

# OPERATING LIMITATIONS TABLE OF CONTENTS

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# STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

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License Number	Licensee Name	License Type	Expiration Date
123456789	John Doe	Commercial Driver License	08/31/2025
987654321	Jane Smith	Operator License	09/15/2025
246813579	Michael Johnson	Commercial Driver License	10/01/2025
135792468	Sarah Williams	Operator License	11/10/2025
876543210	David Brown	Commercial Driver License	12/05/2025
345678901	Emily Davis	Operator License	01/20/2026
678901234	Robert Miller	Commercial Driver License	02/15/2026
901234567	Laura Wilson	Operator License	03/01/2026
456789012	Christopher Moore	Commercial Driver License	04/10/2026
789012345	Amanda Taylor	Operator License	05/05/2026
012345678	Matthew Anderson	Commercial Driver License	06/01/2026
321098765	Stephanie White	Operator License	07/15/2026
654321098	Andrew Garcia	Commercial Driver License	08/10/2026
987654321	Megan Martinez	Operator License	09/05/2026
210987654	Joshua Hernandez	Commercial Driver License	10/01/2026
543210987	Kyle Lopez	Operator License	11/10/2026
876543210	Olivia Gonzalez	Commercial Driver License	12/05/2026
109876543	Isaac King	Operator License	01/20/2027
432109876	Grace Lee	Commercial Driver License	02/15/2027
765432109	Benjamin Walker	Operator License	03/01/2027
098765432	Chloe Young	Commercial Driver License	04/10/2027
321098765	Lucas Allen	Operator License	05/05/2027
654321098	Sophia King	Commercial Driver License	06/01/2027
987654321	Leo Green	Operator License	07/15/2027
210987654	Aria Baker	Commercial Driver License	08/10/2027
543210987	Oliver Adams	Operator License	09/05/2027
876543210	Scarlett Baker	Commercial Driver License	10/01/2027
109876543	Jack Nelson	Operator License	11/10/2027
432109876	Madison Hill	Commercial Driver License	12/05/2027
765432109	William Scott	Operator License	01/20/2028
098765432	Isabella King	Commercial Driver License	02/15/2028
321098765	James Lee	Operator License	03/01/2028
654321098	Madeline King	Commercial Driver License	04/10/2028
987654321	Benjamin King	Operator License	05/05/2028
210987654	Charlotte King	Commercial Driver License	06/01/2028
543210987	Lucas King	Operator License	07/15/2028
876543210	Amelia King	Commercial Driver License	08/10/2028
109876543	Isaac King	Operator License	09/05/2028
432109876	Grace King	Commercial Driver License	10/01/2028
765432109	Benjamin King	Operator License	11/10/2028
098765432	Charlotte King	Commercial Driver License	12/05/2028
321098765	Lucas King	Operator License	01/20/2029
654321098	Amelia King	Commercial Driver License	02/15/2029
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210987654	Grace King	Commercial Driver License	04/10/2029
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876543210	Charlotte King	Commercial Driver License	06/01/2029
109876543	Lucas King	Operator License	07/15/2029
432109876	Amelia King	Commercial Driver License	08/10/2029
765432109	Isaac King	Operator License	09/05/2029
098765432	Grace King	Commercial Driver License	10/01/2029
321098765	Benjamin King	Operator License	11/10/2029
654321098	Charlotte King	Commercial Driver License	12/05/2029
987654321	Lucas King	Operator License	01/20/2030

# OPERATING LIMITATIONS

## NOTICE

CERTIFICATION AND OPERATIONAL LIMITATIONS ARE CONDITIONS OF THE TYPE AND AIRWORTHINESS CERTIFICATES AND MUST BE COMPLIED WITH AT ALL TIMES AS REQUIRED BY LAW.

### CERTIFICATION STATUS

This airplane is certified in accordance with 14 CFR 23 Normal Category and 14 CFR 36 (noise). Takeoff and Landing performance special condition certification requirements are equivalent to 14 CFR 25.

### WEIGHT LIMITATIONS

Maximum Design Ramp Weight .....	12,500 Pounds
Maximum Design Takeoff Weight .....	12,375 Pounds
Maximum Design Landing Weight .....	11,500 Pounds
Maximum Design Zero Fuel Weight .....	9300 Pounds

Takeoff weight is limited by the most restrictive of the following requirements:

Maximum Certified Takeoff Weight .....	12,375 Pounds
Maximum Takeoff Weight Permitted by Climb Requirements .....	Refer to Procedures for Use of Takeoff Performance Tables in Section IV
Takeoff Field Length .....	Refer to Procedures for Use of Takeoff Performance Tables in Section IV

Landing weight is limited by the most restrictive of the following requirements:

Maximum Certified Landing Weight .....	11,500 Pounds
Maximum Landing Weight Permitted by Climb Requirements or Brake Energy Limits .....	Refer to Procedures for Use of Approach and Landing Performance Tables in Section IV
Landing Distance .....	Refer to Procedures for Use of Approach and Landing Performance Tables in Section IV

### CENTER-OF-GRAVITY LIMITS

Center-of-Gravity Moment Envelope ..... Refer to Figure 2-1

### WEIGHT AND BALANCE DATA

The airplane must be operated in accordance with the approved loading schedule. (Refer to Weight and Balance Data in Section VI.)



# CENTER-OF-GRAVITY MOMENT ENVELOPE

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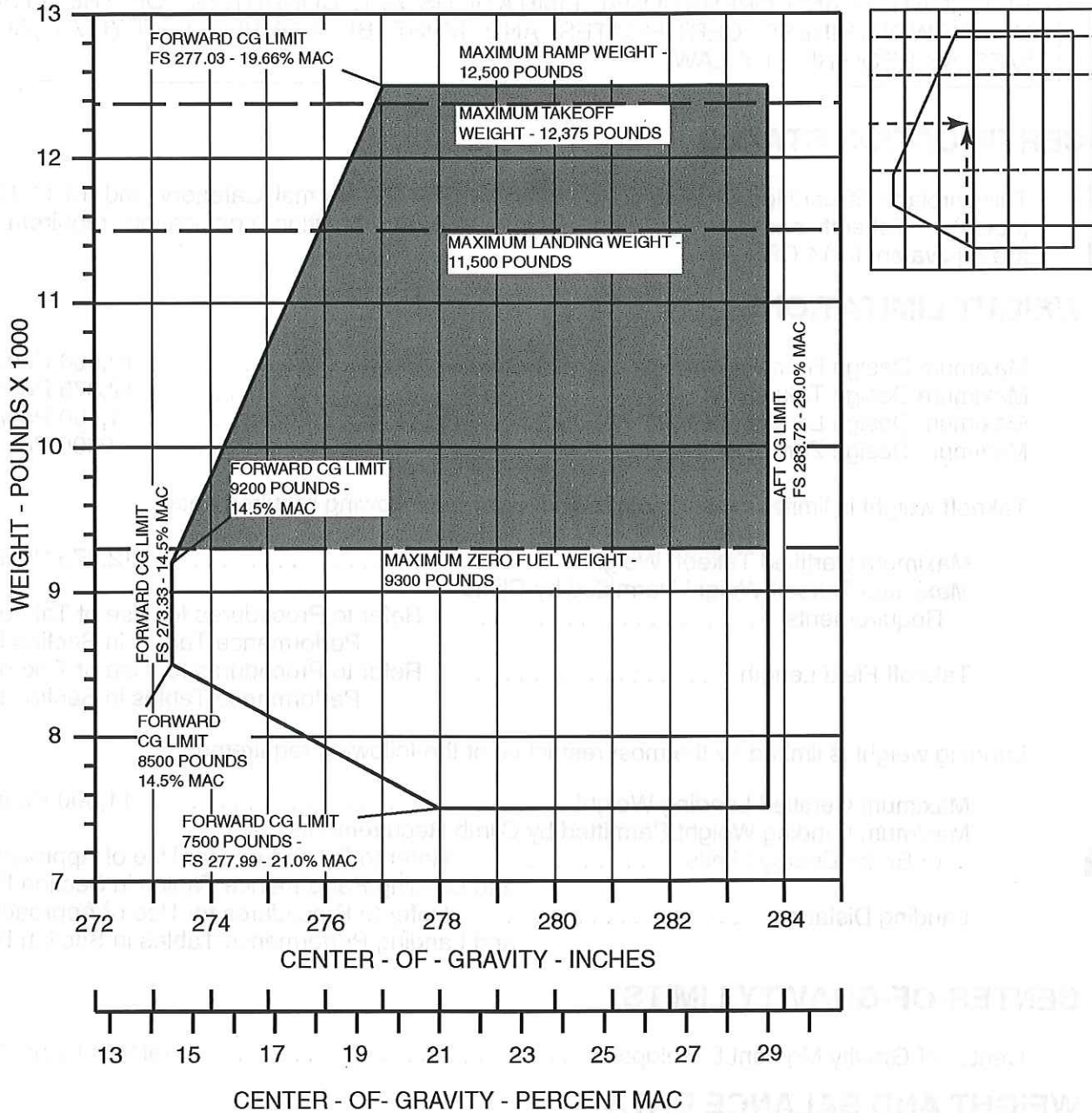


Figure 2-1



## MODEL 525A

## POWERPLANT LIMITATIONS

Engine Type .....	Williams International FJ44-2C Turbofan
Engine Operating Limits .....	Refer to Figure 2-2
Engine Temperature (ITT) Limits .....	Refer to Figures 2-3 and 2-4
Engine Overspeed Limits .....	Refer to Figures 2-5 and 2-6
Takeoff/Go-Around Thrust .....	Refer to Figure 4-8
Maximum Continuous Thrust Single-Engine .....	Refer to Figures 4-9 and 4-10
Maximum Continuous Thrust Multi-Engine .....	Refer to Figure 4-11

