

Installation and Detail Specification EX-5VA1 Fuel Injection Servo

- 1.0 Purpose:** The purpose of this specification is to provide a description of the EX-5VA1 fuel injection servo and outline the installation requirements for new installations.
- 2.0 Description:** The EX-5VA1 fuel injection servo is based on the principle of measuring air flow to establish correct fuel flow. A venturi is used to measure the air flow and create an air force proportional to air flow. An in-line diaphragm type regulator is used to convert an air force into a fuel force. The fuel force is applied across a fuel metering section and makes fuel flow proportional to air flow. The servo is the primary component used in the fuel injection system and performs all functions required to establish fuel flow volumes.

3.0 General Specifications:

- 3.1.1 Regulator: In-Line Diaphragm Type
 Bore Size: 2-5/16" inside diameter
 Weight: Approximately 5.25 lbs.

4.0 Installation Requirements:

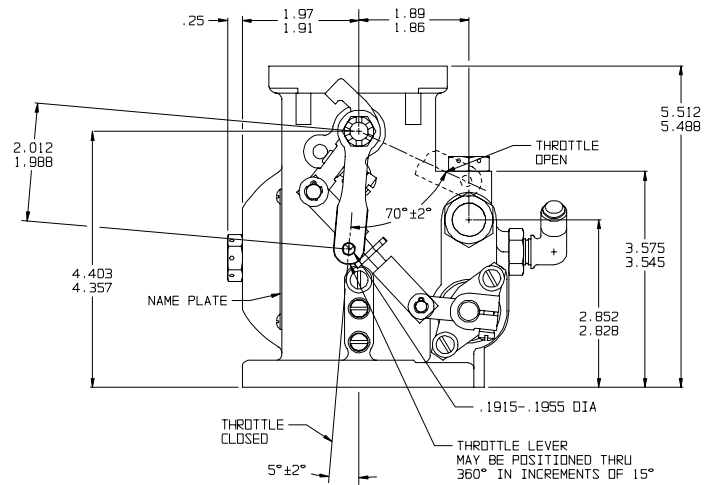
- Dimensional:** See views A – C, for representational information. Other configurations are available for the selection and orientation of fuel fittings and control levers. Contact Precision Airmotive Product Support for specifics.
- Fuel Pressure:** Nominal: 20-50 psig relative to upper deck pressure
 Minimum Operating: The minimum operating pressure shall be determined by installation specific testing.
 Max Operating: 80 psia max
 Max Momentary Peak: 140 psia max
- Fuel Filtration:** The fuel supplied to the servo shall be filtered to 32 micron nominal. This filtration may occur prior to the engine driven pump, but all other pumps and valves shall be upstream of the filter.
- Fuel Temp:** 120°F recommended max at inlet to servo to minimize vapor formation downstream of the servo. Fuel temperatures upstream of the servo shall low enough to prevent vapor formation in the fuel lines. It is assumed that temperatures may exceed the above listed temperatures under some conditions, but these temperatures may result in degraded performance at low engine speeds.
- Inlet Air Temp:** The induction air temperature measured at the inlet to the servo shall not exceed 400°F.
- Orientation:** The servo may be installed in any orientation. If the servo is installed in an updraft orientation, some means shall be employed to prevent fuel and/or oil from running down the intake manifold into the servo bore.

DATE WRITTEN	DATE RELEASED	LATEST REVISED DATE	SHEET NO.	NO. OF SHEETS	WRITTEN BY:
12/5/03	12/5/03	12/5/03	1	4	RSHall
					APPROVED BY:
LATEST CHANGE		PRECISION AIRMOTIVE CORPORATION 14800 40th Avenue NE, Marysville, Washington 98271 F.A.A. Repair Station: P32R748N • F.A.A.-P.M.A.: PQ 111 NM • FSCM 65702			
A					

5.0 Environmental Requirements:

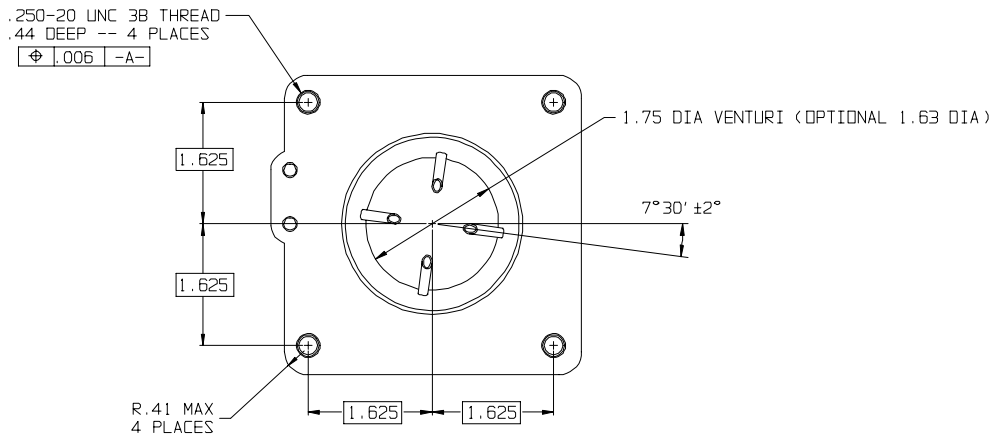
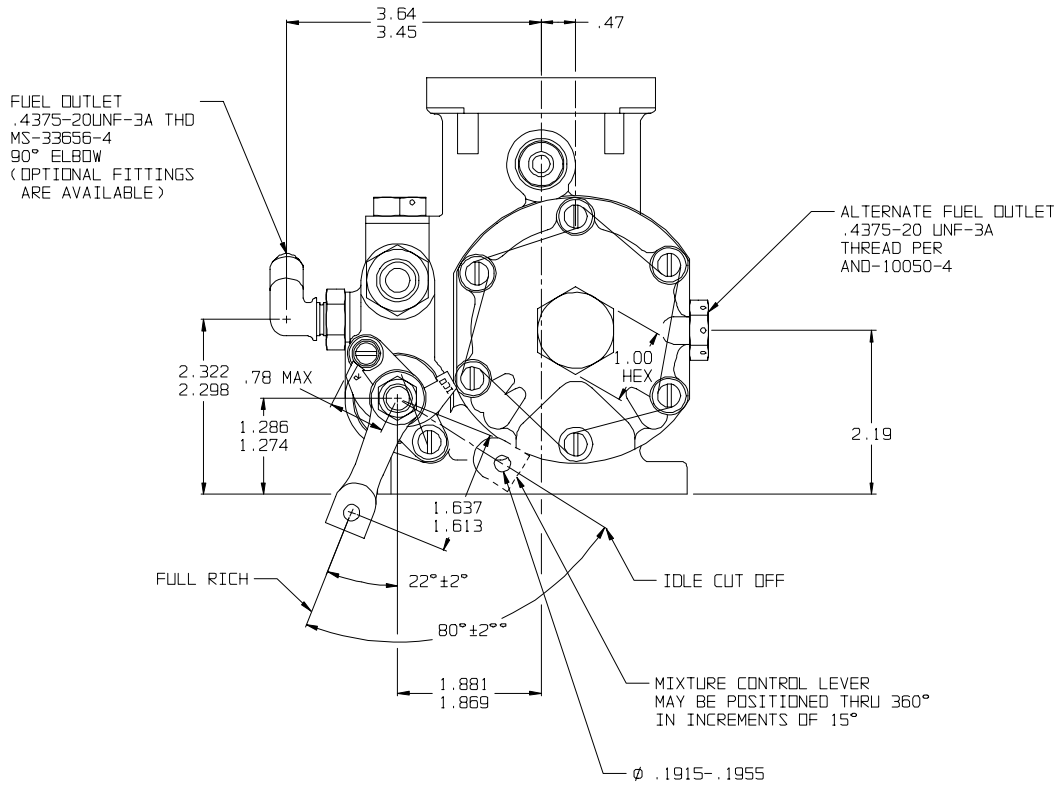
Operating

Temperature: -65°F to 300°F. This temperature shall be measured on the exterior of the throttle body adjacent to the outlet port on the valve body side of the servo.



