



# FUEL PRESSURE REGULATOR P/N 15810NOS

## INSTALLATION INSTRUCTIONS P/N A5087-SNOS

### INTRODUCTION:

The Fuel Pressure Regulator that NOS supplies for use with its nitrous systems is designed to maintain a very accurate fuel supply pressure after it is properly adjusted for your application. The unique engine load “sensing” ability of this smart regulator makes it ideally suited for use with NOS nitrous systems that are installed with certain “Blow-through” type turbocharged applications. The changing manifold pressure on this type of system directly affects the fuel pressure needs of the nitrous system. The regulator’s pressure sensing ability automatically adjusts the fuel pressure being supplied to the nitrous system in proportion to the blower boost, preventing a lean, “power robbing” condition at higher RPMs.

### REGULATOR LAYOUT:

A jam-nutted maximum pressure regulating screw and an engine vacuum sensing port is located at the small end of the regulator body. Four fuel ports (one **IN**let and three **OUT**lets) are located around the larger end of the body. Two holes that may be tapped and used for mounting (if desired) are located on the bottom of the unit.

Two fittings are required to adapt the regulator in the NOS system. A 1/4 to 1/8 reducer bushing is used for inserting the fuel **IN**let line fitting and a 1/8 to 1/4 NPT adapter is used to mount the NOS fuel solenoid. The type and quantity of additional fittings and/or plugs is dependent on what (if any) optional NOS accessories are to be used in conjunction with the regulator (Figure 1).

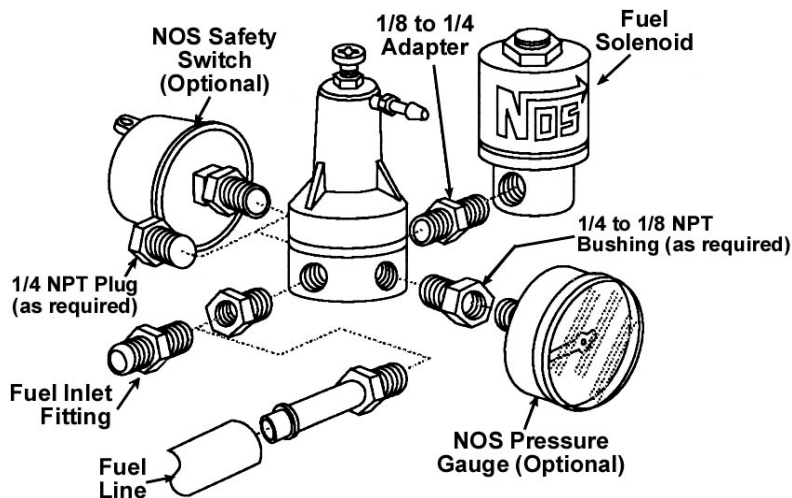


Figure 1

### INSTALLATION:

1. If connected, remove the fuel feed line from the **IN**let port fitting of the NOS fuel solenoid. Remove the inlet fitting from the solenoid.
2. On the bottom of the large end of the regulator, the stamped “**IN**” identifies the single inlet port (Figure 2). Insert and tighten the fuel line inlet fitting removed from the fuel solenoid (bushings required) into this port and carefully tighten.

**NOTE:** Use Teflon-based paste thread sealer on **ALL** pipe threads. **DO NOT** allow the sealer to enter the inside of the regulator.

3. One of the three remaining **OUT**let ports must be used to remount the NOS fuel solenoid (Figure 3). Insert a 1/8 to 1/4 pipe adapter fitting into the chosen port and tighten. Position the **IN**let or **P** port of the solenoid on the adapter and tighten.
4. If the optional NOS fuel pressure safety switch or fuel pressure gauge accessories are not going to be used, insert a 1/4 male pipe plug (with sealer) into each of the remaining outlet ports (2) and securely tighten.
5. If either or both of the optional NOS accessories will be utilized, insert a reducer bushing into the desired port(s). Install and tighten the gauge and/or safety switch in place (Figure 1).

**NOTE:** If the optional pressure safety switch is being used, refer to its instruction sheet for proper wiring and setting.

