New England Hillclimb Association Rule Book

1. Technical and Safety Requirements
    - 1.1. General Hillclimb Rules
    - 1.2. Technical Inspection
    - 1.3. Rules for All Vehicles
    - 1.4. Vehicles Running Faster than Breakout Time (non-X cars)
    - 1.5. Prepared Electric Vehicles
2. Classification
    - 2.1. Formula Libre Class Requirements
    - 2.2. Prepared Class Requirements
    - 2.3. Street Prepared Class Requirements
    - 2.4. Unprepared Class Requirements
    - 2.5. Unprepared and Street Prepared Class Determination
    - 2.6. Electric Vehicles
    - 2.7. Rally Vehicles
    - 2.8. Bracket
3. General Regulations
    - 3.1. Event Regulations
    - 3.2. Technical and Classification Committees
4. Appendix and Forms
    - 4.1. Medical Form
    - 4.2. Class Determination Worksheet
    - 4.3. Unprepared (U) Class Worksheet
    - 4.4. Street Prepared (SP) Class Worksheet
    - 4.5. Prepared (P) Class Worksheet

1. Technical and Safety Requirements

These regulations are set forth to provide for the orderly conduct of time trial events. Participants are cautioned that all motor sports have inherent risks; it is the participant's responsibility to take adequate precautions in light of these risks. No express or implied warranty of safety or freedom from risk shall result from publication of or compliance with these rules and regulations. They are intended as a guide for the conduct of this motor sport and are in no way a guarantee against property damage or injury to participants, spectators, or others.

1.1. General Hillclimb Rules

1.1.1. All competing vehicles are required to have a NEHA or approved sanctioning body logbook (ARA, SCCA, CARS, NASA, RA, and FIA passports). A vehicle must meet the minimum safety requirements listed in these rules, logbook notwithstanding. Any vehicle issues that need attention or problems that prevent it from passing technical inspection will be written into the logbook by a Technical Inspector. The logbook must be present with the vehicle and presented at technical inspection.

1.1.2. Each course has a breakout time. A vehicle that has passed technical inspection and has sufficient safety equipment (see section 1.4) is allowed to race to achieve any time. A vehicle that has passed technical inspection but does not have sufficient safety equipment (as listed in section 1.4) must display an X symbol after their race number (an X vehicle), and must run a time greater than (or equal to) the breakout time.

1.1.2.1. Breakout times per course:

3:20 Ascutney (normal/traditional course) Windsor Overlook finish
4:10 Ascutney (long course)
1:32 Bolton
2:30 Burke
2:43 Okemo
1:20 Philo

1.1.3. If the driver of an X vehicle gets a time that is faster than the breakout time, they will receive a warning that they broke out. The warnings are delivered either in-person, or by text message, or by other means noted at the driver's meeting. If they break out a second time during the event, OR if a driver breaks out by greater than 10 seconds (Philo: 5 seconds) on any single run, that vehicle/driver combination will not be allowed to run at that hill again until the vehicle receives sufficient safety equipment (as listed in section 1.4). Times faster than breakout will not be recorded and will not count in the event results or year-end points.

1.1.4. Drivers are responsible for any haz-mat spills from their vehicles and pit equipment, anywhere on the venue. They are responsible for timely cleanup, and disposal of any sorbents, residue, and cleaning materials. Course workers will respond to any spill on course, but the driver is ultimately responsible for disposal. Sorbents, brooms, etc. will be available at START, and after FINISH.

1.2. Technical Inspection

1.2.1. All vehicles are required to pass a technical inspection before making their first run (familiarization or timed) at each event. All vehicles are subject to a technical inspection at any time during the event.

1.2.2. Entrants are to present vehicles and equipment in ready-to-race condition. Alternate wheels/tires to be used at the event must be checked by Tech Inspectors.

1.2.3. Vehicles that have an incident on the hill might be required to undergo another technical inspection.

1.3. Rules for All Vehicles

This section outlines the rules for all vehicles and drivers running at a NEHA event, unless the vehicle is allowed to go faster than the breakout time (non-X cars) in which case there are additional safety requirements listed in section 1.4.

1.3.1. Clothing

1.3.1.1. Full clothing (minimal exposed skin), long sleeves, long pants, socks.

1.3.1.2. Fire-resistant material (e.g., cotton, linen, leather, wool).

1.3.1.3. No thermoplastic (meltable) synthetic materials (e.g., nylon, polyester, polypropylene, Polarfleece).

1.3.2. Shoes

1.3.2.1. Fire-resistant material (e.g., leather, cotton).

1.3.2.2. No platform soles, high heels, open shoes, sandals.

1.3.2.3. No thermoplastic (meltable) synthetic materials (e.g., nylon, polyester, polypropylene).

1.3.3. Helmet

1.3.3.1. Snell SA 2015 or newer

1.3.3.2. FIA 8860-20XX with manufacture date less than 10 years

1.3.3.3. All helmets must be in good condition.

1.3.4. Eye Protection

1.3.4.1. DOT-approved windshield or Polycarbonate (Lexan) windshield or a full face helmet with visor is required. Acrylic/Plexiglass is prohibited.

1.3.5. Suspension

1.3.5.1. Ball joints, bushings and rod ends have negligible play (not to exceed manufacturer's specifications).

1.3.5.2. Wheel bearings: minimal play and secure.

1.3.5.3. Steering: no loose tie rods, pitman arms, idler arms, or rack ends. Limited free play; steering wheel in good condition, tight column. If a quick disconnect steering wheel coupler is used, it must be made of metal, with no plastic inserts.

