

CHAPTER 1

FUSELAGE

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GENERAL (fig. 1)

1. The fuselage is a composite structure of balsa sandwiched between an inner and outer plywood skin. The fuselage is oval in cross-section, tapering in plan and elevation from bulkhead 3 to the nose. It is built in halves, and joined along the top and bottom centre-lines. The balsa packing between the plywood skins is replaced by laminated spruce at the centre-line joints and at the bulkhead attachments. The fuselage structure is cut away between bulkheads 3 and 4 to allow the air-intake ducts to pass from each wing to the engine.

BULKHEADS

2. The fuselage shell structure is supported by four primary bulkheads; number 1 bulkhead in the front, is armoured and supports the nose wheel mounting. Number 2 bulkhead, which is directly behind the pilot's seat, also has armour plate attached. Number 3 and 4 bulkheads are reinforced to accommodate the wing attachment fittings. Number 4 bulkhead, which is fireproof, supports the engine-mounting frame and two transverse tubular steel members for the main spar attachment fittings.

NOSE WHEEL MOUNTING

3. The nose wheel mounting consists of a tubular structure bolted to the front of No. 1 armoured bulkhead. The detachable top half of the nose fairing, is constructed

of light alloy; the lower fixed portion incorporates the nose wheel door fairing.

TAIL CONE FAIRING

4. The tail cone fairing is attached to an extension of rib 1 on each main plane. To allow for engine and jet-pipe expansion the fairing is not attached to the power unit. The cowl support ring is attached to the engine and the cowl panels are secured by hook fasteners.

DOORS

5. Two removable gun bay doors covering the ventral compartment, provide access to the centre fuel tank and the 20 mm. guns. Two hinged doors, situated aft of the cockpit coaming, provide access to the radio and ammunition tanks. An armoured door attached to No. 1 bulkhead allows access to the back of the instrument panel.

CANOPY AND WINDSCREEN

6. The canopy is constructed of two sheets of moulded transparent plastic with an intervening air space (Sect. 4, Chap. 3). The canopy is mechanically opened to allow unobstructed entry to the cockpit. The Triplex windscreen, consisting of a centre panel and two side panels, is constructed, with a dry air space, similar to the canopy. The centre panel is bullet-proof. All three panels of the windscreen are mounted in a light-alloy frame.

