

Quality Procedure

Testing & Inspection

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When selecting attributes to inspect, focus attention on key attributes and attributes which will be concealed by future assembly steps, before the next inspection. Consult the [Engineering Manager](#) as needed when selecting attributes to inspect.

1.4.3 Receiving Inspection

1.4.3.1 General

Upon receipt of materials and products, the [Receiving Inspector](#) verifies the number of delivered units, checks the markings and identification of packages, and inspects all packages for any signs of tampering or damage.

If all these checks and inspections are satisfactory, the [Receiving Inspector](#) signs the delivery receipt. If not, any shortages or damages are noted on all copies of the delivery receipts.

The received containers are then moved to the designated inspection area, a copy of the purchase order is retrieved, and the packing slips are removed from the containers. Upon opening the containers, the goods are verified against the purchase order, and the packing slip and the contents are examined visually for any signs of damage.

The purchase order is stamped '**RECEIVED**' and is signed and dated by the [Receiving Inspector](#). All receiving inspections are recorded using the [Receiving Inspection Log](#).

On critical parts and components, as determined by the [Quality Manager](#), precision inspection and testing may be performed. This type of inspection includes:

1. Review of relevant material certificates, supplier inspection records, and compliance certificates;
2. Random sampling based on the statistical technique specified;
3. Visual inspection to detect any damage or other visible problems;
4. Perform measurements and testing against specified requirements as required;
5. Record sample size, measurement, and inspection test results using the [Inspection & Test Data Sheet](#).

All purchased material that influences the manufacture of, or is intended for use as part of, deliverable products is subject to inspection and testing by the [Quality Inspectors](#).

1.4.3.2 Documentation Verification

Begin an [Inspection & Test Data Sheet](#) indicating the inspection level, e.g., first-article or 100% receiving inspection for the material or products. Record the part number and description, date received, quantity received, inspected and rejected, work or purchase order number, and supplier ID.

1. Verify that the engineering drawings and specifications used for inspection are at the appropriate revision level;
2. Compare the documentation and the material received to the Material Identification Label(s), to assure that each label is accurate;
3. Have Shipping/Receiving correct any label discrepancies;
4. Verify that material certification was received; ensure the certification matches the material received;
5. Notify the [Purchasing Manager](#) immediately if certification is missing or incorrect as required;
6. The [Quality Manager](#) will contact the vendor and request a scanned copy of the certification;
7. Reject material for which certification cannot be obtained;
8. Verify all material markings and/or packaging required by the drawing, specification, or PO;

9. Verify that the material was purchased from an approved supplier;
10. Verify that the manufacturer part number and/or supplier and supplier part number are identical to those listed in the specification;
11. Verify that any receipt record is accurate and complete;
12. For material with a finite shelf life, verify that the correct expiration date has been recorded;
13. Record the expiration dates.

Record the following documentation verification results on the *Inspection & Test Data Sheet*.

1.4.3.3 Inspect Material at the Supplier

The [Quality Inspector](#) will inspect and accept the material at the supplier prior to shipment. Any such material received properly labeled as "**Accepted**" and accompanied by (or received separately) a completed *Inspection & Test Data Sheet* has passed incoming inspection and need not be re-inspected.

1.4.3.4 Inspect Material at Incoming Inspection

The [Quality Inspector](#) will inspect the material according to the inspection criteria by randomly selecting samples.

Record inspection results on the *Inspection & Test Data Sheet*, attaching additional sheets as necessary and highlighting any nonconformities.

1.4.3.5 Accepted Material

A shipment of material is accepted if document verification is satisfactory and the material meets or exceeds all of the acceptance criteria in the inspection criteria.

For sample inspection, acceptance criteria are met if the number or percentage of nonconformities found in the sample is less than or equal to the acceptance number for the sampling plan.

The [Quality Inspector](#) will complete the inspection report, including quantity accepted, quantity rejected, and page numbering. Date, initial, and stamp the report. Attach material certifications to the *Inspection & Test Data Sheet* if applicable.

Identify the status of the material as "**Accepted**" by attaching the appropriate material label. Retain (file) the *Inspection & Test Data Sheet* and move material to inventory as required.

1.4.3.6 Rejected Material

A shipment of material is rejected if document verification is not satisfactory or if the material does not meet one or more of the acceptance criteria in the inspection criteria.

Sample inspection and acceptance criteria are not met if the number or percentage of nonconformities found in the sample is greater than or equal to the rejection number in the sampling plan.

The [Quality Inspector](#) will complete the *Inspection & Test Data Sheet*, including quantity accepted, quantity rejected, date, and initial the report. Attach material certifications to the report. Rejected material will be quarantined.

The [Quality Inspector](#) will identify the status of the material as "**Rejected**" by attaching the appropriate material label. Record the defects in the *Nonconforming Product Report* and retain (file) the Inspection Report. Rejected incoming material will be dispositioned.

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1.4.3.7 Release Prior to Inspection

In rare instances, a shipment of material will be needed by production before the incoming inspection is complete.

At the discretion of the [Quality Manager](#), part or all of the shipment (less samples retained for inspection) may be released to production, provided a positive recall system is in place to identify and recover the shipment if it is rejected when inspected.

Lot tracing to the shipment and to all stocking locations and assemblies is one positive recall method.

1.4.4 First-article Inspection

1.4.4.1 General

[Quality Inspectors](#) will examine the first-article as described below by reference to all applicable drawing prints, machining samples, programs, or other data, from each machining process which is to produce more than three (3) identical parts:

1. Examine all critical dimensions affecting product performance for length, distance, outside diameter, inside diameter, threads, taper, angle, height, depth, width, surface finish, diameter, and radii, etc.;
2. Fit and function test the machining processes using the test or sample parts when specified on the drawings;
3. Perform a first-article inspection on each consecutive part until a part has been produced which is within the target range for all dimensions;
4. Initial or stamp the dimensional record and/or traveler sheet with acceptance of the process when a successful first-article inspection is achieved for the particular work in progress.

All first-article inspections are recorded in the [Inspection & Test Data Sheet](#) and logged in the [Inspection & Test Log](#) and are retained to provide traceability, while any nonconformances are documented using the [Nonconforming Product Report](#) and processed accordingly.

1.4.4.2 When to Perform First-article Inspection

First-article inspection is recommended when any of the following occur:

1. An item is supplied by a vendor for the first time;
2. A new revision of an item is supplied;
3. A change occurs in the processing of an item;
4. A change occurs in the tooling for an item.

When the criteria for performing the first-article inspection are met, the [Quality Manager](#), the [Engineering Manager](#), the [Manufacturing Manager](#), and the [Purchasing Manager](#) are notified. These four functions jointly decide to perform or waive first-article inspection and/or trial assembly.

If first-article inspection and trial assembly are waived by all four functions, the first-article inspection elements of this procedure terminate; otherwise, first-article inspection and/or trial assembly is performed according to this procedure.

1.4.4.3 Who Performs First-article Inspection

Coordinated by the [Quality Manager](#), first-article inspection may be performed by any of the following: