

BEFORE STARTING ENGINE

Brakes set
 Preflight check completed
 Technical status verified
 Tacho time note
 Seat adjust
 Fuses check
 Electrical equipment OFF
 Fuel caps locked

STARTING ENGINE

Master switch ON
 Gear down lights ON
 Fuel gauges check
 Fuel selector desired tank
 Alternate air OFF
 Mixture Closed
 Prop full FORWARD
 Throttle 1 cm
 Fuel pump On
 Prop area clear
 Primer Prime
 Starter Engage
 Mixture Rich
 Oil pressure check
 Alternator/Load ON/check

TAXIING

Belts/harness fasten
 Avionic master ON
 Transponder GND
 Altimeter set
 Navigation aids check
 Taxi area clear
 Throttle apply slowly
 Brakes check
 Flight instruments check in turn

GROUND CHECK

Propeller full FORWARD
 Throttle 2000 RPM
 Magnetos max drop 150, max diff 50 RPM
 Vacuum 4.8" - 5.1" Hg
 AUX vacuum check
 Oil temperature check
 Oil pressure check
 Propeller exercise then full FORWARD
 Alternate air check
 Auxiliary fuel pump OFF
 Alternate static port check
 Fuel flow check
 Throttle ~ 1000 RPM

Annunciator panel press-to-test
 Fuel selector fullest tank
 Trim tabs set
 Flaps check - set
 Controls free
 Directional gyro set
 Door/window latch
 Flight/engine instruments check
 Nav aids/departure briefing set/give
 Emergency procedures review

ON RUNWAY

Gyro/Compass check RWY HDG
 Transponder ALT
 Electric fuel pump ON
 Pitot heat as required
 Lights as required
 Strobe lights ON
 Takeoff time note

NORMAL TAKEOFF, INITIAL CLIMB

Mixture full RICH
 Prop full FORWARD
 Gear up < 108 KIAS
 Climb speed best angle (Vx) 78 KIAS
 Climb speed best rate (Vy) 87 KIAS
 Flaps retract slowly
 Electric fuel pump OFF

CRUISE CLIMB

Manifold pressure 25 in Hg
 Prop speed 2500 RPM
 Climb speed 97 KIAS
 Altimeter 1013 if applicable

CRUISING

Max power 75%
 Mixture Leaned
 Fuel selector change every hour
 Directional gyro Check

BEFORE DESCENT

Directional gyro set
 Vacuum 4.8" - 5.1" Hg
 Fuel quantity check
 Nav aids set & identify

APPROACH AND LANDING

Altimeter set
 Fuel selector proper tank
 Seat backs erect
 Belts/harness fasten
 Electric fuel pump ON
 Landing light ON
 Gear down airspeed < 130 KIAS
 Flap set airspeed < 109 KIAS
 Mixture full RICH
 Propeller full FORWARD
 Final approach speed 75 KIAS

"Mix - Prop - Throttle - Three Green"

AFTER LANDING

Flaps retract
 Electric fuel pump OFF
 Strobe lights OFF
 Pitot heat OFF
 Transponder GND
 Landing time note

STOPPING ENGINE

Avionic master OFF
 Propeller full FORWARD
 Mixture idle cut-off
 Magnetos OFF
 Master switch OFF
 Tacho time note
 Control wheel/tie downs secure

INFREQUENT PROCEDURES
PA-28R-180 SE-FCE

STARTING ENGINE WHEN FLOODED

Throttle – Propeller full FORWARD
Mixture idle cut off
Master switch.....ON
Auxiliary fuel pump OFF
Propeller clear
Starter.....engage

When engine fires

Throttleretard
Mixture advance slowly

STARTING WITH EXTERNAL POWER SOURCE

Master switch.....OFF
All electrical equipment OFF
Terminals..... connect
External power plug..... insert

Proceed with normal start

Throttlelowest possible RPM
External power plug.....disconnect
Master switch..... ON – check ammeter
Oil pressurecheck

