CRJ series (700/900)

General Familiarization

by Steve Oebermann

Presented by AeroEd LLC
Tel: 585 935-7239
Fax: 585 935-5940
www.aeroed.com

DETAILS:
This book is a study guide for the CRJ 700-900 Aircraft. It covers the 700 and 900 models. This book is a great tool for review, refresher, new hires, pre-requisite training, and preparation for systems level classes. There are many benefits for students, technicians, teachers, MRO Training Departments, and Airlines alike. With self-paced study, training time does not need to conflict with your working time!

HOW TO ENROLL IN THE CERTIFICATION PROGRAM:
You can convert this study guide to the AeroEd certificate program which will award you with an official Certificate of Completion and the opportunity to collect 40 hours of FAA AMT Awards Credits. Successful completion of this course qualifies for 40 hours FAA AMT Awards Program credit for FAA certificated mechanics or repairmen, technicians, instructors, and students. All materials required for registration are included in the available Certificate Packet. For more information on the program contact your local FSDO Airworthiness Safety Program Manager.

Self Paced Training Study Guide

APRIL 2015

DISTRIBUTED BY

AIRCRAFT TECHNICAL Book Company

+1 970 726-5111

www.actechbooks.com

72413 US Hwy 40
Tabernash, CO 80478-0270
USA

The General Familiarization that this course provides can serve as the springboard for Systems classes and a deeper level of detail. Just contact AeroEd and we will get you started. For the incremental cost of the program you will receive the following items in the Certification Packet: a set of tests or online test login, a registration number, and an online account to track your chapter scores and mastery results. Upon successful completion, you will receive a Certificate of Completion and registration information for the FAA AMT Awards Program.

For more information or to enroll in the course contact AeroEd at *www.AeroEd.com* or call 1 585 935-7239

CRJ 700/900 GENERAL FAMILIARIZATION SELF PACED

This course covers an overview of the Mechanical Systems to include: Description and Operation, Controls and Indications, Component Location, & Servicing.

OBJECTIVES

On completion of this training, using the study guide provided, and appropriate Maintenance Manuals the student will be able to:

1) Describe the safety precautions to be observed when working on or near the aircraft and its systems.
2) Describe the locations of principle components.
3) Describe the normal functions of each major system, including terminology and nomenclature.
4) Using the proper maintenance manual reference, perform all aircraft system servicing tasks.
5) Interpret reports provided by the crew members.

TABLE OF CONTENTS
CRJ 700/900 GENERAL FAMILIARIZATION SELF PACED
ATA-06

The Aircraft Maintenance Manual (AMM)

Overview

The Aircraft Maintenance Manual is divided into two separate manuals, Part 1 and Part 2.

Part 1 contains the System Description Section (SDS). The SDS gives the function, operation, configuration and control of the systems and components of the aircraft. The information is given in sufficient detail to let the technician know the function and construction of the systems.

Part 2 contains data that includes the scheduled maintenance procedures identified by the Maintenance Requirements Manual (MRM). It gives instructions to service, replace, adjust, test, inspect, check, clean, paint, and repair the aircraft systems and equipment on the aircraft, usually done on the ramp or in the maintenance hangar.

NOTE: See the Introduction section in Part 2 of the AMM which has a detailed description of the contents of Part 2.

The AMM also gives instructions to inspect and maintain the aircraft structure. Instructions to repair the structure are found in the CRJ 700/900 Series Regional Jet Structural Repair Manual (SRM). Instructions and data for repair of equipment off the aircraft are contained in the Component Maintenance Manuals (CMM).

Bombardier Aerospace Regional Aircraft publications use both American and metric systems of measurement. The system used in the original reference document is given first, followed by the conversion in parentheses.

AIRCRAFT EFFECTIVITY

Effectivity data is given in the effectivity block found on the lower left side of each page. The effectivity block includes the customer effectivity codes.

When a description applies to all aircraft, 10001 to 10999 is found in the customer effectivity code field.

