

WARELYPOS

QUALITY ASSURANCE - FINAL DEVELOPMENT TEST REPORT

Singapore Beverage Container Return Scheme (BCRS)

End-to-end validation across Backend Admin, QR Ordering, Android POS and Android Kiosk

PASS - 55 OF 55 UNIQUE TEST CASES VALIDATED

Document ID	QA-BCRS-DEV-20260812	Version	1.1
Prepared by	Surendra K (Technical Manager)	Execution	11-12 August 2026
Environment	WarelyPOS Development - Goro	Classification	Internal - QA Reference

This image-complete report is suitable for internal QA reference and audit. The companion private QA portal provides native browser playback for all original recordings.

Document control

Field	Value	Field	Value
Document owner	Surendra K (Technical Manager)	Status	Final - Development QA Pass
System under test	Singapore BCRS module	Business / location	Goro / Location 418
Repositories	warelypos-backend, WarelyPOS-Kotlin, WarelyKiosk-Kotlin, WarelyPOS-QR	Branch	bugfix/bcrs-issues-dev-11082026
Commit state	No commit, staging, push, or pull request	Distribution	Internal QA, Engineering, Product, Technical Management

Approval record

Role	Name	Decision	Date / signature
Prepared by	Surendra K - Technical Manager	Development QA evidence complete	12 Aug 2026
QA review	Internal QA Team	Pending independent review	_____
Product / release	Designated approver	Development evidence only - production approval separate	_____

Video compatibility statement

PDF rich-media playback is inconsistent across browsers and corporate document viewers. For maximum portability, every validated case has rendered image evidence in this report. All 13 recordings are available with native playback in the companion private QA portal. Evidence references use portable IDs and integrity hashes rather than workstation or deployment paths.

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1. Executive summary

55 / 55 QA cases passed	13 defects resolved	4 repositories validated	0 blocked cases
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PASS-LIVE 42

PASS-AUTO 13



55 / 55 unique QA cases passed

0 blocked | 0 reviewed-only

The development BCRS implementation passed all normalized QA cases after 13 defects were corrected. Validation covered server authority, GST exclusion, RRFS behavior, waivers, full and partial refunds, duplicate/over-refund protection, historical reporting, QR ordering, physical POS and kiosk operation, offline failure safety, and unsynchronized catalogue behavior.

Backend and QR changes were deployed by exact-file SCP to private development nodes with backups and hash verification. Debug POS and kiosk APKs were installed only on the named Samsung development tablet. The working branches remain uncommitted and nothing is staged.

DEVELOPMENT RELEASE RECOMMENDATION	PASS	Production release authorization remains a separate governance decision.
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2. Scope, environment and approach

Test scope

- Backend admin configuration, historical sales, All Sales, Sales by Receipt, Product Sell and Report 607.
- QR dine-in, takeaway and pickup totals, payloads, RRFS treatment and completed-order rendering.
- Android POS catalogue, cart, waiver lifecycle, order completion, sale history and refund variants.
- Android kiosk catalogue, quantity changes, checkout, persisted totals, offline failure and stale-cache behavior.
- Server validation for enablement, product eligibility, invalid quantities/packs, refund boundaries and audit reasons.

Component	Environment / identity	Verification method
Backend	do-backend-dev, private 10.111.0.4	Playwright, PHP validation, writer reconciliation, service/hash checks
QR	do-qr-dev, private 10.111.0.6	Playwright, live orders, PM2/hash checks
POS	Samsung SM_X230; package com.warelypos.dev; terminal 1489	Physical ADB/Maestro session, screenshots, recordings, DB reconciliation
Kiosk	Samsung SM_X230; package com.warelykioskpos.dev; terminal 1494	Physical ADB/Maestro session, screenshots, recordings, DB reconciliation
Business	Goro development account; business 289; location 418	Cross-channel live validation

Acceptance model

Deposit	S\$0.10 per eligible container; quantity x containers per pack.
GST / revenue	Deposit is outside GST and excluded from revenue.
Enablement	Business and location must both be enabled.
RRFS	Customer deposit bypass applies only to registered dine-in.
Waiver	Reason required; eligible-cart changes invalidate the waiver.
Refund	Reason required; refund capped by remaining transaction and eligible-line deposit.
History	Stored transaction values remain visible after current flags change.

3. Defect summary and closure

Thirteen defects were resolved and retested. DEV-BCRS-11 through DEV-BCRS-13 were discovered during physical-device reconciliation and are called out as late-cycle critical findings.

ID	Severity	Finding	Closure evidence
DEV-BCRS-01	Critical	QR boolean strings such as "0" were truthy and a later total effect could remove the deposit	Strict flag parser and shared calculator; 15 deterministic assertions passed
DEV-BCRS-02	Critical	QR pickup could inherit dine-in service/type behavior	Pickup has no dine-in service charge, is non-RRFS, and sends Pickup consistently
DEV-BCRS-03	Critical	QR dine-in sent location_id, while the backend read only business_location_id	Validated fallback added; transaction 9967924 stores deposit 0 and RRFS claim S\$0.10
DEV-BCRS-04	High	Completed QR bill omitted persisted BCRS	Completed-order view now shows the separate non-GST row; transaction 9967925 verified
DEV-BCRS-05	Critical	Client BCRS values could be stale or forged	Server validates product, pack, quantity, enablement, RRFS, waiver, and total delta
DEV-BCRS-06	Critical	Refunds were not safely capped or audited	Original sale is scoped/locked; line allocation, reason, remaining amount, over-refund, and duplicate-refund guards added
DEV-BCRS-07	High	Current switches suppressed historical BCRS data	Stored transaction values now drive sale/history/receipt/report rendering
DEV-BCRS-08	High	Report 607 returned HTTP 500 from an unsupported shared-filter variable	Report uses only supported filters and loads successfully
DEV-BCRS-09	High	POS waiver allowed an incomplete reason and survived eligible-cart changes	Mandatory selection/custom text and eligible-cart signature invalidation added
DEV-BCRS-10	Medium	Invalid pack/quantity values could produce invalid deposits	Eligible pack must be integer ≥ 1 ; quantity is nonnegative on client and server
DEV-BCRS-11	Critical	The paginated Android catalogue endpoint omitted BCRS product fields	Eligible/container fields are now mapped on the paginated response; S1 Coke Zero became eligible on the physical POS without changing the product
DEV-BCRS-12	Critical	Normal POS refund routing omitted the deposit, while correction reasons could affect item quantity	Added BCRS refund routing calculator and five focused tests; full, deposit-only, partial, wrong-charge, and repeat-refund physical cases passed
DEV-BCRS-13	Critical	The kiosk activity used a separate save builder that omitted BCRS fields, so the backend added S\$0.10 a second time	The actual payload now includes deposit, RRFS, waiver, and reason fields; corrected transaction 9967967 stores S\$3.10 and deposit S\$0.10

4. Financial and transaction reconciliation

Flow	Transaction(s)	Expected financial result	Validated writer result
QR RRFS dine-in	9967924	Deposit 0; RRFS claim S\$0.10	deposit 0.0000; claim 0.1000
QR pickup	9967925	Deposit S\$0.10; claim 0	final S\$16.30; deposit 0.1000; claim 0
POS full refund	9967960 -> 9967961; ledger 11	Item plus S\$0.10 deposit	Item and deposit refunded
POS deposit only	9967962 -> 9967963; ledger 12	Only S\$0.10; item quantity unchanged	quantity_returned 0; deposit -S\$0.10
POS partial / wrong charge	9967964 -> 9967965; ledgers 13, 14	Selected deposits only; no duplicate	Two S\$0.10 allocations; repeat blocked
Kiosk corrected checkout	9967967	Receipt and writer S\$3.10; deposit S\$0.10	final 3.1000; deposit 0.1000
Offline submit	No new transaction	Safe error; no partial insertion	Terminal 1494 remained at 9967967

Retained pre-fix evidence

Transaction 9967959 demonstrates the original POS refund omission. Transaction 9967966 demonstrates the kiosk S\$3.20 writer total versus its S\$3.10 receipt. Both are retained in development as controlled defect evidence and are not successful business transactions.

