SPECIFICATION AND DESCRIPTION



CITATION XLS+

Cessna
TEXTRON AVIATION

October 2015

Revision F
Units 560XLS-6172 to TBD

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UNITS 560XL-6172 TO TBD

OCTOBER 2015

REVISION F

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INTRODUCTION

This Specification and Description is published for the purpose of providing general information for the evaluation of the design, performance, and equipment of the Cessna Citation XLS+, Units 560XL-6172 to TBD. This document supersedes all previous Specification and Description documents and describes only the Cessna Citation XLS+ Model 560XL, its powerplants and equipment.

Due to the time span between the date of this Specification and Description and the scheduled delivery date of the Aircraft, Cessna reserves the right to revise the Specification whenever occasioned by product improvements, government regulations or other good cause as long as such revisions do not result in a material reduction in performance.

In the event of any conflict or discrepancy between this document and the terms and conditions of the Purchase Agreement to which it is incorporated, the terms and conditions of the Purchase Agreement govern.

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WARNING: This product contains Halon 1211 and Halon 1301. Furthermore, the product is manufactured with 1-1-1 Trichloroethane, substances which harm public health and environment by destroying ozone in the upper atmosphere.

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1. GENERAL DESCRIPTION

1. GENERAL DESCRIPTION

The Cessna Citation XLS+ is a low-wing aircraft with retractable tricycle landing gear and a conventional tail. A pressurized cabin accommodates a crew of two and up to 12 passengers (nine is standard). An interior configuration of ten or more passenger seats is not available for 14 CFR Part 135 operations. Two Pratt & Whitney Canada (P&WC) PW545C turbofan engines are pylon-mounted on the rear fuselage. Fuel stored in the wings offers generous range for missions typical of this class aircraft. Space for baggage is provided in the cabin and tailcone.

Multiple structural load paths and system redundancies have been built into the aluminum airframe. Metal bonding techniques have been used in many areas for added strength and reduced weight. Certain parts with non-critical loads such as the nose radome and fairings are made of composite materials to save weight. The airframe design incorporates anti-corrosion applications and lightning protection.

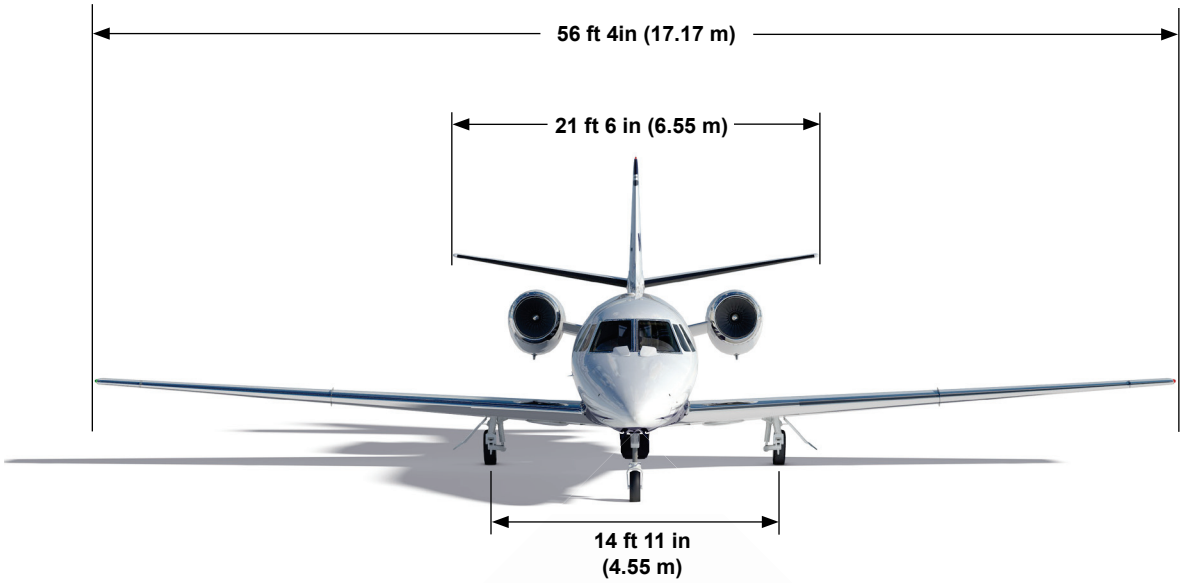
Cessna offers a third-party training package for pilots and mechanics, and various manufacturers' warranties as described in this book. Cessna's worldwide network of company-owned and authorized service facilities provides a complete source for all servicing needs.

1.1 CERTIFICATION

The Model 560XL is certified to the requirements of U.S. 14 CFR Part 25, Transport category, including day, night, VFR, IFR, flight-into-known icing conditions and steep approach. Optional certifications include Part 91 Category II. The Citation XLS+ is compliant with all RVSM certification requirements. (Note: specific approval is required for operation within RVSM airspace; Cessna offers a no charge service to assist with this process.)

The Purchaser is responsible for obtaining aircraft operating approval from the relevant civil aviation authority. International certification requirements may include modifications and/or additional equipment; such costs are the responsibility of the Purchaser.