If the information does not apply to all aircraft, the customer effectivity code of the aircraft to which information does apply is given.

In the master manual, all information applicable to any and all aircraft is given.

MANUAL ORGANIZATION

The AMM is organized on four levels as specified by ATA 100. They are usually referred to as Group, Chapter, Section, and Subject.

Each page contains the Chapter-Section-Subject number, the page number, the effectivity code of the page, and the revision date of the page.

The groups are divided into Chapter/System; the Chapter/System is divided into Section/Subsystem and the Section/Subsystem is divided into Subject/Unit as follows:

Level 1 Group

Level 2 Chapter/System

Level 3 Section/Subsystem

Level 4 Subject/Unit

Group

Groups give a broad separation of the contents of the manual. The SDS is organized into four groups. Each group contains aircraft systems usually known as Chapters and are divided as follows:

AMM

GROUP 1	GROUP 2	GROUP 3	GROUP 4
Aircraft General	Airframe Systems	Structure	Power Plant
Chapters 5 to 12	Chapters 20 to 49	Chapters 51 to 57	Chapters 70 to 80

Chapter/System

This level is usually known as the Chapter. It has interrelated components arranged to do a specific function and is further divided into subsystems usually known as Sections. Each Chapter is assigned its number and title by ATA 100 and is identified by the first element in the standard numbering system.

Section/Subsystem

This level is usually known as the Section. It permits the Chapter to be divided into subsystems and is identified by the second element in the standard numbering system.

Subject/Unit

This level is usually known as the Subject. It permits the identification of individual units in a system or section and is identified by the third element in the standard numbering system (by ATA 100).

STANDARD NUMBERING SYSTEM

The standard numbering system used in the Manual is as specified by the ATA 100. It is a three-element numbering system that divides the manual material into Chapter/Section/Subject. Each element has two digits and is given as follows:

PAGE BLOCK ASSIGNMENT

The Subjects in the AMM are divided into page blocks with headings specified by ATA 100. The SDS uses page numbers 1 to 99.

The page blocks categorize the tasks that they contain. The page blocks are defined by ATA Specification 100:

NOMENCLATURE	PAGE BLOCK
DESCRIPTION AND OPERATION (D&O)	1 to 99
TROUBLESHOOTING (TS)	101 to 199
MAINTENANCE PRACTICES (MP)	201 to 299
SERVICING (SRV)	301 to 399
REMOVAL/INSTALLATION (R/I)	401 to 499
ADJUSTMENT/TEST (A/T)	501 to 599
INSPECTION/CHECK (I/C)	601 to 699
CLEANING/PAINTING (C/P)	701 to 799
APPROVED REPAIRS (AR)	801 to 899

ATA 100 specifies Warnings, Cautions, and Notes

WARNING:
- Calls attention to the use of materials, processes, methods, procedures, or limits that must be followed precisely to avoid injury to persons.

