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Flight Standardization Board (FSB) Report

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Textron Aviation

Type Certificate Data Sheet (TCDS)	TCDS Identifier	Marketing Name	Pilot Type Rating
T00012WI	680	Sovereign (Serial #0001 thru #0500) Sovereign+ (Serial #0501 and on)	CE-680
T00012WI	680A (#0001 and on)	Latitude	CE-680

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TABLE OF CONTENTS

1. RECORD OF REVISIONS.....	3
2. INTRODUCTION.....	3
3. HIGHLIGHTS OF CHANGE	3
4. BACKGROUND	3
5. ACRONYMS	3
6. DEFINITIONS	4
7. PILOT TYPE RATING.....	5
8. RELATED AIRCRAFT	5
9. PILOT TRAINING.....	6
10. PILOT CHECKING	7
11. PILOT CURRENCY	7
12. OPERATIONAL SUITABILITY.....	8
13. MISCELLANEOUS.....	8
APPENDIX 1. DIFFERENCES LEGEND.....	10
APPENDIX 2. MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE	12
APPENDIX 3. DIFFERENCES TABLES.....	13
APPENDIX 4. CESSNA 680 ELECTRONIC FLIGHT BAG	38
APPENDIX 5. CESSNA 680+/680A ELECTRONIC FLIGHT BAG.....	41

1. RECORD OF REVISIONS

Revision Number	Sections(s)	Page(s) Affected	Date
Original	All	All	05/12/2006
Revision 1	All	All	12/10/2010
Revision 2	All	All	05/19/2014
Revision 3	All	All	06/24/2015
Revision 4	3.0	9	08/30/2016
Revision 5	All	All	10/13/2017

2. INTRODUCTION

Aircraft Evaluation Groups (AEG) are responsible for working with aircraft manufacturers and modifiers, during the development and FAA certification of new and modified aircraft, to determine: 1) the pilot type rating; 2) flightcrew member training, checking, and currency requirements; and 3) operational suitability.

This report lists those determinations for use by: 1) FAA employees who approve training programs; 2) FAA employees and designees who certify airmen; and 3) aircraft operators and training providers to assist them in developing their flightcrew member training, checking, and currency.

3. HIGHLIGHTS OF CHANGE

The purpose of this revision is to revise observer seat evaluation and utilize new report format.

4. BACKGROUND

The Kansas City AEG (MKC-AEG) formed a Flight Standardization Board (FSB) that evaluated the Cessna Model 680 as defined in FAA Type Certificate Data Sheet (TCDS) # T00012WI. The evaluation was conducted using the methods described in FAA Advisory Circular (AC) 120-53A, Guidance for Conducting and Use of Flight Standardization Board Evaluations.

In April 2017, the FSB conducted an evaluation of the forward, side-facing passenger seats for the purpose of determining operational suitability with Title 14 of the Code of Federal Regulations (14 CFR) part 135, § 135.75.

5. ACRONYMS

- 14 CFR Title 14 of the Code of Federal Regulations
- AC Advisory Circular
- AEG Aircraft Evaluation Group

- AFCS Aircraft Flight Control System
- ATP Airline Transport Pilot
- EFB Electronic Flight Bag
- EICAS Engine Indicating and Crew Alerting System
- FAA Federal Aviation Administration
- FADEC Full Authority Digital Engine Control
- FFS Full Flight Simulator
- FMS Flight Management System
- FSB Flight Standardization Board
- FSTD Flight Simulation Training Device
- FTD Flight Training Device
- GTC Garmin Touchscreen Controller
- MCDU Multifunction Control Display Units
- MDR Master Differences Requirements
- MFD Multifunction Display
- MKC-AEG Kansas City Aircraft Evaluation Group
- ODR Operator Differences Requirements
- PFD Primary Flight Display
- STAR Standard Terminal Arrival Route
- TCAS Traffic Alert and Collision Avoidance System
- TCDS Type Certificate Data Sheet
- V_1 Takeoff Decision Speed
- V_2 Takeoff Safety Speed
- V_{REF} The airspeed equal to the landing 50-foot point speed ($1.23 V_{SR0}$) with flaps 35° and landing gear extended.
- 91K 14 CFR Part 91 Subpart K

6. DEFINITIONS

These definitions are for the purposes of this report only.

- 6.1 Base Aircraft.** An aircraft identified for use as a reference to compare differences with another aircraft.
- 6.2 Current.** A crewmember meets all requirements to operate the aircraft under the applicable operating part.
- 6.3 Differences Tables.** Describe the differences between a pair of related aircraft, and the minimum levels operators must use to conduct differences training and checking of crewmembers. Difference levels range from A to E.
- 6.4 Master Differences Requirements (MDR).** Specifies the highest training and checking difference levels between a pair of related aircraft derived from the Differences Tables.

- 6.5 Mixed Fleet Flying.** The operation of a base aircraft and one or more related aircraft for which credit may be taken for training, checking, and currency events.
- 6.6 Operational Evaluation.** An AEG process to determine pilot type rating, minimum crewmember training, checking and currency requirements, and unique or special airman certification requirements (e.g., specific flight characteristics, no-flap landing).
- 6.7 Operational Suitability.** An AEG determination that an aircraft or system may be used in the National Airspace System (NAS) and meets the applicable operational regulations (e.g., 14 CFR parts 91, 121, 133, 135).
- 6.8 Qualified.** A crewmember holds the appropriate airman certificate and ratings as required by the applicable operating part.
- 6.9 Related Aircraft.** Any two or more aircraft of the same make with either the same or different type certificates that have been demonstrated and determined by the Administrator to have commonality.
- 6.10 Seat Dependent Tasks.** Maneuvers or procedures using controls that are accessible or operable from only one flightcrew member seat.
- 6.11 Special Emphasis Area.** A training requirement unique to the aircraft, based on a system, procedure, or maneuver, which requires additional highlighting during training. It may also require additional training time, specialized training devices, or training equipment.
- 6.12 Specific Flight Characteristics.** A maneuver or procedure with unique handling or performance characteristics that the FSB has determined must be checked.

