

# BETHEL MOTOR SPEEDWAY

COUNTY ROUTE 141 – WHITE LAKE, NY

## DIRT SPORTSMAN RULES – 2018

(Last Updated 01/24/2018)

***BE SURE TO READ THESE RULES CAREFULLY AS THERE HAVE BEEN CHANGES FOR 2018!***

The Dirt Sportsman division is based on readily available dirt-style fabricated open wheel chassis with limited small block engines. There are many dirt tracks with similar classes, so these dirt style cars are plentiful and rules have been formulated to allow cars from numerous tracks to be competitive. Since the track is a paved surface, most dirt style cars have an abundance of traction which makes older, less advanced chassis suitable for competition. Bethel encourages teams to re-purpose obsolete dirt cars for participation on our pavement. Bodies may be current style or older style which allows the older chassis to carry less weight and have less aero-drag by installing a smaller body. Vintage bodies are also allowed. Uniqueness and creativity are encouraged in the Dirt Sportsman division.

### **Technical Specifications, SPORTSMAN:**

These rules have been formulated to encourage participation. It is not the intention that every participating car will be equipped with all the items allowed by these rules. Since cars from a multitude of tracks and numerous sources of used cars and parts must be considered, the rules have been written to accommodate what is likely to be available or already installed on cars that are in the area or available for purchase used.

**CAR ELIGIBILITY:** Must be dirt style, open wheeled, center steering car only. Must be easily recognizable as a dirt style car. No "D/A" (dirt/asphalt) cars allowed. Sportsman cars ONLY. No full Modified cars allowed.

### **FRAME:**

1. Only 2x4 box frames are permitted between axle centers, front and rear. The 4 inch side must be vertical. Frame rails must be steel only. All 2x4 rails must be .120 inch wall thickness only. At the discretion of the officials, it may be necessary to drill a 3/16 inch hole in the frame rail for inspection of thickness. No other holes will be permitted. All other tubing permitted for the frame rails must be either 1½ inch diameter by .095 inch wall or 1¾ inch by .095 inch wall.
2. Frame width shall be as follows:
  - a. Front (at shock towers): Maximum 35 inches, minimum 24 inches.
  - b. Rear: Maximum 35 inches, minimum 26 inches.
3. The minimum frame width at the rear roll bar must be 26 inches.
4. All measurements are to be taken from the outside of the frame rails. These measurements shall be taken at both top and bottom of the frame at its longest length. Clips, sub-frames, etc. are considered part of the frame.

5. Minimum length of the 2x4 frame rails must start at 14 inches in front of the rear axle centerline and extend to the front of the radiator. All kick-up material must be the same specifications as the roll cage or frame material. Left and right frame rails (both top and bottom rails) must be equal distance from the driveline centerline in a vertical plane along the total length of the frame. The only exceptions will be the lower left rear frame rail, which will be permitted at 4 inch maximum indent for suspension clearance, and the two upper frame rails in the engine compartment to allow for the clearance of large cylinder heads.
6. Titanium or carbon fiber materials are not permitted on the chassis.
7. All cars must have a drive shaft cover. All cars with open drive shafts, must have a tunnel, made from a minimum of 1/8 inch thick steel which extends from 2 inches under the front edge of the seat to the back of the transmission covering the shaft and "U" joint, and output flange on top and both sides. It must extend completely down to the floorboards. It must be held in place with a minimum of four 3/8 inch diameter bolts at the bottom, connected to a substantial cross-member. This drive shaft cover must be a solid unit with no cut-aways for lightening purposes.
8. Two steel safety rings, diameter to suit, x 1/4 inch wall thickness x 2 inches wide, each fastened by two 3/8 inch grade 5 bolts with locking nuts to the torque arm side plate or the frame must be installed around each universal joint.
9. Closed drive type cars, torque tubes, or bells that already have a 360 degree covering from "U" joint back to seat will be accepted as is. To protect the driver, any suspension link such as a torque arm, coil over or trailer bar inside the driver's compartment must have a steel cable (1/4 inch in diameter or more) or clamp connecting it to a substantial cross-member to limit its range should it break loose. These parts must have no sharp edges and must be padded.
10. Firewalls, both front and rear, are mandatory. The rear firewall must extend from the top of the fuel cell to the belly pan to isolate the driver from the fuel cell. A minimum thickness of .050 inch aluminum or steel is required. A minimal amount of sheet metal may be cut out for drive shaft clearance. The front firewall must fully isolate the driver from the engine compartment.
11. Belly pans are mandatory and must extend from the front firewall to rear firewall and be attached at both spots. It is mandatory to have a separate floor to protect the driver's feet in the event the under pan falls off. This extra floor must be attached to the frame or cross-member or both, and extend from the front firewall past the front edge of the seat.
12. On-board "flame-out" systems installed in the race car are recommended.
13. A horizontal bar with minimum dimensions of 1 inch by .095 inch wall thickness must be mounted behind the fuel cell for rear impact protection.

