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https://www.occaphot-ch.com/bernina-oldie-modelle/bernina-kl-125-121-1950s/

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BERNINA Self Service Oldtimer

Kl. 121

Images - Dates - Info

BERNINA Self Service Oldtimer

Kl. 125

Images - Dates - Info

BERNINA Kl. 121 sold in Switzerland until 1957 ... and outside Switzerland until 1959. (End of production was 1959). Some copies were demonstrably sold until 1964, since some dealers apparently had some machines in stock for a long time.

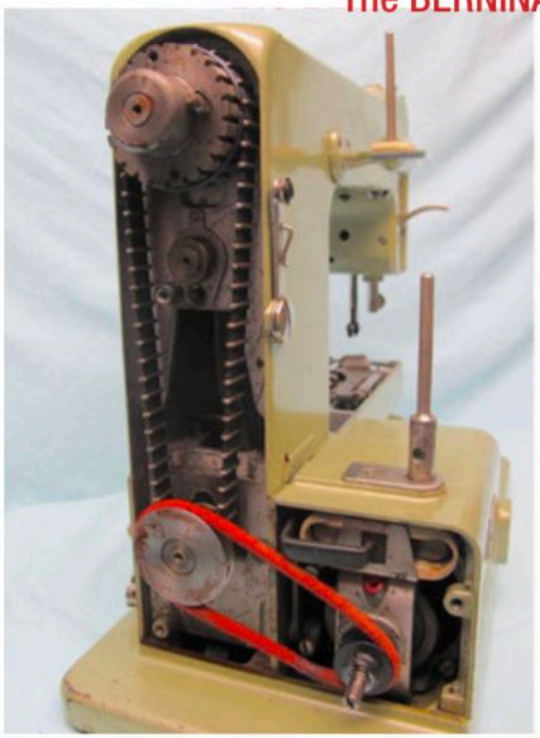
Class 121 was produced to 1947 ... class 125 to 1957 ... outside of Switzerland sold to 1959.

BERNINA KI, 121: sews straight, up and down

The BERNINA 121 is the precursor of the class 125 ... without ZigZag (in response to the Elna 1). Officially, this machine is rarely or never mentioned in documentaries, because... the STAR was the BERNINA 125 in 1945 as the world's first portable free arm with ZigZag, and was much more important to the company.
First Mod. 121 were powered by a cord chain. The 121 was available in green, beige and light gray.

The first version of the BERNINA 121 does not have a belt tensioner.

The BERNINA Mod.121 has no belt tensioner



1945 BERNINA Kl. 125 (class 125)

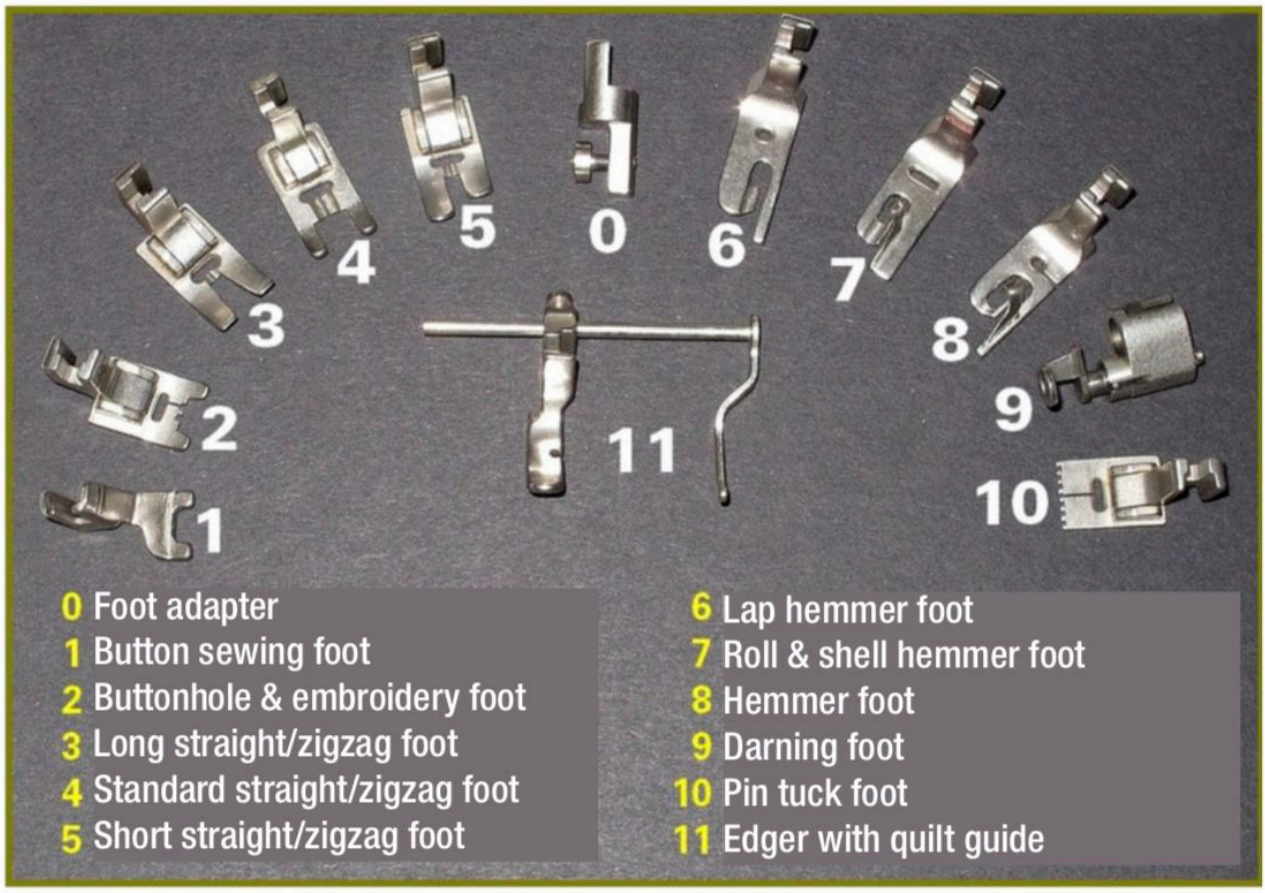
The first ZigZag free arm sewing machine in the world

1945 the first free-arm zig-zag household sewing machine in the world. The chrome bar is folded down and serves as a start-stop and speed control for the engine. This bar is operated with the knee. **The BERNINA Kl. 125** was also supplied with foot pedal from 1953 ... from 1954 a variant with a new “clip-on” foot was also made available as it became the new standard for the 530 Record. Sold abroad until 1959.

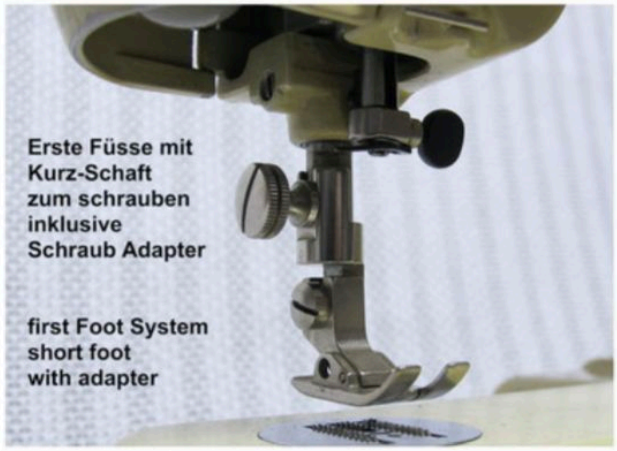
Mod. 125 was available in green, beige, light gray

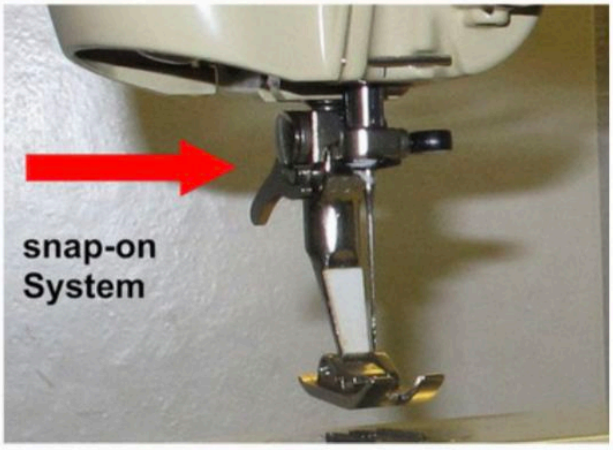
Presser feet of the BERNINA 121/125 series (1943 / 1945-1957)

The first feet with a short shank had to be screwed down with an adapter. They are identical to the long shank feet of the BERNINA KL 117.