7. PILOT TYPE RATING

- 7.1** Type rating. The CE-680 (#0001 thru 0500), CE-680+ (#0501 and On), and CE-680A (#0001 and On) aircraft type rating designation is CE-680.
Common type ratings. Not applicable.
- 7.2** Military equivalent designations. Military aircraft that qualify for the CE-680 can be found on the [faa.gov](http://www.faa.gov/licenses_certificates/airmen_certification/) website under Licenses and Certificates, Airmen Certification, Online Services, Aircraft Type Rating Designators. This webpage is kept up-to-date and can be found at http://www.faa.gov/licenses_certificates/airmen_certification/.

8. RELATED AIRCRAFT

- 8.1** Related Aircraft on same Type Certificate Data Sheet (TCDS). The Model 680, 680+, and 680A are related.
- 8.2** Related Aircraft on different TCDS. Not applicable.

9. PILOT TRAINING

9.1 Airman Experience

Airmen receiving initial CE-680, CE-680+, and CE-680A training should have previous training in high altitude operations in multi-engine transport turbojet aircraft, new generation avionics, and Flight Management System (FMS) experience. Pilots without this experience may require additional training.

Airmen receiving differences, upgrade, transition CE-680/CE-680+/CE-680A training are assumed to have previous experience in the CE-680/CE-680+/CE-680A, multi-engine transport turbojet aircraft, new generation avionics, high altitude operations, and FMS. Pilots without this experience may require additional training.

9.2 Special Emphasis Areas

There are no special emphasis areas.

9.3 Specific Flight Characteristics

There are no specific flight characteristics.

9.4 Seat Dependent Tasks

Pilots must receive training in these seat dependent tasks:

a) Nose wheel steering (left seat); initial, transition, upgrade, and recurrent training.

9.5 Regulatory Training Requirements Which Are Not Applicable to the CE-680/680+/680A.

None.

9.6 Flight Simulation Training Devices (FSTD)

There are no specific systems, procedures, or maneuvers that are unique to the CE-680/680+/680A that require a specific FSTD for training.

9.7 Training Equipment

There are no specific systems or procedures that are unique to the CE-680/680+/680A that require specific training equipment.

9.8 Differences Training Between Related Aircraft

Pilots must receive differences training between the CE-680, CE-680+, and CE-680A. The level of training is specified in Appendix 3, Differences Tables.

10. PILOT CHECKING

10.1 Landing from a No Flap or Non Standard Flap Approach

Demonstration of a no flap approach and landing during pilot certification or a 14 CFR part 61, § 61.58 proficiency check, part 91, § 91.1065 competency check, or part 135, §135.293 competency check is required. Refer to FAA Order 8900.1, Volume 5 when the test or check is conducted in an aircraft versus an FFS.

10.2 Specific Flight Characteristics

There are no specific flight characteristics.

10.3 Seat Dependent Tasks

Pilots must be checked in these seat dependent tasks:

- a) Nosewheel steering (left seat), initial, transition, upgrade, differences, and recurrent checking.

10.4 Other Checking Items

Not applicable.

10.5 FSTDs

There are no specific systems, procedures, or maneuvers that are unique to the CE-680/680+/680A that require a specific FSTD for checking.

10.6 Equipment

There are no specific systems or procedures that are unique to the CE-680/680+/680A that require specific equipment.

10.7 Differences Checking Between Related Aircraft

Pilots must receive difference checking between the CE-680, CE-680+, and CE-680A. The level of checking is specified in Appendix 3, Differences Tables.

11. PILOT CURRENCY

There are no additional currency requirements for the CE-680, CE-680+, and CE-680A other than those already specified in parts 61 and 135.

11.1 Differences Currency Between Related Aircraft

Pilots must receive differences currency between the CE-680, CE-680+, and CE-680A as follows:

Recency of Experience. Each aircraft type is addressed separately unless otherwise approved. Recency of experience must include operation and programming of the FMS/G5000 and use of Aircraft Flight Control System (AFCS)/autopilot for departure, enroute, arrival, and approach.

12. OPERATIONAL SUITABILITY

The CE-680, CE-680+, and CE-680A is operationally suitable for operations under parts 91 and 135. The list of operating rules evaluated is on file at the Kansas City AEG (MKC-AEG).

13. MISCELLANEOUS

13.1 Forward Observer Seat

In April 2017, at the request of industry, the FSB conducted a reevaluation of the forward, side-facing passenger seats. As a result, the following recommendations are provided to assist an inspector in making a risk-based determination of operational suitability with § 135.75 in aircraft that are not equipped with an optional dedicated forward observer seat.

1. In order to maintain the ability for positive three-way communications, the observer should be supplied and use a headset with boom microphone.
2. Observer outside view limitations may be mitigated by use of Traffic Alert and Collision Avoidance System (TCAS), Garmin SafeTaxi, and Garmin SurfaceWatch, if installed.
3. The following table are recommendations from the FSB when a side-facing passenger seat is used in lieu of a dedicated forward observer seat. Checks in the table below with a determination of “NO” may be accomplished at the discretion of the inspector. The inspector conducting the check will consider the recommendations below and the configuration of the cabin to make an on-scene determination based off the inspector’s ability to suitably conduct the check.

TYPE OF CHECK	Double side-facing seat (without large refreshment center)	Single side-facing seat (with large refreshment center)
§§ 135.299, 135.339	YES	YES
§§ 135.293, 135.297	YES	NO
ATP/TYPE RATING	YES	NO
COCKPIT ENROUTE INSPECTION	YES	YES
PROVING or VALIDATION TEST	YES	YES

NOTE: The above table is applicable to the side-facing passenger seats only. If optional dedicated observer seat is installed and used, the above limitations do not apply.

