

Occasionally, a job will require modifying one or more of the load cases that the MiTek Engineering software generates. A job might require adding loading from a steeple or a knee-brace into just the wind load cases or a tie-in truss with uplift reactions in a gravity load case that needs to be applied to the girder.

Project specifications will determine which load case(s) will need to be modified. With steeples, multiple wind load cases will typically need to be modified. Girder trusses may actually have uplift reactions that will require modifying one or more of the “gravity” load cases. See Figure 1 for an example of a load cases list.

Chord	Type	Distribution	Load Direction	Direction	Begin	End	Load From	Value 1	Value 2	Panels	Source
#C	#C	#C	#C	#C	=	=	#C	#C	#C	#C	#C
<ul style="list-style-type: none"> > 1: Dead + Snow (balanced) (Count=4) > 2: Dead + Roof Live (balanced) (Count=6) > 3: Dead + 0.75 Roof Live (balanced) (Count=6) > 4: Dead + 0.75 Snow (balanced) (Count=4) > 5: Dead + 0.75 Snow (Unbal. Left) (Count=5) > 6: Dead + 0.75 Snow (Unbal. Right) (Count=5) > 7: Dead + Uninhabitable Attic Without Storage (Count=3) > 8: Dead + 0.6 C-C Wind (Pos. Internal) Case 1 (Count=8) > 9: Dead + 0.6 C-C Wind (Neg. Internal) Case 1 (Count=8) 											

Figure 1 – Load Cases List

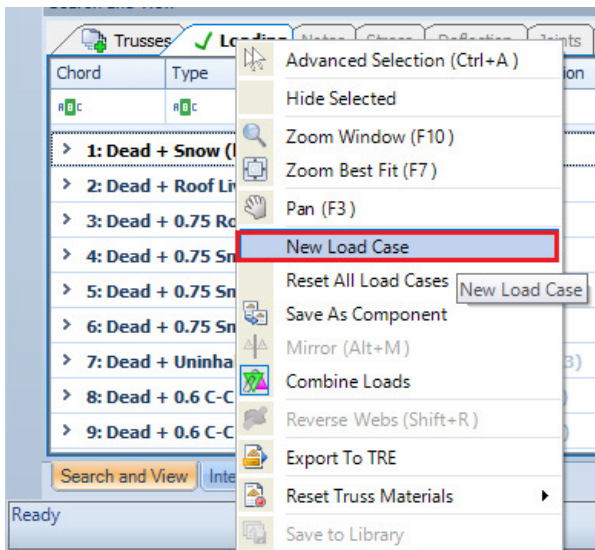


Figure 2 – New Load Case

The first step to modifying a specific load case is to duplicate the load case that needs to be modified. Start by opening Loading and choosing the desired Load Case. Click the right mouse button on the desired load case, click the New Load Case in pop-up menu as shown in Figure 2.

By clicking the New Load Case a duplicate of the selected load case is added to the end of the list of load cases and will be called a “User Defined” load case.

In the Ribbon Bar – Loads select type of Load you would like to add, see Figure 3.

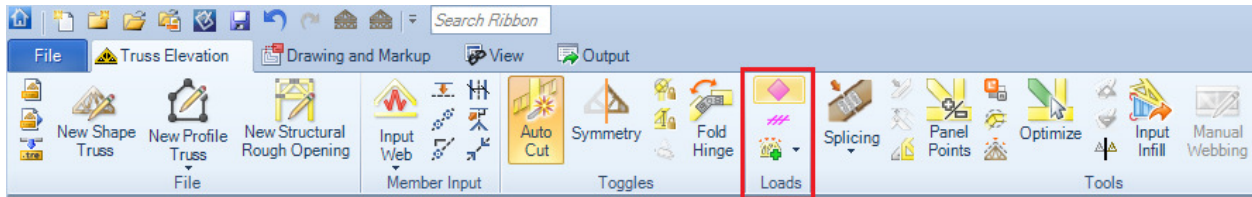


Figure 3 – Ribbon Bar

The next step is to add the loading needed to this load case. In open Properties dialog box enter and define this new load as required and specify Load Case you would like this load to be added to. For gravity load enter positive number, for uplift load enter negative number. See Figure 4.