SHORT/SOFT FIELD TAKEOFF

Flaps.....25° (second notch)
Accelerate to 52 – 61 KIAS
Control wheelrotate
When airborne accelerate to 74- 87 KIAS
Gear..... UP
Accelerate to Vx 78 KIAS
When past the obstacle, Vy..... 87 KIAS
Retract the flaps slowly

APPROACH BRIEFING

Airport & approach type & RWY
MSA.....check
IAF & Entry decide
Initial altitude decide
Inbound track..... set
OM/MM altitudecheck
Minima/DPcheck
GA/Missed APCH.....check

INSTRUMENT APPROACH

Approach instruments set and ident
Final approach fix altitude
Minimum decent altitudecheck
Missed approach instruction.....check
Trim to 90 KIAS
Gear down FAF
Flaps set..... FAF

PARKING

Parking brake set
Control wheel secured with belts
Flaps..... full up
Wheel chocksin place
Tie downs secure



PREFLIGHT CHECK
PA-28R-180 SE-FCE



INSIDE COCKPIT

Required papers on board
Control wheel release
Primary flight controls..... proper operation
Seat belts inertia reel
Master switch ON
Pitot heat ON
External lights ON
Internal lightscheck
Landing gear gear lamps.....check
Fuel quantity gaugescheck

EXTERIOR

External lightscheck
Stall warnercheck
Pitot heatcheck

INSIDE COCKPIT

Pitot heat OFF
External lights OFF
Master switch OFF
Ignition verify OFF
Flaps..... Extend fully

EXTERIOR

Exterior check for damage
Control surfaces check for interference
Hinges check for interference
Wings free of ice, snow, frost
Fuel tanks check supply
Fuel caps check secure
Fuel tanks sumps drain, check closed
Fuel vents open
Main gear struts inflation 6,5 ± 1 cm
Nose gear strut inflation 7 ± 1 cm
Tirescheck
Brake blockscheck
Gear squat switchescheck
Gear bayscheck
Main gear bays foamcheck
Gear doorscheck
Fuselage static vents..... clear
Pitot head remove cover, holes clear
Windshield clean
Propeller and spinner check defects, nicks
Engine air inlets check foreign matter
Engine baffle sealscheck
Fuel and oil check for leaks
Oil level 6-8 quarts
Cowling secure
Alternator belt check tension
Tow bar store
Baggage stored and secured
Baggage door close and secured

INSIDE COCKPIT

Flaps..... retract
Life vests ON for overwater flight
Portable ELT reachable
Passenger board
Seat belts fasten
Safety briefing perform

POWER LOSS DURING TAKEOFF

Maintain safe airspeed 75 KIAS
Land straight ahead

POWER LOSS IN FLIGHT

Maintain safe airspeed 75 KIAS
Locate suitable field
Fuel selector switch tank
Auxiliary fuel pump unlatch, HI
Mixture RICH
Alternate air OPEN
Magnetos best effect
Distress call transmit
Transponder 7700
Engine gauges check for indication
of cause of power loss

If no fuel pressure is indicated, check
tank selector position to be sure it is on a
tank containing fuel.

If power is restored

Alternate air CLOSED
Auxiliary fuel pump OFF

POWER OFF GLIDE TO LANDING

Propeller full retard
Trim for ... maximum flight time (V_x) 78 KIAS
Trim for best range (V_y) 87 KIAS
Locate suitable field
Establish spiral pattern
Downwind position 1000 ft
Field reachable 75 KIAS
Gear down
Flaps full

GEAR DOWN EMERGENCY LANDING

When committed to landing

Throttle close
Mixture idle cut-off
Ignition OFF
Master switch OFF
Fuel selector OFF
Seat belt and harness tight
Door open
Trim for lowest possible airspeed

GEAR UP EMERGENCY LANDING

Prepare for abrupt stop
Seat belt and harness VERY TIGHT
Flaps as desired
Throttle close
Mixture idle cut-off
Ignition switches OFF
Master switch OFF
Fuel selector OFF
Seat belt and harness tight
Door open
Trim for lowest possible airspeed

ENGINE FIRE DURING START

Starter crank engine
Mixture idle Cut-Off
Throttle open
Primer OFF
Fuel selector OFF
If fire continues abandon aircraft

