Documentation – Exporting a txt file from CATIA

Purpose:

This document explains step by step creating a txt-file interface between CATIA and MatLab.
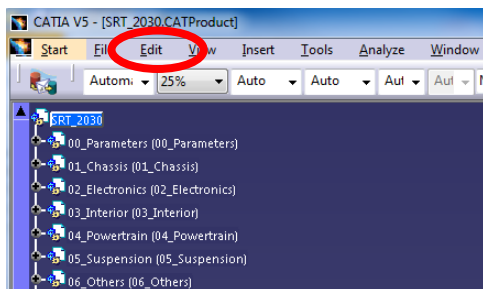The txt file has to be created once in the beginning. Then it works as a communication interface every time.
If the existing txt file crashed or has a problem following needs to be done to export a new one.
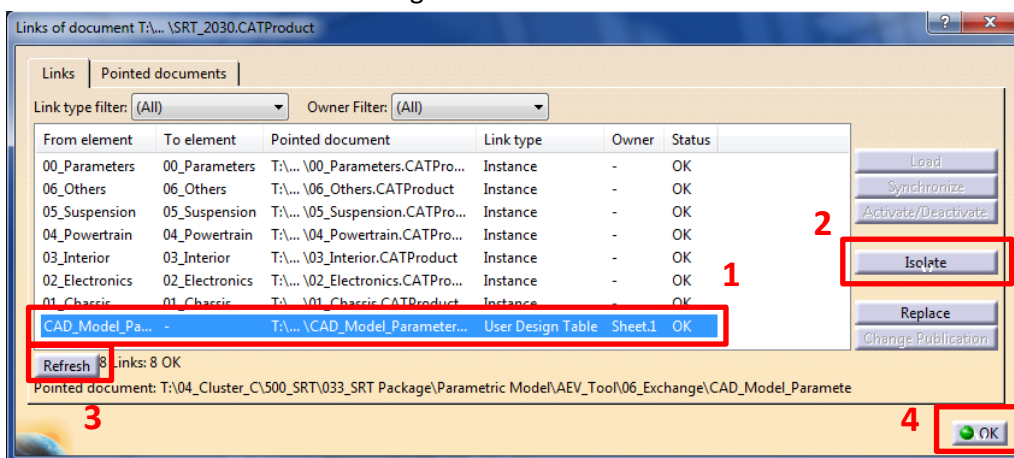
Exporting Process Step-by-Step:

When existing txt-file crashed, all links to the CAD model need to be deleted before exporting a new file

1. **Deleting existing TXT file and link to Catia**

    1.1. Deleting existing txt-file that has an error or crashed
    1.2. Open CAD model
    1.3. Click Edit

    1.4. Click on Links
    1.5. Search for parameter table name "CAD_Model_Parameter_Table" and klick on it to activate Isolate button on the right
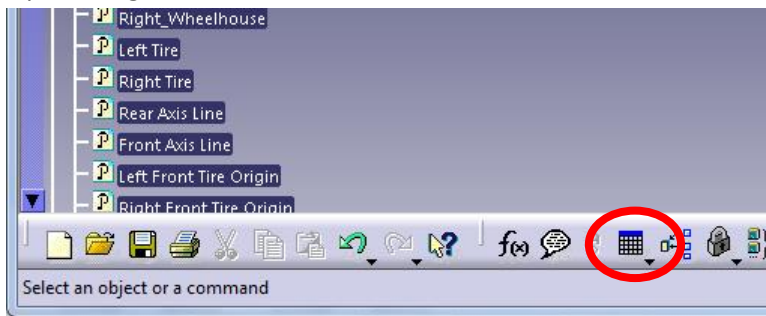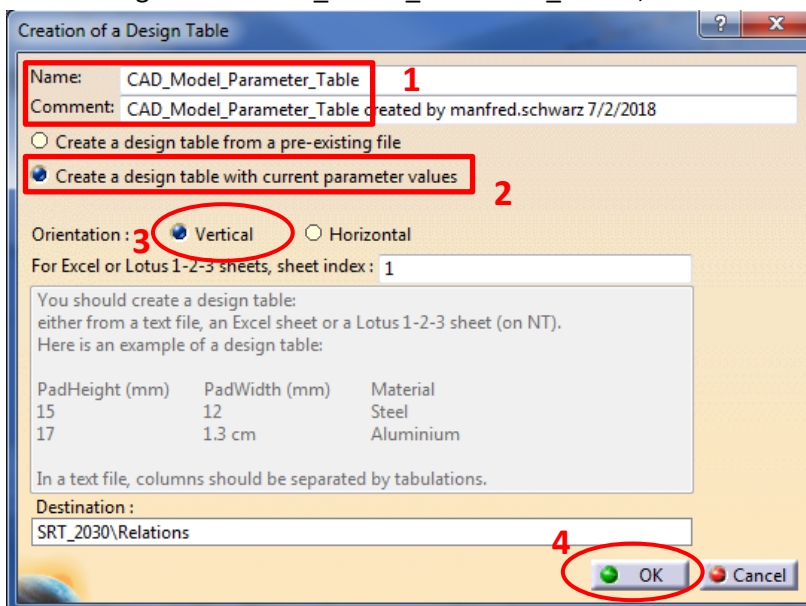

