SECTION 2
LIMITATIONS

TABLE OF CONTENTS

Page

Introduction 2-3
Airspeed Limitations 2-4
Airspeed Indicator Markings 2-5
Power Plant Limitations 2-6
Power Plant Instrument Markings 2-10
Miscellaneous Instrument Markings 2-11
Preflight 2-12
Weight Limits 2-13
Center of Gravity Limits 2-13
Maneuver Limits 2-13
Flight Load Factor Limits 2-14
Flight Crew Limits 2-14
Kinds of Operation Limits 2-14
  Required Equipment 2-15
    Day VFR 2-15
    Night VFR 2-15
    IFR 2-16
    Flight into Known Icing 2-16
    Cold Weather Operations 2-16
Fuel Limitations 2-17
Maximum Operating Altitude Limit 2-19
Outside Air Temperature Limits 2-19
Maximum Passenger Seating Limits 2-20
Other Limitations 2-20
  Flap Limitations 2-20
Type II, Type III or Type IV Anti-ice Fluid Takeoff Limitations 2-20
Flap Limitations 2-20
  Airspeed Limitations 2-20
Flight in Known Icing Visual Cues - As Required by AD 96-09-15, Paragraph (a) (1) 2-21
Placards 2-22

INTRODUCTION

Section 2 includes operating limitations, instrument markings, and basic placards necessary for the safe operation of the airplane, its engine, standard systems and standard equipment.

WARNING

THE LIMITATIONS INCLUDED IN THIS SECTION AND IN SECTION 9 HAVE BEEN APPROVED BY THE FEDERAL AVIATION ADMINISTRATION. OBSERVANCE OF THESE OPERATING LIMITATIONS IS REQUIRED BY FEDERAL AVIATION REGULATIONS.

NOTE

- Operation in countries other than the United States may require observance of other limitations, procedures or performance data.
- Refer to Section 9, Supplements, of this Pilot's Operating Handbook for amended operating limitations, operating procedures, performance data and other necessary information for supplemental systems.
- The airspeeds listed in the Airspeed Limitations chart (Figure 2-1) and the Airspeed Indicator Markings chart (Figure 2-2) are based on Airspeed Calibration data shown in Section 5 with the normal static source. If the alternate static source is being used, ample margins should be observed to allow for the airspeed calibration variations between the normal and alternate static sources as shown in Section 5.

Your Cessna is certificated under FAA Type Certificate No. A37CE as Cessna Model No. 208.

AIRSPEED LIMITATIONS

Airspeed limitations and their operational significance are shown in Figure 2-1.

	SPEED	KCAS	KIAS	REMARKS
V_{MO}	Maximum Operating Speed	175	175	Do not exceed this speed in any operation.
V_A	Maneuvering Speed: 8000 lbs 6300 lbs 4600 lbs	 150 133 114	 150 134 115	Do not make full or abrupt control movements above this speed.
V_{FE}	Maximum Flap Extended Speed: 0° - 10° Flaps 10° - 20° Flaps 20° - 30° Flaps	 175 150 125	 175 150 125	Do not exceed these speeds with the given flap settings.
	Maximum Window Open Speed	175	175	Do not exceed this speed with window open.

Figure 2-1. Airspeed Limitations

AIRSPEED INDICATOR MARKINGS

Airspeed indicator markings and their color code significance are shown in Figure 2-2.

MARKING	KIAS VALUE OR RANGE	REMARKS
White Arc	50 - 125	Full Flap Operating Range. Lower limit is maximum weight V_{SO} in landing configuration. Upper limit is maximum speed permissible with flaps fully extended.
Green Arc	63 - 175	Normal Operating Range. Lower limit is maximum weight V_S at most forward C.G. with flaps retracted. Upper limit is maximum operating speed.
Red Line	175	Maximum speed for all operations.

Figure 2-2. Airspeed Indicator Markings

POWER PLANT LIMITATIONS

Engine Manufacturer: Pratt & Whitney Canada Inc.

Engine Model Number: PT6A-114

Engine Operating Limits: Refer to Figure 2-3.

Fuel Grade and Approved Fuel Additives: Refer to Fuel Limitations.

Oil Grade (Specification):

Oil conforming to Pratt & Whitney Engine Service Bulletin No.1001, and all revisions or supplements thereto, **must be used**. Refer to Section 8 for a listing of approved oils. When adding oil, service the engine with the type and brand which is currently being used in the engine.

CAUTION

DO NOT MIX TYPES OR BRANDS OF OIL.

Hartzell Propeller

Manufacturer: Hartzell Propeller Products.
Propeller Model Number: HC-B3MN-3/M10083.
Propeller Diameter:
Maximum: 100 inches.
Minimum: 100 inches (No cutoff approved).
Propeller Blade Angle at 42-inch Station:
Feathered: 78.4°.
Low Pitch: 9°.
Maximum Reverse: -18°.

McCauley Propeller

Manufacturer: McCauley Propeller Division.
Propeller Model Number: 3GFR34C703/106GA-0.
Propeller Diameter:
Maximum: 106 inches.
Minimum: 104 inches.
Propeller Blade Angle at 30-inch Station:
Feathered: 88°.
Low Pitch: 15.6°.
Maximum Reverse: -14°.

(Continued Next Page)

POWER PLANT LIMITATIONS (Continued)

Propeller System Operating Limits:

An overspeed governor check shall be performed before the first flight of the day, after engine control system maintenance, or if adjustment has been made.

Engine Control Operating Limits:

Flight operation with the power lever retarded below the IDLE position is prohibited. Such positioning may lead to loss of airplane control or may result in an engine overspeed condition and consequent loss of engine power.

