

# **HPI Baja Endurance Challenge Final Rules 2010**

## **Welcome to the HPI Baja Endurance Challenge**

Thank you for participating in the HPI Baja Endurance Challenge! For several years, the HPI Challenge has been a way for new and experienced racers from around the world to get together and just have fun racing and competing in an organized, friendly way. We know that many people enjoy running their Baja buggy with friends, and we decided to provide a competitive format for racers to meet, have fun and race with other Baja buggy fanatics!

These rules are provided as a way to provide a fair and equal racing opportunity for racers across many countries and languages.

While these rules are provided specifically for the HPI Baja Endurance Challenge Series Final race, they may be used by any country participating in the HPI Baja Endurance Challenge Series, either as a guide or the actual set of rules used by that country.

Where these rules do not specifically state, the EFRA rules will be used as a guideline or specific clarification, please see the EFRA rule handbook:  
<http://www.efra.se/pages/rules/rules.html>

All the staff at HPI Racing hope that you will have a fun and fulfilling racing experience with your Baja buggy!

Sincerely,  
Frank McKinney  
HPI Marketing

**Last Updated: 11 August 2010**  
Please see text in **RED** for changes

## Official Language

English will be the official language of the event. Please make sure that at least one person on your team can understand instructions and converse in English.

## Entry Fee

The entry fee is **€250 per team**, regardless of the number of members on each team.

## Weekend schedule (all times approximate)

Friday: Registration, booking in, Qualifying

- 09:00 HPI Staff, Race Director and Race Organizer meeting, pits open
- 11:00 to 13:00 – Technical Inspection open; tyre/shirt collection
- 13:30 – Driver/Team meeting
- 14:00 – 16:00 Free Practice
- 17:00 – 18:00 Qualifying
- 18:00 – Track closed
- 19:00 Evening Activities (trip to Utrecht city centre for dinner and fun!)

Saturday: Race

- 08:00 – HPI Staff, Race Director and Race Organizer meeting
- 08:10 – Team Manager Meeting with Race Officials if necessary
- 08:15 – Group Picture; Pre-Start; Team Presentation
- 09:00 – Race Start
- 21:00 – Race Finish
- Top Three car teardown and inspection
- Prize Presentation
- HPI Racer's Banquet
- HPI Prize Raffle

## Location

Address

RACO2000

Floridadreef 17

3665AM Utrecht

The Netherlands

Website: <http://www.raco2000.nl/>

Telephone: 0653270356

Navigation coordinates: 52°07'55.37" N    5°05'19.76" O

Nearest regional airports: Amsterdam Schipol

Approximate driving time: less than 45 minutes

## Saturday Evening HPI Racer's Banquet

After the race and prize ceremony on Saturday evening we will have the **official HPI Racer's Banquet** at the track. There will be plenty of food, any drinks must be purchased separately.

## **Team Registration and Car Inspection**

Before qualifying, all teams must register and bring their race car and transponder number to the timing/inspection area.

The team manager will need to:

- Confirm driver names
- Collect race T-shirts for each member of their team (1 shirt per racer, 6 shirts maximum per team)
- Provide at least one transponder number for race officials
- Clear any payments outstanding with HPI staff
- Collect handout tyres and/or wheels

At the same time, the car will be inspected by HPI staff (see below)

## **Technical Inspection**

All cars must pass inspection by HPI personnel before qualifying. Each chassis will be marked during inspection.

Immediately before the race start, each car will be checked for the chassis and engine marks before the race can begin.

HPI reserve the right to require any race team to disassemble any parts of the car (engine, tyres, brake, diff, etc.) while under inspection.

**New for 2010:** At random points during the race, teams will be asked to bring their cars into the pit lane for a very quick inspection of the tyres, chassis and other parts. The inspection will not take longer than a normal fuel stop. The race car will also be inspected at random times during repairs and refuelling. The inspection times will not be pre-announced. All teams will be randomly inspected at least once every 4 hours of racing.

Teams using unmarked tyres or chassis will be subject to immediate penalties and the car will not be allowed to race until it fully complies with the rules and has been inspected again.

The top 3 teams, plus 2 teams chosen at random, will be required to disassemble their cars after the race.

