

## **SECTION - 8**

### **FIGURE 8 DIVISION – 2018**

Open to two-wheel drive American automobiles provided they comply with, and adhere to, specifications as outlined for this division. NOTICE: ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF FRRC OFFICIALS. NO EQUIPMENT WILL BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THRU INSPECTION UNNOTICED. EFFORTS TO TAKE ADVANTAGE OF “LOOP HOLES” IN THESE RULES WILL NOT BE TOLERATED.

#### **8.1 COMPETING MODELS AS APPROVED BY FRRC**

FRRC Figure 8 races are open to approved 1950 to 2015 models of American made passenger cars. Cars must have full frame. Unibody style cars are prohibited. Convertibles and station wagons are prohibited.

All cars must maintain a minimum wheelbase of 108.0 inches at all times.

##### **8.1.2 Other Approved Models**

Other models may be approved, provided they are of the same body configuration and meet the spirit and intent of competitive racing.

##### **8.1.3 Identification and Marking**

FRRC reserves the right to assign car numbers, and to assign or restrict the display of graphics and advertising on racecars. Offensive graphics or slogans are not permitted. All Competitors agree to accept FRRC’s decision in this matter.

Officially issued, single or two digit, numbers in contrasting colors to the body, must be at least 16 inches high by 3 inches wide and neatly applied (paint or decals) to both doors.

Where required, participating sponsor’s emblems, or decals will be placed in the position designated by FRRC Officials.

#### **8.2 GENERAL CAR REQUIREMENTS**

##### **8.2.1 Bodies**

Car and truck bodies are permitted. After market bodies are prohibited. The body must meet the following requirements:

Interior area of car must be completely enclosed from front to rear and be of steel.

All cars and trucks must have complete bodies, hoods, fenders, and an approved front and rear bumper. Bumpers may be fabricated of pipe, or tubing, with capped ends. Bumper maximum 2 inch diameter and max wall thickness of .125 inch.

Bumpers may only have 2 points of contact to frame horns. No additional bracing allowed.

All glass, except windshield, (windows, headlights, taillights, etc.), exterior body moldings (chrome, trim, mirrors, door handles, etc.), combustible material (headliner, seats, insulation, etc.) must be removed. Screen of ½-inch mesh may be used on driver’s side of windshield opening. Stock hood and trunk hinges must be removed and replaced with clip type hood pins. Spin-off hood pins are prohibited. Stock grills must be replaced with expanded metal or screen.

Rub rails may be no larger than 2 inches in diameter and have a maximum wall thickness of 0.125 inches. Rub rails must have the ends cut at a 45-degree angle and be capped. Rub rails must be flush with body and must be bolted or welded to the roll cage. Rub rails must match

the color of the body.

### **8.2.2 Added Weight**

Any weight (ballast) added to the car must be secured by no less than two ½-inch bolts. The maximum spacing between bolts is 10 inches. No weights may be added outside the body. The front weight must be angled at 45 degrees. Added weights must be painted a bright color and have car number on weight.

### **8.3 FRAME AND ROLL CAGE**

All frames and roll cages must be acceptable to FRRRC Officials. The frame and roll cage must meet the requirements described in the following paragraphs.

#### **8.3.1 Frame**

All frames must be stock passenger car frames. Hearse and truck frames are prohibited. Frame can be plated forward of front spring pocket to repair bent frame horn(s) with a 3"x3" 11 gauge (1/8") steel plate welded on the outside of the frame. No plating on the inside of the frame forward of the front spring pockets.

**Cement or lead filled frames are prohibited.**

#### **8.3.2 Roll Cage**

Roll cage installation and workmanship must be acceptable to FRRRC Officials.

**The driver's side must be plated between the door panel and roll cage. Plate must be a minimum of 1/8 inch thick and Must be welded on.**

#### **NO FORWARD BRACING**

The jack posts must be guarded, or inside the body.

All roll bars exposed to the driver must be padded.

Bay bars allowed. May only extend past upper A-arm 1" to allow clearance to remove A-arm nut. Maximum 2" diameter x .125" wall tubing. NO ADDITIONAL bracing allowed on bay bar!

### **8.4 SUSPENSION**

The front suspension must be OEM. Upper and lower control arms must be OEM. Springs must be a minimum of 5 inches in diameter.

The rear suspension may be modified to convert from coil springs to leaf springs. Coil springs must be a minimum of 5 inches in diameter.

Front and rear shocks may mount in any position. One shock per wheel. Steel body racing shocks are permitted. **Aluminum body and remote reservoir shock absorbers are prohibited.** Maximum Shock retail price \$90

**After market control arms are allowed. 4 corner screw jacks are allowed.**

#### **8.4.1 Spindles, Wheel Bearings, and Hubs**

Spindles, wheel bearings, and hubs must be OEM. Dropped spindles are prohibited.

