

Aircraft General

Overview
Differences
Cockpit Layout
Overhead Panel
Cabin Layouts
Cabin Accessories
Power Outlet System
Windows
Weights
Outside Air Temperature Limitations
Speeds
G3000 Automatic Flight Control System
Limitations

Flight Controls

Control Surfaces
Elevator
Control Yoke
Rudder
Ailerons
Static Wicks
Aileron Trim Tabs
Rudder Trim
Pitch Trim
Trim Disconnect
Trim Indications
Flaps
Flap System
Flap Operation
Flap Protections System
Flap Asymmetry
Flap Overheat
Flap Operation Interruption
Un-intentional Flap Extension
Flap Overspeed
Flap Indications
Takeoff Configuration

Landing Gear

System Description
Nose Gear
Main Gear
System Schematic
Electrical Power
Gear Operation
Nosewheel Steering
Nosewheel Steering Limits
Tires
Emergency Gear Extension-Electric System
Emergency Gear Extension
Emergency Gear Extension Operation
Landing Gear Indications
Air Ground System
Main Gear Ground Proximity Switch
Brake System

Parking Brake
CAS Messages
GEAR Warning
Landing Gear Limitations

Electrical System

PGDS-Power Generation Distribution System
Electrical System Overview
Power Line
Essential Bus
Secondary Power Line
Generator Buses
Non Essential Bus
Cabin Bus
Overhead Panel
Electrical System Indications
Power Junction Boxes
CB Panels
Bus Tie
Bus Tie Switch
Bus Tie CAS Message
Hot Battery Bus
Bus Bar Cas Messages
Standby Power
External Power Operation
External Power System Operation
External Power Caution CAS
Battery
Battery Temperature Indication
Pre-heating Li-Ion batteries
Battery Power
Load Shedding
Generators
Generator Switches
Generator Indications
Generator Power
Generator 2 Failure
Generator 1 Failure
AC Power
Master Power Emergency OFF

Doors and exits

Doors and exit locations
Entry door
Overwing exit operation
Cargo Door Dimensions
Cargo Door Operation
Cargo Door Locking Mechanism
Cargo Door Opening
Electric Door Opening
Service Door
CAS Messages

Powerplant

Overview
Installation
Components
Modular Engine
Operation
Reduction Gearbox
Increased Performance
Power Control Lever
PCL Functions
Bleed Air
Compressor Bleed Valve
Compressor Bleed Valve Location
Failed Compressor Progressive Bleed Valve
Jet Flap
Bleed Air Operation
Fuel System Schematic
Oil-To-Fuel-Heater
Fuel Temperature
Fuel Filter
Fuel Nozzles
FCU-Fuel Control Unit
Ecology System
Ignition
Starter-Generator
EPECS-Engine and Propeller Electronic Control System
EEC-Electronic Engine Control
Engine Start Protection
EPECS
Engine Start Sequence
Engine Start Disengage
Engine Start Abort
Flameout Protection
Surge Recovery
Oil System
Oil Level
Oil Indications
Oil System Familiarization
Oil Debris Monitoring
Air Inlet
Inertial Separator
Fire Detection
System Components
Fire Detection Operation
Fire Detection Test
Fire System Faults
Electrical Power
Starter Limits
Engine Indication System – EIS
Engine Instruments
Limitations

Propeller

Components
Operation
PCU-Propeller Control Unit
Blade Angles-Feathered
Blade Angles-Fine Pitch
Blade Angles-Reverse
Propeller Operation
Low Prop Speed
Normal Operation
Propeller Low Pitch Warning
Propeller de ice
Propeller de ice Power supply
Propeller de ice Operation 5 Bladed
Propeller de ice – faults
Limitations
CAS Messages

Fuel System

Fuel Tanks
Fuel Tank Design
Collector Tank
G3000 Fuel System Architecture
Fuel Indications
Fuel System Schematic
Fuel Pumps
Motive Flow
Motive Flow Fuel Line
Oil-To-Fuel-Heater
Fuel Pressure Sensor
Low Fuel Pressure
Fuel Temperature
Fuel Filter
Fuel Drains
Fuel Tank Ventilation
Power Sources
Engine start
Fuel Emergency shut off
Fuel Reset
Fuel Imbalance
Fuel Balance Fault
Fuel Anti-Icing Additive
CAS Messages – Fuel System

Lighting

Exterior Lighting Overview
Light Switches – External Lights
Power Sources
Taxi and Landing Light
Taxi Light
Landing Light
Beacon
Navigation Lights
Strobe Light
Wing Inspection Light
Recognition Lights
Tail Flood Lights
Light Control Panel
Cabin Light
Cabin Lights Timer
Baggage Compartment Light
Cargo Door Light

Oxygen System

Description
Oxygen Cylinder
System Overview
Shut-off Valve
Pressure Reducing Valve
Charging Port
Cockpit Pressure Gauge
Oxygen Discard Disc
MIC Selector Switch
AUTO Mode
Oxygen Selector Switch
Oxygen Supply Table