1. GENERAL DESCRIPTION (CONTINUED)





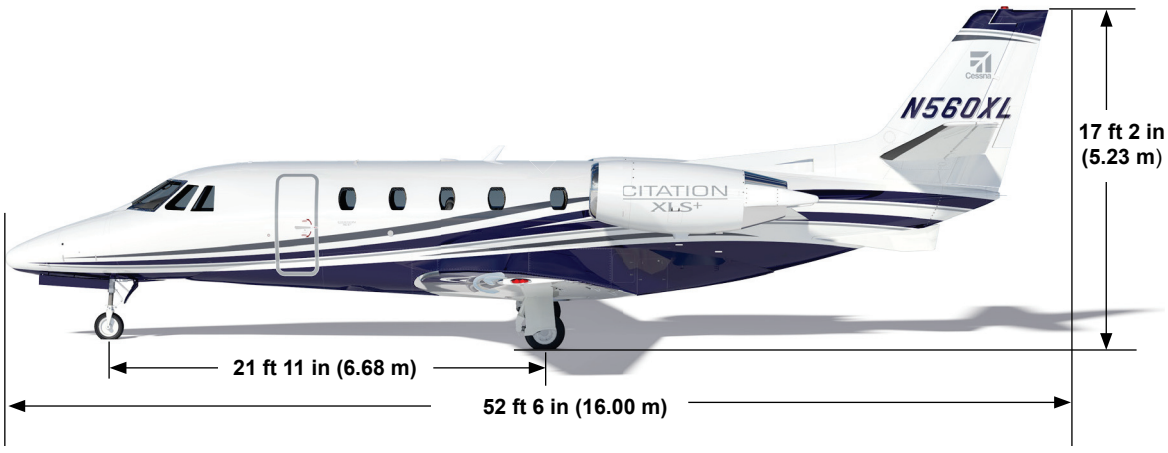


FIGURE I — CITATION XLS+ EXTERIOR DIMENSIONS

1. GENERAL DESCRIPTION (CONTINUED)

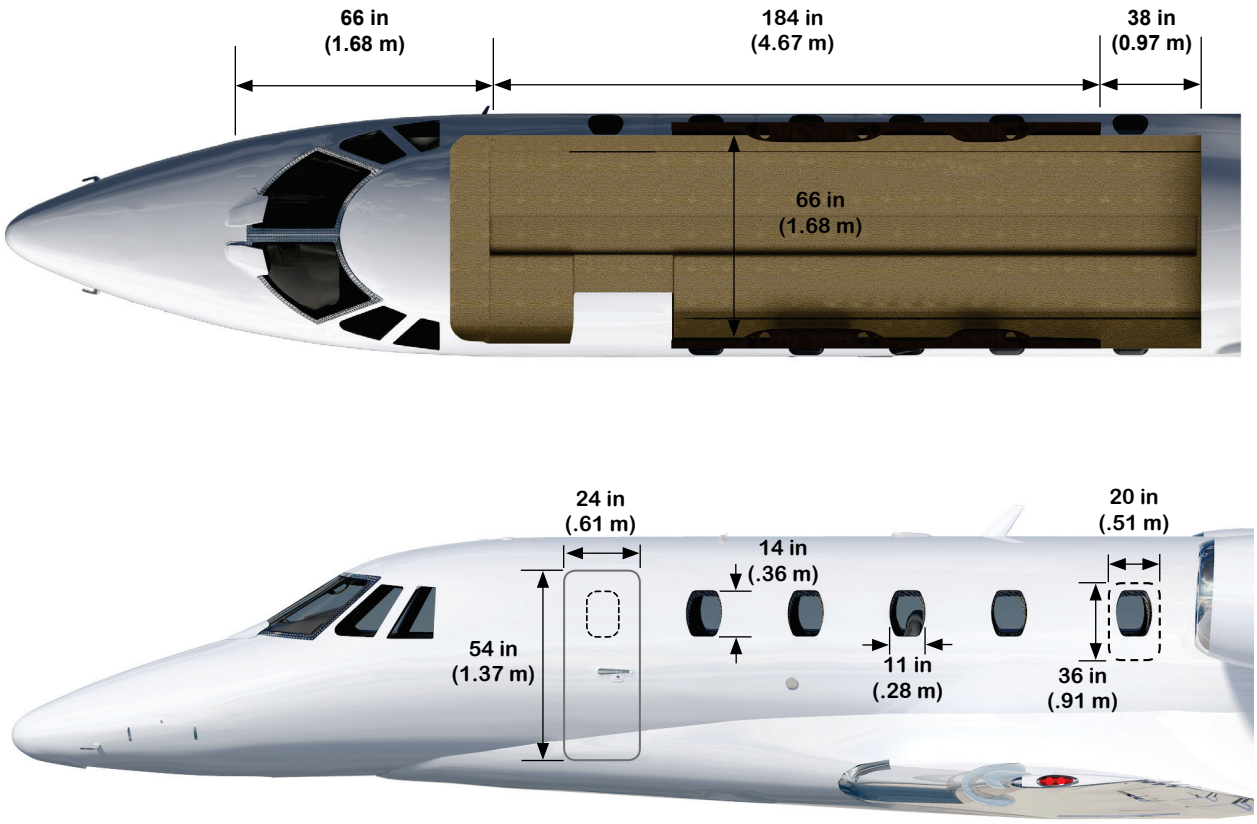


FIGURE II — CITATION XLS+ INTERIOR DIMENSIONS

1. GENERAL DESCRIPTION (CONTINUED)

1.2 APPROXIMATE DIMENSIONS

Overall Height	17 ft 2 in (5.23 m)
Overall Length	52 ft 6 in (16.00 m)
Overall Width	56 ft 4 in (17.17 m)

WING

Span (does not include tip lights)	55 ft 8 in (16.97 m)
Area	369.7 ft^2 (34.35 m^2)
Sweepback (at 25% chord)	0 degrees

HORIZONTAL TAIL

Span (overall)	21 ft 6 in (6.55 m)
Area	84.8 ft^2 (7.89 m^2)
Sweepback (at 25% chord)	0 degrees

VERTICAL TAIL

Height	9 ft 0 in (2.74 m)
Area	50.9 ft^2 (4.73 m^2)
Sweepback (at 25% chord)	33 degrees

CABIN INTERIOR

Height (maximum over aisle)	68 in (1.73 m)
Width (trim to trim)	66 in (1.68 m)
Length (forward pressure bulkhead to aft pressure bulkhead)	24 ft 0 in (7.32 m)

LANDING GEAR

Tread (main to main)	14 ft 11in (4.55 m)
Wheelbase (nose to main)	21 ft 11 in (6.68 m)

1.3 DESIGN WEIGHTS AND CAPACITIES

Maximum Ramp Weight	20,400 lb (9,253 kg)
Maximum Takeoff Weight	20,200 lb (9,163 kg)
Maximum Landing Weight	18,700 lb (8,482 kg)
Maximum Zero Fuel Weight	15,100 lb (6,849 kg)
Standard Empty Weight*	12,300 lb (5,579 kg)
Useful Load	8,100 lb (3,674 kg)
Fuel Capacity (useable) at 6.70 lb/gal	6,740 lb. (3,057 kg)

* Standard empty weight includes unusable fuel, full oil, standard interior, and standard avionics.

2. PERFORMANCE

All performance data is based on a standard aircraft configuration, operating in International Standard Atmosphere (ISA) conditions with zero wind. Takeoff and landing field lengths are based on a level, hard surface, dry runway. Actual performance will vary with individual airplanes and other factors such as environmental conditions, aircraft configuration, and operational/ATC procedures.

Takeoff Runway Length	3,190 ft (972 m)
(Maximum Takeoff Weight, Sea Level, ISA Balanced Field Length per Part 25, 15° Flaps)	
Climb Performance	29 min to 45,000 ft (13,716 m)
(Maximum Takeoff Weight, Sea Level, ISA)	
Maximum Altitude	45,000 ft (13,716 m)
Maximum Cruise Speed (± 3%)	451 KTAS (836 km/hr or 519 mph)
(Mid-Cruise Weight, 31,000 ft (9,449 m), ISA)	
NBAA IFR Range (100 nm alternate) (± 4%)	1,920 nm (3,556 km or 2,209 mi)
(Maximum Takeoff Weight, Full Fuel, Optimal Climb and Descent, Maximum Cruise Thrust at 45,000 feet)	
Landing Runway Length	2,740 ft (835 m)
(Maximum Landing Weight, Sea Level, ISA, per Part 25)	
Certified Noise Levels	
Takeoff	72.7 EPNdB
Sideline	86.3 EPNdB
Landing	92.8 EPNdB

3. STRUCTURAL DESIGN CRITERIA

The Citation XLS+ airframe is conventional in design, incorporating aluminum alloys, steel and other materials as appropriate. Engineering principles using multiple load paths, low stress levels and small panel size are incorporated in all primary structure.

Limit Speeds	
V_{MO} 8,000 ft (2,438 m) to 26,515 ft (8,082 m)	305 KIAS (565 km/hr, 351 mph)
M_{MO} 26,515 ft (8,082 m) and above	Mach 0.75 (indicated)
Flap Extension Speeds	
V_{FE} 0° to 15° Extension	200 KIAS (370km/hr, 230 mph)
V_{FE} 15° to 35° Extension	175 KIAS (324 km/hr, 201 mph)
Landing Gear Operating and Extended Speeds	
V_{LO} (retracting)	200 KIAS (370 km/hr, 230 mph)
V_{LO} (extending)	250 KIAS (463 km/hr, 288 mph)
V_{LE}	250 KIAS (463 km/hr, 288 mph)

4. FUSELAGE

A circular fuselage section is utilized with a maximum internal cabin width of 66 inches (1.68 m). A dropped aisle in the passenger cabin provides 68 inches (1.73 m) of headroom (measurements represent distance between softgoods).

The nose section includes a composite radome, high resolution radar and the avionics bay. The windshields are designed to meet bird resistance requirements of 14 CFR Part 25. Openable side windows are provided for the pilot and copilot. The cabin door is located on the forward left-hand side of the fuselage and is 54 inches (1.37 m) high with a maximum width of 24 inches (0.61 m). A plug-type emergency exit is located on the aft right-hand side of the cabin.

Various systems are housed or accessed through the wing/fuselage fairing. Removable or openable panels are provided for single point refueling, servicing of the hydraulic and power brake systems, external power, the battery, and the externally serviceable toilet.

A baggage compartment is located in the tailcone and is accessed through a door on the left hand side. The tailcone also contains an equipment bay which houses the APU and the major components of the hydraulic, environmental, electrical distribution, flight controls and engine fire extinguishing systems. External access to the equipment bay is provided through a door on the RH side of the tailcone. The APU is accessed through a panel above the right engine pylon. Additional equipment may also be accessed through removable panels inside the baggage compartment.

The aft fuselage is equipped with small strakes on both sides. The strakes are of a conventional construction and extend the usable C.G. range of the aircraft.

5. WING

The straight wing design is of conventional, all metal construction. The wing incorporates fuselage attachment points and a dropped carry-through which permit a continuous dropped aisle in the passenger cabin and lavatory. The wing structure has a two-cell torque box formed by spars, stringers, ribs and skin. Four degrees dihedral contributes to lateral stability. Integral fuel tanks are located in each wing forward of the aft spar and in the wing carry through section which passes under the fuselage.

Control surfaces on the wing include an outboard aileron with a trim tab on the left side, two flap sections per wing, and an upper and lower speed brake on each wing. The wing tips include navigation lights, strobe lights and flush mounted recognition/landing lights. Aileron, flap and speed brake gaps are sealed to reduce drag. The flaps utilize graphite composite materials.

6. EMPENNAGE

The empennage consists of a vertical stabilizer, horizontal stabilizer and a dorsal fin. The dorsal fin is attached to the top side of the rear fuselage and has two ram air ducts to provide air for use in the aircraft heat exchangers. The horizontal stabilizer incorporates a nine-degree dihedral for minimum sonic fatigue and thrust effects. Control surfaces include the elevators with a trim tab on each elevator and a rudder with a rudder servo/trim tab.

The horizontal stabilizer has two position settings, a takeoff and landing position, and a cruise position. Stabilizer position is controlled by flap position and airspeed.

A red flashing beacon is provided at the top of the rudder horn.

7. LANDING GEAR

Both the main and nose landing gears use a single wheel assembly. The nose gear has a chined tire for water and slush deflection. The main landing gear is a trailing link type. The landing gear retraction system is electrically controlled and hydraulically actuated. The main gear retracts inboard into the wing. When retracted, the main gear strut is covered by a door. Wing mounted fairings aerodynamically blend the retracted tires. The nose gear retracts forward into the fuselage nose section and, when retracted, is enclosed by three doors. All three doors remain open with the nose gear fully extended.

The gear actuators incorporate an internal lock to hold the gear in the extended position. Mechanical uplocks are used to hold the gear in the retracted position.

Emergency landing gear extension is accomplished by a manually operated system which releases the landing gear for free-fall extension. In the case of an unsuccessful manual release, a pneumatic system releases the uplocks and extends/locks the gear.

The nose gear is mechanically steered by the rudder pedals to 20° either side of center. For maximum maneuverability during ground handling, maximum deflection of the nosewheel is 90° either side of center.

