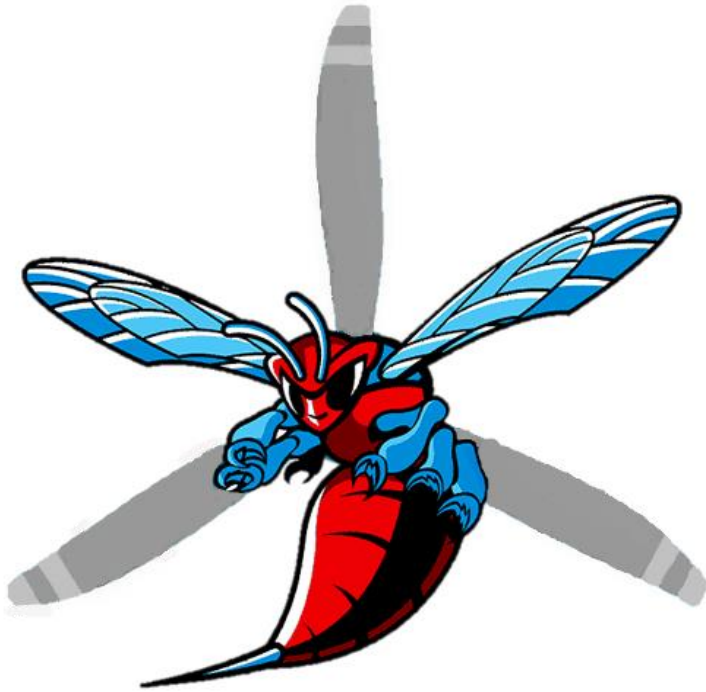


# Pilot's Checklist



Vulcanair  
V1.0

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# REVISIONS

Changes and/or additions in this checklist will be covered by Owner Advisories Published by the aircraft manufacturer. 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

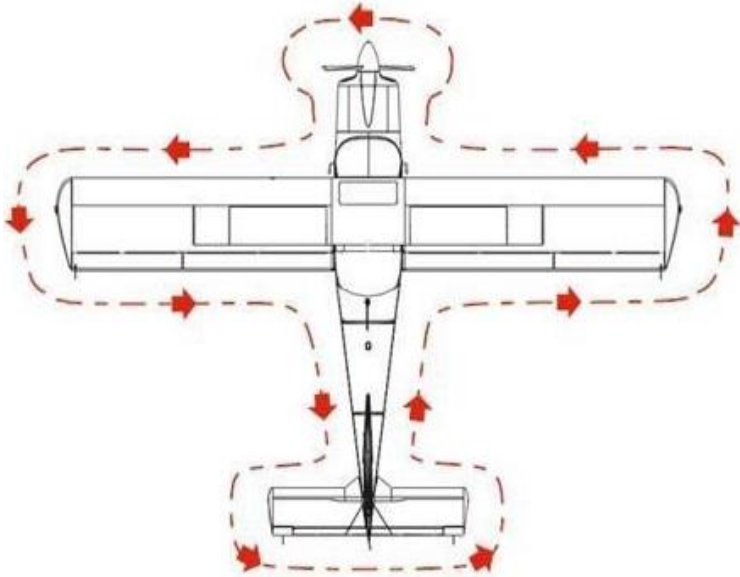
## LOG OF REVISIONS

Revisions to this checklist shall supersede all previous revisions in its entirety as listed below. All previous checklists should be discarded.

Revision	Date
Original Issue	09/30/2020

ALL REFERENCES TO SECTIONS THROUGHOUT THIS CHECKLIST PERTAIN TO THE APPROPRIATE SECTION OF THE PILOT'S OPERATING HANDBOOK (POH) SHOULD ANY LIMITATION OR PROCEDURAL DIFFERENCE EXIST, THE MORE RESTRICTIVE SHALL APPLY

# 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 the POH.

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

## **PREPARATION**

External Control Locks ..... REMOVED and STOWED  
Covers and Plugs ..... REMOVED and STOWED  
Tow bar ..... REMOVED and STOWED  
Flight Log ..... CHECK FOR OPEN SQUAWKS  
100 Hour/Annual /VOR Insp ..... CHECK  
Hobbs/Tach Meters ..... RECORD  
Weather ..... SUITABLE  
Baggage ..... WEIGHED, STOWED, SECURED  
Weight and C.G. .... WITHIN LIMITS  
Navigation ..... PLANNED  
Charts and navigation equipment ..... ON BOARD  
Performance and Range ..... COMPUTED AND SAFE

## **PREFLIGHT**

### **COCKPIT**

Parking Brake ..... SET  
Alternate Static Source ..... PRESS TO DRAIN  
then RELEASE  
Required Papers / POH ..... ON BOARD  
Headsets ..... CHECK  
External Control Locks ..... CHECK REMOVED  
Controls ..... FREE and CORRECT  
Trim ..... SET NATURAL  
Mixture ..... IDLE CUTOFF  
Start Key Switch ..... OFF  
Alternator Switch ..... OFF  
Circuit Breakers ..... CHECK IN  
Avionics Master Switch ..... OFF  
Fuel Pump Switch ..... OFF  
All Light Switches ..... OFF  
Flaps ..... CHECK RETRACTED  
Flap Control ..... CHECK 0° POSITION  
Battery Master Switch ..... ON  
Garmin Avionics Equipment ..... CHECKED ON  
Annunciator Panel ..... PUSH "PPT" to TEST  
PFD ..... CHECK NO RED Xs  
EIS ..... CHECKED ON  
Fuel Quantity Indicators ..... CHECK QUANTITY  
Fuel Selector ..... SELECT ON to LOWEST TANK  
Map Lights ..... CHECK OPERATION  
Navigation Lights Switch ..... ON

- Strobe Lights Switch ..... ON
- LDG Light Switch ..... ON
- TAXI Light Switch.....ON
- Pitot Heat Switch..... ON

Walk around to check lights, stall indicator and Pitot Heat

- Landing/Taxi lights ..... ILLUMINATED
- Pitot Heat ..... CHECKED
- Stall Warning Horn ..... OPERATIONAL
- ALL other external lights ..... ILLUMINATED
- ALL Light and Pitot Heat Switches ..... OFF
- Battery Master Switch ..... OFF
- ELT Remote Switch ..... CHECKED SET to "ARM"
- Fire Extinguisher ..... CHECK SECURE and EXPIRATION
- Windshield ..... CHECK CLEAN

**LEFT WING**

- Surface Condition..... FREE OF ICE SNOW, FROST
- Leading Edge Condition ..... CHECK
- Fresh Air Inlets ..... CLEAR
- Fuel Tank ..... CHECK SUPPLY VISUALLY  
SECURE CAP and COVER
- Fuel Vent ..... CHECK OPEN
- Fuel Tank Sump ..... DRAIN  
CHECK FOR WATER  
SEDIMENT and PROPER FUEL

**CAUTION**

When draining any amount of fuel, care should be taken to ensure that no fire hazard exists before starting engine

- Strut Condition ..... CHECK
- Wing Tie-Down ..... REMOVE
- Stall Warning Detector ..... CHECK
- Pitot Tube ..... CHECK
- Landing/Taxi Lights ..... CHECK
- Wing Tip and Navigation Lights ..... CHECK
- Aileron and Hinges ..... CHECK
- Flap and Hinges ..... CHECK
- Control Lock ..... CHECK REMOVED
- Static Wicks ..... CHECK SECURE

### **FUSELAGE, Left Side**

Condition ..... FREE OF ICE, SNOW, FROST  
Windows..... CHECK  
Antennas ..... SECURE  
Main Gear Leaf Spring..... CHECK  
Tire Condition ..... CHECK  
Brake Blocks/Caliper/Pad ..... CHECK  
Hydraulic Lines ..... CHECK  
Chock..... REMOVED

### **EMPENNAGE**

Stabilator Condition ..... FREE OF ICE SNOW, FROST  
Stabilator Trim Condition ..... CHECK  
Rudder and Fin Condition ..... CHECK  
Control Lock..... CHECK REMOVED  
Tie Down ..... REMOVE

### **FUSELAGE, Right Side**

Condition ..... FREE OF ICE SNOW, FROST  
Antennas ..... SECURE  
Side Windows ..... CHECK  
Baggage Door ..... CHECK LOCKED  
Passenger Door ..... CHECK  
Antennas ..... SECURE  
Main Gear Leaf Spring..... CHECK  
Tire Condition ..... CHECK  
Brake Blocks/Caliper/Pad ..... CHECK  
Hydraulic Lines ..... CHECK  
Chock ..... REMOVED

