

AIRPLANE FLIGHT MANUAL

SECTION II

LIMITATIONS

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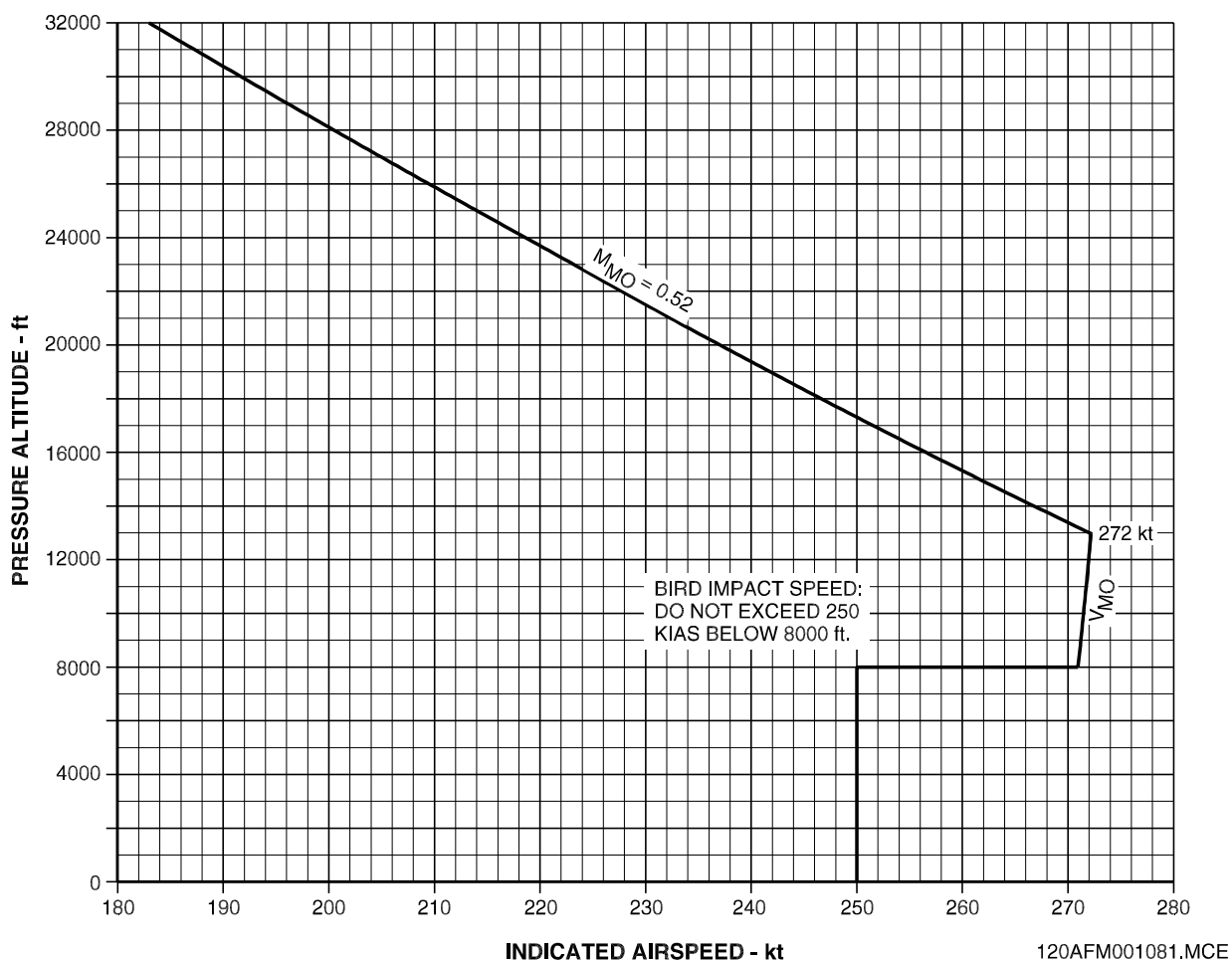
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LIMITATIONS

AIRSPEED LIMITATIONS

- Maximum Operating Limit Speed (V_{MO}/M_{MO})



NOTE: This speed limit 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.

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- Design Maneuvering Speed (V_A) 200 KIAS

NOTE: Maneuvers that involve angle of attack near the stall or full application of rudder, elevator, and aileron controls should be confined to speeds below V_A . In addition, the maneuvering flight load factor limit of 2.80 g shall not be exceeded.

CAUTION: RAPID AND LARGE ALTERNATING CONTROL INPUTS, ESPECIALLY IN COMBINATION WITH LARGE CHANGES IN PITCH, ROLL, OR YAW (E.G. LARGE SIDE ANGLES) MAY RESULT IN STRUCTURAL FAILURES AT ANY SPEED, EVEN BELOW V_A .

- Maximum Flap Extended Speed (V_{FE})
 - Flap 15° 200 KIAS
 - Flap 25° 150 KIAS
 - Flap 45° 135 KIAS
- Maximum Landing Gear Operation Speed ($V_{LO} = V_{LE}$) 200 KIAS



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POWER PLANT

ENGINE

Manufacturer PRATT & WHITNEY OF CANADA
Model Number PW 118
Number of Engines 2
Above 12000 ft, Np increase by moving condition levers to MAX RPM is not approved except with power levers at FLT IDLE.

