

# Full Throttle Motor Speedway @ Varney

## 2024 Varney Hot Rod Rule Book

### FRAME

Any full perimeter chassis may be used. Right and left frame rails should be an equal distance from the frame centerline, there will be a 1" tolerance allowed. No offset chassis allowed. Stock or tube clip chassis allowed. See below for weight penalties. Rear frame sections may have 2" x 3" replacement tubing from top of kick up rearward. Unibody cars are allowed and must have the front and rear frame rails tied together by welding 2" x 3" x 0.095" wall tubing sections to make the connection. Frame ride height must be a minimum of 5" measured with the driver out of the car. Minimum wheelbase is 105". \*No aftermarket or fabricated strut cars allowed\*

### ROLL CAGE

No offset cages. A 4-point racing roll cage is mandatory. Front hoop must attach to the main cage forward to the front frame rails. Rear hoop must extend over the driver's head and attach to the rear frame rails. 4 bars on the driver's door. 3 bars on the passenger door or right-side door bars must at least form an "X" with the top bar running from front to back. A fabricated plate must be installed on the outside of the driver's door bars, minimum thickness of 0.100". A petty bar is recommended running from the center of the cage to the upper right halo. Upper roof halo must be a minimum 32" wide. No part of the roll cage may project outside the exterior sheet metal. Cage must be constructed of 1 3/4" minimum outside diameter by 0.095" wall thickness round steel tubing. Left leg protection bar must be installed. Foot box must be constructed of a minimum 12 gage sheet steel. No square tubing, channel or angle iron will be allowed in the construction of the roll cage or bracing.

### BODY

Car must be North American, steel body, year range 1949- 1981. Evans bros. Fiberglass bodies 55 - 57 chevy parts will be allowed. Performance racing bodies 76 - 81 Camaro allowed. With this roof you must add a piece of 14 gage aluminum from the center of the cage halo over the driver's head to the left side bar and must run from the front to the rear of the halo. Must have chrome or steel bumpers and they must have a tether strap attached to prevent them from falling off. Front bumper may have a nerf bar welded to the top to help protect the grill area. It can be 2" wider on each side of the grill and must be 2" lower than the front edge of the hood. No pick-up trucks, convertibles, or front wheel drive cars. Body to have a minimum 4 inches of ground clearance. Must have stock roof, grill, tail and the rest of the body panels can be fabricated from 22 gage sheet steel, but must remain stock appearance. No aluminum body panels. Fiberglass racing style hoods may be used. No operational cowl induction hoods allowed. Non functioning cowl induction hoods are allowed. No offset bodies allowed. Aluminum side skirts are allowed along each side of the body and cannot be wider than 6". Bodies must be complete at the beginning of each race event. Roof minimum 45 inches in height, measured 10" back from the windshield. Roof may be chopped or modified to fit the chassis but must remain stock appearance. No laid-back windshields. The side window opening must have a minimum 13" opening. Lexan windshields are mandatory to fit complete windshield opening and must have a minimum of 2 center braces and 4 safety clips (2 at the top of the window and 2 at the bottom). The top 6" of windshield must be kept clear for division sponsor. All cars must be neat and painted. Numbers must be on both door panels and the roof in large minimum 18" letters in a color that clearly contrasts the paint. Original wheel arches may be removed/trimmed for tire clearance. Wheels may stick out a max of 2" from the body and be measured from the tire bulge at the spindle height. Fender flares may be added to cover the tread area only and must not project towards the bulge in the tire.

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Rear spoiler allowed but may not extend beyond the rear edge of rear deck panel and must follow the contour of the deck lid. Max 5" high by the width of the rear deck. Bracing of the rear spoiler is allowed by using approved struts only. No side pods. Rub rails allowed, max 2" wide steel, aluminum or Lexan that can match the tire bulge from front to back. Carriage bolts only to fasten the steel or aluminum rub rails, rivets for Lexan. No sharp edges. Cars must be presentable in appearance for each race.

### **DRIVER/COCKPIT DEVICES**

Traction control - no operator controlled, radio controlled, computer controlled or automatic traction control devices or ignition retard devices. No chassis or suspension adjustment devices inside the cockpit. Brake bias adjustment device is permitted. Standard, convex or multi panel rear view mirror is mandatory. One left side mirror is allowed, no larger than 3" round and must not be any farther out than the scrub rail.

