

February 27, 1992

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF-5 AIRCRAFT

SUBJECT: CORROSION OF STAINLESS STEEL FLYING WIRES

Classic Aircraft has received a second report of an inflight failure of a streamline flying wire. In both cases, the laboratory analysis of the break determined the failure resulted from a fatigue crack which originated from a very small region of pitting on the surface of the wire and then progressed until the wire failed. Streamline flying wires are made from type 316 stainless steel, which is slightly susceptible to chlorine corrosion pitting when in contact with substances such as salt or chlorine bleach. Both of the subject aircraft have been operating in a salt air environment.

It is the recommendation of the wire manufacturer and Classic Aircraft Corporation that the wires on all aircraft be cleaned and inspected immediately for condition and that a thorough cleaning and inspection of the wires be made a part of all future inspections of the aircraft. The corrosion pitting appears as a dull gray spot on the shiny polished wire surface and the associated pitting is evident when viewed through a magnifying glass. Any wires found to be pitted should be replaced immediately.


After cleaning and inspecting, the application of a coat of oil or wax will help prevent contact of corrosive elements with the stainless steel.

Please notify Classic Aircraft Corporation of any wires found to be corroded. If you have any questions in regard to your Classic WACO, please contact the Service Manager at Classic Aircraft Corporation.

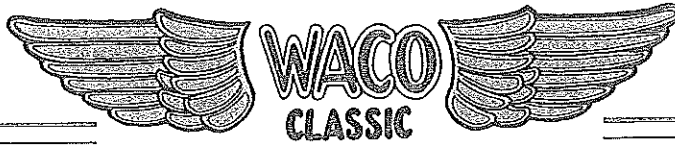
Please insert this letter into the Service Manual of your aircraft so that the people maintaining it will have this information.

Best regards,

CLASSIC AIRCRAFT CORPORATION


Robert N. Edelstein
Service Manager

Classic Aircraft Corporation



April 17, 1996

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF AIRCRAFT

SUBJECT: PROPELLER MOUNTING BOLT TORQUE REQUIREMENTS

A wood aircraft propeller as used on the Classic WACO has the driving torque transmitted from the hub to the prop primarily by the friction between the hub front and rear flanges pressing against the front and rear faces of the prop. This friction is controlled by the tension in the prop hub bolts and is measured by the torque applied to the prop hub nuts. It is imperative that the proper torque be maintained on the hub nuts, as any slippage between the prop and hub will result in damage to the prop with the possibility of separation of the prop from the aircraft.

A characteristic of wood is that it expands and contracts as the moisture content within the wood varies. It is this characteristic that affects the tension in the hub bolts in that as the prop wood dries out, the prop shrinks and the bolts lose their tension. The moisture content of the wood is affected by such things as climatic changes or moving the aircraft from a humid location to a dry location.

Classic Aircraft Corporation recommends checking the prop nut torque, (per the Sensenich installation and maintenance instructions in your aircraft's Service Manual), every few weeks after a change in humidity until it is determined that the wood has stabilized again and, also, with every routine aircraft inspection. Hub bolts with 7/16 threads should be torqued 250 to 300 inch-lb., and hub bolts with 5/8 threads should be torqued 300 to 350 inch-lb.

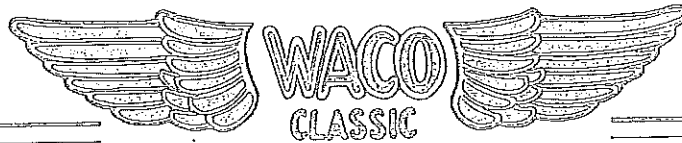
We recommend that this letter be inserted into your WACO's Service Manual, next to the other service letters, so that this information is available to the mechanics doing future inspections.

If you have any questions about this matter, please feel free to call.

Best regards,


Robert N. Edelstein
General Manager

Classic Aircraft Corporation



May 17, 1996

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF AIRCRAFT

SUBJECT: OVERHEATING OF EXHAUST PIPES WITHIN THE HEAT EXCHANGERS

Some Classic WACOS have shown indications of the exhaust pipe within the heat exchanger muffers running at above normal temperatures. Running at higher temperatures tends to cause distortion and shortens the service life of the exhaust pipe. When carb. heat is in use, the pipe is cooled by the induction air flowing through the muff, but when carb. heat is off, the cooling of the pipe relies on ram pressure of the air within the cowl to cause an air flow through the muff and out through an outlet in the bottom of the carb. airbox.

