



2019-2022

Thunder Stock Official Car Specifications

2019 - 2022 Thunder Stock Official Car Specifications

Note: Items Highlighted in RED are additions / changes

TERMS:

The term "Stock O.E.M. replacement" means that the item/part must have been a standard item/part on the MAKE and MODEL of the vehicle being driven as a racecar. Just because the company that manufactured the vehicle manufactures a part does NOT mean the part is legal. The part must have been available on the specific vehicle being used as a racecar. Stock O.E.M. replacement direct fit, direct replacement part. Must meet size/weight/material requirements as if factory produced. **No Modifications.**

The term Factory Stock/Production or Factory Produced:

Manufactured by the company who produced the vehicle being used as a racecar. Manufactured for the year/make/model of the racecar. No aftermarket parts allowed.

REMEMBER – BUILD IT LEGAL, KEEP IT LEGAL AND HAVE FUN!

In the spirit of equalizing competition, adjustments may be made as becomes necessary.

1.0 – Thunder Stock Competing Models

- 1.1 - Competition is open to all North American made passenger cars. No Corvettes.
- 1.2 - Minimum factory wheelbase of 100"
- 1.3 - No Jeeps, 4WD, SUV's, station wagons, compacts, convertibles, full size trucks, vans, front wheel drive
- 1.4 - Mid size trucks (S10, S15, Ranger and Dakota) are not allowed.

2.0 – Appearance

- 2.1 - All cars must be neatly and brightly painted.
- 2.2 - Numbers should be as large as possible (opposite colour of background) on doors, roof and all four corners of the body. (roof number must be read from right hand side of the car) – may be asked to make adjustments to numbers at scorers discretion.
- 2.3 - Sponsor decals must be placed on designated location.

- 2.4 - Year, Make and Model must appear in small print on the hood of car.

3.0 - Battery

- 3.1 - Battery must be securely fastened in trunk or under hood or behind the driver.
- 3.2 - Positive terminal end to be insulated to prevent shorting (use of rubber suggested)

4.0 – Body

- 4.1 - Must retain All Factory Stock appearance, location and dimensions.
- 4.2 – Stock roof must be steel and remain in stock location for the car’s make and model year. Fenders, doors, trunk lid and quarter panels can be replaced with minimum 0.040” aluminum.
- 4.3 – Any Stock Appearing fiberglass, aluminum, or plastic composite hoods will be allowed. Maximum 3” raised cowl is allowed.
- 4.4 – No openings in hoods allowed.
- 4.5 - Body no lower than the frame rail.
- 4.6 - Altered bodylines will be significant reason for disqualification.
- 4.7 - Bodies must be attached and mounted in original stock factory location.
- 4.8 - No off setting bodies and must be centered on the chassis.
- 4.9 - The body may not be lowered on the frame.
- 4.10 - Windshield pillars and windshield angle must remain stock appearing.
- 4.11 - Headlight, parking, and taillights must be removed and neatly covered.
- 4.12 -Maximum 6" rear blade spoiler. No side pods or side supports allowed. Stock spoiler allowed.

5.0 – Body Mounts

- 5.1 - Bracing must be welded or bolted to a minimum 2 locations to the frame, two locations to the body.

6.0 – Bumpers

- 6.1 - Stock front and rear bumpers (rubber bumpers allowed) or fabricated bumpers with stock appearing cover must be approved by official.
- 6.2 - A bar may be mounted inside the bumper at 19" from center to ground.
- 6.3 – All bumpers must be rolled in and securely fastened in place.
- 6.4 - Bumper shock brackets must be welded and or bolted.
- 6.5 - Aftermarket plastic front and tail pieces allowed but must be stock appearing.
- 6.6 - Corner bracing is allowed inside behind sheet metal.

7.0 – Doors

- 7.1 - Must be welded or bolted shut.

