

stringer at the splice.

2-62. DAMAGE NECESSITATING REPLACEMENT. Partial and complete damage occurring to the 1E129T type of stringer requires replacement. See Section VIII.

2-63. AILERONS.

2-64. DESCRIPTION. The ailerons are fabricated from 24ST alclad sheet riveted together with modified brazier head type rivets. Each aileron consists of a single spar at 32.4% of the aileron chord, four nose former ribs between two complete ribs at the inboard and outboard ends, and skin wrapped around the ribs. The ailerons are hinged to the wing rear beam, at the inboard end, outboard end, and center of the aileron spar. Ball bearings are staked into each of the hinge brackets. A fixed trim tab is riveted to the inboard trailing edge of the right-hand aileron. An external streamlined static balance weight is attached to the outboard rib of each aileron. Both ailerons are statically balanced within a maximum allowable unbalance of 4 inch-pounds.

2-65. ACCESS FOR REPAIRS. Access to the interior of the ailerons may be gained by removing the skin or installing a cover plate as described in Paragraph 2-14.

2-66. AILERON SKIN.

2-67. DESCRIPTION. The aileron skin consists of three panels of .016 24ST alclad sheet. One sheet is wrapped around and riveted to the nose ribs and spar flanges. Another is used for the lower surface and is bent up and flanged to form the spar. The third is on the upper surface and is riveted to the upper flange of the spar and to the trailing edge of the lower surface skin. The upper and lower surfaces aft of the beam are beaded.

2-68. NEGLIGIBLE DAMAGE. The same limits may be applied to the aileron skin as to that on the wing, see Paragraph 2-7.

2-69. DAMAGE REPAIRABLE BY PATCHING. Damage to the aileron skin panels which exceeds that specified as negligible should be repaired by patching. These patches need not be flush. Use Figures B-1 or B-3.

2-70. AILERON BEAM.

2-71. DESCRIPTION. The aileron beam is the forward portion of the bottom surface skin bent up, flanged, beaded and with lightening holes.

2-72. NEGLIGIBLE DAMAGE. Smooth dents free of cracks and abrasions and clear of lightening hole flanges and cap flanges may be disregarded, provided the dents do not exceed a depth of 1/8 inch and 1-1/2 inches in diameter, and adjacent negligible dents are at a distance of 15 inches. Dents exceeding the above limits and subsequently bumped back to contour without cracking or creasing the web may be considered negligible damage. Scratches which do not penetrate beyond the alclad coating may be considered negligible damage. No damage is permitted to the effective spar caps. The effective spar cap is considered to be the flange and approximately 3/4 inch of the adjacent web.

2-73. DAMAGE REPAIRABLE BY PATCHING. Partial or complete damage to a cross section of the aileron beam is repairable by nesting a .020 24ST alclad channel within the beam channel. The channel should be the depth of the beam with 5/8 inch flanges top

and bottom. Attach the repair channel flanges to the beam flanges with AN470AD3 rivets, four rivets thru each flange on each side of the damaged area. Web rivet rows should be spaced approximately 5/8 inch apart with four AN470AD3 rivets per row on each side of damage. All rivet rows run spanwise, with the rivets spaced at approximately 5/8 inch. The .020 24ST alclad reinforcing strip at the center hinge should be replaced when damaged.

2-74. AILERON RIBS.

2-75. DESCRIPTION. The aileron ribs are formed of 24ST alclad sheet. There are four nose ribs of .020 and .025 gage, with lightening holes. The ribs at the inboard and outboard ends, extend the length of the aileron chord. All nose ribs are flanged and riveted to the beam and the skin.

2-76. NEGLIGIBLE DAMAGE. Same as that specified in Paragraph 2-48.

2-77. DAMAGE REPAIRABLE BY PATCHING. Any damage not included in that specified as negligible should be repaired by patching or replacement. Repairs may be made as shown for typical formed ribs. See Figures B-5 and B-6.

2-78. DAMAGE NECESSITATING REPLACEMENT. If any damage extends over half the length of a rib, it should be replaced. Any damaged fittings or brackets should be replaced.

2-79. AILERON TRIM TAB.

2-80. DESCRIPTION. The aileron trim tab is 52S0 aluminum alloy sheet, .032 x 2-1/16 x 10-3/8 inches riveted on the inboard trailing edge of the right hand aileron.

2-81. NEGLIGIBLE DAMAGE. Disregard smooth dents free of cracks or abrasions. Two punctures or trimmed holes up to 1/4 inch in diameter may be permitted provided they have a minimum edge distance of 3 inches from each other and are at least a 1/2 inch from all edges of the tab or aileron trailing edge. If the tab is bent or twisted, it may be formed back into shape as long as it is not cracked.

2-82. DAMAGE NECESSITATING REPLACEMENT. Any damage exceeding that classified as negligible requires that the tab be replaced.

2-83. FLAPS.

2-84. DESCRIPTION. The flaps are fabricated from 24ST alclad sheet. Riveted with modified brazier head rivets. Each flap consists of two spars, a stringer, four nose ribs, outboard and inboard end ribs, and beaded skin. The flaps are the slotted type and are mounted on brackets.

2-85. ACCESS FOR REPAIRS. Access to the interior of the flaps may be gained by removing the skin or installing a cover plate, see Paragraph 2-89.

2-86. FLAP SKIN.

2-87. DESCRIPTION. The flap skin consists of three panels of 24ST alclad. A sheet of .016 gage is wrapped around and riveted to the nose ribs and front beam flanges. One of .020 is used for the lower surface, it is riveted to the lower flange of the auxiliary beam, extends forward and is bent up and flanged to form the main beam. The third, also .020 gage, is on the upper surface and is riveted to the upper