Scrap Control
via Vorne XLv1 Entry Dashboard

This document assumes that you know how to configure the Vorne XLv1 boards.

Introduction

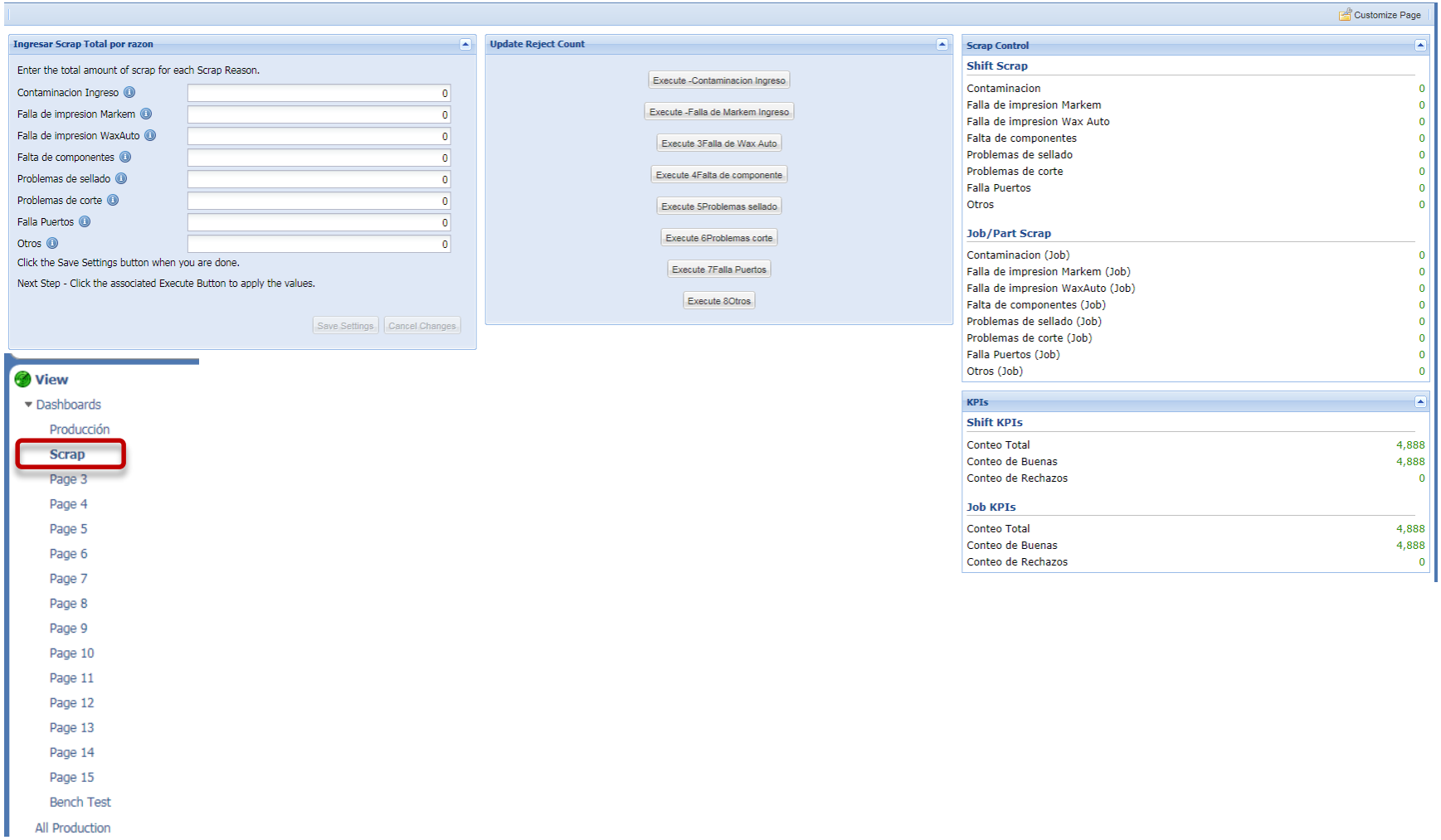
The user has requested the ability to enter amounts more than one for up to 8 reject reasons. They requested a ‘Scrap’ dashboard for operator entry.

- There are 8 User Numbers for each Shift (UN 1 – 8)
- There are 8 User Numbers for each Job (UN 11-18)
- These User Numbers are saved in the event of a power failure.
- Recommend to use UN 21-28 for the Scrap Input registers.
- Then execute the related Program for the Scrap number and it will do all the math to update the Reject Count for the Shift, Reject Count for the current Job and the associated UNs for the shift and job.
- Need to make sure that the Shift Start program resets the Shift UN.
- Need to make sure the ‘Job Start’ (whatever is used) program resets the Job UN.

Reject Reason UN Mapping

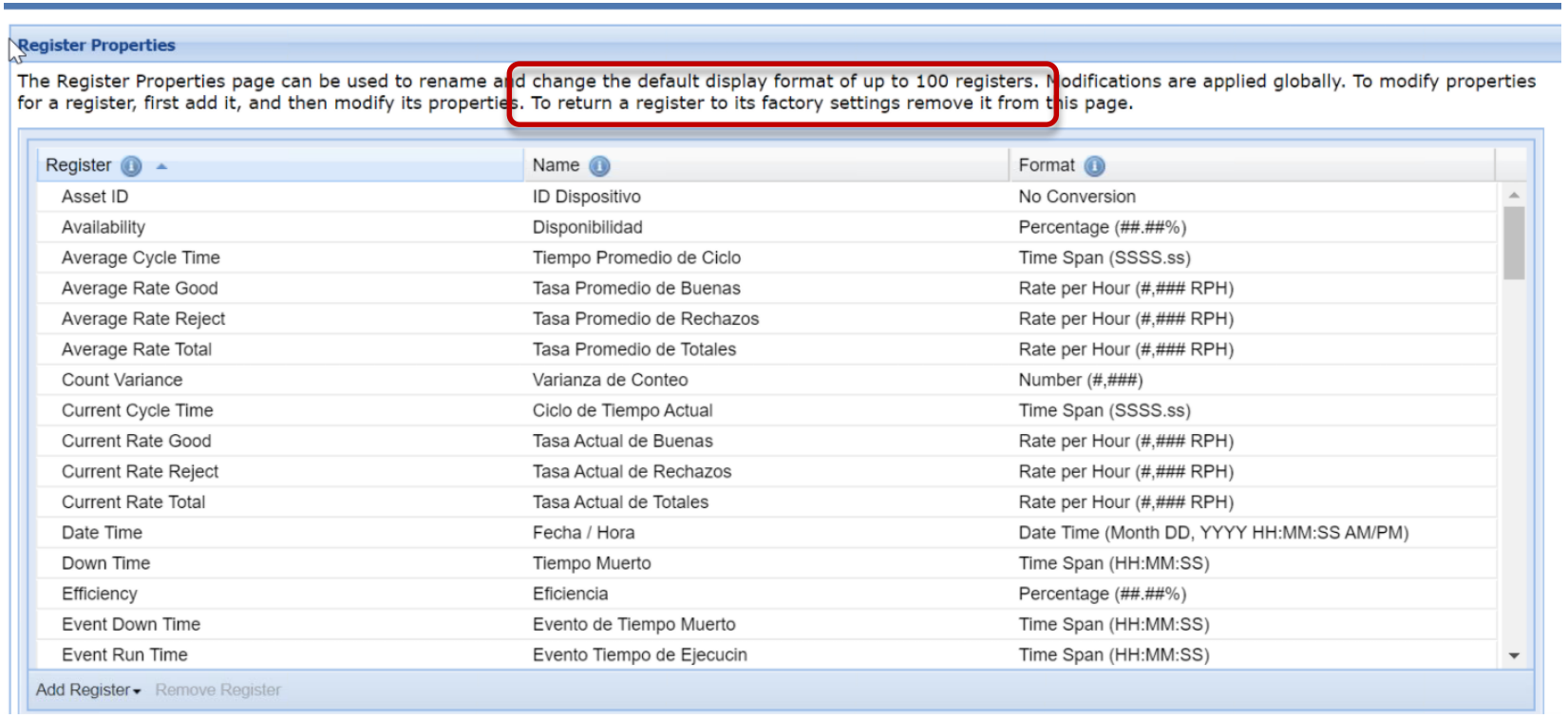
Reject Reason	User Number – Shift	User Number – Job	User Number – Value Entry
Reject Reason A	1	11	21
Reject Reason B	2	12	22
Reject Reason C	3	13	23
Reject Reason D	4	14	24
Reject Reason E	5	15	25
Reject Reason F	6	16	26
Reject Reason G	7	17	27
Reject Reason H	8	18	28

Scrap Dashboard



Step 1 – Update Register Properties

Because the register properties are being used to convert to Spanish, you will need to remove some of the registers that are not translated, such as Scale Factors and Timer Snapshots



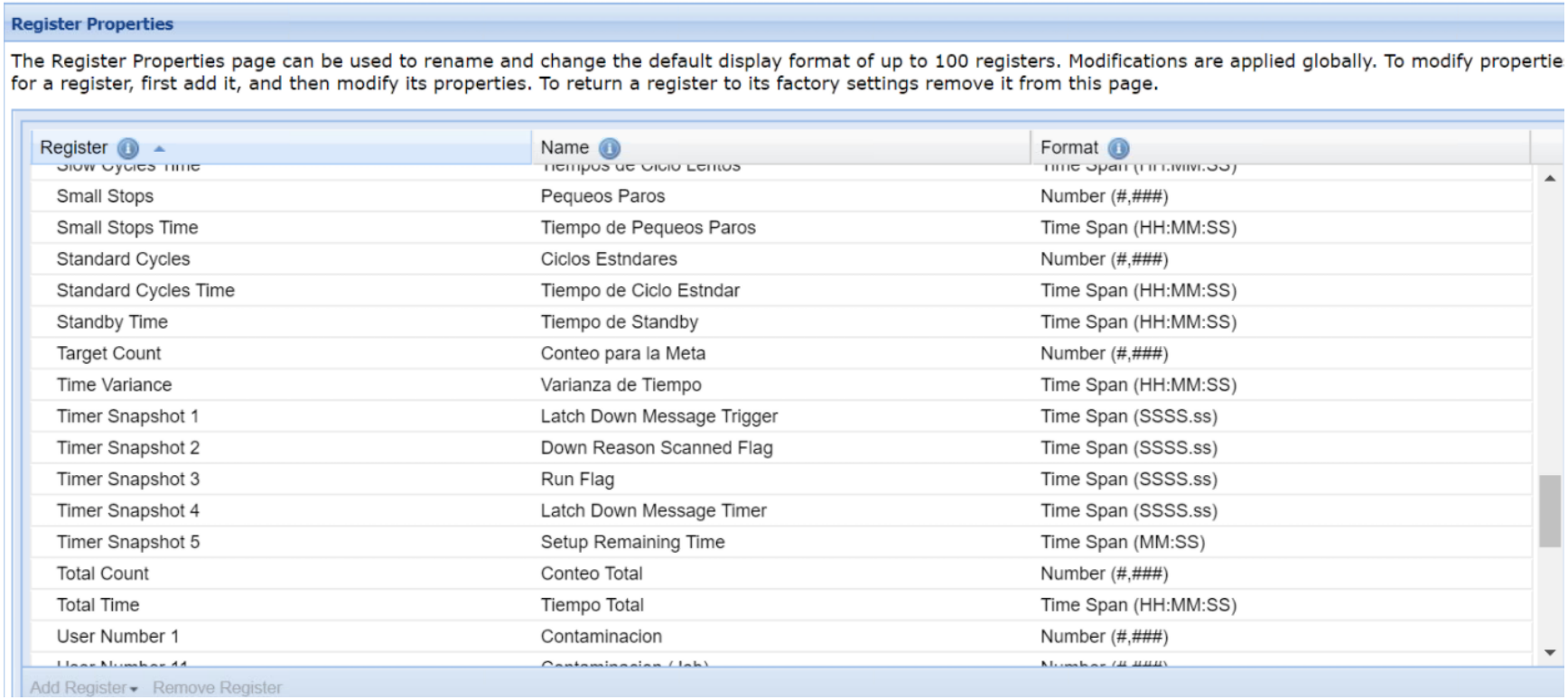
Register Properties

The Register Properties page can be used to rename and change the default display format of up to 100 registers. Modifications are applied globally. To modify properties for a register, first add it, and then modify its properties. To return a register to its factory settings remove it from this page.

Register	Name	Format
Asset ID	ID Dispositivo	No Conversion
Availability	Disponibilidad	Percentage (##.##%)
Average Cycle Time	Tiempo Promedio de Ciclo	Time Span (SSSS.ss)
Average Rate Good	Tasa Promedio de Buenas	Rate per Hour (#,### RPH)
Average Rate Reject	Tasa Promedio de Rechazos	Rate per Hour (#,### RPH)
Average Rate Total	Tasa Promedio de Totales	Rate per Hour (#,### RPH)
Count Variance	Varianza de Conteo	Number (#,###)
Current Cycle Time	Ciclo de Tiempo Actual	Time Span (SSSS.ss)
Current Rate Good	Tasa Actual de Buenas	Rate per Hour (#,### RPH)
Current Rate Reject	Tasa Actual de Rechazos	Rate per Hour (#,### RPH)
Current Rate Total	Tasa Actual de Totales	Rate per Hour (#,### RPH)
Date Time	Fecha / Hora	Date Time (Month DD, YYYY HH:MM:SS AM/PM)
Down Time	Tiempo Muerto	Time Span (HH:MM:SS)
Efficiency	Eficiencia	Percentage (##.##%)
Event Down Time	Evento de Tiempo Muerto	Time Span (HH:MM:SS)
Event Run Time	Evento Tiempo de Ejecucin	Time Span (HH:MM:SS)

Add Register ▾ Remove Register

Remove Timer Snapshots 3-5 and all of the Scale Factor registers.



Register Properties

The Register Properties page can be used to rename and change the default display format of up to 100 registers. Modifications are applied globally. To modify propertie for a register, first add it, and then modify its properties. To return a register to its factory settings remove it from this page.

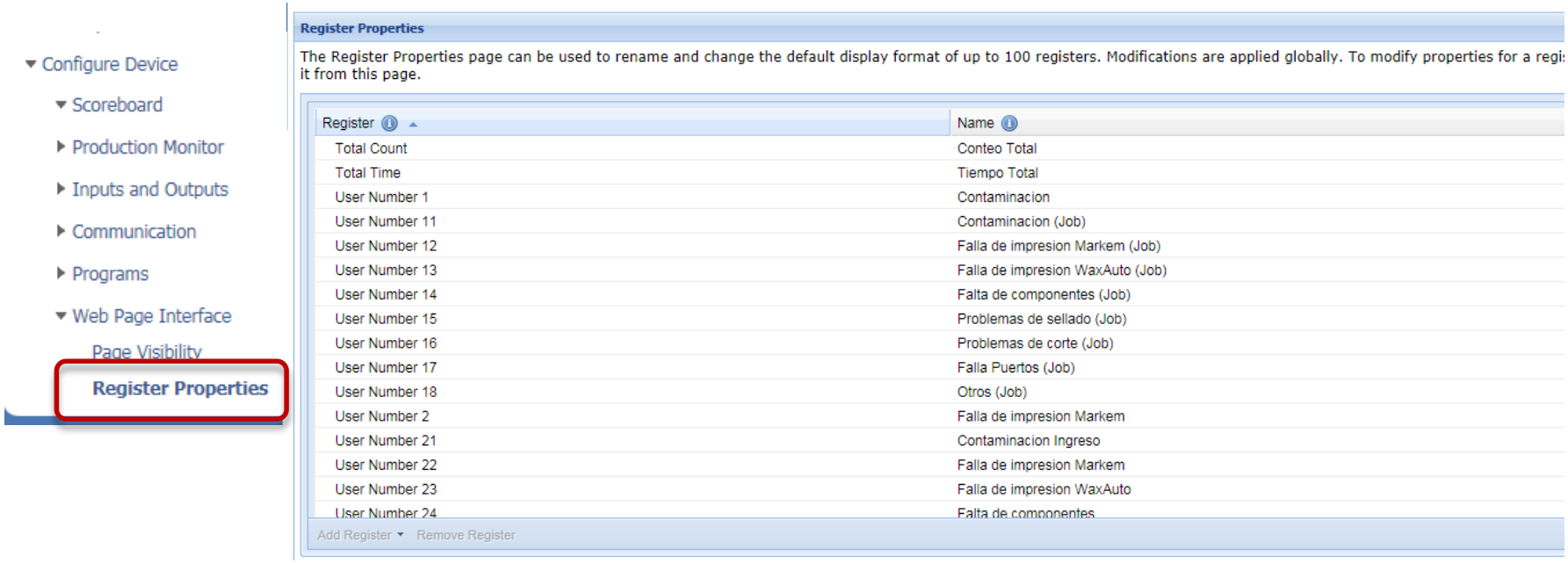
Register	Name	Format
Small Stops	Pequeos Paros	Number (#,###)
Small Stops Time	Tiempo de Pequeos Paros	Time Span (HH:MM:SS)
Standard Cycles	Ciclos Estndares	Number (#,###)
Standard Cycles Time	Tiempo de Ciclo Estndar	Time Span (HH:MM:SS)
Standby Time	Tiempo de Standby	Time Span (HH:MM:SS)
Target Count	Conteo para la Meta	Number (#,###)
Time Variance	Varianza de Tiempo	Time Span (HH:MM:SS)
Timer Snapshot 1	Latch Down Message Trigger	Time Span (SSSS.ss)
Timer Snapshot 2	Down Reason Scanned Flag	Time Span (SSSS.ss)
Timer Snapshot 3	Run Flag	Time Span (SSSS.ss)
Timer Snapshot 4	Latch Down Message Timer	Time Span (SSSS.ss)
Timer Snapshot 5	Setup Remaining Time	Time Span (MM:SS)
Total Count	Conteo Total	Number (#,###)
Total Time	Tiempo Total	Time Span (HH:MM:SS)
User Number 1	Contaminacion	Number (#,###)

Add Register ▾ Remove Register

Step 1 – Update Register Properties

First check to see if the scrap reasons have been mapped in the Register Properties page. If not, then you will need to add them using the Add Register.

If the Add Register option is grayed out, you will need to remove some other register properties.

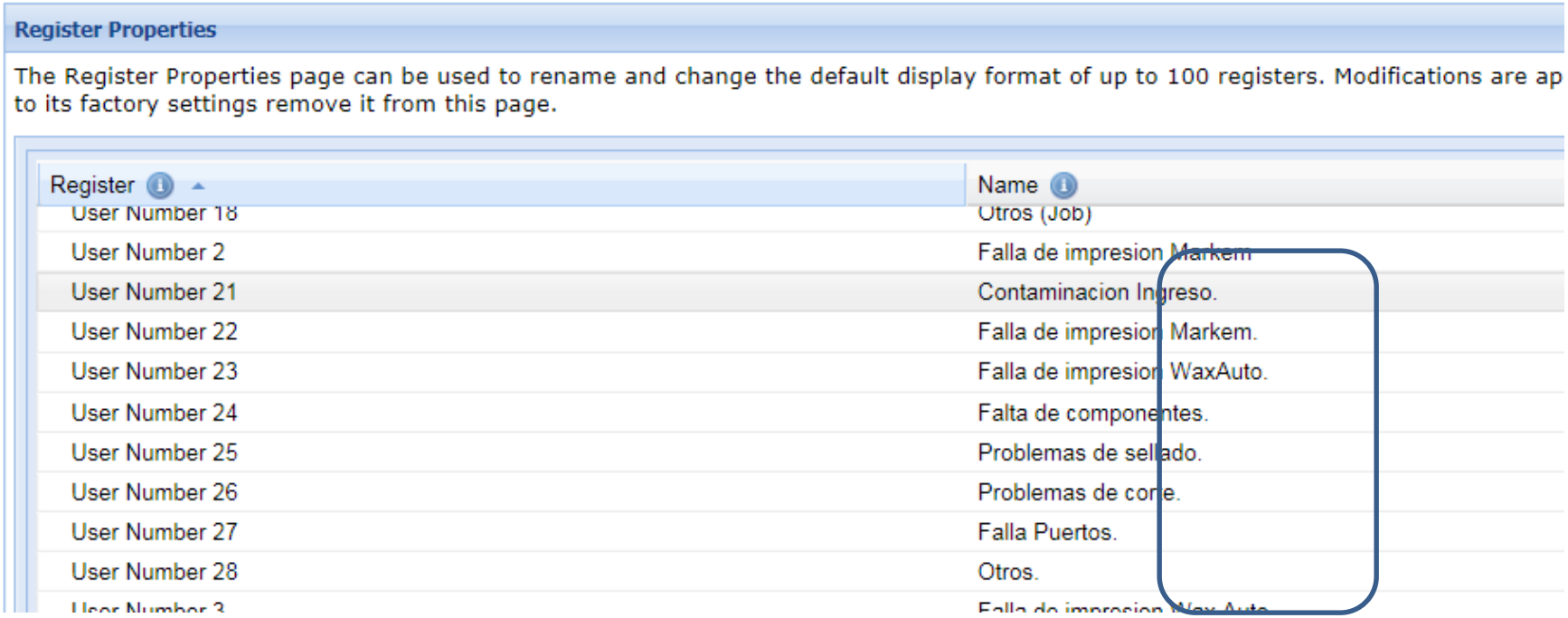


Add User Numbers 21 - 28

These User Numbers will match the associated Shift and Job/Part User Numbers.

It is recommended that you include a period symbol at the end of each name to make them unique.

Click the Save button when you are finished.

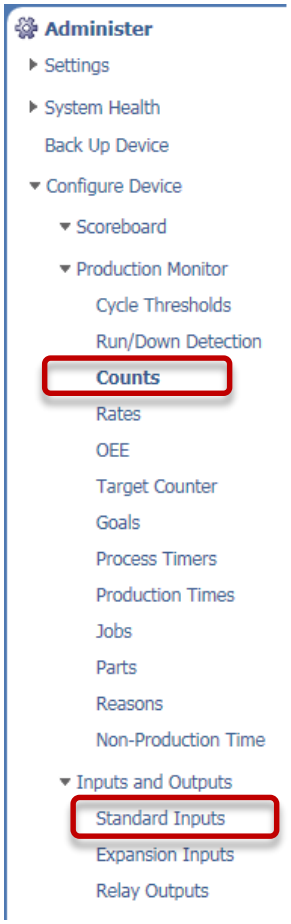


Step 2 – Create the Scrap Programs

- You will need to create a program for each of your scrap reasons.
- It is optional if you don’t want to update the Reject Counter. You may just want to capture scrap that does not affect producing a part.

Check the Inputs and Counts

The Scrap Programs will be updating the Reject Counter so we need to make sure that the device is not already doing that. In this instance there is only one sensor for Total Count.



The Counts module tracks production output in terms of total, good and reject counts. Production counters are typically driven by digital inputs, which are configured in the **Administer** | **Configure Device** | **Inputs and Outputs** | **Standard Inputs** page.

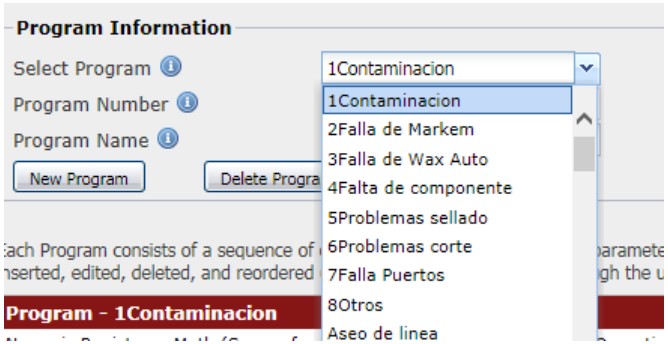
Calculated Counter
Good Count

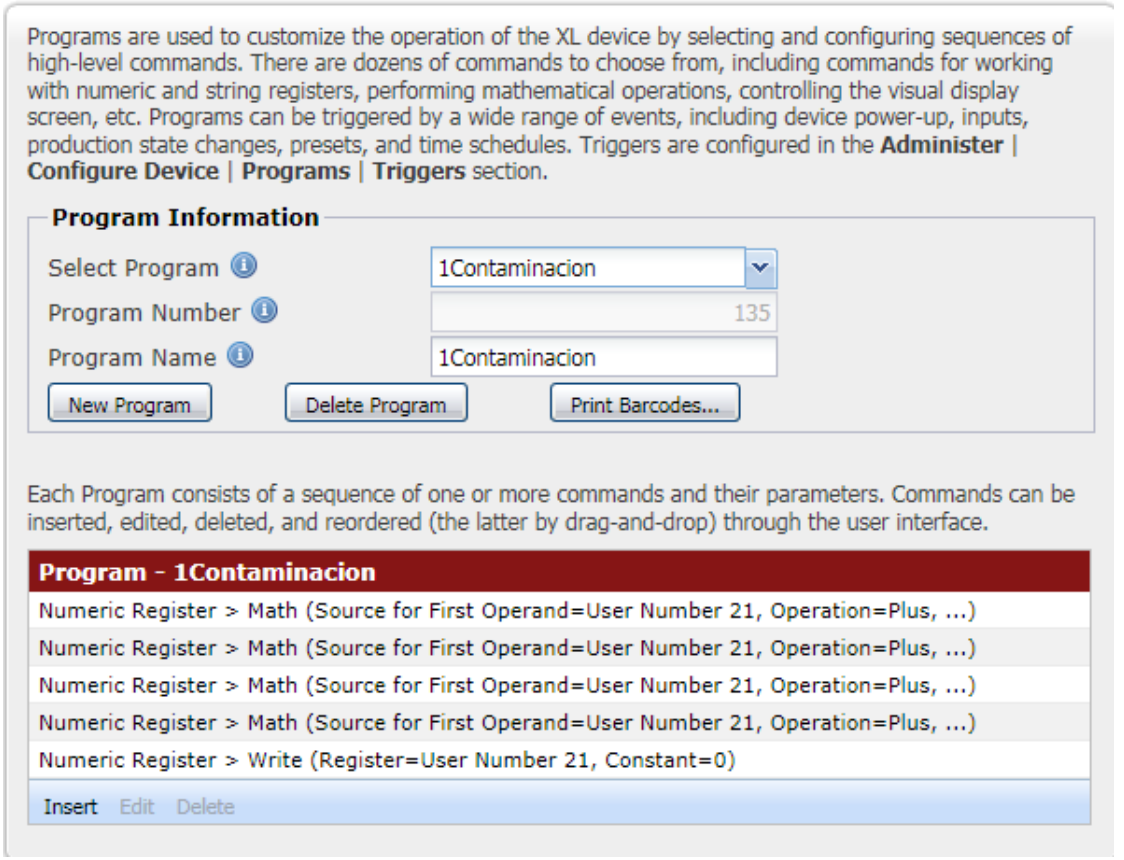
Standard Inputs are discrete (digital) inputs that are included with every XL device. They can be used to drive production counters or to trigger programs for execution. Programs are created in the **Administer** | **Configure Device** | **Programs** | **Programs** page and enable you to tailor the operation of XL to your specific application. The primary function of each input can be configured as desired; however for correct OEE Performance calculations, Input 1 must be configured as 'Count Up (Total)'.

Input	Logic Level	Primary Function	Execute on Active	Execute on Inactive	Debounce	Inhibit
1	Standard	Count Up (Total)	None	None	Low Speed (up to 50 inputs/sec.)	8.50
2	Standard	Count Up (Good)	None	None	Low Speed (up to 50 inputs/sec.)	0.00
3	Standard	Execute Program	State: Set Setup	State: Set Auto Run	Low Speed (up to 50 inputs/sec.)	0.00
4	Standard	Execute Program	State: Set Standby	State: Set Auto Run	Low Speed (up to 50 inputs/sec.)	0.00
5	Standard	Input Not Used	None	None	Low Speed (up to 50 inputs/sec.)	0.00
6	Standard	Execute Program	Reset: Master	None	Low Speed (up to 50 inputs/sec.)	0.00
7	Standard	Input Not Used	None	None	Low Speed (up to 50 inputs/sec.)	0.00
8	Standard	Input Not Used	None	None	Low Speed (up to 50 inputs/sec.)	0.00

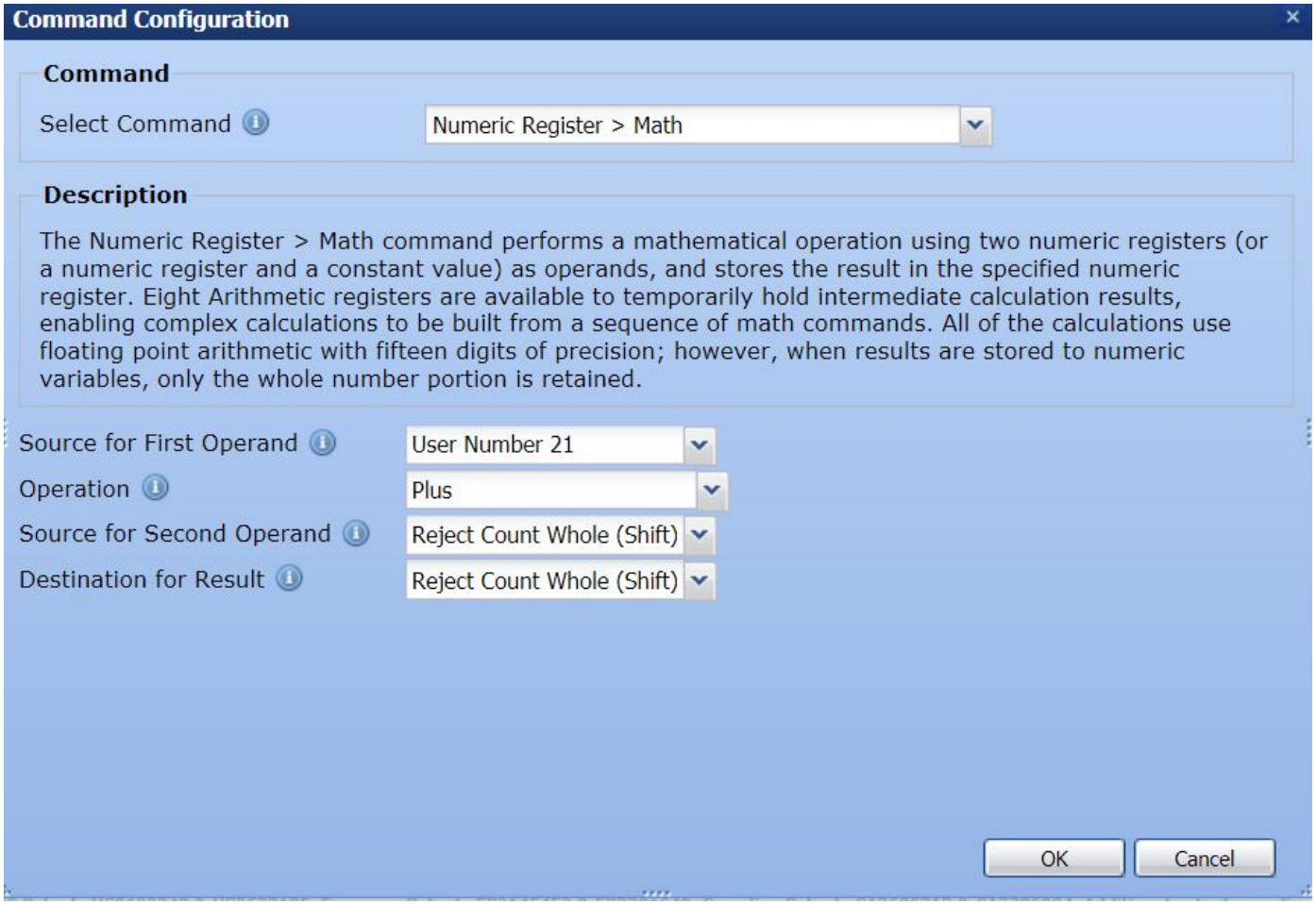
Scrap Programs – 1 for each scrap type

Recommendation is to put a number followed by the scrap reason following the number mapping.

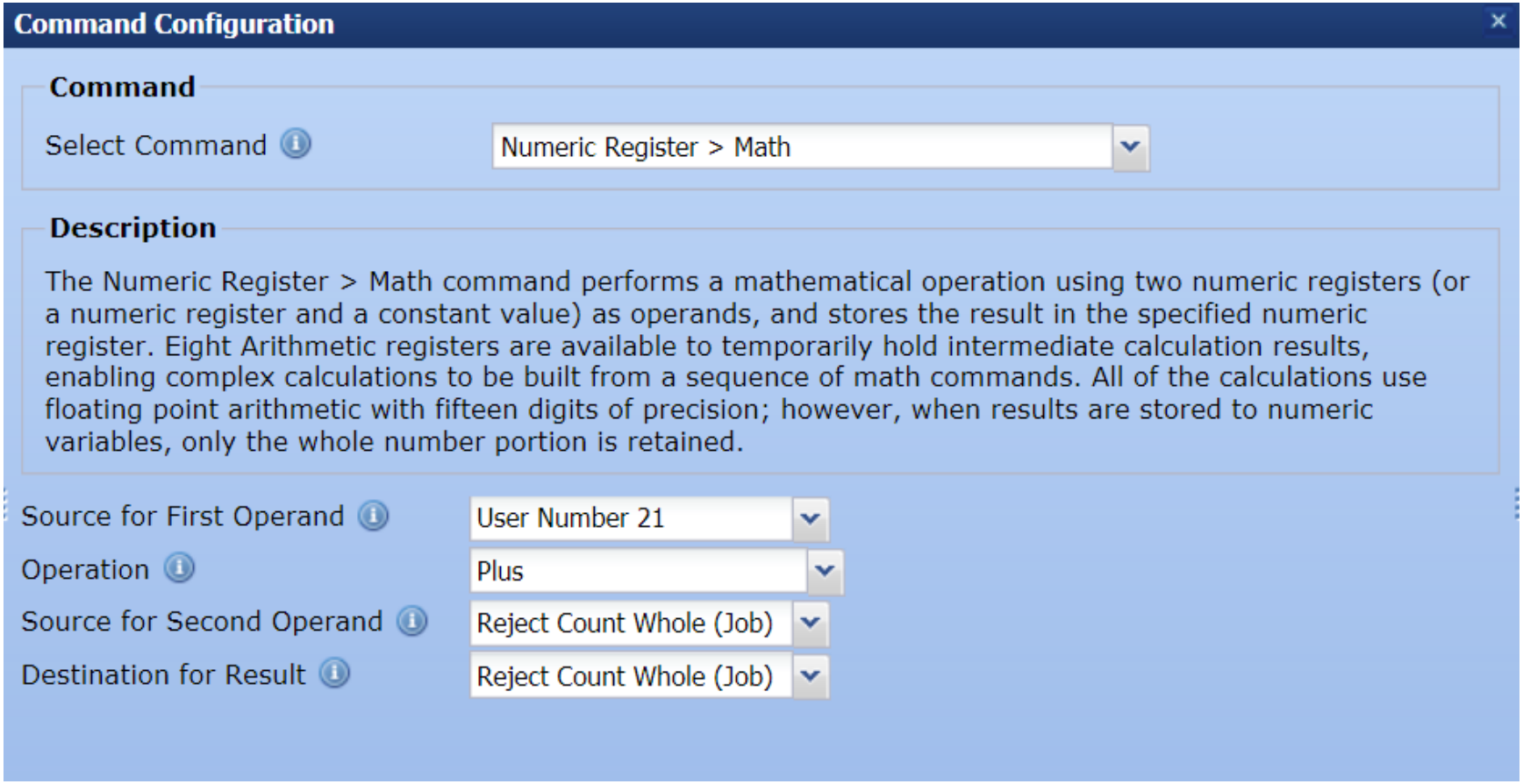




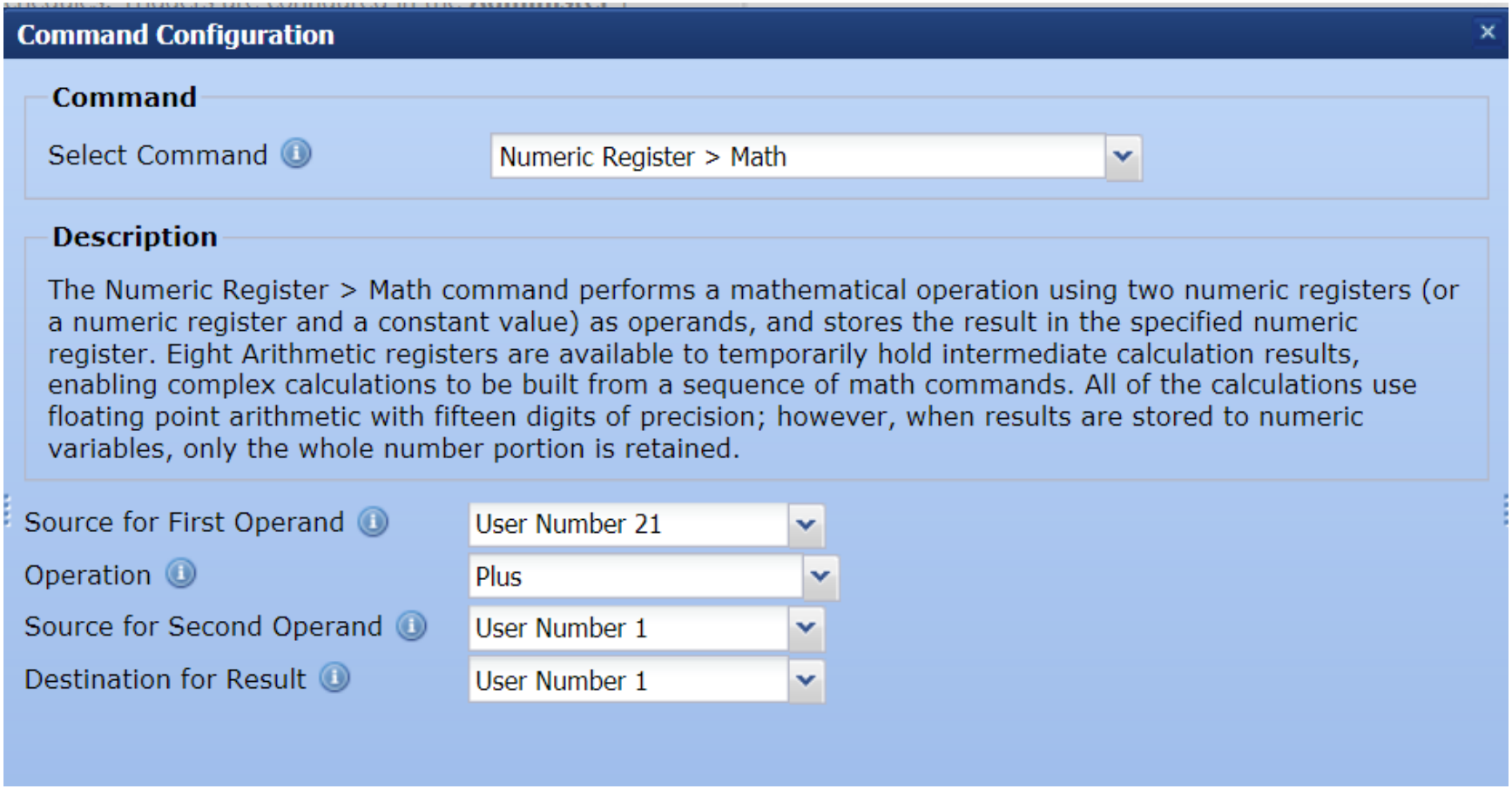
Command 1 – Add value in UN 21 to the Reject Count Whole for the Shift.



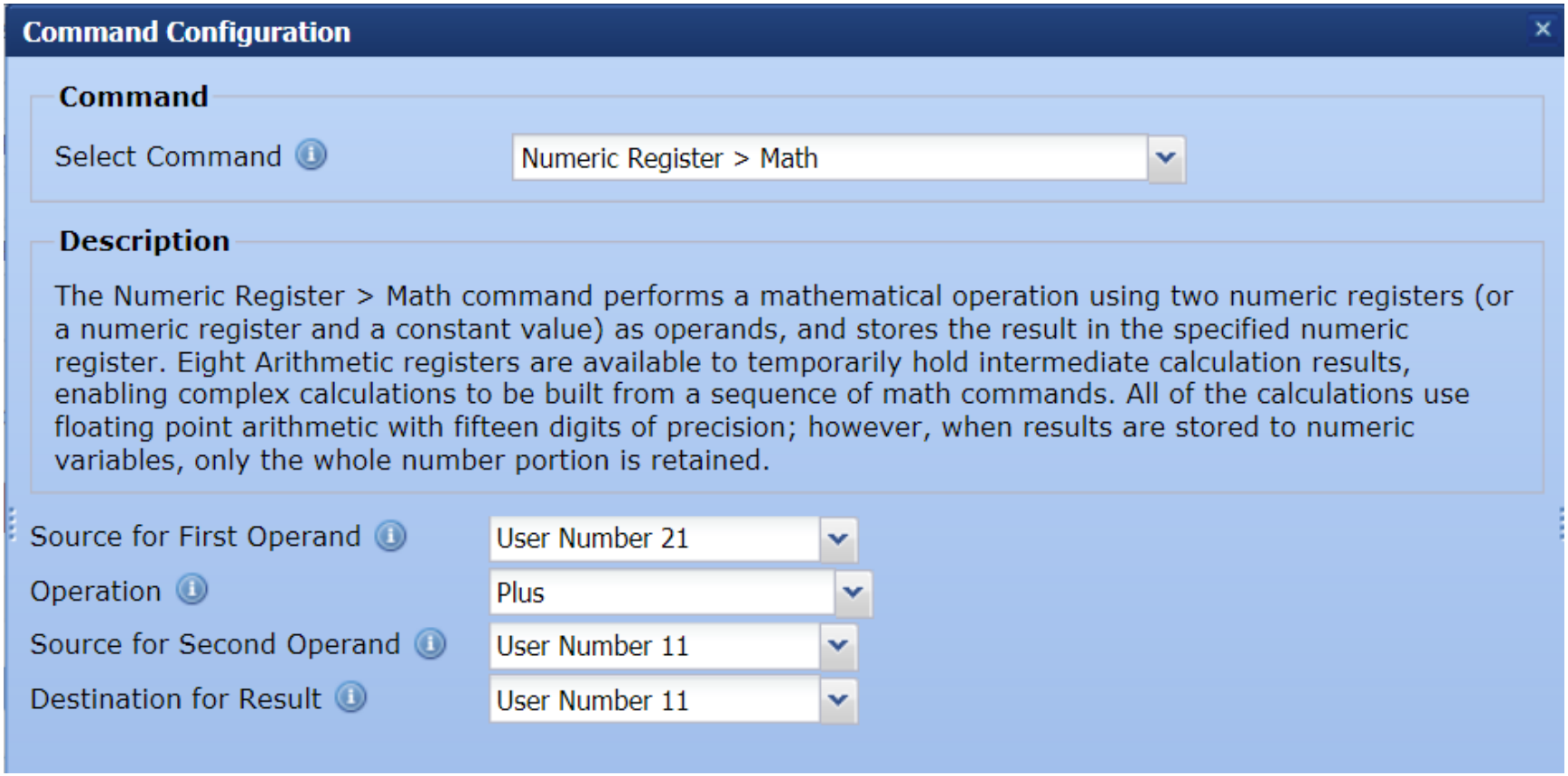
Command 2 – Add the value in UN 21 to the Reject Count Whole for the Job.



