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# IH: Engine Mechanicals - Sub-01B

[Click Here](#) to reference the Ironhead Engine Case Identification page in the Sportsterpedia.

## Engine Case Numbers

The engine VIN, also called engine number or serial number, and can be found on a pad in the "V" between the cylinders.

Motor serial numbers are on the left side of the motor from 1957-1969 and on the right side of the motor from 1970-1985.

From 1957-1969, motorcycles were titled to the engine only. Starting in 1970, motorcycles were titled to the frame instead of the engine.

But if your frame and motor were born together the numbers will match (and possibly save you title hassles).

There are also casting numbers as well as stamped numbers in various places on the engine and early frames, but they are not motor numbers.

Casting numbers do not indicate the year of your bike, only the date the part was cast.

For instance, on a 70s bike, there are still quite a few -52 (the first year of the K model) numbers.

(leading the uniformed to advertise all sorts of later model parts as K model parts)

Decoding the motor number / VIN will tell you the year of the motor and hence the gasket set you should buy.

Often, riders add later parts, especially items like transmission doors and oil pumps because the later castings have been improved.

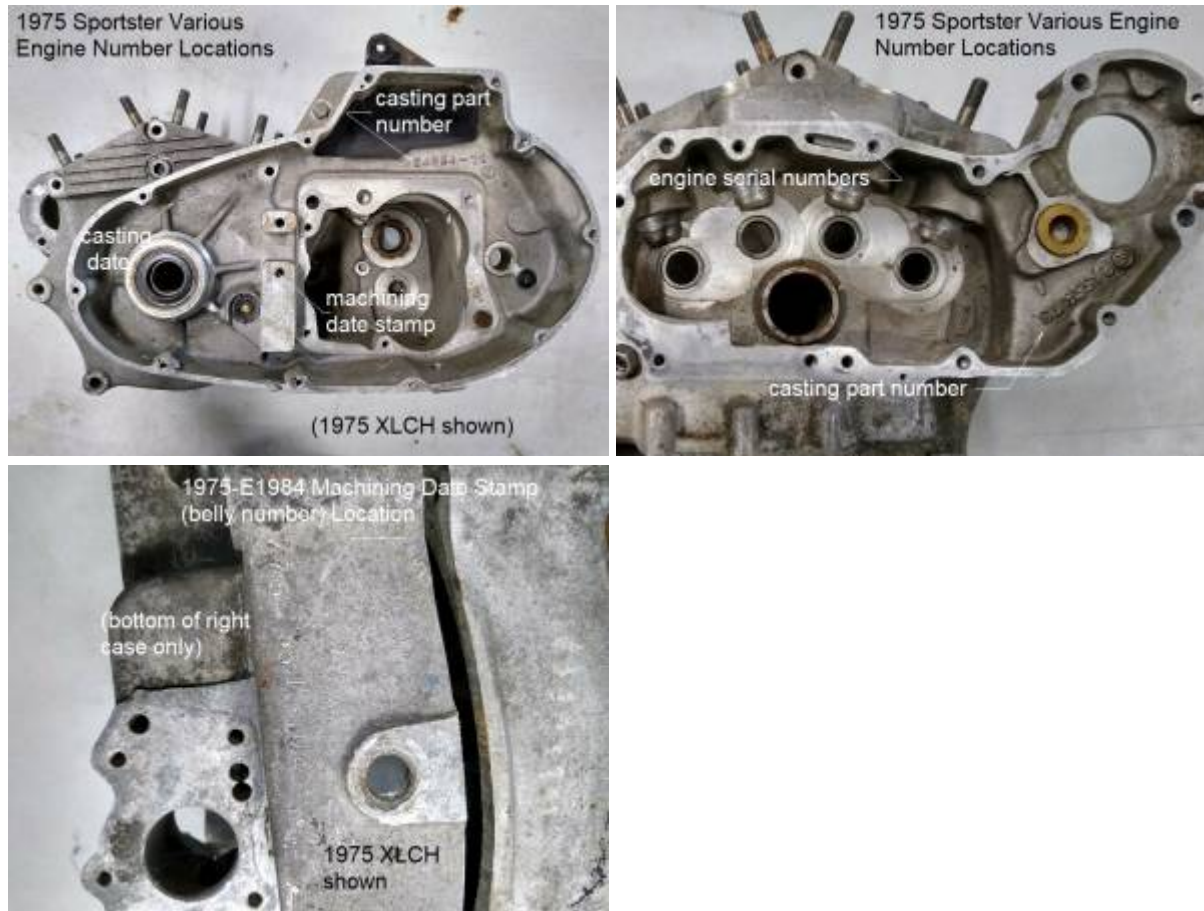
Just because you have a later casting number on a part of the motor does not mean you have a later motor though.

The casting date simply tells you the month the part was cast. This is not the same as the day the assembly was made.

Casting dates can help confirm that factory cases on a 1976 motor were not cast in 1978 for instance.

### **1975-1985 various engine number locations:**

1975 model casting and stamped engine numbers: <sup>1)</sup>



## 1957-1969 Engine Serial Numbers

Noted serial numbers with their respective dates as stated in service bulletins.

- 62 XLCH 2481, September 21, 1961 (shipped from the factory) <sup>2)</sup>
- 62 XLCH-2549, September 15, 1961 (shipped from the factory) <sup>3)</sup>
- 65 XLH 1768, September 10, 1965 (new shock adjusting cam) <sup>4)</sup>
- 65 XLH 7359, April 30, 1965 (new spark plugs) <sup>5)</sup>
- 66 XLCH 6117, January 13, 1966 (fillet added at the base of the countershaft low gear boss, right crankcase) <sup>6)</sup>
- 66 XLCH 10611, produced after August 10, 1966 <sup>7)</sup>
- 69 XLCH 5921, November 4, 1968 (new 19 tooth transmission sprocket) <sup>8)</sup>
- 69 XLH 9070, produced January 3, 1969 (timer weight springs changed) <sup>9)</sup>

## 1970-1985 Engine VIN Numbers

- A new numbering system was issued for both the engine and frame.  
(first year referred to as a Vehicle Identification Number or VIN)  
The same VIN number is stamped into both the engine and frame.  
It consists of a model code, a serial number, a manufacturer's identification, and the model year.

The factory VIN (serial number) on the engine does not have anything to do with nor is it used for the title / registration.

It did serve at one time as warranty information. However, now it does suffice for at least one point of engine identification.

Due to folks altering these numbers from time to time, the number alone doesn't always mean anything toward the actual year/model (unless factory stamped).

- Motorcycles were produced in batches and the VINs were consecutive thru the different batches of different models.

There were no set number of same model bikes in a batch (no 50 or 100 XLH models per batch deal).

For instance, Service Bulletin M-736 reveals a long list of VINs produced from June 7, 1978 to June 14, 1978.

Also revealed in that bulletin is the fact there was a year model change within that 8 day time frame.

So the year model change for case production was the 2nd week in June, 1978.

A few numbers in-between were left out of the bulletin but the VINs start at (FX) 2A75920H8 and end at (XLCH) 4A17621H9.

In those 8 days (6 work days) and in this order per the VIN sequence, produced were;

- 17 FLH 1200 (2A 75921 H8-2A 75943 H8)
- 1 FX 1200 (2C 75961 H8)
- 5 FLH 1200 (2A 75969 H8-2A 75975 H8)
- 38 FXE 1200 (9D 75983 H8-9D 76025 H8)
- 3 FLH 1200 (2A 76027 H8-2A 76030 H8)
- 1 FLH-80 (3G 76036 H8)
- 38 FXS 1200 (2F 76040 H8-2F 76102 H8)
- 34 FXE 1200 (9D 76103 H8-9D 76142 H8)
- 12 FLH-80 (3G 76143 H8-3G 76160 H8)
- 2 FXE 1200 (9D 76173 H8-9D 76174 H8)
- 9 FXS 1200 (2F 76180 H8-2F 76199 H8)
- 11 FLH 1200 (2A 76201 H8-2A 76226 H8)
- 30 FXE 1200 (9D 76227 H8-9D 76350 H8)
- 5 FX 1200 (2C 76352 H8-2C 76380 H8)
- 20 XLH (3A 17392 H8-3A 17497 H8)
- 1 FLH 1200 (2A 17501 H9)
- 94 XLH (3A 17502 H9-3A 17737 H9)
- 17 XLCH (4A 17404 H9-4A 17621 H9)

In an effort to date (somewhat) factory issued engine VINs, a list is being compiled below of engine numbers verified through service bulletins.

