



MCS
INCORPORATED

Your customers are paying for higher integrity, you must have the proper systems in place to meet their needs.

**PERFECT MATCH:
BEST MANAGEMENT
PRACTICES**

Purpose of the Perfect Match

The Perfect Match system is designed to increase the integrity and productivity of a match job on a variety of equipment. It uses cameras, printers and a tracking controller to help keep pieces matched in an automated machine environment.

While the system is very reliable, we have found that the system integrity can be compromised by incorrect operator procedures. In short, operators have found ways to override the system. The purpose of this document is to share some best practices that we have seen in the industry.



Most Common Ways to inadvertently override the Perfect Match system

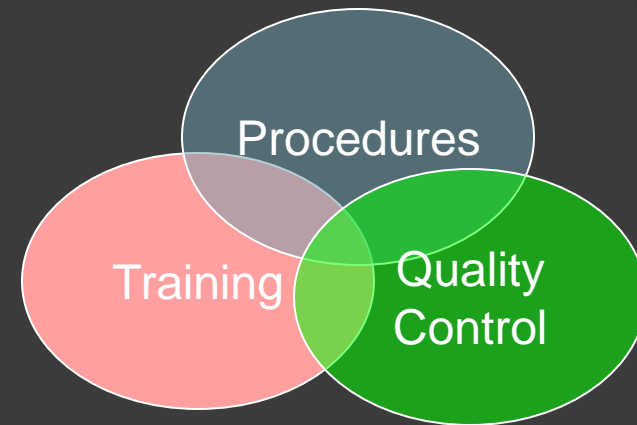
- Turn it off – believe it or not, we have had calls from customers complaining that a job had a number of mismatches, only to find after reviewing the log, the operator turned it off during the job because it had too many errors cause by setting up the camera incorrectly.
- Unplug a diverter – too many diverts? Just turn off the diverter
- The operator manually places diverted pieces on the last conveyor
- Set up mismatches to do “Nothing” if the condition occurs (ie e-stop connection)
- Use the wrong database for read and print
- Have a major jam, and the operator switches the pieces in the confusion.
- Print the same number on all the pieces. Can't have a mismatch that way!
- Don't follow recovery procedure with major event. **Remove, Update and Verify.**
- Reprint rework pieces with the camera off, and the printer on.

The Perfect Match System has options to deal with most of these issues, but someone must turn them on and follow the procedures.



Best Practices

- People
- Maintenance
- Operations
- Quality Control Management



People

Assign a team for your Camera Integrity System:

Manager – responsible for deciding the logic of the job. How many misreads before the system stops? Is sequential checking on? Is the diverter turned on? What kind of barcode is used? Where is the barcode placed? Usually a DP person. This person also will “own” the success of the job. If operating speeds were low, misreads high or procedures not followed, this is the person that will gather this information and act on it.

Setup Mechanics – responsible for setting up cameras, diverters and printers. Choose your best setup mechanics, and make them feel special for learning the new technology. Most good mechanics enjoy the challenge.

Operators – Only use your most experienced operators. An operator that can't keep a machine running well, is going to cause integrity problems. Train them to understand what the purpose of the system is, and how it works.

QC – Educate your QC people on what to look for with an integrity camera system. If a customer is paying for a camera integrity job, chances are, it needs a higher level of QC than a normal job.

Make all of these people part of a special team dedicated to providing camera integrity mailings. If possible, get the team together before the MCS Technician gets to your site, and review the purpose of the system and define responsibilities.



Maintenance

Do not turn on the Perfect Match System until the equipment it is installed on is running properly.

- Are the pieces flowing through the machine properly?
- Are there an unusual number of double feeds?
- Are there an unusual number of jams?
- Are the pieces moving around where the camera takes the picture (are the side guides set up correctly, are the feeders feeding smoothly)?
- Are the pieces rolling down the track after they are read by the camera?
- Are all the sensors set up correctly?

Running an integrity camera job on a poorly running machine increases the chance of a mismatch.



Operations

What is the procedure to start a integrity camera job?

1. Manager sets up logic (what happens to misreads? How many misreads before the system stops?, What gets diverted?)
2. Setup mechanic setups up the equipment (Feeders, conveyers, etc.)
3. Setup mechanic setups cameras, diverters and printer
4. QC person checks the logic, (test the logic on the machine, Do misreads divert)
5. Operator starts the job.
6. QC person checks the job (every X defined pieces)
7. Manager reviews performance of the job afterwards.

