



LONG DISTANCE EVENT CAR PREPARATION GUIDE AND TECHNICAL REGULATIONS



Photo: Blue Passion



HERO-ERA





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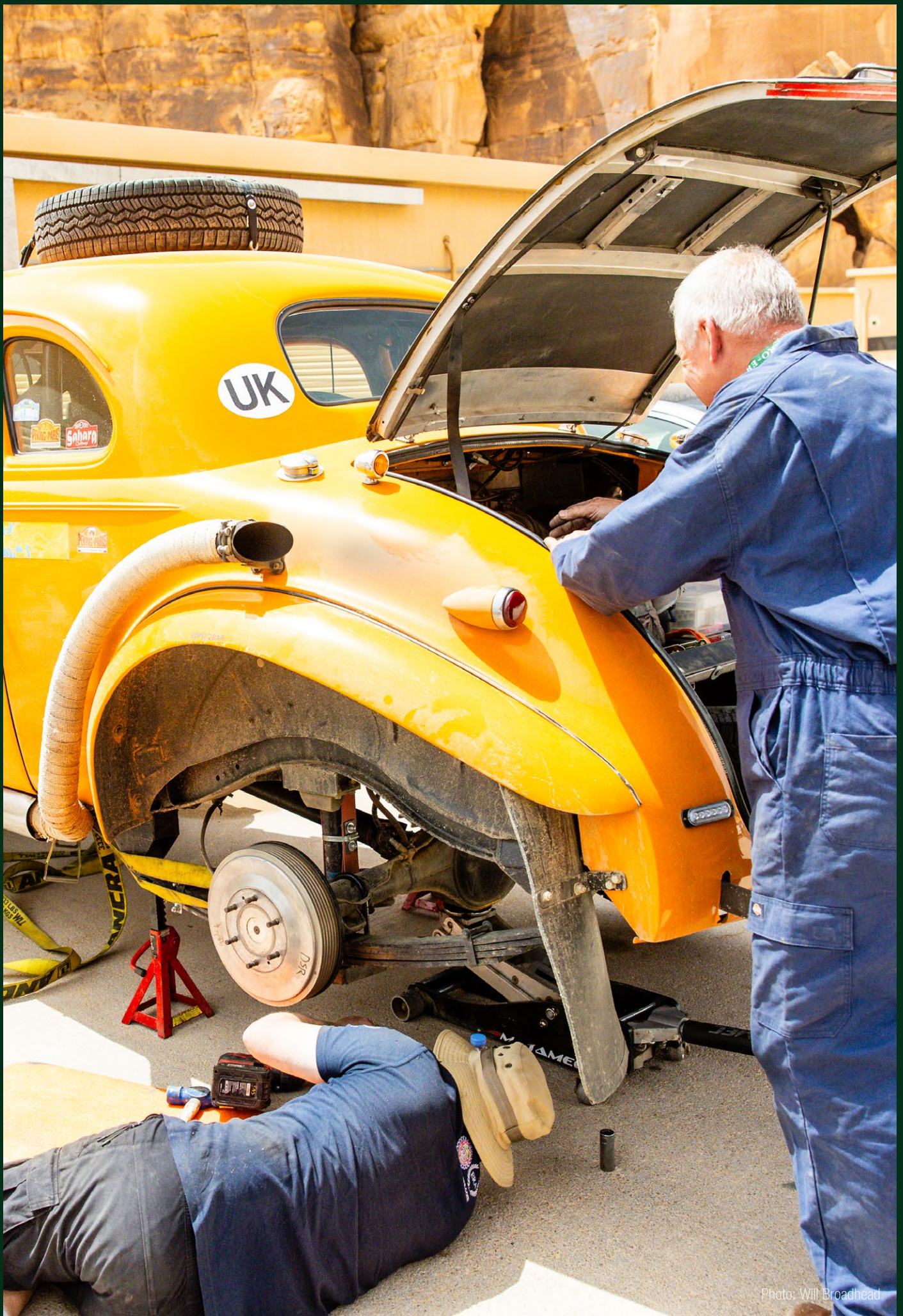


Photo: Will Broadhead



LONG DISTANCE EVENT CAR PREPARATION GUIDE

READ THOROUGHLY AND SHARE WITH YOUR CAR PREPARER

SUCCESS BEGINS WITH THE PREPARATION OF YOUR CAR

The best way to enjoy the whole experience of a long-distance event is to complete the journey without mechanical problems. This is achieved by careful car preparation and continues with regular on-event car maintenance. Pay equal attention to your car build and its on-event maintenance.

We are not going to suggest which car is most suitable, as most entrants have already made this decision. One of the joys of HERO-ERA events is the rich diversity of machinery taking part but some basic principles apply to all vehicles.

These car preparation notes should be read carefully by the competing crew and whoever is preparing the car. The suggestions are not compulsory but are based on the experience gained by some of the most respected mechanics and car builders in the business. These teams have travelled with HERO-ERA on numerous Peking to Paris events and countless other long-distance rallies through over 50 countries around the world. Think carefully before you ignore their advice and experience!

THE BASICS - KEEP YOUR CAR SIMPLE AND TRAVEL LIGHT

Test Thoroughly

Your build schedule must include time for a proper test programme. The car should be fully loaded with a full tank of fuel and everything you plan to take on the actual event. A key recommendation from our successful rally competitors is to drive some miles in one single trip once the car is prepared, to check the car mechanicals and the crew's comfort. If all competitors followed this approach, the mechanical assistance crews would have much less work to do.

Weight

Weight comes at the top of our list as the biggest enemy for any rally car, particularly on an event demanding endurance events. The temptation before such an adventure is to pack as much stuff as you can, but this puts enormous strain on your car's suspension, brakes, engine and transmission, as well as hampering access to everything in the car.

Ask yourself whether, just for a month, you can do without something. Fridges, tables, chairs, high heeled shoes, stoves, kettles, televisions, whole rounds of cheese – you may laugh but we’ve seen it all – and most of it can be done without. Weighty items that you feel are essential should be packed as low as possible in the car and kept between the front and rear axle lines. See the separate section about tools and spares. No amount of weight should be considered too small. “Oh, don’t worry it doesn’t weigh much” ... say this 20 times and you suddenly have a significant extra load. This approach can be extended to parts of the car, look at everything and consider if you actually need it. Bumpers can be replaced with the spare leaf springs for example.

Major Components

Your engine, gearbox and axle should all be in first class condition. Gearboxes and axles will often fail quite suddenly as they become older so all major components should be stripped and rebuilt by an expert for your model of vehicle to be sure they are in first class order before starting the event.

Renewable Components

Do not start the event with wheel bearings, or a clutch, or suspension joints, or any replaceable items that have already done thousands of miles. Make sure that any component subject to wear that can be replaced is replaced. If removed wheel bearings appear unworn, then carefully repack them with new grease and carry them as spares, but do not assume that anything will be OK just because it has not failed yet. Avoid HMP (High Melting Point) grease in wheel bearings as it tends to be thrown out rather than being retained in the bearing. Older cars never have totally sealed wheel bearings and will suffer from water and dust ingress. Regreasing during the event will largely eliminate this problem.

Eligibility And Scrutineering

Your car will be checked to make sure it is safe and complies with the regulations before being allowed to start the event. This may be a little nerve-racking but should not present any problems if your car is properly prepared. Take care to comply with the HERO-ERA Long Distance Technical Regulations as many non-period modifications are prohibited. A FIVA ID Card, which will list all modifications, is recommended but **NOT** compulsory.

Long distance Technical Regulations are to be found at the end of this document and in the Event Regulations. Make sure all the items required by the Regulations such as mudflaps, navigation and safety equipment are properly installed. Make sure your car is clean, tidy and organised, and that all your lights, horn, wipers etc. are working and have all the correct safety equipment ready for inspection before you present it for scrutineering.

Comfort & Convenience

Make sure your car seats are comfortable. Ten minutes round the block will not give you a hint of how you will feel after a 15-hour day followed by many more of the same. Do not be too quick to throw out the carpets. A car without carpets or trim will be lighter but the tiring effect of days sitting in a noisy tin box will soon take its toll. Make your car as comfortable as possible.

PREPARATION TIPS

IN THE ENGINE BAY

1. Border officials want to see that your engine and chassis numbers match the paperwork. Make your life easy at borders by pop-riveting or screwing a clearly readable metal engine number plate to the top of the engine and a similar chassis number plate somewhere easy to see within the engine compartment.

2. Number your plug leads, mark the firing order somewhere obvious and make the top dead centre mark very obvious.

3. Ensure your engine can run on low octane fuels. You may be told that fuel in the remote locations is 95 RON, but it is not. High compression engines with high lift cams are not suitable for this event and might

easily result in a holed piston or worse. Don't consider octane boosters, you could not carry enough. Endurance events are about reliability and not squeezing maximum horsepower from your engine.

4. Waterproof your engine and ignition. If the HT leads have rubber sleeves where they enter the distributor cap use thin (2mm or 2.5mm wide) cable ties around the sleeves to prevent them from expanding and water getting in.

5. Test your waterproofing thoroughly. If you do not have a ford or river crossing close by, give your engine bay a good soaking from a hose or gently used pressure washer before starting the engine. Avoid using oil-based dispersants such as WD40 until your engine refuses to run due to water. Prolonged use of such products swells any rubber parts and makes water ingress more likely.

6. On bumpy roads engines move more than you can imagine. It is important to limit this movement to prevent a damaged radiator or simply the engine coming free. Engine mounts are designed to restrict movement in all directions; the worst rely on a sandwich of rubber bonded to metal. Straps between the engine and chassis, or caps over the engine mounts can be effective to restrict movement. Carry spare engine mounts. For the most effective solution you should search Google Images for 'Escort World Cup engine mounts' to find design ideas that may be adaptable for your car.

Exhaust System

Exhausts are a major source of work for our mechanical support teams, usually because they are too rigid, made of the wrong material, or poorly supported.

1. Your exhaust system should be made of mild steel. Do not use stainless steel, it requires specialist welding that you will not find in remote villages.

2. Always build flexibility into the exhaust system by using modern flexi sections, or the more traditional loose fitting slip joints.

3. Avoid heat wrapping the exhaust as it can cause cracking and make subsequent repairs more difficult.

4. Add extra rubber mounts and fit chain or wire loops to stop the system falling onto the road in the event of a failure.

5. Skid any silencer or muffler leading edges so the exhaust rides over obstacles rather than taking the full impact.

Drive Train

Weight is the enemy for any rally car, but some items will stop all further progress if they break. Striking the right balance is the trick when considering which spares to take. We do not recommend packing a spare gearbox, but half-shafts should be considered.

1. The axle and differential are so important that they should be rebuilt by an expert before the event. Do not use half shafts that show any sign of twisting near the splines.

2. Even so-called unbreakable drive shafts are known to fail, so carry spares and the necessary tools to fit them.

3. If your particular model is prone to breaking half-shafts, get some reinforced ones made out of stronger steel. If the bearings are pressed on, then make sure these are fitted before you go.

4. As ever, you should trial fit any spares you carry to be sure they fit and that you have the tools, seals and gaskets for the job.

5. The prop shaft should have new universal joints fitted and spare joints should be carried.



Photo: Will Broadhead

Fuel System

Fuel blockages are a very common problem. The inside of an old or rarely filled fuel tank will often be rusty and rubber fuel hoses perish. The rust or perished rubber will quickly flake off and clog the fuel system.

1. The fuel tank should be thoroughly flushed or ideally replaced with a new one to be totally sure there is no rust lurking. Your fuel capacity should be large enough for 400 kilometres range.
2. Replace fuel hoses with high benzene resistant hose to avoid problems caused by old age, or the corrosive fuel found abroad. Google 'low permeation fuel hose'.
3. Keep the fuel system simple, easy to maintain and easily accessible. Make sure you are familiar with all the component parts. It is no use finding there is a reserve tap, or one way valve hidden somewhere when you are stranded in the wilderness.
4. Consider fitting a good quality marine or commercial fuel filter with a clear inspection bowl (such as the 'Racor 100' range or similar) and carry spare filters for replacement.
5. Do not rely on the small and cheap in-line fuel filters. They become blocked very easily.
6. Make sure your fuel pump can deliver the correct fuel flow at the correct pressure for your engine, neither being too high or too low. Make sure the pump is fitted the correct way up according to the manufacturer's instructions and consider a second pump mounted with a changeover switch.
7. If your carburettor sits on top of the engine in a hot engine bay, you might consider a recirculating fuel system but remember there is no place for a complicated fuel system that the crew does not understand. A recirculating fuel system requires knowledgeable design and installation to avoid overloading the fuel pump or suffering low fuel pressure. A small restrictor sleeve in the return line with a bore of approximately 1mm is usually all that is required. Avoid pressure regulators and other unnecessary complexity.

Ignition

Without a spark your engine will not run so keep your ignition system simple and reliable.

1. Our preference is a basic points and condenser ignition system. With plenty of spares and regular maintenance this option is probably the most reliable and the easiest to fix when it goes wrong.
2. If you do use electronic ignition buy the best you can obtain and avoid the cheaper aftermarket systems. Remember, if your electronic ignition fails there is little or nothing that will fix it in a remote area.
3. If you do choose electronic ignition, then carry a standard non electronic distributor. Fit this and get the car running well, mark everything up and then remove it. Carefully pack it away and make sure you know how to fit it.
4. Carry ignition spares. A rotor arm is very small, but your car will not run with a broken or faulty one. Take at least 3 rotor arms, 2 contact sets, 2 condensers plus a distributor cap and leads, and don't forget any other essential ignition system spares for your car. We recommend that you buy good quality points and condensers; there are lots of cheap alternatives available, but these have failed regularly, so try to avoid cheap aftermarket versions.
5. If your car runs a magneto ignition system, carry a spare magneto that has been previously fitted to your car and is known to work.
6. It is common rally practice to fit a spare coil next to the used one. When a coil fails, we have often found that a spare fitted next to the original has also failed after being subject to the same heat and vibration, avoid this situation.

Tyres

Tyres are a very personal choice, and you will be offered a lot of advice that can be confusing. Remember that most 'experts' have never experienced driving endurance events so treat advice with suitable caution unless it is from a respected previous participant or similar event veteran.

1. Normal car tyres are probably too susceptible to puncture to survive our endurance events.
2. Look for reinforced, commercial van or 4x4 tyres in a size suitable for your car. If considering 4x4 tyres, street or highway (ST / HT) treads are probably more appropriate than all terrain (AT) types. Avoid mud terrain (MT) tyres as they will dig into soft ground and will be dangerous on wet tarmac.
3. Be sure that all your tyres are the same size and consider what matching size might be available along the rally route in case you need to buy replacements.
4. Do not fit tubes unless your vintage car can only run with tubed tyres. Tubes should be carried for spares to quickly repair a tyre that can't easily be vulcanised.
5. Some readily available tubes, usually imported from the Far East, are very low quality and may split the first time they are inflated. If possible, seek out Michelin tubes, although even these are becoming increasingly difficult to obtain.
6. Remember that your tyres are an integral part of the suspension. If your tyres are too stiff or have the pressures set too high, they will overload and cause early failure of the suspension.

Electrical System & Wiring (inc: - Tripmeters, GPS devices and Trackers)

Old and poorly installed wiring is another item very high on the failures list. The sight of an engine bay with odd and unsupported wires draped everywhere with a multitude of 'scotchlocks' and odd connectors joining different bits of wire, is a sure sign of trouble ahead.

1. Replace push on terminals with properly crimped and soldered ring terminals, wherever possible, to avoid failures from vibration and old components.
2. The insides of old switches become corroded and filled with dust. Replace old switches with high-quality modern ones wherever possible.
3. Avoid unclipped and loose wiring. We all know that a piece of wire will break if it is bent back and forth a few times. Loose wires on your car are no exception. Clip or cable-tie all wires at regular short spaces so they cannot flap about.
4. A great deal of time can be wasted tracing faults in unidentified wiring. Carry a complete wiring diagram and make sure you know where any fuses are. Make a list and mark exactly what circuit each fuse protects and carry a full range of spare fuses.
5. Be sure that your battery is in first class condition. If it is more than a couple of years old, it should be replaced with a top quality new one. Do not use some battery types including AGM (Absorbed Glass Mat) and gel filled types; HERO-ERA mechanics still recommend fitting a good quality lead-acid car battery. Batteries must be securely fitted but must not be fully enclosed as they need to breathe.
6. If your car has a 6-volt electrical system, it must be changed to 12 volt. We know this involves a lot of work, but it is very unlikely that a 6-volt system will be trouble free and there is no way that we can fix a 6-volt system on an event.
7. Do not use 'scotchlok' connectors.

8. It is a good idea to wire in an auxiliary over-ride circuit from the battery via a switch to power the ignition coil in the event of everything else failing.
9. Do not overlook important but often forgotten items. Windscreen wiper motors often fail on old cars. The same goes for starter motors, dynamos and alternators. Replace them if you can or get an auto electrician to check or overhaul them. Use original parts not high torque starters or race parts.
10. You should install an accurate Tripmeter we recommend the Monit G100+ as this can be used with either GPS or a Wheel Sensor (with a second one fitted and wired for a quick swop over). Do not install a G200+ unless you are intending to use it connected to a GPS speed sensor and under no circumstances connected to a wheel sensor as this will attract a penalty.
11. If required by the Event Regulations you should install a mounting for the stipulated GPS device, currently the Garmin 276CX and ensure the power supply is fused correctly
12. On some events Spot Trace units are required as advised in the regulations, the wiring of these is **critical**, you must use the supplied SPOT waterproof power cable and connect to a permanent 12v supply and protected by a one-amp fuse. **Note: This must be independent of any battery cut off.** The mounting of the device must have the SPOT logo uppermost and obviously be in a position where it can see the sky! You should pack at least one set if not two of the AAA batteries used in the device as a backup.

