

Changes are highlighted in yellow.

# BETHEL MOTOR SPEEDWAY

COUNTY ROUTE 141 – WHITE LAKE, NY

## MODIFIED 4 CYLINDER RULES – 2022

(Last Updated 4/23/22)

***BE SURE TO READ THESE RULES CAREFULLY AS THERE HAVE BEEN CHANGES FOR 2022!***

**1. GENERAL** The Modified 4 cylinder division is rigidly based on stock production type cars with modified drive trains and suspension. While not a “strictly stock” class like the 4-Cylinder Novice division, Modified 4 cylinders have the ability to do more to their cars, as well, allow cars from other tracks to more easily participate without much, if any change to encourage participation. The Modified 4 cylinder class is not limited to beginner or novice drivers, however it is not the class for those with the resources to build or purchase more complex race cars, as those teams should be considering a more complex division.

**2. SAFETY EQUIPMENT:** While cost is a major factor in the rules and specifications for this division, the speedway vigorously recommends all participants to utilize all available safety gear. The following items are the minimum required and of course participants are encouraged to use additional safety equipment available to them.

### **REQUIRED SAFETY EQUIPMENT:**

2.1. Snell SA 2015 or newer crash helmet (securely strapped on at all times). "M" prefix Snell rating helmets are NOT allowed.

2.2. SFI or FIA approved full long sleeve firesuit in good condition. Suits with holes will NOT be permitted. In the event of a fire, Track Officials reserve the right to disallow future use of the firesuit worn at the time of the fire.

2.3. 5 point racing style seat belt and shoulder harness worn tight and secure at all times. Lap and shoulder belts must be 3” wide, except that 2” shoulder belts are allowed ONLY with Hans type head and neck restraint.

Seat belts will be inspected by Track Officials, and must be dated within five years (i.e., in order to be legal for the 2022 season, the date stamped on the belts can be no older than 2017). Seat belts without a legible date stamp on them will NOT be allowed.

2.4. Driver’s side window net.

2.5. Properly installed 4 point roll cage.

2.6. Neck Collar or HANS type head and neck restraint mandatory; HANS type device is HIGHLY recommended. As per manufacturers’ specifications, recertification of HANS type head and neck restraint systems every five years is mandatory; date of manufacture or recertification can be no older than 2017.

2.7. SFI or FIA approved racing gloves and shoes.

2.8. Aluminum Racing Seat.

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**HIGHLY RECOMMENDED SAFETY EQUIPMENT:** Fire retardant underwear, helmet sock, and factory-manufactured head and neck restraint system such as a HANS device.

### **3. ELIGIBLE CARS:**

3.1 The 4 cylinder division is open to any normally aspirated, 4 cylinder, front wheel drive passenger car, with a maximum wheelbase of 107".

3.3 Excluded are trucks, convertibles, four wheel drives, rear wheel drives, mid-engine, and special production sports cars.

3.4 No after-market superchargers, after-market turbochargers, or hybrids allowed.

3.5 All cars are subject to approval by speedway management.

Any car deemed to be outside the intentions of the division will be disallowed at the discretion of the speedway management. If you have any question as to the eligibility of your car, please ask management to approve it before you waste valuable time and materials constructing a car which may be disallowed. Any car deemed not structurally sound (i.e. excessive rust of the frame or unibody, etc.) will be ineligible to compete. The decision of Track Officials and speedway management will be FINAL.

### **4. WEIGHT:**

4.1 The minimum weight after race, weighed as raced with driver in the car wearing helmet and all safety gear, no fuel added, will be 2000lbs.

4.2 Maximum weight will be 2600lbs. Any car weighing more than this weight will be disallowed.

4.3 Any car adding weight will do so, adding it evenly to right and left side. No left side bias allowed. Additional weight MUST be painted white in color, must be marked with car number, and must be attached with a minimum of two (2) GRADE 5 or better bolts, ½" diameter or larger, with locking nuts (no lock washers).

### **5. BODIES:**

5.1 All bodies must be steel and remain completely stock as manufactured. Body style must match chassis and engine being used. Chevy match Chevy – Ford match Ford, etc. Absolutely no interchanging of bodies. No homemade, aftermarket, or flat sheet metal body parts will be permitted. Stock O.E.M. or comparable aftermarket sheet metal only.

