American Endurance Racing: An Overview

The American Endurance Racing (AER) series was born out of a desire for an inclusive endurance racing series with simple rules. The goal of AER is to provide a fun, safe environment for experienced drivers to participate in endurance races using almost any production-based race car.

AER is determined to provide competitors an excellent value and to keep entry economical. AER’s simple, all-inclusive fee covers the event costs for one car: all drivers and crew are included in the fee as are all practice, qualifying, and race sessions.

An AER event typically includes one practice session, one qualifying session and one or more races. An AER race team typically includes one car and two or more drivers. All AER races are multiclass races with cars competing against other in-class cars and for the overall win based on laps. Cars will be classed with other cars with similar performance based on times posted during designated qualifying sessions.

AER reserves the right to photograph, record audio and/or video of any participant, crew member, or guest without permission, license, or payment for commercial and/or promotional purposes.

As a participant in a race, you are subject to the rules set forth herein and agree to comply with them. We strongly advise you to read and fully understand this rulebook before participating in an AER event.

Payment for a race is due at time of registration. If you cancel your registration more than thirty days from the scheduled start of the event, you have the choice of receiving a cash refund less a $100 processing fee, or alternatively a credit of the entire amount that can be used towards another AER race within twelve months. If you cancel your registration within thirty days of the start of the event, you will receive a 75% credit towards another AER event within twelve months. To cancel a registration for an event, send an email to registration@americanenduranceracing.com.

Register for an event at: race.americanenduranceracing.com
Driver and Crew Eligibility and Requirements

1.1. Any person who wishes to drive during any session (testing, practice, HPDE, qualifying, or racing sessions) must go through a vetting and approval process.

1.1.1. Any person who wishes to be approved as a driver with AER shall be prepared to provide information to AER. Some of the things we look for and consider as part of the vetting process are: racing licenses (current and/or expired), overall wheel to wheel racing experience, other racing experience (time trials, karting, etc.), track experience (HPDE, etc.), schools completed, and references.


1.1.3. Next, contact AER through electronic mail at approval@americanenduranceracing.com. In this email, please include any relevant information, as outlined in 1.1.1. Also, please provide contact information including your telephone number.

1.1.4. Once you are approved to drive with AER, you are considered to be a provisional driver and will be given extra scrutiny during your provisional period. A driver will remain provisional until the following criteria are met:

1.1.4.1. You have been racing with AER for at least twelve months.
1.1.4.2. You have participated in at least three events.
1.1.4.3. You have driven at least six stints.
1.1.4.4. You have completed at least 300 laps.
1.1.4.5. You have not been responsible for incidents involving contact.

1.1.5. Ultimately, it is at the discretion of AER management to determine who is or is not eligible to race in the series.

1.2. AER offers, at the driver's option and expense, the issuance of a hard-card license. A driver is not eligible to obtain a license until the driver has successfully exited from their initial provisional period.

1.3. Drivers will be issued a unique identifier so that on track behavior will be documented. Drivers involved in on-track incidents or exhibiting aggressive or unsafe driving behavior may be ejected or banned depending on the severity. Driver conduct is subject to AER review. Any driver, crew, or spectator may be ejected at any time and for any reason at the discretion of AER.

1.4. No driver will be allowed to participate in any qualifying or race session unless they have the following equipment:

1.4.1. A driver’s suit, with a rating of SFI 3.2A/5 or FIA 8856-2000, or SFI 3.2A/1 with FIA 8856-2000 or SFI 3.3 approved base layer, or better. The suit must be in good condition (no rips or tears, zippers operating properly, etc.).
1.4.2. Shoes, socks and gloves, all to be rated at SFI 3.3 or FIA 8856-2000 or better. These items must also be in good condition.

1.4.3. If a driver has long hair (as defined as protruding from the helmet), a balaclava with a rating of SFI 3.3 or FIA 8856-2000 or better is required. This includes facial hair.

1.4.4. A full-face helmet with a rating of SA2010 or later, or FIA 8860-2004. No open-face helmets will be allowed under any circumstances.

1.4.5. Head and neck restraint, with a rating of SFI 38.1 or FIA 8858-2010 or better. It should be noted that according to SFI 38.1, head and neck restraints need to be recertified every five years by the manufacturer. If the head and neck restraint is certified by both the FIA and SFI, AER will require the SFI five year recertification.

1.5. Each driver must have their own equipment except for head and neck restraint, which may be shared among teammates. No driver will be allowed on the track during qualifying or racing sessions without a head and neck restraint equipment as defined in 1.3.5. All equipment must be in excellent condition. It is the responsibility of the driver to possess and use the proper gear and to ensure it is in good and working condition and not expired. AER reserves the right to spot-check equipment and issue penalties accordingly.

1.6. No person shall participate in any event with AER unless they meet the following age requirements:

1.6.1. To race with AER, you must be 16 years of age or older. If you are under the age of 18, written consent of a parent or guardian must be given to AER.

1.6.2. To participate in activities in the hot pits (“over the wall”), you must be 16 years of age or older. If you are under the age of 18, written consent of a parent or guardian must be given to AER.

1.6.3. To be present anywhere else not outlined in 1.6.1 or 1.6.2, you must meet any age requirements set forth by the track. If you are under the age of 16, you must be accompanied by a parent or guardian.

1.6.4. Any of the provisions of 1.6.1, 1.6.2, and 1.6.3 are secondary to any more restrictive rules or regulations that the venue may have.

