CHRISTEN *

PRODUCT LETTER

No: 000317

CHRISTEN INDUSTRIES, INC.
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By: FLC Date: 06-03-83 Page: 1 of 1

Send To: 904 FUSELAGE KIT

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CHRISTEN INDUSTRIES INC.
1048 SANTA ANA VALLEY RD.
HOLLISTER, CA 95023

Subject: INSPECTION OF LANDING GEAR SUPPORT STRUCTURE ON FUSELAGE OF EAGLE II AIRCRAFT

*** IMPORTANT! RESPONSE TO THIS LETTER MAY BE CRITICAL FOR FLIGHT SAFETY. ***

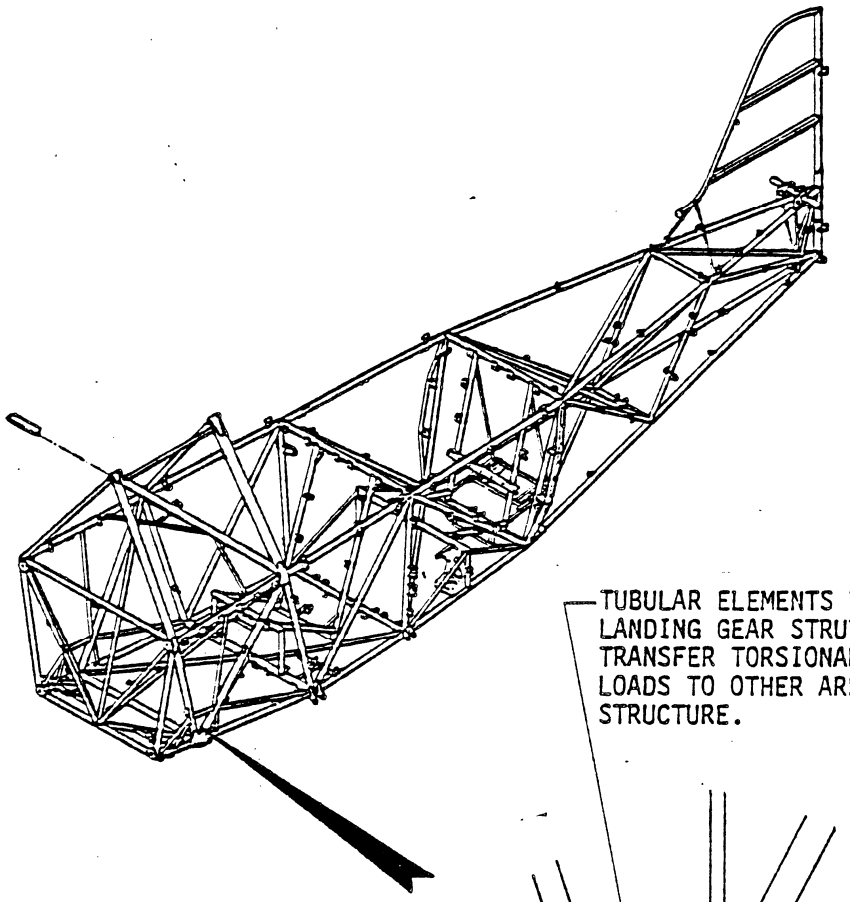
The landing gear strut on the Eagle II aircraft is a single piece of AA 2024 aluminum heat treated to T6 condition. It is attached to the tubular fuselage structure on both sides with bolts and clamping plates. The clamping area of the fuselage structure is heavily reinforced with tubular elements which transfer bending and torsional loads to other areas of the structure. As a part of the landing gear design the fuselage structure was statically tested and found to exceed by more than 200% the requirements of FAR Part 23.

The landing gear system has been tested for more than four years on the Eagles Team and factory demonstrator aircraft, all of which have more than 1000 hours of flight time and hundreds of landings under a great variety of conditions. Regular inspections of these aircraft indicate that the landing gear strut and the associated fuselage structure are performing well and as expected with no evidence of corrosion, wear, or structural problems.

An Eagle builder recently reported discovering cracks in the lower longerons of his fuselage structure immediately adjacent to the landing gear clamping area. His aircraft has less than 200 flight hours and he does not recall any unusual usage or landing situations which could have overstressed the landing gear system. We cannot account for this apparent structural failure, and it conflicts with inspection reports provided by other Eagle aircraft operators and with factory testing and inspection experience. The aircraft will be repaired at the factory under warranty, and information from field inspections of other Eagle II aircraft will be reviewed carefully by factory personnel to verify that this is the only incident of its kind.