5.2 A maximum of TWO cars in any single division will be permitted to have the same number. It will be FIRST COME, FIRST SERVED with a paid purchase of a Bethel membership. The FIRST driver to purchase a membership will be allowed to maintain simply a number, while the SECOND driver will be required to have both a number AND distinguishing letter on their car. When two cars in the same division have the same number, they will be required to either (a) paint the cars in contrasting colors, or (b) put different colored numbers on each car. The WHOLE number will be required to be a different color - different outlines will not be acceptable (in the case of non-team cars with the same number, if both cars have the same color number, the SECOND driver to register the number will be the one that has to change the color). Check with the office before putting vinyl or other lettering on the car to avoid an unnecessary expense, in case someone else registered the number first. ADDED LETTERS on the roof and sides of the car must be a minimum of 8" high to stand out. Added letters must be included next to the number in ALL locations on the car (rear, front, doors, roof, etc.) and must be easily visible.

5.3 Body and interior must be completely stripped of all glass (except windshield), trim, lights, molding, etc. ALL AIRBAGS MUST BE COMPLETELY REMOVED, including the inflator module. No gutting or skinning of body panels allowed (except doors, and only if equipped with optional curved door bars

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extending to outer skin). Any car deemed to be excessively lightened by gutting/skinning of body panels will be disallowed at the discretion of speedway management.

5.4 Doors must be securely bolted, and welded shut. Hoods and trunk lids must have the stock style latches removed and be secured shut with quick release type hold downs (hood pins recommended). No bungee cords or chains allowed on hoods or trunks.

5.5 Side rub rails are optional and must be a maximum of 1" thickness metal mounted flush against body with closed ends, and must angle in at the ends. Any bolts exposed on the outboard surface of the rub rail must be carriage bolts with rounded heads. Rub rails are allowed for body preservation purposes ONLY, and are not to be used to reinforce the car. Open ends, sharp edges, or protrusions are not allowed.

5.7 Fenders may be reasonably radiused for additional tire clearance.

5.8 Bumpers must be stock O.E.M. style steel, aluminum, or plastic. No tubing or pipe bumpers or reinforcements allowed. Original bumper may be replaced with different stock bumper which is compatible in size and width for the car it is fitted to. No sharp edges on bumpers, bumper corners may be attached to fenders with sheet metal guards to avoid hooking and gouging. All bumpers must be securely fastened by bolting and/or welding, and must additionally be chained to the car's frame.

5.9 Full front windshield mandatory. Windshields may be retained as long as any defects (crack, scratches, etc.) do not interfere with the driver's vision. If the stock windshield is removed, it must be replaced with full width heavy gauge wire mesh screen with at least one center support or full Lexan windshield with two minimum 1/8 inch x 1 inch center supports (inside and outside) from the dashboard to the roof. Straps must be solid, no pipe strap allowed. If for any reason the windshield gets broken, it must be replaced or taken out and replaced with heavy gauge wire mesh screen with at least one center support or Lexan with two center supports (inside and outside) from the dashboard to the roof as described above. NO plexiglass allowed. Lexan windshield, if used, must be secured with rivets or threaded bolt with locking nut (no lock washers). No self-tapping screws or ZIP ties.

## **6. FRAMES AND SUSPENSION:**

6.1 Minimum wheelbase for this class will be 97"

6.2. Steering must remain stock as manufactured. A quick release type steering wheel (optional) is allowed on the stock column. OEM steering locks MUST be removed or disabled.

6.3. Brakes must be operable and effective on all four wheels (car must lock all 4 wheels upon inspection). The emergency parking brake mechanism must be removed.

## **7. ROLL CAGE AND COCKPIT:**

7.1 The driver's compartment (cockpit) must be completely stripped of all glass (except windshield), seats (except driver's approved racing seat), upholstery, headliners, insulation, excess wiring, lights, plastic trim, door panels, consoles, etc. (The dashboard may remain - optional). If car is equipped with air bags they must be removed. All items such as shifters, steering columns, dash boards etc., that the driver's head, arms, knees could come in contact with must be adequately padded for safety. No sharp edges should be left in the driver's area.

Front loop allowed: 1 brace to each strut tower, but not connected across the motor.

Tow Hooks must be provided.

7.2 All gauges, tachometers, etc. MUST be mounted below the dash line and out of the driver's direct line of sight. Gauge mounting is subject to inspection and approval by track officials.

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7.3 Fire walls and floor pans must have all holes securely sheet metaled over to isolate the driver from the engine compartment and gas tank area. Hatch back style cars with a fuel cell installed in the trunk area must have a steel firewall and shelf installed to completely seal off the fuel cell's area from the driver.

