# Registration Mark _____

| | | | Pass | Fail |
|---|---|---|---|---|
| Record engine tach time at start up: | | hrs. | | |

| | | | Pass | Fail |
|---|---|---|---|---|
| **3. ENGINE START UP AND TAXI** | | | Pass | Fail |
| 1.1 | 1.1.1 | **Oil pressure** at 1000 RPM:- Minimum 10 PSI | PSI | |
| | 1.1.2 | **ATIS: Direction:** **Wind Speed:** **Altimeter:** | Pass | Fail |
| | 1.1.3 | ATIS information: **OAT** (outside air temp) (_____°C) Runway used: | | |
| | 1.1.4 | Check **COM radio** transmit and receive functions. | | |
| | 1.1.5 | Check for proper erection of **artificial horizon** when engine starts. (if installed) | | |
| | **TAXI**: Check list complete then accomplish the following: | | | |
| | 1.1.6 | **Brake check**: Start, stop and turn as required to insure proper brake operation. Ensure brake pedal travel is relatively equal with no binding or bleed down. | | |
| | 1.1.7 | Verify **tail wheel breaks out** of steering detent properly both right, left and freely casters beyond rudder arc. Taxi forward and reengagement of steering detent. | | |
| | 1.1.8 | Verify **tail wheel operation** is smooth and positive. | | |
| | 1.1.9 | Verify **tail wheel tracks with rudder** through rudder arc. | | |
| | notes: | | | |

| | | | Pass | Fail |
|---|---|---|---|---|
| 1.2 | **ENGINE RUN UP:** Look for area free of loose pebbles and debris. **1700 RPM** | | Pass | Fail |
| | 1.2.1 | **Parking brake test**: Set park brake. Increase RPM to 1700. Verify aircraft does not creep. | | |
| | 1.2.2 | **Carburetor Heat**: Check engine RPM decrease with full carb heat applied. | | |
| | 1.2.3 | There should be a positive drop in RPM **Record RPM drop:** | | |
| | 1.2.4 | **Electronic Ignition** @1700 RPM **Left**: RPM **Right**: RPM | | |
| | 1.2.5 | Check for no roughness or fault lights. RPM drop should not exceed 50 RPM. | | |
| | | Return ignition switch to **"BOTH"** position following this test. | | |
| | 1.2.6 | **Oil pressure** at 1700 RPM: PSI Normal: 60 to 85 PSI | | |
| | 1.2.7 | **Oil temp** at 1700 RPM: °F Normal: 120° to 245° F | | |
| | 1.2.8 | **Charging system** check should show less than 5 amps. (if amp meter installed) | | |
| | 1.2.9 | Reduce RPM to idle, **release parking brake**, verify aircraft rolls easily. | | |
| | 1.2.10 | IDLE RPM: Minimum 500 RPM Record idle RPM: RPM | | |
| | 1.2.11 | **Ignition switch check**: Momentarily place in the "Off" position, engine should "cut out". Immediately move ignition switch to "On" position. | | |
| | 1.2.12 | **Static RPM**: recorded with full brakes and at full power. | | |

| Prop | Max | Min | Actual RPM | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| notes: | | | | |

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### *COMPLETE BEFORE TAKE OFF: CHECKLIST, PER PILOT OPERATING HANDBOOK*

| | | | Pass | Fail |
|---|---|---|---|---|
| 1.3 | **TAKEOFF** | | Pass | Fail |
| | 1.3.1 | **Power Check: Tach in Green-------Oil Pressure in Green** | | |
| | 1.3.2 | **Rudder Effectiveness**: Right and left rudder inputs should result in adequate right and left yaw reactions. If it does not---abort takeoff. | | |
| | 1.3.3 | **Pitch Control**: Test pitch control immediately after lift off. Aft stick motion should require increasing force. If it is does not, consider terminating flight immediately. | | |
| | 1.3.4 | **Take off distance** meets requirements as shown in POH (see chart in test binder) | | |
| | | Estimated take off distance: ft. Distance shown in POH: ft. | | |
| | notes: | | | |

| 1.4 | CLIMB OUT | Full power and AS of 71 MPH | | | Pass | Fail |
|---|---|---|---|---|---|---|
| 1.4.1 | **Vibration level** normal. | | | | | |
| | If vibration excessive, complete the following. | | No | Yes | | |
| | If present, does it vary with changes in RPM? | | | | | |
| | If present, does it vary with changes in AS? | | | | | |
| 1.4.2 | **Oil temp**. at the start of a 3 minute climb at full power and AS of 71 MPH. | | | | Pass | Fail |
| | **If over 210°F, initiate cooling procedure.** | | **Temp** | °F | | |
| 1.4.3 | Note any **unusual smells**: | | | | | |
| 1.4.4 | **Instrument Function**: Altimeter/VSI;   Example: In a 400FPM indicated climb or descent the altitude change at the end of one minute shall be 400' ±100' . (adjust to conditions) | | | | | |
| 1.4.5 | **Throttle and mixture** controls maintain their positions without creeping during climb. | | | | | |
| 1.4.6 | **Maximum RPM** in climb: | | RPM | | | |
| 1.4.7 | **Climb rate** meets requirements as shown in POH:   (see chart in test binder) | | | | | |
| | Climb rate: | | Rate shown in POH: | | | |
| 1.4.8 | **CHT Temp** (if installed). at the end of a 2 minute climb at full power and AS of 71 MPH.  **If over 450°F, initiate cooling procedure**.  **CHT Temp:** _____°F | | | | | |
| | Verify **Oil Temperature and PSI are** in the green at the **end** of a 3 minute climb | | | | Pass | Fail |
| 1.4.9 | **Oil Temperature 120 to 245** | °F | **Oil PSI** 60 to 85 | PSI | | |
| 1.4.10 | Compare **Mode "C"** altitude vs. the altimeter reading. | | | | | |
| | Check if installed | Mode "C" alt.: | | Actual alt.: | | |

| 1.5 | CRUISE | | | | Pass | Fail |
|---|---|---|---|---|---|---|
| 1.5.1 | **Fuel Selector "Both** position functions properly at normal engine operation. **Move Fuel Selector to "Left"** position and operate engine for min. 5 minutes. | | | | | |
| 1.5.2 | **Check Directional Gyro** for smooth and proper operation (If installed) . | | | | | |
| 1.5.3 | **Check Magnetic Compass** by flying parallel to a known ground course. **Compare with correction** on the compass correction card.  Max. error on any heading is 10°. | | | | | |
| 1.5.4 | **Artificial Horizon** (If installed): The small aircraft indicator shall operate freely and be parallel with the horizon bar in straight and level flight.  Horizon bar operates smoothly in right and left turns, and moves in climbs and descents. | | | | | |
| 1.5.5 | **Engine instruments** give proper indications with minimal needle fluctuations. | | | | | |
| 1.5.6 | Unusual **noise or buffeting**? | | | | | |
| 1.5.7 | Operations normal without excessive **vibration**? | | | | | |
| 1.5.8 | **Cruise check**; Stabilize plane at **4000'** MSL at **2200 RPM** (Per placard) **After 3 min** record the following: | | | | | |

| | | | Min | Max | Pass | Fail |
|---|---|---|---|---|---|---|
| | **Actual RPM** | | | | | |
| | **Oil pressure** | | 60 PSI | 85 PSI | | |
| | **Oil temperature** | °F | 120° | 245° | | |
| | **AS** | | | | | |
| | **PA** (29.92 Hg) | | | | | |
| | **Check if installed:** | | | | | |
| | **CHT** | | 200° | 500° | | |
| | **EGT** (full rich) | | | | | |
| | **Volts** | | | | | |
| | **Amps** | | | | | |
| | **OAT** | °F | | | | |

| 1.5.9 | **Rudder Coordination**: Hold **wings level** with ailerons, **feet on floor**.  2500 RPM | | | Pass | Fail |
|---|---|---|---|---|---|
| | Turn coordinator ball is: | **Center** | | | |
| | | **Left** | **Right** | | |
| 1.5.10 | **Wing balance**: Hold TC **ball in center** using rudder with **hands off stick** at **2500 RPM**. | | | | |
| | Wings remain **level** | | | | |
| | Wings bank **right** | Wings bank **left** | | | |
| 1.5.11 | **Aileron effectiveness**: Alternately apply equal force to stick in both directions. Roll right then roll left. Ensure proper response to stick input. | | | | |

| 1.5 | **CRUISE cont** | | | | | | Pass | Fail |
|---|---|---|---|---|---|---|---|---|
| | 1.5.12 | **Fuel Selector "Left"** position functions properly at normal engine operation. | | | | | | |
| | | **Move Fuel Selector to "Right"** position and operate engine for min. 5 minutes. | | | | | | |

### 1.5.13 Maximum level speed at full throttle. (do not exceed 2700 RPM)

| AS (Air Speed) | MPH | | If installed | |
|---|---|---|---|---|
| Oil Pressure | | | EGT | °F |
| Oil Temperature | °F | | CHT | °F |
| Pressure Altitude | | | OAT | °F |

### 1.5.14 Red Line Air Speed: Smooth air ONLY, at or above 3000' AGL. IAS 138 MPH-RPM maximum 2700 RPM. Use gentle control inputs.

Pass   Fail

Note vibration and controllability changes.

| Vibration: | Normal | | Abnormal | |
|---|---|---|---|---|
| Controllability: | Normal | | Abnormal | |

### 1.5.15 Power off stalls, straight ahead. Deceleration rate of approx. 1 MPH/sec.

| | Horn AS | Stall speed or full aft stick | | Difference: horn AS/stall AS | |
|---|---|---|---|---|---|
| **Pwr Off-No Flaps** | | | Shall be 40 MPH, IAS or less | MPH | |
| **Pwr Off-Full Flaps** | | | Shall be 32 MPH, IAS or less | MPH | Pass   Fail |

**Normal: Horn should sound 5 to 10 MPH before stall.**

### 1.5.16 Power off stalls, 20 degrees bank right and left.

| | | Horn AS | Stall speed or full aft stick |
|---|---|---|---|
| **Power off-No Flaps** | Left | | |
| | Right | | |
| **Power off-Full Flaps** | Left | | |
| | Right | | Pass   Fail |

**Aircraft controllability** remained normal during the above stall tests?

### 1.5.17 Directional Stability (Flat Turn):   Trimmed to 60 MPH IAS   Power: Idle   Flaps: Full Down

Hold the aircraft **wings level** with the ailerons while **fully depressing rudder pedal** until deflection is reached. Release the rudder pedal while maintaining the wings level and the trimmed speed.  The aircraft should weathervane to normal flight direction.

| | | |
|---|---|---|
| **Left** rudder pedal. | | |
| **Right** rudder pedal. | | |

### 1.5.18 Lateral Stability:   Trimmed to 60 MPH IAS   Power: Idle   Flaps: Full Down

Hold a **constant heading** with the appropriate rudder pedal while rolling into a **10 degree bank**.  After the 10 degree bank is reached, relax the ailerons while maintaining the rudder input.  The wing should rise or remain at 10 degrees. In no case should the bank increase.

| | | |
|---|---|---|
| **Left** rudder pedal. | | |
| **Right** rudder pedal. | | |

### 1.5.19 Directional Stability (Flat Turn):   Trimmed to 80 MPH IAS   Power: Lvl. Flt.   Flaps: UP

Hold the aircraft **wings level** with the ailerons while depressing **rudder pedal** until **half deflection** is reached. Release the rudder pedal while maintaining the wings level and the trimmed speed.  The aircraft should weathervane to normal flight direction.

| | | |
|---|---|---|
| **Left** rudder pedal | | |
| **Right** rudder pedal. | | |

### 1.5.20 Lateral Stability:   Trimmed to 80 MPH IAS   Power: Lvl. Flt.   Flaps: UP

Hold a **constant heading** with the appropriate rudder pedal while rolling into a **10 degree bank**.  After the 10 degree bank is reached, relax the ailerons while maintaining the rudder input.  The wing should rise or remain at 10 degrees. In no case should the bank increase.

| | | |
|---|---|---|
| **Left** rudder pedal. | | |
| **Right** rudder pedal. | | |

notes: _____

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| | | **CRUISE cont.** | Pass | Fail |
|---|---|---|---|---|
| | 1.5.21 | **Fuel Selector in "Right"** position functions properly at normal engine operation. | | |
| | | Return fuel selector switch to **"Both "** position. | | |
| | | | | |
| | notes: | | | |
| | | | | |
| | | | | |
| | | | | |

### 4. LANDING ON RUNWAY NORMAL LANDING GEAR

| | | | Pass | Fail |
|---|---|---|---|---|
| 2.1 | Stabilized Approach: | | | |
| | 2.1.1 | Note ability to establish a stabilized final approach at **AS of 42MPH**: | Pass | Fail |
| | | **Elevator authority**: | | |
| | | **Trim authority**: | | |
| | 2.1.2 | No **adverse conditions** exist during normal runway landing. | | |
| | 2.1.3 | Tail wheel steering should be **free of any shimmying**. | | |
| | 2.1.4 | After landing set **fuel selector to "OFF"**.  Engine should quit after approx. 3 minutes @ 1000 RPM. | | |
| | notes: | | | |

### 5. POST FLIGHT INSPECTION

| | | | Pass | Fail |
|---|---|---|---|---|
| 3.1 | COWL DOOR RIGHT SIDE | | Pass | Fail |
| | 3.1.1 | Open dipstick access cover and check for leaks, secure cover. | | |
| | 3.1.2 | Examine exterior of cowl for visual signs of leaks. | | |
| | notes: | | | |
| | | | | |
| 3.2 | AIRCRAFT EXTERIOR | | Pass | Fail |
| | 3.2.1 | Do a visual inspection of the aircraft exterior.  Note any unusual conditions. | | |
| | notes: | | | |

**Flight test ending tach time:** _____ hrs.

| **Pilot:** | | |
|---|---|---|
| | print name | sign name |
| **Date:** | | |