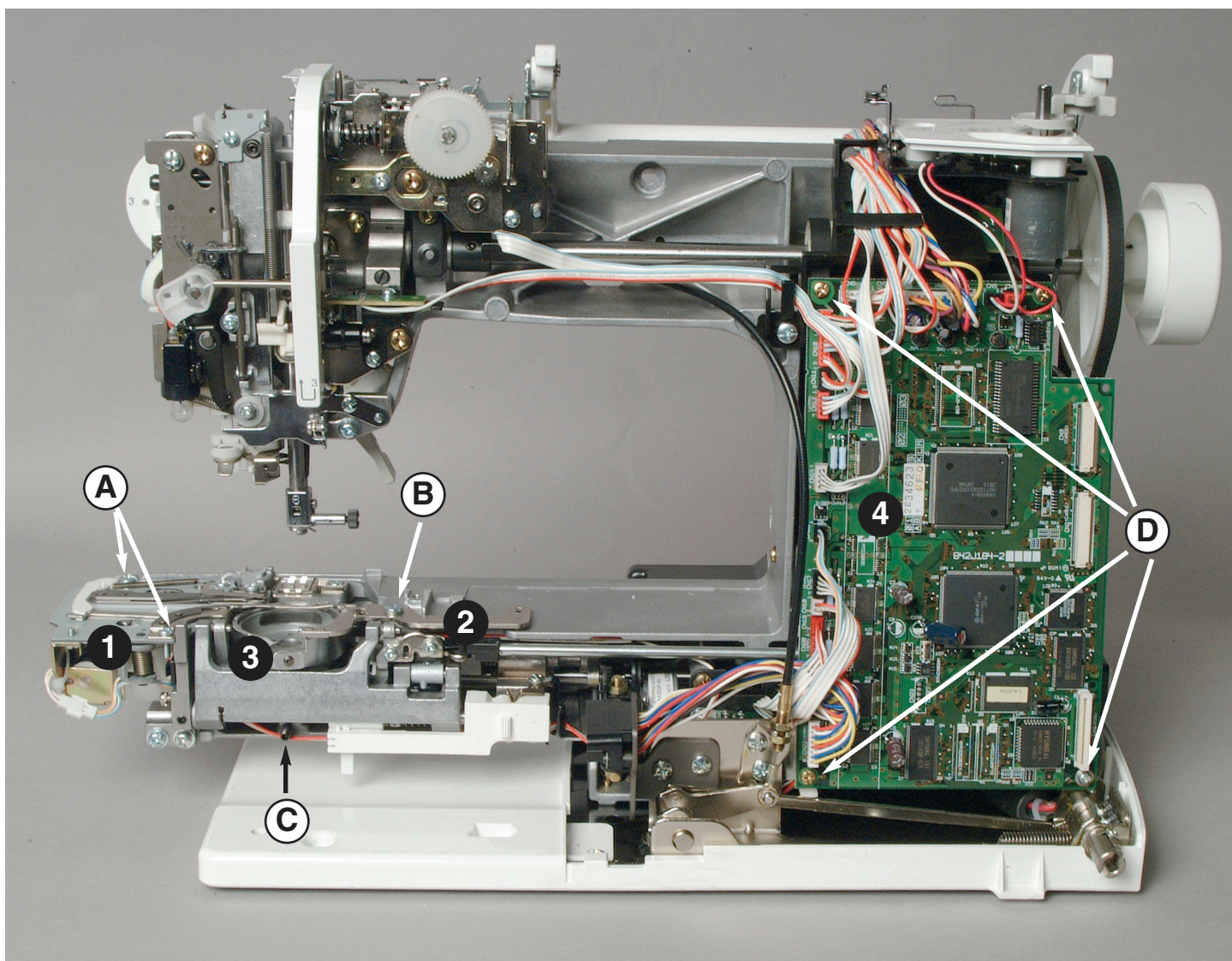




ESG3
(ESG/ESG2)

