



TECHNICAL DATA SHEET

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AE is recognized for Quality Management System Registration to ISO 9001:2000.

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TITAN® EXP™ Fuel Injection System Calibration Kit

- 1.0 **Subject:** Instructions for use.
- 2.0 **Part Number and Availability:** The TITAN® EXP™ Fuel Injection System Calibration Kit (P/N AE115) is sold through Engine Components Inc. (ECi®).
- 3.0 **Reference:** For additional information go to the ECi web site at www.eci2fly.com.
- 4.0 **General Description:** The kit contains the necessary components to properly adjust the AE400 thru AE900 Fuel Injection Systems after the system is installed on an engine and the engine is installed in an airframe. The kit includes the following components:
 - 1 – Molded high impact plastic case measuring 12" x 13" x 6" (Color: Silver)
 - 1 – Calibrated high accuracy (0 – 60 psi, Grade 1A) pressure test gauge
 - 1 – Selector valve, 3 ports
 - 2 – Hose, #4 size (1/4") x 30 in. long
 - 2 – Tee Fitting, Tube to Swivel, Swivel on Run, 37° Flared, 203102-4-4S

CAUTION

Substitutions for any of the components that are supplied in the kit may result in erroneous readings. If any component in the kit requires replacement due to physical damage or wear, contact Engine Components, Inc. at sales-service@eci2fly.com for a replacement. In addition Airmotive Engineering recommends that the pressure test gauge be calibrated every year. Calibration service is offered for a nominal fee and may be obtained by contacting sales-service@eci2fly.com.

- 5.0 **Safety Information:** The following special attention notices are used in this Technical Data Sheet to notify and advise the user of the product that certain actions or procedures may be dangerous to the user or result in improper fuel system adjustment.

CAUTION

Caution is used to indicate the presence of a hazard which will or can cause minor injury or property damage if the notice is ignored.

WARNING

Warning advises that a potential hazard exists and denotes actions and procedures that must be followed exactly to either eliminate or reduce the hazard and to avoid serious personal injury or prevent future safety problems with the product.

6.0 **Pressure Test Gauge Installation**

- 6.1 Place the pressure test gauge and selector valve assembly on a suitable work stand or properly protected wing of the aircraft at a height approximately even with the fuel manifold valve.
- 6.2 Insure that the selector valve ports are plumbed as follows (port numbers are stamped on the underside of the valve):
 - #1 – Pressure gauge
 - #2 – Un-metered fuel
 - #3 – Metered fuel
 - #4 – Plugged
- 6.3 Attach the selector valve to the pressure gauge using the included coupling. Apply Teflon tape to the male pipe threads before assembly. Torque to 70 - 120 in. lbs.

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- 6.4 Attach one end of each test hose that is supplied with the kit to the ports that are on selector valve (See 6.2 above). Torque to 135 – 190 in. lbs.
- 6.5 To measure un-metered fuel pressure, attach the open end of the un-metered test hose to the pump outlet or the throttle body inlet by means of the swivel tee adapter fitting that is supplied with the kit. For location of connection points, see Figure 1. Torque fittings to 135 - 190 in. lbs.
- 6.6 To check metered fuel pressure, attach the open end of the metered test hose to the throttle body fuel outlet or the fuel manifold inlet by means the swivel tee adapter fitting. For location of connection points, see Figure 1. Torque fittings to 135 - 190 in. lbs.
- 7.0 **Bleeding of the Pressure Test Gauge Installation**
- Place mixture control in full rich position
 - Place throttle in wide open position
 - Turn boost pump ON
 - Loosen fuel line connections on the selector valve, bleed out all of the air and then re-tighten the connections. Collect fuel in a suitable container and dispose of the purged fuel in a safe manner.

WARNING

Verify torque values on all connections in order to prevent fuel leaks which could result in an engine fire.

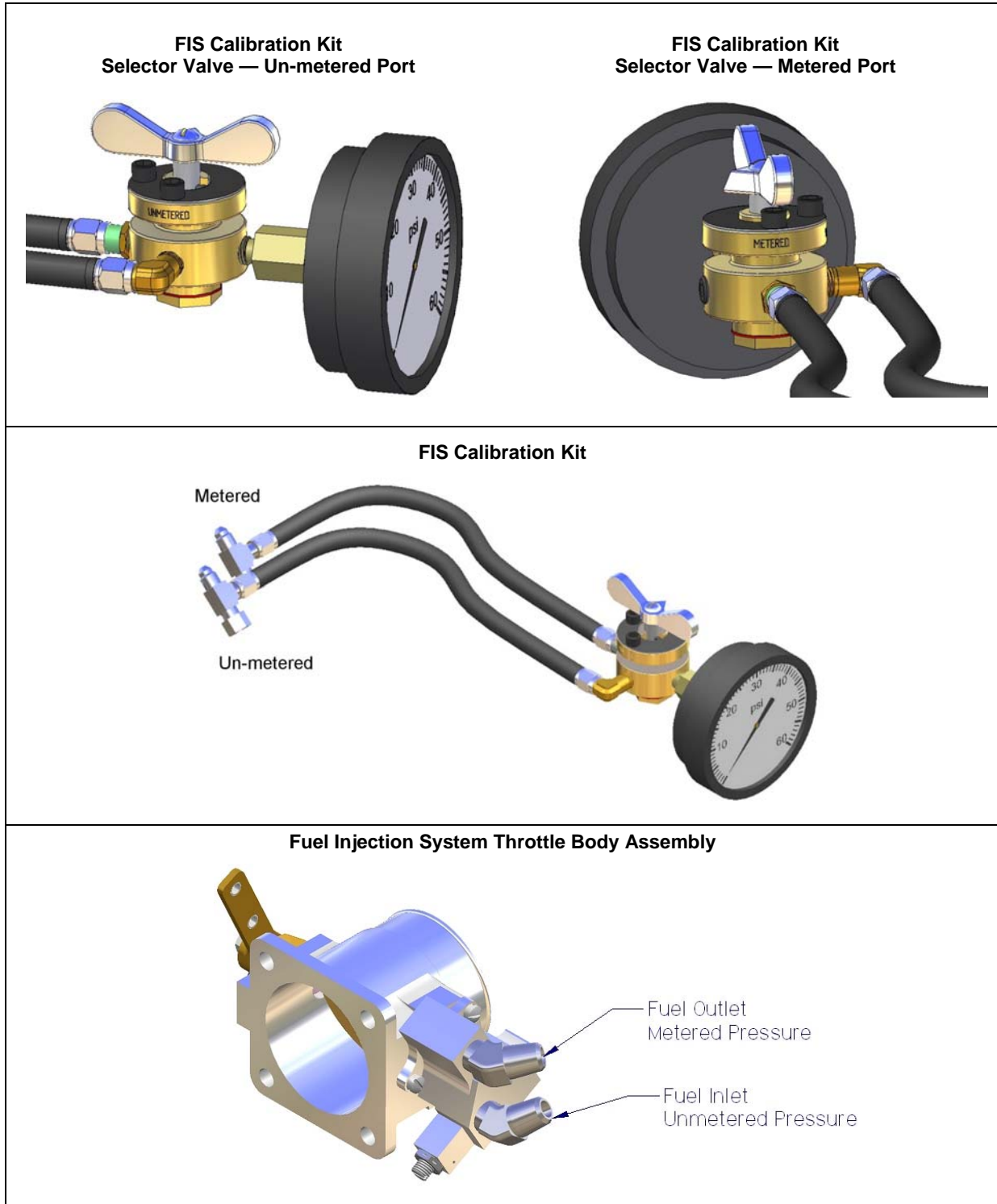
- 8.0 **Adjustment and Test:** Adjust and test the TITAN EXP Fuel Injection System in accordance with procedures contained in the TITAN EXP Fuel Injection System Manual and calibration data contained in the appropriate Technical Data Sheet.
- 9.0 **Uninstall Pressure Test Gauge:**
- 9.1 After completing the adjustment and test procedure, the fuel pressure test gauge may be uninstalled by reversing the steps taken to install the gauge. Be sure to clean up any fuel that may have spilled when removing the gauge, test hoses and swivel tee adapters.
- 9.2 Remove all traces of fuel from the test kit components and replace the components in the molded plastic case which is part of the test kit.