## ENGINE OPERATING LIMITS



OPERATING CONDITIONS	OPERATING LIMITS						
	THRUST SETTING	TIME LIMIT (MINUTES)	ITT TEMPERATURE °C	N <sub>2</sub> % TURBINE RPM	N <sub>1</sub> % FAN RPM	OIL PRESSURE PSIG	OIL TEMPERATURE °C
START			REFER TO FIGURE 2-4				-40 TO 135 (NOTE 7)
GND IDLE		CONTINUOUS		53.4 ±2.5		35 MIN. 100 MAX (NOTE 6)	-40 TO 135 (NOTE 7)
FLT IDLE		CONTINUOUS		64.3 ±2.5		35 MIN. 100 MAX (NOTE 6)	-40 TO 135 (NOTE 7)
TAKEOFF		5 (NOTE 1)	820 MAX.	98.8	105.2 (NOTE 1)	45 - 90 (NOTE 3)	10 - 135
MAXIMUM CONTINUOUS		CONTINUOUS	805 MAX.	98.8	105.2 (NOTE 2)	45 - 90 (NOTE 3)	10 - 135
TRANSIENT		---	REFER TO FIGURE 2-3	REFER TO FIGURE 2-5	REFER TO FIGURE 2-6	23 MIN. (NOTE 4) 100 MAX. (NOTE 5)	149 (NOTE 8)

## NOTES

1. Takeoff ratings that are nominally limited to 5 minutes duration may be used for up to 10 minutes for One Engine Inoperative operations. Time limit begins when throttle lever is advanced for takeoff thrust. The takeoff thrust (N<sub>1</sub>) for the airplane is defined in Figure 4-8, and is more limiting than engine rotational limits, and must be observed. Performance data, including V<sub>MCA</sub> and V<sub>MCG</sub> in Section IV, is based on use of the takeoff thrust setting.
2. Maximum continuous thrust (MCT) for the airplane is defined by Figures 4-9 and 4-10 (single-engine) and Figure 4-11 (multi-engine). These thrust limits (N<sub>1</sub>) are more limiting than engine rotational limits and must be observed. Performance data in Section IV is based on the use of the appropriate MCT setting.
3. Minimum oil pressure is 45 PSIG when operating at or above 80% N<sub>2</sub>; 35 PSIG when operating below 80% N<sub>2</sub>.
4. Minimum allowable oil pressure is 23 PSIG for up to 5 minutes when operating below 80% N<sub>2</sub>.
5. Maximum allowable oil pressure is 100 PSIG for up to 5 minutes when operating at or above 80% N<sub>2</sub>.
6. Maximum allowable oil pressure is 100 PSIG for up to 5 minutes with oil pressure returning to normal range.
7. The engine should not be operated above 80% N<sub>2</sub> until oil temperature is above 10°C.
8. Maximum oil temperature is 149°C for up to 5 minutes when operating below 80% N<sub>2</sub>.

Figure 2-2

# TEMPERATURE LIMITS (EXCEPT STARTING)

-  1. Record Incident in Log Book  
2. Determine and Correct Cause of Overtemperature
-  Perform Major Periodic Inspection

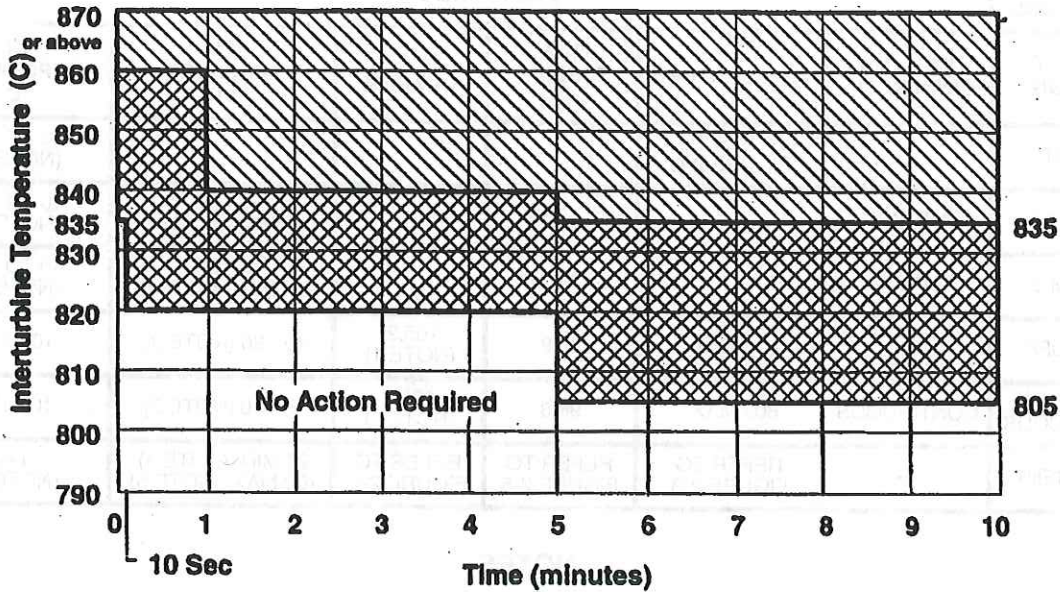


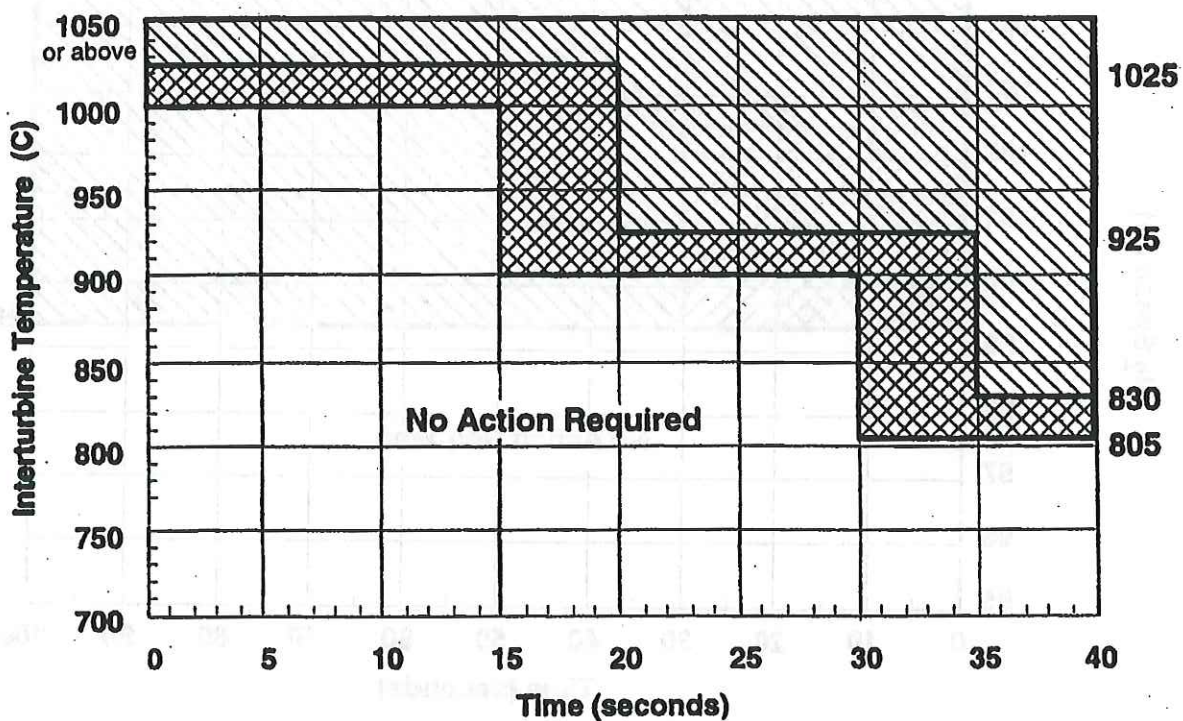


Figure 2-3



# TEMPERATURE LIMITS (STARTING)

-  1. Record Incident in Log Book  
2. Determine and Correct Cause of Overtemperature Prior to Next Start
-  Perform Hot Section Inspection



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Figure 2-4



# N<sub>2</sub> ENGINE OVERSPEED LIMITS

- 1. Record Incident in Operator's Test Log
- 2. Determine and Correct Cause of Overspeed
  
- Perform Major Periodic Inspection including NDI of HP Turbine Components and HP Turbine Blade Growth Measurement
  
- Return to Approved Facility for Compressor Zone Inspection

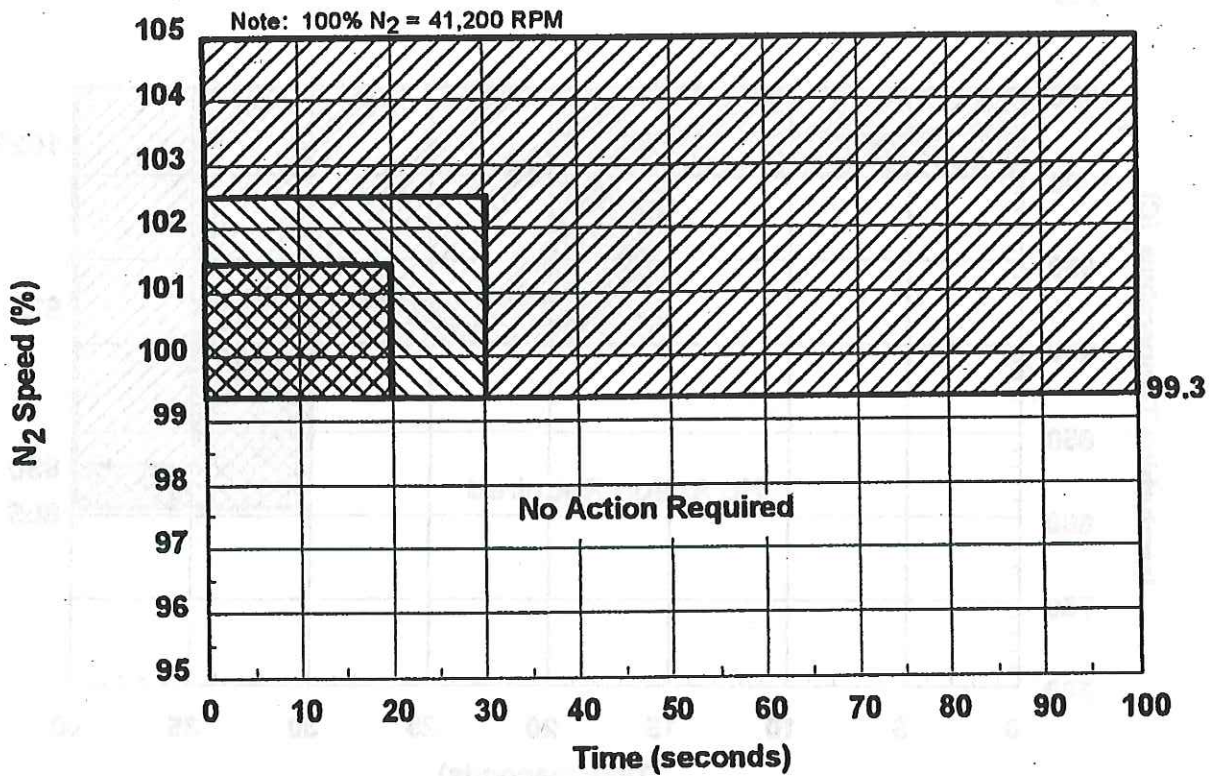




Figure 2-5

### NOTE

The N<sub>2</sub> limit of the engine as installed in the 525A is 98.8%.

