

# Original Oberndorf M98 Sporter Variations

By Jon Speed

*Several comprehensive works describe the history and development of the Model 98 Mauser action and its use in military and sporting rifles. This article will attempt to condense the most important data on original Oberndorf Mauser M98 sporters.*

Commercial (sporting) Mauser actions were basically made on the machinery used for military production. Rough components then went to the sporting rifle department for final machining and modifications which required special tools and fixtures. Some tolerances were kept tighter than for military actions, and greater care was taken in tuning and finishing.

Although the company inscription *Waffenfabrik Mauser Oberndorf a/n* was changed to *Mauser Werke, Oberndorf a/n* in 1922, some post-1922 rifles bear the old inscription on the barrel or action of a matching number rifle. Bore dimensions (groove diameter, land diameter, rate of twist) are normally found under the barrel. The 'Ch 51' mark (standard industrial

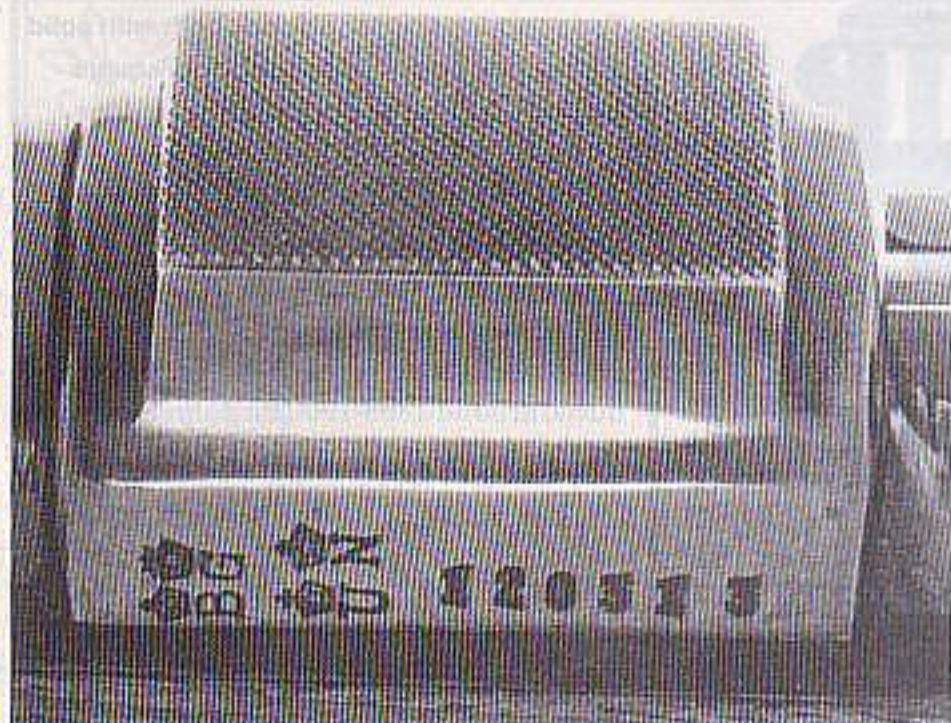
steel code), and the bore gauge code number may also be found here.

The action proof marks and serial numbers were usually applied to the left side of the receiver above the wood line and later the serial number was also placed opposite on the barrel. The first proofs, applied until approximately 1924, were crown over B and crown over U. After this a crown over G was