8.0 – Firewalls & Floor

- 8.1- Car must remain stock front steel firewall in original location and must be sealed to the hood.
- 8.1.1– Fabricated steel firewalls in stock location will be allowed but must be the same weight as stock firewall.
- 8.1.2– Fabricated steel firewall up to a maximum of 6” setback from stock location will be allowed with a 20 lb. weight penalty.
- 8.3 - Sheet metal may be added to repair firewall mounted in original location.
- 8.4 - Floor must be stock or replaced with a minimum 20 gauge steel. Right side may be “tin kitted” from the center of the drive shaft tunnel and raised even with the top door bar on the passenger door. Tin Kit must be made of sheet steel minimum 20 gauge. Tin kit must remain one height from the dash back to the rear fire wall.
- 8.5 - Rear firewall must be completely sealed off from drivers compartment minimum 20 gauge steel must maintain approximately same angle as stock fire wall.
- 8.6 - Trunk floor may be removed

9.0 – Frames and Suspension

- 9.1 - Frames
 - 9.1.1 - All frames must retain all Factory Stock specifications and dimensions for make and model from front to rear. Wheelbase tolerance +/- 1” from stock.
 - 9.1.2 - Rusted out rear clips may be reinforced from rear-end back.
 - 9.1.3 - Unibody cars may tie sub frames together.
 - 9.1.4 - Sub frames may be tied together but must be symmetrical to the centerline of the car.
 - 9.1.5 - "X"ing of frames allowed.
 - 9.1.6 – Rusted out C Channel centre sections on full frame cars may be replaced with 2”X3” steel tubing. Front frame clip and rear frame clip must remain stock.
- 9.2 – Suspension
 - 9.2.1 - Front and rear suspension must be stock dimensions.
 - 9.2.2 – Front upper control arms may be replaced with any length tubular arms with bolt in stock ball joint or AFCO 20032-1, TRW 10269, Moog K6136, ALL 56208. Steel shaft only, caster slugs and slotted shafts allowed.
 - 9.2.3 - Thicker lower ball joints allowed, spindle must be in stock location.
 - 9.2.4 – Rear lower control arms may be fabricated or adjustable within +/- 1” of stock length or stock arms may be reinforced. Adjustable upper arms allowed.
 - 9.2.5 – Steel caster/camber plates allowed on strut cars relocation of upper strut mount is allowed within 1” of factory holes.
 - 9.2.6 - Any steel springs allowed must be stock coil diameter.
 - 9.2.7 - Cut springs allowed.
 - 9.2.8 - The use of twist in ties or rubber spacers are allowed between the coils.
 - 9.2.9 - Adjustable spacers or load bolts allowed above or below rear coils.

- 9.2.10 - Adjustable or solid spacers allowed above or below front springs
 - 9.2.11 - Rear shackles must be no longer than 6". (Multi-bolt holes allowed).
 - 9.2.12 - Lowering blocks allowed 2" Max.
 - 9.2.13 - The use of aftermarket bushings allowed
- 9.3 - Transponders
 - 9.3.1 – Transponder must be located 18" back from center line of rear end to front leading edge of the transponder or further back is OK. Please also keep as close to the lower part of the frame as possible. DO NOT MOUNT HIGH
 - 9.3.2 - Cars with Transponders found in locations other than that indicated above during post-race inspection will be penalized.

10.0 – Glass and Trim

- 10.1 - All glass and plastic must be removed. This includes all chrome, lights, mirrors, reflectors and trim.

11.0 – Hood and Trunk Lid

- 11.1 - All hood and trunk lid must remain on car at all times.
- 11.2 - All hoods and trunk lid in stock position and properly sealed from drivers compartment.
- 11.3 - All hoods and trunk lid must be securely fastened.

12.0 – Interior

- 12.1 - All knobs, handles, decks, unnecessary upholstery and seats must be removed.
- 12.2 - No rearview mirrors are allowed inside or outside of the car.

13.0 – Roll Cage

- 13.1 - No offset cages.
- 13.2 - A roll cage is mandatory and must consist of a minimum six-point roll cage with approved driver protection.
- 13.3 - Roll cages must be welded directly to the frame.
- 13.4 - Roll cages must be constructed of steel tubing 1-1/2" O.D. x .120 " wall thickness or 1-3/4" x.095" wall thickness.
- 13.5 - No extra bracing on outside of car allowed.
- 13.6 - Three (3) horizontal bars minimum running between the front and rear upright bracing are required on the driver's side and must bow outward (not including the frame)
- 13.7 - Passenger side must have a minimum of (3) horizontal bars running between front and rear upright or a X with a top straight bar (not including the frame)

- 13.8 - Front center windshield post minimum 1-1/4"x.120 mandatory.
- 13.9 - Upper roll cage must have center roof bar. 1-3/4" x .095 minimum or 1-1/2 "x .120 minimum.
- 13.10 - Main roll bar must be symmetrical to driveshaft.
- 13.11 - All roll bars in driver's immediate area must be padded.

