

**ANSYS Workbench Class3****Error Report**

**ERROR NO:**  
WB2014-12

**Keywords:**

CONTACT TOOL RESULTS                      CONTACT USER DEFINED RESULTS                      FAR  
STATUS

**Description of Error:**

For contact elements with STATUS=FAR (or equivalently STATUS=0), Contact Tool Results and Contact User Defined Results may report incorrect results. To conserve disk space, the solver, by design, writes no contact result data to the result file for these elements. However, the Mechanical post processor erroneously assigns ZERO result values (rather than UNDEFINED values) to all nodes of these elements for Display Option=Unaveraged. Also, for all other Display Options (Averaged, Nodal Difference, and Nodal Fraction), those nodes that were incorrectly assigned ZERO result values for the Unaveraged Option are used in arithmetic expressions to calculate derived values.

For example, for the Averaged Option, a node could be shared by two contact elements, only one of which has STATUS=FAR. If the contact pressure for the node in the other element is 1000, then Mechanical currently reports the average result as  $(1000 + \text{ZERO}) / 2 = 500$ . The true averaged result is  $1000 / 1 = 1000$  since the node in the element with STATUS=FAR should NOT be involved in the calculation.

**Typical GUI Path(s):**

Contact Tool -> Frictional Stress or Pressure or etc. Solution  
-> Worksheet -> Contact User Defined Result

**Other Comments:**

**First Incorrect Version:**

Release 12.0

**Corrected In:**

Release 16.0

**Suggested User Action For Running on Uncorrected Version:**

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