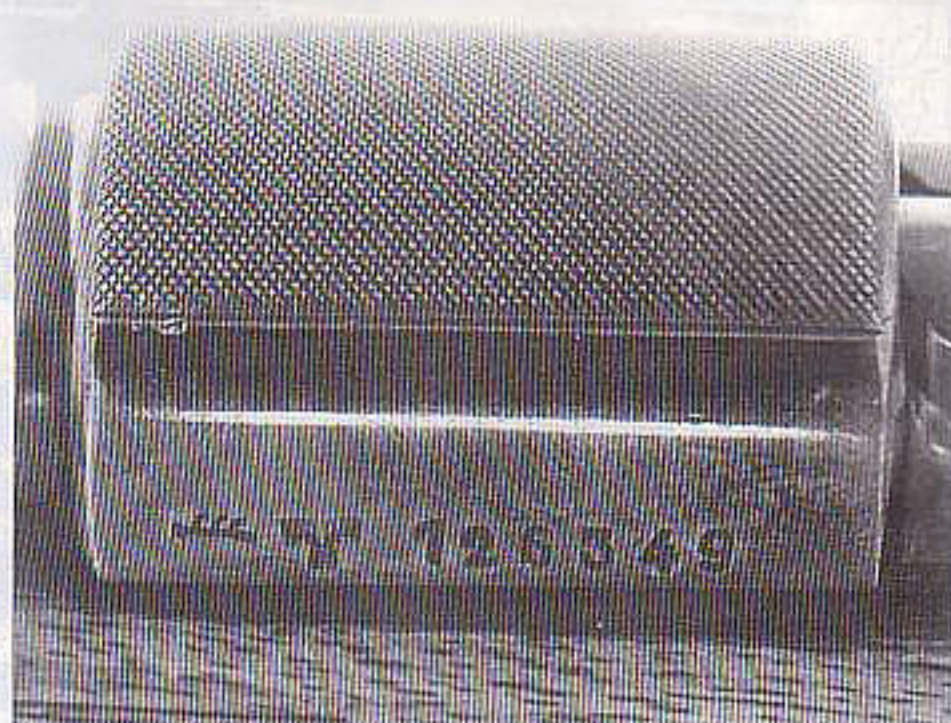
Observe and weep. Every one of these rifles is on a double square bridge action, one or two magnum lengths among them. They are but a few of the many treasures that were confiscated, without compensation, when Frelimo took over Mozambique.







Late 1939 BUGN proofs.



Oberndorf Stag Horn/Eagle proofs on a model S carbine.

added and, in the late 1930s, a crown over N. From 1940 onwards the proofs comprised the stag horn of the Oberndorf proof house with an eagle over N before the serial number. Under the barrel the same proofs are found with a number representing the month and a two digit year mark.

As WWII progressed the general quality of work fell off, but some fine sporters were made right to the end of the war. Some wartime sporters have non-typical fittings and components. Action dating on the ring was discontinued after WWI, though the odd example dated after 1922 has come to light.

One of the first magnum Mauser actions ever made (serial number 223). Sloping magazine box was for Rigby's .400/350 rimmed cartridge.



Various forms of stippling and knurling of the ring and receiver bridge were used. Calibre designations were usually applied to the upper left side of the barrel after 1905-1908. This might be the full metric description such as 8x57 or abbreviated to 8N for 8mm in .318" bore. After WWII the 8x60N cartridge came into use and was also available in both the .318N and .323 ('S') bullet diameter. This can usually be confirmed by checking under the barrel, where the actual bore diameter should be found.

Several types of trigger system such as double pull, double set, single set and

shotgun type were offered. Around 1930 a sliding side safety was also offered. Windage adjustable sights along with a pop-up peep sight installed in the pistol grip were special order items.

Now let's take a look at the different commercial Mauser M98 action types used on sporting rifles and carbines. We have confirmed the following basic action sizes and variations manufactured by Mauser. The term variation implies some structural change or feature in the receiver, not simply an action set up for any specific calibre.

#### 1. MAGNUM LENGTH ACTIONS

Length: 9.150 inches

Bolt length: 6.770 inches

Receiver ring diameter and length:

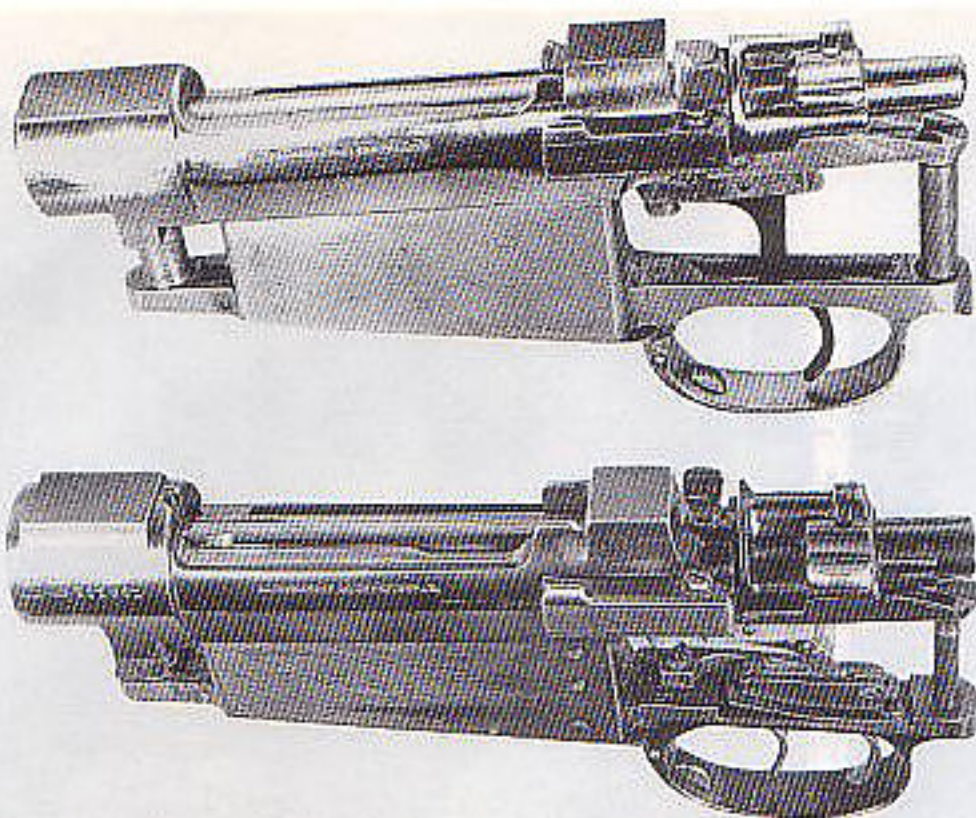
1.41 and 1.68 inches

The underside of magnum receivers was milled out to accept various magazine boxes, so a close look at dimensions here will show some variations.

#### VARIATIONS

1. The first magnum actions were made for the British firm John Rigby around 1902. These were of round top configuration with a distinctive stepped-down receiver ring. The thumb-slot was retained in the left-hand receiver wall. The magazine box and trigger guard assembly was slanted to accept the long 400/.350 rimmed cartridge. The bolt face was opened up and the extractor modified to better grasp the rimmed case. The floorplate was the straddle type (rear end straddling the front of the trigger guard) with push button release.
2. Same as above, only with rear square bridge.
3. Round top action with normal receiver ring, plus thumb-slot (this one is quite rare).





Two magnum Mauser actions, both with solid left receiver wall. Top one is single square bridge; bottom one, double square bridge.