OPERATING LIMITS							
OPERATING CONDITIONS	T ₆ °C	TORQUE %	N _p %	N _H %	N _L %	OIL TEMP °C (9)	OIL PRESS PSID
TAKEOFF/MAX CONTINUOUS	800 (2)	100 (5)	100.0 (7)	100.0	100	45 to 100	55 to 65
GROUND IDLE	—	—	—	62.0 MIN	—	— 40 to 100	40 MIN (11)
STARTING	850 (3) 950 (4)	—	—	—	—	— 40 MIN	70 MAX
MAX CLIMB/ CRUISE (1)	—	84	100.0 (7)	100.0	100	45 to 100	55 to 65
TRANSIENT	850 (3)	120 (6)	110.0 (6)	102.0 (6)	103 (6)	100 to 115 (10)	40 to 70
MAX REVERSE	—	—	80.5 (8)	—	—	45 to 100	55 to 65

- NOTE:**
- (1) Maximum allowable cruise power of 1305 SHP must not be exceeded, by reducing either torque or N_p, or both.
 - (2) This value may be exceeded during takeoff, up to 816°C, for 5 minutes maximum.
 - (3) Above 816°C up to 850°C time limited to 20 seconds maximum.
 - (4) Above 850°C up to 950°C time limited to 5 seconds maximum.
 - (5) This value may be exceeded during takeoff, up to 110%, for 5 minutes maximum.
 - (6) Up to this value time limited to 20 seconds maximum.
 - (7) Maximum N_p speed control tolerance is 100.0 to 101.0.
 - (8) Steady state operation after selection of REVERSE.
 - (9) Oil temperature must be maintained above 45°C to ensure intake strut deicing and prevent fuel icing.
 - (10) Operation between 100 and 115°C allowed for 20 minutes maximum.
 - (11) Operation between 40 and 55 PSID only if N_H is below 75%.

- CAUTION:**
- DO NOT SET POWER LEVER BELOW FLT IDLE IN FLIGHT.
 - REVERSE THRUST FOR GROUND USE ONLY.
 - MAX REVERSE NOT APPROVED ON WET RUNWAYS WITH AREAS OF STANDING WATER, TO AVOID THE POSSIBILITY OF WATER INGESTION BY THE ENGINE.
 - ABOVE 12000 FT, FAST MOVEMENT OF THE CONDITION LEVER TOWARD MAX RPM MAY LEAD TO COMPRESSOR STALL, IF THE POWER LEVER IS NOT AT FLT IDLE.

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**STARTER DUTY CYCLE**

- 1st cycle: 30 seconds on and 3 minutes off.
- 2nd cycle: 30 seconds on and 3 minutes off.
- 3rd cycle: 30 seconds on and 30 minutes off.

PROPELLER

Manufacturer HAMILTON STANDARD

Model Number 14 RF-9

Number of Propellers 2

Diameter 3.2 m

Number of Blades 4

Condition Levers must be in MIN RPM position during all ground operations, except when cleared for takeoff or during landing roll.

For takeoff and landing PROP SYNC must be off.

Power Levers must remain at or below Flight Idle during all ground operations, except for brief (approximately 5 seconds) excursions as needed to maneuver the airplane.

CAUTION: GROUND OPERATION ABOVE FLIGHT IDLE SIGNIFICANTLY INCREASES PROPELLER STRESS UNDER CERTAIN ADVERSE WIND CONDITIONS (E.G., TAILWINDS OR REAR CROSSWINDS). OPERATION IN THIS RPM RANGE MUST BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE.

Minimum oil temperature of 0°C is required to unfeather the propeller either after engine start or during electrical feathering pump test.

POWER PLANT INSTRUMENT MARKINGS

INSTRUMENT	RED RADIAL MINIMUM LIMIT	YELLOW ARC CAUTIONARY RANGE	GREEN ARC NORMAL RANGE	RED RADIAL MAXIMUM LIMIT
INTERTURBINE TEMPERATURE INDICATOR T_6 (°C)	–	800 to 816	400 to 800	816
TORQUE INDICATOR (%)	–	100 to 110	0 to 100	110
PROPELLER SPEED INDICATOR N_P (%)	–	–	50 to 100	100
HIGH AND LOW PRESSURE SPOOL SPEED INDICATOR - N_H/N_L (%)	–	–	62 to 100 (1)	100
OIL TEMPERATURE INDICATOR (°C)	- 40	- 40 to 45 100 to 115	45 to 100	115
OIL PRESSURE INDICATOR (PSID)	40	40 to 55 65 to 70	55 to 65	70

NOTE: (1) This range is valid for N_H only.



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FUEL SYSTEM

- Maximum fuel quantity in each wing tank 1311 kg (1670 liters).
- Unusable fuel quantity in each wing tank..... 11 kg (14 liters).
- The maximum demonstrated imbalance between left and right wing fuel tanks is 272 kg (346 liters).

CAUTION: WHEN THE FUEL QUANTITY INDICATOR READS ZERO IN LEVEL FLIGHT, ANY FUEL REMAINING IN THE FUEL TANK CANNOT BE USED SAFELY IN FLIGHT.

AVERAGE FUEL DENSITY: 0.785 KG/LITER.

ADD 36.1 KG (46 LITERS) TO THE UNUSABLE FUEL IN THE CORRESPONDING WING WHEN THE MAIN EJECTOR BOOSTER PUMP IS INOPERATIVE.

