

## ERROR CODES

MODEL(S)	ERROR(S)
<p><b>Janome model(s):</b> MB4</p> <p><b>Elna models:</b> 940 / 9900</p>	<p><i>Detailed diagnosing of this machine is very difficult and may require contacting the Janome Service Department. The following are simple checks.</i></p> <p>The error 'E:##' is displayed on the small LCD on the machine when the RCS is not plugged in. When the RCS unit is plugged in, it will give a specific error on the LCD:</p> <p><b>E:00:</b> Please power down and restart again. <i>(Communication error with the RCS. The machine won't display this error on the RCS. Instead the screen will not go to the next step from the 'Welcome screen'.)</i></p> <ol style="list-style-type: none"> <li>1. Check the connection going from the RCS plug into the RCS unit and the connector on the machine to the 'B' board.</li> <li>2. Try another RCS unit to determine which part is the problem.</li> </ol> <p><b>E:01:</b> Please power down and restart again. <i>(There is a problem with a stepping motor not initializing correctly or at all.)</i></p> <ol style="list-style-type: none"> <li>1. With the machine off, manually move the head to needle #4, push the carriage unit all of the way to the front and to the right. Turn on the machine and see which doesn't calibrate.</li> <li>2. While holding down the Start/Stop &amp; Reverse buttons, turn on the machine. Release the buttons once you see icons on the screen:             <ol style="list-style-type: none"> <li>A. Press "Phase" then 'All Init' to calibrate the machine, then press "Cancel".</li> <li>B. Check the "Needle" and press the left &amp; right arrow keys to bring the needle to #4 then back to #1 to check the step motor &amp; sensors. Press "Cancel" to exit.</li> <li>C. Press "Pick-Up" and press "Init" to check the thread catcher. Press "Cancel" to exit.</li> <li>D. Press "Sensor Solenoid" and press "Solenoid1" to check [QQQQQQ] and "Solenoid2" to check [QQQQQQ]. Press "Cancel" to exit.</li> <li>E. Press "Cut Motor" and press "Init" to calibrate the dynamic cutter. Now press "Divide" then "Init" once again to check the cutter.</li> </ol> </li> </ol> <p><b>E:02:</b> Please power down and restart again. <i>(Needle bar changeover.)</i></p> <ol style="list-style-type: none"> <li>1. Remove the stationary cover then turn the hand wheel to 270°. Using a 2.5mm hex driver, turn the silver gear on the needle-change step motor to move the head from needle bar #1 to #4 then back to #1 to check for any binds. If there is a bind, adjust 'head play' as shown in the service manual.</li> <li>2. Check and adjust 'moving head stop position' and 'needle stop position' as shown in the service manual.</li> </ol> <p><b>E:03:</b> Needle bar is out of position. Press OK to move the needle bar to switching position. <i>(Needle bar change over phase.)</i></p> <ol style="list-style-type: none"> <li>3. Remove the stationary cover then turn the hand wheel to 270°. Using a 2.5mm hex driver, turn the silver gear on the needle-change step motor to move the head from needle bar #1 to #4 then back to #1 to check for any binds. If there is a bind, adjust 'head play' as shown in the service manual.</li> <li>4. Check and adjust 'moving head stop position' and 'needle stop position' as shown in the service manual.</li> </ol> <p><b>E:04:</b> Lock!! <i>(There is a problem with the DC Motor.)</i></p> <ol style="list-style-type: none"> <li>1. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>2. Try resetting the DC motor. Hold down the Forward &amp; Bobbin Winder buttons on the RCS unit then turn on the machine. Press the button called "Clear". Turn off the machine.</li> </ol> <p><b>E:05:</b> Rethread and start. <i>(Either the machine broke the thread or it thinks the thread is broken.)</i></p> <ol style="list-style-type: none"> <li>1. Remove any thread, then the tension unit cover. Now run the machine and quickly spin the small wheel by hand (depending on which needle is being 'sewn'). If it still gives you the error, check the connections or replace the circuit board.</li> <li>2. If you do not get the error, check: needle position (left-right &amp; front-back), needle bar height, presser bar height, hook timing, and clearance.</li> </ol> <p><b>E:06:</b> [Deleted]</p> <p><b>E:07:</b> Please power down and restart again. <i>(The thread cutter malfunctioned.)</i></p> <ol style="list-style-type: none"> <li>1. Check the connections and any binds in the thread cutter linkage. Replace the dynamic thread cutter unit if necessary.</li> </ol> <p><b>E:08:</b> Pull the tension release lever. <i>(The lever that opens the tension discs may be engaged.)</i></p> <ol style="list-style-type: none"> <li>1. Make sure the lever is not engaged (keeping the tension discs open) and check the connections.</li> <li>2. Remove the tension unit cover and check the position of the microswitch. Adjust the position of this microswitch. Replace the microswitch if necessary.</li> </ol> <p><b>E:09:</b> Please power down and restart again. <i>(The driving motor malfunctioned.)</i></p> <p><b>Replace DC Motor</b></p> <ol style="list-style-type: none"> <li>1. While holding down the Bobbin Winder &amp; Forward buttons on the RCS, turn on the machine.</li> <li>2. Once a menu appears on the screen, release the buttons. Press 'Clear'.</li> <li>3. Turn the machine off then back on like normal.</li> </ol>
<p><b>Janome model(s):</b> MC15000</p>	<p><b>Raise Presser Foot and Needle Bar, then turn power on again.</b></p> <ol style="list-style-type: none"> <li>1. Turn the machine off and attach the carriage unit.</li> <li>2. Raise the needle bar to the highest position and push the needle bar to the left.</li> <li>3. Open the embroidery arm and push the carriage all of the way out towards the back and to the left.</li> <li>4. Put your ear up the machine and then turn it on. Listen for which step motor 'stutters' or does not calibrate. Follow the service book to adjusting/replacing the specific unit.</li> </ol>