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FIGURE 1
FIS Calibration Kit Attachment Points to Throttle Body Assembly

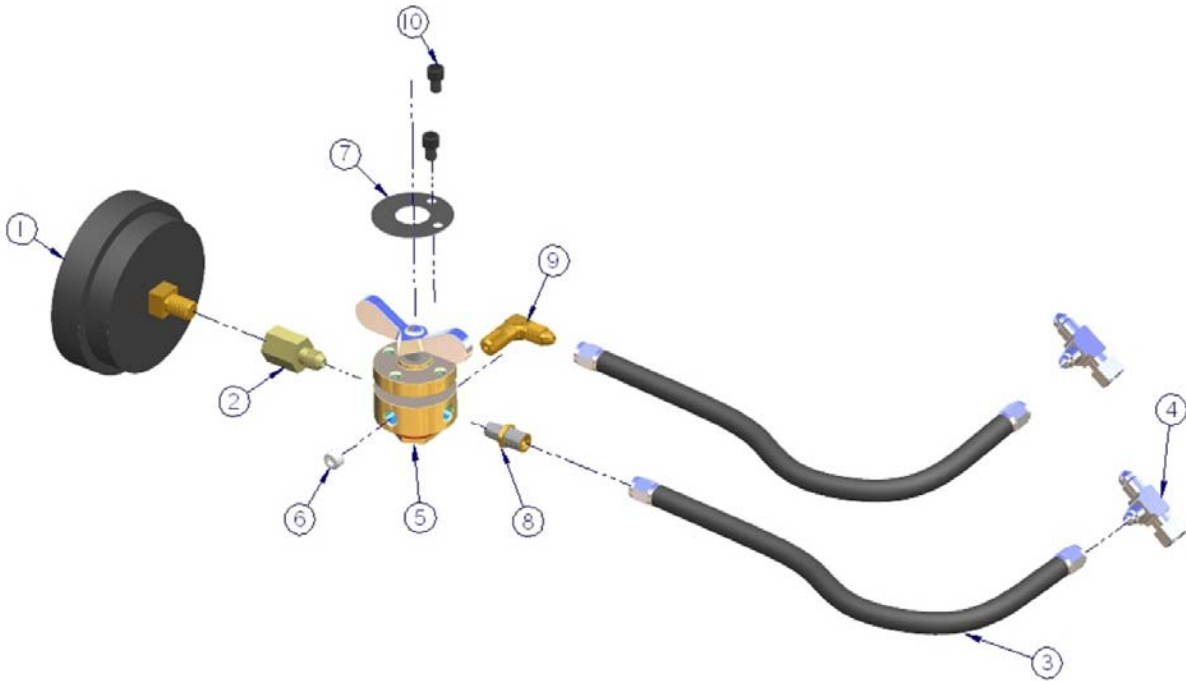


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10.0 **TITAN EXP Fuel Injection System Calibration Installation and Parts List (P/N AE115)**



Item No.	Part Number	Description	Qty.
1	PGAUGE	Gauge, Pressure (0-60 psi)	1
2	FASTENAL69897	Adapter, Pipe	1
3	193000-4D0300	Hose Assembly	2
4	203102-4-4S	Tee	2
5	8159K51	Valve, 3-way, Brass, 1/8" Pipe Plug	1
6	AE27769-2	Plug, Pipe	1
7	AE100109	Plate, Data, Valve	1
8	AN816-4	Adapter, Straight, Pipe to Tube	1
9	MS20822-4	Elbow, Pipe to Tube 90°	1
10	91251A535	Screw, Cap 1/4-20 UNC, Socket, Hd.	2
11	1400	Case, Pelican	1*

* Not shown