

PC12-45 Info Sheet



General

PC12	Series 9 & 10
Service Ceiling	30,000 (25,000 company)
Operating Temp Limitations	-55 ° - +50° C
Max Icing	Moderate
Wingspan	53 ft 3 in
Length	47 ft 3 in
Height	14 ft 10 in
Turning Radius	35 ft 7 in
Load Limits Flaps Up	+3.3G – -1.32G
Load Limits Flaps Down	+2.0G – 0G
Glide Ratio	16:1

Engine PT6A-67B

PC12	Series 9 & 10
Shaft Horsepower	1650 SHP Flat Rated 1200 SHP (Rev 900 SHP)
Starter limit rest requirements	60 Seconds (cycle 1&2) 30 Minuets (cycle 3)
Fuel Introduction	13% N1 – 20% N1
Starting PSI Torque Limitations	44.34 PSI - 61 PSI (20 Sec)
Starting ITT Limitations	800° - 870° (20 Sec) 870 ° - 1000° (5 Sec)
Engine Stabilized Above	50.7% Ng / 950 RPM
Ground Operations	Below 950 RPM Prohibited, Max 23.9 PSI Below 1,000 RPM, Max ITT 750 ° between 50.7%-61.4% Ng
TO Power PSI Torque Limitation	36.95 PSI – 44.34 PSI (5 Min)
TO Power ITT Limitations	760 ° - 800 ° (5 Min)
Max Continuous	36.95 PSI / 760 °
Guardian Normal Climb ITT	760 ° HP Climb / 720 ° Normal Climb
Guardian Normal Cruise ITT	700 ITT
RPM	1700 RPM (Trans 1870 RPM)(REV 1650 RPM)
Oil Temp Limitations	-40° – 105° (up to 110 ° for 10 Min)
Oil Pressure	90 PSI – 135 PSI (Trans 200 PSI)(60 PSI - 90 PSI acceptable below 23.9 PSI Torque)
Oil Type	Eastman 2380 Turbin Oil
Oil Quantity	14.4 Qt (3.6 Gal)
Max Oil Consumption	1 QT / 10 Hours
Min Oil	Redline on sight glass
Fuel Nozzles	10 Primary 4 Secondary
Comp Bleed Valve	< 80% Ng
Max Graduated Restart Altitude	13,000 MSL * (see air restart envelope)
CHIP Annunciator	Takeoff Prohibited
Fire Detection System	Preflight Test and Functionality Required for Flight
Engine Ice Protection	Preflight Function Test Required for Flight

Props

PC12	Series 9 & 10
Type	Hartzell 4-blade Model No. HC-E4A-3D/E10477K or SK
Normal Travel	6° – 19°
Feather	79.6°
Beta	0° – 6 °
Reverse	-17.5° – 0 °
Normal RPM Range	1670 RPM – 1730 RPM
Maximum Transient	1870 RPM (20 Sec)
Prop Gov 106%	1802 RPM
Fuel Topper Gov 109% (97% REV)	1853 RPM MAX (1650 RPM MAX)
Avoid Continuous Ops	350 RPM – 950 RPM
Prop Heat	> 0 ° = Off 0 ° - 16 ° = 45 Sec per pair then 90 sec rest (fail mode) < -16 ° =90 Sec per pair
Max Thrust Rev Speed	40 KNTS (60 KNTS company)
PCL Reverse Activation Prohibited When	Engine not running / during flight / MOR level activated

Electrical

PC12	Series 9 & 10
Battery 1 (and 2)	24 Volt 42 Amp/Hr
Battery Duration	30 min at 50 Amp Draw (60 min with 2 Battery System)
Generator 1	28.5 Volt 300 Amp (450 Amp / 2 Min)
Generator 2 (alt)	28.5 Volt 115 Amp
Start Volts	Not below 24 Volts
Starter Limits	Cycle 1&2 60 sec off Then 30 MIN rest
Inverter	26 VAC 400 Hertz
GPU Limits	500 Amps for systems, 1000 Amps for starting
Non Ess Switch	OVRD for light preflight
Cabin Door Cockpit Dome Light	45 Seconds
Cargo Door Light	5 Minutes
Max load before Gen 2 activation	100 Amps
Max amp charge at TO	15 Amps
Gen 1 or Gen 2 INOP	Flight in Icing Conditions Prohibited

Fuel

PC12	Series 9 & 10
Total Quantity	406.8 Gallons (2736.5 LBS)
Usable Quantity	402 Gallons (2703.6 LBS)
Load Imbalance Limit	3 Bars, 26.4 Gal, 178 LBS
Prist Required	0.06% - 0.15%
Takeoff	> 3 Bars Prohibited
Auto balance disconnect	> 6 Bars
Fuel Pump Activation	< 2 PSI

