

Tips for setting the GM TBI P/N 17113186 regulator (vacuum-adjustable fuel pressure):

Background: The GM TBI P/N 17113186 regulator Top-Down Solutions has tested the spring (orange in color) that came in the GM TBI vafpr (GM P/N 17113186) and found it measures approximately 18 lbs/in. TDS found this spring rate was too high. We were unable to adjust the fuel pressure below 18 psi at WOT (Wide-Open Throttle) with this spring. Swapping this spring for the stock spring (tan in color) that came in the non-adjustable fuel pressure regulator wasn't acceptable either. This spring tested at approximately 8 lbs/in. This was found to be too low of a spring rate. We were unable to adjust this spring beyond 13 psi at WOT.

The new spring you have purchased (TDS P/N 105290) is rated at 15.5 lbs/in. This spring will give you an adjustment range from 12 psi to 20 psi at WOT.

Tools needed: Torx T10 & T15 tips.

CAUTION: Before attempting to turn the center adjustment screw you **MUST** break off the pin in the center. This is a TORX-T10 security screw. Do not try and adjust it using a Torx security tip. Or you'll wind up buying a new one as we did. Use a small flat head screwdriver or chisel to break off the pin, then use a standard Torx T10 tip. Heat the screw with a propane torch, then turn the screw while it is still hot. It has a thread-locking compound on it. We have found that adjusting the screw from flush 7 turns in will give 8 ps at idle and 15 psi at WOT. Turning the adjustment screw in or out 2.5 turns will raise or lower it by 1 psi. For some applications the 8 psi at idle may be acceptable. But for our test engine, the air fuel ratio was a bit lean and it wouldn't idle well. We used a Distributor Vacuum Control Valve (aka Spark Delay Valve) by NAPA/Echlin p/n 2-1036 (cost between \$10-\$12) available at most auto parts stores and from TDS. This was put in-line from the vacuum source (at the TBI base) to the vafpr. This raised the fuel pressure at idle to from 8 to 11 psi. It didn't effect the pressure that had been set for WOT.



VAFPR spring on left, p/n 105290 center, non-adjust FPR spring on right

TDS p/n 105290
Descr: TBI Spring
for GM TBI vacuum-adjustable fuel
pressure regulator
Qty: 1 spring



Thank you for purchasing this TBI Spring.

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*TDS test engine: LO3 (305 ci) with the following modifications: 1995 LT1 cam, LT1 in-tank fuel pump, Jacobs Ultra Coil, SLP 1-5/8" headers with 3" cat-back exhaust. The chip was custom programmed to pull some fuel out at WOT. This was done to allow for more adjustability at the track by adjusting the fuel pressure with the spring. Current settings on the engine are 8 psi idle fuel pressure and 15 psi WOT fuel pressure. An AutoMeter 0-100 psi electronic fuel pressure gauge and AFR (air-fuel ratio) gauge are used to monitor the settings at the track. Test vehicle: 1990 RS Camaro Convertible, best ¼ mile e/t: 15.495 @89.6 mph.