



AR949 GME T4 SO

Executive Summary



Purpose	
Analysis	
Conclusions	
Next Steps	

Trace Manager v2 main program

Main program



The screenshot shows the Trace Manager v2.0 main program interface. The window title is "Trace Manager v2.0". The menu bar includes "File", "Configuration", and "help".

File & Signal Selection:

- File:** A list of channels (TH 1 to TH 8) is shown on the left. A blue box labeled "1" points to the "TH 1" button.
- filter:** A section with "name CH" and "units: (no filter)" is shown. A blue box labeled "2" points to the list of channels.
- Description:** A section with "Unit: -" is shown at the bottom left.

Signal prop:

- Signal on axes:** A list of signals is shown. A blue box labeled "5" points to the "delete" button.
- file reference:** A list of file references is shown. A blue box labeled "3" points to the "new" button.
- Selected:** A section with "Selected: BSM_Comm_Fail_CANC from: tTH_1" is shown. It includes fields for "X offset", "Y gain", "LineStyle", "LineWidth", "MarkerStyle", and "Marker size". A blue box labeled "6" points to the "Custom X axis" dropdown.
- Y legend:** A section with "Y legend: BSM_Comm_Fail_CANC" and "unit: -" is shown.
- Select windows:** A section with "Select windows" and "Custom X axis" is shown. A blue box labeled "6.a" points to the "time" dropdown.
- Select x axes signal:** A section with "Select x axes signal" and "time" is shown.
- filter tTH by:** A section with "filter tTH by" and "0.01" to "36.5" is shown.
- Enable custom x axes:** A checkbox labeled "Enable custom x axes" is shown.
- Enable filter:** A checkbox labeled "Enable filter" is shown.

axis:

- asse n° 1:** A list of axes is shown. A blue box labeled "3" points to the "new" button.
- new:** A button labeled "new" is shown.
- delete:** A button labeled "delete" is shown.
- X min, X max, delta:** Fields for "X min", "X max", and "delta" are shown.
- Y min, Y max, delta:** Fields for "Y min", "Y max", and "delta" are shown.
- X label:** A field labeled "X label:" is shown.
- Y label:** A field labeled "Y label:" is shown.
- save:** A button labeled "save" is shown.
- width, height:** Fields for "width" and "height" are shown.
- Total size:** A field labeled "Total size" is shown.
- round close to zero:** A checkbox labeled "round close to zero" is shown.
- Plot:** A button labeled "Plot" is shown.

Untracked error: A message box at the bottom left shows the error: "Untracked error: MATLAB:cellRefFromNonCell Message:Cell contents reference from a non-cell array object." A blue box labeled "8" points to this message.

