ELECTRICAL SYSTEM TEST PROCEDURE

INTRODUCTION

A complete and functional electrical system is critical to the operation of any aircraft. This test procedure is designed to ensure that the electrical system is functioning correctly and safely.

GENERAL

The electrical system consists of a 28VDC power supply, electrical distribution, and various electrical components such as lights, switches, and instruments.

1. **Check PFD & MFD Power On**
   - Ensure that both the primary flight display (PFD) and multifunction display (MFD) are operational.
   - Check that all systems and functionalities are indicated.

2. **SkyView Check PFD and MFD recognize a USB stick**
   - Connect a USB stick containing the necessary software to the USB port on the PFD/MFD.
   - Verify that the software is recognized and loaded correctly.

3. **Install latest software and settings per the readme files (applicable portions) on the Van's Web Site**
   - Download the latest software and configuration files from the Van's Web Site.
   - Follow the installation instructions provided in the readme files.

4. **Check PFD & MFD recognize all LRU's**
   - Ensure that all Line Replaceable Units (LRUs) are recognized by the PFD and MFD.
   - Verify that all LRU's are functional and outputting expected data.

5. **Check function of AP disconnect switch near throttle.**
   - Operate the AP disconnect switch to ensure that it is functioning correctly.
   - Verify that power is isolated when the switch is engaged.

6. **Check fuel pump A and B switches for function**
   - Test the fuel pump switches to ensure that they are operating correctly.
   - Verify that the fuel pumps are energized and de-energized as expected.

INSTALLATION

1. **Configure COM radio in accordance with “GTR 200B Internal Presets” or “Trig TY96 Internal Presets”**
   - Choose the appropriate radio configuration settings based on the selected radio type.
   - Ensure that the radio is configured correctly for optimal operation.

2. **Check NAV/Strobe Lights**
   - Test the navigation and strobe light systems to ensure that they are functioning correctly.
   - Verify that the lights are illuminated as expected.

3. **Check Co-Pilot TX Button**
   - Operate the TX button for the co-pilot to verify that it is functioning correctly.
   - Ensure that the communication channel is activated and audible.

4. **Check Co-Pilot Headset Jack**
   - Test the headset jack to ensure that it is functioning correctly.
   - Verify that audio signals are transmitted and received appropriately.

5. **Check function of AP disconnect switch near throttle.**
   - Re-test the function of the AP disconnect switch near the throttle to ensure consistency.
   - Verify that power is correctly isolated when engaged.

6. **Check Wig Wag Function**
   - Operate the Wig Wag function to verify that it is functioning correctly.
   - Ensure that the appropriate signals are transmitted and received.

INSTRUMENTATION

1. **Check Pilot Trim Buttons (Both Directions)**
   - Test the trim buttons to ensure that they are functioning correctly in both directions.
   - Verify that the trim movement is proportional.

2. **Check Pilot Trim Buttons (Both Directions)**
   - Re-test the trim buttons to ensure consistency.
   - Verify that the movement is consistent across both directions.

3. **Check Co-Pilot TX Button**
   - Operate the TX button again to ensure that it is functioning correctly.
   - Verify that the communication channel is activated.

4. **Check Co-Pilot Headset Jack**
   - Re-test the headset jack to ensure that it is functioning correctly.
   - Verify that audio signals are transmitted and received.

5. **Check function of AP disconnect switch near throttle.**
   - Re-test the function of the AP disconnect switch near the throttle.
   - Verify that power is isolated when engaged.

6. **Check PFD & MFD recognize all LRU's**
   - Re-test the recognition of all Line Replaceable Units (LRUs) on the PFD and MFD.
   - Verify that all LRU's are recognized and functioning correctly.

WIRING

1. **Check Co-Pilot Headset Jack**
   - Ensure that the headset jack is properly wired and functioning correctly.
   - Verify that audio signals are transmitted and received.

2. **Check Pilot Trim Buttons (Both Directions)**
   - Re-test the trim buttons to ensure that they are functioning correctly.
   - Verify that the movement is consistent across both directions.

3. **Check Co-Pilot TX Button**
   - Operate the TX button again to ensure that it is functioning correctly.
   - Verify that the communication channel is activated.

4. **Check Co-Pilot Headset Jack**
   - Re-test the headset jack to ensure that it is functioning correctly.
   - Verify that audio signals are transmitted and received.

5. **Check function of AP disconnect switch near throttle.**
   - Re-test the function of the AP disconnect switch near the throttle.
   - Verify that power is isolated when engaged.

6. **Check PFD & MFD recognize all LRU's**
   - Re-test the recognition of all Line Replaceable Units (LRUs) on the PFD and MFD.
   - Verify that all LRU's are recognized and functioning correctly.

NOTE: If customer has selected the pre-wired stick option then use their control sticks.

ADJUSTED WIRE SIZE - TERMINAL SIZE AS REQUIRED TO ACCOMMODATE DESIRED WIRE GAUGE(S). SMALLEST RECOMMENDED TERMINAL SIZE AS SMALL AS POSSIBLE.

- USE ONLY MICE BACKSHELLS ON D-SUB CONNECTORS (WITH THE EXCEPTION OF 50-PIN CONNECTORS).

- HARNESS MUST BE TESTED WITH ALL AVIONICS IN ACCORDANCE WITH THE "ELECTRICAL SYSTEM BENCH TEST PROCEDURE". RESULTS ARE TO BE USEFUL FOR VAN'S ASSEMBLY.

- CRIMPED WIRE, TVS, AND AMP TERMINALS ARE TO BE CRIMPED WITH THE MANUFACTURER'S RECOMMENDED CRIMPING TOOL.

- CRIMPED TERMINALS ARE TO BE INDIVIDUALLY TESTED.

- WIRING HARNESS NOTES:
  - SET FREQUENCY STEP APPROPRIATE FOR LIGHTING SOURCE 14V

- WARN THE PRESENT NOTES: NOT TOG TO GAIN ACCESS TO THE INTERNAL PRESETS.

- CONNECT ALL WIRES TO D-SUBS USING ES-SA-1017 SOCKETS OR ES-SA-1018 PINS. PERMISSIBLE TO STRIP 18 AWG WIRE TO FIT ES-SA-1017 SOCKETS.

- LABEL THE FLYING LEAD OF EACH WIRE WITH THE TRUNCATED NOMENCLATURE AND WIRE NUMBER.

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- WARN THE PRESENT NOTES: NOT TOG TO GAIN ACCESS TO THE INTERNAL PRESETS.
These components not included in Avionics Kit, nor part of the WH-00133.
NOTE: THE HIC CONNECTOR MODULE MUST BE ATTACHED TO F-1202B WITH STAR WASHERS UNDER THE SCREWS.