The BERNINA 125 is also available (depending on the year) with the clip-on system, so you can use all BERNINA feet as on the 530/730/830 record, etc. (all with two lugs).

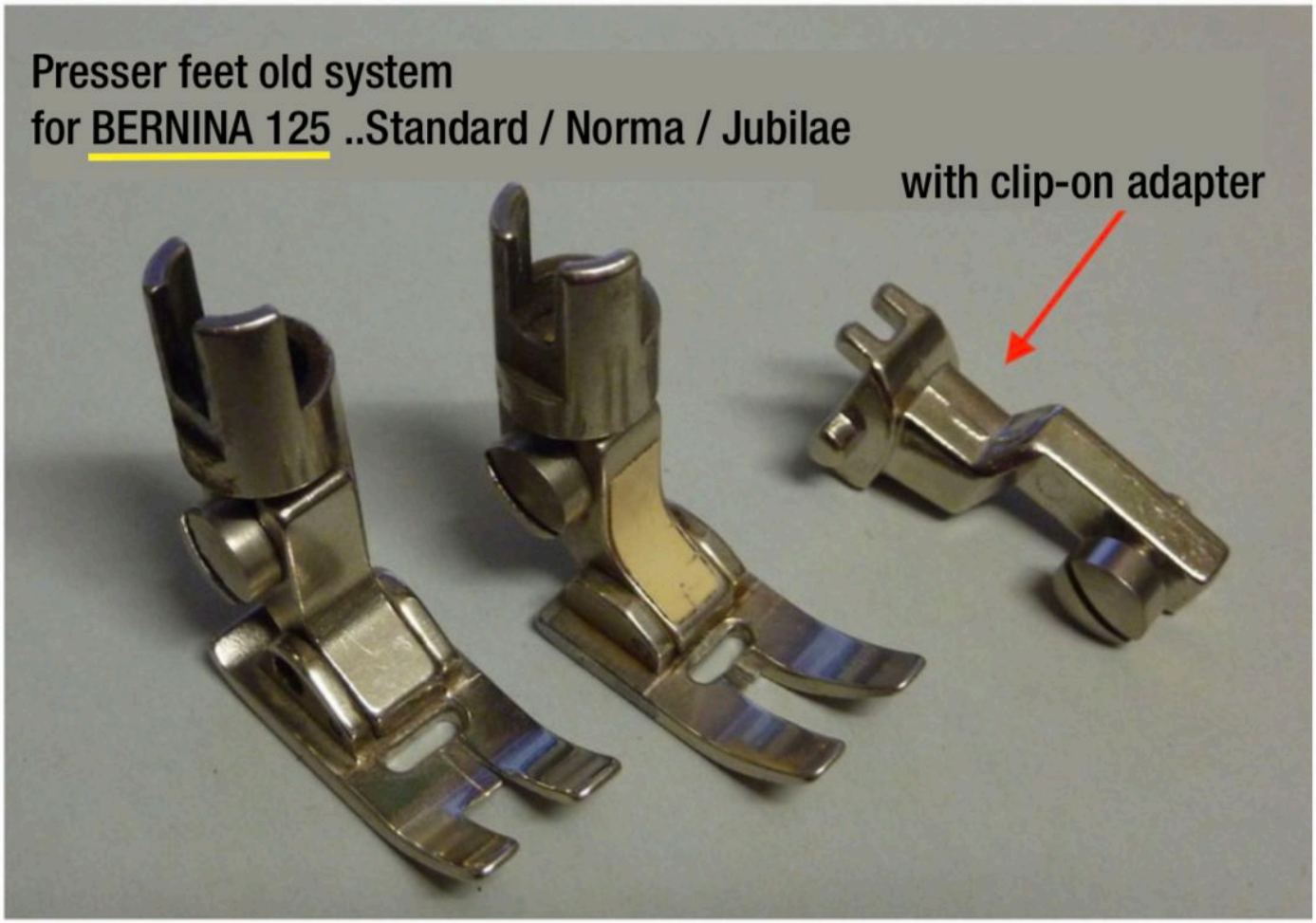


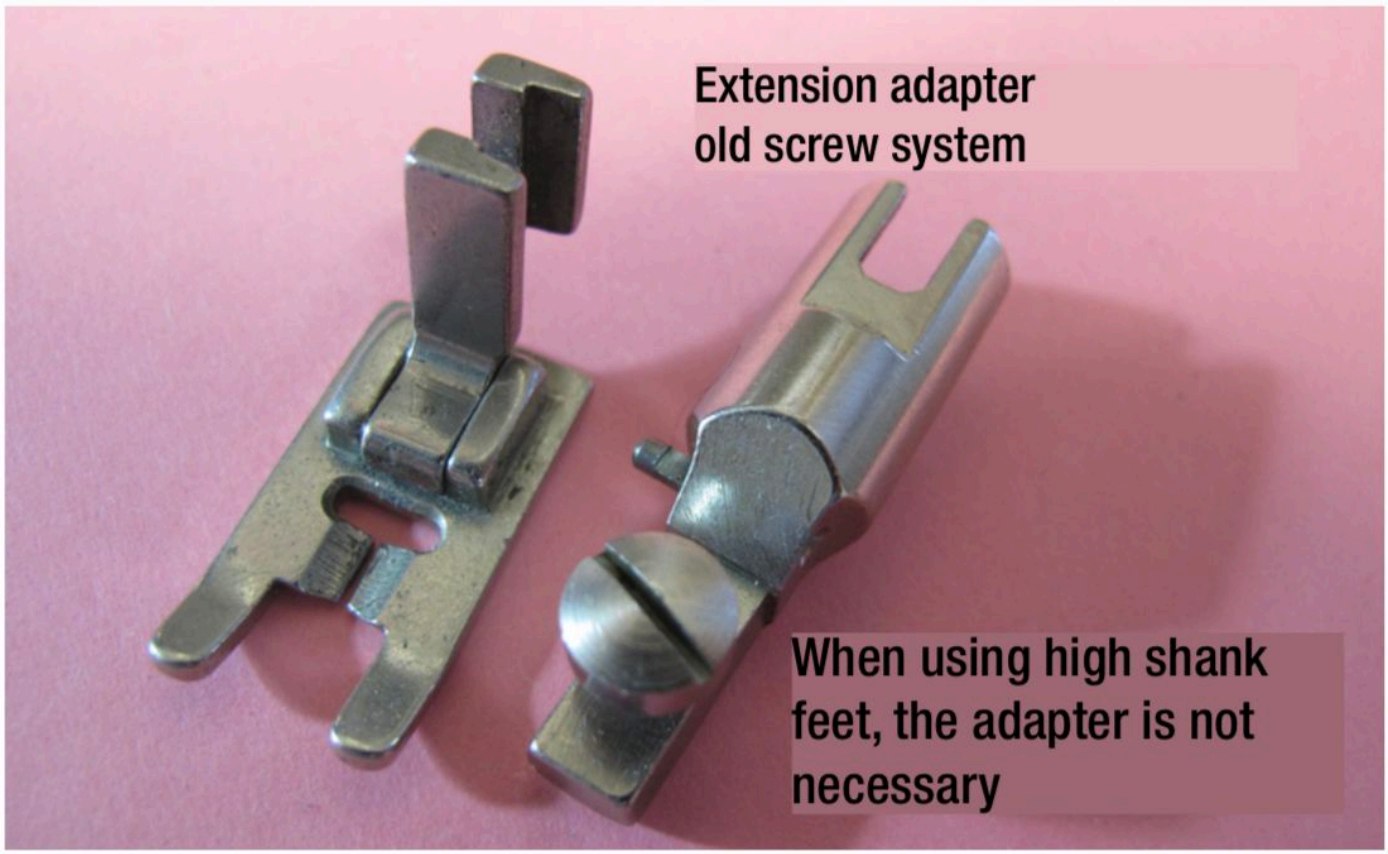


Clip-on feet like the first on the 530 Record series.
Standard used until the 1630 model.
There are only two variants ... older with one lug (top side of the shank) and newer with two lugs.
[It is always the identical foot.]
Both versions fit on your old BERNINA 125, if it is equipped with the clip-on system. There are also adapters, so you can attach old feet to the clip-on system.

Adapter system

The BERNINA 125 and the adapter also fit various other makes of feet, e.g. old ELNA Lotus, etc., also some old feet of Singer, Husqvarna and some others. The height has to fit. Small height differences of 1-2 mm are possible, but tolerable.





Foot adapter INFO for BERNINA 125

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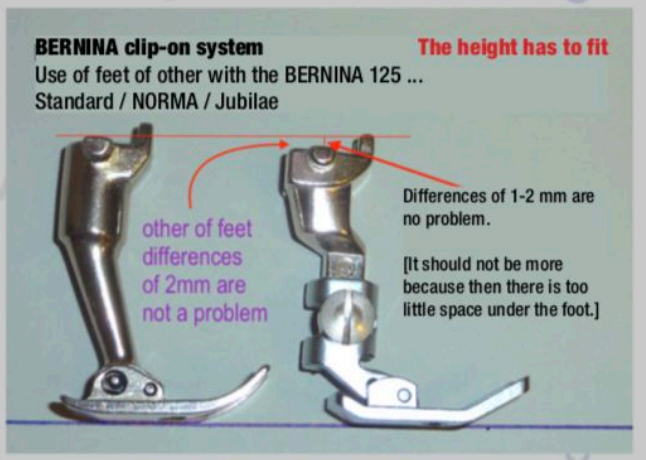
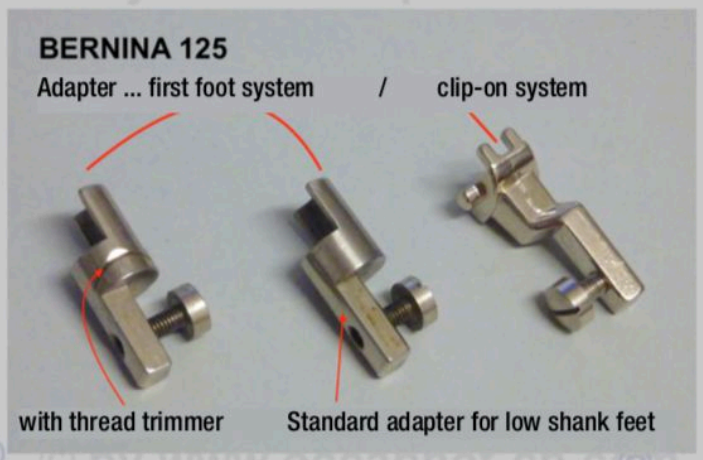
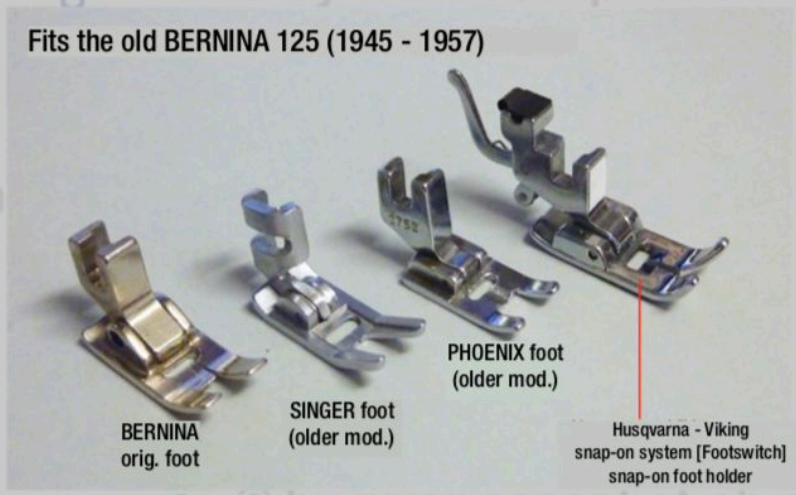




You can also try other feet.

With a little skill, other makes of feet can be made to fit with a file and grinder.

It is important to note that the total height of the foot is within a small difference of 1-2mm max. 3mm remains.



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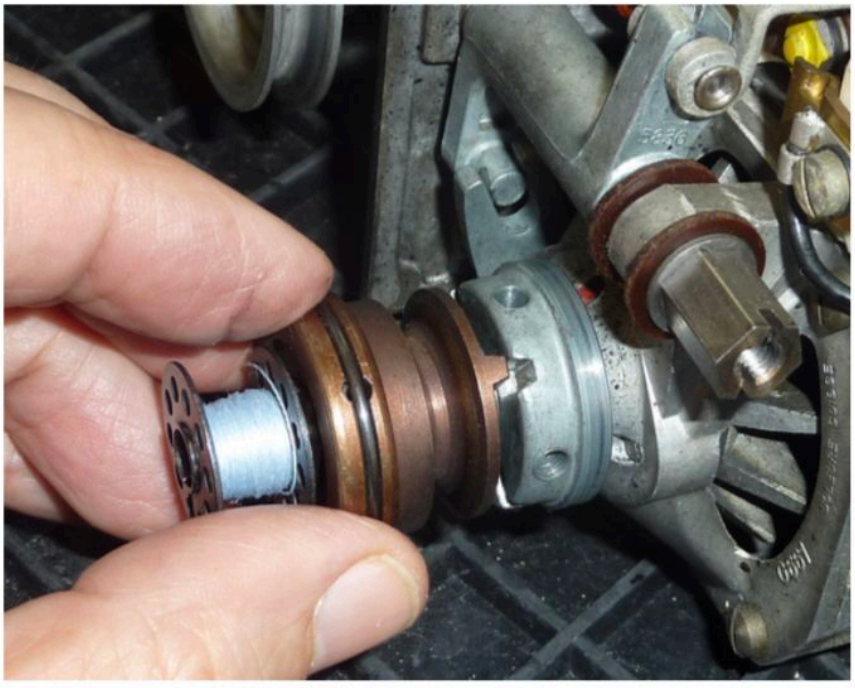
The bobbin of the old BERNINA 125

Early models had a thread winder with clutch and a [motor brake] that you could activate while winding.
This was soon omitted because it was not necessary.



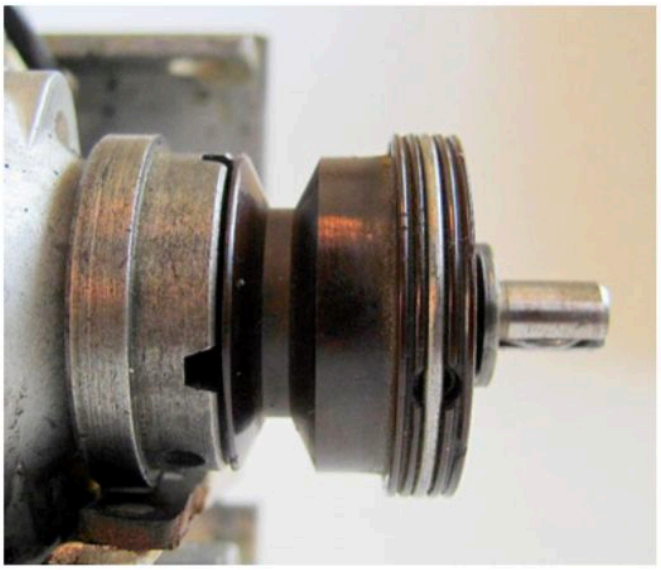
The bobbin winder with coupling.

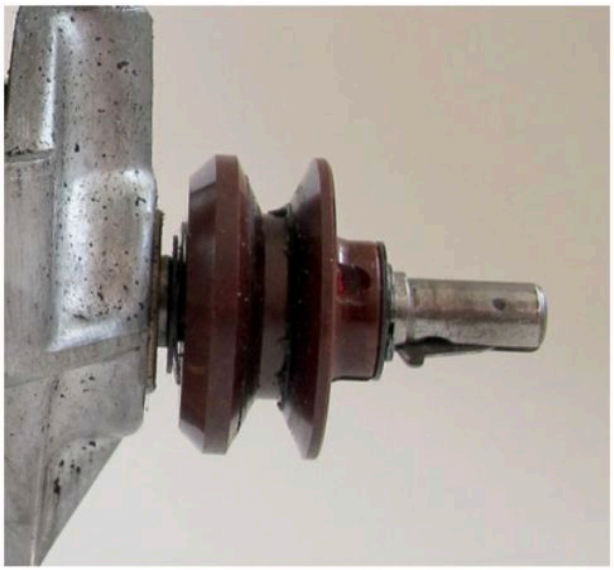
If you pull the belt pulley outwards, the uptake will be released and the machine will not run when the thread is being wound.
A [luxury fitting] on early 125 models. Structurally and financially not exactly economical, which is why it was later - for a few years - again simplified.

Bobbin winder without coupling

This was, again, later produced in a simpler version, standard winder.

This winder runs continuously while operating the machine (this is completely normal). This design was kept until the late 1950s.



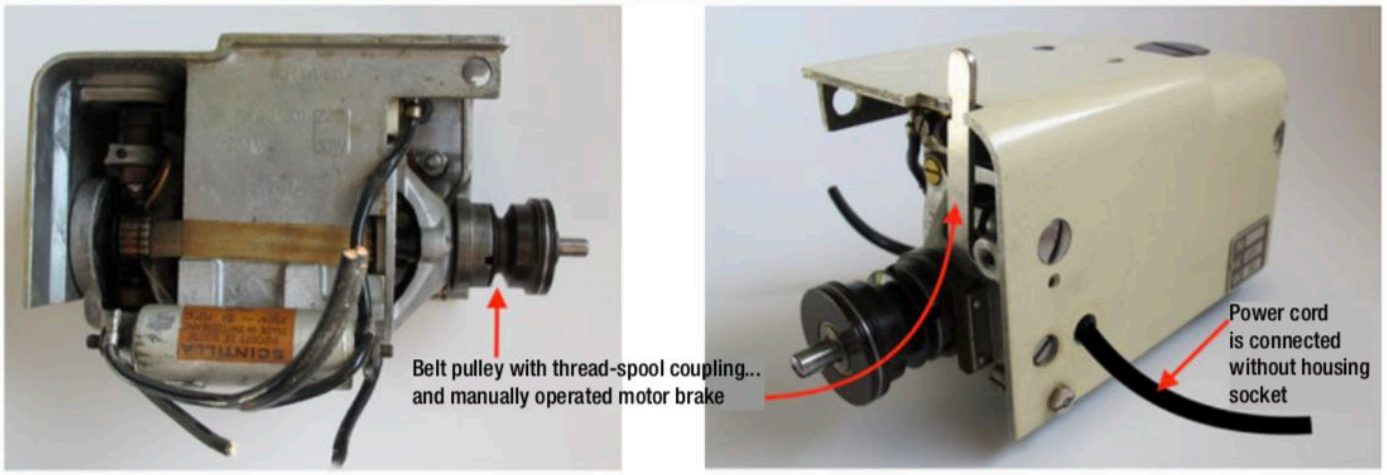


The first generation motor of the old BERNINA 125

was one of the very first versions with the single casting housing. The whole thing was screwed with two screws horizontally on the machine stand mounted bolt. The belt pulley on the motor was equipped with a clutch that you could disengage manually so that when spooling the machine does not run. In addition, a 'handbrake' could stop (if necessary) the engine completely ... which proved, however, unnecessary.

The power cord was firmly connected directly to the motor without a device socket.

BERNINA KI. 125
First generation motor. Motor and housing are a single casting.



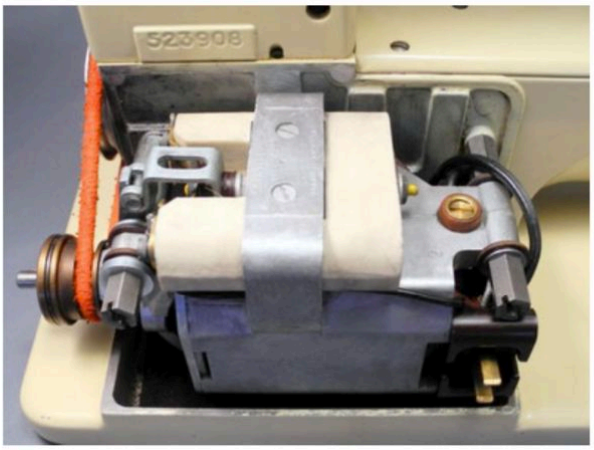
Built from 1945 to about 1948

Pictured below: a BERNINA 125 constructed 1947 (sold 1948) without model designation. With only one [spool holder] and the first motor including motor brake (brake lever removed). The power cord has been fixed to the motor in this version without mains socket on the housing.

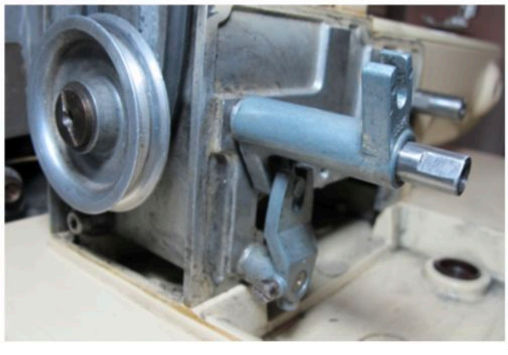
The 2nd generation motor

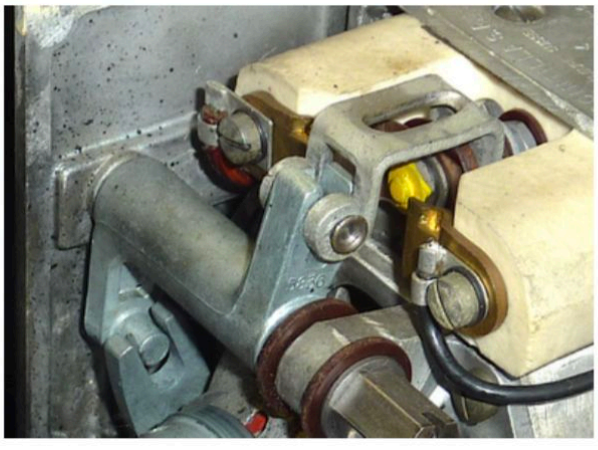
This motor was modified and equipped with a connection socket including a separate engine cover. Later, the motor brake was also omitted. But together they all had the tension regulator with unnecessarily complex lever mechanism. This would have been much easier to solve from the very beginning.

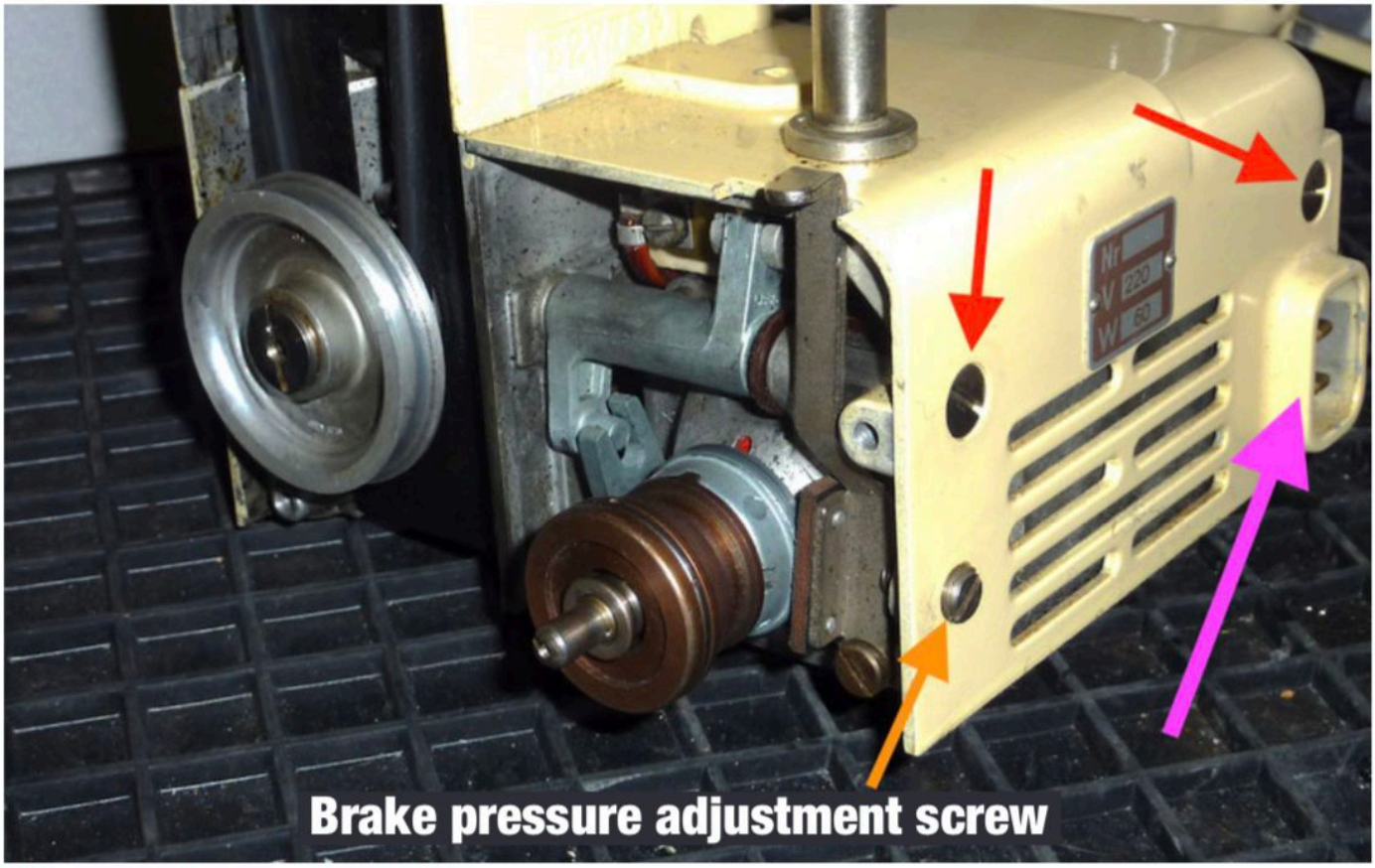
In the picture on the right, we can see the ceramic regulator mounted to the belt assembly with the finely crafted but technically complex [toughening mechanism] that could have been made simpler.



Picture below shows the lever mechanism that moves the current regulator. Cast aluminum parts with guide bolts made this design unnecessarily complex and too expensive .... which is why it was later changed.



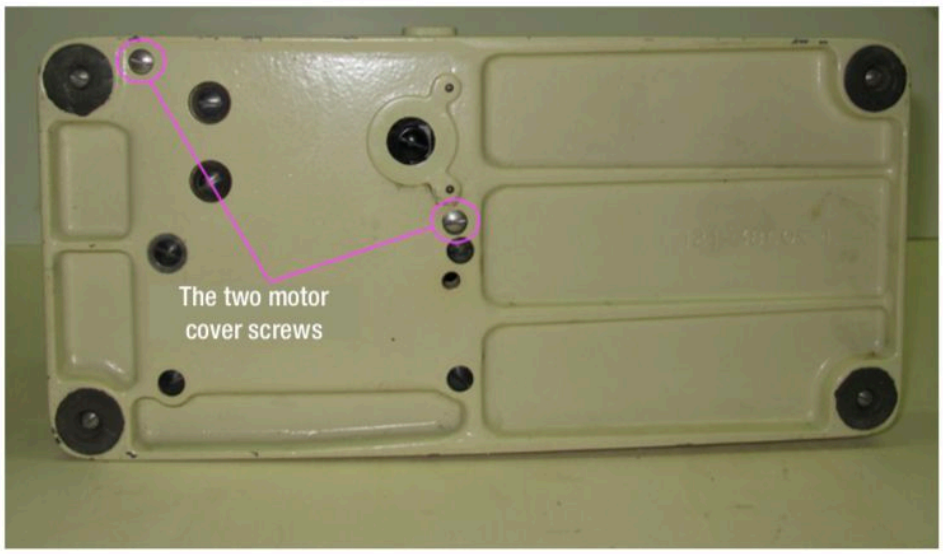




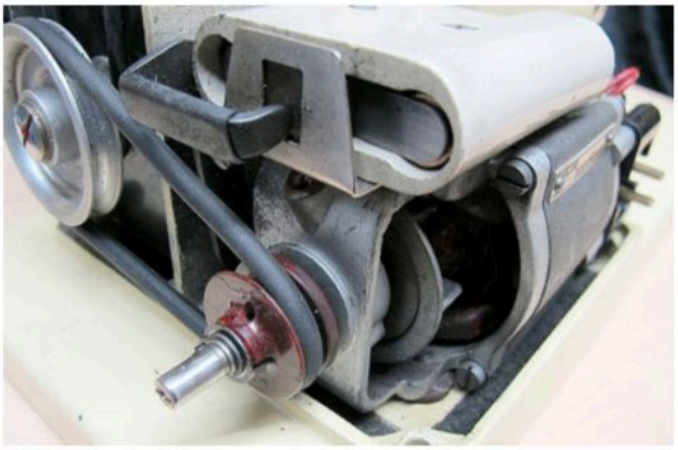
The second-generation motor was still the same but slightly modified. It now had a housing socket for the power cord and a separate motor cover. This was screwed from the back with two screws on horizontally standing bolts with internal thread as before.

The third generation motor

was a new development with an automatic thread winder, which automatically disengages from the belt pulley when the bobbin is inserted, so that the machine does not run while being spooled. The motor cover has now been screwed down from the underside of the bottom plate.



Also, the rocker arm that moved the current regulator has now been redesigned.



