

Resource: iATN®

Compiled by Chip Keen

Simply stated, the International Automotive Technicians' Network, www.iATN.net, is a group of nearly 50,000 automotive professionals representing 136 countries. But it's more than that. It's a community. Like all communities, it has its share of leaders, wits, and hecklers, but its predominate spirit is people freely sharing their knowledge and learning from one another.

The iATN mission is "to promote the continued growth, success and image of the professional automotive technician by providing a forum for the exchange of knowledge and the promotion of education, professionalism, and integrity."

Master Technician's "Resource: iATN" is dedicated to promoting the iATN mission by publishing examples of noteworthy postings.

This feature's inaugural example was posted by Danny Iwama, owner/technician of J&S Auto Service in Los Angeles, California. Entitled "**No Job Too Small, No Hammer Too Big**," it was originally posted July 01, 2004:

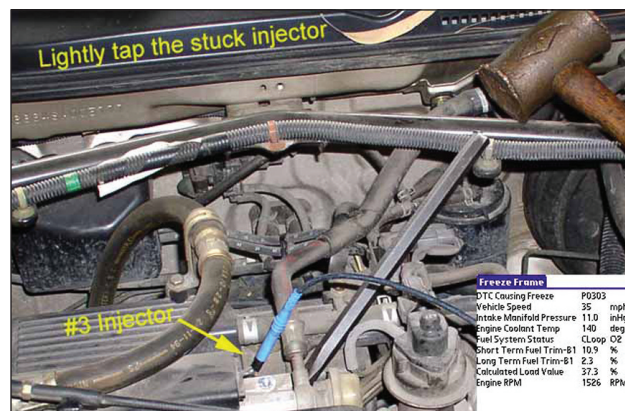
"iATN has made my life a lot easier. The Techs on the network are great. Everyone helps each other unconditionally. Today was another one of those days that someone made my life so much easier.

"My relatively-new customer called yesterday for a routine LOF for his 1995 Honda Accord. He was referred to me earlier this year by an iATN shop in another state. When the customer came in, he mentioned that the "Check Engine" light had just come on and that the engine was running rough. I could feel the engine missing as I drove it into the service bay. Hooking up my Palm Scanner, I came up with a P0303 (multiple misfire) trouble code. I checked the tailpipe with the infrared and noticed that HCs were low and O2 was about 3%.

"I figured I should call for some information from the facility that serviced this vehicle before the customer moved to my part of the country. The owner of the shop answered the phone and gave me the service history of the Honda. I mentioned that I thought that there was probably something wrong with one of the injectors. He said that injectors on that platform were occasionally getting stuck closed. He said that I should "lightly tap" the injector that's not working in order to

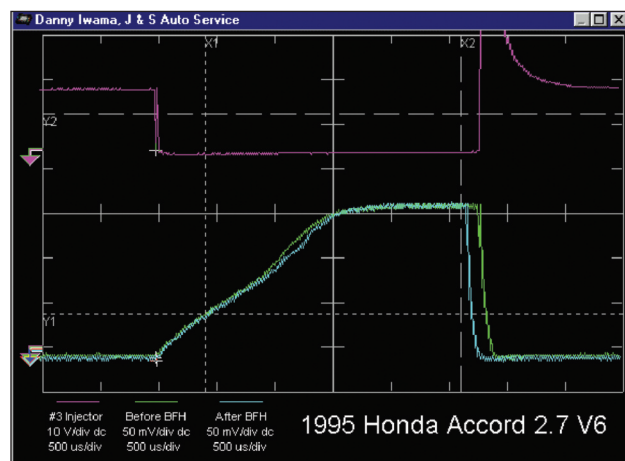
bring it back to life, and that performing a fuel injector system service (Motorvac) after freeing the injector should keep the car on the road.

"Son-of-gun, it worked (*editor's note: that big hammer and drift are a goof*).



No Hammer Too Big?

"I performed the fuel injection service. Just for the heck of it here are some before and after shots of the injector:



Before & After Injector Cleaning

"Not much difference in the waveforms, but I feel very confident that the car is fixed.

