



# NHRA Exhibition Vehicle Rulebook Supplement

## Revision History

Original Release: **12/14/2017**, Deleted Top Fuel Harley section and moved it to the NHRA Rulebook, Deleted Drag Racing Experience powered by Doug Foley and added Pure Speed Drag Racing to the Two-Seater Dragster Ride-Along Program

**2<sup>nd</sup> Release:** 1/3/2018, Remove SA2005 from approved helmet for Jet Trucks, Updated minimum helmet requirements for Two-Seater Dragster Ride Along Program from M2005 to M2010 and from SFI 31.1/2005 to SFI 31.1/2010

**3<sup>rd</sup> Release:** 2/19/2018, Added Jet Powered Dragster and Funny Car tire Goodyear D2934

**4<sup>th</sup> Release:** 2/19/2019, Added Mountain Motors, Updated Credentials for Jet Dragster, Jet Funny Car, and Jet Truck

**5<sup>th</sup> Release:** 3/7/2019, Updated Mountain Motor Pro Stock: Frame/Rollcage, Updated Jet Truck: Tires and Wheels/Tires

**6<sup>th</sup> Release:** 12/11/2019, Mountain Motor Pro Stock: Better definition of suspension, Prohibited inerters or damper inverter hybrids, Prohibited digressive spring devices and digressive springs.

**7<sup>th</sup> Release:** 2/14/2020, Mountain Motor Pro Stock: Permit inerters and damper inverter hybrids

**8<sup>th</sup> Release:** 2/17/2020, Mountain Motor Pro Stock: Maximum wicker height changed to 1".

**9<sup>th</sup> Release:** 8/20/2020, Clarifications to Two-Seater Dragster Ride Along Program

**10<sup>th</sup> Release:** 8/28/2020, Added Snell SA2020, M2020 and SFI 31.1/2015 helmets where necessary

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**11<sup>th</sup> Release:** 6/18/2021, Added SFI 31.1/2020, SFI 41.1/2020 helmets and 8860 helmets

**12<sup>th</sup> Release:** 11/5/2021, Added Modern Fuel Altered, Added Factory Experimental

**13<sup>th</sup> Release:** 12/16/2021, Various changes to Factory X (see highlighted edits), removed duplicate language from Two-Seater Dragster Ride Along Program

**14<sup>th</sup> Release:** 1/20/2022, Added NHRA Factory X Presented by Holley Logo, Added starter ring gear minimum diameter in Factory X (see highlighted edits)

**15<sup>th</sup> Release:** 1/27/2022, Made changes to Exhibition Fuel Motorcycle involving ground clearance requirements, fork tuning arc requirements and brake rotor requirements (see highlighted edits)

**16<sup>th</sup> Release:** 3/1/2022, Added Docol R8 everywhere chromoly tubing is used, Removed editing notes in Factory X and Exhibition Motorcycle Sections

**17<sup>th</sup> Release:** 6/17/2022, Changes to Throttle Body and Wheelbase language in Factory X, Added to all motorcycles front fork suspension outer tubes must be a one-piece design requirement.

## National Hot Rod Association

These exhibition vehicle supplemental programs, that incorporate technical and competition guidelines, have been established to accommodate specialized vehicles not currently defined within the NHRA Rulebook.

The rules and regulations set forth in this document apply specifically to such vehicles and drivers, and to performance and conduct at any NHRA member track.

These rules and regulations are excerpts from, or supplements to the NHRA Rulebook. Participants and track officials should consult the current NHRA Rulebook for additional applicable information. Unless otherwise noted the requirements of the General Regulations section are applicable to all vehicles included in this supplement.

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# **MOUNTAIN MOTOR PRO STOCK**

## **DESIGNATION**

MPS, preceded by competition number.

Reserved for 2000 or later model year NHRA accepted 2-door or 4-door coupe or sedan (domestic or foreign) production vehicles. Body, drivetrain, chassis etc. may not be altered, modified, or relocated, except outlined in Requirements & Specifications. Minimum weight at conclusion of run is 2400 pounds with a Lenco Transmission and 2415 with a Liberty Transmission at conclusion of run.

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 short block and heads, and will be serialized or otherwise identified at each event.

## ***REQUIREMENTS & SPECIFICATIONS***

### **ENGINE: 1**

#### **CARBURETORS**

Limited to any two 4-bbl. American automotive carburetors available to the general public with any internal modifications. Carburetors may be split.

#### **CYLINDER HEADS**

Cylinder heads must be configured after OEM pattern, contain OEM or aftermarket factory casting number & logo, and must be available to the general public. Heads must be aluminum or cast iron. No billet materials, magnesium or other materials allowed. Maximum 2 valves, and one spark plug per cylinder.

#### **ENGINE**

Internal combustion, reciprocating, naturally aspirated, single camshaft, 90 degree V-8 automotive-type mandatory. Crankshaft centerline must intersect cylinder bore centerlines and be symmetrical. Limited to 833ci hemi and 843 ci on wedge entries, no tolerance. Blocks may be aluminum or cast iron. No magnesium or other materials allowed. One distributor maximum. Maximum 5" bore spacing. Every engine must have an individual Serial No. given by engine builder. The Serial No. must be located in a clearly visible place on the cylinder heads and block. All moving engine components must be accepted prior to utilization. Additionally, the use of beryllium, carbon fiber/kevlar, ceramic, or composites are prohibited from use on these components. The rod and main bearing assemblies must be of conventional sleeve design.

#### **ENGINE SETBACK**

Maximum setback is 80.125" as measured from the center of the rear axle to the back of the engine block. Modifications to the block that would permit additional setback are prohibited.

#### **EXHAUST SYSTEM**

Open exhaust with headers mandatory. Side exit exhaust systems prohibited. All removable multi-piece exhaust collectors/stacks must be securely fastened with either an NHRA-accepted header tether, a minimum ½" (half-inch) stitch weld located on each primary tube or be permanently attached to the vehicle body or frame with positive

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fasteners (i.e. exhaust hangers, support brackets, bolts/nuts, etc.) such that they require tools for removal.

### **FUEL INJECTION**

Permitted. EFI controller manufacturer, model, firmware and software must be approved for use by the NHRA Technical Services Department and must be commercially available to all competitors prior to use in competition. Maximum of 16 injectors placed in any location above the cylinder head. EFI controller must operate in an open loop configuration with no connection to oxygen sensor or EGT sensor. EFI controller is stand alone, fuel only with rpm signal provided from crank and or distributor trigger separate from the ignition trigger. EFI controller can have output to data logger only. Oxygen sensors cannot be connected to the EFI controller. EFI controller acceleration, drive shaft, wheel speed, track position, etc. The only sensors to be utilized and or monitored with the EFI controller are coolant temperature, fuel pressure, IAT (Inlet Air Temperature), MAP (Manifold Air Pressure) and TPS (Throttle Position Sensor). Competitors may utilize either 2-4 blade or 4-2 blade throttle bodies. Throttle bodies must be installed with throttle blades in a horizontal location. Forward facing throttle bodies are not permitted. Throttle bodies must be production units commercially available to all competitors prior to use in competition. Intake manifold must be of conventional design with no active components, i.e., runners. Inlet air must be drawn from a single opening, forward facing hood scoop of conventional design. EFI and carburetion cannot be combined on an intake manifold.

### **FUEL**

Propylene oxide and/or nitrous oxide prohibited. See General Regulations 1:6.

### **FUEL SYSTEM**

All fuel cells must be NHRA-accepted (JAZ #220-015, 220-115-01, and 220-315-01): maximum 1 1/2 -gallon fuel cell meeting SFI Spec 28.1 mounted in front of radiator mandatory: must be mounted between frame rails and enclosed in a round tube frame, minimum 1 1/4-inch O.D. x .065 chromoly or Docol R8 tubing. The round tube frame must be attached to a cross member constructed of minimum 1 1/4 O.D. x .065-inch chromoly or Docol R8 tubing. All other designs must be NHRA accepted. 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.

### **OIL-RETENTION DEVICE**

All vehicles must utilize an NHRA-accepted lower engine oil-retention device; may use a belly pan in lieu of device attached to engine. Pan must be constructed of an NHRA-accepted 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 frame rails. Minimum number of slots or holes in the walls to clear frame, steering, or lines permitted. 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 non-flammable, oil-absorbent liner mandatory inside retention device.

### **RADIATOR**

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

### **THROTTLE**

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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

### **DRIVETRAIN: 2**

#### **CLUTCH, FLYWHEEL, FLYWHEELSHIELD**

Flywheel and clutch meeting SFI Spec 1.1, 1.2, 1.3, or 1.4 mandatory. Flywheel shield meeting SFI Spec 6.2 or 6.3 mandatory on any car using SFI Spec 1.3 or 1.4 clutches. 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 finger, 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. Full 360-degree drive shaft tube required over yoke, extended from transmission tail shaft a minimum length of 12" required from transmission tail shaft. Minimum thickness of tube housing is .050" chromoly, Docol R8, or titanium. Two-piece accepted with minimum 6 3/8" grade 8 bolts. See General Regulations 2:4.

### **BRAKES AND SUSPENSION: 3**

#### **BRAKES**

Four-wheel brakes mandatory with dual master cylinder mounted above frame rails on all entries. Steel brake lines mandatory.

#### **STEERING**

Stock-type steering in conventional location required. Minimum steering wheel outside diameter is 12". SFI 42.1 disconnect is mandatory.

#### **SUSPENSION**

Full automobile production systems required. One hydraulic damper, inerter or damper inerter hybrid required per wheel, for a maximum of four per vehicle. Lightening of stock components prohibited. Rigid mounted suspensions or straight front axles prohibited. Digressive spring devices and digressive springs prohibited.

#### **WHEELIE BARS**

Required. Non-metallic wheels required. Maximum length of wheelie bar 80" from center of housing to center of wheelie bar wheel.

### **FRAME: 4**

#### **BALLAST**

250 lbs maximum. Shot bags must be contained in weight box. Ballast attached on or in front of the forward cross member is limited to 40 lbs maximum, including bracket. The bracket may not exceed 12" in length, measured from the cross member, attached with a minimum of (4) 1/2" bolts. The maximum distance from the front of the bracket to the front of the motor plate is 36". Any car found with unsecured or illegal ballast following a



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run will be disqualified from the event at discretion of the NHRA Technical Services Department.

### **GROUND CLEARANCE**

Minimum 3" from front of car to 12" behind centerline of front axle, 2" for remainder of car.

### **PARACHUTE**

Dual parachutes required. Separate shroud-line mounting points with 1/2" sleeved grade 8 bolts required.

### **ROLLCAGE**

Chassis must meet SFI Spec 25.1. Chassis must be recertified yearly by NHRA and have a serialized sticker affixed to roll cage before participation. See General Regulations 4:4, 4:11, 10:6.

### **ROLLCAGE PADDING**

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 [NHRAracer.com](http://NHRAracer.com). See General Regulations 4:11.

### **WHEELBASE**

Minimum 100, Maximum 105. Maximum variation is 1" side to side.

## **TIRES & WHEELS: 5**

### **TIRES**

Slicks permitted. Must be automotive type designed for racing. All tires must have manufacturer, model and size information clearly designated if used in competition. Clearance from outside of front tire to inside of fender at widest point not to exceed 4". Rear clearance 3" from outside of tire to inset of fender at widest point. Inner liners accepted. No Radial Tires allowed.

### **WHEELS**

SFI 15.1 bead-lock rear wheels mandatory. Maximum width 16".

## **INTERIOR: 6**

### **SEATS/UPHOLSTERY**

Must be in stock location. Driver's seat to be no less than 24" from center of rear axle to seat back (where shoulder harness passes through). Seat frame of chromoly or Docol R8 tubing must be installed as a permanent part of the chassis. "Wrap around" type seat or fiberglass one-piece bucket accepted. Dash board exterior appearance must be retained: replicas of original allowed. Head liner optional; area must be painted if headliner is not used. Driver's seat foamed with energy absorbing material, formed for the driver and covered with flame retardant material is required. Lateral helmet supports required.

### **WINDOW NET**

SFI 27.1 Required.

## **BODY: 7**

### **BODY**

Must be 2000 or later model year factory produced 2 door coupes and sedans. Sports cars, sedan deliveries and trucks prohibited. Original OEM body shell or NHRA accepted composite replacement required. Chopping, channeling, sectioning, or other alterations to contour, length or width are prohibited. All composite replacement parts must be NHRA accepted and exact duplicates of OEM components and may not be modified. The front end may be lengthened in the cowl area to facilitate body relocation and wheelbase modifications. The maximum front- end overhang on all entries is 45 inches.

### **DOORS**

Must be functional from inside and outside. NHRA duplicates in fiberglass or carbon fiber permitted. All entries must incorporate a metal deflector between the fenders and the leading edge of the doors.

### **FIREWALL**

Moving stock firewall rearward for engine installation permitted. Replacing stock unit with one of .024" steel or .032" aluminum allowed; Magnesium prohibited.

### **FLOOR**

Replacing stock floors with .024" steel or .032" aluminum allowed. Replaced floors must be stock in appearance and location. Driver's side floor pan must be steel and must extend from firewall to rear of driver's seat and must be welded in place. Chassis, frame and drive line must be below floor. Rear floor may not be higher than 8" above door sill. Belly pan mandatory between the center frame rails extending from the rear to the front cross member or to the bell housing. All pans must be designed to facilitate fluid retention. If belly pan is utilized, the drip pan or secondary oil retention blanket is not required.

### **GRILL**

Must be full stock production for body used and visible from front. May have covering over back of grille to prevent air passage. Any factory accessory package must be accepted by NHRA Tech Department, i.e., spoilers, air dams, etc.

### **BUMPERS**

Stock or composite duplicates required front and rear, may be molded into body. Must be NHRA accepted.

### **SPOILERS**

Rear spoilers must measure between 14" to 17", measured from the body line at spoiler transition point to the tip and may have no less than 0 degrees from horizontal. May not be molded into deck lid. All spoilers to be painted to match paint scheme. Rear of chute pack cannot be forward of rear tip of spoiler. Roof-mounted spoilers prohibited. Air foils prohibited. Any front spoiler used must have been factory available for body used. Spoiler outside of deck lid opening may not exceed 8" wide. Spill plates may be no more than 6" high and 26" long. Spill plate may not be molded to the quarter panel. 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 can be no more than 2". A wicker bill must be attached across the entire trailing edge of the spoiler. It must be constructed and attached in a way that will prevent air from passing under or through the unit. It must be 90 degrees from top of horizontal plane and a minimum of 1/4" high and a maximum of 1" high.

### **WHEELWELLS**

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Rear, must be separate for each tire.

### **WINDSHIELD AND WINDOWS**

Full windows required, .125 polycarbonate materials, such as Lexan MR 4000, allowed. Must match original contour and shape, and mount in stock location. No bubbles in side windows for tire clearance. Windows must be closed, need not be operative. Cutting and/or notching windshield permitted if covered by hood scoop

### **HOOD AND HOOD SCOOP**

One opening only. The highest point of the hood scoop may not exceed 15" in overall height above the original hood surface, measured from the leading edge of the scoop. Must be finished and painted to follow body paint scheme. Hood must be stock size with no bubbles. Cowl section may be molded to hood. A minimum of four fasteners must be used on the leading edge of all lift-off hoods. Sensors, lines, or wires, etc. are prohibited from being in hood scoop.

## **ELECTRICAL: 8**

### **BATTERY**

Maximum two batteries. If mounted inside driver's compartment, battery must be located in a sealed .024-inch steel or titanium, or .032-inch aluminum box See General Regulations 8:1

### **IGNITION**

Aftermarket electronic ignition boxes may not be modified from factory specifications. If digital ignition system has internal programmable retard functions, all of the external wires that have the ability to activate similar functions must be clearly disconnected and removed from the wiring harness. (Ex. MSD 7530, 7530T and 75301 (pink, tan, violet and white wires). MSD 7730 power grid system allowed provided the MSD 7720 (Ignition Module), MSD 7740 (4 connector CAN-Bus Hub) and /or MSD 7751 (Launch Control Module) are the only products used to complete the ignition system. The 5 individual step retard wires (pink, violet, tan, light green and green) must be clearly disconnected. Any electronic traction control device prohibited.

### **MASTER CUTOFF**

Mandatory. See General Regulations 8:4

## **SUPPORT GROUP: 9**

### **FIRE EXTINGUISHER SYSTEM**

SFI 17.1 system required. System must contain a minimum of 5 lbs of fluid or gas fire suppression agent. One nozzle required inside driver's compartment must be directed at driver's feet. Two or more nozzles must be directed at front of engine and fuel cell.

### **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.

### **SHUTOFF DEVICE**

Properly functioning Electrimotion Pro Stock shutoff device (part numbers SB001 and RF001) required. The Electromotion Shutoff Controller kit must be properly installed per the manufacturer's instructions. Modification or tampering with the Electromotion Pro Stock Shutoff Controller Kit Prohibited.

### **TOW VEHICLES**

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

### **WARM-UPS**

See General Regulations of the NHRA Rulebook 9:5, 9:14.

## **DRIVER: 10**

### **CREDENTIALS**

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

### **DRIVER RESTRAINT SYSTEM**

Driver restraint system meeting SFI Spec 16.1 or 16.5 mandatory. See General Regulations 10:8.

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

System meeting SFI Spec 38.1 mandatory.

### **HELMET**

Full-face helmet meeting Snell: M2010, M2015, M2020, SA2010, 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's instructions. A Stand 21 Lid lifter head sock meeting SFI Spec 3.3 may be used in lieu of the Eject helmet removal System. See General Regulations 10:7.

### **PROTECTIVE CLOTHING**

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.

## **DIESEL TRUCK**

### **DESIGNATION**

This category is reserved for 18-wheeler, over-the-road-type trucks only. Pickups, passenger cars, El Camino-style, vans, etc. are prohibited.

Diesel Trucks are considered Exhibition vehicles only. Diesel Trucks may run against other Diesel Trucks only. Competition against other types of vehicles is prohibited.

Diesel Truck is restricted in that no vehicle shall run quicker than 11.99 (7.49 eighth-mile) or faster than 115 mph.

Refer to the current NHRA Rulebook or rule amendments for further vehicle/driver requirements, specifications, and general regulations.

Two classes of competition:

**Stock Truck:** maximum weight 16,000 pounds

**Hot Truck:** maximum weight 8,000 pounds

## ***REQUIREMENTS & SPECIFICATIONS***

## **ENGINE: 1**

### **ENGINE**

Must be of a type/style commercially produced for tractor-trailer-type trucks. Any internal modifications permitted.

### **FUEL**

Diesel or propane permitted. All other types of fuel prohibited. Nitrous oxide permitted.

### **SUPERCHARGER, TURBOCHARGER**

Permitted. Restricted to standard Roots-type supercharger. Rotor helix not to exceed standard 71 series GM-type rotor.

## **DRIVETRAIN: 2**

### **DRIVELINE**

Driveshaft loop required on all trucks running slicks and/or quicker than 14.00 (8.60) seconds.

## **BRAKES & SUSPENSION: 3**

### **BRAKES**

Four-wheel hydraulic or air brakes mandatory. Air brake systems must have sufficient air-tank capacity to maintain minimum 65 psi of pressure at all times.

### **SUSPENSION**

Stock-type suspension required. Must be beam-type axle with leaf springs.

## **FRAME: 4**

### **ROLL CAGE**

Mandatory on any truck running 13.99 (8.59) seconds or quicker. Roll cage configuration must follow Full Bodied configuration found in the NHRA Rulebook. Any truck running 13.99 (8.59) seconds and quicker must be inspected by NHRA and have a valid NHRA Sportsman Chassis Certification sticker affixed to the roll cage prior to participation, on a two-year interval. Tubing size: Hot Truck: 1 3/4-inch x .095-inch chromoly only Stock Truck: 1 5/8-inch x .083-inch chromoly or Docol R8; or 1 5/8-inch x .118-inch mild steel.

## **TIRES & WHEELS: 5**

### **TIRES**

Minimum front, 10.00 x 20-inch or tubeless equivalent. Slicks permitted in Hot Truck class only.

### **WHEELS**

Must be OEM for use on 18-wheeler-type truck.

## **BODY: 7**

### **BODY**

Must be an original or replica of a commercial truck to qualify for this program.

### **WINDSHIELD, WINDOWS**

OEM safety glass mandatory in Stock Truck. Lexan or Plexiglas replacement permitted in Hot Truck. Tinting prohibited in both categories.

## **ELECTRICAL: 8**

### **BATTERY**

Batteries must be securely mounted; may not be located in driver's compartment.

### **TAILLIGHTS**

Must have one functional taillight for night operation.

## **SUPPORT GROUP: 9**

### **TOW VEHICLES**

Permitted.

### **DRIVER: 10**

#### **DRIVER RESTRAINT SYSTEM**

Driver restraint system meeting SFI Spec 16.1 or 16.5, including crotch strap, mandatory in any truck running quicker than 14.00 (8.60) and in all Hot Trucks. Seat belts mandatory in all other trucks.

#### **HELMET**

Helmet meeting SFI: M2010, M2015, M2020, SA2010, SA2015, SA2020, SFI: 31.1/2010, 31.1/2015, 31.1/2020, 41.1/2010, 41.1/2015, 41.1/2020, FIA: 8860-2010, 8860-2015 or 8860-2018 Specs mandatory in all trucks running 13.99 (8.59) seconds or quicker.

#### **PROTECTIVE CLOTHING**

Drivers in trucks running 13.99 (8.59) seconds or quicker must wear a jacket meeting SFI Spec 3.2A/1.

## **EXHIBITION FUEL MOTORCYCLE**

### ***REQUIREMENTS & SPECIFICATIONS***

### **ENGINE: 1**

#### **ENGINE**

Must be of a type specifically designed and manufactured for motorcycle use. Maximum two engines, size unlimited, with any internal modifications permitted. Engines must be self-starting. Push, tow, or roller starts prohibited. An SFI Spec 46.1 engine restraint system mandatory.

#### **FUEL**

Nitromethane, alcohol, racing gasoline, gasohol, diesel, natural gas, or propane permitted. Nitrous oxide permitted on naturally aspirated alcohol or gasoline-burning engines only.

#### **FUEL SYSTEM**

Steel-braided fuel lines mandatory. Dual cable positive-return throttle mandatory. All motorcycles must be equipped with a preloaded fuel shutoff connected by a lanyard between the rider and the trigger.

#### **NITROUS OXIDE**

Commercially available nitrous oxide permitted. Bottle(s) must be stamped with a DOT-1800 pound rating and permanently mounted (hose clamps or tie wraps prohibited). Hoses from bottle(s) to solenoid must be high-pressure steel braided or NHRA-accepted hoses. Commercially available, thermostatically controlled, blanket-type warmer accepted. Any other external heating of bottle(s) prohibited.

#### **SUPERCHARGER**

Supercharger must be equipped with a supercharger restraint system. Manifold burst panel or rubber manifold connection mandatory on all supercharger installations. Nitrous oxide prohibited with any supercharger.

#### **TURBOCHARGER**

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Permitted. Nitrous oxide permitted with turbocharger only when gasoline is used as a fuel.

### **DRIVETRAIN: 2**

#### **CHAIN GUARDS**

Mandatory on all motorcycles. Chain guard must be .060-inch steel or 1/8-inch aluminum and must be securely mounted in three places. Chain guard must cover the width and at least the top run of chain/belt, from centerline to centerline of the sprockets.

#### **CLUTCH**

Any type clutch permitted. Cast material prohibited in stress bearing areas. Clutch must have a protective guard made of .060-inch steel or 1/8-inch aluminum that covers the unit 360 degrees.

### **BRAKES & SUSPENSION: 3**

#### **BRAKES**

Hydraulic type, front and rear, mandatory. Steel-braided brake lines mandatory. Brake lines must be routed and mounted to ensure no contact with moving parts. Minimum size: front, dual discs, 9-inch diameter by 1/8-inch thickness (single caliper permitted if 11-inch diameter by 1/4-inch thickness; rear, 9-inch diameter by 1/4-inch thickness). Piston diameter must meet OEM minimums for brand of bike. Drilled disc brakes may be used if commercially manufactured or they meet the following requirements: Holes in rotors, (if used), cannot exceed 1/2-inch maximum. All holes must be countersunk. No two holes closer than 1.25-inch center to center.

#### **CONTROLS**

Handlebar controls must be located in safe, workable position. Foot pegs and foot controls must be located in safe, workable position and must be mounted in an accepted manner. Rider must be able to shut off fuel without removing hands from handlebars. A secondary shut off device must be attached to rider in the event of a premature exit from motorcycle. This device must control the fuel valve. Dual cable push-pull throttle assembly is mandatory. Lanyard for secondary shut off must be run through eyelet, allowing the lanyard to be pulled in any direction to force shut off.

#### **FRONT SUSPENSION**

Hydraulic-tube-type only; minimum tube diameter is 32mm. Front fork suspension outer tubes must be a one-piece design. Minimum travel: 2 inches. Positive fork stops with a maximum turning arc of 12 degrees in either direction mandatory. Steering dampener mandatory.

#### **WHEELIE BARS**

Wheelie bars mandatory. Length may not exceed 120". Wheels must be nonmetallic.

### **FRAME: 4**

#### **FRAME**

Minimum tubing dimension: 1 inch by .058-inch; 4130 chromoly or Docol R8 mandatory. All butt welds must have visible reinforcement. All welding on chromoly must be by approved heliarc (TIG) process.

#### **GROUND CLEARANCE**

Minimum of 2 inches with rider on bike.

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

#### **TIRES**

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Must be specified for racing use by manufacturer. Any rear tire size permitted, as long as does not exceed rim width by more than two inches. Minimum front tire width: 3 inches.

### **WHEELS**

Bead-lock rear wheel mandatory. Rear-wheel minimum: 15-inch minimum diameter; maximum: 18-inch diameter. Front-wheel minimum: 16-inch diameter; maximum: 19-inch diameter.

## **BODY: 7**

### **FAIRINGS/FENDERS**

Front fairings must be solidly mounted to frame tubes. Rear fenders must cover width of tire extended past rear axle.

### **SEAT**

Seat, tail section, and rear fender may be incorporated as one unit and must include a step to prevent rider sliding backward.

## **RIDER: 10**

### **CREDENTIALS**

Valid NHRA Exhibition Fuel Motorcycle license mandatory. License applications will only be accepted from legitimate Fuel-type or Funny Bike-type vehicles, not street-type bikes. Prior to receiving an NHRA license, the following conditions must be met: Motorcycle must meet all established minimum requirements as outlined in this Exhibition Fuel Motorcycle section and current NHRA Rulebook.

### **HELMET**

Full-face helmet and shield (goggles prohibited) meeting Snell: M2010, M2015, M2020, SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 Specs mandatory.

### **PROTECTIVE CLOTHING**

Full all-leathers or SFI Spec 40.1/2 suit, leather boots that completely cover the ankle with toe-area reinforcement, and full-finger leather gloves mandatory. Gloves must be Kevlar-lined or equipped with slide buttons. Suits may be one-piece design or joined with a zipper at the waist. Reinforcement and/or armor in the knee, elbow, shoulder, and knuckle areas required. Spine/back protector and ballistic chest protector mandatory on supercharged, nitromethane burning, or nitrous motorcycles.

### **LICENSING PROCEDURE**

New riders must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. Rider must successfully complete an NHRA physical and have a completed NHRA physical form signed by a licensed physician in hand before any test runs are made. Physicals are required every two years.

A minimum of six runs must be made, witnessed and documented by a minimum of two currently licensed NHRA Exhibition Fuel Motorcycle riders. Any currently licensed NHRA Pro Stock Motorcycle license holder may cross-grade to an Exhibition Top Fuel license upon application to NHRA and completion of a checkout pass of a minimum of 7.50 seconds (quarter-mile) and payment of the appropriate fees. The final runs must be quicker than 7.50 seconds or representative of the performance of the motorcycle. After completion of the test/license runs, applicant must complete license application



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form in full and have it signed by the track manager or other authorized person. Applicant is responsible for sending the test form, medical (physical) form, time slips for all test runs documented on the application form, and the appropriate fees to: NHRA Technical Services Department 2035 Financial Way Glendora, CA 91741

### **LICENSE RENEWALS**

Rider must submit a completed physical form, signed by a licensed physician, and an NHRA Exhibition License application form along with appropriate fees. If license is expired more than six months, rider must make three test runs, witnessed and documented on application form. A minimum of one run must be 7.50 seconds or quicker. If license is expired more than one year, the complete application and testing process must be repeated (as if new rider). All Exhibition licenses are valid for two years from date of physical.

# **EXHIBITION V-8 MOTORCYCLE**

## ***REQUIREMENTS & SPECIFICATIONS***

### **ENGINE: 1**

#### **ENGINE**

Must be single, internal combustion, automobile-type engine with a maximum original displacement of 400 cubic inches. Small-block engine only. Push, tow, or roller starts prohibited.

#### **EXHAUST**

Exhaust must be directed away from rider when in riding position.

#### **FUEL**

Gasoline, racing gasoline, gasohol, propane, natural gas, and ethanol permitted. Nitromethane prohibited.

#### **FUEL SYSTEM**

Fuel-shutoff valve mandatory. Steel-braided line mandatory. All fuel tanks must be securely mounted.

#### **NITROUS OXIDE**

Commercially available nitrous oxide permitted. Bottle(s) must be stamped with a DOT-1800 pound rating and permanently mounted (hose clamps or tie wraps prohibited). Hoses from bottle(s) to solenoid must be high-pressure steel braided or NHRA-accepted hoses. Commercially available, thermostatically controlled, blanket-type warmer accepted. Any other external heating of bottle(s) prohibited.

#### **SUPERCHARGER/TURBOCHARGER**

Prohibited.

### **DRIVETRAIN: 2**

#### **CHAIN/DRIVE BELT**

Primary chain or belt guards mandatory. Must be 1/8-inch steel or 1/4-inch aluminum, fully enclosed. Shaft drive must have protection for rider's legs and body. Chain guard required. Must cover the width and at least the top run of chain or belt to centerline of sprocket.

#### **CLUTCH/FLYWHEEL**

Clutch and flywheel meeting SFI Spec 1.1, 1.2, or 1.3 required.

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### **FLYWHEEL SHIELD**

Flywheel shield meeting SFI Spec 6.1, 6.2, 6.3 or shield made of 1/4-inch steel with 360-degree coverage required.

## **BRAKES & SUSPENSION: 3**

### **BRAKES**

Operational hydraulic or mechanical disc brakes front and rear mandatory. Disc brakes on front must be minimum: Dual rotors, 9-inch diameter by 1/8-inch thickness; single rotor, 11-inch diameter x 3/16-inch thickness. Rear brakes must be a minimum of 10-inch diameter x 3/16-inch thickness or NHRA-accepted system. Steel-braided lines required.

### **CONTROLS**

Handlebar controls must be located in safe, workable position. Foot pegs and foot controls must be located in safe, workable position and must be mounted in an accepted manner. Rider must be able to shut off fuel without removing hands from handlebars. A secondary shut off device must be attached to rider in the event of a premature exit from motorcycle. This device must control the fuel valve. Dual cable push-pull throttle assembly is mandatory. Lanyard for secondary shut off must be run through eyelet, allowing the lanyard to be pulled in any direction to force shut off. A positive-return throttle required. Must be snap-back type, with minimum two throttle-return springs mandatory.

### **FRONT SUSPENSION**

Hydraulic-tube type only. Front fork suspension outer tubes must be a one-piece design. Minimum tube diameter is 36mm, with a minimum of two inches of travel.

### **WHEELIE BARS**

Maximum length may be equal to, but may not exceed, the wheelbase. Wheels must be nonmetallic.

## **FRAME: 4**

### **FRAME**

Must be reinforced to accept weight and torque of an automotive-type engine. Lower frame rail must be minimum 1 1/2-inch x .058-inch 4130 chromoly or Docol R8 tubing. A dated NHRA Exhibition Chassis Certification sticker will be placed on all accepted vehicles in this program; and chassis must be inspected every two years by NHRA.

## **TIRES & WHEELS: 5**

### **TIRES**

Automotive tires permitted. Must be specified for racing use by manufacturer.

### **WHEELS**

Automotive wheels permitted. Dual bead-lock design on rear wheel mandatory.

## **ELECTRICAL: 8**

### **IGNITION SHUTOFF**

A positive ignition cutoff switch on the handle bar attached to rider's wrist by a lanyard is mandatory. A master electrical cutoff switch is required to cut off all electrical functions.

## **RIDER: 10**

### **CREDENTIALS**

A valid NHRA Exhibition V-8 Motorcycle rider license is required.

### **HELMET**

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Full-face helmet and shield (goggles prohibited) meeting Snell: M2010, M2015, M2020, SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 Specs mandatory.

### **PROTECTIVE CLOTHING**

Full all-leathers or SFI Spec. 40.1/2 suit is mandatory. Suits must be one-piece design or joined at the waist with a zipper. Leather boots/shoes above the ankle and leather gloves must be Kevlar-lined or equipped with slide buttons.

### **LICENSING PROCEDURE**

New riders must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. Motorcycle must meet all established requirements as outlined in the NHRA Exhibition V-8 Motorcycle Program and the current NHRA Rulebook. Rider must successfully complete an NHRA physical and have a completed NHRA physical form signed by a licensed physician in hand before any test runs may be made. New physical required every two years. A minimum of six runs must be completed, witnessed, and documented by a license committee accepted by NHRA. All runs must be made at NHRA member tracks. Final runs must be quicker than 9.99 seconds (quarter-mile) or representative of the performance of the bike. Upon completion of test runs, applicant must forward the completed license forms with all applicable signatures, original physical form, and time slips along with full fees to: NHRA Technical Services Department 2035 Financial Way Glendora, CA 91741. Riders licensed under this program are restricted to single runs only. Match races or side-by-side competition with any other vehicle is prohibited.

### **INITIAL INSPECTION**

Contact NHRA Tech Department for initial inspection procedures.

### **LICENSE SUSPENSION**

Any rider found in violation of NHRA rules and/or regulations may be subject to penalties as determined appropriate in the sole and absolute discretion of the NHRA.

### **PERFORMANCE LIMITS**

V-8 motorcycles with engine mounted in a longitudinal method (crankshaft at right angles to rear wheel) may utilize a limit of 205.99 mph in the quarter-mile. V-8 motorcycles with the engine mounted with the crankshaft parallel to the wheelbase of the motorcycle are restricted to 150.99 mph in the quarter-mile. All accidents, incidents, problems, or failures (Whether they occur at NHRA member tracks or facilities or not.) *MUST BE REPORTED TO THE NHRA TECHNICAL SERVICES DEPARTMENT IMMEDIATELY* (within 48 hours). Failure to report such events or careless operation of any motorcycle in this program may cause suspension of license or fines. Any procedure, requirement, or specification described herein may be amended by the NHRA at any time.

## **JET-POWERED DRAGSTER & FUNNY CAR**

### **COMPETITION**

Although an all-out competitive category does not exist for jet-powered thrust vehicles, such vehicles are a popular feature at many NHRA member tracks. Strictly enforced performance limits are in effect. See PERFORMANCE LIMITS.

## **REQUIREMENTS & SPECIFICATIONS**

### **ENGINE: 1**

#### **AFTERBURNER-TAILPIPE**

For butts, seams must be on bottom; overlap seam placement will be at the discretion of the technical inspector. Dump valve on afterburner manifold mandatory; valve to be actuated with primary chute lever (to prevent shutoff smoke).

#### **AIR INTAKE**

All air intakes must be totally and securely screened (1/8-inch minimum, 3/8-inch maximum or equivalent). Such screening must be securely attached to the engine.

#### **CATCH CAN**

Fuel overflow catch tanks of sufficient capacity to accommodate excess fuel on shutdown and adequate tank venting (minimum 1 quart) required on all vehicles. Use of hose clamps or tie wraps prohibited.

#### **CONTROL CABLES**

Manual afterburner control valve cable, minimum 3/16-inch. Electronic control accepted. Fuel control cable must be minimum 3/16-inch. Must have secondary shutoff on main fuel line. Emergency shutoff on burner shutoff line mandatory. Emergency shutoff on manually controlled afterburner system mandatory.

#### **ENGINE**

Maximum of one thrust-driven engine permitted. Engine attitude must have down thrust; minimum negative 1-degree angle. No internal modifications permitted. All engines must be run within manufacturer's maximum limits. Engine make, type, and model must be NHRA-accepted. Current engines are J-33, J-34, J-60 (JT-12), J85-5 (CJ-610), and Rolls Royce Viper 522 & 622. Any other engines must be accepted prior to running.

#### **FILTER**

Filter on hot streak inlet mandatory.

#### **FUEL**

Approved jet-type fuel only (Jet A, Jet A-1, kerosene, diesel). Only diesel fuel additives permitted. Separate water and methanol injection systems permitted. Racing gasoline permitted for starting purposes only.

#### **FUEL TANK**

Maximum 30 gallons. Must be securely mounted to frame, with appropriate baffling (welded or equivalent). If pressurized, tank must be round. Mechanism to release fuel tank pressure mandatory. If electrical device, switch must be "normally open" type. Fuel line(s) may not be routed inside framerail.

#### **INSTRUMENTS**

All instruments, gauges, and metering devices must be fully functional. The following instruments must be visible from the cockpit of each vehicle: tachometer (percent of rpm); exhaust gas temperature gauge (EGT); oil pressure gauge/light (taken off pump outlet housing).

### **BRAKES & SUSPENSION: 3**

#### **BRAKES**

Caliper-type disc brakes required on all four wheels. Two separate hydraulic systems required; may be front/rear or double system.

#### **SUSPENSION**

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Functional front and rear suspension optional. Rear shocks, if used, must be installed in such a manner as to retain integrity of suspension in case of failure.

### **FRAME: 4**

#### **GROUND CLEARANCE**

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

#### **PARACHUTES**

Dual parachutes mandatory. Separate shroud-line mounting points required with ½-inch sleeved grade 8 bolts. Primary parachute must be on a control system that will shut off engine when parachute is released. Secondary parachute must be used as an independent backup system with engine shutdown capabilities (secondary fuel shutoff bypass valve on main fuel line to work with secondary parachute). Must have at least two ways to positively shut off jet engine. Parachute mount must be substantially bolted and/or welded in place. Minimum parachute connection spool diameter: 1 inch. Funny Cars required to have a minimum 10-foot bridle cord to attach pilot parachute. Chutes and shroud lines must be mounted in such a position as to be protected from tailpipe heat. All unpacked shroud lines must be covered with 1/16-inch leather or NHRA-accepted material (silver tape prohibited). Steel, aluminum, or carbon-fiber parachute tubes only. Parachute packs prohibited.

#### **ROLL CAGE**

Dragster chassis must meet SFI Spec 2.1; Funny Car chassis must meet SFI Spec 2.2B, 2.1, or 10.1E. Plating of chassis prohibited; painting permitted. Chassis must be recertified every two years by NHRA and have serialized sticker affixed to frame before participation. Absolutely no motorcycles or three-wheeled vehicles will be considered for this program. Roll-cage padding meeting SFI Spec 45.1 mandatory anywhere driver's helmet may come in contact with roll-cage components.

#### **WEIGHT**

Minimum 1,250 pounds; maximum 3,200 pounds. All weights include driver and residual fuel at completion of run.

#### **WHEELBASE, DRAGSTER**

Minimum 180 inches; maximum 300 inches.

#### **WHEELBASE, FUNNY CAR**

Minimum 125 inches; maximum 135 inches.

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

#### **TIRES**

Rear tires restricted to Goodyear NASCAR Radials D4006 and D4224 or Goodyear Bias Ply D2934, 2270, D2932, D4600, D2291 and D2279. Tires are to meet size requirements when installed and ready to run at manufacturer's recommended operating pressures. Minimum front-wheel diameter on jet Funny Cars, 14 inches.

### **INTERIOR: 6**

#### **SEAT**

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

## **SHEET METAL**

All sheet metal within driver compartment must be aluminum or steel; magnesium prohibited.