## **Car**

HPI Baja 5B & Baja SS cars or Baja 5T trucks only. No other make/brand/car allowed.

Changing vehicles during the race is not allowed. Each chassis will be marked during inspection and unless the team can demonstrate damage sufficient to replace it, the team vehicle must start and finish the race with the same chassis. All other components on the vehicle are allowed to be changed. Teams are allowed to bring extra vehicles to use for spare parts.

**New for 2010:** Teams using a chassis or engine during the race not marked with inspection tags will be given an immediate minimum 10-lap penalty.

## **Options and Modifications**

Unless otherwise allowed elsewhere in these rules, only HPI, HB or Edit parts specifically made for the Baja 5B buggy are allowed. To provide fairness for all racers, the official options must be announced on the HPI EU website on or before 1 August 2010. New parts are only announced when they are in stock at HPI EU, so distributors will have a chance to order the parts in time for the HPI Baja Endurance Challenge Finals.

No non-HPI, non-HB, or non-Edit options or hand-made modifications are allowed that affect suspension geometry, provide substantial weight changes, affect engine or braking power, clutch, etc. If in doubt, please contact HPI staff before the event or *before qualifying starts* to verify the legality of the part/modification. Have a supply of spare or otherwise legal parts to return your car to stock form in case your modification is not allowed.

Some simple modifications will be allowed to improve durability or maintenance, however they must be *simple* modifications *any* team can do and not consist of extensive modifications. Examples of these modifications are on the HPI EU website in the 'Bulletproof Your Baja' tutorial: <http://www.hpieurope.com/walk.php?lang=en&id=22>.

## **Non-HPI parts**

In general, using non-HPI ball bearings, screws, air filters, washers, shims, nylon ties, shock covers, rock guards, turnbuckles, wheel scrapers, etc., are allowed within the 'spirit' of the rules. However, any attempts whatsoever to modify any component, system or part of the car using these parts will be grounds for immediate disqualification.

Team managers must ask HPI personnel about any parts they have any doubts about.

## **Dimensions**

The length and width of the standard HPI Baja buggy or truck is not to be altered.

## **Engine**

Only standard HPI Fuelie 23cc, 26cc and 26S engines are allowed. Any spark plug may be used. Any air filter or cover may be used. Filter or cover of pullstart or flywheel is allowed. Modification of any internal or external engine part is not allowed whatsoever.

**New for 2010:** Teams must use one engine only, which will be marked and may be rebuilt during the race. Teams using an engine during the race not marked with inspection tags will be given an immediate minimum 10-lap penalty.

## **Fuel Tank & Fuel**

Only the standard HPI Baja fuel tank is allowed. No modifications are allowed. Only standard-size fuel tubing is allowed. Excessive lengths of fuel tubing will

not be permitted. A single in-line fuel filter is allowed. Fuel will be from normal 'pump' sources (i.e., a car petrol station) and supplied in the fuelling area at the race track. Custom mixed or race fuels are not allowed. No additives other than standard HPI 2-cycle engine oil are allowed. HPI reserve the right to check any race team's car for fuel capacity.

Teams will be informed of any pre-mixing at the driver meeting.

### **Drivetrain**

Clutch, spur gear and all other parts of the drivetrain must be as standard, except for allowed option parts. Any diff oil or grease may be used.

### **Suspension**

Standard HPI shocks must be used. Altering suspension geometry in any way is not allowed. Any shock oil may be used. Shock 'socks' may be used. **New for 2010:** The internal parts of the shock may not be altered or replaced.

### **Brakes**

Rear wheel brake must be as standard. HPI options are allowed. **Revised for 2010:** No front brakes or alternate linkage of any type are allowed.

### **Tyres**

Only HPI brand tyres, wheels or foams are allowed. Tyres may not be cut, narrowed, widened, glued together, belted or modified in any way. Glue may be used only to attach tyres to wheels.