FUEL SPECIFICATION

- BRAZILIAN SPECIFICATION CNP-08-QAV1 AND QAV4
- PRATT & WHITNEY SPECIFICATION CPW 204
- ASTM SPECIFICATION D 1655 – JET A, JET A-1, JET B
- AMERICAN MILITARY SPECIFICATION MIL-T-5624 – JP-4, JP-5
- AMERICAN MILITARY SPECIFICATION MIL-T-83133 – JP-8

CAUTION: AVIATION GASOLINE PER MIL-G-5572, IN EMERGENCY, UP TO A LIMIT OF 150 HOURS BETWEEN OVERHAULS, MAY BE USED. PREFERENCE SHOULD BE GIVEN TO AVAILABLE GASOLINE HAVING THE LOWEST OCTANE GRADE.

JET B OR JP-4 OR QAV4 FUEL SHOULD ONLY BE USED WHEN NO OTHER FUEL IS AVAILABLE.

**WEIGHT LIMITATIONS****AIRPLANES MODEL EMB-120RT**

- Maximum Ramp Weight (MRW)..... 11580 kg
- Maximum Takeoff Weight (MTOW)..... 11500 kg
- Maximum Landing Weight (MLW) 11250 kg
- Maximum Zero Fuel Weight (MZFW) 10500 kg

AIRPLANES MODEL EMB-120ER

- Maximum Ramp Weight (MRW)..... 12070 kg
- Maximum Takeoff Weight (MTOW)..... 11990 kg
- Maximum Landing Weight (MLW) 11700 kg
- Maximum Zero Fuel Weight (MZFW) 10900 kg

To comply with the performance and operating limitations of the regulations, the maximum allowable takeoff and landing operational weights may be equal to but not greater than structural limits.

When the takeoff performance is calculated by the software ETB 120 FOR, the takeoff imitations and procedures established in Supplement 11, TAKEOFF PERFORMANCE - SOFTWARE ETB 120 FOR, must be observed.

When the takeoff performance is determined through the takeoff charts and procedures contained in Section 5 of either the basic AFM or Supplement 5, the takeoff weight (weight at brake release or at start of takeoff roll) is limited by the most restrictive of the following requirements:

- Maximum takeoff weight for altitude and temperature determined from Maximum Takeoff Weight Climb Limited Charts, Section 5.
- Takeoff field length requirements determined from Maximum Takeoff Weight Field Length Limited Charts, Section 5.
- Brake energy requirements determined from Maximum Takeoff Weight Brake Energy Limited Chart, Section 5.
- Obstacle clearance, en-route and landing operating requirements.

The landing weight is limited by the most restrictive of the following requirements:

- Landing field length requirements determined from Maximum Landing Weight Field Length Limited Chart, Section 5.
- Maximum approach and landing weight for altitude and temperature determined from Maximum Landing Weight Climb Limited Charts, Section 5.

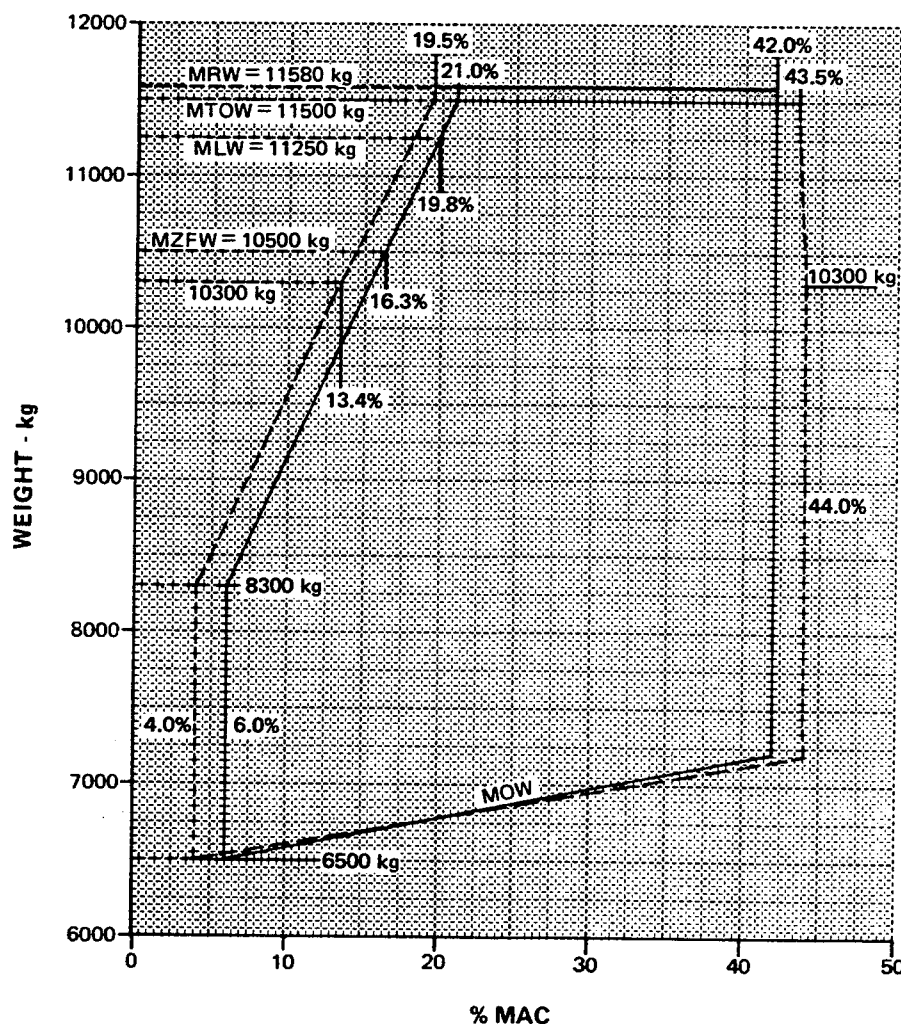
The above weight limits are predicated on the use of the Power Setting Charts, Section 5.