## **BODY: 7**

### **BODY, Funny Car**

Driver must be isolated from engine compartment and fuel system with minimum 3/16-inch Lexan. Firewall must provide a bulkhead between the engine or fuel tank and driver compartment. All openings must be sealed with metal. Minimum .032-inch 6061 T6 aluminum or .024-inch steel; use of magnesium prohibited. Must have at least one way to easily and quickly exit the car with the body down (roof hatch or removable windshield), with release operable from inside and outside of vehicle. Exit from car with body down must be demonstrated during the inspection process. Rear spoiler recommended for vehicle stability.

## **SUPPORT GROUP: 9**

### **FIRE EXTINGUISHER SYSTEM**

Funny Cars: minimum 10-pound, NHRA-accepted fire extinguisher system. Enclosed-cockpit dragsters: Minimum 5-pound, NHRA-accepted fire extinguisher system. See General Regulations 9:3 for NHRA-accepted fire extinguishing agents. The release of onboard fireworks is prohibited.

### **SHUT OFF DEVICES**

Moving of the throttle to the maximum position arms an automatic shutoff device installed such that release of a driver actuated momentary switch will shut off all fuel to the engine (including the afterburner), and deploy either the primary chute or the emergency chute. The system may be electrically and/or pneumatically operated. In the absence of either electrical power or pneumatic pressure to the system, the system will prevent the engine from running, and loss of either electric power or pneumatic pressure to the system during the run will also shut off all fuel to the engine (including the afterburner).

Additionally, a timer, set at 0.2 seconds above the normal or expected elapsed time of the participating car, and armed by going to maximum throttle, shall be triggered either by the activation of the hot streak, and/or release of brake pedal/handle. Once activated, and timed out, the system shall shut off all fuel to the engine (including the afterburner), and deploy either the primary chute or the emergency chute.

Absolutely no delays, overrides, or bypasses of any description are permitted in any of the shutdown devices/systems.

## **DRIVER: 10**

### **ARM RESTRAINTS**

Mandatory.

### **CREDENTIALS**

Valid NHRA jet license mandatory. Applicant must be minimum 18 years of age. Licensing is on an individual basis through the NHRA Technical Services Department. Contact NHRA Technical Services Department for more information.

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### **DRIVER LOCATION**

Driver must be sealed off from intake by firewall of at least shoulder height. If located next to compressor section, driver must be totally isolated from compressor by 3/8-inch 7075-T6 aluminum shield. J-85 Funny Cars must be additionally equipped with a minimum 360-degree .050-inch stainless steel shield encompassing combustion and combustion can. If driver is located near hot section, insulation must be used to protect driver from engine heat.

### **DRIVER RESTRAINT SYSTEM**

A quick-release driver restraint system, with a 2-inch crotch strap, meeting SFI Spec 16.1 or 16.5 is mandatory in all cars. Driver restraint system must be clearly labeled as meeting SFI Spec 16.1 or SFI Spec 16.5 and be dated by manufacturer. SFI 16.1 or 16.5 3-inch wide shoulder harness straps folded over and sewn to be 2-inches wide by the original manufacturer in order to fit into head and neck restraint lips/channels are acceptable. Restraint system must be updated at two-year intervals from date of manufacture.

**Effective 1/1/2014:** Minimum 6-points of attachment mandatory and installed according to the manufacturer's instruction.

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

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

### **HELMET**

For all cars, a full-face Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited).

### **PROTECTIVE CLOTHING**

Drivers of dragsters must wear a suit meeting SFI Spec 3.2A/15 with SFI 3.3/15 gloves and SFI 3.3/15 boots. Drivers of Funny Cars and dragsters with canopies must wear a suit meeting SFI Spec 3.2A/20 with SFI 3.3/20 gloves and SFI 3.3/20 boots. Head sock 3.3 mandatory. A head sock is not mandatory when helmet is manufactured with a skirt and labeled as meeting SFI Spec. 3.3.

### **LICENSED DRIVER, NEW VEHICLE**

Any currently licensed NHRA exhibition-jet driver may cross-grade to any other exhibition-jet Dragster or Funny Car vehicle category. Proof of car must be submitted and pass a vehicle inspection prior to NHRA issuing a permit. Must be witnessed by two currently licensed jet drivers with a minimum of three years' jet-driving experience each. Runs may be made at open track session. Runs may be made in a single day. Driver will be given a cockpit-orientation (blindfold) test.

(3) three full passes must be completed.

### **LICENSE, NEW DRIVER**

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

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drivers will pay a license application fee with the submission of a physical-exam form. Proof of car must be submitted and pass a vehicle inspection prior to NHRA issuing a permit, which will include NHRA membership and insurance, to begin initial licensing runs. New driver will be given a cockpit-orientation (blindfold) test. New driver must make a minimum of 12 test runs within a 90 day period or less. A two-day (minimum) period, for the 3 sessions. All runs must be made at a closed session. Blindfold test and test runs must be witnessed by two currently licensed jet exhibition drivers with at least three years' experience and NHRA Member track official. In Addition, final session must also be witnessed by 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.

(A driver with an NHRA competition license in any wheel-driven category may not cross-grade to a jet exhibition license, regardless of experience.) **In all categories, competition license will be granted or denied in NHRA's discretion.**

### **EXPIRED LICENSE**

If license is expired one year or more, applicant must meet all new-driver requirements.

### **PERFORMANCE LIMITS**

Jet dragsters, 320.99 mph; jet Funny Cars, 305.99 mph

If a driver exceeds these limits, the following fines apply:

**FIRST OFFENSE: 1-10 mph:** \$500 fine. **11+ mph:** \$2,000 fine.

**SECOND OFFENSE: 1-10 mph:** \$1,500 fine/six-month suspension. **11+ mph:** \$5,000 fine/six-month suspension.

**THIRD OFFENSE: 1+ mph:** \$5,000 fine/indefinite suspension.

### **ACCIDENTS OR OTHER ISSUES PROCEDURES**

All accidents, engine problems other than routine maintenance, and/or repeated problems or failures of the same nature (Whether they occur at NHRA member tracks or facilities or not.) *MUST BE REPORTED TO THE NHRA TECHNICAL SERVICES DEPARTMENT IMMEDIATELY* (within 48 hours). Failure to report such incidents, careless operation of vehicle, and/or hot-end failure is in violation of NHRA rules and regulations and will result in penalties ranging from formal warning to immediate and indefinite suspension of exhibition privileges. In some instances, a monetary fine may be imposed. See current NHRA Rulebook for appeal procedures. Any procedure or requirement described herein may be waived or amended by NHRA, if NHRA in its sole judgment determines that such waiver or amendment is appropriate.

## **JET TRUCK**

THIS SUPPLEMENT ACCOMMODATES SPECIALIZED JET-POWERED TRUCKS AND IS A SUPPLEMENT TO THE CURRENT NHRA EXHIBITION JET PROGRAM.



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PARTICIPANTS IN THIS PROGRAM MUST CONSULT JET-POWERED DRAGSTER & FUNNY CAR FOR ANY ADDITIONAL APPLICABLE INFORMATION.

### **COMPETITION**

Jet trucks are considered exhibition vehicles and are restricted to single runs only. Side-by-side runs are prohibited. Jet trucks may not compete for prize money. See PERFORMANCE LIMITS.

## ***REQUIREMENTS & SPECIFICATIONS***

### **ENGINE: 1**

#### **AFTERBURNER-TAILPIPE**

For butts, seams must be on bottom; overlap seam placement will be at the discretion of the technical inspector. Dump valve on afterburner manifold mandatory; valve to be actuated with primary chute lever (to prevent shutoff smoke).

#### **AIR INTAKE**

All air intakes must be securely screened (1/8-inch minimum, 1/4-inch maximum or equivalent). Such screening must be securely attached to the engine.

#### **CATCH CAN**

Fuel-overflow catch tanks of sufficient capacity to accommodate excess fuel on shutdown and adequate tank venting (minimum 1 quart) required on all vehicles. Use of hose clamps and/or tie wraps for mounting prohibited.

#### **CONTROL CABLES**

Manual afterburner control valve cable, minimum 1/4-inch. Fuel control cable must be minimum 3/16-inch. Must have secondary shutoff on main fuel line. Emergency shutoff on afterburner mandatory. See PARACHUTES for additional details.

#### **ENGINE(S)**

Engine(s) attitude must have down thrust; minimum -1 degree angle required. Front engine mounts must be expandable (TRUNION) type, allowing at least 3/16-inch, 360-degree lateral expansion. Permitted engines are J-34, J-46, J-60 (JT-12), J85-5 (CJ-610), J-79, Rolls Royce Viper 522. Maximum 3 engines allowed, except J-79, restricted to one engine only.

#### **FUEL FILTER**

A suitable fuel filter must be installed on the inlet side of the hot streak valve.

#### **FUEL**

Approved jet-type fuel only (Jet A, Jet A-1, kerosene, diesel). Only diesel fuel additives permitted. Separate water and methanol injection systems allowed. Racing gasoline permitted for starting purposes only.

#### **FUEL TANK**

Must be securely mounted to frame with appropriate baffling (welded or equivalent). If pressurized, tank must be round. Mechanism to release fuel-tank pressure mandatory. If electrical device, switch must be "normally open" type.

#### **INSTRUMENTS**

All instruments, gauges, and metering devices must be fully functional. The following instruments must be visible from the cockpit of each vehicle: tachometer (percent of rpm); exhaust-gas-temperature gauge (EGT); oil-pressure gauge/light (taken from pump-outlet housing).

## **BRAKES & SUSPENSION: 3**

### **BRAKES**

Caliper-type disc brakes required on all four wheels. Two separate hydraulic systems required; may be front/rear or double system. All brake systems must be steel-vented rotor type.

### **SUSPENSION**

Functional suspension optional. Front suspension applications must be minimum four-bar radius rod type. Rear upper-shock eyes must be pinned or otherwise secured. Rear shocks must be installed in such a manner as to retain integrity of suspension in case of failure.

## **FRAME: 4**

### **GROUND CLEARANCE**

Minimum 3 inches from front of vehicle to 12 inches behind front axle centerline, which must be maintained at all times.

### **BUMPERS**

Vehicle must be equipped with a satisfactory bumper/nerf bar device so designed to prevent front tire from becoming first point of impact with guard wall at a 45-degree angle.

### **PARACHUTES**

Minimum of two (2) braking parachutes required. Primary parachute must be on a control system that will shut off engine when parachute is released. Secondary parachute must be used as an independent backup system with engine-shutdown capabilities (secondary fuel-shutoff bypass valve on main fuel line to work with secondary parachute). Must have at least two ways to positively shut off jet engine. Parachute mounts must be substantially bolted and/or welded in place; each parachute must utilize a separate mounting point. Minimum chute connection spool diameter: 1.50 inches. Parachutes and shroud lines must be mounted in such a position as to offer protection from tailpipe heat. Parachute attachment lines must be covered with 1/16-inch leather or NHRA-accepted material (silver tape prohibited). Steel, aluminum, or carbon-fiber parachute tubes only. Parachute packs prohibited.

### **ROLL CAGE**

Cage structure must be designed to protect driver from any angle, 360 degrees. Material used in construction must be a minimum of 1 1/2-inch x .095-inch chromoly or Docol R8 tubing when a funny car insert is also installed; otherwise 1 5/8-inch x .095-inch chromoly or Docol R8 tubing welded to frame. All vehicles must successfully pass NHRA inspection every two (2) years and have a serialized chassis sticker affixed to frame before participation. *INITIAL CERTIFICATION OF VEHICLES MUST BE DONE AT AN NHRA NATIONAL EVENT ONLY OR BY INDIVIDUAL APPOINTMENT SCHEDULED WITH THE NHRA TECHNICAL DEPARTMENT.* Vehicle may be re-inspected at any NHRA divisional event, National Open, national event, or by individual appointment with NHRA. Prior arrangements must be made with the national technical director, or division tech director. Drivers are instructed to bring all required safety apparel and have vehicle in ready-to-run condition. Change of ownership of the vehicle voids the current chassis and vehicle inspection; a recertification is required when ownership of the vehicle changes.

### **WEIGHT**

Maximum 7,500 pounds. All weights excluding driver and fuel. Certified weight

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certificate required.

### **WHEELBASE**

Minimum 120 inches; maximum 300 inches.

## **TIRES & WHEELS: 5**

### **TIRES**

Tires - Tires specifically built for racing only can be used front and rear. DOT tires for model truck permitted. Maximum height of any tire is 45 inches. *RECAPS NOT PERMITTED*. Visible cord damage in sidewall requires tire change. All casings must be of new manufacture. Minimum tread depth 4/32.

### **WHEELS**

Full floating hubs required on rear wheels.

## **INTERIOR: 6**

### **SHEET METAL**

All sheet metal within driver compartment must be aluminum or steel; magnesium prohibited.

## **BODY: 7**

### **BODY**

Must be an original or replica of a commercial truck or emergency vehicle to qualify for this program.

## **SUPPORT GROUP: 9**

### **FIRE EXTINGUISHING SYSTEM**

Must be equipped with an onboard fire extinguishing system of at least 10-pound capacity installed to provide protection for the driver. Extinguishing agents must be NHRA-accepted.

### **FIREWORKS**

The release of onboard fireworks prohibited.

### **SHUT OFF DEVICES**

Moving of the throttle to the maximum position arms an automatic shutoff device installed such that release of a driver actuated momentary switch will shut off all fuel to the engine (including the afterburner), and deploy either the primary chute or the emergency chute. The system may be electrically and/or pneumatically operated. In the absence of either electrical power or pneumatic pressure to the system, the system will prevent the engine from running, and loss of either electric power or pneumatic pressure to the system during the run will also shut off all fuel to the engine (including the afterburner).