Radiator And Cooling System

Your radiator is another crucial item so make sure it is in perfect condition and look after it.

1. The radiator and all water hoses should be new or professionally rebuilt. If there is any doubt, find a radiator repairer and have your radiator flushed and tested or re-cored. If holes or weaknesses are found, they can be fixed before a failure stops you during the rally.
2. Modern aluminium and composite radiators are very good but have a high-risk factor on our events as they are almost impossible to repair. An old-fashioned copper and brass radiator can often be fixed, either by our own mechanics or at a small local workshop along the way.
3. Avoid mounting the radiator too rigidly. The use of rubber mounting bushes can vastly reduce the risk of vibration fractures.
4. Protect your radiator from flying stones while ensuring it gets maximum airflow. Mesh over the front will help but make sure it is not so dense that the airflow is reduced.
5. The addition of electric fans will only cure low speed overheating issues. If your car overheats at speed, then there is an air flow problem. Adding an electric fan that obscures the radiator will make it worse. Retaining the original engine mounted fan is often the best solution but make sure the blades have no cracks and check them every day.
6. Do not fit your rally plate in front of the radiator. These are often fitted after testing the car and the first two days of a long-distance rally sees the service crews cutting many of these off to reduce overheating.
7. We advise avoiding waterless coolant products. If your car's cooling system is right, water and antifreeze is the best option.
8. Your spares should include a water pump and a full head gasket set.



Photo: Blue Passion

Suspension

On our roughest long-distance events, suspension failures are frequent and probably occupy a large part of pre-event preparation. Remember that good suspension is much more important than ultimate engine power.

1. Reinforce all suspension pick up points and upgrade the springs and shock absorbers to suit the tough conditions and heat your car will be subjected to. We recommend you carry a spare set of shock absorbers.
2. Prolonged vibration will loosen almost everything. Drill and wire lock key suspension fittings wherever possible.
3. Do not be tempted to supplement the standard springs with coil over shock absorbers but instead have stronger leaf springs made. Only use very reliable sources for any springs you have made and, be sure to schedule a long and fully laden test run over the toughest roads you can find before the rally starts. Poor quality springs will start to sag almost immediately.
4. If you decide to use existing leaf springs make sure the leaves are in good condition and can move. Dismantle clean and grease between the leaves.
5. Pay particular attention to shock absorber length. Too short and they will be destroyed or pull out of the body mountings or, too long and they will fail on full compression.
6. Fit axle straps to control the amount the axle is able to drop. This will protect your shock absorbers and body mountings on full droop.
7. Make sure you have high quality bump stops fitted to prevent metal to metal contact on full bump. Do not be tempted to use hydraulic bump stops, these can seize and cause major damage to suspension components and axles.
8. Avoid springs that are too hard or shock absorbers that are set too stiff. Your suspension needs to absorb the bumps rather than fight them.
9. Avoid using rose joints and/or spherical bearings in your suspension. Use high-quality rubber, polyurethane or machined PTFE bushes in your suspension to survive the tough conditions better.
10. Do remember to check that your modifications comply with the Event Regulations.

Under-Body Protection

Endurance Long-distance events you are competing on will be rough in places, so you need to protect the underside of your car. A sump guard to protect the engine and gearbox is the first essential, but all vulnerable components such as fuel tanks, brake and fuel lines, anti-roll bars and so on should be protected.

1. Do not fit too light a gauge sump guard. It is **imperative** to use 10mm or 12mm thick 'dural', 6061-T6, or similar grade aluminium, which is usually suitable for the main sump guard, while thinner material may be suitable for less vulnerable components.
2. Consider adding foam between the sump and the guard to prevent trapped stones punching through the sump, but do not overdo this so the cooling airflow is severely restricted, or the foam risks catching fire from a hot exhaust.
3. Avoid full underbody guards, if possible, as they tend to restrict the air flow around hot components. Heat needs to be able to dissipate. Remember that extensive car testing should be carried out with all guards in place.
4. Guards should be easy to remove. Make use of captive nuts and position or protect bolts to avoid them being damaged when driving over rough ground.

5. Route all fuel and brake lines inside the car to make them less vulnerable but shield any that cannot be re-routed. Do not use rubber fuel lines inside the passenger compartment.

6. Look at the underside of your car and skid or protect any vulnerable or low points such as suspension or shock absorber mountings, exhaust silencers and fuel tanks.

Brakes And Hydraulics

Your brakes must be in first class condition. Avoid complicated brake modifications and be sure your brakes comply with the Event Regulations.

1. Carry spare brake pads and / or brake shoes and remember to test fit any spares to be sure they will fit. Take only the best quality items you can obtain.

2. Old hydraulic cylinders become corroded, and the seals perish. Your car should be fitted with all new hydraulic hoses, cylinders and seals. If your car has a hydraulic clutch release, include the clutch master and slave cylinders in this.

3. Please avoid the use of 'Aeroquip' style braided brake hoses. These often fail, are more prone to damage when snagged, and are difficult to repair in the wilds. If possible, use new rubber brake hoses and protect them with plastic spiral wire binding. Make sure that solid brake pipes are not subject to 'flex', and that a solid brake pipe does not go between body and chassis. Use flexible hoses at likely points to eliminate fracture.

4. Metal brake pipes across the axle or, anywhere under the car, should be routed carefully and protected in plastic tubing to reduce the risk of stone damage.

5. Check that the brake pipes and hoses cannot become trapped or strained over the full range of suspension or steering movement.

6. Brake fluid absorbs moisture so make sure yours is replaced with good quality Dot 4 or Dot 5.1 fluid.

Do **NOT** use Dot 5 'silicone-based' brake fluid as this is not readily available in remote locations.

TOOLS, SPARES & EQUIPMENT

Have a list of any modifications made to your car. If you must import a part, it is very frustrating if you do not know the specification of the part you need and, even worse, when a part arrives that does not fit. Differential ratios, piston size, valve size, propshaft length etc. are the common ones, but the more you know about your car the better.

Bring a workshop manual and a complete vehicle wiring diagram. Even if the contents mean little to you, the technical details could be invaluable for our event mechanics.

Tools

Keep tools to an absolute minimum. They are very heavy, and an excess of tools makes finding the one you need difficult. We often see boxes of spanners that won't even fit the car they are packed in.

1. A trolley jack may be convenient but is usually far too heavy to consider taking in a rally car, but you can source a lightweight aluminium version. A good quality lightweight mechanical scissor jack will do the job. It may take a few minutes more to use, but the weight saving is more than worth it.

2. Check that your jack will lift the car when the car is fully loaded and has a flat tyre. The jack base must be large enough to support the car on soft ground. Carry a separate larger base if necessary and, remember, never to work under your car while it is only supported on a jack.

3. Ask the car builder, if it is not you, to work out what spanners and other tools you actually need. It is amazing how many people turn up with more tools than the sweep crews. A lot of the tools our sweep mechanics still use are those discarded by competitors who decide to shed weight after welding their suspension for the third or fourth time.

4. Most vehicles will not have allen keys, torx bits or even metric spanner sizes. If not, do not bring them. If there are no 5/8" nuts and bolts, do not take a 5/8" spanner. It sounds obvious, but you will buy a set of spanners, and it will be tempting to bring them all.

Only do this if you intend to fix everyone else's cars. If you need two of a particular spanner, will an adjustable do? You will be amazed at how few tools you will actually need.

5. A canvas or soft tool bag of the correct size to hold the tools you take is much better than the heavy metal cantilever toolbox that you just happen to have in the garage. Canvas tool rolls will stop spanners or other items from rattling about and will help prevent the loss of essentials items if they are all thrown in one big box.

Spares

Never pack a part that you have not test fitted. **Do not accept** it when a parts supplier says that a set of brake pads, a fan belt or any other part is correct for your car. Open any new parts and test fit them to be sure they are correct before packing.

You should try and find a good balance of weight versus comprehensive spares package. Ignition components are essential, whereas a faulty starter motor can be overcome by bump starting the car. If your car can go a whole day on a fully charged battery, you can get away without carrying an alternator. Try and break an item down to its component parts. For example, you could carry the regulator of an alternator instead of carrying a whole alternator. Hydraulic repair kits for wheel cylinders or slave cylinders might be almost as good as, and certainly lighter, than having a complete replacement item.

A good idea is to brainstorm a list of potential failures, weigh up their likelihood and try and think of alternative ways of fixing them. Bits of chain, strapping, cable ties, wire etc. can be used to fix all manner of problems. You are not trying to produce a concours vehicle every time you work on it, just to get to the end of the event, or in some cases just to the next rest day.

Think about where the spares are kept. Things you will need quickly should be easily accessible, but an item such as a half-shaft or a leaf spring, can be tucked out of the way or even bolted under the car. Replacing these is time consuming, so getting to the parts easily is not important. Do not take heavy and bulky items like gallons of oil that can be bought along the way. Be ruthless. Between HERO-ERA mechanics and other competitors, we can normally sort something out, so do not carry stuff that is not likely to fail.

PACKING

Pay attention to packing your car. Keep packed items to the minimum but also take care to know where everything is and how it is packed. A properly packed car will have tools and spares dotted around the vehicle to keep the weight low and central. Write down their location in a notebook so that you can quickly find the item you need.

Do not load the boot or trunk with tools and boxes of bits. Everything should be secured with simple straps to prevent it bouncing around when the car is driven on rough tracks. Do not put any heavy items in the main passenger compartment as these can become lethal in the event of an accident in a confined space. A loose spanner can easily short-circuit unprotected battery terminals or a loose object in the passenger compartment can have serious consequences in an accident.

Avoid hard shell suitcases. They may not keep your shirts or dresses as neatly pressed and folded but soft travel bags are much more appropriate for Peking to Paris than a bulky hard suitcase.

LONG DISTANCE EVENT TECHNICAL REGULATIONS

Effective 1st January 2027

READ AND COMPLY WITH ALL THE REGULATIONS

THE BASICS - KEEP YOUR CAR SIMPLE AND TRAVEL LIGHT

1. ELIGIBLE CARS

1.1 Only cars of a model type produced within the Category dates listed below will be eligible for HE-RO-ERA Long Distance events (those not covered by Motorsport UK Regulations). As not all Categories are applicable to all events, reference should be made to the specific Event Regulations, Article 7.

1.2 Category:

A - Pioneer - models in production up to and including December 1920

B - Vintage - models in production between January 1921 and December 1930

C - Vintageant - models in production between January 1931 to December 1947

D - Classic - All model types in production between January 1948 and December 1975 or December 1985 as advised in the specific Event Regulations - car derived 4x4s by special invitation only

E - Specials - any car not eligible in its normal age Category due non-period modifications or a later build date may be considered for the 'Special' class at the discretion of the Organisers

F - Off Road 4x4s - A 4x4 model type excluding sports/saloon car derived 4x4s, in production up to and including December 1985 - by special invitation only and not eligible for overall awards.

G - Solo* - All solo drivers (three or four wheels only)

H - Three Wheels or Less* - Models in production up to and including December 1985 - by special invitation only.

I - Tribute* - Original Peking to Paris models in production up to 1907

* Normally reserved solely for Peking to Paris, reference should be made to the specific Event Regulations for clarity.

1.3 The Organisers reserve the right to accept cars manufactured after the cut off dates, provided they are to the original period design and all components are of appearance, design, materials and dimensions known to have existed during the period for which the car is entered, apart from any exceptions allowed within these Technical Regulations. Period modifications may be permitted provided the competitor can supply authenticating documents to the Organisers prior to acceptance.

1.4 So that cars of similar type and performance can compete against each other; Categories may be sub-divided into separate Classes based differing criteria for example engine size and date of production or hard top and soft top Vintageant

1.5 All cars must be of a type exclusively designed to carry passengers with either saloon or sports bodywork. Estate cars and station wagons may be considered but any commercial or military vehicles such as light trucks, vans, ambulances, are not eligible. Certain 4x4 vehicles may be allowed on some events but this will be by special invitation only, reference should be made to the Event Regulations of each specific event.

1.6 The Organisers may decline or re-categorise the entry of a car if it does not comply with the period in spirit or appearance, if it is considered to be of inadequate performance or does not comply with the requirements of these Technical Regulations. Once an entry has been accepted the entrant may only change the Category or Class of the car entered with the written permission of the Organisers.

1.7 The acceptance of an entry is subject to pre-event Scrutineering. The Entrant must ensure that, at the date of Scrutineering and for the duration of the event the car is road-legal for the countries in which the event takes place and that it complies with these Technical Regulations along with the specific Event Regulations.

1.8 A car failing to comply with these Technical Regulations at pre-event Scrutineering will be refused a start. At the discretion of the Organisers it may be transferred to the 'Specials' Category but will not be included in the general classification or the results. In this eventuality, the crew and the car will only be eligible for a Finisher's award.

1.9 A car or a competitor failing to comply with these Technical Regulations during the event will be penalised at the discretion of the Clerk of the Course – see specific Event Regulations.