EMBRAER
EMB120 Brasília
AIRPLANE FLIGHT MANUAL



CENTER OF GRAVITY LIMITS
AIRPLANES MODEL EMB-120RT

—— TAKEOFF AND LANDING LIMITS
----- INFLIGHT LIMITS (FLAPS AND GEAR UP)



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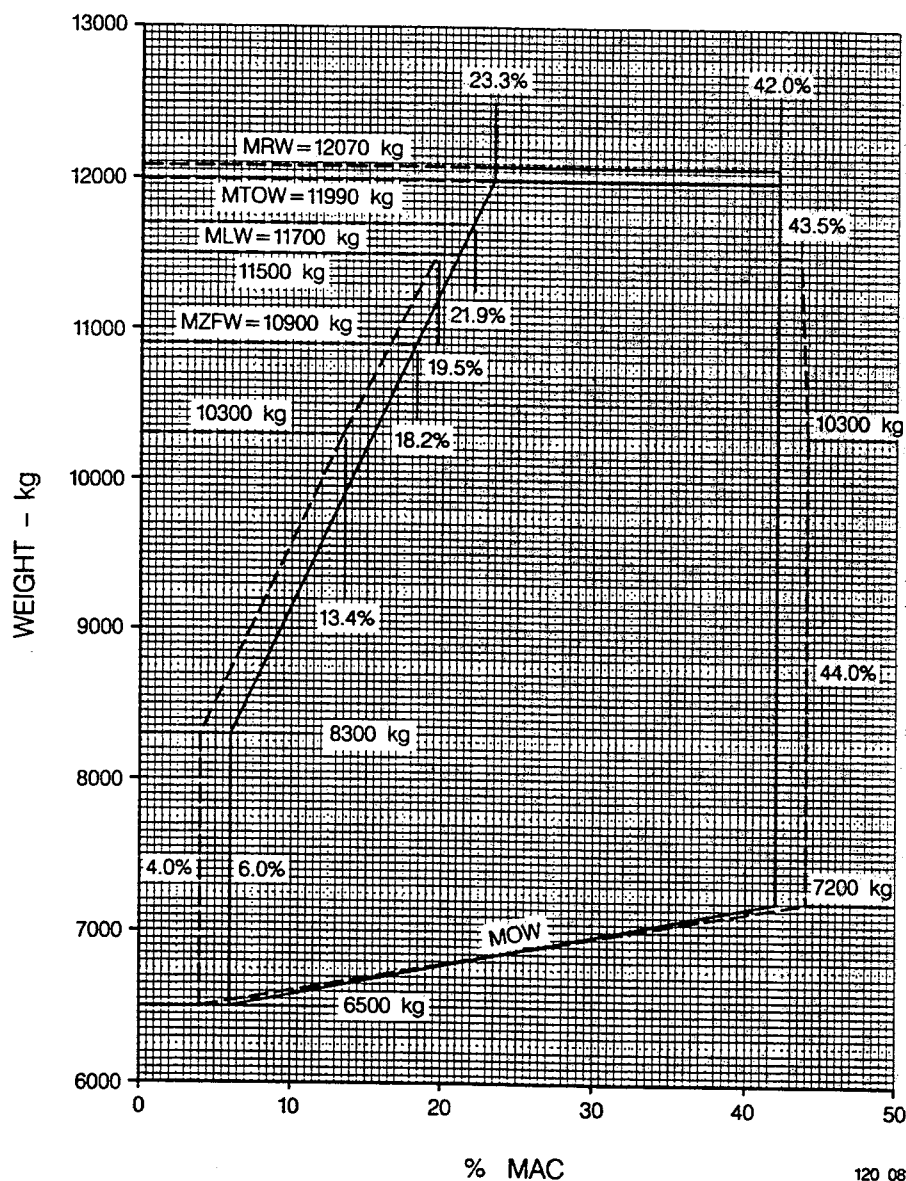


AIRPLANE FLIGHT MANUAL

CENTER OF GRAVITY LIMITS

AIRPLANES MODEL EMB-120ER

———— TAKEOFF AND LANDING LIMITS
----- INFLIGHT LIMITS (FLAPS AND GEAR UP)



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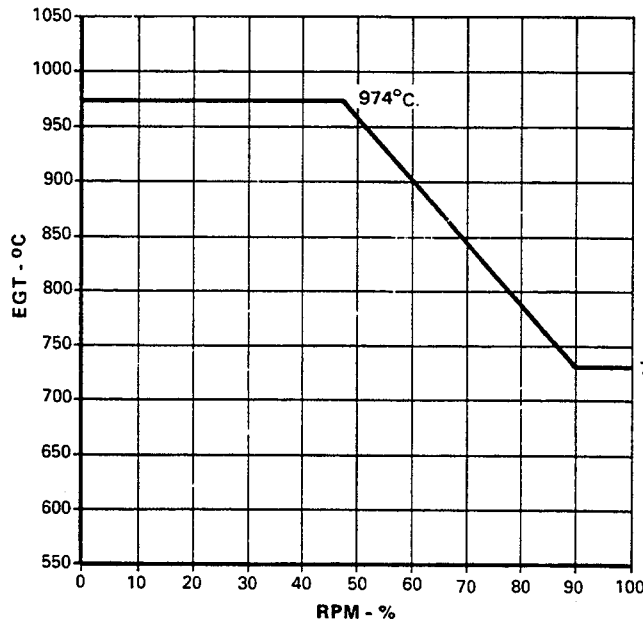


