

SOLOY, LLC  
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Olympia, WA 98501

**PILOT'S OPERATING HANDBOOK  
SUPPLEMENT**

AND

**AIRPLANE FLIGHT MANUAL**

FOR

**CESSNA T206H/206H/TU206G/U206G**

UNCONTROLLED

SERIAL NO.: \_\_\_\_\_

REGISTRATION NO.: \_\_\_\_\_

This Supplement must be attached to the Pilot's Operating Handbook (POH) when a Soloy, LLC Microwave Downlink Antenna is installed in accordance with S.T.C. SA02748AT.

Information contained herein supplements or supersedes the basic POH only in those areas listed herein. For limitations, procedures and performance information not contained in this Supplement, consult the basic POH.

COPY

F.A.A. Approved

*Shan Rippe*  
for \_\_\_\_\_  
Manager, Seattle Area Aircraft Certification Office

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Sup. 1

**SOLOY DOWNLINK ANTENNA SYSTEM  
POHS CESSNA T206H/206H/T206G/U206G**

**LIST OF EFFECTIVE PAGES**

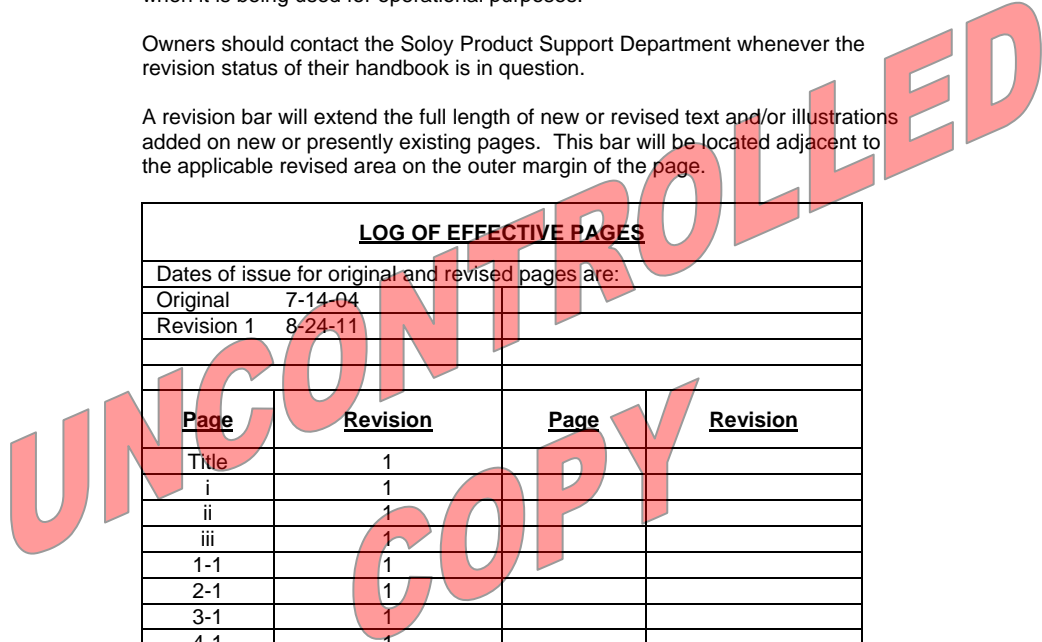
This handbook supplement will be kept current with revisions distributed to the last known owner of each airplane equipped with a Soloy Downlink Antenna System.

It is the responsibility of the owner to maintain this handbook in current status when it is being used for operational purposes.

Owners should contact the Soloy Product Support Department whenever the revision status of their handbook is in question.


A revision bar will extend the full length of new or revised text and/or illustrations added on new or presently existing pages. This bar will be located adjacent to the applicable revised area on the outer margin of the page.

