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# THE OUTBACK CAR TREK

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## 2021 FLYING DOCTOR OUTBACK CAR TREK SUPPLEMENTARY REGULATIONS

version 210104

To be read in conjunction with the Trek web site, various forms and other relevant materials.

**PLEASE READ THIS INFORMATION BEFORE ENTERING THE EVENT. BE AWARE  
THAT VEHICLES THAT DO NOT COMPLY WILL BE REFUSED PARTICIPATION**

### ENTRIES

Entries into any event will be processed on a first come first served basis and are subject to acceptance by the Trek Director. The Trek Director reserves the right to refuse entry to any person(s) for any reason.

### VEHICLE ELIGIBILITY

In general terms, most 2WD motor cars that are more than 30 years old on the 1<sup>st</sup> January of the year of the event will be accepted into the event, subject to the written confirmation of the event organiser. Identical model run-ons will also be allowed. If thinking about building or entering a car onto the event for the first time, you must request written confirmation of your vehicle's suitability from the Trek office.

**N.B.** In certain cases, vehicles that might be considered "unusual" or "mechanically complicated" may be refused entry at the discretion of the event organiser.

The Outback Car Trek has for many years prided itself on being able to fix most types of mechanical failure whilst out on the event. As cars became more complex in the late '70's and the 1980's the ability to fix some types of mechanical problems whilst out on the road has been severely diminished. Fuel injection, turbo/super chargers, onboard engine management systems, are just some examples of this issue.

For this reason, please contact the event organiser prior to committing to buy or build a car. We don't want to see you stuck on the side of the road due to mechanical failure.

### SUPPORT VEHICLES

In addition to the entries mentioned above a limited number of support vehicles will be allowed to accompany cars on the event. Support vehicles are accepted into the event as they are expected to provide assistance to any Trek vehicle that may require help. Often this will involve towing vehicles long distances, pulling vehicles out of bogs, and so on. For reasons such as this there is a minimum requirement of support vehicle weight, towing capability and transmission. Vehicles that may be considered "soft roaders" or SUV's are unlikely to be suitable as support vehicles.

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In general terms support vehicles must have a kerb weight of greater than 2,400 kgs and must be capable of towing 2,500 kgs (with trailer brakes). Support vehicles must also have a high & low range transmission.

If in doubt please contact the Trek office to determine vehicle eligibility.

Support vehicles will be accepted on a first come first served basis. At least one person in the support vehicle must have either medical or mechanical skills and carry the appropriate equipment to perform his or her duties. All support vehicles must be modern 4WD's and must be in good condition. They must be fitted with effective mudflaps, a UHF radio, a rearwards facing bright white light and a dust light.

Support vehicles must attend a safety check before the Trek for a general inspection. Support crews must understand that there are certain conditions that apply to them. These include;

- i. They must leave a control point only as directed by an official or as per a published schedule
- ii. They **MUST NEVER** pass a stricken or apparently stricken vehicle without offering assistance
- iii. They must help with official duties if requested to do so. This may involve manning a Control, towing a vehicle, carrying items, etc.
- iv. They will not be permitted to follow the Trek route if so directed by an official or if instructed by the Road Book. In such cases they will be sent via an alternative route.

## **PARTICIPANTS BRIEFING**

There will be a participants briefing held at 8:30 on the Sunday morning immediately prior to the start of the event. All participants must attend the briefing.

## **TREK FEES & PAYMENTS**

Each year there are three separate fees payable. These are separate entry fees and donations paid to the Royal Flying Doctor Service, plus a disbursements fee paid to Outback Car Trek Pty Limited.

## **ENTRY FEES**

Each entrant will pay an entry fee for 2021 of \$975 (including GST) per vehicle to the Royal Flying Doctor Service.

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## DONATIONS

Each vehicle agrees to donate to the Royal Flying Doctor Service South Eastern Section a *minimum* of \$7,500.

Of course, you are encouraged to raise more than the minimum donation.

## DISBURSEMENTS FEE

Each entrant will pay a fee for 2021 of \$TBA (including GST) per person for disbursements. (Due to COVID we are waiting to see what cost increases venues will pass on to our participants before we publish the disbursements fee.)

