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Migrating from the “Cab Positions, Velocities and Accelerations” Screen

This Technical Memo provides instructions for migrating from the deprecated browser screen and library **Cab Positions, Velocities and Accelerations (Deprecated)** to its replacement **Positions, Velocities and Accelerations** in CarSim, TruckSim, and BikeSim.

From time to time, the addition of new features or support for more detail in existing features causes the introduction of new library screens with substantially similar function (though most often with new, additional capabilities). The older, less capable screens are retained in the product to ensure backward compatibility and support updates of older databases. However, after a time the older screens are removed.

With the release of Version 2020.0, the **Cab Positions, Velocities and Accelerations (Deprecated)** screen and library has been deprecated (i.e., marked for retirement). Normal policy is to retain a deprecated screen for two releases before removal. In other words, this deprecated screen will be carried in the 2020.0 and 2020.1 scheduled releases, and no longer appear in Version 2021.0.

Differences Between the Libraries

Figure 1 shows a **Positions, Velocities and Accelerations** screen and Figure 2 shows the deprecated **Cab Positions, Velocities and Accelerations (Deprecated)** screen.

For brevity, the screens will be called **New** and in **Deprecated** most of the remainder of this document.

Both screens perform the same function. They define the coordinates of motion sensors on a vehicle unit to be used to track motion or to define the points of application with custom user-defined forces. The **Deprecated** screen creates points only on a suspended cab. The **New** screen can create points on a cab, or elsewhere on the sprung mass, or on the sprung mass of a trailer. It also offers options for the types of motion data to be calculated.

This document discusses only transferring data from the **Deprecated** screen to the **New** screen. For more information you should review the **Help** for the **Positions, Velocities and Accelerations.**

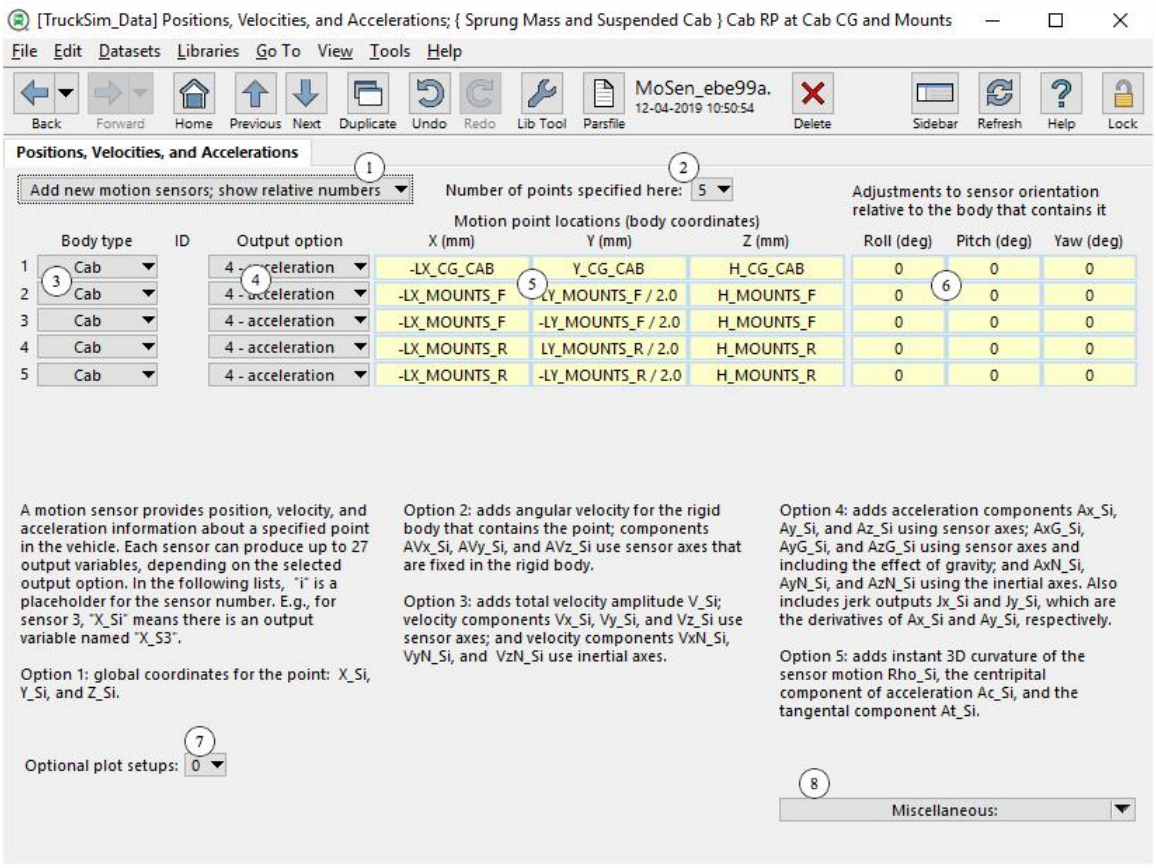

Figure 1. Positions, Velocities and Accelerations screen

Migrating the Data – Preparing a Screen

To assist you in moving to the newer screen, it's a good idea to first navigate to the **Deprecated** screen for the dataset you want to replace. Use the **View** menu item and select "Additional Window (Read-Only)". This opens a copy of the screen you can refer to while building its replacement in the **New** screen**.** Note that in the read-only copy you can navigate among screens and copy data to the clipboard, but you cannot change the contents of any screen.

