CITATION



Specification & Description

August 2010, Revision A Units 525C-0001 to TBD





SPECIFICATION AND DESCRIPTION

UNITS 525C-0001 TO TBD

AUGUST 2010

REVISION A

Citation Marketing
Cessna Aircraft Company
P.O. Box 7706
Wichita, Kansas 67277-7706



August 2010, Revision A

INTRODUCTION ___

Advanced Fully Integrated Avionics for the Citation CJ4

Combining the latest technology sensors and displays in an integrated package that is both smaller and lighter than traditional avionics, the Collins Pro Line 21 suite for the CJ4 is a true breakthrough in flight deck efficiency and pilot workload reduction. It integrates pilot information into intuitive, easy to interpret new formats with safety enhancing reversion capability.

At the heart of all the advancements found in the Pro Line 21 system are the Pro Line 21 radios and the Collins File Server Unit (FSU). The FSU serves as a portal for software and database uploads, allowing new capabilities to be added as airspace requirements and technology evolve. The net result is a flexible, cost-effective, reusable architecture with inherent growth capability and true software mobility. Maximizing the system's high-performance, partitioned processing capabilities, Ethernet interfaces and active matrix liquid crystal display (AMLCD) flight displays, the FSU integrates with this new technology to provide enhancements such as Integrated Flight Information System (IFIS) with functionalities including electronic charting, graphical weather and enhanced mapping for the flight deck.

All primary flight, navigation, engine and sensor data is graphically presented on the system's four large liquid crystal displays for easy scanning and integration. Standard pilot and copilot primary flight displays (PFDs) are teamed with two enhanced multi-function displays (MFDs) featuring a flexibly displayed Engine Indicating and Crew Alerting System (EICAS) for maximum awareness of both the internal health of the aircraft and the external situation. Additionally, a Collins FMS-3000 Flight Management System and dual Control Display Units (CDUs) streamline and automate navigation and communication input functions. This helps to ensure more eyes-up time at the controls, giving pilots a better overall view of their real-time flight situation.

There's never been a system this capable in this category of aircraft. But then, offering exceptional value is what Cessna and the Citation CJ4 are all about.

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 CJ4, Units 525C-0001 to TBD. This document supersedes all previous Specification and Description documents and describes only the Cessna Citation CJ4 Model 525C, 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, Halon 1301, and also R-134A. Furthermore, the product was manufactured with CFC-12 and 1-1-1 Trichloroethane, substances which harm public health and environment by destroying ozone in the upper atmosphere.



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MANUFACTURER ______ CESSNA AIRCRAFT COMPANY MODEL _____525C

1. GENERAL DESCRIPTION ____

The Cessna Citation CJ4 is a low-wing aircraft with retractable tricycle landing gear and a "T" tail. A pressurized cabin accommodates a crew of two and up to nine passengers (eight is standard). Two Williams International Co., LLC (Williams) FJ44-4A Full Authority Digital Engine Control (FADEC) controlled 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 nose and tailcone with additional storage space available in the cabin.

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 authorized service facilities provides a complete source for all servicing needs.

1.1 Certification

The Model 525C will be certified to the requirements of U.S. 14 CFR Part 23, Commuter Category, including day, night, VFR, IFR, and flight into known icing conditions. It will also be certified for single pilot operations for U.S. registered aircraft and for steep approach operations. The Citation CJ4 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.

1.2 Approximate Dimensions

Overall Height	15 ft 4 in (4.67 m)			
Overall Length	53 ft 4 in (16.26 m)			
Overall Width	50 ft 10 in (15.49 m)			
Wing				
Span (does not include tip lights)	50 ft 5 in (15.37 m)			
Area				
Sweepback (at 25% chord)	12.5 degrees			
Horizontal Tail				
Span (overall)	22 ft 1 in (6.73 m)			
Area	79.6 ft² (7.40 m²)			
Sweepback (at 25% chord)	20 degrees			
Vertical Tail				
Height	7 ft 5 in (2.26 m)			
Area				
Sweepback (at 25% chord)	49 degrees			
Cabin Interior				
Height (maximum over aisle)	57 in (1.45 m)			
Width (trim to trim)	58 in (1.47 m)			
Length (forward pressure bulkhead to aft pressure bulkhead)	22 ft 4 in (6.81 m)			
Landing Gear				
Tread (main to main)	12 ft 4 in (3.76 m)			
Wheelbase (nose to main)	21 ft 2 in (6.45 m)			



1. GENERAL DESCRIPTION (Continued)_

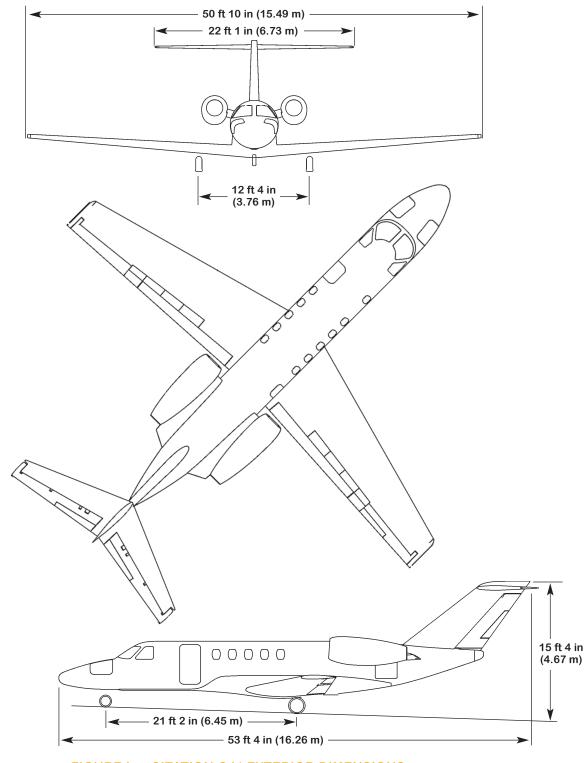
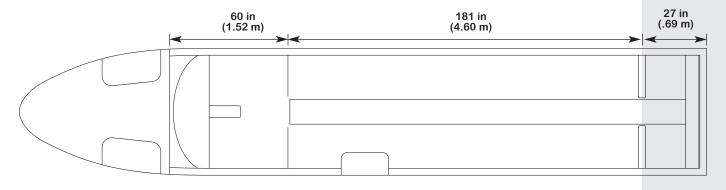
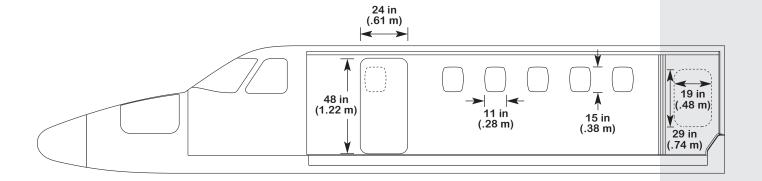