13.2 Landing Minima Categories

Reference 14 CFR part 97, § 97.3. The CE-680 (#0001 thru 0500), CE-680+ (#0501 and On), and CE-680A (#0001 and On) are considered Category “B” aircraft for the purposes of determining normal “straight-in” landing weather minima. This is based on the maximum certificated landing weight V_{ref} for flaps “35/Full”. For circling approaches, flaps “35/Full” is the recommended flap position. The minimum indicated airspeed is $V_{ref} + 10$ for the selected flap position and the actual gross weight of the aircraft, plus any additional speed additives for the conditions during the approach, until aligned with the landing runway. If operating at a speed in excess of the upper limit of the speed range for the aircraft’s category, the minimums for the higher category must be used.

13.3 Normal Landing Flaps

The normal “final landing flap setting” per § 91.126(c) is flaps 35/Full.

13.4 Aircraft Proving Tests

Proving and validation tests in accordance with §§ 91.1041 and 135.145 are appropriate in accordance with FAA Order 8900.1, Volume 3, Chapter 29 when the CE-680 is new to a particular operator. When an operator is currently operating CE-680+ (#0501 and On) aircraft and adds CE-680A (#0001 and On) aircraft in the same kind of operation, proving tests are not required.

APPENDIX 1. DIFFERENCES LEGEND

Training Differences Legend

Differences Level	Type	Training Method Examples	Conditions
A	Self-instruction	<ul style="list-style-type: none"> • Operating manual revision (HO) • Flightcrew operating bulletin (HO) 	<ul style="list-style-type: none"> • Crew has already demonstrated understanding on base aircraft (e.g. updated version of engine). • Minor or no procedural changes required. • No safety impact if information is not reviewed or is forgotten (e.g. different engine vibration damping mount). • Once called to attention of crew, the difference is self-evident.
B	Aided instruction	<ul style="list-style-type: none"> • Audiovisual presentation (AV) • Tutorial computer-based instruction (TCBI) • Stand-up instruction (SU) 	<ul style="list-style-type: none"> • Systems are functionally similar. • Crew understanding required. • Issues need emphasis. • Standard methods of presentation required.
C	Systems Devices	<ul style="list-style-type: none"> • Interactive (full-task) computer-based instruction (ICBI) • Cockpit procedures trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5) 	<ul style="list-style-type: none"> • Training can only be accomplished through systems training devices. • Training objectives focus on mastering individual systems, procedures, or tasks versus highly integrated flight operations or “real-time” operations. • Training devices are required to assure attainment or retention of crew skills to accomplish more complex tasks usually related to aircraft systems.
D	Maneuvers Devices	<ul style="list-style-type: none"> • Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B) 	<ul style="list-style-type: none"> • Training can only be accomplished in flight maneuver devices in a real-time environment. • Training requires mastery of interrelated skills versus individual skills. • Motion, visual, control loading, and specific environmental conditions may be required.

Differences Level	Type	Training Method Examples	Conditions
E	Level C/D FFS or Aircraft	<ul style="list-style-type: none"> • Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT) 	<ul style="list-style-type: none"> • Motion, visual, control loading, audio, and specific environmental conditions are required. • Significant full task differences that require a high fidelity environment. • Usually correlates with significant differences in handling qualities.

Checking Differences Legend

Differences Level	Checking Method Examples	Conditions
A	None	None
B	<ul style="list-style-type: none"> • Oral or written exam • Tutorial computer-based instruction self-test (TCBI) 	<ul style="list-style-type: none"> • Individual systems or related groups of systems.
C	<ul style="list-style-type: none"> • Interactive (full-task) computer-based instruction (ICBI) • Cockpit procedures trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5) 	<ul style="list-style-type: none"> • Checking can only be accomplished using systems devices. • Checking objectives focus on mastering individual systems, procedures, or tasks.
D	<ul style="list-style-type: none"> • Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B) 	<ul style="list-style-type: none"> • Checking can only be accomplished in flight maneuver devices in a real-time environment. • Checking requires mastery of interrelated skills versus individual skills. • Motion, visual, control loading, and specific environmental conditions may be required.
E	<ul style="list-style-type: none"> • Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT) 	<ul style="list-style-type: none"> • Significant full task differences that require a high fidelity environment.

APPENDIX 2. MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE

These are the minimum levels of training and checking required, derived from the highest level in the Differences Tables in Appendix 3. Differences levels are arranged as training/checking.

Related Aircraft ↓	Base Aircraft →	CE-680 (#0001 thru 0500)	CE-680 with Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather Map	CE-680+ (#0501 and On)	CE-680A (#0001 and On)
CE-680 (#0001 thru 0500)		A/A*	C/C	C/C	C/C
CE-680 with Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather Map		A/A*	A/A*	C/C	C/C
CE-680+ (#0501 and On)		C/C	C/C	A/A	B/B
CE-680A (#0001 and On)		Not Evaluated	Not Evaluated	B/B	A/A*

A/A* accounts for installation of optional equipment.

APPENDIX 3. DIFFERENCES TABLES

This Design Differences table, from the CE-680 to the CE-680 with Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680 TO RELATED AIRCRAFT: CE-680 with Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Cessna 680 with Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather	Added capability of displaying aeronautical information, such as charts and weather.	No	Yes	C	C

