

MAIN BYPASS VALVE

The main jet is the most basic adjustment of a constant flow metering system. A smaller main jet makes the engine richer, by allowing less fuel to flow back to the tank and forcing more fuel to go to the engine. A larger main jet makes the engine leaner, by allowing more fuel to flow back to the tank which means less fuel flows to the engine. Regarding jets: see section on "K-TYPE JETS" on Pages #76-77 and "ORIFICE THEORY" on Pages #202-203.

This valve also acts as a check valve to hold pressure for starting and idling. We highly recommend plumbing this valve after the fuel filter, since any dirt or sticking may cause the engine to idle poorly or possibly not start (see Kinsler's PREFERRED PLUMBING SCHEMATIC on Page #112). Note: It is important to carefully read the section on "HIGH-SPEED BYPASS" on Pages #90-94, so you will understand the relationship between the two bypass valves at wide open throttle.

QUICK DISCONNECT VALVES AND COMPONENTS

3104	Red and gold anodized aluminum, 6 AN male flare, for gasoline
3112	Hard-anodized aluminum, model: Ano-QD, 6 AN male flare, for gasoline and methanol
3115	Same as #3112 but with o-rings for use with nitromethane
3101	End cap, for quick disconnect, hard-anodized, includes jet sealing o-ring
3036	Poppet, Kinsler hard-anodized, for Kinsler and Hilborn 6 AN jet can
3319	Spring, .019" wire diameter, standard spring for Kinsler main bypass valve
3116	O-ring, jet sealing, for end cap #3006, #3104, and #3112
3117	O-ring set, for quick disconnect, gasoline and methanol ONLY
3119	O-ring set, for quick disconnect, nitromethane ONLY

SCREW TOGETHER VALVES AND COMPONENTS

3006	Main bypass valve, 6 AN male flare, hard-anodized aluminum, model: Ano-K, for gasoline and methanol
3007	Same as #3006, but with o-rings for nitromethane
3016	End cap ONLY, for model: Ano-K jet can
3010	Washer o-ring, for end cap to 6 AN jet can body, Kinsler or Hilborn
3036	Poppet, Kinsler hard-anodized, for Kinsler and Hilborn 6 AN jet can
3084	Main bypass valve, Kinsler 6 AN High-Flow brass jet can, for all fuels
3155	Main bypass valve, Kinsler 6 AN High-Flow hard-anodized aluminum, for all fuels
3087	Poppet, for #3084 and #3155, precision ground stainless steel
3074	O-ring set, for #3084 and #3155 end cap, gasoline and methanol

NOTE

There is no one o-ring compound that works well for gasoline, methanol, and nitromethane. We therefore use one o-ring compound in the gas/methanol jet cans, and a different compound in the methanol/nitro jet cans. Using a fuel or additive other than that specified may cause swelling of the main body o-ring, or leakage due to shrinkage of the o-rings. When the main body o-ring swells, it may be difficult to uncouple the valve. Contact us for the proper o-rings if a fuel other than the ones specified is being used.



FUEL FLOW DELIVERY OF SIMPLEST SYSTEM

(pump, nozzles, and main jet can ONLY)

In the most basic fuel injection system, flow increases directly with RPM, resulting in a curve that is theoretically a straight line. In actual practice, internal leakage in the pump would alter the shape of the curve slightly (see schematic at right).

The output of the pump is split between the nozzles and the main jet. A larger main jet leans out the engine because it allows more fuel to return back to the tank.

When you drop the jet into the end of the main jet can, make certain the number is facing you



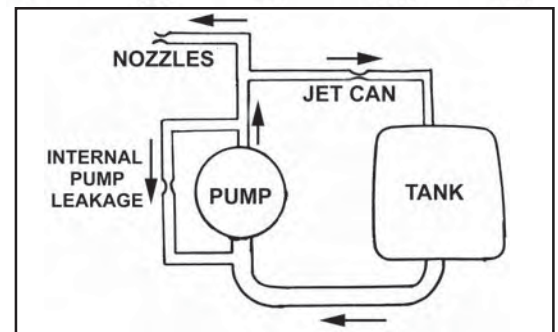
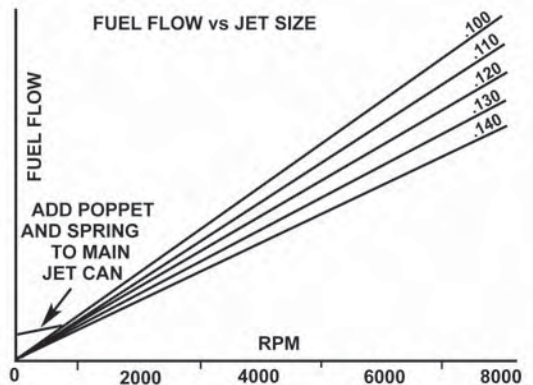
#3112 'Ano-QD' quick disconnect valve



#3084 6 AN brass high-flow



#3006 6 AN standard hard-anodized aluminum



Running clearance is a must for the pump gears. This clearance causes some internal leakage back past the gears and has the same effect as a bypass from the pump outlet back to the inlet. While internal pump leakage must occur, we do NOT recommend plumbing any bypass valve's return flow back to the pump inlet.

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