    1.6. Click Isolate

1.7. Click refresh – parameter table file should be gone now

1.8. Close Links management centre

1.9. Save CAD model and Close CATIA to avoid any errors

2. Exporting a new txt file

2.1. Open CAD model

2.2. Open design table Icon

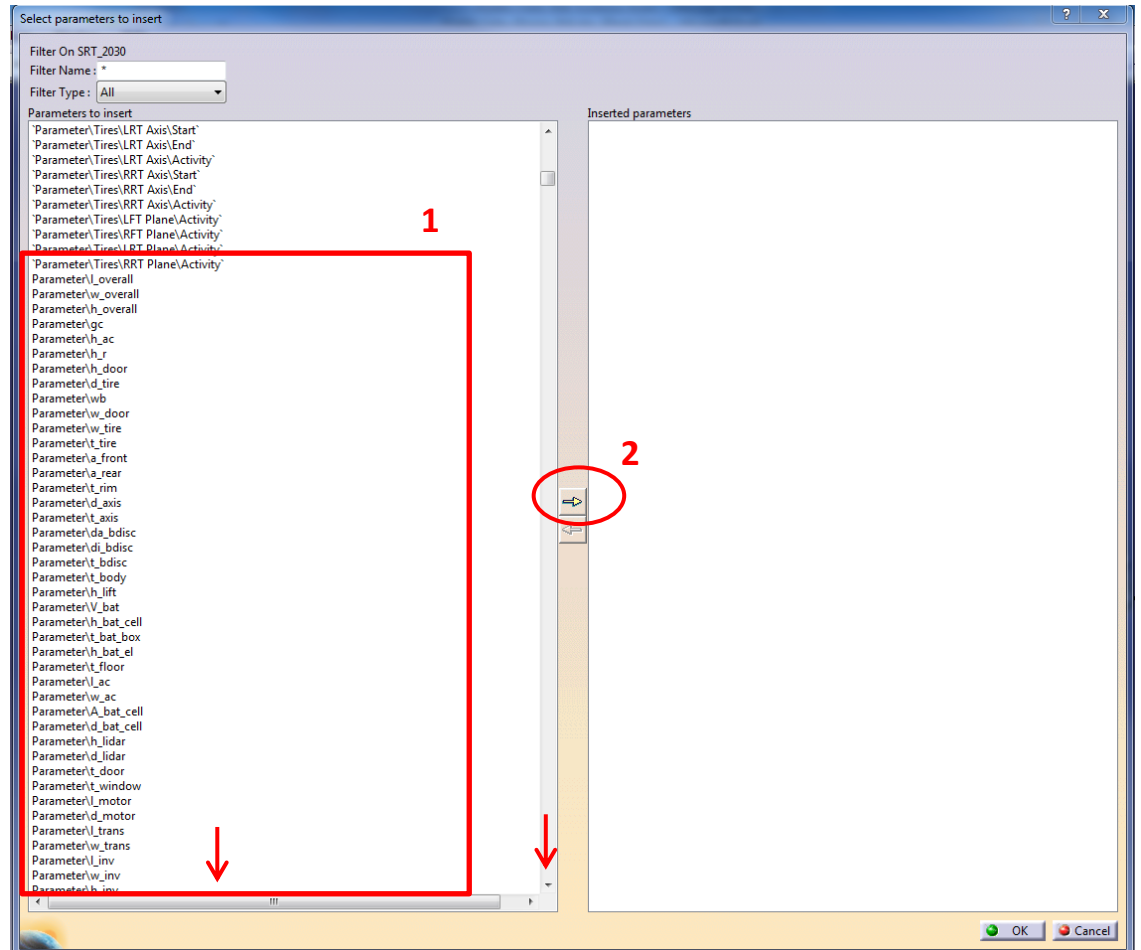2.3. Name Design Table: "CAD_Model_Parameter_Table", also Comment window

2.4. Klick "Create a design table with current parameter values

2.5. Click Vertical

2.6. Click OK

2.7. Insert parameters to table in following order by clicking on arrow to.
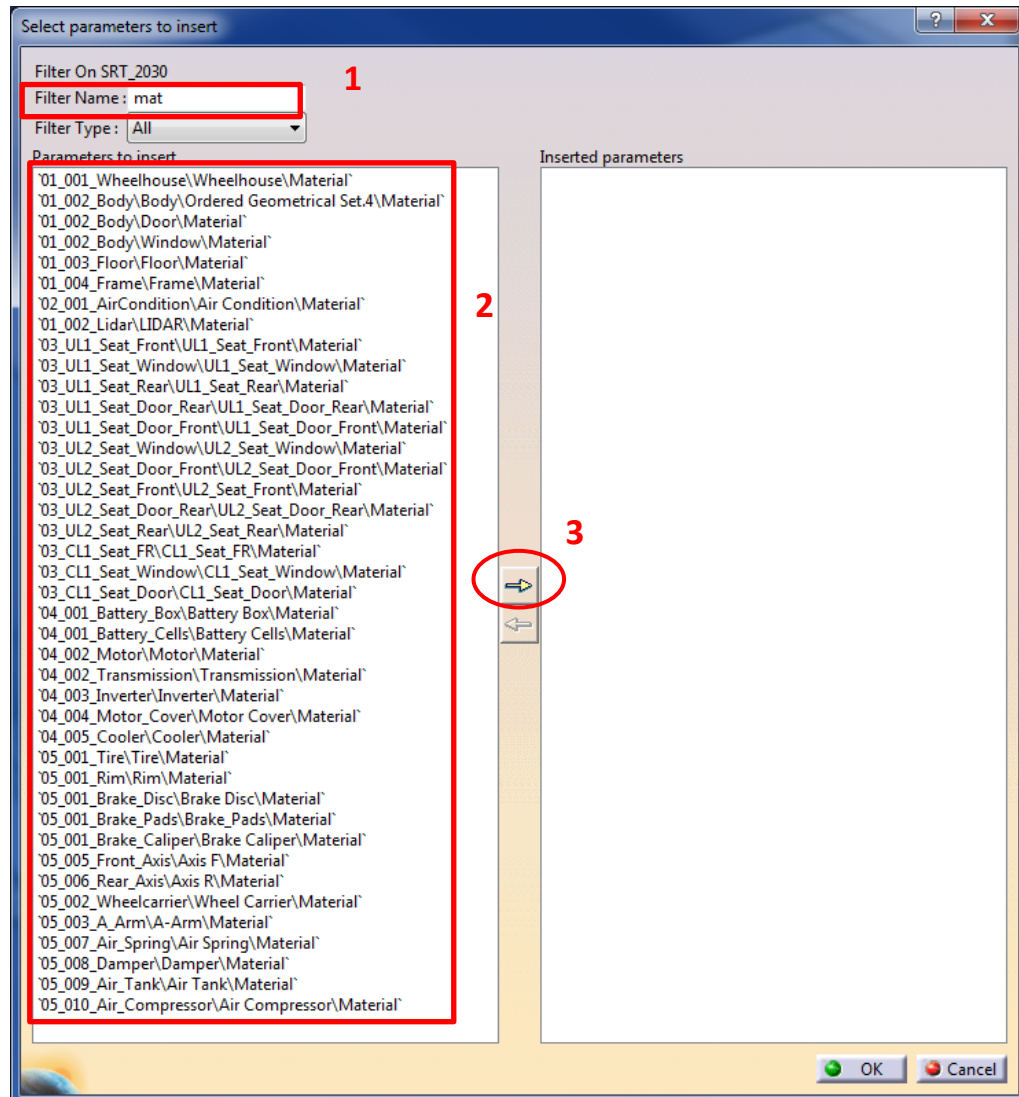
2.7.1. Parameters:

From *Parameter\l_overall* until *Parameter\h_window*

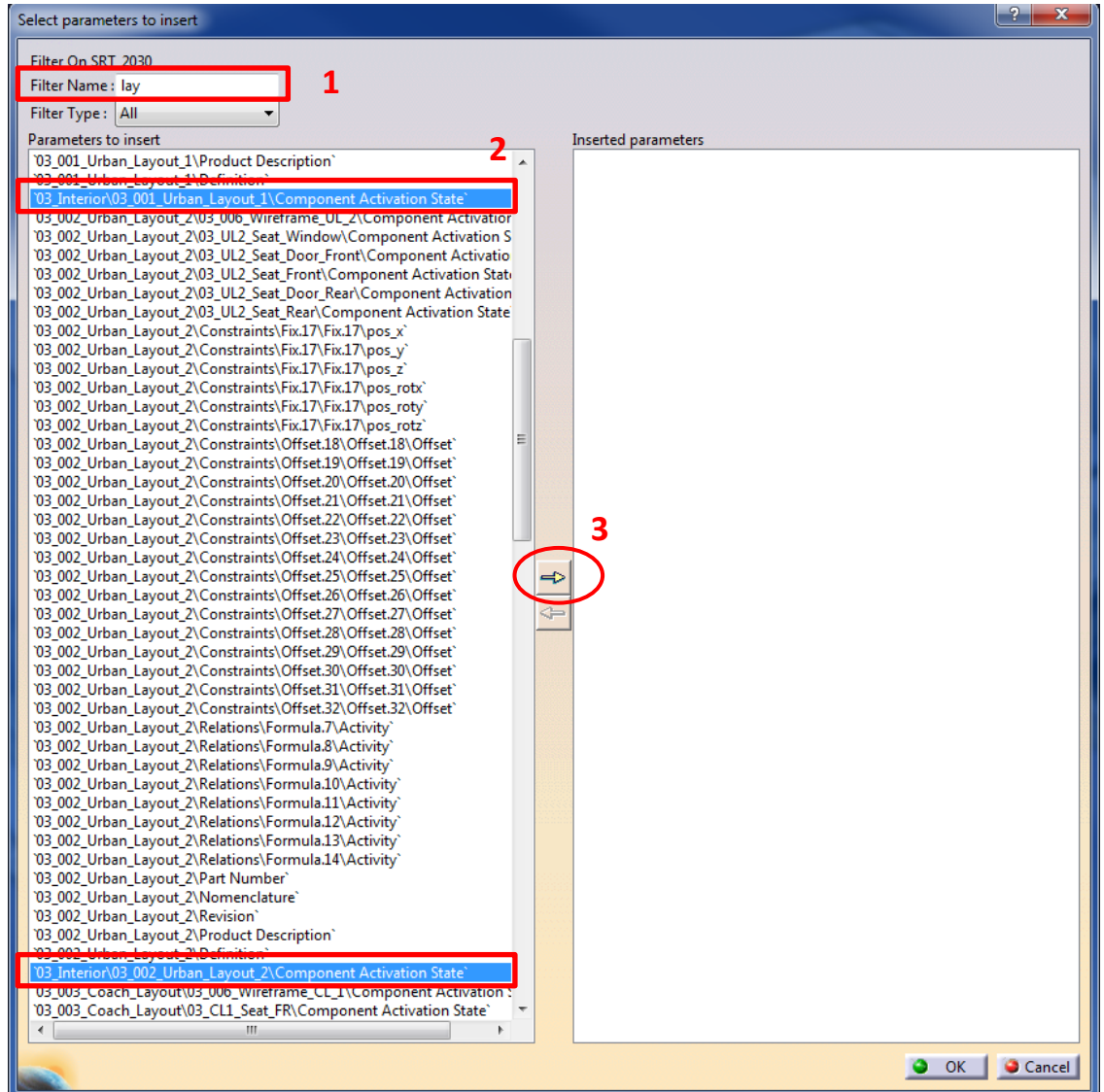Confirm with arrow then filter materials

2.7.2. Materials, all assigned ones:

From *01_001_Wheelhouse\Wheelhouse\Material*

until *05_010_Air Compressor\ Air Compressor\Material*

Confirm with arrow then filter layout

2.7.3. Layouts:

- *03_Interior\03_001_Urban_Layout_1\ Component Activation State*
- *03_Interior\03_002_Urban_Layout_2\ Component Activation State*
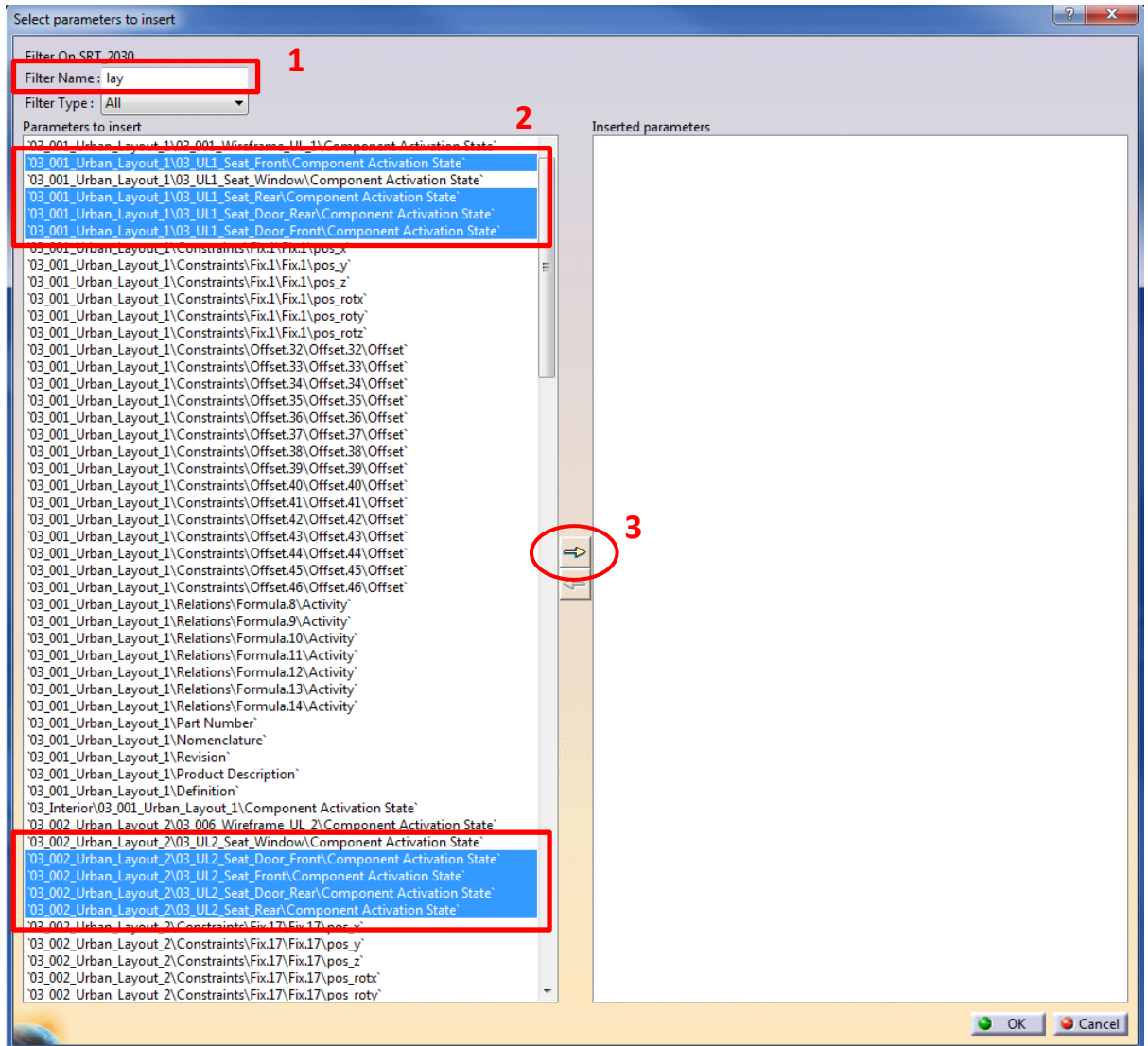- *03_Interior\03_003_Coach_Layout\ Component Activation State*