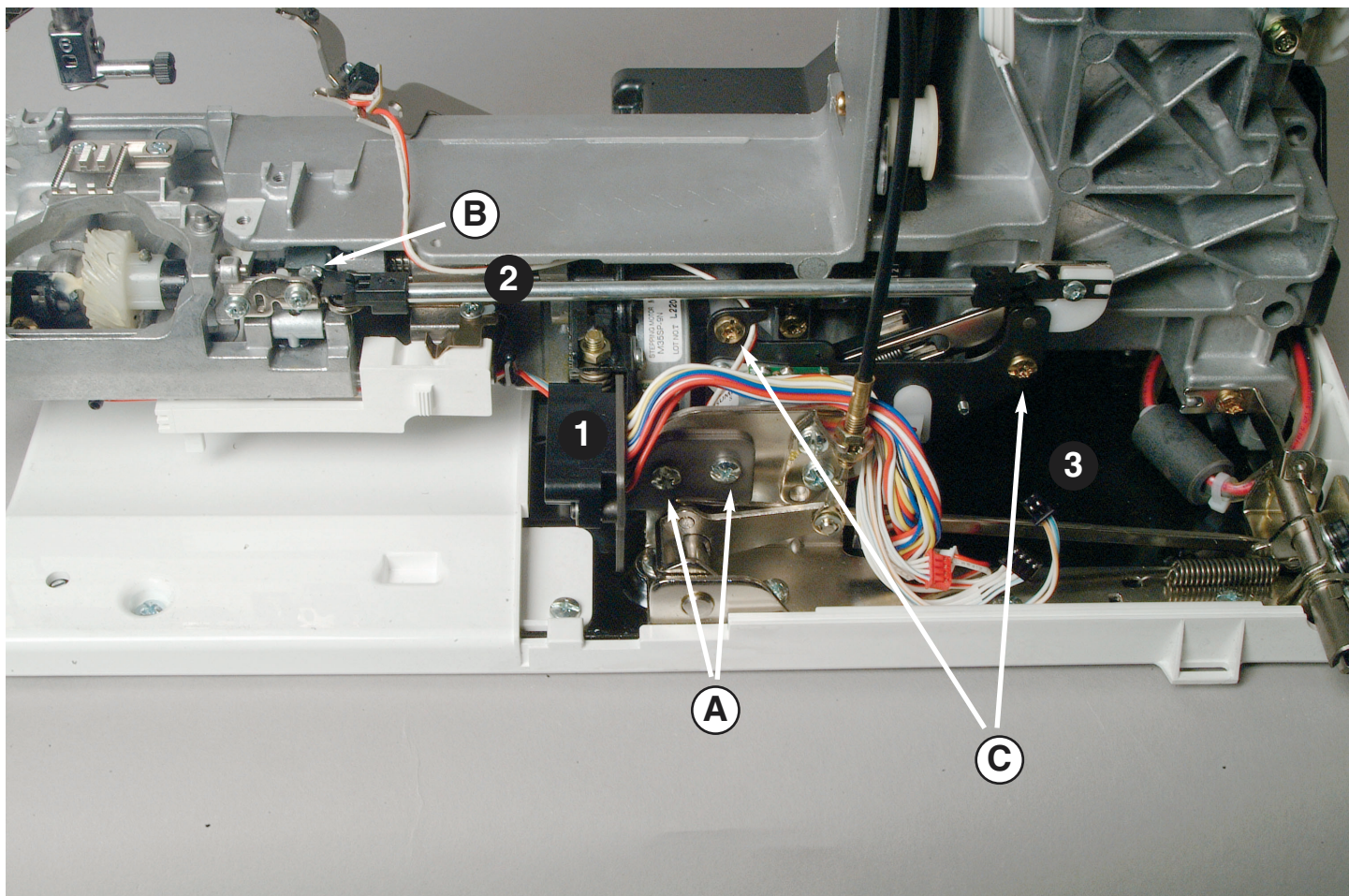
Technical Service

Lower Shaft Replacement Procedure



- 1)** Remove Knife Unit by removing two screws "A", with needle on down stroke and the tip of the Outer Hook set at 6:00 position, lift Knife Unit up and pull forward.
- 2)** Remove Inner Hook Bracket by removing screw "B", lay towards the rear of machine.
- 3)** Remove Outer Rotary Hook by loosening screw "C", and lifting up. Be careful two spacers underneath Hook.
- 4)** Unplug all connectors from the Main Board. Remove Main Board by removing all four screws "D". Lower right screw is different from others.





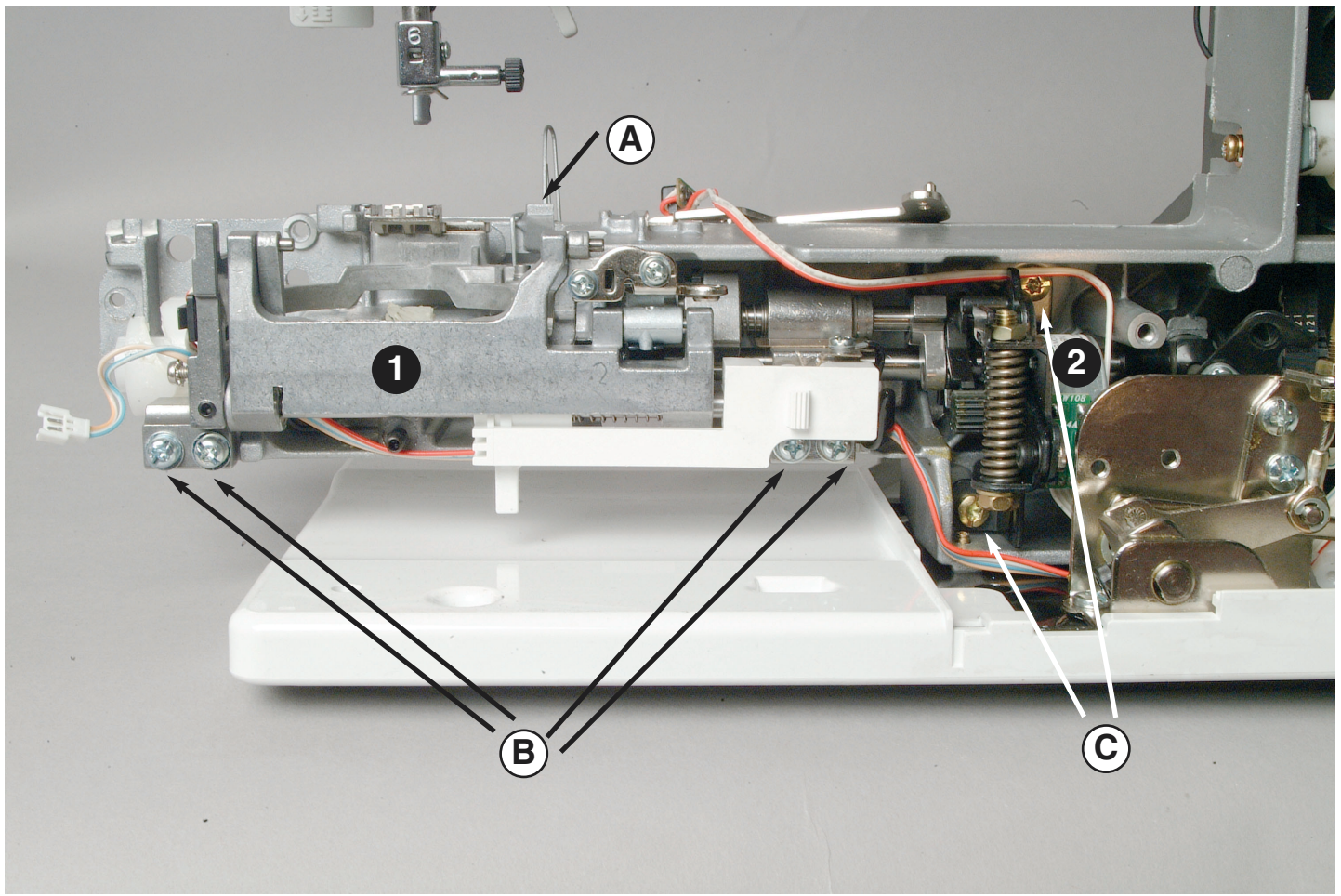
1) Remove Embroidery Unit Connector, by removing screws "A".

2) Remove Side Feed Arm Assy. by removing screw "B".

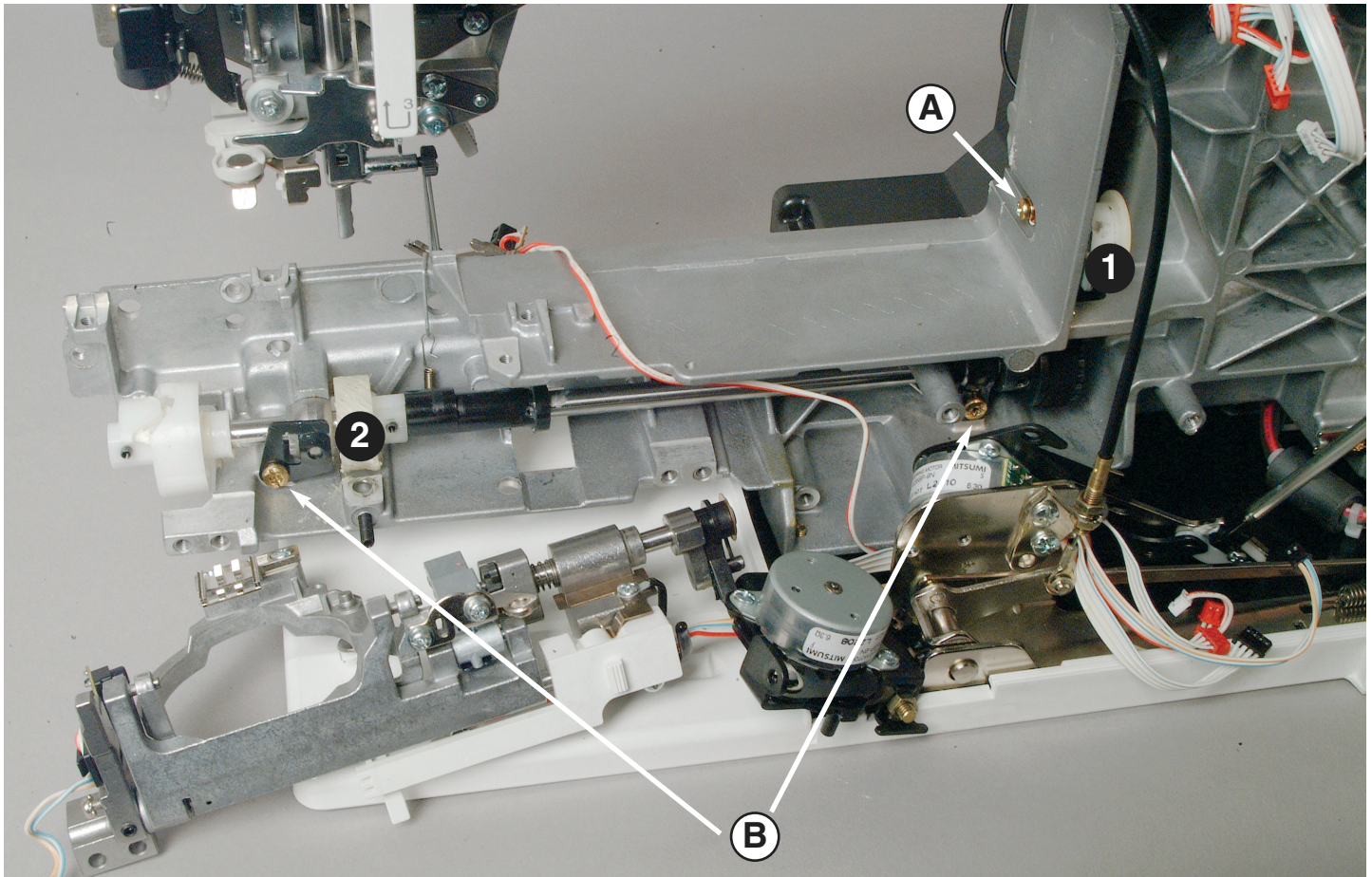
3) Remove Side Feed Bracket by removing two torx screws "C".