# N<sub>1</sub> ENGINE OVERSPEED LIMITS

-  1. Record Incident in Log Book  
2. Determine and Correct Cause of Overspeed
-  Perform Major Periodic Inspection including NDI of LP Turbine Components

Above 110% N<sub>1</sub> return to Approved Facility for Compressor Zone Inspection

Note: 100% N<sub>1</sub> = 17,245 RPM

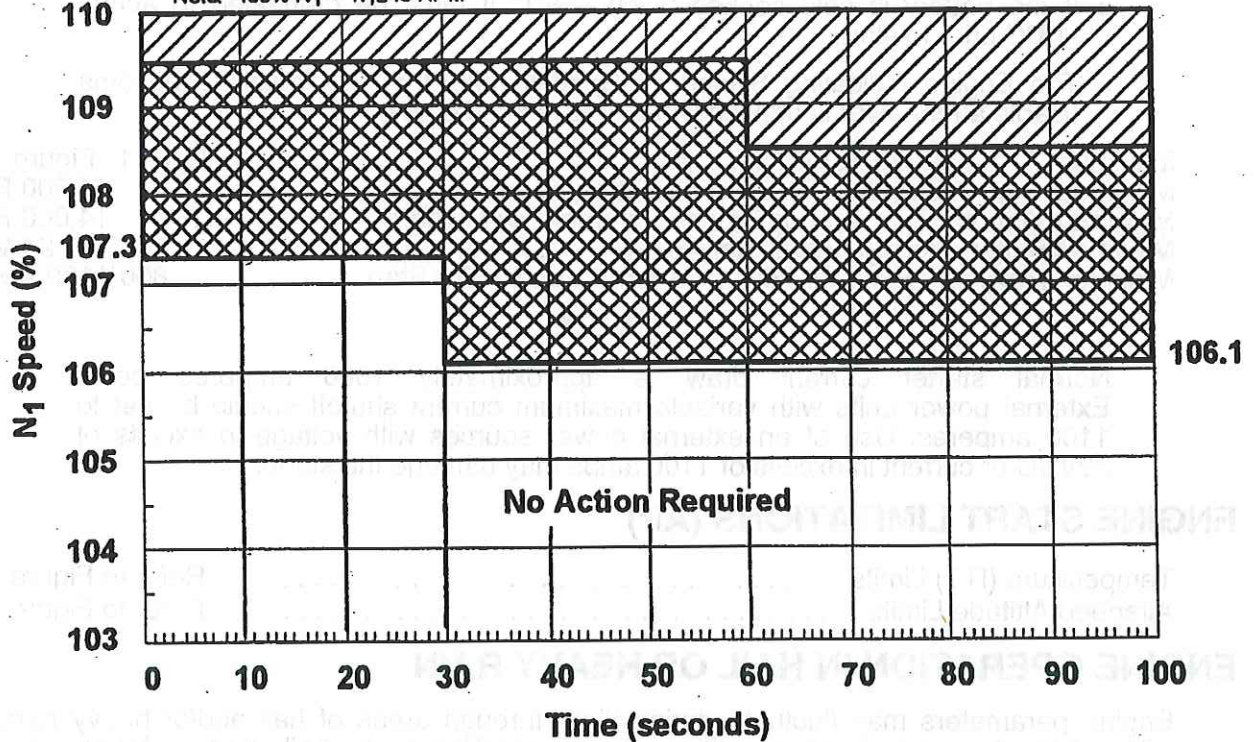


Figure 2-6

## ENGINE START LIMITATIONS (Ground)

Temperature (ITT) Limits	.....	Refer to Figure 2-4
Maximum Tailwind Component (airport elevation 10,000 feet or lower)	.....	16 Knots
Maximum Tailwind Component (airport elevation above 10,000 feet)	.....	0 Knots
Maximum Crosswind Component	.....	16 Knots

**NOTE**

Thrust attenuator switch must be in AUTO for tailwind within ±30 degrees of the tail.

Maximum Time to Light-off	.....	10 Seconds
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**NOTE**

Time to light-off is defined as the time after the throttle lever is moved from off to idle position until light-off is indicated.

(Continued Next Page)



**ENGINE START LIMITATIONS (Ground) (Continued)**

Minimum Engine Oil Temperature (indicated on EIS) ..... -40°C

**NOTE**

- If the airplane is cold soaked and the engine oil temperature is below -33°C (indicated on EIS), it must be preheated prior to conducting a battery start. A GPU must be used for the first engine start between -33°C and -40°C.
- If the battery is cold soaked below -18°C it must be preheated to above -18°C prior to start.
- The Engine Indicating System (EIS) may take 1 to 6 minutes to become usable after power is applied when cold soaked below -10°C.

Maximum Temperature For Engine Start .....	Refer to Figure 2-9
Maximum Airport Elevation For Ground Battery Start .....	14,000 Feet
Maximum Airport Elevation For Ground External Power Start .....	14,000 Feet
Minimum Battery Voltage For Battery Start .....	24 VDC
Minimum/Maximum External Power Current Capacity For Start .....	800/1100 AMPS

**NOTE**

Normal starter current draw is approximately 1000 amperes peak. External power units with variable maximum current shutoff should be set to 1100 amperes. Use of an external power sources with voltage in excess of 29VDC or current in excess of 1100 amps may damage the starter.

**ENGINE START LIMITATIONS (Air)**

Temperature (ITT) Limits .....	Refer to Figure 2-4
Airspeed/Altitude Limits .....	Refer to Figure 3-1

**ENGINE OPERATION IN HAIL OR HEAVY RAIN**

Engine parameters may fluctuate during flight through areas of hail and/or heavy rain, but will return to normal after exiting these conditions. If hail and/or heavy rain is encountered:

- Ignition must be on.
- Flight at or below 15,500 ft: Turbine speed must be maintained at 70% N<sub>2</sub> or greater.
- Flight above 15,500 ft: Turbine speed must be maintained at 76.5% N<sub>2</sub> or greater.

**ENGINE FAN INSPECTION**

Prior to engine start the Engine Fan Duct and Fan inspection in Section III, Normal Procedures, must be satisfactorily completed.

**STARTER CYCLE LIMITATIONS**

Starter Cycle Limitation .. Three engine starts per 30 minutes. Three cycles of operation with a 60-second rest period between cycles is permitted.

**NOTE**

This limitation is independent of starter power source: i.e. battery, generator assisted cross start, or external power unit.



**MODEL 525A****BATTERY LIMITATIONS**

The battery temperature warning system must be operational for all ground and flight operations.

The battery temperature warning system preflight test in Section III, Normal Procedures, must be satisfactorily completed.

If the BATT O'TEMP light illuminates during ground operation, do not take off until the proper maintenance procedures have been accomplished.

Battery Cycle Limitations: Three engine starts per hour.

**NOTE**

- If battery limitation is exceeded, ground maintenance procedures are required. Refer to Chapter 24 of the Maintenance Manual for procedure.
- Three generator assisted cross starts are equal to one battery start.
- If an external power unit is used for start, no battery cycle is counted.

**GROUND OPERATION**

Continuous engine ground static operation up to and including five minutes at takeoff thrust is limited to ambient temperatures defined in Figure 2-9.

Generator Current ..... 250 Amperes

Limit ground operation of pitot/static heat to two minutes to preclude damage to the pitot tubes and angle of attack vane.

Prolonged ground operation at high engine RPM with engine, wing, and/or windshield anti-ice on is prohibited. Do not operate with the wing anti-ice on more than one minute after the WING ANTI-ICE L/R annunciators have extinguished.

**WINDSHIELD ICE PROTECTION FLUID**

Use TT-I-735 isopropyl alcohol for windshield anti-ice.

**HYDRAULIC FLUID**

Use MIL-H-83282 Type fluids only.

**FUEL LIMITATIONS**

Fuel Boost Pumps - ON; when L and/or R FUEL LOW LEVEL caution lights illuminate or at 220 pounds or less indicated fuel.

**NOTE**

If fuel transfer is required, VERIFY the fuel boost pump is OFF on the side to which the fuel is being transferred. (For example, transfer from left tank to right tank, verify right boost pump is OFF).

Refer to Figure 2-7 for fuels that are approved for use.

## FUEL LIMITATIONS

GRADE (TYPE) (REFER TO NOTE BELOW)	SPECIFICATION	MINIMUM FUEL TEMPERATURE °C/°F	MAXIMUM FUEL TEMPERATURE °C/°F
JET A	ASTM-D1655	-40/-40	57.2/135
JET A1		-40/-40	57.2/135
JP-5	MIL-T-5624	-40/-40	57.2/135
JP-8	MIL-T-83133	-40/-40	57.2/135
JET B*	ASTM-D1655	-45/-49	56/132.8
JP-4*	MIL-T-5624	-45/-49	56/132.8

\*REFER TO FIGURE 2-7A FOR ALTITUDE OPERATING LIMITATIONS WITH JET B OR JP-4 FUEL

### NOTE

- Dupont Stadis 450 anti-static additive or equivalent is permitted to bring fuel up to 300 conductive units, but not to exceed 1 ppm (parts per million).
- SOHIO Biobor JF biocide additive is approved at a concentration not to exceed 20 ppm (270 ppm total additive) of elemental boron.
- EGME/DIEGME additive is approved at a concentration not to exceed 0.15 percent volume.

Figure 2-7

### APPROVED OILS

APPROVED BRAND	SPECIFICATION
Mobil Jet II	MIL-L-23699
Mobil 254	MIL-L-23699
Exxon 2380	MIL-L-23699

### NOTE

- Mixing of approved oils is permissible.
- Mobil Jet II is the preferred oil.

# TEMPORARY FAA APPROVED AIRPLANE FLIGHT MANUAL CHANGE

Publication Affected: Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual, Revision 6, dated 15 April 2005.

