

PART 0 - GENERAL INFORMATION

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SCOPE OF THE MANUAL

The Operations Manual for C-295 aircraft, provides the flight crew with the essential information for the safe and efficient operation of the aircraft. Information herein supplies knowledge about the aircraft, its limitations, flight characteristics and procedures for both ordinary and emergency conditions. Flight basics are excluded, as crew flying skills are assumed.

Handbook instructions are intended for a non-skilled crew while flying the aircraft. Deemed best operating instructions are given for every condition in the Operations Manual, but no handbook can replace the pilot's know-how. Procedures may be conditioned by diverse emergencies, adverse weather, terrain conditions, etc...

Operations Manual states only what can be normally done. Unless specifically addressed, no atypical configuration (such as asymmetrical loading) or operation is allowed.

This manual complements the approved Flight Manual. This last one will be the final authority, when discrepancies arise between both of them.

ARRANGEMENT

The Operations Manual is divided in two volumes, to become friendly to the user:

- *(VOL I) Systems Description and Operation*: it is divided in 24 chapters arranged according to the AECMA 1000D standards. It reports system description and functioning of the aircraft.
- *(VOL II) Procedures and Limitations*: it is divided into 8 sections arranged according to AECMA 1000D standards. Consists of every flight information needed. For an easy management and use, the performance data are extracted from this volume and gathered as a separate manual, the Performance Data Manual.

The following manuals are issued separately, but they are required for the aircraft operation:

- *Performance Data Manual*: referenced as P.D.M. C-295M MIL OP. It is divided into 11 parts. It includes performance data and graphics applied on the full range of weights for military operation of the aircraft, according to the recommendations of MIL-PRF-7700F standards. For civil operation refer to applicable AFM.
- *Quick Reference Handbook*: It includes an arranged summary of limitations, procedures list and performance data. Performance data for military operation of the aircraft are according to the recommendations of MIL-PRF-7700F standards.
- *CheckList*: It assigns to each flight phase a minimum series of points to be checked by the crew to ensure aircraft safety and efficiency.

REVISIONS

Documentation updating is carried-out through the following types of revisions:

- **Normal Revisions**: Periodically issued, they cover not urgent amendments, changes or updating. They also contains instructions for their insertion into the manual, and replacements for the List of Effective Pages.
- **Temporary Revisions**: Covering any urgent amendment, are printed on yellow paper. They include a Transmittal Letter (also printed on yellow paper), which contains the instructions for the insertion of the revised pages into the manual, and serves as a record sheet of temporary revisions, for control purposes.

WARNING, CAUTION AND NOTE

The following definitions apply to the “Warnings”, “Cautions” and “Notes” calls found throughout the manual:

WARNING

Procedures, methods, etc., which will result in personal injury or loss of life, if not carefully observed.

CAUTION

Procedures, methods, etc., which will result in damage to equipment, if not carefully observed.

NOTE

Procedures, methods, etc., which are considered essential to emphasize.

COMMENTS AND SUGGESTIONS

This manual must be kept up to date. Any gathered experience must become part of its contents. No error may be ammended unless we formerly know about its existence. So, it is essential that everyone collaborates on making the right remarks and suggestions, when needed they should be forwarded to:

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LIST OF ABBREVIATIONS AND SYMBOLS

NOTE

Abbreviations underlined will always appear in capital letters.

%	Percent
<u>AC</u>	Alternating Current
<u>A/C</u>	Aircraft
<u>ADC</u>	Air Data Computer
ACM	Air Cicle Machine
ACOC	Air Cooled Oil Cooler
<u>ADC</u>	Air Data Computer
<u>ADF</u>	Automatic Direction Finder
<u>ADI</u>	Attitude Direction Indicator
ADL	Air Data Loader
ADS	Air Data System
ADU	Air Data Unit
AFCS	Automatic Flight Control System
AFU	Auto-Feather Unit
AGB	Accesory Gear Box
<u>AGL</u>	Above Ground Level
AHCP	Attitude Heading Control Panel
AHRS	Attitude Heading Reference System
AHRU	Attitude Heading Reference Unit
<u>A/I</u>	Anti-Ice
<u>AIL</u>	Aileron
ALT	Altitude
<u>AMP</u>	Amperes
ANT	Antenna, Aerial
<u>AOA</u>	Angle Of Attack
<u>AP</u>	Automatic Pilot
APP	Approach

