PREFLIGHT INSPECTION

CABIN
Certificates/Documents .................................. IN AIRCRAFT
Airworthiness Certificate ................................
Registration .............................................
Radio Operators/Station License (International Flights Only)
Operating Limitations / Airplane Flight Manual
Weight & Balance (current) ................................
Parking Brake ........................................... SET
Control Wheel Lock ..................................... REMOVED
Ignition Switch .......................................... OFF
Master Switch .......................................... ON
Fuel Quantity Indicators ................................ CHECK QUANTITY
Anti-collision / Strobe Lights......................... CHECK OPERATING
Flaps ................................................................ DOWN FOR INSPECTION
**For Night Operation: Lights........................ CHECK
Master Switch .......................................... OFF
Engine Fuel Strainer ..................................... DRAIN 4 SECONDS
Fuel Selector ............................................. BOTH
Baggage Door ........................................... CHECK SECURE

TAIL SECTION
Tail Tie-Down / Rudder Gust Lock ................. REMOVE
Elevator & Rudder ..................................... CHECK FREEDOM & SECURE
Nav. Lights .................................................. UNBROKEN (WHITE)

RIGHT WING
Flap Tracks & Actuator Rod......................... CHECK
Aileron .................................................... CHECK FREEDOM & SECURE
Nav Light ................................................... UNBROKEN (GREEN)
Fuel Quantity .......................................... CHECK VISUALLY
Fuel Filler Cap ......................................... SECURE
Wing Tie-down ........................................ REMOVED
Fuel Tank Sump Quick-Drain Valve ................ DRAIN
Main Wheel Tire ....................................... CHECK WEAR & INFLATION (32 psi)

NOSE
Windshield ............................................... CHECK CLEAN
Wheel Chocks .......................................... REMOVE
Engine Oil Dipstick .................................. CHECK (9-12 qt.)
Nose Wheel ............................................. CHECK WEAR & INFLATION (32 psi)
Shock Strut ............................................ CHECK PROPER INFLATION (45 psi)
Approx. 3.25 inches showing
Air Inlets .................................................... CHECK FREE OF FOREIGN MATTER
Landing Light .......................................... CHECK
Air Filter ................................................. CHECK
Propeller & Spinner .................................. CHECK
Tow Bar .................................................... REMOVE
Static Port .............................................. CHECK

LEFT WING
Main Wheel Tire .................................. CHECK WEAR & INFLATION (32 psi)
Fuel Tank Sump Quick-Drain Valve ................ DRAIN
Wing Tie-down ........................................ REMOVED
Fuel Quantity .......................................... CHECK VISUALLY
Fuel Filler Cap ......................................... SECURE
Pitot Tube / Cover ..................................... CHECK / REMOVE
Fuel Tank Vent Opening ................................ CHECK
Stall Warning Vent .................................... CHECK
Nav. Light .............................................. UNBROKEN (RED)
Aileron .................................................... CHECK FREEDOM & SECURE
Flap Tracks & Actuator Rod ......................... CHECK

BEFORE STARTING ENGINE
Chocks ..................................................... REMOVE
Preflight Inspection ................................. COMPLETE
Circuit Breakers ..................................... CHECK IN
Passenger Briefing .................................. COMPLETE
Flight Controls ...................................... FREE & CORRECT
Seats, Seat Belts, Harness ......................... ADJUST & LOCK
Brakes .................................................... TEST & SET
Master Switch .......................................... ON
Cowl Flaps ................................................ OPEN
Elevator Trim ......................................... SET for takeoff

STARTING ENGINE
Carburetor Heat ...................................... COLD
Mixture ................................................. RICH
Propeller ............................................... HIGH RPM
Throttle ............................................... OPEN (2-6 strokes) AS REQUIRED
Prime .................................................... IN & LOCKED
Anti-collision / Strobe Lights ..................... CHECK REQUIRED
Propeller Area ....................................... CLEAR
Ignition Switch .......................... START (hold no longer than 30 sec.)
Oil Pressure ........................................... CHECK*
Engine Warm-up ....................... THROTTLE 800-1200 RPM
Mixture ................................................. LEAN FOR TAXI

BEFORE TAXI
Lights & Strobes ..................................... AS REQUIRED
Radios .................................................... BOTH
Transponder ......................................... STANDBY
Flaps ..................................................... UP
Seats, Belts, Harnesses ......................... CHECK SECURE
Brakes .................................................... TEST

BEFORE TAKEOFF
Parking Brake ........................................ SET
Seats, Belts, Harnesses ........................... CHECK SECURE
Fuel Selector ........................................ BOTH
Fuel Quantity ......................................... CHECK
Mixture .................................................. RICH
Throttle ................................................ 1700 RPM
Magnets ................................................. CHECK
(125 max drop / 50 max diff.)
Carburetor Heat .................................... CHECK
Suction Gage ......................................... CHECK (3.75 to 5.0)
Propeller ................................................. CYCLE
(3 high to low RPM; return to HIGH)
Engine Instruments & Ammeter ............... CHECK
Throttle ................................................. CHECK IDLE LIMITS (650 RPM)
If holding for Takeoff IDLE at 1200 RPM
Throttle Friction Lock ....................... ADJUST
Flight Controls ................................ FREE & CORRECT
Transponder .......................................... STANDBY
Altitude .................................................. 0 foot
Cowl Flaps ........................................... SET for takeoff (0° to 20° Only)
Cowl Flaps ........................................... FULL OPEN
Flight Instruments & Radios .................... CHECK & SET
Elevator & Rudder Trim ....................... SET for takeoff
Cabin Doors & Windows ....................... CLOSED & LOCKED
Lights ................................................... AS DESIRED
Brakes .................................................... RELEASE

TAKE OFF
NORMAL TAKEOFF
Wing Flaps ........................................... 0 Degrees
Carburetor Heat ................................... COLD
Throttle ................................................. FULL "OPEN" & 2600 RPM
Elevator Control ................................. LIFT NOSE WHEEL (60 MPH)
Climb Speed ......................................... 90 MPH

ENROUTE CLimb
Airspeed ........................................... 100-120 MPH
Power ................................................. 23° and 2450 RPM
Mixture ................................................ RICH (until 3000 feet)
Cowl Flaps ........................................... OPEN as required

CRUISE
Power ................................................. 15° to 23° MP and 2200 to 2450 RPM
Cowl Flaps ........................................... OPEN as required
Elevator & Rudder Trim ....................... ADJUST
Mixture ................................................ LEAN
### USEFUL INFORMATION

**Cessna 182 Skylane**

<table>
<thead>
<tr>
<th>Aircraft V-Speeds:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vr: Rotation Speed</td>
<td>60 MPH</td>
</tr>
<tr>
<td>Vx: Best angle of climb</td>
<td>70 MPH</td>
</tr>
<tr>
<td>Vv: Best rate of climb</td>
<td>88 MPH</td>
</tr>
<tr>
<td>Va: Maneuvering Speed</td>
<td>128 MPH</td>
</tr>
<tr>
<td>Vle: Max flapped extended speed</td>
<td>110 MPH</td>
</tr>
<tr>
<td>Vno: Max structural cruising speed</td>
<td>160 MPH</td>
</tr>
<tr>
<td>Vnc: (Never exceed speed)</td>
<td>193 MPH</td>
</tr>
<tr>
<td>Vs1: Stall Speed (clean)</td>
<td>67 MPH</td>
</tr>
<tr>
<td>Vso: Stall Speed (dirty)</td>
<td>60 MPH</td>
</tr>
<tr>
<td>Glide: (clean)</td>
<td>80 MPH</td>
</tr>
</tbody>
</table>

**Weight & Balance:**

| Max Gross Weight | 2800.00 lbs |
| Basic Empty Weight | lbs |
| Useful Load | lbs |
| Payload | lbs |
| Moment | lbs |

| Center of Gravity | in |

**Standard Fuel Loading:**

| 84 Gallon Capacity | 504 lbs |
| 79 Gallons Usable | 474 lbs |
| 5 Gallons Unusable Fuel | 30 lbs |

### DESCENT

- Fuel Selector: BOTH
- Mixture: RICH
- Power: AS DESIRED
- Carburetor Heat: AS REQUIRED

### BEFORE LANDING

- Seats, Belts, Harnesses: SECURE
- Fuel Selector: BOTH
- Mixture: RICH
- Propeller: HIGH RPM
- Cowl Flaps: CLOSED
- Carburetor Heat: APPLY FULL HEAT
- Elevator and Rudder Trim: ADJUST

### BALKED LANDING (Go-Around)

- Power: FULL THROTTLE
- Carburetor Heat: COLD
- Wing Flaps: RETRACT to 20°

Upon reaching an airspeed of approximately 60 MPH, retract flaps slowly.

### LANDING

#### NORMAL LANDING

- Airspeed: 80-90 MPH (flaps up)
- Wing Flaps: 0° to 40° (below 110 MPH)
- Airspeed: 70-80 MPH (flaps down)
- Touchdown: MAINS FIRST
- Landing Roll: LOWER NOSE WHEEL GENTLY
- Braking: MINIMUM REQUIRED

### AFTER LANDING

- Cowl Flaps: OPEN
- Wing Flaps: UP
- Carburetor Heat: COLD
- Transponder: STANDBY
- Lights: AS REQUIRED

**Note:** (Time of landing to compare against the Hobbs.)

### SHUTDOWN

- Parking Brake: SET
- Radios & Electrical Equipment & Lights: OFF
- Throttle: 1000 RPM
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master: OFF
- Control Lock: INSTALL
- Hobbs & Tach: RECORD
- Aircraft: SECURE

### EMERGENCY PROCEDURES

#### ENGINE FIRE DURING START

- (Technique)
- Airspeed: 80 MPH
- Carburetor Heat: ON
- Fuel Selector: SWITCH TANKS
- Mixture: RICH
- Engine Gauges: CHECK FOR CAUSE
- Ignition Switch: "L" then "R" back to BOTH
- Primer: IN & LOCKED
- Transponder: 7700
- Radio: 121.5 MAYDAY

*If engine failure was caused by fuel exhaustion, power will not be regained after tanks are switched until empty fuel lines are filled, which may require up to ten seconds.

**When calling on 121.5 say your last known position number of people on board, how much fuel, and what kind of emergency. It is recorded and they will be able to find you and take care of you faster.*

#### ENGINE POWER LOSS DURING TAKE-OFF

- (Instructor Technique)
- Airspeed: 80 MPH
- Fuel Selector: CUT-OFF
- Ignition Switch: OFF
- Fuel Selector: SWITCH TANKS
- Mixture: COLD
- Engine Gauges: CHECK FOR CAUSE
- Ignition Switch: "L" then "R" back to BOTH
- Primer: IN & LOCKED
- Transponder: 7700
- Radio: 121.5 MAYDAY

*If insufficient runway remains, maintain a safe airspeed and make only shallow turns to avoid obstructions.

**If you have gained sufficient altitude to attempt a restart, proceed with next checklist.*

#### ENGINE FAILURE DURING FLIGHT

- (Instructor Technique)
- Airspeed: 80 MPH
- Fuel Selector: CUT-OFF
- Ignition Switch: OFF
- Seal belt and harness: TIGHT
- Flaps: AS REQUIRED WITHIN GLIDING DIST OF FIELD
- Master Switch: OFF
- Cabin Doors: UNLATCH PRIOR TO FINAL APPROACH
- Touchdown: SLIGHTLY TAIL LOW (min. speed)
- Apply heavy braking while holding full up elevator.

#### EMERGENCY LANDING WITHOUT ENGINE POWER

- (Technique)
- Airspeed: 80 MPH
- Fuel Selector: CUT-OFF
- Ignition Switch: OFF
- Seat belt and harness: TIGHT
- Flaps: AS REQUIRED WITHIN GLIDING DIST OF FIELD
- Master Switch: OFF
- Cabin Doors: UNLATCH PRIOR TO FINAL APPROACH
- Touchdown: SLIGHTLY TAIL LOW (min. speed)
- Apply heavy braking while holding full up elevator.

#### ELECTRICAL FIRE

- (Smoke in cabin)
- (Instructor Technique)
- Master Switch: OFF
- All Electrical Switches (except ignition): OFF
- Vents / Windows: OPEN TO VENT SMOKE
- Cabin Heat: OFF
- Land as soon as Practical

#### ENGINE FIRE IN FLIGHT

- (Instructor Technique)
- Mixture: COLD
- Fuel Selector: OFF
- Master Switch: OFF
- Glide Establish: 120 MPH
- Cabin Heat: OFF / CLOSED

If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide incombustible mixture.

**Magneto Switch:**

Proceed with **EMERGENCY LANDING w/o POWER** procedure.