

Alternator regulator setpoint - standby set lower than primary - 14 or more and 13.5

Lower standby alternator voltage setting in the case of a discharged battery reduces current to battery so more of the standby alternator's limited capacity can be used to power electronics. Moot point if standby alternator can charge battery and run electronics.

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Posted: Fri Jan 04, 2019 1:28 pm Post subject: Alternator/shunt question

One does not CHARGE a battery with the standby alternator . . . you only support the bus at some level that prevents DISCHARGING the battery.

The idea is to minimize loads to some level at or below what the standby alternator will deliver thus holding the battery in reserve for approach to landing

Bob . . .

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Posted: Sun Sep 23, 2018 5:36 pm Post subject: Alternator/shunt question

SB-1 is set too low. It only needs to be 0.7v or so below your main alternator set point.

Bob . . .

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Posted: Mon Sep 24, 2018 7:38 am Post subject: What to monitor in a dual alternator airplane

<http://lists.matronics.com/viewtopic.php?p=483381&sid=0da4f57d1fd174abf0e38b9282a5a60d>

Why would you have the second Alt. set to ANYTHING less than the charging voltage?
13.0 VDC is NOT a Charging Voltage.

Correct. There are TWO choices in the B&C product line for selection of an AUX alternator controller.

The SB/LS series regulators were tailored for Z-12 style installations in TC aircraft where the AUX alternator is paralleled to the main bus and turned ON during normal phases of flight. The AUX controller is set at some level slightly below the MAIN controller so that under normal ops, it completely relaxes but in a condition ready to go to work should the bus voltage drop.

The AUX alternator was never intended to charge batteries . . . only hold the bus at some level above the battery's discharge voltage such that battery energy is held in reserve for descent/approach phases of flight.

If the bus voltage drops below the AUX controller set point, the AUX alternator wakes up and a SPECIAL circuitry within the controller senses this and illuminates an ALTERNATOR LOADED light.

The stand-by versions of the alternator controller are not recommended for simple dual alternator installations where the auto-switch feature is not necessary . . . this was a 'bell-n-whistle' aimed primarily at the STC market for TC aircraft that were receiving the pad driven, aux alternators.

Yeah, 13.0 is a bit too low (for the backup alternator) . . . 13.5 is better. Will talk with B&C about this. Further, if one is flying a lithium battery, the set-point for the SB/LS regulators becomes still more critical. There will probably be a reassessment of design philosophy for alternator controllers to bring them into better alignment with the new technologies.

... but know that there is a reason for the '13.0 madness'...

Bottom line is that there is no good reason to monitor/worry/fuss over any condition other than to know that bus voltage is above 14.0V. It can never be that high except that the (main) alternator is carrying present system loads. If that

condition changes, then you call in the cavalry and bring the bus back up to 13.5 or higher depending on the second system (backup alternator) installed.

ALL other currents, voltages, humidity and phases of the moon are irrelevant to the primary goal of supporting needed electro-whizzies through all phases of the flight.

Bob . . .