

FLIGHT TEST ASSOCIATES
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS AND
AIRWORTHINESS LIMITATIONS

**PILATUS PC-12/45, AND -12/47 MODIFIED WITH PRATT & WHITNEY PT6A-
67P ENGINE BY
SUPPLEMENTAL TYPE CERTIFICATE NUMBER SA02266LA**

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LIST OF EFFECTIVE PAGES

PAGE NO.	REVISION NO.	REVISION DATE
1	B	07/22/15
2	IR	10/19/09
3	B	07/22/15
4	B	07/22/15
5	B	07/22/15
6	B	07/22/15
7	B	07/22/15
8	A	2/18/12
9	A	2/18/12
10	B	07/22/15
11	B	07/22/15
12	B	07/22/15
13	B	07/22/15

RECORD OF REVISIONS

This page provides a record of manual revisions. Whenever you receive revision or update pages, replace the old pages with the new and log the information in the following table.

[illegible]

DESCRIPTION OF REVISIONS

Revision	Revision Date	Revision Description
IR	10/19/09	Initial Release of Document
A	2/18/12	General update for the STC amendment
B	07/22/15	Updated Section 2.2 for STC amendment Revised Section 5.2 for STC amendment Updated Section 10.0 for STC amendment Pg. 13, Updated contact information

RECORD OF TEMPORARY REVISIONS

This page provides a record of temporary revisions. When you receive a temporary revision, insert the temporary revision in the manual opposite the first affected page and log the information in the table below. Remove the temporary revision when the manual is permanently revised.

NOTE: Temporary revisions are printed on yellow paper with the heading TEMPORARY REVISION.

[illegible]

SERVICE BULLETIN LIST

When a Service Bulletin is received for these installations, perform the instructions given, log it into the Service Bulletin List given below, and insert the Service Bulletin into this section to maintain a historical record.

NOTE: Alert Service Bulletins are produced on blue paper with the heading ALERT. When an ALERT Service Bulletin is received, take immediate action.

[illegible]

SECTION 1 – INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

1.0 INTRODUCTION

These Instructions for Continued Airworthiness (ICA) apply to Pilatus PC-12/45 and PC-12/47 aircraft that have been modified in accordance with STC SA02266LA to remove Pratt & Whitney engine PT6A-67B and replace with Pratt & Whitney engine PT6A-67P, and the addition of a Unison 300A generator, associated air ducts specified in STC SA02266LA, and a modified Engine Information System (EIS)

The PT6A-67B engine utilizes a belt driven 28VDC generator outputting 149 amperes. The PT6A-67P engine requires a gear driven generator due to casing differences between the -67B and the -67P engines. A Unison Industries 28VDC 300 ampere generator was chosen and tested for this STC.

The PT6A-67P Engine allows operation at a higher ITT, which requires modification of the EIS to account for the higher ITT limits. This modification is limited to look-up tables in software. In addition, a resistor change inside the EIS allows for display of the secondary Unison Generator at higher amps.

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document, relevant to the aircraft into the operator's Maintenance Manual and the operator's Aircraft Scheduled Maintenance Program.

1.1 REVISIONS

It may be necessary to issue revisions to this document. Revisions may add, delete and/or change data as necessary. All revisions are by replacement of pages. Hand-written revisions are not acceptable.

Prior to being issued, all revisions will be submitted to the responsible FAA Aircraft Certification Office (ACO) for review and will be forwarded to the appropriate FAA Aircraft Evaluation Group (AEG) for acceptance. Upon acceptance by the AEG, the revision will be issued to each owner / operator whose aircraft has been modified by this installation.

When issued, a Letter of Transmittal will be sent with each revision. The transmittal letter is the authority to place the revision in this document. It gives instructions on how to put the revision into the manual and includes a highlight column that gives a short description of the Reason for Change. It is recommended that Transmittal letters be kept at the front of the manual for reference.

Each revision has a reference letter that starts at Revision A. A Record of Revisions page is given at the front of the manual. When the revision has been placed into the manual, write the revision number and its issue date on the Record of Revisions page.

Changes in this document are included by using red as an identifier.

1.2 DESCRIPTION AND OPERATION

The PT6A-67P engine is the same engine used by Pilatus on the PC-12E Model. The engine mounts, truss, forward bulkhead, and supporting structure remain unchanged on the PC-12E model from the PC-12/45 Model. With the updated EIS, differences between the engines performance parameters are now included in this STC. Therefore, engine operating limitations are altered as noted in the PC-12/45, PC-12/47 Airplane Flight Manual Supplement.

The primary difference for this STC amendment is the inclusion of the modified EIS and an increase secondary generator output to 300 amps. As noted, the PT6A-67B engine uses a belt driven 28VDC generator outputting 149 amperes. The secondary generator on the PT6A-67P engine is gear driven and this STC uses a Unison Industries with 28VDC 300 amps output, the same as for the PC-12/47E.