1.7. Children above the age of twelve may be present in the cold pits, so long as they are accompanied by a parent or guardian over the age of eighteen. The child and parent or guardian must complete the minor waiver. Please note that some venues have age requirements more restrictive than our rules, and you must abide by them.

2. Car Requirements

2.1. Generally, AER will accept any production-based, closed-wheel, prepared race car that has been approved to race with SCCA, NASA, BMW CCA, PCA, IMSA, or similar governing
bodies. Compliance with other sanctioning bodies does not guarantee acceptance in AER. There are certain rules in our rulebook that the car must comply with that may be substantively different than other racing organizations. In those cases where there is a disagreement between rulebooks, the AER rulebook shall supersede. We urge you to inquire with AER if you have any questions or if your car will have any exceptions with any rule in this rulebook (see section 11.3 for contact information). Cars must retain the shape and configuration of the original car. We will not accept extensively altered cars. Any car to be used in AER must have started its life as street legal car and have been mass-produced (defined as having at least 500 produced and sold in the US or Canada and have undergone federal crash testing). The car must have unaltered crumple zones. Factory-prepared race cars that are based off of a production car are also allowed (such as a Mazda MX-5 Cup or a BMW M235i Racing). Exceptions may be made by AER on a case-by-case basis, as outlined in section in section 2.22 below.

2.2. The following items on the race car are considered “free”, or “unrestricted”: aerodynamic aids (such as wings, under-trays, dive-planes, etc.), removal of glass or replacement of glass with Lexan or polycarbonate, wheels, wheelhousing flares, brakes, and suspension. Lexan and polycarbonate windshields must be at least one-quarter of an inch thick and properly braced. Side and rear thicknesses are open.

2.3. All items related to the drivetrain (engine, transmission/transaxle, differential, etc.) are free, and drivetrain swaps are allowed. Drivetrain components must remain in the same area of the car.

2.4. All race cars used in qualifying and races are required to use a US DOT approved tire (with a corresponding DOT Tire Identification Number stamped on the sidewall), and a DOT UTQG (Uniform Tire Quality Grade) treadwear rating of 180 or greater.

2.5. All cars must have an exhaust system installed and must be muffled. In many cases, rules of the venues will have sound restrictions that must be adhered to. Any requirements will be outlined in the supplemental information packet before each race.

2.6. Safety Requirements.

2.6.1. It is the position of AER that the below-listed safety requirements are the absolute minimum that should be considered by any driver, team, or car owner. We strongly advise you to research and discuss your safety requirements with qualified experts in the field to help you construct a safe car. Ultimately, it is up to you to make sure that the car you intend on racing in is safe. Further, if you are witness to an unsafe car or situation on or off track, it is your duty to immediately report it to AER personnel.

2.6.2. All cars must go through AER’s annual tech and safety inspection before they will be allowed on the track for their first event of the season. Due to the nature of
2.6.3. All cars that will be used in qualifying sessions or races must have a minimum of a six-point cage. The cage tubing must be of the appropriate size and material for the car that it is being installed in. AER will accept cage constructions that comply with the following sanctioning bodies: SCCA, NASA, BMW CCA, PCA, IMSA, or FIA. Chassis stiffening is allowed. You are advised to seek the assistance of an experienced cage builder. If you have questions about the compliance or construction of your cage contact AER (see section 11.3).

2.6.4. All surfaces of roll cage tubing that the drivers head or body may contact must be covered in SFI 45.1 or FIA Type A padding.

2.6.5. Five, six, or seven-point harnesses are required and must meet either FIA 8853/98 or SFI 16.1 or SFI 16.5. The belts installed must be compatible with any head and neck restraint used in the car. No expired belts will be accepted. Any belts in poor condition or without proper identification will not be accepted. Harnesses must be installed to SFI 16.5 standards.

2.6.6. All drivers of any car that has a removable roof, is a convertible, or has no roof, are required to wear arm restraints that meet the SFI 3.3 specification.

2.6.7. On-Board Fire System.

2.6.7.1. All cars must have an onboard fire system installed. An onboard system uses lines routed through the car with one or two actuator(s) to engage in case of emergency. At least one actuator must be in reach of the driver when belted into the driver’s seat.

2.6.7.2. An onboard system shall have a five-pound minimum of one of the following agents: Novac 1230, Halon 1301, 1211, or Halotron I, hexafluoropropane, HFC236a, CC0610, FE36. Other agents in SFI certified systems are also acceptable. Systems may also use AFFF material (e.g. SPA Lite, ZERO 2000, Coldfire 302) with a 2.25 liter minimum. If such a system is used, the appropriate atomizing nozzles shall be used. All AFFF internally pressurized system bottles shall use a working pressure gauge. All AFFF bottles shall be marked with the recommended “filled weight.” Onboard systems may also use CEA614 provided that the lines and nozzles are replaced as per the manufacturer’s (3M) instructions.
2.6.7.3. There shall be a minimum of two nozzles (one in the cockpit and one in the engine bay) with manual or auto-release.

2.6.7.4. All system cylinders should be securely mounted with bolts.

2.6.7.5. If an electric solenoid or switch is used to activate the fire suppression system, it should not lose power when the electrical master switch or car ignition switch is turned off. Cars must display one (1) “E” decal on the outside of the car identifying the location of easiest access to the system’s interior actuator or the location of the exterior actuator and one (1) decal at the interior actuator itself.

2.6.7.6. Fire systems shall be inspected, serviced and maintained as specified by the manufacturer’s requirements. Typically, this is every two years.