This Design Differences table, from the CE-680 to the CE-680+, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680+ (#0501 and On)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Airplane Configuration	Winglets added. Thrust reverser nozzle canted 4° outboard	Yes	No	B/SU/TCBI	B
	Cockpit Panel	Garmin G5000 avionics replaces Honeywell P2000 Autothrottle added	No	Yes	B/SU/TCBI	B
	Aircraft Weight	30,775 lb. MTOW (475 lb. increase) 27,575 lb. MLW (475 lb. increase)	Yes	No	B/SU/TCBI	B
	21 Environmental Control	Temperature and pressurization control accomplished via GTC 570 touch screen controllers	No	Yes	B	B
	22 Auto Flight	Garmin G5000 AFCS replaces Honeywell AFCS. Autothrottle added	No	Yes	C/FTD-5	B
	23 Communications	Four Garmin GTC 570 touch screen controllers replace MCDUs and MFD/EICAS radio tuning. Backup tuning provided by two GCU 275	No	Yes	C/FTD-5	B
	24 Electrical Power	Two Transformer Rectifier Units (TRU) added	No	Yes	B/SU/TCBI	B
	26 Fire Protection	APU Fire switch relocated to center pedestal	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680+ (#0501 and On)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	28 Fuel	Fuel crossfeed knob and L-R boost pump switches relocated to center pedestal	No	Yes	B/SU/TCBI	B
	31 Indicating and Recording	Rotary Test knob deleted Systems test automated or incorporated in GTC 570 touch screen controllers	No	Yes	C/FTD-5	B
	31 Indicating and Recording	Summary synoptic display on MFD	No	Yes	B/SU/TCBI	B
	33 Lights	Interior and Exterior lighting controls relocated to overhead lighting panel added GTC 570 soft keys for Nav, Beacon and Pulse lights added	No	Yes	B/SU/TCBI	B
	34 Navigation	Garmin G5000 PFD/MFD replaces Honeywell Epic PFD/MFD	No	Yes	C/FTD-5	C
	34 Navigation	Garmin Synthetic Vision Technology added	No	Yes	C/FTD-5	C
	34 Navigation	Dual Litef LCR 100 Hybrid Navigation System replaces existing AHRS.	No	Yes	B/SU/TCBI	B
	34 Navigation	Dual Garmin G5000 FMS replaces dual Honeywell Epic FMS	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680+ (#0501 and On)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	35 Oxygen	Mechanical oxygen pressure gages deleted Low pressure warning lights deleted Misc/FLT Controls/Oxygen pressure synoptic on MFD added	No	Yes	B/SU/TCBI	B
	49 Airborne Auxiliary Power	APU Hobbs meter deleted APU RPM, EGT and Volts indicators deleted APU parameters displayed on Garmin G5000 EIS display APU hours and cycles displayed on GTC 570 propulsion page APU controls relocated to center pedestal	No	Yes	B/SU/TCBI	B
	74 Ignition	Engine ignition control switches deleted Ignition soft keys added on GTC-570 Propulsion System Page	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680+ (#0501 and On)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	76 Engine Controls	Throttle lever idle/cut-off triggers deleted Engine run/stop switches added FADEC in-control indication toggle switches deleted FADEC in control indication soft keys in GTC 570 added Thrust reverser piggy-back levers deleted Throttle levers with thrust reverser paddles and pull-through for reverse throttle levers added Cruise and climb thrust detents deleted Cruise and climb thrust indication on EIS display (G5000)	No	Yes	C/FTD-5	B

This Maneuver Differences table, from the CE-680 to the CE-680+, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO AIRCRAFT: CE-680+ (#0501 and On)	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Rejected Takeoff	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Multi-engine go- around	With Autothrottle OFF	No	No	C/FTD-5	C
	Multi-engine go-around	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Low Altitude Level Off	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Deployment and stowing of thrust reversers	New throttle quadrant with paddles in lieu of piggy-back levers	No	Yes	C/FTD-5	C
	Modulation of reverse thrust	Reverse thrust is modulated moving the thrust levers aft of the IDLE REV detent after thrust reversers deployment	No	Yes	C/FTD-5	C

This Design Differences table, from the CE-680+ to the CE-680, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680 (#0001 thru (#0500)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Airplane Configuration	No Winglets Thrust reverser nozzle canted 4° inboard	Yes	No	B/SU/TCBI	B
	Cockpit Panel	Honeywell P2000 avionics replaces Garmin 5000 No Autothrottle system	No	Yes	B/SU/TCBI	B
	Aircraft Weight	30,300 lb. MTOW (475 lb. decrease) 27,100 lb. MLW (475 lb. decrease)	Yes	No	B/SU/TCBI	B
	21 Environmental Control	Temperature and pressurization controls copilot’s tilt panel	No	Yes	B	B
	22 Auto Flight	Honeywell Epic AFCS replaces Garmin G5000 AFCS. Autothrottle deleted	No	Yes	C/FTD-5	B
	23 Communications	Four Garmin GTC 570 touch screen controllers replaced by MCDUs and MFD/EICAS radio tuning.	No	Yes	C/FTD-5	B
	24 Electrical Power	Two Transformer Rectifier Units (TRU) deleted	No	Yes	B/SU/TCBI	B
	26 Fire Protection	APU Fire switch relocated to copilot side instrument panel.	No	Yes	B/SU/TCBI	B
	28 Fuel	Fuel crossfeed knob and L-R boost pump switches relocated to left side pilot tilt panel	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680 (#0001 thru (#0500)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	31 Indicating and Recording	Rotary Test knob Systems test	No	Yes	C/FTD-5	B
	31 Indicating and Recording	Summary synoptic display on MFD	No	Yes	B/SU/TCBI	B
	33 Lights	Interior and Exterior lighting controls relocated	No	Yes	B/SU/TCBI	B
	34 Navigation	Garmin G5000 PFD/MFD replaced with Honeywell Epic PFD/MFD	No	Yes	C/FTD-5	C
	34 Navigation	Dual AHRS Navigation System	No	Yes	B/SU/TCBI	C
	34 Navigation	Dual Honeywell Epic FMS	No	Yes	C/FTD-5	C
	35 Oxygen	Mechanical oxygen pressure gages Low pressure warning lights	No	Yes	B/SU/TCBI	B
	49 Airborne Auxiliary Power	APU Hobbs meter APU RPM, EGT and Volts indicators APU controls relocated to copilot side panel	No	Yes	B/SU/TCBI	B
	74 Ignition	Engine ignition control switches.	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680 (#0001 thru (#0500)	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	76 Engine Controls	Throttle lever idle/cut-off triggers Engine run/stop switches deleted FADEC in-control indication toggle switches Thrust reverser piggy-back levers added Throttle levers with thrust reverser paddles and pull-through for reverse throttle levers deleted Cruise and climb thrust detents Cruise and climb thrust indication on EIS display (Honeywell Epic)	No	Yes	C/FTD-5	B