The outlet hole in the bottom of the airbox is small for the amount of air trying to flow through the muffers. A simple modification to enlarge the outlet hole, as shown on Classic print 51041 (Carb. Airbox Mod.), will help relieve this restriction. We recommend that this modification be made to all classic WACOS at your convenience as it should result in a longer service life for your heat exchangers.

To accomplish this modification, saw off the flange flush with the bottom of the airbox. Then locate the center point of the 2" hole, as shown on Classic print 51041, and drill a pilot hole to match the hole saw to be used. Using a 2" hole saw with a short pilot, (so as not to damage the internal parts of the airbox), saw a hole through the bottom of the airbox. Clean all chips from the airbox and repaint the raw edges of the airbox to prevent corrosion.

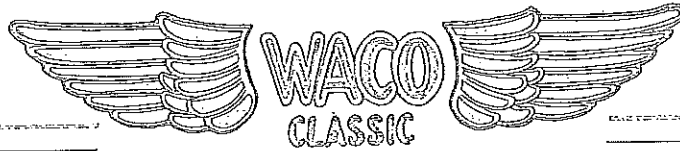
If you have any questions about this matter, please feel free to call.

Best regards,


Robert N. Edelstein
General Manager

Enclosure - Classic Print 51041

Classic Aircraft Corporation



May 21, 1991

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF-5 AIRCRAFT

SUBJECT: EQUALIZE FIT OF LOWER COWL

Due to the angle of the #5 cylinder exhaust rocker box cover, this cowling felt pad takes most of the pressure of the bottom cowl. To equalize the cowl fit, add another felt pad to the five remaining pads in the bottom cowl. This will let all felt pads rest against the engine cylinders.

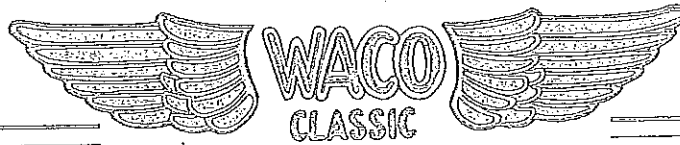
Clean the old felt pads and glue the new felt pads to the existing pads centered in the rocker box cavity.

Best regards,

A large, fluid handwritten signature in cursive script that reads "Lloyd M. James".

Lloyd M. James
Service Manager

Classic Aircraft Corporation



Service Alert

June 3, 1996

TO: ALL OWNERS AND OPERATORS OF CLASSIC YMF AIRCRAFT

SUBJECT: CABANE STREAMLINE WIRE FAILURE

The wings of the Classic Waco rely on the truss formed by the spars, struts and streamline wires to support the aircraft and also to keep the wing panels rigged to the proper relationship with the other parts of the aircraft. It was brought to our attention that the pilot of an original Waco F2 experienced a virtually uncontrollable aircraft after the failure of one of the cabane wires.

Classic Aircraft recommends checking your aircraft to be sure that the wires are not notched or scratched where they pass through the combing and also where the wires cross below the combing. Any notching or scratches is cause for rejection and should be replaced immediately (Ref.: Service Alert letter of 2-27-92 Corrosion of Flying Wires in your service manual).

We also recommend opening the holes in the combing to 1/4 inch clearance completely around the wires to assure the wires will never touch. Be sure to shield the wire when working on enlarging the holes as any scratch will render the wire unusable.

We recommend that this letter be inserted into your Waco's service manual, next to the other service letters, so that this information is available to the mechanics doing future inspections.

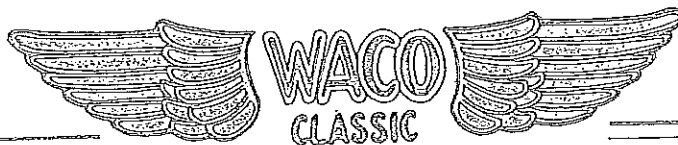
If you have any questions about this matter, feel free to call.

Best regards,

A handwritten signature in cursive script that reads "Robert Edelstein".

Robert Edelstein
General Manager

Classic Aircraft Corporation



September 25, 1989

TO: All owners of Classic WACO Serial No. F5001 thru F5022

SUBJECT: Cockpit Ventilation

Some aircraft operating in warmer climates were found to be warm in the front cockpit. Classic Aircraft has incorporated some changes in its later aircraft which help this condition. These changes are readily retrofitable to all earlier aircraft and does reduce the temperature in both cockpits.