APR	Automatic Power Reserve
<u>APU</u>	Auxiliary Power Unit
ARM	Armed
ARTCS	Automatic Rudder Trim Compensator System
ARTCU	Automatic Rudder Trim Compensator Unit
<u>ARTE</u>	Above the Runway Threshold Elevation
ASCU	AntiSkid Control Unit
<u>ASI</u>	Air Speed Indicator
<u>ATC</u>	Air Traffic Control
ATT	Attitude
<u>AUT</u>	Automatic
<u>AUX</u>	Auxiliary
BARO, BAR	Barometric
<u>BATT, BAT</u>	Battery
<u>BCF</u>	
BLS	Beta Lockout System
BLW	Below
<u>°C</u>	Centigrade, Celsius Degrees
<u>CADC</u>	Central Air Data Computer
CAPT	Captain (Flight Commander)
<u>CAS</u>	Calibrated Airspeed
CASA	Construcciones Aeronáuticas Sociedad Anónima
<u>C/B</u>	Circuit Breaker
CC (DC)	Direct Current
<u>CG</u>	Center of Gravity
CDS	Centered Diagnostic System
CEU	Control Engaging Unit
CFL	Critical Field Length
<u>CH</u>	Channel
<u>CKL</u>	Check List
CLB	Climb

<u>C/M</u>	Crew Member
<u>C/M-1,(2)</u>	Crew Member 1, (2)
CMD	Command
<u>CMDS</u>	Counter Measure Dispenser System
CMS	Centralized Maintenance System
COMM	Communications
<u>CON, CONT</u>	Continuation
CONFIG	Configuration
<u>CPS</u>	Cycles per Second
CRA	Corrective Actions
CRS	Course
CRZ1	Cruise 1
CRZ2	Cruise 2
<u>CVR</u>	Cockpit Voice Recorder
<u>DA</u>	Decision Altitude
<u>DC</u>	Direct Current
DEC DECR	Decrease
DEV	Deviation
DFDR	Digital Flight Data Recorder
<u>DG</u>	Directional Gyro
<u>DH</u>	Decision Height
DI	Drag Index
DIFF	Differential
DIS	Disconnection
DISCH	Discharge
<u>DME</u>	Distance Measuring Equipment
DN	Down
<u>DOI</u>	Dry Operating Index
<u>DOW</u>	Dry Operating Weight
DSC	Descent
DTVC	Double Temperature Control Valve

DZ	Drop Zone
ΔV_c	Airspeed Compressibility Correction
EADS	European Aeronautic Defense and Space Company
<u>EAS</u>	Equivalent Airspeed
ECS	Environmental Control System
ECU	Electronic Control Unit
EEC	Electronic Engine Control
EFCP	Electronic Flight Control Panel
EFIS	Electronic Flight Instrument System
EHSI	Electronic Horizontal Situation Indicator
ELEC	Electric
ELEV	Elevator
<u>ELT</u>	Emergency Locator Transmitter
EMERG	Emergency
ENG	Engine
EPC	Electronic Propeller Control
EPE	Estimated Position Error
EQPT	Equipment
<u>ET</u>	Elapsed Time
ETCAS	Enhanced Traffic Control and Alert System
<u>EV</u>	Electrovalve
EVAC	Evacuation
<u>EXT</u>	External
°F	Fahrenheit Degrees
<u>FAA</u>	Federal Aviation Administration
<u>FAR</u>	Federal Aviation Regulations
FCOC	Fuel Cooled Oil Cooler
FCU	Fuel Control Unit
<u>FD</u>	Flight Director
FDAU	Flight Data Acquiring Unit
<u>FDR</u>	Flight Data Recorder

FDS	Flight Deck System
FDU	Fire Detection Unit
FECU	Flap Electronic Control Unit
<u>FF</u>	Fuel Flow
FFL	Fuel and Feather Levers
FGCP	Flight Guidance Control Panel
FGM	Flight Guidance Module
<u>FGS</u>	Flight Guidance System
<u>FL</u>	Flight Level
FL	Flare
FLT	Flight
FMC	Flight Management Computer
FMG	Flight Management Guide
FMM	Flight Management Module
FMS	Flight Management System
FPLN	Flight Plan
<u>FPM</u>	Feet per minute
FR	Frame
<u>FREQ</u>	Frequency, Frequence
<u>FT</u>	Feet (units of measure)
FVU	Flap Validation Unit
<u>FWD</u>	Forward, Front part
<u>GA</u>	Go-Around
GAL	US Gallons
GCA	Ground Controlled Approach
GCU	Generator Control Unit
<u>GEN</u>	Generator
GFE	Government Furnished Equipment
GI	Ground Idle
GMT	Greenwich Meridian Time
GND, GRD	Ground

