SECTION II - OPERATING LIMITATIONS

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 FAR 25.

WEIGHT LIMITATIONS

<table>
<thead>
<tr>
<th>Limitation</th>
<th>Maximum/Minimum Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Design Ramp Weight</td>
<td>20,200 Pounds</td>
</tr>
<tr>
<td>Maximum Design Takeoff Weight</td>
<td>20,000 Pounds</td>
</tr>
<tr>
<td>Maximum Design Landing Weight</td>
<td>18,700 Pounds</td>
</tr>
<tr>
<td>Maximum Design Zero Fuel Weight</td>
<td>15,000 Pounds</td>
</tr>
<tr>
<td>Minimum Flight Weight</td>
<td>12,400 Pounds</td>
</tr>
<tr>
<td>Maximum Tailcone Baggage Weight</td>
<td>700 Pounds</td>
</tr>
</tbody>
</table>

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

- Maximum Certified Takeoff Weight: 20,000 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: 18,700 Pounds
- Maximum Landing Weight Permitted by Climb Requirements or Brake Energy Limit: 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 Sheet and Model 560XL Weight and Balance Manual.
SECTION II - OPERATING LIMITATIONS

CENTER-OF-GRAVITY LIMITS ENVELOPE GRAPH

MAXIMUM RAMP WEIGHT
20,200 POUNDS

MAXIMUM TAKEOFF WEIGHT
20,000 POUNDS

MAXIMUM LANDING WEIGHT
15,700 POUNDS

MAXIMUM ZERO FUEL WEIGHT
15,000 POUNDS

MINIMUM FLIGHT WEIGHT
12,400 POUNDS

WEIGHT - POUNDS x 1000

CENTER-OF-GRAVITY - INCHES

CENTER-OF-GRAVITY - PERCENT MAC

FORM NUMBER 2008A, 17 November 1999

Figure 2-1
CERTIFICATION STATUS

This airplane is certified in accordance with FAR 25.

WEIGHT LIMITATIONS

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<th>Weight Limit</th>
</tr>
</thead>
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- 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: 18,700 Pounds
- Maximum Landing Weight Permitted by Climb Requirements or Brake Energy Limit
- 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 Sheet and Model 560XL Weight and Balance Manual.
CENTER-OF-GRAVITY LIMITS ENVELOPE GRAPH

MAXIMUM RAMP WEIGHT
20,200 POUNDS

MAXIMUM TAKEOFF WEIGHT
20,000 POUNDS

MAXIMUM LANDING WEIGHT
18,700 POUNDS

MAXIMUM ZERO FUEL WEIGHT
15,000 POUNDS

MINIMUM FLIGHT WEIGHT
12,400 POUNDS

FORM NUMBER 2008, 17 April 1998
REVISED 14 August 1998

FAA APPROVED
56XF-04
POWERPLANT LIMITATIONS

Engine Type: Pratt and Whitney Canada Inc. PW545A Turbofan
Engine Operating Limits: Refer to Figure 2-2
Inter-Turbine Temperature Limits: Refer to Figure 2-3
Engine Overspeed Limits: Refer to Figure 2-4
Takeoff/Go Around Thrust Setting (TO Detent): Refer to Figure 4-8
Maximum Continuous Thrust Setting (CLB Detent): Refer to Figure 4-9

Minimum ambient temperature for ground engine starting is – 30°C.