Additionally, a timer, set at 0.2 seconds above the normal or expected elapsed time of the participating car, and armed by going to maximum throttle, shall be triggered either by the activation of the hot streak, and/or release of brake pedal/handle. Once activated, and timed out, the system shall shut off all fuel to the engine (including the afterburner), and deploy either the primary chute or the emergency chute.

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Absolutely no delays, overrides, or bypasses of any description are permitted in any of the shutdown devices/systems.

**Note: Any other method for performing the shut-off function must be submitted in writing to NHRA and preliminarily approved in writing by the NHRA Technical Administrative Executive. Final approval will be given once the vehicle successfully completes the chassis inspection process.**

## DRIVER: 10

### **CREDENTIALS**

Valid NHRA jet truck license mandatory. Licensing is on an individual basis through the NHRA Technical Services Department. Contact NHRA for more information.

### **DRIVER LOCATION**

Driver must be located in front of engine and sealed off from intake and fuel system by a firewall and/or windows that extend and seal to the top of the driver's compartment. One seat for driver permitted. Secondary seat not permitted. Passengers not permitted at any time. Must have at least two methods to exit from vehicle (door, roof hatch, or removable windshield) with release operable from inside and outside of the vehicle.

### **DRIVER RESTRAINT SYSTEM**

A quick-release driver restraint system, with a 2-inch crotch strap, meeting SFI Spec 16.1 or 16.5 is mandatory in all cars. Driver restraint system must be clearly labeled as meeting SFI Spec 16.1 or SFI Spec 16.5 and be dated by manufacturer. SFI 16.1 or 16.5 3-inch wide shoulder harness straps folded over and sewn to be 2-inches wide by the original manufacturer in order to fit into head and neck restraint lips/channels are acceptable. Restraint system must be updated at two-year intervals from date of manufacture.

**Effective 1/1/2014:** Minimum 6-points of attachment mandatory and installed according to the manufacturer's instruction.

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

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

### **HELMET**

Full face helmet and shield (goggles prohibited) meeting Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 Spec mandatory. See General Regulations.

### **PROTECTIVE CLOTHING**

Drivers must wear a suit meeting SFI Spec 3.2A/15. All drivers must wear SFI 3.3/15 gloves and SFI 3.3/15 boots and SFI Spec 3.3 head sock or skirted helmet.

### **LICENSING PROCEDURES**

Licenses will be issued restricting driver/vehicle as a unit to the vehicle in which licensing was conducted.

### **LICENSE, NEW DRIVER**

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New driver must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. Proof of car and pass a vehicle inspection are required prior to NHRA issuing a permit, which will include NHRA membership and insurance, to begin initial licensing runs. Driver will be given a cockpit-orientation (blindfold) test. Driver must make a minimum of 12 test runs over a two-day (minimum) period. Blindfold test and two currently licensed jet-exhibition drivers with at least three years' experience and a NHRA Member track official must witness test runs. Final session an NHRA-designated person must witness test runs.

Test runs are typically divided into three sessions, as follows:

**Session one:** three half passes and one moderate run.

**Session two:** four moderate runs.

**Session three:** one moderate and three full run's with afterburner.

Full runs must be representative of vehicle's performance.

All sessions must be made at closed sessions. A minimum of 12 runs must be made over a period of two days (need not run consecutively). All runs must be completed over a period of 90 days or less. Upon completion of license runs, applicant must submit completed, signed application and time slips for all runs to NHRA Technical Services Department.

### **CROSS-GRADE REQUIREMENTS**

Any currently licensed jet vehicle driver may cross grade to jet truck by completing the following:

1. Applicant must receive authorization from NHRA Technical Services Department.
2. A cockpit-orientation test.
3. A minimum of three runs in front of standard witnesses.

### **LICENSED DRIVER, NEW VEHICLE**

A currently licensed jet truck driver may drive any other jet truck by making a minimum of one moderate orientation run and receiving authorization from NHRA Technical Services Department prior to making any full runs.

### **PERFORMANCE LIMITS**

Maximum **220.99** mph. Limit will be *STRICTLY ENFORCED*. Exceeding the performance limit will result in the following:

**FIRST OFFENSE: 1-10 mph:** \$500 fine. **11+ mph:** \$2,000 fine.

**SECOND OFFENSE: 1-10 mph:** \$1,500 fine/six-month suspension. **11+ mph:** \$5,000 fine/six-month suspension.

**THIRD OFFENSE: 1+ mph:** \$5,000 fine/indefinite suspension.

### **ACCIDENTS OR OTHER ISSUES PROCEDURES**

All accidents, engine problems other than routine maintenance, and/or repeated problems or failures of the same nature (Whether they occur at NHRA member tracks or facilities or not.) *MUST BE REPORTED TO THE NHRA TECHNICAL SERVICES*

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*DEPARTMENT IMMEDIATELY* (within 48 hours). Failure to report such incidents, careless operation of vehicle, and/ or hot-end failure is in violation of NHRA rules and regulations and may result in penalties ranging from formal warning to immediate and indefinite suspension of exhibition privileges. In some instances, a monetary fine may be imposed. See current NHRA Rulebook for appeal procedures. Any procedure or requirement described herein may be waived or amended by NHRA, if NHRA in its sole judgment determines that such waiver or amendment is appropriate.

# **TOP FUEL HARLEY**

Designation: "TFH" followed by motorcycle number.

Reserved for nitro burning motorcycles. Built specifically for all out drag racing.

## ***REQUIREMENTS AND SPECIFICATIONS***

### **ENGINE: 1**

#### **ENGINE**

Must keep design features of Harley-Davidson engines (Pushrod, 45° to 90° VTwin). Carbureted, fuel injected or supercharged single or double engines with 200 cu.i. maximum displacement. Pushrod aftermarket heads are permitted (including 4 valve). Crankcase and all tanks containing fluids must have vent tubes routed to catch can or have a non-spill breather system on motorcycle. Superchargers must have rubber manifold connections or some form of "sneeze" valve. Supercharger blankets are mandatory. Must have "Bellypan" scatter shield under engine. S.F.I. Specification 46.1 approved engine restraint systems are required. A nonflammable, oil absorbent liner mandatory inside of retention device. These restraints must be replaced or recertified by the manufacturer every two (2) years. Chest protectors are mandatory.

#### **FUEL**

Fuel to be mononitromethane and/or methyl alcohol only. No propylene oxide or nitrous permitted. Refer to General Regulations Section 1:6 of the current NHRA Rulebook for nitromethane regulations.

### **DRIVETRAIN: 2**

#### **CHAIN GUARD**

Mandatory on all motorcycles. Chain guard must be .060-inch steel or 1/8-inch aluminum and must be securely mounted in three places. Chain guard must cover the width and at least the top run of the chain, from centerline to centerline of sprockets.

#### **CLUTCH**

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Any type dry friction clutch, including multi-stage setup, permitted. Clutch engagement must be by centrifugal force only and must exhibit reliable disengagement at idle speed. Clutch must have a protective guard made of .060-inch steel or 1/8-inch aluminum that covers the unit 360 degrees.

### **TRANSMISSION**

Any transmission or high-gear-only system may be used.

## **BRAKES AND SUSPENSION: 3**

### **BRAKES**

Hydraulic type, front and rear, mandatory. Minimum size for dual rotor is 9-inch diameter, 1/8-inch thickness for rotors. Single rotor must be over 11-inch diameter.

### **CONTROLS**

Handlebar controls must be located in safe, workable position. Foot pegs and foot controls must be located in safe, workable position and must be mounted in a safe, craftsman-like manner. Rider must be able to shut off fuel without removing hands from handlebars. A secondary shut-off device attached to rider (in the event of premature exit from motorcycle) must mechanically control the fuel shut-off valve. Lanyard for shut-off must be run through an eyelet or guide, allowing the lanyard to be pulled in any direction and closing shut-off. Dual cable push-pull throttle assembly is mandatory.

### **SUSPENSION**

Front suspension minimum size 32 mm and minimum travel of 2 inches. Front fork suspension outer tubes must be a one-piece design. A steering dampener is mandatory. Rear suspension not required. Fork stops required; must limit the turning arc to 28 degrees.

## **FRAME: 4**

### **FRAME**

Any type permitted. All frames should be heliarc welded and main rails must be chrom moly or Docol R8 and have a minimum diameter of 1-1/8 inch. All major frame tubing must have at least .065-inch wall thickness. Rake angle must be at least 40 degrees. Alternative frame materials must be submitted to NHRA for approval. Frames constructed before 1999 and approved for competition may use one (1) x .058 inch tubing.

### **GROUND CLEARANCE**

Minimum of 2 inches with rider on motorcycle and 10 p.s.i. in rear tire (includes exhaust and kickstand).

### **WHEELBASE**

Minimum of 85 inches.

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### **WHEELIE BARS**

Wheelie bars are required. Minimum length from center of rear axle to center of wheelie bar axle must be at least 84 inches but not exceed 120 inches. Must be securely cross-braced.

## **TIRES AND WHEELS: 5**

### **TIRES**

Must be specified for racing use by manufacturer. Any tire size is permitted

### **WHEELS**

Rear wheel minimum 15 inch, maximum 18 inch. Front wheel minimum 16 inch, maximum 19 inch.

## **SEAT: 6**

### **SEAT**

Seat, tail section and rear fender may be incorporated into one unit and must include a step to prevent rider sliding backward.

## **BODY: 7**

### **BODY**

No body parts are required, except rear fender that must cover width of tire and extend past the rear axle.

### **FAIRING**

Permitted. Must be mounted solidly to frame tubes.

## **ELECTRICAL: 8**

### **IGNITION**

Any ignition system is permitted.

### **CHARGING SYSTEM**

Not required.

### **STARTING SYSTEM**

Must be electric external starter. Battery top covers are required. No rollers. No push starts. Jack stands are mandatory for starting. No dry hops in pits.

### **CONTROL SWITCHES**

Must be mounted and constructed in an accepted manner. Must have an emergency fuel shut off.

### **LIGHTS**

Not required.



## **SUPPORT GROUP: 9**

### **COMPUTER/DATA RECORDERS**

Only data gathering computers are permitted.

## **RIDER: 10**

### **CREDENTIALS**

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

### **HELMET**

Full-face Snell: M2010, M2015, M2020, SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet mandatory; shield mandatory (goggles prohibited). See General Regulations 10:7 in NHRA Rulebook.

### **PROTECTIVE CLOTHING**

Full all-leathers or SFI Spec 40.1/2 suit, leather boots that completely cover the ankle with toe-area reinforcement, and full-finger leather gloves are mandatory. Gloves must be Kevlar-lined or equipped with slide buttons and have knuckle armor and palm reinforcement. Suits may be one-piece design or joined with a zipper at the waist. Reinforcement and/or armor in the knee, elbow, shoulder, and knuckle areas required. Spine/back protector and ballistic chest protector mandatory.

### **RACE TEAM CLOTHING**

All team crewman that help start, assist in burnout and stage race motorcycle must wear a uniform shirt that relates to their specific team.

## **SPECIAL FUEL**

**Notice:** Special Fuel is not an NHRA category or eliminator. It is not part of the NHRA Exhibition program. It has been established primarily for the purpose of licensing drivers of vehicles that use nitromethane as a fuel and run elapsed times slower than 5.99 seconds in the quarter-mile.

These rules are designed as minimum safety rules & regulations for nitromethane vehicles running 6.00 (3.66 eighth-mile) to 7.99 (4.99) seconds. Individual groups of vehicle owners and NHRA member tracks are allowed to implement specific and additional restrictions as to body style, chassis type, and specific E.T. range within the rules as written. Refer to the current NHRA Rulebook or rule amendments for vehicle/driver requirements, specifications, and general regulations.

## ***REQUIREMENTS & SPECIFICATIONS***

## **ENGINE: 1**

### **ENGINE(S)**

Any internal-combustion reciprocating 90-degree automotive engine(s) permitted.

### **EXHAUST**

Must be directed away from driver, track, and vehicle.

### **FUEL**

Nitromethane mandatory.

### **FUEL SYSTEM**

Metal fuel tank or fuel cell required. Fuel lines must be located outside driver's compartment. Fuel tanks must be enclosed in a round tube frame, a minimum 1 1/4-inch O.D. x .065-inch chromoly or Docol R8 tubing if mounted outside of frame.

### **LIQUID OVERFLOW**

Catch can mandatory if coolant is used.

### **NITROUS OXIDE**

Prohibited.

### **SUPERCHARGER**

Maximum size 14-71 Roots type only. SFI Spec 14.3 supercharger restraint system mandatory. Aluminum studs required. Burst panel meeting SFI Spec 23.1 required. SFI Spec 14.1 restraint permitted with Roots-type 6-71 supercharger and nitromethane. Turbochargers, screw-, and centrifugal-type superchargers prohibited.

### **VALVE COVERS**

Cast or fabricated metal valve covers, using all attachment bolt holes, mandatory.

## **DRIVETRAIN: 2**

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

Flywheel and clutch meeting SFI Spec 1.3 or 1.4 mandatory. Flywheel shield meeting SFI Spec 6.2 or 6.3 mandatory. Clutch management system prohibited. Release of clutch must be the result of a manual operation by driver's foot. See General Regulations.

### **DRIVELINE COVER**

Each end of driveshaft must have a 360-degree cover of minimum 1/16-inch steel or 1/8-inch aluminum. Rear cover must surround coupler. Front cover must surround the driveshaft from the back of the reverser to the end of the splicer sleeve in the area of the driver's legs. All covers must be securely mounted to frame, a suitable cross member, or the third member.

### **REAR END**

Aftermarket full-floating or live axle assembly mandatory on all vehicles running 7.49 (4.85) seconds or quicker.

