

VAN'S AIRCRAFT, INC.

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Service Letters and Bulletins: <http://www.vansaircraft.com/public/notices.htm>

IMPORTANT!

June 6, 2008

Re: Service Bulletin 08-6-1 applicable to all Van's RV-10 kits and completed aircraft

Service Bulletin 08-6-1 was issued in June of 2008 (see www.vansaircraft.com). The service bulletin details inspection and reinforcement procedures for the F-1010 bulkhead in the RV-10.

The necessary parts and instructions to comply with this service bulletin have been mailed to all RV-10 builders/owners of record in June of 2008. If you have received this information in the mail and are no longer the owner of an RV-10 Kit or RV-10 flying aircraft, please forward this safety information and parts to the current owner and/or contact Van's Aircraft with contact information for the current owner.

If you are viewing this information and have not received the parts to comply with the service bulletin by July 1, 2008, please contact Van's Aircraft. Van's will supply the necessary parts to comply with SB 08-6-1 at no charge.

Thank you,
Van's Aircraft, Inc.

Mailing started June 6, 2008 to all RV-10 builders customer #'s 40866 and below. Posted on Van's website and vansairforce.com the week of June 9, 2008.

Scott Risan, General Manager

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Service Bulletin 08-6-1

Date: June 1, 2008

Subject: F-1010 bulkhead reinforcement

Affected Models: RV-10

Required Action: Inspect F-1010 bulkhead for cracks
Install F-1010C bulkhead reinforcing doublers

Time of Compliance: Inspection of F-1010 bulkhead within the next 5 flight hours and at 25 hour intervals until the next annual condition inspection and...
Installation of F-1010C doublers at or before the next annual condition inspection. (Inspection requirement may be terminated after F-1010C doublers are installed.)

Synopsis: A crack was discovered on the F-1010 bulkhead on Van's RV-10 demonstrator aircraft at ~500 hours time in service. The F-1010 bulkhead is integral in the attachment of the forward spar of the horizontal and vertical stabilizers. Inspection of the F-1010 bulkhead should be accomplished in order to determine the integrity of the bulkhead. If no crack is found, recurrent inspections should be accomplished until F-1010C doublers are installed during the next annual condition inspection. If a crack is found during inspection, F-1010C doublers should be installed prior to further flight in accordance with the instructions outlined in this bulletin.

Method of Compliance:

Inspection: *If F-1010C doublers have not already been installed, an inspection of the F-1010 bulkhead should be performed within the next 5 flight hours and at no greater than 25 hour intervals thereafter.* Remove the F-1094B empennage fairing and use a mirror and flashlight to carefully inspect the upper outboard corners of the F-1010 bulkhead for cracks. If no cracks are found, the fairing can be replaced and the aircraft flown for another 25 hours or until the next annual condition inspection, whichever is sooner. F-1010C doublers should be installed in accordance with the instructions outlined in this bulletin at or before the next annual condition inspection.

Installation of F-1010C doublers: See Instructions and associated Figures 1-5.

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Instructions for Installation of F-1010C Doublers:

Step 1: Remove the empennage from the tailcone. Note hardware type and location for reinstallation.

If two people are available, time can be saved by removing the horizontal stabilizer and elevators as an assembly.

- a) Crawl inside the tailcone (lay boards across the tailcone frames) and remove the bolts and nuts securing the MW-3M Rod Ends to the F-1095B Trim Bellcrank. See Figure 1.
- b) Remove the MW-3M Rod Ends from the CT Q-43 Elevator Trim Cables. For later reassembly, note the number of turns each rod-end is unthreaded from the elevator trim cables. See Figure 1.
- c) Remove the forward anchor nuts from the CT Q-43 Elevator Trim Cables (leave the aft anchor nuts in place so the elevator trim cables can be reassembled in the same position), then pull the elevator trim cables through the F-1095G Trim Cable Anchor Brackets. See Figure 1.
- d) The entire horizontal stabilizer/elevator assembly can now be removed.

Step 2: Remove the two F-1094A Empennage Gap Covers.

Step 3: Remove the F-1095 Elevator Trim Actuator Sub-Assembly from the F-1014 Aft Deck. See Figure 2.

