



## FORM 2 - Battery Specifications

DATE FORM FILLED IN:		7 Aug 2001	
CAR NO: 6	Car Name: Sungroper		
TEAM NAME:	Sungroper Solar car Association		
TEAM CONTACT:	Craig Richmond		
TEAM ADDRESS:	****		
Leeming WA 6149			
Australia			
TEL:	041 186 9925		
FAX:	(08) 9332 8447		
EMAIL:	manager@sungroper.asn.au		
<b>BATTERY DESCRIPTION:</b> * Delete as applicable			
Type of <del>cell</del> /module*	Odyssey Sealed Lead Acide		
Manufacturer of <del>cell</del> /module*	Hawker Energy		
Voltage <del>cell</del> /module*	12		V
Capacity (20-h rate) <del>cell</del> /module*	28		Ah
Weight fully-charged <del>cell</del> /module*	10.8		kg
Total No. <del>cells</del> /modules*	10		
System layout <del>cells</del> /modules* in series (= 1 string)	1 series string (120V) of 10 modules		Strings
Total battery energy	3.1		kWh
Total battery weight	108	(to nearest 0.1 of a kilogram)	
Please mail, email or fax this information, WITH MANUFACTURER'S SPECIFICATION SHEET/ CATALOGUE, by 31 July 2001 to:			
Address: Dr David A J Rand CSIRO Energy Technology Box 312 Clayton South, Victoria 3169 Australia		Telephone: + 61 3 9545 8500 Fax: +61 3 9562 8919 Email: drand@dcet.csiro.au	

## Odyssey Battery Specifications

	<u>ES12V500</u>	<u>ES12V650</u>	<u>ES12V700</u>
CCA	175A	245A	245A
CA at 0°C	300A	360A	350A
HCA at 26.7°C	360A	440A	440A
Reserve capacity <sup>1</sup>	21	28	27
Terminals	M6 <sup>2</sup>	Brass <sup>3</sup>	M6 (brass stud)
Max. installation torque	5.5Nm	5.5Nm	5.5Nm
<i>Max. dimensions with metal jacket, in. (mm)</i>			
L	86	79	99
W (terminal side)	178	185	170
H (incl. terminals)	131	169	175
Weight (kg.)	5.4	6.7	6.0
Cycle life at 25°C	400 for 100% DOD and 2.45 vpc charge for 16 – 24 hr. 500 for 80% DOD and 2.45 vpc charge for 16 – 24 hr.		
Operating temp.	- 40°C to + 60°C, depending on packaging selected		
Resistance at 25°C	10.0mΩ	7.0mΩ	7.0mΩ
Short circuit current	> 1,200A	> 1,800A	> 1,800A

1. Time is minutes that the battery can support a 25A load.

2. All terminals are female threaded maintenance free copper alloy with stainless steel bolts.

	<u>ES12V800</u>	<u>ES12V1000</u>	<u>ES12V1500</u>
CCA	400A	600A	930A
CA at 0°C	590A	800A	1175A
HCA at 26.7°C	700A	940A	1360A
Reserve capacity <sup>4</sup>	53	91	140
Terminals	brass <sup>5</sup>	brass <sup>5</sup>	brass <sup>5</sup>
Max. installation torque	6.5 Nm	6.5 Nm	6.5 Nm
<i>Max. dimensions with metal jacket, in. (mm)</i>			
L	179	169	168
W (terminal side)	169	200	331
H (incl. terminals)	147	192	195
Weight (kg.)	10.9	16	26.6
Cycle life at 25°C	400 for 100% DOD and 2.45 vpc charge for 16 – 24 hr. 500 for 80% DOD and 2.45 vpc charge for 16 – 24 hr.		
Operating temp.	- 40°C to + 60°C, depending on packaging selected		
Resistance at 25°C	5.0mΩ	4.5mΩ	3.5mΩ
Short circuit current	> 2,400A	> 2,600A	> 3,500A

4. Time is minutes that the battery can support a 25A load to 10.5V per module.

5. All terminals are brass SAE posts.

TABLE 1: ODYSSEY® Battery Specifications

Battery Label

