Y NOTE WP

Galaxy Aerospace

O :

AEROSPACE (M) SDN. BHD.
DEPARTMENT
, MRO Centre,
ysia International Aerospace Centre,
an Abdul Aziz Shah Airport,
200 Subang, Selangor
alaysia.
Attn : Zaty Nadhira binti Mohamed Zuhari

DN NUMBER: GAM/DN/23/PTA-125
OUR REFERENCE: 2022-12830
WO REFERENCE: 9M-PTA-12830
DATE COMPLETION: 2 NOVEMBER 2023
AJL NUMBER: 000507

A/C DETAILS					
A/C TYPE	B300 (SKA350)	**A/C REG**	9M-PTA	**A/C S/N**	FL-587
OWNER / OPERATOR	ROYAL MALAYSIA FORCE	**A/C TOTAL TIME**	6607:11	**LANDINGS**	5265
ENGINE #1 S/N	PCE-PK0999	**T.S.N**	5264:26	**T.S.O**	-
ENGINE #2 S/N	PCE-PK0971	**T.S.N**	6414:01	**T.S.O**	-

LIST OF TASK PERFORMED	WP NUMBER	NUMBER OF PAGES					
		*WS	*PR	*ARC	*S	*SBC	*OTH
INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000	**-001**	**1**	**1**	**7**	**3**	**-**	**30**

*THIS IS TO CERTIFY THAT TASKS LISTED ABOVE HAS BEEN ACCOMPLISHED AS PER PO/WORK ORDER/SERVICE ORDER NO. AS ABOVE.

NAME	NOOR MASDARIAH	SIGNATURE		DATE	7 NOVEMBER 2023

VERIFIED AND ACCEPTED BY	NUR HANIS BINTI RAHIMUDDIN CAMO Planner Galaxy Aerospace (M) Sdn Bhd (1040262-D)
DATE	07 NOV 2023

*WS – WORKSHEET
*PR – PART REPORT
*ARC – AUTHORISED RELEASE CERTIFICATE
*S – SERVICEABLE LABEL
*SBC – SERVICE BULLETIN COMPLIANCE
*OTH – OTHERS

GALAXY AEROSPACE (M) SDN. BHD. [1040262-D]
Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre,
Sultan Abdul Aziz Shah Airport,
47200 Subang, Selangor, Malaysia.
Tel: +603 7734 7226 | Fax: +603 7734 7526
www.galaxyaerospace.my | enquiry@galaxyaerospace.my

WORK ORDER

To: GALAXY AEROSPACE (M) SDN. BHD.

Address: Lot 11-14, MRO Centre, Malaysia International Aerospace Centre, SAAS Airport, Subang Malaysia

Attention: Mr. Syafrul Yamani
Engineering Manager
syafrul@galaxyaerospace.my

Work Order Number:	2022-12830
Work Pack Reference:	9M-PTA-12830
Date Issued:	22/09/2022
A/C Registration / SN:	9M-PTA/FL-587
Sheet:	1 OF 1

Description:

Item	Description/Task/Inspection	Reference	Man Hours
1	INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000	ICA 324-00-0015, STC NO. SA10965SC	20 (PLEASE ADVISE)

Remark/Notes:

1. State this Work Order reference on your Work Package. Should there is any additional job/defect (unless specified in the work package) the maintenance organization must notify GAM Continuing Airworthiness Manager prior to proceed with rectification.
2. Work must be carried out in accordance with approved data and perform by qualified personnel/ approved LAE from the maintenance organization.
3. Parts used must be written in Parts Report Form and accompanied by ARC, Serviceable Label or equivalent document.
4. Test report, parameter reading or any supporting data must be attached with the worksheet if applicable.
5. The maintenance organization shall be responsible for any damages made on the aircraft/ components during maintenance.
6. Softcopy of completed Work Package shall be submitted or as mutual agreed and GAM Continuing Airworthiness Manager must be informed once the aircraft is Release to Service.
7. Completed Work Package (original) must be submitted to GAM Continuing Airworthiness Manager office within 3 days of date of completion.

I hereby declare that an approved and up to date maintenance data has been referred for the issuance of this work order.

Thank you.
Best Regards,

Zaty Nadhira Mohamed Zuhari
Continuing Airworthiness Management Manager
Email: zaty@galaxyaerospace.my

GALAXY AEROSPACE (M) SDN. BHD. [1040262-D]
Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre
Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor Malaysia.
Tel: +603 7734 7226 | Fax: +603 7734 7526
www.galaxyaerospace.my | enquiry@galaxyaerospace.my

WORKPACK

CLIENT/OWNER: ROYAL MALAYSIA POLICE		SERIAL NO.	HOURS	LDG/CYCLE		WORKPACK NO: 9M-PTA-12830
AIRCRAFT TYPE: B300 (SKA350)	AIRCRAFT	FL-587	6601:11	5265		WORK/INSP/DESC: INSTALL UPGRADED HARDWARE
REGISTRATION: 9M-PTA	#1 ENGINE:	PCE-PK0999	5264:26	N/A	N/A	AERONET JOB NO.: 2022-12830
BASE/FACILITY: WMSA	#2 ENGINE:	PCE-PK0971	6414:01	N/A	N/A	AJL REF NO.: 000507
DATE IN: 24/10/23 OUT: 2/11/23				NG / N1	NF / N2	SHEET: 1 OF 1

Reason for raising:
INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000 TO BE CARRY OUT IN ACCORDANCE WITH ICA 324-00-0015 REVISION C DATED SEP-26-2012 OR LATER APPROVED REVISIONS.

Raised by and date:
CAMO; Nurul Husna Zainol Abidin
22/09/2022

Other requirements/information:
NOT APPLICABLE

List of scheduled inspection and all work carried out under this workpack including individual reference

NO.	INSPECTION / WORK	WORKSHEET REF	DATE INSPECTION COMPLETED	Master Signature Schedule NAME	SIGNATURE	APP/STAMP
1	INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000	12830-001	2/11/23	KHAIRUL		GALAXY AEROSPACE M036 MALAYSIA

Galaxy Aerospace (M) Sdn. Bhd.

I hereby certify the following task has been performed and found satisfactory:

1) All the tools and equipment used for maintenance has been removed from aircraft. 2) All the access panels removed for maintenance access has been reinstalled. 3) All the excess spares and materials have been notified to AMO Planner for return plan. 4) FOD check has been done.

Sign & Stamp: GALAXY AEROSPACE M036 MALAYSIA *Date & Time:* 2/11/23 1100

PART 145 - AMO RELEASE STATEMENT AMO/2016/02

THIS IS TO CERTIFY THAT ALL WORK LISTED ABOVE HAS BEEN INSPECTED AND ACCOMPLISHED IN ACCORDANCE WITH CONTRACTED AMO EXPOSITION AND PROCEDURE LATEST REVISION, AND

☑ * OEM PUBLICATION/REVISION AS PER REASON FOR RAISING ABOVE

☐ *IF DIFFERENT FROM ABOVE. OEM PUBLICATION/REVISION.....

.....

.....

☐ * TICK ✓ WHERE APPLICABLE

NAME	KHAIRUL
SIGN & APPROVAL	GALAXY AEROSPACE M036 MALAYSIA
FIRM	GAM
DATE	2/11/23

PART M - CAMO ACCEPTANCE STATEMENT

THIS IS TO CERTIFY THAT THE ABOVE MENTIONED WORK PACKAGE HAS BEEN REVIEWED, CHECKED FOR COMPLETION AND UPDATED IN THE MAINTENANCE SOFTWARE.

NAME	SIGN & APPROVAL	DATE
NUR HANIS BINTI RAHIMUDDIN CAMO Planner Galaxy Aerospace (M) Sdn Bhd (1040262-D)	GAM CAMO CP 09	07 NOV 2022

GALAXY AEROSPACE (M) SDN. BHD. [1040262-D]
Suite 11-1d, Helicopter Centre, Malaysia International Aerospace Centre,
Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor Malaysia.
Tel: +603 7734 7226 | Fax: +603 7734 7526
www.galaxyaerospace.my | enquiry@galaxyaerospace.my

WORKSHEET

CLIENT/OWNER: ROYAL MALAYSIA POLICE		SERIAL NO.	HOURS	LDG/CYCLE
AIRCRAFT TYPE: B300 (SKA350)	AIRCRAFT	FL-587	REFER WORKPACK	
REGISTRATION: 9M-PTA	#1 ENGINE:	PCE-PK0999	REFER WORKPACK	
BASE/FACILITY: WMSA	#2 ENGINE:	PCE-PK0971	REFER WORKPACK	
DATE IN: REFER WORKPACK OUT: REFER WORKPACK			NG / N1	NF / N2

WORKSHEET NO:	12830-001
WORK/INSP/DESC:	INSTALL UPGRADED HARDWARE
WORKPACK REF:	9M-PTA-12830
AJL REF NO.:	REFER WORKPACK
SHEET:	1 OF 1

Reason for raising:
INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000 TO BE CARRY OUT IN ACCORDANCE WITH ICA 324-00-0015 REVISION C DATED SEP-26-2012 OR LATER APPROVED REVISIONS.

Raised by and date:
CAMO; Nurul Husna Zainol Abidin
22/09/2022

Other requirements/information:
NOT APPLICABLE

Item	Description	Technician	* Eng. CRS	Date
1	INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000 TO BE CARRY OUT IN ACCORDANCE WITH ICA 324-00-0015 REFERENCE: ICA 324-00-0015, STC NO. SA10965SC. REMARKS: FOUND SATISFACTORY	8189	GALAXY AEROSPACE M036 MALAYSIA	2/11/23

☑ *Certifies that the work specified above, except as otherwise specified, was carried out in accordance with CAA Malaysia Requirements and in respect to that work the aircraft / aircraft component is considered ready for release to service. AMO/2016/02

☐ *Certifies that the work specified above, except as otherwise specified, was carried out in accordance with _____ and in respect to that work the aircraft / aircraft component is considered ready for release to service.

