

DA-20 Ops Limits

DA20-C1 OPERATING INFORMATION TABLE

Indicated Airspeeds (KIAS)

V _{SO} Stall speed with flaps LDG	34
V _{SI} Stall speed with flaps CRUISE	42
V _R Rotate speed	44
Lift-off speed	52
Min. Forced landing final approach speed with flaps LDG	55
Standard pattern SFL final approach speed with flaps LDG	60
V _X Best angle of climb speed with flaps T/O	60
Normal landing final approach speed	60
Min. engine-out speed to sustain windmilling prop	60
Min. Forced landing final approach speed with flaps T/O	60
Min. Forced landing final approach speed with flaps CRUISE	65
No-Flap landing final approach speed	65
V _X Best angle of climb speed with flaps CRUISE	65
V _Y Best rate of climb speed with flaps T/O	66
V _Y Best rate of climb speed with flaps CRUISE	70
Best glide speed (1764 lbs)	73
V_{FE} Max. Airspeed with flaps LDG	78
V_{FE} Max. Airspeed with flaps T/O	100
V_A Max. speed for full or abrupt control inputs (1764 lbs)	106
V_{NO} Max. structural cruising speed	118
Force a stopped propeller to windmill if starter is inop	137
V_{NE} Never-exceed speed	164

Maneuvering

Positive limit load factor (flaps CRUISE)	+4.4
Negative limit load factor (flaps CRUISE)	-2.2
Positive limit load factor (flaps T/O or LDG)	+2.0
Negative limit load factor (flaps T/O or LDG)	0
Max. permissible bank angle for steep turns (in degrees)	60

Voltmeter

Voltmeter lower limit red arc (volts)	8-11
Voltmeter caution range yellow arc (volts)	11-12.5
Voltmeter green arc (volts)	12.5-16.1
Voltmeter upper limit red line (volts)	16.1

Fuel

Approved fuel grade	100LL
Usable fuel (US gal.)	24.0
Fuel tank capacity (US gal.)	24.5

Weight and Balance

Max. ramp weight (lbs)	1770
Max. takeoff weight (lbs)	1764
Max. landing weight (lbs)	1764
Forward CG limit (at or below 1653 lbs)	7.95
Forward CG limit (1764 lbs)	8.07
Aft CG limit (1764 lbs)	12.16
Aft CG limit (at or below 1653 lbs)	12.48
Max. weight in baggage compartment (lbs)	44

Power Plant Operation

RPM normal operating range (tachometer green arc)	700-2800
Min. RPM during engine runup idle check	975
Min. RPM ("area idle") if beyond gliding range of a runway	1400
Min. RPM during operations with fuel pump off	1400
Min. permissible full-throttle static RPM during engine runup	2000
Max. permissible continuous RPM if an IFT student is PF	2700
Max. permissible continuous RPM (tach redline)	2800
Min. RPM drop during magneto check	25
Max. RPM drop during magneto check	150
Max. RPM drop difference between magnetos	50
Max. permissible continuous bhp	125
Min. oil pressure (psi)	10
Oil pressure normal operating range (psi)	30-60
Max. time for oil pressure to reach 10 psi after start (sec.)	30
Max. oil pressure for full power operation if OAT < 0°C (psi)	70
Max. oil pressure (psi)	100
Min. oil temperature (°F)	75
Max. RPM after start until oil temp indication registers	1000
Oil temperature normal operating range (°F)	170-220
Min oil temp. to begin an area SFL at area idle (°F)	170
Min. oil temp for full power operation if oil pressure norm (°F)	100
Max. oil temperature (°F)	240
Min. oil quantity (US qts)	4
Max. oil quantity (US qts)	6
Fuel pressure lower limit red line (psi)	3.5
Fuel pressure upper limit red line (psi)	16.5
Max. continuous starter operation (sec.)	10
Max. cumulative starter operation before 3-5min cooling (sec.)	30
Max. time for CHT below 300°F in descent (minutes)	5
Min. CHT (°F) takeoff & descent	240
CHT normal operating range (°F)	300-420
CHT caution range (°F)	420-460
Max. CHT (°F)	460
Max. OAT (°C) operation w/ full winterization kit	0
Max. OAT (°C) operation w/ partial winterization kit	12.5

Pattern Wind Limits (KTS)

Max. tailwind dual or solo	5
Max. student solo gust spread	8
Max. student solo crosswind	10
Max. dual crosswind if IFT student is PF below 500' AGL	15
Max. student solo total wind	20
DA20-C1 Max. demonstrated crosswind component	20
Max. dual total wind if IFT student is PF below 500' AGL	25

Misc.

Max. aircraft structural temperature (°C)	55
Propeller approx. minimum ground clearance (inches)	10
Main landing gear tire pressure (psi)	33
Nose gear tire pressure (psi)	26
Min. OAT (°C) cabin heat not req for 10 min. before T/O	-20

Items in **red** must be committed to memory