2.7.4. Seats:

No window seat configuration

UL1 and UL2: only front rear, door rear and door front
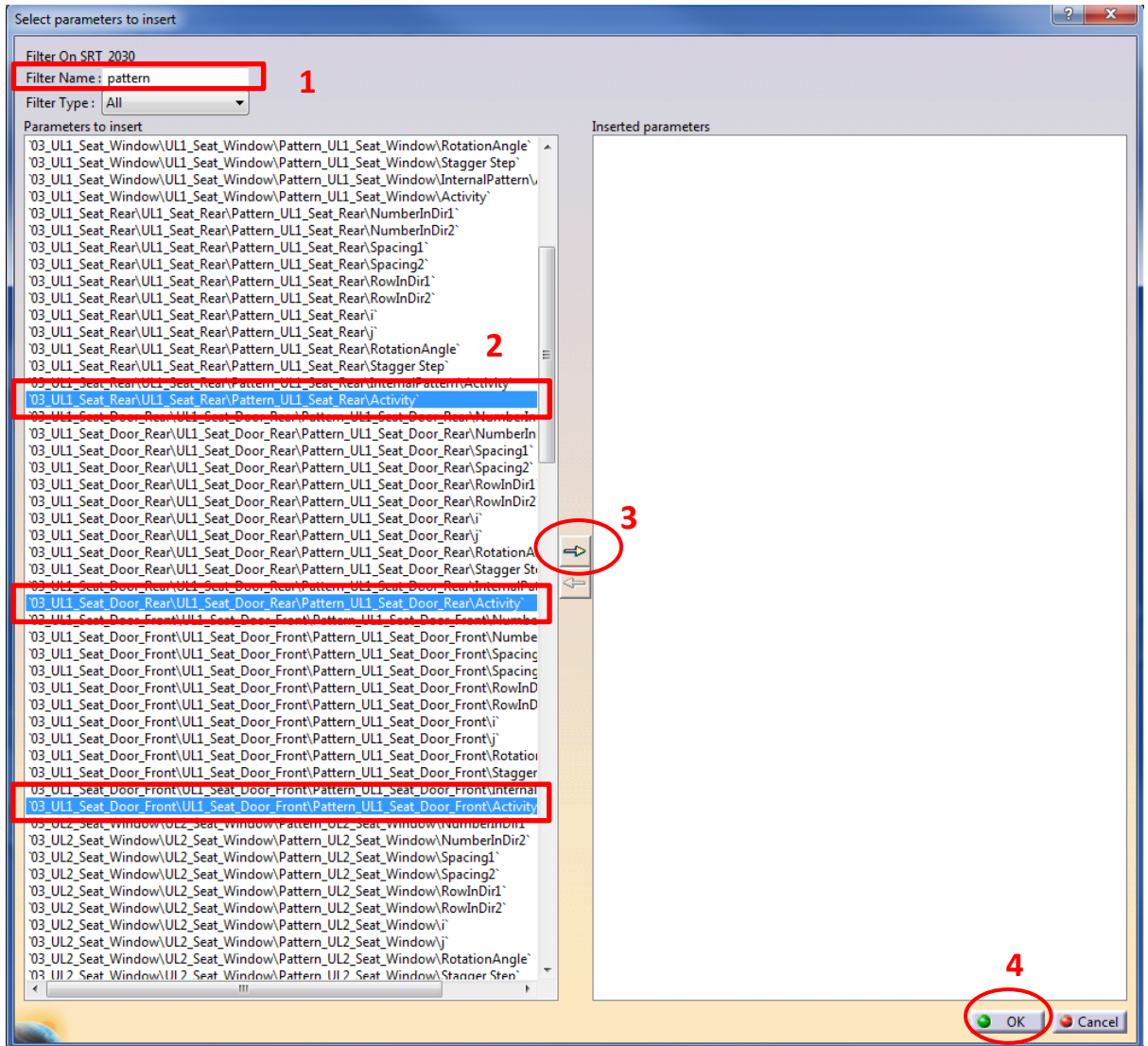
Coach: only door

In total 9 seating configurations
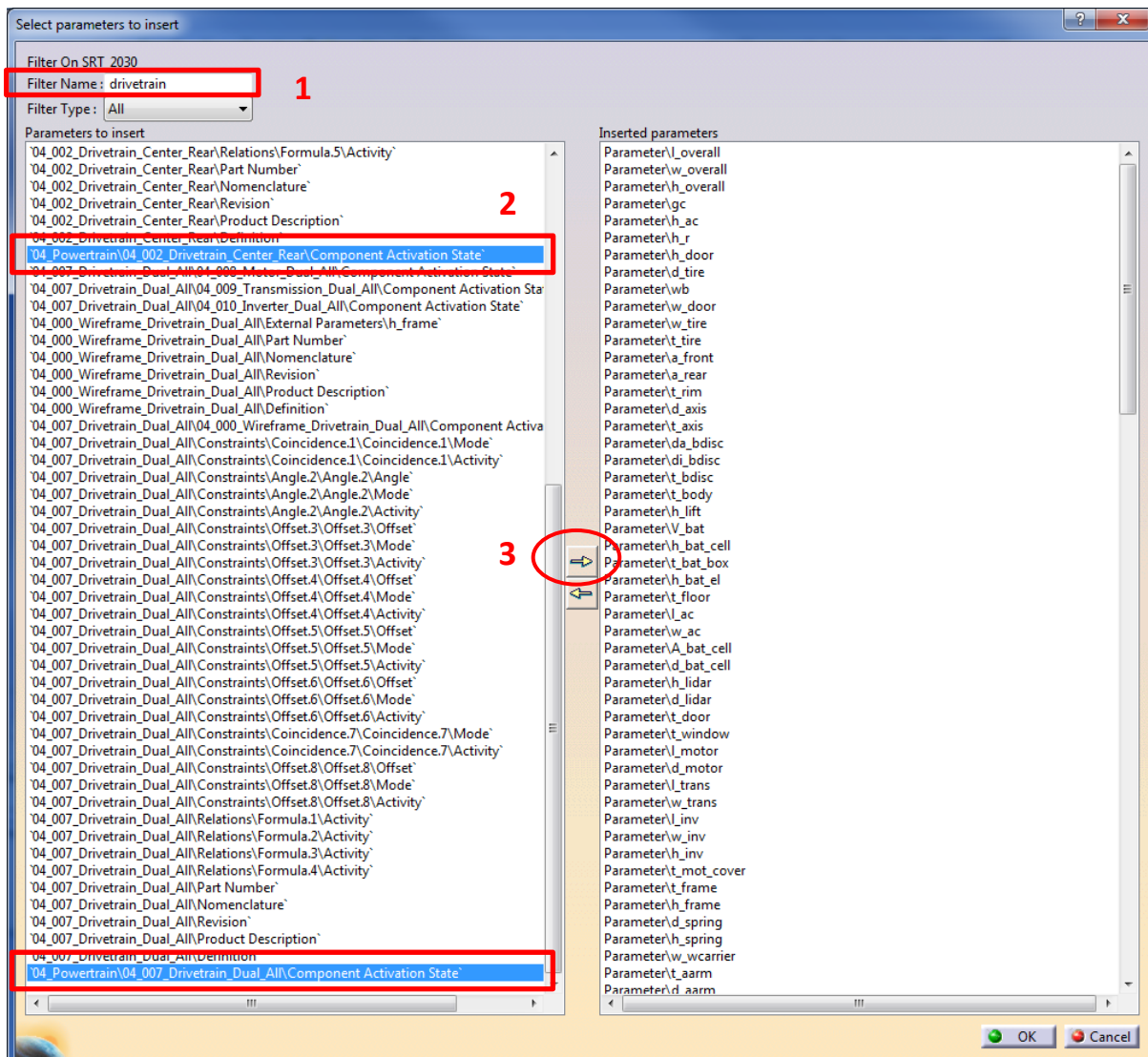
2.7.5. Pattern (only UL1 and UL2):