### **RIGHT WING**

Surface Condition..... FREE OF ICE SNOW, FROST  
Flap and Hinges ..... CHECK  
Aileron and Hinges..... CHECK  
Control Lock ..... CHECK REMOVED  
Static Wicks ..... CHECK SECURE  
Wing Tip and Navigation Lights ..... CHECK  
Leading Edge Condition ..... CHECK  
Strut Condition ..... CHECK

- Tie Down ..... REMOVE
- Fresh Air Inlets ..... CLEAR
- Fuel Tank ..... CHECK SUPPLY VISUALLY  
SECURE CAP and COVER
- Fuel Vent ..... CHECK OPEN
- Fuel Tank Sump ..... DRAIN  
CHECK FOR WATER  
SEDIMENT AND PROPER FUEL

**CAUTION**

When draining any amount of fuel, care should be taken to ensure that no fire hazard exists before starting engine

**RIGHT FUSELAGE, forward of wing strut**

- Co-Pilots Door ..... CHECK
- RH Static Port ..... CLEAR

**NOSE SECTION**

- Cowl Plugs ..... REMOVED
- Air Inlets ..... CLEAR
- Cowling ..... SECURE
- Windshield ..... CLEAN
- Oil Quantity ..... CHECK LEVEL
- Dipstick ..... PROPERLY SEATED
- Oil filler Door ..... SECURE
- Nose Gear ..... CHECK
- Nose Wheel Tire ..... CHECK
- Oil Cooler ..... CLEAR
- Engine Air Intake ..... CHECK
- Engine Air Intake Filter ..... CHECK
- Induction System ..... DRAIN
- Nacelle Locking Screws ..... SECURE
- Propeller and Spinner ..... CHECK
- Exhaust Pipes ..... CHECK
- Fuel Strainer ..... DRAIN  
CHECK FOR WATER  
SEDIMENT AND PROPER FUEL

**CAUTION**

When draining any amount of fuel, care should be taken to ensure that no fire hazard exists before starting engine



Chock ..... REMOVE  
 LH Static Port ..... CLEAR  
 External Power Receptacle ..... CHECK  
 Pilots Door ..... CHECK

**BEFORE STARTING ENGINE**

Pre-Flight Inspection ..... COMPLETE  
 Doors..... CLOSE and SECURE  
 Passenger Safety Brief ..... BRIEFED  
 Belts and Harnesses ..... SECURE  
 Seats ..... ADJUSTED  
 Parking Brake ..... SET  
 Empty Seats ..... SEAT BELTS FASTENED  
 FUEL PUMP Switch ..... OFF  
 Throttle ..... OPEN ½"  
 Propeller ..... FULL FORWARD  
 Mixture ..... IDLE CUT-OFF  
 Fuel Selector ..... FULLEST TANK  
 Circuit Breakers ..... CHECK IN  
 Battery Master Switch ..... ON  
 Avionics Switch ..... ON  
 Fuel Quantity Indicator ..... CHECK  
 Battery Voltage ..... CHECK  
 NAV Lights ..... ON  
 STROBE Lights ..... ON  
 Alternate Air Control ..... OFF  
 Cockpit Lights ..... AS REQUIRED  
 Trim Tabs ..... CHECK and SET FOR T/O  
 Brakes ..... SET  
 Altimeter ..... SET TO FIELD ELEVATION

**WARNING**

After power is applied but before starting engine, the PFD and MFD appear. If any failure message appears on the PFD or on the MFD, the take-off is strictly prohibited until the problem has been identified and solved.

If engine does not start within 10 seconds, prime and repeat starting procedure. Starter manufacturer recommends cranking periods be limited to 10 seconds with a 30 second rest period between cranking periods. Maximum of 6 start periods allowed. If start is not achieved on sixth attempt, allow starter to cool for 30 minutes before attempting additional starts

**NORMAL START – COLD Engine**

Battery Master Switch ..... ON  
Avionics Master Switch ..... ON  
MFD ..... SET TO ENGINE PAGE  
Strobe Light Switch ..... ON  
Alternator Switch ..... OFF  
Starter Key Switch ..... ROTATE on BOTH  
Fuel Pump Switch ..... ON  
Throttle ..... SET ½” OPEN  
Mixture ..... FULL RICH  
Until Stabilized Fuel Flow then  
IDLE-CUTOFF  
Throttle ..... SET FOR 1000 RPM  
Prop Area ..... VISUALLY, AUDIBLY CLEAR  
Starter Key Switch ..... ROTATE TO START  
Mixture ..... ADVANCE as engine starts  
Throttle ..... 1000 RPM  
Oil Pressure ..... CHECK

**WARNING**

Oil pressure should rise within 30 seconds, except in very cold weather, when it may take somewhat longer. Take-off should not be started if oil pressure is above maximum. If the oil pressure gauge does not show any indication, shut down the engine and investigate.

