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# Core Release Bulletin

## *CostGuard Solution 23.10 Release*

October 2023

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## About this Document

IDI's Core Release Bulletins describe new Core functionality introduced with the release through either Adaptive (AR) or Feature (FR) requests. Core functionality is defined as a capability that is available to all customers that upgrade to the release, although in some cases additional custom work may be required to use it. This document includes an overview of the new capabilities as well as the required configuration or setup information. Supporting documentation can be found on E-Support under Resources > Knowledge Center and Resources Help Resources.

Additional training opportunities are also available through IDI University. Please contact your Account/Project Manager for more information.

# 1 Release Summary

## 1.1 Change Orders/Enhancements

The following change orders and other enhancements are included in this release.

| Functional Area | AR/FR | Description |
|---|---|---|
| Orders – Web Sales | FR 3412 | **Web Sales – Bill payments, returns & voids**<br>Web Sales is an ongoing development effort to provide a complete web-based solution for managing the full scope of front office transactions including billing orders, tendered retail sales and direct invoice transactions.<br>Functional milestones will be deployed over a series of CostGuard software releases where each subsequent release builds on the prior one. This release provides enhancements for:<br>• Adding a bill payment to be tendered on a transaction<br>• Returning items and tendering a refund<br>• Voiding a previously submitted transaction<br>• Starting block *Behavior* options to streamline transactions by skipping New Transaction and/or Detail pages (for instance, on a disconnect customer or service order).<br>• Additional configuration options for certain starting actions that prepopulate the required order information (e.g. return reason).<br>For details regarding the overall objectives and planned future deliverables for web sales, refer to the IDI Knowledge Center > CostGuard Updates > Product Roadmap presentation. |
| Customer Care | FR 3516 | **Incentivizing Paperless Billing**<br>Providers are moving away from paper billing to leverage the efficiency and cost benefit of electronic invoice delivery. Processing paper invoices is costly, uses valuable staff time and is prone to human error. Electronic delivery is faster, more efficient, and providers get paid sooner. Prior to this release, the CostGuard system had the capability to track whether an account should get a paper bill. This feature adds the ability to incentivize subscribers by providing a discount when paperless billing is chosen (or apply a charge when subscribers opt out). |
| Payment Processing - Paymentus | FR 3539 | **Enhancements for AdvancePay automatic renewal**<br>AdvancePay auto-renewal in Paymentus Integration was originally released with CostGuard version 23.9. Version 23.10 provides the ability to filter the list of available services when adding them for automatic renewal in Customer Care. |

| Functional Area | AR/FR | Description |
|---|---|---|
| E911 Management – Web Orders & CostGuard Client | FR 3463 | **Enhancements for E911 management**<br>Support for E911 management in web modules was originally provided in CostGuard version 23.7, and some enhancements were provided with CostGuard version 23.8. Version 23.10 provides the following enhancements:<br>• **E911 information on services in CostGuard Client is read-only**. This ensures service representatives use the superior functionality in the Orders and Customer Care web modules.<br>• **Designating E911 Class of Service and Type of Service in web orders**. When configuring E911 service addresses on an order, these parameters previously defaulted to values set in the Product Catalog. Now users can set these values when adding or modifying an E911 service via the APIs. The ability to set these values in the Orders user interface will come in a future release. |
| Orders | AR 9248 | **Ability to edit service name in web orders**<br>Customer Care and CostGuard Client orders provide the ability to enter a name or other information on a service; however, that capability did not exist when adding or editing a service in the Orders web module.<br>This release adds a field to enter such information on the transaction details screen when adding or editing a service in web orders. |
| CostGuard Database | AR 9155 | **Last Modified Date enhancements**<br>Improvements to storing last modified date in CostGuard database tables make it easier for data engineers to analyze and troubleshoot issues where problems may occur during data transmission. |
| Workflow | AR 9263 | **Access to service level attributes in Workflow data look ups**<br>This adds a ServiceInformationItemID to the BillingOrderDetail OData in the Order Placement Web Service, and creates four new Data Lookups: BillingOrderDetailByServiceInformationItem, CartItemExtendedInformationItem, OrderExtendedInformationItem, and ServiceInformationItemExtendedInformationItem.<br>These enhancements let you build a workflow that passes extended information, for example, values on a service based on the ServiceInformationItemID provided. See the applicable API documentation in the IDI Knowledge Center for details. |
| Database Services | FR 3439 | **Prevent overflow of general ledger journal entry table IDs**<br>Changes were made to prevent GL Journal Entry tables from overflowing their identity columns, which could potentially cause an outage for a customer. |

## 1.2 Resolved Known Issues

The following known issues have been resolved in this release.

| Functional Area | PR | Description |
|---|---|---|
| Payment Processing - Paymentus | 84462 | **No access to payment information in Paymentus Customer Portal**<br>When administrators attempted to impersonate an OnlineBill user to access their payment information the Paymentus Customer Portal I-frame would throw an error.<br>This has been corrected. |
| Payment Processing - Paymentus | 84470 | **Paymentus notifications not received in CostGuard system**<br>When a payment is created in Paymentus, the resulting notification to IDI was not firing the Payment Created trigger.<br>This has been corrected. |
| Customer Care | 84449 | **Allocation override on new payment not loading invoices**<br>In some instances, when trying to allocate a payment across multiple invoices and/or invoice categories in Customer Care, the allocation did not complete or hung. This occurred when the payment was being allocated on an account that had more than 100 invoices.<br>The allocation process has been updated to handle this scenario. |
| Customer Care | 84469 | **Service address validation errors and issues**<br>When creating a service address on the global service address management page in Customer Care the screen would show *unvalidated* even if USPS and MSAG validation was successful.<br>This has been fixed so the correct validation status is displayed. |
| Service Agreements | 84477 | **HTML error when attempting to view service agreement PDF**<br>The terms & conditions editor in CostGuard Client Product Management > Manage Service Agreements saves the text as HTML so it can be used to generate PDFs. The HTML was inadvertently being modified when editing terms & conditions with bulleted or numbered text. This did not impact the text; however, it did result in an HTML validation error when attempting to view the service agreement in Customer Care.<br>This has been corrected such that when editing terms & conditions with a bulleted or numbered list, the HTML saves correctly and the agreement can be viewed in Customer Care without causing an error. |
| Treatment | 84481 | **Treatment workbook not supporting optional parameters**<br>The solution for PR 84410 was delivered in CostGuard version 23.9 to improve the performance of treatment workbooks for hotline, suspend, restore actions. This caused the *HotlineRedirectAccountOrder* treatment workbook function to not support optional parameters.<br>This has been corrected. |

| Functional Area | PR | Description |
|---|---|---|
| Provisioning | 84453 | **New service numbers with 10 x's pulling in POD properties**<br>When adding a new temporary service number, Provisioning POD properties in Orders were defaulted to values from previously provisioned orders.  This was due to the Provisioning system finding a match on the service number.<br>The Orders will now only show the default POD Properties, not previously provisioned values, for temporary service numbers. |

# 2 Web Sales – Returns and Void Transactions

Web Sales is an ongoing development effort to provide a complete web-based solution for managing the full scope of front office transactions including billing orders, tendered retail sales and direct invoice transactions. This release provides the following enhancements:

- Bill payments on order transactions
  - Use a starting block specifically configured for bill payment or tender a payment in the assembly phase of an eligible transaction. A new default (seed) starting block can be used as is or modified as needed.
  - Tendering observes the selected location's register policy.
  - You must have the new Bill Payment permission in Security to use this functionality.
- Return items
  - Use a starting block specifically configured for returns or select Modify > Return Item on the Detail view during order assembly. A new default (seed) Return Item starting block can be used as is or modified as needed.
  - Returns observe the selected location's register policy. You can override register policy return rules through Order Field configuration.
  - You must have the new Return Item permission in Security to use this functionality.
- Void transactions
  - Use a starting block specifically configured to void transactions. A new default (seed) Void Transaction starting block can be used as is or modified as needed. Configuration options are restricted as applicable for voids.
  - You must have the new Void Transaction permission in Security to use this functionality.
- **Behavior options for order pages** when not applicable for the current transaction (for instance, a disconnect customer or hotline service). You can choose to skip one or both of the following pages when the starting block's and/or Order Field configuration provide the required information:
  - Skip New Transaction (Basic Information) page and begin on the Details (Assembly) page.
  - Skip New Transaction and the Details pages and begin on the summary (either the Review Cart or the Summary page).
  - Display New Transaction page and then skip Details page. After saving the basic information, the transaction resumes at either the Review Cart or Summary page.
- **Additional starting block options for certain starting actions –** Additional options are presented for starting block configuration when applicable for the selected starting action. This lets you prepopulate the required information on the order to streamline the process and potentially avoid errors. The options depend on the selected starting action. For example, when Starting Action = Return Item, drop-down menus are provided for selecting a return reason and inventory status.

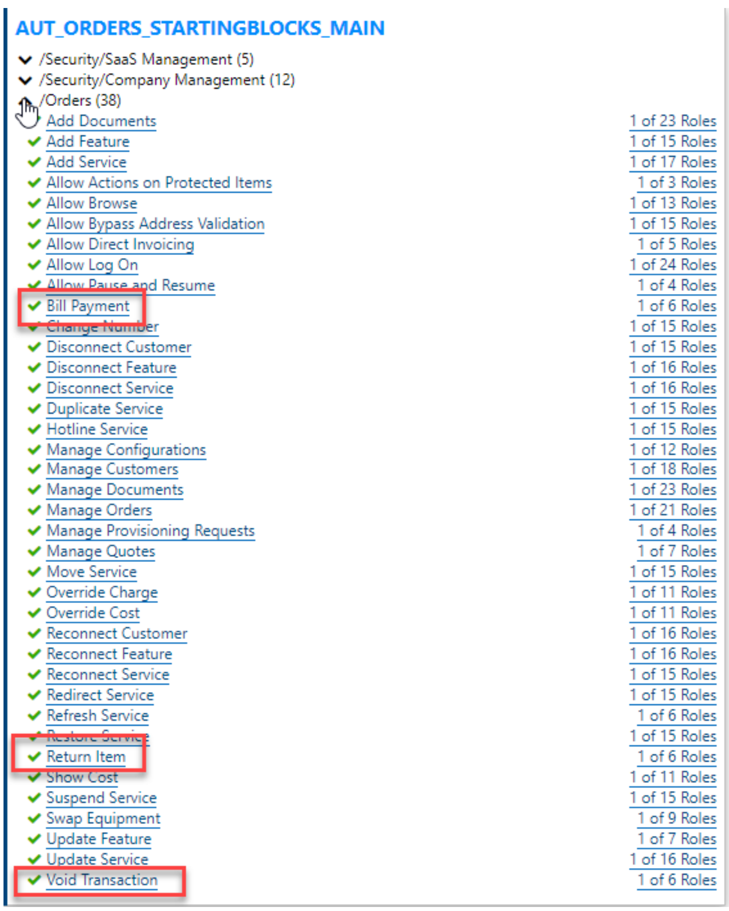
## 2.1 Setup

### 2.1.1 SECURITY – PERMISSIONS

New permissions are required for bill payment, return item, and void transactions. These permissions are included in the following roles:

- Orders Admin
- Orders Manager
- Orders User

The new permissions are listed under Orders for the selected user and environment in the Security web application.