2.6.8. Driver’s Seat

2.6.8.1. The seat must be a one-piece, purpose-built racing seat that is manufactured to one of the following standards: FIA 8855-1999, FIA 8862-2009, SFI 39.1 or SFI 39.2. If your seat is not covered by one of those standards, please contact AER (see section 11.3).

2.6.8.2. The back of the seat must extend to a point at least halfway up the helmet of the driver.

2.6.8.3. All materials, including (but not limited to) attachment hardware, brackets, sliders, load spread plates, and washers must be adequately sized for the application.

2.6.8.4. It is your responsibility to ensure the installation methods used, the age of the seat and the use of any bracing, brackets, or sliders is compliant with the recommendations set forth by the seat manufacturer and any applicable standards. You should consult with experts in the field or the manufacturer of the seat for advice on the proper installation of the seat.

2.6.9. The car must be configured in a way for drivers to be able to exit the car quickly in an emergency. The driver of a car is required to be able to demonstrate the ability to completely exit the car within fifteen seconds, while wearing all required safety equipment and tightly belted into the seat of the car, with all window nets and center nets attached and in the up position.

2.6.10. A master electrical shut-off is required.

2.6.10.1. The master electrical shut-off must be within reach of the driver, when wearing all required safety equipment and tightly belted into the seat.

2.6.10.2. The master electrical shut-off must be marked with the appropriate decal.

2.6.10.3. The master electrical shut-off must isolate both the battery and the alternator from the remainder of the car, and completely shut the car
down and interrupt fuel supply. Further, the master electrical shut-off must turn off all lighting on the car, including but not limited to headlamps, fog lamps, rain lights, halos, tail-lights, and brake-lights.

2.6.10.4. Cars may have a low-amperage circuit to maintain power to certain types of electronic components in the car even if the master electrical shut-off is activated. This circuit is limited at ten amperes and must be fused within twelve inches of the battery. The purpose of this circuit is to maintain power to items such as cameras, routers, and communications equipment. Under no circumstances can power be maintained to anything related to the fuel system or engine management.

2.6.10.5. Any battery located inside the driver’s compartment should be fully covered and firmly secured to the chassis (or tub) in a marine type battery case. Dry cell, gel cell, and AGM batteries may be mounted without a surrounding case, however a case is still recommended. In all cases, a lithium-ion battery must be outside of the passenger compartment of the vehicle because of the higher risk of ignition.

2.6.11. All cars must have an SFI 27.1 or FIA J253-11 approved window net on the driver’s side of the car. AER will allow for window nets to be used for up to five years from the date of manufacture, so long as the net is not degraded, ripped, or torn.

2.6.12. All cars must have an SFI 37.1 or FIA 8863-2013 approved center net installed. AER will allow for window nets to be used for up to five years from the date of manufacture, so long as the net is not degraded, ripped, or torn.

2.6.13. All cars must have at minimum at a left-side, a right-side, and a center rear view mirror. The mirrors must allow for the driver to completely see around the car, with no blind-spots.

2.7. Aftermarket fuel cells (specifically, fuel tanks installed that are not the original fuel tank in the original position of the car) of any size are permitted but not required. Any aftermarket fuel cell installed in any car must comply with the following:

2.7.1. The entire aftermarket fuel cell, including (but not limited to) the enclosure, construction method, bladder, and foam must comply with the provisions outlined in the FIA FT-3 standard.

2.7.2. Any aftermarket fuel cell installed in any car must have the appropriate discriminator and/or roll-over valves to prevent fuel spillage in the case the car rolls over.

2.7.3. When installing an aftermarket fuel cell in a car, it is allowed to keep and use the original fuel tank in the car, so long as it is in the original position of the car.
2.7.4. When installing any new fuel filler port, or modifying the location of an existing fuel filler port, it must not be installed in such a way that gasoline may drip onto hot components of the car (including, but not limited to, the exhaust system, braking components, etc.)

2.8. All fuel system components, including (but not limited to) fuel cells, fuel tanks, pumps, filters, filler necks, filler hoses, fuel lines, vent lines, and anything else related to the fuel system, must be completely separated from the driver’s compartment by a metal bulkhead. Any added vents to the fuel system must have a discriminator valve installed. Any venting of the fuel tank or fuel system shall be vented outside the car only, and shall not vent into the passenger compartment or any other compartment of the car. Under no circumstances will fuel spills be allowed on the track.

2.9. Wheel studs are required. Studs must be made of at least 190,000 psi steel and be long enough that threads extend beyond the torqued nut.

2.10. All column and steering locks must be disabled so that there is no way for the steering system to be locked.

2.11. If the car has glass headlamps, they must be covered with an adhesive tape, to prevent glass from getting on track in the event of contact.

2.12. All cars must be equipped with a transponder that is compatible with the MyLaps (formerly known as AMB) timing system (such as the MyLaps TranX or X2). AER can provide rental units upon request.

2.13. Car Numbers

2.13.1. All cars must have eight inch or taller numbers in a color contrasting their car color or number plate on each side, and numbers at least four inches tall on the front and back of the car.

2.13.2. When creating or registering the car for a race, you will be able to select any unused number. This number will remain with the car for the remainder of the season. As long as that number was used in at least one event in a season, that number will remain reserved to that car in the next season. If the number was not used for an entire season, the number will be released.

