

## **SECTION – 5**

### **SUPER LATE MODEL DIVISION – 2020**

NOTICE ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF FRRRC 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. ALL RACE CARS ARE SUBJECT TO INSPECTION BY TRACK OFFICIALS AT ANY TIME.

#### **Major Infraction**

Major infractions include: violation of cubic inch displacement, compression limit, using non-approved cylinder block, crankshaft, connecting rods, valves, valve lifters, rocker arms, cylinder heads, intake manifold, carburetor spacer; carburetor (including altering of stock boosters), violation of minimum clutch diameter rule, carbon fiber drive shafts and/or springs, non-approved and/or treated tires; traction control; fuel; failure to tear down car for inspection when requested; failure to surrender to FRRRC any part and/or equipment found during an inspection that does not meet FRRRC specifications; harassment, verbal abuse, or assault to any FRRRC Officer, FRRRC Technical Official, or any persons serving under the direction of FRRRC. Major infractions result in a loss of points and money for the event.

#### **Minor Infraction**

An infraction that is not a Major Infraction. First offense on minor infractions will result in a Written documented warning. The next event competitor must bring vehicle immediately to tech area prior to competition to ensure infraction has been resolved prior to competing. The final week of the racing season no warnings will be issued and any infractions will be subject to loss of points and/or money.

ALL Infractions Major or Minor will be documented and displayed in tech area the following week for entire club body to see.

#### **5.1 COMPETING MODELS AS APPROVED BY FRRRC**

FRRRC Super Late Model races are open to approved 2005 to 2020 models of American made passenger cars.

##### **5.1.1 Approved Competition Models**

All ABC bodies are approved for competition made pre-2018

All cars must maintain a wheelbase of 103.0 +/- 2.0 inches at all times.

The maximum overall width of all cars, as measured from the outside of the right body or tires to the outside left body or tires, is 82 inches.

The maximum tread width for these cars is 66 inches, measured at spindle height.

Any car over 66.0 inches is deemed illegal and DQ'ed.

Max Front and Rear Tread Width to be measured without driver in car. Car must comply with the 4" ground clearance rule (No shock tie down allowed during tread width inspections) tread width must comply before and after each event.

The Gen 6 body is NOT approved for full time FRRRC Competition but will be allowed to compete a maximum of 3 times in 2020.

##### **5.1.3 Identification and Marking**

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

Officially issued numbers must be at least 16 inches high by 3 inches wide and neatly applied (paint or decals) to both doors. Numbers, as large as possible and in contrasting colors to the body, must be applied to the right front corner of the roof, front headlight cover, and rear taillight cover.

Where requested, participating sponsor's emblems, or decals will be placed in the position designated by FRRC Officials. Failure to place participating sponsor's emblems on a race car may result in ineligibility for contingency prizes.

#### 5.1.4 Retired numbers

#44 – Wally Jors

#6 – Jim Pagel

## 5.2 GENERAL CAR WEIGHT REQUIREMENTS

### 5.2.1 Overall Car Weight

The specific minimum weights for all cars are listed below. No fuel burn off allowance for qualifying. All weights are with the driver. All cars must maintain the minimum right side percentage of the total car weight, at all times. FRRC Officers reserve the right to adjust weight at any point during the season to ensure fair competition. Fuel burn off allowance is 1lb PER LAP.

Any car after a race that is more than 10 pounds under minimum weight: last place points and money for that race. If a car is 10 pounds or less under minimum weight, the first offense the competitor will be provided a written documented warning. After this initial warning, subsequent violations will result in 1 point and \$10 fine per pound between 1 and 10 pounds. (For example: If competitor has already been issued their warning and is found 7 pounds light, this will result in loss of 7 points along with \$70 fine.)

Also, any cars that are 1 or more pounds under minimum weight prior to qualifying will not be allowed to enter qualifying line until minimum weight is reached. If this results in a break in the qualifying line, competitor will only receive one lap of qualifying.

Any car after a race that has less than the minimum required right side weight percent by greater than .3%: last place points and money for race. If car is less than .2% below minimum requirement, the first offense competitor will be provided a written documented warning. After this initial warning, subsequent violations will result in 5 points and \$50 fine per .1%. (For example, if competitor has already been issued their warning is found .2% below minimum right-side percent, this will result in a right-side weight prior to qualifying will not be allowed to enter qualifying line until minimum weight is reached. If this results in a break in the qualifying line, competitor will only receive one lap of qualifying.

