

AQUAVITE ENERGY BUDGET

energyb.wb1

Date: 16-Nov-07
 Orig: 01-Aug-98

EQUIPMENT	DAYSAIL				OVERNIGHT			AT SEA			
	AMPS	QUAN.	HRS/D	LOAD	QUAN.	HRS/D	LOAD	QUAN.	HRS/D	LOAD	
Anchor Light	0.5	1		0.0	1	6	3.0	1		0.0	new Mega Light
Autopilot	2.0	1	5	10.0	1	5	10.0	1	24	48.0	
Bilge Blower	2.5	1	0	0.0	1	0	0.0	1		0.0	
Bilge Pump	5.0	1	0.1	0.5	1	0.1	0.5	1	0.1	0.5	
Cabin fan	0.5	2		0.0	2	1	1.0	2	0.5	0.5	
Cabin Light	1.5	1	0.25	0.4	3	3	13.5	1	4	6.0	
Depth Sounder	0.4	1	5	2.0	1	5	2.0	1	24	9.6	
Knotmeter	0.1	1	5	0.5	1	5	0.5	1	24	2.4	
Loran	1.0	1	0	0.0	1	2	2.0	1	3	3.0	
Refrigerator (cycle)	5.0	0.75	6	22.5	0.5	14	35.0	0.5	24	60.0	
Running Lights	1.0	3		0.0	3	1	3.0	3	8	24.0	
Stereo	3.5	1		0.0	1		0.0	1		0.0	
VHF	1.0	1	0.1	0.1	1	2	2.0	1	3	3.0	
Wind Speed	0.1	1	5	0.5	1	5	0.5	1	24	2.4	

Daily Amp Hours Used	36.5	73.0	159.4
Total Amps	24.1		

BATTERY SIZE REQUIRED page 14 Calder

Amp Hours/Day * 50% charge			
*80% full charge*20% fudge factor	145.9	292.0	637.6
(+F21/0.3)*1.2 Multiplier	4.0	4.0	4.0

Capacity Available

		35%	40%	50% (<<< represents % discharge from full charge)	
Batt 1	55	55			SeaVolt WMP Starting Battery, wet cell 3/5/99, new 9/5/05
Batt 2	130	130			American Battery 7/25/06 Hayward
Batt 2A	130	130			American Battery 7/25/06 Hayward
Batt 2B	130	130			American Battery 7/25/06 Hayward
Batt 2C	0	0			Delco Voyager Deep Cycle Sealed DELETED 1999
(375*s above)		445	155.8	178.0	222.5
Batt 1 (less starting battery)	(55)	-55			
Plus 1 hour engine run @ 30 A		390	136.5	156.0	195.0
			166.5	186.0	225.0

Total Availabe Amp Hours from House Battery Bank
 avaialbe for use at varying % discharges from full

Energy Calculations

AC watts/12 X 1.1 X Hours of Use = amp hours (p 504 2001 Boat US)
 watts = volts X amps

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Autopilot	2.0	1	5	10.0	1	5	10.0	1	24	48.0	
Bilge Blower	2.5	1	0	0.0	1	0	0.0	1		0.0	
Bilge Pump	5.0	1	0.1	0.5	1	0.1	0.5	1	0.1	0.5	
Cabin fan	0.5	2		0.0	2	1	1.0	2	0.5	0.5	
Cabin Light	1.5	1	0.25	0.4	3	3	13.5	1	4	6.0	
Depth Sounder	0.4	1	5	2.0	1	5	2.0	1	24	9.6	
Knotmeter	0.1	1	5	0.5	1	5	0.5	1	24	2.4	
Loran	1.0	1	0	0.0	1	2	2.0	1	3	3.0	
Refrigerator (cycle)	5.0	0.75	6	22.5	0.5	14	35.0	0.5	24	60.0	
Running Lights	1.0	3		0.0	3	1	3.0	3	8	24.0	
Stereo	3.5	1		0.0	1		0.0	1		0.0	
VHF	1.0	1	0.1	0.1	1	2	2.0	1	3	3.0	
Wind Speed	0.1	1	5	0.5	1	5	0.5	1	24	2.4	

Daily Amp Hours Used **36.5** **73.0** **159.4**
 Total Amps 24.1

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