PS2420 ERROR CODE DESCRPTIONS

- Battery Over Voltage—Output DC Cable connection is possibly connected to a battery pack with votlage higher than the output rating of the charger.
- Battery Temperature Low/High—If an external thermistor is connected in the application, the charger has detected an attempt to use the battery out of is recommended temperature range.
  NEVER ATTEMPT TO CHARGE A BATTERY THAT IS, OR HAS BEEN, FROZEN.
- Battery Pack Unbalanced—V:
    - Triggered in Bulk Constant Current Stage, this can be caused by an unbalanced battery condition and/or excessive battery plate sulphation. Example: Some batteries are at a much higher state of charge than others. This may require replacement of the batteries. Refer to the Equipment Operators manual for instructions on servicing the battery pack.
- Battery Pack Unbalanced—A:
    - Triggered in Absorption Constant Voltage Stage, this can be caused by an unbalanced battery condition. Inspect each battery with a load tester as well as observe if any battery is 'hotter' to the touch than other batteries in the pack. The indication is that a cell or cells within the pack may have shorted or experienced stratification of the electrolyte. Battery replacement may be required. Refer to the Equipment Operators manual for instructions on servicing the battery pack.
- Batt is 100% Discharged —Based on 1.75 Volts Per Cell (VPC), this error is produced when cell voltage falls below this value (example; 21VDC for 24V Battery Pack). AC Power should be connector to charger and charging initiated immediately.
- Batt Emergency Under-Voltage—Based on 1.31VPC, battery may have been subjected to an extended Over-Discharge condition (example: 15.75VDC for a 24V battery pack) and battery is in danger of becoming damaged beyond repair. Using a volt meter, check if battery voltage is well under its 100% depth of charge. Remove all loads from battery, including charger, and allow time for battery pack to rise above 1.31VPC. Reconnect only the charger to battery pack and allow to charge.
- Batt Beyond Over Discharged!—Based on 1.00VPC, battery may have been subjected to an extreme Over-Discharge condition (example: 12VDC for a 24V battery pack) and battery damage is beyond probable repair—expect a shortened life span for battery. Charge will have turned off completely to avoid adding to the decaying process. Using a volt meter, check if battery voltage is well under 100% depth of discharge. Remove all loads from battery, including charger, and allow time for battery to rise above 1.00VPC. Reconnect only the charger to battery pack and allow to charge.
- Batt Temperature Sensor open/Shorted—If a Battery Temperature Sensor Cable was installed at start of charging but later found to be open or shorted, this error is produced. Inspect Temperature Device cable for breaks or shorts and correct.

- Batt Over-Temperature—If a Battery Temperature Sensor Cable is installed at start of charging and a maximum battery temperature is reached, further charging is then terminated and an error condition is produced. Check batteries for possible cell damage and perform a load test on each battery.
- Battery Storage Error—While equipment and battery sits in storage for an excessive amount of time, batteries have depleted. Charging is required immediately. Connect charger to AC power to start charging—error will clear.
- Battery Testing Error—Sulphated/Discharged
    - This error is only generated by one of two conditions found during the Pre-Qualification-Test Charge Stage:
        - Sulphated: Severely sulphated battery plates are preventing a charge flow from increasing above a minimum value. Disconnect and reconnect AC power to charger to restart this stage. If a second attempt failed, load test each battery and replace and failed battery.
        - Discharged: A severely discharged battery did not charge up to 1.75VPC (example: 21VDC for a 24V battery), within an allotted time span of approximately 4 to 8 hours. Check for heavy loads preventing battery from increasing charge and/or defective batteries that will not accept a charge.
- Bulk Charge Safety Time Error—Occurs during the Bulk Charge Stage when its associated safety timer times out AND the battery voltage was not allowed to increase above 2.17V/cell. Possible causes include: use of a battery load that is draining energy from the battery while the charger is trying to charge that same battery, aged or unbalanced battery cell conditions, etc.
- Absorption Charge Safety Time Error—Occurs during the Absorption Charge Stage when its associated safety timer times out AND the battery voltage was dragged below 2.17V/cell. Possible causes include: use of a heavy battery load that drained energy from the battery while the charger was trying to charge that same battery.
- Excessive Charge Time Error—Occurs when charging took too long AND the battery voltage was not allowed to increase above 2.17V/cell. Possible causes include: use of a battery load that is draining energy from the battery while the charger is trying to charge that same battery, aged or unbalanced battery cell conditions, etc.
- Mode Selected Empty—The selected Charge Algorithm, set via the User Selected Switch Setting, is empty and not a valid setting for charging batteries – reset the MODE Select switches to a valid value.
- Lockout (Inhibit) Enable Defective—If an Equipment Lockout (Inhibit) Cable is installed and supposed to be active, but it is not, this error is produced – Check Inhibit vehicle wiring. If correct, internal inhibit switch may have been overloaded.
- Lockout (Inhibit) Disable Defective—If an Equipment Lockout (Inhibit) Cable is installed and supposed to be deactivated, but it is not, this error is produced – Check Inhibit vehicle wiring. If correct, internal inhibit switch may have been overloaded.

- Internal Over Temperature—Charger shut down due to an internal over temperature condition – check fan operation and remove blockages, if any. Also, remove any air flow obstructions in and around the immediate vicinity of the product. Clean/clear away grease, grime and any debris from product. If this does not remedy situation, product may have been permanently damaged. Contact the factory or your point of distribution.
- Alert Definitions and Meaning—During Finish or Equalization Charge Stages, if the upper safety voltage was reached, the stage was terminated. It 'MAY' be an indication of loose or corroded terminals or other condition that produced a resistance into the charge path. Check all connections.
    - The Green LED Flashing Alerts are as follows:

      Slow = Finish Stage, Medium = Equalization Stage, Fast = Total Charge Timer