7.4 Seat installation must be approved by the speedway. 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.

The seat must be positioned completely to the left of the center line of car. A high back seat or padded roll bar headrest is mandatory.

A support from the roll cage cross bar to the back of the top of the seat is mandatory.

7.5 Seat belt installation must be approved by the speedway. A racing style 3" wide 5 point seat belt (in good condition) is required. (2" shoulder straps allowed ONLY with HANS type device.) Seat belts will be inspected by Track Officials, and must be dated within five years (i.e., in order to be legal for the 2022 season, the date stamped on the belts can be no older than 2017). Seat belts without a legible date stamp on them will NOT be allowed.

Seat belt & harness must be securely fastened to the frame or cage and NOT to floorboards or sheet metal components of car. The shoulder straps of the seat belt must be solidly mounted to the shoulder height crossbar in the roll cage. All mounts MUST be in direct line with the direction of the pull. Bolts MAY NOT be inserted through belt webbing for mounting. Seat belts will be rejected if not in good condition. Refer to Minimum Safety Requirements in General Rules, for proper installation of seat belts & harness, with diagrams.

Lap belts should be mounted to roll cage. The lap belt straps may be bolted into the original seat belt mounts at the floorboards (as long as original mounts are not rusted or otherwise damaged). Lap belts may not be installed into un-reinforced floorboard areas or to the seat. The sub-marine strap may be 2" width and must be mounted to the cage loop that is required under the seat. Additional roll cage material may be added as an option, so that lap belts can be mounted to cage.

**SEAT BELTS MUST BE WORN TIGHTLY AND SECURELY AT ALL TIMES WHILE ON THE SPEEDWAY AND MOVING CAR AROUND IN THE PIT AREA. ALL DIVISIONS - NO EXCEPTIONS!!**

**\*\*\*THE FOLLOWING ROLL CAGE CONSTRUCTION AND MOUNTING METHODS ARE REQUIRED BEFORE ANY CAR CAN COMPETE. IF THESE METHODS ARE NOT IN PLACE, YOU WILL NOT BE ALLOWED TO PRACTICE OR COMPETE\*\*\***

7.6 Roll cage construction must be approved by the speedway. A minimum 4 post roll cage is mandatory. Additional bars are allowed in the cockpit area as an option. All roll cage bars are to be constructed of heavy wall steel tubing (minimum 1-1/2" outside diameter and 0.095" wall thickness). Absolutely NO black iron pipe to be used at all in the cage. No angle iron, channel, exhaust, soft galvanized, or threaded pipe will be permitted. Heavy wall tubing is the ONLY acceptable material! The cage bar thickness will be measured with a thickness gauge. Any cage found to have less than the minimal wall thickness, even with the proper roll cage material, will be disallowed from competition. NO EXCEPTIONS! All roll cage joints must be fitted, notched, welded (no brazing or soldering) and gusseted to acceptable roll cage construction standards.

Wherever the main roll cage posts meet the floor pan of the unibody structure on each side, a minimum 1/8" thick 3" x 3" steel plate or angle channel must be attached to the car's structure, under the main roll cage down posts. The roll cage must be mounted to structural areas of the uni-body, and not to flimsy floorboard areas. A main hoop shall be installed just behind the driver extending from rocker panel to inside of the roof panel. The roll cage must be the full width of the car. A mandatory bar shall be installed at shoulder height, full width behind the driver's seat. This bar will serve to locate the shoulder straps of

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the seat belt and will support the back of the driver's seat. A crossbar at the front in the dashboard area is recommended. The main hoop of the roll cage must be connected to the front uprights of the roll cage with a bar at least 2" above the driver's head (with helmet on) on each side of the roof area. Additionally, there must be 2 horizontal supports in the driver's side door. If doors are gutted, then door bars must be curved to extend to the inside of door skin. If straight bars are used in the door area, then door must remain un-gutted (complete door frame shall remain for extra protection). All roll cage tubing must remain in driver's compartment. No roll cage tubing shall extend into engine compartment. All roll cage bars which the driver's head could contact must be padded with racing style padding.

7.7 Window net on the driver's side window is mandatory. A string ribbon, or mesh racing style net will be required. Window net must be solidly attached at the bottom (no tie wraps) to horizontal door bar. At the top, the window net MUST be latched to the cage on both ends. The window net must have a quick release mechanism, so that the driver's compartment can be accessed quickly (seat belt type latches or similar required).

