



AOA, Pitot, Static Plumbing Kit Installation Guide

This product is not approved for installation in type certificated aircraft

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Kit Contents				
Dynon Part #	QTY	Part Description	Part Symbol	Part Image
102631-000	6	Straight Male		
102631-001	2	Elbow Male		
102639-000	3	Y-Union		
102639-001	1	T-Union		
102559-000	2	Static Air Port		
102632-000 102632-001 102632-002	25 ft 25 ft 35 ft	Polyethylene Tube Blue (-000) Green (-001) White (-002)	BLUE GREEN WHITE	 AOA Pitot Static

102642-000	30	Snap Bushing	N/A	
102641-000	1	Tube Cutter	N/A	
102630-000 102645-000 102643-000 102644-000	2	Flared Coupling Assembly		See Below



Note: Parts may look slightly different than pictured.

Thank you for your purchase of the Dynon Avionics Pitot, Static, Angle of Attack Kit. This installation guide is meant to make the task of plumbing this kit in your aircraft as easy and understandable as possible. If there are questions which you find are not answered inside this guide please feel free to email support@dynon.com or call tech support at (425) 224-6736 for assistance. Photos sent via email are very helpful and can improve our understanding of your situation or issue.

This kit does not include the Dynon AOA/Pitot Probe. For assistance with probe installation please reference the Dynon AOA/Pitot Probe (P/N 100141-000) Heated AOA/Pitot Probe (P/N 100667-000) Installation Guide (Document 100740-001).

Introductory Information

PLEASE READ THE GUIDE IN ITS ENIRETY BEFORE BEGINNING YOUR INSTALLATION.

Modifications or adjustments may be necessary for your individual plane.

Dynon uses Quick-Disconnect fittings for the plumbing of this kit. Tubing is mounted into these fittings using stainless steel retainers that allow tubing to enter the fitting but prevent the tubing from sliding back out unless the retainers are properly retracted by pressing the outer release ring. This allows for connection, disconnection, and reconnection of tubing easily with only one hand. A fresh cut of the tubing with the supplied tube cutter is recommended before re-inserting the tubing. With the use of these Quick-Disconnects maintenance and instrument removal are made significantly easier from the standpoint of a builder such as yourself.

Recommended Tools & Installation Accessories

Dynon has tried to provide the builder with as many parts and tools as necessary to make the installation task go more smoothly. There are tools that Dynon recommends for installations that use different tubing. These tools are listed below along with an optional retailer to purchase them from if necessary.

Recommended Tools

Aviation Grade Flaring Tool (37 degrees)

- www.aircraftspruce.com/catalog/topages/hidutyflaringtool.php?clickkey=4577
- www.aircraftspruce.com/catalog/topages/flaringtools2.php?clickkey=4577
- Or search "flaring tool" from any trusted aircraft retailer

NOTE: Automotive or other non-aviation grade flaring tools will cause aluminum to work harden and fail due to flaring in excess of 37 degrees. Dynon strongly recommends using trusted tools designed specifically for aircraft.

Unique and additional fittings are available through Coast Pneumatics and can be ordered here- <http://www.coastpneumatics.com>

Installation

Static Port

Static air pressure is obtained through both of the static port fittings provided by Dynon which will be mounted into the side of the aircraft. They should be mounted appropriately and in accordance with the builder's specific aircraft; in a place where the port can access relatively undisturbed air flow. Dynon's static port has been designed to be mounted proud of the aircraft skin, in order to give more accurate readings. Two static ports are provided, one to mount on each side of the aircraft, to further increase accuracy in pressure readings.

After the placement of the static port is determined, verify there is enough room inside the aircraft for the flange and fitting of the static port. Drill a ½" diameter hole (12 mm) from which the port will protrude. The circular groove on the back side of the port is meant to help with the alignment and drilling of 2 to 4 evenly spaced rivets. Another option is to use a compound, such as Pro-Seal, to mount the static port and seal out moisture.

Structural Penetration and Pass-Thru

30 snap bushings have been provided in this kit so as to make plumbing within the fuselage and passing through internal structures easier and reduce possible chaffing of the tubing. Once a 3/8" diameter hole is drilled through the structure that needs to be bypassed, the snap bushing can be installed by pushing it into the hole. The tubing will fit snugly through the snap bushing and eliminate the possibility of chaffing. Do not route tubing through a bulkhead without using a snap bushing.

Tubing

The most important consideration when installing tubing for the AOA, Pitot, Static system is to avoid damage or deformation of the tubing. The tube cutter provided by Dynon is an excellent way to ensure the tubing will not be crushed or given a jagged edge that scissors or other cutting tools might produce. Poor cuts can lead to leaky tubes or damage to the fitting to which they are connected. These leaks may not be obvious at first but can develop over time.

When connecting a tube to a fitting it is important to ensure that the tubing is completely sealed in and has bottomed out. Push the tubing into the fitting until you feel it stop. Push with more pressure and the tube will slide in further and finally bottom out. One way to ensure the tube has been pushed in all the way is to draw a small mark ½" (12mm) up from the end of the tubing going into the fitting. When the tubing is fully inserted into the fitting that mark should fall completely below the lip of the fitting and no longer be visible.

Terminating the AOA, Pitot, Static lines into your Dynon Avionics product (SV-ADAHARS-200/201, EFIS-D6, EFIS-D60, EFIS-D10A, EFIS-D100, FLIGHTDEK-180) is covered in those respective manuals.

Pitot, Static, AOA Plumbing Installation Diagram

