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SERVICE INFORMATION LETTER

Partially Programmed State (PPS) Issue Due to Short Term Transients Causing the Next Generation (NG) Power Supply Units, PN 7038248, to Not Recover Correctly

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Transmittal Information

Publication Number D201606000052

Summary

This is the INITIAL release.

Revision History

This service information letter has had no revision(s) as shown in Table 1.

Table 1. Revision History

Revision Number	Revision Date
0	29 Nov 2016

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1. General Information

A. Effectivity

- (1) This service information letter is applicable to the aircraft and models that follow:
- Dassault Falcon, 900EZ, 2000EZ, and F7X
 - Gulfstream, G450, G550, and G650
 - Pilatus, PC-12NG, and PC-24.

B. Applicability

- (1) This service information letter is only applicable to equipment received from Original Equipment Manufacturers or equipment received from in-service aircraft. Aircraft tail number should be provided, as applicable. This service information letter is not applicable to excess equipment and equipment removed from parked or dismantled aircraft.

C. Reason

- (1) It has been determined that short term power transients have been causing the NG power supply unit, PN 7038248, to not recover correctly. This non-recovery causes the NG network interface controller (NIC) module to remain in an infinite loop and resulting in a non-functioning state.
- (2) This service information letter gives the information that follows:
- The PPS issue that is affecting the NG power supply, PN 7038248-1901, and the NG NIC on the aircraft models shown in Paragraph 1.A.
 - Modification (MOD) C to the NG power supply, PN 7038248-1901, that corrects the PPS issue
 - NG NIC Modules already in the PPS.

D. References

- (1) To find, see, and download Honeywell Technical Publications, go to www.myaerospace.com.
- Service Bulletin, Publication Number A21-6710-150, Revision 0, INDICATING / RECORDING SYSTEMS - NEXT GENERATION (NG) POWER SUPPLY ASSEMBLY (PSA) - Modification (MOD) C to NG PSA, PN 7038248-1901.

E. Summary

- (1) **PPS Issue Affecting the NG Power Supply, PN 7038248-1901, and the NG NIC**
- (a) It was determined that several field returned NG NIC modules had the same failure signature where the non-resident boot (NRB) was in a PPS. During normal power sequencing, as the power supply goes offline, both the 3.3 volt and 5.0 volt rails decay. When power is restored, the 5.0 volt rail comes back online before the 3.3 volt rail in accordance with the design requirements.
- (b) During some short power transients, the 3.3 volt may not decay, while the 5.0 volt does. When power is restored, the 3.3 volt rail is still active, and therefore running before the 5.0 volt rail. This effect can cause a situation on the NG

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NIC module, whereby the NICs resident boot may read the non-volatile static random access memory (SRAM) before it is ready to be accessed.

- (c) As a result, this causes the NG NIC module to enter an unrecoverable state where the module will not ping and is considered non-operational.

(2) **Solution to Correct the PPS Issue**

- (a) The solution to resolve the PPS issue is to apply Service Bulletin, Publication Number A21-6710-150, MOD C to the NG power supply, PN 7038248-1901, powering the NG NIC module.

NOTE: Refer to the aircraft MAU configuration for NG power supply modules, PN 7038248-1901, supplying NG NIC modules. The corresponding NG NIC module to NG power supply will only be resolved by MOD C. MOD C and a NON MOD C NG power supply modules, PN 7038248-1901, can be intermixed in the same MAU.

- (b) No change is made to the NG NIC module directly.

- (c) MOD C corrects and prevents the PPS issue with a change to one resistor.

1 MOD C is an attrition service bulletin and accomplished as each unit is returned to a Honeywell repair facility for inspection test or repair.

2 MOD C is SPEX required and installed into SPEX units when maintenance is performed and required for all SPEX Program Shelf units.

(3) **NG NIC Modules Experiencing the PPS Issue**

- (a) There is no way to identify in the field a NG NIC module is in the partially programmed state.

- (b) If a NG NIC module fails after power up in the manner described in Paragraph 1.E.(1), and the NG power supply is PN 7038248-1901 without MOD C, then one can assume the unit is experiencing the PPS issue.

- (c) Once a NIC module is in a state that is unrecoverable it must be sent back to a Honeywell Service Center to be reprogrammed. Refer to Paragraph 1.G.

- (d) MOD C to the NG Power supply is solely preventative and will not correct a NIC experiencing the PPS issue.

F. Action

- (1) This PPS issue can transpire during short transients at power up of the avionics and has been found to occur early in the lifecycle of the aircraft. If the aircraft has not experienced past NIC module failures after a power up where the NIC modules would not communicate (PING) after the power up, then MOD C to the power supplies would not be necessary. To avoid NG NIC modules from entering into PPS, have NG

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power supplies, PN 7038248-1901, updated with Service Bulletin, Publication Number A21-6710-150, MOD C at a Honeywell Service Center.

NOTE: Refer to the aircraft MAU configuration for NG power supply modules, PN 7038248-1901, supplying NG NIC modules. The corresponding NG NIC module to NG power supply will only be resolved by MOD C. MOD C and a NON MOD C NG power supply modules, PN 7038248-1901, can be intermixed in the same MAU.

- (2) Once a NIC module is in a state that is unrecoverable it must be send back to a Honeywell Service Center to be reprogrammed as MOD C to the NG power supply will not resolve a NIC experiencing the PPS issue.

G. Contact Information

- (1) The Honeywell Aerospace Technical Support (ATS) team can be contacted for additional information on this service information letter.

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