



HOLDEN
4WD Club
South Australia

NO HOLDEN BACK

The HOLDEN 4WD CLUB of South Australia
December 2013



FROM THE PRESIDENT'S SLEIGH

As another busy year draws to close, I would like to take this opportunity to wish all our club members & their families a Merry Christmas and a happy & safe 2014.

The club has experienced many things this year, great achievements, wonderful trips near & far, special events, many social gatherings and friendships.

Our end of year Club Christmas BBQ brings most of our members together to celebrate the year that was. The tables will be full of wonderful salads & deserts and the cooks will have prepared us a

feast. Thank you to all who have helped make this a special evening.

Our next big trip is Beachport over the Australia Day long weekend. If you have not booked the caravan park please give them a call. Please feel free to talk to a committee person about Beachport as it is always an enjoyable trip.

The New Year has some great trips planned, the Tri State in NSW at Rydal. There is Peake & Dorado Downs sand driving. There will also be some exploration of the area where we will hold our Tri State in 2015. Although that is still a mystery at the time of writing, our Chairperson Theo & the subcommittee are working hard to make it a reality as soon as possible.

Take time to enjoy the festive season and each other. To one and all a Merry Christmas and a Happy New Year.

Maira Hill

Something to think about: When I was a child, I believed in Santa Claus. When I got older, I didn't believe in Santa Claus. When I became a parent, I was Santa Claus. Now I have grandchildren I look like Santa Claus.

UPCOMING TRIPS

Put your name and details on the trip sheets at the monthly meeting to book in or phone John (0416075144) if you miss the meetings. All trips can be used for training and assessing when training team members are available.

January 23rd - 27th

Beachport

Further Events.

Peake
Tristate
Dorado Downs

Other ideas and leaders needed,
Possible ideas; Bushies, SA Deserts, Vic deserts, Vic Hi country, Sunday Drives,

And if you have a great idea or a simple suggestion, there are plenty of dates available.

Haighs factory tour.

Thankyou Sandy, for organizing a great, yummy day out.

We all met at the Haigh's factory and as usual there were plenty of people in the factory shop. It is popular. We were all given a sample of their chocolate before we started the tour just to whet our appetite.

We were shown into a room full of old pictures and told of the development of the company through the family dynasties, each generation adding something new to the process. However, they are now proud of the fact that their chocolates are still handmade the old fashioned way.

We then went into the worksite and saw the women making the products all by hand. I would imagine this would be a large part of their costs.

After the tour, we again sampled their wares before hitting the shop with a discount incentive to egg us on (not that I needed that). I know I stocked up on my chocolate supplies a bit more than necessary.

We then headed off to Unley Road for a lovely leisurely lunch at Cafe Mondiali. A day full of lovely food but not good for the waist line.

Sue

First Aid Course, 3 November

Participants:- Peter Bourke, Julie Denman, Trevor Denman, Wendy Juleff, Marlene Lehmann, Peter McCarthy, Ian McColl, Martin Pearson, Alan Pickering, Margaret Smith, Simon Smith, Susan Smith, Helen Sosnowski, Theo Van Deventer

On Sunday, 3/11/2013, the club members went to St. Johns Centre at Unley to learn (relearn) first aid. The instructor, Mike Allen, had a lot to contend with this group, but he coped and injected enough humour into his communication to keep people interested and awake.

The first session covered CPR and the DRSABCD mnemonic. For anyone who learnt CPR many years ago, it has changed. There is no longer a need to try and find a pulse, most amateurs can't anyway. The speed and repetition rate has also changed. Mike recommended to keep the Bee Gees hit "Staying alive" in mind to set a good speed. We were split into groups to practice on mannequins.

We were shown and practiced using an Automatic Defibrillator. These amazing machines monitor and talk you through the procedure and operation of their use. They can easily be set to assist the operator through continued CPR if this is required.

We were shown various injuries and accidents and an appropriate method of successfully dealing with the situation. We were quizzed on appropriate responses to situations and despite Alan Pickering's references to the SAS handbook, we were mostly (or at least enough) on the right track.

At the end of the day, we were all judged acceptable and all passed.