14.0 – Rub rails

- 14.1 - One rub rail allowed on each side and maximum 1" by 2" rectangular tubing mounted tight to the door panel only.
- 14.2 - Must have ends beveled.
- 14.3 - No sharp edges.

15.0 – Steering Column

- 15.1 - Steering Column must be in original position for make and model.
- 15.2 - Steering quickener allowed.

16.0 – Tow Hooks

- 16.1 - Front and rear tow hooks are required.

17.0 – Windshield

- 17.1 - All glass removed. Windshield must be replaced Lexan or full screening. 1" square maximum.
- 17.2 - Window screen must cover the entire windshield area. (From door post to door post).

18.0 – Air Cleaners

- 18.1 - Aftermarket air cleaners may be used.
- 18.2 - Air cleaners may not extend beyond the hood.

19.0 – Air Filter

- 19.1 – ONE round type air filter element maintaining a maximum of 4 inches and a maximum of 14 inches in diameter will be permitted.
- 19.2 - K&N style filters will be allowed.
- 19.3 - No special air cleaner top or bottoms that direct air into the carburetor.
- 19.4 – No plastic air cleaner's tops or bottoms (metal only).
- 19.5 – All air shall be filtered through the filter element.
- 19.6 - No carburetor inserts to direct air into the carburetor.
- 19.7 - No air boxes, hoses, or any device that directs air into the air cleaner.

- 19.8 - No ram air.

20.0 – Brakes

- 20.1 - Shut-off valves on any brake line are NOT permitted.
- 20.2 - No rear disc brakes allowed. With the exception of factory equipped Fords or other newer generation cars that may of only come with disc brakes.
- 20.3 - All cars must have OEM working brakes at all times.
- 20.4 - Aluminum Brake Drums will NOT be allowed **STEEL DRUMS ONLY STARTING 2019 No Grace Period**
- 20.5 – Steel Single Piston Calipers Only. Must be same size piston both sides.
- 20.6 – OEM Style Pads Only. No Grooving or cutting beyond factory. Same pads both sides
- 20.7 – Any brake pedal and single master cylinder assembly allowed, no adjustments of any kind allowed.
- One residual pressure valve allowed in the rear brake line. No other restrictor valves, control mechanisms that vary the pressure front to back or side to side.

21.0 – Drive Train Requirements

- 21.1 - Only stock manufactured 3 speed or 4 speed automatic OD transmissions are permitted. No alterations.
- 21.2 - 2 speed Powerglide will be allowed only with 150lbs. added to minimum weight.
- 21.3 - Stock standard transmission or 2 speed Powerglide allowed with no weight penalty if engine is 305 cubic inch. + 0.060" overbore or less.
- 21.4 - No light weight flywheels, pressure plates or disks. OEM only.
- 21.5 - Bell housing can be a steel racing type. If a stock aluminum bell housing is used it must have a scatter shield.
- 21.6 - Must have all operational forward and reverse gears.
- 21.7 - Functional stock unaltered V8 OEM torque converter only. Minimum weight 36 lbs. full of oil. Cannot be modified to reduce weight. Must be stock stall, no lower "positive lock up" stall speed. Track can claim torque converter for \$250 to have cut open for inspection. \$250 will only be paid if converter is legal.
- 21.8 - Transmission coolers are allowed, only in trunk or engine compartment.
- 21.9 - Drive Shaft must be steel OEM type.
- 21.10 - Drive Shafts must be painted white.
- 21.11 - One front 360 degree drive shaft hoop (mounted towards front half of driveshaft) from 1" x .095" tubing is mandatory.
- 21.12 - Rear end must be same as make, model of chassis being used.
- 21.13 - Rear end may be locked by welding spiders or using steel mini spool.
- 21.14 - Leaf spring perches on rear end can be changed to allow for pinion angle adjustment. Rear end must be centered in car.
- 21.15 - Any gears can be used 4.30:1 or numerically lower. (i.e. 2.41:1 – 4.30:1) If engine is 305 cubic inch +0.060" overbore or less any gear ratio may be used for stock make and model of axle.

- 21.16 - Racing wheel studs are mandatory.
- 21.17 – Ford 9” Rear Ends will **NOT** be allowed. Brighton has agreed to give their drivers a grace period of 2019 and they will be eliminated to match the other four tracks in 2020

22.0 – Electrical System

- 22.1 - The self-starter must be in working order and located in stock position.
- 22.2 - Only standard factory OEM type production starters permitted. All cars must start under their own power.
- 22.3 - STOCK OEM HEI Distributor. No aftermarket coils or modules.