Race teams will be supplied with these HPI tyres and wheels for the race:

#### *Buggies*

##### *Front*

2 pairs 4736 Dirt Buster Rib Tyre M Compound on Black Wheel

##### *Rear*

1 pair 4789 Dirt Buster Block Tyre HD Compound on Black Wheel

1 pair 4737 Dirt Buster Block Tyre S Compound on Black Wheel

2 pairs 67969 HB Proto Tyre (White)

2 pairs 67972 HB Khaos Tyre (White)

4 pairs Super Star Rear Wheels

4 pairs Bead Lock Rings

**New for 2010:** Teams may bring their own HPI tyres, wheels & inner foams to use. The tyres & wheels to be used must be brought to scrutineering before racing begins to be inspected in their original, un-opened packaging. A tyre assembly area will be provided where teams can assemble their tyres. The tyres will then be marked by HPI staff and the tyres can then be used. Tyres that are unmarked may not be used during the race.

The maximum total number of tyres allowed (including those supplied by HPI) are:

Front: 0.5 pairs per hour of racing (6 pairs for 12 hrs, 12 pairs for 24 hrs, etc.)  
Rear: 1 pair per hour of racing (12 pairs for 12 hrs, 24 pairs for 24 hrs, etc.)

For example, if HPI provide 7 pairs of rear tyres to each team for a 24 hr race, the teams are allowed to bring up to 14 pairs of their own, which will all be marked.

**New for 2010:** Teams using tyres during the race that are not marked with inspection tags will be given an immediate 5-lap penalty.

Alternately, we may announce no limit to the number of tyres used during the race. Teams will be informed before they must prepare for travel.

### **Bodyshell & Wing**

**Revised for 2010:** Only HPI Baja 5B or 5T polycarbonate upper and lower bodyshells (as appropriate for the chassis) are allowed and must be used.

**New for 2010:** Bodyshells must remain on the car for the entire race. The same bodyshell must be used. Spare bodyshells are allowed, however these must be painted in the same colours and similar scheme as the original. Separate 'high visibility' bodyshells are not allowed. Cars running without bodyshells must be brought into the pits immediately and fitted with a legal bodyshell or face a penalty.

**New for 2010:** Vehicle numbers must be placed across the front window. If there is no front window, the number must be on the bonnet/hood or roof. Custom numbers are allowed, these must be clearly visible as the car drives under the driver stand, across the timing line and on the pit straight.

Windows/deflectors are allowed on the roll cage or under the Baja 5T bodyshell to keep rain & dirt off the air filter.

Only standard HPI Baja 5B wings are allowed on the buggy, and only standard HPI Baja 5T spoilers are allowed on the truck. No additional material is to be added other than decals, etc. No other wings, fins, etc. are allowed anywhere on the car. Reflective stickers are allowed for night visibility.

Race teams are encouraged to paint the bodyshell with their national flags or colours!

Lights, reflective strips or glow strips are allowed and encouraged for all teams during night driving.

### **Bumpers**

**Revised for 2010:** Front, side or rear bumpers are not allowed.

### **Electronics**

Radio Equipment

Only radio frequencies allowed in The Netherlands are allowed. This includes 40 MHz frequencies. HPI recommend using 2.4GHz radio systems, which do not require any frequency crystals and prevent radio conflicts and frequency changes. However, if a high frequency radio system is used, race officials will not be able to help in case of radio interference.

If the team is not using 2.4GHz radio equipment, three sets of frequency crystals are required. For a complete list of frequencies allowed, please see this link: <http://www.ukrcc.org/germany.html>. It is up to the race teams to supply their own legal frequencies. If a team does not use a legal frequency, race officials will not be able to help in the case of any radio problems.

#### Data-Logging Devices

Data devices are allowed. If these devices transmit information to the race team while the car is on the track, these devices are not allowed to interfere with any teams' radio equipment. HPI reserve the right to require the removal of data devices from team cars if they are thought to interfere with radio equipment.

#### Receiver Batteries

Optional receiver batteries are allowed in the Baja cars, however the weight of the race car must not be below the weight of a standard Baja 5B. If using lithium-polymer or lithium-ion batteries, reasonable protection is suggested to prevent any problems. Only Li-Po or Li-Ion chargers are to be used, at a proper charging rate. If in doubt about the safety of the batteries we suggest a charging 'sack' or pouch type container to prevent any damage to the pit area or car. To ensure the safety of all participants and the premises, **we will require fireproof charging sacks or pouches for Li-Po or Li-Ion batteries.**

#### Transponders

Transponders must be 'personal' type transponders with a serial number. One personal transponder, with serial number, per car must be provided by the race team.

