

# NAG Library Function Document

## nag\_ode\_ivp\_adams\_free (d02qyc)

### 1 Purpose

nag\_ode\_ivp\_adams\_free (d02qyc) is the function for freeing memory from the structure of type Nag\_ODE\_Adams. This memory will have been allocated to pointers within this structure during calls to the NAG C Library function nag\_ode\_ivp\_adams\_setup (d02qwc). This allocated memory is used by functions nag\_ode\_ivp\_adams\_roots (d02qfc) and nag\_ode\_ivp\_adams\_interp (d02qzc).

### 2 Specification

```
#include <nag.h>
#include <nagd02.h>

void nag_ode_ivp_adams_free (Nag_ODE_Adams *opt)
```

### 3 Description

The NAG C Library functions nag\_ode\_ivp\_adams\_setup (d02qwc), nag\_ode\_ivp\_adams\_roots (d02qfc) and nag\_ode\_ivp\_adams\_interp (d02qzc) use a structure of type Nag\_ODE\_Adams to retain and communicate information between calls of these functions. During this process memory is allocated to several pointers within the structure; nag\_ode\_ivp\_adams\_free (d02qyc) may be used to free this memory when all calls to the functions nag\_ode\_ivp\_adams\_setup (d02qwc), nag\_ode\_ivp\_adams\_roots (d02qfc) and nag\_ode\_ivp\_adams\_interp (d02qzc) have been completed. A call to nag\_ode\_ivp\_adams\_free (d02qyc) may also be made prior to re-entering nag\_ode\_ivp\_adams\_setup (d02qwc) with the argument **state** = Nag\_NewStart.

### 4 References

None.

### 5 Arguments

- 1: **opt** – Nag\_ODE\_Adams \* *Input/Output*  
*On entry:* the structure used in calls to the functions nag\_ode\_ivp\_adams\_setup (d02qwc), nag\_ode\_ivp\_adams\_roots (d02qfc) and nag\_ode\_ivp\_adams\_interp (d02qzc).  
*On exit:* all memory allocated to this structure will have been freed and the pointers set to NULL.

### 6 Error Indicators and Warnings

None.

### 7 Accuracy

Not applicable.

### 8 Parallelism and Performance

nag\_ode\_ivp\_adams\_free (d02qyc) is not threaded in any implementation.

## **9 Further Comments**

None.

## **10 Example**

See Section 10 in nag\_ode\_ivp\_adams\_roots (d02qfc) and nag\_ode\_ivp\_adams\_interp (d02qzc).

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