### **TRANSMISSION**

In-out box permitted with reverser. Aftermarket planetary type with reverser permitted. A one-piece ballistic shield covering all units mandatory. Shield must meet SFI Spec 4.1. OEM or OEM modified transmission prohibited. See General Regulations.

## **BRAKES: 3**

### **BRAKES**

Minimum two rear wheel (one caliper per wheel) hydraulic brakes mandatory.

### **STEERING**

If removable steering wheel is used, commercially available quick-disconnect steering

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wheel adapter meeting SFI Spec 42.1 mandatory.

### **WHEELIE BARS**

Permitted. Wheels must be nonmetallic.

## **FRAME: 4**

### **PARACHUTES**

Dual parachutes mandatory on vehicles running 7.49 and quicker or over 190 mph. Parachute pack and unpacked shroud lines must be protected with fire-resistant material from mounting point to the pack.

### **ROLL CAGE**

Vehicles running 7.49 (4.49) e.t. and quicker must have a roll cage meeting SFI specifications 25.1E, 25.2, 10.5, 10.3, 10.2, 10.1E, 2.1, 2.2B, 2.3N, 2.5B, or 2.4B. Vehicles running 7.50 e.t. or slower must meet applicable SFI Spec requirements. Plating of any chassis manufactured after 1/1/99 prohibited. Chassis must be inspected every three years and have an NHRA chassis sticker affixed to the cage.

### **SUSPENSION**

Front suspension optional. Rigid rear suspension permitted on dragsters, altered and Funny Cars only.

### **WHEELBASE**

Minimum 100 inches, maximum 125 inches, bodied cars. Dragster maximum 300 inches. Measured on long side.

## **INTERIOR: 6**

### **SEAT**

Seat must be metal or fiberglass. Magnesium prohibited. A flame retardant material covered seat is mandatory.

## **BODY: 7**

### **AIRFOILS, WINGS**

Permitted. Nonadjustable during run.

### **BODY**

Center-steer dragster, altered, roadster, or Funny Car-type body permitted. Pro Mod-or Pro Stock-type vehicles prohibited.

### **FIREWALL**

Must be equipped with a minimum .032-inch aluminum or .024-inch steel firewall. Must completely seal top to bottom and side to side, driver's compartment from engine compartment. Use of magnesium is prohibited.

## **ELECTRICAL: 8**

### **IGNITION**

Must have positive on/off switch, capable of de-energizing the entire ignition system, in good working order. Located within easy reach of the driver.

### **MASTER CUTOFF SWITCH (for vehicles with battery)**

Mandatory. Must cut off all electrical functions of vehicle. See General Regulations.

## **SUPPORT GROUP: 9**

### **FIRE EXTINGUISHER**

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Minimum 20 pounds. NHRA-accepted fire extinguishing system mandatory on all Funny Cars and enclosed body altered. Minimum 5 pounds for front-engine dragsters and open-body altered. Funny Car and enclosed altered systems must be divided so that a minimum of 15 pounds is directed into engine compartment by means of nozzle outlets placed in front of each bank of exhaust headers. Remaining 5 pounds or more should be dispersed in driver's compartment by means of an atomizing nozzle placed at driver's feet. Must be installed as per manufacture specifications. Fire bottle activation cables must be installed inside frame where cables pass engine/bell housing area. See General Regulations for NHRA-accepted fire-extinguishing agents.

## **DRIVER: 10**

### **ARM RESTRAINTS**

Mandatory on all open-bodied vehicles.

### **CREDENTIALS**

NHRA Special Fuel license required.

### **DRIVER RESTRAINT SYSTEM**

Minimum six point three-inch driver restraint system meeting SFI Spec 16.1 or 16.5 mandatory. All belts and mounting points must be covered with either sheet metal or an acceptable fire-resistant material. Restraint system must be updated at two-year intervals from date of manufacture.

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

Mandatory for the driver of all cars that exceed 200 mph. At all times that the driver is in the race vehicle, from the ready line until the vehicle is on the return road, driver must properly utilize an SFI-approved head and neck restraint device/system, including connecting the helmet as required for full functionality of the device. The device/system must meet SFI Spec 38.1 and must display a valid SFI label. The head and neck restraint device/system, when connected, must conform to the manufacturer's mounting instructions, and it must be configured, maintained, and used in accordance with the manufacturer's instructions.

### **HELMET**

All drivers must wear a full face helmet and shield (goggles prohibited) meeting Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018. Fresh air breathing system permitted. Compressed air only. Air can be supplied on demand or by constant pressure.

### **NECK COLLAR**

See Head and Neck Restraint Device/System above; otherwise required. Full 360-degree type mandatory. Must meet SFI Spec 3.3.

### **PROTECTIVE CLOTHING**

Driver's suit meeting SFI Spec 3.3/15, gloves 3.3/15, boots/shoes 3.3/15 and SFI 3.3 head sock mandatory. Drivers in front-engine, open-bodied cars (including Funny Cars) must use a suit meeting SFI Spec 3.2A/20, gloves 3.2A/20, boots 3.3/20 and SFI 3.3 head sock. A head sock is not mandatory when helmet is manufactured with a skirt labeled as meeting SFI Spec 3.3.

### **LICENSE REQUIREMENTS**

New driver must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. A completed standard NHRA medical form must be in hand before any test runs are made. NHRA standard license application completed and signed at conclusion of test runs. Six (6) runs prescribed on

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form. Two (2) witnesses required. Witness may be any currently licensed Top Fuel, Funny Car, Top Alcohol Dragster, Top Alcohol Funny Car, or Advanced E.T. driver. Final time must be quicker than 7.99 seconds in the quarter-mile. All completed original forms and time slips must be submitted to NHRA Headquarters Field Office.

### **LICENSE SUSPENSION**

Any driver found violating NHRA rules and/or regulations may be subject to penalties as determined appropriate in the sole and absolute discretion of the NHRA.

### **PERFORMANCE LIMITS**

Special Fuel vehicles are limited to an E.T. of 6.00 seconds or slower in the quarter-mile and 3.66 seconds or slower in the eighth-mile using these specifications. In addition, a maximum speed limit of 255.00 mph is imposed. Vehicles running quicker than 6.00 (3.66) seconds or faster than 255.00 mph must meet all Funny Car (Section 17) or Top Fuel dragster (Section 18) requirements for chassis, safety equipment, and licensing in current NHRA Rulebook.

## **EXHIBITION WHEEL-STANDER**

Refer to the current NHRA Rulebook or rule amendments for vehicle/driver requirements, specifications, and general regulations.

### ***REQUIREMENTS AND SPECIFICATIONS***

#### **ENGINE: 1**

##### **COOLANT SYSTEM/OVERFLOW**

Operational coolant system containing a maximum of 15 gallons of water permitted. Tank or vent must be behind rear axle. Vent must terminate in a minimum 1-quart catch can. Vent into exhaust permitted.

##### **ENGINE(S)**

Internal-combustion engine(s) required. Harmonic balancer meeting SFI Spec 18.1 required.

##### **EXHAUST SYSTEM**

Exhaust must be directed to rear of vehicle away from driver and fuel tank.

##### **FIRE SHOW**

Driver/owner must submit to NHRA a complete work schematic diagram and description with photos of any onboard fire show, pyrotechnic display, or olfactory display. All such shows must be NHRA-accepted. Upon acceptance, any change or alterations to the as-submitted diagrams or operation of show must be accepted by NHRA before implementation. All liquids used in such displays must be located outside of driver's compartment and installed in accepted vessels. All propellants or other fluids under pressure must be in DOT-approved vessels. Flame show igniters must be installed in a protected manner and accepted by NHRA. Steel or steel-braided line is required throughout the system. Any substance/fluid must be clearly defined and stated along with Material Substance Data Sheet (MSDS) on file with NHRA. *Prohibited Items:* Explosives, fireworks, rockets, dynamite, flares, solid fuel, hydrazine, nitroglycerin, blasting caps, gun powder, poisonous or carcinogenic substances, propane, or any compound used to create smoke.

##### **FUEL**

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Gasoline, racing gasoline, alcohol, gasohol, diesel, ethanol, natural gas, and propane permitted. Nitromethane permitted on naturally aspirated engines only.

### **FUEL SYSTEM**

Fuel tank must be isolated from driver by a firewall constructed of a minimum of .024-inch steel or .032-inch aluminum. Steel-braided fuel lines required. Fuel lines must be located outside driver compartment. Fuel tanks/cells must be within confines of the body. A quick-action fuel-shutoff valve within easy reach of driver and located in the main fuel line between tank and induction system required.

### **MOTORPLATE**

Mandatory (unless equipped with block side mounts). Must be constructed of 1/4-inch aluminum or 1/8-inch steel. A 1/4-inch steel plate required for manual-transmission vehicles.

### **NITROUS OXIDE**

Permitted on supercharged and naturally aspirated engines. Nitrous bottle(s) in driver compartment must be equipped with a relief valve and vented to the outside of vehicle. Bottle(s) must be stamped with a DOT-1800 pound rating and permanently mounted (no hose clamps or tie wraps). Hoses from bottle(s) to solenoid must be high-pressure steel-braided or NHRA-accepted hoses. Any external heating of bottles prohibited.

### **SUPERCHARGER, TURBOCHARGER**

Permitted on gasoline-, racing gasoline- and alcohol-burning vehicles. Supercharger restraint system meeting SFI Spec 14.1 mandatory. All high-helix and non-OEM screw superchargers are prohibited.

### **VALVE COVERS**

Cast or fabricated valve covers using all attachment bolt holes, mandatory on supercharged, methanol-burning vehicles.

## **DRIVETRAIN: 2**

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

Flywheel and clutch meeting SFI Spec 1.1, 1.2, 1.3, or 1.4 mandatory. Flywheel shield meeting SFI Spec 6.1 required on vehicles using SFI Spec 1.1 clutch. SFI Spec 6.2 or 6.3 mandatory on all vehicles using SFI Spec 1.2 clutch with more than 2 discs or SFI Spec 1.3 or 1.4 clutches with 2 discs maximum. Supercharged or turbocharged cars and all cars using nitrous oxide require an SFI Spec 6.2 or 6.3 shield.

### **REAR END**

Aftermarket or full floating axles mandatory.

### **TRANSMISSION, AUTOMATIC**

Transmission shield meeting SFI Spec 4.1 mandatory. Automatic-transmission flex plate meeting SFI Spec 29.1 and flex plate shield meeting SFI Spec 30.1 mandatory. Shifter must be equipped with a spring-loaded reverse lockout device. Functional neutral safety switch mandatory.

### **TRANSMISSION, AFTERMARKET PLANETARY**

Transmission shield meeting SFI Spec 4.1 mandatory.

### **V-DRIVE**

Homemade cast-iron V-drives must be covered with 1/8-inch steel or 1/4-inch aluminum shield securely mounted. Must be full width of V-drive.

## **BRAKES & SUSPENSION: 3**

### **BRAKES**

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Two (2) separate brake systems must be employed, one for stopping and one for guidance. Vented-disc type only. Front brakes optional. Master cylinder must have 1.5 times the stopping and steering volume of wheel cylinders. Vented discs from or intended for a full-size vehicle required.

### **STEERING**

Quick-disconnect adapter for removable steering wheel must meet SFI Spec 42.1.

### **SUSPENSION, FRONT**

Optional. Minimum specification for tube axle is 1 5/8 inches diameter.

### **SUSPENSION, REAR**

Optional.

## **FRAME: 4**

### **BALLAST**

Permitted. Maximum 500 pounds. No liquid or loose ballast allowed. Removable weight must be secured to chassis by two (2) 1/2-inch bolts per 100 pounds.

### **PARACHUTE**

Mandatory.

### **ROLL CAGE**

Mandatory. All cage structures must be designed to protect driver from any angle 360 degrees. Minimum requirements are 1 5/8-inch x .118-inch wall mild steel or 1 5/8-inch x .083-inch chromoly or Docol R8 tubing. Frame rails must be minimum 2-inch x 3-inch x .120-inch wall thickness rectangular tubing or 1 5/8-inch x .118-inch mild steel or 1 5/8-inch x .083-inch chromoly or Docol R8 round tubing. Any vehicle that was originally constructed with front and rear sub frames must have connector to tie sub frame material. Cab forward vehicles must have additional tubes across front of cage. Minimum two (2), in addition to front cross member in this area. All cages must be inspected by NHRA and have a serialized Exhibition Chassis Certification sticker affixed before vehicle may be operated at any NHRA member track.

### **SKID PLATES**

Optional. If wheels are used, minimum requirement, 3,500 pounds, FAA-rated 6-inch diameter.

### **WEIGHT**

Minimum: 2,000 pounds. Maximum: 4,000 pounds.

### **WHEELBASE**

Minimum: 90 inches.

## **TIRES & WHEELS: 5**

### **TIRES**

Front tires must be automotive type listed by manufacturer for racing purposes or have a minimum four-ply rating.

### **WHEELS**

Must be automotive-type OEM or aftermarket wheels.

## **INTERIOR: 6**

### **SEAT**

Aftermarket race-type seat required. Must be properly braced, framed, and supported. Aluminum, fiberglass, carbon fiber, or double-layer poly type permitted.

### **SHEET METAL**

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Driver compartment must be aluminum, steel, or fiberglass. Magnesium prohibited.

### **UPHOLSTERY**

Optional.

### **VISIBILITY**

Forward visibility is mandatory during all operations of vehicle. Both lanes must be visible to driver during a wheels-up operation. All vehicles must provide a minimum of one opening for a driver unassisted exit and entry from vehicle. Center steering permitted. Lift-up bodies must have clearly marked outside actuated latches on front of body. Tinted windows permitted; must not inhibit driver's view. All bodies must be accepted by NHRA. Body change or transfer requires re-inspection by an NHRA-authorized representative.