Martin

Caravan Driving Test - Reduce Accidents & Insurance Premiums/Costs

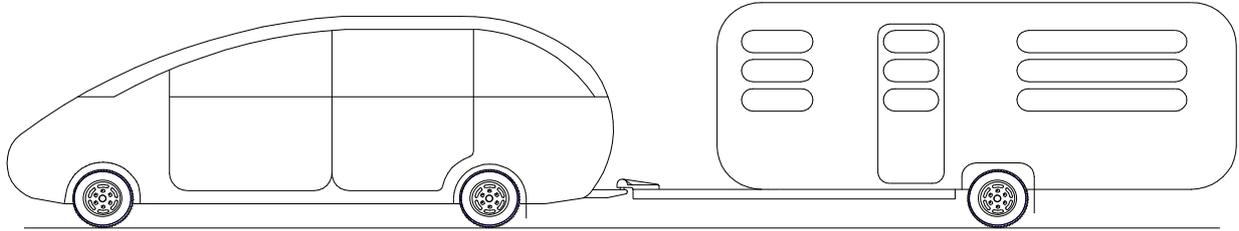
Theory Test for Towing:

- 1: What do the following abbreviations mean:
- ATM:** (a) Average Travelling Mass
(b) Australian Testing Method
(c) Aggregate Trailer Mass
- GTM:** (a) General Technical Manufacture
(b) Gross Trailer Mass
(c) Guaranteed Trailer Mass
- (Tow vehicle) **GVM:** (a) Gross Vehicle Mass
(b) Generous Velocity Measurement
(c) German Vehicle Method
- (Tow vehicle) **GCM:** (a) Guaranteed Coupling Movement
(b) Grand Co-operative Management
(c) Gross Combination Mass
- 2: Are the above items "Actual Masses" or "Ratings":
(a) actual masses
(b) both
(c) Ratings
- 3: Are "Tare Mass" & "Ball-loading" "actual masses" or "Ratings":
(a) neither
(b) Ratings
(c) actual masses
(d) both
- 4: The definition of "Tare Mass" for a Caravan & Camper/Tent-Trailer is:
(a) The load (force) on the coupling when the caravan is fully loaded
(b) The *total permitted* mass of the laden caravan transmitted to the ground by the caravan tyres, when carrying the maximum load recommended by the manufacturer, when coupled to a tow-vehicle. This rating must *not* exceed the axle-group (wheels/tyres/suspension/axle) *rating* stated by the chassis manufacturer.
(c) The actual mass of the caravan with all OEM equipment fitted - as specified on the sales contract - with empty water tanks and empty LPG cylinders, and without any luggage or personal effects. This is measured with the jockey-wheel and tyres on the weigh-bridge.
- 5: What do each of the elements of a tyre designation mean: **LT-P 225 / 85 R 16 90 Q**
- | | | | |
|------|----------------------------|--------------------------|------------------------|
| LT: | (a) Low Temperature | (b) Light Truck | (c) Large Texture |
| P: | (a) Positive | (b) Pressurized | (c) Passenger (car) |
| 225: | (a) Top Speed (225 mph) | (b) Tyre Diameter (" | (c) Section Width (mm) |
| 85: | (a) Minimum Speed (85 mph) | (b) Profile Ratio (%) | (c) Maximum Temp |
| R: | (a) Radial Construction | (b) Radical Construction | (c) Racing Tyre |
| 16: | (a) Tread Width (cm) | (b) Rim Diameter (" | (c) Inflation Pressure |
| 90: | (a) Year of Manufacture | (b) Load Rating | (c) Manufacturer ID |
| Q: | (a) Speed Rating | (b) Queen's Approval | (c) Quick Inflation |
- 6: What is the standard size for a ball-coupling: (a) 50 mm (b) 2" (c) 3 cm

