# NAG Library Routine Document

# g22zaf

**Note:** please be advised that this routine is classed as 'experimental' and its interface may be developed further in the future. Please see Section 3.1.1 in How to Use the NAG Library and its Documentation for further information.

## 1 Purpose

**g22zaf** destroys a G22 handle and deallocates all the memory used.

## 2 Specification

**Fortran Interface**

```
Subroutine g22zaf (handle, ifail)
Integer, Intent (Inout)     :: ifail
Type (c_ptr), Intent (Inout) :: handle
```

## 3 Description

Each G22 handle should be deallocated to avoid memory leaks. Therefore, **g22zaf** should be called on all such handles which are no longer needed. Please note that passing an uninitialized handle might cause unpredictable behaviour, including a crash of your program.

## 4 References

None.

## 5 Arguments

1:    **handle** – Type (c_ptr)                                                                 *Input/Output*

   *On entry*: the G22 handle to be destroyed.

   *On exit*: the handle is destroyed and set to **c_null_ptr**.

2:    **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** $= 11$

> **handle** has not been initialized.

**ifail** $= 12$

> **handle** has been corrupted.

**ifail** $= 13$

> **handle** is a handle to an unknown data structure.

**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

**g22zaf** is not threaded in any implementation.

# 9 Further Comments

None.

# 10 Example

See the example for **g22yaf**.