### 2.1.2 STARTING BLOCKS FOR NEW ACTIONS

New system-provided (seed) starting blocks are available for:

- Tender bill payments
- Return Item
- Void Transaction

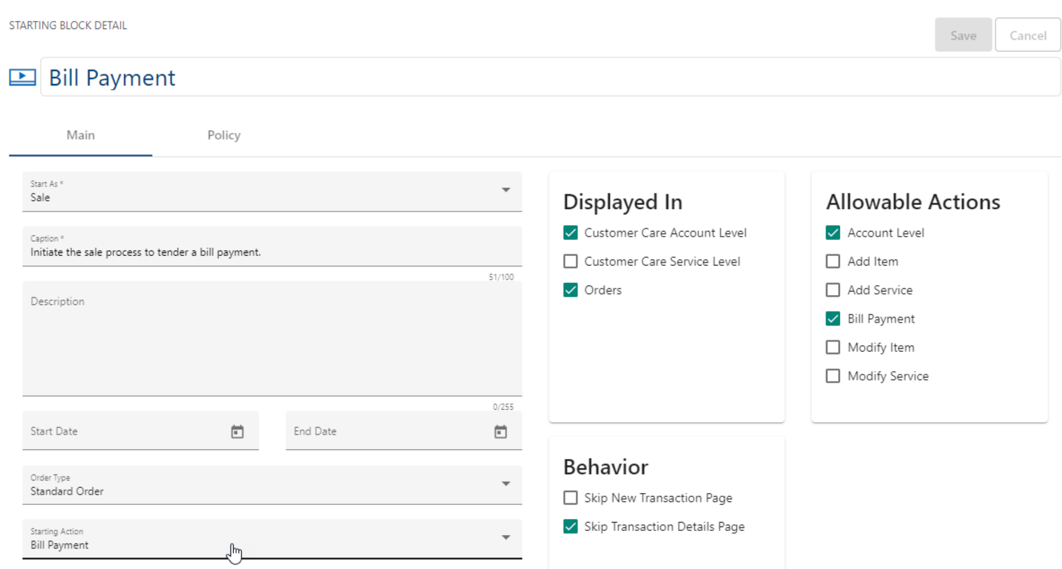
You can use these starting blocks as is, modify them or create new starting blocks for these functions as needed. These starting block configurations supersede any Order Field configuration (as currently supported).

<u>Bill Payment Starting Block</u>

The default Bill Payment starting block is predefined with the following parameters on the Main tab:

- Start As = **Sale**
- Starting Action = **Tender Bill Payment**
- Displayed in is set to Customer Care Account Level and Orders
- Allowable Actions **Account level** and **Bill Payment** are enabled (checked)
- Behavior = Skip Transaction Details Page

The Policy tab setup has not changed, except that **Require Register to Start Transaction** is preselected and cannot be disabled.

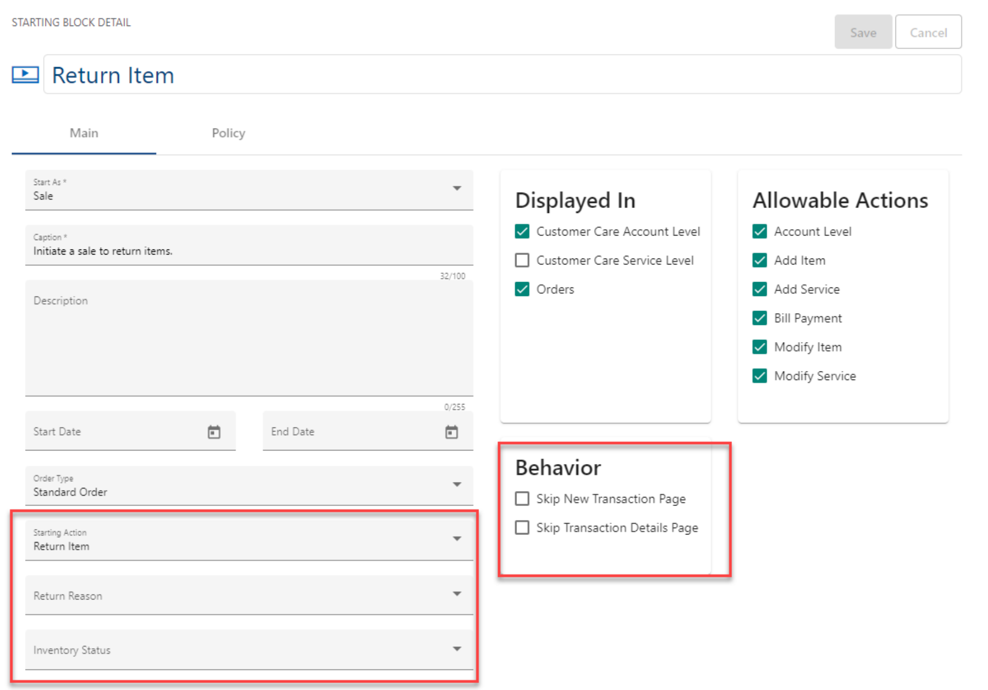


## Return Item Starting Block

The default Return Item starting block is predefined with the following parameters on the Main tab:

- Start As = **Sale**
- Starting Action = **Return Item –** This provides two additional drop-down menus:
    - Return Reason
    - Inventory Status
- Displayed in is set to Customer Care Account Level and Orders
- Allowable Actions all are enabled (checked)
- No Behavior to skip pages are predefined

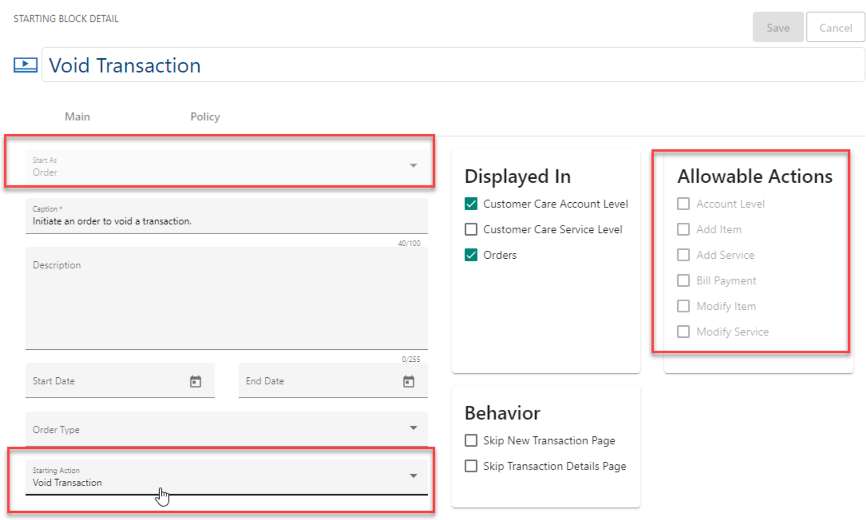
The Policy tab setup has not changed. **Note**: As rules that govern returns are set on a register policy basis, the Location options can be used to set up additional starting blocks to enforce different return rules for different locations. Also, **Require Register to Start Transaction** is preselected and cannot be disabled.



### Void Transaction Starting Block

When Void Transaction is selected as the starting action:

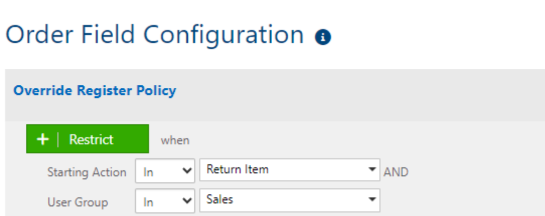
- The Start As drop-down menu is set to **Order** and cannot be changed. This ensures voids can only be performed on order transactions.
- The Allowable Actions options are disabled and cannot be changed.
- Displayed In defaults to Customer Care Account level and Orders; however, Customer Care Service level may be selected if you want.
- On the Policy tab, Location, Email and Reciept configuration options are disabled and can not be changed.




## 2.1.3 RESTRICTING OVERRIDE REGISTER POLICY ON RETURN TRANSACTIONS

During a return transaction, items selected for return are evaluated against the register policy *return* rules based on the transaction's location. If any items violate a rule, those items are presented in a dialog with options for overriding the register policy. Typically these options are available to any user authorized to return items. You can restrict the ability to use these options on a user group basis by adding *Override Register Policy* in Order Field Configuration. Select Return Item as the action and select the user group(s) to restrict.

This is not set up by default and must be added if you need to restrict override capability for some users (restricting access to *Sales* user group shown below).



## 2.2 Tendering Bill Payments

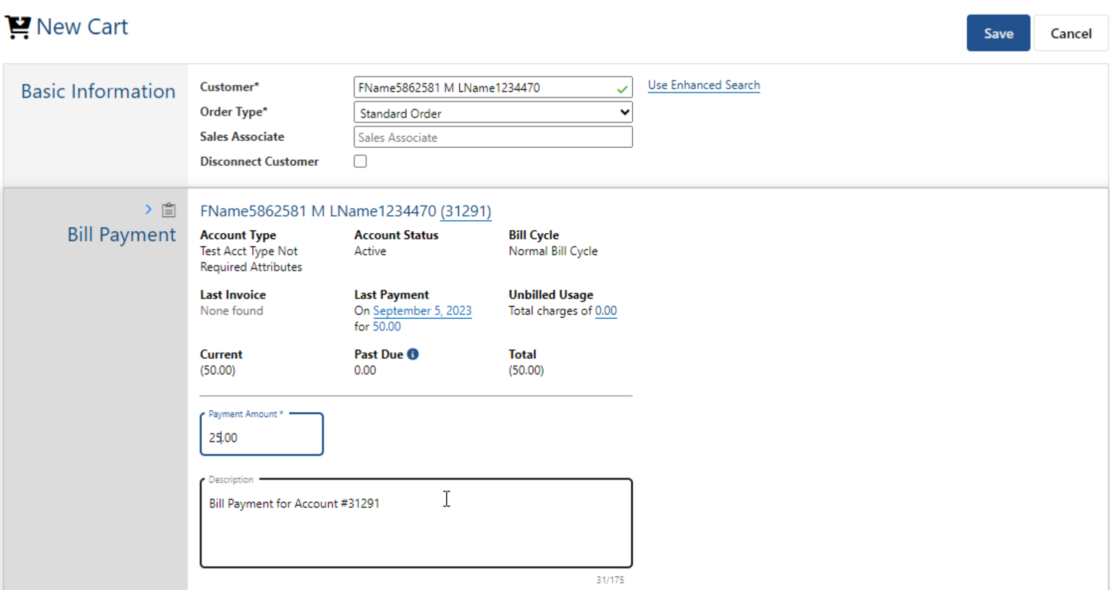
You can use a starting block configured for this purpose , or from any eligible transaction.