What is referred to as the disbursements fee covers all your meals on the event, from and including breakfast on Day 1 to and including the five-star Gala Awards Dinner at the destination town. This fee also covers entertainment during the event, public liability insurance, the cost of movie and still photography to be made as the event progresses, coach transfers, National Parks fees, some camping fees and a great many other expenses.

*The meal & disbursements fee is estimated 9 months in advance on a cost recovery basis, plus a small contingency fee to allow for any cost over-runs.*

## DATES FOR PAYMENT

The entry fee must be submitted with the completed entry form.

- Cheques for the entry fee are to be made out to the Royal Flying Doctor SE Section.
- Cheques for the meal & disbursements money are to be made out to Outback Car Trek Pty Limited.
- A donation of 50% of the minimum amount must be paid on or before 15 February 2021 and the balance of the minimum donation made on or before 1 April 2020.

Any vehicle that is not up to date with its Fees & Payments on 1<sup>st</sup> May 2020 may lose its right to participate in the Trek.

## REFUNDS

All entry fees are non-refundable and non-transferable to other vehicles or later Treks.

Where more than 30 days notice is given, the Disbursements & Meals fee may be transferred to another event at the discretion of the event organiser.

## CREW NUMBERS

No vehicle shall carry fewer than two people or more than its legal capacity. No one under the age of 18 years will be allowed on the event.

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## **LICENCES**

No special licences are required by crewmembers, as this is not a competitive event. However all participants must be over 18, and anyone who drives at any time must have a current, non-provisional civil driving licence recognised in Australia.

## **VEHICLE SPECIFICATIONS**

*IF IN ANY DOUBT CALL THE TREK OFFICE FOR A DECISION BEFORE BUYING/ BUILDING/ MODIFYING A CAR. ANYONE WISHING TO MAKE MINOR ALTERERATIONS TO THESE REGULATIONS CAN SUBMIT A REQUEST TO A PANEL COMPRISING SCRUTINEERS, EXPERIENCED ENTRANTS AND THE EVENT DIRECTOR FOR CONSIDERATION. NO MAJOR VARIATIONS WILL BE ACCEPTED.*

## **GENERAL**

The purpose of these specifications is to see that cars are built strongly with an emphasis on safety and reliability. We do not want “hotted up” high performance vehicles.

Pre-1959 vehicles may be modified with the approval of the Organisers.

## **ENGINE**

Do not “hot up” your engine. The engine must be generally in accordance with the manufacturer’s original specification. Only the original engine (or an identical replacement) can be used unless permission is sought from the Trek Director.

Fuel injection cannot be fitted unless it came as original equipment on that model.

Engine capacity may be increased by up to 15%.

Engine mountings should be replaced, no matter how good they seem to be, and an engine securing device must be fitted.

## **TRANSMISSION & DRIVE TRAIN**

Transmission and drive train are free, but the fewer changes from standard there are, the more likely it will be that spares can be found. A safety strap must be fitted under the forward end of the tail shaft.

## **EXHAUST SYSTEM**

The original engine pipe may be replaced with extractors. It is strongly recommended that the exhaust system be built so as to protrude as little as possible below the chassis rails.

## **BRAKES**

Brakes are free and entrants are encouraged to upgrade them wherever possible, eg. from drums to discs. Brake lines are to be made from steel, not copper, unless certified by the installer as being brake line quality. Brake lines that are encased in rubber of some other protective wrapping are to be inspected for corrosion.

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## **SUSPENSION**

Suspension is free and should be lifted as high as possible to increase ground clearance. Stronger springs and suitable shock absorbers should be fitted and particular attention given to strengthening shock absorber mounting brackets. Shock absorbers take a hammering on the corrugations and old ones should also be replaced with ones of superior specifications. If they bolt through the floor (as in EH-HR Holdens) reinforce the area with steel angle.

To prevent/reduce stone damage, shock absorbers should have a protective covering at their front – e.g. strong rubber covering.

Front suspension collapses have been common in the past. Reinforce upper and lower control arm (wishbones) by welding 12mm bar between the inner and outer pivots, as close to the outer edges as possible. Replace ball joints every two years, annually on heavy cars.

## **AXLES**

Diff housings tend to bend causing axles to break. Weld angle to the underside of the rear axle casings from the diff to the brake backing plate.