The A.C.E and the 9:1 are the Preferred Choices of the FRRC. Other motor weights are listed. Minimum Weights

Engine Weight Right Side Percentage

9:1 Alum. Heads 2800 lbs. 42.0% - For any features scheduled longer than normal number of laps – 2825lbs for other FRRC events

A.C.E Alum. Heads 2750 lbs. 42.0%

FRRC Chevy Crate Motor 2600 lbs. 40.0% (GM P/N 88958604 ONLY)

Wegner LS Spec Motor 2825 lbs. 42.0% (364ci max and must have 2bbl carburetor) (Must have 8000 Rev Chip)

Wegner 5.3 LS 2750 lbs. 42.0% (must have 2bbl carburetor) (Must have 7600 Rev Chip)

Southern Sealed Parts Engine 2825 lbs. 42.0% (Must have 8000 Rev Chip)

MEP Sealed Motor 2825 lbs. 42.0% (Must have 7600 Rev Chip)

Hamner Sealed Motor 2825 lbs. 42.0% (Must have 7600 Rev Chip)

Tesar Sealed Engine 2825 lbs. 42.0% (Must have 7600 Rev Chip)

Added Weight

Lightweight Bolts 25 lbs.

Cars without: Leg & Shoulder protectors 50 lbs.

### 5.2.2 Added Weight

Any weight (ballast) added to the car must be secured by ½-inch diameter bolts. Loose weights are prohibited. No weights may be added outside the body and under the frame rails, except for over tail cars. Added weights must be painted a bright color (safety orange or white) and have car number on weight. TUNGSTEN IS PROHIBITED

### **5.2.3 Car Weights After Race**

All heat race winners and the top 5 finishers in the dash, semi and feature races must weigh in immediately after the race. Failure to report to scale will result in last place points and money. If competitor goes to their pit stall prior to coming to scale, this will result in last place points and money for the event they were required to scale. Any ballast that falls off a car during competition cannot be returned to the car for determining weight after a race. A fine of \$1.00 per pound of weight lost will be assessed to car.

Crew Members may NOT jack the car prior to scaling, tech inspection and in the qualifying line.

## **5.3 GENERAL CAR REQUIREMENTS**

### **5.3.1 Car Bodies**

The car body must meet all ABC rules as established in the current ABC rule book.

### **5.3.2 Body Height and Body Ground Clearance Requirements**

All body height and body ground clearance measurements are made without the driver in the car. No tolerance for measurements for cars without driver. All body measurements will be taken with 4" blocks placed under the frame where the front stub meets the main frame and 4.0" blocks under the rear frame at the center line of rear axles.

#### **5.3.2.1 Body Height Requirements**

The roof height will be measured at a point 10 inches behind the top of the windshield on the Roof centerline. For ABC Body the minimum allowable roof height is 47 inches, maximum 48 inches.

#### **5.3.2.2 Body Ground Clearance Requirements**

Front air dam clearance shall be no less than 4 inches.

Rocker panel clearance shall be no less than 4 inches.

Minimum height of quarter panels, behind rear tire, shall be 10 inches.

#### **5.3.2.3 Under Car Panning**

Panning of radiator to front bumper and between frame rails for air intake to radiator allowed a maximum the width of front ABC nose screen. Under car panning (weight trays) may start at foot box and only run to back of drivers' area (cockpit) and remain inside frame rails. Final discretion for approval set by FRRC tech officials.

### **5.3.3 Rear Spoiler**

Rear Spoiler 5" max or 6.5 max. No modifications to spoiler to make height between 5"-6.5".

Must run either 5" or 6.5"

No rudders or forward mounting brackets are allowed. THE SPOILER MUST REMAIN CLEAR

## **5.4 FRAME AND ROLL CAGE**

No carbon fiber parts of any kind allowed. Driver safety related items may be carbon fiber. (examples: helmet, seats, Hans) (Decorative type carbon fiber at the discretion of the FRRC Officials & Tech Crew.... Example Gauge cluster mounting backplate)

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

All chassis must have safety vehicle pickup points clearly marked, front and rear.

All chassis' must be equipped with a fuel cell protector bar that extends to the bottom of the fuel cell and is adequately braced.

