CHAPTER 06

DIMENSIONS AND AREAS

Learjet

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* Asterisk indicates pages revised, added or deleted by the current revision. The portion of the text affected by the current revision is indicated by a vertical line in the outer margin of the page.

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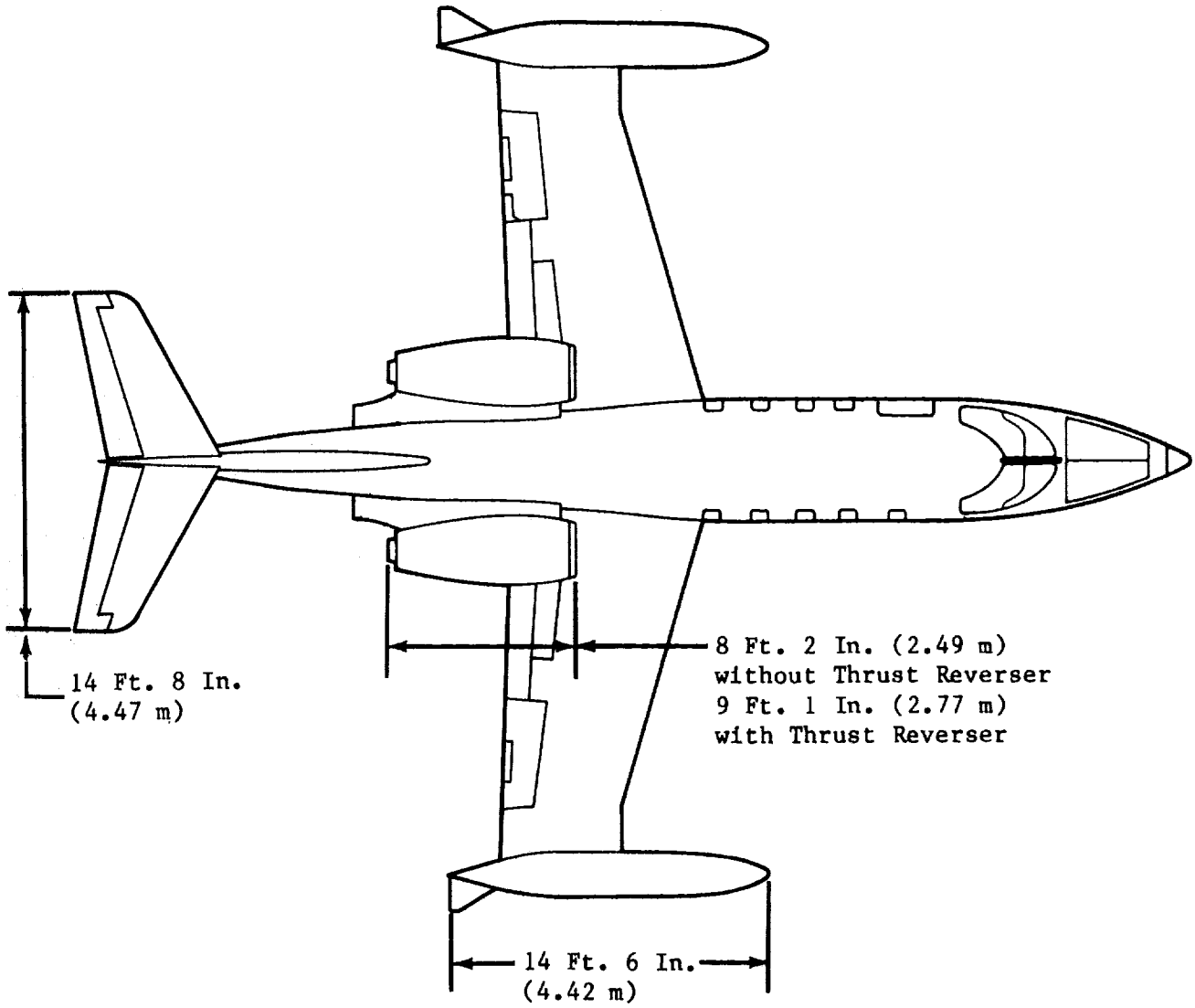
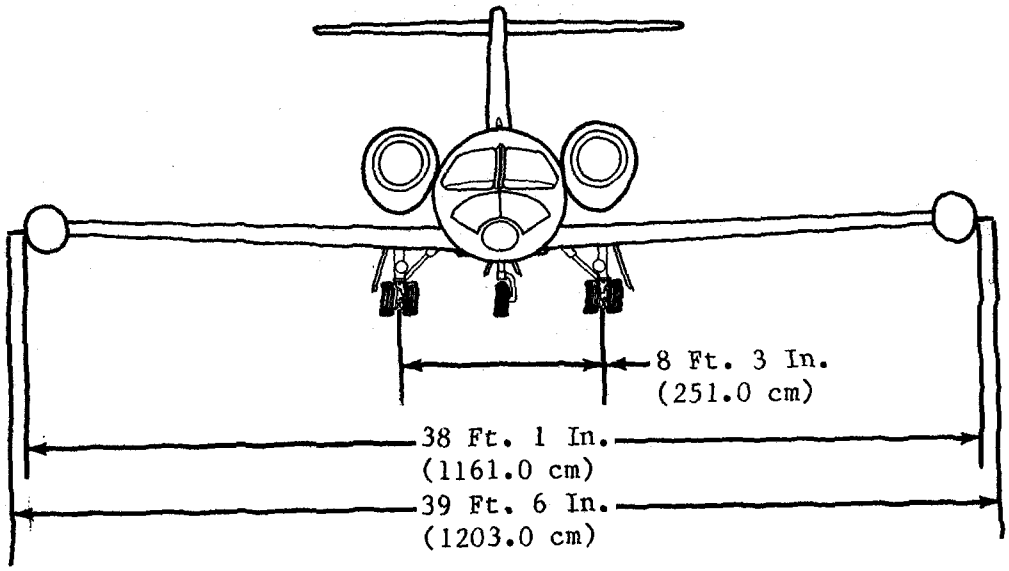
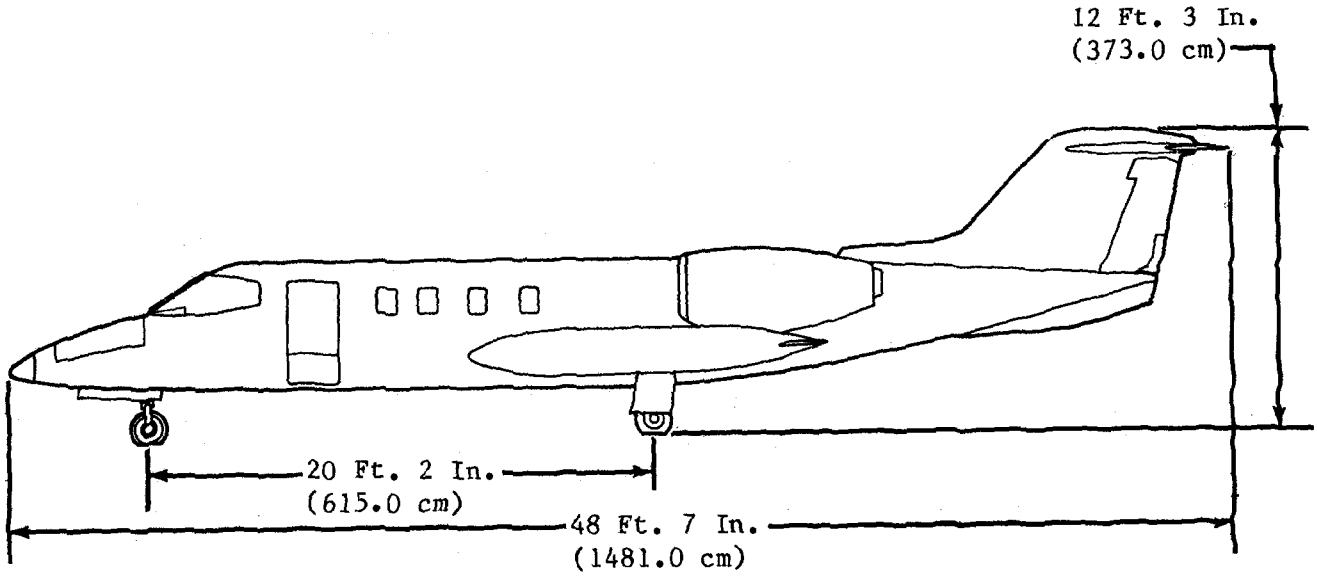
1. DESCRIPTION
   A. This chapter presents the aircraft dimensions, control surface areas, water lines, buttock lines, and station designations as outlined in the text and illustrations.
   B. Dimensions are given in U.S. and metric measure for overall length, width (wing span), and height at vertical stabilizer. Areas are in U.S. and metric measure and are provided for wing and control surfaces. Measurements are carried to nearest full inch and centimeter.