ENGINE OPERATING LIMITS

<table>
<thead>
<tr>
<th>OPERATING CONDITION</th>
<th>OPERATING LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX OBSERVED</td>
</tr>
<tr>
<td>OPERATING LIMITS</td>
<td>ITT °C</td>
</tr>
<tr>
<td>N₂</td>
<td>%</td>
</tr>
<tr>
<td>N₁</td>
<td>%</td>
</tr>
<tr>
<td>OIL TEMP °C</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THRUST SETTING</th>
<th>TIME LIMIT (MINUTES)</th>
<th>MAX OBSERVED</th>
<th>N₂</th>
<th>N₁</th>
<th>OIL PRESSURE</th>
<th>OIL TEMP °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF</td>
<td>5 (NOTE 4)</td>
<td>720</td>
<td>101.1</td>
<td>100</td>
<td>45 TO 140</td>
<td>10 TO 121.1</td>
</tr>
<tr>
<td>MAXIMUM CONTINUOUS</td>
<td>CONTINUOUS</td>
<td>720</td>
<td>101.1</td>
<td>100</td>
<td>45 TO 140</td>
<td>10 TO 121.1</td>
</tr>
<tr>
<td>GROUND IDLE</td>
<td>CONTINUOUS</td>
<td>N/A</td>
<td>47 (MIN) (NOTE 2)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>FLIGHT IDLE</td>
<td>CONTINUOUS</td>
<td>N/A</td>
<td>51.5 (MIN) (NOTE 3)</td>
<td>--</td>
<td>45 (MIN)</td>
<td>-40 TO 121.1</td>
</tr>
<tr>
<td>STARTING</td>
<td>N/A</td>
<td>720**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-40 MIN</td>
</tr>
<tr>
<td>TRANSIENT 20 SECONDS</td>
<td>760**</td>
<td>103*</td>
<td>102*</td>
<td>NOTE 1</td>
<td>121.1 TO 135</td>
<td></td>
</tr>
<tr>
<td>TRANSIENT 120 SECONDS</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>NOTE 1</td>
<td>121.1 TO 135</td>
</tr>
</tbody>
</table>

* Refer to Figure 2-4.
** Refer to Figure 2-3.

NOTES

1. Oil Pressure
   - Normal oil pressure is 45 to 140 PSI at N₂ speeds above 60%. Oil pressure below 45 PSI is undesirable and should be tolerated only for the completion of the flight, preferably at reduced power setting.
   - Oil pressure at takeoff and maximum thrust setting may exceed 140 PSI (not to exceed 250 PSI) for up to 120 seconds.

2. Ground Idle is available in EEC mode only.

3. Flight idle is available in EEC or Manual modes.

4. Take-off ratings that are nominally limited to 5 minutes duration may be used for up to 10 minutes for One Engine Inoperative operations without adverse effects upon engine airworthiness.

Figure 2-2
INTER-TURBINE TEMPERATURE LIMITS

NOTE

Inter-Turbine Temperatures shown make no allowance for correction factors or instrument errors but allow for some typical instrument lag.

AREA A - NO ACTION REQUIRED

AREA B (1) DETERMINE CAUSE AND CORRECT
(2) INSPECT HOT SECTION USING BORESCOPE IN ACCORDANCE WITH PRATT & WHITNEY INSTRUCTIONS

AREA C - PERFORM INSPECTION/REPAIRS IN ACCORDANCE WITH PRATT & WHITNEY INSTRUCTIONS.

Figure 2-3
ENGINE OVERSPEED LIMITS

N₁ and N₂ Overspeed Limits

ENGINE FAN INSPECTION

To assure accurate fan speed thrust indication, inspect the fan for damage prior to each flight in accordance with the exterior inspection in the Normal Procedures Section of the manual.

ELECTRONIC ENGINE COMPUTER

Dispatch with either, or both, engines operating in manual mode is prohibited, except when conducted in accordance with limitations and procedures contained in Supplement 9, Dispatch with Electronic Engine Computer(s) Inoperative.

BATTERY AND STARTER CYCLE LIMITATIONS

- Starter Limitation ..................... Three engine starts per 30 minutes. Three cycles of operation with a 90-second rest period between cycles is permitted.
- Battery Limitation ..................... Three engine starts per hour. Refer to notes 2 and 3.

(Continued Next Page)
BATTERY AND STARTER CYCLE LIMITATIONS (Continued)

NOTE

1. If battery limitation is exceeded, a deep cycle including a capacity check must be accomplished to detect possible cell damage. Refer to Chapter 24 of the Maintenance Manual for procedure.

2. Three generator assisted cross starts are equal to one battery start.

3. If an external power unit is used for start, no battery cycle is counted.

4. Use of an external power source with voltage in excess of 28 VDC or current in excess of 1000 amps may damage the starter. Minimum 800 amps for start.

GROUND OPERATION

Continuous engine ground static operation up to and including five minutes at takeoff thrust is limited to ambient temperatures not to exceed 39°C above ISA. (Refer to Figure 2-6).

