



Civil Aviation Administration of China (CAAC)

Aircraft Evaluation Group (AEG)

Aircraft Evaluation Report

For

AT-802 and AT-802A

Rev.0 December 31, 2013

Manufacturer: Air Tractor, Inc.

Revision Record & Approval

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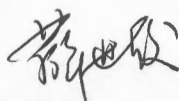
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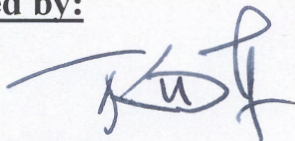
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Foreword

AT-802 and AT-802A are two types of agriculture airplane which have been certificated in restricted category by FAA. For ensuring enough safety level, **Chinese operators must use these airplanes within the operation limitations of Paragraph 5.1 in this report.**

AT-802A was certificated by FAA in Dec. 17, 1992, and AT-802 in Apr. 27, 1993. AT-802A has one pilot seat, and AT-802 has two tandem seats. AT-802 and AT-802A are large turboprop agriculture airplanes with MTOW at and over 14,800 lbs. They have conventional landing gears with spring steel main and tail gear struts. Their propellers, driven by a PT6 turboprop engine, are a Hartzell five-blade constant-speed, feathering and reversing propeller.

AT-802 and AT-802A have been certificated in day VFR and night VFR (with appropriate lighting system installation) operations, and their flights into icing condition are prohibited.

The type certificate of AT-802 and AT-802A was first validated by CAAC Airworthiness Department on November 2013.

AT-802 and AT-802A was evaluated by CAAC AEG in July 2013. This report is the result of the AEG evaluation. It shall be used as a basic reference by CAAC operational inspectors and Chinese operators in their working processes or operations.

Section 1: Pilot Type Rating and Qualification Specification

1.1 Statement and Explanation

This paragraph is a formal notification that CAAC AEG has conducted a Flight Standardization Board (FSB) evaluation for AT-802 and AT-802A airplane based on the result of FAA evaluation such as the assigned type rating and approved training program.

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

Any alternate means of compliance to the appropriate requirements of CCAR 61 and 91, 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.

No FAA FSB Report for AT-802 and AT-802A has been issued.

1.2 Pilot Type Rating and Licence Endorsement

According to the requirement of CCAR61.13(b)(3), a type rating shall be assigned to an aircraft with a MTOW over 12,500lbs (5,700kg). The minimum MTOW of AT-802 and AT-802A is 14,800lbs, and they should be assigned a type rating in accordance with CCAR61.13(b)(3). But considering the application, operating limitations and operational experience of these aircrafts, CAAC AEG recognized no type rating is needed for AT-802 and AT-802A after the evaluation finished.

Upon this CAAC AEG evaluation, the pilot type rating and license endorsement for AT-802 and AT-802A is listed as following:

Manufacturer	Aircraft Model	Pilot Type Rating
Air Tractor, Inc.	AT-802 and AT-802A	None

License endorsement:

No type rating has been assigned to AT-802 and AT-802A by CAAC according to CCARs and this CAAC AEG evaluation. For the purpose of training or checking records, ***AT-802 or AT-802A*** may be used.

1.3 ODR and MDR

Not applicable.

1.4 Specification for Training

Although no type rating is required, a specific training is needed for ensuring the certain safety level. Pilots must complete an appropriate training before they fly these airplanes. Operators may also develop training program for their pilot training.

There is not any training course for AT-802/AT-802A provided by Air Tractor, Inc., but Air Tractor, Inc. has developed a training manual for pilot training, which is *Air Tractor AT-802/AT-802A Training Manual*, Engineering Report 1773. This document can be used as a supplement to the AFM during training, and not as a stand-alone document. Chinese operators may develop their AT-802/AT-802A training program on the basis of this training manual.

The person authorized to give training must meet the following minimum qualifications:
(a) Be authorized by Air Tractor to give this training, or be approved by CAAC Regional Office;

(b) Hold at least a commercial pilot certificate; and

(c) Meet the following experience requirements:

(i) 500 hours of flight time in turbine-powered agricultural type airplanes; or

(ii) 1,000 hours of flight time in agricultural type airplanes which includes at least 100 hours of flight time in AT-802/AT-802A.

No pilot may fly AT-802/AT-802A airplane except training unless the pilot meet the following requirements at least:

(a) Holding a pilot license with airplane category rating and single-engine land class rating.

(b) Having completed tail-wheel airplane training in accordance with CCAR 61.27(e).

(c) Having completed an additional training of complex airplane in accordance with CCAR 61.27(f).

