during the run, leaving a minimum of 1 ½ inches ground clearance on the front of the body by a maximum of 1 inch (2 inches and 1 inch ground clearance minimum respectively). This measurement will be verified by forcing the body down onto the ground clearance steps.~~ All Funny Car bodies must meet the Funny Car Acceptance Process and Specifications (this document may be found on [NHRARacer.com/Rules/NHRA Product Specifications/...](http://NHRARacer.com/Rules/NHRA Product Specifications/)). The body support tree on the nose of the body must be constructed in a rigid manner. Rigid manner is defined as, assuring the nose does not flex in relationship to the rest of the body when pressure is applied, at NHRA's sole and absolute discretion. Oil pan and exhaust headers are excluded from ground clearance rules. See General Regulations 4:5.

**SECTION 18: FUNNY CAR, FRAME: 4, ROLL-CAGE PADDING (Page 8)
(1/18/2023)**

Roll-cage padding meeting SFI Spec 45.2 mandatory anywhere driver's helmet may come in contact with roll-cage components during tire shake or an accident. Additional padding meeting SFI 45.2 is also required around the steering column to protect the driver's knees during an accident. See Accepted Products/Roll Cage and Steering Column Padding on NHRARacer.com for an example of roll-cage and steering column padding. All roll-cage and steering column padding must be securely attached and be covered with flame-retardant material. ~~All roll-cage and steering column padding must be accepted by NHRA officials.~~

**SECTION 18: FUNNY CAR, FRAME: 4, TOW-STRAP HOOPS, (Page 8)
(1/18/2023)**

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

SECTION 18: FUNNY CAR, BODY: 7, BODY LATCHES, (After BODY subsection) (Page 9) (1/18/2023)

While the engine is running, and the body is lowered, one front latch is required to be functional and in the locked position from the time the vehicle exits the water box and returns to stage. Before the driver stages, two latches are required to be functional and in the locked position.

**SECTION 18: FUNNY CAR, ELECTRICAL: 8, IGNITION SYSTEMS (Page 10)
(1/18/2023)**

The use of ignition systems and/or components is limited to those that have been NHRA accepted for competition. The MSD 8771 is the only accepted unit for NHRA competition.

Individual Cylinder Timing permitted. Any ignition system and/or components other than those specified must be NHRA-accepted prior to usage. Any other attachment prohibited. Ignition systems and/or components must be utilized in an unaltered manner consistent with the manufacturer's installation and instruction books unless otherwise approved. Maximum two spark plugs per cylinder. Spark plug tubes are mandatory and they must be made of stainless steel or aluminum. Removable or pin-type timing pointers prohibited.

SECTION 18: FUNNY CAR, SUPPORT GROUP: 9, SHUTOFF DEVICE (Page 11) (4/17/2023)

Kit (part number SB001FC, SB002FC, or CM3.0) and Electrimotion Shutoff Receiver (part number RF001) mandatory. The Electrimotion Funny Car Safety Shutoff Controller Kit must be installed per the manufacturer's instructions. The Electrimotion Funny Car Safety Shutoff Controller Kit must trigger the following four outputs when the "Wall RF Signal" input becomes active. The four outputs are as follows: disengage the throttle blades/pedal, close the fuel pump shutoffs, turn off ignition power, and deploy the parachutes. Modification of or tampering with the Electrimotion Funny Car Safety Shutoff Controller Kit prohibited. The activation of the system override switch by any means other than parachute deployment is prohibited. The Electrimotion Crew Alert Box, part number CB001 and the Motorsports Safety Electronics Shutoff System part number MS1150, may be used in conjunction with the Shutoff Device to illuminate a dash light for driver notification, disengage throttle and/or enable the shutoff device. Any other use of the Electrimotion Crew Chief Alert box or the Motorsports Safety Electronics Shutoff System is prohibited.