This Maneuver Differences table, from the CE-680+ to the CE-680, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680 (#0001 thru (#0500)	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Rejected Takeoff	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Multi-engine go- around	With Autothrottle OFF	No	No	C/FTD-5	C
	Multi-engine go-around	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Low Altitude Level Off	With Autothrottle ON	Yes	Yes	C/FTD-5	C
	Deployment and stowing of thrust reversers	New throttle quadrant with piggy-back levers in lieu of paddles	No	Yes	C/FTD-5	C
	Modulation of reverse thrust	Reverse thrust is modulated moving the piggy-back levers after thrust reversers deployment.	No	Yes	C/FTD-5	C

This Design Differences table, from the CE-680+ to the CE-680A, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Airplane Configuration	11.75 inch fuselage diameter increase.	No	No	A	A
	Instrument Panel layout	Baggage heat system and associated button deleted Windshield rain removal fan and associated button deleted	No	Yes	A	A
	Aircraft Weight	MTOW increased 25 lb to 30,800 lb	No	No	A	A
	Limitations	Maximum certified altitude of 45,000 ft.	No	No	A	A
	Placards and Markings	Limit speeds placard relocated from lower panel in front of throttles to upper panel adjacent to standby flight display	No	No	A	A
	Servicing	Oxygen fill port relocated from right side fuselage to left nose compartment.	No	Yes	A	A
	Cabin	Escape hatch with egress view port.	No	No	A	A
	21 Environmental Control	New Air Cycle Machine New outflow valve and pressurization controller Removal of cabin rate knob and Garmin Touchscreen Controller slider	No	Yes	B/SU/TCBI	B
	24 Electrical Power	Li-Ion Battery	No	Yes	B/SU/TCBI	B
	29 Hydraulic	Relocated hydraulic reservoir and addition of reservoir accumulator	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	30 Ice / Rain	Windshield rain removal fan deleted	No	Yes	A	A
	35 Oxygen	Oxygen bottle and fill port relocated from right side fuselage to left nose compartment.	No	No	A	A
	49 Airborne Auxiliary Power	Tailcone APU test switch and low oil level light deleted, function added to Garmin G5000 display	No	Yes	A	A
	52 Doors	Electrically actuated entry door.	No	Yes	B/SU/TCBI	B
	53 Fuselage	11.75 inch fuselage diameter increase. Aluminum strakes	No	No	A	A
	56 Windows	New windows	No	No	A	A

This Maneuver Differences table, from the CE-680+ to the CE-680A, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Preflight	Changed Normal Procedures: Preliminary Exterior Inspection, Exterior Inspection: Left Forward Fuselage, Exterior Inspection: Left Nose Compartment, Exterior Inspection: Right Nose Compartment, Exterior Inspection: Right Forward Fuselage, Exterior Inspection: Empennage	No	Yes	A	A

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Normal Procedures	Changed White Messages: FIRE BTL LOW BAG-APU, FIRE BTL LOW BAGGAGE, NO TAKEOFF New White Messages: BATTERY FAULT L and/or R, CABIN CALL, CHECK DOORS, HYD RES PRESS LOW, MAX COOL ON, PHONE CALL, SURFACEWATCH FAIL, SURFACEWATCH INHIBIT Deleted White Messages: AC BEARING L and/or R, BAGGAGE HEAT FAIL Changed Normal Procedures: Before Start, Before Taxi, Before Takeoff, After Landing, Shutdown (Quickturn), APU Ground or In-Flight Start (At or Below FL 200 and 250 KIAS), Expanded Preflight Procedures: Cockpit Preparation: Cockpit Switches	No	Yes	A	A

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Abnormal Procedures	Changed Amber Messages: ACM O'TEMP, BATTERY AMPS L and /or R, BLD AIR O'TEMP L and/or R, CABIN ALTITUDE, CABIN DOOR OPEN, PRESSURIZATION FAULT, SUPPLY BLD LEAK L and/or R, WOW MISCOMPARE New Amber Messages: APU OIL LEVEL LOW, BATTERY FAULT L and/or R, CHECK DOORS, HYD RES PRESS LOW, P/S HEAT ON, PRESS CTRL MANUAL, RECIRC VLV FAIL, TAIL BLD LEAK Deleted Amber Messages: BAGGAGE HEAT FAIL, O2 BOTTLE OFF L and/or R	No	Yes	A	A
	Emergency Procedures	New Red Message: BATTERY FAIL L and/or R.	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680+ (#0501 and On) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Emergency Procedures	Changed Red Messages: BAGGAGE FIRE, BATTERY O’TEMP L and/or R, DC GENS OFF, ENGINE FAILED L and/or R, ENGINE FIRE L and/or R Changed Emergency/Abnormal Procedures: Engine Failure or Precautionary Shutdown, In-Flight Restart - One Engine, Uncommanded Engine Thrust, Environmental System Smoke or Odor, Smoke Removal, Overpressurization, Airplane Pressurized on the Ground, Ditching, Suspected Fuel Leak New Emergency/Abnormal Procedures: Cabin Door Motor Fails to Lift	No	Yes	A	A

