

Chapter 53

Fuselage

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53-00-00

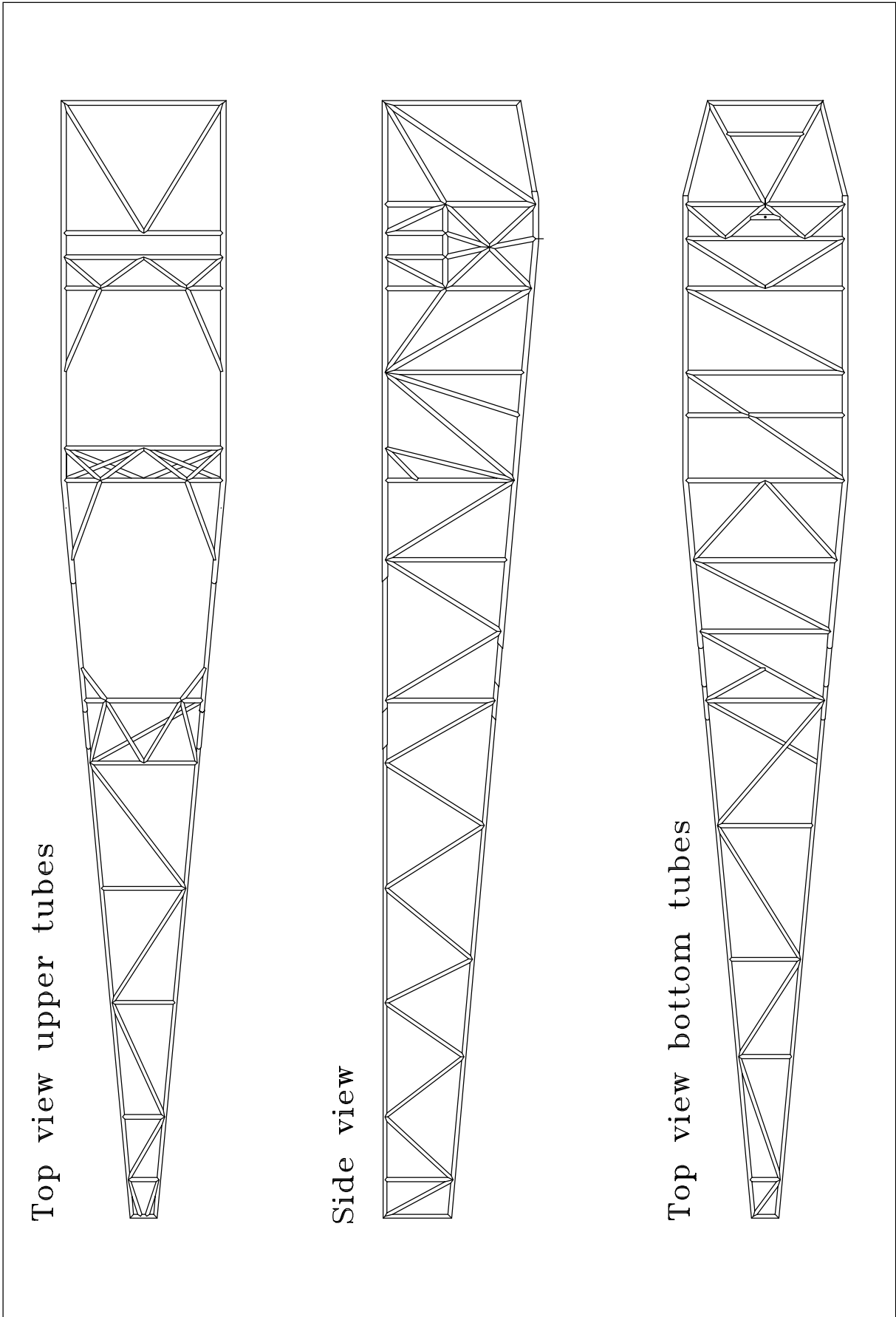
GENERAL

The fuselage structure consists of a TIG-welded steel tube construction integrating the wing and empennage connections as well as the seats (refer to Figure 1).

