PA 32 CHEROKEE SIX

PRE-LANDING

Airspeed	90 KT
Flaps (Vref: (10^0) 87KT – ($25\text{-}40^0$) 78KT)	As Required
Power	18" – 12"MP/ cruise RPM
Mixture	RICH
Hatches and Harness	Secure
Brakes	Pressure checked / OFF

FINAL

Pitch	FINE (HIGH RPM)
Heels	ON FLOOR
Flaps	FULL (40^0) or as req'd
Threshold speed: O^0 Flap	85 KT
40^0 Flap (Normal Landing)	78 KT
40^0 Flap (Short/Soft Field)	68 KT

Touchdown: MAINS FIRST, then FLY NOSEWHEEL ON, BRAKE gently.

CLEAR OF RUNWAY

Flaps	UP
Radio	'Ground' VACATED/TAXI CLNC
Strobes (if fitted)/ Landing light / Pitot Heat	OFF
Transponder	STANDBY
Trim	Set 'N'

SHUT DOWN/SECURE AIRCRAFT

Park Brake	ON
Avionics	OFF
Engine Instruments	Checked Normal
Magnetos	Check L/R
Mixture	IDLE CUTOFF
Masters: Battery/Alternator	OFF
Chocks / Tie Down / Control Locks	Installed as Required
Screens/Pitot Cover/Security	Installed. Lock Aircraft
Search and Rescue	CANCEL SAR

PRE-TKOF SAFETY and DEPARTURE BRIEF

SAFETY BRIEF:'If the engine fails on the runway, I will close the throttle, apply full and even braking, slow to taxi speed and vacate the runway if possible.'
'If the engine fails after TKOF with runway/overrun remaining, I will lower the nose and land the aircraft on the remaining surface, accepting a possible overrun.'
'If the engine fails after TKOF with no runway remaining, I will lower the nose, adopt a 70KT glide, select a field 30^0 either side of the nose. I will not consider turning back to the runway unless I am above 1000FT or turning downwind.'

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DEPARTURE BRIEF: 'I am departing <RNY>, (VISUAL or IFR DEP), TK <DEGREES>, Climbing to <ALT> At <POSITION> will turn/ climb to <ALT>…

April 2023

Sydney Social Flying

PIPER PA 32 CHEROKEE SIX CHECKLIST

PRE FLIGHT CHECKS

Pre Flight Inspection	Complete
Seats	Adjusted and locked
Control lock	Remove
Park Brake	ON
Trim	Check l Travel, set 'N'
Fuel Selector	Left or Right MAIN
Alt. Air	CLOSED
Flaps	Checked and UP
Avionics	OFF
Circuit Breakers	All IN
MASTER (BAT+ALT)	ON
Engine Instruments	Check TEMP, FUEL
Rotating Beacon	ON

START ENGINE

Engine Controls	Checked and Set:
Throttle	SET, 12mm (1/2")
Pitch	FINE (HIGH RPM)
Mixture	RICH
Friction	FREE
Prime	FUEL PUMP On 'til
Fuel flow meter	INDICATING, then
Fuel pump	OFF
Mixture	IDLE CUTOFF
Prop. Area	'CLEAR'
Ignition Switch	START ENGINE, release
Mixture	RICH
Throttle	800-1000 RPM

AFTER START CHECKS

Oil pressure	Green Arc,
If no pressure in 30 seconds, shut down (Mixture: IDLE CUTOFF)	
Engine Instruments	NORMAL
Avionics	ON
Flight Instruments	SET DI, ALT

NOTE: FOR DETAILED INFORMATION, CONSULT THE AIRCRAFT FLIGHT MANUAL AND OWNERS HANDBOOK

AFTER START (cont'd).

Alternator	CHARGING
If NO, cycle ALT MASTER, check CB IN. If still NO, shut down	
Gyro Instruments	5psi +/- .1psi
Radio aids	SET for departure
Transponder	CODE/STBY
Mixture	Leaned for Taxi

TAXI

Toe Brakes (both seats)			TEST
Gyro Instruments:		Right Turn	Left Turn
	DI	INCREASING	DECREASING
	TC	RIGHT bank/LEFT skid	LEFT bank/RIGHT skid
ATC Clearances			As required

RUNUP

Park Brake	ON
Throttle	1000 - 1200 RPM
Mixture	FULL RICH
Oil	Green arcs
Throttle	2000 RPM
Pitch – Exercise	Once (100-200 RPM drop)
Magnetos	Check Left-Both-Right-Both
(Max drop 175 RPM/ Max difference 50RPM)	
Alt Air	RPM drop, then OFF
Throttle	Idle Check (700 – 800 RPM)
Throttle	1000 RPM

PRE-TKOF

Trims	Set 'N'
Flaps	10^0 Normal, 25^0 Short/Soft Sfc
Mixtures	RICH
Pitch	HIGH RPM (FINE)
Friction Nut	FREE
Fuel	ALL TANKS, set MAIN
Fuel Pump	ON
Flight and Engine Instruments	SET, Green arcs
Radio Aids	SET/TESTED
Transponder	SSR CODE SET 'STBY'
Flight Controls	FREE/CORRECT SENSE
Auto Pilot	Normal, override checked
Electric trim	Normal, override checked
Doors, Windows	Secure
Safety/Departure briefs	COMPLETE
Seat Belts and Doors	SECURE

LINE-UP (No delay, unless requested, or cleared 'Line up/hold')

Compass/DI	ALIGNED
Landing Light	ON
Pitot Heat	As required
Transponder	ALT
Heading Bug	RUNWAY

TKOF

Power	FULL THROTTLE/2600RPM
Temps and Pressures	GREEN ARC
Airspeed	INCREASING
Rotate Speed	50KTS
Initial Climb	70KTS

