Finance Department
Aptos9 User Notes

Understanding Tolerances
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# Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>04 January 2006</td>
<td>Karen Porteous</td>
</tr>
<tr>
<td>2</td>
<td>12 January 2006</td>
<td>M.L. Woodcock-Kroble</td>
</tr>
<tr>
<td>3</td>
<td>8 January 2010</td>
<td>Ian Fowler</td>
</tr>
</tbody>
</table>
1. Tolerances

1.1. Overview

Tolerances are used to allow Aptos to decide the action to take when receipts and invoices do not exactly match purchase orders; for example, undershipments, late shipments, and unit price variations.

The following tolerance set has been applied to the live system and applies in all cases:

<table>
<thead>
<tr>
<th>Tolerance Set</th>
<th>Set</th>
<th>Description</th>
<th>Ignore</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoices</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over Shipment Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Under Shipment Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Over Invoice Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Under Invoice Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Over Unit Price</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Under Unit Price</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Receipts</td>
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<td></td>
</tr>
<tr>
<td>Over Shipment Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Under Shipment Quantity</td>
<td>X</td>
<td>Yes</td>
<td>0.01%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Early Shipment Days</td>
<td>X</td>
<td>Yes</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Late Shipment Days</td>
<td>X</td>
<td>Yes</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Note the tolerance values shown later in this document are the same as those on the test system for simplicity.

The following points should be noted:

- All tolerances (except those relating to days) are expressed as percentages.
- Where a tolerance group is set to ignore, then no checking will be carried out.
- Where a tolerance group is set to ‘enforce’ then checking will be enforced, and NO differences will be allowed between the two forms.
- When dealing with tolerances, it is easier if each option is understood individually as this makes it easier to understand how they combine together.
- This document deals with each option individually and the applicable tolerance set is displayed as a screenshot prior to each section.

Tolerance failures result in entries to the mismatch list. If a single line fails multiple tolerance checks it will have multiple entries in the mismatch list.

- When matching an invoice to a purchase order, the quantity defaulted is that of the purchase order, not the receipt.
- For each set (except Receipts) the warnings/errors appear after Scheduling the Purchase Invoice For Payment in the message frame.
- If you get error message(s) when scheduling an invoice for payment, the error messages highlighted in bold at the end of each following example will help you identify why a mismatch has occurred.
  - Warning messages indicate that the match is not exact BUT is within tolerances – the system will treat this as a match and the invoice will be paid.
  - Hold messages create a mismatch entry and the invoice status changes to ‘scheduled for payment’ – the invoice will not be paid until the mismatch is cleared.
  - Error messages create a mismatch with the invoice status remaining as ‘registered’. When the mismatch is cleared, the invoice will have to be scheduled for payment before it can be paid.
Understanding Tolerances

2. Invoice Tolerance Options

Tolerance settings defined under this section will only be checked at the time of Invoice Schedule for Payment.

The fields in the Invoices box specify the actions to be taken on mismatches detected when vendor invoices that are matched to purchase orders are scheduled for payment.

2.1. Over Shipment Quantity and Under Shipment Quantity

This option is used to specify the action taken when received quantities do not match ordered quantities. This option only applies to receivable PO lines.

Example 1

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>100 each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt</td>
<td>106 each</td>
</tr>
<tr>
<td>Receipt to PO Difference</td>
<td>6%</td>
</tr>
</tbody>
</table>

The difference is greater than the warning level but less than the hold level

W5051 Failed Overshipment Tolerance Check With Warnings

Example 2

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>100 each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt</td>
<td>112 each</td>
</tr>
<tr>
<td>Receipt to PO Difference</td>
<td>12%</td>
</tr>
</tbody>
</table>

The difference is greater than the hold level but less than the error level

E5702 Failed Quantity Over Invoice Tolerance Check With Hold
W5127 Mismatch Created. Invoice will be Withheld From Payment

Example 3

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>100 each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt</td>
<td>118 each</td>
</tr>
<tr>
<td>Receipt to PO Difference</td>
<td>18%</td>
</tr>
</tbody>
</table>

