



## SPECIFICATION AND DESCRIPTION



## CITATION M2



TEXTRON AVIATION

October 2015

Revision A  
Units 525-0900 to TBD



# SPECIFICATION AND DESCRIPTION



UNITS 525-0900 TO TBD

OCTOBER 2015

REVISION A



## INTRODUCTION

This document is published for the purpose of providing general information for the evaluation of the design, performance, and equipment of the Cessna Citation M2, Units 525-0900 to TBD. This document supersedes all previous Specification and Description documents and describes only the Cessna Citation M2 Model 525, 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.

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## TABLE OF CONTENTS

### CESSNA CITATION M2 SPECIFICATION AND DESCRIPTION

SECTION	PAGE
1. General Description .....	3
1.1 Certification .....	3
1.2 Approximate Dimensions .....	6
1.3 Design Weights and Capacities .....	6
2. Performance .....	7
3. Structural Design Criteria .....	8
4. Fuselage .....	8
5. Wing .....	9
6. Empennage .....	9
7. Landing Gear .....	9
8. Powerplants .....	10
9. Systems .....	10
9.1 Flight Controls .....	10
9.2 Fuel System .....	10
9.3 Hydraulic System .....	11
9.4 Electrical System .....	11
9.5 Pressurization and Environmental System .....	11
9.6 Oxygen System .....	12
9.7 Ice and Rain Protection .....	12
10. Avionics .....	13
10.1 General .....	14
10.2 Instrument and Control Panels .....	14
10.3 Avionics .....	14
10.4 Miscellaneous Cockpit Equipment .....	18
11. Interior .....	19
11.1 General .....	19
11.2 Standard Interior Configuration .....	19
11.3 Baggage .....	20
12. Exterior .....	21
13. Additional Equipment .....	21
14. Emergency Equipment .....	21
15. Documentation and Technical Publications .....	21
16. Computerized Maintenance Record Service (CESCOM) .....	22
17. Limited Warranties .....	22
17.1 Cessna Citation M2 Limited Warranty .....	22
17.2 Williams FJ44 Limited Engine Warranty .....	24
18. Citation M2 Crew Training Agreement .....	27
FIGURE I – CITATION M2 EXTERIOR DIMENSIONS .....	4
FIGURE II – CITATION M2 INTERIOR DIMENSIONS .....	5
FIGURE III – CITATION M2 INSTRUMENT PANEL AND PEDESTAL LAYOUT .....	13
FIGURE IV – CITATION M2 STANDARD FLOORPLAN .....	19

# 1. GENERAL DESCRIPTION

## 1. GENERAL DESCRIPTION

The Cessna Citation M2 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 six passengers. Two FADEC controlled Williams International Co., LLC (Williams) FJ44 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.

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 centers provides a complete source for all servicing needs.

## 1.1 CERTIFICATION

The Model 525 is certified to the requirements of U.S. 14 CFR Part 23 including day, night, VFR, IFR, and flight-into-known icing conditions. It is also certified for single pilot operations. The Citation M2 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)

