

## Nodal Results (Near Node Member Forces) Bugfix release note

SkyCiv releases a fix for the *Nodal Results (Near Node Member Forces)* dialog.

### Summary of bug

The near node member forces dialog (launched using the Nodal Results button when viewing results in S3D) displays the member forces and moments for members attaching to a node, at a specified distance along the member from the node.

Member forces and moments can have more than value at certain positions along the member, since there can be a step change in the axial force, shear force, moment or torsion diagram when another force or moment is acting on the member.

In some cases, the near node member forces dialog and graphic showed only one value for force or moment, when two values should have been shown.

At any position that was not a precise % of the member length (e.g. 50, 75, 100 etc.), at which a step in the force or moment diagram occurred, the near node member forces dialog would show just one value, instead of the two values that are observed in the main graphical results display.

This most commonly occurred when the distance in the near node member forces dialog was set to 0.

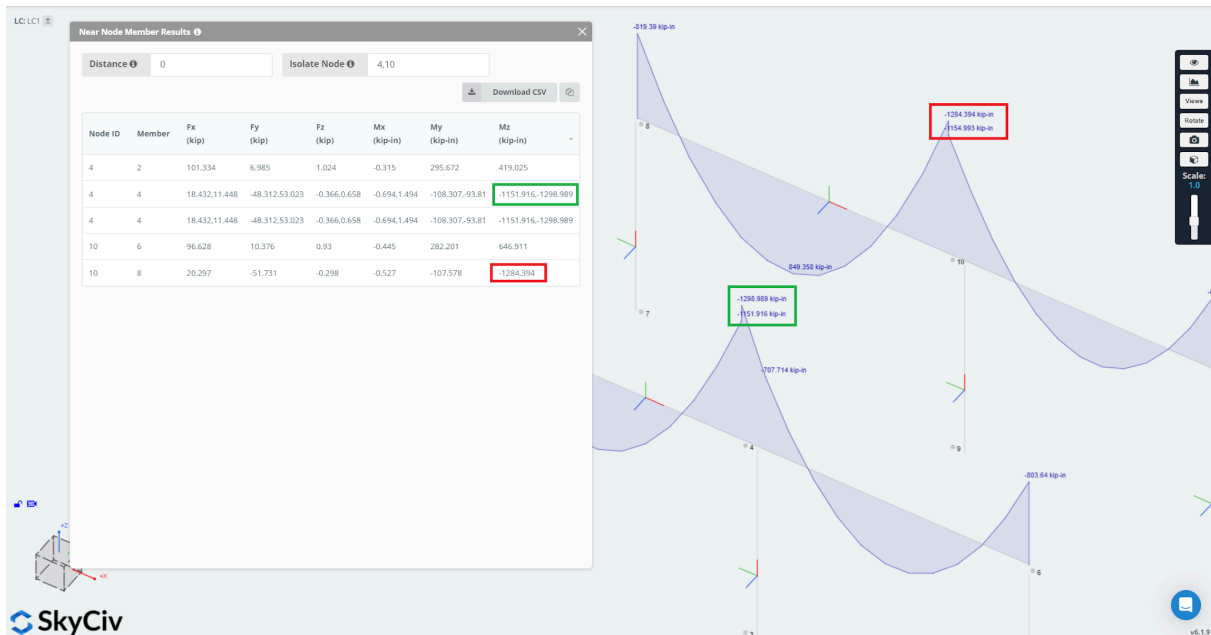
### Implications for users

Users should check carefully any previous model where the contents of the near node member forces dialog have been used to perform a separate calculation, since some forces or moments may have been missed.

Specifically, cases where the distance from the node was set to zero, and the position of the node along the member was not a precise % of the member length (e.g. 50, 75, 100 etc.) are most likely to be affected by the bug.