This Design Differences table, from the CE-680 to the CE-680A, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Airplane Configuration	Winglets added Thrust reverser nozzle canted 4° outboard	Yes	No	B/SU/TCBI	B
	Airplane Configuration	11.75 inch fuselage diameter increase. Aluminum Strakes	No	No	A	A
	Instrument Panel layout	Baggage heat system and associated button deleted Windshield rain removal fan and associated button deleted	No	Yes	A	A
	Aircraft Weight	MTOW increased 500 lb to 30,800 lb MLW increased 475 lb to 27,575 lb	Yes	No	B/SU/TCBI	B
	Limitations	Maximum certified altitude of 45,000 ft.	No	No	A	A
	Placards and Markings	Limit speeds placard relocated from lower panel in front of throttles to upper panel adjacent to standby flight display	No	No	A	A
	Servicing	Oxygen fill port relocated from right side fuselage to left nose compartment.	No	Yes	A	A
	Engines	Thrust increased from 5,760 to 5,907 lb	Yes	No	B/SU/TCBI	B
	Flight Deck	New throttle quadrant with paddles in lieu of piggy-back levers.	No	Yes	C/FTD-5	C

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Instrument Panel Layout	Garmin G5000 avionics replaces Honeywell Primus Epic Autothrottle added	No	Yes	B/SU/TCBI	B
	Instrument Panel Layout	Baggage heat system and associated button deleted Windshield rain removal fan and associated button deleted	No	Yes	A	A
	Cabin	Escape hatch with egress view port.	No	No	A	A
	21 Environmental Control	Temperature and pressurization control accomplished via Garmin GTC 570 touch screen controllers	No	Yes	B/SU/TCBI	B
	21 Environmental Control	New Air Cycle Machine New outflow valve and pressurization controller Removal of cabin rate knob	No	Yes	B/SU/TCBI	B
	22 Autoflight	Garmin G5000 AFCS replaces Honeywell AFCS Autothrottle added	No	Yes	C/FTD-5	B
	23 Communications	Four Garmin GTC 570 touch screen controllers replace Honeywell MCDUs and MFD/EICAS radio tuning Backup radio tuning provided by two Garmin GCU 275s	No	Yes	C/FTD-5	B
	24 Electrical Power	Two Transformer Rectifier Units (TRU) added	No	Yes	B/SU/TCBI	B
	24 Electrical Power	Li-Ion Battery	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	26 Fire Protection	APU Fire switch relocated to center pedestal	No	Yes	B/SU/TCBI	B
	28 Fuel	Fuel crossfeed knob and L-R boost pump switches relocated to center pedestal	No	Yes	B/SU/TCBI	B
	29 Hydraulic	Relocated hydraulic reservoir and addition of reservoir accumulator	No	Yes	B/SU/TCBI	B
	30 Ice / Rain Protection	Windshield rain removal fan deleted	No	Yes	A	A
	31 Indicating/Recording system	Rotary Test knob deleted and Systems Test automated or incorporated into Garmin GTC 570 touch screen controllers	No	Yes	C/FTD-5	B
	31 Indicating/Recording system	Synoptic displays on MFD for flight controls, hydraulics, fuel, and electrical systems added	No	Yes	B/SU/TCBI	B
	33 Lights	Interior and Exterior lighting controls relocated to overhead lighting panel Garmin GTC 570 soft keys added for Nav, Beacon, and Pulselights	No	Yes	B/SU/TCBI	B
	34 Navigation	Garmin G5000 PFD/MFD replaces Honeywell Primus Epic PFD/MFD Garmin Synthetic Vision Technology added Dual Garmin G5000 FMS replaces dual Honeywell Primus Epic FMS	No	Yes	C/FTD-5	C
	34 Navigation	Dual Litef LCR 100 Hybrid Navigation System replaces existing AHRS	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	35 Oxygen	Mechanical oxygen pressure gages deleted Low pressure warning lights deleted Misc/FLT Controls/Oxygen pressure synoptic on MFD added	No	No	B/SU/TCBI	B
	35 Oxygen	Oxygen bottle and fill port relocated from right side fuselage to left nose compartment	No	No	A	A
	49 Auxiliary Power APU	APU Hobbs meter deleted APU RPM, EGT, and Volts indicators deleted APU parameters displayed on Garmin G5000 EIS display APU hours and cycles displayed on Garmin GTC 570 propulsion page APU controls relocated to center pedestal	No	Yes	B/SU/TCBI	B
	49 Auxiliary Power APU	Tailcone APU test switch and low oil level light deleted, function added to Garmin G5000 display	No	Yes	A	A
	52 Doors	Electrically actuated entry door.	No	Yes	B/SU/TCBI	B
	53 Fuselage	11.75 inch fuselage diameter increase. Aluminum strakes	No	No	A	A
	56 Windows	New windows	No	No	A	A

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	74 Engine Ignitions	Engine ignition control switches deleted Ignition soft keys added on Garmin GTC-570 Propulsion System Page	No	Yes	B/SU/TCBI	B
	76 Engine Controls	Throttle lever idle/cut-off triggers deleted Engine run/stop switches added FADEC in control indication toggle switches deleted FADEC in control indication soft keys in Garmin GTC 570 added Thrust reverser piggy-back levers deleted Throttle levers with thrust reverser paddles and pull-through for reverse throttle levers added Cruise and climb thrust detents deleted Cruise and climb thrust indication on Garmin G5000 EIS display	No	Yes	C/FTD-5	B

This Maneuver Differences table, from the CE-680 to the CE-680A, was proposed by Textron Aviation and validated by the FSB. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Preflight	Changed Normal Procedures: Preliminary Exterior Inspection, Exterior Inspection: Left Forward Fuselage, Exterior Inspection: Left Nose Compartment, Exterior Inspection: Right Nose Compartment, Exterior Inspection: Right Forward Fuselage, Exterior Inspection: Empennage	No	Yes	A	A
	Taxi	Reverse thrust is modulated by moving the thrust levers aft of the IDLE REV	No	Yes	C/FTD-5	C
	RTO or V1 Fail	Engine Failure or Other Emergency During Takeoff: With autothrottle ON	Yes	Yes	C/FTD-5	C
	Normal Procedures	All Engine Go-Around: with autothrottle OFF	No	No	C/FTD-5	C
	Normal Procedures	All Engine Go-Around: with autothrottle ON	Yes	Yes	C/FTD-5	C

