

STARTING TIT

Max for Enrichment	100°C
Max Normal Start	200°C
Max During Start	830°C
Abnormal Torch	Stop/781/Inspect
720°C or less	781/MX
720°C - 750°C	781/TempControl CK
750°C - 830°C	Normal Start Limits
830°C - 850°C	781/Con. Start
850°C - 965°C	Stop Start/781/1 Retry
Exceeds 965°C-	Stop Start/781/Overtemp

ENGINE TIT

Takeoff Max (5 Min) -	1083°C
Takeoff Range -	1067 - 1083°C
Takeoff Reduced Min -	900°C/970/1010°C
Normal Continuous -	200-1010°C
Military (30 Min.) -	1049°C
Climb -	1010°C
Exceeds 1083°C over 5 seconds or 1175°C	
Momentarily -	781/ O/T Inspect
Crossover -	65 deg / 820° ± 20°C
Normal Limiting -	1083°C
Max Downshift TIT -	850°C

ENGINE RPM

Ignition by -	35%
Oil Press Ind by -	35%
LSGI -	69 – 75.5%
Normal Ground Idle -	94 – 102%
Max Reverse -	96 – 106%
Flight Idle on Ground -	92.5 – 100.5%
Normal (Incl. Takeoff) -	98 – 102% ± 0.5
Starter Disengage -	60%

ENGINE TORQUE

Oil Temp < 0°C	Min Torque
Oil Temp 0 - 40°C -	4500 lbs
Max Allow on T.O. -	19600 lbs
Max Allow in flight -	19600 lbs
NTS Action -	- 1260 ± 600 lbs
Propulsion check -	8000 in. lbs
Torq Comparison CK -	<1000 in.lbs
Max Continous -	19600 lbs
Safety Coupling -	- 6000 lbs

PROP DE-ICING

Load Range -	65 – 90 Amps
Timing Cycle -	15 Sec On / 45 Sec Off
Max Gnd Ops -	2 Cycles (2 Mins)
Anti Ice Amperage -	20 Amps/prop

WINDSHIELD ANTI-ICE

Max OAT Ops GND -	27°C/81°F
Cold Start -	5 Sec On/10 Off, until -43°C

OIL QUANTITY

Capacity Range -	4-12 Gal
Low Light -	4 Gal
Allowable Burn Rate -	.25 Gal/Hour

C-130H OPS LIMITS**AC ELECTRIC**

Freq Range -	380-420 Hz (4 cyc/rpm)
Voltage Range -	110 – 125 V
Max load in Flight -	1.05
Generator Capacity -	40 KVA
APU Generator -	40 KVA
APU Gen Load	1.05

DC ELECTRIC

Volt Range / Norm -	25-30V / 28V
Max DC Load -	1.03
Batt. Volt Norm / Min -	24V / 21V
Min INS Batt Volt -	21V
DC Pwr Sources -	Batt / 4 Tr's / External
CP Inverter Pwr -	Iso DC Buss
AC I & EFC Inv. Pwr -	Ess DC Buss
# Gens to Pwr all Buses -	2

FUEL SYSTEM

Out / Inboard Diff -	500 – 1000 lbs
Sym Tank Diff. (exc. Aux) -	<1000 lbs
Wing to Wing (exc. Aux) -	<1500 lbs
Aux Diff. -	1 Empty, 1 Full if others even
Main Tank Pressure -	15 – 24 psi
Aux / Ext. / Fus. Press -	28 – 40 psi
Low Pressure Light -	8.5 psi
Tank Empty Light -	23 psi

OXYGEN SYSTEM

Low Light -	2.5 ltrs
Fully Serviced Qty -	25 ltrs
Press. Rng No Flow -	270 – 455 psi
Press. Range Cont. -	270 – 340 psi

ENGINE OIL PRESSURE

Max (Start & Warmup) -	> 100 psi
Normal Range -	50 – 60 psi
LSGI Min. -	< 50 psi if Normal @ 100%
Flux -	± 10

GEARBOX OIL PRESSURE

Max (Start & Warmup) -	> 250 psi
Normal Range -	150 – 250 psi
Min Allow for Mis. Accomp -	130 psi
LSGI -	50 psi
Flux -	± 20

OIL TEMPERATURE

Max GND (30 Min) -	85 – 100°C
Max Flight (5 Min) -	85 – 100°C
Normal Range -	60 – 85°C
Min (Increasing) -	40°C
Minimum for Start -	-40°C
Cooler Flaps Maintain -	78 – 82°C