Operation of the emergency power lever is prohibited with the power lever out of the IDLE position.

Engine Starting Cycle Limits:

Using the airplane battery, the starting cycle shall be limited to the following intervals and sequence:

30 seconds ON - 60 seconds OFF,
30 seconds ON - 60 seconds OFF,
30 seconds ON - 30 **minutes** OFF.

Repeat the above cycle as required.

Using external power, the starting cycle shall be limited to the following intervals and sequence:

20 seconds ON - 120 seconds OFF,
20 seconds ON - 120 seconds OFF,
20 seconds ON - 60 **minutes** OFF.

Repeat the above cycle as required.

(Continued Next Page)

POWER PLANT LIMITATIONS (Continued)

ENGINE OPERATING LIMITS

POWER SETTING	TORQUE FT-LBS	MAX ITT(C°)	GAS GEN RPM% N_g (2)	PROP RPM	OIL PRESS PSIG (3)	OIL TEMP °C (7)	SHP (9)
Takeoff	(1), (4)	805 (10)	101.6	1900	85 to 105	10 to 99	600
Maximum Climb	(4), (13)	765	101.6	1900	85 to 105	0 to 99	600
Maximum Cruise	(4), (14)	740	101.6	1900	85 to 105	0 to 99	600
Idle	---	685 (15)	52 Minimum	---	40 Minimum	-40 to 99	---
Maximum Reverse (5)	1658	805	101.6	1825	85 to 105	0 to 99	600
Transient	2400 (11)	850 (6)	102.6 (6)	2090	---	0 to 99 0 to 104 (12)	---
Starting	---	1090 (6)	---	---	---	-40 Minimum	---
Maximum Rated (8)	1658	805	101.6	1900	85 to 105	10 to 99	600

Figure 2-3*. Engine Operating Limits

1. Per the Maximum Engine Torque For Takeoff figure of Section 5.
2. For every 10°C (18°F) below -30°C (-22°F) ambient temperature, reduce maximum allowable N_g by 2.2%.
3. Normal oil pressure is 85 to 105 PSI at gas generator speeds above 72% with oil temperature between 60° and 70°C (140° and 158°F). Oil pressures below 85 PSI are undesirable and should be tolerated only for the completion of the flight, preferably at a reduced power setting. Oil pressures below normal should be reported as an engine discrepancy and should be corrected before the next flight. Oil pressures below 40 PSI are unsafe and require that either the engine be shut down or a landing be made as soon as possible using the minimum power required to sustain flight.

(Continued Next Page)

POWER PLANT LIMITATIONS (Continued)

4. Propeller RPM must be set so as not to exceed 600 SHP with torque above 1658 ft-lbs.
5. Reverse power operation is limited to one minute.
6. These values are time limited to two seconds.
7. For increased oil service life, an oil temperature between 74° and 80°C (165° and 176°F) is recommended. A minimum oil temperature of 55°C (130°F) is recommended for fuel heater operation at takeoff power.
8. Use of this rating is intended for abnormal situations (i.e., maintain altitude or climb out of extreme icing or windshear conditions).
9. Deleted
10. When the ITT exceeds 765°C, this power setting is time limited to 5 minutes.
11. These values are time limited to 20 seconds.
12. Up to 10 minutes for airplanes equipped with Service Kit SK208-147.
13. Per the Maximum Engine Torque for Climb figure in Section 5.
14. Per the Cruise Performance tables in Section 5.
15. Increase Ng to keep within limit.

POWER PLANT INSTRUMENT MARKINGS

Power plant instrument markings and their color significance are shown in Figure 2-4.

INSTRUMENT	RED LINE (Min Limit)	GREEN ARC (Normal Operating)	YELLOW ARC (Caution Range)	STRIPED GREEN ARCH (Alt Power Range)	RED LINE (Max Limit)
Torque Indicator (1)	---	0 - 1658 ft-lbs	---	1658 - 1970 ft-lbs (2)	1970 ft-lbs
Inter-Turbine Temperature Indicator (ITT) (3)	---	100°C to 740°C	765°C - 805°C (7)	---	805°C
Gas Generator % RPM Indicator (4)	---	52% to 101.6%	---	---	101.6%
Propeller RPM Indicator	---	1600 RPM to 1900 RPM	---	---	1900 RPM
Oil Pressure Gage	40 PSI	85 PSI to 105 PSI	40 PSI to 85 PSI	---	105 PSI
Oil Temperature Gage	-40°C	+10°C to +99°C	-40°C to +10°C, +99°C to +104°C (6)	---	+99°C (5), +104°C (6)

1. Incorporates red wedge and T.O. at 1658 ft-lbs to indicate the takeoff position.
2. Propeller RPM must be set so as not to exceed 600 SHP with torque above 1658 ft-lbs.
3. Incorporates red triangle at 1090°C and starting temperature limitation box labeled **ST. LIM 1090°**.
4. 100% N_g is 37,500 RPM.
5. Maximum oil temperature indicated by a red wedge.
6. Airplanes 20800364 and On and Airplanes 20800001 thru 00363 Incorporating SK208-174
7. Airplanes 20800001 thru 00276 Incorporating SK208-170, but not Incorporating SK208-80.

Figure 2-4. Power Plant Instrument Markings

MISCELLANEOUS INSTRUMENT MARKINGS

Miscellaneous instrument markings and their color code significance are shown in Figure 2-5.

