

Developers of "Track" – family Software for Production & Maintenance

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Critical Component Control

Performance Tracking of

Parts, Positions and People

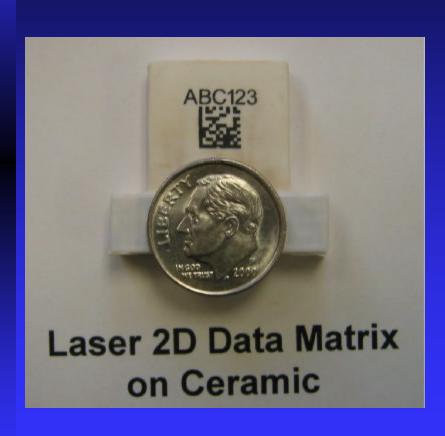
Introduction

- The cost of gathering information
- Need for improvement
- Opportunity for improvement
- UID effective 1/1/04
- IRAC
 - Identify (permanently)
 - Record (track actions and relationships)
 - Analysis (how is each component performing)
 - Correct (use analysis to correct problems identified)

Identification

- Permanent
 - Laser
 - Dot Peen
 - Bumpy Bar Code
- Unique
 - No Duplicates
 - No Significance
- Machine Readable
 - Difficult to track manually

Laser



- Advantages
 - Durable
 - ◆ Flexible
 - Fast
- Disadvantages
 - Surface Treatment
 - Personnel Training
 - Specialized Readers
- Cost
 - **◆** ~ \$30,000 \$50,000

Dot Peen



- Advantages
 - Very Durable
 - 2D Data Matrix small area
 - Can withstand abuse
- Disadvantages
 - Specialized Readers
 - Personnel Training
- Cost
 - **◆** ~ \$10,000

Bumpy Bar Code



- Advantages
 - Very Durable
 - Can be painted
 - ◆ Can be molded
- Disadvantages
 - Specialized readers
 - Personnel Training
 - Larger Footprint
- Cost
 - **•** ~ \$10,000

Record / Track

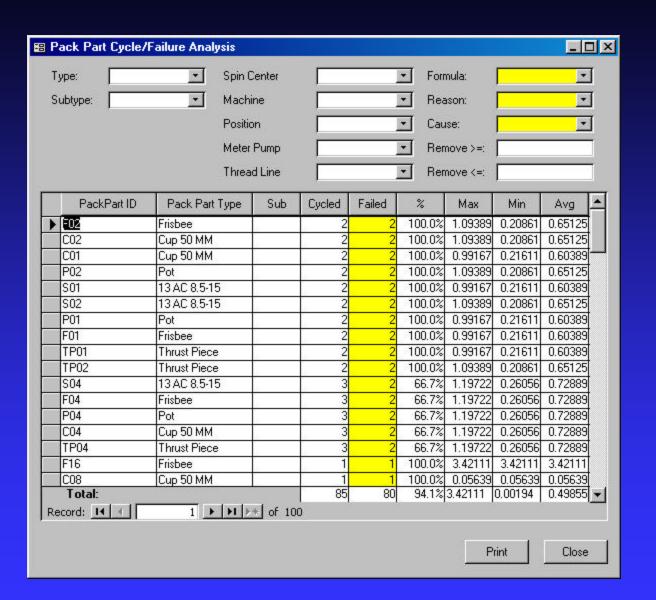
- Documents each step of the process
 - Who
 - What
 - When
 - Where
- Will not happen unless:
 - Easy
 - Requirement
 - Demonstrate value

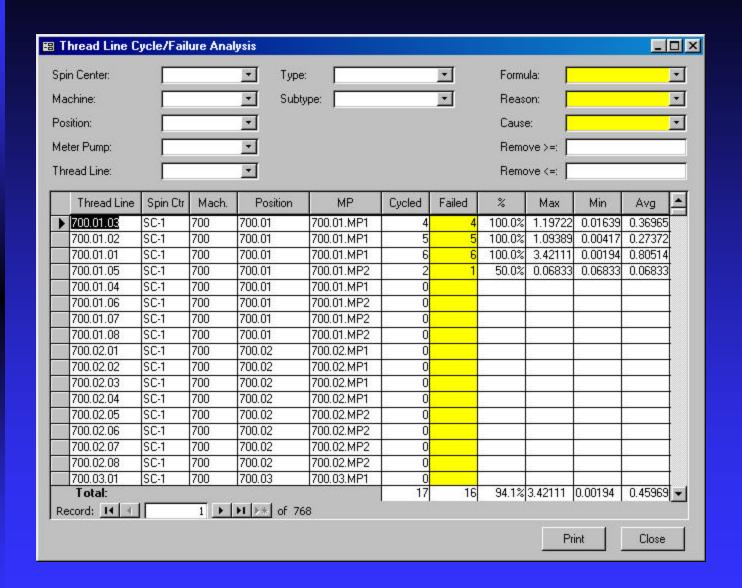
Record / Track (Con't)

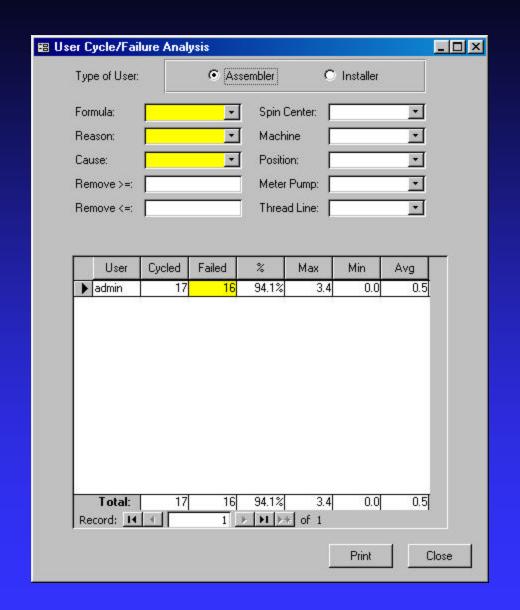
- Additional Benefits
 - Eliminate mistakes during assembly
 - Show availability
 - Packs to build each shift
 - Packs to remove each shift
 - Navigate with scanner
 - Identify bad parts before assembly
 - Navigate with scanner
 - Time in preheater
 - Scan parts into other systems
 - Machine planning

Analysis

- Performance
 - ◆ Parts
 - Positions
 - People
- Access
 - Exception reports (send via email)
 - Show results to everybody







Analysis (Con't)

- Benefits
 - Extends Pack Life
 - Bad components cycle faster than good components
 - Identifies problem positions
 - Highlights operator performance
- Additional benefits
 - Identify performance of parts supplied by various manufacturers
 - Compare filter media
 - Compare screen types and manufacturers
 - Compare designs and materials

Corrective Action

- Correct the problem
 - Train or remove personnel
 - Remove or repair defective parts
 - Change positional conditions
 - Contact or change vendors
 - Parts
 - Filter Media
 - Screens

Summary

- Vision is Essential
- Dedication is required to implement changes
 - ◆ If not dedicated don't waste your money
- Technology is available to improve performance
- Request vendor assistance (Spec 2000)
 - Mark parts
 - Improve part performance
- UID