

BATTERY INFORMATION

CHANGE IN BATTERY CAPACITY AS THE DISCHARGE RATE INCREASES

If your battery amp hour capacity is rated at the 20 hour rate, the following chart shows the decrease in usable capacity (at 80deg F) as the discharge rate is increased.

DISCHARGE RATE	PERCENT CAPACITY
20.0	100.0
15.0	97.9
12.0	92.5
8.0	91.0
7.0	89.5
6.0	87.9
5.0	85.6
4.0	82.4
3.0	77.2
2.0	72.9
1.5	65.3
1.0	59.0

EFFECT OF SPECIFIC GRAVITY ON THE BATTERY FREEZING POINT

The following chart shows the freezing point of a battery with various electrolyte specific gravities. This is useful for identifying the freezing point of a fully charged battery and of a battery in various stages of discharge since the specific gravity decreases as the battery discharges.

SPECIFIC GRAVITY (@ 60 deg F.)	FREEZING POINT (in degrees F.)
1.300	-95
1.275	-93
1.250	-65
1.225	-39
1.200	-18
1.175	- 4
1.150	+ 5
1.125	+12
1.100	+17
1.075	+22
1.050	+25
1.025	+29
1.000 (water)	+32

VOLTAGES & SPECIFIC GRAVITY CHANGES AT VARIOUS STAGES OF BATTERY DISCHARGE

Assumes a fully charged specific gravity at 80 deg F. of 1.265. Voltage for a 24V battery will be double.

Voltage for a 6V battery will be half.
Specific gravity can vary +or- .015.

STATE OF CHARGE	SPECIFIC GRVITY	12V BATTERY VOLTAGE
100%	1.265	12.70
90%	1.249	12.58
80%	1.233	12.46
70%	1.218	12.36
60%	1.204	12.28
50%	1.190	12.20
40%	1.176	12.12
30%	1.162	12.04
20%	1.148	11.98
10%	1.134	11.94
Discharged.....	1.120	11.90

CHANGE IN BATTERY CAPACITY AS THE SPECIFIC GRAVITY CHANGES

Using 1.290 S.G. as the baseline, the following chart shows how increases or decreases in the specific gravity affect the amp hour capacity of the battery.

ELECTROLYTE SPECIFIC GRAVITY (fully charged)	PERCENT CAPACITY @ 0 deg F. (3 deg C.)	PERCENT CAPACITY @ 80 deg F. (20 deg C.)
1.310	108	102.2
1.300	105	101.3
1.290	100	100.0
1.280	93	98.5
1.270	84	96.6
1.260	77	94.4
1.250	67	91.9
1.240	57	89.4
1.230	48	86.7
1.220	40	83.5

On the Web: www.absAK.com

ABS Alaskan, Inc.

2130 Van Horn Rd., Fairbanks AK 99701
 ph: 907-452-2002 fax: 907-451-1949
 Toll Free US: 800-235-0689
 email: abs@absAK.com

Alaska Battery Mfg.

166 E. Potter Dr. #2 Anchorage, AK 99518
 ph: 907-562-4949 fax: 907-563-4900
 Toll Free AK/Canada: 800-562-4523
 email: akbattery@absAK.com

ABS Distribution Center

244 SW 43rd Street, Renton, WA 98057
 ph: 425-251-5745 fax: 425-251-5748
 Toll Free: 888-606-4949
 email: seldon@absAK.com