The difference is greater than the error level

E5702 Failed Overshipment Tolerance Check With Error
E5738 Invoice Matching Failed: Invoice XXX
E5718 Schedule For Payment Failed: Matching Unsuccessful

Example 4

<table>
<thead>
<tr>
<th>Purchase Order</th>
<th>100 each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt</td>
<td>106 each</td>
</tr>
<tr>
<td>Invoice</td>
<td>110 each</td>
</tr>
<tr>
<td>Receipt to PO Difference</td>
<td>6%</td>
</tr>
</tbody>
</table>

Only W5051 would appear as the units entered at invoice level are irrelevant with only Over/Under Shipment tolerances
2.2. Understanding Tolerances

2.2.1. Over Invoice Quantity

This option is used to specify the action taken when the invoice quantity is more than the received quantity (receivable PO lines) or the ordered quantity (non-receivable PO lines).

Example 1
Receipt: 100 each
Invoice: 108 each
Invoice to Receipt Difference: 8%
The difference is greater than the warning level but less than the hold level
W5051 Failed Quantity Over Invoice Tolerance Check With Warnings

Example 2
Receipt: 100 each
Invoice: 113 each
Invoice to Receipt Difference: 13%
The difference is greater than the hold level but less than the error level
E5702 Failed Quantity over Invoice Tolerance Check with Hold
W5127 Mismatch Created. Invoice will be withheld from Payment

Example 3
Receipt: 100 each
Invoice: 118 each
Invoice to Receipt Difference: 18%
The difference is greater than the error level
E5702 Failed Quantity Over Invoice Tolerance Check With Error
E5738 Invoice Matching Failed: Invoice XXX
E5718 Schedule For Payment Failed: Matching Unsuccessful

2.2.2. Over Invoice Amount

This option is used to specify the action taken when the invoiced cost of an item is more than the same item’s cost on the purchase order.
This only applies to lines entered without units of measurement and quantity, whether or not they are receivable.

This compares the Line amount on the Invoice line to the line amount on the purchase order, where the line does NOT contain a unit of measure and quantity.
It will not compare lines that have any UOM’s or quantities, even if they are non-receivable.
Understanding Tolerances

Example 1
Purchase order line value £100.00
Invoice Line value £108.00
Line Value Difference 8%
The difference is greater than the warning level but less than the hold level
W5051 Invoice Line XX Failed Amount Over Invoice Tolerance Check with Warning

Example 2
Purchase order line value £100.00
Invoice Line value £113.00
Line Value Difference 13%
The difference is greater than the hold level but less than the error level
E5702 Invoice Line XX Failed Amount Over Invoice Tolerance Check with Hold
W5127 Mismatch Created. Invoice will be Withheld From Payment

Example 3
Purchase order line value £100.00
Invoice Line value £120.00
Line Value Difference 20%
The difference is greater than the error level
E5702 Invoice Line XX Failed Amount Over Invoice Tolerance Check with Error
E5718 Schedule For Payment Failed

2.3. Over Unit Price and Under Unit Price
This option is used to specify the action taken when the unit price of an item on the invoice is different to that entered for the same item on the purchase order.

Example 1
Purchase Order 100 units @ £1.00 each
Receipt 100 units
Invoice 100 units @ £1.08 each
Unit Price Difference 8%
The difference is greater than the warning level but less than the hold level
W5051 Invoice Line XX Failed Over Unit Price Tolerance Check with Warnings

Example 2
Purchase Order 100 units @ £1.00 each
Receipt 100 units
Invoice 100 units @ £1.13 each
Unit Price Difference 13%
Understanding Tolerances

The difference is greater than the hold level but less than the error level
E5702 Invoice Line XX Failed Over Unit Price Tolerance Check With Hold
W5127 Mismatch Created. Invoice will be Withheld From Payment