Operations

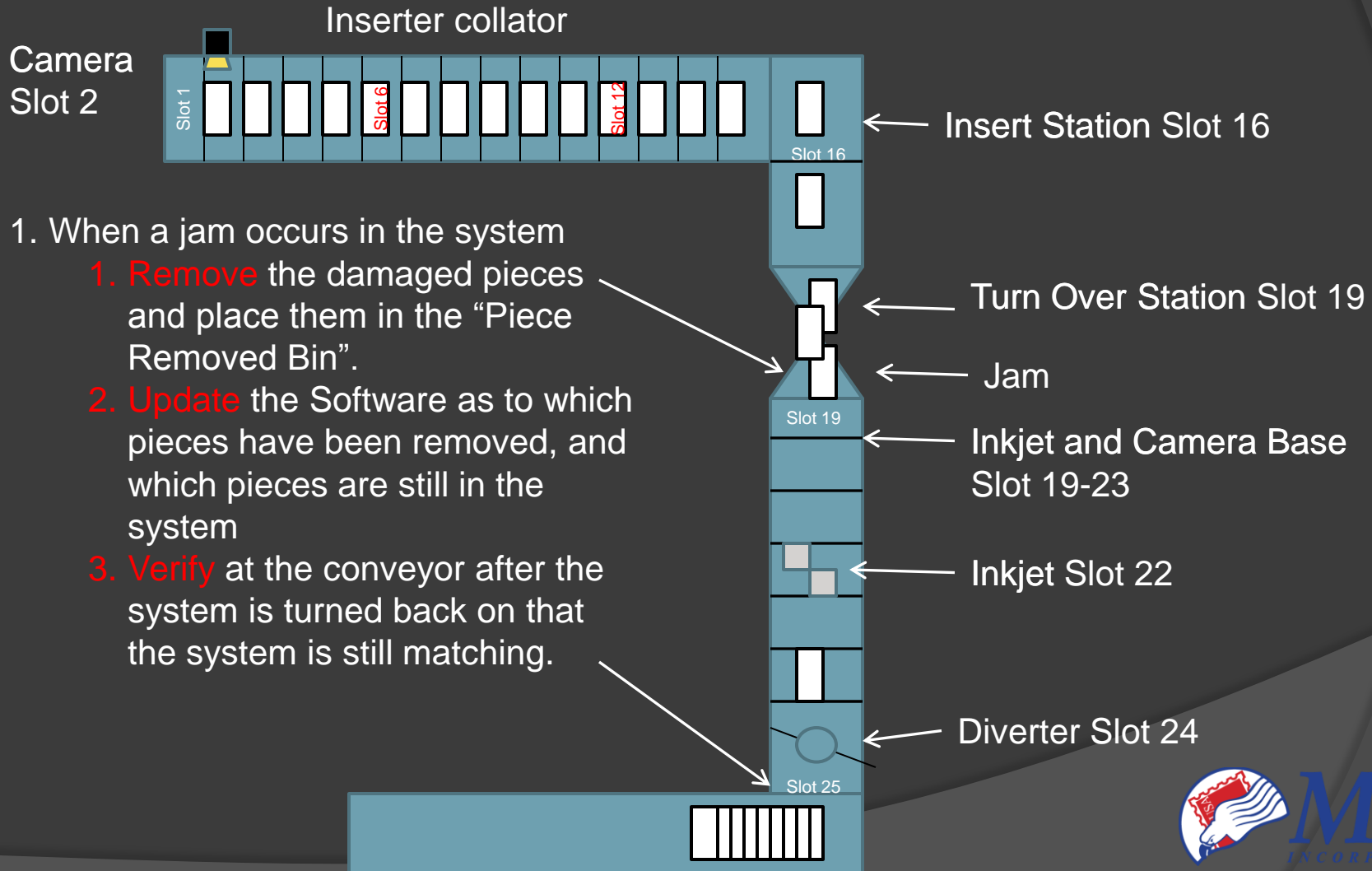
What happens when?

Not defining these rules before a job gets started causes major integrity problems.

