a. Position (UNIVERSAL) indicates the position of machining restart. Normally, this position is the start point of the block on which the feed-hold operation was performed.

b. Position (INCREMENT) indicates the distance from the current tool position to the machining restart position.

c. The M codes and the number of M codes designated (M COUNT) from the head of the program to the block of the specified sequence number are displayed. However, if the number of designated M codes exceeds 35, the 35 M codes as counted from the specified block are displayed.

d. The two last T codes specified up to the designated block are displayed.

e. The last S code specified up to the designated block is displayed.

f. The last B code specified up to the designated block is displayed.

Note: The M codes and T codes are displayed in the order in which they were specified. The code displayed last is nearest the designated block.

(8) Turn off PROGRAM RESTART switch on the machine control station.

(9) Look at the displayed program restart information and specify the M, T, S, or B code necessary for the restart as shown below:

a. Set MDI mode.

b. Press PROG function key.

c. Key-in the necessary M, T, S, or B code and depress WR key.

d. Press CYCLE START button.

e. Press POS function key and check the display of program restart information.

(10) Set the original operation mode (memory or tape mode).

(11) Depress CYCLE START button.

The tool moves to the machining restart position, axis by axis; that is, the 4th axis, X-axis, Y-axis, and Z-axis, in this order. Then, the automatic operation restarts from the head of the block (on which the feed-hold operation was performed) that follows the block of the designated sequence number.

6.2.4.2 PROGRAM RESTART OF TYPE Q

If the coordinate system is changed by any of the following operations performed after the interruption automatic operation, use the program restart of type Q:

(1) The machine power was turned off.

(2) G92 is specified by MDI operation.

(3) The setting of work coordinate system is specified.

(4) The automatic setting of work coordinate system was specified by reference-point return.

(5) ORG key was pressed.

Operational Procedure

The automatic operation interrupted by any of the above operations may be resumed using the following procedure:

(1) When the machine power is turned on after the interruption of machining, perform the necessary operations such as reference-point return.

(2) Manually move the tool to the start point (of machining) of the part program. Change the tool offset amount if necessary.

(3) Turn on PROGRAM RESTART switch on the machine control station.

(4) Press PROG function key to display the part program (being executed). Record the sequence number of the block immediately before the block to be restarted.

(5) Set the head of the part program as follows:

a. In memory mode

Set memory mode, key-in the program number (Oxxxx) to be restarted, and depress [CURSOR ↓] key.

b. In tape mode

Set tape mode and set the head of the tape to the tape reader.

(6) Key-in Q, sequence number, and [CURSOR ↓] in this order. The sequence number is the one that was taken note of in step (4).
While making the setups for program restart, the machine searches the block of the specified sequence number. If the same sequence number appears repeatedly, the nth sequence number may be specified.