- 7: What does *ADR* stand for:
- (a) Alternative Driving Requirements
 - (b) Advanced Development Regime
 - (c) Australian Design Rule
- 8: What does *AS* stand for:
- (a) Australian Standard
 - (b) Automotive Satisfaction
 - (c) African Substitution
- 9: Does the *Tyre & Rim Association* Manual give:
- (a) The names of all companies who make tyres and rims
 - (b) The starting odds of all past winners of the Melbourne Cup
 - (c) The correct tyre/rim combinations, and the recommended inflation pressures for all tyre sizes, to suit the load carried by the tyre
- 10: Are non-swivel 50 mm *Ball-couplings* suitable for off-road operation:
- (a) Yes
 - (b) No
 - (c) Only in winter
- 11: *Brakes* are required on caravans:
- (a) Only if the driver of the tow-vehicle is not very good
 - (b) Yes, on all caravans and camper/tent-trailers
 - (c) If the GTM Rating is above 750 kg
- 12: *Break-away* brakes are required:
- (a) Only in winter
 - (b) If the GTM Rating is above 2,000 kg
 - (c) Only if drive faster than 120 km/h
- 13: *ABS* (on tow-vehicle) stands for:
- (a) Automatic Braking System
 - (b) Australian Broadcasting Syndicate
 - (c) Anti-lock Braking System
- 14: If *ABS* is fitted to the tow-vehicle, will it also automatically work on the caravan:
- (a) No
 - (b) Hopefully, if you are in trouble
 - (c) Yes
- 15: The *Ball-loading* at any time:
- (a) Is not important
 - (b) Should either be around 1%, or 30%, of the Tare Mass
 - (c) Should be *around* 10% of the caravan/trailer mass (if not otherwise advised by the manufacturer, in writing)
- 16: If the *Ball-loading* is too *light*:
- (a) You will go faster
 - (b) The caravan/trailer will most likely develop a *most dangerous* sway (snaking) situation
 - (c) The caravan/trailer will be harder to lift on and off the coupling
- 17: If the *Ball-loading* is too *heavy*:
- (a) You will be able to change the front tyres of the tow-vehicle without needing a jack
 - (b) Tyre wear will be reduced
 - (c) Handling, steering and safety will be dangerously impaired, and the tow-bar may fail
- 18: Heavy items should be stored in the caravan:
- (a) On the roof
 - (b) On the A-frame or rear bumper
 - (c) As close as possible to the axle(s)
- 19: If caravan/trailer tyre pressures are too *low*:
- (a) The vehicle will be much lighter because there is not much air in the tyres
 - (b) The vehicle will sway and wallow, and the outer edges of the tread will wear out
 - (c) The vehicle will be much closer to the road, greatly reducing the air drag

- 20: If caravan/trailer tyre pressures are too *high*:
- (a) The vehicle will skip and bounce, and the centre of the tread will wear out
 - (b) The vehicle will not vibrate as much
 - (c) It will wreck tyre-pressure gauges, although a smooth ride is achieved
- 21: The caravan/trailer allowable/legal Pay-load (Load-carrying capacity) is:
- (a) Whatever the driver thinks their tow-vehicle can handle OK
 - (b) ATM Rating – (minus) Tare Mass
 - (c) 50% of the GTM Rating + (plus) the Ball-loading
- 22: The left-side and right-side brakes should be:
- (a) Regularly checked for wear, and adjusted evenly
 - (b) Must be greased on a daily basis when travelling
 - (c) As big as those on the tow-vehicle
- 23: The caravan/trailer lamps:
- (a) Operate best on 230 volts
 - (b) Need to be tapped moderately hard if they do not operate reliably
 - (c) Should be checked for correct operation before setting off on a trip
- 24: When towing a caravan/trailer, added or extended mirrors:
- (a) Slow you down appreciably because of the very high air resistance
 - (b) Must be used so as to obtain a clear field-of-view along each side of the vehicle
 - (c) Should only be fitted when going “off-road” on dusty tracks
- 25: When towing a caravan/trailer, the time and distance needed to accelerate from 60 – 80 km/h (compared to just driving the tow-vehicle on its own) are:
- (a) Hardly worth worrying about
 - (b) *Appreciably* much longer
 - (c) Around 10 seconds and 50 metres longer
- 26: When towing a caravan/trailer, the time and distance needed to slow down from 80 - 60 km/h (compared to just driving the tow-vehicle on its own) are:
- (a) Around 5 seconds and 100 metres shorter, because of the additional brakes
 - (b) Again, hardly worth worrying about
 - (c) *Appreciably* much longer
- 27: When towing a caravan/trailer around a curve, you should:
- (a) Speed up, so that the caravan/trailer will “drift” around the curve
 - (b) Slow down, because of the additional centrifugal force, and risk of swaying
 - (c) “Cut the corner” (especially on rough roads) to increase the radius of the curve
- 28: *Doubling* your speed - say from 40 - 80 km/h - will:
- (a) Improve the handling and braking performance of the caravan/trailer
 - (b) Increase the kinetic-energy - and braking distance - by a factor of 4 (four)
 - (c) Improve fuel economy (because the trip will take much less time)
- 29: If you see a B-Double approaching (from the front or rear), you should:
- (a) Immediately give a friendly call to the driver on Channel 79
 - (b) Speed up, so as to quickly get the meeting/over-taking over and done with
 - (c) Slow down a little, and firmly hold the steering wheel in case a “sway” starts
- 30: If the caravan/trailer starts to “sway” or “snake”, you should:
- (a) Hit the brakes as hard as possible
 - (b) Accelerate as hard as possible
 - (c) *Don't* panic and *don't* make any sudden/severe manoeuvres, but gently slow down, ensuring that you keep steering in the direction that you need to.

Remember: You are driving for Recreation... not Wreck-Creation!!!



An **ANSWER** sheet is available upon request. email caravancouncil@optusnet.com.au

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Where is the Outback?

For Eastern Staters, the Outback is somewhere west of wherever you are. As a 'westerner' from outside Longreach attending a Brisbane boarding school, I was amazed at the ignorance of city dwellers who regarded the Outback (aka 'out west') as just past Toowoomba (125 km west of Brisbane). Longreach is somewhat further away, 825 km west of the meridian of Brisbane (about half way across Qld) and about 1,200 km by road. This was regarded by those of us boarders from those parts as 'out west'. Back home, we regarded the Outback as somewhere further west than we would normally travel regularly. For us, that might be Vergemont or Winton. For those who had properties further west, the Outback might start somewhere west of Cloncurry or Boulia.

Without knowing for sure, I am sure the same applies to Western Australians, simply exchange west for east. For northerners (I lived in Kununurra for a while) anywhere far enough inland was Outback. With the advent of the 4WD and the annual dry season population bubble in the centre, the term loses some of its original meaning.

Outback can even be used unfortunately, as a term of derision or derogation implying some sort of hillbilly or bogan status, where the folk there are not as good as yourself, think of 'Western Sydney', but that is the topic of another discussion, somewhat longer and emotive discussion. Outback is a relative term and relates to your own experience. Outback begins somewhere out there beyond your own comfort zone, beyond where you know about and thus be an expression of your own ignorance, even bigotry.

For those of us who have experienced the Outback, the inland, whatever, in all its beauty, terror and extremes, with emphasis on extremes, it is that sparsely populated area back of beyond where solitude and wonder combine in some sort of a spiritual fashion, probably akin to the Aboriginal's link with the land, hard for us to experience elsewhere.

David. Canberra

REDARC Handy hint:-

(This is for information only! The Holden 4WD Club does not endorse these products)

New vehicles technology can affect dual battery system's charging performance

Australia is following the trend occurring in the rest of the world regarding reducing pollution from new vehicles and from next year they must meet even tighter exhaust emission standards. New cars sold in Australia from 2013 must meet 'Euro 5' exhaust emissions standards and the tougher 'Euro 6' standard around 2017. As the standards have been becoming progressively tighter over recent years, car manufacturers in their quest to meet the new standards have had to introduce new technology. They have designed the ECU to interconnect with the alternator and monitor electrical load. The ECU can control important engine functions via the CANBUS, including injection duration and timing to better control emissions as loads vary. The ECU can even shut off the alternator in certain circumstances, adjust the alternator output voltage and preload the alternator when the load changes. We refer to these alternators as ECU Controlled Variable Voltage Alternators.

For the most part, the changes made by vehicle manufacturers are aimed at increasing fuel efficiency, whilst reducing engine emissions. They can also frustrate the 4WD enthusiast however, particularly when faced with the ugly prospect of drinking warm beer from their fridge connected to their flattened auxiliary battery.

The new engine and alternator control technology we are experiencing however is nothing new. It is widely known that temperature compensating alternators have been used primarily in the Toyota range of vehicles fitted with D4D common rail diesels since early 2000's. It is also present in 2010 Toyota Kluger Petrol, BF Falcon and the subsequent models to name a few.

The rollout of this technology will render the common Voltage Sensitive Relay (VSR) virtually useless as was commonly used over the last fifteen years or so when adding a second or auxiliary battery to your 4WD vehicle. A smarter product is therefore required to ensure the auxiliary battery is 100% charged whilst coping with the fluctuations in voltage. It is important to note that current sensing in the vehicle's electrical system means that all additional electrical accessories must be grounded to the vehicle chassis or body, not to the main battery negative terminal.

South Australian automotive electronics accessories manufacturer, REDARC, has developed a patented solution. They have released a family of In-Vehicle Battery Chargers known as the 'BCDC' to charge auxiliary or house battery banks to 100% state of charge whilst on the move. They feature a multi stage DC-DC battery charger that is designed for installing in any 12 or 24 volt passenger, 4WD, truck, bus or marine electrical system. Another key feature of the BCDC In-Vehicle Battery Chargers is the voltage inverter technology that overcomes voltage drop when the auxiliary or house batteries are a considerable distance from the charging source as experienced in caravans and camper trailers, trucks and buses. Most critically though, to avoid the warm beer conundrum, they boost the low output voltages provided from ECU Controlled Alternators to your auxiliary battery.

The BCDC in-vehicle charger utilises voltage sensing of the main battery to determine when to charge the auxiliary battery and when to isolate the vehicle start battery. These voltages are researched by REDARC Engineers and have been selected to suit a wide range of vehicles and for this reason there is the need to have a range of BCDC products to best suit all vehicle manufacturer charging system variations. The standard BCDC range will operate on voltage sensing alone in vehicles where the alternator voltages do not regulate lower than 12.7V at any time, such as standard Fixed Voltage Alternators and ECU Controlled Temperature Compensating Alternators.

The wider range of BCDC variants are applied in vehicles fitted with ECU Controlled Variable Voltage Alternators. The turn on and off voltages are sensed at different levels along with an ignition input to the charger, ensuring that the BCDC will charge the auxiliary battery to 100% while effectively protecting the main battery from over-discharge. The BCDC In-Vehicle battery chargers are available in 6 Amp, 20 Amp, 25 Amp and 40 Amp outputs. These current output options ensure there is a BCDC for all common load and battery charging requirements. The BCDC products incorporate specific battery charging algorithms to suit lead acid, Gel, AGM and Calcium batteries that have been designed by REDARC Engineers in conjunction with research commissioned by REDARC and carried out at The University of Wollongong.

The BCDC1225 and BCDC1240 models also feature a MPPT Solar Regulator, which can be used to charge your auxiliary batteries from solar panels. The MPPT Solar charging algorithm extracts the maximum available power from your solar panels at any given time.

A common question is which model of BCDC can we use in our vehicle? Typically vehicles released from late 2011 onwards with common rail diesel motors are fitted with ECU Controlled Variable Voltage Alternators such as the Nissan Pathfinder, Nissan Navara, BMW X5 2010 onwards, Ford Ranger 2011 onwards, Mitsubishi Pajero 2012 onwards, Mazda Spirit, Mazda BT50 and various Range Rovers. Practically, the best way to determine your alternator's characteristics is to go for a drive with a voltmeter on the main battery.

Run the vehicle through varied driving conditions and record the minimum voltage found. The driving condition variations should include:

- Engine temperature (test whilst the engine is cold, and again whilst at operating temperature)
- Vary engine load (accelerate up an incline, and decelerate down declines)
- Vary electrical load (turn on the headlights and airconditioner and with all off)

The table below also helps identify the BCDC that you require for your vehicle.

Fixed Voltage Alternators (always 12.7V or more from alternator during driving)	Temperature Compensating Alternators (always 12.7V or more from alternator during driving)	ECU Controlled Variable Voltage Alternators (12.7V or less from alternator at any time during driving)
BCDC1206 (6 Amp model)	BCDC1206	BCDC1206
BCDC1220 (20 Amp model)	BCDC1220	BCDC1220-IGN
BCDC1225 (25 Amp model)	BCDC1225	BCDC1225-LV
BCDC1240 (40 Amp model)	BCDC1240	BCDC1240-LV

It is important to ensure that the correct BCDC is selected for your vehicle, application, and battery charging requirements. REDARC have developed a growing database of vehicles that determines the correct BCDC model to use for each vehicle.

If you have any questions or require help choosing the right BCDC for your vehicle, please contact the REDARC technical helpline, power@redarc.com.au or call the friendly technicians for free assistance on (08) 8322 4848.