

## Tech Chat

With Ken Mortimer



**Ken in his shop** (one can never have too many tools!)

Welcome to the first edition of "Tech Chat".

As the name implies, this column will lean towards the technical aspect of our passion but stay on the lighter side of subjects. You won't find detailed explanations of how to time your 1960 M120 Panther, (it's no fun), but hopefully I will provide some interesting reading and perhaps even a tid-bit or two that you didn't know. And the definition of "Chat" suggests a two way conversation and I hope to get many of you readers involved as well.

When our new person responsible for editorial content within the CVMG Newsletter, Alison Green, asked me if I could contribute some technical articles for the news I wondered aloud how I could qualify. Although I'm a licensed technician, (since 1979) and currently turning wrenches at a full line Yamaha, Suzuki, Mercury Outboard & Stihl dealership, I spent many of the last twenty years working on the fringe of the trade. And my involvement with vintage motorcycles began less than ten years ago. But Alison reminded me of the wealth of experience I have to draw on from within our very own Nickel Belt Section and throughout the entire organisation.

It is still a daunting thought to be "talking tech" to members of the CVMG as by the very nature of our hobby, most of you are mechanics to some degree and many, many of you are experts that have forgotten more than I will ever learn. (Or remember at my age!). So, suffice to say I don't pretend to know everything about anything. But I enjoy the writing and hopefully enough of you will enjoy the reading to make this all work.

Borrowing an idea that other publications use with success, I'm asking members for your contributions as well. I'd like part of this space to be devoted to snippets of wisdom that you readers would like to share with others. I'll break these down into categories, the first dealing with previous columns. Corrections, additions etc will be expected and welcome. In another category I'd like to post your favourite "tech tips". These can be marque specific but please keep in mind our

space limitations. Rather than the step by step sequence for syncing the carbs on your CBX how about a tip about synchronizing in general that might help someone trying to get the stumble out of their /5. New and favourite products that you've found to work "as advertised" will be another category. I'd like to limit these to tools and chemicals, (lubes, adhesives, specialty cleaners etc), you get the idea.

Please send any correspondence to [kmortimer@persona.ca](mailto:kmortimer@persona.ca)

So hopefully together we can create a page of the newsletter that informs and entertains each month and carries on the tradition of motorcyclists helping motorcyclists. Now grab a beverage and come on out to the garage. There's a milk crate with your name on it and I could use a hand checking the valve clearance on the Eldorado...

PS-disclaimers being all the rage these days, our editor thought that Tech Chat should have one as well. So here it is and it applies to this and all future writings under the Tech Chat title: You are all big boys and girls so please take responsibility for yourselves and for your actions. I will never intentionally lead you astray. But if you are not comfortable with any technique, tool or product discussed in Tech Chat please take the time to find out more BEFORE you potentially harm yourself, your bike or innocent bystanders. From wiping off the dust to totally rebuilding your motorcycle, tinkering can be very rewarding. But be brave enough to admit when you need some expert help, need to sublet a task, or need to run from the garage screaming, "DIAL NINE-ONE-ONE!!!"

....Ken

### *Dealing with damaged fastener heads.*

So you've unloaded your latest pride and joy from the brother in-law's utility trailer, grabbed a beverage, Neil Young is on the tape player in the shop and now the time has come to lay wrench to bolt and begin the restoration. Further investigation reveals however that the previous owner, or owners, apparently didn't own any metric wrenches. Or sockets. It seems that "Dipstick Duncan's" vast array of Vise Grips and adjustable wrenches have found their way onto just about every fastener on the bike. And now your quality, tools slip.

As an aside here, there is no use scrimping on some tools-always buy the best you can afford when it comes to sockets, wrenches, screwdrivers etc. A cheap brand tool can quickly ruin a perfectly good fastener head.

If your hex headed bolt or nut is rounded off you can try a few things. Tapping the correct size, six point socket over the head with a hammer may catch enough of what's left to loosen the bolt/nut. If room allows, try your impact driver. Although it probably came with only Phillips and flat head attachments, most are 3/8" or 1/2" square drive so can accept a regular socket as well.

If this fails, next you may have some luck by changing socket sizes and/or changing from metric to fractional, (or vice-versa). A rounded off 17mm may take a liking to a 5/8" socket, for instance.

If you are equipped, heat will always help and even a propane plumber's torch can be effective, (although oxy/acetylene will provide a much quicker, more concentrated heat, reducing the chance of damage). Heating the nut or the area around the bolt may be enough that the damaged head is less of an issue.