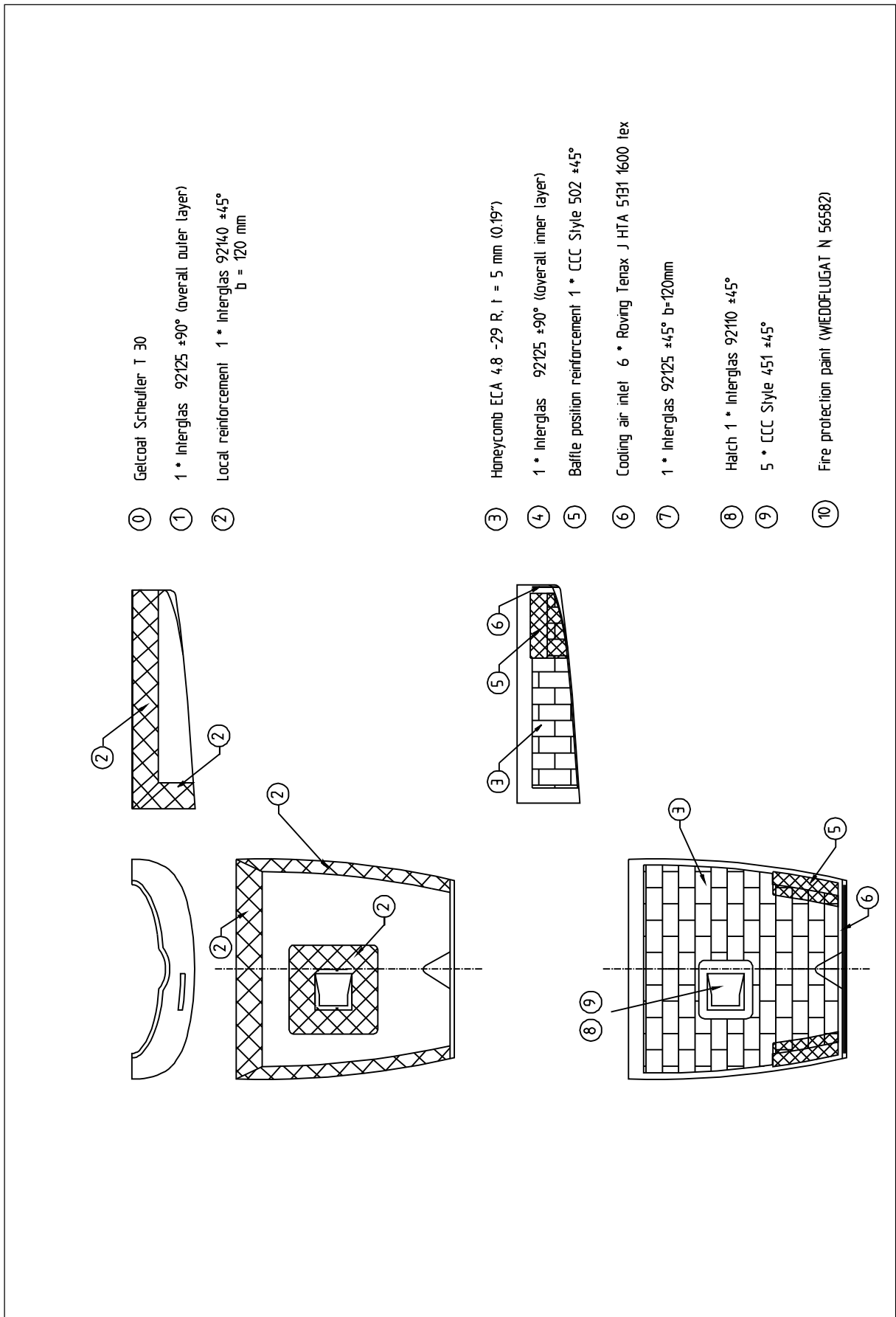
The particular areas of the fuselage are covered with different materials (also refer to Chapter 51-00-01 "Access Panel Identification"): Both halves of the engine cowling consist of glass fibre laminate and honeycomb. The front part of the fuselage behind the fire wall, the lower side and the sides below the wing are faired with aluminium panels. The lower rear part of the fuselage is covered with fabric. The rear part of the upper fuselage surface (turtle deck) consists of an aramid laminate. The one-piece canopy frame is built of carbon fibre laminate and rovings. The window portion is made of acrylic glass. The layer sequences of the engine cowlings, the turtle deck and the tail fairing are shown in Figures 2-5.