## **Race Team**

A race team will consist of a minimum of four racers from the same country. This allows for one driver, one pit crew, one mechanic and one team member resting at any time during the race. Any team may have a maximum of six racers. Extra team members in the form of mechanics, etc., are allowed.

For insurance purposes, \*all\* team members must be members of their country's RC racing organization (BRCA, AECAR, DMC, etc.). Team managers may be required to provide proof of membership for each team member at the time of registration.

Race teams are encouraged to bring their national flag, and wear their national colours during the team presentations on Saturday, and during the trophy presentation on Sunday!

## **Team Manager**

One member of the race team must be the 'manager'. This person is responsible for communicating with HPI Europe staff about team accommodations, names of team members, car information, etc. – everything to do with the team must be through the team manager. This makes it much easier for HPI and race staff to work with all the teams.

The team manager is required to speak English as this is the official language of the HPI Baja Endurance Challenge Finals. *Only* the team manager may discuss penalties, infringements, complaints and/or grievances with HPI staff. If any member of a team causes a disruption to the race, impedes or harasses race officials, track staff or HPI staff members, that driver or their team may be subject to disqualification, dismissal, banning, etc., from the track and race weekend.

The team manager is required to attend any team manager meetings to be held during the race weekend (at least one on Saturday morning). If any issues make themselves known that could affect the race weekend, further team manager meetings may be announced. These meetings cannot begin without all team managers being present, so prompt attendance is required. Reference EFRA rule 8.8

## **Driver Meeting New for 2010**

Before practice begins on Friday, all drivers must attend the official driver meeting. The meeting will be conducted in English, but every attempt will be made so that all drivers will be made to understand what is said.

Items to be covered include:

- introduction of race officials and HPI staff
- marshal, track crew and spectator safety
- security in the pit area
- smoking in the driver, pit lane, pit area and timing area
- pit area power usage – soldering irons, toasters, kettles, etc.
- pit lane procedure
- refuelling and fuel mixture

- practice procedure
- qualifying procedure
- race start procedure
- driver time sheets
- warnings and penalties procedure

## **Race Rules**

### **Penalties and Flags Revised for 2010**

The HPI Challenge races are not under EFRA rules, however we will reference EFRA rule 8.9 and 8.10 when needed for guidelines in deciding penalties for drivers and/or teams.

Race officials and HPI staff will act as referees as much as possible.

#### **Warnings**

The first time a race official witnesses an act by any driver or team member that falls under a penalty, they have the right to give the driver and team manager an official warning. All warnings and penalties will be noted in writing and shared with all race officials. The warning is transferrable to the remainder of the team. The team manager must relay the warning to the rest of the team, and is allowed on the driver stand to relay the warning to the driver.

#### **Penalties during Qualifying**

Penalties that occur during qualifying will result in a warning, as above. If the penalty happens again during qualifying the team will take a demotion of at least one place on the starting grid, and/or start with negative laps. All warnings given during qualifying will transfer to the race itself.

#### **Penalties during Racing**

Penalties that occur during racing will result in a warning, as above. If the penalty happens again during racing, the team will receive a stop-and-go penalty and/or penalty laps during the race.

Examples of on-track actions that will result in warnings/penalties:

- Deliberate corner-cutting
- Team driving or blocking or other unsportsmanlike behaviour
- Ignoring race officials
- Dangerous, uncontrolled or wild driving, or excessive hitting/block of other cars, whether intentional or not
- Not slowing around track repairs
- Car repairs made on the track
- Refuelling outside the designated refuelling area
- Excessive yelling and/or cursing on the driver stand
- Driving too quickly through pit lane, or pit crew stepping onto pit lane

Race officials and HPI staff will discuss penalties with team managers ONLY. If the team manager is not available, a team member will be informed of any warnings or penalties, and the driver must be informed immediately.