Aircraft Dimensions
Figure 1 (Sheet 1 of 2)





Aircraft Dimensions
Figure 1 (Sheet 2 of 2)

DIMENSIONS AND AREAS - DESCRIPTION AND OPERATION

1. Description
   A. The following charts and figures give the dimensions of the aircraft and the areas of the control surfaces. Dimensions and areas are given in U.S. and metric units. Measurements are carried to the nearest full inch and centimeter. These dimensions are for reference only and are not for inspection purposes.
   B. Dimensions

Span (overall)	39 ft. 6 in. [1203.0 cm]
Span (excluding tip tank fins)	38 ft. 1 in. [1161.0 cm]
Length (overall)	48 ft. 7 in. [1481.0 cm]
Height (overall)	12 ft. 3 in. [373.0 cm]
Wing	
Root Chord (Fuselage centerline)	9 ft. 0 in. [274.0 cm]
Tip Chord (@ WS 228.8)	5 ft. 1 in. [155.0 cm]
Chord (@ WS 181.1)	5 ft. 1 in. [155.0 cm]
Dihedral	2° 30'
Sweepback (c/4) Inner panel (WS 0.0 to 181.1)	13°
Sweepback (c/4) Outer panel (WS 181.1 to 228.8)	2°
Incidence	1°
Aileron	
Span (nominal)	4 ft. 9 in. [145.0 cm]
Root Chord	1 ft. 5 in. [43.0 cm]
Tip Chord	1 ft. 1 in. [33.0 cm]
Trim Tab Span (LH only)	1 ft. 3 in. [38.0 cm]
Balance Tab Span (RH & LH)	1 ft. 9 in. [53.0 cm]
Flaps	
Type	Single Slotted
Span (nominal)	9 ft. 2 in. [279.0 cm]
Root Chord	2 ft. 4 in. [71.0 cm]
Tip Chord	1 ft. 8 in. [51.0 cm]
Horizontal Stabilizer	
Span	14 ft. 8 in. [447.0 cm]
Root Chord	5 ft. 0 in. [152.0 cm]
Tip Chord	2 ft. 4 in. [71.0 cm]
Sweepback (c/4 chord)	25° 0'
Dihedral	0°
Elevators	
Span (per side)	7 ft. 2 in. [218.0 cm]
Root Chord	1 ft. 4 in. [41.0 cm]
Tip Chord	7 in. [18.0 cm]

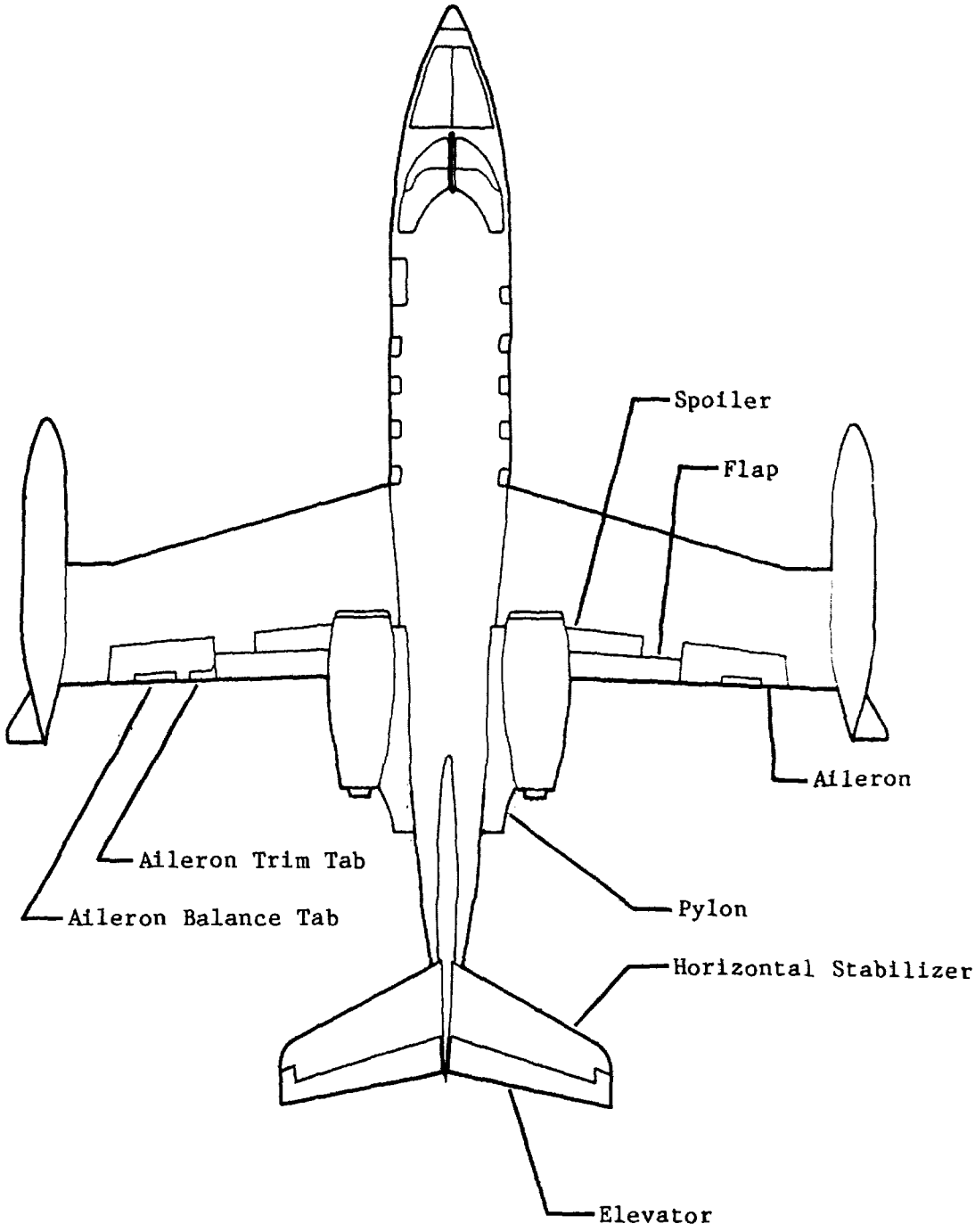
Vertical Stabilizer	
Span	5 ft. 6 in. [168.0 cm]
Root Chord	8 ft. 11 in. [272.0 cm]
Tip Chord	5 ft. 1 in. [155.0 cm]
Sweepback (c/4)	35° 36'
Fuselage	
Fuselage constant section	
Outside diameter	5 ft. 3 in. [160.0 cm]
Inside diameter	4 ft. 9 in. [145.0 cm]
Length of passenger area	11 ft. 4 in. [132.0 cm]
Height (floor to ceiling)	4 ft. 4 in. [132.0 cm]

