August 28, 2019

SUPPLIER TRAINING V5 NET-INSPECT KEY CHARACTERISTIC MANAGEMENT

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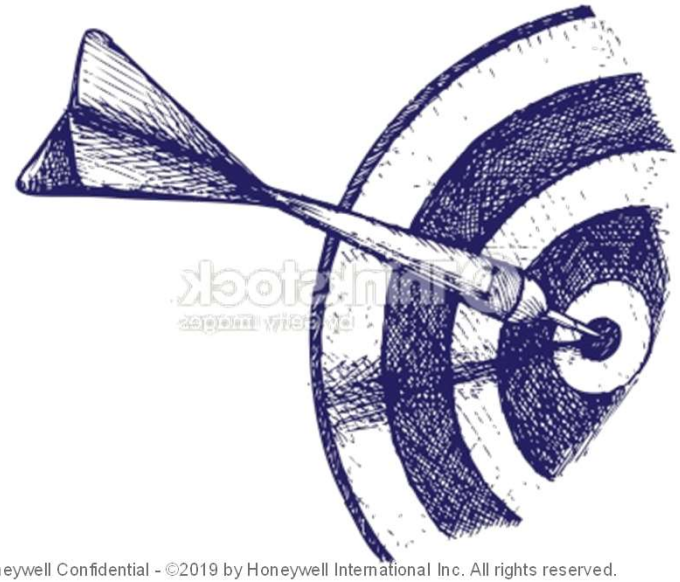
Honeywell

LEARNING OBJECTIVES

- Explain what Honeywell Key Characteristics are.
- Why Honeywell requires Variation Management on KCs.
- How to log into Net-Inspect.
- How to set up part number, features, cell and machine in Net-Inspect.
- How to enter measurement data in Net-Inspect.
- How to view internal SPC data using Net-Inspect.



HONEYWELL KEY CHARACTERISTICS

- KC is an attribute or feature that requires specific actions for the purpose of controlling variation. It has a significant effect on product fit, form, function, performance, service life or producibility and requires specific actions for the purpose of controlling variation.

- The three primary conditions for the selection of KCs are:
  1. Keys are selected when variation inside tolerances or processes causes extra downstream efforts or resources to accommodate it.
  2. Keys must be directly measurable product features or processes that can be monitored and controlled.
  3. Keys could also flow directly from the customer.

VARIATION MANAGEMENT

The need to control variation while manufacturing parts or products:

- Improve quality and make it easy for the customer to use and enhance his satisfaction.
- Increase productivity.
- Reduce costs from scrap, extra handling and escapes.
- Comply with the requirements of variation management per specifications AS 9100 and AS 9103.

The need for Variation Management on KCs is to:

- Reduce variation within the tolerances and processes on the design features that have the potential of causing our customer problems when they start approaching the specification limits.
- Drive towards center and six sigma quality so that the customer does not feel the impact of variation.

KEY CHARACTERISTIC MANAGEMENT

Honeywell may designate a KC:

- By one or more symbols or by a note on the engineering drawing.
- In the wording of a specification.
- In a note on the purchase order.

SPOC 154 requires the management of KCs in Net-Inspect:

– If the KCs are defined on the drawing, specification or purchase order, supplier needs to create the features directly in Net-Inspect.

– If the KCs are defined by the supplier, the supplier needs to create the features directly in Net-Inspect.

– All actual data measurements are to be entered in Net-Inspect and not just the acceptable data points.

NET-INSPECT LOGIN

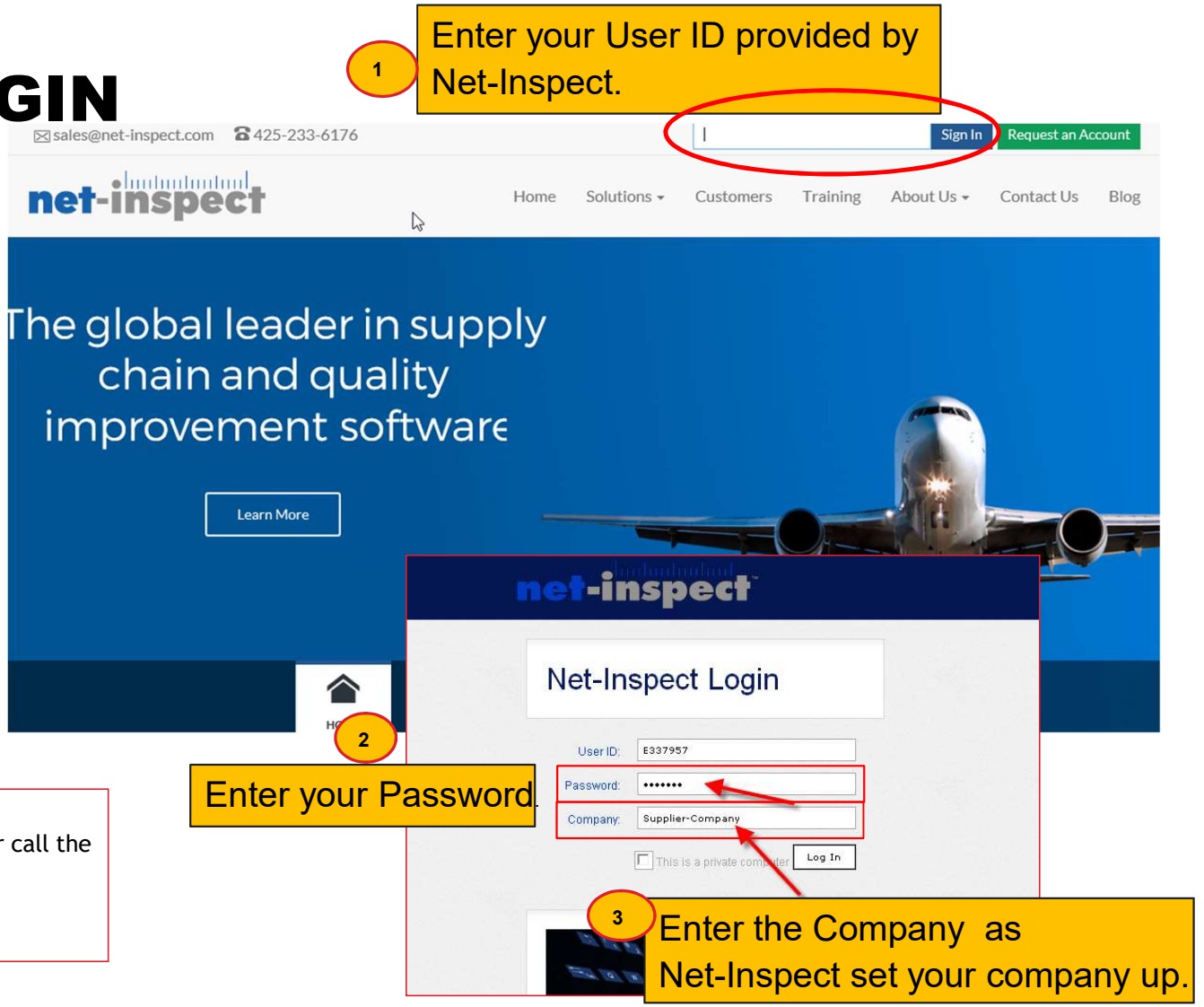
Supplier will log into Net-Inspect with the account details provided by Net-Inspect . This is done once the supplier has contacted Net-Inspect and requested an account to be used for Honeywell.

Contact your Company's Net-Inspect Super Administrator for access

https://www.netinspect.com/

Suppliers to use the following details to send an email or call the Net-Inspect Helpdesk for new accounts:

- Helpdesk@net-inspect.com
- 425 233 6176



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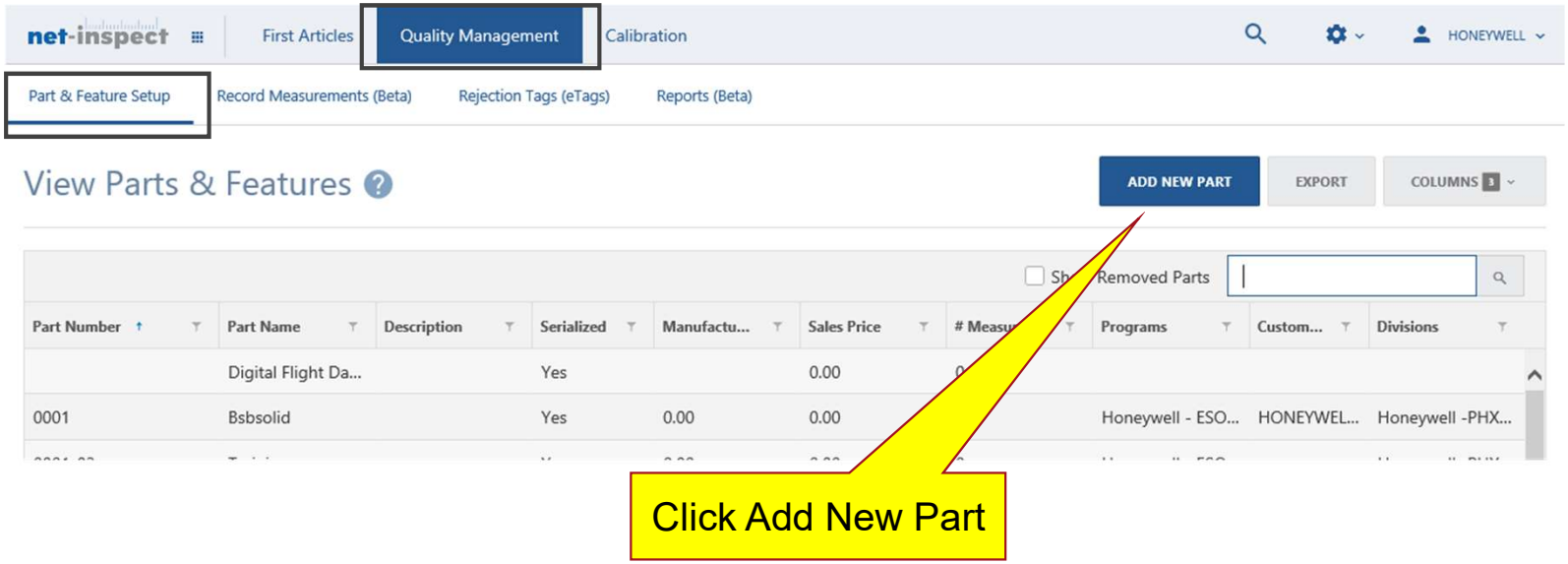
MANUAL ENTRY OF FEATURES IN NET-INSPECT

To monitor and manage KCs in Net-Inspect you have to set each KC up as a Feature.

