

October 18, 2000

G9000-SSG-011

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,



Mark S. Snyder
Nuclear Administrator
Phone: (425) 865-4785
FAX: (425) 865-2957
Mail Code: 7A-33
e-mail: mark.s.snyder@boeing.com

Enclosure(s): ANSYS Class3 Error Reports 2000-01 through 2000-24

IE20



GTSTRUDL Program Report Form 2000.10

GTSTRUDL Program Report Form 2000.11

ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-01

KEYWORDS: *CONTACT* *TEMPERATURE DEPENDENT* *MATERIAL PROPERTY*
CONTA171 *CONTA172* *CONTA173* *CONTA174*

DESCRIPTION OF ERROR:

The friction coefficient Mu used by elements CONTA171, CONTA172, CONTA173 and CONTA174 is always evaluated at a zero degree temperature ignoring any user defined temperature dependency.

TYPICAL GUI PATH(S):

FIRST INCORRECT VERSION(S):*

Release 5.4

CORRECTED IN:*

Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

COMMENTS:

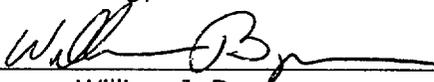
AUTHOR/CORRECTOR:



Yongyi Zhu

DATE: February 4, 2000

REVIEWED BY QA:



William J. Bryan

DATE: February 4, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 4, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-02

KEYWORDS: *POST1* *FSUM* *NFORCE*
 CONTA171 *CONTA172* *CONTA173* *CONTA174*

DESCRIPTION OF ERROR:

POST1 FSUM and NFORCE results are incorrect if the selected set of elements contains CONTA171, CONTA172, CONTA173, or CONTA174 elements for which the contact status has changed during the load step.

TYPICAL GUI PATH(S):

Main Menu>General Postproc>Nodal Calcs

FIRST INCORRECT VERSION(S):*

Release 5.5

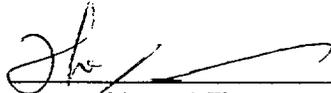
CORRECTED IN:*

Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Unselect contact elements (CONTA171, 172, 173, and 174) before doing FSUM or NFORCE commands.

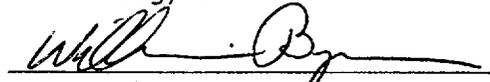
AUTHOR/CORRECTOR:



Yongyi Zhu

DATE: February 8, 2000

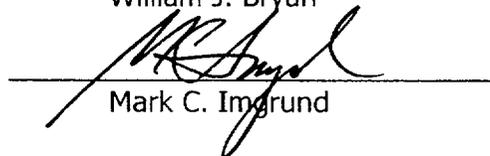
REVIEWED BY QA:



William J. Bryan

DATE: February 8, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 8, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-03

KEYWORDS: *VGEN* *VSYM* *VTRAN* *VLSCALE*

DESCRIPTION OF ERROR:

The VGEN, VSYM, VTRAN, or VLSCALE commands can create duplicate (overlapping and coincident) elements on an area under the following conditions:

1. The area is meshed with area elements, and
2. The area belongs to 2 volumes that were created at the same time by VGEN, VSYM, VTRAN, or VLSCALE, and
3. There are no internal nodes in the area (i.e., there is 1 element division).

If you issue an ACLEAR,ALL, the original and correctly duplicated element are deleted, but the extra element remains.

TYPICAL GUI PATH(S):

Copy>Volumes

FIRST INCORRECT VERSION(S):*

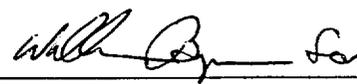
Rev. 5.1

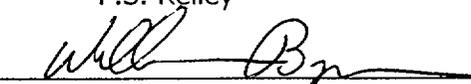
CORRECTED IN:*

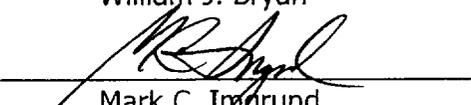
Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Issue NUMMRG,ELEM after any volume copy meeting the above conditions.

AUTHOR/CORRECTOR:  _____ **DATE:** February 4, 2000
F.S. Kelley

REVIEWED BY QA:  _____ **DATE:** February 4, 2000
William J. Bryan

APPROVAL:  _____ **DATE:** February 4, 2000
Mark C. Imgrund

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-04

KEYWORDS:

HARMONIC

EXPSOL

DESCRIPTION OF ERROR:

EXPSOL,,,timfrq incorrectly expands the next highest frequency solution, rather than the closest solution to 'timfrq' as documented.

TYPICAL GUI PATH(S):

Main Menu>Solution>ExpansionPass>By Time/Freq
Main Menu>Preprocessor>Loads>ExpansionPass>By Time/Freq

FIRST INCORRECT VERSION(S):*

Rev. 5.0

CORRECTED IN:*

Release 5.7

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use LSTEP and/or SBSTEP for EXPSOL command.

COMMENTS:

Note that the **FREQ** label in the EXPSOL output reports the closest frequency solution but the expanded solution is always from the next highest frequency solution. For cases where the next highest frequency solution is actually the solution closest to the frequency solution (timfrq) indicated on the EXPSOL command, results are correct.

AUTHOR/CORRECTOR:



Young-Hun Lim

DATE: February 4, 2000

REVIEWED BY QA:



William J. Bryan

DATE: February 4, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 4, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-05

KEYWORDS: *IRLF* *MASS21* *MASS MOMENT OF INERTIA*

DESCRIPTION OF ERROR:

Precise moments of inertia about the center of mass are not calculated correctly if the mass is different in X, Y, or Z directions with the MASS21/MATRIX27 elements using inertial relief (IRLF). IRLF output, seen during local solution output when using IRLF, and with the IRLIST command is documented to take into account the unequal mass distribution.

TYPICAL GUI PATH(S):

Solution>Other>Inertia Relief

FIRST INCORRECT VERSION(S):*

Rev. 5.1

CORRECTED IN:*

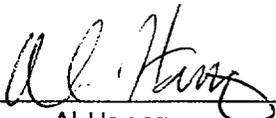
Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

COMMENTS:

This error does not affect normal (imprecise) mass moment of inertia calculations. Normal mass moment of inertia calculations are documented as ignoring different masses in different directions. See section 15.15 in the Theory Manual for more details.

AUTHOR/CORRECTOR:



Al Hancq

DATE: February 18, 2000

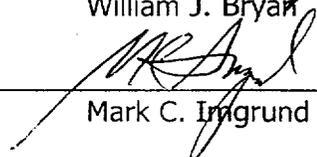
REVIEWED BY QA:



William J. Bryan

DATE: February 18, 2000

APPROVAL:



Mark C. Inggrund

DATE: February 18, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-06

KEYWORDS: *QUERY PICKING* *CSYS* *LOCAL* *CLOCAL*

DESCRIPTION OF ERROR:

If a local coordinate system has been defined (LOCAL or CLOCAL command), then entering the query picker will cause the current active coordinate system to be set to the highest numbered local coordinate system.

TYPICAL GUI PATH(S):

List>Picked Entities

FIRST INCORRECT VERSION(S):*

Release 5.6

CORRECTED IN:*

Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Reset the active coordinate system (CSYS command) after entering the query picker.

COMMENTS:

AUTHOR/CORRECTOR:



Dick DePaul

DATE: February 29, 2000

REVIEWED BY QA:



William J. Bryan

DATE: February 29, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 29, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-07

KEYWORDS: *TB* *BOYCE*

DESCRIPTION OF ERROR:

Arruda-Boyce hyperelastic model may yield incorrect results. The scope or severity of this error could not be quantified due to algorithmic implementation deficiencies. Therefore, it is recommended that 5.6.1 version be used for all models that use this material model.

TYPICAL GUI PATH(S):

FIRST INCORRECT VERSION(S):*

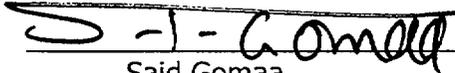
Release 5.6

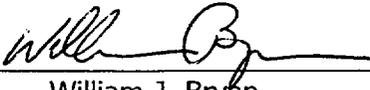
CORRECTED IN:*

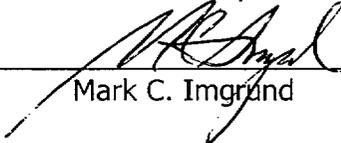
Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

COMMENTS:

AUTHOR/CORRECTOR:  **DATE:** February 29, 2000
Said Gomaa

REVIEWED BY QA:  **DATE:** February 29, 2000
William J. Bryan

APPROVAL:  **DATE:** February 29, 2000
Mark C. Imgrund

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-08

KEYWORDS: *LSDYNA* *POST26* *SHEAR STRESS*

DESCRIPTION OF ERROR:

When post-processing ANSYS/LS-Dyna results in POST26, reported shear stress data are twice the correct value.

TYPICAL GUI PATH(S):

POST26>List Variables

FIRST INCORRECT VERSION(S):*

Release 5.6

CORRECTED IN:*

Release 5.6.1

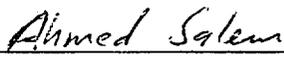
SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use POST1 to print the element shear stresses in ANSYS/LS-Dyna Release 5.6.

