Pilot's Checklist

PIPER
ARROW
PA-28R-200

Original Issue – 10/31/2012

REVISIONS

Changes and/or additions in this checklist will be covered by Owner Advisories published by the Piper Aircraft Corporation. It is the responsibility of DSU to maintain this checklist in a current status when it is used for operational purposes. Additional checklist procedures may be inserted within the manufacture's procedures by DSU Flight Operations

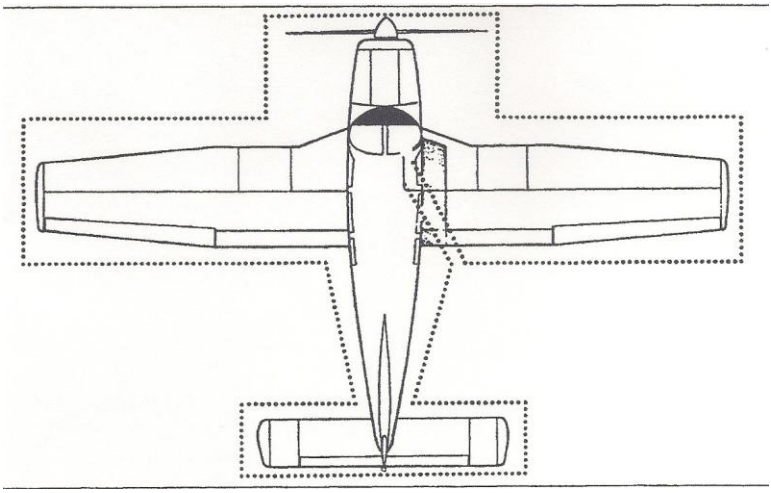
A revision bar will extend the full length of new or revised text and/or illustrations added on new or existing pages. This Bar will be located adjacent to the applicable revised area on the outer margin of the page. All revised pages will carry the date of the revision on the applicable page.

LOG OF REVISIONS

Revision	Date
Original Issue	October 31,2012

ALL REFERENCES TO SECTIONS THROUGHOUT THIS CHECKLIST PERTAIN TO THE APPROPRIATE SECTION O F THE PILOT'S OPERATING HANDBOOK (POH).

NORMAL PROCEDURES



Visually check airplane for general condition during walk-around inspection. In cold weather, remove even the smallest of accumulations of frost, ice or snow from wing, tail and control surfaces. If a night flight is planned, check operation of all lights and ensure a flashlight is available. For detailed information and explanation of these procedures, refer to POH, Section 4.

Procedures in the following Normal checklist shown in **bold-faced** should be committed to memory.

PREPARATION

Flight Log.....CHECK FOR OPEN SQUAWKS
Hobbs/Tach Meters .....RECORD
100 Hour/Annual Insp/VOR .....CHECK
Required Papers.....ON BOARD
Weather..... SUITABLE
Weight and C.G. ..... WITHIN LIMITS
Navigation .....PLANNED
Charts and navigation equipment .....ON BOARD
Performance and range .....COMPUTED AND SAFE

PREFLIGHT CHECK

COCKPIT

Control Wheel..... RELEASE BELT
Landing Gear Handle ..... DOWN
Parking Brake..... SET
Ignition..... OFF/KEY ON GLARESHIELD
Avionics..... OFF
All Switches ..... OFF
Mixture .....IDLE CUT-OFF
Magneto Switch..... OFF
BATT MASTR Switch .....ON
Fuel Quantity Gauges .....CHECK
Annunciator Panel .....CHECK
Landing Gear Lights .....3 GREEN
Internal Lights.....CHECK
External Lights.....CHECK
Stall Warning Horn .....CHECK
Pitot Heat.....CHECK
BATT MASTR Switch ..... OFF
Flight Controls .....PROPER OPERATION
Flaps .....EXTEND FULLY (40^{o})
Trim .....NEUTRAL

Windows..... CHECK CLEAN
Tow Bar & Baggage .....STOW PROPERLY - SECURE

Right Wing

Surface Condition..... FREE OF ICE, FROST, SNOW
Flap, Hinges, and Actuator .....CHECK
Aileron, Hinges and Actuator .....CHECK
Static Wicks..... CHECK - SECURE
Wing Tip and Lights.....CHECK
Fuel Tank ..... VISUALLY CHECK SUPPLY
SECURE CAP
Fuel Tank Vents .....CLEAR
Tank Sumps .....DRAIN CHECK FOR WATER
SEDIMENT AND PROPER FUEL
Tie Down and Chock .....REMOVE
Tire Condition .....CHECK
Brake Block/Disc/Pad .....CHECK
Hydraulic Lines.....CHECK
Gear Doors.....SECURE
Gear Strut..... PROPER INFLATION 2.0 +/- .25 IN.
Fresh air inlet.....CLEAR

Nose Section

General Condition.....CHECK
Cowl Plugs .....REMOVE
Engine Cowl. Right Side .....SECURE
Oil..... CHECK QUANTITY
Dipstick..... PROPERLY SEATED
Oil Filler Cap.....SECURE
Engine Baffle Seals .....CHECK
Oil Access Door..... CLOSE AND SECURE
Windshield.....CLEAN
Propeller and Spinner .....CHECK
Air Inlets .....CLEAR

Alternator Belt ..... CHECK TENSION
Landing Light ..... CHECK
Chock ..... REMOVE
Gear Doors ..... SECURE
Nose Gear Strut ..... PROPER INFLATION
2.75 +/- .25 IN.
Tire ..... CHECK
Engine Cowl Left Side ..... CLOSE AND SECURE
Fuel Strainer ..... DRAIN

Left Wing

Surface Condition ..... FREE OF ICE, FROST, SNOW
Stall Warning Vane ..... CHECK
Fuel Tank ..... CHECK SUPPLY
VISUALLY SECURE CAP
Fresh Air Inlets ..... CLEAR
Chock ..... REMOVE
Gear Strut ..... PROPER INFLATION 2.0 +/-.25 IN.
Tire Condition ..... CHECK
Brake Block/Disc/Pad ..... CHECK
Hydraulic Lines ..... CHECK
Gear Doors ..... SECURE
Fuel Tank Vent ..... CLEAR
Fuel Tank Sump ..... DRAIN, CHECK FOR WATER
SEDIMENT AND PROPER FUEL
Wing Tie-Down ..... REMOVE
Pitot Mast ..... REMOVE COVER, HOLE CLEAR
Wing Tip and Lights ..... CHECK
Aileron, Hinges and Actuator ..... CHECK
Flap, Hinges and Actuator ..... CHECK
Static Wicks ..... CHECK - SECURE

Fuselage, Left Side

Antennas .....SECURE
Left Static Vent .....CLEAR
Condition ..... FREE OF ICE, FROST, SNOW
Side Windows .....CLEAN

Empennage

Condition ..... FREE OF ICE, FROST, SNOW
Fresh Air Inlet .....CLEAR
Stabilator and Trim Tab ..... CHECK
Rudder and Stabilator Hinges..... CHECK
Tie Down ..... REMOVE

Fuselage, Right Side

Condition ..... FREE OF ICE, FROST, SNOW
Antennas .....SECURE
Right Static Vent.....CLEAR
External Power Receptacle ..... CHECK
Side Windows.....CLEAN
Baggage Door ..... SECURED AND LOCKED
Passengers ..... BOARD AND BRIEFED
Empty Seats ..... SEAT BELTS SNUGLY FASTENED
Cabin Door .....CLOSE and SECURE AS REQUIRED
Belts and Harnesses ..... FASTENED - CHECK INERTIA REEL

Before Starting Engine

NOTE

If no start within 10 seconds of starter engagement, ABORT start and allow a 30 second starter cool-off period before next cranking attempt. Maximum of 6 starting attempts. If start not achieved on sixth attempt allow starter to cool for 30 minutes before attempting additional starts.

Parking Brake ..... SET
Circuit Breakers ..... IN
Alternate Air ..... OFF
Propeller ..... FULL INCREASE RPM
Avionics ..... OFF
Fuel Selector ..... DESIRED TANK
Strobes ..... ON

Starting Engine when COLD

Throttle ..... ½ INCH OPEN
Anti-Collision Light ..... ON
ALTR Switch ..... ON
BATT MASTR Switch ..... ON
Electric Fuel Pump ..... ON
Mixture ..... FULL RICH 1 TO 2 SECONDS
then IDLE CUT-OFF
Electric Fuel Pump ..... OFF
Propeller Area ..... CLEAR
Starter ..... ENGAGE
Mixture ..... FULL RICH
Throttle ..... ADJUST (SET TO 1,000 RPM)
Oil Pressure ..... CHECK

Starting Engine when HOT

Throttle ..... ½ INCH OPEN
ALTR Switch..... ON
BATT MASTR Switch ..... ON
Electric Fuel Pump ..... ON
Mixture ..... IDLE CUT-OFF
Propeller Area .....CLEAR
Starter ..... ENGAGE
Mixture ..... ADVANCE
Throttle ..... ADJUST (SET TO 1,000 RPM)
Oil Pressure..... CHECK

Starting Engine when FLOODED

Throttle ..... FULL OPEN
ALTR Switch..... ON
BATT MASTR Switch ..... ON
Electric Fuel Pump ..... OFF
Mixture ..... IDLE CUT-OFF
Throttle .....FULL ADVANCE
Propeller Area .....CLEAR
Starter ..... ENGAGE
Mixture ..... ADVANCE
Throttle ..... RETARD (SET TO 1,000 RPM)
Oil Pressure..... CHECK

Starting Engine with EXTERNAL POWER

BATT MASTR Switch ..... OFF
ALTR Switch..... OFF
All Electrical Equipment ..... OFF
Terminals..... CONNECT
External Power ..... INSERT IN RECEPTACLE

Proceed with Normal Start
Throttle ..... LOWEST POSSIBLE RPM
External Power ..... REMOVE FROM RECEPTACLE
BATT MASTR Switch ..... ON – CHECK AMMETER
Oil Pressure..... CHECK

Warm-UP Checklist

Throttle .....1000 RPM
Oil Pressure..... CHECK

Pre-Taxi Checklist

Fuel Pump .....OFF, CHECK PRESSURE
Mixture .....LEAN FOR TAXI
Avionics Switch.....ON
Transponder .....ALT
ATIS/Airport Info ..... RECEIVED
Altimeter ..... SET
Heading Indicator ..... CHECK TO COMPASS
Departure Clearance ..... RECEIVED
Transponder ..... SET
Nav Radios..... SET
Comm Radios..... SET
Landing/Taxi Light .....AS REQUIRED

Taxi Checklist

Taxi Area.....CLEAR
Parking Brake.....RELEASE
Propeller.....HIGH RPM
Throttle ..... APPLY SLOWLY
Brakes .....CHECK
Steering.....CHECK
Mag Compass ..... SWINGS FREELY
Attitude Indicator ..... ERECT
Turn Coordinator .....SHOWS TURN DIRECTION
Ball & Inclinometer..... MOVES TO OUTSIDE OF TURN

Ground Run-up Checklist

Parking Brake ..... SET
Mixture ..... RICH
Propeller ..... FULL INCREASE
Throttle ..... 2000 RPM
Magnetos ..... CHECK
MAX DROP 175; MAX DIFF. 50 RPM
Vacuum ..... 4.8 to 5.1 inches Hg
Oil Temperature ..... CHECK
Oil Pressure ..... CHECK
Alternator ..... CHECK
Ammeter ..... CHECK
Annunciator Panel ..... PRESS TO TEST
Propeller ..... EXERCISE then FULL INCREASE
Alternate Air ..... CHECK
Electric Fuel Pump ..... OFF
Fuel Pressure ..... CHECK
Throttle ..... RETARD (1000 RPM)
Parking Brake ..... RELEASE

Before Takeoff Checklist

BATT MASTR Switch ..... ON
ALTR Switch ..... ON
Magnetos ..... BOTH
Fuel Selector ..... PROPER TANK
Electric Fuel Pump ..... ON
Engine Gauges ..... CHECK
Alternate Air ..... CLOSED
Seat Backs ..... ERECT
Mixture ..... SET
Propeller ..... SET
Belts/Harness ..... FASTENED/CHECK
Flaps ..... SET
Trim ..... SET
Controls ..... FREE

Takeoff Briefing

Takeoff Procedure ..... BRIEF
Takeoff Emergencies ..... BRIEF
Eng Failure Considerations ..... BRIEF

When Cleared for Takeoff

Strobe ..... ON
Landing Light ..... ON
Door and Window ..... LATCHED

Takeoff

NORMAL TAKEOFF

Flaps ..... SET
Trim ..... SET
Nose Wheel ..... STRAIGHT
Directional Gyro ..... CHECKED TO RWY HDG
Brakes ..... APPLY AND HOLD
Throttle ..... 2,000 RPM
Engine Gauges ..... CHECKED ALL GREEN
Power ..... FULL ADVANCE
Brakes ..... RELEASED
Airspeed ..... ALIVE
Rotate ..... 65 MPH
Gear ..... POSITIVE RATE – GEAR UP
Climb ..... 100 MPH

