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MiscRes: Magazine Articles

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"Numbers Game", Is the VIN on that Ironhead Clean?

TECH & HOW-TO
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TECH**OLD IRON**

NUMBERS GAME

Is The VIN On That Ironhead Clean?

Text and photos by Chris Maida

Lots of old Ironheads have been given number jobs, meaning the engine's Vehicle Identification Number (VIN) has been altered. Usually the bike was stolen, plain and simple. The problem for honest folk is that many people don't know they possess a hot bike. And though they bought it legally and didn't know it was hot, if they get stopped and checked, they still lose the bike and risk jail time. (Not to mention blowing hard-earned cash on a lawyer.) As for the odds of getting nailed, many states have officers, usually State Troopers, who are assigned specifically to stolen vehicles. Some states, like Connecticut, have a squad just for Harleys.

Stolen Harleys is an old problem. Over the years, The Motor Company has tried to make it harder to cleanup stolen engines. (An engine that has been restamped is considered tagged or tattooed.) We'll go through the various VINs and codes that pertain to Ironheads up to 1980 in this story to help keep you from buying somebody else's problem. Later-model Ironheads and Evos will be covered in an upcoming issue.

Harley used the same numbering system for 1957 through 1969 Sportsters. These bikes have the VIN on the left engine case just above the timing hole plug (photo #1). There are no identification numbers on the frame for these bikes. The old system's digits are styled like the number and letter stamps you can buy in a well-stocked hardware store. And that's the problem. Anybody could buy, after hunting long enough, the stamps needed to change the VIN on an altered engine boss.

In reading the old coding system from left to right, the VIN consists of two numbers that are the engine's model year, followed by two to four letters which denote the engine type. The sidebar titled "Alphabet Soup" lists the four possible types. The last four or five numbers are sequential production numbers. So the number



1 These are the old style numbers. Note the height of the engine boss and the texture around the VIN. Also note the style of numbers. If the boss or the surrounding area shows any signs of grinding, welding, or file marks, forget about the bike.

in photo #1 is for a 1968 55-inch (900cc) overhead valve twin with high compression pistons, also known as a Sportster. That's it for the coding system. Let's move on to altered engine bosses.

Though the numbers may be correct, look out for tampering. The factory boss is about 1/8-inch high. A lower one may indicate that it has been filed down and restamped. Also watch for file or grind marks on the boss or the area surrounding the boss. Also check if the boss face has a different texture or finish than the rest of the case area. A very smooth surface means it's been messed with. Check to see if there are any signs of welding or tiny bubbles in the metal. Sometimes bosses are filed down and then welded to the correct height again. If the numbers are hard to read, as in a double image, the number may have been stamped over with a new VIN. These are all indications of tampering and a good reason to find a different bike. But don't be put off by sloppily arranged digits. I used to wonder if the stamping guy at the factory was drunk the day he did some of the VINs I've seen.

Starting with 1970, Harley changed its

numbering system and began using a new digit style and coding system. The 1970 model year is a mixed bag as far as VINs are concerned. Some early 1970 models have the VIN in the old location using the old-style digits and coding system. However, most 1970 Sportsters have their VIN on the right side of the engine on a new engine VIN boss. You will find it forward of the front exhaust pushrod tube. The 1971-1980 Ironheads have the VIN between the two intake pushrods (photo #2) and on the frame on the right side of the neck (photo #3). So much for VIN location. Let's move on to the coding system.

Going from left to right, this VIN coding system works like this: the first character on the engine boss is a star. It's also the last character on the boss. If your VIN does not have these, you have a problem. The next two characters indicate the model. The first is a number, the second a letter. For Sportsters, it will usually be a "3A" or "4A." Again, see the sidebar, "Alphabet Soup" for a list of the eight possible combinations.

The next five characters will be sequential production numbers. Then a letter which indicates the manufacturer and the model year. An "H" is to signify a Harley-Davidson built between 1970-1979. A "J" is for a Harley-Davidson built in 1980. The last digit is a number and it indicates the specific year of manufacture. For example, a VIN like 4A42204H3 says this should be a 1973 kick start 1000cc XLCH Sportster. And remember, check for the two stars, the correct character style, and the previously mentioned signs of tampering like filing marks or incorrect textures.

As stated earlier, this new system started in 1970. At that time, Harley also started putting the engine numbers on the frame. The frame's digits and coding system is the same one as the engine's. Your frame's VIN should match the engine's VIN exactly. If it doesn't, I suggest



2 Here are the new style numbers which were used on 1970 to 1980 Ironheads. These also have a coding system. This number identifies the bike as a 1973 kick start 1000cc XLCH Sportster.



3 Here is the frame's VIN on the frame boss located on the right side of the neck, just above the downtube. These characters have the same style and coding system as the engine VIN.

you somehow discretely find out how your particular state handles this. Some states don't care what's on the engine because it registers bikes by frame number; others do the engine only. Many do both. When the frame and engine don't match, it doesn't mean some parts are hot (though that may be the reason), but it may mean you'll have problems trying to get it registered. If the frame or engine VIN does come back as hot, most states take the whole bike and everything else in the garage. Check this out thoroughly before you buy the bike.

Unknown to many people is Harley's left and right crankcase numbering system. Most thieves don't bother with these numbers because most people don't know about them. Harley has been using this system, in one form or another, since 1925. And though the system was changed slightly in 1975, the change does not affect the way you would read the important first three numbers on any Ironheads.

Pre-1975 crankcase numbers are located on the bottom of the engine (photo #4). These crankcase numbers will not match the VIN or have the same style digits. They should, however, match each other. If they don't, it doesn't mean that the engine is hot (though, again, that may be the reason). It may just be that one of the case halves was changed after the engine left the factory.

The crankcase numbers can give you a clue as to whether the engine VIN has been altered. Here's how this system works: the first number is a model identifier. A "7" indicates a 55- or 61-inch XL, XLH, or XLCH Sportster. The next two characters are the engine's model year. The rest are just production numbers. So if you have a number like the one in photo #4 (773-4321), the engine should be a 1973 Sportster.



4 Another way to tell if the cases have been tagged is to check the crankcase numbers.

Now, a set of cases on a 1973 could also have 772-4321 as a crankcase number. That's because sometimes the cases produced in one calendar year were not all used on that year's engines so they were used on the next year's engines, too. But this did not happen too often.

As for the location of 1975 to 1980 Ironhead left crankcase numbers, they are stamped inside the left case, in the primary system's engine cavity. The 1975 to 1980 Ironhead numbers are grouped like this: 775-168-140. This number is for a 1975 Sportster.

As I said, these case numbers are a good way to tell if the engine numbers have been changed. Here's how: if the case number says it's the same (or earlier) year as the engine's VIN, it's so-

far-so-good. But if the crankcase number says it's a 1971 and the VIN indicates a 1970, it's been tagged. Do you know why? Look at the numbers again. How can a 1970 engine that's already left the factory get a set of 1971 engine cases? As with the engine boss, also look for signs of tampering. Things like file or grind marks, or if the area around the crankcase number has a different texture or finish than the rest of the case area. These are all red flags that probably indicate tampering. If you are unsure and the bike is a really good deal, come back with someone who knows what the VIN and engine boss should look like. Otherwise, pass on it. After all, if you are unsure, the next cop who checks it may also be and he may haul you and the bike in for a better look. ■

ALPHABET SOUP

Here are the four possible letter combinations for the old-style numbering system:

- XL 55-inch overhead valve low compression twin
- XLH 55-inch overhead valve high compression twin
- XLC 55-inch overhead valve competition twin
- XLCH 55-inch overhead valve high compression twin

The 1970 to 1980 numbering system used the following number/letter identifiers:

3A	XL-900 Electric start	(1970-1971)
3A	XL-1000 Electric start	(1972-1980)
4A	XLCH-900 Kick start	(1970-1971)
4A	XLCH-1000 Kick start	(1972-1980)
7F	XLCH-1000 Cafe Racer	(1977-1978)
2G	XLT-1000 Touring	(1977)
4E	XLS-1000 Roadster	(1979-1980)
8G	XLP-1000 Police	(1980)

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