



NATIONAL ASSOCIATION OF
ELECTRICAL DISTRIBUTORS



Recommended Best Practices

"SUPPLY CHAIN SCORECARD: Performance Measures"



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This **Recommended Best Practices for Performance Measures** is designed to facilitate a dialogue among individual distributors and the manufacturers that supply products to them for the purposes of making the supply chain evaluation process more efficient and reducing the costs for all parties involved. It is not intended to express any views regarding individual distributors' or manufacturers' business decisions. All distributors and manufacturers will continue to make their own independent decisions regarding all matters affecting competition. Information outside the scope of the designated categories (e.g., manufacturer pricing and payment terms, promotional allowances, etc.) has been omitted from this document. However, individual distributors are free to discuss these subjects in separate dealings with individual manufacturers.

Why Measure Supply Chain Performance?

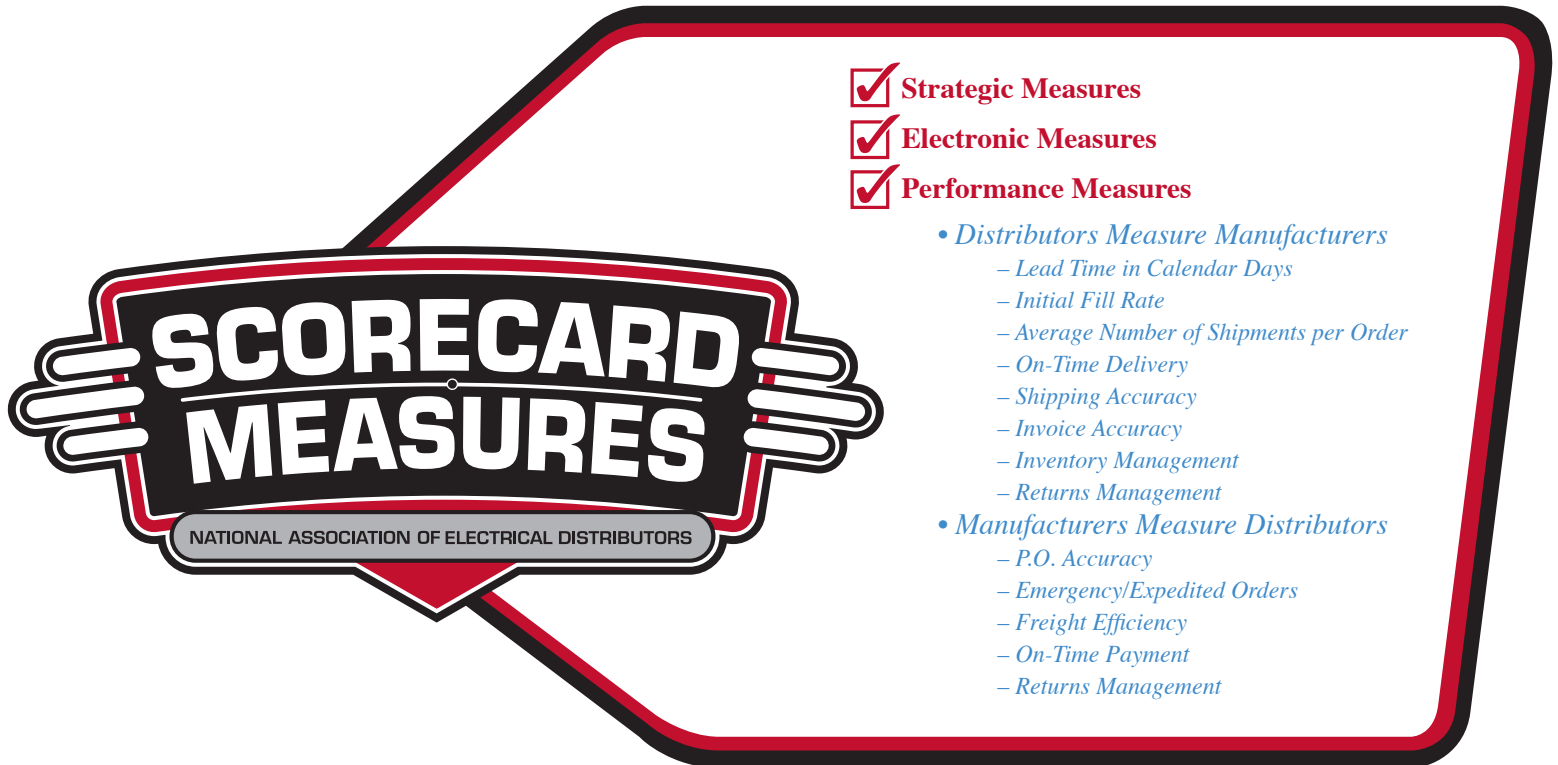
What gets measured, gets done. Better metrics lead to better decisions and better outcomes. NAED distributors measuring supply chain performance report better relationships with channel partners, reductions in operating expense, and above average return on the time and effort invested. Furthermore, measuring supply chain performance can make processes more efficient, lower the cost of doing business together, and give the channel a sustainable competitive advantage in delivering value to end-customers.

Vision for NAED's Supply Chain Scorecard

NAED's Supply Chain Scorecard is more than a report handed out at booth sessions. It is a disciplined, ongoing, and strategic business tool to enhance efficiency, improve performance to end-customers, and drive results. It also enables distributors and manufacturers to identify issues, develop action plans, and hold each other accountable for results. Industry benchmarks, similar to the Performance Analysis Report (PAR), will be developed once a critical mass of distributors (approximately 100) measure supply chain performance.

Performance Measures Defined

Performance measures include lead time in calendar days, initial fill rate, average number of shipments per order, on-time delivery, shipping accuracy, invoice accuracy, inventory management and returns management for scorecards distributors use to evaluate manufacturers. Distributors may also want to measure the timeliness of price change updates. Measures for scorecards manufacturers use to evaluate distributor performance may include measures of purchase order accuracy, emergency / expedited orders, freight efficiency, on-time payment, and returns management.



SCORECARD MEASURES
NATIONAL ASSOCIATION OF ELECTRICAL DISTRIBUTORS

- ✓ **Strategic Measures**
- ✓ **Electronic Measures**
- ✓ **Performance Measures**
 - *Distributors Measure Manufacturers*
 - Lead Time in Calendar Days
 - Initial Fill Rate
 - Average Number of Shipments per Order
 - On-Time Delivery
 - Shipping Accuracy
 - Invoice Accuracy
 - Inventory Management
 - Returns Management
 - *Manufacturers Measure Distributors*
 - P.O. Accuracy
 - Emergency/Expedited Orders
 - Freight Efficiency
 - On-Time Payment
 - Returns Management

✓ **Speak the Same Language: Use the Recommended Industry Vocabulary for Definitions & Formulas.**

Foundation of Recommended Best Practices

When volunteers from NAED members first assembled in 2005 to standardize the process of evaluating supply chain performance to make it more efficient, there were 4 main areas of contention, based on one's position in the supply chain (i.e., distributor or manufacturer):

4 main areas of contention are:

- ✓ Consistently identifying and communicating stock items
- ✓ Measurement based on business or calendar days
- ✓ Measurement based on the date the order is issued by the distributor or accepted by the manufacturer
- ✓ Measurement based on the date requested by the distributor or the date acknowledged by the manufacturer.

RECOMMENDED BEST PRACTICE

The task force's initial white paper, published in 2006, resolved this ongoing source of inefficiency and friction between channel partners, by making the following recommendations, which remain in effect in 2012:



Identifying and communicating stock items: Individual distributors and manufacturers should initially measure their stock items separately, compare measures, discuss discrepancies, and clarify stock items in future iterations of measurements.



Measurement based on business or calendar days: To improve performance to the end-customer, manufacturers to adjust lead times to reflect calendar days.



Measurement based on distributor order issue date or manufacturer order acceptance date:

- Orders sent electronically—via Electronic Data Interchange (EDI), flat files, Vendor Managed Inventory (VMI), or entered online—will be measured based on the date the distributor issues the P.O.
- Purchase Orders entered manually—via mail, fax, email, or telephone—will be measured based on the date the manufacturer accepts the order.



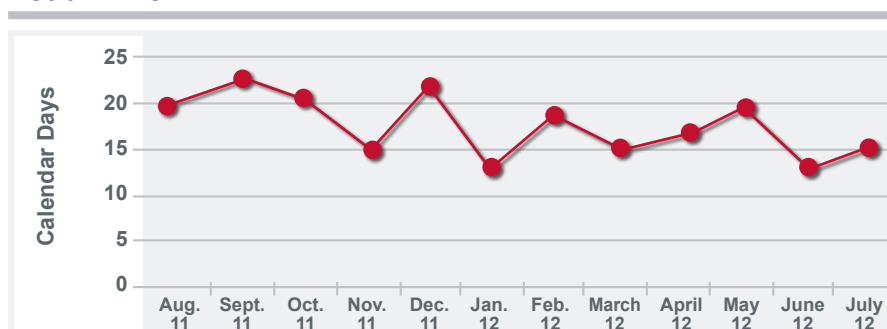
Measurement based on the distributor's request date or the manufacturer's acknowledged date: To improve performance to the end-customer, the request date will be the basis of measurement as long as it reflects historical/normal lead times or a negotiated delivery date.

Lead Time in Calendar Days

Current Situation

Lead time measures the arrival of material, from the time a distributor places a purchase order until the material is received. Areas of concern measuring lead time center include measuring in business or calendar days, when measurement begins, and accurate estimates of the amount of time the product will be in-transit. The most effective way for electrical distributors to decrease inventory is to reduce lead times, however, consistency and dependability of lead time is often more important. Variances in lead time require distributors to carry additional inventory; accurate and consistent lead times allow electrical distributors to optimize inventory and better serve end-customers.

Lead Time



Recommended Definition

Lead Time—The time elapsed in calendar days between when an electronic order is issued, or a manual order is accepted, to the receipt of material.

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: Adjust lead times to calendar days.



Distributors and Manufacturers: Orders sent electronically via EDI 850/852 or flat file will be measured based on when the P.O. is issued by the distributor.

- Manual orders will be measured based on when the order is accepted by the manufacturer.



Manufacturers: Manual orders should be entered within 72 hours or less of receipt.

- Discrepancies in Lead Time for manual orders should be analyzed to determine if the root cause is inaccurate in-transit time estimates or if sales representatives (company- direct or independent) are "holding" orders.



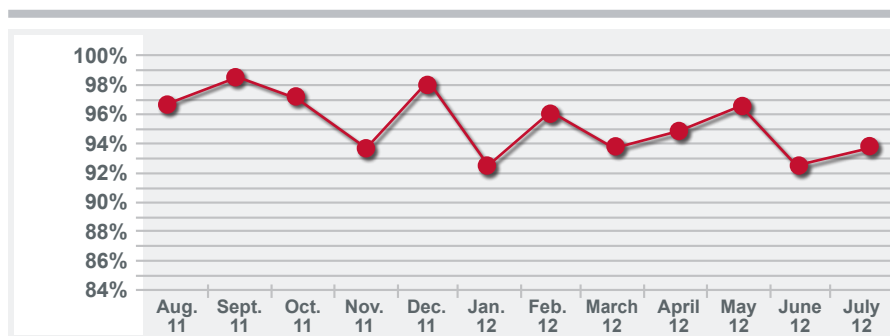
Distributors: Advise your channel partner if their lead time is adequate, if it needs improvement, or if it is unacceptable.

Initial Fill Rate

Current Situation

Initial fill rate measures a manufacturer's effectiveness in fulfilling stock line items on a distributor's purchase order. Higher initial fill rates for stock items equates to higher service levels to end-customers and fewer out-of-stock situations. This allows distributors to carry less inventory, receive fewer shipments, and often process fewer invoices. Manufacturers also gain efficiencies from higher initial fill rates through fewer shipments and possibly fewer invoices.

Initial Fill Rate



Recommended Definition

Initial Fill Rate—Stock line items received complete on first receipt as a percentage of stock line items ordered.

Example:

Distributor X issues PO 984 for various quantities of 10 stock line items. The first receipt of material on PO 984 is the entire quantity ordered of 7 stock line items and partial shipment on 3 stock line items.

$$\text{Initial Fill Rate} = \frac{\text{Number of order lines for stock items received complete on first receipt}}{\text{Total number of stock line items ordered}} = \frac{7}{10} = 70\%$$

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: All orders should be received 100% complete on the first receipt.

- Items shipped from different distribution centers on different packing lists will be considered separate shipments, even if all items are shipped and / or received on the same day.
- If the quantity ordered of a stock line item exceeds a full truckload, adjustments must be made to the initial fill rate to accurately reflect the manufacturer's performance.
 - The preferred method is to split the line items into truckload increments at order entry.
 - However, another option is to manually adjust for stock line items that exceed a full truckload.
 - It is recommended that individual channel partners agree on the solution that best matches their joint internal processes and procedures.



Distributors: Advise your channel partner if their initial fill rate is adequate, if it needs improvement, or if it is unacceptable.

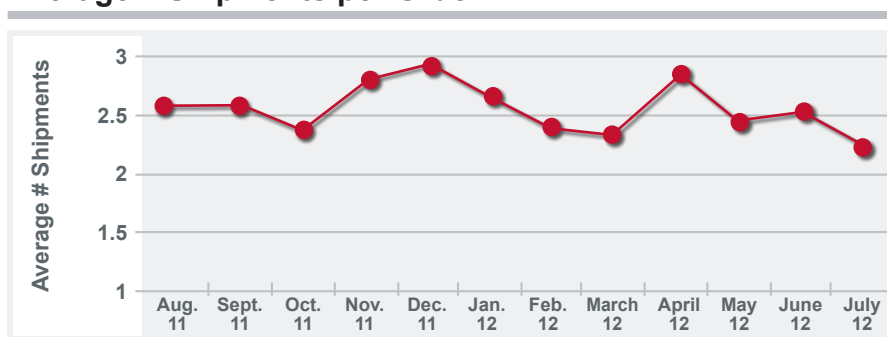
- If initial fill rate is considerably below expectations, consider investigating the fill rate after the second shipment.

Average Number of Shipments per Order

Current Situation

The average number of shipments per order metric is closely related to initial fill rate. Typically, the higher the initial fill rate, the lower the number of shipments per order. Except in the case of out-of-stock situations, fewer shipments equate to a more efficient the supply chain---manufacturers make fewer shipments, distributors receive and put away fewer shipments, and fewer invoices are processed.

Average # Shipments per Order



Recommended Definition

Average Number of Shipments per Order—The number of shipments required to complete an order.

Example:

- Distributor X issues PO 984 for various quantities of 10 stock line items.
- Manufacturer ships the entire quantity of 7 stock line items and partial shipment of 3 stock line items from Warehouse A; additional shipments are made from Warehouses B and C to complete the outstanding balance of the 3 stock line items on the same day.
- Distributor X receives the entire quantity of 7 stock line items and partial shipment of 3 stock line items from Warehouse A; the shipment from Warehouse B is received; and the order is complete with the receipt of material from Warehouse C.
- However, Distributor X must receive and process 3 shipments; additional invoices may or may not be processed, depending on the manufacturer.

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Distributors and Manufacturers: Items shipped from different distribution centers on different packing lists will be considered separate shipments, even if all items are shipped and/or received on the same day.

- In the event the items on an individual order exceed the capacity of a single truck, i.e. truckload overflow situations, it should be considered a single shipment if the trucks depart from the same location on the same day.
- However, if the trucks depart from multiple locations on the same day, it should be considered multiple shipments.



Distributors: Advise your channel partner if their average number of shipments per order is adequate, if it needs improvement, or if it is unacceptable.

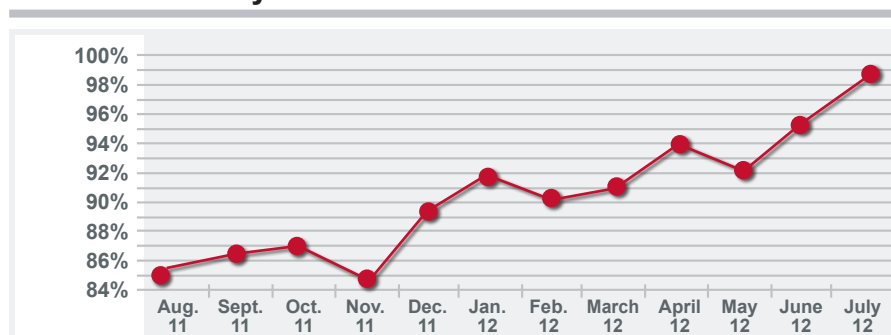
NOTE: The EDI 855 can also be used in conjunction with the EDI 852 Product Activity Data as an initiation of a VMI Order.

