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## Flight Standardization Board (FSB) Report

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Revision: Original  
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Manufacturer  
**Textron Aviation, Inc.**

Type Certificate Data Sheet (TCDS)	TCDS Identifier	Marketing Name	Pilot Type Rating
T00015WI	700 (#0001 and on)	Longitude	CE-700

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## 1. RECORD OF REVISIONS

Revision Number	Sections(s)	Page(s) Affected	Date
Original	ALL	ALL	02/13/2019

## 2. INTRODUCTION

Aircraft Evaluation Groups (AEG) are responsible for working with aircraft manufacturers and modifiers, during the development and Federal Aviation Administration (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

This is the original Textron Model 700 Longitude CE-700 Flight Standardization Board (FSB) Report.

## 4. BACKGROUND

The Small Aircraft Branch (AEG) formed an FSB that evaluated the Textron Aviation Model 700 as defined in FAA Type Certificate Data Sheet (TCDS) # T00015WI. The evaluation was conducted using the methods described in FAA Advisory Circular (AC) 120-53B, Guidance for Conducting and Use of Flight Standardization Board Evaluations.

## 5. ACRONYMS

14 CFR	Title 14 of the Code of Federal Regulations
AC	Advisory Circular
ACFT	Aircraft
ACS	Airman Certification Standards
AEG	Aircraft Evaluation Group
AGL	Above Ground Level
ATP	Airline Transport Pilot
AV	Audiovisual Presentation
CPT	Cockpit Procedures Trainers

ECL	Electronic Checklist
EFB	Electronic Flight Bag
FAA	Federal Aviation Administration
FFS	Full Flight Simulator
FMS	Flight Management System
FSB	Flight Standardization Board
FSTD	Flight Simulation Training Device
FTD	Flight Training Device
HO	Handout
HUD	Head-Up Display
ICBI	Interactive Computer Based Instruction
MDR	Master Differences Requirements
PIC	Pilot in Command
PTS	Practical Test Standards
PTT	Part Task Trainers
SU	Stand-up Instruction
TCAS	Traffic Alert and Collision Avoidance System
TCBI	Tutorial Computer Based Instruction
TCDS	Type Certificate Data Sheet
V <sub>ref</sub>	Reference Landing Speed

## 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., Title 14 of the Code of Federal Regulations (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 Model 700 aircraft type rating designation is CE-700.
- 7.2.** Common type ratings. Not applicable.
- 7.3.** Military equivalent designations. Military aircraft that qualify for the CE-700 can be found on the faa.gov 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/](http://www.faa.gov/licenses_certificates/airmen_certification/).

## **8. RELATED AIRCRAFT**

- 8.1.** Related Aircraft on same TCDS. Not applicable.
- 8.2.** Related Aircraft on different TCDS. Not applicable.

## **9. PILOT TRAINING**

- 9.1.** Airman Experience.

Airmen receiving initial CE-700 pilot in command (PIC) 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 upgrade, transition CE-700 training are assumed to have previous experience in 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.**

**9.2.1** Pilots must receive special emphasis on the following areas during initial ground training:

Use of Automation/Flight Guidance management to include autothrottles.

**9.2.2** Pilots must receive special emphasis on, and perform the following areas during initial flight training:

Two-engine missed approaches and rejected landings: Automation/Flight Guidance management and use of autothrottles is critical when executing missed approaches or rejected landings with both engines operational to ensure aircraft speed does not exceed 14 CFR limits.

## **9.3. Specific Flight Characteristics.**

Maneuvers/procedures required to be checked as referenced in the airline transport pilot (ATP) and type rating practical test standards (PTS) or Airmen Certification Standards (ACS) as applicable.

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);
- b) Initial,
- c) Transition,
- d) Upgrade, and
- e) Recurrent training.

## **9.5. Regulatory Training Requirements which are Not Applicable to the CE-700.**

14 CFR part 135, § 135.345(b)(3): Pilots: Initial, Transition, and Upgrade Ground Training.

## **9.6. Flight Simulation Training Devices (FSTD).**

There are no specific systems, procedures, or maneuvers that are unique to the CE-700 that require a specific FSTD for training.

**9.7. Training Equipment.**

There are no specific systems or procedures that are unique to the CE-700 that require specific training equipment.

