

January 29, 1998
G-1151-SJA-98-069

Document Control Desk
United States Nuclear Regulatory Commission
Washington, D.C. 20555



- Reference: a) Boeing Letter G-1151-RSO-92-365 dated August 31, 1992; R. S. Orr to the NRC Operations Center
- b) NRC Letter Docket No. 99901227 dated August 12, 1992; L. J. Norrholm to R. S. Orr; Subject: Response to 10 CFR 21 Inquiry

Dear Sir or Madam:

In accordance with the reference correspondence and 10 CFR 21, Boeing is sending the NRC the attached error notice(s) received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc.

Echo Energy Consultants, Inc.

Nuclear Applications and Systems Analysis Company (Japan)

Nuclear Power Services

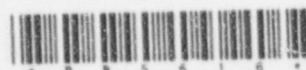
Error notices have been sent to our other former customers.

Very truly yours,

Sandra J. Andrews
Nuclear Administrator
Phone: (425) 865-6248
FAX: (425) 865-4851
Mail Stop: 7A-33, or
e-mail: Sandra.J.Andrews@Boeing.com

Enclosure(s): ANSYS Class3 Error Reports 97-50 through 97-58
ANSYS QA Notices QA97-03 through QA97-05
ANSYS Class3 Error Report 97-28R1
Class3 Error summary Reports for Releases 5.3 and 5.4

9802060205 980129
PDR GA999 EMVBOE
99901227 PDR



QA999, P101

IED91,
IDIR-13
VENDOR
INSP.



ANSYS, Inc.
Southpointe
275 Technology Drive
Canonsburg, PA 15317

JAN 26 1998

January 9, 1997

CONTRACTS

Dear Class3 Error Recipient:

Enclosed you will find ANSYS Class3 Error Reports 97-50 through 97-58 along with ANSYS QA Notices QA97-03, QA97-04 and QA97-05 and ANSYS Class3 Error Report 97-28 R1. These reports were issued in the fourth quarter of 1997. For your convenience, Class3 Error Summary Reports for Release 5.3 and Release 5.4 have also been included.

QA Notice QA97-03 has been issued to inform you of a limitation in the formulation of BEAM44 and BEAM54. QA Notice QA97-04 has been issued to describe a potential Class3 error with BEAM4 or PIPE16 for which the full scope has not yet been determined. QA Notice QA97-05 discusses the resuming of database files using ANSYS/LS-DYNA.

ANSYS Class3 Error Report 97-28 has been revised to include harmonic analysis with use of constraint equations. We suggest not using the CE command with Release 5.3 or higher.

In 1997 the following Class3 Error Reports were issued: Class3 error Reports 97-01 through 97-58, 96-38 R1, 96-45 R1, 96-50 R1, 97-02 R1, and 97-28 R1. Support Coordinator Bulletins SCB97-01 and SCB97-02 were also released. If you are missing any of these reports, please contact Bonny Podolek at 412-514-2858 and they will be provided to you.

I would like to remind you of the various ways that you can receive Class3 error information. Quarterly, Class3 errors will be delivered by mail to the ANSYS Support Coordinator listed on your ANSYS license agreement. Please notify your local ASD if there has been a change in personnel or an address change so that these reports can be delivered promptly.

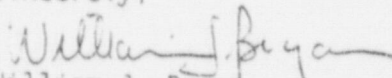
For users desiring access to Class3 errors on a more timely basis you can be added to our email distribution list. To register for email notification of reports, simply send an email request including your email address, company name/address and ANSYS agreement number to bonny.podolek@ansys.com. If you are a subscriber to email distribution, please keep us informed of any changes in your email address by emailing bonny.podolek@ansys.com.

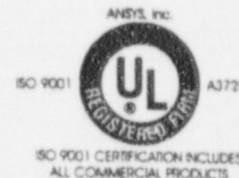
Finally, Class3 Errors and QA Notices are posted on ANSYS's Internet HomePage. The address is <http://www.ansys.com>. They are located in the ANSYS Zones section of the HomePage under Customer. The username to enter this area is "customer" and the password is "ainlrm" (ANSYS is number 1 for me).

Included with this quarter's mailing is a customer survey that the ANSYS, Inc. Documentation Group created to get your feedback about the ANSYS 5.4 product documentation. Please take some time to complete the survey and return it to the Documentation Group using one of the methods described on the survey. The Documentation Group thanks you for your participation.

Please make a note that effective April 30, 1998 ANSYS Inc.'s telephone area code will change from 412 to 724. I would like to take this opportunity to extend to you wishes for a prosperous new year.

Sincerely,


William J. Bryan
Quality Assurance Manager



ANSYS Release Identifier Description

ANSYS release identifiers consist of a major release level, a minor release level, a correction and a build date. An example of how this is constructed is shown below:

```
      5.3 UP030797 <--- build date (form = UPmddyy)
      ^  ^
      |  |
major release level -- -- minor release level
```

Major release level changes indicate that new features have been added to the program and that some level of program architecture change and/or file structure may have occurred. Minor release level changes also indicate that new features have been added to the program, but files are upwardly compatible. All known error fixes are included in both minor and major releases. The build date corresponds to the date the program was created. Special versions may be provided to circumvent an error and are identified by build date. Special versions are not general releases to all ANSYS licensees, since they typically represent error corrections occurring only on one system, a subset of our customers who have specific graphics devices, etc.

When a release identifier on a Class3 Error Report does not include a build date, all build dates for the indicated release level are included. When a release identifier for FIRST INCORRECT VERSION explicitly includes a build date, the release level with the indicated build date as well as all earlier build dates for that release level are affected. When a release identifier for CORRECTED IN explicitly includes a build date, the release level with the indicated build date as well as all subsequent build dates contain the correction.

For example, a Class3 Error Report with "5.3 UP100396" for FIRST INCORRECT VERSION and "5.5 UP063098" for "CORRECTED IN" would apply to all 5.3 releases with a build date UP100396 or later, all 5.4 releases (regardless of build date) and all 5.5 releases with a build date earlier than UP063098.

The ANSYS release identifier(s) shown under "corrected in" on the front side of Class3 Error Reports indicates the first possible release that contains the correction.

An identifier indicated under "corrected in" does not guarantee that a general distribution of that release of ANSYS will occur. It does indicate that the correction is known and implemented in that or any subsequent release.

Product Applicability

The ANSYS family of component products occasionally undergoes name changes between releases and/or changes in the functionality of derived products (such as ANSYS-PC/LINEAR). To minimize the potential for confusion in these areas, unless otherwise noted on the front side of the Class3 Error Report, the error report applies to all ANSYS family products (including standalone component products) that contain the described feature(s) in the designated release(s).

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-50

KEYWORDS: VMESH VDRAG VEXT VOFFST VROTAT

DESCRIPTION OF ERROR:

VMESH fails to form pyramids at the interface between volumes containing hex and tet elements if the hex elements were generated using one of the following commands: VDRAG, VEXT, VOFFST, VROTAT. This results in discontinuities at the interface between the two volumes where two tetrahedron elements' triangular faces are attached to a single quadrilateral face of a hexahedron element.

TYPICAL GUI PATH(S):

Main Menu>Preproces ->Mesh>Volumes-Free

FIRST INCORRECT VERSION(S):*

Release 5.4

CORRECTED IN:*


Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Prior to performing the VMESH, perform AMESH command on interface areas to generate quadrilateral elements. VMESH will then correctly generate pyramids interfacing the quads. Delete the interface quad elements afterwards.

