

The Boeing Company  
P.O. Box 3707  
Seattle, WA 98124-2207

December 10, 1999  
G-1151-JIM-99-541

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,



John I. Maughan  
Nuclear Administrator  
Phone: (425) 865-4785  
FAX: (425) 865-4851  
Mail Code: 7A-33, or  
e-mail: john.i.maughan@boeing.com

Enclosure(s): GTSTRUDL Program Report Form 99.22, 23 and 24

IE20

PDR QA 99901227





DEC 10 1999

November 8, 1999

Attention: Nuclear Administrator  
**Boeing Information & Support Services**  
P.O.Box 24346, M/S 7A-33  
Seattle, Washington 98124-0346

RE: GT STRUDL

Dear Sir or Madam:

Enclosed please find copies of GTSTRUDL PROGRAM REPORT FORM 99.23, 99.24, and a GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM. Please sign and return the GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM to acknowledge receipt of the GTSTRUDL Program Report.

Thank you for reviewing the Program Report and for returning the Acknowledgement Form.

Best regards,  
CASE Center

David C. Key  
Configuration Control Manager

Enclosures

# GTSTRUDL Program Report Form

GPRF No.: 99.233

DATE: 11/8/99

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 11/8/99

Date Notification Sent 11/8/99

Computers All computers

Operating System all

Version 9601 thru 9901

*Kenneth M. Will*

Signature  
R & D Division

Director, ASD

Title

Kenneth M. Will

Typed or Printed Name

11/8/99

Date of Signature

*David C. Key*

Signature  
Professional Services Division

Configuration Control Manager

Title

David C. Key

Typed or Printed Name

11/8/99

Date of Signature

# GTSTRUDL Program Report Form

(Continued)

GPRF No.: 99.23

DATE: 11/8/99

## DESCRIPTION:

The LIST MAXIMUM JOINT DISPLACEMENT command will not respect the ACTIVE ONLY option for LOADS. Instead, all loadings will be processed.

Command Example:

LIST MAX JOINT DISPLACEMENT LOADS ACTIVE ONLY

Workaround:

Use the list option to specify the loads that you wish to consider.

Example where only loads 2 3 and 5 are to be considered:

LIST MAX JOINT DISPLACEMENT LOADS 2 3 5

Reference:

LIST MAX JOI DISP Command

Section 2.1.14.4.1 Volume 1,  
GTSTRUDL Reference Manual

# GTSTRUDL Program Report Form

GPRF No.: 99.24

DATE: 11/8/99

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 11/8/99

Date Notification Sent 11/8/99

Computers All computers

Operating System all

Version All versions thru 9901

*Kenneth M. Will*

Signature  
R & D Division

Director, ASD

Title

Kenneth M. Will  
Typed or Printed Name

11/8/99  
Date of Signature

*David C. Key*  
Signature

Professional Services Division

David C. Key  
Typed or Printed Name

Configuration Control Manager  
Title

11/8/99  
Date of Signature

## GTSTRUDL Program Report Form

(Continued)

GPRF No.: 99.24

DATE: 11/8/99

### DESCRIPTION:

The LIST PRINCIPAL STRAIN and CALCULATE AVERAGE PRINCIPAL STRAIN commands will output an incorrect orientation angle (THETA) for the principal strains for 2D finite elements when the absolute value of the difference of the strain in the x-direction and the strain in the y- direction are less than 0.00001 but not 0.0.

$$| EXX - EYY | < 0.00001$$

where EXX is the strain in the planar x-direction and EYY is the strain in the planar y-direction.

The incorrect output will show a THETA angle of 45 degrees or 1.5707 radians. If EXX and EYY are the same value, the orientation angle should be 45 degrees.

The values of the principal strains are correct. Only the orientation angle is incorrect for the case described above.

### Workaround:

None

### Reference:

LIST PRINCIPAL STRAIN Command

Section 2.3.7.1 Volume 3,  
GTSTRUDL Reference Manual

CALC AVERAGE PRINCIPAL STRAIN Command

Section 2.3.7.2, Volume 3,  
GTSTRUDL Reference Manual



October 27, 1999

DEC 10 1999

Attention: Nuclear Administrator  
**Boeing Information & Support Services**  
P.O.Box 24346, M/S 7A-33  
Seattle, Washington 98124-0346

RE: GT STRUDL

Dear Sir or Madam:

Enclosed please find copies of GTSTRUDL PROGRAM REPORT FORM 99.22, and a GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM. Please sign and return the GTSTRUDL QA CUSTOMER ACKNOWLEDGEMENT FORM to acknowledge receipt of the GTSTRUDL Program Report.

Thank you for reviewing the Program Report and for returning the Acknowledgement Form.

Best regards,  
CASE Center

David C. Key  
Configuration Control Manager

Enclosures

# GTSTRUDL Program Report Form

GPRF No.: 99.22

DATE: 10/27/99

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 10/27/99

Date Notification Sent 10/28/99

Computers All computers

Operating System all

Version 8502 thru 9901

Kenneth Will

Signature  
R & D Division

Director, ASD

Title

Kenneth M. Will  
Typed or Printed Name

10/27/99  
Date of Signature

David C. Key  
Signature  
Professional Services Division

Configuration Control Manager  
Title

David C. Key  
Typed or Printed Name

10/27/99  
Date of Signature



## GTSTRUDL Program Report Form

(Continued)

GPRF No.: 99.22

DATE: 10/27/99

### DESCRIPTION:

The LIST JOINT FORCES command will either abort or produce incorrect moment results if the active units are not inches or feet or kips and pounds. The force results are correct.

### Workaround:

Use inches or feet as the active length unit and kips or pounds as the active force unit.

### Reference:

LIST JOINT FORCES Command

Section 2.1.14.4 Volume 1,  
GTSTRUDL Reference Manual