CLIMB

ATTITUDE/AIRSPEED/BALANCE/CENTRELINE

Flaps	UP (300FT AGL)
Power	FULL THROTTLE/2600RPM
Fuel Pump	OFF <500ft, check fuel pressure
Climb Speed	100KTS
Auto Pilot	As required
Engine Instruments	Monitor
OAT	Monitor
Pitot Heat	As Required

CRUISE

ATTITUDE/POWER/TRIM

Power	As Required (Max 75%)
Recommended: 23"/2300RPM/LEAN (70%)=138KTAS/52LPH	
Flight and Engine Instruments	Monitor
Cabin Air / Heat	As Required
Top of descent	PLAN

DESCENT

Compass – D.I.	ALIGNED
QNH	SET
Mixture	ENRICH (halfway towards Rich)
Landing Light	ON (10NM)
Radios	SELECT FRQs
Navaids	As Required *Ident/test/*

Approach Plan: Check LSALT/A/D Elevation/HOLD/CCT/ENTRY Altitudes 'Traffic' calls/RWY relative to approach/aid/Wind Effect/ Holding/ A/D Lighting

Auto Pilot	OFF
Fuel Pump	ON
Fuel	FULLEST TANK (can be tip)

PA 32 CHEROKEE SIX

April 2023

AIRSPEEDS NORMAL OPERATIONS	**KNOTS**
Vne Never exceed (Redline)	**184**
Vno (Normal Operating (Calm air only above this speed)	**146**
Va (Manouvering speed) (@1542Kg).	**129**
Vg (Best glide speed)	**87**
Vref (flaps 10^0)	**87+1/2 Gust***
Vref (flaps 25-40^0)	**78+1/2 Gust***
Vfe (Max flap speed)	**108**
VsI (Stall speed, flaps up)	**61**
VsO (Stall speed, 40^0 flap)	**55**
Max Demonstrated Crosswind	**17**

*1/2 Gust =(Max – mean windspeed/2) eg: '20G30kt' = add 5kt to appr. speed

PERFORMANCE

Flight planning

FUEL FLOW	64litres per hour @75%power, lean
RANGE (TOTAL, NO RESERVES)	765NM (314 l., Full Tanks at start)
ENDURANCE (TOTAL, NO RESERVES)	0454 (hhmm)
TKOF DISTANCE	348 metres, unfactored (over 50ft barrier)
LANDING DISTANCE	325 metres, unfactored (over 50ft barrier)
MAXIMUM TKOF WEIGHT	1542kg
MAXIMUM LANDING WEIGHT	1542kg
MAXIMUM ZERO FUEL WEIGHT	1411.5kg

Loading: See loading charts. Ensure weight and CG is within limits throughout flight

HOT START
Throttle 12mm, BAT/ALT ON, Fuel Pump ON, Mixt. ICO, Starter CRANK, (When engine starts) Mixt RICH, Throttle 800-1000RPM

FLOODED START
Throttle FULL, BAT/ALT ON, Fuel Pump OFF, Mixture ICO, Starter CRANK, (When engine starts) Mixt RICH, Throttle 800-1000RPM

ELECTRIC FAILURE Essential power only (no Pump, SSR) Land as soon as possible

FUEL: **T**he fuel system has main and tip tanks in each wing, with separate fuel gauges for each tank. The engine can operate off any one tank at a time, but should use either main tank for TKOF and LANDING.
SELECTOR The fuel selector is on the centre floor. It has five positions:

	OFF	**LEFT TIP**	**LEFT MAIN**	**RIGHT MAIN**	**RIGHT TIP**
Fuel quantities litres:		**64**	**93**	**93**	**64**

Total Capacity is **314litres usable of 100LL (or 100/130) Avgas**.
REFUELLING: Long flights, fill TIPS first, then MAINS. Short flights, 'MAINS only' OK.
NB! To avoid fuel transfer and overflow loss, turn fuel OFF when parked.

PRE-FLIGHT CHECK:
For daily inspection, check items 1-7. After refueling, check Item 1 only.
(*Step 1* checks tanks, *Stps 2-7*checks lines and filter)

1. Sample each tank via its quick drain, with regular checker.
2. Place the FUEL TEST TANK under the FUEL DRAIN outlet, below the fuselage right side, aft of the wing spar.
3. Select OFF on tank selector, then select each tank in turn, then
4. Press down on the lever behind the Co-Pilot's seat, allowing 11 seconds flow for tips and 6 seconds flow for mains.
5. Check TEST TANK contents for water and sediment. Dispose of contents.
6. Ensure that all drains have stopped flowing.
7. If fuel has been spilled, move aircraft away from spill before starting.

ENGINE: Lycoming IO540-KIA5, 6 cylinder, Rated Power 300HP
Rated speed 2700RPM
Displacement 541.5 Cubic Inches (8.87 litre)
For normal ops, 8 US Quarts oil is adequate.
(Use Phillips 66 X/C 20W50 oil until further notice)

IN FLIGHT EMERGENCIES:

ENGINE FAILURE:	Glide	87KT, Trimmed
	Mixture	RICH
	Fuel Pump	ON
	Fuel Tank	FULLEST
	Alt Air	ON
	Throttle	THROUGH RANGE
	Pitch	FINE
	Magnetos	CHECK
	Fuel Drain (Behind co-pilot seat)	OPERATE 11sec(water in fuel?)
	Forced Landing	PLAN/DECLARE
	Mixture ICO, Fuel OFF, Magnetos OFF, BAT/ALT OFF	

FIRE: Fuel OFF, Throttle CLOSED, Mixture ICO, Heater/Defrost OFF, Mayday TX, Magnetos OFF, BAT/ALT OFF. Land ASAP