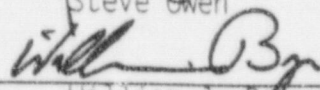
COMMENTS:

AUTHOR/CORRECTOR:


Steve Owen

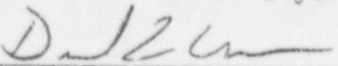
DATE: December 12, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 12, 1997

APPROVAL:


David L. Conover

DATE: December 12, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT-

ERROR NO: 97-51

KEYWORDS: SPARSE SOLVER EQSLV, SPARSE CONSTRAINT EQUATIONS
MULTIPLE LOAD STEPS

DESCRIPTION OF ERROR:

In a linear analysis with constraint equations (CE command), the Sparse Direct Solver (EQSLV, SPARSE) solution at the second and subsequent load steps will give erroneous results when either one of the following two conditions is met:

- A. Displacement boundary conditions with nonzero value is present in the model (D, NODE, Lab, Value: where VALUE is non-zero).
- B. Constraint equations with nonzero constant coefficients are present (CE, NEQN, CONST, NODE1, Lab1, C1, NODE2, Lab2, C2; where, CONST is non-zero) and the applied loading (F, SF, SFE, BF or BFE commands) is modified at any subsequent load step.

TYPICAL GUI PATH(S):

Loads>Constraints
Solution>Analysis Options>Sparse Solver
Solve>Current Load Step
Loads>Forces>Surface Loads>Nodal Body Loads>Element Body Loads

FIRST INCORRECT VERSION(S):*

CORRECTED IN:*

Release 5.4

Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Force reformulation of the stiffness matrix by setting KUSE=-1 (KUSE command) or after the first load step, exit (FINISH) and reenter the solution module (/SOLUTION) to solve any subsequent load cases.

COMMENTS:

AUTHOR/CORRECTOR:

C. Rajakumar
Charles Rajakumar

DATE: December 12, 1997

REVIEWED BY QA:

William J. Bryan
William J. Bryan

DATE: December 12, 1997

APPROVAL:

David L. Conover
David L. Conover

DATE: December 12, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-52

KEYWORDS:

*REPEAT

REPEAT COUNT < 2

DESCRIPTION OF ERROR:

If the repeat count on the *REPEAT command is less than 2, an error message is output to indicate that the command is ignored. In most cases the command is not ignored and one repeat is executed on the previous command.

FIRST INCORRECT VERSION(S):*

CORRECTED IN:*

Release 5.3

Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

COMMENTS:

The error message that is output reflects the count number plus one to account for the previous command that is to be repeated. This error message has also been changed to report the users actual input for the count field.

AUTHOR/CORRECTOR:

Ch/Aiken/de
Christopher W. Aiken

DATE: December 22, 1997

REVIEWED BY QA:

Will J. Bryan
William J. Bryan

DATE: December 22, 1997

APPROVAL:

David L. Conover
David L. Conover

DATE: December 22, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-53

KEYWORDS: SPECTRUM POST26 RESPONSE PSD

DESCRIPTION OF ERROR:

When multiple base-PSD excitation tables are used and their assigned table numbers are not in sequence (e.g. 3 PSD tables with table numbers 1, 4 and 5), the computed response PSD (RPSD command) in POST26 will be incorrect.

TYPICAL GUI PATH(S):

Main Menu>TimeHist Postpro>Calc Resp PSD

FIRST INCORRECT VERSION(S):*

Rev. 5.2

CORRECTED IN:*

Release 5.4

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

When multiple PSD excitation tables are applied to base nodes, assign the table numbers in sequence starting from one (e.g. 3 PSD tables with table number 1, 2 and 3).

COMMENTS:

AUTHOR/CORRECTOR:	<u>Mu-Tsang Chen</u> Mu-Tsang Chen	DATE:	December 22, 1997
REVIEWED BY QA:	<u>William J. Bryan</u> William J. Bryan	DATE:	December 22, 1997
APPROVAL:	<u>David L. Conover</u> David L. Conover	DATE:	December 22, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

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ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-54

KEYWORDS: GRAPHICS POWERGRAPHICS *VPUT

DESCRIPTION OF ERROR:

PowerGraphics result displays will not reflect the "NEW" results input by *VPUT.

TYPICAL GUI PATH(S):

Utility Menu>Parameters>Array Operations>Put Array Data

FIRST INCORRECT VERSION(S):*

Rev. 5.1

CORRECTED IN:*

Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Turn PowerGraphics off (via /GRAPH,FULL) or perform an ALLSELECT operation after a *VPUT.

COMMENTS:

AUTHOR/CORRECTOR: Paul Tallon / dc DATE: December 22, 1997
Paul Tallon

REVIEWED BY QA: William J. Bryan DATE: December 22, 1997
William J. Bryan

APPROVAL: David L. Conover DATE: December 22, 1997
David L. Conover

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-55

KEYWORDS: *REAL CONSTANT* *TABLE NUMBER* *GUI*

DESCRIPTION OF ERROR:

Not all real constant editing dialog boxes display the number of the real constant set being edited. During the editing process, the real constant set that is highlighted in the real constants dialog box (which lists all defined real constant sets) may revert to the default (lowest numbered set) regardless of which set is being edited. This situation typically occurs when editing a real constant set requires multiple dialog boxes.

Note that in many cases, the highlighted set in the real constants window will revert back to the default (the lowest numbered set) while a real constant set is being edited. This typically occurs when editing a real constant set that requires more than one dialog box.

TYPICAL GUI PATH(S):

Prep7>Real Const>Edit

FIRST INCORRECT VERSION(S):*

Rev. 5.1

CORRECTED IN:*

Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Be sure to select the correct real constant set in the Real Constants dialog box before picking the [Edit...] button.

COMMENTS:

AUTHOR/CORRECTOR:

Ron Werkmeister
Ron Werkmeister

DATE: December 31, 1997

REVIEWED BY QA:

William J. Bryan
William J. Bryan

DATE: December 31, 1997

APPROVAL:

David L. Conover
David L. Conover

DATE: December 31, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-56

KEYWORDS: *VGET COORDINATE SYSTEMS

DESCRIPTION OF ERROR:

*VGET of a coordinate system location (*VGET,par,CDSY,n,LOC) returns the location of coordinate system n with respect to the active coordinate system (CSYS) rather than with respect to the global Cartesian system.

TYPICAL GUI PATH(S):

Utility Menu>Parameters>Get Array Data

FIRST INCORRECT VERSION(S):*

Rev. 5.0

CORRECTED IN:*

Release 5.5


SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Issue CSYS,0 before the *VGET command.

COMMENTS:

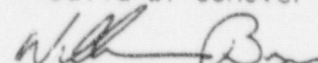
*VGET of the angles (*VGET,par,CDSY,n,ANG) has also been corrected. It was returning an invalid error message.

AUTHOR/CORRECTOR:


David L. Conover

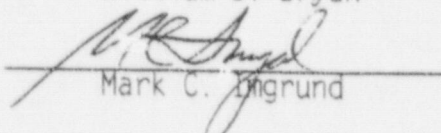
DATE: December 31, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 31, 1997

APPROVAL:


Mark C. Englund

DATE: December 31, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT-

ERROR NO: 97-57

KEYWORDS: MESHING REFINEMENT LMESH

DESCRIPTION OF ERROR:

Using the LMESH command on a line that was altered by using the KREF, LREF, AREF, NREF or EREF commands may produce a line mesh of overlapping elements.

TYPICAL GUI PATH(S):

Main Menu>Preprocessor>Mesh>Lines

FIRST INCORRECT VERSION(S):*

Release 5.3

CORRECTED IN:*

Release 5.5

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

If you use LMESH after AREF, LREF, KREF, EREF, or NREF, inspect the line mesh carefully by turning on node numbers (/PNUM,NODE,1), element numbers (/PNUM,ELEM,1) and listing element connectivity (ELIST). If the line meshed by LMESH was not altered by the refinement command, then the line mesh will be correct. If the line meshed with the LMESH command was altered by the refinement command, the line mesh may be correct or incorrect, depending on the new node numbering.

Workaround: Instead of using one of the refinement commands, change local sizing with LESIZE and remesh, then LMESH will work correctly.

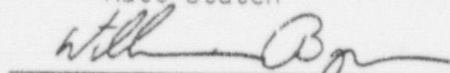
COMMENTS:

AUTHOR/CORRECTOR:


Matt Staten


DATE: December 31, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 31, 1997

APPROVAL:


David L. Conover

DATE: December 31, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-58

KEYWORDS: DOCUMENTATION LSDYNA RSYS

DESCRIPTION OF ERROR:

RSYS command has no effect in processing LS-DYNA output in POST26.

TYPICAL GUI PATH(S):

Main Menu>General Postproc>Options for Outp
Utility Menu>List>Results>Options

FIRST INCORRECT VERSION(S):*

CORRECTED IN:*

ANSYS/LS-DYNA Release 5.3

Release 5.5 Documentation

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

COMMENTS:

AUTHOR/CORRECTOR: Makarand Kulkarni DATE: December 31, 1997

REVIEWED BY QA: William J. Bryan DATE: December 31, 1997

APPROVAL: David L. Conover DATE: December 31, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS QA NOTICE

NOTICE NO: QA97-03

SUBJECT: BEAM44 BEAM54 TAPERING INERTIA RELIEF

DESCRIPTION:

When using the Elastic Tapered Unsymmetric Beams (BEAM44 or BEAM54) with tapered input (e.g. AREA1 is not equal to AREA2) with inertia relief (IRLF,1) the results may be inaccurate. The inaccuracy increases as the tapering increases resulting in non-zero reaction forces. In normal inertia relief analyses, the reaction forces are zero.

Typical GUI Path(s):

Main Menu > Solution > Other > Inertia Relief

AFFECTED VERSIONS: Revision 5.0 - Release 5.4. It will be documented at Release 5.5 with the other inertia relief limitations.

COMMENTS:

For most analyses including a mix of element types, the effect of this inaccuracy is very small. If there is a concern relating to loss of accuracy in this situation, it is recommended that each tapered element in the model be broken into two or three elements to see if the results are noticeably affected.

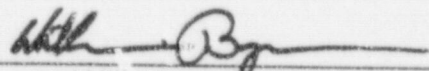
The limit of the ratio of the end cross-sectional properties that will trigger a warning message has been lowered from 10 to 2 at Release 5.5.

AUTHOR:


Peter Kohnke

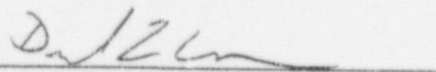
DATE: December 16, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 16, 1997

APPROVAL:


David Conover

DATE: December 16, 1997

ANSYS QA NOTICE

NOTICE NO: QA97-04

SUBJECT: BEAM4 PIPE16 DAMPED EIGENSOLVER GYROSCOPIC MOMENT

DESCRIPTION:

This QA Notice describes a potential Class3 error for which the full scope has not yet been determined. When the full scope of this error is determined, this QA Notice will be updated and re-issued along with a Class3 Error Report, if needed.

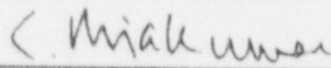
In a BEAM4/PIPE16 element model with gyroscopic moment term turned on (KEYOPT(7) = 1 and nonzero SPIN velocity input through real constant 11 in BEAM 4 and real constant 13 in PIPE16, the eigen frequencies computed by the Damped Eigensolver may be sensitive to the value of the 'shift' used (ex: MODOPT,DAMP,10,shift).

AFFECTED VERSIONS: Not Yet Determined

OTHER COMMENTS:

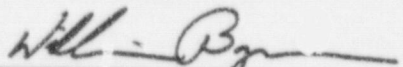
Ensure that the frequencies results remain unchanged with two different 'shift' values, especially, when the SPIN velocity is large, the element matrix coefficients may become poorly conditioned (ratio of max. to min. coefficients too large).

AUTHOR:


Charles Rajakumar

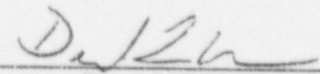
DATE: December 16, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 16, 1997

APPROVAL:


David Conover

DATE: December 16, 1997

ANSYS QA NOTICE

NOTICE NO: QA97-05

SUBJECT: ANSYS/LS-DYNA DATABASE RESUME ABORT

DESCRIPTION:

If a database file (file.DB) created in the ANSYS 5.4 UP19971021 build (provided with the ANSYS/LS-DYNA product) is resumed in either the ANSYS 5.4 UP19970828 (initial production release) or ANSYS 5.4 UP19970930 (provided with the DDA Connection products) builds, the program will abort.

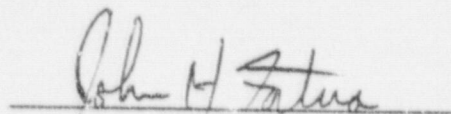
AFFECTED VERSIONS: Release 5.4

OTHER COMMENTS:

Trying to resume database files on the Cray version of ANSYS 5.4, when the database file was created in any non-Cray ANSYS 5.4 version, will fail. Use of a database file written from a non-Cray version of ANSYS 5.4 with build date UP19971021 or later does not exhibit this problem.

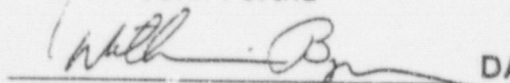
If you encounter this problem, contact your ASD to receive ANSYS 5.4 Service Pack 3, available on CD-ROM or the ANSYS home page (www.ansys.com). The ANSYS 5.4 UP19971021 executable is already available on the ANSYS/LS-DYNA 5.4 CD and may be installed where needed.

AUTHOR:


John Fortna

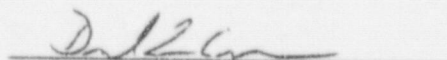
DATE: December 30, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 30, 1997

APPROVAL:


David Conover

DATE: December 30, 1997

ANSYS® CLASS3 ERROR REPORT

ERROR NO: 97-28 R1

KEYWORDS: CONSTRAINT EQUATIONS UNSYMMETRIC MATRICES
 FRONTAL SOLVER HARMONIC ANALYSIS

DESCRIPTION OF ERROR:

Results are incorrect for the following analysis types if constraint equations (CE command) and unsymmetric matrices are used.

Case 1: Any analysis using the frontal solver (EQSLV,FRONT) [default].

Case 2: Any harmonic analysis for all the appropriate solvers, including frontal (EQSLV,FRONT [default]) and iterative (EGSLV,ICCG or EQSLV,JCG) solvers.

Element types which produce unsymmetric matrices include:

BEAM4	3-D Elastic beam (with (KEYOPT(7)=1)
INFIN9,47	Infinite boundary elements (with KEYOPT(2)=1)
PIPE16	Elastic straight pipe (with KEYOPT(7)=1)
MATRIX27	Stiffness matrix with KEYOPT(2)=1)
FLUID29,30	Acoustic fluids (with (KEYOPT(2)=0)
FLUID66	Coupled thermal-fluid pipe
SHELL181	Finite strain shell (with KEYOPT(5)=1)
CIRCU124	General circuit element with the following KEYOPT(1) values:
	4 Independent voltage source
	5 Stranded coil current source
	6 2D Massive conductor voltage source
	7 3D Massive conductor voltage source
	9 Voltage-controlled current source
	10 Voltage-controlled current source
	11 Current-controlled current source
	12 Current-controlled voltage source

TYPICAL GUI PATH(S):

Main Menu>Preprocessor>Coupling/Ceqn

FIRST INCORRECT VERSION(S):*

CORRECTED IN:*

Release 5.3


Case 1: Release 5.4

Case 2: Release 5.4 UP 1997.10.21

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

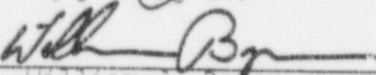
Avoid using CE commands or use Release 5.2 or earlier. For non-harmonic analysis, use the ICCG iterative solver (EQSLV,ICCG) instead of the frontal solver.

AUTHOR/CORRECTOR:


Hong Cheng Liu


DATE: December 16, 1997

REVIEWED BY QA:


William J. Bryan

DATE: December 16, 1997

APPROVAL:


David L. Conover

DATE: December 16, 1997

*Unless noted otherwise, this report applies to all ANSYS family products which contain the described feature in the indicated Release(s). See the reverse side for details regarding product applicability.

