

**ANSYS Workbench Class3****Error Report****ERROR NO:**

WB2012-05

**Keywords:**

ASSEMBLY MESHING

FLUENT MESH EXPORT

PARENT/CHILD

FACE CONVERSION TO POLYHEDRAL CELLS

**Description of Error:**

The meshes generated in WB Meshing using the Assembly Meshing approach which are exported as FLUENT mesh file can have polyhedral cells which are bounded by faces which do not reference interior bridge nodes on edges. This kind of connectivity was not covered in the FLUENT mesh checks up to Release 14.0. The problem will show up when mesh changes such as smoothing or morphing are made, then the wrong connectivity will show up immediately.

**Typical GUI Path(s):**

In WB Meshing, create a mesh using the Assembly Meshing method and transfer the mesh to Fluent.

**Other Comments:**

This error is due to an inconsistent conversion of cells connected by parent/child faces. However, the absence of bridge nodes at the node list can even improve accuracy because averaging from nodes to face w/o bridge nodes will correspond to geometrical face centroids, otherwise it will be with some disturbance. For FLUENT if there are regular hanging node interfaces the bridge nodes are not used for face averaging up to Release 14.0.

**First Incorrect Version:**

Release 13.0

**Corrected In:**

Release 14.5

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

Don't modify a mesh generated with the Assembly Meshing method coming from WB Meshing in FLUENT by mesh smoothing, mesh morphing, or similar.

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**Reviewed By QA:**

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**Approval:**

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