REAL POWER
UNREAL PERFORMANCE

CAUTION! PLEASE READ!

Proper Charging is Crucial! Charge before initial use!

Be sure to read the D Series Instruction Sheet for full instructions.

Proper Charging is crucial to the life of your XS Power battery. It is very important that the temperature of the battery remains cool with respect to the charge voltage. The chart below will help ensure proper charge voltage with different ranges of temperature.

TEMPERATURE SPECIFICATIONS

Nominal Operating Temp.	77°F (25°C)
Charge Temp. Range	32°F - 104°F (0°C - 40°C)
Discharge Temp. Range	5°F - 122°F (-15°C - 50°C)

CHARGE VOLTAGE REFERENCE CHART

Temperature	32°F (0°C)	50°F (10°C)	68°F (20°C)	77°F (25°C)	86°F (30°C)	104°F (40°C)
Charge Voltage	15.30	15.00	14.80	14.70	14.50	14.30
Float Voltage	14.10	14.20	13.75	13.65	13.50	13.35

Do Not Over-tighten Battery Terminals!

Whether using the automotive post adaptors, bolts or screws, the tightening torque should never exceed 8 ft-lbs max on any XS Power Battery!

Installation

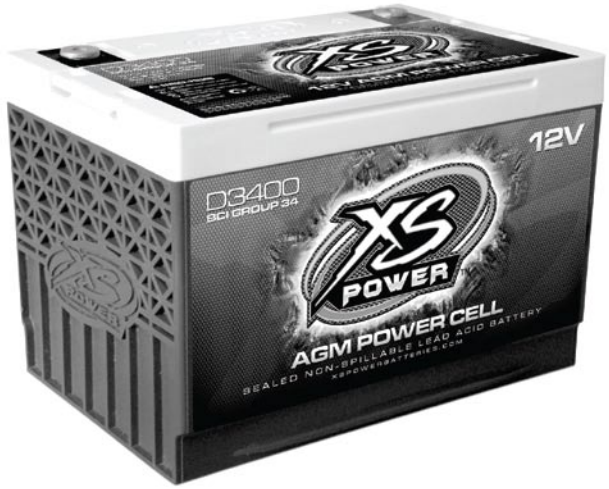
• Securely fasten the battery to the vehicle. XS Power 12-volt AGM Performance batteries are designed to bolt into most automotive, truck and marine applications.

• Connect the battery. Observe polarity carefully.

• If you are running a dual battery set-up, make sure that the batteries are hooked up in parallel(positive to positive and negative to negative). Parallel doubles the amperage and reserve capacities whereas series(positive to negative) would double the voltage output.

When voltage is lower than 12.6V or storage time is longer than 6 months, the battery must be recharged as described in the **Care of XS Power 12-V AGM Battery** on the instruction sheet. (see figure 1.0 reverse)

When voltage is higher than 12.6V, the battery may be installed on the vehicle without any refresh charge.



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⚠ Proper Charging Is Crucial! Charge Before Initial use!

- It is very important that proper charging techniques be used when charging AGM batteries. AGM batteries are designed for use with AGM battery chargers with a MAXIMUM output voltage of 2.4 volts per cell(14.4v for 12v batteries and 19.2v for 16v batteries). AT NO TIME during charging should the battery be subjected to more than 2.4 volts per cell. Voltage above this will cause the battery to "gas" and once oxygen is vented it cannot be restored.

- Under-charging AGM batteries is equally damaging to the life of the battery. Take special care to ensure that the battery is properly charged before the initial use by verifying the open curcuit voltage is above 2.1 volts per cell(12.6v for 12v batteries,14.7v for 14v batteries, and 16.8v for 16v batteries). Improper charging can cause damage that is permanent and WILL VOID THE WARRANTY.

XS Power 12-Volt AGM Batteries

The XS Power 12-Volt AGM Performance battery is a six cell, sealed-valve regulated, lead-acid battery. Sealed-valve regulated, lead- acid(VRLA) batteries are manufactured in two types, gel-cell and AGM(Absorbent Glass Mat). The key difference is how the electrolyte is suspended between the lead plates. AGM batteries such as the XS Power 12-Volt AGM Performance Batteries, use a fibrous material to suspend all liquid electrolyte against the plates. Even if the case were ruptured, no acid would leak. In contrast, gel-cell batteries suspend the electrolyte in a gel form and are not necessarily leakproof.

AGM batteries are similar in chemical function to flooded and maintenance free batteries in that they convert electrical energy into chemical reactions on the lead plates. AGM batteries differ in the amount of electrolyte used. AGM batteries have substantially less electrolyte than a typical flooded or maintenance free battery. Operating with less acid is possible in an AGM battery because each cell in the battery operates on a slight positive air pressure. This air pressure allows for the water produced during discharge to condensate and therefore recycle inside the battery. Hence almost no gasses escape the battery under proper charging conditions. If the battery were to be overcharged, the small amount of electrolytes could be "gassed" and vented by means of the safety valves from the battery. This is the main cause of premature AGM battery failure and therefore should be avoided. The cells are compressed before insertion into the case, which increases performance and makes the battery extremely vibration resistant. The reduced acid content of the battery allows for additional plates and therefore additional performance in an AGM design. XS Power is using this unsurpassed technology to bring high performance to the 12-Volt audio, motorcycle, marine, commercial and automotive markets.

