CHAPTER 51

Structures

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A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

51-EFFECTIVE PAGES

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STRUCTURES

51-CONTENTS

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STRUCTURES - INTRODUCTION

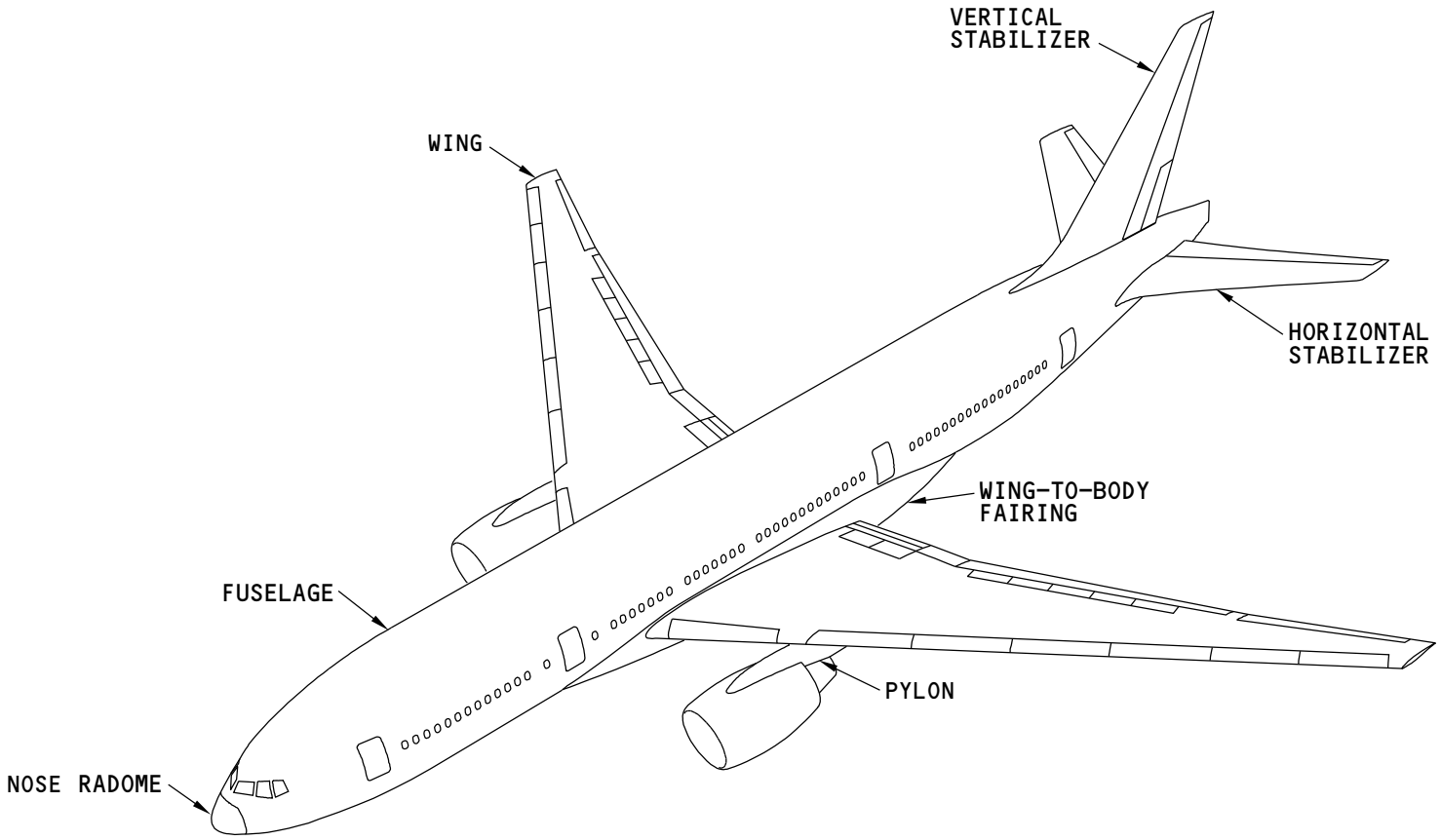
General

These chapters give an overview of these parts of the airplane:

- Nose Radome (chapter 53)
- Fuselage (53)
- Wings (57)
- Vertical stabilizer (55)
- Horizontal stabilizer (55)
- Wing-to-body fairing (53)
- Pylon (54).

Abbreviations and Acronyms

- ADU - air drive unit
- BL - buttock line
- ECS - environmental control system
- ILS - instrument landing system
- RAT - ram air turbine
- Sta - station
- WL - water line



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STRUCTURES - INTRODUCTION

General

Some airplane structure and parts are made of composite materials instead of aluminum. Composite materials are lighter and more resistant to corrosion than aluminum.