All cars must have a front bumper of round steel tubing. All cars must have a rear bumper of

round steel tubing no less than 1¾ inches in diameter and must be secured in two places to rear cover as set by ABC rules

#### **5.4.1 Frame**

All main frames must be aftermarket construction. No stock passenger car frames allowed. All Main frame rails must be steel box tubing minimum 10 inches in circumference and must have a Minimum wall thickness of 0.083 inches.

The front stub may be stock passenger car or aftermarket construction.

#### **5.4.2 Roll Cage**

Roll cage installation and workmanship must be acceptable to FRRC Officials. The roll cage must be a four-post design. Consisting, in general, of a vertical main hoop, roof or top hoop, and left and right front post.

It is recommended that all right angles must be gusseted.

The main hoop must connect to the left and right frame rails, behind the driver, and be diagonally. The main hoop must have a horizontal bar at the midpoint. All bars in the main hoop must be round steel tubing no less than 1¾ inches in diameter and have a minimum wall thickness of 0.095 inches.

The top hoop must attach to the main hoop, and left and right front posts. The left and right front posts must be connected by a horizontal “dash” bar. All bars in the top hoop, left and right front posts, and dash bar must be round steel tubing no less than 1¾ inches in diameter and have a minimum wall thickness of 0.095 inches.

The driver’s side must be equipped with four, or more, equally spaced horizontal bars. The door bars must be connected by two, or more, equally spaced vertical braces and must attach to the main frame by two, or more, equally spaced vertical braces.

A foot protector bar is mandatory.

All driver side door bars and braces must be round steel tubing no less than 1¾ inches in diameter and have a minimum wall thickness of 0.095 inches. All door bars on the driver’s side must be plated. Plating must extend from the front pedal plate to rear main hoop and from top door bar to bottom frame rail. Similar plating is recommended behind the driver’s seat.

The top door bar must be no less than 29 inches from the ground.

The passenger side must be equipped with a minimum of three door bars. Two of the bars may be “X” design. Horizontal bars must be equally spaced and connected by two, or more, equally spaced vertical braces. All passenger side door bars and braces must be round steel tubing no less than 1¾ inches in diameter and have a minimum wall thickness of 0.083 inches.

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

All roll bars exposed to the driver, and left side door bars, must be padded.

Absolutely NO aluminum allowed on structure of chassis. EX: Frame rails, roll cage

### **5.5 SUSPENSION**

The front suspension must be independent. McPherson Strut type suspensions are prohibited. Independent rear suspensions are prohibited.

Computerized, electric, hydraulic, pneumatic, or remote controlled devices, which can change the handling characteristics of the car, during the race, are prohibited.

No birdcage/swing arm suspension set ups allowed

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

Spindles, wheel bearings, and hubs must be heavy duty and are subject to approval by FRRC Officials.

#### **5.5.2 Brake Components – Front and Rear**

Each wheel must be equipped with a brake in proper working condition.

No computerized or electronic traction control devices permitted.

Disc brakes mandatory. Inboard brakes are prohibited.

Maximum of 4 pistons per caliper. Retail cost must not exceed \$500.00 per caliper.

Disc brake rotors must be steel. Aluminum or composite rotors are prohibited.

Floating rotors permitted

Brake balance bar, or brake proportioning valve is permitted.

Brake blowers from nose/radiator box only and must be blown on front brake rotors only.

#### **5.5.3 Shocks – Front and Rear:**

One Shock allowed per wheel

Remote reservoir shock absorbers are permitted.

Maximum cost on racing shocks is MSRP \$850 for a complete unit

Each shock can only have 2 adjustments, 1 REBOUND adjustment and 1 COMPRESSION adjustment

Single adjustable shafts only, no double or triple adjustable shafts.

Shocks allowed are the following: JRI ST-08, SC-07 (SC-07 must be on approved list by JRI)

Ohlins TTX 36

Series, Penske 7300, 7500, 8300 Series

Conventional shocks now in use: Afco, Bilstein, Integra, Koni, Pro, QA1

No covers or blankets allowed

Use of eliminators allowed

#### **5.5.4 Springs- Front and Rear**

No stacking springs allowed

Bumpsprings and Bumpstops are allowed

Take-up springs allowed

Maximum cost on racing springs is MSRP \$250

Carbon Fiber Springs are prohibited

### **5.6 ENGINE REQUIREMENTS**

#### **5.6.1 Engine Location**

The referee will be used to determine front axle centerline.