XS Power Cell Specifications — Terminals Not Included

Model Number	Weight lbs.	Weight kgs.	Dimensions: inch			MAX Amps	CA @ 32°F	Ah C/20
			Length	Width	*Height			
D375	12.24	5.55	7.87	3.03	5.28	800A	190	15Ah
D545	11.02	5.00	6.97	3.39	5.15	800A	240	14Ah
D680	15.42	7.00	7.13	3.03	6.57	1000A	320	20Ah
D925	23.54	10.70	6.50	6.93	4.92	2000A	550	28Ah
D975	26.43	12.00	7.83	5.30	6.67	2100A	525	35Ah
D1200	33.26	15.10	7.80	6.54	6.69	2600A	725	44Ah
D4700	42.19	19.14	9.48	6.93	7.48	2900A	745	50Ah
D4800	48.22	21.87	10.94	6.93	7.48	3000A	815	60Ah
D5100	39.60	18.00	9.02	5.43	8.19	3100A	745	60Ah
D5100R	39.60	18.00	9.02	5.43	8.19	3100A	745	60Ah
D3400	47.00	21.32	10.24	6.65	7.20	3300A	1000	65Ah
D3400R	47.00	21.32	10.24	6.65	7.20	3300A	1000	65Ah
D2400	62.17	28.30	10.24	6.65	8.31	3500A	670	70Ah
D6500	55.78	25.30	11.80	7.20	6.80	3900A	1070	75Ah
D4900	61.22	27.77	13.89	6.93	7.48	4000A	1075	80Ah
D2700	70.99	32.20	12.09	6.65	8.31	4300A	1170	100Ah
D3100	75.40	34.20	12.99	6.81	8.43	5000A	1360	110Ah
D7500	99.80	45.27	12.90	7.20	10.75	6000A	1700	140Ah

TEMPERATURE SPECIFICATIONS

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Proper Charging is crucial to the life of your XS Power battery. It is very important that the temperature of the battery remains cool with respect to the charge voltage. The chart below will help ensure proper charge voltage with different ranges of temperature.

CHARGE VOLTAGE REFERENCE CHART

Temperature	32°F (0°C)	50°F (10°C)	68°F (20°C)	77°F (25°C)	86°F (30°C)	104°F (40°C)
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WARNING/SAFETY Precautions

Warning: Lead-acid batteries of all designs produce explosive gasses. Sparks of any kind could cause a battery to explode.

Therefore:

- Never smoke when around a battery.
- Never weld or otherwise produce sparks around a battery.
- Do not allow tools or other metal objects to fall across the battery terminals- this will short circuit the battery.
- Always wear protective clothing and eye wear when servicing a battery.
- Sulfuric acid can cause severe burns. If acid comes into contact with your skin flush with water immediately. If acid comes in contact with your eyes, flush immediately with water for fifteen minutes and seek medical help promtly.
- Neutralize acid spills with baking soda and water.
- Keep all batteries out of reach of children.
- California Proposition 65 Warning: Batteries, battery posts, terminals, and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer, birth defects, and reproductive harm. **Wash hands after handling!**

Caution:

⚠ Do not overcharge this battery. Use only a voltage limited automatic battery charger set at 14.4VDC±.3VDC maximum.

⚠ This is a sealed battery. Do not attempt to remove the vent caps under the top label.

RECYCLABLE Recycle used batteries in accordance with local, state, and federal law at an authorized recycling center.

Pb Battery must be recycled!

⚠ DO NOT OPEN VENT VALVES!

Care of XS Power 12-V AGM Battery

- Charge voltage is not to exceed 14.4V total for extended periods of time.(5min. max)*

- The charger used MUST HAVE an automatic shut-off.
  *Some AGM chargers may climb to a maximum voltage of 15.5VDC for a short period of time(usually less than 5min.) but will resume charging at or near 14.4VDC±.3VDC for the duration of the charge cycle. If you are unsure of your chargers capabilities, contact the manufacturer of the charger

Exceeding 14.4VDC±.3VDC will cause the battery to "gas" and once the oxygen is released from the battery there is no way to restore it. The results will be reduced capacity and battery life and those results are permanent. This type of damage will cause the battery to show a proper open circuit voltage yet will not accept a charge and will become excessively hot during charging. Damage of this nature will void the warranty. Therefore ensure that your battery charger will not exceed 14.4VDC±.3VDC at any time during the charging cycle. For ease of use, we recommend recharging the battery with an XS Power IntelliCHARGER p/n 1005, as it is a totally automatic 3 stage microprocessor controlled battery charger with float charging capability. This battery charger prevents overcharging, maintains proper performance and can be left on the battery indefinitely during non-use periods.

It is very important to **NEVER USE** a charger designed for flooded 12V batteries, not even once with a **XS Power 12V AGM battery**. Furthermore, we recommend that the battery be disconnected from the rest of the vehicle's electrical system during charging.

"Off Season" Maintenance

All lead-acid batteries, both flooded and AGM designs are subject to self-discharging and this self-discharge rate is very much affected by ambient temperature in which the batteries are stored. Higher ambient temperatures will discharge the battery faster. Cool storage for batteries is the best. When voltage is lower than 12.6V or storing time is longer than 6 months, the battery must be recharged as described in the Preformance Curve diagram to the left.

Performance Curve

(Figure 1.0)