FIGURE I — CITATION CJ4 EXTERIOR DIMENSIONS

1. GENERAL DESCRIPTION (Continued) _





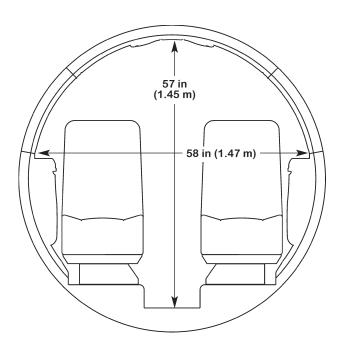


FIGURE II — CITATION CJ4 INTERIOR DIMENSIONS



1. GENERAL DESCRIPTION (Continued) _____

1.3 Design Weights and Capacities

Maximum Ramp Weight	17,070 lb (7,743 kg)
Maximum Takeoff Weight	16,950 lb (7,688 kg)
Maximum Landing Weight	15,500 lb (7,031 kg)
Maximum Zero Fuel Weight	12,360 lb (5,606 kg)
Standard Empty Weight*	9,842 lb (4,464 kg)
Full Fuel Payload	1,000 lb (454 kg)
Maximum Payload	2,100 lb (953 kg)
Fuel Capacity (useable) at 6.70 lb/gal	5,828 lb (2,644 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	3,130 ft (954 m)
Climb Performance	28 min to 45,000 ft (13,716 m)
Maximum Altitude	45,000 ft (13,716 m)
Maximum Cruise Speed (± 3%)	453 KTAS (839 km/hr or 521 mph)
NBAA IFR Range (100 nm alternate) (± 4%)	2,002 nm (3,707 km or 2,304 mi)
Landing Runway Length	2,700 ft (823 m)

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3. STRUCTURAL DESIGN CRITERIA

The Citation CJ4 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 the primary structure. The structure supports a nominal maximum cabin pressure differential of 9.0 psi (.62 bar).

Limit Speeds

V _{MO} 8,000 ft (2,438 m) to 27,900 ft (8,504 m)	· · ·				
Flap Extension Speeds					
V _{FE} 0° to 15° Extension					
V _{FE} 15° to 35° Extension					
Landing Gear Operating and Extended Speeds					
V _{LO} (retracting)					
V _{LO} (extending)					
V _{LE}					

4. FUSELAGE ____

The fuselage has a constant circular cross section and is attached above the wing assembly. A dropped aisle from just behind the cockpit through the lavatory makes moving about the cabin easier. The 24 inch wide, keyed cabin door is located on the forward left-hand side of the fuselage. It has 8 locking pins and is hinged forward with two passive door seals for pressure and acoustics. A folding airstair is mounted just inside the entrance and a fold-up water barrier is designed into the threshold. A plug-type emergency exit is located on the aft right-hand side of the cabin in the lavatory. The windshields are designed to meet bird resistance requirements of 14 CFR Part 25. Framing structures surround the main door opening, emergency exit, and windshields providing structural continuity. The glass windshields and cockpit side windows are surrounded by a stainless steel retainer structure.

The nose section includes a generous baggage compartment from which the avionics bay and oxygen bottle are accessible. Behind the composite radome is the high-resolution weather radar antenna and processor.

The tailcone houses the major components of the hydraulic, environmental, electrical distribution, flight controls, and engine fire extinguishing systems. A baggage compartment is also located in the tailcone. External access to both the equipment and the baggage area is provided through a baggage door on the lower left-hand side of the tailcone and removable exterior panels.



5. WING _

The Citation CJ4 utilizes an advanced, moderately swept wing selected for its low aerodynamic drag and favorable approach and landing characteristics. The wing structure is a three spar design with a shallow drop in the center section to permit attachment of the fuselage without interruption of the cabin cross-section.

Integral fuel tanks are located in each wing. Control surfaces on the wing include outboard ailerons, wide span hinged flaps, spoilers and speed brake panels. The right-hand aileron incorporates a trim tab.

The wing leading edges are anti-iced using engine bleed air. Fairings blend the wing and fuselage for minimum drag. The landing lights consist of industry proven OSRAM LED technology and are integrated with a Pulselight system which are mounted below the fuselage in the fairing. The wing tips include LED position and anti-collision lights and static wicks.

6. EMPENNAGE ____

The empennage section is a T-tail design. The horizontal stabilizer's leading edge is equipped with pneumatic de-ice boots. The rudder includes a bias system and both the rudder and the elevators have pilot-controlled trim tabs. A red LED ground recognition light is mounted on the top. Tail flood lights in the horizontal stabilizer illuminate the vertical.

7. LANDING GEAR_

The main and nose landing gear each use a single wheel assembly. The landing gear retraction system is electrically controlled and hydraulically actuated. Each main gear is a trailing link type and retracts inboard into the wing. The nose gear retracts forward into the fuselage and, when retracted, is enclosed by doors. The nose gear has a chine tire for water and slush deflection. Emergency landing gear extension is accomplished by use of a cable release and pneumatic blow-down system.

The landing gear may be extended at speeds up to 200 KIAS. A warning horn will sound with the gear retracted if airspeed is too low and either throttle is retarded below approximately $85\%~N_2$. The nose gear is mechanically steered by the rudder pedals to 20 degrees either side of center. For ground handling, maximum deflection of the nosewheel is 95 degrees either side of center.

Multiple disc brakes on the main wheels are powered by a digitally controlled anti-skid brake system. An independent electrically powered hydraulic system provides normal power for the brakes with a pneumatic system for back-up.

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8. POWERPLANTS ____

Two Williams FJ44-4A turbofan engines are installed, one on each side of the rear fuselage in easily accessible nacelles. This engine is a medium bypass, twin-spool design with 4 compression stages and 3 turbine stages and produces 3,621 pounds (16.01 kN) of takeoff thrust at sea level, static conditions, flat rated up to 79°F (26°C).

Dual channel Full Authority Digital Engine Controls (FADECs) provide automation and efficiency in engine management. Detents in the throttle quadrant for idle, takeoff (TO), climb (CLB), and high speed cruise (CRU) give pilots the optimal power settings for each phase of flight based on ambient conditions. A takeoff/go around button is located on the throttle lever.

The FADEC system also provides time-limited dispatch (TLD), diagnostics, and engine synchronization. Electrical power for the FADECs comes from engine driven permanent magnet alternators (PMAs) rectified to DC. There are two PMAs mounted to each engine. In the event that both PMAs fail on one engine, the FADEC on that side will draw from main DC power.

The FJ44-4A engine incorporates a modular design and multiple borescope ports for easier maintenance and inspections. Engine overhaul is required at 5,000 hour intervals. A continuous loop fire detection system monitors the nacelle area to detect and warn if a fire occurs. A fire extinguishing system is provided.

9. SYSTEMS _____

9.1 Flight Controls

Dual flight controls are provided consisting of control wheel columns, adjustable rudder pedals, brakes and mechanical nose wheel steering. Pushrod, bellcrank, sector, and cable systems are used to actuate the rudder, elevators, and ailerons. Corrosion resistant stainless steel cables are used in all primary and secondary systems. The rudder cables are split through the tailcone to provide redundancy.

One hinged aluminum flap panel is installed on each wing. The control handle on the pedestal commands three positions only: up, takeoff/approach (15°), and landing (35°). Electric sensing allows flap position to be displayed on the EFIS. A cable interconnect protects against asymmetric extension.

Modulated speed brake panels are provided on the wing for use in flight at any speed. Spoiler panels on the wing provide additional lift-dump capability on the ground. All panels are controlled by a handle on the pedestal. The flaps and the speed brakes are electrically controlled and hydraulically actuated.

Trim is provided in all three axis. For roll and yaw, electric trim switches are installed on the aft switch panel assembly of the pedestal to drive actuators inside the rudder and right aileron. For pitch trim, an electric switch is installed on the yoke. A secondary pitch trim switch is located on the aft switch panel assembly of the pedestal. Trim position is shown on the EFIS for all three systems.