COMMENTS:

Error in POST26 output only.

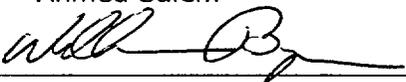
AUTHOR/CORRECTOR:



Ahmed Salem

DATE: February 29, 2000

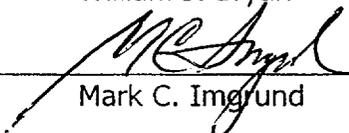
REVIEWED BY QA:



William J. Bryan

DATE: February 29, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 29, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-09

KEYWORDS: *MODAL CYCLIC* *POST1* *EXPAND*

DESCRIPTION OF ERROR:

The POST1 EXPAND command for displaying results of a modal cyclic analysis does not properly scale the mode shape.

TYPICAL GUI PATH(S):

Main Menu>General Postproc>Modal Cyclic Sym

FIRST INCORRECT VERSION(S):*

Rev. 5.0

CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use modal analysis for the full model.

COMMENTS:

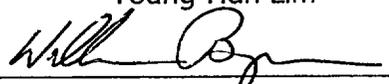
AUTHOR/CORRECTOR:



Young-Hun Lim

DATE: March 13, 2000

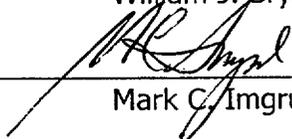
REVIEWED BY QA:



William J. Bryan

DATE: March 13, 2000

APPROVAL:



Mark C. Imgrund

DATE: March 13, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-10

KEYWORDS: DL DA SYMMETRY REFINEMENT OPERATION
IMPROVEMENT OPERATION

DESCRIPTION OF ERROR:

- 1) If a node belongs to a curved line or non-flat area having a DL or DA symmetry or antisymmetry constraint,
- and 2) The node has constraints and rotations from previous transfer of the DL or DA (SOLVE, SBCTRAN, DTRAN),
- and 3) The node is then moved to a new location on the line or area by a refinement operation (EREFINE, NREFINE, KREFINE, LREFINE or AREFINE) or a tetrahedron mesh improvement operation (TIMP or VIMP),

Then the existing constraints and rotations are not changed to be appropriate for the new location.

The node may require updated DOF constraints or node rotations in order to properly enforce the symmetry or antisymmetry condition.

In any subsequent solution, the DL or DA constraint may either:

- a) not retransfer, erroneously leaving the old constraint and rotation in place, or
- b) retransfer, erroneously combining the previous and new constraints in a manner that restrains too many DOFs at the node.

TYPICAL GUI PATH(S):

Preprocessor>MeshTool>Refine

FIRST INCORRECT VERSION(S):*

Release 5.3

CORRECTED IN:*

Release 5.7

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

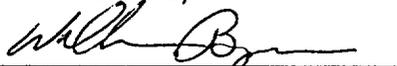
Delete all transferred nodal constraints and rotations [DDEL,ALL \$ CSYS,0 \$ NROT,ALL] immediately before or after any refine operation. This will allow the automatic re-transfer of the DL or DA constraint to apply the correct nodal rotations and constraints.

AUTHOR/CORRECTOR:


F. S. Kelley

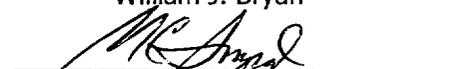
DATE: March 20, 2000

REVIEWED BY QA:


William J. Bryan

DATE: March 20, 2000

APPROVAL:


Mark C. Imgrund

DATE: March 20, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-11

KEYWORDS: *GRAPHICS* *PLNS* *SHELL163* *POWERGRAPHICS*

DESCRIPTION OF ERROR:

Nodal results displays and listings (i.e. PLNS and PRNS) in PowerGraphics (i.e. /GRAPHICS,POWER) are incorrect when LSDYNA and SHELL163 are in effect.

TYPICAL GUI PATH(S):

Utility Menu/Plot/Results/Contour Plot/Nodal Solution
Main Menu/General PostProc/Plot Results/Nodal Solution

FIRST INCORRECT VERSION(S):*

Release 5.5

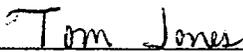
CORRECTED IN:*

Release 5.6

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use /GRAPHICS,FULL when LSDYNA and SHELL163 are in effect.

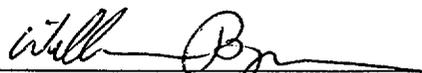
AUTHOR/CORRECTOR:



Tom Jones

DATE: March 20, 2000

REVIEWED BY QA:



William J. Bryan

DATE: March 20, 2000

APPROVAL:



Mark C. Imgrund

DATE: March 20, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-12

KEYWORDS: *GRAPHICS RESULTS PICKING SYSTEM PC WINDOWS*

DESCRIPTION OF ERROR:

On Windows 95/98/NT systems, when performing results picking with shell elements that have different bottom/top values, the displayed values do not update when the element image is rotated.

TYPICAL GUI PATH(S):

PostProcessing>Query results

FIRST INCORRECT VERSION(S):*

Release 5.5

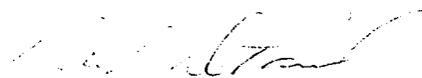
CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Exit and re-enter the results query picker when rotating shells.

AUTHOR/CORRECTOR:



Dick DePaul

DATE: March 20, 2000

REVIEWED BY QA:



William J. Bryan

DATE: March 20, 2000

APPROVAL:



Mark C. Imgrund

DATE: March 20, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-13

KEYWORDS:

TABULAR BOUNDARY CONDITIONS

COUPLING

DESCRIPTION OF ERROR:

If a load is applied to a DOF using the tabular boundary condition format (%name% for the VALUE field on D, F, DK or FK commands) and that DOF is also part of a coupled set (CP command), then the solution is incorrect.

TYPICAL GUI PATH(S):

Main Menu>Preprocessor>Loads>Apply
Main Menu>Solution>Apply

FIRST INCORRECT VERSION(S):*

Release 5.5

CORRECTED IN:*

Release 5.6

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Apply the tabular load to a non-coupled DOF or replace the coupling with a constraint equation.

COMMENTS:

The load which is applied throughout the analysis corresponds to the value at time=0.

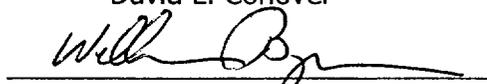
AUTHOR/CORRECTOR:



David L. Conover

DATE: April 13, 2000

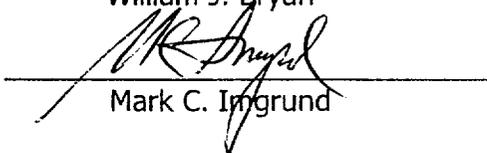
REVIEWED BY QA:



William J. Bryan

DATE: April 13, 2000

APPROVAL:



Mark C. Ingrund

DATE: April 13, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-14

KEYWORDS: POST1 SET COMMAND BEAM188 BEAM189

DESCRIPTION OF ERROR:

The stresses reported by PLNSOL, PLESOL, or PRSSOL commands for BEAM188 and BEAM189 are erroneous if:

1. the SET command is issued in /POST1, and
2. the beam cross section mesh has an even multiple of 11 corner nodes. Note: This will not occur when defining cross-sections through the beam tool.

TYPICAL GUI PATH(S):

Main Menu>General Postproc>Plot Results>Nodal Solution
Main Menu>General Postproc>Plot Results>Elements Solution
Utility Menu>Plot>Results>Contour Plot>Elem Solution
Main Menu>General Postproc>List Results>Section Solution
Utility Menu>List>Results>Section Solution

FIRST INCORRECT VERSION(S):*

Release 5.5

CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Avoid the above conditions in the following way:

1. Do not use the SET command in post-processing. Use only the default (last) results in the database in /POST1 instead of reading from the results files.

Example:

```
/SOLUTION
SOLVE
FINI
/POST1
PLNS,S,X
```

2. Change the cross section mesh (refine or coarsen) so that the number of nodes is not a multiple of 11.

AUTHOR/CORRECTOR:


Jay Oppenheim

DATE: April 25, 2000

REVIEWED BY QA:


William J. Bryan

DATE: April 25, 2000

APPROVAL:


Mark G. Imgrund

DATE: April 25, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-15

KEYWORDS: *POST26* *ESOL* *MAGNETICS* *FMAG*

DESCRIPTION OF ERROR:

Incorrect data is retrieved from the results file in POST26 when using the ESOL command to store the magnitude of electromagnetic forces (Item,Comp=FMAG,SUM).

TYPICAL GUI PATH(S):

Main Menu>TimeHist Postpro>Define Variables

FIRST INCORRECT VERSION(S):*

Rev. 5.0

CORRECTED IN:*

Release 5.7

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Store the component force values (FX, FY, FZ) and use the POST26 operation commands to compute the force magnitude.

AUTHOR/CORRECTOR:



Vladimir Zhulin

DATE: April 25, 2000

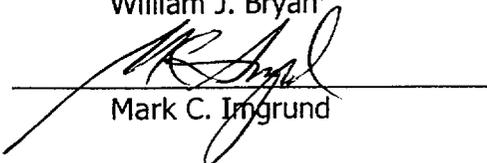
REVIEWED BY QA:



William J. Bryan

DATE: April 25, 2000

APPROVAL:



Mark C. Imgrund

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-16

KEYWORDS: *CFD* *FLUID* *SPECIES TRANSPORT*

DESCRIPTION OF ERROR:

Turbulent diffusion coefficients, input with "MSPROP, SPEC#, MDIF", are used incorrectly. This results in the turbulent mass diffusion being incorrect because a factor of the density is missing. Cases with a density greater than one will underestimate the mass diffusion, and those with a density less than one will over-predict turbulent diffusion.

TYPICAL GUI PATH(S):

Preprocessor>Flotran Setup>Multiple Species>Properties

FIRST INCORRECT VERSION(S):*

Release 5.5

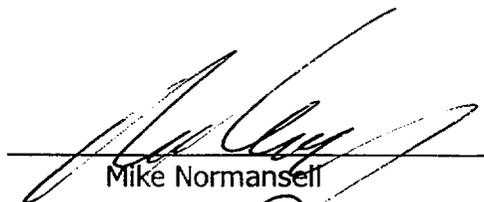
CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

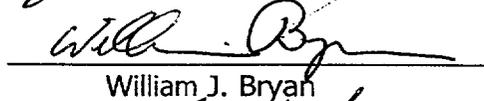
Adjust model properties such that the density is exactly one and the Reynold's number is unchanged. Variable density cases will not be possible when using this approach, but the user should be able to set representative results by setting the Schmidt number to the inverse of the average density for all species present.

AUTHOR/CORRECTOR:


Mike Normansell

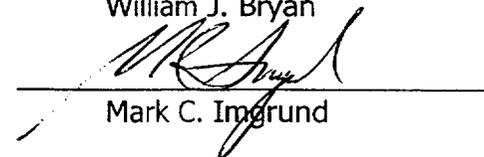
DATE: April 25, 2000

REVIEWED BY QA:


William J. Bryan

DATE: April 25, 2000

APPROVAL:


Mark C. Imgrund

DATE: April 25, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-17

KEYWORDS: *MECHANICAL TOOLBAR* *MM-KG UNITS*

DESCRIPTION OF ERROR:

Material density is incorrectly scaled when using the Mechanical Toolbar interface with the mm-kg-s-C system of units. Because of this, results of a modal analysis are incorrect (frequencies are too low by the square root of 1000 [31.623]) and results of a static analysis are incorrect if gravity or angular velocity was applied as a body load.

TYPICAL GUI PATH(S):

Utility Menu>MenuCtrls>Mechanical Toolbar

FIRST INCORRECT VERSION(S):*

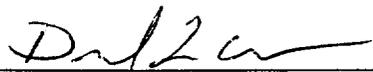
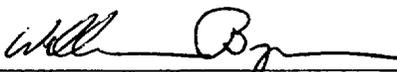
Release 5.5.3

CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use another system of units or create a user-defined material with the density input in metric tons/mm³ (10³kg/mm³).

AUTHOR/CORRECTOR:	 _____ David L. Conover	DATE: April 25, 2000
REVIEWED BY QA:	 _____ William J. Bryan	DATE: April 25, 2000
APPROVAL:	 _____ Mark C. Imgrund	DATE: April 25, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-18

KEYWORDS: *CFD KXX RESTART CONJUGATE HEAT TRANSFER FLUID*

DESCRIPTION OF ERROR:

Results will be incorrect if a conjugate heat transfer problem that uses ANSYS solid material property KXX in the solid region is solved in FLOTRAN and then restarted with a changed KXX value. The new KXX value is reported in the FLOTRAN print file (jobname.pfl), but is not used in the analysis. The previous solution's value is erroneously used instead.

TYPICAL GUI PATH(S):

Preprocessor>Material Props

FIRST INCORRECT VERSION(S):*

Release 5.4

CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Exit ANSYS, then restart ANSYS and resume the database before changing material properties.

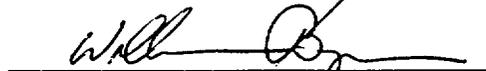
AUTHOR/CORRECTOR:



Mike Normansell

DATE: April 25, 2000

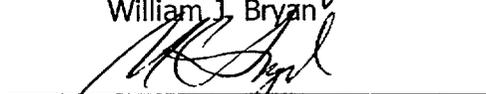
REVIEWED BY QA:



William J. Bryan

DATE: April 25, 2000

APPROVAL:



Mark C. Imgrund

DATE: April 25, 2000

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^ ^ ^
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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-19

KEYWORDS: BEAM44 MODAL BLOCK LANCZOS CONSTRAINT EQUATIONS

DESCRIPTION OF ERROR:

For any model containing the BEAM44 element (tapered beam), modal analysis (ANTYPE,MODAL) results will be incorrect when the following two conditions are met:

1. A 'released' degree of freedom in BEAM44 (KEYOPT(7)=0 or KEYOPT(8)=0) is part of a constraint equation (CE) and
2. The Block Lanczos eigensolver is used with the Lagrange multiplier method of eliminating constraint equations (MODOPT,LANB,n,,, ,cekey, where cekey = 1 or 2).

TYPICAL GUI PATH(S):

PREP7>Element Type>Beam (Tapered 44)>Options>Stiff. Release Node I
SOLU>Modal>Analysis Option>Block Lan>CEkey>Lagrange

FIRST INCORRECT VERSION(S):*

Release 5.4

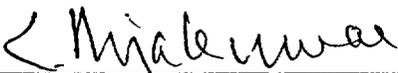
CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

When stiffness 'release' is activated in BEAM44, use the direct elimination method of eliminating constraint equations for Block Lanczos eigensolver (MODOPT,LANB,,, ,0).

AUTHOR/CORRECTOR:



Charles Rajakumar

DATE: April 25, 2000

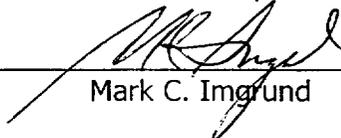
REVIEWED BY QA:



William J. Bryan

DATE: April 25, 2000

APPROVAL:



Mark C. Imgrund

DATE: April 25, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-20

KEYWORDS: *MAGNETICS* *PLANE53* *HARMONIC*
 TRANSIENT *POWERH* *PMGTRAN*

DESCRIPTION OF ERROR:

A PLANE53 element with the voltage-fed stranded coil option (KEYOPT(1)=2) computes incorrect Joule loss when the coil fill factor (real constant FILL) of the element is not equal to unity. Joule loss is retrieved in POST1 using the ETABLE command, the POWERH command macro, and in POST26 using the PMGTRAN command macro.

TYPICAL GUI PATH(S):

Main Menu>General Postproc>Element Table>Define Table
Main Menu>General Postproc>Elec&Mag Calc>Power Loss
Main Menu>TimeHist Postpr>Elec&Mag>Magnetics

FIRST INCORRECT VERSION(S):*

Rev. 5.1

CORRECTED IN:*

Release 5.6.2

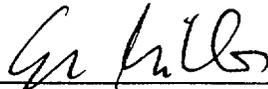
SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

After obtaining the Joule heat, scale the result by the fill factor. The power loss must be:

$$P = RI^2$$

where R is the resistance and I is the current. Note that the element resistance values are computed properly. (Element resistance values are stored in the element NMISC record, sequence number 8).

AUTHOR/CORRECTOR:



Miklos Gyimesi

DATE: May 9, 2000

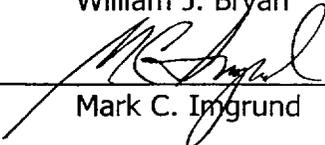
REVIEWED BY QA:



William J. Bryan

DATE: May 9, 2000

APPROVAL:



Mark C. Inggrund

DATE: May 9, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-22

KEYWORDS: *MECHANICAL TOOLBAR* *APPLIED DISPLACEMENTS*
 NON-GLOBAL CARTESIAN COORDINATE SYSTEM

DESCRIPTION OF ERROR:

When using the Mechanical Toolbar interface, result displays are incorrect when an applied displacement (non-zero displacement) is applied in a non-Global Cartesian coordinate system. Reaction forces are also incorrect.

The displacement values are interpreted as being in global Cartesian when in fact they are in a rotated nodal coordinate system. Stresses and strains are correct.

TYPICAL GUI PATH(S):

Utility Menu>MenuCtrls>Mechanical Toolbar

FIRST INCORRECT VERSION(S):*

Release 5.5.3

CORRECTED IN:*

Release 5.6.2

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

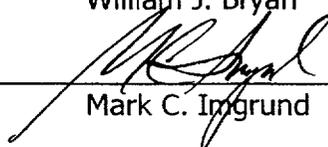
Apply all displacements in the Global Cartesian system.

AUTHOR/CORRECTOR: 

David L. Conover **DATE:** May 10, 2000

REVIEWED BY QA: 

William J. Bryan **DATE:** May 10, 2000

APPROVAL: 

Mark C. Imgrund **DATE:** May 10, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-23

KEYWORDS: *SFCUM* *HEAT FLUX*

DESCRIPTION OF ERROR:

The SFCUM command erroneously changes heat flux loads applied on nodes (SF, HFLUX command) into convection loads (CONV) when used with the ADD option.

TYPICAL GUI PATH(S):

Main Menu>Solution>Settings>Surface Loads

FIRST INCORRECT VERSION(S):*

Release 5.4

CORRECTED IN:*

Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use the replace option (REPL) on the SFCUM command if possible to obtain the correct loading,

AUTHOR/CORRECTOR:


Vladimir Zhulin

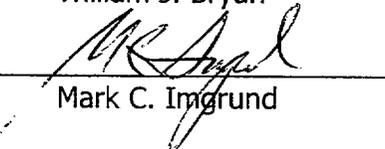
DATE: June 16, 2000

REVIEWED BY QA:


William J. Bryan

DATE: June 16, 2000

APPROVAL:


Mark C. Imgrund

DATE: June 16, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 2000-24

KEYWORDS: *DENSITY* *PLANE2* *SOLID92*

DESCRIPTION OF ERROR:

PLANE2 and SOLID92 elements may generate a mass matrix based on random numbers when the density is not input or is input as 0.0 or blank on the MP,DENS command in a linear analysis. This will have an effect only if a dynamic (transient, harmonic, or modal) analysis is being performed or if accelerations or angular velocities are present.

Nonlinear analyses and axisymmetric PLANE2 (KEYOPT(3)=1) analyses are not affected by this error.

FIRST INCORRECT VERSION(S):*

Release 5.3

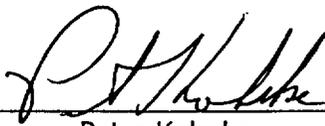
CORRECTED IN:*

Release 5.7

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

If a value of zero for density is desired for these elements when performing a dynamic analysis or loading with accelerations or rotational velocities, give them a very small positive value of density, such as 1.0e-20.

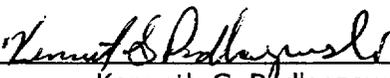
AUTHOR/CORRECTOR:



Peter Kohnke

DATE: June 30, 2000

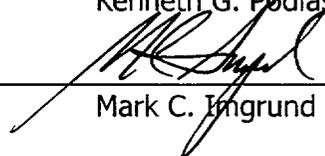
REVIEWED BY QA:



Kenneth G. Podlaszewski

DATE: June 30, 2000

APPROVAL:



Mark C. Imgrund

DATE: June 30, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 1999-23 R1

KEYWORDS: AREVERSE SHELL ANORM AMESH

DESCRIPTION OF ERROR:

Elements meshed onto an area may not follow the area normal direction. For shell elements, this could cause pressure loadings to be oriented opposite to the expected direction.

1. This error has been observed in areas whose normal directions have been reversed by the AREVERSE or ANORM command prior to meshing, but only when a "free" quad or triangle mesher has been used, not the "mapped" quad mesher. (Under typical circumstances, ANSYS chooses between free and mapped meshers based upon topology and/or geometry of the area. It may not be obvious which mesher was used in a given situation. User control of mesher choice is provided by MOPT,AMESH options DEFAULT, MAIN, etc, and by MSHKEY.)

2. It has also been observed when meshing an area attached to exactly 1 meshed volume. In this case, the area element normals are oriented outward from the meshed volume, without regard to the area normal.

FIRST INCORRECT VERSION(S):*

Release 5.5

CORRECTED IN:*

Release 5.6¹

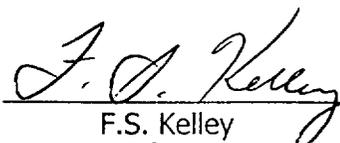
Release 5.6.1¹

¹This error is corrected in Release 5.6 for many cases. However, for areas that are not flat and are meshed using the MAIN free quad or triangle mesher (see **MOPT,AMESH** options), it is corrected in Release 5.6.1.

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

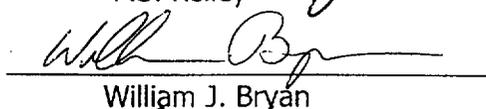
Verify element normals graphically (see /NORMAL command). If incorrect, apply AREVERSE (once or twice as needed, allowing it to reorient elements to match the area normal), ENORM, or ENSYM to correct the element normals.

AUTHOR/CORRECTOR:


F.S. Kelley

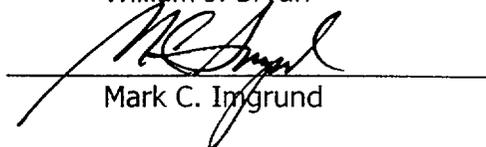
DATE: January 20, 2000

REVIEWED BY QA:


William J. Bryan

DATE: January 20, 2000

APPROVAL:


Mark C. Imgrund

DATE: January 20, 2000

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ANSYS CLASS3 ERROR REPORT

ERROR NO: 1999-47 R1

KEYWORDS: HARMONIC MODE SUPERPOSITION ALPHA DAMPING BETA DAMPING

DESCRIPTION OF ERROR:

Harmonic analysis using the modal superposition method (ANTYPE,HARMIC with HROPT,MSUP) produces incorrect results when Rayleigh damping is used (ALPHAD and BETAD commands).

TYPICAL GUI PATH(S):

Main Menu>Solution>Time/Frequenc>Damping

Main Menu>Preprocessor>Loads>Time/Frequenc>Damping

FIRST INCORRECT VERSION(S):*

Rev. 5.0

CORRECTED IN:*

Release 5.6.1

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use the full harmonic analysis for ALPHAD or BETA damping. Alternatively, use only constant damping (DMPRAT command) or modal damping (MDAMP command) with mode superposition method.

COMMENTS:

In the incorrect version, the modal damping ratio (Equation 15.11-22 of the Theory Manual) is incorrectly calculated using the excitation frequency rather than the natural frequency, ω_j , of each mode. The damping is therefore not constant across all excitation frequencies.

For a given excitation frequency Ω , the damping ratio used for each mode is:

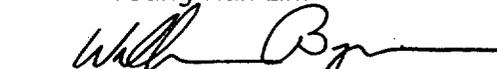
$$\xi_j = (\alpha/2\Omega) + (\beta\Omega/2) \text{ in place of the correct expression } \xi_j = (\alpha/2\omega_j) + (\beta\omega_j/2)$$

AUTHOR/CORRECTOR:


Young-Hun Lim

DATE: January 25, 2000

REVIEWED BY QA:


William J. Bryan

DATE: January 25, 2000

APPROVAL:


Mark C. Imgrund

DATE: January 25, 2000

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An identifier that is 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.

Equivalent Product Identifiers

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 QA NOTICE

QA Notice No. QA 2000-01

KEYWORDS: *P-METHOD STRESS CONVERGENCE*

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 notice is determined, this QA Notice will be updated and re-issued along with a Class3 Error Report, if required.

P-method elements can compute excessively high stresses and fail to converge under the following conditions:

1. The location of interest is on a curved element boundary that is not a stress singularity, and
2. Some, but not all translational degrees of freedom are constrained on an element face attached to the location of interest [for example, where displacements normal to a surface are constrained, but those tangent to it are not], and
3. The p-level of the element is at least 3.

As the p-level rises above 2, the computed stress can increase well above the correct value. For the only observed occurrence of this notice, the p-level became elevated at the location of interest only because a tight (1%) stress convergence control was placed there. The solution terminated without convergence.

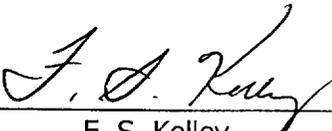
AFFECTED VERSIONS:

Release 5.0 through 5.6

SUGGESTED USER ACTION:

Limit the p-level to 2 for curved elements having partial constraints. If highly accurate stress values are required at such a location, refine the mesh rather than increasing the local p-level.

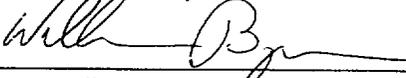
AUTHOR/CORRECTOR:



F. S. Kelley

DATE: January 20, 2000

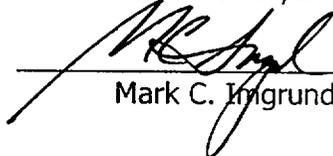
REVIEWED BY QA:



William J. Bryan

DATE: January 20, 2000

APPROVAL:



Mark C. Imgrund

DATE: January 20, 2000

ANSYS QA NOTICE

NOTICE NO. QA2000-02

SUBJECT: *SPECTRUM* *PSD* *PSDVAL*

DESCRIPTION: For random vibration analyses (ANTYPE,SPECTRUM with SPOPT,PSD), the mean square response integral (equation 17.7-50 of the Theory Manual) is computed using a closed-form integration technique where the input PSD curve (PSDFRQ and PSDVAL commands) is curve-fitted to a polynomial to allow for the closed form integration. The use of a closed-form integration is much more efficient than the numerical integration technique used prior to ANSYS 5.3.

Each segment of the input PSD curve is fitted to a polynomial, where each segment is linear in log-log scale (as it is input) but is highly nonlinear in non-log scale (where the fit takes place). If the polynomial fit is not good, inaccurate and sometimes incorrect solutions can be obtained (refer to Class3 Error Reports 97-14, 97-42, and 1998-07R1).

