

## PREFLIGHT CHECK

1. Control Wheel ..... RELEASE BELTS
2. Parking Brake ..... SET
3. Ignition ..... OFF
4. Landing Gear Lever ..... DOWN
5. Master Switch ..... ON
6. Landing Gear ..... 3 GREEN LIGHTS
7. Fuel Quantity Gauges ..... CHECK
8. Navigation Lights ..... CHECK
9. Landing Lights ..... CHECK
10. Stall Warning ..... CHECK
11. Master Switch ..... OFF
12. Exterior ..... CHECK FOR DAMAGE
13. Control Surfaces ..... CHECK  
FOR INTERFERENCE  
FREE OF ICE SNOW, FROST
14. Hinges ..... CHECK FOR INTERFERENCE
15. Wings ..... FREE OFF ICE, SNOW, FROST
16. Fuel Tanks ..... CHECK SUPPLY  
VISUALLY - SECURE CAPS
17. Fuel Tank Sumps ..... DRAIN AND CHECK  
FOR WATER SEDIMENT  
AND PROPER FUEL
18. Fuel Vent ..... OPEN
19. Main Gear Struts ..... PROPER INFLATION  
(4,0 IN)
20. Tires ..... CHECK
21. Brake Blocks ..... CHECK
22. Pitot Heat ..... REMOVE COVER  
HOLES CLEAR
23. Windshield ..... CLEAN
24. Propeller and spinner ..... CHECK
25. Fuel and Oil ..... CHECK FOR LEAKS
26. Oil ..... CHECK LEVEL  
(3-12 QUARTS REC 9 QUARTS)
27. Dipstick ..... PROPERLY SEATED
28. Cowling ..... SECURE
29. Inspection Covers ..... SECURE
30. Nose Wheel Tire ..... CHECK
31. Nose Gear Strut ..... PROPER INFLATION  
(2,6 IN)
32. Air Inlets ..... CLEAR
33. Alternator Belt ..... CHECK TENSION
34. Tow Bar and Control Locks ..... STOW
35. Baggage ..... STOWED PROPERLY  
SECURE
36. Baggage Door ..... CLOSE AND SECURE
37. Fuel Strainer ..... DRAIN AND CHECK  
FOR WATER SEDIMENT  
AND PROPER FUEL
38. Primary Flight Controls ..... PROPER  
OPERATION
39. Cabin Door ..... CLOSE AND SECURE
40. Required Documents ..... ON BOARD
41. Seat Belts and Harness ..... FASTENED  
CHECK INERTIA REEL

### BEFORE STARTING ENGINE

1. Parking Brakes ..... SET
2. Alternate Static Air ..... CLOSED
3. Prop Control ..... FULL FORWARD
4. Fuel Selector ..... DESIRED TANK
5. Alternate Air ..... CLOSED
6. Radios ..... OFF
7. Landing Gear Lever ..... DOWN
8. Master Switch (Battery and alternator).... ON
9. Landing Gear ..... 3 GREEN LIGHTS
10. Circuit Breakers ..... CHECK IN
11. Anti Coll Light (Rotating Beacon) ..... ON

### STARTING ENGINE WHEN COLD

1. Throttle ..... OPEN 1/2 INCH
2. Electric Fuel Pump ..... ON
3. Mixture ..... PRIME - THEN IDLE CUT OFF
4. Starter ..... ENGAGE
5. Mixture ..... SET
6. Throttle ..... 1000 rpm
7. Oil Pressure ..... CHECK
8. Alternator ..... CHECK AMMETER
9. Electric Fuel Pump ..... OFF

### STARTING ENGINE WHEN HOT

1. Throttle ..... OPEN 1/2 INCH
2. Electric Fuel Pump ..... ON
3. Mixture ..... IDLE CUT OFF
4. Starter ..... ENGAGE
5. Mixture ..... ADVANCE AND SET
6. Throttle ..... 1000 rpm
7. Oil Pressure ..... CHECK
8. Alternator ..... CHECK AMMETER
9. Electric Fuel Pump ..... OFF

### STARTING ENGINE WHEN FLOODED

1. Throttle ..... OPEN FULL
2. Electric Fuel Pump ..... OFF
3. Mixture ..... IDLE CUT OFF
4. Starter ..... ENGAGE
5. Mixture ..... ADVANCE AND SET
6. Throttle ..... RETARD TO 1000 rpm
7. Oil Pressure ..... CHECK
8. Alternator ..... CHECK AMMETER
9. Electric Fuel Pump ..... OFF

