

SECONDARY BYPASS VALVE - CONTINUED -

Adjustment

To vary the amount of pressure needed to unseat the poppet inside the valve: The wire diameter (stiffness) of the spring is the primary adjustment; a stiffer spring gives a higher opening pressure (RPM). Shims are utilized for fine tuning. If the secondary opens at the right RPM, but bypasses too much fuel, it's flow back to the tank can be restricted by putting a jet in it. Replacing a thick shim with an .080" jet is usually a good starting point. If installing a jet be sure there is a jet sealing o-ring.

Note: the jet sealing o-ring is equivalent to .060" of shim.

CAUTION - Using a spring that is too light, especially on a supercharged or turbocharged application may cause a backfire through the blower/turbo or into the plenum, causing damage.

The secondary bypass is used to tailor part throttle fuel rate **ONLY**; it has no affect on wide open throttle metering.

Troubleshooting

First follow all steps in "System Troubleshooting," Pages #110-111.

- 1) Check to be sure that the poppet seals in the body. A small amount of dirt can cause the poppet to stick. Thoroughly clean the valve and connecting hose assembly.
- 2) If adjusting the secondary valve doesn't seem to do anything, make sure the barrel valve spool has a bypass port (see Page #108) and that the secondary valve is installed correctly.
- 3) Adjustments to the secondary valve should not affect wide open fuel mixture; if they do:
 - A) Check to make sure the spool is indexed correctly in the barrel valve.
 - B) Check the fit of the spool to the barrel valve block.
Approx. clearance is one-half of a thousandth of an inch.
Too loose of a fit can cause fuel to leak out through the secondary port at wide open throttle. Test the fit with a leak down meter, 1% or less is preferred at WOT.



#3030 secondary bypass valve



#3076 high-flow 6 AN brass valve

SECONDARY BYPASS VALVES

3030	Standard 6 AN male flare hard anodized aluminum valve, complete assembly, includes: poppet, spring, and shims, for gasoline, methanol, and nitromethane (specify nitro. application when ordering)
3036	Poppet, fully machined, very smooth for stick-free operation, hard-anodized aluminum, for Kinsler and Hilborn 6 AN jet cans
3016	End cap ONLY, for #3030 valve
3010	Washer o-ring for #3016 end cap and #3030 valve
3076	High-Flow 6 AN male flare brass valve, complete assembly, includes: poppet, spring, and shims, for gasoline, methanol, and nitromethane
3085	End cap ONLY, for #3076 valve
3086	Body Only, for #3076 valve
3156	High-Flow 6 AN male flare hard-anodized valve, complete assembly, includes: poppet, spring, and shims, for gasoline, methanol, and nitromethane
3150	End cap ONLY, for #3156 valve
3151	Body ONLY, for #3156 valve
3087	Poppet, fully machined, stainless steel for #3076 and #3156 valves
3074	O-ring, fits end cap for #3085 or #3076 and #3150 or #3156 (specify nitro. application when ordering)
3088	Labor; flow test and set pressure of secondary bypass valve on flow bench
3166	O-ring, jet sealing, gasoline/methanol
3019	O-ring, jet sealing, methanol/nitromethane, E.P. compound
3024	O-ring, jet sealing, for extreme duty use (high pressure) , teflon
3535	Kinsler hard-anodized fitting, 6 AN male flare, Kinsler or Hilborn barrel valve
3521	Kinsler hard-anodized plug for Kinsler or Hilborn barrel valve
3010	Washer o-ring, for Kinsler secondary fitting or plug
3519	Spring to retain spool, .039" wire diameter, Kinsler or Hilborn barrel valve
3522	O-ring, Kinsler or Hilborn barrel valve spool shaft, gasoline/methanol
3043	Shim, brass, goes between spring and barrel valve spool, provides bearing surface

SPRINGS FOR 6 AN JET CANS

3303	Spring kit, for Kinsler and Hilborn 6 AN jet can, consists of: .016", .018", .019", .021", .024"
3304	Spring kit, for Kinsler and Hilborn 6 AN jet can, consists of: .028", .032", .036", .039", .042"
3316	Spring: .016" wire diameter
3317	Spring: .017" wire diameter
3318	Spring: .018" wire diameter
3319	Spring: .019" wire diameter
3321	Spring: .021" wire diameter
3324	Spring: .024" wire diameter
3328	Spring: .028" wire diameter
3332	Spring: .032" wire diameter
3336	Spring: .036" wire diameter
3339	Spring: .039" wire diameter
3342	Spring: .042" wire diameter

SHIMS FOR 6 AN JET CANS

3034	Shim kit, includes: 1- .183" thick shim and 6- .030" thick shims
3040	Shim, .183" thick, brass
3042	Shim, .020" thick, brass
3043	Shim, .030" thick, brass



#3535

#3521

#3010

#3519

#3522

#3043

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