The curve-fitting algorithm has been improved each release as a response to difficulties encountered, but these modifications do not address the fundamental inexactness of fitting a polynomial to an exponential function.

TYPICAL GUI PATH(S):

Main Menu>Solution>Spectrum>PSD vs Freq.

AFFECTED VERSIONS: Release 5.3 and later

SUGGESTED USER ACTION:

It has been observed that whenever consecutive spectral values (PSDVAL, COVAL, QDVAL commands) span more than one order of magnitude, the curve-fit becomes more inaccurate. Adding an intermediate point(s) to the input curve will produce a more accurate solution. For instance, the following input spectrum:

```
PSDFRQ,1,,60,2000  
PSDVAL,1,.0002,.16
```

is more accurately represented when additional points are inserted (maintaining the linear relationship in log-log scale):

```
PSDFRQ,1,,60,254,1030,2000  
PSDVAL,1,.0002,.003131,.045158,.16
```

The table below illustrates the maximum displacement response obtained using the two input curves and different releases of ANSYS:

Number of Input Points

Release	2 Points	4 Points
5.4	.1904	.2208
5.5.3	.2267	.2208
5.6	.2208	.2208

At ANSYS 5.6, the curve-fitted polynomials can be displayed, overlaid on the input PSD curve (PSDGRAPH command, Main Menu>Solution>Loads>Spectrum>Plot Tables), so that the accuracy of the fit can be judged. If the fit is not good, additional points can be added to the input curve using the following equations (in APDL):

ANSYS QA NOTICE

Page 2 of 2

NOTICE NO. QA2000-02

```
! insert a spectral point (ww,ss) midway between (w1,s1) and (w2,s2) that
! maintains a linear relationship in log-log scale
w1=                ! set to the beginning frequency of the segment
w2=                ! set to the ending frequency of the segment
s1=                ! set to the beginning spectral value of the segment
s2=                ! set to the ending spectral value of the segment
ww=w1+(w2-w1)*0.5 ! compute a frequency midway between w1 and w2
dw=log(w2/w1)
l1=log(w2/ww)
l2=log(ww/w1)
ss=s1**((l1/dw)*s2**((l2/dw)) ! compute the spectral value midway in log scale
! now the PSD input should be:
! PSDFRQ,tblno1,tblno2, ...,w1,ww,w2,...
! PSDVAL,tblno, ...,s1,ss,s2,...
```

COMMENTS:

The PSDGRAPH command is not included in the documentation with ANSYS 5.6 (but will be with the ANSYS 5.6.1 on-line documentation), and is as follows:

PSDGRAPH,TBLNO1,TBLNO2 - Displays input PSD curves.

Argument Descriptions

TBLNO1 PSD table number to display.

TBLNO2 Second PSD table number to display. TBLNO2 is only used to display cospectral values (COVAL) and/or quadspectral values (QDVAL).

Notes

The input PSD tables are displayed in log-log format as dotted lines. The best-fit curves, used to perform the closed-form integration, are displayed as solid lines. If there is a significant discrepancy between the two, then you should add one or more intermediate points to the table to obtain a better fit.

If TBLNO2 is zero, blank or equal to TBLNO1, then the autospectra (PSDVAL) are displayed for TBLNO1. If TBLNO2 is also specified, then the autospectra for TBLNO1 and TBLNO2 are displayed along with the corresponding cospectra (COVAL) and quadspectra (QDVAL), if they are defined.

This command is valid in any processor.

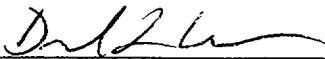
Menu Paths

Main Menu>Preprocessor>Loads>Spectrum>Plot Tables

Main Menu>Solution>Loads>Spectrum>Plot Tables

Utility Menu>Plot>PSD Tables

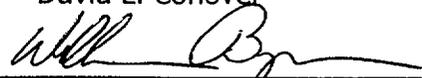
AUTHOR/CORRECTOR:



David L. Conover

DATE: February 4, 2000

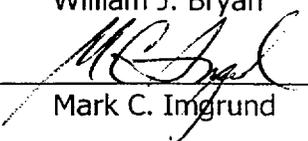
REVIEWED BY QA:



William J. Bryan

DATE: February 4, 2000

APPROVAL:



Mark C. Imgrund

DATE: February 4, 2000

ANSYS QA NOTICE

QA Notice No. Q2000-03

KEYWORDS: *TABULAR BOUNDARY CONDITIONS* *SFE* *BFE*

DESCRIPTION:

When a surface load is applied to an element (SFE or BFE command) using tabular boundary conditions (%name%), and different tables are applied to each node, such as:

SFE,1,PRES,, %name1%, %name2%, %name3%, %name4%

where name1, name2, name3 and name4 are associated with different tables, both the command response and the SFELIST [BFELIST] command incorrectly list the first table (name1) for all nodes. However, all four nodal tabular values are correctly used in solution as documented.

TYPICAL GUI PATHS:

ANSYSMenu>List>Loads>Surface Loads>On ALL Loads

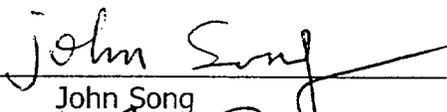
AFFECTED VERSIONS:

Release 5.6 and 5.6.1

SUGGESTED USER ACTION:

If using this non-uniform tabular element load capability, do not rely on SFE [BFE] or SFELIST [BFELIST] command echo; carefully verify the input. Alternatively, use a uniform tabular element load (%name1% only).

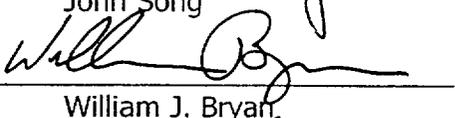
AUTHOR/CORRECTOR:



John Song

DATE: June 16, 2000

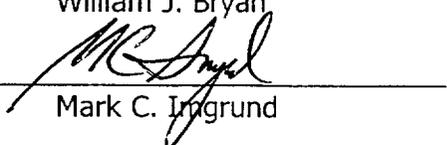
REVIEWED BY QA:



William J. Bryan

DATE: June 16, 2000

APPROVAL:



Mark C. Ingrund

DATE: June 16, 2000

ANSYS QA NOTICE

QA Notice No. Q2000-04

KEYWORDS:

LDREAD

TRANSIENT

DESCRIPTION:

If the TIME field on the LDREAD command is less than 0.5, the program will always retrieve load data from the first data set on the results file. The LDREAD command's echo (in the output window or output file) shows which data set is actually retrieved.

TYPICAL GUI PATHS:

Main Menu>Preprocessor>Loads>Apply>Boundary>Temperature>From Therm Analy

AFFECTED VERSIONS:

Release 5.6 and 5.6.1

SUGGESTED USER ACTION:

Use LSTEP/SBSTEP fields of the LDREAD command to retrieve load data from the results file for data sets at time values less than 0.5.

AUTHOR/CORRECTOR:



Vladimir Zhulin

DATE: June 16, 2000

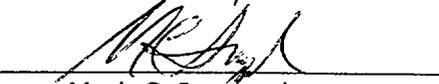
REVIEWED BY QA:



William J. Bryan

DATE: June 16, 2000

APPROVAL:



Mark C. Imgrund

DATE: June 16, 2000

ANSYS QA NOTICE

QA Notice No. Q2000-05

KEYWORDS: *MAGNETIC* *SENERGY* *ENERGY* *COENERGY*

DESCRIPTION:

The accuracy of nonlinear magnetic energy and coenergy computed by the SENERGY command macro is dependent upon how many B-H data points are provided in the B-H curve of nonlinear materials.

TYPICAL GUI PATHS:

Main Menu>General Postproc>Elec & Mag Calc>Co-energy
Main Menu>General Postproc>Elec & Mag Calc<Energy

AFFECTED VERSIONS:

Release 5.1 through 5.6.2

SUGGESTED USER ACTION:

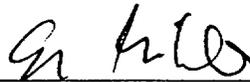
Check results carefully. Increase the number of B-H points in the B-H curve(s) (TB command). Provide several intermediate data points when extrapolating the B-H curve towards high levels of saturation. Note: increasing the number of B-H points may not increase the accuracy.

OTHER COMMENTS:

Please review Section 2.3.1.6.2 of the Electromagnetic Field Analysis Guide for recommendations on defining the magnetic BH curve.

Beginning with the ANSYS 5.7 Release, energy will be computed in the element solution rather than by the SENERGY command macro.

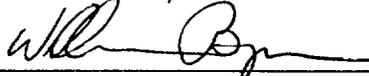
AUTHOR/CORRECTOR:



Miklos Gyimesi

DATE: June 16, 2000

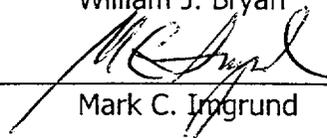
REVIEWED BY QA:



William J. Bryan

DATE: June 16, 2000

APPROVAL:



Mark C. Ingrund

DATE: June 16, 2000

ANSYS SUPPORT COORDINATOR BULLETIN

SCB NO: SCB-2000-01

Keywords: *FLOTRAN* *VISCOUS DISSIPATION*

FLOTRAN users who are calculating the effects of viscous dissipation for incompressible flows need to be aware that "work units" for the energy quantities must be used. The thermal properties affected are specific heat and thermal conductivity. The boundary conditions and loads affected are the heat transfer coefficient, volumetric heat source, and heat flux. The following table shows the appropriate units for energy for the five standard FLOTRAN systems of units.

<u>System of Units</u>	<u>Energy/Work units</u>
Standard International:	Joules
gram-cm-sec:	Ergs
gram-mm-sec:	Centi-ergs
slug-ft-sec:	lbf-ft
(lbf-in/sec ²)-in-sec:	lbf-in

AUTHOR/CORRECTOR:



Rich Lange

DATE: June 16, 2000

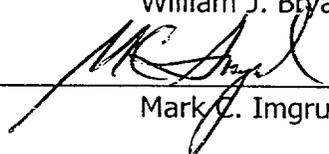
REVIEWED BY QA:



William J. Bryan

DATE: June 16, 2000

APPROVAL:



Mark C. Imgrund

DATE: June 16, 2000

ANSYS 5.6.2 CLASS3 ERROR SUMMARY BY REPORT NUMBER

<u>ERROR NO.</u>	<u>KEYWORD #1</u>	<u>KEYWORD #2</u>	<u>KEYWORD #3</u>	<u>KEYWORD #4</u>	<u>KEYWORD #5</u>	<u>KEYWORD #6</u>	<u>RELEASE CORRECTED</u>
2000-04	HARMONIC	EXPSOL					Release 5.7
2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA		Release 5.7
2000-15	POST26	ESOL	MAGNETICS	FMAG			Release 5.7
2000-24	DENSITY	PLANE2	SOLID92				Release 5.7

ANSYS 5.6.2 CLASS3 ERROR SUMMARY BY KEYWORD

Summary Report by Keyword

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST				RELEASE CORRECTED	
DA	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	
DENSITY	2000-24	DENSITY	PLANE2	SOLID92			Release 5.7
DL	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7
ESOL	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.7
EXPSOL	2000-04	HARMONIC	EXPSOL				Release 5.7
FMAG	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.7
HARMONIC	2000-04	HARMONIC	EXPSOL				Release 5.7
IMPROVEMENT OPERA	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7
MAGNETICS	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.7
PLANE2	2000-24	DENSITY	PLANE2	SOLID92			Release 5.7
POST26	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.7
REFINEMENT OPERAT	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7
SOLID92	2000-24	DENSITY	PLANE2	SOLID92			Release 5.7
SYMMETRY	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7

ANSYS 5.6.1 CLASS3 ERROR SUMMARY BY REPORT NUMBER

<u>ERROR NO.</u>	<u>KEYWORD #1</u>	<u>KEYWORD #2</u>	<u>KEYWORD #3</u>	<u>KEYWORD #4</u>	<u>KEYWORD #5</u>	<u>KEYWORD #6</u>	<u>RELEASE CORRECTED</u>
2000-04	HARMONIC	EXPSOL					Release 5.7
2000-09	MODAL CYCLIC	POST1	EXPAND				Release 5.6.2
2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA		Release 5.7
2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC			Release 5.6.2
2000-14	POST1	SET COMMAND	BEAM188	BEAM189			Release 5.6.2
2000-15	POST26	ESOL	MAGNETICS	FMAG			Release 5.7
2000-16	CFD	FLUID	SPECIES TRANSPORT				Release 5.6.2
2000-17	MECHANICAL TOOLBA	MM-KG UNITS					Release 5.6.2
2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID		Release 5.6.2
2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONSTRAINT EQUATI			Release 5.6.2
2000-20	MAGNETICS	PLANE53	HARMONIC	TRANSIENT	POWERH	PMGTRAN	Release 5.6.2
2000-21	MODAL	CYCGEN	CYGEN	BEAM44	BEAM188	BEAM189	Release 5.6.2
2000-22	MECHANICAL TOOLBA	APPLIED DISPLACEM	NON-GLOB CARTESIA				Release 5.6.2
2000-24	DENSITY	PLANE2	SOLID92				Release 5.7

ANSYS 5.6.1 CLASS3 ERROR SUMMARY BY KEYWORD

Summary Report by Keyword

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST					RELEASE CORRECTED
APPLIED DISPLACEM	2000-22	MECHANICAL TOOLBA	APPLIED DISPLACEM	NON-GLOB CARTESIA			Release 5.6.2
BEAM188	2000-14	POST1	SET COMMAND	BEAM188	BEAM189		Release 5.6.2
BEAM188	2000-21	MODAL	CYCGEN	CYCGEN	BEAM44	BEAM188	Release 5.6.2
BEAM189	2000-14	POST1	SET COMMAND	BEAM188	BEAM189		Release 5.6.2
BEAM189	2000-21	MODAL	CYCGEN	CYCGEN	BEAM44	BEAM188	Release 5.6.2
BEAM44	2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONSTRAINT EQUATI		Release 5.6.2
BEAM44	2000-21	MODAL	CYCGEN	CYCGEN	BEAM44	BEAM188	Release 5.6.2
BLOCK LANCZOS	2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONSTRAINT EQUATI		Release 5.6.2
CFD	2000-16	CFD	FLUID	SPECIES TRANSPORT			Release 5.6.2
CFD	2000-18	CFD	KXX	RESTART			Release 5.6.2
CONJUGATE HEAT TR	2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID	Release 5.6.2
CONSTRAINT EQUATI	2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONJUGATE HEAT TR	FLUID	Release 5.6.2
CYCGEN	2000-21	MODAL	CYCGEN	CYGEN	CONSTRAINT EQUATI		Release 5.6.2
CYGEN	2000-21	MODAL	CYCGEN	CYGEN	BEAM44	BEAM188	Release 5.6.2
DA	2000-10	DL	DA	CYGEN	BEAM44	BEAM188	Release 5.6.2
DENSITY	2000-24	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7
DL	2000-10	DL	DA	SOLID92			Release 5.7
ESOL	2000-15	POST26	ESOL	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.7
EXPAND	2000-09	MODAL CYCLIC	POST1	MAGNETICS	FMAG		Release 5.7
EXPSOL	2000-04	HARMONIC	EXPSOL	EXPAND			Release 5.6.2
FLUID	2000-16	CFD	FLUID	SPECIES TRANSPORT			Release 5.7
FLUID	2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID	Release 5.6.2
FMAG	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.6.2
GRAPHICS	2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC		Release 5.7
HARMONIC	2000-04	HARMONIC	EXPSOL				Release 5.6.2
HARMONIC	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.7
IMPROVEMENT OPERA	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.6.2
KXX	2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID	Release 5.7
MAGNETICS	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.6.2
MAGNETICS	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.6.2
MECHANICAL TOOLBA	2000-17	MECHANICAL TOOLBA	MM-KG UNITS				Release 5.7
MECHANICAL TOOLBA	2000-22	MECHANICAL TOOLBA	APPLIED DISPLACEM	NON-GLOB CARTESIA			Release 5.6.2
MM-KG UNITS	2000-17	MECHANICAL TOOLBA	MM-KG UNITS				Release 5.6.2
MODAL	2000-21	MODAL	CYCGEN	CYGEN	BEAM44	BEAM188	Release 5.6.2
MODAL	2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONSTRAINT EQUATI		Release 5.6.2
MODAL CYCLIC	2000-09	MODAL CYCLIC	POST1	EXPAND			Release 5.6.2
NON-GLOB CARTESIA	2000-22	MECHANICAL TOOLBA	APPLIED DISPLACEM	NON-GLOB CARTESIA			Release 5.6.2
PC	2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC		Release 5.6.2
PLANE2	2000-24	DENSITY	PLANE2	SOLID92			Release 5.6.2
PLANES3	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.7
PMOTRAN	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.6.2
POST1	2000-14	POST1	SET COMMAND	BEAM188	BEAM189		Release 5.6.2
POST1	2000-09	MODAL CYCLIC	POST1	EXPAND			Release 5.6.2
POST26	2000-15	POST26	ESOL	MAGNETICS	FMAG		Release 5.6.2
POWERH	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.7
REFINEMENT OPERAT	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.6.2
RESTART	2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID	Release 5.7
RESULTS PICKING	2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC		Release 5.6.2
SET COMMAND	2000-14	POST1	SET COMMAND	BEAM188	BEAM189		Release 5.6.2
SOLID92	2000-24	DENSITY	PLANE2	SOLID92			Release 5.6.2
SPECIES TRANSPORT	2000-16	CFD	FLUID	SPECIES TRANSPORT			Release 5.7
SYMMETRY	2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA	Release 5.6.2
SYSTEM	2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC		Release 5.7
TRANSIENT	2000-20	MAGNETICS	PLANES3	HARMONIC	TRANSIENT	POWERH	Release 5.6.2
							Release 5.6.2