Cooling air to the 300A generator was insufficient with the existing ducting and air intake. This STC adds an increased area NACA Duct to the Left Hand side of the engine cowling in the same area occupied by the previous secondary generator cooling duct. It also adds a composite End Cap to the intake of the generator and increases the intake air hose to 2.5 inches diameter, which is identical to the air intake hose of the primary starter/generator. Flight tests determined that the modified NACA duct on the left side cowling provides sufficient airflow to meet the Unison 300 amp generator cooling requirements.

2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

2.1 INITIAL INSPECTION REQUIREMENTS

At initial PT6A-67P engine installation, ensure that the engine removal/installation has been documented in the Maintenance Log Book in accordance with Pilatus Maintenance Manual 71-00-01.

Ensure that the engine components have been swapped in accordance with Pilatus Maintenance Manual 71-00-02 and documented in the Maintenance Log Book.

Ensure electrical connectors swapped from engine to engine are cleaned in accordance with Pilatus Maintenance Manual 71-00-03 and documented in the Maintenance Log Book.

Ensure that the propeller has been installed and balanced in accordance with Pilatus Maintenance Manual 61-00-00 and documented in the Maintenance Log Book.

Ensure that the engine adjustments have been documented and the twenty ground tests listed in the Pilatus Maintenance Manual 71-00-00 had been completed and documented in the Maintenance Log Book.

Ensure the cooling air ducting is attached at the intake of the secondary generator in accordance with FTA MDL 0201-00100 Revision IR or later

2.2 SCHEDULED MAINTENANCE REQUIREMENTS

In conjunction with 14 CFR 91.411 and 91.413 Certifications, perform a visual check of the NACA Duct for visible cracking or ply separation.

Inspect the air intake ducting to the generator to ensure proper air flow is reaching the generator intake.

As noted in Section 1.2, there are no structural differences between the PC-12/45 with the PT6A-67B engine and the PC-12/47E with the PT6A-67P engine installations. In addition, there is no change in the airspeed limits and load factor limits. Therefore, there is no need to identify any unique structural inspections for this STC SA02266LA installation. Refer to Finnoff Aviation Products, Aircraft Maintenance Manual Supplement, Doc. No. FTA-FIN-002025 for maintenance procedures & requirements.

2.3 NON-SCHEDULED MAINTENANCE REQUIREMENTS

There are no non-scheduled maintenance requirements associated with this STC.

2.4 OVERHAUL REQUIREMENTS

There are no overhaul requirements associated with this STC.

3.0 DIMENSIONS AND ACCESS

There are no changes to aircraft dimensions or access associated with this STC.

4.0 LIFTING AND SHORING

4.1 JACKING INFORMATION

There are no changes to the basic aircraft jacking instructions (Maintenance Manual).

4.2 SHORING INFORMATION

There are no changes to the basic aircraft shoring information (Maintenance Manual).

5.0 LEVELING AND WEIGHING

5.1 LEVELING INFORMATION

There are no changes to the basic aircraft leveling information (Maintenance Manual).

5.2 WEIGHING AND DETERMINATION OF CENTER OF GRAVITY INSTRUCTIONS

There are no changes to the basic aircraft weighing and determination of center of gravity instructions (Maintenance Manual). Refer to FTA Weight and Balance Manual Supplement document number FTA-FIN-001011 for differentials from the basic Pilatus PC-12.

2nd battery option installation requires weight and balance re-calculation using the weights of the various matched set batteries.

6.0 TOWING AND TAXIING

6.1 TOWING INFORMATION

There are no changes to the basic aircraft towing information (Maintenance Manual).

6.2 TAXIING INFORMATION

There are no changes to the basic aircraft taxi instructions (Maintenance Manual).

7.0 PARKING AND MOORING INFORMATION

7.1 PARKING INFORMATION

There are no changes to the basic aircraft parking information.

7.2 MOORING INFORMATION

There are no changes to the basic aircraft mooring information.

7.3 STORAGE LIMITATIONS

There are no changes to the storage limitations.

8.0 PLACARDS AND MARKINGS

There are no new placards or markings associated with this STC.

9.0 SERVICING

9.1 SERVICING INFORMATION

Servicing remains in accordance with the Pilatus Maintenance Manual.

9.2 LUBRICATION INFORMATION

Lubrication remains in accordance with the Pilatus Maintenance Manual.

9.3 EQUIPMENT REQUIRED FOR SERVICING

No new equipment is required to service associated with this STC.

9.4 CONSUMABLE MATERIALS

No new requirements for consumable materials are associated with this STC.

10.0 MAINTENANCE INSTRUCTIONS

Inspection interval requirements and maintenance procedures are contained in the Aircraft Maintenance Manual Supplement Document No. FTA-FIN-002025 and Pratt & Whitney PT6A-67P Maintenance Manual.

10.1 TROUBLESHOOTING

Refer to the procedures in the Pilatus Maintenance Manual and the Pratt & Whitney PT6A-67P Maintenance Manual.

SECTION 2 – AIRWORTHINESS LIMITATIONS

11.0 AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR § § 43.16 and 91.403 unless an alternative program has been FAA approved.

No Airworthiness Limitations are associated with this STC.

If clarifications, technical support, or other information regarding this manual or these modifications is required, contact the following:

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