

FREE MANUFACTURING QUALITY TEMPLATE

In-Process Quality Inspection Checklist

Use this 60-point checklist to verify control plans, WIP traceability, first-piece release, process parameters, workmanship, measurements, gauge status, sampling, nonconformance, reinspection, records, and corrective action.

Line / machine

Inspection date

Product / order

Inspector / shift

Internal manufacturing template. Apply current control plans, drawings, specifications, sampling rules, customer requirements, measurement procedures, process limits, and nonconformance controls as the controlling inspection criteria.

1. Inspection plan, control plan, specifications, and inspection readiness

1

Confirm the current approved drawing, specification, control plan, inspection instruction, work instruction, or quality standard is available at the point of inspection.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

2

Verify inspection characteristics, acceptance limits, tolerances, sample size, frequency, method, and responsibility are clearly defined for the active product or process.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

3

Confirm the production order, product or part number, revision, operation, line, machine, and inspection stage match the documents being used.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

4

Verify special, critical, safety-related, customer-specific, or regulatory characteristics are clearly identified where applicable.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

5

Confirm required gauges, fixtures, samples, test equipment, inspection forms, reference standards, and trained personnel are available before inspection begins.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

6

Record facility, line or machine, product, order or batch, operation, shift, inspector, date, and inspection-plan reference.

IN-PROCESS

FINAL STATUS | Enter

PRODUCTION OWNER | Enter

QUALITY APPROVAL | Enter

Execution tip: Begin with the current control plan or inspection instruction. The inspector should know exactly what characteristic to check, how to check it, how...

2. WIP identity, lot and batch traceability, material status, and line clearance

7

Confirm work-in-process is positively identified by product or part number, order, batch or lot, quantity, and current operation or process stage.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

8

Verify raw-material, component, subassembly, and WIP lot or batch traceability is preserved through the inspected operation where required.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

9

Confirm only released or approved material and components are present at the workstation and restricted or rejected material is segregated.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

10

Check labels, travelers, routers, kanban cards, barcodes, ERP or MES records, and physical WIP identity agree with one another.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

11

Verify previous-product material, labels, tooling, components, samples, or documents are removed or controlled after a changeover where line clearance applies.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

12

If product identity, revision, material status, or traceability is uncertain, hold the affected WIP and prevent further processing until resolved.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Before checking quality, confirm you are inspecting the correct WIP. Product, revision, material lot, status, and process stage should agree across...

3. Start-up, setup verification, first-piece approval, and changeover release

13

Confirm machine setup, tooling, fixture, program, recipe, change parts, process parameters, and material configuration match the active production requirement.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

14

Verify required first-piece, first-off, setup, start-up, or changeover inspection is completed before normal production release.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

15

Check all defined first-piece characteristics are measured or verified against the current specification and results are recorded.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

16

Confirm the first-piece sample is traceable to the machine, setup, cavity, tool, line, time, operator, and material lot where these factors affect quality.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

17

Verify failed first-piece results trigger adjustment, containment, repeat inspection, and authorized approval before production resumes.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

18

Confirm first-piece approval, quality release, or other required authorization is completed and visible before full-rate production continues.

CRITICAL

IN-PROCESS

C

PC

NC

NA

Execution tip: First-piece or start-up approval should confirm the process is capable of making acceptable output before normal volume continues. Do not treat it...

4. Process parameters, machine settings, control limits, and operating discipline

19

Confirm critical process parameters such as temperature, pressure, speed, torque, time, flow, concentration, weight, or other defined settings are within approved limits.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

20

Verify actual machine or process settings match the approved recipe, setup sheet, process specification, or validated parameter range.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

21

Check alarms, interlocks, limits, automatic controls, sensors, or process-monitoring features related to quality are active and not bypassed without authorization.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

22

Confirm temporary adjustments, deviations, alternate settings, or process concessions are formally approved, time-limited, and traceable where permitted.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

23

Review parameter drift, repeated manual adjustments, frequent alarms, unstable readings, or recurring near-limit conditions for escalation.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

24

If a critical process parameter is outside the approved range, contain affected WIP and follow the site's deviation or nonconformance process before continuing.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Quality inspection should verify both the product and the process conditions that create it. Record actual values rather than relying only on a green...

5. Visual workmanship, defects, appearance, assembly, and completeness checks

25

Inspect WIP for cracks, chips, dents, scratches, burrs, deformation, contamination, discoloration, corrosion, incomplete features, or other defined visual defects.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

26

Verify workmanship requirements for finish, alignment, orientation, assembly, fit, weld, bond, seal, coating, print, label, or other visual characteristics are met.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

27

Confirm required components, fasteners, inserts, labels, subassemblies, protective items, and features are present and correctly installed.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

28

Check cosmetic zones, defect classes, reference samples, boundary samples, visual aids, or customer appearance standards are current and consistently applied where relevant.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

29

Verify recurring defect patterns by cavity, tool, machine, station, operator, material lot, or shift are recorded and escalated rather than treated as isolated defects.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

30

Record visual defect type, location, quantity affected, sample ID, evidence, and disposition where a nonconformance is found.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use defined defect criteria and reference standards. Terms such as 'good' or 'looks okay' should be backed by approved workmanship requirements,...