On-Time Delivery

Current Situation

On-time delivery measures a manufacturer's ability to deliver product on time, every time, allowing distributors to meet end-customer requests. An area of concern measuring on-time delivery is measurement based on the distributor request date or manufacturer's acknowledged date. A high level of on-time delivery performance is vital to providing service to end-customers. Variances in on-time delivery can result in out-of-stock situations unless distributors carry additional inventory. Reliable on-time delivery performance can reduce costs, improve operational efficiencies, and increase sales due to satisfied end-customers.

On-Time Delivery



Recommended Definition

On-Time Delivery—The number of lines received complete from the manufacturer by the requested date based on normal/historical lead times or a negotiated delivery date divided by the total lines ordered.

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Distributors and Manufacturers: The distributor's request date will be used as the basis of measurement as long as it reflects historical/normal lead times; otherwise the negotiated delivery date will be used as the basis of measurement.



Distributors: The "default" request date in your business system should be an accurate estimate of historical lead time rather than ASAP, today's date, or tomorrow.



Distributors: Advise your channel partner if their on-time delivery is adequate, if it needs improvement, or if it is unacceptable.

NOTE: Orders requiring special handling, i.e. requested in less than the normal/historical lead times, a negotiated delivery date, or shipment via air freight are considered emergency/expedited orders and will be measured separately by manufacturers.



Shipping Accuracy

Current Situation

Shipping accuracy measures error-proof shipment of the items on a purchase order—the right product; in the right quantity; in saleable condition (i.e., undamaged); and included on the packing list. High levels of shipping accuracy increase end-customer satisfaction by minimizing possible out-of-stock situations. On the other hand, shipments that are not 100% accurate add additional cost to the channel due to discrepancy resolution processes, emergency orders, and increased requests for returns. The use of bar coding, the EDI 856 Shipping Notice/Manifest, and the UCC 128 Shipping Container Label can improve shipping accuracy.

Shipping Accuracy



Recommended Definition

Shipping Accuracy—The number of line items received 100% correctly divided by the total line items ordered.

EDI 856 Ship Notice/Manifest—EDI transaction sent when product is shipped that is an electronic version of a printed packing slip. (*Manufacturer → Distributor*)

UCC-128 Shipping Container Label—Scan-able packing list. A UCC 128 lets the receiving department know what is in the shipment without having to open the cartons. NOTE: Used in conjunction with the EDI 856 Ship Notice/Manifest, when a shipment with a UCC-128 is received, it is scanned and the contents of the shipment are electronically matched in the receiver's computer. This streamlines the receiving process by eliminating the manual entry of data. (*Manufacturer → Distributor*)

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Distributors: Track and analyze the actual number of shipping errors by the categories of wrong part number, wrong quantity, over-/under-shipment, item not on P.O., no Packing List, and carrier claims.

- Evaluate truck line damage versus inadequate product packaging separately.



Manufacturers: Use bar coding, the EDI 856 Shipping Notice/Manifest, and the UCC 128 Shipping Container Label to improve shipping accuracy.



Distributors: Advise your channel partner if their shipping accuracy is adequate, if it needs improvement, or if it is unacceptable.



Distributors and Manufacturers: Address shipping process problems and day-to-day shipping accuracy issues peer-to-peer; escalate issues you cannot resolve to executives.

To increase shipping accuracy, ask your channel partners the following questions:

DISTRIBUTORS ASK MANUFACTURER:

Is your company transmitting the EDI 856?

☐ Yes

☐ No*

*If No, "When will the EDI 856 be transmitted?"

MANUFACTURER ASK DISTRIBUTOR:

Is your company set up to receive EDI 856?

☐ Yes

☐ No*

*If No, "When will the EDI 856 be set up?"

DISTRIBUTORS ASK MANUFACTURER:

Is your company transmitting the UCC-128 ?

☐ Yes

☐ No*

*If No, "When will the UCC-128 be transmitted?"

MANUFACTURER ASK DISTRIBUTOR:

Is your company set up to receive UCC-128?

☐ Yes

☐ No*

*If No, "When will the UCC-128 be set up?"

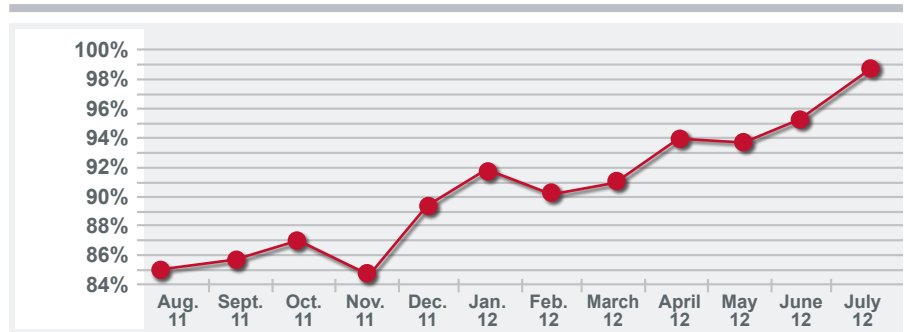


Invoice Accuracy

Current Situation

Invoice accuracy measures the error-proof invoicing of the items on a purchase order—the right product; in the right quantity; in salable condition, with the right unit of measure, and at the right price. Invoices with accurate information flow seamlessly through a distributor's accounts payable department on "first pass." However, when invoices do not match the information on the purchase order and/or the receiving documents, a non-value added process begins, requiring research and negotiation by both the distributor and manufacturer personnel to determine the source of the error and take corrective action. Invoice errors also can impact on-time payment. Use of the EDI 810 Invoice can improve invoice accuracy and reduce costs for all parties involved.

Invoice Accuracy



Recommended Definition

Invoice Accuracy—The number of line items invoiced correctly divided by the total number of line items invoiced.

EDI 810 Invoice—EDI transaction that is an electronic version of a paper invoice. It communicates the specific items, price, and quantities shipped and the amount that must be paid. (*Manufacturer → Distributor*)

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Distributors: Measure the number and types of invoice errors; trend the percent of items invoiced correctly.



Manufacturers: Use the EDI 810 Invoice to improve invoice accuracy



Distributors: Advise your channel partner if their invoice accuracy is adequate, if it needs improvement, or if it is unacceptable.



Distributors and Manufacturers: Address invoice process problems and day-to-day invoice accuracy issues peer-to-peer; escalate issues you cannot resolve to executives.

To improve invoice accuracy, ask your channel partners the following questions:

DISTRIBUTORS ASK MANUFACTURER:

Is your company transmitting the EDI 810 Invoice?

☐ Yes

☐ No*

*If No, "When will the EDI 810 be transmitted?"

MANUFACTURER ASK DISTRIBUTOR:

Is your company set up to receive EDI 810 Invoice?

☐ Yes

☐ No*

*If No, "When will the EDI 810 be set up?"



Price Update Timeliness

Current Situation

Manufacturers send invoices to distributors in a variety of methods—mail, fax, email, flat file, and Electronic Data Interchange (EDI). Invoices received via mail, fax, email, and downloaded from a vendor’s secure website in Adobe Acrobat.pdf must be interpreted and manually re-keyed into the distributor’s business system. This additional manual labor increases both operating costs and the opportunity for “human-error,” increasing the cost of doing business together. Invoices provided electronically via EDI or flat file, however, provide accurate information with an audit trail.

Recommended Definition

Notification of Change—The number of calendar days in advance of the effective date of price changes notification is provided. (*Example of notification of change: Manufacturer announces, “We’re changing prices effective xx/xx/xxxx”*).

Updates Received—The number of calendar days in advance of the effective date specific price updates are provided. (*Example of updates received: Distributor receives the actual item-by-item prices effective with the change*).

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Distributors: Measure the number of calendar days in advance of the effective date specific price updates are provided.

NOTE: Process efficiency issues regarding updates to Special Pricing Authorizations are addressed in the white paper, “Recommended Best Practices in SPA Updates.”



Manufacturers: Subject to business considerations, provide price updates as far in advance of the effective date of those changes as possible.



Distributors: Advise your channel partner if the timeliness of their price updates is adequate, if it needs improvement, or if it is unacceptable.



Purchase Order Accuracy

Current Situation

Purchase order accuracy measures the correctness of information on a P.O.—the correct part number; in the correct carton quantity; with the correct unit of measure, at the correct price, within the published or “agreed to” lead time. Purchase order errors cause rejection of the line item (i.e., the item “kicks-out” of the manufacturer’s business system), initiating a non-value added process requiring the error(s) be researched and resolved. In some cases, errors on purchase orders necessitate emergency / expedited shipments to meet end-customer requirements. Furthermore, if the wrong part number is ordered, requests for return may increase. Errors in purchase orders can be minimized by timely price change updates and by distributors keeping their business systems updated with the latest information. Accurate purchase orders take cost out of the channel by decreasing lead time, improving initial fill rates, enabling on-time delivery, enhancing invoice accuracy, and minimizing returns.

Purchase Order Accuracy



Recommended Definition

Notification of Change—The number of line items ordered 100% correctly (Correct part number, correct price, correct Unit of Measure, correct carton quantity, within the published or “agreed to” lead time) divided by the total line items ordered.

EDI 850 Purchase Order—EDI transaction that is an electronic version of a paper Purchase Order.
(Manufacturer ➔ Distributor)

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: Measure and trend purchase order accuracy by the percent of line items ordered 100% correctly.

- Track the number of purchase order errors by type to isolate the causes of errors and to facilitate the prevention of future errors.



Manufacturers: Advise your channel partner if their purchase order accuracy is adequate, if it needs improvement, or if it is unacceptable.

To increase Purchase Order accuracy, ask your channel partners the following questions:

DISTRIBUTORS ASK MANUFACTURER:

How often do you update your product and pricing information in the Industry Data Warehouse (IDW)?

☐ Daily ☐ Weekly ☐ Monthly

DISTRIBUTORS ASK MANUFACTURER:

Is your company set up to receive the EDI 850 P.O.?

☐ Yes ☐ No*

*If No, "When will the EDI 850 be set up?"

MANUFACTURER ASK DISTRIBUTOR:

How often do you check the IDW for updates to product and pricing information in order to keep your business system updated?

☐ Daily ☐ Weekly ☐ Monthly

MANUFACTURER ASK DISTRIBUTOR:

Is your company transmitting the EDI 810 P.O.?

☐ Yes ☐ No*

*If No, "When will the EDI 850 be transmitted?"

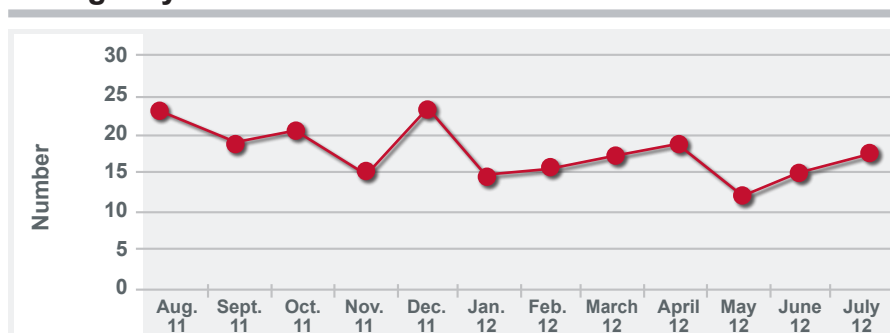


Emergency/Expedited Orders

Current Situation

There are a plethora of reasons for orders requiring special handling and/or shipment via air freight--- disaster recovery, end-customer special requests, back-order situations, late deliveries, unforeseen demand, information errors, etc. However, the special attention required to make the emergency shipment disrupts normal processes, requires manual intervention, and adds cost to the channel. While responding to end-customer requests is our livelihood, care must be taken to ensure emergency/expedited orders are the exception, rather than the rule.