Step 4: Remove the rivets common to the F-1014 Aft Deck, F-1010B Spacer, and F-1010A Horizontal Stabilizer Attachment Angle. See Figure 2. To make it easier removing these rivets, leave the bolts in place that secure the horizontal stabilizer attachment angle to the F-1032-L & -R Longerons. After removing the rivets, remove the bolts.

Step 5: Remove the rivets common to the F-1014 Aft Deck and F-1032-L & -R Longerons forward of the F-1011D Attachment Bar Support Angle.

Step 6: Use a #30, 12-inch extension drill to remove the eight rivets common to the F-1014 Aft Deck and the F-1009 Bulkhead.

Step 7: As shown in Figure 3, pull back the F-1014 Aft Deck and secure it in position with a rope, wire, etc.

Step 8: Inspect the rivets that secure the F-1032-L & -R Longerons to the F-1073-L & -R Side Skins in the area of the F-1010 Bulkhead. See Figure 3. Any rivets that appear to be working loose (they will have a dark discoloration around the head) need to be removed and replaced with AN426AD3-5 rivets.

Step 9: Use an angle drill to remove the two outboard rivets in both ends of the F-1010A Horizontal Stabilizer Attachment Angle that secure it to the F-1010 Bulkhead. See Figure 4.

Step 10: Separate the F-1010C Bulkhead Doubler into left and right parts. Deburr the parts as required.

Step 11: Cleco the F-1010C-L & -R Bulkhead Doublers to the F-1010 Bulkhead and F-1010A Horizontal Stabilizer Attachment Angle using the holes for the rivets removed in Step 9. See Figure 4.

Step 12: Match-Drill #30 all of the holes of the F-1010C-L & -R Bulkhead Doublers into the F-1010 Bulkhead and F-1010A Horizontal Stabilizer Attachment Angle. Be careful to drill square to the bulkhead, particularly when drilling into the angle. The reflection of the drill bit in the bulkhead doublers can be helpful.

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Step 13: Remove the F-1010C-L & -R Bulkhead Doublers, remove any chips from between the F-1010 Bulkhead and F-1010A Horizontal Stabilizer Attachment Angle, and deburr the parts. Prime the bulkhead doublers if desired.

Step 14: Rivet the F-1010C-L & -R Bulkhead Doublers to the F-1010 Bulkhead and F-1010A Horizontal Stabilizer Attachment Angle using the rivets called out in Figure 4.

Step 15: Position the F-1010B Spacer back in place on the F-1010A Horizontal Stabilizer Attachment Angle, then cleco the F-1014 Aft Deck back in place.

Step 16: Replace the two AN4 bolts that secure the F-1014 Aft Deck to the F-1032-L & -R Longerons and, to maintain alignment while riveting, temporarily place AN3 bolts in the four holes in the aft deck that are used to secure the front spar of the horizontal stabilizer.

Step 17: Rivet the F-1014 Aft Deck in place using the rivets called out in Figure 5.

Step 18: Replace the F-1095 Elevator Trim Actuator Sub-Assembly, the empennage, and the F-1094A Empennage Gap Covers. *Check for correct orientation and function of trim tabs and control surfaces.*

NOTE: Installation of the F-1010C doublers terminates any further inspection requirements called out in this bulletin.

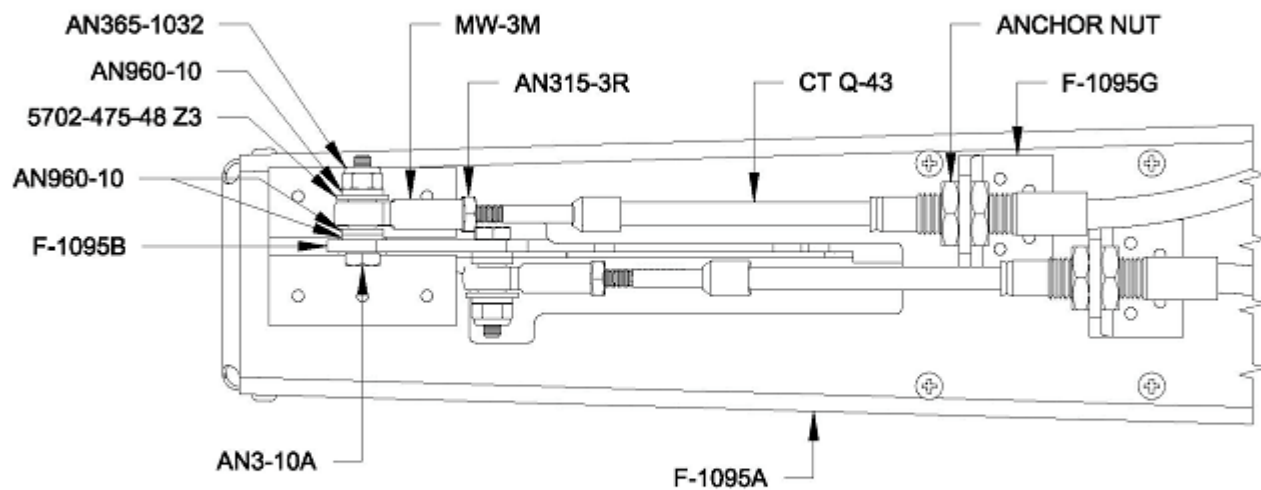
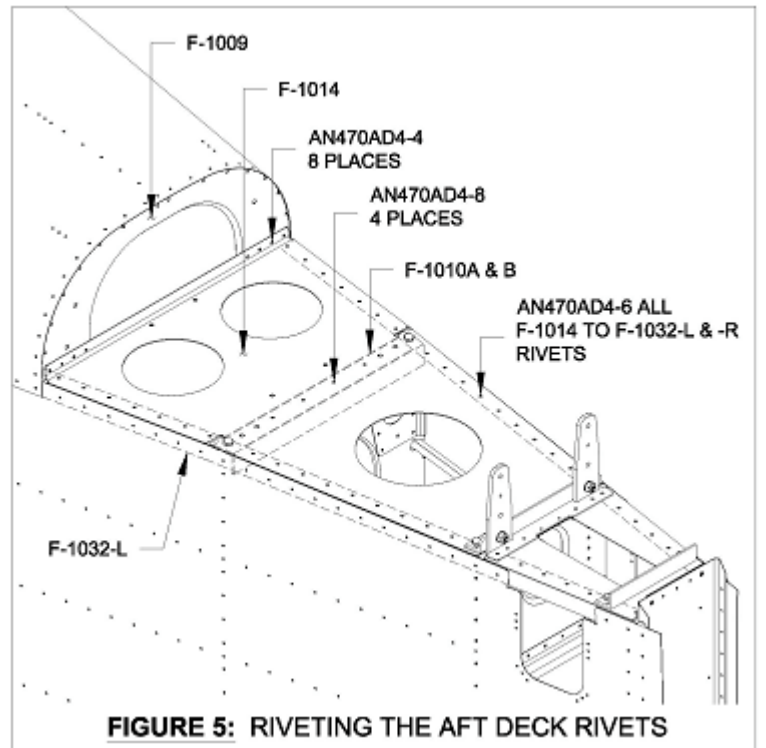
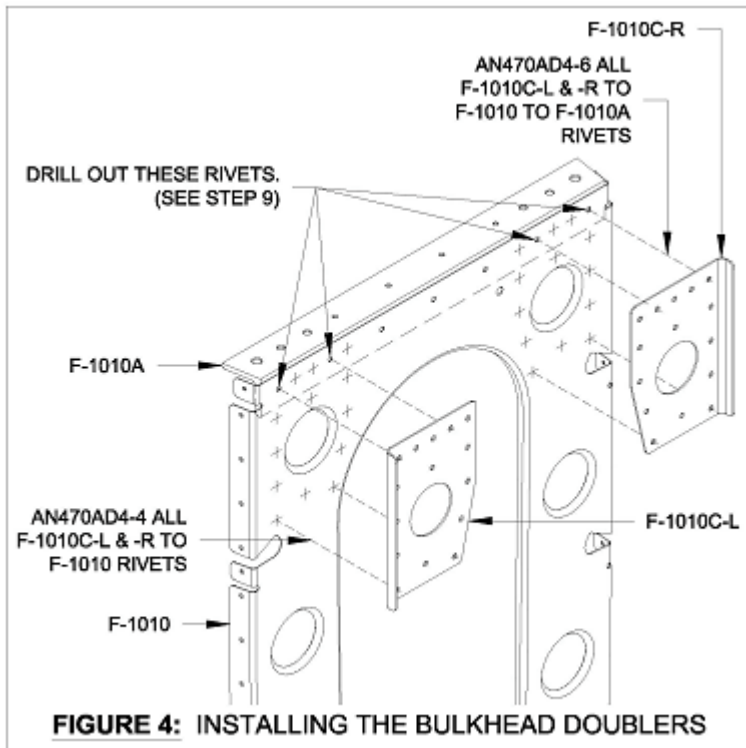
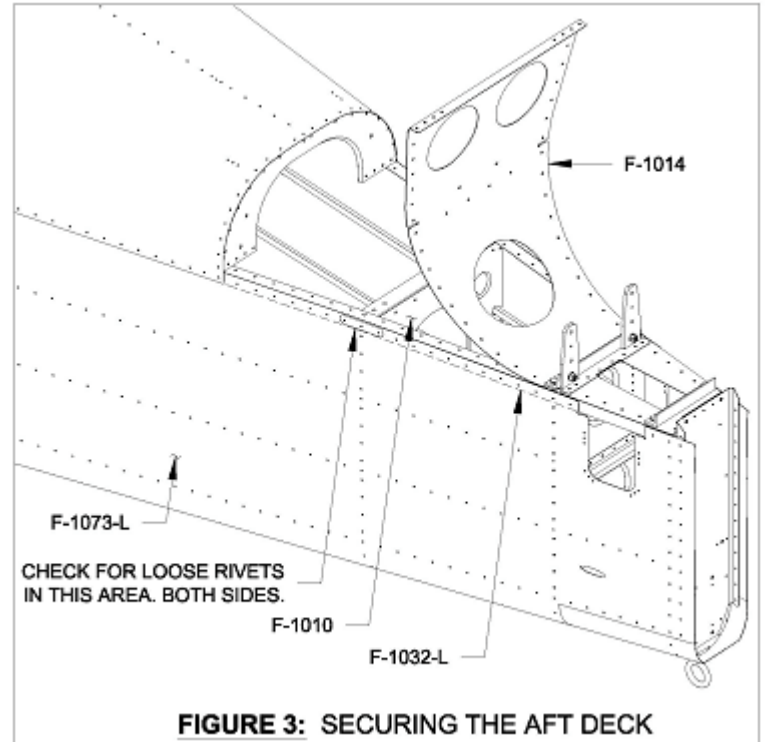
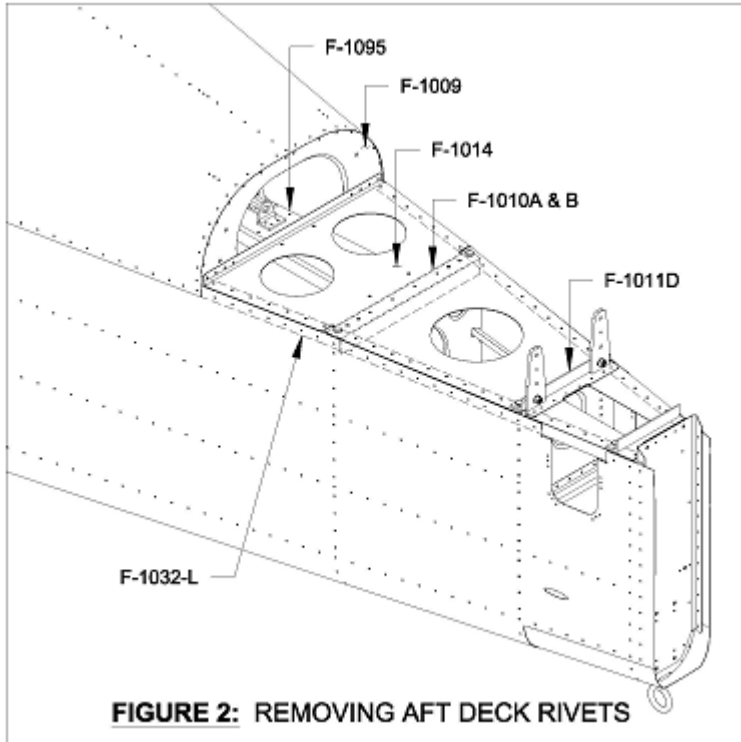