The changes consist of baffle fabric seals installed at the lower firewall sides to stop the flow of warm air from the rear cowl area, back through the wing fairings to the cockpit area, (see Sketch 50905M); and, the addition of two vent holes in the cockpit divider panel to allow cooler air to flow from the rear cockpit into the lower pressure area of the front cockpit, thus providing air flow through both cockpits, (see Sketch 50097M). Under certain conditions it is desirable to close the vent holes, therefore Classic has available a hole cover which is held in place with a single quarter turn fastener.

The conditions for opening or closing the vent holes are as follows:

Warm weather with front cockpit open - open vents to provide air flow between cockpits.

Warm weather with front cockpit covered - close vents to prevent warm air flowing from front cockpit aft to lower pressure area of rear cockpit.

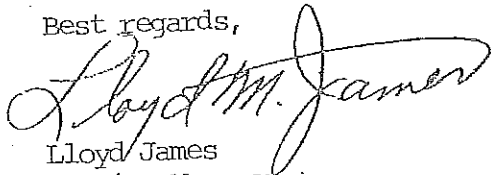
Cold weather with front cockpit open - close vents to prevent flow of cold air between cockpits.

Cold weather with front cockpit covered - open vents to allow warm air to flow from front cockpit to rear cockpit.

The vent kit is identified as Kit #50097M and is priced at \$67.85. The firewall seal kit is identified as Kit #50905M and is priced at \$48.40.

If your aircraft is not already equipped with the above items, either or both kits may be ordered from the Service Department of Classic Aircraft Corporation.

Best regards,


Lloyd James
Service Manager

Enclosures

Classic Aircraft Corporation

INSTRUCTIONS FOR INSTALLATION OF FIREWALL SEAL

KIT #50905M

The purpose of this firewall seal is to stop the flow of warm air from the area forward of the firewall back through the landing gear fairing to the cockpit area. The opening to be sealed is located at the forward end of the landing gear fairing and can be seen by opening the cowl side door and looking down and back through the door opening. Notice that the opening is widest at the back and tapers to a point at the front.

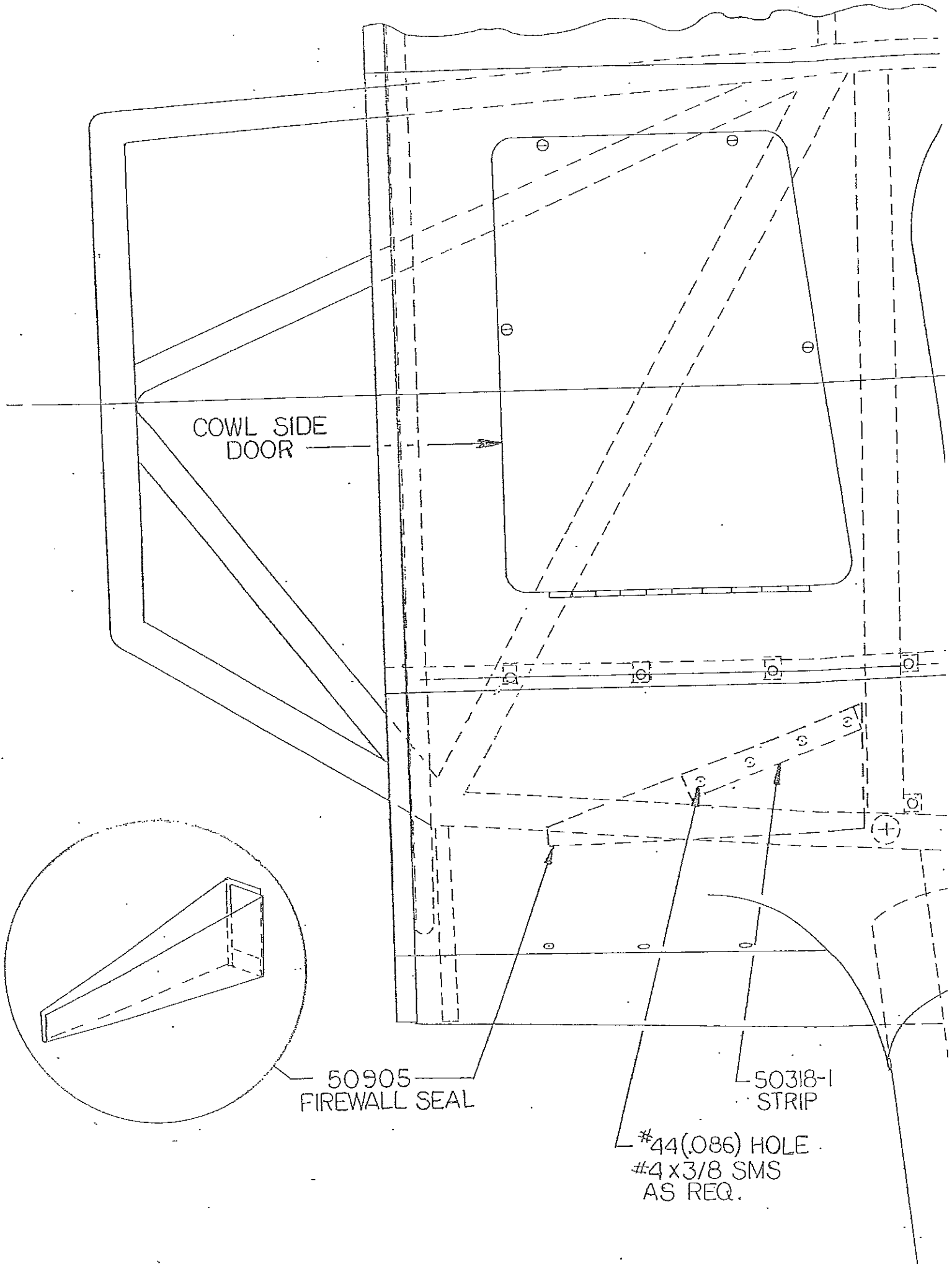
Thoroughly clean the firewall area where the seal will be positioned to assure good adhesion of the cement to hold the seal in place.