☐ TICK ✓ WHERE APPLICABLE

GALAXY AEROSPACE (M) SDN. BHD. [1040262-D]
Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre,
Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia.
Tel: +603 7734 7226 | Fax: +603 7734 7526
www.galaxyaerospace.my | enquiry@galaxyaerospace.my

PARTS REPORT

CLIENT/OWNER: ROYAL MALAYSIA POLICE		SERIAL NO.	HOURS	LDG/CYCLE
AIRCRAFT TYPE: B300 (SKA350)	AIRCRAFT	FL-587	REFER WORKPACK	
REGISTRATION: 9M-PTA	#1 ENGINE:	PCE-PK0999	REFER WORKPACK	
BASE/FACILITY: WMSA	#2 ENGINE:	PCE-PK0971	REFER WORKPACK	
DATE IN: REFER WORKPACK OUT: REFER WORKPACK			NG / N1	NF / N2

WORKSHEET NO:	12830-001
WORK/INSP/DESC:	INSTALL UPGRADED HARDWARE
WORKPACK REF:	9M-PTA-12830
AJL REF NO.:	REFER WORKPACK
SHEET:	1 OF 1

Reason for raising:
INSTALLATION OF UPGRADED HARDWARE TO THE ROCKWELL COLLINS PRO-LINE 21 FMS-3000 TO BE CARRY OUT IN ACCORDANCE WITH ICA 324-00-0015 REVISION C DATED SEP-26-2012 OR LATER APPROVED REVISIONS.

Raised by and date:
CAMO; Nurul Husna Zainol Abidin
22/09/2022

Other requirements/information:
NOT APPLICABLE

Item	Part No	Description	Serial Number Off	Serial Number On	Qty	Position	Reason	Lifed Item Information TSN/TSO/DUE/TIMEX	Release Reference
1	822-1484-201	OCM 1	31R9V	–	1	NO1	MOD	N/A	–
	822-1484-228	OCM 1	–	4GN7XV	1	NO1	MOD	N/A	GIN 5119
2	822-1484-201	OCM 2	31R9T	–	1	NO2	MOD	N/A	–
	822-1484-228	OCM 2	–	4GN7Y8	1	NO2	MOD	N/A	GIN 5119
3	822-1361-612	IOC 1	30C26	–	1	NO1	MOD	N/A	–
	822-1361-614	IOC 1	–	4YTYMG	1	NO1	MOD	N/A	1544460
4	822-1361-612	IOC 2	2NDJY	–	1	NO2	MOD	N/A	–
	822-1361-614	IOC 2	–	4YTYMF	1	NO2	MOD	N/A	809699329/3506149
5	822-0883-048	FMC	33XXL	–	1	N/A	MOD	N/A	–
	822-0883-053	FMC	–	4GN3V6	1	N/A	MOD	N/A	807508158/3122799
6	822-1377-001	GPS 4000A	3LNXP	–	1	N/A	MOD	N/A	–
	822-2189-101	GPS 4000S	–	4RGN2L	1	N/A	MOD	N/A	809056023/3441005
7	CI401-460	GPS ANTENNA	227525	–	1	N/A	MOD	N/A	–
	CI429-410	GPS ANTENNA	–	660599	1	N/A	MOD	N/A	GIN 2116

NAME	FIRM	SIGN & APPROVAL	DATE
KHAIRUL	GAM	M036	2/11/23

☑ *Certifies that the work specified above, except as otherwise specified, was carried out in accordance with CAA Malaysia Requirements and in respect to that work the aircraft / aircraft component is considered ready for release to service. AMO/2016/02

☐ *Certifies that the work specified above, except as otherwise specified, was carried out in accordance with _____ and in respect to that work the aircraft / aircraft component is considered ready for release to service.

☐ TICK ✓ WHERE APPLICABLE

GALAXY AEROSPACE (M) SDN. BHD. [1040262-D]
Suite 11-13, Helicopter Centre, Malaysia International Aerospace Centre,
Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia.
Tel: +603 7734 7226 | Fax: +603 7734 7526
www.galaxyaerospace.my | enquiry@galaxyaerospace.my

Tools Report

Aircraft Serial No:	FL-587	**Work Pack No:**	9M-PTA-12830
Aircraft Type:	B300 (SKA350)	**DESC:**	INSTALL UPGRADED HARDWARE
Aircraft Reg:	9M-PTA	**PAGE:**	1 OF 1

Description	Part No	Serial Number	Worksheet Ref No. / Item No.	Calibration Due Date

BHE & Associates, Ltd.
Master Data List

PRO LINE 21 FMS-3000 - LPV UPGRADE

324-00-0001

ODA/FAA PROJECT NO: ----------

STC NO: SA10965SC

REV: N DATE: 10/27/2020

APPROVED: _____

REV*	DRAWING NO	TITLE	REVISION	REL DATE	DOC TYPE
	324-00-0002	FLIGHT MANAGEMENT SYSTEM (FMS) UPGRADE EQUIPMENT INSTALLATION	E	9/14/2020	S E
	324-00-0003	GPS CONFIGURATION STRAP UPGRADE	A	4/27/2010	E
	324-00-0011	GROUND TEST PROCEDURE	IR	11/25/2009	C
	324-00-0014	FAA APPROVED AFMS FOR HBC B200/B200C, B200GT/B200CGT, B300/B300C	G	9/1/2020	C
	324-00-0015	INSTRUCTIONS FOR CONTINUED AIRWORTHINESS	C	9/26/2012	C
	324-00-0016	ELECTRICAL LOAD ANALYSIS	IR	11/25/2009	C
R	324-00-0023	FAA APPROVED AFMS FOR AIRPLANE REGISTERED IN EUROPE/EASA	B	10/27/2020	C

Data Type Definitions: Drawings: E-Electrical M-Mechanical S-Structural P-Powerplant
Compliance Documents: C-Compliance
See seperate approvals for Compliance Documents
*** "R" = Document revised since last MDL revision**
*** "*R" = Only Document Date revised since last MDL revision**

United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA10965SC

This Certificate issued to BHE & Associates, Ltd.
12002 Warfield Dr.
Suite 250
San Antonio, TX 78216

certifies that the change in the type design for the following product with the limitations and conditions thereto as specified hereon meets the airworthiness requirements of Part 23 *of the* Federal Aviation Regulations.

Original Product Type Certificate Number: A24CE

Make: Hawker Beechcraft Corporation

Model: B200, B200C, B200CGT, B200GT, B300, and B300C

Description of Type Design Change: Installation of upgraded hardware to the Rockwell Collins Pro Line 21 FMS-3000 to provide Localizer Performance with Vertical Guidance (LPV) in accordance with master drawing list 324-00-0001, revision A, dated January 12, 2010, or later approved FAA revision. Airplane flight manual supplement, document 324-00-0014, revision IR, dated January 12, 2010, or later approved FAA revision, is required.

Limitations and Conditions: The installer must determine whether this design change is compatible with previously approved modifications. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission. This installation is limited to airplane serial numbers listed in BHE & Associates document 324-00-0002, revision IR, dated November 24, 2009, or later FAA approved revision.

(See continuation sheet 3 of 3)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: November 02, 2009

Date of issuance: January 25, 2010

Date reissued:

Date amended:

By direction of the Administrator

(Signature)

S. Frances Cox
Manager, Special Certification Office
Southwest Region

(Title)

BHE & Associates, Ltd.
12002 Warfield
Suite 250
San Antonio, TX 78216

February 25, 2022

Nik Mohd Fareez Auddin
Galaxy Aerospace (M) Sdn Bhd
No. A-03-02, Blok A
Bangunan Perdagangan Siera Ara Damansara
Jalan PJU 1A/5A
Ara Damansara, 47301 Petaling Jaya
Selangor Darul Ehsan
Malaysia.

Subject: Authorization to install STC
References: FAA STC Number SA10965SC

Dear Mr. Auddin,

BHE & Associates, Ltd. hereby authorizes Galaxy Aerospace (M) Sdn Bhd to install the Pro Line 21, FMS-3000 LPV upgrade in accordance with FAA STC number SA10965SC on a Textron Aviation B300, serial number FL-587.

Please note that the Collins GPS-4000S (-100 status) is on a stop ship from Collins Aerospace at the present time. If you have another access to the GPS-4000S (-100 status), you may install the unit and proceed with the modification. All other GPS equipment listed on the STC are not affected by the stop ship and may be installed. For any questions related to this unit, contact your Collins Representative.

This is an amended Letter of authorization to correct Name of Modification Center from Textron Aviation to Galaxy Aerospace (M) Sdn Bhd, and the aircraft serial number from FL-598 to FL-587.

Please note that the documentation is provided to you on an "as is" basis, and your acceptance of the documentation serves to hold BHE & Associates and Collins Aerospace harmless for any liability arising out of the use of such documentation. BHE & Associates and Collins Aerospace grant no warranties as to current serviceability, completeness or correctness.

Prior to beginning the installation, Galaxy Aerospace (M) Sdn Bhd must review the STC, all limitations, prerequisites and the data package to verify this modification is applicable to the aircraft model, serial number, equipment and aircraft configuration.

There is always a possibility of variability between the initial certification aircraft and the aircraft being considered for installation of the STC(s) noted above.

Galaxy Aerospace (M) Sdn Bhd is responsible for developing and approving any differences in engineering (deviations to the STC) required to modify the aircraft and the actual aircraft modifications and for obtaining FAA and/or other host country regulatory agency approval of any deviations.

Galaxy Aerospace (M) Sdn Bhd is also responsible for supplying any parts or engineering services required for manufacturing the installation kits/parts for the aircraft.

This authorization is limited to the aircraft listed above and may not be extended to other aircraft without the written authorization from BHE & Associates. This authorization does not grant Galaxy Aerospace (M) Sdn Bhd rights or usage of this documentation for any other non-Collins Aerospace product or program. This documentation or any portion thereof shall not be used in any manner to manufacture, design, substantiate and/or certify by similarity or any other method, any non-Collins Aerospace product.

It is expressly prohibited to disclose this documentation to any third party without written approval by BHE & Associates and Collins Aerospace. Authorization to use this documentation or any portion thereof may not be assigned or sub-licensed by recipient without the express written consent of BHE & Associates and Collins Aerospace.

Please return a record of any additional aircraft serial number(s) to your Collins Aerospace customer order administrator for installations performed using this STC. Collins Aerospace needs to receive this data before BHE & Associates can authorize any installations.

For technical questions regarding this STC please contact Michael Graham at 210-349-9488. For administrative questions, please contact your Collins Aerospace customer administrator.