GPS	Global Positioning System
<u>GPU</u>	Ground Power Unit
<u>GPWS</u>	Ground Proximity Warning System
GS	Gilde Slope
<u>GW</u>	Gross Weight
HARP	Hight Altitude Air Release Point
<u>HAS</u>	Heading and Attitude System
HDG	Heading
HDOP	Horizontal Dissolution Of Precision
HF	High Frequency
Hg	Mercury
HLD	Hold
<u>HMU</u>	Hydraulic Mechanical Unit
Hp	True Pressure Altitude
Hpa	Hectopascal
Hpi	Indicated Pressure Altitude
Hpo	Sea Level Pressure Altitude
HPSOV	High Pressure Shut-Off Valve
hr	Hour
<u>HSI</u>	Horizontal Situation Indicator
HVY	Heavy
HYD	Hydraulic
<u>Hz</u>	Hertz
<u>IAS</u>	Indicated Airspeed
<u>ICP</u>	Index Control Panel
ICS	Integrated Customer Service
ID	Identification
IEDS	Integrated Engine Display System
IESI	Integrated Electronic Standby Instrument
IFA	In-flight Alignment
IFC	In-flight Computer

IFF	Identification Friend or Foe
<u>IFR</u>	Instrumental Flight Rules
<u>ILS</u>	Instrument Landing System
INBD	In Board
in	Inch
INCR	Increase
INOP	Inoperative
<u>INV</u>	Inverter
IOP	In-Out Processors
IRS	Inertial Reference System
<u>ISA</u>	International Standard Atmosphere
<u>ITT</u>	Interstage Turbine Temperature
<u>IU</u>	Index Unit
IVSI	Inertial Vertical Speed Indicator
JB	Jack Box
<u>JUL</u>	July Joule
<u>KCAS</u>	Knots Calibrated Air Speed
<u>KG</u>	Kilograms
<u>KHZ</u>	Kilohertz
<u>KIAS</u>	Knots Indicated Air Speed
<u>KT</u>	Knots
<u>KVA</u>	Kilovolt-Ampere
KW	Kilowatt
<u>L</u>	Left
LAT	Latitude
LB	Pounds
Lb/H	Pounds per Hour
LDG, LDNG	Landing
LNAV	Lateral Navigation
LO	Low
LOC	Locator

LONG	Longitudinal
<u>LP</u>	Low Pressure
<u>LRC</u>	Long Range Cruise
Lt	Light
<u>LW</u>	Landing Weight
m	Meters
M	Military
m/s	Meters per second
<u>MAC</u>	Mean Aerodynamic Chord
MAN	Manual
MAX	Maximum
MB	Millibar
MCDU	Multipurpose Control Display Unit
<u>MCL</u>	Maximum Climb Power [Torque]
<u>MCR</u>	Maximum Cruise Range [Torque]
<u>MCT</u>	Maximum Continuous Power [Torque]
<u>MDF</u>	Mission Data File
<u>MEA</u>	Minimum En-route Altitude
<u>MEL</u>	Minimum Equipment List
MEM	Memory
<u>MHZ</u>	Megahertz
m.i.	Magnetic Indicator
<u>MIC</u>	Microphone
MIN	Minimum
min	Minute
MJ	Mega-Joules
MKR	Marker
<u>MLW</u>	Maximum Landing Weight
<u>MM</u>	Middle Marker
<u>MMEL</u>	Master Minimum Equipment List
MMR	Multi-mode Receptor

<u>MPH</u>	Miles per Hour
<u>MSA</u>	Minimum Safety Altitude
MSG	Message
<u>MSL</u>	Mean Sea Level
<u>MTOW</u>	Maximum Take Off Weight
<u>MTXW</u>	Maximum Taxi Weight
<u>MZFW</u>	Maximum Zero Fuel Weight
NAV	Navigation
ND	Navigation Display
NDB	Non-directional Radio Beacon
NH	High Pressure Reel Turn Speed (rpm)
Ni-Cd	Nickel-Cadmium
NL	Low Pressure Reel Tur Speed (rpm)
NM	Nautic miles
No	Number
NP	Propeller Turn Speed (rpm)
NRP	No Return Point
NVG	Night Vision Goggles
<u>OAT</u>	Outside Air Temperature
<u>OCL</u>	Obstacle Clearance Limit
<u>OCT</u>	October
OFP	Operational Flight Plan
<u>OM</u>	Outer Marker
OSG	Over-Speed Governor
OT	Other Traffic
OVHT	Overheat
OVRD	Override
OXY	Oxygen
P	Procedures
<u>PA</u>	Passenger Address or Public Address
<u>PAR</u>	Precision Approach Radar