Trace Manager v2

Main program

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Output Figure

1. [Main window](#)
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 - c. [Legend](#)
 - d. [Data Cursor](#)
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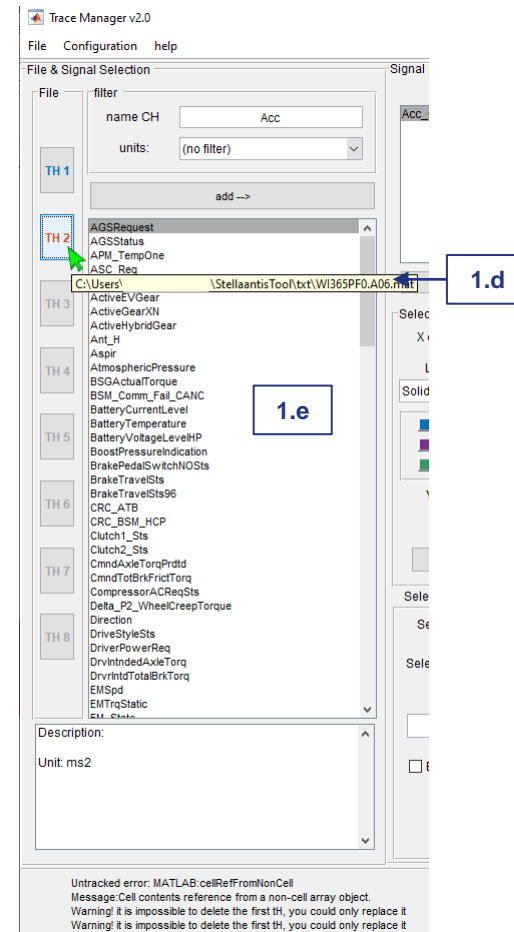
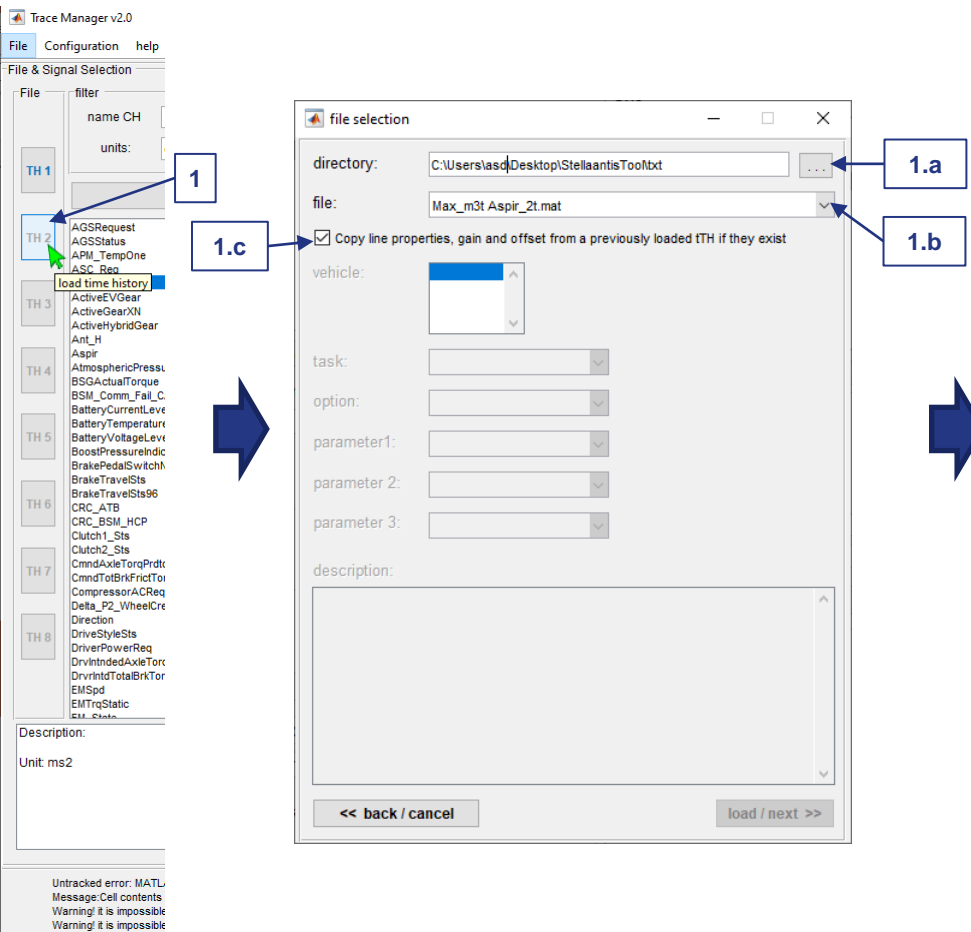
Trace Manager v2

Main program

1. File Selection

File selection

- Select folder
- Choice the time history that you want to load
- Check the checkbox if you want to load the configuration of a previous time history
- After you have load the file correctly, when you drag the mouse on the button appear the full path of the time history
- in the signal list box appear all signal contain in the time history



Notes:

- Load the time history in order is it's possible
- Don't close the file selection windows with the **X** use **back/cancel** button instead
- It's impossible to remove the first time history, you could replace it perform a new tTH load

Trace Manager v2

Main program

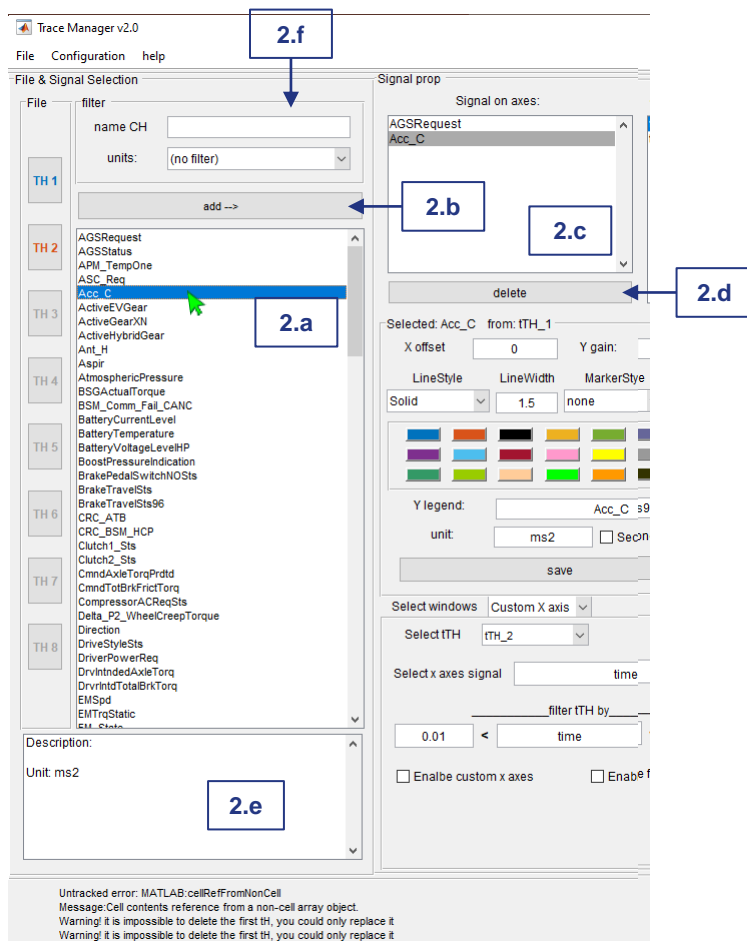
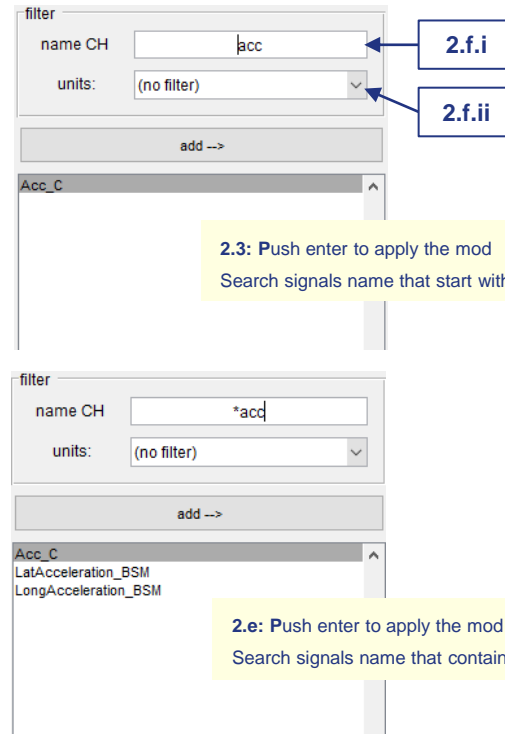
2. Load a Signal

File selection

- List of signals for all time histories
- Select one or more signals in the signals list than push add button. The signals will load in the window 2.c
- In this windows there are all signals on single axis.
- Removes a signal from axis select them and push on delete button
- After selecting a signal in the window 2.e appear info on unit and a description if exist.

f. Filter Panel

- Filter by name.
- Filter by unit



Notes:

- before creating a plot make sure that there is at least one signal (in window 2.c) for each axis (in window 3) you have created.

Trace Manager v2

Main program

3. Create new axis

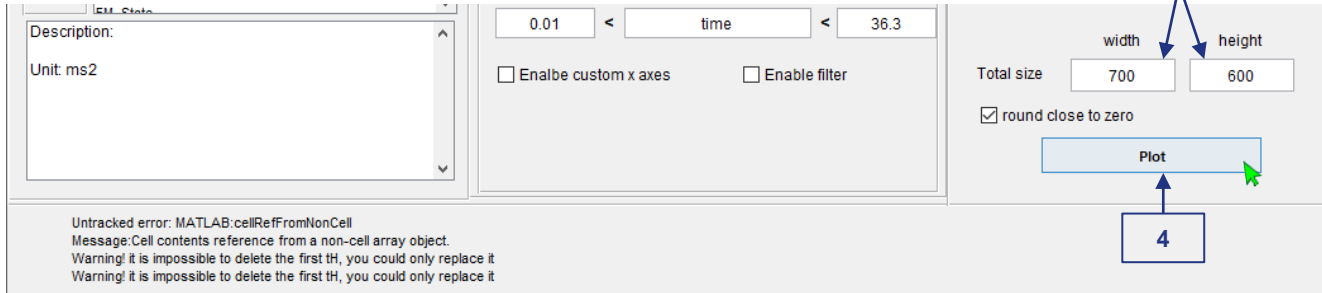
Create new axis
List of axes window
a. Create a new axis
b. Delete selected axis
c. Change the order of the axes

The screenshot shows the Trace Manager v2.0 interface with several annotated components:

- File & Signal Selection:**
 - File:** Includes a filter section with 'name CH' and 'units: (no filter)', and a list of files (TH 1, TH 2, TH 3). A blue box labeled **2.c** points to the 'add -->' button.
 - Signal:** A list of signals including BSGActualTorque, BSM_Comm_Fail_CANC, BatteryCurrentLevel, BatteryTemperature, BatteryVoltageLevelHP, BoostPressureIndication, BrakePedalSwitchNOSTs, BrakeTravelSts, and BrakeTravelSts96. A blue box labeled **2.c** points to the 'delete' button.
- Signal prop:** A section for signal properties, currently showing 'Selected: BrakeTravelSts96 from: tTH_1'.
- axis:** A section for managing axes.
 - A list of axes (asse n° 1 to asse n° 5) with a blue box labeled **3** pointing to it.
 - Buttons for 'new' (labeled **3.a**) and 'delete' (labeled **3.b**).
 - Up and down arrow buttons (labeled **3.c**) for changing the order of axes.
 - Input fields for X min, X max, delta, Y min, Y max, delta, X label, and Y label. Blue boxes **3.d**, **3.e**, and **3.g** point to these fields.
 - A 'save' button (labeled **3.h**).
 - A blue box labeled **3.f** points to the 'time [s]' and 'rpm' labels in the X and Y label fields.

Notes:

- before creating a plot make sure that there is at least one signal (in window 2.c) for each axis (in window 3) you have created.
- Before change the order of the axes make sure that all axes has at least one signal



Trace Manager v2

Main program

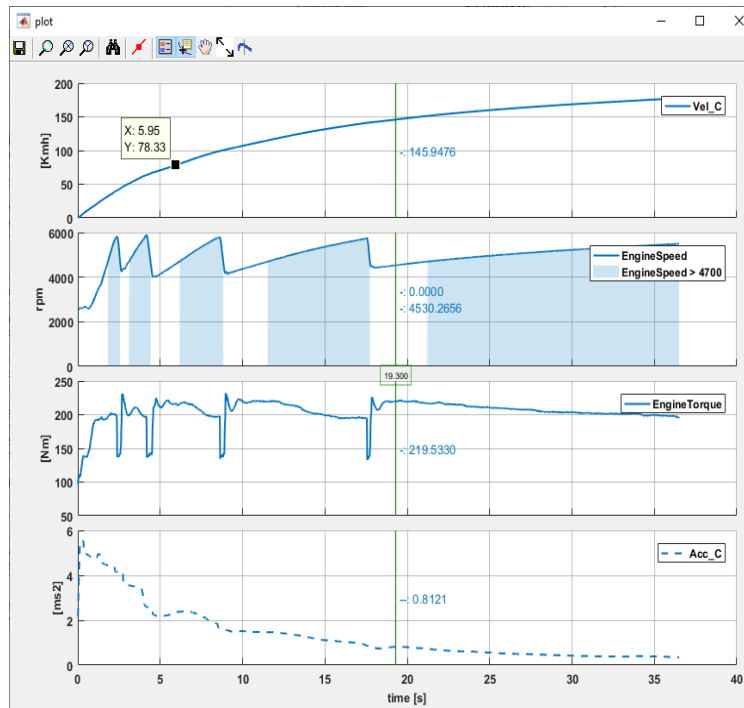
- ...
4. Create a Figure

Create a Figure
With a click on plot button appear a figure with the signals loaded (2.c) and the axes created (3) in the Main Program

- Choice the width and height dimension of the output figure

For more information on the output figure and figure tools go to the [Output figure](#) section.

600



700

Notes:

- before creating a plot make sure that there is at least one signal (in window 2.c) for each axis (in window 3) you have created.
- If the figure don't appear correctly try to:
 - close the previous figure
 - Check if all axes contain at least one signal
 - Check if all signal in all axes exist in the time histories loaded

Define line properties

Signal prop

Signal on axes:

Acc_C
Aspir

5.a

delete

file reference:

tTH_1
tTH_2

5.b

5.c Selected: Acc_C from: tTH_1

5.d X offset: 0 Y gain: 1

5.e

LineStyle: Dashed LineWidth: 1.5 MarkerStyle: none Marker size: 4

5.f

5.g

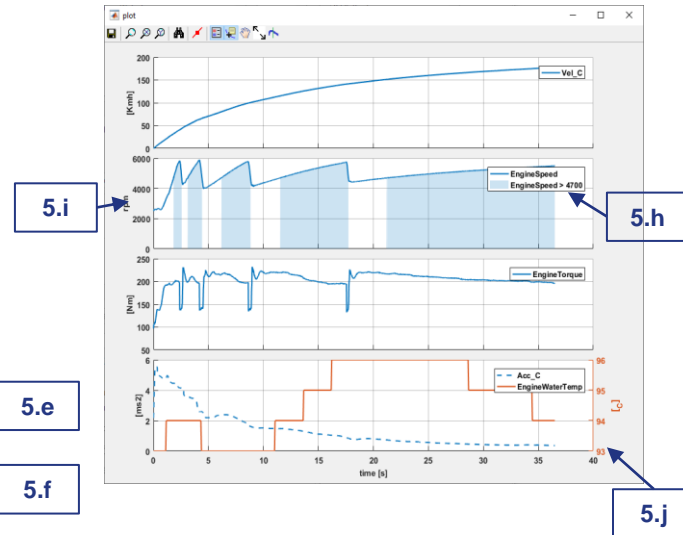
Y legend: Acc_C

5.h

5.i unit: ms2 ☐ Secondary axis

5.j

5.k save



Trace Manager v2

Main program

5. Define line properties

Define line properties

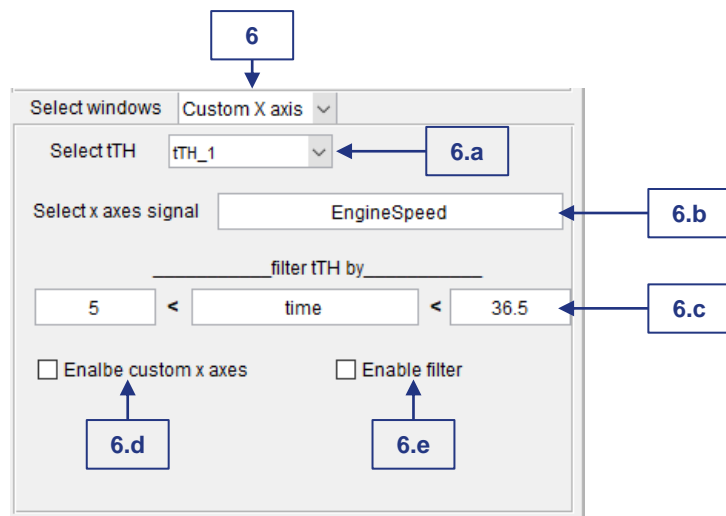
- Select a signal target on 5.a window
- Select the time history target on 5.b window. If the signal exist in more than one time histories
- In this label appear the signal target that you are modifier

- Translate the time history on x axes by this value. This value are applied to all signals of the time history
- The selected signal will be multiplied by this value before it is plotted.
- Define the line style, the weight or the marker of the line.
- Choice the line colours.
- Change the signal string in the legend
- Change the unit of the signal write in the figure. Note, the unit written on the subplot is the unit of the first signal in the axis
- Check the checkbox to plot the signal on a secondary axis
- After you set the property of the line, push save button to apply the mods.

Notes:

be sure that the changes you are making will be applied to the signal you want by always executing the steps **a**, **b** and **c** before.

The changes on this section is not automatically apply to the output figure, you have to create another output figure with plot button.

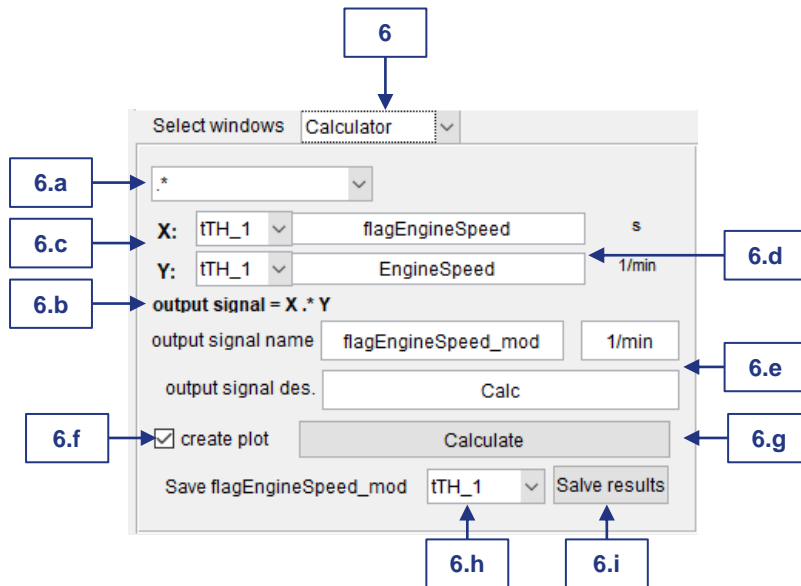


Trace Manager v2

Main program

...

- 6. Panel selector
 - a. [custom x axis](#)
 - b. [channel calculator](#)



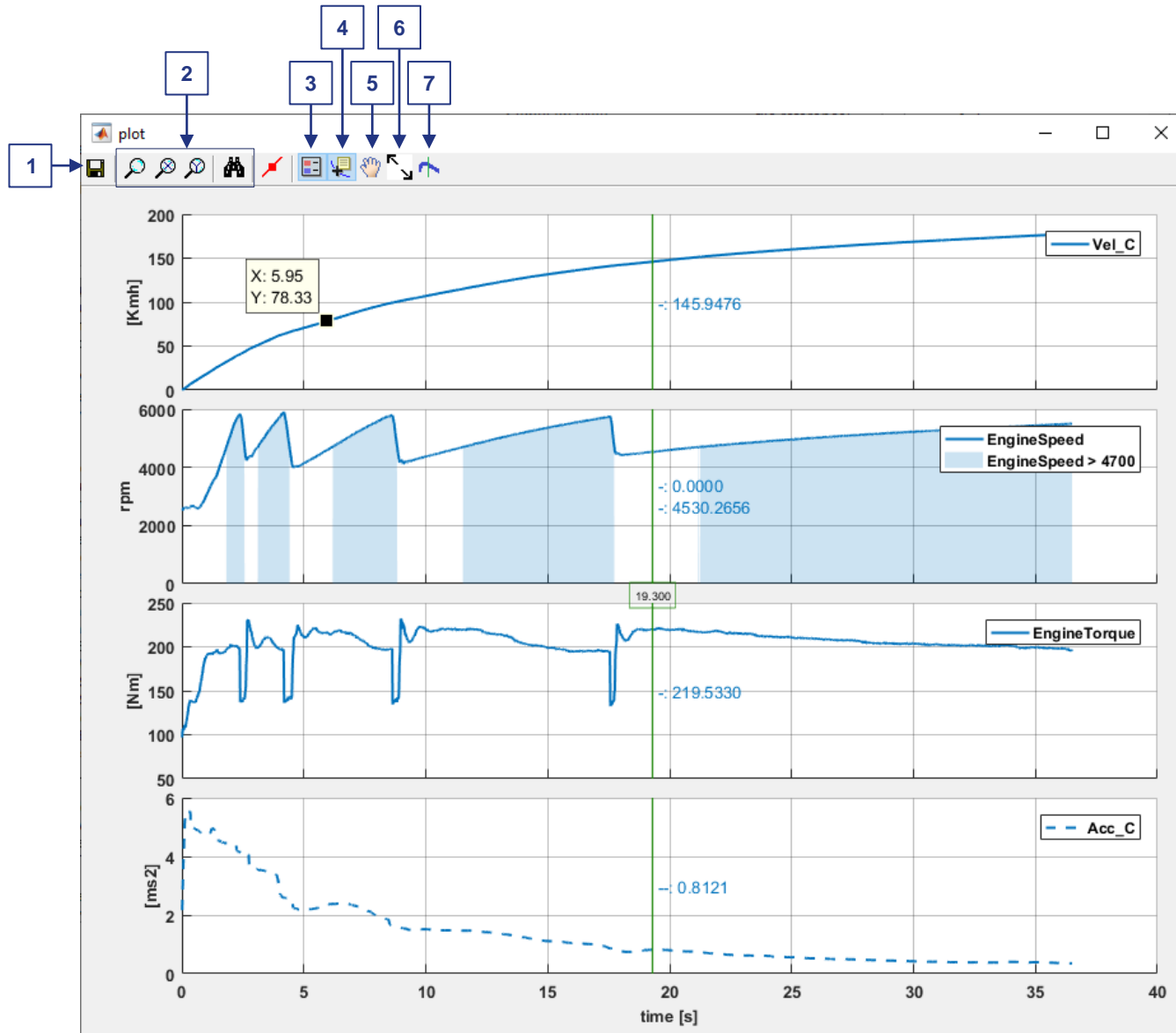
Trace Manager v2

Main program

- ...
- 6. Panel selector
 - a. [custom x axis](#)
 - b. [channel calculator](#)

Output figure

Output figure



Trace Manager v2

Main program

...

Output Figure

1. Main window
2. Tool panel
 - a. Export Figure
 - b. Zoom
 - c. Legend
 - d. Data Cursor
 - e. Resize subplots
 - f. Vertical Cursor



Backup

