CW-519 FRONT SPAR
Z-3029
GREEN

This section extends from RBL 114.95 to RBL 66.65 and is on the right side of the front spar. The upper connection separated along the radius of the upper skin/spar chord. The outboard side separated along a vertical line in line with the fuselage bulkhead fitting. The inboard side separated just inboard of RBL 66.65. The bottom separated along the radius of the lower skin/spar chord.

The extreme right bottom corner near the access hole exhibited evidence of sooting. The outboard end of the web near the access hole is bent forward 45 degrees and a small section of this web is bent aft about 20 degrees.

There is a hole in the web about 6" wide X 48" near RBL 66.65. The front spar web is curled in a forward direction at various locations around this hole edge. The web at the bottom of the hole exhibits tight curls up to 150 degrees. The "I" shaped stiffener at RBL 66.65 retains a partial shear tie at the bottom, a complete shear tie at the top, and is twisted inboard from the bottom all the way up to a web fracture about 18 inches below the top. The remaining 5 stiffeners to the right of RBL 66.65 separated from their shear ties at the lower and upper skin, and remained attached to the front spar skin. These stiffeners suffered severe impact damage to their flanges in the dry bay side. There is evidence of impact damage to the aft flange of the stiffeners about 63" from the bottom. This impact damage is about 3" wide and is consistent for all the stiffeners except at RBL 83.24. The stiffener web and flange at RBL 83.24 broke off.

The detail documentation of the shear tie deformation, bolt bending, and bolt hole elongation is documented in the center tank shear tie study.

There is no evidence of any pre-existing fracture or corrosion on this section of the front spar.

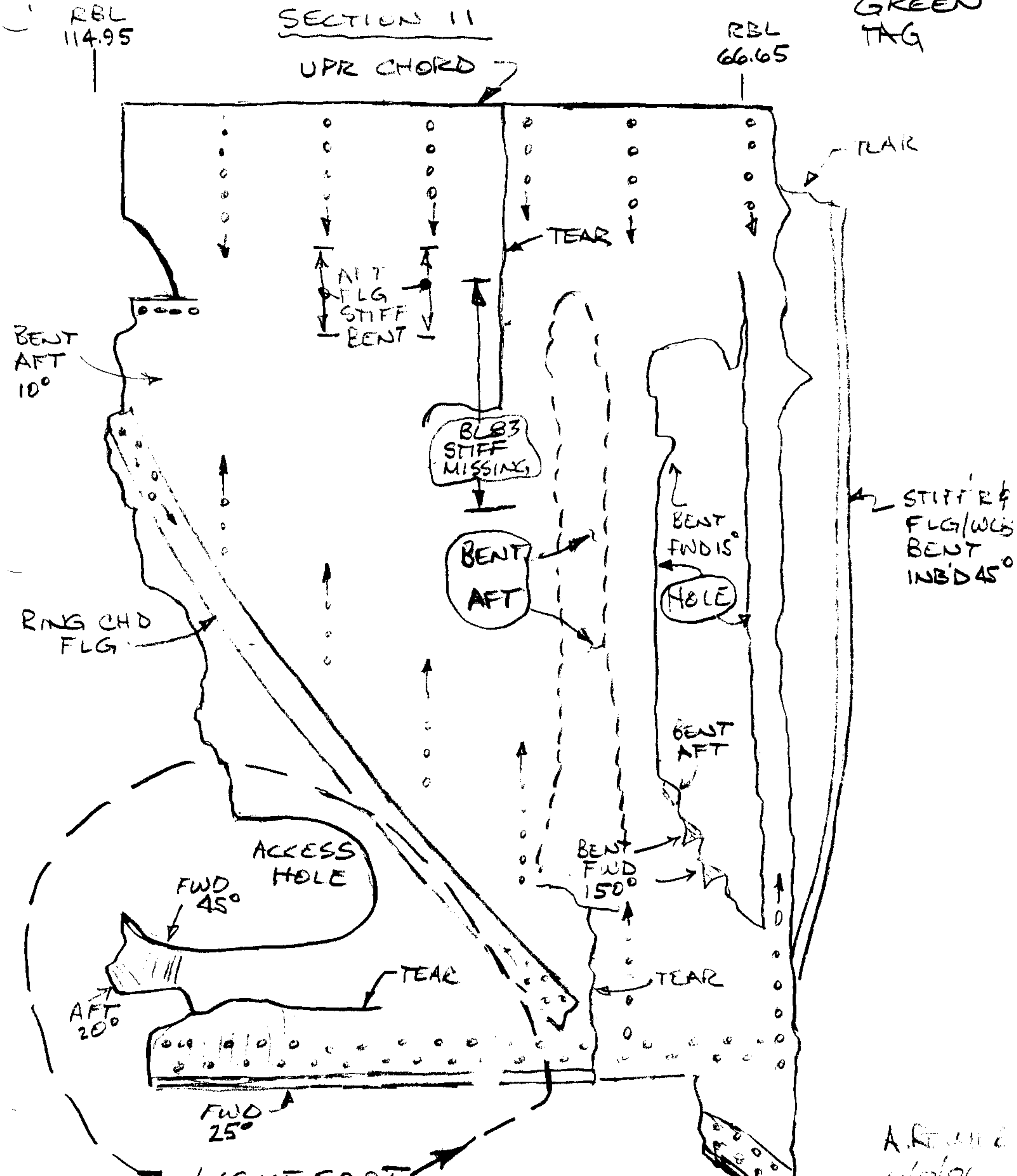
SD GREEN ALPA
12-06-96
[signature] Reimer BOEING 12/7/96