Toe-actuated multiple disc carbon brakes are installed on the main gear wheels. Anti-skid protection is available at speeds above approximately 12 knots. Braking can be accomplished by either of two independent systems: the power brake hydraulic system or a back-up pneumatic system. Normal braking can be applied from either cockpit seat.

8. POWERPLANTS

Two Pratt & Whitney Canada PW545C turbofan engines are installed on the Citation XLS+, one on each side of the rear fuselage in easily accessible nacelles. The PW545C produces a static takeoff thrust of 4,119 pounds (18.32 kN) at sea level, up to 77°F (25°C) and has a bypass ratio of 3.8 to 1. Major maintenance intervals are 2,500 hours for hot section inspection and 5,000 hours for overhaul.

Dual channel Full Authority Digital Electronic Controls (FADECs) provide automation and efficiency in engine management. Detents in the throttle quadrant (takeoff, climb, cruise) permit optimal power settings based on ambient conditions for each phase of flight. The system also provides time-limited dispatch (TLD), engine protection, synchronization, and diagnostic capability.

Hydraulically actuated, target-type thrust reversers are attached to each engine. The effect of the thrust reversers on runway performance is accounted for under various conditions.

A continuous loop fire detection system monitors the nacelle area to detect and warn if a fire occurs. A two-shot fire extinguishing system is supplied.

AUXILIARY POWER UNIT (APU)

The Honeywell RE100(XL) APU is installed in the tailcone equipment bay. The APU supplies bleed air for pressurization and air conditioning, electrical power for engine assisted starts, and other benefits. It is certified for use in flight up to 30,000 feet (9,144 m).

9. SYSTEMS

9.1 FLIGHT CONTROLS

Dual controls are provided and comprise control wheel columns, adjustable rudder pedals, anti-skid power brakes and mechanical nose gear steering. Pushrod and cable systems are used to actuate the rudder, elevator and ailerons, each of which is of metal construction. An integral control lock is provided in the cockpit for the flight controls and throttles.

Trim wheels, installed on the pedestal, control mechanical trim tabs for each elevator, the left aileron, and a servo/trim tab for the rudder. Pitch trim is also electrically powered through a split switch mounted on the pilot's and copilot's control wheel.

The flap system consists of two panels on each wing which are hydraulically actuated. The flap panels are Fowler-type and are constructed of graphite composites. The flap actuation system includes a position select lever and a flap position indicator. Infinite positioning is provided with detents at the takeoff (7°), takeoff/approach (15°) and landing (35°) positions.

Speed brakes are installed on the upper and lower surfaces of each wing. The speed brakes are electrically controlled and hydraulically actuated by a switch on the side of the throttle handles.

A rudder bias system is provided to assist the pilot in the event of an engine failure and improves the balanced field length for wet runways. The rudder bias system utilizes engine bleed air to power a pneumatic actuator.

9.2 FUEL SYSTEM

Two independent fuel systems consisting of an integral tank in each wing are provided. System operation is fully automatic throughout the normal flight profile with each engine receiving fuel from its respective wing tank. Crossfeed capability is provided and, when selected, enables both engines to receive fuel from a single tank.

A capacitance-type fuel gauging system provides direct reading of fuel on board in pounds. Usable fuel capacity is 6,740 pounds (3,057 kg). Fueling is accomplished through a lockable filler port on each wing or single point pressure refueling system.

9.3 HYDRAULIC SYSTEM

An open-center hydraulic system operates the two position horizonal stabilizer, landing gear, flaps, speed brakes, and thrust reversers. All hydraulic control valves are consolidated into a main manifold and two thrust reverser control manifolds. A separate independent system is used for the main wheel anti-skid/power brake system.

Basic aircraft hydraulic pressure is provided by two positive displacement, engine-driven pumps. Either pump can supply enough flow to operate the system.

An electric motor-driven hydraulic pump charges an accumulator to power the independent system used for the wheel brakes.

When activated, the basic aircraft system pressurizes to 1,500 psi (103 bar). Ground connections are provided to service the hydraulic system. Approved hydraulic fluids include Skydrol and Hyjet. Flare-type fittings, aluminum tubing and flex-hoses are used throughout the system.

9.4 ELECTRICAL SYSTEM

Electrical power is supplied by two 28-volt DC, 300 ampere, engine-driven starter/generators and by a 28-volt DC, 300 ampere, APU mounted starter/generator. Generator control units provide static regulation, overvoltage, feeder fault, and ground fault protection for each generator. An AC system is included and dedicated to support the electric windshield. A separate 500 watt inverter supplies 110 volt AC power to three outlets: one in the cockpit and two in the cabin.

A 24-volt, 44-amp-hour, nickel-cadmium battery is mounted inside an access panel on the left side of the fuselage just behind the wing fairing to supply power for starting and emergency requirements. A receptacle is provided for connection of an external power unit. Battery temperature monitoring and battery disconnect systems are provided.

The electrical system incorporates a dual parallel main bus distribution system, designed so that essential equipment operation will not be interrupted in the event of a single power source or distribution system failure.

9. SYSTEMS (CONTINUED)

Exterior lighting consists of one red flashing beacon, two anti-collision strobes, two wing inspection lights, navigation lights, two wing recognition/landing lights, two fuselage belly fairing recognition/landing lights, and the tail flood light system consisting of two external flood lights mounted on top of the horizontal stabilizer illuminating the vertical fin.

9.5 PRESSURIZATION AND ENVIRONMENTAL SYSTEM

The pressurization and air conditioning systems utilize APU or engine bleed air to pressurize and air condition the cabin and defog the cabin and cockpit side windows. Pressurization is controlled by two outflow valves located in the aft pressure bulkhead. Cabin altitude and rate of change are automatically scheduled by the pressurization controller.

The system provides a 6,800 foot (2,073 m) cabin altitude at 45,000 feet (13,716 m) (9.3 psi (0.64 bar) nominal maximum working pressure). Sea level cabin altitude can be maintained to 25,230 feet (7,690 m).

Air conditioning for the cabin is provided by routing APU or engine bleed air through the air cycle machine which conditions the air prior to distribution to the cabin. The cabin air distribution system consists of overhead air ducts and outlets, and underfloor and armrest air ducts. A separate cockpit air distribution system is ducted forward through the underfloor from the aft cabin. Dual thermostats provide independent sensing for automatic temperature control in both zones.

9.6 OXYGEN SYSTEM

A 77.1 cubic foot (2.18 m3) oxygen bottle is provided with a high pressure gauge and bottle-mounted pressure reducer. Automatic dropout, constant-flow oxygen masks are provided for each passenger. Pressure demand masks are provided for the crew.

9.7 ICE AND RAIN PROTECTION

Engine bleed air is used for anti-ice protection of the engine inlets and wing leading edges. The windshields, pitot tubes, static ports, and angle of attack probe are electrically anti-iced.

A pneumatic boot ice protection system is used on the horizontal tail leading edge surfaces. Windshield ice detection lights are mounted on the glareshield and wing inspection lights are mounted on the fuselage to assist in detection of ice buildup during night flights.

A fan mounted in the nose avionics bay is available to assist with rain removal from the windshields during taxi operations.

10. AVIONICS



FIGURE III — CITATION XLS+ INSTRUMENT PANEL AND PEDESTAL LAYOUT

10. AVIONICS (CONTINUED)

10.1 GENERAL

The Collins Pro Line 21 is the featured avionics suite on the Citation XLS+. It includes an integrated Flight Director/ Autopilot and EFIS system utilizing four 8 x 10 inch (20 x 25 cm) color, Active Matrix Liquid Crystal Displays (AMLCD) in portrait orientation. The two outer displays are Primary Flight Displays (PFDs) and the two inner are Enhanced Multi-Function Displays (MFDs) including a flexibly displayed Engine Indicating and Crew Alerting System (EICAS). Because each display is capable of providing critical flight, navigation, and engine indications in reversion mode, dispatch is possible with one display inoperative.

Described in this section are standard XLS+ avionics features such as turbulence Doppler weather radar, Traffic Collision Avoidance System (TCAS), Terrain Awareness Warning System (TAWS), XM Broadcast Weather, electronic charts and maps, and EICAS. An L-3 Avionics GH-3000 and EHSI-4000 provide standby flight instrumentation with an Ametek N1/N2/ITT instrument for standby engine display.

A variety of information is available to the crew through a graphical menu system on the EFIS. PFD functions are controlled via two Display Control Panels (DCPs). The MFD functions are primarily controlled by dual Cursor Control Panels (CCPs). Dual Control Display Units (CDUs) forward of the throttle quadrant are a means for radio tuning and the interface with the Flight Management System (FMS). A second FMS is available as an option.

Two complete crew stations are provided with dual controls including control columns, adjustable rudder pedals, and brakes. The crew seats are fully adjustable and include five-point restraint harnesses.

Electroluminescent panels, instrument floodlights, and blue-white background lighting illuminate all cockpit instruments and switches. Illuminated LED pushbutton switches, overhead map lights and floodlights are also provided. The pitot-static system includes three heated pitot sources and six heated static sources to drive the pilot's and copilot's flight instruments and the secondary air data display. The emergency oxygen system provides two pressure demand masks with microphones for the crew members. Circuit breakers are installed on circuit breaker panels located on the pilot's and copilot's sidewalls.

