To Scrap Or Not To Scrap

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Every manufacturer deals with shipments of nonconforming parts (also known as “part deviation”) from suppliers. Quality control systems simply do not eliminate nonconforming parts altogether. However, by better managing deviation and minimizing its impact, manufacturers can reduce costs, strengthen customer relationships, and build stronger ties with suppliers and partners. Taking it one step further, manufacturers today are actually creating a strategic advantage by adopting a proactive approach to working with suppliers and maintaining efficient internal review/approval processes.

Let’s look at ways these companies are turning part nonconformance into a strategic advantage through supplier collaboration and communication, effective workflow for short-term corrective actions, cause analysis, tracking, auditing, and SRM integration.

Risk Versus Reward

Due to the prevailing urgency to control costs, manufacturers often fast-track unproven suppliers offering lower material costs that can be passed onto customers or boost margins on existing products. But because of their unfamiliarity with the manufacturers’ needs, these new suppliers produce parts and materials that don’t conform to the manufacturer’s specifications. And the problem isn’t limited to new suppliers: In an effort to stay competitive with low-cost competitors, manufacturers report that existing suppliers with a long history of compliant shipments are rushing their products to market and increasing the incidence of part nonconformance.

Unfortunately, the drive to lower costs in the short term often results in higher rates of nonconforming parts, which in turn increase the risk of:

- **Higher long-term costs** — Initially, a supplier may absorb the cost of a nonconforming shipment. However, over time the supplier will look to recoup these costs in some way from existing customers or risk going out of business. Ultimately, product deviation can raise costs for both suppliers and customers through higher shipping expenses.
- **Production delays** — With nonconforming parts, manufacturers have a choice: Either wait for a new, corrected shipment, or develop a workaround that makes use of the nonconforming shipment. Both options mean production delays.
- **Tarnished customer relationships and market reputation** — Whether the manufacturer waits for a new shipment, or develops a workaround, it jeopardizes customer goodwill and reputation. Delays can motivate customers to seek out other sources, while a workaround may introduce quality issues that threaten a manufacturer's reputation.

Turning Deviation into a Strategic Advantage

Regardless of economic conditions, part deviation will continue to be a challenge for manufacturers. Even in the best of times, proven suppliers will release nonconforming parts. Today's market leaders have acknowledged this reality and are taking a more proactive approach to working with suppliers in order to minimize the negative impact. They recognize that having a realistic strategy for managing product deviation when it occurs — versus hoping it won't — is as important as any other quality initiative.

Here's how some emerging best practices are turning part nonconformance into a strategic advantage.

Supplier Collaboration and Communication

The most effective approaches to product deviation recognize that suppliers also have a vested interest in minimizing nonconforming parts. The costs of shipping and scrapping can significantly affect margins — and ongoing problems with nonconforming parts can jeopardize supply chain relationships and market reputation.

Manufacturers must encourage early notification of part nonconformance. Unfortunately, simple emails aren't the answer. Deviation needs a dedicated communication channel that can deliver urgent messages that won't get lost in the daily email deluge. Ideally, suppliers will have access to an established Web-based tool that allows them to alert manufacturers to potential problems the moment a nonconforming order is recognized. The sooner the supplier notifies the manufacturer, the more time the manufacturer has for corrective action.

By providing a dedicated communication channel, the manufacturer can also enforce its own processes for deviation notification. They can mandate which information they'll need from the supplier and who receives the information within the manufacturer's organization, allowing the recipient to prioritize any corrective action.

Effective Workflow for Short-Term Corrective Actions

After receiving the communication from the supplier, the manufacturer must make a decision on whether to reject the nonconforming shipment or take corrective action. Any decisions usually begin with a supplier quality engineer. The engineer may quickly decide whether a simple design modification is in order or whether the nonconforming parts are still adequate. However, for complex products with multiple engineering disciplines and interdependencies, manufacturers may want an established workflow for decisions related to nonconforming shipments. This process often involves multiple levels of review and approval, wherein authorized experts are responsible for specific decisions. As a result, the manufacturing organization needs visibility into the process to ensure the decision-making stays on track.

One proven solution to this challenge is an operational dashboard that provides a real-time view of the workflow related to nonconforming parts. All parties can review the status of each submitted review, see who is responsible for approval, then easily determine the cause of any delays. The increased visibility also enforces accountability within the review/approval process.

Cause Analysis, Tracking, and Auditing

In addition to the real-time tracking of the review/approval process, companies interested in turning their approach to nonconforming parts into a value-added best practice need easy access to summary historical data. A historical perspective enables the identification of problems with a specific supplier or component. As a result, one can better determine whether an ongoing issue with nonconformance is rooted in a faulty process, a poor design, or lack of a particular skill. Component deviation isn't always a supplier problem. With a historical view of issues submitted by suppliers, a manufacturer can determine if the problem is an engineering flaw or quality issue at the manufacturer.

SRM Integration

The longer nonconforming parts go undetected, the more they cost a manufacturer in time, effort and lost partner and customer goodwill. To prevent deviation from mushrooming into significant problems down the road, manufacturers should explore how to integrate their product deviation strategy with their supplier relationship management (SRM) tools and processes.

For example, in cases where a supplier continues to ship nonconforming parts, the manufacturer can use the labeling functionality of an SRM solution to prevent additional shipments. This applies to those SRM solutions where the supplier

accesses the manufacturers labeling solution through a Web-based tool. Also, if the nonconforming parts aren't detected until they reach the manufacturer, the manufacturer can use the labeling solution to hold on future shipments until it determines the impact and cause of the deviation.

Deviation Happens

It's impractical to think that quality control systems will eliminate nonconforming parts altogether. Industry-leading manufacturers must find ways to address deviation as it occurs to minimize its impact on supply chain operations and isolate its causes. A more proactive approach to working with suppliers allows organizations to collect the information that's critical to identifying the source of deviation. Manufacturers also need established processes and workflow that enforce a timely review/approval process within their own organization.

By treating nonconforming parts as an inevitable part of doing business — versus a nuisance or distraction — manufacturers can realize significant savings by minimizing scrapped shipments and fine tuning product design. They can also strengthen customer relationships by minimizing delays, while forging stronger ties with suppliers and supply chain partners.

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