

# NAG Library Routine Document

## E05JLF

**Note:** before using this routine, please read the Users' Note for your implementation to check the interpretation of *bold italicised* terms and other implementation-dependent details.

### 1 Purpose

E05JLF is used to get the value of a real E05JBF optional parameter. E05JLF can be used before or after calling E05JBF, but the initialization routine E05JAF **must** have been called before calling E05JLF.

### 2 Specification

```
SUBROUTINE E05JLF (OPTSTR, RVALUE, COMM, LCOMM, IFAIL)
  INTEGER          LCOMM, IFAIL
  REAL (KIND=nag_wp) RVALUE, COMM(LCOMM)
  CHARACTER(*)    OPTSTR
```

### 3 Description

E05JLF obtains the current value of a real-valued optional parameter. For example

```
CALL E05JLF ('Local Searches Tolerance', LOCTOL, COMM, LCOMM, IFAIL)
```

will result in the value of the optional parameter **Local Searches Tolerance** being output in LOCTOL.

A complete list of optional parameters, their symbolic names and default values is given in Section 12 in E05JBF.

### 4 References

None.

### 5 Arguments

- 1: OPTSTR – CHARACTER(\*) *Input*  
*On entry:* a string identifying a real-valued optional parameter (as described in Section 12 in E05JBF).
- 2: RVALUE – REAL (KIND=nag\_wp) *Output*  
*On exit:* if IFAIL = 0 on exit, RVALUE contains the real value associated with the optional parameter in OPTSTR.
- 3: COMM(LCOMM) – REAL (KIND=nag\_wp) array *Communication Array*  
*On entry:* communication data as initialized by E05JAF.
- 4: LCOMM – INTEGER *Input*  
*On entry:* the dimension of the array COMM as declared in the (sub)program from which E05JLF is called.  
*Constraint:* LCOMM ≥ 100.

## 5: IFAIL – INTEGER

*Input/Output*

*On entry:* IFAIL must be set to 0, -1 or 1. If you are unfamiliar with this argument you should refer to Section 3.4 in How to Use the NAG Library and its Documentation for details.

For environments where it might be inappropriate to halt program execution when an error is detected, the value -1 or 1 is recommended. If the output of error messages is undesirable, then the value 1 is recommended. Otherwise, if you are not familiar with this argument, the recommended value is 0. **When the value -1 or 1 is used it is essential to test the value of IFAIL on exit.**

*On exit:* IFAIL = 0 unless the routine detects an error or a warning has been flagged (see Section 6).

## 6 Error Indicators and Warnings

If on entry IFAIL = 0 or -1, explanatory error messages are output on the current error message unit (as defined by X04AAF).

Errors or warnings detected by the routine:

IFAIL = 1

Initialization routine E05JAF has not been called.

On entry, LCOMM =  $\langle value \rangle$ .

Constraint: LCOMM  $\geq$  100.

IFAIL = 2

The supplied optional parameter is invalid. A keyword or keyword combination was not recognized.

IFAIL = -99

An unexpected error has been triggered by this routine. Please contact NAG.

See Section 3.9 in How to Use the NAG Library and its Documentation for further information.

IFAIL = -399

Your licence key may have expired or may not have been installed correctly.

See Section 3.8 in How to Use the NAG Library and its Documentation for further information.

IFAIL = -999

Dynamic memory allocation failed.

See Section 3.7 in How to Use the NAG Library and its Documentation for further information.

## 7 Accuracy

Not applicable.

## 8 Parallelism and Performance

E05JLF is not threaded in any implementation.

## 9 Further Comments

None.

## **10 Example**

See Section 10 in E05JCF.

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