## **8. ENGINES AND TRANSMISSIONS:**

8.1 Any naturally aspirated OEM type FWD 4 cylinder motor allowed.

8.2 Extra capacity radiator may be installed as long as frame does not require notching and hood still closes properly. No water additives of any kind. No Anti-Freeze – Water Only!! No Heater Cores in cockpit area. No Coolant running through cockpit area at all!

8.3 Location of battery may be changed to protect it from being damaged in an accident, but it may not be located in the driver's compartment. All batteries must have an acid resistant cover over the top. Cars that race at other tracks regularly, that have the battery mounted in the driver's compartment, will be subject to safety approval by tech staff. If that car becomes a regular competitor, the car must be modified to comply with our track rules.

The speedway must approve all battery mounts, and they must be securely mounted and held down with sturdy metal brackets - no bungee cords or ratchet straps.

8.4 Exhaust systems must be securely mounted and sufficiently quiet. If car is determined to be too loud during a race it may be black flagged and removed from the race at the discretion of the speedway management. Exhaust must exit behind the driver's door; exit must be on left side or pointed toward the track surface.

## **9. FUEL SYSTEMS:**

9.1 Fuel tank installation must be approved by the speedway. Racing style fuel cells are highly recommended. The stock fuel tank will be permitted to remain in place if it is in good (leak free) condition and mounted forward of the rear wheels (beneath the rear seat area). The condition of the mounting straps and filler necks should be routinely checked and kept in good shape. For cars which have fuel tanks located elsewhere (behind rear wheels, etc.), a racing style fuel cell must be installed in the trunk area and centered from side to side. Fuel cells must be contained in a metal enclosure and be securely mounted as far from the rear bumper as is practical.

A protection bar equivalent to the roll cage MUST be installed behind the fuel cell (inside the body). All cars re-locating the fuel cell to the trunk area must install a full steel firewall/shelf to completely isolate the driver's compartment from the fuel tank.

9.2 Fuel pumps must have Fuel Pump Kill Switch separate from the main ignition switch, clearly labeled, and located within reach of the driver.

9.3 Fuel lines routed through the driver's compartment must be either steel or made of high pressure type braided hose and fittings, or standard hose contained within a metal sleeve (such as electrical conduit).

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## **10. TIRES AND WHEELS:**

10.1 Wheels must be stock O.E.M. steel one piece, with a maximum diameter of 13", 14", 15", or 16" (nominal) and a maximum width of 7" (nominal). All wheels on the car must be the same size and offset. No mixing and matching from other production cars to gain any other offset than intended by the manufacturer. NO cutting and welding of wheel centers to gain a greater wheel offset. Wheels as provided from the car manufacturer only. Steel aftermarket racing wheels allowed. Max 7 inch width. All aftermarket wheel offsets MUST be the same size and offset on all four corners of the vehicle. Any car utilizing the 3" offset wheels, or cars that half of the the tire sticks out past the body will be mandated to install rubrails. (SEE RULE 5.5) This rule is at the discretion of speedway officials.

For stock steel wheels: It is HIGHLY RECOMMENDED that the right front wheel may be reinforced to handle the extra loads encountered in racing. Each wheel must be attached with all lug nuts that the hub is intended for. (1" lug nuts MANDATORY). No car will be allowed to race with broken or missing lugs. No 4 lug nuts with 5 studs. Any car found to have four lug nuts on a five lug rim will be immediately black flagged off of the track.

10.2 Tires must be stock type radial ply with a maximum tread width of 7". No snow lugs, retreads, or made for racing tires will be allowed. All 4 tires on the car must be the same diameter and series. If you race 175/65-14, all four tires must be 175/65-14. Any car suffering a flat tire must leave the racing surface immediately, or be disqualified at the discretion of the speedway.

No tire softener permitted

Tires with exposed cords or belts will not be permitted on the track.

Sidewall markings MUST be legible on at least one side of the tire, and you may be asked to remove the tire for inspection if the outer sidewall markings are not legible. Any tire that does not have legible markings on at least one side is prohibited, and its use will result in disqualification.

## **11. SCANNERS**

Scanners are required, and to be mounted behind and out of reach of driver. No other form of one- or two-way communication permitted. Scanners must be in working order at all times. CHECK your batteries! Any car found to be without a working scanner may be black flagged and disqualified from the event at the discretion of speedway management.

TAKE PRIDE in the cars you build. We want to make this track a place that we all can be proud of. Make your team as professional as possible.