Emergency Orders



Recommended Definition

Emergency/Expedited Order—Orders requiring special handling, i.e., requested in less than the normal/historical lead times, a negotiated delivery date, or shipment via air freight.

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: Measure emergency/expedited orders by the number of emergency/expedited orders and dollar value.

- Advise your channel partner if their level of emergency/expedited orders is adequate, if it needs improvement, or if it is unacceptable.



Freight Efficiency

Current Situation

Freight efficiency measures the number of purchase orders distributors enter that do not meet a manufacturer's minimum order requirements, increasing costs for all parties involved. While some manufacturers may impose a "small order" processing charge in order to recoup their increased costs, others may require the distributor to pay for the freight.

Freight Efficiency



Recommended Definition

Emergency/Expedited Order—Freight Efficiency is the number of purchase orders that do not meet minimum order requirements and the distributor pays a surcharge or the freight, divided by total orders.

NOTE: Purchase Orders that do not meet minimum order requirements may incur a "small order" processing charge or require the distributor to pay for the freight.

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: Measure the number of purchase orders that do not meet the minimum order requirements by number of purchase orders as well as by dollar value.



Distributors: Refer to the manufacturer's published policies and procedures to determine minimum order requirements.



Manufacturers: Advise your channel partner if their freight efficiency is adequate, if it needs improvement, or if it is unacceptable.

On-Time Payment

Current Situation

When invoices do not match the information on the distributor's purchase order and receiving documents, payment is often withheld for the line item(s) with discrepancies. In the meantime, shipments may be held while a non-value added process of research and negotiation by distributor and manufacturer personnel determines the source of the error and corrective action is taken.

Payment Accuracy



Recommended Definition

On-Time Payment—The total dollar value of past due invoices as a percent of total invoices due.

EDI 820 Payment Order/Remittance Advice—EDI transaction used to receive remittance advice and send payments to vendors. (*Distributor* → *Manufacturer*)

RECOMMENDED BEST PRACTICE

To improve process efficiency and reduce costs for all parties involved, the task force recommends:



Manufacturers: Measure the total dollar value of a distributor's past due invoices as a percent of total invoices due.

- Advise your channel partner if their level of on-time payment level is adequate, if it needs improvement, or if it is unacceptable.

To increase on-time payments, ask your channel partners the following questions:

DISTRIBUTORS ASK MANUFACTURER:

Is your company set up to receive the EDI 820?

☐ Yes

☐ No*

*If No, "When will the EDI 820 be set up?"

MANUFACTURER ASK DISTRIBUTOR:

Is your company transmitting EDI 820?

☐ Yes

☐ No*

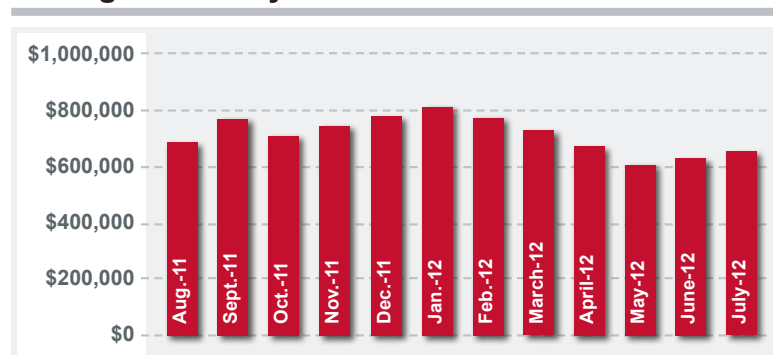
*If No, "When will the EDI 820 be transmitted?"

Average Inventory

Current Situation

Having the right items in the warehouse at the moment they are needed is the heart of an electrical distributor's business. Electrical distributors must balance maintaining adequate inventory to support sales, maintaining customer service levels, and preventing out-of-stock situations against inventory carrying costs and the risk of unsalable items. Flexible manufacturer stock adjustment policies are a tool to help distributors address these conflicting goals.

Average Inventory



Recommended Definition

Average Inventory—Average of the inventory within the rolling 12 months.

RECOMMENDED BEST PRACTICE



Distributors: Monitor and track average inventory by supplier monthly.

NOTE: Some distributors may also want to consider measuring the percent of new products in inventory.



Manufacturers: Items shipped in error should be handled immediately and separately from stock adjustment returns.



Distributors and Manufacturers: Work one-on-one to jointly develop solutions to optimize average inventory levels.

- If participating in Vendor Managed Inventory (VMI), jointly develop a formal approval process with sign-offs before putting new items in the distributor's inventory.

✓ Inventory supports sales: Product available when the customer wants it.



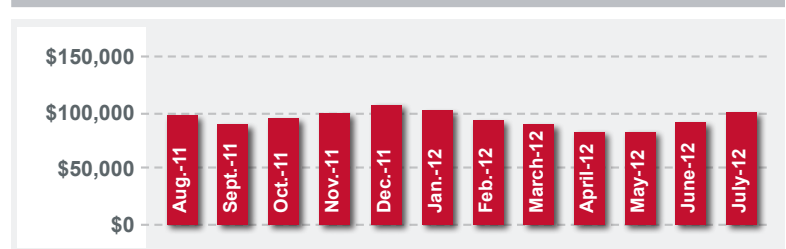
Overstock Inventory

Current Situation

An oversupply of inventory takes value away from a business by tying up capital, rather than generating sales. The best way to prevent the accumulation of too much inventory is to “buy correctly”---order the correct quantities at the appropriate time. However, demand can be fleeting---customers can change orders, cancel backorders, or return material. Likewise, new competitors can enter the local market or a new product be introduced. In addition, sometimes manufacturers ship the wrong items and expect the distributor to keep the material shipped in error.

