

**Marc/Mentat Current Error List**  
**Current Update: August 28, 2008**

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This section includes a description of all known errors in all releases of Marc and Mentat. The field next to the error number indicates the version that the error was found.

Note that intermediate patches may be found at:  
[http://www.mscsoftware.com/support/software\\_updates/](http://www.mscsoftware.com/support/software_updates/)

**Error Description**

Each error has a heading with as many as three entries. These entries provide high level key words that classify the particular error. A more detailed description of the error is also provided. For more information on any of these errors, please contact the MSC.Software Support Team.

Error reports are updated when more facts or better avoidance techniques become known.

The following errors are grouped in two categories, Marc and Mentat.

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**Marc Current Error List - August 28, 2008**  
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**M-3821                    2001                    Elements - Membrane Shell 49 - Non-convergence**

Membrane element 49 goes non-positive definite when pulled in Tension. Shell Element works fine.

**1-23319291                2005                    Creep - Rigid Body Growth - Incorrect Results**

Creep results are incorrect when the model also has rigid body growth. Workarounds are available.

**1-21753741                2005                    LBCs - Cavity Pressure - Pressure Direction**

There is a know problem with cavity pressure and axisymmetric shell element (type 1). The documentation indicates that the pressure is applied on top edge of cavity elements. But the results are wrong, and the pressure seems to have changed of sign, or to be applied on bottom edge.

**1-22967421                2005                    LBCs - Cavity Pressure - Multiple Load Cases**

Cavity pressure loading followed by mass loading or closed cavity provides incorrect results. Marc uses the previous step's volume instead of the current step's volume.

**M-5780                    2005                    Contact - 2D Elements - Penetration**

Penetration in self contact is possible when Remeshing is used

**M-5490                    2005                    Restarts - Job Monitor - Monitor Fails**

Mentat MONITOR fails when Marc job is run with auto-restart option

**1-56911171            2005r3            LBCs - Local Coord - Failed Constraints**

When giving constraint by local coordinate, if users use not using table driven format and give load with table (e.g. force vs. time), the constraint will fail. This problem will be solved if using table driven format.

**M-6033                2005r3            DDM - Solver 8 on SunOS - Does not converge**

DDM job does not converge with solver 8 on blade2 (SunOS 2.8).  
The same example works on all other platforms. It also works on blade2, if solver 0 is used or version 11 is changed to version 10

**M-6013                2005r3            Joule-Mechanical - Reduced Elements - Incorrect Results**

Reduced integration elements (linear for 2d and 3d) do not work well in a joule mechanical analysis. A joule heating analysis also gives wrong results. The problem is in the number of integration points used. For 2d this is changed from 1 to 4 when the heat generation is computed.

**M-6040                2005r3            Acoustics - Contact - Quadratic Contact results**

Quadratic contact in acoustic-solid gives problems. Element 82 performs better than Element 119.

**1-43558591            2005r3            Marc Input Reader - DMIG - Incorrect data**

Marc imports mass and heat capacity matrix incorrectly in DMIG format.

**1-47814641            2005r3            Contact - Beam Element - Double Sided not supported**

Marc doesn't support double side contact of beam element.

**1-50682511            2005r3            LBCs - Follower Force - Error with New Tables**

In the case of using Follower Force with new style input, the follow force stiffness is not added at start of load case 2(modal shape). Therefore the global stiffness is different in eigenvector extraction phase.

**1-52323069            2005r3            Coupled Analysis - Deactivation - Temp. Discontinuities**

Temperature discontinuity can occur while using deactivation in the coupled analysis.

**1-54568987            2005r3            Remeshing - 2D Elements - Incorrect Shape Change**

Error with results in 2D contact analysis with remeshing; remeshed body incorrectly changes shape during remeshing.

**1-50744905            2007r1            Results - DISTLOAD - Incorrect results**

Post file of dynamic analysis with a single gravity load has incorrect DIST LOADS section. These values remain zero throughout the analysis.

**1-54193171            2007r1            Materials - NLELAST - Shape collapse**

Element collapses when using invariant NLELAST material with large strain option. Small strain works fine.

**1-52462347            2007r1            Elements - Element 138 - Wrong shape with LARGE STRAIN**

Shape of structure is changed via boundary conditions on all nodes. Element 138 shows very strange behavior, the shape that is formed is incorrect. This happens only when Updated Lagrange (LARGE STRAIN) is flagged.