23.0 – Exhaust System

- 23.1 - Unaltered stock cast iron exhaust manifold only allowed or factory built steel street style headers are permitted. Primary pipes maximum 1 5/8" OD to maximum 3" collector.
- 23.2 - Mufflers are mandatory if headers are used. Must be an unaltered OEM or unaltered street style muffler. No glass pack type muffler or "cherry bomb" muffler.
- 23.3 - Mufflers are recommended with cast manifolds.
- 23.4 - Maximum exhaust pipe diameter 3" OD round with cast manifolds. Maximum 2 1/2" OD round with headers. No oval or square.
- 23.5 - Pipe must run under floorboard and exit behind the driver.
- 23.6 - No center dump manifolds
- 23.7 - No "H" or "X" pipes.
- 23.8 - Exhaust must be secure. Muffler must have two hangers. If muffler or exhaust falls off during a race the car may be penalized.

24.0 – Fuel Pumps

- 24.1 - Mechanical fuel pump only.
- 24.2 - No electric or belt driven fuel pump allowed.
- 24.3 - Engines converted from fuel injected, electric pumps will be allowed but must have oil pressure shut off.

25.0 – Fuel

- 25.1 - Pump gas with no additives recommended. Racing fuel allowed with no additives

26.0 – Fuel Cell

- 26.1 - Stock gas tank must be removed and replaced with a mandatory fuel cell.
- 26.2 - Fuel Cell shall be securely mounted in the trunk area with a minimum of two straps of 1/8" x 1" steel.
- 26.3 - Fuel Cell to be no lower than lowest part of frame section or be fully protected by a minimum of 1-1/2" tube.
- 26.4 - No stock location tanks allowed.
- 26.5 - No aluminum tanks allowed.
- 26.6 - All caps, fittings and lines must be secure, leak proof and of high quality.
- 26.7- Fuel line from trunk to engine must be one continuous line securely fastened under floor board and attached to frame rail. Fuel line may be run through the right side of the driver's compartment if one continuous line is run through steel conduit and clearly marked, (subject to technical inspector's approval).
- 26.8 - Trunk must have to be opened to refuel.
- 26.9 - No sloppy installations.
- 26.10- Filler neck must be grounded
- 26.11 – Plastic fuel cells must be encased in a steel box.

27.0 – Radio and Communications

- 27.1 - No two way radios are allowed.
- 27.2 - A working one way radio is mandatory.
- 27.3 - Frequency is 454.000.
- 27.4 - RACECEIVER One way radios are recommended.
- 27.5 – No Mobile Devices allowed in cars during competition.

28.0 – Radiator

- 28.1 - Racing aluminum radiators or stock aluminum radiators allowed.
- 28.2 - No electric pumps.
- 28.3 - Radiator must remain in front of the engine in the stock position.
- 28.4 - Racing fans and electric fans allowed. Metal flex fans are not permitted.

29.0 – Safety

- 29.1 - Entrants must wear an SFI 3.2A -1 or better fire retardant racing suit.
- 29.2 - Entrants must wear a proper fitting full-faced 2005 SNELL SA or newer – approved racing helmet with proper identification, and have no signs of previous damage. No open face helmets allowed. A 2010 SNELL SA or newer is highly recommended.
- 29.3 - Fireproof gloves SFI 3.3/1 mandatory.
- 29.4 – Fireproof footwear are strongly recommended.
- 29.5 - Hans/Neck Gen is strongly recommended
- 29.6 - Helmet is recommended to be worn at all times when the vehicle is in motion.

- 29.7 – 25 lb weight break if head and neck restraint meeting SFI 38.1 or greater is worn.

30.0 – Seat Belts

- 30.1 - 2010 or newer belts are mandatory. Newer belts that are worn or frayed as detected by inspectors must be changed at the recommendation of the head tech director.
- 30.2 - Minimum three (3) inch wide, five-point racing seat belt harness mandatory.
- 30.3 - One 3" inch wide lap, shoulder, (two belts over the shoulder) and submarine strap mandatory. No frayed or torn belts.
- 30.4 - Both ends of lap belts must be securely fastened to the frame and roll cage with high quality bolts, not less than 7/16 inch in diameter. ½" recommended.

31.0 – Seat

- 31.1 - Seat must be an aftermarket aluminum high back-racing seat. No fiberglass seat allowed.
- 31.2 - Seat must be securely fastened in six spots, Four (4) bolts on bottom and two (2) bolts on seat back.
- 31.3 - Seat must be securely fastened to frame and cage.
- 31.4 - No floorboard installations allowed.
- 31.5 - The seat must be positioned to the left of the center of the car.
- 31.6 - All bars and sharp contact areas around driver must be padded.