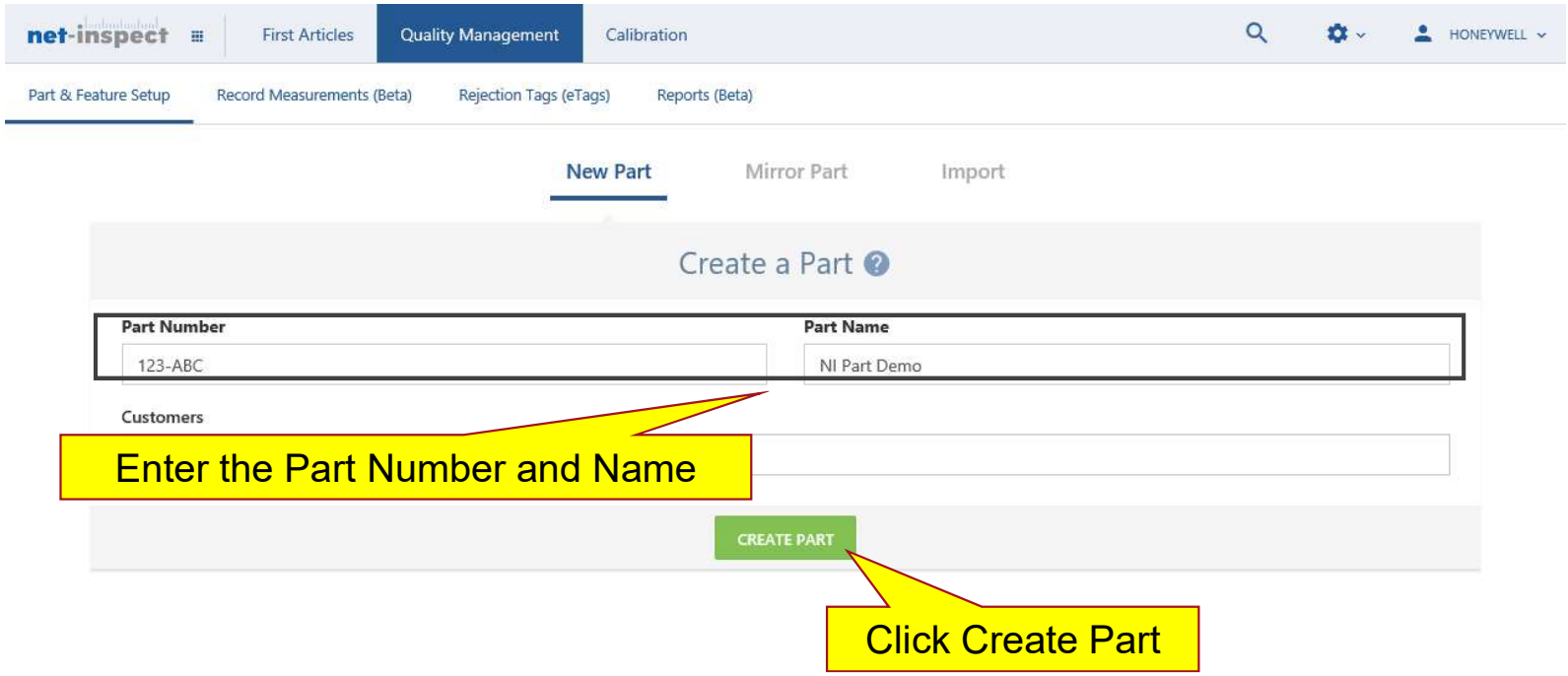
The following items must be set-up to get a feature and be able to collect data; Part Number, Features, Cell and Machine in Net-Inspect

PART NUMBER SETUP

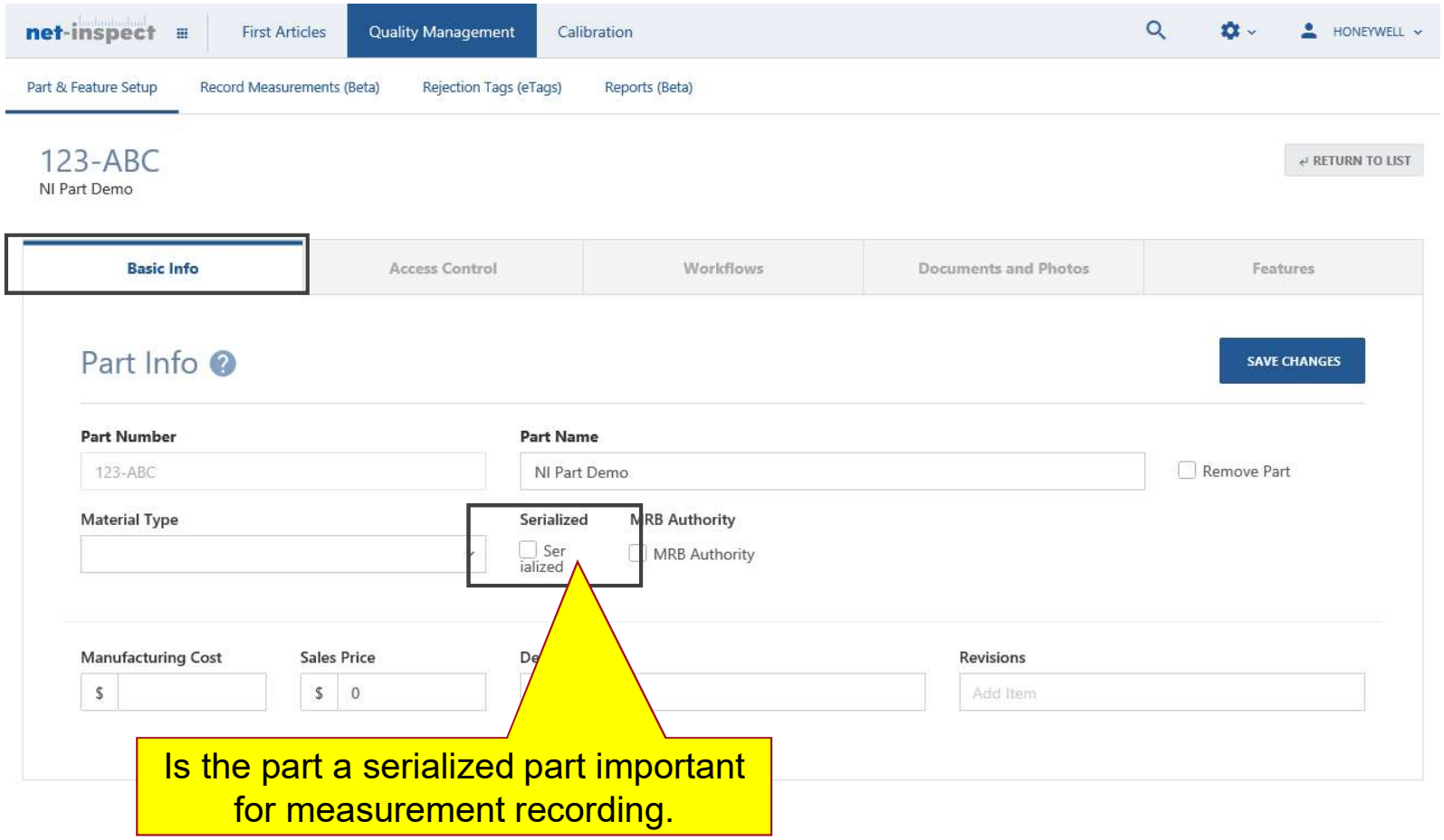
If your company has not done a FAIR for Honeywell Aerospace you must set the part number up.