IF your VIN is listed below (or even before or after dates), it may help deciphering app dates.

The list may also help to establish a range of VINs within specific times frames as defined by the MoCo in the TSBs.

1973 Models		
XLH/XLCH	3A or 4A, 42100H3 to 50000H3	Produced between October 31, 1972 and March 25, 1973 <sup>10)</sup>
FX	2C 12100 H3 to 19200H3	

XL/XLCH	3A or 4A, 45311H3 to 46787H3	Described as an initial production of 1973 models <sup>11)</sup>
XL/XLCH	3A or 4A, 60000H3 to 60130H3	
XLH/XLCH	3A or 4A, 40000H3 to 50772H3	All 1973 XL and XLCH motorcycle frames will require corrective modification <sup>12)</sup>
XLH/XLCH	3A or 4A, 60000H3 to 71568H3	
1975 Models		
XL/XLCH	3A or 4A, 10000H5 to 51760H5	Front brake caliper mounting bolt defect showing affected models <sup>13)</sup>
FX	2C10000H5 to 2C51760H5	
FXE	9D10000H5 to 9D51760H5	
FL/FLP	1A24439H5 to 1A48750H5	Safety Defect, inspect for wheel spoke breakage <sup>14)</sup> TSB issued November 7, 1975
FLH	2A24439H5 to 2A48750H5	
FX	2C24439H5 to 2C48750H5	
FXE	9D24439H5 to 9D48750H5	
XLH	3A24439H5 to 3A48750H5	
XLCH	4A24439H5 to 4A48750H5	
1976 Models		
XL/XLCH	3A or 4A, 10000H6 to 55388H6	Front brake caliper mounting bolt defect showing affected models <sup>15)</sup>
FX	2C10000H6 to 2C55388H6	
FXE	9D10000H6 to 9D55388H6	
XLH/XLCH	3A or 4A, 31727H6 to 50376H6	Rear brake shoe linings with defective adhesive bond Produced January 5, 1976 to May 20, 1976 <sup>16)</sup>
1977 Models		
XL/XLCH	3A or 4A, 10000H7 to 26346H7	Front brake caliper mounting bolt defect showing affected E1977 models <sup>17)</sup>
XLT	2G19844H7 to 2G26346H7	
FX	2C10000H7 to 2C26346H7	
FXE	9D10000H7 to 9D26346H7	
XLH/XLCH/XLT	3A/4A/2G 27940H7	New breather valve in late 1977 models beginning app October 15, 1976 App date corresponds to VIN listed <sup>18)</sup>
XLH	3A51694H7 to 3A51717H7	(24) Produced Friday June 24, 1977 <sup>19)</sup>
	3A51739H7 to 3A51799H7	(61) Produced Monday June 27, 1977 <sup>20)</sup>
	3A51820H7 to 3A51834H7	(15) Produced Tuesday June 28, 1977 <sup>21)</sup>
1979 Models		
XLH/XLCH	Mixed numbers	Engine numbers from January 9, 1979 to February 8, 1979 were mixed. <a href="#">Click Here</a> to read more on the 1979 Exception
XLH	3A10001H9 to 3A12067H9	Produced between February 15, 1978 and March 22, 1978 <sup>22)</sup>
XLH	3A17502H9-3A17737H9	Produced in the 2nd week of June, 1978 <sup>23)</sup>
XLCH	4A17404H9-4A17621H9	
XLH	3A56358H9-3A57166H9	Produced and shipped from 3/22/1979 to 3/30/1979 <sup>24)</sup>

