

From: [REDACTED]
To: [REDACTED]
Subject: Inverter training and information
Date: Monday, March 29, 2021 8:42:44 AM

-----Original Message-----

From: Roydon Wells
Sent: Wednesday, December 18, 2019 11:59 AM
To: Alan Rusinowitz
Subject: Inverter equipped C208

Alan,

Please forward to Mike, re: Inverter equipped C208

Martinaire specifies in our ground training and in Section R of the GOM, the use of the Inverter system and affected instruments and systems.

In ground training we specifically point out the differences in operation and what the pilot sees, especially the Attitude indicator and HSI. Both of these have “annunciation flags” that are clearly visible to indicate the gyros are not yet up to correct speed or properly erect/ aligned. A light Annunciator on the main annunciator panel labeled “Inverter Inop” is lit whenever the inverter system power is OFF.

Pilots are taught never to move the aircraft until all annunciators and flags on the instruments have dropped. The C208 abbreviated Checklist, C208 POH/AFM and Martinaire approved checklist all include checks for the Inverter system.

In the aircraft after starting the engine, and avionics are powered. The Inverter system will be switched to either Inverter 1 or 2. Allowing at least 2 mins for the gyros to come up to speed and the annunciator flags on the Attitude indicator and HSI have dropped from view, indicating the gyros are at correct speed. Now the pilot may move the aircraft.

Systems checks show specific checklist and flow items for all the C208 systems including the Auto-Pilot and electric Trim. Pilots are to perform systems checks on the Autopilot and electric trim prior to each flight for correct function and operation. In the Inverter equipped aircraft, the Inverter powers the Autopilot and electric gyro instruments - Attitude and HSI. I believe the turn coordinator is electrically powered by the main bus.

With the Inverter switch and system OFF, the Pilot would see “ATTITUDE” and “COMPUTER” flags on the Attitude indicator, and “NAV” and “COMPASS” flags on the HSI. Also a lighted “INVERTER INOP” Annunciator light will be clearly visible on the master annunciator panel.

Annunciator lights TEST is mandatory for each flight and included in all checklists prior to taxi. Martinaire Pilots are instructed to never take off an aircraft with Red or Amber Annunciators lit until the situation is either rectified or return to the ramp. Should the Pilot miss flow/ checklist items and Annunciator lights and get airborne, the Pilot will be without functioning Attitude indicator and HSI.

Additionally the Autopilot will not function in any capacity.

The Co-Pilot side Attitude and Direction gyros are Air driven and a completely separate system to the Pilot side instruments. These may be used in the event of pilot side gyro failure. Turn co-ordinations on both sides are electric and powered by the main bus. These would also continue to function. In flight training we perform unusual Attitude recovery and partial panel training to prepare for various instrument system failures. In the non-Inverter aircraft. The electric gyros are pilots side HSI and co pilots Attitude and vacuum/ air driven pilots side Attitude and co-pilots Direction Indicator.

If you need any more information you can contact me by phone or email:



Thank you

Roydon Wells
Assistant Chief Pilot
Martinaire Aviation

Sent from my iPad