Airplane Serial Numbers Affected: Airplanes 525A-0001 thru -0299.

Description of Change: Section II, Operating Limitations, Fuel Limitations, add additional approved fuels and limitations to the existing chart, Figure 2-7.

Filing Instructions: Insert this temporary change in the Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual adjacent to page 2-12.

Removal Instructions: This temporary change must be removed and discarded when Revision 7 has been collated into the basic FAA Approved Airplane Flight Manual.

In Section II, Operating Limitations, add the following approved fuels and limitations to the existing chart, Figure 2-7:

GRADE (TYPE) REFER TO NOTE BELOW	SPECIFICATION	MINIMUM FUEL TEMPERATURE °C/°F	MAXIMUM FUEL TEMPERATURE °C/°F
RT	GOST-10227-86	-35/-31	57.2/135
TS-1	GOST-10227-86	-45/-49	57.2/135

Figure 2-7

APPROVED BY

FAA APPROVED UNDER 14 CFR PART 21 SUBPART J  
Cessna Aircraft Co.  
Delegation Option Authorization DOA-230084-CE

*Barbara J. Davis*  
BJD Asst. DOA Administrator

DATE OF APPROVAL 19 MAY 2008



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Item No.	Description	Quantity	Unit Price	Total Price
1	...	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...

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# JET B/JP-4 FUEL OPERATING LIMITATIONS

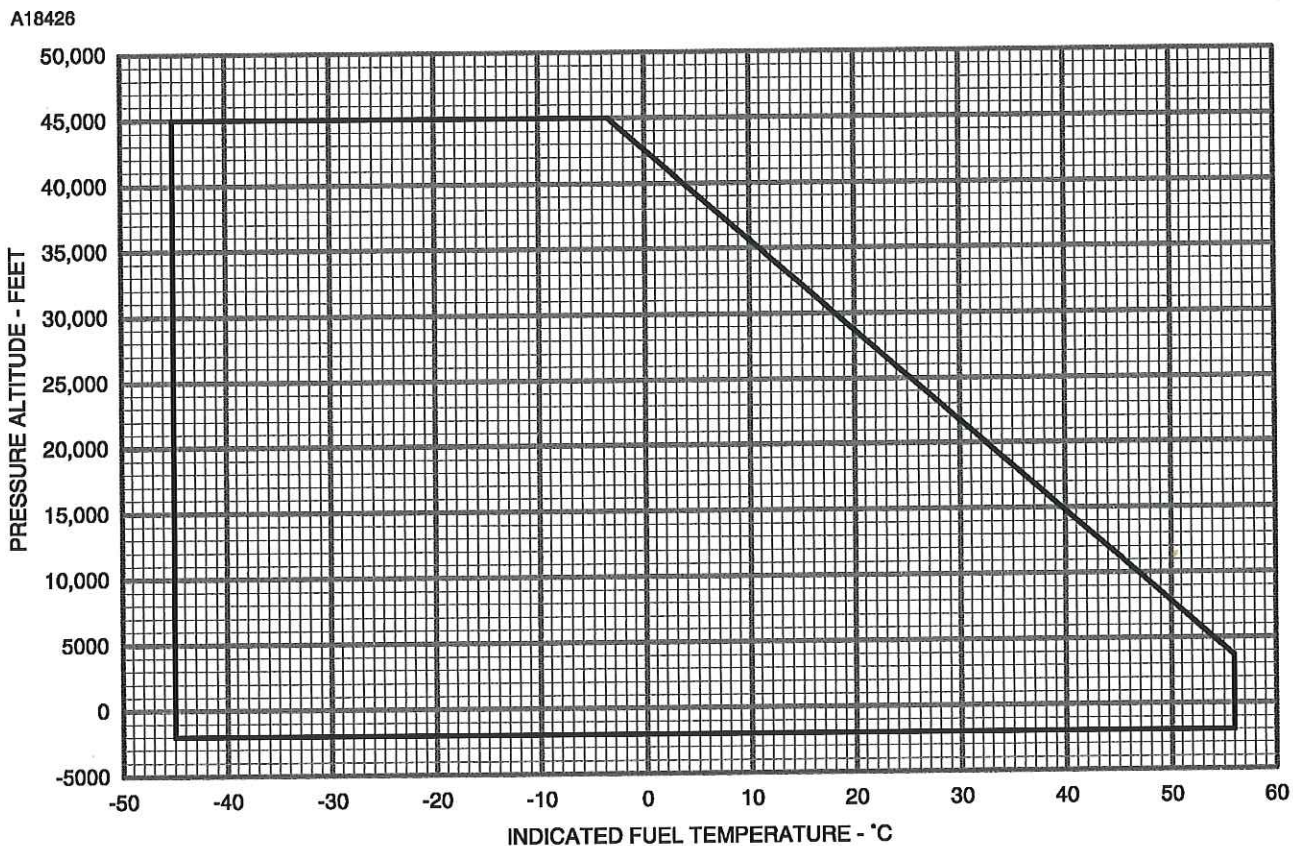
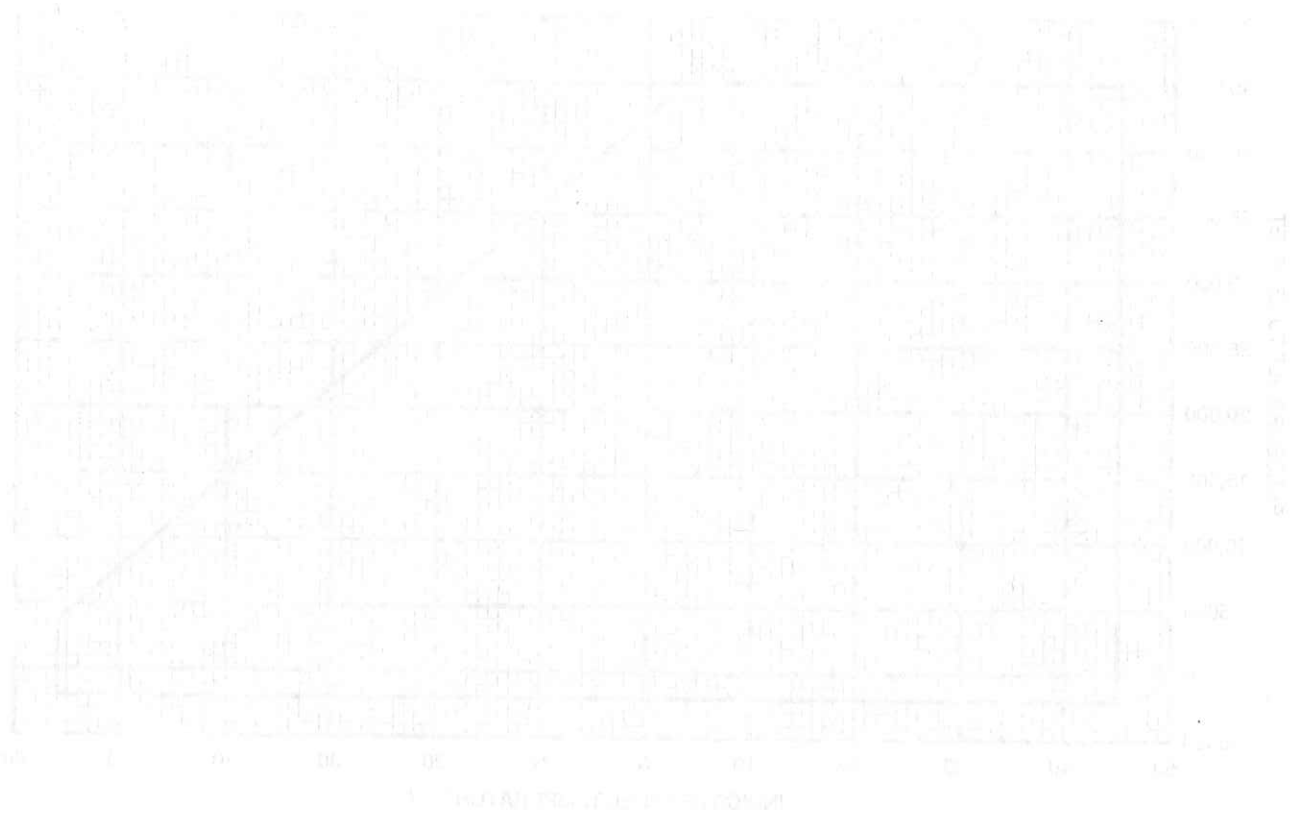


Figure 2-7A

# UNITED STATES AIR FORCE



REVISED





TEMPORARY FAA APPROVED AIRPLANE FLIGHT MANUAL CHANGE

Publication Affected: Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual, Revision 6, dated 15 April 2005.

Airplane Serial Numbers Affected: Airplanes 525A-0001 thru -0299.

Description of Change: Section II, Operating Limitations, Speed Limitations, Landing Gear  $V_{LE}$  and  $V_{LO}$  (Extending) airspeeds are both reduced to 200 KIAS.

Filing Instructions: Insert this temporary change in the Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual adjacent to page 2-15.

Removal Instructions: This temporary change must be removed and discarded when Revision 7 has been collated into the basic FAA Approved Airplane Flight Manual.

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In Section II, Operating Limitations, Speed Limitations, change the  $V_{LE}$  and  $V_{LO}$  (Extending) airspeeds as follows:

Maximum Landing Gear Extended Speed –  $V_{LE}$  ..... 200 KIAS.  
Maximum Landing Gear Operating Speed –  $V_{LO}$  (Extending) ..... 200 KIAS.

FAA APPROVED UNDER 14 CFR PART 21 SUBPART 1  
Cessna Aircraft Co.  
Delegation Option Authorization DOA-230594-CE  
*Ken Hackett* DOA Administrator  
KAA

DATE OF APPROVAL 10 JULY 2006

**UNUSABLE FUEL**

Fuel remaining in the fuel tanks when the fuel quantity indicator reads zero is not usable in flight.

**SPEED LIMITATIONS**

**Maximum Operating Limit Speeds**

M <sub>MO</sub> (Above 29,300 Feet)	0.720 Mach (Indicated)
V <sub>MO</sub> (Between 8,000 and 29,300 Feet)	275 KIAS
V <sub>MO</sub> (Below 8,000 Feet)	260 KIAS

The maximum operating limit speeds may not be deliberately exceeded in any regime of flight (climb, cruise or descent) unless a higher speed is authorized for flight test or pilot training.

Maximum Maneuvering Speeds - V<sub>A</sub> ..... Refer to Figure 2-8

Full application of rudder and aileron controls as well as maneuvers that involve angle-of-attack near the stall should be confined to speeds below maximum maneuvering speed. Refer to LOAD FACTOR limitations for pitch maneuvering limitations.

**Maximum Flap Extended Speed - V<sub>FE</sub>**

TAKEOFF AND APPROACH Position (15°)	200 KIAS
LAND Position (35°)	161 KIAS
Maximum Speed With Flaps Failed to Ground Flaps (60°)	140 KIAS

Maximum Landing Gear Extended Speed - V <sub>LE</sub>	275 KIAS
Maximum Landing Gear Operating Speed - V <sub>LO</sub> (Extending)	250 KIAS
Maximum Landing Gear Operating Speed - V <sub>LO</sub> (Retracting)	200 KIAS
Maximum Speed Brake Operation Speed - V <sub>SB</sub>	No Limit
Maximum Autopilot Operation Speed	275 KIAS or 0.720 Mach

**NOTE**

For minimum control speeds (V<sub>MCA</sub> and V<sub>MCG</sub>) refer to the respective definition in Section IV, Performance - General.

**GROUND FLAPS LIMITATIONS**

Intentional selection of Ground Flaps in flight is prohibited.

**WARNING**

**THE GROUND FLAPS POSITION IS NOT LOCKED OUT IN FLIGHT. SELECTION OF GROUND FLAPS WILL SIGNIFICANTLY INCREASE DRAG AND SINK RATE.**

**TAKEOFF AND LANDING OPERATIONAL LIMITS**

Maximum Altitude Limit	14,000 Feet
Maximum Tailwind Component	10 Knots
Maximum Ambient Temperature	Refer to Figures 2-9 and 4-7
Minimum Ambient Temperature	-54°C

(Continued Next Page)



**TAKEOFF AND LANDING OPERATIONAL LIMITS** (Continued)

The maximum asymmetric fuel differential is 200 pounds, however, controllability for safe return and landing has been demonstrated with an emergency asymmetrical difference of 600 pounds.

Cabin temperature must be held at or above 0°C (32°F) for a minimum of 20 minutes prior to takeoff after a prolonged ground soak period (two hours or longer) at ambient temperatures of -10°C (+14°F) or colder (refer to Normal Procedures, COLD WEATHER OPERATIONS). This temperature ensures proper deployment and operation of the passenger oxygen masks. A handheld thermometer is acceptable to determine cabin temperature. This limitation does not apply if there are no passengers in the cabin.

Prior to takeoff the following systems must be operational and must have satisfactorily completed the preflight checks in Section III, Normal Procedures: The Angle of Attack and Stall Warning System, Electric Elevator Trim, Rudder Bias, Flaps, and Flight Controls.

The autopilot and yaw damper must be OFF for takeoff and landing.

Engine synchronizer must be OFF for takeoff and landing.

Takeoff is prohibited when antiskid is inoperative and flaps in the UP position.

Takeoff is prohibited if both antiskid and thrust attenuators are inoperative.

Cabin must be depressurized for takeoff and landing.

Takeoffs and landings are limited to paved runway surfaces.

Refer to Section VII for landing distance corrections applicable to runway surfaces other than dry.

Speed brakes must be retracted prior to 50 feet AGL before landing.

Extending Ground Flaps during touch and go landings is prohibited.

The GND IDLE switch must be in the HIGH position when conducting touch and go landings.

Goodyear tire part number 184F68-1 and tire part number 030-611-0 (manufactured by BFGoodrich/Michelin) are the only nose tires approved. The nose tire must be inflated to 125 ±5 PSI (loaded), or 120 ±5 PSI (unloaded).

Maximum Tire Ground Speed ..... 165 Knots

**ENROUTE OPERATIONAL LIMITS**

Maximum Operating Altitude .....	45,000 Feet
Maximum Ambient Temperature .....	Refer to Figure 2-9
Minimum Ambient Temperature .....	Refer to Figure 2-9
Generator Load .....	300 Amperes Up to 41,000 Feet

**NOTE**

The cabin must be heated to a temperature of 0°C (32°F) prior to operation above FL240. This temperature ensures proper deployment and operation of the passenger oxygen masks. A handheld thermometer is acceptable to determine cabin temperature. This limitation does not apply if there are no passengers in the cabin.

## TEMPORARY FAA APPROVED AIRPLANE FLIGHT MANUAL CHANGE

Publication Affected: Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual, Revision 6, dated 15 April 2005.

Airplane Serial Numbers Affected: Airplanes 525A-0001 thru -0299.

Description of Change: Section II, Operating Limitations, add a takeoff limitation.

Filing Instructions: Insert this temporary change in the Model 525A Citation CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual adjacent to page 2-16.

Removal Instructions: This temporary change must be removed and discarded when Revision 7 has been collated into the basic FAA Approved Airplane Flight Manual.

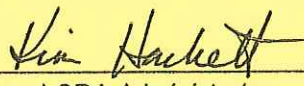
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In Section II, Operating Limitations, page 2-16, subheading TAKEOFF AND LANDING OPERATIONAL LIMITS, add the following limitation that restricts the takeoff flap configuration to Flaps UP (0°) when Type II, Type III, or Type IV anti-ice fluid is on the airplane:

### TAKEOFF AND LANDING OPERATIONAL LIMITS

Takeoff is limited to the Flaps UP (0°) position when Type II, Type III, or Type IV anti-ice fluid is on the airplane.

APPROVED BY

*for*   
Vasant Gondhalekar, Lead ODA Administrator  
Cessna Aircraft Company  
Organization Designation Authorization ODA-100129-CE  
FAA Approved Under 14 CFR Part 183 Subpart D

DATE OF APPROVAL 20 AUGUST 2010

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

INVENTORY AND LISTING OF MATERIALS

Faint text below the section header, likely a sub-header or introductory sentence.

APPROVED BY: [Signature]

DATE: [Date]



## TEMPORARY FAA APPROVED AIRPLANE FLIGHT MANUAL CHANGE

Publication Affected:	Model 525A CJ2, (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual, Revision 6, dated 15 April 2005.
Airplane Serial Numbers Affected:	Airplanes 525A-0001 thru -0299.
Description of Change:	Section II, Operating Limitations, page 2-16, add frost, ice, snow, and slush takeoff limitations, below current Takeoff and Landing Operational Limits.
Filing Instructions:	Insert this temporary change in the Model 525A CJ2 (525A-0001 thru -0299) basic FAA Approved Airplane Flight Manual, adjacent to page 2-16.
Removal Instructions:	This temporary change must be removed and discarded once Revision 7 has been collated into the basic FAA Approved Airplane Flight Manual.

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In Section II, OPERATING LIMITATIONS, page 2-16, add frost, ice, snow, and slush takeoff limitations, below current Takeoff and Landing Operational Limits:

### **TAKEOFF AND LANDING OPERATIONAL LIMITS**

Takeoff is prohibited with the following forms of contamination:

1. With frost adhering to the following critical areas:
  - Wing Leading Edge
  - Upper Wing Surface
  - Windshield
2. With ice, snow or slush adhering to the following critical areas:
  - Wing Leading Edge and Upper Wing Surface
  - Flight Control Surfaces including all hinge gaps
  - Horizontal Stabilizer
  - Vertical Stabilizer
  - Engine Inlets
  - Top of Engine Pylons
  - Top of Fuselage
  - Windshield
  - All Static Ports
  - Angle of Attack Vanes
  - Upper surface of nose forward of the windshield

### **NOTE**

Refer to Section VII for information regarding Ground Deicing and Anti-icing procedures.

3. A visual and tactile (hand on surface) check of the wing leading edge and wing upper surface must be performed to ensure the wing is free from frost, ice, snow, or slush when the outside air temperature is less than 10°C (50°F) or if it cannot be determined that the wing fuel temperature is above 0°C (32°F) and any of the following conditions exist:
  - a. There is visible moisture present (rain, drizzle, sleet, snow, fog, etc.); or
  - b. Water is present on the wing upper surface; or
  - c. The difference between the dew point and the outside temperature is 3°C (5°F) or less; or
  - d. The atmospheric conditions have been conducive to frost formation.

525AFM TC-R06-09

1. The first part of the document discusses the background and objectives of the project. It outlines the scope of the work and the roles of the various stakeholders involved. The document is intended to provide a clear understanding of the project's goals and the steps that will be taken to achieve them.

2. The second part of the document describes the methodology used in the study. This includes a detailed explanation of the data collection methods, the analysis techniques employed, and the criteria used to evaluate the results. The methodology is designed to ensure the reliability and validity of the findings.

- The first part of the document discusses the background and objectives of the project.
- The second part of the document describes the methodology used in the study.
- The third part of the document presents the results of the study.
- The fourth part of the document discusses the conclusions and recommendations.
- The fifth part of the document provides a list of references.
- The sixth part of the document contains the appendices.
- The seventh part of the document is the index.

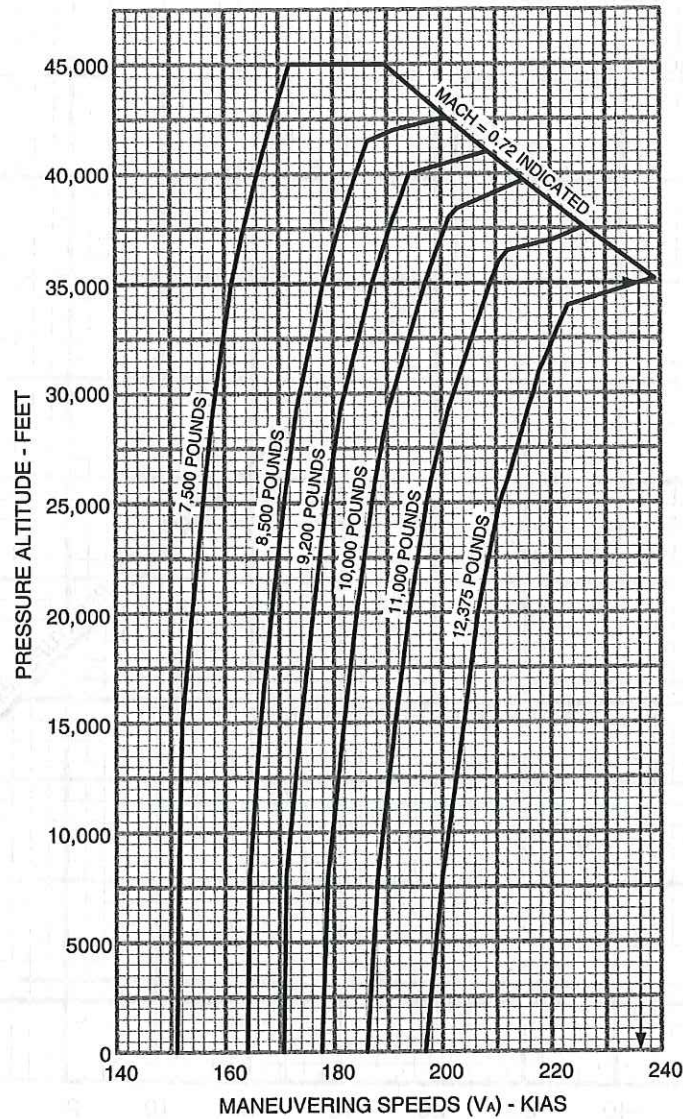
3. The third part of the document presents the results of the study. This section includes a detailed analysis of the data collected and a discussion of the findings. The results are presented in a clear and concise manner, highlighting the key findings and their implications.

