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TEMPORARY FLIGHT MANUAL CHANGE

Publications Affected:
- Learjet 40 AFM — FM-132
- Learjet 40 AFM — FM-132 (Metric)
- Learjet 40 AFM — EASA AFM — FM-132 (EASA)
- Learjet 40 Brazilian AFM — FM-132 (CTA)
- Learjet 40 Canadian AFM — FM-132 (TCA)
- Learjet 45 AFM — FM-126
- Learjet 45 AFM — FM-126 (Metric)
- Learjet 45 AFM — EASA AFM — FM-126 (EASA)
- Learjet 45 Brazilian AFM — FM-126 (CTA)
- Learjet 45 Canadian AFM — FM-126 (TCA)
- Learjet 60 AFM — FM-123

Description of Change:
Adds additional limitation to Icing under the heading TYPE OF OPERATION.

Filing Instructions:
Insert this Temporary Flight Manual Change in the affected AFMs adjacent to page 1-1 and retain until further notice.

Add the following paragraph under Icing in TYPE OF OPERATION:
When icing or frost conditions exist, this airplane must be inspected and operated in accordance with the Cold Weather Operation procedures of Section II. These procedures include the requirement to assure that all critical surfaces of the airplane (wing, vertical and horizontal stabilizers, flight control surfaces, spoilers and flaps) are free of frost, ice and snow for takeoff. Conducting only a visual inspection may not detect very small levels of contamination; therefore, a tactile (hand on surface) check of the wing leading edge and adjacent wing upper surface is required when the ambient temperature is less than 10°C (50°F).
GENERAL

TYPE OF OPERATION

This airplane is certificated in accordance with FAR 25 in the transport category and is eligible for the following kinds of operations when the appropriate instruments and equipment required by the airworthiness and operating requirements are installed and approved and are in operable condition.

This airplane is approved for:
- VFR (Visual)
- IFR (Instrument)
- Day
- Night
- Icing

Icing conditions exist when outside air temperature (OAT) on the ground and for takeoff is 10°C (50°F) or below, or the static air temperature (SAT) in flight is 10°C (50°F) to -40°C (-40°F), and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet, or ice crystals).

Icing conditions also exist when the OAT on the ground and for takeoff is 10°C (50°F) or below when operating on ramps, taxiways, or runways where surface snow, ice, standing water, or slush may be ingested by the engines, or freeze on engines, nacelles, or engine sensor probes.

This airplane is not certificated for ditching under FAR 25.801.

PERFORMANCE CONFIGURATION

The airplane configuration must be as presented under Standard Performance Conditions in Section V.

MINIMUM FLIGHT CREW

The minimum flight crew shall consist of pilot and copilot.

WEIGHT AND C.G. LIMITS

On aircraft 45-002 & subsequent not modified by SB 45-11-4:

MAXIMUM RAMP WEIGHT .................................................. 20,750 Pounds 9412 kg

MAXIMUM CERTIFIED TAKEOFF WEIGHT .................................. 20,500 Pounds 9299 kg

On aircraft 45-002 & subsequent modified by SB 45-11-4:

MAXIMUM RAMP WEIGHT .................................................. 21,750 Pounds 9865 kg

MAXIMUM CERTIFIED TAKEOFF WEIGHT .................................. 21,500 Pounds 9752 kg
Limitations

WEIGHT AND C.G. LIMITS (Cont)

MINIMUM FLIGHT WEIGHT ........................................ 14,000 Pounds
6350 kg

MAXIMUM ZERO FUEL WEIGHT ................................... 16,000 Pounds
7258 kg

NOTE All weights in excess of Maximum Zero Fuel Weight must consist of fuel.

