

ATA-chapter 01 / INTRODUCTION ATA-chapter 02 / MANUAL SYSTEM



ATA 01 - INTRODUCTION



General

The Airplane Maintenance Manual contains the data necessary to do the maintenance of the DA40NG. It contains a full description of the systems, trouble shooting procedures, removal and installation procedures and maintenance instructions. It does not contain maintenance data for components removed from the airplane (maintenance shop data).

The Airplane Maintenance Manual contains wiring diagrams for the electrical system.

Use these manuals with the Airplane Maintenance Manual, and the related Service Bulletins:

- The DA40NG Illustrated Parts Catalogue.
- The DA40NG Airplane Flight Manual.
- The ELT Manufacturer's Operator's Manual.
- The mt-Propeller Owner's Manual.
- The Austro Engine Operation Manual, Doc. No. E4.01.01.
- The Austro Engine Maintenance Manual, Doc.No. E4.08.04.
- The Austro Engine Installation Manual, Doc.No. E4.02.01.
- The mt-Propeller Operation and Installation Manual for the hydraulic constant speed governor.
- The Garmin G1000 Line Maintenance Manual.
- The Garmin GFC 700 Troubleshooting Reference.
- The Garmin DA 40 NG Pilot's Guide (GFC 700).

Revision Service

The manufacturer provides a revision service for the Airplane Maintenance Manual. The revision shows design changes to the airplane or changes in procedures. Each page of the manual shows the date of first issue. If the page has changed, it shows the date of the revision.

Warnings, Cautions and Notes

Obey all the usual safety precautions and maintenance instructions when doing maintenance.

This Airplane Maintenance Manual also contains warnings, cautions and notes before applicable instructions:

WARNING: A WARNING TELLS THE PERSON DOING THE MAINTENANCE THAT INJURY OR DEATH IS POSSIBLE IF THEY DO NOT FOLLOW THE INSTRUCTIONS.

CAUTION: A CAUTION TELLS THE PERSON DOING THE MAINTENANCE THAT DAMAGE TO EQUIPMENT IS POSSIBLE IF THEY DO NOT FOLLOW THE INSTRUCTIONS.

Note: A Note tells the person doing the maintenance how to make the task easier.

Manual Configuration

This manual is written using the regulations of the Air Transport Association of America Specification 100 (ATA 100). Each system is given a chapter number from the ATA 100. Where applicable, a chapter contains sections for each sub-system.

The Specification AECMA Simplified English has been used to write this Airplane Maintenance Manual. This is a mandatory requirement of the Air Transport Association of America Specification 100 (ATA 100).

There are only 3 sources of words available to use in Simplified English (SE).

- Approved words from the SE Guide. These have defined meanings and selected parts of speech.
- Technical names as defined in the SE Guide. Used only as Adjectives or Nouns.
- Manufacturing processes as defined in the SE Guide. Always used as Verbs.

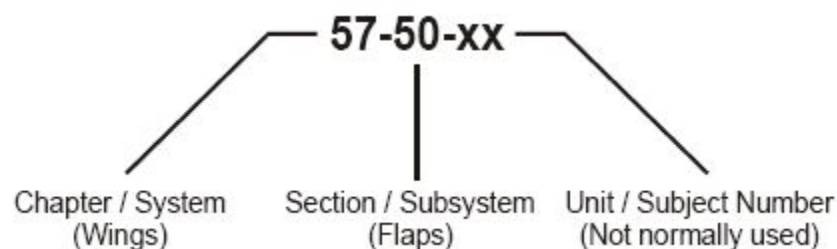
To obtain a copy of the SE Guide contact ASD-STAN, Avenue de Tervuren, B-1150 Brussels, Belgium.

Tel: +32-2775-81-26, Fax: +32-2763-35-65, Email: contact@asd-stan.org

The AMM does not use the ATA iSpec2200 Airplane Maintenance Task Oriented Support System (ATMOSS) or the ATA iSpec2200 Production Management Data Base (PMDB).

A. The ATA100 Numbering System

The ATA100 numbering system uses 3 pairs of numbers, for example:



The first pair of numbers shows the system. System 57 is the wings. Chapter 57 contains the data for the wings.

The second pair of numbers shows the sub-system. Sub system 50 is the Trailing Edge Flaps. Chapter 57, section 50 contains the data for the trailing edge flaps installation.

The third pair of numbers shows a unit. A unit could be the flap itself. Only complex systems use unit numbers.

For simple systems, the main chapter has all of the data and there are no section/sub-system break-downs.

B. Groups of Chapters

The chapters are put together in these groups:

- Group A Introduction Chapters 01-02
- Group B Airplane General Chapters 03-12
- Group C Airframe Systems Chapters 20-37
- Group D Structure Chapters 51-57
- Group E Propeller Chapter 61
- Group F Engine (Power Plant) Chapters 71-81

A separation sheet divides each chapter. The separation sheet shows the number of the chapter and the title. The main contents of each group of chapters are given below:

Group A - Introduction

Chapter 1 tells you about the Airplane Maintenance Manual, and Chapter 2 tells you how to use the Airplane Maintenance Manual.

Group B - Airplane General

Chapter 3 gives you a general description of the airplane and its systems. Chapter 4 gives you data about the Airworthiness Limitations and certification of the airplane. Chapter 5 contains the Scheduled Maintenance Checklist. Some tasks require a maintenance procedure. The scheduled maintenance checklist identifies the Section in the manual that gives the maintenance procedure for the task. It also tells you where to find general information.

Chapters 6 to 10 tell you about the dimensions of the airplane and general procedures such as towing, parking and weighing.

Chapter 11 tells you about the placards and markings which are important for the safe operation of the airplane.

Chapter 12 contains servicing tasks such as refuelling and lubrication. It also contains data about cleaning the airplane.

Group C - Airframe Systems

Chapter 20 contains the standard practices for airframe maintenance. Chapters 21 to 37 tell you about the airframe systems. They include the avionics systems (such as communications (23)) and the mechanical systems (such as flight controls (27)). Chapter 31 shows the location of the instruments. The chapter which is applicable to the system gives the details. For example, Chapter 27 gives the details for the flap position indicator.

Group D - Structure

Chapter 51 contains data about the design of the airframe. It also gives instructions for assessing damage to the airframe and how to do minor repairs. Chapters 52 to 57 tell you about each part of the structure.

Group E - Propeller

Chapter 61 contains the maintenance procedures for the propeller. Refer to the propeller manufacturer's manual for other data.

Group F – Engine

This group of chapters describes the engine and its systems. It contains the maintenance procedures for maintenance of the engine on the airplane. Refer to the engine manufacturer's manual for other data.

Chapter Configuration

The first page of each chapter shows the number of the chapter and the title. The second page shows the contents. Where applicable, each chapter and section contains the topics that follow:

- Description and Operation.
- Trouble-Shooting.
- Maintenance Practices. Where applicable the Maintenance Practices give data on these procedures:
 - Servicing
 - Removal and Installation
 - Adjustment/Tests
 - Checking/Testing
 - Cleaning/Painting
 - Repairs

Page Numbering System

The Airplane Maintenance Manual uses the ATA100 page block-numbering system. The page number is at the bottom of the page at the outer edge. It is adjacent to the chapter/section number.

Each topic in a section has numbers from these page blocks:

- Description and Operation Pages 1 to 99.
- Trouble Shooting Pages 101 to 199.
- Maintenance Procedures Pages 201 to 299.

Figures

Figures are given numbers in sequence. The first figure in a chapter or section is figure 1.

Record of Revisions

The Airplane Maintenance Manual has a Record of Revisions. Use the Record of Revisions to show when changes were included in the Airplane Maintenance Manual.

List of Effective Pages

This Airplane Maintenance Manual has a List of Effective Pages. The List of Effective Pages shows you the number and effective date of each page contained in the Airplane Maintenance Manual.

ATA 02 – MANUAL SYSTEM



ATA 02 – MANUAL SYSTEM

Organization and Handling of Manuals

General

For data about a system, look in the list of chapters and find the chapter number. The first page of each chapter after the title page shows the contents.

Applicability

Data applicable to a series of airplane is marked with an applicability note. For example:

Valid for S/N 40.N001 thru 40.N099.

This shows that you can use this data for airplane with serial numbers 40.N001 thru 40.N099 inclusive.

Revisions

The manufacturer makes changes to the Airplane Maintenance Manual to show design changes, maintenance procedure changes or other changes. Each group of changes is called a 'Revision'.

A manual revision contains these items:

- The changed pages.
- The reason for the revision.
- Instructions for putting the revision into the Airplane Maintenance Manual.
- A new List of Effective Pages.

A vertical bar in the left margin of the page shows the changes. Where a figure is changed, a small hand points to the change if necessary.

Temporary Revisions

Temporary revisions correct errors, or they give temporary instructions. The manufacturer sends them to the airplane owners quickly. The manufacturer uses yellow paper for temporary revisions. The manufacturer usually puts the contents of a temporary revision in the next approved revision.

Service Bulletins

Service Bulletins get issued when necessary. They give the operator more information on inspection, maintenance, repairs or modifications.

