

The Maintenance Excellence Institute

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Purchasing Excellence for MRO Materials Management Success

By Ralph W. “Pete” Peters, Founder/President

Mission-Essential Maintenance: Excellence in corporate-level and plant-level purchasing is an important contributor to success within your maintenance operations. Likewise, total operations success must have high quality, mission-essential maintenance to survive and achieve profitability. The purchasing and procurement function at any level must understand its key role and strive for purchasing excellence for raw materials, finished goods and MRO-related (maintenance repair organization) parts, suppliers and equipment.

Lesson Learned: At one point during my career, I had direct responsibility for plant purchasing within a world-class, hand-tool manufacturing plant. Never once did I have to really focus my attention on expediting MRO items or checking delivery status of parts. I focused on achieving just-in-time delivery from steel mills and expediting forgings from our sister forging plant operations.

Our maintenance was progressing toward world-class status and did not require the typical purchasing support needed in a purely reactive maintenance operation. Our engineering manager and his maintenance team allowed valuable purchasing resources to focus on our closed-loop MRP II implementation. They had their act together in regards to MRO vendors and what they needed through MRO vendor contracts, blanket orders and consignment stocking of MRO items. Their proactive maintenance strategy eliminated expediting “hot shot” MRO requisitions.

This picture is not normal. In many operations, purchasing is often seen as the villain in plants where even proactive and reactive run-to-failure strategies for mission-critical maintenance are performed. Purchasing must understand that MRO inventory and procurement are different in many ways. For instance:

There is a high cost associated with a low-bid buying strategy for MRO items. ValuJet provides a tragic example related to low-cost, contracted maintenance, a direct contributor to its most recent crash. Low-grade nuts and bolts have contributed to serious catastrophic failures in refineries and chemical processing plants. Purchasing must listen, take the proper actions and do the right thing when the maintenance leader pleads for quality MRO parts and materials.

MRO items and materials purchased for the finished product are different. Purchasing must understand the basic differences related to MRO items. Key areas of understanding include:

- More stock-keeping units (SKUs) with higher value
- Lower turnover rates
- Clearly defined specifications required in most cases
- JIT service needed if run-to-failure strategy exists
- Total operations quality starts with quality parts to support quality maintenance service
- Low-bid buying of sub-quality parts can be fatal

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6809 Foxfire Place, Raleigh, NC 27615 and 2625 East Beach Drive, Oak Island, NC 28465

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- Maintenance can be a key player on the MRO purchasing team
- Purchasing must get help from maintenance to support MRO procurement

Information Links: Information links between purchasing, the MRO storeroom, the maintenance planning process, MRO vendors and equipment designers/manufacturers are very important. These links should be developed from personal contacts with internal staff and via the CMMS system that interfaces electronically. For example:

- Purchasing must be a part of what I call the “life-cycle information loop” for equipment assets and component parts of the respective assets we must maintain.
- Equipment designers/manufacturers need feedback information on reliability and maintainability issues.
- Basic warranty information is often not being captured at the shop-floor level. Make sure you have a fool proof process in place to identify and report warranty claims
- Root-caused failures related to design problems do not flow easily back to the original equipment manufacturers (OEMs).
- Purchasing can play a key role in the “life-cycle information loop” by:
 1. Supporting computerized maintenance management systems (CMMS) databases with reliable vendor performance data, quality, lead-time reliability, costs, alternate sources, etc.
 2. Developing partnerships with MRO vendors and OEMs with key maintenance leaders on the team.
 3. Requiring that the initial contract provides:
 - ✓ Parts manuals, equipment drawings and specification packages come with each new asset or major modification
 - ✓ Recommended spare parts lists are also included
 - ✓ Recommended preventive/predictive maintenance procedures are included

Purchasing excellence translates into several key team relationships. These relationships are internal and external to the organization.

TWO KEY INTERNAL RELATIONSHIPS:

MRO Storeroom: Effective purchasing is the key to an effective storeroom. Purchasing must get the right MRO items into the inventory management and control systems. Purchasing and MRO inventory management must share and maintain a common database. Hopefully, the MRO inventory database is accurate and up-to-date regarding MRO parts used as assets. For run-to-failure operations, purchasing stays on the “hot seat” expediting “hot shot” emergency MRO purchases.

Maintenance Planning and Scheduling: All maintenance repairs are planned one way or another. Systematic planning and scheduling by qualified planners is a world-class maintenance best practice in medium and large maintenance operations. Reactive and proactive maintenance requires planning and support from MRO purchasing. Purchasing and maintenance planners must work as a close-knit team to anticipate MRO parts and work with

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the internal storeroom and purchasing to get the right parts at the right time for day-to-day planned repairs, as well as major projects or shutdown-related work.

TWO KEY EXTERNAL RELATIONSHIPS:

MRO Vendor Partnerships: Partnering is a key buzzword today and is a strategic initiative for organizations within a global society. Information technology (IT) gives us the Internet (and Intranets) to make sharing information convenience. Electronic Data Interchange (EDI) helps share information of all types: purchase requests, receipt payments upon delivery, inventory level sharing with automatic replenishment by vendors, vendor stocking plans and vendor consignment stocking. Many of these progressive partnering practices are just becoming standard practices, enhanced by today's IT advances. Purchasing, maintenance and the respective vendors must work as a total team to make these practices happen at the shop-floor level.

Partnering with OEMs: Many organizations view the original equipment manufacturer as a key part of the total team already. OEMs must provide a reliable source of repair parts, service, technical advice, recommended PM procedures, recommended spare part stock levels and warranty support. OEMs must be a key part of the team providing reliable equipment and reliable engineering drawings, electrical diagrams and schematics, parts manuals and repair and troubleshooting manuals. Purchasing must fully understand the support maintenance requires from its base of OEMs

Partnerships: The market place and maintenance of the future will be dominated by organizations that successfully build partnerships today. Partnerships with MRO vendors and OEMs are an essential ingredient for operational success and continuous improvement. True partnering is people working together, internally and externally, for mutual benefit. Companies create partnership agreements, but people create the partnership. Partnerships can shift the focus of the customer/supplier relationship from adversarial to a win-win situation.

Win-Win: Maintenance and purchasing need stronger win-win relationships. There must be a desire for a long-term relationship based on trust. Purchasing must understand the challenges and technical requirements the maintenance leader is faced with each day by the maintenance leader. Both must understand the IT practices that are available to support total operations success.

Never before than in today's trend towards downsizing has maintenance needed to assume the attitude that it truly is a "profit center." Purchasing must accept its role for achieving MRO materials management success. Purchasing and maintenance will be a profit center if continuous improvement achieves reliable internal/external partnerships. Total operations excellence requires a true partnership between maintenance and purchasing.

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