On Point: The German SG. 84/98 III Bayonet for the Kar 98k Rifle

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Introduction

The recent influx of affordable Russian-capture Mauser Kar 98k rifles has introduced a new generation of collectors to this legendary German rifle of World War II. This article provides a basic introduction to the bayonet used with the Kar 98k, the Seitengewehr (sidearm) M1884/98 Third Pattern or SG. 84/98 III for short. My objective is to further the collecting community's appreciation of the history associated with the SG. 84/98 III bayonet and provide the Kar 98k collector with enough basic knowledge to be confident in acquiring an example to go with their Kar 98k rifle.

History

The knife bayonet first came about when Germany redesigned the single-shot Mauser M1871 rifle into a repeating rifle in 1884. Although produced in quantity, the M1871/84 knife bayonet never fully superseded the graceful M1871 sword bayonet as the primary service bayonet for use with the M1871/84 and M1888 rifles.

Figure 1: M1871 sword bayonet made at the Prussian Royal Arsenal at Erfurt in 1878, using a blade manufactured by Gebruder Simpson of Suhl (the forerunner of Simpson & Co.)

Figure 2: M1871/84 knife bayonet made in 1886 by C.G. Haenel of Suhl.

The legendary Mauser Gewehr 98 (M1898 rifle) is one of the outstanding military rifles of all time. Although best known for it's superb receiver and bolt design, the M1898 also introduced a groundbreaking bayonet mounting approach. Prior to the M1898, all sword and knife bayonets were supported at the rear by a bayonet lug and at the front by a muzzle ring. However, contact between the muzzle ring and barrel adversely affected accuracy. The M1898 introduced a more substantial bayonet mounting bar that could adequately support a bayonet without need of a muzzle ring.

Top: Mauser bayonet lug on a M1893

Bottom:Mauser bayonet bar on a Gewehr 98

The first bayonet for the M1898 rifle was the long, slender M1898 “Quillback” bayonet. This bayonet gets it's name from the round spine that runs the length of the blade, like the quill of a feather.

Figure 4: At 25 ¾ inches long, the M1898 was the longest bayonet produced for the Gewehr 98 rifle. This example was made by Simpson & Co. in 1906.

Beginning in 1905, two new bayonets were introduced for the M1898 rifle. The first was the well-known M1898/05 “Butcher Blade” bayonet, so named for it's resemblance to a butcher's knife.

Figure 5: M1898/05 Sawback bayonet. This example was made by Weyersberg, Kirschbaum & Co. in 1916.

The second was a modification of the old M1871/84 knife bayonet. The mortise (mounting slot) was lengthened to accept the M1898 bayonet bar and the muzzle ring was ground away. This was designated the M1884/98 bayonet. In addition to modified M1871/84 bayonets, there were new-made M1884/98 bayonets as well. However, the longer M1898 and M1898/05 bayonets were preferred and were made in vastly greater numbers.

During World War I, the M1884/98 knife bayonet made a second appearance. As the stalemate of trench warfare developed during 1915, it became evident that the M1898 and M1898/05 bayonets were longer and heavier than needed. The M1884/98 Second Pattern introduced a couple of changes over the pre-war first pattern types. The grips were no longer of the 'humpback' M1871/84 profile. Beginning in 1916, a sheet-metal flashguard was added to prevent charring of the wooden grips when mounted to the shortened Kar98a rifle.

Top: Sheet-Metal Flashguard

Bottom: No Flashguard

Figure 7: SG. 84/98 III bayonet. This example was made by E. & F. Hörster & Cie., Solingen in 1940.

SG. 84/98 III Markings

Both the bayonet and scabbard were marked with a serial number, year of manufacture, and maker's mark. Bayonet and scabbard markings will match, if the bayonet and scabbard have remained together since new. Government acceptance marks, called waffenampts, were also placed on both the bayonet and scabbard.

Serial numbers were used in blocks of 10,000, from 1-9999, then 1a-9999a, then 1b-9999b, and so on. Number series' were sometimes continued into the next year, without starting over at number one. With one exception, Genossenshaft Maschinenfabrik, Ferlach, all makers used this same serial numbering pattern. Ferlach used a complex formula to assign serial numbers, the explanation of which is beyond the scope of this writing.

Figure 8: Bayonet and scabbard showing matching serial numbers. This example was made by Richard A. Herder in 1937.