Three electric servos are installed for autopilot functions. The yaw servo also performs yaw damping. The yaw damper system, located in the tail, works with the autopilot to augment stability at high altitudes. A bleed air sourced bias system is incorporated into the rudder for improved runway performance and automatic control enhancement during engine out conditions. An integral control lock below the pilot's panel holds the rudder, elevators, ailerons and throttles during storage.

9.2 Fuel System

There are two integral fuel tanks, one per wing. System operation is fully automatic throughout the normal flight profile with each engine receiving fuel from its respective wing tank. Fuel is heated through an oil heat exchanger and anti-ice additive is not required.



9. SYSTEMS (Continued) _

One electric boost pump in each tank sump delivers fuel during engine start, fuel transfer, and as activated by low fuel pressure. Each engine has a Fuel Delivery Unit (FDU), which includes the main engine fuel pump, filter, and metering components. The FDU is controlled by the respective FADEC to deliver high pressure fuel to the engine. Some of that high pressure fuel from the FDU is routed back to a motive flow ejector pump in each fuel tank sump to generate the low pressure fuel supply required by the engine driven pump and the two motive flow scavenge pumps per tank that are located near the sump. Fuel may be transferred from tank to tank as needed. A vented surge tank is integrated near each wing tip.

Fuel levels are monitored by seven passive capacitance probes per wing and one dual channel signal conditioner for accurate quantity indications which are shown on the EICAS display. Refueling is accomplished through over wing filler ports with flush mounted locking caps, or through the single point refueling system. The single point refueling system incorporates a standard fueling receptacle forward of the right wing in the fairing capable of refueling the aircraft at a rate of 120 gpm (454 l/min) at a refueling pressure of 60 psig (4.14 bar). The system can also be used to defuel one or both fuel tanks.

9.3 Hydraulic System

A closed-center, constant pressure 3,000 psi (206.8 bar) hydraulic system operates the landing gear, speed brakes, and flaps. Hydraulic pressure is supplied by two engine driven pressure compensating pumps. Either pump can supply enough flow to operate the system. An independent, electrically powered hydraulic system is located in the fairing behind the wing to operate the wheel brakes and the anti-skid system, and to charge the accumulator. Ground connections to service the hydraulic system are located on the right side below the engine, and brake system connections are available on the left side forward of the engine.

9.4 Electrical System

The CJ4 electrical power generation and distribution system features traditional parallel bus architecture designed to provide 600 amperes at 28.5 volts DC from two engine driven 300 ampere starter/generators. Each generator is connected to a remote Digital Generator Control Unit (DGCU) in the tailcone. The two DGCUs are connected to each other to allow proportionate load sharing. If one generator becomes disabled in flight, the

vapor cycle air conditioning system, if in use, will automatically turn off. All other essential electrical systems are supplied by the remaining generator through the respective main and crossfeed busses.

Each engine also drives an alternator in support of an AC system for electrical anti-icing and defogging of the glass windshields and cockpit side windows. This system also provides backup to the generators in the event of a dual generator failure by supplying power through a transformer rectifier with solid state controls onto an essential bus. The essential bus powers all components of the Pro Line 21 system that are essential for flight including all four display units and the autopilot. Only one alternator is required to keep the essential bus on line. If all engine driven power sources are lost, the 44 ampere-hour Lithium Ion battery, normally used for initial engine starts, will serve as a limited backup.

This essential bus design and its multiple power sources provide much higher reliability and greater situational awareness in the event of an electrical emergency.

In addition to the alternators, each engine also drives a dedicated permanent magnet alternator (PMA) to support its respective FADEC.

All system controls are located on the left-hand tilt panel with system indications on the EFIS. Left and right circuit breaker panels, redesigned with about half as many CBs as previous CJs, are positioned on the cockpit sidewall within easy reach of each pilot. A junction box is accessible through the aft baggage compartment. The battery, with quick disconnect, is located in the LH fairing aft of the wing for improved serviceability. An external power receptacle is also provided.

Two landing/taxi lights are installed in the belly fairing forward of the wing. Each flash simultaneously when the pulse light system is activated (manually or by the TCAS II). A wing inspection light and tail flood lights are standard. Wingtip position and anti-collision strobe lights, and a red recognition light on the vertical stabilizer are all LED.

A 500 watt static inverter supplies 110 volt AC power to four 5-amp outlets: two in the cockpit sidewalls and two in the cabin.

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9. SYSTEMS (Continued) _

9.5 Pressurization and Environmental System

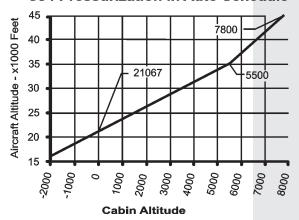
The CJ4's pressurization and heating system is divided into two separate systems: cabin and cockpit. High pressure bleed air is drawn from the right engine for the cabin while the left engine supplies the cockpit. The air is conditioned in two stages; first, by passing through a heat exchanger in the engine pylon and second, through a proprietary cooler. Exhaust from this cooler is used to help draw ambient air across the heat exchanger. Conditioned air then passes through a pressure regulator and muffler before entering the cockpit and cabin. Right engine air is delivered to the cabin through sidewall shoulder and floor vents while air from the left engine is routed to the cockpit through foot warmers and sidewall vents. If conditioned air to the cockpit is interrupted a check valve redirects cabin air to the cockpit, eliminating the need for a separate emergency pressurization system.

The cooling system is independent of the heating system and is divided into separate cabin and cockpit zones. The cockpit is divided for fan speed control for each crew member. Rheostats mounted on the instrument panel provide temperature control for each zone. A separate controller for the cabin only is provided at the VIP cabin seat. The system consists of a compressor and condenser assembly in the tailcone, three evaporator fan assemblies inside the pressure vessel, and cold air ducting. The cabin evaporator assembly is located on the aft pressure bulkhead. The left and right cockpit evaporator fan assemblies are in the lower part of the refreshment center and the equipment cabinet. Each draws in surrounding air and distributes chilled air through their respective outlets. The system may be operated anytime in the air, or on the ground when ground power is connected or either engine is running. In flight, the vapor cycle compressor automatically shuts down if one generator falls off line. A fresh air vent with a blower and a check valve is located in the tailcone and feeds into the existing conditioned air ducts to provide outside air to the cockpit whenever the cabin is not pressurized.

The pressurization control system automatically schedules cabin altitude (as shown in chart below). The basic components include an avionics linked digital controller and two outflow valves mounted in the aft pressure bulkhead. The controller automates all functions of pressurization including capture of the destination field eleva-

tion. Pressurization switches are mounted on the left side of the tilt panel and all related parameters are displayed on the EFIS.

CJ4 Pressurization in Auto Schedule



9.6 Oxygen System

A 50 cubic foot (1.42 m3) oxygen bottle, located in the nose, is provided with a bottle-mounted pressure regulator and a manual shut off valve on the tilt panel. Pressure indications are shown on the EFIS. Quick-donning pressure demand masks with microphones are provided at each crew seat, while automatic dropout constant-flow oxygen masks are provided at each passenger seat and the toilet.

9.7 Ice and Rain Protection

Engine bleed air is used for anti-ice protection of the engine inlets and the wing leading edges. The horizontal stabilizer leading edges are fitted with pneumatic de-ice boots, inflated by engine bleed air through the service air system. A timer manages the inflation cycle. The pitot tubes, static ports, and the AOA sensor are electrically anti-iced. The glass windshields and cockpit side windows are also electrically heated; however, power is provided by dedicated AC alternators, one on each engine. A low power setting achieves defogging and high for anti-icing. A water repellent coating is used on all four panes for rain removal. Two windshield ice detection lights are mounted on the glareshield and a wing inspection light is positioned on the left side of the fuselage to assist in the detection of ice buildup during night flights.



