

longerons by two AN442AD5 rivets and one AN3 steel bolt on each side.

4-55. NEGLIGIBLE DAMAGE. Dents up to 1/16 inch in depth and free of cracks and abrasion may be disregarded. Light longitudinal scratches may be classified as negligible damage when burnished and painted with zinc chromate primer.

4-56. DAMAGE NECESSITATING REPLACEMENT. Damage exceeding the above limits of negligible damage requires the replacement by another tube of the same material, diameter and thickness; or larger diameter or greater thickness. No repairs should be attempted except straightening of a bowed tube.

4-57. CABIN ENCLOSURE FLOOR.

4-58. DESCRIPTION. The cabin enclosure floor is made up of 24ST clad material. A sheet of .040 gage extends across the fuselage between Stations 54 and 93.438. It is riveted to the fuselage, skin panels and firewall, and is also supported longitudinally by the two nose gear beams. Additional angles and channels are attached to the floor undersurface to provide stiffening and to support various equipment.

4-59. NEGLIGIBLE DAMAGE. Smooth dents free of cracks or abrasions located anywhere on the cabin enclosure floor may be disregarded, provided they do not exceed a depth of 1/8 inch and a diameter of 1-1/2 inches; and there is at least 15 inches between adjacent dents. Those exceeding the above limits and subsequently bumped back to contour without cracking or creasing the floor may be considered negligible damage. Scratches which do not penetrate beyond the alclad coating may also be considered negligible.

4-60. DAMAGE REPAIRABLE BY PATCHING. Damage which exceeds that specified as negligible should be repaired by patching as shown in Figure B-3.

4-61. NOSE GEAR BEAMS.

4-62. DESCRIPTION. These two beams, extending longitudinally six inches either side of the airplane centerline are identical except for minor details. Each is made up of 24ST clad material and consists of an .032 web approximately 9-1/2 inches deep, upper cap angle of standard section .064 x .759 x .759 (See Section VIII, 1S129), and lower cap angle with equal 3/4 inch flanges .040 inches thick. Vertical stiffening angles are added to the web in between bulkhead stations.

4-63. NEGLIGIBLE DAMAGE. See paragraph 4-25.

4-64. DAMAGE REPAIRABLE BY PATCHING. Holes and punctures in the web and 1-1/2 inches clear of the cap angles may be repaired as shown in Figure B-3. Rivet the doubler to the web with two rows of AN470AD4 rivets spaced at 3/4 inch and 5/8 inch between rows, maintaining a 1/4 inch edge distance. Damaged stiffening angles should be replaced.

4-65. BAGGAGE COMPARTMENT FLOOR.

4-66. DESCRIPTION. The baggage compartment floor web is .025 24ST alclad, riveted to the lower longerons, the wing aft attachment beam and the fuselage frame at Station 179.75. Stiffening is provided by 7/8 inch deep zee sections, which are riveted to the undersurface of the floor.

4-67. ACCESS FOR REPAIRS. The baggage compartment floor is readily accessible from the inside or the

outside. Inside, the rear passengers seats may be moved forward, or removed. Outside, the fuselage fairing under the baggage compartment can be removed.

4-68. NEGLIGIBLE DAMAGE. Smooth dents free of cracks or abrasions located anywhere on the web may be disregarded, provided they do not exceed a depth of 1/8 inch and a diameter of 1-1/2 inches and there is at least 15 inches between adjacent dents. Dents exceeding the above limits, and subsequently bumped back to contour without cracking or creasing the skin may be considered negligible damage. Scratches which do not penetrate beyond the alclad coating may also be considered negligible.

4-69. DAMAGE REPAIRABLE BY PATCHING. Damage to the baggage floor zee stiffeners which requires a complete splice, is repaired by splicing with a zee section of the dimensions and material given for N.A.A. No. 1S41 in Section VIII. Nest the zee section and attach with four AN470AD4 rivets in the upper and lower flanges and four AN470AD4 rivets thru the vertical web, making a total of 12 rivets on each side of the damaged area. Rivet spacing to be approximately 5/8 inch with a minimum edge distance of 3/16 inch. Damage to the floor web may be repaired as shown in Figure B-3. The damage should be trimmed to a circular or rectangular cutout; with 1/2 inch minimum corner radii for rectangular cutouts. The patch should be of sufficient size to permit picking up two rows of AN470AD4 rivets around the periphery of the cutout, 3/4 inch on centers and between rows, maintaining a 1/2 inch minimum edge distance.

4-70. DAMAGE REPAIRABLE BY INSERTION. Stringer damage exceeding a length of approximately six inches should be repaired by an insertion. The insertion zee should be of the material and to the dimension of N.A.A. No. 1S41 in Section VIII. The insertion is butted against the existing zee section and spliced as described in paragraph 4-69.

4-71. FUSELAGE LONGERONS.

4-72. DESCRIPTION. The fuselage is reinforced longitudinally between Station 54.0 and Station 179.75 with four longerons; upper left and right, and lower left and right. The longerons are spliced at Station 93.438. Fittings riveted to the forward ends of the lower longerons provide for the attachment of the engine mount. The longerons are all formed sheet metal channels, the upper are made from .051 24ST alclad, and the lower are .102 24ST alclad.

4-73. NEGLIGIBLE DAMAGE. Bends and dents in flanges, free of cracks and abrasions, which are reworked to their original shape, free of waviness and without cracking or creasing the longeron may be classified as negligible damage. Scratches which do not penetrate beyond the alclad coating may be disregarded.

4-74. DAMAGE REPAIRABLE BY PATCHING. (See Figure 4-4.) Damage to the longerons must be repaired in accordance with the repair data shown on the Figure. Complete damage to the longeron cross section is repaired by effecting a complete splice. Use a filler in the damaged area at the skin attachment flange. Attach the skin to the splice and the filler in the damaged area with rivets spaced the same as existing rivets. The lower longerons are repaired as shown in Figure 4-4. Two .102 24ST alclad splice angles span the damaged area, attached with four NAS 178-6 hi-shear rivets thru each flange and four NAS 178-6 hi-shear rivets thru the web, making a total of 12 hi-shear rivets each side of the damaged area. NAS 179-6 hi-shear rivet collars are used with the above hi-shear rivets.