
**Quality Excellence for Suppliers of
Telecommunications Forum
(QuEST Forum)**

**TL 9000
Quality Management System
Measurements Handbook
OTD Examples**

5.4 OTD Examples

5.4.1 On-Time Delivery Philosophy

When considering the TL 9000 OTD measures, it is important to remember that the intent of the measures is to drive improvement in delivery performance as viewed by the customer. This is why the customer requested delivery date is used instead of the organization's promised delivery date in the determination of "on-time". It is also the reason unauthorized early deliveries are not counted as on-time deliveries. Viewing the measurement rules from the customer's viewpoint will aid greatly in applying them correctly.

NOTE: Prior to Release 4.0, there was an on-time delivery measurement for installed systems reported as OTIS. The on-time delivery of installed systems is still tracked and reported but is now included in the on-time delivery measurement for services, OTS, rather than being reported separately.

5.4.2 On-Time Delivery For Items

Table 5.4.2-1 illustrates computation of the OTD measurement from a series of delivered line items per purchase order (PO).

Table 5.4.2-1 On-Time Item Delivery (OTI) For March

Purchase Order	CRD (mm/dd)	Line Item	Quantity Ordered	Split Order	Quantity Delivered	Date Delivered (mm/dd)	Number of On-time Line Item CRDs Met	Note
A	03/10	1	5		5	03/10	1	
	03/12	2	6		6	03/13	0	
	03/17	3	4		4	03/18	0	
B	03/20	1	8		8	03/22	0	
	03/22	2	12	yes	6	03/22	0	1
				yes	6	03/25	0	
	03/29	3	2		2	unknown	0	2
03/30	4	2		2	03/30	1		
C	02/15	1	7		7	03/15	NA	3
	02/15	2	1		1	03/15	NA	
D	03/25	1	20	yes	10	03/25	NA	4
				yes	10	03/25	1	
E	03/10	1	2		2	03/5	0	5
Number of Orders = 4	Number of item CRDs due in month Dld = 9						On-time Line Items Dla = 3	
OTD for Line Items (OTI) = $100 \times (Dla/Dld) = 100 \times (3/9) = 33\%$								6

NOTES:

- 1) Line item B2 was not on time for the CRD because only ½ of the items were delivered on the CRD.
- 2) OTD date could not be confirmed or derived from other information and therefore the line item is assumed to have missed OTD.

- 3) Purchase Order line items C1 and C2 CRDs were not counted in the total of 9 for March as they had a February CRD.
- 4) Line item D is counted as 1 on-time line item because while both portions of the split shipments were delivered on time, it is still just 1 line item on the order.
- 5) Line item E was delivered early. Assuming there is no evidence of customer authorization of the early delivery, the CRD was not met.
- 6) The OTI performance for March is 3 (CRD met) / 9 (CRDs due) or 33%.

5.4.3 On-Time Delivery For Services Including System Installations

Table 5.4.3-1 illustrates computation of the OTD measurement from a series of services per purchase order (PO).

Table 5.4.3-1 On-Time Service Delivery (OTS) For March

Purchase Order	CRD (mm/dd)	Task/Line Item	Date Completed (mm/dd)	Date Accepted (mm/dd)	Number of On-time Services CRDs met	Note
F	03/10	1	03/10	03/10	1	
		2	03/10			
		3	03/10			
G	03/20	1	03/22	03/25	0	
		2	03/22			
H	03/21	1	03/21	03/22	0	
		2	03/21			
I	02/15	1	03/15		NA	1
		2	03/15			
J	03/25	1	03/15	03/25	0	2
Number of Purchase Orders = 5	CRDs Due in moth DVd = 4				On-time Service CRDs DVa = 1	
OTD for Service (OTS) = $100 \times (DVa/DVd) = 100 \times (1/4) = 25\%$						3

NOTES:

- 1) Purchase Order I was not counted in the total of 4 for March as it had a February CRD.
- 2) Purchase Order J was completed but not accepted for early delivery by the customer. Thus, the CRD was not met.
- 3) The OTS performance for March is 1(CRD met) / 4 (CRDs due) or 25%.