ANSYS 5.6 CLASS3 ERROR SUMMARY BY REPORT NUMBER

<u>ERROR NO.</u>	<u>KEYWORD #1</u>	<u>KEYWORD #2</u>	<u>KEYWORD #3</u>	<u>KEYWORD #4</u>	<u>KEYWORD #5</u>	<u>KEYWORD #6</u>	<u>RELEASE CORRECTED</u>
1999-23 R1	AREVERSE	SHELL	ANORM	AMESH			Release 5.6.1
1999-47 R1	HARMONIC	MODE SUPERPOSITIO	ALPHA DAMPING	BETA DAMPING			Release 5.6.1
2000-01	CONTACT	TEMPERATURE DEPEND	MATERIAL PROPERTY	CONTA171	CONTA172	C ONTA173,CONTA17	Release 5.6.1
2000-02	POST1	FSUM	NFORCE	CONTA171	CONTA172	CONTA173	Release 5.6.1
2000-03	VGEN	VSYS	VTRAN	VLSCALE			Release 5.6.1
2000-04	HARMONIC	EXPSOL					Release 5.7
2000-05	IRLF	MASS21	MASS MOMENT OF IN				Release 5.6.1
2000-06	QUERY PICKING	CSYS					Release 5.6.1
2000-07	TB	BOYCE					Release 5.6.1
2000-08	LSDYNA	POST26	SHEAR STRESS				Release 5.6.1
2000-09	MODAL CYCLIC	POST1	EXPAND				Release 5.6.2
2000-10	DL	DA	SYMMETRY	REFINEMENT OPERAT	IMPROVEMENT OPERA		Release 5.7
2000-12	GRAPHICS	RESULTS PICKING	SYSTEM	PC			Release 5.6.2
2000-14	POST1	SET COMMAND	BEAM188	BEAM189			Release 5.6.2
2000-15	POST26	ESOL	MAGNETICS	FMAG			Release 5.7
2000-16	CFD	FLUID	SPECIES TRANSPORT				Release 5.6.2
2000-17	MECHANICAL TOOLBA	MM-KG UNITS					Release 5.6.2
2000-18	CFD	KXX	RESTART	CONJUGATE HEAT TR	FLUID		Release 5.6.2
2000-19	BEAM44	MODAL	BLOCK LANCZOS	CONSTRAINT EQUATI			Release 5.6.2
2000-20	MAGNETICS	PLANE53	HARMONIC	TRANSIENT	POWERH	PMGTRAN	Release 5.6.2
2000-21	MODAL	CYGEN	CYGEN	BEAM44	BEAM188	BEAM189	Release 5.6.2
2000-22	MECHANICAL TOOLBA	APPLIED DISPLACEM	NON-GLOB CARTESIA				Release 5.6.2
2000-23	SFCUM	HEAT FLUX					Release 5.6.1
2000-24	DENSITY	PLANE2	SOLID92				Release 5.7

ANSYS 5.6 CLASS3 ERROR SUMMARY BY KEYWORD

Summary Report by Keyword

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST	RELEASE CORRECTED
ALPHA DAMPING	1999-47 R1	HARMONIC	Release 5.6.1
AMESH	1999-23 R1	AREVERSE	Release 5.6.1
ANORM	1999-23 R1	AREVERSE	Release 5.6.1
APPLIED DISPLACEM	2000-22	MECHANICAL TOOLBA	Release 5.6.2
AREVERSE	1999-23 R1	AREVERSE	Release 5.6.1
BEAM188	2000-14	POST1	Release 5.6.2
BEAM188	2000-21	MODAL	Release 5.6.2
BEAM189	2000-14	POST1	Release 5.6.2
BEAM189	2000-21	MODAL	Release 5.6.2
BEAM44	2000-19	BEAM44	Release 5.6.2
BEAM44	2000-21	MODAL	Release 5.6.2
BETA DAMPING	1999-47 R1	HARMONIC	Release 5.6.1
BLOCK LANCZOS	2000-19	BEAM44	Release 5.6.2
BOYCE	2000-07	TB	Release 5.6.1
C ONTA173,CONTA17	2000-01	CONTACT	Release 5.6.1
CFD	2000-16	CFD	Release 5.6.2
CFD	2000-18	CFD	Release 5.6.2
CONJUGATE HEAT TR	2000-18	CFD	Release 5.6.2
CONSTRAINT EQUATI	2000-19	BEAM44	Release 5.6.2
CONTA171	2000-01	CONTACT	Release 5.6.1
CONTA171	2000-02	POST1	Release 5.6.1
CONTA172	2000-01	CONTACT	Release 5.6.1
CONTA172	2000-02	POST1	Release 5.6.1
CONTA173	2000-02	POST1	Release 5.6.1
CONTACT	2000-01	CONTACT	Release 5.6.1
CSYS	2000-06	QUERY PICKING	Release 5.6.1
CYCGEN	2000-21	MODAL	Release 5.6.2
CYGEN	2000-21	MODAL	Release 5.6.2
DA	2000-10	DL	Release 5.7
DENSITY	2000-24	DENSITY	Release 5.7
DL	2000-10	DL	Release 5.7
ESOL	2000-15	POST26	Release 5.7
EXPAND	2000-09	MODAL CYCLIC	Release 5.6.2
EXPSOL	2000-04	HARMONIC	Release 5.7
FLUID	2000-16	CFD	Release 5.6.2
FLUID	2000-18	CFD	Release 5.6.2
FMAG	2000-15	POST26	Release 5.7
FSUM	2000-02	POST1	Release 5.6.1
GRAPHICS	2000-12	GRAPHICS	Release 5.6.2
HARMONIC	1999-47 R1	HARMONIC	Release 5.6.1
HARMONIC	2000-04	HARMONIC	Release 5.7
HARMONIC	2000-20	MAGNETICS	Release 5.6.2
HEAT FLUX	2000-23	SPCUM	Release 5.6.1
IMPROVEMENT OPERA	2000-10	DL	Release 5.7
IRLF	2000-05	IRLF	Release 5.6.1
KXX	2000-18	CFD	Release 5.6.2
LSDYNA	2000-08	LSDYNA	Release 5.6.1
MAGNETICS	2000-20	MAGNETICS	Release 5.6.2
MAGNETICS	2000-15	POST26	Release 5.7
MASS MOMENT OF IN	2000-05	IRLF	Release 5.6.1
MASS21	2000-05	IRLF	Release 5.6.1
MATERIAL PROPERTY	2000-01	CONTACT	Release 5.6.1
MECHANICAL TOOLBA	2000-17	MECHANICAL TOOLBA	Release 5.6.2
MECHANICAL TOOLBA	2000-22	MECHANICAL TOOLBA	Release 5.6.2
MM-KG UNITS	2000-17	MECHANICAL TOOLBA	Release 5.6.2
MODAL	2000-21	MODAL	Release 5.6.2
MODAL	2000-19	BEAM44	Release 5.6.2
MODAL CYCLIC	2000-09	MODAL CYCLIC	Release 5.6.2
MODE SUPERPOSITIO	1999-47 R1	HARMONIC	Release 5.6.1
NFORCE	2000-02	POST1	Release 5.6.1
NON-GLOB CARTESIA	2000-22	MECHANICAL TOOLBA	Release 5.6.2
PC	2000-12	GRAPHICS	Release 5.6.2
PLANE2	2000-24	DENSITY	Release 5.7
PLANE53	2000-20	MAGNETICS	Release 5.6.2
PMGTRAN	2000-20	MAGNETICS	Release 5.6.2
POST1	2000-02	POST1	Release 5.6.1
POST1	2000-14	POST1	Release 5.6.2
POST1	2000-09	MODAL CYCLIC	Release 5.6.2
POST26	2000-15	POST26	Release 5.7
POST26	2000-08	LSDYNA	Release 5.6.1
POWERH	2000-20	MAGNETICS	Release 5.6.2
QUERY PICKING	2000-06	QUERY PICKING	Release 5.6.1
REFINEMENT OPERAT	2000-10	DL	Release 5.7
RESTART	2000-18	CFD	Release 5.6.2
MODE SUPERPOSITIO		SHELL	
SHELL		SHELL	
APPLIED DISPLACEM		APPLIED DISPLACEM	
NON-GLOB CARTESIA		NON-GLOB CARTESIA	
ANORM		ANORM	
BEAM188		BEAM188	
CYCGEN		CYCGEN	
BEAM188		BEAM188	
CYGEN		CYGEN	
BLOCK LANCZOS		BLOCK LANCZOS	
CYGEN		CYGEN	
ALPHA DAMPING		ALPHA DAMPING	
BLOCK LANCZOS		BLOCK LANCZOS	
BETA DAMPING		BETA DAMPING	
AMESH		AMESH	
AMESH		AMESH	
BEAM189		BEAM189	
BEAM44		BEAM44	
BEAM189		BEAM189	
BEAM44		BEAM44	
CONSTRAINT EQUATI		CONSTRAINT EQUATI	
BEAM188		BEAM188	
BEAM189		BEAM189	
BEAM44		BEAM44	
BETA DAMPING		BETA DAMPING	
CONSTRAINT EQUATI		CONSTRAINT EQUATI	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173,CONTA17		CONTA173,CONTA17	
MATERIAL PROPERTY		MATERIAL PROPERTY	
SPECIES TRANSPORT		SPECIES TRANSPORT	
RESTART		RESTART	
KXX		KXX	
CFD		CFD	
KXX		KXX	
MODAL		MODAL	
BLOCK LANCZOS		BLOCK LANCZOS	
MATERIAL PROPERTY		MATERIAL PROPERTY	
NFORCE		NFORCE	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173,CONTA17		CONTA173,CONTA17	
CONTA173		CONTA173	
CONTA172		CONTA172	
CONTA173,CONTA17		CONTA173,CONTA17	
CONTA173		CONTA173	
CONTA172		CONTA172	
CONTA173,CONTA17		CONTA173,CONTA17	
CONTA173		CONTA173	
CONTA172		CONTA172	
CONTA171		CONTA171	
CYGEN		CYGEN	
CYCGEN		CYCGEN	
CYGEN		CYGEN	
SYMMETRY		SYMMETRY	
SOLID92		SOLID92	
DA		DA	
REFINEMENT OPERAT		REFINEMENT OPERAT	
IMPROVEMENT OPERA		IMPROVEMENT OPERA	
FMAG		FMAG	
REFINEMENT OPERAT		REFINEMENT OPERAT	
IMPROVEMENT OPERA		IMPROVEMENT OPERA	
FMAG		FMAG	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173		CONTA173	
PC		PC	
BETA DAMPING		BETA DAMPING	
TRANSIENT		TRANSIENT	
POWERH		POWERH	
PMGTRAN		PMGTRAN	
REFINEMENT OPERAT		REFINEMENT OPERAT	
IMPROVEMENT OPERA		IMPROVEMENT OPERA	
FLUID		FLUID	
CONJUGATE HEAT TR		CONJUGATE HEAT TR	
FMAG		FMAG	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173		CONTA173	
PC		PC	
BETA DAMPING		BETA DAMPING	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173		CONTA173	
PC		PC	
TRANSIENT		TRANSIENT	
POWERH		POWERH	
PMGTRAN		PMGTRAN	
TRANSIENT		TRANSIENT	
POWERH		POWERH	
CONTA171		CONTA171	
CONTA172		CONTA172	
CONTA173		CONTA173	
BEAM188		BEAM188	
EXPAND		EXPAND	
MAGNETICS		MAGNETICS	
SHEAR STRESS		SHEAR STRESS	
HARMONIC		HARMONIC	
TRANSIENT		TRANSIENT	
POWERH		POWERH	
PMGTRAN		PMGTRAN	
REFINEMENT OPERAT		REFINEMENT OPERAT	
IMPROVEMENT OPERA		IMPROVEMENT OPERA	
FLUID		FLUID	