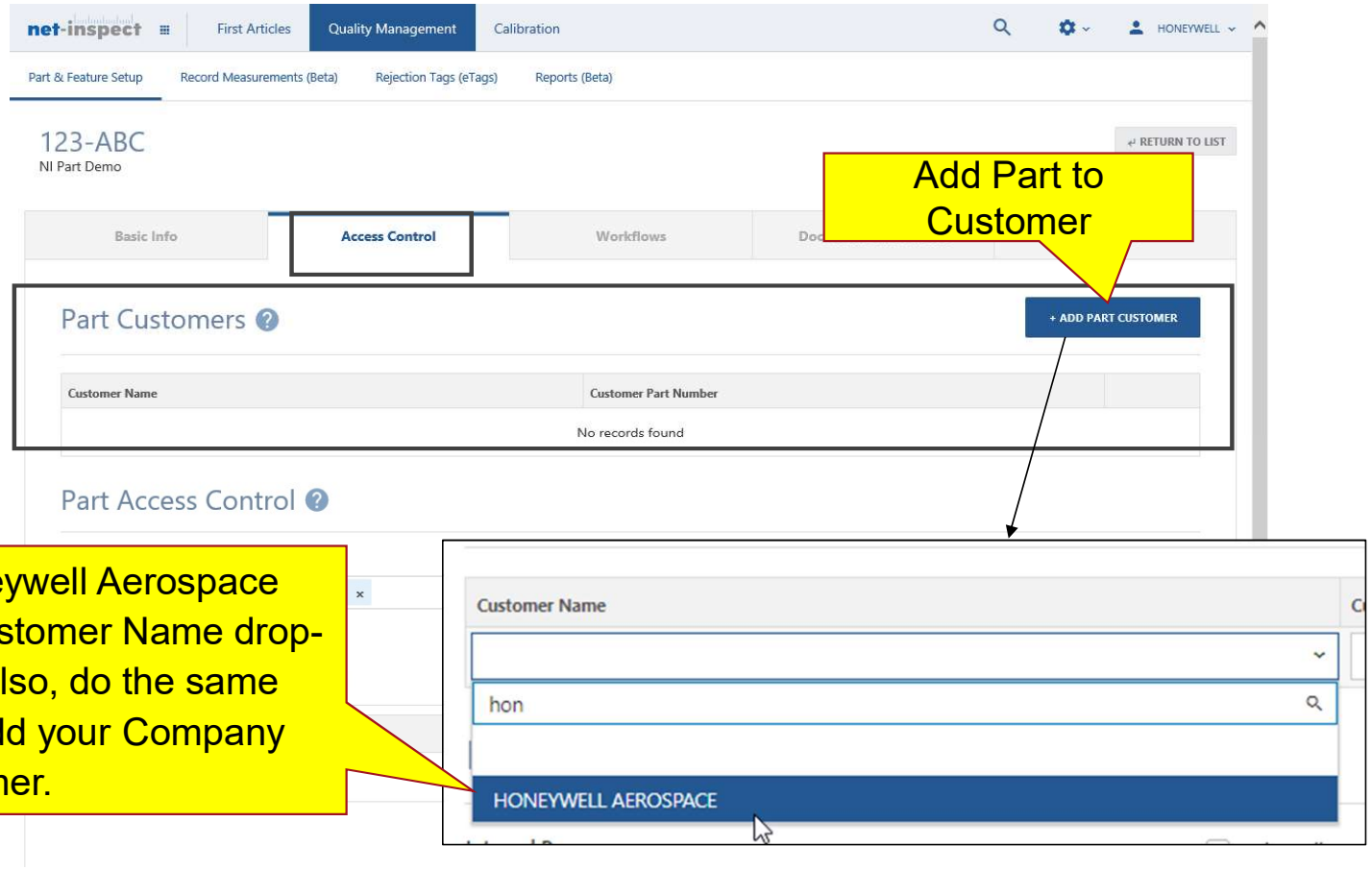
PART NUMBER SETUP



PART NUMBER SETUP

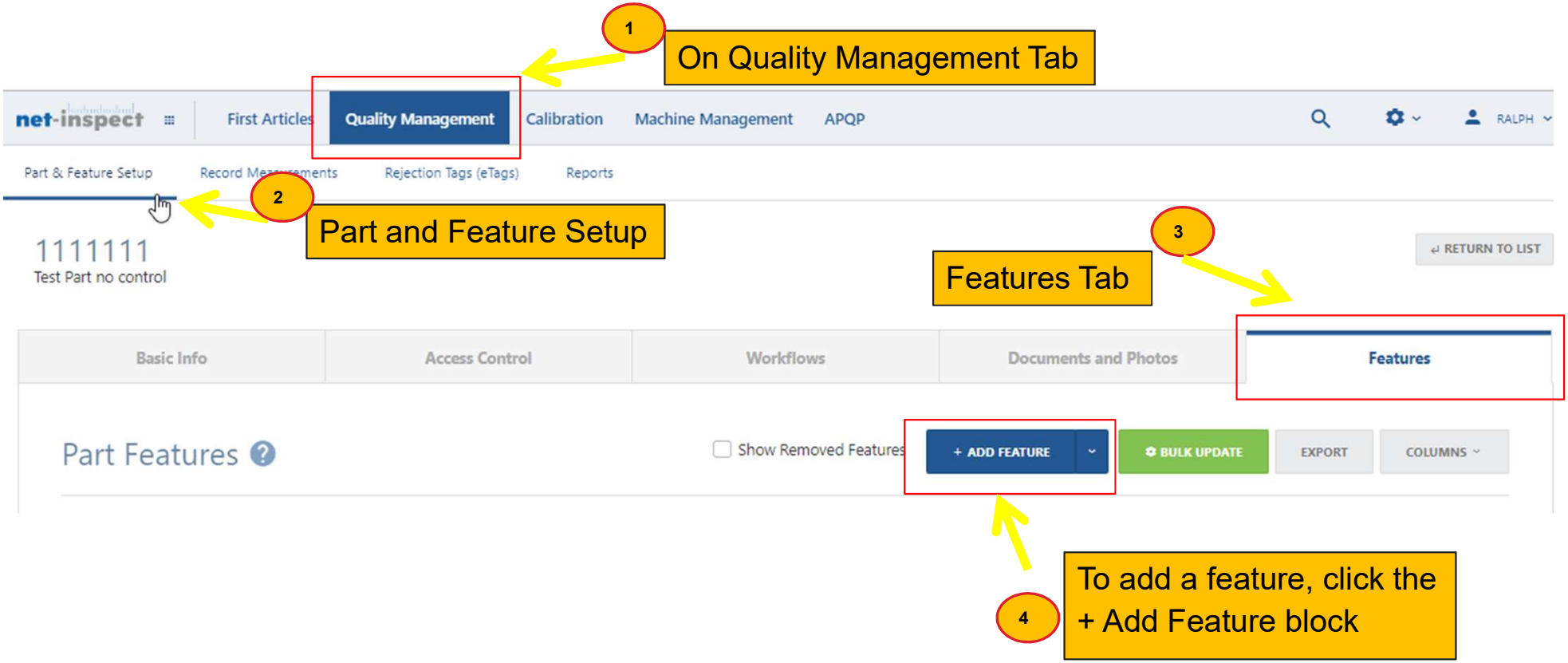


PART NUMBER SETUP

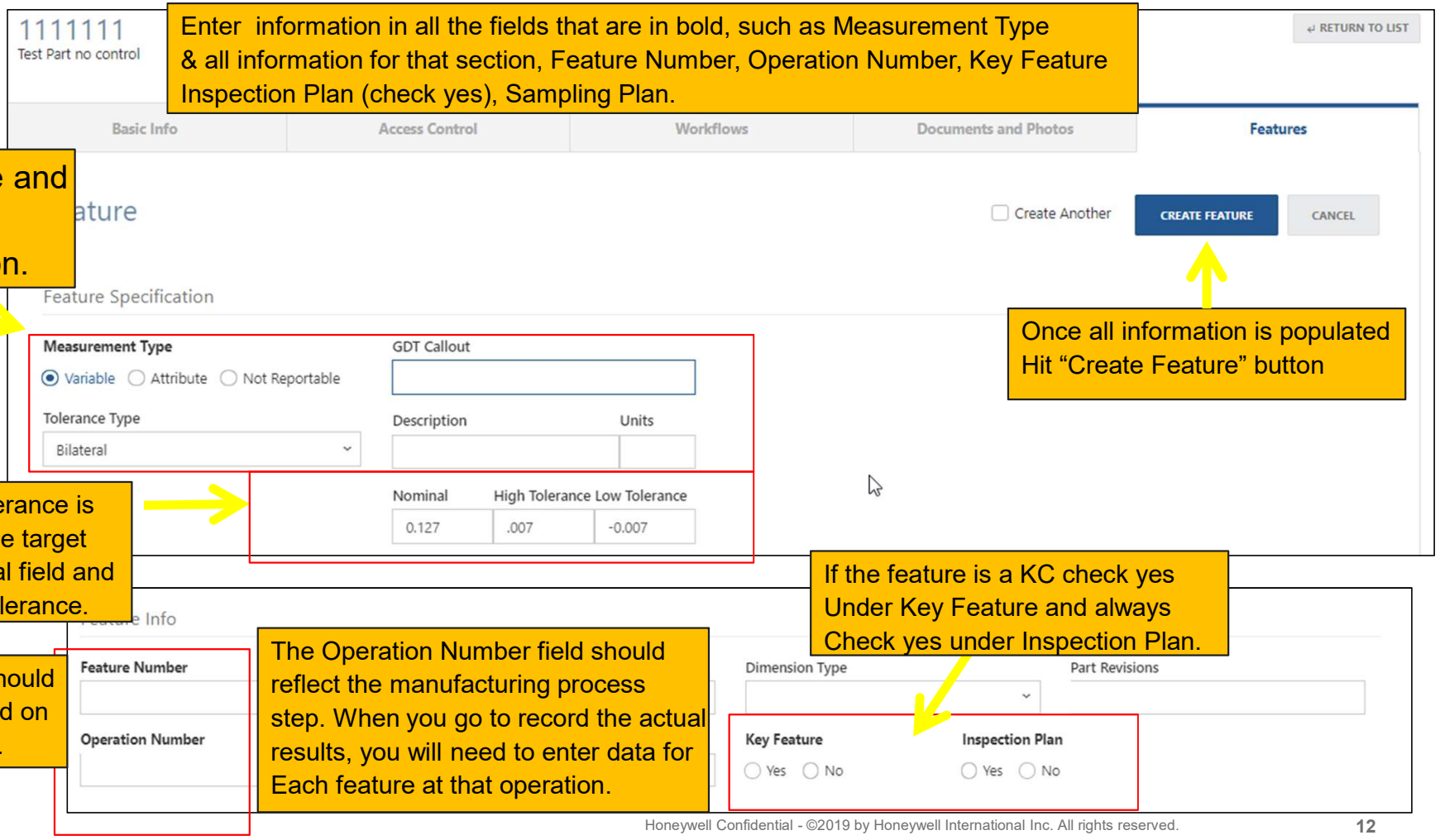


Select Honeywell Aerospace from the Customer Name drop-down list. Also, do the same thing and add your Company as a Customer.

SET UP–FEATURES IN NET-INSPECT



FEATURES SETUP: POPULATE THE DETAILS



Enter information in all the fields that are in bold, such as Measurement Type & all information for that section, Feature Number, Operation Number, Key Feature Inspection Plan (check yes), Sampling Plan.

Measurement Type and all other applicable Fields in this section.

Once all information is populated Hit “Create Feature” button

In this example Tolerance is Bilateral so enter the target value in the Nominal field and the High and low tolerance.

If the feature is a KC check yes Under Key Feature and always Check yes under Inspection Plan.

The Feature Number should Match KC # as identified on Dwg, Spec or PO if KC.

The Operation Number field should reflect the manufacturing process step. When you go to record the actual results, you will need to enter data for Each feature at that operation.

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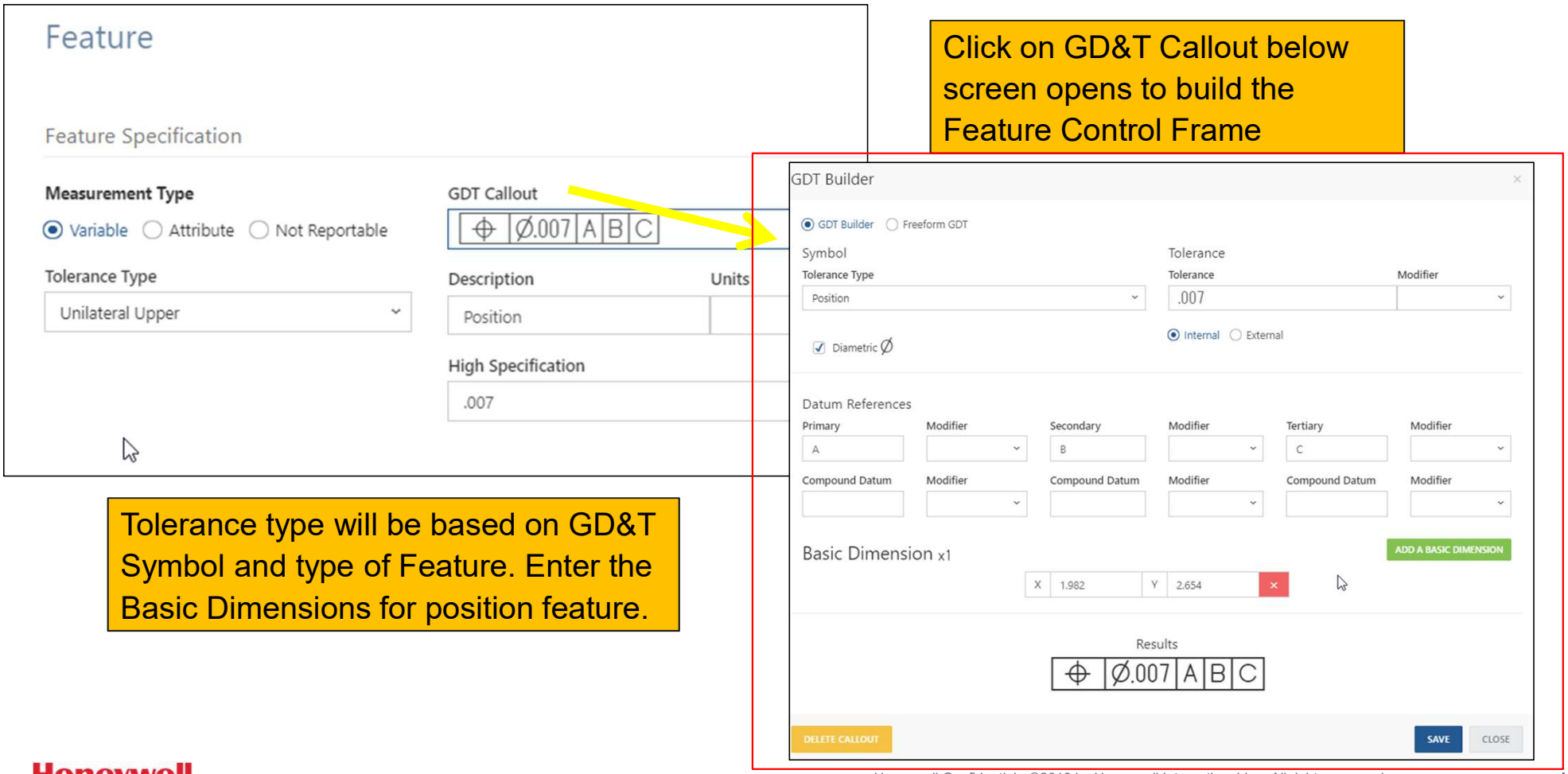
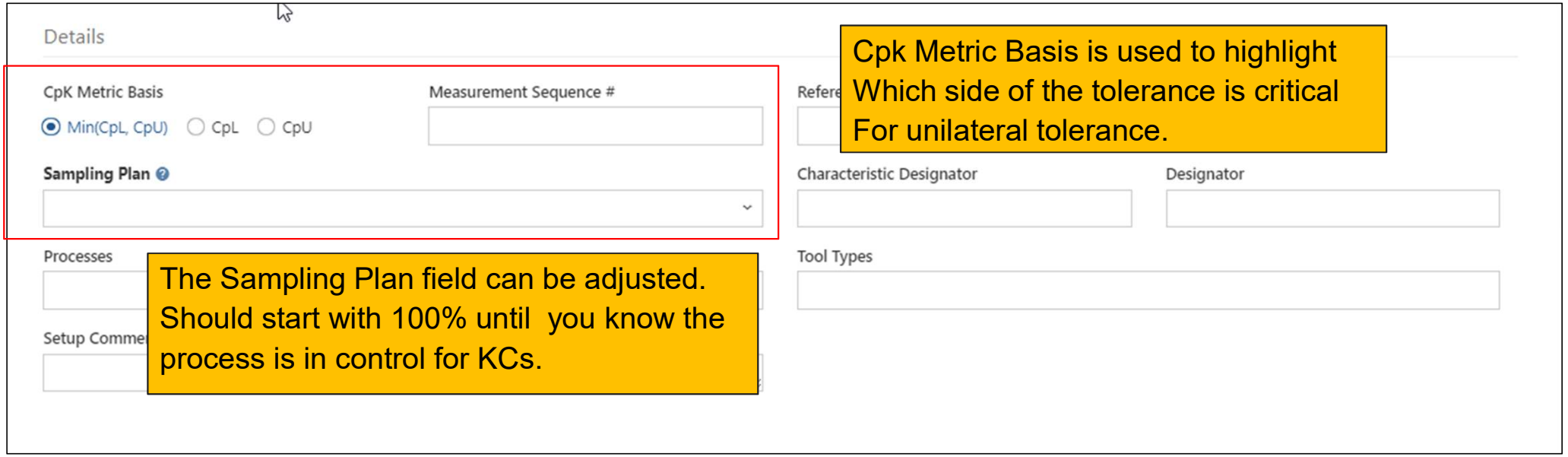
FEATURES SETUP: GD&T EXAMPLE



Click on GD&T Callout below screen opens to build the Feature Control Frame

Tolerance type will be based on GD&T Symbol and type of Feature. Enter the Basic Dimensions for position feature.

