## HazOp Table

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A HazOp Table allows you to perform hazards and operability analysis which is a common hazard analysis method for complex systems. In the HazOp Table, you can identify the Malfunctioning Behaviors for each function of your system.

Elem	ent Type: Activity		Scope (d	ptional): System Functi	ons	{ky Filter:	$\nabla$		
#	Name	More	Less	Unintended	Intermittent	Late	Early	Inverted	No
1	🔁 Steering Assist	Excessive Steering Assist	Reduced Steering Assist	Onintended Steering Assist	Reduced Steering Assist	Unintended Steering Assist	Contended Steering	Reverse Steering Assist	Loss of Steering assist
2	Tilt the Vehicle Body	Vehicle body tilts more than required	Vehicle body tilts when not required	Vehicle body tilts when not required	Vehicle body oscillates between min and max tilt angle	Delayed vehicle body tilt	Vehicle body tilts when not required	Vehicle body tilts opposite to required direction	No vehicle bofy ti provided. Fixed ir position at time o malfuction

An example of a HazOp Table.

## Creating a HazOp Table

You can create a HazOp table as described below.

Alazop table supports three element types: Activity, Use Case, and Class. If you want to use a different system function type, you can extend the

default type list by using customization.

To create a HazOp Table

- 1. In the Containment tree, select the element that you want to be the owner of the table.
- 2. Do one of the following:
  - In the main menu, go to Diagrams > Create Diagram, then select HazOp Table in the open dialog.
  - In the Containment tree, right-click the owner of the table, select Create Diagram and select HazOp Table in the open dialog.

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⊡…	Create Diagram: Search   General Analysis Diagrams   Other Diagrams Other Diagrams   ISO 26262 Functional Safety Analysis   Safety Requirement Diagram   HazOp Table   Operational Situations Table   Accident Scenarios Table   Effects Table   HARA Table	* * * * *	
	Safety and Reliability Analysis	*	
	Simulation	*	
	UML Diagrams	*	
	⊙ Expert		

- 3. Type the name of the table and press Enter.
- 4. To specify the scope of the table, drag the Package containing system functions from the Containment tree to the Scope box.
- 5. To specify the type of your system functions, drag any system function from the Containment tree to the Element Type box.

After you create a HazOp Table with the system functions displayed in it, you can start creating Malfunctioning Behaviors, as described in the section below.

## **Creating Malfunctioning Behaviors**

There are two ways to create Malfunctioning Behaviors:

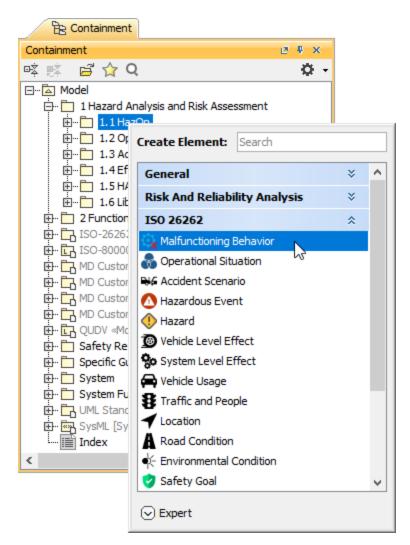
- Create Malfunctioning Behaviors in the Containment tree and add them to a HazOp Table.
- Create Malfunctioning Behaviors right in a HazOp Table.

the predefined table columns (guide words): More, Less, Unintended, Late,

Early, Inverted, Late, and No.

To create a Malfunctioning Behavior in the Containment tree

- 1. In the Containment tree, right-click the owner of a new element and select Create Element.
- 2. In the open window, select Malfunctioning Behavior.



- 3. Type the name of the element and press Enter.
- 4. To assign the Malfunctioning Behavior to a system function, drag it from the Containment tree to the desired cell of the HazOp Table.

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To create a Malfunctioning Behavior in a HazOp Table

- 1. In a HazOp Table, double-click the cell for which you want to create a Malfunctioning Behavior and click .....
- 2. In the Select Elements dialog, enable the Creation Mode if it is not enabled yet.
- 3. In the element tree on the left side of the dialog, select the owner of a new element and click the Create button.

4. When the Specification window of the created element opens, enter the element name and close the Specification window. The element is created and automatically added to the selected elements area on the right side of the Select Elements dialog.

🕅 Select Elements	×							
Select, search for, or create elements Use the List or Tree view to search for an element. To find the element, type a name in the "Search by Name" box. You can also use wildcards (*,?). Click the magnifier icon to select searching for elements by qualified names, or use camel case.								
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Cadd an additional Malfunctioning Behavior related table cell, double-click that element in the element tree on the left side of the Select

Elements dialog. To find the element quicker, go to the List tab displaying the list of all the Malfunctioning Behaviors of your model.

5. Click OK to close the Select Elements dialog.