C. Areas

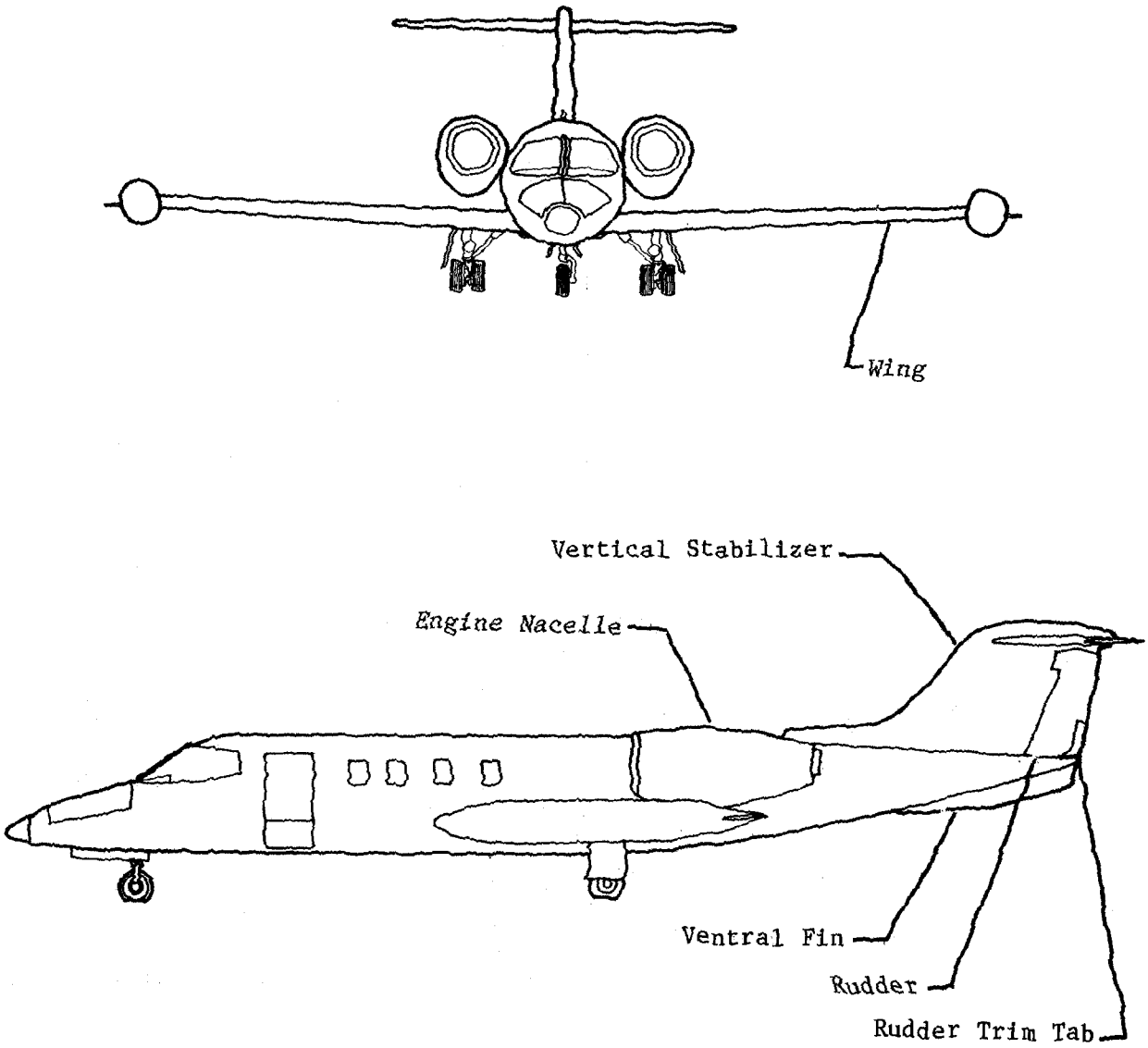
Wing	
Inner panel (WS 0.0 to WS 181.1)	212.9 ft.^{2} [19.0 m^2]
Outer panel (WS 181.1 to WS 228.8)	40.4 ft.^{2} [4.0 m^2]
Total reference area	253.3 ft.^{2} [23.0 m^2]
Aileron (per side)	5.854 ft.^{2} [5438.0 cm^2]
Aileron Trim Tab (LH only)	0.335 ft.^{2} [311.0 cm^2]
Aileron Balance Tab (LH & RH)	1.28 ft.^{2} [1189.0 cm^2]
Flaps (total)	36.85 ft.^{2} [3.0 m^2]
Spoilers (total)	7 ft.^{2} [6503.0 cm^2]
Horizontal Stabilizer (total)	54.0 ft.^{2} [5.0 m^2]
Stabilizer (excluding elevator)	40.4 ft.^{2} [4.0 m^2]
Elevator	13.6 ft.^{2} [1.0 m^2]
Vertical Stabilizer	38.35 ft.^{2} [3.0 m^2]
Vertical Stabilizer (excluding rudder)	31.80 ft.^{2} [3.0 m^2]
Rudder	6.55 ft.^{2} [6038.0 cm^2]
Rudder Trim Tab	0.69 ft.^{2} [641.0 cm^2]

D. Volume

Model 35/35A	
Passenger Compartment (from flight deck divider to baggage divider)	228 ft.^{3} [6.45 m^3]
Crew Compartment (forward of flight deck divider)	54 ft.^{3} [1.53 m^3]
Baggage Compartment (from baggage divider to aft pressure bulkhead)	40 ft.^{3} [1.13 m^3]
Model 36/36A	
Passenger Compartment (from flight deck divider to baggage divider)	188 ft.^{3} [5.32 m^3]
Crew Compartment (forward of flight deck divider)	54 ft.^{3} [1.53 m^3]
Baggage Compartment (from baggage divider to aft pressure bulkhead)	40 ft.^{3} [1.13 m^3]



Aircraft Areas
Figure 1 (Sheet 1 of 2)



Aircraft Areas
Figure 1 (Sheet 2 of 2)

STATIONS - DESCRIPTION AND OPERATION

1. DESCRIPTION
   A. The aircraft is divided into reference points along three axes. The reference points are measured in inches. These reference points provide a means of quickly identifying the location of a bulkhead, component, etc.
      (1) Fuselage station, water line, and buttock line measurements used in this manual are rounded to the nearest inch.
   B. All reference points may be converted to metric measurement (centimeters) by multiplying the reference point (in inches) by 2.54.
   C. The following terms are used for reference points.

