

# What's New to PLE in 18.0 SP1

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**pure::variants** integration has been enhanced in this service pack. Download the Product Line engineering plugin today at [nomagic.com](http://nomagic.com) or contact your sales representative, and don't forget to give us your feedback on [Twitter](#) or [Facebook](#).

## Validation of Variation Point Expressions

Basic error checking has been added for variation point expressions. It allows detecting and fixing of errors in variation point expressions after a feature model changes.

Let's say we have a variation point in our system model, as shown in the Figure 1. This variation point refers to a feature named *Speed* in the feature model.

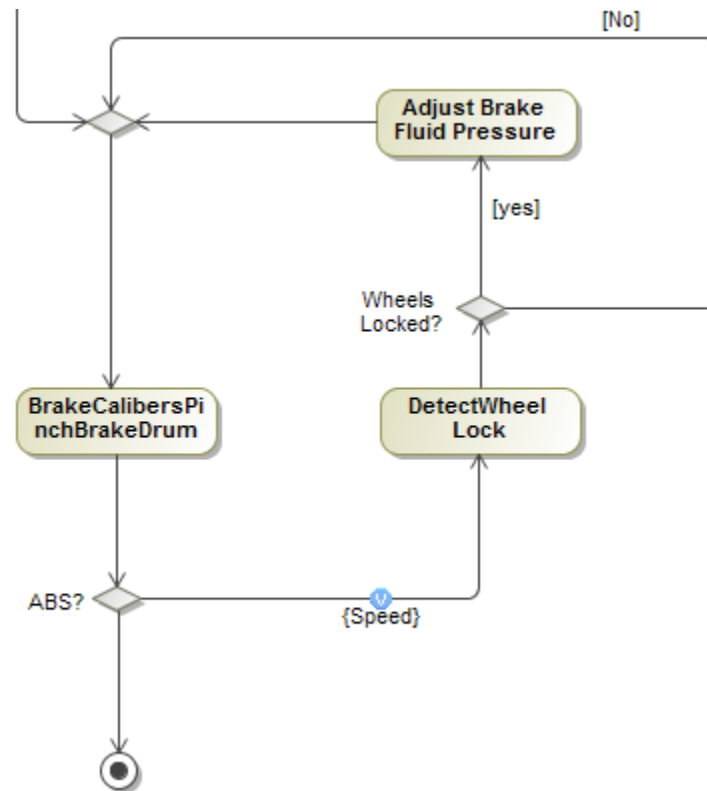


Figure 1. Example activity showing a Variation point named *Speed*

Now let's say somebody has changed the feature model renaming the feature *Speed* to *WindSpeed*. As a result, our variation point expression is no longer valid. To detect and correct such situations, you can run a validation suite which will detect such situations in the model and provide suggestions for fixing them.