### STARTING WITH EXTERNAL POWER

1. Master Switch ..... OFF
2. Terminal ..... CONNECT
3. Plug ..... INSET IN FUSELAGE
4. Master Switch ..... ON  
**Proceed with normal start**
5. Master Switch ..... OFF
6. Plug ..... DISCONNECT FROM FUSELAGE
7. Master Switch ..... ON – check ammeter
8. Oil Pressure ..... CHECK
9. Throttle ..... 1000 rpm
10. Electric Fuel Pump ..... OFF

### BEFORE TAXI

1. Fuel quantity ..... CHECK
2. Radios / Nav ..... ON
3. Nav Lights ..... AS REQ
4. ATIS and CLEARANCE ..... COPIED
5. Altitude meter ..... SET
6. Nav Instrument ..... SET

### TAXI

1. Taxi Lights ..... AS REQ
2. Fuel Selector ..... SWITCH TANK
3. Brakes / Steering ..... CHECK
4. Gyros ..... CHECK

### GROUND CHECK

1. Parking Brake ..... SET
2. Mixture ..... FULL RICH
3. Prop Control ..... FULL FORWARD
4. Throttle ..... 2000 rpm
5. Magnetos .... MAX DROP 175 RPM (diff 50)
6. Vacuum ..... 4,9 - 5,1 Hg
7. Oil Temp ..... CHECK
8. Oil Pressure ..... CHECK
9. Annunciator Panel ..... PRESS TO TEST
10. Propeller Control ..... EXERCISE, MAX  
DROP 500 rpm – then FULL FORWARD
11. Alternate Air ..... CHECK
12. Fuel Pressure ..... CHECK
13. Throttle ..... 1000 rpm

### BEFORE TAKEOFF

1. Seat backs ..... ERECT
2. Belts / Harness ..... FASTENED
3. Empty seats .. BELTS SNUGLY FASTENED
4. Doors ..... LATCHED
5. Master Switch (Battery and alternator).... ON
6. Flight Instrument ..... CHECK
7. Fuel Selector ..... PROPER TANK
8. Electric Fuel Pump ..... ON
9. Engine Gauges ..... CHECK
10. Alternate Air ..... CLOSED
11. Mixture ..... SET
12. Prop Control ..... FULL FORWARD
13. Flaps ..... SET 0-10-25
14. Trim Tab ..... SET N
15. Controls ..... FREE
16. Gyro and Compass ..... SET
- 17. ENGINE FAILURE CHECKLIST .. REVIEW**

### LINE UP

1. Parking Brake ..... RELEASE
2. Landing Lights ..... ON
3. Anti Coll Light (Strobe) ..... ON
4. Pitot Heat ..... AS REQ
5. Transponder ..... ON
6. Gyro ..... CHECK RUNWAY HEADING

### TAKEOFF NORMAL

1. Flaps ..... SET 0-10
2. Trim ..... SET N
3. Power ..... SET TO MAXIMUM
4. Lift Off ..... 73 mph
5. Climb ..... 106 mph
6. Landing Gear Lever ..... UP
7. Flaps ..... RETRACT

### TAKEOFF SHORT FIELD

1. Flaps ..... SET 25
2. Trim ..... SET N
3. Brakes ..... APPLY
4. Power ..... SET TO MAXIMUM
5. Brakes ..... RELEASE
6. Lift Off ..... 61 mph
7. Climb ..... 67 mph
8. Landing Gear Lever ..... UP
9. Climb Obstacle ..... 100 mph
10. Climb ..... 106 mph
11. Flaps ..... SLOWLY RETRACT

## CLIMB

### A CLIMB MAXIMUM POWER

1. Manifold Pressure ..... MAXIMUM
2. Propeller Speed ..... 2700 rpm
3. Mixture ..... FULL RICH
4. Climb Speed .. BEST ANGLE 100 mph  
BEST RATE 106 mph

### B CRUISE CLIMB

1. Manifold Pressure ..... 25 IN HG
2. Propeller Speed ..... 2500 rpm
3. Mixture ..... 21 GPH
4. Climb Speed ..... 120 mph
5. Electric Fuel Pump ..... OFF  
CHECK PRESSURE
6. Landing Lights ..... OFF
7. Altimeters Trans Alt ..... SET 1013

## CRUISING

1. Cruise Power ..... SET 65%
2. Mixture ..... ADJUST
3. Fuel Quantity & Balance ..... MONITOR

## NORMAL DESCENT

1. Power ..... CRUISE
2. Mixture ..... CRUISE SETTING
3. Airspeed ..... AS REQ
4. Altimeters Trans Lev ..... SET QNH

## REDUCED POWER DESCENT

1. Throttle ..... 17-20 IN HG(45-55%)
2. Mixture ..... MAINTAIN >1350 EGT
3. Propeller Speed ..... CRUISE SETTING
4. Airspeed ..... AS REQ
6. Altimeters Trans Lev ..... SET QNH