[At some point then, someone noted how it could be improved]. The ceramic regulator has been turned over and the lever has been simplified so that from now on it works as a pressure contact.

[One would simply need to turn the knob at the beginning, then it works with this simple rocker arm].

Aluminium castings and guide bolts were saved.

Belts for the BERNINA 125 S / J

Round belts for this machine are still available today. Requires 5mm standard round belts. These are still available in stores. V-belts run poorly, diagonally or become damaged.

Synthetic tooth V-belts (width 4-5mm) can also be used, which are more flexible than the rigid fabric V-belts. These should create exactly the right amount of tension ... because the belt tensioner has little effect.

Modern belts e.g. the Green Habasit straps are often sold by the meter. These can be cut to size, heated with a lighter and squeeze/welded together. Also the red straps (finished product) are very flexible and commercially available. **The machine also runs perfectly with two different belts.** In Switzerland such belts are easily available e.g. from the company: www.btrade.ch

Further suppliers: see **chapter "Spare parts and addresses".**

Original Belt = round belt ø 5mm ... so usable = synthetic timing belt 4-5mm.

Belt tensioner

Belt tensioner BERNINA 125..S / J etc.

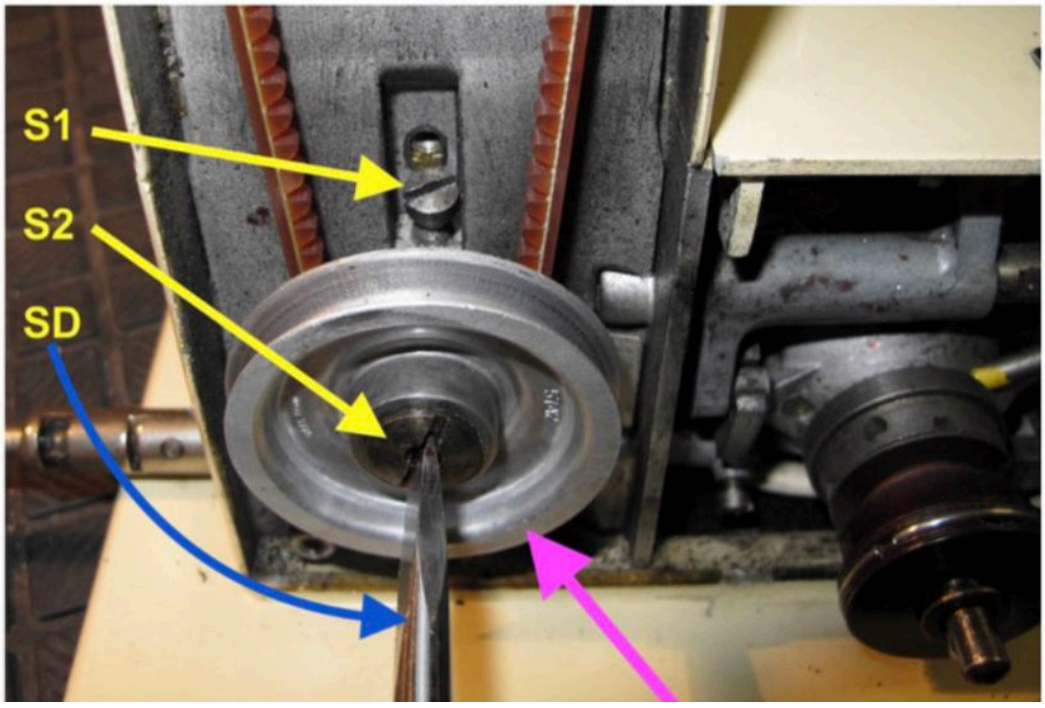
The upper screw holds only a small cover plate.

Function: The pulley runs on an eccentric axis.

Before tightening, both screws S1 + S2 must be tightened.

Belt is stretched as follows:

1. Loosen the screw S1 which allows the axle to move freely (turn)
2. Turn screw S2 at the front of the pulley using a screwdriver SD. The axle can be rotated within a small range to tension the belt.



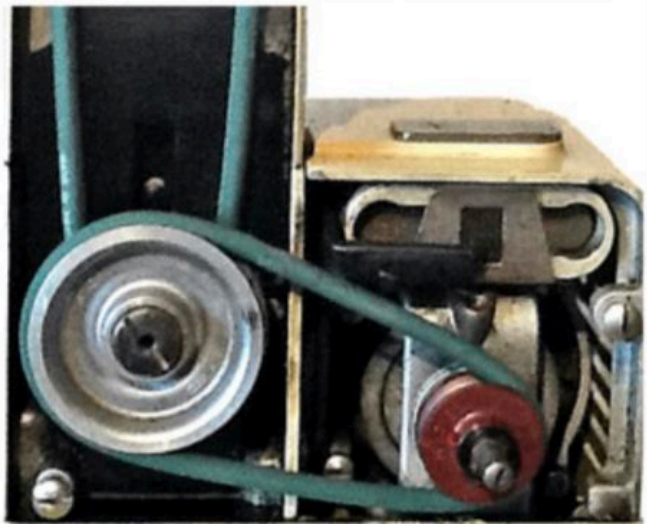
Eccentric axis

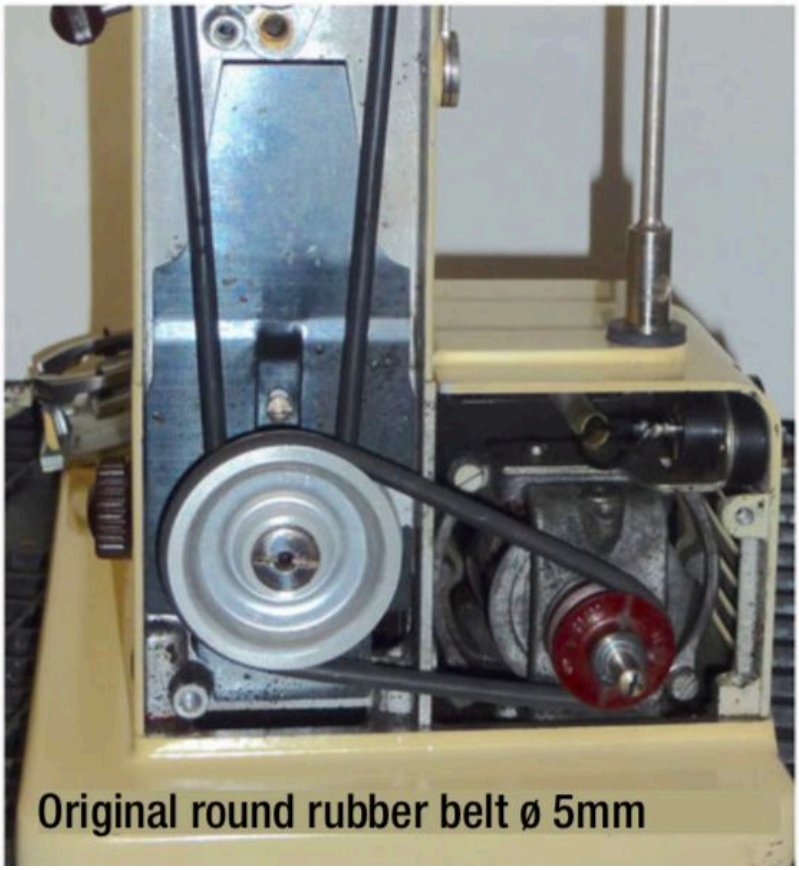
After tightening the belt, the S1 bolt will be tightened immediately