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Normal Procedures	Changed White Messages: FIRE BTL LOW BAG-APU, FIRE BTL LOW BAGGAGE, NO TAKEOFF New White Messages: BATTERY FAULT L and/or R, CABIN CALL, CHECK DOORS, HYD RES PRESS LOW, MAX COOL ON, PHONE CALL, SURFACEWATCH FAIL, SURFACEWATCH INHIBIT Deleted White Messages: AC BEARING L and/or R, BAGGAGE HEAT FAIL Changed Normal Procedures: Before Start, Before Taxi, Before Takeoff, After Landing, Shutdown (Quickturn), APU Ground or In-Flight Start (At or Below FL 200 and 250 KIAS), Expanded Preflight Procedures: Cockpit Preparation: Cockpit Switches	No	Yes	A	A

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Abnormal Procedures	Changed Amber Messages: ACM O'TEMP, BATTERY O'CURRENT now BATTERY AMPS L and /or R and changed procedure, BLD AIR O'TEMP L and/or R, CABIN ALTITUDE, CABIN DOOR OPEN, SUPPLY BLEED LEAK L and/or R now SUPPLY BLD LEAK L and/or R and procedure changed, WOW MISCOMPARE New Amber Messages: APU OIL LEVEL LOW, BATTERY FAULT L and/or R, CHECK DOORS, HYD RES PRESS LOW, P/S HEAT ON, PRESS CTRL MANUAL, PRESSURIZATION FAULT, RECIRC VLV FAIL, TAIL BLD LEAK Deleted Amber Messages: BAGGAGE HEAT FAIL	No	Yes	A	A
	Emergency Procedures	New Red Message: BATTERY FAIL L and/or R.	No	Yes	B/SU/TCBI	B

FROM BASE AIRCRAFT: CE-680 (#0001 thru #0500) TO RELATED AIRCRAFT: CE-680A	MANUEVER	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Emergency Procedures	Changed Red Messages: BAGGAGE FIRE, BATTERY O' TEMP L and/or R, DC GEN OFF L and/or R and/or APU now DC GENS OFF and procedure changed, ENGINE FAILED L or R now ENGINE FAILED L and/or R and procedure changed, ENGINE FIRE L and/or R Changed Emergency/Abnormal Procedures: Engine Failure or Precautionary Shutdown, In-Flight Restart - One Engine, Environmental System Smoke or Odor, Smoke Removal, Overpressurization, Airplane Pressurized on the Ground, Ditching New Emergency/Abnormal Procedures: Cabin Door Motor Fails to Lift, Uncommanded Engine Thrust, Suspected Fuel Leak	No	Yes	A	A
	In-Flight Maneuvers	Low Altitude Level Off with autothrottle ON.	Yes	Yes	C/FTD-5	C

Appendix 4. Cessna 680 Electronic Flight Bag

Cessna 680 Honeywell Primus Epic Charts and/or Multifunction Display (MFD) Uplink Graphical Weather

Table of Contents

1. Purpose and Applicability
2. EFB Suitability Determination
3. EFB Description
4. Flight Standardization Board (FSB) Specifications for Training
5. FSB Specifications for Checking
6. FSB Specifications for Currency
7. Continued Airworthiness
8. List of EFB Affected Document

1. Purpose and Applicability

The following is provided for the benefit of FAA Principal Inspectors (PI) and aircraft operators for their use in determining the acceptance of Electronic Flight Bag (EFB) applications. As described in the current edition of Advisory Circular (AC) 120-76, Guidelines for the Certification, Airworthiness, and Operational Use of Electronic Flight Bags, the Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather is certified Class 3 EFB Hardware and Type C applications. Class 3 hardware is installed equipment and requires Aircraft Certification Service (AIR) involvement and Aircraft Evaluation Group (AEG) involvement. Applications are classified as Type C due to the interactiveness of the Electronic Charts with the aircraft. The charts can be manipulated (i.e., zoomed, scrolled) as Type B, but are classified Type C because aircraft present position is provided on the installed display on the airport depictions and charts. Aircraft present position symbol displayed on the electronic charts provides supplemental airplane situational awareness information. It is not intended as a means for navigation or flight guidance. The airplane symbol is not to be used for conducting instrument approaches or departures, and it should not be relied upon during low visibility taxi operations. Position accuracy, orientation, and related guidance must be assured by other means of required navigation.

This Appendix is applicable for operational approval of the Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather.

2. EFB Suitability Determination

The EFB evaluation determined Cessna 680 Honeywell Primus Epic chart display functions are suitable as one source, for electronic display of airport diagrams, approach plates, arrival procedures, and departure procedures. Since chart information cannot be displayed while on emergency power, or in the event of certain avionics failures, a suitable secondary source is required to be available to the flightcrew. All Flight Manual limitations must be complied with

regarding use of Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather as an EFB.

3. EFB Description

Honeywell Primus Epic Charts

The following is a list of the items that can be displayed through the chart function:

- Airport charts.
- Standard Instrument Departure (SID) charts.
- Standard Terminal Arrival Route (STAR) charts.
- Approach charts.
- Noise charts.
- Notices to Airmen (NOTAM).
- Airspace charts.

MFD Uplink Graphical Weather

The following is a list of the items that can be displayed through the Uplink Graphical Weather Function:

- Uplinked graphical weather.
- Geopolitical boundaries.
- Graphical representation of the active flight plan.
- Magnetic heading.
- Bearing pointers.
- Navigational aids (NAVAIDS).
- Airways.
- Airspace.

4. Flight Standardization Board (FSB) Specifications for Training

As a minimum, the crew should use the EFB electronic chart functions to pull up the airport depiction charts, SIDs, Arrival Procedures, and approach charts. Pilots should master the graphic weather depiction functions to obtain Aviation Routine Weather Reports (METARS) and Terminal Weather Forecasts (TAF) for origin, destination, and alternate airports.

5. FSB Specification for Checking

Recommended tasks include demonstrating competency in using the Flight Management System (FMS) to integrate use of the electronic chart functions to display departures, arrivals, and approaches, and utilizing the graphical weather text functions.

6. FSB Specification for Currency

Recommended tasks include demonstrating competency in using the FMS to integrate use of the electronic chart functions to display departures, arrivals, and approaches, and utilizing the

graphical weather text functions.

7. Continued Airworthiness

Instructions for Continued Airworthiness (ICA) for Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather are addressed in accordance with aircraft certification requirements and available through normal ICA distribution processes.

8. List of EFB Affected Document

The following is a list of Procedures, Documents, and Affected Manuals concerning Operational Approval of the Honeywell Primus Epic Charts and/or MFD Uplink Graphical Weather for use as an EFB:

- Honeywell Primus Epic for the Cessna Citation Sovereign Pilot's Guides
- Operations Manual
- Flightcrew Training Program
- Training Courseware (Flightcrew, Maintenance Personnel, Operations Personnel)
- Company Maintenance Procedures
- Component Maintenance Manuals
- Minimum Equipment List (MEL)
- Data Delivery and Management Procedures
- EFB Configuration Control Procedures

Appendix 5. Cessna 680+/680A Electronic Flight Bag

Cessna 680+ (#0501 and On)/680A (#0001 and On) Garmin G5000 Integrated Avionics System

Table of Contents

1. Purpose and Applicability
2. Suitability Determination
3. Description
4. Mounting
5. Display and Reflectivity
6. Database Revisions
7. Specifications for Training
8. Specifications for Checking
9. Specifications for Currency
10. Environmental Testing (High Intensity Radiated Fields (HIRF), Electromagnetic Interference (EMI))
11. Continued Airworthiness
12. List of Affected Document

1. Purpose and Applicability

The following is provided for the benefit of FAA Principal Inspectors (PI) and aircraft operators for their use in determining the acceptance of Electronic Flight Bag (EFB) applications. As described in the current edition of FAA Advisory Circular (AC) 120-76, Guidelines for the Certification, Airworthiness, and Operational Use of Electronic Flight Bags, the G5000 electronic charts are certified Class 3 EFB Hardware and Type C applications. Class 3 hardware is installed equipment and requires Aircraft Certification Service (AIR) involvement and Aircraft Evaluation Group (AEG) involvement. Applications are classified as Type C due to interaction of the Electronic Charts with the aircraft. The charts can be manipulated (i.e., zoomed, scrolled) as Type B, but are classified Type C because aircraft present position is provided on the installed display on the airport depictions and charts.

2. Suitability Determination

The EFB evaluation determined chart display functions to be suitable as one source for electronic display of airport diagrams, approach plates, arrival procedures, and departure procedures. Since chart information cannot be displayed in the event of certain avionics failures, a suitable secondary source is required to be available to the flightcrew. Approved airplane flight manual provides operating limitations for the installation.

3. Description

The G5000 includes “FliteChart” and optional “ChartView” electronic charts. A specific system description for the system configuration appropriate to the installation is available in the approved airplane flight manual, and Garmin G5000 Integrated Avionics System Pilot’s Guide

Cessna Citation Sovereign, (Model 680+ #0501 and On) or G5000 Integrated Avionics System Pilot's Guide Cessna Citation Latitude (680A #0001 and On).

4. Mounting

EFB applications are displayed on the Multifunction Display (MFD) and have been certified as part of the type design.

5. Display and Reflectivity

The EFB has been evaluated as part of the type design.

6. Database Revisions

The database currency requirements are specified in the approved airplane flight manual, and Garmin G5000 Integrated Avionics System Pilot's Guide Cessna Citation Sovereign, (Model 680+ #0501 and On) or G5000 Integrated Avionics System Pilot's Guide Cessna Citation Latitude (680A #0001 and On).

7. Specifications for Training

As a minimum, the crew should use the Flight Management System (FMS) to flight plan and the EFB electronic chart functions to display the airport depiction charts, Standard Instrument Departure (SID), Arrival Procedures, and approach charts. Pilots should master the weather functions to obtain Aviation Routine Weather Reports (METARS) and Terminal Weather Forecasts (TAF) for origin, destination, and alternate airports if XM weather functions are enabled.

8. Specification for Checking

Recommended tasks include demonstrating competency in using the FMS to integrate use of the electronic chart functions to display departures, arrivals, and approaches, and utilizing the graphical weather functions if XM weather functions are enabled.

9. Specification for Currency

Recommended tasks include demonstrating competency in using the FMS to integrate use of the electronic chart functions to display departures, arrivals, and approaches, and utilizing the graphical functions if XM weather functions are enabled.

10. Environmental Testing (High Intensity Radiated Fields (HIRF), Electromagnetic Interference (EMI))

Intensity Radiated Fields and Indirect Effects of Lightning for system were tested per HIRF and Indirect Effects of Lightning Test Procedure. The system meets Certification Basis requirements and special conditions for HIRF and Indirect Effects of Lightning.

11. Continued Airworthiness

Instructions for Continued Airworthiness (ICA) for the system are addressed in accordance with aircraft certification requirements and available through normal ICA distribution processes.

12. List of Affected Document

The following is a list of Procedures, Documents, and Affected Manuals concerning Operational Approval of G5000 electronic charts for use as an EFB:

- Airplane Flight Manual.
- Garmin G5000 Integrated Avionics System Pilot's Guide Cessna Citation Sovereign, (Model 680+ #0501 and On) or G5000 Integrated Avionics System Pilot's Guide Cessna Citation Latitude (680A #0001 and On).
- Operations Manual.
- Flightcrew Training Program.
- Training Courseware (Flightcrew, Maintenance Personnel, Operations Personnel).
- Company Maintenance Procedures.
- Component Maintenance Manuals.
- Minimum Equipment List (MEL).
- Data Delivery and Management Procedures.
- EFB Configuration Control Procedures.