ANSYS Class3 Error Report

ERROR NO:
2012-23

Keywords:

LINEAR PERTURBATION PERTURB RESUME

Description of Error:

If a database created with any version prior to Release 13.0 is resumed prior to performing a linear perturbation analysis, the stiffness matrix and load vector may be incorrect leading to an incorrect solution. In this scenario, if temperature-dependent material properties are used in the model, the stiffness matrix may be incorrect. Also in this scenario, the load vector will be zero regardless of the material properties and regardless of the LoadControl key on the PERTURB command.

Typical GUI Path(s):

Main Menu>Solution>Analysis Type>Restart

Other Comments:

Linear perturbation analyses were first available in Release 13.0.
The load vectors generated in a linear perturbation analysis can be used in:

- Downstream mode superposition analysis following a linear perturbation modal analysis.
- A linear perturbation eigenvalue buckling, full harmonic, or static analysis.

First Incorrect Version:

Release 13.0

Corrected In:

Release 14.5

Suggested User Action For Running on Uncorrected Version:

When resuming a database created with any version prior to Release 13.0 for use in a linear perturbation analysis, issue the LSCLEAR,LSOPT command to clear the load step options.
or
Use the CDWRITE command to write the older database to a .cdb file, which can then be read back into the program using the CDREAD command to rebuild a new database in Release 13.0 or later versions.

Author Signature:
Yong-Cheng Liu 9/11/2012

Reviewed By QA:
Bill Bryan 9/18/2012

Approval:
Dave Conover 9/12/2012