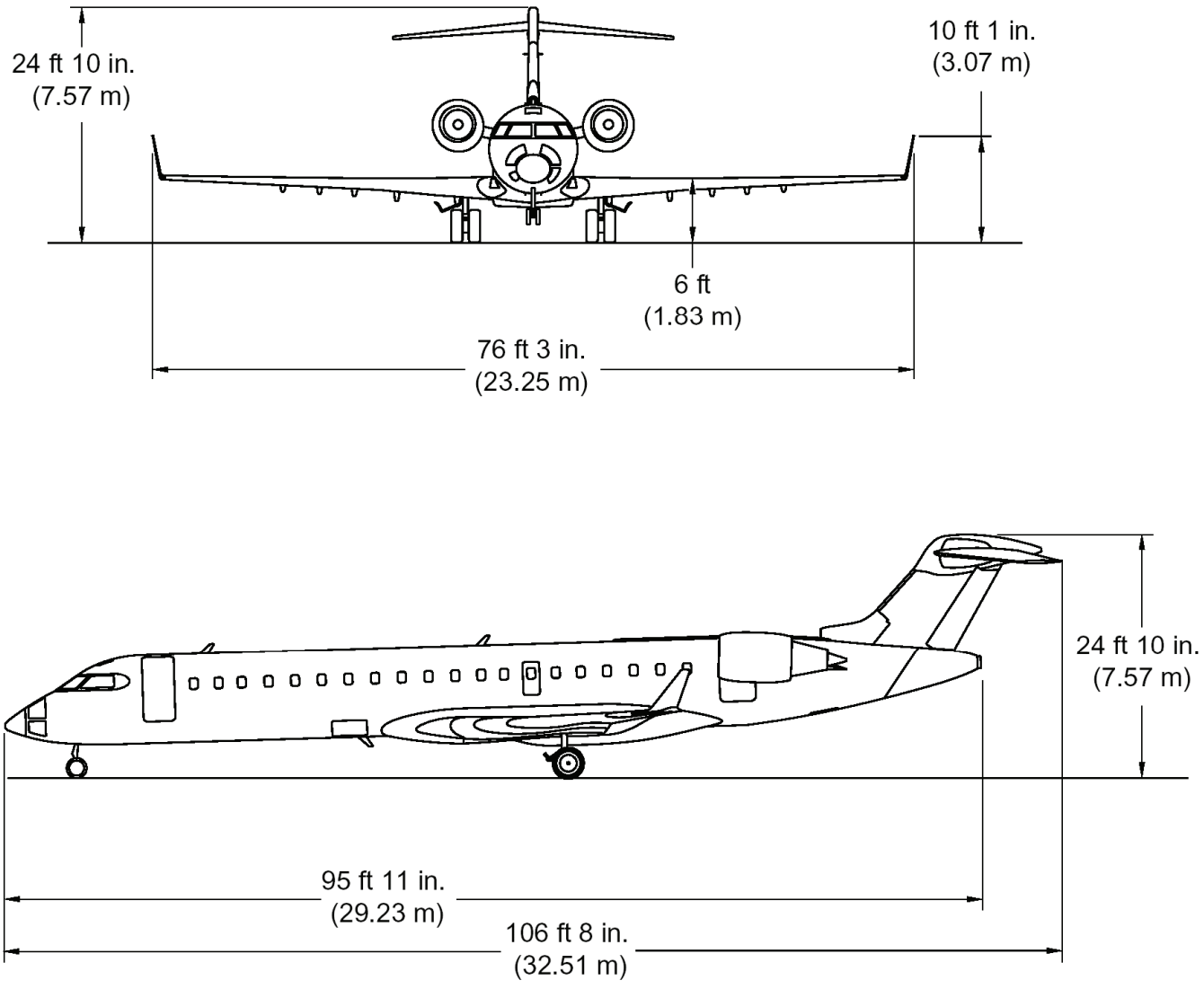
CAUTION:
- Calls attention to methods and procedures that must be followed to avoid damage to equipment.

NOTE:
- Calls attention to information that makes the job easier.

