

USER MANUAL FOR TRANSIENT COMPILATION TOOL

Transient Compilation – How to use

Details of the tool

Objective of the Tool:

To compile the measurements of HOT and COLD transient to a excel sheet.

Purpose of the Tool :

1. Compiling multiple data manually was time taking.
2. Human Errors can avoided.
3. Files can be kept arranged without much effort.

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Pre-requisites for the tool

Some key points for using the tool :

1. Please copy the Transient_Compilation folder into the directory :- 'C:\BOSCH Motronic Tools\'
2. The start time and end time of the file needs to be specified based on the rlsol_w and the start time should be few seconds before a load jump and the end time should be few seconds after a load jump.
3. All the files are to be linked before compiling.
4. The compile button will work only when all the files are linked.
5. In case the user wants to use the tool after once compiling, resetting the tool is a must.

Transient Compilation – How to use Main Window

The screenshot displays the 'TRANSIENT COMPILATION TOOL' interface. At the top, there are input fields for OEM (MSIL), Project Name (YP8), Start Time (18), End Time (redacted), Upper Limit (%), Lower Limit (%), Lambda (ES630_LA1_Lambda), and rfsol (rfsol_w). Below these are fields for Measurement Files and Output Folder. A 'List of Loaded Files' and 'List of signals' are shown on the left. The 'List of signals' includes 'rfsol_w' which is highlighted. A yellow callout 'Respective signal List' points to this list. The 'List of Loaded Files' shows several files, with a yellow callout 'Measurement Files' pointing to them. The main area features an oscilloscope plot showing a square wave signal over time (0 to 160 seconds). A yellow callout 'User Inputs' points to the plot, and another yellow callout 'Oscilloscope to see the signals' points to the plot. Below the plot is an 'Activity Log' with a yellow callout 'Active Log' pointing to it. The log contains the following text: 'Welcome to Transient Compilation Tool', 'Please add measurement files to start.', '7 Measurements added.', 'File Linked', and 'Please fill the missing details to link'. At the bottom, there are buttons for 'Delete', 'Delete All', and 'Clear Log'.

Measurement Files

Respective signal List

User Inputs

Oscilloscope to see the signals

Active Log

Activity Log

Welcome to Transient Compilation Tool
Please add measurement files to start.
7 Measurements added.
File Linked
Please fill the missing details to link

Transient Compilation – How to use Buttons and their workings

The following points and color combinations are required to be known before using the tool :-

1. The measurement files just added from the BROWSE button beside measurement files will be in grey color.
2. The user needs to link the measurement file based on start and end time of rlsol_w variable.
3. If the user tries to link and misses out to fill any of the details a red background will appear indicating the missing details to be filled compulsorily.
4. Once the file is linked the measurement in the list will turn yellow meaning it is linked.
5. To link however you need to select a measurement file from the list and you can see the list of signals present in the file.
6. On double clicking on the signal the user can see the signal in the oscilloscope and the color on the list will be the same color as of the signal. (If in case you want to change the color you can again double click on the signal and a different color will appear)

Transient Compilation – How to use Buttons and their workings

7. The upper limit and lower limit (in %) is basically the limit of lean and rich deviation allowed.
8. So that the points which are out of limits will be marked red in the excel sheet.
9. The limits section can be left blank if there is no limit requirement, and also different limits for acceleration and declaration for lean and rich can be provided. (e.g. 5,10)
10. On the oscilloscope there is a 'C' button to clear the oscilloscope and 'A' to auto-scale the signals.
11. The Unlink, Reset UI, Clear Log, Delete and Delete All have usual meanings as the words.
12. The right top has some option to add alias names to the lambda and rlsol_w variables.
13. However, to add the same the user can manually open the Alias excel sheet and add as many alias name as required and can add OEM names also as per requirements.
14. Based on the copy and move options the measurement files will be moved to the output directory or copied.

Transient Compilation – How to use

Steps to use

Steps to use the tool :

1. Please add the Measurement Files first which are to be compiled.
2. Based on the rlsol_w value the start and end time expected to be entered by the user and linked.
3. After all the files are linked press the compile button.
4. After compilation is successful please move to the output folder directory and the excel will be present based on the limits and inputs provided.
5. The output excel compilation sheet and measurements will already be kept arranged there based on the OEM name, and the start temperature and fuel mode which will be auto extracted from the measurements.
6. If still any confusion please have a look to the video in the link

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