ALTHOUGH WE THINK IT IS UNLIKELY THAT CRACKS WILL BE FOUND IN OTHER EAGLE II AIRCRAFT, ALL AIRCRAFT which are finished and flying SHOULD BE INSPECTED for cracks in the tubular elements of the fuselage structure adjacent to the landing gear attachment PRIOR TO THE NEXT FLIGHT. Please refer to the area identified on the enclosed Engineering Sketch X-90165. This inspection should also be performed at the regular intervals specified in Section 8 (Maintenance) of the 924 Flight Kit product manual. Any evidence of wear, cracking, or other irregularities should be reported immediately to Frank Christensen, Ivan Clede, or Dan Beck at the Christen factory.

ENCLOSURES: ENGINEERING SKETCH X-90165



TUBULAR ELEMENTS WHICH SUPPORT LANDING GEAR STRUT AND WHICH TRANSFER TORSIONAL AND BENDING LOADS TO OTHER AREAS OF FUSELAGE STRUCTURE.

INSPECT FOR CRACKS ON ALL SURFACES OF ALL TUBULAR ELEMENTS IN THIS AREA ON BOTH SIDES OF FUSELAGE AS A PART OF REGULAR INSPECTIONS.

LANDING GEAR STRUT

UNLESS OTHERWISE SPECIFIED: TOLERANCES: FRAC.± 1/64 DEC. XXX± .005 ANGLES± 0° 30' DIMENSIONS IN INCHES DO NOT SCALE DRAWING	MATERIAL AND CONDITION: NOTED			CHRISTEN INDUSTRIES HOLLISTER, CALIFORNIA	
	FINISH: NONE			ENGINEERING SKETCH	
	DRAWN BY: I. CLEDE	DATE: 5-31-83	PROJECT: EAGLE II AIRCRAFT	TITLE: GEAR SUPPORT INSPECTION	
	APPROVED BY: [signature]	DATE: 5-31-83		CODE: PA	NO.: X- 90165	ISSUE:

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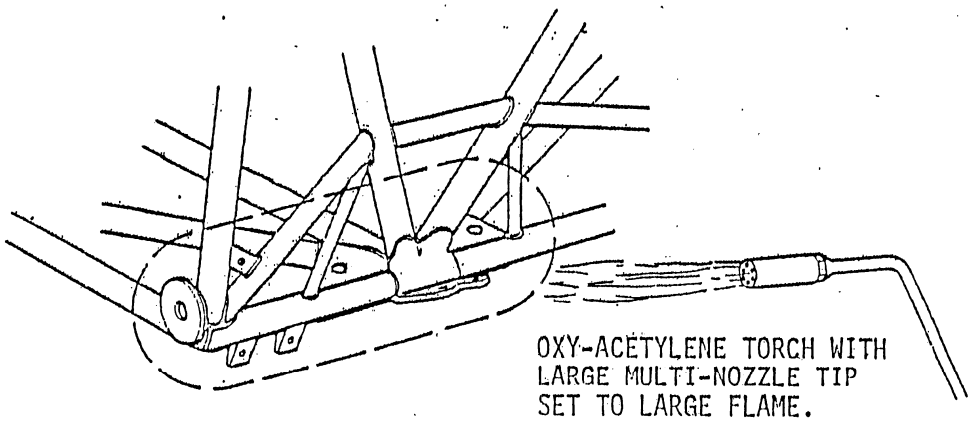
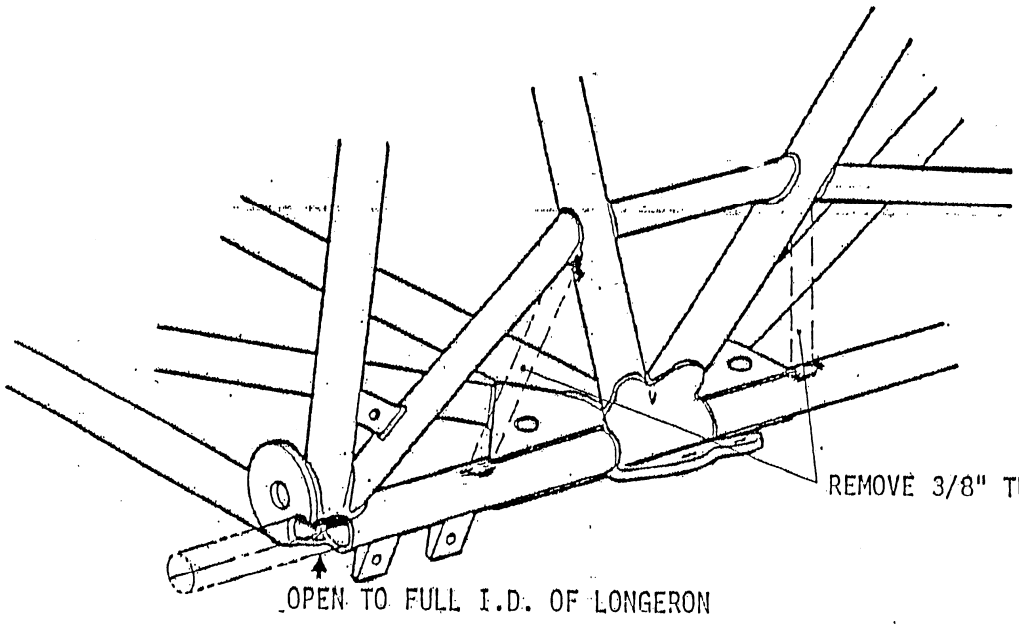