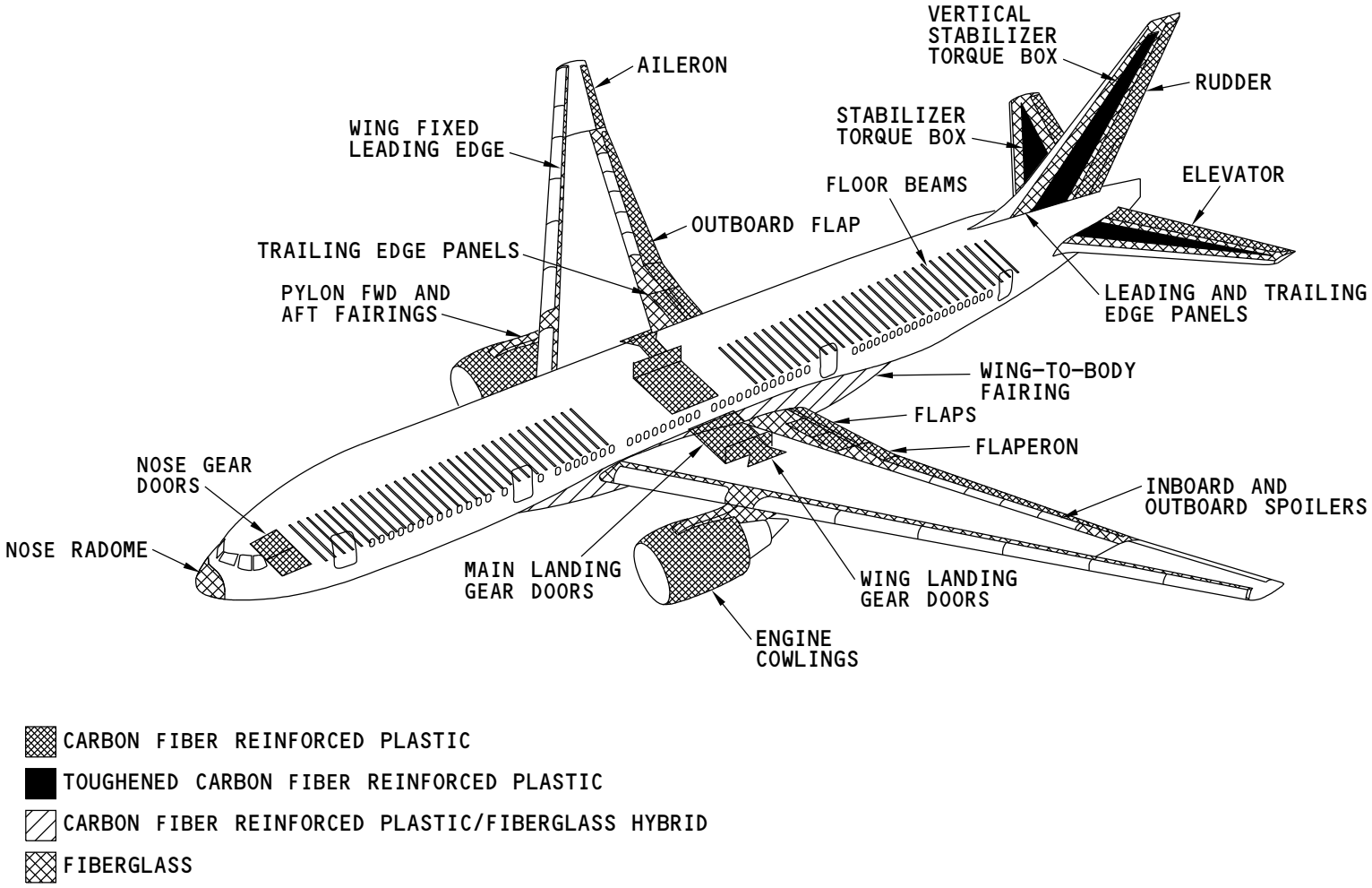
Composite materials are layers (plies) of carbon or fiberglass in a mixture of plastic resin. They include these materials:

- Carbon fiber reinforced plastic
- Toughened carbon fiber reinforced plastic
- Fiberglass
- Carbon fiber reinforced plastic/fiberglass hybrid.

Some structures, such as the engine cowling and the wing-to-body fairing, have a honeycomb core between layers of composite material. This gives more strength to the structure.

Training Information Point

Drilling composite materials creates a dust. The dust is a health hazard. Use a protective mask so you do not inhale the dust.



