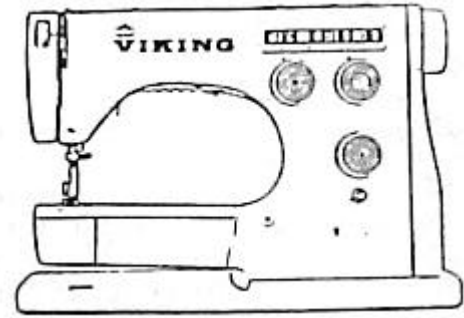


VIKING-HUSQVARNA 6000 SERIES SERVICE PROCEDURE

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This paper was written during my working career, and used as a guide when I taught a seminar at the ISMDA conventions. It is intended to guide the already competent sewing machine mechanic in servicing top of the line Viking-Husqvarna models produced between 1966 and the advent of the computer machines. It will also be a helpful tool for earlier models and less expensive models produced during this period. It will not be of help on the lightweight models (Vanessa 5710 & similar), the Meister built (2840, 4700 & similar), or in later models such as the 100, 600, & 900 series. In no way is it intended to replace a full service manual, which will be needed for problem diagnosis and more extensive repairs. A customer who owns one of these fine machines, and is willing to pay for top quality service, has the right to expect the extra effort on our part that is necessary to realize the full potential of this marvelous product! I hope this will help you be that kind of mechanic.

Bill Holman

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Remove the cover plate from the foot control, and inspect for damage and integrity. Especially note that the mounting screws for the resistance block are secure.

Remove protective covers on machine.

Clean (& oil when applicable) all mechanism.

To prevent solidification of old grease and/or corrosion, spray working parts with lubricating solvent such as Tri-Flow or CRC 5/56. Note: Do not use WD-40 on Viking machines .

Specifically spray:

- Length control block
- Pattern mechanism
- Buttonhole mechanism
- Needle & presser bars
- Take up slide
- Mounting point of take-up lever
- Bushing on needle bar end of lower rear shaft
- Connecting points on feed linkage in front of arm

Check and tighten wire holding screws on junction block, at commutator end of motor.

Check motor carbons and replace with safety interrupter type. Use carbon brush cleaner/seater on commutator.

Check condition of, and tension on both drive belts.

Be sure that spring on belt idler pulley (when applicable) is firmly anchored, and that pulley(s) are working freely.

Check that buttonhole knob moves in and out freely, and that stop pins are properly limiting movement.

Check for binds and/or gummed up parts in pattern mechanism. 1- Control knob must click crisply between stitches through complete cycle. 2- Curved needle position arm, coming under the assembly and extending to a connecting point near the timing chain, must be free to come quickly and crisply down after being manually raised. If, in either of these two tests, the parts feel sluggish or gummy, the pattern mechanism must be removed to clean and check. (Service manual needed)

Inspect internal camstack for damage or cracks. Especially look for hairline cracks in or around camstack drive pin receiving sockets.

Check and adjust both camstack followers as to proper lateral alignment on cams, and proper retraction (lift) when changing stitches.

Inspect take up slide (on self lubricating models) for cracks by holding hand wheel while applying slight upward pressure on take up lever and observing for any expanding cracks.

Check presser bar lift and rotation. If suspect, use gauge (Viking part # 411 1755-01) to check and align.

Check zigzag pendulum swing. Adjust worm gear on main shaft driving camstack if necessary.

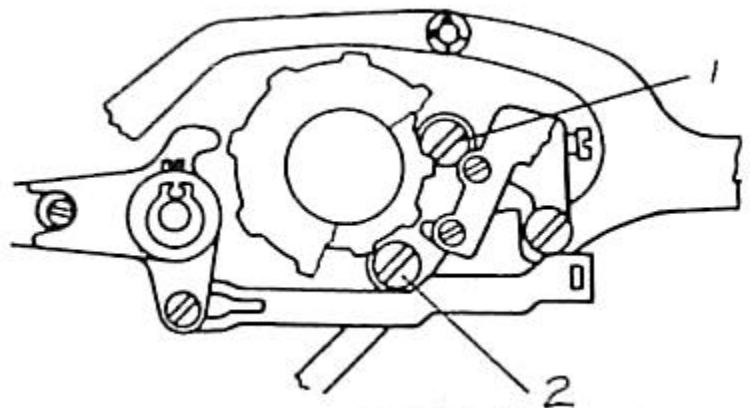
Ascertain that machine has no zigzag when width control is on zero, by watching needle bar frame for zigzag movement. If movement is present, turn vertical (shower) screw on top rear of buttonhole mechanism, clockwise, to eliminate movement. (Note: This adjustment affects the overall zigzag width, and hence, the buttonhole cutting space. You will need to recheck this adjustment when adjusting the buttonholes.)

Check that needle bar is not bent at needle clamp by observing that needle is not going through needle slot at an angle. If slightly bent, bar can usually be re-formed by gripping needle clamp with pliers, close to bar, and returning it to its original vertical condition. (Note: If not done carefully, you might be replacing the needle clamp and possibly the bar.)

Check needle bar frame stop. Screw adjustment near bottom of frame. Check front to back needle position in needle slot and full width zigzag needle position to sides of slot. In 10 and 20 series, these are two separate adjustments. Front to back at the top of the needle bar frame, and side to side by an eccentric screw at the draw rod. In later series, both adjustments are done at once. In 30 series, there is a tiny set screw and knurled adjustment knob at the top of the needle bar frame. In later series, there is a fine tuning adjustment with an allen set screw (Use Viking tool # 4115844-01 to loosen) beside the take up lever, and the adjustment screw under the front stitch indicator panel. For greater movement, there is an eccentric mount on the draw rod, with a set screw in the center and an adjusting nut on the outside, which is reached from the back of the machine.

Set center needle position. (See #2) (Always turn this screw and left needle position screw, in clockwise direction only.)

Set left needle position. Turn pattern mechanism to left needle position, and adjust screw #1. Left needle position on straight stitch should be the same as the left side of a full width zigzag.



Set needle bar height. At bottom of stroke, about 1/3 of the eye of the needle should show above the rim of the hook. (Note: If hook has been replaced with carbon fiber type, eye of needle will be hidden behind rim of hook.)

Remove shuttle cover and shuttle. Inspect these and shuttle driver for excessive wear and/or needle damage. Smooth or replace as necessary. Ascertain that gear mesh is not too tight by feeling for slight rotating freedom in shuttle driver. Feel shuttle driver for side to side movement. Anything more than very slight movement requires replacement of shuttle drive shaft bushing(s). On early models the nylon bushings are a part of the shaft, and on later models they are a part of the sleeve. Replace whichever has the nylon parts. Next, feel shuttle driver and shaft for front to back movement. If any exists, eliminate it by moving gear farther back on shaft. Recheck shuttle driver rotation. Be sure that no end play exists in rear shaft. Eliminate same with collar on shaft beside bushing toward hand wheel, (reached through lower access panel.) It is important to follow this order to be certain that end play on either shaft is not eliminated by having too tight a gear mesh. Re-recheck shuttle drive rotation (gear mesh).

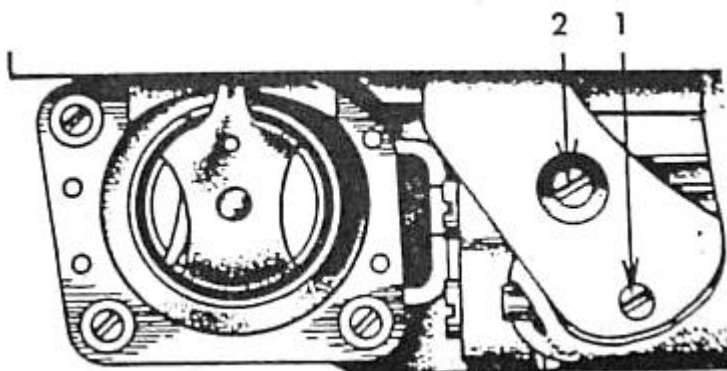
Lay shuttle in driver and check hook timing with timing gauge. (Viking part # 411 17 52-01) Hold shuttle in retarded position while checking. Tiny adjustments can be made with screws on driver. Greater adjustments on lower cog wheel of timing chain. (Notes: First screw to tighten on cog wheel should be black; change positions with silver one if necessary.) Also, be sure not to allow end play to develop on rear shaft by side movement of cog wheel.

Check spacing between point of hook and needle. Needle movement, when pressed toward hook, should be very slight! (Almost hard to visually detect) Adjust by adding or removing spacers behind driver. Infrequently, driver will need to be moved back and no spacers will be present, resulting in a need to reposition the gears and move the whole driver-shaft assembly back by loosening the set screw in the bottom of the arm.

Check the "float" of the shuttle by installing the "mushroom gauge" (Viking part # 411 16 49-01) in place of the shuttle, using only the 2 screws diagonally across from each other. Gauge should be able to be turned with moderate to slight resistance. Adjust with set screws that hold posts in position. Replace gauge with shuttle using all 3 screws, and adjust third post to obtain the lowest noise level from the shuttle, while running free.

Carefully check and clean shuttle post. It is wise to coat it with vaseline to prevent build-up from polyester thread which will cause very annoying noises. ("polychatter")

Check height of feed dogs. Put stitch length on zero. Rotate hand wheel to bring feed dogs to top, and check with gauge. (Viking part # 411 1735-01) Adjust with clamp inside of lower access door.



Check side to side position of feed dogs. Adjust by loosening set screw #1 in front of free arm. (Note: If more than slight adjustment must be made, screw #2 will have to be loosened too, assuring the need to do the following.)

Check front to back position of feed dogs. With stitch length at longest position, feed dogs should not touch needle plate in forward or reverse. Adjust by loosening screw #2.

Check timing of feed dogs. On maximum stitch length, the feed dogs should have completed their travel and have dropped almost to the level of the needle plate, when the needle enters the fabric. Feed timing is adjusted on the feed eccentric which is located on the main shaft, just in from the hand wheel.

Check and adjust upper tension release. Adjustment is located near bottom on the inside of the end door on 10 & 20 series, and at center of vertical release lever on later models.

Install arm covers and stitch in. Especially check as follows:

1- Balance tensions and adjust take up (check) spring.

2- Check 2mm zigzag on tricot.

3- Check 4mm zigzag with low gear on very heavy denim or similar.

4- Check automatic reverse cycle, using elastic straight and overlock stitches. Adjust, if necessary, with eccentric screw on arm that links camstack with stitch length control. (Note: Some models have set screws on top of arm, and some late models have a vertical adjusting screw.) It is wise to recheck feed cam follower retraction after adjusting reverse cycle screw.

5- Check buttonholes. Adjust cutting space with "shower screw" and balance at reverse knob. On all models except 10 & 20 series, be sure that external balance is centered before setting screw under knob cover.

Always remember that a good mechanic is never afraid to ask for help.

GOOD LUCK !!!