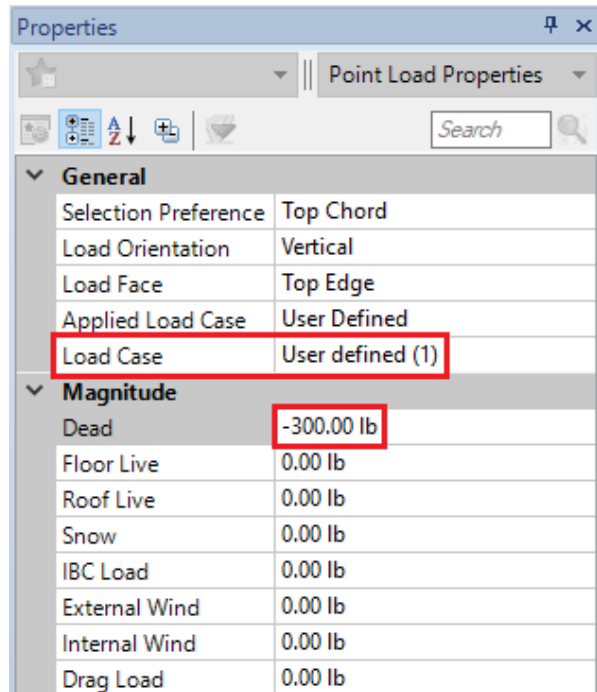


Figure 4 – New Load Dialogue Box

Select location where you would like to add this load on the truss and clock OK. See Figure 5.

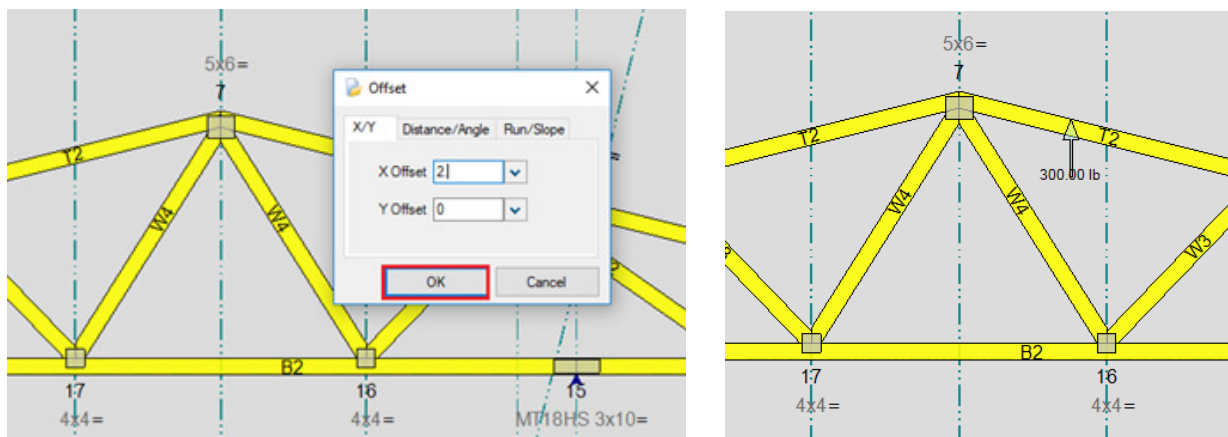


Figure 5

After you are finished adding all the loads, you can select a different load case and complete these steps again to add loads to a different load case (Load Case – User defined (2), etc.). For example, if you were entering loads for a steeple in Wind Left load case, you would now need to find the Wind Right load case, click the New Load Case in pop-up menu and add the appropriate loads. Once all the loads required for all of the affected load cases have been added, click **Esc** keyboard button to get out of Loading and then you can analyze the truss.

For further questions concerning adding manual loads to specific load cases, or if you have questions, please contact the MiTek Engineering department.