10. FLIGHT COMPARTMENT, INSTRUMENTATION AND AVIONICS _

10.1 General

The Collins Pro Line 21 is the featured avionics suite on the Citation CJ4. 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.

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 the means for radio tuning and the interface with the Flight Management System (FMS). A second FMS is available as an option. The entire suite is designed for single pilot operations.

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. LED panels, instrument floodlights, and blue-white background lighting illuminate all cockpit instruments and 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 and RH Master Warning / Master Caution Lights
- LH and RH Display Control Panel
- CVR Microphone
- LH and RH Engine Fire Control Switches
- Flight Guidance Panel
- Reversion Controls

B. Installed on Instrument Panel (left to right):

- · LH Digital Audio Control Panel
- Avionics / Electrical Power Panel
- LH Primary Flight Display (PFD)
- LH Multi-Function Display (MFD)
- Electronic Standby Instrument System
- · Landing Gear Control Module
- RH Multi-Function Display (MFD)
- RH Primary Flight Display (PFD)
- RH Digital Audio Control Panel
- Cockpit Voice Recorder Controller
- Cockpit voice Recorder Controlle
- Database Loading Unit (DBU)

C. Installed on Tilt Panel (left to right):

- Oxygen Controls
- Cockpit Temperature Controls
- Fuel Controls
- Manual Ignition Control
- FADEC Switches
- · Pressurization Controls
- Ice Protection Switches
- Curser Control Panels (CCP)
- Collins FMS-3000 Control Display Unit (CDU)
- Push to Talk Switch
- · Cockpit Speaker Mute Switch
- Event Switch
- · Cabin Temperature Controls
- ELT Remote Switch
- · Flight Hour Meter

D. Installed on Pedestal:

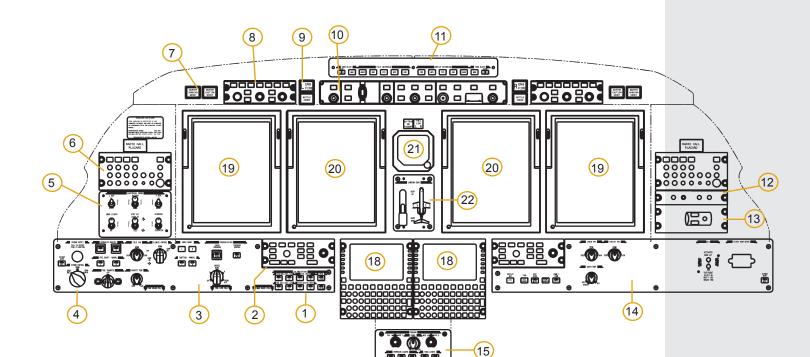
- Lighting and Dimming Controls
- Engine Power Levers
- Flap Control Handle
- Speed Brake Control Handle
- Engine Start Control
- Aileron Trim Control
- Rudder Trim Control
- Secondary Elevator Trim Control

E. Installed Beneath Tilt Panel:

- · Emergency Brake Handle
- Control Lock
- Parking Brake Handle

F. Installed in Floor Aft of Center Pedestal:

· Emergency Gear Extension Handle



- 1. Ice Protection Switches
- 2. Cursor Control Panel
- 3. Left Tilt Panel
- 4. Oxygen Controls
- 5. Avionics/Electrical Power Panel
- 6. Audio Control Panel
- 7. Master Caution / Warning Annunciators
- 8. Display Control Panel
- Engine Fire Indicators / Extinguisher Buttons
- 10. Flight Guidance Panel
- 11. Reversionary Control Panel

- 12. Cockpit Voice Controller
- 13. Database Loading Unit (DBU)
- 14. Right Tilt Panel
- 15. Lighting/Dimming Panel
- 16. Rudder and Aileron Trim Panel
- 17. Throttle Quadrant
- 18. Control Display Unit (CDU)
- 19. Primary Flight Display (PFD)
- 20. Multi-Function Display (MFD)
- 21. Electronic Standby Instrument System
- 22. Landing Gear Panel

(17)



10.3 Avionics

Described below is the Citation CJ4 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 cm) color, Active Matrix Liquid Crystal Displays (AMLCD). Dual Primary Flight Displays (PFDs) and dual Enhanced Multi-Function Displays (MFDs) are positioned in front of each pilot position. All displays are capable of providing compass, radar information, and engine parameters in reversion mode.

Dual Display Control Panels (DCP) are the primary pilot interface with the PFDs providing dedicated controls for common functions. The Flight Guidance Panel (FGP) in the center glareshield panel provides the means to control selected course, selected heading, pre-selected altitude, flight director modes, yaw damper, and autopilot.

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. Various annunciations are presented for autopilot/flight director, display, vertical deviation, and distance.

The MFDs are able to display a variety of graphical information. Navigation and flight plan data, maps, overlaid enhancement from the IFIS, traffic, terrain, weather, menus, checklists, systems status, and EICAS are shown as needed. Most MFD functions are controlled via the Cursor Control Panels.

B. 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.

C. Emergency Descent Mode (EDM)

EDM is a flight director mode that activates an automatic descent of the aircraft if the cabin becomes 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 $V_{\rm MO}/M_{\rm MO}$ 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.

D. Crew Alerting System (CAS)

The Crew Alerting System is an integrated part of the master warning/master caution system allowing appropriate text messages to appear on an MFD accompanied by an aural voice or tone annunciations to draw the pilots' attention as needed. Alerts are color coded, stacked, and scrolled according to system priority logic. CAS messages are displayed on the co-pilot's MFD, and may also be displayed on the PFDs in the event of display failure.

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 the EFIS. 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 Collins FSU-5010 File Server Unit. The FSU contains the storage, memory, and processing power to display Enhanced Map Overlays on the MFDs using high speed Ethernet connections. The two Cursor Control Panels allow pilots to place overlays on the 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 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 the MFDs. 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 or a USB flash drive through the Database Loading Unit (DBU-5000) located on the right side of the instrument panel. 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)

The Collins CCP-3320 is a control panel used primarily for controlling the functions of the MFDs as well as the IFIS functions. It includes three Quick Access Keys, 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.

I. Flight Management System (FMS)

A single Collins FMS-3000 is remotely mounted with a Control Display Unit (CDU) mounted in the center of the tilt panel as the interface with the crew. A second Collins FMS-3000 is available as an option. In dual FMS installations, CDU control can be set up as independent or synchronized but only the onside CDU controls the onside FMS. For single FMS installations, only the left CDU controls FMS 1.The CDUs are also used to tune the radio sensors and transponders.

The FMS-3000 combines an integrated WAAS enabled GPS with DME and VOR sensor inputs to present blended navigation solutions on the EFIS. Through the IFIS, present position referenced geopolitical, airspace, and major water boundaries as well as airways may be overlaid on any of the FMS map formats. Both lateral and vertical modes may be displayed by the Flight Director and may be fully coupled to the autopilot. The FMS-3000 is capable of non-precision approaches and provides automatic FMS-to-ILS transitions. Updated software adds Localizer Performance with Vertical Guidance (LPV) approach capability. Airway flight planning, plain language identifiers and airport communication and navigation frequency lookup features are included. Up to 100 pilot-defined flight plans may be stored.

A performance database specific to the Citation CJ4 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 balanced field length based on specific runway conditions. V-speeds may be automatically posted on the airspeed tape.

