

## **VICTORIA'S AURORA-RMIT 101 SOLAR CAR FINISHES AROUND AUSTRALIA CHALLENGE; 13,054 km in 24 days**

The outstanding Victorian based Aurora-RMIT 101 solar car has smashed the world distance record for a solar car journey as it rolled into Melbourne on 19 January 2002. It has covered 13,054 km in a 24 day continuous trip circumnavigating Australia in an anti-clockwise direction. The previous record, established by Queen's University, Canada stood at 7,043.5 km.

Along the way, two other world marks were established:

- 780 km in one day - achieved using solar energy alone. This occurred on Day 22, 17 January 2002 from Nullabor to Port Augusta.
- 111.24 kph average over 100 km on-road. This was achieved between Broome and Port Hedland on Day 15, 10 January 2002, breaking the previous record held by Northern Territory University of 108.78 kph set in 2000.

Lead driver, Tony Vriens, becomes the world's most experienced solar car driver, accumulating around 15,000 km in a number of events since 1993.

Second driver, Rafael Carmona, becomes the most experienced solar car driver of Mexican nationality. He is presently a post-graduate student at RMIT University in Engineering Management.

The Aurora Vehicle Association Inc., is a group of enthusiastic volunteers interested in pushing the boundaries of high efficiency transportation. It has existed for 22 years and established numerous world records for both fuel economy in petrol powered vehicles, and in achievements with solar cars.

Since 1987, the Aurora Vehicle Association Inc. has fielded a competitive entry in the World Championship for solar cars, the World Solar Challenge. This event has been held on 6 occasions. Aurora has consistently led all Australian entrants in this international competition, winning in 1999 and placing second in 2001. The present program of activities, under the name "Beyond Dreaming", is actively supported and partnered by RMIT University and some 22 members of Aurora are from RMIT.

The Aurora-RMIT 101 program for 2001/02 exists because of the support of 56 companies and organisations which have strong interests in promoting a message for greenhouse gas reduction and the demonstration of Australian developed technology. Ford Australia, Sumitomo Corporation, Minter Ellison, Bosch, 101 Collins Street and the Victorian Government are foundation supporters and another 50 companies, as provided in the attachment, are highly valued supporters.

The Around Australia Challenge encountered unpredictable weather conditions. The NSW bushfires provided smoke filled skies early in the trip. Torrential rain caught the team in northern NSW causing a number of electrical problems as the car was soaked. From Townsville and west to the Stuart Highway, the route skirted the southern edge of tropical cyclone, "Bernie". Finally, from Perth and across the Nullabor, cloud and headwinds slowed progress.

In spite of this, the 13,054 km journey has been completed to the precise schedule planned from the departure date on 27 December 2001. This has been achieved because of the remarkable reliability of the technology embodied in the solar car and the enthusiastic involvement of Aurora team members in building this remarkable machine. For example, the

heart of the drive system - the wheel motor - has now covered 17,000 km without maintenance.

Artimech, a Melbourne engineering group, designed the mechanical layout of the high efficiency front wheel motor as well as the front suspension. CAST, the Cooperative Research Centre for light metals, provided the main magnesium housings used in the motor and Refine Engineering, Marand Precision and the Ford Toolroom made all the components. CSIRO designed the high efficiency electrical layout.

AERL, a Queensland electronic development company designed Aurora's solar trackers, RF Innovations from Western Australia, the telemetry communications, MoTeC from Victoria, the telemetry itself, and Bosch, the electrical system.

Apart from the water damage caused by heavy rain, the Aurora-RMIT solar car has been extremely reliable and has been able to maintain a daily average of 544 km in this Around Australia Challenge.

Nine remarkable people have supported the journey and two other Aurora members, Andrew Lamb and Bradley Cadwallader, joined for parts of the journey.

Team Strategist, Peter Pudney and Lead Driver, Tony Vriens, were the only 2 team members with prior solar car trip experience. Profiles on the team participating in the Around Australia Challenge are attached.

The stunning Aurora-RMIT 101 solar car will not be allowed to rest: On Sunday, 20 January at 9.00 am, it will lead the near 600 entrants in the RACV Great Australia Rally from Melbourne Town Hall to Mornington Racecourse.

On 16 February, the Aurora-RMIT 101 solar car is entered in the AGO Sunrace which starts from Adelaide and finishes in Sydney on 24 February.