[signature] 12-6-96 TWA
Stephen F. Klagaud Jr
FAA - 12-06-96
R. Scarlett IAM 12-6-96

CW-519
Z-3029
GREEN
TAG

FRONT SPAR SECTION RBL 65→112

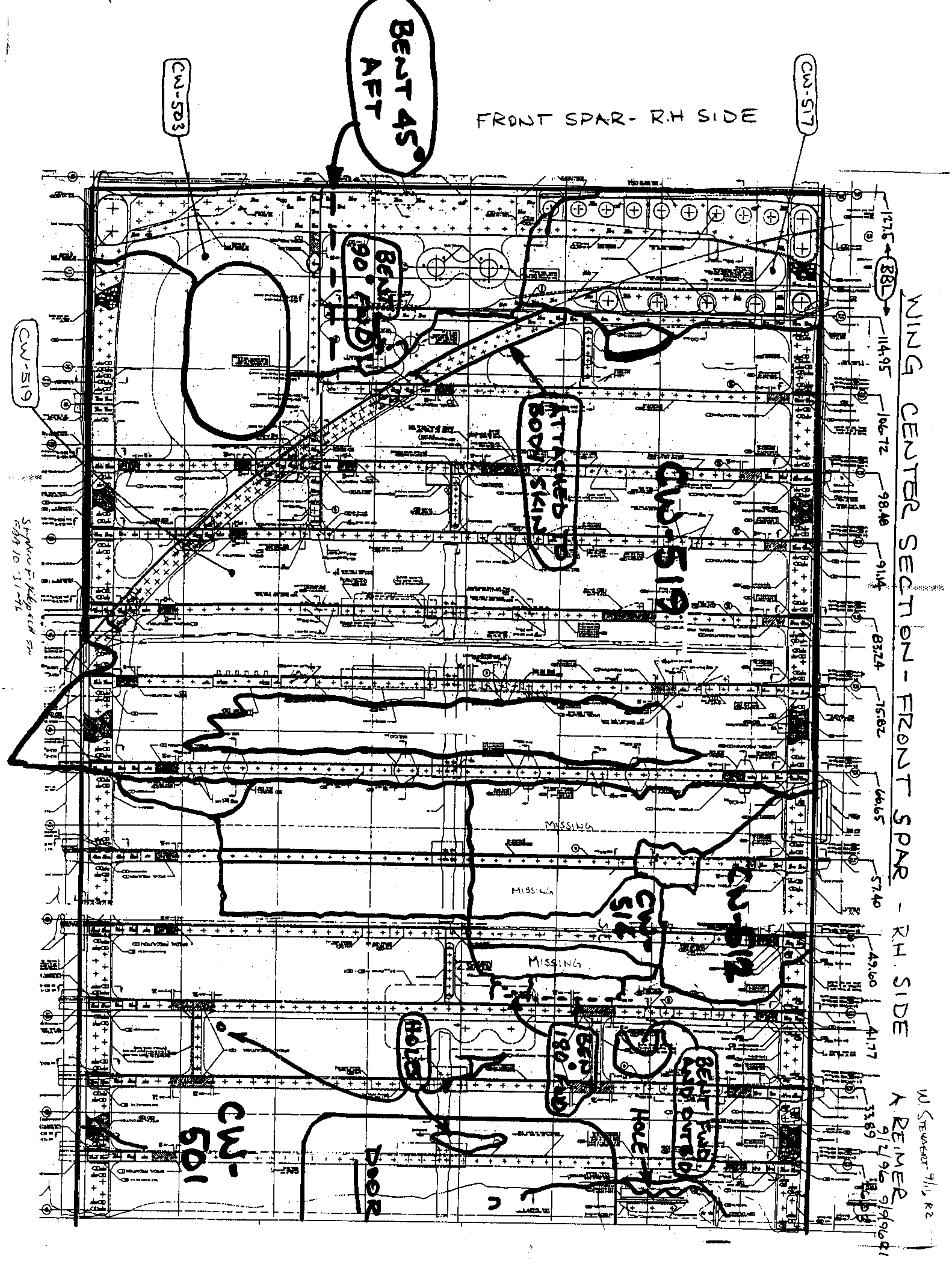
SECTION 11

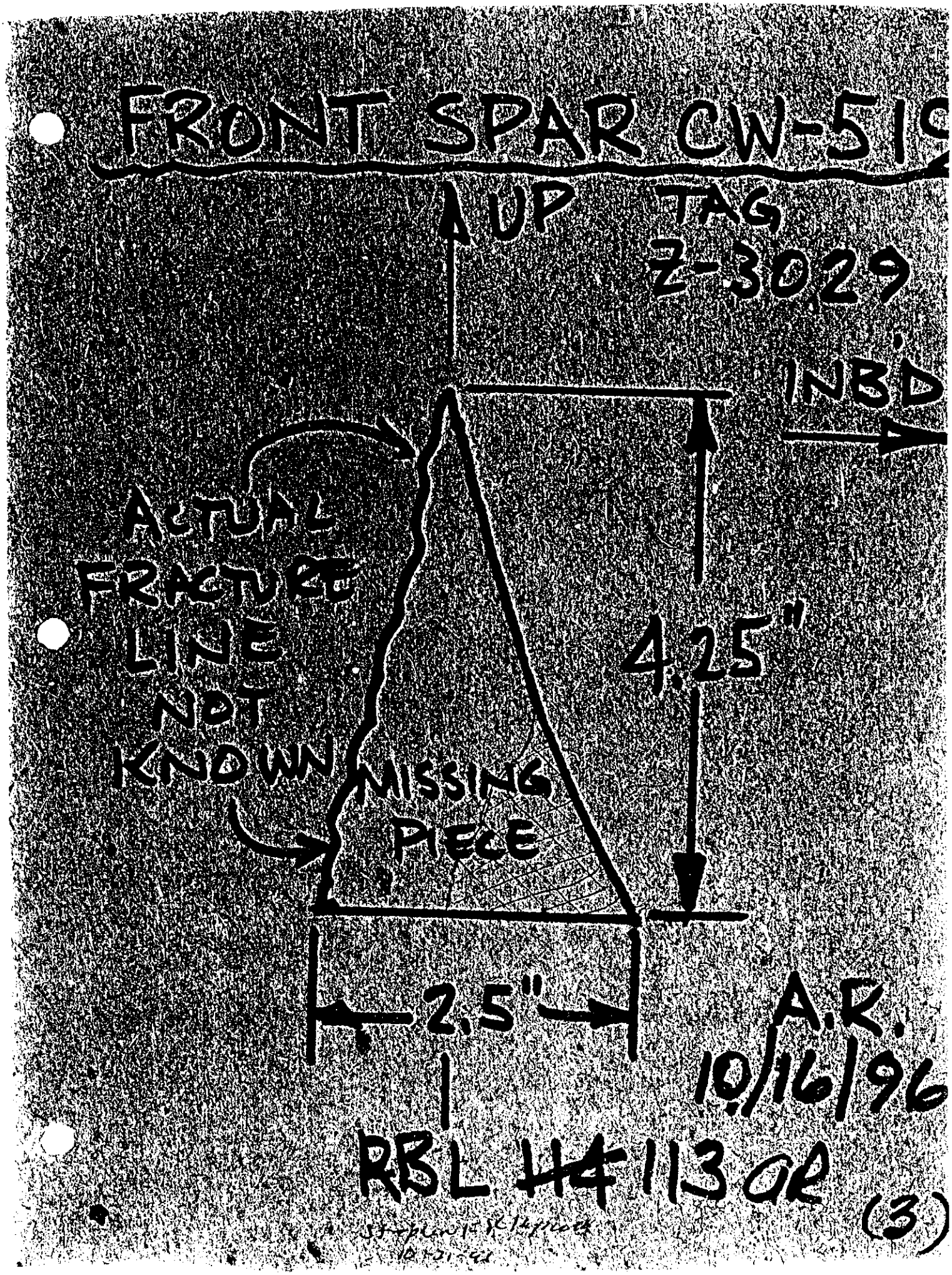


Stephen F Klupacek Jr
Film 10-31-96 No Photo

A.R... 4/9/96

2


FRONT SPAR- R.H SIDE
WING CENTER SECTION - FRONT SPAR - RH SIDE
BENT 45° AFT
CW-503
CW-517
CW-519
BENT 90° FWD
ATTACHED BODY SKIN
CW-519
MISSING
MISSING
MISSING
CW-512
CW-516
BENT 180° FWD
BENT FWD AND OUTBD
HOLE
HOLE
CW-501
DOOR
127.5
BBL
114.95
106.72
98.48
91.14
83.24
75.82
66.65
57.40
49.60
41.77
33.89


FRONT SPAR CW-5
UP
TAG
Z-3029
INBD
ACTUAL
FRACTURE
LINE
NOT
KNOWN
MISSING
PIECE
4.25"
2.5"
A.K.
10/16/96
RBL H4 11302
(3)