1.3.5.4. No excessive ride heights, devices that bind suspension, or other unsafe conditions.

1.3.5.5. Suspension to be in generally safe condition and suitable for high-speed competition.

1.3.6. Brakes

1.3.6.1. Master cylinder full to capacity, no leaks.

1.3.6.2. No leaks in lines, hoses, cylinders or calipers.

1.3.6.3. Four-wheel brakes required.

1.3.6.4. Solid pedal; limited free play.

1.3.6.5. Dual or duplex master cylinder(s) required unless the chassis was originally produced with single circuit braking.

1.3.6.6. Anti-lock brakes (ABS) allowed in all classes.

1.3.7. Wheels/Tires

1.3.7.1. No missing or loose lugs.

1.3.7.2. No cracked, broken, or badly bent wheels.

1.3.7.3. Street tires: visible tread the full width of the tire, no cord separation, DOT#, good tire condition.

1.3.8. Body and Frame

1.3.8.1. Neat, safe construction, all parts secure, adequate tire clearance, no jagged edges within driver's reach. Maximum wheelbase of 144", waivable only by prior approval of the tow operator and the event chair or designee (i.e. tech inspector).

1.3.8.2. No excessive rust in floors or structure.

1.3.8.3. There must be a firewall between engine and driver.

1.3.8.4. Exhaust systems should be securely mounted.

1.3.8.5. All rotary engine vehicles must be adequately muffled.

1.3.8.6. All vehicles shall be muffled, 96 dBa limit at 50 feet will be considered muffled. The event chair has the right to waive this requirement

1.3.9. Fire Extinguisher

1.3.9.1. All vehicles must have a minimum of 2.5 pound ABC portable fire extinguisher with a gauge, mounted using a metal bracket and strap.

1.3.9.2. All extinguishers must have have an inspection tag no older than 3 years or a manufacture date within the last 3 years

1.3.9.3. All portable extinguisher brackets shall be securely mounted to the vehicle. The use of an anti-torpedo tab is required.

1.3.9.4. Non-metal straps, latches, or brackets are not permitted. Portable extinguishers must be mounted within reach of the driver. Additional extinguishers may be mounted beyond the driver's immediate reach.

1.3.9.5. Portable extinguishers must not be mounted on the floor in the driver's footwell.

1.3.9.6. Brackets for 2.5-lb net and smaller extinguishers may use a single latching metal strap. Extinguishers over 2.5-lb net must have at least one additional metal restraining feature that secures the tank of the extinguisher to the bracket. The additional restraint(s) may consist of a second strap, a receiver on the bracket to secure the bottom of the tank, or a similar device and should still permit rapid removal of the extinguisher.

1.3.9.7. Any vehicle with a nitrous system must have an onboard fire system installed in addition to the portable extinguisher. This system must meet FIA 8865-2015 or meet SFI Spec 17.1 and display a manufacturer appearing on the current respective list of SFI Spec 17.1 manufacturers at sfifoundation.com. The activation control of this system must be indicated with the standard symbol of a red "E" on a white background.

1.3.10. Interior

1.3.10.1. No loose objects, loose carpets or mats.

1.3.10.2. Small tools or items shall be in a closed compartment or suitably secured.

1.3.10.3. Each vehicle must carry a disposal (trash) bag for removing fluid spill debris.

1.3.11. Seats

1.3.11.1. All drivers and co-driver seats must be in safe condition.

1.3.11.2. All seats must have sufficient framing and reinforcement, mounting and support. Mountings must align with harness loads, and at comparable strength. OE Seats and 3-point harness mountings are adequate

1.3.12. Arm Restraints

1.3.12.1. Vehicle's window next to the occupant(s) must be raised enough to keep the person's arms inside the vehicle (fully raised is acceptable). If not, the vehicle must be equipped with a window net(s) or the occupant(s) is (are) required to wear arm restraints.

1.3.12.2. Vehicles with no roof or convertible tops must wear arm restraints

1.3.13. Electrical

1.3.13.1. No frayed, loose, or easily pinched wires. Battery cable must not pass through the frame rails or roll cage tubing.

1.3.13.2. Battery must be securely mounted and sealed from the driver.

1.3.13.3. Positive battery terminal must be covered with a nonconducting cover to protect against shorting out and causing a fire.

1.3.13.4. Batteries mounted in same compartment with fuel tank must be enclosed in an insulated box and securely mounted

1.3.13.5. If a kill switch exists, it must meet the requirements of 1.4.7.

1.3.14. Fuel System

1.3.14.1. Gas tanks must be securely mounted and protected.

1.3.14.2. No leaks in the tank or system.

1.3.14.3. Gas tank or fuel cell sealed from the driver. SFI and FIA approved fuel cells are considered sealed from the driver.

1.3.14.4. Tank must be vented to outside air or EEC system and may not be pressurized.

1.3.14.5. The fuel pumps may only operate when the engine is running, except during the starting process.

1.3.14.6. Fuel lines must be securely mounted and well protected from heat, collision, and abrasion.

1.3.15. Fuel

1.3.15.1. Vehicles running gasoline, diesel, and alcohol-based fuels are permitted.

1.3.15.2. Any entrant running fuels based on materials not listed above must notify event officials prior to making a run.

1.3.16. Oil System

1.3.16.1. No oil leaks

1.3.16.2. No excessive oil in the engine compartment.

1.3.16.3. Must have oil overflow catch can or breather system to prevent oil escape, or OEM system in place

1.3.17. Coolant Overflow

1.3.17.1. One-quart minimum non pressurized reservoir required or to meet manufacturer's specifications.

1.3.18. Horns

1.3.18.1. A compressed air horn is mandatory in all vehicles and must be secured within reach of the driver.

1.3.19. Numbers

1.3.19.1. Legible numbers on both sides with class designation. Numbers will be no more than 3 numerals. Numbers may not have preceding zeros.