Unless noted otherwise, this error report also applies to all releases after the first incorrect one and prior to the corrected release. All releases after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS release identifiers.

ANSYS 5.3 CLASS3 ERROR SUMMARY BY REPORT NUMBER

ERROR NUMBER	KEYWORD #1	KEYWORD #2	KEYWORD #3	KEYWORD #4	KEYWORD #5	KEYWORD #6	CORRECTED VERSION
95-37 R1	FLOTRAN	FLUID142	ELEM142				Release 5.4
95-39 R1	FLOTRAN	ELEM142	FLUID142				Release 5.4
95-49 R1	FLOTRAN	ELEM141	ELEM142				Release 5.4
96-38 R1	SOLID MODELLING	BOOLEAN	SUBTRACT	ASBL			Release 5.4
96-39	APDL	ARFACE	*GET				Release 5.4
96-40	PREP7	PIPE16	VALVE	BUNIF			Release 5.4
96-41	ELEM150	SHELL150	ELEMENT VOLUME	ETABLE	*GET		Release 5.4
96-42	CONSTRAINT EQUA	MODAL	ITERATIVE SOLVE				Release 5.4
96-43	MATRIX50	SUPERELEMENTS	COUPLED DOF	NONZERO CONSTRA			Release 5.4
96-44	SAVE	LOADS	INITIAL CONDITI	/EXIT			Release 5.4
96-45 R1	SURFACE LOADS	BODY FORCES	RAMPING				Release 5.4
96-46	CFD	THERMAL EXPANSI	FLUID141	*FLUID142			Release 5.4
96-47	/CLEAR	DEC-ALPHA	PARALLEL				Release 5.4
96-48	LSDYNA	EDLOAD					Release 5.4
96-49	LSDYNA	ROTATED NODES					Release 5.4
96-50 R1	SOLID92	PLANE2	SOLID87	CURVED EDGES			Release 5.4
96-51	/GRAPHICS,POWER	POST1	LCOPER	PLNSOL			Release 5.4
96-52	DOCUMENTATION	SELECT					5.4 User Manual
96-53	PIPE20	ELEM20	STRESS STIFFENI	ANTYPE, BUCKLE	SSTIF,ON	PSTRESS,ON	Release 5.4
97-01	SOLID MODEL BCs	ROTATED NODES	DA				Release 5.4
97-02 R1	MAGNETICS	SENERGY	MACRO				Release 5.4
97-03	LSDYNA	EDLOAD	RIGID BODY				Release 5.4
97-04	HARMONIC RESPON	UNSYMMETRIC MAT	PIVOT TERM				Release 5.4
97-05	STRUCTURAL ANAL	PCG SOLVER	IMPOSED DOF				Release 5.4
97-06	MAGNETICS	HARMONIC	CIRCUIT	ELEM124			Release 5.4
97-07	MAGNETICS	VOLTAGE LOADING	FLANE53				Release 5.4
97-08	INERTIA RELIEF	DROP MIDSIDE NO					Release 5.4
97-09	RBE3	CONSTRAINT EQUA					Release 5.4
97-10	GUT	PIPE17	ELEM17	REAL CONSTANTS			Release 5.4
97-11	PLANE2	SOLID92	RAMPED B.C.	MULTIPLE SOLUTI			Release 5.4
97-12	SUBSTRUCTURE	MATRIX50	DOF	MOOF	TRI FILE		Release 5.4
97-13	PSD	BASE EXCITATION	RPSD	ABS RESP PSD			Release 5.4
97-14	PSD						Release 5.4
97-15	NSLA	SELECT	AREA NODES				Release 5.4
97-16	*MOONEY	*EVAL	HYPERELASTICITY				Release 5.4
97-17	ORTHOTROPIC MAT	LSDYNA	POISSONS RATIO				Release 5.4
97-18	LSDYNA	SOLID164	EDLOAD	PRESSURE			Release 5.4

ANSYS 5.3 CLASS3 ERROR SUMMARY BY REPORT NUMBER

ERROR NUMBER	KEYWORD #1	KEYWORD #2	KEYWORD #3	KEYWORD #4	KEYWORD #5	KEYWORD #6	CORRECTED VERSION
97-19	GUI	MODAL	PRESTRESSED	UPCOORD			Release 5.4
97-20	PLANE25	ELEM25	TEMPERATURES	NONLINEAR			Release 5.4
97-21	SOLID5	SOLID98	THERMAL ANALYSIS	RAMPED B.C.	HEAT FLUX		Release 5.4
97-22	SHELL181						Release 5.4
97-23	LSDYNA	CP	D	COUPLED NODES	CONSTRAINT		Release 5.4
97-24	MAGNETICS	BIOT-SAVART	SOURC36				Release 5.4
97-25	POST1	LCASE	LCDEF				Release 5.4
97-26	SPECTRUM	PSDWAY	RANDOM VIBRATION	WAVE PROPAGATION			Release 5.4
97-27	LSDYNA	SOLID164	ELEM164				Release 5.4
97-28 R1	CONSTRAINT EQUA	UNSYMMETRIC MAT	FRONTAL SOLVER				Release 5.4
97-29	EMAG	CIRCUIT	CIRCU124				Release 5.4
97-30	LUMPED MASS	CONSTRAINT EQUA	REDUCED MODAL	SUBSTRUCTURE			Release 5.4
97-31	MODE SUPERPOSIT	LARGE DEFLECTION	LVSCALE	PSOLVE			Release 5.4
97-32	PREP7	AREA MESH	QUADRILATERALS	FREE MESH			Release 5.4
97-33	WINDOWS NT	WINDOWS 95	/COPY				Release 5.4
97-34	MODE SUPERPOSIT	HARMONIC	TRANSIENT				Release 5.4
97-36	SOLID87	PCG	JCG				Release 5.4
97-37	BIRTH AND DEATH	ELEMENT THICKNESS	NLGEOM	LARGE DEFORMATION			Release 5.4
97-38	COUPLING	NDELE	XCLEAR	SUPERELEMENTS	P-METHOD		Release 5.4
97-39	NONLINEAR ANALY	NEQIT, 1					Release 5.4
97-40	SELECT	ALLSEL, BELOW					Release 5.4
97-41	THERMAL	FLUID					Release 5.5
97-42	SPECTRUM	PSD	SPOPT, PSD				Release 5.4
97-43	EMAG	CIRCUIT	CIRCU124	ELEM124	RESISTANCE		Release 5.4
97-44	SELECT	ELEMENT	ESEL				Release 5.5
97-45	*AFUN, DEG	GUI	PICKING	ANGULAR FUNCTION			Release 5.4
97-46	CFD	FLOTRAN	YPLU				Release 5.4
97-47	CSWPLANE	*GET	CDWRITE	ANGLES			Release 5.4
97-48	SHELL181	HYPERELASTIC					Release 5.4
97-52	*REPEAT	REPEAT COUNT <					Release 5.5
97-53	SPECTRUM	POST26	RESPONSE PSD				Release 5.4
97-54	GRAPHICS	POWERGRAPHICS	*VPUT				Release 5.5
97-55	REAL CONSTANT	TABLE NUMBER	GUI				Release 5.5
97-56	*VGET	COORDINATE SYSTEM					Release 5.5
97-57	MESHING	REFINEMENT	LMESH				Release 5.5
97-58	DOCUMENTATION	LSDYNA	RSYS				5.5 Documentation