MAXIMUM ALLOWABLE TAKEOFF WEIGHT

The takeoff weight is limited by the most restrictive of the following requirements:
- Maximum Certified Takeoff Weight.
- Maximum Takeoff Weight (Climb or Brake Energy Limited) for altitude and temperature as determined from the applicable figure entitled TAKEOFF WEIGHT LIMITS, Section V.
- Maximum Takeoff Weight for the runway and ambient conditions as determined from the applicable figure entitled TAKEOFF DISTANCE, Section V.

MAXIMUM CERTIFIED LANDING WEIGHT .......................... 19,200 Pounds
8709 kg

MAXIMUM ALLOWABLE LANDING WEIGHT

The landing weight is limited by the most restrictive of the following requirements:
- Maximum Certified Landing Weight.
- Perform Hard or Overweight Landing Inspection (Chapter 5, Learjet 45 Maintenance Manual) if Maximum Certified Landing Weight is exceeded.
- Maximum Landing Weight for the runway and ambient conditions as determined from the applicable figure entitled ACTUAL LANDING DISTANCE, Section V.
- Maximum Landing Weight (Approach Climb or Brake Energy Limited) for altitude and temperature as determined from the applicable figure entitled LANDING WEIGHT LIMITS, Section V.
- Perform High Energy Stop Inspection (Chapter 5, Learjet 45 Maintenance Manual) if the maximum brake energy weight for landing is exceeded during a landing or rejected takeoff.

CENTER-OF-GRAVITY

The center-of-gravity of the airplane for all flight conditions must be maintained within the applicable figure entitled CENTER-OF-GRAVITY ENVELOPE, this section.

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Limitations

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CENTER-OF-GRAVITY ENVELOPE

EFFECTIVITY
Aircraft 45-002 & Subsequent
modified by SB 45-11-4

Figure 1-1.3
Limitations

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AIRSPEED/MACH LIMITS
PRIMARY PITOT-STATIC SYSTEM
EFFECTIVITY
Aircraft 45-002 & Subsequent
modified by SB 45-11-4

Figure 1-2.3
AIRSPEED/MACH LIMITS

MAXIMUM OPERATING SPEED VMO/MMO

VMO/MMO shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent) unless a higher speed is authorized for flight test.

Primary Display

VMO .............................................................................................. 330 KIAS

MMO
- with Mach trim operative ...................................................... 0.81 Mi
- with Mach trim inoperative and Autopilot engaged ........ 0.81 Mi
- with Mach trim inoperative and Autopilot disengaged
  - 23,400 to 42,000 feet ..................................................... 0.76-0.78 Mi
  - Above 42,000 feet ............................................................ 0.78 Mi

Standby Instruments

VMO .............................................................................................. 325 KIAS

MMO .............................................................................................. 0.75 Mi

MANEUVERING SPEED VA

Avoid rapid and large alternating control inputs, especially in combinations with large changes in pitch, roll or yaw as they may cause structural failure at any speed, including below VA.

Refer to applicable figure entitled AIRSPEED/MACH LIMITS, this section, for VA. Maneuvers involving full application of rudder and aileron controls, as well as maneuvers that involve angles of attack near stall should be confined to speeds below VA.

MAXIMUM LANDING GEAR OPERATING SPEED VLO ............. 200 KIAS

MAXIMUM LANDING GEAR EXTENDED SPEED VLE ................ 260 KIAS

MAXIMUM FLAP EXTENDED SPEED VFE
- Flaps 8° ............................................................................... 250 KIAS
- Flaps 20° ............................................................................. 200 KIAS
- Flaps 40° ............................................................................. 150 KIAS

CAUTION
Limitations

AIRSPEED/MACH LIMITS (Cont)

MINIMUM CONTROL SPEED AIR VMCA

VMCA is a function of altitude and temperature. During flight tests, the aircraft was controllable down to stall speed. The speed shown is the minimum demonstrated speed corrected for maximum thrust effect with rudder boost on or off.

VMCA
- Flaps 8\° ................................................................. 103 KIAS
- Flaps 20\° ................................................................. 101 KIAS

MINIMUM CONTROL SPEED GROUND VMCG

VMCG is a function of altitude and temperature. The speed shown is a maximum, which occurs at maximum thrust conditions.

VMCG
- Rudder Boost On, APR On .............................................. 102 KIAS
- Rudder Boost On, APR Off .............................................. 100 KIAS
- Rudder Boost OFF, APR On ............................................. 125 KIAS
- Rudder Boost OFF, APR Off ........................................... 123 KIAS

MINIMUM CONTROL SPEED LANDING VMCL

VMCL is a function of altitude and temperature. The speed shown is a maximum, which occurs at maximum thrust conditions.

VMCL
- Flaps 8\° ................................................................. 105 KIAS
- Flaps 40\° ................................................................. 98 KIAS

TAKEOFF DECISION SPEED V1

Refer to applicable figure entitled TAKEOFF SPEEDS, Section V.

ROTATION SPEED VR

Refer to applicable figure entitled TAKEOFF SPEEDS, Section V.

TAKEOFF SAFETY SPEED V2

Refer to applicable figure entitled TAKEOFF SPEEDS, Section V.
OPERATIONAL LIMITS/REQUIREMENTS

TAKEOFF

Maximum Pressure Altitude ....................................................... 14,000 feet
Ambient Temperature .................................. Refer to Figure 1-3 and Section V
Tailwind Component
- Aircraft *not modified by SB 45-72-1* ........................................ 10 knots
- Aircraft modified by SB 45-72-1:
  - 12,000 feet and below ......................................................... 10 knots
  - Above 12,000 feet ............................................................. 0 knots

Runway Conditions:
Takeoff is limited to paved runways.
Runway water ............................................................... 3/4 inch (19 mm)
HI FLOW ................................................................. OFF
Fuel Load .................................................. Wings balanced within 200 pounds (91 kg)
EICAS ................................................................. SUMRY or FLT PAGE
Rudder Boost ................................................................. On

EN ROUTE

Maximum Pressure Altitude ..................................................... 51,000 feet
Fuel Load
- Aircraft 45-002 thru 45-258, and 45-260 *not modified by SB 45-28-8* .................................. Wings balanced within 500 pounds (227 kg)
- Aircraft 45-259, 45-261 thru 45-2000 and prior aircraft modified by SB 45-28-8 .................................. Wings balanced within 200 pounds (91 kg)

LANDING

Maximum Pressure Altitude ....................................................... 14,000 feet
Ambient Temperature .................................. Refer to Figure 1-3 and Section V
Tailwind Component ................................................................. 10 knots
Runway Conditions:
Landing is limited to paved runways.
Runway water ............................................................... 3/4 inch (19 mm)
Pressurization ....................................................... Cabin not pressurized
Fuel Load .................................................. Wings balanced within 200 pounds (91 kg)
EICAS ................................................................. SUMRY or FLT PAGE
OPERATIONAL LIMITS/REQUIREMENTS (Cont)

LIMIT MANEUVERING LOAD FACTORS

- Flaps Up ........................................................................... +2.9 g to -1.0 g
- Flaps Down ........................................................................... +2.0 g to 0.0 g

These acceleration values limit the bank angle in a level coordinated turn to 70° (flaps up) and 60° (flaps down).

BCAS or MFD

SUMRY or FLT page must be selected for takeoff and landing.

FLAPS

Do not extend flaps above 18,000 feet.

GEAR

Do not extend gear above 18,000 feet.

MANEUVERS

No aerobatic maneuvers, including spins, are approved.

Intentional stalls are prohibited above 18,000 feet.

SEAT BELTS AND SHOULDER HARNESSSES

Seat belts must be worn by all occupants during takeoff and landing.

When a seat is equipped with a shoulder harness, it must be worn by the occupant during takeoff and landing.

NOTE

The lavatory seat is certified for takeoff and landing using the seat belt only. This seat is not equipped with a shoulder harness.
GROUND OPERATING TEMPERATURE

If the aircraft is cold soaked on the ground for an extended period of time at an ambient temperature colder than -23°C (-9°F), the aircraft and its components must be warmed to -23°C (-9°F) or above prior to start.

The cabin temperature must be -15°C (+5°F) or warmer prior to takeoff.
**SYSTEM LIMITS**

**AUTOMATIC DIRECTION FINDER (ADF)**
*(Aircraft 45-006 thru 45-011 not modified by SB 45-34-2)*

Do not use the ADF as the sole source for navigation or as a navigation fix. NDB approaches are not approved.

**AIR DATA SYSTEM**

Air data systems (ADC 1 and 2) must be selected normal (NORM) for takeoff.

To assure proper air data system operation, the ADC Check of the Before Starting Engines procedure must be accomplished in accordance with Section II, this manual.

**Reduced Vertical Separation Minimums (RVSM)** — This aircraft has been shown to meet the airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace between 29,000 and 41,000 feet inclusive. This does not constitute an operational approval.

**ATTITUDE HEADING REFERENCE SYSTEM (AHRS)**

Attitude heading reference systems (AHRS 1 and AHRS 2) must be selected normal (NORM) for takeoff.

**AUTOPILOT/FLIGHT DIRECTOR**

Autopilot must be off for takeoff and landing.

Do not intentionally overpower the autopilot.

Autopilot Minimum Use Height:

Climb, En Route or Descent..........................................................500 feet AGL
Approach...................................................................................200 feet AGL

Autopilot & Flight director are approved for Category I approaches.
TEMPORARY FLIGHT MANUAL CHANGE

Publication Affected: Learjet Model 45 AFM (FM-126)

Description of Change: Adds operational limitations for precision approaches.

Filing Instructions: Insert this temporary change in the affected AFM adjacent to page 1-10, and retain until further notice.

Erroneous glide slope indications have occurred during ILS approaches. The anomaly only occurs approaching the outer marker. The glide slope stabilizes as the signal strengthens just inside the outer marker.

*Add the following limitations to the PRIMUS 1000 INTEGRATED AVIONICS SYSTEM:*

**Precision approaches are allowed while adhering to the following:**

1. When crossing the Outer Marker on glide slope, the altitude must be verified with the value on the published procedure.

2. For aircraft with two operating glide slope receivers, the aircraft may be flown to the published minimums for the approach using normal procedures if both receivers are tuned to the approach and both crew members are monitoring the approach using independent data and displays.

3. For aircraft with single operating glide slope receiver, the approach may be flown using normal procedures no lower than Localizer Only Minimum Descent Altitude (MDA).

**FAA APPROVED**

for RONALD K. RATHGEBER, MANAGER
AIRCRAFT CERTIFICATION OFFICE
FEDERAL AVIATION ADMINISTRATION
WICHITA, KANSAS
**SYSTEM LIMITS (Cont)**

**PRESSURIZATION**

Delta P .........................................................+9.9 psid to -0.5 psid

Do not land with the cabin pressurized.

**ENVIRONMENTAL CONTROL SYSTEM**

HI FLOW must be off with takeoff power selected, or for landing, anti-ice operations, and flight above 30,000 ft.

**PRIMUS 1000 INTEGRATED AVIONICS SYSTEM**

The appropriate Honeywell PRIMUS 1000 Integrated Avionics System for the Learjet Model 45/40 Pilot’s Manual must be immediately available to the flight crew. The following table lists the approved manuals:

<table>
<thead>
<tr>
<th>EFFECTIVITY</th>
<th>APPROVED MANUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft 45-002 thru 45-235</td>
<td>Pub. No. A28-1146-106-02 (dated October 2000 or appropriate later revision)</td>
</tr>
<tr>
<td>Aircraft 45-236 &amp; subsequent and prior aircraft modified by SB 45-22-5</td>
<td>Pub. No. A28-1146-165-XX (dated March 2003 or appropriate later revision)</td>
</tr>
</tbody>
</table>

**ENGINE SYNCHRONIZER**

ENG SYNC must be OFF for takeoff, landing, and single-engine operation.

**EXTERNAL POWER**

The maximum amperage from an external power source must be limited to 1500 amps.

**GENERATOR LIMITS**

Generator output is limited as follows:

Ground or Flight Operations

- **Continuous** — 300 amps.

  **NOTE**

  If more electrical load is applied than can be supplied by the generators, the current will be drawn from the aircraft batteries and will not be shown on the DC amps display. If this occurs, DC voltage will be reduced.

- **Transient** — Higher transient loads for cross-starts and battery charging are authorized.
Limitations

**SYSTEM LIMITS (Cont)**

**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.

**NOTE**

Hats and “ear-muff” type headsets must be removed prior to donning crew oxygen masks.

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 altitude is not recommended.

**WARNING**

Passenger masks are intended for use during an emergency descent to an altitude not requiring supplemental oxygen.

**RUDDER BOOST**

Rudder boost must be on for takeoff.

*On aircraft 45-002 thru 45-169 not modified by SB 45-22-4, rudder boost must be OFF when the yaw damper is on.*

**SPOILERS/AUTOSPOILERS/SPOILERONS**

**Spoilers:**

Do not extend spoilers with flaps extended while airborne, except as specified in EMERGENCY and/or ABNORMAL PROCEDURES in Section III and Section IV, this manual.

**Autospoilers:**

Autospoilers must be armed for takeoff and landing, except, do not arm autospoilers for training maneuvers where engine failure will be simulated above V1 speed or for touch-and-go landings.

**STARTER**

The following cooling periods must be observed between consecutive uses of the starter:

<table>
<thead>
<tr>
<th>After Start Attempt</th>
<th>Wait</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 minute</td>
</tr>
<tr>
<td>2</td>
<td>2 minutes</td>
</tr>
<tr>
<td>3</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

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Change 1

SYSTEM LIMITS (Cont)

THRUST REVERSERS

Thrust reverser system use is limited to ground operations on paved surfaces and attempts to deploy shall not be made in flight.

Thrust reversers must not be used to back up the aircraft.

Thrust reverser circuit breakers must not be intentionally pulled while in flight, except as specified in EMERGENCY and/or ABNORMAL PROCEDURES in Section III and Section IV of this manual.

Thrust reversers must not be used for touch-and-go landings.

Maximum reverse thrust is usable at speeds down to 40 KIAS.

Thrust reversers must be limited to idle reverse when the engines are operating in MANual mode.

TIRES

Tire Limiting Speed (Ground Speed) ........................................... 165 knots

NOTE

The takeoff and landing speeds presented in this manual will not exceed this limit.

YAW DAMPER

On aircraft 45-002 thru 45-169 not modified by SB 45-22-4, rudder boost must be off prior to engaging yaw damper.

On aircraft 45-002 thru 45-225 not modified by SB 45-55-6, the yaw damper must be engaged for all flight operations except takeoff and landing.

On aircraft 45-226 & subsequent and prior aircraft modified by SB 45-55-6, yaw damper use is not required.
POWERPLANT LIMITS

ENGINE TYPE

On aircraft 45-002 & subsequent *not* modified by SB 45-72-1, Honeywell TFE731-20R-1B or TFE731-20AR-1B turbofan propulsion engines.

On aircraft 45-002 & subsequent *modified* by SB 45-72-1, Honeywell TFE731-20BR-1B turbofan propulsion engines.