Initially, a letter was inserted into the maker's mark to denote the year of manufacture. K=1934, G=1935, and S=1936. In 1936, this approach was discontinued and a two-digit year was used instead. Initially, bayonets were dated on the spine. The date was later moved to the ricasso, with adoption of the letter codes in 1940.

Figure 9: Bayonet showing the two-digit date on the spine. This example was made by the Elite Diamantwerke in 1939.

The Germans used three distinctly different approaches to maker marks on the SG. 84/98 III. They were as follows:

- Number Codes: used 1934-1937
- Commercial Trademarks: used 1937-1940/41
- Letter Codes: used 1940/41-1945

Number Codes

When Germany began re-arming in 1934, they desired to maintain the pretense that they were still complying with the Treaty of Versailles. To this end, they devised a numerical code system to obscure the identity of arms makers. The identity of makers represented by the Number Codes was kept secret during the war and remained a mystery until just recently.

Number Codes were comprised of three elements:

- A letter prefix, which identified the type of armament. The letter identifying small arms was “S”.
- A number, which identified the maker.

A letter suffix, which identified the year of production (as noted above, this was discontinued in 1936).

Figure10: Number Code on a SG. 84/98 III bayonet made by Carl Eickhorn. The “G” date indicates manufacture in 1935.

Commercial Trademarks

In 1936, Germany openly renounced the Treaty of Versailles. This made the Number Codes unnecessary, so makers simply began marking bayonets with their commercial trademark. There were also some trademarked SG. 84/98 III bayonets made for commercial sale, mostly to local police departments. However, these are uncommon.

Figure 11:- Commercial trademark of Elite Diamantwerke on a SG. 84/98 III made in 1939.

Letter Codes

The outbreak of war created a different need to obscure the identity of arms makers, namely to avoid exposing war production plants to aerial bombing raids. While this helped the armaments industry overall, it offered little protection to edged weapons makers. Most were clustered in the Solingen area. They had been there since the 1400s and the whole world knew it. Fortunately for them, interrupting bayonet production was not high on the Allies' target list.

The earlier numerical code system was inadequate to handle the enormous expansion in the number of arms contractors and subcontractors, so a new system of Letter Codes was devised. These were randomly assigned one, two, and three letter identifiers. The codes began with “a'” and ran to “ozz” by October 1944. After that, the official record of code assignments is very incomplete, with only a few dozen codes identified between “pjj” and “zb”. These late-war gaps in record keeping were likely the result of records lost to Allied bombing.

Figure 12: - Letter Code "asw" for E. & F. Hörster & Cie. on a SG. 84/98 III made in 1942.

Waffenampts

Heerwaffenampt (HWaA) markings are the government inspection stamps found on most all World War II era German military equipment. The marking consists of an eagle over "WaA" followed by a one to three digit number. These marks are tiny, usually requiring a magnifying glass to discern the number.

Heerwaffenampt (Army Weapons Office) inspectors (actually, inspection team leaders) were each issued their own number. If the inspector was reassigned to a different factory, he took his number with him. Although the identities of most German inspectors are not known, documentation regarding the factories inspectors worked in, the type of materiel inspected, and the years that they worked there survived the war. Several listings of these codes are available on the web. A couple are listed on the links page of my site at www.worldbayonets.com.

On the SG 84/98 III bayonet, waffenampts are typically found on the pommel. However, they are also sometimes observed on other parts like the crosspiece, the tang, the flashguard, the lock nut, the press stud, and the underside of the grips. On the scabbard, a waffenampt is typically found on the ball finial. Scabbards are made of very soft steel and the waffenampt is often illegible if too deeply struck.

Two different waffenampt markings were used: Prior to 1937 the eagle had drooping wings. Beginning in 1937/38, inspectors transitioned to a new mark, where the eagle had straight wings.

Figure 13: Droop-wing WaA138 marking on the pommel of a SG. 84/98 III bayonet. Finding a pair of waffenampts on the pommel is fairly common.

Figure 14: Straight-wing WaA218 marking on the pommel of a SG. 84/98 III bayonet. Visit one of the code listing sites and see if you can identify the maker of this bayonet by the waffenampt.

One aspect of the SG 84/98 III's history is the absence of production records. The number of bayonets produced from 1934-1945 is not known. The 98k Bayonet Collector's Network (BCN) was founded in 1996 by John C. Jacobi, as an organization focused around collecting of the German SG. 84/98 III bayonet. A continuing project that dates from the BCN's beginning is to re-construct the production record of the SG. 84/98 III bayonet, through collection and analysis of maker and serial number data.