ANSYS 5.3 CLASS3 ERROR SUMMARY

KEYWORD SORT OF ALL REVISION 5.3 CLASS3 ERRORS

Date of this report: 1/ 8/98

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST	VERSION CORRECTED
*AFUN,DEG	97-45	*AFUN,DEG GUI PICKING ANGULAR FUNCTI	Release 5.4
*EVAL	97-16	*MOONEY *EVAL HYPERELASTICIT	Release 5.4
*GET	96-39	APDL ARFACE *GET	Release 5.4
*GET	96-41	ELEM150 SHELL150 ELEMENT VOLUME ETABLE *GET	Release 5.4
*GET	97-47	CSWPLANE *GET CDWRITE ANGLES	Release 5.4
*MOONEY	97-16	*MOONEY *EVAL HYPERELASTICIT	Release 5.4
*REPEAT	97-52	*REPEAT REPEAT COUNT <	Release 5.5
*VGET	97-56	*VGET COORDINATE SYST	Release 5.5
*VPUT	97-54	GRAPHICS POWERGRAPHICS *VPUT	Release 5.5
/CLEAR	96-47	/CLEAR DEC-ALPHA PARALLEL	Release 5.4
/COPY	97-33	WINDOWS NT WINDOWS 95 /COPY	Release 5.4
/EXIT	96-44	SAVE LOADS INITIAL CONDIT /EXIT	Release 5.4
/GRAPHICS,POWER	96-51	/GRAPHICS,POWER POST1 LCOOPER PLNSOL	Release 5.4
ABS RESP PSD	97-13	PSD BASE EXCITATION RPSD ABS RESP PSD	Release 5.4
ALLSEL,BELOW	97-40	SELECT ALLSEL,BELOW	Release 5.4
ANGLES	97-47	CSWPLANE *GET CDWRITE ANGLES	Release 5.4
ANGULAR FUNCTION	97-45	*AFUN,DEG GUI PICKING ANGULAR FUNCTI	Release 5.4
ANTYPE,BUCKLE	96-53	PIPE20 ELEM20 STRESS STIFFEN ANTYPE,BUCKLE SSTIF,ON PSTRESS,04	Release 5.4
APDL	96-39	APDL ARFACE *GET	Release 5.4
AREA MESH	97-32	PREP7 AREA MESH QUADRILATERALS FREE MESH	Release 5.4
AREA NODES	97-15	NSLA SELECT AREA NODES	Release 5.4
ARFACE	96-39	APDL ARFACE *GET	Release 5.4
ASBL	96-38 R1	SOLID MODELLING BOOLEAN SUBTRACT ASBL	Release 5.4
BASE EXCITATION	97-13	PSD BASE EXCITATION RPSD ABS RESP PSD	Release 5.4
BIOT-SAVART	97-24	MAGNETICS BIOT-SAVART CIRC36	Release 5.4
BIRTH AND DEATH	97-37	BIRTH AND DEATH ELEMENT THICKNESS COM LARGE DEFORMAT	Release 5.4
BODY FORCES	96-45 R1	SURFACE LOADS BODY FORCES RAMPING	Release 5.4
BOOLEAN	96-38 R1	SOLID MODELLING BOOLEAN SUBTRACT ASBL	Release 5.4
BUNIF	96-40	PREP7 PIPE16 VALVE BUNIF	Release 5.4
CDWRITE	97-47	CSWPLANE *GET CDWRITE ANGLES	Release 5.4
CFD	96-46	CFD THERMAL EXPANSI FLUID141 FLUID142	Release 5.4
CFD	97-46	CFD FLOTRAN YPLU	Release 5.4
CIRCU124	97-29	EMAG CIRCUIT CIRCU124	Release 5.4

KEYWORD	ERROR REPORT NUMBER	COL LATE KEYWORD LIST					VERSION CORRECTED
CIRCU124	97-43	EMAG	CIRCUIT	CIRCU124	ELEM124	RESISTANCE	Release 5.4
CIRCUIT	97-06	MAGNETICS	HARMONIC	CIRCUIT	ELEM124		Release 5.4
CIRCUIT	97-29	EMAG	CIRCUIT	CIRCU124			Release 5.4
CIRCUIT	97-43	EMAG	CIRCUIT	CIRCU124	ELEM124	RESISTANCE	Release 5.4
CONSTRAINT	97-23	LSDYM*	CP	D	COUPLED NODES	CONSTRAINT	Release 5.4
CONSTRAINT EQUAT	96-42	CONSTRAINT EQUAT	MODAL	ITERATIVE SOLV			Release 5.4
CONSTRAINT EQUAT	97-09	RBE3	CONSTRAINT EQUA				Release 5.4
CONSTRAINT EQUAT	97-28 R1	CONSTRAINT EQUAT	UNSYMMETRIC MAT	FRONTAL SOLVER			Release 5.4
CONSTRAINT EQUAT	97-30	LUMPED MASS	CONSTRAINT EQUA	REDUCED MODAL	SUBSTRUCTURE		Release 5.4
COORDINATE SYSTE	97-56	*VGET	COORDINATE SYST				Release 5.5
COUPLED DOF	96-43	MATRIX50	SUPERELEMENTS	COUPLED DOF	NONZERO CONSTR		Release 5.4
COUPLED NODES	97-23	LSDYNA	CP	D	COUPLED NODES	CONSTRAINT	Release 5.4
COUPLING	97-38	COUPLING	NDELE	XCLEAR	SUPERELEMENTS	P-METHOD	Release 5.4
CP	97-23	LSDYNA	CP	D	COUPLED NODES	CONSTRAINT	Release 5.4
CSWPLANE	97-47	CSWPLANE	*GET	CDWRITE	ANGLES		Release 5.4
CURVED EDGES	96-50 R1	SOLID92	PLANE2	SOLID87	CURVED EDGES		Release 5.4
D	97-23	LSDYNA	CP	D	COUPLED NODES	CONSTRAINT	Release 5.4
DA	97-01	SOLID MODEL BCs	ROTATED NODES	DA			Release 5.4
DEC-ALPHA	96-47	/CLEAR	DEC-ALPHA	PARALLEL			Release 5.4
DOCUMENTATION	96-52	DOCUMENTATION	SELECT				5.4 User Manual
DOCUMENTATION	97-58	DOCUMENTATION	LSDYNA	RSYS			5.5 Documentation
DOF	97-12	SUBSTRUCTURE	MATRIX50	DOF	MDOF	TRI FILE	Release 5.4
DROP MIDSIDE NOD	97-08	INERTIA RELIEF	DROP MIDSIDE NO				Release 5.4
EDLOAD	96-48	LSDYNA	EDLOAD				Release 5.4
EDLOAD	97-03	LSDYNA	EDLOAD	RIGID BODY			Release 5.4
EDLOAD	97-18	LSDYNA	SOLID164	EDLOAD	PRESSURE		Release 5.4
ELEM124	97-06	MAGNETICS	HARMONIC	CIRCUIT	ELEM124		Release 5.4
ELEM124	97-43	EMAG	CIRCUIT	CIRCU124	ELEM124	RESISTANCE	Release 5.4
ELEM141	95-49 R1	FLOTRAN	ELEM141	ELEM142			Release 5.4
ELEM142	95-37 R1	FLOTRAN	FLUID142	ELEM142			Release 5.4
ELEM142	95-39 R1	FLOTRAN	ELEM142	FLUID142			Release 5.4
ELEM142	95-49 R1	FLOTRAN	ELEM141	ELEM142			Release 5.4
ELEM150	96-#1	ELEM150	SHELL150	ELEMENT VOLUME	ETABLE	*GET	Release 5.4
ELEM164	97-27	LSDYNA	SOL1164	ELEM164			Release 5.4
ELEM17	97-10	GUI	PIPE17	ELEM17	REAL CONSTANTS		Release 5.4
ELEM20	97-53	PIPE20	ELEM20	STRESS STIFFEN	ANYPE, BUCKLE	SSTIF, ON	Release 5.4
ELEM25	97-20	PLANE25	ELEM25	TEMPERATURES	NONLINEAR		Release 5.4
ELEMENT	97-44	SELECT	ELEMENT	ESEL			Release 5.5