	<p><b>Warning (with a picture showing you to attach the needle plate):</b></p> <ol style="list-style-type: none"> <li>1. The needle plate is not attached properly.</li> <li>2. The needle plate micro switch needs to be adjusted.</li> </ol> <p><b>Please make sure the proper presser foot is attached.</b></p> <ol style="list-style-type: none"> <li>1. The needle plate is not attached properly.</li> <li>2. The needle plate micro switch needs to be adjusted.</li> </ol> <p><b>Rethread and start.</b></p> <ol style="list-style-type: none"> <li>1. The machine ran out of thread.</li> <li>2. There is a problem with the thread check sensor on the tension unit.</li> </ol> <p><b>Bobbin thread may not be sufficient. Bobbin winding is recommended.</b></p> <ol style="list-style-type: none"> <li>1. The bobbin is almost empty.</li> <li>2. The remaining bobbin thread sensor needs to be adjusted in the test mode.</li> </ol> <p><b>Check bobbin winder.</b></p> <ol style="list-style-type: none"> <li>1. The bobbin winder is not pushed to the left (engaged).</li> <li>2. The bobbin winder connection is not plugged in.</li> </ol> <p><b>Pull down BH Lever.</b></p> <ol style="list-style-type: none"> <li>1. The buttonhole lever is not lowered all the way before sewing a buttonhole.</li> <li>2. The shield plate is not in the center of the sensor.</li> <li>3. The buttonhole sensor connection is not plugged in.</li> </ol> <p><b>Warning! The embroidery unit is attached/detached. Please turn off the power and then on again.</b></p> <ol style="list-style-type: none"> <li>1. The embroidery unit was connected or disconnected while the machine was on. Turn the machine off then back on again to reset the machine.</li> </ol> <p><b>Warning: Is something stuck in machine? Is cloth too thick? Is needle bent? Check the above and restart.</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>3. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</li> <li>4. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>5. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.</li> <li>6. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol>
<p><b>Janome model(s):</b> MC12000</p> <p><b>Elna model(s):</b> 900</p>	<p><b>Raise Presser Foot and Needle Bar, then turn power on again.</b></p> <ol style="list-style-type: none"> <li>1. Turn the machine off and attach the carriage unit.</li> <li>2. Raise the needle bar to the highest position and push the needle bar to the left.</li> <li>3. Open the embroidery arm and push the carriage all of the way out towards the back and to the left.</li> <li>4. Put your ear up the machine and then turn it on. Listen for which step motor 'stutters' or does not calibrate. Follow the service book to adjusting/replacing the specific unit.</li> </ol> <p><b>Warning (with a picture showing you to attach a needle plate):</b></p> <ol style="list-style-type: none"> <li>1. The needle plate is not attached properly.</li> <li>2. The needle plate micro switch needs to be adjusted.</li> </ol> <p><b>Stop for Safety Purposes:</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. Check for a tight or stuck clutch by the hand wheel.</li> <li>3. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>4. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</li> <li>5. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>6. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.</li> <li>7. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol>
<p><b>Janome model(s):</b> MC11000S / MC11000</p>	<p><b>Raise Presser Foot and Needle Bar then Turn Machine on Again</b></p> <ol style="list-style-type: none"> <li>1. Turn the machine off. Raise the needle bar to the highest position and raise the presser foot.</li> <li>2. Open the embroidery arm. *Slowly &amp; firmly*, move the carriage all the way towards the back and all the way to the left.</li> </ol>