Environmental System

System Layout
Air Cycle System (ACS)
ACS Bleed air
Vapor Cycle Cooling System – Air Distribution
Panels
Vapor Cycle Cooling System – Condenser Outlet
Air Distribution Bleed Air
Air Inlets
Auxiliary Heating Operation
Fan Selections
VCCS Operation Indication
Temperature Setting
Firewall Shutoff Valve
Foot Warmer
CAS Messages

Cabin Pressure Control System

System Description
Cabin Pressure Vessel
Cabin Differential Pressure
Controls
System Layout
ECMU
Outflow Valve (OFV)
Pressure Relief Valve (PRV)
Negative Pressure Relief Valves (NPRV)
Landing Field Elevation
CPCS Low Cabin Mode
Climb Mode
Descent Mode
Target Altitudes
High Field Takeoff
High Field Landing
Manual Mode
Dump
Cautions and Warnings

Ice and Rain Protection

Deice System
Overview
Windshield Heat
De ice boots
System Layout
De Ice Controls
Surface De-Ice Schematic
Pressure Regulator
Surface De-Ice Power
Deice Boots Operation
Probe Heat
Operation in Rain
CAS Messages

G3000-Overview

G3000 Prime-System Overview
Touchscreens
Split Screens
Displays and Information
SDU Button Bar
Window Manager - SDU
Menu Buttons
PFD Menu
MFW Button Bar
EIS Mode
MFW Apps Window
Data Entry
Reversionary Mode
SDU Apps
SDU CNS Bar

Automatic Flight

Automatic Flight Control System - AFCS
AFCS Controller
AFCS Status Box
Autothrottle
Autothrottle Modes
Takeoff
Speed Selection
Fine Trim Mode
Torque Reference Modes
AT Automatic Saftey Modes
AFCS Disconnect
Emergency Descent Mode (EDM)
Emergency Decent Mode - Activation
Electronic Stability and Protetion - ESP
Yaw Damper
Touch Control Steering – TCS

G3000 – Initialization

G3000 Prime – Initialization
Missing or invalid data
Bypass INIT
Initialization Completion
Modify or Reset Initialization
Access INIT Page

Audio and CNS

SDU & MFW Access
PFW Comm
Transmit/Receive Indications
Frequency Transfer
Frequency Change
COM Selection
Audio and Radio Window
Automatic Squelch
HF COM Transceiver
SELCAL Incoming Messages
NAV Frequency Tuning
Transponder Selection

Flight Plan

Flight Plan Access
Departure and Destination
Flight Plan Menu
Edit Flight Plan
Waypoint Options
Airways
Direct To
Hold
Nearest
Nearest Options
Airport Info
Radial Menu
Measuring Distance

TCAS II

Introduction
TCAS/ACAS
TCAS Functionality
TCAS System Description
Surveillance
Levels of Protection
Traffic not Displayed
Limited Bearing Aaccuracy
TCAS Theory of Operation
CPA – Closest Point of Approach
CPA – Altitude Based Thresholds
Altitude Mode
Selecting Altitude Mode
XPDR Mode Selection
TCAS Modes
TCAS II Cockpit Display
Traffic Overlays Settings
TCAS test
Capability
TCAS Surveillance Volume
ADS-B System Overview
ADS-B with TCAS
Traffic Symbols – RA's
Traffic Symbols – TA's
Traffic Symbols – Proximity Advisory
Intruder altitude
TA – Traffic Advisory Alerts
Aural Alerts
EGPWS Inhibit
Coordinated Vertical RA
Reversal RA
Vertical speed RA
Level Off RA
Crossing RA
Clear of Conflict
Resolution Advisory – RA
RA Procedure
ATC Phraseology
Clear of conflict
Mandatory Report
Rate of climb/descent

Performance

Introduction
Takeoff Charts
Takeoff Calculation
Rate of Climb
Distance to Climb
Cruise
Descent Charts
Power-Off Glide
Balked Landing
Total Landing Distance
Icing Conditions
Pilatus Calculator Application

Weight & Balance

Reference Datum
Seat Tracks
Seating
Cabin Seat Location
Cargo Net
Cabin and Door Dimensions
Loading Areas
Restraint of Cargo
Maximum Allowable Weight
Cargo C.G
Cargo Tie Down Configuration Charts
Loading Arrangement
Restraint Bars and Placement
Floor and Rail Load Limits
Loading Form
Cargo F.S.

Maintenance Practices

Maintenance Practices
Structural limitations
Component limitations
Miscellaneous limitations
Scheduled maintenance packages
Operational profiles 150 FH
Inspection interval tolerances
Inspection layout
Inspection differences
Time limited inspection requirements
Overhaul and replacement schedule
Master maintenance plan MMP
Supplemental structural inspection document
Job setup
Job close up
Jacking
Jacking tail jack
Power plant adjustment test
Central maintenance system

Standard Practices and Tooling

Special tools and equipment
Locking and retaining devices
Torque wrenches and procedures
Consumables
Consumables examples
Standard practices – description and operation
Plastic tubing - example

Limitations

PC12 PRO theoretical exam – 100 questions

Total duration: 30 hrs