5. Requirements-to-test traceability matrix

TC	Scenario	Execution	Result	Evidence ID / outcome
TC_01	Business OFF	Backend / Admin / Server	PASS-AUTO	EV-TC-01 - A new-order save request submitted while the business switch was OFF was normalized to deposit S\$0.00 and RRFS claim S\$0.00. The validation fixture was rolled back after the assertion; settled historical values were not changed.
TC_02	Business ON	QR Ordering / Backend	PASS-LIVE	EV-TC-02 - Goro configuration produced BCRS in QR, POS, and kiosk
TC_03	Location OFF	Backend / Admin / Server	PASS-AUTO	EV-TC-03 - Server cleared deposit while product remained sellable
TC_04	Location ON	QR Ordering / Backend	PASS-LIVE	EV-TC-04 - Goro location produced S\$0.10 deposit
TC_05	Product eligible	Android POS / Backend	PASS-LIVE	EV-TC-05 - Product 93667 charged S\$0.10 on all channels
TC_06	Product not eligible	Android POS / Backend	PASS-LIVE	EV-TC-06 - Mixed carts did not charge product 93678/non-eligible item
TC_07	Single item	QR Ordering / Backend	PASS-LIVE	EV-TC-07 - S\$0.10 shown and persisted
TC_08	Multiple items	Android Kiosk / Backend	PASS-AUTO	EV-TC-08 - Quantity evidence and deterministic calculator validation confirmed S\$0.30 for three eligible containers.
TC_09	Multi-pack	Cross-channel	PASS-AUTO	EV-TC-09 - Production QR calculator returned S\$1.20 for quantity 2 with six containers per pack.
TC_10	Mixed cart	Android POS / Backend	PASS-LIVE	EV-TC-10 - QR/POS/kiosk mixed carts charged only one eligible deposit
TC_11	Increase quantity	Android Kiosk / Backend	PASS-AUTO	EV-TC-11 - Quantity increase recalculated immediately; physical kiosk quantity 2 displayed S\$0.20.
TC_12	Remove item	Android Kiosk / Backend	PASS-AUTO	EV-TC-12 - Removing the final eligible item removed the deposit row and returned the deposit total to zero.
TC_13	GST exclusion	QR Ordering / Backend	PASS-LIVE	EV-TC-13 - Deposit stayed separate while item GST remained unchanged
TC_14	Total calculation	QR Ordering / Backend	PASS-LIVE	EV-TC-14 - QR, POS, and corrected kiosk totals reconciled
TC_15	RRFS dine-in	QR Ordering / Backend	PASS-LIVE	EV-TC-15 - 9967924: deposit 0, RRFS claim S\$0.10
TC_16	RRFS takeaway/pickup	QR Ordering / Backend	PASS-LIVE	EV-TC-16 - 9967925: deposit S\$0.10, RRFS claim 0
TC_17	Non-RRFS	Backend / Admin / Server	PASS-AUTO	EV-TC-17 - Server charged S\$0.10
TC_18	Open waiver	Android POS / Backend	PASS-LIVE	EV-TC-18 - pos-bcrs-waiver-open.png
TC_19	Apply waiver	Android POS / Backend	PASS-LIVE	EV-TC-19 - pos-bcrs-waived.png; deposit became zero
TC_20	Mandatory waiver reason	Android POS / Backend	PASS-LIVE	EV-TC-20 - pos-bcrs-waiver-reason-required.png
TC_21	Waiver persistence	Android POS / Backend	PASS-LIVE	EV-TC-21 - Sale 9967958 and order/history evidence retain waiver

TC	Scenario	Execution	Result	Evidence ID / outcome
TC_22	Waiver then add item	Android POS / Backend	PASS-LIVE	EV-TC-22 - pos-bcrs-waiver-invalidated-add.png; deposit recalculated
TC_23	Deposit row display	Android POS / Backend	PASS-LIVE	EV-TC-23 - pos-bcrs-mixed-cart.png
TC_24	Remove deposit row	Android POS / Backend	PASS-LIVE	EV-TC-24 - pos-bcrs-row-removed.png
TC_25	Cart quantity update	Android Kiosk / Backend	PASS-LIVE	EV-TC-25 - Kiosk quantity 2 showed S\$0.20 in kiosk-bcrs-qty2.png
TC_26	Mixed removal	Android POS / Backend	PASS-LIVE	EV-TC-26 - pos-bcrs-mixed-eligible-removed.png; deposit cleared
TC_27	Normal POS order	Android POS / Backend	PASS-LIVE	EV-TC-27 - Corrected physical sales 9967960, 9967962, 9967964
TC_28	Waiver order	Android POS / Backend	PASS-LIVE	EV-TC-28 - 9967958; pos-waiver-order-complete.png
TC_29	RRFS order	QR Ordering / Backend	PASS-LIVE	EV-TC-29 - QR dine-in 9967924
TC_30	Full refund	Android POS / Backend	PASS-LIVE	EV-TC-30 - Sale 9967960 produced return 9967961 and ledger 11; the item and S\$0.10 deposit were refunded.
TC_31	Deposit-only refund	Android POS / Backend	PASS-LIVE	EV-TC-31 - Sale 9967962 produced return 9967963 and ledger 12; only S\$0.10 was refunded and item quantity_returned stayed zero.
TC_32	Wrong-charge refund	Android POS / Backend	PASS-LIVE	EV-TC-32 - Wrong-charge correction created ledger 14 for S\$0.10 without changing item quantity_returned.
TC_33	Partial refund	Android POS / Backend	PASS-LIVE	EV-TC-33 - Partial refund created return 9967965 and ledger 13 for the selected eligible line and S\$0.10 deposit.
TC_34	Over-refund	Backend / Admin / Server	PASS-AUTO	EV-TC-34 - S\$0.20 against S\$0.10 rejected
TC_35	Double refund	Android POS / Backend	PASS-LIVE	EV-TC-35 - Repeat attempt blocked; no new ledger
TC_36	Kiosk deposit	Android Kiosk / Backend	PASS-LIVE	EV-TC-36 - Physical kiosk receipt and writer transaction 9967967 both show final S\$3.10 and deposit S\$0.10.
TC_37	No kiosk waiver	Android Kiosk / Backend	PASS-LIVE	EV-TC-37 - Physical kiosk has no waiver action; payload sends waiver false
TC_38	QR deposit	QR Ordering / Backend	PASS-LIVE	EV-TC-38 - Pickup UI/request showed S\$0.10
TC_39	RRFS QR	QR Ordering / Backend	PASS-LIVE	EV-TC-39 - Dine-in UI and writer charged zero customer deposit
TC_40	BCRS report section	Backend / Admin / Server	PASS-LIVE	EV-TC-40 - Historical details and reports show BCRS
TC_41	Revenue excludes deposit	Backend / Admin / Server	PASS-LIVE	EV-TC-41 - All Sales, Report 607, Sales by Receipt, and Product Sell verified
TC_42	RRFS claim report	Backend / Admin / Server	PASS-LIVE	EV-TC-42 - Historical report and transaction evidence verified
TC_43	Business OFF + location ON	Backend / Admin / Server	PASS-AUTO	EV-TC-43 - Both flags are required
TC_44	GST on deposit	QR Ordering / Backend	PASS-LIVE	EV-TC-44 - Separate deposit did not increase taxable GST
TC_45	RRFS wrong charge	QR Ordering / Backend	PASS-LIVE	EV-TC-45 - Fixed location fallback verified in 9967924

TC	Scenario	Execution	Result	Evidence ID / outcome
TC_46	Refund more than paid	Backend / Admin / Server	PASS-AUTO	EV-TC-46 - Remaining-deposit guard rejected request
TC_47	Waiver not saved	Android POS / Backend	PASS-LIVE	EV-TC-47 - 9967958 proves waiver and reason persistence
TC_48	Invalid pack value	Backend / Admin / Server	PASS-AUTO	EV-TC-48 - Backend requires integer >= 1; clients clamp defensively
TC_49	Negative quantity	Backend / Admin / Server	PASS-AUTO	EV-TC-49 - Server rejected it; client calculator returned zero
TC_50	Product change/no sync	Android Kiosk / Backend	PASS-LIVE	EV-TC-50 - During a guarded server eligibility change, the unsynchronized kiosk continued using its cached S\$0.10 metadata; the product row was restored exactly.
TC_51	Waiver without reason	Android POS / Backend	PASS-LIVE	EV-TC-51 - Physical POS blocked blank custom reason
TC_52	Add after waiver	Android POS / Backend	PASS-LIVE	EV-TC-52 - Physical add invalidated waiver and restored deposit
TC_53	Refund non-BCRS item	Backend / Admin / Server	PASS-AUTO	EV-TC-53 - Backend rejected deposit allocation to product 93678
TC_54	Duplicate refund	Android POS / Backend	PASS-LIVE	EV-TC-54 - Physical repeat attempt blocked; no second ledger
TC_55	Offline mode	Android Kiosk / Backend	PASS-LIVE	EV-TC-55 - With Wi-Fi disabled, local BCRS remained correct, submit failed safely, the cart stayed intact, and no transaction newer than 9967967 was inserted.

6. Video evidence catalog

The all-in-one PDF edition embeds all recordings below as file attachments. Open the Attachments panel in Adobe Acrobat Reader and save the selected VID file. Browser PDF viewers may not display embedded attachments.

ID	Recording	Size	SHA-256	Attachment name
VID-01	backend-bcrs-regression.webm	41.5 MiB	D97D02FC75B838154992 . . .	VID-01_backend-bcrs-regression.webm
VID-02	kiosk-bcrs-live.mp4	26.3 MiB	25E87B9AE281D4F74FD8 . . .	VID-02_kiosk-bcrs-live.mp4
VID-03	kiosk-bcrs-offline.mp4	28.0 MiB	72200F4C7713F43293E8 . . .	VID-03_kiosk-bcrs-offline.mp4
VID-04	kiosk-bcrs-payload-fixed.mp4	28.2 MiB	4848784330949F2C2A10 . . .	VID-04_kiosk-bcrs-payload-fixed.mp4
VID-05	kiosk-bcrs-submit.mp4	45.1 MiB	8FB3C16D346FA903CEEC . . .	VID-05_kiosk-bcrs-submit.mp4
VID-06	pos-bcrs-cart.mp4	11.7 MiB	5659CED461F15671A49D . . .	VID-06_pos-bcrs-cart.mp4
VID-07	pos-bcrs-deposit-only.mp4	31.9 MiB	75AE2EE18F2CBAD56E54 . . .	VID-07_pos-bcrs-deposit-only.mp4
VID-08	pos-bcrs-order-refund.mp4	12.4 MiB	4F27F6CAFE64F3F91F5C . . .	VID-08_pos-bcrs-order-refund.mp4
VID-09	pos-bcrs-paginated-fix.mp4	16.9 MiB	012634458A0C1598331B . . .	VID-09_pos-bcrs-paginated-fix.mp4
VID-10	pos-bcrs-partial-refund.mp4	38.6 MiB	5040D8272CC3FEF28826 . . .	VID-10_pos-bcrs-partial-refund.mp4
VID-11	pos-bcrs-refund-fixed.mp4	23.5 MiB	C370D906C5102BD89B69 . . .	VID-11_pos-bcrs-refund-fixed.mp4
VID-12	qr-bcrs-e2e.webm	66.8 MiB	59D5ABF55CB49A8EAC96 . . .	VID-12_qr-bcrs-e2e.webm
VID-13	qr-takeaway-bcrs-e2e.webm	15.8 MiB	7E0DA59DED7BE2B014CD . . .	VID-13_qr-takeaway-bcrs-e2e.webm

Total embedded video payload: 386.5 MiB across 13 recordings.

7. Detailed test case evidence

Each case below includes the original QA scenario, execution channel, expected result, validated result, evidence identity, integrity hash and related recording IDs where applicable.

TC_01 | Business OFF

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	High
Procedure	Disable BCRS at business level, then submit a new-order payload containing stale BCRS values.		Expected	New and unsettled orders must not charge BCRS while the business switch is OFF. Previously settled BCRS values remain stored for audit and reporting.	
Actual	A new-order save request submitted while the business switch was OFF was normalized to deposit S\$0.00 and RRFS claim S\$0.00. The validation fixture was rolled back after the assertion; settled historical values were not changed.		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_01 Business disabled

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "business disabled clears deposit", "result": "ACCEPTED", "after": {"deposit": 0, "rrfs_claim": 0}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

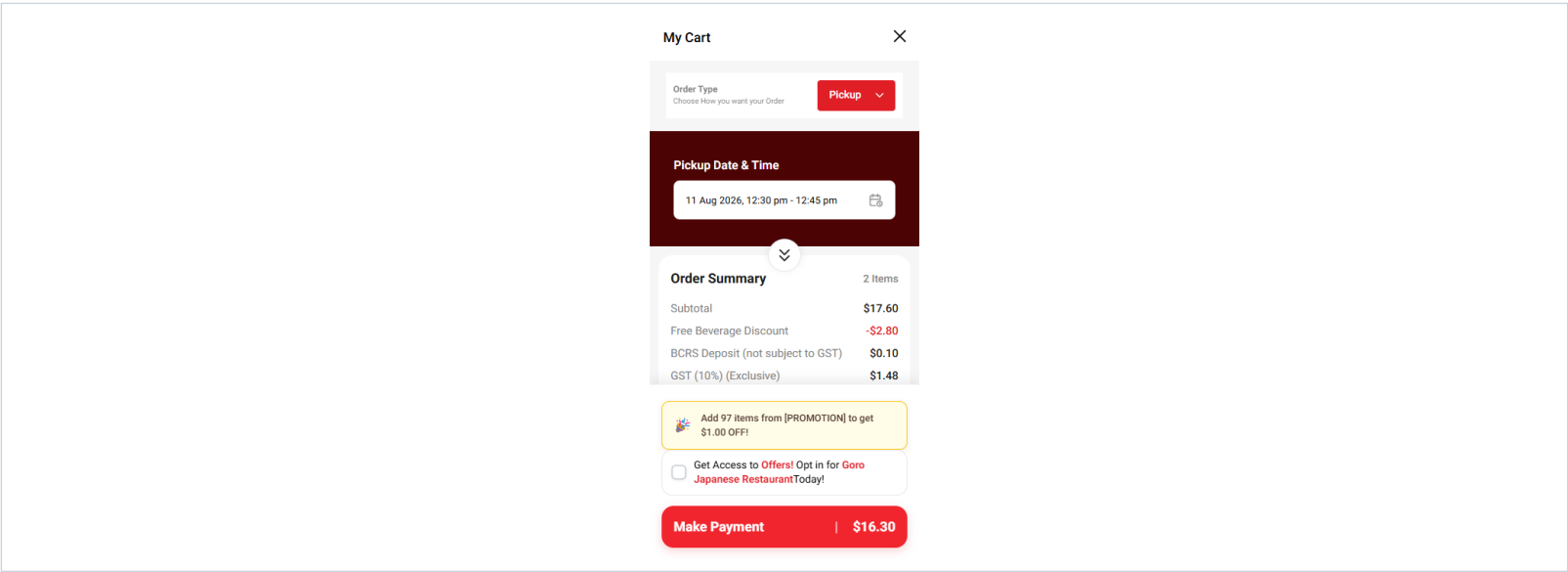
Source integrity: 4EA9A89BB55F4A8BE8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-01
EV-TC-01-01 | SHA-256 092138B5DD25A431846C1238EF82173D22D35340D2DBB4F2682CED7CDD6755

TC_02 | Business ON

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Enable BCRS		Expected	BCRS visible in product & location	
Actual	Goro configuration produced BCRS in QR, POS, and kiosk		Related video	Not applicable - still image / automated evidence	



Evidence ID EV-TC-02
EV-TC-02-01 | SHA-256 EBC343E15426BA71B3C46C5C46D048887A070055B351E19502E61289957780C

TC_03 | Location OFF

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	High
Procedure	Disable BCRS in location		Expected	No deposit in POS	
Actual	Server cleared deposit while product remained sellable		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_03 Location disabled

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "location disabled clears deposit", "result": "ACCEPTED", "after": {"deposit": 0, "rrfs_claim": 0}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

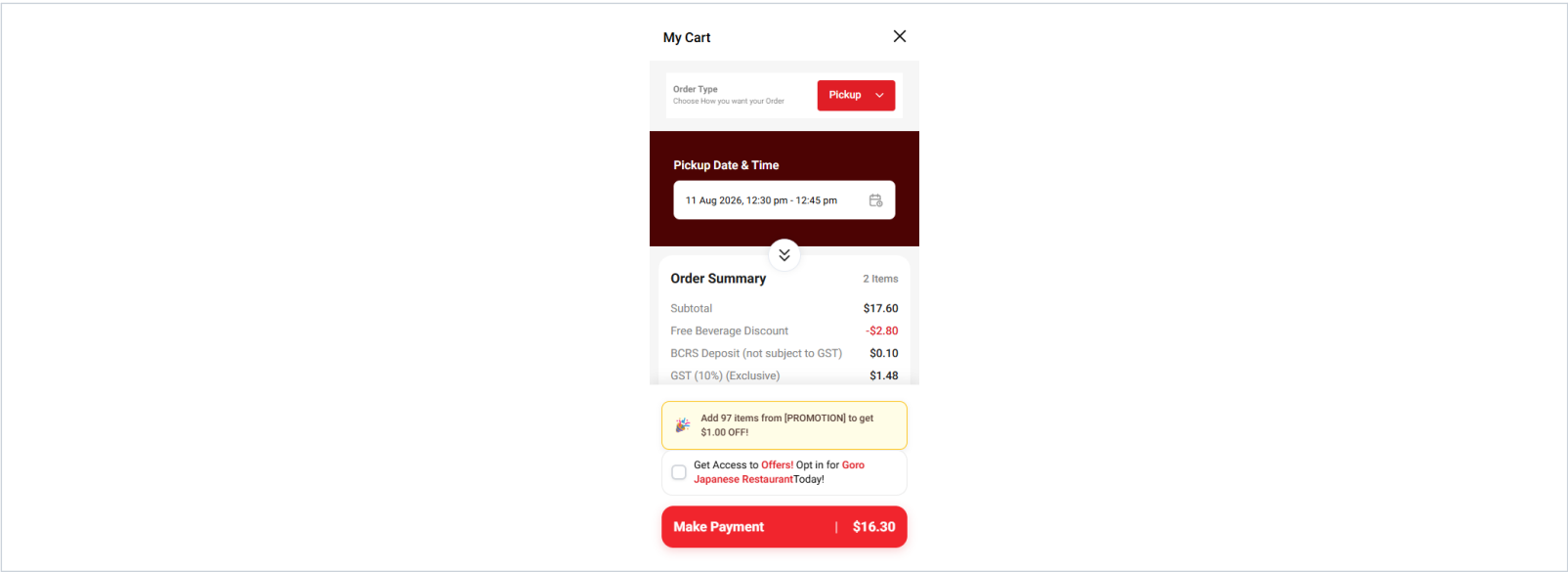
Source integrity: 4EA9A898B55F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-03
EV-TC-03-01 | SHA-256 F0028A544E2AF110D8995F3A3C3D8D7C939432471AC021CD172FECFA3DF3943D