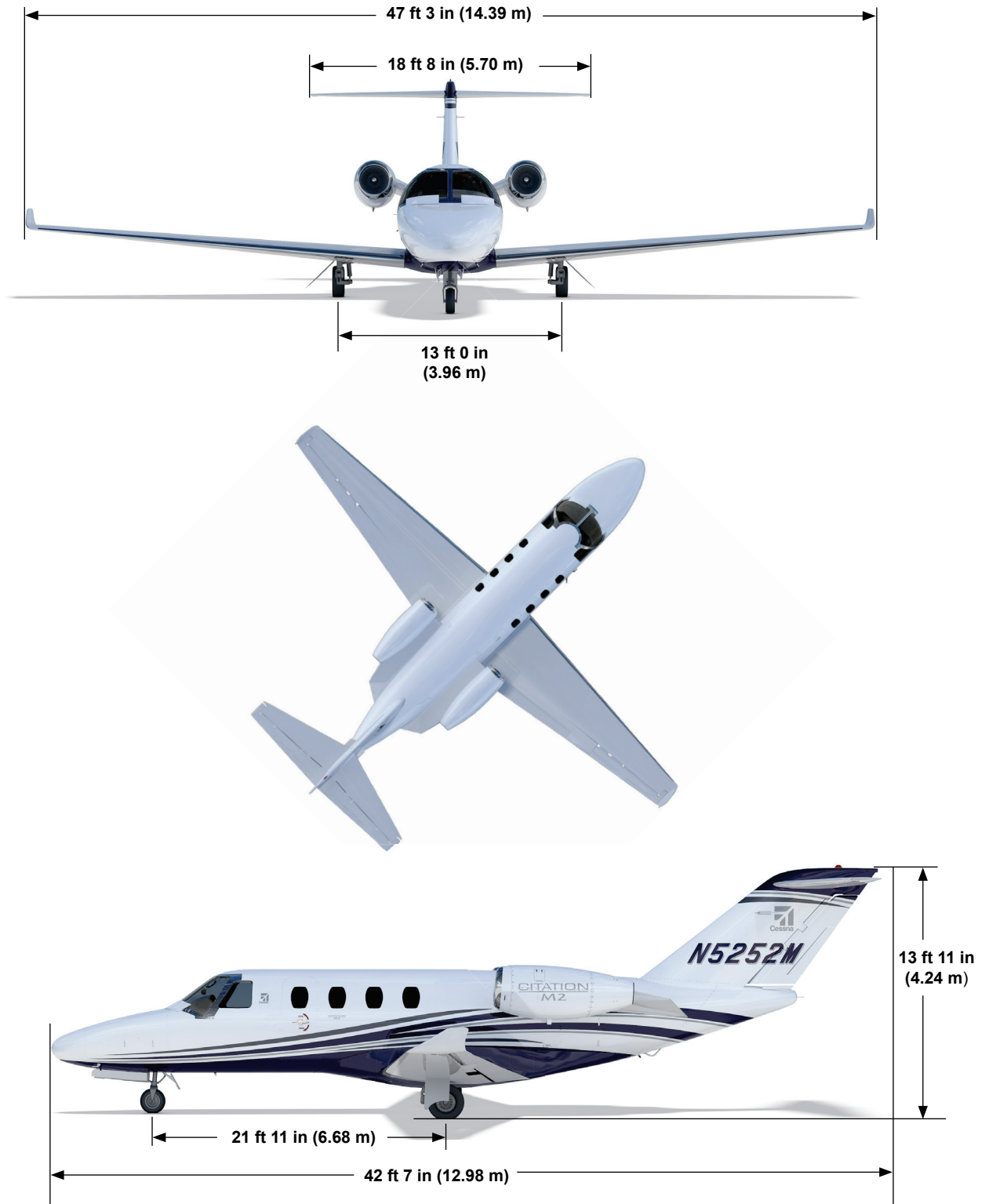


FIGURE I — CITATION M2 EXTERIOR DIMENSIONS



# 1. GENERAL DESCRIPTION (CONTINUED)

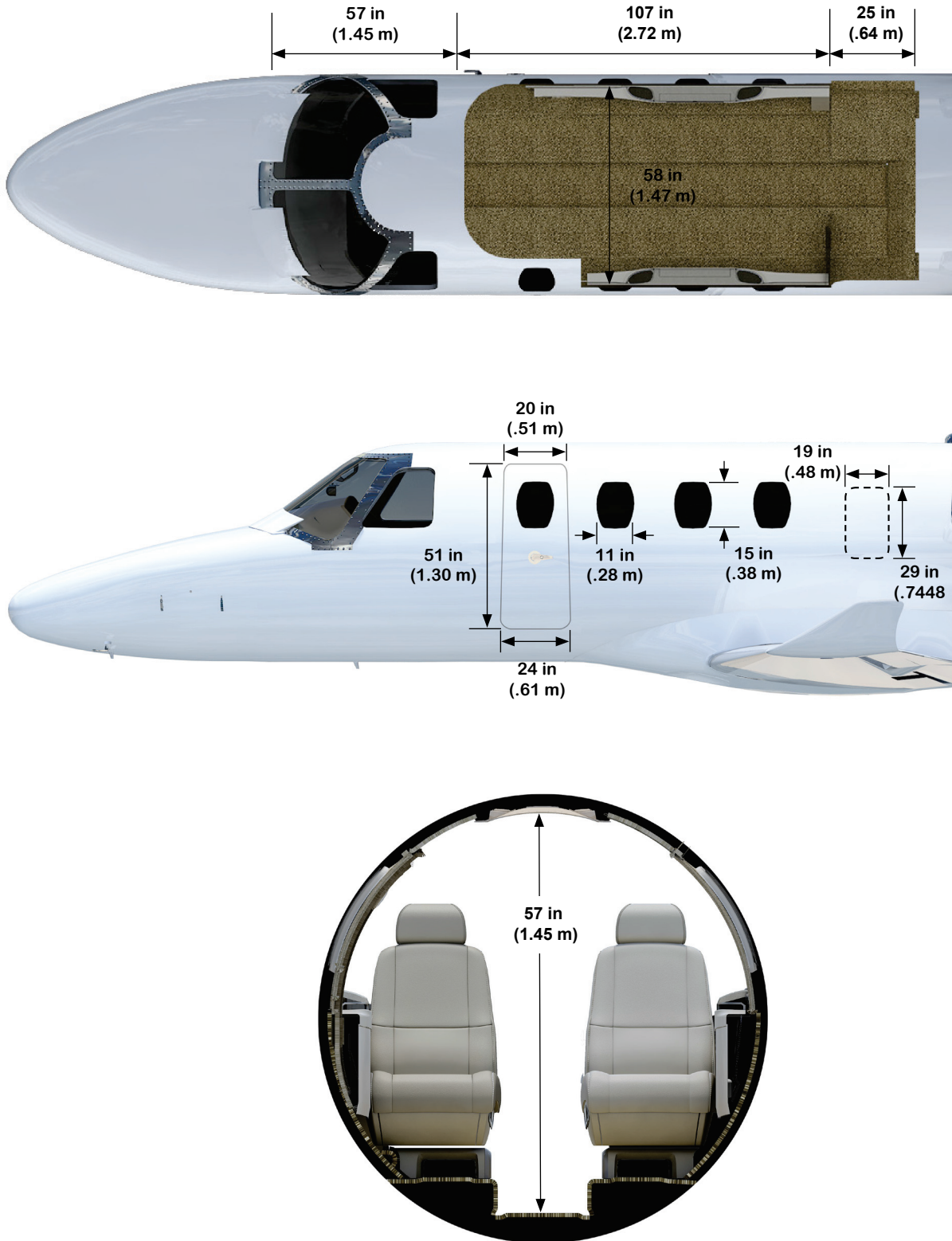


FIGURE II — CITATION M2 EXTERIOR DIMENSIONS

## 1. GENERAL DESCRIPTION (CONTINUED)

### 1.2 APPROXIMATE DIMENSIONS

Overall Height .....	13 ft 11 in (4.24 m)
Overall Length .....	42 ft 7 in (12.98 m)
Overall Width .....	47 ft 3 in (14.39 m)

### WING

Span (does not include tip lights) .....	47 ft 0 in (14.33 m)
Area .....	240.0 ft <sup>2</sup> (22.30 m <sup>2</sup> )
Sweepback (at 35% chord) .....	0 degrees

### HORIZONTAL TAIL

Span (tip to tip) .....	18 ft 8 in (5.70 m)
Area .....	60.7 ft <sup>2</sup> (5.64 m <sup>2</sup> )
Sweepback (at 70% chord) .....	0 degrees

### VERTICAL TAIL

Height .....	6 ft 5 in (1.96 m)
Area .....	46.8 ft <sup>2</sup> (4.35 m <sup>2</sup> )
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) .....	15 ft 9 in (4.80 m)

### LANDING GEAR

Tread (main to main) .....	13 ft 0 in (3.96 m)
Wheelbase (nose to main) .....	15 ft 4 in (4.67 m)

### 1.3 DESIGN WEIGHTS AND CAPACITIES

Maximum Ramp Weight .....	10,800 lb (4,899 kg)
Maximum Takeoff Weight .....	10,700 lb (4,853 kg)
Maximum Landing Weight .....	9,900 lb (4,491 kg)
Maximum Zero Fuel Weight .....	8,400 lb (3,810 kg)
Standard Empty Weight* .....	6,746 lb (3,060 kg)
Useful Load .....	4,009 lb (1,818 kg)
Fuel Capacity (useable) at 6.70 lb/gal .....	3,296 lb (1,495 kg)

