MANAGING SERVICE PARTS LOGISTICS IN THE FIELD

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One of the most difficult problems in running any type of field service business is the need for dynamic and real time coordination and control of the full logistics pipeline of parts, sub-assemblies, and items of supply. Technically managing this pipeline can not only significantly increase the efficiency of the field service organization, for reasons more clearly articulated below, but also can result in a more significant real bottom line dollar savings in the overall costs of operations, than activity in any other areas of the service business environment.

To fully understand this service logistics pipeline concept and strategic implications, we must first look at the overall picture of this pipeline (as shown in Figure 1), which starts its flow from the intake of parts, sub-assemblies, and materials from either a manufacturing line of the parent corporation, or from an outside vendor. These logistics then move from a central warehouse to a regional or local manned stocking facilities, and ultimately into the hands of the service engineers (or the customer sites) in the field. Normally this one way flow is very similar to logistics and inventory control in the manufacturing environment; however, in a service environment the “pipeline” flows back (i.e., reverse logistics).

As a direct result of service engineers fixing, repairing, and installing equipment in the field, they make use of parts. In fact, a good rule of thumb is that about 70% of all emergency calls for service will require a part. In the event that the part is not available, the service engineer is generally forced to break off the call and travel to another location to pick up the part, wait on site for somebody to deliver the part, or terminate the call to be handed off to another service engineer. In any case, the efficiency and effectiveness of the logistics pipeline to deliver the right part at the right time has a

critical impact on the ability of the service force in the field to get their job done efficiently.

Typically, the high volume and repairable parts removed as part of the “break and fix” process are returned through the reverse logistics pipeline. This return link is very important to the overall effectiveness of the management of the full logistics pipeline. It turns out that about 80% of the value of most field inventories return at least once annually. It also turns out that approximately 30% - 40% of all returns to repair depot are perfectly good parts. This is due to the fact that service engineers are increasingly utilizing parts as diagnostic tools, particularly in a pull and replace maintenance philosophy.

Since a high percentage of material and inventory in terms of value is returned, and a significant percentage is perfectly good, it should be very clear that the return link or reverse logistics pipeline back through the repair depot becomes very critical in terms of resupplying the pipeline.

Finally, to fully understand the coordination and control requirements for this closed loop pipeline, we need to recognize that typically about 50% of the total inventory in this pipeline is below the manned stocking levels, either flowing to the service engineers in the hands of the service engineer, or at sites, or flowing back to the depot repair operation.

With these key parameters in mind, we can begin to realize the critical importance of managing the full logistics pipeline down to, and including, the service engineer trunk site stocks, in particularly the reverse loop. Traditionally, service engineers tend to over order parts in anticipation of future needs, and also “squirrel away” their stockpile of parts in anticipation of future needs. The end result is that parts continue to flow outward into the field and never return and inventory costs and investment, particularly the cost of procurement, continue to rise.

The need to control the full pipeline requires creation of an on-line, real time reporting at the service engineer level to both report on the use of parts at the services engineer "trunk" or site stock level, as well as the receipt of parts from the central warehouses and the return of parts to the repair depot. By doing so, we effectively close the logistics loop in real time and provide the necessary data and intelligence to effectively forecast, control, and coordinate the full logistics pipeline, guaranteeing the maximum fill rate at the service engineer trunk stock level, with minimum risk. This can be best achieved through the combination of full wireless communications down to, and including, the mobile field force and the use of advanced service logistics management systems for forecasting, timing, coordination, and control. Fully automating and supporting the logistic pipeline can lead to a reduction in total inventory costs in the range of 25% - 35%, or more, while at the same time, maintaining or increasing the trunk stock, fill rate, or ability to meet service requirements and needs in the field.

Service Logistics "Pipeline" Flow