2.13.3. Numbers may not have any leading zeros, may not have any letters, and may not be more than four numerals long.

2.14. All cars must have all of the required AER stickers (details of the stickers required are detailed in this graphic) on both sides of the race car to be allowed on track and to be eligible to accumulate points. AER Required stickers will be provided to teams upon request at no charge. See registrar or tech staff for event stickers. All unapproved competing series logos must be covered or removed to be allowed on track or to be eligible for event and series points.
2.15. All cars must be in good condition and appearance. Cars with excessive body damage, or unpainted body panels, are not allowed. The car must meet the “50/50” rule, which means they must look undamaged and straight at fifty (50) mph from fifty (50) feet. Three-dimensional decorations are not allowed.

2.16. All cars that will be on-track during qualifying or racing sessions must have a working video recording camera on board that is forward facing with an unobstructed view of the track, traffic, and flagging stations. The camera must be equipped with a battery or supplied power and data storage sufficient to capture the entire qualifying/race day. AER reserves the right to request, and the team must then supply, any video from the on-board camera for any reason in a timely fashion. It is required for teams to have two data cards so that a swap can occur during a race if needed. Failure to supply the video may result in penalties at the discretion of AER. All video files for the entire racing event must be saved for a minimum of forty-eight hours after the end of the last race of the event.

2.17. All cars must have at least two drivers, with no maximum.

2.18. Cars must have a tow point on both the front and rear of the car. These tow points must be securely installed to a point on the chassis that can withstand the pulling forces needed to extract the car from a gravel trap, muddy or soft ground.

2.19. Cars must be equipped with a combination of rain and brake light which must meet the following requirements:

   2.19.1. The rain light must comply with the FIA specification for rain lights.
   2.19.2. The rain light must be located on the rear of the car, and must be no lower than eighteen inches from the pavement. It is recommended to place the light in the location that the license plate would normally be.
   2.19.3. The rain light must be the type that blinks at 4 hertz when activated, and must become solidly lit when the brake lights are activated.
   2.19.4. At the discretion of AER and as conditions dictate, AER will put out a rain flag (a white flag with a red X) at the start/finish flagging station. At this time, and only at this time, shall the rain light be activated (including supplemental brake light functionality). For clarity, the rain light may act as a third brake light (but may NOT act as a rain light) when the rain flag is not present.

2.20. All cars must be equipped with a forward facing light.

   2.20.1. A ‘forward facing light’ means at least one working headlamp bulb, which is defined as a low beam, a high beam, or an auxiliary light. This DOES NOT mean a marker light or parking light. It must emit forward light similar to how a headlamp does. It must be located on the front of the car, at approximately the
same height as the headlamps that would customarily be present on the car. This lamp shall not flash or strobe in any pattern whatsoever.

2.20.2. This lamp will be required to be illuminated whenever the rain flag is present as described in 2.19.4.

2.20.3. This lamp will also be required to be illuminated by any car in the top two classes of any race.

2.20.4. At your option, you may run a ‘forward facing light’ at all times.

2.21. All cars are subject to AER approval. Any questions about a car’s eligibility should be submitted to our tech director (see section 11.3).

2.22. On a case-by-case basis, AER will consider allowing a particular make and model car that would not normally be compliant with rule 2.1 to race with AER. To submit a car to be considered, please send an email to tech@americanenduranceracing.com with as much information about the proposed car. AER will take several factors into consideration, such as (but not limited to) car structure, performance envelope and overall safety of the proposed car. If AER decides to allow the car to race, the make and model will be added to an exception list attached as Appendix A of this rule book. When it is added to the list of exceptions, the addition will be provisional until that make and model car has raced in the series for at least two races. During this provisional period, the performance of the make and model will be closely monitored to ensure that it fits the spirit of racing in AER.

3. Race Operations

3.1. See Supplemental Rules for each event pertaining to venue specific protocols, such as the event schedule, noise restrictions, and the like.

3.2. The maximum speed in the paddock is 15 miles per hour.

3.3. Every car that intends to be used in the race must participate in the qualifying session of the race event unless an exception has been arranged with AER (see section 11.4). The data collected from the qualifying session will be used to classify the car for the weekend.

3.3.1. Every car intended to be raced during the race weekend MUST complete at least 20 at-race-pace laps during qualifying unless otherwise arranged with AER management (see section 11.4).

3.3.2. Every driver intending to race during the race weekend MUST complete at least 5 at-race-pace laps during qualifying unless otherwise arranged with AER management (see section 11.4).

3.4. Any car on the track during qualifying and the race(s) must have an operating transponder. If a car does not have an operating transponder it will not be allowed on the track. If the transponder ceases to operate on track the car will be black flagged.
3.5. After qualifying, AER will group cars with similar lap times in classes, with a goal of 3 to 5 classes dependent upon the size of the overall field. Class assignments will be determined exclusively at the discretion of AER and all decisions made by AER are final. Cars will display class markings (provided by AER) to distinguish classes. If a car does not run in qualifying sessions, it will be classed at the discretion of AER. The goal is to group cars based on their speed potential; if a driver or team is found to be “sandbagging” or intentionally qualifying slowly the team may be re-classed, penalized, or disqualified. Class stickers must be placed on the front and rear of the car in a position that can be seen by cars in front of and behind. Also, a class sticker must be placed inside the cockpit of the car that can be seen by the driver of the car. If a car is discovered to be on track with the wrong or missing class stickers, a warning will be given to the team to correct the situation at the next pit stop. If the situation is not corrected at the next pit stop, the car will be black flagged with a stop and go penalty, then will be directed to their pit stall to apply the correct class sticker.