As a result, inventory can quickly build up if distributors are not able to find new customers for excess items or easily return material to manufacturers. While a few manufacturers currently offer flexible, quick, and easy stock adjustment returns without the requirement to order additional material, this practice has yet to become widespread.

Overstock Inventory



Recommended Definition

Overstock Inventory—The amount of inventory in excess of a specified number of days supply.

RECOMMENDED BEST PRACTICE



As a general rule, overstock inventory is no more than a 90-day supply of inventory.

NOTE: Some distributors may want up to a 180 day supply, depending on a manufacturer's return policy.

- Distributors, please disclose the number of day's supply your company considers to be overstock inventory to your channel partners when measuring supply chain performance.



Distributors: Measure both total overstock inventory dollars and the percent of total inventory that is considered overstock.



Manufacturers: In the event of new product introductions, create transition plans for the disposition of the items being replaced.



Manufacturers: Offer no strings attached returns---no off-setting order, broken cartons, etc.--- for new products for at least 180 days from shipment.

- Make sure all new items have complete information in IDEA so distributors can begin selling as soon as the material is received.



Distributors and Manufacturers: Work one-on-one to jointly develop solutions to minimize overstock situations and prevent the accumulation of stagnant inventory.



Manufacturers: Encourage your local sales representatives to monitor each distributor's overstock inventory on at least a quarterly basis and work with distributors to sell or return overstock inventory.



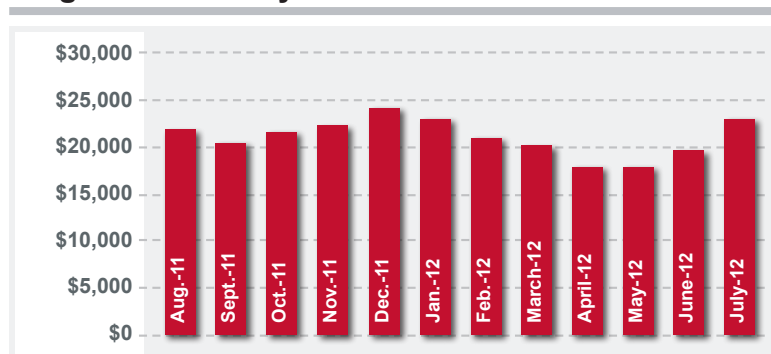
Overstock inventory ties up capital.

Stagnant Inventory

Current Situation

Like overstock inventory, stagnant inventory is an idle asset, tying up capital, occupying warehouse space, and accumulating carrying costs. The difference is stagnant inventory has been sitting on the shelf waiting for a customer to place an order (*and accumulating dust*) for a longer time period. Stagnant inventory may have been purchased due to lack of knowledge or poor communications between sales and purchasing. However, unless corrective action is taken to prevent stagnant inventory from accumulating in the first place, it will continue to eat away at bottom-line profitability until action is taken to prevent and reduce it.

Stagnant Inventory



Recommended Definition

Stagnant Inventory—Stock items that have not had a sale during a specified time period.

RECOMMENDED BEST PRACTICE



The specified time period for stagnant inventory is 12 months or greater.

- Distributors, please disclose the number of month's supply your company considers to be stagnant inventory to your channel partners when measuring supply chain performance.



Distributors: Measure both total stagnant inventory dollars and the percent of total inventory that is considered stagnant.



Distributors and Manufacturers: While inter-branch transfers of material are not considered a "sale," the branch with the stagnant inventory should be able to return it directly to the manufacturer without transferring it back to the purchasing location.



Distributors and Manufacturers: Work one-on-one to jointly develop solutions to reduce current stagnant inventory and prevent its accumulation in the future.



Manufacturers: Encourage your local sales representatives to monitor each distributor's stagnant inventory on at least a quarterly basis and work with distributors to sell, return, or "trade" stagnant inventory for new products.



Stagnant inventory is an idle asset.



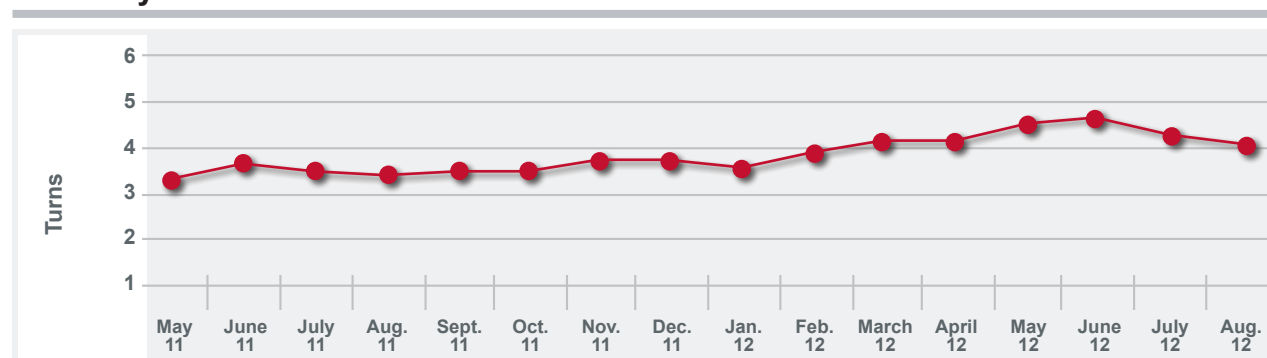
Inventory Turns, also known as Inventory Turnover

Current Situation

Inventory Turns reflects how well inventory is managed. It measures how many times an electrical distributor sells and replaces its inventory, i.e., the velocity with which merchandise dollars move through the business. In most cases, the higher the inventory turns, the better, as long as customer service levels are not impacted by out-of-stock situations. Items that turn over more quickly indicate responsiveness to changes in customer requirements. On the other hand, low inventory turns often indicates too much inventory (overstock inventory) or obsolete inventory (stagnant inventory).

