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FAA

Aircraft N120CG S/N 5681
Engine, Subaru All MDLS A/B 4 cycle

This letter is in response to the inspection to find the cause of the engine to quick running. First we inspected the two Odyssey PC-680 batteries installed in this aircraft Battery A had 12.5 volts and B battery had 5.2 volts. We then re-connected both batteries and turned on the master switch, no power was noted. We then removed B battery with 5.2 volts and installed a serviceable with 11.8 volts. When we turned on the master switch the ships power came on. The fuel boost pumps (2 ea.) were running, alternator field was energized and the armature was magnetized indicating that the alternator would produce voltage.

We then took the B battery with 5.2 volts and tried to charge that battery with a Teledyne TDMC dual mode charger in doing so we discovered that this battery has an eternal short, and would not take a charge.

It was noted that there is a A system , B system and A/B system switch on the panel for the battery choice but both batteries are in series not parallel meaning if one battery dies the electrical system shuts down. (Battery B was shorted out and only had 5.2 volts) This was the cast when we disconnected either battery A or B the system would shut down. The operation of the engine, fuel system, and electronic fuel injection system is dependent on electrical power provided from two good batteries and the charging system.

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Sincerely,

Richard White A&P [REDACTED]