In the read-write copy that you have open, use the **Libraries** menu item to navigate to **Positions, Velocities and Accelerations.** You will create a dataset in this library for each dataset you need to transfer to a **Cab Positions, Velocities and Accelerations (Deprecated)** dataset. To do this, Use the **File** menu item and select "New Dataset (Empty)". In the dialog that opens, type in the category name and title from the read-only copy. (Remember you are creating a replacement in a different library, so the same category and title is a good idea). Note that all the fields in the new screen are initially empty.

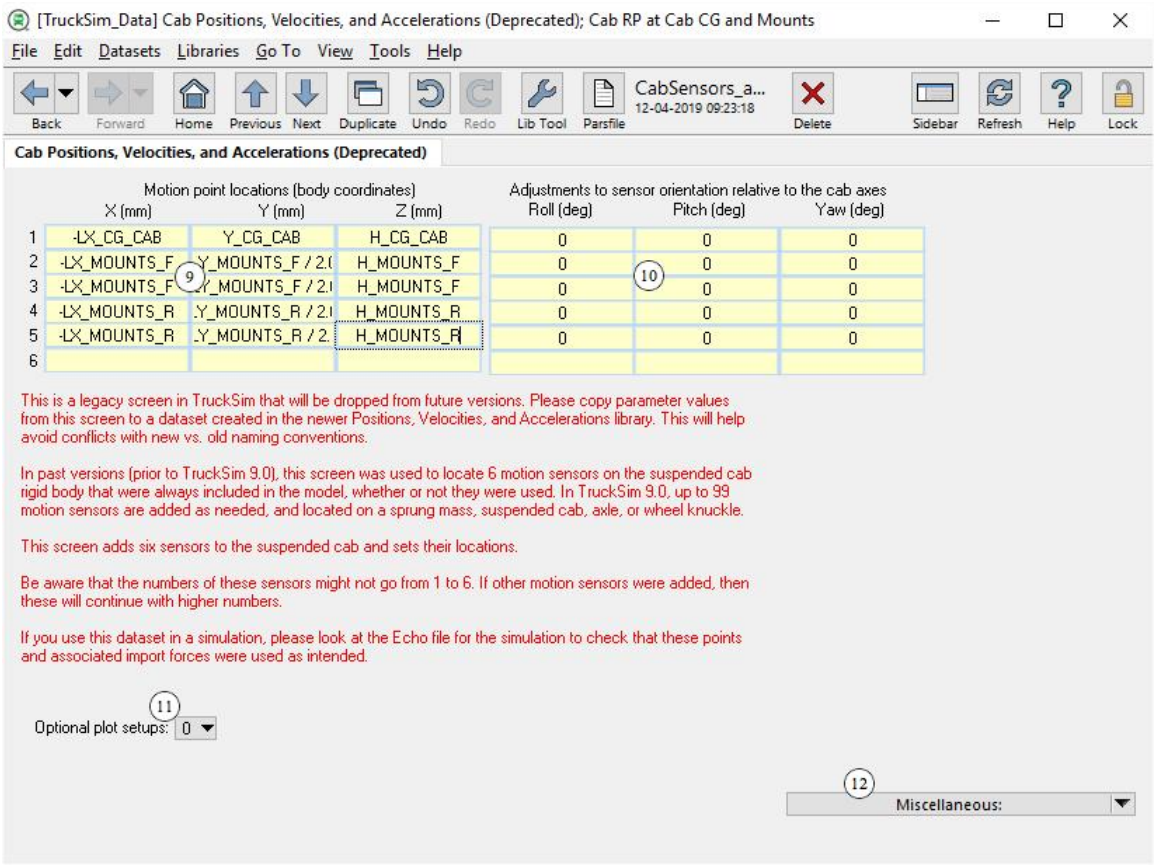

Figure 2. Cab Positions, Velocities and Accelerations (Deprecated) screen

Migrating the Data

On the **New** screen, set the pull-down (1) to "Add new motion sensors; show relative numbers". This will cause the installed sensors to be numbered in the Echo file consecutively after any sensors that might have been installed by other screens linked before this one. This is the same behavior as the **Deprecated** screen.

On the **New** screen, set the "Number of Points" pull-down (2) to the number of points defined on the **Deprecated** screen. Also set all of the "Body type" controls (3) to "Cab" and "Output option" (4) to "4 - Acceleration".

One by one, copy and paste the contents of the X, Y, and Z coordinate (9) fields from the **Deprecated** screen to the corresponding **New** screen fields (5). Next, copy and paste the contents of the Roll, Pitch, and Yaw (10) fields from the **Deprecated** screen to the corresponding **New** screen fields (6).

If any optional information is linked, such as Plot Setups (11) , or other Miscellaneous information (12), transfer those settings to the **New** screen (7), and (8).

Finishing Up

After creating the new datasets in **Positions, Velocities and Accelerations**, close the read-only window and navigate to the **Cab Positions, Velocities and Accelerations (Deprecated)** library again. For each dataset, use **Tools** from the menu and choose **Find All References to This Dataset** to find the places that link to it. One by one, double-click the listed items to go to the screen where the **Deprecated** dataset is linked, and change that link to the **Positions, Velocities and Accelerations** dataset just created.

Complete the above steps for each dataset in the **Cab Positions, Velocities and Accelerations (Deprecated)** library. Once you are sure the data has been transferred correctly and is linked to the datasets that use it, it's a good idea to delete **Cab Positions, Velocities and Accelerations (Deprecated)** datasets so you won't use them in the future. Remember, when the screen is retired any data still there will be lost.