### **INTERIOR**

The interior of the car can only be constructed of minimum 22 gage steel or aluminum. All roll bars in the driver's area must be padded. All flammable materials are not allowed in or around the driver's area. Front and rear firewalls must be complete. Any holes or openings must be covered with sheet metal or aluminum.

### **HELMET**

Helmets must be Snell SA2015 or newer. A full-face helmet is recommended. It is highly recommended that driver's wear eye protection designed for auto racing. Helmet restraints such as Hans or Hutchens devices will be highly recommended for all events

### **FIRE SUIT**

Driver's fire suit SF13.2A/1 is mandatory. Recommended SF13.2A/5. Driver and suit must maintain a clean looking appearance. Fireproof gloves are mandatory. Fireproof neck collar, and fireproof shoes are mandatory. No nylon shoes allowed.

### **BELTS AND HARNESS**

A quick release SFI approved 5-point harness of no less than 3" in width and in good condition is mandatory. Belts must have a date tag attached and must not be any older than 5 years. Belts must be securely fastened to the frame, cross member or roll cage with a minimum of 7/16" grade 8 bolts and locknuts, in such a manner that all fittings are in direct line with the direction of the pull, as per manufacturer's instructions. All belts and mounting are subject to tech inspection.

### **FIRE SAFETY**

Cars must have a 2 1/2lb minimum fire extinguisher with either a steel or aluminum head and mounted in a steel bracket, and must be bolted down within the driver's reach with seat belts fastened. No plastic parts are allowed on the control and discharge device. On board fire extinguisher is acceptable and must be a 5lb bottle to have 2 nozzles in the cockpit area. Fire extinguishers must be new or serviced and inspected each year and dated no later than Jan 1 of the current year.

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### **RADIOS**

Teams will be permitted to have radio communication with 1 spotter. Other team members cannot use a scanner. If a team is found to have additional communication through a radio or a scanner or have contact with any additional crews/family/friends/etc., they will be subject to disqualification from the event. Teams must ensure that their receiver works in conjunction with the radio. One way radio communication with track officials is mandatory. 2-way communication is allowed but not mandatory.

### **SEAT**

Aluminum racing seats are mandatory. Seat must be bolted securely with minimum diameter  $\frac{3}{8}$ " or larger with large steel plate washers in 4 points attached to the roll bar or frame only. Full upper body, head and shoulder containment seat is highly recommended.

### **WINDOW NET**

An approved nylon mesh net is mandatory, installed in the driver's side window opening. Window net anchors must be attached to the roll bars, not to the body. Window nets must be a quick release type. Window net must be permanently mounted/anchored at the bottom and released at the top.

### **FRONT SUSPENSION**

Spring diameter 5" minimum, must be conventional coil springs only. One lower control arm( can modify + or - 1" from stock length). Load bolts allowed. Spindles must be impala style, oldsmobile 2 piece howes (cast only with welded steering arm). Any sway bar is allowed.

### **SHOCKS**

Steel body, non-rebuildable racing shocks only. Preferred shock is PRO WB Series Single Valve, AFCO Series 10, 12, or 14.

### **STEERING**

Stock appearing steel steering box. Steel rod/heim ends allowed ( min  $\frac{5}{8}$ " ). Adjustable center link allowed. Steering rod to steering box must have a collapsable shaft or multiple u-joints. Any bolts in steering must be a minimum of grade 8 bolts. Steering wheel must be mounted with a quick disconnect hub and have center padding. No rack and pinion steering.

### **HUBS**

5x5 hubs or wide 5 - must use  $\frac{5}{8}$ " wheel studs.

### **REAR SUSPENSION**

3 link, 4 link, or leaf springs allowed. Trailing arms and upper link max 30". Spring diameter to be 5" minimum conventional coil springs only. The 4 link allowed adjustable upper arms +/-1". Rear upper control arms can be manufactured (1" x 2" or 2" x 2") steel tubing or adjustable steel rods with minimum  $\frac{5}{8}$ " steel heims no longer than stock length. Truck arms are allowed. No bird cages.

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### REAR ENDS

Ford 9" with drum or disc brakes allowed. Ford 9" full floaters allowed. Dodge 8 3/4" rear ends allowed. GM 12 bolt rear ends allowed. Quick change rear ends allowed (must have a 10" ring gear, no thermal coatings, steel tubes only). Racing axles are mandatory. No aluminum tubes. Full spool or mini spool only. No gold tracs, limited slip devices or post units. No cambered rear ends.

