

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.163

National Policy

Effective Date:
8/3/11

Cancellation Date:
8/3/12

SUBJ: Eclipse EA500 Electrical System and Avionics Installation or Alteration
Evaluation Requirements

1. Purpose of This Notice. This notice provides guidance to aviation safety inspectors (ASI) on actions dealing with the installation and/or modifications of Eclipse EA500 airplane electrical system and avionics system/components.

2. Audience. The primary audience for this notice is Flight Standards District Office (FSDO) ASIs with oversight responsibilities for maintenance and alteration of EA500 airplanes. The secondary audience includes Flight Standards Service (AFS) branches and divisions in the regions and in headquarters (HQ).

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators and the public can find this notice on the Federal Aviation Administration's (FAA) Web site at <http://fsims.faa.gov>.

4. Background.

a. Previously Published EA500 Guidance. Eclipse Aerospace holds type certificate (TC) No. A00002AC, which prescribes conditions and limitations under which the Eclipse model EA500 airplane meets the airworthiness requirements of Title 14 of the Code of Federal Regulations (14 CFR). The FAA previously published National policy, Notice N 8900.84, Eclipse EA500 Avionics Installation or Alteration Evaluation Requirements, that addressed EA500 avionics installation or alteration evaluation requirements. Since that time the FAA has determined that the guidance should be extended to include any alteration or modification of the airplane electrical system or associated component.

b. Type Certificate Data Sheet (TCDS) No. A00002AC. TCDS No. A00002AC, revision 4, contains notes concerning changes or modifications to the EA500 integrated avionics systems or cockpit configuration.

(1) Note 5 states, "The Eclipse EA500 incorporates integrated avionics systems using software-based line replaceable units (LRU's), which share a digital signal transmission bus. The avionics configuration of the Eclipse EA500 as delivered from production is critical to the proper

operation of the cockpit instrumentation system. Modification to the LRU software supplied with the Eclipse EA500, replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics system may be made without coordination with the Certificate Management Aircraft Certification Office.”

(2) Note 7 states, “Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night operational capabilities must be evaluated by an FAA Aircraft Certification Flight Test Pilot.”

Note: Within the context of this notice, replacement of a line replacement unit (LRU) with another LRU identified by the same part number and software level is not considered replacement with a different LRU.

Note: The EA500 electrical system design is highly integrated with the airplane avionics, making previous distinctions concerning electrical and avionics inappropriate.

5. Alteration Requests. The FAA is aware of a growing number of requests to the FSDOs to approve installations and data associated with alteration or modification of the EA500 electrical system, avionics, and cockpit configuration. Additionally, there are a small number of EA500 airplanes that had alterations performed without the recommended Aircraft Certification Office (ACO) involvement.

6. Action. To avoid a potential unsafe condition, ASIs who observe an alteration or modification that involves the EA500 airplane avionics must contact the ACO in Fort Worth, Texas, for assistance in determining appropriate compliance requirements and approval methodology. This guidance supersedes the field approval guidance in the current edition of FAA Order 8900.1, Flight Standards Information Management System (FSIMS), for the Eclipse EA500 until further notice. ASIs may not issue field approvals based on existing field approvals, Supplemental Type Certificates (STC), or Parts Manufacturer Approvals (PMA) without the required coordination and concurrence from the Southwest Region Aircraft Certification Service, Rotorcraft Directorate—Airplane Certification Office, (ASW-150). Direct inquiries to Michael Heusser, Program Manager, (ASW-150), at 817-222-5038, or by e-mail at: michael.a.heusser@faa.gov.

7. Disposition. This is a special emphasis activity. We will incorporate the information in this notice into FSIMS before this notice expires. Direct questions concerning this notice to the Aircraft Maintenance Division, Avionics Branch (AFS-360) at 202-385-4292.

for 

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Director, Flight Standards Service