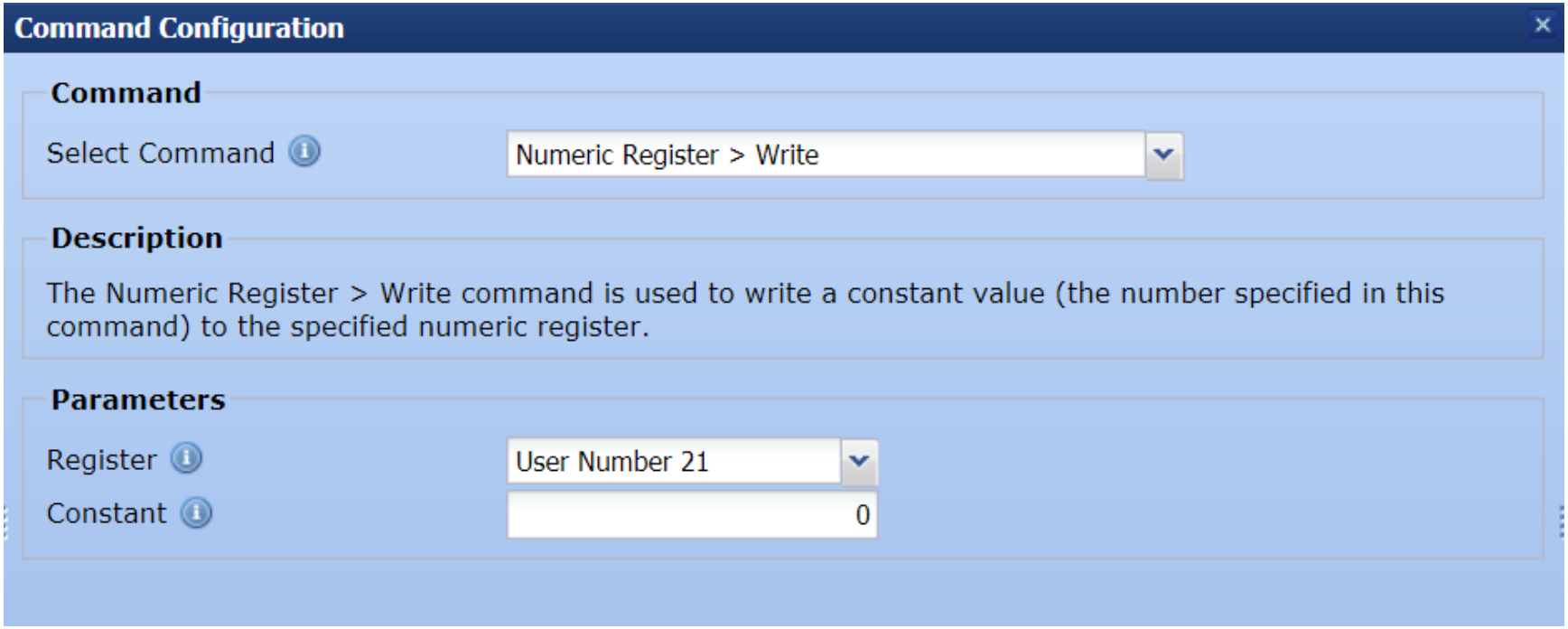
Command 3 – Add the value in UN 21 to UN 1 (reject reason for the shift)



Command 4 – Add the value in UN 21 to UN 11 (reject reason for the job)

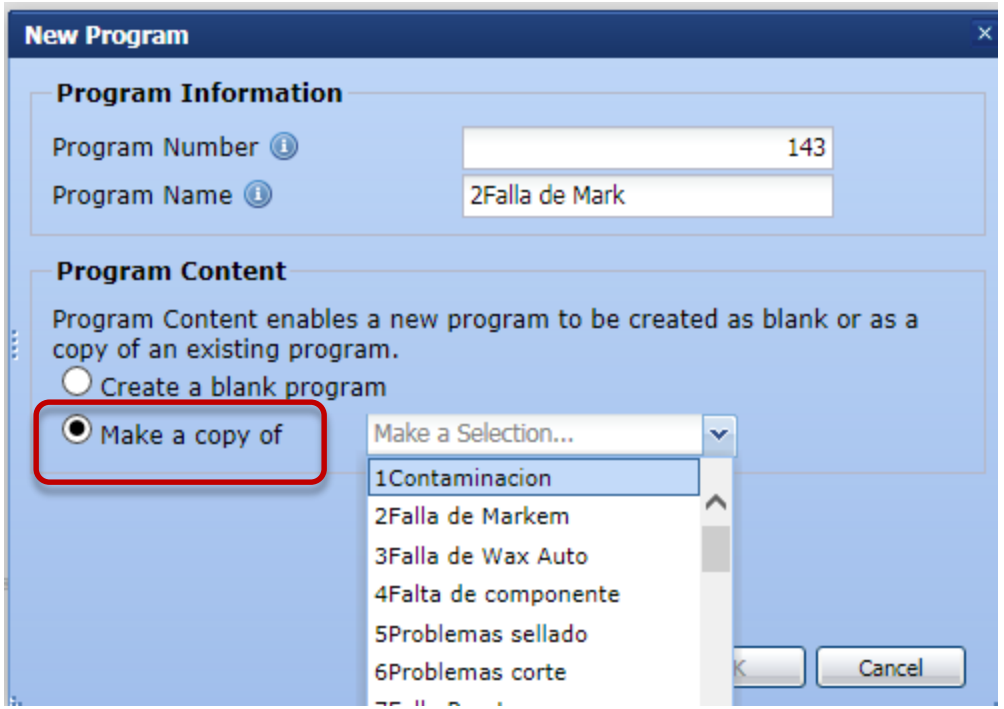


Command 5 – Zero the value in UN 21

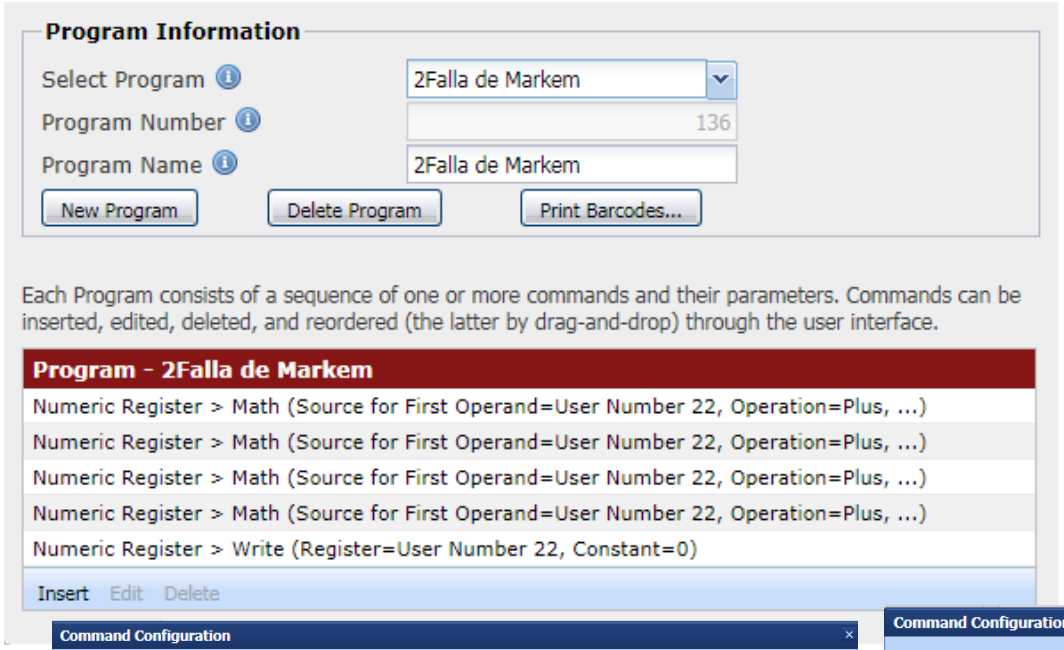


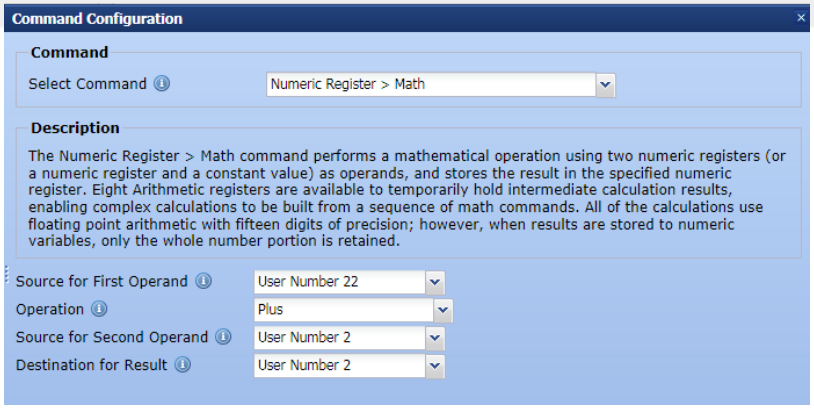
Continue creating the remaining Scrap Programs

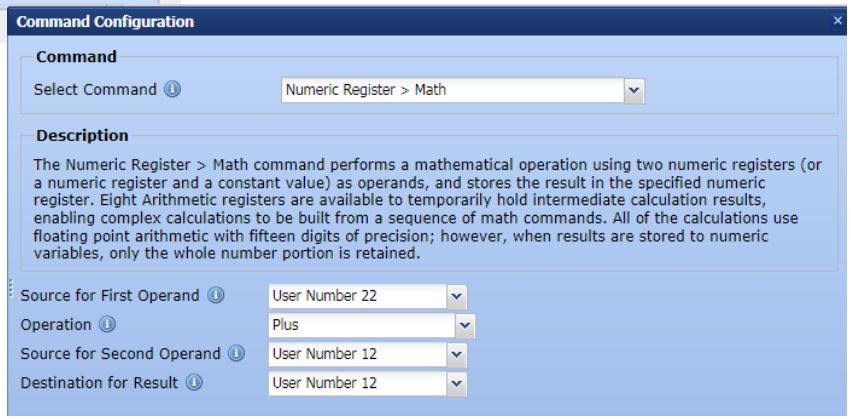
To make the next program, copy the first one and so on.



This shows the mapping using UN 22, UN 2 and UN 12

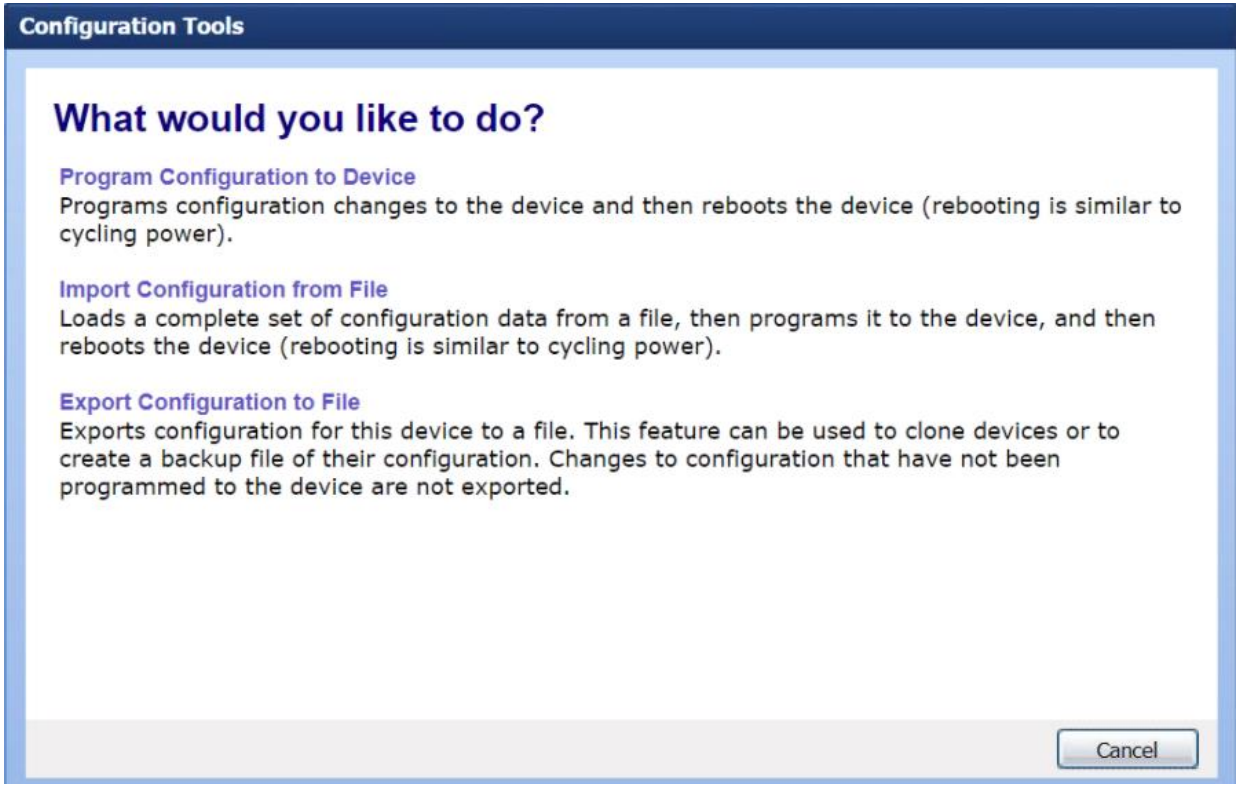






Step 3 – Program Configuration to Device

After making the New Programs you must program configure to the device.

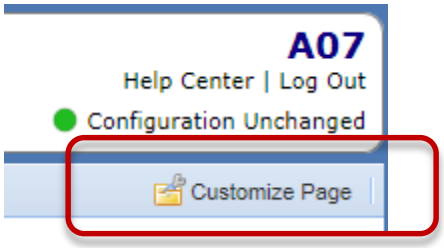


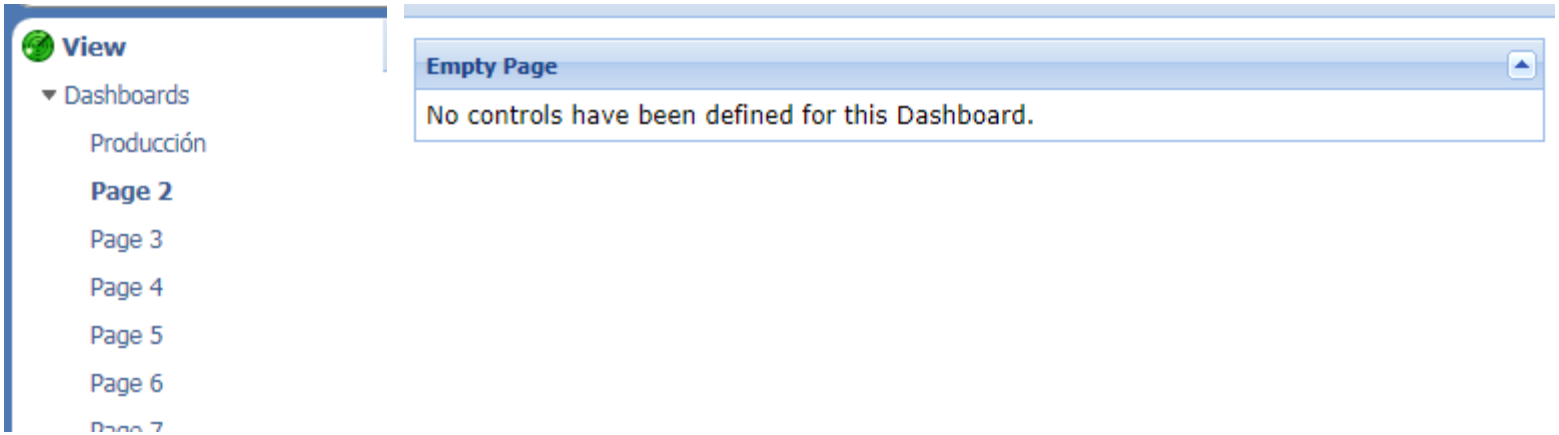
Step 4 – Create the Dashboard

- The Scrap Dashboard will consist of the following:
  - User Entry Control
  - Update Reject Count Control – Program Execution buttons
  - Scrap Control view of the Shift and Job/Part Scrap reasons
  - Simple Shift and Job KPI Control

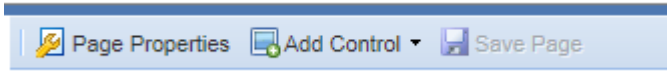
Expand Dashboards and click on Page 2 or the next available Page