Fold the baffle fabric seal to form a triangular shaped open top box and slide into place with the heel of the box against the rear firewall and the point forward. Push the point down far enough to completely close the opening into the fairing. When the seal is properly positioned, cement the top edge and rear tabs of the seal to the firewall only, using 3M #8046 adhesive. When the cement has set, secure the inboard upper edge of the seal to the firewall with the 50318-1 strip, attaching it with #4 x 3/8 sheet metal screws as shown on the attached sketch. It may be necessary to trim the length of the strip to fit. Securing the seal only to the firewall allows removing the belly skin and fairings without disturbing the seal installation.

Repeat the above procedure to install the seal on the other side of the firewall. Make appropriate log book entry to complete the installation.

Kit Contents:

- 1 Instruction Sheet
- 1 Sketch 50905M
- 2 50905 Firewall Seal
- 2 50318-1 Strip
- 8 #4 x 3/8 Sheet Metal Screws



COWL SIDE DOOR

50905 FIREWALL SEAL

50318-1 STRIP

#44(.086) HOLE
#4 x 3/8 SMS
AS REQ.

INSTRUCTIONS FOR INSTALLATION OF COCKPIT DIVIDER VENT

Kit #50097M

The purpose of this modification is to provide a route for air to flow between the cockpits through the cockpit divider thus venting both cockpits. The modification consists of adding a vent hole in both lower corners of the cockpit divider panel just forward of the pilot's rudder pedals. This work can be accomplished from the rear cockpit by lowering the seat to the bottom position and removing the seat bottom cushion. The rudder pedals can be tied back to provide more working space.

Prepare a template for locating and drilling pilot holes for the vent hole end radius and Camloc receptacle. If a chassis punch is to be used to make the vent holes, then only the center holes need to be located. If the hole is to be routed out, then it will be desirable to have the hole outline traceable. The template can be made by contact cementing the paper pattern included in this kit to a piece of flat sheet stock, trimming to the pattern outline and drilling the pilot holes.

Locate the template on the lower outboard corner of the cockpit divider as shown on attached sketch 50097M. Using a #40 drill, drill one pilot hole and secure template with a cleco. Then drill remaining pilot holes and trace hole outline. Do the same to the other side of the divider. Enlarge the Camloc center hole to 1/2 inch. Enlarge the vent pilot holes to match the chassis punch to be used. Use the chassis punch to punch the end radius on each end of the vent holes. Route out the remaining material and deburr to complete the hole preparation.

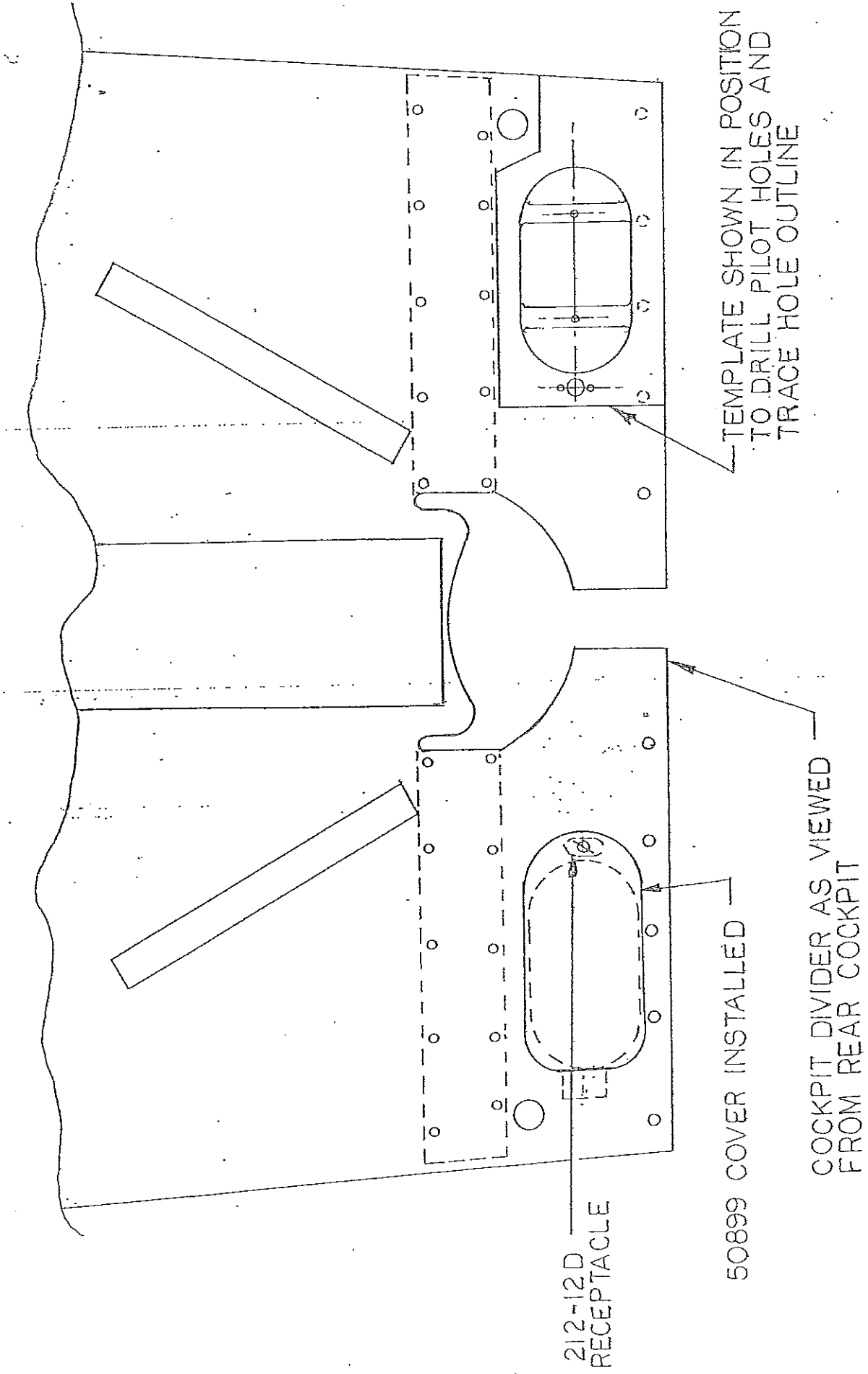
Using two (2) AN426AD3-4 rivets, rivet the 212-12D Camloc receptacle to the forward side of the divider so that the Camloc on the hole cover can be installed from the rear cockpit. The 50899 hole covers can now be installed by inserting the cover tab through the vent hole and engaging the Camloc. Thoroughly clean the area of metal chips, etc., untie the rudder pedals and replace the seat cushion to complete the installation.