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

## 2. PERFORMANCE

All performance data is based on the 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 .....	3,250 ft (991 m)
(Maximum Takeoff Weight, Sea Level, ISA, Balanced Field Length per Part 25, 15° Flaps)	
Climb Performance .....	25 min to 41,000 ft (12,497 m)
(Maximum Takeoff Weight, Sea Level, ISA)	
Maximum Altitude .....	41,000 ft (12,497 m)
Maximum Cruise Speed (± 3%) .....	400 KTAS (741 km/hr) at 460 mph
(Mid-Cruise Weight, 31,000 ft (9,449 m), ISA)	
NBAA IFR Range (100 nm alternate) (± 4%) .....	1,300 nm (2,408 km, 1,496 mi)
(Maximum Takeoff Weight, Full Fuel, Optimal Climb and Descent, Maximum Cruise Thrust at 41,000 feet)	
Landing Runway Length .....	2,590 ft (789 m)
(Maximum Landing Weight, Sea Level, ISA, per Part 25)	
Certified Noise Levels	
Takeoff .....	73.5 EPNdB
Sideline .....	85.2 EPNdB
Landing .....	88.5 EPNdB

# 3. STRUCTURAL DESIGN CRITERIA

The Citation M2 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. Design maneuver limit load factors are -1.52 Gs to +3.8 Gs. Ultimate loads are defined as 1.5 times the limit loads. The structure supports a nominal maximum cabin pressure differential of 8.5 psi (.59 bar).

### Limit Speeds

$V_{MO}$ at Sea Level to 30,500 ft (9,296 m) .....	263 KIAS (487 km/hr, 303 mph)
$M_{MO}$ at 30,500 ft (9,296 m) and above .....	Mach 0.71 (indicated)

### Flap Extension Speeds

$V_{FE}$ 0° to 15° Extension .....	200 KIAS (370km/hr, 230 mph)
$V_{FE}$ 15° to 35° Extension .....	161 KIAS (298 km/hr, 185 mph)

### Landing Gear Operating and Extended Speeds

$V_{LO}$ (retracting) .....	175 KIAS (324 km/hr, 201 mph)
$V_{LO}$ (extending) .....	186 KIAS (344 km/hr, 214 mph)
$V_{LE}$ .....	186 KIAS (344 km/hr, 214 mph)

# 4. FUSELAGE

The Model 525 fuselage has a constant circular cross section and is attached to the wing without any cutouts for the spar. A dropped aisle from just behind the cockpit through the lavatory makes moving about the cabin easier. The keyed cabin door is located on the forward left-hand side of the fuselage. It has 12 locking pins and two pressure seals and is hinged forward with a folding two-step entry stair mounted just inside the entrance. A plug-type emergency exit is located on the aft right-hand side of the cabin. Framing assemblies surround the main door opening, emergency exit, and windshields to provide structural continuity.

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

The aft fuselage houses the major components of the hydraulic, environmental, electrical distribution, flight control, 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 aft fuselage and removable exterior panels.

## 5. WING

The straight wing design of the M2 incorporates a natural laminar flow airfoil. 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. Five degrees dihedral contributes to lateral stability.

Integral fuel tanks are located in each wing. Control surfaces on the wing include outboard ailerons, wide span flaps with a lift-dump feature, and upper and lower surface speed brakes. The left-hand aileron incorporates a trim tab.

## 6. EMPENNAGE

The empennage section is a T-tail design with a one-piece horizontal stabilizer. The horizontal stabilizer's leading edge is equipped with pneumatic de-ice boots. The rudder and the elevators have pilot-controlled trim tabs. A tail logo light

The wing leading edges are anti-iced using engine bleed air. Aluminum fairings blend the wing and fuselage for minimum drag. The landing lights consist of industry proven OS-RAM LED technology. The wing tips include LED position and anti-collision lights and static wicks.

is standard with a red LED ground recognition light mounted on the top.

## 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 and takes less than 6 seconds to cycle. Each main gear is a trailing link type and retracts inboard into the wing. The nose gear retracts forward into the fuselage nose section and, when retracted, is enclosed by doors. The nose wheel has a chined tire for water and slush deflection. Emergency landing gear extension is accomplished by manual release of the uplocks for free fall followed by use of the pneumatic blow-down system.

The landing gear may be extended at speeds up to 186 KIAS. A warning horn will sound with the gear retracted if airspeed is below 130 KIAS and either throttle is retarded below approximately 85% N2. The nose gear is mechani-

cally 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 anti-skid brakes are installed on the main gear wheels. An independent, electrically driven hydraulic system provides the power for braking with a pneumatic system for back-up. Anti-skid protection is available at speeds above 12 knots.

# 8. POWERPLANTS

Two Williams FJ44 turbofan engines are installed, one on each side of the rear fuselage in easily accessible nacelles. This engine is a 2.58:1 bypass, twin-spool design with 3 compression stages and 3 turbine stages and produces 1,965 pounds (8.74 kN) of takeoff thrust at sea level, static conditions, flat rated up to 72° F (22° C).

Dual channel Full Authority Digital Engine Controls (FADECs) provide automation and efficiency in engine management. Detents in the throttle quadrant for takeoff (TO), climb (CLB), high speed cruise (CRU) give pilots the optimal power settings for each phase of flight based on ambient conditions. The system also provides time-limited dispatch (TLD) and diagnostics. 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 engine incorporates a modular design and multiple borescope ports for easier maintenance and inspections. Engine overhaul is required at 3,500 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 supplied.

# 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, elevator, and ailerons. Corrosion resistant stainless steel cables are used in all primary and secondary systems.

Trim wheels installed on the pedestal control mechanical trim tabs for the left aileron, elevators and rudder. The elevator trim also has an electric actuator controlled by switches on each pilots' control wheel. A yaw damper system in the tail works with the autopilot to augment stability at high altitudes, however, it is not required for dispatch. An integral control lock below the pilot's panel holds the rudder, elevators, ailerons, and throttles during storage.