SECTION 18: FUNNY CAR, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 12) (2/14/2023)

Driver's suit meeting SFI Spec 3.2A/20, long sleeve underwear shirt meeting SFI 3.3, long underwear pants meeting SFI 3.3, SFI Spec 3.3/20 gloves, glove underliners made of flame retardant material, SFI Spec 3.3/20 boots, socks meeting SFI 3.3, SFI Spec 3.3 head sock, and SFI Spec 3.3/10 helmet skirt mandatory. A shoe meeting SFI Spec 3.3/20 constructed such that the flame retardant material is at least six inches above the heel may be used in lieu of a 3.3/20 boot. All jacket/pants or suits meeting SFI Spec 3.2A/20 must be recertified on a five year interval. All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex etc.) are prohibited. **All metallic jewelry prohibited, with the exception of a high temperature rated silicone wedding band. Beginning January 1, 2023, a one-piece driver's suit ~~will be~~ is mandatory in addition to above requirements.** See General Regulations 10:10.

**SECTION 19: TOP FUEL DRAGSTER, ENGINE: 1, INJECTOR HAT (Page 3)
(1/18/2023)**

Each throttle blade must have a contrasting color located on the forward outside face. The throttle blades must be clearly identified from a distance and cannot be all black. Contrasting colors can be represented by a sponsor's logo, color of the throttle blades, decals placed on throttle blade, etc. Maximum fuel injector air inlet opening: 65 square inches measured at butterfly or throttle bodies, excluding cross shaft in fully open position. The maximum accepted height from the crankshaft centerline to the top of the injector hat is 46.000 inches. The injector hat shall extend forward no more than 10.375 inches from the front of the injector hat to the front left cylinder mounting stud/bolt for the intake manifold to cylinder-head attachment. Maximum throat inlet opening, 65 square inches. Electronic or electrically controlled fuel injection prohibited. Any NHRA-approved modification must be performed by the original manufacturer only.

**SECTION 19: TOP FUEL DRAGSTER, ENGINE: 1, INTAKE MANIFOLD (Page 4)
(2/28/2023)**

Accepted setback manifolds: AJPE Stage III 25A-103 or 25A-110, JFR FAM1174 and TBS-500. All other setback manifolds prohibited. Non-setback manifolds permitted if approved by NHRA. Manifold studs must be manufactured per NHRA specifications. Refer to NHRARacer.com for minimum requirements. If using the TBS-500 a tether is required connecting the two halves of the manifold. Front manifold restraint meeting SFI 14.5 mandatory on JFR FAM1174 intake manifolds. A current list of NHRA-accepted manifold restraints is available on NHRARacer.com. Manifold burst panel(s) meeting SFI Spec 23.1 mandatory. Any active burst panel(s) must be covered with a safety shutoff tether. Minimum of 2 separate hold down or tether anchor points must be used to attach or contain tether over each burst panel. Tether must be installed to minimize the distance between the face of the burst panel and the tether cable/ connector. A minimum of 1 tether connection must be installed over the face of each burst panel. Tape can be used over the tether connection to prevent accidental separation if kept to a minimum. Only one burst panel per opening allowed. When using AJPE Stage III 25A-103 manifold, one or both of the 10.75 square-inch round openings may be blocked off. Only one round opening may be blocked off when using AJPE Stage III 25A-110. When a block off plate is utilized on any round opening, a minimum of 12 each (24 each effective July 1, 2023) 1/4-20 steel studs with locking nuts must be utilized to secure the blocking plate(s) to the manifold. ~~When a block off plate is utilized, only the front round opening can be blocked off, all other openings must be active. All hardware securing burst panels and burst panel block off plates to the intake manifold must use steel studs and self-locking nuts.~~ See General Regulations 1:10.

**SECTION 19: TOP FUEL DRAGSTER, FRAME: 4, ROLL CAGE (Page 9)
(8/07/2023)**

Beginning January 1st, 2024, all chassis must meet SFI Spec 2.3 (rear-engine cars) except that the "Tubing Minimum" for the front half top and bottom frame

rails will be 1.25 x .058". Chassis must be recertified yearly by NHRA and have serialized sticker affixed to frame the front half, main cockpit, back half, and wing stand before participation. Cars without crossmember above driver's legs must have a strap or device to prevent legs from protruding outside chassis. Routing of cables, electrical wiring, and hydraulic or pneumatic lines inside the chassis is permitted. See General Regulations 4:4, 4:11, 10:6.