TC_04 | Location ON

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Enable BCRS		Expected	Deposit applied	
Actual	Goro location produced S\$0.10 deposit		Related video	Not applicable - still image / automated evidence	

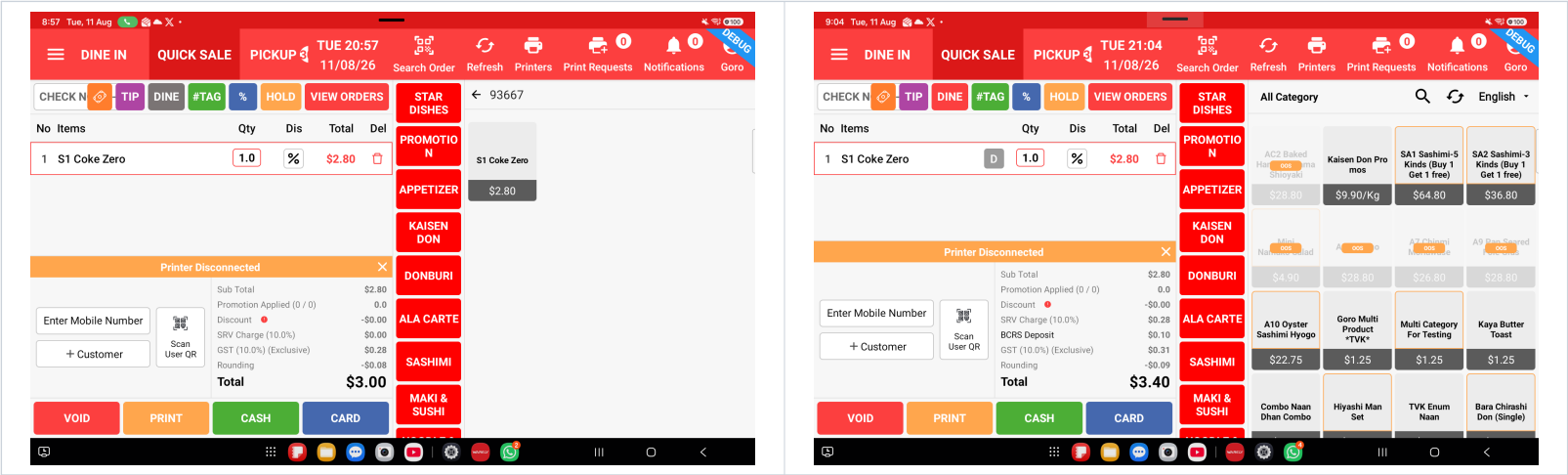


Evidence ID EV-TC-04
EV-TC-04-01 | SHA-256 EBC343E15426BA71B3C46C5C46D048887A070055B351E19502E61289957780C

TC_05 | Product eligible

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Enable BCRS in product		Expected	Deposit applied	
Actual	Product 93667 charged S\$0.10 on all channels		Related video	VID-09	

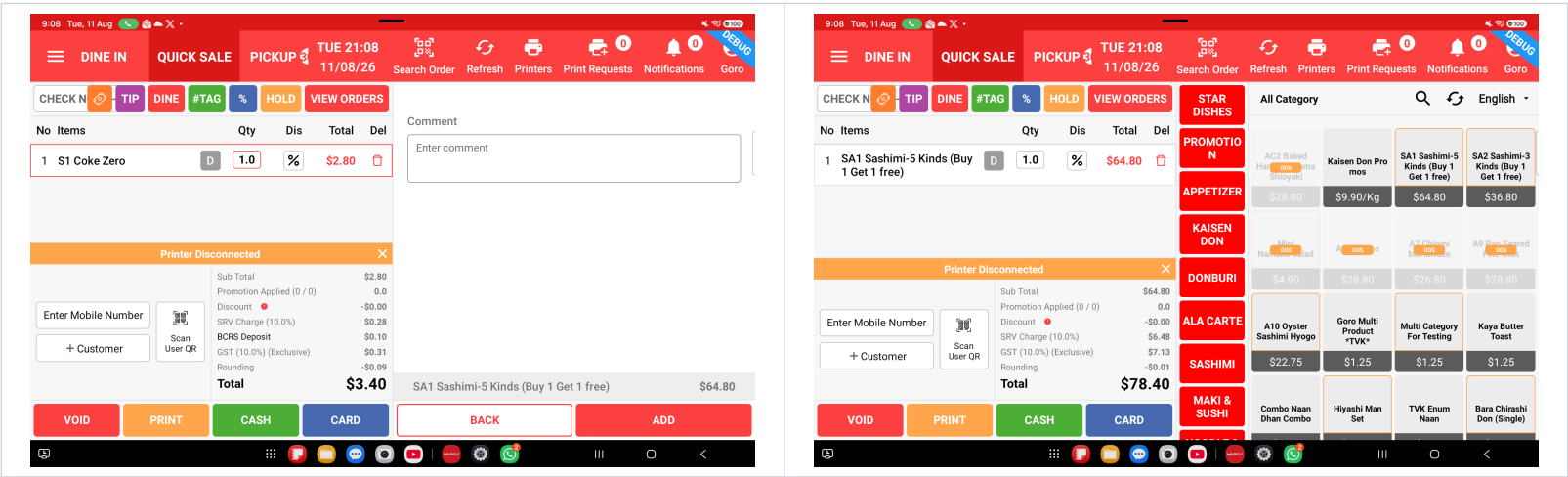


Evidence ID EV-TC-05
EV-TC-05-01 | SHA-256 C879D8F0902DF8C95ACD018C02B5B4F3F672EAD6E6ECADACCC52FBD318CD31C4
EV-TC-05-02 | SHA-256 E5B561B691186258B51F97F748CE0780263A1EC7F34BB0A09006F36EFB08CF09

TC_06 | Product not eligible

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Disable BCRS in product		Expected	No deposit	
Actual	Mixed carts did not charge product 93678/non-eligible item		Related video	Not applicable - still image / automated evidence	

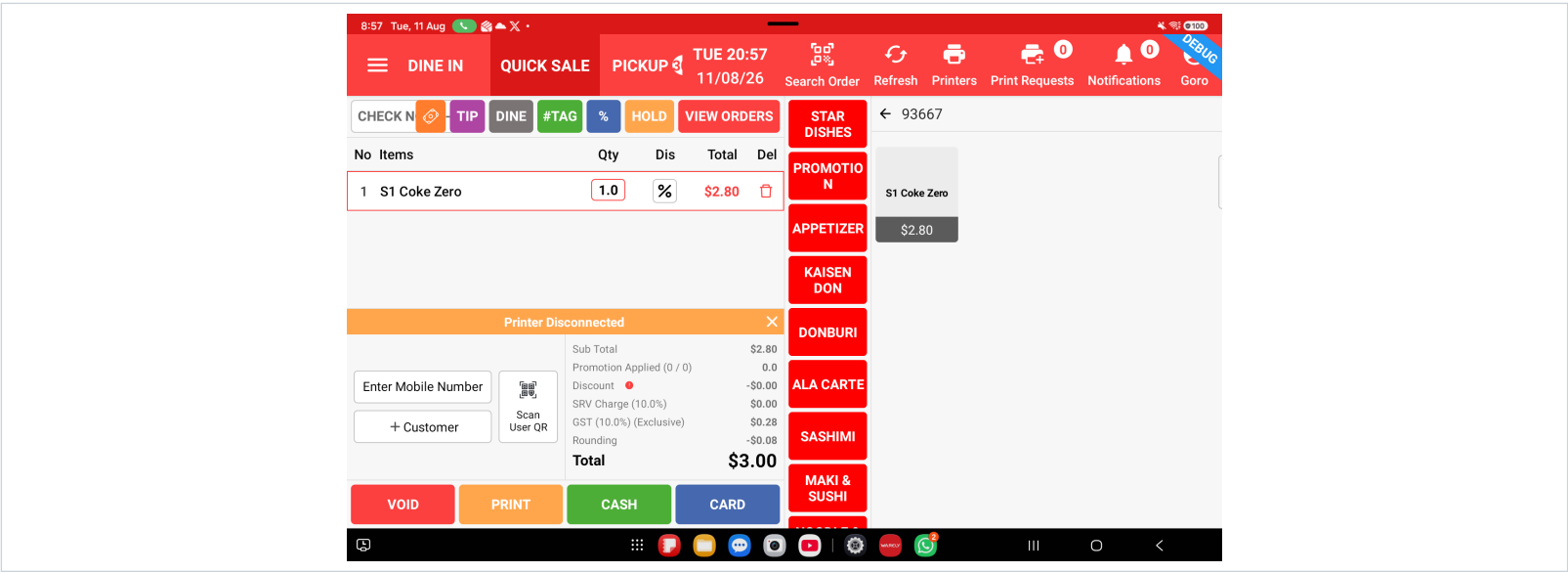


Evidence ID EV-TC-06
EV-TC-06-01 | SHA-256 6CF2E9EEA5A394BCD5F4859B2BEF9A7F6AB864567FB113C5B0D9A850D465FF23
EV-TC-06-02 | SHA-256 5EF450921E15D65E1E8293B41A821D4316B00806E28AB8C2CB39AC8748829928