PROPELLER (HYD) OIL

Complete System -	26 Qts
Press Sump -	6.5 Qts
Prop Low Oil Light -	2 Qts Low Press Sump

PROPS

Prop brake held disengaged -	23% - GB oil
Cyclic Variation -	± 0.5%
Feather Blade Angle -	92.5°
Reverse Blade Angle -	-5° – -8°
Pitch Lock Range -	25° – 55°
Pitchlock prevents overspeed >	103%
Pitchlocked RPM range -	96% - 98%
To unlock pitchlock -	Increase 2°
Low Pitch Stop -	23° (Ft Idle or Above)
Low Pitch Stop Torq. Ind -	> 200 lbs Diff
Safety Coupling -	-6000 lbs
Prop Aux Pump Ops	1 min on / 1 min off
Limits -	(not to exceed 2 min on in 30 mins)
Static Fthr Check time	25 sec (if btn doesn't pop
(Rev to Fthr) -	out in 6 sec. pull it out)

UTIL / BOOST HYD PRESSURE

Normal -	2900 – 3200 psi
Max Allowable -	3500 psi
ESP if Hyd Press Exceeds -	3900 psi
RPM for Indication -	On / Speed
RPM for Normal Press -	O / S + 30 Sec
Min Press LSGI -	2550 psi
Aileron Boost Press -	2050 psi
Low Press Light On -	1000 psi
Suction Boost Press Light -	20 psi

AUXILIARY HYD PRESSURE

Normal -	2900 – 3300 psi
Max Allowable -	3500 psi
Time between Cycles -	10 sec

NORMAL BRAKE PRESSURE

Normal -	2900 – 3200 psi
Max Allowable -	3500 psi
2 Brake Applications -	2900 – 3200 psi
1 Brake Applications -	2250 psi

EMERGENCY BRAKE PRESSURE

Normal -	2900 – 3300 psi
Max Allowable -	3500 psi
1 Brake Application -	2900 psi

BLEED AIR SYSTEM

APU Min Press Output -	35 psi
Gnd Check APU -	30 → 15 psi ≥ 8.5 sec
Gnd Ck Engine -	60 → 35 psi ≥ 10 sec
Normal Temp and Press -	600°F / 125 psi

PRESSURIZATION

Gauge Rate -	-1.2 – 15.8 in Hg
Safety Valve Open -	-0.76 – 15.9 in Hg
Differential Press Max -	15.16 in Hg
Aux Vent Valve Open -	0.28 PSID
Windshield Window Max (1 or 2) -	<Δ 10 in Hg
Cargo Window Cracked (1 Pane) -	<Δ 10 in Hg
Cargo Window Cracked (2 Panes) -	0 in Hg
Rate Controller @ Min -	30 – 200 fpm
Rate Controller @ Max -	1600 – 2900 fpm

LEADING EDGE ANTI-ICING

Max Ground Ops -	30 Sec
Normal Range -	75 – 200°F
Overheat Range -	200°F
Control Valve Open -	158°F
Control Valve Closed -	180°F

AIRSPEEDS

Max Speed -	0.64 Mach
T-Storm Penetration -	≤ 180 (65 ↑ PO Stall)
Windmill Taxi Start -	100 kts until last 4000 ft
Flaps 10% -	220 kts
Flaps 50% -	180 kts
Flaps 100% -	145 kts
Flap Formula -	230 – Flap % = A/S
Door Only -	185 kts
Ramp and Door -	150 kts
Air Deflector Door -	150 kts
w/o elev hyd assist -	170 ind. or less
Crew door Bailout -	150 kts
Gear and Lights -	165 kts
Airstart -	≤ 180 / < 200°C
Airstart (no NTS) -	130 kias below 5000 ft
Max Bank Angle -	60°
Max Bank w/Flaps -	45°
Painted Control Surfaces (not stencil) -	250 kias
Max Nose Tire Rotation -	139 kts
Max Main Tire Rotation -	174 kts

TAXI OPERATIONS

Taxi over rough/substandard	≤ 10 kts
Terrain -	
Normal X wind Limit -	30 kts @ 90°
Max X wind Limit -	60 kts @ 90°
Max NW turn above 155,000 lbs -	20°
Max taxi speed above 155,000 -	10 kts
Max taxi speed w/60° NW -	5 kts
Max taxi speed w/20° NW -	20 kts
Max taxi speed hard surface -	20 kts
Stop in turn -	781 entry

