Basair Aviation College

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PA28-161 CHEROKEE WARRIOR III CHECKLIST - AVIDYNE DISPLAY

Normal Procedures

PREFLIGHT CHECK

Control Wheel ..... RELEASE BELTS
Avionics ..... OFF
Parking brake ..... Set
Electric switches ..... OFF
Magneto switch ..... OFF
Mixture ..... idle cut-off
Master Switch ..... ON
Fuel Quantity Gauges ..... check
Annunciator panel ..... check
Master Switch ..... OFF
Flight controls ..... check
Flaps ..... check
Trim ..... check, set neutral
Pitot drain ..... DRAIN, close
Static drain ..... DRAIN, close
Windows ..... check, clean
Tow bar ..... stow
Baggage ..... secure
Baggage door ..... close, secure

RIGHT WING

Wings ..... free of ice, snow, frost
Control Surfaces ..... check for interference - free of ice, snow, frost
Hinges ..... check for interference
Static wicks ..... check
Wing tip and lights ..... check
Fuel tank ..... check supply visually – secure caps
Fuel tank sump ..... drain, check for water, sediment and proper fuel
Fuel vent ..... clear
Tie down and chock ..... remove
Main Gear Strut ..... proper inflation (4.50 in.)

Tire ..... check
Brake and block discs ..... check
Fresh air inlet ..... clear

NOSE SECTION

Fuel & Oil ..... check for leaks
Cowling ..... secure
Windshield ..... clean (inside & out)
Propeller & Spinner ..... check
Air Inlets ..... clear
Alternator Belt ..... check tension
Landing light ..... check
Nose chock ..... remove
Nose Gear Strut ..... proper inflation (3.25in.)
Nose Wheel Tire ..... check
Oil ..... check level
Dipstick ..... properly seated
Fuel Strainer ..... drain
Check for water, sediment and proper fuel

LEFT WING

Wings ..... free of ice, snow, frost
Fresh air inlet ..... clear
Main Gear Strut ..... proper inflation (4.50 in.)
Tire ..... check
Brake and block discs ..... check
Fuel tank ..... check supply visually – secure caps
Fuel tank sump ..... drain, check for water, sediment and proper fuel
Fuel Vents ..... open
Tie down and chock ..... remove
Pitot Head ..... remove cover & holes clear
Wing tip and lights ..... check
Control Surfaces ..... check for interference - free of ice, snow, frost
Hinges ..... check for interference
Static wicks ..... check

FUSELAGE

Antennas ..... check
Empennage ..... free of ice, snow and frost
Fresh air inlet ..... clear
Stabilator and trim tab ..... check for interference
Tie Down ..... remove
Master Switch ..... ON
Cockpit lighting ..... check
Navigation & strobe lights ..... check
Stall Warning ..... check
Pitot heat ..... check
All switches ..... OFF
Passengers ..... board
Cabin Door ..... close & secure
Seat Belts & Harness ..... fasten/adjust & check inertia reel

BEFORE START

Brakes .....SET
Flight authorisation ..... complete
Maintenance release..... check and sign (PPL or higher)
Alternate static source ..... OFF
Circuit breakers .....Check IN
Carburettor Heat..... Full OFF
Fuel Selector ..... desired tank (LEFT OR LEAST)
Radios/Avionics ..... OFF

STARTING ENGINE WHEN COLD

Throttle ..... ¼ ”OPEN
Battery Master Switch ..... ON
Primary Flight Display (PFD)..... Verify correct aircraft model software
Alternator switch ..... ON
Standby Alternator Switch..... ON
Electric Fuel Pump ..... ON
Mixture.....full RICH
Propeller.....CLEAR
Starter .....ENGAGE
Throttle .....ADJUST
Oil Pressure.....CHECK

