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**Civil Aviation Administration of China (CAAC)**

**Aircraft Evaluation Group (AEG)**

# **Aircraft Evaluation Report**

**For**

**Cessna 208/208B**

**Rev. 1      Date: 23/12, 2013**

**Manufacturer: Cessna Aircraft Company**

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## Revision Record & Approval

Revision No.	Section	Highlight	Date
Revision 0	All	All	November 20, 2013
Revision 1	Foreword Section 5	The CCARs Compliance Checklist for 208 (With 675SHP PT6A-114A Engine, G1000) was supplementary evaluated.	December 23, 2013

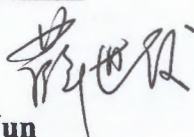
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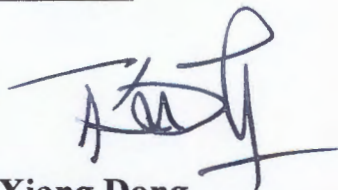


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## Foreword

The Cessna Model 208 series aircraft was initially type certificated by Federal Aviation Administration (FAA) in October 1984 as normal category airplane, with commercial designation as “Caravan”. 208B is the variant include following configuration:

- 208B “Super Cargomaster” version (FAA certified in 1986), “Grand Caravan” version (FAA certified in 1989), with either 600 SHP PT6A-114 Engine or 675 SHP PT6A-114A Engine (No longer in production)
- 208B “Super Cargomaster EX” and “Grand Caravan EX” version (FAA certified in 2012), with 867 SHP PT6A-140 engine.

The CAAC validated Type Certificate of 208 series aircraft was issued by CAAC Aircraft Airworthiness Department on 05 April, 1993, which including 208 and 208B “Grand Caravan” version. When this report finalized, 208B “Grand Caravan EX” CAAC validated Type Certificate is in processing.

Since 208 and 208B “Grand Caravan” version was type certificated before CAAC AEG conduct formal evaluation to imported aircraft, it is considered as grandfathered for CAAC AEG evaluation. The Cessna 208 series aircraft was first evaluated by the CAAC AEG on August 2013, and focus on 208B “Grand Caravan EX” version, but catch-up evaluation was conducted by CAAC AEG due to 208 and 208B shares same common technical publications.

As requested by Cessna, the CCARs Compliance Checklist for 208 (With 675SHP PT6A-114A Engine, G1000) was supplementary evaluated by CAAC AEG in December 2013. Revision 1 was issued after this CAAC AEG supplementary evaluation.

**Note:** For catch-up evaluation, CAAC AEG only considered the new variants or modifications and effected factors associated with the grandfathered type aircraft, and kept current status for AEG evaluation items for the grandfathered type aircraft.

## **Section 1: Pilot Type Rating and Qualification Specification**

### **1.1 Statement and Explanation**

This section is the formal notification that CAAC AEG has conducted a Flight Standardization Board (FSB) evaluation for Cessna 208/208B airplane.

Hereby, the provisions in this section can be used, as the basis, by Chinese operators to develop their pilot qualification and training program for above airplanes.

Alternate means of compliance to the requirements of CCAR 61, 135, other than as specified in the provisions of this section, must be approved by Flight Standards Department of CAAC. If alternate compliance is sought, operators will be required to establish that proposed alternate means provide an equivalent level of safety to the provisions of this section, and analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.

## 1.2 Pilot Type Rating and Licence Endorsement

Upon the FSB evaluation, there is no Pilot Type Rating requirement for Cessna 208B “Grand Caravan EX” version airplanes.

***Note:** Upon catch-up evaluation, Cessna 208 and 208B “Grand Caravan” version also no Pilot Type Rating requirement.*

## 1.3 ODR and MDR

Not applicable.