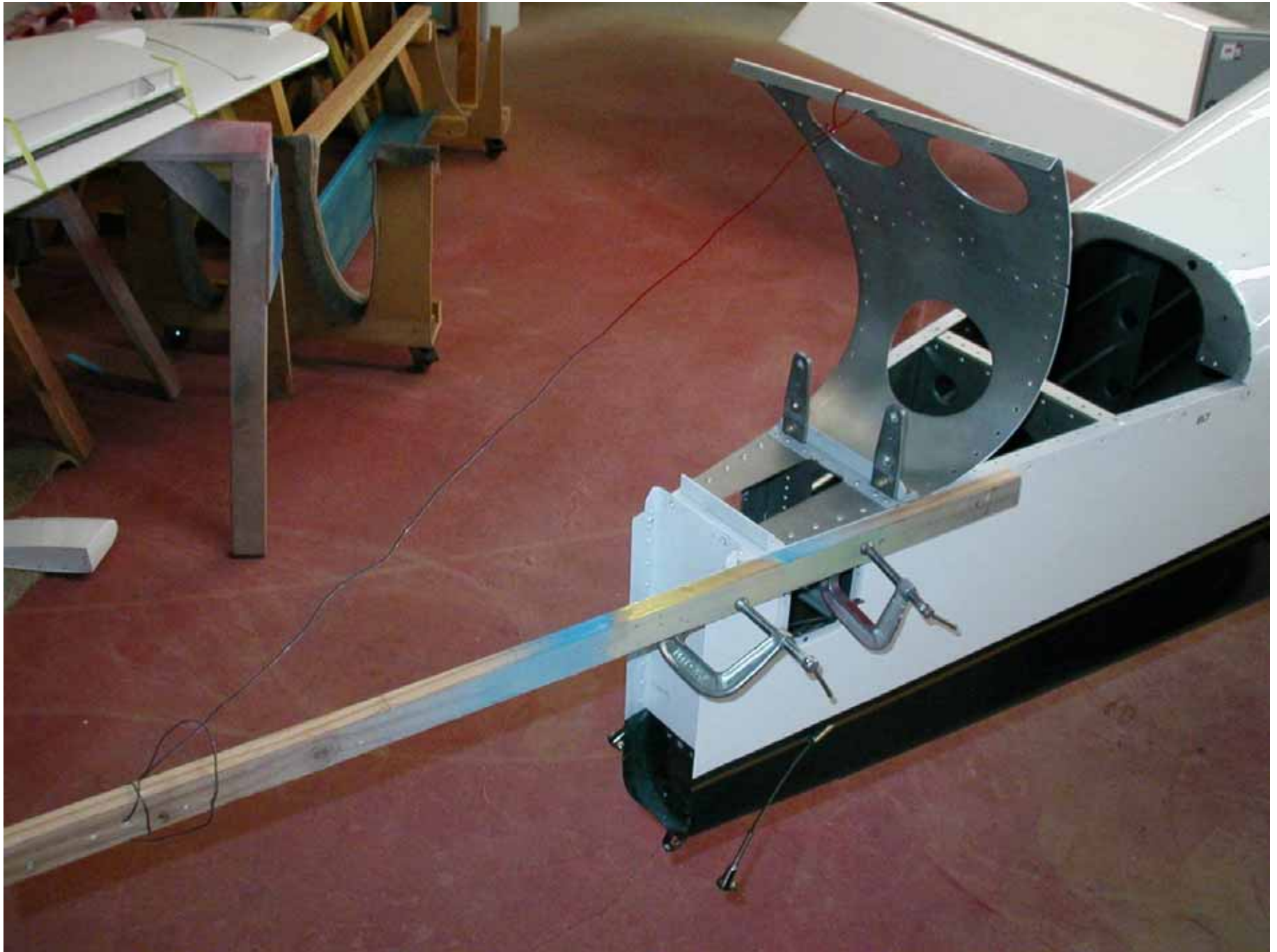


FIGURE 1: ELEVATOR TRIM CABLE





Empennage has been removed. The aft deck is held open and out of the way with this simple setup.



Doublers clecoed/clamped in place after match drilling.



Crack in the upper left corner of F-1010 bulkhead....as seen from the back side looking forward.



Crack in the upper left corner of F-1010 bulkhead....as seen from the front side looking aft.



F-1010C doubler riveted in place.