PAX, PASS	Passengers
<u>PCU</u>	Propeller Control Unit
PERFO	Performance
PF	Pilot Flying
PFD	Primary Flight Display
PGB	Propeller Gear Box
<u>PL</u>	Power Level
PNEU	Pneumatic
<u>PNF</u>	Pilot not Flying
pph	Pounds per Hour
PRESS	Pressure
Press Alt	Pressure Altitude
PROC	Procedure
PRS	Power Rating Selector
PRSOV	Pressure Regulating and Shut-Off Valve
PSI	Pounds per Square Inch
<u>PSU</u>	Passenger Service Unit
PT	Proximity Traffic
PTT	Push To Talk
PVM	Propeller Valve Module
PWR	Power
<u>QFE</u>	Field Elevation Atmospheric Pressure
<u>QNH</u>	Sea Level Atmospheric Pressure
QTY	Quantity
<u>R, RH</u>	Right Hand
<u>R/A</u>	Radio Altimeter
RBS	Rudder Booster System
<u>R/C</u>	Rate of Climb
RCR	Runway Condition Reading
<u>R/D</u>	Rate of Descent
<u>RDMI</u>	Radio Distance Magnetic Indicator

REF	Reference
REL	Release
RF	Radio-Frequency
RFI	Rolling Friction Index
RGB	Reduction Gear Box
<u>RMI</u>	Radio-Magnetic Indicator
RMS	Radio Management System
RNAV	Area Navigation
RPM	Revolutions Per Minute
<u>RVR</u>	Runway Visual Range
<u>RWR</u>	Radar Warning Receiver
<u>RWY</u>	Runway
SAR	Search and Rescue
SEL	Selector
<u>SELCAL</u>	Selective Call
<u>SEMI</u>	Semiautomatic
SEQ	Sequence
SHP	Shaft Horse Power
SL	Sea Level
SLPS	Secondary Low Pitch Stop System
SOV	Shut-Off Valve
SPD	Speed
STBY	Standby
STO	Store/Storage
SWRS	Stall Warning Recovery System
SYNC	Synchronize
SYS	System
T	Temperature
TA	Traffic Advisory
TAC	TACAN
TACAN	Tactical Air Navigation

<u>TAS</u>	True Airspeed
TAT	Total Air Temperature
TCAS	Traffic Collision Avoidance System
<u>TCP</u>	Technical Crew Passenger
TEMP	Temperature
TK	Track Angle
<u>TO, T.O.</u>	Take-Off
<u>TOC</u>	Top of Climb
<u>TOD</u>	Top of Descent
TOGA	Take-Off and Go-Around
TOGR	Take-Off Ground Run
<u>TOW</u>	Take-off Weight
<u>TOW</u>	Towing
<u>TQ</u>	Torque, Torsion force
<u>TRU</u>	Transformer Rectifier (Unit)
<u>TTG</u>	Time To Go
TURB	Turbulence
UNLKD	Unlocked
V	Volts
<u>V_{app-to}</u>	Flap Retraction Speed
<u>V_{CEF}</u>	Critical Engine Failure Speed
<u>V_e</u>	Equivalent Speed
VER	Vertical
<u>V_{fe}</u>	Maximum Flap Extended Speed
VFR	Visual Flying Rules
<u>V_{fto}</u>	Take-Off Flap Speed
VHF	Very High Frequency Communications
VIB	Vibration
V/L	VOR/LOC
<u>V_{LOF}</u>	Lift-Off Speed
VMC	Visual Meteorological Conditions