## 1.4 Specification for Training

Even though there is no Pilot Type Rating requirement, the initial and recurrent training for 208/208B airplane recommended by Cessna is provided, by Flight Safety International (FSI), as defined in their FAA Part 142 Training Control Manual - “Cessna 208 Series Pilot Training Program Book 2”, and has to be considered as a minimum. The training FSI currently offers is described in the following syllabuses, available by request to Cessna:

- Cessna 208 Series Pilot Initial Syllabus
- Cessna 208 Series Pilot Recurrent Syllabus

***Note 1:** Cessna 208/208B airplane may be equipped with G1000, GNS 530/430 or Bendix/King avionics suite and the training, currently offered by FSI, is tailored to the avionics suite. There is, currently, no “differences” training for Cessna 208/208B, offered by FSI. Therefore, if flying an airplane with an avionics configuration which is different from their training, the pilot should complete the “initial” training course tailored to the new avionics configuration.*

***Note 2:** For initial training of Cessna 208/208B airplane, the prerequisite recommended is Private pilot License and High performance endorsement.*

Additionally, for flight into known or forecast icing conditions, pilots must complete the online Cold Weather Operations Training Course, provided by Cessna. The training is specific to the type of ice protection equipment installed and is described in the following syllabuses, available by request to Cessna:

- Cold Weather Operations Training Course Syllabus (TKS-equipped Models)
- Cold Weather Operations Training Course Syllabus (De-Ice Boot Equipped Models)

### **1.5 Specification for Checking**

As required by CCAR Part 61 and 135.

Annual proficiency required for cold weather operation, reference Cessna appropriate POH/AFM or its supplemental for detail,

### **1.6 Specification for Currency**

As required by CCAR Part 61 and 135.

The Cessna recommended recurrent training, as provided by Flight Safety International (FSI) and defined in their FAA Part 142 Training Control Manual - "*Cessna 208 Series Pilot Training Program Book 2*" and described in Cessna 208 Series Pilot Recurrent Syllabus, satisfies the requirements of periodic flight review required under CCAR Part 61

Cold weather operation for 208/208B airplane recommended by Cessna is provided as following in the "*Cessna 208 Series Pilot Training Program Book2*"

### **1.7 Specification for Flight Simulation Training Devices**

As qualified per CCAR Part 60.

For initial and difference training, the specific training device reflects each configuration should be used.



## **Section 2: Master Minimum Equipment List**

### **2.1 Statement and Explanation:**

This section is the formal notification that CAAC AEG has conducted Flight Operation Evaluation Board (FOEB) evaluation for Cessna 208/208B airplane based on the Master Minimum Equipment List (MMEL) for Cessna 208, 208B , which outlines the items of equipment that may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations.

Hereby, the MMEL and its future revisions issued by FAA can be used, as the basis, by Chinese operators to develop their Minimum Equipment List (MEL) for above aircrafts.

It is the responsibility of Chinese operators and the Principle Inspectors (PI) to check and verify the exact CCAR requirements for any of the contents marked or referenced with FAA regulatory document or its articles.

### **FAA MMEL document distribution:**

<http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=MMEL>

### **2.2 CAAC Supplemental**

Not applicable.

## Section 3: Schedule Maintenance Requirements

### 3.1 Statement and Explanation:

There is no Maintenance Review Board Report for Cessna 208/208B airplane.

Airworthiness Limitation approved by type certification process included in the following documents:

- Model 208 Maintenance Manual, Chapter 4

Maintenance tasks of above mentioned Airworthiness Limitation will not be allowed to be escalated without approval of type certification authority.

Schedule maintenance requirements recommended by Cessna included in the following documents:

- Model 208 Maintenance Manual, Chapter 5

Maintenance tasks of above mentioned schedule maintenance requirements may be escalated with the supporting data by operator's reliability program.

***Note:** As of revision 24 of the Model 208 Maintenance manual, the “Progressive Care” and “Phase Card” program are no longer supported by Cessna.*

### 3.2 CAAC Supplemental

Not applicable.

## **Section 4: Operational and Continued Airworthiness Instructions**

### **4.1 Statement and Explanation:**

This section is the formal notification that CAAC AEG has conducted evaluation of the operational and continued airworthiness instructions for Cessna 208/208B airplane based on the relevant policies and procedures of Cessna.