(d) Completed necessary training in accordance with an appropriate training program developed for AT-802/AT-802A.

1.5 Specification for Checking

As required by CCAR Part 61.

1.6 Specification for Currency

As required by CCAR Part 61.

1.7 Specification for Flight Simulation Training Devices

At present, no FSTD for AT-802/AT-802A is available.

Section 2: Master Minimum Equipment List

2.1 Statement and Explanation

Although a proposed MMEL has been provided for AT-802 and AT-802A airplane by Air Tractor, but FAA didn't approve it. Therefore, no approved MMEL is available at present.

For the purpose of operational convenience and safety, Chinese operators may develop their MEL on the base of the proposed MMEL provided by Air Tractor, Inc., and use it with an appropriate PI approval.

2.2 CAAC Supplement

Not applicable.

Section 3: Maintenance Review Board Report

3.1 Statement and Explanation

There is no Maintenance Review Board Report for the AT-802 and AT-802A airplane.

Airworthiness Limitations are contained in section 6 of Owners Manual. These Limitations may not be changed without FAA approval.

Schedule maintenance requirements recommended by Air Tractor Inc included in the following documents:

—Inspection of AT-802 Owners Manual.

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

3.2 CAAC Supplement

Not applicable.

Section 4: Operational and Continued Airworthiness Instructions

4.1 Statement and Explanation:

This paragraph is a formal notification that CAAC AEG has conducted an evaluation of the operational and continued airworthiness instructions for AT-802/AT-802A airplane based on the relevant policies and procedures of Air Tractor, Inc..

The documents of Operational and Continued Airworthiness Instructions listed in the paragraph 4.2 of this section were found and accepted by CAAC AEG. These documents will give the necessary guidance for properly operating and maintaining AT-802/AT-802A 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. And they may also report such information to CAAC AEG by the website: <http://aeg.caac.gov.cn>.

Operational and Continued Airworthiness Instructions distribution:

The related documents are distributed by the website of Air Tractor, Inc. at <http://www.airtractor.com>, except engine and propeller manuals, which are directly distributed to the operators by the engine and propeller manufacturer.

4.2 List of Operational and Continued Airworthiness Instructions

Manual	Reference No.	Description	Revision/Date
OM	N/A	AT-802 and AT-802A Owner's Manual	As revised
IPC	N/A	AT-802 and AT-802A Parts Manual	As revised
ALI	N/A	Section 6 - Airworthiness Limitations, AT-802 and AT-802A Owner's Manual	As revised
AFM	N/A	Airplane Flight Manual for Air Tractor Model AT-802 and 802A	As revised

Note 1: The acceptance of the above manuals is not affected by the customization of these documents.

Note 2: The acceptance of the above manuals doesn't mean that the other applicable technical publication for AT-802 and AT-802A could not be used by Chinese operators.

Section 5: CCARs Compliance Checklist

5.1 Statement and Explanation

This paragraph is a formal notification that CAAC AEG has developed the compliance checklists for AT-802/AT-802A airplane based on the following documents related to the aircraft configuration:

- For AT-802, Dwg.10011 Sheet 1
- For AT-802A, Dwg.10011 Sheet 2
- Type Certificate Data Sheet No.A19SW, R8

The compliance checklists are provided as aids for inspectors and operators to identify the compliance with those specific requirements of CCARs for which the compliance has already been demonstrated in the type design. The checklist also notes the requirements of CCARs which remain to be demonstrated the compliance by the operators.

When the aircraft configuration differs from the above stated aircraft configuration, it is the responsibility of the operators and their CAAC Principle Inspectors (PIs) to evaluate those differences and demonstrate or determine the compliance with the relevant requirements of CCARs.

It is also the responsibility of the operators and their PIs to evaluate the corrective actions for those items not satisfactorily demonstrating compliance in the checklist prior to an approval of conducting an appropriate operation.

Note 1: *Exemptions. According to the evaluation by CAAC AEG and the practice of FAA, the following exemptions for AT-802 and AT-802A are issued by CAAC FSD:*

- (a) Exemption from CCAR61.13(b)(3)(i). This exemption allows pilots to operate AT-802 or AT-802A with only a class rating of single engine land airplane instead of a type rating after they have completed specific training for these airplanes, although the MTOWs of AT-802 and AT-802A are over 5,700kg.*
- (b) Exemption from CCAR91.433(a)(1)(iii). This exemption allows air operators fly AT-802 or AT-802A without an installation of flight data recorder.*
- (c) Exemption from CCAR91.433(a)(2)(i). This exemption allows air operators fly AT-802 or AT-802A without an installation of cockpit voice recorder.*
- (d) Exemption from CCAR91.437(a)(1). This exemption allows air operators fly AT-802 or AT-802A without an installation of TAWS (Terrain Awareness and Warning System).*
- (e) Exemption from CCAR91.439(a). This exemption allows air operators fly AT-802 or AT-802A without an installation of airborne collision avoidance system (ACAS II).*

These exemptions are subject to the specification for training for AT-802/AT-802A (see paragraph 1.4 in Section 1), and the operating limitations for AT-802/AT-802A (see Note 2 in

this paragraph).