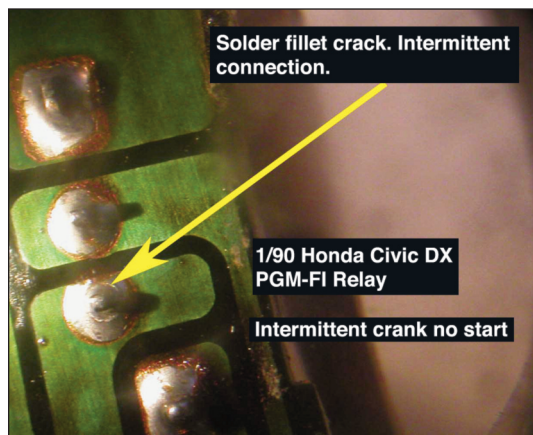
"Many thanks to Master Honda Tech and Guru George Witt. Yeah, that's his tongue-in-cheek motto in the title of this post. :-)"

"90 Civic Crank No Start" was posted January 11, 2006 by George Catanbay, owner/engineer of Advanced Conversions in Orangevale, California:

"This nice person brings in a '90 Honda Civic, and tells me that every 3-4 weeks or so it won't start. It just cranks over and over and over (made me wonder how the starter is doing).

“Well, I didn’t want to waste a lot of time trying to chase down an intermittent problem, so I got on iATN and searched for fixes related to the symptoms the customer gave me.

“Everybody said it was the PGM-FI relay. OK. So I pulled it out and took a look at the circuit board and found my intermittent problem:

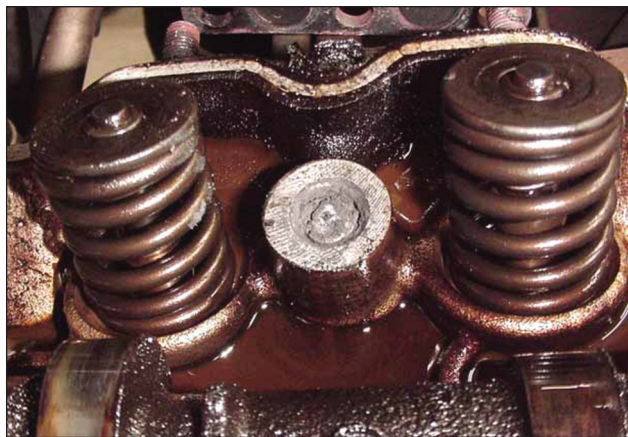


PGM FI Relay Circuit Board

“I only spent 15 minutes diagnosing this car and another 15 minutes photo-documenting and posting it. So I used iATN as a tool and saved myself a lot of time – time I will spend with my kids tonight.”

“89 Toyota Pickup 22RE broken head bolts – Suggestions?” was posted November 22, 2003 by Brad Petersen, owner/technician at Petersen Automotive in Escondido, California:

“I knew the last week went by too easily. I have a 1989 Toyota Pickup 2.4L 22RE engine in for a blown head gasket. Two of the head bolts snapped right off when I was breaking them all loose. They broke off flush with the head:



The two that broke were right between #1 & 2 and #3 & 4 exhaust ports. It's obvious they have been weakened over time.

“The two that broke were right between #1 & 2 and #3 & 4 exhaust ports. It's obvious they have been weakened over time:



“The cylinder head is about four inches thick, and that's how much rotten head bolt needs to be removed before this head is coming off:



“I know someone must have run across this on these Toyotas. Any ideas? I really don't like the idea of drilling due to the four inches I would have to go through. I might be able to relieve enough to get the head free though. Weld a nut to the remains and see if it can be twisted out? Soak it for a few months with penetrating oil? Stick of TNT? Pour ether in the combustion chamber and light it, hoping the explosion will blow the head off?

