The initial test removes as a failure such phrases as:

b := 
$$(a+b)$$
  $\underline{if}$  ...  
b :=  $A[b]$   $\underline{if}$  ...  
 $\underline{if}$   $a > \underline{then}$   $\underline{if}$  ...

EXP is then called to set E to zero if the preceding delimiter was := as in

$$a := \underline{if} \dots$$

In the case of E being equal to 1, DECTYP is tested. It is normally zero (i.e. we are not in a declaration) and DECSTA is set to /o o. It may however be set to array, as in:

## real array A [1 : PROC (if ...

In this case of course DECSTA must not be changed. A test is then made to see if this is an actual parameter, and if it is E is set to zero.

If E was not equal to 1, a further test is made to remove constructs such as

$$y + if$$

The stack entry saves the state variables ARITH, E and EXPTYP and stacks <u>if</u> to be checked by the following then. ARITH and E are then set up for the Boolean expression in the if clause.

## ERRORS

FAIL 67; if misused

FAIL 100; if must not be used after log., arith. or rel. operator.

FAIL 68; if used in declaration other than array declaration.