1.3.19.2. Breakout vehicles require an “X” and Rally vehicles require an “R” after the number.

1.3.19.3. Only the number for the competing driver may be displayed. Alternate (i.e., double driver) numbers must be obscured or removed.

1.3.19.4. A registry of permanent numbers will be maintained by the NEHA points keeper. These numbers will be given preference in assignment for each event. If a driver is inactive (not working or driving) for more than two years their number will be removed from the list. NEHA also reserves the right to retire numbers.

1.3.19.5. In honor of Walt Snow, the first NEHA King of the Hill, the car number "1" shall be reserved for use by the current New England hillclimb champion (King/Queen of the Hill) (use is optional).

1.3.20. Convertibles and vehicles with removable roofs

1.3.20.1. Roll bar required in all vehicles with a removable roof

1.3.20.2. Roll bar should be equivalent in construction to cage specs

1.4. Vehicles Running Faster than Breakout Time (non-X cars)

This section outlines the rules that are to be followed by vehicles that are attempting to go quicker than the breakout time. All of the rules in the 1.3 section apply to vehicles and drivers unless the rule stated here is for a higher standard of safety.

1.4.1. Clothing

1.4.1.1. All outer clothing worn during racing must have the appropriate SFI or FIA tag.

1.4.1.2. All competitors shall wear at all times driving the vehicle on the course, a one- or two-piece driving suit conforming to:

- FIA Standard 8856-2000 or 8856-2018
- FIA 1986 Standard
- SFI 3.2A/5 or 3.4/5 Specification
- SFI 3.2A/1 Specification with approved fire-resistant underwear (FIA Standard 8856-2000 or SFI 3.3 Specification)

1.4.1.3. No other garments worn over driving suits are acceptable. The suit and applicable undergarments shall be presented at technical inspection in a clean and presentable condition.

1.4.1.4. Driving suits must effectively cover the body from the neck to the ankles and wrists and be in good condition, free of defects, stains, holes, cracks, frays, etc.

1.4.1.5. SFI or FIA rated gloves in good condition (e.g., no stain, no holes).

1.4.1.6. Socks made of fire resistant material (e.g., cotton, Nomex). No thermoplastic (meltable) synthetic materials (e.g., nylon, polyester, polypropylene).

1.4.1.7. Shoes, with uppers of leather and/or nonflammable material that, at a minimum, cover the instep.

1.4.1.8. Fire-retardant hood or helmet skirt in open-engine vehicles.

1.4.2. Head and Neck Support

1.4.2.1. HANS® system: HANS devices shall be approved according to FIA standards 8858- 2002 or 8858-2010. Consult the FIA Technical List number 29 to see which HANS devices are approved by the FIA.

1.4.2.2. Hybrid® system: Hybrid devices shall be approved according to FIA Standard 8858- 2010. Consult the FIA Technical List number 29 to see which Hybrid devices are approved by the FIA.

1.4.2.3. Other systems certified to SFI 38.1: Such devices must bear a SFI 38.1 conformance label that is less than five years old.

1.4.2.4. All head and neck restraints must have tethers less than 5 years old.

1.4.3. Belts

1.4.3.1. An SFI (16.1 or 16.5). FIA (8853/2016 or 8853/98. 5-, 6-, or 7-point harness assembly is mandatory.

1.4.3.2. Y or V-type shoulder harness is NOT permitted.

1.4.3.3. All harnesses must be properly mounted and adjusted and installed with the correct hardware.

1.4.3.4. All restraint systems must be in good condition with no visible fading, deterioration, no rust on the latching systems, and not altered from their original condition.

1.4.3.5. SFI and FIA approved systems may not be used either beyond the expiration date tagged on the belt or greater than 5 years from the date of manufacture. If the belt has no tag, it is considered out of date.

1.4.3.6. Belts should be installed according to the SFI seat belt Installation Guide (available from www.sfifoundation.com), or section 6.2 (Installation) of FIA Appendix J, Article 253, or the harness manufacturer's instructions. This includes both belt angles and belt anchoring points.

1.4.3.7. Seat belt and harness anchor points must each be capable of 3300# (15,000 N), applied in line with the load of the harness. Sub belt points must be capable of ½ of this load. OE anchor points are considered adequate.

1.4.4. Seats

1.4.4.1. Any altered seat may be considered unsafe and fail technical inspection.

1.4.4.2. All seats used with 5+ point harness must be fixed- back (as mounted), fully supportive type, (i.e., “racing seat”) with back extending to shoulder harness points’ of intersection with seatback, as worn. Seat width and height must fit the driver(s). Headrest: max. 3" behind driver's helmet, as seated, with sufficient area to contain helmet.

1.4.4.3. Aftermarket seats meeting should be installed per best practices of that type seat, (i.e., manufacturer’s instructions). Regardless of mounting, there must be no play in the seat.

1.4.4.4. Seat assembly should mount to substantial structure, i.e., the OE reinforced mountings, or FIA 8855-2010, or the integrated chassis/roll cage. Must be mounted and supported in direct line with the loads of the harness as worn.

1.4.5. Construction

1.4.5.1. In absence of a full factory steel floor and firewall, chassis structure must be reinforced to prevent driveline intrusion into the driver's compartment.