### BRAKES

All 4 wheels must have working brakes. Rotors are to be magnetic steel only and no drilling of rotors. Front rotors are minimum 1" thick and rear rotors are minimum 0.750" thick. Brake calipers must be magnetic steel with a single piston.

### IGNITION

Car must be self-starting. Ignition on/off switch must be mounted to the right-side dash of the car and clearly labeled so that the ignition can be turned off from outside of the car in the event of an emergency. The only switches allowed are a master on/off mounted in the center of the car, a push button start switch, ignition power and off, or a fan switch if equipped with an electric fan. Stock type distributor, a DUI, or MSD distributor allowed. Only 1 MSD box, one coil, and one wiring harness per vehicle. MSD blaster 2 or SS coils allowed. \*ALL MSD WIRING MUST REMAIN OPEN FOR INSPECTION. ALL WIRING MUST USE WEATHER PAK CONNECTOR 6 AND 2 PIN AT THE MSD MODULE, 2 PIN AT THE DISTRIBUTOR. MALE CONNECTORS ARE REQUIRED ON THE BOX AND DISTRIBUTOR. A 4 PIN CONNECTOR IS REQUIRED AND MUST BE ACCESSIBLE ON THE REAR OF THE TACHOMETER. An operational rev chip must be accessible through the passenger window. Soft touch rev control part 8728 must be mounted on the right side of the dash (same as ignition box) if a stock distributor and stock module is used. All built engine cars will have an operational 6800 rev chip installed. All crate engines will have an operational 6400 rev chip installed. All 6AL, 6ALN wiring should be standard. Red wire - ignition switch, brown wire - tach output, black wire - coil negative, orange wire - coil positive, green wire - distributor negative, purple wire - distributor positive. Connectors to be within 12" of the 6AL or 6ALN box. Battery positive and negative may be hard wired to master disconnect and chassis ground. MSD6CT ignition box is not allowed because of its feature that allows quick resetting. Anyone caught tampering with chips or rev limiters will be automatically disqualified.

### BATTERY

One 12V battery only. AMG type batteries preferred. Battery must be anchored securely and outside of the driver's compartment by a firewall, located ahead of the rear end and no lower than the frame rail and between the frame rails. A battery disconnect switch is mandatory and should be located on the left side of the rear tail panel within reach of track officials or safety crew and clearly marked on/off.

### WEIGHT LOCATION

Weight must be securely fastened to the chassis and mounted no lower than the frame rail. No weight can be added rearward of the fuel cell. All added weight must be painted white and clearly identified with the car number on each piece.

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### WHEELS

15" diameter steel racing wheels with a max width of 8-10" measured from bead seat to bead seat.

### TIRES

Drivers are allowed to start the season with 6 new EC-21 tires that shall last the first 2 nights of racing events. Drivers are allowed one new EC-21 tire per subsequent race night. All new tires must be purchased from the speedway. Driver's will also be permitted to used EC-21 if they wish to do so. **All used tires are subject to approval from Full Throttle Motor Speedway.**

### TRACK WIDTH

Wheel track width will be a max of 80" measured from outside of tire bulge at spindle height.

### ENGINE HEIGHT

Engine height will be a minimum of 12" measured from the ground to the center of the crankshaft. Engine location: #1 spark plug of engine must be in line or ahead of upper ball joint and centered in the frame. Crossmember may be altered to achieve this.