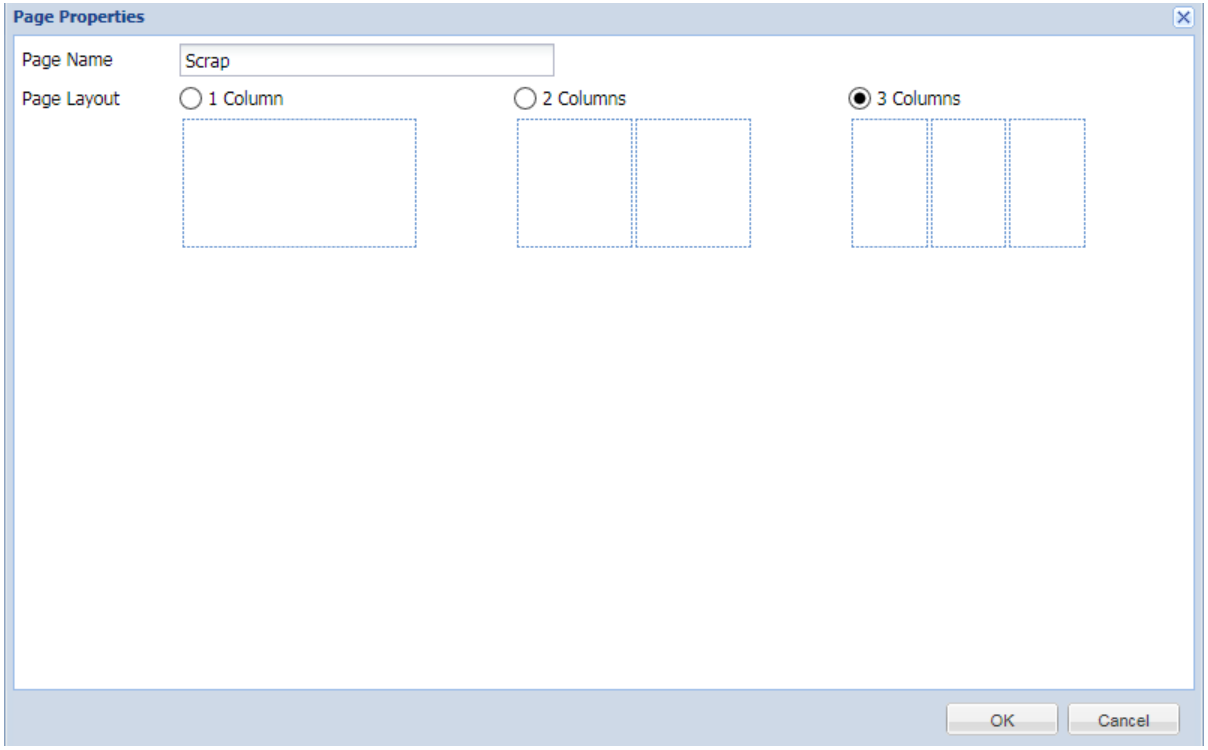
Click on **Customize Page** to start building the Dashboard >>





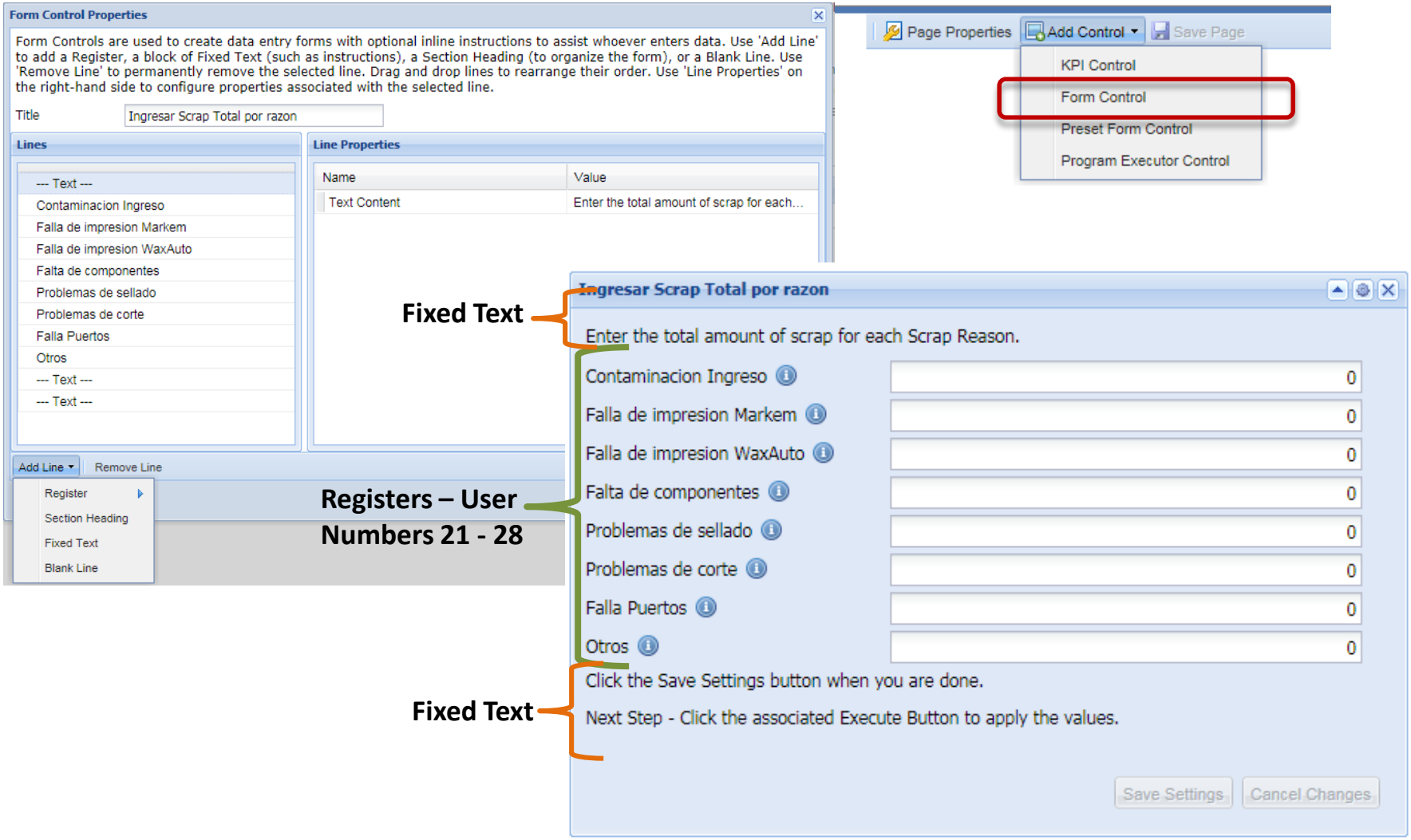
Configure Page Properties



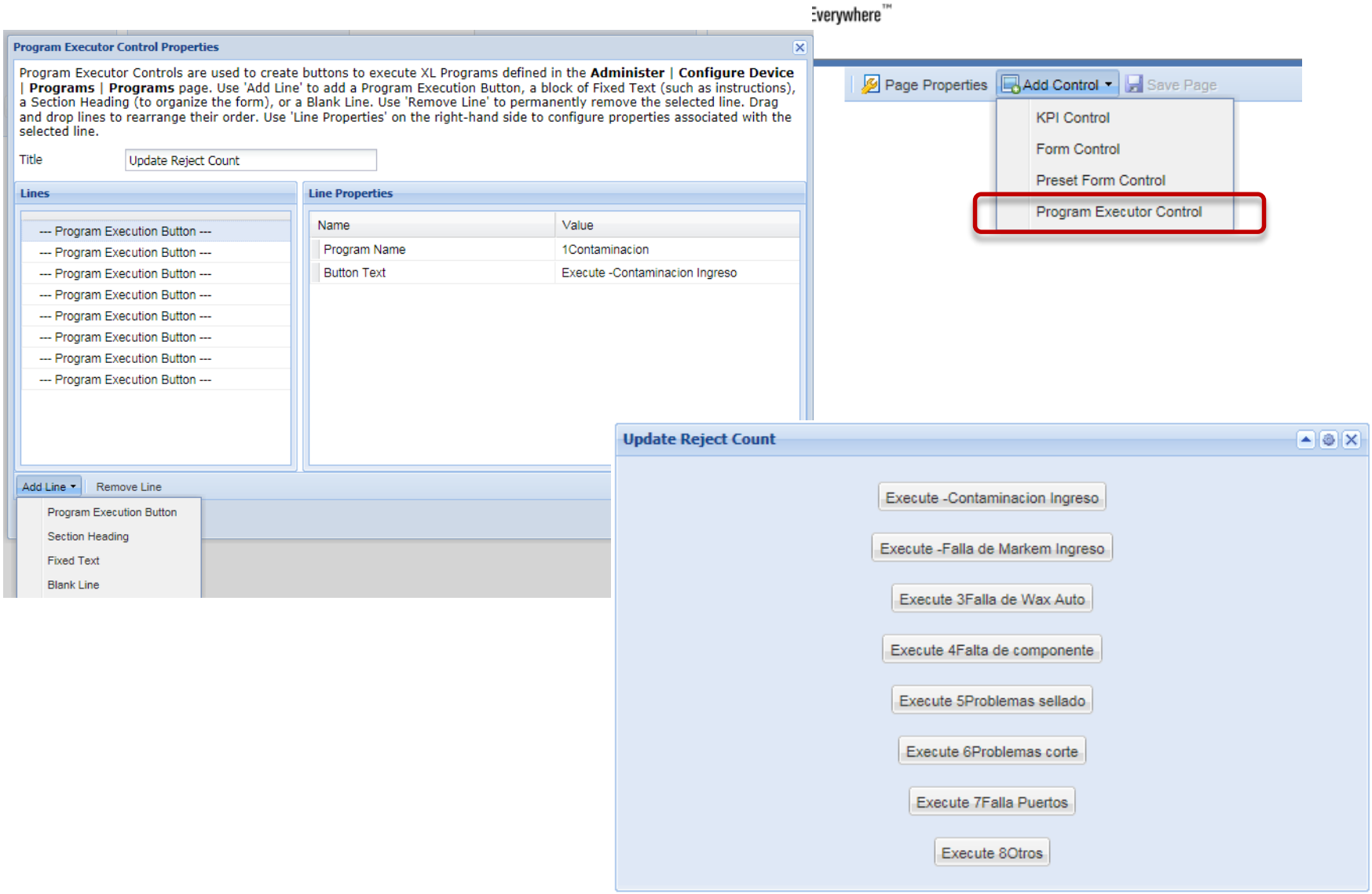


Add Control – Form Control

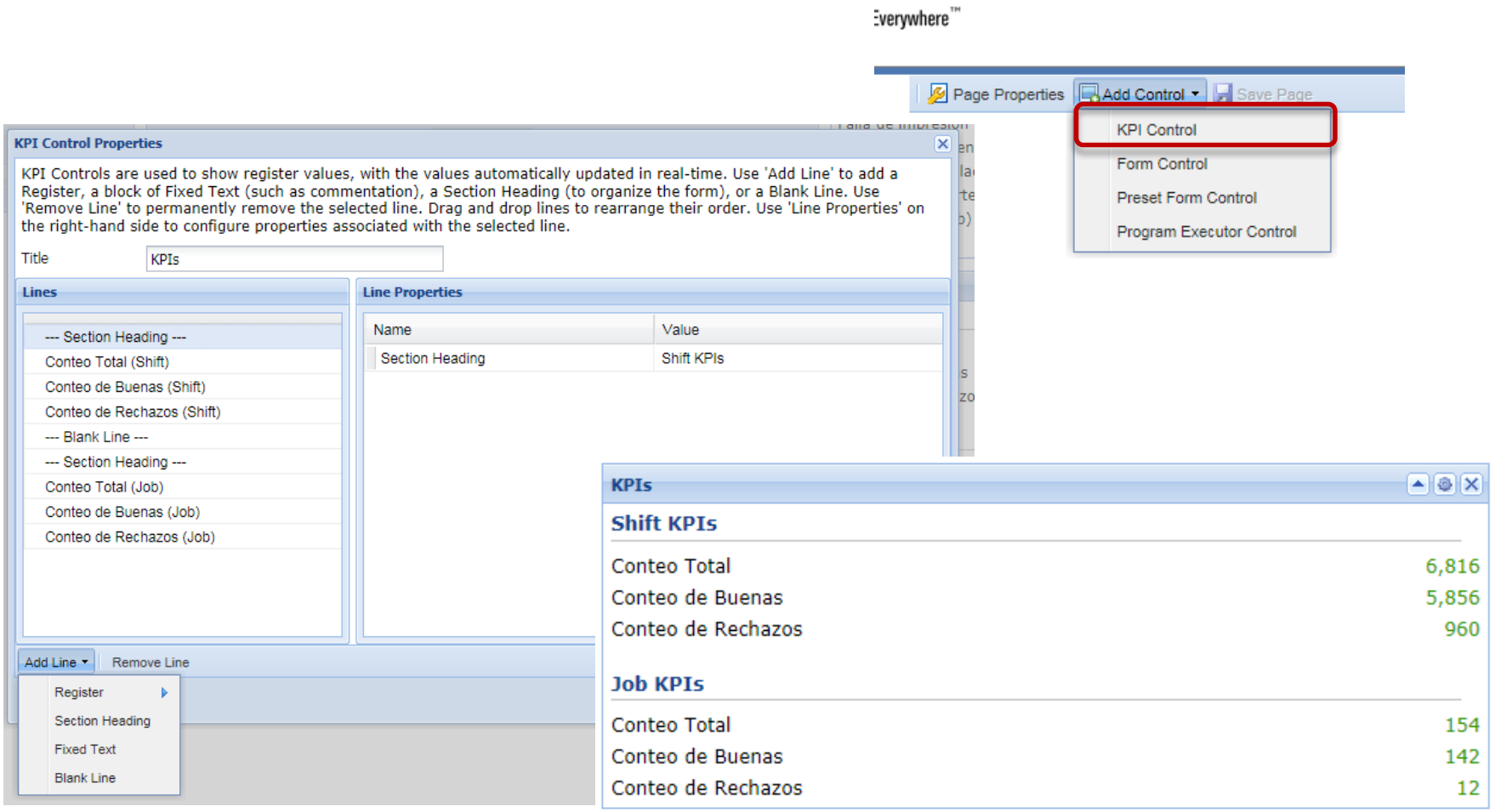
Everywhere™ Create the Scrap Entry Control



