

ODYSSEY PC680

ODYSSEY PC680 AGM Powersports Battery Instruction Manual

MODEL: PC680

Brand: ODYSSEY

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your ODYSSEY PC680 AGM Powersports Battery. The ODYSSEY PC680 is engineered with a rugged construction, designed to withstand constant vibration and shock. Its non-spillable AGM (Absorbed Glass Mat) design, packed with pure lead plates, offers superior power and extended life compared to conventional batteries. This battery is suitable for a wide range of powersports applications, including motorcycles, ATVs, personal watercraft, and snowmobiles.

2. SAFETY INFORMATION

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 Warning).

Batteries contain corrosive sulfuric acid and produce explosive gases. Improper handling can lead to severe injury or death. Always follow these safety guidelines:

- Always wear appropriate personal protective equipment, including safety glasses and gloves, when handling batteries.
- Keep sparks, flames, and smoking materials away from the battery.
- Ensure adequate ventilation when charging or working near batteries.
- Avoid contact with battery acid. If contact occurs, flush immediately with water and seek medical attention.
- Do not short-circuit battery terminals.

- This item is classified as Hazmat and is non-returnable due to safety regulations.
- Do not attempt to open or modify the battery casing.

3. PRODUCT OVERVIEW

The ODYSSEY PC680 battery features a robust design for demanding applications. Key characteristics include:

- **Longer Service Life:** Provides 3-10 years of service life, reducing replacement frequency.
- **Extended Cycle Life:** Offers 70% longer cycle life compared to conventional deep cycle batteries, up to 400 cycles at 80% depth of discharge.
- **Faster Recharge:** Achieves 100% recharge in 4-6 hours, the highest recharge efficiency among sealed lead batteries.
- **Vibration Resistance:** Designed to protect against high impact shock and mechanical vibration.
- **Extreme Temperature Tolerant:** Operates reliably across a wide range of temperatures.
- **Non-Spillable Design:** Allows for flexible mounting options without risk of acid spills.



Figure 1: The ODYSSEY PC680 AGM Powersports Battery, showcasing its red top and black casing with threaded terminals.

4. SETUP AND INSTALLATION

The ODYSSEY PC680 battery is designed for universal fit in various automotive and powersports applications. It features threaded terminals and top terminals for connection.

- **Terminal Type:** This model comes with Threaded Terminals and Top Terminals. Ensure your vehicle's connectors are compatible or acquire appropriate adapters (e.g., screw-in Odyssey brass battery posts for car connections).
- **Mounting:** The non-spillable AGM design allows for flexible mounting. It can be mounted on its side or

even upside down if necessary, provided it is securely fastened.

- **Secure Installation:** Always ensure the battery is securely mounted to prevent movement, which can cause damage or short circuits.
- **Connection:** Connect the positive (+) terminal first, then the negative (-) terminal. Ensure all connections are clean and tight to prevent resistance and ensure optimal performance.



Figure 2: The ODYSSEY PC680 battery shown with an optional mounting bracket, illustrating how it can be secured.



Figure 3: Diagram illustrating the physical dimensions of the ODYSSEY PC680 battery: 7.15 inches deep, 3 inches wide, and 6.65 inches high.

5. OPERATING INSTRUCTIONS

The ODYSSEY PC680 battery is designed to deliver high cranking power and reliable performance. Its Pulse (5-Second) Hot Cranking Amps (PHCA) is 520, and its Cold Cranking Amps (CCA) is 170, ensuring strong starts even in challenging conditions.

- **Starting:** The battery provides ample power for starting high-compression engines.
- **Reserve Capacity:** While powerful, its reserve capacity is optimized for its compact size. Avoid prolonged use of accessories (e.g., headlights, radio) with the engine off to prevent deep discharge.
- **Voltage Stability:** Maintains a high stable voltage for longer periods, contributing to consistent performance.

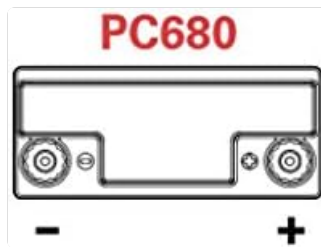


Figure 4: A top-down diagram of the ODYSSEY PC680 battery, clearly indicating the positive (+) and negative (-) terminal locations.

6. MAINTENANCE

The ODYSSEY PC680 is a sealed, maintenance-free AGM battery. However, proper care ensures maximum lifespan and performance.

