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## MRO Today

### Is your tool crib the pits?

*The key to a well-managed site is knowing what's in inventory and where those items are*

by Paul V. Arnold

You can run a tool crib a thousand different ways. You can manage one and hold any of two dozen titles. You can visit a site and be surrounded by fences or shoppers.

If you've seen one tool crib, you haven't seen them all.

"I've seen countless cribs over the past 35 years and I still see different arrangements all the time," says Roy Talyor, district sales manager for Lyon Metal Products, a storage equipment manufacturer based in Aurora, Ill. "It's amazing how diverse they can be."

In all this diversity, however, Talyor and scores of people who are in charge of tool cribs agree that there is a common thread. Whether your crib resembles Fort Knox or a grocery store, the key to successfully managing and maintaining this area is having the ability to keep track of inventory.

"Bottom line, you have to know what you have, where it's going and where it's been," says Jim Wilson, parts and equipment manager for Team Green, an auto racing outfit that has won an Indianapolis 500 and an Indy circuit points title during the past four years.

Wilson takes care of the tool needs at the team's 44,000-square-foot facility in Indianapolis. Besides room for cars, tractor-trailers and buses, there is plenty of space for engine building, metal fabricating, welding and painting. By keeping track of inventory, Team Green stays on track . . . and covers it at more than 200 mph.

"There are thousands of parts for each of our four cars," says Wilson. "You have to be prepared and organized and good at what you do."

But you don't have to conquer the Brickyard to be all those things . . . or to be able to turn your tool crib into a well-oiled machine.

Here are ways that several facilities in the industrial city of Columbus, Ind., address their tool crib problems by improving their tracking capabilities.

#### **Solution No. 1: Restrict access to an open crib**

Beth Lewis is on a mission. Within the next six months, she

#### **A high-performance crib**

Roy Talyor is an expert on tool cribs. As a salesman for the past 35 years with Lyon Metal Products, he has worked with countless companies to optimize their crib area and make it more efficient. His credo: a place for everything and everything in its place.

Here are "Talyor's Tips" for improving your crib's capabilities and

would like to do a complete makeover of the crib area in one of the two buildings at Enkei America, a company that manufactures tire rims for cars and trucks.

“On a scale of one to 10, the tool crib is currently a four,” says Lewis, the plant’s inventory supervisor. “I want to see it get to be a 10.”

The building’s gray and dingy crib had been overlooked in the otherwise cared-for facility.

“We have a philosophy at Enkei of cleanliness and organization,” says Lewis. “We shut down everything for 15 minutes every day during first shift to clean. Everybody cleans their work area and organizes it. We need to bring that philosophy to the tool crib. We have to know what we have and where those items are. Right now, we don’t know that information most of the time.”

Enkei America has had a free-to-roam system in place for its two tool cribs since the plant opened in 1987. If you need a tool or a part, you walk in and grab it. There are no attendants to assist or monitor the shoppers.

“The biggest concern we face is being able to locate items and keep our inventory numbers accurate,” says Lewis. “What happens is someone looks for a tool, picks up three or four and then realizes this isn’t what he needs. He’ll lay the tools back in a drawer or location where he didn’t find them.

“So when we do inventory, we will count those misplaced items in the wrong location and note that we are low in the area where those tools should be in. Then we order stuff that we don’t need and have an incorrect number in the other area.”

Lewis hopes to eliminate many of those situations by incorporating what she says is a half-open/half-closed system.

“We will restrict the amount of personnel who can go into the crib,” she says. “We will lock it up and give keys to specific personnel, such as supervisors, lead operators, setup-type operators. Those people will make sure everybody’s needs are met. We will still be on the honor system, but we hope that fewer people in the crib will create fewer problems.”

To support that plan, Enkei will triple the size of the problematic crib and install new storage racks and compartmentalized storage units. Lewis believes giving every item a clearly defined and marked space will reduce tool hunting and inventory errors.

performance:

- 1) Identify a goal for your tool crib. Is it to increase usable storage space, relocate the site, get organized or manage inventory better?
- 2) Draw up a master plan. Factor in expansion and future growth.
- 3) Gather input from both crib personnel and crib users.
- 4) Conduct a feasibility survey based on objectives and space.
- 5) Make sure the crib is located on the factory floor and in an area closest to the most users.
- 6) Design aisle ways to handle not only foot traffic, but carts, pallets and forklifts.
- 7) Enclose the tool crib with wire fencing to limit access and improve the accuracy of inventory numbers.
- 8) Choose the right type of storage for each item. Options include floor storage, pallet racks, bulk racks, shelf units, drawers and specialty units.
- 9) Design extra floor space for a receiving area and a check-in table.
- 10) Use the 80-20 rule of storage. Put fast-moving items closer to the checkout area.
- 11) Store items that are in the same family (like hardware or boring and milling materials) together to speed up batch picking.
- 12) Use an alphanumeric bin locator system. The system lists the row, section, shelf level, shelf location and drawer/tray of all items.
- 13) Store free-issue, high-volume items outside the crib. Focus your tracking strategies on high-dollar and critical items.
- 14) Conduct an annual tool crib audit to improve organization and remove obsolete stock.

Enkei also has researched tool vending machines as a way to dispense some of the high-volume, low-cost consumable items that are currently in the crib.

With such a system, operators swipe an ID card and punch in a code to obtain equipment from the machine. The machine can be accessed on a real-time basis with a modem-equipped computer, allowing crib and purchasing personnel or a distributor to keep track of inventory and user information.