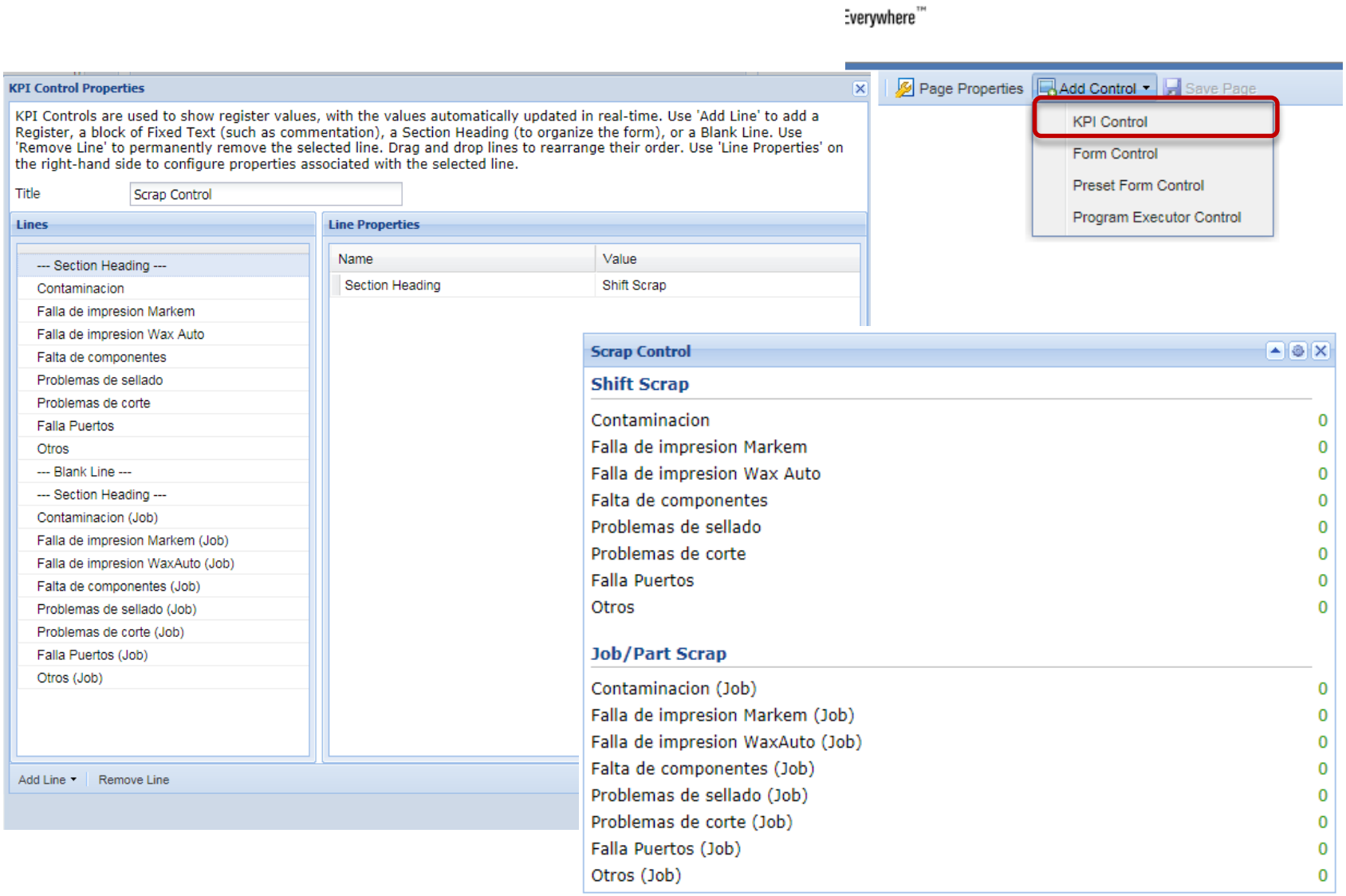
Add Control – Program Executor



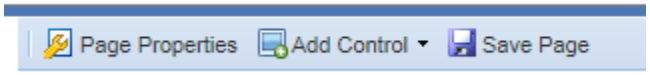
Add Control – KPI Control

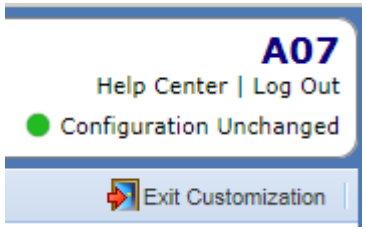


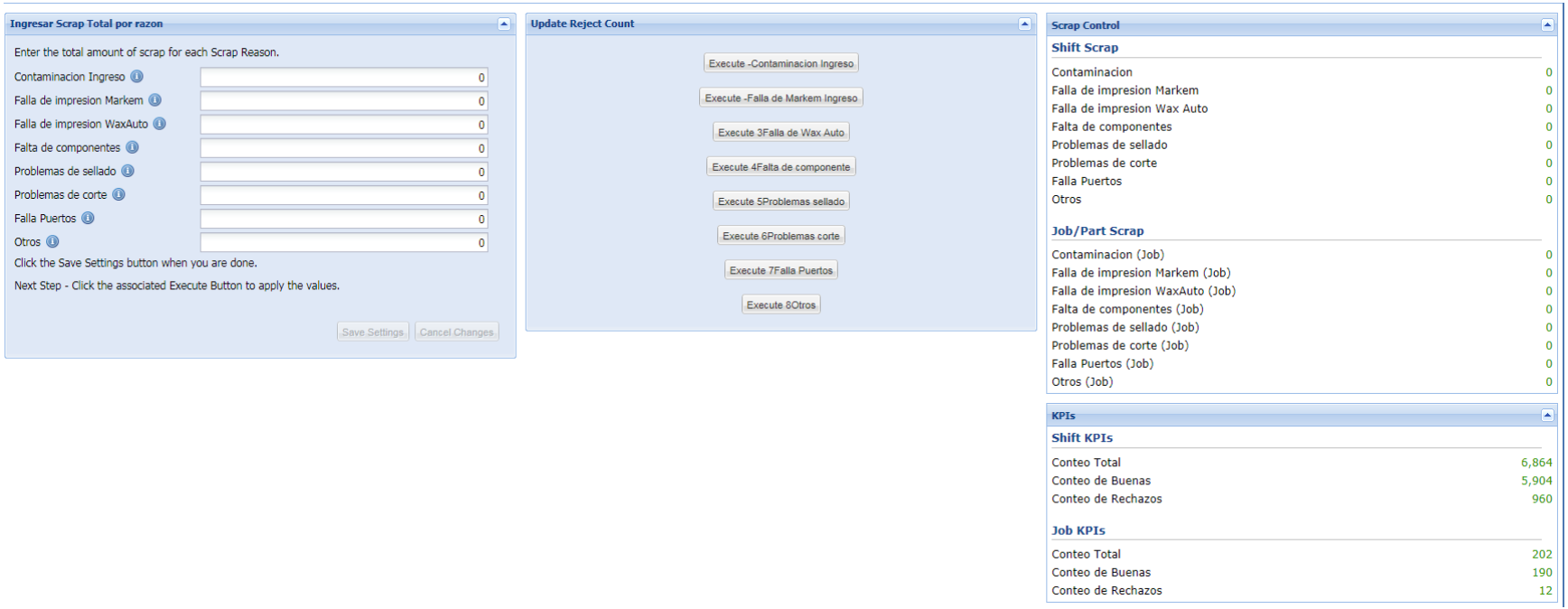
Add Control – KPI Control



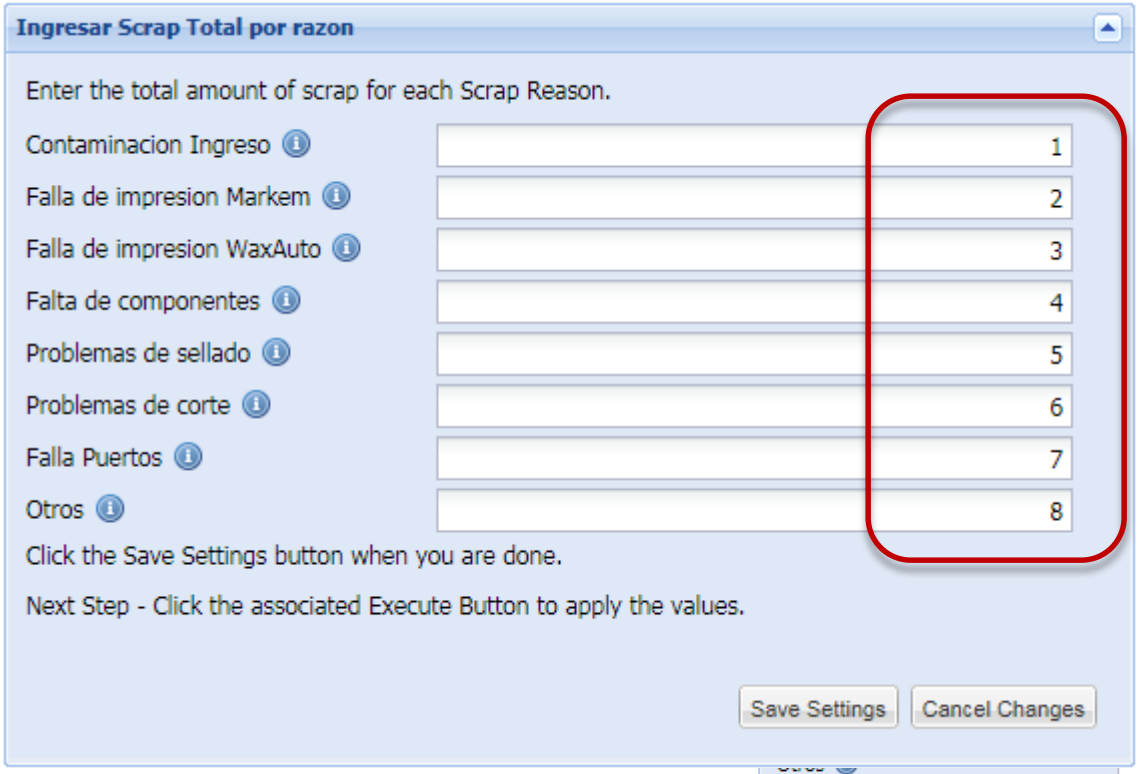
Save the Page and Exit!

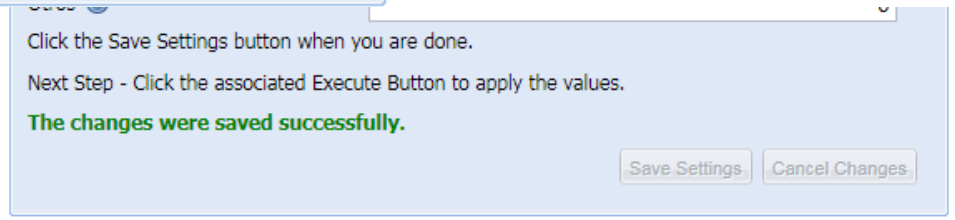




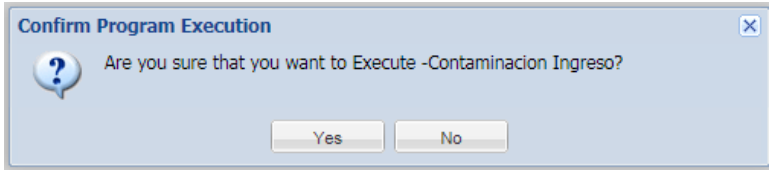


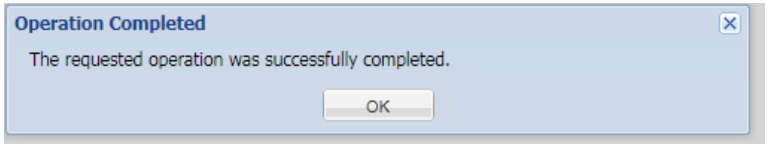
Dashboard with values in Reject Entry fields. Click Save Settings.





The associated Execute buttons need to be pressed.





Values are now updated.

Refresh the screen to see that the entry values are zero.

Ingresar Scrap Total por razon

Enter the total amount of scrap for each Scrap Reason.

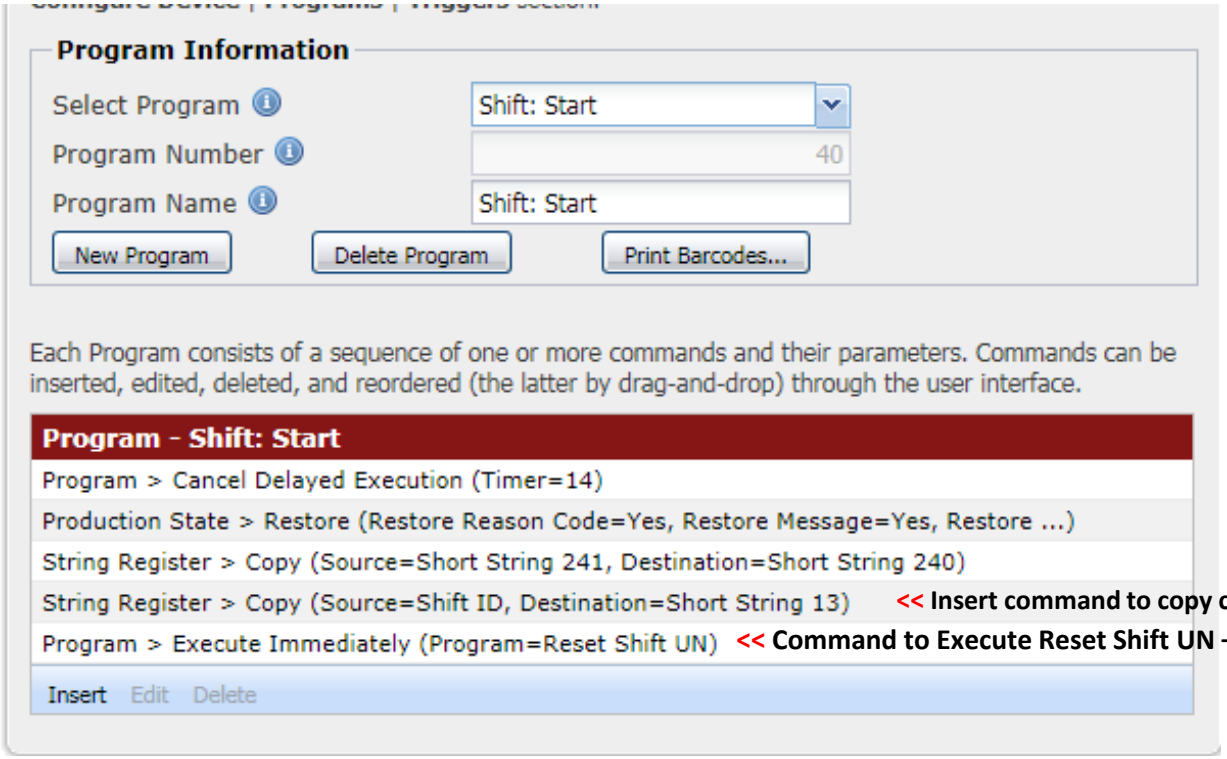
Contaminacion Ingreso.	0
Falla de impresion Markem.	0
Falla de impresion WaxAuto.	0
Falta de componentes.	0
Problemas de sellado.	0
Problemas de corte.	0
Falla Puertos.	0
Otros.	0

Click the Save Settings button when you are done.

Next Step - Click the associated Execute Button to apply the values.

Save Settings | Cancel Changes

Step 5 – Reset Shift User Numbers



<< Insert command to copy current Shift ID to User String 13 for the Job.