ENGINE FIRE IN FLIGHT

Fuel selector OFF
Throttle CLOSED
Mixture idle cut-off
Auxiliary fuel pump check OFF
Heater and defroster OFF
Power off landing execute

ELECTRICAL FIRE (smoke in cabin)

Master switch OFF
Vents open
Cabin heat OFF
Land as soon as practicable

HIGH OIL TEMPERATURE

Land at nearest airport
Prepare for power off landing

LOSS OF OIL PRESSURE

Land as soon as possible
Prepare for power off landing

LOSS OF FUEL PRESSURE

Auxiliary fuel pump ON
Fuel selector check on fullest tank

PRIMARY VACUUM PUMP FAILURE

Auxiliary vacuum pump engage
Prepare for partial panel flight
Proceed VMC if possible
Land when practical

EMERGENCY LANDING ON WATER

Ditch using power if possible
Rescue sources locate ships, shorelines
Distress call transmit
Transponder 7700
Study wind and sea surface
Direction of ditching decide
Passengers brief
Life jacket OUTSIDE cockpit inflate
Survival equipment readily accessible
Personal locator beacon.. secured on person
Seat belt and harness VERY TIGHT
Gear remains UP
Flaps 25° (second notch)
Door open
Final approach commence > 500 feet
Prepare for VERY abrupt stop
Flare normal height
Rate of descent < 200 feet / minute
Hold off until impact
Wings parallel with the sea surface
Airplane floats vacate



EMGY LANDING GEAR EXTENSION

If landing gear does not check down, recycle gear through up position, and then select gear DOWN

Prior to emergency extension procedure

Master switch..... check ON
Circuit breakerscheck
Panel lights OFF (in daytime)
Gear indicator bulbscheck

Emergency extension

Airspeed < 87 KIAS
Gear selector switchDOWN
Emergency gear lever move to "Emergency Down" position and **hold**
Gear indicator check three green

If gear has still failed to lock down

Rudder..... yaw the airplane abruptly from side to side

NOSE GEAR FAIL TO LOCK DOWN

Airspeed lowest safe speed
Emergency gear lever "Override Engage"
Gear selector switchDOWN

DOOR OPEN IN FLIGHT

Slow to 87 KIAS
Cabin ventsclose
Storm window open
If upper latch is open latch
If side latch is open..... pull on armrest while latching handle
If both latches are open.. first latch side latch then latch top latch

PROPELLER OVER SPEED

Throttleretard
Oil pressurecheck
Prop control full DECREASE rpm, then set if any control available
Airspeed reduce
Throttle as required to remain below 2575 rpm

SPIN RECOVERY

Rudder..... full opposite to direction of rotation
Control wheel full forward while neutralizing ailerons
Throttle idle
Rudder..... neutral (when rotation stops)
Control wheelas required to smoothly regain level flight attitude

CAUTIONS

ALTERNATOR FAILURE

Verify failure

Reduce electrical load as much as possible.
Alternator circuit breakerscheck
Alt switch OFF for 1 second then ON

If no output

Alt switch OFF
Electrical load reduce
Land as soon as practical

If battery is discharged

Before startup..... consider aborting flight
Landing gear emergency gear extension procedure
Lights inoperative
Radios inoperative
AUX Vacuum pump inoperative

NOTE

A discharged battery will put extra strain on an operating alternator and may lead to electrical equipment failure, boiling battery acid and eventually alternator overload.

Piper FLIGHT MANUAL EXCERPTS PA-28R-180 SE-FCE

WEIGHTS

Maximum takeoff weight..... 1135 kg
Basic empty weight 714,08 kg
Full fuel (182 l)..... 129 kg
Max cabin load full fuel..... 292 kg

TIRE INFLATION

Nose tire inflation..... (30 psi) 2.1 bar
Main tires inflation (27 psi) 1.9bar

FLUIDS

Fuel AVGAS 100/130 or 100LL
Engine oil.....Aeroshell 15W50
Hydraulic brake fluid..... MIL-H-5606