**N.B.** In past years the breakage of fatigued front stub axles has been a problem. To combat this, from 2014 we require that all stub axles be crack-tested and the evidence of that crack test be submitted with your entry form and also at safety check day.

All cars are required to have stub axles crack tested every 3 Treks at the minimum.

You should replace your wheel bearings with highest quality products as a matter of course every year. And make sure you carry replacement wheel bearings with you.

## **WHEELS & TYRES**

Wheels and tyres are free. Fairly narrow wheels are best for mud and bulldust as they are less likely to 'float'. Larger diameter wheels are a good idea as they increase ground clearance, particularly under the diff. A greater range of tyres is available for larger wheels ie. from 14" upwards. Strong tyres in good condition are essential. Take 2 spares and don't forget the jack and a board to put under it for changing wheels on sandy or muddy surfaces.

## **FUEL TANK**

Specifications are free but it is your responsibility to make sure you are carry enough fuel. Part of the enjoyment of the Trek is "getting away from it all" which translates into "not near many service stations". You should increase your fuel tank capacity to provide you with 600+ kms range of driving on dirt roads.

If you fit a second fuel tank, don't drain this tank into the main one, as a hole in the lower tank will cause you to lose all your fuel.

If you carry Jerry cans they **MUST** be strapped down in the boot. Don't forget a funnel.

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## UNDERBODY PROTECTION

Protection of your car's vitals is essential. Sump guards, transmission guards and plates under fuel tanks must be fitted. Sump guards should be perforated to stop mud building up around the engine and causing overheating. Don't forget to leave access for the sump plug. A heavy curtain made from industrial rubber belting makes a good stone guard in front of the rear axle and tends to protect the fuel tank and shock absorbers as well. It must not hang lower than 50 mm above the ground when the car is laden.

*Effective mud flaps are compulsory on all vehicles, including supports.*

## ROLLOVER PROTECTION

Rollover protection is mandatory on cars built after 1959 and recommended for those built earlier. The following is an extract from the 'Light Vehicle Code of Practice' (Jan 1994).

### **3.6.10 Roll Bars**

*The majority of internal roll bars or 'roll cages' were originally designed principally for use in racing cars where the driver's head was protected by a helmet. Unfortunately under normal driving conditions and in an accident, the heads of the driver and passengers are not protected by helmets so any modifications to the inside of the cabin must be carefully designed to prevent injuries to occupants in an accident. Four point 'roll bars' or 'roll cages' ie. roll cages having a roll bar at the 'B' pillar areas with two braces to the rear of the vehicle are satisfactory providing the following requirements can be met:*

- a) the transverse section of the roll cage running across the vehicle behind the driver's head is to be outside the headspace area for the driver and front passenger;*
- b) if the rear braces for the roll cage lie within the headspace for any rear passengers then the rear seat is to be removed;*
- c) all areas of the roll cage structure above the driver's shoulder shall be padded;*
- d) the roll cage must not restrict access to any seating position;*
- e) the roll cage must not interfere with the normal functioning of any standard or mandatory equipment eg. seat belts and head restraints;*
- f) the roll cage must not obstruct the driver's vision;*
- g) the roll cage must not obstruct the driver in his full and proper control of the vehicle.*

*'Six point' roll cages ie. roll cages having supports running down the 'A' pillars, 'B' pillars and braces running to the rear are generally not acceptable because the sections running down the A pillars and across the top of the windscreen can*

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*constitute an increased risk to the driver and front passenger in an accident. They can also decrease visibility for the driver and usually prevent the correct positioning of the sunvisors.*

*Roll cage anchorages and seat belt anchorages should not be combined in the one anchorage. Where seat belts are attached to the roll cage, the roll cage and its attachment to the body must be capable of withstanding the combined seat belt and roll cage loads.*

## SEAT BELTS

All vehicles must be fitted with full-harness seat belts. (Pre 1960 must have lap-sash seat belts as a minimum).

## WINDSCREENS

Windscreen glass must be laminated.

## TOWING EYES

Every vehicle must have a strong towing point front and rear. A hook is good, as is an eye with a D-shackle fitted. Tow bars are also acceptable.

**UNDER NO CIRCUMSTANCES SHOULD TOW BALLS BE USED TO TOW OR SNATCH VEHICLES WITH ROPES OR SNATCH STRAPS.**

## SAFETY TRIANGLES

Every vehicle must carry a red reflective triangle and display it if the car is stopped on or close to the road.

