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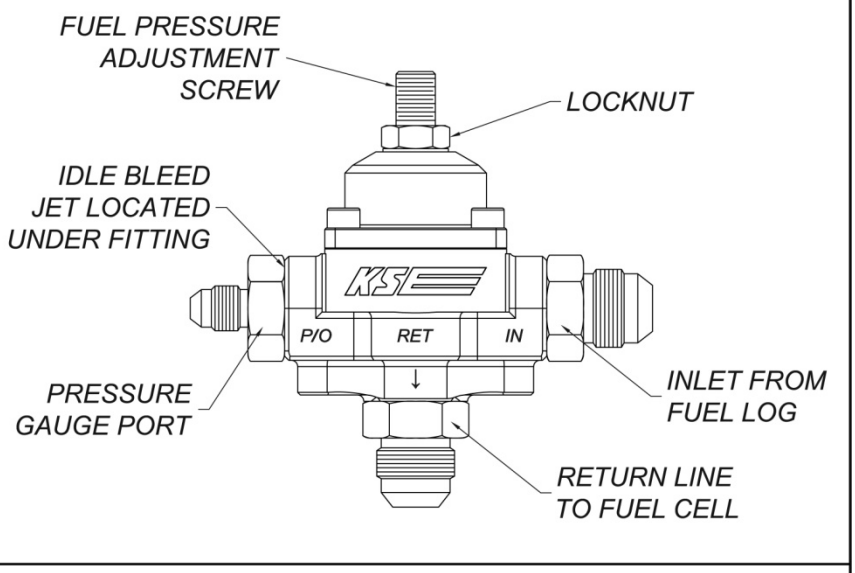
KSC2005 - Bypass Fuel Regulator w/ Idle Bleed Jet Installation Guide

The KSE Bypass Fuel Regulator w/ Idle Bleed Jet (PN: KSC2005) is designed to work with belt driven and direct driven mechanical fuel pumps for both Alcohol and Gasoline racing applications. The diaphragm style bypass design can react faster, smoother, and more consistent than many traditional style bypass designs. This design also utilizes an idle bleed jet which can be adjusted in order to control idle fuel pressure requirements.

IMPORTANT: *As with all fuel systems, precaution should be taken to ensure that all system components are properly sized and suited for the intended application. Proper installation is mandatory for optimal performance. All hoses, fittings, and connections should be examined to verify the system is adequately plumbed and leak free.*

The features of the bypass fuel regulator are shown below:



NOTE: All Inlet / Outlet Ports Are Standard -8 ORB (O-Ring Boss).
**All Fittings Supplied Separately - PN#: KSM1018 (-8 ORB / -8 JIC)*

TECH TIP – Initial Setpoint:

With engine revved to 3000 RPM, adjust bypass regulator to desired max racing pressure. Make an on-track test and verify fuel pressure reading at mid straight-away to confirm setpoint. Based upon the on-track test, fine-tune the fuel pressure to the desired setpoint by turning the adjustment screw CW (+) or CCW (-) accordingly.

Typical bypass regulator adjustment:
1 psi = ~1/8 Turn

Setting The Bypass Fuel Regulator Pressure To properly set the bypass pressure, loosen the locknut located on the top of the regulator and turn the pressure adjustment screw accordingly. Turning the screw clockwise (CW) will increase the fuel pressure. Turning the screw counter-clockwise (CCW) will decrease the fuel pressure. It is important to tighten the locknut after the desired fuel pressure has been set. Typical fuel pressure requirements at max engine power are 7-9 psi Gasoline and 8-10 psi Alcohol. Idle pressures of 2-5 psi are typical for both Gasoline and Alcohol.

Adjusting The Idle Pressure The bypass fuel regulator contains an idle bleed jet which helps maintain proper idle fuel pressures and can be adjusted by removing and replacing with an alternate jet. The regulator comes stock with a **"76"** Standard Holley Main Jet (1/4-32 UNF). A larger bleed jet will lower the idle pressure. A smaller bleed jet will increase the idle pressure.

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Installation Plumbing Circuit

The bypass fuel regulator is typically mounted at the end of the fuel log and should be mounted as close as possible to the carburetor. The bypass return line should return the bypassed fuel to the air space of the fuel cell. If used with a KSE Tandem Pump, the bypass port on top of the pump is to be capped off (internal poppet, spring, and pill can remain inside). A fuel pressure gauge tap can be plumbed from the "P/O" port or the plugged pipe port located on the side of the regulator body.

Alternate Plumbing: The bypass regulator can be mounted directly to the bypass port on the KSE Tandem Pump if desired (with internal poppet, spring, and pill removed). The "IN" port on the regulator should align with the pump's bypass port and a return line to the fuel cell should be plumbed from the "RET" port accordingly.