No window pattern configuration, only front rear, door rear and door front
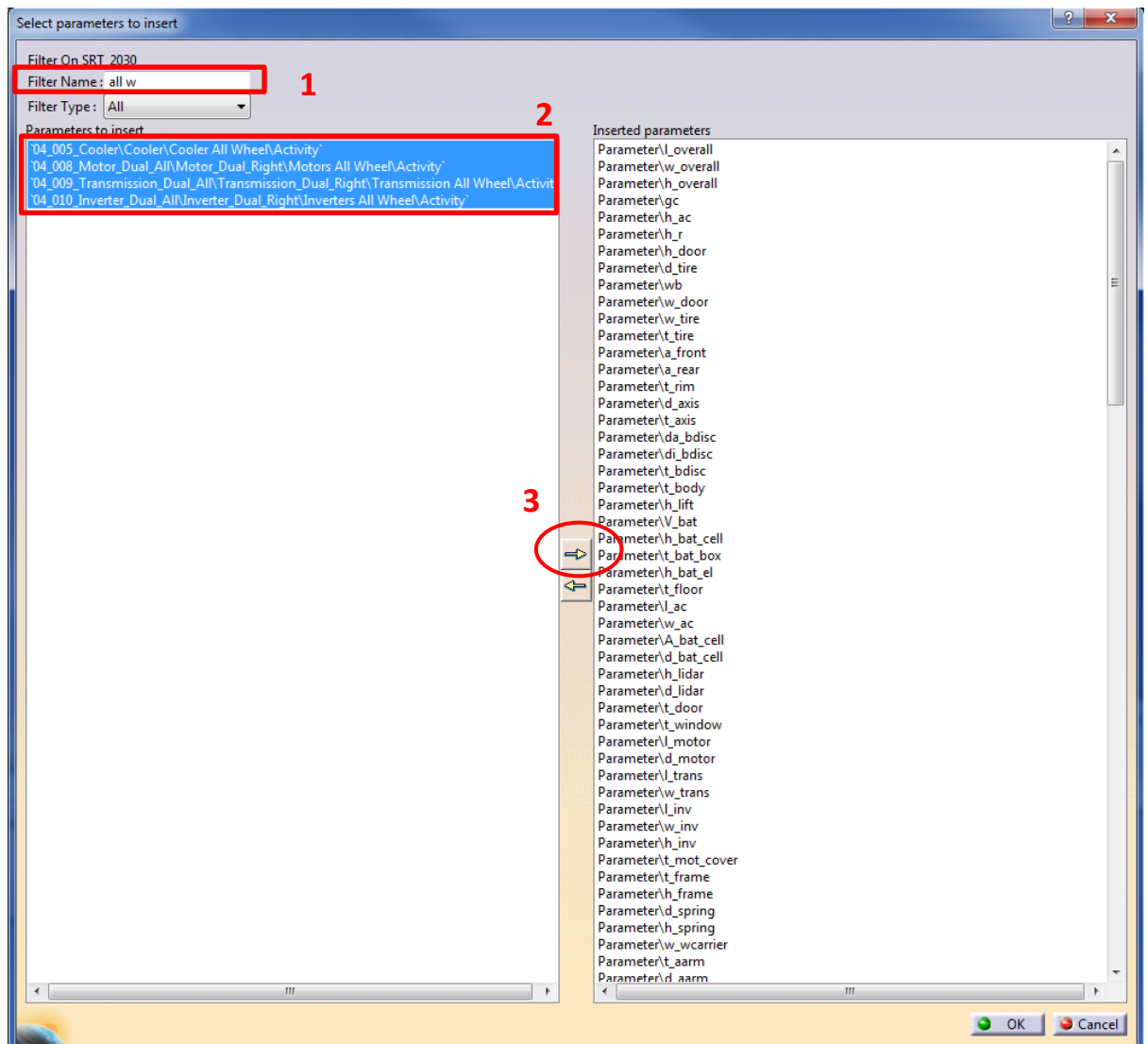
In total 8 patterns