All composite parts, as protection against moisture and UV radiation, are coated with an unsaturated polyester gel-coat, an acrylic filler and finally with an acrylic paint.

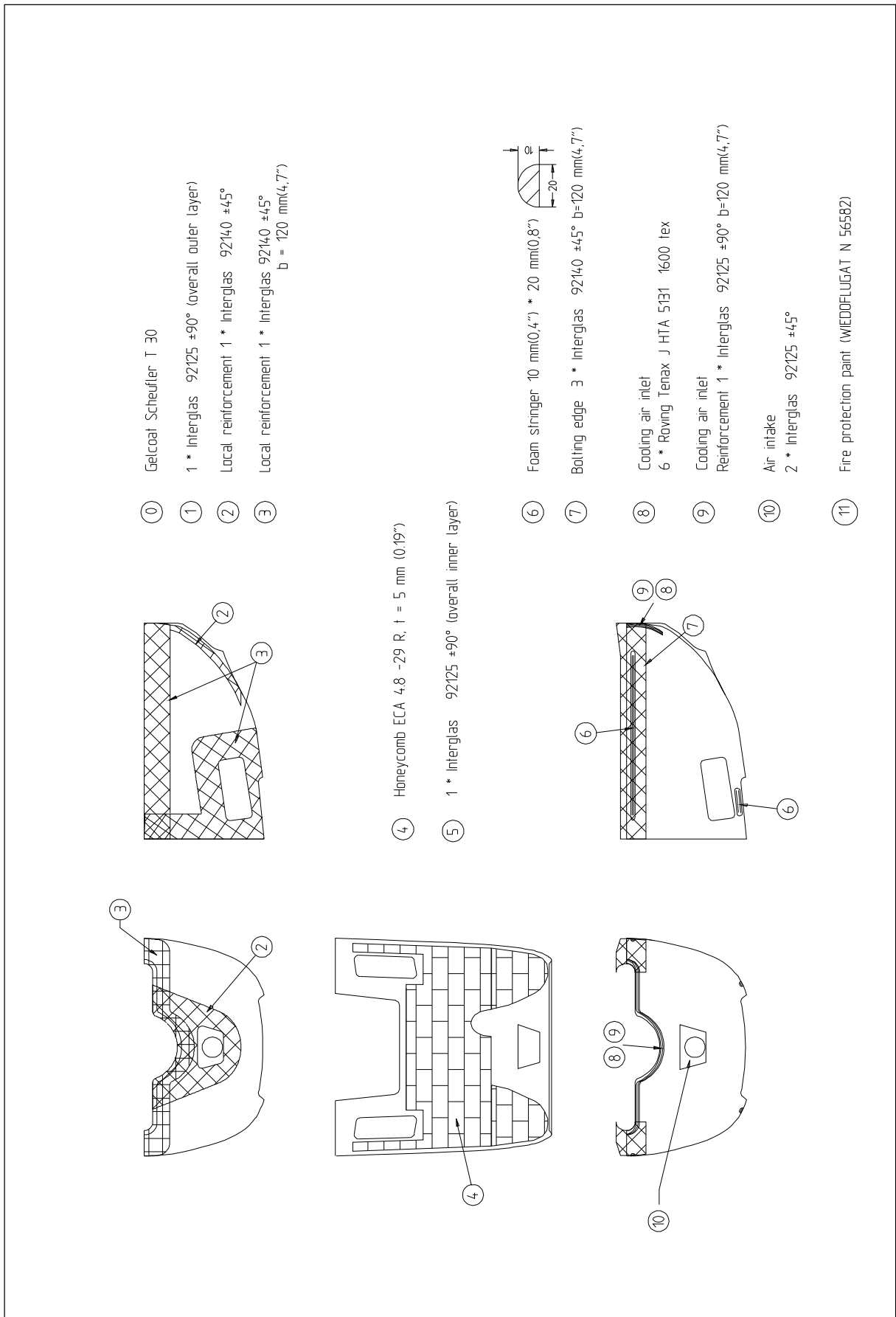
For repair of composite parts and steel components refer to Chapter 51. The repair of fabric has to be executed in accordance to the FAA AC 43.13-1A.