**ROLL CAGE:**

1. The roll cage shall be integral with the frame.
2. Only round steel roll over bars may be used. Front and rear roll bars must be connected at the top in a cage-type configuration. Two round horizontal side bars on each side are mandatory. The top side bar must be a maximum of 20 inches below the top roll bar. Proper bracing and triangulation on front and rear roll bars is required. All roll bar bracing must be a minimum of 1 1/2 inch diameter by .095 inch wall thickness. A minimum of one diagonal bar across the top of the roll cage is mandatory.

3. The rear main roll bar hoop must be a minimum of 26 inches measured across from outside to outside of the tubing and must maintain that measurement from the bottom all the way to the top of the cage. Bottom of the rear roll bar must be welded to the 2x4 frame (no outriggers). The front roll bar must be measured and constructed the same way, except that the allowable taper in the frame rules will govern the width dimensions.
4. Only two roll bar diameters will be permitted:
  - a. Roll bars of 1¾ inch diameter will require a minimum of .095 inch wall thickness.
  - b. Roll bars of 1½ inch diameter will require .120 inch wall thickness.
5. Roll bar padding must fully cover all bars that may come in contact with the driver's head while strapped in the seat. On center type steering, all housings, lines, and fittings must be covered with roll bar padding. The steering wheel center must also be padded. The starter housing and any other points of contact that could potentially injure the driver must also be adequately padded. It is recommended that this padding is flame retardant.
6. All cars must have a functional padded headrest, which must be in line with the center of the driver's head, if not built into the seat.
7. Adequate window openings on both sides of the car must be maintained for emergency exit of the driver. The minimum opening size is that which will allow a rectangular box with dimensions of 15 inches high by 15 inches wide to be passed through the inside of the car from one window through to the other. Any obstacles other than the driver's headrest, which prohibit the passage of the inspection box through the cockpit, must be removed.

#### **SAFETY – ANCILLARIES:**

1. All cars must have an ignition switch which is easily accessible within the driver's compartment. The ignition switch must be marked ON/OFF with a bright colored paint or decal and be clearly visible and easily accessible to the driver.
2. Fuel lines, power steering lines, and fittings running through the driver's compartment must be steel or made from an approved braided type line only. No plastic or glass fuel filters permitted. High pressure lines and fittings or hot fluid lines running through the driver's compartment must be encased or shielded by a deflector to prevent driver injury.
3. All cars must at all times have four wheel hydraulic brakes in good working order. Brake tests may be held throughout the year.
4. Exhaust headers must be safe for the driver and exit past the driver's seat.

#### **SEAT & SEAT BELTS:**

1. A racing style aluminum seat is mandatory. Must be securely fastened (bolted) to the roll cage and/or frame. No floorboard installations. A minimum of six (6) bolts are required, four (4) in the seat area and two (2) in the backrest; minimum 3/8" diameter, Grade 5 or Grade 8, with flat washers and locking nuts. No carriage bolts or lock washers.
2. Seat in center steering type car must have adequate steel plating below and partially up back of seat in case of driveshaft or u-joint failure.
3. A high back seat or padded roll bar headrest is mandatory. Driver's head must not protrude above cage with helmet on, strapped in driver's seat. Roll bar padding shall be installed wherever impact by the driver could cause injury.

