

## G500 Limitations

Acft wingspan	87'1"
Acft length	91'2"
Acft tail height	25'6"
Taxi turn radius using tiller	60'
Taxi turn radius rudder pedals	125'
Max number passengers	19
Rwy considered wet	>25% visible dampness ≤ 1/8"
Rwy considered contaminated	>25% frost, ice, snow, slush > 1/8"
Max rwy slope	+/- 2%
Max t-w (tkof/lbg)	10 kts
Max t-w for F10 or less	0 kts
Static tkof c-w limit	30 kts
Max PA (tkof/lbg)	15,000'
Max c-w for lbg, any FCC law other than normal?	10 kts
Max op alt	51,000'
Max op alt for extension of F10 or F20	25,000'
Max op alt for extension/flight with Flaps down	20,0000'
Max op alt with rudder failure or jam	35,000'
Max op alt with a single AC pack op	48,000'
Max op alt with interior baggage door open	45,000'
Max op alt for extension/flight with LG extended	20,000'
VMCA for F10	120 KCAS
VMCA for F20	112 KCAS
VMCL	109 KCAS
VMCG	111 KCAS
VA	206 KCAS
VFE-F10	250 KCAS
VFE-F20	220 KCAS
VFE-F39	180 KCAS
VLE	250 KCAS
VLO	225 KCAS
Max Emer Ldg Gr Ex speed	175 KCAS
MMO	0.925 Mac
VMO	340 KCAS

Max Turbulence Penetration speed ≥ 10,000'	270 KCAS / 0.85 M
Max Turbulence Penetration speed < 10,000'	240 KCAS
Max tire groundspeed	195 kts
Max speed with FCC not normal	285 KCAS / 0.90 M
Max G F0	-1 to 2.5 G
Maxi G F10 or F20	0 to 2.0 G
Max speed with any primary flight control surface or spoiler panel failed	285 KCAS / 0.90 M
Approach speed F39	VREF + ½ steady + full gust up to 20 kts
Min approach speed	VREF + 5 kts
How long must approach speed be maintained	Rwy threshold
Max G F39 below max lbg wt	0 to 2.0 G
Max G F39 above max lbg wt	0 to 1.5 G
Max baggage compartment wt	2,250 lbs
Max zero fuel wt	52,100 lbs
Max ramp wt	80,000 lbs
Max tkof wt	79,600 lbs
Max lbg wt	64,350 lbs
Min flight wt	48,300 lbs
Max fuel imbalance inflight	2,000 lbs
Max fuel imbalance for tkof	1,000 lbs
Min operational safety factor for lbg distance	1.15
Max cabin differential flight	10.69 PSI
Max cabin differential taxi, tkof, lbg	03 PSI
Max duct pressure, manual zone control	200°F
Min speed for effective RAT	200 KCAS
When are A/T prohibited?	SE, F10, F0 approaches
When is A/P prohibited?	SE G/A
Min A/P engage height	200'
Min A/P disengage height from ILS or LPV	90' (F39) / 130' (< F39)
When is speed brake prohibited	F39 to LG
Max demonstrated alt loss during G/A	50'
Usable fuel, gravity refuel	22,500 lbs
Usable fuel, pressure refuel	30,250 lbs
Automatic anti-ice inhibited	< 400' AGL, > 35,000' MSL

Max speed yaw damper failed	285 KCAS
Min allowed fuel tank temp	-37°C > 5,000 lbs fuel, 30°C with less
Min A/P disengage height from other than ILS or LPV	200'
Below what ambient temp is engine start prohibited?	-40°C
WAI, CAI must be used	Entry into icing imminent or detected
WAI results in automatic higher engine idle speed	Inflight, TAT < 0°C
Min speed WAI not op and FO	200 KCAS
Single bleed WAI restrictions	1 ECS pack, 32,000' max alt, manual A/I mode, 100°F prior to entry
Prior to flap retract following flight in icing conditions with flaps > 10 minutes	Check ldg edge flaps (gnd) winglets (flt)
WAI time limit before tkof with Type II, III, or IV applied	20 mins
Min distance from people with weather radar on	11'
Passenger O2 mask time limit	15 mins > 25,000'
When can SFD declutter be used?	Never
Max APU op alt	45,000'
Single bleed source restrictions with WAI	Single pack, 32,000' max
Normal powerplant start cycle	3 attempts up to 3 mins each, 15 secs between, followed by 10 mins cooling
Reverse thrust must be cancelled	Idle by 60 kts
Max start TGT	975°C
Max continuous TGT	956°C
Max time tkof thrust OEI	10 mins
Powerplant starting c-w / t-w limit	40 / 25 kts
Powerplant taxi c-w / t-w limit	40 / 40 kts
Start envelope APU or crossbleed assisted	30,000' max, VMIN to VMO
Use of both T/R prohibited	< 10 kts GS

Automatic higher engine idle speed due to WAI	About 47% N1
Temp and conditions for icing	SAT or TAT between 10°C and -40°C, visible moisture
Above what temp must an ECS pack be op, ground ops, with APU or engines op	98°F
Max ldg field elevation with CPCS semi mode (except emer)	10,000'
WAI for tkof restrictions	4 mins prior to tkof, stabilized 130°F
Flaps or LG okay in icing conditions	Tkof, approach, ldg only
Min distance of refuel ops with weather radar on	50'
When is VORAP prohibited	VOR overflight needed during intermediate and final apch, except MAP
CAI required for taxi, takof	SAT < 10°C, visible moisture or wet rwy
When should Terrain Inhibit be selected on	Airports not in EGPWS database
Max guaranteed APU start alt	37,000'
Max op alt for APU	45,000'
When are crew and cabin O2 masks not allowed	Cabin alt > 40,000'
APU prohibited for tkof temp	Above 45°C
External DC okay for APU start	No
APU starter cycle	3 consecutive start attempts, 1 min cool between each, followed by 1 hour
APU start min ambient temp	-40°C
Max TGT / time limit for tkof	965°C / 5 mins
Max time tkof thrust AEO	5 mins
Time limit engine at OG	7 secs
Powerplant high power ground ops c-w / t-w limit	25 / 20 kts
Powerplant normal tkof c-w / t-w limit	30 / 10 kts
Start envelope, windmill	16,500' max, 250 KCAS to VMO
Extended powerplant start cycle	One attempt over 3 mins up to 5 mins, 10 mins cooling