FUEL PUMP Switch ..... OFF  
Alternator Switch ..... ON

**NORMAL START – HOT Engine**

Battery Master Switch ..... ON  
Avionics Master Switch ..... ON  
MFD ..... SET TO ENGINE PAGE  
Strobe Light Switch ..... ON  
Alternator Switch ..... OFF  
Starter Key Switch ..... ROTATE on BOTH  
Fuel Pump Switch ..... ON  
Mixture ..... IDLE-CUTOFF  
Throttle ..... SET FOR 1000 RPM  
Prop Area ..... VISUALLY, AUDIBLY CLEAR  
Starter Key Switch ..... ROTATE TO START  
Mixture ..... ADVANCE as engine starts

Throttle ..... 1000 RPM  
 Oil Pressure ..... CHECK  
 Fuel Pump Switch ..... OFF  
 Alternator Switch ..... ON

**NOTE**

In the event of backfire during engine start-up, shut down the engine and check the entire intake system for security and damage before flight. In this case the downstream face of the foam element will show charring. Replace any damaged element.

**ENGINE START with EXTERNAL POWER**

Alternator Switch ..... OFF  
 External Power ..... CONNECT and ON  
 Battery Master Switch ..... ON  
 AVIONICS Master Switch ..... ON

Proceed with NORMAL START (Hot or Cold)

**WARM-UP**

Throttle ..... 800 to 1200 RPM

**TAXI**

Battery Master Switch .....CHECK ON  
 Avionics Master Switch .....CHECK ON  
 Transponder ..... PROPER CODE / SET to ALT  
 Alternator Switch .....CHECK ON  
 Nav Lights Switch .....AS REQUIRED  
 TAXI Light Switch ..... ON  
 Altimeter ..... SET  
 Radios ..... ON, SET & CHECK  
 Flaps ..... CHECK FULL RANGE then UP  
 Taxi Clearance ..... RECEIVED  
 Parking Brakes ..... RELEASE  
 Taxi Area ..... CLEAR  
 Throttle ..... APPLY SLOWLY  
 Brakes ..... CHECK  
 Steering ..... CHECK  
 Mag Compass ..... SWINGS FREELY  
 Standby Attitude Indicator ..... ERECT  
 Rate of Turn Indicator ..... SHOWS TURN DIRECTION  
 Slip / Skid Indicator ..... MOVES to OUTSIDE  
 OF TURN

## **GROUND RUN-UP**

Parking Brake ..... SET  
Fuel Selector ..... LEFT then RIGHT  
FUEL PUMP Switch ..... OFF  
Mixture ..... RICH  
Propeller ..... FULL FORWARD  
Alternate Air Control ..... OFF  
Throttle ..... 1900 RPM  
Propeller ..... FULL AFT  
CHECK RPM drop to 1400 RPM

Then

Propeller ..... FULL FORWARD  
CHECK RPM recovers to 1900 RPM

### NOTE

Check oil pressure decreases and manifold pressure increases during deceleration to 1400 RPM. - Check oil pressure increases and manifold pressure decreases during acceleration to 1900 RPM.

Mixture ..... CHECK  
Alternate Air Control ..... ON  
CHECK RPM drop, then OFF  
CHECK RECOVERY  
Throttle ..... 2100 RPM  
Magnetos ..... CHECK  
175 RPM max drop, 50 RPM max differential  
Oil Temp ..... CHECK  
Oil Pressure ..... CHECK GREEN BAR  
Electric Fuel Pump ..... OFF  
Fuel Pressure ..... CHECK  
Alternator ..... CHECK  
Throttle ..... RETARD (1000 RPM)  
Parking Brake ..... RELEASE

## **BEFORE TAKEOFF**

Starter Key Switch ..... BOTH  
Master Switch ..... ON  
Alternator Switch ..... ON  
Fuel Selector ..... FULLEST TANK  
Fuel Pump Switch ..... ON  
Alternate Air Control ..... OFF  
Seat Back ..... ERECT  
Mixture ..... SET

Propeller ..... FULL FORWARD  
Engine Gauges ..... CHECKED/GREEN  
Flaps ..... SET  
AS REQUIRED  
Trim Tab ..... SET  
Controls ..... FREE AND CORRECT  
Radio Stack/Clock and Instruments ..... SET  
Takeoff Procedure ..... BRIEF  
Takeoff Emergencies ..... BRIEF  
Door and Window ..... LATCHED

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### When Cleared for Takeoff

Transponder ..... CHECKED PROPER CODE / SET to ALT  
Wing Strobes ..... ON  
Landing Light ..... ON  
Clock ..... START

### **TAKEOFF**

#### **NORMAL TAKEOFF**

Nose Wheel ..... STRAIGHT  
Directional Gyro ..... CHECKED TO RWY HDG  
Brakes ..... APPLY AND HOLD  
Throttle ..... 2,000<sub>RPM</sub>  
Engine Gauges ..... CHECKED ALL GREEN  
Brakes ..... RELEASED  
Throttle ..... FULL  
Airspeed ..... ALIVE  
Rotate ..... 65<sub>KIAS</sub>  
Initial Climb (Vx) ..... 70<sub>KIAS</sub>  
Airspeed (Vy) ..... 80<sub>KIAS</sub>  
Fuel Pump Switch ..... OFF at safe altitude  
Climb Power Set ..... 2600<sub>RPM</sub> at 26"<sub>MAP</sub>

### **CLIMB**

Best Rate (Flaps Up) ..... 80<sub>KIAS</sub>  
Cruise Climb ..... 100<sub>KIAS</sub>  
Electric Fuel Pump ..... OFF  
AT DESIRED ALTITUDE

**CRUISE**

Normal Max Power ..... 75%  
Power ..... SET PER POWER TABLE  
Mixture ..... ADJUST  
Landing Light ..... AS REQUIRED

**MANEUVERS**

Practice Area ..... CLEAR OF TRAFFIC  
Airspeed ..... AT or BELOW V<sub>A</sub>  
Fuel Selector ..... FULLEST TANK  
Mixture ..... FULL RICH  
Electric Fuel Pump ..... SET as REQUIRED  
ON Below 1000' AGL  
Landing Light ..... ON

**DESCENT**

**NORMAL**

ATIS/Airport Info ..... RECEIVED  
Approach/Landing Brief ..... COMPLETED  
Fuel Selector ..... FULLEST TANK  
Landing Light ..... ON  
Seat Back ..... ERECT  
Belts/Harnesses ..... FASTENED  
Mixture ..... RICH  
Throttle ..... 18" MP

**APPROACH and LANDING**

TO BE COMPLETED BY FAF OR 1,000 FT AGL

Electric Fuel Pump ..... ON  
Landing Light ..... ON  
Power ..... AS REQUIRED  
Mixture ..... SET  
Propeller ..... FULL FORWARD  
Flaps ..... AS REQUIRED  
78<sub>KIAS</sub> MAX  
Final Approach Speed (Flaps 28°) ..... 70<sub>KIAS</sub>

### **GO AROUND**

Power ..... MAX  
Flaps ..... RETRACT ONE POSITION  
Pitch ..... UP  
Airspeed ..... 70<sub>KIAS</sub>  
Obstacle Cleared ..... FLAPS UP  
Climb ..... 80<sub>KIAS</sub>

### **AFTER LANDING**

When Off Runway ..... STOP AIRCRAFT  
Throttle ..... 1,000<sub>RPM</sub>  
Flaps ..... RETRACT  
Fuel Pump Switch ..... OFF  
Landing Light Switch ..... OFF  
Pitot Heat Switch ..... OFF  
Stall Heat Switch ..... OFF  
Exterior Lights ..... AS REQUIRED  
Mixture ..... LEANED FOR TAXI

### **PARKING**

Parking Brake ..... SET  
Avionics Master Switch ..... OFF  
Throttle ..... 1000 RPM  
Mixture Control ..... IDLE CUT-OFF  
Starter Key ..... OFF  
Nav and Cockpit Lights ..... OFF  
Anti-Collision Light ..... ON  
Alternator Switch ..... OFF  
Hobbs and Tach Meters ..... RECORD  
Master Switch ..... OFF  
Parking Brake ..... RELEASE  
Squawk Sheet ..... RECORD AND REPORT  
Controls ..... RESTRAIN  
Aircraft ..... TIED DOWN AND SECURE