10.2 INSTRUMENT AND CONTROL PANELS

The instrument layout includes a tilt panel below the vertical instrument panel across the width of the cockpit. The tilt panel improves visibility of instruments mounted low in the panel. In addition, the pedestal has been designed to ease crew ingress/egress and to improve maintenance technician interface.

A. Installed in Center Glareshield Panel:

- LH Pilot's Digital Audio Control Panel
- Master Warning / Master Caution Lights
- Primary Flight Display
- Display Control Panel (DCP)
- Battery Temperature Gauge
- Digital Clock

B. Installed on Right-Hand Panel (copilot):

- Master Warning / Master Caution Lights
- Display Control Panel (DCP)
- Primary Flight Display
- Copilot's Digital Audio Control Panel
- APU Fire Annunciator
- APU System Annunciators
- APU Ammeter

C. Installed on Center Panel:

- TAWS Switches and Annunciators
- Electronic Standby Flight Display
- Electronic Standby Horizontal Situation Indicator
- Standby Engine Display with N1, N2, ITT
- Multi-Function Displays

D. Installed in Glareshield:

- Flight Guidance Panel
- Thrust Reverser Indications and Engine Fire Control Switches
- Angle of Attack Indexer (pilot's side)

E. Installed on LH Tilt Panel:

- FADEC Switches
- Electrical Power Control
- Avionics Power Control

10. AVIONICS (CONTINUED)

- Fuel Transfer Control
- Pilot's AHRS Control
- Oxygen Pressure Indicator
- Cockpit Speaker Mute Switch
- Pilot's AHRS and ADC Reversion Switches
- Oxygen Mask Switch
- Microphone Selector Switch

F. Installed on RH Tilt Panel:

- Copilot's AHRS Control
- Anti-Ice / De-Ice Controls
- Cockpit Speaker Mute Switch
- Landing Gear Control and Indicators
- Cabin Altitude and Differential Pressure Indicator
- Cabin Pressurization System Controller with Digital Cabin Rate of Climb
- Cabin Bleed Air Source Selection Control
- Manual Pressurization Control
- Microphone Selector Switch
- Copilot's AHRS and ADC Reversion Switches
- Cockpit and Cabin Temperature Controls
- Emergency Cabin Pressure Dump Control

G. Installed on Pedestal:

- Rotary Test Switch
- Engine Start and Ignition Control
- Pulse Light Switches
- Exterior Lights Control
- Cockpit and Instrument Lighting Controls
- Landing / Recognition / Taxi Light Controls
- Flight Deck Lighting Controls
- Cockpit Voice Recorder (CVR) Control Panel
- Event Switch
- DC Voltmeter
- Left and right generator load ammeters
- Standby Radio Tuning Control
- Engine Power Levers
- Flap Control
- Flap Position Indicator
- Speed Brake Control (on throttle knobs)
- Engine Synchronizer Switch
- Collins FMS-3000 Control Display Units (CDU)
- Cursor Control Panels (CCP)
- Elevator Trim Control and Indicator
- Aileron Trim Control and Indicator
- Rudder Trim Control and Indicator
- Maintenance Diagnostic System Download Ports
- Database Loading Unit (DBU-5000)
- Display Reversionary Control Panel

10.3 AVIONICS

Described Described below is the Citation XLS+ standard avionics suite as referred to in section 17, Limited Warranties.

A. ELECTRONIC FLIGHT DISPLAYS

The Collins Pro Line 21 Avionics System is an integrated Flight Director/Autopilot and EFIS system utilizing four 8 x 10 inch (.20 x .25 m) color, Active Matrix Liquid Crystal Displays (AMLCD). The Primary Flight Displays (PFD) are located on the pilot's and copilot's panel with two Enhanced Multi-Function Displays (MFD) on the center panel. All displays are capable of providing compass, radar information, and engine parameters in reversion mode.

Dual Display Control Panels (DCP) and a Flight Guidance Panel (FGP) are the primary pilot interfaces with the PFDs. The DCPs provide dedicated controls for BARO setting, map range, and radar antenna tilt. The FGP (in the firetray) provides the means to control selected course, selected heading, and pre-selected altitude.

Each PFD displays an edge to edge attitude display graphic with respect to an aircraft symbol, and incorporates a pilot selectable single cue or cross pointer flight director command bar presentation. Dual digital air data computers supply information to the PFDs for presentation of altitude, airspeed, and vertical speed. Altimeter settings may be displayed in either inches or hectopascals and altitude in either feet or meters. Dual attitude heading reference systems supply attitude and magnetic heading information.

The PFDs display either a full compass rose, a partial compass arc, or a present position map format (PPOS). Situational awareness presentations (weather detection, TAWS and TCAS) may be overlaid on either the arc or PPOS map formats for both the PFDs and the MFDs. The PFDs also display lateral navigation information in conjunction with the bearings and compass information. COMM 1 and COMM 2 selected frequencies, ATC transponder code, RAT and UTC

10. AVIONICS (CONTINUED)

are displayed at the bottom of each PFD. Various annunciations are presented for autopilot/flight director, display, vertical deviation, and distance.

The pilot's MFD is able to display a variety of graphical information. Engine parameters will be displayed at the top of the MFD, including N1, N1 reference, thrust mode, ITT, ignition selected annunciation, N2, oil temp, oil pressure, fuel quantity, fuel flow and fuel temperature. Below the engine display is a window which may display extended FMS data or an integrated electronic checklist. The lower portion of the MFD displays navigation information in either a full compass rose, partial compass arc, PPOS map format or a planning map format. TCAS and TAWS may also be overlaid on the navigation information.

The copilot's MFD displays CAS messages on the upper portion of the display with the remainder typically used for electronic chart display. The copilot's MFD also has the capability to display video for optional enhanced vision systems or surveillance systems.

B. CREW ALERTING SYSTEM (CAS)

The integrated Crew Alerting System provides messages displayed on the copilot's MFD. The CAS display consists of text messages integrated with the master warning/master caution as appropriate and also with aural voice or tone annunciations.

C. FLIGHT GUIDANCE SYSTEM

The integrated Collins Pro Line 21 Flight Guidance System (FGS) consists of dual flight guidance computers and a single, three-axis autopilot. Flight director modes consist of selected heading, lateral navigation capture and track, Go Around (GA) attitude, altitude hold, preselected altitude capture and track, vertical speed, IAS or Mach hold, and vertical navigation capture and track. In the absence of a vertical or lateral selected mode, the system will maintain pitch or roll attitude. Mode references can be synchronized to current aircraft parameters with a control wheel mounted SYNC switch. Flight director commands from either the pilot's or copilot's side may be coupled to the autopilot/yaw damper system, which consists of three electric servos in the primary flight control system along with an integral automatic or manual pitch trim system.

D. EMERGENCY DESCENT MODE (EDM)

EDM is a flight director mode that provides an automatic aircraft descent should the aircraft cabin become depressurized at altitude. EDM is automatically armed when the autopilot is engaged and aircraft altitude is over 30,000 feet. When EDM is activated, the autopilot generates commands to descend at a speed not exceeding Vmo/Mmo until reaching 15,000 feet. The pilot is required to retard throttles manually prior to descent to minimize descent times. Upon reaching the target altitude, the autopilot will capture and hold 15,000 feet.

E. ATTITUDE HEADING REFERENCE SYSTEM (AHRS)

Dual Collins AHC-3000 solid-state Attitude/Heading Computers independently supply attitude and heading information to the EFIS and flight guidance system. Either AHC may be selected for display on each PFD via a cockpit switch. The heading reference may be slaved to a magnetic flux detector or may be operated in the free-gyro mode.

F. AIR DATA COMPUTER (ADC)

Dual Collins ADC-3000 digital air data computers independently supply altitude, airspeed, vertical speed and temperature information to each pilot's PFD. Pressure altitude information is supplied to each Mode-S transponder, as well as to the Collins FMS and FGS for vertical mode computations. In addition, a third ADC is dedicated to the Electronic Standby Instrument System.

G. INTEGRATED FLIGHT INFORMATION SYSTEM (IFIS)

The Collins IFIS-5000 is integrated with the Collins FMS to provide a significant increase in situational awareness. The heart of the system is the line replaceable Collins FSU-5010 File Server Unit. The FSU contains the storage, memory, and processing power to display Enhanced Map Overlays on an MFD using high speed Ethernet connections. The cursor control device allows pilots to place overlays on the Collins FMS navigation presentation such as worldwide political boundaries including state and national borders; geographical features such as lakes, rivers, and oceans; high and low enroute airways; and controlled, restricted, and prohibited

10. AVIONICS (CONTINUED)

airspace. In addition, the XM WX Satellite Weather Data Service (Broadcast Weather) and Jeppesen Electronic Charts are channeled through the IFIS and may be selected for display on a MFD. See respective descriptions in this section.

The IFIS Enhanced Map Overlay database is updated by subscription through Collins on a 28 day cycle. The database may be uploaded from a customer-supplied laptop computer or a USB flash drive through the Database Loading Unit (DBU-5000) located on the pedestal. Inherent flexibility in the Collins IFIS allows for future expansion and/or upgrades to options currently available such as Interactive Graphical Weather and Flight Services.