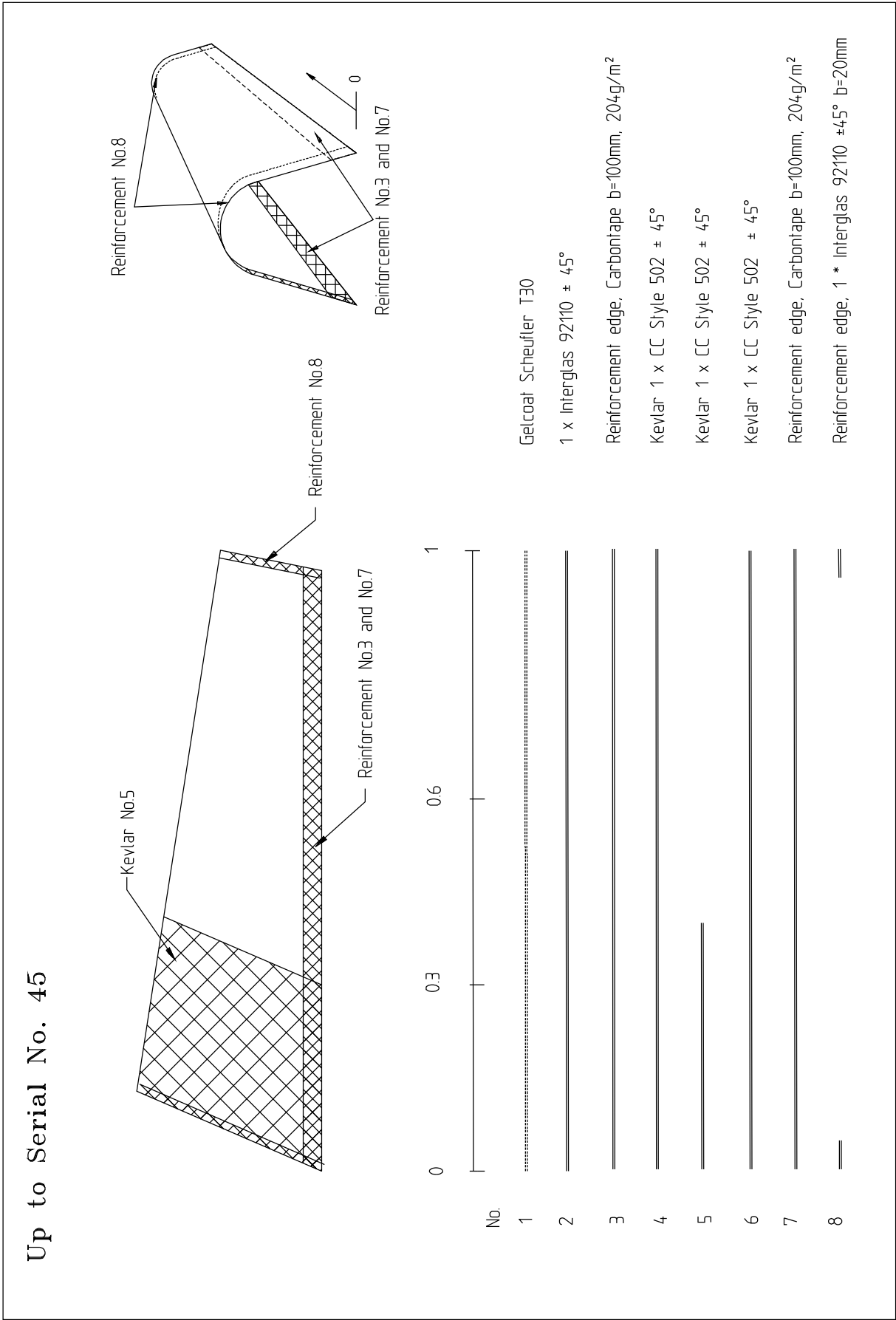
*Fuselage Steel Tube Design
Figure 1*



*Layer Sequence Top Half of the Engine Cowling
 Figure 2*

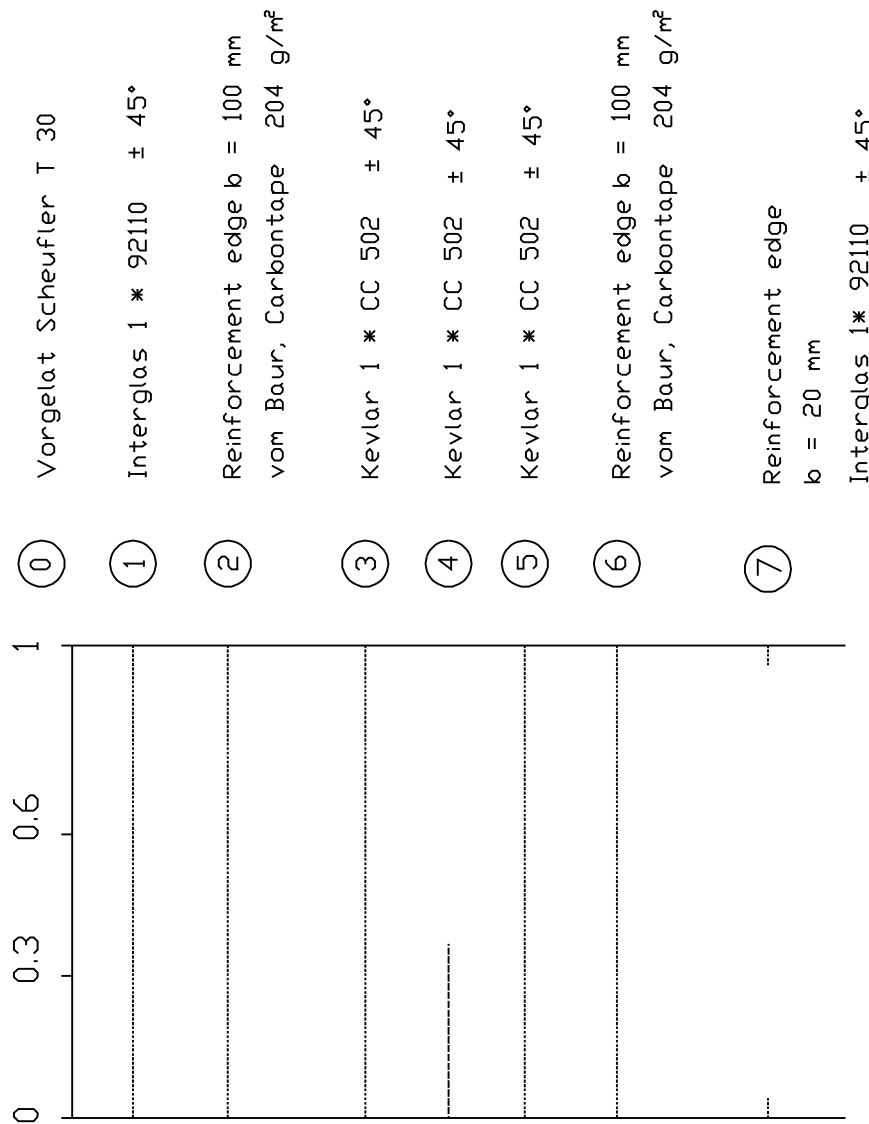