OXY-ACETYLENE TORCH WITH LARGE MULTI-NOZZLE TIP SET TO LARGE FLAME.

1st STEP: HEAT LOWER LONGERON AND ASSOCIATED TUBING CLUSTERS AND CLAMP PLATES TO CHERRY RED COLOR AND ALLOW TO SLOWLY AIR COOL TO ANNEAL. PAINT WILL OXIDIZE AWAY, LEAVING A LIGHT GRAY COLOR.



REMOVE 3/8" TUBES

OPEN TO FULL I.D. OF LONGERON

2nd STEP: CUT AND GRIND FORWARD END OF LOWER LONGERON TUBING CLUSTER AND ENGINE MOUNT WASHER FROM CENTERLINE OF LOWER LONGERON TO FULL INSIDE DIAMETER OF LOWER LONGERON.

CUT OUT VERTICAL 3/8 IN. DIA TUBING MEMBERS (DASHED OUTLINE) AND GRIND AWAY REMAINING TUBING STUBS AND WELD AREAS AT BOTH ENDS TO PRODUCE SMOOTH TUBING SURFACES.

NOTE: ALL STEPS SHOULD BE PERFORMED ON BOTH SIDES OF THE FUSELAGE STRUCTURE.

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	FINISH: NONE			ENGINEERING SKETCH
	DRAWN BY: I. CLEDE	DATE: 6-8-83	PROJECT: EAGLE II AIRCRAFT	TITLE: FUSELAGE LONGERON REPAIR
	APPROVED BY: [signature]	DATE: 6-8-83		CODE: PA NO.: X- 90169 1 of 3 ISSUE: B