H. CURSOR CONTROL PANEL (CCP)

Two Collins CCP-3310 cursor control panels are provided for use in conjunction with the IFIS. Three Quick Access Keys are included which allow rapid selection of pilot defined, pre-stored MFD formats. Other knobs and buttons support electronic checklist functions and menu functions for Enhanced Map Overlays, Broadcast Weather, and Electronic Charts. The CCP-3310 also has a radio tuning knob that may be used to change radio frequencies displayed on the FMS CDU.

I. INTEGRATED ELECTRONIC CHECKLIST

Capability for display of pilot-defined electronic checklists is included on an MFD. Control of the checklists is through the integral Cursor Control Panel, installed in the pedestal. Windows compatible software is provided for customized generation of checklist text pages.

J. ELECTRONIC CHARTS

The worldwide Electronic Charts function allows high resolution Jeppesen SID, STAR, and Approach charts as well as airport taxi diagrams to display on an MFD. This IFIS-driven feature includes dynamic integration with the Collins FMS to allow the aircraft's present position to be shown on all geo-referenced charts. The ever-growing list of such charts includes most of the U.S. and many areas outside the U.S. Collins' Chartlink feature automatically loads the appropriate charts based on the flight plan data from the Collins FMS. Using the CCP, the pilot may zoom and pan a chart or map. The database must be updated by subscription on a 14 day cycle.

K. COLLINS FLIGHT MANAGEMENT SYSTEM (FMS)

A single Collins FMS-3000 with dual CDU displays mounted in the forward pedestal is standard equipment on the XLS+. The single FMS standard equipment also includes wiring provisions for a second FMS-3000. The second FMS-3000 is offered as optional equipment. The single Collins FMS-3000 combines the Satellite-Based Augmentation System (SBAS) enabled GPS-4000S and provides multiple waypoint navigation solutions blended from GPS, VOR, and DME sources, suitable for enroute, terminal, and approach navigation. Both lateral and vertical modes may be displayed on the Flight Director and may be fully coupled to the autopilot. Airway flight planning, plain language identifiers and airport communication and navigation frequency lookup features are included. Present position referenced geopolitical, airspace, and major water boundaries as well as airways may be overlaid on any of the FMS map formats. Updated software adds Localizer Performance with Vertical Guidance (LPV) approach capability. The FMS-3000 CDU provides tuning capability for the radio sensors and transponders.

A performance database specific to the Citation XLS+ is included in the FMS. It permits flight-planning calculations prior to departure based on predicted fuel burn. It also allows calculation of aircraft weight, V-speeds, and required field length based on specific runway conditions. V-speeds may be automatically posted on the airspeed tape.

The FMS database requires updates by subscription through Collins on a 28 day cycle. The database may be uploaded from a customer-supplied laptop computer or a USB flash drive through the Database Loading Unit (DBU-5000) located on the pedestal. The DBU features two USB ports for FMS navigation database and FSU electronic chart database upload.

L. GLOBAL POSITIONING SYSTEM (GPS)

The single Collins GPS-4000S is a 12-channel receiver providing satellite-based position data and SBAS-based data (where available) for use by the Collins FMS-3000. The second GPS-4000S is offered as optional equipment.

10. AVIONICS (CONTINUED)

M. TERRESTRIAL NAVIGATION RECEIVERS

Dual Collins NAV-4500 navigation receivers provide integrated ground-based navigation functions. Dual VOR, Localizer, Glideslope, and Marker Beacon receivers are standard. A single ADF receiver may be ordered as an option. Navigation information is displayed on the EFIS. Tuning and management is accomplished through the CCPs or the FMS-3000.

N. DISTANCE MEASURING EQUIPMENT (DME)

A single Collins DME-4000 provides the ability to monitor as many as three active DME stations simultaneously. This allows full time distance display of pilot-selected VHF navaids, along with the enhancement of FMS position determination through the use of the non-displayed DME channel. Tuning and management is accomplished through the CCPs or the FMS-3000. The second DME-4000 is offered as optional equipment.

O. RADIO ALTIMETER

The Collins ALT-4000 Radio Altimeter system provides height above the terrain from 2,500 feet (762 m) to touchdown. This information is integrated with functions in the EFIS, TCAS II, and TAWS and is presented on the PFDs.

P. VHF COMMUNICATION TRANSCEIVERS

The dual Collins VHF-4000 Transceivers provide a minimum of 16 watts power output and digital receiver and exciter technology, which will provide growth capability to support future VHF data link modes of operation. They are compliant with European 8.33 kHz spacing requirements. Tuning and management is accomplished through the CCPs or the FMS-3000.

Q. PROVISIONS FOR COLLINS HF-9031A WITH SELCAL

All wiring, racks, and hardware necessary to accommodate future installation of the Collins HF-9031A High Frequency radio with selective calling feature are included as standard.

R. STANDBY RADIO TUNING CONTROL

The Collins CTL-23D remote VHF radio tuning head is installed in the pedestal and provides a backup tuning source for COMM 1 and NAV 1 radios. The CTL-23D is functional in normal and emergency power.

S. AUDIO CONTROL PANEL

Dual Collins digital audio control panel amplifiers provide transmitter selection for microphone inputs and direct audio outputs from all receivers to either the speaker or headphones at each crew station. Crew sidetone may be adjusted independently. Collins Variable Audio Level feature automatically adjusts the overhead speaker audio levels to compensate for cockpit environmental changes such as flight with the gear down, flaps extended, or speed brakes extended. Seven audio levels are selected based on aircraft configuration.

T. COCKPIT SPEAKER MUTE SWITCHES

Switches on both LH and RH tilt panels allow the crew to mute all audio and aural warnings to the cockpit overhead speakers including TCAS and TAWS. (Note: This system may not be approved by some international regulation authorities, in which case, it may be disabled.)

U. TRANSPONDERS

Dual Collins TDR-94D Mode S Diversity solid-state transponders include Enhanced Surveillance capability. Altitude reporting information is supplied from the digital ADCs. Each transponder is remotely mounted and tuned through the CCPs or the FMS-3000.

V. TRAFFIC COLLISION AVOIDANCE SYSTEM (TCAS II)

The Collins TCAS-4000 system provides traffic awareness by tracking all Mode C or S aircraft within 35 nm. This system, which meets all ICAO ACAS II (Change 7.1) requirements, selects for display only those aircraft (up to 30) that pose the greatest collision threat. Traffic Alerts (TAs) and Resolution Advisories (RAs) are given aurally through the aircraft audio system and visually on the PFDs. When other TCAS II-equipped aircraft are encountered, complementary RA maneuvers are coordinated by each system.

10. AVIONICS (CONTINUED)

W. PULSE LIGHTS

The system utilizes a soft-start feature to cycle on and off both taxi and recognition lights to improve own aircraft visibility in flight. Activation is tied to the recognition light switch and weight-on-wheels logic. A switch on the panel allows the TCAS-4000 (TCAS II) to automatically activate the Pulselight system in the event of a Traffic Advisory (TA) or Resolution Advisory (RA).

X. TERRAIN AWARENESS WARNING SYSTEM (TAWS)

The Honeywell Mark V is a Class A TAWS providing visual and aural warning alerts for terrain avoidance. It features the Honeywell terrain awareness and display system (TADS) and may be displayed on the MFDs and the PFDs. It includes six basic alert and warning modes such as excessive descent rate, altitude loss after takeoff, and inadvertent descent below glideslope. In addition, Mode 7 provides reactive windshear warning and windshear caution.

The Mark V uses GPS input and a worldwide terrain database to display an enhanced graphical plan view of terrain, color coded in relation to the aircraft's position. Terrain is shown in higher resolution around all runways longer than 2,000 feet. Within North America and certain other areas, manmade obstacles greater than 100 feet are shown and included in the alert and warning modes. The Mark V also includes a terrain clearance floor exceedence mode and a "look-ahead" cautionary mode. Subscribed operators will be notified by Honeywell of database updates as required.

Y. WEATHER AVOIDANCE RADAR

The Collins TWR-850 Turbulence Doppler weather radar unit is a stabilized, solid state, X-band color radar system. The depiction can be overlaid on the arc or present-position map displays on either the PFDs or MFDs and corresponds to the map/radar range selected. The radar has a 120 degree scan angle over a selectable range of five to 300 nm. In addition, the TWR-850 provides turbulence detection to 50 nm, sector scan (reduced sweep angle for rapid updates), target alert (notifies the pilots of hazardous targets outside the selected range), and auto-tilt (maintains angle during altitude or range changes).

Z. BROADCAST WEATHER

The XM WX Satellite Weather Data Service adds long range comprehensive situational awareness by providing constantly updated broadcast weather information, channeled through the IFIS for display on the MFD. By using the CCP, pilots may select and manipulate site specific products such as high resolution NEXRAD; graphical echo tops, METARs, and SIGMETs; and textual METARs, SIGMETs, AIRMETs, and TAFs. Because of IFIS integration, the aircraft's present position is shown on the graphical images. Upgraded software features the capability to have satellite imagery with NEXRAD overlays, see TFRs both in graphical and textual formats, view winds aloft, and view cloud-to-cloud lightning with strikes refreshed every five minutes. Images and data are available at any altitude and are processed through a receiver supplied by Heads Up Technologies and stored in the FSU for recall on demand. This service requires a subscription through XM and is currently available only within the continental United States.