      FS - Fuselage station is a vertical reference plane measured horizontally from the nose of the aircraft.

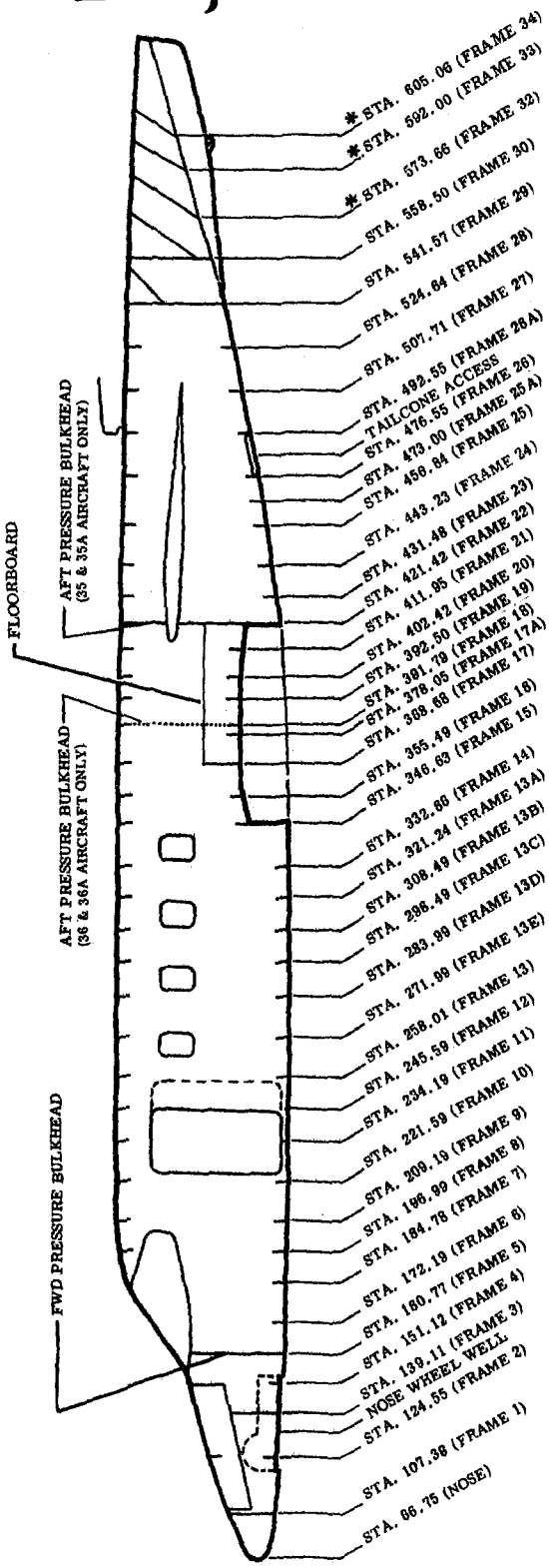
      WL - Water line is horizontal reference plane measured vertically from the horizontal reference line of the aircraft.

      BL - Buttock line is a vertical reference plane measured horizontally from the aircraft centerline. Right or left is added to indicate the direction from aircraft centerline (RBL and LBL).

      WS - Wing station is a vertical reference plane measured horizontally from the wing centerline perpendicularly along wing datum.

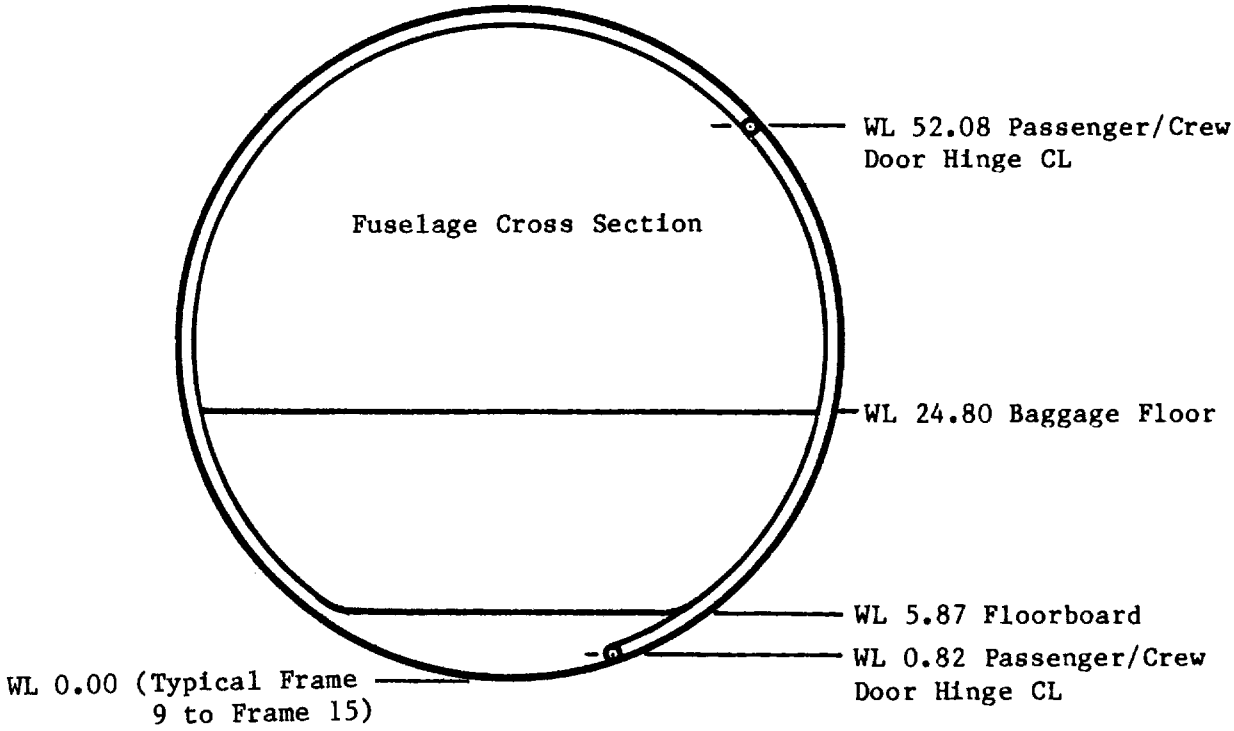
      NAC STA - Reference points that apply to the engine nacelle.
      NAC WL
      NAC BL

      TIP TANK STA - Reference points that apply to the tip tank.
      TT WL
      TT BL



