Fitting Main Panel and Connecting Instruments

Reference: Photos

Parts Required:

Materials Required:

Procedure:

VLA Panel:
If you are using the VLA panel, a face panel will have to be cut out of 2mm or 2.5mm Aluminium. The three hole saws that are needed are 51mm (2”) all engine VDO gauges, 57mm (2 1/4”) Microair Radio, 79mm (3 1/8”) Flight instruments, ASI, VSI AH, DG etc. Trace the instruments that you are using into a paper cut-out which is the same profile as the panel.
Helicopter Type Panel:
The Helicopter type panel uses the black face panel which is held in with 5/32W brass machined screws.

Pitot & Static Systems

The pitot system conveys ram air pressure to the airspeed indicator. The static system vents vertical speed indicator (if fitted), altimeter and airspeed indicator to atmospheric pressure through plastic tubing connected to a static port.

Maintenance

Proper maintenance of pitot and static system is essential for proper operation of the altimeter, airspeed indicator and vertical speed indicator (if fitted). Leaks, moisture and obstructions in the pitot system will result in false airspeed indications, while static system malfunctions will affect reading of all three instruments. Cleanliness and security are the principal rules for system maintenance. The pitot tube and static port MUST be kept clean and unobstructed.

Static Pressure System Inspection and Leakage Test

The following procedure outlines inspection and testing of the static pressure system, assuming that the altimeter has been tested and inspected in accordance with current Regulations.

1. Ensure the static system is free from entrapped moisture and restrictions.

2. Ensure no alterations of airframe surface have been made which would effect the relationship between air pressure in the static pressure system and true ambient air pressure for any flight configuration.
3. Attach a source of suction to static pressure source opening. Shows one method of obtaining suction.

4. Slowly apply suction until the altimeter indicates a 1000 foot increase in altitude.

**CAUTION**

*When applying or releasing suction, do not exceed the range of either vertical speed indicator or airspeed indicator.*

5. Cut off suction source to maintain a “closed” system for one minute. Leakage shall not exceed 100 feet altitude loss as indicated on the altimeter.

6. If leakage rate is within tolerance, slowly release suction source.

**Note:** If leakage exceeds maximum allowable, first tighten all connections, then repeat leakage test. If leakage rate still exceeds maximum allowable, use the following procedure:

7. Disconnect static pressure lines from airspeed indicator and vertical speed indicator. Use suitable fittings to connect lines together so that the altimeter is the only instrument still connected into the static pressure system.

8. Repeat leakage test to check whether static pressure system or the bypassed instruments are the cause of the leakage. If instruments are at fault, they must be repaired by an “appropriately authorized repair station”, or replaced. If static pressure system is at fault, use the following procedure to locate the leakage.

9. Attach a source positive pressure to the static source opening. Drawing 9017093 shows one method of obtaining positive pressure.

**CAUTION**

*Do not apply positive pressure with airspeed indicator or vertical indicator connected to the static pressure system.*

10. Slowly apply positive pressure until altimeter indicates a 500 foot decrease in altitude and maintain this altimeter indication while checking for leaks. Coat line connectors and static source flange with solution of mild soap and water, watching for bubbles to locate leaks.

11. Tighten leaking connections. Repair or replace parts found to be defective.

12. Reconnect airspeed and vertical speed indicators into static pressure system and repeat leakage test steps 3 through 6.

**Pitot System Inspection and Leakage Test**
To check pitot system for leaks, place a piece of rubber or plastic tubing over pitot tube, close opposite end of tubing and slowly roll up tube until airspeed indicator registers in the cruise range. Secure tube and after a few minutes recheck airspeed indicator. Any leakage will have reduced the pressure in the system, resulting in a lower airspeed indication. Slowly unroll tubing before removing it, so pressure may be released gradually. Otherwise instrument may be damaged. If test reveals a leak in the system, check all connections for tightness.

**Blowing out Lines**

Condensation may collect at points in the pitot system and produce a partial obstruction. To clear line, disconnect airspeed indicator. Using low pressure air, blow from indicator end of line toward pitot tube.

**CAUTION**

*Never blow through pitot or static lines towards the instruments*

Like pitot lines, static lines must be kept clear and connections tight. When necessary, disconnect static line at first instrument to which it is connected, then blow line clear with low pressure air. Check all static pressure lines for tightness. If hose or hose connections are used, check for general condition and clamps for security. Replace hose which has cracked, hardened or shows signs of deterioration.

**Removal & Installation of Components**

To remove pitot mast, remove the two rivets fastening it to the wing strut and pull it out from the strut far enough to disconnect the pitot line.

The static mast is fixed and cannot be removed. To gain access to disconnect the static tube from the static mast, Pitot and static tubing is removed in the usual manner.

Installation of tubing will be simplified if a guide wire is drawn in as the tubing is removed. When replacing tubing and fittings, tighten connection firmly, but avoid over-tightening and distortion of fittings or tubing.

**Engine Instruments**

Detailed instructions covering the installation of each engine instrument are enclosed with the instrument.
**Jabiru Aircraft**

**SECTION AA**

- R.S. WING ATTACH AT THIS END
- TUBE TO BE SET PARALLEL TO AIR FLOW WHEN INSTALLED

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>TUBE BENT PITOT</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>HOSE CLAMP M58242</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>HOSE COUPLING</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>PVC TUBE 1/4&quot; ID</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>WIRE TIE</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>RIVET</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>MOUNT PLATE PITOT TUBE</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>TUBE STRAIGHT PITOT</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>WING STRUT ASSY</td>
<td>1</td>
</tr>
</tbody>
</table>

**NEW PART NO.**

**DESCRIPTION**

**QTY**

**Drawing 9024094/2 PITOT ASSEMBLY**