**9.8. Differences Training Between Related Aircraft.**

Not applicable

**10. PILOT CHECKING**

**10.1. Landing from a No-Flap or Nonstandard Flap Approach.**

The probability of flap extension failure on the CE-700 is not extremely remote due to system design. Therefore, demonstration of a no-flap approach and landing during pilot certification or a 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 a Full Flight Simulator (FFS).

**10.2. Specific Flight Characteristics.**

Maneuvers/Procedures required to be checked as referenced in the ATP and type rating PTS or ACS, as applicable.

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),
- b) Initial,
- c) Transition,
- d) Upgrade,
- e) Differences, and
- f) Recurrent checking.

**10.4. Other Checking Items.**

Not applicable.

**10.5. FSTD.**

There are no specific systems, procedures, or maneuvers that are unique to the CE-700 that require a specific FSTD for checking.

#### **10.6. Equipment.**

There are no specific systems or procedures that are unique to the CE-700 that require specific equipment.

#### **10.7. Differences Checking Between Related Aircraft.**

Not applicable.

### **11. PILOT CURRENCY**

There are no additional currency requirements for the CE-700 other than those already specified in parts 61, 91, and 135.

#### **11.1. Differences Currency Between Related Aircraft.**

Not applicable.

### **12. OPERATIONAL SUITABILITY**

The CE-700 is operationally suitable for operations under parts 91 and 135. The list of operating rules evaluated is on file at the Small Aircraft Branch (SEA-AEG).

### **13. MISCELLANEOUS**

#### **13.1. Forward Observer Seat.**

CE-700 aircraft that have the optional dedicated observer seat meet the requirements of § 135.75(b) and have no restrictions on the type of pilot check conducted from the seat. The CE-700 forward side-facing passenger seats have been evaluated and determined to meet requirements of § 135.75(b) in accordance with the table below with the following limitations:

1. Observer must be supplied and use a headset with boom microphone for three-way crew communications.
2. Outside view limitations are mitigated by use of Traffic Alert and Collision Avoidance System (TCAS), Garmin SafeTaxi, or Garmin SurfaceWatch, if installed.

TYPE OF CHECK	SINGLE SEAT	DUAL SEAT
§ 135.299, § 135.339	YES	YES
§ 135.293/297	YES	NO
ATP / TYPE RATING	YES	NO
COCKPIT ENROUTE INSPECTION	YES	YES
PROVING/VALIDATION TEST	YES	YES

### 13.2. Landing Minima Categories.

Reference Part 97, § 97.3.

The CE-700 is considered Category “C” aircraft for the purposes of determining normal “straight-in” landing weather minima. This is based on the maximum certificated landing weight reference landing speed ( $V_{ref}$ ) for flaps “Full”. For circling approaches, flaps “Full” is the recommended flap position. The minimum indicated airspeed is  $V_{ref}$  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. The minimum indicated airspeed when using autothrottles is  $V_{ref} + 3$  for the selected flap position and actual gross weight of the aircraft, plus any additional additives for the conditions during the approach, until aligned with the landing runway. Autothrottles must be disengaged by 50 feet above ground level (AGL). 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/are flaps “Full.”

## APPENDIX 1. DIFFERENCES LEGEND

### Training Differences Legend

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

### Checking Differences Legend

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

**APPENDIX 2. MASTER DIFFERENCES REQUIREMENTS (MDR)  
TABLE**

Not applicable.

## **APPENDIX 3 DIFFERENCES TABLES**

Not Applicable.

## **APPENDIX 4 HEAD-UP DISPLAY (HUD)**

Not Applicable.

## **APPENDIX 5 ELECTRONIC DISPLAY OF AERONAUTICAL CHARTS, CHECKLISTS, AND WEATHER**

### 1. Purpose and Applicability

The following is provided for the benefit of FAA Principal Inspectors and aircraft operators for their use in determining the acceptance of Electronic Flight Bag (EFB) applications. The Garmin G5000 was evaluated using AC 120-76D.

### 2. Suitability Determination

The Garmin G5000 is operationally suitable for:

- Electronic Display of Aeronautical charts.
- Electronic checklist (ECL) display.
- Weather and aeronautical information.

The 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 flight crew.

### 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 Longitude, (Model 700 #0001 and On).

### 4. Specifications for Training

As a minimum, training should include use of the FMS to flight plan and use of the electronic chart functions to display the airport depiction charts, SID’s, Arrival Procedures, and approach charts. Pilots should master the weather functions to obtain METARS and TAF’s for origin, destination, and alternate, airports if XM weather functions are enabled.

### 5. 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.