32.0 – Shocks & Struts

- 32.1 - Stock Mount Sealed, Non Adjustable, Non rebuildable, Steel, Unaltered Shocks Only. Shocks not to retail more than \$150.00 CDN. Drivers that currently have PRO/AFCO Click Adjustable shocks will be allowed to run them in 2019 however by 2020 and beyond no adjustable shocks period.
- 32.2 - One steel shock or strut mounted in stock location. One per wheel.
- Shock extensions allowed.
- 32.4 - Struts not to exceed Retail of \$300.00 CDN.
- 32.5 - Track Officials have the option to buy shocks for \$150 from any car in competition

33.0 – Tires

- 33.1 - Cars running SPEC, GM Crate part # 88958602, #19258602 or 305 cubic inch or less engine +0.060" overbore allowed:

Hoosier Spec 8" tires PN 36149 Soft and Medium and PN 36156 Soft and Medium

OR

American Racer 8” **soft, med hard** spec tires (**“F” tread pattern only**).

These tires may be mixed and matched.

Brighton will only allow Hoosier PN 36149 Soft and Medium and PN 36156 Soft and Medium only during regular points events.

- 33.2 – Siping, grinding and grooving of tires allowed.
- 33.3 - Maximum radial tire size P235 with 8"tread. DOT numbers and tire stampings must be visible.
- 33.4 - No snow or ice tires allowed.

34.0 – Steering Wheel

- 34.1 - The steering wheel center must be padded.
- 34.2 - Minimum size of steering wheel 12 "diameter.

35.0 – Weight

- 35.1 - All must weigh a minimum of 3000 pounds after the event with driver.
 - 35.1.1 – Maximum 55% left side weight.
 - 35.1.2 – Maximum 49 % rear weight for Four (4) control arm suspension cars.
 - 35.1.3 – Maximum 47% rear weight for all other types of rear suspensions.
- 35.2 – Driver must have belts tight when checking %. Removal of mud will be at the discretion of the technical director(s).
- 35.3 - Any additional weight must be securely fastened with two, minimum ½"diameter, grade 8 bolts.
- 35.4 - Weight in the driver’s compartment must be approved by tech official before competition.
- 35.5 - Added weight must be painted white with the car number painted, engraved, or stamped on each piece.
- 35.6 - It is recommended that extra roll cage and driver protection be considered for reaching legal weight.
- 35.7 – 25 lb weight break if a head and neck restraint meeting SFI 38.1 or greater is worn

36.0 – Water Pump & Pulleys

- 36.1 - OEM replacement water pump only. No Chevy aluminum pumps.
- 36.2 - The use of aftermarket pulleys will be allowed to assist over-heating problems.
- 36.3 – One piece metallic steel fans only. No removable blades

37.0 – Wheels

- 37.1 - Steel racing type wheels allowed.
- 37.2 - Maximum steel wheel width of eight (8) inches.
- 37.3 – Minimum Two (2) inch, Three (3) inch and Four (4) inch back spacing. Tires must not stick out past body or rub rails.
- 37.4 - 1/2 inch studs, minimum, are mandatory on all four wheels.
- 37.5 - Must have one (1) inch lugs.
- 37.6 - A wheel spacer up to a ½" on right rear is allowed.
- 37.7 - BEADLOCK rims allowed.
- 37.8 - Foam only wheel plugs are allowed.
- 37.9 – Plastic Wheel Covers are allowed. NO DZUS TAB or expandable mounting bead lock covers allowed. Must be bolted on using welded tabs.

38.0 – Window Nets

- 38.1 - Racing window nets are mandatory on driver's side of car.
- 38.2 - Window net to be mounted so quick release latch is at top front of window.

