



American Endurance Racing LLC

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Race Car Technical Inspection Guidelines v. 2017.1.1

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Thank you for choosing to race with American Endurance Racing.

AER takes safety of its participants very seriously. To this end, we require annual inspections of every car raced with AER. Your car must be inspected and approved every year before it can participate in any AER race for that calendar year. You may have your car inspected at an AER approved inspection shop (listed at the end of this document). If you cannot arrange to have your car inspected at one of the listed shops, you must have your car inspected at the track at one of our race weekends. We strongly urge you to have the inspection done before the race weekend, as it can become very busy at the track. Further, if something is found to be deficient on your car, it may prevent you from racing.

Below is a list of items that will be scrutinized during the inspection. It is the job of the car owner to make sure that the car is compliant with the AER Rule Book (available at http://americanenduranceracing.com/docs/aer_rulebook.pdf). It is also the job of the car owner to make sure that the car remains compliant throughout the race season. The car owner should be aware that AER may make spot-inspections throughout the racing season. Further, it should be noted that ultimately the safety and preparation of the car rests upon the car owners and drivers. Safety is everyone's responsibility.

It is the job of the inspector to verify that the car is ready to race with AER, and is compliant with the rulebook found above.

The list following will be the minimum of what will be inspected:

1. **Brake Lights** - a minimum of two working brake lights (and preferably a center-mounted elevated third), that operates with actuation of the brake pedal of the car. It must be bright enough to be seen in direct sunlight, and distinguishable from taillights.
2. **Battery and Electrical Kill System** - Battery is properly and securely mounted, with no possibility of coming loose. All battery cables shall be securely fastened as needed, with no frayed or loose cable connections, and no evidence of arcing or melting. Battery terminals should be shielded or covered to prevent any sort of shorting. There must be an electrical kill switch pursuant to rule 2.6.10, and within reach of the driver when securely belted.
3. **Steering and Suspension** - No play or loose components. No worn bushings, no play in ball-joints, no play in wheel bearings.
4. **Brakes** - Fluid is clean, properly filled, and recently changed/flushed. Reservoir is not leaking. All fittings are tight, and no leaks. Brake pedal is firm with no excessive travel. Caliper boots are not torn or cracked. Brake pads are of the correct type and application. No cracks in rotors. No air in system, properly bled using factory procedure with appropriate fluid.

5. **Tires and Wheels** - US DOT approved tire (with a corresponding DOT Tire Identification Number stamped on the sidewall), and a DOT UTQG (Uniform Tire Quality Grade) tread wear rating of 180 or greater. Appropriate amount of tread. Wheels have no cracks or bends, or out-of-round condition. Wheels secured to vehicle torqued to the manufacturer's specifications.
6. **Wheel Studs** - Wheel studs only, in good condition, and long enough that threads exist beyond the lug nut, pursuant to rule 2.9.
7. **Drivetrain** – Engine, transmission, transaxle, drive shafts, half shafts, differentials, and axles are all properly secured. Mounts are tight and in good condition. No leaks of any sort. Engine in the original position in the car (see rule 2.3).
8. **Fuel System** – Fuel tank shall be safely and securely fastened to the vehicle. All fuel lines to be in good working order and not leaking, and properly shielded from any debris that may hit the vehicle. No leaks at any connection points, including fittings, hoses, injectors, fuel rails, etc. Fuel lines are not routed in the passenger compartment. Any aftermarket modifications made to the fuel system must comply with rule section 2.7.
9. **Cooling** - No leaks. No use of glycol, water to be used only. Catch can to capture any expansion of fluids.
10. **Exhaust** - Routed in a such a way that it will not come in contact with the body of the car, mechanical components, brake or fuel lines. Properly secured and not allowing any engine gasses into driver space of the vehicle. Noise level must be taken into consideration depending on the location of the event.
11. **Firewalls and Bulkheads** - Firewalls and bulkheads that separate the passenger compartment from the engine bay and any fuel components must not have any openings or holes.
12. **Glass** – no cracks or spidering; glass is properly and securely mounted and adhered to the vehicle. Lexan windshield and polycarbonate windows allowed, front windshield must be one-quarter of an inch thick.
13. **Mirrors** – side and rearview mirrors working and adjustable to suit the driver and give good visibility around and behind the vehicle. Additional mirrors for good visibility are acceptable and recommended.
14. **Driver Access and Egress** - cage, window nets, belts and seat must be configured in a way that allows for quick driver egress in an emergency, pursuant to rule 2.6.9.
15. **Safety Equipment** - Seat, belts, center net, window net, roll cage, padding, and fire suppression all installed in a fashion pursuant to the rule section 2.6, and not out of date. Fire system must be serviced according to manufacturer's recommendations. Fire system actuation mechanism must be within reach of the driver when securely belted.
16. **Exterior Safety Markings** - Clear markings for electrical kill switches and fire actuation handles on the outside of the car.
17. **Tow Points** - Car must have a marked front and rear tow point, pursuant to rule 2.17.
18. **Structure** - Car must adhere to 2.1. No tube frame chassis allowed, no altered crumple zones. Cage and reinforcement structures may not extend beyond the shock towers. Front and rear rails must remain unaltered.

19. **Appearance** - Car must be in good condition and appearance. Must adhere to the 50/50 rule (2.14).
20. **Body** - No loose body panels or parts, bumper covers, emblems, etc. Nothing rubbing on tires of the vehicle. No three-dimensional decorations are allowed.
21. **Car Numbers** - Must have numbers on hood, trunk and both sides of the car (a minimum of eight inches tall on the sides, four inches tall on the front and back), of contrasting color, as sized per rule 2.12.
22. **Glass Headlights** - If the car is equipped with glass headlights, they must be removed or taped.
23. **Interior** - All items installed in the car must be properly secured and not come loose in the event of an incident or crash. Cameras, data acquisition devices, cool suit systems, fire bottles, etc.
24. **Camera** - Car must have a camera installed, pursuant to rule 2.15.

AER Approved Inspection Shops:

[Albany Autoworks](#), 5197 Washington RD, Albany OH, 740-698-6269

[AutoSport Fabrications](#), Plainville CT, 860-410-1710

[Dawe's Motorsports Development](#), 11 Foundry St, Stroudsburg PA, 570-422-6848

[Heinlein Racing Development](#), 2 Howard Pl, Ledgewood NJ, 862-244-4985

[Mike Tillson Motorcar Service](#), 2097 N 63rd St, Philadelphia PA, 215-473-6400

[Off Camber Autosport](#), 85 Franklin Rd, Dover NJ, 973-453-3580

[RRT](#), 23700 Overland Dr., Dulles VA, 703-661-4222

[Stable Energies Motorsports](#), 175 Passaic St., Garfield NJ, 973-773-3177