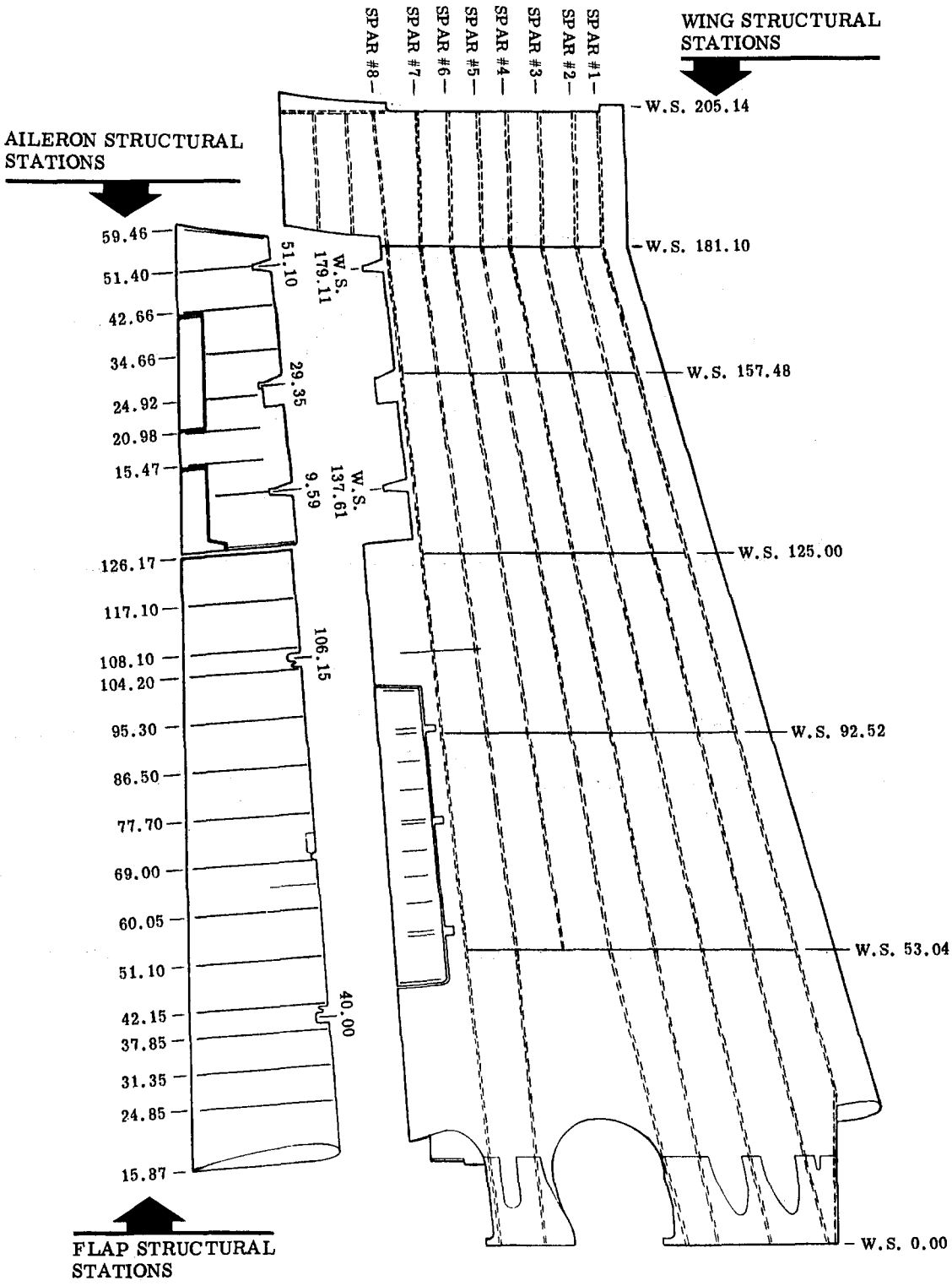
Fuselage Structural Station Diagram
Figure 1 (Sheet 1 of 2)

*Measured at outside mold line of bulkhead intersection with bottom CL of fuselage skin.

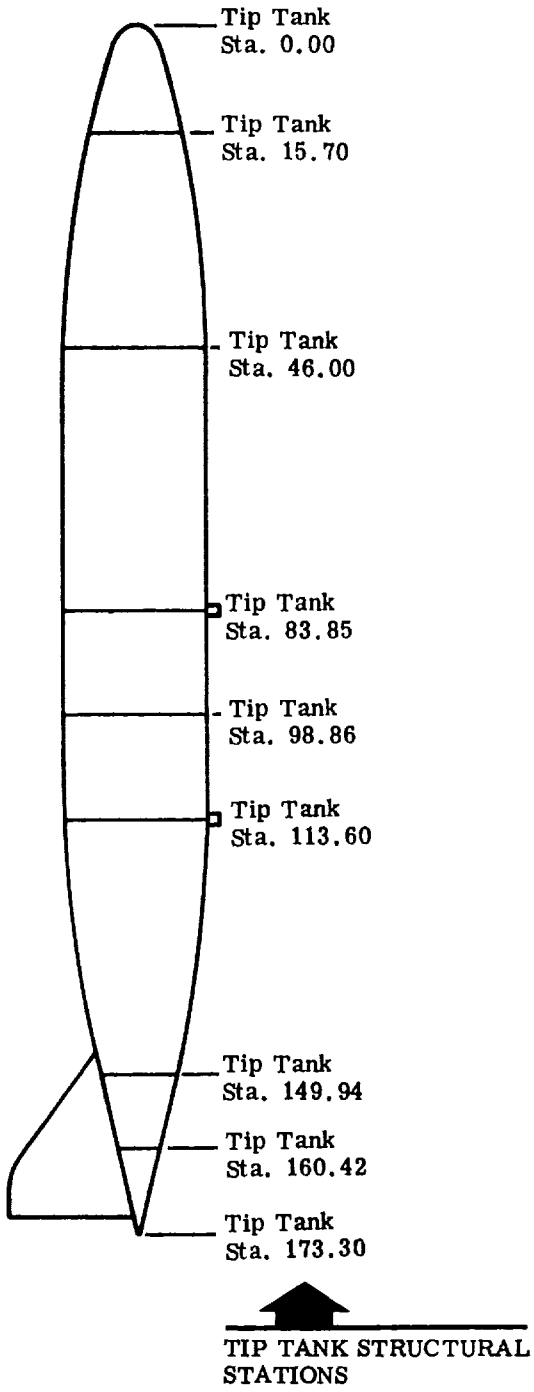


NOTE: Refer to 53-10-00 for station line measurement instruction.