<< Command to Execute Reset Shift UN – this is factory default. It sets UN1-8 = 0

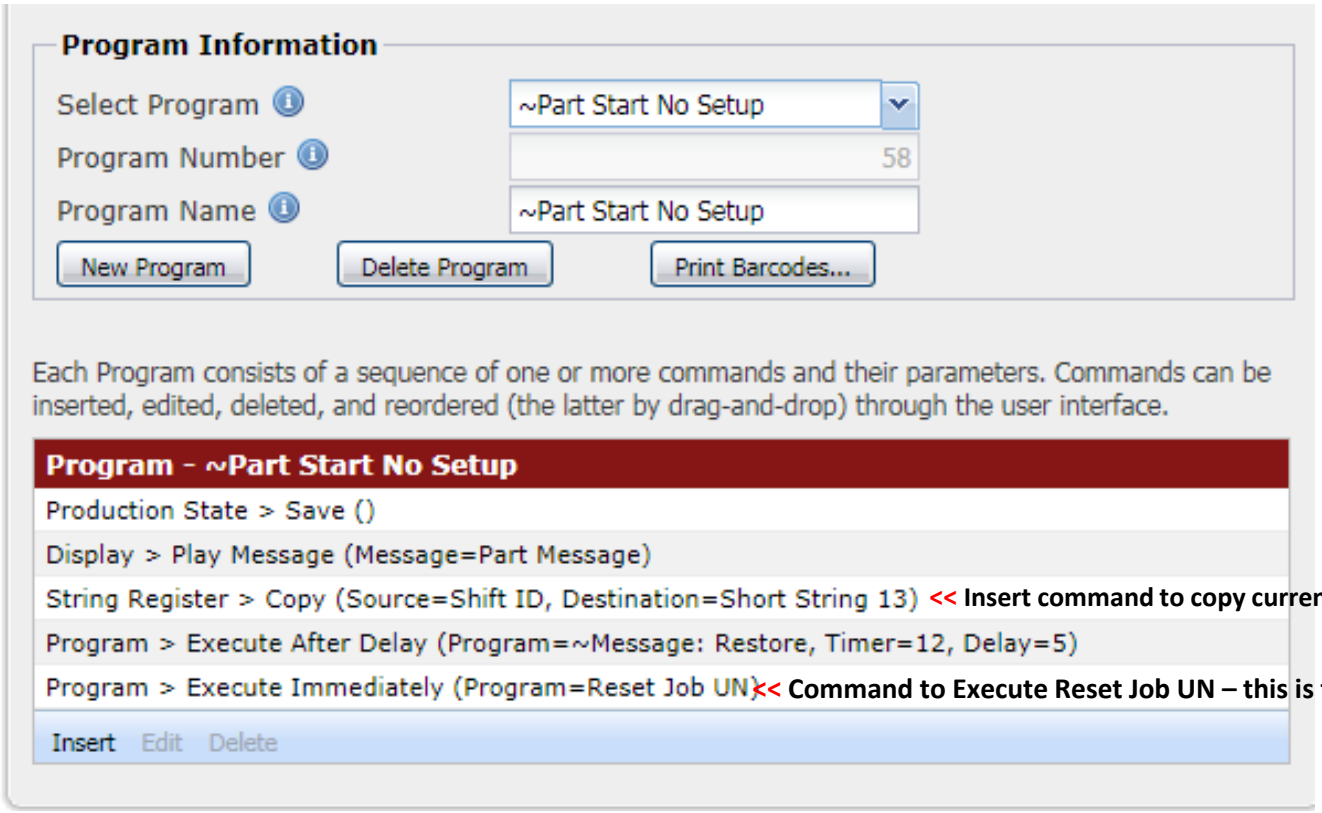
Step 6 – Identify which program is executed when you scan the Part Barcode

The Parts module contains the set of preconfigured parts that are available for selection in the **Administer** | **Settings** | **Part** pag
or when a new Job is loaded in the **Administer** | **Settings** | **Job** page. The part to use can also be configured on-the-fly in either
page, but commonly used parts should be configured here for ease of use. Parts with blank Part IDs will not be available for
selection.

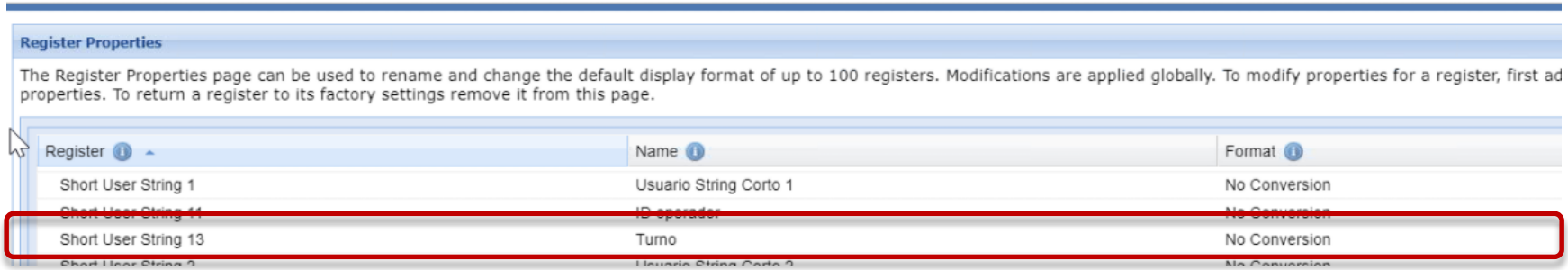
ID Producto	Ideal Cycle	Takt Time	Scale Factor 1	Scale Factor 2	Program to Execute
Sample Part	1.00	1.00	1.00	1.00	~Part Start No Setup
9529	11.61	11.61	2.00	1.00	~Part Start No Setup
73022	12.00	10.00	2.00	1.00	~Part Start No Setup
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None
	1.00	1.00	1.00	1.00	None

Page 1 of 25 | Export Table | Import Table | Print Barcodes...

Insert the command to Reset Job UN

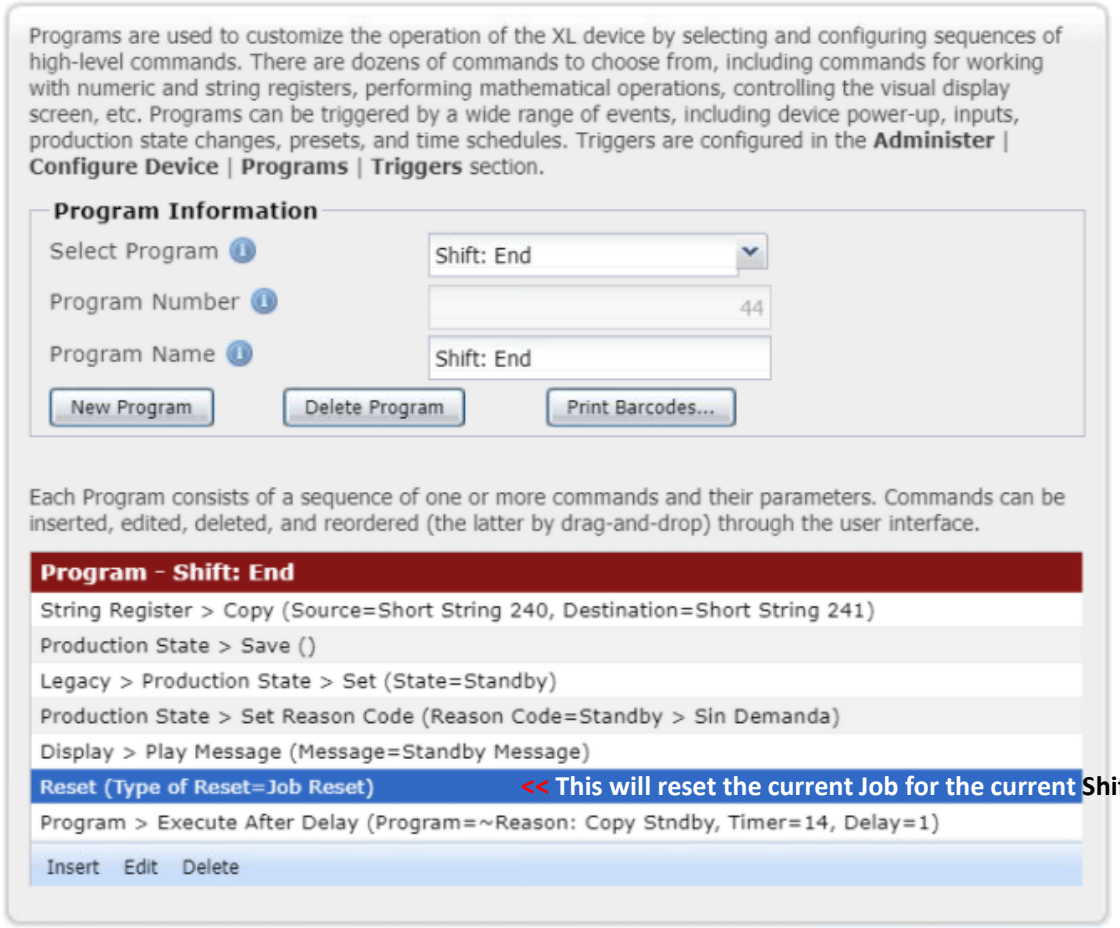


Step 7 – Update Register Properties

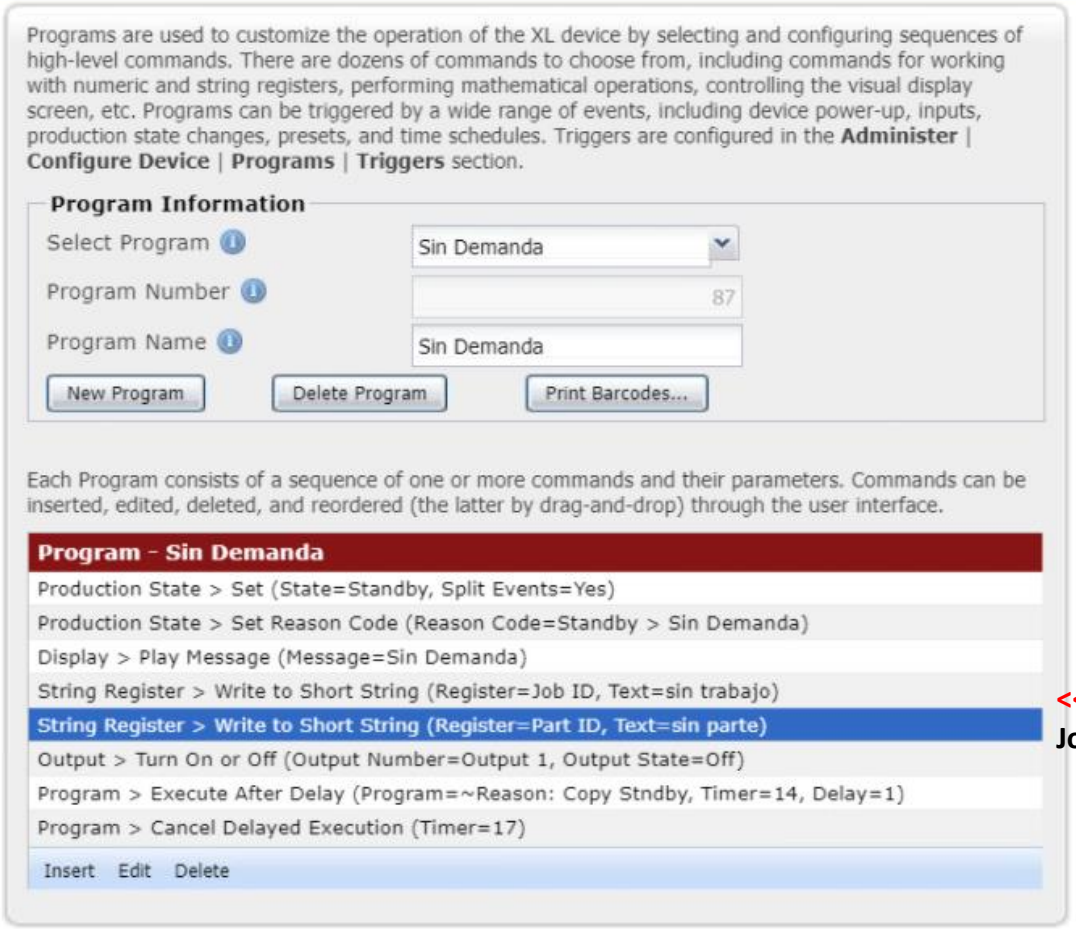


Change the register properties for Short User String 13 to be either Shift or Turno. Whichever language you want to use.

Step 8 – Insert a command to Reset Job at Shift End



Step – 9 Standby – no part/no job

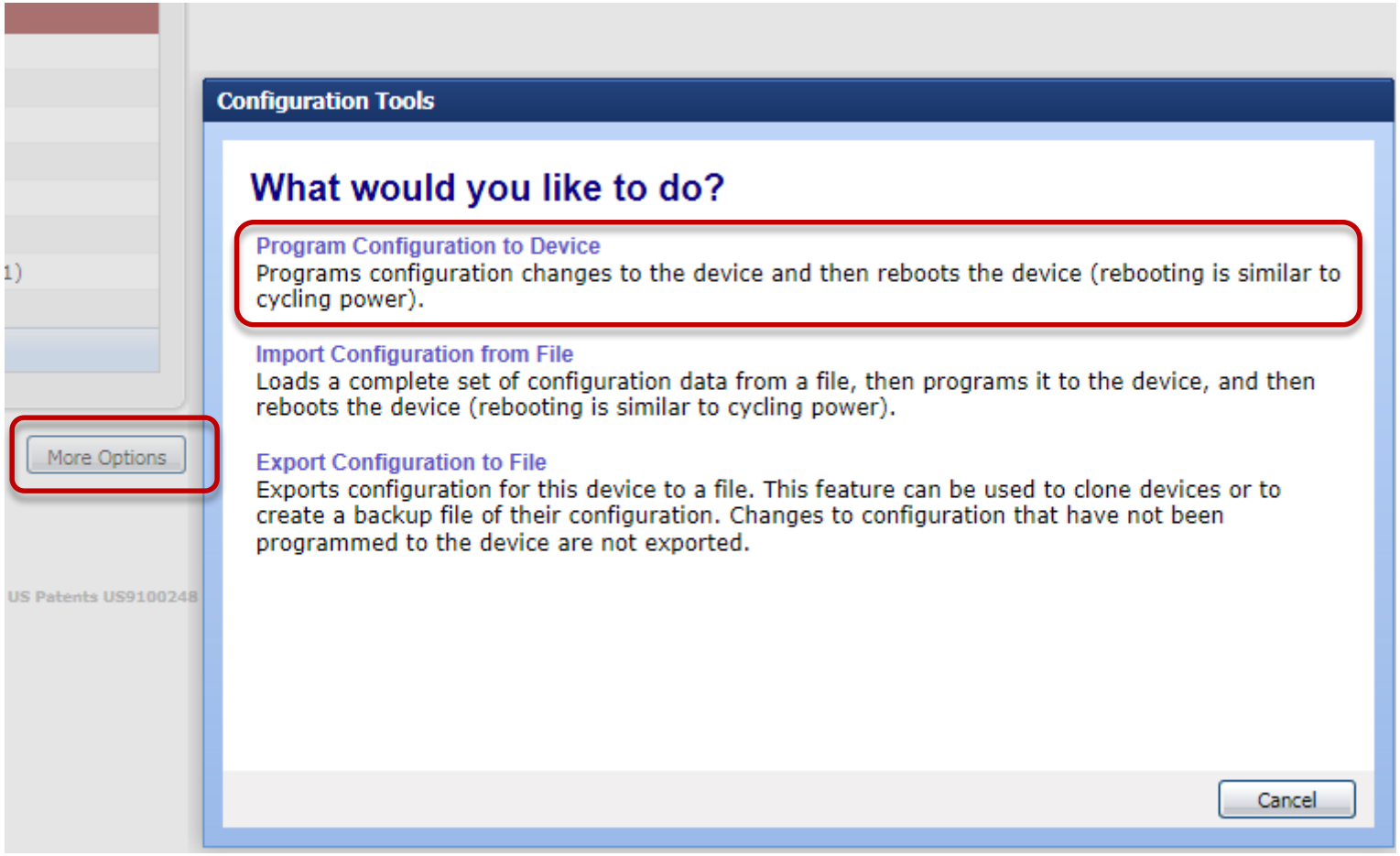


When the line is in Standby for an extended period of time, it is recommended that you change the Job ID and Part ID to indication No Job/No Part.