AA. ELECTRONIC STANDBY INSTRUMENT SYSTEM (ESIS)

The L-3 Communications GH-3000 ESIS features solid-state internal sensors for attitude cues and an independent, dedicated air data computer (remotely mounted) for airspeed and altitude information. Flight reference information including heading is presented in an EFIS-matched format on a full-color AMLCD.

BB. ELECTRONIC STANDBY HORIZONTAL SITUATION INDICATOR (EHSI)

The L-3 Communications EHSI-4000 Electronic Horizontal Situation Indicator (EHSI) uses a dedicated magnetometer and signals from the navigation radio to present heading, range, navigation, and course deviation data in a HSI format. A standby slave switch on the panel may be used to select directional gyro mode when necessary.

CC. STANDBY ENGINE INDICATOR

Standby engine indications include N1, N2, and ITT for each engine and are displayed in digits on the standby engine indicator on the center panel. Exceedances cause the respective digits to flash.

10. AVIONICS (CONTINUED)

DD. EMERGENCY LOCATOR TRANSMITTER (ELT)

The Artex C406-N provides a three frequency ELT that transmits on the emergency frequencies of 121.5 and 243.0 MHz and the satellite frequency of 406 MHz. It interfaces with the onboard Collins FMS and is capable of transmitting the last known aircraft position on the satellite frequency if activated.

EE. COCKPIT VOICE RECORDER (CVR)

The L-3 Communications FA2100 consists of three major components: the recorder with ULB (Underwater Locator Beacon) located in the aircraft tailcone, the control panel located in the pedestal and a remote microphone located in the instrument panel glareshield. The recorder continuously records both pilot and copilot audio communications as well as the cabin PA system. The remote area mic records all cockpit sound information. The recorder stores the last 120 minutes of data prior to system shutdown.

FF. MAINTENANCE DIAGNOSTIC SYSTEM (MDS)

The Collins Maintenance Diagnostic System has the ability to collect, store, and display diagnostic data, service, and fault messages for many Collins Pro Line 21 Line Replaceable Units (LRUs). The Collins Pro Line 21 system diagnostics provides a listing of current faults, advanced diagnostics information for each current fault, currently failed LRUs, and fault history. The MDS assists in the diagnosis of aircraft CAS messages by recording specific relevant parameters for each CAS message, records engine trend data on every flight and also interfaces with various aircraft logic modules and parameters for display of live data. The system can store fault history for up to 500 faults occurring during the previous 100 flights and also provides maintenance reports which may be downloaded in ASCII format to a USB storage device. The maintenance data is available through the copilot's MFD and can only be accessed when the aircraft is on the ground.

GG. MAINTENANCE DATA RECORDER

Additional data storage is provided by the Maintenance Data Recorder to be used for advanced troubleshooting. It records aircraft logic module and FGC data busses.

Purchaser agrees that Seller has a perpetual license to use all information contained in the Aircraft recording and/or diagnostic systems for any reason, including maintenance and accident investigation. Purchaser expressly provides Seller with licensed permission to download, use, and/or read such information at any time. Purchaser further agrees this perpetual license runs with and is automatically transferred with the title to the Aircraft and is binding on any and all subsequent purchasers of the Aircraft.

HH. AVIONICS DISPATCH GROUND POWER

The Avionics dispatch ground power switch provides power to minimal avionics to allow obtaining clearances and FMS preparation while minimizing aircraft battery drain prior to starting engines. Avionics dispatch ground power is not available in flight or when the aircraft battery switch is in the ON or EMER position. Avionics dispatch ground power provides power to FMS 1, CDU 1&2 (Control Display Unit for the FMS), COMM 1, Audio 1&2, and DBU (Database Unit) equipment. CDU 1 allows for FMS 1 functionality while CDU 2 allows for radio tuning.

10.4 MISCELLANEOUS COCKPIT EQUIPMENT

- Seat Belts, Shoulder Harnesses with a Five-point Restraint System
- Generic Seat Tailoring
- Monorail Sunvisor (2)
- Parking Brake Control
- Emergency Brake Control
- Flight Deck Dividers with a One-Piece Curtain
- Ventilation Air Outlets
- Map Lights (2)
- Cup Holders (4)
- Oxygen Masks (2)
- Overwater Life Vest (2) (TSO-C13)
- Three-Book Navigation Chart Case (2)
- Cockpit Assist Handle
- Emergency Gear Extend Control
- Openable Side Windows
- Control Lock
- 110 volt AC Outlet

11. INTERIOR

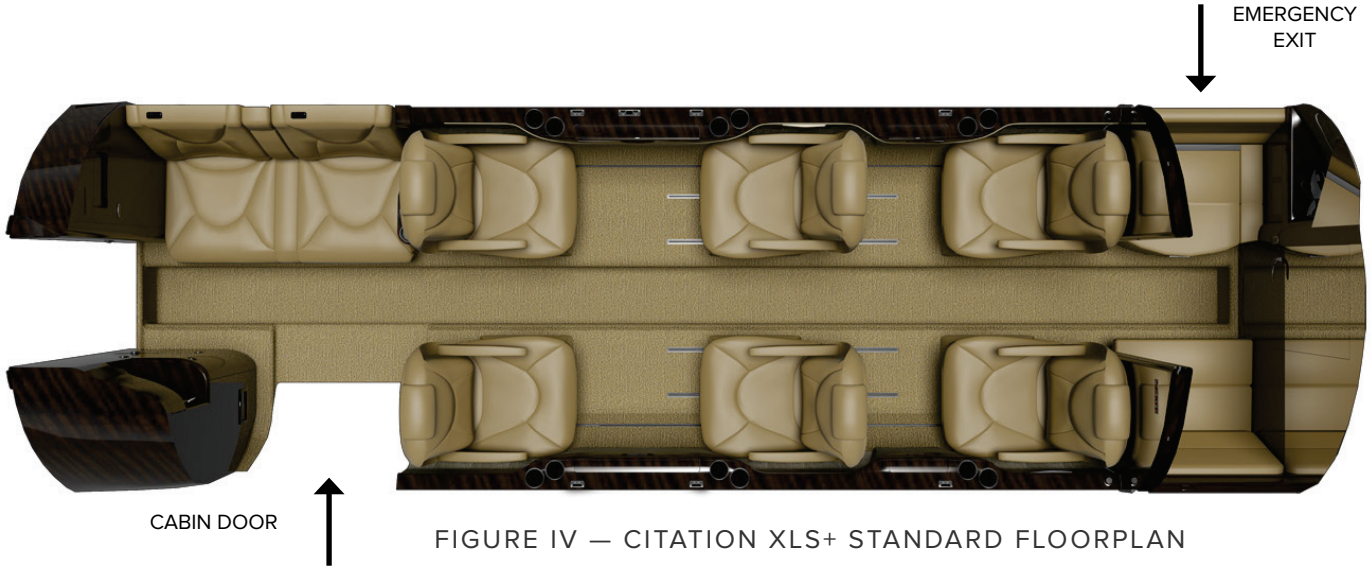


FIGURE IV — CITATION XLS+ STANDARD FLOORPLAN

11.1 GENERAL

The The XLS+ fuselage is sized to minimize drag while offering passenger comfort and flexibility for a variety of interior arrangements. The constant section of the cabin provides a continuous width of 66 inches (1.68 m). The cabin is 18 ft 6 in (5.64 m) long from the flight compartment to the aft pressure bulkhead. The cabin is separated from the flight compartment by the storage cabinet and refreshment center. A one-piece half-length cockpit curtain is mounted on the RH forward side of the cabinets and may be pulled across the aisle and fastened on the LH side.

A 13 inch (0.33 m) wide dropped aisle, extending from the cockpit divider aft to the aft pressure bulkhead, provides a cabin height of 68 inches (1.73 m) (measurements represent distance between softgoods).

Passenger seats track forward and aft 7 inches (0.18 m) and track 4 inches (0.10 m) laterally on the seatbase with 360° swiveling capability. Seats recline to an infinite number of positions, with full reclining capability. All passenger seats are equipped with seat belts, shoulder harness straps with inertia reel, and an overwater life vest stored in the seatbase shroud.

Eleven elliptical windows are provided in the cabin with pleated manual window shades. Individual air outlets and reading lights are provided for each passenger. Indirect LED lights with full dimming capability, dropped aisle lighting, entrance and emergency exit lights are also provided in the passenger cabin. Bagged insulation and soundproofing are consistent with this category of aircraft, its operating speeds and environment. Dropout, constant-flow oxygen masks are furnished for each passenger for emergency use. Certified burn resistant materials are used throughout the cockpit and cabin.

11.2 STANDARD INTERIOR CONFIGURATION

The standard interior configuration of the Citation XLS+ includes the following:

- LH Forward Refreshment Center featuring one hot tank, bottled water storage, two disposable cup dispensers, beverage can rack, wine bottle storage, divided ice chest with removable wine caddy, drip tray connected to a manual overboard drain, trash container, miscellaneous general storage, catering drawer and accent lighting
- RH Forward Closet with removable/adjustable shelves, switch panel for couch occupant and accent lighting, and a flush-mounted 10.4” monitor for the RosenviewLX passenger information system. This system provides a moving map presentation as well as flight information parameters, such as altitude, distance to destination, and ground speed. Worldwide satellite map imagery is included. The system permits the user to configure specific display settings, and includes audio passenger briefing capability along with a cockpit-located controller for activating the briefings.

