EMERGENCY PROCEDURES - CESSNA 172 N - 180 HP STC

POWER LOSS AFTER TAKE OFF NO RESTART

FLY THE PLANE - AVIATE - NAVIGATE - COMMUNICATE

TAKE OFF ROLL RWAY LEFT - LAND STRAIGHT AHEAD
- THROTTLE CLOSED , MAX BRAKING, FUEL OFF
- ELECTRICAL OFF

NO RUNWAY - BELOW ~ 1000 AGL
- BEST GLIDE **70** KIAS - TRIM
- LAND STRAIGHT AHEAD OR 45° EITHER SIDE
- FUEL SELECTOR-OTHER TANK / MIXTURE CHK-SET
- CARB HEAT / MAGS CHK
- LAND

NO RUNWAY - ABOVE ~ 1000 AGL
- BEST GLIDE **75** KIAS - TRIM
- TRY RESTART - ABOVE
- TURN INTO WIND IF ABLE AND DO 180° TO RUNWAY
- COMMUNICATE EMERGENCY IF TIME

POWER LOSS IN FLIGHT

- BEST GLIDE **75** KIAS - TRIM
- NOTE WIND DIRECTION / SPEED
- LOCATE BEST LANDING AREA - TARGET SPOT
- FLY TO TARGET - LANDING SITE
- CHECK FUEL /ENGINE GAUGES
- CARB HEAT - ON
- THROTTLE - CRACKED FOR START
- MIXTURE - CHECK / SET
- FUEL SELECTOR - BOTH
- MAGS - ALL POSITIONS
- PRIMER - IN and LOCKED

NO RESTART - PREPARE TO LAND

- CONTINUE BEST GLIDE TO TARGET - LANDING SITE
- MIXTURE - OUT - IDLE CUT-OFF
- FUEL SELECTOR -OFF
- SQUAWK 7700
- MAYDAY (TWR, APPR, UNICOM, OR 121.5)
- WHEN LANDING SITE IS SECURED
- 70 KIAS IAS FULL FLAPS IF ABLE
- STORE AWAY LOOSE ARTICLES
- MAGS - OFF / AVIONICS / ALT. / MASTER OFF
- CRACK DOORS AJAR
- PROTECT BODY FOR LANDING

ENGINE FIRE IN FLIGHT

- MIXTURE - OUT - IDLE CUT-OFF
- FUEL SELECTOR -OFF
- MASTER / MAGS - OFF
- PERFORM EMERGENCY DECENT **105** KIAS
- CABIN VENTS / HEAT - CLOSED
- LOCATE BEST LANDING AREA - TARGET SPOT
- INCREASE AIRSPEED / SLIP AS REQUIRED TO EXTINGUISH FIRE

ELECTRICAL FIRE IN FLIGHT

- AVIONICS / AUTOPILOT / MASTER OFF
- (LEAVE MAGS ON) - ENGINE RUNNING
- CABIN VENTS CLOSED
- FIRE EXTINGUISHER IF REQUIRED
- CHECK CKT BREAKER FOR POPPED BREAKER DO NOT RESET
- MASTER ON
- TURN ON CRITICAL EQUIPMENT - ONE AT A TIME
- VENTS OPEN AFTER FIRE/SMOKE OUT

ENGINE FIRE DURING START

- CONTINUE TO CRANK A FEW SECONDS
- **IF STARTS** - RUN A FEW MINUTESS
- SHUT DOWN AND INSPECT
- **IF NO START** - MIXTURE OUT/CUT-OFF, FUEL OFF
- THROTTLE - FULL OPEN
- CONTINUE TO CRANK A FEW SECONDS
- MASTER / MAGS OFF
- FUEL SELECTOR - OFF
- EVACUATE / USE FIRE EXTINGUISHER

ICING

- PITOT HEAT ON
- CABIN HEAT / DEFROSTER ON MAX
- DO A 180° TURN AROUND AND OR CLIMB / DESCEND TO NON-ICING CONDITIONS
- MAXIMUM POWER SETTING / MAX PROP SPEED
- CARB HEAT AS NECESSARY
- FLAPS NOT RECOMMENDED
- LAND IF NECESSARY - FASTER THAN NORMAL

CARBURATOR ICING

- CARB HEAT ON
- THROTTLE - FULL OPEN
- MIXTURE - LEAN AS REQUIRED FOR SMOOTHE OPERATION

AFTER CLEARING ICE, RETURN TO NORMAL OPERATION, THEN MONITOR ICING. IT MAY BE NECESSARY TO USE PARTIAL CARB HEAT IN SOME CONDITIONS. IF SO, LEAN AS REQUIRED FOR SMOOTHE OPERATION.