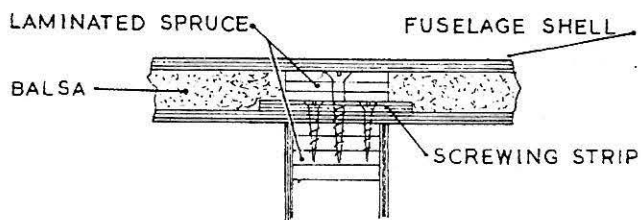
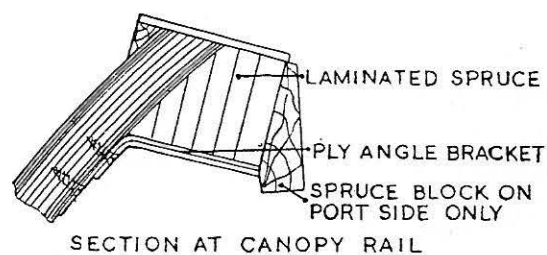
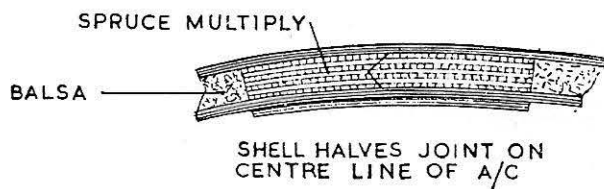
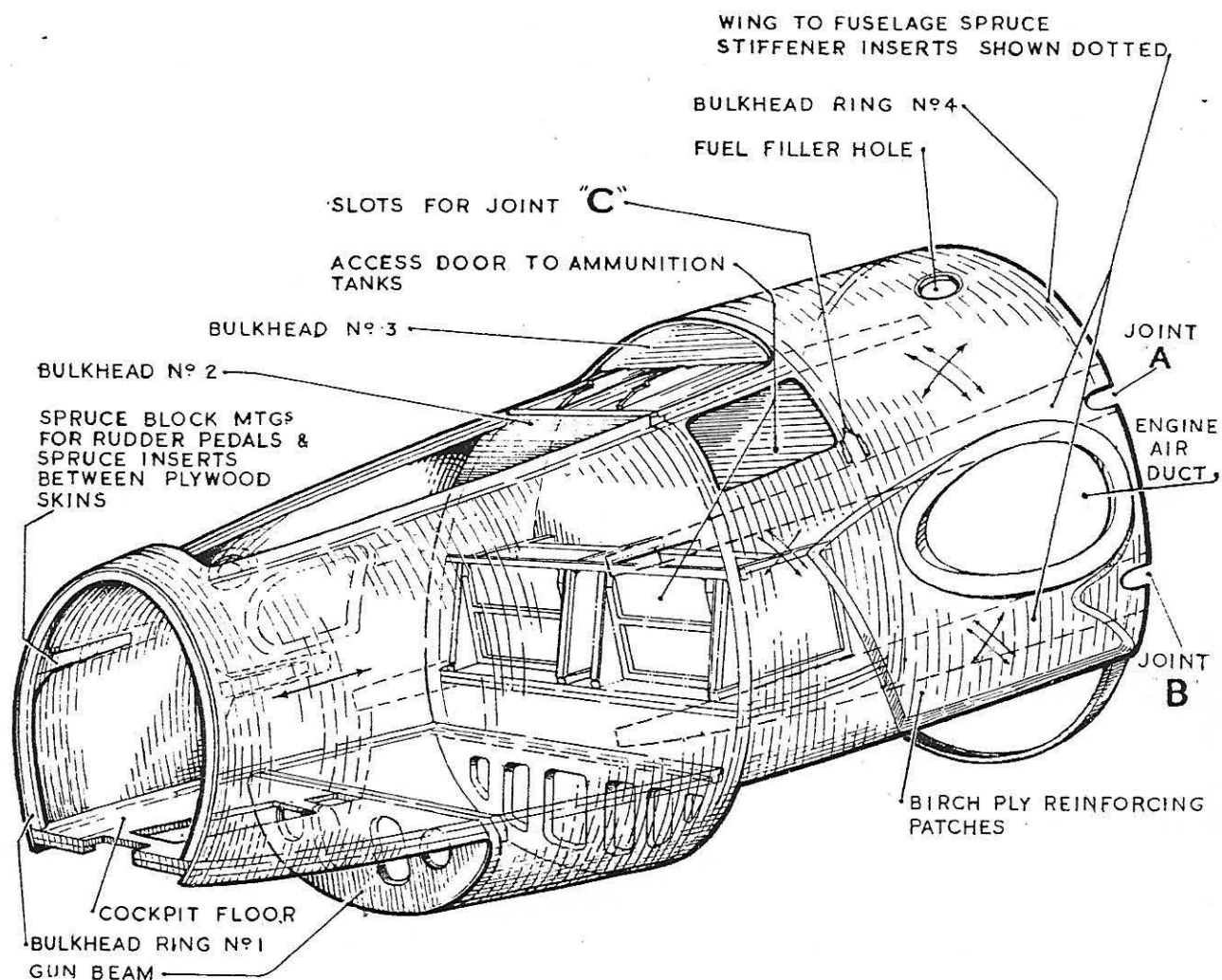
COCKPIT

7. The cockpit, which can be pressurised, is placed between bulkheads 1 and 2. The layout of the controls and equipment in the cockpit is illustrated in Sect. 1. The cabin sealing is effected by the use of fabric strips and water-resisting compound

(Repellor) externally, and sealing compound (Peratol) internally.

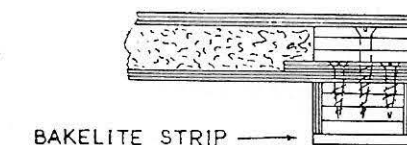
COVERING

8. The fuselage outer skin is covered with madapollam. Further instructions regarding this covering and the detail finish of components will be found in the Vol. 2, Part 3 of this publication.



TYPICAL BULKHEAD TO FUSELAGE JOINT

GRAIN OF PLY SHOWN THUS



BULKHEAD RING N°4 TO FUSELAGE

FIG 1. FUSELAGE CONSTRUCTION



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