

# Pre-Event Safety Inspection Form



Participant(s) \_\_\_\_\_

Event date \_\_\_\_\_

VIN \_\_\_\_\_

Track \_\_\_\_\_

Modifications:

Year, make, model \_\_\_\_\_

Plate & state \_\_\_\_\_

Inspector: Check off  every item inspected following detailed instructions on page 2.  
Include additional items as you need necessary to insure the safe condition of the vehicle.

- |  |   |
|--|---|
| ① Brake fluid. Last change date _____                | ⑩ Exhaust, noise                                |
| ② Brake pads, rotors, lines, master cylinder, lights | ⑪ Fluid hoses, lines, leaks                     |
| ③ Suspension, mounting points                        | ⑫ Mirrors                                       |
| ④ Ball joints. See E30/E36 warning on page 3         | ⑬ Pedals, throttle linkage                      |
| ⑤ Wheel bearings                                     | ⑭ Seats, belts. See harness installation page 3 |
| ⑥ Battery  | ⑮ Steering                                      |
| ⑦ Drive shafts, half shafts, CV joints, guibo        | ⑯ Wheels & tires                                |
| ⑧ Engine belts                                       | ⑰ Windows, wipers, fogger                       |
| ⑨ Engine, transmission, differential mounts          | ⑱ General, cameras/loggers tethered, corrosion  |

Inspected by \_\_\_\_\_

Shop stamp:

Inspection date \_\_\_\_\_

I hereby certify that the above vehicle has been carefully examined by a qualified individual and that all the foregoing items have been checked. I understand that the safe condition and operation of this vehicle are entirely my responsibility and that the Boston Chapter of BMW CCA, Inc. and/or its members cannot be held liable or responsible for any vehicle. Problems, malfunctions, or damage may occur in connection with the operation of this vehicle prior, during, or subsequent to the driver's school.

I acknowledge that the trackside vehicle spot-check which may have been performed on the above vehicle cannot verify that the vehicle has been in fact properly prepared and inspected for this high performance driving event. No representation is made by the Boston Chapter, BMW CCA, Inc., and/or its members of the vehicle's road worthiness for street driving or for the High Performance Driver's Education Course at the indicated event course/location. No warranties are implied or expressed by this spot-check. I acknowledge that at all times I remain solely responsible for the safe condition and roadworthiness of the above vehicle, and I am not relying on the trackside spot-check in deciding whether or not to drive the vehicle. I realize that the trackside spot-check is performed at the discretion of the Boston Chapter, BMW CCA, Inc., and that not all vehicles are checked.

Participant signature \_\_\_\_\_ Date \_\_\_\_\_

## INSPECTION INSTRUCTIONS

- ① **Brake fluid.** Must have adequate level and not be discolored or obviously old. **Bleed** brakes. Fluid must be **flushed within the last 6 months**, including new vehicles regardless of date of manufacture. Remove old fluid from reservoir before flushing with new. Brake fluid moisture may be **tested on-site** and must not exceed **2%**.
- ② **Brake pads** must have sufficient lining thickness. **Hoses and lines** must not be cut, abraded or cracked. **Rotors and drums** must not be worn beyond statutory requirements or manufacturer recommendations. **Master cylinder** must not exhibit bleed-down when under steady pedal pressure. **Brake equalization** must be checked via road test. All brake **lights** must function. Brake **dust shields** must be removed.
- ③ **Suspension** must be secure and in sound condition. **Mounting points** must be secure and not cracked or unsound. No excessive side-to-side height variation. Shocks absorbers must provide adequate damping and be securely mounted.
- ④ **Ball joints** must not exhibit any play when compressed with large slip-lock pliers
- ⑤ **Wheel bearings** must be properly adjusted and not exhibit looseness. No lube leakage on brake linings.
- ⑥ **Battery.** Must be **securely mounted** and have no fluid leaks or corroded mountings.
- ⑦ **Drive and half shafts universal or CV joints** must not have excessive looseness or leak lubricant. Drive shaft **guibo coupling** (flex disc) must be in good condition and not exhibit cracks or deterioration. Drive shaft **center support bearing** must not have excessive looseness of it mounting.
- ⑧ **Engine belts** must be in sound condition and properly tensioned.
- ⑨ **Engine, transmission, differential mounts** must be secure and must not exhibit signs of deterioration or permit excessive motion.
- ⑩ **Exhaust** must be securely mounted and in good condition. This is a muffled event and requires street legal **sound levels**. If the vehicle is deemed to be too loud by Boston Chapter tech or track personnel, you will not be allowed on the track. Sound levels vary by track; consult the day-of-event information.
- ⑪ **Power steering, fuel, oil, and coolant lines** must be in good condition and not exhibit cracks, swelling or deterioration. Vehicles with potentially dangerous hoses will not be allowed. No power steering, coolant, or fuel leaks. Coolant level adequate. No excessive oil leaks.
- ⑫ **Mirrors** must be securely mounted. An inside rearview mirror is required; side mirrors are recommended.
- ⑬ **Pedals** must be securely mounted, exhibit free return and have securely mounted pads in sound condition. No excessive brake pedal travel. **Throttle linkage** must have free return (no binding) throughout entire travel.
- ⑭ **Seats** must be in sound condition, securely mounted and of equivalent **restraint**. **Seatbelts** must be in sound condition, securely and properly mounted, of equal restraint and have metal-to-metal. **Equivalent restraint** means of the same type for both driver and passenger. **Harnesses** must be installed according to SFI/FIA specifications without modification and must not be faded, frayed, damaged, or significant worn (regardless of age), or routed around seat backs or over seat bottoms. Aftermarket and seat mounting may be closely inspected at the event. **See page 3.**
- ⑮ **Steering** must not exhibit looseness, play or binding throughout range of travel. Steering box mounting must be secure. Power assist fluid must be adequate.
- ⑯ **Wheels** must not be cracked or bent. Lug bolts must be properly torqued and must be re-checked immediately before and during the event. **Tires** must not be cracked, blistered, or show cord. **No plugs.** No side-to-side tire size stagger. Inflate to proper pressure. Tread depth must be adequate for wet driving.
- ⑰ **Windows** must be secure and in sound condition and not excessively tinted. **Wipers** must function and be in sound condition. A working **defogger** will be required in wet conditions.
- ⑱ **General, cameras/loggers tethered, corrosion.** No excessive body or chassis corrosion. No loose parts. All cameras, data loggers, etc that are temporarily mounted inside the car must be tethered.