- **Charging:** The battery can be recharged to 100% in 4-6 hours. Use a compatible battery charger designed for AGM batteries. Avoid overcharging.
- **Storage:** If storing the vehicle or battery for extended periods, ensure the battery is fully charged. For very long storage, consider using a battery maintainer or disconnecting the negative terminal to prevent parasitic drains.
- **Cleaning:** Keep the battery terminals clean and free of corrosion. Use a wire brush and a mixture of baking soda and water if corrosion is present, then rinse with clean water and dry thoroughly.
- **Inspection:** Periodically inspect the battery for any signs of physical damage, such as cracks or swelling.

7. TROUBLESHOOTING

If you experience issues with your ODYSSEY PC680 battery, consider the following common troubleshooting steps:

- **No Start/Weak Crank:**
 - Check battery terminals for cleanliness and tightness. Loose or corroded connections can impede current flow.
 - Verify the battery's charge level. A weak battery may require recharging.
 - Ensure the vehicle's charging system (alternator) is functioning correctly.
- **Battery Drains Quickly:**
 - Check for parasitic drains in the vehicle's electrical system (components drawing power when the vehicle is off).
 - Ensure the battery is being fully charged during operation.
- **Battery Not Holding Charge:**
 - Perform a voltage test after the battery has rested off a charger for 24 hours.
 - If the voltage is below 10.5V, the battery may be over-discharged and might not recover.
 - Consider a CCA load test to assess the battery's health.

If issues persist after troubleshooting, refer to the Warranty and Support section for further assistance.

8. TECHNICAL SPECIFICATIONS

Model	Voltage	PHCA** (5 sec)	CCA*	HCA	MCA	Nominal Capacity	
						(20 Hr Rate-Ah)	(10 Hr Rate-Ah)
PC680	12	520	170	350	280	16	16

Reserve Capacity Minutes	Length inches (mm)	Width inches (mm)	Height inches (mm)	Weight lbs (kg)
24	7.27 (184.7)	3.11 (79.0)	7.55 (191.8)	15.4 (7.0)

Terminal	Torque Specs in-lbs (Nm max)	Internal Resis- tance (mΩ)	Short Circuit Current
M6 Receptacle' or SAE 3/8-16" Receptacle	50 (5.6)	7	1800A

Figure 5: A table detailing the performance and physical specifications of the ODYSSEY PC680 battery, including voltage, PHCA, CCA, nominal capacity, dimensions, and weight.

ODYSSEY PC680 Key Specifications

Specification	Value
Brand	ODYSSEY
Model	PC680
Product Dimensions	7.15"D x 3"W x 6.65"H
Item Weight	13.45 pounds
Terminal Type	SAE Terminal (Threaded Terminals, Top Terminals)
Pulse (5-Second) Hot Cranking Amps (PHCA)	520
Cold Cranking Amps (CCA)	170
Amperage	18 Amps
OEM Part Number	PC680
UPC	635241138061
Manufacturer	Odyssey Battery

9. WARRANTY AND SUPPORT

The ODYSSEY PC680 battery comes with a **Limited 2-year full replacement warranty**. This warranty is not pro-rata, meaning it covers full replacement within the specified period under qualifying conditions. To ensure your warranty claim is processed smoothly, please be aware of the following conditions and requirements:

- **Minimum Voltage:** The battery must have a minimum of 10.5V when returned for warranty support. Claims may be void if the voltage is less than 10.5V due to an over-discharged condition.

- **Physical Condition:** The battery must not show signs of case distortion or damage due to overheating or mishandling.
- **Failure to Recover:** The battery must fail to recover when charged and/or not test within battery specifications.
- **Proof of Purchase:** A copy of the purchase receipt or order confirmation is required.
- **Documentation:** You may be asked to provide general photos of the battery, including all labels with clear view of information, and the serial number (SN) bar code label.
- **Testing Results:** Provide a rested voltage reading from the battery 24 hours off charge and CCA load test results (if available) that include voltage and CCA readings. Pictures of tester results from a local dealer or auto parts retailer are acceptable.

For warranty claims or technical support, please contact ODYSSEY Battery customer service directly. Refer to the official ODYSSEY website for current contact information.

10. WHAT'S IN THE BOX

Upon unpacking your ODYSSEY PC680 battery, you should find the following item:

- ODYSSEY PC680 AGM Powersports Battery