*KEYWORD

***KEYWORD**_*{OPTION} {memory} {memory2 = j} {NCPU = n}*

Available options include:

<BLANK>

ID

JOBID

Purpose: The keyword, *KEYWORD, flags LS-DYNA that the input deck is a keyword deck rather than the structured format, which has a strictly defined format. This must be the first card in the input file. Alternatively, by typing "keyword" on the execution line, keyword input formats are assumed and this beginning "*KEYWORD" line is not required.

There are 3 optional parameters that can be specified on the *KEYWORD line. If a number *{memory}* is specified, it defines the memory size in units of words to be allocated. For MPP, if the parameter {memory2 = *j*} is also given, *memory* defines the memory allocation in words for the first core and *j* defines the memory allocation in words for each of the remaining cores. Note that if the memory size is specified on the execution line, it will override the memory size specified on the *KEYWORD line.

If the parameter {NCPU = *n*} is specified it defines the number Shared Memory Parallel (SMP) threads of "*n*" to be used for each processor during the analysis. This applies to both SMP and HYBRID versions of LS-DYNA.

For the Distributed Memory Version (MPP), the number of CPUs is defined with the "mpirun –np *m*" command.

HYBRID is combination of SMP and MPP therefore the total number of cores used in this example will be *n x m* cores. Defining the number of CPUs on the execution line overrides what is specified on the *KEYWORD line and both override the number of CPUs specified by *CONTROL_PARALLEL. An example of the {memory} and {NCPU = *n*} options would be as follows:

```
*KEYWORD 120m memory2=10m NCPU=2
```

This *KEYWORD command is requesting 120 million words of memory, 10 million words of memory2 and 2 CPUs to be used for the analysis with the consistency flag (see CONST in *CONTROL_PARALLEL) turned off. To run with the consistency flag turned on (recommended), set NCPU to a negative value, e.g., "NCPU = -2" runs with 2 CPUs with the consistency flag turned on.

The ID and JOBID command line options are available to add a prefix to all output and scratch file names, i.e., not the input filenames. This allows multiple simulations in a directory since a different prefix prevents files from being overwritten. If the ID option is used, the prefix is constructed of three user specified strings separated by "_f" characters.

ID Card. Additional Card if the ID option is active.

Card 1	1	2	3	4	5	6	7	8
Variable	PROJECT		NUM		STAGE			
Type	A		A		A			
Default	none		none		none			

VARIABLE	DESCRIPTION
PROJECT	First part of the output file name prefix.
NUM	Second part of the output file name prefix.
STAGE	Third part of the output file name prefix.

By using the ID option of *KEYWORD, an output file name prefix may be specified as a combination of the variables PROJECT, NUM and STAGE as defined on Card 1 above. For example, if these variables were set literally to "PROJECT", "NUM", and "STAGE", the first d3plot would be named:

```
PROJECT_NUM_STAGE.d3plot
```

Alternatively, an output file name prefix can be assigned by including "jobid=" on the execution line. For example,

lsdyna i=**input.k** jobid=**PROJECT_NUM_STAGE**

A third way to define an output file name prefix is by using the JOBID option of the *KEYWORD command, in which case Card 1 is defined as shown below and the variable JBID acts as the output prefix.

JOBID Card. Additional card if the JOBID option is active.

Card 1	1	2	3	4	5	6	7	8
Variable	JBID							
Type	A							
Default	none							