3.2.2 GENERAL PART PROGRAM FORM

Part programs are generally written on tapes in the following formats.

(EIA code)

(ISO code)

'-EOB code, or "end of block" code   ∟--- or M02
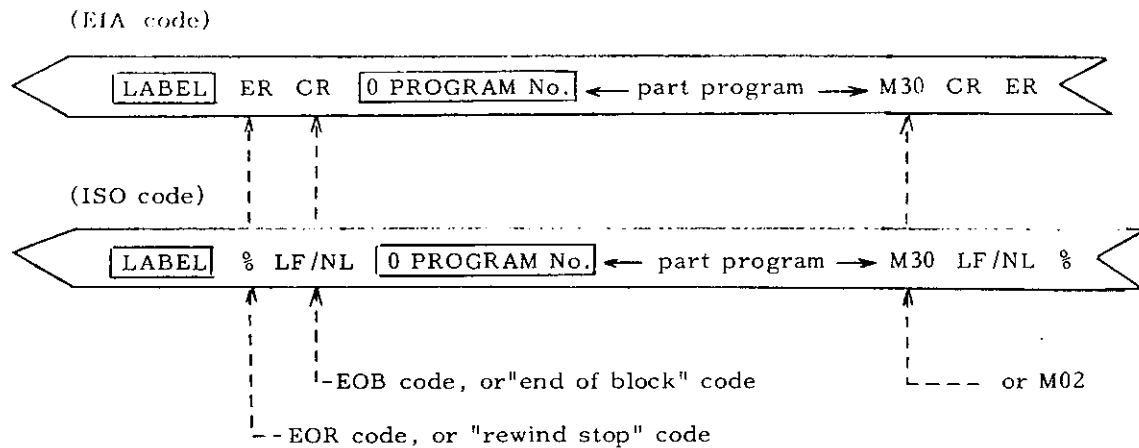
'--EOR code, or "rewind stop" code

Fig. 3.2

To facilitate classification and handling of tapes, any identifying labels may be written at the leading end of all part program tapes. Since all data appearing before the first EOB code are skipped by the NC reading these tapes using the label skip function, even addresses and function codes not specified may be written here, and also out-of-parity codes may be written.
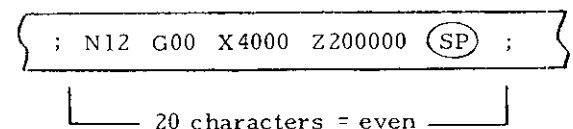
The EOR (rewind stop) code following the label is the stopping point of rewinding motion which is initiated by a rewind command.

When programs on a part program tape is transferred into the memory, the data between the first EOB code, following label skipping, and the next earliest EOR code is transferred. Therefore, the EOR code at the end should not be omitted.
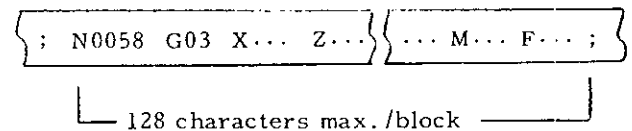
3.2.3 CAUTIONS IN PROGRAMMING

· One block ends with an EOB code.
The EOB code is CR in EIA, and LF/NL in ISO. However, in the example programs in this manual, ";" is used to represent EOB codes to make recognition easy.

· One part program ends with a block containing M02 (end of program) or M30 (end of tape).

· When an M02 or M30 code is read, the NC resets itself or rewind the tape (or the memory), depending on the design of the machine under control. For this, refer to the manual prepared by the machine tool builder.

· Do not use any characters other than the address characters and the function code characters specified in 2.1.2 ADDRESS AND FUNCTION CHARACTERS.

· When the tape vertical parity check (TV check) function is to be used, the number of characters in each block must be made even with an SP (space) code.
Disregard codes such as BS, Tab, SP, UC, LC, and Del should be avoided in the significant data area, if unnecessary.

· The maximum number of characters that can be written in a block is 128, not counting disregard characters such as Del.

(a) Evening up number of characters for TV check (odd is treated as error)

(b) Maximum number of effective characters that can be written in a block

Fig. 3.3