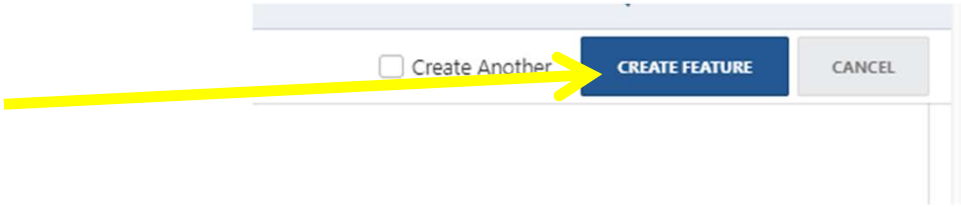
FEATURES SETUP: LAST REQUIRED FIELDS



Cpk Metric Basis is used to highlight Which side of the tolerance is critical For unilateral tolerance.

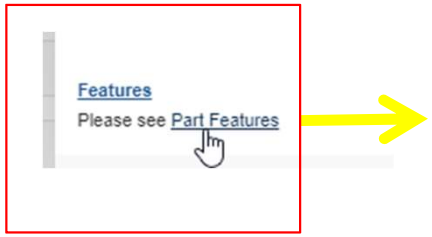
The Sampling Plan field can be adjusted. Should start with 100% until you know the process is in control for KCs.

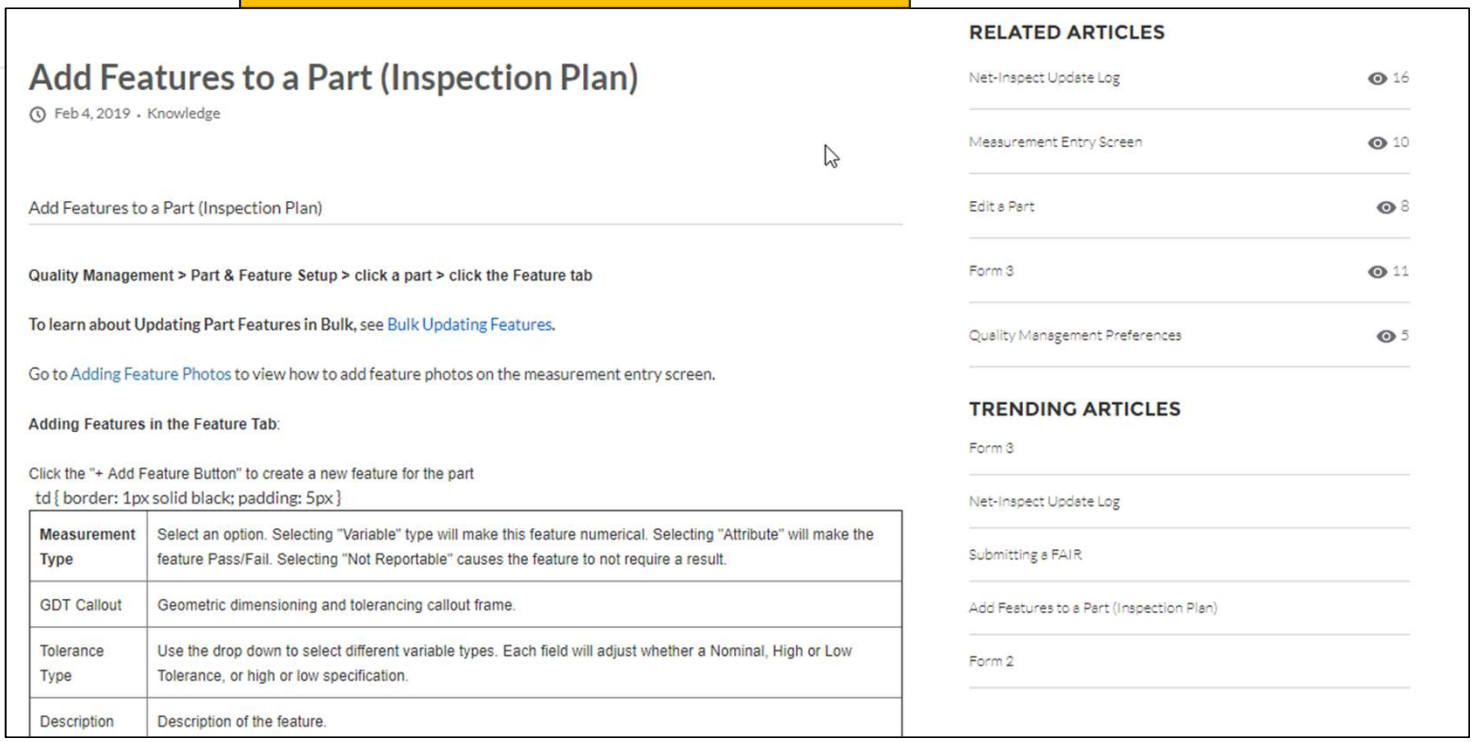
Fill any other fields you may have Setup such as Process, once all information is populated Hit “Create Feature” button.



NET-INSPECT TRAINING MATERIAL

Select the Question Mark (?) next to Topic and get Net-Inspect training Material. Here you can scroll down To get Part Features Help





Add Features to a Part (Inspection Plan)

Feb 4, 2019 • Knowledge

Add Features to a Part (Inspection Plan)

Quality Management > Part & Feature Setup > click a part > click the Feature tab

To learn about Updating Part Features in Bulk, see Bulk Updating Features.

Go to Adding Feature Photos to view how to add feature photos on the measurement entry screen.

Adding Features in the Feature Tab:

Click the "+ Add Feature Button" to create a new feature for the part

td { border: 1px solid black; padding: 5px }

Measurement Type	Select an option. Selecting "Variable" type will make this feature numerical. Selecting "Attribute" will make the feature Pass/Fail. Selecting "Not Reportable" causes the feature to not require a result.
GDT Callout	Geometric dimensioning and tolerancing callout frame.
Tolerance Type	Use the drop down to select different variable types. Each field will adjust whether a Nominal, High or Low Tolerance, or high or low specification.
Description	Description of the feature.

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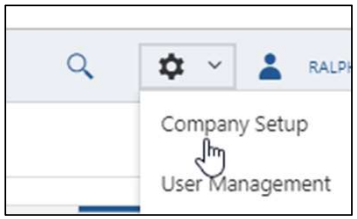
MEASUREMENT ENTRY
NET-INSPECT KEY CHARACTERISTICS

All actual data measurements are to be entered in Net-Inspect and not just the acceptable data points.

SET UP CELL

The supplier needs to setup a cell(s) prior to measurement data entry.

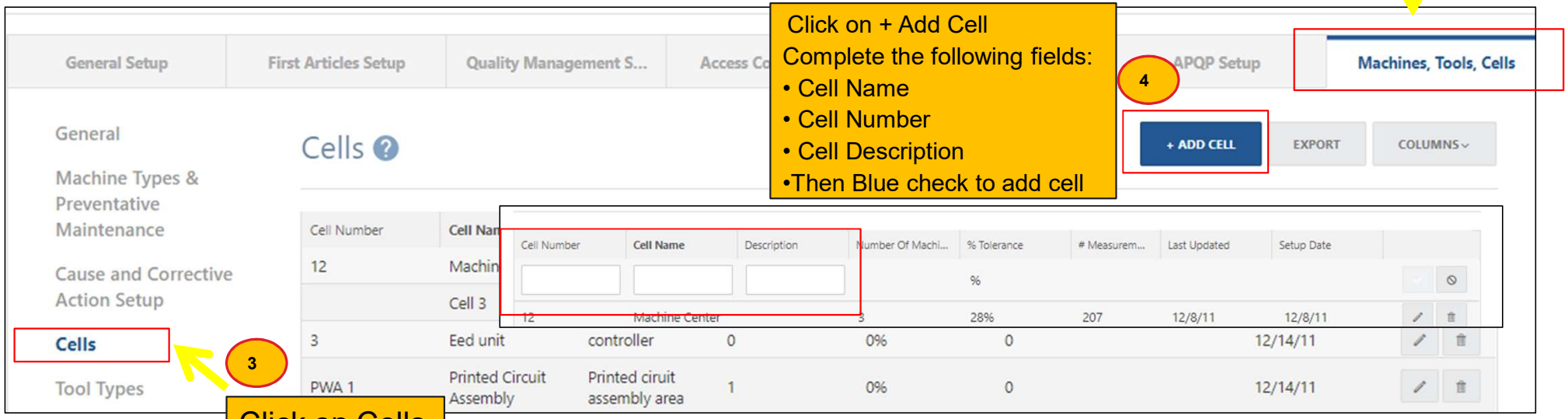


1

Click on Gear on top right of page
And select Company Setup.

Click Machine, Tools, Cells.

2



Click on + Add Cell
Complete the following fields:
- Cell Name
- Cell Number
- Cell Description
- Then Blue check to add cell