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				VERSION CORRECTED
ELEMENT THICKNES	97-37	BIRTH AND DEATH	ELEMENT THICKNE	NLGEOM	LARGE DEFORMAT	Release 5.4
ELEMENT VOLUME	96-41	ELEM150	SHELL150	ELEMENT VOLUME	ETABLE *GET	Release 5.4
EMAG	97-29	EMAG	CIRCUIT	CIRCU124		Release 5.4
EMAG	97-43	EMAG	CIRCUIT	CIRCU124	ELEM124 RESISTANCE	Release 5.4
ESEL	97-44	SELECT	ELEMENT	ESEL		Release 5.5
ETABLE	96-41	ELEM150	SHELL150	ELEMENT VOLUME	ETABLE *GET	Release 5.4
FLOTRAN	95-37 R1	FLOTRAN	FLUID142	ELEM142		Release 5.4
FLOTRAN	95-39 R1	FLOTRAN	ELEM142	FLUID142		Release 5.4
FLOTRAN	95-49 R1	FLOTRAN	ELEM141	ELEM142		Release 5.4
FLOTRAN	97-46	CFD	FLOTRAN	YPLU		Release 5.4
FLUID	97-41	THERMAL	FLUID			Release 5.5
FLUID141	96-46	CFD	THERMAL EXPANSI	FLUID141	FLUID142	Release 5.4
FLUID142	95-37 R1	FLOTRAN	FLUID142	ELEM142		Release 5.4
FLUID142	95-39 R1	FLOTRAN	ELEM142	FLUID142		Release 5.4
FLUID142	96-46	CFD	THERMAL EXPANSI	FLUID141	FLUID142	Release 5.4
FREE MESH	97-32	PREP7	AREA MESH	QUADRILATERALS	FREE MESH	Release 5.4
FRONTAL SOLVER	97-28 R1	CONSTRAINT EQUAT	UNSYMMETRIC MAT	FRONTAL SOLVER		Release 5.4
GRAPHICS	97-54	GRAPHICS	POWERGRAPHICS	*VPUT		Release 5.5
GUI	97-10	GUI	PIPE17	ELEM17	REAL CONSTANTS	Release 5.4
GUI	97-19	GUI	MODAL	PRESTRESSED	UPCOORD	Release 5.4
GUI	97-45	*AFUN,DEG	GUI	PICKING	ANGULAR FUNCTI	Release 5.4
GUI	97-55	REAL CONSTANT	TABLE NUMBER	GUI		Release 5.5
HARMONIC	97-06	MAGNETICS	HARMONIC	CIRCUIT	ELEM124	Release 5.4
HARMONIC	97-34	MODE SUPERPOSITI	HARMONIC	TRANSIENT		Release 5.4
HARMONIC RESPON	97-04	HARMONIC RESPON	UNSYMMETRIC MAT	PIVOT TERM		Release 5.4
HEAT FLUX	97-21	SOLID5	SOLID98	THERMAL ANALYS	RAMPED B.C. HEAT FLUX	Release 5.4
HYPERELASTIC	97-48	SHELL181	HYPERELASTIC			Release 5.4
HYPERELASTICITY	97-16	*MOONEY	*EVAL	HYPERELASTICIT		Release 5.4
IMPOSED DOF	97-05	STRUCTURAL ANAL	PCG SOLVER	IMPOSED DOF		Release 5.4
INERTIA RELIEF	97-08	INERTIA RELIEF	DROP MIDSIDE NO			Release 5.4
INITIAL CONDITIO	96-44	SAVE	LOADS	INITIAL CONDIT /EXIT		Release 5.4
ITERATIVE SOLVER	96-42	CONSTRAINT EQUAT	MODAL	ITERATIVE SOLV		Release 5.4
JCG	97-36	SOLID87	PCG	JCG		Release 5.4
LARGE DEFLECTION	97-31	MODE SUPERPOSITI	LARGE DEFLECTIO	LVSCALE	FSOLVE	Release 5.4
LARGE DEFORMATIO	97-37	BIRTH AND DEATH	ELEMENT THICKNE	NLGEOM	LARGE DEFORMAT	Release 5.4
LCASE	97-25	POST1	LCASE	LCDEF		Release 5.4
LCDEF	97-25	POST1	LCASE	LCDEF		Release 5.4
LCOPER	96-51	/GRAPHICS,POWER	POST1	LCOPER	PLNSOL	Release 5.4

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				VERSION CORRECTED
LMESH	97-57	MESHING	REFINEMENT	LMESH		Release 5.5
LOADS	96-44	SAVE	LOADS	INITIAL CONDIT /EXIT		Release 5.4
LSDYNA	96-48	LSDYNA	EDLOAD			Release 5.4
LSDYNA	96-49	LSDYNA	ROTATED NODES			Release 5.4
LSDYNA	97-03	LSDYNA	EDLOAD	RIGID BODY		Release 5.4
LSDYNA	97-17	ORTHOTROPIC MAT	LSDYNA	POISSONS RATIO		Release 5.4
LSDYNA	97-18	LSDYNA	SOLID164	EDLOAD	PRESSURE	Release 5.4
LSDYNA	97-23	LSDYNA	CP	D	COUPLED NODES CONSTRAINT	Release 5.4
LSDYNA	97-27	LSDYNA	SOLID164	ELEM164		Release 5.4
LSDYNA	97-58	DOCUMENTATION	LSDYNA	RSYS		5.5 Documentation
LUMPED MASS	97-30	LUMPED MASS	CONSTRAINT EQUA	REDUCED MODAL	SUBSTRUCTURE	Release 5.4
LVSCALE	97-31	MODE SUPERPOSITI	LARGE DEFLECTIO	LVSCALE	PSOLVE	Release 5.4
MACRO	97-02 R1	MAGNETICS	SENERGY	MACRO		Release 5.4
MAGNETICS	97-02 R1	MAGNETICS	SENERGY	MACRO		Release 5.4
MAGNETICS	97-06	MAGNETICS	HARMONIC	CIRCUIT	ELEM124	Release 5.4
MAGNETICS	97-07	MAGNETICS	VOLTAGE LOADING	PLANES3		Release 5.4
MAGNETICS	97-24	MAGNETICS	BIOT-SAVART	SOURC36		Release 5.4
MATRIX50	96-43	MATRIX50	SUPERELEMENTS	COUPLED DOF	NONZERO CONSTR	Release 5.4
MATRIX50	97-12	SUBSTRUCTURE	MATRIX50	DOF	MDOF TRI FILE	Release 5.4
MDOF	97-12	SUBSTRUCTURE	MATRIX50	DOF	MDOF TRI FILE	Release 5.4
MESHING	97-57	MESHING	REFINEMENT	LMESH		Release 5.5
MODAL	96-42	CONSTRAINT EQUAT	MODAL	ITERATIVE SOLV		Release 5.4
MODAL	97-19	GUT	MODAL	PRESTRESSED	UPCOORD	Release 5.4
MODE SUPERPOSITI	97-31	MODE SUPERPOSITI	LARGE DEFLECTIO	LVSCALE	PSOLVE	Release 5.4
MODE SUPERPOSITI	97-34	MODE SUPERPOSITI	HARMONIC	TRANSIENT		Release 5.4
MULTIPLE SOLUTIO	97-11	PLANE2	SOLID92	RAMPED B.C.	MULTIPLE SOLUT	Release 5.4
NDELE	97-38	COUPLING	NDELE	xCLEAR	SUPERELEMENTS P-METHOD	Release 5.4
NEQIT.1	97-39	NONLINEAR ANALYS	NEQIT.1			Release 5.4
NLGEOM	97-37	BIRTH AND DEATH	ELEMENT THICKNE	NLGEOM	LARGE DEFORMAT	Release 5.4
NONLINEAR	97-20	PLANE25	ELEM25	TEMPERATURES	NONLINEAR	Release 5.4
NONLINEAR ANALYS	97-39	NONLINEAR ANALYS	NEQIT.1			Release 5.4
NONZERO CONSTRAI	96-43	MATRIX50	SUPERELEMENTS	COUPLED DOF	NONZERO CONSTR	Release 5.4
NSLA	97-15	NSLA	SELECT	AREA NODES		Release 5.4
ORTHOTROPIC MAT	97-17	ORTHOTROPIC MAT	LSDYNA	POISSONS RATIO		Release 5.4
P-METHOD	97-38	COUPLING	NDELE	xCLEAR	SUPERELEMENTS P-METHOD	Release 5.4
PARALLEL	96-47	/CLEAR	DEC-ALPHA	PARALLEL		Release 5.4
PCG	97-36	SOLID87	PCG	JCG		Release 5.4
PCG SOLVER	97-05	STRUCTURAL ANAL	PCG SOLVER	IMPOSED DOF		Release 5.4

KEYWORD

ERROR
REPORT
NUMBER

COMPLETE KEYWORD LIST

VERSION
CORRECTED

PICKING	97-45	*AFUN,DEG	GUI	PICKING	ANGULAR FUNCTI	Release 5.4
PIPE16	96-40	PREP7	PIPE16	VALVE	BUNIF	Release 5.4
PIPE17	97-10	GUI	PIPE17	ELEM17	REAL CONSTANTS	Release 5.4
PIPE20	96-53	PIPE20	ELEM20	STRESS STIFFEN	ANTYPE,BUCKLE SSTIF,ON	Release 5.4
PIVOT TERM	97-04	HARMONIC RESPON	UNSYMMETRIC MAT	PIVOT TERM		Release 5.4
PLANE2	96-50 R1	SOLID92	PLANE2	SOLID87	CURVED EDGES	Release 5.4
PLANE2	97-11	PLANE2	SOLID92	RAMPED B.C.	MULTIPLE SOLUT	Release 5.4
PLANE25	97-20	PLANE25	ELEM25	TEMPERATURES	NONLINEAR	Release 5.4
PLANE53	97-07	MAGNETICS	VOLTAGE LOADING	PLANE53		Release 5.4
PLNSOL	96-51	/GRAPHICS,POWER	POST1	LCOPER	PLNSOL	Release 5.4
POISSONS RATIO	97-17	ORTHOTROPIC MAT	LSDYNA	POISSONS RATIO		Release 5.4
POST1	96-51	/GRAPHICS,POWER	POST1	LCOPER	PLNSOL	Release 5.4
POST1	97-25	POST1	LCASE	LCDEF		Release 5.4
POST26	97-53	SPECTRUM	POST26	RESPONSE PSD		Release 5.4
POWERGRAPHICS	97-54	GRAPHICS	POWERGRAPHICS	*VPJT		Release 5.5
PREP7	96-40	PREP7	PIPE16	VALVE	BUNIF	Release 5.4
PREP7	97-32	PREP7	AREA MESH	QUADRILATERALS	FREE MESH	Release 5.4
PRESSURE	97-18	LSDYNA	SOLID164	FDLOAD	PRESSURE	Release 5.4
PRESTRESSED	97-19	GUI	MODAL	PRESTRESSED	UPCOORD	Release 5.4
PSD	97-13	PSD	BASE EXCITATION	RPSD	A= -RESP PSD	Release 5.4
PSD	97-14	PSD				Release 5.4
PSD	97-42	SPECTRUM	PSD	SPOPT,PSD		Release 5.4
PSDWAV	97-26	SPECTRUM	PSDWAV	RANDOM VIBRATI	WAVE PROPAGATI	Release 5.4
PSOLVE	97-31	MODE SUPERPOSITI	LARGE DEFLECTIO	LVSCALE	PSOLVE	Release 5.4
PSTRESS,ON	96-53	PIPE20	ELEM20	STRESS STIFFEN	ANTYPE,BUCKLE SSTIF,ON	Release 5.4
QUADRILATERALS	97-32	PREP7	AREA MESH	QUADRILATERALS	FREE MESH	Release 5.4
RAMPED B.C.	97-11	PLANE2	SOLID92	RAMPED B.C.	MULTIPLE SOLUT	Release 5.4
RAMPED B.C.	97-21	SOLID5	SOLID98	THERMAL ANALYS	RAMPED B.C. HEAT FLUX	Release 5.4
RAMPING	96-45 R1	SURFACE LOADS	BODY FORCES	RAMPING		Release 5.4
RANDOM VIBRATION	97-26	SPECTRUM	PSDWAV	RANDOM VIBRATI	WAVE PROPAGATI	Release 5.4
RBE3	97-09	RBE3	CONSTRAINT EQUA			Release 5.4
REAL CONSTANT	97-55	REAL CONSTANT	TABLE NUMBER	GUI		Release 5.5
REAL CONSTANTS	97-10	GUI	PIPE17	ELEM17	REAL CONSTANTS	Release 5.4
REDUCED MODAL	97-30	LUMPED MASS	CONSTRAINT EQUA	REDUCED MODAL	SUBSTRUCTURE	Release 5.4
REFINEMENT	97-57	MESHING	REFINEMENT	LMESH		Release 5.5
REPEAT COUNT < 2	97-52	*REPEAT	REPEAT COUNT <			Release 5.5
RESISTANCE	97-43	EMAG	CIRCUIT	CIRCU124	ELEM124	Release 5.4
RESPONSE PSD	97-53	SPECTRUM	POST26	RESPONSE PSD		Release 5.4

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				VERSION CORRECTED
RIGID BODY	97-03	LSDYNA	EDLOAD	RIGID BODY		Release 5.4
ROTATED NODES	96-49	LSDYNA	ROTATED NODES			Release 5.4
ROTATED NODES	97-01	SOLID MODEL BCS	ROTATED NODES	DA		Release 5.4
RPSD	97-13	PSD	BASE EXCITATION	RPSD	ABS RESP PSD	Release 5.4
RSYS	97-58	DOCUMENTATION	LSDYNA	RSYS		5.5 Documentation
SAVE	96-44	SAVE	LOADS	INITIAL CONDIT /EXIT		Release 5.4
SELECT	96-52	DOCUMENTATION	SELECT			5.4 User Manual
SELECT	97-15	NSLA	SELECT	AREA NODES		Release 5.4
SELECT	97-40	SELECT	ALLSEL,BELOW			Release 5.4
SELECT	97-44	SELECT	ELEMENT	ESEL		Release 5.5
SENERGY	97-02 R1	MAGNETICS	SENERGY	MACRO		Release 5.4
SHELL150	96-41	ELEM150	SHELL150	ELEMENT VOLUME	ETABLE *GET	Release 5.4
SHELL181	97-22	SHELL181				Release 5.4
SHELL181	97-48	SHELL181	HYPEPELASTIC			Release 5.4
SOLID MODEL BCS	97-01	SOLID MODEL BCS	ROTATED NODES	DA		Release 5.4
SOLID MODELLING	96-38 R1	SOLID MODELLING	BOOLEAN	SUBTRACT	ASBL	Release 5.4
SOLID164	97-18	LSDYNA	SOLID164	EDLOAD	PRESSURE	Release 5.4
SOLID164	97-27	LSDYNA	SOLID164	ELEM164		Release 5.4
SOLID5	97-21	SOLID5	SOLID98	THERMAL ANALYS	RAMPED B.C. HEAT FLUX	Release 5.4
SOLID87	96-50 R1	SOLID92	PLANE2	SOLID87	CURVED EDGES	Release 5.4
SOLID87	97-36	SOLID87	PCG	JCG		Release 5.4
SOLID92	96-50 R1	SOLID92	PLANE2	SOLID87	CURVED EDGES	Release 5.4
SOLID92	97-11	PLANE2	SOLID92	RAMPED B.C.	MULTIPLE SOLUT	Release 5.4
SOLID98	97-21	SOLID5	SOLID98	THERMAL ANALYS	RAMPED B.C. HEAT FLUX	Release 5.4
SOURC36	97-24	MAGNETICS	BIOT-SAVART	SOURC36		Release 5.4
SPECTRUM	97-26	SPECTRUM	PSD WAV	RANDOM VIBRATI	WAVE PROPAGATI	Release 5.4
SPECTRUM	97-42	SPECTRUM	PSD	SPOPT,PSD		Release 5.4
SPECTRUM	97-53	SPECTRUM	POST26	RESPONSE PSD		Release 5.4
SPOPT,PSD	97-42	SPECTRUM	PSD	SPOPT,PSD		Release 5.4
SSTIF,ON	96-53	PIPE20	ELEM20	STRESS STIFFEN	ANTYPE,BUCKLE SSTIF,ON PSTRESS,ON	Release 5.4
STRESS STIFFENIN	96-53	PIPE20	ELEM20	STRESS STIFFEN	ANTYPE,BUCKLE SSTIF,ON PSTRESS,ON	Release 5.4
STRUCTURAL ANAL	97-05	STRUCTURAL ANAL	PCG SOLVER	IMPOSED DOF		Release 5.4
SUBSTRUCTURE	97-12	SUBSTRUCTURE	MATRIX50	DOF	MDOF TRI FILE	Release 5.4
SUBSTRUCTURE	97-30	LUMPED MASS	CONSTRAINT EQUA	REDUCED MODAL	SUBSTRUCTURE	Release 5.4
SUBTRACT	96-38 R1	SOLID MODELLING	BOOLEAN	SUBTRACT	ASBL	Release 5.4
SUPERELEMENTS	96-43	MATRIX50	SUPERELEMENTS	COUPLED DOF	NONZERO CONSTR	Release 5.4
SUPERELEMENTS	97-38	COUPLING	NDELE	XCLEAR	SUPERELEMENTS P-METHOD	Release 5.4
SURFACE LOADS	96-45 R1	SURFACE LOADS	BODY FORCES	RAMPING		Release 5.4