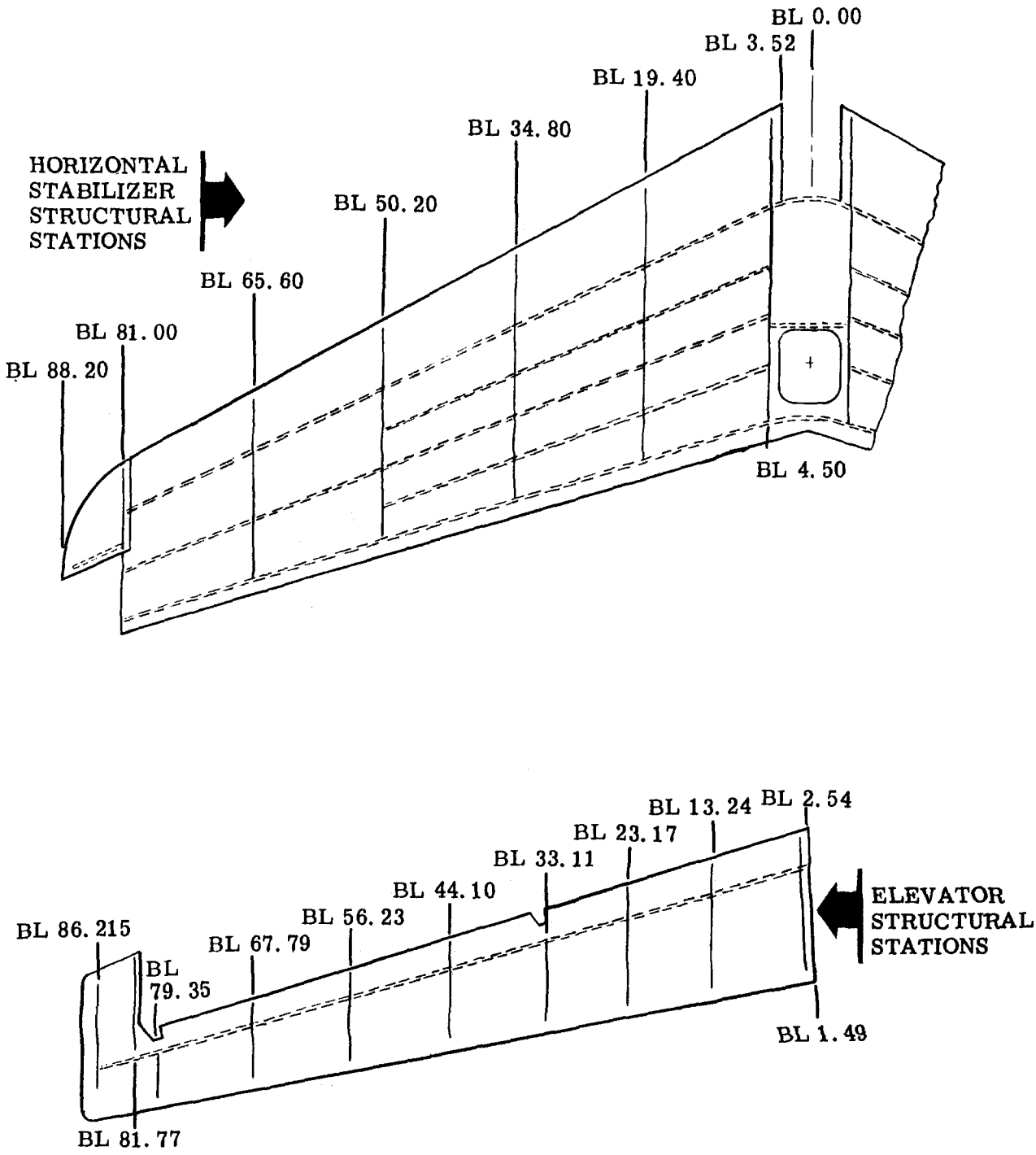
Fuselage Structural Station Diagram
Figure 1 (Sheet 2 of 2)



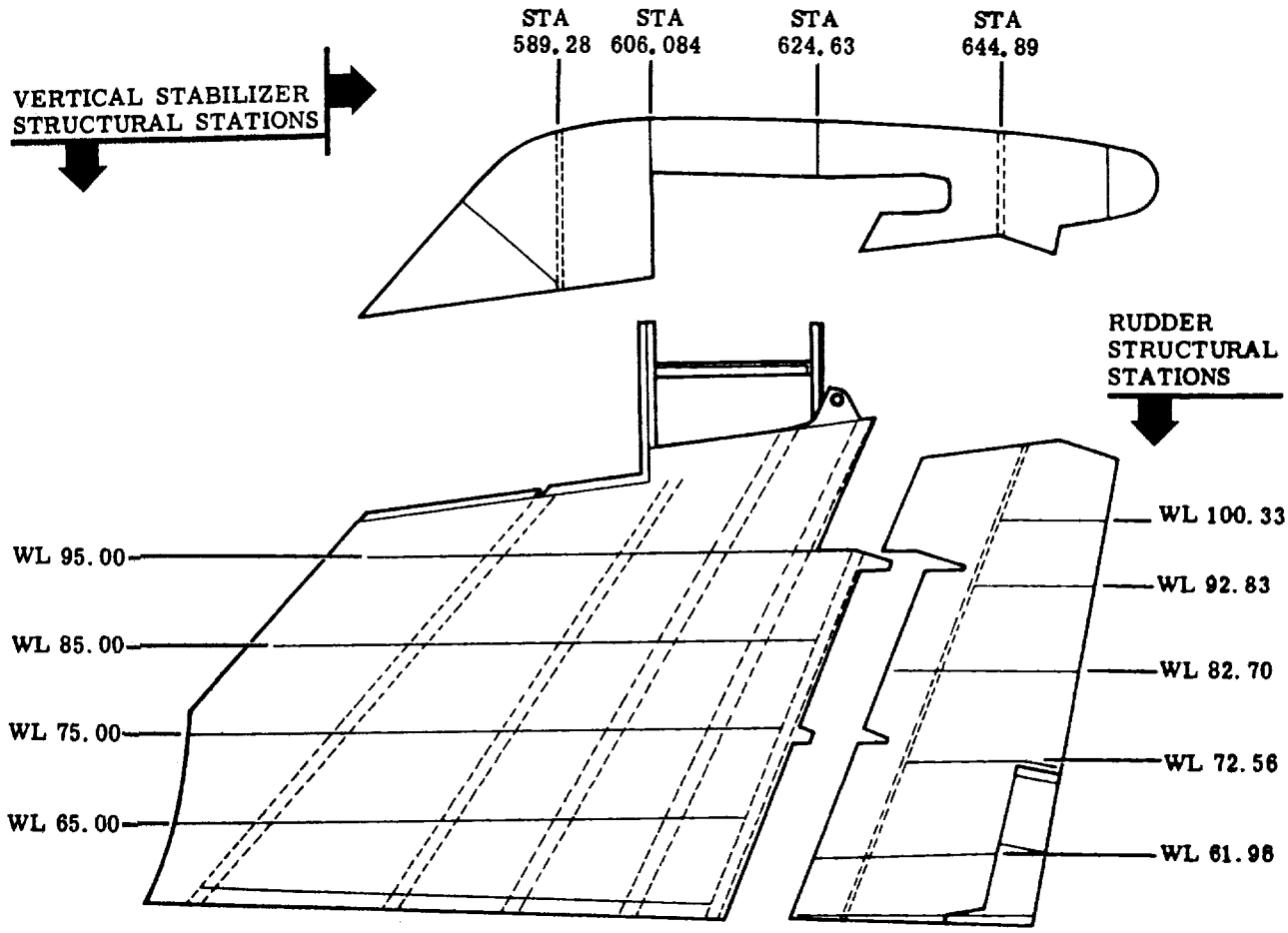
Wing, Aileron, and Flap Structural Station Diagram
Figure 2