4. The fourth part of the document discusses the conclusions and recommendations. This section summarizes the main findings of the study and provides practical suggestions for future research and implementation. The conclusions are based on the results of the study and are intended to guide decision-makers.



# MAXIMUM MANEUVERING SPEEDS

A10163



**EXAMPLE:**

Pressure Altitude - 35,000 FEET

Weight - 12,375 POUNDS

Maximum Maneuvering Speed - 236 KNOTS

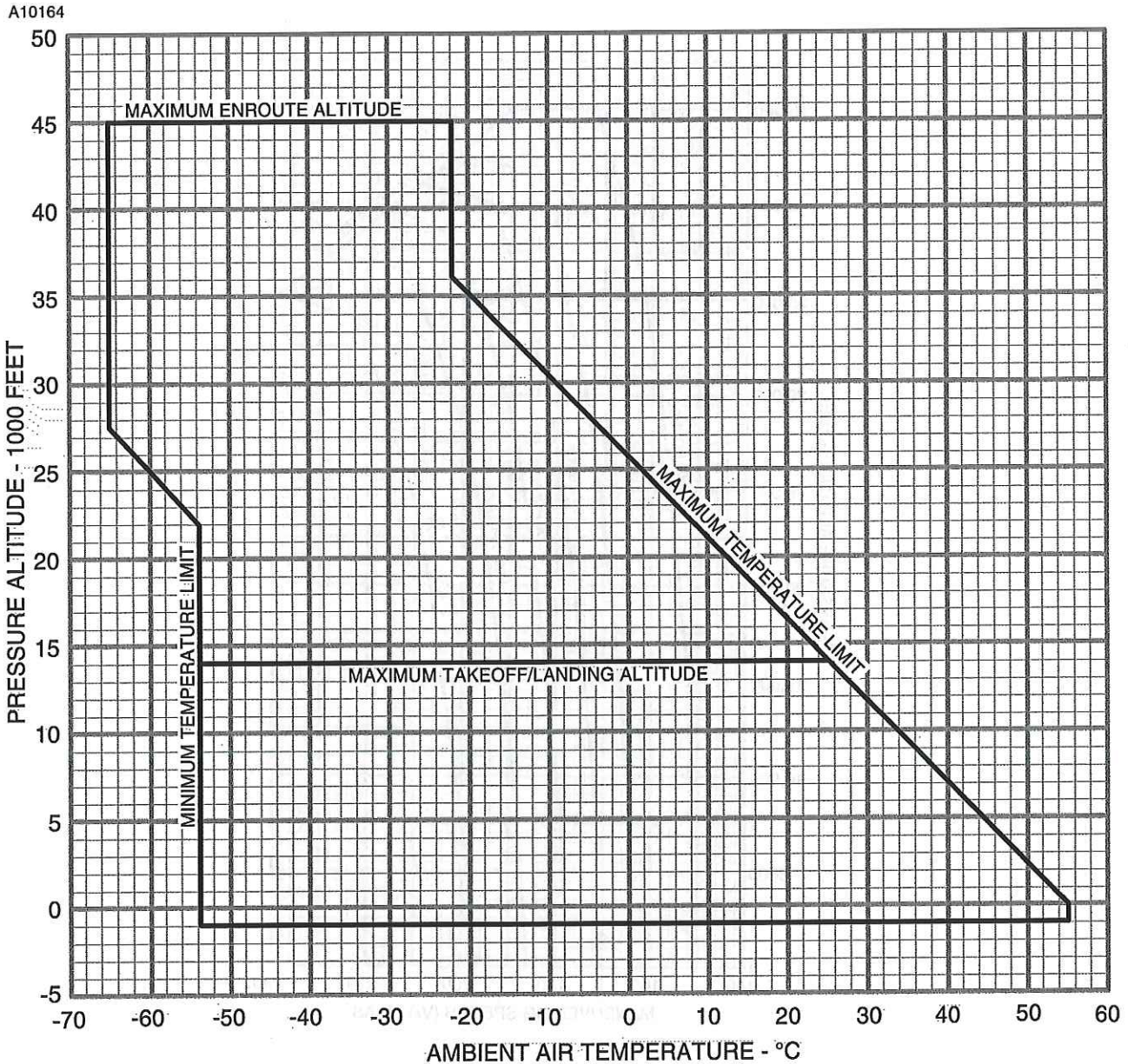
Figure 2-8

**WARNING**

**AVOID RAPID AND LARGE ALTERNATING CONTROL INPUTS, ESPECIALLY IN COMBINATION WITH LARGE CHANGES IN PITCH, ROLL, OR YAW (E.G. LARGE SIDESLIP ANGLES), AS THEY MAY RESULT IN STRUCTURAL FAILURES AT ANY SPEED, INCLUDING BELOW V<sub>A</sub>.**



# TAKEOFF/LANDING/ENROUTE TEMPERATURE LIMITATIONS



### NOTE

Ambient air temperature limit is indicated static air temperature (SAT) on the MFD.

Figure 2-9

## OPERATIONS AUTHORIZED

This airplane is approved for day and night, VFR and IFR, and flight into known icing conditions when the required equipment is installed as defined within the KINDS OF OPERATIONS EQUIPMENT LIST.

(Continued Next Page)



**OPERATIONS AUTHORIZED** (Continued)

Acrobatic maneuvers, including spins, are prohibited. Intentional stalls are prohibited above 18,000 feet.

**MINIMUM CREW**

Except where otherwise prescribed by applicable operating limitations,

Minimum crew for all operations:

1 Pilot, provided:

- a. The pilot holds a CE525(S), single pilot, type rating.
- b. The airplane is equipped for single pilot operation as specified in the Kinds of Operations Equipment List.
- c. The pilot must occupy the left pilot's seat.

Or

1 Pilot and 1 Copilot provided:

- a. The pilot in command holds a CE525(S) or CE525 (second-in-command required) type rating.

**LOAD FACTOR**

In Flight

Flaps UP Position (0°)	.....	-1.52 to +3.6G at 12,375 Pounds
Flaps TAKEOFF AND APPROACH to LAND Position (15° to 35°)	.....	0.0 to +2.0G at 12,375 Pounds

These accelerations limit the angle-of-bank in turns and limit the severity of pull-up and push-over maneuvers.

**CABIN PRESSURIZATION LIMITATIONS**

Normal Cabin Pressurization Limitations ..... 0.0 to 8.9 PSI ± 0.1 PSI Differential

**PASSENGER SEATING**

For all takeoffs and landings, adjustable seats must be fully upright and outboard and passenger seat belts and shoulder harnesses must be fastened.

Maximum passenger seating, not including 2 crew seats, is seven (eight with optional belted toilet installed).

**AUDIO CONTROL PANEL**

Operation of the audio panel in the passenger speaker (PASS SPKR) mode is limited to required passenger briefings or emergencies.

**NOTE**

- The same side cockpit speaker is muted when PASS SPKR is selected with the audio control panel rotary switch. All incoming transmissions and auxiliary audio warnings (GPWS and TCAS, if installed) will be received only through the opposite side speaker. If both audio control switches are selected to PASS SPKR, both cockpit speakers become muted. Avoid selecting both switches to PASS SPKR at the same time.
- With passenger speaker mode selected and microphone selector switch selected to oxygen mask, the cockpit speaker will not receive voice interphone communications from the oxygen mask microphone of the opposite side pilot.
- Headset audio is not affected when PASS SPKR mode is selected.

**INSTRUMENT MARKINGS****ENGINE INDICATING SYSTEM****FAN (N<sub>1</sub>) RPM INDICATORS**

Scale Markings .....	Red Line	105.3% RPM
Tape/Pointer/Digital Readout .....	Red	≥ 106.5% RPM
	Yellow	105.3 - 106.4% RPM for ≥ 30 Sec
	White	≥ 105.3% ≤ 106.4% < 30 Sec
Tape/Pointer .....	White	≤ 105.2% RPM
Digital Readout .....	Green	≤ 105.2% RPM

**NOTE**

- Tape, Pointer and Digital Readout will turn red or yellow if outside normal operating limits.
- Pointer and Digital Readout will flash for 5 seconds and then remain steady if outside normal operating limits.
- White Tape Pointer represents Green band.

**INTER-TURBINE TEMPERATURE INDICATORS**Engine Start

Scale Markings .....	Red Triangle	1002°C
	Red Line	822°C
	Yellow Band	806°C - 820°C
Tape/Pointer .....	Red	≥ 1002°C
	White	≤ 1000°C

**NOTE**

- Tape will turn red and Pointer will flash red for five seconds and then remain steady red if outside normal starting operating limits.
- Engine Running Red Line and Yellow Band do not apply while ITT Start Limit (Red Triangle) is in view.
- White Tape Pointer represents Green band.

Engine Running

Scale Markings .....	Red Line	822°C
	Yellow Band	806°C - 820°C
Tape/Pointer .....	Red	≥ 822°C
	Yellow	806°C - 820°C for > 5 min
	White	806°C - 820°C for ≤ 5 min
		≤ 805°C

**NOTE**

- Tape will turn yellow above 805°C or red above 820°C or above 805°C for more than 5 minutes. The Pointer will flash yellow or red for 5 seconds and then remain steady if outside normal operating limits.
- White Tape Pointer represents Green band.