INSTRUMENT	RED LINE (Minimum Limit)	GREEN ARC (Normal Operating)	YELLOW ARC (Caution Range)	RED LINE (Maximum Limit)
Fuel Quantity Indicators (1)	E (2.5 Gal Unusable Each Tank)	---	---	---
Fuel Quantity Indicators (2)	E (2.8 Gal Unusable Each Tank)	---	---	---
Suction Gage (3)	---		---	----
To 15,000 Ft		4.5 - 5.5 in.hg.		
To 20,000 Ft		4.0 - 5.5 in.hg.		
To 25,000 Ft		3.5 - 5.5 in.hg.		
To 30,000 Ft		3.0 - 5.5 in.hg.		
Propeller Anti-Ice Ammeter	----	20 AMPS to 24 AMPS		--
Oxygen Pressure Gage	---	1550 PSI to 1850 PSI	0 PSI to 300 PSI	2000 PSI

Figure 2-5. Miscellaneous Instrument Markings

1. S/N 20800001 thru 20800130 not modified with Service Kit KS208-52:
   Total unusable when operating with both tanks on is 3.0 U.S. gallons.
2. S/N 20800001 thru 20800130 modified with Service Kit SK208-52, and SN 20800131 and on:
   Total unusable when operating with both tanks on is 3.6 U.S. gallons.
3. Incorporates stepped green arc with 15K, 20K, 25K and 30K markings at the appropriate step locations to indicate the altitude (in thousands of feet) at which the lower limit of that arc segment is acceptable.

PREFLIGHT

Takeoff is prohibited with any frost, ice, snow, or slush adhering to the wings, horizontal stabilizer, vertical stabilizer, control surfaces, propeller blades, and/or engine inlets.

WARNING

EVEN SMALL AMOUNTS OF FROST, ICE, SNOW OR SLUSH ON THE WING MAY ADVERSELY CHANGE LIFT AND DRAG. FAILURE TO REMOVE THESE CONTAMINANTS WILL DEGRADE AIRPLANE PERFORMANCE AND MAY PREVENT A SAFE TAKEOFF AND CLIMBOUT.

VISUAL AND TACTILE CHECK

If the OAT is below 10°C (50°F) a tactile check of the wing leading edge and upper surface per Section 4 of the POH is required in addition to a visual inspection. During ground icing conditions, takeoff must be accomplished within 5 minutes of completing the tactile inspection unless the airplane is operated per FAR 135.227(b)(3).

Ground icing conditions are defined as:

1. The OAT is 2°C (36°F) or below and visible moisture is present (i.e. rain, drizzle, sleet, snow, fog, water is present on the wing, etc.), or,
2. The OAT is 5°C (43°F) or below and conditions are conducive to active frost formation (e.g. clear night with a dew point temperature/OAT difference of 3°C (5°F) or less).

Takeoff is prohibited if frost, ice or snow may reasonably be expected to adhere to the airplane between the tactile check and takeoff (e.g. snow near freezing temperature with no deicing/anti-ice fluid application).

Refer to the preflight procedures in Section 4, of this basic Pilot's Operating Handbook.

WEIGHT LIMITS

Maximum Ramp Weight: 8035 lbs.
Maximum Takeoff Weight: 8000 lbs.
Maximum Landing Weight: 7800 lbs.

NOTE

Refer to Section 6 of this handbook for recommended loading arrangements in the Standard 208 and Cargomaster.

CENTER OF GRAVITY LIMITS

Center of Gravity Range:

Forward: 162.41 inches (7.29% MAC) aft of datum at 4200 lbs. or less, with straight line variation to 174.06 inches (24.83% MAC) aft of datum at 8000 lbs.

Aft: 184.35 inches (40.33% MAC) aft of datum at all weights up to 8000 lbs.

Reference Datum: 100 inches forward of front face of firewall.

Mean Aerodynamic Chord (MAC):
The leading edge of the MAC is 157.57 inches aft of the datum.
The MAC length is 66.40 inches.

MANEUVER LIMITS

This airplane is certificated in the normal category. The normal category is applicable to aircraft intended for non-aerobatic operations. These include any maneuvers incidental to normal flying, stalls (except whip stalls), lazy eights, chandelles, and turns in which the angle of bank is not more than 60°.

WARNING

AEROBATIC MANEUVERS, INCLUDING SPINS, ARE NOT APPROVED.

FLIGHT LOAD FACTOR LIMITS

Flight Load Factors:

* Flaps Up: +3.8g, -1.52g
* Flaps Down (All Settings): +2.4g

* The design load factors are 150% of the above, and in all cases, the structure meets or exceeds design loads.

FLIGHT CREW LIMITS

For passenger configuration, minimum crew is one pilot in the left seat. For cargo configuration, minimum crew is two pilots or one pilot in the left seat if an approved autopilot is installed and operative.

KINDS OF OPERATION LIMITS

This airplane is equipped for day VFR and may be equipped for night VFR and/or IFR operations and for flight-into-known icing conditions. The operating limitations placard reflects the limits applicable at the time of Airworthiness Certificate issuance.

The following equipment lists identify the systems and equipment upon which type certification for each kind of operation was predicated. These systems and equipment items must be installed and operable for the particular kind of operation indicated. Reference should also be made to the Equipment List furnished with the airplane for additional equipment information. The pilot is responsible for determining the airworthiness of his airplane for each flight and for assuring compliance with current operating FAR's.

(Continued Next Page)

KINDS OF OPERATION LIMITS (Continued)

REQUIRED EQUIPMENT

DAY VFR:

Airspeed Indicator (1)
Altimeter (1)*
Auxiliary Boost Pump System
BATTERY HOT And BATTERY OVERHEAT Annunciators (NiCad Batteries Only)
Elevator Trim System (Manual)
Engine Ignition System
Flap Motor (1)
Flap Position Indicator
FUEL PRESS LOW Annunciator
Fuel Quantity Indicators (2)
Fuel Selectors Off Warning System
Generator
Inertial Separator System
ITT Indicator
Magnetic Compass
N_g% RPM Indicator
OIL PRESS LOW Annunciator
Oil Pressure Gage
Oil Temperature Gage
Outside Air Temperature Gage
Overspeed (Airspeed) Warning System
Overspeed Governor
Pilots Operating Handbook/AFM
Pitot-Static System (1)
Propeller RPM Indicator
Seat Belts (Each Occupant)
Shoulder Harnesses (Front Seats)
Slip-Skid Indicator (1)
Stall Warning System
Torque Indicator
Trim Position Indicators (3)
Volt/Ammeter

NOTE

* When a servoed altimeter is installed, a functioning pneumatic altimeter is also required.

NIGHT VFR:

All Equipment Required For Day VFR
Instrument Lights
Navigation Lights (3)
Strobe Lights (2)

(Continued Next Page)

KINDS OF OPERATION LIMITS (Continued)
REQUIRED EQUIPMENT (Continued)

IFR:

All Equipment Required For Day VFR	Directional Indicator -Gyro Stabilized (1)
All Equipment Required For Night VFR (if a night flight)	Navigation Radios (As required)
Attitude Indicator -Gyro Stabilized (1)	Sensitive Altimeter (1)*
Clock	Suction Gage (If gyros are vacuum powered)
Communications Radio (VHF) (1)	Turn And Bank Indicator Or Turn Coordinator (1)

NOTE

*When a servoed altimeter is installed, a functioning pneumatic altimeter is also required.

Flight-Into-Known Icing:

All Equipment Required For Day VFR, Night VFR, And/Or IFR, As Applicable	Pitot-Static Tube Heat System
Horizontal Stabilizer De-Ice Boots	Standby Electrical System
Ice Detector Light (For night flight)	Stall Warning System Heater
Propeller Anti-Ice Boots	Vertical Stabilizer De-Ice Boot
Cargo Pod Nosecap De-Ice Boot	Windshield Anti-Ice Panel
Main Landing Gear Lower Leading Edge De-Ice Boots	Wing And Wing Strut De-Ice Boots
Low Airspeed Awareness System	

Cold Weather Operations:

The airplane must be equipped with the following equipment when operating at an airport in ground icing conditions as defined under "Visual/Tactile Check" in the LIMITATIONS section:

1. Pilot Inspection Assist Handle.

FUEL LIMITATIONS

2 Standard Tanks (S/N 20800001 thru 20800130 Not Modified with SK208-52):

Total Fuel-
- Both Tanks: 335.0 U.S. gallons.
- Each Tank: 167.5 U.S. gallons.

Usable Fuel-
- Both Tanks On: 332.0 U.S. gallons total.
- Single Tank On: 165.0 U.S. gallons per tank.

Unusable Fuel-
- Both Tanks On: 3.0 U.S. gallons total.
- Single Tank On: 2.5 U.S. gallons per tank.

2 Standard Tanks (S/N 20800001 thru 20800130 Modified with SK208-52, and 20800131 and On):

Total Fuel-
- Both Tanks: 335.6 U.S. gallons.
- Each Tank: 167.8 U.S. gallons.

Usable Fuel-
- Both Tanks On: 332.0 U.S. gallons total.
- Single Tank On: 165.0 U.S. gallons per tank.

Unusable Fuel-
- Both Tanks On: 3.6 U.S. gallons total.
- Single Tank On: 2.8 U.S. gallons per tank.

NOTE

To achieve full capacity, fill fuel tank to the top of the filler neck. Filling fuel tanks to the bottom of the fuel filler collar (level with flapper valve) allows space for thermal expansion and results in a decrease in fuel capacity of four gallons per side (eight gallons total).

With low fuel reserves (FUEL LOW annunciator(s) ON), continuous uncoordinated flight with the turn and bank "ball" more than one-quarter ball out of center position is prohibited. Unusable fuel quantity increases when more severe sideslip is maintained.

(Continued Next Page)

FUEL LIMITATIONS (Continued)

Due to possible fuel starvation, maximum full rudder sideslip duration time is three minutes.

Maximum fuel unbalance in flight is 200 lbs.

NOTE

With the fuel selectors turned OFF, there is adequate fuel in the fuel reservoir tank for approximately two minutes forty-six seconds of maximum continuous power operation or approximately eight minutes twenty seconds of idle power operation. A warning horn will sound with both fuel selectors turned OFF.

Fuel Grade (Specification) and Fuel Additives:

The following fuel grades and fuel additives are approved:

CAUTION

AVIATION GASOLINE IS RESTRICTED TO EMERGENCY USE AND SHALL NOT BE USED FOR MORE THAN 150 HOURS IN ONE OVERHAUL PERIOD; A MIXTURE OF ONE PART AVIATION GASOLINE AND THREE PARTS OF JET A, JET A-1, JP-1 OR JP-5 MAY BE USED FOR EMERGENCY PURPOSES FOR A MAXIMUM OF 450 HOURS PER OVERHAUL PERIOD.