2. MECHANICAL MODIFICATIONS

2.1 It is the Organiser's intention that all competing cars conform as closely as possible to their original production specification in exceptional circumstances and if original equipment is no longer available, written permission may be sought from the Organisers to use out of period components. The following equipment and modifications, using period or modern components, would make a significant difference to the performance of the car and are NOT permitted:

- Conversion of live or solid axle to independent suspension.
- Coil springs replacing or augmenting leaf springs or torsion bars.
- Shock absorbers with separate reservoirs.
- Conversion to rack and pinion or power steering.
- Limited slip or torque biasing differential, unless available as original equipment within period and of original specification – competitor to provide written evidence to prove such equipment was available.
- Engine from a different manufacturer, engine of different configuration or an engine from the same manufacturer but out of period.
- Fuel injection or forced induction, unless available as original equipment within period and of the original specification.
- Electronic engine management systems and associated componentry.
- Disc brakes except where they were available as original equipment within period and of the original specification.
- Replacement of body panels or window glass with composite materials. Unless available in period or such parts are no longer available. If composite or plastic windows are fitted, they must be a minimum of 4mm thickness
- Wheel design, or material, that was unavailable within period.
- Auxiliary LED or gas discharge (HID) forward facing lighting equipment.
- Modern racing driver overalls or full-face helmets.
- Radio transmitters.

2.2 There will be no limit to the quantity or the range of spares that can be carried in the car, but trailers are NOT permitted. All spares carried in the car must be securely fastened in such a manner that they will not become loose on rough terrain or in the event of a collision.

3 UPGRADED EQUIPMENT

3.1 In the interests of reliability, comfort, and performance, the following upgrades to the original production specifications ARE permitted:

- Under-body protection for the engine sump, gearbox, rear axle, brake and fuel lines, fuel tank and exhaust system.
- Strengthening of chassis and suspension components.
- Up-rating of engine, gearbox and radiator mountings.
- Fitting an electric cooling fan(s).
- Additional or enlarged fuel tanks (fitted to a professional safety standard). Fuel may only be carried in a professionally installed main/auxiliary fuel tank, no separate fuel cans are allowed.
- Changed or modified fuel and air filters.
- Re-tuning engines to cope with low octane fuel.
- Upgraded Gearbox, Overdrive or Final Drive ratio.
- Up-rating from 6 to 12 volt electrical systems.
- Replacement of charging circuit components with an alternator.
- Replacement front seats and steering wheel, back seats can be removed.
- Tyres of different specification.
- Roof racks of a period design and material (must not overhang the roof area).
- Additional instruments, switches, controls and accessories (the original layout should be retained).

Modifications, such as additional cooling vents, bonnet and boot straps or catches, lamp guards and period luggage are encouraged.

4. SAFETY EQUIPMENT

4.1 The following equipment is strongly recommended for all Categories:

- Full harness seat belts fitted and used at all times, except, where applicable, motorcycles
- Roll over bar with at least a single hoop and two back stays (obligatory if a roof rack is fitted or spare wheels are carried on the roof).
- Fire and liquid proof bulkheads separating the passenger compartment from the engine and fuel tank.
- Up-rated brake friction material, brake hoses and pipes.
- Up-rated light bulbs.

4.2 The following equipment is also required:

4.2.1 Laminated windscreen or aero-screens.

4.2.2 Fire extinguisher of at least 1.75 litres or 2kg. Securely fitted and within easy reach of both occupants within the car (not in the boot/trunk). Two Fire Safety Stick extinguishers of a minimum 50 seconds each are also permitted as an alternative.

4.2.3 Seatbelt cutter (even for vehicles not fitted with seat belts – to assist other competitors).

4.2.4 Mud flaps fitted to rear wheel arches.

4.2.5 Warning triangle; a tow rope; high visibility jackets; spare light bulbs.

4.2.6 Comprehensive first aid kit.

4.2.7 A non-porous sheet or drip tray to contain fluid leakages from the car which should at a minimum be the width and length of the vehicle.

4.2.8 Fuel range of at least 400 kilometres or 250 miles, or where applicable, 300 kms (190 miles) for motorcycles

5. NAVIGATION EQUIPMENT

5.1 Electronic and digital clocks and trip meters ARE permitted.

5.2 On events where navigation by GPS waypoints is necessary the type of GPS device specified by the Organisers MUST be used – This will be specified in the relevant Event Regulations.

5.3 Competitors are NOT allowed to use the functions on any devices (for example trip-meters (unless non calibrated GPS only), Sat Nav, GPS, Smart phone applications, average speed calculators), whether fitted to the car or hand-held, to aid the maintenance of a set average speed or display any kind of digital mapping, in an attempt to gain a competitive advantage. If they are found to be used the Clerk of the Course may impose a penalty based on a report from a Judge of Fact.

These Technical Regulations may be subject to revision or amendment by Specific Event Regulations or Official Bulletin

August 2026

THE FINAL WORD

Have your car checked over and spanner checked by a mechanic that did not build the car.

Do this before your long test-drive and do it again afterwards.

If a question is raised make sure the item is attended to.

“It’s good enough” will not get you to the finish!

Good Luck to all crews!



Photo: Blue Passion

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