PARAVION TECHNOLOGY, INC.
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REPORT NO. PR-C206IR-900M

INSTALLATION INSTRUCTIONS

FOR

INFRARED IMAGING SYSTEM

REVISIONS

REV.	DATE	DESCRIPTION	BY
N/C	11/02/00	Original	MR
A	05/18/01	Added Video Output Note.	MR
B	09/06/02	Added reference to C206IR-101-2 Support Installation, section 2.1.1.	GP
C	10/25/04	Section 2.1.1 added reference to FLIR U8000, U8500 Section 2.1.3 re-worded to clarify doubler installation Added Table 2.2, other minor wording changes to clarify	REB
D	01-07-05	Section 2.2.10 edited to include assembly of Item 33 doubler and Item 26 beam Assembly.	REB
E	12/06/05	Sect. 2.1.8, page 1 was "... Remove fasteners which conflict with angle installation. Adjust clamps to support tube in center of opening and level tube to cabin floor." Clarified to indicate positioning laterally and longitudinally.	REB
F	06/05/14	Revised support tube installation instructions.	L.S.

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References:

AC43.13-1B “Acceptable Methods, Techniques and Practices Aircraft Inspection and Repair”

Appropriate Cessna 206 Maintenance Manual per model

The following FAA approved Paravion Technology Inc. drawings:

C206IR-100 “C206IR System Configuration”

C206IR-101 “Support Installation”

C206IR-201 “Equipment Cabinet Installation”

C206IR-251 “Equipment Installation”

C206IR-301 “Electrical Installation”

1.0 INTRODUCTION

This document provides a step-by-step procedure for installation of the C206IR-100-(X) Infrared Camera System Installation provisions kit in the Cessna 206 Aircraft. The instructions contained herein are intended to supplement the information contained on the installation drawings. Torque all fasteners per AC43.13-1B, Table 7-1unless otherwise specified on the installation drawings. See the current FAA approved revision of Paravion Technology Inc. drawing C206IR-100 for kit applicability.

1.1 AREAS OF ACCESS

NOTE: Most efficient installation of the Imaging Mount Assembly is achieved by first accomplishing the following tasks:

1.1.1 Disconnect and/or remove battery

A. Referencing the aircraft manufacturer's maintenance manual, remove cabin seats and interior furnishings as needed to gain access for system installation.

B. Remove access/inspection panels as needed for electrical conductor routing and bracket modification.

2.0 INSTALLATION PROCEDURES

2.1 Support Installation (Drawing C206IR-101)

2.1.1 Per the manufacturer's instructions, remove baggage floor covering, all necessary side panels and furnishings.

2.1.2 Verify location of doubler between longitudinal stringers in baggage compartment area sidewall and trim doubler/shim to fit as necessary. Mark location of doubler on fuselage and remove all conflicting fasteners. Match drill doubler and shim to existing fastener holes. Locate and drill additional fastener holes per drawing. Remove doubler and shim, de-burr holes and install using indicated hardware.

2.1.3 Install extrusion to circumference of opening per drawing.

2.1.4 Temporarily clamp together support assembly and angles.

CAUTION: The indicated spacers (if needed) and angle fastener holes are not symmetrical. Note correct orientation of parts before drilling baggage compartment floor.

Locate the assembly on the baggage floor positioned per drawing. Adjust the location as required to assure that the support assembly tube will extend through the doubler previously installed per drawing and the outboard support angle is located on existing rivet line (ref. overhead view).

2.1.5 Position clamped assembly in aircraft perpendicular to aircraft centerline to locate through hole. Adjust clamps to center the control unit mount brackets on the support tube level to the Pilots seat rails longitudinally, laterally and perpendicular to aircraft centerline.

2.1.6 Remove fasteners which conflict with angle installation.

CAUTION: The indicated spacer (if needed) and support angle holes spacing are not symmetrical. Note correct orientation of parts before drilling baggage compartment floor.

2.1.7 Mark and match drill floor to support tube angles, remove clamped assembly.

2.1.8 Temporarily install beam and bulkhead attachment angles as shown. Match mark the beam for angles installation. Match drill the Beam Assembly to the previously drilled floor. Remove beam and angles, de-burr and attach the angles and nutplates to the beam in accordance to the drawing, re-install the assembly using indicated fasteners. Install inboard support nutplate assembly per dwg.

2.1.9 Match drill support tube vertical legs to angles, de-burr and assemble using indicated hardware. Note correct direction of attachment screws on outboard support leg.

2.1.10 Reinstall support assembly by securing support leg angles (through optional spacers if needed) into the installed fastener assemblies in floor using indicated hardware.

2.1.11 Reinstall floor covering and fairing, trimming as necessary.

2.1.12 Install placard in a conspicuous location near existing baggage weight limits placard.

2.1.13 Use of MIL-S-8802F Class B2 sealant and DC4 (Dow-Corning Corp.) or equivalent products, as indicated, may be desirable.

2.1 Equipment Cabinet Installation (Drawing C206IR-201)

2.2.1 Aircraft built prior to 1997 incorporate a lighter seat rail and require use of the C206IR-201-1 installation. The heavier seat rails in post-1997 or retrofit aircraft require use of the C206IR-201-2 installation. See Table 2.2 for available Mount Plate options

The equipment cabinet mount plate assembly may be installed to the seat rail pair in place of the copilot seat. Refer to the appropriate Cessna 206 maintenance manual for seat removal.

TABLE 2.2; EQUIPMENT CABINET MOUNT PLATE INSTALLATIONS

Aircraft Mfr. Date	C206IR-201-1 Equipment Cabinet Installation	C206IR-201-2 Equipment Cabinet Installation
Pre-1997	C182IR-2500-1 Mount Plate Assy. Optional C182IR-2500-3 Assy.	
1997 and Later		C182IR-2500-2 Mount Plate Assy. Optional C182IR-2500-4 Assy.

2.2.2 Install Mount Plate Assembly to rail pair in desired location by sliding clamps onto rails. Mark locations for seat pin assemblies and remove to drill indicated holes.

Note: Assure small end of keyway slots on mount plate are facing forward.

2.2.3 Reinstall mount plate assembly to rail, slide clamps tight against rails and tighten screws.

2.2.4 Secure FWD/AFT movement by installing seat pin assemblies in drilled holes.

2.2.5 Install cabinet by inserting studs on bottom of cabinet into slots in the Mount Plate assembly and slide forward to small end of slot. Secure by inserting bolt through locking hole through Mount Plate assembly and into cabinet nut plate.

2.2.6 Assure all fasteners are securely installed.

NOTE: Weight and balance data must be adjusted in accordance with actual weights and locations of installed equipment.

2.2 Equipment Installation (Drawing C206IR-251)

The monitor and Electronic Control Unit (ECU) installations are addressed by this drawing. The equipment cabinet installation is designed to carry up to 25 lb. The equipment mounting bracket based on a FLIR Systems ECU is provided on the support tube assembly.

NOTE: All video outputs to any monitors should come from the video recorder if installed.

2.3.1 Monitor Installation:

2.3.1.1 Refer to installation drawing for maximum monitor weight. Any other monitor installations may require different mounting provisions and a separate FAA approval.

2.3.1.2 Using indicated hardware, install monitor to the swivel support assembly. Locate monitor in final position and tighten fasteners.

2.3.2 Electronics Unit Installation:

2.3.2.1 Install IR-2000-1 buttons to FLIR Systems EU using indicated hardware as applicable.

2.3.2.2 Remove the safety clip from the rail assembly of EU mount.

2.3.2.3 Loosen locking knobs and move the sliding shafts away from the keyholes in both rail assemblies.

2.3.2.4 Fit the buttons on the EU into the keyways, and slide them into the keyway slots.

2.3.2.5 Move the sliding shafts against the EU and tighten the lock knobs. Re-install the safety clip.

2.3.2.6 **Weight and Balance:** Weight of approved Electronic Control Unit installations and center of gravity location is documented on drawing C206IR-100.

NOTE: Weight and balance calculations must include all installed equipment.

2.4 Power Supply Wiring (Drawing C206IR-301)

2.4.1 Refer to drawing for cable identification, routing and connection.

2.4.2 Remove interior and access panels as necessary.

2.4.3 Install indicated circuit breaker/switch in available aircraft electrical panel position per drawing. Provide electrical power through avionics non-essential buss.

2.4.4 Route power cable to electronics unit from infrared on/off breaker/switch. General routing should follow existing electrical wiring.

2.4.5 When system is installed for use, loose cables should be routed under seats and otherwise secured.

2.4.6 When system is disabled or removed, loose cables and controls must be stowed or removed.

TESTING AND AIRCRAFT RECORDS

When installation is complete, perform the following;

- EMI test per Paravion Technology, Inc. Test Plan PR-EMITEST-6 (See Master Drawing List for current revision level and date).
- An electrical load analysis.
- Amend aircraft weight and balance and equipment list.
- Install provided supplement in flight manual.
- Submit test results with FAA Form 337, and retain copy in aircraft records.
- Make the appropriate logbook entry for return to service.