CRJ – 700 DIMENSIONS AND AREAS

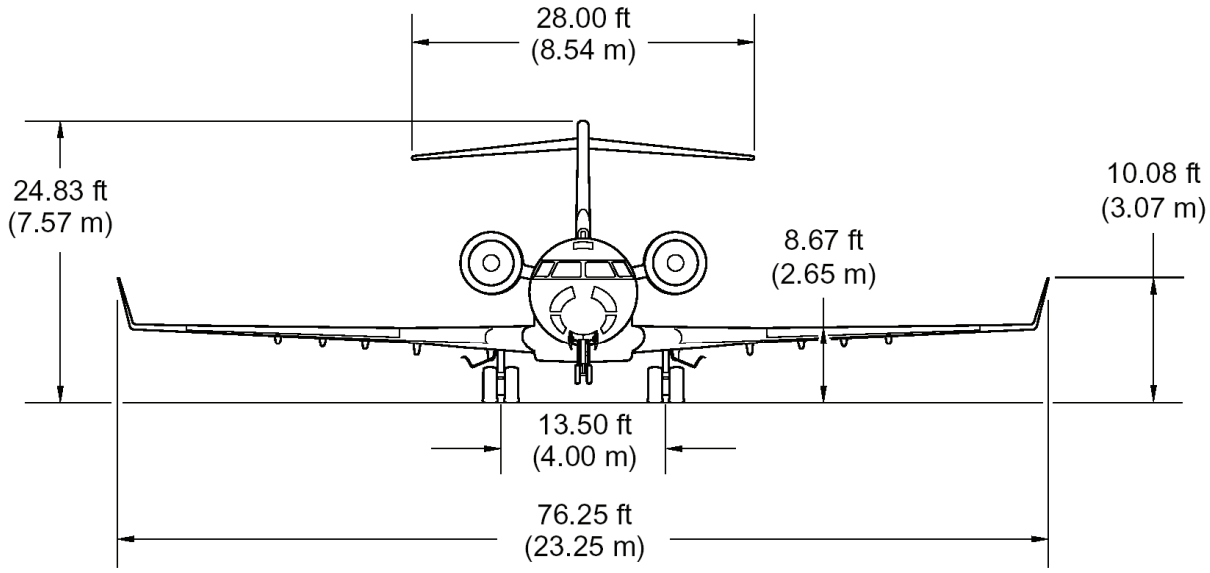
Dimensions are measured in planes parallel or perpendicular to the fuselage reference plane. Chord lines are measured as projections on the wing reference plane. The wing reference plane passes through WL55.95 at the aircraft center line and has a dihedral angle of +2.33 degrees with respect to the fuselage reference plane.

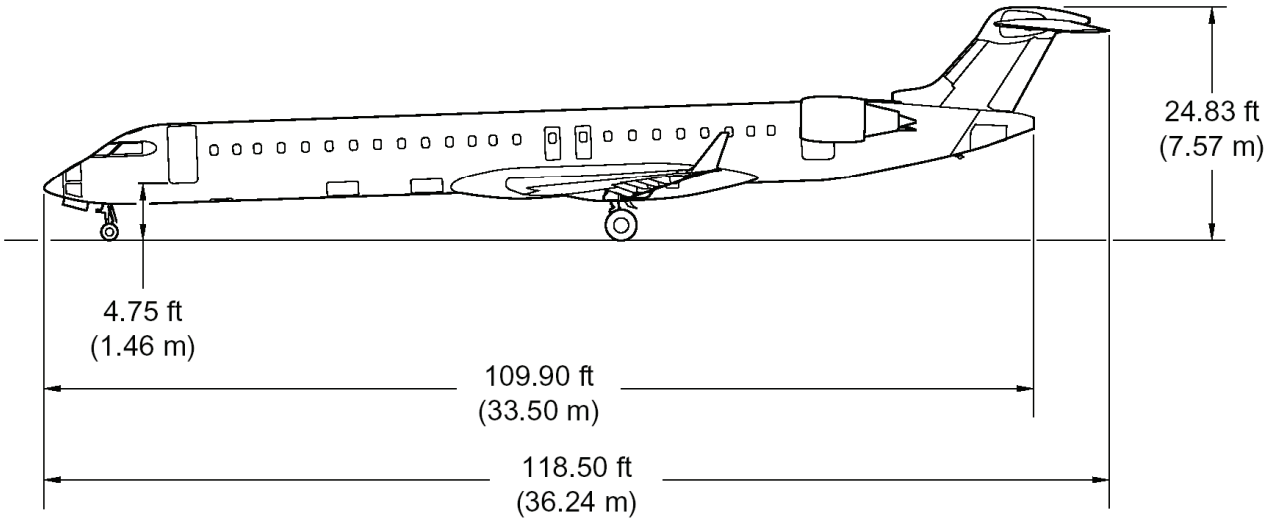
Areas are measured in planes that are parallel or perpendicular to the fuselage reference plane.