1.4.5.2. Driver must be guarded from the driveshaft.

1.4.5.3. Front driveshaft loop required on rear-wheel-drive vehicles.

1.4.6. Collision Protection

1.4.6.1. Roll cages consist of horizontal and vertical bars above, ahead, behind, and to the sides of the plane of the drivers’ helmet. Main hoop (or equivalent) must be braced front and/or back and have a diagonal member(s) or equivalent within the hoop if spanning more than 36”. If the main hoop contains only one diagonal member then it must be from the upper driver’s side to lower passenger side.

1.4.6.2. Headrest, maximum of 3” behind driver’s head as seated, must be padded Any rollcage member reachable by the driver’s head must incorporate high-density shock-absorbing material in padding.

1.4.6.3. Roll cage material within the cockpit (including tubular frame rails) must be steel mechanical tubing meeting commercial standards ASTM a500, a513, or a519, SAE xx16 – xx30, >50000 psi tensile, >36000 psi yield, >=10% elongation*. (ref. Rb>60). 1018 CDS or 1020 DOM are preferred. Material used is ultimately the responsibility of the entrant. Members of the cage, (as in sec. 1.4.6.1, above) must have a minimum diameter and wall thickness of:

1.25” x .120” or 1.38” x .090” under 1500 lbs.
1.38” x .120” or 1.50” x .090” under 2500 lbs.
1.50” x .120”, 1 5/8 x .109 or 1.75” x .090” over 2500 lbs.

1.4.6.4. Other components of the roll cage, tubular chassis, and collision protection features may differ in size and wall but be of comparable material.

1.4.6.5. Entrants with a cage fabricated prior to 1/1/2025 that does not meet section 1.4.6.3 are strongly suggested to contact the technical committee to get approval.

1.4.6.6. FIA homologated cages produced after 2006 may run as designed with no changes. Supporting paperwork for the cage will be required at technical inspection. Earlier FIA designs and homologations will require an FIA approved A pillar support and X bracing kit in main hoop or aft support. The two side bars also need to be proper diameter and wall thickness.

1.4.6.7. All fabricated construction should exhibit reasonable standards of workmanship. Distortion of section within bends (i.e., ovality) limited to 10%. No evident kinks or buckles in bends, any evident seam to be correctly oriented. Welded joints in the basic cage not containing a continuous tube section (i.e., “butt” or “lap”) must be reinforced with gussets, sleeves, or diagonals, so that weld equals 2x tube circumference. Welds must be fully penetrated, all around the tube, and equal tubing wall. Welds must be visually inspectable.

1.4.6.8. 4” minimum of weld on each welded belt/harness mount.

1.4.6.9. Roll cages must be mounted to the structure of the vehicle at 6 points minimum. Welded mountings must be socketed, gusseted, or plated to the equivalent tube wall. Bolted or welded foot plates must be at least “4 x 5” (20 sq. inches) or bigger. Bolted foot plates must use a minimum of 3 3/8” grade 5 (or better) bolts each with sandwich plates of equal size to the foot plates.

1.4.6.10. Vehicles must have at least 2 sections of side protection. Roll cages must have at least one bar in the door area. Stock door beam found in most vehicles is acceptable as a section, as is a substantial outboard frame rail or rocker panel.

1.4.6.11. Protection for the footwell area, and from “drive train intrusion”, must be incorporated into the chassis/roll cage structure. Full, continuous (stamped, OE) steel floor is considered adequate.

1.4.6.12. Energy absorbing features must be incorporated into the chassis structure ahead of the driver’s feet, and to the side of the driver.

1.4.7. Kill Switch required for Prepared and FL classes only

1.4.7.1. Switch to cut off / isolate electrical power throughout the vehicle

1.4.7.2. The switch must be obviously marked with a standard lightning bolt symbol and the off position is clearly marked.

1.5. Prepared Electric Vehicles

1.5.1. Competitors wishing to race a Prepared Electric Vehicle (class PE) must contact the event organizer or a technical committee member prior to entering to discuss their vehicle’s safety systems. Competitors must supply two copies of the vehicle’s safety documents to the event chair.

1.5.2. Vehicles that comply with the current FIA Appendix J, Article 253 – Safety Equipment, ART. 18, will comply with PE rules.

1.5.3. Battery System – Each battery cell must be monitored for temperature and safety protocols must be implemented to prevent cells from exceeding the maximum temperature specified in the manufacturer's specification sheet. All electric cables must be properly sized based on expected system currents.

1.5.4. Battery Disconnect – One or more switches to quickly disconnect the battery from the electrical system. The switch must be capable of interrupting the full load current. The switch must be operable from both the driver compartment and from outside the vehicle. It must be clearly marked as the "Battery Switch" and be marked with "ON" and "OFF" positions.

1.5.5. Main Fuse – A separate fuse (not a circuit breaker) placed in series with the main battery, the rating must not exceed 200% of the maximum expected current draw. All low voltage taps from the main battery must be separately fused. All fuses must be placed first in series with the battery starting at the positive connection.

1.5.6. Electrical Shock Hazards – All exposed conductors operating at greater than thirty-six (36) volts must be properly insulated and marked with "High Voltage" warning signs.

1.5.7. Covers and Shields – All revolving parts (except wheels and axles) must be suitably covered to prevent accidental contact or injury should one or more of these parts break or malfunction.

2. Classification

The following are guidelines for the New England Hillclimb Series. They are meant to be a fair and equal grouping of vehicles in a competitive nature. All vehicles are classed as though they were prepared to the ultimate state. The tech inspectors are empowered to inspect your vehicle and personal equipment for general safety for participation at our events. Tech inspectors are NOT the classification committee. Any vehicle P/S/U may bump up to a higher class within the given category (U/S/P) provided that an AWD/4WD doesn't bump up into a 2WD class.