#### **8.4.2 Brake Components - Front and Rear**

Each wheel must be equipped with a brake in proper working condition. Brakes may be disc or drum. Disc brake calipers must be OEM, grinding is prohibited. Disc brake rotors must be steel. Aluminum or composite rotors are prohibited.

**Fabricated foot boxes are permitted.**

### **8.5 ENGINE REQUIREMENTS**

#### **8.5.1 General Eligibility**

Only V-8 engines with a 2 bbl. carburetor are permitted. Engine must be of Parent Corporation of frame. Cast iron intake and exhaust manifolds mandatory, no Corvette exhaust

or intake manifolds permitted. No Aluminum Intakes, No RH Heads **STOCK GM aluminum Intake is allowed if approved by FRRC Tech officials.**

#### **8.5.2 Engine Blocks**

Block must be a factory production **cast iron** block with external measurements identical to the standard production engine. Angle milling of block is prohibited.

#### **8.5.6 Cylinder Heads**

Aluminum cylinder heads are prohibited. **Titanium valves are prohibited.**

#### **8.5.7 Intake Manifold**

Any production type, cast iron intake manifold is permitted. **STOCK GM aluminum Intake is allowed if approved by FRRC tech officials.**

An adapter plate, with a maximum thickness of 1¼-inches, may be used between the intake manifold and carburetor.

Only 2 gaskets (1 per side), with a maximum thickness of 0.065inches, may be used on the adapter plate.

#### **8.5.8 Carburetor**

**Holly 4412 carb or Rochester 2 bbl carburetor. 1 ¼ inch maximum spacer + gasket allowed.**

#### **8.5.9 Air Cleaner**

All cars must be equipped with an air cleaner during competition.

#### **8.5.10 Ignition System and Battery**

Magnetos and crankshaft-triggered ignitions are prohibited. 12-volt battery and electrical systems only.

The battery must be located between the frame rails, must be securely installed. Batteries located in the driver compartment must be enclosed in either a plastic, marine battery box or an FRRC approved battery box.

#### **8.5.11 Exhaust System**

All cars must have a complete exhaust system. Exhaust manifolds must be unaltered, cast iron, OEM. Corvette type exhaust manifolds are prohibited. Exhaust manifold may not exceed 2" i.d. when measured at the exhaust flange. All exhaust systems must extend past the driver and exit under the car.

#### **8.5.12 Cooling System**

Radiator must mount in front of engine **in stock location.**

### **8.6 DRIVE TRAIN**

#### **8.6.1 Clutch, Bell Housing, Transmission, and Drive Shaft**

Any three, four, or five speed, American made, manual transmission is permitted. Unaltered automatic transmissions are permitted. Torque converter diameter cannot be less than 10". Quick-change transmissions, couplers, in/out boxes, and buttons are prohibited.

All manual transmission cars must be equipped with a scatter-proof bell housing. A 3-inch diameter hole is required in the bottom of the bell housing for inspection purposes.

The flywheel and clutch assembly must be a single disc, OEM, no less than 10.5 inches in diameter and cannot weigh less than 40lbs.

All cars must be equipped with a loop that surrounds the drive shaft. The loop must be fastened to the frame or cross member.

#### **8.6.2 Rear End**

Only OEM passenger car rear ends are permitted.

Quick-change rear ends are prohibited. Locked rear ends are permitted.  
Ford 9" rear ends are permitted.

Axles must be steel. Titanium axles are prohibited.

### **8.6.3 Wheels and Tires**

#### **8.6.3.1 Wheels**

The wheels must be steel and meet the following requirements:

- 1 After market steel wheels are required. No magnesium or aluminum wheels.
- 2 All wheels must be 15 inches in diameter and no more than 8.0 inches wide.
- 3 Wheel studs must be a minimum of 7/16 inch diameter and at least flush with outside of lug nut.
- 4 Wheels must be attached with 1-inch, steel, lug nuts. Lug nuts may not be altered.

#### **8.6.3.2 Tires**

NO NEW TIRES ALLOWED

Only approved tires allowed. Tires must be used in approved positions. Approved tires and positions are: 8.0/27.0-15 Hoosier F53, Hoosier F75 or Hoosier R-750 (both sides). No buffing or treatment of tires allowed.

### **8.7 FUEL SYSTEM**

Electric fuel pumps are prohibited.

Fuel line must be metal. Fuel line may not be located in driver's compartment. Fuel line must run along the inside of the frame rail.

#### **8.7.1 Fuel Cell**

All cars must be equipped with a fuel cell. The maximum capacity of the fuel cell is 22 gallons. Fuel cell must be located behind the rear end, between the frame rails and centered in the trunk area. The fuel cell must be attached to the frame with a minimum of four bolts. Minimum height to the bottom of the fuel cell container is 11 inches.