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				VERSION CORRECTED
TABLE NUMBER	97-55	REAL CONSTANT	TABLE NUMBER	GUI		Release 5.5
TEMPERATURES	97-20	PLANE25	ELEM25	TEMPERATURES	NONLINEAR	Release 5.4
THERMAL	97-41	THERMAL	FLUID			Release 5.5
THERMAL ANALYSIS	97-21	SOLID5	SOLID98	THERMAL ANALYS	RAMPED B. C.	Release 5.4
THERMAL EXPANSIO	96-46	CFD	THERMAL EXPANSI	FLUID141	FLUID142	Release 5.4
TRANSIENT	97-34	MODE SUPERPOSITI	HARMONIC	TRANSIENT		Release 5.4
TRI FILE	97-12	SUBSTRUCTURE	MATRIX50	DOF	MOOF	Release 5.4
UNSYMMETRIC MATR	97-04	HARMONIC RESPON	UNSYMMETRIC MAT	PIVOT TERM	TRI FILE	Release 5.4
UNSYMMETRIC MATR	97-28 R1	CONSTRAINT EQUAT	UNSYMMETRIC MAT	FRONTAL SOLVER		Release 5.4
UPCOORD	97-19	GUI	MODAL	PRESTRESSED	UPCOORD	Release 5.4
VALVE	96-40	PREP7	PIPE16	VALVE	BUNIF	Release 5.4
VOLTAGE LOADING	97-07	MAGNETICS	VOLTAGE LOADING	PLANE53		Release 5.4
WAVE PROPAGATION	97-26	SPECTRUM	PSDWAV	RANDOM VIBRATI	WAVE PROPAGATI	Release 5.4
WINDOWS 95	97-33	WINDOWS NT	WINDOWS 95	/COPY		Release 5.4
WINDOWS NT	97-33	WINDOWS NT	WINDOWS 95	/COPY		Release 5.4
YPLU	97-46	CFD	FLOTRAN	YPLU		Release 5.4
XCLEAR	97-38	COUPLING	NDELE	XCLEAR	SUPERELEMENTS P-METHOD	Release 5.4

ANSYS 5.4 CLASS3 ERROR SUMMARY BY REPORT NUMBER

ERROR NUMBER	KEYWORD #1	KEYWORD #2	KEYWORD #3	KEYWORD #4	KEYWORD #5	KEYWORD #6	CORRECTED VERSION
97-41	THERMAL	FLUID					Release 5.5
97-44	SELECT	ELEMENT	ESEL				Release 5.5
97-49	POST1	PLESOL	SHELL	/GRAPHICS,FULL	SHELL ELEMENTS		Release 5.5
97-50	VMESH	VDRAG	VECT	VOFFST	VROTAT		Release 5.5
97-51	SPARSE SOLVER	EQSLV,SPARSE	CONSTRAINT EQUA	MULTIPLE LOAD S			Release 5.5
97-52	*REPEAT	REPEAT COUNT <					Release 5.5
97-54	GRAPHICS	POWERGRAPHICS	*VPUT				Release 5.5
97-55	REAL CONSTANT	TABLE NUMBER	GUI				Release 5.5
97-56	*VGET	COORDINATE SYST					Release 5.5
97-57	MESHING	REFINEMENT	LMESH				Release 5.5
97-58	DOCUMENTATION	LSDYNA	RSYS				5.5 Documentation

ANSYS 5.4 CLASS3 ERROR SUMMARY

KEYWORD SORT OF ALL REVISION 5.4 CLASS3 ERRORS

Date of this report: 1/8/98

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST	VERSION CORRECTED
*REPEAT	97-52	REPEAT COUNT <	Release 5.5
*VGET	97-56	COORDINATE SYST	Release 5.5
*VPUT	97-54	POWERGRAPHICS	Release 5.5
/GRAPHICS, FULL	97-49	POST1 SHELL	Release 5.5
CONSTRAINT EQUAT	97-51	CONSTRAINT EQU MULTIPLE LOAD	Release 5.5
COORDINATE SYSTE	97-56	EOSLV, SPARSE	Release 5.5
DOCUMENTATION	97-58	COORDINATE SYST	Release 5.5
ELEMENT	97-44	LS DYNA	5.5 Documentation
EOSLV, SPARSE	97-51	ELEMENT	Release 5.5
ESEL	97-44	EOSLV, SPARSE	Release 5.5
FLUID	97-41	ELEMENT	Release 5.5
GRAPHICS	97-54	FLUID	Release 5.5
GUT	97-55	POWERGRAPHICS	Release 5.5
LMESH	97-57	TABLE NUMBER	Release 5.5
LS DYNA	97-58	REFINEMENT	Release 5.5
MESHING	97-57	LS DYNA	Release 5.5
MULTIPLE LOAD ST	97-51	REFINEMENT	Release 5.5
PLESOL	97-49	EOSLV, SPARSE	Release 5.5
POST1	97-49	PLESOL	Release 5.5
POWERGRAPHICS	97-54	PLESOL	Release 5.5
REAL CONSTANT	97-55	POWERGRAPHICS	Release 5.5
REFINEMENT	97-57	TABLE NUMBER	Release 5.5
REPEAT COUNT < 2	97-52	REFINEMENT	Release 5.5
RSYS	97-58	REPEAT COUNT <	Release 5.5
SELECT	97-44	LS DYNA	5.5 Documentation
SHELL	97-49	ELEMENT	Release 5.5
SHELL ELEMENTS	97-49	PLESOL	Release 5.5
SPARSE SOLVER	97-51	PLESOL	Release 5.5
TABLE NUMBER	97-56	EOSLV, SPARSE	Release 5.5
THERMAL	97-54	TABLE NUMBER	Release 5.5
VORAG	97-50	FLUID	Release 5.5
VEXT	97-50	VORAG	Release 5.5
VMESH	97-50	VORAG	Release 5.5
		VMESH	Release 5.5
		VRROT	Release 5.5
		VROFFST	Release 5.5
		VROFFST	Release 5.5
		VROFFST	Release 5.5

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				VERSION CORRECTED
VFFST	97-50					Release 5.5
VROTAT	97-50					Release 5.5
		VMESH	VORAG	VLAT	VFFST	VROTAT
		VMESH	VORAG	VLAT	VFFST	VROTAT