

Aircraft Systems General**Moir 2001**

MOIR, Ian; SEABRIDGE, Allan: *Aircraft Systems : Mechanical, Electrical, and Avionics Subsystems Integration*. Washington D.C. : AIAA, 2001 (AIAA Education Series)

CUNDY, Dale R.; BROWN, Rick S.: *Introduction to Avionics*. Upper Saddle River, NJ : Prentice Hall, 1997

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: *Airframe and Powerplant Mechanics Airframe Handbook*. FAA, 1976 (AC 65-15A). – 609 pages, available online from <http://www.faa.gov>

KROES, Michael J.; WATKINS, William A.; DELP, Frank: *Aircraft Maintenance and Repair*. Singapore : McGraw-Hill, 1993

LOMBARDO, David: *Advanced Aircraft Systems*. New York : TAB Books, McGraw-Hill, 1993

MIDDLETON, Donald H. (Ed.): *Avionic Systems*. Harlow, GB : Longmann, 1989

ROSKAM, Jan: *Airplane Design*. Vol. 4 : *Layout Design of Landing Gear and Systems*. Ottawa, KA : Roskam Aviation and Engineering Corporation, 1989. – Available from DARcorporation (<http://www.darcorp.com>)

WILD, Thomas W.: *Transport Category Aircraft Systems*. Casper, WY : IAP, 1990

WILKINSON, Ray: *Aircraft Structures and Systems*. Harlow, GB : Addison Wesley Longman, 1996

Definitions and Breakdown

- AGARD 1980** AGARD: *Multilingual Aeronautical Dictionary*. Neuilly sur Seine, F : Advisory Group for Aerospace Research and Development, 1980. – Available online from NATO's Research & Technology Organisation <http://www.rta.nato.int>
- AIR 171** SAE: Glossary of Technical and Physiological Terms Related to Aerospace Oxygen Systems. Warrendale, PA : Society of Automotive Engineers, 2000 (AIR171D). – Available from SAE (<http://www.sae.org>)
- SAE: Aerospace Landing Gear Systems Terminology. Warrendale, PA : Society of Automotive Engineers, 1994 (AIR 1489). – Available from SAE (<http://www.sae.org>)
- SAE: Nomenclature, Aircraft Air Conditioning Equipment. Warrendale, PA : Society of Automotive Engineers, 1978 (ARP147C). – Available from SAE (<http://www.sae.org>)
- SAE: Terminology and Definitions for Aerospace Fluid Power, Actuation, and Control Technologies. Warrendale, PA : Society of Automotive Engineers, 1994 (ARP 4386). – Available from SAE (<http://www.sae.org>)
- ATA 100** AIR TRANSPORT ASSOCIATION OF AMERICA: Manufacturers' Technical Data (ATA Spec 100). Washington : ATA, 1999. – Available from ATA (<http://www.airlines.org>)
- ATA 2200** AIR TRANSPORT ASSOCIATION OF AMERICA: Information Standards for Aviation Maintenance (ATA iSpec 2200). Washington : ATA, 2001
- ICAO Annex 1** ICAO: Convention on International Civil Aviation, Annex 1: Personnel Licensing. 9th Ed. Montreal : International Civil Aviation Organization, 2001. – Available from ICAO (<http://www.icao.int>)
- ICAO Annex 2** ICAO: Convention on International Civil Aviation, Annex 1: Rules of the Air. 9th Ed. Montreal : International Civil Aviation Organization, 1990

- SAE 1998** TOMSIC, Joal L. (Ed.): *SAE Dictionary of Aerospace Engineering*. Warrendale, PA : Society of Automotive Engineers, 1998. – Available from SAE (<http://www.sae.org>)
- WATOG** AIR TRANSPORT ASSOCIATION OF AMERICA: Airline Industry Standard, World Airlines Technical Operations Glossary (WATOG). Washington : ATA, 1992. – Available from ATA (<http://www.airlines.org>)

Certification

- AC 25-17** FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Transport Airplane Cabin Interiors Crashworthiness Handbook, 1991 (AC 25-17)
- AC 25-22** FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Certification of Transport Airplane Mechanical Systems, 2000 (AC 25-22)
- ACJ-25** JOINT AVIATION AUTHORITIES: Joint Aviation Requirements for Large Aeroplanes (JAR-25), Section 2, Acceptable Means of Compliance and Interpretations (ACJ). – Available from the JAA (see: <http://www.jaa.nl>)
- AMJ-25** JOINT AVIATION AUTHORITIES: Joint Aviation Requirements for Large Aeroplanes (JAR-25), Section 3, Advisory Material Joint (AMJ). – Available from the JAA (see: <http://www.jaa.nl>)
- JAR-1** JOINT AVIATION AUTHORITIES: Definitions and Abbreviations (JAR-1). – Available from the JAA (see: <http://www.jaa.nl>)
- JAR-25** JOINT AVIATION AUTHORITIES: Joint Aviation Requirements for Large Aeroplanes (JAR-25), Section 1, Requirements. – Available online from <http://www.jaa.nl>
- FAR Part 25** FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Part 25 – Airworthiness Standards: Transport Category Airplanes. – Available online from <http://www.faa.gov>

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Advisory Circular Checklist. FAA, 2000 (AC 00-2.13)

Safety and Reliability

- Davidson 1988** DAVIDSON, John: *The Reliability of Mechanical Systems*. London : Mechanical Engineering Publications, 1988
- MIL-HDBK-217** ROME AIR DEVELOPMENT CENTER: Reliability Prediction for Electronic Systems. 1985 (ADA 163900). – Available from the National Technical Information Service (<http://www.ntis.gov>)
- MIL-STD-1629** DEPARTMENT OF DEFENSE: Procedures for Performing a Failure Mode, Effects and Criticality Analysis. 1980 (MIL-STD-1629A). – Available from the National Technical Information Service (<http://www.ntis.gov>)
- O'Connor 1991** O'CONNOR, Patrick D.T.: *Practical Reliability Engineering*. Chichester : John Wiley, 1991
- Rome 1985** ROME AIR DEVELOPMENT CENTER; HUGHES AIRCRAFT COMPANY: Nonelectronic Reliability Notebook, Revision B. 1985 (ADA 163900). – Available from the National Technical Information Service (<http://www.ntis.gov>)
- RTCA/DO-160D** RADIO TECHNICAL COMMISSION FOR AERONAUTICS: Environmental Conditions and Test Procedures for Airborne Equipment. Washington : RTCA, 2001 (RTCA/DO-160D Change 2). – RTCA, Inc., 1140 Connecticut Avenue, N. W., Suite 1020, Washington, D. C. 20036 (<http://www.rtca.org>). Document also available from the National Technical Information Service (<http://www.ntis.gov>)
- RTCA/DO-178B** RADIO TECHNICAL COMMISSION FOR AERONAUTICS: Software Considerations in Airborne Systems and Equipment Certification. Washington : RTCA, 1992 (RTCA/DO-178B)
- FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: System Design and Analysis. FAA, 1988 (AC 25.1309-1A). – Available online from <http://www.faa.gov>

Mass

- Boeing 1968** BOEING, Weight Research Group: Weight Prediction Manual – Class I. Renton, WA : The Boeing Company, Commercial Airplane Division, 1968 (D6-23201 TN)
- MIL-STD-1374** DEPARTMENT OF DEFENSE: Weight and Balance Data Reporting Forms for Aircraft. 1997 (MIL-STD-1374A). – Available online from <http://www.sawe.org>
- Raymer 1992** RAYMER, Daniel P.: *Aircraft Design: A Conceptual Approach*. Washington D.C. : AIAA, 1992 (AIAA Education Series)
- Roskam 1989** ROSKAM, Jan: *Airplane Design. Vol. 5 : Component Weight Estimation*. Ottawa, KA : Roskam Aviation and Engineering Corporation, 1989. – Available from DARcorporation (<http://www.darcorp.com>)
- Torenbeek 1988** TORENBEEK, Egbert: *Synthesis of Subsonic Airplane Design*. Delft : Delft University Press, 1988
- SAWE 2002** <http://www.sawe.org> (2002-02-28)

Power

- ARP 1280** SAE: Application Guide for Hydraulic Power Transfer Units. Warrendale, PA : Society of Automotive Engineers, 1994 (AIR 1280A) . – Available from SAE (<http://www.sae.org>)
- SAE: Aerospace Auxiliary Power Sources. Warrendale, PA : Society of Automotive Engineers, 1995 (AIR 744B) . – Available from SAE (<http://www.sae.org>)
- SAE: Power Sources for Fluidic Controls. Warrendale, PA : Society of Automotive Engineers, 1995 (AIR 1244A) . – Available from SAE (<http://www.sae.org>)

Costs and Trade-Off Studies

- Shustrov 1999** SHUSTROV, Yury M.: "Starting mass" – a Complex Criterion of Quality for Aircraft On-board Systems. In: *Aircraft Design*, 1 (1998), p 193 - 203. – See: <http://www.elsevier.com>
- Scholz 1998** SCHOLZ, Dieter: DOCsys - A Method to Evaluate Aircraft Systems. In: SCHMITT, D. (Ed.): *Bewertung von Flugzeugen (Workshop: DGLR Fachausschuß S2 - Luftfahrtsysteme, München, 26./27. October 1998)*. Bonn : Deutsche Gesellschaft für Luft- und Raumfahrt, 1998. – Available online from <http://www.ProfScholz.de>

Air Conditioning

- AIR 1168/3** SAE: Aerothermodynamic Systems Engineering and Design. Warrendale, PA : Society of Automotive Engineers, 1990 (AIR 1168/3). – Available from SAE (<http://www.sae.org>)
- SAE: Aerospace Pressurization System Design. Warrendale, PA : Society of Automotive Engineers, 1991 (AIR 1168/7) . – Available from SAE (<http://www.sae.org>)
- SAE: Aircraft Fuel Weight Penalty Due to Air Conditioning. Warrendale, PA : Society of Automotive Engineers, 1989 (AIR 1168/8) . – Available from SAE (<http://www.sae.org>)
- AIR 1609** SAE: Aircraft Humidification. Warrendale, PA : Society of Automotive Engineers, 1982 (AIR 1609) . – Available from SAE (<http://www.sae.org>)
- ARP 85** SAE: Air Conditioning Systems for Subsonic Airplanes. Warrendale, PA : Society of Automotive Engineers, 1991 (ARP 85E) . – Available from SAE (<http://www.sae.org>)
- ARP 1270** SAE: Aircraft Pressurization Control Criteria. Warrendale, PA : Society of Automotive Engineers, 2000 (ARP 1270). – Available from SAE (<http://www.sae.org>)
- DEPARTMENT OF DEFENSE: Environmental Control System, Aircraft, General Requirements for. 1986 (MIL-E-18927E). – Available from the National Technical Information Service (<http://www.ntis.gov>)

Electrical Power

EISMIN, Thomas K.: *Aircraft Electricity & Electronics*. New York : Macmillan, McGraw-Hill, 1994

PALLET, E.H.J.: *Aircraft Electrical Systems*. Harlow, GB : Longman, 1998

Equipment / Furnishings

AC 25.803 FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Emergency Evacuation Demonstration, 1989 (AC 25.803). – Available online from <http://www.faa.gov>

Granzeier 2001 GRANZEIER, Werner: Flugzeugkabine Boeing B717-200. In: Scholz, Dieter (Ed.): *Flugzeugkabine/Kabinensysteme – Die naechsten Schritte (Workshop DGLR S2.1/T8, Hamburg, 2001)*. Bonn : Deutsche Gesellschaft fuer Luft- und Raumfahrt, 2001, 79-87. – Available online from <http://s2.dglr.de>

SAE: Performance Standard for Seats in Civil Rotorcraft, Transport Aircraft, and General Aviation Aircraft. Warrendale, PA : Society of Automotive Engineers, 1997 (AS 8049A) . – Available from SAE (<http://www.sae.org>)

SAE: Crew Rest Facilities. Warrendale, PA : Society of Automotive Engineers, 1992 (ARP 4101/3). – Available from SAE (<http://www.sae.org>)

SAE: Lavatory Installation. Warrendale, PA : Society of Automotive Engineers, 1998 (ARP 1315C). – Available from SAE (<http://www.sae.org>)

SAE: Galley Installations. Warrendale, PA : Society of Automotive Engineers, 1986 (ARP 695C). – Available from SAE (<http://www.sae.org>)

SAE: Passenger Evacuation Devices - Civil Air Transport. Warrendale, PA : Society of Automotive Engineers, 1989 (ARP 495C). – Available from SAE (<http://www.sae.org>)

Fire Protection**Hillman 2001**

HILLMAN, Thomas C.; HILL, Steven W.; STURLA, Martin J.: *Aircraft Fire Detection and Suppression*. Kidde plc, 2001. – URL: <http://www.walterkidde.com> (2002-02-28)

Flight Controls

RAYMOND, E. T.; CHENOWETH, C.C.: *Aircraft Flight Control Actuation System Design*. Warrendale, PA :Society of Automotive Engineers, 1993

SCHMITT, V.R.; MORRIS, J.W.; JENNY G.D.: *Fly-by-Wire : A Historical and Design Perspective*. Warrendale, PA :Society of Automotive Engineers, 1998

SCHOLZ, Dieter: Development of a CAE-Tool for the Design of Flight Control and Hydraulic Systems. In: INSTITUTION OF MECHANICAL ENGINEERS: *Avionic Systems, Design and Software*. London : Mechanical Engineering Publications, 1996, 1 - 22. – Introduction to the mechanical design aspects of Fly-by-Wire aircraft

Hydraulic Power

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: *Hydraulic System Certification Tests And Analysis*. FAA, 2001 (AC 25.1435-1). – Available online from <http://www.faa.gov>

GREEN, William L.: *Aircraft Hydraulic Systems : An Introduction to the Analysis of Systems and Components*. Chichester, GB :John Wiley, 1985

GUILLON, M.: *Hydraulic Servo Systems : Analysis and Design*. London : Butterworth, 1968. – Translation of the French edition: *Etude et Détermination des Systèmes Hydrauliques*. Paris :Dunod, 1961

SAE: Aerospace - Design and Installation of Commercial Transport Aircraft Hydraulic Systems. Warrendale, PA : Society of Automotive Engineers, 1994 (ARP 4752). – Available from SAE (<http://www.sae.org>)

SAE: Hydraulic Systems, Aircraft, Design and Installation, Requirements for. Warrendale, PA : Society of Automotive Engineers, 1998 (AS 5440). – Was: MIL-H-5440. Available from SAE (<http://www.sae.org>)

SCHOLZ, Dieter: Computer Aided Engineering for the Design of Flight Control and Hydraulic Systems. In: SOCIETY OF AUTOMOTIVE ENGINEERS: *SAE 1996 Transactions, Journal of Aerospace*. Sec. 1, Vol. 105 (1997), 203 - 212. – SAE-Paper: 961327: The design of central hydraulic aircraft systems. Available from SAE (<http://www.sae.org>)

Ice and Rain Protection

AIR 1168/4

SAE: Ice, Rain, Fog, and Frost Protection. Warrendale, PA : Society of Automotive Engineers, 1990 (AIR 1168/4). – Available from SAE (<http://www.sae.org>)

FAA 1993

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Aircraft Icing Handbook. FAA, 1993 (FAA Tech Report DOT/FAA/CT-88/8-2). – Updated sections available online from <http://www.fire.tc.faa.gov>

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Aircraft Ice Protection. FAA, 1971 (AC 20-73). – Available online from <http://www.faa.gov>

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Certification of Transport Category Airplanes for Flight in Icing Conditions. FAA, 1999 (AC 25.1419-1)

FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION: Effect of Icing on Aircraft Control and Airplane Deice and Anti-Ice Systems. FAA, 1996 (AC 91-51A)

Landing Gear

CONVWAY, H. G.: *Landing Gear Design*. London : Chapman, 1958

CURREY, Norman S.: *Aircraft Landing Gear Design : Principles and Practices*. Washington D.C. : AIAA, 1988 (AIAA Education Series)

DEPARTMENT OF DEFENSE: Landing Gear Systems. 1984 (MIL-L-87139). – Available from the National Technical Information Service (<http://www.ntis.gov>)

PAZMANY, Ladislao: *Landing Gear Design for Light Aircraft*. San Diego, CA : Pazmany Aircraft Corporation, Box 80051, 1986

SAE: Landing Gear System Development Plan. Warrendale, PA : Society of Automotive Engineers, 1997 (ARP 1598A) . – Available from SAE (<http://www.sae.org>)

Lights

SAE: 1994 SAE Aircraft Lighting Handbook. Warrendale, PA : Society of Automotive Engineers, 1994. – A collection of all aerospace standards prepared by the SAE A-20 Committee. Available from SAE (<http://www.sae.org>)

Oxygen

SAE: Introduction to Oxygen Equipment for Aircraft. Warrendale, PA : Society of Automotive Engineers, 2001 (AIR 825/1). – Available from SAE (<http://www.sae.org>)

SAE: Oxygen Equipment for Aircraft. Warrendale, PA : Society of Automotive Engineers, 1986 (AIR 825B). – Available from SAE (<http://www.sae.org>)

SAE: Chemical Oxygen Supplies. Warrendale, PA : Society of Automotive Engineers, 1991 (AIR 1133A). – Available from SAE (<http://www.sae.org>)

Pneumatics

SAE: Engine Bleed Air Systems for Aircraft. Warrendale, PA : Society of Automotive Engineers, 1987 (ARP 1796). – Available from SAE (<http://www.sae.org>)

SAE: High Pressure Pneumatic Compressors Users Guide for Aerospace Applications. Warrendale, PA : Society of Automotive Engineers, 1996 (AIR 4994). – Available from SAE (<http://www.sae.org>)

DEPARTMENT OF DEFENSE: Bleed Air Systems, General Specification for. 1966 (MIL-B-81365). – Available from the National Technical Information Service (<http://www.ntis.gov>)

Airborne Auxiliary Power

SAE: Commercial Aircraft Auxiliary Power Unit Installations. Warrendale, PA : Society of Automotive Engineers, 1991 (AIR 4204). – Available from SAE (<http://www.sae.org>)

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All Figures named "A321..." are by courtesy of Airbus. They are taken from the Aircraft Maintenance Manual (AMM), the Flight Crew Operations Manual (FCOM), or other material prepared or used for flight maintenance training. *At no time should the information given be used for actual aircraft operation or maintenance. The information given is intended for familiarization and training purposes only.*