6. Dimensional, functional, performance, and measurement verification

31

Measure required dimensions, thicknesses, diameters, lengths, weights, gaps, clearances, torque, force, or other quantitative characteristics according to the approved method.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

32

Verify measured values meet the current drawing, specification, control limit, tolerance, or acceptance criterion.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

33

Complete required functional, fit, leak, electrical, pressure, performance, destructive, or other in-process tests where specified.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

34

Confirm inspection points, measurement locations, datum references, sample preparation, and test conditions match the approved inspection method.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

35

Record actual values, units, sample or cavity identity, equipment ID, time, and result rather than recording only a generic pass where data is required.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

36

Escalate results showing significant drift, unusual variation, repeated near-limit readings, or inconsistent measurements even when individual samples remain within specification.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Record actual measurement values for critical characteristics. A simple pass/fail can hide drift that is visible well before the specification limit is...

7. Inspection equipment, calibration status, fixtures, and measurement validity

37

Confirm calipers, micrometers, gauges, scales, torque tools, test equipment, fixtures, masters, and other devices used for acceptance are suitable for the characteristic checked.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

38

Verify controlled measuring equipment is within current calibration or verification status and uniquely identifiable.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

39

Check range, resolution, accuracy, fixture condition, measurement capability, and environmental suitability are appropriate for the required tolerance or decision.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

40

Inspect gauges and fixtures for visible damage, wear, contamination, loose components, missing features, or conditions that could invalidate the result.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

41

Confirm operators and inspectors use the approved measurement technique and understand any zeroing, master-check, setup, or environmental requirements.

IN-PROCESS

C

PC

NC

NA

Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

42

If inspection equipment is out of status, damaged, or suspect, contain affected acceptance decisions and assess whether previous inspection results require review.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: An acceptable product decision depends on valid measurement. Check the gauge status before trusting the result, especially for tight tolerances or...

8. Sampling frequency, SPC trends, reaction plans, and inspection discipline

43

Confirm required inspection frequency, sample size, time interval, quantity interval, cavity coverage, or event-based sampling is followed throughout the production run.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

44

Verify missed, delayed, skipped, or incomplete inspections are visible and escalated according to the site's quality process.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

45

Review control charts, run charts, trend data, capability information, defect rates, or other process-monitoring data where used.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

46

Confirm defined statistical or process reaction rules are understood and followed for out-of-control signals, trends, shifts, runs, or other abnormal patterns.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

47

Verify increased inspection, containment, sorting, process adjustment, or other reaction-plan steps are documented when triggered.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

48

Confirm inspection frequency is reviewed when defects recur, processes change, supplier or material risk changes, or capability deteriorates.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Sampling is useful only when it is performed at the defined frequency and linked to a reaction plan. Missed samples and uncontrolled trend signals...

9. Nonconforming WIP, containment, segregation, rework, reinspection, and disposition

49

Identify and segregate nonconforming or suspect WIP immediately so it cannot continue uncontrolled through production or be mixed with acceptable product.

CRITICAL

IN-PROCESS

Accept

Needs review

Hold WIP

LIVE PHOTO | Add

Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

50

Determine the potentially affected quantity using the last known-good inspection, process history, machine or cavity information, material lots, and production timing as applicable.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

51

Create the required nonconformance, deviation, hold, defect, or quality-event record with clear defect evidence and specification reference.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

52

Confirm rework, repair, use-as-is, concession, scrap, sort, return, or other disposition is authorized by the required function before execution.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

53

Verify reworked, repaired, sorted, or adjusted WIP is reinspected against the defined acceptance criteria before release.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

54

Confirm released and nonconforming material status is updated physically and electronically after final disposition to prevent unintended use.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Contain first, then decide disposition. Clearly identify how much product may be affected from the last known-good inspection to the point where...

10. Inspection records, trend review, CAPA, release, and quality sign-off

55

Confirm inspection records are complete, legible, attributable, traceable to product and lot, and retained according to the approved record-control process.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...

56

Verify corrections to inspection records preserve the original information and follow the site's data-integrity and record-correction rules.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...

57

Review recurring defects, process drift, missed samples, repeated adjustments, high rework, scrap, and recurring holds for systemic corrective action.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...

58

Assign corrective actions to named owners with due dates, containment, root-cause expectations, required evidence, and effectiveness criteria where appropriate.

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...

59

Verify effectiveness through repeat inspection, defect trends, capability or process data, audit follow-up, or other objective evidence before action closure.

CRITICAL

IN-PROCESS

Inspection item	Result / value	Owner	Evidence	Action
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Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...

60

Record final inspection status, unresolved critical quality risks, affected WIP, follow-up actions, next review point, inspector, production owner, quality reviewer, date, and approval.

CRITICAL

IN-PROCESS

FINAL STATUS | Enter

PRODUCTION OWNER | Enter

QUALITY APPROVAL | Enter

Execution tip: Use in-process inspection records to improve the process, not only to prove checks occurred. Repeat defects, drift, missed inspections, and...