STANDARD PLANE

Empty Weight 1514 Lbs.
Max Useful Wt. 1,036 # (empty) 796# (max fuel)
Max Baggage Area 170 Lbs. (120 Area 1, 50 Area 2)
Max Total Wt. 2550 Lbs.

Fuel Type: 100 LL (Lt. Blue)
Useable Fuel: 40 Gal 20 ea. L / R Main.
Oil Capacity: 7 Qts. (if filter 8) (min 6 Qts.)
Electrical: 24 V / 60 amp alternator
Tire Pressure: Nose - 40 Psi Main - 35 Psi

AVIATE - NAVIGATE - COMMUNICATE

CESSNA C172N 180 HP

PLANNING

Weather & Den. Alt.
Weight & Balance
Performance Req./
Flight Plan - File
Check Personal Min.
Check Sqawk Sheet

INTERIOR

Papers - A.R.R.O.W.
Hobbs Time
Circuit Breakers - In
Control Lock-Remove
ELT - Armed
Avionics - Off
Trim - T/O mark
Master - On
Flaps - Extend
Pitot Heat - As Req.
Stall Indicator - Test
Nav/Beacon/Strobe
Taxi/Land/Nav Lights
Fuel Gauges - Full
Master - Off
Alternate Static
Fire Ext. / CO2

EXTERIOR

Baggage Door - Lock
Flaps / Ailerons
Fuel Levels-**VISUAL**
Fuel Drain/Quality
Caps/Drain/Vents
Gear/Tires/Brakes
Engine/Oil/Belt
Min Oil Level **6** qts.
Prop/Spinner/Air Intake
Exhaust Pipe - loose
Nose Wheel / Shock
Pitot & Static Ports
Rudder/Elevator/Trim
Undercarriage Clear
Antennas
Tie Downs / Chocks
Final Walk About

BEFORE START

Seat Adj./Lock/Belts
Maps/Equip. Org.
Passenger Brief-(CRM
Emrg Lnd)
Heat/Vents
Fuel valve - **BOTH**

START ENGINE

Brakes Set
Mixture - Rich(in)
Carb Heat - Off
Prime as Req. / Lock
Throttle - Open ~ 1/2"
Master - On
Beacon - On
Area Clear/Prop Clear
Mags On - Start
Oil Pressure - OK
RPM - 1000
Lean for Taxi

PRE TAXI

Avionics - On
Start Timer - Fuel
Flaps - Up
Check Winds / RR
Com Freq.s Set
Atis / Clearance Del
Com. Ground Control
Transponder / ALT
Altitude Set
Artificial Horiz (AI) Set
Taxi Lights / As Req.
H.I. / Compass Set
Clear Taxi Route
Controls Set for Wind

TAXI

Brake Test
AI/Turn Cord - Test
HI/Compas - Test
Airspeed / VSI - Test
Mixture - As required
LOOK For Traffic !!
Radio/Com - Check
Wind - Fly Away
Taxi/Landing Light - On

RUN UP

Brakes - Set
Fuel valve - **BOTH**
Trim - T/O
Flight Controls-LOOK
Instruments Set
Prime in / Locked
Throttle - 1700 RPM
Mixture - Best Power
Mags Check (L & R)
< 150 Drop / 75 rpm diff
Carb Heat - Check
Vacuum (Green)
Amps / Volts
Oil Pressure
Oil Temp
Throttle Idle Ck
Friction Lock

PRE TAKEOFF

Flaps 0 deg
Mixture - Best Power
Carb Heat-Off / As Req.
Pitot Heat / As Req.
H.I. To Compass
Doors / Windows
Lights/Camera/Action
360 Traffic Check
Abort Plan/Ready!
T.O. Clearance

TAKEOFF !!