Sincerely,

Robert M. Hurley
Vice President

Instructions for Continued Airworthiness
For
Rockwell Collins Pro Line 21
In
Hawker Beechcraft Corporation
Model B200/B200C/B200GT/B200CGT/B300/B300C

REPORT No. 324-00-0015

Revision C

BHE & Associates, Ltd.
San Antonio, TX 78216 USA
CAGE: N/A

BHE Approval Signatures

	NAME	SIGNATURE
Prepared by:	D. Kendricks	See Rev IR for Signatures
Checked By:	S. Penn	See Rev IR for Signatures
Approved By:	R. Hurley	See Rev IR for Signatures

REVISION LOG

Rev.	Page	Description	Approved	Date
IR	All	Initial Release	RMH	11-24-09
A	6 6 6 7 11 11	4.3.1.b: Changed ICC-3010 to ICC-3000 4.3.2.a: Changed ICC-3010 to ICC-3000 4.3.4.b: Changed ICC-3010 to ICC-3000 4.3.5.a: Changed ICC-3010 to ICC-3000 5.0: Corrected publication p/n to 523-0807237 6.1: Changed "system" to "LRUs"	RMH	12-21-09
B	4 4 7	2.1: Added GPS antenna location 3.0: Remove FAA signature block 4.4.1: Added GPS antenna location	RMH	01-12-10
C	iv 1 11, 15 12 15 A-1	Entered STC number Corrected GPS, was (Gps). Revised interval requirements(was 600 Hrs), deleted "Phase 3" reference to align with MM requirements. 6.4 Deleted inspection instructions for Fwd and Aft Pressure Bulkhead, para. 6.4.2. 6.8 Deleted Inspection instructions for Fwd and Aft Pressure Bulkhead. Deleted description from MDL, added "or later" to reference documents.		9/26/12

Introduction

These Instructions for Continued Airworthiness document has been developed using the guidelines in Appendix "G" of FAR Part 23 as required by FAR 21.50 and 23.1529.

This document is designed to provide avionics and aircraft technicians with sufficient information to inspect, troubleshoot, adjust, repair, test, remove, and install the Rockwell Collins Pro Line 21 FMS-3000 system installed in accordance with FAA Supplemental Type Certificate No. SA10965SC. See the List of Applicable Publications (LOAP) in Appendix A of this document. The publications listed in the LOAP constitute the required information essential for continued airworthiness for the aircraft.

The information in this document supplements or supersedes the original manufacturer's maintenance manual only in those areas listed. For limitations, procedures and other information not contained in this document, refer to the aircraft manufacturer's maintenance manuals, illustrated parts manuals and wiring diagrams or the vendor manuals as listed in the LOAP.

Record of Revisions

For continuous use of this document, this document must be maintained in current revision status. Each time the STC holder finds it necessary to revise this document; a revision will be distributed to all users of the STC. Changes to this document will be incorporated by a "new" revision to the complete document. All pages will indicate the "new" revision level. Upon receipt of the revision, the "old" revision should be discarded and replaced with the "new" revision. Changes to this document will be listed in the revision block on page 1.

It is the responsibility of the person(s) performing maintenance on the installed system to ensure that this document is current prior to performing this maintenance. The current revision number may be verified by contacting the STC holder, BHE & Associates, 12002 Warfield Suite 250, San Antonio, Texas 78216.

Table of Contents

1. SYSTEM DESCRIPTION

1.1 GENERAL

1.1.1 Flight Management System (FMS)

The FMS supplies the capability of en route, terminal, and precision or non-precision approach lateral navigation. The system contains an advanced Global Positioning System (GPS) receiver that processes the transmissions from multiple satellites to calculate navigation solutions. When the Satellite Based Augmentation System (SBAS) is enabled, additional satellites provide corrections for lateral guidance and offer the user a true satellite based precision guidance capability. The system also supplies predictive Receiver Autonomous Integrity Monitoring (RAIM), which is used to determine whether the satellite geometry at the destination airport will be sufficient to support a non-precision GPS based approach at the planned time of arrival. When the FMS is in a GNSS navigation mode, the FMS uses only the Global Navigation Satellite System (GNSS) data and does not blend other sensors into the position estimation. The FMS also receives data from the AHS, ADC, DME, and VOR. The FMS supplies necessary controls for all input sensors, when appropriate. The FMS can be initialized, waypoints chosen, and destination selected by a variety of pilot-friendly means. Database SID, STAR, and airway routes are accommodated. A great circle route is calculated between waypoints for en route lateral navigation, and roll steering is supplied to the Flight Guidance System (FGS). A sophisticated interface with the FGS lets the FMS VNAV function select various FGS vertical modes of navigation. The FMS supplies vertical steering when appropriate. The FMS interfaces with a Data Base Unit (DBU) data loader to update its internal database. The FMS interfaces with the Adaptive Flight Display (AFD) electronic flight displays to supply conventional navigation information and state-of-the-art map presentation.

A single FMS system with single CDU and GPS is standard. A second FMS system with CDU 2 and GPS 2 is optional.

The FMC(s) are located in the IAPS assembly on the avionics shelves in the nose. The CDUs are located in the pedestal.

1.1.2 Global Positioning System (GPS)

The GPS-4000S Global Positioning System (GPS) provides accurate worldwide navigation capabilities. The GPS-4000S Global Positioning System processes GPS satellite signals to provide navigational data outputs. The GPS System contains two GPS-4000S receivers and two GPS antennas. The GPS antenna provides the GPS-4000S receiver with the radio frequency signals from the GPS satellites. The antenna is an active receive only device operating with the L-band frequency of 1575.42 10MHz. The antenna uses right hand circular polarization and is a microscopy patch type design. The Rockwell Collins, Inc. CDU-3000 Control Display Unit (CDU) provides backup display pages for the GPS navigation data. The GPS receivers process the GPS signals received from the antenna together with inputs from other airplane sensors to provide position, velocity, and time outputs through the integrated avionics processor's input/output data concentrators to the flight management system.

Both CDUs can display GPS data. The CDU INDEX page is used to select the FMS1 GPS CONTROL page. The FMS1 GPS CONTROL page is used to select a GPS receiver for position data and to deselect all usage of GPS data. The

FMS1 GPS CONTROL page displays the position difference between each GPS receiver position and flight management computers computed position.

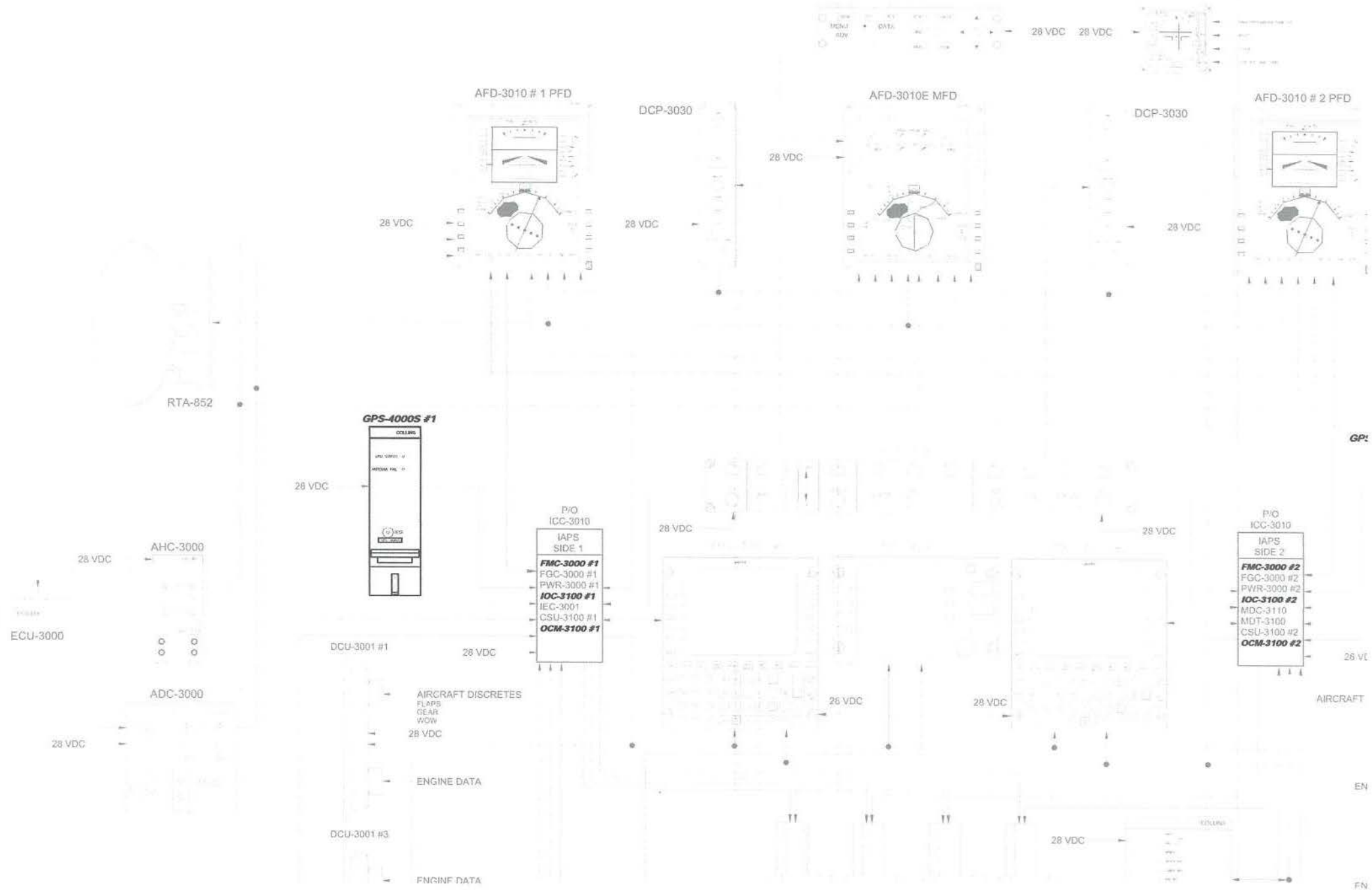
The CDU-3000 INDEX page is used to select the GPS1 POS page. The GPS1 POS page displays the following information from the on-side GPS receiver: GPS Date, Latitude, Longitude, Track Angle, Ground Speed, Receiver Autonomous Integrity Monitoring (RAIM) Limit, Probable Error, GPS Mode, and Number of GPS Satellites used.

All GPS position data, date, and time are displayed in green. If GPS data is flagged or missing, the GPS position Data is replaced with yellow dashes.

A detailed description and operation of the GPS-4000S Global Positioning Receiver and CDU-3000 Control Display Unit (CDU) is located in the Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237.

1.1.3 Data Base Unit

The DBU-5000, located in the pedestal (reference Figure 2), is a panel mounted data loader that communicates with external equipment using an ARINC-429, RS-422 and Ethernet interfaces. The DBU has the capability of transferring data files between removable media (USB memory devices) and aircraft LRUs. It also performs the task of interfacing with aircraft LRUs. In particular, the FMS system uses the DBU to load data base updates into the FMS computers. The IAPS maintenance diagnostic computer uses the DBU to upload maintenance tables or download maintenance data files. The IFIS system uses the DBU for loading FSU database files.


28 VDC
28 VDC
AFD-3010 # 1 PFD
DCP-3030
AFD-3010E MFD
DCP-3030
AFD-3010 # 2 PFD
28 VDC
28 VDC
28 VDC
28 VDC
RTA-852
GPS-4000S #1
28 VDC
P/O
ICC-3010
IAPS
SIDE 1
FMC-3000 #1
FGC-3000 #1
PWR-3000 #1
IOC-3100 #1
IEC-3001
CSU-3100 #1
OCM-3100 #1
28 VDC
28 VDC
P/O
ICC-3010
IAPS
SIDE 2
FMC-3000 #2
FGC-3000 #2
PWR-3000 #2
IOC-3100 #2
MDC-3110
MDT-3100
CSU-3100 #2
OCM-3100 #2
AHC-3000
28 VDC
ECU-3000
DCU-3001 #1
28 VDC
ADC-3000
AIRCRAFT DISCRETES
FLAPS
GEAR
WOW
28 VDC
28 VDC
ENGINE DATA
DCU-3001 #3
ENGINE DATA
26 VDC
28 VDC
28 VDC

2. COMPONENTS

The Collins Pro Line 21 Avionics FMS-3000 System installation consists of the following systems and sub-systems with component locations noted:

2.1 Pro Line 21 Flight Management System (FMS)

1 ea	FMC-3000 Flight Management Computers	IAPS Cage-Nose
	Second FMC-3000 Optional	
1 ea	CDU-3000 Control Display Unit	Pedestal
	Second CDU-3000 Optional	
1 ea	GPS-4000S GPS Receiver	Nose
	Second GPS-4000S Optional	
1 ea	DBU-5000 Database Unit	Pedestal
2 ea	OCM-3100 Optional Control Module	IAPS Cage-Nose
2 ea	IOC-4110 Input Output Concentrator	IAPS Cage-Nose
2 ea	CI 429-210/400 GPS antennas	Top, forward Fuselage

3. AIRWORTHINESS LIMITATIONS

No additional Airworthiness Limitations have been issued due to the installation of the Pro Line 21. The Airworthiness Limitations section is FAA approved and specifies maintenance required under § 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

4. MAINTENANCE PRACTICES

4.1 MAINTENANCE – GENERAL

Reference Hawker Beechcraft Corporation approved inspection program in the Airplane Maintenance Manual. This document addresses additional maintenance for the Pro Line 21 FMS-3000 installation.

4.2 REMOVAL / INSTALLATION

The following installation and/or systems manuals contain complete detailed instruction for installation and removal of equipment and should be consulted for all maintenance activities:

FAA Approved Maintenance Manual Supplement for Raytheon Aircraft Company Model B200/B200C with Rockwell Collins Pro Line 21, document RCA-0019-001.

FAA Approved Maintenance Manual Supplement for Raytheon Aircraft Company Model B300/B300C with Rockwell Collins Pro Line 21, document RCA-0060.

Refer to Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, Chapter 2 – INSTALLATION and Chapter 5 – MAINTENANCE for the following systems: Flight Management System (FMS)

4.3 FMS SYSTEM

4.3.1 INPUT/OUTPUT CONCENTRATOR (IOC-3100) REMOVAL -

NOTE

Before removing the IOC-3100, remove electrical power from the airplane.

a. The IOC-3100 Input/Output Concentrator is located in the IAPS card cage. Gain access to the IAPS Card Cage by opening the access panels for the right nose avionics bay.

b. Perform the ICC-3000 IAPS Card Cage Modules removal procedure (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

4.3.2 INPUT/OUTPUT CONCENTRATOR (IOC-3100) INSTALLATION

NOTE

Before installing the IOC-3100, remove electrical power from the airplane.

a. Perform the ICC-3000 IAPS Card Cage Modules installation procedure (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

b. Restore electrical power to the airplane.

c. Perform Input/Output Concentrator (IOC-3100) Adjustment/Test procedure.

d. Close up all access panels that were opened while accessing the IOC-3100.

4.3.3 INPUT/OUTPUT CONCENTRATOR (IOC-3100) ADJUSTMENT/TEST

a. Ensure electrical power has been restored to the airplane.

b. Perform the IOC 1 and/or IOC 2 Test Procedure for the IOC-3100 (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, TESTING AND TROUBLESHOOTING subsection in the MAINTENANCE section).

4.3.4 FLIGHT MANAGEMENT COMPUTER (FMC-3000) REMOVAL

NOTE

Before removing the FMC-3000, remove electrical power from the airplane.

a. The No. 1 and No. 2 FMC are located in the IAPS Card Cage. Gain Access to the IAPS Card Cage by opening the panel for the right nose avionics bay.

b. Perform the ICC-3000 IAPS Card Cage Modules removal/installation procedure (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

4.3.5 FLIGHT MANAGEMENT COMPUTER (FMC-3000) INSTALLATION

NOTE

Before installing the FMC-3000, remove electrical power from the airplane.

a. Perform the ICC-3000 IAPS Card Cage Modules removal/installation procedure (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

b. Restore electrical power to the airplane.

c. Perform the Flight Management Computer (FMC-3000) Adjustment/Test procedure.

d. Close up all panels that were opened while accessing the FMC-3000.

4.3.6 FLIGHT MANAGEMENT COMPUTER (FMC-3000) ADJUSTMENT/TEST

a. Ensure electrical power has been restored to the airplane.

b. Perform the FMC 1 and/or FMC 2 Test Procedure for the FMC-3000 (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, TESTING AND TROUBLESHOOTING subsection in the MAINTENANCE section).

4.4 GLOBAL POSITIONING SYSTEM

4.4.1 GLOBAL POSITIONING SYSTEM ANTENNA (GPS-ANT) REMOVAL

a. The GPS antennas are located on the top, forward fuselage. Gain access to the respective GPS Antenna.

b. Remove sealant and screws (four places) from antenna base.

c. Carefully pry around antenna base with sealant removal tool until sealant is completely broken.

CAUTION

When removing antenna, do not pull on cables. Damage to cables could result. Lift antenna only far enough to disconnect cables.

d. Raise antenna until connector is accessible.

e. Disconnect antenna cable and remove antenna. Install protective cover to the antenna connector.

WARNING

Use cleaning solvents in a well ventilated area. Do not inhale vapor. Do not allow fluid to contact the skin. Prolonged exposure may result in unconsciousness or lung or skin irritation.

f. Remove existing sealant from aircraft skin.

4.4.2 GLOBAL POSITIONING SYSTEM ANTENNA (GPS-ANT) INSTALLATION

a. Visually inspect mounting surfaces of antenna and airplane for corrosion and dirt. Clean mounting surfaces as required.

WARNING

Use cleaning solvents in a well ventilated area. Do not inhale vapor. Do not allow fluid to contact the skin. Prolonged exposure may result in unconsciousness or lung or skin irritation.

b. Apply acceptable corrosion-inhibiting compound per aircraft maintenance manual to mounting surfaces of antenna and aircraft.

c. Remove the protective cover from the connector of antenna and inspect for dirt or damage.

d. Position antenna in place and install mounting screws (four places) through antenna mounting base. Tighten screws to near contact with bearing surface and determine friction drag torque required to turn the screw into securing nut. Torque screws to friction drag torque plus 20 in-lbs. maximum.

e. Verify antenna bonding by removing one mounting screw and measuring resistance from antenna mounting base to aircraft skin. Resistance/impedance must be less than 0.0025Ω.

f. Reinstall antenna mounting screw per step e above.

g. Apply Pro-Seal, P/S 870B-1/2 weather/aerodynamic fillet sealant or equivalent to periphery of antenna and shape as necessary. Remove any excess sealant.

h. Cover heads of mounting screws with layer of Dow-Corning RTV-3145 sealant, or electrical equivalent, having dielectric constant of 2.8, or less, at 100 Hz. Blend sealant smooth with the mounting holes. Remove any excess.

i. Perform Global Positioning System (GPS-4000A/4000S) Adjustment/Test procedure.

4.4.3 GLOBAL POSITIONING SYSTEM RECEIVER (GPS-4000S) REMOVAL

NOTE

Before removing the GPS-4000S Receiver, remove electrical power from the airplane.

a. The No. 1 GPS-4000S Global Positioning System Receiver(s) is located on the left middle nose avionic rack. Gain access to the No. 1 GPS receiver by opening the panel for the left nose avionics bay. The No. 2 GPS-4000S Global Positioning System Receiver(s) is located on the right middle nose avionic rack. Gain access to the No. 2 GPS receiver by opening the panel for the right nose avionics bay.

b. Perform the RACK MOUNTED LRU removal procedure for the GPS-4000S system (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

4.4.4 GLOBAL POSITIONING SYSTEM RECEIVER (GPS-4000S) INSTALLATION

NOTE

Before installing the GPS-4000S Receiver, remove electrical power from the airplane.

a. Perform the RACK MOUNTED LRU installation procedure for the GPS-4000S (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, INSTALLATION AND REMOVAL PROCEDURES subsection in the INSTALLATION section).

b. Restore electrical power to the airplane.

c. Perform Global Positioning System Adjustment/Test procedure.

d. Close up all panels that were opened while accessing the GPS-4000S.