**1-63361131            2007r1            Materials - NLELAST - Cut-off stress**

NLELAST with cut-off stress does not function correctly, may result in non-convergence

**1-67211901            2007r1            DDM - Single Input File - Wrong results**

Marc single file parallel gets wrong results and diverges using 4 processors

**1-67273404            2007r1            Thermal Analysis - Element 41 - Recession**

With Marc2007R1, the recession doesn't work (the surface subjected to recession doesn't move) and the .REC file contains only the increment number and the time. The new coordinates of the nodes are not written.

**1-67568551            2007r1            Results - Force Balance - Prescribed Displacement**

Force Balance output is incorrect for prescribed displacements

**1-70517278            2007r1            Remeshing - Element Change - Program crash**

When quad8 (27/56) elements are used in global remeshing, and a request is made that they are changed to quad4 (118), we get an exit 1005, preceded by:

```
*** warning - memory overwrite detected by marc_memsize!  
*** warning - iteration during projection on quadratic segment did not converge  
*** error - element inside out at element            6 integration point            1
```

Other related errors are: Quad8 (27/56) to Quad4 (115) does not work. Traceback, preceded by:

```
*** warning - memory overwrite detected by marc_memsize!
```

This is with the advancing front mesher.

Note: it does work going from quad8 (27/56) to quad4 (11/80)

**1-70527867            2007r1            Remeshing - Element Change - Program crash**

When tri6 (125/128) elements are used in global remeshing, and a request is made that they are changed to quad4 (115/118), a traceback is given, preceded by:

```
*** warning - memory overwrite detected by marc_memsize!
```

Note: it does work going from tri6 (125/128) to quad4 (11)

**1-74236204            2007r1            Materials - Mixture - Program crash**

Marc may crash when using mixture model in combination with element type 117. Depending on the machine, the program crashes or produces NaN.

- 1-76742811            2007r1            Remeshing - Contact - No post-processing of rigid body**
- Rigid contact body is checked for contact in contact table 1 for load case 1; Rigid Body is not checked for contact in contact table 2 for load case 2. After running the job, in post-processing on Mentat, the rigid body does NOT appear in the steps in load case 2. When remeshing is turned off, it works fine.
- 1-76749681            2007r1            Large Model - Restart - Run time error**
- Restart fails in Marc when model is large
- 1-76847772            2007r1            Materials - Shape Memory Alloy - Step size Dependence**
- Different results are calculated in a single element model by changing the step size of the loading.
- 1-52196681            2007r1            Contact - BODY APPROACH - Failure with New Style Tables**
- When body approach velocities are defined by the TABLES and NEW STYLE TABLES input format for a rigid body, the analysis failed with Exit 40 during BODY APPROACH phase.
- 1-58525651            2007r1            Remeshing - Shell Elements - Loss of BCs**
- Shell remeshing loses fixed boundary conditions after remeshing
- 1-60221257            2007r1            Thermal Analysis - Time Step - Accuracy of results**
- Marc thermal results may deviate from theory when too large a time step is used. The user should try a smaller time step until the solution converges.
- 1-71162461            2007r1            Failure Analysis - Release Energy - Incorrect Results**
- The release energy at the crack node is incorrect with 3d model. The problem occurs when the crack face is curved with a large curvature. A workaround for the user would be to use smaller elements along the crack front.
- 1-71698905            2007r1            Elements - Penta Elements - Normal Directions**
- For the penta Element (136) the direction of the face load (pressure) goes in the opposite direction compared to the arrow as displayed in Mentat. So the positive pressure has the direction of the face-normal.
- 1-72016942            2007r1            Materials - Flow Stress Data - Cannot read in from file**
- Marc is not reading the user defined Flow-Stress data for the Orthotropic Material.
- 1-73213381            2007r1            Results - POST -1, Increment written to file**
- Using post increment -1, no increments should be written in the post file, however increment 1 is written.
- 1-73661370            2007r1            Remeshing - HP Alpha - Crash**
- Program crash after shell remeshing

