

NUMBER: SB 500-31-019, Rev B
MODEL: ECLIPSE EA500
SUBJECT: Aircraft Computer System (ACS) Software Update
to 5.1.06

Mandatory

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1. PLANNING INFORMATION

A. Effectivity

Aircraft Serial Numbers: 000001 through 000104, 000113 through 000115, 000120 and 000123 through 000124 when modified by SB 500-99-002, Avionics Upgrade to AVIO NG Configuration AND NOT modified by SB 500-99-005, Avionics Upgrade To Avio NG + 1.5 Configuration.

Aircraft Serial Numbers 000105 through 000112, 000116 through 000119, 000121, 000122 and 000125 through 000265 NOT modified by SB 500-99-005, Avionics Upgrade To Avio NG + 1.5 Configuration.

NOTE: Applies to Aircraft in the Avio NG configuration.

B. Reason

Aircraft Computer System (ACS) software upgrade for enhanced functionality and product improvement.

Revision B Changes: Clarified effectivity.

C. Description

This Service Bulletin (SB) updates the ACS software version for Avio NG configured aircraft.

D. Relevant Publications

None

E. Compliance

Eclipse Aerospace Incorporated considers this to be a mandatory upgrade that should be accomplished within 90 days or 50 hours whichever comes first.

F. Approval

This Service Bulletin is based on engineering data that is FAA-approved, and the modification herein complies with the applicable regulations.

G. Labor Requirements

The following information is for planning purposes only.

(1) Estimated labor hours to perform:

Suggested number of personnel: 1

ACS Software loading: 4.0 Hours

Total labor hours: 4.0 Hours

The above is an estimate based on properly equipped and experienced personnel complying with this Service Bulletin. Actual labor hours may vary depending on workforce experience, concurrent maintenance, discovery of other discrepancies, etc.

(2) Qualification of personnel:

- A person properly authorized to perform aircraft maintenance under 14 CFR 43 or equivalent approved by the Civil Aviation Authority having jurisdiction.
- Avio Maintenance Computer (AMC) trained.

H. Software Accomplishment Summary

Upgrade ACS software to version 5.1.06 using the Avio Maintenance Computer (AMC) with software version 2.4.00 or greater.

I. References

Aircraft Maintenance Manual (AMM) P/N 06-117751, latest revision.

J. Publications Affected

Aircraft Flight Manual, P/N 06-122204, Revision 4 or higher must be used after completion of this Service Bulletin.

K. Export Control

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. These commodities, technology or software are intended for use only in the End User's country. An export license from the U.S. Department of Commerce may be required before these products can be re-exported, transferred, transshipped on a non-continuous voyage, or otherwise disposed of in any other country, either in their original form or after being incorporated into an end item. Diversion of this end-item or its use contrary to any applicable U.S. government license or to U.S. law is prohibited.

2 MATERIAL INFORMATION

A. Materials

No parts and/or kits need to be ordered for this Service Bulletin.

B. Tooling

The following special tooling/support equipment is required to accomplish this Service Bulletin.

Nomenclature	Part Number	Use
Avio Maintenance Computer (AMC) with software version 2.4.00 or later	20-120576-1001 or 20-121926-1001	To load ACS software.
ACS J08 T-harness	99-117120-2001	ACS/AMC Connection
AMC ACS Software Download Box	87-120876-1003	ACS/AMC Connection
USB to Ethernet Adapter	SMC2209	Aircraft Interface
Ethernet Cable		Aircraft Interface

C. Part Re-identification

Enter the new SW version (ACS_5.1.06) on the ACS software label.

3. ACCOMPLISHMENT INSTRUCTIONS

A. Job Setup

Sign Off

- (1) Power up the AMC, select Tab 31, Software Revision drop down and verify that ACS Software version 5.1.06 is available.

NOTE: If ACS Software version 5.1.06 is not listed contact Eclipse Aerospace Service Engineering, Tel. toll free (877) 375-7978.

- (2) Make the aircraft safe for maintenance. Refer to AMM 20-00-01 MAKE SAFE FOR MAINTENANCE.

B. ACS Software Update

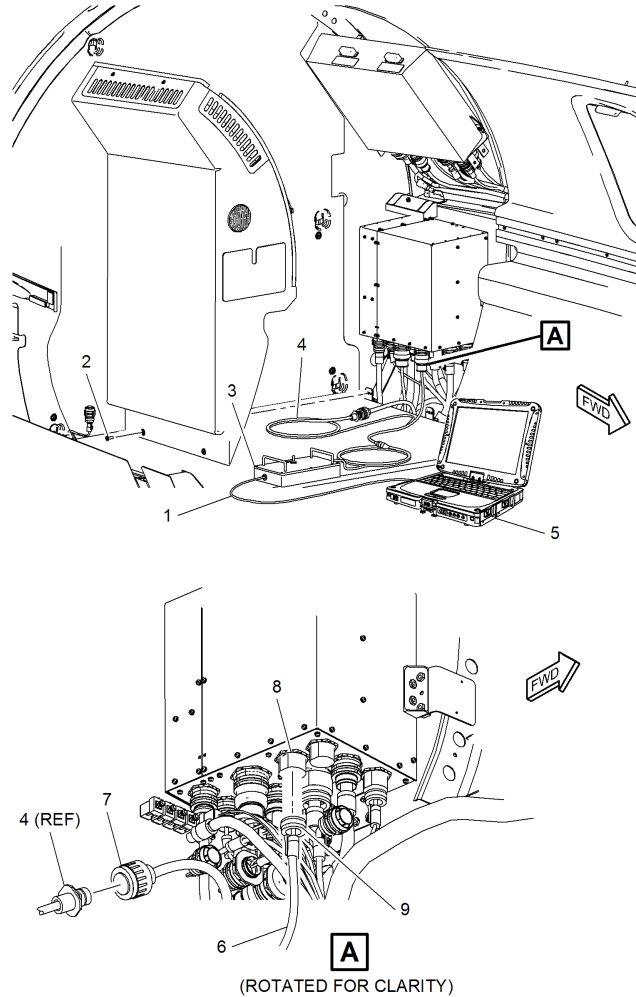
- (1) Using SUBTASK AMM-31-40-00-021-921-001, prepare ACS computers for installation of 5.1.06 software upgrade.

CAUTION: MAKE SURE ELECTRICAL POWER IS OFF WHEN CONNECTING ACS J08 T-HARNES.

- (2) AMC to ACS connection.

NOTE: Both ACSs will need to be loaded; this will require performing this procedure for both the Left and Right ACS. [Step 3.B.\(2\)\(a\)](#) provides instructions for connecting the AMC to the left ACS and [Step 3.B.\(2\)\(b\)](#) provides instructions for connecting the AMC to the right ACS.

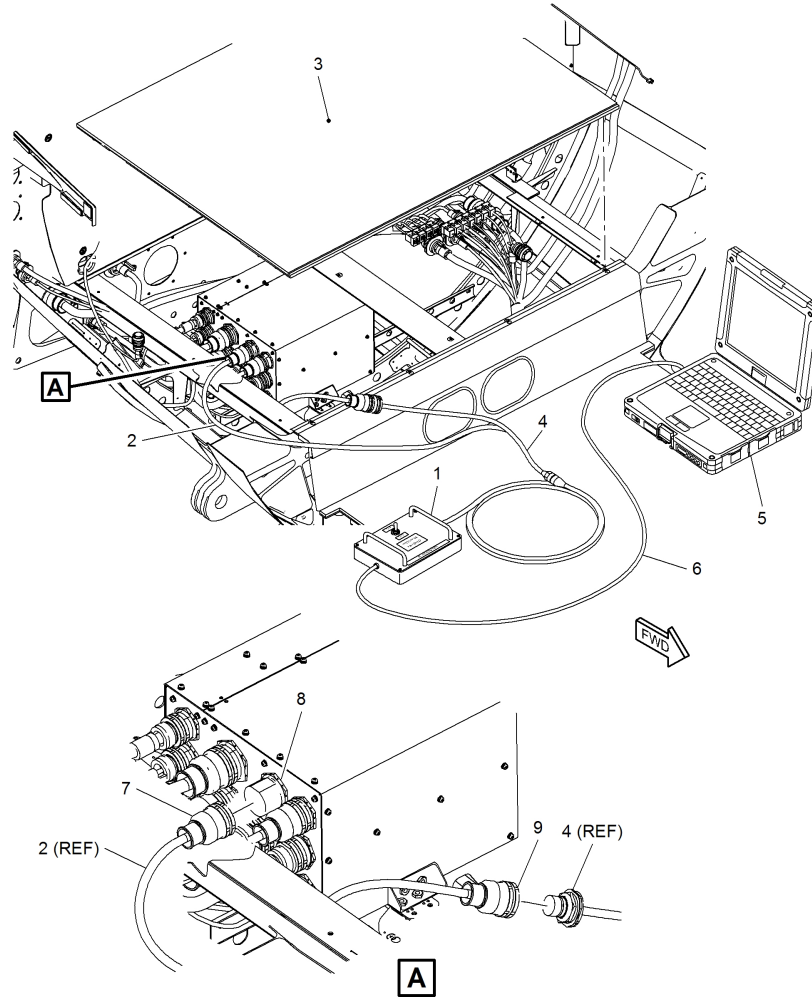
- (a) Connect AMC to left ACS as follows:
Refer to [Figure 1](#).



**Left ACS - AMC Connection
Figure 1**

1. Disconnect aircraft harness connector 39A01P08 (7, [Figure 1](#)) from left APC connector 39A01J08 (8, [Figure 1](#)). _____
2. Connect APC J08 T-Harness (9, [Figure 1](#)) to left APC connector 39A01J08 (8, [Figure 1](#)). _____
3. Connect APC J08 T-Harness (4, [Figure 1](#)) to aircraft harness connector 39A01P08 (7, [Figure 1](#)). _____
4. Connect AMC ACS Download Box (3, [Figure 1](#)) to APC J08 T-Harness (4, [Figure 1](#)). _____
5. Connect AMC ACS Download Box USB connector (1, [Figure 1](#)) to USB port on AMC (1, [Figure 1](#)). _____
6. Make sure that the Program Enable switch on the AMC ACS Download Box (3, [Figure 1](#)) is in the OFF position. _____
7. Continue to step B.(3). _____

- (b) Connect AMC to right ACS as follows:
Refer to [Figure 2](#).



**Right ACS - AMC Connection
Figure 2**

1. Disconnect aircraft harness connector 39A02P08 (9, [Figure 2](#)) from right APC connector 39A02J08 (8, [Figure 2](#)). _____
2. Connect APC J08 T-Harness (7, [Figure 2](#)) to right APC connector 39A02J08 (8, [Figure 2](#)). _____
3. Connect APC J08 T-Harness (4, [Figure 2](#)) to aircraft harness connector 39A02P08 (9, [Figure 2](#)). _____
4. Connect AMC ACS Download Box (1, [Figure 2](#)) to APC J08 T-Harness (4, [Figure 2](#)). _____

Sign Off

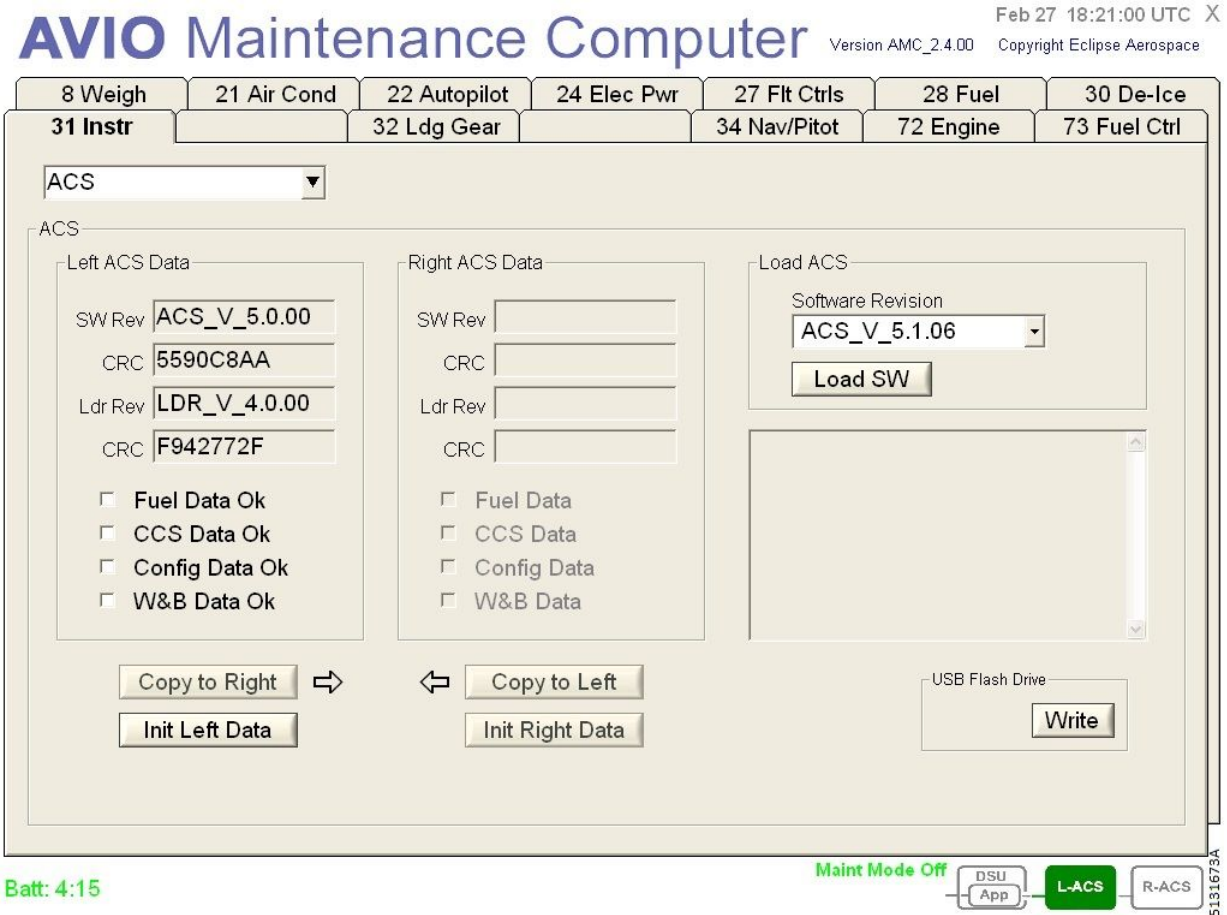
5. Connect AMC ACS Download Box USB connector (6, Figure 2) to USB port on AMC (5, Figure 2).
6. Make sure that the Program Enable switch on the AMC ACS Download Box (1, Figure 2) is in the OFF position.
7. Continue to step B.(3).

NOTE: Both ACSs will need to be loaded; this will require performing this procedure for both the left and right ACS.

- (3) Power up the aircraft by setting the SYS BATT and START BATT switches to ON and the BUS TIE to AUTO. (Clear any MASTER WARNINGS/CAUTIONS as needed.)

NOTE: If use of external power is required, Refer to AMM - 24-40-00-051-801 - EXTERNAL POWER - MAINTENANCE PRACTICES.

- (4) On the AMC, select Tab 31 and wait for the AMC to connect. Refer to Figure 3.



**AMC Tab 31 – For Reference Only
Figure 3**

NOTE: AMC Screenshot is for reference only and may vary with the AMC software revision.

- (5) Connection on lower right corner of AMC will show L-ACS or R-ACS box in green, which ever is applicable.

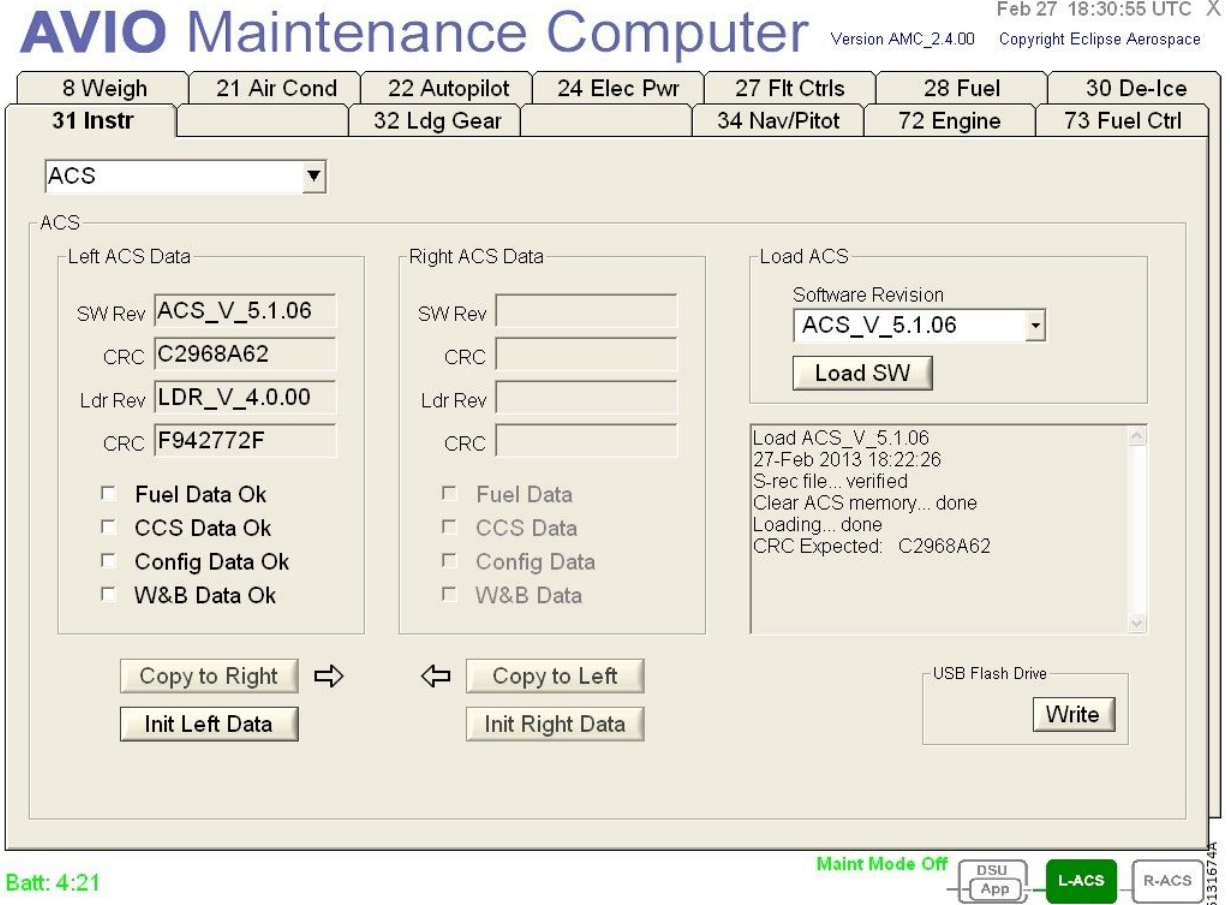
Sign Off

- (6) On Load ACS dropdown box select ACS_V_5.1.06 and select the Load SW button, follow the AMC prompts after selecting the load SW button.

NOTE: Software load should take approximately five minutes.

- When software load is complete, the status box will show Loading...done.

- (7) On AMC verify software ACS CRC is C2968A62. Refer to [Figure 4](#).



**AMC Tab 31 – For Reference Only
Figure 4**

NOTE: AMC Screenshot is for reference only and may vary with the AMC software revision.

- (8) Power down the aircraft by setting the SYS BATT and START BATT switches to OFF and the BUS TIE to OPEN.

CAUTION: AIRCRAFT MUST BE POWERED DOWN PRIOR TO DISCONNECTING/CONNECTING THE T-HARNESS FROM THE ACS. DAMAGE TO EQUIPMENT COULD OCCUR.

- (9) Disconnect AMC from ACS.

(a) For left ACS:

1. Remove APC J08 T-Harness from the left APC connector 39A01J08 and aircraft harness connector 39A01P08. Reconnect connector 39A01P08 to left APC connector 39A01J08.

(b) For right ACS:

1. Remove APC J08 T-Harness from the right APC connector 39A02J08 and aircraft harness connector 39A02P08. Reconnect connector 39A02P08 to right APC connector 39A02J08.

- (10) Write the new software version (5.1.06) on the ACS software label with a permanent ink marker.
- (11) Perform software update on right ACS, do step B.(2).(b), and repeat steps B.(3) thru B.(10).
- (12) Perform aircraft configuration update. Note installed options, activate and configure as required. Refer to AMM 31-40-00 AIRCRAFT COMPUTER SYSTEMS - MAINTENANCE PRACTICES.
- (13) Do adjustment/test of the left and right APCs (for software update). Refer to AMM - 31-40-00-071-801 - AIRCRAFT COMPUTER SYSTEMS - ADJUSTMENT/TEST.
- (14) Remove all tools, equipment, and unwanted material from work area.
- (15) If no further maintenance is required, return the aircraft back to service. Refer to AMM - 20-00-02-051-801 - RETURN TO SERVICE (AFTER MAINTENANCE).

C. Limitations and Procedures

Avio Maintenance Computer (AMC) must have software version 2.4.00 or higher in order to load ACS software 5.1.06.

Remove AFM TR-016 (installed by SB 500-31-026 Software Configuration Update).

D. Cost

Contact Eclipse Aerospace Customer Care for cost and availability.

4. RECORD OF COMPLIANCE

Upon completion of this Service Bulletin, make an appropriate maintenance-record entry specifying the Service Bulletin number.

5. NOTIFYING ECLIPSE AEROSPACE

On completing this service bulletin, the operator/maintainer shall complete the attached Compliance Record and send it to Eclipse Aerospace via regular mail, fax, or e-mail.

Mailing Address	Eclipse Aerospace Incorporated ATTN: Customer Care 2503 Clark Carr Loop SE Albuquerque, NM 87106
Fax	1-505-241-8802
E-mail	sbcompliance@eclipse.aero

