CHECKLIST

NOTE ON CHECKLISTS

A normal checklist is provided for use in flight. This checklist covers items that are of vital importance to the safety of the flight.

When completing a checklist it is assumed the pilot is familiar with the full operating procedures in the sections following the normal checklist and outlined in the aircraft POH section 4. The checklist is completed after normal flows as a cross check to ensure critical items are set correctly.

Expanded procedures for normal, non-normal, and emergency operations are provided on the reverse side. These should be used for training aids during type ratings and for personal reference.

As model differences frequently occur, the manufactures handbook for the aircraft you are flying should be referenced to and this checklist must be modified accordingly prior to any use operation!

Speeds and performance figures provided here are an average for the more common C182 models and rounded up to the nearest 5kts.

HAPPY FLIYING

RED SKY CHECKLISTS

Cessna 182

Speeds

NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW condition.

V_R.....55 KIAS
V_X – Best Angle of Climb .....65 KIAS
V_Y – Best Rate of Climb.....Vy_{sl} 80 KIAS
Normal approach.....70-80 KIAS
V_{ref}.....65 KIAS
V_A – Maneuvering Speed.....111 KIAS

Maximum demonstrated crosswind.....15kts

PLACARD/ASI LIMITATIONS

V_{NO} – Top of Green Arc .....140 KIAS
V_{NE} – Red Line (Never Exceed).....167 KIAS

V_{SO} – Stall landing configuration.....52 KIAS
V_S – Stall Clean .....58 KIAS

V_{FE} – Max. Flap Extension 10-40º....110 KIAS
V_{FE} – Max. Flap Extension 0-10 º.....140 KIAS

EMERGENCY OPERATION

Best glide Speed.....70 KIAS
Precautionary
Slow safe Cruise.....90-105 KIAS
Approach (flaps up).....70 KIAS
Approach (flaps full).....65 KIAS
Ditching.....65 KIAS
Engine failure after takeoff.....70 KIAS
Engine Failure in flight flap up.....70 KIAS
Engine Failure in flight flap down.....65 KIAS

PERFORMANCE

Before Leaving Home

"I'M SAFE"

Self Check

Illness
Medication.....No
Stress.....No
Alcohol in last 8 hrs.....No
Feeling OK.....Yes
Eaten.....Yes

Flight Equipment Check

Crew Licenses
Strainer, Dipstick, Leatherman
Current Charts
Airport Guide/Airfield Charts
Custom Checklists
Text Books
Flight Plans
Weather Reports
Flight Computer, Plotter Calculator,
Pencils, Clipboard
Time Piece
Flashlights, Batteries, Bulbs
Cell Phone (Charged)
Spare Glasses, Sun Glasses

SPCRM

Before Start

Preflight Inspection.....Complete
Tach/Hobbs/Time.....Recorded
Passenger Briefing.....Complete
Seats / Seatbelts.....Adjust, Lock
Fuel Selector Valve.....Both
Cowl Flaps.....Open
Brakes.....Set/Hold
Avionics, Electrical.....Off
Circuit Breakers.....Check In

Normal Engine Start

Mixture..... Rich
Propeller.....High RPM
Power.....½ Centimeter
Carburetor Heat.....Cold
Prime.....1-3 as req'd
Rotating Beacon.....On
Area.....Clear

After start

Mixture.....Set for Taxi
Engine Instruments.....Check
Taxi, Nav. Lights.....As Required
Flaps.....Retracted
Transponder.....Standby

Taxi

Brakes.....Release, Check
Avionics and Flight Instruments.....Check/Set
Nav instruments .....Test

Pre Run Up

Parking Brake.....Set
Fuel Selector.....Both
Engine Instruments.....Green
Cowls.....Open

NORMAL CHECKLIST

Loading

Maximum TO/Ldg Weight 2800lbs
Standard Empty Weight 1600lbs
Useful Load 1200lbs

Operating performance

Fuel Capacity (useable)
Standard.....56gals
Long Range.....75gals
Fuel Consumption
75%@2500ft..... 55lt /hr
75%@7500ft..... 45 /hr
Planning..... 60 /hr
Plan Cruise speed..... 125KTAS

Other Information

Transponder Codes:
Unlawful Interference.....7500
Loss of Communication 7600
Emergency 7700

Radio Frequencies
Emergency Frequencies.....121.5/243
All Africa TIBA.....126.9
Uncontrolled/Unmanned: 124.8
Training Areas:.....124.4

Light Signals

Signal	On Ground	In Flight
Green Steady	Takeoff	Land
Green Flashing	Taxi	Return to land
Red Steady	Stop	Give way
Red Flashing	Clear runway	Do not land
White Flashing	Return to ramp	--
Red/Green alternating	WARNING – USE CAUTION	

PERFORMANCE

Run Up

Power.....Set
Mixture.....Set
Carb Heat.....Check
Magnetos.....Check Left, Both, Right, Both
Propeller Governor .....Cycle
Engine Instruments.....Check
Vacuum.....Check
Ammeter.....Check with load
DI .....Set to Compass
Throttle friction lock.....Set
Idle.....Check

Pre-Takeoff

Trim.....Set for takeoff
Mixture.....Set for takeoff
Magnetos .....Both
Propeller Governor .....Full fine
Flight Controls.....Free and Correct
Flaps.....Set for takeoff
Cowl Flaps .....Open
Instruments.....Checked and Set
Radios.....Set for Departure
Navigation / GPS.....Set for Departure
Hatches .....Closed, Locked
Harnesses.....Secure
Engine Runup.....Complete
Engine Instruments.....Checked
Electrics.....CB's Checked
Emergency & Dep. brief.....Perform

Line Up

Area.....Clear
Landing light, strobes.....On
Transponder.....Set to altitude
DI.....Aligned with Compass, Rwy
Area.....Clear
Windsock.....Check
Engine Parameters.....Green

NORMAL CHECKLIST

After Takeoff (above 1000' AGL

Brakes.....Check
Undercarriage.....Retracted
Power/Pitch.....Set
Mixture.....Adjust
Fuel.....Checked
Flaps.....Up
Engine Parameters.....Green
Lights.....As required

Cruise

Power/Prop.....Set
Elevator/Rudder trim.....Adjust
Mixture.....Lean for altitude
Cowl Flaps.....Closed/As Req'd

Descent

Fuel .....Correct Tank, Qty checked
Radios.....Set
Approach Briefing.....Complete
Cowl Flaps.....Closed
Mixture.....Set
Power/Prop.....Set
Icing.....As required
Lights.....On/as req'd

Downwind

Brakes.....Check
Undercarriage.....Down & Locked
Power/Prop.....Set
Mixture.....Set
Fuel.....Correct Tank
Flaps.....Set
Engine Parameters.....Green
Lights.....As required
Seats / Seatbelts.....Check Secure
Fuel Selector.....Both
Carb Heat.....As Required

Final

Cowl Flaps.....Open
Carb Heat.....Off
Undercarriage.....Down & Locked
Propeller Pitch.....Full fine

NORMAL CHECKLIST

Short field take-off

Wing Flaps .....20 deg
Brakes ..... APPLY
Power ..... Maximum
Mixture ..... Set for Field Elevation
Brakes ..... RELEASE
Elevator Control ..... Slightly Tail Low
Lift Nose.....60KIAS
Maintain 65KIAS
Until clear of Obstacles

Accelerate.....80KIAS
Wing Flaps (above70KIAS).....RETRACT
Power.....Set for climb

Note: Do not reduce power until wing flaps have been retracted.S

Soft field take-off

Wing Flaps ..... Maximum for field
Line up.....Do not stop rolling
Takeoff roll.....Nose high
Liftoff .....Minimum speed
Accelerate.....65KIAS
Until clear of Obstacles, continue with Short Field Procedure

Maximum Performance Climb

Wing Flaps ..... Up
Power ..... Maximum Climb
Pitch.....Maximum Continuous
Note: for an after takeoff climb or in an emergency full power may be used ensure time limits are not exceeded for normal operations
Mixture ..... Set for Field Elevation
Airspeed.....Vy_{sl} 80 KIAS (sea level)
.....$Vy_{10,000}$ 75 KIAS (10,000ft)
Cowl Flaps .....Open
Note: Vy will provide maximum rate of climb, when performance is limiting such that less than 200fpm is achieved, the reduction to best angle of climb may result in zero or negative rate of climb.