### 3. INTERMEDIATE LENGTH ACTIONS

Length 8.75 inches

Bolt length 6.165 inches

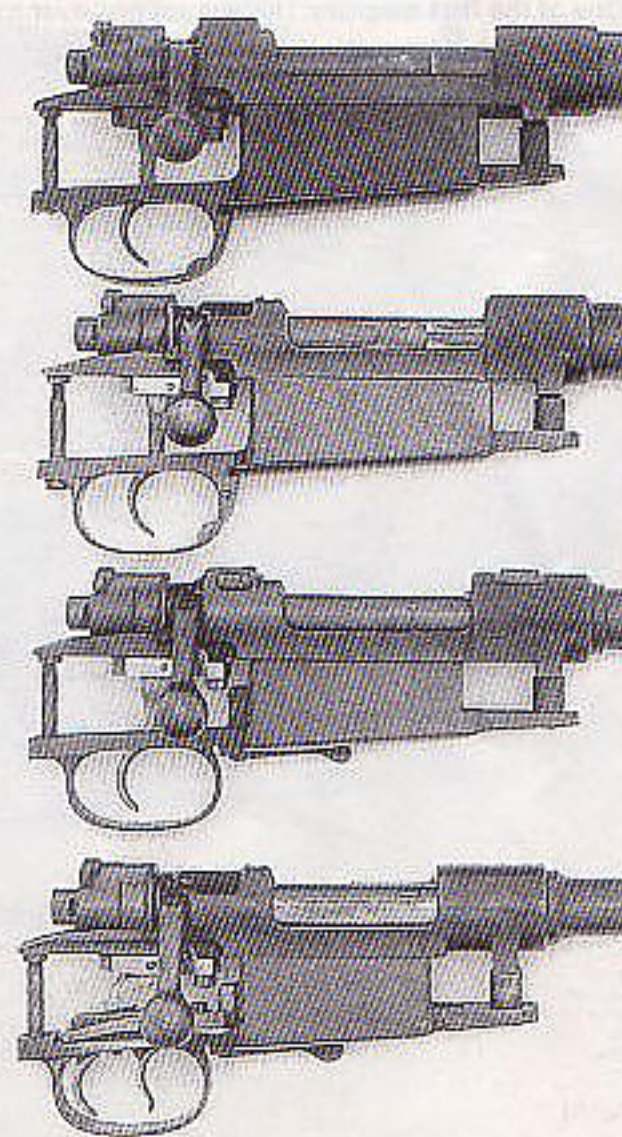
Ring diameter/length 1.41/1.89 inches

This interesting action was first produced around 1899-1900 for John Rigby & Co for their .275 (7x57) cartridge. The first types of transition M98 small ring actions had shorter bolts than the later standard action. When the large (thicker) receiver ring was adopted for the standard action, Mauser decided to put the thicker ring on the intermediate action as well, but they also elongated the ring to bring the overall receiver length to the same as that of the standard length action while retaining the shorter bolt. This then became the normal intermediate action. Perhaps Mauser had a large stock of the shorter bolts from the transition actions. This action was then used by Mauser for most of their 7x57 calibre rifles and carbines.

#### VARIATIONS

1. Round top action with thumb-slot. Most common.
2. Square bridge with thumb-slot. Used for scope mounted rifles and carbines. Fairly common.

Action lengths, top to bottom: magnum, standard, intermediate, kurz (short).



the most magnum actions, but several American and European gunmakers also used them. The estimated number of magnum actions and rifles made by Mauser could run as high as 15 000.

### 2. STANDARD LENGTH ACTIONS

Length: 8.75 inches

Bolt length: 6.30 inches

Ring diameter/length: 1.41/1.68 inches

Introduced in 1898, the standard length action has the same dimensions as the original military 98 action. In commercial form, it was produced in far greater numbers than the other lengths.

#### VARIATIONS

1. Round top with thumb-slot. Used on most Mauser sporter models.
2. Single square bridge with thumb-slot. The square bridge was fitted with a push button scope release. The receiver ring could be dovetailed (a lateral slot cut into the top of the ring) for the front mount. Fairly common.
3. Double square bridge with solid left wall (thumb-slot omitted). Introduced around 1930. The front square bridge was added after gunsmiths complained that cutting a dovetail slot into the receiver ring weakened it. Rare.
4. Double square bridge action with thumb-slot. Very rare.
5. Round top with solid left wall, for single-shot Mauser 'Wehrmannsgewehr' and 'Einheitsgewehr' target rifles in 8,15x46R. First made around 1928. Rare.
6. Special fully enclosed round top, single-shot action used for early 'Wehrmannsgewehr' around 1926. Very rare.
7. Round top with thumb-slot, magazine-fed 8,15x46 target rifles. Fairly common.
8. Special round top with solid left wall. Limited production action found on very rare Mauser-made sniper rifles and some sporters after 1942. Very rare.

4. Single square bridge with thumb-slot (the most common for Magnum cartridges). The square bridge feature was patented around 1900.

5. Single square bridge with solid left wall (thumb-slot omitted) first made around 1930-31, quite rare.

6. Double square bridge with solid left wall, first made around 1930. Rare.

7. Double square bridge, with thumb-slot. Very rare.

Very few square bridge magnum actions were set up with original Mauser scope mounts as most of these powerful rifles were used at close ranges with iron sights. British gunmakers made up their own claw-type mounts which hooked into the rear square bridge mortise then dropped down into a front mount on the receiver ring or barrel. Some side mounts were also fitted to a few magnum actions. Square bridge contours on some magnum actions vary somewhat as this dimension was never standardized. The mortise cuts into square bridges for scope mounting were also not of standardized size. Most original Mauser scope mounts had to be hand fitted.