<b>LOG OF EFFECTIVE PAGES</b>			
Dates of issue for original and revised pages are:			
Original	7-14-04		
Revision 1	8-24-11		
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**LOG OF REVISIONS**

Revision		Pages Revised	Comments	FAA Approval
No.	Date			
0	7-14-04	Original	Original of Manual.	<u>Eugene L Bollin</u> for Manager, Atlanta Aircraft Certification Office Central Region, ACE-115A College Park, GA 30337-2747 Date: 7-14-04
1		All Pages	Revised to Soloy format with ownership transfer. to Soloy LLC.	 <u>Stan Rippel</u> for Manager, Seattle Aircraft Certification Office, ANM-100S Renton, WA 98055-4056 Date: 24 Aug 2011

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## SECTION 1

### GENERAL

#### INTRODUCTION

This handbook supplement contains eight sections and includes the material required to be furnished to the pilot by 14 CFR Part 23.

The Microwave Downlink Antenna (and its associated transmitter) provides a system to transmit real-time video captured by a wing mounted Forward Looking Infrared (FLIR) camera system.

The downlink antenna consists of a small antenna contained in the bottom end of a 22-inch frangible fiberglass tube. The tube is attached to an aluminum block mounted under the center of the airframe belly. During FLIR operations, the tube is rotated down through a 90 degree arc to extend the antenna perpendicular to the airplane in order to minimize airplane and prop wash interference during video transmissions.

When not in use, and during take-off and landing, the antenna is rotated up into the retracted position parallel to the underbelly of the fuselage.

## SECTION 2

### LIMITATIONS

#### INTRODUCTION

This Supplement contains the information required to be furnished to the pilot by 14 CFR Part 23 and must be carried in the airplane during flight operations. It also provides additional information, which will assist in operating the airplane at its maximum efficiency.

Compliance with the limitations section is mandatory.

All other aircraft limitations not listed in this section remain unchanged from the Normal Category Cessna 206. Refer to Section 2 of the POH.

#### AIRSPPEED LIMITATIONS

1. The airplane maximum airspeed with a downlink antenna installed is 140 KIAS.

#### OTHER LIMITATIONS

##### ANTENNA LIMITATIONS

The following limitations apply to the downlink antenna system:

1. The downlink antenna must be positioned in the up or retracted position during take-off and landing.

#### PLACARDS

The following information is displayed in the form of composite or individual placards.

1. Next to the antenna actuator switch on the FLIR console:

“EXTEND”

“RETRACT”

SECTION 3

EMERGENCY PROCEDURES

INTRODUCTION

In the event that the downlink antenna cannot be retracted during landing, expect the outer end (tip) of the downlink antenna to strike the ground.

If the downlink antenna is unable to be retracted, a minimum nose up attitude upon landing flare will minimize damage to the antenna and the aircraft. Stop on runway (or clear runway if necessary) and secure antenna before further taxi.

If the airplane is landed with the downlink antenna extended, an inspection of the aircraft underside must be conducted. Any damage to the aircraft fuselage must be repaired by competent maintenance authority before further flight is conducted.

EMERGENCY CHECKLISTS

1. Unable to Retract Downlink Antenna for Landing
  - a. Flaps ..... 20°
  - b. Landing Flare ..... MINIMUM
2. After Landing
  - a. Stop Aircraft ..... AS SOON AS PRACTICABLE
  - b. Antenna ..... SECURE UP
  - c. Fuselage and Antenna ..... INSPECT
  - d. Repair ..... AS NECESSARY BEFORE FURTHER FLIGHT
3. All Other Aircraft Emergencies
  - a. All other aircraft emergency procedures not listed in this section remain unchanged from the Normal Category Cessna 206. Refer to Section 3 of the POH.

SECTION 4

NORMAL PROCEDURES

INTRODUCTION

Section 4 provides checklist and amplified procedures for the conduct of normal operation.

NORMAL OPERATION

1. The operation of the downlink antenna is conducted by the FLIR system operator. The FLIR console has a two position switch with an extend and a retract position.
2. The pilot and system operator will use a "challenge and response" checklist to ensure the downlink antenna is in the "RETRACT" position for landing.

