NiCd Battery

Foaming during charge is an indication of low electrolyte concentration. Recondition the electrolyte and replace the old electrolyte in the foaming cells. Contamination of the electrolyte can be more serious because the contaminants may have caused permanent damage in the cells. This probably is going to require replacement of the affected individual cell.

If the battery output voltage is below normal, the most likely reason is you have accidentally left a load on the battery and it has discharged; simply recharge it. Other possibilities are simple, physical problems such as loose, dirty, damaged, or broken hardware; or loose, corroded, burned, or pitted connectors. Often a thorough cleaning of the problem area will rectify the situation. The worst case is a defective or reversed cell, which requires replacement of the cell. If the electrolyte level is too low, there is a cell imbalance, or the charging voltage has been too low; the battery should be reconditioned and the level of the electrolyte brought up. The voltage regulator also should be adjusted in the case of a low-charging voltage. No battery output could be the result of broken or disconnected hardware or links or a loose battery connector. Repair or replace the parts as necessary and recondition the battery.

Discolored, corroded, and/or burned hardware, connectors, or terminals indicate improper maintenance. The most likely problems are loose hardware, improper matching of parts, shorts between links, and improper cleaning. Correct the problem and recondition the battery if necessary.

If a cell is distorted or damaged, the problem could be a cell with an internal short, an overheated battery, or improper cooling. It also could be the result of charger failure or a plugged cell vent cap. Your mechanic will have to find the problem, correct it, and recondition the battery. Distortion of the battery case and/or cover could be the result of a major explosion of one of the cells, a dry cell, a high-charge voltage, a charge failure, or a plugged battery vent. Again, the mechanic will have to isolate and correct the problem and recondition the battery.

Starter

The operator may employ several troubleshooting techniques on the starter circuit. If the starter motor power seems insufficient to turn the engine, the most likely problem is the battery. If the battery is sound, inspect the load circuit; it could have a loose connection or a frayed cable. There also may be insufficient lubrication in the engine or something may be binding the engine or propeller. If the starter doesn't activate at all, the first thing to check is the battery and its connections. The starter switch also could be defective; try jiggling it.

If the starter draws unusually high current, there probably is an excessive load. Several things could be the culprit. If it's cold, the problem may be congealed oil. Use a preheat and external power for the next start attempt. There also may be an obstruction to the propeller or, in the worst case, the engine bearings may have seized.

Occasionally, a starter will run too fast. This almost certainly is caused by excessive external power output voltage. Should the starter overheat, frequently made obvious by its odor, there could be several causes. Most often it is caused by exceeding recommended