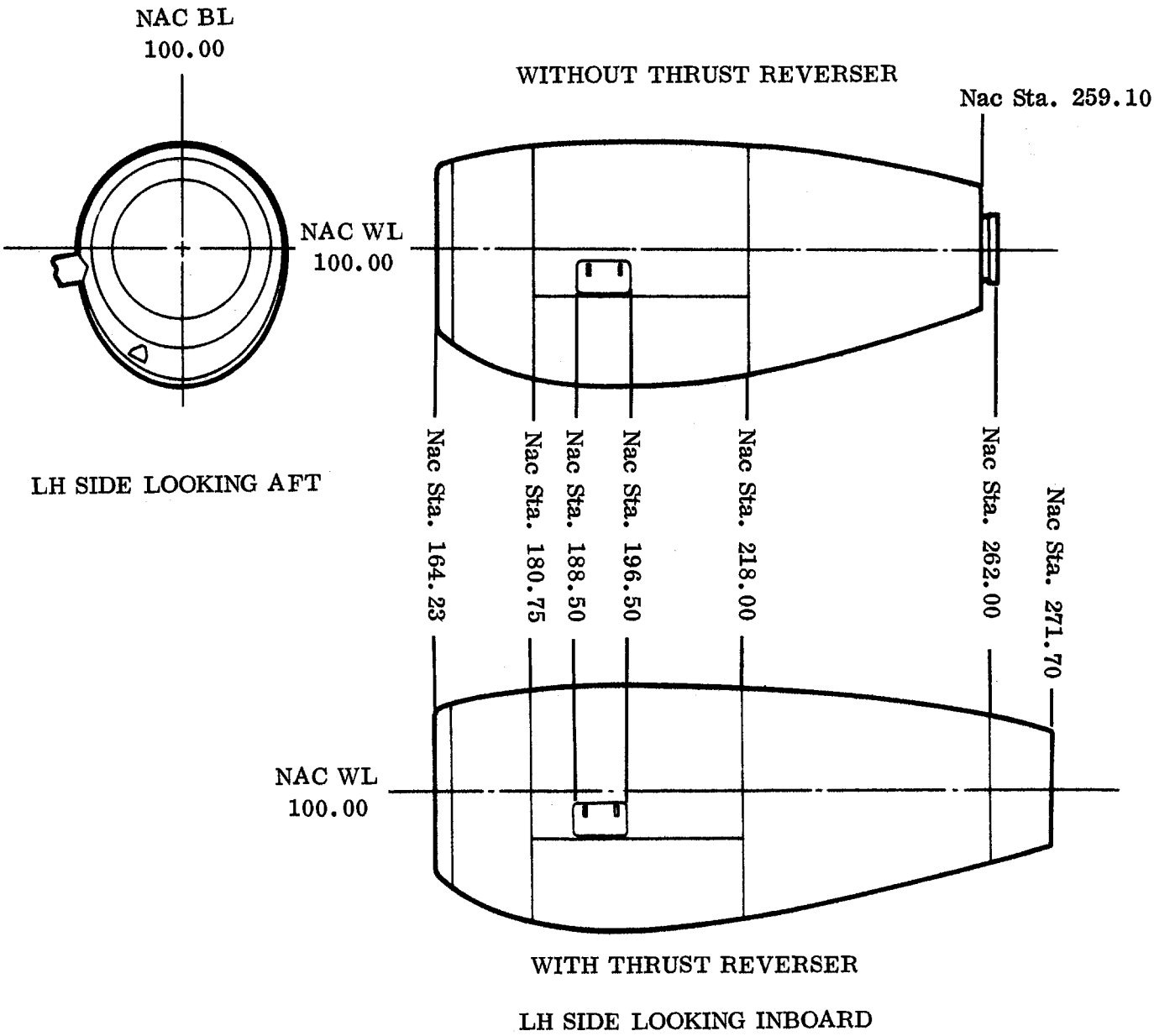
Tip Tank Structural Station Diagram
Figure 3



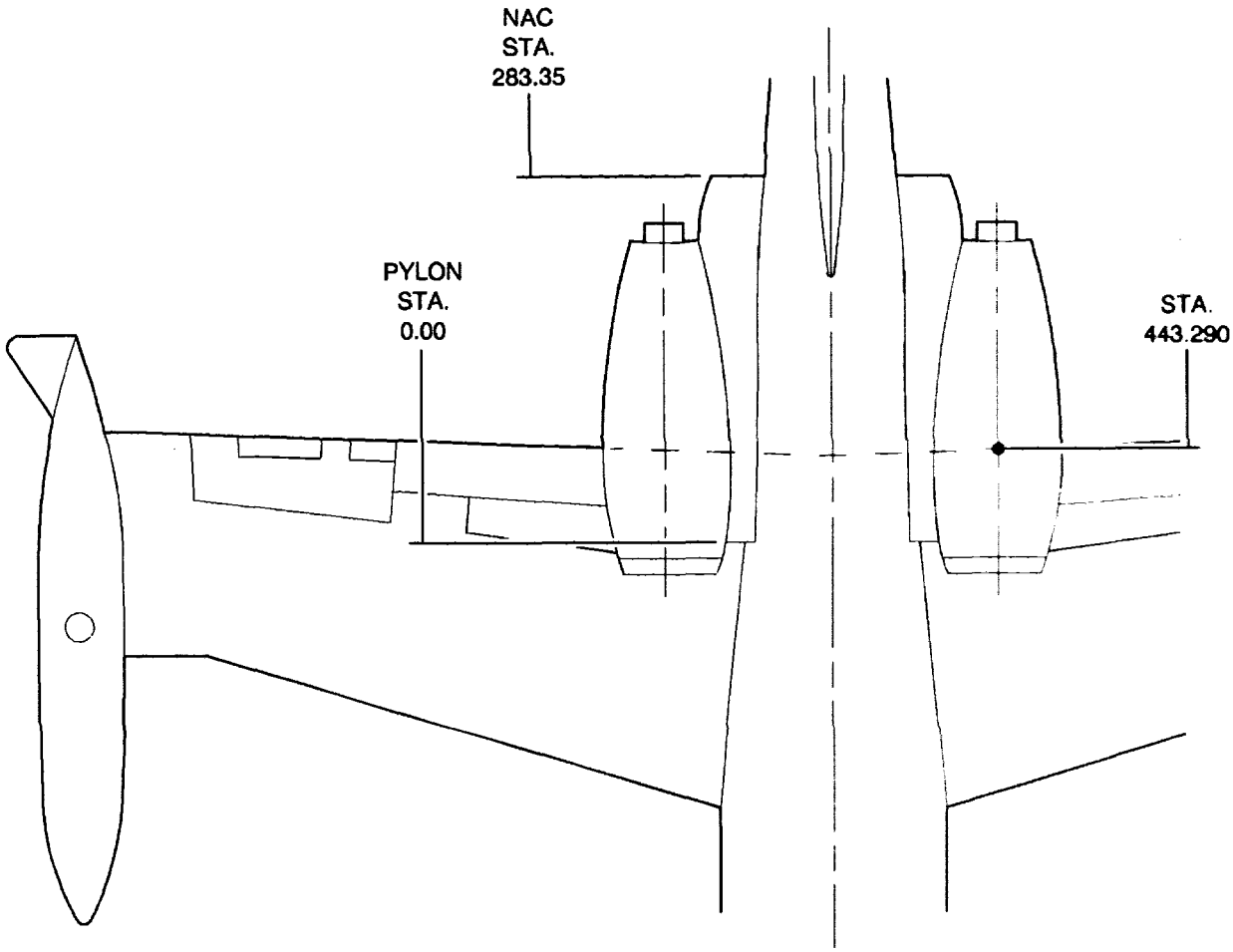
Horizontal Stabilizer and Elevator Structural Stations Diagram
Figure 4