### 2.2.1 USING A TENDER BILL PAYMENT STARTING BLOCK

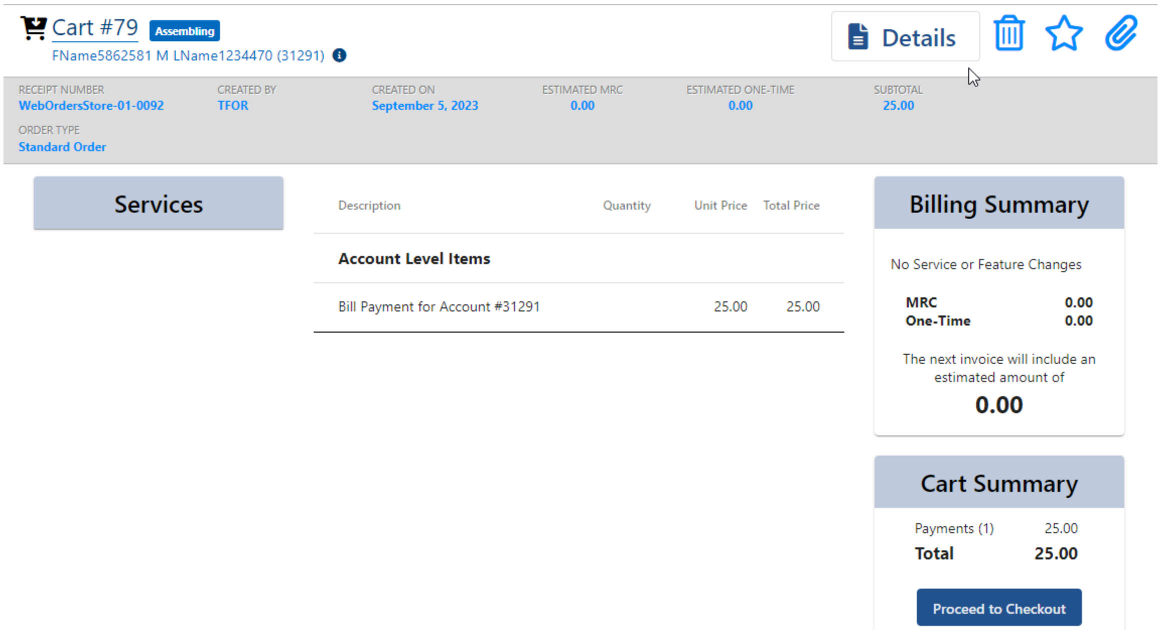
When initiated from Customer Care, the account is provided. When initiated from Orders, use the New Transaction page to select an account. Once the customer is specified, the New Transaction page displays the following account details related to bill payment for the selected account:

- Account Number
- Account Status
- Billing Status
- Total Amount Due
- Days Past Due
- Aging Group
- Account Balance Information, including a breakdown of aged balances.

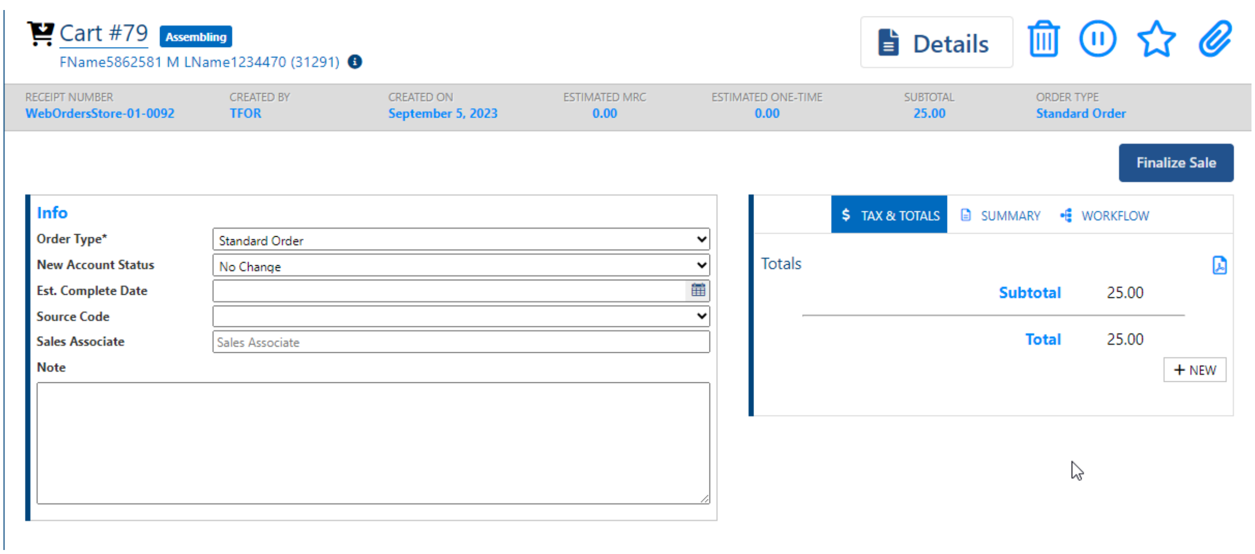
Enter the amount to be tendered. A description can be entered on an optional basis.




Saving the bill payment information skips the details page and takes you directly to the summary page, if the starting block's **Skip Transaction Details Page** option is selected. Note: This is selected by default on the system-provided (see) Bill Payment starting block, and when you create a new starting block and select **Bill Payment** as the starting action. **Note** that you can configure a starting block with starting = **Bill Payment** that *DOES NOT* skip the transaction details page, if so desired.

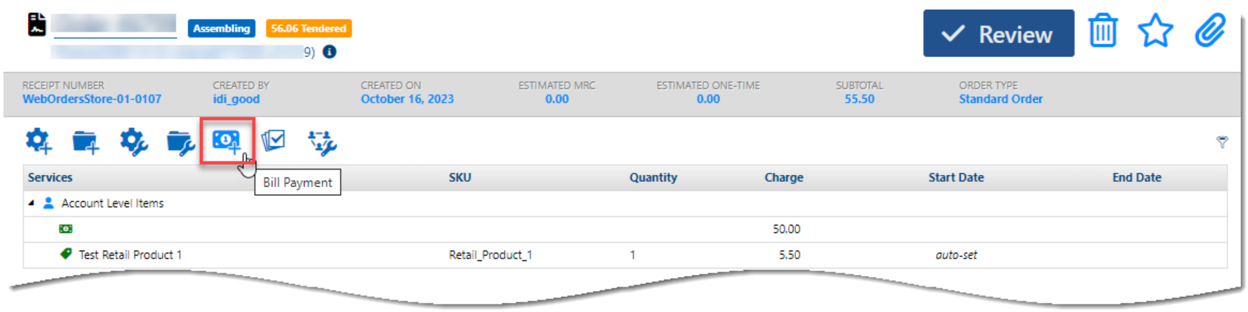



On proceeding to checkout, the finalize page is displayed. From here, you can either finalize the bill payment as is or add more tendering specifications (**+NEW**).

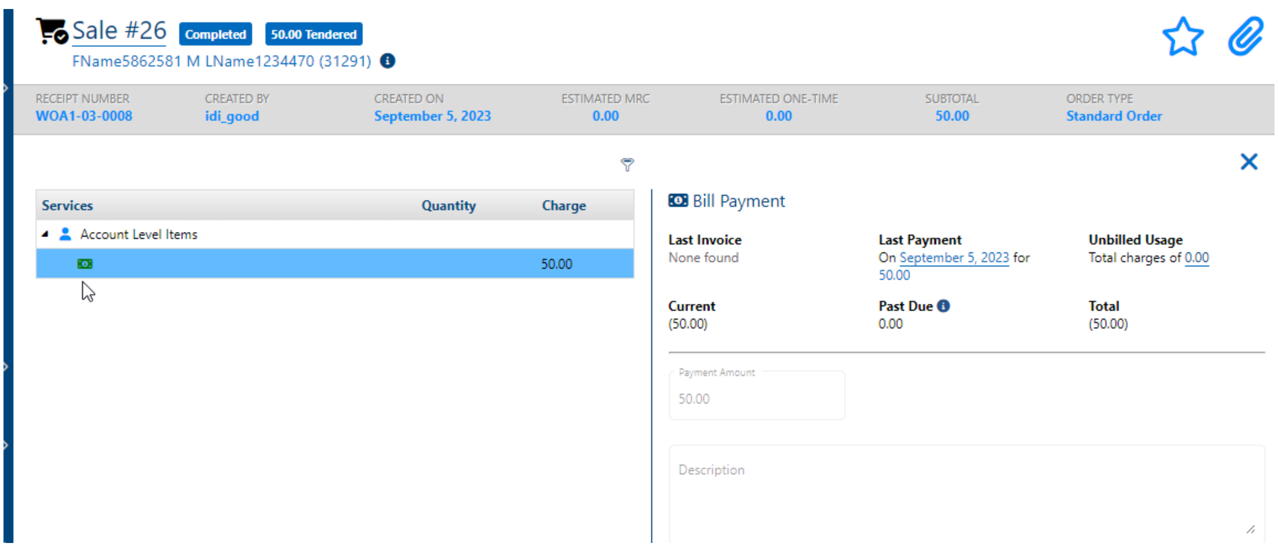


### 2.2.2 TENDERING A BILL PAYMENT FROM AN ELIGIBLE TRANSACTION

During order assembly, the Details page provides a new button for adding a bill payment to an eligible transaction.




Clicking this button displays bill payment details for the account in the right side assembly pane.



