



## **Fit Ram Air Cooling Ducts & Gull Wings**

**Reference:** Drawing  
Photos

**Parts Required:** Gull Wings x 2, Lock wire, 1/8" rivets, 1/8" washers, Aluminium angle bracket.

**Materials Required:** 5 min Araldite, Flock, Epoxy Resin, AF303 Fibreglass.

### **Procedure:**

#### **Fit Ram Air Ducts:**

1. Trial fit Ram Air cooling duct to Left & Right cylinders. It may be necessary to trim around the front of the Ram Air Cooling Duct & around the cylinders to enable it to sit as close as possible to the cylinders.
2. Find the front & rear cap screws for the tappet cover with the Ram Air Duct in place & transfer the position onto the Ram Air Cooling Duct.
3. Remove the Ram air cooling duct & drill the two marked cap screw holes to 1/4".
4. Re fit Cooling ducts to engine & secure with 1/4" cap screws.
5. Ensure cooling duct is as close to the front of the cylinders as possible, then tack the join together with 5min araldite. Repeat for other side.
6. Remove cooling ducts & mix a small amount of epoxy resin.
7. Using two layers of AF303 fibreglass the join & allow to cure.
8. Trim excess fibreglass off & reinstall duct onto cylinders.



Ram Air Cooling Ducts trial fitted

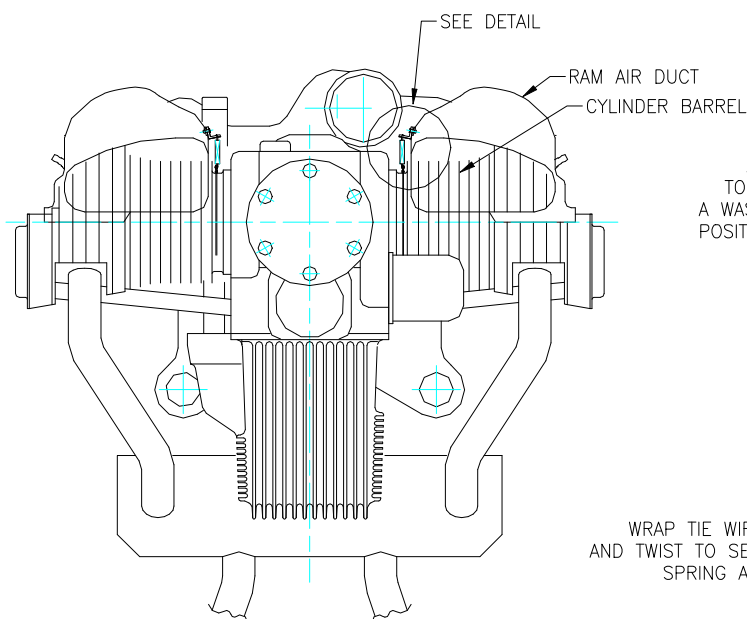
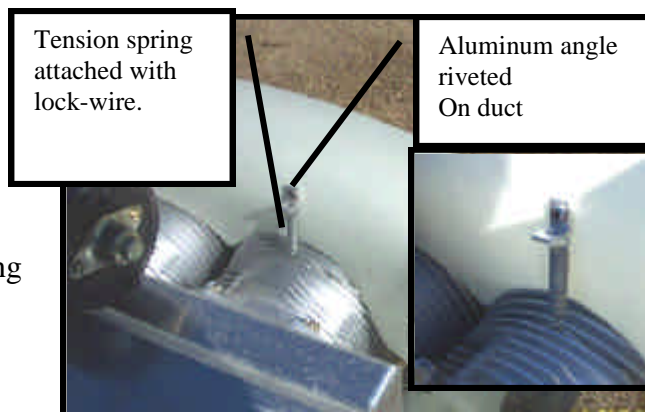


Front & Rear tappet cover Cap Screws used for securing Ram Air Cooling Ducts.