### CRATE ENGINE OPTIONS

It is your responsibility to make sure your crate engine has been properly sealed. Approved crate engine is Chev 350/350hp circle track crate engine part "602". No changes, substitutions, or modifications to the engine. ALL NEW CRATE ENGINES MUST BE SEALED USING 3 SEALS. ONE ON EACH SIDE OF THE INTAKE AND ONE ON THE TIMING CHAIN COVER. ONLY APPROVED SEALS ARE ALLOWED. You are allowed to replace the oil pan, pick up tube, and timing chain. Metric clip cars can use CANTON PAN 11-122T with CANTON 20-042 pick up tube. Tube clip cars can use CHAMP PAN CP100LTRB with CHAMP 1012SB pick up tube. Timing chains can be replaced with CLOYES 9-1100 double roller chain and gear set, or equivalent. In order to qualify for the crate engine program, the new engine needs to be shipped directly from the dealership to one of the 2 approved engine builders or you must have a representative pick up the engine with you and deliver it to one of the 2 approved engine builders. Engine builder info is listed at the back of the rule book. Any tampering, alterations, or violations with respect to the crate engine program will result in the immediate suspension of the driver, car owner, and chief mechanic for a minimum of 1 year from the date of the infraction. Further monetary fines and reduction of points will be assessed by the tech committee. The tampered engine which must be removed at the team's expense, will be impounded at both the team's expense and risk until the ruling is final. FTMS reserves the right to destroy all tampered with parts. If any sealed crate engine is damaged or fails and needs to be repaired it must go to either one of the approved engine specialists so the repairs are made to the crate spec and then re-sealed. Any crate engine that has been rebuilt by one of the approved rebuilders will need to add 75lbs to the total weight of the car. The rebuilt engine must be rebuilt to the specifications in the gm circle track crate engine tech manual.

### BUILT ENGINE DEFINITION

Parts available from your local dealer through ordinary parts catalogue may be accepted as stock. Parts ordered through dealer performance catalogues will not necessarily be considered legal.

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### **ENGINE MAX OVERBORE DISPLACEMENT**

Chev - 305-350 060 360 cu in. Dodge - 318-360 060 371 cu in. Ford - 351 (windsor only) 060 362 cu in. Cylinder block assembly (short block) steel block only, aftermarket engine blocks not permitted. The engine block must retain all factory engine dimensions, with the exception of the max overbore and the surfacing of the engine block deck. Must maintain stock lifter bore: Chev - 0.842 in Dodge - 0.904 in. Repair sleeving of lifter bores permitted to a max of 4. Crankshaft must be OEM type and must have factory I.D. numbers that are legible. Oil pan must have 1" removable plug in the left front to inspect the crankshaft part number. No lightening or knife edging of crankshaft.

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### **CONNECTING RODS**

Must be magnetic steel only. Stock type, flat top or dished 3 ring pistons with all rings installed.

Compression ratio on all makes 9.5:1 or lower. However, due to measuring variations with the equipment, a whistle of 9.9:1 will be deemed legal. If on an engine teardown, the engine exceeds 9.5:1 compression, based on exact measurements performed, the engine will be declared illegal.

### **CYLINDER HEADS**

Cast iron OEM heads only. Must be the stock valve angle for the manufacturer. VORTEC heads are allowed only on a GM 88958602 engine. Dart 10021070 heads are allowed. No angle plug heads will be allowed. No acid dipping, angle milling, polishing, porting or port matching of heads to intake or exhaust. No hollow, sodium or titanium valves allowed. Valves stem size 11/32" on ford and Chev heads. Chrysler heads must use 3/8" valve stems. Valves 1.94 intake and 1.6 exhaust. Chrysler magnum heads are allowed. Ford may use dart 13311181 heads. Ford and Chrysler must use OEM stock valve stem size. All dodge and ford heads must be approved by tech. Must use OEM type valve springs and retainers. Max spring diameter must be stock size for the engine used. Roller rockers and stud girdles allowed. Screw in studs or pinning of studs is allowed.

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### **CAMSHAFT**

Flat tappet hydraulic valve lifters and camshaft only. Roller rockers and stud girdles allowed. Screw in studs or pinning of studs is allowed. Guide plates allowed. Shaft rockers allowed on Chrysler (factory type only). No roller or mushroom lifters. No aluminum, ceramic, titanium, or exotic metals allowed.

### **INTAKE MANIFOLD**

Manifolds must remain stock and unaltered as produced by the manufacturer. Water crossover cooling lines allowed. No acid dipping, porting, port matching, turtles or modifications allowed. Chev engines - part #2101 (newer style only) or 2701 vortec performer part 2116 edelbrock performer intake only. Ford engines - part #2665, 2750 or 2181 edelbrock performer intake. Dodge engines - part # 2176, edelbrock performer intake or mopar part #p4876335.

### **OIL PAN AND LUBRICATION**

Magnetic steel oil pans only. Wet sump systems only. No external oil pump (aftermarket) or external reservoir tanks allowed.