Service Bulletins have 4 categories:

A. Alert Service Bulletins

Alert Service Bulletins are issued if there is an immediate danger (risk of damage or total loss). They are sent immediately by the fastest means to all known addresses of operators and service stations which are affected.

B. Mandatory Service Bulletins

Mandatory Service Bulletins include the description of a problem and the solution. If you do not follow a mandatory Service Bulletin, failures or malfunctions can result during further operation.

You must do the work given in a Mandatory Service Bulletin.

C. Recommended Service Bulletins

Recommended Service Bulletins give data about:

- A minor problem and its correction.
- A better technical design.

If you do not follow a Recommended Service Bulletin, it will not cause a failure. But it may cause increased maintenance work.

If you do follow a Recommended Service Bulletin:

- The maintenance work may be reduced (for example, reduced wear, increased life).
- The operational behavior will be improved (for example, easier engine starting).

D. Optional Service Bulletins

Optional Service Bulletins give data about optional equipment that you can install in an airplane (for example, sailplane towing device).

The airplane owner makes the decision to follow an Optional Service Bulletin.

Service Instructions

A Service Instruction tells the operator about permitted installations or additional equipment. It also gives the applicable technical data.

ATA 02 – MANUAL SYSTEM / Abbreviations

AC	Alternating Current	DISC	Disconnect
ACL	Anti-Collision Light	DME	Distance Measurement Equipment
ADC	Air Data Computer	ECU	Engine Control Unit
ADF	Automatic Direction Finder	EIS	Engine Instrumentation System
AH	Artificial Horizon	ELT	Emergency Location Transmitter
AHRS	Attitude, Heading and Reference Unit	EM	Electro Magnetic
ALT	Altitude/Altimeter	ENG	Engine
A.M.E.	Aircraft Maintenance Engineer	ENT	Enter
AMM	Airplane Maintenance Manual	F°	Degree Fahrenheit
Amp	Ampere	FADEC	Full Authority Digital Engine Control
AMTOSS	Airplane Maint. Task Oriented Support System	FCC	Flight Control Computer
AP	Auto Pilot	FPL	Flight Plan
A&P	Airplane and Power Plant Mechanic	FRP	Fiber Reinforced Plastic
APR	Approach	GFRP	Glass Fiber Reinforced Plastic
appr	Approximately	GPS	Global Positioning System
ASI	Air Speed Indicator	G/S	Glide Slope
ATA	Air Transport Association	HDG	Heading
AUX	Auxiliary	Hg	inches of mercury
C°	Degree Celsius	hPa	hectopascal
CAN	Controller Area Network	HPA	Height, Pressure Altitude
CDI	Course Deviation Indicator	hr	Hour
CG	Centre of Gravity	Hp	Horse Power
CLR	Clear	HSI	Horizontal Situation Indicator
CFRP	Carbon-Fiber Reinforced-Plastic	IAU	Integrated Avionics Unit
COM	Communication	ICS	Integrated Cockpit System
CWS	Control Wheel Steering	ID	Identification
CSU	Constant Speed Unit	IFR	Instrument Flight Rules
DA	Diamond Aircraft	in	Inch
DC	Direct Current	in.lb	Inch pound

ATA 02 – MANUAL SYSTEM / Abbreviations

LCD	Liquid Crystal Display	qts	Quarts
LDG	Landing	RAM	Read And Memory
LED	Light Emitting Diode	RCPI	Remote Control Panel Indicator
LH	Left Hand	RH	Right Hand
LOC	Localizer	ROM	Read Only Memory
LOEP	List Of Effective Pages	RPM	Revolutions Per Minute
m	Meter	sec	Second
mbar	Millibar	SB	Service Bulletin
MAN	Manuel	SD	Secure Digital
max	Maximum	SE	Simplified English
MHZ	Megahertz	SEL	Selector
MIC	Microphone	SI	Service Instruction
MFD	Multi Function Display	S/N	Serial Number
mm	Millimetre	SPKR	Speaker
MKR	Marker	SQ	Squelch
NAV	Navigation	TAS	True Air Speed
OAT	Outside Air Temperature	TBO	Time Between Overhaul
PA	Public Address	TSMOH	Time Since Major Overhaul
PFD	Primary Flight Display	TTSN	Total Time Since New
PMDB	Production Management Data Base	UHF	Ultra High Frequency
Press	Pressure	US gal	US Gallons
Proc	Procedures	V	Voltage
psi.	Pound Square Inch	VFR	Visual Flight Rules
PT	Pitch Trim	VHF	Very High Frequency
PTT	Push To Talk	VOL	Volume
PU	Poly Urethane	VOR	Very high frequency Omni directional Ranging VOX Voice Operated
		VS	Vertical Speed
		VSI	Vertical Speed Indicator

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