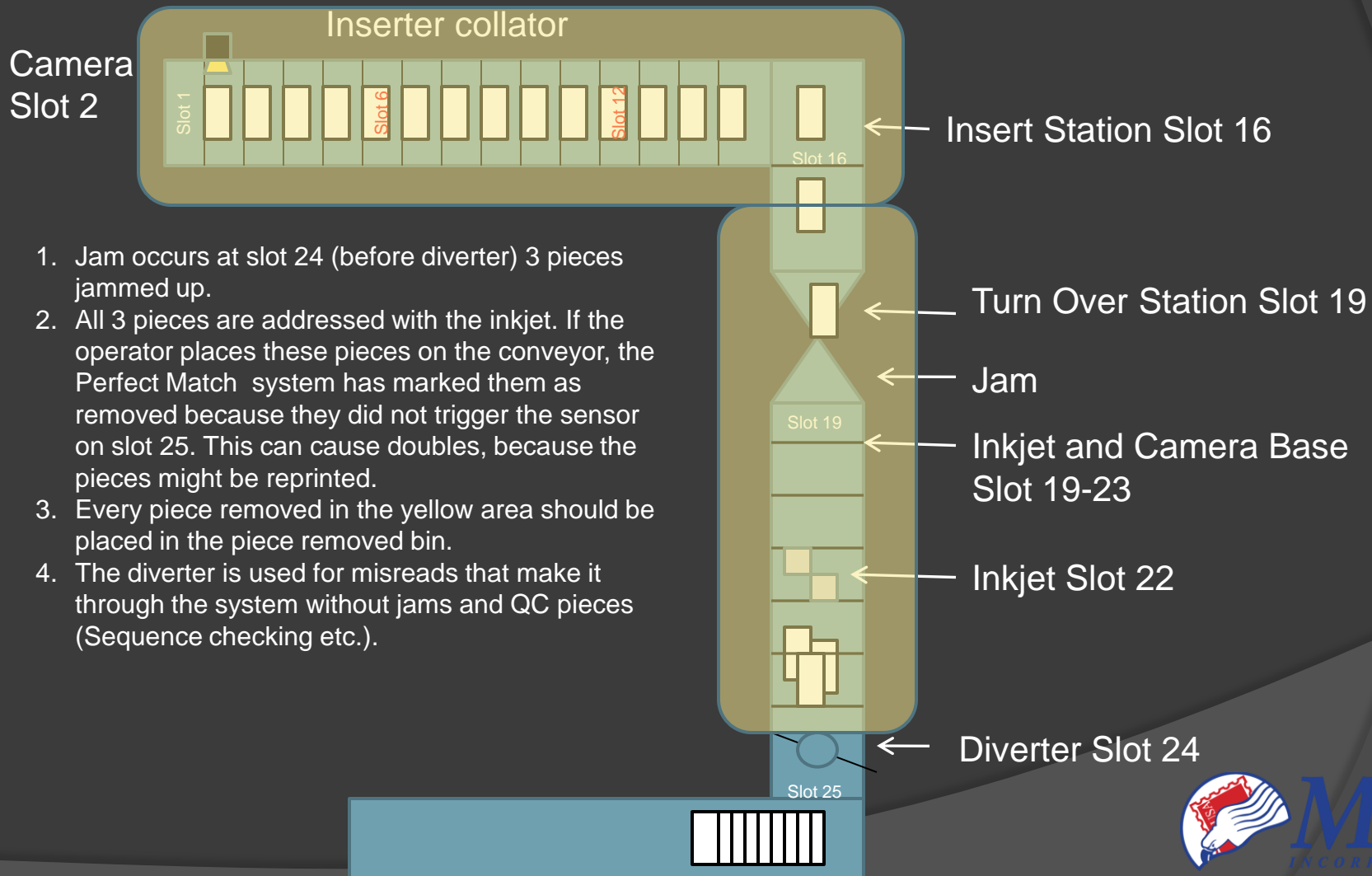
- ⦿ What happens when pieces are diverted? Where do the operators put them?
- ⦿ What happens when pieces get jammed?
- ⦿ What happens when the pieces are not feeding well?

Where do these pieces end up? Believe it or not, it is very common for operators to take a piece that has jammed on an inkjet table, and manually place it on a conveyor. When does an operator call a setup mechanic? The rules must be defined and followed by everybody involved in the process. Define the procedures.

Jams: Remove, Update, Verify



Put the Pieces where they Belong



1. Jam occurs at slot 24 (before diverter) 3 pieces jammed up.
2. All 3 pieces are addressed with the inkjet. If the operator places these pieces on the conveyor, the Perfect Match system has marked them as removed because they did not trigger the sensor on slot 25. This can cause doubles, because the pieces might be reprinted.
3. Every piece removed in the yellow area should be placed in the piece removed bin.
4. The diverter is used for misreads that make it through the system without jams and QC pieces (Sequence checking etc.).

Operations

Procedures for Operators

- When does the operator get briefed on the purpose of the Perfect Match job? (Read and Print? 2 Way Match? Sequential Match?) Who briefs them?
- What condition does the operator ask for help (i.e.. How many misreads, How many jams)?
- Does the operator do manual reworks during the job? For the purpose of productivity, and integrity, we recommend rework at the end of a shift or the job, which ever comes first.

QC – Quality Control

We would always recommend an independent quality control system. Most mail shops do have an independent QC department, but they are not fully trained on what to look for when a camera system is added to existing equipment.

We recommend at a minimum the following:

1. Have the QC person check the logic of the system before the job is started. For example, if it's a 2 way match, with sequential checking, have the operator demonstrate it before the job starts to the QC person. Just take a piece out of the feeder to create the mismatch and out of sequence.
2. Educate the QC people on what to look for in the diverts, or the spoilage area (i.e. bad barcodes, missing pieces.)
3. Define when QC should stop a job because of quality problems.
4. Camera jobs need more quality checks because of the nature of the job.
5. How many pieces per QC check?