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STRUCTURES - COMPOSITE MATERIALS

STRUCTURES - STATION NUMBERS, WATER LINES, AND BUTTOCK LINES

General

These designated numbers help you find areas of the airplane:

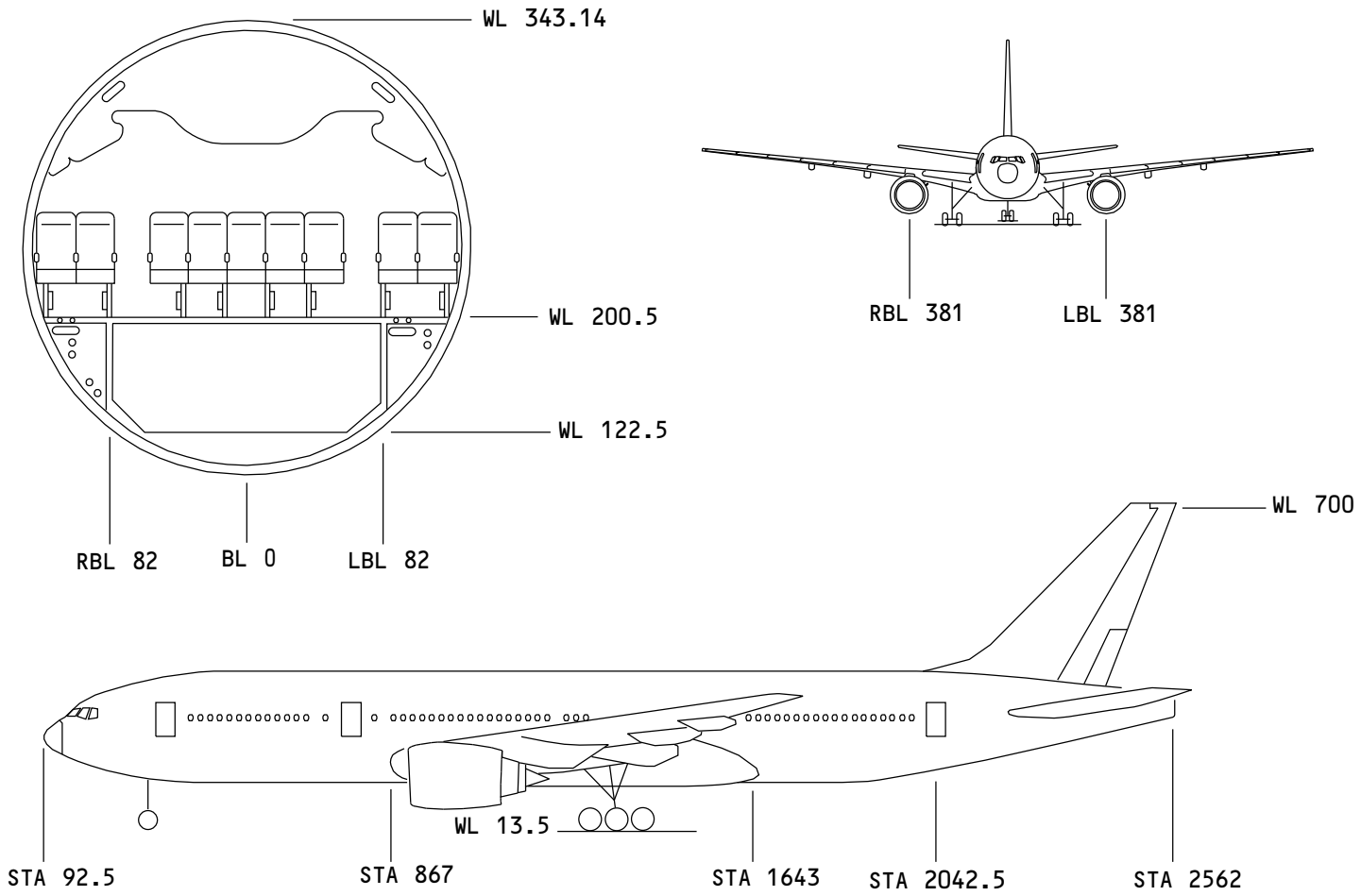
- Water line (WL)
- Buttock line (BL)
- Station (Sta).

The water line is a height measurement in inches from a reference plane below the airplane. The ground is water line 13.5.

The buttock line is a lateral measurement in inches from the center line of the airplane. There are left and right buttock lines.

The station is a length measurement in inches from a zero datum. The front of the airplane is station 92.5.

This information is in chapter 6 of the maintenance manual.



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STRUCTURES - STATION NUMBERS, WATER LINES, AND BUTTOCK LINES