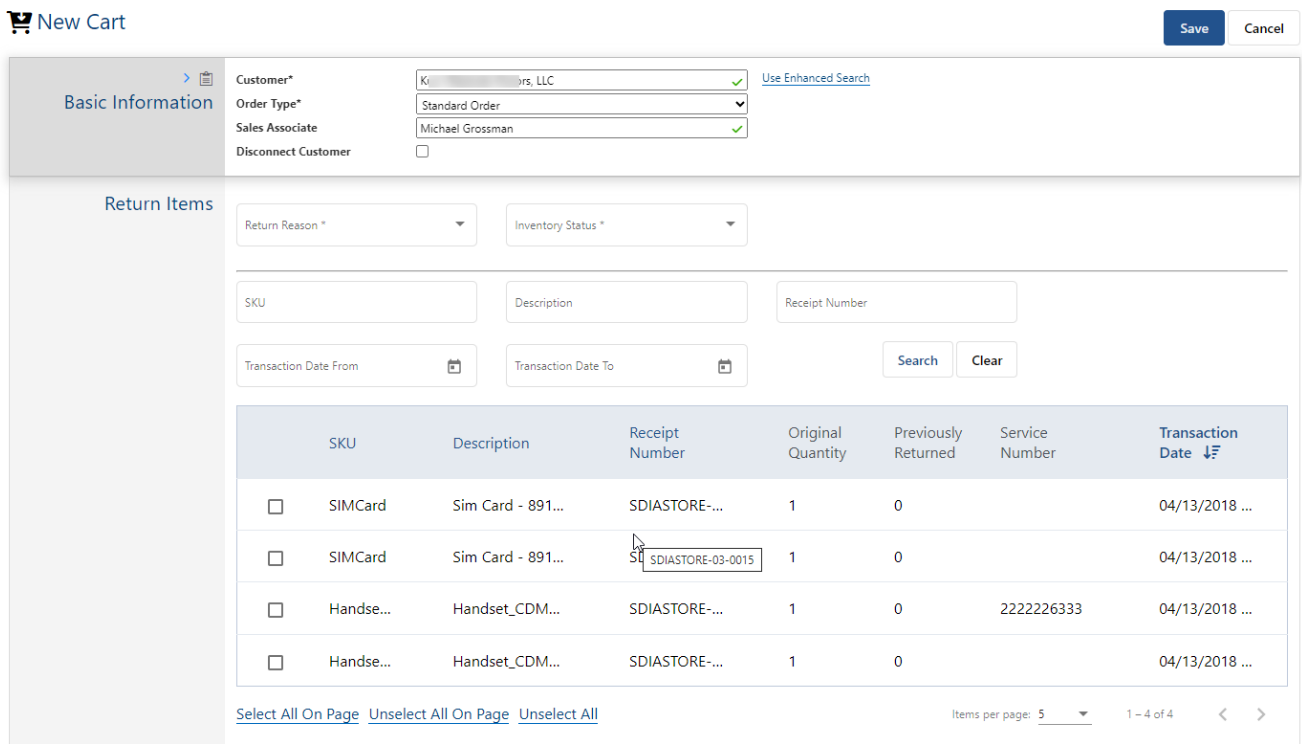

## 2.3 Returns

Returns can be initiated using a starting block configured for this purpose, or during assembly phase of an existing transaction. In either case:

- You'll be required to provide a Return Reason and Inventory Status. These can be predefined on the starting block or provided on the New Transaction Basic Information page.
- When selected items are added to the order, the details pane shows amount to be refunded

## 2.3.1 USING A RETURN ITEM STARTING BLOCK

Selecting a starting block with the *Return Item* starting action displays the New Transaction page. When initiated from Customer Care, the account is provided. When initiated from Orders, use the New Transaction page to select an account. Once the customer is specified, the New Transaction page displays a *Return Items* section below the Basic Information.




All returnable retail items on the account are available for selection. Items are configured as returnable (or not) in CostGuard Client Product Catalog.

- The list includes already returned items. This status is indicated in the *Previously Returned* column. However, these items cannot be selected.
- You can select items whose return window has expired (with override permission).

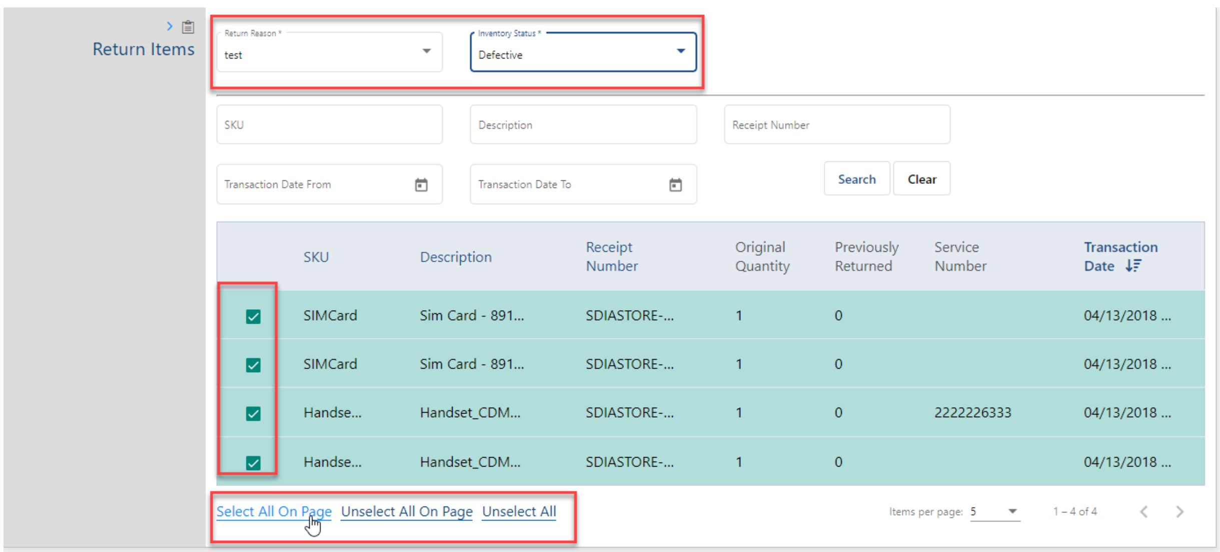
The following is indcated for each item:

- SKU & Description
- Receipt Number
- Original Quantity
- How many have previously been returned
- Service where the item was added (if applicable)
- Transaction date (when the item was added)

You can use the search section to present a taylored list of returnable items based on the specified search criteria. The following search criteria are supported:

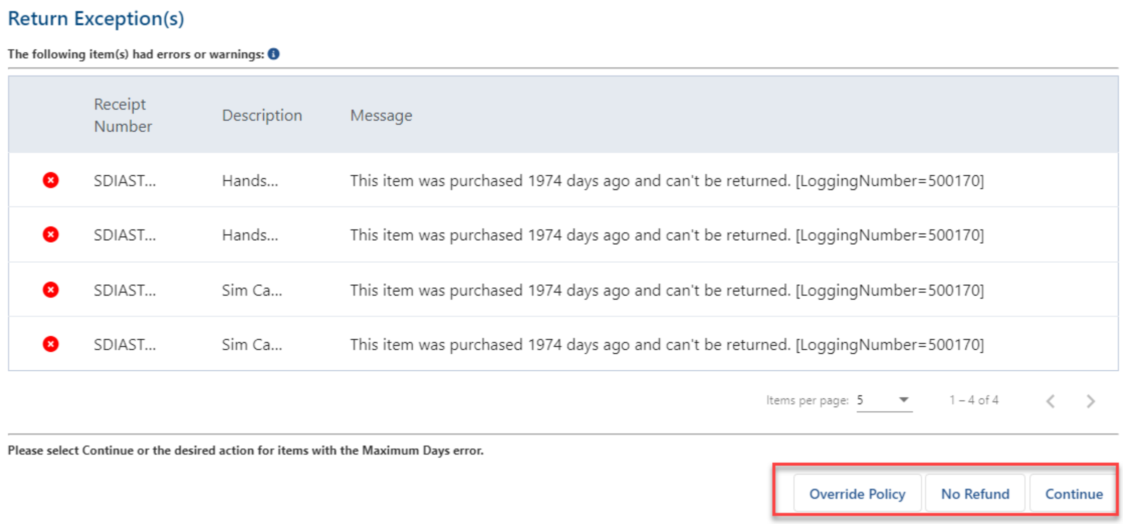
- Date the Transaction was finalized/submitted (and/or completed?)
- Receipt Number
- Product Catalog Item's SKU
- Product Catalog Item's Description

Select the item or items to be returned and provide the Return Reason and Inventory Status.



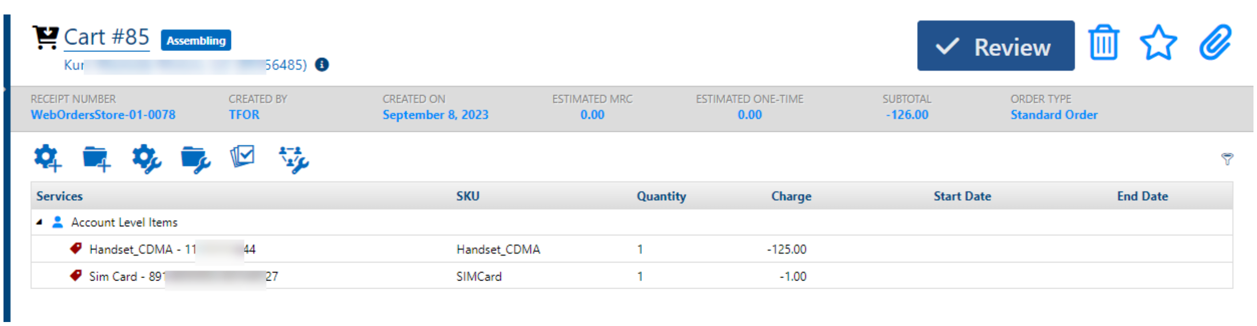

Items selected for return are evaluated against the register policy rules for returns based on the transaction's location (either the location the user is assigned to the location configured on the starting block). If any items violate a rule, those items (exceptions) are presented in a dialog with options to override the register policy. Typically these options are available to any user authorized to return items. You can restrict the ability to use these options on a user group basis through Order Field Configuration. When restricted, the options are visible to all users; however, they're disabled for users in the specified group(s).

The example below shows a case where the location’s register policy does not permit returns that exceed a specified number of days. The dialog lists the exceptions found and lets you choose to allow a manager to override the policy and return the items with a refund, return the items with no refund, or continue the order but not include the exception items.