TC_07 | Single item

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Add 1 item		Expected	Deposit = 0.10	
Actual	S\$0.10 shown and persisted		Related video	Not applicable - still image / automated evidence	

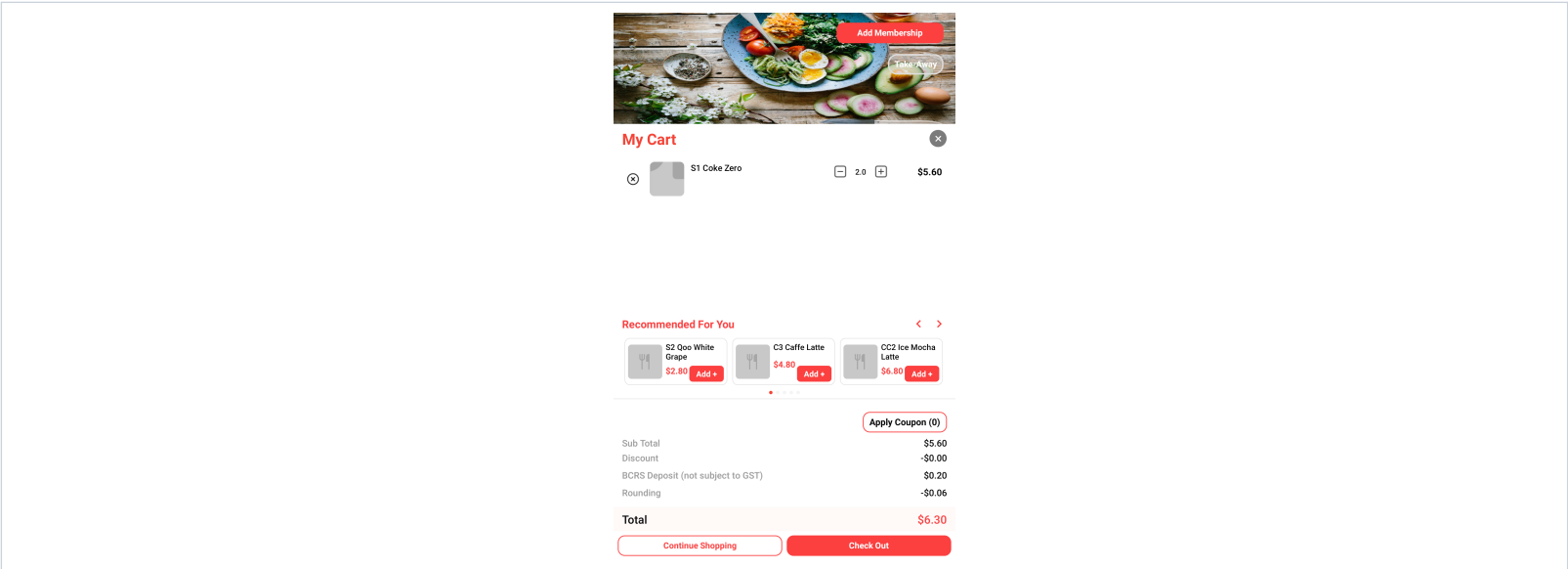


Evidence ID EV-TC-07
EV-TC-07-01 | SHA-256 C879D8F0902DF8C95ACD018C02B5B4F3F672EADDEE6ECADACCC52FBD318CD31C4

TC_08 | Multiple items

PASS

Execution	Android Kiosk / Backend	Classification	PASS-AUTO	Priority	High
Procedure	Add 3 items		Expected	Deposit = 0.30	
Actual	Quantity evidence and deterministic calculator validation confirmed S\$0.30 for three eligible containers.		Related video	Not applicable - still image / automated evidence	



Evidence ID EV-TC-08
EV-TC-08-01 | SHA-256 0824616BC72A28C895FBA9C1BA112F58072F75EB3F48CE75DDC86F581DB03539

TC_09 | Multi-pack

PASS

Execution	Cross-channel	Classification	PASS-AUTO	Priority	High
Procedure	Pack=6, qty=2		Expected	Deposit = 1.20	
Actual	Production QR calculator returned S\$1.20 for quantity 2 with six containers per pack.		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_09 Multi-pack calculation

PASS

Evidence source

bcrs-calculator-15-assertions.json

{"name": "six-pack quantity two", "expected": 1.2, "actual": 1.2, "status": "PASS"}

suite_passed=15

suite_failed=0

source_component=Production QR BCRS calculator

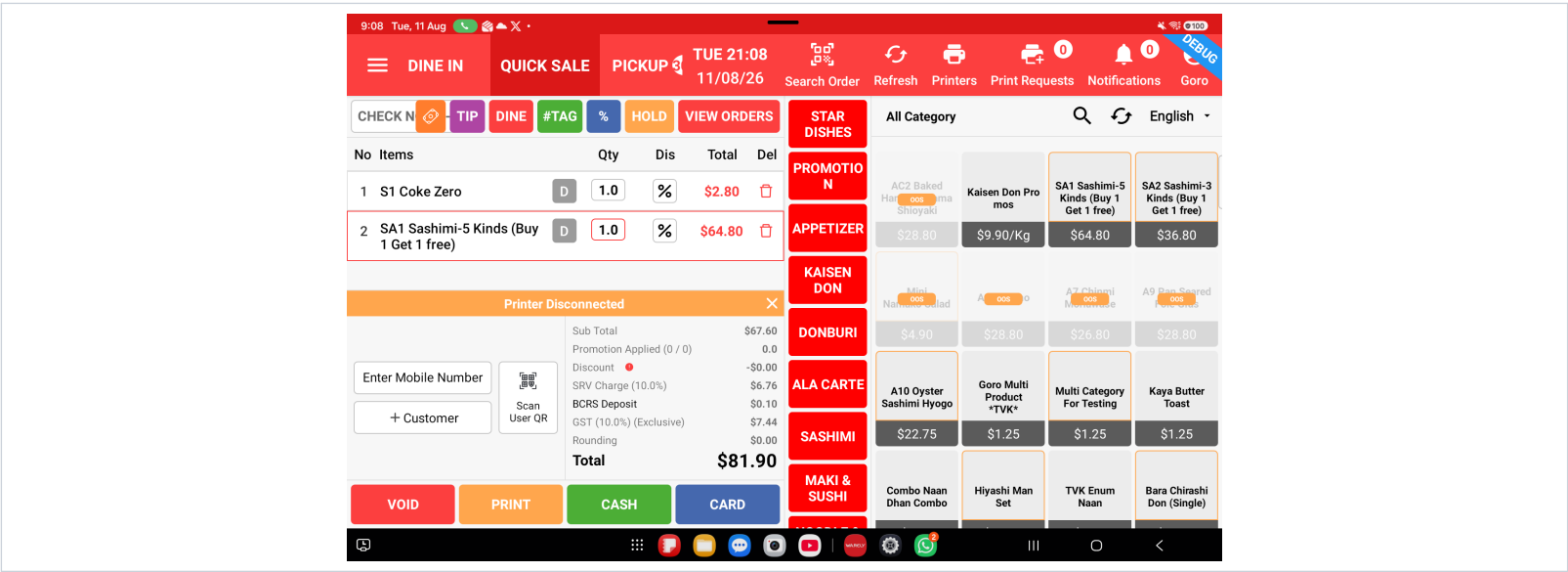
Source integrity: A94F2A9DA235DA541AE6DD9B6189E12C1404ED5580CRE291

Evidence ID EV-TC-09
EV-TC-09-01 | SHA-256 BECCEA1884A911ADCCADE8CEA8403C0D30936A6DEABE24F88470AC91A04084E4

TC_10 | Mixed cart

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Add eligible + non-eligible		Expected	Deposit only for eligible	
Actual	QR/POS/kiosk mixed carts charged only one eligible deposit		Related video	Not applicable - still image / automated evidence	

