



Spirits 'Processing Blend' Recipe Type

January 2024 | ECP Version 24.01

This document explains how the new 'Processing Blend' Recipe Type works, how the proof gallons data reports on the TTB DRO, and how to set up Processing Blend Recipes.

Problem Statement

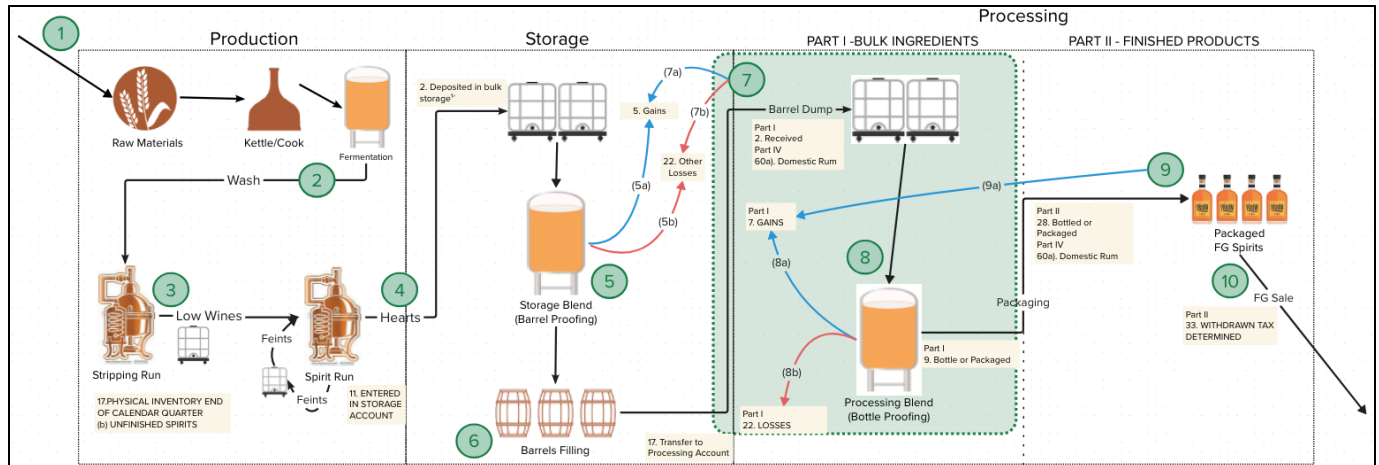
The spirit production process includes steps where the spirit is processed in preparation of packaging. These processing steps can include any combination of the following processing activities, but will always end with bottle proofing:

- A) Barrel Dumping - completing the barrel aging process by dumping barrels
- B) Spirit Maceration - the infusion of non-spirit ingredients to add flavor to the original spirit, resulting in the transformation to a new spirit type
- C) Spirits Blending - the blending of spirit ingredients together, which may result in a transformation to a new spirit type
- D) Bottle Proofing - diluting the processed spirit down to the target bottle proof

Examples of these spirit processing activities include:

- Flavored Vodka - includes Spirit Maceration + Bottle Proofing
- Blended Bourbon - includes multiple Barrel Dumps + Spirits Blending + Bottle Proofing
- Premade Manhattan - includes Barrel Dumping + Spirits Blending + Bottle Proofing
- Gin - includes Spirit Maceration + Bottle Proofing
- Whiskey - includes Barrel Dumping + Bottle Proofing

The TTB DRO classifies these processing activities as occurring in the *DRO Processing Report Part I - Bulk Ingredients*. Using the 'Processing Blend' Recipe Type will ensure that the spirit processing activities will be reported on the *DRO Processing Report Part I - Bulk Ingredients*.



The Solution

Introducing the 'Processing Blend' Recipe Type. The 'Processing Blend' Recipe Type is used to record the previously mentioned spirit processing activities used to process the spirit in preparation of packaging. Any spirits processing activity that transforms the original base spirit into a new spirit type should use the 'Processing Blend' Recipe Type because, unlike the DRO Storage report, the DRO Processing Report supports the transformation of spirit types during processing.

'Processing Blend' Recipes assist the user in ensuring no proof gallons are lost during the processing blend in order to be TTB DRO compliant. This is accomplished by comparing the input proof gallons to the output proof gallons at the stage level, and asking the user to complete a write-off/write-in for any proof gallon gains or losses during the blend.



How it Works

'Processing Blend' Recipe Setup

Save Changes **Add Recipe Stages** **QC**

Recipe Version: 7/8) Barrel Dump & Bottle Proof -
Product: 134 Bottle Proof - Dark Barrel Aged Rum
* Recipe Type: Processing Blend
* Location: Distillery North
Production Partner:
* Active: ☒
* Planned Units: 37.5
UoM: Gallons
* Proof: 80
Laid-in Cost: \$20.66
Total Cost: \$774.81

Barrel Dumping

* Recipe Stage	* Stage Type	Sequence	* Planned Units	* Proof	UoM	Turnable
Barrel dumping	Barrel Dumping	1	25	120	Gallons	☐
Lead Time	Transfer When Complete	Memo				
0 Minutes	☐					
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost
144 Barrel Proof - Dark Rum		30	Gallons	0 Minutes	0	\$25.83
						Total Cost: \$774.81

Bottle Proofing

* Recipe Stage	* Stage Type	Sequence	* Planned Units	* Proof	UoM	Turnable
Bottle proofing dark barrel aged	Bottle Proofing	2	37.5	80	Gallons	☐
Lead Time	Transfer When Complete	Memo				
0 Minutes	☐					
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost
363 Water		12.5	Gallons	0 Minutes	0	\$0.00
						Total Cost: \$0.00

Setup & Configuration:

- 'Processing Blend' Recipes require the use of Production Stage Types with Stage Class = Spirits. Stage Class = Spirits enforces the collection of proof data when processing the PdO. The 'Stage Type' dropdown in Recipe Management will be auto-filtered down to only those Production Stage Types with Stage Class = Spirits.
- Processing Blend' Recipes are typically going to be multistage recipes.
- Every Recipe Stage in a 'Processing Blend' Recipe should have an Inventory Adjustment Customer set on the Recipe Stage.
 - The Inventory Adjustment Customer is used to record proof gallon gains or losses

Save Changes **Add Recipe Stages** **QC**

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Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost
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Bottle Proofing

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Lead Time	Transfer When Complete	Memo				
0 Minutes	☐					
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost
363 Water		12.5	Gallons	0 Minutes	0	\$0.00
						Total Cost: \$0.00



during the spirit processing activity.

- The Inventory Adjustment Customer used must either use TTB Tax Code = *DRO Storage Loss/Gain* OR *DRO Processing Loss/Gain*. Which one to use will depend on the processing activity taking place. Below is a list of suggestions based on the previously mentioned spirit processing activities:
 - A. Barrel Dumping - use an Inventory Adjustment Customer with TTB Tax Code = *DRO Storage Loss/Gain* because the proof gallon gain/loss recorded at the time of a barrel dump occurred while the spirit was at rest in storage. This loss is commonly called “angels’ share”.
 - B. Spirit Maceration - use an Inventory Adjustment Customer with TTB Tax Code = *DRO Processing Loss/Gain* because proof gallon gain/loss recorded during Spirit Maceration occurs when processing the spirit before packaging.
 - C. Spirits Blending - use an Inventory Adjustment Customer with TTB Tax Code = *DRO Processing Loss/Gain* because proof gallon gain/loss recorded during Spirit Blending occurs when processing the spirit before packaging.
 - D. Bottle Proofing - use an Inventory Adjustment Customer with TTB Tax Code = *DRO Processing Loss/Gain* because proof gallon gain/loss recorded during Bottle Proofing occurs when processing the spirit before packaging.

Save Changes Add Recipe Stages QC

Recipe Version: 7/8) Barrel Dump & Bottle Proof -
Product: 134 Bottle Proof - Dark Barrel Aged Rum
UoM: Gallons
Recipe Type: Processing Blend
Location: Distillery North
Production Partner:
Active: ☒
Laid-in Cost: \$20.66
Total Cost: \$774.81

Collapse All

Barrel Dumping

Byproducts Management Delete

* Recipe Stage	* Stage Type	Sequence	* Planned Units	* Proof	UoM	Turnable
Barrel dumping	Barrel Dumping	1	25	120	Gallons	☐
Lead Time	Transfer When Complete	Memo				
0 Minutes	☐					
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost Total Cost
144 Barrel Proof - Dark Rum		30	Gallons	0 Minutes	0	\$25.83 \$774.81

Add Recipe Component Add Instruction

Bottle Proofing

Byproducts Management Delete

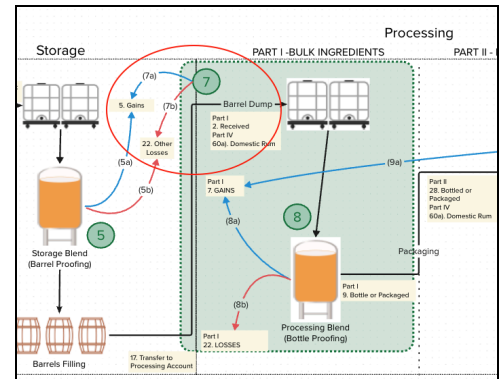
* Recipe Stage	* Stage Type	Sequence	* Planned Units	* Proof	UoM	Turnable
Bottle proofing dark barrel aged	Bottle Proofing	2	37.5	80	Gallons	☐
Lead Time	Transfer When Complete	Memo				
0 Minutes	☐					
Product	Memo	* Planned Units	UoM	Timing	Sequence	Laid-In Cost Total Cost
363 Water		12.5	Gallons	0 Minutes	0	\$0.00 \$0.00

Add Recipe Component Add Instruction



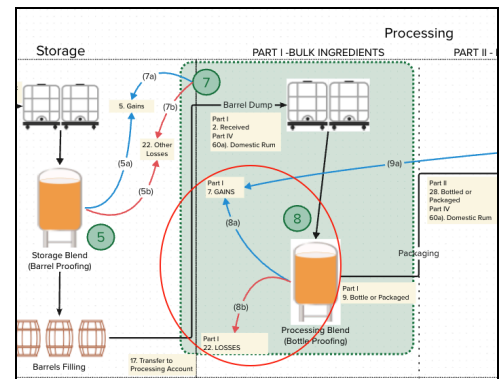
- When the Processing Blend Recipe Stage Inventory Adjustment Customer has TTB Tax Code = *DRO Storage Loss/Gain*:

- Proof gallon gains are reported on the DRO Storage Report Line 5.
Gains
- Proof gallon losses are reported on the DRO Storage Report Line 22.
Other Losses



- When the Processing Blend Recipe Stage Inventory Adjustment Customer has TTB Tax Code = *DRO Processing Loss/Gain*:

- Proof gallon gains are reported on the DRO Processing Report Part I Line 7. Gains
- Proof gallon losses are reported on the DRO Processing Report Part I Line 22. Losses



- The input spirit Product being consumed in a Recipe Component does NOT have to share the same Brand TTB Category (spirit type) as the output spirit Product being produced.
 - This is because the DRO Processing Report DOES support the transformation of spirit type, unlike the DRO Storage Report.
 - This is only enforced on the 'Storage Blend' Recipe Type.

Processing Blend PdO Processing – Proof Gallon Loss

How to Use – Example: Two stage 'Processing Blend' Recipe, where Stage 1 is for Barrel Dumping, and Stage 2 is for Bottle Proofing.

1. Scheduling 'Processing Blend' Recipe Type PdO's happens from the Batch Management page, which is the same as all other Recipe Types.
2. On Stage 1 – Barrel Dumping click 'Assign' to select the barrels being consumed.
 - a. The user can clearly see how many proof gallons are being dumped when assigning and consuming spirit liquid.
 - b. For barrel dumping, the input proof gallons consumed are likely the Original Proof Gallons (OPG) put into the barrel at the time of the barrel



fill, not necessarily the amount of proof gallons actually in the barrel at the time of the barrel dumping.

The screenshot displays a production order management system. At the top, there's a navigation bar with tabs: 'Edit Production Order', 'Log QC', 'Batch Management', and 'Production Orders'. Below this, a table shows production order details for 'Test 2: Spirit Production Processing RM-to-FG 3520'. The main section shows a 'Barrel dumping' stage with a table of planned and completed units and proof gallons. A 'Lot Selection' modal is open, showing a list of products and their associated proof gallons. The modal has columns for Product, Bin, Batch Code, Received Date, Exp Date, Quantity, Proof Gallons, Available Quantity, UoM, and Proof. The 'Proof Gallons' column is highlighted with a red box. The modal also includes 'Consume' buttons for each product and 'Cancel' and 'Save' buttons at the bottom.

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	Proof Gallons
Barrel dumping	Chill Tank 1	New	Gallons	25	0	120	0

Product	End Time	Status	Memo	UoM	Planned Units	Completed Units	Proof Gallons
144 Barrel Proof - Dark Rum	12/7/2023 2:25 PM	New		Gallons	30	0	0

Product	Bin	Batch Code	Received Date	Exp Date	Quantity	Proof Gallons	Available Quantity	UoM	Proof
144 Barrel Proof - Dark Rum	30NC3022	6/5/2019	10/9/2022		30	36.00	30	Gallons	120
144 Barrel Proof - Dark Rum	53MMOR001	53MMOR001	10/25/2022			0	53	Gallons	120
144 Barrel Proof - Dark Rum	53NC3011	8/19/2022	10/9/2022			0	53	Gallons	120
144 Barrel Proof - Dark Rum	53NC3009	5/24/2022	10/9/2022			0	53	Gallons	120

3. After consuming the input spirits in the barrel dump, enter the Completed Units and Proof of the output spirit being produced.
 - a. This is where the user records the actual volume and proof of the spirit liquid collected from the barrel dump.
 - b. The total proof gallons consumed will be compared against the total proof gallons produced to determine any proof gallon gains or losses in the barrel dump.
4. The user is notified when a proof gallon loss is calculated. The system will auto-select the Inventory Adjustment Customer set on the Recipe Stage, so all



the user has to do is click 'Write Off'.

The screenshot shows a production order management interface. At the top, there are tabs for 'Edit Production Order', 'Log QC', 'Batch Management', and 'Production Orders'. Below these, a table lists production orders with columns for Batch, Production Order ID, Product, Status, Planned Start Time, Actual Start Time, Planned End Time, Actual End Time, UoM, Planned Units, Completed Units, and Proof. A specific order is highlighted: 'Test 2: Spirit Production Processing RM-to-FG 3520' with product '134 Bottle Proof - Dark Barrel Aged Rum' and status 'In Process'. Below this, a 'Collapse All' button is visible. The main table shows stages of production. Stage 1, 'Barrel dumping', is in progress, with 25 planned units, 25 completed units, and 120 proof gallons. Stage 2, 'Bottle proofing dark barrel aged', is also in progress, with 30 planned units, 30 completed units, and 36 proof gallons. A 'Spirits Blending Error' dialog box is open, showing a discrepancy: 36.00 proof gallons were consumed, but only 30.00 were produced, resulting in a 6.00 proof gallon loss. The dialog prompts the user to either close the prompt and fix the data or write off the loss. The 'Write Off' button is highlighted.

Batch	Production Order ID	Product	Status	Planned Start Time	Actual Start Time	Planned End Time	Actual End Time	UoM	Planned Units	Completed Units	Proof
Test 2: Spirit Production Processing RM-to-FG	3520	134 Bottle Proof - Dark Barrel Aged Rum	In Process	1/15/2024 2:22 PM	12/7/2023 2:27 PM	1/15/2024 2:24 PM		Gallons	37.5	0	80

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	Proof Gallons	Buttons				
Barrel dumping	Chill Tank 1	In Process	Gallons	25	25	120	30	Auto Assign and Consume, Complete, Log QC				
				Planned Start Time	Actual Start Time	Lead Time	Planned End Time	Actual End Time				
				1/15/2024 2:23 PM	12/7/2023 2:25 PM	0 Minutes	1/15/2024 2:23 PM					
				Product	End Time	Status	Memo	UoM	Planned Units	Completed Units	Proof Gallons	Buttons
				144 Barrel Proof - Dark Rum	12/7/2023 2:25 PM	In Process		Gallons	30	30	36	Assign, Auto Assign and Consume

Stage Name	Equipment	Status	UoM	Planned Start Time	Actual Start Time	Lead Time	Planned End Time	Actual End Time
Bottle proofing dark barrel aged	Chill Tank 1	New	Gallons	1/15/2024 2:24 PM		0 Minutes	1/15/2024 2:24 PM	
				Product	End Time	Status	Memo	UoM
				363 Water	1/15/2024 2:24 PM	New		Gallons

Spirits Blending Error

Consumed proof gallons must equal produced proof gallons when blending spirits.

36.00 proof gallons were consumed in this blend.
30.00 proof gallons were produced in this blend.
This results in a 6.00 proof gallon loss.

You can either close this prompt and fix the data resulting in this proof gallon loss, or write-off the proof gallon difference as a loss.

* Customer
DRO Storage Loss/Gain - ! 冊

Close Write Off

5. The proof gallons produced in Stage 1 are passed to Stage 2 - Bottle Proofing and immediately consumed.
6. Consume all ingredients in Stage 2 - Bottle Proofing, which is typically just adding water to dilute the spirit to the target bottle proof.
7. Enter Completed Units and Proof for the output being produced in Stage 2 - Bottle Proofing.
 - a. This is where the user records the actual volume and proof of the bottle proofed spirit.
 - b. The total proof gallons consumed will be compared against the total proof gallons produced to determine any proof gallon gains or losses.
8. The user is notified when a proof gallon loss is calculated. The system will auto-select the Inventory Adjustment Customer set on Stage 2 - Bottle Proofing, so all the user has to do is click 'Write Off'.



Edit Production Order | Log QC | Batch Management | Production Orders

Batch: Test 2: Spirit Production Processing RM-to-FG 3520 | Product: 134 Bottle Proof - Dark Barrel Aged Rum | Status: In Process | Planned Start Time: 1/15/2024 2:22 PM | Actual Start Time: 12/7/2023 2:27 PM | Planned End Time: 1/15/2024 2:24 PM | Actual End Time: | UoM: Gallons | Planned Units: 37.5 | Completed Units: 0 | Proof: 80

Expand All

Stage Name	Equipment	Status	UoM	Planned Units	Completed Units	Proof	Proof Gallons
Barrel dumping	Chill Tank 1	Completed	Gallons	25	25	120	30
Planned Start Time: 1/15/2024 2:23 PM Actual Start Time: 12/7/2023 2:25 PM Lead Time: 0 Minutes Planned End Time: 1/15/2024 2:23 PM Actual End Time: 12/7/2023 2:28 PM							
Bottle proofing dark barrel aged	Chill Tank 1	In Process	Gallons	37.5	36.5	80	29.2
Planned Start Time: 1/15/2024 2:24 PM Actual Start Time: 12/7/2023 2:28 PM Lead Time: 0 Minutes Planned End Time: 1/15/2024 2:24 PM Actual End Time: 12/7/2023 2:28 PM							

Attach Documents

Upload Files | or Drop Files

Spirits Blending Error

Consumed proof gallons must equal produced proof gallons when blending spirits.

30.00 proof gallons were consumed in this blend.
29.20 proof gallons were produced in this blend.
This results in a 0.80 proof gallon loss.

You can either close this prompt and fix the data resulting in this proof gallon loss, or write-off the proof gallon difference as a loss.

* Customer

DRO Processing Loss/Gain

Close | Write Off

9. Confirm the PdO's end time/date after confirming the PG loss.
- a. This completion date will be applied to the PdO and the associated PG loss from all stages in the PdO. Meaning, this is the date that the Processing Blend activity and the PG loss will report on the TTB DRO.
10. The first Barrel Dumping stage used the DRO *Storage Loss/Gain* Inventory Adjustment Customer the PG loss is mapped to the DRO Storage Report Line 22. Other Losses.

15. Transfer to CBW	0	0	0	0	0	0
16. Research, development, or testing ^v	0	0	0	0	0	0
17. Transferred to processing account	0	0	0	0	30	0
18. Transferred to production account ^v	0	0	0	0	0	0
19. Transferred to other bonded premises	0	0	0	0	0	0
20. Destroyed	0	0	0	0	0	0
21.	0	0	0	0	0	0
22. Other Losses ^v	0	0	0	0	6	0
23. On hand end of month	451.8	0	0	0	5,014.89	2,164.69
24. TOTAL (Lines 7 through 23)	0	0	0	0	0	0

11. The second Bottle Proofing stage used the DRO *Processing Loss/Gain* Inventory Adjustment Customer the PG loss is mapped to the DRO Processing Report Line 24. Losses..



19. DESTROYED	0	0
20. USED FOR REDISTILLATION	0	0
21.	0	0
22.	0	0
23.	0	0
24. LOSSES	0	0.8

Processing Blend PdO Processing - Proof Gallon Gain

How to Use - Example: Two stage 'Processing Blend' Recipe, where Stage 1 is for Barrel Dumping, and Stage 2 is for Bottle Proofing.

1. Scheduling Processing Blend' Recipe Type PdO's happens from the Batch Management page, which is the same as all other Recipe Types.
2. Click 'Assign' to select the spirit liquid being consumed in the storage blend.
3. After assigning all of the ingredients, enter the Completed Units and Proof being produced.
 - a. The total proof gallons consumed will be compared against the total proof gallons produced at each stage to determine any proof gallon gains or losses in the Processing Blend.
 - b. The proof gallons produced in the first stage are consumed by the second stage, and then compared against the proof gallons produced by the second stage to determine PG gains or losses.
4. The user is notified when a proof gallon gain is calculated.
 - a. The system will auto-select the Inventory Adjustment Customer set on the Recipe Stage, so all the user has to do is click 'Write Off'.

The screenshot shows the 'Spirits Blending Error' dialog box with the following text:

Consumed proof gallons must equal produced proof gallons when blending spirits.
36.00 proof gallons were consumed in this blend.
37.50 proof gallons were produced in this blend.
This leaves a 1.50 proof gallon gain.
You can either close this prompt and fix the data resulting in this proof gallon gain, or write off the proof gallon difference as a gain.
* Customer
DRO Storage Loss/Gain - R

The dialog box has 'Close' and 'Write Off' buttons.



5. The proof gallons produced in Stage 1 are passed to Stage 2 – Bottle Proofing and immediately consumed.
6. Consume all ingredients in Stage 2 – Bottle Proofing, which is typically just adding water to dilute the spirit to the target bottle proof.
7. Enter Completed Units and Proof for the output being produced in Stage 2 – Bottle Proofing.
 - a. This is where the user records the actual volume and proof of the bottle proofed spirit.
 - b. The total proof gallons consumed will be compared against the total proof gallons produced to determine any proof gallon gains or losses.
8. The user is notified when a proof gallon gain is calculated. The system will auto-select the Inventory Adjustment Customer set on Stage 2 – Bottle Proofing, so all the user has to do is click 'Write Off'.

The screenshot shows a production order for '134 Bottle Proof - Dark Barrel Aged Rum' in 'In Process' status. The interface includes tabs for 'Edit Production Order', 'Log QC', 'Batch Management', and 'Production Orders'. A table lists production stages: 'Barrel dumping' (Completed) and 'Bottle proofing dark barrel aged' (In Process). The 'Bottle proofing' stage shows 37.5 planned units, 48 completed units, and a proof of 80. A 'Spirits Blending Error' dialog box is open, stating: 'Consumed proof gallons must equal produced proof gallons when blending spirits. 37.50 proof gallons were consumed in this blend. 38.40 proof gallons were produced in this blend. This leaves a 0.90 proof gallon gain. You can either close this prompt and fix the data resulting in this proof gallon gain, or write-off the proof gallon difference as a gain. * Customer DRO Processing Loss/Gain: [input field]. Buttons for 'Close' and 'Write Off' are at the bottom right of the dialog.

9. Confirm the PdO's end time/date after confirming the PG gain.
 - a. This completion date will be applied to the PdO and the associated PG gain from all stages in the PdO. Meaning, this is the date that the Processing Blend activity and the PG gain will report on the TTB DRO.
10. The first Barrel Dumping stage used the DRO Storage Loss/Gain Inventory Adjustment Customer so the PG gain is mapped to the DRO Storage Report Line 5. Gains.

TRANSACTION (a)	WHISKY ¹		BRANDY		PROOF G	
	DISTILLED AT 160° AND UNDER (b)	DISTILLED AT OVER 160° (c)	DISTILLED AT 170° AND UNDER (d)	DISTILLED AT OVER 170° (e)	RUM (f)	
1. On hand first of month	451.8	0	0	0	5,021.69	
2. Deposited in bulk storage ²	0	0	0	0	0	
3. Received from Customs custody	0	0	0	0	0	
4. Returned to bulk storage	0	0	0	0	0	
5. Gains	0	0	0	0	1.5	
6. TOTAL (Lines 1 through 5)	0	0	0	0	0	



11. The second Bottle Proofing stage used the DRO Processing Loss/Gain Inventory Adjustment Customer the PG gain is mapped to the DRO Processing Report Line 7. Gains.

PART I - BULK INGREDIENTS		
TRANSACTION (a)	WINE (Proof gallons) (b)	SPIRITS (Proof gallons) (c)
1. ON HAND FIRST OF MONTH	0	105
2. RECEIVED (Other than line 3)	0	67.5
3. ALCOHOL FOR FUEL USE RECEIVED FROM CUSTOMS CUSTODY		0
4. ALCOHOL, FLAVOR, MATERIALS DUMPED		0
5. WINE MIXED WITH SPIRITS		0
6. DUMPED FOR FURTHER PROCESSING		0
7. GAINS	0	0.9
8. TOTAL - LINES 1 THROUGH 7	0	173.4
9. BOTTLED OR PACKAGED		0

FAQs

Does the Equipment used in the Processing Blend have any impact on TTB DRO reporting?

No, Equipment does not directly relate to TTB DRO reporting in any way. The proof gallons associated with Processing Blend PdO's is reported on the TTB DRO Processing Report.