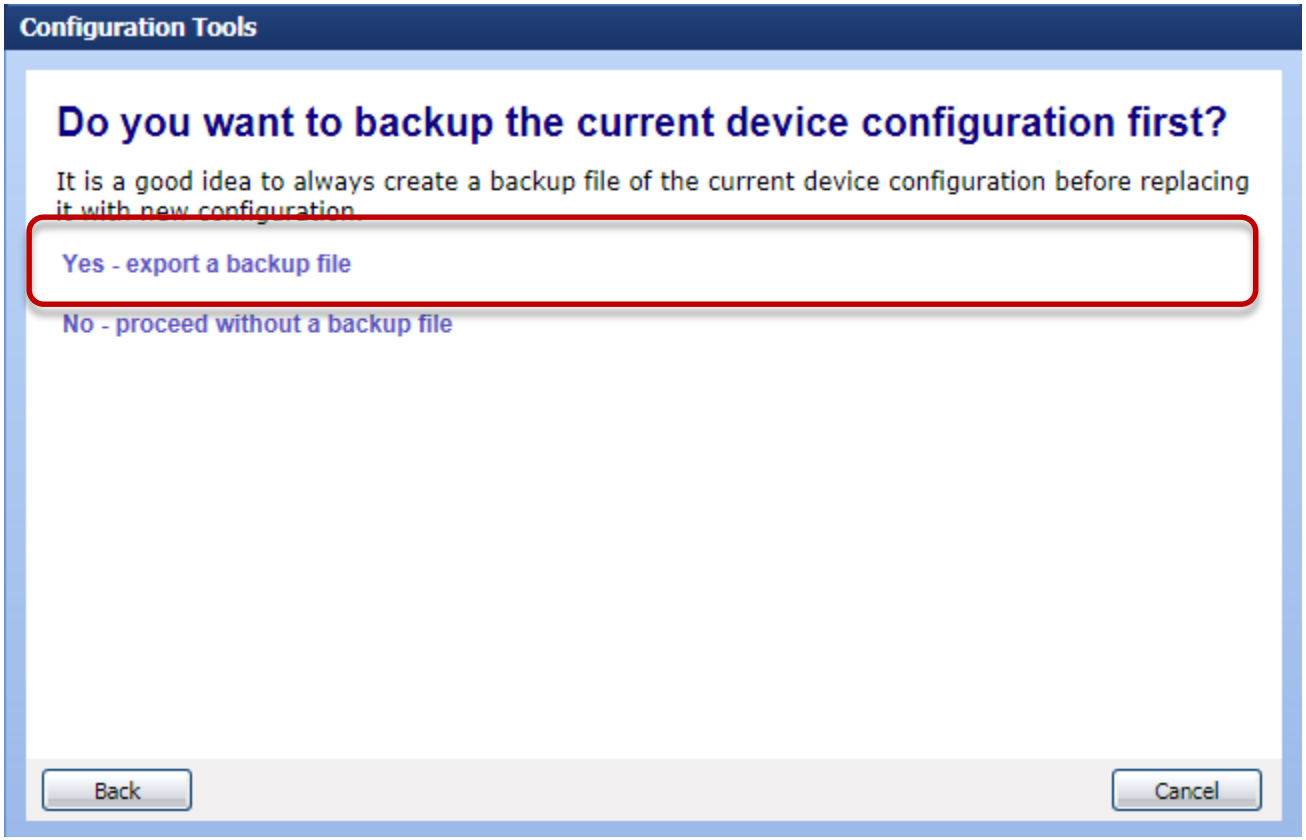
The reason being that the extended standby time does not affect the Job/Part OEE Calculations.

<< Insert the 2 commands to Write 'No Job' to the Job ID and 'No Part' to the Part ID

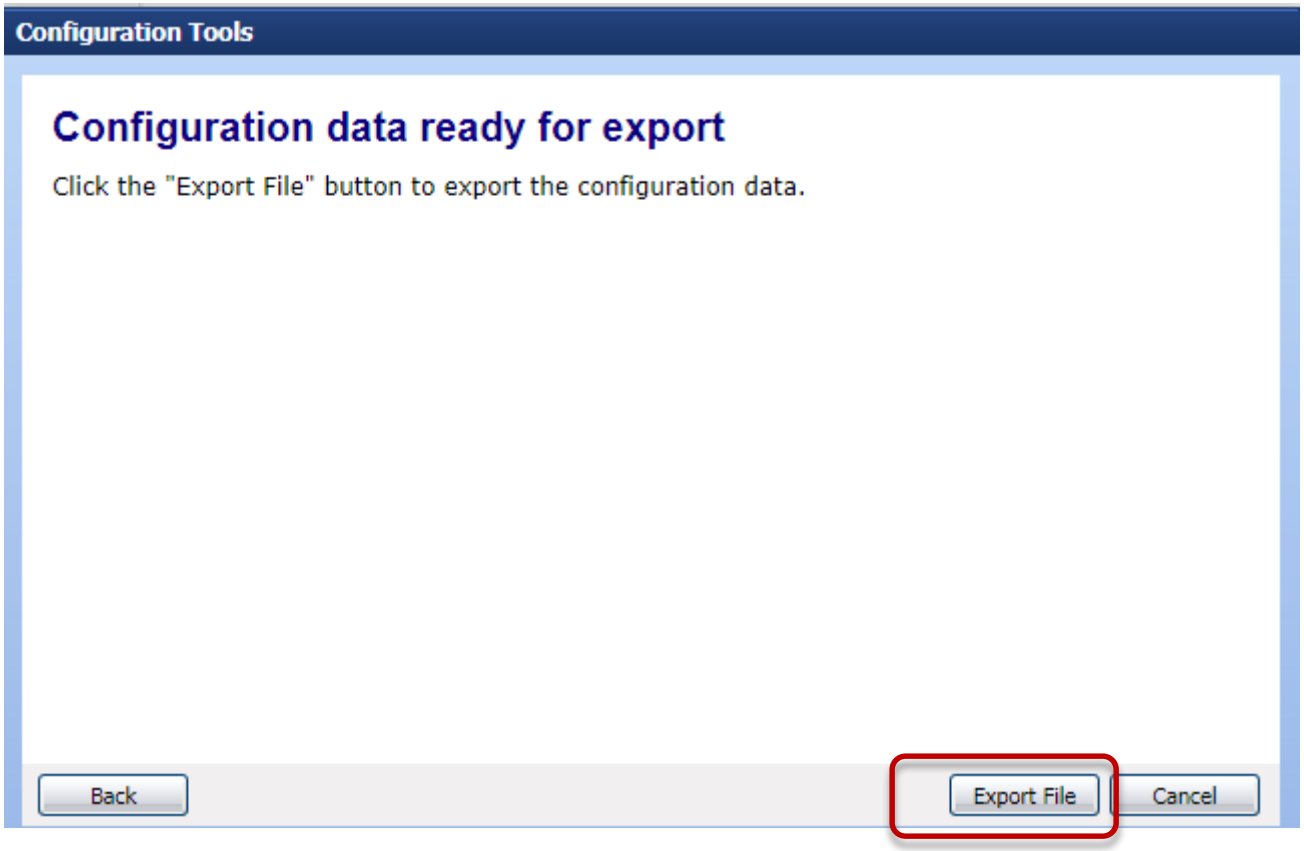
Final Step – Program Configuration to Device



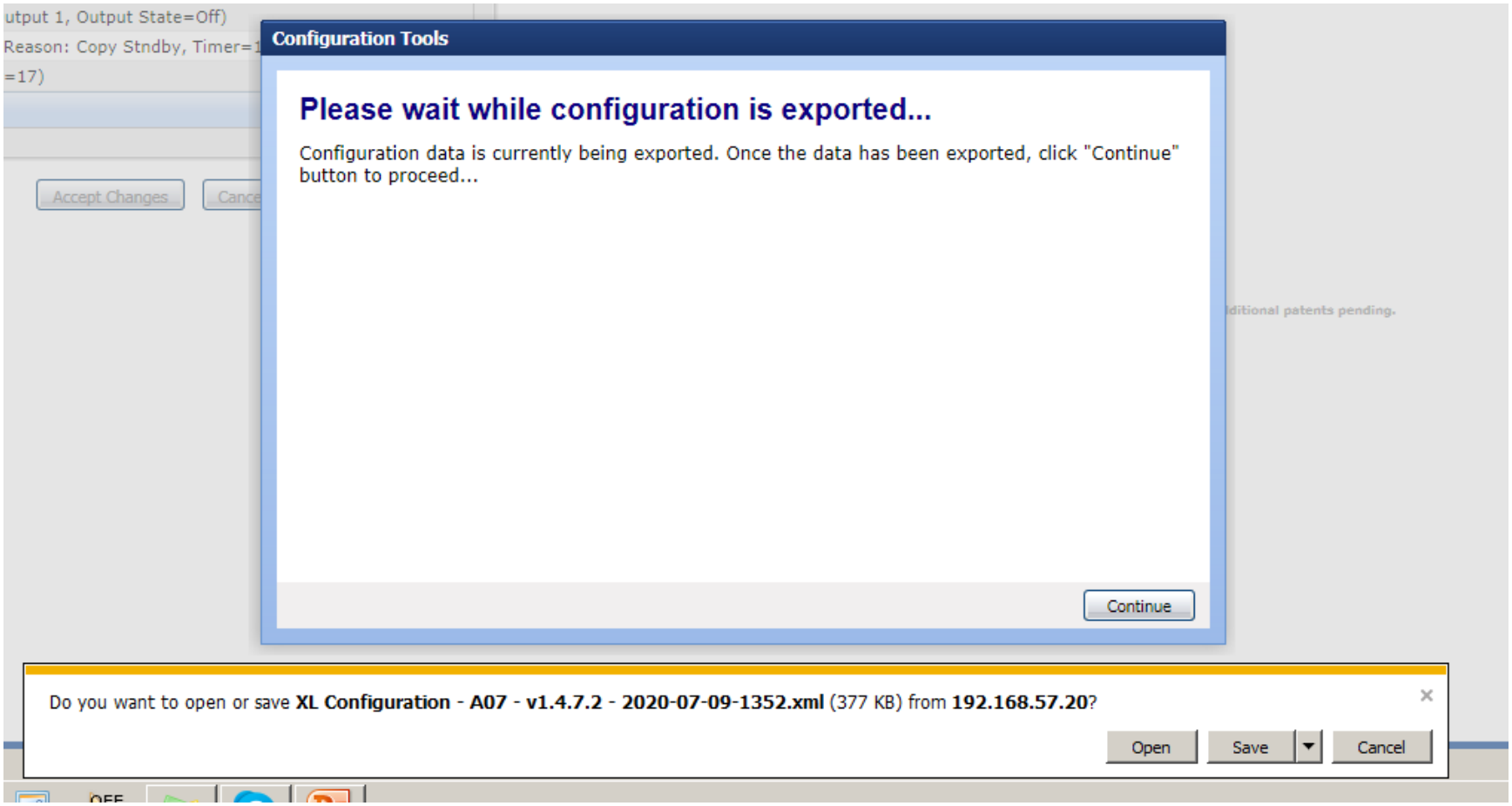
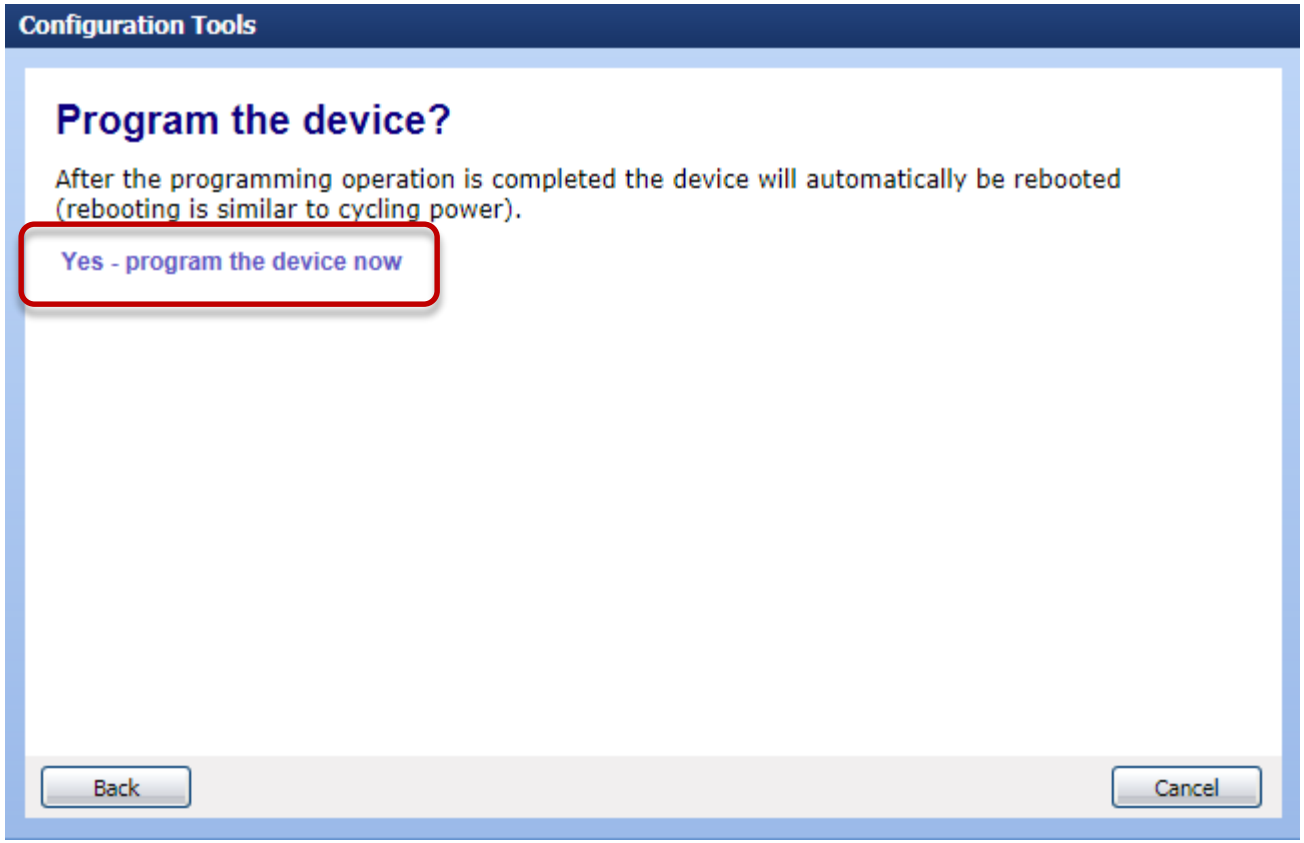
Final Step – Program Configuration to Device



Final Step – Program Configuration to Device



Final Step – Program Configuration to Device



Final Step – Program Configuration to Device