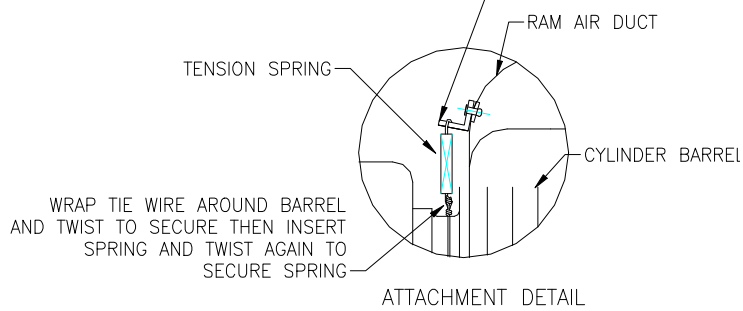


### **Fit Spring to Ram air Ducts**

1. Wrap Lock Wire around the # 3 & 4 cylinders to pull down the spring into the cooling fins.
2. Insert lock wire through the eye of the spring & wind lock wire until spring has pulled down into fins.
3. Project a line up to the top of the radius of the Ram Air Cooling Duct with the spring Vertical.
4. Drill a 1/8" hole through the fiberglass using the Right Angle bracket as you drilling jig.
5. Rivet the Aluminum Bracket to the Ram Air Cooling Duct using a 1/8" Aluminum Rivet & a 1/8" steel washer on the inside as a backing plate.
6. Attachment to the spring to the aluminum angle.



ALUMINIUM ANGLE BRACKET ATTACHED TO RAM AIR DUCT WITH POP RIVET AND A WASHER ON INSIDE TO DISTRIBUTE LOAD POSITION TO PROVIDE TENSION ON SPRING

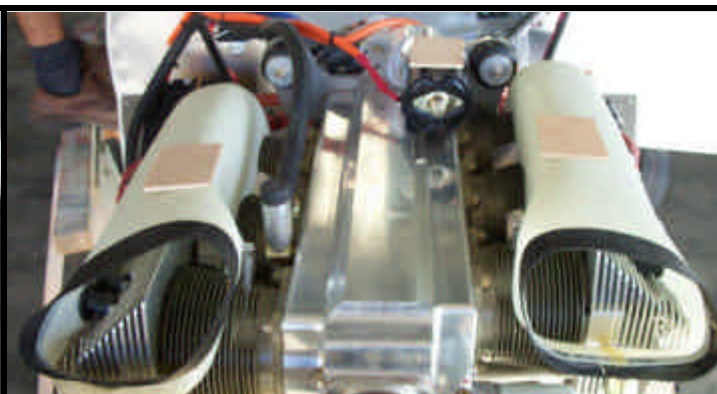


Drawing 9111094/1 AIR DUCT ATTACHMENT

### **Fit Insertion Rubber to Ram Air Cooling Duct**

*N.B As the Jabiru Ram air cooling ducts are used on a large number of different aircraft, the nose of the duct is left longer for different applications. It may be necessary to cut the front of the Duct down to fit your cowl.*

1. When satisfied with the length, cut 1mm insertion rubber to length, sand rubber & cooling duct well to ensure a good bond.
2. Bond with 5-min Araldite making sure you have about 1/2" overlap. Use some spring clamps to secure while bonding.





### Fit Gull Wings procedure:

These are fitted between the cylinders in order to enable air to be forced through the head fins. The Ram air cooling ducts fit over the Gull Wings after the gull wings are fitted.

1. Wrap wire around the front cylinder making sure you are against the cylinder & not around any pushrod tubes.
2. Feed the wire up through the Gull wing, pulling the wire until it is tight.
3. Push lock wire back down through the second hole & wrap around the next cylinder.
4. Repeat step 2 & 3.
5. To finish the lock wire off, make a loop through the spring & tension it enough to pull the Gull wings into the cylinder Valleys.