39.0 – Spec. Engine Rules

- 39.0.1 - Engines must be mounted in stock location.
- 39.0.2 - All engine blocks must be standard factory production passenger block.
- 39.0.3 - Engine block and component parts must retain all standard stock external and internal dimensions.
- 39.0.4 - No aftermarket or aluminum blocks.
- 39.0.5 - Zero deck allowed on blocks with maximum .060 overbore allowed.
- 39.0.6 - Internal polishing of the engine block is not permitted.
- 39.0.7 - Chevrolet –350 CID, Ford-351CID, Chrysler -360 CID allowed.
- 39.0.8 - Stock hardware on engines.
- 39.0.9 - Factory production unaltered replacement three ring, four eyebrow flat top aluminum pistons allowed. No modifications.
- 39.0.10 - Only Factory production or OEM standard steel piston pins may be used.
- 39.0.11 - Only Factory production steel connecting rods permitted.
- 39.0.12 - All rods must maintain the standard stock rod length for engine block used.
- 39.0.13 - No Oldsmobile Rods.
- 39.0.14 - No modifications of any kind.
- 39.0.15 - Any steel oil pan.
- 39.0.16 - No oil coolers allowed.
- 39.0.17 - No accusumps or external oil pumps allowed.

39.1 – Spec. Carburetor

- 39.1.1 - Holley R4412 that MUST REMAIN BOX STOCK.
- 39.1.2 - Carburetor must be mounted parallel to intake.
- 39.1.3 - Track Officials reserve the right to and will exchange any competitor's carburetor at any time.
- 39.1.4 - Choke may be removed, throttle shaft may be welded, jets and power valves may be changed.
- 39.1.5 - One- BRP 377 adapter mandatory.
- 39.1.6 - Two .030 Gaskets only.
- 39.1.7 - Throttle Shafts must remain standard and must not be thinned, cut or altered. No modifications.
- 39.1.8 - No air induction plastic inserts or other devices to direct air to intake.

39.2 – Spec. Cylinder Head

- 39.2.1 - Re: CHEV 350 - GM STRAIGHT PLUG CAST IRON HEADS ONLY. NO CAMEL BACKS; VORTEC; or DART PERFORMANCE HEADS.
- 39.2.2 - Identification and part numbers must remain on the part being used with no alteration.
- 39.2.3 - Any attempt to alter, change, or eliminate part numbers will result in that part's ineligibility.
- 39.2.4 - Maximum intake port of 160cc. and maximum exhaust port of 60 cc. with minimum 74 cc. combustion chamber.
- 39.2.5 - No internal grinding except valve seats. All cutting in reference to the valve job must be centered off of the centerline of the valve guide. Upon completion of the valve job, the bowl area under the valve seat down to the bottom of the valve guide must still be the same configuration as far as shape and size as it was from the manufacturer. Must retain same configuration.
- 39.2.6 - No work below valves.
- 39.2.7 - Screw in studs, guide plates and poly locks allowed.
- 39.2.8 - Chev maximum valve size - INTAKE 1.94 - EXHAUST 1.50.
- 39.2.9 - Ford and Chrysler stock valve size for head.
- 39.2.10 - Stainless steel exhaust valves allowed. No neck down valves, No titanium valves.
- 39.2.11 - No bronze guides, but bronze liners allowed.
- 39.2.12 - Minimum head gasket thickness .040.
- 39.2.13 - Stock diameter single valve springs and retainers only.
- 39.2.14 - No dual valve springs.

39.3 – Spec. Crankshaft & Harmonic Balancer

- 39.3.1 - Only factory production cast iron crankshafts with no other modifications of any kind except minimum .030 under size. Chev Part # 3932442 or # 14088526.
- 39.3.2 - Drilling for balancing only.

- 39.3.3 - Must remain stock stroke.
- 39.3.4 - Knife-edging, polishing, undercutting, and lightening is not permitted. No modifications.
- 39.3.5 - Factory production or OEM replacement harmonic balancers are permitted.

39.4 – Spec. Camshaft & Timing Chain

- 39.4.1 - Hydraulic camshaft only.
- 39.4.2 - Not to exceed .450 lift on intake and exhaust with stock diameter lifters.
- 39.4.3 - No roller cams allowed.
- 39.4.4 - No mushroom cams allowed.
- 39.4.5 - No gear or belt driven cams.
- 39.4.6 - Timing chain and gear may be of a roller type or OEM replacement chain and gear.
- 39.4.7 - Lifter valley baffles allowed.

39.5 – Spec. Exhaust Manifold

- 39.5.1 - Stock cast iron exhaust manifold must be used (unaltered) – no center dump manifolds.
- 39.5.2 - Factory built steel street style headers are permitted. Primary pipes maximum 1 5/8" OD to maximum 3" collector.

39.6 – Spec. Rocker Arms

- 39.6.1 - Stock ratio stamped steel rockers arms only.(Chev. 1.5)
- 39.6.2 - No roller tip or roller rockers.