IF 06-01

CRJ – 900 DIMENSIONS AND AREAS





IF 06-2

CRJ 700 ZONES

Overview

Zoning data is provided to facilitate maintenance and planning, and for the location of work areas and components.

For easier location, each zone is identified with a three-digit number.

The aircraft is divided into eight primary zones numbering from 100 to 800.

- 100 □ Lower half of the fuselage
- 200 □ Upper half of the fuselage
- 300 □ Empennage
- 400 □ Power plants, nacelles and pylons
- 500 □ Left wing
- 600 □ Right wing
- 700 □ Landing gear and landing gear doors
- 800 □ Flight compartment, passenger compartment, cargo, avionics bay and aft equipment compartment doors.

ZONE CLASSIFICATION

The eight primary zones have sub-zones and the sub-zones have zones. A three digit number defines the primary zones, sub-zones and zones.

Primary zone - the first digit is a number from 1 to 8 with two zeros after it.

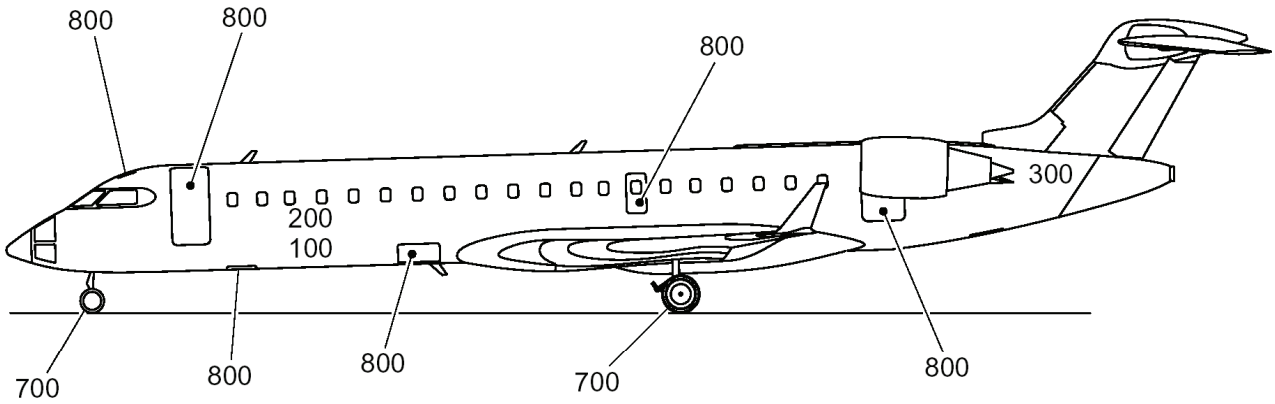
Sub-zone - the second digit will be a number from 1 to 9 and the third digit will be a zero.

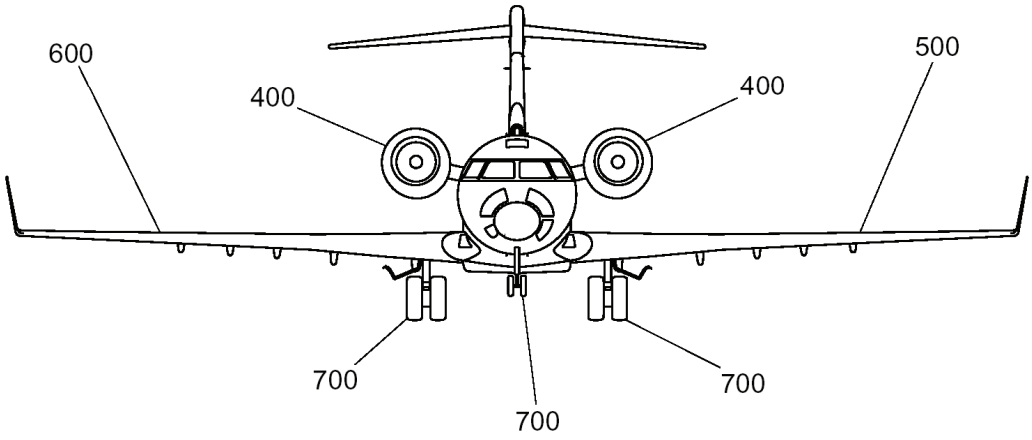
Zone - the third digit will be a number from 1 to 9 and represents a component or group of components in a sub-zone.

