

T-44C Operational Limits and Memory Items

Airspeeds (KIAS)	Memory Items	
V _{MO/VNE} Max dive/level flight 227	Emergency Shutdown On Deck	Emergency Shutdown Checklist
V _{MCA} Minimum controllable airspeed 86	1) Condition Levers – FUEL CUTOFF	†1) Power lever – IDLE
V _X Best angle of climb 102	If confirmed/suspected fire or fuel leak, continue checklist.	†2) Prop lever – FEATHER
V _Y Best rate of climb 108	Otherwise, secure using Secure Checklist.	†3) Condition lever – FUEL CUTOFF
V _{SSE} Minimum safe 1 engine inop 91	2) Firewall Valves – CLOSED	If prop fails to feather, alternate feathering checklist.
V _{XSE} Best angle of climb single engine 102	3) Boost Pumps – OFF	If confirmed/suspected fire or fuel leak, continue steps 4-6.
V _{YSE} Best rate of climb single engine 110	4) Fire Extinguisher – As Required	†4) Firewall valve – CLOSED
V _{FE} Max flap extension/extended (full) 140	5) AUX BATT Switch – OFF	†5) Fire Extinguisher – As Required
V _{FE} Max flap extension/extended (appr) 174	6) Gang Bar – OFF	†6) Bleed air – CLOSED
V _{LR} Max landing gear retraction 145	7) Evacuate Aircraft	
V _{LE} Max landing gear extension 155		Single-Engine Waveoff/Missed Approach
V _A Maneuvering speed 153	Abnormal Start	1) Power – Max Allowable, establish positive rate of climb (V _{XSE} minimum)
V _{MCG} Min controllable speed on ground 63	1) Condition Lever – FUEL CUTOFF (dec. below 790°C)	2) Flaps – APPROACH (unless already UP)
Max range glide 130	2) Starter – Starter only (for the remainder of the 40 seconds)	3) Gear - UP
Max endurance glide 102	3) Starter – OFF (at 40 seconds)	4) Flaps - UP
		5) Prop – 1900 RPM
Electrical	Aborting Takeoff	Jammed Power Lever
DC generator voltage 28.25 ± .8 VDC	1) Announce “Abort”	†1) Condition Lever – FUEL CUTOFF
Min battery voltage for APU charge 18 VDC	2) Power levers – IDLE	2) Emergency Shutdown Checklist – Execute
Min battery voltage for APU start 20 VDC	3) Reverse – As Required	
Min battery voltage for BATT start 22 VDC	4) Brakes – As Required	Fuel Leak
Starter (40sec, 60sec) x2, then 40 on, 30min off	5) Condition levers – FUEL CUTOFF	†1) Condition Lever – Fuel Cutoff
	6) Firewall valves – CLOSED	2) Emergency Shutdown Checklist – Execute
Interstage Turbine Temperature (ITT)	7) Boost pumps – OFF	
Normal operating range 400–790 °C	8) Fire extinguisher(s) – As Required	Primary Governor Failure/Malfunction
Max allowable 790 °C	9) AUX BATT switch – OFF	1) Attempt to adjust prop rpm to normal operating range.
Max continuous 790 °C	10) Gang bar – OFF	†2) Power Lever – IDLE
Max reverse 790 °C	11) Evacuate aircraft	†3) Prop Lever – FEATHER
Max acceleration (up to 2 sec) 850 °C		4) Alternate Prop Feathering Checklist – As Required
Max low idle 685 °C	Engine Failure After Takeoff	
Max cruising 740 °C	1) Power – As Required	Generator Failure
Cruise climb 765 °C	2) Gear – UP	1) Starter – OFF
Start Limit 925 °C (cutoff) 1090 °C (2 sec)	3) Airspeed – As Required (V _{XSE} or V _{YSE})	2) Generator – OFF, Reset Momentarily, release slowly to ON
	4) Emergency Shutdown Checklist – Execute	If generator will not reset:
Torque		3) Generator – OFF
Normal operating range 400–1315 lb-ft	EGPWS Pull Up Warning (IMC or at Night)	4) Current limiter (Battery Ammeter) – Checked
Max @ 1900 RPM 1520 lb-ft	1) Wings – Level	
Max @ 2200 RPM 1315 lb-ft	2) Power – Max Allowable	Smoke and Fume Elimination
Max acceleration 2100 lb-ft	3) Pitch – As required to set and maintain V _X	1) Oxygen masks/MIC switches (100 percent) – As Required
	4) Flaps – Approach (unless already up)	2) Pressurization – DUMP
Turbine Tachometer (N1)	5) Gear – Up	
Normal Operating Range 51-101.5 %	6) Flaps – Up	Explosive Decompression
Low idle range 51-54 %	7) Props – 1900 rpm	1) Oxygen masks/MIC switches (100 percent) – As Required
Hi idle range 70-73 %	8) Continue climb at V _X until all visual and voice warnings cease	2) Descend – As Required
Max reverse 86 %		
Max acceleration 102.6 %	Low Altitude Windshear	
Max continuous 101.5 %	1) Power – Maximum Allowable	Smoke/Fire of Unknown Origin
	2) Attitude – Set and Hold Approximately 15° Noseup	1) Crew – Alerted
Propeller Tachometer (N2)	3) Gear – UP	2) Cabin temperature mode – OFF
Normal operating range 1800-2200 rpm	4) Flaps – Maintain Current Setting	3) Vent blower – AUTO
Max reverse 2100 rpm		4) Oxygen masks/MIC switches (100 percent) – As Required
Max during accel (2sec) 2420 rpm	Spin/Out of Control Flight Recovery	
	1) Power Levers – Idle	Emergency Descent Procedure
Oil Temperature	2) Rudder – Full deflection opposite direction of turn needle	1) Power Levers - IDLE
Normal operating range 10-99 °C	3) Control Wheel – Rapidly forward	2) Props – Full Forward
Max oil temp 99 °C	4) Rudder – Neutralize after rotation stops	3) Flaps – As Required
	5) Control wheel – Pull out of dive by exerting smooth, steady back pressure.	4) Landing Gear – As Required
Oil Pressure		5) Airspeed – As Required
Normal operating range 85-100 psi	Windmilling Airstart	6) Windshield Heat – As Required
Max oil pressure 100 psi	†1) Power Lever (Failed Engine) – IDLE	
Min oil pressure 40 psi	†2) Prop Lever (Failed Engine) – Full Forward	General
	†3) Condition Lever (Failed Engine) – FUEL CUTOFF	Pneumatic pressure norm operating range 12-20 psi
Weights	4) Firewall Valve – OPEN	Max sink rate on landing 600 fpm
Max ramp weight 9710 lbs	5) Autoignition – ARMED	Max crosswind 20 knots
Max takeoff weight 9650 lbs	6) Condition Lever – LOW IDLE	Max cabin pressure differential 4.7 psi
Max landing weight 9168 lbs	7) Power – As Required	Gyro suction norm operating range 4.3-5.9 inHg
		Min oxygen required for local/XC flight 1000/1500 psi
		Prop deicer ammeter normal operation 14-18 amps
		Normal TAS altitude range +/- 2700 feet