



CITATION CJ4



SPECIFICATIONS	
IACO Code	C25C
Max Takeoff Weight (MTOW)	17,110 lb (7,761 kg)
Max Landing Weight (MLDW)	15,660 lb (7,103 kg)
Zero Fuel Weight (ZFW)	12,500 lb (5,670 kg)
Fuel Capacity	5,762 lb (2,614 kg)
Limit Speeds:	
Below 8,000 ft	260 KIAS (481 km/h)
V _{MO} (8,000 ft to 27,900 ft)	305 KIAS (565 km/h)
M _{MO} (27,900 ft +)	Mach 0.77
Flap Extension Speeds:	
V _{FE} 0° to 15° Extension	200 KIAS
V _{FE} 15° to 35° Extension	160 KIAS
Landing Gear Max Speed V _{LO} /V _{LE}	200 KIAS
Performance:	
Climb Performance	29 min to 45,000 ft
Max. Altitude	45,000 ft (13,716 m)
Max Cruise Speed	451 KTAS (31,000 ft & 14,000 lb)
Range	1,920 nm (3,556 km)
Takeoff Rway Length	3,410 ft (1,039 m)
Landing Distance	2,940 ft (896 m)
Passengers	9
Engines	Williams FJ-44-4A (3,621 lbs of thrust each)
Avionics	Pro Line 21 Suite
Flight Management System	Collins FMS-3000

FUEL CONSUMPTION (14,000 lb, no wind, in MSFS)			
Fuel total capacity		5,762 lb (2,614 kg)	
CLIMB (240 KIAS / M .64 - N1 75%)			
Climb to	Fuel (lb)	Dist. (NM)	Time (m:s)
FL100	32	8	01:56
FL200	80	22	04:40
FL300	162	50	09:20
FL400	282	90	15:55
FL450	406	116	22:45
CRUISE (High-Speed Cruise - Mach .77)			
Alt.	Fuel flow (lb/h)	Avg. Airspeed (kts)	Fuel for 10NM (lb)
FL100	360 x2	351 KTAS 305 KIAS	20.5
FL200	400 x2	406 KTAS 305 KIAS	19.7
FL300	462 x2	454 KTAS M.77	20.4
FL370	464 x2	444 KTAS M.77	20.9
FL400	465 x2	443 KTAS M.77	21.0
FL450	485 x2	442 KTAS M.77	21.9
DESCENT (3° to 3,000 ft)			
Desc. from	Fuel (lb)	Dist. (NM)	Time (m:s)
FL450	218	140	22:52
FL400	202	122	20:18
FL300	150	89	15:15
FL200	96	55	10:15
FL100	42	23	04:55

TYPICAL CRUISE ALTITUDE	
Distance (nm)	Altitude (ft)
0-99	4000 – 12000
100-199	12000 – 24000
200-299	23000 – 31000
300-499	30000 – 39000
500-999	38000 – 43000
1000+	41000 – 45000

PRE-FLIGHT
DEFINE FLIGHT PLAN (IFR or VFR)
Departure & Destination:
- Get METAR & QNH (metar-taf.com)
- Get Runway Altitude & Orientation
- Get Charts (SID, STAR, Approach)
FUEL CALCULATION
TOP OF DESCENT CALCULATION:
$\text{Distance(nm)} = \frac{\Delta \text{Altitude (ft)}}{1000} \times 3$

COCKPIT CHECKLIST	
PARKING BRAKE	SET
LANDING GEAR	DOWN
L/R GEN SWITCHES	ON (for battery start)
FUEL TRANSFER knob	OFF
CLIMATE CONTROL SELECTOR	OFF
PRESSURE SOURCE	NORM
BATTERY SWITCH	EMER (CHECK POWER)
BATTERY SWITCH	ON
EMERGENCY LIGHTS SWITCH	ARMED
STBY FLIGHT DISPLAY SWITCH	ON
OXYGEN PRESSURE	CHECK 1600-1800 PSI
FUEL QUANTITY	CHECK
AVIONICS SWITCH	DISPATCH
FMS (INIT, FPLN, PERF)	CHECK/SET

FMS – INIT, FPLN & PERF
INIT GPS POSITION
1. IDX → Select POS INIT
2. Copy-paste GPS position to SET POS
ADD FLIGHT PLAN
1. FPLN → Set ORIGIN and DEST Airports
2. DEP ARR → Set SID, STAR and APPROACH
3. LEGS → Add waypoints between SID & STAR
PERF
1. PERF → PERF INIT → Enter CRZ ALT, PASS and CARGO
2. PERF → TAKEOFF → Enter WIND, OAT and QNH
3. PERF → TAKEOFF → NEXT → Select A/I (Anti-ice) and FLAPS
4. PERF → SEND>

ENGINE START	
BEACON LIGHT	ON
THROTTLES	IDLE
RIGHT ENGINE STARTER	PUSH
When N2 > 20%:	
→ RIGHT ENGINE RUN/STOP BTN	RUN
Monitor MFD: Check stabilization at 25% N1 and 600°C ITT. Check Oil °C and PSI.	
OPPOSITE ENGINE	DO THE SAME
ENGINE RUN/STOP COVERS	CLOSE