4. Seat belts & harnesses must be a minimum 5-point style (including sub-belt). 5-point seat belt/harness shall employ 3" quick release lap belts and 3" shoulder straps. 2" shoulder straps acceptable ONLY with HANS type device.
5. Seat belt & harness must be securely fastened to the frame or cage and NOT to floorboards or sheet metal components of car. All mounts MUST be in direct line with the direction of the pull. Bolts MAY NOT be inserted through belt webbing for mounting.
6. Seat belts will be rejected if not in good condition. Refer to General Rules, Pages 18-20 for instructions, and Page 24 for diagrams of proper installation of seat belts & harness. Seat belts will be inspected by Track Officials, and must be dated within five years (i.e., in order to be legal for the 2018 season, the date stamped on the belts can be no older than 2013). Seat belts without a legible date stamp on them will NOT be allowed.
7. SEAT BELTS MUST BE WORN TIGHTLY AND SECURELY AT ALL TIMES WHILE ON SPEEDWAY!! NO EXCEPTIONS!!

#### **BODIES AND BUMPERS:**

##### **BODY:**

1. Bodies shall be conventional dirt-style open wheeled with the current DIRT rule book dimensions being the maximum allowable body.
2. NO sail panels allowed on rear quarter panels. No wings or other aero advantages allowed.
3. Older style body designs allowed (example: Mud Bus)
4. Vintage and stock style bodies allowed (examples: Coupe, Gremlin, Falcon, etc...)
5. Side door panel: Maximum 41 inches in height, measured 60" in front of rear wheel centerline.
6. Front door extensions will be permitted up to 20 inches behind the front axle centerline.
7. Ground clearance on the bottom of the doors must be a minimum of 4 inches.
8. All door and rear quarter panels may have a maximum lip of 1 ½ inch rounded at 90 degrees and facing inward only, on the top and the bottom.
9. At the top of the doors and rear quarter panels, a lip angled out at a maximum of 45 degrees, protruding away from the door no more than ½ inch and no more than 1 inch in length before it bends inward for strength will be permitted.
10. Minimum window opening is 15 inches by 15 inches on both sides of the car.
11. All bodies shall be subject to the discretion of speedway officials.
12. Inspectors reserve the right to request body or sheet metal to be replaced and painted if it has any sharp edges or is not looking presentable to the sport.
13. No oil coolers may be mounted external to the bodywork. All oil cooler piping shall be routed under the bodywork, as safely away from driver as practical.
14. Oil coolers may be mounted under the hood ahead of the motor.

15. Max rear spoiler height, regardless of ride height, not to exceed 50 inches. This height will be randomly measured during an event. It is suggested that manufactures do not make tall cars that can only pass tech at low ride heights. The race car driver must be able to see through for clear view of track ahead.
16. All cars must have a full steel windscreen (rock guard) of substantial material with a maximum individual hole opening of 2 inch by 1 inch by 1/16 inch (no chicken wire or aluminum). Screen must cover entire windshield area left to right across the cage and from top of cage down to hood or cowl. Clear Lexan or safety glass windshields may be used for additional protection if they are in the driver's line of sight. They must be shatterproof and mounted behind the screen, enabling driver to wipe them clean. Any additional windshield must not obstruct the emergency exit of the driver.

**FRONT BUMPER:**

1. Must be made from round steel tubing only, with a minimum diameter of 1¼ inches by .095 inch wall thickness for main bumper and all bracing.
2. It must consist of two rails, an upper and lower and at least 1 or 2 vertical braces equally spaced. These rails must have four sockets or supports attached to the frame.
3. The four tubes that support the bumper from the four frame sockets must be horizontal. These rails must also be a minimum of 6 inches apart and a maximum of 12 inches measured from top to bottom and maintain that measurement for a minimum width of 24 inches or a maximum width of 30 inches. It must also have an 18 inch center measurement from the ground up to the middle of the bumper.
4. The front bumper may not extend more than 24 inches in front of the front axle centerline.
5. No V-shaped bumpers, crash areas must be flat and vertical for the full width of the bumper.
6. The bumper must have all rounded ends and no sharp edges.
7. The end bracing tubes of the bumper must be angled in such a way as to prevent the bumper interlocking with another car's bumper.

**REAR BUMPER:**

1. The rear bumper must be made of round steel tubing, with a minimum diameter of 1½ inch by .095 wall thickness for main bumper and all bracing.
2. It must consist of two rails, an upper and lower, which must have four sockets and horizontal support bars attaching it to the frame. These rails must also be a minimum of 10 inches apart and a maximum of 16 inches measured from top to bottom and maintain that measurement for a minimum width of 64 inches or a maximum width of 86 inches.
3. The rear bumper or any side bars cannot extend past the outside of tire sidewalls on both sides. It also must have an 18 inch center measured from the ground up to the middle of the bumper.
4. The rear bumper may not exceed 52 inches back of the rear axle centerline.
5. No V-shaped bumpers, crash area must be flat and vertical for the full width of the chassis.
6. Bumper must have all rounded ends and no sharp edges.

