

State-of-the-Art In Service Parts

Mazak

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INTRODUCTION

The efficiency of service/replacement parts department operations plays a critical role in today's manufacturing world. This holds true because the more time it takes to get a service part, the longer a particular piece of equipment or system sits idle, crippling a company's overall production output.

An effective parts department has to not only ship/deliver as quickly as possible, but also have the capacity to support all its company's existing equipment in the field, both old and new. This paper charts the transformation of the Mazak Parts Department in Florence, Kentucky, and how the company incorporated special systems, software and processes – typically associated with large distribution centers – into its service parts operation and significantly boosted speed, efficiency, capacity, storage flexibility and most importantly its same-day-ship rate to 97 percent.

Prior to the transformation, Mazak would – and continues to – receive numerous orders late in the afternoons, some of which would fail to ship that day because the cutoff for ground shipping is typically 6pm. Plus, the sheer volume of late-day orders made it impossible for the company to keep pace.

As opposed to horizontal carousels, Mazak opted for vertical lift module (VLM) parts storage. Horizontal carousels are typically used in large-scale product distribution center operations. Many of Mazak's service parts are very small, such as tiny O-rings and flat washers, and somewhat long like machine tool rails, ballscrews or linear guides. In addition to various

individual part sizes, the system handles big awkward machine tool components such as pumps and motors.

Horizontal systems were unable to provide the flexibility Mazak needed to accommodate such a wide scope of service part types. With the VLM, the company became the first (machine tool builder) to marry such a system with pick and pack conveyor automation. Doing so gave them the needed parts handling flexibility.

MAZAK PARTS DEPARTMENT OVERVIEW

The Mazak 45,000-sq-ft service parts department houses storage systems, pallet racks, a series of conveyors, packing and pick up stations. Within the department's staggered shift operations, a partial shift starts early in the day and handles receiving and cycle counting. A second crew works from 10 am to 7 pm for picking and packing, while the rest of the crew loads and cleans up from noon until 9 pm. To ensure customers have full 24/7 parts accessibility, the parts department has an after-hours cell phone number.

Customers can sign up for this service when they register as a user on the Mazak Parts Online Store. If a call comes in, on-call personnel use home laptops to access the Mazak system and enter the order as well as help the customer quote the parts they need. And depending on the customer's location, Mazak will use its after-hours logistics to get it to the customer, especially if it's an emergency situation, which typically happens about four times per week.

The department never really closes and is open six days per week as well as provides an after-hours number. As long as the parcel carriers are open/operating, so is Mazak's Parts Department. Customers can also order online, and Mazak accepts all major credit cards for parts orders. In the unlikely event a part is out of stock in North America, Mazak can ship it – with overnight delivery – from one of its nine other parts hubs located worldwide.

AUTOMATION

As a result of all the automation incorporated into Mazak's Parts Department, the company economizes its storage space and maximizes efficiency without having to increase manpower. The system's trays store in the VLM approximately an inch apart from one another. Each tray accommodates up to 1,100 lb worth of parts, and Mazak uses two different size trays – 8.5' long and 10.5' long – that allow the company to house more parts in the same amount of floor space.

The entire cell operates with just six attendants – two individuals are pickers and four packers. Prior to such automation, those tasks would have required double the amount of current manpower. This is possible because instead of attendants

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having to physically travel to the parts, the automation brings the parts to them.

Once VLM trays are brought to the attendants, they scan part barcodes to ensure the right parts are there. Then a batch station displays in what order the parts should be grouped together in a tote that then continues to move down the conveyor for the next required item. The system displays quantity and exactly what items/parts were picked, and fulfilled orders then move to the packing stations.

SOFTWARE

Manufacturing customers rarely, if ever, order parts at the start of the day. Instead, orders come in at end of the day, and customers need them the next day first thing in the morning. Unfortunately, all the major parcel carriers have strict pickup times, and service parts departments, including Mazak's, must work within those constraints.

Mazak speeds and streamlines parcel pickups and shipping because its parts department software is tied into that of the company's main carriers – UPS and FedEx. This allows Mazak to – within one half hour of receiving and entering a parts purchase order into the system – send the customer a tracking number.

Once order totes route to the packing area, all the individual part data automatically transfers via barcodes from Mazak's system into that of its carriers. Prior to such integration, attendants had to manually enter in all the data.

Mazak's IT department worked closely with the IT departments of its two main parcel carriers to set up the system. When an order prints out in Mazak's stock room, data transfers to a specific shipping area where attendants log on to the carrier's software system. The carrier's system then automatically has the shipping address, the party that will pay the shipping cost, the type of shipping priority the customer wants, size and weight of the container and the customer's email address.

With all this data, the carriers will, in turn, send Mazak information such as tracking numbers and freight charges. All of which automatically enters into Mazak's software system that then uses the information to close out the order and notify the customer that their order is on its way.

PROCESSES

Standardized shipping box sizes and a sophisticated contact routing system were two key service parts department process changes at Mazak. While the standardized box sizes help streamline shipping operations, especially on the parcel carrier side of the equation, the contact routing system ensures customers connect with a real person that can assist them as quickly as possible.

Customers can contact the Mazak service parts department via a toll-free phone number, the department's designated email address or the Mazak website. About 65 percent of customers contact the department through email.

Within the parts call center, Mazak's contact routing system immediately sends incoming calls to the next available agent. Fourteen people man the call center, and on any given day, some of that group will be logged in to answer calls, while the others will handle the incoming emails.

To further increase speed and efficiency, Mazak gives call center agents full visibility. They can view, in real time, all the current parts stocked at every one of Mazak's manufacturing facilities as well as at its service part hubs around the world.

Agents also have easy access to all necessary documentation such as machine manuals and parts lists. The goal – much like with Mazak Multi-Tasking machines – is Done In One® when it comes to providing parts call center agents with all the customer service tools they need to fully help customers and resolve all their issues within one call.

The call center initiates part orders. As they enter orders, a printout automatically generates in the stock room. The automated VLM system then takes over from there.

SUMMARY

For Mazak, special systems, software and processes incorporated into its state-of-the-art machine tool service parts operations have heightened speed, efficiency and capacity. But most importantly, the company has boosted its same-day-ship rate. These enhancements also forced Mazak's parts center to be more process oriented, which, in turn, further enhanced the company's performance quality as well as customer satisfaction

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ON LINE STORE

<https://www.mazakusa.com/customer-support/parts-support/>
(after hours service available through on line store)

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PHONE

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CONTACT CENTER HOURS

MON-FRI 8 am - 7 pm (EST)

SAT 9am - 2pm (EST)