Note: The above mentioned performance database will be available shortly after delivery of the first aircraft unit and will be provided at that time to Purchasers of all prior units.

The FMS database requires updates by subscription through Collins on a 28 day cycle. The database may be uploaded from a customer-supplied laptop or a USB flash drive through the Database Loading Unit (DBU-5000) located on the right side of the instrument panel.

J. Global Positioning System (GPS)

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



K. Electronic Charts

The worldwide Electronic Charts function allows high resolution Jeppesen DP, STAR, and Approach charts as well as airport taxi diagrams to display on the MFDs. 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 evergrowing list of such charts includes all of the U.S. and many areas outside the U.S. Collins' Chartlink feature automatically loads the appropriate chart based on the flight plan data from the FMS. Using the CCP, the pilot may zoom and pan a chart or map. The database subscription through Jeppesen Electronic Chart service must be updated on a 14 day cycle.

L. Integrated Electronic Checklist

Cessna defined and/or Customer-defined electronic checklists may be displayed on the MFDs accompanied by digitized voice reading through the audio panels if desired. Checklist selection and control is done through either Cursor Control Panel.

M. Terrestrial Navigation Receivers

Two 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 CDUs.

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 CDUs.

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, 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 CDUs.

Q. 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 speedbrakes extended. Seven audio levels are selected based on aircraft configuration. The system is designed to default to full volume should there be a failure in the system.

R. Avionics Dispatch Switch

An avionics dispatch switch provides power to the VHF COMM 1, FMS/CDU 1, File Server Unit, Pilot's Multifunction Display, Checklist, Database Loader, and both Audio Control Panels prior to engine start.

S. Cockpit Speaker Mute Switch

A switch on the tilt panel allows 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.)

T. Transponders

Dual Collins Mode S Diversity solid-state transponders include Enhanced Surveillance and preparatory ADS-B out transmission capability. Altitude reporting information is supplied from the digital ADCs. One transponder is contained within the TSS-4100 Traffic Surveillance System unit while the stand alone TDR-94D transponder is remotely mounted. Both are tuned through the CDUs.

U. Traffic Surveillance System (TSS)

The Collins TSS-4100 Traffic Surveillance System inte-

grates the TCAS and Mode-S transponder functions into a single LRU. The TSS-4100 combination unit eliminates a stand alone TDR-94D transponder unit as well as the two Mode-S diversity antennas. Its architecture provides several advantages including growth provisions for future traffic and navigation functions.

The TSS (TCAS II) improves situational awareness by tracking all Mode C or S aircraft within 35 nm. This system, which meets all ICAO ACAS II (Change 7) requirements, selects for display only those aircraft (up to 30) that pose the greatest collision threat. Traffic advisories (TAs) are displayed on the Rose, ARC and MAP formats of the PFDs and MFDs. Resolution Advisories (RAs) are displayed on the PFDs only. TAs and RAs are also given aurally through the aircraft audio system. When other TCAS II-equipped aircraft are encountered, complementary RA maneuvers are coordinated by each system. The TCAS range is selectable from the Display Control Panels (DCPs).

V. Integrated Pulse Lights

The system utilizes a soft-start feature to cycle on and off both landing lights simultaneously to improve own aircraft visibility in flight. Activation is tied to the landing light switches and weight-on-wheels logic. Panel mounted switches include On/Off capability and activation of the TSS-4100 to automatically activate the Pulselite system in the event of a Resolution Advisory (RA).

W. Terrain Awareness Warning System (TAWS)

The Mark VIII 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 is displayed on the MFD and the PFDs. Supports Steep Approach functionality and six basic alert and warning modes such as excessive descent rate, altitude loss after takeoff, and inadvertent descent below glideslope.

In addition, the Mark VIII uses GPS input and a world-wide 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 VIII also includes a terrain clearance floor exceedence mode and a "look-

ahead" cautionary mode. Operators will be notified by Honeywell of database updates as required.

X. Multi-Scan RTA-4112 Weather Radar

This is a solid state color Radar system used to aid the pilot in the detection of thunderstorms and to assist in avoiding turbulence. It combines multiple radar scans at pre-selected tilt angles in order to detect short, mid and long range weather. The display presentation represents an optimized weather picture regardless of the aircraft altitude or the range selected. Capabilities include: fully automatic operation (simultaneous monitoring of high, middle and low altitude weather merged to form one display picture of virtually clutter-free weather), variable temperature based gain, oceanic/continental weather correlation, advanced RADAR threshold techniques, enhanced ground clutter suppression, improved turbulence detection out to 40 nautical miles, improved ground mapping, automatic over flight protection, "Smart Scan" optimizes radar dwell time in direction of turn, split function control active gain in all modes and twice the scan rate of traditional radar with two side dedicated outputs.

Y. Broadcast Weather

XM WX Satellite Weather Data service provides constantly updated weather information displayed on the MFD. Products such as high resolution NEXRAD, graphical echo tops, and METARs may be manipulated using the cursor control panel. 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. Data is processed through a Heads Up Technologies receiver and stored for recall on demand. A subscription through XM is required and is currently available only within the Continental U.S.

Z. Electronic Standby Instrument System (ESIS)

The 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 is presented on a full-color AMLCD.



AA. 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. (Interface feature disallowed by some certifying agencies.)

BB. 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 on the right side of the instrument panel and a remote microphone centrally 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.

CC. Maintenance Diagnostic System (MDS)

The CJ4 incorporates a Collins Maintenance Diagnostic System (MDS) to collect, store, and display diagnostic data, service, and fault messages for many Collins Pro Line 21 Line components. The system provides a listing of current faults, advanced diagnostics information for each fault, failed component, and fault history. The system can store history for up to 500 faults occurring during the previous 100 flights and may be downloaded in ASCII format to a USB storage device.

In addition to the MDS, the CJ4 incorporates full time data storage through a Cessna Aircraft Recording System (AReS). AReS records useful data during the previous 25+ flight hours in non volatile memory for advanced troubleshooting and analysis by systems specialists from the Cessna Service and Support network.

Purchaser agrees that Cessna has a perpetual license to use all information contained in the AReS system for maintenance and accident investigation. Purchaser expressly provides Cessna with licensed permission to download, use, and/or read such information at any time upon request. 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.

10.4 Miscellaneous Cockpit Equipment

- Eye Position Reference Indicator
- Glareshield
- Four Ventilation Air Outlets
- Two Oxygen Masks
- Two Reading Lights
- Floodlight

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11. INTERIOR ____

11.1 General

The Citation CJ4's cockpit is designed to provide the crew with the tools for the job in a comfortable working environment. Single pilot capability means that all essential controls are within easy reach from the left seat. Each crew seat is fully adjustable and includes a five-point restraint system. Left and right hand reading lights, air outlets, sidewall pockets, and dual cupholders are provided as well as a two-book chart case behind the copilot seat.

The standard configuration in the Citation CJ4 features a six-place center club with a seventh seat across from the entry door facing sideways. The side-facing seat includes an armrest storage cabinet. A refreshment center is set behind the pilot's seat with a heated liquid container, ice chest, LED work surface lighting, and other storage places. The interior master switch panel resides near the top of this cabinet. On the right, behind the copilot, is a 22 inch wide equipment/storage cabinet, some of which houses the cabin management and entertainment equipment. Both cabinets contain air conditioning equipment in the lowest parts. A left-hand belted flushing toilet in the aft cabin lavatory offers an approved eighth passenger seat. A dedicated equipment cabinet (no general storage) is across from the belted toilet. Sliding divider doors provide privacy. A center overhead flush-mounted coat rod is also provided in the lavatory. An alternate floorplan is available as an option, offering a two-place side facing couch with a 9 inch cabinet in lieu of the 22 inch right hand cabinet.