FOR SIMULATION USE ONLY

AFTER ENGINE START / BEFORE TAXI	
AVIONICS SWITCH	ON
CLIMATE CONTROL SELECTOR	NORM
PASS LIGHT SAFETY BUTTON	ON
FLIGHT CONTROLS	CHECK OK
GROUND SPOILERS	CHECK AND RETRACT
EICAS*	CHECK
TRIMS	CHECK
ENGINE ONLY ANTI-ICE	AS REQ.
ALTIMETER	SET QNH LOCAL
TAKEOFF DATAS (V ₁ , V _R , V ₂ , V _T)	CHECK
DEST ELEVATION	CHECK/SET
PASS SAFETY BUTTON	ON
NAV LIGHTS	ON
TAXI LIGHTS	ON

*EICAS : Engine-indicating and crew-alerting system

TAXI	
BRAKES	CHECK
NOSEWHEEL STEERING	CHECK
FLIGHT INSTRUMENTS	CHECK

BEFORE LINE UP	
LANDING LIGHTS	ON
STROBE LIGHTS	ON
TRIMS	SET FOR TAKEOFF
FLAPS	SET TAKEOFF (15°)
SPOILERS	RETRACTED
TO/GA BUTTON	PUSH
PITOT/STATIC HEAT 1&2	ON
ICE-PROTECTION	AS REQ.
AUTOPILOT	AS REQ.
PASS SAFETY BUTTON	ON
EICAS	CHECK

TAKEOFF
Takeoff Speeds
V ₁ : Speed after which a take off should not be aborted, V _R : Rotation Speed
→ LINE UP and BRAKE
→ SET THROTTLE TO TAKEOFF (FULL)
→ RELEASE BRAKES
@ V _R → ROTATE (pitch ~ 10°)
@ positive VS → GEAR UP
@ ~ (V ₂ +10) → REATRACT FLAPS
→ YAW DAMPER SET ON
@ ~ 1,000 ft AGL: → REDUCE THROTTLE TO CLIMB (CLB – N1 75%) → ACCELERATE TO 240 KIAS CLIMB SPEED

CLIMB
LANDING GEAR UP
FLAPS CHECK RETRACTED
THROTTLE CLIMB
AUTOPILOT AS REQ.
YAW DAMPER ON
PASS SAFETY BUTTONS AS REQ.
PRESSURIZATION CHECK
@ 10,000 ft & TA (18,000 ft) CHECK
LANDING LIGHT OFF above 10,000 ft
ALTIMETER SET STD at TA (FL180)

CALCULATE TOD (3° descent rate)
$\text{Distance(nm)} = \frac{\Delta \text{Altitude (ft)}}{1000} \times 3$
$\text{Vertical Speed (ft/min)} = 5 \times \text{GS (Ground Speed)}$

CLIMB

CLIMB SPEED:

→ **240 KIAS** then **M .64** (After FL300)

*THROTTLE: Set **CLB***

AUTOPILOT:

→ Use **FLC** mode with 240 KIAS

→ Can use VNAV

Expected climb rates

Altitude	Rate
Below FL200	3,000-5,000 ft/min
FL200 – FL300	2,000-3,000 ft/min
Above FL300	2,000 ft/min or less

CRUISE
THROTTLE CRU or AS REQ.
ANTI-ICE SYSTEMS AS REQ.
PRESSURIZATION CHECK

CRUISE
High-Speed Cruise FL370 + M .77 (N1 67% - 444 KTAS) (Recommended)
Long-Range Cruise: FL450 + M .66 (N1 60% - 377 KTAS)
Average Speeds High-Speed Cruise: M .71 (N1 65%) Long-Range Cruise: M .63 (N1 60%)
Limit Speed 8,000 ft to 27,900 ft → 305 KIAS Above 27,900 ft → Mach .77

FMS – PERF APPROACH
PERF → APPROACH → Enter WIND, OAT and QNH PERF → SEND>

BEFORE DESCENT
PRESSURIZATION CHECK / VERIFY DEST ELV
ANTI-ICE SYSTEMS AS REQ.
ALTIMETER SET/CHECK
LANDING DATAS (V _{APP} , V _{REF} , ...) CHECK/SET (FMS)
LANDING LIGHT AS REQ.

DESCENT
→ AUTOPILOT: Use VNAV or VS mode → ALTIMETER: SET LOCAL below TA (FL18)
Below 10,000 ft: → Reduce speed to 250 KIAS max (FF~ 300 PPH) → LANDING LIGHTS: ON

BEFORE APPROACH
PERF APPROACH (FMS) CONFIRM
MINIMUMS SET
FUEL TRANSFER SELECTOR OFF
FLAPS 15°
PASS SAFETY BUTTON ON
PRESSURIZATION < 0.5 PSI before landing
EICAS CHECK

APPROACH

@ ~ 20 NM
→ Speed: 180-200 KIAS
→ Set Flaps 15° below 200 KIAS

@ IF (Intermediate Fix)
→ Check NAV Source switched to NAV1
→ Autopilot: set APPR ON