Vertical Stabilizer and Rudder Structural Stations Diagram
Figure 5



Nacelle Structural Station Diagram
Figure 6

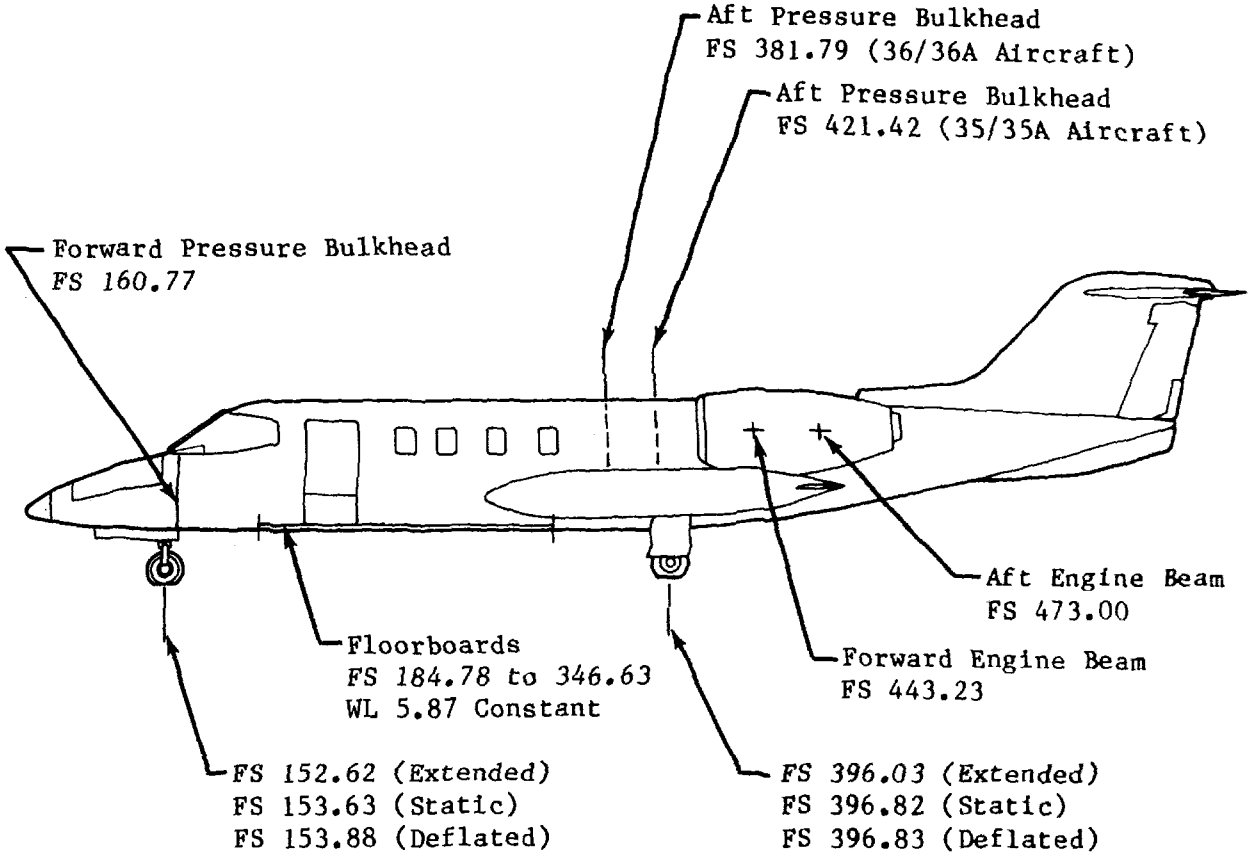


Pylon Structural Station Diagram
Figure 7

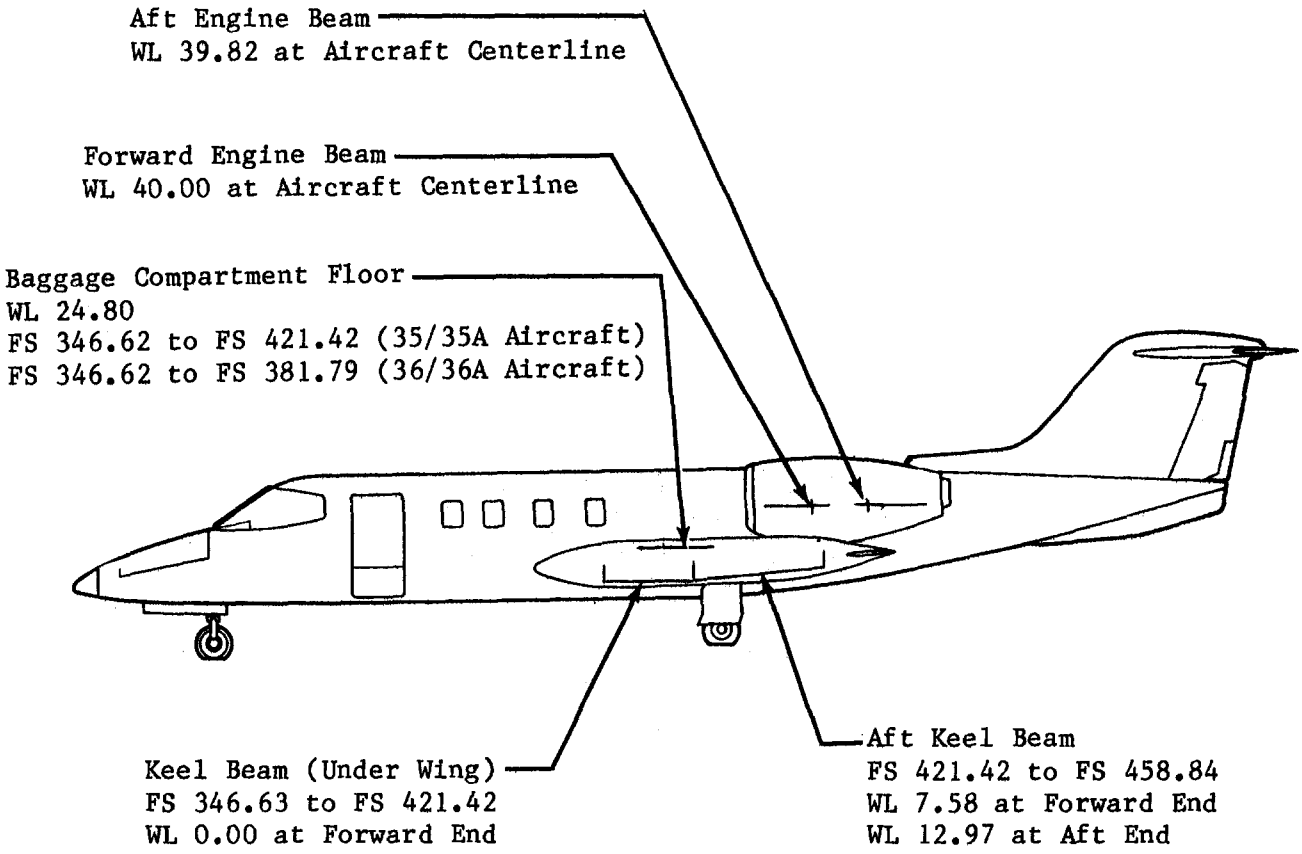
MAJOR STRUCTURAL MEMBERS - DESCRIPTION AND OPERATION

1. DESCRIPTION

A. The location of some major structural members are shown in figure 1.



Major Structural Member Locations
Figure 1 (Sheet 1 of 2)



Major Structural Member Locations
Figure 1 (Sheet 2 of 2)