

## C&D TECHNOLOGIES, INC.

### TWENTY-YEAR LIMITED WARRANTY AND PRO RATA ADJUSTMENT FOR FLOODED, LEAD-CALCIUM BATTERIES USED IN FULL FLOAT SERVICE\* IN THE USA AND CANADA

WARRANTY DOES NOT APPLY TO BATTERIES USED IN CYCLE SERVICE

**WARRANTY:** Batteries manufactured by C&D Technologies, Inc. (collectively referred to as "C&D") are warranted against defects in materials and workmanship for a period of one year from date of shipment. As the sole and exclusive remedy in discharge of the Warranty, C&D agrees to repair or replace, at its option, any cells or parts of the battery assembly which do not meet C&D specifications for new materials or workmanship, provided the User gives C&D prompt notice of such alleged defects and further provided User, if requested by C&D, returns allegedly defective goods to C&D, F.O.B. C&D destination, freight prepaid and allowed, for evaluation. The replacement battery shall only complete the remaining unused portion of the original warranty of the replaced battery.

**WARRANTY ADJUSTMENT AGREEMENT:** In addition, for a period of 240 months from date of shipment, C&D warrants the batteries, when installed and operated in full float service in accordance with C&D Standby Battery Installation and Operating Instructions, RS-1476 ("Instructions"), as may be amended from time-to-time, as follows:

C&D agrees if battery fails to deliver 80 percent of its published, rated capacity, when tested under C&D supervision, prior to 240 months from date of shipment, C&D, at its option, will either (a) repair battery at C&D expense, F.O.B. C&D destination, freight prepaid and allowed, to deliver in excess of 80 percent of its published rated capacity, or (b) credit User against the purchase of another C&D battery of equal or greater capacity in an amount equal in dollars to the net purchase price received by C&D for the original battery multiplied by the months of unexpired warranted life divided by 240, in exchange for the unserviceable battery, exclusive of freight.

This Limited Warranty is subject to the following terms and conditions:

1. User shall install and maintain each battery in accordance with the Instructions.
2. User shall give a freshening charge to all cells every six months when stored at 77°F (25°C) or every three months if stored at temperatures of 92°F (33.3°C) after ship date from C&D factory until final installation, which must be completed within 12 months from date of shipment.

3. Battery shall not be placed in an operating environment in which the average ambient temperature exceeds 80°F (26.6°C), or peak temperature exceeds 110°F (43.3°C) for more than a 24-hour period. Battery shall not be subjected to freezing conditions.
4. User shall locate cells in such a manner that no cell in a string will differ more than 5°F (2.78°C) between the lowest and highest individual cell temperature, when floating at recommended float voltages shown in charge voltage table. Cells shall not be installed near radiators, steam pipes, or direct sunlight, or in any location where cells may be exposed to elevated temperatures.

CHARGE VOLTAGE TABLE A

SPECIFIC GRAVITY	FLOAT VOLTAGE (Vpc)	INITIAL/EQUALIZE (Vpc)	MIN. ACCEPTABLE (Vpc)
1.170	2.17-2.22	2.29-2.34	2.10
1.215	2.20-2.25	2.33-2.38	2.13
1.225	2.22-2.27	2.36-2.40	2.15
1.250	2.25-2.30	2.38-2.43	2.18
1.275	2.29-2.34	2.40-2.46	2.20
1.300	2.33-2.38	2.45-2.50	2.23

5. User shall not permit any cell to operate below the minimum acceptable voltage shown in charge voltage table above. An equalizing charge shall be given within three months if any cell voltage drops below the minimum acceptable voltage.
6. User shall utilize automatic constant voltage charging equipment of a type approved by C&D. Trickle charging, i.e., where a specific charging current is manually set to trickle charge the battery at a given rate, is not acceptable.

\* Full float service is defined as a battery supplied with a constant potential charge that maintains the battery at full charge. The battery is intended to supply back-up power for a limited number of discharge cycles. However, it is anticipated up to one 30-second transfer test each month and one annual capacity discharge may be performed throughout the life of the battery.

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7. User shall maintain electrolyte levels between the high and low level marks at all times. If water is required, User shall add only approved water as described in Manual RS-1476. If local water is unsatisfactory, distilled or deionized water must be used.
8. Battery shall not be subjected to misuse, abuse or physical damage.
9. In order to obtain optimum life, battery should not be subjected to testing in excess of the following:
  - a. Initial acceptance test not to exceed User's original design load parameters for User's original specified system reserve time.
  - b. Full load service test to be performed not more than once every 12 months to verify battery capacity at User's original specified discharge rate.
  - c. A monthly system transfer test not to exceed a maximum of 30 seconds battery discharge time at User's original specified discharge rate to verify system load transfer and ancillary electrical system performance.
10. C&D representatives shall be given access to any goods subject to this Limited Warranty for purposes of inspection at reasonable hours and intervals.
11. C&D, unless otherwise agreed, shall not be obligated for removal or installation in connection with the furnishing of new cells or repair parts, and undertakes no responsibility for work done by others or expense incurred.
12. At least once a year, User shall complete an inspection report in substantially the same form as C&D form RS-105, which is available upon request, and forward the report to the attention of the technical service department, C&D Technologies, Inc., 1400 Union Meeting Road, P.O. Box 3053, Blue Bell, PA 19422-0858.

13. User shall not continue use of battery after discovery of a defect.
14. Battery will be considered at end of its useful life when it fails to deliver 80 percent of its published rated capacity when tested under C&D supervision and in accordance with IEEE 450-1989, "Recommended Practice for Maintenance, Testing, and Replacement of Large, Lead-Acid Storage Batteries for Generating Stations and Substations."
15. The warranty covers battery cells/multi-cell units. Connectors, hardware and accessories are not included except as noted in Field Letter FLSP 11-20.

The foregoing is the sole and exclusive remedy in discharge of this warranty. C&D liability for damages, whether based upon alleged negligence, breach of warranty, breach of contract, or otherwise, shall in no event exceed the purchase price of the specific item with respect to which such damages are claimed. Costs of replacement, installation, travel expenses of a C&D representative, and material freight expenses will be the responsibility of the user.

**LIMITATIONS:** This Limited Warranty Agreement extends only to original purchaser (User) and is non-transferable. Except as authorized in writing, this warranty does not cover any equipment that has been altered by any party other than C&D. User shall indemnify and save C&D harmless from any claims and liabilities arising out of the use, maintenance, transportation, or installation of any equipment warranted hereunder. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. C&D MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL C&D BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

### **WARNING**

At all times, safety must be considered an important factor in the installation, servicing and operation of the product, and skilled, qualified technical assistance always should be utilized.