

# 7 Benefits of Using PLCs for Parts Counting & Container Labeling



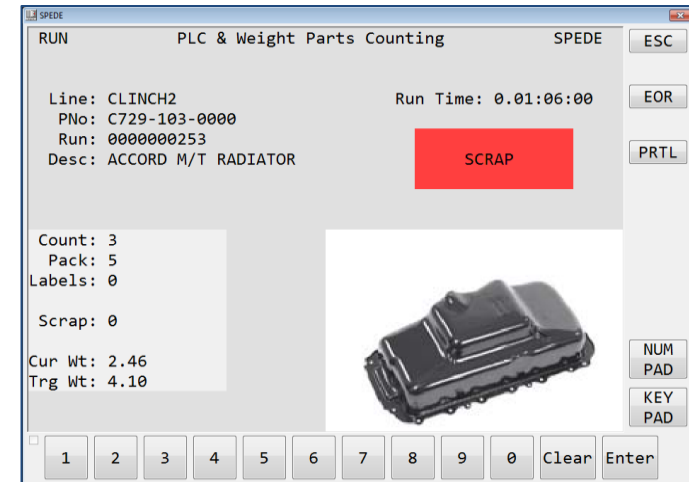
# 1. Error-proof Parts Counting

## All Parts are Counted Automatically:

- By individual pieces not just containers
- Counts good, scrap & rework pieces
- Counts serialized pieces

## Interfaces to:

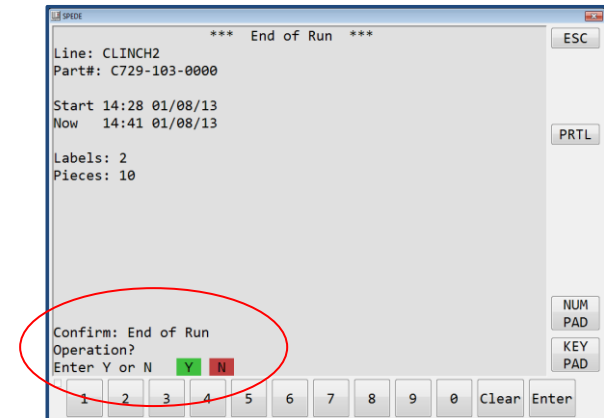
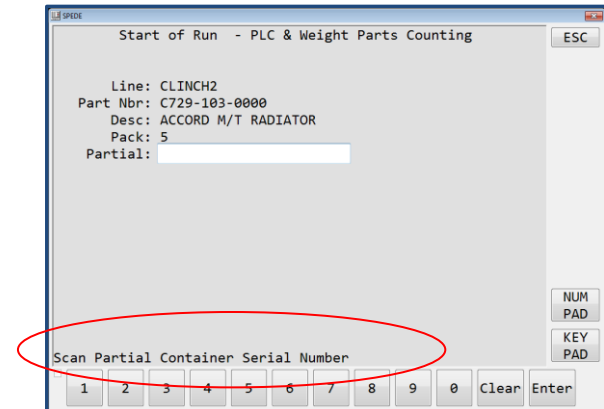
- Weigh Scales to count by weight
- Vision sensors (e.g. Keyence) to identify scrap
- Conveyors/diverters to divert scrap
- 2D Scanners or OCR to read & record serial numbers of pieces