SHORT FIELD OBSTACLE CLEARANCE TAKEOFF

Flaps ..... 25^{o}
Trim ..... SET
Nose Wheel ..... STRAIGHT
Directional Gyro ..... CHECKED TO RWY HDG

Brakes ..... APPLY AND HOLD
Throttle.....2,000 RPM
Engine Gauges .....CHECKED ALL GREEN
Power ..... FULL ADVANCE
Brakes .....RELEASED
Airspeed ..... ALIVE
Rotate .....60 MPH to 65 MPH
Gear .....POSITIVE RATE – GEAR UP
Accelerate .....85 MPH
Gear ..... UP
Accelerate and Climb.....100 MPH
Flaps .....RETRACT SLOWLY

SOFT FIELD TAKEOFF

Flaps ..... 25^{o}
Trim ..... SET
Nose Wheel ..... STRAIGHT
Directional Gyro .....CHECKED TO RWY HDG
Brakes .....DO NOT APPLY
Throttle.....FULL ADVANCE
Engine Gauges .....CHECKED ALL GREEN
Airspeed ..... ALIVE
Rotate .....60 MPH TO 65 MPH
Accelerate .....85 MPH
Gear .....POSITIVE RATE – GEAR UP
Accelerate .....100 MPH
Flaps .....RETRACT SLOWLY

Climb

Throttle..... 25 INCHES
Propeller.....2500 RPM
Mixture ..... SET TO 10 GPH @ 1,000 AGL
Electric Fuel Pump .....OFF AT DESIRED ALTITUDE
Flaps..... UP
Best Rate Gear Up, Flaps Up .....100 MPH
Best Rate Gear Down, Flaps Up.....95 MPH
Best Angle Gear Up, Flaps Up.....96 MPH
Best Angle Gear Down, Flaps Up .....85 MPH
En Route .....110 MPH

Cruise Checklist

Normal Max Power 75%
Power .....SET per POWER TABLE
Mixture .....ADJUST
Landing Light..... OFF

Maneuvers Checklist

Practice Area.....CLEAR OF TRAFFIC
Airspeed .....AT OR BELOW V_A
Fuel Selector ..... FULLEST TANK
Mixture .....FULL RICH
Propeller.....FULL INCREASE
Fuel Pump .....ON
Landing Light.....ON

Descent Checklist

ATIS/Airport Info ..... RECEIVED
Approach/Landing Brief ..... COMPLETED
Fuel Selector ..... FULLEST TANK
Landing Light ..... ON
Seat Backs ..... ERECT
Belts/Harnesses ..... FASTENED
Mixture ..... AS REQUIRED
Power ..... AS REQUIRED
Power Off Descent ..... CHECK THROTTLE EVERY 30 SECONDS

Approach and Landing Checklist

TO BE COMPLETED BY FAF *OR* 1,000 FT AGL

Fuel Selector ..... PROPER TANK
Belts/Harness ..... FASTEN
Electric Fuel Pump ..... ON
Mixture ..... SET
Propeller ..... FULL INCREASE
Gear ..... DOWN – 150 MPH max
Flaps ..... SET – 125 MPH max
Flaps ..... AS REQUIRED
Final Approach Speed .... TRIM TO 90 MPH (FULL FLAPS)

Go Around Checklist

Power ..... MAX
Pitch ..... UP TO 10^{o}
Flaps ..... RETRACT TO AT OR BELOW 25^{o}
Gear ..... POSITIVE RATE – GEAR UP
Climb ..... 100 MPH

After Landing Checklist

When Off Runway ..... STOP AIRCRAFT
Flaps .....RETRACT
Fuel Pump ..... OFF
Landing Light .....AS REQUIRED
Exterior Lights .....AS REQUIRED
Mixture .....LEANED FOR TAXI

Parking Checklist

STOPPING ENGINE

Parking Brake..... SET
Avionics Switch..... OFF
Throttle .....1000 RPM
Propeller.....FULL INCREASE
Mixture .....IDLE CUT-OFF
Throttle ..... CLOSE
Nav and Cockpit Lights..... OFF
Anti-Collision Light.....ON
Magnetos..... OFF
Ignition Switch ..... OFF
ALTR Switch..... OFF
BATT MASTR..... OFF
Parking Brake.....RELEASE
Hobbs and Tach Meters .....RECORD
Squawk Sheet .....RECORD AND REPORT
Controls..... RESTRAIN
Aircraft.....TIED DOWN AND SECURE