## **BODY: 7**

### **FIREWALL**

Mandatory. Minimum requirement: .024-inch steel or .032-inch aluminum. Must fully isolate the driver from engine. Firewall must extend from top of driver's compartment to bottom of frame or belly pan and side to side in driver's compartment.

## **ELECTRICAL: 8**

### **BATTERIES**

Must be located outside of driver's compartment and securely mounted.

### **MASTER CUTOFF**

Mandatory. Must disconnect all electrical functions.

## **SUPPORT GROUP: 9**

### **FIRE EXTINGUISHER**

All vehicles must be equipped with a 10-pound onboard fire extinguishing system installed to provide protection for driver and a second nozzle in engine compartment.

### **DRIVING LIMITS**

All wheels-up runs of two vehicles must be made in one lane only for each vehicle. Crossing centerline permitted on single run only. Maximum down track distance wheels up is 200 feet past finish line. Wheels-up runs toward starting line permitted; must not go past eighth-mile mark.

### **COMPETITION**

Wheel-standers permitted to run side by side with other wheel-standers. Competition with any other type vehicle is prohibited.

### **OCCUPANTS**

Passengers and/or a second seat prohibited.

### **PHOTOS**

A full set of photos of vehicle must be submitted to NHRA upon initial inspection and/or upon any change of body. Photos shall consist of front, rear, side, and 3/4 front views.

### **VEHICLE CHANGES**

Any changes in the as-originally-inspected condition, including change of ownership, of the vehicle may require a re-inspection. Contact NHRA Technical Services Department.

### **WARM-UPS**

An NHRA-licensed wheel-stander driver must be in the driver position anytime vehicle is running.



## **DRIVER: 10**

### **CREDENTIALS**

NHRA Exhibition Wheel-stander license mandatory.

### **DRIVER**

Driver and vehicle are licensed as a unit. Each driver must have all licensed vehicles listed on license in order to operate any vehicle.

### **DRIVER RESTRAINT SYSTEM**

Driver restraint system meeting SFI Spec 16.1 or SFI Spec. 16.5 mandatory. Restraint system must be updated at two-year intervals from date of manufacture. All belts used must be covered with a fire-resistant covering. Restraint system must be worn until engine is shut off.

### **HELMET**

For all cars, a full-face meeting Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited). Fresh air breathing system permitted. Compressed air only. Air can be supplied on demand or by constant pressure.

### **PROTECTIVE CLOTHING**

Jacket and pants or suit meeting SFI Spec 3.2A/15, SFI Spec 3.3/15 gloves, and SFI Spec 3.3/15 boots mandatory, except nitromethane-burning naturally aspirated cars: Jacket and pants or suit meeting SFI Spec 3.2A/20, SFI Spec 3.3/20 gloves, and SFI Spec 3.3/20 boots with gloves and boots meeting SFI Spec 3.3/20. An SFI 3.3 head or skirted helmet is required on all cars.

### **LICENSING, NEW DRIVER**

New driver must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. Contact NHRA Technical Services Department for all forms and rules. Vehicle must be inspected, certified, and have an NHRA chassis sticker affixed to roll cage prior to any test runs. Applicant must have a completed NHRA physical form in hand before any test runs are made. Physical required every two years. A licensing committee of one currently licensed NHRA Exhibition Wheelstander driver with a minimum of four years continuous experience must witness all license runs. In addition, an authorized NHRA member track official must observe all test sessions. Committee shall make recommendation to NHRA as to whether to issue a license. No committee member may have a vested interest in vehicle or applicant.

### **Three sessions are required for license.**

**Session one:** eighth-mile run; two moderate runs.

**Session two:** one moderate run; two full runs.

**Session three:** three full runs witnessed by an NHRA division director, division tech director, or NHRA-authorized representative.

A full run is defined as a wheels-up operation from starting line to finish line. All license runs must be down track single runs only. Sessions one, two and three must be conducted at a closed session at an NHRA member track. All sessions (runs) must be made in alternating lanes — one left, one right, etc. The license committee will conduct a blindfold cockpit-orientation test.

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Physical form must be submitted with renewal form. NHRA may require renewing drivers to submit proof of having performed wheel-stander driving skills a minimum of four times within the previous two-year period. Accepted proof may be affidavit signed by NHRA track operator.

### **EXPIRATION**

All licenses expire on date listed on license. No grace period. Driver with license expired for period of one year may be required to complete NHRA new driver requirements. Currently licensed Exhibition Wheel-stander drivers wishing to cross over to any other licensed and inspected wheel-stander vehicle may do so by submitting a license form and a processing fee.

### **VEHICLE INSPECTION NEW VEHICLE**

Valid for two years. Expires on last day of month punched on chassis sticker. No grace period. Exhibition Wheel-stander vehicles and drivers are licensed as a unit. Each driver is licensed to a given vehicle. All vehicles are initially inspected at national events only. All fees must be paid at completion of successful inspection. Contact NHRA for appointment.

### **VEHICLE INSPECTION RENEWAL**

May be done at any location; call NHRA for appointment. Submit all license forms, physical form, and time slips along with appropriate fees to NHRA Technical Services Department.

### **SPECIAL VEHICLES**

Any vehicle that fails to comply with parameters of these regulations but falls within the general outline and intent of this program may be considered on an individual basis. Applicants are urged to contact the NHRA Technical Services Department before construction of any vehicle.

### **SPEED LIMIT**

Maximum allowable speed limit: **150 mph**. Exceeding speed limit at any time may result in the following sanctions:

**FIRST OFFENSE:** 1-10 mph over limit: \$500 fine; 11 mph or greater: \$500 fine.

**SECOND OFFENSE:** 1-10 mph over limit: \$1,500 fine; 11 mph or greater: \$5,000 fine and 6-month suspension of license.

**THIRD OFFENSE:** Exceeding limit by 1 mph or greater: \$5,000 fine and indefinite suspension.

Any procedures or requirements described herein may be waived by the NHRA, if NHRA in its sole judgment, determines that such a waiver or amendment is appropriate. Violations of the NHRA Exhibition Wheel-stander rules and regulations, limits, or policies, may result in penalties ranging from formal warning to immediate and indefinite suspension of all driving privileges. All accidents, engine problems other than routine maintenance, and/or repeated problems or failures of the same nature (Whether they occur at NHRA member tracks or facilities or not.) Any events or incidents (**Whether they occur at NHRA member tracks or facilities or not.**) other than normal operation of any vehicle licensed under this program must be reported to the NHRA Technical Services Department within 48 hours. Failure to do so may result in suspension of license and/or other penalties, as NHRA deems appropriate.

## **SPORTSMAN MOTORCYCLE**

### **DESIGNATION**

Part of the Division 4, 5, 6, and 7 programs. For motorcycles snowmobiles and ATVs running between 6.00 and 11.99 seconds, using a handicapped start and a .4-second Pro Tree or .5-second full Tree. Requirements and specifications for NHRA Sportsman Motorcycle Series are the same as those for E.T. Motorcycle, Advanced E.T. Motorcycle, ET Snowmobile, and All-Terrain Vehicle (ATV) – Sections 4E, 4F, 4G, and 4H of the NHRA Rulebook – with some exceptions. ET breaks, Pro/full tree, permitted electronics (i.e., electronic-controlled functions such as delay boxes, throttle stops, roll counters, down track rev limiters, and electronic, or rpm-controlled shifters, data recorders), other components, and permitted vehicles may vary by division. See the tech section of the applicable Division website for specific requirements. Refer to the current NHRA Rulebook or rule revisions for vehicle/rider requirements, specifications, and general regulations.

## **TWO-SEATER DRAGSTER RIDE-ALONG PROGRAM**

- **Failure to follow the rules below can result in being removed from the list of NHRA accepted two-seater programs and other penalties in NHRA's sole and absolute discretion.**
- Program may only be offered by a legitimate drag racing school, as determined in the sole and absolute discretion of NHRA, with a minimum of 10 years instructional experience. **Currently accepted two-seater programs: Frank Hawley's Drag Racing School, Pure Speed Drag Racing and Roy Hill's Drag Racing School.**
- **Any vehicle with more than two seats is prohibited.**
- Beginning January 1, 2020, any drag racing school wishing to participate in this program and not previously on the NHRA accepted two-seater program list, must submit a drag racing training curriculum to NHRA for review. Inclusion in this program is only official after receiving acceptance in writing from NHRA.
- Two-seater dragsters limited to single runs only – no side by side activity. Maximum of two passengers (one driver and one passenger) per vehicle.
- Quarter-mile performance limited to 8.50 ET or slower and 160 MPH maximum.

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- Two-seater dragster must meet current NHRA rules for 7.50 second or slower ET dragsters. Chassis must meet SFI 2.7. Due to its unique configuration, each two-seater dragster must be individually inspected and accepted by NHRA prior to being permitted to run. Beginning September 1, 2020, any two-seater dragster requiring an initial chassis inspection or chassis reinspection must be affixed with a separate chassis inspection label for each of the two cockpits. Two-seater dragsters are further restricted to a maximum 520 cubic inch gasoline burning engine. Supercharger, turbocharger, methanol, nitrous oxide, or similar performance enhancing modifications, fuels or additives, prohibited.
- Passenger must wear same level of protective equipment as driver – at a minimum, SFI 3.2A/5 jacket and pants, SFI 3.3/1 gloves, neck collar, arm restraints, SFI 16.1 driver restraint system, and minimum Snell: M2010, M2015, M2020, SA2010, SA2015, SA2020, SFI: 31.1/2010, 31.1/2015, 31.1/2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet.
- Minimum age of passenger 18.
- Passengers must sign the appropriate Waiver and Liability Releases as required by the Liability Insurance carrier.
- Passenger must be given written and verbal instruction prior to riding. Orientation to include familiarization with driving equipment, explanation of how to release driver restraint system, and detailed explanation of waiver and release.
- Passenger must be capable of exiting the vehicle unassisted.

# **SPECIALTY VEHICLES**

## **JCB BACKHOE**

- The JCB Backhoe design was been submitted to and accepted by the NHRA Technical Department. All design documentation is on file with the NHRA Technical Department. Any changes or modifications to the design of the JCB Backhoe must be resubmitted to the NHRA Technical Department for acceptance prior to the vehicle's use at any NHRA member track.
- Single runs only permitted.

## **DRIVER: 10**

## Exhibition Vehicle Rulebook Supplement

### **CREDENTIALS**

NHRA Specialty Vehicle license mandatory.

### **DRIVER**

Driver and vehicle are licensed as a unit. Each driver must have all licensed vehicles listed on license in order to operate any vehicle.

### **DRIVER RESTRAINT SYSTEM**

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. All belts used must be covered with a fire-resistant covering. Restraint system must be worn until engine is shut off.

### **HELMET**

For all cars, a full-face meeting Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet and shield mandatory (goggles prohibited). Fresh air breathing system permitted. Compressed air only. Air can be supplied on demand or by constant pressure.

### **PROTECTIVE CLOTHING**

Jacket and pants or suit meeting SFI Spec 3.2A/15, SFI Spec 3.3/15 gloves, and SFI Spec 3.3/15 boots mandatory.

### **LICENSING, NEW DRIVER**

New driver must notify NHRA of intention to obtain a license and all required forms and rules for the category. All new drivers will pay a license application fee with the submission of verification of physical examination. Contact NHRA Technical Services Department for all forms and rules. Vehicle must be inspected, certified, and have an NHRA chassis sticker affixed to roll cage prior to any test runs. Applicant must have a completed NHRA physical form in hand before any test runs are made. Physical required every two years.

### **Three sessions are required for license.**

**Session one:** eighth-mile run; two moderate runs.

**Session two:** one moderate run; two full runs.

**Session three:** three full runs witnessed by an NHRA division director, division tech director, or NHRA-authorized representative.

A full run is defined as operation from starting line to finish line. All license runs must be down track single runs only. Sessions one, two and three must be conducted at a closed session at an NHRA member track. All sessions (runs) must be made in alternating lanes — one left, one right, etc. The license committee will conduct a blindfold cockpit-orientation test.

Physical form must be submitted with renewal form.

### **EXPIRATION**

All licenses expire on date listed on license. No grace period. Driver with license expired for period of one year may be required to complete NHRA new driver requirements.

### **VEHICLE INSPECTION NEW VEHICLE**

Valid for two years. Expires on last day of month punched on chassis sticker. No grace period. Exhibition Wheel-stander vehicles and drivers are licensed as a unit. Each driver is licensed to a given vehicle. All vehicles are initially inspected at national events only. All fees must be paid at completion of successful inspection. Contact NHRA for

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appointment.

### **VEHICLE INSPECTION RENEWAL**

May be done at any location; call NHRA for appointment. Submit all license forms, physical form, and time slips along with appropriate fees to NHRA Technical Services Department.

### **SPEED LIMIT**

Maximum allowable speed limit: **100 mph**. Exceeding speed limit at any time may result in the following sanctions:

**FIRST OFFENSE:** 1-10 mph over limit: \$500 fine; 11 mph or greater: \$500 fine.

**SECOND OFFENSE:** 1-10 mph over limit: \$1,500 fine; 11 mph or greater: \$5,000 fine and 6-month suspension of license.