## 2. Control of Partial Containers & Rework

### Controls Piece Counts at Start / End of Run:

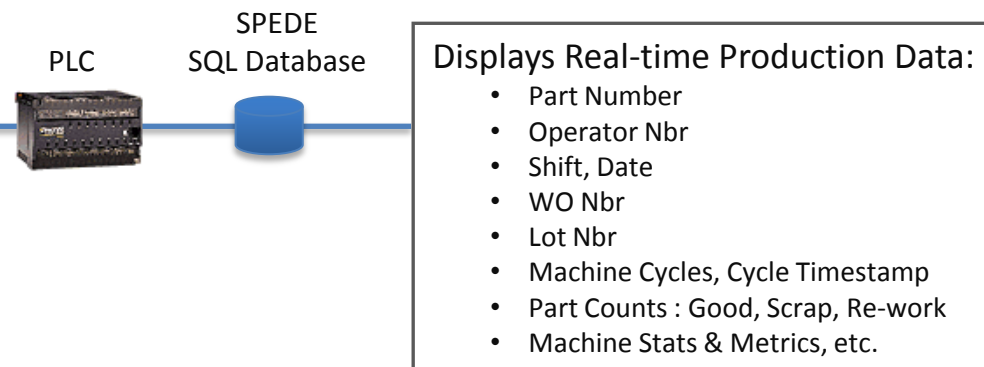
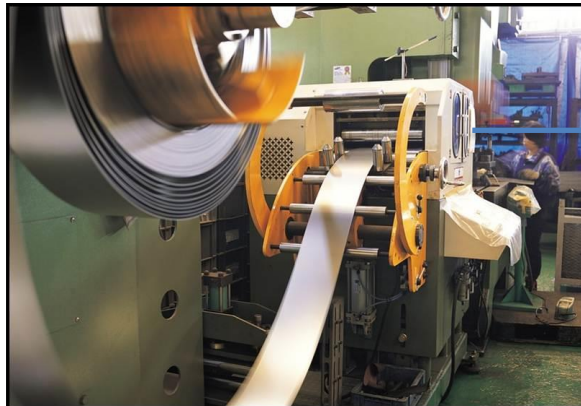
- Uses the Container Serial Number for control
- Controls Partial Pack Counts at End of Run and End of Shift
- Pack Qty can be adjusted using a virtual keypad on the TouchScreen
- Validates aggregation of multiple containers of Partial Containers with the same Part Number
- Validates new Full Pack containers built from multiple Partial Containers
- Provides for Re-work operations on Partial Containers



## 3. Real-time Production Visibility

### View Real-time Production data via PC Browser:

- Production Counts - by Part, Date, Line, Shift, Operator, etc.
- Scrap Counts - by Part, Date, Line, Shift, etc.
- Partial Containers available for Re-pack, Re-work
- Production Counts of Re-work Pieces and Re-work Containers by Part, Date, Line, Shift, Operator, etc.
- Automatically exports production data to host ERP



## 4. Error-proof Container Labeling

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### The PLC is the most accurate source of information about the Part being made

- The PLC supplies Part Number, Run data, Piece Count
- SPEDE controls piece counts at Start of Run, End of Run
- SPEDE controls partial packs & counts at End of Run, End of Shift
  - Label prints automatically at full pack count of good parts
  - Can interface to vision sensors to identify scrap
  - Can interface to conveyor/diverter to divert scrap
  - Can interface to Weigh Scales for piece counts
  - Can interface to USB Cameras to ensure accurate packing of dunnage layers
  - Can use a SPEDE-built PLC at production lines and packing areas where no PLC is available



PLC-controlled Print & Apply Labeling

## 5. Collect Machine Data for OEE Analysis

### You Can View OEE (Overall Equipment Effectiveness) Data

As a by-product of PLC controlled labeling, you can:

- View real-time Production data at line-side via TouchScreen
- Collect / Export Machine Run data for your OEE system:
  - Cycle Times, Part Counts, Scrap Counts, Downtime, etc.
- View, Sort and Analyze Machine Data in the SPEDE SQL database
- Build a real-time audit trail of activity per Machine
- Collect real-time Part / Serial traceability data by Machine

Use data mining to  
create your own  
Machine Performance  
Reports

#### Sample Company

Cleveland Division

Report From: 11/04/2012

Report To: 11/10/2012

Sort Order: Part Nbr Descending



Printed By: Paul Jacobson  
Report Date: 01/05/2013  
Report Time: 14:35:00  
Page: 1 of 1