Speeds

PC12	Series 9 & 10
Vr (MTOW)	81 KNTS
Vx	110 KNTS (Donut)
Vy 0 – 10,000	120 KNTS (Fast Dimond)
Vy 10,000 – 20,000	115 KNTS (Fast Dimond)
Vy 20,000+	110 KNTS (Fast Dimond)
Va /Vo 9,921 LBS	158 – 120 KNTS (-5KNTS per 500 LBS)
Vfe	163 KNTS (15 °) 130 KNTS (>15 °)
Vle	236 KNTS
Vlo	177 KNTS
Vne / Vmo	236 KNTS (.48 M)
Vs1	91 KNTS
Vs0	64 KNTS
Vref 0 °	118 KNTS / LRD x 1.83
Vref 15 °	98 KNTS / LRD x 1.31
Vref 30 °	89 KNTS / LRD x 1.22
Vref 40 °	84 KNTS
Vref 15 ° Ice Mode	108 KNTS
Ice Mode + Boot Fail	130 KNTS
X-Wind Limits 0 ° Flaps	30 KNTS
X-Wind Limits 15 ° Flaps	25 KNTS
X-Wind Limits 30 ° Flaps	20 KNTS
X-Wind Limits 40 ° Flaps	15 KNTS
Vtp	170 KNTS
Vmi	140 KNTS
Vg	114 - 93 KNTS (Donut) (-3KNTS per 500 LBS)
Ved	236 KNTS
Pusher Activation 0 ° Flaps	91 KNTS
Pusher Activation 0 ° Flaps	Ice Mode 102 KNTS
Pusher Activation 0 ° Flaps	Boot Failure 105 KNTS
Pusher Activation 15 ° Flaps	74 KNTS
Pusher Activation 15 ° Flaps	Ice Mode 83 KNTS
Go Around 15 ° Flaps	95 KNTS (105 KNTS Ice Mode)
Go Around 30 ° Flaps	85 KNTS
Go Around 40 ° Flaps	84 KNTS

Landing Gear

PC12	Series 9 & 10
Hydraulic Max PSI	2750 PSI
Hydraulic Pump Activation PSI	2430 PSI
Hydraulic CAWS Activation	1800 PSI
Main / Nose Tires	60 + 3/- 0 PSI (10 ply)
Warning Horn Activation	Flaps >15, PCL idle, KIAS<130
Failed Hydraulic Retract Time	200 Minutes

Weights

PC12	Series 9 & 10
Max Ramp Weight	9,965 LBS
Max Take Off Weight	9,921 LBS
Max Landing Weight	9,921 LBS
Zero Fuel Weight	9,039 LBS
Baggage Area	400 LBS
Cabin Area	3,300 LBS
Useful Load	4,454 LBS *
Max Patent Weight (ramp)	650 LBS
Tail Stand Required	400+ LBS
Baggage Net Limit	Check POH
Max Patient Gurth	72

MISC Limitations

PC12	Series 9 & 10
Autopilot Disconnect	>1.6G or <.3G
Max AP Intercept Angle	90 °
Max differential Pressure	5.75 PSI
Safety Valve Activation	6.35 PSI
WOW + Ground Idle	Pressurized Landing Prohibited
Av O2	1200 PSI – 2775 PSI (10 Min)
O2 Shutoff	Must be on prior to Engine Start
Med-bed O2	1200 PSI – 2250 PSI
Under Floor Temp	> -15 ° C for takeoff or 3 min per 5 ° below -15 ° C
Ice Boot Pressure	18 PSI
Boot Inflation Times	8 Sec Per Section (T,IL, IU, OL, OT) 40 Sec Total
Min Boot Temp	-40 °C
Max Boot Temp	40 °C
Boot Failure	0 ° flap landing required
Inertial Separator	On below 10,000 MSL
VCCS (AC)	Off above FL 180
Flap Cycle Limit	< 15 °C = 10 per hour / 15 °C- 50 °C = 8 per hour
Hydraulic Pac Failure	< 1800 PSI / 10 Min Operation / 6 Cycles Per Hr
Tannis	0 ° - 15 °Rear Req / <-15 ° Front & Rear Req
OAT Differential	+/- 8 °C
Probe Heat	On Under 10 °C
Icing Conditions	Flap Extension beyond 15 °and Flap retract prohibited
Ground Deice	Full Flap Cycle (40 °) Required
Wing Inspection Light	Required for Flight in Icing Conditions
Wing Contamination	Left Wing Clean within 5 min before takeoff
MOR Lever Usage	Taxi Prohibited
ECS MAN Mode	MX Required if used
Maximum Occupation	11 (9 passengers + 2 pilots)
Pusher	Required for Flight (Ice Mode below 10 ° IVM)
Windshield Heat	Pilot Side Required for all Flights (Both Required for Icing and VFR Flight)
Probe Heat	Preflight Test Required (Functionality Required for IFR and Icing Flight)
Trim Systems	Stabilizer Normal / Alternate and Rudder Trim Required for Flight
EFIS	IFR Ops Prohibited with SG or DU flag or INOP Standby Artificial Horizon
EIS	Preflight Test Required (Any Warning Lights Prohibit Takeoff)
Pilots Guides	EFS 40/50 Guide and KFC 325 Guide Must be Accessible to the Pilot During Flight
Autopilot	Activation and usage below 1,000 AGL Prohibited (Except ILS down to 200 AGL)
WX Radar	Do Not Operated within 15 Feet of People, Objects, or Structures