

Thought Leadership Series

Accelerate Spare Parts Fulfillment to Optimize Warehouse Operations



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Executive Summary

When equipment needs maintenance or repair, the availability of the right part can determine how quickly it returns to service. That makes spare parts fulfillment a critical part of operational readiness and uptime.

Spare parts operations can manage thousands of SKUs with very different demand patterns. Some components move frequently, while others are needed less often but become urgent when the equipment they support goes down. Managing this complexity requires an inventory strategy that considers both demand and operational importance when deciding how parts are positioned and replenished.

Space adds another constraint. Growing inventories compete for valuable warehouse capacity, creating pressure to make better use of the existing footprint without sacrificing access to parts.

An effective spare parts fulfillment strategy connects inventory positioning with storage design and execution. Software provides the visibility needed to manage inventory accurately, while automation can improve how parts are retrieved and moved through the warehouse. The objective is reliable access to the right parts when needed, with the capacity and flexibility to respond as requirements change.

Key takeaways

- **Parts availability support uptime.** Inventory positioning should reflect operational importance along with demand when deciding how spare parts are stocked and fulfilled.
- **Storage density must preserve access.** High-density storage can increase capacity while maintaining timely access to critical parts.
- **Inventory visibility enables faster response.** Accurate inventory data supports faster fulfillment and replenishment decisions.



Understand which parts matter

SKU velocity is an important aspect of warehouse design, but spare parts require a broader view of inventory. A fast-moving component needs to be positioned for efficient picking and replenishment. A slower-moving part can carry greater operational importance if the equipment it supports cannot operate without it.

These differences should influence how inventory is positioned and accessed. Demand helps decide how frequently a part needs to be retrieved, while service requirements help determine how quickly it must be available. Part size and handling characteristics also affect which storage methods are required.

Considering these factors together helps operations make more informed decisions about where parts are stored and how they're replenished.

Reduce delays from order to shipment

The urgency of a spare parts order can be different from a typical fulfillment request. When equipment is waiting for a component, delays in locating or retrieving that part can extend the time it remains out of service.

Fulfillment priorities should reflect the urgency of the order, with time-sensitive parts receiving immediate attention. Pick paths and retrieval methods affect how quickly parts move through the warehouse. Reducing unnecessary travel and handling can shorten retrieval and improve response times.

Retrieving the part is only one step. Picking, packing and preparing an order for shipment also affect how quickly it leaves the facility. Evaluating the entire process, from order release through shipment, can reveal delays that might be overlooked.

The fastest possible movement is not helpful if it results in the wrong part in the wrong place, at the wrong time, in the wrong configuration.

Dan Avila

Vice President of Sales, FORTNA

Turn visibility into operational control

Having the right part in inventory only matters if the operation can locate it when needed. A system may show that a component is available, but if the physical inventory does not match the record, fulfillment can be delayed.

Warehouse software provides visibility into spare parts availability and movement through the facility, helping teams maintain inventory accuracy and respond to demand. Reliable inventory information also supports replenishment decisions by identifying when stock needs to be restored, especially for parts with unpredictable demand.

The Warehouse Execution System (WES) helps connect inventory information with the work taking place on the warehouse floor. Using real-time operational data, WES can coordinate tasks across manual and automated processes and adjust priorities as order requirements change.

Use space without sacrificing access

Spare parts inventories can consume significant warehouse capacity, especially when businesses need to maintain a broad assortment of components. Even parts with lower demand require storage space, but expanding the facility to accommodate growing inventories isn't always practical. The challenge is making better use of the existing footprint while maintaining prompt access to parts.

High-density storage can help address both needs. Automated storage and retrieval systems (ASRS) can increase storage capacity while keeping inventory accessible. The right configuration depends on the parts being stored. Smaller components may be a fit for tote or bin-based systems, while larger items may need solutions designed for their size and handling requirements.

Storage is only one side of the discussion. How parts move through the warehouse also affect fulfillment speed. Goods-to-person (GTP) technologies can reduce operator travel by bringing inventory directly to picking stations, while autonomous mobile robots (AMRs) can support movement between processes. Other parts may be better suited by simpler storage and retrieval methods. The goal is to select technologies that work together to provide the right balance of support capacity, accessibility and response time.



Build flexibility into the operation



The same design decisions that improve storage and fulfillment today also need to account for changing requirements in the future. New equipment introduces different components, parts portfolios expand and demand patterns shift over time.

Smart automation can help operations respond to those changes by connecting storage and material movement with intelligent software. As inventory volumes and characteristics of parts evolve, storage and fulfillment systems need to accommodate new demands. Integrating additional technologies with existing systems and processes can provide further flexibility while maintaining inventory visibility or access.

Planning for flexibility in the beginning helps protect the value of warehouse investments as business needs change. It also supports the larger objective of spare parts fulfillment by keeping the right components accessible so equipment can return to service quickly.

FORTNA

FORTNA CAN HELP

As a system integrator, FORTNA helps organizations design and optimize spare parts distribution operations around their inventory profiles and service requirements. Using proven design methodologies and proprietary tools, FORTNA identifies the best-fit automation technologies to improve fulfillment performance and support long-term flexibility.

Contact us today at www.FORTNA.com