Part Nbr	Description	Run Nbr	Start	Stop	Elapsed	Scrap	Good	Containers
C729-103-0000	ACCORD M/T RADIATOR	000012001	08:03:22	12:01:10	03:57:48	11	200	40
C729-103-0000	ACCORD M/T RADIATOR	000012004	13:01:08	17:38:57	04:37:51	19	240	48
C729-103-0000	ACCORD M/T RADIATOR	000012007	18:20:07	23:30:45	05:10:38	9	280	52
					<b>13:46:17</b>	<b>39</b>	<b>700</b>	<b>140</b>
C729-101-0000	CIVIC M/T RADIATOR	000012012	07:58:28	12:10:00	04:11:34	13	180	36
C729-101-0000	CIVIC M/T RADIATOR	000012016	13:12:35	17:28:20	04:15:45	8	180	32
C729-101-0000	CIVIC M/T RADIATOR	000012017	19:00:05	23:40:10	04:40:05	11	205	41
					<b>13:07:24</b>	<b>32</b>	<b>545</b>	<b>109</b>



## 6. Create Lot / Serial Traceability

### Easy Access to Trace-back and Trace-forward Data

SPEDE PLC Labeling links a Part Number to:

- Individual Part Serial Numbers or 2D Parts Marks
- Production Machine, Run Date, Shift, Operator, Lot Number, Location, etc.
- Container Serial Number(s) that the Part was packed in
- All other Serialized Parts in a generalized Container

Limit the scope of  
Recalls by using Data  
Mining to look up  
specific Part details

Printed By: Dan Worthington  
Report Date: 01/08/2013  
Report Time: 08:35:00  
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**Container Trace: 0319804-05088465**

Part Nbr	Description	Run Nbr	Line Nbr	Create Date	Create By	Qty	Item S/N
C729-101-0000	CIVIC M/T RADIATOR	000012001	CLINCH2	11/05/2012	JS MITH	5	AB879762351 AB879762352 AB879762353 AB879762354 AB879762355



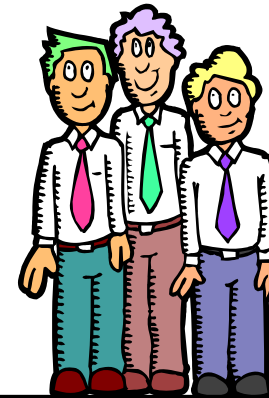
# 7. Meet Customer QC Objectives

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## And Improve Your Operations too

- Every container has the Correct Part
- Every container has the Correct Quantity
- Every container has the Correct Label
- Every label has the Correct Data
- Meets Honda MPRs for an Accurate Labeling and Traceability Process

*Bottom Line: Your OEMs are happy!*





# Complete PLC Labeling Solutions

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## Our Solutions include Software, Hardware & Services:

1. SPEDE Software Platform and Labeling App - PC server-based
2. Connectivity of PLCs and printers to the SPEDE WiFi network
3. Interfaces to your ERP, EDI, Release Accounting, OEE Systems
4. Total System Support, 365 days/yr
5. Quick Installation with no impact on your Production or IT resources

## Additional Options:

1. SPEDE-built PLCs for your production lines that need one
2. Interfaces to scales, vision, cameras, conveyors, OCR devices
3. WiFi TouchScreen PCs for line-sides
4. WiFi Label Printers

# Meet a Few of our Customers ...

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*Driven by performance*



# To Discuss Your Line-side Project...

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Call or Email:

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440-808-8888 x22

[www.spede.com](http://www.spede.com)

## About Us:

SPEDE Technologies is a software and systems company specializing in solutions for automotive suppliers since 1980. Our focus is automating Production Area processes to increase efficiency, eliminate errors and improve profitability.

Our Customers are mid-size to Fortune 500 auto suppliers with multiple plant sites throughout the U.S. and in Mexico. They rely on SPEDE Automated Line-side Solutions to keep their mission-critical processes running smoothly, 24/7.