Wide span flaps are controlled by a handle on the pedestal with detents at 15, 35, and 60 degrees. Any intermediate position from zero to 35 degrees may be selected in flight.

The 60 degree position, or ground flaps, is for lift dump and increased drag only during landing and will automatically cause the speed brakes to deploy. Speed brakes extend above and below each wing and may be extended in flight at any speed. However, they will automatically retract anytime either engine's throttle lever is in a high thrust position. The flaps and the speed brakes are electrically controlled and hydraulically actuated.

## 9.2 FUEL SYSTEM

The M2 has two integral fuel tanks, one per wing, providing a total of 3,302 pounds (1,497 kg) of usable fuel. 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 additives are not required.

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 an engine driven fuel pump

## 9. SYSTEMS (CONTINUED)

and a fuel delivery unit (FDU) 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 FDU and by the one motive flow scavenge pump per tank located near each 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 six passive capacitance probes per wing and one dual channel signal conditioner for accurate quantity indications which are shown on the multi-function display. Refueling is accomplished through over wing filler ports with flush mounted caps.

### 9.3 HYDRAULIC SYSTEM

The hydraulic system is an open-center design providing 1,500 psi (103.4 bar) on demand to operate the landing gear, speed brakes, and flaps. Two engine-driven pumps, one located on each engine, supply hydraulic pressure. Either pump can supply enough pressure and flow to operate the system. An independent hydraulic system, driven by an electric motor, operates the wheel brakes and anti-skid system, and charges the emergency accumulator.

### 9.4 ELECTRICAL SYSTEM

The M2 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. One 44 ampere-hour nickel cadmium battery is used for initial engine starts and serves as a limited backup to the generators.

Each generator is connected to a remote digital generator control unit (GCU) in the tailcone. The two GCUs 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, and the interior electrical equipment, will automatically load shed to prevent overloading the remaining generator. All other systems are supplied by the remaining generator through the respective main and crossfeed busses.

All system controls are located on the left-hand power

switch panel and the indications are displayed on the MFD EIS window for voltage and generators amperage. Left and right circuit breaker panels 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 positioned just left of the baggage compartment door behind an easy access panel. An external power receptacle is provided below the left engine pylon.

A sealed lead acid 24V, 16a-hr auxiliary battery is installed in the nose over the landing gear well. During normal operation the battery works in conjunction with the primary ships battery to allow for all aircraft systems, including avionics, to be powered on during engine starts. The auxiliary battery is also used to provide additional battery capacity during emergency operation.

A 500 watt inverter supplies 110 volt AC power to three outlets: one in the copilot's sidewall and two in the cabin.

### 9.5 PRESSURIZATION AND ENVIRONMENTAL SYSTEM

Engine bleed air is tapped to pressurize the M2 cabin. The pressurization control system automatically schedules cabin altitude and change rate while maintaining a nominal maximum pressure differential of 8.5 psi. Cabin altitude and rate of change are automatically managed by a digital, auto-schedule controller. A nominal maximum differential pressure of 8.5 psi (.59 bar) permits a sea level cabin altitude up to 22,027 feet (6,714 m), increasing to 8,000 feet (2,438 m) at the maximum cruise altitude of 41,000 feet (12,497 m). The MFD displays all pressurization parameters and the GTCs provide pilot interface for entry of landing field elevation.

Engine bleed air is also used to heat the cabin and to defog the windows. A vapor cycle air conditioning system provides cooling and may be operated anytime in the air, or on the ground when ground power is connected or when the right engine is running. In flight, the system automatically shuts down if one generator falls off line. A cockpit thermostat permits automatic temperature control and a five-position flow divider allows proportioning of the airflow.

# 9. SYSTEMS (CONTINUED)

## 9.6 OXYGEN SYSTEM

A 50 cubic foot (1.42 m<sup>3</sup>) oxygen bottle, located in the nose, is provided with a high pressure gauge and bottle-mounted pressure regulator. 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 above the toilet. Oxygen flow to the cabin is controlled by a sequencing regulator valve for optimal passenger usage.

## 9.7 ICE AND RAIN PROTECTION

Engine bleed air is used for anti-ice protection of the engine inlets, pylon inlet ducts, wings, and windshields. The pilot's windshield also utilizes a back-up alcohol anti-ice system. The horizontal stabilizer leading edges are fitted with pneumatic de-ice boots, inflated by engine bleed air (23 psi service air system). A timer manages the inflation cycle. The pitot tubes, static ports, and the AOA sensor are electrically anti-iced. 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.

Windshield rain removal is accomplished with engine bleed air during normal operations and by mechanically actuated rain doors to provide deflected airflow in heavy rain.



# 10. AVIONICS



FIGURE III — CITATION M2 INSTRUMENT PANEL AND PEDESTAL LAYOUT

# 10. AVIONICS (CONTINUED)

## 10.1 GENERAL

The Citation M2 features the Garmin G3000 advanced avionics system, a large-format glass cockpit with integrated sensors and lightweight modular avionics. The system presents to the crew all the flight, navigation, and situational inputs, as well as aircraft systems information, for a precise picture of the total flying environment. Three liquid crystal displays (LCDs) offer high resolution, wide viewing angles, and clear sunlight readability. Complete flight management functionality and a three axis digital autopilot ease the workload for one or two pilots.

## 10.2 INSTRUMENT AND CONTROL PANELS

### A. Installed on Center Glareshield Panel:

- LH and RH Master Caution / Master Warning Lights
- LH and RH Engine Fire Control Switches
- Reversionary and Dimming Controls
- Flight Director / Autopilot Controller
- Electronic Standby Instrument System
- LH and RH Display Control Units

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

- Electrical Power Panel
- LH Primary Flight Display (PFD)
- Multi-Function Display (MFD)
- RH Primary Flight Display (PFD)

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

- Pressurization Controls
- Ice Protection Controls
- Windshield Anti-ice Controls
- Fuel Controls
- Manual Temp Controls
- Landing Gear Control Module
- Lighting Controls
- Emergency Comm Switch
- Event Marker
- Cockpit Voice Recorder Controller
- Flight Hour Meter
- ELT Remote Switch

### D. Installed on Pedestal:

- GTC 570 (2) each
- Engine Start Control

- Engine Power Levers
- Flap Control Handles
- Speed Brake Control
- Elevator Trim Control and Indicator
- Takeoff / Go-Around Button
- Rudder Trim Control
- Aileron Trim Control

### E. Installed Beneath the Instrument Panel:

- Emergency Brake Handle
- Parking Brake Handle
- Emergency Gear Release
- Control Locks
- Rain Removal levers

## 10.3 AVIONICS

Described below is the Citation M2 standard avionics suite as referred to in section 17, Limited Warranties.