The number sequence for the zones and sub-zones are as follows:

- Wings - inboard to outboard, front to rear
- Horizontal stabilizer and elevator – inboard to outboard, front to rear.
- Vertical stabilizer and rudder - root to the tip.
- Fuselage - front to rear and away from the floor line.

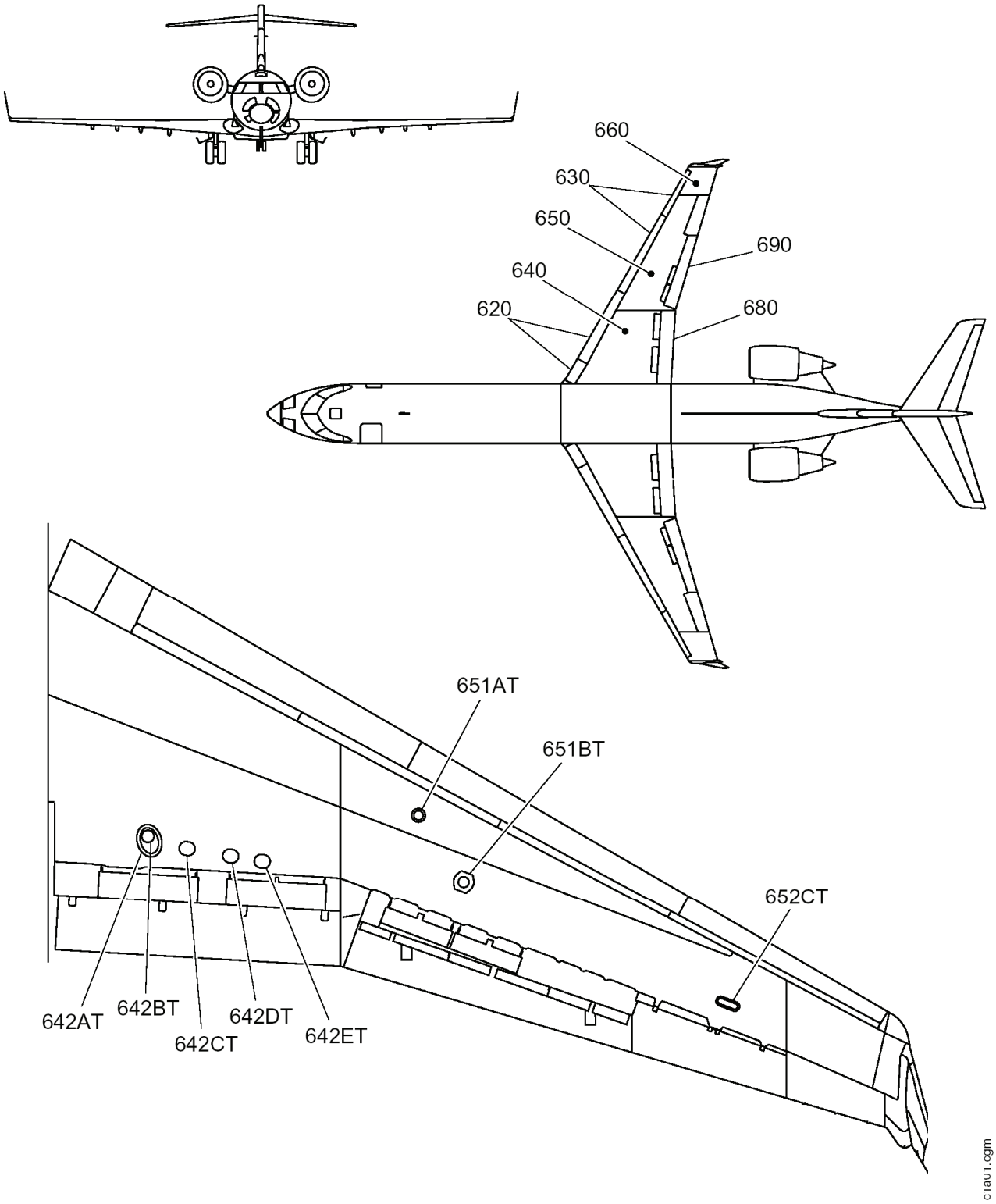
CRJ 700 ZONES





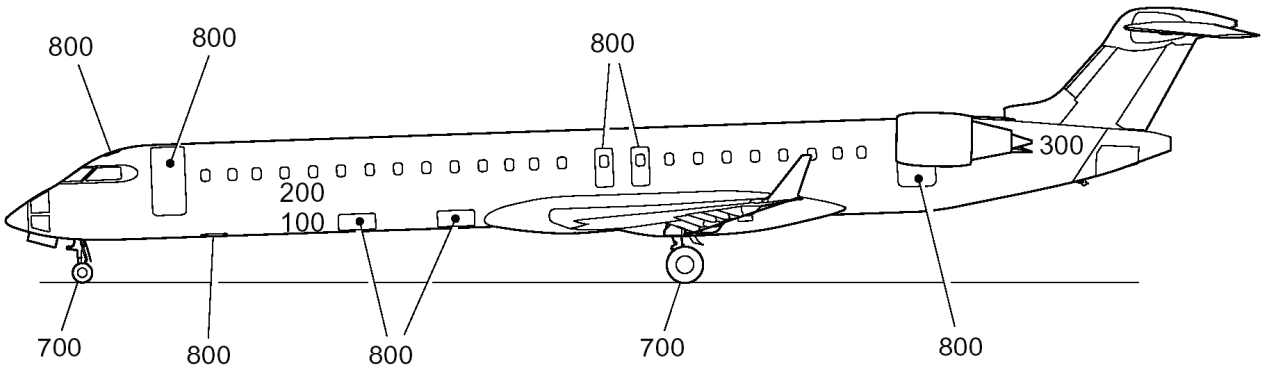