(Continued Next Page)



**MODEL 525A**

**INSTRUMENT MARKINGS (Continued)**

**TURBINE (N<sub>2</sub>) RPM INDICATORS**

Digital Readout .....	Red	≥ 98.9% RPM
	Green	≤ 98.8% RPM

**NOTE**

Digital Readout will flash red for five seconds and then remain steady if outside normal operating limits.

**OIL TEMPERATURE INDICATORS**

Scale Markings .....	Red Band	≥ 136°C
	Yellow Band	≤ 9°C
	Green Band	10°C - 135°C
Pointer .....	Red	≥ 136°C
	Yellow	≤ 9°C
	Green	10°C - 135°C
Digital Readout .....	Red	≥ 136°C
	Yellow	≤ 9°C

**NOTE**

- Pointer and Digital Readout will flash red or yellow for five seconds and then remain steady if outside normal operating limits.
- Digital Readout is displayed only when temperature is outside normal operating limits.

**OIL PRESSURE INDICATORS**

Scale Markings .....	Red Band	≤ 22 PSI
	Yellow Band	≥ 101 PSI 23 - 34 PSI
	Green Band	91 - 100 PSI 35 - 90 PSI

**NOTE**

Oil Pressure Indicator Scale Markings do not change with varying N<sub>2</sub>.

N<sub>2</sub> < 80%

Pointer .....	Red	≤ 22 PSI
		23 - 34 PSI ≥ 5 min
		91 - 100 PSI ≥ 5 min
	Yellow	≥ 101 PSI
		23 - 34 PSI < 5 min
		91 - 100 PSI < 5 min
	Green	35 - 90 PSI

(Continued Next Page)

**INSTRUMENT MARKINGS** (Continued)**OIL PRESSURE INDICATORS** (continued)

Digital Readout .....	Red	≤ 22 PSI 23 - 34 PSI ≥ 5 min 91 - 100 PSI ≥ 5 min ≥ 101 PSI
	Yellow	23 - 34 PSI < 5 min 91 - 100 PSI < 5 min
<u>N<sub>2</sub> 80%</u>		
Pointer .....	Red	≤ 44 PSI 91 - 100 PSI ≥ 5 min ≥ 101 PSI
	Yellow	91 - 100 PSI < 5 min
	Green	45 - 90 PSI
Digital Readout .....	Red	≤ 44 PSI 91 - 100 PSI ≥ 5 min ≥ 101 PSI
	Yellow	91 - 100 PSI < 5 min

**NOTE**

- Pointer and Digital Readout will flash red or yellow for five seconds and then remain steady if outside normal operating limits, with one exception: For oil pressure 91-100 PSI, the pointer will change to yellow but digits will not be displayed until 4 minutes have elapsed, at which time both yellow digits and pointer will flash for 5 seconds then remain steady.
- Digital Readout is displayed only when pressure is outside normal operating limits.

**OTHER INSTRUMENTS**

Airspeed Indicator .....	Red Line: 275 KIAS (0.72 MACH) 260 KIAS (Below 8000 Feet)
Ammeter Indicators .....	Red Line: 300 Amps Yellow Arc: 250 - 300 Amps
Cabin Differential Pressure Indicator .....	Red Line: 8.9 PSI Green Arc: 0.0 - 8.9 PSI
Oxygen Pressure Indicator .....	Red Line: 2000 PSI Yellow Arc: 0 - 400 PSI Green Arc: 1600 - 1800 PSI
Brake and Gear Pneumatic Pressure Indicator (In nose compartment) .....	Wide Red Arc: > 2050 PSI Narrow Red Arc: 0 - 1600 PSI Wide Yellow Arc: 1600 - 1800 PSI Wide Green Arc: 1800 - 2050 PSI
Brake Hydraulic Accumulator Pressure Indicator (In nose compartment) .....	Narrow Red Arc: Underpressure Light Green Arc: Precharge Pressure Yellow Arc: Caution Wide Green Arc: Normal Operating Range Wide Red Arc: Overpressure

## MODEL 525A

**ROCKWELL COLLINS FCS-3000 INTEGRATED FLIGHT CONTROL SYSTEM**

The Rockwell Collins Pro Line 21 Avionics System Pilot's Guide for Cessna Citation CJ1/CJ2 Publication Number 523-0780351-00X117 (X is a variable and changes with revision number), dated 02/07/2000 or later revision, must be immediately available to the flight crew.

1. One pilot must remain in his/her seat with the seat belt fastened during all autopilot operations.
2. Operating in the composite mode is limited to training and display failure conditions.
3. The pilot's PFD (and copilot's if installed) and MFD must be installed and operational in the normal mode for takeoff.
4. The FCS-3000 system must be verified to be operational by a satisfactory automatic preflight test (no messages on power up) prior to each flight in which the autopilot is to be used.
5. The autopilot minimum engage height is 240 feet AGL.
6. The autopilot minimum use height during cruise is 1000 feet AGL.
7. The autopilot minimum use height is:
  - a. ILS Approach 70 Feet AGL
  - b. Non-precision Approaches 240 Feet AGL
8. Category II approaches are not approved.
9. VOR approaches must be conducted in the APPR mode.
10. The TURB mode of the flight control system must be off when conducting either VOR or LNV (FMS) approaches.
11. On dual PFD equipped aircraft, it is prohibited to display the non-coupled side Flight Director unless the coupled side Flight Director is being displayed. Failure to adhere to this limitation will result in incorrect Flight Director guidance. Use of the coupled side Flight Director by itself will operate correctly.

**STANDBY GYRO HORIZON**

A satisfactory preflight test must be accomplished on the standby gyro system in accordance with Section III, Normal Procedures.



### OXYGEN MASK

Prior to flight, the EROS oxygen mask must be checked and stowed properly in its receptacle to qualify as a quick donning oxygen mask.

#### NOTE

- Headsets, eyeglasses or hats worn by the crew may interfere with the quick donning capability of the oxygen mask.
- Unless carefully trimmed, mustaches and/or beards worn by crew members may interfere with proper sealing of the oxygen mask. Mask fit and seal should be checked on the ground prior to flight.

Continuous use of the supplemental oxygen system above 25,000 feet cabin altitude, with passengers, or above 40,000 feet cabin altitude, crew only, is prohibited.

For single pilot operations, a crew oxygen mask must be available for a passenger occupying the right crew seat. The mask must be checked during preflight and passenger briefed on its use.

### ICING LIMITATIONS

#### NOTE

- Icing conditions exist when the indicated RAT in flight is +10°C (+50°F) or below, and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet, or ice crystals).
- Icing conditions on the ground exist when the OAT or indicated RAT is +10°C (+50°F) or below and, where surface snow, slush, ice or standing water may be ingested by the engines or freeze on engine nacelles, or engine sensor probes.

Minimum airspeed for sustained flight in icing conditions (except approach and landing) is 160 KIAS.

In icing conditions, operating the airplane at other than flaps 0 for an extended period of time (except approach and landing) is prohibited.

Minimum engine N<sub>2</sub> speed for effective wing anti-icing ..... 75% N<sub>2</sub>

Minimum temperature for operation of tail deicing boots (Indicated RAT) ..... -35°C

The WING/ENGINE ANTI-ICE switches must be ENG ON or WING/ENG for operations with indicated RAT of +10°C (+50°F) or below, when flight free of visible moisture cannot be assured.

After an icing encounter with inoperative tail deice boots, maximum flap deflection is 15 degrees.

## MODEL 525A

## OPERATIONS IN SEVERE ICING CONDITIONS

### WARNING

SEVERE ICING MAY RESULT FROM ENVIRONMENTAL CONDITIONS OUTSIDE OF THOSE FOR WHICH THE AIRPLANE IS CERTIFIED. FLIGHT IN FREEZING RAIN, FREEZING DRIZZLE, OR MIXED ICING CONDITIONS (SUPERCOOLED LIQUID WATER AND ICE CRYSTALS) MAY RESULT IN ICE BUILD-UP ON PROTECTED SURFACES EXCEEDING THE CAPABILITY OF THE ICE PROTECTION SYSTEM, OR MAY RESULT IN ICE FORMING AFT OF THE PROTECTED SURFACES. THIS ICE MAY NOT SHED WHEN THE ICE PROTECTION SYSTEMS ARE USED, AND MAY SERIOUSLY DEGRADE THE PERFORMANCE AND CONTROLLABILITY OF THE AIRPLANE.

All wing icing inspection lights must be operative prior to flight into known or forecast icing conditions at night.

### NOTE

This supersedes relief provided by the Master Minimum Equipment List.

Severe icing conditions that exceed those for which the airplane is certificated shall be determined by the following visual cues:

1. Unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice.
2. Accumulation of ice on the upper surface of the wing aft of the protected area.

If one or more of these visual cues exist:

1. Use of the autopilot is prohibited.
2. Immediately request priority handling from Air Traffic Control to facilitate a route or altitude change to exit the icing conditions.
3. Leave flaps in current position, do not extend or retract.
4. Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
5. If unusual or uncommanded roll control movement is observed, reduce angle-of-attack.

Since the autopilot, when installed and operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when:

1. Unusual lateral trim is required while the airplane is in icing conditions.
2. Autopilot trim warnings are encountered while the airplane is in icing conditions.

## KINDS OF OPERATIONS EQUIPMENT LIST

This airplane may be operated in day or night VFR or IFR and flight into known icing conditions when the appropriate equipment is installed.

The following equipment list identifies the systems and equipment upon which type certification for each kind of operation was predicated. The systems and items of equipment listed must be installed and operable unless:

1. The airplane is approved to be operated in accordance with a current Minimum Equipment List (MEL) issued by the FAA.

Or;

(Continued Next Page)



## KINDS OF OPERATIONS EQUIPMENT LIST (Continued)

2. An alternate procedure is provided in the basic FAA Approved Airplane Flight Manual for the inoperative state of the listed equipment and all limitations are complied with.

## NOTE

The following systems and equipment list does not include all equipment required by the 14 CFR Parts 91 and 135 Operating Requirements. It also does not include components obviously required for the airplane to be airworthy such as wings, primary flight controls, empennage, engine, etc.