Hereby, the Operational & Continued Airworthiness Instructions document listed in the attachment was found acceptable by CAAC AEG, and will give the necessary guidance for properly operating and maintaining above airplane within the approved operating conditions and limitations.

This acceptance may not assure the accuracy and applicability of the content in each document, it is the aircraft owner's or operator's responsibility to report any defect or discrepancy in the documents to the aircraft manufacturer, or report to CAAC AEG through website: <http://aeg.caac.gov.cn/>.

### **Operational & Continued Airworthiness Instructions distribution:**

By Cessna: Hard copy, CD/DVD and website (<http://www.cessnasupport.com>) combination, except engine manuals are distributed by engine manufacturer directly to operators.

## 4.2 List of Operational and Continued Airworthiness Instructions for 208, 208B “Grand Caravan” version

Not evaluated since grandfathered, but as share the same process as 208B “Grand Caravan EX” version, CAAC AEG no any opposition for Chinese operators to continue use the exist Operational and Continued Airworthiness Instructions for 208, 208B “Grand Caravan” version.

## 4.3 List of Operational and Continued Airworthiness Instructions for 208B “Grand Caravan EX” version

Manual	Reference No.	Description	Revision/Date
POH/AFM	208BPHCUS 208BPHDUS	Pilot’s Operating Handbook and FAA Approved Airplane Flight Manual	As revised
Pilot’s Checklist	208BCLCNPUS 208BCLDNPUS	Pilot’s Checklist (Normal Procedure)	As revised
Pilot’s Checklist	208BCLCEAPUS 208BCLDEAPUS	Pilot’s Checklist (Emergency/Abnormal Procedure)	As revised
OM	208BPHCUS 208BPHDUS	Operating Manual	As revised
WBM	208BPHCUS 208BPHDUS	Weight and Balance Manual	As revised
MM	D2078	Maintenance Manual	As revised
IPC	P688	Illustrated Parts Catalog	As revised
WDM	D2079	Wiring Diagram Manual	As revised
SRM	D5132	Structural Repair Manual	As revised
NTM	208ND	Nondestructive Testing Manual	As revised
ICA Supplements	C208ICA	Instructions for Continued Airworthiness	As revised

**Note 1:** The above technical publication will be not customized by Cessna, the operator should carefully check the applicability before reference to some contents of the manual.

**Note 2:** For optional equipment installation developed by Cessna, the operation document as defined in POH/AFM Supplemental, and maintenance instructions included in the general technical publications as above.

**Note 3:** Cessna issue Service Document only for instructions of modification and separate ICA provide related maintenance instructions. ICA also provides temporary manual amendment no related to modifications.

**Note 4:** Amendment to Flight Manual, Structural Repair Manual and chapter 4 of Maintenance Manual should be approved by FAA.

## Section 5: CCARs Compliance Checklist

### 5.1 Statement and Explanation:

This section is the formal notification that CAAC AEG has developed the compliance checklist for Cessna 208 and 208B type airplane based on the following aircraft configuration:

- FAA Type Certificate Data Sheet: No.: A37CE, Revision 20
- Pilot's Operating Handbook and FAA Approved Airplane Flight Manual:  
208BPHCUS-01, Revision 1 - 22 May 2013; 208BPHDUS-00, Original Issue - 23 May 2013
- Pilot's Operating Handbook and FAA Approved Airplane Flight Manual:  
208PHBUS-02, Revision 2 - 12 MARCH 2010;

*Note1: Since 208(600SHP PT6A-114 Engine) 208B "Grand Caravan" version considered as grandfathered for CAAC AEG evaluation, they are not evaluated for CCARs compliance, but Chinese operators may continue operate those airplanes as already approved.*

*Note2: The 208 mentioned in the CCARs Compliance Checklist is the version with 675SHP PTA -114A Engine and G1000 equipped.*

The checklist is provided as an aid to identify those specific requirements of rules for which compliance has already been demonstrated for the type design. The checklist also notes the requirements of rules which remain to be demonstrated compliance by the operators.