ENGINE COMPUTER

The engines must be operated at all times with the ENG CMPTR switches in the ON position, except as specified in NORMAL, EMERGENCY and ABNORMAL PROCEDURES in Sections II, III and IV, this manual.
### ENGINE OPERATING LIMITS

<table>
<thead>
<tr>
<th>Operating Condition</th>
<th>Operating Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thrust Setting</td>
</tr>
<tr>
<td>APR</td>
<td>5</td>
</tr>
<tr>
<td>T/O</td>
<td>5</td>
</tr>
<tr>
<td>MCT</td>
<td>Continuous</td>
</tr>
<tr>
<td>MCR</td>
<td>Continuous</td>
</tr>
<tr>
<td>Ground Idle</td>
<td>Continuous</td>
</tr>
<tr>
<td>Flight Idle</td>
<td>Continuous</td>
</tr>
<tr>
<td>Starting Idle</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Maximum oil pressure may be exceeded for cold temperature starts for short durations.
2. Engine preheat is recommended at temperatures below -28°C.
3. Allow oil temperature to increase to 30°C prior to increasing thrust above idle. If cold ambient conditions prevent oil temperature from obtaining 30°C, idle thrust may be exceeded as required.
4. If altitude is greater than 30,000 feet: Oil Temperature — 140°C. If altitude is 30,000 feet or less: Oil Temperature — 127°C.
5. Manual Mode or RMU — 917°C (amber), Limit — 942°C (red).
6. The thrust setting tables, in Section V, may be more limiting than the values listed here.

Figure 1-4.4
Limitations

ENGINE TRANSIENT SPEED LIMITS

N1 LIMITS

- Reduce applicable N1 or N2 below limit.
- Reduce applicable N1 or N2 below limit. Record maximum N1 or N2, and time above limit in engine log book. Refer to Honeywell Engine Light Maintenance Manual for control check and performance calibration.
- Reduce applicable N1 or N2 below limit. Record maximum N1 or N2, and time above limit in engine log book. Refer to Honeywell Engine Light Maintenance Manual for overspeed inspection.
- N2 may operate for 5 minutes in APR.

NOTE: On aircraft 45-002 & subsequent modified by 45-72-1, there may be a momentary N1 red EI illumination which is allowable.

Figure 1-5
Abort start. Record maximum ITT and time in excess of 991°C in engine log book.
Determine cause and correct prior to next start.

Abort start. Record maximum ITT and time in excess of 991°C in engine log book.
Refer to Honeywell Engine Light Maintenance Manual for static takeoff power check.

Abort start. Record maximum ITT and time in excess of 991°C in engine log book.
Refer to Honeywell Engine Light Maintenance Manual for hot section inspection.

Figure 1-6.4
Limitations

ENGINE TEMPERATURE LIMITS (ITT) (Cont)
EXCEPT STARTING

EFFECTIVITY
Aircraft 45-002 & Subsequent modified by SB 45-72-1


Figure 1-7.4
FUEL LIMITS

FUEL LOAD/BALANCE

Do not takeoff or land with wing fuel imbalance greater than 200 pounds (91 kg).

On aircraft 45-002 thru 45-258 and 45-260 not modified by SB 45-28-8:
During flight, wing fuel balance must be maintained within 500 pounds (227 kg) flaps up or 200 lb (91 kg) with flaps greater than 3°.

On aircraft 45-259, 45-261 thru 45-2000 and prior aircraft modified by SB 45-28-8:
During flight, wing fuel balance must be maintained within 200 pounds (91 kg).

APPROVED FUELS

The mixing of fuel types is allowed.


FUEL ADDITIVES

ANTI-ICING ADDITIVE

On aircraft 45-002 thru 45-064 not modified by SB 45-11-1:
Anti-icing additive conforming to MIL-I-27686 or MIL-I-85470 is a requirement.

The aircraft may be single-point pressure refueled with approved pre-mixed fuels.

The following products have been approved for blending MIL-I-27686 additive during refueling (gravity fill method only):
- Hi-Flo Prist 20 fluid ounce aerosol blender.
- Quell 20 fluid ounce aerosol blender.
- D-Ice 20 fluid ounce aerosol blender.

