

SOLOY AVIATION SOLUTIONS

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

**MAINTENANCE
MANUAL SUPPLEMENT**

FOR

**CESSNA U206G/TU206G 206H/T206H
AIRPLANES WITH SOLOY WING MOUNT CAMERA
MODIFIED I/A/W SOLOY KIT
P/N 916-1000**

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NOTICE

This data is furnished with the understanding that it will be used for operational service and maintenance purposes only, and not to manufacture or procure the manufacture of the part shown and/or described.

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NOTE

On a revised page, the portion of the text affected by the latest revision is indicated by a vertical line in the left margin.

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INTRODUCTION

CAUTION

THE INFORMATION IN THIS MANUAL IS PROVIDED TO HELP ASSURE THE PERSONAL SAFETY OF THE OCCUPANTS OF THE AIRPLANE. ALL DIRECTIONS, INSTRUCTIONS, PROCEDURES, ETC. SET FORTH MUST BE STRICTLY FOLLOWED.

The Cessna 206 Maintenance Manual Supplement is designed to be used in conjunction with the applicable Cessna 206 model Maintenance Manual

This manual supplement does not cover the complete airplane but only the areas affected by the installation of the camera mount and the associated hardware. For information on Cessna systems and sub-systems which are not affected by the installation of the camera mount, refer to the Cessna 206 model Maintenance Manual.

For ease of navigation the Cessna 206 Maintenance Manual Supplement is presented in the same format as the Cessna 206 model Maintenance Manual.

This information is presented in the following sections:

05-00-00 TIME LIMITS/MAINTENANCE CHECKS	24-00-00 ELECTRICAL POWER
06-00-00 DIMENSIONS AND AREAS	57-00-00 WINGS
11-00-00 PLACARDS	

In addition to the information contained in this supplement, Soloy Aviation Solutions will render all possible assistance in the solution of all unusual maintenance or operational problems that may be encountered. This supplement will be revised periodically as improvements in the product are made and as improved service methods or procedures are developed. Revised and/or added pages will be forwarded to you as they are released. These revised pages should be inserted immediately in order to keep your supplement up-to-date.

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CAUTION

DO NOT ATTEMPT ANY REPAIRS OR MAINTENANCE PROCEDURES THAT ARE NOT DESCRIBED IN THIS MANUAL OR BY REFERENCE TO THE APPLICABLE CESSNA OR ROLLS ROYCE MANUAL.

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TIME LIMITS/MAINTENANCE CHECKS – GENERAL

1. SCOPE

The scheduled inspection table, Table 3 Section 05-20-00, includes all pertinent items for the structural aspects of the Soloy wing mount camera installation. Inspection items pertaining to the installed electronic equipment are not provided because each electronic equipment installation is tailored to the customer's needs. For complete electronic inspection check sheets, refer to the electronic equipment manufacturer's specific operation and maintenance manuals for each item installed.

2. INSPECTION REQUIREMENTS

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual.

3. DESCRIPTION

Listed below is a brief description and intended purpose of each section in the chapter. For detailed information related to each particular program refer to the specific section within this chapter.

- A. Section 05-00-00, Time Limits/Maintenance Checks – General. This section provides a general overview of inspection requirements.
- B. Section 05-20-00, Inspection Time Intervals. The primary purpose of this section is to provide a central location for inspection time intervals. This section may also be utilized in conjunction with 14 CFR Part 43 to provide greater detail on inspection criteria when performing Annual/100 Hour inspections.

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AIRWORTHINESS LIMITATIONS – FAA APPROVED DATA

1. SCOPE

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Parts 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

2. AIRWORTHINESS LIMITATIONS

A. AIRPLANE

There are no airworthiness limitations associated with the Cessna 206 wing mount camera installation.

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SCHEDULED MAINTENANCE CHECK

1. GENERAL

- A. The primary purpose of this section is to provide inspection time intervals. Section 05-20-00 is not intended to be utilized as the primary checklist for inspection of the airplane. However, it may be utilized in conjunction with FAR Part 43 Inspection Scope and Detail.

NOTE

The inspection guidelines contained in this section are not intended to be all inclusive, as no such charts can replace the good judgment of certified airframe and power plant mechanics in performance of their duties. As the one primarily responsible for the airworthiness of the airplane, the owner or operator should select only qualified personnel to maintain the airplane.

2. PROCEDURE

- A A complete airplane inspection includes all inspection items as required by 14 CFR 43, Appendix D, Scope and Detail of Annual/100 Hour inspections. The chart provided in this section should be used to augment the inspection. Inspect in accordance with manufacturer's instructions.
- B The intervals shown are recommended intervals at which items are to be inspected based on normal usage under average environmental conditions. Airplanes operated in extremely humid areas (tropics), or in exceptionally cold, damp climates, etc., may need more frequent inspections for wear, corrosion, and lubrication. Under these adverse conditions, perform periodic inspections in compliance with this chart at more frequent intervals until the operator can set his own inspection periods based on field experience without exceeding the maximum intervals listed in this section.

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- (1) The 14 CFR Part 91 operator's inspection intervals shall not deviate from the inspection time limits shown in this manual except as provided below: (Refer to 14 CFR 91.409)
 - (a) The airplane can only exceed its inspection point up to ten hours if the airplane is enroute to a facility to have the inspection completed.
 - (b) In the event of late compliance of any operation scheduled, the next operation in sequence retains a due point from the time the late operation was originally scheduled (reschedule if late).
 - (c) In the event of early compliance of any operation scheduled, that occurs 10 hours or less ahead of schedule, the next phase due point may remain where originally set.
 - (d) In the event of early compliance on any operation scheduled, that occurs more than 10 hours ahead of schedule, the next phase due point must be rescheduled to establish a new due point from the time of early accomplishment.

3. INSPECTION TERMS AND GUIDELINES

- A. For inspection terms and guidelines, refer to paragraph 6, Scheduled Inspection Checklist.

4. SCHEDULED MAINTENANCE CHECKS

NOTE

The daily inspection items listed in the table below are in addition to Cessna airframe daily inspection lists. Consult Cessna Flight Manual and Soloy Flight Manual Supplement for expanded pre flight, post flight, and daily inspection requirements.

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TABLE 1 CAMERA INSTALLED DAILY INSPECTION		
NO.	INSPECTION ITEM	SIGN-OFF
1	Camera Connections – Verify that the camera cables are securely connected to the camera.	
2	Camera Security – Verify that the dovetail locking blocks are tightened in place and that the lock pin is installed. Verify that the upper dovetail bolts are tight and safety wired. Check the overall security of the installed camera pod.	
3	Aileron Trim Tabs – Verify that the left aileron trim tab is set from 0° to 9° up and the right aileron trim tab is set from 0° to 9° down. Adjust trim tabs as required to correct for wing mount camera on left wing. Trim tabs must be at equal but opposite angles. Also verify both trim tabs are secured.	

TABLE 2 CAMERA REMOVED DAILY INSPECTION		
NO.	INSPECTION ITEM	SIGN-OFF
1	Aileron Trim Tabs – Verify both aileron trim tabs are set to 0° and that the trim tabs are secured.	
2	Wing Access Panel – Verify that wing access cover installed at wing access panel 510 YBS does not have a cable pass through hole. Exchange panel for correct panel if the incorrect panel was installed. Refer to Soloy document S2061A Cessna 206 with Wing Mount Camera Illustrated Parts Catalog.	

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5. SCHEDULED INSPECTION CHECKLIST LEGEND

- ITEM..... Inspection item number grouped in sections.
- REQ..... Provides a short description of the inspection and/or servicing procedure.
- REFER Refers to the appropriate manual for further information.
- INL..... This column is used to initial the checklist once each item has been completed.
- INT..... This column lists the interval of inspection in alphabetic coded form. The legend for the alpha code is listed below:

Interval Letter	Interval
A	Every 50 hours
B	Every 100 hours or 1 year, whichever occurs first

NOTE

Inspection items listed in Table 3 are in addition to the applicable inspection items listed in the Cessna 206 model Maintenance Manual airframe inspection table for unmodified systems.

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CESSNA 206 WITH WING MOUNT CAMERA
SCHEDULED INSPECTION CHECKLIST

OWNER: _____ DATE: _____

A/C MODEL: _____ S/N: _____ REG: _____

A/C TIME SINCE NEW: _____ HOBBS: _____

ENGINE S/N: _____ CYCLES: _____ TT: _____

This inspection checklist is to be used when performing scheduled inspections on above type aircraft only. Additional inspection items from FAR Part 43 may be used in conjunction with this checklist. This form may be locally reproduced and/or expanded to reflect the aircraft operating environment. Keep the completed check sheets as a permanent part of the aircraft scheduled maintenance records. Detail information regarding each inspection item is contained in the referenced paragraphs of the following: Cessna 206 with Wing Mount Camera, Maintenance Manual Supplement (S/MMS), Soloy Service Bulletins (S/SB), Soloy Service Instructions (S/SI), Soloy Flight Manual Supplement (S/FMS), Cessna 206 Model Maintenance Manual (C/MM), Cessna Service Bulletins (C/SB), Cessna Service Instructions (C/SI). It is the responsibility of the owner, maintenance technician, or maintenance facility performing the inspection to check all Service Bulletins, Service Letters, and Airworthiness Directives.

CAUTION

BEFORE UNDERTAKING ANY INSPECTION OR
MAINTENANCE ACTION, CONSULT THE REFERENCED
PARAGRAPHS OF THE APPLICABLE DOCUMENT.

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6. SCHEDULED INSPECTION CHECKLIST

TABLE 3				
SCHEDULED INSPECTION CHECKLIST				
ITEM	REQUIREMENTS	REFER	INT	INL
GENERAL AIRFRAME – SECTION 1				
1-1	Placards and Decals – Inspect presence, legibility and security of all interior and exterior.	S/MMS	B	
ELECTRICAL – SECTION 2				
2-1	Camera Cables – Inspect for condition and security.	S/MMS	B	
2-2	Additional Electronics Power Supply and Wiring – Inspect for general condition and security.	S/MMS	B	
2-3	Additional Electronics Switch and Circuit Breakers – Check switches and breakers for security and condition. Inspect wiring for condition and security.	S/MMS	B	
WINGS AND EMPENNAGE – SECTION 5				
5-1	Wing Surfaces – Inspect for skin damage, loose rivets and condition of paint.	S/MMS	B	
5-2	Wing Access Plates – Check for damage and security of installation. Check for loose or missing screws.	S/MMS	B	
5-4	Wing Structure – Inspect spars, intercostal web, ribs, skins, and stringers for cracks, wrinkles, loose rivets, corrosion or other damage.	S/MMS	B	
5-5	Dovetail Mount – Check for security of fasteners, condition of safety wire, locking notch condition, stop pin condition. Check overall condition for cracking or deformation.	S/MMS	B	
5-6	Spar and Intercostal Blocks – Inspect for loose or missing rivets, also check for cracking. Inspect thread in end of block for loose or missing thread.	S/MMS	B	
AILERON CONTROL SYSTEM – SECTION 8				
8-1	Aileron Trim Tabs – Check for loose or missing rivets. Verify that adjustment screws are tight and in heads are not stripped. Verify trim tabs are secure. Check hinges and corners for cracks and deformation. Check aileron skin for cracks.	S/MMS	A	

UNSCHEDULED MAINTENANCE CHECKS

1. GENERAL

- A. In addition to the standard Cessna 206 unscheduled maintenance checks, the following maneuvers may be experienced during a flight:
- (1) Hard landings
 - (2) Overspeed
 - (3) Extreme turbulence or extreme maneuvers.
- B. When the flight crew gives a report of any of these conditions, complete a visual inspection of the airframe and specific inspection of components and areas involved. Pay particular attention to camera mount, camera mount attaching structures and ailerons.
- C. Do the inspections to find and examine the damage in local areas of visible damage, and in the structure and components adjacent to the area of damage.
- D. If foreign object damage (FOD) is found, complete a visual inspection of the airplane before the airplane is returned to service. If the FOD contacted the camera mount or any object mounted on the camera mount, perform a full camera mount inspection before the airplane is returned to service.

2. UNSCHEDULED MAINTENANCE CHECKS DEFINED AND AREAS OF INSPECTION

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following:

- A. Hard/Overweight Landings
- (1) A hard landing is any landing made when the sink rate is more than the permitted sink rate limit. An overweight landing is any landing made when the gross weight is more than the maximum gross landing weight given in the Pilot's Operating Handbook.

- (2) Hard or overweight landing check.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following items.

- (a) Wing camera mount installation.
 - 1 Wing surface and lift strut – Examine the skin for buckling, loose or unserviceable fasteners and fuel leaks. Examine the attach fittings for security.
 - 2 Trailing edge – Examine for any deformation that stops the normal aileron or flap operation.
 - 3 Leading Edge – Examine the camera attachment point for cracks, misalignment and signs of structural damage. Check for loose or unserviceable fasteners. Refer to Chapter 57-42-00 Dovetail Mount – Inspection for further inspection criteria.
 - 4 Perform a complete 100 hour inspection prior to resuming normal operation with camera installed.

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B. Overspeed

- (1) Overspeed occurs when one of the following conditions are met:
 - (a) The airplane was flown at a speed more than the speed limit of the flaps.
 - (b) The airplane was flown at a speed more than the maximum design speed.
- (2) Overspeed (airspeed) check.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following items.

- (a) Trailing Edge – Examine aileron trim tab hinges, hinge attach points, attachments, and skins for deformation and signs of structural damage.
- (b) Leading Edge – Examine the camera attachment point for buckling, loose or unserviceable fasteners, cracking and signs of structural damage.
- (c) Perform a complete 100 hour inspection prior to resuming normal operation with camera installed.

C. Extreme turbulence and/or maneuvers checks.

- (1) Extreme turbulence is caused by atmospheric conditions that produce dangerous quantities of stress on the airplane. Extreme maneuvers are any maneuvers that do not stay within the limits given in the Pilot's Operating Handbook.

- (2) Extreme turbulence and/or maintenance checks.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following items.

- (a) Wing to body strut fittings and supportive structure – Examine for loose or unserviceable fasteners and signs of structural damage.
- (b) Trailing Edge – Examine aileron trim tab hinges, hinge attach points, attachments, and skins for deformation and signs of structural damage.
- (c) Leading Edge – Examine the camera attachment point for cracks, misalignment and signs of structural damage. Check for loose or unserviceable fasteners. Refer to Chapter 57-42-00 Dovetail Mount – Inspection for further inspection criteria.
- (d) Optional downlink antenna – Examine for any skin buckling and any loose or unserviceable fasteners.
- (e) Perform a complete 100 hour inspection on the wing mount camera installation components prior to resuming normal operation with camera installed.

D. Lightning Strike.

- (1) If the airplane is flown through an electrically charged region of the atmosphere, it can be struck by an electrical discharge moving from cloud to cloud or from cloud to ground. During a lightning strike, the current goes into the airplane at one point and comes out of another, usually opposite extremities. The wing tips, nose and tail sections are the areas where damage is most likely to occur. You can find burns and/or erosion of small surface areas of the skin and structure during inspection. In most cases, the damage is not easily seen. The function of the lightning strike inspection is to find any damage to the airplane before it is returned to service.

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(2) Lightning strike check.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following items.

(a) Wing mount camera.

- 1 Camera mount – Examine for burns and pits. Remove camera from dovetail and examine dovetail interface for burns.
- 2 Camera – Examine surface for burns or erosion. Examine structure for signs of damage.
- 3 Electronics – Perform a functional check of the camera system.

E. Foreign Object Damage.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual.

(1) Foreign object damage check.

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the addition of the following.

(a) Wing mount camera.

- 1 Camera mount – Examine for cracks, misalignment and signs of structural damage. Check for loose or unserviceable fasteners. Refer to Chapter 57-42-00 Dovetail Mount – Inspection for further inspection criteria.
- 2 Camera – Examine for dents, punctures, cracks and signs of structural damage. Check for loose or unserviceable fasteners.
- 3 Aileron trim tab – Examine for cracks, misalignment and signs of structural damage. Check for loose or unserviceable fasteners.

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DIMENSIONS AND AREAS – GENERAL

1. SCOPE

This section identifies dimensions and specifications of the airplane. The information contained in this section is intended to assist operators, maintenance personnel and ground handling personnel. The dimensions and specifications of the aircraft remain largely unchanged and are included in this supplement for convenience. The Soloy wing mount camera installation has limitations in size and weight of the equipment attached.

2. DEFINITION

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual.

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**AIRPLANE DIMENSIONS AND SPECIFICATIONS –
DESCRIPTION AND OPERATION**

1. GENERAL

- A. This section identifies dimensions and specifications of the Soloy wing mount camera installation. Dimensions are selected for pertinent information of measurements to assist operators, maintenance personnel, and/or ground handling personnel. Refer to the respective charts below.

Refer to the standard Cessna 206 model maintenance manual for all standard Cessna dimensions and areas.

- B. Airplane dimensions are illustrated in Figure 1.

2. DIMENSIONS AND SPECIFICATIONS

CAMERA MOUNT LIMITATIONS

Location	Left Wing Station 110
Size:.....	18.5 Inches Wide Max
(Total weight and distance including mount adapter)	25 Inches Below Wing Max
Weight	100 Pounds Max

OPTIONAL DOWNLINK ANTENNA

Location	Fuselage Station 130
----------------	----------------------

3. CONTROL SURFACE TRAVELS/CABLE TENSION SETTINGS

All control surface settings not mentioned below remain unchanged from the standard Cessna 206.

AILERONS

Aileron Trim Tab Settings

Left.....	0° to 9° Up As Required
Right	0° to 9° Down As Required

NOTE

Trim tabs must be returned to 0° when camera is removed from wing. Left and right trim tabs must be adjusted to equal, but opposite angles. Adjusted trim tab angle is dependant on the size of payload installed at the wing mount location.

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FLAPS

Flap Setting:

0 Degrees	0 Degrees
10 Degrees	10 Degrees, +1 or -2 Degree
20 Degrees	20 Degrees, +1 or -2 Degree
30 Degrees	30 Degrees, +1 or -2 Degree
40 Degrees	40 Degrees, +1 or -2 Degree

NOTE

Flaps limited to 20° maximum with camera installed.
 Autopilot use prohibited with camera installed.

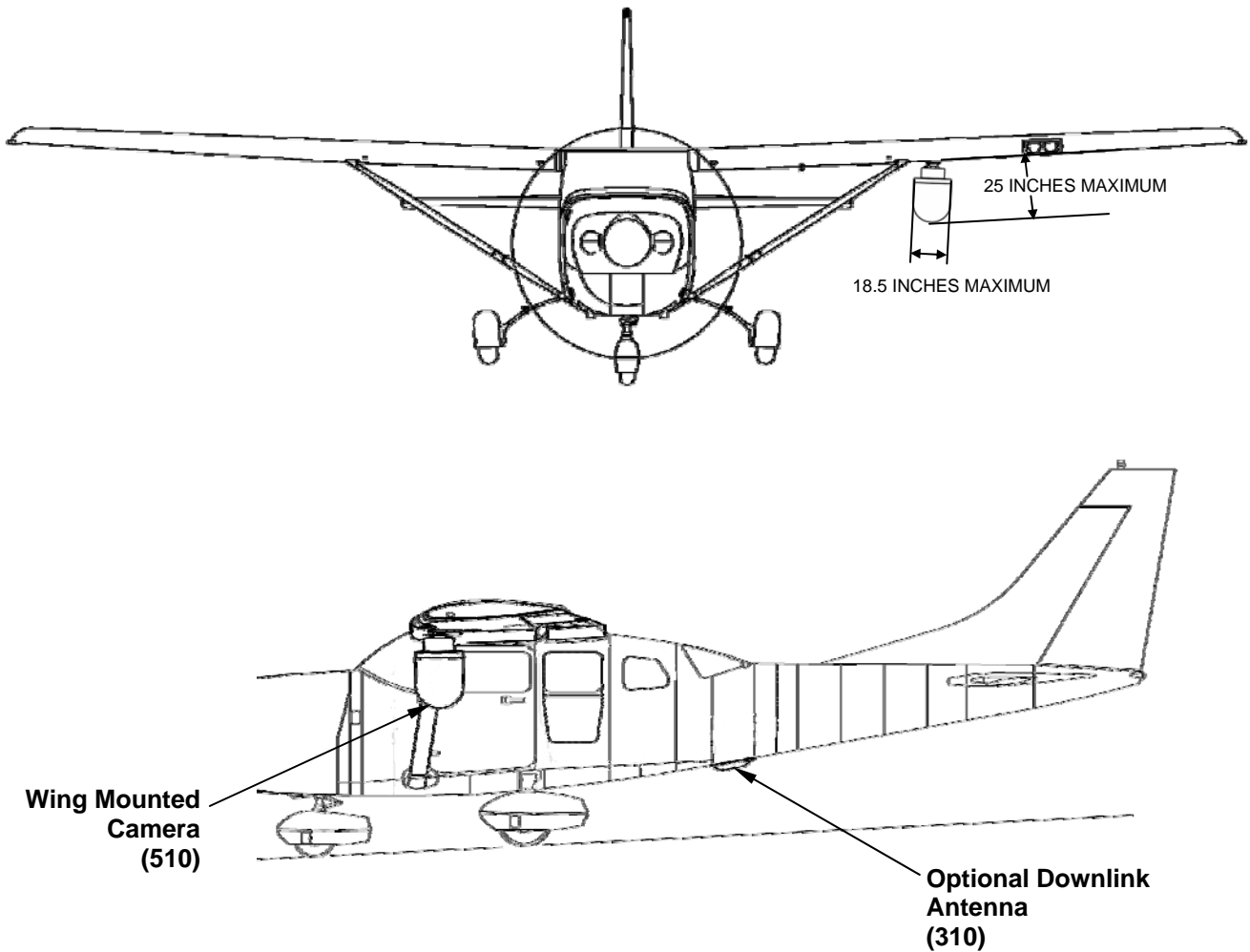


Figure 1: Airplane Zones

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AIRPLANE STATIONS – DESCRIPTIONS AND OPERATION

1. GENERAL

This section remains unchanged from the Cessna 206 model Maintenance Manual.

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AIRPLANE ZONING – DESCRIPTION AND OPERATION

1. GENERAL

This section remains unchanged from the Cessna 206 model Maintenance Manual.

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ACCESS/INSPECTION PLATES – DESCRIPTION AND OPERATION

1. GENERAL

- A. There are access and inspection panels on the interior and exterior of the airplane. These panels give access to components and airframe areas.

NOTE

Panels that have hinges attached to them are not referred to as panels and are not included in this section. Cessna U206G/TU206G aircraft may not have all standard Cessna access panels shown in Figure 1.

- B. This section can be used in conjunction with inspection practices (Chapter 5) or standard maintenance practices to quickly find related components throughout the airplane.

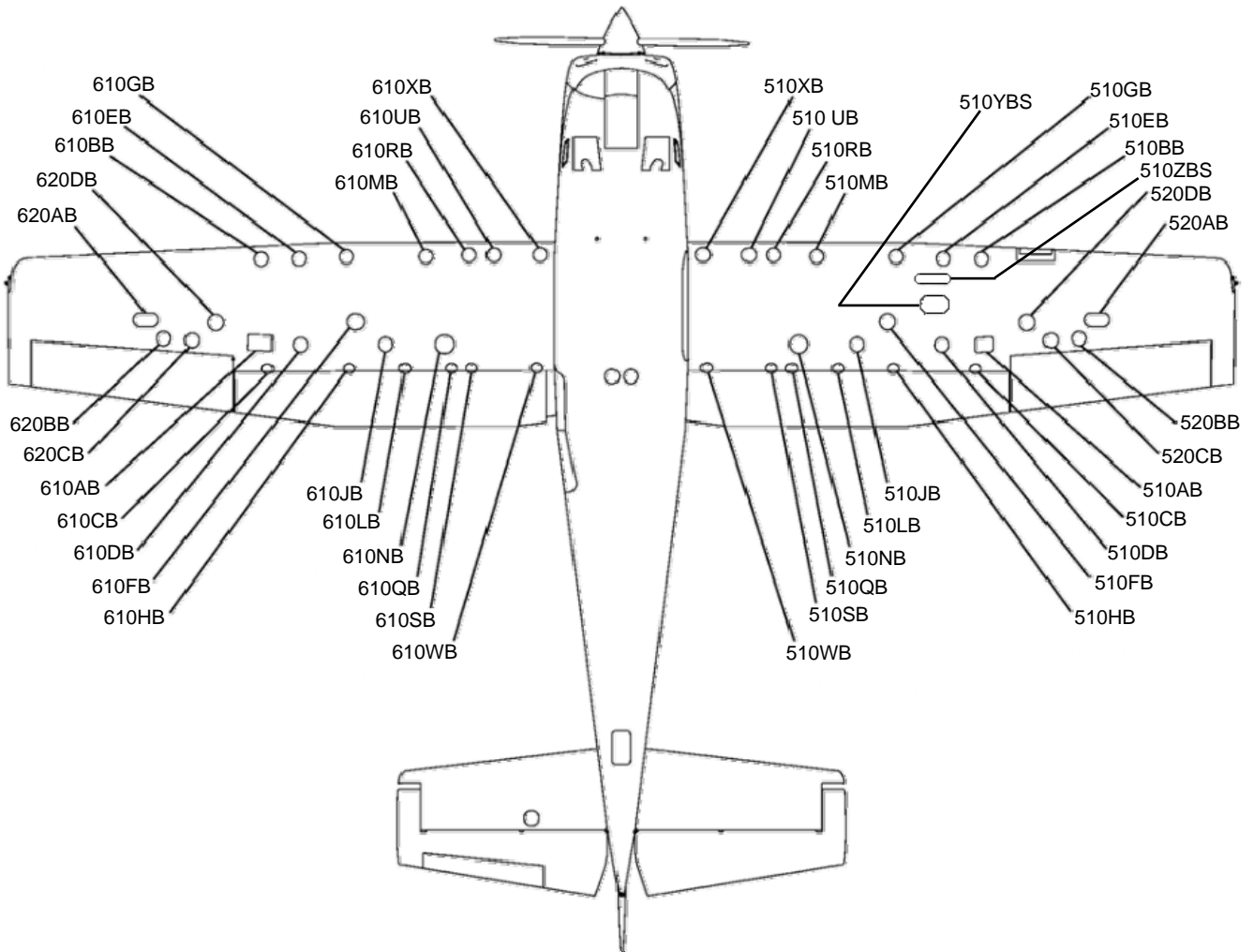
2. ACCESS/INSPECTION PLATE NUMBERING

- A. All access/inspection panels have a series of numbers and letters which identify their zone location, sequence and orientation.
- (1) Zone Location – Zone location is identified by the first three numbers of any panel. This three number sequence is specified in Airplane Zoning – Description and Operation in the standard Cessna 206 model maintenance manual.
 - (2) Sequence – The sequence is identified by alphabetical letters following the three number sequence. The first panel is identified as “A”, The second panel is identified as “B”, and so on.
 - (3) Orientation – The orientation for each panel is identified by one of four letters that come after the sequence letter. The orientation letters are “T” for top, “B” for bottom, “L” for left and “R” for right.
- B. With access panel 510AB as an example, the breakdown is as follows:
- (1) Zone Location = 510 (inboard portion of left wing)
 - (2) Sequence = A (the first panel within the zone)
 - (3) Orientation = B (located on the bottom of the zone).
 - (4) Soloy Access Panels = S (only used on Soloy wing mounted camera mount)

3. DESCRIPTION

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual with the exception of additional wing access panels 510YBS and 510ZBS. Both additional access panels are used for the structural installation, servicing and inspection of the new Soloy wing mount camera. Wing access panel 510YBS is also used as the pass through location for the camera electrical cables. All other inspection/access panels are used in their original configuration. Information on access panel usage can be found in the Cessna 206 model Maintenance Manual.

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View from Bottom of Aircraft

Figure 1: Wing Access Panels

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PLACARDS AND MARKINGS – GENERAL

1. GENERAL

- A. For a complete list of all placards used on the Cessna 206 aircraft refer to the S2060A Cessna 206 with Wing Mount Camera Pilot's Operating Handbook Supplement, Section 2.
- B. A complete list of Soloy placard part numbers and locations can be found in S2061A Cessna 206 with Wing Mount Camera Illustrated Parts Catalog, Chapter 11.

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PLACARDS AND MARKINGS – INSPECTION/CHECK

1. SCOPE

A. This section has inspection data for the interior and exterior placards.

2. INTERIOR AND EXTERIOR PLACARD AND DECAL INSPECTION

Refer to the Cessna 206 Pilot's Operating Handbook Supplement, Section 2 for an inspection guide for all applicable placards.

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ELECTRICAL POWER – GENERAL

1. SCOPE

The Cessna wing mount camera allows for the electronic installation to be customized to each installation. Each customized application has different inspection, removal, installation, testing and adjustment procedures. This chapter is intended to give a general overview of the electrical system and how the electrical cables are routed throughout the aircraft for the Cessna wing mount camera installation.

A. Switch and Circuit Breaker Panel

An camera master switch and a 40 amp circuit breaker are added as part of the Cessna 206 wing mount camera installation. The avionics master switch activates a relay that supplies power to all additional electrical devices installed for the wing mount camera installation.

B. Wing Mount Camera Cables (Figure 1)

The make and model of the camera is customer dependant, but the basic routing of the camera cable bundle is consistent for all aircraft. The cable bundle starts at the camera and passes through wing access panel 510YBS. The cable then loops around and travels down the leading edge of the wing into the left side of the cabin area. Then the cable passes behind the head liner and down behind the interior panel emerging into the cabin area at around fuselage station 124. Refer to Figure 1 for an illustration of camera cable routing.

C. Optional Downlink Antenna

The make and model of the optional downlink antenna is customer dependant. The antenna wiring passes through a small hole in the belly of the aircraft and is routed to the equipment rack located on the baggage shelf.

2. TOOLS, EQUIPMENT AND MATERIALS

This paragraph remains unchanged from the Cessna 206 model Maintenance Manual.

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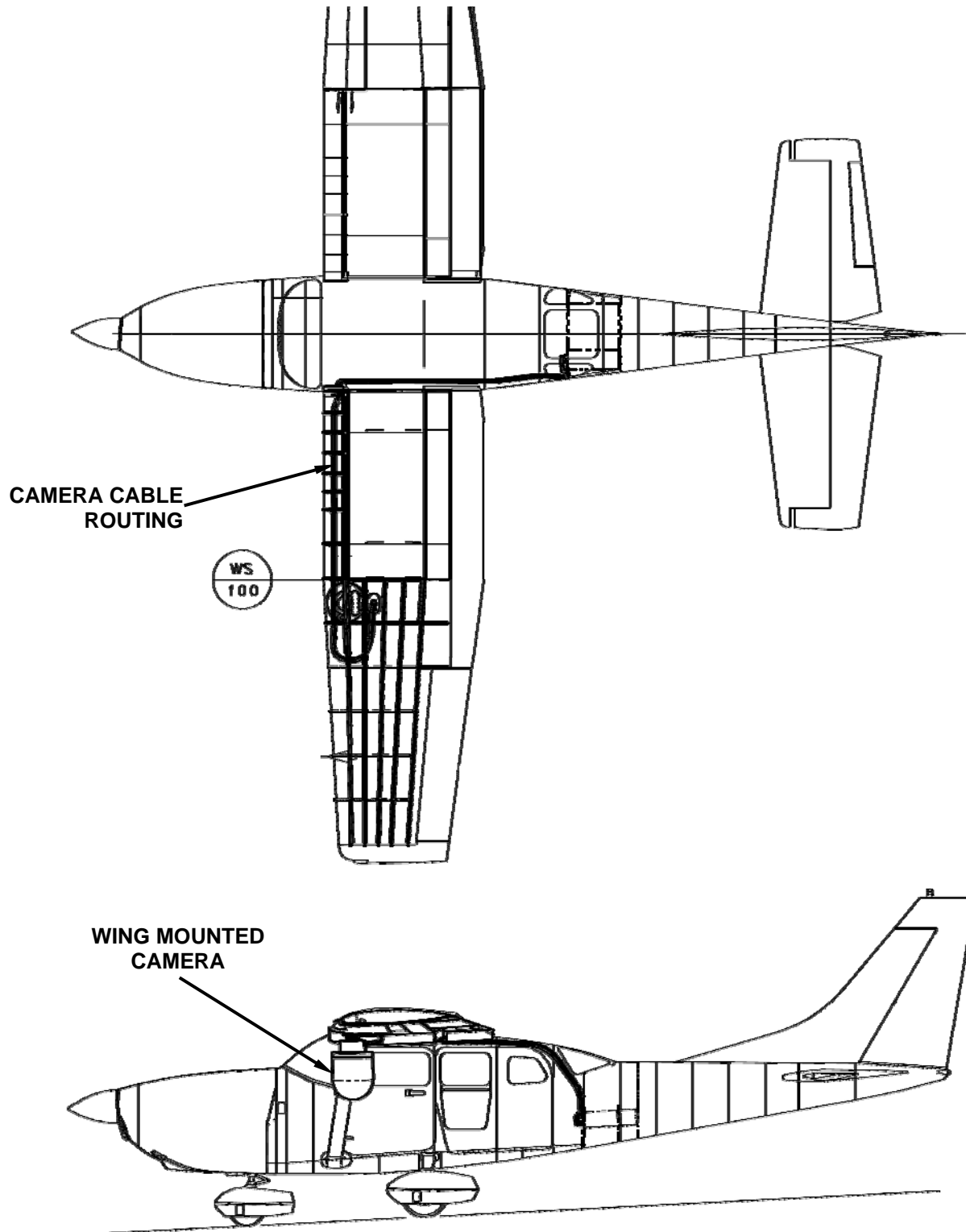


Figure 1: General Electrical Layout

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CIRCUIT BREAKER – GENERAL

1. DESCRIPTION

The electrical system of the Cessna 206 wing mounted camera installation uses one switch, circuit breaker and relay to power all subsequent camera system requirements. The customer specific circuit breaker needs of the additional electronics are protected by individual circuit breakers for each component. Although the circuit breakers may be in different locations, the maintenance practices are unchanged from the Cessna 206 model maintenance manual.

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CAMERA CABLE ROUTING – REMOVAL/INSTALLATION

1. GENERAL

- A. The camera cables used on each installation are specific to the camera installed on the aircraft. This section is meant to be a guideline for installing and removing the camera cables, but each installation is slightly different.

2. CAMERA CABLE REMOVAL/INSTALLATION

A. REMOVAL (Left Wing Only)

- (1) Remove all interior panels from left side of cabin.
- (2) Inside cabin, label all wires terminating at end of cable and remove all cable connectors from end of cable (inside cabin only).
- (3) Remove wing access panels 510AB, 510DB, 510XB, 510UB, 510RB, 510MB, 510GB, 510EB, 510BB and 510YBS.
- (4) Inside the wing, pull the cotter pin and remove the hose clamp for the outboard fresh air ventilation tube and the inboard fresh air ventilation hose. Then remove the inboard and outboard fresh air ventilation hose and tube running down leading edge of wing.
- (5) Cut zip ties holding camera cable at every rib along leading edge of wing and inside cabin.
- (6) Feed cable out of cabin and down wing. Remove cable through wing access panel 510YBS.
- (7) Reinstall the inboard and outboard fresh air ventilation hose and tube.
- (8) Reinstall previously removed wing access and interior panels. Replace wing access panel at 510YBS with Soloy part number 916-1341-1 or Cessna part number 120117-1.

B. INSTALLATION (Left Wing Only)

- (1) Remove all interior panels from left side of cabin.
- (2) Remove wing access panels 510AB, 510DB, 510XB, 510UB, 510RB, 510MB, 510GB, 510EB, 510BB and 510YBS.
- (3) Pull cotter pin and remove fresh air ventilation hose running down leading edge of wing.
- (4) Start at wing access point 510YBS and feed cable through wing and through the passenger compartment as shown in Figure 1. The cable passes behind the head liner and down behind the interior panel emerging into the cabin area at around fuselage station 124.
- (5) Zip tie camera cable at each rib to the zip tie anchors (9 places).
- (6) Reinstall both fresh air vents down leading edge of wing.
- (7) Seal all access holes with sealant per MIL-A-46106B, Type I (RTV). Refer to Figure 1, Detail A.
- (8) Reinstall wing access panels. If cables are needed on camera install Soloy part number 916-1340-1. If cables are not needed, coil cable and tie, stow inside wing and replace cover at 510YBS with either Soloy part number 916-1341-1 or Cessna part number 120117-1.
- (9) Install cable end connector onto cable inside cabin and connect to electronic equipment.
- (10) Reinstall interior panels.

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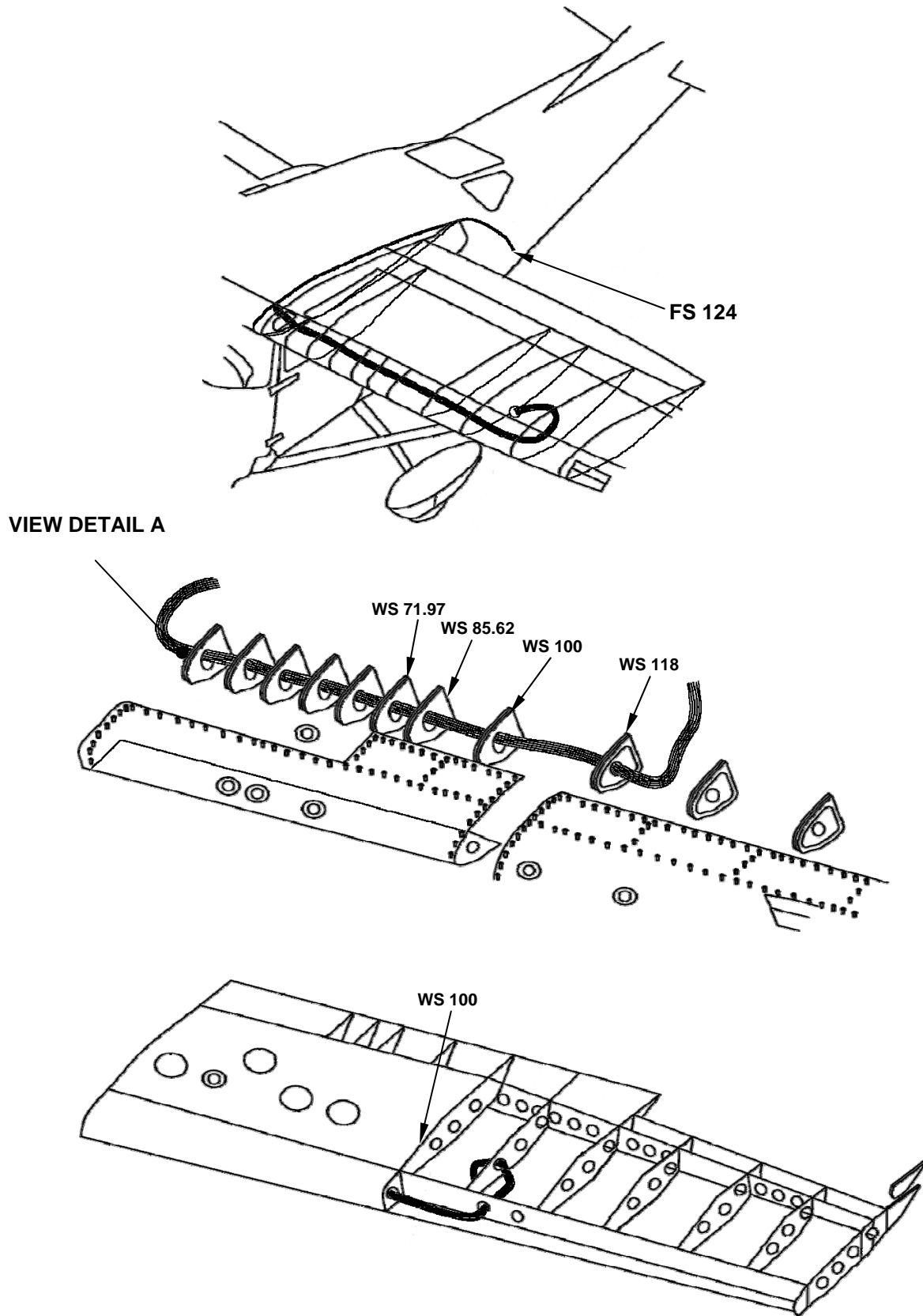
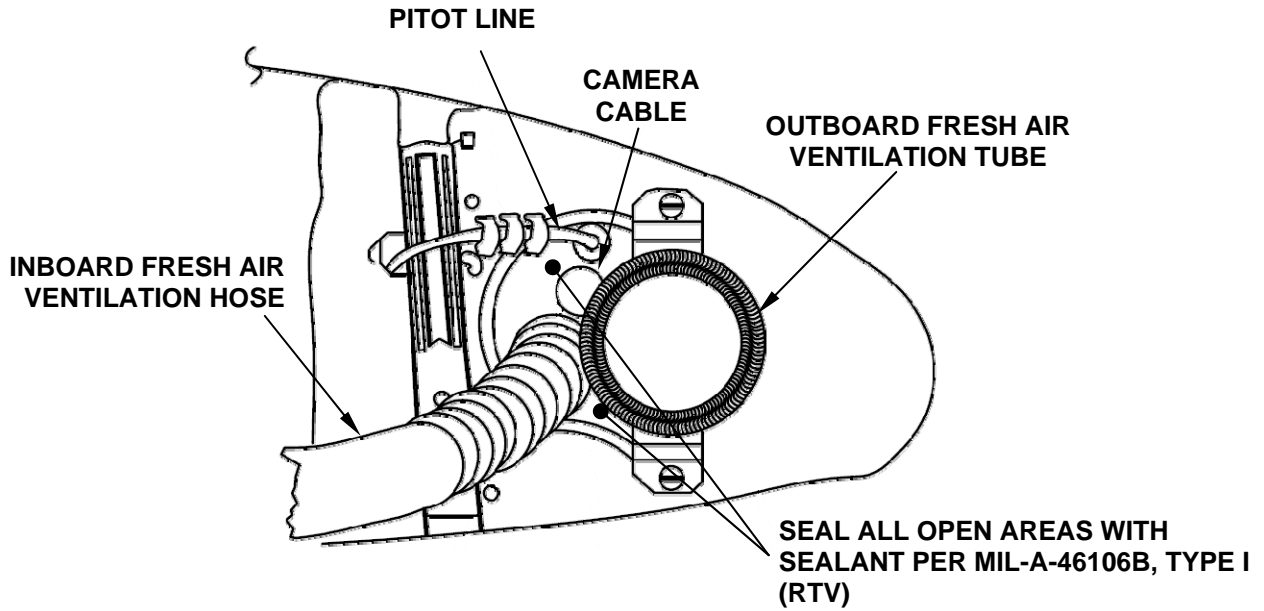


Figure 1: Camera Cable Routing (Sheet 1)

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DETAIL A

Figure 1: Camera Cable Routing (Sheet 2)

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WINGS – GENERAL

1. SCOPE

The Soloy / Cessna 206 wing mount camera involves the structural aspects of mounting the camera on the left wing and the aerodynamic adjustments for flight with the camera installed. All components of the wing modified or added during the wing mount camera installation are described in this chapter.

NOTE

If installing a spar block, intercostal block, intercostal web, aileron trim tab or any of their associated shims for the first time, contact Soloy Aviation Solutions for initial installation instructions.

A. WING ACCESS PANELS

Two new access panels are created for the wing mount camera installation. The panels are located on the left wing only and are designated as 510YBS and 510ZBS. The access panels function like all other standard Cessna wing access panels. The access panels are located to allow for the installation of the spar blocks, intercostal web and blocks, and for an access point for the camera cable to pass through when a camera is mounted on the wing. Additionally 510YBS can be configured with or without the camera cable hole depending on if the camera cables are needed.

B. SPAR BLOCKS

Two spar blocks are fastened inside the wing to an existing wing spar. They are used as the forward two hard points for the dovetail mount.

C. INTERCOSTAL WEB AND BLOCKS

An intercostal web is added to the wing between wing access holes 510YBS and 510ZBS. The intercostal blocks are then fastened to the intercostal web and act as the aft two hard points for the dovetail mount.

D. DOVETAIL MOUNT

The dovetail mount is located on the forward part of the left wing and is the standard platform to which the camera mounts. The dovetail mount features locking indentations and a stop pin to allow the camera to only be removed from the front side of the mount. A matching lower dovetail mount attached to the camera is used to install the camera assembly.

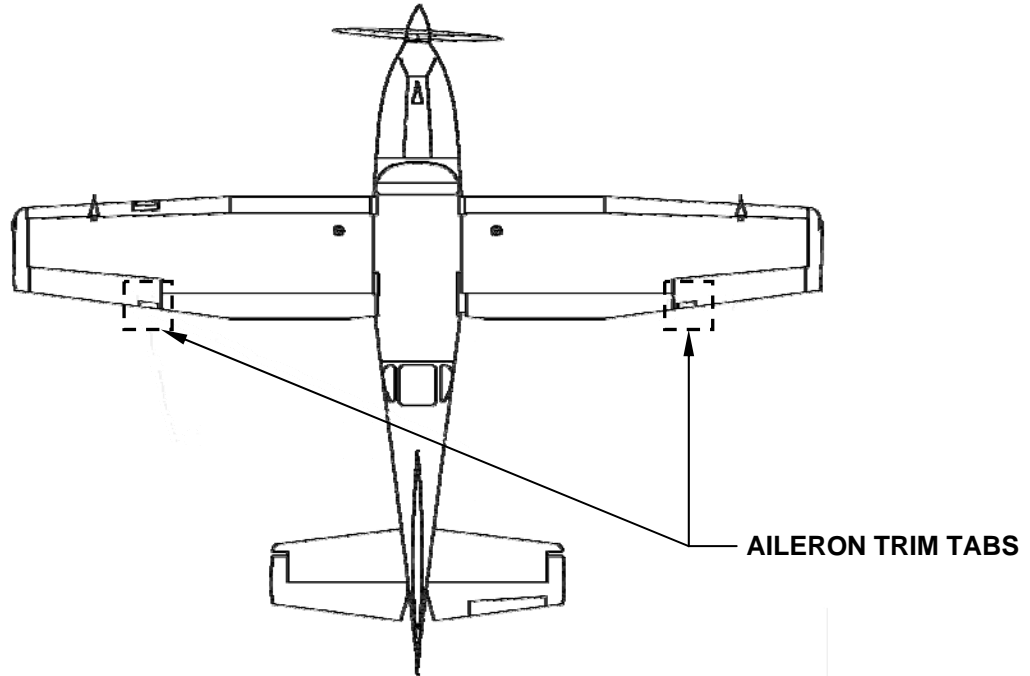
E. CAMERA INSTALLATION

The complete camera installation is specific to the make and model of camera installed, but the basic steps remain unchanged for all eligible cameras. The camera installation involves installing the camera on the mount, switching out the wing access panel to allow the camera cable to pass through the skin of the wing and adjustment of the aileron trim tabs.

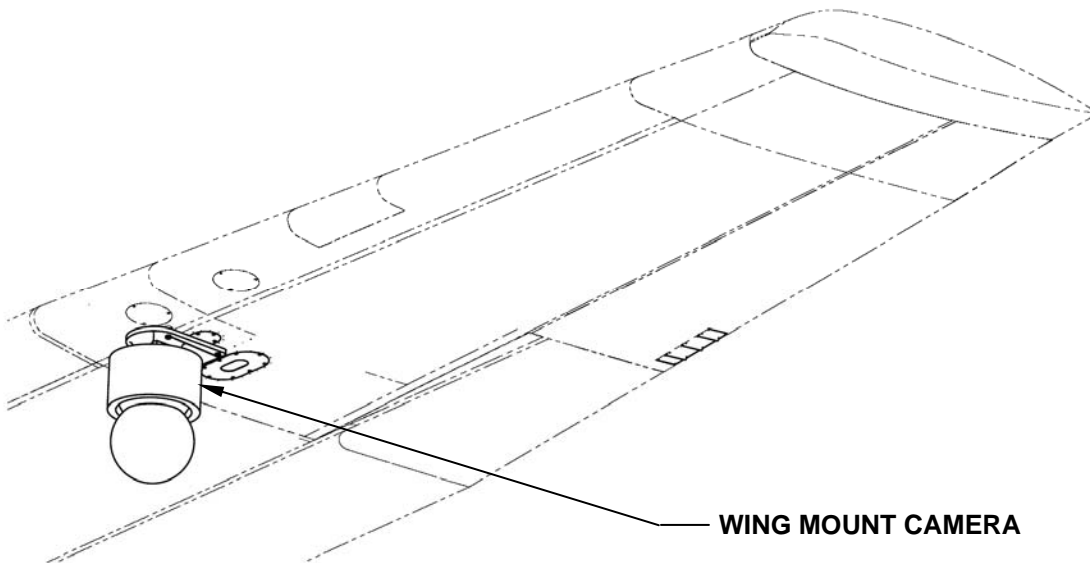
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F. AILERON TRIM TABS

In order to balance the aerodynamic loads of the wing mount camera on the left wing, aileron trim tabs are used on both wings. The trim tabs are adjusted to specific settings for camera installed or uninstalled configurations.



VIEW LOOKING DOWN ON AIRCRAFT



LEFT WING VIEW LOOKING UP

FIGURE 1: Wing Mount Camera Components

SPAR BLOCKS – REMOVAL/INSTALLATION

1. SPAR BLOCKS – REMOVAL/INSTALLATION

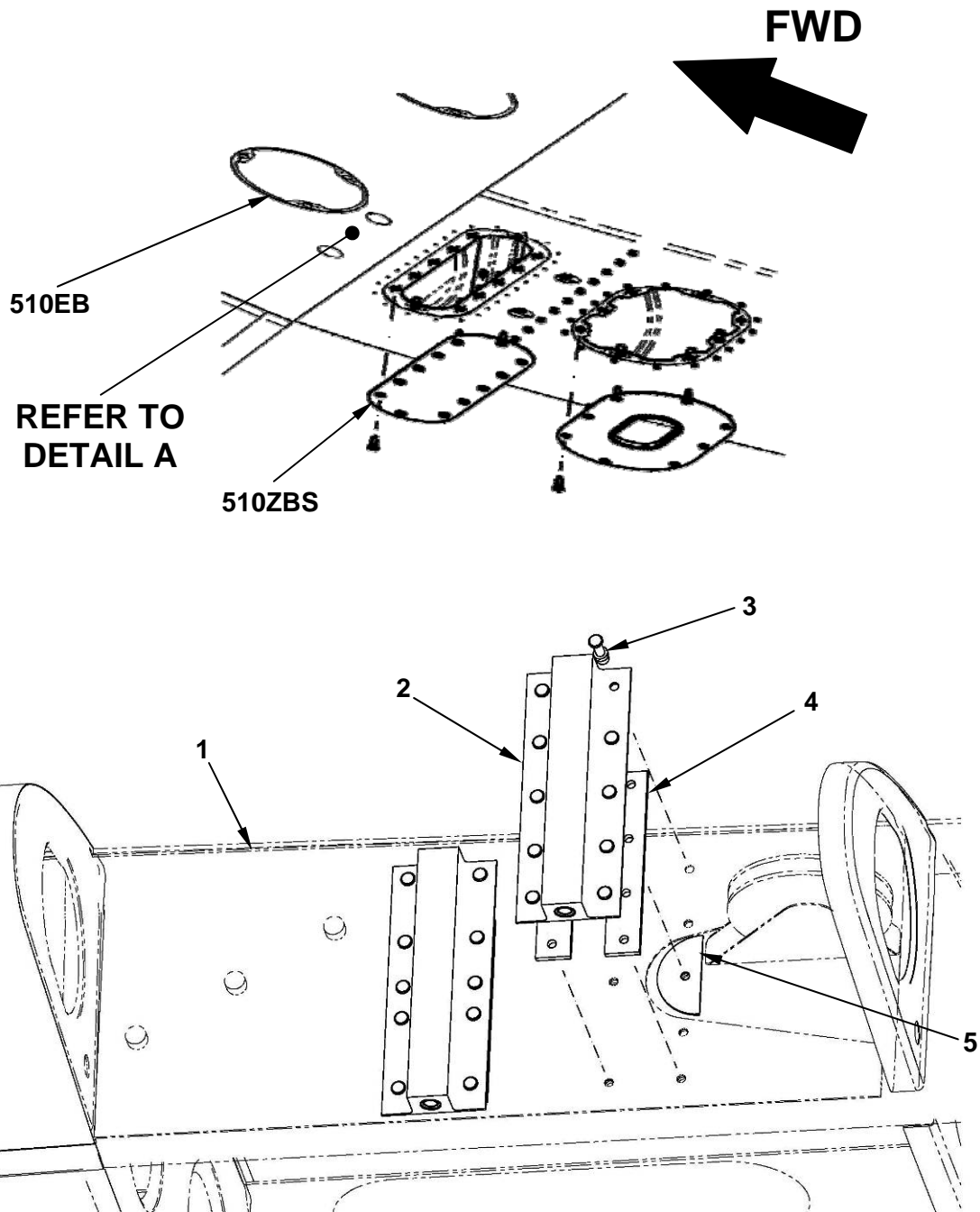
A. Removal (Figure 1)

- (1) Cut safety wire and remove bolts from dovetail mount. Tagging or otherwise identifying dovetail spacer locations on spacers will facilitate reassembly.
- (2) Remove wing access panels 510ZBS and 510EB.
- (3) Remove spar attachment fasteners (3).
- (4) Remove spar block and all shims from spar.
- (5) Reinstall wing access panels 510ZBS and 510EB. Check wing access location 510YBS for correct cover without cable pass through hole.

B. Installation

- (1) Remove wing access covers 510ZBS and 510EB
- (2) Use a small dab of adhesive to hold shims in place per Figure 1. Half circle shim may be held in place with adhesive against spar.
- (3) Align spar block spar with previously match drilled holes. With spar block inside wing, bolt Soloy installation tool 916T1220-1 to spar blocks and intercostal blocks.
- (4) Install clecos to temporarily hold the block in place and then remove the clecos one by one while installing the fasteners listed in Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A.
- (5) Reinstall wing access panels 510ZBS and 510EB. Replace access panel screws if the screws are worn or stripped.
- (6) Reinstall dovetail mount, spacers, washers and bolts. Torque bolts evenly at 80 to 90 in-lb. Safety wire dovetail mount bolts, front to rear, per MS33540 using wire per MS20995C30.

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DETAIL A
(WING SKIN REMOVED)

- | | |
|---------------|---------------------|
| 1. Wing Spar | 4. Long Shim |
| 2. Spar Block | 5. Half Circle Shim |
| 3. Fastener | |

Figure 1: Spar Block Installation

SPAR BLOCKS – INSPECTION

1. **SPAR BLOCKS – INSPECTION** (Figure 1)
 - A. Cut safety wire and remove bolts from dovetail mount. Tagging or otherwise identifying dovetail spacer locations on spacers will facilitate reassembly.
 - B. Remove wing access panels 510ZBS and 510EB.
 - C. Check for loose or missing fasteners (3).
 - D. Inspect the threaded insert in the end of the spar block (2) for loose or missing thread. Also check that the insert inside the spar block is secure.
 - E. Inspect the spar block for cracks or other damage.
 - F. Inspect wing spar (1) for cracks or deflection around rivet locations.
 - G. Inspect perimeter of wing spar attachment for cracks or deformation.
 - H. Prior to reinstalling the dovetail mount and wing access panels, perform an inspection of the intercostal web and intercostal blocks. Refer to Section 57-41-02 INTERCOSTAL WEB AND BLOCKS – INSPECTION.

NOTE

No repairs are allowed for the spar blocks. Loose or missing fasteners may be replaced if the fastener hole has not been damaged. Replace spar block if any damage is found.

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INTERCOSTAL WEB AND BLOCKS – REMOVAL/INSTALLATION

1. INTERCOSTAL BLOCKS – REMOVAL/INSTALLATION

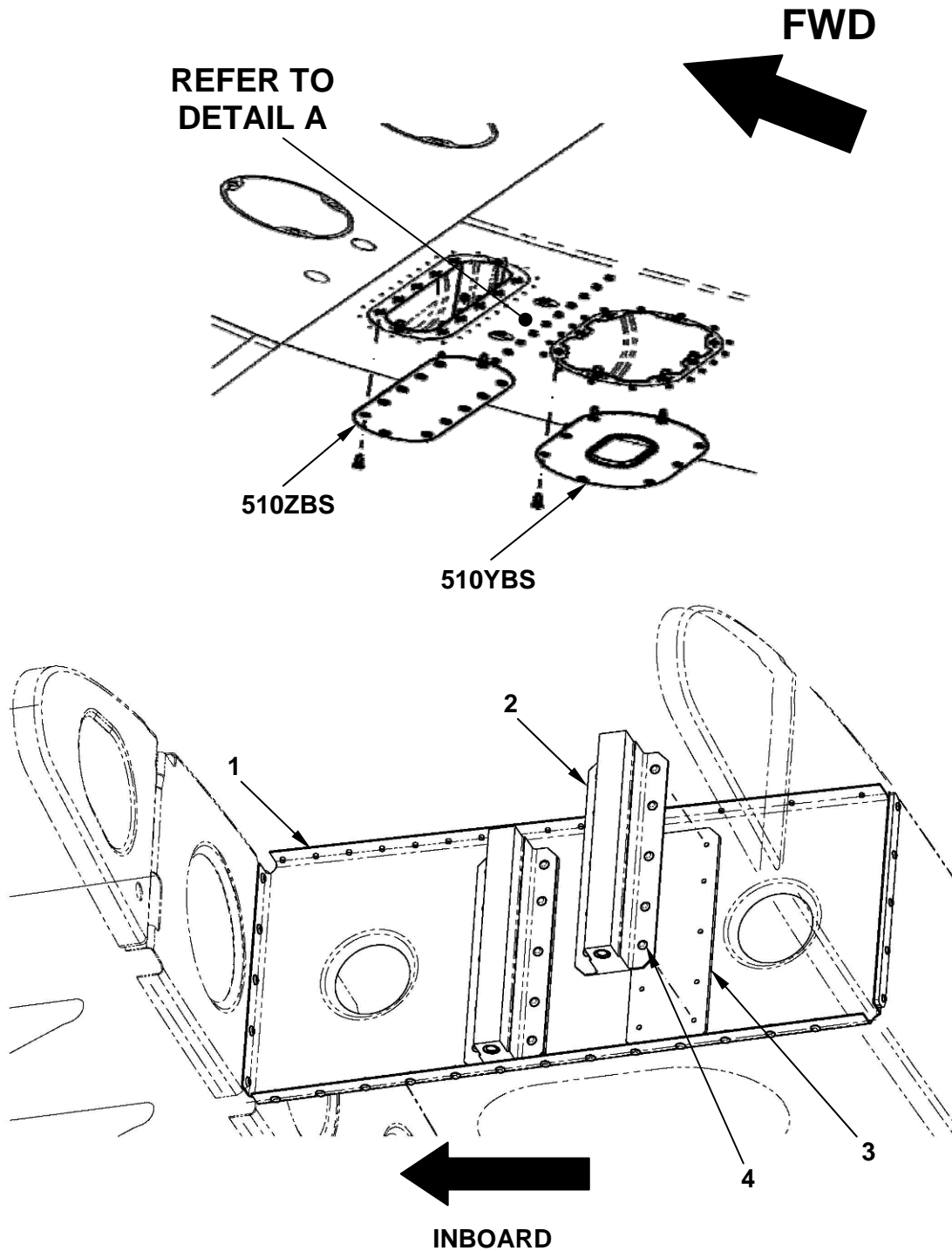
A. Removal (Figure 1)

- (1) Cut safety wire and remove bolts from dovetail mount. Tagging or otherwise identifying dovetail spacer locations on spacers will facilitate reassembly.
- (2) Remove wing access covers 510ZBS and 510YBS.
- (3) Remove fasteners (3) holding intercostal block (2) to the intercostal web (1).
- (4) Remove intercostal block and all shims.
- (5) Reinstall wing access covers 510ZBS and 510YBS. Check wing access location 510YBS for correct cover without cable pass through hole.

B. Installation

- (1) Remove wing access panels 510ZBS and 510YBS.
- (2) Use a small dab of adhesive to hold shims in place per Figure 1. Half circle shim may be installed in place against spar.
- (3) Align intercostal block with previously match drilled holes. With intercostal block inside wing, bolt Soloy installation tool 916T1220-1 to spar and intercostal blocks.
- (4) Install clecos to temporarily hold the block in place and then remove the clecos one by one while installing the fasteners listed in Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A.
- (5) Reinstall wing access panels 510ZBS and 510YBS. Replace access panel screws if the screws are worn or stripped
- (6) Reinstall dovetail mount, spacers, washers and bolts. Torque bolts evenly 80 to 90 in-lb. Safety wire dovetail mount bolts front to rear per MS33540 using wire per MS20995C30.

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DETAIL A

(WING SKIN AND SPAR REMOVED)

- | | |
|----------------------|-------------|
| 1. Intercostal Web | 3. Shim |
| 2. Intercostal Block | 4. Fastener |

FIGURE 1: Intercostal Web and Blocks

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CESSNA 206 WITH WING MOUNT CAMERA
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2. INTERCOSTAL WEB – REMOVAL/INSTALLATION

A. Removal

- (1) Prior to removing the intercostal web, remove intercostal blocks, fasteners and shims. Refer to INTERCOSTAL BLOCKS – REMOVAL/INSTALLATION.
- (2) Remove rivets from upper and lower wing skins holding the intercostal web in place.
- (3) Remove fasteners along both vertical flanges of the intercostal web.
- (4) Remove the intercostal web along with the inboard and outboard shim from wing access panel 510YBS.
- (5) Either reinstall intercostal web or reinstall upper and lower wing skin rivets prior to next flight.
- (6) Replace wing access panels 510YBS and 510ZBS. Check wing access location 510YBS for correct cover without cable pass through hole.

B. Installation

- (1) Remove wing access panels 510YBS and 510ZBS.
- (2) Insert intercostal web and the inboard and outboard shims into wing access panel 510YBS.
- (3) Align fastener holes on intercostal web with upper and lower wing skin. Insert clecos in wing skin to hold intercostal web in place.
- (4) Insert appropriate shims between the intercostal web and the wing rib. Insert clecos to temporarily hold side shims in place. Remove the clecos one by one while installing the fasteners listed in Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A around entire intercostal web.
- (5) Install intercostal blocks, fasteners and shims. Refer to INTERCOSTAL BLOCKS – REMOVAL/INSTALLATION.

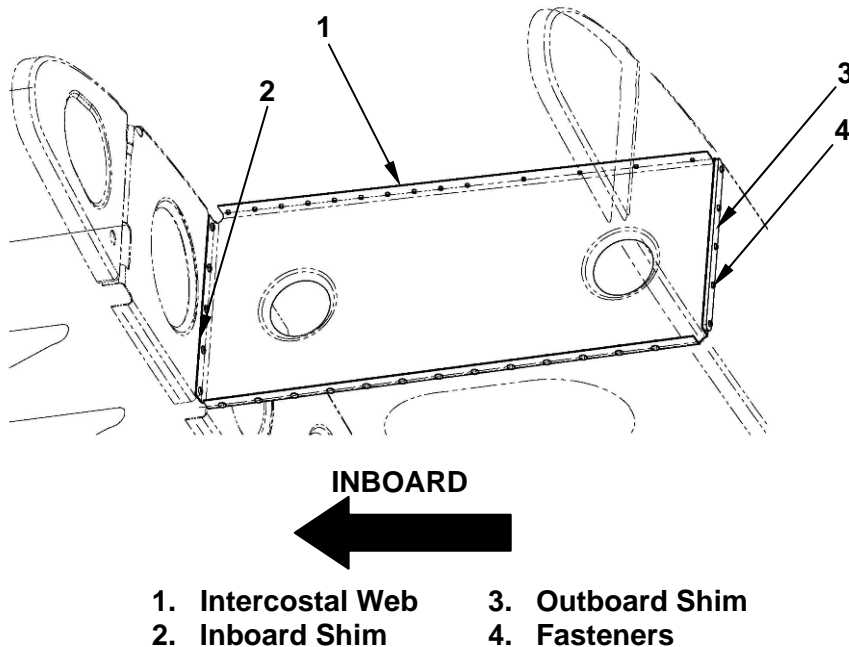


Figure 2: Intercostal Web

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INTERCOSTAL WEB AND BLOCKS – INSPECTION

1. **INTERCOSTAL WEB AND BLOCKS – INSPECTION** (Figure 1)
 - A. Cut safety wire and remove bolts from dovetail mount. Tagging or otherwise identifying dovetail spacer locations on spacers will facilitate reassembly.
 - B. Remove wing access panels 510YBS and 510ZBS.
 - C. Check for loose or missing fasteners (3).
 - D. Inspect the threaded insert in the end of the intercostal block (2) for loose, cross threaded or missing thread. Also check that the insert has not rotated inside the intercostal block.
 - E. Inspect the intercostal block for cracking or other damage.
 - F. Inspect intercostal web and wing ribs (1) for cracking or deflection around rivet locations.
 - G. Prior to reinstalling the dovetail mount and wing access panels, perform an inspection of the intercostal spar blocks. Refer to Section 57-41-01 SPAR BLOCKS – INSPECTION.

NOTE

No repairs are allowed for the intercostal web or blocks. Loose or missing fasteners may be replaced if the fastener hole has not been damaged. Replace intercostal web or block if any damage is found.

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DOVETAIL MOUNT – REMOVAL/INSTALLATION

1. **DOVETAIL MOUNT – REMOVAL** (Figure 1)
 - A. Remove safety wire from 4 bolts (4) holding dovetail mount to underside of wing.
 - B. Remove all 4 dovetail mount bolts and washers (3). Label the location of the four spacers (1) between the dovetail mount (2) and the mounting blocks inside the wing.
2. **DOVETAIL MOUNT – INSTALLATION**
 - A. Reinstall dovetail mount (2), washers (3), spacers (1) and bolts (4). Torque bolts evenly 80 to 90 in-lb.
 - B. Safety wire dovetail mount bolts front to rear per MS33540 using wire per MS20995C30 (Figure 2).

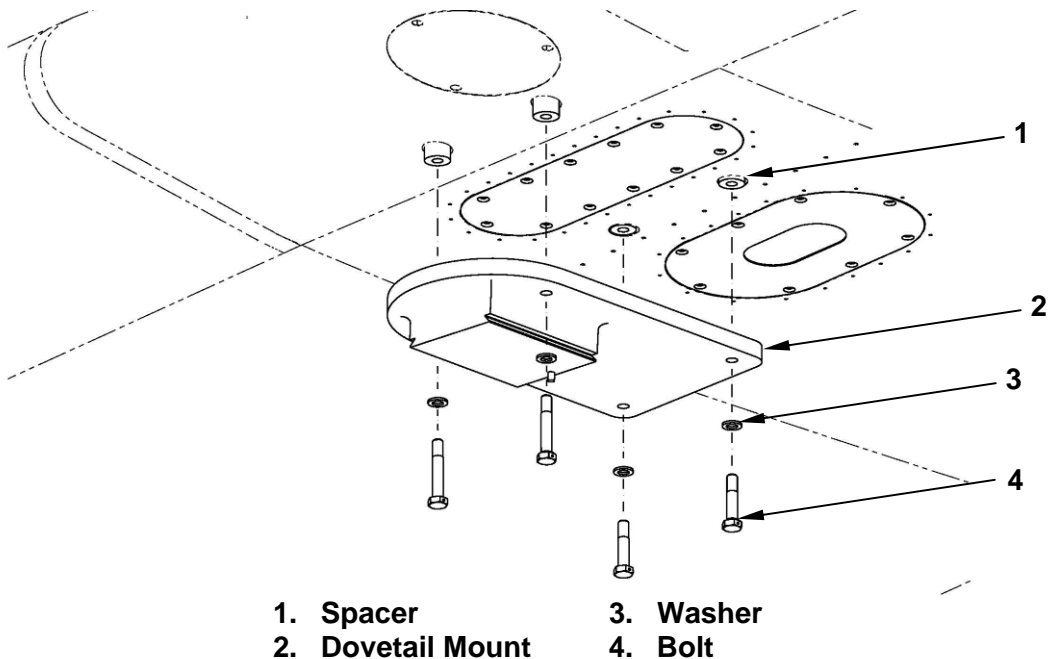


Figure 1: Dovetail Mount Assembly

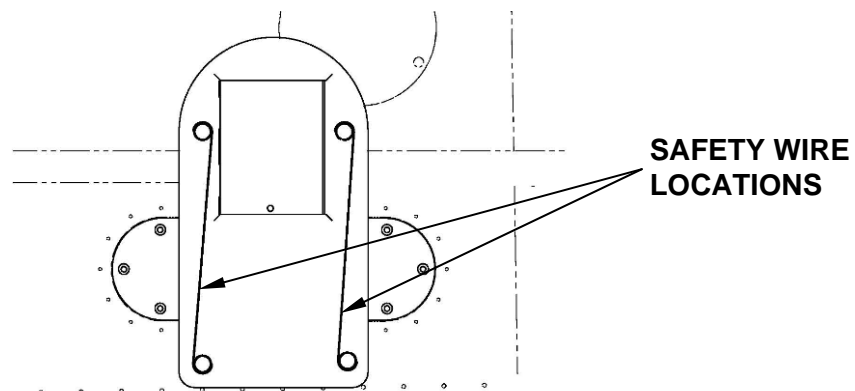


Figure 2: Dovetail Mount Safety Wire

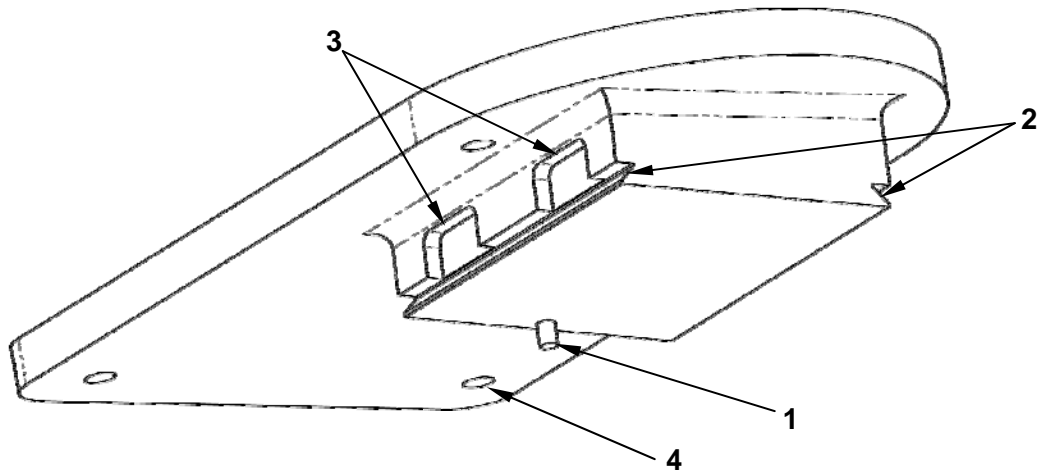
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DOVETAIL MOUNT – INSPECTION

1. **DOVETAIL MOUNT – INSPECTION** (Figure 3)
 - A. Verify that the dovetail fasteners (4) are tight and safety wired.
 - B. Check dovetail stop pin (1) for security and condition.
 - C. Inspect contact surfaces (2) of the dovetail mount for wear, cracks or other deformation.
 - D. Check locking notches (3) for deformation and wear.
 - E. Inspect overall condition of mount and check for cracks around fastener locations and around dovetail block.

NOTE

If performing unscheduled inspection (Chapter 05-50-00), perform dye penetrant inspection on contact surfaces (2) per ASTM-E-1417, type I, method B, level 3 or better. MIL-STD-1907 grade A criteria to apply.



- | | |
|---------------------|---|
| 1. Stop Pin | 3. Locking Notches |
| 2. Contact Surfaces | 4. Dovetail Fastener Locations (4 places) |

Figure 3: Dovetail Mount Inspection Areas

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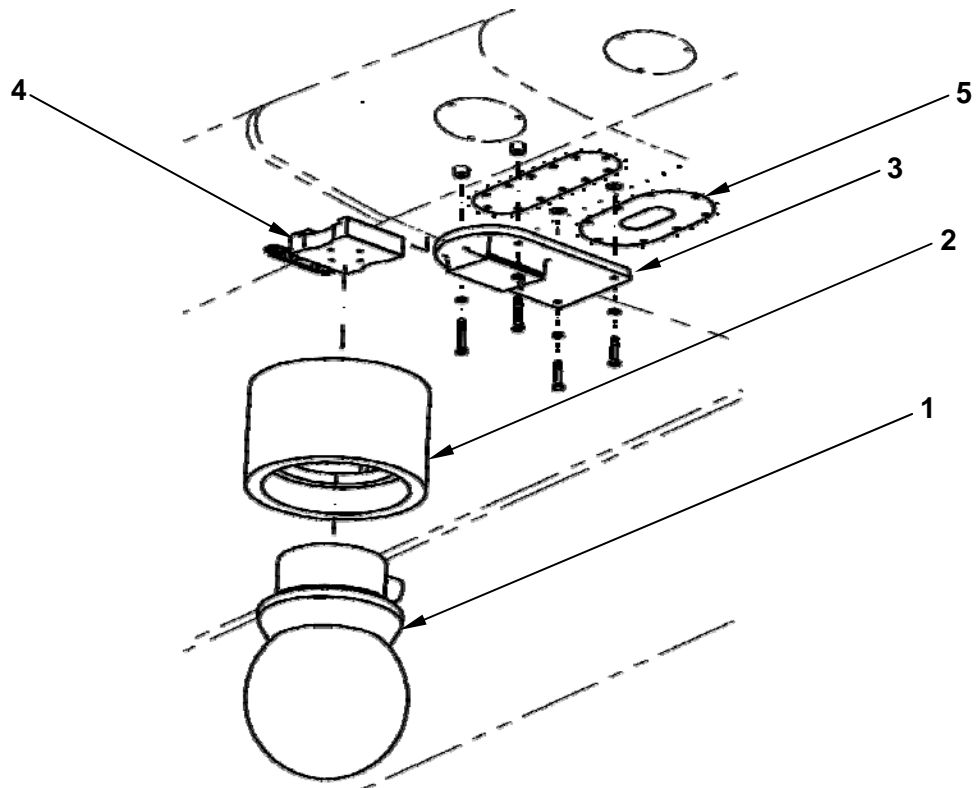
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CAMERA INSTALLATION – DESCRIPTION

1. CAMERA INSTALLATION – DESCRIPTION (Figure 1)

Installation of the wing mount camera requires a few modifications and/or adjustments:

- The correct wing access panel must be installed (5).
- The aileron trim tabs must be adjusted
- The camera (1, 2) must be mounted on the lower dovetail mount (4).
- The lower dovetail mount must be installed on the upper dovetail mount (3).
- The lower dovetail mount must be locked and safety pinned.
- The placards inside the passenger compartment must be properly installed and legible.
- Connect camera control, display and recording devices as required.



- | | |
|--------------------------------|-----------------------------|
| 1. Camera | 4. Lower Dovetail Mount |
| 2. Isolation Collar (Optional) | 5. Wing Access Panel 510YBS |
| 3. Upper Dovetail Mount | |

Figure 1: Camera Installation

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CAMERA INSTALLATION – REMOVAL/INSTALLATION

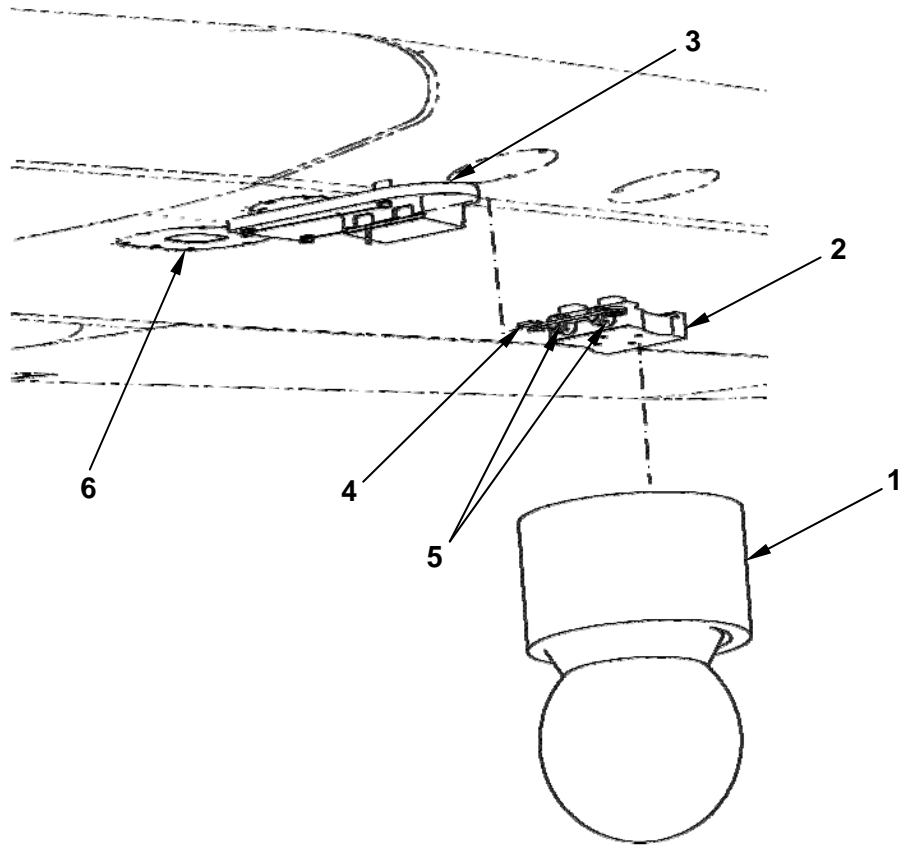
1. CAMERA – REMOVAL

- A. Disconnect all camera electrical connections at camera.
- B. Remove lower dovetail safety pin (4)(Figure 2).
- C. Loosen dovetail locking blocks (5).
- D. With adequate support and a place to set the camera (5) once removed, carefully slide the camera forward off of the upper dovetail mount (3). Do not allow the upper dovetail to hold the weight of the camera while removing from the airplane.
- E. Remove cover at 510YBS (6). Install protective caps on cable ends and coil wire inside wing. Tie cable coil together to prevent cable movement inside wing.
- F. Replace the cover at 510YBS with Soloy part number 916-1341-1 or Cessna part number 120117-1 access cover (no cable hole).
- G. Loosen aileron trim tab adjustment screws (2)(Figure 3) and return aileron trim tab (1) to 0°. Tighten adjustment screws. If any adjustment screw is worn or damaged replace at this time. Refer to Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A.
- H. Update the aircraft weight and balance information in the aircraft log book for the removed hardware.

2. CAMERA – INSTALLATION

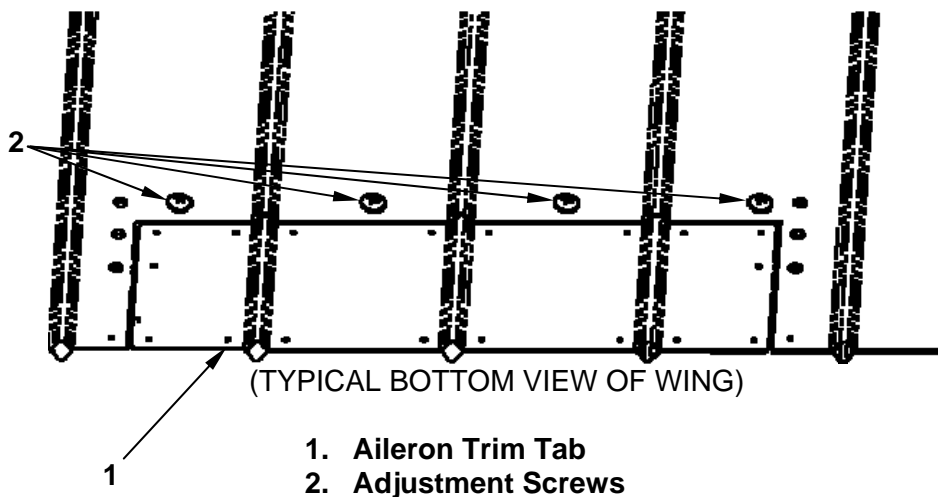
- A. Open the cover at 510YBS (6)(Figure 2). Remove cable ties from cables and remove protective covers from cable ends.
- B. Replace the cover at 510YBS with Soloy part number 916-1340-1 access cover (cable hole). Feed cable through hole in the access cover.
- C. Install camera (1) on lower dovetail mount (2) per the camera manufacturer's instructions. Safety wire all bolts used to hold lower dovetail mount to camera.
- D. Remove safety pin (4) if installed from lower dovetail mount and loosen locking blocks (5) enough to install on upper dovetail mount.
- E. With adequate support under the camera, align the aft end of the lower dovetail mount with the forward end of the upper dovetail mount (3). Slide the lower mount onto the upper mount until the lower mount touches the stop pin. Do not allow the upper dovetail to hold the weight of the camera until the lower dovetail is in it's final location on the upper dovetail.
- F. Tighten dovetail locking blocks into the appropriate notches. Once tight install safety pin.
- G. Connect all camera electrical connections to camera.
- H. Loosen aileron trim tab adjustment screws (2)(Figure 3) and use Soloy tool 916T1016-3 to set the left trim tab from 0° to 9° up and the right trim tab from 0° to 9° down. Left and right trim tabs must be adjusted to equal, but opposite angles. Adjusted trim tab angle is dependant on the size of payload installed at the wing mount location. Tighten all adjustment screws. If any adjustment screw is worn or damaged replace at this time. Refer to Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A.
- I. Update the aircraft weight and balance information in the aircraft log book for the removed hardware.

SOLOY AVIATION SOLUTIONS
CESSNA 206 WITH WING MOUNT CAMERA
 MAINTENANCE MANUAL SUPPLEMENT



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|-------------------------|----------------------------|
| 1. Camera Assembly | 4. Safety Pin |
| 2. Lower Dovetail Mount | 5. Dovetail Locking Blocks |
| 3. Upper Dovetail Mount | 6. Access Cover 510YBS |

Figure 2: Camera Installation



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| 1. Aileron Trim Tab |
| 2. Adjustment Screws |

Figure 3: Aileron Trim Tab Adjustment

CAMERA INSTALLATION – INSPECTION

1. CAMERA INSTALLED – INSPECTION

Prior to each flight with the camera installed, an inspection of the installed components must be performed.

- A. Verify that the camera cables are securely connected to the camera.
- B. Verify that the dovetail locking blocks are tightened in place and that the lock pin is installed.
- C. Verify that the upper dovetail bolts are tight and safety wired.
- D. Check the security of the installed camera pod.
- E. Verify that the left aileron trim tab is secured and adjusted up and the right trim tab is secured and adjusted down. The trim tabs must be set at equal but opposite angles from 0° to 9° dependant on the size of payload installed at the wing mount location.
- F. Verify that the correct placards are installed in the passenger compartment of the aircraft. Refer to S2060A Soloy Wing Mount Camera Pilot's Operating Handbook Supplement Section 2 for the placards and their locations.

2. CAMERA REMOVED – INSPECTION

When the camera is removed verify that the trim tabs are secured at 0° and that the correct cover is installed at wing access panel 510YBS (no camera cable hole).

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CESSNA 206 WITH WING MOUNT CAMERA
MAINTENANCE MANUAL SUPPLEMENT

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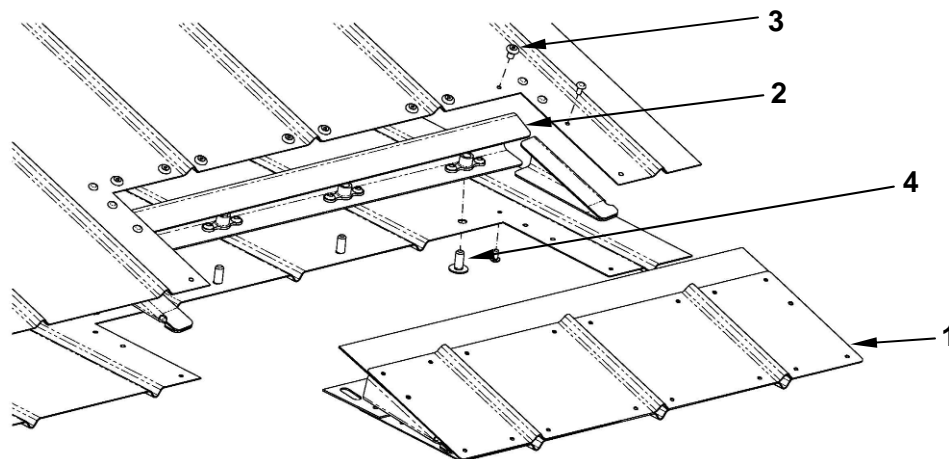
AILERON TRIM TABS – REMOVAL/INSTALLATION

- 1. AILERON TRIM TAB – REMOVAL** (Figure 1)
 - A. Remove aileron trim tab adjustment screws (4).
 - B. Remove upper attachment rivets (3).
 - C. Remove aileron trim tab (1) from rear of aileron.

- 2. AILERON TRIM TAB – INSTALLATION**
 - A. Slip aileron trim tab hinge plates between wing skin and the intercostal frame assembly (2). Verify that the slotted hinge plate is down and that the trim tabs are being installed on the correct side of the aircraft.
 - B. Align the trailing edge of the aileron trim tab to the aileron at with the trim tab at 0°.
 - C. Install aileron trim tab adjustment screws and tighten in place.
 - D. Install clecos along top to hold hinge plate in place and then remove the clecos one by one while installing the correct rivets.
 - (1) If aileron trim tab is being installed for the first time, mark outer rivet locations and remove trim tab from aileron.
 - (2) Drill outer rivet locations with trim tab on bench and reinstall trim tab with clecos holding outer two locations.
 - (3) Install lower 4 trim tab adjustment screws.
 - (4) Drill other 6 rivet locations with trim tab installed on aileron.
 - (5) Clean out metal shavings, then install rivets along upper hinge plate.
 - E. Verify that the aileron trim tabs can move 9° up on the left wing and 9° down on the right wing. The aileron trim tabs do not need to move beyond 0° in the opposite direction.

NOTE

The aileron trim tabs look very similar side to side. Refer to Chapter 57 of the Cessna 206 Wing Mount Camera Illustrated Parts Catalog S2061A for the correct aileron trim tab component locations.



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| 1. Aileron Trim Tab | 3. Rivet |
| 2. Intercostal Frame | 4. Adjustment Screw |

Figure 1: Aileron Trim Tab Installation

SOLOY AVIATION SOLUTIONS
CESSNA 206 WITH WING MOUNT CAMERA
MAINTENANCE MANUAL SUPPLEMENT

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AILERON TRIM TABS – INSPECTION

1. AILERON TRIM TABS – INSPECTION

- A. Check the aileron trim tab and surrounding aileron for loose or missing rivets.
- B. Inspect aileron and trim tab skin for cracking. Pay particular attention to the corner cutouts around the trim tab.
- C. Check the condition of the trim tab adjustment screws. Screws that are worn or damaged should be replaced.
- D. Loosen adjustment screws and check trim tab hinge plates for cracks or permanent deformation. Adjust trim tab to previous setting and tighten adjustment screws.

SOLOY AVIATION SOLUTIONS
CESSNA 206 WITH WING MOUNT CAMERA
MAINTENANCE MANUAL SUPPLEMENT

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