

Charging Procedures for SunXtender Batteries

1. CHARGE PROCEDURES

Sun-Xtender Batteries: charged at the factory and delivered ready for use.

- While in storage, boost charge every 90 days or when the open circuit voltage drops below 2.08 V./cell (12.5 V. for a 12 volt battery).
- Battery temperature should be 20 C. (68 F.) or higher.
- Boost charge the battery using a regulated constant voltage charger.
- Set the charge voltage to 2.37 to 2.40 V./cell (14.2 to 14.4 V. for a 12 volt battery).
- Charge the battery until the charger reaches the 2.37 to 2.40 V./cell (14.2 to 14.4 for a 12 volt battery) and leave the battery on charge for an additional 4 to 6 hours before removing it from the charger.
 - Alternately, the battery can be charged to the voltage setting until the current from the charger drops to 0.5 A. per 100 Ampere Hour rating of the battery.



2. CONDITIONING CHARGE

Batteries that have not been boost charged and have been in storage for long periods (not over 9 months) or that have been operated in a partial or low state of charge for long periods (90 days or more) may need a conditioning charge.

- Charge the battery at a constant current rate using the table below for the specific battery involved.
- Charge the battery until its voltage remains constant or decreases slightly.
- Remove the battery from charge. It is recommended that a reserve capacity discharge test be performed (instructions below) to insure that the battery capacity is at or above the recommended minimum 80% of its capacity.
- After the test is completed, recharge the battery as described in Item 1.
- During the conditioning charge process, the battery will get hot. If the battery container's temperature exceeds 50 C. (122 F.) remove the battery from charge and contact Concorde.
- Battery reaches 115 F° [46 C°] while on charge.

CONSTANT CURRENT CHARGE RATE TABLE

12 VOLT BATTERIES		6 VOLT BATTERIES	
Part #	Amps	Part #	Amps
PVX-340T	2	PVX-1380T	7
PVX-420T	2	PVX-1680T	8
PVX-490T	2	PVX-1780T	8
PVX-560T	3	PVX-2080T	10
PVX-690T	3	PVX-2160T	10
PVX-840T	4	PVX-2240L	11
PVX-890T	4	2 VOLT BATTERIES	
PVX-1040T	5	PVX-4140T	19
PVX-1080T	5	PVX-5040T	24
PVX-2120L	10	PVX-5340T	24
PVX-2580L	12	PVX-6240T	30
		PVX-6480T	30

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3. RESERVE CAPACITY TEST

The procedure described below allows the Ampere Hour Capacity of the battery to be tested. This test will insure that the battery is capable of providing the necessary capacity to perform properly.

- Charge the battery in accordance with paragraph 1, Charging Procedures, above.
- With the battery temperature above 20 C. (68 F.) discharge the battery at 25 Amps to 1.75V/cell (10.5 V for a 12 volt battery).
- Record the amount of time in minutes of full discharge.
- If the battery fails to deliver 80% of its rated discharge time, the battery should be replaced.
- The discharge times for each of the Sun-Xtender batteries are listed in the table below.

25 A DISCHARGE MINUTES TIME					
12 VOLT BATTERIES			6 VOLT BATTERIES		
Part Number	80%	Rated	Part Number	80%	Rated
PVX-340T	40	50	PVX-1380T	194	242
PVX-420T	49	61	PVX-1680T	238	298
PVX-490T	67	84	PVX-1780T	253	316
PVX-560T	77	96	PVX-2080T	298	372
PVX-690T	97	121	PVX-2160T	312	390
PVX-840T	119	149	PVX-2240L	394	492
PVX-890T	126	158	2 VOLT BATTERIES		
PVX-1040T	149	186	PVX-4140T	581	726
PVX-1080T	156	195	PVX-5040T	715	894
PVX-2120L	312	390	PVX-5340T	758	948
PVX-2580L	403	504	PVX-6240T	893	1116
			PVX-6480T	936	1170