On larger nuts, let's say a swing arm pivot pin lock nut for instance, you can always try the hammer and chisel. Wear the safety glasses and use a sharp chisel. Obviously this will do further damage to the fastener head but at this point your goal is removal at all costs. Chisel an indentation into one of the flats of the nut and then chisel in the "off" direction.

Another possibility is to cut the nut off. If space allows, you can cut across one or two of the flats of the nut using a hacksaw or better yet a Dremel tool with a small cut off blade. Wear your safety bi-focals as you want to pay close attention to how deep you are cutting and stop before you damage the threads on the male component. You will find that one or two relief cuts may be enough for the nut to give. Or you can try splitting the nut into two pieces by chiselling into your cuts. Again, try to stop prior to digging into the threads.

There is a tool available for this purpose. It is referred to as a "Nut Splitter". And no, it has nothing to do with the upswept forward portion of your kid's moto-crosser seat. It clamps around the nut and a chisel-like blade is forced against a flat on the nut with a pressure screw. The screw head is designed to be hammered upon and alternate pounding and tightening should eventually split the nut. Problem is; you rarely have room to fit this tool in place.

If it's a bolt you're dealing with and all else has failed it's time to bring out the heavy artillery. Our favourite method at the shop is to mig weld a good nut to the end of the bolt. This will provide you with a new and maybe larger fastener head to work with. Remember it's a good idea to disconnect the battery on your bike when doing any arc or mig welding.

If it's an Allen style headed bolt that "Butcher Bill" has left damaged for you then again, try a slightly different size working between metric and fractional. Always clean out the female hex, (a small seal pick works good), before fitting the Allen wrench or socket as even a small amount of rust/dirt will prevent a good mate up and you can easily cause more problems. And again, use your small hammer to fully seat the tool into the bolt head. This is another time to try your trusty impact driver.

For those Phillips head bolts and machine screws, spare no expense buying screwdrivers. Find a Snap On dealer as experience has shown me many times that they make the best, bar none. An impact driver is a must in dealing with this type of stubborn fastener as well. If the screwdriver is slipping in the head while trying to turn the screw out, try tightening instead. Sometimes the "on" mating surfaces of the screw head are in good condition and a bit of movement in this direction will break the fastener free for removal. An old wooden boat building trick is to dip the screwdriver head into a gritty paste such as valve lapping compound, hopefully aiding the driver to grip the screw.

With Phillips heads you may improve the grip by filing flatly across the head. This removes burrs left from previous screwdriver slippage. Another trick is to cut a slot in the head to accept a flat blade driver. The Dremel tool with a tiny cut off blade is again the best approach. But; obviously this

eliminates the possibility of using the Phillips driver again.

If everything you've try has failed or you lack access to some of the equipment I've mentioned, consider a few things.

First off, try not to go beyond your capabilities and damage an expensive part for the sake of a rounded fastener head. It may be cheaper to bring the bike, (or component) to a trusted shop, (or fellow CVMGer with the tools and expertise). And a lot easier on your nerves. Get over the fact that it may cost \$50 to remove one damaged screw and rejoice in the knowledge that you don't have to shop E-Bay for that elusive \$200 crankcase cover.

Perhaps conversely you can sacrifice a cheap part and have a better chance at removing the fastener. A timing mark access cover is much cheaper than a crankcase.

And always remember when it's your turn to install any fastener- YOU may be the next one having to remove it - so:

Use the correct tool for the job. Use anti-seize compound if appropriate. And torque to spec, not till that vein on your fore arm begins to bulge!

Your further tips on this subject are most welcome and will be included in future articles. [kmortimer@persona.ca](mailto:kmortimer@persona.ca) And, as this is the first edition of Tech Chat, I will provide this month's Tech Tip and Favourite Product:

**Tip-** Ever been trying to start a spark plug in a less than convenient location? You're trying not to drop the plug while reaching down in and turning it all at the same time. And maybe a little close to warm engine parts. Cut a piece of reinforced fuel hose, 3/8" inside diameter, (or similar), to about four inches in length. Slip the hose over the porcelain part of the plug and this will make it easy to start the plug into the threads in even the trickiest locations. And provide a grippier surface for your fingers to spin the plug in. (or out) Or; steal a spark plug boot from an old set of automotive ignition wires.

Works like a charm!

**Favourite product-** The Meguiars company makes many cleaning and polishing products that all seem to work well. One that you may not be aware of is their "Vinyl & Rubber Cleaner". It's in their "Marine/RV" line so you may not see it at your local bike shop. It is very good at cleaning vinyl seats and the coloured plastic used for dirt bike fenders etc. A 16oz spray bottle sells for about \$12.

**Remember,** next month the Tips & F.Ps are up to you!

....Ken