IF 06-3

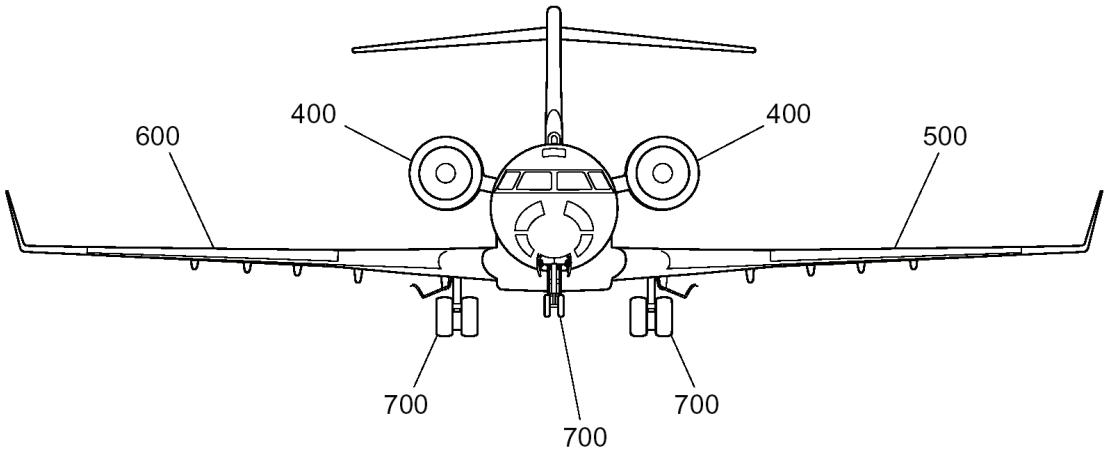
CRJ 700 ZONES



IF 06-4

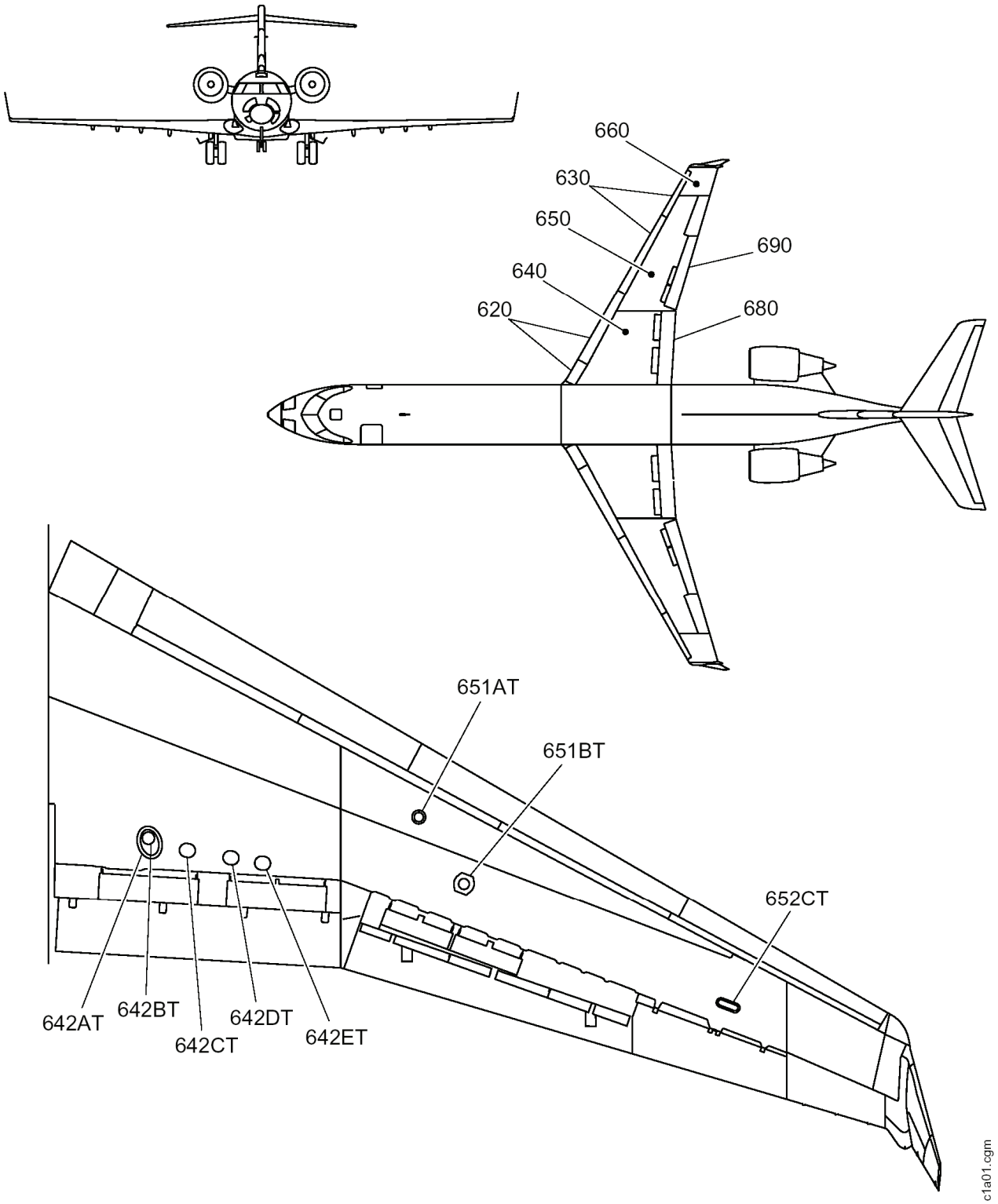
CRJ 900 ZONES





IF 06-5

CRJ 900 ZONES



IF 06-6