

Customizing Output in Calypso

With Calypso we have the ability to add additional information to our Printout Header that may be required or desired. The first thing we want to do is to create a backup of the protform folder (by copying and pasting the folder) so we still have the original folder we can go back to if necessary.

Calypso 5.4 or older the path is **C:/Program files(x86)/Zeiss/Calypso/opt/om/protform**

Calypso 5.6 or newer the path is **C:/Users/Public/Public Documents/Zeiss/CAYLPSO/protocol/protform**

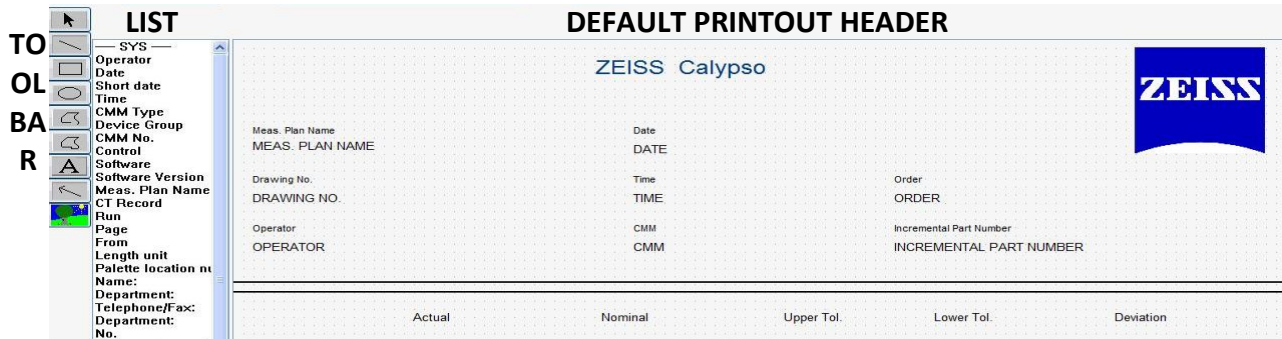
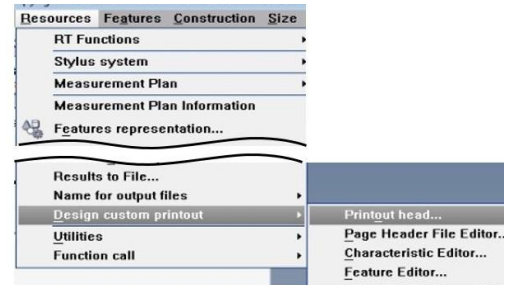
To make changes to the Custom Printout Header we need to make changes to the vthead.gra in the default folder. Start by selecting



Begin New Measurement Plan or opening an existing program. From the drop down menus select **Resources/design custom**


printout/Printout head... the Printout format editor page opens

select  and select the vthead.gra from the default folder.



We can add, align, move, remove, and resize items in the header. The more usable tools are:



Removes items from the header, select the item in the header and click  to remove.



Add Image Adds images to the header, click  Add Image and then click in the header to insert an image.



Select Clears whatever mode you are in. (**VERY IMPORTANT!**)


There is also a list, along the left side, that we can add items to the header from, the list consist of 4 sections.

SYS Section: has information that comes from the CMM system such as operator, date, time, and units.

EDIT Section: allows a programmer to put in information that is editable in a Measurement Plan.

START Section: allows a programmer to put in information that is editable at CNC start (**RUN**).

OTHER Section: allows a programmer to add information about the creation or changing of a program.

To get an item from the list to the header simply click on the desired item in the list and then click on the header where you want it to go, **REMEMBER** to press  after to clear the item so you do not keep adding it to the header.

We can add items to the list (**EDIT** and/or **START** sections) that can then be applied to the header by modifying a user field that has the item or items we want to add to the header.