Look Up / Down Wind
Announce Intentions
Full Throttle - Hand On
2700 RPM (Red line)
Mixture - Max. Perf
Oil Press
Air Speed - Alive
Rotate 60 KIAS
Vx = **62** (0 flaps,Sea)
Vx = **67** (10,000')
Vy = **72** (2500')
Vy = **68** (10,000')
SOFT (Not Short)
Vx = 57 (10^0 Flaps)

CLIMB

Max Performance
Vx = 65 KIAS
Max Pwr @ **2700** RPM
Clear Obstacle
Vy Climb 85 KIAS
> 1000' Cruse Climb
Cruse Climb = **90**
Mixture - As Req.
Takeoff Lights Off
Eng. Guages Green
Open Flight Plan

CRUSE

2200-2540 RPM
2700 RPM Max Cont
Lean Mixture
Fuel Management:
Switch Main ~ 60 min.
H.I. To Compass

DECENT

Throttle-Avoid Shock
Cooling
(Aprox 100 RPM / Min.)
Mixture - Richen
Fuel - Fullest Main
Check ATIS/AWOS
Altimeter Set
H.I. To Compass
Plan Approach
CALL UNICOM /
TWR / APPROACH
At 10 Mile Out
Land / Strobe Lights
Communicate Pos/Alt
Say Intentions
At 5 Mile Out
Altitude at TPA
Seat Belts / Harness

CLOSE FLIGHT PLAN

PRE-LANDING

Vfe = 100 KIAS
Gas - Fullest
Undercarriage - Down
Mixture - Best Pwr.
Prop - N/A
Carb Heat - ON
Speed / **S**eat Belts
90 KIAS - D.W.
Abrest Touch Dn
Flaps 10^0
Power 1500 RPM
80 KIAS + Gust
On Base/Final-**LOOK**
Flaps - Full or as req.
65 KIAS + Gust

LANDING

60 KIAS + Gust
GO AROUND
POWER - FULL
Positive rate of climb
Carb Heat - OFF
Trim - Take - Off
CLIMB = 65 KIAS
Flaps - bleed gradual

CLEAR ACTIVE

Flaps Up
Pitot Heat - Off
Landing Ltgs-As Req.

Communicate clear
Contatc Ground

SECURING

Avionics/Auto Pilot Off
Mixture - lean off
Mags - Off
Master - Off
Beacon - Off
Hobbs / Tach Time
Windows/Doors Close
Control lock / tie down
Clean / Refuel

CLOSE FLIGHT PLAN

Xwind Max xwind comp	= 15	**ALL SPEEDS KIAS - INDICATED**		Performance Maneuvers (Utility Category)
Vr - Rotation Speed	= 55	Va (max wt 2550)	= 105	Chandels, Lazy 8's = 105
Vx - Best Angle - dist.	= 62	Va (min wt. 1750)	= 85	Steep Turns = 95
Vy - Best Rate - time	= 73	Vno - Max Struct Cruse	= 127	Spins / Stalls (No whip) ... Slow Deceleration
Vso - Stall with flaps	= 40	Vne - Never Exceed	= 158	**Best Glide (Max Gross) = 70**
Vs - Stall w/o flaps	= 50	Vfe - Flaps Extend	= 85	**Power off land (Flaps down) = 60**

DEPARTURE	KIAS	Flaps / RPM	NOTES
Rotation	55	0	**Avoid Slips with > 20^0 Flaps Extended**
Best Angle Vx	62(2550#) / 58(2100#)	0	
Best Rate Vy	73 (2500') / 72 (10,000')	0	
CRUSE (8000' STD.)			
Economy	100	0 / 2300	2300 RPM - 7.0 GPH - 50% BHP
Normal	111	0 / 2500	2500 RPM - 8.4 GPH - 62% BHP
Maximum	122	0 / 2700	2700 RPM - 10.1 GPH - 76% BHP
ARRIVAL			
Aproach	80-90	10^0-20^0	1700 RPM (Aprox.)
Short Final	60-70	30^0 - max	1500 RPM (Aprox.)