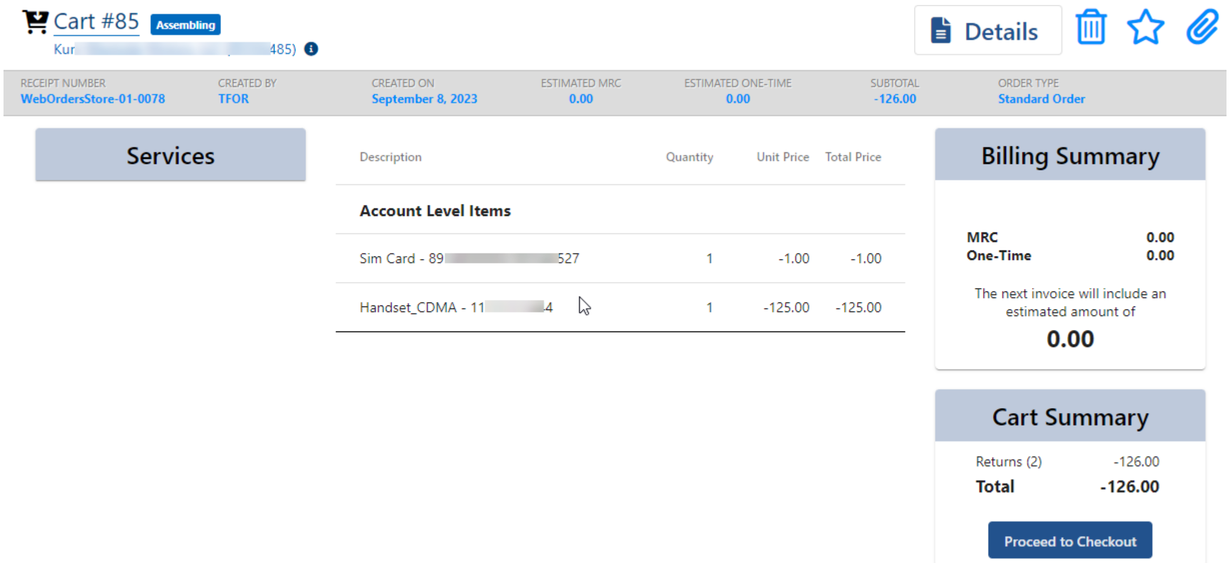



After handling exceptions (if any) and saving your selections, the order proceeds through the Detail, Summary and Submit Order pages. At each step you can review the items to be returned and their respective charges.

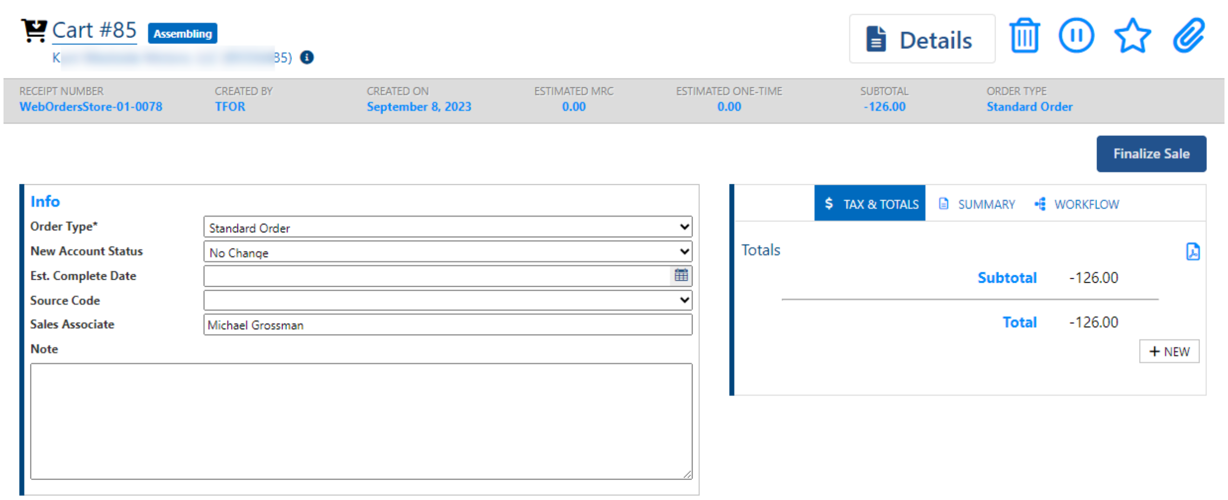
The Details page lets you edit and/or remove items. **Note**: Additional *Allowed Actions* can be selected at this point as applicable per the starting block configuration.



The Summary also shows a breakdown of items and respective charges.

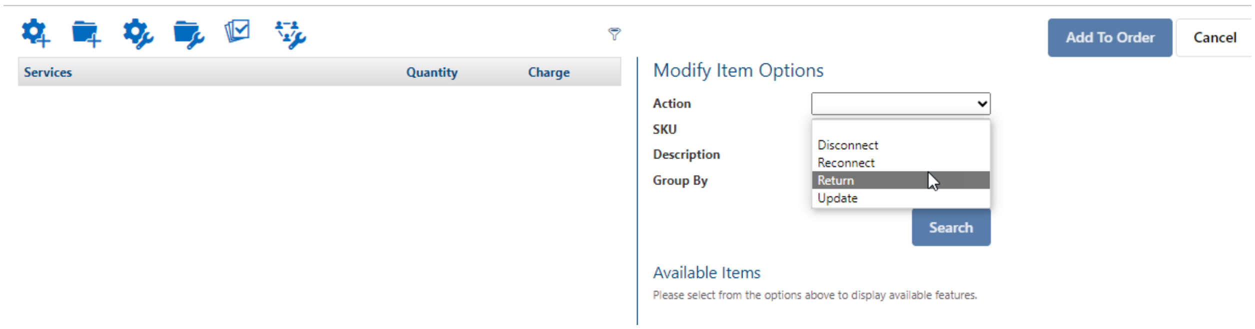



On proceeding to checkout, the finalize page is displayed. From here, you can either finalize the return as is or add more tendering specifications (**+NEW**). You can also generate a receipt or direct invoice; however, email functions are not supported.

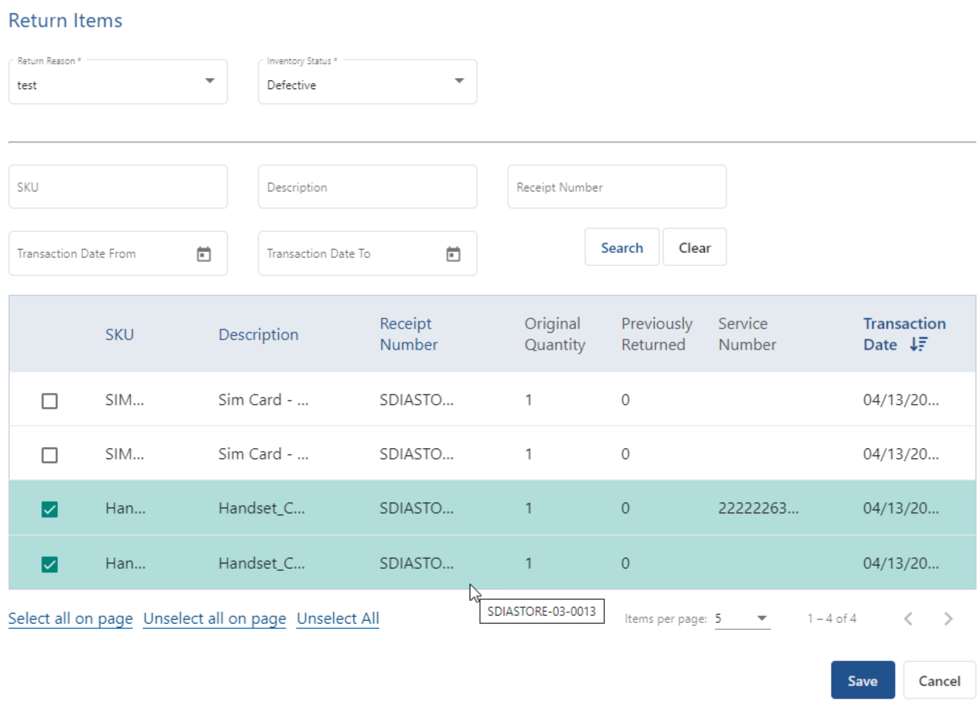


### 2.3.2 USING MODIFY ITEM TO RETURN AN ITEM DURING ASSEMBLY

In the assembly phase of a transaction that was not necessarily initiated as a return, when you click the *Modify Item* icon, the *Action* drop-down menu provides a new **Return** action if a location and register have been specified.



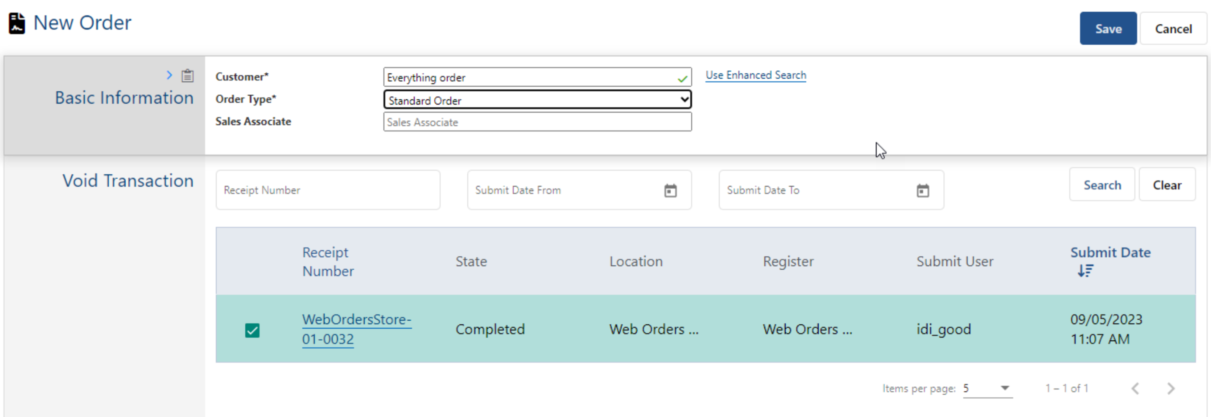

Selecting the **Return** action begins the process to search for and select available items to be returned. It displays the return items grid, from which point you proceed as previously described.