ABNORMAL PROCEDURES

Abnormal Maneuvers

HASELL
Complete prior to conducting stalls, spins and approved aerobatic maneuvers

Height.....Sufficient for recovery
.....Above 3000ft AG

Airframe .....Limitations Reviewed
.....Configuration Reviewed

Security.....Seatbelts/Passengers/Load
Engine.....Temperatures/Pressures
.....Power/Pitch Mixture Checked
Location.....Not over built up areas, airfields or controlled airspace High Terrain Within proximity of suitable landing areas
Lookout.....Complete a lookout turn

ABNORMAL PROCEDURES

Engine failure

TAKEOFF

NOTE: Bold Items are immediate recall Items, other times may be followed up by the use of the AFM checklist.

Throttle.....IDLE
Brakes.....Apply
Flaps.....UP
Mixture.....IDLE cut-off
Ignition.....OFF
Master switch.....OFF

AFTER TAKEOFF

Airspeed.....70 KIAS Flaps Up
.....65 KIAS Flaps Down
Mixture .....Idle Cut-off
Fuel shutoff valve.....OFF
Ignition.....OFF
Flaps .....as required
Master switch.....OFF

DURING FLIGHT

IMMEDIATE ACTIONS
Airspeed 70KIAS
Carb Heat.....ON
Field.....Select
Approach.....Plan
FINDING
Carb Heat.....ON
Primer .....IN & Locked
Fuel Shutoff valve.....ON
Mixture.....RICH
Ignition.....BOTH (or START)
COMMUNICATE
Mayday.....Transmit on Active or 121.5
Transponder.....7700
Passengers.....Brief
SECURE
Mixture .....cutoff
Fuel shutoff valve.....off
Ignition.....off
FINAL
Flaps.....as required
Master switch.....Off
Doors .....unlatch
Touchdown.....tail low
Note: It is recommended that engine failure during fight procedures be committed to memory

EMERGENCY PROCEDURES

After Landing

Cowl Flaps.....Open
Trim.....Takeoff
Flaps.....Retract
Carb Heat.....Off
Land, Strobe lights.....Off
Transponder.....Standby

Shutdown and Securing

Power.....Idle
Avionics and Switches.....Off
Mixture.....Idle Cutoff
Mags.....Off
Master.....Off
Control Lock.....In
Hobbs and Tach.....Record
Tie Downs.....Attached

NORMAL CHECKLIST

Short field landing

Flaps.....Full
Airspeed.....65kts
Touchdown Positive, Main Wheels First
Nose Wheel .....Lower
Braking ..... Maximum Steady Braking
Flaps.....Retract

Soft field landing

Flaps.....Full
Airspeed.....65kts
Touchdown, ...Softly Main Wheels First
Nose Wheel .....Lower gently
Elevator.....Full up
Braking ..... Gently, minimum required
Flaps.....Leave down until clear of rwy

Crosswind take-off

Wing Flaps ..... Minimum for field
Takeoff roll.....Ailerons Into wind
Liftoff .....Ailerons Neutra
Liftoff .....Vr nml+
After takeoff .....Crab into wind for drift

Crosswind landing

Wing Flaps .....minimum for field length (and as required by strength of wind)
Approach.....crab into wind

Touchdown.....Nose straight, into wind wheel first
After landing.....Ailerons into wind
Note: maximum demonstrated crosswind

Go-around

Mixture/Pitch/Throttle.....Forward
Wing Flaps .....Retract to Takeoff
Brakes ..... APPLY

(after obstacles are cleared and above Vx)
Wing Flaps .....RETRACT
Power.....Set for climb

Note: Do not reduce power until wing flaps and landing gear have been retracted.