7. Bumper must be on the car to compete.

**RUB RAILS:**

1. All rub rails and bracing must be constructed of 1½ inch by .095 inch OD tubing. No ballast added inside.
2. Rub rails must be outside of body panels but may not exceed the outside edges of the tires. The exception is the left rub rail only, which may extend an absolute maximum of 2 inches outside the left rear tire sidewall.
3. Rub rail ends must be rounded with no sharp edges and bent at a gradual 90 degrees and must protrude a minimum of 6 inches back in past the body.
4. Rub rails must be a minimum of 50 inches long, socket to socket.
5. Both side rub rails may be single or double horizontal rail only. Double horizontal rub rails may have no more than one vertical brace between the two horizontal bars, and no more than 7.5 inches of space between the 2 horizontal rails.

**ALL BUMPERS AND RUB RAILS:**

1. 5/16 inch attachment bolts with nyloc locking nuts or approved quick release pins are the only permitted fasteners. NO COTTER PINS.
2. All rub rail sockets must be pinned or bolted.
3. Front and rear rub rails must have a 360 degree sleeve, 3/8 inch wide by .095 wall minimum welded to the rub rail tube butted up against the support socket to prevent pins from shearing.

**CHASSIS GROUND CLEARANCE:**

1. There must be a minimum of 4 inch ground clearance from the chassis or anything attached to it, including any part of the body.
2. No metal, Lexan, or rubber air dams, fins, spoilers or skirts are permitted under the car.
3. No ground effects on cars are permitted.

**SUSPENSION:**

1. No independent suspensions front or rear.
2. No "A" frames or ball joints may be utilized for steering axis (kingpin only).
3. No four wheel steering permitted that is actuated by steering wheel.
4. All suspension systems must be mechanical with no form of hydraulic, air, electrical, radio or computer assistance for adjustments, in or out of cockpit allowed.
5. No form of traction control is permitted, braking system included.

**SPRINGS:**

1. Any form will be permitted (torsion bars, coil overs, leaf springs, etc.).

2. No carbon fiber or titanium springs are permitted.

**SHOCKS:**

1. Only one shock per wheel.
2. Shocks may not be driver externally adjustable.
3. External reservoirs are not permitted.

**FRONT END:**

1. The front axle must be straight, one-piece steel tubing only with no camber adjustments.
2. No split axle or dropped axle permitted.
3. All brackets on the front axle must be bolted or welded (no bird cages or slides)
4. Modified type front spindles only.
5. It is recommended that bearing shafts be made of steel.
6. Front wheels must be fully exposed. No fenders are permitted.

**TRANSMISSION:**

1. Approved North American or Canadian manufactured manual shift transmission only. No automatics permitted.
2. No overdrive or underdrive transmissions are permitted.
3. No running through reduction gears. Transmission must be direct drive to rear end at racing speed.
4. Transmission must have forward, neutral and reverse gear in good working condition. From a neutral position with the motor running, a car must be able to go forward and backward in a smooth manner.
5. Transmission must bolt to the bellhousing.

**DRIVELINE:**

1. No chassis, driveline or suspension components made of carbon fiber or titanium are permitted.
2. Only two universal joints per driveline.
3. A driveline shield and two steel safety rings are mandatory (see safety rules for detailed requirements).

**REAR END:**

1. Competition rears only. No titanium.
2. No hypoid type rears are permitted.
3. No limited slip-type rear ends or hubs are permitted.

4. No lockers or two speed rears are permitted.
5. Rear end must have a solid aluminum or steel spool only.
6. Rear spindles may be steel or aluminum only. If aluminum, it must be a one size tube and spindle with a minimum outside diameter of 2 7/8 inches and maximum inside diameter of 2 1/2 inches.

**BRAKES:**

1. No carbon fiber, carbon, titanium, ceramic or aluminum pads or rotors are permitted.
2. On live rear axles, one inboard and one outboard brake assembly is permitted.
3. Brake tests may be conducted throughout the year.
4. Brake bias may be cockpit adjustable.
5. No manual brake shut offs permitted, except only the right front will be allowed a shut off.
6. Cars that appear to have inadequate brakes may be removed from the race due to safety reasons.