2.1. Formula Libre Class Requirements

2.1.1. Any vehicle legal for any NEHA class may bump to Formula Libre (FL) at the entrant's request.

2.1.2. Vehicles in Formula Libre must be legal for some other NEHA class with the exception that vehicles not legal for Prepared because of engine displacement are legal in Formula Libre.

2.2. Prepared Class Requirements

2.2.1. Displacement Determination

2.2.1.1. Actual displacement is the total physical volume of all cylinders in cubic centimeters (cc).

2.2.1.2. For a side-port rotary engine, use the displacement rated by the manufacturer and multiply by 1.62 to get actual displacement.

2.2.1.3. For supercharging, turbocharging, or nitrous oxide induction, multiply the actual displacement by 2 to get modified displacement.

2.2.1.4. Naturally-aspirated vehicles use actual displacement, otherwise (2.2.1.3 above) use modified displacement for the following adjustments.

2.2.2. Prepared Displacement

2.2.2.1. 4WD or AWD: Add 25% of displacement.

2.2.2.2. Traction Control – Devices that automatically limit engine power or apply braking to control traction: Add 12% of displacement.

2.2.2.3. Vehicles competing on tires that are DOT approved (DOT label on sidewall): Subtract 12% of displacement.

2.2.2.4. Vehicles with a total throttle plate area of less than 0.65 mm2/cc: Subtract 12% of displacement.

2.2.2.5. Vehicles configured for production class racing: Subtract 12% of displacement. Classes recognized as production classes include SCCA IT and AS; production classes in SCCA, EMRA, and SVRA; and most Street Stock classes. Criteria for recognition of existing classes, or for use of this factor on vehicles not originating in these classes, are: retention of all-original body, frame, floors, and firewalls; use of all original control arms and original suspension geometry; original configuration of engine, in stock position.

2.2.3. Prepared Class Determination

Prepared 1 (P1): Prepared displacement above 4500 cc to 8000 cc.
Prepared 2 (P2): Prepared displacement above 2200 cc to 4500 cc.
Prepared 3 (P3): Prepared displacement above 1600 cc to 2200 cc.
Prepared 4 (P4): Prepared displacement of 1600 cc or less.

2.3. Street Prepared Class Requirements

2.3.1. This category is based on stock production vehicles that are easily recognized as such, and must have operational lights, horn, glass, wipers, mirrors, door handles, bumpers, bumper reinforcement bars (in good condition OEM or equivalent), both front seats, heater and dashboard.

2.3.2. Updating or backdating within the model will not be penalized (factors will be assessed after the changes).

2.3.3. Kit vehicles or engine swaps will be classed where deemed most competitive.

2.3.4. The following items may be removed: emissions equipment, sound deadening, sound system, head liner, floor covering, trunk area covering, rear seating (provided that proper separation remains or is installed between driver and fuel area). Removal in excess of the above invokes the excessive lightening penalty.

2.3.5. Doors may not have any structure removed causing them to be excessively lightened – specifically the intrusion bar, outer framework and basic structure of the door must remain intact.

2.3.6. The floor and trunk area must remain intact and in stock location. Any modifications to the floor or trunk area must be sealed as good as the factory original.

2.3.7. All exterior body panels must appear as stock and remain in place (fender flares are free).

2.3.8. Relocation of accessories, batteries, fuel system, electrical components is allowed, provided that the exterior of the vehicle remains as produced.

2.3.9. Interchange of production options within the model is free.

2.3.10. Engine and driveline modifications are allowed.

2.3.11. Rim size may be changed.

2.3.12. Tire size is free but the tread may not be seen from above. Tires must be DOT approved (DOT label on sidewall).

2.3.13. Wheel openings shall retain their original contour when viewed from the side.

2.3.14. A roll cage may be installed.

2.3.15. Racing seats and harnesses may be installed.

2.3.16. The above items do not void any applicable safety requirements as listed in the Technical and Safety Requirements.

2.4. Unprepared Class Requirements

2.4.1. All vehicles shall be as-produced, available in North America, and at least 500 made by the manufacturer.

2.4.2. No kit vehicles and no engine swaps will be allowed in Unprepared.

2.4.3. Must be capable of passing a Vermont State Vehicle Inspection.

2.4.4. Updating or backdating within the model will not be penalized (factors will be assessed after the changes).

2.4.5. No stock equipment or parts may be removed unless they were available as an option on that particular vehicle. The only exception is removal of the A/C system.

2.4.6. Some interior parts may be minimally altered (but not removed) to allow installation of safety equipment.

2.4.7. The engine is to be the original type and size for that year of vehicle.

2.4.8. Other than the air filter and its housings the induction system may not be modified to allow more air into the engine, such as oversize throttle bodies, carbs, or intake manifolds.

2.4.9. A piggyback computer that can modify the mass air flow or MAP sensor is illegal.

2.4.10. No modifications to the exhaust manifold. The exhaust system may be replaced with a “cat-back” system (where applicable) that runs in the stock location and exits in the stock location.

2.4.11. Bolt-on bracing and minor suspension reinforcements that require no cutting or fabrication for installation are allowed.