11. INTERIOR (CONTINUED)

- Two-place side facing couch with stowable center armrest with dual cup holders, aft armrest cabinet with dual cup holders and two overwater life vests stored in couch base
- Six pedestal seats (four forward and two aft facing) with dual flip-down armrests, an adjustable headrest, seat back pocket, and seat restraints. Seats #5 and #6 have floor tracking
- Two executive and two slimline tables with leather table top inserts
- Two cupholders in sideledge at each seat location
- Axxess II Iridium Satellite Telephone – Includes two Iridium satellite telephone channels. The system offers PBX functionality, including call waiting, call forwarding, and conference calling capability. Service charges apply.
- Overhead panels containing an air vent, reading light, and oxygen mask for each passenger and the aft lavatory area
- Manual pleated window shades
- Carpeting
- Aft cabin dividers with mirror/veneer and sliding privacy doors
- Removable, belted, LH aft side facing seat with restraint system and fold down seat back cushion for storage with cargo net and overwater life vest stored in seat base
- RH non-belted externally serviceable flushing toilet
- Aft centerline closet with vanity sink, temperature controlled water, coat rod and hooks, and general storage
- LH aft retractable coat rod with hangers
- Plated hardware finish
- Selected wood veneer cabinetry
- Fasten seat belt, no smoking, emergency exit signs with chimes (Note: The no smoking sign remains illuminated at all times unless the optional smoking configuration is ordered.)
- Single insertable ashtray
- Fireblocking on all passenger seats
- Fire extinguisher

11.3 BAGGAGE COMPARTMENTS

An unpressurized, unheated baggage compartment is located in the tailcone. The compartment is accessible through a 25 x 29 inch (0.64 x 0.74 m) lockable door with an integral step. Anchors for the cargo tie-down straps and cargo net are built into the compartment walls. In addition, the cabin accommodates baggage in the 9 inch (0.23 m) RH forward closet and the aft centerline closet. The following limits apply:

- Tailcone Baggage Compartment: 700 lb, 80 ft3 (318 kg, 2.27 m3)
- RH Forward Closet: 56 lb, 3.6 ft3 (25 kg, 0.10 m3)
- Aft Centerline Closet: 44 lb, 6.6 ft3 (20 kg, 0.19 m3)

12. EXTERIOR

Distinctive exterior styling featuring polyurethane paint in a variety of colors is provided.

13. ADDITIONAL EQUIPMENT

- Two Telex Airman 850 ANR Headsets
- Fuel Sump Sample Cup
- Screwdriver
- Pitot Covers
- Engine Inlet and Exhaust Covers
- Emergency Escape Hatch Ground Locking Pin
- Thrust Reverser Stow Locks
- Cargo Tie-Down Straps
- Emergency Tow Straps (MLG)
- Three Jack Pads
- Coat Hangers
- Leather Cleaning Kit
- Cabin Door Eccentric Adjustment Tools
- Static Discharge Wick Covers
- APU Cover Kit
- Water Barrier

14. EMERGENCY EQUIPMENT

- Fire Extinguisher in Cockpit and Cabin
- Individual Life Preservers (TSO-C13 Overwater)
- Crew and Passenger Oxygen
- Emergency Exit Lights
- Emergency Lighting Battery Packs
- First Aid Kit
- Two Flashlights (Maglite)

15. DOCUMENTATION AND TECHNICAL PUBLICATONS

- U.S. Standard Airworthiness Certificate FAA8100-2; Export Certificate of Airworthiness FAA8130-4; or Special Airworthiness Certificate FAA8130-7 as appropriate
- Airplane Flight Manual
- Pilot's Operating Manual
- Abbreviated Procedures Checklist
- Weight and Balance Report
- Cabin Operating Manual
- Passenger Information Cards
- Log Books (aircraft and engines)
- Service Bulletins and Service Letters - Engine **
- Maintenance Manual - Airframe *
- Maintenance Manual - Interior *
- Maintenance Manual - Engine **
- Maintenance Manual - APU **
- Illustrated Parts Catalog - Airframe *
- Illustrated Parts Catalog - Interior *
- Illustrated Parts Catalog - Engine **
- Illustrated Parts Catalog - APU **
- Wiring Diagram Manual - Airframe *
- Avionics Wiring Booklet *
- Component Maintenance Manual *
- Structural Repair Manual *
- Nondestructive Testing Manual *
- Illustrated Tool and Equipment Manual *
- CESNAV ***

Seller will provide Service Bulletins, Service Letters and manual revisions for documents published by Seller for five years beginning from the start date of airframe warranty.

* These publications are provided on CD-ROM or DVD.
** These publications are provided directly from the applicable supplier.
***CESNAV software provides an integrated FAA approved performance calculator, weight & balance calculator, and operating manual performance data.

16. COMPUTERIZED MAINTENANCE RECORD SERVICE

Seller will provide an online computerized maintenance record service for one full year from the date of delivery of a Citation XLS+ to the Purchaser.

This service will provide management and operations personnel with the reports necessary for the efficient control of maintenance activities. The service provides an accurate and simple method of keeping up with aircraft components, inspections, service bulletins and airworthiness directives while providing permanent aircraft records of maintenance performed.

Reports, available on demand, show the current status, upcoming scheduled maintenance activity and the history of the aircraft maintenance activity in an online format which is printable locally. Semi-annual reports concerning projected annual maintenance requirements, component removal history and fleet-wide component reliabity are provided as part of the service.

Services are provided through a secure Internet Site requiring a computer with Internet connectivity. A local printer is required to print paper versions of the online reports and documentation. If receiving these services through the Internet is not feasible for an operation, a paper based service delivered through the U.S. mail is available at an additional fee.

17. LIMITED WARRANTIES

The standard Citation XLS+ Aircraft Limited Warranty which covers the aircraft, other than Pratt & Whitney Canada (P&WC) engines and associated engine accessories and the Honeywell auxiliary power unit (APU) and associated APU accessories which are separately warranted, is set forth below. Seller specifically excludes vendor subscription services and the availability of vendor service providers from Seller's Limited Aircraft Warranty. Following Seller's Limited Warranty, the engine and engine accessory warranty of P&WC and the APU and APU accessory warranty of Honeywell are set forth. All warranties are incorporated by reference and made part of the Purchase Agreement. All warranties are administered by Seller's Citation Warranty Department.

17.1 CESSNA CITATION XLS+ LIMITED WARRANTY (LIMITED WARRANTY)

Seller expressly warrants each new Citation XLS+ Aircraft (exclusive of engines and engine accessories supplied by P&WC and APU and APU accessories supplied by Honeywell which are covered by their separate warranty), including factory-installed avionics and other factory-installed optional equipment to be free from defects in material and workmanship under normal use and service for the following periods after delivery:

(a) Five years or 5,000 operating hours, whichever occurs first, for Aircraft components manufactured by Seller;

(b) Five years or 5,000 operating hours, whichever occurs first, for Collins' standard avionics;

(c) Two years for all other Standard Avionics;

(d) One year for all Optional Avionics;

(e) One year for Actuators, ACMs, Brakes, GCUs, Oleos, Starter Generators, Valves, Windshields, and Vendor items including engine accessories supplied by Seller unless otherwise stated in the Optional Equipment and Selection Guide; and

(f) One year for Customer (CRQs), Interior Components, Interior Furnishings, and Paint.

Any remaining term of this Limited Warranty is automatically transferred to subsequent purchasers of the aircraft.

Seller's obligation under this Limited Warranty is limited to repairing or replacing, at Seller's sole discretion, any part or

17. LIMITED WARRANTIES (CONTINUED)

parts which:

(1) within the applicable warranty period,

(2) are returned at the owner's expense to the facility, from which the replacement part is procured, whether through Textron Aviation Service Parts & Programs or a Textron Aviation-owned Citation service facility or a Citation service facility authorized by Seller to perform service on the aircraft (collectively "Support Facility") or as directed by Seller,

(3) are accompanied by a completed claim form containing the following information: aircraft model, aircraft serial number, customer number, failed part number and serial number if applicable, failure date, sales order number, purchased part number and serial number if applicable, failure codes, any diagnostic data, and action codes, and

(4) are found by Seller or its designee to be defective.

Replacement parts must be procured through a Support Facility and are only warranted for the remainder of the applicable original aircraft warranty period. A new warranty period is not established for replacement parts. The repair or replacement of defective parts under this Limited Warranty will be made by any Textron Aviation-owned Citation service facility or a Citation service facility authorized by Seller to perform service on the aircraft without charge for parts and/or labor for removal, installation, and/or repair. All expedited freight transportation expenses, import duties, customs brokerage fees, sales taxes, and use taxes, if any, on such warranty repairs or replacement parts are the warranty recipient's sole responsibility. (Location of Textron Aviation-owned and Textron Aviation-authorized Citation service facilities will be furnished by Seller upon request.)