Original Oberndorf Mauser sporters fitted with magnum actions were only offered in the calibres .404 (10,75x73), 9,3x64 Brenneke (only a few made up), 8x75, 8x68 (only a few made up around 1940) and .280 Ross. The .404 and .280 Ross were offered in the Mauser Type A sporter configuration only.

Magnum actions made for the British gun trade were available for calibres 300H&H, .350 Rigby, .375H&H, .404, .416 Rigby, .500 Jeffrey and .505 Gibbs. Most of these were fitted with straddle-style floorplates (push button release). The floorplates on the .416 Rigby and .505 Gibbs were of thicker (deeper) configuration than the others. Magazine capacity on magnum actions ran from five to three for the .505 Gibbs. The British gun trade ordered by far



3. Double square bridge with solid left wall. Not so common.

4. Double square bridge with thumb-slot. Very scarce.

#### SHORT INTERMEDIATE ACTION

This special action was of limited production and first made up for John Rigby & Co around 1901-02 for their .303 rimmed cartridge. It had a special slanted magazine box and floorplate, and the thumb-slot. It had the short bolt of the normal intermediate action, but the receiver ring was .200 inches shorter, hence the overall length was .200 inches shorter than the intermediate and standard actions. Rigby first sold these in 1902 and probably built fewer than 100 full rifles on this action. The first Rigby barrelled actions had their own special serial number range starting with 1. Later examples, as high as the 28000 range, reverted to the normal M98 action serial number range of the period. Rigby did sell a few of these actions to other firms. This is an important and scarce action type.



Type A

Similar actions were also used for part of a small Siamese military contract, as the rimmed 8mm Siamese cartridge required a slanting magazine. Then the Siamese were licensed by Mauser to make standard length action military rifles with a slanted box.

#### 4. SHORT (KURZ) ACTIONS

Length: 8.125 inches

Bolt length: 5.70 inches

Ring diameter/length 1.30/1.68 inches

Interesting short, small-ring action with thumb-slot, for calibres 6,5x54, .250/3000 and 8x51. First made around 1900. Estimated total production as high as 5000.

#### VARIATIONS

1. Round top with thumb-slot. Most common.
2. Square bridge with thumb-slot. Fairly common within the group.
3. Square bridge with large ring. Only one recorded to date. Extremely rare.
4. Round top action with solid left wall, single shot in 8,15x46R with BU 1 serial number. Probably a limited production series action after 1903 period.
5. Round top action with solid left wall, single-shot 8,15x46R, has no bolt-guide rib. Mauser banner on top of receiver ring. Sb1 serial number. Probably a specially made up example.

#### EXTRA SHORT ACTION

Length 7.125 inches. Solid left wall. No bolt guide rib or gas ports. Firing-pin with no safety flange. Small bolt-stop/ejector unit. Used to make up a very limited production series of single-shot 8,15x46R target rifles around 1904. The shortest M98 type action recorded to date. Very rare.

The aforementioned list comprises confirmed action variations, however, there may be others waiting to be discovered. Readers may have information that could contribute to this list. We have yet to find an original *left-handed* Mauser action! These were offered with several months time delay and at extra cost.

#### SPORTER TYPES AND MODELS

Let us now examine the various types and models of complete sporting rifles and carbines made at the Oberndorf factory, and dubbed *Original* by the company.

#### 1. SPECIAL RIFLE TYPE A (actual factory designation)

This sporter was intended for the export market, especially England and the USA. It was designed to compete with the best British-made turnbolts of the day, and was the highest grade standard production (non-custom) rifle that Mauser manufactured. First offered just before WWI, it had a specially designed stock of good quality wood with horn fore-end tip and capped pistol grip, and fine chequering. Built on the first four action lengths. The round tapered barrel had a special barrel-band sling swivel and the ramp foresight was also on a muzzle band. Barrel length was 24 or 28 inches. The rear sight was the British 'express' type with one fixed and four folding leaves graded from 100-500 yards.