2.4.12. Springs must be on original seats.

2.4.13. Rim size may be changed.

2.4.14. Tire size is free. Tires must be DOT approved (DOT label on sidewall), minimum treadwear rating 50.

2.4.15. Fender lip may be flattened to help prevent tire chafing.

2.4.16. OEM flexible brake lines may be replaced with aftermarket or motorsport braided stainless steel lines.

2.4.17. A roll cage may be installed.

2.4.18. Racing seats and harnesses may be installed.

2.5. Unprepared and Street Prepared Class Determination

2.5.1. Class Calculation Method

2.5.1.1. Some classes in Unprepared and Street Prepared are limited to two wheel drive (2WD) vehicles.

2.5.1.2. Classes are determined within a category by the ratio of adjusted engine displacement (in cubic centimeters) to vehicle weight (in pounds).

2.5.1.3. Curb weights are those published in the N.A.D.A. used vehicle dealer guide, if available, or on the vehicle manufacturer’s tag if equipped and not tampered with. If the tag weight is used, it will be given in gross vehicle weight and must be adjusted. Subtract 175 lb per occupant, from the GVWR to get curb weight.

2.5.1.4. Side-intake-port Wankel rotary engine manufacturer-rated displacement is multiplied by 1.62 (to give actual displacement) prior to applying adjustment factors.

2.5.1.5. To determine your vehicle’s class, multiply actual displacement (in cc) by each applicable adjustment under 2.5.2 (Street Prepared) or 2.5.4 (Unprepared) below. Sum up the adjustments (adding the positive and subtracting the negative) and add this total to the actual displacement, then divide by the vehicle’s weight to get

a value in cc/lb. Apply this value to the table in 2.5.3 (Street Prepared) or 2.5.5 (Unprepared), noting whether 2WD or 4WD/AWD.

2.5.2. Street Prepared Adjustment Factors

Note whether positive or negative to add or subtract adjustment; see appendix for calculators.

Variable valve timing 25%
Four-wheel drive or AWD 25%
Wheel size difference (diameter and width) per .5 inch 1%
Tire treadwear rating less than 100 8%
Non-stock anti-roll bars 5%
Non-stock springs 5%
Modified suspension 5% (Other than shocks, alignment, and bolt-on reinforcement.)
6-point (or more) roll cage -20%
Intact interior (only with full cage) -5%
Excessive lightening 15%
More than 2 valves per cylinder 10% each (Stratified charge valves not included.)
More than 1 camshaft per bank of cylinders 5%
V type engine configuration 10%
1 venturi or injector per 4 or more cylinders -20%
1 venturi or injector per 2 cylinders -10%
Non-stock exhaust manifold 10%
Non-stock induction 10%
Turbocharger 30%
Supercharger 25%
Intercooler 25%
Excessive sound (over 96 dB) at 50 feet 15%
Nitrous oxide (mandatory fire system) plus 1 Class
Diesel -25%

2.5.3. Street Prepared Classes

Street Prepared 1 (S1): 1.500 or greater cc/lb
Street Prepared 2 (S2): 2WD 1.500 or greater cc/lb
Street Prepared 3 (S3): 1.060 to less than 1.500 cc/lb
Street Prepared 4 (S4): 2WD 1.060 to less than 1.500 cc/lb
Street Prepared 5 (S5): 0.900 to less than 1.060 cc/lb
Street Prepared 6 (S6): Less than 0.900 cc/lb

2.5.4. Unprepared Adjustment Factors

Note whether positive or negative to add or subtract adjustment; see appendix for calculators.

Variable valve timing 25%
Four-wheel drive or AWD 25%
Wheel size difference (diameter and width) per .5 inch 1%

Tire treadwear rating (50–150) 8%
6-point (or more) roll cage -5%
More than 2 valves per cylinder 10% each (Stratified charge valves NOT included.)
More than 1 camshaft per bank of cylinders 5%
V type engine configuration 10%
1 venturi or injector per 4 or more cylinders -20%
1 venturi or injector per 2 cylinders -10%
Turbocharger 30%
Supercharger 25%
Intercooler 25%
Excessive sound (over 96 dB) at 50 feet 15%
Diesel -25%

2.5.5. Unprepared Classes

Unprepared 1 (U1): 1.550 or greater cc/lb
Unprepared 2 (U2): 2WD 1.550 or greater cc/lb
Unprepared 3 (U3): 1.000 to less than 1.550 cc/lb
Unprepared 4 (U4): 2WD 1.000 to less than 1.550 cc/lb
Unprepared 5 (U5): 0.840 to less than 1.000 cc/lb
Unprepared 6 (U6): Less than 0.840 cc/lb

2.6. Electric Vehicles

2.6.1. Electric Class Requirements

2.6.1.1. Electric vehicles must use only electric power during racing. Motor(s) must be powered only by a charge storage device (batteries, capacitors, other charge accumulators), or by fuel cell. A hybrid electric vehicle (e.g., Toyota Prius) may be raced in electric-only mode.

2.6.2. Electric Vehicle Class Determination

2.6.2.1. Unprepared Electric (UE) Electric class is for unmodified electric vehicles built by a recognized manufacturer to U.S. DOT standards.

2.6.2.2. Prepared Electric (PE) class is for modified, converted, or custom electric vehicles, and must comply with the technical and safety rules for prepared electric vehicles.

2.7. Rally Vehicles

2.7.1. Rally Class Requirements

2.7.1.1. Properly Rally Logbooked vehicles only-includes NASA Rallysport, Rally America, FIA, CARS, ARA and SCCA ProRally vehicles do not need to be registered/street legal as there are no transits.

2.7.1.2. Driver and co-driver must have all personal safety gear required by a current North American rally sanctioning body. No Rally license required.

2.7.1.3. Tires: Must be DOT tires or Tarmac Rally Tires. Slicks are disallowed: "slicks" are defined as any tire that does not have a minimum of 1.6mm (2/32") tread depth over at least a 17% void area.