Layer Sequence Bottom Half of the Engine Cowling
Figure 3

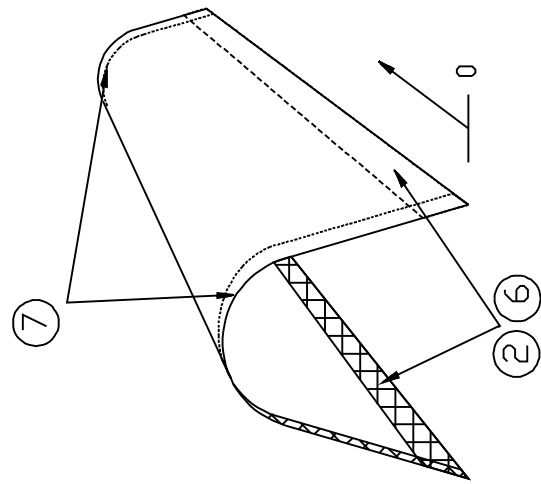


**Layer Sequence Turtle Deck
 Figure 4, Sheet 1**

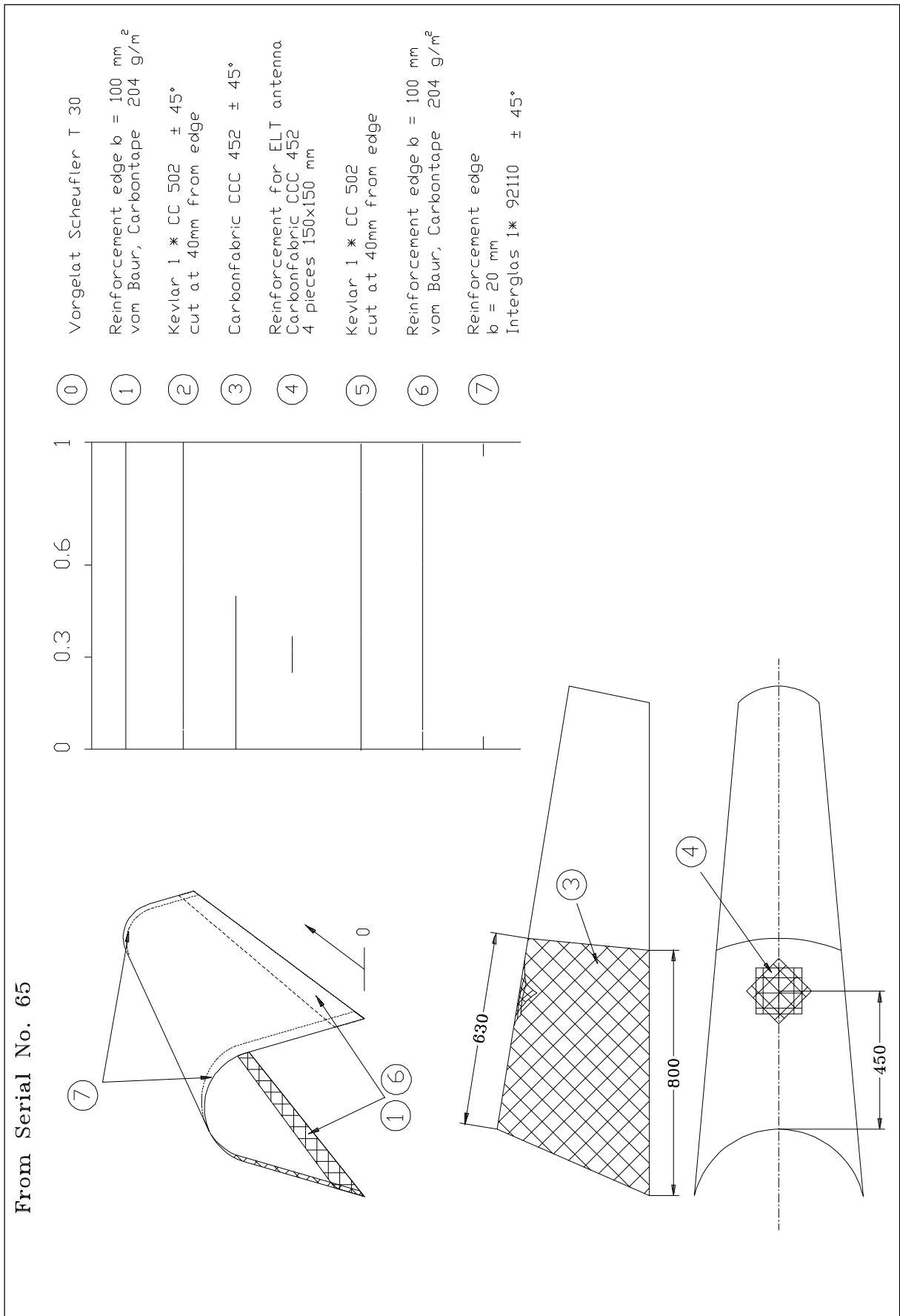
From Serial No. 46 up to No. 64