## APPROACH AND LANDING

1. Seats ..... ERECT
2. Belts/Harnesses ..... FASTENED
3. Briefing Crew and Passenger ..... AS REQ
4. Electric Fuel Pump ..... ON
5. Fuel Selector ..... PROPER TANK
7. Power ..... SET
8. Prop Control ..... FULL FORWARD
9. Mixture ..... RICH
10. Gear DOWN ..... MAX 150 mph (3 GREEN)
11. Landing Lights ..... AS REQ
12. Flaps ..... MAX 125 mph
14. Toe Brakes ..... PRESS TO CHECK
15. Autopilot ..... DISENGAGE
16. Approachspeed ..... 86 mph (flaps down)

## AFTER LANDING

1. Flaps ..... RETRACT
2. Electric Fuel Pump ..... OFF
3. Pitot Heat ..... OFF
4. Exterior Lights ..... AS REQ

## SHUTDOWN AND PARKING

1. Radios & Electrical Equipment ..... OFF
2. Prop Control ..... FULL FORWARD
3. Throttle ..... FULL AFT
4. Mixture ..... IDLE CUT-OFF
5. Magnetos (Key Remove) ..... OFF
6. Master Switch (Battery and alternator)...OFF

### ENGINE POWER LOSS IN FLIGHT

1. Trim for **106 mph Power off glide speed.**
2. Fuel Selector ..... SWITCH TANK
3. Electric Fuel Pump ..... ON
4. Mixture ..... RICH
5. Alternate Air ..... OPEN
6. Engine Gauges ..... CHECK

#### WHEN POWER IS RESTORED

7. Alternate Air ..... CLOSED
8. Electric Fuel Pump ..... OFF
9. Mixture ..... AS REQUIRED

#### IF POWER IS NOT RESTORED.....

10. PREPARE FOR POWER OFF LANDING

### POWER OFF LANDING

Trim for **106 mph Best Power off glide speed.**

Locate suitable field. Establish spiral pattern. 1000 ft above field at downwind position for normal landing approach. When field can easily be reached slow to 86 mph IAS for shortest landing. Touchdown should normally be made at lowest possible airspeed with flaps full extended.

#### GEAR DOWN LANDING

1. Landing Gear Lever ..... DOWN
2. Ignition ..... OFF
3. Master Switch (Battery and alternator)...OFF
4. Fuel Selector ..... OFF
5. Mixture ..... IDLE CUT OFF
6. Seat Belt & Harness ..... TIGHT

#### GEAR UP LANDING

1. Landing Gear Lever ..... UP
2. Ignition ..... OFF
3. Master Switch (Battery and alternator)...OFF
4. Fuel Selector ..... OFF
5. Mixture ..... IDLE CUT OFF
6. Seat Belt & Harness ..... TIGHT

### FIRE IN FLIGHT

1. Source Of Fire ..... CHECK

#### ELECTRICAL FIRE (Smoke in Cabin)

1. Master Switch (Battery and alternator)...OFF
2. Vents ..... OPEN
3. Cabin heat ..... OFF
4. **LAND AS SOON AS POSSIBLE**

#### ENGINE FIRE

1. Magneto switch ..... OFF
2. Throttle ..... CLOSED
3. Mixture ..... IDLE CUT-OFF
4. Fuel Selector ..... OFF
5. Electric Fuel Pump ..... CHECK OFF
6. Master Switch (Battery and alternator)...OFF
7. **PROCEED WITH POWER OFF LANDING**

## EMERGENCY LANDING GEAR EXTENSION

### Prior to emergency extension procedure:

1. Master switch ..... CHECK ON
2. Circuit breakers ..... CHECK
3. Radio lights ..... OFF (in daytime)
4. Gear indicator bulbs ..... CHECK

### If landing gear does not check down and locked:

5. Airspeed ..... BELOW 100 mph
6. Landing gear selector ..... DOWN
7. Emergency gear lever ..... **HOLD**

### **EMERGENCY GEAR LEVER IN THE EMERGENCY DOWN POSITION**

while fish tailing airplane  
until gear is down and locked. Under  
normal conditions will take approx  
10 seconds to be down and locked

If all electrical power has been lost, the landing gear must be extended using the above procedures. The gear position indicator light will not illuminate.

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