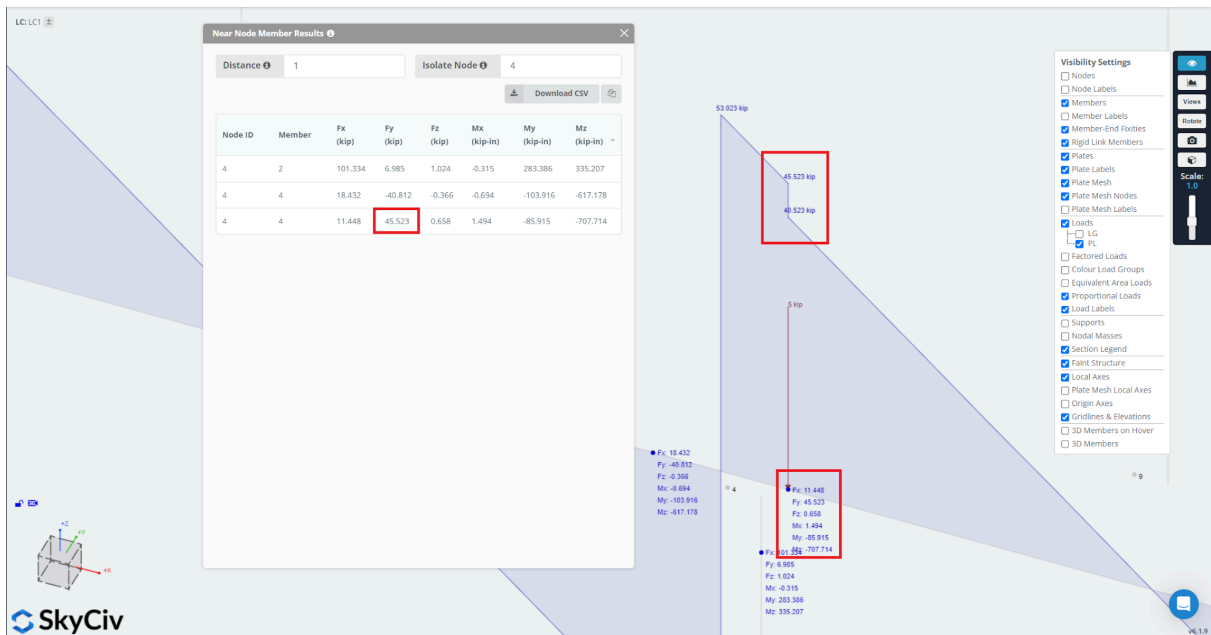
### Example 1 of the bug

For example, in the following S3D model, the bending moment diagram for member 8 at node 10 is stepped at a distance of 0 feet from the node. But, in the near node member results dialog, only one value of moment is seen (highlighted in red). The values show correctly for member 4 at node 4.



## Example 2 of the bug

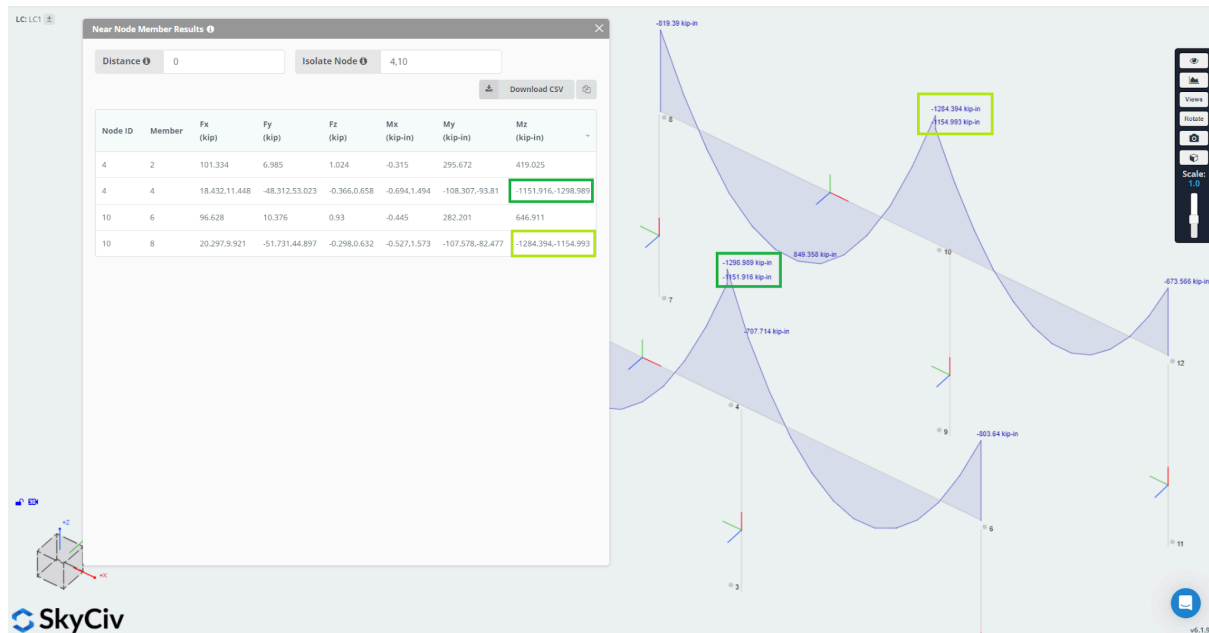
Similarly, in another (much rarer) case, a point load along the span of the beam results in a step change in the shear force diagram for member 4 at node 4 at a distance of 1 foot from the node (the position of the point load), but only one value of shear force is seen in the near node member results dialog:



## Summary of the Fix

The near node member forces dialog now correctly shows both forces (when relevant) at all positions along the member.

For the first case above, for member 8 at node 10, at a distance of 0 ft from the node, the near node forces dialog now correctly shows both values of moment:



Similarly, for example 2 above, for member 4 at node 4, at a distance of 1 ft from the node (the position of the point load), the near node forces dialog now correctly shows both values of shear force:

