

## API Fuel Injection Systems 101

### Practical Knowledge of the Fuel Injection System Application to Experimental Aircraft



For over forty years mechanical fuel injection has been used on general aviation aircraft piston engines. Today it is still the most misunderstood system encountered by aviation mechanics and homebuilders alike. It's a sobering fact but the majority of first flight mishaps are due to fuel system related issues. Armed with the correct understanding and knowledge of these systems, one can separate myth from fact. The homebuilding experience, first flight and subsequent flights will be a fulfilling, safe and fun experience.

Airflow Performance has been in the business of providing aircraft fuel injection components for 20 years, our experience in aircraft fuel injection systems spans over 30 years. Sean D. Tucker, Patty Wagstaff, Jim Leroy, and Steve Oliver, are just a few of the top names in the air show business that our company sponsors. These people depend on Airflow Performance products reliability, high performance and our staff's technical expertise to give them the performance they demand from their equipment.

In an effort to dispel the mysteries of fuel injection, Airflow Performance will be offering a class titled Fuel Injection 101. In this two day event, participants will learn the basics of fuel injection, the theory of the design, system interface concerns, tuning, maintenance, and troubleshooting. Actual demonstrations with system components will be made to reinforce classroom lectures. Class size will be kept small (5 to 10 people). This will give the participants the most time for hands on labs, and discussion of questions pertaining to unique fuel metering situations.

Our facility is located at the Spartanburg downtown airport (SPA). We encourage participants to fly in their own plane (fuel injected aircraft preferred) as we can use these as live examples for installation techniques, idle mixture setting, and nozzle tuning (do the GAMI thing for 1/10 the price). We have adequate hanger space to keep your aircraft safe and secure for the duration of the class. Ground transportation will be provided for those pilots flying to this seminar.

This seminar is an excellent source of information for the homebuilder, A&P, and EAA Technical Councilor.



## API Fuel Injection Seminar

- Opportunity to gain more knowledge of your fuel injection system
- Begins on Friday's and ends on Sunday. A class is scheduled for November 4<sup>th</sup> through 6<sup>th</sup>, 2011. A Tentative class is set for the beginning of March 2012.
- \$325.00 pre-paid covers the expenses of the seminar, transportation to and from a hotel within a five mile radius, and meals
- Hotels within the area include: Super8, Hampton, Holiday Inn Express, Comfort Suites, Radisson, and Courtyard by Marriott
- Rooms typically run from \$49.95 to \$79.00 per night. Ask about corporate discounts and AAA and AARP discounts

### Tentative Itinerary

Friday	4pm-	Tour of Facility. Evening Cookout and Gathering.
Saturday	8:30-10:00am	Greeting. Airflow Performance background Fuel Metering Theory Fuel Air Ratio; effect EGT/power.
	10:00-10:30	Break
	10:30-12:30	Fuel Injection Parts/Function Fuel Control Flow Divider Injector Nozzle
	12:30-1:30pm	Lunch (provided)
	1:30-3:00pm	View Fuel Injection Components
	3:00-3:30	Break
	3:30-5:00pm	Fuel Injection Installation
	5:00-	Discussion and Barbeque Dinner
Sunday	8:30-10:00	Turbo/Supercharging Installation Injector Nozzle tuning
	10:00-10:30	Break
	10:30-12:00	Questions Closing Light Lunch (Provided for those wishing to stay)



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