**WHEELS:**

1. Dirt Sportsman/Modified steel or aluminum wheels only. No carbon fiber permitted.
2. Rim width restricted to 14 inches maximum. This is measured from inside of left bead to inside of right bead on the wheel. Wheel diameter limited to 15 inches only.
3. Beadlocks are permitted. Any wheel or beadlock that is used must maintain a minimum diameter of 11 inch hole inside beadlock and wheel. Beadlocks may be outside of rim only.
4. The use of air bleeders is not permitted.

**WHEELBASE AND TREAD:**

1. Wheelbase: Minimum 106 inches, maximum 110 inches. This measurement will be taken from the center of the rear axle to the center of the front axle, for both left and right sides with a maximum tolerance of 1/2 inch.
2. Tread width (measured outside edge of tire to outside edge of opposite side tire):
  - a. Front: Maximum 86 inches, minimum 74 inches
  - b. Rear: Maximum 86 inches, minimum 74 inches

**TIRES:**

1. Any brand dirt track tires and compound will be permitted.
2. Maximum tire size is 13" x 92" inches. NO DRAG RUBBER.
3. No tire softener or liquids of any kind will be permitted on the inside or outside of tires. No tire softener is permitted on speedway property at any time.
4. Heating of tires by torch, blankets or exhaust system is not permitted.
5. Durometer readings may be taken periodically.



6. No defacing or re-facing of any sidewall lettering on tires is permitted. No covering up of lettering of any kind.

**MUFFLERS AND EXHAUST SYSTEM:**

1. Each car must have one unaltered muffler per cylinder bank.
2. Mounting position front to back will be optional however the exhaust must exit past the driver.
3. No exhaust pipe may face outside the car.
4. No cross-over pipes are permitted connecting the two banks of cylinders.
5. Exhaust headers must be safe for the driver and exit past the driver's seat.
6. Cars deemed excessively loud may be removed / black flagged from the race.

**RADIATOR:**

1. Only one (1) radiator is permitted and it must be centered squarely, not angled, in front of the engine in a vertical position and must be a minimum of 22 inches tall.
2. No plastic or carbon fiber permitted.
3. No auxiliary cooling tanks or catch cans are permitted in the driver's compartment.
4. Water only. No antifreeze, coolant, lubricants, or additives. Min. 1 QT catch can mandatory, securely mounted.

**WATER PUMP:**

1. May be cast iron or aluminum only.
2. Radiator fan may be steel, aluminum, or electric. All cooling devices must be shrouded

**FUEL:**

1. **Sunoco brand Race Fuel only.** No other fuel is permitted. Random checks will be made throughout the year to ensure use of Sunoco brand Race Fuel.
2. Refer to General Rules regarding placement of required decals and driver suit patches to be eligible for Sunoco Race Fuels points fund bonus.
3. No racing fuel in drums may be brought on to track premises.

**FUEL TANK AND LINES:**

1. Tank must be centered inside of the frame rails and be rectangular or square in shape on all sides.
2. Fuel lines must siphon from top only.
3. No fuel lines bigger than #10 are permitted.
3. A fuel shut-off valve must be mounted within easy reach of the driver and the safety crew. It must be labeled in a clearly visible location with words "FUEL" and "ON/OFF" with a bright colored paint or decal.

5. No auxiliary fuel tanks are permitted.
6. No fuel filters with more than ½ quart capacity are permitted.
7. Fuel tank vent line must have an inline one-way valve for the prevention of fuel spillage.
8. Only one carburetor fuel log will be permitted and is limited to a maximum outside diameter of 1”.
9. No cool cans or fuel cooling devices are permitted.
10. A fuel cell with a maximum capacity of 24.5 U.S. gallons is mandatory. No pressure tanks are permitted on fuel systems.
11. The fuel cell must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060 inches. The cell must be fully foamed with just a minimal cut-out for filler. Cut-out may be no larger than 6 inches wide by 10 inches long by 7 inches deep. Fuel lines must siphon from the top only. There must be a one-way safety valve in the vent line. Fuel tank must be mounted behind the driver. Fuel tank must be secured by a least 3 steel/aluminum straps (each strap must be a minimum of 1 inch wide by ¼ inches thick) and bolted to the structure with at least 5/16 inch diameter grade five (3 line) bolts with locking nuts.