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EMERGENCY PROCEDURES

ENGINE FAILURES
- ENGINE FAILURE DURING TAKEOFF
- ENGINE FAILURE DURING FLIGHT

FORCED LANDINGS
- POWER OFF LANDING GEAR DOWN
- POWER OFF LANDING GEAR UP
- PRECAUTIONARY LANDING WITH POWER

FIRES
- ENGINE FIRE DURING START
- FIRE IN FLIGHT

ELECTRICAL
- ELECTRICAL FAILURES
- ELECTRICAL OVERLOAD

ENGINE/PROPELLER
- ENGINE ROUGHNESS
- LOSS OF OIL PRESSURE
- HIGH OIL TEMPERATURE
- LOSS OF FUEL FLOW/PRESSURE
- PROPELLER OVERSPEED

LANDING GEAR
- EMERGENCY LANDING GEAR EXTENSION

CABIN
- OPEN DOOR

Procedures in the following Emergency checklists shown in **bold-faced** type are immediate-action items which should be committed to memory.

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF

If Sufficient Runway Remains:

Gear Selector Switch..... DOWN
Land.....STRAIGHT AHEAD

If Area Ahead is Rough or is Necessary to Clear Obstructions:

Gear Selector Switch..... UP

If at Sufficient Altitude to Attempt a Restart:

Maintain Safe Airspeed
Fuel Selector ..... SWITCH TO TANK CONTAINING FUEL
Electric Fuel Pump .....CHECK ON
Mixture ..... CHECK RICH
Alternate Air..... OPEN

If Power is Not Regained, **Go To POWER OFF LANDING**

ENGINE FAILURE DURING FLIGHT

If at Low Altitude:

Airspeed..... MAINTAIN 85 MPH (minimum)

Go To POWER OFF LANDING

(Continued on next page)

ENGINE FAILURES (Continued)

If Altitude Permits:

Best Glide (Max Gross Weight) .....105 MPH
Fuel Selector .....SWITCH TO TANK CONTAINING FUEL
Electric Fuel Pump .....ON
Mixture .....RICH
Magnetos.....CHECK ON "BOTH"
Alternate Air..... OPEN
Engine Gauges..... CHECK FOR INDICATION OF CAUSE OF POWER LOSS

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

MAINTAIN BEST GLIDE SPEED

When Power is Restored

Alternate Air..... CLOSE
Electric Fuel Pump ..... OFF

LAND AS SOON AS PRACTICABLE, PERFORM SAFETY INSPECTION

If Power Cannot be Restored

Maintain Best Glide Speed .....105 MPH
Transponder (If *NOT* w/ATC)..... 7700
Radio (If *NOT* w/ATC)..... TRANSMIT ON 121.5

Go To POWER OFF LANDING

FORCED LANDINGS

POWER OFF LANDING

Trim for 105 MPH
Locate suitable field
Establish spiral pattern
Plan to be 1000 ft above field at downwind position for normal landing approach.

Touchdowns should normally be made at 85 MPH for shortest landing.

GEAR DOWN EMERGENCY LANDING

Touchdowns should normally be made at the lowest possible airspeed with full flaps.

When committed to landing
Landing Gear Selector..... DOWN
Flaps ..... AS DESIRED
Throttle ..... CLOSE
Mixture ..... IDLE CUT-OFF
Ignition..... OFF
BATT MASTR Switch ..... OFF
ALTR Switch..... OFF
Fuel selector..... OFF
Seat Belts and Harnesses .....TIGHT

GEAR UP EMERGENCY LANDING

When committed to landing
Flaps ..... AS DESIRED
Throttle ..... CLOSE
Mixture ..... IDLE CUT-OFF
Ignition..... OFF

(Continued on next page)

FORCED LANDINGS (Continued)

BATT MASTR Switch ..... OFF
ALTR Switch..... OFF
Fuel selector..... OFF
Seat Belts and Harnesses .....TIGHT

CONTACT SURFACE AT MINIMUM POSSIBLE AIRSPEED

PRECAUTIONARY LANDING WITH POWER

If flight to an airport is not possible:

Select Field.....FLY OVER NOTING TERRAIN AND OBSTRUCTIONS
Plan ..... NORMAL APPROACH
Seat Belts and Harnesses .....FASTENED
AIRSPEED .....90 MPH
FLAPS.....AS REQUIRED
Master Switch..... OFF
Doors.....UNLATCHED UP & LOWER
Touchdown..... COMPLETED
Ignition Switch ..... OFF

FIRES

ENGINE FIRE DURING START

Starter..... CRANK ENGINE
Mixture ..... IDLE CUT-OFF
Throttle..... OPEN
Electric Fuel Pump ..... OFF
Fuel Selector..... OFF

ABANDON IF FIRE CONTINUES

FIRE IN FLIGHT

SOURCE OF FIRE ..... CHECK

ELECTRICAL FIRE (Smoke in Cabin)

BATT MASTR Switch ..... OFF
ALTR ..... OFF
Vents ..... OPEN
Cabin Heat ..... OFF

LAND AS SOON AS POSSIBLE

ENGINE FIRE

Fuel Selector..... OFF
Throttle.....CLOSED
Mixture ..... IDLE CUT-OFF
Electric Fuel Pump .....CHECK OFF
Heater and Defroster ..... OFF

Go To POWER OFF LANDING

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ELECTRICAL

ELECTRICAL FAILURES

ALT ANNUNCIATOR LIGHT ILLUMINATED
Ammeter..... CHECK TO VERIFY INOP ALT

If Ammeter Shows Zero
ALTR switch ..... OFF

REDUCE ELECTRICAL LOADS TO A MINIMUM

Circuit Breaker .....CHECK AND RESET
ALTR Switch.....ON

If Power Not Restored
ALTR Switch..... OFF

NOTE
If alternator output cannot be restored, reduce electrical loads and land as soon as practical. The battery is the only remaining source of electrical power. Land as soon as practical.

ELECTRICAL OVERLOAD

ALTERNATOR OVER 20 AMPS ABOVE KNOWN LOAD

BATT MASTR Switch ..... OFF

If Ammeter Reading DOES NOT Decrease
ALTR Switch..... OFF

LAND AS SOON AS POSSIBLE

Go To EMERGENCY LANDING GEAR EXTENSION

ELECTRICAL (Continued)

If Ammeter Reading DOES Decrease
BATT MASTR Switch .....ON
Ammeter.....MONITOR

If Ammeter Reading DOES NOT Begin to Decrease Within Five (5) Minutes
BATT MASTR Switch ..... OFF

LAND AS SOON AS POSSIBLE

CAUTION
If the battery is depleted, the landing gear must be lowered using the emergency extension procedure. The gear position lights will be inoperative

NOTE
Due to increased system voltage and radio frequency noise, operation with ALT switch ON and BATT switch OFF should be made only when required by an electrical system failure.

If Ammeter Reading DOES Begin to Decrease Within Five (5) Minutes
Ammeter.....MONITOR

ENGINE

ENGINE ROUGHNESS

Mixture .....ADJUST FOR MAX SMOOTHNESS
Alternate Air..... OPEN
Electric Fuel Pump .....ON
Fuel Selector .....SWITCH TANKS
Engine Gauges.....CHECK
Magneto Switch..... L then R then BOTH

NOTE

If operation is satisfactory on either one, continue on that magneto at reduced power and RICH mixture to first airport. If roughness persists, prepare for power off landing.

LOSS OF OIL PRESSURE

Land as soon as possible and investigate cause. Prepare for power off landing.

HIGH OIL TEMPERATURE

Land at nearest airport and investigate the problem. Prepare for power off landing.

LOSS OF FUEL FLOW/PRESSURE

Electric Fuel Pump .....ON
Fuel Selector .....CHECK ON FULL TANK

ENGINE (Continued)

PROPELLER OVERSPEED

Throttle ..... RETARD
Oil Pressure ..... CHECK
Propeller Control ..... FULL DECREASE RPM
SET IF ANY CONTROL AVAILABLE
Airspeed ..... REDUCE
Throttle ..... AS REQUIRED
REMAIN BELOW 2700 RPM

LANDING GEAR

EMERGENCY LANDING GEAR EXTENSION

Prior to Emergency Extension Procedure

BATT MASTR Switch ..... CHECK ON
ALTR Switch..... CHECK ON
Circuit Breakers..... CHECK
LIGHT Switch ..... OFF (in daytime)
Gear Indicator Bulbs..... CHECK

If Landing Gear DOES NOT Check Down and Locked

Airspeed ..... REDUCE BELOW 100 MPH
Landing Gear Selector Switch ..... GEAR DOWN POSITION

If gear has still failed to lock down, move and *hold* the emergency lever down to the Emergency Down position.

If gear has still failed to lock down, yaw the airplane abruptly from side to side with the rudder.

If the nose gear will not lock down using the above procedure, slow the aircraft to the lowest safe speed attainable using the lowest power setting required for safe operation and accomplish the following:

Landing Gear Selector Switch ..... GEAR DOWN POSITION

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CABIN

OPEN DOOR

If both upper and lower latches are open, the door will trail slightly open and airspeeds will be reduced slightly.

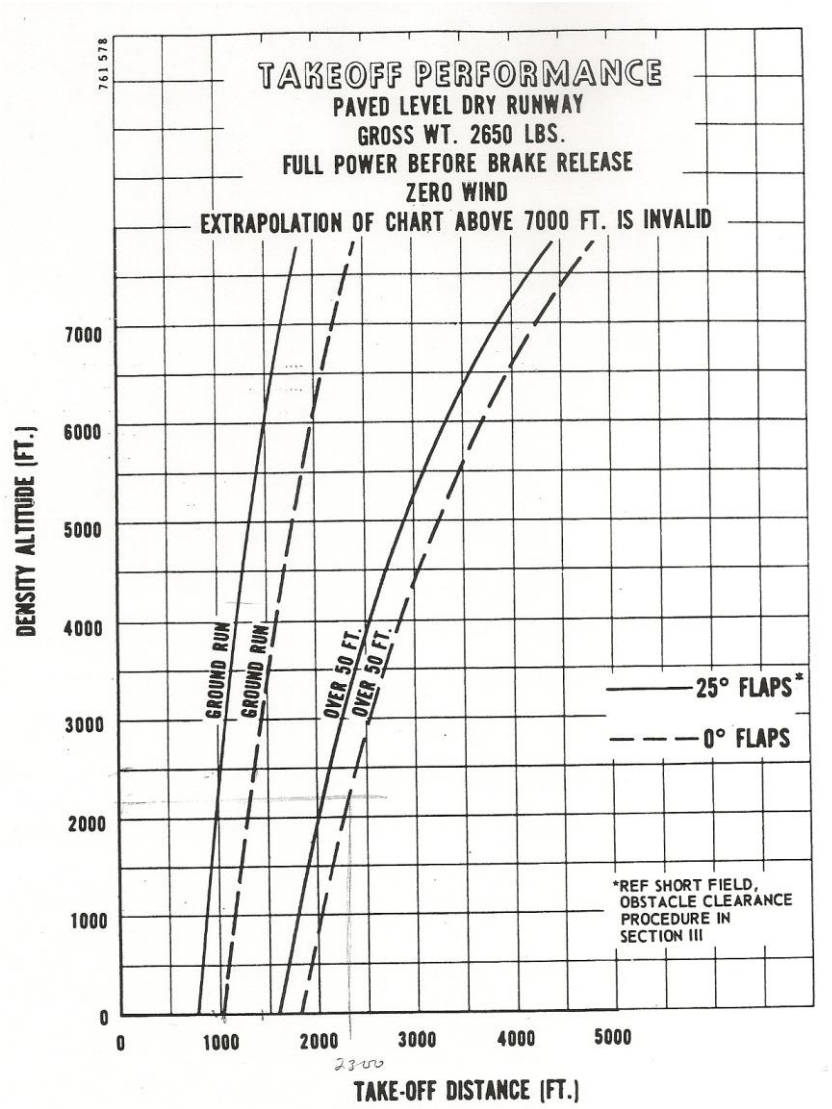
Slow Airplane .....100 MPH
Cabin Vents..... CLOSE
Storm Window..... OPEN
If upper latch is open .....LATCH
If side latch is open..... PULL ARM REST, MOVE HANDLE TO LATCHED POSITION
If both latches are open ..... LATCH SIDE LATCH THEN TOP LATCH