Each pedestal seat tracks forward, aft, and laterally and may be reclined. The two center seats (#5 and #6) are mounted on floor tracks for greater flexibility and have full recline capability. A single inboard armrest folds down and out of the way when not in use. Individual air outlets and reading lights are provided in the area above each passenger. Dropout, constant-flow oxygen masks are also installed in center overhead for emergency use.

The sideledges feature side storage pockets for magazines or newspapers, dual cupholders, and bi-fold tables. The club seating tables are the wide executive style, while the aft tables are slimline style, each having a wood veneer finish.

In the lower sidewall next to seats #5 and #6 are two 110 volt AC outlets, one on each side. The VIP seat includes a corded satellite phone with a cockpit intercom call switch.

A next-generation integrated cabin management and entertainment suite comes standard on the Citation CJ4. A home theater quality media center device with digital audio/visual distributor is built into the RH forward equipment cabinet. The majority of the supporting equipment is located in the right hand vanity equipment cabinet. The integrated system allows passenger selection of such entertainment media as BluRay DVD, CD, and MP3. An additional input interface allows hookup of an iPod or similar device. A single XM satellite radio channel is also standard. Beside each main cabin seat is a receptacle for a portable plug-in color LCD display (16:9) with an arm mount, of which two units are included as standard. Near each receptacle are headphone jacks and a programmable cabin system selection panel for A/V source and volume control as well as control of the VIP lighting and shade controls. Additional XM channels, LCD displays, and other equipment are available optionally.

A five inch dropped aisle, extending from the cockpit divider aft through the lavatory, provides a cabin height of 57 inches. The constant cross section of the cabin provides a continuous width of 58 inches measured between softgoods. Within the area of the club and aft seats the cross section of the floor has been widened by 2 inches on each side for extra foot room compared to previous Citations of the same diameter. (See the cross section diagram of Figure II on page 5.) The cabin is approximately 17 feet 4 inches long measured from the cockpit divider to the aft pressure bulkhead.

Included are dropped aisle LED lighting and indirect overhead LED lights with full dimming capability. Entrance and emergency exit lights are also provided in the passenger cabin. Eleven elliptical windows offer exceptional natural lighting throughout the cabin. Three panes per window and bagged insulation in the walls contribute to a quiet, comfortable cabin environment even at high speeds. Each window has an electric pleated window shade.

An extensive selection of carpets, fabrics, leathers, and veneer cabinetry coverings, all burn-resistant, are included in the base price of the aircraft.



11. INTERIOR (Continued)_

11.2 Standard Interior Configuration

The following items are standard in the Citation CJ4. Numbered items refer to the cabin diagram (Figure IV).

Cockpit

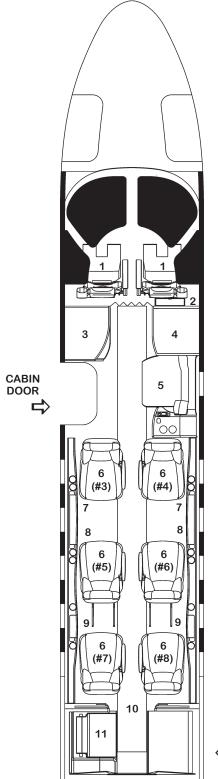
- 1. Two leather covered crew seats
 - Five-Point Restraint System
 - Stowable Inboard Armrest
 - Fwd & Aft Tracking Lever
 - · Recline Adjustment Lever
 - · Height Adjustment Lever
 - · Adjustable Lumbar
 - Seat Back Pocket
 - · Overwater Life Vest Located In Seat Base
- 2. RH two-book navigation chart case

Not Shown:

- · Dual cupholders for each crew seat
- Cockpit assist handle
- Sunvisors
- Two 110 volt Universal AC outlets, one in each pilot's sidewall
- Sidewall storage pockets
- · Standard headset jacks
- Panel-powered headset jacks for customer-supplied Bose headsets
- Headset hooks
- Axxess II phone (in overhead)
- Fire extinguisher

Cabin Area

- 3. LH forward refreshment center with:
 - · One-piece, half-length cockpit curtain
 - · Heated liquid container
 - · Two dispensers for disposable cups
 - · Bottled water storage
 - Beverage can storage
 - General storage
 - Adjustable storage shelf
 - Divided ice chest drawer with, manual overboard drain and removable liner
 - · Drip tray with manual overboard drain
 - Trash container
 - · Work surface with LED lighting
- 4. RH forward equipment/storage cabinet with:
 - Various general storage areas and adjustable shelves
 - Components of the Rockwell Collins Venue™ System System



EXIT

EMERGENCY

11. INTERIOR (Continued)_

- 5. RH forward side-facing seat with:
 - · Armrest storage cabinet
 - Seat restraint system including seat belt and retracting shoulder harness with inertial reel
 - Plug-in LCD display receptacle
 - · Cabin system control panel
 - · Overwater life vest stored in seat base
 - · Dual cupholders
- 6. Six pedestal seats: two aft facing (#3 and #4), and four forward facing (#5, #6, #7, and #8) with:
 - Headrest
 - · Single stowable inboard armrest
 - Forward/aft and inboard/outboard tracking on pedestal
 - Floor tracking (seats #5 and #6 only)
 - Seat back recline (fully reclinable depending on seat position)
 - Seat restraint system including seat belt and retracting shoulder harness with inertial reel
 - · Overwater life vest stored in seat base
- LH/RH sideledge with plug-in LCD display receptacle, cabin system control panel, and dual cupholders at each pedestal seat location
- 8. LH/RH executive bi-fold tables with cabinetry top
- 9. LH/RH slimline bi-fold tables with cabinetry top
- 10. LH/RH aft cabin dividers with mirror treatment and sliding privacy doors
- 11. LH aft belted flushing toilet
 - · Two-drawer cabinet with toilet tissue storage area
 - · Relief tube with overboard drain
 - · Overwater life vest stored in toilet cabinet armrest

Not Shown:

- Rockwell Collins Venue™ System. Includes BluRay DVD/CD/100 GB Hard Drive, 10.6" bulkhead monitor, two 10.6" high definition side ledge monitors, single XM receiver, moving map display, cabin temperature and fan control and lighting/shade control
- Auxilliary input interface at seat #6 consisting of a data port and RCA jacks for local input of portable personal media devices. Includes VGA port for laptop display on cabin monitors
- Axxess II Iridium Satcom Telephone (seat #6)
- Interior master switch
- Entry Switch located in door post
- Client Switch located in RH FWD cabinet
- One 110 volt Universal AC outlet in lower sidewall at seats 5 and 6 with 5 amp maximum each (total 2)
- · Sidewall pockets next to each pedestal seat

- Overhead area containing an oxygen mask, air outlets, and LED reading light at each passenger seat location and in the aft lavatory area
- Electric pleated cabin window shades
- Indirect overhead LED lighting
- · Dropped aisle LED lighting
- · Veneer cabinetry finish
- · Brushed aluminum hardware finish
- · Spare center aisle carpet assembly
- Aft center overhead flush mounted coat rod
- · Airstair cabin entry step
- Fasten seat belt/no smoking and emergency exit signs (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
- Water barrier
- · Cabin fire extinguisher

11.3 Baggage

Two separate baggage areas and a cabin storage cabinet provide a total volume of 77.1 cubic feet (2.02 m3) and a total weight capacity of 1,040 pounds (472 kg).

