To: LFEVY42016 Team
From: Geoff Nudge
Date: 5/9/2016
Subject: Accumulator Errata

This memo lists all known errata regarding the TSV accumulator. Suggestions are made to correct these items.

*PacMan*

The PacMan computer occasionally resets when AlRs close and when LCO cable is connected/disconnected. The LCD display also changes the displayed screen in this scenario. This is likely due to input pins on the Atmel AVR AT90CAN128 that are connected to the 16 pin connector without any protection or device connected (to allow for future development). Cutting traces or adding protection should alleviate the problem.

A zener diode and CAN resistor should never be populated (see attached annotated schematic).

CAN GND should not be connected to PacMan ground plane (see attached annotated schematic).

CAN addresses and calibration factors are not able to be modified via the control panel.

*AMS*

The AMS PIC processor is bricked when the function ams_set_bypass_time in i2c.c is called. The reason for this needs further investigation.

Calibration factors should be moved from PacMan software to AMS firmware.

*Mechanical*

PacMan standoffs should be replaced. They are currently bolts and nuts tightened down to the pcb. Proper standoffs should be used.

The hole for the pack alive LED is slightly too small. It should be drilled out larger by the shop.

The garolite that PacMan is mounted to has threaded inserts that accept bolts from the top of the pack. These inserts tear out easily and should be held in with an adhesive.

The aluminum plate that separates cells 3 and 4 is too tall and must be cut shorter to allow for the aluminum bar wire to connect these cells.
This power supply is responsible for delivering non-isolated 5V power to the high voltage electronics. All AMS bus connected devices are powered from this regulator. Maximum current draw is 250mA. This Switcher was selected for its high efficiency even at light load. Maximum current draw on 5V output: 1.2A

This zener diode is not needed now that the flyback converter is not being used.

R26 provides the ability to use this board as a terminating CAN node in development only.
This connection between CAN GND and the ground plane should be removed.