**IGNITION:**

1. Only stock type battery ignition systems permitted.
2. Use of aftermarket stock type distributor is permitted.
3. No external or internal ignition boxes or ignition amplifier permitted except for Ford, which may use an OEM type external ignition box.
4. No MSD or performance type external ignition box. No crank trigger ignition systems. No traction control devices of any kind.
5. The use of an aftermarket add-on rev limiter to protect engine from over-revving is permitted.
6. The use of aftermarket, heavy duty, replacement coil and control module both mounted in stock location is permitted.
7. All cars must have an ignition switch which is easily accessible within the driver's compartment. The ignition switch must be marked ON/OFF with a bright colored paint or decal and be clearly visible and easily accessible to the driver.

**BATTERY:**

1. The battery must be properly secured (no bungee cords or ratchet straps) and must have top terminals completely covered by rubber.
2. The battery must not show signs of leaking or acid deterioration.
3. All cars in all divisions shall have a mandatory labeled master disconnect switch, which shall disconnect any and all electrical functions of the race car.

**ENGINES:**

**ENGINE LOCATION IN CHASSIS:**

1. The engine must be centered in the front of the chassis and placed in an upright position.
2. Engine set-back: Maximum of 66 inches, minimum of 56 inches with a ½ inch maximum tolerance. Setback will be measured from the center of the front axle to the rear machined bell housing surface of the engine.

**ELIGIBLE ENGINES:** Engine eligibility shall include GM 602 "Crate" (option 1) or 358 flat top "Open" (option 2) with each option subject to specific carburetion and weight regulations.

**OPTION # 1 602 CRATE ENGINE:**

A. **WEIGHT BREAK:** Crate engines will be allowed to compete in the Sportsman division and will be allowed a 200 lb. weight break. Crate Sportsman must weigh minimum of 2250 lbs. with driver compared to Open Sportsman minimum weight of 2450 lbs. with driver.

B. **BLOCK:** The crate engine GM part # is 88958602 / 19258602. This is a factory-sealed 350 horsepower, cast iron cylinder head, hydraulic lifter engine requiring minimal maintenance. Seals on crate engines must not be tampered with or removed. Any such tampering shall require the engine to be resealed and re-certified by a GM authorized crate engine servicing facility before being allowed for competition. All engine parts must have casting or part numbers for identification.

C. **CLAIMING:** Crate engines shall be subject to claiming in the amount of \$4,000 (U.S. Funds). Claimed engines shall be surrendered the night of the claim, at the track, and include only the long block (intake to pan) & ignition as supplied by GM at time of purchase. Claims may be made by another active competitor within the specific division, who must have finished the race on the lead lap, and who must have a 2018 Bethel Motor Speedway Membership license. The claims must be submitted with CASH, CASHIERS CHECK, OR MONEY ORDER PAYABLE TO BETHEL MOTOR SPEEDWAY only, along with a written request of the claim, signed, and dated. Engines are only eligible to be claimed when they finish in a top 3 position at the conclusion of their main feature event. The claim must be made within 15 minutes after the feature event officially ended, and must be made to the tech inspector or pit steward. If a valid claim is refused by the driver of the claimed car, it will result in a disqualification from the feature event with a loss of points and monetary/prize winnings. Additional penalties will also occur to the claimed race team by refusing a valid claim.

D. **CARBURETOR:** One 4-barrel carburetor only. The following carburetors are permitted for use: Holley Part # 4777, Part # 80777, and Part # 80541-1. No other carburetors are allowed. 650 CFM is maximum. The carburetor must remain stock in all aspects. Booster height must remain stock (no cutting or polishing). No visible modifications without disassembly. Go/no-go gauge measurements valid on hot or cold carburetor. Carburetor maximum height to be 7 inches measured from the top of the carburetor bowl using a straight edge from the bowl to the No. 3 or No. 4 runner of the intake manifold. Carburetor modifications permitted are listed below. Any other modification not mentioned is not legal.

1. Holes drilled in the throttle plates for proper idling.
2. Drilling, tapping, and plugging of unused vacuum ports.
3. Welding of throttle shaft to linkage arm.
4. Drilling of idle or high speed air correction jets.
5. Milling of center carburetor body metering block surface a maximum of .015 inch on each side.
6. Removal of choke plate and shaft.
7. The jets may be changed as needed.