## CB RADIOS

Every vehicle, including supports must have a UHF CB radio with at least 20 channels. A second radio (AM CB will do) should be fitted if one crew wants to talk to another without disturbing regular radio traffic or turning the main UHF off the Trek channel.

## DUST LIGHTS

All vehicles must be fitted with a revolving amber light mounted on the roof to indicate their position in dusty conditions. **You must make sure that your amber light/ strobe is clearly visible from both the front and the rear.** Globes are to be 100 watt or greater. Powerful strobe lights are also acceptable.

A second fixed white rear facing light must be fitted at or above rear window height (approx. equivalent to head height of the driver in a car behind you) and wired to a separate circuit.

Carry spare globes and fuses for your dust lights.

Dust lights must be illuminated at all times when on dirt roads.

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**NUMBERS** – All vehicles must carry the identifying door panels provided by the organisers. This will be in the form of self-adhesive vinyl panels approximately 500mm deep by 400mm wide. Space must be left for a panel on each door. On the panel entrants must fix **BLACK** 150mm high numbers. These are available from marine outlets or instant sign companies.

**REARWARD FACING NUMBERS.** Vehicles approaching from behind, often in dusty conditions, must be able to identify you from a reasonable distance. You must fix your vehicle's number, at least 150mm high, in **WHITE** onto the upper right hand corner of your car's back window for the benefit of following vehicles, and also onto the front left hand corner of your windscreen for the benefit of officials at check points. If there is insufficient contrast for the rear facing number use a darker (or lighter) background.

## SPARE PARTS & EXTRA EQUIPMENT

You must carry a reasonable range of spares in your car, or in your support vehicle if you have one. You may wish to share the load with another entrant in a similar vehicle as long as you intend running together, e.g. you might carry a spare radiator and they may carry spare shock absorbers. A check list should include;

▪ tie rods & control arms	▪ wheel bearings
▪ shock absorbers – 1 front & 1 rear	▪ fan belts
▪ spark plugs, leads & distributor cap	▪ condensor, coil & points
▪ distributor cap	▪ spark plugs
▪ spare windscreen wiper motor	▪ spare washer bottle pump
▪ fuel pump	▪ roll of fencing wire
▪ tools	▪ radiator hoses
▪ gaffer tape	▪ spare radiator

All vehicles **MUST** carry a Snatch Strap and a fire extinguisher. You must also bring 4 litres of engine oil, automatic transmission or clutch fluid, brake fluid and at least 20 litres of water.

Every loose item which cannot be stowed in the boot must be bolted to the floor.

## ROOF RACKS

We are not in favour of roof racks. If at all possible leave roof racks behind. They can make you think that you have more space than you need and tempt you to bring extra gear. They can also dramatically lift the centre of gravity and seriously alter your cars handling. If you must use a roof rack use it for light items only and keep heavy items down low. Do not use your roof rack for spare fuel or spare tyres.

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## FIRST AID KIT

Every vehicle, both 2WD & Support, must carry a first aid kit. Here is a list of suggested items to be included. This list is not comprehensive and is additional to what might be in your basic first aid kit;

▪ Sunscreen and lipscreen	▪ Multivitamins
▪ Cold & Flu capsules	▪ Cold sore cream
▪ Band-aids	▪ Dencorub
▪ Panadol	▪ First aid cream (iodine base)
▪ And any medications that you might use from time to time	

## INSURANCE & VEHICLE REGISTRATION

All vehicles must hold Third Party Property insurance as a minimum. Comprehensive cover is preferable.

All vehicles must be registered for use on public roads for the duration of the event.

## VEHICLE INSPECTION

All vehicles must be presented for a safety check at venues and dates to be advised each year. Failure to do so may result in elimination from the event. Where genuine reasons exist for non-attendance it MAY be acceptable for a mechanic OTHER THAN THE MECHANIC WHO BUILT OR NORMALLY WORKS ON YOUR CAR to provide a certificate of compliance to the Trek office. Check with the Trek office first.

## TRAVEL LIGHT

**FINALLY** – lay out everything you intend to take with you on the garage floor. Look carefully at what you wish to carry, eliminate anything you can do without, then take half of what's left.

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