A full octagonal barrel was optional. Offered in all the Mauser calibres. Because of exports many have survived around the world. Eight standard factory variations were available. Rarest of the Type A are those on the magnum length action in .404 and those on the *kurz* (short) action in .250/3000. Some calibres were *only* made up in Type A: .404, .318, and the .280 Ross.

#### 2. TYPE B SPORTERS

This was the most popular Mauser sporter, and the most widely used in Europe. It was made on the first four action sizes and





Type B

in most calibres. Sixteen standard factory variations were offered with at least three barrel forms in lengths from 22-28 inches and many sight options. Stock style was European; early pre-WWI stocks have rounded pistol grips and a few had raised side panels over the magazine and trigger mechanism area. More Type B rifles were taken out of Germany as war booty by Allied forces after WWII than were ever exported. The rarest is the magnum length in 8x75, and also in 9,3x64 Brenneke. Only a few Type B sporters were made in 6,5x68 and the 8x68s (RWS) after 1939. Type B sporters were made through to the end of WWII.

### 3. TYPE M CARBINE



Type M Carbine

Designed just before WWI to compete with the Mannlicher Schoenauer carbine. Light weight and with a special 'spoon-handle' shape bolt-handle, it was suitable for carrying in a saddle scabbard. Barrel length was 20 inches, and the full-length Mannlicher-style stock had a metal nose-cap. These carbines were made on actions

Nos 2 to 4 in calibres up to 9x57. Most had a special trapdoor butt-plate with a Mauser banner. Five standard variations were offered. Many were exported, so good examples can be found. Any *kurz* actioned Type M carbine is scarce. Others are fairly common to scarce. Made until the end of WWII.

### 4. TYPE S CARBINE

Designed before WWI, it had the normal pear-shaped bolt-knob and 20" barrel. Actions Nos 2 to 4 were used in calibres up to 9x57, in seven factory variations. Made until the end of WWII. Pre-WWI examples have rounded pistol grips, some have side panels. More were made than in Type M,



Type S Carbine

but many were destroyed during and after WWII. Most variations can still be found. *Kurz* actioned versions are the rarest.

### 5. SPECIAL AFRIKA MODEL

Designed for German Colonial settlers in South West Africa and East Africa around 1905, possibly at the request of the





Afrika Model

settlers. Fitted with 26-28 inch barrels, with stocks running two thirds of this length, some rare ones fitted with a wooden handguard. All four action lengths used. Most common calibres were the 8x57 to 10,75x68. The rarest are the magnum and *kurz* actioned versions. Afrika models are scarce as so many have been modified.

#### 6. TYPE K (KURZ) RIFLES & CARBINES

The *kurz* action was used for some of the previously described sporters, and Mauser gave these their own Model K designation. Made until the start of WWII.

#### 7. MODEL C ARMY HUNTING RIFLE

First appearing as early as 1903, these were made for various military customers who wished to have cheaper hunting rifles made up from their Mauser military contract parts. Most used military components, while the action and bolt could be commercial parts. The Mauser name was usually found on the left wall or ring. Some are serial numbered in the normal commercial range, others retain the military contract serial numbers. Non-Mauser parts are also known to have been used. Actions marked G98 have also been found. This was the lowest grade rifle Mauser offered through to 1930. Most often found in calibres 7x57, 7,65, 8x57, .30-06US, 9x57. Good examples are scarce as many were modified.

#### 8. SPECIAL RANGE RIFLE

First offered around 1925-26. Heavy non-tapered 25" barrel, full-length stock with hand guard and horn fore-end tip, trapdoor butt-plate, tangent rear sight with windage adjustment. Only confirmed example has standard round top action in .30-06.

Catalogues show it was also offered with square bridge and folding sight. Very rare.