Fuel Grade Specification and Fuel Additives

FUEL GRADE	FUEL SPECIFICATION (1)	MINIMUM FUEL TEMPERATURE FOR TAKEOFF (2)	SPECIFIC WEIGHT (POUNDS PER U.S. GALLON AT 15°C)	COLOR
Jet A	ASTM-D1655	-35°C	6.7	Colorless
Jet A-1	ASTM-D1655	-40°C	6.7	Colorless
Jet-B	ASTM-D1655	-45°C	6.5	Colorless
JP-1	MIL-L-5616	-35°C	6.7	Colorless
JP-4	MIL-T-5624	-54°C	6.5	Colorless
JP-5	MIL-T-5624	-40°C	6.8	Colorless
JP-8	MIL-T-83133A	-40°C	6.7	Colorless
Av Gas (all grades) (3)	MIL-G-5572 ASTM-D910	-54°C	6.0	80/87 Red 100LL Blue 100/130 Green

(Continued Next Page)

FUEL LIMITATIONS (Continued)

1. For all flight operations in ambient temperatures below 5C, the fuel used must contain an anti-icing fuel additive in compliance with MIL-I-27686 (EGME), or MIL-I-85470 (DIEGME). For operations where the entire flight and ground profile will be conducted in ambient temperatures above 5C, the use of an anti-icing fuel additive in compliance with MIL-I-27686 (EGME), or MIL-I-85470 (DIEGME) is optional. If fuel with EGME or DIEGME is not used, the operator is required to use one of the biocidal additives listed in Section 8 of this manual. Any operation with fuel that does not contain EGME or DIEGME, will require the operator to verify appropriate concentration levels of EGME or DIEGME in the aircraft's fuel system whenever these components are reintroduced.

CAUTION

JP-4 AND JP-5 FUELS PER MIL-T-5624 AND JP-8 FUEL PER MIL-T-83133A CONTAIN THE CORRECT PREMIXED QUANTITY OF AN APPROVED TYPE OF ANTI-ICING FUEL ADDITIVE AND NO ADDITIONAL ANTI-ICE COMPOUNDS SHOULD BE ADDED.

2. Minimum starting temperature is that given or the minimum allowable oil temperature (-40°C), whichever is warmer.

NOTE

Starts may be attempted with fuel at lower temperatures providing other specified engine limitations are not exceeded.

3. When using aviation gasoline, the maximum fuel and ambient temperature for takeoff is +37°C.

Refer to Section 8 for additional approved additives and concentrations.

MAXIMUM OPERATING ALTITUDE LIMIT

Certificated Maximum Operating Altitude: 30,000 Feet.
Non-Icing Conditions: 30,000 Feet.
Icing Conditions (if so equipped): 20,000 Feet.
Any conditions with any ice on the airplane: 20,000 Feet.

OUTSIDE AIR TEMPERATURE LIMITS

(Airplanes with Standard Capacity Oil Cooler) (S/N 20800001 thru 20800145 not modified with Service Kit SK208-40)

Cold Day:
-54°C from sea level to 25,000 Feet, then straight line variation to 30,000 Feet at -63°C.

Hot Day:
Ground Operations: +53°C from sea level to 5000 Feet; ISA +37°C between 5000 feet and 12,000 Feet.
Flight Operations: ISA +30°C from sea level to 30,000 Feet.

(Airplanes with Large Capacity Oil Cooler) (S/N 20800001 thru 20800145 modified with Service Kit SK208-40 and S/N 20800146 and On with Large Cooler Installed.)

Cold Day:
-54°C from sea level to 25,000 Feet, then straight line variation to 30,000 Feet at -63°C.

Hot Day:
Ground Operations: +53°C from sea level to 5000 Feet; ISA +37°C above 5000 feet.
Flight Operations: ISA +37°C from sea level to 30,000 Feet.

Refer to Figure 5-4, ISA Conversion and Operating Temperature Limits chart, for a graphical presentation of the operating air temperature limits.

MAXIMUM PASSENGER SEATING LIMITS

A maximum of nine seats, in addition to the pilot's seat may be installed in the Passenger Version. A maximum of one seat, in addition to the pilot's seat may be installed in the Cargo Version.

OTHER LIMITATIONS

FLAP LIMITATIONS

Approved Takeoff Range: . . . . . .0° to 20°.
Approved Landing Range: . . . . . .0° to 30°.
Approved Landing Range in Icing Conditions: . . . . . .0° to 20°.

TYPE II, TYPE III OR TYPE IV ANTI-ICE FLUID TAKEOFF LIMITATIONS

FLAP LIMITATIONS

Takeoff Flaps Setting: 0°.

AIRSPEED LIMITATIONS

Takeoff Rotation Speed: 89 KIAS.

FLIGHT IN KNOWN ICING VISUAL CUES

As Required by AD 96-09-15, Paragraph (a) (1)

WARNING

SEVERE ICING MAY RESULT FROM ENVIRONMENTAL CONDITIONS OUTSIDE OF THOSE FOR WHICH THE AIRPLANE IS CERTIFICATED. 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 BE SHED USING THE ICE PROTECTION SYSTEMS, AND MAY SERIOUSLY DEGRADE THE PERFORMANCE AND CONTROLLABILITY OF THE AIRPLANE.

During flight, severe icing conditions that exceed those for which the airplane is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

1. Unusually extensive ice is accreted on the airframe in areas not normally observed to collect ice.
2. Accumulation of ice on the upper or lower surface of the wing aft of the protected area.
3. Heavy ice accumulations on the windshield, or when ice forms aft of the curved sections on the windshield.
4. Ice forms aft of the protected surfaces of the wing struts.
5. Visible rain or drizzle at temperatures below +5° C outside air temperature (OAT).
6. Droplets that splash or splatter on impact at temperatures below

NOTE

+5° C outside air temperature (OAT).This supersedes any relief provided by the Master Minimum Equipment List (MMEL).