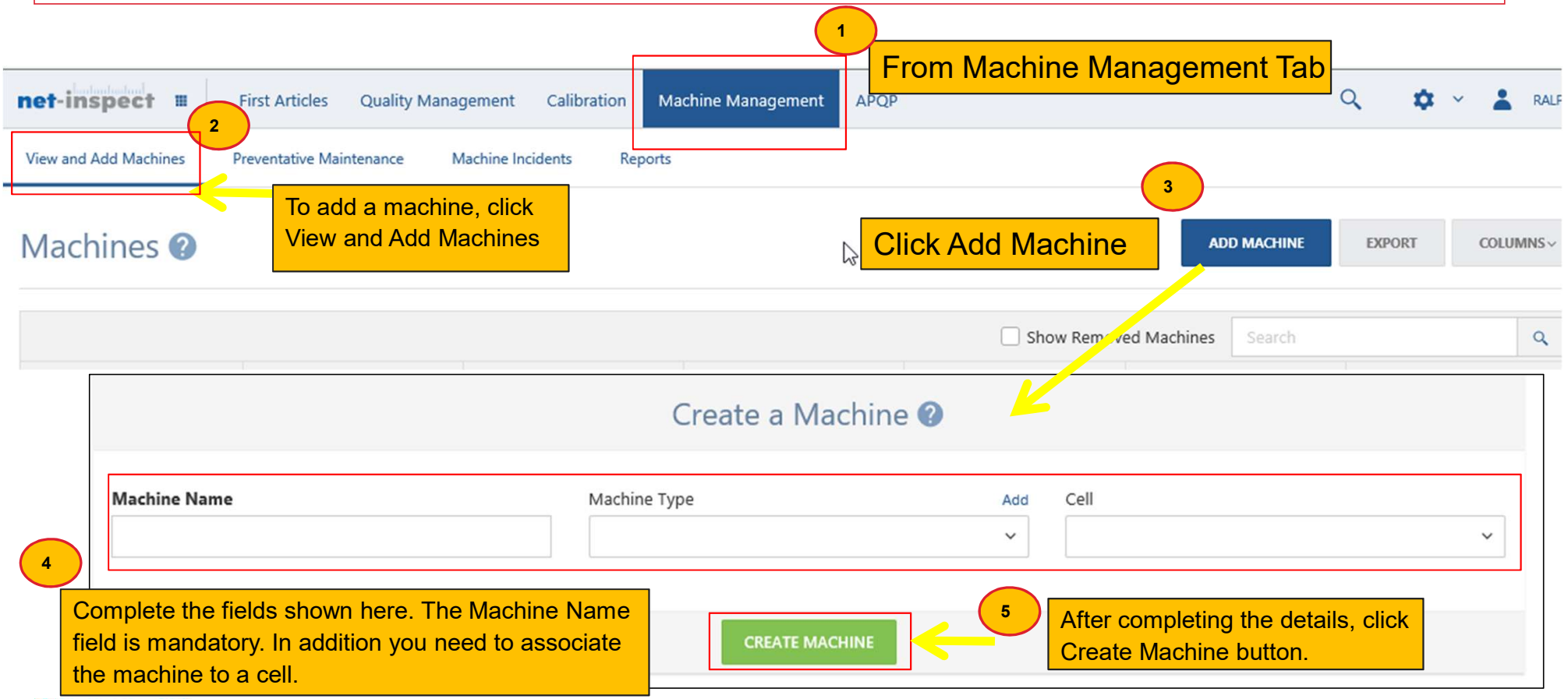
4

3

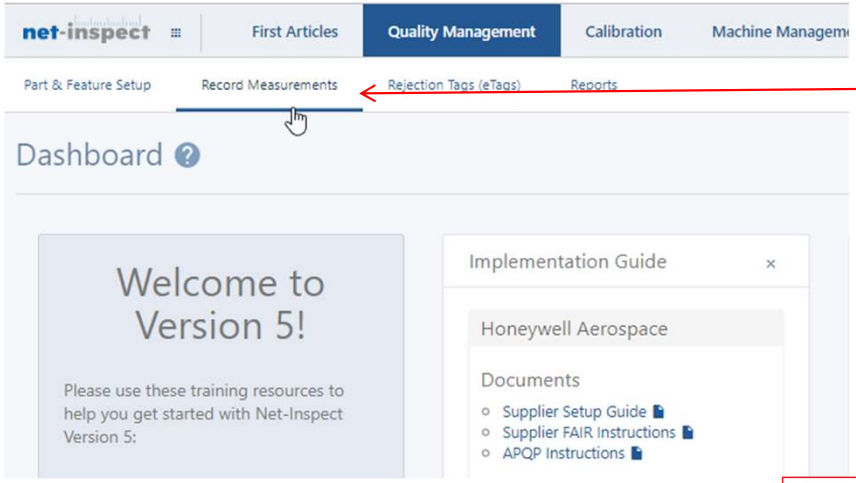
Click on Cells

SET UP MACHINE & ASSOCIATE TO CELL

The supplier needs to setup a machine(s) prior to measurement data entry also and associate it to a cell.

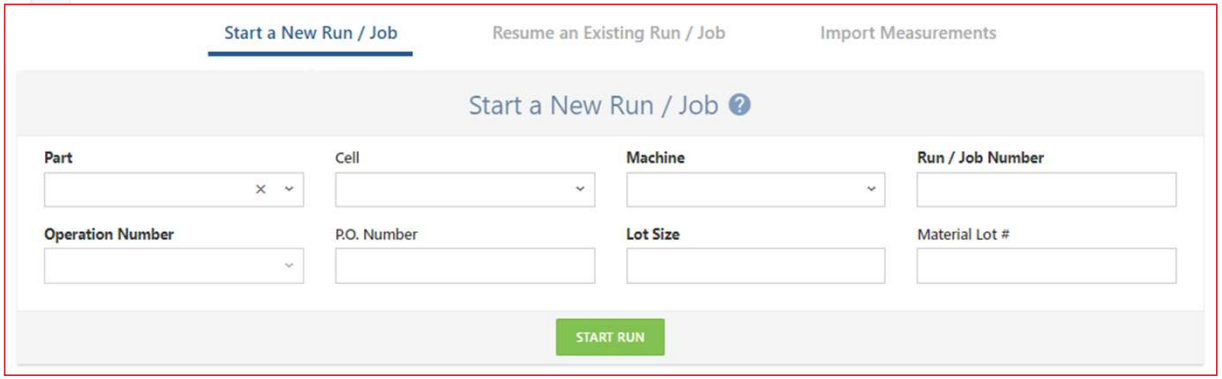


MEASUREMENT ENTRY



Users with additional roles then operator can select **"Record Measurements"** at the main page under **Quality Management.**

If user has only Operator role, upon login Net-Inspect will only open and give access to this Measurement Entry screen

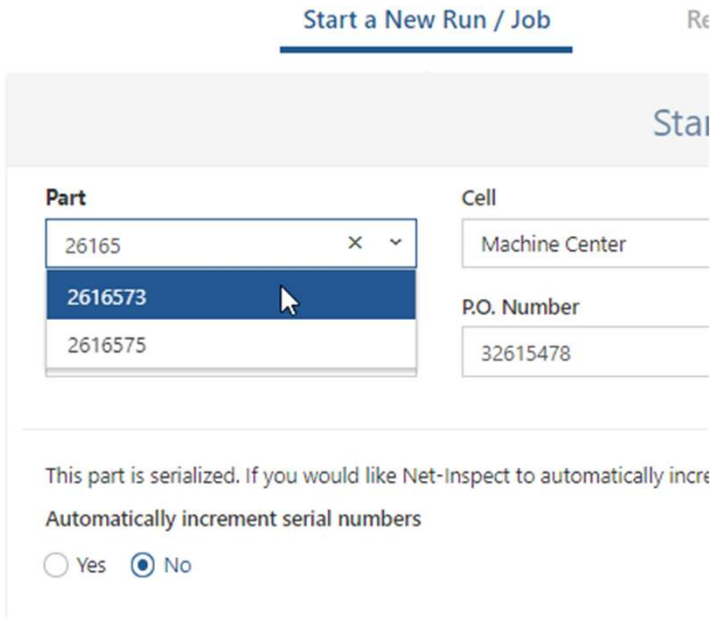


To enable this menu the user must be set up with the User Type (role) of "Operator"

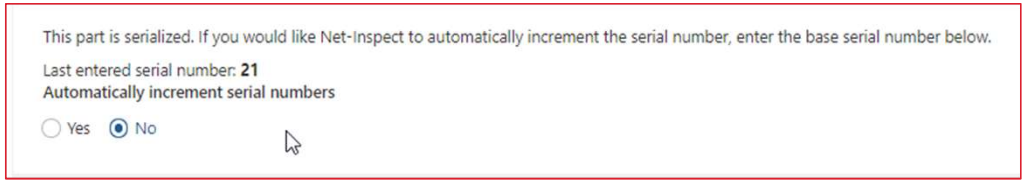
NOTE : All bold fields on the screen are MANDATORY.

ENTER PART NUMBER

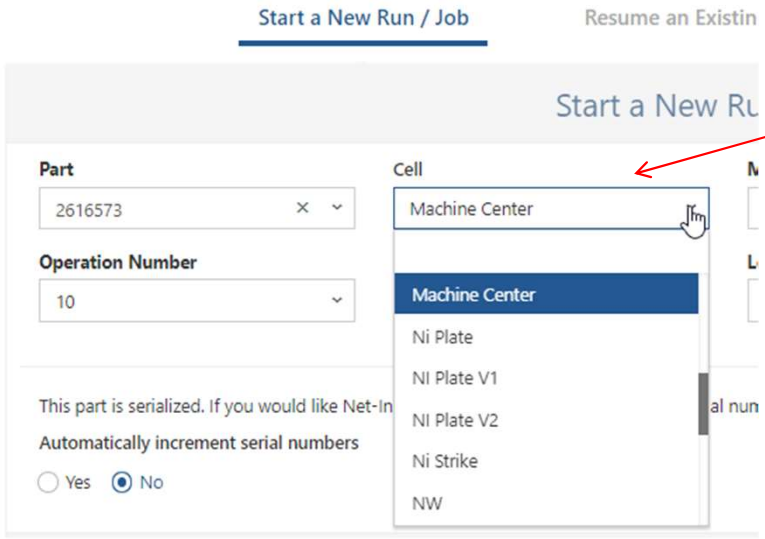
Start typing in the part number. Net-Inspect will list part numbers which match and when you see your part number highlight it and select it. Cut and Paste does not work in this field.



If the part is serialized you will be asked if you want NI automatically Increment the serial number to the next number or if you want to type in Serial number.

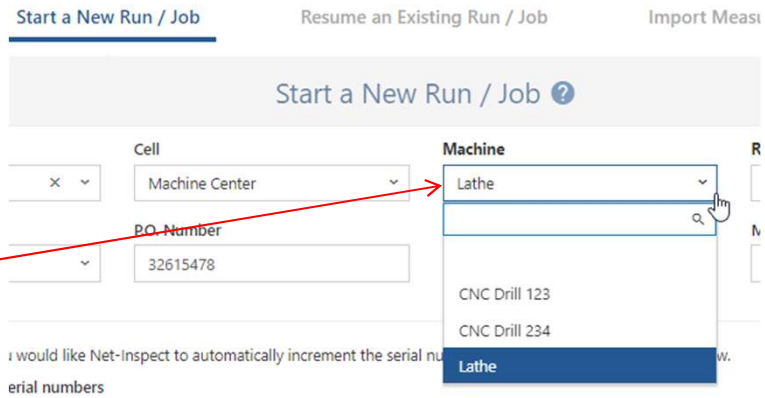


SELECT A CELL AND MACHINE

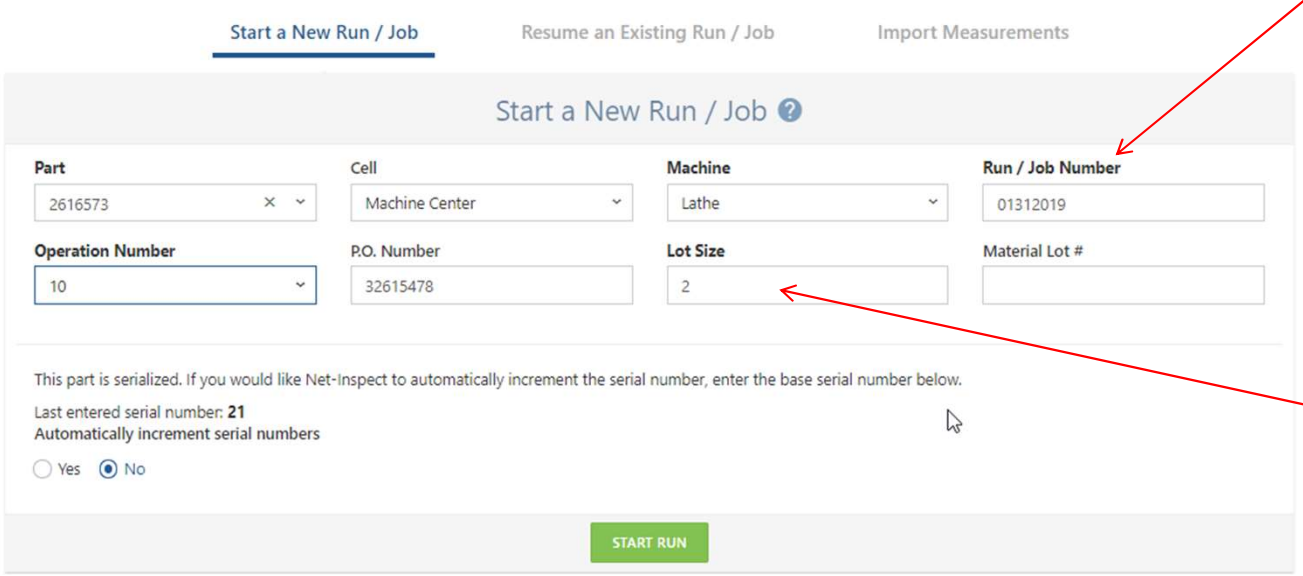


Select the Cell from the dropdown list.

Select the Machine from the dropdown list. Down selects from Cell selection.



ENTER RUN / JOB NUMBER AND LOT SIZE

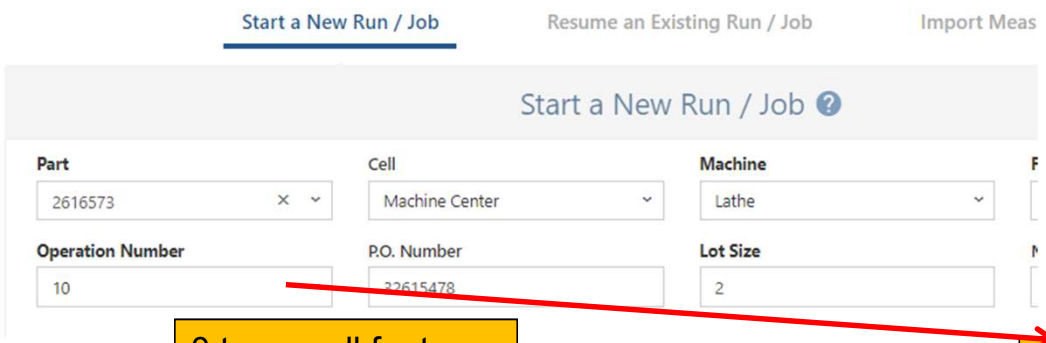


Run / Job number is a required field and dependent on site specific definition. Verify a consistent strategy for populating this field.

Lot Size is also dependent on site specific implementation based on sampling plan setup against the feature. Dependent on strategy Lot Size might be Quantity you want to record measurements for.

Features of Lot Size:
- Lot size is the last item that must be populated before the measurements can be taken.
- This needs to be the total lot size of the parts being measured.
- Net-Inspect will determine the measurements to be recorded, based on the sample plan that is setup for the feature and the lot size.
- Not all the measurements must be recorded at one time but if you want to return to the Job/Run/Lot # again, you must list the full lot size every time.
- Net-Inspect will keep a count until all the required measurements have been captured.

OPERATION NUMBER (OP #)

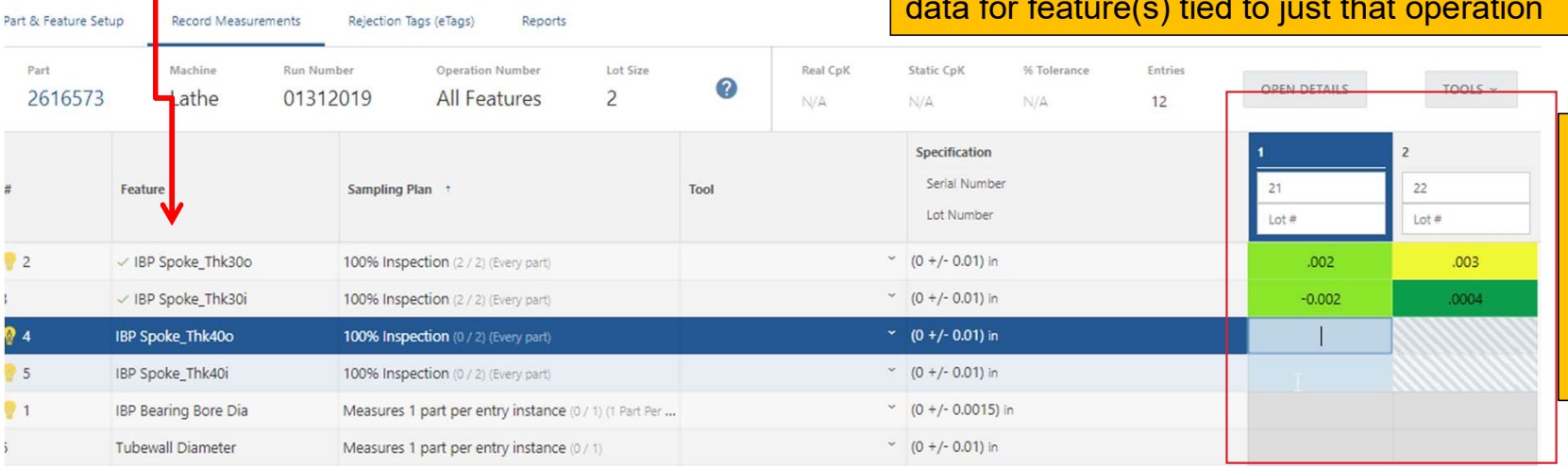


Once all the mandatory fields (In Bold) are entered in the Measurement Entry Screen, depending if the User selects a particular Op# it will display either the feature(s) associated to that Op# or if Op# = 0 then it will display all features for that Part Number on one screen to enter measurements.

Hit “Start Run” and User then enters data.

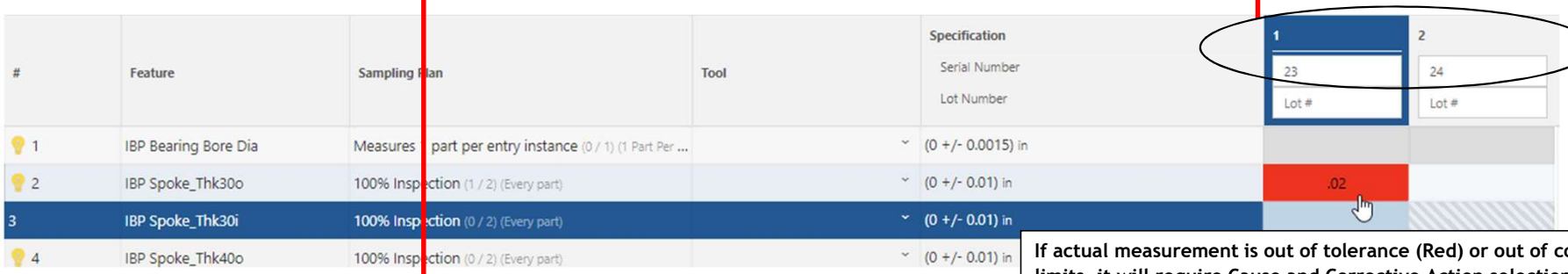
0 to see all features

Pick Op # to be able to enter measurement data for feature(s) tied to just that operation



Results Area
Enter S/N if required and then actual values for each part.

MEASUREMENT ENTRY SCREEN- CONT



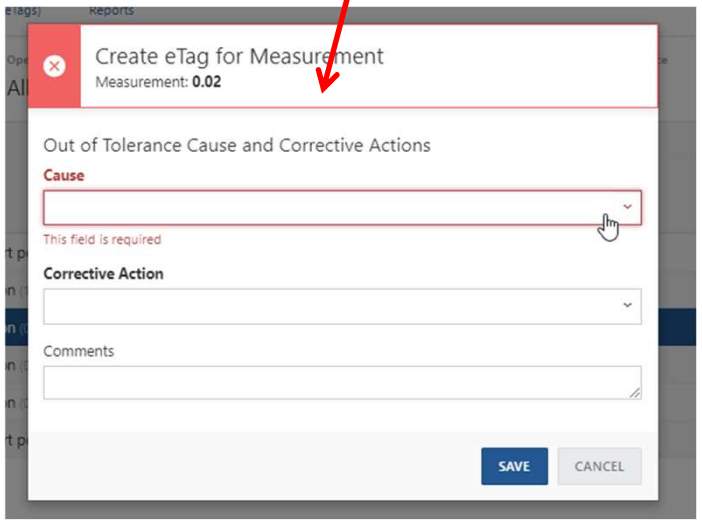
The measurement entry screen will open and show you how many samples you need to inspect depending on the sampling plan set up for the part and Lot Size.

If the part is a serialized part it will require a serial number to enter the measurement .

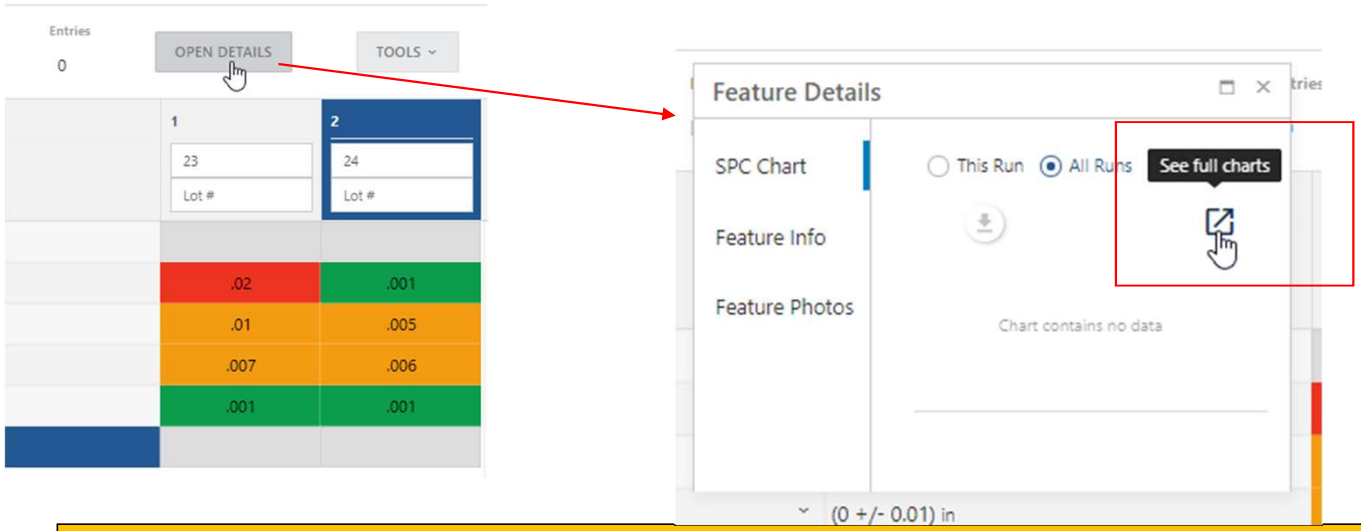
lot # will come from previous screen if populated. Not a required field.

The measurements will be saved upon entering them no Save button.

If actual measurement is out of tolerance (Red) or out of control limits, it will require Cause and Corrective Action selection if this is turned on and might require some comments.



MEASUREMENT ENTRY SCREEN- TO VIEW CHARTS

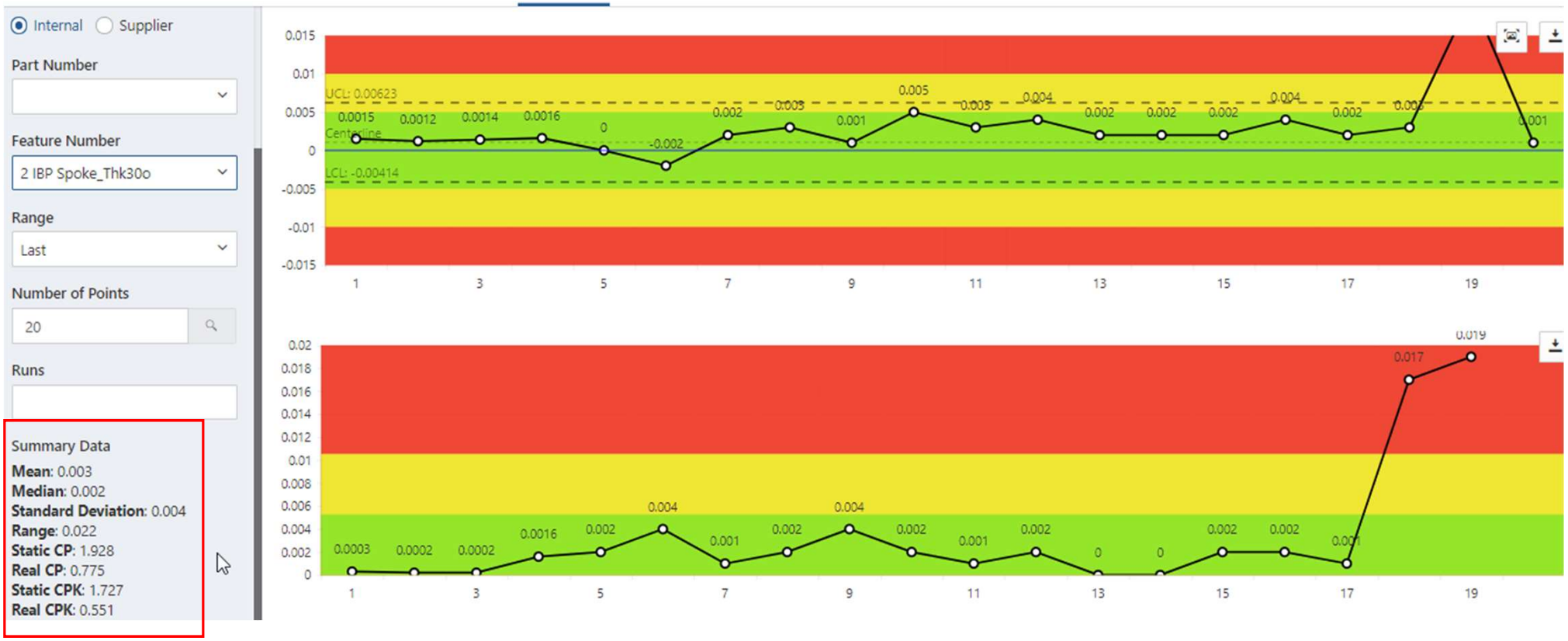


Once you have entered your Measurement(s) you can do several things.