3.6. Lap times will be monitored during racing, and software will be used to look for trends. Any car that no longer fits in their assigned class may be moved up or down a class or receive lap penalties. We will not penalize a driver for one great lap. Our goal is to keep each class competitive.

3.7. The starting order of the first race will first be sorted by class, and secondly by qualifying times within the class. Subsequent races for the weekend will have a starting order sorted first by class, and secondly by the previous races’ finishing order within that class.

3.7.1. If a car fails to complete any qualifying laps, the car will start from the back of the field for its first race.

3.8. The grid will open 45 minutes before the scheduled start of the race and close 15 minutes before the scheduled start of the race.

3.8.1. If a car is late to grid (defined as coming to grid after grid closes, but before the pace car begins to move), the car will be placed at the back of the entire grid.

3.8.2. If a car misses the grid (defined as coming to the grid after the pace car has begun to move, but before the green flag flies), the car will be held in pit lane until the green is thrown and the tail of the pack passes pit-out.

3.8.3. If a car misses the grid and remains in the pit or paddock for the start of the race, this will count as a stop. However, the first twenty minutes from the time of the green flag will not count towards the stop. For clarity, 0 to 20 minutes after green flag counts as 0 stops; 20 to 40 minutes counts as 1 stop; so on and so forth.
3.9. Local Yellow Flags

3.9.1. When an incident occurs on track which requires the use of a flagger to display a standing yellow flag, cars shall reduce speed. Should a waving yellow flag be displayed, cars shall significantly reduce speed.

3.9.2. Passing any other car is prohibited from the moment the driver is able to see a yellow flag ahead until the car passes a manned flagging station that is displaying a green flag.

3.10. Full-Course Yellow (FCY) Procedures

3.10.1. If in the judgement of AER or track officials, a situation on track requires the suspension of racing, a full-course yellow (FCY) may occur.

3.10.2. As soon as a FCY is in effect (signaled by a double-yellow flag at all flagging stations), cars shall reduce speed and racing will cease. Cars shall immediately limit their speeds to a maximum of 75 miles per hour. It is the duty of the overall leader to slow down to safety-car speed (45 miles per hour) and control the field.

3.10.3. In the event of a full course yellow (FCY), the safety car will be deployed. If a safety car cannot be deployed during a FCY, it is the job of the overall leader to control the field for the duration of the FCY.

3.10.4. When a safety car is deployed, AER will attempt to pick up the overall leader of the race (irrespective of class). If the overall leader is not on track for any reason when the safety car deploys, the safety car will attempt to pick up the next highest overall positioned car.

3.10.5. When safely able to do so, Cars shall “close the gap” by catching cars in front of them and shall make a tight pack. Failure to do so may be cause for black flagging and/or penalty. Under no circumstances are cars allowed to pass each other for any reason while under FCY conditions.

3.10.6. Once the situation on track has been resolved and racing is ready to resume, if the safety car was unable to pick up the overall leader when initially deployed, the safety car will wave by cars until the overall leader is directly behind the safety car. Cars that are waved by should proceed at near-race-pace to catch the pack prior to the restart of the race. If the overall leader is in the pit, or has pitted during the FCY, then the safety car will pick up the car that was next behind the leader. If that car is in the pit or has pitted, the next car on the track will be picked up, and so on and so forth.

3.10.7. Once the safety car has the appropriate car behind, racing is subject to start.

3.10.8. Pit-Road Operations under FCY:

3.10.8.1. At all times during FCY, pit-in will remain open and cars can enter the pit at any time.
3.10.8.2. As soon as FCY is in effect, pit-out will be closed.
3.10.8.3. Pit-out will remain closed until the tail of the pack approaches pit-out. At that time, and on every passing of the tail of the pack, pit-out will open and waiting cars will be released subject to 3.10.8.4.
3.10.8.4. Once all the released cars queued at pit-out have passed the marshal with the stop/go sign, the pit-out will remain open for ten seconds. Once this time has expired, pit-out will be closed again until the tail end of the pack passes pit-out again.
3.10.8.5. On the last lap of the FCY, pit-out rules will be the same, where pit-out will remain closed until the race is green-flagged AND the tail of the pack passes pit-out. Then, and only then will pit-out open and stay open.

3.10.9. Cars found to be ignoring these rules, passing or causing any other unsafe situation when under local yellow or FCY, may result in penalty, disqualification, points-loss, suspension, or ejection from an event or the entire series.

3.11. Black Flag Procedures

3.11.1. If at the discretion of AER or the track there is a need to suspend racing, the race shall be black flagged. When a black flag is displayed at the appropriate flag stations, racing will be suspended and cars will enter the pit in a single file line in the order they were on the track.

3.11.2. During a black flag, no work may be performed on the car whatsoever in pit lane. Items deemed to be “driver comfort” may be serviced, such as drink bottles, cool shirts, and cleaning the windshield. Any work on the car, including but not limited to, checking or changing tire pressures or engine fluids, is strictly prohibited. No driver change is allowed, unless authorized by AER on a case by case basis by consulting with a pit steward.

3.11.3. If during a black flag, a car becomes disabled (such as leaking fluids, won’t restart, etc.), the car will be sidelined and cannot be touched until the green flag is thrown. At this time, the car may either go behind the wall or be pushed to the pit stall of the team. While this stop will count, the pit-in timer starts when the green flag is thrown.