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

AVIONICS AMBIENT TEMPERATURE LIMIT

Electrical load is limited to 200 amps per generator during ground operations (transients up to 250 amps are permissible for up to 4 minutes).
HYDRAULIC FLUID

Use Skydrol 500A, B, B-4, C, or LD-4; or Hyjet, Hyjet W, III, IV, IVA or IVA Plus only.

APPROVED OILS

The following oils are approved for use:

MOBIL JET OIL II  EXXON TURBO OIL 2380  AEROSHELL TURBINE OIL 500
MOBIL JET OIL 254 *  ROYCO TURBINE OIL 500  AEROSHELL TURBINE OIL 560*
CASTROL 5000

Oils denoted with an asterisk are “THIRD GENERATION” lubricants.

CAUTION

WHEN CHANGING FROM AN EXISTING LUBRICANT FORMULATION TO A “THIRD GENERATION” LUBRICANT FORMULATION (AEROSHELL TURBINE OIL 560 OR MOBIL JET 254), THE ENGINE MANUFACTURER STRONGLY RECOMMENDS THAT SUCH A CHANGE SHOULD ONLY BE MADE WHEN AN ENGINE IS NEW OR FRESHLY OVERHAULED. FOR ADDITIONAL INFORMATION ON USE OF THIRD GENERATION OILS, REFER TO ENGINE MANUFACTURER’S PERTINENT OIL SERVICE BULLETINS.

Should it be necessary to replenish oil consumption losses when oil of the same brand (as tank contents) is unavailable, then the following requirements apply:

For contingency purposes, oil replenishment using any other approved oil brand listed is acceptable provided:

1. The total quantity of added oil does not exceed two U.S. quarts in any 400-hour period.
2. If it is required to add more than two U.S. quarts of dissimilar oil brands, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

Should oils of nonapproved brands or of different viscosities become intermixed, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

SINGLE POINT REFUELING LIMITATION

Single point refueling operations must be accomplished per the procedures contained on the placard installed on the single point refueling access door. Refueling pressure range is 10 to 55 PSI, maximum defueling pressure is -10 PSI.
FUEL LIMITATIONS

FUEL BOOST Pumps - ON; when low fuel lights illuminate or at 400 pounds or less indicated fuel.

The following fuels are approved for use in accordance with Figure 2-5.


NOTE

EGME and DIEGME fuel additives are approved for use, but are not required. Refer to Normal Procedures, Anti-Ice Additives for blending instructions.

FUEL LIMITATIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MINIMUM FUEL TEMPERATURE</td>
<td>−40°C</td>
<td>−45°C</td>
</tr>
<tr>
<td>MAXIMUM FUEL TEMPERATURE</td>
<td>+57°C</td>
<td>**</td>
</tr>
<tr>
<td>MAXIMUM ALTITUDE</td>
<td>45,000 FEET</td>
<td>**</td>
</tr>
<tr>
<td>MAXIMUM ASYMMETRIC FUEL DIFFERENTIAL FOR NORMAL OPERATIONS</td>
<td>400 POUNDS</td>
<td>400 POUNDS</td>
</tr>
<tr>
<td>EMERGENCY ASYMMETRIC FUEL DIFFERENTIAL *</td>
<td>800 POUNDS</td>
<td>800 POUNDS</td>
</tr>
</tbody>
</table>

* MAXIMUM LATERAL FUEL IMBALANCE IS 400 POUNDS. A LATERAL FUEL IMBALANCE OF 800 POUNDS HAS BEEN DEMONSTRATED FOR EMERGENCY RETURN.

** REFER TO FIGURE 2-5A

UNUSABLE FUEL

Fuel remaining in the fuel tanks when the fuel quantity indicator reads zero is not usable in flight.
SECTION II - OPERATING LIMITATIONS

MODEL 560XL

JET B/JP-4 FUEL OPERATING LIMITATIONS

Figure 2-5A

SPEED LIMITATIONS

Maximum Operating Limit Speeds

- $V_{MO}$ (Above 26,515 Feet) ....................... 0.75 Mach (Indicated)
- $V_{MO}$ (Between 8000 and 26,515 Feet) ....................... 305 KIAS
- $V_{MO}$ (Below 8000 Feet) ....................... 260 KIAS

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

Maximum Maneuvering Speeds - $V_A$ ....................... Refer to Figure 2-7

Full application of rudder and aileron controls as well as maneuvers that involve angles-of-attack near the stall should be confined to speeds below maximum maneuvering speed.

