

CHARGING BASICS

Review and follow the latest applicable CMM @ Gillbatteries.com. The following are helpful guidelines only.

Correct charging is very important and will affect the overall life of the battery. The charging process is not 100% efficient and will typically be 10% to 20% higher than the amount of capacity removed during discharge.

Undercharging a battery occurs when the required 110% to 120% of the removed capacity is not returned during recharge. Undercharging will cause a lead sulfate increase in the plates, causing a permanent loss of capacity.

Overcharging a battery repeatedly will corrode the grids in the positive plates and break down the water in the electrolyte to hydrogen and oxygen (electrolysis) and lead to failure.

Charging efficiency is affected by temperature. Lower temperatures will require higher charging voltages and vice versa for higher temperatures.

Constant Current (CC)

Useful in recovering deeply discharged batteries, if performed per GILL instructions. This method uses a constant current throughout the charging period. Voltage could be as high as 2.67 volts per cell.

You MUST have a functional timer to end charging! Since the charge rate is constant, prolonged charging using this technique will result in excessive water loss and accelerate battery failure

Constant Voltage (CV)

Charger output voltage is constant – typically around 2.36 volts per cell.

Initial charge rate is dependent on the charger – could be as high as 10A. The rate will continue to drop as the battery voltage approaches the charger output voltage (battery internal resistance changes)

End of charge is typically determined by the drop in charging rate to less than 0.5 amps.

Trickle chargers are also constant voltage chargers.

CONTINUED AIRWORTHINESS TESTING

If you cannot discharge a battery at the recommended discharge rate, call Teledyne Tech Support for the performance curve for that battery. This curve can be used to determine the discharge time for a known discharge rate to a specified end voltage (1.67 volts per cell).

MANAGING PERIODS OF NON-USE/LIMITED USE

Teledyne recommends that the battery be removed from the aircraft during extended periods (more than 30 days) of non-use or between repeated short duration flights (typically less than one hour, once or twice a month) and kept on trickle charge or fully recharged prior to the next flight.

BATTERY SAFETY

ALWAYS WEAR ACID RESISTANT GLOVES AND SAFETY GOGGLES WHEN WORKING WITH BATTERIES

Batteries generate explosive gases when charging do not generate any sparks, flames, smoke cigarettes or introduce any ignition sources around the battery

MAKE SURE THERE IS ADEQUATE VENTILATION WHEREVER A BATTERY IS USED OR CHARGED.

FOLLOW BATTERY MANUFACTURER'S CMM INSTRUCTIONS AT ALL TIMES.

RECYCLE SPENT BATTERIES RESPONSIBLY. CHECK OUR WEB-SITE FOR WORLD-WIDE RECYCLING RESOURCES.

Keeping it Simple - A Guide to process your Warranty

1. Follow the applicable CMM to recover your battery if possible. Call us if you need help.
2. Make sure you meet the limitations and conditions of the warranty before calling technical support to start a claim.
3. Call technical support to begin the warranty process within 7 days of failure and have the serial number and maintenance information handy. Do not dispose of battery until Tech. Support evaluation is completed.
4. Validated warranty claims will either be shipped a replacement battery from Teledyne or will be given a Warranty Authorization number to use on this form (see step 5).
5. Complete this form both sides including the provided Authorization #. Remove Serial Number sticker from old battery and affix to form in box above the Maintenance Log. Return to any authorized Dealer/ Distributor **within 30 days of GILL authorization for a replacement GILL battery. GILL authorization remains in effect for 90 days from issuance, void thereafter. Add the New** (replacement) GILL Serial Number to this form. Submit original form to Dealer/Distributor at time of exchange. GILL Tech Support can be contacted through our website listed below or at: Within USA (800) 456 0070, or Outside USA (909) 793-3131, press option 3, between 7 am. to 4 pm. PST, Monday through Friday.

Our website address is www.gillbatteries.com

CALIFORNIA PROPOSITION 65 WARNING

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

Battery Type	Warranty Period
G-25, G-35 G-6381E/C	15 Months Or 900 Hours
G-200 Series	12 Months Or 600 Hours
G-639E/C G-640E/C G-641	9 Months Or 450 Hours
G-88 GE-50 Series	9 Months Or 450 Hours

Table A

Date _____

Owner _____

Phone Number _____

E-mail _____

Distributor _____

Dealer/Installer _____

Aircraft Make/Model _____

New GILL Battery Serial Number _____

Description of defect: (please circle one)

Won't take or hold charge Dead Cell Other
 (describe below)

Gill contact: _____

Warranty Authorization # _____

PLEASE ALSO COMPLETE REVERSE SIDE
 Gill Maintenance Log June 2019