

# TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

## TYPE INSPECTION AUTHORIZATION, FAA FORM 8110-1

The Type Inspection Authorization (TIA) is prepared by the ACO on FAA Form 8110-1 and is used to authorize official conformity, airworthiness inspections, and flight tests necessary to fulfill certain requirements for Type Certificate (TC), Supplemental Type Certificate (STC), amended TC, and amended STC certification (refer to FAA Order 8110.4, Type Certification). The TIA is not prepared until coordination is accomplished with each appropriate engineering discipline such that all required information relative to the engineering discipline's portion of the inspection or authorization is included. The TIA is issued when the examination of the technical data required for type certification is completed or has reached a point where it appears that the aircraft or component being examined will meet the applicable regulations. The AIR Risk Management process must be performed and documented within or attached to the TIA for all FAA ground and flight tests conducted under the TIA. The Risk Management assessment is required prior to signing the TIA. (Refer to FAA Order 4040.26, Aircraft Certification Service Flight Test Risk Management Program)

1. Type Inspection Authorization: Enter the FAA flight test and/or manufacturing office that is requested to perform the flight test and/or ground inspection.
2. Project No.: Enter the FAA project number established for the project.
3. Date: Enter the current date.
4. Name of applicant: As shown on the project application.
5. Address: As shown on the project application. Note: A post office box is not acceptable.
6. Block 1 Inspection Authorized For: Identify type of product, whether new or altered, and if altered, the original type certificate number.
7. Block 2 Certification Basis: List the complete certification basis for the project. A reference may be made to additional pages as required.
8. Block 3 Category: For aircraft only, identify the proper category.
9. Block 4 Description of Alteration: For alteration, include the description of the alteration being made. A reference may be made to additional pages as required.
10. Block 5 Operating Limitations: For Aircraft, reference page that identifies approved limitations or reference to approved flight manual.
11. Block 6 Powerplant: For engine powered aircraft, identify engine information and operating limitations and type certificate data sheet number. For turbine engine operating limitations, reference supplemental page that identifies approved limitations or reference to approved flight manual or engine operating instructions.
12. Block 7 Propeller: For propeller equipped aircraft, identify propeller information and type certificate data sheet number. Reference supplemental page that identifies approved limitations or reference to approved flight manual.
13. Block 8: For rotorcraft, identify rotor rpm limits.
14. Block 9 Inspection Report: Identify if 100-hour inspection has been completed.
15. Block 10 Equipment List: Identify if equipment list has been verified for correct weight and moment arm of each item of installed equipment. Indicate if equipment list is attached and identify the manufacturer's report number if appropriate.
16. Block 11 Originated By: Indicate the project office symbol.
17. Block 12 (Part 1): Indicate if the manufacturing inspector is requested to accomplish ground inspection in support of Type Inspection Report - Part 1. Identify on supplemental page the specific instructions for inspections to be accomplished. Include the following information at the beginning of the supplemental page for Block 12:  
Point of contact at conformity site (including name and phone number), location of aircraft/conformity site, and (if applicable) DAR requested by the applicant.

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18. Block 12 (Part 2): Indicate if the flight test office is requested to accomplish flight test in support of Type Inspection Report - Part 2. Identify on supplemental page the specific instructions for tests to be accomplished.
19. Block 12 (Special): The TIA may contain a section titled "Operational and Maintenance Requirements" that provides for certain other operational evaluations identified by the AEG.  
**NOTE:** For Ground tests to be witnessed by other than manufacturing or flight test personnel, identify who is going to witness the tests and include instructions of what is to be accomplished.
20. Block 13 Concurrences: Identify the office symbol of all participating offices. Initials are evidence of office concurrence.
21. Approval: Identify date and title of approval authority. This may be ACO manager or the ACO manager may delegate to appropriate branch or project manager.

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To: <input type="checkbox"/> Flight Test	<input type="checkbox"/> Manufacturing	Date:
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Name of Applicant	Address (Number, street, city, and zip code)
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## 1.0 Inspection Authorization for

<input type="checkbox"/> Airplane	<input type="checkbox"/> Engine	<input type="checkbox"/> Propeller	<input type="checkbox"/> Rotorcraft	Other (specify) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<input type="checkbox"/> New Model (Give model number)	<input type="checkbox"/> Altered Model (Give name of original Manu. and Model no.)	Original T.C. Data Sheet No.
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## 2.0 Certification Basis

