



6-2. Engine Operating Limits

Table 6-2. TSIO-550 Engine Operating Limits

Specification	Limit			
	B	C	E	G
Full Throttle Speed ±25 RPM	2700	2600	2700	2700
Idle Speed RPM ± 25 RPM	600	600	600	600
Rated Manifold Air Pressure (full throttle@ sea level) ± 0.2 in. Hg	38.0	35.5	38.5	34.0
Engine Intake Air Temperature	Ambient	Ambient	Ambient	Ambient
Engine Intake Air Pressure	Ambient	Ambient	Ambient	Ambient
Fuel Grade (Octane)	100-LL Blue or 100 Green	100-LL Blue or 100 Green	100-LL Blue or 100 Green	100-LL Blue or 100 Green
Unmetered Fuel Pump Pressure (Idle) (psi)	7.0-9.0	7.0-9.0	7.0-9.0	7.0-9.0
Metered Nozzle Pressure (psi)	15.3-16.9	12.7-13.9	15.3-16.9	12.4-13.6
Unmetered Fuel Pump Pressure (Full Power) (Reference) (psi)	32-36	26-29	32-36	20.5-23.5
Full Throttle Fuel Flow (lbs/Hr)	245-255	212-224	245-255	200-210
Oil Temperature (Minimum)	100°F (38°)	100°F (38°)	100°F (38°)	100°F (38°)
Oil Temperature (Maximum)	240°F (116°C)	240°F (116°C)	240°F (116°C)	240°F (116°C)
Oil Pressure (Cold) (Maximum)	100 psig	100 psig	100 psig	100 psig
Oil Pressure (Minimum)	10 psig	10 psig	10 psig	10 psig
Oil Sump Capacity (quarts)	12	8	12	8
Crankcase Pressure ^① (Max.)	4.0 Inches H ₂ O	4.0 Inches H ₂ O	4.0 Inches H ₂ O	4.0 Inches H ₂ O
Magneto Drop/Spread	150/50	150/50	150/50	150/50
Cylinder Head Temperature with Bayonet Thermocouple (Limit)	460°F Max. (238°C Max.)	460°F Max. (238°C Max.)	460°F Max. (238°C Max.)	460°F Max. (238°C Max.)
Oil Consumption	$0.006 \times (\text{rated power of engine}) \times (\% \text{power at which measured}/100) \times (\text{hours duration}) = \text{amt. of oil consumed}$ 1 quart of oil = 1.875 lbs (Refer to the "Oil Consumption Test" in Chapter 18)			
① A sudden increase in crankcase pressure during which the liquid in the manometer fluctuates rapidly typically indicates sticking piston rings. However, before removing cylinders, investigate the breather and manometer. Refer to "Excessive Crankcase Pressure" in Chapter 8, Troubleshooting for details.				