

# RAM AIRCRAFT

## SERVICE INFORMATION DIRECTIVE

Compliance will enhance safety, maintenance, or economy of operation

# SID2006-01

TECHNICAL PORTIONS OF THIS DOCUMENT ARE FAA APPROVED.

**SUBJECT:** Fuel injection system specifications for RAM Series IV, VI, and VII engines.

**PURPOSE:** Provide information for fuel system set-up and maintenance of RAM Series IV, VI, and VII engines.

**COMPLIANCE:** At engine installation, 100-hour/annual inspection, fuel system component replacement, or as required.

**MODELS AFFECTED:** Teledyne Continental Motors (TCM) model TSIO-520–NB engines modified per RAM STC # SE4327SW or STC # SE09104SC, rated as follows:


<u>RAM Series Reference</u>	<u>RAM STC Reference</u>	<u>Max. Horsepower Rating</u>	<u>Max. Manifold Abs. Pressure (MAP) In. Hg.</u>	<u>Max Propeller RPM</u>
IV	STC # SE4327SW	325	41	2700
VI	STC # SE4327SW	335	41	2700
VII	STC # SE09104SC	335	38	2700

### GENERAL INFORMATION

RAM Series IV, VI, and VII engines noted above are supplied with TCM continuous flow fuel injection system components, which are adjusted and calibrated to meet TCM specifications for the TSIO-520-NB engine. This ensures proper fuel flow throughout the full range of operation. Fuel injection system components installed on newly overhauled RAM Series IV, VI, and VII engines are adjusted to meet design specifications of the applicable STC for increased horsepower. These adjustments are carried out in an environment of controlled fuel supply pressures and calibrated test equipment.

When installing or maintaining RAM Series IV, VI, or VII engines in aircraft, they require additional checks and adjustment of the fuel injection system to meet operational specifications of the applicable STC for increased horsepower before flight.

Procedures and equipment for adjustment of RAM Series IV, VI, or VII engines are the same as those set forth by TCM service information directive SID97-3C. The following fuel pressure and flow settings are specified for RAM Series IV, VI, and VII engines and must be used in place of those specified in SID97-3C, Table 3 for TCM TSIO-520-NB engine.

ISSUED			REVISED			 <b>RAM Aircraft, Limited Partnership</b> Waco Regional Airport 7505 Karl May Dr, Waco, Texas 76708 Phone: (254) 752-8381 Fax: (254) 752-3307 Website: <a href="http://www.ramaircraft.com">http://www.ramaircraft.com</a>	PAGE	REVISION
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**TABLE 1: Fuel System Adjustment Values**

<b>IDLE AND FULL POWER FUEL PRESSURES AND FLOWS</b>					
<u>RAM Series Reference</u> (horsepower)	<b>Prop. RPM &amp; (MAP)</b>	<b>Unmetered Pump PSI (NOTE 1)</b>	<b>Metered Nozzle PSI (NOTE 2)</b>	<b>Flow lbs/hr (NOTE 3)</b>	<b>Flow gal/hr (NOTE 3)</b>
IV (325)	600	5.5 – 6.5	N/A	N/A	N/A
	2700 (41.0)	34.0 – 43.0	19.0 – 30.0	200 – 205	34.0 – 35.0
VI (335)	600	5.5 – 6.5	N/A	N/A	N/A
	2700 (41.0)	34.0 – 42.0	21.0 – 27.0	202 – 208	34.5 – 35.5
VII (335)	600	5.5 – 6.5	N/A	N/A	N/A
	2700 (38.0)	35.0 – 41.0	22.0 – 28.0	199 – 211	34.0 – 36.0


NOTE 1: FULL POWER “unmetered” fuel pump pressure limits are provided for reference only. Use “metered” fuel flow specifications for adjustments at full power.

NOTE 2: Use for full power, maximum RPM adjustment only. All other parameters for reference only.

NOTE 3: Should be determined using a **calibrated** in-line flow measuring device.

**CONTACT INFORMATION:**

RAM Aircraft Customer Service Dept. at (254) 752-8381 (M-F, 8 AM to 5 PM, CDT).

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