1.) Click on open details to get to the SPC chart. Click see full charts to get more ability to select range or lot numbers. See next page for full chart capability.

2.) Click on Tools to modify results or do a bulk update.

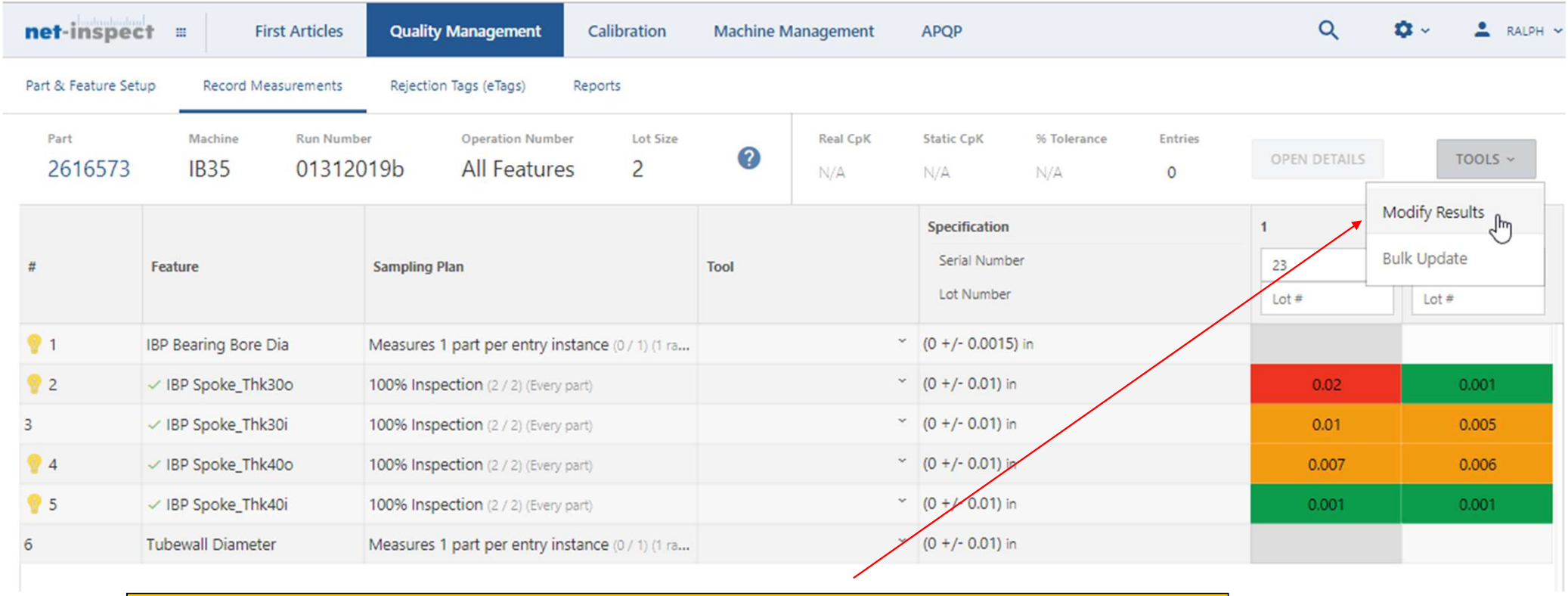
FULL CHARTS



IX AND MOVING RANGE CHART

Click on a measurement point to see the details.

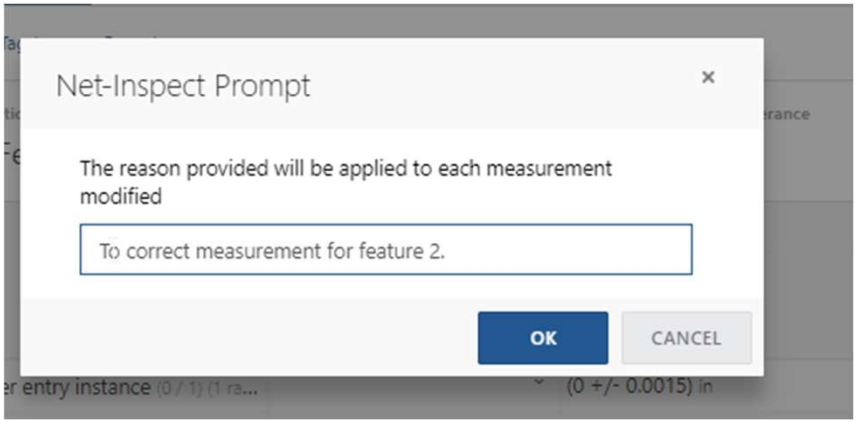
TO EDIT A MEASUREMENT

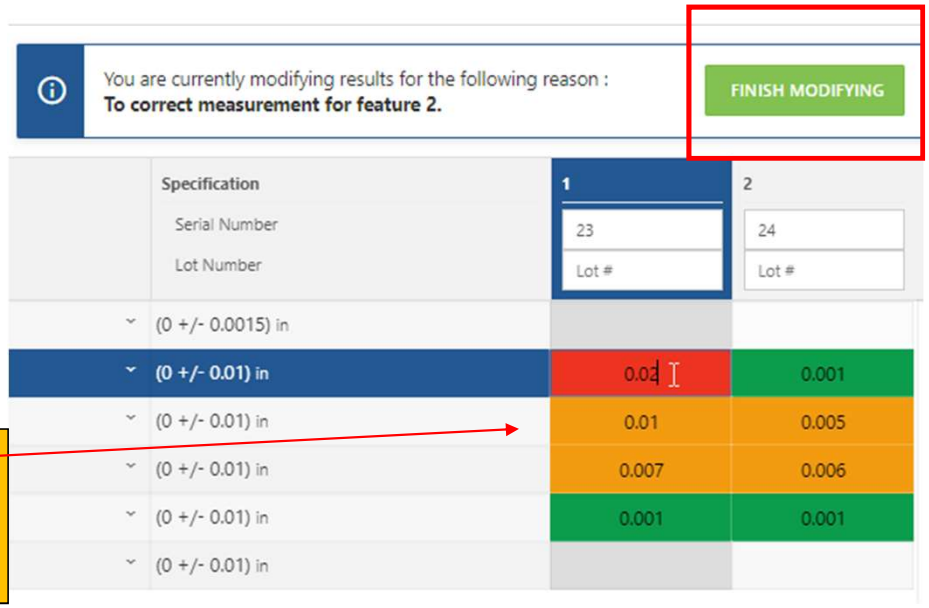


Click on **Tools** to modify results or do a bulk update. Provide an explanation of why you want to modify the results and then you will be in edit mode.

TO EDIT A MEASUREMENT

Provide an explanation of why you want to modify the results and then you will be in edit mode.



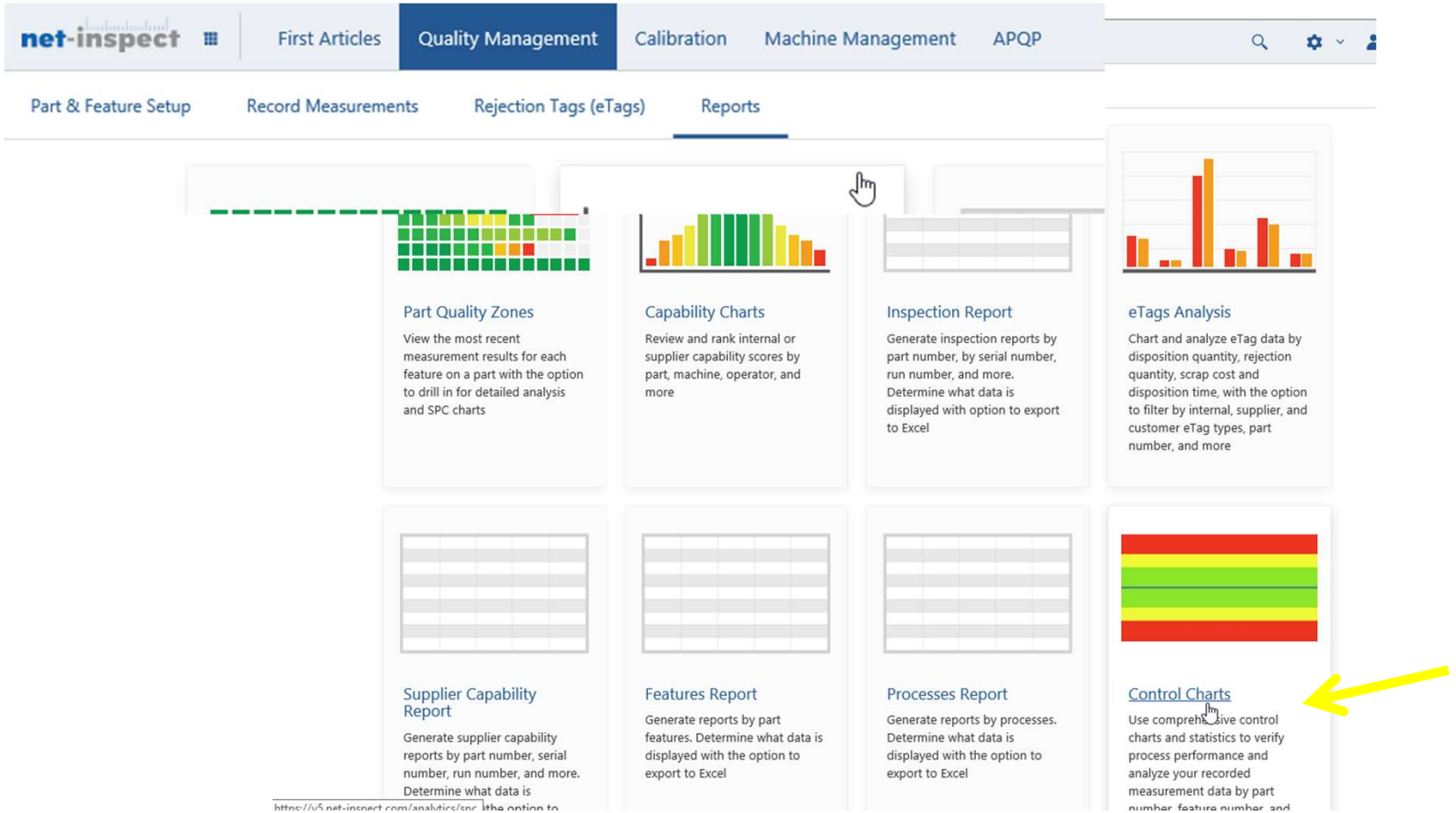


Once in Edit Mode correct the measurement(s) needing to be corrected and then hit “Finish Modifying” to save and update the measurements.

HOW TO ANALYZE NET-INSPECT KC DATA

There are several ways to view the SPC data for the features set up. One was during the imputing of the actual data already shown and using reports or features on the part set up.