2.7.1.4. Any rule not directly addressed by the rally class rules defaults to NEHA SP class rules. (Example: all vehicles with a kill switch must have an air horn installed)

2.7.2. **Class Determination**

Class R1 - Rally 1 - Turbo/supercharged/high displacement vehicles. AWD turbo vehicles in R1 must use a turbo restrictor in accordance with current US rally regulations.
Class R2 – Rally 2 - Non-turbo vehicles.

2.8. Bracket

2.8.1. Bracket Class Requirements

2.8.1.1. Any vehicle legal for any NEHA class may bump to Bracket class at the entrant's request.

2.8.1.2. Vehicles in Bracket are subject to a bracket time which is 5 seconds more than the breakout time for the course.

2.8.1.3. If the driver of a Bracket class vehicle gets a time that is less than the bracket time the driver will receive no time (NT) in the results.

2.8.1.4. Bracket class vehicles that are subject to the breakout rule (1.1.2) are still subject to that rule if they run less than the breakout time for the course.

2.8.2. Bracket Class Determination

2.8.2.1. Class B – Bracket – The Bracket (B) class is the only Bracket class and is used for all entrants

3. General Regulations

3.1. Event Regulations

3.1.1. Hillclimbs are a two-day event. The only person who can make exceptions to this rule is the event chair. Drivers wishing to participate on Sunday only must be pre-registered and it must be cleared with the event chair; such drivers lose the right to protest.

3.1.2. A valid driver's license must be shown at registration, without exception. Drivers, workers, and other participants must sign, and therefore accept the terms of, all

releases required for the event. This may include club, landowner, municipal, state, and medical treatment/transport releases.

3.1.3. A medical form will be filled out and handed to registration for all workers, drivers, crew, and anyone else who signs the waivers. A new medical form will be needed at each event.

3.1.4. All entrants shall state that they either own their vehicle or have permission to use it, prior to running an event. This information will be stated on the entry form for each event.

3.1.5. If there are more than 2 drivers in a vehicle, or more than 2 vehicles per driver, those drivers may not get a full set of runs, despite regulation 3.1.16. One entry per vehicle, per driver.

3.1.6. Notification of time and place of the mandatory new driver orientation shall be provided in the entry package.

3.1.7. All participants, workers, and crew will be issued identification indicating that they have signed release forms and are allowed to be on the hill.

3.1.8. No one other than workers, drivers, and those given permission by the event chair will be on the course, or beyond set barriers. The only exception to this would be on courses set on roads that are public ways and must be opened to the public periodically throughout the event.

3.1.9. No one under the age of 18 will be on the course at any time or for any reason while the course is open. The only exception is that minors age 16–18 may work on the course with a fully executed minor release form. These forms are available from the sponsoring club. It is suggested that the event chair be contacted prior to the event if 16 to 18 year-olds wish to work.

3.1.10. Refunds to entrants for withdrawn entries or failure to pass Technical Inspection will be made solely at the discretion of the sponsoring clubs.

3.1.11. If a vehicle crashes, it is subject to a new technical inspection before running again, at the discretion of the Technical Inspector.

3.1.12. Each driver must attend a drivers' meeting each day before he or she is allowed to make a competition, practice, or familiarization run. The location for posting announcements pertaining to the event will be announced during the drivers meeting. Drivers are responsible for being aware of updates at all times.

3.1.13. Each driver must complete a satisfactory familiarization run before making a timed run and must be given the opportunity to be a driver during a familiarization run.

3.1.14. There will be at least one familiarization run on Sunday.

3.1.15. There will be no practice runs on Sunday under any condition.

3.1.16. Practice and timed runs will be done in "heats." Entrants will have the same opportunity for the same number of runs. If an entrant cannot make a run during the allotted time, he/she will forfeit that run and take the next run.

3.1.17. Race vehicle and driver shall remain in full race preparedness while on the course. This includes familiarization, practice and timed runs as well as all bring downs.

3.1.18. The start will be standing, with the rear wheels blocked. The decision to permit tire warmups (or “burnouts”) is at the discretion of the event chair.

3.1.19. The starter’s countdown will not start until a signal is given by the driver that he/she is ready. If a driver acknowledges he/she is ready, it is considered a timed run. It is the responsibility of Control and the starter to judge the fairness of a driver’s start. In the event of an unfair start the driver shall receive a 10- second penalty.

3.1.20. Drivers will be told whether timing is starting from the countdown or from the beam break.

3.1.21. The finish line shall be marked with two clearly visible checkered displays, one on each side of the road. The checker may be traditional flags hanging unfurled, or checkered signs or boards.

3.1.22. Drivers may opt to have their times excluded from the event, class trophies, and all year-end points calculations. The normal class designation is used for tech; vehicles will have E (excluded) in front of their numbers.

3.1.23. Reruns will be given if the timer misses a time or the entrant is red flagged for course problems. If flagged for any reason the driver must wait at the checkpoint until given instructions for coming down.

3.1.24. If for any reason a driver does not finish a timed run, he/she must wait at the nearest checkpoint for further instructions. Any driver not adhering to this rule may be disqualified immediately.

3.1.25. Protests must be filed with the event chair within two hours after the last run on Saturday or within one-half hour of the last run on Sunday in order to be considered. If it is a protest for the Technical or Classification Committee, the chair will forward it to that committee with his/her recommendation. (Keep in mind that all sponsoring clubs are represented on the protest committees.) Entrants registered for Sunday only can be protested at any time.