The Garmin G3000 is an integrated avionics and flight guidance system providing flight, navigation, communication, surveillance, situational awareness, and aircraft systems status and alerting on three large glass displays.

### A. ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)

The G3000 system utilizes three 14.1 inch (diagonal) Control display units (GDU1400W) as Primary Flight Displays (PFD) and Multi-Function Display (MFD). All three are WXGA Liquid Crystal Displays (LCD) with LED backlighting and a resolution of 1280 x 800.

Behind the MFDs and within the pressure vessel are the two remote audio processors (GMA 36). Located in the nose of the aircraft are the main Garmin Integrated Avionics (GIA 63W) incorporating all communication, navigation, automatic flight control, and extensive data management functions. These two interface adapter units are directly linked to the AHRS, ADCs, transponders, audio controllers, and Engine/interface units (GEA 71, located in the tail cone). Data from each source is processed and sent to the PFDs and MFD. Ethernet architecture and various ARINC cabling are used for high-speed data transfer. Most components are line replaceable units (LRUs) contained in individual trays and racks. Two

## 10. AVIONICS (CONTINUED)

glareshield cooling fans continuously circulate cockpit air around the avionics.

### B. PRIMARY FLIGHT DISPLAY (PFD)

The following elements are shown on the PFDs in normal mode: attitude (full screen horizon line), altitude tape (feet or meters with six-second trend vectors), airspeed tape (with six-second trend vectors), Mach, vertical speed, flap limit speeds, slip/skid, heading, horizontal situation, glide slope, flight director (cross pointer or single cue), navigation and communication frequencies (active and standby), navigation station/waypoint identification, track, distance, transponder code, altimeter setting (inches or hectopascals), clock, timer (up or down), temperature (RAT), ISA deviation, and many other items. V-speeds can be automatically generated or are entered manually by the pilot and will appear on the airspeed tape. At the bottom edge of the display several menu items are shown directly above corresponding soft keys on the bezel. The soft keys are used to select the menu and submenu items. Selection of the “Inset” soft key places a smaller version of the MFD navigation map in the lower corner of the PFD for added situational awareness. The Crew Alerting (CAS) information will be presented on the PFDs.

### C. MULTI-FUNCTION DISPLAY

The MFD serves primarily as a moving map and EIS platform. The moving map may be populated with a wide variety of information including traffic, terrain, airborne weather radar, data link weather, political and airspace boundaries, airports, nav aids, way points, cities, roads, Garmin Flight-Charts and Safe Taxi, and many others, all at various ranges. The pilot may choose a north-up or track-up orientation. These and many other options may be selected using the soft keys along the bottom edge of the bezel or by using the touch screen GTC 570. A subscription through Garmin is required for database updates.

### D. SECONDARY CONTROLLER

The GCU 275 is a PFD controller used to perform inset map panning and ranging, to adjust the barometric setting, and to access often used and high-workload flight planning functions such as the active flight plan on the lower inset window on the PFD. The GCU 275 will also control the MFD

unit when it is operating in reversionary mode and presenting primary flight information.

### E. ENGINE INDICATING (EIS) AND CREW ALERTING SYSTEM (CAS)

The EIS information is presented on the left side of the MFD and includes: engine speeds and temperatures; oil pressures and temperatures; fuel flow, quantity and temperature; oxygen pressure and electrical and pressurization systems data. The Crew Alerting (CAS) is presented on the lower part of each PFD and shows colored text messages as determined by system inputs. Up to 10 messages are shown in the CAS box; additional messages may be scrolled into view by using the PFD soft keys. Pre-programmed logic determines the color, order, and flashing characteristics of all messages.

Each display may show the essential components of the EIS and CAS in reversionary mode. Reversion may be selected manually for either the pilot or copilot side using switches located below the glareshield.

### F. AIR DATA AND ATTITUDE INFORMATION

The pitot-static system includes two electrically heated pitot and static sources. Each is cross-plumbed into dual air data computers (ADCs) located in the forward nose behind the radar bulkhead. The ADCs perform source error corrections and calculate indicated airspeed, true airspeed, mach number, vertical speed, density altitude, pressure altitude, and total temperature for output to the Interface Adapters and the PFDs.

In addition, ADC output is received by the Attitude and Heading Reference Systems (AHRS). Two solid state digital AHRS reside in the nose of the aircraft and are each tied to the three-axis magnetometers located in the tail. The AHRS are capable of in-flight and on-the-move initialization. Output from the AHRS is received and processed by the Interface Adapter Units and the PFDs. The system meets RVSM requirements.

Input from an electrically heated stall warning vane on the right side of the forward cabin is processed by the Interface Adapter Units for display on the PFDs and for input to the aural warning system.

# 10. AVIONICS (CONTINUED)

## G. VHS COMMUNICATIONS TRANSCEIVERS

Dual VHF communications transceivers are part of the Interface Adapter units and produce 16 watts of transmission power. They are compliant with European 8.33 kHz channel spacing requirements. Tuning and management is accomplished through dual touch screen GTC 570 controllers. There is also an emergency radio tuning switch located on the right side tilt panel that will tune the VHF radio to 121.5 bypassing all other tuning controls.

## H. REMOTE AUDIO PROCESSOR

Dual GMA 36 Remote Audio Processors controlled through the dual GTC 570 touch screen controllers provide transmitter section for microphone inputs and direct audio outputs from all receivers to the speakers and/or headphones at each crew station. The system includes crew and cabin intercom and the ability to record and playback up to 2 ½ minutes of incoming audio. Two handheld microphones are connected to the audio processors and installed on each of the control columns.

## I. NAVIGATION

Dual Garmin navigation receivers located in the Interface Adapter Units provide VOR, Localizer and Glideslope functions. The Marker Beacon receivers are integrated into the Audio Processors. Navigation information is displayed on both PFDs and the reversionary mode of the MFD. Tuning and management is accomplished through the dual touch screen controllers.

