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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Complaint Number: | | | | | | | Open Date: xx/xx/xx Target Date: xx/xx/xx  Completed Date: xx/xx/xx Total Days Open: xx | | | | |
| Customer: | | | | Part Number: | | | Part Name: | | | | |
| Symptom Description: | | | | | | | | | | | |
| Step | D0 | D1 | D2 | | D3 | D4 | | D5 | D6 | D7 | D8 |
| Action | The Planning Stage | Establishing the Team | Problem Definition / Statement & Description | | Developing Interim Containment Action | Identifying & Verifying Root Cause | | Identifying & Implement Permanent Corrective Actions (PCA) | | Preventing Recurrence | Recognizing Team Efforts |
| D0 | Emergency Response Actions Needed / The Planning Stage  24-hour response to the corrective action (D1-D3)  Sort activity at Supplier, at Pace, at Pace Customer and elsewhere | | | | | | | | | | |
| D1 | Establishing the Team:  Establish a small group of people with the process / product knowledge, allocated time, authority, and skill in the required technical disciplines to solve the problem and implement corrective actions. | | | | | | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | Name | Function | E-mail | Phone | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | | | | | | | | | | |

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| D2 | Problem Description | |
| Initial Problem Description  Provides the starting point for solving the problem or  non-conformance issue. Need to have “correct” issue description to identify causes. Need to use terms that are understood by all. | | Sketch / Photo of the Problem |
|  |
| List all the data and documents that might help you to define the problem more exactly   * X * X | |
| Detail the timeline of events: | |

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| --- | --- | --- |
| D2 | Root Cause thought starters: N’s should be considered in the 5 WHY analysis | |
|  | | <1> Correct Process?  Y N 1.1 Are the work instructions standardized, correct, current, and legible?  Y N 1.2 Were the instructions/procedures followed?  Y N 1.3 Has the operator been on the job 1 month or longer?  Y N 1.4 Is the operator trained and/or have they received annual refresher training?  Y N 1.5 Did the operator follow the Reaction Plans?  Y N 1.6 Was the Control Plan adequate?  Y N 1.7 Was the Control Plan followed?  <2> Correct Tool?  Y N 2.1 Are tools, fixtures, gages, &/or error proofing in place & being used?  Y N 2.2 Are tools functioning correctly (not broken, bypassed, not worn, set correctly)?  Y N 2.3 Are machines functioning correctly (PM done, fixtures and locators maintained)?  Y N 2.4 Was the gage(s) mastered and properly functioning?  <3> Correct Parts?  Y N 3.1 Is the correct part for the application clearly identified and being used? Y N 3.2 Is 5S Workplace effective (part# marked, storage area/racks labeled)?  Y N 3.3 Is the part storage effective (parts free of debris, damage, breakage)?  <4> Parts in Spec?  Y N 4.1 Is the part within specification?  Y N 4.2 Is the variation within specification acceptable?  Y N 4.3 Is the variation acceptable to the customer?  <5> Process Variation Acceptable?  Y N 5.1 If any of items 1-4 are N (NO), enter a “N” |

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| D2 | Problem Information |
| Who | Who is affected by the problem?  Who first observed the problem?  To whom was the problem reported? |
| What | What type of problem is it?  What has the problem (part id, lot #s, etc)?  What is happening with the process & with containment?  Do we have physical evidence of the problem? |
| Why | Why is this a problem (degraded performance)?  Is the process stable? |
| Where | Where was the problem observed?  Where does the problem occur? |
| When | When was the problem first noticed?  When has it been noticed since? |
| How Many | Quantity of problem (quantity of parts)?  How much is the problem costing in dollars, people, & time? |
| How Often | What is the trend (continuous, random, cyclical)?  Has the problem occurred previously? |

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| D3 | Immediate Containment Actions | |
| Developing Interim Containment Actions List Temporary actions to contain the problem and “fix” until permanent correction is in place | | |
| 1 |  | |
| 2 |  | |
| 3 |  | |
| 4 |  | |
| Picture of Certification Mark on the Part  Provide picture of details & clean date. | | Picture of Certification Mark on the Box  Provide picture of details & clean date. |
| Sort Results: Sorted By:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Date | Supply Chain Location | Quantity Parts  Sorted | Quantity  Failed | Comments | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | | | |

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| D4 | Fishbone Diagram (Ishikawa Cause & Effect Diagram) |

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| (A) MATERIALS / COMPONENTS | |  | (B) METHODS /  PROCESS FLOW & PARAMETERS | |  | (C) MEASUREMENT METHODS | |
| A1 |  |  | B1 |  |  | C1 |  |
| A2 |  |  | B2 |  |  | C2 |  |
| A3 |  |  | B3 |  |  | C3 |  |
| A4 |  |  | B4 |  |  | C4 |  |
| A5 |  |  | B5 |  |  | C5 |  |
| A6 |  |  | B6 |  |  | C6 |  |
| A7 |  |  | B7 |  |  | C7 |  |
| A8 |  |  | B8 |  |  | C8 |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| (D) MANPOWER, SETUP & HOURLY PERSONNEL / STANDARDIZED WORK | |  | (E) MACHINES / TOOLING / EQUIPMENT | |  | (F) MOTHER NATURE / ENVIRONMENT/PACKAGING | |
| D1 |  |  | E1 |  |  | F1 |  |
| D2 |  |  | E2 |  |  | F2 |  |
| D3 |  |  | E3 |  |  | F3 |  |
| D4 |  |  | E4 |  |  | F4 |  |
| D5 |  |  | E5 |  |  | F5 |  |
| D6 |  |  | E6 |  |  | F6 |  |
| D7 |  |  | E7 |  |  | F7 |  |
| D8 |  |  | E8 |  |  | F8 |  |

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| D4 | Causal Analysis | | |
| Escape Cause  *How did this defect escape the process and plant?* | | Occurrence Cause  *How was this defect created?* | Systemic Cause  *What systems failed such as Process Control, PFMEA, inadequate Control Plan, inadequate Work standards?* |
| Why 1: | | Why 1: | Why 1: |
| Why 2: | | Why 2: | Why 2: |
| Why 3: | | Why 3: | Why 3: |
| Why 4: | | Why 4: | Why 4: |
| Why 5: | | Why 5: | Why 5: |
| Root Cause: | | Root Cause: | Root Cause: |

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| --- | --- | --- | --- |
| D5  D6 | ESCAPE – Implement and Validate Corrective Actions to Address how it Escaped the Process | | |
|  | Action | Responsibility | Date Completed  (MM/DD/YY) |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |

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| D5  D6 | OCCURRENCE – Implement and Validate Corrective Actions to Address how the defect was made | | |
|  | Action | Responsibility | Date Completed  (MM/DD/YY) |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  | . |  |
| 6 |  |  |  |
| 7 |  |  |  |
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| D5  D6 | SYSTEMIC – Implement and Validate Corrective Actions to Address how the system failed to prevent | | |
|  | Action | Responsibility | Date Completed  (MM/DD/YY) |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  | . |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |

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| D7 | Prevent Recurrence & Read Across to Other Products and Processes |
| Address Similar Systems (Read Across / Prevention of Failure Mode Recurrence)  Y N Can this issue happen again?  Y N Has this been implemented on other parts and processes?  Y N Has a pokayoke been developed to prevent this issue from recurrence? | |
| |  |  |  | | --- | --- | --- | | Process / Item | Who Responsible | When | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | |

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| D7 | Review the following documents / systems | | | |
| Document | | Who Responsible | Completion Date | |
| Planned | Actual |
| Management System Manual | | - |  |  |
| Standardized Work Instructions | |  |  |  |
| Inspection Work Instructions | |  |  |  |
| Layered Process Audits (LPA) | |  |  |  |
| Process Flow Charts | |  |  |  |
| Process Control Plans | |  |  |  |
| Design FMEA / Process FMEA | |  |  |  |
| Packaging Instructions | |  |  |  |
| Gages | |  |  |  |
| PPAP | |  |  |  |
| Engineering Change Approval | |  |  |  |
| Preventive Maintenance System | |  |  |  |
| Other: | |  |  |  |

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| D8 | Congratulate Team | | |
| Was this problem solving exercise effective? Has it been verified with a follow-up? | | | |
| Yes, No | | Signature / Title / Date | Findings |
|  | | General Manager |  |
|  | | Quality Manager |  |