All engines must be located so that the centerline of the forward most spark plug hole is no more than 4 inches back from the center line of the front axles.

#### **5.6.3 9 to 1 Aluminum Cylinder Head Engine**

Only V-8 engines with a minimum displacement of 350.0 cubic inches and a maximum displacement of 362.0 inches are permitted. The maximum compression ratio is 9.50 to 1.

##### **5.6.3.1 Engine Block**

Any size “small block” may be used. Engine displacement may be increased or decreased by Boring and/or stroking to provide the required displacement.

Block must be a factory production cast iron block with external measurements identical to the standard production engine.

Angle milling of block is prohibited. All engine block markings must remain.

##### **5.6.3.2 Crankshaft and Harmonic Balancer**

Only cast iron or forged steel crankshafts are permitted. Titanium crankshafts are prohibited

Minimum crankshaft weight is 38 lbs.

Steel and Aluminum Balancers allowed. Aluminum balancer must have STEEL HUB.**5.6.3.3 Pistons and Rods**

Any flat top, dished, or inverted dome piston may be used. Valve reliefs may be cut into pistons. No part of the piston may protrude above the top of the block.

Only magnetic steel connecting rods are permitted. Titanium, Aluminum, and Composite rods are prohibited.

##### **5.6.3.4 Oil Pans**

Steel and Aluminum Oil Pans Allowed. Oil pan must be equipped with a ¾ inch plug for inspection. The plug must be directly inline with a rod journal.  
Engines equipped with a windage tray must provide a hole in the tray, in line with the plug.

#### **5.6.3.5 Cylinder Heads**

Cylinder heads must be FRRC approved.  
GM cylinder head 23 degree plus or minus 2 degrees  
FORD cylinder head 10 degrees  
MOPAR cylinder head 18 degrees.  
Titanium exhaust valves are prohibited.  
Titanium intake valves permitted.  
Maximum valve spring diameter 1.57 inches.

#### **5.6.3.6 Camshaft, Valve Lifters, & Rocker Arms**

Any steel or cast-iron camshaft may be used.  
Roller tappets and rev kits are permitted.  
Any steel lifter is permitted.

#### **5.6.3.7 Intake Manifold**

Any readily available, production type, intake manifold is permitted.  
Grinding or polishing of the intake manifold ports is permissible.  
An adapter plate, with a straight bore and a maximum thickness of 1½ inches, may be used between the intake manifold and carburetor.  
NO chamfering, tapering, or beveling of the adapter plate is permitted.  
Only 2 gaskets (1 per side), with a maximum thickness of 0.065 inches, may be used on the adapter plate.  
Adapter plate may be claimed for \$75.00.

#### **5.6.4 Chevy 604 FRRC Sealed Crate Engine**

All rules for Super Late Model are the same as the Late Models.  
See Late Model Rules (6.6.4 FRRC Sealed Crate Engine)  
Super Late Model crates are permitted to have the ASA style oil pan. Inspection plug required!

#### **5.6.5 A.C.E Aluminum Head Engine**

Chevy and Ford engines with a minimum displacement of 350.0 cubic inches and a maximum displacement of 362.0 inches are permitted.  
The maximum displacement for a Mopar aluminum engine is 360.0 cubic inches.  
The maximum compression ratio is 10.50 to 1.  
Engines may only run a dry sump pump with a maximum of 4 stages.

##### **5.6.5.1 Engine Block**

Block must be a factory production cast iron block with external measurements identical to the standard production engine.  
Angle milling of block is prohibited. All engine block markings must remain.  
No aluminum engine blocks permitted.  
The maximum cylinder bore is 4.060 inches. The minimum cylinder bore is 4.000 inches.

##### **5.6.5.2 Crankshaft and Harmonic Balancer**

Only cast iron or forged steel crankshafts are permitted. Titanium crankshafts are prohibited.  
The maximum stroke is 3.500 inches. Crankshafts with journal sizes less than 1.980 inches or Undersized journals less than original factory specifications are prohibited.  
Lightweight, Knife-Edge and Undercut Crankshafts are prohibited. No Honda journal crankshafts allowed. Minimum crankshaft weight is 43 lbs.  
Steel and Aluminum Balancers are allowed. Aluminum Balancer must have STEEL HUB.

