THE ViNTAGE JAPANESE MOTORCYCLE MAGAZINE

'SUPER' HL500

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VJMC Vintage Japanese Motorcycle Club

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That’s not a Phillips

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This installment of Tool Tips will focus on just that, Tips. You know, those screwdriver tips that we use more than any other tool on our workbench. Just about every Japanese motorcycle ever made uses the cross-point screws that many of us still identify as the Phillips head. But the Phillips of the U.S. and the Japanese Industrial Standard cross-point share only outside appearances. They are very different, and drivers as different as the screws themselves must be used to properly remove and replace them.

The Phillips is an American design created and patented by Henry Phillips in 1936. It went onto the production floor first at the Cadillac factory in 1940. One of the attributes that Cadillac engineers liked about the design is that the driver would “cam-out” after a certain torque was reached and not allow over-tightening of the screw. The design offered other advantages like self-centering and the tool/screw engagement was quick, with never more than 90 degrees of rotation needed before the tool started working.

Japanese engineers developed their own cross-point design, but did not view this “cam-out” feature as an advantage. They wanted the benefits of self-centering and quick tool/screw engagement that the cross-point design offered, but torque and over-tightening would be addressed at the operator or tool level—not at the screw tip.

Close examination of the drawings shows the differences in these two cross-point designs. The profiles of the two standards are so different when you view them in this magnification, yet we’ve all been fooled into thinking they were the same. A Phillips driver does not fit the Japanese screw and is to blame much more than not for the damaged cross-points we’ve all seen and experienced.

Since making the switch to drivers made specifically for the Japanese screws that I’m working with, my restorations, repairs, and assembly projects are much easier, cheaper, and I’m not in the parts department of a local dealer replacing screws that I ruined upon removal.

Take, for example, that a 1973 Honda CB500F has some 66 cross-point screws in 5mm and 6mm. Even discounted, my cost for these is more than $40 (plus tax). Unless damaged by a previous owner, I can remove the screws with the correct driver and reuse them over and over with no signs of damage. If the screw and its points are in good shape but have rust or poor finish, I save them until I get my next zinc-plating batch done. In the last 5-
Whether it's a CB750, a GT380, or a piece of Japanese electronic equipment, these drivers are up to the task. Your VJM's have screws that even the best made Phillips won't deal with. Japanese bikes need Japanese screwdrivers.

years that I've used the correct Japanese drivers, I have accumulated hundreds of screws in various lengths that would have otherwise been trashed.

So even if you're not restoring and simply want to do normal maintenance, make sure your drivers are made for the screws those Japanese factories originally installed on your machines.