PERFORMANCE

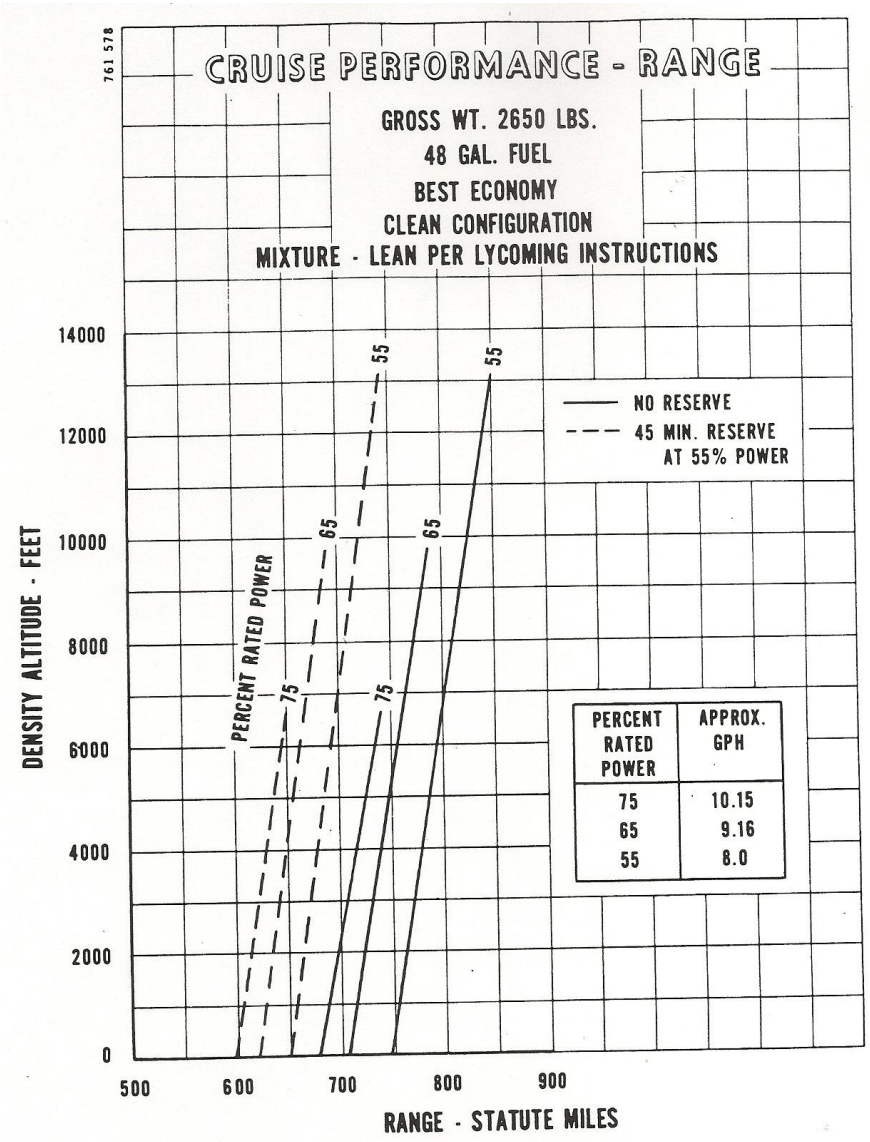
Speeds are for Aircraft at Max Gross Weight

Takeoff	
Rotation Speed (V_R)	65 MPH
Lift Off Speed (V_{LOF})	70 MPH
Normal Climb	100 MPH
Climb, Flaps Up	
Cruise	110 MPH
Best Angle Gear Down(V_X)	85 MPH
Best Angle Gear Up (V_X)	96 MPH
Best Rate Gear Down (V_Y)	95 MPH
Best Rate Gear Up(V_Y)	100 MPH
Landing Approach	
Normal Flaps Up	125 MPH
Normal Flaps 40	90 MPH
Short Field Flaps 40	85 MPH
Maneuvering Speed (V_A) Turbulent Air Penetration Speed	
2440 Lbs	131 MPH
Best Glide Speed (V_G)	105 MPH
Stall Speeds	
Stall Speed Gear Flaps (V_{SO})	64 MPH
Stall Speed Clean (V_{S1})	71 MPH
Maximum Speed	
Flaps Extend Speed (V_{FE})	125 MPH
Gear Operating Speed (V_{LO})	125 MPH
Gear Extend Speed (V_{LE})	150 MPH
Never Exceed Speed (V_{NE})	214 MPH

NORMAL TAKEOFF, 0° FLAPS
And
SHORT FIELD TAKEOFF 25° FLAPS



CRUISE PERFORMANCE



LANDING PERFORMANCE