##### **5.6.5.3 Pistons and Rods**

Any flat top, dished, or inverted dome piston may be used. Valve reliefs may be cut into pistons. No part of the piston may protrude above the top of the block.

Only magnetic steel connecting rods, with minimum 3/8 inch rod bolts, are permitted.

Titanium, aluminum, or composite rods are prohibited.

#### **5.6.5.4 Oil Pans**

Steel and Aluminum oil pans allowed.

Oil pan must be equipped with a 1 inch plug for inspection. The plug must be directly inline with a rod journal.

Engines equipped with a windage tray must provide a hole in the tray, in line with the plug.

#### **5.6.5.5 Cylinder Heads**

Only BRODIX ACE cylinder heads may be used. All cylinder heads must be registered with FRRC.

Coating of the cylinder heads is prohibited.

Cylinder heads must be unmodified. Machining, cutting, grinding, abrasive blasting, or any alterations to the cylinder head is prohibited.

A three angle valve job is permitted. No cutting down or reshaping of the valve guides is permitted.

Exhaust port matching is prohibited. Intake port matching is prohibited.

Use of titanium valves is prohibited.

Valve stem diameter may be 11/32 or 5/16 inch.

Only the following valves may be used:

Engine Manufacturer Intake Exhaust

GENERAL MOTORS / FORD BRODIX BR81019 BR81621

Engine Tech BR810198 BR81621

FERREA F1121P F1476P

MANLEY 11818 11595

REV CL-1643 CL-1604 CL-8003 CL-1171

CHRYSLER CORP. BRODIX BR60029 BR60037

The maximum allowable spring diameter is 1.570 inches.

Steel or titanium valve spring retainers are permitted.

Cylinder heads may have one extra water line per head.

#### **5.6.5.6 Camshaft, Valve Lifters, & Rocker Arms**

Valve job may be blended into combustion chamber 3/8 inch from seat.

Any magnetic steel, or cast-iron camshafts may be used. Camshaft journals must be stock for engine.

Rollerized camshaft bearings are prohibited.

The maximum camshaft lift is 0.625 inches, measured at the valve.

The maximum camshaft duration is 270 degrees at 0.050 inches lift.

Roller tappets and rev kits are permitted.

Any, all steel, lifter is permitted. Only steel push rods are allowed.

Roller rocker arms are permitted. Maximum rocker arm ratio is 1.6 to 1. Shaft type rocker arms are permitted on Chrysler motors only.

Stud girdles are permitted.

#### **5.6.5.7 Intake Manifold**

Any readily available, production type, intake manifold is permitted.

Retail cost must not exceed \$ 350.00.

No material may be added to the manifold. Grinding or polishing of the ports is prohibited.

Port matching of the intake manifold is permitted to a maximum of 1 inch.

The maximum height of the manifold, as measured from the top of the cylinder block to the

base of the carburetor (including adapter plate and gaskets), is 7.25 inches.

Only a straight bore adapter plate is permitted.

NO chamfering, tapering, or beveling of the adapter plate is permitted.

Only one flat gasket, with a maximum thickness of 0.120 inches, may be used between the Intake manifold and cylinder head. No spacer or wedge type gaskets are permitted between the intake manifold and head.

#### **5.6.6 Carburetor**

All Super Late Model engines must run a Holley, 500 cfm., Model# 0-4412 2bbl Carburetor.

NO ULTRA STYLE HOLLEY HP CARB ALLOWED

The carburetor must meet the following:

1 Carburetor Body – No polishing, grinding, or drilling permitted.

2 Choke – The choke may be removed.

3 Choke Horn – The choke horn may not be removed.

4 Boosters – The boosters may not be changed. The size or shape must not be altered.

Boosters may not be tapered.

Height must remain standard.

1 Venturi – Venturi area must not be altered. Casting ring must remain.

2 Butterflies – Butterflies must not be thinned or tapered.

3 Throttle Shafts – Throttle shafts must not be thinned.

Only one flat gasket may be used between the intake manifold and adapter plate, and adapter plate and carburetor.

Any attempt to pull outside air other than down thru the venturies is prohibited.