The 2012 Performance Analysis Report (PAR) reveals the typical NAED distributor's inventory is turned over 4.3 times per year. This means typical NAED distributor sells the equivalent of its entire inventory every 84.3 days.

Inventory Turns



Recommended Definition

Inventory Turns (also known as *Inventory Turnover*)—Stock items that have not had a sale during a specified time period. *Source: 2012 Performance Analysis Report (PAR)*

NOTE: Dr. Al Bates measures Inventory 2 ways in PAR---Cost of Goods Sold of Total Sales and Cost of Goods Sold of Sales through Stock. For purposes of the Supply Chain Scorecard, it is recommended that Inventory Turnover be calculated based on the Cost of Goods Sold for Sales through Stock only.

RECOMMENDED BEST PRACTICE



Distributors: Benchmark inventory turns for suppliers against your own internal goals, internal benchmarks, and/or upper quartile of vendors, as well as with the Performance Analysis Report (PAR).



Distributors and Manufacturers: Work one-on-one to jointly develop solutions to optimize inventory turns.



Inventory turns in the 2012 Performance Analysis Report (PAR) for the “typical” NAED distributor is 4.3 times.

Return Management Measures

Current Situation

The vision of the ultimate returns management process is for manufacturers to accept anything, anytime, regardless of packaging, and without an off-setting order. However, some manufacturer's stock adjustment returns processes are quick and easy, while the process is onerous at others. Hence, distributors may want to measure Return Authorization (RA) Processing Cycle Time and Receipt of Credit Cycle Time. Likewise, while some distributors return authorized goods in a timely fashion, others may not. In that event, manufacturers may elect to measure Return of Authorized Goods Cycle Time.

NOTE: This white paper focuses on stock adjustment returns only. Warranty returns and discussion of a "Scrap in Field" return policy is out of the scope of this task force.

Return Authorization Processing Cycle Time

Current Situation

Some manufacturers allow distributors to initiate stock adjustment returns with no prior authorization, some manufacturers offer online return request systems, while others have cumbersome manual processes. In most cases, this will be a manual measure for distributors. Unless a vendor's return process is particularly long, it may not be worthwhile to measure.

Recommended Definition

Return Authorization Processing Cycle Time—The number of calendar days between the initial request for Return Goods Authorization (RGA) and the receipt of authorization for return.

RECOMMENDED BEST PRACTICE



Manufacturers: Returns authorizations for items shipped in error to a distributor should be automatic with final disposition known within 72 hours.

NOTE: While final disposition of material may include "scrap in field," discussion of scrap in field return policy is out of the scope of this task force.



Manufacturers: Authorization to return products in salable condition should be made in no more than 72 hours of the request.



Quick and easy returns processes allow distributors to optimize their inventory investment.



Return of Authorized Goods Cycle Time

Current Situation

While many distributors return authorized material to manufacturers in a timely fashion, some do not place a priority on shipping the material after it has been removed from inventory.

Recommended Definition

Return of Authorized Goods Cycle Time—The number of calendar days between the receipt of authorization for return and the shipment of the items on the Return Goods Authorization (RGA).

RECOMMENDED BEST PRACTICE



Distributors: Authorized material should be shipped to manufacturer within 7 days after the authorization is issued.



Manufacturers: To encourage the timely shipment of authorized goods, make the return authorization valid for 30 days.

NOTE: Some manufacturers may also want to measure Return Goods Authorization Requests as a Percent of Sales.



Ship material to supplier within 7 days of authorization.



Receipt of Credit for Return Cycle Time

Current Situation

Some manufacturers issue credit for material returned in salable condition in a timely fashion. Other manufacturers are not as diligent. This metric can be automated in some distributor business systems by tracking the time from when the items are shipped back to the manufacturer until the credit is received. However, unless a vendor's process for issuing credit for return material is particularly long, it may not be worthwhile for distributors to measure.

Recommended Definition

Receipt of Credit for Return Cycle Time—The number of calendar days between shipment of the items on the Return Goods Authorization (RGA) and the receipt of the credit for the items returned.

RECOMMENDED BEST PRACTICE



Manufacturers: Issue credit to distributors within 72 hours (3 Business Days) of receipt of the material for those items for which there is no discrepancy.

- For items for which there is a discrepancy, an error message with detailed information regarding how the credit was calculated should be sent within 72 hours (3 Business Days) of receipt of the material.



Distributors: Please refrain from taking deductions for returned goods.

- If however: (1. You have followed up with a manufacturer and received no satisfaction; and (2. Your material was received more than 3 business days prior to your payment due date, then you may take a deduction if the credit is not received within 45 days of shipment.



Issue credit within 72 hours of receipt of authorized material.



What You Can Do

Please help us leverage the collective knowledge of the industry by giving us your feedback!

Share your insight and input with the Supply Chain Scorecard task force by calling NAED Member Services toll free at 1.888.791.2512 or emailing memberservices@naed.org.



Additional tools from NAED's Supply Chain Task Force are available for download at <http://www.naed.org/supplychainscorecard/>