## J. GLOBAL POSITIONING SYSTEM (GPS)

Each Interface Adapter Unit includes a WAAS capable GPS receiver. Both receivers are capable of monitoring 12 channels to provide satellite-based position data for use by the FMS.

## K. FLIGHT MANAGEMENT SYSTEM (FMS)

The Garmin FMS provides a multiple waypoint navigation solution suitable for enroute, terminal, and WAAS precision approach navigation. The touch screen controllers (GTC570) on the pedestal are the FMS interface to the MFD.

It includes controls for selection and manipulation of moving map functions such as range and pan. Each PFD calculates and displays the current flight plan using the onside GPS sensor. Automatic GPS sensor reversion occurs in the event the onside sensor is degraded or failed.

Airway flight planning, plain language identifiers, airport communication and navigation frequency lookup features are included. Flight plans may be created, stored, accessed, and activated as needed and are shown on the MFD moving map. Both lateral and vertical modes (to the final approach fix) may be displayed and coupled to the autopilot. Present position referenced geopolitical and airspace boundaries, and airways may be overlaid on any of the FMS map formats.

Precision guidance from the FMS meets the operational requirements of oceanic/remote, NAT MNPS, RNP10, and RNP5/BRNAV. The navigation database requires periodic updates via subscription and must be uploaded to the aircraft through the upper SD flash card port on each of the three displays.

## L. AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS)

Automatic flight control is provided in the M2 by the Garmin GFC 700 system. The autopilot system (AP) includes dual flight director computers (integrated in the Interface Adapter Units), a single Garmin Mode Controller (GMC 710), and four electric servos for roll, yaw, pitch, and pitch trim.

The GMC 710 Mode Controller, located just below the glareshield, enables the selection of flight director and autopilot modes for either pilot. The AFCS modes may be hand flown using the flight director command bars or coupled to the autopilot for automatic flight. Selection of the autopilot will automatically enable the flight director. Modes of operation include attitude, heading, altitude, speed, and vertical speed, as well as VNAV and the various NAV radio and GPS navigation modes. In addition, the AFCS provides a takeoff/go-around mode activated by a button on the left throttle handle. Control Wheel Steering (CWS) and AP disconnect functions are controlled via switches on each yoke.

The pitch trim servo also provides electric pitch trim when the autopilot is not engaged, through yoke mounted trim



## 10. AVIONICS (CONTINUED)

switches. The yaw servo may be activated by the pilot during normal maneuvers to provide Dutch roll damping and turn coordination. Or, it will automatically engage with auto-pilot activation.

### M. TRANSPONDERS WITH ADS-B OUT CAPABILITY

Dual Mode S transponders with antenna diversity and 1090 MHz Extended Squitter (ES) Automatic Dependent Surveillance – Broadcast Out (ADS-B Out) transmission capability in accordance with FAA TSO-166B are included. The transponders meet European Mode S mandates for Enhanced Surveillance (EHS).

### N. WEATHER AVOIDANCE RADAR

The Garmin GWX 70 is a solid state radar with 40 watts of transmit power and Altitude Compensated Tilt (ACT). The radar supports display of different weather data on multiple display units simultaneously. Doppler capability is an option on the GWX 70 which adds the ability to see frequency shifts that are caused when an object reflecting the radar pulse is moving relative to the radar itself. The addition of Doppler adds the two distinct advantages of Turbulence Detection and Ground Clutter Suppression.

### O. CHART VIEW

Provides the ability to show approach charts, SIDs, STARs, and airport diagrams as moving maps on the Multi-Function Display (MFD). Aircraft position is graphically overlaid in the plan view format. A profile view may also be shown, and both formats may be zoomed and panned. Chart View is integrated with the FMS to automatically load charts according to the flight plan. A database subscription service is required.

### P. 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 nav aids, along with the enhancement of FMS position determination through the use of non-displayed DME channels. Tuning and management is accomplished through the GTCs.

### Q. RADIO ALTIMETER

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

### R. TRAFFIC COLLISION AVOIDANCE SYSTEM (TCAS I)

The Garmin GTS 855 is a TCAS I system that improves situational awareness by tracking all Mode C and S aircraft and displaying their locations on the PFDs and/or MFD. In addition to the display, Traffic Alerts are given aurally through the aircraft audio system.

### S. TERRAIN AVOIDANCE WARNING SYSTEM (TAWS)

The Garmin Terrain Avoidance Warning System is a Class B TAWS. The system provides basic terrain awareness and ground proximity alerting. Terrain information is displayed in standard colors on the MFD and gives both audible and visual warnings as required. The terrain database resides in the secure digital data storage cards located in the lower port on the right hand side of each PFD and MFD bezel. Data is independently processed by each of the three Display Units for display either when pilot selected or when activated by ground proximity criteria.

### T. AVIONICS DISPATCH SWITCH

A Dispatch Power switch in the Electrical Power Panel allows for limited avionics equipment to be powered for ground radio calls and FMS flight planning operations without the battery drain of powering the entire avionics suite without engines running.

### U. ELECTRONIC STANDBY INSTRUMENT

The L-3 Communications ESI-1000 Trilogy Electronic Standby Instrument (ESI) is a solid-state instrument that provides backup for attitude, altitude, airspeed, and slip/skid information on a 3.7 inch Liquid Crystal Display with LED backlight.

A bezel-mounted light sensor provides automatic dimming with manual offset controlled via the menu access mode.

# 10. AVIONICS (CONTINUED)

Four soft key buttons on the front of the bezel provide the user with quick access for setting display and button brightness, barometric setting and access to menu options.

## V. EMERGENCY LOCATOR TRANSMITTER (ELT)

The Artex C406-N is 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 is located in the tail-cone and interfaces with the GIA to transmit the last known aircraft position on the satellite frequency if activated. (Interface feature disallowed by some certifying agencies.) The C406-N has a remote control switch panel on the right hand tilt panel and a six-year lithium battery pack.

## W. MAINTENANCE DIAGNOSTICS

The G3000 system includes the capability to record specific maintenance diagnostic information, which can be reviewed on the MFD while on the ground and downloaded for review off the Aircraft. In addition, the M2 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 Seller Service and Support network.