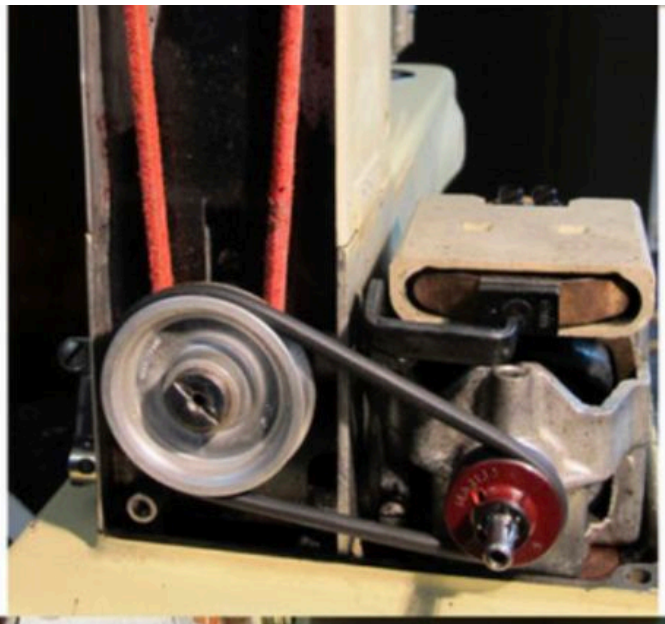
Remove pulley
Screw S1
tighten ... and loosen
S2 screw

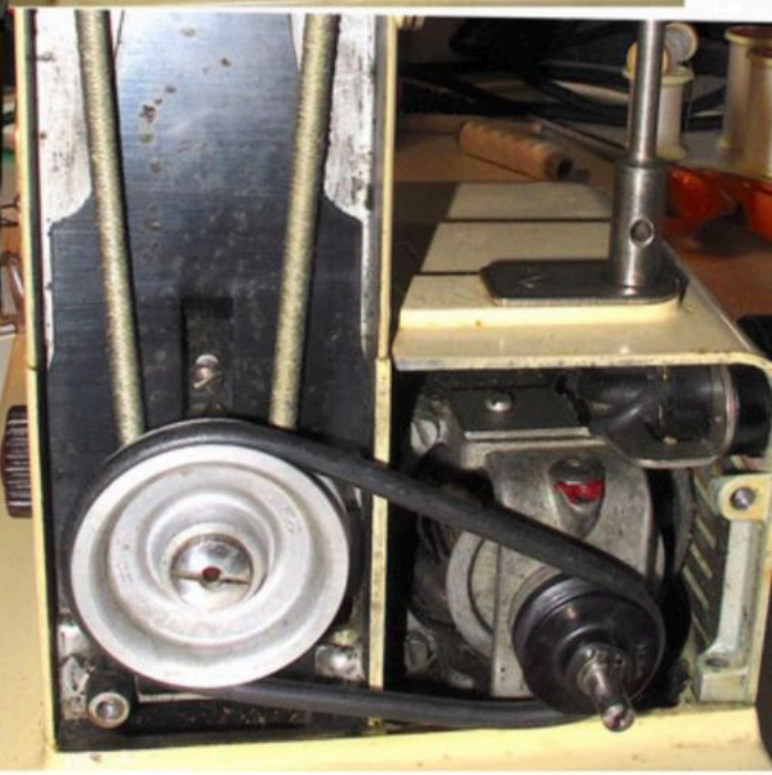
Belt Variants

BERNINA 125 S/J









1953 60th birthday of Fritz GEGAUF

For the first time, the 125 Jubilae came on the market with a foot pedal

BERNINA 125 J = Anniversary.

The main feature is the hand scripting, “Jubilae” and the stand emblem riveted on the front. Furthermore, there was a foot pedal for this model now.
Note: On customer request, the anniversary was also delivered with a knee lever.
At that time, older models could also be retrofitted later.

First BERNINA 125 with foot pedal ...

Motors and pedals for BERNINA have all been produced for decades by SCINTILLA (pronounced: chintilla) in Switzerland. Scintilla has been building millions of motors and all Bosch electric tools for decades .... The company was then “very slowly” taken over by Bosch. Today Scintilla S.A. is an independent Bosch plant. - BOSCH announces in December 2013 to terminate 300 of the 620 employees in Solothurn, Switzerland, and to relocate production to Eastern Europe. As of Dec. 2013.

****

Note: Machine housings, foot controller parts and other aluminum castings, etc. were produced by Bühler on behalf of BERNINA.
INCA also produced parts in cast aluminum for BERNINA in the early days.
INCA is (was) a Swiss company specializing in the production of woodworking machinery and cast aluminum parts. They also fabricated on behalf of third parties ... e.g. the aluminum case for early Elna sewing machines. (Bühler was financially more interesting then)
Later models from 1954/55 were equipped with a "normal" foot pedal, which also like the engines in the company Scintilla S.A. were produced in Solothurn. (as well as the foot controller for Keller + Helvetia) **Here are some pictures of one**

BERNINA 125 with foot pedal

BERNINA 125/121... repair and service

Adjusting the needle bar and feed dog is easy enough. But mechanical repairs are rather difficult for a layperson. The machine is small and access to the mechanics very tight. 95% of an old machines are no longer running because they have sat around unused for long periods... but should only need to be cleaned.
Old oil thickens and slows or seizes mechanical parts.

...Cleaning: see chapter "Care and maintenance".

The electrical system has basically few defects. Damaged or defective cables should be repaired immediately or replaced with new ones.
"Naturally" the capacitor gives up the ghost after 30-50 years and should be replaced. **The capacitor** can be found on the motor after removing the cover. ... see chapter Suppressor technology.

How old is my 125er ????

Getting the year of manufacture from the serial number is, unfortunately, not 100% reliable with these models. Usually the first two digits are for the year of construction... Series no. 47xxx = 1947 53xxx = 1953 (there are, however, deviations and inconsistencies in the serial numbers).

One also cannot derive this from the date of sale in the existing "guarantee certificate", since some machines sat longer at the dealers and many copies were sold until 1964.

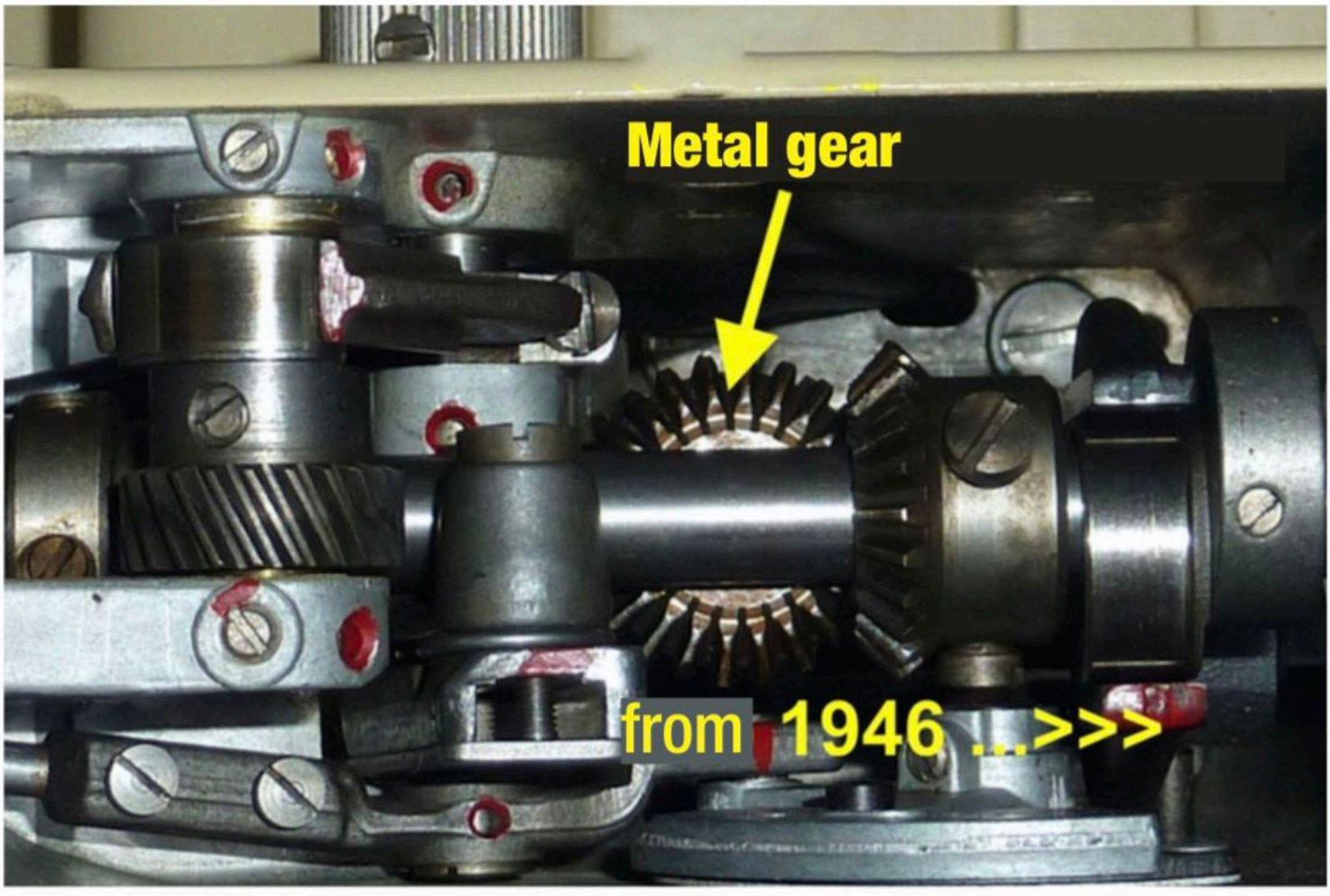
There are certain indicators by which one can roughly estimate the year of construction.

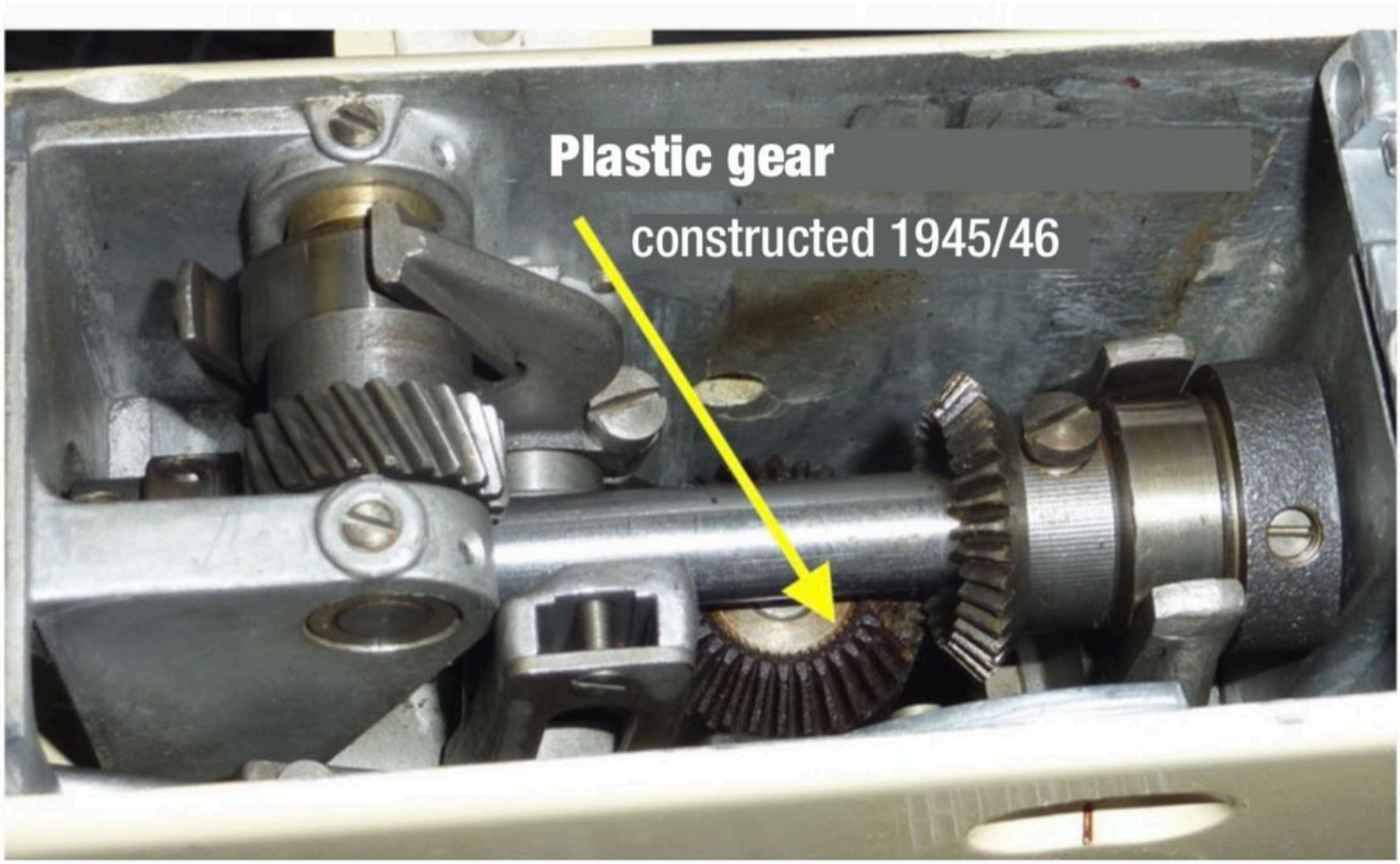
For example, if the machine has the 1st generation motor you can safely assume these machines were built before 1949...

If the machine has the 2nd generation motor, one can assume that it was built between 1949-1951. ... the last ones were built in 1959.

If a bakelite-like [brittle bevel] gear is attached to the synchronous axle, then the machine was most likely built between 1945-1946.

From 1946/47 this gear was metal on all models.





BERNINA KI. 125 for Husqvarna

The Second World War (1939-1945) brought most of the European private sector to a standstill. At this time, the Swedish weapons factory HUSQVARNA only produced military material. This meant at the end of the war much was missing that the private sector urgently needed, including sewing machines. Since "neutral" Switzerland was spared from the war, BERNINA was still able to develop and produce all these years, even under difficult conditions.

For this reason, some European manufacturers bought finished products from manufacturers in Switzerland for the first few years after the war. Husqvarna did not have their own free arm ZigZag machine at this time, which is why they bought them in from BERNINA. Husqvarna bought functioning machines from BERNINA in the raw state. The engine was installed at Husqvarna and came from Electrolux.

For example, the BERNINA 125 from **1947-1954** was sold as the **HUSQVARNA ZigZag** (shown below). In France it was sold as the Husqvarna Excelsior.

Husqvarna did not build the thread winder directly on the engine (like BERNINA). The winder was mounted on the intermediate wheel and was moved by the motor belt.

note:
- after the 2nd World War, manufacturers in Europe did not have current sewing machines.
- same manufacturers bought in Switzerland in 1945-1947
- BERNINA delivered to Husqvarna the functioning machine without electric motor, colored in the classical Husqvarna dark green. This was the Model 125. The electric motor was made in Sweden and coms from Electrolux.

Husqvarna also supplied this model to France, where it was also sold as the Excelsior model. Unfortunately, I can not show the original French ad here as someone from France vehemently claims I stole it from them, **which is not true because I have collected old documents from BERNINA and other sewing machines since**