

ESG TROUBLE SHOOTING GUIDE

From the Baby Lock Technical Department May 2003

Operation problems:

1. Start/Stop button won't respond.
 - a. Remove foot control
 - b. Check that scissor button is not stuck in.
 - c. Check that width control selection on settings screen is "off".
2. Reverse button will not work or is working sporadically.
 - a. Check stitch selected, some stitches do not reverse just sew in one place.
 - b. Replace card module board.
3. No power when machine is turned on.
 - a. Check fuses and power supply output.
 - b. Check CN2 connection on card module board.
4. Sew light comes on but the LCD and Start/Stop are dark.
 - a. Check connections from card module board.
 - b. Replace card module board.
5. Sew light not working.
 - a. Check that lamp is "ON" in the settings screen.
 - b. Replace bulb.
 - c. Replace main board.
6. Screen flashes or blanks out during sewing.
 - a. Check connections on boards.
 - b. Change power supply.
7. Start/Stop light stays red when presser foot is down.
 - a. Check the height of the presser bar (refer to service manual).
 - b. Check the electronic setting of the cloth thickness sensor (refer to service manual) test #7. Reset using test #2 if required
 - c. Check that width control is "OFF" in the setting screen.
 - d. Check the foot control jack assembly.
 - e. Replace the card module board.

LCD Malfunctions:

1. Blank LCD screen - responds to touch (beeps).
 - a. Check flat cable connections.
 - b. Possible bad inverter board.
2. Blank LCD screen – no response to touch. When Start/Stop, Reverse, and Needle Position buttons are held in while power is turned on regular sewing screen comes up.
 - a. Check flat ribbon connections, especially between LCD and card module board.
3. Lines across LCD.
 - a. Check flat cable connections.
 - b. Possible bad main board.
4. LCD flashes after board upgrade.
 - a. Turn off, turn on and reset the touch screen (1-5 screen).
5. 1-5 won't come up on the screen or 1-5 does come up but won't set past #2.
 - a. Replace main board.

Poor Tension:

1. Check thread path. Ensure thread is not hung up somewhere. i.e. grooves, burrs, thread knotted.

2. Check for burrs or scarring on the needle plate holes. Insert proper, new needle (schmetz 80/12).
3. What kind of thread is being used? Consider differences. Use the same weight thread (top and bottom) for normal sewing. Is finishing touch bobbin thread being used for embroidery? If doing embroidery, what is the source of the design? Is it too dense in areas? Verify using a Baby Lock pre programmed card.
4. Check the position and height of the arm that lies over the felt pad on the inner hook.
5. Check tension settings, using a gram gauge, at the pre-tension plate, the tension discs, and the inner hook.
6. Check position of the rotary hook bracket.
7. Refer to Technical Bulletin March 2003, for thread tension setting.
8. Check pretension plate position.

Thread Breaking:

1. Review the Poor Tension check-list.
2. Check for burrs or scarring on the hook, needle plate, and throughout the thread path.
3. Check the needle clearance and hook needle timing.
4. Check for proper back-lash in outer hook.
5. Check needle clamp for needle angle if worn clamp.

Hand wheel hard to turn or machine binding:

1. Check for bind or thread wound around the needle bar crank area.
2. Check bushings on upper and lower shafts for black oil discharge or flecks of black on casting.
3. Check the horizontal feed assembly for binding.
4. Check the back-lash of the outer hook.

Error Messages:

1. Stop For Safety; Check for right/left play in upper shaft. If so, needle position board (NP board) may be damaged. Check for bind in shaft bushings or needle bar crank area.
2. No face plate, test mode; Check CN4 connection on card module board, to LCD module, that it is secured properly.
3. Test mode 1 activated; Check all flat ribbon connections. Main board may be bad.
4. Attach hoop (when hoop is attached); Check flexible flat cable in embroidery unit for damage. Check hoop sensor board (3 small white switches) for damage.
5. Check upper thread; Check the check spring and spring sensor in test mode #11. check connector at the main board and the solder connection at the sensor. Check for proper tension.

Embroidery problems:

1. Screen blanks out when embroidery unit initialized; Check flat flexible cable for kinks or tears. Check for bind in the X or Y carriage of embroidery unit. Check the ohm values in the X and Y pulse motors. Possible main board drive chip bad (change main board).
2. Machine won't recognize embroidery hoop; Check hoop sensor switches. Check flexible flat cable for kinks or tears.
3. Pattern jumps during embroidery, or when trying to position a design, forward or back, arm acts erratic; Check belt tensions in embroidery unit. Check for binds in X and Y carriage. Check embroidery unit lead wire (blue) from main connector to Y step motor for breaks. Check X and Y pulse motors OHM values.
4. Embroidery unit initializes to forward right position and stays there; Y sensor or Y pulse motor bad.

5. Embroidery unit finishes first color in design then the screen reads “attach hoop”; Check flexible flat cable in embroidery unit.
6. Outline problems; Check belt tension on embroidery unit. Check for foreign material in gear set teeth.