

FUEL INJECTOR CLEANING

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A few years ago, took my fuel injectors (R1100S, 1999, at 16,000 miles) to the Bosch authorized cleaning specialist - a very nice and helpful authority name Giles at Superior Fuel Injection & Turbos, Markham, Ontario. Keep in mind that since a bit of water may remain in the injectors after cleaning and testing, best if you are able to run your engine with the freshly cleaned injectors within a day or three of the servicing.

His initial tests indicated the injectors were reasonably matched, the internal filter screens were reasonably clean, didn't leak, and with a subjectively rated "Fair" spray pattern. The flow rate was 84 and 86cc per 15 seconds at a standardized pressure (but I don't happen to know what that pressure is). So, "84" and "86" equal 336 and 344 cc/min. Stock is said to be 315 cc/min at 3 BAR (43.5 psi).

After cleaning, the spray pattern was improved to "Good" (finer and better dispersion) and the flow rate was 86 and 88 which is slightly richer.

Giles thought the bike had benefited from good gas and maintenance (previous owner should take the credit but I do use FI cleaner now and then, not that the cleaning power of the additive is really much, he said). Ordinarily, FI need cleaning either after the passage of a couple of years of clock time OR bike miles.

The servicing at \$25/injector takes a couple of hours if a batch is being cleaned that day. Included are free new o-rings (there is an o-ring at each end of the injector but no need to buy spares from your dealer) and new filter screens were installed inside the injectors.

Removing the injectors is one of most un-challenging non-anxious bits of maintenance a beginner can do on the bike despite the reality that the operation of the injectors and good sealing at each end are critical.

In hindsight, my injectors prolly didn't need the servicing but there was a slight improvement. I think surging was reduced because both aspects of cleaning (spray pattern quality and volume of fuel) would lead to better burns including when riding on O2-sensor feedback cruising. But I am a nut for balance. Sadly, the Bosch/BMW tolerance spec for matching the two injectors is supposed to be atrocious... at least when you consider that the demands of a boxer layout means you should have really fine balance in matched parts). Anyway, I am keen to be cognizant of the state of my machine and you may feel the same way about yours. And maybe yours needs a cleaning as much or as little as mine.

I use silicone grease on all rubber bits (often after soaking Armor All on aging rubber). Giles thought gas-soluble grease like Vaseline was a safer bet because at least it could be

dissolved by fuel (unlike silicone grease which has no solvent among ordinary household cleaning stuff). But I like using silicone grease.

April 2008, Phoenixtexoma installed Russ Collins injectors. They are the most highly respected provider of truck fuel injectors. These RC units were intended for the R1100S, matched, and had a superior spray pattern. Reports as of when I heard last from Phoenixtexoma indicate definitely smoother balance and possibly stronger top.