The task/line items are shown in Table 5.4.3-1 for completeness only. The service has not been delivered until the last task has been accepted as complete.

The data reported for the above examples are shown in Table 5.4.3-1.

Table 5.4.3-1 Example 5.4.2 & 5.4.3 – OTD Data Table Report

Identifier	Value
MeasurementID	OTD
D1a	3
D1d	9
DVa	1
DVd	4

5.4.4 Frequently asked questions

5.4.4.1 When does delivery occur?

Delivery occurs when the customer accepts control of the physical line item for OTI or accepts the service as being completed for OTS. For a physical line item, this can be at the organization's dock if that is where the customer accepts the item per rule 5.4.4 b) 10). For example, when the customer specifies the shipper or otherwise takes control of the shipment at the organization's factory or distribution center, then delivery has been made as the time the customer is notified the item is available at the organization's dock. A commonly used term associated with some orders of this type is FOB – Factory.

5.4.4.2 Are deliveries of software counted?

Software that is physically delivered via a CD-ROM, tape, or other physical media is treated as any other line item. Software that is electronically delivered by the organization by placement of the new software on the customer's equipment is also treated like a line item. A delivery of software that is made by placement on the organization's server for later download by the customer is not counted in OTD per rule 5.4.4 c) 2).

5.4.4.3 How is material that is part of a service order handled?

Unless the material related to a service order is ordered, delivered, and accepted by the customer in a separate transaction with its own CRD, the service material delivery is considered being made to the organization providing the service and not the customer per 5.4.4 c) 3). Therefore there is no delivery data to be reported for the material itself. Only the data pertaining to the delivery of the service is reported. Table 5.4.4.2 -1 below shows how this applies to various types of orders.

Table 5.4.4.2-1 Order type versus OTD measure

Order Type	Description	OTD Measure	Notes
F	Furnish only (line items)	OTI	
F&I	Furnish and Install	OTS	1
EF& I	Engineer, Furnish, and Install	OTS	1
I	Install	OTS	
E	Engineer	OTS	
E&F	Engineer and Furnish	OTS & OTI	2

NOTES:

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- 1) F&I and EF&I orders are typically set up with a single CRD with on time delivery determined by acceptance by the customer at that time. If there is a separate transaction where the customer assumes control of the equipment separate from completion of the installation, such as a delivery of spare circuit packs, then that transaction would be reported in OTI. A separate invoice or bill sent to the customer for the equipment delivery would be a clear indication of the need to report OTI in addition to the OTS. If everything remains under the organization's control until completion of the installation, then there is only OTS data to report.
 - 2) It is standard industry practice to have a separate delivery and CRD related to the delivery of the engineering design package associated with an E&F order. If this is not the case for a particular order, then there would only be OTI data to report.

5.4.4.4 What if the customer requested delivery date (CRD) is “unreasonable”?

By definition, rule 5.4.4 c) 1), the only “unreasonable” CRD is one that is before the date the order is received by the organization. Such orders may be excluded from the OTD measurement. If the organization believes a CRD to be unreasonable, it is free to refuse the order. Once an order is accepted, then the on-time performance is to be measured against the CRD.

While the organization may not request a change to the CRD once the order is accepted, rule 5.4.4 b) 6), it is free to negotiate contractual standard delivery intervals with the customer prior to receipt an order. Any such delivery interval agreed to by the customer can then be applied when an order is received. This contractual agreement would override the requested delivery date on the purchase order,

5.4.4.5 Do I have to get separate authorization for every early delivery in order for it to count on time?

No, a blanket agreement may be set up to authorize a delivery window that allows early deliveries for any order. Typically these agreements noting the customer may still specify a given date when it is required. It should be noted agreements such as this are common for certain services such as repair, maintenance, support, or installation.