Modifying user fields:

There are 2 types of user fields in Calypso a **standard** (xxx_userfields) and **advanced** (zzz_userfields). Both allow the programmer to add additional information to the Printout Header for the programmer or operator to use and/or modify.

The **Standard** user field allows the user to **type** in additional information.

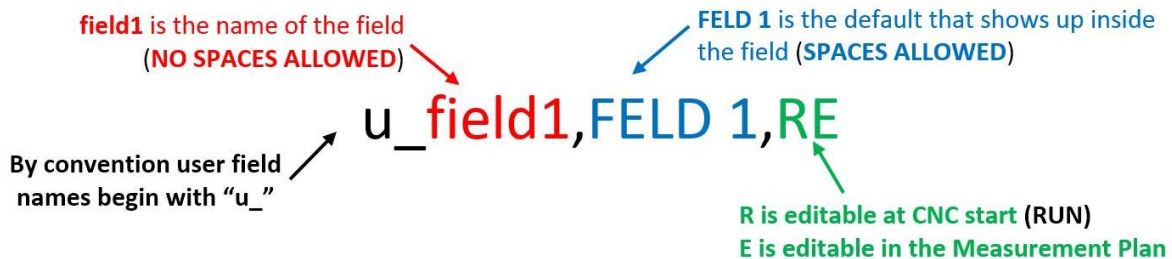
The **Advanced** user field allows the user to **type** or **select from a pre-existing list**.

To modify xxx_userfields or zzz_userfields in the protform folder:

Copy and paste the user field you want to use so you make a copy; **xxx_userfields-Copy** or **zzz_userfields-Copy**. Select the copied userfields and rename (F2) it **userfields**, the standard one will stay a .txt and the advanced will stay an .ini.

Standard

Here is the default for a standard user field, the standard user field is a .txt (Text Document) file.



Here is an example of a modified standard user field line of code:

```
u_Work_Order_Number,XXXXXX,RE
```

In this example the User Field Name is Work_Order_Number (this name also carries over to QC Calc), XXXXXX is the default that shows up in the input field and is editable at CNC start (R) and is also editable in the Measurement Plan (E) **Resources/Printout header parameters**. **REMEMBER that any user fields you apply to the header are applied to all programs, the Printout Header is a global setting.**

You can create additional fields to get the information you need.

```
u_Work_Order_Number,XXXXXX,RE  
u_Part_Number,XXXXXX,E  
u_Inspector,Your Name,R
```

If you want the operator to be prompted to input something at run time use R. If you want to input something that stays with a particular program, use E. If you are not sure, use RE!

Advanced

The advanced user field is an .ini (Configuration settings) file.

There are two options when we define an advanced user field, one allows an input field similar to the standard user field the other allows us to create a Selection List or a Combo Box.

Understanding the advanced user field code:

[Fieldnames]

u_field1 This is the list of available user fields
u_field2 (more can be added as needed)
u_field3

[u_field1]

name= TEXT
editMode= true or false
runMode= true or false Typical
selectiveList= true or false advanced user
selectiveListValues= u_field1_valueList field code
editable= true or false
defaultValue= TEXT or a LIST NUMBER

name: the text which is shown as the name of the input field

editMode: **true** the field shall be edited while editing the measurement plan and a value is to be entered (**Resources/Printout header parameters**), **false** the field shall not be edited

runMode: **true** the field shall be queried, **false** the field shall not be queried at CNC start (**RUN**)

selectiveList: **true** the input is from a Combo Box or a Selection List, **false** no list for the user field therefore it is a input field

selectiveListValues: the name of the section with the entries of the combo box or selection list (where is it looking and getting the information) **ONLY needed if selectiveList=true**

editable: **true** is a Combo Box, **false** is a Selection List

defaultValue: this is a text or a list number that is the default value that appears in the user field

Note: The difference between Selection List and Combo Box is that a Combo Box allows the user to type in additional values, you are not limited to only the values in the list.

Here is an example of a modified advanced user field lines of code:

```
[Fieldnames]
u_QC_Inspector Available / Created User Fields
u_Work_Shift
```

```
[u_QC_Inspector]
name=Inspector
editMode=true
runMode=true
selectiveList=false
editable=false
defaultValue=Your Name
```

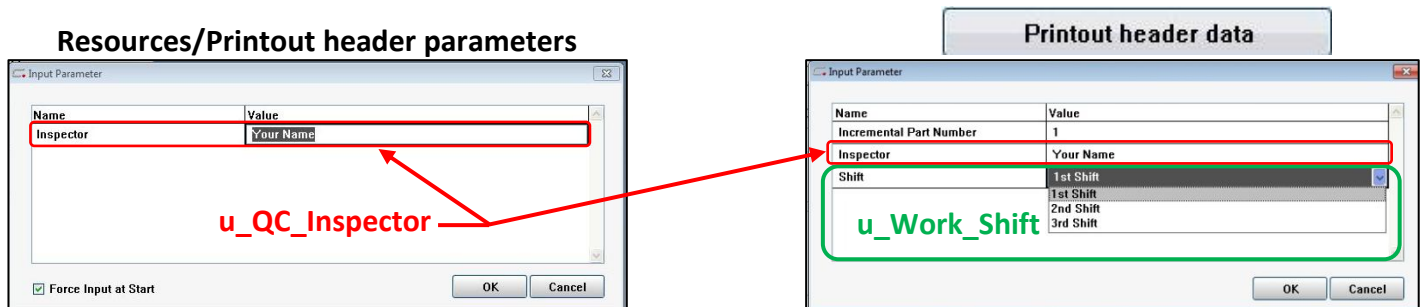
In this example (u_QC_Inspector) of code the user field name is Inspector and the default value for the user field is Your Name, because editMode and runMode are true it is editable in the measurement plan as well at CNC start (**RUN**), since selectiveList is false it is a user input and not a list so the operator will have to type in his or her name in the user field.

```
[u_Work_Shift]
name=Shift
editMode=false
runMode=true
selectiveList=true
selectiveListValues=u_Work_Shift_valueList
editable=false
defaultValue=1
```

In this example (u_Work_Shift) of code the user field name is Shift and the default value for the user field is 1 (1st Shift), because runMode is true it is editable at CNC start (**RUN**), since selectiveList is true and editable is false this is a Selection List. The u_Work_Shift_valueList is the list that is populating the Selection List.

Here is the list we need for selectiveListValues

```
[u_Work_Shift_valueList]
1=1st Shift (this is the default value)
2=2nd Shift
3=3rd Shift
```



Modified Printout Header

Resized Zeiss logo and moved name and logo to left side

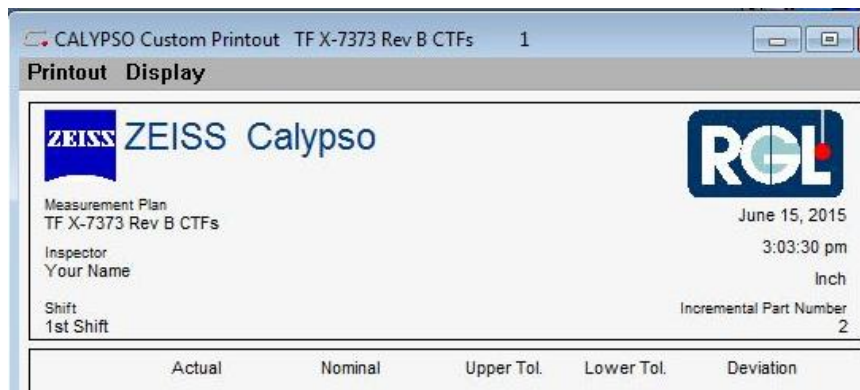
Added Inspector and Shift from the advanced user field

Added Company Logo

Moved Date, Time, and Incremental Part Number, added Length Unit and aligned to the right, removed the top section for Date, Time, and Length Unit

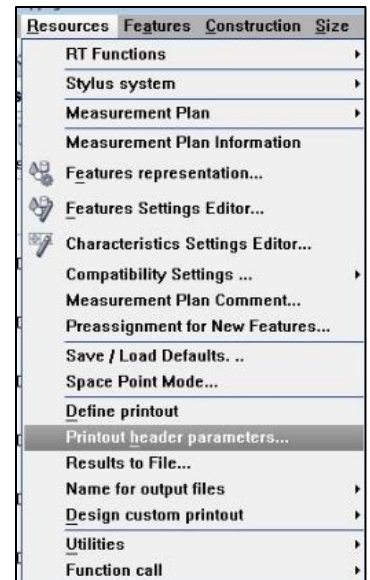
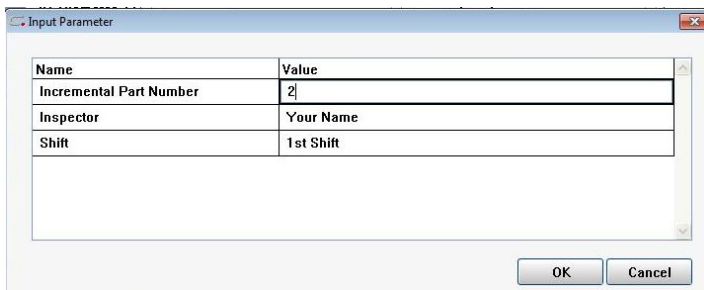
Removed CMM, Order, Drawing No., and Operator from default header

Here is what the actual Calypso Custom Printout header looks like after being modified.



Mini Plan NOTE:
If using Mini Plans add **Run** from the **SYS Section** to display what Mini Plan is being used in the header.

If you have data that you want to force the operator to enter at CNC start (**R** or **runMode=true** from the user field.) or if you have data you need to add to the Measurement Plan (**E** or **editMode=true** from the user field) go to **Resources/Printout header parameters...** to make your changes. To force the operator to enter or select information check **Force Input at Start** and when the operator selects on the run screen the Input Parameter window will open, so the operator can input the information **before** the program runs.



To get to the CNC start Input Parameters from the drop down menus select **Plan/Preassign CNC Start Values...** then select .

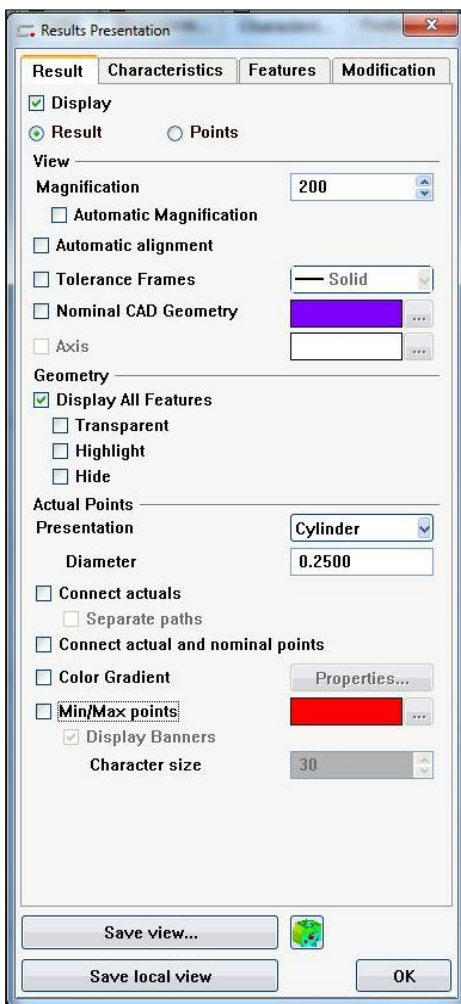
Creating a Graphical Output of Data (CAD Presentation)

With Calypso we have the ability to capture data graphically which allows us to present information in a very visible and easy to understand manner. We have the ability to not only create these graphical views of the data but also add them to the Custom Printout pdf for easy viewing. This method works well for cylindricity, flatness, perpendicularity, profile, roundness, etc... For this to work well, you need to run the part so you have actual collected data to evaluate and usually some kind of form GD & T callout like profile or flatness.

This section of the guide will be based on Calypso 2014. For older versions some things may not be the same but the process will be similar, certain screens and buttons may be different or not available. This also only applies for version 5.XX.

Understanding CAD Evaluation:

This guide will explain commonly used features of CAD Evaluation.



Display Results

Magnification: How much you want to magnify the data for the best visual results (for a Report that is going to have multiple CAD Presentations use Automatic Magnification for best results).

Tolerance Frames: Checking this places upper and lower limit graphics in the presentation.

Nominal CAD Geometry: Checking this places a nominal graphic in the presentation (recommend using a color that is not in the color gradient).

Display All Features: Checking this leaves the CAD model and/or wireframe in the presentation.

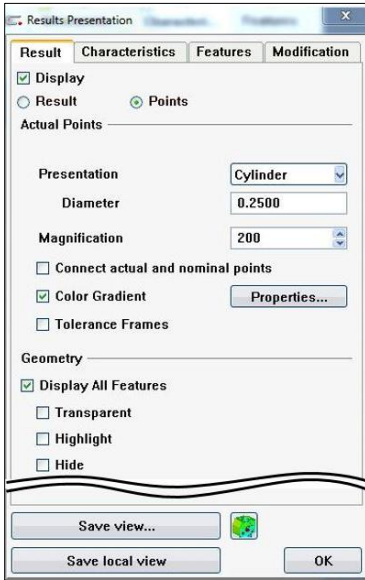
Presentation: Allows you to modify how you want to display the data, there are 5 types to choose from (Diameter/Size can be modified when applicable).

Color Gradient: Checking this places a color gradient chart based on your tolerance in the presentation.

Min/Max points: Checking this places the Min and Max graphic in the presentation (checking **Display Banners** displays actual Min and Max values if it is not checked you just get squares at the Min and Max locations).

Character size: Adjusting this increases and decreases the font size of the Min and Max graphic.

The Display Results gives you the most flexibility but is not available for every characteristic.



Display Points

Presentation: Allows you to modify how you want to display the data, there are 5 types to choose from (Diameter/Size can be modified when applicable).

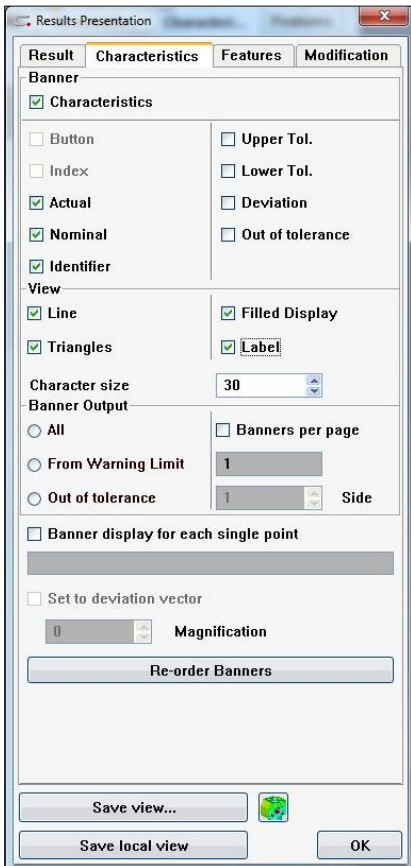
Magnification: How much you want to magnify the data for the best visual results.

Color Gradient: Checking this places a color gradient chart based on your tolerance in the presentation.

Tolerance Frames: Checking this places upper and lower limit graphics in the presentation.

Display All Features: Checking this leaves the CAD model and/or wireframe in the presentation.

The Display Points is available for every characteristic.



Characteristics Tab

Actual: Checking this adds the actual value to the Characteristic Banner

Nominal: Checking this adds the nominal value to the Characteristic Banner

Identifier: Checking this adds the characteristic name to the Characteristic Banner.

Line: Checking this adds a leader line from the Characteristic Banner to the first probing point of the feature.

Triangles: Checking this adds a triangle to the side of the Characteristic Banner

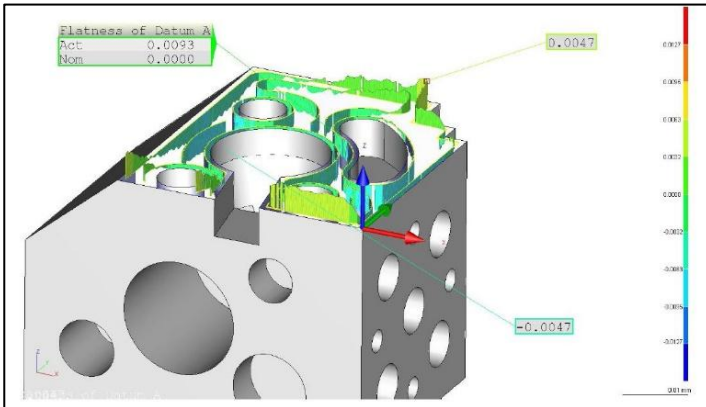
Filled Display: Checking this makes the Characteristic Banner non-transparent.

Label: Checking this applies the label to the selected characteristics to the Characteristic Banner (example: Act label is added to the actual value and Nom label is added to the nominal value).

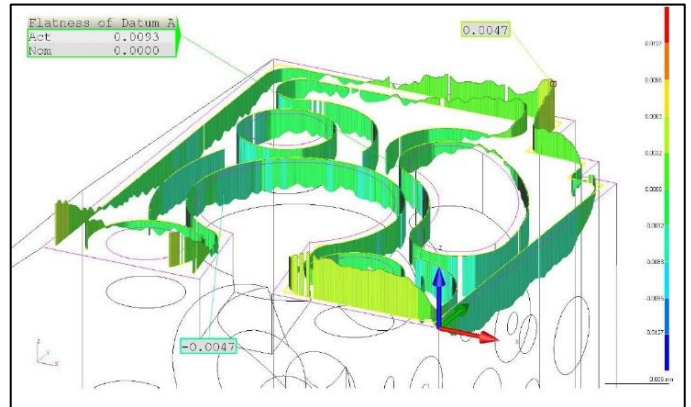
Character size: Adjusting this increases and decreases the font size of the Characteristic Banner.

CAD Presentation Examples of Flatness:

Example 1: Automatic Magnification, Display All Features, Transparent, Color Gradient, Min/Max points with Display Banners, and Characteristics are checked and the CAD model is displayed

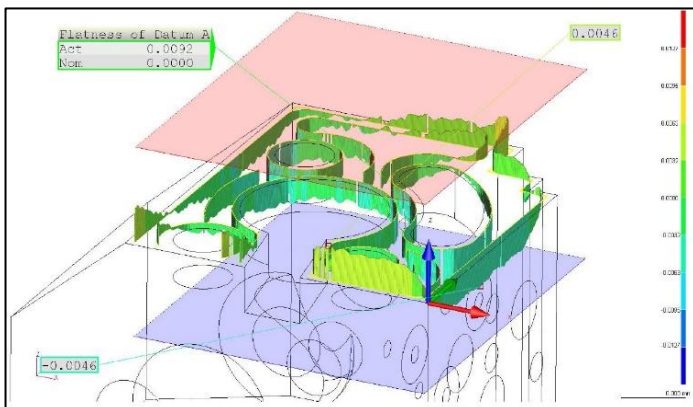


Example 2: Automatic Magnification, Display All Features, Color Gradient, Min/Max points with Display Banners, and Characteristics are checked and the wireframe is displayed

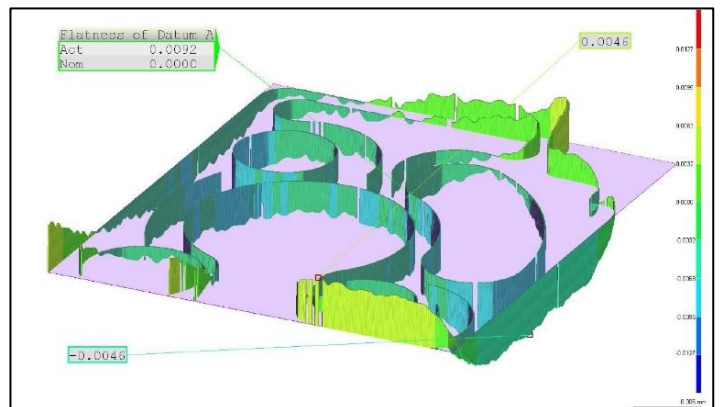


Reminder: Selecting  Show CAD models with surfaces in the CAD Model tool bar toggles between the wireframe and solid view.

Example 3: Automatic Magnification, Tolerance Frame, Display All Features, Color Gradient, Min/Max points with Display Banners, and Characteristics are checked and the wireframe is displayed





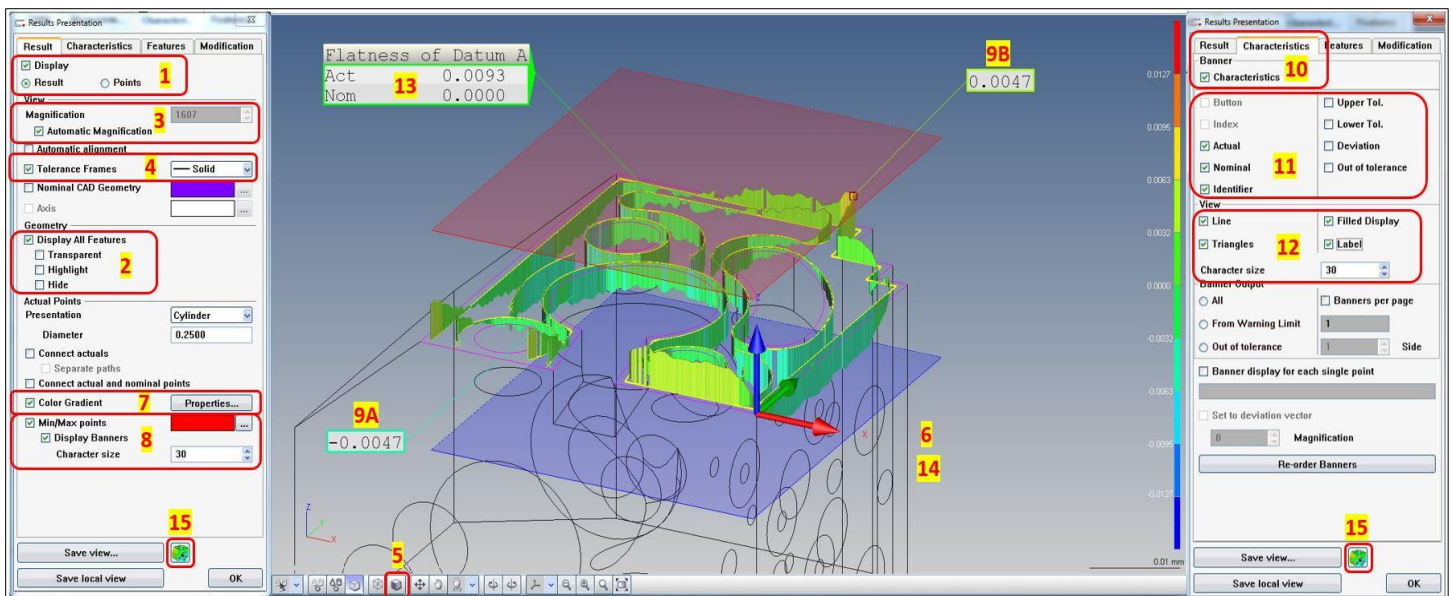
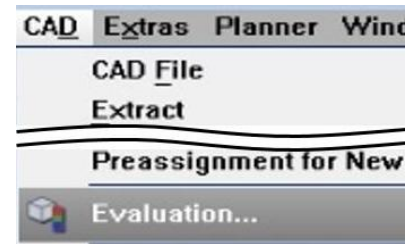
Example 4: Automatic Magnification, Nominal CAD Geometry, Color Gradient, Min/Max points with Display Banners, and Characteristics are checked





Creating a CAD Presentation using CAD Evaluation:

Now that we have a basic understanding of Cad Evaluation lets create the CAD Presentation for Example 3.

With our program written and run we are going to select  Characteristic Tab and highlight (single click) a Flatness Characteristic  (do not open it just highlight it). **At least one characteristic must be highlighted to see any results on the screen.** From the Drop Down Menus select **CAD/Evaluation**. This will open the Results Presentation window.



- 1: Check Display and Select Result
- 2: Check Display all Features
- 3: Select Automatic Magnification
- 4: Check Tolerance Frames
- 5: Change CAD model view to Wireframe
- 6: Modify CAD model size, rotation, and location to best capture the data
- 7: Check Color Gradient
- 8: Check Min/Max points and Display Banners; adjust character size if needed
- 9: Move the Min and Max Banners to a neutral location
- 10: Select the Characteristic tab and check Characteristics
- 11: Check Actual, Nominal, and Identifier

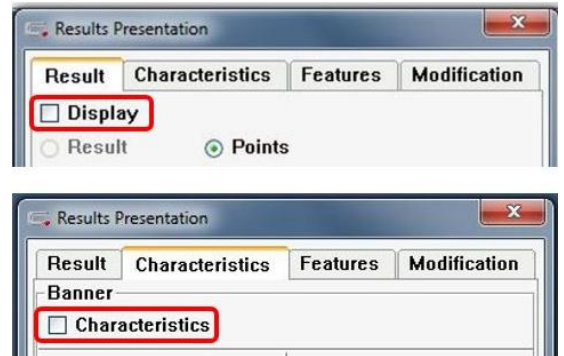
- 12: Check Line, Triangles, Filled Display, and Labels; adjust character size if needed
- 13: Move Characteristic Banner to a neutral location
- 14: **NOW IS THE TIME** to readjust anything you are not happy with in the CAD Model Window once we go to Step 15 it will be too late and we will have to delete the CAD Presentation and recapture the screen.
- 15: Select , in the window that opens name the view (If you are going to use multiple CAD Presentations make sure each one has its own view name for the presentation to go to the pdf correctly.) and select  the CAD Presentation is placed in the Characteristic Tab (You can rename the CAD Presentation just like any other characteristic in Calypso).

CAD Presentation Tips:

Tip 1:

The last view used for the CAD Presentation becomes the view Calypso stays in until you close the program out and open it again. If you are going to leave the program open and run multiple parts I recommend adding a CAD Presentation at the end that is just the CAD model in the proper orientation (to help avoid confusion) with Results Presentation turned off (uncheck Display in the Result Tab and Characteristics in the Characteristic Tab).

NOTE: Once Results Presentation is checked on in a program, every time you select a characteristic all the presentation info will appear until it is turned off.



Tip 2:

When there are multiple diameters on a part that share the same diameter we can help identify them with a CAD Presentation. In this example I show the operator and/or the customer what feature the multiple diameters and radii belong to (ONLY Characteristics and Identifier checked)