SECTION 19: TOP FUEL DRAGSTER, FRAME: 4, ROLL-CAGE PADDING (Page 9) (1/18/2023)

Roll-cage padding meeting SFI Spec 45.2 mandatory anywhere driver's helmet may come in contact with roll-cage components during tire shake or an accident. See Accepted Products/Roll Cage and Steering Column Padding on NHRARacer.com for an example of roll-cage padding. ~~All roll-cage padding must be accepted by NHRA officials.~~

SECTION 19: TOP FUEL DRAGSTER, ELECTRICAL: 8, IGNITION SYSTEMS (Page 12) (1/18/2023)

The use of ignition systems and/or components is limited to those that have been NHRA-accepted for competition. The MSD 8771 is the only accepted unit for NHRA competition.

Individual Cylinder Timing permitted. Any ignition system and/or components other than those specified must be NHRA-accepted prior to usage. Any other attachment prohibited. Ignition systems and/or components must be utilized in an unaltered manner consistent with the manufacturer's installation and instruction books unless otherwise approved. Maximum two spark plugs per cylinder. Spark plug tubes are mandatory and they must be made of stainless steel or aluminum. Removable or pin-type timing pointers prohibited.

SECTION 19: TOP FUEL DRAGSTER, SUPPORT GROUP: 9, SHUTOFF DEVICE (Page 14) (4/17/2023)

Properly installed and operational Electrimotion Top Fuel Safety Shutoff Controller Kit (part number SB001TF, SB002TF, or CM3.0) and Electrimotion Shutoff Receiver (part number RF001) mandatory. The Electrimotion Top Fuel Safety Shutoff Controller Kit must be installed per the manufacturer's instructions. The Electrimotion Top Fuel Safety Shutoff Controller Kit must trigger the following four outputs when the "Wall RF Signal" input becomes active. The four outputs are as follows: disengage the throttle blades/pedal, close the fuel pump shutoffs, turn off ignition power, and deploy the parachutes. Modification of or tampering with the Electrimotion Top Fuel Safety Shutoff Controller Kit prohibited. The activation of the system override switch by any means other than parachute deployment is prohibited. The Electrimotion Crew Alert Box, part number CB001 and the Motorsports Safety Electronics Shutoff System part number MS1150, may be used in conjunction with the Shutoff Device to illuminate a dash light for driver notification, disengage throttle and/or enable the

shutoff device. Any other use of the Electrimotion Crew Chief Alert box or the Motorsports Safety Electronics Shutoff System is prohibited.

SECTION 19: TOP FUEL DRAGSTER, DRIVER: 10, PROTECTIVE EQUIPMENT (Page 15) (2/14/2023)

Driver's suit meeting SFI Spec 3.2A/20, long sleeve underwear shirt meeting SFI 3.3., long underwear pants meeting SFI 3.3, SFI Spec 3.3/20 gloves, glove under-liners made of flame retardant material, SFI Spec 3.3/15 boots/ shoes, socks meeting SFI 3.3, SFI Spec 3.3 head sock, and SFI Spec 3.3/10 helmet skirt mandatory. All jacket/pants or suits meeting SFI Spec 3.2A/20 must be recertified on a five-year interval. All clothing containing metal or plastic prohibited. Undergarments that are worn in addition to those mandated that are made of flammable materials (e.g. nylon, rayon, polyester, spandex etc.) are prohibited. **All metallie jewelry prohibited, with the exception of a high temperature rated silicone wedding band.** Beginning January 1, 2023, a one piece driver's suit **will be is** mandatory in addition to above requirements. See General Regulations 10:10.

SECTION 21: GENERAL REGULATIONS, 1:11 SUPERCHARGER RESTRAINT DEVICE (Page 10) (8/23/2023)

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. Ball-lock pin attachment to engine brackets prohibited. See Class Requirements.

SECTION 21: GENERAL REGULATIONS, 1:13 VENT TUBES, BREATHEHS (Page 1) (10/06/2023)

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. Routing of vent tubes/hoses through drivers' compartment is permitted. Tubes/hoses must be NHRA-accepted when routed through drivers' compartment. See NHRARacer.com for a list of accepted vent tubes/hoses.

SECTION 21: GENERAL REGULATIONS, 10:4 CREDENTIALS (Page 43) (12/6/2022)

See NHRARacer.com for credential and license information.

~~Each driver of a vehicle entered in any event conducted at an NHRA member track must be at least 16 years of age (except Jr Dragster or Jr Street) and have either a valid state or government issued driver's license beyond a learner's-~~

~~permit level or NHRA Competition License for the vehicle they are racing (motorcycle, car, etc.) subject to inspection by officials at any time. In addition, a current NHRA license is required for participation in any divisional or national NHRA sanctioned event. All non-professional competitors at NHRA Camping World national events must be a minimum of 16 years of age. All professional competitors at NHRA Camping World national events must be a minimum of 18 years of age. A 17-year-old may apply for a Professional category license and national event entry 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).~~

PROFESSIONAL

	Type A	Type B	Type C	Type D
LEVEL 1	TF	FC	PS	PSM

PRO SPORTSMAN

LEVEL 2	TAD, NTF	TAFC, NFC	PM	TFH, PFH
LEVEL 3	COMP, TD, Adv. ET	COMP, TD, TS, Adv. ET	HU	Adv. ETM
LEVEL 4	SC	SC, SG, SST, SS, STK		
LEVEL 5	SST, SS, STK			

SPORTSMAN

LEVEL 6	ET	ET, HU	ETM, SM, ATV
LEVEL 7	ET	ET, HU	ETM, SM, ATV

All license applicants 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 quarter-mile runs of 5.20 or quicker and two runs of 260 mph or faster **OR** two 1,000-foot runs of 4.50 or quicker and 240 mph or faster

Funny Car Two quarter-mile runs of 5.50 or quicker and two runs of 250 mph or faster **OR** two 1,000-foot runs of 4.70 or quicker and 230 mph or faster

Pro Stock Two quarter-mile runs of 7.40 or quicker and 175 mph or faster

Pro Stock Motorcycle Two quarter-mile runs of 7.90 or quicker and two runs of 165 mph or faster

TAD/TAFC Two quarter-mile runs of 6.20 or quicker and two runs of 205 mph or faster

Pro Mod Two quarter-mile runs of 6.90 or quicker and two runs of 190 mph or faster

NTF/NFC/SPF Two quarter-mile runs of 6.99 or quicker

TFH Two quarter-mile runs of 7.50 or quicker

PFH Two quarter-mile runs of 8.30 or quicker

~~**Comp** Two quarter-mile runs representative of Comp class
TD/TS Two quarter-mile runs of 7.99 or quicker
Levels 4 and 6 Two quarter-mile runs of 9.99 or quicker **OR** 135 mph or faster~~

~~All Level 1-3 license applicants are required to have a completed and approved physical examination prior to making any test runs. Physical forms and license applications are available at NHRARacer.com. (License and physical will expire two years from end of the month of exam date.) Likewise, the vehicle used for test runs must be current with respect to rules and regulations for the class/license being applied for. To obtain a new permanent competition license or renew a license, please visit NHRARacer.com for the applications.~~

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 wheel-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.~~

SECTION 21: GENERAL REGULATIONS, 10:8 NECK COLLAR/HEAD AND NECK RESTRAINT DEVICE/SYSTEM (Page 46) (3/25/2023)(3/29/2023)

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 meeting SFI 38.1 is mandatory for any vehicle running 200 mph or faster or running 7.49 (*4.49) or quicker or by Class Requirements.

Beginning January 1st, 2024, A head and neck restraint device/system meeting SFI 38.1 is mandatory for any vehicle running 150 mph or faster for 1/4 or 1/8 mile or running 7.49 (*4.49) E.T. or quicker or by Class Requirements. An SFI 38.1 head and neck restraint device can be used with, or without, a neck collar; when a neck collar is not used, an SFI 3.3 head sock or SFI Spec 3.3 skirted helmet is required.

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.