#### **5.6.7.1 Air Cleaner**

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

No additives allowed in the air filter

#### **5.6.7.2 Air Intake**

Forward intakes are not allowed. Air boxes are permitted.

The back of the air box must be flat, with a vertical face at 90 degrees to the floor of the air box.

Cars may also run the ABC fiberglass air deflector at the back of the air box.

No devices for directing the flow of air into the air cleaner are permitted.

The maximum opening in the Windshield Cowl Panel for air intake, is 2½" x 20".

#### **5.6.8 Ignition System and Battery – All Engines**

12 Volt systems only

A labeled, centrally located, master on-off switch, to cut off all electrical power to the car, is required.

The battery must be located between the frame rails and must be securely installed

The battery may not be located forward of the radiator, or behind the rear end of the car.

TWO compatible ignition boxes, mounted out of the reach of the driver, permitted.

Crank trigger ignition, magnetos, computerized ignitions, adjustable timing controls, or ignition retard or delay devices are not permitted.

Traction control devices and computer equipment on board the car are prohibited.

#### **5.6.9 Exhaust System – All Engines**

All cars must have a complete exhaust system that must be equipped with a muffler.

All exhaust must exit the car behind the driver but not past the rear axle of the car.

All under car exhaust exit pipes must be pointed down toward the ground.

Max of 5.0 inches o.d. after the collector.

Under car exhaust systems are allowed.

Exhaust systems are allowed to exit the passenger side of the car.

Side exhaust systems must be equipped with a braced plate located on the inside of the body panels.

Exhaust exit pipes are to be welded in the center of the plate with the ends flush to the plate. A maximum of 2 holes are allowed in the side of the body panel.

#### **5.6.10 Cooling System**

Electric fans are permitted. Use of antifreeze is prohibited. Water recommended.

All cars must be equipped with an overflow or catch tank.

Radiator must mount in front of engine.

Fan shroud mandatory when using pump mounted fan. Shroud must be a minimum of 3" wide and in line with fan.

### **5.7 DRIVE TRAIN**

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

Any two, three or four speed, American made, manual transmission, or automatic transmission is permitted.

Bert and Brin transmissions are permitted.

Any transmissions other than the Bert and Brin with internal clutches are prohibited. Bert and Brin transmissions having the internal clutches are permitted.

Five speed manual transmissions are prohibited.

Bottom load transmissions are prohibited. Torque converters on automatic transmissions are not allowed.

All inspection and drain plugs must be safety wired.

If found not wired, car will be removed from line for the next event and must show inspectors that safety wiring is in place before allowed to compete in next race.

All transmissions must work in reverse.

The clutch must be mounted to the crankshaft.

The minimum clutch diameter is 5.5 inches. (Carbon fiber clutches are prohibited).

Retail cost of clutch must not exceed \$1,000.

All cars must be equipped with 2 loops that surrounds the drive shaft.

The loops must be a minimum of 1/8" x 2" steel and attached to the frame or cross member 6" to 8" behind front universal joint.

Steel or aluminum drive shafts only

Carbon fiber drive shafts are prohibited.

#### **5.7.2 Rear End**

Quick change or full floating rear ends are mandatory. Axle tubes must be steel. Aluminum axle tubes are prohibited but are allowed to run a maximum of 3 races with a 10 lb. penalty.

**Ratchets and differentials (Non-Spoiled) allowed with a 50-pound penalty. Drive plates on spool rear ends must be marked accordingly and marks must line up so tech knows you have a spool.**

Cambered axle tubes are allowed. Tolerance  $\pm 1.0$  degree.

Axles must be steel. Titanium axles are prohibited.

All inspection and drain plugs must be safety wired. Along with quick change rear cover plate (bottom 3 nuts minimum).

If found not wired, car will be removed from line for the next event and must show inspectors That safety wiring is in place before allowed to compete in next race.