#### **8.7.2 Fuel Cell Container**

The fuel cell container must be a minimum of 18-gauge steel and must have a 1-inch lip. The container must have, two, 1 inch by 1/8 -inch steel straps, around the top, sides, and bottom, in both directions. The top must be a minimum of 18 gauge, steel.

#### **8.7.3 Fuel**

The fuel must be automotive gasoline only. The use of nitrous oxide is prohibited. FRRRC has the right to sample a competitor's fuel at any time, during an event. Samples will be tested by FRRRC and/or any outside laboratory at FRRRC discretion.

### **8.8 MISCELLANEOUS EQUIPMENT**

#### **8.8.1 Steering components**

All steering boxes and components must be stock, unaltered OEM, for the car. All cars must have either a collapsible, two piece steering column, or a minimum of two swivel joints. The steering column must have an impact collar, no less than 1½-inches in diameter, welded, or bolted to the column forward of the column support inside the drivers' compartment. The center of the steering wheel must be padded with resilient material.

#### **8.9.2 Seat**

Seat must be made of aluminum and installed in a manner acceptable to FRRRC Officials. No less than 4, ½-inch diameter, bolts must be used to attach seat to frame and cage. A flat steel washer no less than 1½-inches in diameter must be installed between the head of the bolt and

seat. Headrest on seat is mandatory.

### **8.8.3 Seat Belts and Shoulder Harness**

It is recommended to use head and neck restraint system such as a "Haans Device", but not required. Driver discretion.

A quick release lap belt and double shoulder belt no less than 3 inches wide is mandatory. A submarine belt is also mandatory. Seat belt and shoulder harness must be date stamped 2005 or newer. Seat belt and shoulder harness must be installed according to manufacturer's recommendations. The belts and harness must be attached to the roll bar cage at approximately shoulder height with Grade 5 or better hardware, no less than 3/8 inch in diameter.

### **8.8.4 Helmet**

A helmet that meets SA2005 Snell Foundation specifications is mandatory.

### **8.8.5 Drivers Suit**

It is mandatory that a driver wears a fire retardant suit (free of rips and tears) and gloves while on the race track. It is recommended that a driver wear fire retardant socks and shoes. Drivers will not be allowed on the track unless wearing a fire retardant suit and gloves. If a driver removes his/her gloves during an event, the driver will be black-flagged.

### **8.8.7 Window Net**

It is recommended that each car be equipped with either a 1-inch web or knitted mesh window net on the driver's side. The minimum allowable length is 12 inches. The window net must attach to the roll cage at the bottom and release with a seat belt snap or FRRRC approved release on the top front corner of the window net. Window net must be in place while car is on race track.

### **8.8 Engine Claim Rule**

**\$1,000.00** claim/swap. The driver claiming the engine must be an FRRRC member, finish on the lead lap and within 5 positions of the car he/she claims, and must have competed in the 2 races prior to the claim. Engine must be claimed within 5 minutes of the completion of that race. Cash or money order must be given to a FRRRC Officer. Only 1 claim **made** per year per driver.

**Each competitor can also only be claimed one time per season.** Engine claim to include intake manifold to oil pan and does not include the following: carburetor, clutch assembly, flywheel, exhaust manifolds, engine mounts, sending units, fuel pump, distributor and spark plug wires or the valve covers. If the driver refuses to sell the claimed engine, he/she will lose all points and money up to and including that race, and be suspended for two (2) additional weeks of competition. **No claiming is allowed for the last 2 weeks of the season.**

### **8.9 TRANSPONDERS**

**Transponders are required on every car and are to be working and turned on whenever the car is on the racing surface. Only 1 transponder allowed per car. Transponder to be located 75 inches from the center of the transponder to the front bumper.**

## **FIGURE 8 TRACK POLICY**

1 Any car in competition with a flat tire or an open hood must leave the race track immediately or you will not be scored.

2 At the "X", all racers must yield (give right of way) to cars coming from the right, to

prevent a hit in the drivers' door.

3 Drivers must be signed in by 5:45pm Starting line-ups will be posted shortly after the drivers' meeting. The previous week's winner will start last. Any driver not signed in by 5:45pm will start at the rear of the field.

4 All competitors must be 18 years of age or older.

5 All points go with the driver.

6 These rules apply to all Figure 8 races held at W.I.R., this includes all special events

7 Use your best judgment when entering and leaving the race track or pit area. Severe penalties will be imposed if extreme caution is not used.

8 Track officials can have a competitor's car inspected at any time. If a driver refuses to present the car for inspection, they forfeit their right to compete for 1 full year from the date of the infraction and lose all points and money accumulated up to that point.