

December 20, 2001
G9701-SSG-040

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 notices received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc
Echo Energy Consultants
Nuclear Applications and Systems Analysis Company (Japan)
Nuclear Power Services
GPU Nuclear Corporation

Error notices have been sent to our other former customers.

Very truly yours,

A handwritten signature in cursive script that reads "Mark S. Snyder".

Mark S. Snyder
Nuclear Administrator
Mail Code 7A-43

Enclosures: GT STRUDL Program Report Forms 2001.13 through 2001.16

IE20

GTSTRUDL Program Report Form

GPRF No.: 2001.13

DATE: 10/2/01

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 September 27, 2001

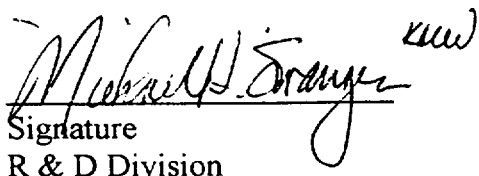
Date Notification Sent 10/2/01

Computers All

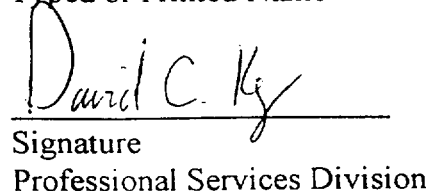
Operating System All

Version 97.01 and later

Target Release for Correction Version 26.0


Signature
R & D Division

Michael H. Swanger
Typed or Printed Name


Signature
Professional Services Division

David C. Key

Sr. RE
Title

10/2/01
Date of Signature

Configuration Control Manager
Title

10/2/01

GTSTRUDL Program Report Form

(Continued)

GPRF No.: 2001.13

DATE: 10/2/01

DESCRIPTION:

The PRINT MEMBER PROPERTIES command will abort if rigid body elements are present in the model and one or more of the rigid body elements were not the last of all members and elements to be created (by the RIGID BODY INCIDENCES command).

The work-around is to make certain that all rigid body elements are the last elements to be created.

GTSTRUDL User Reference Manual Sections:

Joint Constraints –

Rigid Bodies and Joint Ties

Section 2.6.4, Volume 3, GTSTRUDL
Reference Manual

Problem Description Data Output –

The PRINT Command

Section 2.1.14.2, Volume 1, GTSTRUDL
Reference Manual

GTSTRUDL Program Report Form

GPRF No.: 2001.14

DATE: 10/2/01

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

SEVERITY LEVEL:

- ☒ X 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 October 1, 2001

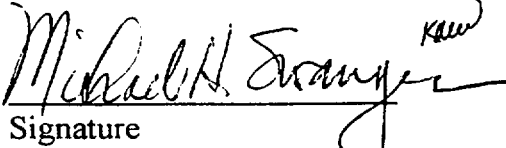
Date Notification Sent 10/2/01

Computers All

Operating System All

Version All

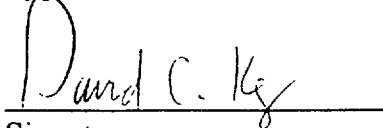
Target Release for Correction Version 26.0


Signature
R & D Division

Sr. RE
Title

Michael H. Swanger
Typed or Printed Name

10/1/2001
Date of Signature


Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

10/2/01
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2001.14

DATE: 10/2/01

DESCRIPTION:

The incremental $P-\Delta$ effect for nonlinear geometric frame members is ignored for axial member temperature loads or axial member distortion loads. For example, a simple pinned-pinned beam with no axial release at either pinned support, and a mid-span free joint will demonstrate no $P-\Delta$ effect when the only applied loading is the member axial temperature or distortion load.

There is no work-around for the problem.

GTSTRUDL User Reference Manual Sections:

Nonlinear Effects Command

Section 2.5.2, Volume 3, Rev. P,
GTSTRUDL Reference Manual

GTSTRUDL Program Report Form

GPRF No.: 2001.15

DATE: 10/4/01

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 10/4/01

Date Notification Sent 10/4/01

Computers All

Operating System All

Version All versions prior to and including Version 91.01

Kenneth M. Will
Signature
R & D Division

Director, ASD
Title

Kenneth M. Will
Typed or Printed Name

10/4/01
Date of Signature

David C. Key
Signature
Professional Services Division

Configuration Control Manager
Title

David C. Key
Typed or Printed Name

10/4/01
Date of Signature

GTSTRU DL Program Report Form

(Continued)

GPRF No.: 2001.15

DATE: 10/4/01

DESCRIPTION:

The CALCULATE AVERAGE STRESS (AND) ENVELOPE command will produce incomplete output when the following conditions exist:

1. The elements listed in the CALCULATE AVERAGE command are TYPE TRIDIMENSIONAL elements (IPLS, IPSL,...etc.).
2. Results do not exist for the last active loading condition

When the above conditions exist, the envelope output will only contain results for 3 stress components (SXX, SYY, SXY). The output will not contain envelope results for the SZZ, SXZ, and SYZ components.

Workaround:

Be sure that results exist for all active loadings before issuing the command.

Applicable Documentation:

CALCULATE AVERAGE Command - Section 2.3.7.2 of Volume 3 of the GTSTRU DL Reference Manual.

GTSTRUDL Program Report Form

GPRF No.: 2001.16

DATE: 11/19/01

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

SEVERITY LEVEL:

- ☒ X 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 October 19, 2001

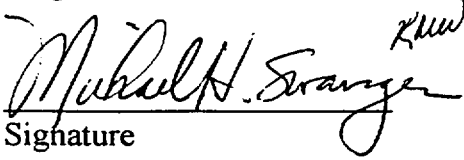
Date Notification Sent 11/19/01

Computers All

Operating System All

Version All

Target Release for Correction Version 26.0


Signature
R & D Division

Michael H. Swanger
Typed or Printed Name

Sr. RE
Title

11/19/2001
Date of Signature


Signature
Professional Services Division

David C. Key
Typed or Printed Name

Configuration Control Manager
Title

11/19/01
Date of Signature

GTSTRUDL Program Report Form
(Continued)

GPRF No.: 2001.16

DATE: 11/19/01

DESCRIPTION:

Any analysis operation – stiffness, nonlinear, dynamic – may abort if members and elements having mixed degrees of freedom are incident on a **released** slave node. An example of this situation is when space frame members (6 DOFs) and SBHQ 2-D plate elements (5 DOFs) are incident on the same **released** slave joint. If the analysis does not abort, it will most likely encounter instabilities and/or statics check failures. This problem does not occur if the subject slave joint(s) are not released.

GTSTRUDL User Reference Manual Sections:

Joint Constraints –

Rigid Bodies and Joint Ties

Section 2.6.4, Volume 3, Rev. P, GTSTRUDL
Reference Manual