Example 3

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Order</td>
<td>100 units @ £1.00 each</td>
</tr>
<tr>
<td>Receipt</td>
<td>100 units</td>
</tr>
<tr>
<td>Invoice</td>
<td>100 units @ £1.20 each</td>
</tr>
<tr>
<td>Unit Price Difference</td>
<td>20%</td>
</tr>
</tbody>
</table>

The difference is greater than the error level
E5702 Invoice Line XX Failed Over Unit Price Tolerance Check With Error

2.4. Combining Invoice Tolerances

2.4.1. Over / Under Shipment with Over Invoice Quantity

Section 2.1 demonstrates that the over/under shipment values compare PO values to Receipt values, regardless of the quantities entered in the matching purchase invoice.

Section 2.2.1 demonstrates that the over invoice quantity values compare PO values to the received quantity (receivable PO lines) or ordered quantity (non-receivable PO lines).

Setting both tolerances allows these checks to be combined.

Example

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Order</td>
<td>100 units</td>
</tr>
<tr>
<td>Receipt</td>
<td>106 units</td>
</tr>
<tr>
<td>Invoice</td>
<td>125 units</td>
</tr>
<tr>
<td>Receipt to PO Difference</td>
<td>6%</td>
</tr>
<tr>
<td>Invoice to Receipt Difference</td>
<td>18%</td>
</tr>
</tbody>
</table>

The receipt to PO difference is greater than the warning level but less than the hold level
W5051 Failed Overshipment Tolerance Check With Warnings
E5702 Failed Quantity Over Invoice Tolerance Check With Errors

This demonstrates that if multiple tolerance options are set, the messages reported are simply a consolidated list of those reported had the invoice been processed against each individual option separately.
3. Receipt Tolerance Options

If any Receipt tolerances are setup, the errors or warnings will be applied during Submit Receipt. Use the fields in the Receipts box to specify actions to be taken on mismatches that are detected when receipts are submitted for processing.

3.1. Over Shipment Quantity and Under Shipment Quantity

This option is used to specify the action taken when a mismatch between the received quantity and the ordered quantity is detected during receipt processing. This is only applicable to receivable PO lines: no action is taken on PO lines marked as non-receivable.

<table>
<thead>
<tr>
<th>Set</th>
<th>Description</th>
<th>System Tolerance Set</th>
<th>Ignore</th>
<th>Distance</th>
<th>Warn</th>
<th>Hold</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over Shipment Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under Shipment Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over Invoice Quantity</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Over Invoice Amount</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over Unit Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under Unit Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receipts</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Over Shipment Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under Shipment Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Early Shipment Days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Late Shipment Days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example 1
Purchase Order: 100 each
Receipt: 106 each
Receipt to PO Difference: 6%
The difference is greater than the warning level but less than the error level resulting in the following message:

A5038 Receipt Line X’s Status Is:
W5031 Overshipment of 6 EAC (6%)
Accept It?
If Yes, the receipt status becomes Warning
If No, the receipt status becomes Error

Example 2
Purchase Order: 100 each
Receipt: 110 each
Receipt to PO Difference: 10%
The difference is greater than the error level so the status of the receipt will immediately be reverted to Error
3.2. Early Shipment Days and Late Shipment Days

This option is used to specify the action taken if the required date is different from the receipt date.

**Example 1**
- **Purchase Order Date**: 13/10/05
- **Required Date**: 20/11/05
- **Receipt Date**: 30/10/05
- **Difference**: 21 days

The difference is greater than the warning level but less than the error level resulting in the following message

**W5032 Early by 21 days – Accept ‘Yes’ or ‘No’**

If Yes, the receipt is submitted correctly.

If No, the receipt is returned with an error status in which case the only resolution is to scrap the receipt, or leave the error receipt on the system.

**Example 2**
- **Purchase Order Date**: 13/10/05
- **Required Date**: 20/11/05
- **Receipt Date**: 13/10/05
- **Difference**: 38 days

The difference is greater than the error level

**E5433 Early by 38 days**

The receipt is then returned with an error status.