

The ErcoBender machine is a logical machine during the automatic cycle. A series of conditions and parameters must be met to initiate and complete a single or series of bends in the automatic cycle.

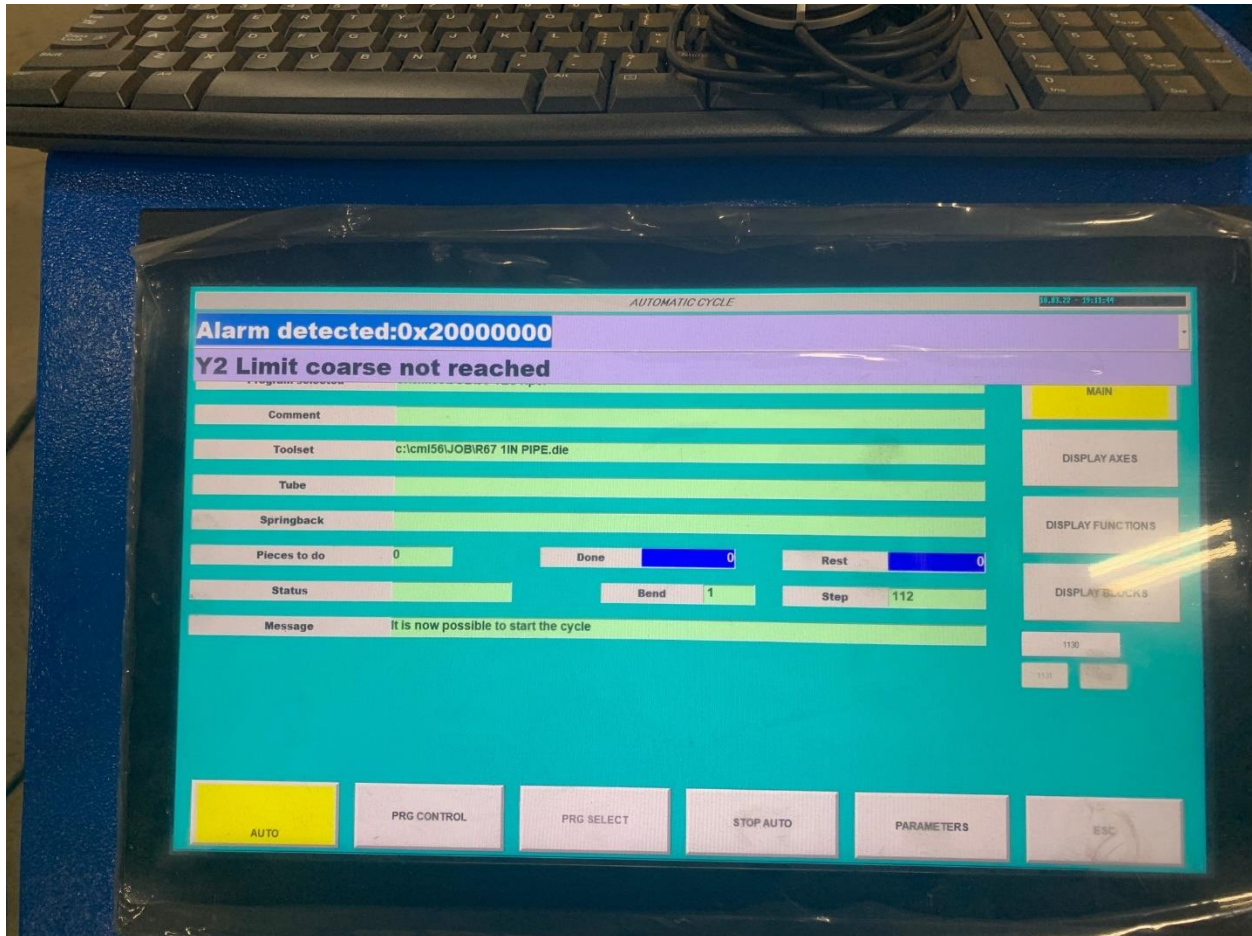
(All Axes must be at their programmed open or home positions to start the cycle)

The “logic” during automatic cycle is as follows:

1. The collet closes on the material and the carriage (Y1) draws it back to the programmed first bend position. A material recapture operation may also be performed if using a longer stick of material.
2. While the carriage is positioning the material, the mandrel axis (Y3) is moving forward to its’ programmed “IN” position according to the toolset settings.
3. The former is returned back to home zero.
4. The clamping cylinder fires and closes the fingers onto the former face.
5. The pressure die cylinder (X2) closes to the programmed “IN” position on the toolset.
6. The C Axis starts to rotate to the desired angle according to the program
7. The Booster die (Y2) fires and follows the material with the C axis motion. It is important to regulate the speed of the booster with the flow control valve on top of the cylinder. The Y2 booster should travel at the same rate as the C axis.
8. Once the C axis reaches the programmed bend angle, the spring back function is performed while the material remains clamped.
9. The mandrel axis (Y3) has already retracted according to the value set on the toolset .
10. The clamp fingers open, the pressure die (X2) opens, the booster die (Y2) is retracted and finally, the C axis is returned to the home zero position.
11. If there are sequential bends, the Y1 carriage will position to the next bend location and start the sequence over again. If no further bends, the Y1 carriage will come forward to the UNLOAD position as per the toolset and wait for the operator to open the collet and release the material.

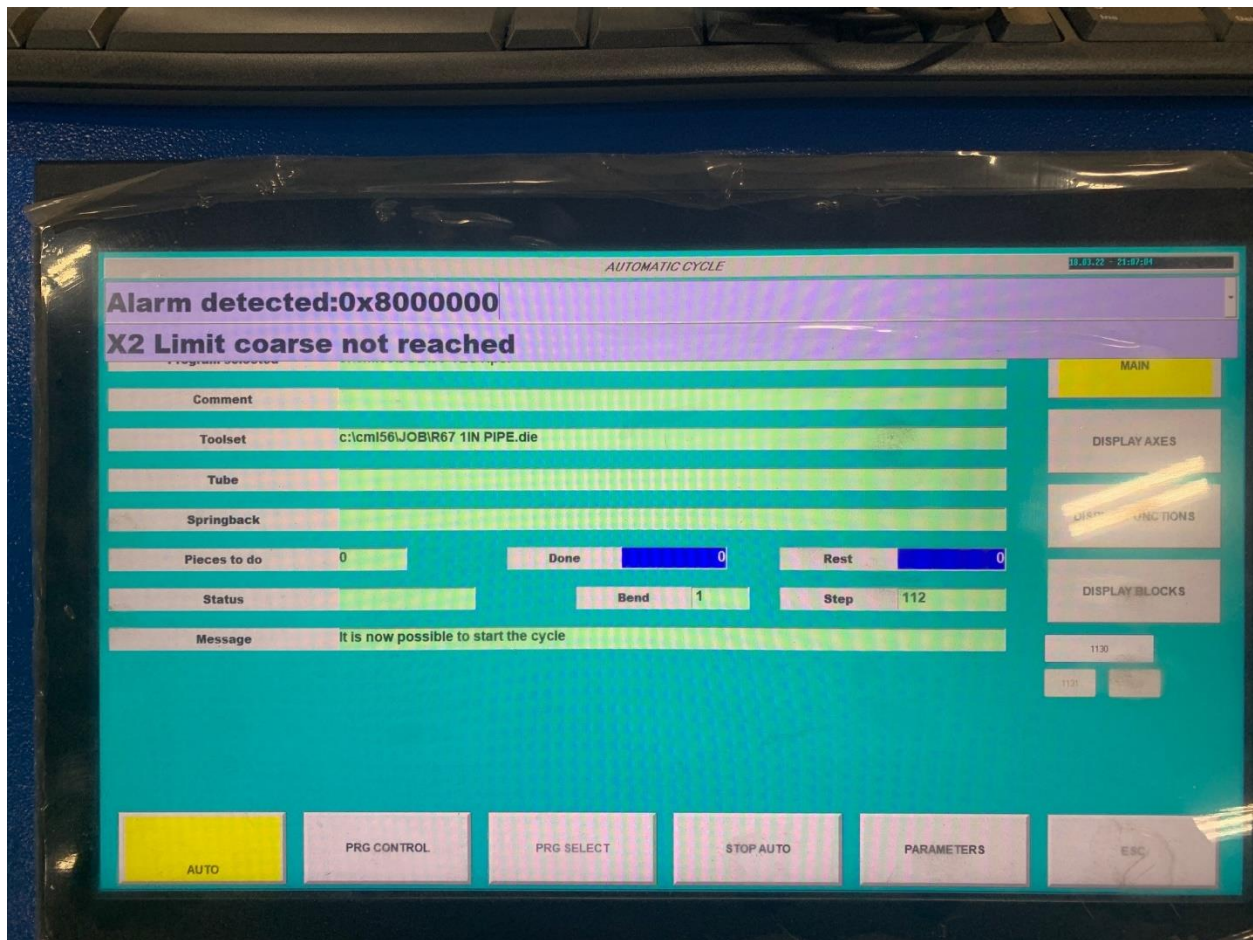
ErcoBender Error Messages in Auto Cycle

During Automatic cycle, If an alarm message appears use the arrow drop down on the right hand side to display the full message and axis fault.

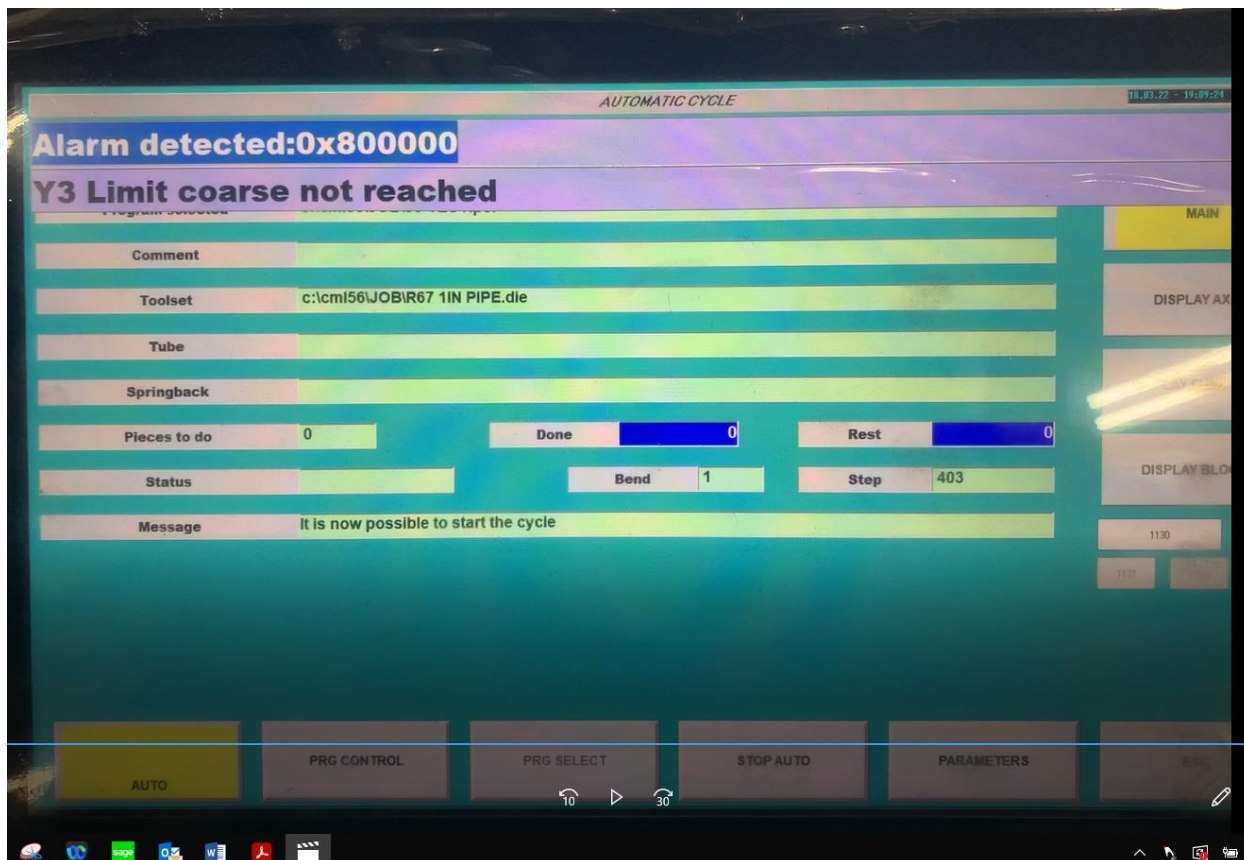


This message is displayed when the Y2 axis is fully retracted but it cannot reach the home zero position. The machine will not cycle in automatic mode if this axis is NOT at home zero.

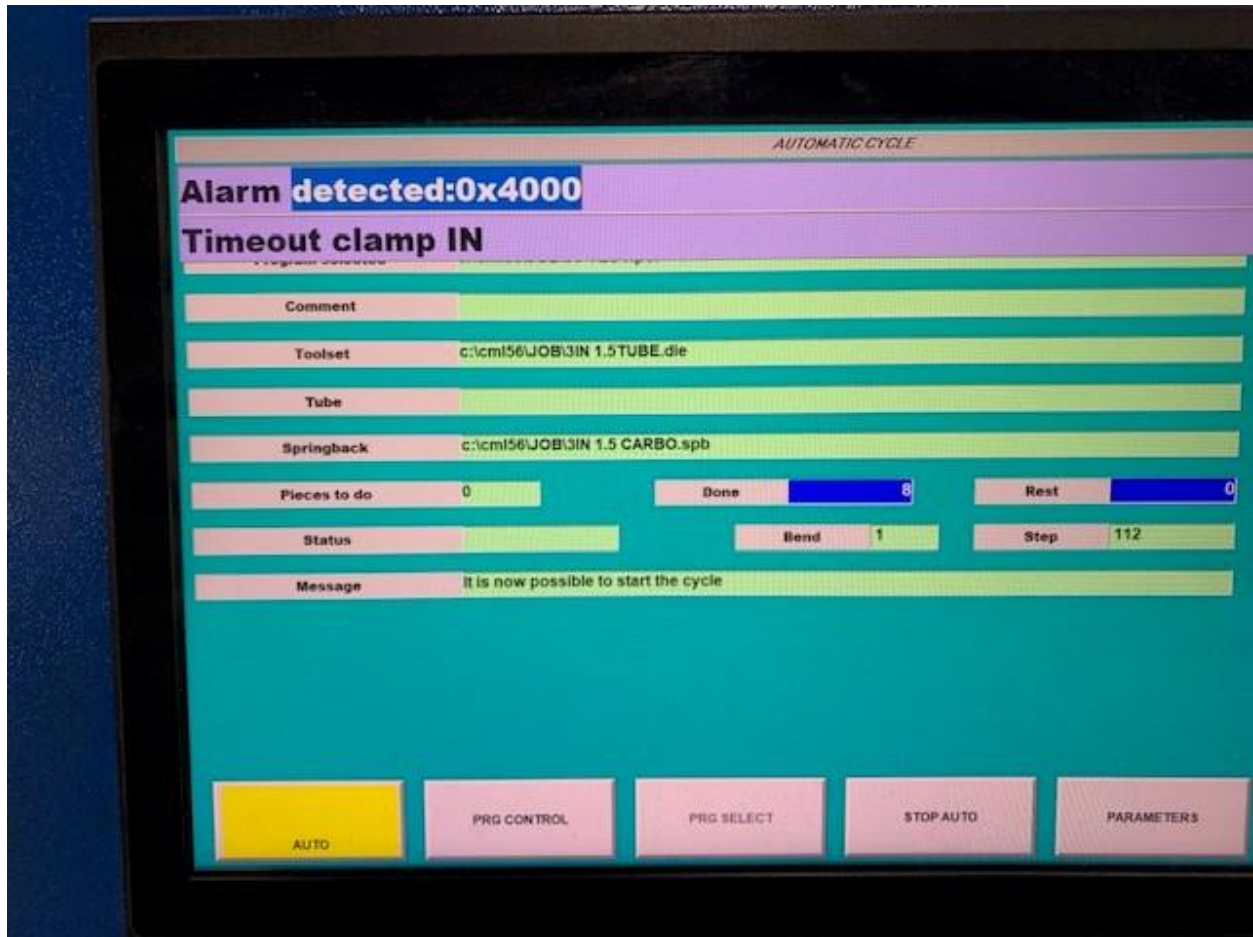
The solution is to go to the MANUAL page and make sure the Y2 axis is fully retracted and then zero the axis through the SERVICES screen.



This message is displayed when the X2 axis cannot reach the OUT position as programmed on the toolset file. The solution is to verify the settings on the toolset file and make sure the IN and the OUT positions are physically attainable. Change the values on the toolset if needed and re-link the toolset file to the polar program file.



This message is displayed when the mandrel axis (Y3) cannot reach the programmed OUT position as per the settings on the toolset file. The solution is to verify that the programmed IN and OUT positions are physically attainable on the Y3 axis. Modify the toolset settings if needed and re-link the toolset file to the polar program.



This alarm is displayed when the clamp die selection is incorrect on the toolset file or the clamp die switch box is set incorrectly. The Erco series machines all utilize a bending ARM. The line on the toolset file should always be YES for ARM selection. A pop up window will allow you to select this option. Always save and re-attach the toolset file to your program after making changes.

Comment

| | |
|------------------------------------|---------|
| Mandrel pre retract angle | 3.0 |
| Following mode Y1 | 100.000 |
| Pressure on pressure die | NO |
| Clamp pressure | 110 |
| Pressure die pressure | 55 |
| KST (NO) / ARM (YES) | NO |
| tooling Roll System 1 (YES) 0 (NO) | NO |
| Max stroke Y1 recapture cycle | 0.0000 |
| | 0.000 |
| | 0.000 |
| | 0.000 |
| | 0.000 |
| | 0.000 |
| | 0.000 |

DATA

EMERGENCY STOP

RESET DIE