AUXILIARY POWER UNIT (APU)

APU MODEL GTCP36-150 [A] AND -150 [AA]

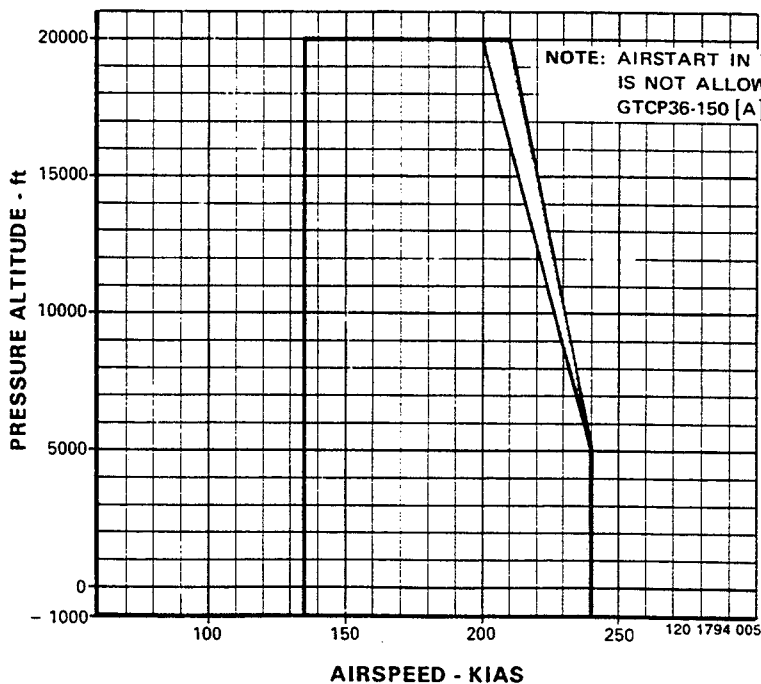
- APU operation above 16000 ft permitted only with APU bleed to both air conditioning packs (only for APU model GTCP36-150 [A], P/N 3800148-2).

MAXIMUM ALLOWABLE EGT DURING START

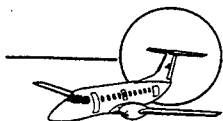


NOTE: DURING START, EGTs ABOVE 732°C TO A MAXIMUM OF 974°C ARE LIMITED TO 10 SECONDS.

APU IN - FLIGHT STARTING ENVELOPE



NOTE: AIRSTART IN THE SHADED AREA IS NOT ALLOWED FOR APU model GTCP36-150 [A].

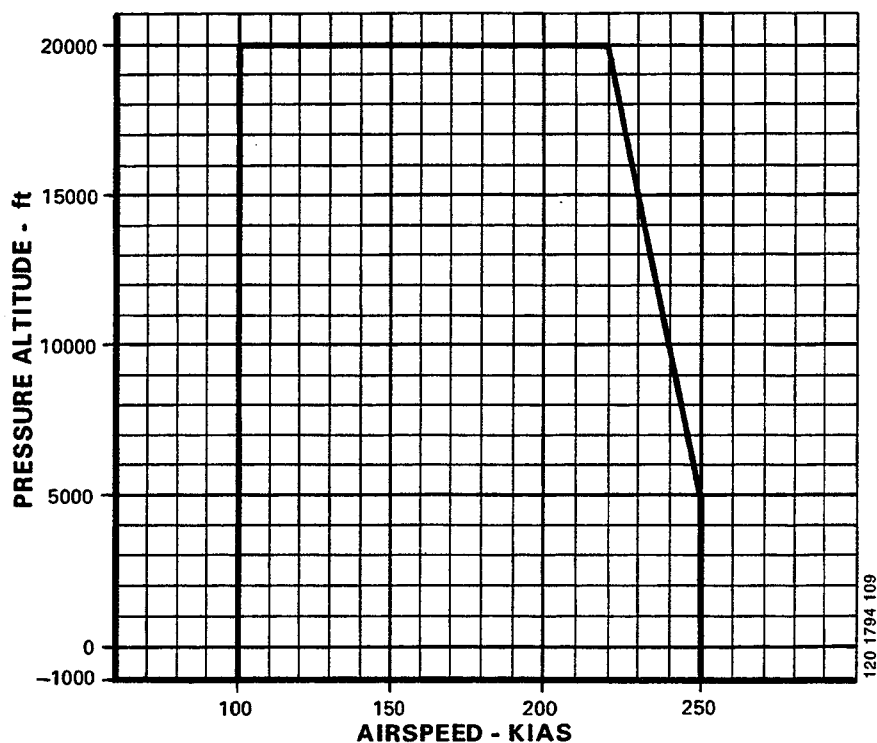


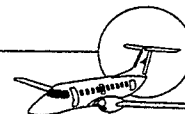
AUXILIARY POWER UNIT (APU) (Continued)

SUNDSTRAND TURBOMACH T-62T-40C7E1

- Maximum allowable EGT:
 - during start: 760°C.
 - during steady state operation: 680°C (Inflight, EGT's above 680 up to 730°C are permitted for 5 minutes maximum).

APU INFLIGHT STARTING ENVELOPE



**CABIN PRESSURIZATION**

- Maximum differential pressure 7.2 psi

OPERATIONAL LIMITS

- External temperature:
Minimum: -54°C .

NOTE: In the event of a landing below -40°C , the abnormal procedure **LANDING BELOW -40°C** must be followed.

Maximum:

AIR CONDITIONING		
FUNCTIONING	NOT FUNCTIONING (1)	
	ALTITUDE ALERTER DEENERGIZED	ALTITUDE ALERTER ENERGIZED
ISA + 35°C	ISA + 20°C (2)	ISA + 15°C (3)

NOTE: (1) If performance data requires, air conditioning may be turned off for takeoff and landing up to two minutes, without limiting the airplane to ISA + 15°C or ISA + 20°C .

- (2) This limitation is due to heat concentration behind the instrument panel. Radio Master switch should be on all the time, except during engine starting, to have the EFIS fans running.
- (3) This limitation is due to the heat concentration in Altitude Alerter. It may be exceeded up to ISA + 20°C for 30 minutes only, provided Radio Master switch is kept on all the time, except during engine starting, to have the EFIS fans running.



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OPERATIONAL LIMITS (Continued)

- Maximum operating altitude:

EEC	ENGINE BLEED	
	OPEN	CLOSED
ON	32000 ft	25000 ft
OFF	25000 ft	20000 ft

- NOTE:** – For airplanes equipped with APU Garrett model GTCP36-150 [A], P/N 3800148-2, when the engine bleeds are closed and the APU is the only source of bleed air, the maximum operating altitude is:
- 10000 ft for single-pack operation.
 - 20000 ft for dual-pack operation.
- For airplanes equipped with forward lavatory and Pre-Mod. SB 120-25-0264 (Oxygen Bottle under the Flight Attendant Seat not installed), the maximum operating altitude is limited to 25000 ft, unless the RH front aisle passenger seat is reserved for the flight attendant.
 - For airplanes equipped with forward lavatory and Post-Mod. SB 120-25-0264 (Oxygen Bottle under the Flight Attendant Seat installed), the maximum operating altitude is limited to 30000 ft, unless the RH front aisle passenger seat is reserved for the flight attendant.



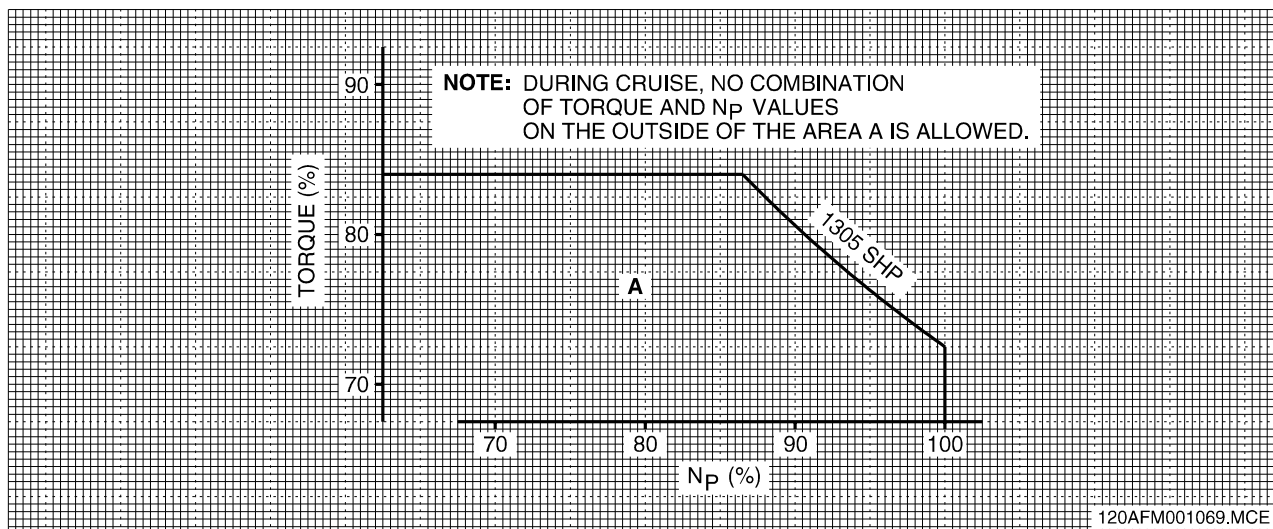
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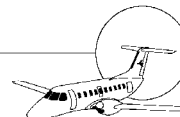
OPERATIONAL LIMITS (Continued)

- Maximum takeoff and landing altitude: 10000 ft pressure altitude.

NOTE: Takeoff and landing operations above 8000 ft pressure altitude are allowed only with EEC off.

- The procedures and performance data presented in the basic AFM consider the airplane operation on prepared paved runways. For operation on unpaved runways, refer to Supplement 14.
- Runway slope: $\pm 2\%$.
- Maximum takeoff and landing tailwind component: 10 kt.
- Maximum allowable cruise power:



**ICE AND RAIN PROTECTION**

- Maximum speed for windshield wiper operation: 160 KIAS.
- Minimum N_H required for operation of the pneumatic deicing system: 80%.

LOADING

The airplane must be loaded in accordance with the weight and center of gravity limits contained in this Airplane Flight Manual.