(Continued Next Page)
SECTION II - OPERATING LIMITATIONS

MODEL 560XL

SPEED LIMITATIONS (Continued)

Maximum Flap Extended Speed - V_{FE}
  Full Flaps - LAND Position (35°) ................................. 175 KIAS
  Partial Flaps - T.O. (7°) and T.O. & APPR Position (15°) ........ 200 KIAS
Maximum Landing Gear Extended Speed - V_{LE} .......................... 250 KIAS
Maximum Landing Gear Operating Speed - V_{LO} (Extending) ........ 250 KIAS
  - V_{LO} (Retracting) ............................................. 200 KIAS
Maximum Speed Brake Operation Speed - V_{SB} ......................... No Limit
Minimum Control Speeds (V_{MCA} and V_{MCG}) Refer to Section IV, Performance General
  Autopilot Operation ................................................. 305 KIAS or 0.75 MACH

TAKEOFF AND LANDING OPERATIONAL LIMITS

Maximum Altitude Limit .................................................. 14,000 Feet
Maximum Tailwind Components .......................................... 10 Knots
Maximum Ambient Temperature ......................................... ISA +39°C (Refer to Figure 2-6)
Minimum Ambient Temperature .......................................... –30°C

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

Michelin part number 031-613-8 nose tire and OM13701 main tire are the only tires approved. The nose tire must be inflated to 130±5 PSI with the weight on the wheels.

Maximum Tire Ground Speed ............................................ 165 Knots

The lavatory doors must be latched open for takeoff and landing.

Engine Sync must be off for takeoff and landing.

Takeoff and landings are limited to paved runway surfaces.

Takeoff from a wet runway, when using thrust reversers for performance credit, is limited to a minimum runway width of 75 feet.

Antiskid must be operational for takeoff and landing.

Rudder bias and the rudder bias heater must be operational for takeoff, and a satisfactory preflight test must be performed in accordance with Section III, Normal Procedures.

PERFORMANCE CONFIGURATION

The airplane configuration must be as presented under Standard Performance Conditions, Section IV, Performance.

ENROUTE OPERATIONAL LIMITS

Minimum airspeed for sustained flight in icing
  (except approach and landing) .................................... 160 KIAS
Maximum Operating Altitude ........................................... 45,000 Feet
Maximum Operating Altitude With 1-3 Vortex Generators Missing .... 41,000 Feet
Maximum Ambient Temperature ....................................... Refer to Figure 2-6
Minimum Ambient Temperature ....................................... Refer to Figure 2-6
Generator Load ......................................................... 300 Amperes in Flight

OPERATIONS AUTHORIZED

This airplane is approved for day and night, VFR, IFR flight and flight into known icing conditions. This airplane is not approved for ditching under FAR 25.801.
SECTION II - OPERATING LIMITATIONS

MODEL 560XL

JET B/JP-4 FUEL OPERATING LIMITATIONS

Figure 2-5A

SPEED LIMITATIONS

Maximum Operating Limit Speeds

\[
\begin{align*}
M_{MO} \text{ (Above 26,515 Feet)} & : 0.75 \text{ Mach (Indicated)} \\
V_{MO} \text{ (Between 8000 and 26,515 Feet)} & : 305 \text{ KIAS} \\
V_{MO} \text{ (Below 8000 Feet)} & : 260 \text{ KIAS}
\end{align*}
\]

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

Maximum Maneuvering Speeds - \( V_A \)

Refer to Figure 2-7

Full application of rudder and aileron controls as well as maneuvers that involve angles-of-attack near the stall should be confined to speeds below maximum maneuvering speed.

(Continued Next Page)
SECTION II - OPERATING LIMITATIONS

MODEL 560XL

SPEED LIMITATIONS (Continued)

Maximum Flap Extended Speed - $V_{FE}$
Full Flaps - LAND Position (35°) .................................................. 175 KIAS
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- $V_{LO}$ (Retracting) ................................................................. 200 KIAS
Maximum Speed Brake Operation Speed - $V_{SB}$ .......................... No Limit
Minimum Control Speeds ($V_{MCA}$ and $V_{MCG}$) Refer to Section IV, Performance
Autopilot Operation ................................................................. 305 KIAS or 0.75 MACH

TAKEOFF AND LANDING OPERATIONAL LIMITS

Maximum Altitude Limit .............................................................. 14,000 Feet
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Minimum Ambient Temperature ................................................ –30°C

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

Michelin part number 031-613-8 nose tire and OM13701 main tire are the only tires approved. The nose tire must be inflated to 130±5 PSI with the weight on the wheels.

Maximum Tire Ground Speed ..................................................... 165 Knots

The lavatory doors must be latched open for takeoff and landing.

Engine Sync must be off for takeoff and landing.

Takeoff and landings are limited to paved runway surfaces.

Takeoff from a wet runway, when using thrust reversers for performance credit, is limited to a minimum runway width of 75 feet.

- Antiskid must be operational for takeoff and landing.

PERFORMANCE CONFIGURATION

The airplane configuration must be as presented under Standard Performance Conditions, Section IV, Performance.

ENROUTE OPERATIONAL LIMITS

Minimum airspeed for sustained flight in icing
(except approach and landing) ....................................................... 160 KIAS
Maximum Operating Altitude ..................................................... 45,000 Feet
Maximum Operating Altitude With 1-3 Vortex Generators Missing ...... 41,000 Feet
Maximum Ambient Temperature ................................................ Refer to Figure 2-6
Minimum Ambient Temperature ................................................ Refer to Figure 2-6
Generator Load ................................................................. 300 Amperes in Flight

OPERATIONS AUTHORIZED

This airplane is approved for day and night, VFR, IFR flight and flight into known icing conditions. This airplane is not approved for ditching under FAR 25.801.
VORTEX GENERATORS/BOUNDARY LAYER ENERGIZERS

Up to three vortex generators may be missing for dispatch provided the aircraft is limited to FL410 for enroute operations. There are typically a total of 52 vortex generators installed, 26 per wing. All boundary layer energizers must be present for dispatch (11 per wing).

TAKEOFF/LANDING/ENROUTE TEMPERATURE LIMITATIONS

NOTE: Ambient Air Temperature Limit is indicated Ram Air Temperature (RAT) adjusted for Ram rise (refer to Figure 4-2).
EXAMPLE:
PRESSURE ALTITUDE - 37,000 FEET
WEIGHT - 13,500 POUNDS
MAXIMUM MANEUVERING SPEED - 200 KNOTS

Figure 2-7
SECTION II - OPERATING LIMITATIONS

MODEL 560XL

MINIMUM CREW

Minimum Flight Crew for All Operations ....................... 1 Pilot and 1 Copilot

LOAD FACTOR

In Flight
- Flaps UP Position (0°) .......................... –1.2 to +3.0G at 20,000 Pounds
- Flaps T.O., T.O. & APPR to LAND Position
  (7° To 35°) .......................... 0.0 to +2.0G at 20,000 Pounds

NOTE

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

Landing .............................................. 0.0 to +2.0G at 18,700 Pounds

NOTE

These accelerations limit the airplane to landing sink rate of 600 feet-per-minute.

CABIN PRESSURIZATION LIMITATIONS

Normal Cabin Pressurization Limitations .......... 0.0 to 9.3 PSI, +0.1 or –0.1 PSI Differential
Pressure Relief Valve ................................. 9.5 PSI, +0.1 or –0.1 PSI Differential
Pressure Gauge Redline .............................. 9.7 PSI, +0.0 or –0.1 PSI Differential

MANEUVERS

No acrobatic maneuvers, including spins, are approved. No intentional stalls permitted above 25,000 feet.

PASSENGER COMPARTMENT

For all takeoff and landings, seats must be fully upright and outboard, and passenger seat belts and shoulder harnesses must be fastened. Maximum number of passenger seats is twelve. The lavatory door must be latched open for taxi, takeoff, and landing.

ANGLE-OF-ATTACK/STICK SHAKER SYSTEM

The angle-of-attack system may be used as a reference system but does not replace the airspeed display in the PFD as a primary instrument.

The angle-of-attack system can be used as a reference for approach speed (1.3 $V_{S1}$) at all airplane weights and center-of-gravity locations at zero, takeoff/approach and landing flap positions. 1.3 $V_{S1}$ is indicated by approximately .6 on the AOA gage and by the top of the white tape on the pilot’s and copilot’s airspeed indicators.

The angle-of-attack and stall warning system must be operable and a satisfactory preflight test must be performed in accordance with Section III, Normal Procedures.
AIRPLANE BATTERY

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

INSTRUMENT MARKINGS

Left and Right Oil Pressure Indicators  . . . . . . . . . . . . . . . . . . . Red Line (Min) - 20 PSI
Yellow Band - 20 to 45 PSI
Green Band - 45 to 140 PSI
Red Line - 140 PSI
Red Triangle (Max) - 250 PSI

Left and Right Turbine RPM
Indicators  . . . . . . . . . . . . . . . . . . . . Flashing Red Light - ≥101.2% RPM
Normal Operating - 47 to 101.1% RPM

Left and Right Oil Temperature Indicators  . . . . . . . . . . . . . . . . . . . Red Line - 121°C
Green Band - 10 to 121°C

Airspeed Indicator  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Red Bands - 260 KIAS
- 305 KIAS
- 0.75 Mach

Standby Airspeed Indicator  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Red Bands - 260 KIAS
- 305 KIAS
- 0.75 Mach

Left and Right Inter-Turbine Temperature Indicators  . . . . . . . . . . . . . . . . . . . . Red Line - 720°C
Green Band - 0 to 720°C

Left and Right Fan RPM Indicators  . . . . . . . . . . . . . . . . . . . . . . . . . . Red Line - 100.0%
(Refer to Section IV for thrust setting limits)
Green Band - 20 to 100.0%

Left and Right Ammeter Indicators  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Red Line - 300 Amps
Red Triangle - 200 Amps

Cabin Differential Pressure Indicator  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Red Line - 9.7 PSI
Green Arc - 0.0 to 9.6 PSI

Oxygen Pressure Indicator  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Red Line - 2000 PSI
Yellow Arc - 0.0 to 400 PSI
Green Arc - 1600 to 1800 PSI

Brake and Gear Pneumatic Pressure Indicator
(In Nose Compartment)  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Per Placard

Brake Hydraulic Accumulator Pressure
Indicator (In Nose Compartment)  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Per Placard
AUTOPilot

1. One pilot must remain in his seat with the seat belt fastened during all autopilot operations.
2. Autopilot operation is prohibited if any comparison monitor annunciator illuminates inflight.
3. Minimum use height: 1000 Feet AGL - Enroute
   300 Feet AGL - Non-precision Approach
   180 Feet AGL - Category I ILS Approach

Honeywell Primus-1000 Flight Guidance System

1. The Pilot’s Manual for the Honeywell P-1000 Integrated Avionics System for the Cessna Citation Excel airplanes equipped with IC-600, part number A28-1146-120-00, revision 0, or later applicable revision, must be immediately available to the flight crew. For airplanes equipped with IC-615, part number A28-1146-137-00, revision 0, or later applicable revision, must be immediately available to the flight crew.
2. Category II approaches are not approved.
3. EFIS ground operation with the pilot’s RADOME FAN FAIL annunciator light illuminated is limited to 30 minutes or until either IC-1 HOT or IC-2 HOT annunciator light illuminates, whichever occurs first.
4. Dispatch is prohibited if either the IC-1 HOT or IC-2 HOT annunciator light is illuminated.
5. Dispatch in instrument meteorological conditions is prohibited with the RADOME FAN annunciator light illuminated. Dispatch in visual meteorological conditions is allowed with the RADOME FAN annunciator illuminated, provided the DISPLAY GUIDANCE COMPUTER COOLING FAN FAILURE abnormal procedures are followed.
6. Dispatch is prohibited following a flight where either a IC-1 HOT or IC-2 HOT annunciator light was illuminated, until the condition is identified and corrected.
7. The pilot’s and copilot’s PFD’s must be installed and operational in the normal (non-reversionary) mode for takeoff.
8. The P-1000 system must be verified to be operational by a satisfactory preflight test as contained in Section III, Normal Procedures.
9. Reversion of both PFD’s to the MFD is prohibited.
10. VOR approaches without a valid DME signal are prohibited with autopilot coupled or with flight director only.

Note

Enroute VOR navigation without a valid co-located DME signal may result in significantly degraded course tracking when utilizing the flight director or autopilot. The flight crew should monitor the CDI for excessive deviation and select HDG mode as required to manually track the desired course.

Standby Flight Display

1. A satisfactory preflight test must be accomplished on the STBY PWR system in accordance with Section III, Normal Procedures.
2. The standby flight display (including ATT, ALT and ASI) and HSI must be functioning prior to takeoff.
3. Use of the approach mode (APR) on the standby flight display is prohibited.
SUPPLEMENTAL OXYGEN SYSTEM

The following aircraft certification requirements are in addition to the requirements of applicable operating rules. The most restrictive requirements (certification or operating) must be observed:

Crew and passenger oxygen masks are not approved for use above 40,000 feet cabin altitude. Prolonged operation of passenger masks above 25,000 feet cabin altitudes is not recommended.

WARNING

PASSENGER MASKS ARE INTENDED FOR USE DURING AN EMERGENCY DESCENT TO AN ALTITUDE NOT REQUIRING SUPPLEMENTAL OXYGEN.

The pressure demand crew oxygen masks must be properly stowed in their containers to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew will interfere with the quick-donning capabilities of the oxygen masks.

THRUST REVERSERS

Reverse thrust power must be reduced to the idle reverse detent position at 60 KIAS on landing roll.

Maximum reverse thrust setting is limited to 75% of takeoff thrust.

Maximum allowable thrust reverser deployed time is 3 minutes in any 10 minute period.

Engine static ground operation is limited to idle power (if thrust reversers are deployed).

Use of thrust reversers is prohibited during touch and go landings.

The thrust reverser(s) must be verified to be operational by the Taxi test in Section III Normal Procedures.

The use of thrust reversers to back the airplane is prohibited.

TRIM

Prior to takeoff the elevator trim check in Section III, Normal Procedures, must be satisfactorily completed.

AHRS SLAVING

NOTE

To prevent precession of attitude information, once AHRS is selected in flight to DG MODE, AHRS must remain in DG MODE for the remainder of the flight. AHRS may be returned to SLAVE MODE after landing or prior to next flight if appropriate.

(Continued Next Page)
AUTOPILOT

1. One pilot must remain in his seat with the seat belt fastened during all autopilot operations.
2. Autopilot operation is prohibited if any comparison monitor annunciator illuminates inflight.
3. Minimum use height: 1000 Feet AGL - Enroute
   300 Feet AGL - Non-precision Approach
   180 Feet AGL - Category I ILS Approach

HONEYWELL PRIMUS-1000 FLIGHT GUIDANCE SYSTEM

1. The Pilot’s Manual for the Honeywell P-1000 Integrated Avionics System for the Cessna Citation Excel airplanes equipped with IC-600, part number A28-1146-120-00, revision 0, or later applicable revision, must be immediately available to the flight crew. For airplanes equipped with IC-615, part number A28-1146-137-00, revision 0, or later applicable revision, must be immediately available to the flight crew.
2. Category II approaches are not approved.
3. EFIS ground operation with the pilot’s RADOME FAN FAIL annunciator light illuminated is limited to 30 minutes or until either IC-1 HOT or IC-2 HOT annunciator light illuminates, whichever occurs first.
4. Dispatch is prohibited if either the IC-1 HOT or IC-2 HOT annunciator light is illuminated.
5. Dispatch in instrument meteorological conditions is prohibited with the RADOME FAN annunciator light illuminated. Dispatch in visual meteorological conditions is allowed with the RADOME FAN annunciator illuminated, provided the DISPLAY GUIDANCE COMPUTER COOLING FAN FAILURE abnormal procedures are followed.
6. Dispatch is prohibited following a flight where either a IC-1 HOT or IC-2 HOT annunciator light was illuminated, until the condition is identified and corrected.
7. The pilot’s and copilot’s PFD’s must be installed and operational in the normal (non-reversionary) mode for takeoff.
8. The P-1000 system must be verified to be operational by a satisfactory preflight test as contained in Section III, Normal Procedures.
9. Reversion of both PFD’s to the MFD is prohibited.
10. VOR approaches without a valid DME signal are prohibited with autopilot coupled or with flight director only.

NOTE

Enroute VOR navigation without a valid co-located DME signal may result in significantly degraded course tracking when utilizing the flight director or autopilot. The flight crew should monitor the CDI for excessive deviation and select HDG mode as required to manually track the desired course.

STANDBY FLIGHT DISPLAY

1. A satisfactory preflight test must be accomplished on the STBY PWR system in accordance with Section III, Normal Procedures.
2. The standby flight display (including ATT, ALT and ASI) and HSI must be functioning prior to takeoff.
SUPPLEMENTAL OXYGEN SYSTEM

The following aircraft certification requirements are in addition to the requirements of applicable operating rules. The most restrictive requirements (certification or operating) must be observed:

Crew and passenger oxygen masks are not approved for use above 40,000 feet cabin altitude. Prolonged operation of passenger masks above 25,000 feet cabin altitudes is not recommended.

WARNING

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The pressure demand crew oxygen masks must be properly stowed in their containers to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew will interfere with the quick-donning capabilities of the oxygen masks.

THRUST REVERSERS

Reverse thrust power must be reduced to the idle reverse detent position at 60 KIAS on landing roll.

Maximum reverse thrust setting is limited to 75% of takeoff thrust.

Maximum allowable thrust reverser deployed time is 3 minutes in any 10 minute period.

Engine static ground operation is limited to idle power (if thrust reversers are deployed).

Use of thrust reversers is prohibited during touch and go landings.

The thrust reverser(s) must be verified to be operational by the Taxi test in Section III Normal Procedures.

The use of thrust reversers to back the airplane is prohibited.

TRIM

Prior to takeoff the elevator trim check in Section III, Normal Procedures, must be satisfactorily completed.

AHRS SLAVING

NOTE

To prevent precession of attitude information, once AHRS is selected in flight to DG MODE, AHRS must remain in DG MODE for the remainder of the flight. AHRS may be returned to SLAVE MODE after landing or prior to next flight if appropriate.

(Continued Next Page)
SECTION II - OPERATING LIMITATIONS

AUTOPILOT

1. One pilot must remain in his seat with the seat belt fastened during all autopilot operations.
2. Autopilot operation is prohibited if any comparison monitor annunciator illuminates in flight.
3. Minimum use height: 1000 Feet AGL - Enroute
   300 Feet AGL - Non-precision Approach
   180 Feet AGL - Category I ILS Approach

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6. Dispatch is prohibited following a flight where either a IC-1 HOT or IC-2 HOT annunciator light was illuminated, until the condition is identified and corrected.
7. The pilot's and copilot's PFD's must be installed and operational in the normal (non-reversionary) mode for takeoff.
8. The P-1000 system must be verified to be operational by a satisfactory preflight test as contained in Section III, Normal Procedures.
9. Reversion of both PFD's to the MFD is prohibited.
10. VOR approaches without a valid DME signal are prohibited with autopilot coupled or with flight director only.

NOTE

Enroute VOR navigation without a valid co-located DME signal may result in significantly degraded course tracking when utilizing the flight director or autopilot. The flight crew should monitor the CDI for excessive deviation and select HDG mode as required to manually track the desired course.

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TRIM

Prior to takeoff the elevator trim check in Section III, Normal Procedures, must be satisfactorily completed.
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The use of thrust reversers to back the airplane is prohibited.

TRIM

Prior to takeoff the elevator trim check in Section III, Normal Procedures, must be satisfactorily completed.
AHRS SLAVING (Continued)

Figure 2-8

COMPILED FROM DATA OBTAINED FROM
WORLD DATA CENTER 2 FOR GEOGRAPHIC-GEODETIC
REFERENCE FRAME

AREA ABOVE THIS LATITUDE RECOMMENDED DG-MODE OPERATION

AREA OF RECOMMENDED DG-MODE OPERATION