## 3.0 Category - For Aircraft Only (Check all applicable items)

<input type="checkbox"/> Normal	<input type="checkbox"/> Utility	<input type="checkbox"/> Acrobatic	<input type="checkbox"/> Transport	<input type="checkbox"/> Restricted	<input type="checkbox"/> Other (Specify)
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## 4.0 Description of Alteration

## 5.0 Operating Limitations

## 6.0 Powerplant

Engine Model	Manufacturer	Data Sheet No.
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Operating Limitations

## 7.0 Propeller

Make and Model	Data Sheet No.	Diameter
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Hub Model No.	Blade Model No.	Limitations
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## 8.0 Rotorcraft

## 9.0 Inspection Report

	Maximum	Minimum	100 Hour Inspection completed <span style="float: right;"><input type="radio"/> Yes <input type="radio"/> No</span>
Power on Rotor Limits - RPM			<h3 style="text-align: center;">10.0 Equipment List</h3> Is equipment list correct as to weight and arm of each item? <span style="float: right;"><input type="radio"/> Yes <input type="radio"/> No</span>
Power off Rotor Limits - RPM			Equipment list attached? <span style="float: right;"><input type="radio"/> Yes <input type="radio"/> No</span>
			Mfr. Report no.

## 11.0 Originated by

## 12.0 Type Inspection Report

Routing Symbol	<input type="checkbox"/> A. Complete applicable portions of type inspection report, part 1 <input type="checkbox"/> B. Complete applicable portions of type inspection report, part 2 See attached pages for instructions See attached pages for Special Test (Define divisions of responsibilities)
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## 13.0 Concurrences

Routing Symbol	Initials and Date	Routing Symbol	Initials and Date	Routing Symbol	Initials and Date
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## APPROVAL

Date:	Title Manager	Signature
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## Block 12. Supplemental Page

**12.** Enter tasks to be conducted by Manufacturing Inspection branch, Flight Test branch, and AEG (if applicable):

**Part 1.** The Manufacturing Inspection Branch, A -1 , is requested to accomplish the following:

Include the following information, if applicable:

Point of contact at conformity site:

Phone number of point of contact:

Location of aircraft/conformity site:

(if applicable) DAR or DMIR requested by the applicant:

**Part 2.** The Flight Test Branch, A -1 , is requested to accomplish the following:

**Special.** The TIA may contain a section titled “Operational and Maintenance Requirements” that provides for certain other operational evaluations identified by the AEG.

**NOTE:** For Ground tests to be witnessed by other than manufacturing or flight test personnel, identify who is going to witness the tests and include instructions of what is to be accomplished.

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## **TIA Documentation for Risk Management - Instructions for applicants without FAA-Accepted Risk Management Process**

1. General - Enter general description of the project.
2. TIA Risk Management - Enter the highest risk level (high, medium, or low) in order to provide overall visibility of risk level to management.
3. Enter identified hazards and procedures integrated to reduce or mitigate, to the maximum extent possible, the level of risk expected during the tests described in this TIA. Describe Risk Management plan or specifics. It may refer to applicant's approved test plan, or stand- alone risk management plan for this project.
4. Enter signature and date of Flight Test Manager or his/her designee.
5. TIA Operating Limitations. List additional limitations resulting from safety reviews and/or refer to approved test plan section containing such limitations.

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## TIA for Applicants without FAA Accepted Risk Management Process

### General

### TIA Risk Management

This TIA has been assessed as  risk. The following hazards have been identified and procedures integrated to reduce or mitigate, to the maximum extent possible, the level of risk expected during the tests described in this TIA:

Flight Test Branch Manager

Date

TIA Operating Limitations:

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## **TIA Documentation for Risk Management - Instructions for applicants with FAA-Accepted Risk Management Process**

1. General - Enter general description of the project.
2. TIA Risk Management - The flight safety and Risk Management program of the [*applicant's name*] will be used to analyze hazards and minimize risks associated with flight testing authorized by this TIA. (*Reference ACO's documented acceptance of the applicant's risk management process.*)
3. Enter signature and date of Flight Test Manager or his/her designee.
4. TIA Operating Limitations. List additional limitations resulting from the ACO's review of the company's Risk Management for this specific project.

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## TIA for companies with FAA-Accepted Risk Management Process

### General

### TIA Risk Management

The flight safety and Risk Management program of the \_\_\_\_\_ will be used to analyze hazards and minimize risks associated with flight testing authorized by this TIA. (*Reference ACO's documented acceptance of the applicant's risk management process.*)

Flight Test Branch Manager

Date

TIA Operating Limitations: