

Program Restarts

Chapter 14

OBJECTIVE

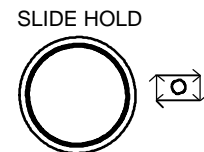
Perform Mid-Auto Manual and Sequence Restart procedures to begin or restore program operations

**MID-AUTO
MANUAL**

Following are procedures for using the Mid-Auto Manual feature.

1. You should already be in the Auto mode of operation running a part program.

2. Press the SLIDE HOLD button.



3. Press the MID-AUTO MANUAL key; the light in the corner of the key will be lit..



4. At this point you have complete manual control over the machine. Your axes can be moved, the spindle stopped, or tools changed, etc...
5. If you indexed the turret or stopped the spindle, you must return them to their previous condition.

6. Return the tool **near** the position where Slide hold was activated using manual controls.

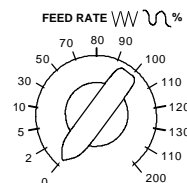
!!! WARNING !!!

YOU MUST INSURE THERE IS A CLEAR PATH FROM THE TOOL BACK TO WHERE THE SLIDE HOLD CONDITION WAS ACTIVATED.

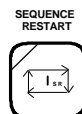
7. Ensure that the SINGLE BLOCK condition is active; the light in the corner of the key should be lit.



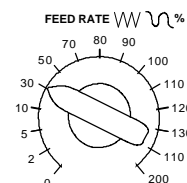
8. Rotate the FEED RATE OVERRIDE dial to zero (fully counter-clockwise).



9. Press the SEQ. RESTART key.

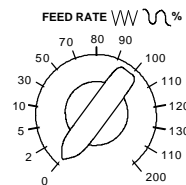


10. Gradually rotate the FEED RATE OVERRIDE dial clockwise.

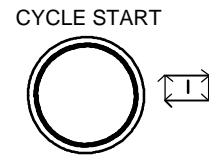


11. The turret will return to the slide hold position and the light in the MID-AUTO key will go OFF.

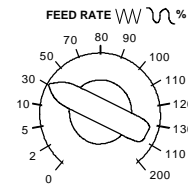
12. Rotate the FEED RATE OVERRIDE dial back to zero (fully counterclockwise).



13. Press the CYCLE START button.



14. Gradually rotate the FEED RATE OVERRIDE dial clockwise until the machine has started the cut.



Because you are in the Single Block condition while running a program, turret movement may stop. If this occurs, perform steps 12 through 14 to maintain turret movement as you start step 15.

15. Ensure that the SINGLE BLOCK condition is **not** active; the light in the corner of the key should **not** be lit.



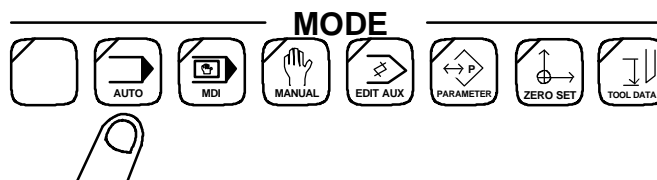
At this point you have completed the Mid-Auto Manual procedure.

SEQUENCE RESTART (2-AXIS)

Following are the procedures for using the Sequence Restart feature on a 2-axis lathe.

1. If necessary, go to the Manual mode of operation and position the turret on a soft limit where a safe tool change can occur.

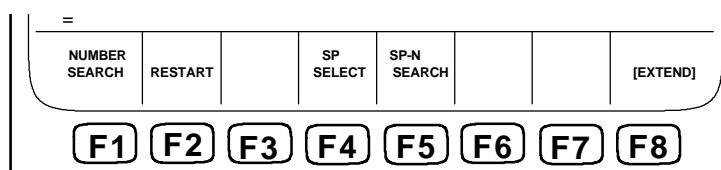
- On the Operation Panel, select the Auto mode of operation.



- Ensure that the SINGLE BLOCK condition is active; the light in the corner of the key should be lit.



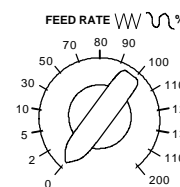
- Select function key [F8] (EXTEND) as many times as necessary until function key [F2] (RESTART) is displayed.

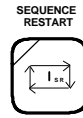


- Select function key [F2] (RESTART).
- At the Extended Keypad enter the sequence number (or name) where the restart should begin. Remember that the first character **must** be an N.

This line should be on, or just before a tool line. A tool line will contain information for indexing the turret.

- Press the WRITE key.
- Rotate the FEED RATE OVER-RIDE dial fully counterclockwise.

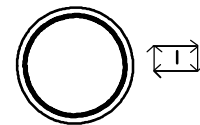




9. Press the SEQ. RESTART key.

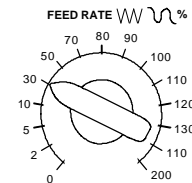
If you are in the PART PROGRAM display you will see an up arrow on the left side of the program. Information directly to the right of this arrow indicates the program information currently being read by the OSP.

CYCLE START



10. Press the CYCLE START button.

11. Gradually rotate the FEED RATE OVERRIDE dial clockwise until the machine is stopped in the position for the desired cutting pass.



Because you are in the Single Block condition while running a program, turret movement may stop. If this occurs, perform steps 8, 10 and 11 as necessary to maintain movement.



12. Once you are satisfied with the turret position, you can take the machine out of the SINGLE BLOCK condition. The light in the corner of the key should **not** be lit.

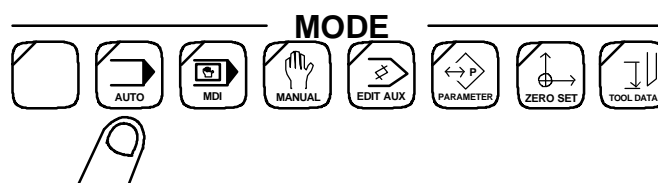
At this point the Sequence Restart procedure is finished.

In the event you are restarting from an Emergency Stop condition a sequence number (far upper right corner) may be used in step 5. This number does not require an N at the beginning of the number.

SEQUENCE RESTART (4-AXIS)

Following are the procedures for using the Sequence Restart feature on a 4-axis lathe.

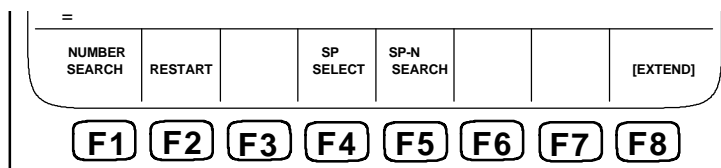
1. If necessary, go to the Manual mode of operation and position both the "A" and "B" turrets on a soft limit where a safe tool change can occur.
2. On the Operation Panel, select the Auto mode of operation.



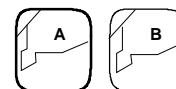
3. Ensure that the SINGLE BLOCK condition is active; the light in the corner of the key should be lit.



4. Select function key [F8] (EXTEND) as many times as necessary until function key [F2] (RESTART) is displayed.



5. Select function key [F2] (RESTART).
6. Select the "A" Turret Control key.

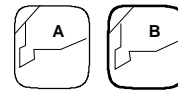


7. At the Extended Keypad enter the sequence number (or name) where the restart should begin in the G13 part of your program. Remember that the first character **must** be an N.

This line should be on, or just before a tool line. A tool line will contain information for indexing the turret.

8. Press the WRITE key.

9. Select the "B" Turret Control key.

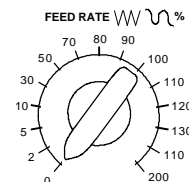


10. At the Extended Keypad enter the sequence number (or name) where the restart should begin in the G14 part of your program. Remember that the first character **must** be an N.

This line should be on, or just before a tool line. A tool line will contain information for indexing the turret.

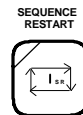
11. Press the WRITE key.

12. Rotate the FEED RATE OVER-RIDE dial fully counterclockwise.

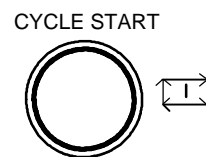


13. Press the SEQ. RESTART key.

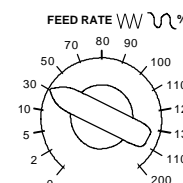
If you are in the PART PROGRAM display you will see an up arrow on the left side of the program. Information directly to the right of this arrow indicates the program information currently being read by the OSP.



14. Press the CYCLE START button.



15. Gradually rotate the FEED RATE OVERRIDE dial clockwise until the machine is stopped in the position for the desired cutting pass.



Because you are in the Single Block condition while running a program, turret movement may stop. If this occurs, perform steps 12, 14 and 15 as necessary to maintain movement.

16. Once you are satisfied with the turret position, you can take the machine out of the SINGLE BLOCK condition. The light in the corner of the key should **not** be lit.



At this point the Sequence Restart procedure is finished.

In the event you are restarting from an Emergency Stop condition a sequence number (far upper right corner) may be used in step 5. This number does not require an N at the beginning of the number.