<u>V_{MCA}</u>	Minimum Control Speed on the Air
<u>V_{MCG}</u>	Minimum Control Speed on Ground
<u>V_{MD}</u>	Minimum Drag Speed
<u>V_{MO}</u>	Maximum Operating Speed
VNAV	Vertical Navigation
VOL	Volumen
VOR	VHF Omni Directional Radio Range
<u>V_R</u>	Rotation Speed
<u>V_{RE}</u>	Refusal Speed
<u>V_{REF}</u>	Reference Speed
<u>V_S</u>	Stalling Speed
<u>V_{SCR}</u>	Screen Speed
<u>V_{SR}</u>	Stall Reference Speed
<u>V_{S1g}</u>	Stall Speed with 1g
<u>V_{TD}</u>	Touchdown Speed
<u>V_{TH}</u>	Threshold Speed
<u>V_{to-up}</u>	Flap Retraction Speed
<u>V_Z</u>	Vertical Speed with wind Component
<u>WING LVL</u>	Wings Leveled
WOW	Weight on Wheels
<u>WPT</u>	Way Point
WT	Weight
<u>WX</u>	Weather
X	Cross as (combining prefix)
<u>XFR</u>	Transfer
YD	Yaw Damper
<u>ZFW</u>	Zero Fuel Weight