SYSTEM and/or COMPONENT	KIND OF OPERATION					COMMENTS
	V F R D A Y	V F R N I D G H T	I F R D A Y	I F R N I D G H T	I C I N G	
<b>AVIONICS</b>						
1) VHF Transceiver	*	*	1*	1*	1*	* or as required by operating regulation
2) Static Wicks	13*	13*	13*	13*	13*	* 15 total installed; 1 may be missing from any control surface, no more than 2 total may be missing
3) Transponder	*	*	1*	1*	1*	* or as required by operating regulation
4) VHF NAV Receiver	*	*	1*	1*	1*	* or as required by operating regulation
5) Cockpit Voice Recorder	*	*	*	*	*	* required when six or more passenger seats are installed and operating rules require two pilots
<b>ELECTRICAL</b>						
1) Battery	1	1	1	1	1	
2) Battery Overheat Annunciator	1	1	1	1	1	
3) DC Generator	2	2	2	2	2	
4) DC Generator Annunciator	2	2	2	2	2	
5) DC Loadmeter	2	2	2	2	2	
6) DC Voltmeter and Select Switch	1	1	1	1	1	
<b>ENVIRONMENTAL/PRESSURIZATION</b>						
1) Bleed Air Shutoff Valve	2	2	2	2	2	
2) Cabin Bleed Air Flow Control Valve	1	1	1	1	1	
3) Outflow Valve/Safety Valve	2	2	2	2	2	
4) Primary Door Seal	1	1	1	1	1	
5) Secondary Door Seal	1	1	1	1	1	required above FL310
6) Pressurization Controller	1	1	1	1	1	
7) Emergency Press Dump Valve	1	1	1	1	1	
8) Fresh Air Fan	1	1	1	1	1	
(Continued Next Page)						



## MODEL 525A

## KINDS OF OPERATIONS EQUIPMENT LIST (Continued)

SYSTEM and/or COMPONENT	KIND OF OPERATION					COMMENTS
	V F R D A Y	V F R N I G H T	I F R D A Y	I F R N I G H T	I C I N G	
<b>ENVIRONMENTAL/PRESSURIZATION</b> (Continued)						
9) Defog Fan	1	1	1	1	1	
10) Differential Press/Cabin Altitude Gage	1	1	1	1	1	
11) Cabin Temperature Control System (except air conditioner)	1	1	1	1	1	
12) Duct Over Temperature Annunciator	1	1	1	1	1	
13) Cabin Altitude Warning System	1	1	1	1	1	required above FL240
<b>EQUIPMENT AND FURNISHINGS</b>						
1) Exit Sign (lighted)	2	2	2	2	2	
2) Seat Belt	*	*	*	*	*	* one per occupied seat
3) Shoulder Harness	*	*	*	*	*	* crew seats and all occupied passenger seats
<b>FIRE PROTECTION</b>						
1) Engine Fire Detection System	2	2	2	2	2	
2) Engine Fire Extinguisher System	2	2	2	2	2	
3) Portable Fire Extinguisher	1	1	1	1	1	
<b>FLIGHT CONTROLS</b>						
1) Flap Position Indicator	1	1	1	1	1	
2) Flap System (including annunciators)	1	1	1	1	1	
3) Trim Tab Position Indicator (rudder, aileron, and elevator)	3	3	3	3	3	
4) Trim Systems (rudder, aileron, and elevator)	3	3	3	3	3	
5) Stick Shaker System	1	1	1	1	1	
6) Speed Brake System (both sides)	1	1	1	1	1	
7) Rudder Bias System	1	1	1	1	1	
<b>FLIGHT/NAVIGATION INSTRUMENTS</b>						
1) Airspeed Indicator	2	2	2	2	2	Dual PFD or Single PFD & Copilot Airspeed
2) Sensitive Altimeter	2	2	2	2	2	Dual PFD or Single PFD & Copilot Altimeter
3) Single PFD (Primary Flight Display)	1*	1*	1*	1*	1*	* Includes AHRS 1 & 2, ADC 1
(Continued Next Page)						

## KINDS OF OPERATIONS EQUIPMENT LIST (Continued)

SYSTEM and/or COMPONENT	KIND OF OPERATION					COMMENTS
	V F R D A Y	V F R N I G H T	I F R D A Y	I F R N I G H T	I C I N G	
<b>FLIGHT/NAVIGATION INSTRUMENTS (Continued)</b>						
4) Dual PFD (Primary Flight Display)	2*	2*	2*	2*	2*	* includes AHRS 1 & 2, ADC 1 & 2
5) MFD (Multi-Function Display)	1	1	1	1	1	
6) Vertical Speed Indicator	0	0	2	2	2	
7) Standby Altimeter/Airspeed	1	1	1	1	1	
8) Standby NAV 1 HSI	1	1	1	1	1	
9) Standby Attitude Indicator	1	1	1	1	1	
10) Copilot's Attitude Indicator	1	1	1	1	1	applicable to Single PFD installations
11) Copilot's HSI	1	1	1	1	1	applicable to Single PFD installations
12) Clock	0	0	1	1	1	
13) Magnetic Compass	1	1	1	1	1	
<b>FUEL/ENGINE</b>						
1) Fuel Boost Pumps (including annunciators)	2	2	2	2	2	
2) Fuel Flow Indicator System **	2	2	2	2	2	
3) Fuel Quantity System **	2	2	2	2	2	
4) Fuel Transfer System (including annunciator)	1	1	1	1	1	
5) Firewall Shutoff System	2	2	2	2	2	
6) Fuel Low Level Annunciators	2	2	2	2	2	
7) Fuel Low Pressure Annunciators	2	2	2	2	2	
8) Engine Driven Fuel Pump	2	2	2	2	2	
9) Dual Igniter System, Each Engine (including indicator lights)	2	2	2	2	2	
10) Engine Indicators (N <sub>1</sub> , ITT, N <sub>2</sub> , Oil Pressure, and Oil Temperature) **	2	2	2	2	2	
11) Engine Oil Pressure Annunciators	2	2	2	2	2	
12) Hydraulic Pressure On Annunciator	1	1	1	1	1	
13) Hydraulic Flow Low Annunciators	2	2	2	2	2	
14) Thrust Attenuators	2*	2*	2*	2*	2*	*For thrust attenuators stowed, refer to Abnormal Procedures, DISPATCH WITH THRUST ATTENUATORS STOWED
15) Standby N <sub>1</sub> Indicator	1	1	1	1	1	

\*\* These items are part of the Engine Indicating System (EIS) displayed on the MFD.

## MODEL 525A

## KINDS OF OPERATIONS EQUIPMENT LIST (Continued)

SYSTEM and/or COMPONENT	KIND OF OPERATION					COMMENTS
	V F R D A Y	V F R N I G H T	I F R D A Y	I F R N I G H T	I C I N G	
<b>ICE AND RAIN PROTECTION</b>						
1) Engine Anti-Ice System (including annunciators)	2	2	2	2	2	
2) Wing Anti-Ice System (including annunciators)	0	0	0	0	2	
3) Windshield Anti-Ice System (including annunciators and including rain removal doors)	1*	1*	1*	1*	2	* pilot's required for ground defog and rain removal
4) Pitot-Static and AOA Heat (including annunciators)	2*	2*	2*	2*	2*	* single AOA system
5) Tail Deice System (including annunciators)	0	0	0	0	1	
6) Glareshield Ice Detect Lights	0	0	0	2*	2*	* required for night ice detection
<b>LANDING GEAR/BRAKES</b>						
1) Landing Gear Position Indicator	3	3	3	3	3	
2) Unsafe Indicator	1	1	1	1	1	
3) Landing Gear Aural Warning System	1	1	1	1	1	
4) Emergency Extension System	1	1	1	1	1	
5) Power Brake System	1	1	1	1	1	
6) Antiskid System (including annunciator)	1*	1*	1*	1*	1*	* for inoperative antiskid, refer to Abnormal Procedures, DISPATCH WITH ANTISKID INOPERATIVE
7) Emergency Brake System	1	1	1	1	1	
<b>LIGHTING</b>						
1) Cockpit and Instrument Light System	0	1	0	1	0	
2) Landing Lights	0	2	0	2	0	
3) Navigation Light	0	3	0	3	0	
4) Anti-collision Light (Wing Tip Strobe)	0	2	0	2	0	
5) Wing Inspection Light	0	0	0	1*	1*	* required for night ice detection
6) Passenger Safety System	1	1	1	1	1	
<b>OXYGEN</b>						
1) Oxygen System Including Pressure Gage	1	1	1	1	1	required if unpressurized or if flight is above FL240
2) Passenger Masks	*	*	*	*	*	* if any passenger seat is occupied, the number of installed masks must equal the number of installed passenger seats plus one
3) Crew Oxygen Mask	2*	2*	2*	2*	2*	* one for each occupied crew seat



## KINDS OF OPERATIONS EQUIPMENT LIST (Continued)

SYSTEM and/or COMPONENT	KIND OF OPERATION					COMMENTS
	V F R D A Y	V F R N I G H T	I F R D A Y	I F R N I G H T	I C I N G	
<b>WARNING/CAUTION</b>						
1) Annunciator Panel	1	1	1	1	1	pilot's is required for single pilot operations; both required for two crew pilot's is required for single pilot operations; both required for two crew * all audio warnings are required (Verbal Warning System) * all audio warnings are required (Tone Warning System) * all are required
2) Master Caution	1	1	1	1	1	
3) Master Warning	1	1	1	1	1	
4) Audio Warnings (red annunciators, engine fire, dual generator fail, autopilot, minimums, altitude, and landing gear) or	*	*	*	*	*	
4) Tone Warnings (autopilot, minimums, altitude, and landing gear)	*	*	*	*	*	
5) Overspeed Warning System	1	1	1	1	1	
6) Miscellaneous Annunciators (DME, display fan, nose avionics fan, thrust attenuator stow)	*	*	*	*	*	
<b>MISCELLANEOUS EQUIPMENT</b>						
1) FAA Approved Airplane Flight Manual	1	1	1	1	1	* one required for each occupied seat
2) Collins Pro Line 21 Pilot's Guide	1	1	1	1	1	
3) Approved FMS Pilot's Manual	2	2	2	2	2	
4) Hand Microphones	*	*	*	*	*	
5) Passenger Briefing Cards						

**SINGLE PILOT**

The following are required when the airplane is operated with a crew of one pilot; per applicable operating rules:

- 1) Operable FCS-3000 Autopilot
- 2) Headset with microphone (must be worn).
- 3) FAA Approved Pilots' Abbreviated Checklist, Cessna PN 525ACL-03 or later approved revision.
- 4) Provisions for storage and retention of navigation charts, accessible to the pilot from the pilot station.