#### 9. TARGET RIFLES IN 8.15X46R

After WWI Mauser made up three variations of target rifle in 8,15x46R using actions listed under STANDARD ACTION numbers 5, 6, 7. These were made until well into WWII. They were serial num-

#### Commercial M98 actioned Rifles and Carbines, manufactured from 1898 onwards

1898 SN range 1-900  
 1899 SN range 900-1500  
 1900 SN range 1500+-3250  
 1901 SN range 3250+-3500  
 1902 SN range 3500+-5700  
 1903 SN range 5700+-7000  
 1904 SN range 7000+-8700  
 1905 SN range 8700+-11850 (factory records)  
 1906 SN range 11850+-14950 (factory records)  
 1907 SN range 14951+-18680 (factory records)  
 1908 SN range 18680+-28500  
 1909 SN range 28500+-34000  
 1910 SN range 34500+-42350  
 1911 SN range 42350+-50000  
 1912 SN range 50000+-69700  
 1913 SN range 69700+-78500  
 1914 SN range 78500+-82240

During WW1 general production of sporters was halted. Production of sporting rifles after WWI was permitted by the Treaty of Versailles, starting in 1920. The military 8x57 cartridge was replaced by the new 8x60 shell at this time, however, a few 8x57 rifles were made up occasionally between 1925-35. After 1939 quite a few 8x57 rifles were again made up.

1920-21 SN range 82300+-84670  
 1922-23 SN range 84670+-87500  
 1924-35 SN range 87500+-94130  
 1926-27 SN range 94130+-97125  
 1928-29 SN range 97125+-103030  
 1930-31 SN range 103030+-110999  
 1932-33 SN range 110999+-113735  
 1934-35 SN range 113735+-116000  
 1936-37 SN range 116000+-118715  
 1938-39 SN range 118715+-122285

A new set of German proof laws came into effect on April 1 1940. At this time receivers and barrels were marked with an Eagle over N, to signify Nitro proof, and the Oberndorf proof Stag horn mark. The underside of barrels were also marked with the number of the month and year.

1940 SN range 122962-124264  
 1941 SN range 124264+-124908  
 1942 SN range 124908+-125821  
 1943 SN range 125821+-126178  
 1944 SN range 126178+-126417

No rifles located were marked 1945, however, we have just examined some new Mauser records which indicate at least 15 sporters were made up in the last hectic days of WWII. Mauser rifles were made up during French occupation. These were correctly marked and proofed.

Dated 5.46 SN 126518  
 Dated 6.46 SN 126544

bered within the normal sporter series, but a few were specially numbered for shooting clubs or political groups. Many examples were destroyed after the war as they resembled military rifles. Occasionally mint examples can be found. Quite scarce; probably less than 15000 made.

Mauser also offered full-length rifles stocked to the muzzle and some 30 extra features as options. Special order 27.75 inch barrelled rifles were also offered with three quarter length stocks. Those who could afford it and didn't mind waiting could order just about anything from Mauser. We have never recorded an Original Mauser take-down sporter but surely a few must have been made. I have seen Mauser company drawings of sporters with folding stocks hinged at the pistol grip. Mauser also made up a few pop-up cheek-pieces.

Mauser sporters were offered in a wide range of calibres even though most of the catalogues give only a basic list. *Mauser Original Oberndorf Sporting Rifles* published by Collector Grade Publications, contains a full list. Mauser made a few (rare) sporters in calibres 6,5x68, 8x68, 8x64 Brenneke, 8x75, and some were made in 9,3x57 for export to Sweden. Other than these, Mauser rifles appearing in calibres not officially listed are probably not Original Oberndorf examples, but modifications, or were built on Mauser actions by other companies or gunsmiths.

One of the most common questions asked by Mauser collectors is, "When was my Mauser rifle/carbine made?" Though there were odd exceptions, we can state that in 1898 Mauser started a new serial number series for their commercial M98 actioned rifles and carbines. Published here is an abbreviated year-of-manufacture chart, the accuracy of which is fairly well verified by a variety of documents and ring dates.

Most important from an historical point of view, and in terms of collector value, is that fewer than 127 000 complete sporters and commercial actions were ever made (1898-1946). This includes all models and variations discussed above. In fact, of all the well-known firearm manufacturing companies, Mauser produced the fewest commercial rifles. This confirms the rarity and importance of Original Mauser sporters.

It is hoped that readers will provide new substantiated data to add to the Mauser sporter history. One thing serious collectors soon learn about Mauser products is that there are always surprising finds popping up which stimulate our interest and broaden our knowledge of this once great firm. ☉

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