When the aircraft configuration differs from the above stated aircraft configuration, it is the responsibility of the operator and its CAAC Principle Inspector (PI) to evaluate those differences and develop the compliance to the relevant requirements of rules.

It also remains the responsibility of the operator and its PI to evaluate the corrective actions for those items not satisfactorily addressing compliance in the checklist prior to approve the appropriate operation.

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**5.2 CCAR-91R2 Compliance Checklist for 208B “Grand Caravan EX” version and 208(675 SHP & G1000) version**

<b>Articles/Subject</b>	<b>Compliance</b>	<b>Remark/Limitation</b>
<b>§91.401</b> Civil aircraft: Certifications required	Part 34 and Part 36 as Type Certification Basis	Other requirements should be checked by PI.
<b>§91.403</b> Instrument and Equipment for VFR operation	Compliance	
<b>§91.405</b> Instrument and Equipment for IFR operation	Compliance	
<b>§91.407</b> Instruments and Equipments for night and over-the-top operation	Compliance	Other requirements in operation should be checked by PI.
<b>§91.409</b> Mach number indicator	N/A	
<b>§91.411</b> Radio communication equipment	Compliance	Requirements in operation should be checked by PI.
<b>§91.413</b> Navigation equipment	Compliance	Requirements in operation should be checked by PI.
<b>§91.415</b> Emergency and life-saving equipment	Compliance except First aid kits	1. The First aid kits installation should be checked by PI. 2. Sign or instruction for oxygen equipment, life jackets may require if optional installation or equipped by operator, and should be checked by PI.
<b>§91.417</b> Additional emergency and Life equipments for over water operation	Not compliance	Life jackets or equivalent individual flotation devices not included in the designed, but may be equipped by operator for overwater operation if approved by PI.
<b>§91.419</b> Additional emergency and Life-saving	N/A	

### Aircraft Evaluation Report for Cessna 208/208B

Articles/Subject	Compliance	Remark/Limitation
equipment for rotorcraft over water flights		
<b>§91.421</b> Additional emergency and Life-saving equipment for flights over designated land areas	Not compliant	Additional emergency and Life-saving equipment for flights over designated land areas not included in the design, but may be equipped by operator for such operation if approved by PI.
<b>§91.423</b> Oxygen equipment-operation at high altitude	Compliance for flight crew, optional compliance for passengers.	Passengers oxygen equipment installation should be checked by PI for approval of operation above 3000m.
<b>§91.425</b> Equipment for operation in icing conditions	Optional compliance	Equipment installation for operation in icing conditions should be checked by PI for approval of operation in icing conditions
<b>§91.427</b> ATC transponder and altitude reporting equipment	Compliance	Requirements in operation should be checked by PI.
<b>§91.429</b> Altitude alerting system or device: Turbojet-powered civil airplanes.	N/A	
<b>§91.431</b> Weather radar	Optional compliance	Weather radar installation should be checked by PI for approval of operation in areas where thunderstorms or other potentially hazardous weather conditions.
<b>§91.433</b> Flight recorder	N/A, but optional installation provided	
<b>§91.435</b> Emergency locator transmitter	Compliance	Requirements in operation should be checked by PI.
<b>§91.437</b> Terrain awareness and warning system.	N/A, but optional installation provided	
<b>§91.439</b> Traffic Alert and Collision Avoidance equipment and use	N/A	Installation of STC should be checked by PI before introduced into operation.