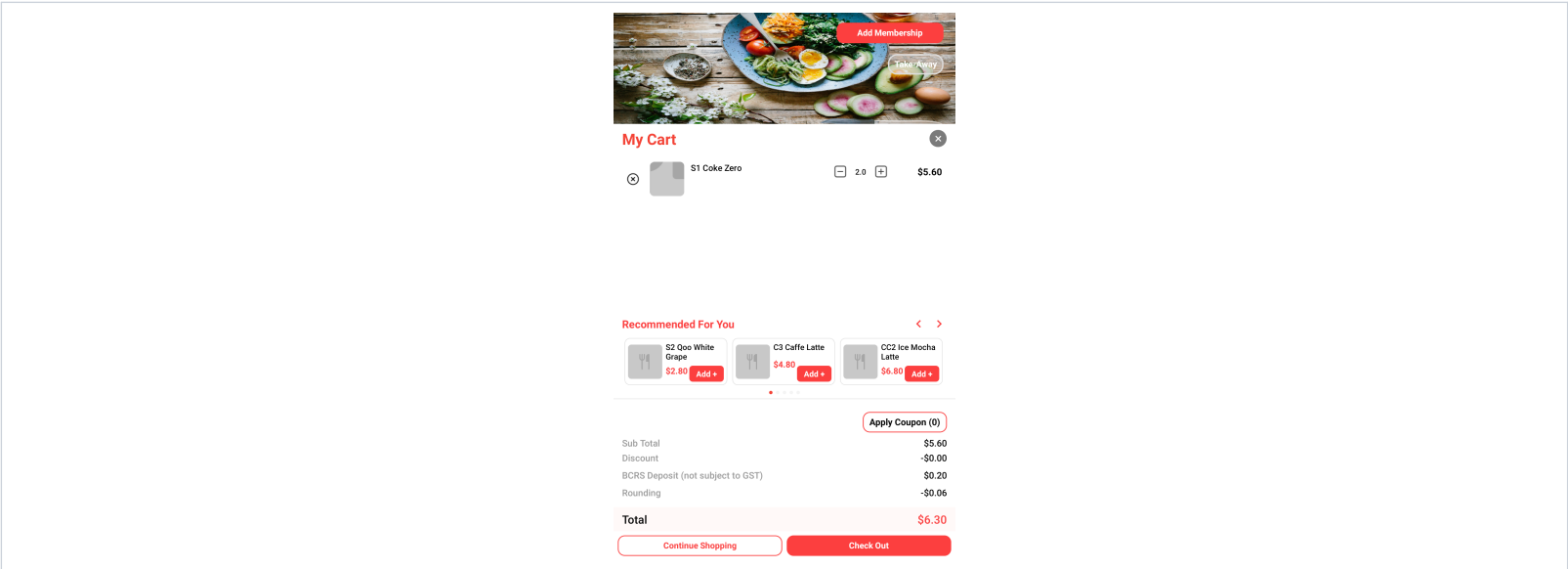


Evidence ID EV-TC-10
EV-TC-10-01 | SHA-256 698C5201F1AE82B6232E1FDF82859A7B8A633041A6BA6925D1D7960A9F8D4FA4

TC_11 | Increase quantity

PASS

Execution	Android Kiosk / Backend	Classification	PASS-AUTO	Priority	High
Procedure	Increase quantity		Expected	Deposit updates	
Actual	Quantity increase recalculated immediately; physical kiosk quantity 2 displayed S\$0.20.		Related video	Not applicable - still image / automated evidence	

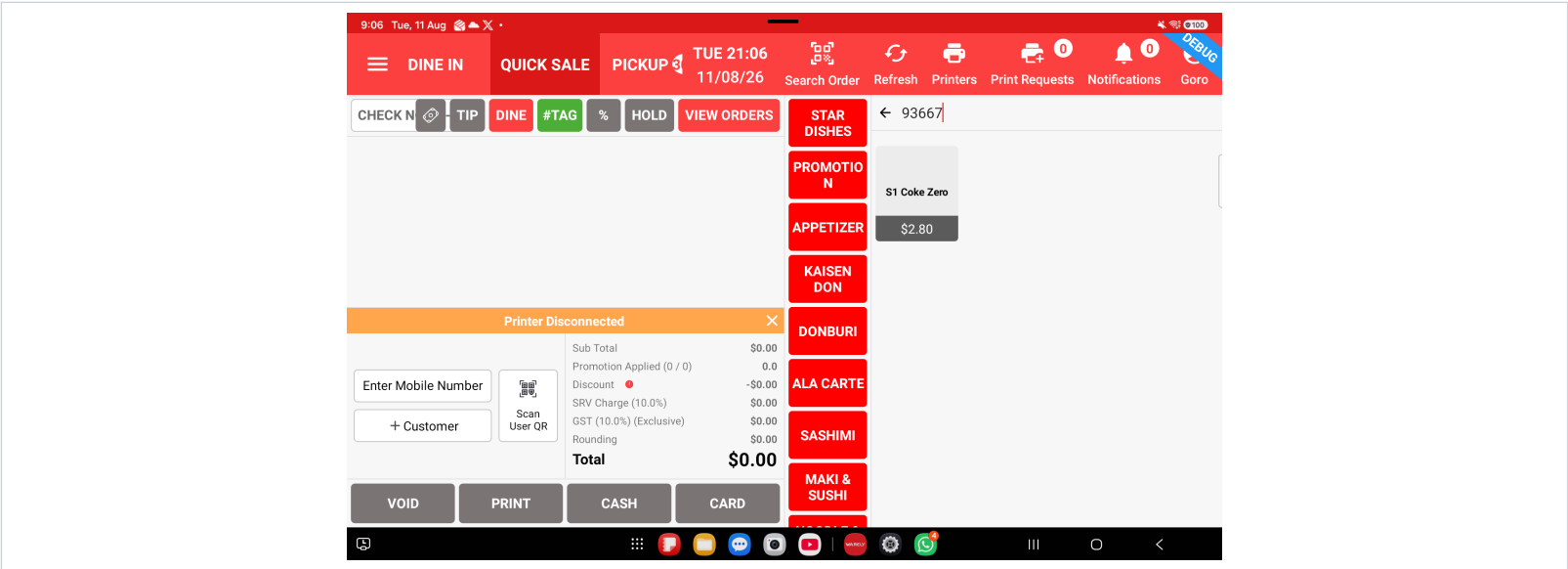


Evidence ID EV-TC-11
EV-TC-11-01 | SHA-256 0824616BC72A28C895FBA9C1BA112F58072F75EB3F48CE75DDC86F581DB03539

TC_12 | Remove item

PASS

Execution	Android Kiosk / Backend	Classification	PASS-AUTO	Priority	High
Procedure	Remove BCRS item		Expected	Deposit removed	
Actual	Removing the final eligible item removed the deposit row and returned the deposit total to zero.		Related video	Not applicable - still image / automated evidence	

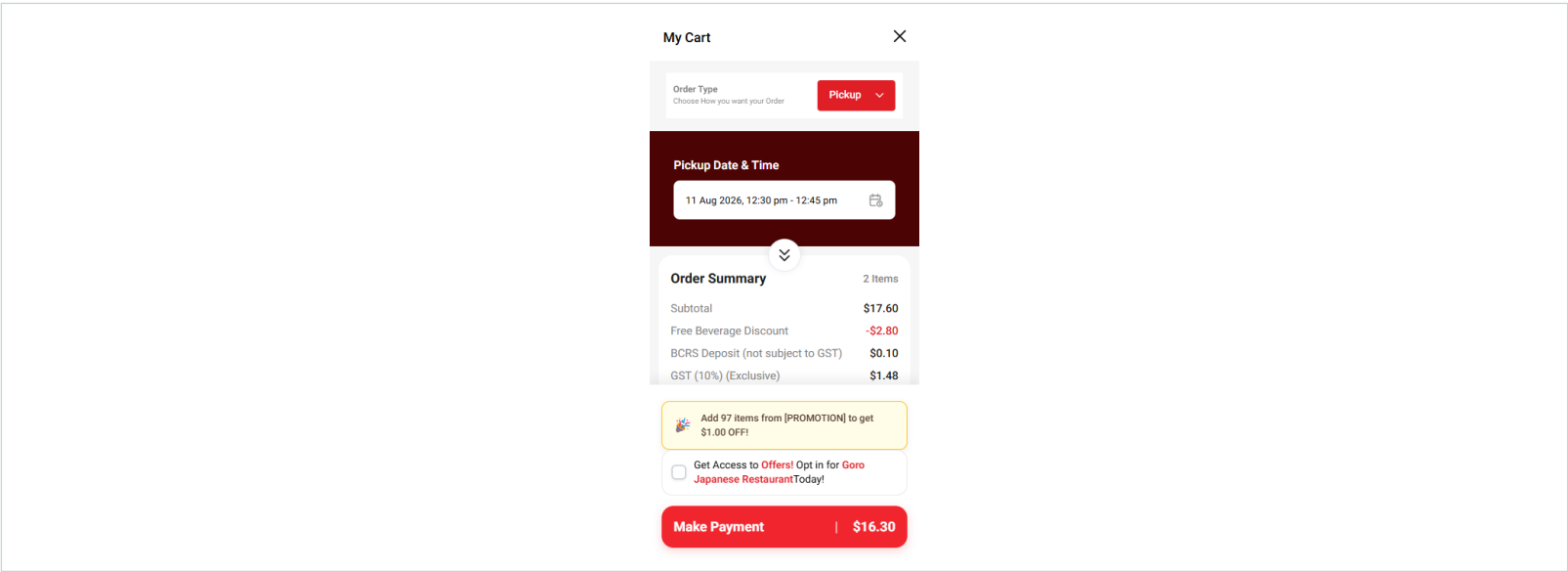


Evidence ID EV-TC-12
EV-TC-12-01 | SHA-256 66244396D69C2ECB44E478B27F088D0AEB11F52E77C8167210491DC00C7FE8FC

TC_13 | GST exclusion

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Add item + deposit		Expected	GST only on item	
Actual	Deposit stayed separate while item GST remained unchanged		Related video	Not applicable - still image / automated evidence	