Members from many countries report maker's codes, production years, and serial numbers observed at shows and other places to Andrej 'Andy' Blazicek in Slovakia. As of Summer 2006, data on over 12,000 SG. 84/98 III bayonets have been collected. Based on statistical analysis, it is currently estimated that just over 14,500,000 SG. 84/98 III bayonets were produced from 1934-1945. However, this number is a moving target and will change as more data is included in the analysis.

Until recently, only a handful of the Number Codes had been linked to specific manufacturers. In 2002, author Johannes Preuss uncovered a copy of the Number Code directory while conducting archival research in Germany. This was subsequently published in his book, Zahlencode System Des Herres Von 1925-1940 (Number Code System of the Armies from 1925-1940).

The majority of SG 84/98 III makers were old guard German bladesmiths from Solingen. These makers were legendary for producing some of the world's finest edged weapons. There were also two SG. 84/98 III makers outside of Germany: the former French government arsenal at Châtellerault, in occupied France, and Genossenshaft Maschinenfabrik, Ferlach, in occupied Austria.

Additionally, there were five German commercial firms that produced SG. 84/98 III bayonets:

Josua Corts und Sohn, Remscheid, was a maker of precision measuring instruments. They are still in business today, making precision components for steel rolling machinery.

Dürkopp Werke, Bielefeld, founded in 1867, was an amazingly innovative company. By the turn of the Century, Dürkopp had already produced their own lines of bicycles, motorcycles, and automobiles. In the 1930s, Dürkopp developed the first conveyor system that allowed assembly-line production of clothing. They later produced both household and industrial sewing machines. In the 1950s, Dürkopp designed an immensely popular motor scooter, the Diana. They are still in business today, manufacturing industrial sewing machinery and conveyor systems.

Mundlow & Company of Magdeburg (Mundlos AG) was a sewing machine manufacturer / distributor. They came into existence in 1863, as one of the many German competitors to Singer and the various British sewing machine makers. Mundlos survived World War II and remained in business into the 1960s.

Elite-Diamantwerk (Elite Diamond Works) made bicycles. The first Elite Diamant bicycles were made in 1885. During World War II, they also produced small motorcycles. After World War II, the works fell into Russian hands and became part of the East German State. Under communist control, they continued producing bicycles and pioneered development of alloy bicycle components, including the first all-alloy bicycles. Diamant's alloy bicycles won the world road race championships in the late 1950s. Following German reunification in 1992, Diamant was privatized and is the oldest bicycle factory still operating in Germany. In the USA, we still refer to the classic boy's/men's bicycle frame as a “diamond frame” and now you know where the term came from.

Jetter & Scherrer, Aesculap Werke, Tuttlingen is a world-renowned maker of medical and surgical instruments. Aesculap was formed in 1867 by Gottfried Jetter. Aesculap survived the war and continues making medical instruments today. Tuttlingen is the home for more than 200 surgical equipment companies, including Aesculap. Half of the world's surgical equipment is manufactured in Tuttlingen!

The following table lists the SG. 84/98 III makers, their maker's marks, and years of production observed to date. The Number Codes are as documented by Preuss. The years of production are as documented by Andrej Blazicek's analysis of data collected by the BCN.

Manufacturer's Markings Found on SG 84/98 III Bayonets and Scabbards 1934-1945				

Maker	Number Code	Trademark	Letter Code	Years of Production
E. & F. Hörster, Solingen	S/155	E.u.F. Hörster	asw sgx	1934-1944 1944-1945
Carl Eickhorn, Solingen	S/172	CARL EICKHORN	cof	1934-1944
Alex Coppel GmbH, Solingen	S/173	Coppel G.m.b.H.	fnj	1934-1944
Weyersberg, Kirschbaum & Company, Waffenfabrik GmbH, Solingen-Wald	S/174	W.K.C.	cvl	1934-1945
F. W. Höller, Solingen	S/175	F.W. Höller	fze	1934-1944
Paul Weyersberg, Solingen	S/176	P.WEYERSBERG	crs	1934-1945
Ernst Pack & Son, Solingen	S/177	E.PACK & S.	cul	1934-1944
Gebruder Heller, Marienthal bei Schweina, Thueringen	S/178	GEBR.HELLER	n/a	1934-1940
Remscheider Hobelmesserfabrik, Josua Corts & Son, Remscheid	S/184	JOS.CORTS Sn.	ddl	1934-1944
Elite-Diamantwerk, Siegmar-Schönau bei Chemnitz	S/185	Elite Diamant	i	1934-1941
Dürkopp Werke, Bielefeld	S/238	DURKOPP	n/a	1934-40
Richard A. Herder, Solingen	S/239	RICH.A.HERDER	clc	1934-1944
Friedrich A. Herder und Sohn, Solingen	S/240	F.HERDER A.Sn.	ffc	1934-1944
Clemen & Jung, Solingen	S/241	Clemen & Jung	cqh	1934-1944
Berg & Co., Solingen-Ohligs	S/242	BERG & Co.	agv & pyy	1934-1944 1944
Mundlos AG, Magdeburg Nord	S/244	MUNDLOS	ab	1935-1944

Jetter & Scherrer, Tuttlingen	S/245	J.Sch.	n/a	1935-1941
Genossenshaft Maschinenfabrik, Ferlach-Kärnten, Ostmark (Austria)	n/a	OMC	bym	1939-1945
August Wallmeyer, Eisenach-Thüringen (scabbards only)	n/a	n/a	can	1944
Staatliche Waffenfabrik, Chatellerault, France	n/a	n/a	jwh	1941-1944

Grips

The SG. 84/98 III utilized two different grip materials: wood and plastic. Both were used throughout SG. 84/98 III production. Whatever was available was used, so makers switched grip materials back and forth over time.

Wood grips were smooth, made of European Walnut. Plastic grips were ribbed. Colors ranged from a deep chocolate brown to red, with many different shades observed. Some plastic grips give the appearance that sawdust was mixed in with the plastic to form a composite material.

Both wood and plastic grips were held by slotted screws, secured by a split nut. Beginning in 1944, some makers began to utilize rivets in place of screws. Riveted grip SG. 84/98 III bayonets are very scarce and sought after by advanced collectors.

Top: Wood Grips

Bottom: Plastic Grips

Finishes

For most of the production period, all metal parts of the SG. 84/98 III (including the scabbard) had a polished blued finish. As the war dragged on, makers became less attentive to polishing out all of the tool marks, and the finish suffered accordingly. Beginning in 1944, a few makers began substituting a phosphate (parkerized) finish. Phosphate-finished SG. 84/98 III bayonets are scarce and desirable. Many SG. 84/98 III bayonets are found today without any finish remaining, however, all SG. 84/98 III bayonets were finished when new.

Frogs

There were many belt frogs produced for use with the SG 84/98 III bayonet. In his book, Bayonet Belt Frogs, the late Anthony Carter documented 28 distinct variations for the SG. 84/98 III bayonet. The most common were of black or brown leather. Some frogs have maker's markings on the reverse, but many do not.

Figure 16: Carter #311 brown leather frog with four aluminum rivets. The hilt strap is absent. This example is marked Gebruder Klinge, Dresden, 1937, on the reverse.

Web frogs were produced for use by the Deutsche Afrika Korps (DAK), because leather does not hold up well in tropical or desert climates. DAK frogs are scarce and very desirable. They often bring more than a matching bayonet and scabbard. Fake DAK frogs abound and far outnumber legitimate examples.

Figure 17: Carter # 316 web frog. The color of these frogs varied, with the earliest type being olive drab in color like the example pictured. As the Deutsche Afrika Korps only existed for two years, these frogs are very scarce.

Manufacture and Use by Other Nations

In the late 1930's, Portugal purchased a quantity of SG 94/98 III bayonets from Germany to go with their variant of the Kar 98k rifle. These bayonets are devoid of maker's mark and date, but will have waffenampts and a serial number on the pommel.

China copied the SG. 84/98 III for use with their M1935 Chiang Kai Shek rifle, a copy of the Kar 98k. Spain also made their own copy of the SG. 84/98 III bayonet to go with their Kar 98k clone, the M1943 rifle. Spanish M1943 bayonets have a much thinner blade and the scabbard does not have a throatpiece.

Figure 18: Spanish M1943 bayonet. The close-up photo reveals a portion of the tang visible forward of the crosspiece and the "P.R.8." marking. These features are not found on SG. 84/98 III bayonets.

The story of the SG. 84/98 III did not end with the demise of Nazi Germany. Norway inherited a quantity of Kar 98k rifles and SG. 84/98 III bayonets from their German occupiers. When the USA provided Norway with M-1 Garand rifles, the Norwegians ingeniously modified 5,000 SG 84/98 III bayonets to mount to the M-1 rifle. Designated the M/1957 SLG (Selv Lessing Gevær or Self Loading Rifle), it is distinctive in having an adapter brazed to the crosspiece that fits into the Garand rifle's gas plug (similar to the US M-5 bayonet). The scabbard is also modified to attach to the U.S.-style web equipment belt.

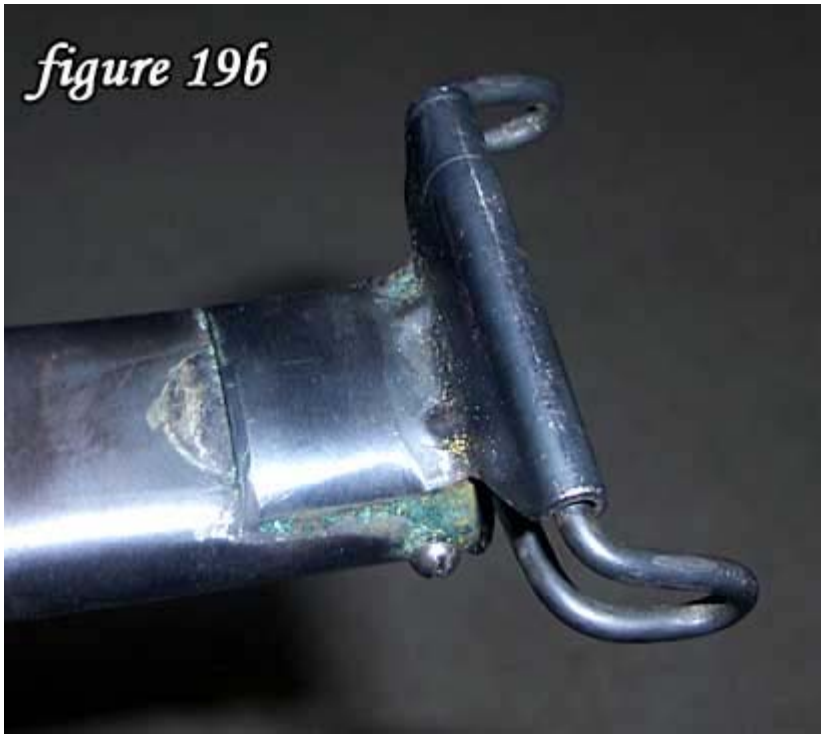

Figure19: Norwegian M/1957 SLG bayonet, showing the modifications to bayonet and scabbard. This example was originally made by Carl Eickhorn, Solingen in 1935.

Figure 20: Now, that's how to dress up a Garand!

Israel also inherited significant quantities of German military equipment in the late 1940's, during their war of independence. The Israelis felt that the Mauser bayonet bar was too

weak and added a muzzle ring to their German SG. 84/98 III bayonets, designating them M1949. Although one might have expected the Israelis to remove the original German military markings, they typically did not. When the ex-German bayonets ran short, the Israelis began manufacturing the M1949 bayonet themselves. All Israeli M1949's are parkerized and not to be confused with original German phosphate finished bayonets.

Figure 21: An Israeli M1949 conversion of the German SG. 84/98 III, with the added muzzle ring. This example was originally made by Carl Eickhorn in 1942.

Yugoslavia reworked significant quantities of captured Kar 98k rifles and SG. 84/98 III bayonets. These have now made their way to the USA for sale to collectors. Yugo rework bayonets typically have nice bluing, unsharpened blades, clean grips, and scabbards devoid of dents. However, the flashguard was sometimes deleted. German markings are usually still present, albeit somewhat feint due to polishing and rebluing. Bayonets were not kept with their scabbards and are now mismatched. Matching new serial numbers, stamped on the crosspiece and frog stud, are diagnostic of these reworked bayonets.

Conclusion

I want to acknowledge Andrej 'Andy' Blazicek in Slovakia for allowing inclusion of the production data and for his technical review and guidance.

This article barely scratches the surface of what there is to know about the SG. 84/98 III bayonet. Collectors who specialize in the SG. 84/98 III, can have several hundred examples in their collection. As can be seen in the source list, entire books are dedicated to capturing what is known about the SG. 84/98 III bayonet. However, this article provides some appreciation of the history behind the SG 84/98 III and should enable readers to confidently purchase a SG. 84/98 III bayonet to go with their Kar 98k rifle. Beware! It's hard to stop at just one.

Sources

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