## AFTERMARKET HARNESS INSTALLATION TIPS

Harnesses are not required. Stock seats and seat belts are adequate. All aftermarket harnesses must be installed by a qualified individual in accordance with manufacturer and SFI/FIA specifications. Restraint for the passenger must be equivalent to that for the driver.

4-point Schroth belts with anti-submarine (ASM) are accepted; other 4-point belts are accepted at the discretion of the instructor.

5+ point belts are accepted with proper mounting. 6+-point belts are preferred.

① Harnesses using 3-bar buckles must be doubled back as shown. Ensure that slot #2 has three thicknesses of webbing. **Otherwise it will fail under load.**

② Install the 3-bar buckle as close as possible to the roll bar tube or mounting tab.

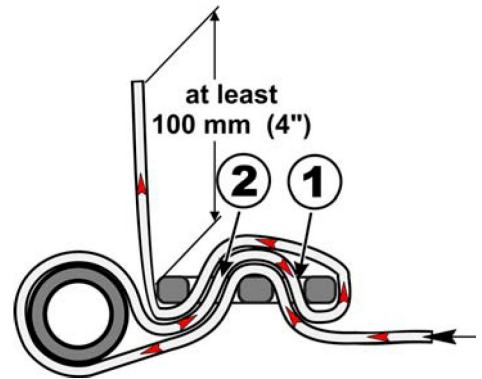
③ Fixing points must be either stock or backed by a steel plate on the outside of the car.

④ Shoulder harness should be horizontal, or no more than 20° below horizontal, unless otherwise approved by the manufacturer.

⑤ Do not mount any anti-submarine belt around the front of the seat, but rather down through an approved opening in the seat bottom.

⑥ Do not route shoulder harnesses around the outside of integrated headrests. They can slide off the shoulders.

⑦ Mounting points must be free to rotate or oriented in line with load.



If you are unsure if your harnesses and/or seats are installed properly, contact the event chair prior to the event to have your installation inspected by the Boston Chapter. Aftermarket harnesses may be closely inspected at the track and improper installation must be remedied before the vehicle will be allowed.

## E30 AND E36 BALL JOINT WARNING

E30/E36 ball joint may be prone to failure, particularly when used more than 20 days on dry pavement with R-compound tires. Absolutely no play should be felt when compressed with large pliers. We recommend preventative replacement of the control arms.

## COMMON ISSUES

Common reasons to fail the at-track inspection:

- Didn't get car inspected before event
- Brake fluid contains excessive moisture
- Loose wheel bearing
- Loose ball joint
- Loose battery
- Improperly installed harness belts
- Seat and harnesses not compatible
- Restraint not equivalent

Typical day-ending mechanical failures:

- Boiled brake fluid
- Consumed all brake pad material
- Corded a tire
- Broken engine belt
- Cooling issues - water pump failure, thermostat stuck, hose burst, radiator broken (especially at the plastic seams)
- Power steering fluid leak, often caused by worn engine mount