#### **5.7.3 Wheels and Tires**

##### **5.7.3.1 Wheels**

The wheels must meet the following requirements:

1 Only Steel racing wheels are permitted

2 All wheels must be 15 inches in diameter and no more than 10.0 inches wide.

3 Wheels, less tire, weights, and valve, must weigh a minimum of 17.0 pounds.

4 Wheel studs must be a minimum of 5/8 inch diameter.

5 Wheels must be attached with 1-inch, steel, lug nuts. Lug nuts may not be altered.  
Wheel covers are prohibited.

#### **5.7.3.2 Tires**

A. FRRC Approved tires for 2018:

~~A.~~ Hoosier F3035 10.0-27.0-15 Economy (left side)

~~B.~~ Hoosier F3045 10.0-27.0-15 Economy (right side)

B. A FRRC approved tire is unaltered in any way from the manufacturer. The tire must be used on the correct location, have the correct FRRC markings, and if not new, be from your used or impound inventory. Tires not meeting these specifications must be pre-certified by FRRC Tech.

C. The four (4) tires used during a car's qualifying must be used on that same car for all events within that program.

D. Four (4) new tires are permitted the first FRRC racing program of the current year, each of the Red, White, Blue programs and select FRRC programs as authorized by FRRC Officers. The tire shed will be closed during Red, White and Blue nights. Competitors must run separate tires.

E. All other FRRC racing programs will follow a strictly enforced two (2) new tire rule, which is... Maximum of two (2) new tires and two (2) previously impounded tires. A car that begins a FRRC two (2) new tire program using more than two (2) allowed new tires will forfeit any qualifying points and money earned, will start the first heat, semi-feature (if scheduled) and feature (by way of transfer) in the rear.

Red, White and Blue tires may not be used in non Red, White and Blue events without prior officer or tech approval.

F. Prior to post qualifying weigh in, every car must submit its dated program tire sheet to FRRC tech. This sheet will identify, via bar code numbers, the six (6) tires available to that car. The six (6) bar code numbers will include the new, impound and spare tires.

G. A spare tire is one that has within the current racing season, been previously used by that car for one entire FRRC racing program or been impounded after a FRRC racing program by that car. Exceptions subject to FRRC tech.

H. Failure to submit dated program tire sheet within the specified timeline will result in that car forfeiting any qualifying points, and money earned. That car will start the first heat, semi-feature (if scheduled) and feature (by way of transfer) in the rear.

I. Every competing car must present two (2) tires to the impound area within 15 minutes of the car's final event of the program. Those tires must be warm. No warming devices allowed.

Tires for impound must have correct FRRC markings. Non-compliance will be subject to discipline by FRRC Officers. A tire sheet for the following week must be turned in with the 2 warm tires for impound.

J. If a FRRC program is canceled after qualifying and before heat races begin, all four (4) qualifying tires will be impounded. These four (4) tires will be released at the next FRRC program, changing that program into a no new tire program. for those cars present at the cancelled program.

K. On four (4) new tire programs, excluding the season opener, the tire impound area will be closed to super late models. No tires in. Not tires out.

L. The impounded tires will be released at the beginning of the next FRRC racing program. The impounded tires are to be used only on that car that impounded them. The four (4) tires used during a car's qualifying must be used on that same car for all events within that program. Spare tire usage being the only exceptions.

M. A car requiring a replacement tire any time after qualifying will be dealt with as such: New tire by another new tire, start in rear of all remaining events in that program. New tire by designated spare, keep earned starting position in remaining events in that program. Replacing an impounded tire with a new tire is NOT AN OPTION. Replacing an impound tire with a designated spare, keep earned starting position in remaining events in that program.

N. FRRC Officers/Tech have the right to confiscate at any time, tires/wheels that are to be evaluated to confirm their legality.

O. Tire rule violations will be classified as major infractions and punished as such unless specified else wise. Major infractions result in a loss of all points and all money earned during the program.

## **5.8 FUEL SYSTEM**

Electric fuel pumps are prohibited. Fuel filler must be mounted on the inside of the quarter panel.

The Oberg Fuel Shut Off valve is highly recommended

### **5.8.1 Fuel Cell**

All cars must be equipped with, either a 1/8-inch thick fuel cell tub, or 18 or 20-gauge fuel cell Container protected by 1/8-inch thick steel plates. The installation must be FRRC approved.

Fuel cell must be located behind the rear end, between the frame rails. No Fuel Cells Allowed in Front of Rear Axle

The fuel cell must meet FIA – FT3 specifications. Rubber type fuel cell bladders mandatory.

Fuel cell must be filled with foam manufactured for use in fuel cells.

All fuel cells must be equipped with check balls or flaps.

Minimum height to the bottom of the fuel cell container is 10 inches.