VIEW INTERNAL SPC DATA



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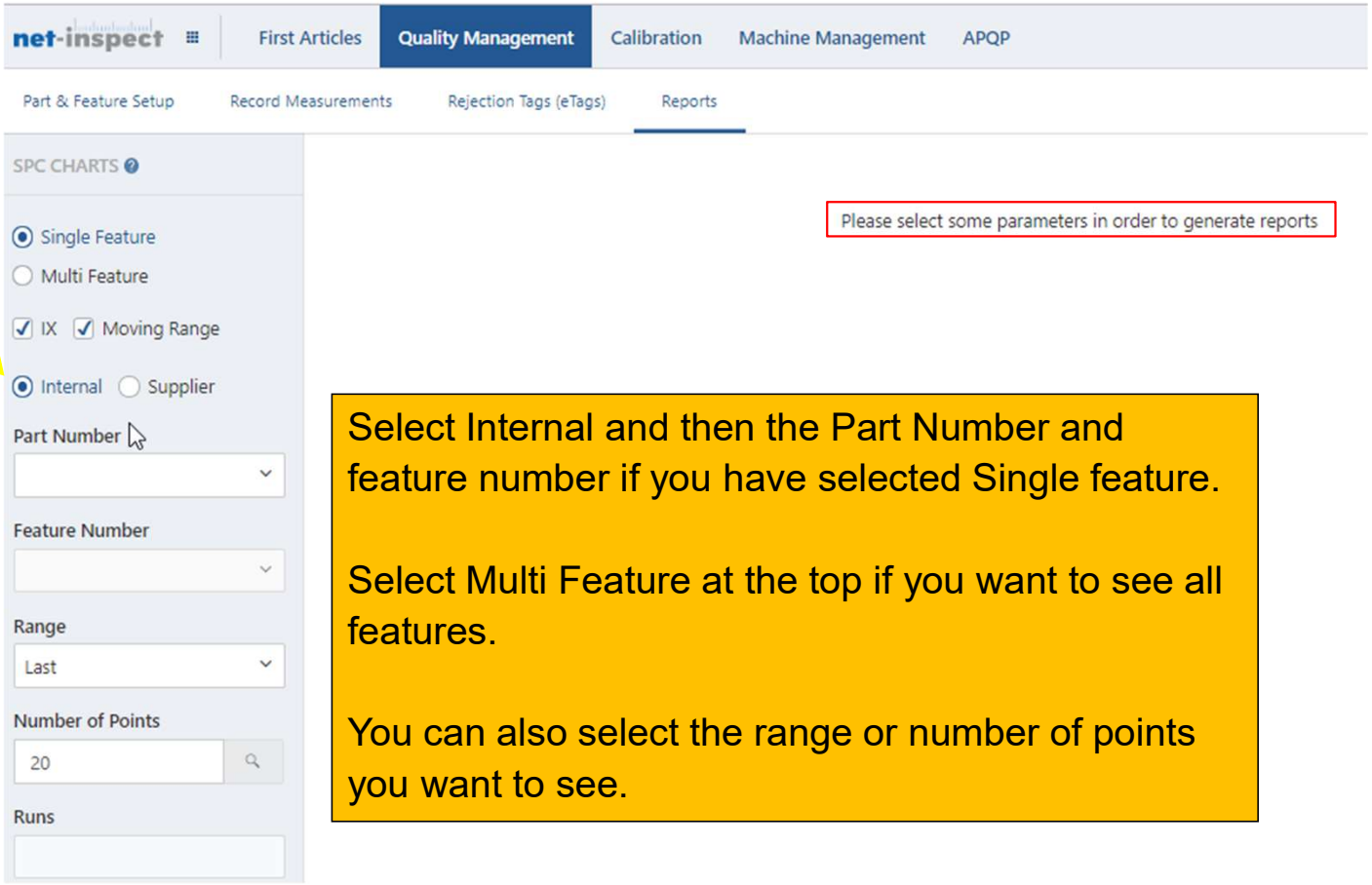
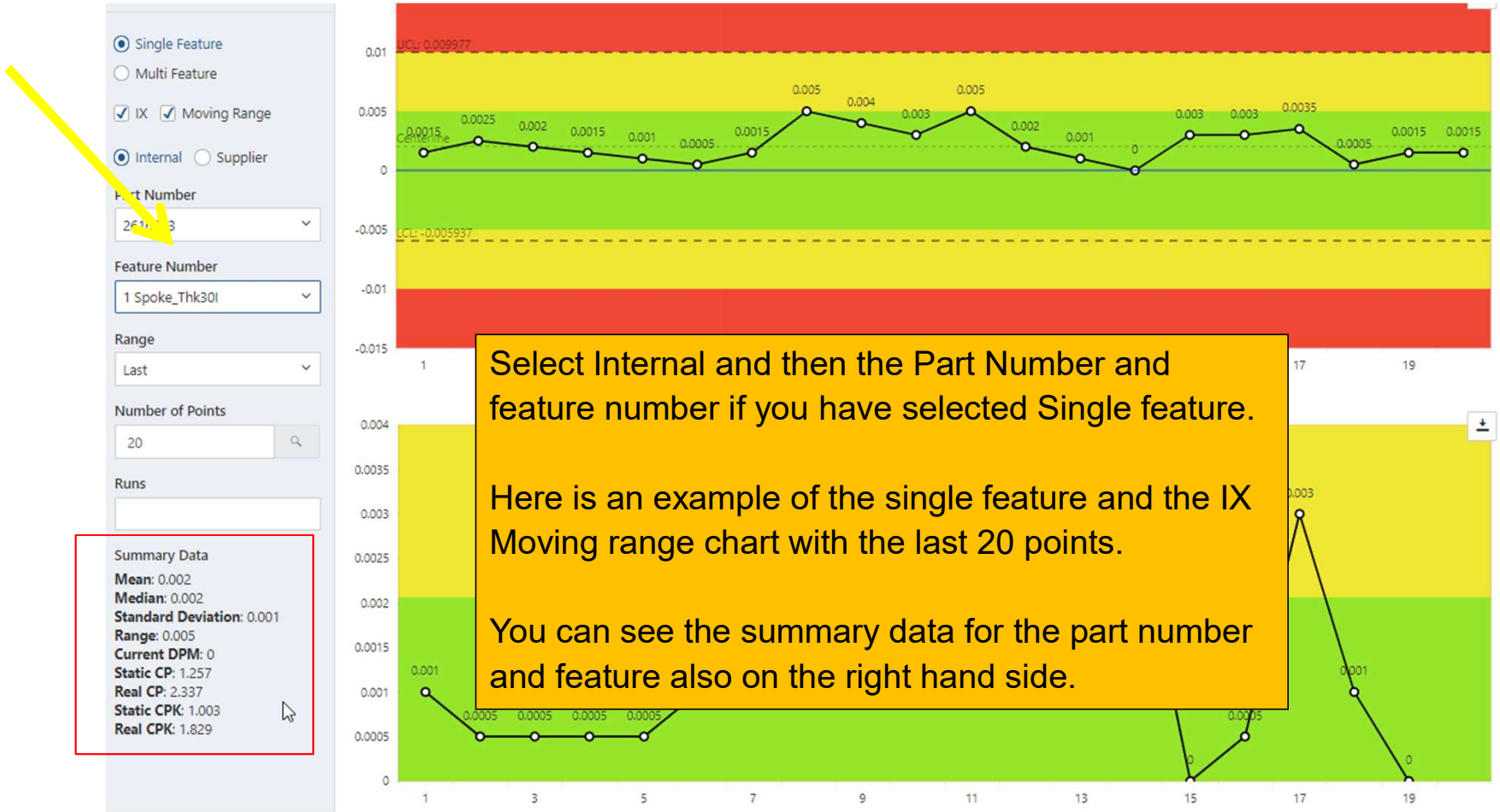


Select Internal and then the Part Number and feature number if you have selected Single feature.

Select Multi Feature at the top if you want to see all features.

You can also select the range or number of points you want to see.

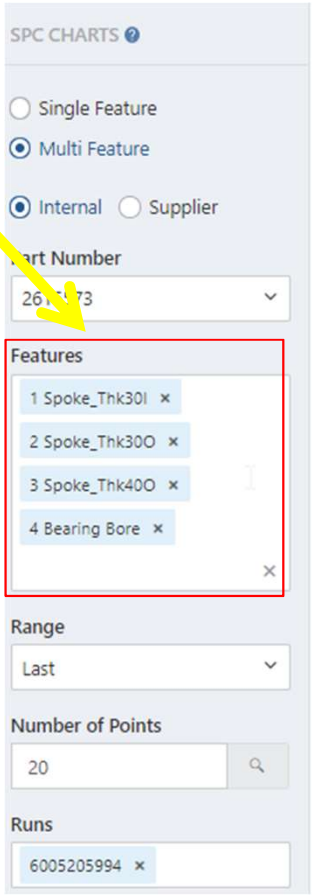
VIEW INTERNAL SPC DATA

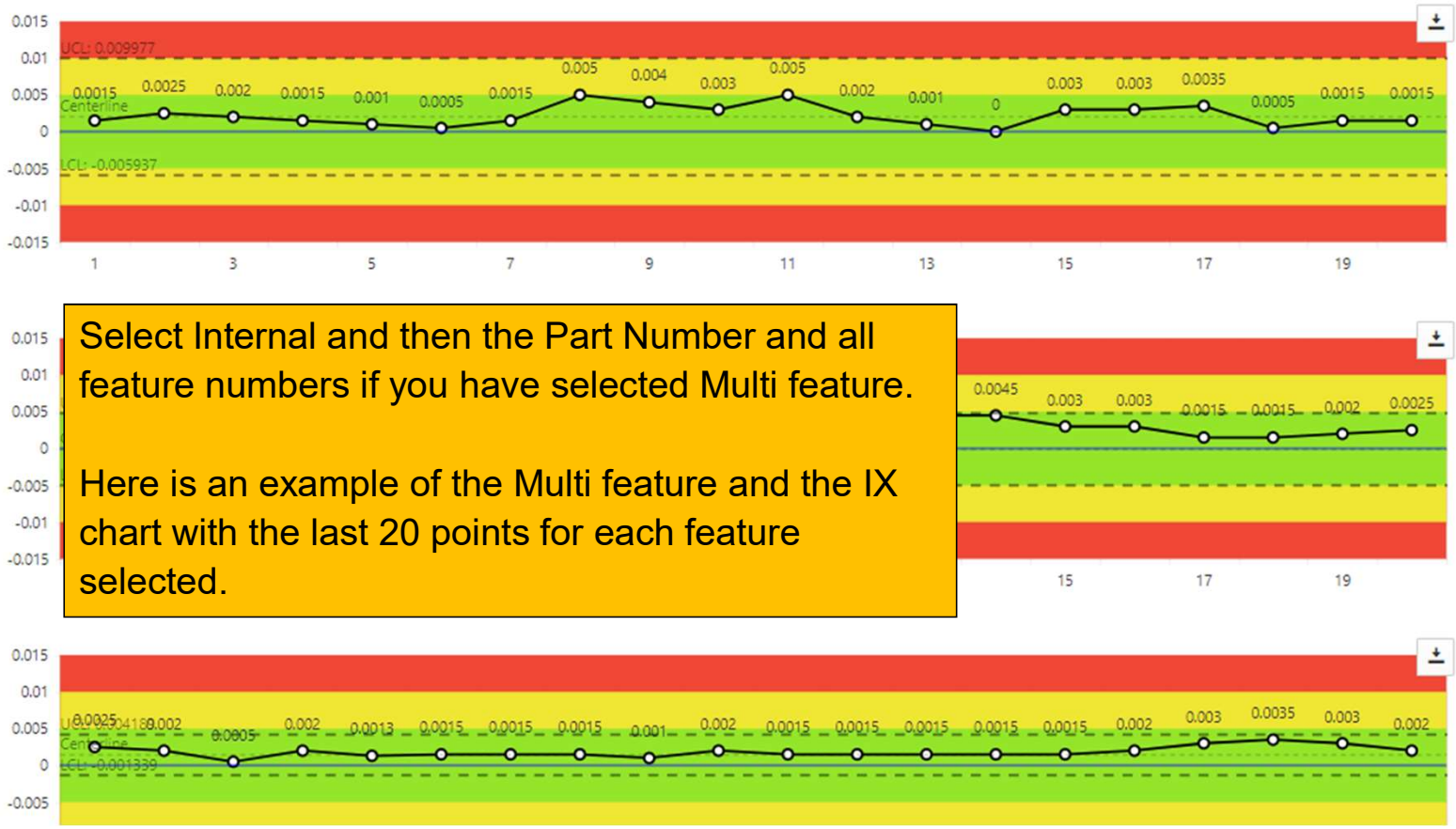


IX AND MOVING RANGE CHART

Click on a measurement point to see the details.

VIEW INTERNAL SPC DATA





Select Internal and then the Part Number and all feature numbers if you have selected Multi feature.

Here is an example of the Multi feature and the IX chart with the last 20 points for each feature selected.