- 1-73716711**      **2007r1**      **Performance - DISTLOAD - Remeshing and Tables**  
 Extremely slow solution with gravity load, remeshing and new style input.
- 1-74047341**      **2007r1**      **Memory - Welding Simulation - Memory Access Failure**  
 MARC welding simulation memory error for less than 100000 elements
- 1-74176556**      **2007r1**      **User Subs - NEWSV and INITPL - Variable Array limit**  
 SIGTE is used to store the user given values. In most user routines, SIGTE is supposed to be of dimension (no. of layers, no. of int. pts). As an example, for a shell with 11 layers and 4 int. pts, SIGTE should be of size 44. However, in BLNK.CMN, SIGTE is only allowed a size of 33. A memory over-write may occur.
- 1-74236041**      **2007r1**      **Materials - Orientation - Spiral Curve Definitions**  
 Different techniques can be used to define spiral curves for Material Orientation. Care should be taken in defining these curves to achieve the correct behavior.
- 1-75159461**      **2007r1**      **Materials - Grain size calculation - Differing Results**  
 Grain size (YADA model) is calculated incorrectly imarc2005r3 and above. The result is different from marc2005r2.
- 1-74667151**      **2008r1**      **Materials - Mixture models - Material Orientation**  
 Material orientation is not working for mixture materials
- 1-74667198**      **2008r1**      **Materials - Mixture Models - Material Failure**  
 Mixture type 1 and 2 work fine. Mixture type 3 exits with convergence difficulties.
- 1-75466966**      **2008r1**      **Geometry - CURVE option - Failure with complex curve**  
 Models may fail with exit 2004 due to usage of complicated spiral for CURVE option in orientation
- 1-76290104**      **2008r1**      **Elements - Solid Shell - DDM with Pre-State crashes**  
 If first job is run on multiple CPU using single post file and second job is run on 1 CPU, then second job is not copying data and crashes with exit 1009.
- 1-74811861**      **2008r1**      **Materials - Hardening Laws - Wrong Answers**  
 Kinematic and combined hardening gives wrong results

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**M-3129                    2000                    Post-Processing - Contact Status - Incorrect Results**

Contact status is sometimes incorrectly plotted for analyses with local adaptivity.

**1-6153765                2001                    Post-Processing - Thermal Results - Coordinate System**

When post-processing thermal results, no effects of local results coordinate systems are seen on vector plots.

**M-3827                    2001                    NODE MOVE - DIRECTED - Incorrect Location**

Mentat does not have the option to attach node to surface in ATTACH menu. However, we can move the nodes to surface using MOVE -> MOVE TO GEOMETRIC ENTITIES menu. Mentat seems to move the node correctly if we use CLOSEST option for moving the nodes to surface, but it doesn't seem to work correctly with DIRECTED option.

**M-4857                    2001                    BEAM SECT - GRID ORIGIN COORD - Window not updating**

When grid origin of beam sect updated, grid in beam sect window is not updated

**M-3671                    2001                    EXPAND - SHELL - Wrong Expansion**

Shell Expand for line elements wrong when different element orientation is used

**M-4996                    2001                    Object picking - 3D Solid Elements - Box and Polygon picking**

This problem occurs in the case that elements are 3d continuum and element faces are plotted on surface. In this case, there are elements don't have visible faces and edges inside of mode.

**M-4519                    2003                    Sets - Input File - Null Sets**

Mentat may write out sets with no members

**M-4392                    2003                    Coordinate Systems - Label Location - AXES LENGTH**

Labels of coordinate system (grid) axes drawn in the wrong place if the AXES LENGTH is << 1

**M-4065                    2003                    BCs - NODE - Lost BC after Import of Input File**

Can not put boundary condition on node associated with generalized plane strain

**1-21030395                2005                    Solid Geometry - Boolean Operations - Failure to Create**

Creation of a solid from a trimmed surface, via solid face, fails,

entid 7035: Error: Coedges out of order about edge.

Solids cannot be used for Boolean operations. Operation fails also if revolve of the surface is used

- 1-22843637**      **2005**      **Meshing - Transition Factor - Meshing Failure**
- Tetrahedral meshing may cause access violation if the transition factor is < 0.8 on Windows 2000/ XP
- M-5770**      **2005**      **DDM - Servo Links - Incorrect Input File**
- Incorrect DDM input files may be written if servo links exist and retained nodes are used as tied
- M-5858**      **2005**      **DDM - Neumann Pre-Conditioner - Incorrect Input File**
- When Neumann pre-conditioner is selected, marc\_writer writes tolerance on 3rd block of solver card to input file for parent domain. However this item is on 5th block of solver card for parent. For children domains, this item is on 3rd block.
- M-5741**      **2005**      **Meshing - SUBDIVIDE - Element Quality**
- Subdividing a model results in a wrong mesh when the geometry is attached. Without attachment, it works fine.
- M-5727**      **2005**      **Post-Processing - History Plot - Wrong Results**
- Activation/deactivation elements cause problems in history plot/post-processing
- 1-23838781**      **2005**      **Meshing - SUBDIVIDE - Incorrect Elements**
- Subdivide of elements incorrect in cylindrical and spherical coordinate system if node is at center
- M-5025**      **2003r2**      **Post-Processing - Element 72 - Incorrect Results**
- Postprocessing of nodal quantities at mid-side nodes of element 72 is not correct
- M-5885**      **2005r2**      **MOVE - Formula Entry - Bad Float Error**
- In the move operation, if the user clicks on Formulas, then enters sin(x) and hit return, Mentat returns "Bad float!" error. If the user ignores the error message and proceeds, the nodes are moved correctly.
- 1-24156203**      **2005r3**      **LBCs - State Variables - Pore Pressure (LAST)**
- Option LAST must be removed from PORE PRESSURE initial condition menu. Mentat writes -1, if the button 'LAST' increment is selected. However, Marc does not recognize this.
- 1-26166771**      **2005r3**      **Meshing - AXITO3D - Incorrect mesh**
- 3d mesh created from axisymmetric mesh is incorrect for axito3d analysis if elements have been renumbered
- 1-41683031**      **2005r3**      **Mentat Window - Resizing - No Update**
- Mentat GDI version does not update the window border when Mentat window size is increased

- 1-48687621**      **2005r3**      **Post-Processing - NUMERICS - No display**
- Scalar Plot NUMERICS may behave differently from CONTOUR BANDS when using ISOLATE ELEMENTS
- 1-49646471**      **2005r3**      **Post-Processing - PATHPLOT - Mentat hangs**
- Problem may occur using the command \*pathplot\_fit on Windows XP - Mentat may hang up
- 1-51690511**      **2005r3**      **NODE MOVE - Projection to Surface - Inaccurate Location**
- Projection of elements to surface is inaccurate
- 1-52783861**      **2005r3**      **Geometry - Create - Coincident Points**
- If a point is duplicated (rotate, 10 degree, 36 times) along a circular arc and a circular arc is also created and divided with fixed division 36, the curve divisions and the generated points are not coincident.
- 1-54057356**      **2005r3**      **Results - Beam Section - Layer All Selection**
- For a beam section, only 16 stress points are outputted if Layers All is selected in JOB RESULTS
- 1-57093315**      **2005r3**      **Export - Nastran - RBE3 Error**
- When a model is export in the Nastran format, the following problems occur: The RBE3 cards are not written correctly. All the coefficients for the connected nodes are written on more than eight characters. Also, if you have a shell element, only the membrane material is written in the PSHELL card (field MID1).
- 1-46535153**      **2007r1**      **History Plot - Collecting Data - Performance**
- Nodal data collection for history plot may be very slow fro model with a Gravity load on the elements.
- 1-64327185**      **2007r1**      **Elements - Beam Axis - Incorrect Orientation**
- Plot of bushing element beam axes are incorrect when orientation is aligned with coordinate system
- 1-64378063**      **2007r1**      **Material Properties - Fluid - User Subroutine**
- Fluid material menu suggests viscosity can be table dependent for Bingham/PLaw/GPLaw/Carreau. This should not be the case.
- 1-64451136**      **2007r1**      **Job Setup - Static Job - Input file error**
- If a spectrum response analysis has been written, subsequent writing of input files is incorrect for a Static Analysis.
- 1-67040208**      **2007r1**      **Post-Processing - Penta Elements - Vector Errors**
- Shear stress vectors appear to use an incorrect normal face direction for penta6 elements

1-71714926            2007r1            **Marc Input Reader - Shell Offsets - Input error**

Shell offset at 1st node not read from input file

1-72160157            2007r1            **Meshing - Subdivide Element - Crash**

Mentat may crash if it needs more memory than available, e.g. when subdividing elements

1-72958171            2007r1            **Meshing - Subdivide - Lost Cavity Information**

Subdivide in Mentat loses top/bottom in cavity definition for shell elements

1-74360201            2007r1            **Marc Input Reader - Materials - Failure Data Error**

Marc Input Reader has problems reading in material failure data