- A 15.0 cubic foot (.42 m³), 400 pound (182 kg) capacity lockable nose baggage compartment is externally accessible from either side of the aircraft.
- A 6.5 cubic foot (.18 m³), 40 pound (18 kg) total capacity is available in the RH forward equipment/ storage cabinet for passenger use.
- A 55.6 cubic foot (1.42 m³), 600 pound (272 kg) capacity baggage compartment is located in the tailcone and is externally accessible through a 20 x 26 inch (.51 x .66 m) lockable door on the left side beneath the engine pylon.



12. EXTERIOR _____

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

13. ADDITIONAL EQUIPMENT_____

- Two Telex Active Noise Reduction Headsets
- Pitot Covers
- Engine Inlet, Pylon Inlet, Exhaust, and Generator Inlet covers
- Static Discharge Wick Covers
- Tow Straps
- Tailcone Baggage Restraint Strap
- Emergency Escape Hatch Ground-Locking Pin
- Jack Pad Adapter (Nose)

14. EMERGENCY EQUIPMENT _____

- Fire Extinguisher in Cockpit and Cabin
- Individual Overwater Life Vests For All Seats
- Crew and Passenger Oxygen
- Emergency Exit Lighting (Interior and Over Wing)
- Emergency Lighting Battery Pack

15. DOCUMENTATION AND TECHNICAL PUBLICATIONS _____

- 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
- Weight and Balance calculator spreadsheet *
- 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 **
- Illustrated Parts Catalog Airframe *
- Illustrated Parts Catalog Interior *
- Illustrated Parts Catalog Engine **
- Wiring Diagram Manual Airframe *
- Avionics Wiring Booklet *
- Component Maintenance Manual *

- * These documents are provided on CD-ROM or DVD.
- ** These publications / revisions are provided by the supplier following delivery.

- Structural Repair Manual *
- Nondestructive Testing Manual *
- Illustrated Tool and Equipment Manual *

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

16. COMPUTERIZED MAINTENANCE RECORD SERVICE _

Cessna will provide an online computerized maintenance record service for one (1) full year from the date of delivery of a Citation CJ4 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 reliability are provided as part of the service.

Services are provided though 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 CJ4 Aircraft Limited Warranty which covers the aircraft, other than Williams' engines and associated engine accessories, is set forth below. Cessna specifically excludes vendor subscription services and the availability of vendor service providers for Optional and Customer Requests (CRQ) equipment from Cessna's Limited Aircraft Warranty. Following Cessna's Limited Warranty, the engine and engine accessory warranty of Williams is set forth. Both warranties are incorporated by reference and made part of the Purchase Agreement. All warranties are administered by Cessna's Citation Warranty Department.

17.1 Cessna Citation CJ4 Limited Warranty (Limited Warranty)

Cessna Aircraft Company (Cessna) expressly warrants each new Citation CJ4 Aircraft (exclusive of engines and engine accessories supplied by Williams 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 to the first user for the following periods after delivery:

- (a) Five years or 5,000 operating hours, whichever occurs first, for Aircraft components manufactured by Cessna;
- (b) Five years or 5,000 operating hours, whichever occurs first, for Collins' standard avionics;
- (c) Two years for all other Standard Avionics and Optional Avionics;
- (d) Two years or 1,000 operating hours, whichever occurs first, for Actuators, ACMs, Brakes, GCUs, Oleos, Starter Generators, Valves, Windshields, and Vendor items including engine accessories supplied by Cessna unless otherwise stated in the Optional Equipment and Selection Guide;
- (e) One year for Customer (CRQs), Interior Components, Interior Furnishings, and Paint;



17. LIMITED WARRANTIES (Continued) _

Any remaining term of this Limited Warranty is automatically transferred to subsequent Purchasers of the Aircraft.

Cessna's obligation under this Limited Warranty is limited to repairing or replacing, at Cessnas' sole discretion, any part or parts which within the applicable warranty period are returned at the owner's expense to the facility where the replacement part was procured with a completed claim form (claim form should have all relevant information, e.g. A/C model, A/C serial, customer number, failed part number and serial number if applicable, sales order number, purchased part number and serial number if applicable, failure codes, and action codes) within 120 days of failure. Replacement parts must be procured through Cessna Service Parts & Programs or any Cessna Owned, or Cessna-authorized Citation Service 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 Cessna-owned or Cessna-authorized Citation Service Facility without charge for parts and/or labor for removal and installation, and/or repair, and/or actual labor worked on A/C. All expedited freight, travel expense, 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. Cessna's performance under this limited warranty may be delayed or prohibited if export licenses are required to be approved by the US Government before specific spare parts can be shipped to Purchaser in some foreign countries. (Location of Cessna-owned and Cessna-authorized Citation Service Facilities will be furnished by Cessna upon request.)

This Limited Warranty applies to only items detailed herein which have been used, maintained, and operated in accordance with Cessna 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 Cessna; or to items that, in the sole judgment of Cessna, have been installed, repaired, or altered by other than Cessnaowned service facilities contrary to applicable manuals, bulletins, and/or other written instructions provided by Cessna so that the performance, stability, or reliability of such items are adversely affected. 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 APPLIC-ABLE LAW, THIS LIMITED WARRANTY IS EXPRESS-LY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, IN FACT OR BY LAW, APPLICABLE TO THE AIRCRAFT. CESSNA SPECIFI-CALLY 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. CESSNA EXPRESSLY AND SPECIFICALLY DISCLAIMS ALL OTHER REME-DIES, 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. **CESSNA NEITHER** ASSUMES NOR AUTHORIZES ANYONE ELSE TO ASSUME ON ITS BEHALF ANY FURTHER OBLIGA-TIONS OR LIABILITIES PERTAINING TO THE AIR-CRAFT NOT CONTAINED IN THIS LIMITED WARRAN-TY.

17.2 Williams FJ44-4A Limited Engine Warranty

This limited warranty covers Williams International Co., LLC (Williams) FJ44-4A Engines, Spare Parts and Exchange Parts installed in Cessna aircraft which are sold for Commercial Business Jet use. Capitalized terms used throughout this warranty are defined in Section II hereof.

SECTION I: ALLOWANCES

1. ENGINE WARRANTY

Williams warrants to the Owner or Operator that each new Engine sold for installation on Aircraft (as either original equipment or a Spare Part) will at the time of delivery be free from defects in material, workmanship and title.

17. LIMITED WARRANTIES (Continued)_

Warranty shall run to the original purchaser, its successors, assigns, and customers when they are the Owner or Operator. This warranty shall expire 60 months from the date of delivery to the original retail purchaser or First User or 2,000 Engine Operating Hours (EOH) prorated on a straight line basis to 2,500 EOH, whichever occurs first. Williams will, at its option, during the warranty period:

- 1.1 Undertake Repair or replacement of an Engine, which in the sole discretion of Williams is found to have suffered a Failure pursuant to the definition of "Failure" in Section II, Paragraph 3.4 of this warranty;
- 1.2 For engines which have 2,000 EOH or less, grant an allowance of 100 percent of the Price of Parts suffering Failure or Resultant Damage (or at its option Repair or exchange such Parts free of charge) plus reasonable cost of labor used during Repair at Williams authorized Repair Facility;
- 1.3 For engines which have 2,000 to 2,500 EOH, grant an allowance of, based on a straight line basis, the Price of Parts suffering Failure or Resultant Damage, or at its option, the Price to Repair or exchange such failed or damaged Parts.