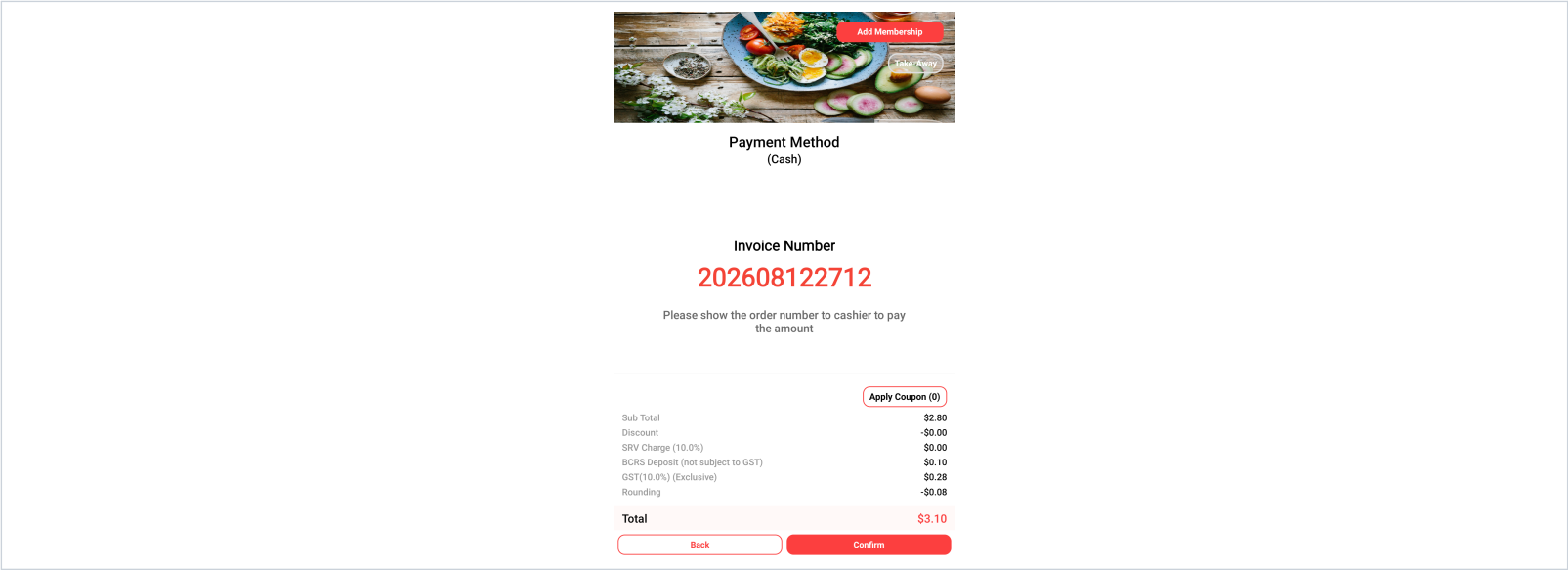


Evidence ID EV-TC-13
EV-TC-13-01 | SHA-256 EBC343E15426BA71B3C46C5C46D048887A070055B351E19502E61289957780C

TC_14 | Total calculation

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Verify total		Expected	Total = subtotal + GST + deposit	
Actual	QR, POS, and corrected kiosk totals reconciled		Related video	Not applicable - still image / automated evidence	

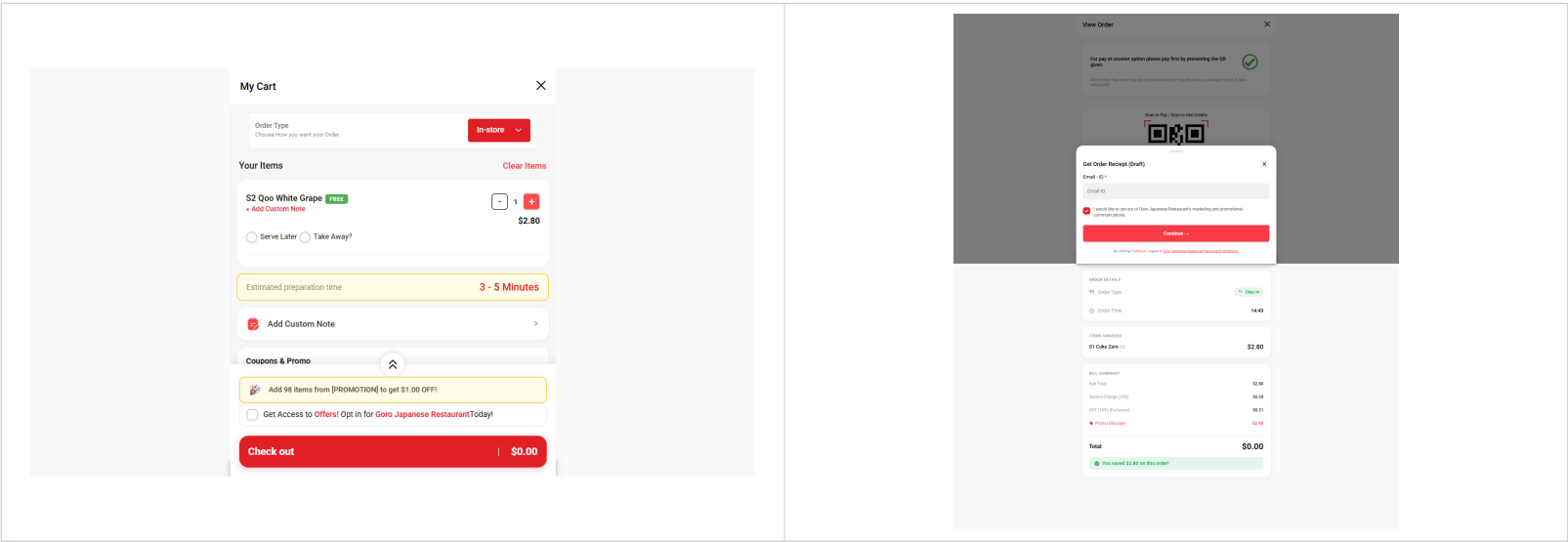


Evidence ID EV-TC-14
EV-TC-14-01 | SHA-256 A83C095BAFC1DBBEE64C290A78A51A0B32B6D179210809BF5E1D6069AB133620

TC_15 | RRFS dine-in

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Enable RRFS + dine-in		Expected	Deposit = 0	
Actual	9967924: deposit 0, RRFS claim S\$0.10		Related video	VID-12	

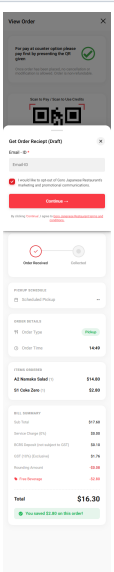


Evidence ID EV-TC-15
EV-TC-15-01 | SHA-256 DB397AAD4822CA65DCF82E4137AD3F2C29D50A679679021B42100ED854D19890
EV-TC-15-02 | SHA-256 B3C48A47E7E242774C351FC93805E29BE6BD0104F74AB7C3625DA2A43E16EDB2

TC_16 | RRFS takeaway/pickup

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	RRFS + takeaway		Expected	Deposit applied	
Actual	9967925: deposit S\$0.10, RRFS claim 0		Related video	VID-13	



Evidence ID EV-TC-16
EV-TC-16-01 | SHA-256 C345D38364F79F265D2F4AA3C34A66581BAC112B8FB8F99810A507F6A6529B91

TC_17 | Non-RRFS

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	High
Procedure	Normal location		Expected	Deposit applied	
Actual	Server charged S\$0.10		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_17 Non-RRFS pickup

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "non-RRFS pickup charges deposit", "result": "ACCEPTED", "after": {"deposit": 0.1, "rrfs_claim": 0}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