### Aircraft Evaluation Report for Cessna 208/208B

Articles/Subject	Compliance	Remark/Limitation
<b>§91.441</b> Radiation indicator	N/A	Not approved for operation above 49000ft
<b>Appendix B</b> Category II Operations: Manual, Instruments, Equipment, and Maintenance	Not Compliance	Only certified for CAT I ILS.
<b>Appendix C</b> Operations within airspace designated as Minimum Navigation Performance Specification Airspace.	Compliance as following if G1000 avionics installed: -Oceanic/Remote - RNP-10 -Enroute and Terminal including RNP5/BRNAV and PRNAV (RNP-1)	1. Reference POH/AFM for more detailed information. Requirements in operation should be checked by PI.
<b>Appendix D</b> Operations in Reduced Vertical Separation Minimum(RVSM)	N/A	

### 5.3 CCAR-135 Compliance Checklist for 208B “Grand Caravan EX” version 208(675 SHP & G1000) version

Articles/Subject	Compliance	Remark/Limitation
<b>§135.75</b> Inspectors credentials: admission to pilots' compartment	Forward observer's seat not include in the design, but as 208B is certified single pilot, the copilot's seat or a front passenger seat may be used by inspectors.	Copilot's seat or a front passenger seat should be check and accepted by PI.
<b>§135.146</b> Emergency locator transmitters	Compliance	Requirements in operation should be checked by PI.
<b>§135.149</b> Dual controls required.	Compliance	
<b>§135.151</b> Equipment requirements: General.	Compliance	
<b>§135.153</b> Public address and crewmember interphone systems.	N/A	
<b>§135.155</b> Flight Data Recorder	compliance if one optional CVDR installed	Installation for optional CVDR should be checked by PI.



### Aircraft Evaluation Report for Cessna 208/208B

Articles/Subject	Compliance	Remark/Limitation
§135.157 Cockpit voice recorders.	compliance if one optional CVDR installed	Installation for optional CVDR should be checked by PI.
§135.159 Ground proximity warning system	N/A, but optional installation provided	
§135.161 Terrain awareness and warning system (TAWS)	N/A, but optional TAWS-B installation provided	
§135.163 Fire extinguishers: Passenger carrying aircraft.	Compliance	
§135.165 Oxygen equipment requirements.	Compliance for flight crew, optional compliance for passengers.	Passengers oxygen equipment installation should be checked by PI for approval of operation above 3000m.
§135.167 Equipment requirements: Carrying passengers under VFR at night or under VFR over the top conditions	Compliance	
§135.169 Radio and navigational equipment: Carrying passengers under VFR at night or under VFR over the top.	Compliance	
§135.171 Equipment requirements: Aircraft carrying passengers under IFR	Compliance	
§135.173 Radio and navigational equipment requirement for extended overwater or IFR operations.	N/A	Extend Over water operations limited
§135.175 Emergency equipment requirements for extended overwater operations.	N/A	Extend Over water operations limited
§135.177 Shoulder harness installation requirement at flight crewmember stations.	Compliance	

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<b>Articles/Subject</b>	<b>Compliance</b>	<b>Remark/Limitation</b>
<b>§135.179</b> Airborne thunderstorm detection equipment requirements.	Optional compliance	Stormscope installation should be checked by PI
<b>§135.181</b> Airborne weather radar equipment requirements.	Optional compliance	Weather radar installation should be checked by PI for approval of operation in areas where thunderstorms or other potentially hazardous weather conditions.
<b>§135.183</b> Emergency equipment requirements for aircraft having a passenger seating configuration of more than 19 passengers.	N/A	
<b>§135.185</b> Additional emergency equipments	N/A	
<b>§135.189</b> Airborne Collision Avoidance System (ACAS II )	N/A	
<b>§135.197</b> Language requirement for placards and markings	Optional compliance	Should be further checked by PI before operation
<b>§135.199</b> Pitot heat indication systems.	N/A	
<b>§135.203</b> Materials for compartment interiors	N/A	

## **Section 6: Other Evaluation Items**

Not Applicable

## **Appendix: CAAC AEG Team and Point of Contact**

### **CAAC AEG Team:**

<u>Mr. Xue Shi Jun</u>	Director, Aircraft Evaluation Division, Flight Standards Department
<u>Mr. Li Xiao Lei</u>	Engineer, AEG Division, Civil Aviation Safety & Technology Center

### **Cessna Point of Contact:**

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