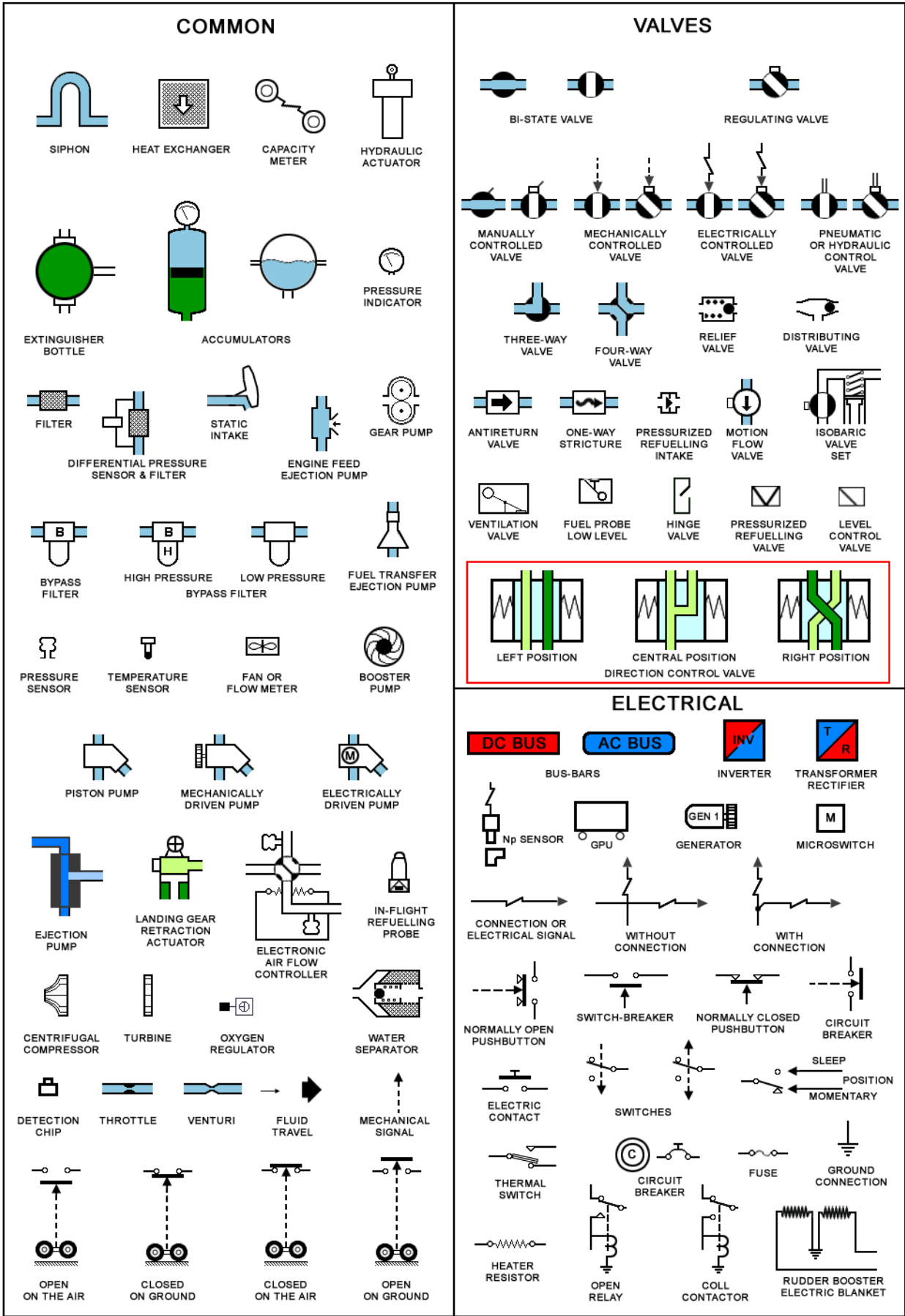


Figure 0-1 (Sheet 1 of 2) Symbols

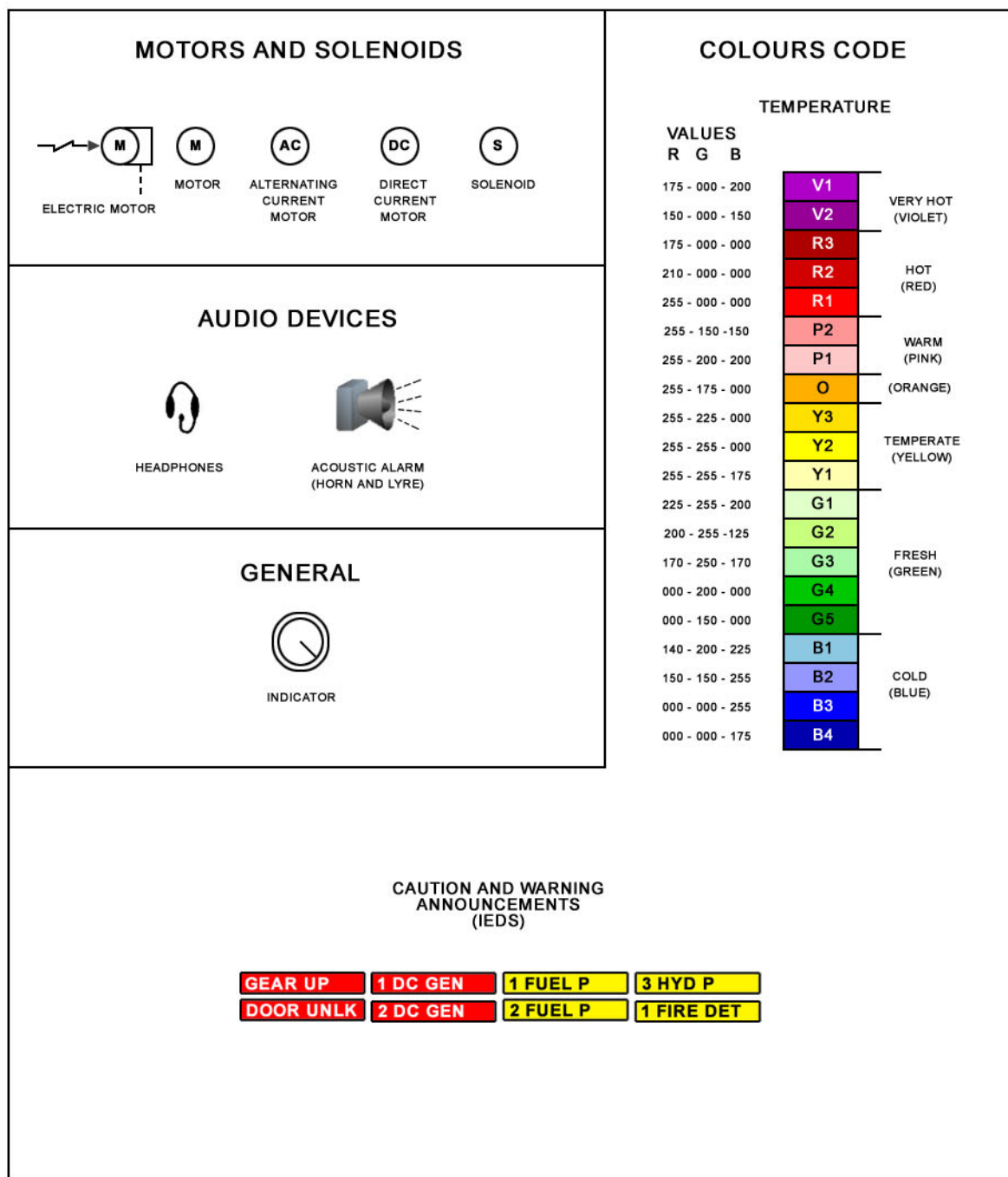


Figure 0-1 (Sheet 2 of 2) Symbols

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