

How to pass technical inspection

The goal of Baja technical inspection is to confirm that your car complies with the requirements of the Baja SAE rules. The technical inspectors want you to pass tech and will clearly identify any areas that need to be corrected.

The inspectors' goal is to thoroughly finish your inspection and to do it as quickly as possible. Your team can make that happen – and make technical inspection easier on yourselves - by being prepared.

Do it yourself Inspection – Teams should take the self-inspection their car seriously. Use the tech inspection form found on the South African Baja website during your self-inspection as this is the same form that will be used by the technical inspectors. If you have a question about how a rule will be interpreted ask yourself the following: (1) what is the purpose of the rule? Every rule has a purpose which should be readily apparent. And (2) is what we've done a "good engineering practice"?

Rules Question Documentation – If your team submitted a rules question and received an interpretation from the Rules Committee; then bring copies of both the question and answer with you to technical inspection. Without your copies the inspectors won't know the Committee's interpretation and will make their own.

What to bring to technical inspection

- Vehicle
- All your teams drivers
- Driver's equipment including Helmets, Drivers Shirts, Gloves, Goggles, Wrist Restraints, and Neck Support/Collars.
- Fire extinguishers
- Vehicle documentation
 - Completed South African technical Inspection Sheet
 - Roll cage material documentation as per rule B8.3.12 (Any Required Calculations, Recites of the purchase of the material).
 - Roll cage specification sheet
 - Design specification sheet
 - Hard copy of design report
 - Hard copy of cost report
 - Design/redesign comparison document
 - any correspondence concerning your documentation. The inspectors may NOT have records of your documentation and won't know what's been approved
- Weld Samples per rule B8.3.11
- Tools to remove your body panels and any parts that are blocking inspection access
- Material to record the inspectors' comments

Re-inspection – If your vehicle doesn't pass tech the inspectors will identify the items that must be brought into compliance. When you've completed the corrections the inspectors will examine the items that did not comply. Teams will be allowed to have their vehicle inspected at any time during the event but will not be allowed to partake in any of the finished events.

Inspection Stickers – The technical inspection sticker is issued in 3 sections as your car passes different parts of the inspection process. The first sticker is given at Briggs and Stratton governor setting. You will be given the second part of the sticker after you pass technical inspection, and the third part will be after the vehicle passes the dynamic brake test.

Brake test - Many teams struggled to pass the brake test, the most important tip is that teams should perform their own brake test before arriving at the competition. If unsuccessful use the below tips to troubleshoot the braking system.

- Use fresh, non-fouled brake pads that are of appropriate design for the brake rotors and make sure the brake rotors are clean, dry, and not fouled.
- Use properly sized master cylinders.
- Use a properly designed motion ratio.
- Check to see that any mechanical linkages, such as bias bars, calipers and pistons can move freely.
- Check for any line obstructions or leaks.
- Construct brake systems that minimize locations where air can become entrapped and ensure that bleeder valves on brake calipers are properly oriented to bleed entrapped air.
- Construct brake systems that can supply enough brake fluid to the braking system.
- Design for two truly independent systems. Avoid using single master cylinders that have two internal circuits.

Safety gear - The rule stating all arm-restraints and neck-supports must be SFI 3.3 rated and not older than three years from current competition date. will be strictly enforced for the 2013 event. **No person will be allowed to drive a Baja vehicle without the correct safety gear as specified in the 2013 SAE Baja rules including the South African amendment's.**

List of technical inspection infringements for the 2012 Event

Please use this list as a guide to ensure your vehicle passes technical inspection the first time.

Rule ID	Description	Amount of Errors				
SA.2	Belt loose ends must be restrained					6
B9.10	Fire extinguisher mounting incorrect					6
B12.6.1	Fuel not draining from drip pan					6
B3.3.2	External kill switch location				4	
SA.1	Fuel tank not empty			3		
B8.3.13	Roll cage specification sheet not correct			3		
B10.2.2	Shoulder belt lateral separation incorrect			3		
B10.2.1	Shoulder belt vertical location			3		
B8.4	Sharp edges		2			
B8.3.11	Weld samples missing		2			
B8.3.11A	Insufficient quality sample A		2			
B8.3.11B	Insufficient quality sample B		2			
B9.9	Leg and foot shielding incorrect		2			
B10.3.1	Lap belt location incorrect		2			
B10.4.2	Redirection and chaffing not satisfactory		2			
B16.1	No tear offs		2			
SA.3	Cracks/deformation of roll cage elements	1				
B3.3	Kil switch operation not satisfactory	1				
B3.3.1	Incorrect Kill switch type	1				
B3.3.3	Kill switch wiring not satisfactory	1				
B5.3	Vehicle Number - body	1				
B5.2.3	Cutout size incorrect	1				
B9.7	Body panel gaps too large	1				
B10.1	Incorrect driver restraint	1				
B10.1.1	Driver restraint buckle	1				
B10.2.3	Shoulder belt mounts protected by firewall	1				
B10.4.1	Anti submarine belt mounting	1				
B10.5.2	Arm restraints prevent arms from exiting frame	1				
B15.1	Power train guard material	1				
B15.2	Power train guard finger requirements	1				