### **5.8.2 1/8 Inch Fuel Cell Tub**

The fuel cell tub must be 1/8-inch thick steel (10 gauge) and must have a 1 inch lip. The front, bottom, and rear must be one piece.

The top may be either 18 or 20 gauge steel, and have, two, 1 inch by 1/8-inch steel straps, in each direction.

### **5.8.3 Fuel Cell Container with 1/8 Inch Protector Plates**

The fuel cell container may be either 18 or 20 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 may be either 18 or 20 gauge, steel.

The 1/8-inch, steel, fuel cell protector plates must be mounted on the outside of the frame. The Plates must cover both sides and rear of the fuel cell. The only holes allowed in the plates are for attachment or a 2-inch hole for safety vehicle pickup points.

Any over the axle style rear tail style chassis must use approved 1/8 inch magnetic steel fuel cell can.

Any chassis with incorrect fuel cell can, will be asked to change or be disqualified.

The cell must be bolted in with a minimum of 14-3/8 bolts with flat washers on top and lock washers on bottom. The top for this cell will be 18-gauge steel with straps in both directions.

A sonic tester will be used to check fuel cell can thickness.

### **5.8.4 Fuel**

The fuel must be automotive gasoline only.

The gasoline must not be blended with alcohols (such as methanol or ethanol), ethers, aniline or its derivatives, or oxygenated additives (such as nitro methane or nitro propane).

The use of nitrous oxide is prohibited.

FRRC has the right to sample a competitor's fuel at any time, during an event. Samples will be tested by FRRC and/or any outside laboratory at FRRC discretion.

Fuel violations are considered a Major Infraction

## **5.9 MISCELLANEOUS EQUIPMENT**

### **5.9.1 Steering components**

A metal (no plastic) quick release coupling, acceptable to FRRC, on the steering wheel is mandatory.

The steering column must be collapsible or have an impact collar, no less than 1½ inches in diameter, welded to, or bolted to the column forward of the column support inside the driver's compartment.

The center of the steering wheel must be padded with resilient material.

Electric Power Steering is prohibited

### **5.9.2 Seat**

Seat must be made of aluminum and installed in a manner acceptable to FRRC Officials.

Seat must be equipped with a fully padded cover.

Headrest on seat is mandatory.

### **5.9.3 Seat Belts and Shoulder Harness**

A quick release lap belt and double shoulder belt no less than 3 inches wide or the Schroth racing 2 inch wide strap wide is mandatory.

A submarine belt is also mandatory.

Seat belt and shoulder harness must be date stamped and not more than three years old for SFI Rated belts and not more than 5 years old for FIA rated belts. 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 with high quality hardware, no less than 3/8inch in diameter.

Seat belts and shoulder harness must be worn at all times when car is on racetrack.

### **5.9.4 Helmet**

A helmet that meets SA2015 Snell Foundation specifications is mandatory. Head and neck restraint system mandatory.

### **5.9.5 Drivers Suit**

It is mandatory that a driver wears a fire retardant suit (free of rips and tears) and gloves while on the racetrack.

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.

### **5.9.6 Fire Control System**

It is mandatory that each car be equipped with a fully charged on-board fire control system.

The extinguisher must be equipped with a gauge to indicate state of charge. The system must be at least 5-pound capacity and Halon 1301 or equivalent. Fire extinguisher located over fuel cell is recommended, but not mandatory. Cold Fire fire systems recommended for cockpit usage, but not mandatory.

### **5.9.7 Window Net**

It is mandatory that each car be equipped with an approved 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 FRRC approved retainer on the top front corner of the window.

Window net must be in place when car is on racetrack.

If car does not have full containment seat, car must be equipped with a head restraint net,

Mounted between the window net and seat. Net may be rectangular or triangular.

#### **5.9.8 Two Way Radios**

Two Way radios are permitted. It is required that all teams submit their frequency to FRRC officials.

ONE spotter, with a two way radio, must be located in the area designated for spotters.

#### **5.10 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 8 inches forward of the front side of the rear end axle tube to the center of the transponder.

#### **5.11 Raceivers**

A receiver or scanner capable of receiving track personal instruction is required by all team spotters.

Information relayed from track personal must be relayed to the driver via spotter.

Failure to comply with instructions may result in disqualification or black flag from the event.