ABNORMAL PROCEDURES

Engine Fire

during start

Starter.....Crank
To draw away flames, If Engine Starts:
Power.....1700rpm
For a few minutes until flames appear to be extinguished, or if engine does not start:
Mixture.....IDLE cut-off
Ignition.....OFF
Master .....OFF
Inspect damage

during flight

Mixture.....IDLE cut-off
Fuel .....OFF
Master .....OFF
Cabin Air.....OFF
Sideslip.....Initiate if required
Proceed with Engine Failure in Flight Actions

Cabin Fire

On the Ground

Master Switch.....OFF
Cabin Vents/Air/Heat.....Closed
Fire Extinguisher.....Activate
Cabin Vents/Windhws.....Open

During flight

Follow Above Procedure, Once Fire is extinguished:
Electrics/Avionics.....Off
Master .....ON
Avionics/Electrics.....On, one at a time
Land at the nearest Suitable Airfield

Electrical Fire

Unknown Source

Master Switch.....OFF
Avionics and Electrics.....OFF
Circuit Brekers.....PULL
If Smoke Ceases:
Master Switch.....ON
Essential Electrical/Avionics.....On, One at a time

EMERGENCY PROCEDURES

Electrical failure

Load.....Verify
.....Reduce to minimum
Alternator .....OFF
Alternator CB.....Trip&Reset
Alternator.....ON
If no Power
Alternator.....OFF

PLAN To land at nearest suitable airfield,
Conserve Battery as much as possible,
All non essential electrics off, if necessary
Inform ATC and turn master off until approaching circuit.
Be prepared for implications of electrical failures on systems(flaps/gear)

Electrical overload

Load.....verify
.....Reduce to minimum
Alternator .....OFF
Alternator CB.....Trip&Reset
Alternator.....ON
Load.....OK?

If Not:
Master .....OFF
Master .....ON

IF LOAD still not does not return to normal land at nearest suitable airfield.

Carburetor Icing

Carb Heat.....Fully ON
Mixture.....Adjust
Once icing/roughness has cleared;
Carb Heat.....Cold
Mixture.....Reset

Engine Roughness

Magnetos.....Check
Mixture.....Adjust
Temperatures/Pressures.....Check
If roughness continues, plan to land at nerest suitable airfield.

EMERGENCY PROCEDURES

Cockpit Inspection

Aircraft documents.....Check
- Pilot's Operating Handbook
- Aircraft Weight & Balance records
- Certificate Of Airworthiness a
- Certificate of Registration
- Maintenance Release
- Aircraft Radio license
- Flight Folio

Control wheel lock.....Remove
Hobbs/Tach.....Check/Record
Ignition.....Off
Avionics Master (if fitted).....Off
Master Switch.....On
Fuel quantity indicators.....Check
Flaps .....Down
Lights.....On and Check (if Req'd)
Pitot heat.....On and Check (if Req'd)
Master Switch.....Off
Fuel shutoff valve.....On
Brakes ..... Test and Set
Gust Locks.....Remove
Covers and tie downs.....Remove

NOTE: PROPELLERS SHOULD BE TREATED AS LIVE AT ALL TIMES REGARDLES OF THE POSITION OF ENGINE CONTROL SWITCHES

Fuselage and Empenage

Baggage Door.....Check and Lock
Rivets.....Check, Secure
Nav Light .....Check, Secure
Elevator.....Free movement, Secure
Elevator Trim.....Check, Secure
Balance weights.....Secure
Lock wires.....Check, Secure
Radio antennas.....Check, Secure
Balance weights.....Secure
Rudder.....Free, Secure
Beacon.....Check, Secure

Before starting engine

Chocks .....Removed
Preflight .....Complete
Seats/Seat Belts .....Adjusted & Locked
Brakes .....Set and Hold
Cowl Flaps ..... Open
Fuel Selector ..... Fullest Tank
Lights ..... OFF
Circuit Breakers .....Check IN
Clock .....Set
Altimeter .....Set
Avionics .....OFF
Electrical Equipment .....OFF
Beacon.....ON

Normal Start

Mixture..... Rich
Propeller.....High RPM
Power.....½ Centimeter Open
Carburetor Heat.....Cold
Magnetos.....Both
Prime.....1-3 as req'd
Rotating Beacon.....On
Master Switch.....On
Prop Area.....Clear

START Accomplish:
Ignition Switch.....Engage
As engine fires:
Throttle.....Minimum
Oil Pressure.....Rising within 30s

Flooded Start

Mixture..... Cut-Off
Power.....Full
Prop Area.....Clear

START Accomplish:
Ignition Switch.....Engage
As engine fires:
Mixture.....Rich
Throttle.....Minimum rpm
Oil Pressure Rising.....Rising within 30s

Before Takeoff

(***"Too Many Pilots Fly In Heaven Early"***

Test Controls ..... Free & Correct
Trim ..... Set for T/O
Throttle friction lock.....Set
Mixture.....Set for takeoff
Magnetos .....Both
Propeller Governor .....Full fine
Primer .....Locked
Pumps.....As required
Flight Controls.....Free and Correct
Flaps.....Set for takeoff
Cowl **F**laps .....Open
Fuel.....Correct Tank, Qty
Instruments.....Checked and Set
Radios.....Set for Departure
Navigation / GPS.....Set for Departure
Hatches .....Closed, Locked
Harnesses.....Secure
Engine Instruments.....Checked
Electrics.....CB's Checked
Emergency, dep. brief.....Perform

Line-Up

Runway/Approach.....Clear
Landing light, strobes.....On
Transponder.....Set to altitude
DI.....Aligned with Compass, Rwy
Windsock.....Check
Engine Temps and Pressures.....Check

Normal Takeoff

Power ..... Full
Manifold Pressure.....1-2"below ambient
Rpm.....Redline

Engine parameters.....Check
Rotate.....60 KIAS
Climb Speed .....70-90 KIAS

Airbourne with no runway left, with positive climb and above minimum retraction speed
Brakes ..... Apply (when airborne)
Clear of obstacles and safe climb speed
Wing Flaps ..... Retract
Power.....Set for climb

Spin Recovery

Ailerons.....NEUTRAL
Throttle.....IDLE
Confirm direction
RUDDER.....FULL OPPOSITE
Elevator.....Forward to break stall
Rudder….Neutralise when spinning stops
Pitch.....Ease out of dive

Plan to land at the nearest Airfield

EMERGENCY PROCEDURES

Right wing

Aileron.....Free movement, Secure
Balance weights.....Secure
Lock wires.....Check, Secure
Nav Light .....Check, Secure
Flaps.....Check, Secure
Flap runners.....Greased, correct play
Main wheel tire.....Proper Inflation
Brakes.....Secure, condition
Fuel tank sump.....Sample
NOTE: IF after repeated sampling contamination remains report to maintenance, DO NOT Fly
Fuel Quantity.....Check Visually
Fuel Filler cap.....Secure

Nose

Engine oil level.....Check
Fuel strainer.....Sample
Propeller and spinner.....Check
Alternator belt.....Check
Air intake .....Check
Carburetor air filter.....Check
Landing lights.....Check
Nose wheel strut & tire.....Check
Nose-Tie down.....Disconnect
Static source opening.....Check

Left Wing

Aileron.....Free movement, secure
Balance weights.....Secure
Lock wires.....Check, Secure
Nav Light .....Check, Secure
Flaps.....Check, Secure
Flap runners.....Greased, correct play
Main wheel tire.....Proper Inflation
Brakes.....Secure, condition
Fuel tank sump.....Sample
Fuel Quantity.....Check Visually
Fuel Filler cap.....Secure
Pitot Tube.....Check
Stall Warning .....Check
Fuel Tank Vent Opening.....Check

After Start

Throttle.....1000 rpm
Mixture.....Set for Taxi
Engine Instruments.....Check
Taxi, Nav. Lights.....As Required
Flaps.....Retract
Avionics Master.....On
Transponder.....Standby

Taxi

Brakes.....Release, Check
Avionics .....Check/Set
Flight Instruments.....Check/Set
Nav instruments .....Test
Fuel Tanks.....Check

Run-up

Parking Brake.....Set
Fuel Selector.....Both
Engine Instruments.....Green
Cowls.....Open
Prop area.....Clear
Power.....1700 rpm
Mixture.....Set
Carb Heat.....Check
Magnetos…Check Left, Both, Right, Both
(150rpm drop, 50rpm differential)
Propeller Governor .....Cycle
Engine Instruments.....Check
Vacuum.....Check
Ammeter.....Check with load
DI .....Set to Compass
Throttle.....Idle, Check minimum rpm
Throttle .....Reset 1000rpm

After Takeoff

Brakes .....Check
Undercarriage .....Up
Power/Pitch/Mixture.....Set
Fuel.....Correct tank, pump Off
Flaps .....Up
Temp/Pressures.....Checked
Landing Lights.....OFF

Normal Climb

Airspeed .....90-100 KIAS
Power .....23“ and 2450RPM
Mixture ..... Lean above 3000ft
Cowl Flaps ..... Open

Cruise

Power .....23", 2400RPM
Elevator and Rudder Trim .....Adjust
Mixture .....Lean for Cruise
Cowl Flaps .....As Required
Engine Temp/Pressures.....Check
Fuel.....Check/Change tanks
Traffic.....Check
Radio.....Transmit
Estimated Times .....Record

Enroute

'SAFIER'

Suction.....Checked
Amps.....Checked
Fuel.....Checked
Icing.....As Required
Engine Power/Pitch/Mixture.....Set
Engine Temp/Pressures.....Checked
Engine Cowl Flaps ..... As Required
Radios/Nav/DI.....Checked and Set

Descent/Approach

'FREDALS'

Fuel.....Correct Tank
Fuel Qty.....Check
Radios/Nav.....Set/Clearance Obtained
Engine Power/Pitch/Mixture.....Set
Engine Temp/Pressures.....Checked
Engine Cowl Flaps ..... As Required
DI.....Aligned with Compass
Altimeter.....Set
Landing Lights.....As Required
Seats/belts, Doors.....Adjusted&Locked

Approach Set Up

Flaps .....Below Vfe, first stage
Brakes .....Check
Undercarriage .....Down
Power/Pitch/Mixture.....Set
Fuel .....Correct Tank
Temp/Pressures.....Checked
Landing Lights.....OFF
Seats/Seatbelts.....Secure

Downwind Checks

Brakes .....Check
Undercarriage .....Down
Mixture.....Set
Fuel .....Correct Tank, Pumps As req'd
Temp/Pressures.....Checked
Landing Lights.....ON
Seats/Seatbelts.....Secure

Final Approach

'CUP'

Cowls.....Open
Carb Heat.....Cold
Undercarriage .....Down and Locked
Power/Pitch/Mixture.....Set

Normal Landing

Touchdown ..... Main Wheels First
Nose Wheel .....Lower Gently
Braking ..... Minimum Required

NORMAL PROCEDURES expanded checklist

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HAPPY FLYING!

RED SKY CHECKLISTS Cessna 182

CONTENTS:

After landing

(Once roll out complete)

Cowl Flaps ..... OPEN
Carb Heat.....COLD
Wing Flaps .....RETRACT
Transponder ..... Stby
Strobes/Lights.....OFF

Parking

Parking Brake ..... SET
Time.....Record
Avionics ..... OFF
Magnetos.....Dead Cut Checked
Mixture ..... Cut-Off
Ignition ..... OFF
Master Switch.....OFF
Control Lock ..... Installed
Paperwork.....Complete

Securing the aircraft

Control Lock ..... Installed
Paperwork.....Complete
Tie downs/covers.....Installed

Compilation notes

These pages are printed front and back side, then cut around the text the first few pages need to be trimmed and bound to create a flip style checklsist with tabs at the front, and the expanded procedures on the reverse side. It might take a bit of time to work it out, but the result is quite effective for use by students when they are learning.

If you like jigsaw puzzles have fun!