

The most important tool: MANUALS

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WHEN THEY FIRST CAME INTO existence, motorcycles were fantastically complicated and not at all standardized. Some shifted on the left, some on the right. Some shifted with the foot, some with the hand. One hand grip was the throttle, the other advanced and retarded the ignition's timing. Controlling all that and keeping the bike upright required the same presence of mind and coordination of a singing drummer, with the added challenge of keeping the kit balanced on two spindly tires.

With the surge of Japanese motorcycles in the 1960s and '70s, motorcycles became simpler (in general) and started moving to standardization. In 1975, the U.S. government mandated our current setup with the toe shifter on the left and the rear brake on the right, and Triumph and Harley-Davidson (the last major manufacturers to make bikes any other way) ceased production of right-shift bikes.

The standardization of controls led to an explosion of motorcycle ownership around the world, and in the next 30 years, millions of people rode millions of motorcycles for millions of miles. There were incremental improvements, of course, but it wasn't until the 1980s that BMW started pushing the envelope with fuel injection and anti-lock brakes. While motorcycle manufacturers have always been engaged in culture wars,

the 1990s and early 2000s saw the builders gear up their technology wars.

Many motorcycles currently being produced are as complicated as fighter planes. It's easy to look at BMW as the leader in this arena, with intelligent linked ABS that works with the bike leaned over in a curve, lights that follow the turn, and suspension components that monitor the ride quality and adjust to conditions multiple times a



second, but the fact is that many other manufacturers, including KTM, Ducati and Harley-Davidson, are pushing the technology envelope just as vigorously as our favorite builder.

As motorcycles have become more complicated, it seems as if the toolkits included with new motorcycles have gotten simplistic to the point of minimalism. Pictured is the entire toolkit for a brand-new S 1000 RR.

This new series, titled "The Most Important Tool," is geared toward helping motorcycle owners who are interested in working on their own motorcycles on any level

discover, obtain, maintain and understand a number of tools that will enable them to better service their motorcycles. Maybe you're the kind of rider that relies on a credit card as your primary toolkit, and maybe you're the kind of rider that dreams of breaking out a 917-piece toolkit on the side of a cracked, abandoned stretch of pavement in a thunderstorm. Either way or anywhere in between, this column should at least get you thinking about the tools you keep in your garage or on your bike.

The first installment then is about something that's not often considered a tool; but if you can hold it in your hands and it helps you accomplish a task, it's a tool, so here we go. This month's most important tool: MANUALS.

When you buy a new BMW motorcycle, it comes with two booklets and a quick-start sheet. The Rider's Manual features diagrams and definitions, as well as basic instructions on how to operate the motorcycle. It's important for the new owner to study this manual, because the technological level of these new bikes is so high that it's easy to have no idea about half the stuff a new motorcycle can do! Yes, it's simple enough to sit there and twist that,

but having a basic understanding of the motorcycle's functional capabilities is part and parcel of safely operating the vehicle.

The little booklets BMW includes with a new bike only cover the operation of the motorcycle, however. When it comes to technical information, the rider has to go aftermarket, and this is where the Haynes Publishing Group steps in. (Note: HPG



publishes both Haynes Manuals, which cover a variety of vehicles, and Clymer Manuals, which traditionally focus on powersports vehicles such as motorcycles and ATVs.)

Some of the information contained in a typical Haynes or Clymer manual is, frankly, beyond most shade-tree mechanics. We are not likely to need or even want to do a complete K 1600 GT or R 1200 GS Adventure engine tear-down on a bench in our garage, but the beauty of the Haynes/Clymer books is that they're there for us if that's what we end up doing.

Where these manuals shine is in lending an understanding of complicated systems and sub-assemblies that would otherwise seem incomprehensible. They walk you through, step by step and with accompanying photos, many of the things you can do in your garage or on the side of the road in a pinch. More importantly, they collect in one place all the critical torque values and other measurements needed to properly reassemble all the components and sub-assemblies on the motorcycle.

Haynes' newest BMW-centric manual covers 2013-16 liquid-cooled R 1200 bikes, including the newest R and RS models. It matches the high quality standard expected by Haynes readers and contains a wealth of information garnered from a complete tear-down and reassembly of an actual motorcycle. My hardback copy of the 2004-09 R-bike manual is annotated, circled, highlighted, dog-eared and grease-stained.

Ron Wright, a motorcycle mechanic and freelance tech writer who writes manuals for Haynes, had this to say: "The motorcycles we are riding today are technically amazing when compared to just a few years ago, and working on them can be a bit overwhelming. Probably the biggest stumbling block we all have when doing something for the first time is a lack of confidence, and when it comes to motorcycles, that may be because we're not familiar with the motorcycle or technology. One of the easiest ways

to gain confidence when working on your BMW is to purchase and study a service manual. Say you've never performed a valve adjustment before, or maybe you have but you are now working on your new BMW for the first time. To start, first read through the complete procedure in the manual. By doing so, the text and illustrations

will familiarize you with the steps required, and you'll also see what tools you'll need to do the job. With everything at hand, you can then dig in and start the procedure. Haynes manuals are written around the complete teardown of the motorcycle, so what you're seeing on your motorcycle while taking it apart is the same as what you are looking at in the manual. Using a manual to guide you through simple maintenance tasks will give you more confidence when having to tackle more difficult jobs—and we all know these jobs pop up as we put miles on our motorcycles. Using a manual and working on your BMW also helps to build confidence when traveling. Because you're more familiar with the motorcycle, you're more likely to fix the problem, and if that's not possible on the side of the road, you can relay accurate information to someone listed in the BMW Owners Anonymous or a dealership."

In addition to books from Haynes, there are a variety of official BMW-published manuals that you might be able to get your hands on, but you'd have to work pretty hard at it and possibly spend a large amount of money—or go to BMW Motorrad Tech School!

No matter how you get one, a tech manual is an absolutely invaluable addition to your toolkit and is therefore this month's Most Important Tool. ☺