“Seriously though, what have any of you done on these that's worked? “

Ten minutes after posting his question, Brad received this reply from Peter Wright, an educator/instructor/technical writer in Sydney, Australia:

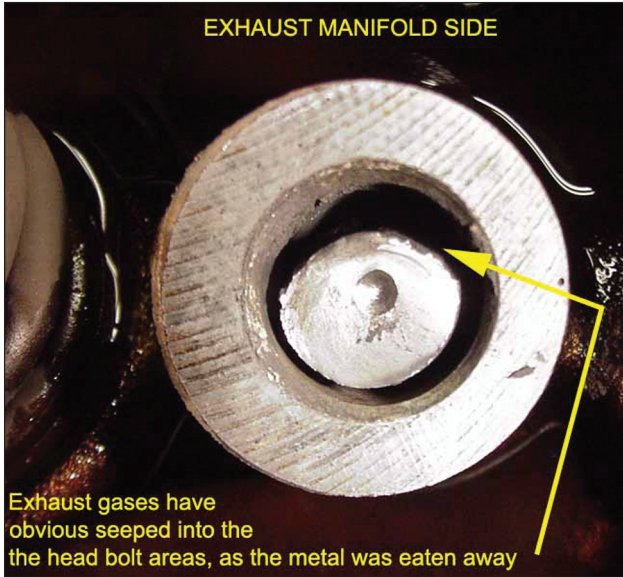
“Here's a radical thought. Soak all broken bolts with heaps of penetrating oil. Refit all the good head bolts and just hand tighten. Then crank the engine over. (I have actually started one this way - VBG)”

Early the next morning, Brad received a reply from Andrew Kollosche, owner/technician at Diesel-Tec in Lilydale, Australia:

“To do it a slower way, you can soak it, then remove the spark plugs, then put #1 cylinder to BTC, then insert a cotton rope into the cylinders 1 & 4; it may take a lot. Then either with the key, or by hand, crank the engine over. The rope will compress, then start to push the head up without doing any damage internally.”

Brad completed the post with his own solution to the problem:

“Well, I put my thinking cap on (for a change). I center-punched each broken head bolt to set up some vibration.



“Then I got my air nozzle out and blew out the carbon/rust dust (GET SOME GOGGLES ON!!), sprayed some penetrating oil in the holes, banged on the bolts again (GOGGLES STILL ON??), blew them out again, then washed out the black debris with the nozzle attachment on a can of brake cleaner – then penetrating oil again, center punch action again, blew them out again, washed them out again, and over and over and over.

“Here is my theory on why this was going to work: Ever use a concrete wedge bolt? The carbon/debris would act as a wedge and only make the fit tighter if I tried to force the head off. By getting the debris out, the clearances would open up, and I’d be able to lift the head off the broken bolts.

“It worked!!

“It took some patience and repeated spraying, soaking and blowing out the holes, wiggling of the head, but it did come off.

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“Pretty, huh?:



“At least I now have something to work with.

“Hope this helps someone else out in the same or similar situations. I know if I would have gone in and drilled, I would have screwed it up.”

“1998 BMW Oxygen Sensor Mix-up” was posted August 6, 2001 by Eric Diedrick, owner/technician at Diedrick’s Automotive in Edgerton, Wisconsin:

“A 1998 BMW 540i came in with a Check Engine light on. The codes were P0135, P0141, P0150, P0156 and P0161. These codes have to do with either the O2 sensors or the sensor heaters. I found a campaign to reprogram the PCM if there were several codes for O2 sensors, so I sent him to the dealer.

“He came back two days later and said the Check Engine light came on while driving home from the dealer. I checked for codes again and the same ones were back. I watched the O2 sensors on the scanner. The Bank #2 sensors seemed to be working OK, but the Bank #1 sensors were not responding at all.

"I went to test the sensors at the wire harness connections and found this:



"Believe it or not, it is possible to connect the Bank #1 sensor #1, and Bank #1 sensor #2 together, as well as the wire harness connectors:



"This can be done on both banks. I changed the connectors back to the way they were supposed to be:



"and now everything works. I don't know if this will damage the PCM but time will tell, I guess."

That's it for this issue's iATN tips and techniques. Check the next issue of *Master Technician* for Resource: iATN help on curing Mercedes-Benz valve lifter noise and EGR flow rate codes, and tips on solving GM Northstar ignition problems. ■

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