THROTTLE QUADRANT RANGES

LSGI Throt Range -	9 - 30°
Ground Idle -	18°
Flight Idle -	34°
Temp Limit Range -	0 - 65°
Temp Control Range -	65 - 90°
Reverse Range -	0 - 18°
Beta Range -	0 - 34°
Alpha Range -	34 - 90°

C-130H OPS LIMITS

RUDDER BOOSTER PRESSURE

Norm 0 – 15% Flaps -	1100 – 1400 psi
Caution 0 – 15% Flaps -	1400 – 1600 psi
Max 0 – 15% Flaps -	1600 psi
Norm 15 – 100% Flaps -	2900 – 3200 psi
Max 15 – 100% Flaps -	3500 psi

HYD ACCUMULATOR PRELOAD

Utility System -	1500 ± 100 psi
Booster System -	1500 ± 100 psi
Auxiliary System -	300 psi
Normal Brakes -	1500 ± 100 psi
Emergency Brakes -	1000 ± 100 psi

HYD RES QUANTITY

Utility System -	3.2 gal
Booster System -	2.0 gal
Auxiliary System -	3.4 gal

MAXIMUM WEIGHTS

Max T/O Weight -	155,000 lbs
Max Weight EWP -	175,000 lbs
Normal Landing Wt. -	130,000 lbs
Max Effort Rec Wt -	130,000 lbs
No Flap rec Wt -	120,000 lbs

APU

APU Starter Limit -	1 min on/ 4 min off
Warmup Normal -	1 min
Warmup Cold -	4 mins
Min Air Pressure (Grnd) -	35 psi

No. 1 INSTRUMENT TRANSFORMER

Engine Oil Pressure Indicators (3 & 4)
Gearbox Oil Pressure Indicators (3 & 4)
Fuel Pressure Indicator (Fuel Panel)
Hyd Pressure Indicator (EMER BRAKE)
Hyd Pressure Indicator (BOOSTER)

No. 2 INSTRUMENT TRANSFORMER

Engine Oil Pressure Indicators (1 & 2)
Gearbox Oil Pressure Indicators (1 & 2)
Hyd Pressure Indicator (RAMP)
Hyd Pressure Indicator (NORMAL BRAKES)
Hyd Pressure Indicator (UTILITY)
Rudder Booster Hyd Press (BOOSTER)
Rudder Booster Hyd Press (UTILITY)
Anti-skid Test (Circuit Breaker)
All 26 Volt, 400 cycle, Single Phase

MISCELLANEOUS

Crew Door Jettison -	< 3.1 in Hg
Flap setting for Prop malf on T/O -	20%
Cold WX ops Temp -	< 32°F
Hot WX ops Temp -	> 95°F
Battery Min Temp -	- 29°F
CG Limits -	Must be within MAC
	Max – 15 – 30%

ENGINE SHUTDOWN CONDITIONS

1. Engine Fire
2. Turbine Overheat
3. Nacelle Overheat
4. Uncontrollable Power
5. Certain Propeller Malfunctions
6. Uncontrollable rise in TIT
7. Uncontrollable Drop in Oil Press
8. Uncontrollable Rise in Oil Temp
9. Unusual Vibration or Roughness
10. Throttle Control Failure
11. Visible Fluid Leak

ENGINE SHUTDOWN PROCEDURE

1. CONDITION LEVER “FEATHER” (CP)
2. FIRE HANDLE “PULLED” (CP)
3. AGENT “DISCHARGED” (FOR FIRE OR NACELLE OVERHEAT) (CP)

MULTIPLE ENGINE POWER

LOSS/STALL/FLAMEOUT

1. TEMPERATURE DATUM CONTROL VALVE SWITCHES “NULL” (E)
2. PROPELLER GOVERNOR CONTROL SWITCHES “MECH GOV” (CP/E)

APU EMERGENCY SHUTDOWN

1. FIRE HANDLE “PULLED” (E)
2. AGENT “DISCHARGED” (FOR FIRE) (E)

SMOKE AND FUME ELIMINATION

1. OXYGEN “ON, 100%” (ALL)

RAPID DECOMPRESSION

1. OXYGEN “ON, 100%” (ALL)