3.11.4. When the need for a black flag ends, cars will return to the track in the same order they came off, under the control of the safety car. Cars will be pointed by until the leader (or, if the leader is not present, the next car in order on track) will be picked up. There will be at least one lap under FCY before the restart.

3.11.5. If a car goes through the pit-in RFID reader before the black flag was thrown, they can go to their stall and the stop will count. The team can continue to complete the stop (including working on the car, fueling, driver change, etc.)
even when the black flag is thrown. However, the car will be placed at the end of the pack when released from pit at the end of the black flag.

3.11.6. If a car is in the paddock on a long stop when the black flag is thrown, credit will not be given for the time from when the black flag is thrown to when the green flag is thrown.

3.12. Infractions, Penalties, and Probation

3.12.1. For each racing event, AER will maintain a log of all infractions committed by teams, drivers, or crew. Any violation of this rule book or any of the infractions outlined at http://aer.af/infractions-penalties will be logged to the car and assigned a point value.

3.12.2. As the car accumulates infraction points through the course of a racing weekend, penalties will be given as outlined at http://aer.af/infractions-penalties. Infraction points will be cumulative for the duration of the event.

3.12.3. Drivers may be placed on probation at the sole discretion of AER, in response to a violation of the rules or accumulation of points, poor driving etiquette, an on-track incident, or for any other reason. When a driver is placed on probation, the driver will be told why, and for how long they will be on probation. During this period, the driver will be subject to a much higher level of scrutiny. If the driver continues to exhibit poor behavior during the probationary period, the driver may have their driving privileges revoked or be banned from the series entirely.

3.13. Cars that are “behind the wall” for work to be conducted, including tire changes during the race, shall not be parked or stopped in any fire lane or other restricted area as defined by the track or AER.

4. Mandatory Pit Stops and Pit Stop Timing

4.1. The minimum mandatory number of stops will be set by dividing the race length (in minutes) by 90 and subtracting 1. For example: a nine-hour race is five mandatory stops (540 divided by 90, minus 1 = 5). If this number is not a whole number, it will be rounded up to the next whole number.

4.2. Each mandatory stop will be a minimum of three minutes (from the time the car passes under the pit-in RFID antenna until the time it passes under the pit-out RFID antenna). It is up to the driver and teams to ensure that the pit stop was at least three minutes.

4.3. It is the team’s responsibility to release their car from their pit box in a manner that does not require the driver to slow the pace of pit lane. If a team or driver is found to be driving in a manner that would be considered “killing time” before reaching the pit-out RFID antenna, that team may be subject to a penalty.
4.4. Stop times cannot be combined. For example, sitting in the hot pit for six minutes will only count as one stop, not two.

4.5. If a car is in the pit or paddock for an extended period of time, the following will apply. For cars that have a stop for greater than three minutes, but less than twenty minutes, this shall count as one stop; for stops greater than twenty minutes but less than forty minutes, this will count as two stops; For stops greater than forty minutes but less than sixty minutes, this will count as three stops; so on and so forth.

4.6. Failure to complete the mandatory number of stops will incur a lap penalty equal to the following formula: $(20 \text{ minutes})/(\text{the cars’ fastest lap time})$ rounded up to the next whole number of laps, multiplied by the number of stops missed.

4.7. Short stops may be made at any time during the race, but must follow all pit stop requirements as outlined in this section. Short stops will not count towards the minimum mandatory stops in any regard.

4.8. Cars circulating through the pit lane at speed must remain in the lane furthest away from the pit boxes. Cars may only come across the center lane and into and out of the pit box when within close proximity to their assigned pit box. Under no circumstances should a car be driving through pit boxes at speed.

4.9. It is possible that the race may unexpectedly be reduced in duration.

4.9.1. If the race is going to be ended early and notice is given to AER, AER will notify the teams as soon as possible. The number of mandatory pit stops may be reduced depending on when the change of duration occurs, and on how much notice AER is able to give teams. It is then the team's responsibility to complete the prescribed number of stops. In this case, there will not be any exemptions from rule 4.6.

4.9.2. If the race is ended prior to the scheduled time for reasons beyond the control of AER and without reasonable notice to the teams, any car which has not completed the number of pit stops defined in 4.1 above will have their results adjusted. AER will look at all green-flag pit stops that the car has made under five minutes, and average them. Using that result, AER will manually make an adjustment to the finishing order.

4.10. Any pit stop must begin (as defined as passing through the pit-in RFID reader) no less than ten minutes before the scheduled end of the race. If a pit stop begins after that point, it will not be counted.
5. **Pit Stop Procedures**

5.1. No one is allowed over the wall, and both feet must remain planted on the cold side of the pit wall, until the car comes to a complete stop. Further, there cannot be any fuel jugs, tools, supplies, or any other materials on the hot side of the wall until the car comes to a complete stop.

5.2. It is recommended that all teams have a lollipop type of sign to make sure their drivers can safely locate their pit stall.

5.3. No more than five people are allowed over the wall at any time during a pit stop. This includes the driver in the car.

5.4. Everyone over the wall must be in full safety gear as outlined in section 1.3, with the following exceptions: i) over-the-wall crew are not required to wear a head and neck restraint as noted in 1.3.5; ii) crew use a helmet that is SA2005 or later.

5.5. Reversing under power is not allowed in the hot pits.

5.6. The maximum speed between the pit-in and pit-out RFID is 35 miles per hour. The maximum speed through the RFID reader is 5 miles per hour.