Be careful of all wires, there is NO need to un route any wires.



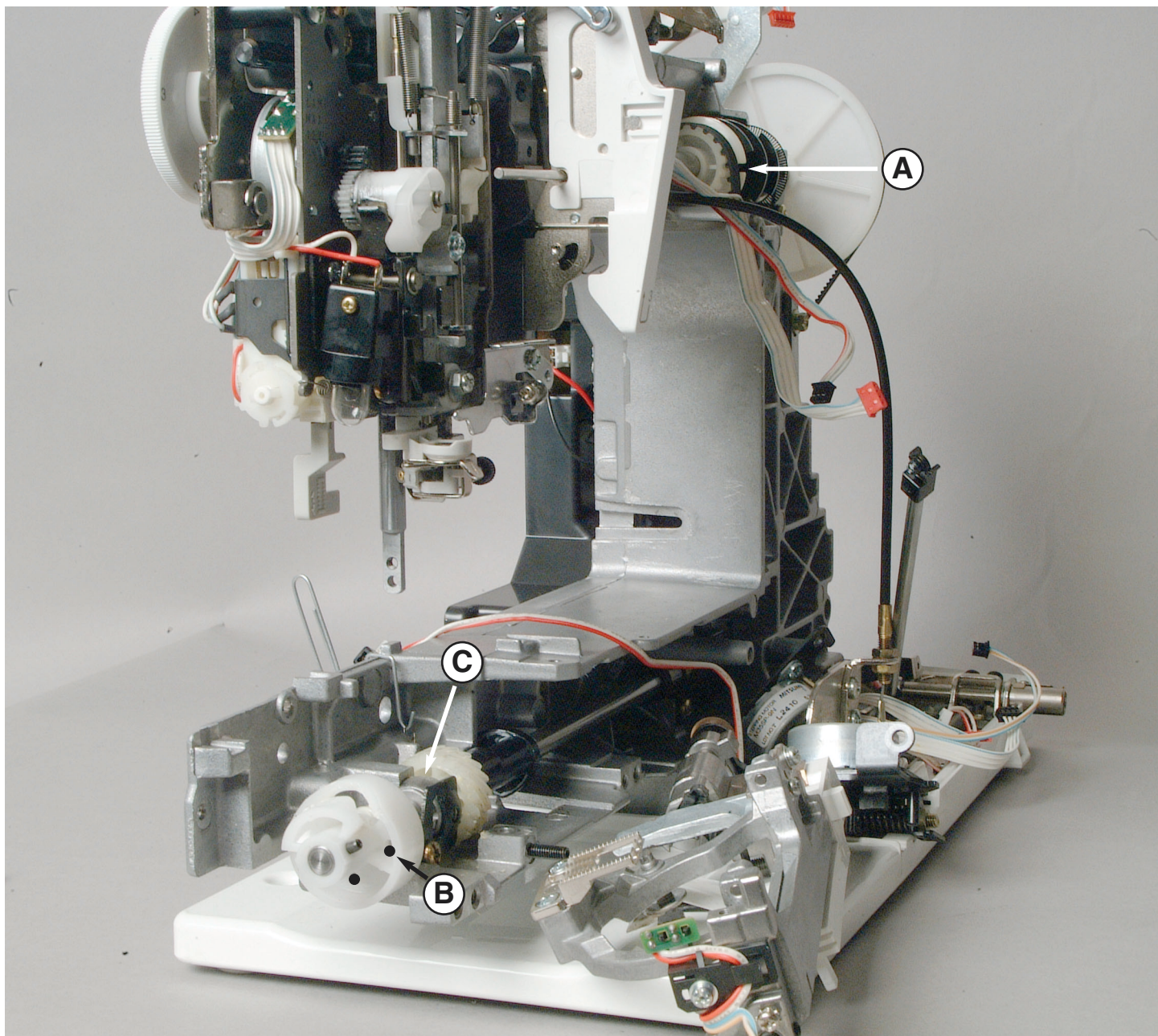


- 1) Remove Feed Unit by lifting spring "A", use paper clip to hook onto rear of casting. Then remove four screws "B" and slide unit forward.
- 2) Remove Vertical Feed Assy. by removing two torx screws "C" and slightly pull forward.



- 1) Remove Belt Pulley by removing screw "A".
- 2) Remove Lower Shaft by removing two torx screws "B" and setting plates then pull towards front and slide out towards the left.

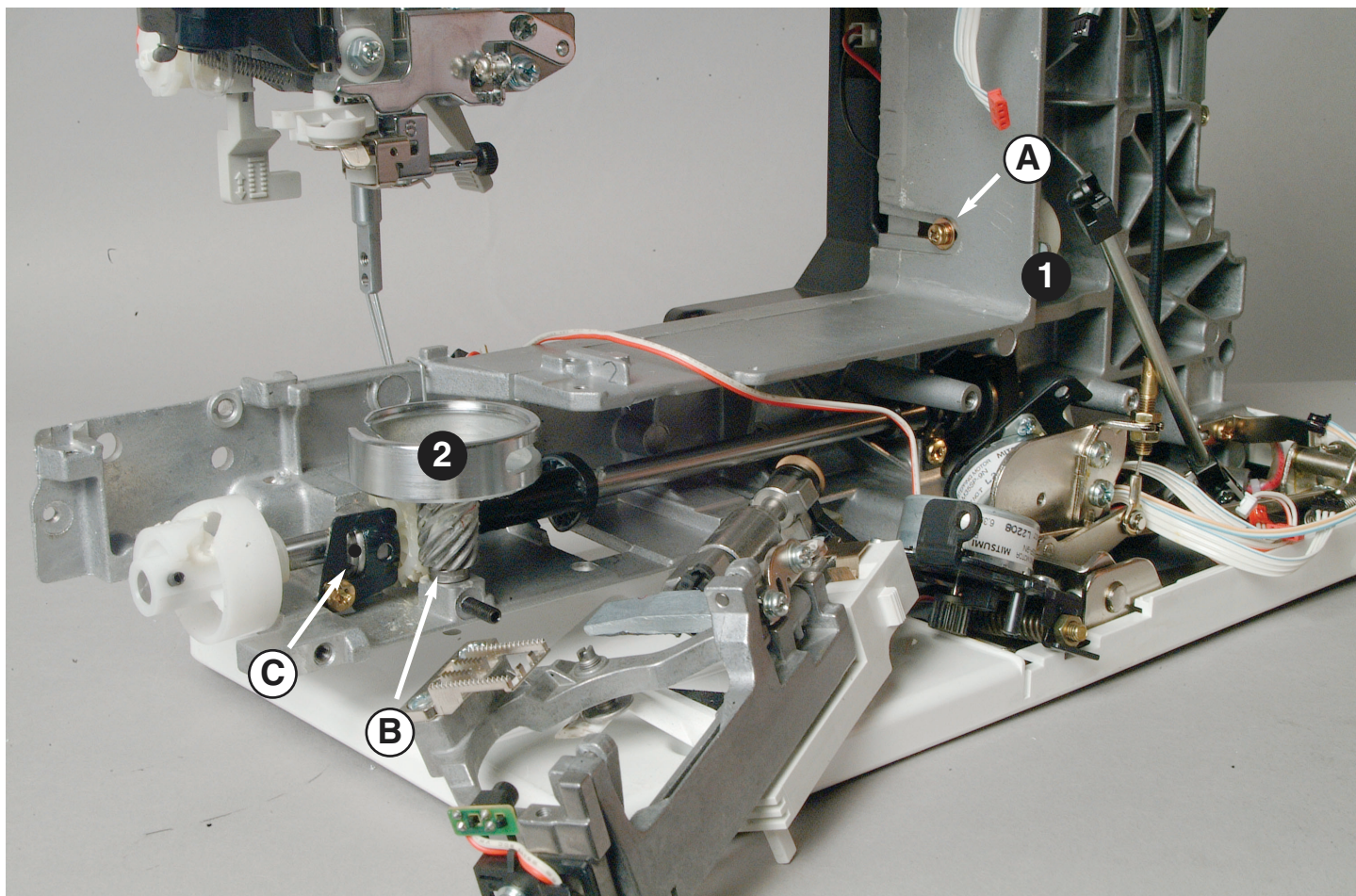




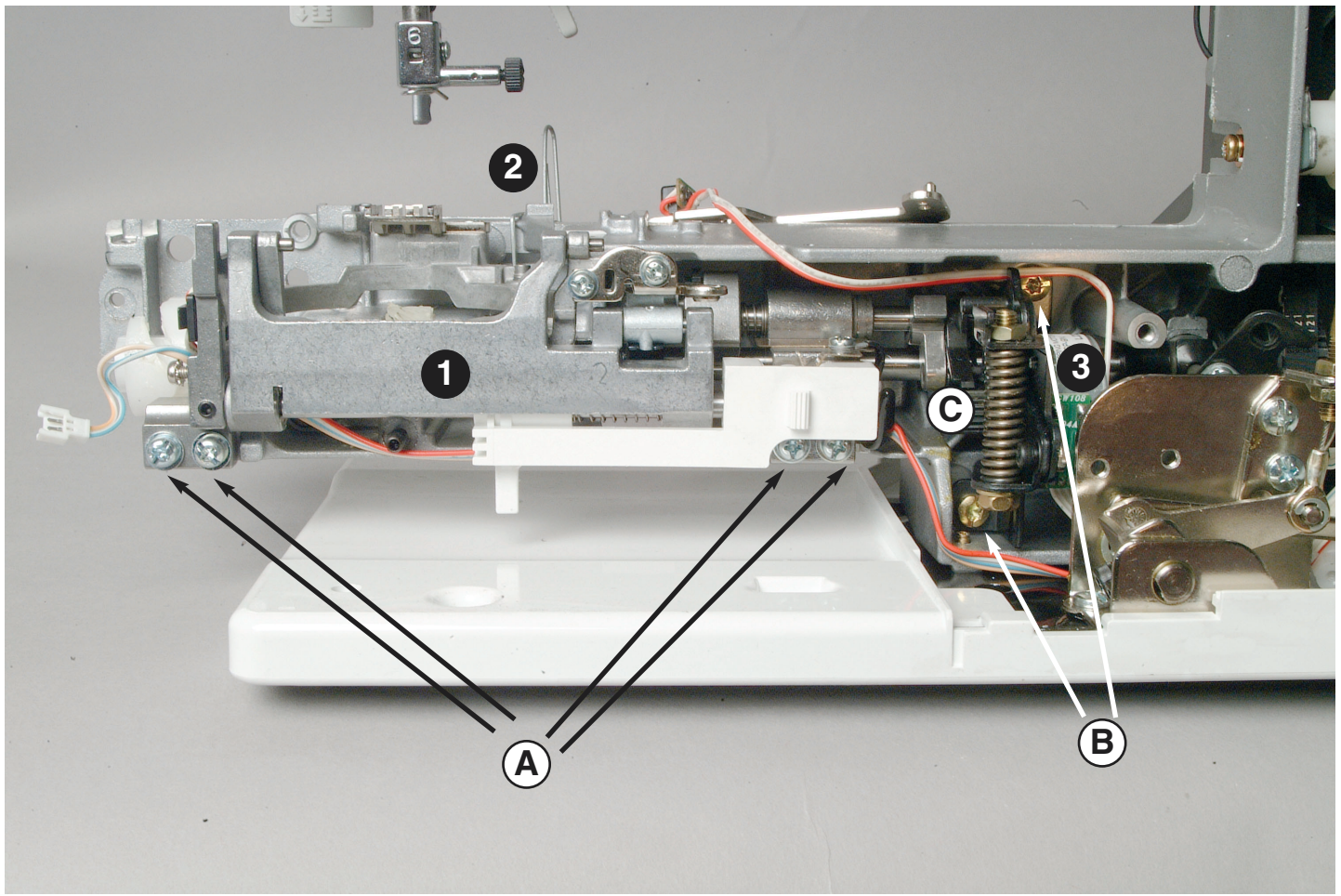
Reinstallation

- 1) With Upper Shaft timing mark "A" facing forward, reinstall Lower Shaft, so that SECOND timing mark "B" on lower shaft is facing forward. Position eccentric bushing "C" so that heavy side is facing down and notch facing forward.