Note 2: *Operating Limitations. AT-802/AT-802A is a restricted category aircraft certificated by FAA. Therefore, for ensuring enough safety level, the following operating limitation shall be met when an operator uses this aircraft:*

(a) AT-802/AT-802A can only be used for the special purposes as following:

(1) Agricultural (spraying, dusting, and seeding, and livestock and predatory animal control);

(2) Forest and wildlife conservation.

(b) It is permitted to conduct operations necessary to accomplish the work activity directly associated with special purposes listed in paragraph (a) of this section. Providing flight training in a special purpose is considered to be an operation for that special purpose.

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5.2 CCAR-91 Compliance Checklist (AT-802 and AT-802A)

Articles/Subject	Compliance	Remark/Limitation
§91.401 Civil aircraft: Certifications required	Compliant.	Because AT-802 and 802A is an agriculture airplane, Part 36 Noise Requirements are not applicable to AT-802 and AT-802A according to CCAR 36.1583.
§91.403 Instrument and Equipment for VFR operation	Compliant when anti-collision light system and clock are installed.	
§91.405 Instrument and Equipment for IFR operation	Not Compliant.	AT-802 and AT-802A was only approved for VFR operation.
§91.407 Instruments and Equipments for night and over-the-top operation	Compliant when optional landing light, navigation lights, anti-collision light, instrument lighting system, clock and flashlight are installed.	
§91.409 Mach number indicator	Not Applicable.	
§91.411 Radio communication equipment	Compliant when optional radio communication system is installed.	
§91.413 Navigation equipment	Not Compliant.	Only one optional equipment with navigation function is available for AT-802 and AT-802A.
§91.415 Emergency and life-saving equipment	Compliant when one optional extinguisher is installed.	
§91.417 Additional emergency and Life equipments for over water operation	Not Compliant.	
§91.419 Additional emergency and life-saving equipment for rotorcraft over water flights	Not Applicable.	
§91.421 Additional emergency and Life-saving equipment for flights over designated land areas	Not Compliant.	
§91.423 Oxygen equipment-operation at high altitude	Not Compliant.	
§91.425 Equipment for operation in icing conditions	Not Compliant.	Flight into icing conditions is prohibited.

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Articles/Subject	Compliance	Remark/Limitation
§91.427 ATC transponder and altitude reporting equipment	Compliant when an optional transponder is installed.	
§91.429 Altitude alerting system or device: Turbojet-powered civil airplanes	Not Applicable.	
§91.431 Weather radar	Not Compliant.	
§91.433 Flight recorder	Not Compliant	
§91.435 Emergency locator transmitter	Not Applicable.	
§91.437 Terrain awareness and warning system	Not Compliant	
§91.439 Traffic Alert and Collision Avoidance equipment and use	Not Compliant	
§91.441 Radiation indicator	Not Applicable.	
Appendix B Category II Operations: Manual, Instruments, Equipment, and Maintenance	Not Compliant.	
Appendix C Operations within airspace designated as Minimum Navigation Performance Specification Airspace	Not Compliant.	
Appendix D Operations in Reduced Vertical Separation Minimum(RVSM)	Not Compliant.	

5.3 CCAR-121 Compliance Checklist (AT-802 and AT-802A)

Not Applicable.

5.4 CCAR-135 Compliance Checklist (AT-802 and AT-802A)

Not Applicable.

Section 6: Other Evaluation Items

[Reserved]

Appendix: CAAC AEG and Air Tractor Coordinator

A.1: CAAC AEG

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<u>Mr. Liu Yunlei</u>	Engineer, AEG Office of Civil Aviation Safety and Technology Center

A.2: Air Tractor Coordinator

<u>Mr. Jim Hirsch</u>	President, Air Tractor, Inc.
<u>Mr. David Ligon</u>	Engineering Manager, Air Tractor, Inc.
<u>Mr. Marshall T Leemann</u>	Project Engineer, Air Tractor, Inc.