PLACARDS

WARNING

THE FOLLOWING INFORMATION MUST BE DISPLAYED IN THE FORM OF COMPOSITE OR INDIVIDUAL PLACARDS. AS A MINIMUM, THE EXACT WORDING OF THESE PLACARDS IS REQUIRED AS SPECIFIED IN THIS SECTION. PLACARD WORDING CAN BE FROM PART NUMBERED PLACARDS OBTAINED FROM CESSNA AIRCRAFT COMPANY OR EQUIVALENT PLACARDS INSTALLED BY AN APPROVED REPAIR STATION IN ACCORDANCE WITH NORMAL MAINTENANCE PRACTICES/PROCEDURES.

1. In full view of the pilot on the sunvisor or windshield trim strip on airplanes equipped for flight into known icing:

A38999

The markings and placards installed in this airplane contain operating limitations which must be complied with when operating this airplane in the Normal Category. Other operating limitations which must be complied with when operating this airplane in this category are contained in the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

No acrobatic maneuvers, including spins, approved.

This airplane is approved for flights into icing conditions if the proper optional equipment is installed and operational. See POH for weight and altitude restrictions relating to ice.

This airplane is certified for the following flight operations as of date of original airworthiness certificate:

DAY - NIGHT - VFR - IFR

2. In full view of the pilot on the sunvisor or windshield trim strip on airplanes not equipped for flight into known icing:

A39000

The markings and placards installed in this airplane contain operating limitations which must be complied with when operating this airplane in the Normal Category. Other operating limitations which must be complied with when operating this airplane in this category are contained in the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

No acrobatic maneuvers, including spins, approved.

Flight into known or forecast icing conditions prohibited.

This airplane is certified for the following flight operations as of date of original airworthiness certificate:

DAY - NIGHT - VFR - IFR

(Continued Next Page)

PLACARDS (Continued)

3. In full view of the pilot on the sunvisor or windshield trim on airplanes not equipped for flight into known icing:

THIS AIRPLANE IS PROHIBITED FROM FLIGHT IN KNOWN OR FORECAST ICING

4.

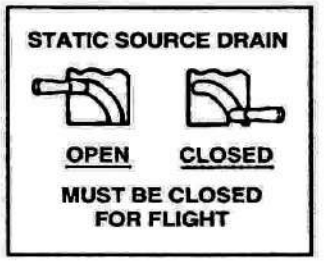
DO NOT TAKEOFF WITH ICE/FROST/SNOW ON THE AIRCRAFT

5. On control lock:

CAUTION
CONTROL LOCK
REMOVE BEFORE STARTING ENGINE

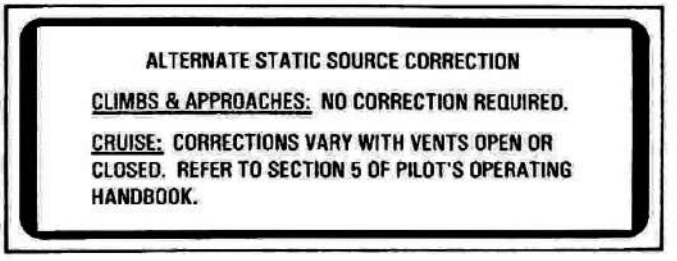
6. On left sidewall below and forward of instrument panel and (when right flight instrument panel is installed) on right sidewall below and forward of instrument panel:

A39001



7. On sunvisor or windshield trim-strip:

A39002



8. Near airspeed indicator:

MANEUVER SPEED 150 KIAS

(Early Serials Placard)

MAX WT. MANEUVER SPEED 150 KIAS
SEE POH FOR OTHER WEIGHTS

(Later Serials and Spares Placards)

(Continued Next Page)

PLACARDS (Continued)

9. Near torque indicator:

RPM	MAX TORQUE
1900	1658
1800	1751
1700	1854
1600	1970

10. A calibration card must be provided to indicate the accuracy of the magnetic compass in 30° increments.

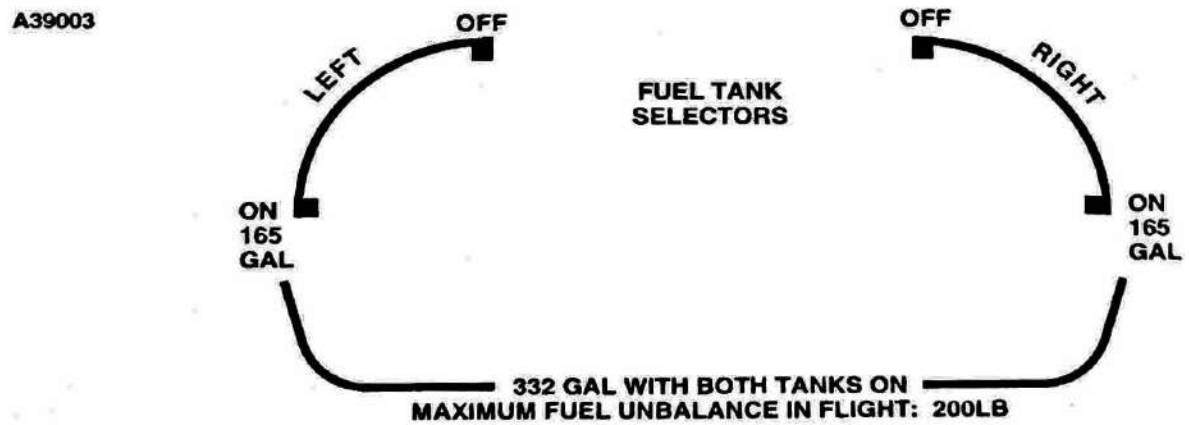
11. Near wing flap position indicator:

UP to 10°	**175 KIAS**	**(partial flap range with dark blue color code; also mechanical detent at 10°)**
10° to 20°	**150 KIAS**	**(light blue code; also, mechanical detent at 20°)**
20° to FULL	**125 KIAS**	**(white color code)**

12. Below power lever:

CAUTION
USE BETA AND REVERSE ONLY
WITH ENGINE RUNNING AND
PROPELLER OUT OF FEATHER

13. On fuel tank selector:



(Continued Next Page)

PLACARDS (Continued)

14. Adjacent to each outboard fuel tank filler cap except all spares:

A39004

JET-A-FUEL
TOTAL CAPACITY 167.8 U.S. GALLONS
ANTI-ICE ADDITIVE REQUIRED. SEE PILOT'S OPERATING HANDBOOK FOR OTHER APPROVED FUELS, QUANTITY AND TYPE OF ADDITIVE.
- GROUND TO WING TIE-DOWN FITTING.-

Adjacent to each outboard fuel tank filler cap for all spares:

A59790

(Continued Next Page)

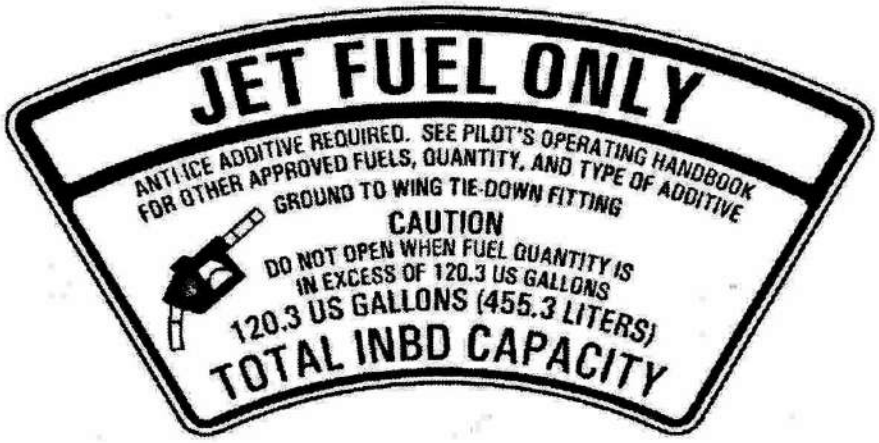
PLACARDS (Continued)

15. Adjacent to each inboard fuel tank filler cap (when installed) except for spares:

A39005

Adjacent to each inboard fuel tank filler cap (when installed) and all spares:

A41070



16. Adjacent to fuel filter:

A39006

(Continued Next Page)

PLACARDS (Continued)

17. Adjacent to fuel drain can:

A39007

EPA CAN - DRAIN
PROPERLY DISPOSE

18. On the brake fluid reservoir:

A39008

BRAKE FLUID RESERVIOR
REFILL WITH MIL-H-5606 FLUID WHEN RESERVIOR REACHES 1/2 FULL. REFILL TO WITHIN 3/4" OF.098 DIA. VENT HOLE.

(EARLY SERIALS PLACARD)

MAX
BRAKE FLUID RESERVOIR
REFILL WITH MIL-H-5606 FLUID
MIN

(LATER SERIALS AND SPARES PLACARD)

19. Adjacent to oil dipstick/filler cap (on inertial separator duct):

A39009

ENGINE OIL
TOTAL CAPACITY 14 U.S. QUARTS
DRAIN & FILL 9.5 U.S. QUARTS
TYPE: SEE PILOT'S OPERATING HANDBOOK FOR APPROVED OILS. DO NOT MIX BRANDS.
SERVICED WITH: _____

(Continued Next Page)

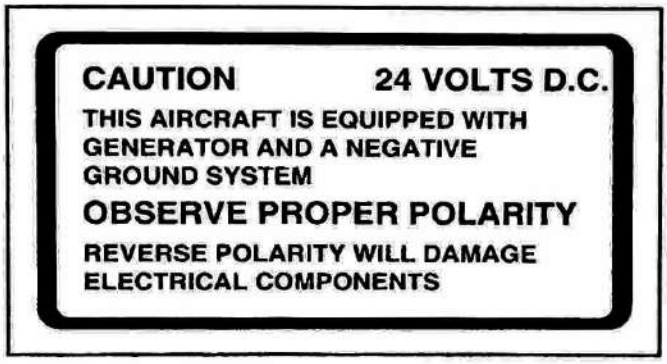
PLACARDS (Continued)

20.On side of inertial separator duct:

A39010

21.On firewall above battery tray:

A39011



22.Near ground service plug receptacle:

EXTERNAL POWER
28 VOLTS D.C. NOMINAL
800 AMP
STARTING CAPACITY MIN.
DO NOT EXCEED 1700 AMPS

23.On bottom of right hand wing just forward of aileron:

FLUX VALVE
USE NON-MAGNETIC
TOOLS AND SCREWS

(Continued Next Page)

PLACARDS (Continued)

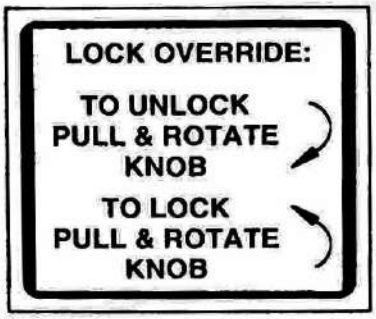
24. On each side of nose strut fairing near tow limit marking (rudder lock placard required when rudder lock installed):