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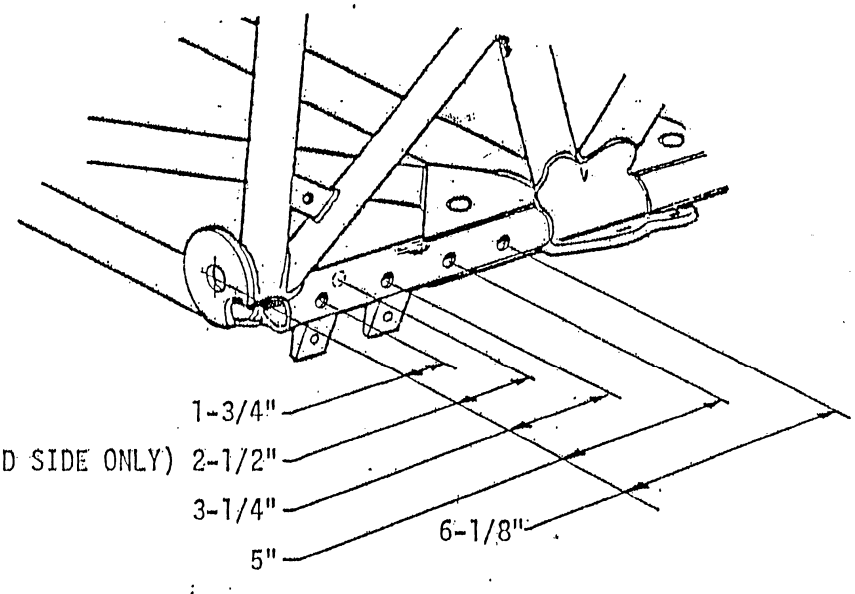
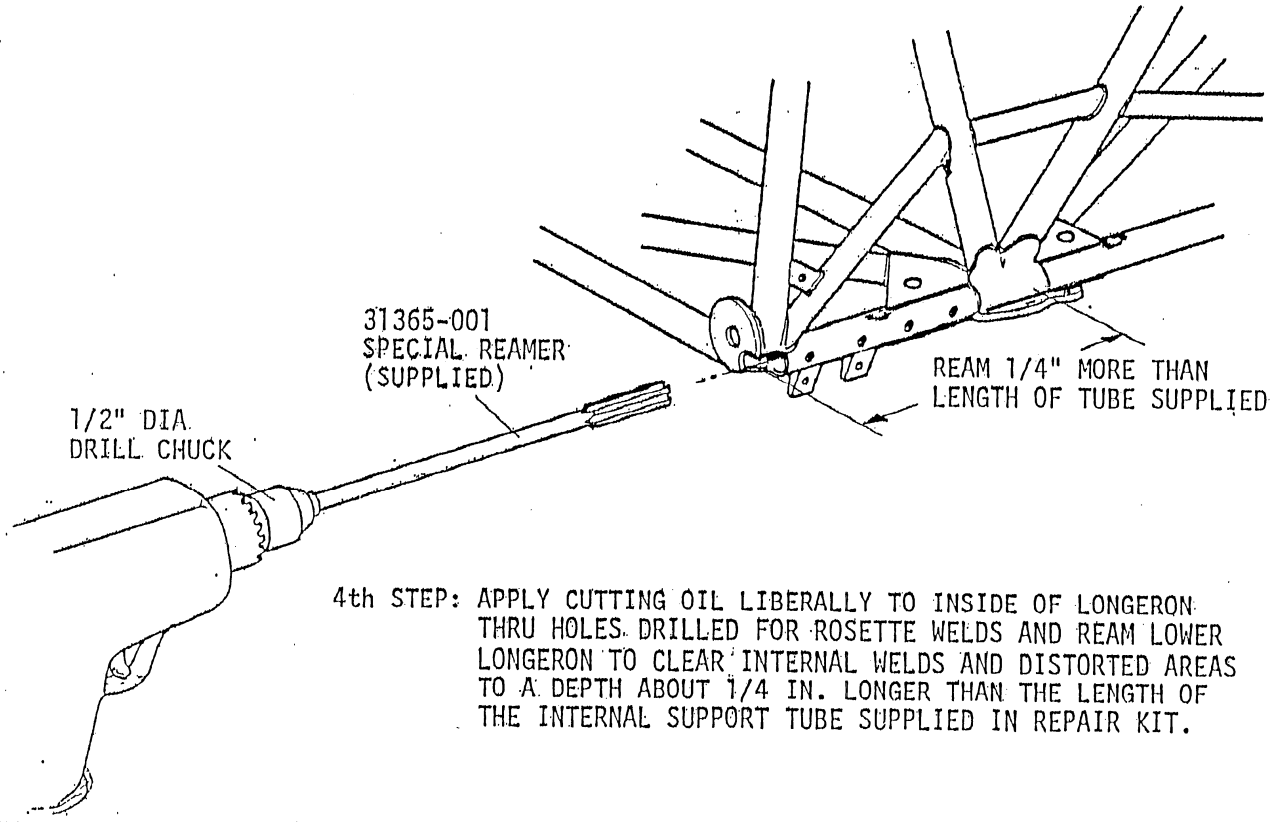


3rd STEP: DRILL FIVE 1/4 IN. DIA HOLES IN LOWER LONGERON FOR ROSETTE WELDS.



4th STEP: APPLY CUTTING OIL LIBERALLY TO INSIDE OF LONGERON THRU HOLES DRILLED FOR ROSETTE WELDS AND REAM LOWER LONGERON TO CLEAR INTERNAL WELDS AND DISTORTED AREAS TO A DEPTH ABOUT 1/4 IN. LONGER THAN THE LENGTH OF THE INTERNAL SUPPORT TUBE SUPPLIED IN REPAIR KIT.