**OPTION # 2 SPORTSMAN 358 Flat Top OPEN ENGINE RULES:**

A. **BLOCKS:** Only American made cast iron V8 engine block. General Motors, Ford, or Chrysler. No aluminum blocks. Aftermarket cast iron blocks such as Dart Iron Eagle, Merlin, Dart Little M sportsman block (part #31151111), Bowtie are permitted. No performance blocks such as Rocket Blocks are

permitted. The engine block and all internal parts must meet stock specifications for its make. All engine parts must have casting or part numbers on them for identification.

B. CYLINDER HEADS: Only cast iron stock production type heads, or cast iron aftermarket production type heads allowed, with stock valve angles and location. Milling or angle milling of the cylinder head to any amount will be allowed. No epoxy or coating of heads is allowed. No relieving or unshrouding of valves in the combustion chamber. Valve guide liners are allowed. Valve material must be one-piece solid steel or stainless steel, no titanium, or sodium filled valves allowed. The only titanium allowed in these engines is the valve spring retainers. Any carbon fiber engine parts are illegal. Any amount of valve seats per cylinder head may be installed for the purpose of repairing a head. Any angle valve job will be permitted as long as it is done on a machine that cuts concentric to the valve guide center.

C. RODS: Any factory production or aftermarket cast iron or forged solid steel connecting rod. No aluminum, titanium, polished or billet. There is a 6" inch maximum rod length except for Chrysler which may be 6.125 inches. No machine work may be done to connecting rods except for shot peening, and normal balancing and resizing procedures.

D. CRANKSHAFT: Any stock appearing cast iron or forged steel crankshaft is permitted. No lightweight crankshaft permitted. Lightening or balancing holes through rod journals are permitted. No knife edging, narrowing or cutting down the diameter of the crank counterweights. No machine work to be done to crank counterweights or journals with the exception of normal balancing and resurfacing procedures. Only stock type engine bearings allowed. No roller or needle bearing engine bearings permitted. Bore or stroke combination must remain stock for the engine being used and must fall within guidelines below:

Chevy 350 CID 4.00" bore x 3.480" stroke Maximum overbore to +.070 = maximum CID 362.20  
Chrysler 340 CID 4.04" bore x 3.313" stroke Maximum overbore +.060 = maximum CID 349.92  
Chrysler 360 CID 4.00" bore x 3.578" stroke Maximum overbore +.010 = maximum CID 362.49  
Ford 351 CID 4.00" bore x 3.500" stroke Maximum overbore +0.60 = maximum CID 362.40

E. PISTONS: Any brand, three ring flat top aluminum pistons only. No coatings of any kind are allowed. No part can extend above the block. Zero deck height.

F. VIBRATION DAMPENERS: Any steel or cast iron, stock OEM vibration dampener is permitted providing it is not machined or altered in any way. No fluid or friction dampeners are allowed.

G. CAMSHAFT: No roller cams, roller gear driven cams, roller, mushroom lifters or lash caps are allowed. Camshaft may be of any brand. Only hydraulic or mechanical/solid flat tappet type camshafts permitted. Camshaft and lifters must be solid steel or cast iron construction only. No titanium, ceramic, or other exotic materials permitted. Camshaft must be located in factory position in block. Stock type and size cam bearings only. No roller or needle bearing cam bearings permitted. Lifters and lifter bores are to remain stock in diameter and are to remain in stock location within block. Sleeving of the lifter bores to compensate for wear is permitted. Must utilize stock type timing chain and gears only. No gear drives, belt drives or devices with external camshaft timing provisions are allowed. Roller rocker arms of any ratio are permitted. Stud girdles are permitted. Aftermarket "rev kits" are prohibited.

H. INTAKE MANIFOLD: Any cast iron or cast aluminum manifold is permitted. No welding or epoxy is permitted.

I. CARBURETOR: The Holley carburetors, #4412 and #4412HP, are the only acceptable carburetors and may run a MAXIMUM spacer adapter of 1-1/8 inch including gaskets, measured from the top mounting surface of the intake manifold to the bottom of the carburetor base plate. The adapter that

turns the carburetor sideways is considered to be a spacer and will be measured as such. No modifications of any kind will be allowed to these carburetors except those listed below (box stock only). No fuel logs or fuel cooling devices are permitted. Utilizing a mechanical throttle linkage only. Double return springs required.

