

REAR SPAR - WING CENTER TANK

CW-1004
C-2139
GREEN

This section contains a portion of the web that extends from LBL 11 to RBL 33 at the upper spar chord and LBL 19 to BL 0 at 10" above the lower chord. The web extends vertically from the upper spar chord to the lower spar chord. This section also contains a portion of the stiffener at RBL 11, BL 0, and LBL 11.

The entire periphery of the web is a jagged fracture that has edges bent both fwd and aft. This is especially true of the edge near LBL 19 which has a portion of the web that has a double fold in which the bend radii ranges from a tight crimp to 1" radii. The portion of the web that also includes the vertical flange of the lower spar chord is bent forward 180 degrees on a very tight bend radii and some of the bend is fractured.

The stiffener at RBL 21 is missing and the top three fasteners still in the web exhibit a tension failure. The top 20" of the stiffener at RBL 11 still remains intact. Only the web attach flange on the right side of BL 0 still remains of the BL 0 stiffener. The fasteners common to the left side of the stiffener exhibit tension failures with a failure direction of the stiffener indicated slightly to the left. Only the top 8" of the stiffener at LBL 11 is still remaining attached to the web. (Note: the remainder of the stiffener is still attached to the Keel Beam)

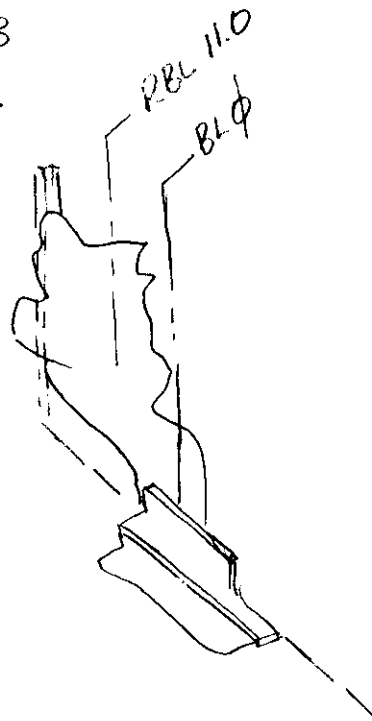
The mounting spacer for the Center Wing Tank fuel scavenge pump remains in place on the rear spar but it has been deformed away from the spar web except at approx. the 9-11 o'clock position. The three bolts that mount the spacer to the spar web are in place with the safety wires attached. There is a partial sooted outline of the pump housing on the spacer plate and a difference in soot levels on the forward side of the spar web where the pump is mounted as compared with the remainder of the web. There is only a very light soot deposit on the spar web where the spacer plate has been deformed from the web. The spacer plate is the only portion of the pump that is still attached. The forward side of the lower portion of the web that is bent up 180 degrees has a location that shows impact damage to the web and to the fillet seals on the fastener heads.

This section shows heavy soot and fire damage on not only the fwd and aft surfaces but also on the web and stiffener fracture edges. It also shows marked difference of soot levels as compared with the adjacent segments. The stiffener to web interface at LBL 11 shows both soot and unsooted regions on the interface where the stiffener is missing. The protruding portion of the fasteners that have failed also show soot accumulation. See the fire and explosion group notes for complete documentation.

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12-01-96 FAA
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12-6-96 TWA
12/2/96 BOEING

CW2 PART B
CW-1007

ASSOCIATED WITH
GREEN DEBRIS FIELD



← PART AS DRAWN
ON ROAD MAP

VIEW AS SITUATED ON KEEL BEAM RDK

STIFF IS
HEAVILY
SOOTED

RBL
9

THIS FRACTURE FACE
IS SOOTED

DARK SOOTING

GREEN PRIMER
INTACT

HEAT
DAMAGE

TENSION
FAILURE
ON WEB

R/S
LWR SURFACE

UP

AFT

BL φ

'ANGLE'
FRACTURE
FACE ON
WEB

AFT FACE - HEAVY SOOTING INBD RBL 9, OUTBD RBL 9
PAINT BURNED OFF

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R Hanover e/12/96
STEPHEN F 146200025 FAR 11-01-96