2. SPARE PARTS AND EXCHANGE PARTS WARRANTY

Williams warrants to the Owner or Operator that each new Spare Part or Exchange Part sold for installation in Engines will at the time of delivery be free from defects in material, workmanship and title. Warranty shall run to the original purchaser, its successors, assigns, and customers when they are the Owner or Operator. This warranty shall expire 36 months from the date of shipment from Williams or 12 months from the day of installation of the new Spare Part or Exchange Part in an Engine, whichever occurs first. Williams will during this warranty period grant an allowance of 100 percent on the Price of the Spare Part or Exchange Part which, in the sole discretion of Williams is found to have suffered a Failure or the Resultant Damage of a warranted Part or at its option Repair or exchange such Spare Part or Exchange Part free of charge.

SECTION II: DEFINITIONS

- 3. In this warranty, the following definitions shall apply to the exclusion of all other meanings, and words in the plural shall have similar meanings:
- 3.1 "Commercial Use" means the operation of the Engines in aircraft licensed by FAA or its equivalent for general civilian

- and Commercial Use excluding aerial dusting and spraying and any other type of flying requiring special authorization or dispensation by FAA or its equivalent;
- 3.2 "Engine" means a Williams FJ44-4A Engine;
- 3.3 "Engine Operating Hours" means the total number of hours run by an Engine since new;
- 3.4 "Failure" means the breakdown or deterioration of a Part or Spare Part or Exchange Part which is established to the reasonable satisfaction of Williams to be due to a defect in material or workmanship in the manufacture of that Part or Spare Part or Exchange Part and which either:
 - 3.4.1 Necessitates the removal of the Engine or Part or Spare Part or Exchange Part from the aircraft before the next scheduled shop visit of the Engine, or is discovered during a Repair performed in connection with such removal; or
 - 3.4.2 Is discovered during a scheduled shop visit and necessitates the scrapping of the Part or Spare Part or Exchange Part because in the opinion of Williams, the Part or Spare Part or Exchange Part is beyond Repair in accordance with Repair instructions approved in writing by Williams.
- 3.5 "First User" means that individual, firm or agency effecting initial operation of the Engine, exclusive of operation incidental to production and initial distribution of the aircraft in which the Engine is installed.
- 3.6 "Operator" means that individual, firm or agency actually operating the Engine as Part of an aircraft.
- 3.7 "Owner" means the Owner of the aircraft in which the Engine is installed who is registered with the Federal Aviation Administration (FAA) or its equivalent at the time of the warranty claim, or the legal Owner of the Engine.
- 3.8 "Part" means any Part manufactured or supplied by Williams, originally assembled into or attached to an Engine. "Spare Part" means any Part manufactured or supplied by Williams, not originally assembled into or attached to an Engine. "Exchange Part" means any Part or Spare Part which has been newly overhauled in accordance with 14 CFR Part 43. Where two or more Parts are permanently attached together by a manufacturing process, Part or Spare Part or Exchange Part means the minimum assembly listed in the Williams Illustrated Parts Catalog.
- 3.9 "Price" as used in <u>1. Engine Warranty</u>, and <u>2. Spare Parts and Exchange Parts Warranty</u> of <u>Section I.</u>



17. LIMITED WARRANTIES (Continued)_

Allowances, means the net selling Price to the Operator (excluding import duties and sales or other taxes imposed in the Operator's country), last published by Williams prior to the time when the Failure is discovered.

- 3.10 "Repair" means the work comprising the tear down of one or more major assemblies which is required to render serviceable an Engine or Part or Spare Part or Exchange Part which has suffered Failure, necessitating the removal of that Engine from the aircraft.
- 3.11 "Resultant Damage" means the damage suffered by a Part, necessitating the scrapping of that Part because that Part is beyond economic Repair in accordance with Repair instructions approved in writing by Williams, provided such damage is caused by the Failure of another warranted Part.

SECTION III: GOVERNING CONDITIONS

- 4. The obligations of Williams hereunder shall be subject to the following conditions:
- 4.1 The Operator shall present any claim to Williams in writing within 30 days after the date upon which the claim is discovered, and shall keep and disclose accurate records of Engine operation and maintenance adequate to support such claims. Owner shall ship the failed Engine or Part for Repair or replacement within 30 days after notice;
- 4.2 Williams shall have no obligation under this Warranty in respect of any Engine, Part, Spare Part or Exchange Part which in the reasonable opinion of Williams:
 - 4.2.1 Has not been properly installed, operated, and maintained in accordance with the recommendations of Williams as contained in its manuals or other written instructions, including operating procedures; or
 - 4.2.2 Has been repaired or altered outside the authorized facilities of Williams; or
 - 4.2.3 Has been subject to misuse, negligence, accident; or
 - 4.2.4 Has suffered damage due to the ingestion of a foreign body; or
 - 4.2.5 Was acquired by the Operator other than from Williams, or through channels not specifically approved in writing by Williams.
- 4.3 Except as expressly stated in <u>Section I. Allowances</u>, hereof, Williams shall not be liable for any other expenses,

taxes, duties or liabilities. In particular costs of removal or replacement from/in an aircraft and transportation costs to/from a Repair facility are excluded from <u>Section I. Allowances</u>.

- 4.4 The Operator shall notify a Williams Customer Support representative of a potential warranty problem prior to removing or shipping Engines pursuant to a warranty claim. The Operator shall make available as requested all Engines, Parts, Spare Parts and Exchange Parts for inspection and preliminary analysis relative to said claim.
- 4.5 Upon request of Williams, any Part, Spare Part or Exchange Part for which an allowance has been granted by Williams hereunder, shall be returned by the Operator at Williams' expense, and upon such return any such Part, Spare Part or Exchange Part shall become the property of Williams.
- 4.6 Duration of the warranty for Products replaced under the terms of this Warranty shall be for the unused portion of the new Engine warranty, Spare Part or Exchange Part warranty as applicable. Replacement of an Engine, Spare Part or Exchange Part does not commence a new warranty period.
- 4.7 Williams reserves the right to make changes in the design and to add improvements without incurring any obligation to incorporate the same on other Engines or Parts sold by Williams.
- 4.8 ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, SUCH AS WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED AND DISCLAIMED TO THE EXTENT THEY EXCEED THE WARRANTIES GRANTED HEREIN. THIS WARRANTY COMPRISES WILLIAMS' ENTIRE LIABILITY IN RELATION TO ANY MALFUNCTION, FAILURE OR DEFECT TO THE EXCLUSION OF ALL OTHER LIABILITY, IN TORT (WHETHER FOR NEGLIGENCE, PRODUCT LIABILITY OR OTHERWISE) OR IN CONTRACT, INCLUDING LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL LOSS, DAMAGE OR EXPENSE.
- 4.9 NO AGREEMENT EXTENDING THIS WARRANTY SHALL BE BINDING UPON WILLIAMS, UNLESS IN WRITING AND SIGNED BY A DULY AUTHORIZED OFFICER OR REPRESENTATIVE OF WILLIAMS.

18. CITATION CJ4 CREW TRAINING AGREEMENT ___

Training for one (1) Citation CJ4 crew 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 multiengine 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 Cessna or by its designated training organization.
 - a. A simulator shall be utilized which is FAA certified to provide training for the FAA type rating.
 - b. In lieu of a model specific simulator, training will 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 Cessna 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 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 CJ4 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 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.