2.8. Drivetrain Configurations

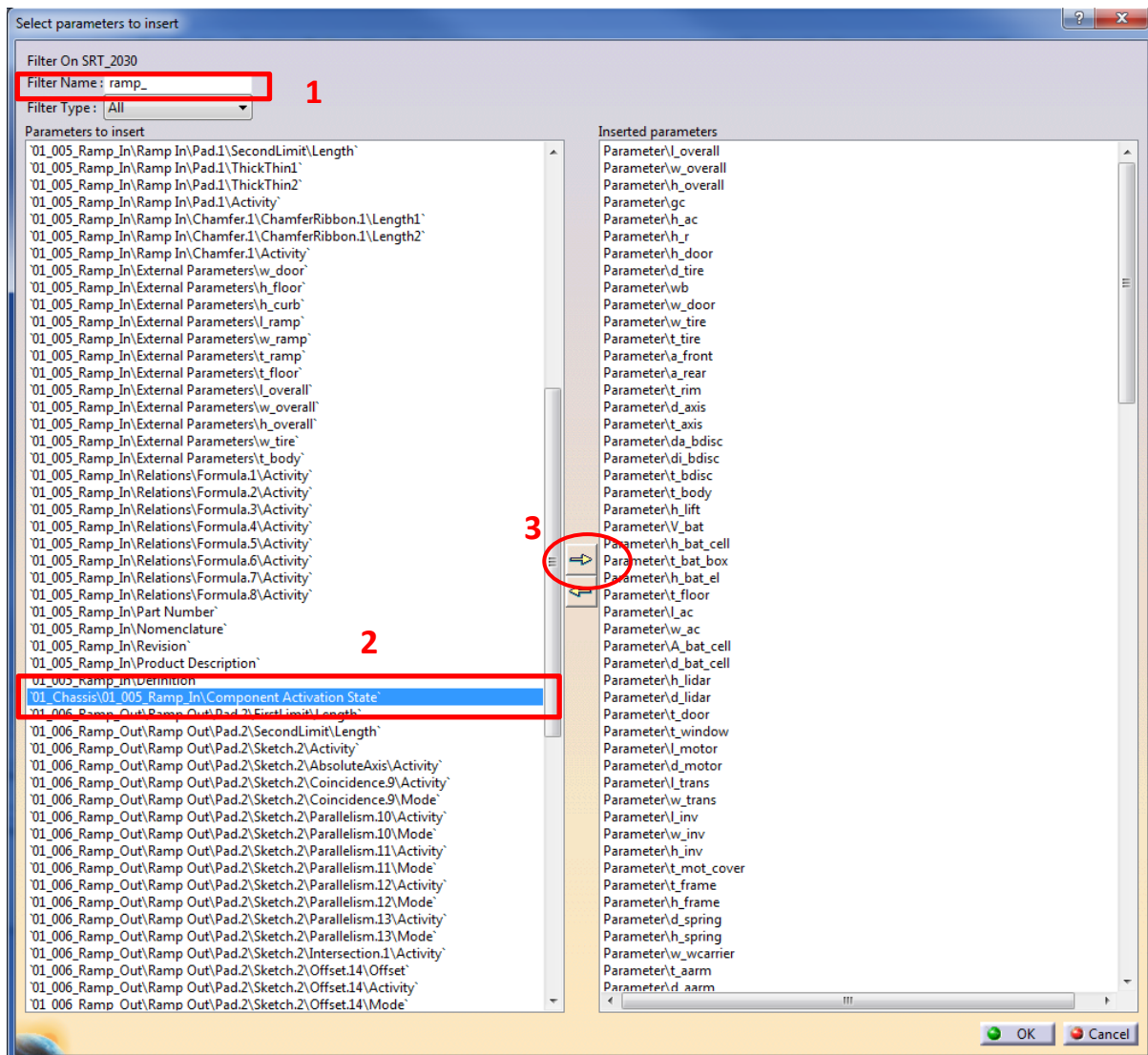### 2.8.1. Drivetrain Activation: *Center Rear* and *Dual All*

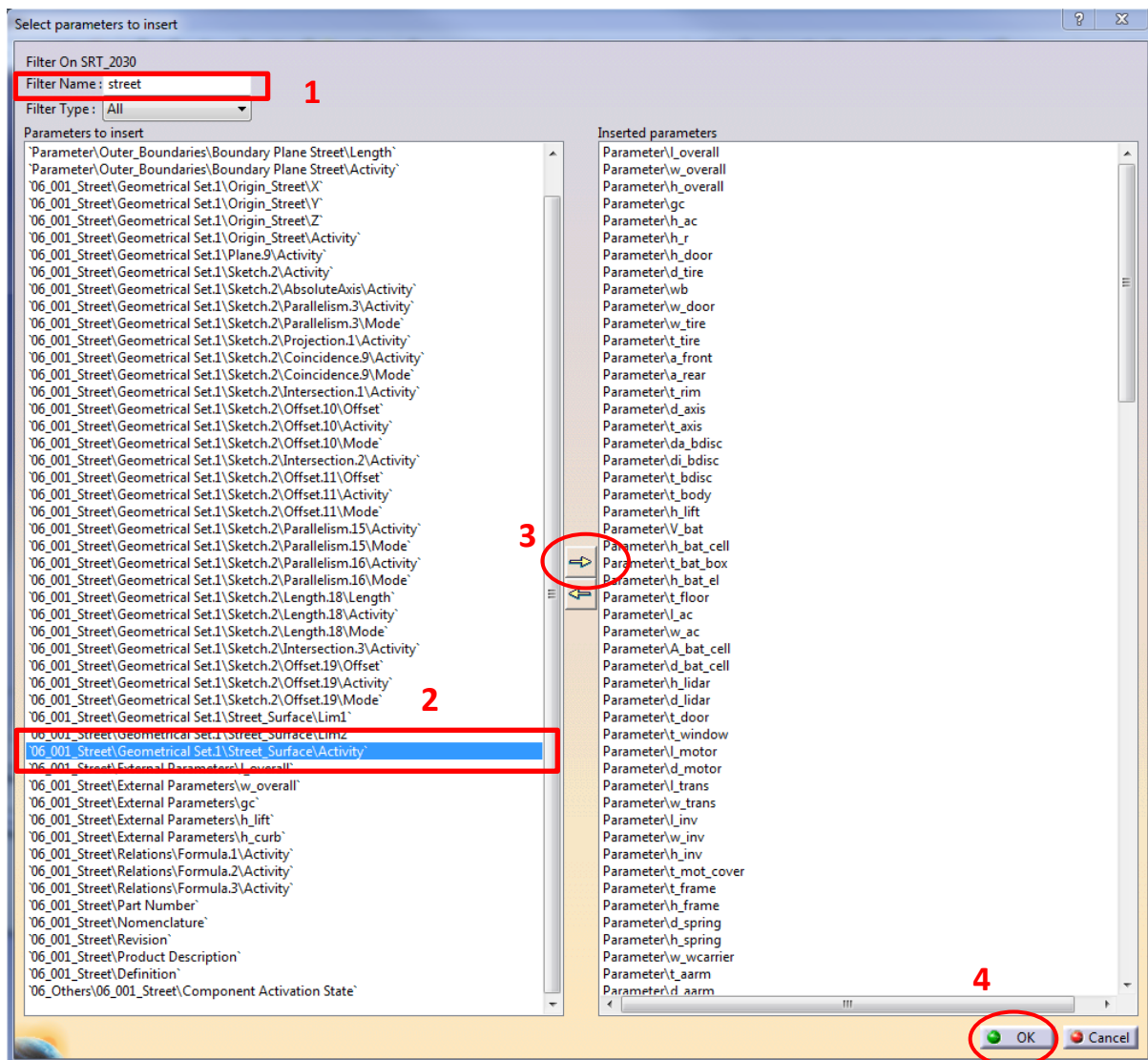## 2.8.2. Mirror Activation Drivetrain and Cooler for All Wheel Drive
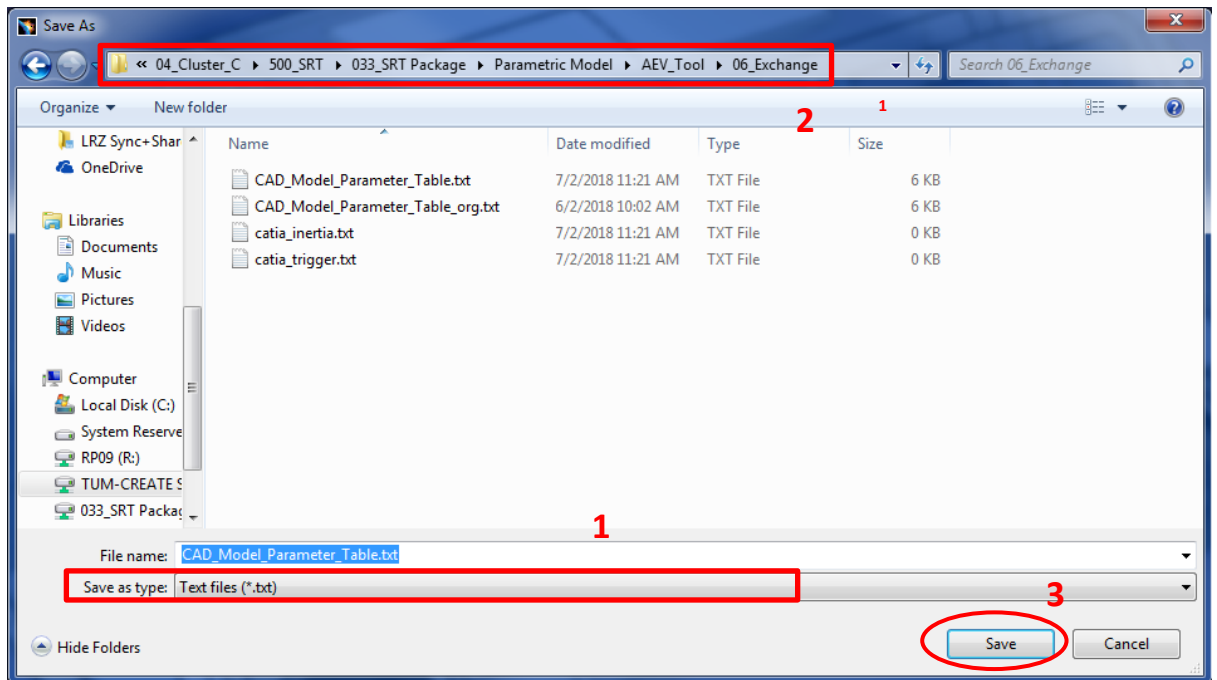
2.9. Ramp and Street

2.9.1. *Ramp In* and *Ramp Out Component Activation State*

2.9.2. Street Activation

2.10.   After selecting all 7 sets of parameter, clicking OK

2.11.   Select file type: txt

2.12.   Select right folder path to save file

2.13.   Click save

3. Save CAD model in CATIA
4. Done! ☺

The order of exporting the parameters is very important, because the list and the order of parameters is implemented in the Matlab code of the GUI (Update Parameters,…)

When adding additional parameters, layouts and materials the order of parameters have to be adapted in every code section a parameter is called from the txt file!