3.1.26. The decision of the protest committee must be unanimous or the protest automatically fails.

3.1.27. At all hillclimbs, the holding area (after finish) must have communication with Control and all checkpoints.

3.1.28. Hillclimbs will be run in inclement weather unless there is danger to course workers or the integrity of the course. Consideration will be given to visibility, road surface, and communications. The decision to run is the responsibility of the event chair and his/her decision will be final.

3.1.29. Event awards will be based on Sunday’s times if a run is completed on Sunday. If Saturday's times are used for awards in case of cancellation on Sunday, they will be used across the board; no exceptions.

3.1.30. In case of a cancellation due to weather, etc. the event chair may or may not issue a partial refund. Since there are many expenses involved in setting up a hillclimb, total refunds cannot be given in the event of cancellation. A sponsoring club could not put on events if it had to absorb all the costs of a canceled hillclimb.

3.1.31. Any per diems, tow money, merchandise, awards, or contingencies disbursed to workers or drivers is done so in reimbursement of expenses incurred, and in no way constitute an employer relationship or wage. All such items are paid or distributed at the discretion of the sponsoring club.

3.1.32. There will be no racing anywhere other than on the course during timed runs. At the option of the chair, pace or speed controls may be imposed on noncompetitive transits or bringdowns. Penalties for violations may include loss of runs or disqualification. Running a red flag constitutes a violation.

3.1.33. No alcohol or drugs to be consumed by anyone having to do with the event until the course is officially closed for the day. Drivers are responsible for their crew and anyone they bring with them. No alcohol or drugs are to be kept on the course at any time.

3.1.34. Any personal or property damage incurred is the total responsibility of the individual and shall not be borne by the sponsoring club or its agents.

3.1.35. Drivers are subject to disqualification or alternate penalty at any time if they do not adhere to the rules.

3.1.36. It is the responsibility of the event chair to interpret and enforce the rules. However, no event chair may lessen the effect or intent of any technical or safety regulation. Any participant displaying unsportsmanlike conduct or unacceptable behavior, as defined by the chairperson, may be removed and/or disqualified from the event by the chairperson. The board of directors of the sponsoring club reserves the right to take further action, including barring entry from one or more future events sponsored by the affected club.

3.1.37. Annual points are computed by dividing each driver’s time for each event into the winning time for the event. For Class points the winning time for the class is used. For King of the Hill points FTD is used. The resulting fractions are totaled for the year, highest total wins. A DNS or DNF counts as a zero fraction. If there are 5–6 events, then the worst event for each driver will be dropped. If there are 7 or more events, then the worst two events for each driver will be dropped. A driver must enter 3 events to qualify for year-end placings. All events that are not dropped must be in the same class to qualify for the class placings. If an event is rained out both days, all drivers who have gone through registration will be awarded a score of 1. Any entrant running under a promoter's exception and not meeting these rules will have that event be excluded from the annual points. Events that impose additional restrictions on drivers or vehicles beyond these rules, other than those required to use the hill facilities, will not be included in the annual points.

3.1.38. All checkpoints shall be manned by a minimum of two workers during timed runs.

3.1.39. The WEZIL award (in memory of Jim Gosselin) may be awarded for technical excellence in preparation.

3.1.40. All access trails that meet the hillclimb road shall have at least barrier tape and/or a posting across the trail.

3.1.41. In order to submit or vote on a proposal that pertains to a NEHA rule, the person must be a member of KSCC, SCCNH, or SCCV, must be of age to be a driver (18) or worker (16) in a NEHA hillclimb as of the date of the rules meeting, and have participated at a hillclimb in the last three years, either as a worker or driver.

3.1.42. A driver can use another vehicle (referred to as “replacement vehicle”) to accrue points in their normal class. A driver can use this option one time in a season. The “replacement vehicle” must not be of a higher class than the class for which it is being scored. The finishing time for the “replacement vehicle” will be applied to the driver’s normal class to determine the points awarded.

3.1.43. All drivers are responsible at the event to ensure their class and other information is correct. Drivers must notify the event organizers or the NEHA Points Keeper with result errors within 14 days of results being posted on Hillclimb.org.

3.1.44. The “New England Hillclimb Association”, (aka “NEHA”, “New England Hillclimb Series”, ”NEHA Family”) is a joint venture (DBA) of the New England Sports Car Club Council, Inc., for the use of its member clubs in the promotion and operation of hillclimbs. The Council, and its member clubs, are not owned by, or subordinate to, any other sanction or organization. Any specifications incorporated herein are for reference purposes, and represent known and accepted practices, trade standards, and equivalences.

3.2. Technical and Classification Committees

3.2.1. Requirements: Sound automotive knowledge, must have attended a minimum of one-half of the NEHA events the prior season. The Technical Inspector cannot be a full time committee member.

3.2.2. Committee members must be reconfirmed or replaced each year at the NEHA rules meeting via individuals who can vote on rule proposals. Interested individuals may submit their name at the meeting for consideration and voting.

3.2.3. If either committee is needed at an event and there are not at least three in attendance for the specific committee, the event chairperson will act as a committee member. If only one committee member is at the event, both the event chairperson and a Technical Inspector will act as committee members

3.2.4. Committee Members:

Classification Committee: Jamie Melhuish • Kevin Erickson • Robert Salisbury
Technical Committee: Emmanuel Cecchet • Drew Young • John Reed
Points Keeper: Patrick Martin

4. Appendix and Forms

4.1. Medical Form
4.2. Class Determination Worksheet
4.3. Unprepared (U) Class Worksheet
4.4. Street Prepared (SP) Class Worksheet
4.5. Prepared (P) Class Worksheet