4.4.5 GLOBAL POSITIONING SYSTEM (GPS-4000S) ADJUSTMENT/TEST

a. Ensure electrical power has been restored to the airplane.

b. Perform the No. 1 GPS and/or No. 2 GPS Test Procedure for the GPS-4000S (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237, TESTING AND TROUBLESHOOTING subsection in the MAINTENANCE section).

4.4.6 DATA BASE UNIT (DBU-5000) REMOVAL

The DBU-5000 Data Base Unit is located in the pedestal. Perform the DBU-5000 removal procedure (Ref. Rockwell Collins, Inc. DBU-5000 Data Base Unit Installation Manual 523-0808860, INSTALLATION and REMOVAL subsection in the INSTALLATION section).

4.4.7 DATA BASE UNIT (DBU-5000) INSTALLATION

The DBU-5000 Data Base Unit is located in the pedestal. Perform the DBU-5000 installation procedure (Ref. Rockwell Collins, Inc. DBU-5000 Data Base Unit Installation Manual 523-0808860, INSTALLATION and REMOVAL subsection in the INSTALLATION section).

4.4.8 DATA BASE UNIT (DBU-5000) ADJUSTMENT/TEST

Perform the DBU Test Procedure for the DBU-5000 (Ref. Rockwell Collins, Inc. DBU-5000 Data Base Unit Installation Manual 523-0808860, TESTING PROCEDURES subsection in the MAINTENANCE section.

4.5 FMS-3000 NAVIGATION DATABASE LOADING

a. The FMS database memory stores VHF navaid and airport reference point information for use by the flight management subsystem. Each database also contains named en route waypoints for the applicable geographic area. The FMS database expires periodically and must be updated with the latest information on a 28-day cycle. When the database has expired, a warning displays on the CDU during FMS initialization

b. Every 28 days, Collins Business and Regional Systems will distribute the latest database information. Database updates may also be received via the Internet.

c. Subscription information may be obtained by contacting Rockwell Collins Database Technical Support at 319-295-2512 or via the Internet at www.RockwellCollins.com/FMS.

d. A new database should be loaded into system memory as soon as it arrives. Do not wait for the current database to expire. Perform the update while the airplane is parked on the ground.

e. Several types of databases may be loaded into the FMS: navigation database, route database, pilot waypoint database. Two navigation databases may be loaded into the memory of a flight management computer. In a dual FMS system, database loading is independent. (Ref. Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual 523-0807237 and DBU-5000 Operators Guide 523-0808703).

5. SYSTEM TROUBLESHOOTING

For troubleshooting information refer to the following documents or follow the steps listed:

Refer to the Collins Pro Line 21 Raytheon King Air with IFIS System Manual 523-0807237 Section 5.8 Testing and Troubleshooting.

6. INSPECTION REQUIREMENTS

6.1 SCHEDULED INSPECTIONS AND MAINTENANCE CHECKS

No scheduled inspection or maintenance is required for the FMS-3000 LRUs.

6.2 VISUAL WIRING INSPECTION

Perform visual inspections of the Pro Line 21 System wiring. These visual inspections should be performed as part of the existing Phase or out of phase inspection at an interval not to exceed 800 hours.

A "visual inspection" is defined as the process of using the eye, alone or in conjunction with various aids, as the sensing mechanism from which judgments may be made about the condition of a unit to be inspected.

This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or droplight and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.

The inspection criteria provided below is intended to be used as general guidance. Special inspection should be conducted as deemed appropriate by each operator based on aircraft experience. Any discrepancies found should be repaired.

6.3 WIRING INSPECTION GUIDANCE

The inspection criteria provided below is intended to be used as general guidance. Special inspection should be conducted as deemed appropriate by each operator, based on aircraft experience. Any discrepancies found should be repaired.

a. Perform a visual inspection of the wiring for security of installation and cleanliness.

b. Perform a visual inspection of clamping points, and observe for signs of wire chaffing due to loose clamp, damaged clamp, clamp cushion migration, or improper clamp installation.

c. Perform a visual inspection of connectors and observe for signs of wiring and/or connector damage due to loose connector, excessive corrosion, missing plug, missing dummy contact, condition of strain relief, grommet degradation, and condition of drip loops near connectors.

d. Perform a visual inspection of wiring terminations and observe for mechanical damage, heat damage, and chemical contamination.

e. Perform a visual inspection of backshells and observe for wire damage and loss of bonding.

f. Perform a visual inspection of sleeving and conduits and observe for wire damage.

g. Perform a visual inspection of grounding points and observe for security (or tightness), condition of termination, cleanliness and corrosion.

h. Perform a visual inspection around electrical panels and observe for broken wires and/or damaged insulation.

i. Perform a visual inspection around LRUs and observe for broken wires and/or chaffed insulation.

j. Perform any other checks deemed necessary to observe condition of system wiring.

k. Perform any cleaning and/or repair deemed necessary based on the findings of these inspections.

CAUTION

Use care when disturbing or removing wire harness/bundles to minimize the possibility of wire insulation damage or cracking. Care must be especially used in areas with severe moisture problems. During any repair, modification, or installation work in close proximity to wire bundles, mounts, connectors and systems, ensure that these areas are protected from and/or cleaned of metal shavings and debris.

6.4 STRUCTURAL INSPECTIONS

Perform the following visual inspections at intervals shown in chart in section 6.8. Perform visual inspections as detailed in section 6.5. These inspections and intervals are taken from the King Air B200/B200C Maintenance Manual and the King Air B300/B300C Maintenance Manual and are repeated here for ease of maintenance.

6.4.1 Antennas

Inspect all external antennas for leading edge erosion and condition of base seals.

6.5 VISUAL INSPECTIONS

The equipment necessary for conducting a visual inspection usually consists of a strong flashlight, a mirror with a ball joint, and a 2.5x - 4x magnifying glasses. A 10x magnifying glass is recommended for positive identification of suspected cracks.

6.5.1 Corrosion Treatment

Before attempting a close, visual inspection of any selected part or structural area, it should be checked for signs of corrosion. Any corrosion found should be tested to discover its extent and severity. Heavy or severe corrosion requires immediate corrective action. If mild corrosion is present, it should be carefully, but completely, removed before continuing with preparations for the visual inspection.

6.5.2 Structural Failure Determination

The first step in a visual inspection should be an examination of the area for deformed or missing fasteners. These should be identified for subsequent replacement. A close examination for cracks in the surfaces of structural members should then be made with the aid of a flashlight. The majorities of cracks start at, and progress from, points of concentrated stress such as sharp corner cutouts and fastener holes. Cracks may also occur in sheet metal bend radii and similar places that were subjected to severe forming operations during manufacture.

6.5.3 Cleaning of Structural Parts

All parts of areas from which mild corrosion has been removed should be thoroughly cleaned using an approved solvent. (Metal conditioner should not be applied at this time as it may interfere with subsequent dye penetrant inspection.)

6.5.4 Cleaning Other Areas

All other areas to be inspected should also be cleaned of any deposits that might hinder the discovery of existing surface flaws. The protective finish need not be removed. The cleaning should be performed using any approved solvent. For cleaning high heat treat steel parts, or areas in which a high heat steel part is installed, use only the approved solvents.

6.5.5 Crack Detection Technique

When looking for surface cracks, the inspector should point his flashlight towards himself and hold it at an angle of 5° - 45° to the surface. (See Figure 1) The extent of the crack may be traced by directing the beam at right angles to the crack. Never direct the light beam at such an angle that the reflected beam shines directly into the eyes. The proper procedure is to keep the eyes above the reflected beam.

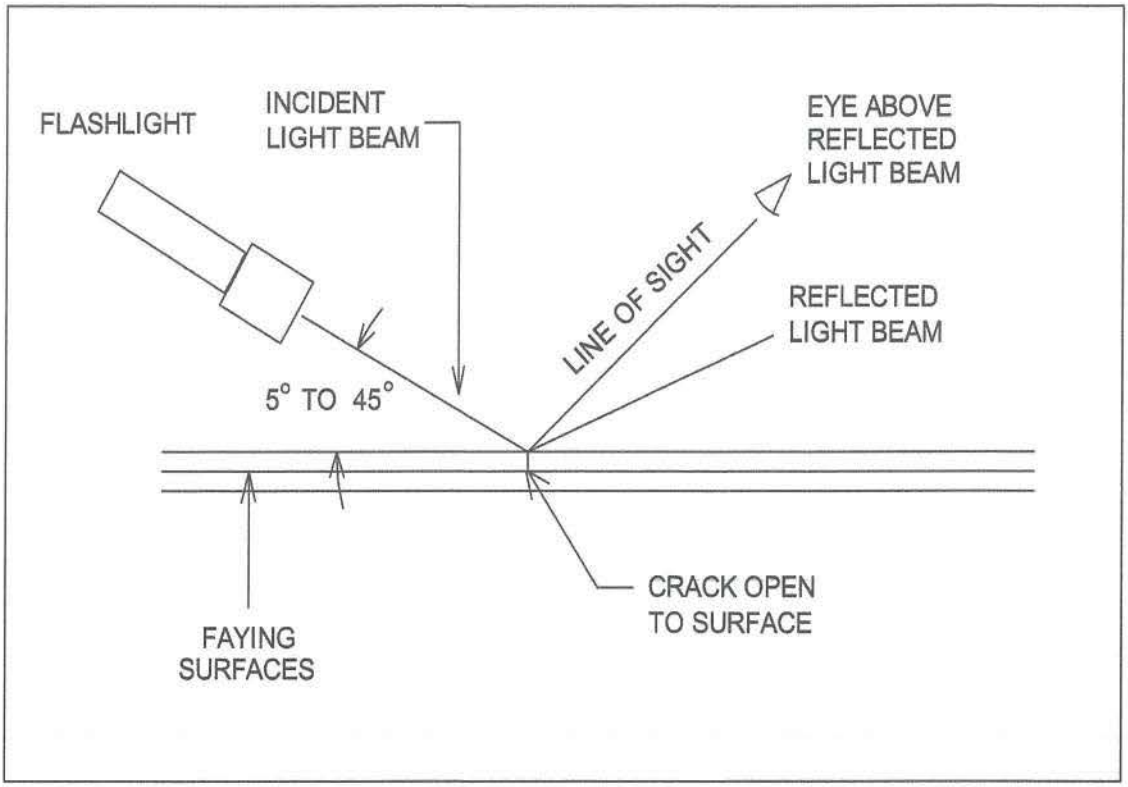


Figure 1

6.5.6 Verification of Cracks

A 10x magnifying glass may be used to confirm the existence or extent of a suspected crack.

6.6 RETURN TO SERVICE

This inspection form is provided only as a guide and checklist for inspecting the installed system.

Aircraft S/N: _____ **Aircraft Registration No:**_____

Aircraft Total Time: _____ **W/O No.:** _____

6.7 LRU INSPECTION

Any time a Pro Line 21 component is removed and replaced following repair or maintenance, a return to service test is required per BHE & Associates Ground Test 324-00-0011. Check applicable maintenance practices for each individual component removed to determine what level of testing is required for returning to service.

6.8 Mechanical and Electrical Hardware Inspection

Perform the following at each at an interval not to exceed 800 Hours	**Date**	**Technician**
1. Visually inspect the antenna from outside of aircraft for leading edge erosion and condition of the base seal. From inside the aircraft visually inspect all doublers and fasteners for cracking, corrosion and proper mounting.		
2. Inspect the fwd avionic compartment, instrument panel and pedestal for all Pro Line 21 IDS equipment mounting & attachment security.		
3. Inspect the circuit breaker(s) for security of attachment, operation, & chaffing and labeling		
4. Inspect all related wiring for general condition routing, chafing, bonding and integrity of stand offs and clamping.		

Appendix A
List of Applicable Publications

The publications listed in the LOAP constitute the required information essential for continued airworthiness for the aircraft.

Document Title	Document Number	Revision/Date
Flight Manual Supplement	324-00-0014	FAA Date
Master Drawing List	324-00-0001	Rev IR or later
Raytheon Aircraft Model King Air B200 and B200C Maintenance Manual	101-590010-19B11	Revised July 25, 2005 or later
Raytheon Aircraft Model King Air B300 and B300C Maintenance Manual	130-590031-11A20	Revised April 28, 20062005 or later
Raytheon Aircraft Beech Super King Air B200 & B200C Pilot's Operating Handbook and FAA Approved Flight Manual	101-590010-307C	Revised December, 20042005 or later
Raytheon Aircraft Beech Super King Air B300 & B300C Pilot's Operating Handbook and FAA Approved Flight Manual	130-590031-1C4	Revised November, 20012005 or later
Rockwell Collins, Inc. Raytheon King Air with IFIS Avionics System Manual	523-0807237	1st Edition 30 Sept 20052005 or later
Rockwell Collins, Inc. DBU-5000 Data Base Unit Installation Manual	523-0808860	2nd Edition, Rev 1 16 May 20082005 or later
Rockwell Collins, Inc. Installation Practices Manual	523-0775254	3rd Edition 1 Sept 19982005 or later

Appendix B
Special Tools and Equipment

No special tools or test equipment for the FMS-3000 System

NOTES:

REVISIONS				
DESCRIPTION	LTR	REVISION NO.	DATE	APVD
INITIAL RELEASE	IR		11-24-09	RMH
SHT 1 & 4 – ADDED ALT IOC-3100 P/N SHT 1 – ADDED MDT-3100 P/N & NOTE J	A		03-02-10	RMH
SHT 2 – ADD ALTERNATE ANTENNA LOCATIONS SHT 6 – ADD SHEET	B		03-16-10	RMH
SHT 1 – REV NOTE J	C		01-27-11	RMH
SHT 1 – DISABLED FMS TEMPERATURE TEMP COMPENSATION. ADDED NOTE 3.	D		02-01-19	TH
SHT 1 – PL, ADDED ALT IOC 822-1361-615, REVISED GPS-4000S PN. ADDED NOTE K. SHT 4 – ADDED ALT IOC	E		9/14/20	

3. SET WORD 10, STRAP 4 OF THE CSU TO 0 (UP POSITION) TO DISABLE FMS AUTOMATIC TEMPERATURE COMPENSATION ON EACH CSU.

   FOR ACCESS TO CSU BOARD REMOVE FRONT COVER OF ICC-3000 IAPS CARD CAGE TO EXPOSE BOARDS. REMOVE BOTH CSU'S FROM THE IAPS BY LIFTING AND PULLING THE CAM LOCK HANDLES. ACCESS TO STRAPPING SWITCHES IS ACCOMPLISHED BY LOOSENING THE 6 SCREWS ON THE COVER, ENOUGH TO LET THE COVER SLIDE DOWN AND EXPOSE THE SETUP SWITCHES.

   THE CSU WORD 10 STRAP 4 NEEDS TO BE SET AS FOLLOWS:

SWITCH BANK	STRAP	DEFINITION	SETTING	
WORD 10	4	TEMPERATURE COMPENSATION	0	0=DISABLED

2. PREREQUISITE FOR THIS INSTALLATION ARE FACTORY AIRCRAFT LISTED IN THE EFFECTIVITY TABLE BELOW OR AIRCRAFT WITH THE FOLLOWING STC'S INSTALLED:
   B200/B200C – SA1268WI-D
   B300/B300C – SA1267WI-D

MODEL	SN EFF
B200CGT	BZ-1 & UP
B200GT	BY-1 & UP
B200C	BL-148 & UP
B200	BB-1834, BB-1843 & UP
B300C	FM-12 & UP
B300	FL-381, FL-383 & UP

EFFECTIVITY TABLE

NOTE: 1. SEAL ANTENNAS PER FAA AC43-13.2A, CHAPTER 3, SECTION 44 AND APPLICABLE AIRCRAFT MAINTENANCE MANUAL, CHAPTER 20.

(K) GPS UNITS MUST BE GPS-4000S P/N 822-2189-002, -004 -010 OR -101. FOR DUAL INSTALLATIONS USING GPS-4000S P/N 822-2189-101 BOTH GPS UNITS MUST BE THE SAME PART NUMBER. UPGRADE EXISTING UNITS AS REQUIRED PER COLLINS AML STC SA01434WI-D AND SA01848WI.

(J) MDT-3110 P/N 810-0042-013 IS AN ALTERNATE TO THE FACTORY OR STC INSTALLED MDT. ALTERNATE MDT ONLY APPLICABLE IF MDC-3110 IS P/N 822-1987-005 OR HIGHER.

(H) REMOVE EXISTING ANTENNA, P/N CI 401-220 & REPLACE WITH P/N CI 429-200.

(G) IF EXISTING ANTENNA P/N IS CI 401-460 REMOVE & REPLACE WITH P/N CI 429-410. IF EXISTING ANTENNA P/N IS CI 401-220 REMOVE & REPLACE WITH P/N CI 429-200.

(F) REMOVE EXISTING IOC-3100 & REPLACE WITH P/N SHOWN.

(E) REMOVE EXISTING FMC-3000 & REPLACE WITH P/N SHOWN.

(D) REMOVE EXISTING OCM-3100 & REPLACE WITH P/N SHOWN. REUSE EXISTING MOUNTING HARDWARE.

(C) REMOVE EXISTING GPS-4000( ) & REPLACE WITH P/N SHOWN. REUSE EXISTING MOUNTING TRAY/HARDWARE.

(B) TSOD, VENDOR COMANT INDUSTRIES.

(A) PN, ROCKWELL COLLINS, CEDAR RAPIDS, IA 52498

-3	-1	ITM	NOMENCLATURE OR DESCRIPTION	CAGE CODE	PART OR IDENTIFYING NUMBER	DASH NO.	SPECIFICATION	MATERIAL OR NOTE	ZONE
			LIST OF MATERIALS OR PARTS LIST						
		ALT	ALT (A)	IOC-3100	4V792	822-1361-615			
		AR	AR	SEALANT		RTV-3145		PN DOW CORNING CORPORATION	
		AR	AR	SEALANT		P/S 870B-1/2		PN PRO-SEAL PRODUCTS, INC.	
		8	4	SCREW		MS24694-C54			
		1	ALT	(B) GPS ANTENNA	4V792	CI 429-200			
		1	1	(B) GPS/XM ANTENNA	4V792	CI 429-410			
		1	1	(A) MDT-3110	4V792	810-0042-013	(J)		
		ALT	ALT	(A) IOC-3100	4V792	822-1361-614			
		2	2	(A) IOC-3100	4V792	822-1361-613			
		ALT	ALT	(A) OCM-3100	4V792	822-1484-314	(TAWS, LPV & VIDEO)		
		2	2	(A) OCM-3100	4V792	822-1484-228	(TAWS & LPV)		
		ALT	ALT	(A) FMC-3000	4V792	822-0883-054	(W/SEARCH & RESCUE)		
		2	1	(A) FMC-3000	4V792	822-0883-053			
		2	1	(A) GPS-4000S	4V792	SEE NOTE (K)			
		1		NO.2 GPS STRAP UPGRADE		324-00-0002-2			
		1	1	NO.1 GPS STRAP UPGRADE		324-00-0002-1			
X				DUAL FMS UPGRADE EQUIPMENT INSTALLATION			-3		
	X			SINGLE FMS UPGRADE EQUIPMENT INSTALLATION			-1		

WHERE AND QTY REQD FOR IND. DASH NO. REQD.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOL ON DIA .XX=±0.02, .XXX=±.005
HOLE DIAMETER:
UNDER .2516 = +.005 –.000
.2516 TO .5008= +.006 –.005
OVER .5008= +.008 –.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA OR A COMMON AXIS TO BE WITHIN .010 ø.

