

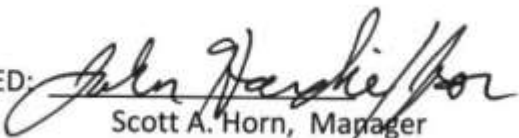
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GAMIjectors[®] and *turboGAMIjectors*[®] Fuel Injectors

FAA Approved Airplane Flight Manual Supplement

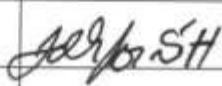
This Supplement must be attached to the Airplane Flight Manual or Pilot Operating Handbook when General Aviation Modifications, Inc. fuel injector kits are installed in accordance with one of the following STC's: **SE09217SC, SE09289SC, SE09401SC, SE09445SC, or SE09963SC**. This Supplement applies to aircraft with engines that have *GAMIjectors*[®] or *turboGAMIjectors*[®] fuel injector kits serial number 25000 and after. This Supplement optionally applies to aircraft with engines that have *GAMIjectors*[®] or *turboGAMIjectors*[®] fuel injector kits prior to serial number 25000.

The information contained herein supplements the information of the Airplane Flight Manual or Pilot Operating Handbook only in those areas listed herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Airplane Flight Manual or Pilot Operating Handbook.

FAA APPROVED: 
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LOG OF REVISIONS

Revision	Pages	Date	Description	FAA Approved
IR	1-4	06/25/2015	Complete Supplement	

SECTION 1 – GENERAL

This supplement provides information which may be optionally observed when operating the engine with *GAMIjectors*[®] fuel injectors and an every-cylinder EGT/CHT engine monitor with digital readout of EGT and CHT temperatures for each cylinder.

Description

The *GAMIjectors*[®] fuel injectors, when properly tuned using the GAMI Lean Test procedures and with the aid of an every-cylinder EGT/CHT engine monitor, will allow the engine to operate in a wider range of fuel/air mixture settings than originally available when the Aircraft Flight Manual or Pilot Operating Handbook was first published. This gives the pilot more options when selecting an appropriate fuel/air mixture for a given flight.

SECTION 2 – LIMITATIONS

Not Applicable.

SECTION 3 – EMERGENCY PROCEDURES

Not Applicable.

SECTION 4 – NORMAL PROCEDURES

1. In takeoff and full power climb, do either of the following:
 - A. Set the fuel flow in accordance with the existing approved Airplane Flight Manual (AFM) or Pilot Operating Handbook (POH);
 - Or -
 - B. Set the fuel flow in accordance with the existing approved AFM or POH until pilot workload allows further adjustment of the mixture. Then, determine the typical highest EGT (TIT on turbocharged aircraft) shortly after takeoff

with full power and the mixture full rich from a low altitude (< 1,000 feet MSL) airport. Record that EGT (or TIT) temperature as a target EGT or TIT for leaning in other circumstances. For subsequent takeoffs and climbs, when pilot workload permits, adjust the mixture to keep the EGT (or TIT) during the takeoff or climb at the target EGT (or TIT). If the highest CHT exceeds 380°F (193°C), then enrichen the mixture in increments of approximately 0.5 GPH to maintain the highest CHT at or below 380°F (193°C).

2. In level flight, when pilot workload permits, lean the mixture to peak EGTⁱ. Then enrichen or lean, as desired, using Figure 1 as a guideⁱⁱ.

FIGURE 1

Power Setting ⁱⁱⁱ	Richer than Peak EGT ⁱ	Leaner than Peak EGT ⁱ
75% Power	150°F (83°C) or Richer	50°F (28°C) or Leaner
70 – 75%	125°F (69°C) or Richer	25°F (14°C) or Leaner
65 – 70%	100°F (56°C) or Richer	15°F (8°C) or Leaner
65% and below	Any Mixture Setting ⁱⁱ	Any Mixture Setting ⁱⁱ

ⁱNote: For mixture settings richer than peak EGT, use the first cylinder to reach peak EGT as you lean for your peak EGT reference point. This is the leanest cylinder. For mixture settings leaner than peak EGT, use the last cylinder to reach peak EGT for your reference point. This is the richest cylinder.

ⁱⁱNote: If any CHT is above 380°F (193°C), enrichen the mixture if operating richer than peak EGT, or lean the mixture if operating leaner than peak EGT.

ⁱⁱⁱNote: For power settings not listed, refer to AFM, POH, or other supplements, as applicable.

3. In low power descents, any mixture setting which produces a smooth running engine is acceptable. The pilot should make sure that the mixture is sufficiently rich at all times in the descent and traffic pattern so that engine will accept full power if the throttle is advanced, without stumbling or failing to respond in a normal manner.

Note: Make sure the mixture control is returned to an appropriately rich setting for landing or in the event of a go-around. At higher altitude airports, or in very hot weather, a normally aspirated engine may not operate properly with the

mixture full rich. See the Airplane Flight Manual or Pilot Operating Handbook for your aircraft as a reference. A turbocharged engine should normally use a full rich mixture or a mixture very close to full rich for any high power missed approach or go-around. The target EGT (or TIT) established as described in Normal Operations may be used for missed approaches and go-arounds, if pilot workload permits.

4. Avoid mixture settings that result in any cylinder head temperature operating continuously above 400°F (204°C).

Recommendation: The highest cylinder head temperature should remain at or below 380°F (193°C) for improved long term engine durability.

(a). If any CHT is above the recommended temperature, enrichen the mixture if operating richer than peak EGT, or lean the mixture if operating leaner than peak EGT.

5. If operating leaner than peak EGT, do not continue to operate the engine at a mixture that produces unacceptable levels of engine roughness.
6. For turbocharged engines, the Turbine Inlet Temperature should remain below the continuous limit in the original AFM or POH. However, the AFM, POH, or turbocharger manufacturer's instructions may allow operation above the continuous limit for short periods of time to establish the peak EGT/TIT reference.

SECTION 5 – PERFORMANCE

Not Applicable.