To complete the modification, insert the new page describing the operation of the vents into the flight manual and make an appropriate log book entry.

Kit Contents:

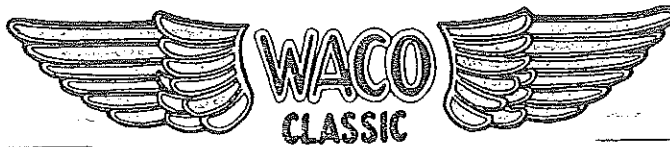
- 1 Instruction Sheet
- 1 Sketch 50097M
- 1 Vent Hole Template
- 2 50899 Cover
- 2 212-12D Camloc Receptacle
- 4 AN426AD3-4 Rivet

COCKPIT DIVIDER VENT LOCATION



SKETCH 50097M

REV. A



November 5, 1990

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF-5 AIRCRAFT

SUBJECT: CORROSION OF STAINLESS STEEL FLYING WIRES

The operator of a Classic WACO YMF-5 experienced an in-flight failure of a streamline flying wire. That wire was returned to the manufacturer for a laboratory analysis of the break. The conclusion was that the failure occurred due to a small region of pitting on the leading edge of the tie rod, which provided an initiation site for a fatigue crack, which progressed until the wire failed. The report points out that streamline tie rods are made from type 316 stainless steel, which is slightly susceptible to corrosion pitting when in contact with substances such as sea water or chlorine bleach. The subject aircraft has been operating in a salt air environment.

It is the recommendation of the wire manufacturer and Classic Aircraft Corporation that the wires on all aircraft be cleaned and inspected immediately for condition and that a thorough cleaning and inspection of the wires be made a part of all future inspections of the aircraft. The corrosion pitting appears as a dull gray spot on the shiny polished wire surface and the associated pitting is evident when viewed through a magnifying glass. Any wires found to be pitted should be replaced immediately.

After cleaning and inspecting, the application of a coat of oil or wax will help prevent contact of corrosive elements with the stainless steel.

Please notify Classic Aircraft Corporation of any wires found to be corroded. If you have any questions in regard to your Classic WACO, please contact the Service Manager at Classic Aircraft Corporation.

Best regards,

A handwritten signature in cursive script, appearing to read "Lloyd M. James", is written over a horizontal line.

Lloyd M. James
Service Manager

Classic Aircraft Corporation



December 5, 1995

TO: ALL OWNERS AND OPERATORS OF CLASSIC WACO YMF-5 AIRCRAFT

SUBJECT: COMPLIANCE WITH PROPER DOCUMENTATION OF ENGINE MANUFACTURING INSPECTION REQUIREMENTS

It has been brought to our attention that an operator of a Jacobs powered aircraft, not a Classic build WACO, received a citation and was fined for non-compliance with a Jacobs inspection procedure. In this case the pilot made a safe precautionary off-airport landing with no damage or harm to anyone. The problem which prompted the precautionary landing was found to be the separation of a cylinder from the crankcase due to failed cylinder hold-down studs.

During the FAA investigation it was noted that the aircraft records did not show compliance with the requirements of Jacobs Operators Manual, page 50, paragraph 6, which requires engine nuts to be checked for tightness every 100 hours, with reference made to the table of limits for proper tightening torque where specified. (Note in the Jacobs Torque Chart, Ref. No. T202 - Cylinder Hold-Down Nuts 250-300 in. lbs.)

I would also like to point out that in the Classic Aircraft Corporation WACO Inspection Report, Section B Powerplant, Item 26 does address cylinder nuts and if this form is used, properly executed and made a part of the aircraft records, it should be satisfactory documentation of compliance with this item. A sample of this inspection form is in your Classic WACO Service Manual.

The purpose of this letter is to remind you of the requirement to inspect your engine to the Jacobs recommendations in your Operators Manual and also to provide you with a copy of the Torque Limit chart copied from the Jacobs Overhaul Manual.

We recommend that the torque chart be inserted into your WACO Service Manual immediately following the sample inspection form and that this letter be inserted next to the Flying Wire Service Letter, so that this information is available to the mechanics doing future inspections.

If you have any questions about this item, please feel free to call.

Best regards,

A handwritten signature in cursive script that reads "Bob Edelstein".

Robert N. Edelstein
Service Manager

Enclosure

Classic Aircraft Corporation