### **CARBURETOR**

One stock 4412 500CFM old style, metering block numbers 5924, 5925, and 10570 holley factory produced 2-barrel carburetor. Only changes allowed are jets, power valve, removal of choke parts and filing in of choke rod holes. Two throttle return springs and stop are mandatory. May use 1" spacer. No venturies in or below the spacer. Distance from the bottom of the carburetor to the top of the intake manifold where the carburetor sits, to measure no taller than 1 1/4" including gaskets. Must have air cleaner, max 16" x 5". Air cleaner base must attach directly to carb, no spacers or hats.

### **COOLING SYSTEM**

No antifreeze allowed in the cooling system. Mechanical fans must be shrouded for protection. Must have overflow container or surge tank, recommended to have surge pressure blow off tube located at the right side of the windshield in sight of the driver. No electric water pumps allowed.

### **DRIVE SHAFT**

Drive shaft must be steel. Drive shaft must be painted white. Steel 360-degree retainer hoops, a minimum of 1/4" thick x 2" wide, must be positioned at the front and rear of the driveshaft within 12" of each u-joint.

### **EXHAUST SYSTEM**

Headers allowed. Max 1 3/4" diameter tubing from header flange to collector and the max size of the collector 3 1/2". Exhaust system must either exit outside of the body and be turned either downward and out or exit under the car on the right side and behind the driver turned downward. Mufflers are mandatory. Mufflers used must remain unaltered and must meet 98 decibels reading.

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### **FUEL LINE**

A single AN-8 (1/2") steel, armored or kevlar braided fuel line is mandatory, and must be securely fastened under the floor. No neoprene or copper lines allowed. No plastic or glass fuel filters. If the fuel line runs through the interior of the cab, it must run through a steel tube painted either red or yellow and marked "fuel line" in contrast to your car interior.

### **FUEL PUMP**

Stock type mechanical fuel pump only

### **FUEL CELL**

Max 22 gallons allowed. The fuel cell must be separated from the driver's compartment by an all-metal firewall. Fuel cell is to be securely mounted in the trunk area centered between the frame rails and no lower than the centerline of the rear axle. Minimum of 2 straps to secure fuel cell (straps must be steel and a min of 1" x 1/8" flat strap or equivalent). A minimum of 20 gage steel is to be used for fuel cell case. Must have a rear hoop bar for protection. If there is no vent line, cap must have a check valve. Fuel cell cap must be tethered to the car. There must be a fuel shut-off valve in working order and clearly marked ON and OFF, mounted on the right-side tin kit or dash and accessible by track or safety officials.

### **TRANSMISSION (MANUAL)**

OEM transmission only. Must be 3 or 4 speed cast iron only. Must have reverse gear and all forward gears must be operational. Transmission must be unaltered and as produced by the OEM manufacturer.

### **CLUTCH AND FLYWHEEL**

Stock OEM type friction disc minimum diameter to be 10". Steel pressure plates only allowed. Stock style clutch disc, but can be a solid racing disc. Total clutch weight to be determined (24lbs). Flywheel must not weigh less than 13 pounds. Only steel ring gears.

### **BELLHOUSING**

Steel bellhousing only. Starter mounting position must remain stock (same as on standard production bellhousing). Inspection hole must be in the bellhousing and be large enough to permit inspection of the flywheel and pressure plate.

### **TRANSMISSION (AUTO)**

Automatic 2 or 3 speed transmissions and may be strengthened. Modifications to shifting patterns are permitted, provided the full shift pattern is retained. Scatter shield is highly recommended with automatic transmission. Stock-type 10" working torque with a minimum weight of 25lbs wet. Stall test will be conducted in both forward and reverse gears. Transmission oil coolers are mandatory but must not be mounted inside the driver's compartment and must be contained inside the body of the car.



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### **WEIGHT**

55% left side weight for cars with 108" or longer wheel base.

54% left side weight for cars under 108" wheel base.

50% rear weight for all cars.

Wheel base may be no shorter than 105".

Cars with 602 crate or Varney Spec Motor will be minimum 3050lbs

Cars with built engine minimum 3150lbs Cars with tube front clip must have 20lbs of ballast weight mounted on each front frame horn.

Minimum 12" ahead of the upper ball joint.

No topping up with fuel after the feature.

When adding ballast, it must be in blocks of no less than 5lbs, bolted securely, painted white with a car number on it, must have a minimum of 5" ground clearance and be secured with a minimum of ½" bolts.

### **TRANSPONDER LOCATION**

168" from front of the car. Must be mounted facing downwards