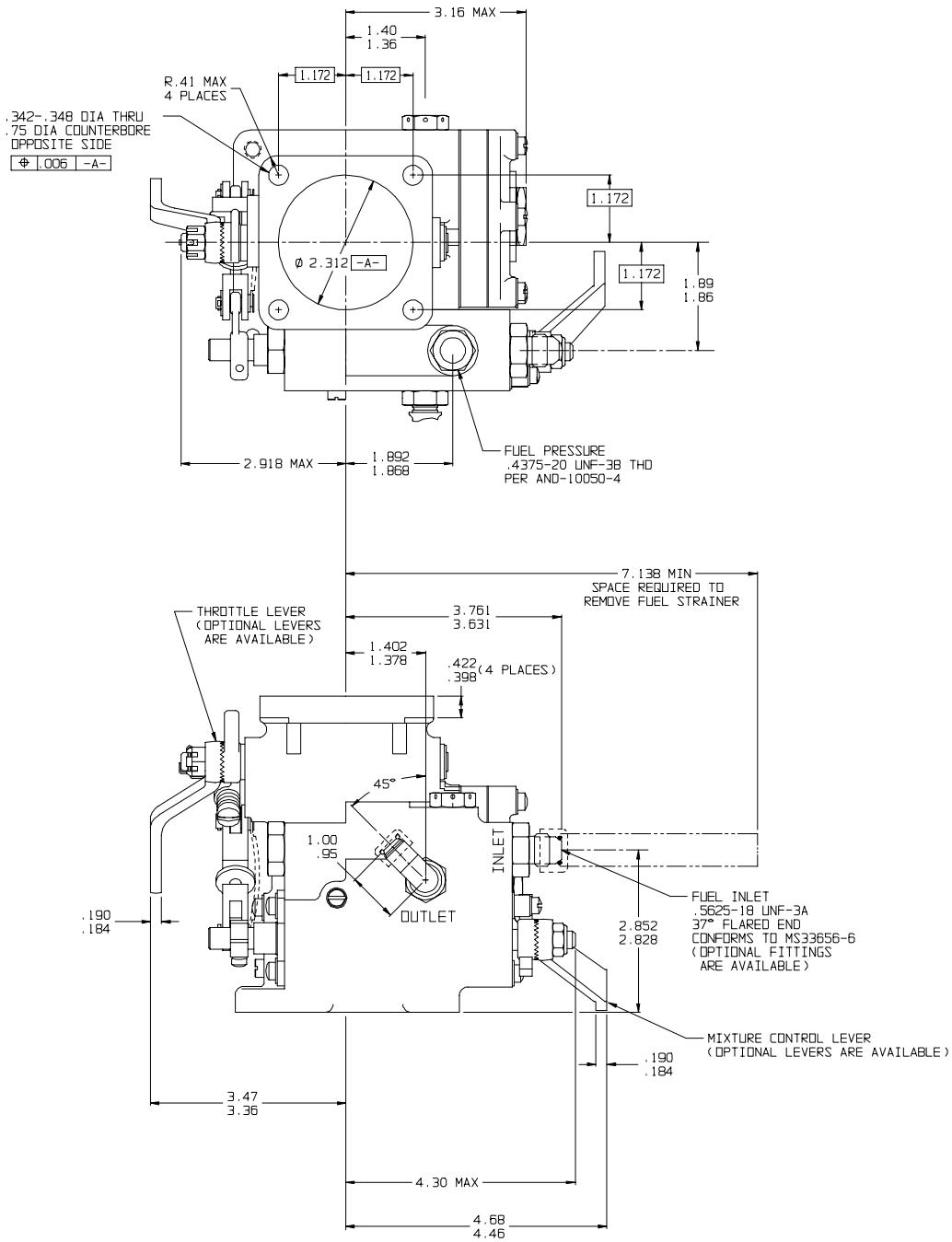
EX-5VA1
VIEW A

DATE WRITTEN	DATE RELEASED	LATEST REVISED DATE	SHEET NO.	NO. OF SHEETS	WRITTEN BY:	RSHall
12/5/03	12/5/03	12/5/03	2	4	APPROVED BY:	(See Page 1)
LATEST CHANGE		A				



EX-5VA1
VIEW B

DATE WRITTEN	DATE RELEASED	LATEST REVISED DATE	SHEET NO.	NO. OF SHEETS	WRITTEN BY:	RSHall
12/5/03	12/5/03	12/5/03	3	4	APPROVED BY:	(See Page 1)
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EX-5VA1
VIEW C

DATE WRITTEN	DATE RELEASED	LATEST REVISED DATE	SHEET NO.	NO. OF SHEETS	WRITTEN BY:	RSHall
12/5/03	12/5/03	12/5/03	4	4	APPROVED BY:	(See Page 1)
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