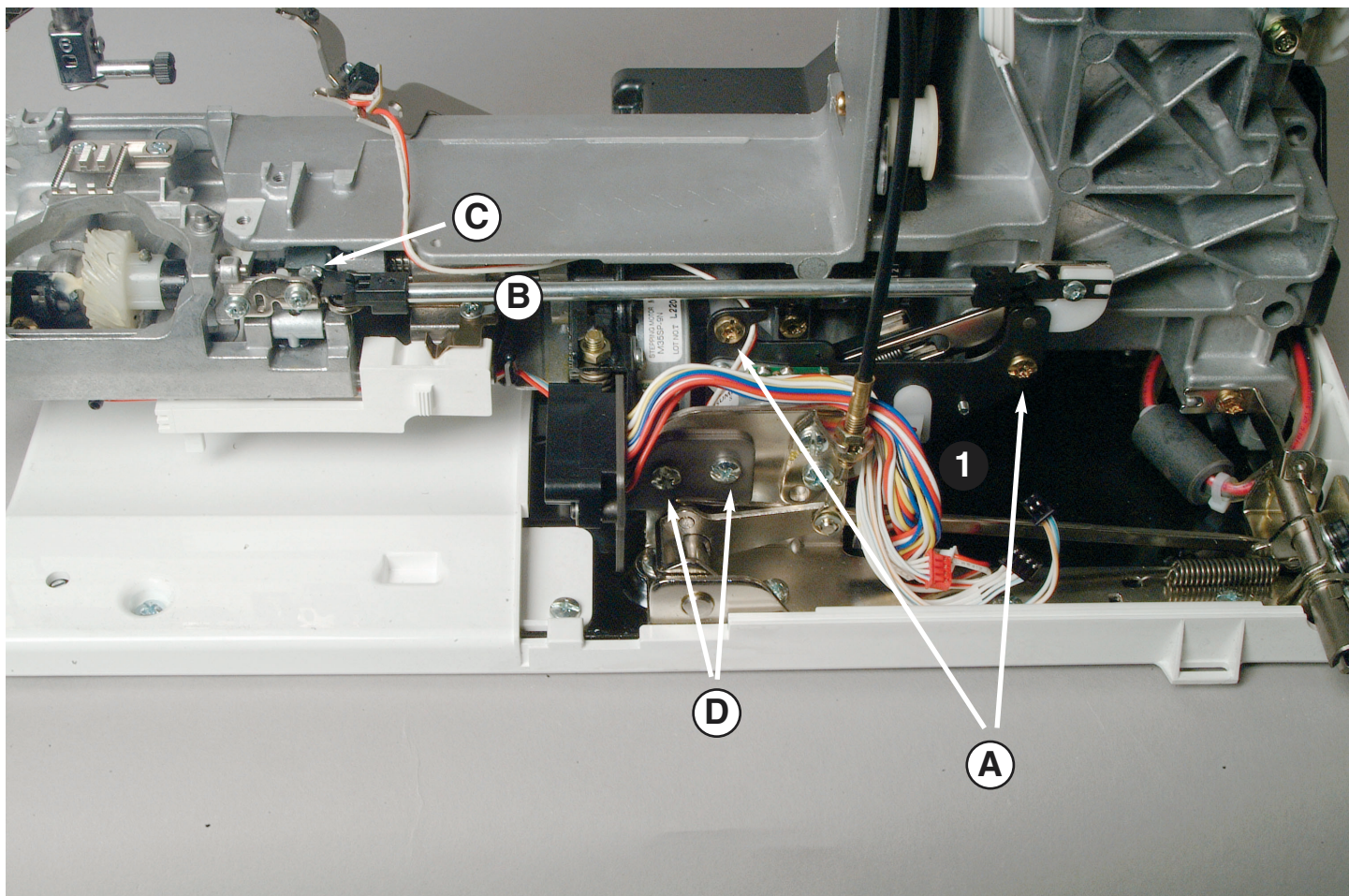


- 1) Reinstall Timing Belt Pulley and tighten screw "A", be careful not to over tighten belt.
- 2) Temporally install Outer Rotary Hook, (remember two spacers, Thick spacer on Top, Thin on bottom "B") and adjust backlash between Hook Gear and Lower Shaft Gear by rotating bushing "C" up or down (with notch) to achieve 1mm