- Check the regulator section of your NOS main system installation instructions to see if and where the vacuum sensing port of the regulator needs to be connected for your application. If the vacuum sensing port is needed, install the port fitting into the regulator body fingertight, leaving at least one thread showing. Do not seat the port fitting against the regulator body or fuel pressure adjustment problems may occur.

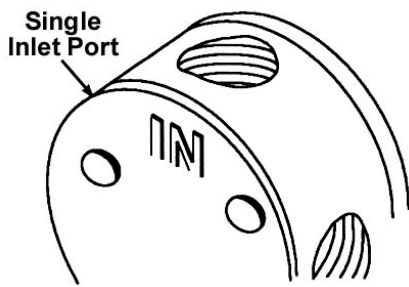


Figure 2

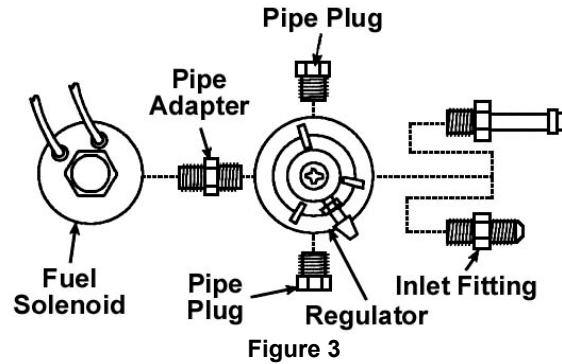


Figure 3

- To complete the regulator installation, (re)connect both the fuel inlet line( from the pressure source) to the regulator's **IN**let port fitting and the fuel feed line (if removed) from the **OUT**let or **A** port (Figure 1).

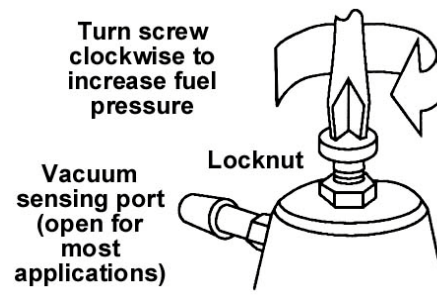


Figure 4

## REGULATOR PRESSURE ADJUSTMENT:

- Before starting the engine, loosen the adjusting screw locknut. Carefully turn the screw (clockwise), until it stops (Figure 4).
- If the main NOS system instruction sheet informed you to connect the vacuum sensing port for your particular installation, remove the hose from the regulator's sensing port before beginning the setting operation.
- If the optional NOS pressure gauge is **not** being used in the system, a temporary gauge must be installed into the system to monitor the fuel pressure during adjustment.
- Start the engine and let it idle for approximately one minute to stabilize the fuel pressure. The fuel pressure reading indicated on the gauge is the **MAXIMUM** pressure your fuel pump can produce normally in the 2 to 12 psi range (dependant on the pump type).
- Reconnect the vacuum sensing line to the regulator (only if specified for your application).
- Turn the adjustment screw all the way out (counter-clockwise) and hit the throttle a few times until the pressure gauge registers zero. With the engine at idle, turn the adjusting screw (clockwise) until 6 psi\* operating fuel pressure is indicated on the gauge and lock screw in place by re-tightening the nut.

**\*NOTE:** This pressure setting is a suggested starting point for standard type systems. The higher horsepower producing systems may require initial settings from 7 to 9 psi.

## SYSTEM TUNING:

The fuel pressure regulator is a very useful tool for "fine-tuning" the NOS system to your particular vehicle and application. A slightly higher fuel pressure setting will provide an overall **richer** nitrous system, reducing engine "ping", burnt spark plugs, electrodes, etc. A slightly lower fuel pressure setting will produce a **leaner** system, resulting in cleaner reading spark plugs (if plugs are reading rich before adjustment), and an increase in overall system performance.

**CAUTION!** Any tuning changes affecting the nitrous system's fuel ratio should be made in several small steps, carefully checking the results of the previous change before making any additional changes. This will reduce the possibility of any unexpected and unwanted surprises!