*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.*

## 10.4 MISCELLANEOUS COCKPIT EQUIPMENT

- Magnetic Compass
- Eye Position Reference Indicator
- Two Ventilation Air Outlets
- Oxygen System Control
- Two Oxygen Masks
- Parking Brake Control
- Rain Removal Door Control
- Control Lock
- Emergency Brake Control
- Emergency Gear Extension Control
- Two Reading Lights
- Floodlight

# 11. INTERIOR

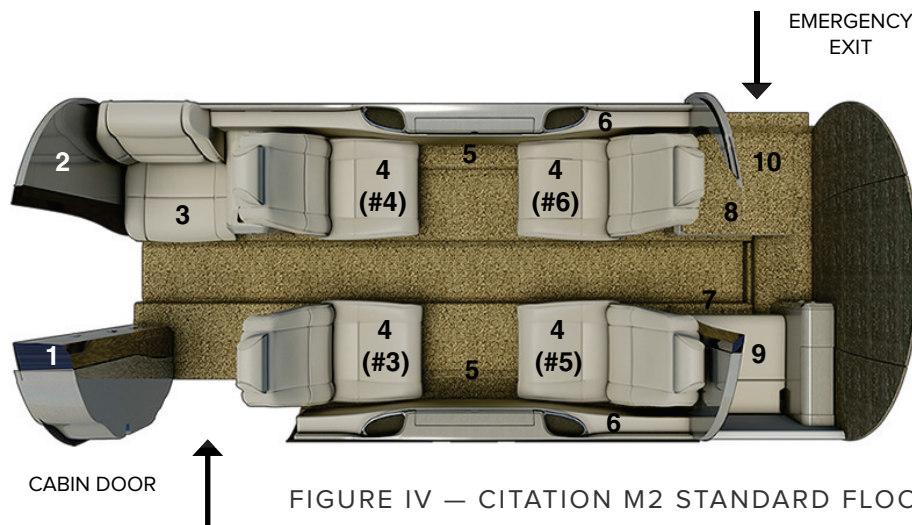


FIGURE IV – CITATION M2 STANDARD FLOORPLAN

## 11.1 CABIN

The Citation M2 cockpit is designed to provide the crew with the tools for the job in a comfortable working environment. Single pilot capabilities mean 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 map pockets, and dual cupholders are provided.

The standard configuration in the Citation M2 features a side facing seat with an armrest cabinet, a storage cabinet across from the side facing seat and four passenger seats in a center club configuration. A left hand belted flushing toilet and a center aft coat rod are located in the aft cabin lavatory. A removable curtain provides privacy.

Each passenger seat is mounted on a pedestal with the ability to track forward, aft, and laterally. Each seat may be reclined depending on its position on the pedestal. The aft cabin divider restricts seat #5 (see diagram). Individual air outlets and reading lights are provided in the cabin overhead above each passenger. Dropout, constant-flow oxygen masks are also installed in the overhead for emergency use. Cupholder/storage areas are built into the side ledge next to each seat. Two 110 volt AC outlets are included below the LH/RH executive tables. Also built into the side-ledges in the center club are foldout executive tables with leather table top inserts.

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. (Measurements represent distance between softgoods.) The cabin is 11 feet long measured from the cockpit divider to the aft pressure bulkhead.

Included are indirect overhead lights with full dimming capability. Entrance and emergency exit lights are also provided in the passenger cabin. Eight 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. With the exception of the entrance door, each window has pleated manual window shades.

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

## 11.2 STANDARD INTERIOR CONFIGURATION

The following items are standard in the Citation M2. Numbered items refer to the cabin diagram (Figure IV).

### Cockpit

#### Two crew seats

- Five-Point Restraint System
- Stowable Inboard Armrest
- Fwd & Aft Tracking Lever
- Recline Adjustment Lever
- Height Adjustment Lever

# 11. INTERIOR (CONTINUED)

- Adjustable Lumbar
- Seat Back Pocket

Dual cupholders for each crew seat

Single 110 volt AC outlet in copilot sidewall

Not Shown:

- Two swing-arm sunvisors
- Cockpit assist handle
- Fire extinguisher

### Cabin Area

1. LH Cabinet
  - Beverage can storage
  - Ice chest drawer with removable liner connected to an overboard drain
  - Trash container
2. RH forward divider
  - Half-length removable cockpit curtain on the forward side of the divider may be drawn across aisle through an overhead track and secured on the LH cabinet
3. RH forward side facing seat with armrest storage cabinet
  - Seat restraint
  - Cupholder/Storage area
  - Storage drawer
4. Pedestal seats: two aft facing and two forward facing
  - Forward/aft and inboard/outboard tracking on pedestal
  - Adjustable recline
  - Seat restraint system including seat belt and retracting shoulder harness with inertial reel
  - Single retractable inboard armrest
  - Adjustable headrest
5. LH/RH executive tables with leather table top inserts
6. LH/RH sideledge with cupholder/storage area at each pedestal seat location
7. LH aft cabin divider with high gloss paint
8. RH aft removable curtain
9. LH aft, belted, flushing toilet
  - Seat restraint
  - Toilet tissue storage area
  - Relief tube with overboard drain

10. RH aft carpet covered avionics lowboy cabinet, houses diagnostics and common PC boards

Not Shown:

- Two 110 volt AC outlets located below LH/RH executive tables with 5 amp maximum per outlet
- Cabin overhead containing oxygen mask, air outlet, and LED reading light at each passenger seat location and in the aft lavatory area
- Manual pleated cabin window shades (exposed)
- Indirect overhead LED lighting
- High gloss paint cabinetry finish
- Brushed aluminum hardware finish
- Foldable threshold carpet assembly
- Spare threshold carpet assembly
- Spare center aisle carpet assembly
- Center aft coat rod
- Chime unit
- 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.)
- One insertable ashtray
- Fireblocking on all passenger seats

### 11.3 BAGGAGE

Two separate unpressurized baggage areas provide a total volume of 43.1 cubic feet (1.22 m<sup>3</sup>) and a total weight capacity of 725 pounds (329 kg).

- An LED illuminated 12.9 cubic foot (.37 m<sup>3</sup>), 400 pound (182 kg) capacity lockable nose baggage compartment is externally accessible from either side of the aircraft.
- An LED illuminated 30.2 cubic foot (.86 m<sup>3</sup>), 325 pound (147 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 featuring polyurethane paint in a variety of colors is provided.

## 13. ADDITIONAL EQUIPMENT

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

## 14. EMERGENCY EQUIPMENT

- Fire Extinguisher in Cockpit
- Crew and Passenger Oxygen
- Exterior LED Emergency Exit Lighting
- 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 software \*
- Citation Performance Calculator (CPC) pending availability
- Passenger Information Cards
- Log Books (Aircraft and Engines)
- Service Bulletins and Service Letters - Engine \*\*
- Maintenance related documents such as Maintenance Manuals, Illustrated Parts Catalogs, and Wiring Diagrams for the airframe, interior, avionics, and/or engines\*

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 documents are provided on CD-ROM or DVD.

\*\* These publications / revisions are provided by the supplier following delivery.

# 16. COMPUTERIZED MAINTENANCE RECORD SERVICE

Seller, through the exclusive endorsement of CAMP Systems International, will provide an online computerized maintenance record service for one (1) full year from the date of delivery of a Citation M2 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 through an Internet hosted software application, show the current status, upcoming scheduled

maintenance activity and the history of the aircraft maintenance which is printable locally. Reports concerning projected annual maintenance requirements, component removal history and fleet-wide component reliability 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.

# 17. LIMITED WARRANTIES

The standard Citation M2 Aircraft Limited Warranty which covers the aircraft, other than Williams engines and associated engine accessories which are warranted separately is set forth below. Seller specifically excludes vendor subscription services and the availability of vendor service providers for Optional and Customer Requested Equipment (CRQ) from Seller's Limited Aircraft Warranty. Following Seller'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 Seller's Citation Warranty Department.

## 17.1 CESSNA CITATION M2 LIMITED WARRANTY (LIMITED WARRANTY)

Seller expressly warrants each new Citation M2 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, except as set forth herein, 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 Seller;

(b) Five years or 5,000 operating hours, whichever occurs first, for Garmin Standard Avionics;

(c) Two years for all other Standard Avionics;

(d) Two years 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;

(f) One year for Customer Requests (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, in Seller's sole discretion, any part or parts which:

(1) within the applicable warranty period and 120 days of

## 17. LIMITED WARRANTIES (CONTINUED)

failure,

(2) are returned at the owner's expense to the facility, where the replacement part is procured, whether Textron Aviation Parts Distribution 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"),

(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, 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. Seller'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 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 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 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 PER-**

# 17. LIMITED WARRANTIES (CONTINUED)

## SONAL JURISDICTION IN THE FORUM CHOSEN.

### 17.2 WILLIAMS' FJ44 LIMITED ENGINE WARRANTY

This warranty covers Williams International Co., L.L.C. FJ44-1AP 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 International Co., L.L.C. Inc. 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. Warranty shall run to the original purchaser, its successors, assigns, and customers when they are the Owner or Operator. This warranty shall expire 48 months from the date of shipment by Williams International Co., L.L.C. Inc., 36 months from the date of delivery to the original retail purchaser or First User or 1500 Engine Operating Hours (EOH) prorated on a straight line basis to 2000 EOH, whichever occurs first. Williams International Co., L.L.C. will, at its option, during the warranty period:

- a. Undertake Repair or replacement of an Engine, which in the sole discretion of Williams International Co., L.L.C. is found to have suffered a Failure pursuant to the definition of "Failure" in Section II, Paragraph 3.4 of this warranty.
- b. For Engines which have 1500 Engine Operating Hours 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 International Co., L.L.C. authorized Repair Facility.
- c. For Engines which have 1500 to 2000 Engine Operating Hours, 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 International Co., L.L.C. 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 International Co., L.L.C. or 12 months from the day of installation of the new Spare Part or Exchange Part in an Engine, whichever occurs first. Williams International Co., L.L.C. 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 International Co., L.L.C. 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 International Co., L.L.C. FJ44-1AP 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 International Co., L.L.C. 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

## 17. LIMITED WARRANTIES (CONTINUED)

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 International Co., L.L.C. the Part or Spare Part or Exchange Part is beyond Repair in accordance with Repair instructions approved in writing by Williams International Co., L.L.C.

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 Agency (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 International Co., L.L.C. originally assembled into or attached to an Engine. “Spare Part” means any Part manufactured or supplied by Williams International Co., L.L.C. 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 FAR 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 International Co., L.L.C. Inc. Illustrated Parts Catalogue.

3.9 “Price” as used in 1, Engine Warranty, and 2, Spare Parts Warranty, of Section I, 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 International Co., L.L.C. 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 International Co., L.L.C., 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 International Co., L.L.C. 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 International Co., L.L.C. 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 International Co., L.L.C.

4.2.1 Has not been properly installed, operated, and maintained in accordance with the recommendations of Williams International Co., L.L.C. 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 International Co., L.L.C. 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 International Co., L.L.C. or through channels not specifically approved in writing by Williams International Co., L.L.C.

# 17. LIMITED WARRANTIES (CONTINUED)

4.3 Except as expressly stated in Section I, Allowances, hereof, Williams International Co., L.L.C. 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 Section I, Allowances.

4.4 The Operator shall notify a Williams International Co., L.L.C. 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 International Co., L.L.C. any Parts, Spare Parts or Exchange Part for which an allowance has been granted by Williams International Co., L.L.C. hereunder, shall be returned by the Operator at Williams International Co., L.L.C. expense, and upon such return any such Part, Spare Part or Exchange Part shall become the property of Williams International Co., L.L.C.

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 Parts 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 International Co., L.L.C. 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 International Co., L.L.C.

**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 INTERNATIONAL Co., L.L.C.'S 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, INCLUD-**

**ING LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL LOSS, DAMAGE OR EXPENSE.**

**4.9 NO AGREEMENT EXTENDING THIS WARRANTY SHALL BE BINDING UPON WILLIAMS-INTERNATIONAL Co., L.L.C. UNLESS IN WRITING AND SIGNED BY A DULY AUTHORIZED OFFICER OR REPRESENTATIVE.**



# 18. CITATION M2 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-525 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 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.
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 M2 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.

# 18. CITATION M2 CREW TRAINING AGREEMENT (CONTINUED)

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.











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