



**GROUP 31 31A760**

# **WARRANTY**

Warranty Not Transferable.

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This battery is a multipurpose battery for use in starting, UPS and RV applications. The standard Warranty on this product is two years for a starting application.

Standard Terms: Refer to points 1 and 2.

1. This is where the product is correctly sized and fitted to a vehicle for the sole purpose of starting the engine.
2. If used in a vehicle for RV secondary battery or dual battery system, it carries a standard one year warranty.
3. If the battery is used for a cycling application it carries a one year or cycle life warranty whichever comes first.
4. 30% DOD will provide 350 cycles (one year if discharged daily).
5. 50% DOD will provide 200 cycles (6,5 months if discharged daily).
6. 80% DOD will provide 110 cycles (3 months if discharged daily).
7. It is thus clear that one cannot apply a one year warranty if the products design life is less than that period.

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**All batteries are designed for specific applications and have limits and thresholds to their use. If these limits and thresholds are exceeded the warranty of the product will be void. This is standard practice for all products in the market place.**

- Batteries carry warranty for faulty materials or bad workmanship. Thus if the battery fails due to a factory defect, it will carry a warranty. If the battery has failed due to wear and tear, abuse or factors exceeding battery working parameters it cannot be considered a warranty.

- The battery is rated at a C20 rate for 102 Ah's. This means it can be discharged at 5 amps for a period of 20 hours. This is correct for a fridge in a camping or RV application.
- The battery also carries an RC rating of 180 minutes. This means it will deliver 75 Ah's if discharged at a rate of 25 amps.
- This is the maximum continuous current the battery can deliver as per its design parameters. Anything more will void the warranty.
- Remember that DOD % will reduce the minutes one can use.

**Rate of discharge is very important to take into account when sizing the solution.**

- To not void the warranty we cannot exceed the C rating of the product.
- Remember that 102 Ah battery is rated at C20 thus 5 amps maximum continuous discharge. So if you need to discharge at 15 amps you would need 3 batteries connected in parallel.
- If you opt to run as a 75 ah hour battery with a RC capacity of 90 min to 50% DOD you are limited to 25Amps continuous for 90 min. If you need 60 amps, you will need to connect 3 batteries in parallel.
- If you exceed these thresholds, you have intentionally exceeded the terms of the warranty and you therefore cannot expect to be assisted with a warranty.



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**Depth Of Discharge is also very important to consider. (DOD)**

- Size the battery for 30% DOD and you will have no issues and battery should last the expected period. (5 amps for 6 hours).
- Size the battery for 50% DOD and the battery will complete 200 cycles before a year is up if cycled daily. (5 amps for 10 hours or Max 25 amps for 54 minutes).
- If more time is required, again you will need to add batteries in parallel to meet the required need.
- If depth of discharge exceeds 50% then cycle life will be shortened below the period of one year.
- If 80% DOD is exceeded then warranty is void under standard terms and condition of all lead acid batteries.

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**Charging of Batteries**

- The charger needs to be sized correctly to ensure the battery receives the correct rate of charge. If this is incorrect or outside of the required parameters, standard terms and conditions apply and the warranty will be void.
- If continuous partial charging occurs, the warranty will also automatically be void. This will occur if the battery is not fully charged before starting the next discharge cycle.
- Note: the standard charging time from 50% DOD to top of charge is 9 to 12 Hours depending the rate of bulk charge.

**It will be difficult to determine exact parameters in all applications therefore “Deltec” can only apply reasoning that is fair for all parties in the respect of warranties.**

- If the battery is connected to an appliance that switches off at a cut off voltage of less than 11.6 volt it is fair to conclude that the batteries thresholds were exceeded.
- If the battery is discharged at a continuous rate of more than 25 amps it is fair to conclude that the thresholds of the product were exceeded.
- If the battery charger charging the battery is smaller than 10 amps or larger than 20 amps per battery, then we can conclude that the battery charging parameters were not adhered too and can conclude that the thresholds were exceeded.
- If the charging time and the corresponding charger could not fully charge the battery in the allotted time period we can conclude that the product thresholds were exceeded.

Deltec can proudly say that when the product is used with the design thresholds the product out performs expectations and warranties are little to none for the past 30 years. If you know that you are going to exceed the thresholds or working parameters of the product, please talk to a Deltec consultant and we can offer other products that will better meet the requirements. Deltec has a wide range of products for all applications. Both Lead Acid and Lithium based products. Sizing batteries is a specialised skill and we advise you consult before choosing a product for an application.

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