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			CODE: PA NO.: X- 90169 2 of 3 ISSUE: C
			MTL STORES REF: 70115(pg 2/3

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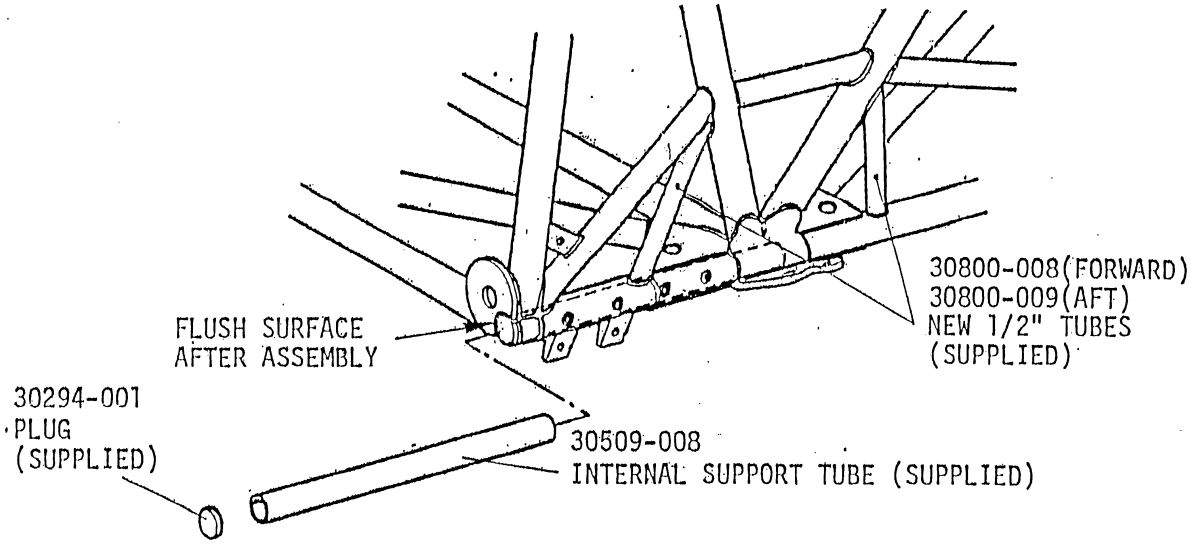
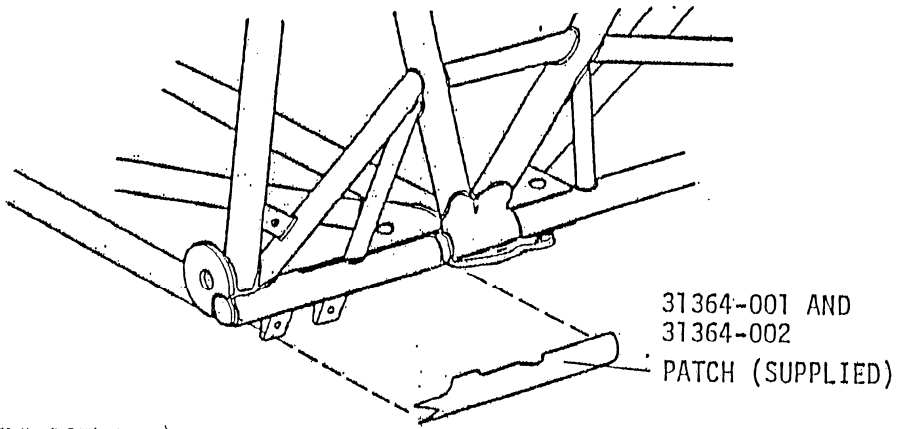


5th STEP: DRIVE INTERNAL SUPPORT TUBE INTO LONGERON JUST FAR ENOUGH SO THAT PLUG WHICH FITS ON FORWARD END OF SUPPORT TUBE IS FLUSH WITH FRONT SURFACE OF ENGINE MOUNT WASHER.

TACK-WELD AT EACH HOLE IN LOWER LONGERON AND AROUND PLUG AND FORWARD END OF SUPPORT TUBE. ROSETTE WELD EACH HOLE IN LONGERON, WELD COMPLETELY AROUND CRACK IN LONGERON, AND WELD COMPLETELY AROUND PLUG IN FORWARD END OF SUPPORT TUBE.

TACK-WELD AND THEN WELD NEW 1/2 IN. DIA VERTICAL TUBES SUPPLIED IN REPAIR KIT



6th STEP: TACK-WELD PATCH. HEAT AND FORM PATCH AS NECESSARY TO MAINTAIN CLOSE CONTACT WITH LONGERON. WELD COMPLETELY AROUND OUTER EDGE. GRIND OR FILE WASHER AREA SMOOTH AND FORWARD OUTER SURFACE OF PATCH TO CLEAR FIREWALL MOUNTED FUSELAGE SIDE PANELS. RE-HEAT ALL PARTS TO CHERRY RED COLOR TO ANNEAL AND RELIEVE STRESSES. REPAINT OXIDIZED AREAS TO PREVENT CORROSION.

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