**THIRD OFFENSE:** Exceeding limit by 1 mph or greater: \$5,000 fine and indefinite suspension.

Any procedures or requirements described herein may be waived by the NHRA, if NHRA in its sole judgment, determines that such a waiver or amendment is appropriate. Violations of the NHRA Exhibition Specialty Vehicle rules and regulations, limits, or policies, may result in penalties ranging from formal warning to immediate and indefinite suspension of all driving privileges. All accidents, engine problems other than routine maintenance, and/or repeated problems or failures of the same nature (Whether they occur at NHRA member tracks or facilities or not.) Any events or incidents (**Whether they occur at NHRA member tracks or facilities or not.**) other than normal operation of any vehicle licensed under this program must be reported to the NHRA Technical Services Department within 48 hours. Failure to do so may result in suspension of license and/or other penalties, as NHRA deems appropriate.

## **MODERN FUEL ALTERED**

Limited to nitromethane fueled altered roadsters that are showcased in 1000-foot solo runs. Requirements and specifications for Modern Fuel Altered are the same as those for Funny car – Section 18 of the NHRA Rulebook - with the following exceptions:

### ***REQUIREMENTS & SPECIFICATIONS***

#### **ENGINE: 1**

##### **INTAKE MANIFOLD**

When using AJPE Stage III 25A-103 or AJPE Stage 25A- 110 manifolds, the rear facing 10.75-inch round openings must be blocked off.

#### **FRAME: 4**

##### **BODY MOUNT TREE**

Not Applicable

## **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. Hoops must line up with the centerline of the car.

# **BODY: 7**

## **AIRFOILS, WINGS, SPOILERS**

Rear wing mandatory. Rear wing must be a maximum 850 square inches. Front spoilers, wings or canards permitted. Maximum square area for front spoilers is 440 square inches. The maximum front frame overhang is 6 inches.

## **BODY**

Limited to 1949 and earlier open cockpit coupes or roadsters. Bodies must resemble the original mass-produced make and model. All bodies must be painted and lettered. Grill shell or grill shell tank design matching the paint design is mandatory.

## **BODY SPECIFICATION**

Not applicable

## **BODY BURST PANEL**

Not applicable

## **BODY, FASTENERS AND STIFFENERS**

Not applicable

## **BODY, FRONT LATCH AND TETHERING SYSTEM**

Not applicable

## **BODY, REAR-RELEASE MECHANISM**

Not applicable

## **ESCAPE HATCH**

Not applicable

## **GRILLE**

Not applicable

## **REAR BUMPER**

Not applicable

## **WINDSHIELD, WINDSCREEN**

Mandatory. The windscreen or deflector must be designed to divert wind, liquids, and foreign matter over the driver's head, be securely mounted, and installed in such a manner that it does not obstruct the driver's frontal view in any way. The windscreen/deflector should be as high as the top of the roll hoop. See General Regulations 7:7.

# FACTORY X EXHIBITON CLASS PRESENTED BY HOLLEY



## DESIGNATION

FX preceded by car number.

Reserved for 2019 and newer 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 (Camaro – COPO) – minimum weight 2,650 lbs.  
Dodge (Challenger – Drag Pak) – minimum weight 2,650 lbs.  
Ford (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



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- 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) 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](http://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**

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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 at [Nhraracer.com](http://Nhraracer.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. 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 framersails. 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**

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Must be correct year, make and model specified 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 framrails, 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.

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### **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) mandatory; all other materials prohibited. 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

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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 framerails. Weight bracket may not extend beyond the limits of the inside of the front fascia. 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

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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

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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. 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 TBD 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 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 under side 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. 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

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slotted for clearance around wheelie bars. Clearance is to allow for wheelie-bar movement only.

### **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 frameroils 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 frameroils 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-



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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. 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

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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 5-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**

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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.

### **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.

## **LEGEND CARS**

### **DESIGNATION**

LC, preceded by competition number.

All Legend Cars must be manufactured by U.S. Legend Cars International (formerly 600 Racing Inc.) as "Stock" or "Original Equipment Manufacturer/OEM" or "Aftermarket" produced by INEX-approved manufacturer other than Original Equipment Manufacturer. Refer to U.S. Legend Cars International, 5245 NC Highway 49 South, Harrisburg, NC 28025.

The minimum car weight is 1,100 pounds. The minimum weight of the car with the driver is 1,300 pounds.

Any competitor running quicker than 12.50 e.t. in the quarter-mile or 7.99 e.t. in the eighth-mile or faster than 110 mph at any time will be disqualified from the event.

See additional rule requirements at the end of the Legend Cars section for the state of New Jersey.

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Competition structure will be conducted in an E.T. dial-your-own format. Competition permitted with E.T. Motorcycles, E.T. Snowmobiles, All-Terrain Vehicles, or Legend Cars only. Competition with standard full-sized closed- or open-bodied vehicles, Jr. Dragsters, or Jr. Comp Dragsters is prohibited.

# **REQUIREMENTS & SPECIFICATIONS**

## **ENGINE: 1**

### **ENGINE SERIAL NUMBERS**

The engine must remain a factory-stock Yamaha FJ1200/XJR1200 or a sealed Yamaha XJR1250 as currently delivered through 600 Racing Inc. A Yamaha FJ1200/XJR1200 from other countries (Canada, England, etc.) or an FJ1100 may only be used if it meets all the specifications of the U.S. model as delivered through 600 Racing Inc.

### **EXHAUST SYSTEM**

The header and gasket must remain within the stock dimensions. Only INEX-approved S&S or Borla mufflers are MANDATORY. Mufflers must remain stock and may not be internally modified in any way (turning tip away from car is permitted).

### **CARBURETORS**

The carburetors and components of the carburetors must remain as stock Yamaha.

### **OIL CATCH CANS**

An oil catch can (maximum 1-quart capacity) may be used.

### **OIL COOLERS & LINE**

Oil coolers must be cooled by air only. Aftermarket oil coolers are permitted.

### **FUEL**

Only petroleum-based unleaded or leaded gasoline.

### **FUEL CELL**

Approved fuel cells (plastic or metal) must be stock as delivered by 600 Racing.

### **FUEL FILTER**

Aftermarket fuel filters may be used. No glass fuel filters will be permitted.

### **FUEL LINES**

Fuel lines may not be located in or run through the driver's compartment of the frame. Steel-braided fuel lines are mandatory.

### **FUEL SHUTOFF VALVE OR FUEL REGULATOR**

Aftermarket fuel shutoff valves and fuel regulators are permitted.

## **DRIVETRAIN: 2**

### **CLUTCH**

The clutch (plates and springs) may be replaced with any aftermarket type of the same design (no aluminum clutch plates).

### **TRANSMISSIONS**

The transmission and transmission gears must remain stock Yamaha FJ1200/XJR1200/XJR1250 (sealed) as delivered by 600 Racing Inc.

### **REAR AXLES**

The long and the short rear axles must remain stock. If one-piece axles are used, they must be stamped INEX and be as delivered by 600 Racing Inc.

### **REAR ENDS**

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Only 10-bolt pattern/wide flange (5/8-inch) Toyota, locked- steel rear ends are permitted.

### **DRIVESHAFT**

The driveshaft, flanges, and U-joints must remain within the stock dimensions, steel thickness, location, and configurations as currently delivered by 600 Racing Inc.

### **DRIVESHAFT RETAINERS**

An INEX-approved driveshaft retainer strap is permitted. A maximum of three (3) retainers of 1/4-inch thickness and 3/4-inch width are permitted.

## **BRAKES AND SUSPENSION: 3**

### **BRAKES**

Any of the brake parts that are attached to the rear end or the spindles must remain stock, within the stock dimensions, steel thickness, location, and configurations as currently delivered by 600 Racing Inc.

### **BRAKE ROTORS**

Only steel rotors (not drilled or reduced in diameter) are permitted on the front. The minimum permitted thickness of the brake rotor is 8mm wide.

### **BRAKE DRUMS**

Only steel drums (not drilled or lightened) are permitted on the rear.

### **BRAKE & CLUTCH LINES**

Rubber, hard-line or steel-braided brake and clutch lines are permitted.

### **STEERING WHEELS**

Larger or smaller steel steering wheels are allowed, aluminum steering wheels are allowed. Racing-style, quick-release steering hubs are mandatory.

### **RACK & PINION STEERING**

Only the rack and pinion steering box as currently delivered and stamped 600 Racing Inc. (or Mid-State Machine) is permitted.

## **FRAME: 4**

### **FRAME**

Absolutely no modifications of the frame (including roll cage) will be permitted. All frames must have 600 Racing Inc. ID plate secured on the frame, inside left main framerail.

### **ROLL BAR PADDING**

Roll bar padding SFI 45.1 on all bars within 12 inches of driver's helmet is required.

### **FIREWALL**

A metal firewall is mandatory. Firewall must be installed as currently delivered by 600 Racing. Using a "thicker than stock" metal firewall is permitted.

### **WHEELBASE**

All cars must compete with OEM wheelbase.

## **TIRES & WHEELS: 5**

### **TIRES**

The tire must be a Legends Edition 205/60R13 BFGoodrich T/A Comp HR4. Tire may not be soaked, softened, siped (razor cuts), grooved, or recapped. The raised white letters of the BFGoodrich Tires logo must face toward the outside of the car and be visible at all times.

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### **WHEELS**

Any type of automotive steel wheel (no bead lock) as delivered by 600 Racing that has a 13-inch diameter and a 7-inch width and the offset of 3 inches to 3 1/4 inches from back rim edge to back of wheel center is permitted. The minimum weight of a tire and wheel must be at least 36.0 pounds without additional weights. All wheel weights must be covered with duct tape. Bleeder or relief valves are not permitted in the wheels.

## **INTERIOR: 6**

### **SEATS**

Only INEX-approved factory-manufactured metal seats may be used.

## **BODY: 7**

### **AERODYNAMICS**

Spoilers, air dams, or other aerodynamic devices are not permitted.

### **FIBERGLASS COMPONENTS**

All fiberglass components must remain within the stock dimensions, thickness, location, and configurations as currently delivered by 600 Racing Inc.

### **HOOD**

Hood louvers are permitted. Replacing the self-locking fasteners on the hood with pins permitted.

### **SHEET METAL**

The minimum thickness of sheet metal is .036-inch. The rear-deck sheet metal (including the package tray behind the driver) may not be removed or altered in any way unless a fuel-cell access hole is used. The fuel-cell access hole must be covered with a sheet-metal plate and secured at all times when the car is on the track.

### **WINDSHIELDS/SCREENS**

All cars must have either a screen or Lexan windshield.

## **ELECTRICAL: 8**

### **BATTERY**

The battery must remain in its stock location and securely mounted. A battery shutoff switch is mandatory.

### **DELAY BOX/DEVICE**

Prohibited. The use of throttle stops, delay devices, timed vehicle-control devices (counters, time displays, etc.) is prohibited. Data recorders prohibited.

### **IGNITION SYSTEM**

The complete ignition/engine control system must be the original OEM parts for the Yamaha FJ1200/XJR1200/XJR1250. Electronic throttle (traction) controls are not permitted. In-line fuses only are permitted (no fuse blocks are permitted). Ignition pickup coil wires must run directly to the ignition box and may not be taped or tie-wrapped to other wires. No open wires or unused connectors allowed within reach of the driver.

Ignition Control Box: The stock FJ1200/XJR1200/XJR1250 ignition control box (black box) and the red ignition box (marked INEX-Approved and delivered by 600 Racing Inc.) are the only boxes permitted to be used, and they may not be altered or relocated in

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any way. Only one ignition box is permitted on a car (multiple boxes are illegal). The original stock FJ1200/XJR1200/XJR1250 rev-limiting system must be in proper working condition and may not exceed 10,500 rpm.

### **SUPPORT GROUP: 9**

#### **FIRE EXTINGUISHERS**

Onboard fire extinguisher required.

#### **DRIVER: 10**

##### **CREDENTIALS**

Valid state, government-issued driver's license beyond a learner's-permit level, or NHRA competition licenses mandatory. Drivers must be at least 16 years of age. See General Regulations 10:4.

##### **HELMET**

Full-face Snell: SA2010, SA2015, SA2020, FIA: 8860-2010, 8860-2015 or 8860-2018 helmet mandatory.

##### **FIRE-RETARDANT GLOVES**

Fire-retardant gloves are mandatory. Gloves must have SFI 3.3/1.

##### **FIRE SUIT**

All drivers must wear a fire-retardant suit or jacket and pant with SFI 3.2A/5.

##### **SAFETY HARNESS**

Driver restraint system meeting SFI Spec 16.1 mandatory. Must be updated at two-year intervals from date of manufacture.

##### **RACING SHOES**

Drivers must wear shoes SFI 3.3/1.

##### **NECK RESTRAINT SYSTEM**

Neck collar meeting SFI Spec 3.3 mandatory. An SFI-approved head and neck restraint device/system is permitted. 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 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.

### **NEW JERSEY STATE REQUIREMENTS**

The following modifications to a Legend Car are required to race in New Jersey:

- 1.) Steel plates welded onto existing passenger-side door.
- 2.) Nomex boot attached to seat back covering the existing safety harness hole.
- 3.) Fuel shutoff switch must be located on the top horizontal shelf behind driver's right shoulder on flat sheet metal. Switch must be clearly marked with red tape, ON - OFF.
- 4.) Plastic battery box.
- 5.) Pad on steering wheel.

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6.) Remove threaded rods on existing fuel-cell bars and replace with 5/16-inch bolts through fuel-cell bar. Bushings must be installed in holes drilled for new bolts passing through fuel-cell bars.

7.) Add to the door strike plates with 3/16-inch-thick, 1 1/2-inch x 1 1/2-inch angle iron that is 5 inches in length. Weld the angle iron on each door strike plate so that the angle iron prevents the door from closing in toward the driver.