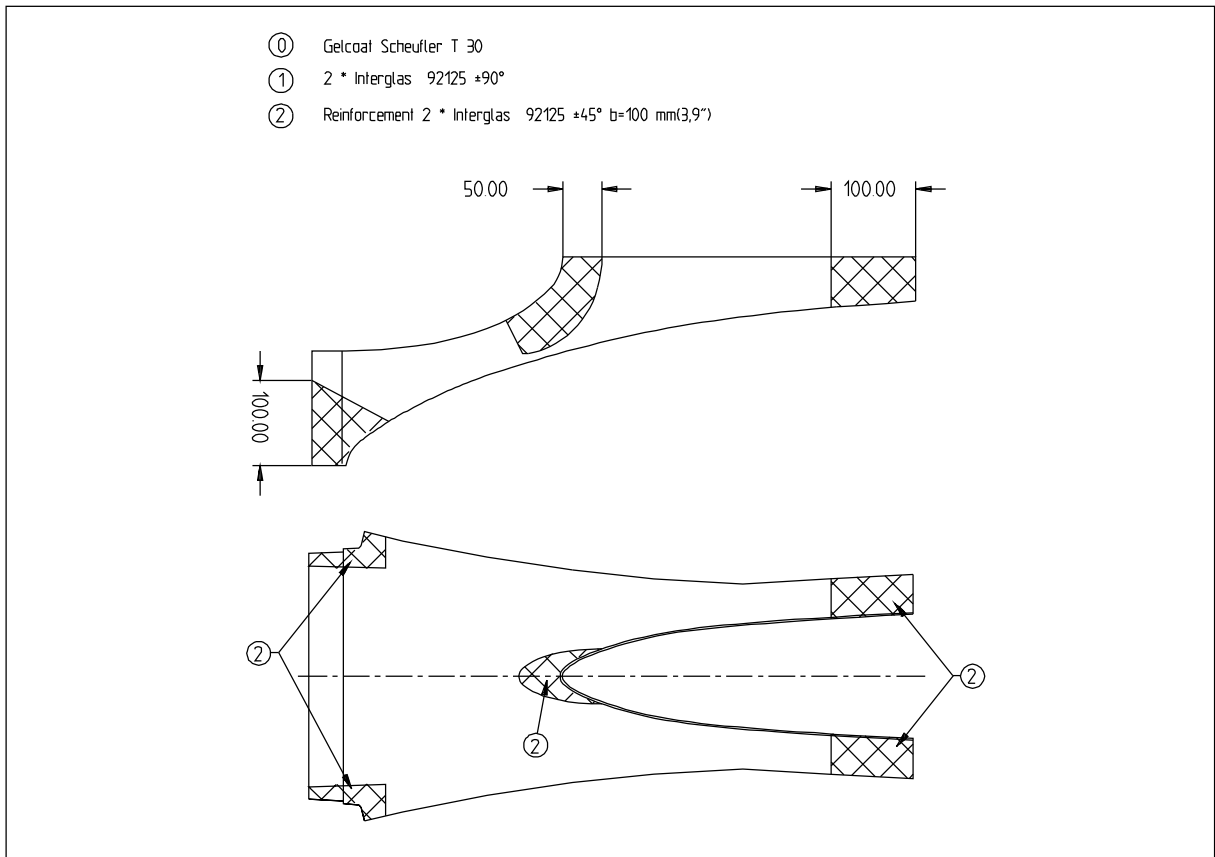
- ⑦ 0 Vorgelagert Scheufler T 30
- ① 1 Interglas 1 * 92110 ± 45°
- ② 2 Reinforcement edge b = 100 mm
vom Baur, Carbontape 204 g/m²
- ③ 3 Kevlar 1 * CC 502 ± 45°
- ④ 4 Kevlar 1 * CC 502 ± 45°
- ⑤ 5 Kevlar 1 * CC 502 ± 45°
- ⑥ 6 Reinforcement edge b = 100 mm
vom Baur, Carbontape 204 g/m²
- ⑦ 7 Reinforcement edge
b = 20 mm
Interglas 1* 92110 ± 45°