<p><b>Elna model(s):</b> 9600 / 9500</p>	<p>3. Push the needle bar to the left.</p> <p>4. Open the face plate. Lower the needle threader only half-way down by manually turning the black threaded bar. (See the diagram on the inside of the face plate.)</p> <p>5. Turn the machine on. The carriage should return to the home position, the needle bar will center itself, the needle threader will return to the up position, and the tension unit will calibrate. If you still get an error, check to see which does not calibrate. Check the connections, any binds, clean the gears, etc. If the error pops up on the screen only after 10 seconds or you hear a high-pitched 'screeching' or 'whining' sound, you have a problem with the feed dog drop step motor. Check the connections, thread caught in the gears, any binds, etc., or replace the unit.</p> <p><b>Lock</b> There's a problem with the DC motor. Check the connections and make sure the shield plate going thru its sensor and is not loose or touching the sides of the sensor. Make sure both the shield plate and sensor are not damaged. If either the shield plate or sensor is damaged or you still get the "Lock" error, replace the DC motor.</p> <p><b>Raise Presser Foot (when the presser foot is down and you try to run the machine)</b> There's a problem with the feed dog drop step motor. Check the connections, thread caught in the gears, any binds, etc., or replace the unit.</p> <p><b>Low Bobbin Thread (you need the green &amp; red bobbin gauges [#00310KGAUGE] to fix this):</b></p> <ol style="list-style-type: none"> <li>1. With the machine off, hold down the Start/Stop &amp; Reverse buttons, then turn the machine on.</li> <li>2. Press 'Bobbin'.</li> <li>3. Insert the red bobbin gauge. Press 'Key' until you get the most common number, then press 'MEM1'.</li> <li>4. Remove the green gauge and Insert the red gauge. Press 'Key' until you get the most common number, then press 'MEM2'.</li> <li>5. Press 'X' to save it and turn the machine off.</li> </ol> <p><b>Presser Foot (P)</b></p> <ol style="list-style-type: none"> <li>1. Go into embroidery mode and select any built-in design.</li> <li>2. Attach the 'P' foot and lower the presser bar.</li> <li>3. Locate the "L"-shaped bracket directly underneath the large, metal bracket that the handle pivots on.</li> <li>4. On older models, you can loosen the Phillips screw next to the c-clip and push the "L"-shaped bracket slightly downwards. Do not push the bracket towards the front of the machine too much, as it will hit the needle bar supporter and cause a loud 'clacking' sound.</li> <li>5. On newer models, there will not be a Phillips screw, so you will need to loosen the Phillips screw that holds the sensor this "L"-shaped bracket goes into and move it slightly towards the back of the machine. <ul style="list-style-type: none"> <li>• These are very fine adjustments. You do not have to turn the machine off each time an adjustment is made. Just press the 'Start/Stop' button each time an adjustment is made.</li> </ul> </li> </ol>
<p><b>Janome model(s):</b> MC9900</p> <p><b>Elna model(s):</b> 860</p>	<p><b>Raise Presser Foot and Needle Bar, then turn power on again.</b></p> <ol style="list-style-type: none"> <li>1. Turn the machine off and attach the carriage unit.</li> <li>2. Raise the needle bar to the highest position and push the needle bar to the left.</li> <li>3. Open the embroidery arm and push the carriage all of the way out towards the back and to the left.</li> <li>4. Put your ear up the machine and then turn it on. Listen for which step motor 'stutters' or does not calibrate. Follow the service book to adjusting/replacing the specific unit.</li> </ol> <p><b>Warning (with a picture showing you to attach a needle plate):</b></p> <ol style="list-style-type: none"> <li>1. The needle plate is not attached properly.</li> <li>2. The needle plate micro switch needs to be adjusted.</li> </ol> <p><b>Please make sure the proper presser foot is attached.</b></p> <ol style="list-style-type: none"> <li>1. Remove the needle plate</li> </ol> <p><b>Bobbin thread may not be sufficient. Bobbin winding is recommended.</b></p> <ol style="list-style-type: none"> <li>1. The bobbin thread is almost empty.</li> <li>2. The remaining bobbin thread sensor needs to be adjusted in the test mode.</li> </ol> <p><b>Lower the Presser Foot.</b></p> <ol style="list-style-type: none"> <li>1. The position of the presser foot up/down micro switch needs to be adjusted.</li> <li>2. The presser foot up/down micro switch may be unplugged or plugged into the wrong connection on the 'A' board.</li> </ol> <p><b>Please attach the P Foot</b></p> <ol style="list-style-type: none"> <li>1. The wrong foot is on the machine.</li> <li>2. The 'P' foot sensor may need to be adjusted.</li> </ol> <p><b>Lower the Feed Dog.</b></p> <ol style="list-style-type: none"> <li>1. The feed dog drop lever may not be activating/deactivating the micro switch.</li> <li>2. The drop feed plate by the hook race may be bent causing it to bind.</li> </ol> <p><b>Pull down BH Lever.</b></p>

	<ol style="list-style-type: none"> <li>1. The buttonhole lever is not lowered all the way before sewing a buttonhole.</li> <li>2. The shield plate is not in the center of the sensor.</li> <li>3. The buttonhole sensor connection is not plugged in.</li> </ol> <p><b>Rethread and start.</b></p> <ol style="list-style-type: none"> <li>1. The machine ran out of thread.</li> <li>2. There is a problem with the thread check sensor on the tension unit.</li> </ol> <p><b>Turn off the machine and attach the embroidery unit.</b></p> <ol style="list-style-type: none"> <li>1. The embroidery unit was connected or disconnected while the machine was on. Turn the machine off then back on again to reset the machine.</li> </ol> <p><b>Warning: Is something stuck in machine? Is cloth too thick? Is needle bent? Check the above and restart.</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>3. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.</li> <li>5. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol>
<p><b>Janome model(s):</b> MC350E / MC300E</p> <p><b>Elna model(s):</b> 8300</p>	<p><b>Raise Presser Foot and Needle Bar then Turn Machine on Again</b> You have a problem with the base unit. Check for any pinched wires, thread caught in the gears, or binds in the base. If you have pinched wires, you need to replace the sensor and/or step motor the wires go to and also the 'A' board.</p> <ol style="list-style-type: none"> <li>1. The machine may be jammed. Check for any black 'gunk' by the right side bushing on the upper shaft. If there is any 'gunk' there, replace both the upper shaft &amp; rear bushing.</li> <li>2. Check for thread caught in the take-up lever/crank pin area.</li> <li>3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. Check the upper shaft sensor. Make sure the shield plates are going perfectly thru the middle of the sensor. Replace the sensor if damaged.</li> <li>5. Check the connections. If everything looks OK but you still get the error, replace the DC motor.</li> </ol>
<p><b>Janome model(s):</b> MC10001 / MC10000</p>	<p><b>01: Base Unit.</b></p> <ol style="list-style-type: none"> <li>A. Remove the base unit from the machine.</li> <li>B. Check the connections especially for pinched wires.</li> <li>C. Remove the 2 step motors from the base. Clean all of the gears thoroughly and lubricate them with white lithium grease</li> <li>D. Service the base by lubricating all moving parts. <ul style="list-style-type: none"> <li>• When reattaching the step motors, be sure to push them away from the gears when tightening the screws. Replace the base unit (first) or 'A' board if you still have problems.</li> </ul> </li> </ol> <p><b>02: Zigzag Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ol> <p><b>04: Feed Step Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>C. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>D. Replace the feed step motor if necessary.</li> </ol> <p><b>08: Tension Unit.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Reset the tension by turning the small, flat-head screw on the side of the tension unit counter-clockwise until it stops (do not overturn it!). Now turn the screw clockwise 16 'clicks'.</li> <li>C. If it continues to jam, replace the tension unit.</li> </ol> <p><b>10: Needle Threader Motor Unit.</b></p> <ol style="list-style-type: none"> <li>A. Turn off the machine and open the face plate.</li> <li>B. Lower the needle threader only half-way down by manually turning the black threader bar, then turn the machine on to reset it the unit. <ul style="list-style-type: none"> <li>• If it continues to jam, check the connections or replace the entire unit.</li> </ul> </li> </ol>

**If you do not see any error number on the lower-right or lower-left section of the error screen, perform the following:**

1. Turn the machine off.
2. Raise the needle bar to the highest position and raise the presser foot.
3. Open the embroidery arm. *\*Slowly & firmly\**, move the carriage all the way towards the back and all the way to the left.
4. Push the needle bar to the left.
5. Open the face plate. Lower the needle threader only half-way down by manually turning the black threaded bar. (See the diagram on the inside of the face plate).
6. Turn the machine on. The carriage should return to the home position, the needle bar will center itself, the needle threader will return to the up position, and the tension unit will calibrate. If you still get an error, check to see which does not calibrate. Check the connections, any binds, clean the gears, etc.

**Is Needle Bent, Fabric too Thick...?**

1. The machine may be jammed. Check for any black 'gunk' by the right side bushing on the upper shaft. If there is any 'gunk' there, replace both the upper shaft & rear bushing.
2. Clean the sensor on the DC Motor and check if the shield plate on the motor is loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.
3. Check & clean the upper shaft sensor. Make sure the shield plates are going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if there is damage.
4. Check the connections. If everything looks OK but you still get the error, replace the DC motor.

**Janome model(s):**  
MC8900QCP

**E1: Zigzag Motor:**

1. Check the connections.
2. With the machine off, push the needle bar to the left & right several times. You should just feel the friction of the step motor.
3. Check for thread caught in the gears and clean zigzag motor sensor.
4. Replace the zigzag motor if necessary.

**E2: Feed Step Motor:**

1. Check the connections.
2. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back & forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.
3. Check for thread caught in the gears and clean feed step motor sensor.
4. Replace the feed step motor if necessary.

**E4: Thread Cutter Motor:**

1. Check the connections.
2. Check & clean the gears.
3. Check the position of the microswitch and adjust if necessary.
4. If you still get the error, replace the thread cutter motor.

**E6: Could Not Detect Feed Phase:**

1. Clean the lower shaft sensor
2. The lower shaft shield plate set screw may be loose. Make sure the shield plates are going perfectly thru the middle of the sensor then tighten the screw.
3. Replace the sensor and/or shield plate if damaged.

**Stop for Safety Purposes:**

1. Replace the foot controller.
2. Check for a tight or stuck clutch by the hand wheel.
3. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance & hook backlash.
4. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.
5. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.
6. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.
7. If you still get the error, replace the DC motor or lower shaft sensor (in this order).

**Warning: Is something stuck in machine? Is cloth too thick? Is needle bent? Check the above and restart.:**

1. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.
2. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.
3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.
4. Clean the upper shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.
5. If you still get the error, replace the DC motor or upper shaft sensor (in this order).

**Pull down BH Lever:**

	<p><i>If the lever is already down and you get this message perform the following:</i></p> <ol style="list-style-type: none"> <li>1. Remove the face plate, remove any foot on the machine, and pull down the buttonhole lever.</li> <li>2. Follow the lever all of the way up where it turns into a shield plate with a thin 'slit' in the middle. This slit should be perfectly (may be tweaked to work better) in the middle of the sensor.</li> <li>3. If an adjustment is necessary, locate the 1.5mm hex screw sticking out of a silver, locknut. Turn this screw to push the shield plate towards the front or back to align the plate to the sensor.</li> <li>4. Check the connections and replace the buttonhole sensor if necessary.</li> </ol> <p><b>Stop for Safety Purposes (with a picture showing you to attach a needle plate):</b></p> <ol style="list-style-type: none"> <li>1. Remove the needle plate, bed cover, free arm cover, then reattach the needle plate.</li> <li>2. Loosen the 2x 2.0mm set screws that hold the needle plate micro switch towards the back of the needle plate.</li> <li>3. Push the micro switch up all of the way until it stops then very slightly down. Tighten the screws.</li> <li>4. If you still get the error, replace the micro switch unit.</li> </ol>
<p><b>Janome model(s):</b> MC7700QCP</p>	<p><b>Before you do anything to this machine, check if the machine has the new, updated 'A' board.</b></p> <ol style="list-style-type: none"> <li>1. Remove the belt cover.</li> <li>2. Take a peak in from the side of the machine where all of the wires are going into the 'A' board. If every single wire plugs into the board and you see <b>no</b> wires that are 'glued' or 'soldered' on to the board, replace the 'A' board with the new, updated version. The updated board has 2 sets of wires that are 'glued' or 'soldered' on with grey paste.</li> </ol> <p><b>F1: Microswitch for Needle Plate Step Motor:</b></p> <ol style="list-style-type: none"> <li>1. Remove the needle plate and press 'D1S'. If you don't get the error, replace the needle plate unit.</li> <li>2. If you still get the error, replace the Needle Plate Step Motor Unit.</li> </ol> <p><b>F2: Center Needle Position Sensor. The sensor is not aligned with the slit on the zigzag rod when the needle is in center position of the needle plate.</b></p> <ol style="list-style-type: none"> <li>1. When in straight-stitch, center-needle position, make sure the needle is perfectly in the middle of the hole of the needle plate. Adjust if necessary.</li> <li>2. If you still get the error, go to 'D1S' anyway.</li> <li>3. On the zigzag rod on the top of the machine, just to the left of the zigzag motor is the center needle position sensor. Verify the sensor is perfectly thru the middle of the sensor. Adjust if necessary.</li> <li>4. If you still get the error, replace the Center Needle Position Sensor.</li> </ol> <p><b>E1: Zigzag Motor:</b></p> <ol style="list-style-type: none"> <li>1. Check the connections.</li> <li>2. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>3. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>4. Replace the zigzag motor if necessary.</li> </ol> <p><b>E2: Feed Step Motor:</b></p> <ol style="list-style-type: none"> <li>1. Check the connections.</li> <li>2. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>3. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>4. Replace the feed step motor if necessary.</li> </ol> <p><b>E3: Needle Plate Step Motor:</b></p> <ol style="list-style-type: none"> <li>1. Remove the needle plate and press 'D1S'. If you don't get the error, replace the needle plate unit.</li> <li>2. If you still get the error, replace the Needle Plate Step Motor Unit.</li> </ol> <p><b>E4: Thread Cutter Motor:</b></p> <ol style="list-style-type: none"> <li>1. Check the connections.</li> <li>2. Check &amp; clean the gears.</li> <li>3. Check the position of the microswitch and adjust if necessary.</li> <li>4. If you still get the error, replace the thread cutter motor.</li> </ol> <p><b>E5: Could Not Detect Zigzag Phase.</b></p> <ol style="list-style-type: none"> <li>1. The lower shaft shield plate set screw may be loose. Adjust the position of set plate making sure the set plate 'blades' are as close to each of the sensors as possible then tighten the screw.</li> <li>2. Clean the lower shaft sensor.</li> <li>3. Replace lower shaft sensor.</li> </ol> <p><b>E6: Could Not Detect Feed Phase.</b></p> <ol style="list-style-type: none"> <li>1. The lower shaft shield plate set screw may be loose. Adjust the position of set plate making sure the set plate 'blades' are as close to each of the sensors as possible then tighten the screw.</li> <li>2. Clean the lower shaft sensor.</li> <li>3. Replace lower shaft sensor.</li> </ol>

	<p><b>E7:</b> <i>The customer pressed the thread cutter button too many times. The thread cutter can only be used up to 3 times in a row. Once the machine sews several stitches, the button can then be used.</i></p> <p><b>Stop for Safety Purposes</b></p> <ol style="list-style-type: none"> <li>1. <i>Replace the foot controller first.</i></li> <li>2. <i>Check the connections.</i></li> <li>3. <i>The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance &amp; hook backlash. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</i></li> <li>4. <i>Check the lower shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</i></li> <li>5. <i>Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</i></li> </ol>
<p><b>Elna model(s):</b> 740</p>	<p><b>Before you do anything to this machine, check if the machine has the new, updated 'A' board.</b></p> <ol style="list-style-type: none"> <li>1. <i>Remove the belt cover.</i></li> <li>2. <i>Take a peak in from the side of the machine where all of the wires are going into the 'A' board. If every single wire plugs into the board and you see no wires that are 'glued' or 'soldered' on to the board, replace the 'A' board with the new, updated version. The updated board has 2 sets of wires that are 'glued' or 'soldered' on with grey paste.</i></li> </ol> <p><b>E1:</b> Zigzag Motor:</p> <ol style="list-style-type: none"> <li>1. <i>Check the connections.</i></li> <li>2. <i>With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</i></li> <li>3. <i>Check for thread caught in the gears and clean zigzag motor sensor.</i></li> <li>4. <i>Replace the zigzag motor if necessary.</i></li> </ol> <p><b>E2:</b> Feed Step Motor:</p> <ol style="list-style-type: none"> <li>1. <i>With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</i></li> <li>2. <i>Check for thread caught in the gears and clean feed step motor sensor.</i></li> <li>3. <i>Replace the feed step motor if necessary.</i></li> </ol> <p><b>E4:</b> Thread Cutter Motor:</p> <ol style="list-style-type: none"> <li>1. <i>Check the connections.</i></li> <li>2. <i>Check &amp; clean the gears.</i></li> <li>3. <i>Check the position of the microswitch and adjust if necessary.</i></li> <li>4. <i>If you still get the error, replace the thread cutter motor.</i></li> </ol> <p><b>E5:</b> Could Not Detect Zigzag Phase:</p> <ol style="list-style-type: none"> <li>1. <i>The lower shaft shield plate set screw may be loose. Adjust the position of set plate making sure the set plate 'blades' are as close to each of the sensors as possible then tighten the screw.</i></li> <li>2. <i>Clean the lower shaft sensor.</i></li> <li>3. <i>Replace lower shaft sensor.</i></li> </ol> <p><b>E6:</b> Could Not Detect Feed Phase:</p> <ol style="list-style-type: none"> <li>1. <i>The lower shaft shield plate set screw may be loose. Adjust the position of set plate making sure the set plate 'blades' are as close to each of the sensors as possible then tighten the screw.</i></li> <li>2. <i>Clean the lower shaft sensor.</i></li> <li>3. <i>Replace lower shaft sensor.</i></li> </ol> <p><b>E7:</b> <i>The customer pressed the thread cutter button too many times. The thread cutter can only be used up to 3 times in a row. Once the machine sews several stitches, the button can then be used.</i></p> <p><b>Stop for Safety Purposes</b></p> <ol style="list-style-type: none"> <li>1. <i>Replace the foot controller first.</i></li> <li>2. <i>Check the connections.</i></li> <li>3. <i>The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance &amp; hook backlash. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</i></li> <li>4. <i>Check the lower shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</i></li> <li>5. <i>Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</i></li> </ol>
<p><b>Janome model(s):</b> MC4000</p>	<p><b>Overload</b></p> <ol style="list-style-type: none"> <li>1. <i>Replace the foot controller.</i></li> </ol>



<p><b>Elna model(s):</b> 6004</p>	<ol style="list-style-type: none"> <li>2. Check the connections. Make sure the white cover over the pins on the 'A' board. Sometimes the white cover will cover the pins. Push this small cover back.</li> <li>3. Replace the DC motor.</li> <li>4. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, then hook backlash.</li> <li>5. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> </ol>
<p><b>Janome model(s):</b> MC9000</p> <p><b>Elna model(s):</b> CE20</p>	<p><b>Is Something Stuck in Machine, is Cloth too Thick...</b></p> <ol style="list-style-type: none"> <li>1. The machine may be jammed. Check for any black 'gunk' by the right side bushing on the upper shaft. If there is any 'gunk' there, replace both the upper shaft &amp; rear bushing.</li> <li>2. Check for thread caught in the take-up lever/crank pin area.</li> <li>3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. Clean the upper shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor. Replace if damaged.</li> <li>5. Check the connections. If everything looks OK but you still get the error, replace the DC motor.</li> </ol> <p><b>Raise Presser Foot and Needle Bar, then Turn Power Switch Back On</b></p> <ol style="list-style-type: none"> <li>1. Turn the machine off.</li> <li>2. Raise the needle bar to the highest position and raise the presser foot.</li> <li>3. Slowly push the embroidery carriage all the way out and to the left.</li> <li>4. Push the needle bar to the left.</li> <li>5. Turn the machine on. The carriage should return to the home position, the needle bar will center itself. If you still get an error, check to see which does not calibrate. Check the connections, any binds, thread caught in the gears, clean the sensors, etc.</li> </ol> <p><b>Raise Presser Foot and Needle Bar, then Turn Power Switch Back On (only after you start to sew or hit needle up/down and you hear the tension unit try to calibrate several times)</b></p> <ol style="list-style-type: none"> <li>1. Make sure the white gear (just to the right of the spring &amp; tension discs) on the tension unit did not pop out or slide off its track. If it did, turn the tension adjustment screw (silver screw on the left of the tension unit cover when you have the face plate open) counter-clockwise until it stops (do not overturn it!), then turn it clockwise 16 'clicks' to reset the tension. Adjust bobbin tension from there.</li> <li>2. Make sure the silver pin for the thread check sensor that sticks out of the tension unit when you have the face plate open is not in the middle or rear of the kidney-shaped hole. The pin needs to be touching the front of this hole.</li> </ol>
<p><b>Janome model(s):</b> MC8000</p> <p><b>Elna model(s):</b> 9006</p>	<p><b>Overload</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. Check the connections. Make sure the white cover over the pins on the 'A' board. Sometimes the white cover will cover the pins. Push this small cover back.</li> <li>3. Replace the DC motor.</li> <li>4. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, then hook backlash.</li> <li>5. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if necessary.</li> </ol> <p><b>Step Motor Error</b></p> <p>This could mean almost anything and is rarely the zigzag or feed step motor. Call the service department for in-depth troubleshooting.</p> <p><b>Error A &amp; Bight Motor (Feed Step Motor)</b></p> <ol style="list-style-type: none"> <li>1. Check the connections.</li> <li>2. Clean the feed step motor sensor and feed system.</li> <li>3. Check for binds in the feed system or thread caught in the gears. <ul style="list-style-type: none"> <li>• If you continue to get this error, it can be either the feed step motor or 'A' board; both of which are no longer available.</li> </ul> </li> </ol>
<p><b>Janome model(s):</b> MC7500</p>	<p><b>Tension Error 3:</b> Tension unit or 'A' board. No longer available, but we can send it to Japan for rebuilding.</p>
<p><b>Janome model(s):</b> MC7000</p>	<p><b>E3:</b> 'A' Board. No longer available, but we can send it to Japan for rebuilding.</p> <p><b>E4:</b> 'A' Board. No longer available, but we can send it to Japan for rebuilding.</p> <p><b>ERG:</b> 'A' Board. No longer available, but we can send it to Japan for rebuilding.</p>
<p><b>Janome model(s):</b></p>	<p><b>E1:</b> Zigzag Motor:</p>



<p>MC5700</p>	<p><b>A. Check the connections.</b>  <b>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</b>  <b>C. Check for thread caught in the gears and clean zigzag motor sensor.</b>  <b>D. Replace the zigzag motor or 'A' board (in this order) if necessary.</b></p> <p><b>Stop for Safety Purposes</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller first.</li> <li>2. Check the connections.</li> <li>3. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance &amp; hook backlash.</li> <li>4. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> <li>5. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> </ol>
<p><b>Janome model(s):</b> MC6600P / MC6300P</p> <p><b>Elna model(s):</b> 7300 / 720</p>	<p><b>To Diagnose if the Fuse has Blown</b></p> <ul style="list-style-type: none"> <li>• Perform the following step for the following errors: "E1", "E2", "E3", and "E5" before doing anything else.</li> </ul> <p>Put the needle in the highest position and then turn the machine on. If you get "E1", turn the machine off, put the needle in the lowest position, and then turn it back on. If you get "E2", the customer jammed the machine and it blew the 3.15A, 250V, white thermo fuse (#000182904) on the back of the 'A' board. "E3" and "E5" can also mean the fuse has blown.</p> <p><b>E1: Zigzag Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ol> <p><b>E2: Feed Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>C. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>D. Replace the feed step motor if necessary.</li> </ol> <p><b>E3: Thread Tension Release Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Replace the thread tension release motor if necessary.</li> </ol> <p><b>E4: The thread cutter jammed.</b></p> <ol style="list-style-type: none"> <li>A.</li> </ol> <p><b>E5: The machine is jammed or the foot controller is defective.</b></p> <ol style="list-style-type: none"> <li>A. Replace the foot controller.</li> <li>B. Check for a tight or stuck clutch by the hand wheel.</li> <li>C. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>D. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</li> <li>E. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>F. Check the lower shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> <li>G. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol> <p><b>Stop for Safety Purposes or LO</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. Check for a tight or stuck clutch by the hand wheel.</li> <li>3. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>4. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</li> <li>5. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>6. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.</li> <li>7. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol> <p><b>The machine takes several extra stitches after releasing your foot off of the foot controller</b></p>

	<ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. Clean the lower shaft sensor and make sure the shield plate going thru this sensor is not hitting the sides of the sensor.</li> <li>3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. If you still have the problem, replace the lower shaft sensor or DC motor (in this order).</li> </ol>
<p><b>Janome model(s):</b> MC6500</p> <p><b>Elna model(s):</b> 7200</p> <p><b>Singer model(s):</b> Studio   S18</p>	<p><b>To Diagnose if the Fuse has Blown</b></p> <ul style="list-style-type: none"> <li>• Perform the following step for the following errors: “BM INIT”, “FM INIT”, and “FM INIT” before doing anything else.</li> </ul> <p>Put the needle in the highest position and then turn the machine on. If you get “E1”, turn the machine off, put the needle in the lowest position, and then turn it back on. If you get “E2”, the customer jammed the machine and it blew the 3.15A, 250V, white thermo fuse (#000182904) on the back of the 'A' board. “E3” and “E5” can also mean the fuse has blown.</p> <p><b>BM INIT: Zigzag Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ol> <p><b>FM INIT: Feed Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>C. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>D. Replace the feed step motor if necessary.</li> </ol> <p><b>TD INIT: Thread Tension Release Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Replace the thread tension release step motor if necessary.</li> </ol> <p><b>Stop for Safety Purposes or LO</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. Check for a tight or stuck clutch by the hand wheel.</li> <li>3. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>4. If you continue to have the problem, loosen the screws that hold the metal, lower shaft supporter. While the machine is running slow-to-medium speed, tighten the screws.</li> <li>5. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>6. Check the lower shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> <li>7. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ol>
<p><b>Janome model(s):</b> MC5200 / MO200</p>	<p><b>To Diagnose if the Fuse has Blown</b></p> <ul style="list-style-type: none"> <li>• Perform the following step for the following errors: “E1”, “E2”, “E3”, and “E5” before doing anything else.</li> </ul> <p>Put the needle in the highest position and then turn the machine on. If you get “E1”, turn the machine off, put the needle in the lowest position, and then turn it back on. If you get “E2”, the customer jammed the machine and it blew the 3.15A, 250V, white thermo fuse (#000182904) on the back of the 'A' board. “E3” and “E5” can also mean the fuse has blown.</p> <p><b>E1: Zigzag Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ol> <p><b>E2: Feed Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>C. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>D. Replace the feed step motor if necessary.</li> </ol> <p><b>E3: Thread Tension Release Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Replace the thread tension release motor if necessary.</li> </ol>

	<p><b>E4: Needle Plate Step Motor.</b></p> <ul style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Remove the needle plate and see, press the center needle, straight-stitch needle positions. If you don't get the error, replace the needle plate unit.</li> <li>C. If you still get the error, replace the needle plate step motor.</li> </ul> <p><b>E5: The machine is jammed or the foot controller is defective.</b></p> <ul style="list-style-type: none"> <li>A. Replace the foot controller.</li> <li>B. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>C. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>D. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> </ul> <p>If you still get the error, replace the DC motor or upper shaft sensor (in this order).</p> <p><b>F1:</b></p> <ul style="list-style-type: none"> <li>A. Check the connections.</li> <li>B.</li> </ul>
<p><b>Janome model(s):</b> MC4900QC</p> <p><b>Elna model(s):</b> 6600</p>	<p><b>To Diagnose if the Fuse has Blown</b></p> <ul style="list-style-type: none"> <li>• Perform the following step for the following errors: "E1", "E2", "E3", and "E5" before doing anything else.</li> </ul> <p>Put the needle in the highest position and then turn the machine on. If you get "E1", turn the machine off, put the needle in the lowest position, and then turn it back on. If you get "E2", the customer jammed the machine and it blew the 3.15A, 250V, white thermo fuse (#000182904) on the back of the 'A' board. "E3" and "E5" can also mean the fuse has blown.</p> <p><b>E1: Zigzag Motor.</b></p> <ul style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ul> <p><b>E2: Feed Motor.</b></p> <ul style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back &amp; forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.</li> <li>C. Check for thread caught in the gears and clean feed step motor sensor.</li> <li>D. Replace the feed step motor if necessary.</li> </ul> <p><b>E5: The machine is jammed or the foot controller is defective.</b></p> <ul style="list-style-type: none"> <li>A. Replace the foot controller.</li> <li>B. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash.</li> <li>C. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>D. If you still get the error, replace the DC motor or lower shaft sensor (in this order).</li> </ul> <p><b>E9: Upper Shaft Sensor.</b></p> <ul style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Clean the sensor and make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> </ul> <p><b>Stop for Safety Purposes</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller first.</li> <li>2. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance &amp; hook backlash. On the MC4900QC specifically, the needle bar has to be in the correct position in order to be properly threaded. Make sure the customer hits the needle up/down button to bring the needle up in its correct position. Once the light to the left of the screen turns green, that is the proper time to thread the machine.</li> <li>3. Check the connections.</li> <li>4. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> </ol>
<p><b>Janome model(s):</b> MC4800 / MC3500 / MC3000</p>	<p><b>Step Motor Error</b></p> <ul style="list-style-type: none"> <li>A1. Turn the machine off. Raise the presser bar &amp; raise the needle bar to its highest position.</li> <li>A2. Turn the machine on. If you get the error, turn the machine off, lower the needle bar to its lowest position, and then turn it back on.</li> </ul>

<p><b>Elna model(s):</b> 6005 / 6003</p>	<p><b>A3.</b> If you <b>do not</b> get an error, switch the zigzag step motor &amp; feed step motor connections on the 'A' board.</p> <p><b>A4.</b> Raise the needle bar to its highest position, and then turn the machine back on. If you <b>do not</b> get the error, replace the 'A' board. If you still get the error, replace the zigzag step motor.</p> <p><b>B1.</b> Turn the machine off. Raise the presser bar &amp; raise the needle bar to its highest position.</p> <p><b>B2.</b> Turn the machine on. If you do <b>not</b> get the error, turn the machine off, lower the needle bar to its lowest position, and then turn it back on.</p> <p><b>B3.</b> If you <b>do</b> get an error, switch the zigzag step motor &amp; feed step motor connections on the 'A' board.</p> <p><b>B4.</b> Raise the needle bar to its highest position, and then turn the machine back on. If you <b>do</b> get the error, replace the 'A' board. If you <b>do not</b> get the error, replace the feed step motor.</p> <p><b>Stop for Safety Purposes</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller first.</li> <li>2. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance &amp; hook backlash.</li> <li>3. Check the connections.</li> <li>4. Remove the hand wheel, end bushing, belt wheel, and large spring. Clean and oil all parts thoroughly then reassemble.</li> <li>5. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor if damaged.</li> <li>6. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> </ol>
<p><b>Janome model(s):</b> 4120QDC / 3160QDC</p> <p><b>Elna model(s):</b> Lotus</p> <p><b>Necchi model(s):</b> EX100 / EX60 / EX30</p>	<p><b>E4: Thread Cutter Motor.</b></p> <ol style="list-style-type: none"> <li>1. Check the connections.</li> <li>2. Check &amp; clean the gears.</li> <li>3. Check the position of the microswitch and adjust if necessary.</li> <li>4. If you still get the error, replace the thread cutter motor.</li> </ol> <p><b>LO:</b></p> <ol style="list-style-type: none"> <li>1. Replace the foot controller.</li> <li>2. The machine may be jammed. <ol style="list-style-type: none"> <li>A. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If you still have a bind, loosen the screws that hold the plates that hold the shaft in place then re-tighten.</li> <li>B. If the lower shaft is binding, check hook backlash.</li> </ol> </li> <li>3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> <li>5. If you still get the error, replace the upper shaft sensor or DC motor (in this order).</li> </ol>
<p><b>Janome model(s):</b> JP760 / JP720 / JNH720 / AQS2009</p>	<p><b>E9: Upper Shaft Sensor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. Clean the sensor and make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> </ol> <p><b>LO: Replace the foot controller.</b></p> <ol style="list-style-type: none"> <li>1. Check for a tight or stuck clutch by the hand wheel.</li> <li>2. The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash. Check the lower shaft rear bushing for any black 'gunk'. If there is, replace the lower shaft and rear bushing.</li> <li>3. Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.</li> <li>4. Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.</li> <li>5. If you still get the error, replace the upper shaft sensor or DC Motor (in this order).</li> </ol>
<p><b>Janome model(s):</b> DC2014 / DC2013 / DC2012 / DC2011 / DC2010 / DC2007LE / HT2008LE / DC4030 / DC3050 / DC3018 / 7061NX / HF3022 / HF8048 / 2040 / 6260QC / HF8077 / TB30 / DC4030 / DC4030PR / 7030 / and many more...</p>	<p><b>To Diagnose if the Fuse has Blown</b></p> <ul style="list-style-type: none"> <li>• Perform the following step for the following errors: "E1" and "E2" before doing anything else.</li> </ul> <p>Put the needle in the highest position and then turn the machine on. If you get "E1", turn the machine off, put the needle in the lowest position, and then turn it back on. If you get "E2", the customer jammed the machine and it blew the 3.15A, 250V, white thermo fuse (#000182904) on the back of the 'A' board.</p> <p><b>E1: Zigzag Motor.</b></p> <ol style="list-style-type: none"> <li>A. Check the connections.</li> <li>B. With the machine off, push the needle bar to the left &amp; right several times. You should just feel the friction of the step motor.</li> <li>C. Check for thread caught in the gears and clean zigzag motor sensor.</li> <li>D. Replace the zigzag motor if necessary.</li> </ol> <p><b>E2: Feed Motor.</b></p>

**Elna model(s):**

6200 / 5300 / 5200 /  
5100 / 520, and many  
more...

**A.** Check the connections.

**B.** With the machine off, and the presser foot up, push the triangle-shaped, large, black feed step motor gear back & forth several times. You should just feel the friction of the step motor and no binds in the feed system. Call the service department for additional help on binds in the feed system.

**C.** Check for thread caught in the gears and clean feed step motor sensor.

**D.** Replace the feed step motor if necessary.

**E9:** Upper Shaft Sensor.

**A.** Check the connections.

**B.** Clean the sensor and make sure the shield plate is going perfectly thru the middle of the sensor.

**C.** Replace the sensor and/or shield plate if damaged.

**LO:** Replace the foot controller.

**1.** Check for a tight or stuck clutch by the hand wheel.

**2.** The machine may be jammed. Remove the timing belt to locate whether the bind is on the upper shaft or lower shaft. If it is the upper shaft, there may be thread caught in the take-up lever or crank pin. If the lower shaft is binding, check hook clearance, hook backlash. Check the lower shaft rear bushing for any black 'gunk'. If there is, replace the lower shaft and rear bushing.

**3.** Clean the sensor on the DC motor and check if the shield plate on the motor is not loose or hitting the sensor. If either the sensor or shield plate is damaged, replace the motor.

**4.** Check the upper shaft sensor. Make sure the shield plate is going perfectly thru the middle of the sensor. Replace the sensor and/or shield plate if damaged.

**5.** If you still get the error, replace the DC Motor or upper shaft sensor (in this order).