Conventional round type air cleaners only. Air cleaners that provide ventilation through the top cover (such as the K&N brand) are permitted. No air induction plastic carburetor inserts or other devices to direct air into intake. No air diffusers are allowed. CARBURETOR MODIFICATIONS ALLOWED ARE LISTED BELOW. ANY OTHER MODIFICATION NOT MENTIONED IS NOT LEGAL:

- \*Holes drilled in the throttle plates for proper idling.
- \*Drilling, tapping, and plugging of unused vacuum ports.
- \*Welding of throttle shaft to linkage arm.
- \*Drilling of idle or high speed air correction jets.
- \*Milling of center carburetor body metering block surface a maximum of .015 inches on each side. \*Removal of choke plate and shaft. \*The jets may be changed as needed.

J. OILING SYSTEM: No dry sump system is allowed. Oil must be in steel or aluminum pan only. Oil pan must have 1 inch inspection hole for connecting rod verification on left side of pan. No external oil pumps or Accu-sumps allowed. Engine evacuation systems consisting of a connection between the valve covers and the exhaust system are permitted. Oil coolers will be permitted providing they are mounted under the left wing or under the hood only.

**MINIMUM WEIGHT:**

1. The minimum weight running Crate engine shall be 2,250 lbs. with the driver at the completion of any qualifying races and the feature event, no fuel added. The minimum weight running Open engine shall be 2,450 lbs. with the driver at the completion of any qualifying races and the feature event, no fuel added.
2. All cars must be clearly identified in letters 2" high on the left side of the hood or left side "A" pillar as to the engine option ("CRATE" or "OPEN") and minimum weight. Letters must be in a contrasting color and clearly visible to tech inspectors as the car approaches the scales. Any car not marked must meet the highest weight specified for this division.

**BALLAST WEIGHT:**

1. Any ballast weight used must be mounted within the vertical planes formed by the frame rails, must be securely fastened, and must remain stationary while racing.
2. Weight may be added prior to the event or time trial.
3. No weight pack may exceed 75 pounds.
4. All weight packs must have a minimum of two ½ inch securing bolts/studs of grade 5 or higher, with locking nuts. These bolts/studs must be securely anchored to the frame by a suitable clamp.
5. No bolts/studs welded to the frame will be permitted.
6. Clamp around weights are permitted.
7. All weights must be painted white and carry the car number in a legible fashion.
8. White duct tape marked with a wide black Sharpie is acceptable for a one race grace period only.

9. No ballast weight may be mounted to roll cage above the rear deck.

**SCORING:**

1. All cars must display numbers acceptable to the scoring and handicapping officials. High contrast, legible numbers shall be located on both sides, and the top of the car.
2. Duplicate numbering or contrasts may require addition or modification to eliminate scoring confusion.
3. **AMB/MyLaps or FLEX transponders are now required in all divisions.** Unless otherwise specified by a particular sanctioning organization, transponders are to be mounted on the right side of the car, between 15 and 20 inches rearward of the centerline of the rear axle, and no more than 18 inches above the track surface. Transponders must be mounted vertically with an unobstructed view of the track surface (no metal underneath). It is the driver's responsibility to be sure that their transponder is charged and functioning properly. If you have a question about whether your transponder is functioning properly, it is YOUR responsibility to ask track staff to check your transponder during hot laps, and track staff will make every reasonable effort to alert you to any issue with signal strength or charge. If a driver's transponder ceases to work during the course of an event, the car will only be scored until the point that their transponder stops reading. Any driver caught improperly mounting their transponder in order to gain an advantage will have their finish position adjusted and/or be disqualified from the event (including forfeiture of points and prize money) at the discretion of speedway officials. If you have a question regarding the mounting location of your transponder, it is your responsibility to verify it with speedway officials prior to competition. Cars equipped with scoring transponders may, or may not, be tracked for lap time purposes. Lap times posted through the electronic scoring system may not accurately list finishing order.

**COMMUNICATION/RADIOS:**

1. One way scanners / radios are required for the driver to receive instruction from track officials.
2. Radios are to have the speedway driver frequency in place before the start of any event.
3. Radios shall be mounted behind and out of reach from the driver.
4. The driver must have a radio ear piece for the unit.
5. No other forms of one way or two-way communication are permitted.
6. Any car found to be without a working scanner may be black flagged and/or disqualified from the event. It is very important to adhere to the instruction of track officials. Check your batteries.