WARNING
MAXIMUM
TOW
LIMIT

CAUTION
DO NOT TOW AIRCRAFT WITH RUDDER LOCK ENGAGED

25. Adjacent to left crew door inside door handle:

A39014



26. Adjacent to upper passenger door outside pushbutton and door handle (Standard 208 only):

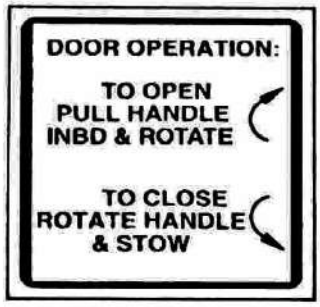
A39015

(Continued Next Page)

PLACARDS (Continued)

27. Adjacent to upper passenger door inside door handle (Standard 208 only):

A39016



28. At center of lower passenger door on inside and outside (Standard 208 only):

A39017

29. Adjacent to upper cargo door outside pushbutton and door handle:

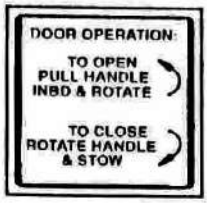
A39018

(Continued Next Page)

PLACARDS (Continued)

30. Adjacent to upper cargo door inside door handle (Standard 208 only):

A39019



31. On right sidewall in Zone 6 (Standard 208 only):

A39020

MAX BAGGAGE 325 LBS. REFER TO WEIGHT AND BALANCE DATA FOR BAGGAGE/CARGO LOADING.

32. On left and right sides of aft side of cargo barrier (when installed):

**MAX LOAD BEHIND BARRIER
2900 LBS TOTAL
ZONES FWD OF LAST LOADED
ZONE MUST BE AT LEAST
75% FULL BY VOLUME. SEE
POH FOR EXCEPTIONS.
-CHECK WEIGHT AND BALANCE-**

33. On inside of lower cargo door (Cargomaster only):

**MAX LOAD BEHIND BARRIER
2900 LBS TOTAL.
ZONES FWD OF LAST LOADED ZONE
MUST BE AT LEAST 75% FULL BY
VOLUME. SEE POH FOR EXCEPTIONS.**

-CHECK WEIGHT AND BALANCE-

**LOAD MUST BE PROTECTED FROM
SHIFTING - SEE POH -**

(Continued Next Page)

PLACARDS (Continued)

34. On right sidewall adjacent to Zone 5 (Cargo version only):

IF LOAD IN ZONE 5 EXCEEDS 400 LBS A PARTITION NET IS REQD AFT OR LOAD MUST BE SECURED TO FLOOR

35. On left and right sides of cabin in appropriate zones (Cargo version only):

ZONE 1 MAX LOAD 1410 LBS
ZONE 2 MAX LOAD 1430 LBS
ZONE 3 MAX LOAD 1410 LBS
ZONE 4 MAX LOAD 1380 LBS
ZONE 5 MAX LOAD 1270 LBS
ZONE 6 MAX LOAD 320 LBS

(Continued Next Page)

PLACARDS (Continued)

36. On inside of cargo pod doors:

FWD. COMPARTMENT MAX. WEIGHT 230 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES
CTR. COMPARTMENT MAX. WEIGHT 310 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES
AFT COMPARTMENT MAX. WEIGHT 280 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES

37. At each sidewall and ceiling anchor plate (except heavy duty anchor plates with additional structural support), and at anchor plate at center of lower cargo door (S/N 20800001 thru 20800122 incorporating SK208-46 and S/N 20800123 and on) (Cargo version only):

A39021

NOTE

All placards on the previous pages have been presented in English; however, external markings for emergency operation of doors, normal ground operation of cargo doors, and for certain servicing operations are provided in Portuguese on the airplane. Also, markings and placards indicating maximum loads in cargo compartments are provided in Portuguese.

SMOKE AND FIRE (Continued)

ENGINE FIRE DURING START ON GROUND
(Red ENGINE FIRE Annunciator On Or Off)

1. **Fuel Condition Lever - CUTOFF.**
2. **Fuel Boost Switch - OFF.**
3. **Starter Switch - MOTOR.**

CAUTION

- DO NOT EXCEED THE STARTING CYCLE LIMITATIONS; REFER TO SECTION 2.
- SHOULD THE FIRE PERSIST, AS INDICATED BY SUSTAINED INTERTURBINE TEMPERATURE, IMMEDIATELY CLOSE THE FUEL SHUTOFF AND CONTINUE MOTORING.

4. Starter Switch - OFF.
5. Fuel Shutoff - OFF (pull out).
6. Battery Switch - OFF.
7. Airplane - EVACUATE.
8. Fire - EXTINGUISH.

PLACARDS (Continued)

36. On inside of cargo pod doors:

FWD. COMPARTMENT MAX. WEIGHT 230 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES
CTR COMPARTMENT MAX. WEIGHT 310 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES
AFT COMPARTMENT MAX. WEIGHT 280 LBS. MAX. FLOOR LOADING 30 LBS. PER SQ. FT. NO SHARP EDGES

37. At each sidewall and ceiling anchor plate (except heavy duty anchor plates with additional structural support), and at anchor plate at center of lower cargo door (S/N 20800001 thru 20800122 incorporating SK208-46 and S/N 20800123 and on) (Cargo version only):

A39021