## 2.4 Void Transaction

Voids can only be performed for unreconciled transactions where a POS register was applied. Selecting a starting block configured to begin a void displays the New Transaction page. A *Void Transaction* grid is displayed below the Basic Information upon specifying a customer. This grid lists the transactions eligible for voiding with the following information:

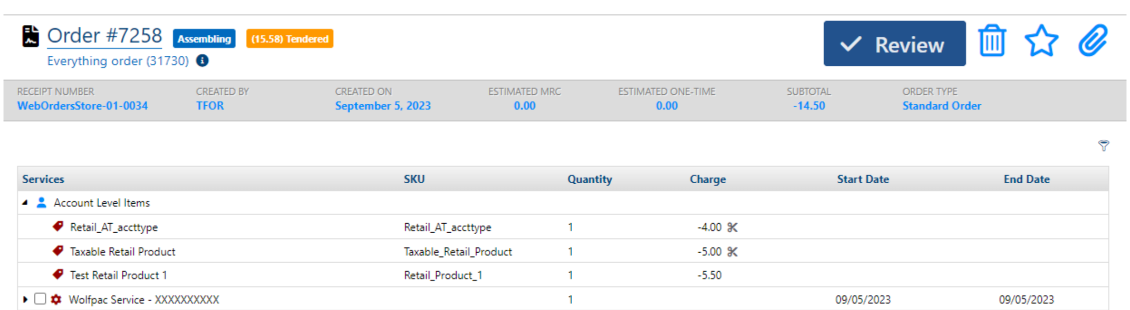
- Store Location Name
- Register Name
- Transaction Type
- Transaction State
- Entered by (user)
- Sales Associate/Sales Channel



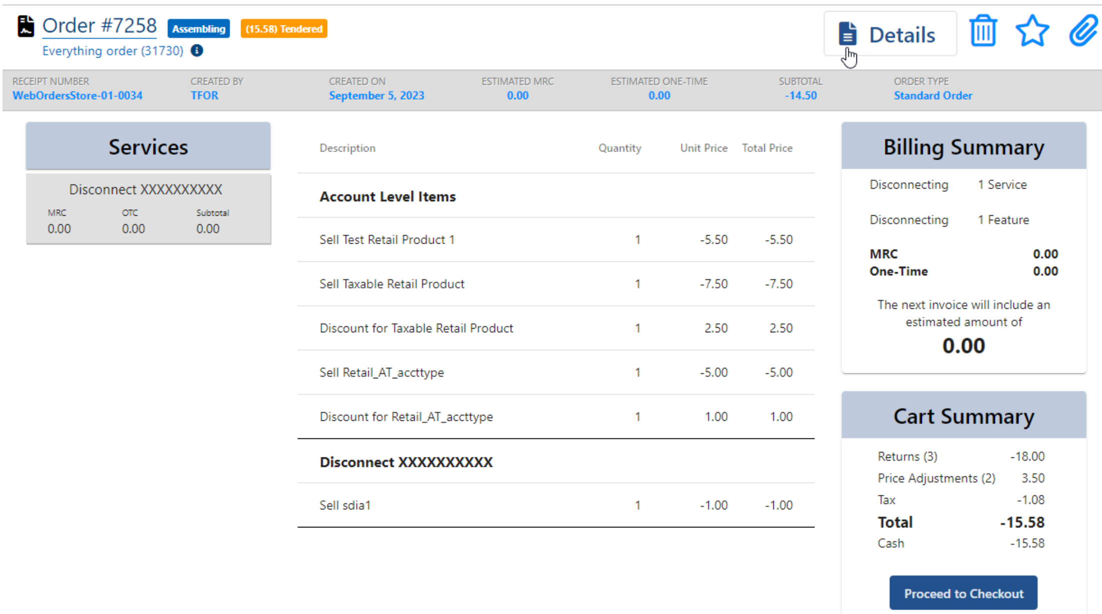

You can use the search section to display specific list based on the search criteria you enter: transaction date (submitted from-to range) and/or receipt number.

Select one or more transactions to void. On saving your selections, the order proceeds through the Detail, Summary and Submit Order pages.  At each step you can review the items to be canceled and their respective charges.

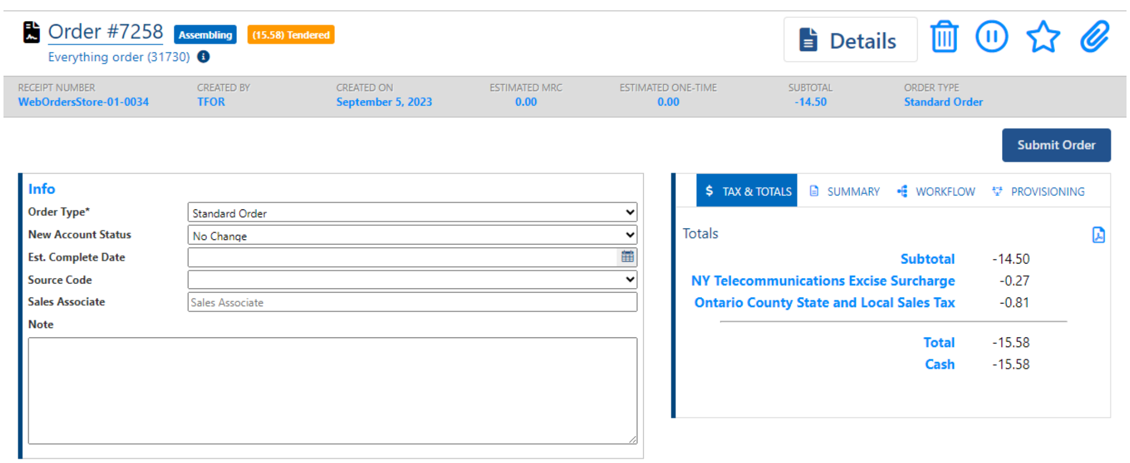
The Details shows the items and respective charges taken on the transaction to be voided. **Note**: You cannot edit or remove items from here.



The Summary also shows a breakdown of items and respective charges.




Submit provides a final review opportunity before submitting the order. It does not prompt for adding tenders as this is not needed. You can generate a receipt or direct invoice; however, email functions are not supported.



# 3 Paperless Billing

Providers are moving away from paper billing to leverage the efficiency and cost benefit of electronic invoice delivery. Processing paper invoices is costly, uses valuable staff time and is prone to human error. Electronic delivery is faster, more efficient, and providers get paid sooner. Currently, the CostGuard system has the capability to track whether an account should get a paper bill; however, until this release, it has not provided the ability to incentivize subscribers to opt for paperless billing by providing a discount when paperless billing is chosen (or apply a charge when subscribers opt out).

## 3.1 Overview

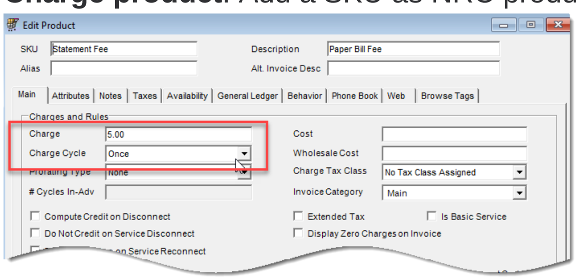
Paperless billing incentive can be set up on an environment basis. Customer Service Representatives can view an account's paperless billing incentive on the Customer Care account summary and view charges/discounts related to paperless billing on the invoice summary.

## 3.2 Setup

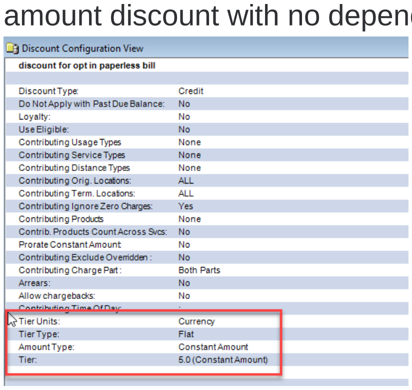
### 3.2.1 CONFIGURE PRODUCTS FOR OPT IN DISCOUNT/OPT-OUT CHARGE

This is done in the CostGuard Client Product Catalog.

- **Charge product**. Add a SKU as NRC product with a charge cycle of once.




- **Discount product**. Add a volume discount. Your configuration options are not limited; however, the recommended best practice is to set up a simple volume discount as a flat amount discount with no dependencies.



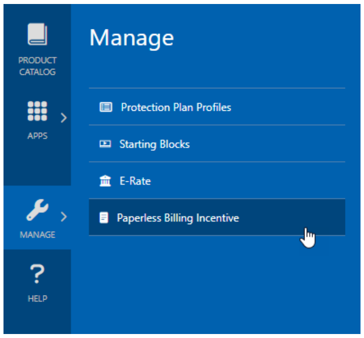
## 3.2.2 CONFIGURE PAPERLESS BILLING INCENTIVE OPTIONS

A new Manage Paperless Billing Incentive page in the Product Catalog web module lets enable and configure this functionality for the current environment. Once enabled you can:

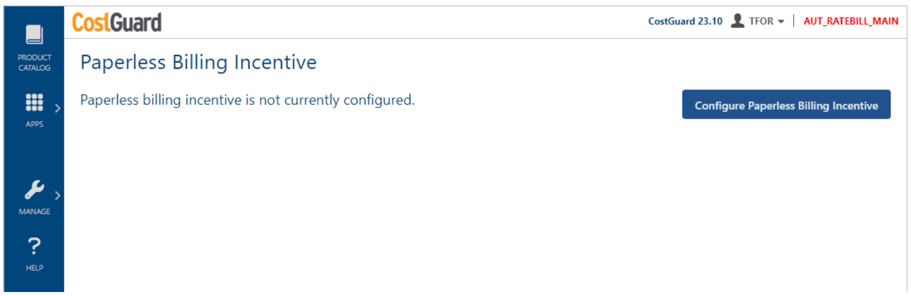
- Select the form of incentive:
  - Discount for opting in
  - Charge for opting out
- Select a SKU configured in the CostGuard Client Product Catalog that applies the discount or charge
- Select one or more account types to omit from paperless billing evaluation

**Note**: In the CostGuard Client Product Catalog set up the SKU to charge for opting out an/or a discount SKU for opting in.

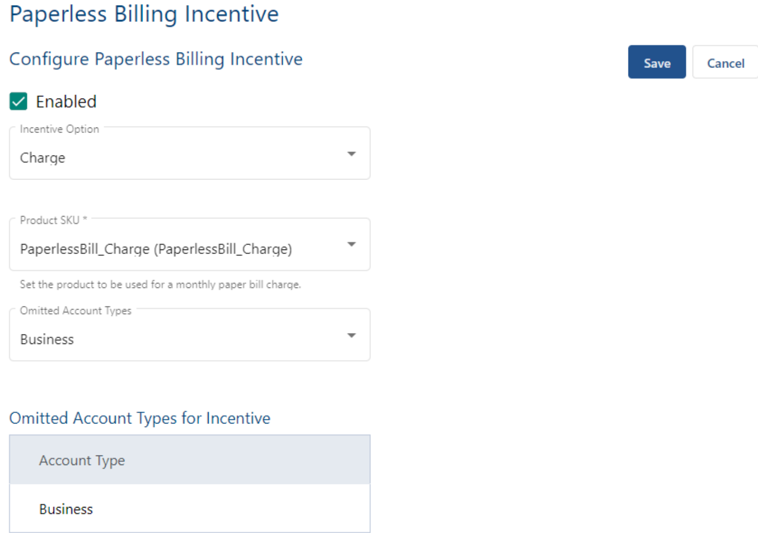
To set this up for the current environment, in the Product Catalog web module choose **MANAGE** > **Paperless Billing Incentive**.




When you select this option, the initial view will indicate this functionality is not yet configured and provide a button to start the configuration process.