ELECTRICAL POWER

- Maximum load per main generator: On ground: 380A (400A if ambient temperature is up to ISA + 27°C).
Up to 27000 ft: 400A.
Above 27000 ft: 380A.
- Maximum load per auxiliary generator: Up to 18000 ft: 150A.
Above 18000 ft: 140A.
- Maximum load on APU generator: Up to 16000 ft: 400A.
Above 16000 ft: 290A.
- Maximum battery temperature: 70°C.

OXYGEN**OXYGEN SYSTEM DURATION**

(Applicable to airplanes equipped with high pressure gaseous oxygen system)

Number of passengers	02	04	06	08	10	12	14	16	18	20	22	24	26	28	30	31
Oxygen system duration (hours: minutes)	13:53	6:53	4:34	3:24	2:42	2:14	1:54	1:39	1:27	1:18	1:10	1:04	0:58	0:54	0:50	0:48

NOTE: (1) Assumed initial pressure is 1850 psi (fully charged oxygen cylinder).

(2) Indicated values are computed for an emergency descent. In addition, the system has provisions for two hours of oxygen for each crew member (pilot, copilot, and observer), computed from the beginning of the emergency descent.

(3) Number of passengers includes cabin attendant.



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OZONE CONCENTRATION

The tables below show the airplane altitude limitations due to ozone concentration in atmosphere. Limitations are only applicable to flight duration longer than 3 hours.

NOTE: (1) These tables are based on FAA ADVISORY CIRCULAR No. 120.38.

(2) The tables show altitude limitations calculated for constant ozone concentration, cabin stabilized at 8000 ft, and both recirculation fans on.

(3) For conditions other than those specified in item 2 above, an optimized flight plan shall be approved by regulatory agencies.

W = Western

E = Eastern

Reference: 100°W longitude

NORTH AMERICA LIMITATIONS

LA- TTITUDE \ FLIGHT LEVEL	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E
80°N	-	270	-	270	-	270	-	270	-	270	-	270	-	270	-	300	-	300	-	300	-	290	-	300
75°N	-	280	-	270	-	270	-	270	-	270	-	270	-	270	-	310	-	310	-	300	-	290	-	300
70°N	-	290	-	270	-	270	-	270	-	270	-	270	-	270	-	-	-	310	-	310	-	300	-	300
65°N	310	290	300	270	300	270	290	270	270	270	300	270	290	290	-	-	-	-	310	-	300	-	-	300
60°N	-	300	310	280	300	290	270	270	270	270	310	270	300	310	-	-	-	-	-	-	300	-	-	310
55°N	-	300	-	290	310	290	270	270	270	270	310	290	300	310	-	-	-	-	-	-	310	-	-	-
50°N	-	310	-	300	310	300	270	270	270	270	310	310	310	-	-	-	-	-	-	-	-	-	-	-
45°N	-	310	-	310	310	310	270	290	290	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40°N	-	-	310	-	310	-	310	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-


OZONE CONCENTRATION (Continued)
SOUTH AMERICA LIMITATIONS

LA- TITUDE \ FLIGHT LEVEL	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E
80°S	/	270	/	300	/	300	/	300	/	290	/	300	/	270	/	270	/	270	/	270	/	270	/	270
75°S	/	270	/	310	/	310	/	300	/	290	/	300	/	280	/	270	/	270	/	270	/	270	/	270
70°S	/	270	/	-	/	310	/	310	/	300	/	300	/	290	/	270	/	270	/	270	/	270	/	270
65°S	290	290	-	-	-	-	-	310	-	300	-	300	310	290	300	270	300	270	290	270	270	270	300	270
60°S	300	310	-	-	-	-	-	-	-	300	-	310	-	300	310	280	300	290	270	270	270	270	310	270
55°S	300	310	-	-	-	-	-	-	-	310	-	-	-	300	-	290	310	290	270	270	270	270	310	290
50°S	310	-	-	-	-	-	-	-	-	-	-	-	-	310	-	300	310	300	270	270	270	270	310	310
45°S	-	-	-	-	-	-	-	-	-	-	-	-	-	310	-	310	310	310	270	290	290	290	-	-
40°S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	310	-	310	-	310	310	-	-	-	-

AUSTRALIA LIMITATIONS

LA- TITUDE \ FLIGHT LEVEL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
43°S	-	-	-	-	-	310	300	300	300	310	270	310
36°S	-	-	-	-	-	-	-	310	310	-	-	-

JAPAN LIMITATIONS

LA- TITUDE \ FLIGHT LEVEL	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
43°N	300	300	300	310	270	310	-	-	-	-	-	310
36°N	-	310	310	-	-	-	-	-	-	-	-	-



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FLIGHT CREW

- Required Flight Crew Pilot and Copilot

KINDS OF OPERATION

The airplane is certificated in the transport category (passengers and cargo), in the following conditions, both day and night, when the appropriate equipment and instruments required by the airworthiness and operating regulations are approved, installed and in an operable condition:

- Visual (VFR);
- Instrument (IFR);
- Icing Conditions;
- Category II (According AFM Supplement 2).

MANEUVERING FLIGHT LOAD FACTORS LIMIT

- – 1 g to + 2.80 g with flaps retracted.
- 0 g to 2.00 g with flaps extended.

BRAKES

After landing with weights exceeding those shown on the Landing Brake Energy Charts, Section 5, a subsequent takeoff must not be scheduled for at least 26 minutes, after which it must be ascertained that wheel thermal plugs have not melted.

ANTI-SKID

- The procedures and performance data presented in the basic AFM consider both anti-skid systems operative. For takeoffs and landings with anti-skid system inoperative, refer to Supplement 8.