of movement in Outer Hook, then retighten screw and recheck.

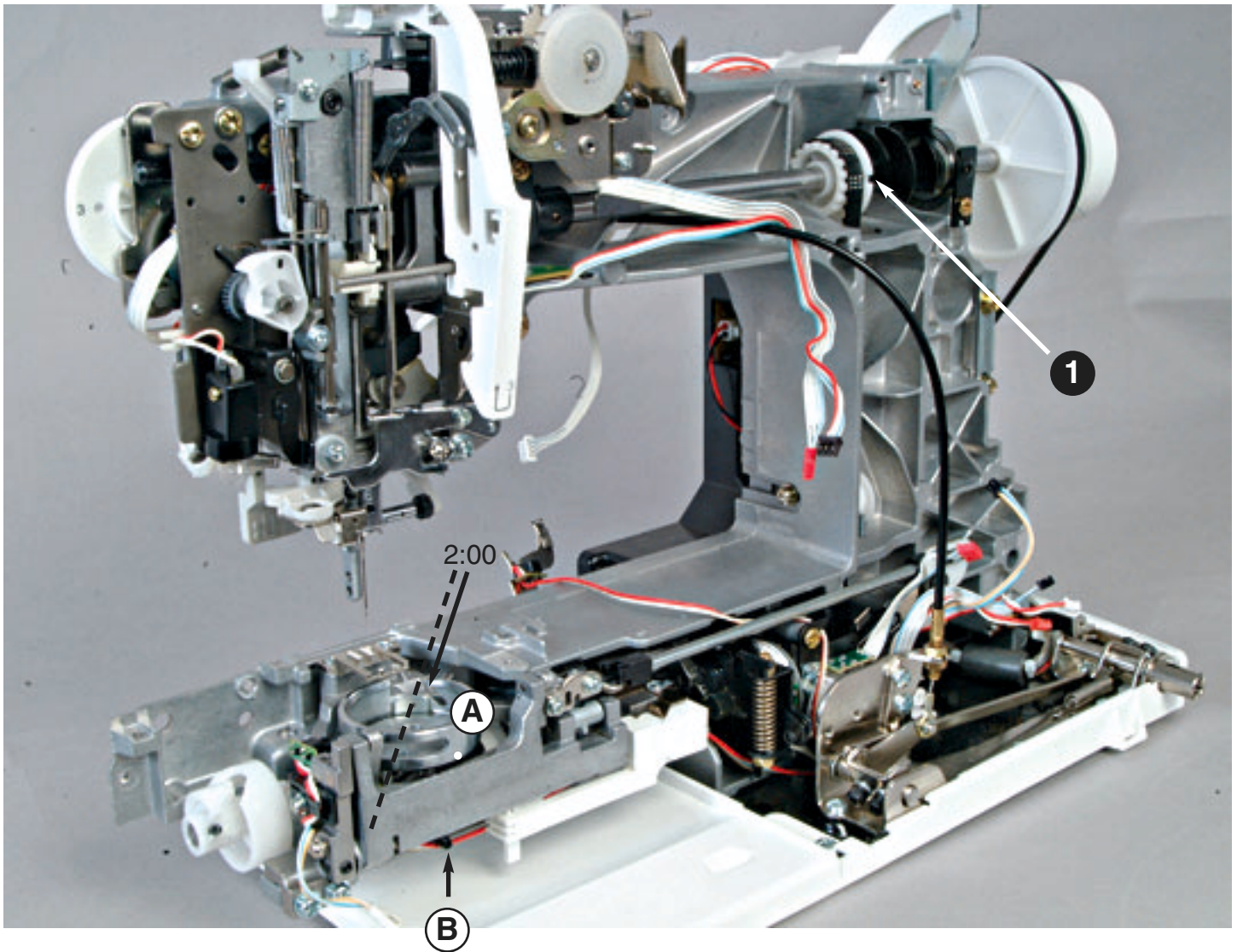


- 1)** Reinstall Horizontal Feed Unit, with four screws "A"(be careful of the wires by the right screws)
- 2)** Reconnect Spring to Feed carrier.
- 3)** Reinstall Vertical Feed Assy. with two torx screws "B", making sure that timing marks are aligned "C".





