

NOTE

Thru the inner flange and web of the lower longeron AN3 bolts and AN365-1032 nuts may be substituted. Thru the flange adjacent to the skin, NAS 221 screws and AN365-1032 nuts should be used.

The upper longerons between station 54 and station 147 are repaired as shown in Figure 4-4. Two .051 24ST alclad splice angles span the damaged area, attached with four AN470AD6 rivets thru each flange and four AN470AD6 rivets thru the web, making a total of 12 rivets each side of the damaged area. Damage to the upper longerons between station 147 and station 179.75 may be repaired similar to Figure 4-4. Two .051 24ST alclad angles are used. The attachment each side of the damaged area, is made with a row of four AN470AD6 rivets thru each longeron flange, and two or more rows, thru the longeron web, spaced at one inch between rows, and using four AN470AD6 rivets per row.

4-75. DAMAGE REPAIRABLE BY INSERTION. All damage to the longerons should be repaired as described in paragraph 4-74. If the damage to the longeron is extensive, an insertion repair should be made. The insertion member must be of the same material, gage, and section as the existing structure. The ends of the insertion member must be butted against the existing longeron. The insertion member must be spliced to the existing longeron, using the repair data in Figure 4-4. Damage occurring at the extremity of the longeron should be repaired by means of an extension splice.

4-76. DAMAGE NECESSITATING REPLACEMENT. Due to the length of the longerons, it will probably always be impractical to replace the longerons. Repair all damage as described in paragraphs 4-75 and 4-76.

4-77. COCKPIT ENCLOSURE.

4-78. DESCRIPTION. The windshield consists of two pieces of formed plastic sheet installed in a 24ST alclad frame. The sliding canopy is constructed of formed 24ST alclad aluminum sheet with plastic window panels. Two channel-shaped longerons extend the full length of the canopy. Attached to the longerons and spot-welded to the top are bowed hat sections which maintain the contour. Two tracks attached to the rear of the canopy engage rollers on the fuselage. The front of the canopy has rollers on each side that engage tracks on the fuselage. A transverse web at the aft end of the canopy covers the baggage compartment, and is strengthened by beading. The windows are held in place by a rubber extrusion. The canopy has a cylinder type lock for use while the airplane is on the ground. A cable, running from the locking handle down the left side to a pin, makes it possible to lock the canopy in several open positions. An opening mechanism makes it possible for the pilot to open the canopy during flight. The inside of the top and sides of the canopy between transparent panels are covered with upholstery, held in place with spring wires along the top, and cemented on the sides.

4-79. NEGLIGIBLE DAMAGE. Smooth shallow dents free of cracks or abrasions located anywhere on the canopy skin may be disregarded, provided they do not exceed a depth of 1/8 inch and 1-1/2 inches in diameter and adjacent dents are at least 15 inches apart. 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 be considered negligible damage.

4-80. DAMAGE REPAIRABLE BY PATCHING. Holes and punctures in the canopy top may be repaired as shown in Figure B-1 or B-3. Damage occurring to the plastic windows must be repaired in accordance with the instructions in AN01-1A-1, "General Manual for Structural Repair."