If engine does not start within 10 sec. prime and repeat starting procedure

STARTING ENGINE WHEN HOT

Throttle ..... ½”OPEN
Battery Master Switch ..... ON
Primary Flight Display (PFD)..... Verify correct aircraft model software
Alternator switch ..... ON
Standby Alternator Switch..... ON
Electric Fuel Pump ..... ON
Mixture.....full RICH
Propeller.....CLEAR
Starter .....ENGAGE
Throttle .....ADJUST
Oil Pressure.....CHECK

FLOODED ENGINE START

Throttle ..... Open full
Battery Master Switch ..... ON
Primary Flight Display (PFD)..... Verify correct aircraft model software
Alternator switch ..... ON
Standby Alternator Switch ..... ON
Electric Fuel Pump ..... OFF
Mixture ..... ICO
Propeller ..... CLEAR
Starter ..... ENGAGE
Mixture ..... ADVANCE
Throttle ..... RETARD
Oil Pressure ..... CHECK

STARTING WITH EXTERNAL POWER SOURCE

Battery Master Switch ..... OFF
Alternator switch ..... OFF
Standby Alternator Switch ..... OFF
All Electrical Equipment ..... OFF
External Power Plug ..... Insert in fuselage
Proceed with normal start checklist
Throttle ..... Lowest possible RPM
External Power Plug ..... DISCONNECT FROM FUSELAGE
Master and Alternator Switches ..... ON

»Proceed with normal checklist«

AFTER START / WARM UP

Throttle .....800 to 1200 RPM
Oil Pressure.....GREEN
Fuel Pump ..... OFF
Mixture..... LEANED A/R
Alternator.....CHARGING
Avionics and Intercom.....ON / SET / CHECKED

TAXI CHECKS

Chocks ..... Removed
Taxi area ..... clear
Throttle .....apply slowly
Brakes .....check
Steering .....check
Flight Instruments .....check

GROUND CHECKS (RUN UPS)

Park Brake ..... ON
Fuel Selector ..... RIGHT or FULLEST TANK
Engine Instruments .....CHECKED GREEN
Throttle .....2000 RPM
Magnetos .....MAX DROP 175 RPM
MAX DIFF. 50 RPM
Carburettor Heat.....CHECK
Annunciator Panel .....PRESS-TO-TEST
Fuel Pressure ..... CHECK
Oil Temp & Pressure.....CHECKED GREEN
Throttle .....maximum power/RPM
ALTR switch ..... OFF
STBY ALTR annunciator.....verify ON
Increase electrical load >20 amps.....check
STBY ALTR ON annunciator.....verify flashing
Decrease electrical load < 20 amps .....check
STBY ALTR ON annunciator.....verify ON (steady)
Throttle .....1000 RPM

ALTR switch ..... ON
Normal amperage indication ..... verify
STBY ALTR ON annunciator.....verify extinguished
Throttle ..... RETARD >600 RPM
Throttle .....1000 RPM

BEFORE TAKE OFF

Master and Alternator Switch ..... ON
STBY ALTR switch ..... ON
Magnetos ..... BOTH
Flight Instruments .....check
Fuel Selector .....proper tank (FULLEST)
Electric Fuel Pump ..... ON
Engine Gauges .....check
Carburettor Heat..... OFF
Seat Backs ..... erect
Mixture.....set
Primer .....Covered
Throttle Friction.....set
Belts/Harnesses .....fastened/check
Empty Seats.....seat belts snugly fastened
Flaps ..... set a/r
Trim Tab.....set
Controls ..... full, free & correct
Door ..... latched
Departure Brief.....Completed
Take Off Safety Brief..... Completed

LINE UP

Compass ..... check
Strobes & Lights ..... on a/r
Transponder ..... on / mode c

AFTER TAKE OFF

Flaps ..... retracted
Fuel Pump ..... off & pressure checked
Engine Instruments ..... checked
Landing Light ..... off

APPROACH AND LANDING

Brakes ..... checked & off
Fuel Selector ..... proper tank (fullest tank)
Seat Backs ..... erect
Belts / Harness ..... fastened
Electric Fuel Pump ..... ON
Mixture ..... set
Flaps ..... set - 103kts max
Trim to 70 KIAS
Final approach speed (flaps 40˚) ..... 63 KIAS

AFTER LANDING

Flaps ..... retracted
Electric Fuel Pump ..... OFF
Strobes & Landing light ..... OFF
Transponder ..... stby
Trims ..... neutral

STOPPING ENGINE

Flaps .....retract
Electric Fuel Pump ..... OFF
Radios /Avionics ..... OFF
STBY ALTR ..... OFF
Throttle ..... 800-1000 rpm
Magnetos .....check

Mixture ..... ICO
Magnetos ..... OFF
Master Switch ..... OFF
ALTR ..... OFF

SECURING AEROPLANE

Parking brake .....set
Control Wheel ..... secure with belts
Flaps ..... up
Wheel Chocks .....in place
Tie Downs & Covers .....secure

AIRCRAFT SUMMARY

For full details refer to the aircraft Flight Manual and/or the Pilot's Operating Handbook for the specific aircraft.

Engine O-320-D3G
160HP @ 2700 RPM

Oil Capacity ..... 8 Quarts maximum
6 Quarts minimum for flight

Grade of Fuel ..... 100/130 (green) or 100LL (blue)
Total Capacity ..... 189 litres
Useable Fuel ..... 181 litres
Fuel to Tabs ..... 129 litres

Best Angle of climb (V_X) ..... 63 KIAS
Best Rate of climb (V_Y) ..... 79 KIAS
Maximum Demonstrated Crosswind 17KIAS
Best Glide Speed ..... 73 KIAS
Maximum Flap Extension Speed (V_{FE}) ..... 103 KIAS
Never Exceed Speed (V_{NE}) ..... 160 KIAS

Emergency Procedures

ENGINE FIRE DURING START

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

Abandon if fire continues

ENGINE POWER LOSS DURING TAKE OFF

<u>If sufficient runway remains for a normal landing</u>:
Land straight ahead

<u>If insufficient runway remains:</u>
Maintain Safe Airspeed
Make only shallow turn to avoid obstructions
Flaps as situation requires

<u>If sufficient altitude has been gained to attempt a restart:</u>
Maintain safe airspeed
Fuel Selector.....SWITCH TO TANK CONTAINING FUEL
Fuel Pump .....ON
Mixture.....RICH
Carburetor Heat.....ON
Engine Gauges .....CHECK FOR INDICATION OF CAUSE OF POWER LOSS
Primer .....IN & LOCKED

If power is not regained, proceed with power off landing.

ENGINE POWER LOSS IN FLIGHT

Fuel Selector .....SWITCH TO TANK CONTAINING FUEL
Electric Fuel Pump .....ON
Mixture .....RICH
Carburetor Heat .....ON
Engine Gauges.....CHECKED FOR INDICATION OF PWR LOSS
If no fuel pressure indicated, check tank selector position to be sure it is on a tank containing fuel.

If Power is Restored:
Carburetor Heat ..... OFF
Electric Fuel Pump ..... OFF
If power is not restored prepare for power off landing & trim for 73 KIAS

Power Off Landing: (Once committed to landing)
Ignition ..... OFF
Master Switch ..... OFF
Fuel Selector ..... OFF
Mixture .....ICO
Seatbelts and Harnesses ..... TIGHT

FIRE IN FLIGHT

Source of fire ..... CHECK

ELECTRICAL FIRE (smoke in cabin):

Master Switch ..... OFF
ALTR Switch ..... OFF
Standby Attitude Gyro..... VERIFY ON and flag is pulled on gyro
Air Vents .....OPEN
Cabin Heat ..... OFF
Ground Clearance Switch (if installed)..... ON

Land as soon as practicable

ENGINE FIRE:

Fuel Selector ..... OFF
Throttle .....CLOSED
Mixture .....ICO
Electric fuel pump .....CHECK OFF
Heater and Defroster ..... OFF
Proceed with power off landing procedure

LOSS OF OIL PRESSURE / HIGH OIL TEMP

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

LOSS OF FUEL PRESSURE

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

ELECTRICAL FAILURE

ALT Annunciator Light Illuminated:

Verify Failure..... check ammeter

Anytime bus voltage < 25 Vdc, low bus voltage annunciator will illuminate

If Ammeter Shows Zero:

ALT Switch ..... OFF

Reduce electrical loads to a minimum:

ALT Circuit Breaker.....CHECK & RESET AS REQUIRED
ALT Switch .....ON

CAUTION

Any power interruption will result in loss of attitude information from the PDF until the unit can be reinstated on the ground

WARNING

Compass error may exceed 10 degrees with alternator inoperative

If power not restored:

ALT Switch ..... OFF

Reduce electrical loads by switching OFF or pulling circuit breakers for all non-essential equipment to include the following

- Reduce PFD & MFD brightness
- Pitot heat (unless required)
- Airconditioner and ventilation fan
- Landing light
- Strobe lights
- Recognition light
- Cabin/flood lights

- No. 2 nav/com/gps
- Autopilot (if installed)
- Electric trim (if installed)
- DME (if installed)
- Stormscope (if installed)
- Skywatch (if installed)

If alternator output cannot be restored, reduce electrical load and land as soon as practicable.

COMPLETE ELECTRICAL FAILURE

Standby Attitude Gyro..... SELECT STBY power button
Standby Attitude Gyro..... Verify ON and flag is pulled

Maintain control of aircraft with reference to standby airspeed, altimeter and gyro indicators

Battery Switch .....OFF
Ground Clearance Switch (if installed) .....ON

LAND AS SOON AS POSSIBLE!

WARNING

Compass error may exceed 10 degrees with alternator inoperative

ELECTRICAL OVERLOAD

(ALT OVER 20 AMPS ABOVE KNOWN ELECTRICAL LOAD)

ALT Switch .....ON
BATT Switch .....OFF

<u>If alternator loads are reduced:</u>
Electrical loads..... REDUCE TO MINIMUM
Land as soon as practical.

<u>If alternator loads are not reduced:</u>
ALT Switch .....OFF
BATT Switch .....AS REQUIRED

SPIN RECOVERY

Throttle .....IDLE
Ailerons .....NEUTRAL
Rudder.....FULL OPPOSITE TO DIRECTION OF ROTATION
Control Wheel .....FULL FORWARD
Rudder.....NEUTRAL (when rotation stops)
Wing Flaps.....Up (if extended)
Control Wheel .....AS REQUIREDTO SMOOTHLY
REGAIN LEVEL FLIGHT

OPEN DOOR

<u>To close door in flight:</u>
Slow aeroplane to 89 KIAS
Cabin vents .....CLOSED
Storm Window.....OPEN
If upper latch is open .....LATCH
If side latch is open .....PULL ON ARMREST WHILE MOVING
LATCH HANDLE TO LATCHED POSITION
If both latches are open ..... LATCH SIDE, then LATCH TOP

ENGINE ROUGHNESS

Carburetor Heat.....ON

<u>If roughness continues for 1 minute:</u>

Carburetor Heat.....OFF
Mixture..... ADJUDT FOR MAX SMOOTHNESS
Electric Fuel Pump .....ON
Fuel Selector .....SWITCH TANKS
Engine Gauges .....CHECK
Magneto Switch .....“L” then “R” then “BOTH”

If operation is satisfactory on either one, continue on that magneto at reduced power and full “RICH” mixture to first airport.
Prepare for power off landing.

CARBURETOR ICING

Carburetor Heat.....ON
Mixture..... ADJUDT FOR MAX SMOOTHNESS