**FLIGHT IN ICING CONDITIONS**

- Airspeeds:
 - Flaps and Gear Up 165 KIAS MINIMUM (all engines operating)
 - Flaps 15°/Gear Up 140 KIAS MINIMUM (all engines operating)

NOTE: In the event of an engine failure in icing conditions, maintain the engine failure airspeeds shown in Section V, Performance. The icing condition low speed alarm may activate if the airspeed is below 160 KIAS with the flaps up.

- Operation in known icing conditions is approved when the appropriate equipment and instruments required by the airworthiness and operating regulations are approved, installed and in operable condition.
- When operating in known or forecast icing conditions, the specific procedures for operation in icing conditions presented in the Abnormal Procedures and Normal Procedures Sections of this manual must be followed.
- Turn on the ice protection systems as follows:
 - AOA, TAT, SLIP, Engine Air Inlet and Ignition switches;
 - Propeller;
 - Leading Edge Deicers and Windshield Heater switches:
 - When atmospheric or ground icing conditions exist or at the first sign of icing accretion anywhere on the airplane or ICE CONDITION light is illuminated, whichever occurs first.

NOTE:

- During takeoff, delay activation of the leading edge deicers until reaching the final segment speed.
- Atmospheric icing conditions exist when indicated Outside Air Temperature (OAT) during ground operations or Total Air Temperature (TAT) 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).
- Ground icing conditions exist when indicated OAT during ground operations is 10°C (50°F) or below, and visible moisture, standing water, slush, ice or snow is present on the ramps, taxiways or runways.

- In icing conditions, use of flaps is restricted to takeoff, approach, and landing only. When the flaps have been extended for approach or landing, they may not be retracted unless the upper surface of the wing aft of the protected area is clear of ice, or unless flap retraction is essential for go-around.
- All wing inspection lights must be operative prior to flight into icing conditions at night.
- Both stall-warning systems must be operative prior to flight into icing conditions.
- When the ice detection is detecting ice and/or the de-ice boots are activated, the fast/slow indication is unreliable.

NOTE: This supersedes any relief provided by the Master Minimum Equipment List (MMEL).



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FLIGHT IN ICING CONDITIONS (Continued)

SEVERE ICING CONDITIONS

- 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:
 - UNUSUALLY EXTENSIVE ICE ACCRETED ON THE AIRFRAME IN AREAS NOT NORMALLY OBSERVED TO COLLECT ICE.
 - ACCUMULATION OF ICE ON THE UPPER SURFACE OF THE WING AFT OF THE PROTECTED AREA.
 - ACCUMULATION OF ICE ON THE PROPELLER SPINNER FARTHER AFT THAN NORMALLY OBSERVED.
 - 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.
 - SINCE THE AUTOPILOT MAY MASK TACTILE CUES THAT INDICATE ADVERSE CHANGES IN HANDLING CHARACTERISTICS, USE OF THE AUTOPILOT IS PROHIBITED WHEN ANY OF THE VISUAL CUES SPECIFIED ABOVE EXIST, OR WHEN UNUSUAL LATERAL TRIM REQUIREMENTS OR AUTOPILOT TRIM WARNINGS ARE ENCOUNTERED WHILE THE AIRPLANE IS IN ICING CONDITIONS.

**NAVIGATION AND COMMUNICATION EQUIPMENT**

- Do not operate weather radar during refueling near fuel spills or people.
- The airplane must not be moved until all heading and attitude information is valid on both pilot and copilot instruments.
- Approach must be made with EFIS in angular mode only. (For airplanes equipped with Collins EFIS-86B).
- While transmitting in HF, hydraulic fluid quantity indicator, battery temperature monitor and RMI information is not valid.
- The non-precision approaches using NDB course on the EFIS are not permitted. (For airplanes equipped with Bendix EFS-10A).
- The Fast/Slow indication is not valid for flaps 15° and 25°. (For airplanes equipped with Stall Warning Computer P/N's C-81806-1 and C-81806-1 MOD. A).
- The following limitations are applicable to the 2101 (I/O) GPS system:
 1. The Pilot's Operating Guide, at the latest approved revision, must be immediately available to the flight crew.
 2. Software version 0229 (or later approved version) must be installed.
 3. Prior to GPS operation the pilot must verify the accuracy of each waypoint by reference to current approved data.
 4. Currency of the Navigation Database must be verified prior to use.
 5. Receiver Autonomous Integrity Monitor (RAIM) must be operative.
 6. When using the GPS system, additional navigation equipment required for the specific type of VFR/IFR operation must be installed.
 7. The GPS position must be checked for accuracy prior to use as a means of navigation, and under the following conditions:
 - Prior to each compulsory reporting point, when not under radar surveillance or control.
 - At or prior to arrival at each enroute waypoint during RNAV operation along approved RNAV routes.
 - Prior to requesting off-airway routing and at hourly intervals, thereafter during RNAV operation of approved RNAV routes.
 8. Use of GPS for IFR navigation as a primary means of navigation is prohibited.

AUTOPILOT

- Refer to Supplement No. 1 for Collins FCS-65 Flight Control System.



AIRPLANE FLIGHT MANUAL

TRAFFIC ALERT AND COLLISION AVOIDANCE

- Deviation from the ATC assigned altitude is authorized only to extent necessary to comply with a TCAS Resolution Advisory (RA).
- Maneuvers must not be based solely on information presented in the traffic display.