XLH	3A53871H9	Produced and shipped between March 30, 1979 and April 19, 1979 <sup>25)</sup>
	3A57901H9-3A57928H9	
	3A58103H9-3A58144H9	
	3A58406H9-3A58413H9	
	3A58528H9-3A58540H9	
	3A58541H9-3A58621H9	
	3A58664H9	
	3A58667H9-3A58707H9	
	3A58746H9-3A58789H9	
	3A58905H9-3A58937H9	
	3A59068H9-3A59087H9	
	3A59155H9-3A59204H9	
	3A59339H9-3A59378H9	
	3A59412H9-3A59429H9	
	3A59530H9-3A59560H9	
	3A59663H9-3A59670H9	
	3A59856H9-3A59870H9	
	3A59987H9-3A59046H9	
	3A60083H9-3A60103H9	
	3A60379H9-3A60410H9	
	3A60623H9-3A60661H9	
	3A60913H9-3A60935H9	
XLS	4E58285H9-4E58292H9	
	4E58665H9-4E58666H9	

## Belly Numbers / Line Bore Numbers

The numbers on the bottom of the cases are commonly called the “belly” numbers or “line bore” numbers. <sup>26)</sup>

If your bike has “born together” cases, the numbers on each case half should match.

These numbers have nothing to do with your gasket set or anything else.

Both case halves should carry a set of these numbers that indicate their actual machining date (when the case halves were machined as a pair).

Belly numbers have no relationship to the Serial number (or VIN number respectively) located on the side of the engine.

Belly numbers are stamped the day the case halves are machined (line bored) and paired up.

The motor serial number or VIN respectively happens later after engine assembly.

These two have absolutely no correlation to each other except they can be a dead give away on bogus numbers when they are out of the realm of possibility with each other.

For instance, if you have an early 77 VIN, the bike would have been assembled in late months of 1976.

If the belly numbers show a machining date of April, 1977, at least the red flag is there.

However, it's possible for blown out cases to get replaced with the same VIN but carry a newer belly date



code (newer machining date).

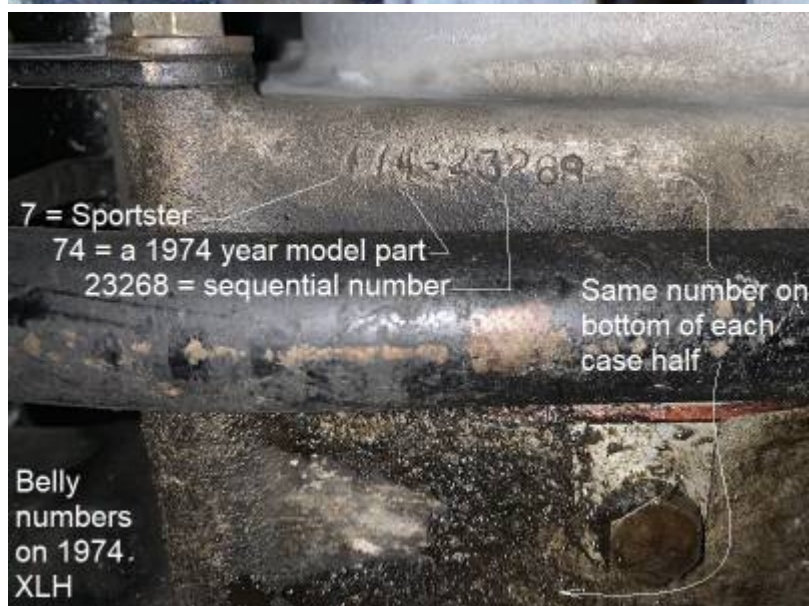
So it's not set in stone that the belly numbers will match the app year/production month of the VIN.

## 1957-1974 Belly Numbers

Belly numbers were coded beginning with a model digit (7) for Sportsters, year and 4-5 running sequential numbers for the year model:

Model (1 digit)-Year (last 2 digits)-Sequential No (4 or 5 digits)

Each set of belly numbers is stamped on the bottom of each case half and the numbers should match if they were factory issued.





## 1975-1985 Belly Numbers

For convenience, [Click Here](#) to see the Julian Day Calendar page in the Misc Resources section of the Sportsterpedia.

You can open a pic of a full per-year calendar thru 1985 there and match your belly numbers to find the day your cases were machined.

Belly numbers changed from simple sequential serial numbers to include the Julian Day Code and sequential production number for the day.