5.7. Repairs to a car that are likely to take more than twenty minutes shall not take place in the hot pits, and must be brought to the paddock. Cars found to be in the pit for more than twenty minutes may be subject to a penalty.

5.8. **Jacking of the car in pit lane is allowed, subject to the following rules.**

5.8.1. Raising of the car shall only be for the purposes of tire changes and the inspection of components in the wheel-well of the car (such as braking components, hubs and bearings, control arms, etc.). Only two tires can be changed per stop.

5.8.2. Under no circumstances shall any crew member or body part be under the car while it is in the air.

5.8.3. Cars that are being jacked using conventional pump-style floor-jacks may only be raised in a manner where up to two tires are in the air at a time. Only one pump-style floor-jack is allowed over the wall at a time.

5.8.4. Cars that are equipped with “air-jacks” may be raised in a manner where all four tires are in the air at a time. However, work may only be performed on two corners of the car at a time; if work is to be performed on additional corners of the car, the car must be fully lowered and re-raised with the air-jack system. If a team is using air-jacks in the pit lane which requires a bottle of gas to be present in the pit stall, it must be on the cold side of the wall, secure, and have a cage protecting the valves, regulator and connections on the bottle.

5.8.5. The use of air-guns and self-contained, uncorded, battery-powered tools may be used. Only one tool is allowed over the wall at a time.
5.8.6. No more than five tires, including those mounted on the vehicle, may be over the wall at any time.

5.8.7. At any time the tires of the car are “in the air”, defined as the rubber of any tire not touching the ground, there must be a dedicated spotter. This spotter must be located at the front corner of the car adjacent to the transition lane facing oncoming traffic. The purpose of this person is to keep watch of the people working on the car, and provide warning to workers about other cars that are coming down pit lane. The spotter may not perform any work on the car or handle any tools, air-jack hoses, etc.

5.9. Subject to 5.7 and 5.8, any work can be performed on the car in the hot pits when not fueling (see 6.9). This includes (but is not limited to) checking and adjusting fluid levels, checking and changing tire pressure, refilling and replenishing drink bottles and cool suits, adjusting suspension and bodywork, etc.

5.10. All teams must have a pit board.

5.11. No passing is allowed in the pits, or on the pit-in or pit-out ramps, unless instructed to do so by a pit steward.

6. Fueling

6.1. Fueling is defined as any time any fuel cap is removed or when any dry-break seal has been broken during a pit stop. During this time, all of the rules in this section apply. During the race (defined as the time between the pace car and race cars leave the grid at the beginning of the race, and until the checkered flag flies at the end of the race), cars may only be fueled in the hot pits, pursuant to the rules of this section. To be clear, cars can never be fueled anywhere outside of the hot pits during a race.

6.2. At all other times outside of the time defined in 6.2, cars may be fueled in the paddock.

6.3. Cars may not be fueled while on the grid before the race.

6.4. Fueling of cars can only be performed using gravity-fed, commercially-available, handheld jugs. Fuel jugs cannot be so large as to require more than one person to handle them at a time. A fuel jug cannot be carried by more than one person at a time. A maximum of two fuel jugs are allowed on the hot-side of the pit wall at any one time, and may be sitting on the ground in the pit stall, subject to rule 5.1. It is allowable to have two people each holding a fuel jug, subject to rule 6.6.

6.5. For cars with more than one filler neck or dry break, only one may be filled at a time.

6.6. During fueling the master electrical shut-off of the car must be switched off.

6.7. During fueling, a dedicated team member acting as a fireman must be present with a ten-pound fire extinguisher with a UL rating of Class A, B and C (such as dry chemical or Halotron). The fireman must be over the wall and standing approximately six to ten feet.
from the open fuel cap or dry-break orifice and in position and ready to operate the fire extinguisher, which includes holding the nozzle in the direction of the fueling operation. The person who is acting as the fireman may not serve any purpose other than holding the fire bottle. The person who is active as the fireman may not be the person removing or replacing the fuel cap, moving fuel bottles, or moving the catch pan.

6.8. During fueling, drivers may enter and exit the car and visual inspections of the car are allowed. No other action is allowed.

6.9. A sturdy metal, non-sparking catch pan at least two and a half inches deep must be used during all fueling operations and in a position that it can catch any spilled fuel during a fueling operation.

6.10. During fueling, the visors must be down on all helmets of anyone over the wall, including the driver in the car.

6.11. The use of a funnel is prohibited.

6.12. Any fueling equipment or procedure deemed to be unsafe by AER will not be allowed.

6.13. Pit stop safety infractions may result in a penalty, disqualification, points-loss, suspension or ejection from an event or the entire series, at AER’s sole discretion.

7. **Scoring**

7.1. First and foremost; all results, standings, points and awards are considered provisional until official results are released. Typically, official results with points awarded will be released within one week of the end of the last race of the event.

7.2. **Team Championships**

7.2.1. During the season, there shall be a “Team Championship”, which is a competition between the cars that run races in AER.

7.2.2. Winners will be determined by the car that completes the most laps in the allotted time. Should cars complete the same number of laps, the car that crosses the finish line first will win the position.

7.2.3. Points and awards will only be given to cars that have finished at least fifty percent of the laps of their class winner.

7.2.4. For the 2020 season, the worst weekends’ results will not be considered for team championship points.

7.2.5. Points will be awarded for the first race of a race weekend as follows: 1st place 25 points; 2nd 18; 3rd 15; 4th 12; 5th 10; 6th 8; 7th 6; 8th 4; 9th 2; 10th 1.