### **Race Format**

All practice, qualifying and race times will be run regardless of the weather or external lighting conditions.

### **Marshals**

- Race teams must be able provide at least one marshal at all times. Depending on the number of teams, some teams may not have to marshal for the duration of each track period.
- Marshals must be members of a race team.
- Teams may alternate who is marshalling for their team at any time, taking care to change quickly, and not cross the track at a dangerous area.
- Marshals must carefully watch their area of the track ONLY, and turn over crashed cars as quickly as possible.
- Only marshals are allowed to be on the track. Mechanics or pit crew are not allowed to be on the track and must stay in the pit area or pit lane.
- In the case of a car engine stopping, only three attempts (pulls) are allowed to restart the car. If this does not start the car, it must be brought safely to the edge of the track by the marshal. A team mechanic may then retrieve the car from the edge of the track.
- Any team member that is not a marshal who goes onto the track or racing surface and impedes or damages another car will earn a 10-lap penalty for their race team.
- **New for 2010:** Mobile phones are not allowed to be used by turn marshals. Marshals must pay full attention to their duties and not talk to other racers or team members.
- **New for 2010:** All marshals must wear sturdy, enclosed footwear at all times (no flip-flops, no open-toe sandals, etc.), be able to quickly retrieve crashed cars and be able to lift cars.
- **New for 2010:** Team managers will be asked to relieve marshals who are unable to fulfil their duties.

### **Pit Lane**

- **New for 2010:** Cars must drive slowly (below walking speed) through the pit lane.
- Up to 2 mechanics or pit crew are allowed into the pit area per team at any time. **New for 2010:** Depending on the size of the pit lane, we may limit pit crew to just one person.
- For safety reasons, pit crew are not allowed to step on the pit lane surface.
- Mechanical work such as changing tyres, cleaning, etc., may take place at the front area of the pit lane (the first area approached by the car as it enters pit lane).
- **New for 2010:** Major mechanical work such as suspension repair, etc., must be made in the pit tent area (e.g., not in the refuelling area or pit lane).
- **New for 2010:** Pit crew should be positioned under their driver whenever possible to minimize shouting.
- All fuelling activities (mixing, removing fuel cap, adding fuel, securing fuel cap) must take place in the designated fuelling area. The fuel handler must inform the fuel crew when their car is coming in for fuel to allow time to fill a fuel bottle for the car.

## **Qualification**

Qualification will take place Friday afternoon from 17:00 to 18:00. All cars must have transponders fitted. Teams running a car without a transponder will not be counted for qualifying in the Final race and must start from the back of the grid. Cars will be ranked in order of the fastest single lap time achieved during qualification. There is no limit on the number of laps for each team, or for the number of drivers driving during qualification. In the case of an identical lap time, the second fastest lap time will be the tie-breaker, and so on. Cars not completing a lap during qualification will start at the back of the starting grid.

## **Final Race**

The Final race will take place Saturday from 09:00 to 21:00 on Sunday. Cars not able to join the grid on time must start from pit lane and will not be allowed to exit pit lane until all cars have passed the pit exit after the official start.

## **Driving Stints**

All team members must drive the car approximately the same amount of time. For example:

- a team with 4 drivers must have each driver drive for 3 hours
- a team with 5 drivers must drive for approximately 2 hours 30 minutes
- a team with 6 drivers must drive for 2 hours each

Drivers must sign in and out of the driver stand as they begin and end their driving stint. The times will be noted by a race official, entered into a computer spreadsheet and compared at the end of the race.

Teams with a large variance (10% or more) in driving times for their drivers will be penalized a minimum of 10 laps at the end of the race, and may be excluded from the race results.

## **Parc Ferme'**

All finishing cars must go into a parc ferme' for a complete inspection by race officials and HPI staff. After the car is brought into the pit lane and shut off, the team manager must bring the car into the inspection area. No race team members are allowed in Parc Ferme' except to disassemble cars as required by HPI staff. Parc Ferme' will not open until at least 30 minutes after the end of the race. Race officials and HPI staff will discuss cars or infractions with team managers ONLY.

## **Prize Ceremony**

The official prize-giving ceremony will be held within 30-45 minutes of the race finish.