- 1) Reinstall Side Feed Motor with two Torx screws "A", reconnect Side Feed Arm "B" and secure with screw "C".
- 2) Reinstall Embroidery Unit Connection with two screws "D"

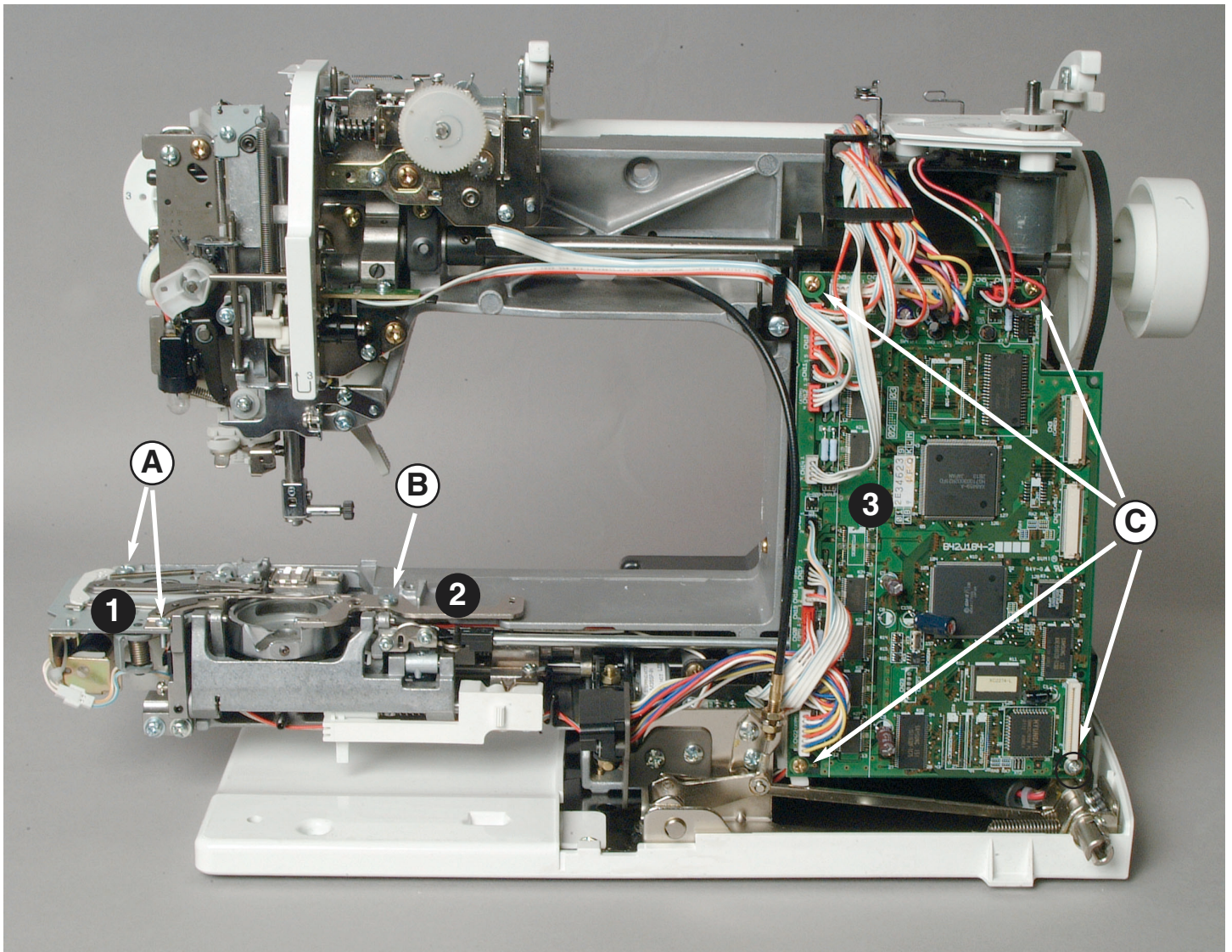


- 1) Position Upper Shaft timing mark facing forward, reinstall Outer Hook "A" (don't forget two washers under hook, thickest on top) with the point of the hook at the 2:00 position, secure Hook Shaft with screw "B", check that there is NO up/down play in the hook, (be sure not to over tighten shaft)

NOTE: ESG3 machines will have a timing dot on the surface of the hook facing forward.

- 2) To check Timing place needle in the left needle position to see that when the needle is rising that the tip of the hook is 1.0mm above the eye of the needle when placed directly behind it.





- 1) To reinstall Cutter Assy, place point of hook at 6:00 position while needle is on the down stroke, tilt unit so that tab sets into the casting first then secure in place with two screws "A"
- 2) Temporarily position Inner Hook Bracket with screw "B"
- 3) Reinstall Main Board, with four screws "C" (lower right screw is different than other three screws). Reconnect all connections.