This Limited Warranty applies to only items detailed herein which have been used, maintained, and operated in accordance with Seller and other applicable manuals, bulletins, and other written instructions. However, this Limited Warranty does not apply to items that have been subjected to misuse, abuse, negligence, accident, or neglect; to items that have been installed, repaired, or altered by repair facilities not authorized by Seller; or to items that, in the sole judgment of Seller, have been installed, repaired, or altered by other than Textron Aviation-owned service facilities contrary to applicable manuals, bulletins, and/or other written instructions provided by Seller. Limited Warranty does not apply to normal maintenance services (such as engine adjustments, cleaning, control rigging, brake and other mechanical adjustments, and maintenance inspections); or to the replacement of service items (such as brake linings, lights, filters, de-ice boots, hoses, belts, tires, and rubber-like items); or to normal deterioration of appurtenances (such as paint, cabinetry, and upholstery), corrosion or structural components due to wear, exposure, and neglect.

WITH THE EXCEPTION OF THE WARRANTY OF TITLE AND TO THE EXTENT ALLOWED BY APPLICABLE LAW, THIS LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, IN FACT OR BY LAW, APPLICABLE TO THE AIRCRAFT. SELLER SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE AFOREMENTIONED REMEDIES OF REPAIR OR REPLACEMENT ARE THE ONLY REMEDIES UNDER THIS LIMITED WARRANTY. SELLER EXPRESSLY AND SPECIFICALLY DISCLAIMS ALL OTHER REMEDIES, OBLIGATIONS, AND LIABILITIES, INCLUDING, BUT NOT LIMITED TO, LOSS OF AIRCRAFT USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOSS OF PROFITS, LOSS OF GOODWILL, AND ANY AND ALL OTHER CONSEQUENTIAL AND INCIDENTAL DAMAGES. SELLER NEITHER ASSUMES NOR AUTHORIZES ANYONE ELSE TO ASSUME ON ITS BEHALF ANY FURTHER OBLIGATIONS OR LIABILITIES PERTAINING TO THE AIRCRAFT NOT CONTAINED IN THIS LIMITED WARRANTY. THIS LIMITED WARRANTY SHALL BE CONSTRUED UNDER THE LAWS OF THE STATE OF KANSAS AND ANY DISPUTES AND/OR CLAIMS ARISING THEREFROM SHALL BE EXCLUSIVELY RESOLVED IN THE STATE AND/OR FEDERAL COURTS LOCATED IN WICHITA, KANSAS. THE PARTIES HERETO CONSENT TO PERSONAL JURISDICTION IN THE FORUM CHOSEN.

17.2 NEW ENGINE WARRANTY

The following is an outline of the P&WC warranty for new PW545C engines.

P&WC warrants that at the time of delivery all parts of a new engine comply with the relevant specification and are free

17. LIMITED WARRANTIES (CONTINUED)

from defects in material or workmanship.

This warranty shall take effect immediately upon acceptance of the engine by the operator, either installed in an aircraft or delivered as a spare, and shall remain in force until the expiration of 5 years or the completion of 2,500 operating hours, whichever occurs first. Notice of warranty defect must be provided to P&WC within 30 days of the occurrence, and P&WC reserves the right to refuse any warranty claim received more than 180 days after the removal from operation of any engine or engine part.

Application

This warranty is applicable only to engines operated on non-military aircraft used for commercial, corporate, or private transportation service.

Coverage

P&WC will repair or replace any parts found to be defective (including resultant damage to the engine) during the warranty period. Replacement parts may be new parts or serviceable parts. P&WC will pay reasonable engine removal and reinstallation costs and transportation costs (excluding insurance, duties and taxes) to and from a facility designated by P&WC warranty administration.

Extended Coverage

After expiration of the new engine warranty, P&WC will provide commercial support to assist an operator in the event of extensive damage to an engine resulting from a chargeable defect. This maximum event cost will be based on total engine hours and cycles run since new, or since last overhaul, adjusted for engine age, as well as environmental and operating conditions. P&WC reserves the right to cancel or change this extended coverage at any time.

Operator's Responsibilities

The operator is responsible for operating and maintaining the engine in accordance with P&WC's manuals and recommendations. All repairs to the engines must be carried out at a facility designated by P&WC warranty administration. P&WC shall not be responsible for defects or damages resulting from improper use, improper maintenance, normal wear and tear, accident or foreign object damage (FOD).

Limitations

This is the only warranty applicable to a new PW545C engine and is given and accepted in place of all other warranties or remedies express or implied including without limitation any warranties as to merchantability or fitness for purpose. In no event shall P&WC be responsible for incidental or consequential damages.

For complete information on how this warranty may apply to you, please write:

Manager, Warranty Administration

Pratt & Whitney Canada Corp.

1000 Marie-Victorin

Longueuil, Quebec J4G-1A1

Canada

17.3 SUMMARY OF HONEYWELL APU WARRANTY:

New APU Warranty:

The following is an outline of the Honeywell warranty for the new RE100(XL) APU.

Each RE100(XL) APU sold for installation as original equipment on new aircraft will, at the time of delivery, be free from defects in material and workmanship and shall conform to the applicable specifications. Warranty shall expire 5 years from date of shipment to Owner or 2,500 APU operating hours, whichever first occurs.

The above APU warranty outline is provided as a general description only; specific terms and conditions are available through Honeywell (Engines, Systems & Services Division) or Seller.

For complete information on how this warranty may apply and for more complete warranty details, please write to:

Honeywell Engines

Post Office Box 29003

Phoenix, Arizona, 85038-9003.

18. CITATION XLS+ CREW TRAINING AGREEMENT

Training will be furnished to First Retail Purchaser (hereinafter called the "Purchaser"), subject to the following:

1. A crew shall consist of up to two (2) licensed pilots with current private or commercial, instrument and multi-engine ratings and a minimum of 1,000 hours total airplane pilot time and up to two (2) mechanics with A&P licenses or equivalent experience.

2. Training shall be conducted by Seller or by its designated training organization, at Seller's option.

   a. A simulator shall be utilized which is FAA certified to provide training for the CE-560XL FAA type rating.

   b. In lieu of a model specific simulator, training may be provided in the most appropriate type simulator available capable of accomplishing the FAA type rating, with differences training provided.

   c. Additional training as requested by the customer, shall be conducted in the customer's aircraft.

   d. Location of training to be Wichita, Kansas, or unless mutually agreed otherwise. The organization conducting the training is hereinafter called the "Trainer."

3. Training furnished shall consist of the following:

   a. Flight training to flight proficiency in accordance with Trainer's standards aimed toward type certification of two (2) Captains under applicable Federal Air Regulations not to exceed five (5) total hours for the two (2) pilots.

   b. Flight simulation training to simulator proficiency in accordance with Trainer's standards but not to exceed thirty (30) total hours for both pilots.

   c. Ground School training for each pilot and theoretical classroom instruction for each mechanic in accordance with Trainer's standards.

4. Purchaser shall be responsible for:

   a. Transportation of crew to and from training site and for living expenses during training.

   b. Providing an interpreter during the course of training for any of Purchaser's crew not conversant with the English language.

   c. Payment to Trainer for additional simulator or flight training beyond that required to attain proficiency in accordance with Trainer's standards for the course in which the pilot is enrolled.

   d. All aircraft required for flight training as well as all landing fees, fuel costs, aircraft maintenance and insurance and all other direct costs of operation, including applicable taxes required in connection with the operation of said aircraft during such flight training.

   e. Extra charges, if any, for scheduling pilots in separate training classes.

   f. Reimbursing to Seller the retail rate for training in the event of training before actual sale/delivery, if sale/delivery is cancelled.

   g. Due to TSA regulations, all current United States citizens must present a current United States passport before training will be able to commence.

5. Seller or Trainer shall schedule all training, furnish Purchaser schedules of training and endeavor to schedule training at a convenient time for Purchaser. A cancellation fee of Two Hundred Dollars ($200) will be paid to Seller by Purchaser if crew fails to appear for scheduled training, except for reasons beyond its reasonable control, unless Purchaser gives Seller written notice of cancellation received at Wichita, Kansas, at least seven (7) days prior to scheduled training. In the event of such cancellation Seller shall reschedule training for the next available class.

6. Neither Seller nor Trainer shall be responsible for the competency of Purchaser's crew during and after training. Trainer will make the same efforts to qualify Purchaser's crew as it makes in training of other Citation XLS+ crews; however, Seller and Trainer cannot guarantee Purchaser's crew shall qualify for any license, certificate or rating.

7. Neither Seller nor Trainer shall be responsible for any delay in providing training due to causes beyond its or

18. CITATION XLS+ CREW TRAINING AGREEMENT (CONTINUED)

their reasonable control.

8. All Training furnished to Purchaser under the Agreement will be scheduled to commence no earlier than three (3) months prior to delivery and will be completed within twelve (12) months after delivery of the Aircraft unless mutually agreed otherwise.

Signature of the Purchaser to the Purchase Agreement to which this Training Agreement is attached as a part of the Specification and Description shall constitute acceptance by Purchaser of the foregoing terms and conditions relative to training to be furnished by Seller. Purchaser agrees that Seller can provide Purchaser's name and address to the training organization for the purpose of coordinating training.



TEXTRON AVIATION

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