NORMAL CHECKLISTS

1. Before Flight (Pilot and System Operator)
  - a. Downlink Antenna ..... RETRACT
  - b. Visually confirm that the antenna is secure and in the retracted position.
2. For FLIR Operations in FLIGHT (Pilot and System Operator)
  - a. Downlink Antenna ..... EXTEND
3. Before Landing (Pilot and System Operator)
  - a. Downlink Antenna ..... RETRACT

All other aircraft normal procedures not listed in this section remain unchanged from the Normal Category Cessna 206. Refer to Section 4 of the POH.



SECTION 5

PERFORMANCE

PERFORMANCE

1. There is no significant change to the airplane performance when the downlink antenna is in the extended or retracted position.

**ALL OTHER AIRCRAFT PERFORMANCE PARAMETERS**

All other aircraft performance parameters not listed in this section remain unchanged from the Normal Category Cessna 206. Refer to Section 5 of the POH.

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SECTION 6

WEIGHT & BALANCE/EQUIPMENT LIST

INTRODUCTION

This section supplies supplemental information for establishing the basic empty weight and moment of the airplane. Supplemental information for calculating the weight and moments for various operations is also provided.

It should be noted that specific information regarding the weight, arm, moment and installed equipment list for this airplane can only be found in the appropriate weight and balance records carried in the airplane.

**COMPREHENSIVE EQUIPMENT LIST** – Add the Following Changes:

The equipment list description has been revised to install items necessary for this modification. Perform a new aircraft weight and balance by weighing the aircraft after FLIR system installation or by calculating new weight and balance.

The FLIR system can be equipped with a number of different options. Measure, record or verify the weight and arm of each item installed. The locations listed below are for reference only.

ITEM NO.	EQUIPMENT LIST DESCRIPTION	WT (LB)	ARM (IN)
<b><u>EQUIPMENT ADDED</u></b>			
<b>23 – Communications</b>			
23-01-O	Downlink Transmitter	5.50	140.60
23-02-O	Downlink Antenna Assembly	3.06	138.00
<b>24 – Electrical Power</b>			
24-01-O	Heat Sink With Fan		140.60

## SECTION 7

### AIRPLANE & SYSTEMS DESCRIPTIONS

#### INTRODUCTION

This section provides description and operation of the airplane and its systems. Some equipment described herein is optional and may not be installed in the airplane.

For a description of the various optional Microwave Downlink Antenna electronics installed on the Cessna 206 refer to the individual manufacturers operating handbook for the electronics installed.

#### AIRFRAME

There are several changes to the airframe due to the Microwave Downlink Antenna installation:

1. An aluminum bracket is attached under the center of the airframe belly. This bracket holds the antenna actuator when installed.
2. The downlink antenna electronics are contained in a box mounted on the baggage tray in the aft end of the aircraft.

#### ELECTRICAL SYSTEM

There are several changes to the electrical system due to the Microwave Downlink Antenna installation. Most changes are equipment specific, but a MASTER SWITCH installed on the circuit breaker panel allows all FLIR camera and microwave downlink antenna related equipment to be turned off with one switch.

## SECTION 8

### HANDLING, SERVICE & MAINTENANCE

#### INTRODUCTION

This section contains recommended procedures for proper ground handling and routine care and servicing of your Soloy Microwave Downlink Antenna System equipped Cessna. It also identifies certain inspection and maintenance requirements which must be followed to maintain the airworthiness of your aircraft. It is wise to follow a planned schedule of preventive maintenance based on climate and flying conditions encountered in your locality.

#### CESSNA OWNER ADVISORIES – Add the Following Changes:

In addition to the Cessna system, Soloy LLC offers a support system consisting of technical publications and service information.

#### PUBLICATIONS – Add the Following Changes:

In addition to the Cessna publications, Soloy LLC furnishes various publications with the Soloy Microwave Downlink Antenna System at the time of delivery. These items are listed below:

1. Pilot's Operating Handbook Supplement.
2. Service Letters and Bulletins.
3. Service Instructions applicable to accessory kits installed or ordered.

All other handling, servicing and maintenance details of the Cessna 206 airplane and its systems are unchanged from the Normal Category Cessna 206. Refer to Section 8 of the POH.