FIRST SHALL BE INTERPRETED IN ACCORDANCE WITH AS43.13-1B

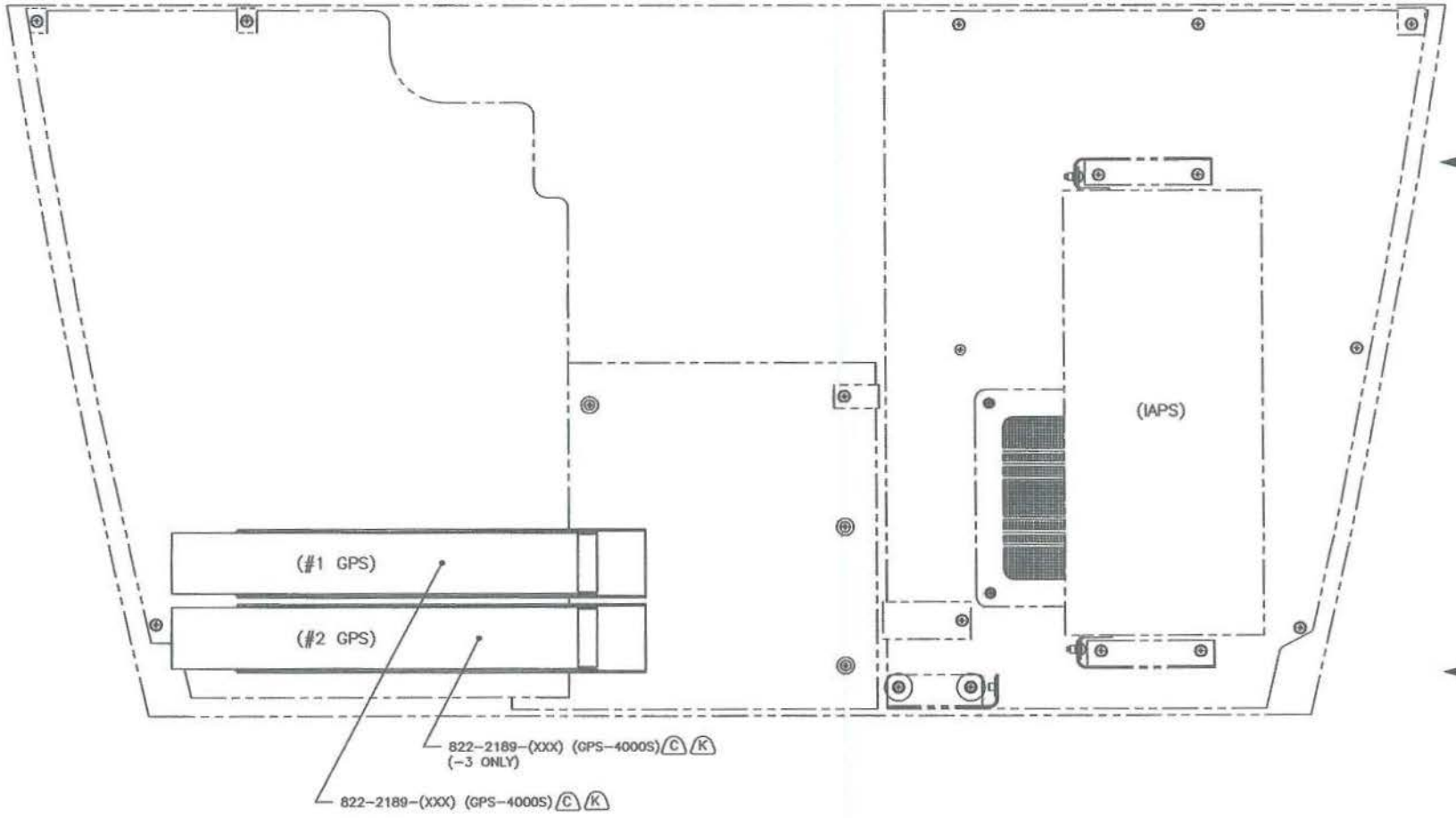
PROP S. PENN
CHK D. KENDRICKS
ENG APVD RM HURLEY
MFG

BHE & ASSOCIATES, LTD.
SAN ANTONIO, TEXAS 78218

FLIGHT MANAGEMENT SYSTEM (FMS) UPGRADE EQUIPMENT INSTALLATION

SIZE	CAGE	DWG NO.	REV LTR
D	--	324-00-0002	E
SCALE NONE		NONE	SHEET 1 OF 6

NEXT ASSY PART NO.: 324-00-0001

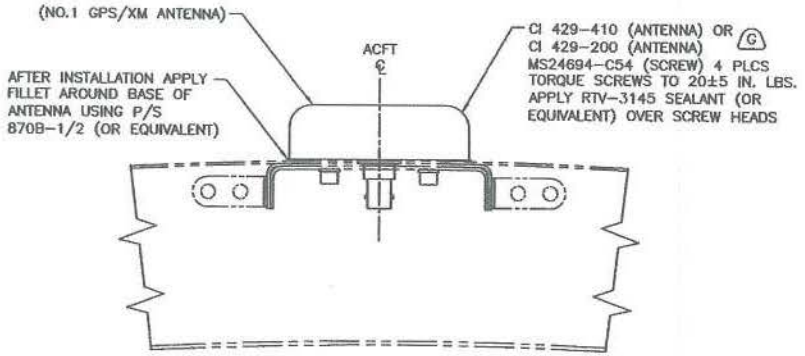


VIEW A-A
VIEW LOOKING DOWN AT LOWER SHELVES IN NOSE
ROTATED 90° CCW
SEE SHEET 2

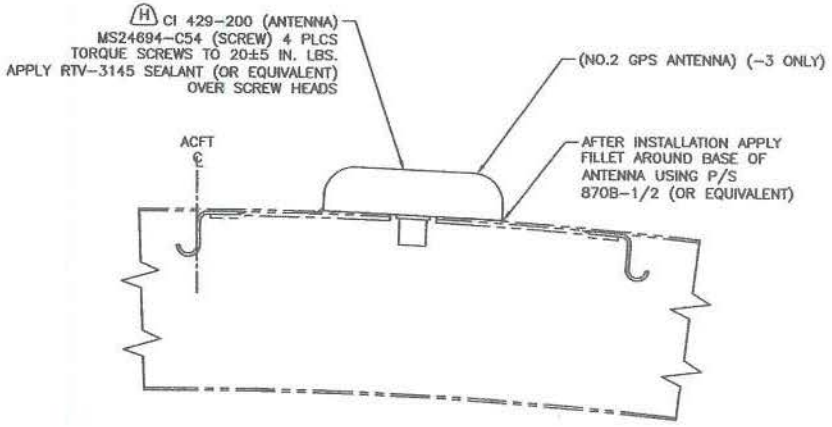
BHE & ASSOCIATES, LTD.			
SIZE D	CAGE —	DWG NO 324-00-0002	REV LTR E
SCALE NONE			SHEET 3

ALTERNATE ANTENNA LOCATIONS

SEE SHT 2



VIEW G-G
LOOKING AFT
SEE SHEET 2



VIEW H-H
LOOKING AFT
(-3 ONLY)
SEE SHEET 2

BHE & ASSOCIATES, LTD.			
SIZE D	CAGE —	DWG NO. 324-00-0002	REV LTR E
SCALE NONE			SHEET 8

DWG NO. 324-00-0003 | SH 1

REVISIONS

DESCRIPTION	LTR	REVISION NO.	DATE	APVD
INITIAL RELEASE	IR		11/11/09	RMH
SHT 1: ADD NOTE 4. SHT 2: ADD EXISTING JUMPERS TO 3452P58 (GPS 1) AND 3452P88 (GPS 2).	A		4/27/10	

NOTES:

UNLESS OTHERWISE SPECIFIED –

1. REF DRAWING 324-00-0002 FOR UPGRADE EQUIPMENT DEFINITIONS.
2. INSTALL STRAPS AS SHOWN IN –1 & –2 IF THEY ARE NOT ALREADY INSTALLED.
3. ALL WORKMANSHIP AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH FAA AC43-13.1B, CHAPTER 11, SECTION 8.
4. REFERENCE ROCKWELL COLLINS, INC. GPS WIRING DIAGRAM RCA-6023 FOR B200 OR GPS WIRING DIAGRAM RCA-6057 FOR B300.

						X			NO.2 GPS STRAP UPGRADE		–2			
							X		NO.1 GPS STRAP UPGRADE		–1			
						–2	–1	SYM	NOMENCLATURE OR DESCRIPTION	PART OR IDENTIFYING NUMBER	DASH NO.	SPECIFICATION	MATERIAL OR NOTE	ZONE

IDENT AND QTY REQD FOR TAB. DASH NO. ITEMS — LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOL ON DIM. .XX=±.02 .XXX=±.008
HOLE DIAMETER:
UNDER .251Ø = +.005 –.005
.251Ø TO .500Ø= +.008 –.005
OVER .500Ø= +.008 –.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 #.

PART SHALL BE INTERPRETED IN ACCORDANCE WITH AC43.13-1B

DIGITAL DATA ONLY
NO MASTER TRACING

PREP: S. PENN
CHK: D. KENDRICKS
ENG APVD: R. HURLEY
MFG:

BHE & ASSOCIATES, LTD.
SAN ANTONIO, TEXAS 78216

GPS CONFIGURATION
STRAP UPGRADE

SIZE: D | CAGE: — | DWG NO. 324-00-0003 | REV LTR: A
SCALE: NONE | NONE | SHEET 1 OF 2

SERVICEABLE

GalaxyAerospace
maintenance . repair . overhaul

ITEM ID:	57642		
DESCRIPTION:	OCM-3100		
PART NO:	822-1484-228	QTY:	1.00
SERIAL NO:	4GN7XV	BIN:	KC-12-00
CONDITION:	NE	LOCATION:	KING AIR RACK
TSN:	N/A	TSO:	N/A
SHELF DUE / EXP DATE:	N/A		
JOB ID:	0	PO ID:	7463
GIN / ID. NO:	GiN5119	APPROVAL:	

SIGN:

14/12/2023

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country: **FAA / United States**	2 **AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	3. Form Tracking Number: **1431917**
4. Organization Name and Address:	**TEXTRON AVIATION INC.** **One Cessna Blvd., Wichita, KS. 67215** **Production Certificate Number: PC4**	5. Work Order / Contract / Invoice Number: **4497578**

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	**OCM-3100**	**822-1484-228**	**1**	**4GN7XV**	**New**

12. Remarks:

New / CIT,
Customer PO #: 07909440.
- End -

13a. Certifies the items identified above were manufactured in conformity to:

[X] Approved design data and are in a condition for safe operation.

[ ] Non-approved design data specified in Block 12.

14a [ ] 14 CFR 43.9 Return to Service [ ] Other regulation specified in Block 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:	13c. Approval / Authorization No.: **PC4**	14b. Authorized Signature:	14c. Approval / Certificate No.:
13d. Name (Typed or Printed): **Dan J. Ehmke**	13e. Date (dd/mmm/yyyy): **23 Sep 2021**	14d. Name (Typed or Printed):	14e. Date (dd/mmm/yyyy):

User / Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine / propeller / article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s) / propeller(s) / article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SERVICEABLE

GalaxyAerospace
maintenance . repair . overhaul

ITEM ID:	57451		
DESCRIPTION:	OCM-3100		
PART NO:	822-1484-228	QTY:	1.00
SERIAL NO:	4GN7Y8	BIN:	KC-12-00
CONDITION:	NE	LOCATION:	KING AIR RACK
TSN:	N/A	TSO:	N/A
SHELF DUE / EXP DATE:	N/A		
JOB ID:	0	PO ID:	7463
GIN / ID. NO:	GIN5119	APPROVAL:	

SIGN:

14/12/2023

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country: **FAA / United States**	2 **AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	3. Form Tracking Number: **1431917**
4. Organization Name and Address:	**TEXTRON AVIATION INC. One Cessna Blvd., Wichita, KS. 67215 Production Certificate Number: PC4**	5. Work Order / Contract / Invoice Number: **4497578**

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
2	**OCM-3100**	**822-1484-228**	**1**	**4GN7Y8**	**New**

12. Remarks:

New / CIT,
Customer PO #: 07909440.
- End -

13a. Certifies the items identified above were manufactured in conformity to:	14a ☐ 14 CFR 43.9 Return to Service ☐ Other regulation specified in Block 12
☒ Approved design data and are in a condition for safe operation. ☐ Non-approved design data specified in Block 12.	Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:	13c. Approval / Authorization No.: **PC4**	14b. Authorized Signature:	14c. Approval / Certificate No.:
13d. Name (Typed or Printed): **Dan J. Ehmke**	13e. Date (dd/mmm/yyyy): **23 Sep 2021**	14d. Name (Typed or Printed):	14e. Date (dd/mmm/yyyy):

User / Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine / propeller / article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s) / propeller(s) / article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SERVICEABLE

GalaxyAerospace
maintenance . repair . overhaul

ITEM ID:	57450		
DESCRIPTION:	IN/OUT CONCENTRATOR, IOC-3100		
PART NO:	822-1361-614	QTY:	1.00
SERIAL NO:	4YTYMG	BIN:	- -
CONDITION:	NE	LOCATION:	KING AIR RACK
TSN:	N/A	TSO:	N/A
SHELF DUE / EXP DATE:	N/A		

JOB ID: 0	PO ID: 7463	SIGN:
GIN / ID. NO: GiN5119	APPROVAL:	14/12/2023

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country: **FAA / United States**	2 **AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	3. Form Tracking Number: **1544460**
4. Organization Name and Address:	**TEXTRON AVIATION INC. One Cessna Blvd., Wichita, KS. 67215 Production Certificate Number: PC4**	5. Work Order / Contract / Invoice Number: **5355776**

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
3	**In / Out Concentrator, IOC-3100**	**822-1361-614**	**1**	**4YTYMG**	**New**

12. Remarks:

New / Exchange,
Customer PO: 08453690.
- End -

13a. Certifies the items identified above were manufactured in conformity to:		14a ☐ 14 CFR 43.9 Return to Service ☐ Other regulation specified in Block 12	
[X] Approved design data and are in a condition for safe operation. ☐ Non-approved design data specified in Block 12.		Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.	
13b. Authorized Signature:	13c. Approval / Authorization No.: **PC4**	14b. Authorized Signature:	14c. Approval / Certificate No.:
13d. Name (Typed or Printed): **Dan J. Ehmke**	13e. Date (dd/mmm/yyyy): **27 Jun 2023**	14d. Name (Typed or Printed):	14e. Date (dd/mmm/yyyy):

User / Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine / propeller / article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s) / propeller(s) / article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SERVICEABLE

GalaxyAerospace
maintenance . repair . overhaul

ITEM ID:	57641		
DESCRIPTION:	IN/OUT CONCENTRATOR, IOC-3100		
PART NO:	822-1361-614	QTY:	1.00
SERIAL NO:	4YTYMF	BIN:	- -
CONDITION:	NE	LOCATION:	KING AIR RACK
TSN:	N/A	TSO:	N/A
SHELF DUE / EXP DATE:	N/A		
JOB ID:	0	PO ID: 7463	SIGN:
GIN / ID. NO:	GiN5119	APPROVAL:	14/12/2023

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** **FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG**	809699329 /3506149

4. Organization Name and Address:		5. Work Order/Contract/Invoice Number:
Rockwell Collins 1100 West Hibiscus Blvd Melbourne, FL 32901-2704 USA	PMA: PQ1024CE TSO: PT1024CE	PO No: 3448038

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
000001	IOC-3100 / IN/OUT CONCENTRATOR, IOC-310	822-1361-614	1	4YTYMF	NEW

12. **Remarks:** AIRWORTHINESS APPROVAL

Item Numbers refer to numbers on Delivery Document

000001 TSO C9c, C52b, C115b

13a. Certifies the items identified above were manufactured in conformity to:

- [X] Approved design data and are in a condition for safe operation.
- [ ] Non-approved design data specified in Block 12.

14a. [ ] 14 CFR 43.9 Return to Service [ ] Other regulation specified in Block 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and with respect to that work, the items are approved for return to service.

N/A

13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.:
	ODA-500864-CE		
13d. Name (Typed or Printed):	**13e. Date (dd/mmm/yyyy):**	**14d. Name (Typed or printed)**	**14e. Date (dd/mmm/yyyy):**
Walton Y. Sochacki	26/JUN/2023		

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintainence records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SERVICEABLE

Galaxy Aerospace
maintenance, repair, overhaul

ITEM ID:	57680		
DESCRIPTION:	FMC-3000/ FLIGHT MANAGEMENT COMPUTER		
PART NO:	822-0883-053	QTY:	1.00
SERIAL NO:	4GN3V6	BIN:	- -
CONDITION:	NE	LOCATION:	KING AIR RACK
TSN:	N/A	TSO:	N/A
SHELF DUE / EXP DATE:	N/A		

JOB ID: 0	PO ID: 7463	SIGN:
GIN / ID. NO: GiN5119	APPROVAL: M022	22/12/2023

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** **FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG**	807508158 /3122799

4. Organization Name and Address:		5. Work Order/Contract/Invoice Number:
Rockwell Collins 1100 West Hibiscus Blvd Melbourne, FL 32901-2704 USA	PMA: PQ1024CE TSO: PT1024CE	PO No: 2822600

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
000001	FMC-3000 / FLIGHT MANAGEMENT COMPUTER,	822-0883-053	1	4GN3V6	NEW

12. Remarks: AIRWORTHINESS APPROVAL

Item Numbers refer to numbers on Delivery Document

TSO 000001 C115b, C146c Delta Cl 4

13a. Certifies the items identified above were manufactured in conformity to:

- [X] **Approved design data and are in a condition for safe operation.**
- [ ] **Non-approved design data specified in Block 12.**

14a. [ ] **14 CFR 43.9 Return to Service** [ ] **Other regulation specified in Block 12**

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and with respect to that work, the items are approved for return to service.

N/A

13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.:
Sarah Martin	ODA-500864-CE		
13d. Name (Typed or Printed):	**13e. Date (dd/mmm/yyyy):**	**14d. Name (Typed or printed)**	**14e. Date (dd/mmm/yyyy):**
Sarah Martin	05/DEC/2018		

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintainence records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

1. Approving Civil Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** **FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG**	809056023 /3441005

4. Organization Name and Address:		5. Work Order/Contract/Invoice Number:
Rockwell Collins 1100 West Hibiscus Blvd Melbourne, FL 32901-2704 USA	PMA: PQ1024CE TSO: PT1024CE	PO No: 3327804

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
000003	GPS-4000S / GLOBAL POSITIONAL SYSTEM, GP	822-2189-101	1	4RGN2L	NEW

12. Remarks: AIRWORTHINESS APPROVAL

Item Numbers refer to numbers on Delivery Document

TSO C145d Class Beta 3

13a. Certifies the items identified above were manufactured in conformity to:

☒ **Approved design data and are in a condition for safe operation.**

☐ **Non-approved design data specified in Block 12.**

14a. ☐ **14 CFR 43.9 Return to Service** ☐ **Other regulation specified in Block 12**

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and with respect to that work, the items are approved for return to service.

N/A

13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.:
	ODA-500864-CE		
13d. Name (Typed or Printed):	**13e. Date (dd/mmm/yyyy):**	**14d. Name (Typed or printed)**	**14e. Date (dd/mmm/yyyy):**
Selena Johnson	14/FEB/2022		

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintainence records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SERVICEABLE

Galaxy Aerospace
maintenance . repair . overhaul

ITEM ID:	30449		
DESCRIPTION:	GPS/XM COMDAT ANTENNA		
PART NO:	CI429-410	QTY:	1.00
SERIAL NO:	660599	BIN:	~~KC8~~ . --
CONDITION:	NE	LOCATION:	KING AIR WAREHOUSE
TSN:		TSO:	
SHELF DUE / EXP DATE:			
JOB ID:	0	PO ID:	SIGN:
GIN / ID. NO:	GiN2116	APPROVAL:	

GAM/E-005 Rev 2 (01/21)

1. Approving Civil Aviation Authority/Country FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	2. Form Tracking Number 1430422
4. Organization Name and Address Textron Aviation Inc. (PC4) Textron Aviation Inc. 1 Cessna Blvd, Wichita, KS 67215		5. Work Order/Contract/Invoice Number 4492086

6. Item	7. Description	8. Part Number	9. Quantity	10. Serial Number	11. Status/Work
3	GPS/ XM COMDAT ANTENNA	CI 429-410	1	660599	New

12. Remarks

PO#: 07909440

13. Certifies the item identified above is in conformity to:
- ☒ Approved design data and is in a condition for safe operation.
- ☐ Non-approved design data specified in Block 12

14a. ☐ 14 CFR 43.9 Return to Service ☐ Other regulation specified in Block 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature	13c. Approval Authorization No.	14b. Authorized Signature	14c. Approval Certificate No.
Jennifer Fisher	PC4		
13d. Name (Typed or Printed)	**13e. Date (dd/mmm/yyyy)**	**14d. Name (Typed or Printed)**	**14e. Date (dd/mmm/yyyy)**
JENNIFER FISHER	20/Sep/2021		

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine propeller article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s) propeller(s) articles(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.