39.7 – Spec. Intake Manifold

- 39.7.1 - Only an aluminum four barrel intake as cast box stock with no modifications or grinding permitted.
- 39.7.2 - Manufacturers and part numbers that are legal are as follows:
 - Wieland X – Celerator, Chevy # 7547,
 - Chrysler #7545
 - Edelbrock Torker II Chevy # 5001, Chrysler #5076.
 - Edelbrock Performer Chevy #2101, Ford #2181, Chrysler #2176

39.8 – Spec. Push Rods & Valve Springs

- 39.8.1 - Stock length and diameter push rods.
 - Chev.350 1.260 diameter spring with installed height of 1.70-1.75
 - Ford 351 1.500 diameter spring with installed height of 1.82
 - Chrysler 360 1.500 diameter spring with installed height of 1.65

NOTE:

The engine owner will be responsible for any and all costs incurred in the tech inspection of this engine however, any Car required to remove their Head(s) and/or Pan by Humberstone, Merrittville and Ohsweken Speedway Technical Inspection and found to be "legal" will be reimbursed \$50 for costs of replacing gaskets.

40.0 – GM Circle Track Crate Engine *Part # 88958602 or #19258602*

- 40.0.1 - Must remain stock.
- 40.0.2 - ANY TAMPERING OR CHANGING OF ANY ENGINE PARTS WILL RESULT IN COMPETITOR BEING DISQUALIFIED FROM EVENT, LOSS OF ALL POINTS TO DATE AND SUSPENDED FOR ONE YEAR.

40.1 – Carburetor

- 40.1.1 - Holley R4412 that MUST REMAIN BOX STOCK.
- 40.1.2 - Choke may be removed, throttle shaft may be welded, jets and power valves may be changed.
- 40.1.3 - Carburetor must be mounted parallel to intake.
- 40.1.4 - Track Officials reserve the right to exchange any competitor's carburetor at any time.
- 40.1.5 - One BRP 377 adapter only.
- 40.1.6 - Two .030 gaskets only.
- 40.1.7 - Throttle shafts must remain standard and must not be thinned, cut or altered. No modifications.
- 40.1.8 - No air induction inserts or other devices to direct air to intake.

41.0 – Non Spec Engine - (*RADIAL TIRES ONLY*)

- 41.0.1 - Must be in stock location.
- 41.0.2 - Maximum engine size:
 - Ford 351 (no Boss or Cleveland)
 - Chrysler 360
 - GM 350
- 41.0.3 - Any engine under 318 CID must be 1976 or newer.
- 41.0.4 - Must be stock stroke, 0.060" overbore.
- 41.0.5 - Engine must be same make as chassis (GM engine in GM car).
- 41.0.6 - Factory blocks with factory dimensions except 0.060" overbore.
- 41.0.7 - No aftermarket or aluminum blocks.
- 41.0.8 - Minimum deck height 0.020" with steel gasket or zero deck height with 0.040" gasket.
- 41.0.9 - Internal block painting, screens and plugs allowed.
- 41.0.10 - Lifter valley baffles allowed.
- 41.0.11 - Rods must be stock length. (Chev.350 5.7") steel only. No light weight.

41.1 – Intake Manifold

- 41.1.1 - An aluminum four barrel intake as cast box stock with no modifications or grinding permitted.
- 41.1.2 - Manufacturers and part numbers that are legal are as follows:
 - Wieland X - Celerator, Chevrolet - part # 7547, Ford - part # 7515, Chrysler - part # 7545
 - Edelbrock Torker II, Chevrolet - part # 5001, Ford part # 5021, Chrysler part # 5076
 - Edelbrock Performer Series, GM #2101,#2104,#2116,#3704, #2181,#2121,#3721,Chrysler #2176
- OEM 2 or 4 barrel dual plane intake with no modifications.

41.2 – Pistons

- 41.2.1 - All engines must use stock type OEM flat top pistons with full skirt.
- 41.2.2 - No light weight pistons

41.3 – Carburetor

- 41.3.1 - Holley manufactured 2 barrel # R4412 carburetor permitted with no modifications box stock only except choke plate removed and jet changes.
- 41.3.2 - Or any OEM production 2 barrel carburetor (max. 1-3/8" venturi) may be used. No modifications except jet changes and choke plate removed.
- 41.3.3 - One 1 inch thick nonadjustable adapter approved by official.
- 41.3.4 - Two .030 gaskets only.
- 41.3.5 - No air induction
- 41.3.6 - No carburetor inserts or other devices to direct air into intake.
- 41.3.7 - Stock type air breather mounted parallel to intake.

41.4 – Cylinder Heads

- 41.4.1 - Screw in studs and guide plates allowed.
- 41.4.2 - No high performance heads.
- 41.4.3 - OEM stock type valves.
- 41.4.4 - No work below valve seats.
- 41.4.5 - Chev. max. valve size - intake 1.94 - exhaust 1.50.
- 41.4.6 - Stock diameter single valve springs and retainers only.
- 41.4.7 - Ford and Chrysler stock valve size for head.
- 41.4.8 - Stock length pushrods.
- 41.4.9 - OEM type stamped steel rocker arms Chev 1.5 ratio only.
- 41.4.10 - No roller or roller tip rocker arms.
- 41.4.11 - 350 Chev 72 cc minimum combustion chamber.

- 41.4.12 – 350 Chev approved head numbers-014, 126, 195, 267, 330, 336, 339, 388, 393, 441, 445, 454, 487, 493, 545, 598, 624, 642, 709, 799, 813, 862, 881, 882, 920, 991, 997.
- 41.4.13 - Vortec heads allowed on 305 CID engines only.
- 41.4.14 - Ford 302 CID and Chev 305 CID heads must be 1976 or newer.
- 41.4.15 - No 305 heads on 350.

41.5 – Camshaft

- 41.5.1 - Any hydraulic camshaft may be used not to exceed .450 lift on intake or exhaust at the valve with stock type hydraulic valve lifters.
- 41.5.2 - No roller lifters.
- 41.5.3 - Engines under 305 CID + 0.060"overbore allowed stock type roller hydraulic valve lifters.
- 41.5.4 – Ford 5.0 Windsor may use maximum, 0.525” lift camshaft.

41.6 – Oil Pan

- 41.6.1 - Optional viewing window can be installed in the oil pan.
- 41.6.2 - Any oil pan may be used.

42.0 – Technical Inspection

Humberstone, Merrittville and Ohsweken Speedways reserve the right to perform technical inspection on and car at any time.

- 42.1 - All new cars must arrive at the track one hour prior to start time and report to the tech inspector.
- 42.2 - If car does not meet our rules it will not be able to compete. No exceptions.
- 42.3 - All cars are subject to inspection by Humberstone, Merrittville and Ohsweken Speedway officials at any time and in any manner determined by track officials. All decisions regarding the timing and manner of the inspections, as well as which cars will be inspected, are final.
- 42.4 – Humberstone, Merrittville and Ohsweken Speedway reserves the right to confiscate any illegal components at any time as deemed necessary.
- 42.5 – Humberstone, Merrittville and Ohsweken Speedway reserves the right to impound any car for any reason at any time.

43.0 – Post Race Technical Inspection

- 43.1 –Post Race Technical Inspection is carried out within the confines of the Tech Barn will be completed under the following guideline:
- 43.2 – Cars to be inspected MUST proceed immediately to the Tech Inspection area after exiting the race track;

- 43.3 – No team members are allowed to touch or remove any part of the race car without receiving prior approval of the HEAD TECH OFFICIAL; (remember the area between the tech barn and the turn two exit is restricted)
- 43.4 – Cars (with Driver) must enter the tech area as instructed by inspectors. Drivers must move their racecar onto scales or be assisted by track officials only if needed;
- Access in the tech barn will be restricted to the car driver and two crew members.
- The team is responsible for preparing only the area(s) of the race car for inspection as requested by the Head tech official in a timely manner;
- Any participant (team) who refuses to allow tech officials to inspect their car at any time or follow inspection directions and procedures will be subject to the following:
 - Immediate disqualification from the event.
 - Loss of points and prize money for that event.
 - Credited with a feature win for handicapping purposes (*if applicable*).
- Participants found to be illegal and disqualified during technical inspection shall be subject to the following:
 - Disqualification from the event.
 - Loss of points and prize money for that event.
 - Credited with a feature win for handicapping purposes (*if applicable*).
 - If found illegal on a double feature night, the car will be declared illegal for both races and will not receive points or prize money for either.
- A second infraction for deemed illegal or technical issues will result in the following:
 - Disqualification from the event.
 - Loss of points and prize money for that event.
 - Total Loss of all accumulated points to date. (Attendance record will not be affected for year-end perfect attendance award)

All questions, concerns or rule clarifications should be addressed to the Ontario Dirt Competition Committee at www.ontariodirtcomp.com/contact

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