The following products have been approved for blending MIL-I-85470 additive during refueling (gravity fill method only):
- Hi-Flash Prist 20 fluid ounce aerosol blender.
- D-Ice Flash 190, 20 fluid ounce aerosol blender.
ANTI-ICING ADDITIVE (Cont)

The anti-icing additive concentrations by volume are as follows:

<table>
<thead>
<tr>
<th>Additive Type</th>
<th>Concentration by Volume Minimum</th>
<th>Concentration by Volume Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-I-27686</td>
<td>0.06%</td>
<td>0.15%</td>
</tr>
<tr>
<td>MIL-I-85470</td>
<td>0.10%</td>
<td>0.15%</td>
</tr>
</tbody>
</table>

Use not less than 20 fluid ounces (1 can) of MIL-I-27686 per 260 gallons (984 liters) nor more than 20 fluid ounces per 105 gallons (397 liters) of fuel. Use not less than 20 fluid ounces (1 can) of MIL-I-85470 per 155 gallons (587 liters) nor more than 20 fluid ounces per 105 gallons (397 liters) of fuel.

Refer to Addendum I — FUEL SERVICING for additional information.

On aircraft 45-065 & subsequent and prior aircraft modified by SB 45-11-1: Anti-icing additive is not a requirement. However, for microbial protection, it is recommended that fuel containing either an approved biocide additive or an anti-icing additive conforming to MIL-I-27686 be used at least once a week for aircraft in regular use and whenever a fueled aircraft will be out of service for a week or more.

Refer to Addendum I — FUEL SERVICING for additional information.

BIOCIDE ADDITIVE

Biobor JF is approved for use as a biocide additive when premixed with fuel in the fuel supply facility. Blending of Biobor JF and fuel using the gravity fill method of refueling is not approved. Additive concentration is not to exceed 270 ppm. Refer to Addendum I — FUEL SERVICING for additional information.

FUELING

On aircraft 45-002 thru 45-156 not modified by SB 45-28-2, Single-point pressure refueling is limited to 40 psig (2758 hPa) and defueling is limited to -10 psig (-690 hPa).

On aircraft 45-157 & subsequent and prior aircraft modified by SB 45-28-2, Single-point pressure refueling is limited to 55 psig (3792 hPa) and defueling is limited to -10 psig (-690 hPa).

HYDRAULIC FLUID LIMITS

APPROVED HYDRAULIC FLUIDS

Hydraulic fluids conforming to military specification MIL-H-5606 are approved.
LIMITATIONS

AUXILIARY POWER UNIT (APU) LIMITS

The APU is limited to ground operations only, up to field pressure altitudes of 10,000 feet, and must be shut down prior to takeoff.

Operation of the APU during gravity fill refueling is prohibited.

Operation of the APU during fluid de-icing/anti-icing is prohibited.

Do not takeoff with an APU FAIL amber CAS illuminated. In the event the APU automatically shuts down due to an APU failure, a visual inspection of the unit must be conducted prior to flight.

APU STARTER LIMITS

<table>
<thead>
<tr>
<th>After Start Attempt</th>
<th>Wait</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 Minute</td>
</tr>
<tr>
<td>2</td>
<td>2 Minutes</td>
</tr>
<tr>
<td>3</td>
<td>15 Minutes</td>
</tr>
</tbody>
</table>

APU GENERATOR LIMITS

- Continuous — 300 amps.

If more electrical load is applied than can be supplied by the APU generator, the current will be drawn from the aircraft batteries and will not be shown on the DC amps display. If this occurs, DC voltage will be reduced.

- Transient — Higher transient loads for cross-starts and battery charging are authorized.

APPROVED FUELS

Fuels approved for the main aircraft engines are also approved for the APU.

APPROVED OILS

Refer to Addendum II — ENGINE OIL SERVICING for a listing of approved oils.