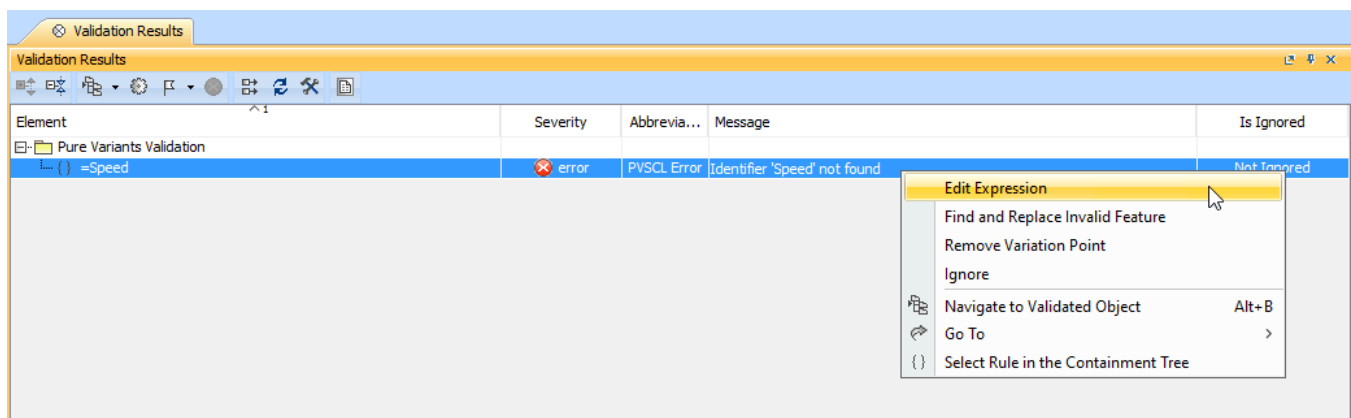


Figure 2. Validation Results panel after running a validation suite

Additionally, there are three more validation rules to check for simple errors in variation point declarations:

- Variation points not connected to any model element.
- Variation points referring to a wrong UML property.
- Variation points referring to a wrong tag.

## Variant Preview

From now you are able to visualize the differences between the general system model and a particular variant model. Just **Enable Transformation Preview** and, as it is shown in the following figure, the selected variant differences are highlighted. Elements which will be removed in the selected variant are highlighted in red, and elements which will be modified are highlighted in yellow.

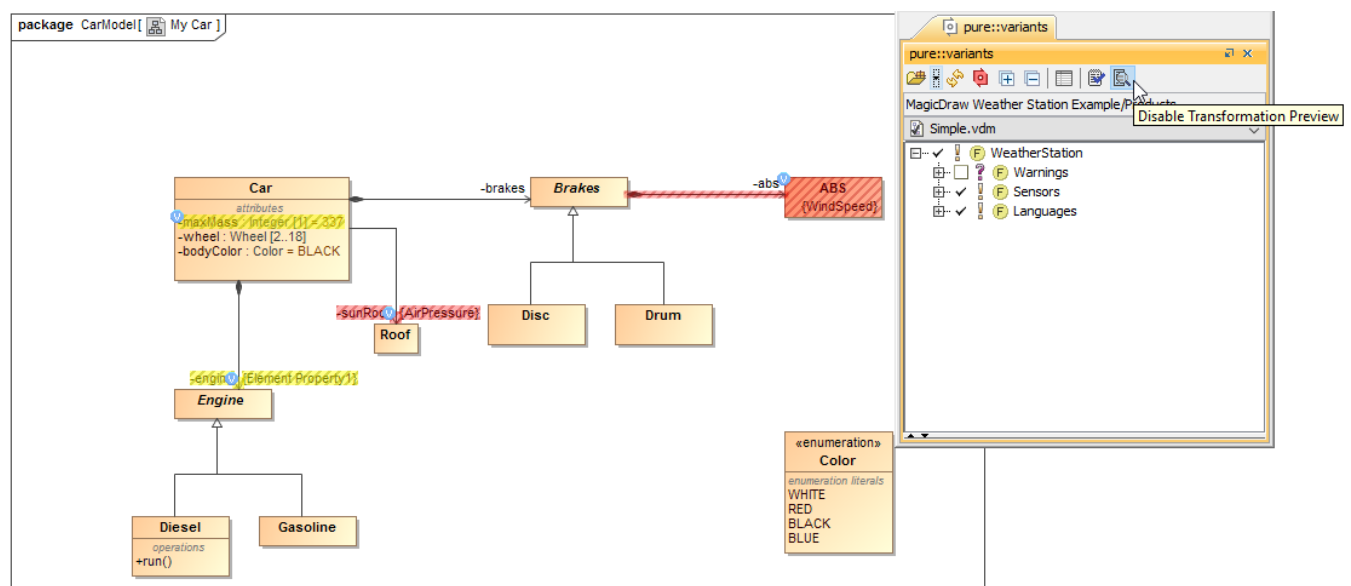


Figure 3. Selected variant differences are highlighted

