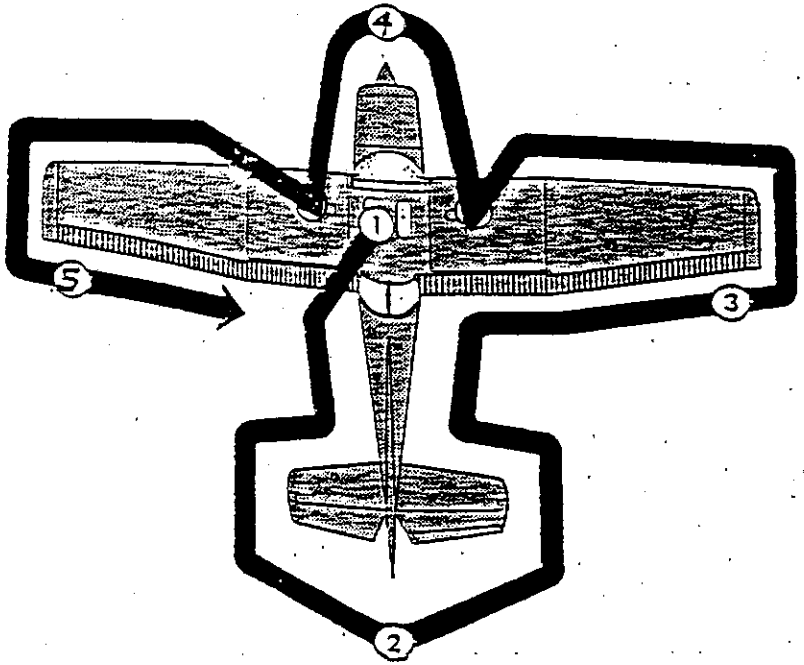
## PREFLIGHT INSPECTION




### ① CABIN

1. Pilot's Operating Handbook — AVAILABLE IN COCKPIT
2. Landing Gear Lever — GEAR DOWN
3. Parking Brake — SET
4. Control Wheel Lock — REMOVE
5. Ignition Switch — OFF
6. Avionics Power Switch — OFF
7. Master Switch — ON
8. Landing Gear Position Light (Green) — ILLUMINATED
9. Flaps — DOWN

[ WARNING ]

**When turning MASTER SWITCH "ON", while using an EXTERNAL POWER SOURCE,** or PULLING the PROPELLER BY HAND, **treat propeller as if ignition is "ON".** Do not stand, nor allow anyone else to stand, within the propeller blade arc, because a loose or broken wire or a component malfunction could cause the propeller to turn.





## PREFLIGHT CHECKLIST

10. Avionics Power Switch — ON
11. Avionics Cooling Fan — CHECK Audibly
12. Avionics Power Switch — OFF
13. Vacuum-Low Warning Light — CHECK "ON"
14. Fuel Gauges — CHECK QUANTITY
15. Master Switch — OFF
16. Static Pressure Alternate Source Valve — OFF
17. Fuel Selector Valve — BOTH

### ② FUSELAGE EXTERIOR & EMPENNAGE

1. Baggage Door — CHECK [LOCK, if child seat to be occupied]
2. Left Main Wheel Well — CHECK for cleanliness & condition.
3. Fuselage Exterior & Windows — CHECK for damage.
4. Left Stabilizer — CHECK for damage.
5. Left Elevator — CHECK for Damage, Freedom of Movement & Security.
6. Rudder Gust Lock — REMOVE
7. Rudder — CHECK for Damage, Freedom of Movement & Security.
8. Flashing Beacon & Tail Nav Light — CHECK
9. Tail Tie-Down — REMOVE
10. Right Elevator — CHECK for Damage, Freedom of Movement & Security
11. Right Stabilizer — CHECK for damage.
12. Fuselage Exterior, Antennas & Windows — CHECK for damage.
13. Right Main Wheel — CHECK for Cleanliness & Condition.

### ③ RIGHT WING

1. Flap — CHECK for Damage & Security
2. Aileron — CHECK Freedom of Movement & Security.
3. Wing Tip & Strobe Lights — CHECK for Damage.
4. Wing Skins (Top, Bottom & Leading Edge) — CHECK
5. Wing Lift Strut — CHECK for Damage.
6. Wing Tie-Down — REMOVE
7. Flap Hinge Tracks & Rollers — CHECK
8. Main Wheel Tire & Brake Unit — CHECK
9. Main Fuel Tank Sump Drain — DRAIN & CHECK fuel sample.
10. Fuel Quantity — CHECK visually, MEASURE & SECURE Cap.
11. Fuel Selector Valve Drain (On Fuselage Bottom) — DRAIN & CHECK

## PREFLIGHT INSPECTION

### ④ NOSE

1. Static Pressure Port — CHECK for stoppage.
2. Engine Oil Supply — CHECK QUANTITY (Min. 5 Qts)
3. Fuel Strainer Drain Knob — PULL to DRAIN fuel sample.
4. Cowling — CHECK security & signs of OIL LEAKS.
5. Front Cowl Openings — CHECK for articles that may obstruct cooling air flow or create a FIRE.
6. Propeller & Spinner — CHECK for Nicks & Security.
7. Nose Gear Doors — CHECK for security.
8. Nose Gear Strut & Tire — CHECK for PROPER INFLATION.
9. Landing & Taxi Lights — CHECK
10. Static Pressure Port — CHECK for stoppage.

### ⑤ LEFT WING

1. Fuel Quantity — CHECK visually, MEASURE & SECURE CAP.
2. Pitot Tube — REMOVE & CHECK for stoppage.
3. Stall Warning — CHECK for stoppage.
4. Wing Tie-Down — REMOVE
5. Wing Lift Strut — CHECK for damage.
6. Fuel Over-Flow & Vent Tube — CHECK for stoppage.
7. Wing Skins (Top, Bottom & Leading Edge) — CHECK
8. Wing Tip, Nav & Stobe Lights — CHECK
9. Aileron — CHECK Freedom of Movement & Security.
10. Flap — CHECK for damage & security.
11. Flap Hinge Tracks & Rollers — CHECK
12. Main Wheel Tire & Brake Unit — CHECK
13. Fuel Tank Sump Drain — DRAIN & CHECK fuel sample.

**If making a Night Flight:**

14. All Exterior Lights — CHECK function.
15. Instrument & Map Lights — CHECK function.

**If making an Instrument Flight:**

16. Pitot Heat — CHECK function.
17. All External Mounted Avionics Antennas — CHECK for damage.





## PILOT'S OPERATING CHECKLISTS

### BEFORE STARTING ENGINE

1. Preflight Inspection — COMPLETE
2. Passenger Briefing — COMPLETE
3. **Seats,** Belts & Shoulder Harness — ADJUST & LOCK
4. Brakes — TEST & SET Parking Brake.
5. [redacted]
6. Avionics Power Switch — OFF

**[ CAUTION ]**

The **AVIONICS POWER SWITCH must** be **"OFF"** during Engine Start to prevent damage to Avionics.

7. Circuit Breakers — CHECK "IN" (Engaged)
8. Electrical Equipment — OFF
9. Landing Gear Lever — DOWN
10. Cowl Flaps — OPEN
11. Fuel Selector Valve — BOTH

### STARTING ENGINE

1. Carburetor Heat — COLD (Off)
2. Throttle — 1/4" to 1/2"
3. Propeller — HIGH RPM
4. Mixture — RICH
5. Prime — AS REQUIRED
6. Propeller & Blast Areas — CLEAR Visually & by **Verbal Warning.**
7. Master Switch — ON
8. Electric Fuel Pump — ON (Check for rise in fuel pressure); Then, "OFF".
9. Ignition/Start Switch — START (Release, when engine starts)
10. Oil Pressure — CHECK **(Must show rise within 30 seconds)**
11. Start — CHECK Starter Disengaged (If Starter remains engaged, the ammeter will indicate "full-scale" charge with engine at 1,000 RPM.) **If Starter remains engaged, KILL ENGINE IMMEDIATELY.**
12. Throttle — 1200 RPM until ready to taxi.
13. Avionics Power Switch — ON
14. Navigation Lights — ON **(If dark or near sunset)**
15. Flashing Beacon — ON
16. Radios — ON **(Set Frequencies, Switches & Adjust Volume.)**
17. Transponder — STANDBY
18. Flaps — UP
19. Parking Brake — RELEASE

## TAXIING

1. Brakes — TEST before taxiing more than the length of fuselage.
2. Throttle — ADJUST as NEEDED (Use brakes to **supplement** Throttle adjustments when **required.**)

## BEFORE TAKEOFF

1. Parking Brake — SET
2. **Seats,** Belts & Shoulder Harness — CHECK SECURE
3. Cabin Doors — CLOSED & LOCKED
4. Flight Controls — MOVE FREE in CORRECT DIRECTIONS.
5. Flight Instruments — CHECK & SET
6. Fuel Quantity — CHECK
7. Primer — IN & LOCKED
8. Fuel Selector Valve — BOTH
9. Elevator & Rudder Trim Tabs — SET for "TAKEOFF"
10. Mixture — RICH (Below 3,000' MSL)
11. Electric Fuel Pump — ON (Check for rise in fuel pressure); Then, "OFF".
12. Throttle — 1700 RPM
    a. Magnetos — CHECK (RPM Drop should not exceed 125 RPM on either magneto, or 50 RPM difference between magnetos.)
    b. Propeller — CYCLE from HIGH to LOW RPM (Obtain 300 to 400 RPM Drop); **RETURN** to **HIGH RPM**
    c. Carburetor Heat — CHECK for RPM Drop.
    d. Suction Gauge — CHECK
    e. Engine Instruments & Ammeter — CHECK
13. Throttle — 1,000 to 1.200 RPM
14. Throttle Friction Lock — ADJUST
15. Strobe Lights — ON
16. Radios — SET FREQUENCIES, AUDIO SWITCHES & VOLUME CONTROLS
17. Pitot Heat — ON **(If making an Instrument Flight).**
18. Transponder — SET CODE; on ALTITUDE
19. Autopilot (If installed) — OFF
20. Cowl Flaps — OPEN
21. Wing Flaps — SET for TAKEOFF (See "Takeoff" Checklists)
22. Windows — CLOSED & LATCHED
23. Parking Brake — RELEASE

The School **recommends using A TAXI or LANDING LIGHT** while **in** or **within one mile of the Traffic Pattern** to aid others in seeing you.





## NORMAL TAKEOFF

1. Flaps — 0°
2. Carburetor Heat — COLD (Off)
3. Mixture — FULL RICH (May be leaned when above 3,000' MSL)
4. Power — FULL THROTTLE & 2400 RPM
5. Elevator Control — LIFT NOSE WHEEL (Rotate) at 50 KIAS

[ **NOTE** ]

After Rotation, the Landing Gear Motor may run 1 to 2 Seconds to restore hydraulic pressure.

6. Brakes — APPLY momentarily when airborne.
7. Landing Gear — RETRACT when no usable runway remains ahead.
8. Climb Speed — 70 KIAS (Flaps 20°)
   80 KIAS (Flaps 0°)
9. Flaps — RETRACT
10. Power — RECOMMEND 25" Hg Manifold Pressure & 2400 RPM

## SHORT FIELD TAKEOFF

1. Flaps — 20°
2. Carburetor Heat — COLD (OFF)
3. Cowl Flaps — OPEN
4. Brakes — APPLY
5. Mixture — FULL RICH below 3,000' MSL
   LEANED above 3,000' MSL
6. Power — FULL THROTTLE & 2400 RPM
7. Brakes — RELEASE
8. Elevator Control — SLIGHTLY NOSE HIGH
9. Climb Airspeed — 59 KIAS until all obstacles are cleared.
10. Landing Gear — RETRACT **after all obstacles are cleared.**
11. Flaps — RETRACT **after 70 KIAS**

## ENROUTE CLIMB (Maximum Performance Climb)

1. Airspeed — 88 KIAS (Vx at Sea Level) to (75 KIAS at 10,000'MSL)
2. Power — FULL THROTTLE & 2400 RPM
3. Fuel Selector Valve — BOTH
4. Mixture — FULL RICH **(Must be above 3,000' MSL before leaning)**
5. Cowl Flaps — FULL OPEN

## PILOT'S OPERATING CHECKLIST

### NORMAL CLIMB

1. Airspeed -- 88 KIAS (Cruise Climb -- 90 to 100 KIAS)
2. Power -- 23" Hg MANIFOLD PRESSURE & 2400 RPM
3. Fuel Selector Valve -- BOTH
4. Mixture -- FULL RICH until above 3,000' MSL
5. Cowl Flaps -- OPEN

### CRUISE

1. Power -- 65% (Usually obtained by 21" Hg & 2300 RPM)
2. Elevator & Rudder Trim -- ADJUST
3. Cowl Flaps -- CLOSED
4. Mixture -- LEAN to Best Power Setting **[Excessive Leaning may severely damage the engine].**

### DESCENT

1. Fuel Selector Valve -- BOTH
2. Carburetor Heat -- FULL HOT ("ON") or as needed to maintain carburetor temperature above Yellow Zone.
3. Mixture -- ENRICHEN as required.
4. Power -- 15" to 23" Hg MANIFOLD PRESSURE, as desired.
5. Cowl Flaps -- CLOSED
6. Wing Flaps -- AS DESIRED ( $0^{\circ}$ to $10^{\circ}$ Below 140 KIAS )
   ($10^{\circ}$ to $20^{\circ}$ Below 120 KIAS )
   ($20^{\circ}$ to $30^{\circ}$ Below 95 KIAS )

[NOTE]

The **Landing Gear** may be extended **below 140 KIAS** to increase descent rate.

### BEFORE LANDING

1. **Seats,** Belts & Shoulder Harness -- SECURE
2. Fuel Selector Valve -- BOTH
3. Radios -- SELECT FREQUENCY, SET SPEAKER/PHONE SWITCHES, ADJUST VOLUME as needed.
4. Power -- ADJUST as required to maintain Airspeed below 140 KIAS while in Traffic Pattern.
5. Landing Gear -- DOWN below 140 KIAS
6. Landing Gear -- **CHECK**
7. Mixture -- RICH
8. Carburetor Heat -- ON **before** closing throttle.
9. Autopilot -- OFF
10. Landing or Taxi Light -- ON (To aid others in seeing you).





PILOT'S OPERATING CHECKLIST

### NORMAL LANDING

1. Fuel Selector Valve -- BOTH
2. Carburetor Heat -- FULL HOT (ON) or as required to maintain Carburetor Temperature above Yellow Zone.
3. Power -- ADJUST as required to maintain Airspeed below 140 KIAS while in traffic pattern.
4. Landing Gear -- CHECK "DOWN" & LOCKED [Observe Main Gear & Green Indicator Light -- ILLUMINATED]
5. Flaps -- AS NEEDED [ $0^{\circ}$ - $10^{\circ}$ below 140 KIAS]
   [$10^{\circ}$ - $20^{\circ}$ below 120 KIAS]
   [$20^{\circ}$ - $30^{\circ}$ below 95 KIAS]
6. Mixture -- RICH
7. Airspeed -- MINIMUM 65 KIAS with Flaps $30^{\circ}$
8. Trim -- ADJUST
9. Propeller -- HIGH RPM
10. Touchdown -- MAIN WHEELS FIRST
11. Landing Roll -- ALLOW NOSE WHEEL to LOWER GENTLY.
12. Braking -- MINIMUM REQUIRED [Aerodynamic Braking **recommended** to supplement Wheel Brakes.

### SHORT FIELD LANDING

1. Fuel Selector Valve -- BOTH
2. Carburetor Heat -- FULL HOT (ON) or as required to maintain carburetor temperature above Yellow Zone.
3. Landing Gear -- CHECK "DOWN" & LOCKED [Observe Main Gear & Green Indicator Light -- ILLUMINATED]
4. Mixture -- RICH
5. Propeller -- HIGH RPM
6. Flaps - DOWN [ $0^{\circ}$ to $10^{\circ}$ below 130 KIAS]
   [$10^{\circ}$ to $20^{\circ}$ below 120 KIAS]
   [$20^{\circ}$ to $30^{\circ}$ below 95 KIAS]
7. Airspeed (On Final Approach0 -- 64 KIAS
8. Trim -- ADJUST
9. Power -- REDUCE to "IDLE" as obstacle is cleared.
10. Touchdown -- MAIN WHEELS FIRST
11. Brakes -- APPLY HEAVILY
12. Flaps -- RETRACT, if having difficulty with traction.

## PILOT'S OPERATING CHECKLIST

### BALKED LANDING & GO-AROUND CLIMB

1. Power — FULL THROTTLE & 2400 RPM
2. Carburetor Heat — COLD (OFF)
3. Flaps — RETRACT to 20°
4. Airspeed — 59 KIAS until obstacles are cleared.
5. Flaps — 0° after 70 KIAS
6. Airspeed — 88 KIAS (Vy)
7. Cowl Flaps — OPEN

### AFTER LANDING

1. Strobe Lights — OFF
2. Landing or Taxi Lights — OFF
3. Carburetor Heat — COLD (OFF)
4. Trims — RE-SET to TAKEOFF POSITIONS
5. Cowl Flaps — OPEN
6. Wing Flaps — RETRACT to 0°
7. Transponder — STANDBY

### SECURING AIRPLANE

1. Parking Brake — SET
2. Power — 1200 RPM
3. Radios & Avionics — OFF
4. Autopilot — OFF
5. Avionics Master Switch — OFF
6. Lights & Electrical Equipment — OFF
7. Mixture — IDle cut-OFF [Pulled Full-Out]
8. Ignition Switch — OFF
9. Master Switch — OFF
10. Control Lock — INSTALL
11. Fuel Selector Valve — RIGHT or LEFT to prevent fuel draining from one tank to the other tank.
12. Parking Brake — RELEASE
13. External Security — PROPERLY TIE-DOWN Airplane or CHOCK WHEELS

**This CHECKLIST is NOT a substitute for a thorough knowledge of the PILOT'S OPERATING HANDBOOK.**

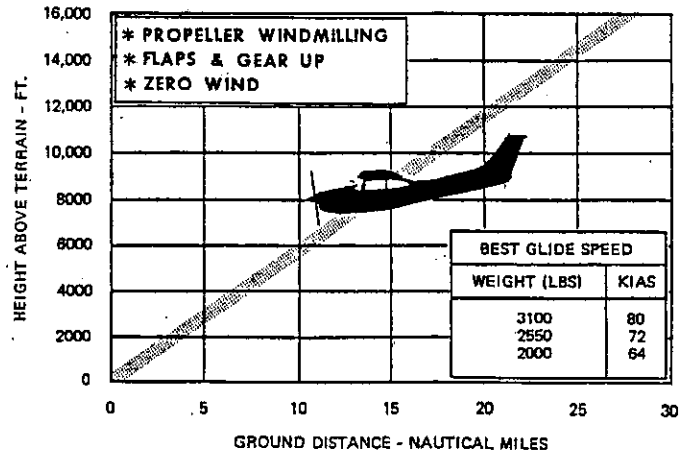




## AIRSPEED REFERENCES

| | |
|---|---|
| **Takeoff:** | |
| Rotate | 55 KIAS |
| Short Field Takeoff, Flaps 20°, Speed at 50 ft. | 59 KIAS |
| **Climbs:** | |
| Best Rate of Climb Vy, Sea Level | 88 KIAS |
| Best Rate of Climb. 10,000 Ft | 75 KIAS |
| Best Angle of Climb Vx, Sea Level | 65 KIAS |
| Best Angle of Climb, 10,000 ft | 67 KIAS |
| **Landing Approach:** | |
| Flaps "UP" (0°) | 70 - 80 KIAS |
| Flaps "DOWN" (30°) | 65 - 75 KIAS |
| Short Field Approach, Flaps 30° | 64 KIAS |
| **Balked Landing Go-Around:** | |
| Power Maximum, Flaps 20° | 75 KIAS |
| **Maximum Turbulent Air Penetration:** | |
| 3100 Lbs | 112 KIAS |
| 2550 lbs | 101 KIAS |
| **Maneuvering Speed:** | 112 KIAS |
| **Maximum Demonstrated Crosswind Velocity:** | 18 Kts |

## MAXIMUM GLIDE DISTANCE



## PILOT'S EMERGENCY CHECKLIST

**EMERGENCY ITEMS requiring IMMEDIATE ACTION are shown in boxes and should be memorized.**

### ENGINE FAILURE DURING TAKEOFF ROLL

1. Throttle — IDLE
2. Brakes — APPLY
3. Flaps — RETRACT
4. Mixture — IDLE CUT-OFF
5. Ignition Switch — OFF
6. Master Switch — OFF

### ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed — 70 KIAS (Flaps 0°)
   65 KIAS (Flaps Down)
2. Mixture — IDLE CUT-OFF
3. Fuel Selector Valve — OFF
4. Ignition Switch — OFF
5. Flaps — AS REQUIRED (Full-Flaps before touchdown, if possible, without causing you to land short of a safe point.)
6. Master Switch — OFF

### ENGINE FAILURE DURING FLIGHT — (Restart)

1. Carburetor Heat — ON
2. Airspeed — 80 KIAS **before** losing any altitude.
3. Mixture — RICH
4. Propeller — HIGH RPM
5. Throttle — SET to "START" POSITION.
6. Ignition Switch — BOTH
7. Primer — IN & LOCKED
8. Fuel Selector — BOTH

| Best Glide |
|---|
| 3100 lbs. — 80 KIAS |
| 2550 Lbs. — 72 KIAS |





## EMERGENCY LANDING WITHOUT ENGINE POWER

### AFTER RESTART UNSUCCESSFUL

1. Airspeed — 70 KIAS (Flaps UP)
   65 KIAS (Flaps DOWN)
2. Landing Area — SELECT
3. Mixture — IDLE CUT-OFF
4. Ignition Switch — OFF
5. Fuel Selector Valve — OFF
6. Transponder — CODE 7700
7. Radio — MAKE **"MAYDAY"** CALL 121.5 MHz or local active frequency.
8. Landing Gear — DOWN [KEEP "UP" unless **terrain if firm enough for small diameter wheels**]
9. Flaps — AS REQUIRED [Full Flaps before touchdown, if possible without causing you to land short of a safe point.]
10. Master Switch — OFF
11. Cabin Doors — UNLATCH prior to touchdown.
12. Touchdown — SLIGHTLY NOSE HIGH
13. Brakes — APPLY HEAVILY if landing gear is down.

### PRECAUTIONARY LANDING WITH ENGINE POWER

1. Flaps — 20°
2. Airspeed — 65 KIAS
3. Selected Field — FLY OVER (Drag Field) Note terrain & obstructions, Climb to safe altitude and airspeed. RETRACT FLAPS.
4. Landing Pattern — ESTABLISH an APPROACH PATTERN.
5. Landing Gear — DOWN [Leave "UP" if terrain is soft or rough]
6. Flaps — 30° on FINAL APPROACH
7. Airspeed — 65 KIAS
8. Cabin Doors — UNLATCH prior to touchdown.
9. Avionics Power Switch — OFF
10. Lights & Electrical Equipment — OFF
11. Master Switch — OFF
12. Touchdown — SLIGHTLY NOSE HIGH
13. Mixture — IDLE CUT-OFF
14. Ignition Switch — OFF
15. Brakes — APPLY HEAVILY

## DITCHING

1. Radio — SET 121.5 MHz, TRANSMIT **"MAY DAY"**, GIVE LOCATION and INTENTIONS.
2. Transponder — SET CODE 7700
3. Heavy Objects (In Babbage Area) — SECURE or JETTISON
4. Landing Gear — UP
5. Landing Approach — INTO WIND (In High Wind, Heavy Seas); PARALLEL to SWELLS (In Light Wind & Heavy Swells).
6. Flaps — 20° to 30°
7. Power — ADJUST to ESTABLISH 300 Ft./Minute Descent Rate at 65 KIAS.

[ NOTE ]

**If no power is available,** approach at 70 KIAS with Flaps 0° or at 65 KIAS with Flaps 10°.

8. Cabin Doors — UNLATCH (Jam OPEN with clothing or carpet)
9. Touchdown — LEVEL ATTITUDE at **STEADY RATE OF DESCENT.**
10. Evacuate — THROUGH CABIN DOORS. If necessary, open windows to flood cabin so ddors can be opened.
11. Life Vests & Raft — INFLATE **after you are outside the airplane.**

## LANDING GEAR FAILS to RETRACT

1. Master Switch — ON
2. Landing Gear Lever — CHECK (Lever Full-UP)
3. Landing Gear & Gear Pump Circuit Breakers — CHECK "IN"
4. Gear "UP" Light — CHECK
5. Airspeed — BELOW 100 KIAS
6. Landing Gear Lever — RECYCLE
7. Gear Pump Motor — CHECK OPERATION (Ammeter & Noise).





## LANDING GEAR FAILS TO EXTEND

1. Master Switch — ON
2. Landing Gear Lever — DOWN
3. Landing Gear & Gear Pump Circuit Breakers — CHECK "IN"
4. Emergency Hand Pump — EXTEND HANDLE & PUMP UNTIL resistance becomes heavy (About 20 strokes).
5. "Gear Down" Light — ON (Verify by looking at Main Wheels).
6. Pump Handle — STOW

## GEAR "UP" LANDING

1. Landing Gear Lever — UP
2. Landing Gear & Gear Pump Circuit Breakers — IN (Engaged)
3. Runway — SELECT longest hard surface or smooth sod runway available.
4. Flaps — 30° on Final Approach
5. Airspeed — 65 KIAS
6. Cabin Doors — UNLATCH prior to touchdown.
7. Avionics Power & Master Switches — OFF when landing assured.
8. Touchdown — SLIGHILY NOSE HIGH
9. Mixture — IDLE CUT-OFF
10. Ignition Switch — OFF
11. Fuel Selector Valve — OFF
12. Evacuate — THROUGH CABIN DOORS

## LANDING WITHOUT POSITIVE INDICATION OF GEAR LOCKED

1. Before Landing Checklist — COMPLETE
2. Final Approach — NORMAL (Flaps 30°)
3. Landing Gear & Gear Pump Circuit Breakers — IN (Engaged)
4. Landing — NOSE HIGH **as smooth as possible.**
5. Braking — MINIMUM NECESSARY
6. Taxi — SLOWLY
7. Engine — SHUT DOWN before Inspecting Gear.

## LANDING with DEFECTIVE NOSE GEAR (or FLAT NOSE TIRE)

1. Movable Load -- MOVE to BAGGAGE AREA
2. Passenger -- MOVE to REAR SEAT
3. "Before Landing Checklist" — COMPLETE
4. Runway — HARD SURFACE or SMOOTH SOD.
5. Flaps — 30°
6. Cabin Doors — UNLATCH prior to touchdown.
7. Avionics Power & Master Switches — OFF when landing assured.
8. Land — SLIGHTLY NOSE HIGH
9. Mixture — IDLE CUT-OFF
10. Ignition Switch — OFF
11. Fuel Selector Valve — OFF
12. Elevator Control — HOLD NOSE OFF of GROUND as long as possible.
13. Evacuate — AS SOON AS AIRPLANE STOPS.

## LANDING with FLAT MAIN TIRE

1. Final Approach — NORMAL (Flaps 30°)
2. Touchdown — GOOD TIRE FIRST. Hold Airplane **OFF** Flat Tire as long as possible with Aileron Control
3. Directional Control — MAINTAIN by using brake on good wheel.

## LANDING WITHOUT ELEVATOR CONTROL

1. Airspeed — BELOW 140 KIAS
2. Simultaneously: Landing Gear — DOWN
   Flaps — 10°
3. Elevator Trim — ADJUST PROMPTLY to maintain level flight
4. Throttle & Elevator Trim — ADJUST to LEVEL FLIGHT & approximately 80 KIAS.
5. Glide Angle & Altitude — CONTROL WITH POWER
6. Flare Out — ADJUST ELEVATOR TRIM toward "Nose Full Up"; ADJUST POWER enough for airplane to pitch "UP" for touchdown.
7. Throttle — CLOSE immediately after touchdown.





## FIRES

### DURING ENGINE START on GROUND

1. Cranking — CONTINUE to get a Start so flames & accumulated fuel will be drawn through the carburetor & into the engine.

**If Engine Starts:**

2. Power — 1700 RPM for a few minutes.
3. Engine — SHUTDOWN & INSPECT for damage.

**If Engine Fails to Start:**

4. Throttle — FULL OPEN
5. Mixture — IDLE CUT-OFF
6. Cranking — CONTINUE
7. Fire Extinguisher — OBTAIN (If not installed, have Ground Attendants obtain.)
8. Engine — SECURE
   a. Master Switch — OFF
   b. Ignition Switch — OFF
   c. Fuel Selector Valve — OFF
9. Fire — EXTINGUISH using Fire Extinguisher, Wool Blanket or dirt.
10. Fire Damage — INSPECT, REPAIR DAMAGE or REPLACE PARTS.

### ENGINE FIRE IN FLIGHT

1. Mixture — IDLE CUT-OFF
2. Ignition Switch — OFF
3. Master Switch — OFF
4. Fuel Selector Valve — OFF
5. Cabin Heat — OFF
6. Cabin Air — OFF, except overhead vents.
7. Airspeed — 100 KIAS [If fire is not extinguished, increase Glide Speed to find an airspeed that will cool the burning materials enough to stop the burning.

**If fire is extinguished, DO NOT attempt to restart the engine.**

8. Forced Landing — EXECUTE "Emergency Landing Without Engine Power" Checklist.

## CABIN FIRE

1. Master Switch — OFF
2. Vents, Cabin Air & Cabin Heat — CLOSED to avoid drafts.
3. Fire Exteinguisher — ACTIVATE (If available).

[ WARNING ]

**After discharging an extinguisher within a closed cabin, ventilate the cabin to remove toxic vapors.**

4. Flight — TERMINATE as soon as possible, inspect for damage

## WING FIRE

1. Navigation Light Switch — OFF
2. Strobe Light Switch — OFF
3. Pitot Heat Switch — OFF
4. Landing Light Switch — OFF

[ NOTE ]

**Execute side slip to keep flames away from the fuel tank and land as soon as possible, using flaps only as required for FINAL APPROACH and TOUCHDOWN.**

## ELECTRICAL MALFUNCTIONS

## AMMETER SHOWS EXCESSIVE CHARGE RATE [Full Scale Deflection]

1. Alternator — OFF
2. Alternator Circuit Breaker — PULL (Disengage).
3. Non-Essential Electrical Equipment — OFF
4. Flight — TERMINATE as soon as **Practical.**





## LOW VOLTAGE LIGHT "ON" DURING FLIGHT
## [ AMMETER SHOWS DISCHARGE ]

[ NOTE ]

Illumination of the low-voltage light may occur during low RPM operations with an electrical load on the system, such as during low RPM taxiing. Under these conditions, the light go out at higher RPM. The Master Switch need not be recycled since an over-voltage condition did not de-activate the Alternator.

1. Avionics Power Switch — OFF
2. Alternator Circuit Breaker — CHECK IN (Engaged)
3. Master Switch — OFF **(Both Sides)**
4. Master Switch — ON (This recycles the over-voltage relay)
5. Low-Voltage Light — CHECK "OFF"
6. Avionics Power Switch — ON

**If Low-Voltage Light Illuminates Again:**

7. Alternator — OFF
8. Non-Essential Radio & Electrical Equipment — OFF
9. Flight — TERMINATE as soon as **Practical.**