7.2.6. Points will be awarded for the second race of a race weekend as follows: 1st place 28 points; 2nd 21; 3rd 18; 4th 15; 5th 13; 6th 11; 7th 9; 8th 7; 9th 5; 10th 4.

7.2.7. Yearly points totals will determine season Team Champions.
7.2.8. Season Team Championship points are tied to the car chassis. If a car chassis is lost due to collision or other reasons, points will only transfer to a replacement chassis within a season on a case by case basis at the sole discretion of AER.

7.3. Driver Championships

7.3.1. During the season, there shall be a “Driver Championship”, which is a competition between the drivers that run races in AER.

7.3.2. At the end of each race, depending on the position that car finishes within its class, the car will be assigned points as follows: 1st place 250 points; 2nd 180; 3rd 150; 4th 120; 5th 100; 6th 80; 7th 60; 8th 40; 9th 20; 10th 10. The car must complete 50% of the class winner to have these points assigned.

7.3.3. Then, a calculation will be performed that determines the percentage of laps each driver spent in that car for that race. That percentage will then be multiplied by the points assigned to that car in 7.3.2. The result of that equation will then be points awarded to that driver.

7.3.4. For example: A car finishes in 3rd place in its class. There were three drivers, one who drove 100 laps, another who drove 30 laps, and another who drove 50. They would receive 83.3, 25.0, and 41.7 points respectively.

7.3.5. For the 2020 season, the worst weekends’ results will not be considered for driver championship points.

7.3.6. Yearly points totals will determine the season Driver Champion.

7.4. There will be podium ceremonies after every race. Trophies will be awarded to the top three finishers in each class for each race. Points from all races will be combined and the three cars in each class with the most points will be awarded trophies as Overall Winners. In the event of a tie the car with the best finish on the later race will be awarded the position.

7.5. There will also be recognition of the driver who accumulated the most driver championship points at that race.

8. Driver Conduct and Expectations

8.1. In all cases, every participant (drivers and crew) is expected and required to conduct themselves in a sportsmanlike manner. AER considers this to be one of the most important aspects of the sport, and expects every person to be fair, honest, courteous, and above all, conduct themselves in a safe manner. Unsportsmanlike conduct will not be tolerated at any level, and may result in penalty, disqualification, points-loss, suspension, or ejection from an event or the entire series.

8.2. All participants are expected to have read and understand the rules as set forth. If there is ever a question or clarification needed you are strongly encouraged to contact AER for
clarity (see section 11). Not knowing the rules will not be an acceptable defense or excuse.

9. **Passing**

9.1. Every competitor has the right to racing room, which is defined as sufficient space on the paved racing surface that under race conditions a driver can maintain control of his car in close quarters.

9.2. The car entirely in front has the right to choose any position on track, so long as it is not considered to be blocking. Blocking is defined when a driver makes two or more line changes in an attempt to prevent the trailing car from passing.

9.3. A driver who does not use his mirrors or appears to be blocking another car attempting to pass may be black flagged, and may be penalized.

9.4. Ultimately, the decision to make a pass and do so safely solely rests with the overtaking car. The car being overtaken should be situationally aware of the fact that they are being overtaken, and not make any sudden or unpredictable moves or blocks to impede the ability of the overtaking driver to pass.

9.5. When possible and when it becomes apparent that a pass is going to occur, it is a courtesy and strongly suggested that the car being passed to indicate to the passing car on which side they would like to be passed on.

9.6. Cars who are not racing in the same class are strongly encouraged to work with each other to effectuate a prompt and safe pass. Drivers should be aware that they may come upon a situation where two other cars are in a heated battle in their respective class and should try to accommodate any passing required without holding up that battle. It should be noted that this applies to classes faster and slower than you.

10. **Car to Car Contact and subsequent Investigations**

10.1. Car to car contact is strictly forbidden, and it is every driver’s responsibility to avoid contact on the race track. If an incident of contact occurs, it is strongly suggested that the two drivers and the respective teams work out the situation on their own without the involvement of AER. If the teams are not able to resolve the situation on their own, they may escalate the situation to AER for investigation and ruling, as described in section 10.2.

10.2. In the case of an incident or a situation that is brought to AER's attention, AER will investigate the issue. AER will collect all of the available information to come to a decision during an investigation. This could include, but not be limited to: information from and discussion with the drivers of the cars involved; information from corner workers or other track personnel; AER staff; other drivers who may have witnessed the incident; video from the involved cars or other cars in the vicinity; or any other source of information deemed relevant.
10.3. AER will work diligently to render a decision quickly. The decision will include any penalties, disqualifications, points-loss, suspensions, or ejection from an event or the entire series, or any other action deemed necessary. Alternatively, if in the sole discretion of AER, there is not enough evidence to place blame or penalty, AER will advise as such.

10.4. In the case where there is damage to the track the financial liability will be placed upon the person or persons who are at fault of the incident, solely at the discretion of AER. The participant will pay for the damage upon demand of AER.

11. **Contact AER**

11.1. General info: info@americanenduranceracing.com
11.2. Registration questions: registration@americanenduranceracing.com
11.3. Tech questions, including car and driver eligibility: tech@americanenduranceracing.com
11.4. Operational issue concerning an event in progress: race@americanenduranceracing.com
Appendix A - Car Exception List

As described in section 2.22 of the rule book, this is a list of cars that do not comply with rule 2.1 but are allowed to compete in AER.

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