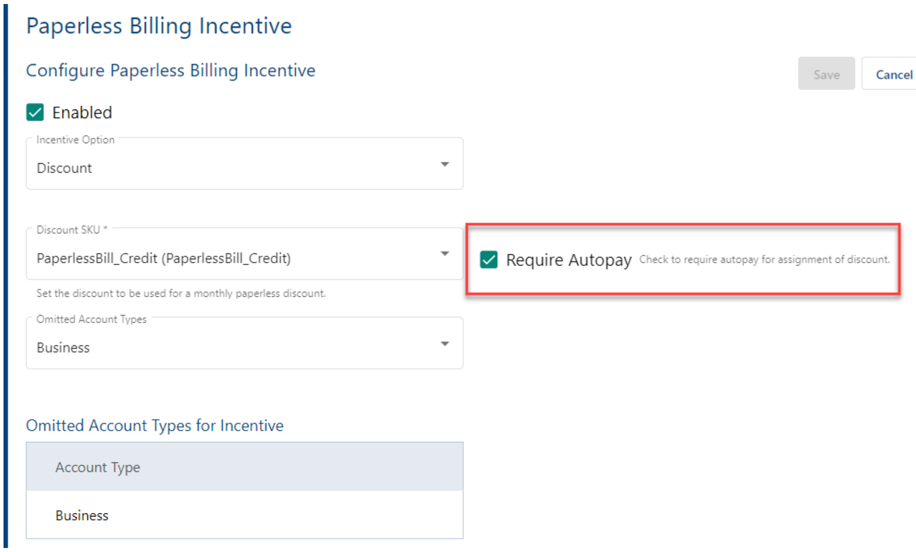



Clicking that button displays a form for configuring the paperless billing incentive. Check **Enabled**, then configure the paperless billing parameters as described below.

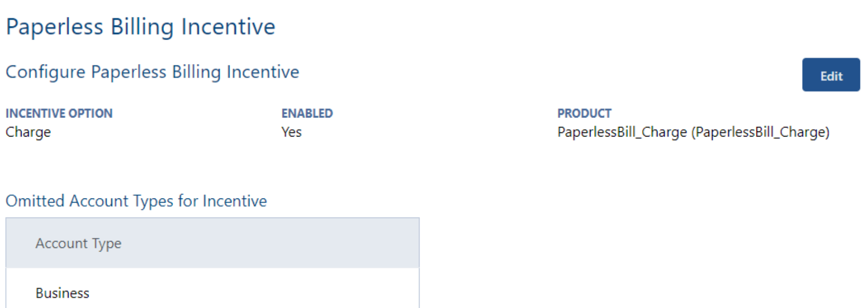



| Field | Description |
|---|---|
| Enabled | Check this box to enable or uncheck to disable. |
| Incentive Option | Choose to apply a **Charge** when subscribers opt out or apply a **Discount** when subscribers opt in. Note: When Incentive Option = Discount, there is an additional parameter to **Require Autopay**. |
| Require Autopay | Check make Autopay an additional requirement to receive a discount when that is the selected Incentive Option. |
| Product SKU | Choose the SKU as configured in the CostGuard Client Product Catalog to apply the charge or discount. **Note**: The SKUs listed in this drop-down menu change depending on the selected incentive option (Charge or Discount). |
| Omitted Account Types | Use this drop-down menu to select one or more account types to omit from paperless billing consideration. These account types will not be charged for opting out, nor will they receive a discount for opting in. Omitted account types (if any) are listed below this drop-down menu. |

Configure Paperless Billing form when Incentive Option = **Discount**



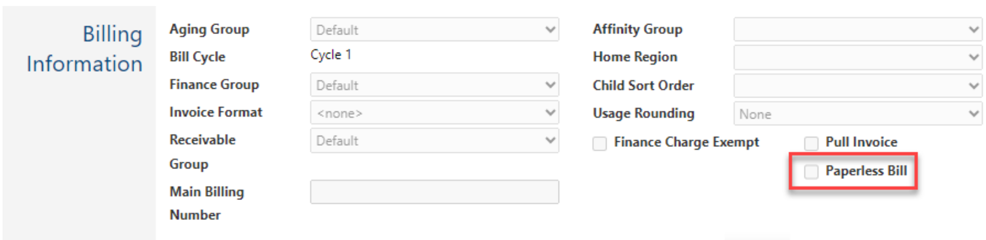

**Note**: If paperless billing is already enabled, you'll skip the first step and go directly to the Configure Paperless Billing form with an option to edit.



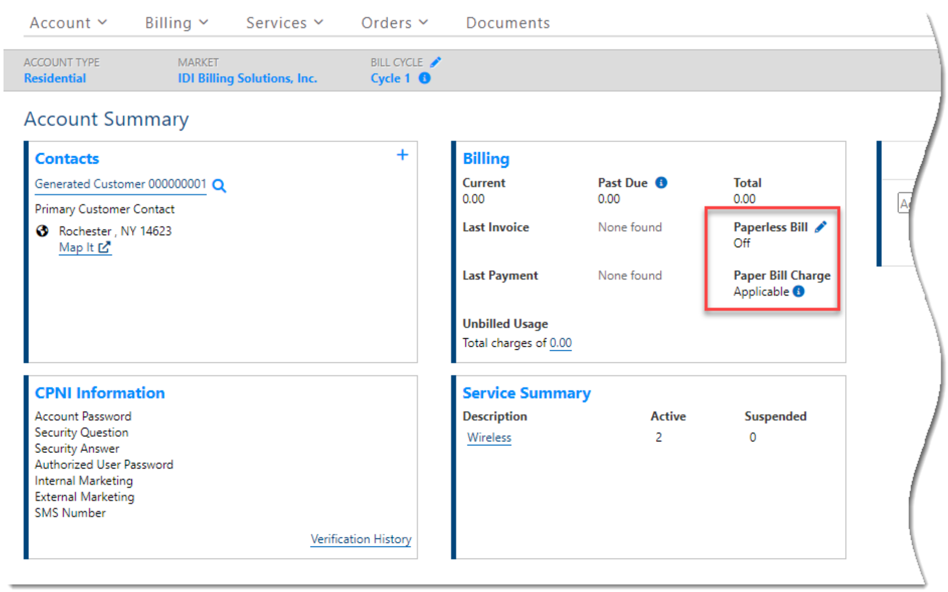
## 3.3 Managing Paperless Billing in Customer Care

### 3.3.1 TOGGLING THE PAPERLESS BILLING SETTING ON AN ACCOUNT

On an account, you can toggle the paperless billing flag to opt in or opt out. The previous *Suppress Invoice Print* setting has been renamed **Paperless Bill**. This setting is available in the Billing Information section when you add/edit an account. Check the box to opt in or uncheck to opt out.




You can also toggle this setting in the Billing section on the Account Summary and see whether a discount or charge applies.



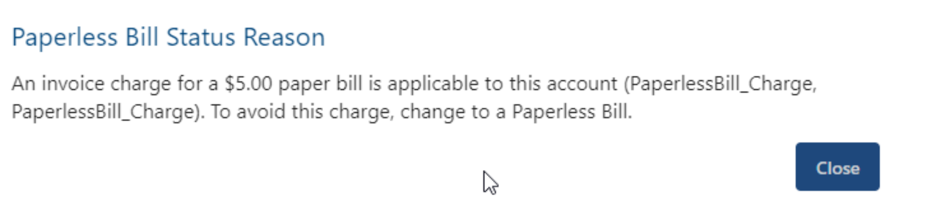

The charge or discount status (applicable or not) is based how the incentive options are configured for the environment and the status of the Paperless Bill setting on the account.

- First, if the account type is selected to be omitted, all other incentive criteria for the environment and the Paperless Bill setting on the account are ignored. Neither a charge nor a discount will apply.
- If the account type is not omitted, whether a charge or discount applies is determined by evaluating the other incentive criteria for the environment and Paperless Bill setting on the account as indicated below:

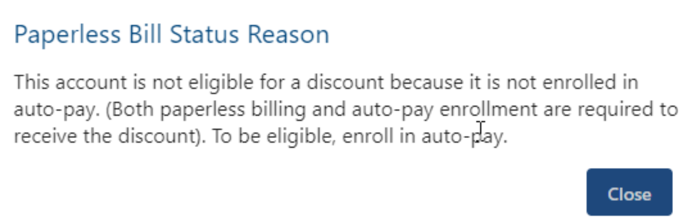
| Incentive and Paperless Bill Settings | Charge or Discount Status |
|---|---|
| • Incentive option = Charge<br>• Paperless Bill for account = Off (opt out) | Charge is applicable |
| • Incentive option = Charge<br>• Paperless Bill for account = On (opt in) | Charge is not applicable |
| • Incentive option = Discount<br>• Require Autopay not checked OR<br>Require Autopay checked and account set up for Autopay<br>• Paperless Bill for account = On (opt in) | Discount is applicable |
| • Incentive option = Discount<br>• Require Autopay checked and account not set up for Autopay<br>• Paperless Bill for account = On (opt in) | Discount is not applicable |
| • Incentive option = Discount<br>• Paperless Bill for account = Off (opt out)<br>• (Require Autopay setting not used in this case) | Discount is not applicable |

The information icon lets you see the reason for applying or not applying a discount or charge. Examples:

- In this example, the environment is set to apply a charge and the account has opted out of paperless billing:



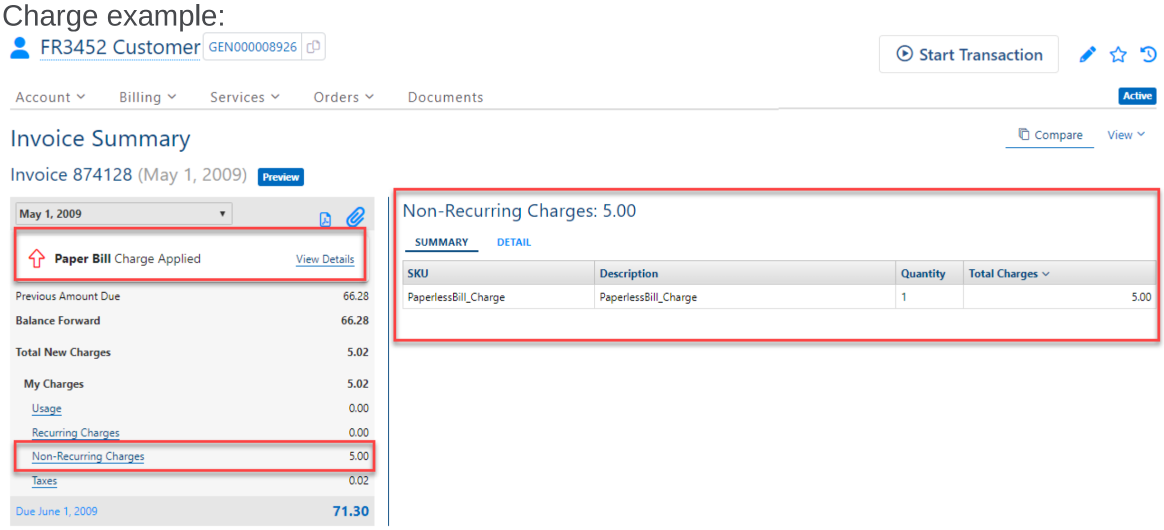

- In this example, the environment is set up to apply a discount and the account has opted in; however, the environment is also set up to require Autopay but the account is not on Autopay.



