

the case that the batch transferred is larger than the standard batch size of the next machine group for this type of product.

Line 28.

The machine immediately returns to the beginning of its operation rule to look for another acceptable batch starting at the front end of the product queue. At this point, if B is true, the connected opart is empty of units and will not be referenced any more. We can regard it as having dropped off the chain. It is easy, however, to demonstrate that the opart will physically leave the system, i.e. that its reference count is reduced to zero. The possible stored references are:

- 1) The variable X and the connection pointer "opart" of this machine or another one of the same group. The go to statement leads out of the connection block, which deletes the connection pointer. X is given another value in line 10. Any other machine referencing this opart would have to be suspended in line 19, which is impossible since np is zero (cf. the second statement of line 16).
- 2) Set membership in que[mg]. The opart must have been removed from the queue (by this machine or another one) since "last" is true and nw is now zero (line 17).
- 3) The attribute "successor" of the opart preceding this one in the chain. The first opart of this order to enter the system has no predecessor. Provided that this first one drops out when it is empty, our conclusion follows by induction (see below).