Summary Report by Keyword

KEYWORD	ERROR REPORT NUMBER	COMPLETE KEYWORD LIST	RELEASE CORRECTED
RESULTS PICKING	2000-12	GRAPHICS	
SET COMMAND	2000-14	POST1	
SFCUM	2000-23	SFCUM	
SHEAR STRESS	2000-08	LSDYNA	
SHELL	1999-23 R1	AREVERSE	
SOLID92	2000-24	DENSITY	
SPECIES TRANSPORT	2000-16	CFD	
SYMMETRY	2000-10	DL	
SYSTEM	2000-12	GRAPHICS	
TB	2000-07	TB	
TEMPERATURE DEPENDENT	2000-01	CONTACT	
TRANSIENT	2000-20	MAGNETICS	
VGEN	2000-03	VGEN	
VLSCALE	2000-03	VGEN	
VSYM	2000-03	VGEN	
VTRAN	2000-03	VGEN	
RESULTS PICKING		RESULTS PICKING	
SET COMMAND		SET COMMAND	
HEAT FLUX		HEAT FLUX	
POST26		POST26	
SHELL		SHELL	
PLANE2		PLANE2	
FLUID		FLUID	
DA		DA	
RESULTS PICKING		RESULTS PICKING	
BOYCE		BOYCE	
TEMPERATURE DEPENDENT		TEMPERATURE DEPENDENT	
PLANE53		PLANE53	
VSYM		VSYM	
VGEN		VGEN	
VSYM		VSYM	
VTRAN		VTRAN	
VSYM		VSYM	
SYSTEM		SYSTEM	
BEAM188		BEAM188	
PC		PC	
BEAM189		BEAM189	
SHEAR STRESS		SHEAR STRESS	
ANORM		ANORM	
AMESH		AMESH	
SOLID92		SOLID92	
SPECIES TRANSPORT		SPECIES TRANSPORT	
SYMMETRY		SYMMETRY	
REFINEMENT OPERATIONAL		REFINEMENT OPERATIONAL	
PC		PC	
IMPROVEMENT OPERATIONAL		IMPROVEMENT OPERATIONAL	
CONTA171		CONTA171	
TRANSIENT		TRANSIENT	
POWERH		POWERH	
C ONTA173, CONTA17		C ONTA173, CONTA17	
PMGTRAN		PMGTRAN	
Release 5.6.2			Release 5.6.2
Release 5.6.2			Release 5.6.2
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.7			Release 5.7
Release 5.6.1			Release 5.6.1
Release 5.7			Release 5.7
Release 5.6.2			Release 5.6.2
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.2			Release 5.6.2
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1
Release 5.6.1			Release 5.6.1

GTSTRUDL Program Report Form

GPRF No.: 2000.10

DATE: 5/17/00

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT** Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS** Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR** Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE** Documentation error, program usage tip, user inconveniences.

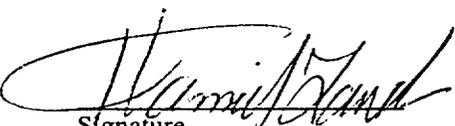
Date Problem Confirmed May 16, 2000

Date Notification Sent 5/18/00

Computers ALL

Operating System ALL

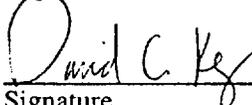
Version Versions 91.01 through 99.01

 ^{kw}
Signature
R & D Division

Senior Software Engineer
Title

Hamid Zand
Typed or Printed Name

5/17/00
Date of Signature


Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

5/17/00
Date of Signature

GTSTRUDL Program Report Form

(Continued)

GPRF No.: 2000.10

DATE: 5/17/00

DESCRIPTION:

Applicable GTSTRUDL Command:

MEMBER PROPERTIES command

GTSTRUDL Documentation Reference:

Section 2.1.9 of Volume 1

Explanation:

When the PIPE option of the individual form of the MEMBER PROPERTIES command is used, the shear areas, AY and AZ, may not be computed and values of zero may be used for these properties. An example of the individual form of the MEMBER PROPERTIES command is as follows:

```
MEMBER 1 2 3 PROPERTIES PIPE OD 20.0 THICKNESS 0.5
```

Workaround:

Use tabular form of the MEMBER PROPERTIES command or change the first MEMBER PROPERTIES command to a tabular form. An example of the tabular form of the MEMBER PROPERTIES command is as follows:

```
MEMBER PROPERTIES  
1 2 3 PIPE OD 20.0 THICKNESS 0.5
```

GTSTRUDL Program Report Form

GPRF No.: 2000.11

DATE: 5/18/00

FROM: Computer-Aided Structural Engineering Center
Georgia Institute of Technology
Atlanta, Georgia 30332-0355

SEVERITY LEVEL:

- URGENT** Problem results in incorrect answers which may not be apparent or job aborts and cannot be recovered within the session or job.
- SERIOUS** Problem results in incorrect answers which are obvious or problem prevents completion of a particular user's task.
- MINOR** Problem can be worked around or problem poses high frustration factor.
- INFORMATIVE** Documentation error, program usage tip, user inconveniences.

Date Problem Confirmed May 18, 2000

Date Notification Sent 5/18/00

Computers PC

Operating System Windows NT/95/98

Version 99.01 only

Target Release for Correction Version 25.0

¹⁰⁰⁰⁰
Michael H. Swanger
Signature
R & D Division

Mgr. ASD
Title

Michael H. Swanger
Typed or Printed Name

5/18/2000
Date of Signature

David C. Key
Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

5/18/00
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2000.11

DATE: 5/18/00

DESCRIPTION:

Section force computation for plane and space truss members having nonlinear geometry effects:

Section force computation produces incorrect results for the plane and space truss members for which the NONLINEAR EFFECTS/GEOMETRY specification was given and a NONLINEAR ANALYSIS was executed. The problem results are confined to the local member force y and force z components which arise due to the nonlinear geometric behavior of the truss members. The axial section force component of these members is correct. This problem will also affect the graphical display of diagrams and envelopes and member selection and code check results for these members.

There is no work-around.

GTSTRUDL User Reference Manual Sections:

Nonlinear Effects Command	Section 2.5.2, Volume 3, GTSTRUDL Reference Manual
Internal Member Results Output -- The LIST Command	Section 2.1.14.6, Volume 1, GTSTRUDL Reference Manual
Designing Members (The SELECT MEMBERS Command)	Section 2.2.3.3, Volume 2a, GTSTRUDL Reference Manual
Checking Members (The CHECK MEMBERS Command)	Section 2.2.3.5, Volume 2a, GTSTRUDL Reference Manual