

ENGINE OPERATING LIMITS TABLE

POWER SETTING	TORQUE %	ITT °C	N ₁ % (1)	N _P % (4)	OIL PRESSURE psi	OIL TEMP °C
TAKEOFF/MAX	<u>100</u> ⁽⁸⁾	<u>820</u> Max	<u>104</u> Max	<u>100</u> Max ⁽²⁾	<u>90</u> to <u>120</u> ⁽⁶⁾	<u>10</u> to <u>105</u>
IDLE	<u>1 to 10</u> % ⁽⁹⁾ (Ground)	<u>750</u> Max	<u>60 to 61</u> (Ground) <u>67</u> Min (Flight)	<u>46 to 50</u> (Ground)	<u>90</u> Min	<u>-40 to 105</u> (Ground) <u>10 to 105</u> (Fit) <u>106 to 110</u> ⁽⁷⁾
START	---	<u>871-1000</u> (<u>5</u> sec)	---	---	<u>200</u> Max	<u>-40</u> Min
TRANSIENT	<u>101-107</u> ⁽¹⁰⁾ (<u>5</u> sec)	<u>821-870</u> (<u>20</u> sec)	<u>104</u> Max	<u>110</u> ⁽³⁾ (<u>20</u> sec)	<u>40</u> to <u>130</u> ⁽⁵⁾	<u>106</u> to <u>110</u> (<u>10</u> minutes)

NOTES

- N₁ values presented for PMU ON. With PMU OFF, N₁ may vary from these values.
- With PMU OFF, permissible maximum N_P is 100 +/- 2 %.
- Permissible at any Operating Condition "Power Setting" for completion of in-flight emergencies.
- Avoid stabilized ground operation from 62 to 80 % N_P.
- Operation in this range permitted only during aerobatics or spins, and 15 to 40 psi for 5 seconds with PCL at IDLE.
- Normal oil pressure during steady state conditions is 90 to 120 psi. Operation at oil pressure less than 90 psi at flight idle or above is indicative of oil system malfunction.
- Acceptable for ground operation at and below 20% torque.
- The PMU will govern Maximum torque at 100+/-2%. Torque above 102% at a constant PCL setting and steady state flight is indicative of a governing system malfunction.
- Allowable torque range with N_P stabilized and PCL at IDLE.
- With the PMU on, Torque between 102-107% is possible following rapid PCL movement or aerobatic maneuvers. Torque above 107% is a limiting system malfunction.

AIRSPEED LIMITATIONS

STARTER CYCLE LIMITATIONS

MAXIMUM AIRSPEED GEAR DOWN (V _{LE}) & FLAP DOWN (V _{FE}) <u>150</u> KIAS	STARTER DUTY CYCLE IS LIMITED TO FOUR <u>20 SEC</u> CYCLES
MAX OPERATING (V _{MO}) <u>316</u> KIAS / MAX MACH (M _{MO}) <u>0.67</u> MACH	COOLING PERIOD AFTER FIRST STARTER CYCLE <u>30 SEC</u>
TURBULENT AIR PENETRATION SPEED (V _O), MAXIMUM: <u>195</u> KIAS	COOLING PERIOD AFTER SECOND STARTER CYCLE <u>2 MIN</u>
MAX OPERATING MANEUVERING (V _O) <u>227</u> KIAS	COOLING PERIOD AFTER THIRD STARTER CYCLE <u>5 MIN</u>
MAX WITH FULL RUDDER DEFLECTION <u>150</u> KIAS	COOLING PERIOD AFTER FOURTH STARTER CYCLE <u>30 MIN</u>
PROHIBITED MANEUVERS	FLIGHT MANEUVERING LIMITATIONS
1. INVERTED STALLS	INVERTED/NEGATIVE G FLIGHT <u>60</u> sec
2. INVERTED SPINS	INTENTIONAL ZERO G FLIGHT <u>5</u> sec
3. SPINS WITH PCL ABOVE IDLE	ACCELERATION LIMITATIONS
4. SPINS WITH THE LANDING GEAR, FLAPS, OR SPEEDBRAKE EXTENDED	SYMMETRIC CLEAN <u>+7.0 TO -3.5</u> Gs
5. SPINS WITH THE PMU OFF	SYMMETRIC GEAR & FLAPS EXTENDED <u>+2.5 TO 0.0</u> Gs
6. AGGRAVATED SPINS PAST TWO TURNS	ASYMMETRIC CLEAN <u>+4.7 TO -1.0</u> Gs
7. SPINS BELOW 10,000 FEET PRESSURE ALTITUDE	ASYMMETRIC GEAR & FLAPS EXTENDED <u>+2.0 TO 0.0</u> Gs
8. SPINS ABOVE 22,000 FEET PRESSURE ALTITUDE	Uncoordinated rolling maneuvers initiated at -1 G shall be limited to a 180 degree bank angle change.
9. ABRUPT CROSS-CONTROLLED (SNAP) MANEUVERS	OTHER LIMITATIONS
10. AEROBATIC MANEUVERS, SPINS, OR STALLS WITH A FUEL IMBALANCE GREATER THAN 50 POUNDS BETWEEN WINGS	MIN VOLTAGE FOR BATTERY START <u>23.5</u> VOLTS
11. TAIL SLIDES	MAX CROSSWIND FOR DRY RUNWAY <u>25</u> KNOTS
THE AIRCRAFT HAS BEEN APPROVED ONLY FOR TRANSIT THROUGH <u>5000</u> FEET OF <u>LIGHT RIME</u> ICE.	MAX CROSSWIND FOR WET RUNWAY <u>10</u> KNOTS
MINIMUM BATTERY VOLTAGE: <u>22.0</u> VOLTS	MAX CROSSWIND FOR ICY RUNWAY <u>5</u> KNOTS
HYDRAULIC CAUTION: < <u>1790</u> PSI, > <u>3510</u> PSI	MAX TAILWIND COMPONENT FOR TAKEOFF <u>10</u> KNOTS
FUEL CAUTION LIGHT: < <u>110</u> POUNDS IN RESPECTIVE WING TANK	MAX FUEL FLOW IS LIMITED TO <u>799</u> PPH OR LESS FOR ALL PHASES OF FLIGHT
COCKPIT PRESSURIZATION SCHEDULE LIMIT: <u>3.6</u> +/- <u>0.2</u> PSI	