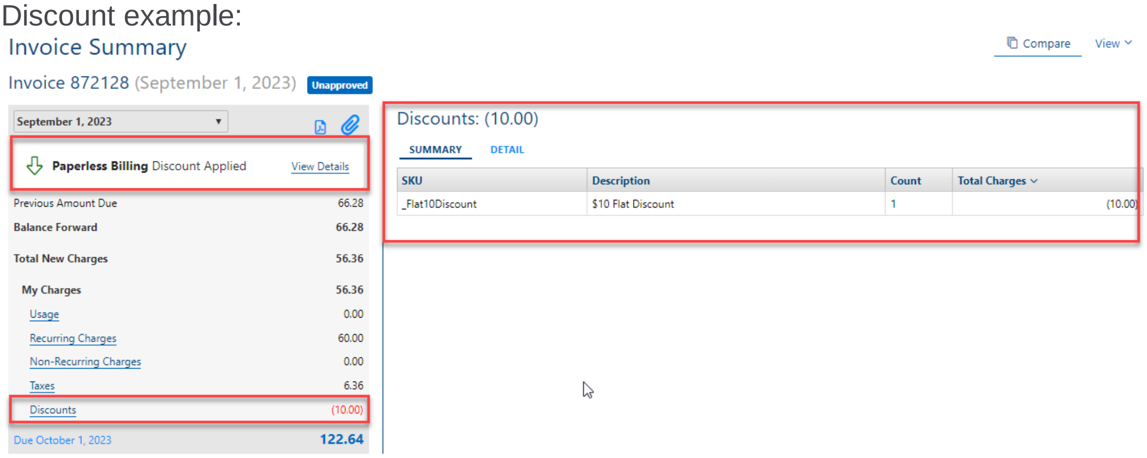
## 3.3.2 PAPERLESS BILLING DETAILS ON THE INVOICE SUMMARY

Charges or discounts for paperless billing are presented on the Invoice Summary when applicable.

Charge example:




Discount example:




Clicking the **View Details** link displays status information (*charge applicable* shown below).

### Paperless Billing

Paper Bill Charge Applicable

### Product

| SKU | REASON |
|---|---|
| US121700_OneTimeCharge | Not currently enrolled in Paperless Billing |

### Details

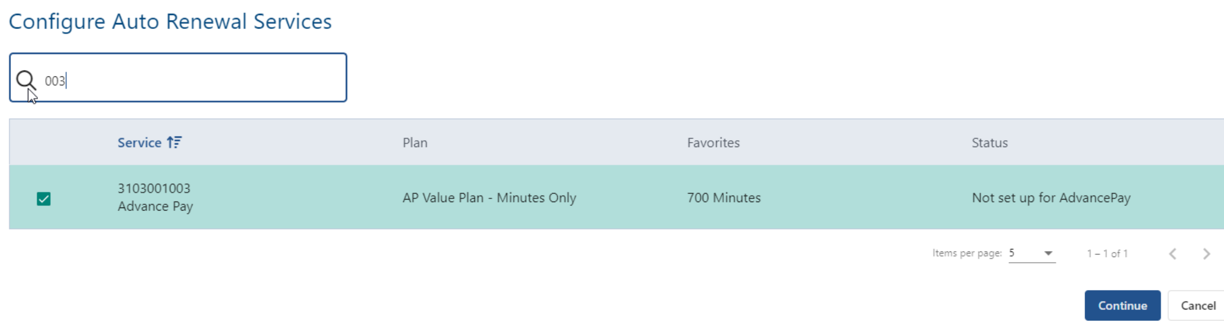
| DATE | ACCOUNT TYPE |
|---|---|
| 09/07/2023 3:19 PM | Residential |

| PAPERLESS BILL | AUTO PAY ENROLLMENT |
|---|---|
| False | False |

Close

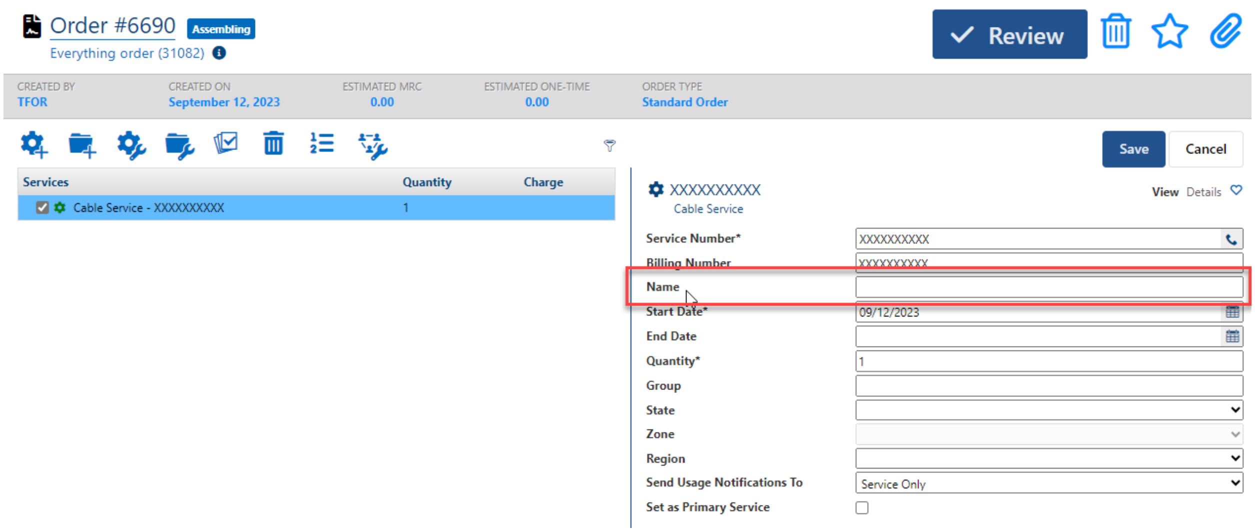
# 4 Enhancements for Advance Pay in Paymentus

AdvancePay in Paymentus Integration was originally released with CostGuard version 23.9. Version 23.10 provides the ability to filter the list of available services when adding auto-renewal services to a wallet in Customer Care. The list will filter based on the specified service number.



# 5 Editing Service Name in Web Orders

Customer Care and CostGuard Client orders provide the ability to enter a name or other information on a service. This capability is now available when adding or editing a service in the Orders web module.



# 6 Last Modified Date Enhancements

Replicated CostGuard data is often collected and transferred to internal systems, data warehouses, and business intelligence applications by customers. Problems can occur during data transmission, requiring data engineers to determine where the transfer process last left off. Data engineers often rely on the *Last Modified* date stored in the CostGuard system for this purpose. It tracks the date and time a record was inserted or updated into a database table. Not every CostGuard table has a *last modified date*. Adding a *lastmodifieddate* column to additional tables makes it easier for data engineers to analyze where the transfer process ended and determine where to resume. The following improvements for storing the last modified date are provided with this release. **Note**: This field may be labeled *LastModifiedDate* or *LastModified* in different tables.

## 6.1 Updates to Existing LastModifiedDate field

The section below addresses scenarios where the database table contains an existing Last Modified Date, but the value was not set every time a record was inserted or updated.

### 6.1.1 UPDATES TO BILLING PROCESS

The billing process has been enhanced to set the *LastModifiedDate* fields for InvoiceDetail and Non Usage Services (NonUsgSvc) tables when invoice detail records are created, and invoice numbers populated.

- The LastModifiedDate is set in the InvoiceDetail table when writing new rows to the table.
- The LastModifiedDate is updated in the NonUsgSvc table when the invoice number posted is added to the record. The LastModifiedDate is updated in the NonUsgSvc table when the final invoice number is added to the record.

### 6.1.2 UPDATES TO BILLING XML GENERATION PROCESS

The CostGuard XML generation process creates the invoice XML file. The file is used to generate the PDF or printed invoice. The XML generation process has been enhanced to set the *Last Modified* field when the invoice status value is updated in the *Invoice* table. The status changes to *print* once the XML file is generated.

### 6.1.3 UPDATES TO INVOICE FILE UPLOAD PROCESS

The Invoice File Upload process has been enhanced to set the *LastModified* field in the Invoice table when PDF invoices are uploaded to Document Storage.

### 6.1.4 UPDATES TO ACCOUNT POSTING PROCESS

The account Posting process posts payments and adjustments to the customer's account balance. The Account Posting process has been enhanced to:

- Set *LastModifiedDate* in the AccountArrears table when a record is added or updated.
- Set *LastModifiedDate* in the Payment table when a payment is posted to an invoice.
- Set *LastModifiedDate* in the Adjustment table when an adjustment is posted to an invoice.

### 6.1.5 UPDATES TO PROCESS FOR FIRST/LAST CALL UPDATES

The *Update First Call and Last Call Dates* scheduled job analyzes the usage databases and updates the service number with the first and last calls made. The Update First and Last Call Dates scheduled job has been enhanced to set the *LastModified* field in the UsgSvc table whenever First Call Date or Last Call Date values have been added or updated.

## 6.2 Last Modified Date Column Added to Additional Tables

A new column called *ct_LastModifiedDate* was added to the following tables to support monitoring records that were added or updated. The tables below did not have an existing *Last Modified Data* column.

- Alert
- AttPropertyOccurrence
- BillingCycleDetail
- Collection
- Contact
- CorpAccts
- Device
- EPayRecurring
- GCJFulfillmentRespDet
- JournalFollowUp
- Phonebook
- PhonebookEntry
- POSTxnDetail
- POSTxnTender
- ProductCatalog
- ProductCatalogGroupMember
- ProductCatalogTree
- RetailDiscount
- RetailInstallmentPlan
- RetailProduct
- RetailProductJurisdictionTax
- SalesEntity
- SystemOrder
- SystemOrderDetail

The default value for *ct_LastModifiedDate* is the current date and time.

**NOTE**: *ct_* indicates *change tracking*. This column is not accessible through the web services. It is only accessible through replication. Also, these fields do not guarantee an audit log entry, which normally accompanies updates to the Last Modified Date.