@ ~ 15 NM
→ Speed: 140-160 KIAS

@ FAF (Final Approach Fix) or @2,000ft AGL
→ set Landing Gear DOWN
→ set Flaps FULL (below 160 KIAS)

BEFORE LANDING

LANDING GEAR

CHECK 3 GREEN

FLAPS

CHECK FULL (35°)

SPOILERS

RETRACTED

PRESSURIZATION

CHECK ZERO DIFFERENTIAL

AIRSPPEED

VREF

AUTOPILOT & YAW DAMPER

DISENGAGE

LANDING

@ 3 NM or ~ 1,000 ft AGL
→ Speed: 98-113 KIAS
→ Autopilot OFF / Yaw Damper OFF

@ 30 ft AGL
→ Throttle to IDLE
→ slowly flare

@ Touchdown
→ Extend SPOILERS (after nosewheel touchdown)
→ apply BRAKES (after nosewheel touchdown)

AFTER LANDING

SPOILERS

RETRACTED

FLAPS

FULL UP

LANDING LIGHTS

OFF

TAXI LIGHTS

ON

STROBE LIGHTS

OFF

PITOT/STATIC HEAT 1&2

OFF

ANTI-ICE SYSTEMS

AS REQ.

SHUTDOWN

PARKING BRAKES

SET

THROTTLE

IDLE

ANTI-ICE SYSTEMS

ALL OFF

PASS SAFETY BUTTON

OFF

CLIMATE CONTROL

OFF

STBY FLIGHT DISPLAY SWITCH

OFF

EMERGENCY LIGHTS

OFF

AVIONICS SWITCH

OFF

ENGINE RUN/STOP 1&2

STOP

EXTERIOR LIGHTS

ALL OFF

BATTERY

OFF

ALL ENGINE GO-AROUND

TO/GA BUTTON

PUSH

THROTTLE

SET TAKEOFF

PITCH ATTITUDE

7.5 then AS REQ.

FLAPS

15°

LANDING GEAR

UP

YAW DAMPER

ON

AUTOPILOT

AS REQ.

FLIGHT MANAGEMENT SYSTEM

MENUS

MSG Messages

DIR Direct-To

IDX Index

TUN Frequencies (COM, NAV, ...)

FPLN Flight plan

LEGS Waypoints

DEP ARR Departure/Arrival: SID, STAR, APPROACH

DSPL MENU Edit PFD, MFD options

MFD ADV Select waypoint on MFD

MFD DATA Show Datas

VNAV

Edit VNAV settings:
PERF → VNAV

Altitude format for constraints in flight plan:
18000 or FL180
5000A = AT or ABOVE 5000ft
5000B = AT or BELOW 5000ft
5000A6000B = AT or ABOVE 5000ft AND AT or BELOW 6000ft

Create HOLD
IDX → HOLD → NEW HOLD

FMS – CUSTOM WAYPOINTS

ADD CUSTOM WAYPOINTS IN LEGS

Method 1: IDENT/±DIST/NAME
DIST can be negative or positive (ex: BODIL/5)

Method 2: IDENTBRG/DIST/NAME
BRG has always 3 numbers (ex: BODIL008/5)

Method 3: IDENTBRG/IDENTBRG/NAME
BRG has always 3 numbers (ex: BODIL045/DABUK280)

Method 4:
(N or S)DDMM.MM(W or E)DDDMM.MM/NAME
(ex: N4338.71E00128.92)

DATABASE

Custom waypoints are stored in:
IDX → PAGE2 → DATABASE → WPT LIST

Add a Waypoint in the Database:
IDX → PAGE2 → DATABASE → DEFINE WPT



- Elapse Time
- Escape Button for Menu
- PFD Menu
- Swap NAV source
- Warning & Caution Alarm Indicator
- Baro
- Speed Refs Menu
- COM, NAV, DME, ADF Switches & Volumes
- Right Engine Alternator
- Master Battery Switch
- Left Engine Alternator
- Avionics Switch
- Emergency Lights
- Standby Flight Display
- Manual Fuel Boost Pump (L & R)
- Cabin Pressure Dump Switch
- Fuel Transfer Switch (L & R Tank)
- Cockpit Temperature
- Manual Engine Ignition (L & R)
- Pressure Source
- Parking Brakes
- MFD Display Buttons
- Wing/Engine Anti-Ice
- ENG Only Anti-Ice
- Pitot Tubes & Static Ports Heat
- Wing Light
- PFD Display Formats
- Terrain & Weather Overlays
- TCAS Traffic Overlay
- TO/GA
- Interior Light
- Autopilot Functions
- Landing Gear
- Copilot Fan Speed
- Cabin Fan Speed
- Cabin Temperature
- PFD & MFD Dimming
- Panel Dimming
- Passenger Lights
- Pulse Light
- Exterior Lights
- Engine Run/Stop
- Spoilers / Speed Brakes
- Flaps
- Throttle
- Engine Starters
- Engine Starters Disengage
- Aileron Trim
- Elevation Trim
- Secondary Elevation Trim Btn
- Ruder Trim