### **Solution No. 2: Stocked and locked**

Free-to-roam works for some companies. It doesn't for others.

NTN Driveshaft Inc. began converting its tool crib to a closed store this summer (1998). On August 1, crib clerks were the only personnel with access to the area.

NTN made the change to eliminate the stockpiling mentality that had overcome the plant.

"The biggest problem was with our tool inserts," says tool room supervisor Pam Henderson. "Everyone was stashing them at their work stations and in their tool boxes. We frequently had lines down because we were out of stock in the tool room. We weren't really out of them. There were plenty in the plant. They were in places they shouldn't have been. It's expensive to continually order them. Some of our inserts are \$60 apiece."

Henderson led a department by department (and tool box by tool box) sweep to reclaim stashed inserts. Then came the lockdown, and the savings.

"We have saved more than \$100,000 in our inserts in two months because we lock them up," says Henderson.

"Operators have to bring in used inserts to get new ones. It's eliminated the problem."

A new, computerized sign-out program, utilizing Microsoft Access software, also erases many of NTN's tracking problems.

"We used to have many people forget to fill out the forms and sign things out," says Henderson. "We run out of items, but my inventory sheet says we still have them. Nobody signed the item out and took it off inventory."

But with a gated system, crib clerks type in all orders, keeping inventory numbers accurate. Access tracks daily, weekly, monthly and annual usage of each item by department. Orders can be placed at the checkout gate, or by e-mail if the operator or department manager has access to a computer.

"I'd say 75 percent of operators have accepted the new method," she says. "You have some that think it's a hassle to have somebody look for something they've always gotten themselves. They'll get used to it."

### **Solution No. 3: The specialized satellite crib**

Installing gates and locks is how most plants address crib problems. But Cummins Engine Co. went the opposite direction at its No. 1 engine facility.

Cummins still has a gated central crib, but it established a free-

access satellite crib to service the needs of workers on its new premium engine line.

“Tool tracking is optimized when it is controlled by the line,” says Garry Lewis, a tool engineering leader and the person who supervises the needs of the specialty crib.

“Central stores base their reports on what department bought an item. That’s it. Once it’s out of their hands, once it’s reconditioned, they never see it again. Since we control our own crib, reconditioned items come back and go into storage in our crib. We’re not only able to keep track of our tools, but are able to better keep track of what kind of real life we are getting out of reconditioned tools.

“We are still going to use the central crib for generic items — shop towels, gloves, basic supplies. For the specialty items for this line, this is the place. It saves time. It’s located to serve this line.”

In the specialty crib, operators find the item they need. A computer located next to rows of storage units allows operators to log in information to show who checked out the item, what item was checked out and where it is going. If the operator needs assistance, an inventory attendant can help.

“It doesn’t matter what software you use, but it has to be easy to use as far as checking things into and out of inventory,” says Lewis. “If it’s not a couple of keystrokes or the wave of a bar-code wand, reality says it’s not going to get done.”

In the future, Lewis says, all items in the satellite crib will have bar codes, and a scanner will capture most of the information currently keyed in.

#### **Solution No. 4: Condensed and computer controlled**

Since 1991, Cummins’ small-engine factory has had a controlled central store that houses all critical components and two free-access areas that house the rest of the supplies. But things are changing.

“Up until a year ago, it had been fairly easy to keep a perfect stocking level,” says tool crib attendant Don Hayes. “This used to be a one-shift facility. We made one particular engine and we had the same number of people working that one shift. You knew from week to week how much you were going to use. Now, we’ve gone to three shifts, several engines and many options. We used to build 150 engines a day. Now, it’s 500-something.”

In response to the increase in business, personnel and product use, Cummins will eliminate the open areas and have one closed, 5,000-SKU superstore at the 600-employee plant. The store, and much of the plant for that matter, will be backed up by Rapier computer software.

“The Rapier system will be used in the crib for orders, as well as in the receiving and purchasing departments,” says Jay Balcerak, materials and Rapier integrity supervisor at the plant. “We went live with it in July and now have real-time inventory numbers. What this will do is give us a look at the usage of an item on a month-by-month basis, see minimum and maximum stocking levels, and we can coordinate those numbers with

delivery time.”

Rapier is created by Asset Care Environmental Software of England. The software, based on Oracle database, is popular in the United Kingdom and used in many of Cummins' European plants. Plant manager David Womersley, a former Cummins UK employee, brought it to the Columbus small-engine plant.

#### **Solution 5: Continually count the inventory**

When it comes to tracking inventory, Toyota Industrial Equipment Manufacturing may be the king of the counters. The Toyota Industrial plant cycle-counts rotating sections of its 6,000-SKU tool crib inventory nearly every working day.

“It's extremely important to making this place run properly,” says inventory specialist Ian Johns. “We cycle-count at least three times a week, sometimes five times a week.”

A computer system running Mapics inventory software selects a group of items to count based on a formatted program.

“We stock nuts and bolts all the way up to the big tools and big pumps,” says Johns. “You determine how frequently you want any of those items counted — monthly, quarterly — and it will automatically put that item on the list when it is time. You catch a lot of things early that way.”

Crib attendants can also find items easily, thanks to Johns.

“We always try to make the best use of space, so we wind up moving items around,” says Steve Pride, assistant purchasing manager. “We used to have a bunch of hand-written labels or sticky-type labels for identification, but that was a problem when we moved things. So Ian had the idea of printing our locations off of the computer and putting them onto magnetic tape. Now, they can be moved along with the items.”

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