HD Model Designation (1-2 digits) - Year (2 digits) - Julian Day of the Year (3 digits) - Sequential Number (3 digits)

- The model designation for 1000cc Sportsters was (7).
- Location of numbers:
  - 1975-E1984:  
The left case is stamped on the outside primary wall.  
The right case is stamped on the bottom under the flywheels.
  - L1984-1985:  
The left case is stamped on the outside primary wall (unchanged).  
The right case is stamped on the right side of the case (sump) below the cam cover starting with crankcase #784 044001.  
Per TSB M-885, the locations of the right crankcase numbers were changed to aid the stamping operation.
- The Julian Day starts over on every January 1st.
  - Example January 1st = Julian Day #1. December 31 = Julian Day #365 of a non leap year, December 31 = 366 of a leap year.  
This is verified thru Service Bulletin numbers 744 and 760.
- The year in the Julian code represents the year the part was intended for (not the year it was machined).
  - Example using belly numbers 775-351-102:  
The 75 represents a 1975 model part, 351 in the code represents December 17, 1974.  
So it's safe to say that motor was assembled and that 1975 model bike was most likely shipped or sold in December, 1974.  
(December 1975 would have those cases machined during the 1976 model season, not so).  
Then if you can match mid to late December to the VIN range, that'd be a good indication toward the motor being original.  
Always check other features as well though since these motors may (probably) have been modified over the years.  
(whether from blown cases, theft or racing mods)
- Sometimes mistakes were made on a number at the factory and they scribed through that number once (so you can still read it) and re-stamped it.  
So it'll look like it's been altered but it would have been altered by the factory (or possibly the dealership in some instances).
- Example of a Sportster belly number: Using belly numbers 776 015 024, the code translates to;
  - 7 = Sportster
  - 76 = 1976, the year model for which the part was intended.
  - 015 = January 15

- 024 = 24th production of the day.
- Both case halves would have the same coding indicating that particular case set was machined (line bored) on January 15, 1976.

These 1975 XLCH cases were machined December 17, 1974 (Julian day# 351). Casting date of Nov. 1974 <sup>29)</sup>



1975-1985 belly numbers on right case bottom <sup>30)</sup>



## Case Match Numbers

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<sup>1)</sup>

photos courtesy of Carson S

<sup>2)</sup>

TSB# 453 dated October 13, 1961

<sup>3)</sup>

TSB# 454 dated December 4, 1961

[4\)](#)

TSB# 494 dated, September 15, 1964

[5\)](#)

TSB# 515 dated June 11, 1965

[6\)](#)

TSB#537 dated March 22, 1966

[7\)](#)

TSB# 547 dated October 24, 1966

[8\)](#)

TSB# 582 dated December 17, 1968

[9\)](#)

TSB# 562A dated May 1, 1969

[10\)](#)

TSB# 651 dated June 27, 1973

[11\)](#)

TSB# 650 dated May 15, 1973

[12\)](#)

TSB# 656 dated February 11, 1974

[13\)](#) [15\)](#) [17\)](#)

TSB# 709 dated March 22, 1977

[14\)](#)

TSB# 695 dated November 7, 1975

[16\)](#)

TSB# 702 dated May 28, 1976

[18\)](#)

TSB# 708 dated December 1, 1976

[19\)](#) [20\)](#) [21\)](#)

TSB M-716 dated August 26, 1977

[22\)](#)

TSB M-727 dated April 11, 1978

[23\)](#)

TSB M-736 dated July 31, 1978

[24\)](#)

TSB M-747 dated May 1, 1979

[25\)](#)

TSB M-751 dated June 29, 1979

[26\)](#)

Moon Wolf of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/79283-case-numbers-not-vin?t=575658&page=2>

[27\)](#)

photo by ironheadjunkie of the XLFORUM

[28\)](#)

photo by The Doctor71 of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/203115-1974-sportster-vin-issues-what-the-heck-did-i-buy?t=2080305&page=2>

[29\)](#)

photo courtesy of Carson S

[30\)](#)

photo by paulc of the XLFORUM, labeled by Hippysmack

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/166796-left-case-belly-number-location?t=1792269>

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