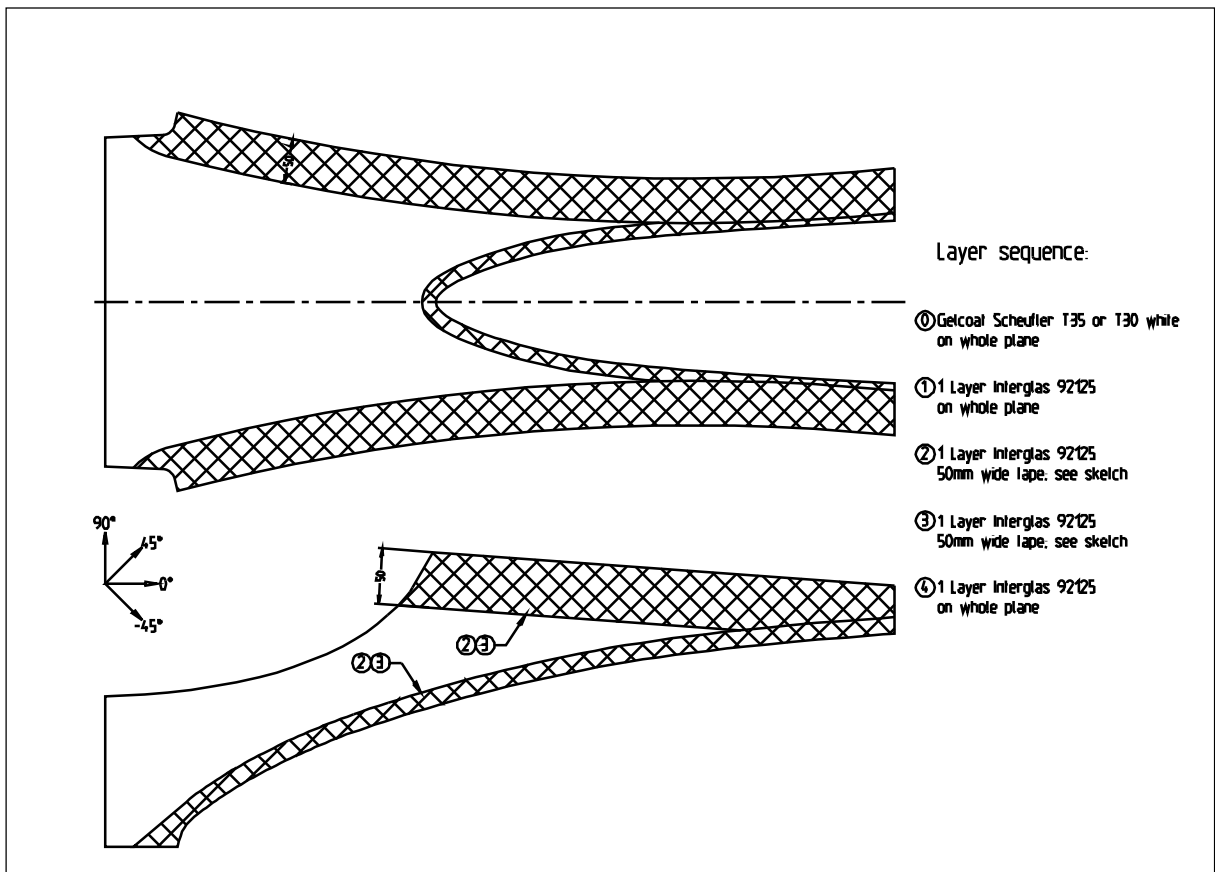
Layer Sequence Turtle Deck
 Figure 4, Sheet 2



Layer Sequence Turtle Deck
 Figure 4, Sheet 3



Layer Sequence Tail Fairing up to Ser. No. 65
Figure 5, Sheet 1



Layer Sequence Tail Fairing from Ser. No. 66
Figure 5, Sheet 2

53-01-00

MAINTENANCE PRACTICES

53-01-01

Canopy

Removal/Installation

- 1 Open canopy.

CAUTION

Support the canopy by hand before disconnecting the opening limiter strap.

- 2 Remove the attachment bolt of the opening limiter strap.
- 3 Push canopy to front and remove.
- 4 Install in reverse sequence of removal.

53-01-02

Canopy Frame

Removal/Installation

- 1 Remove canopy per Chapter 53-01-01.
- 2 Remove top half of the engine cowling, tank covering sheet, and the turtle deck per Chapter 51-00-01.
- 3 Disconnect the pitot/static lines from the front instruments and remove the head set socket.
- 4 Unscrew the canopy frame attachment screws.
- 5 Remove the canopy frame.
- 6 Install in reverse sequence of removal.