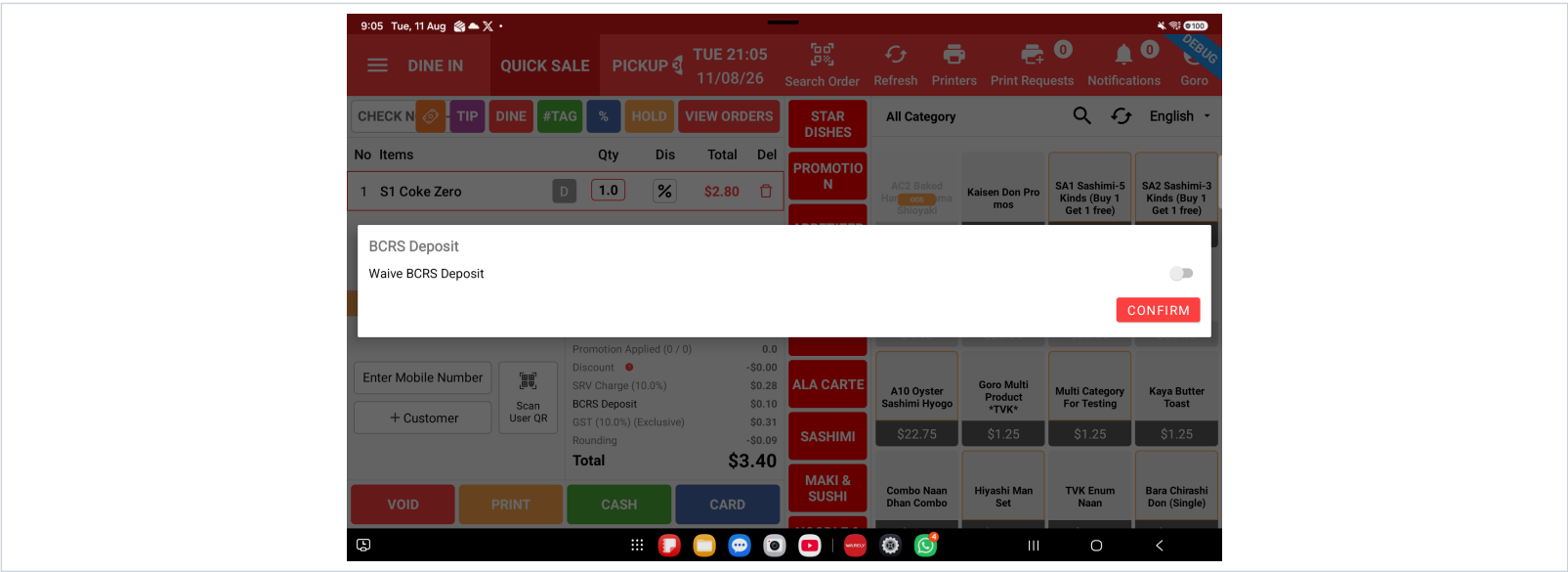
Source integrity: 4EA9A898B55F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-17
EV-TC-17-01 | SHA-256 4E94039B04F68A00068A43A7D98842BBD3858A63D99004CC68A3322D39822D05

TC_18 | Open waiver

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Tap deposit row		Expected	Popup opens	
Actual	pos-bcrs-waiver-open.png		Related video	VID-06	

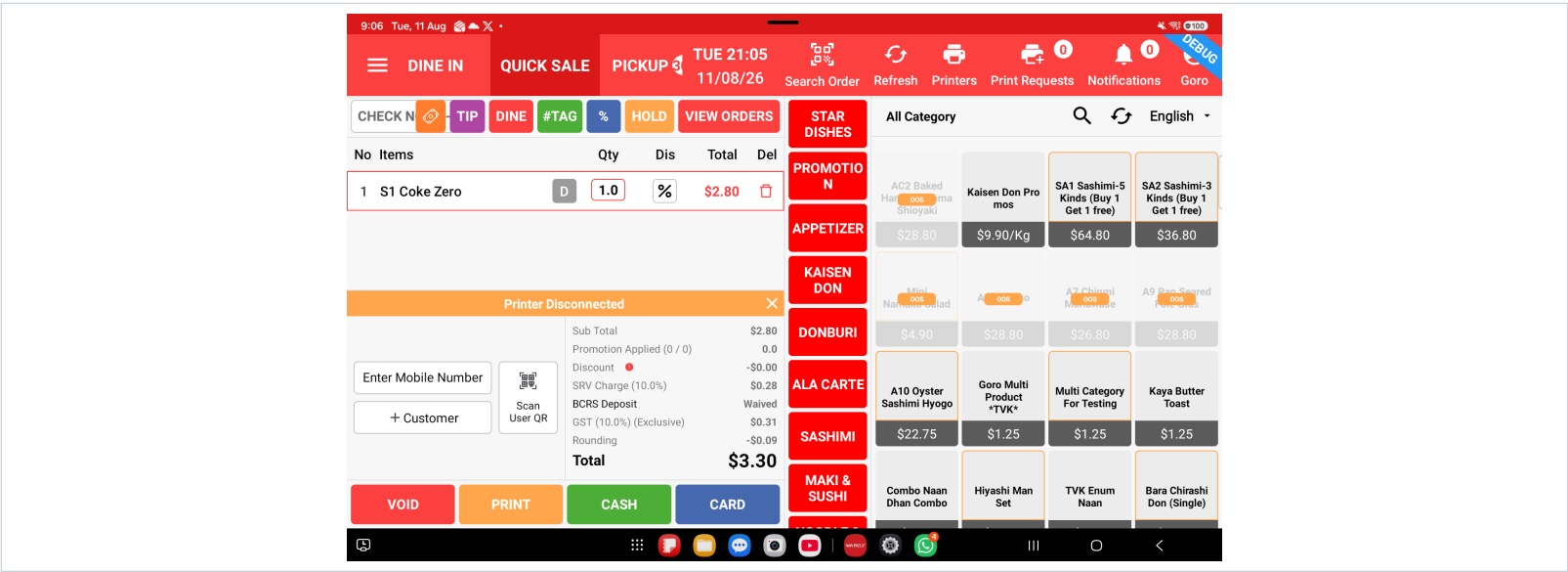


Evidence ID EV-TC-18
QA-TC-18-01 | SHA-256 1773DED0773C8293747CDA2003B7D5FD1F5004143460F47A01F25A4E6CDDFEF8

TC_19 | Apply waiver

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Select reason		Expected	Deposit = 0	
Actual	pos-bcrs-waived.png; deposit became zero		Related video	VID-06	

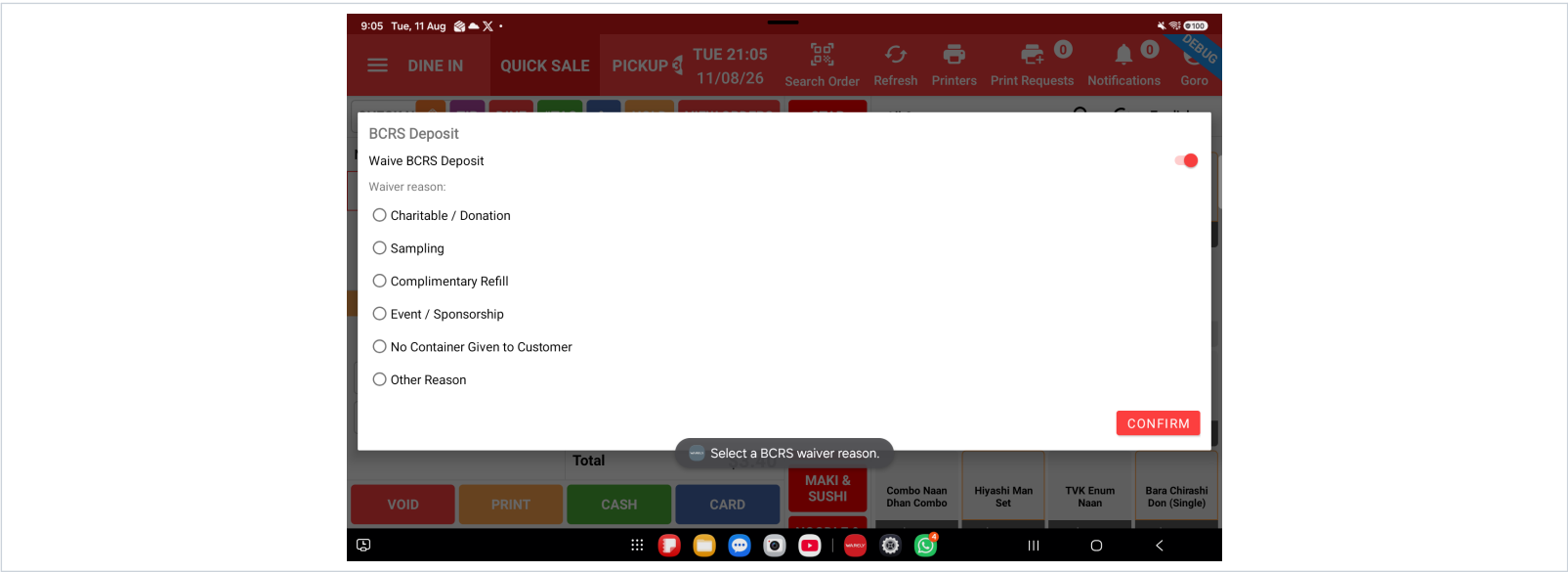


Evidence ID EV-TC-19
EV-TC-19-01 | SHA-256 672834078BDA37551C2CC1BA52DF29DB0B1C162253EF2C1CFDDEE721CF016F3AA

TC_20 | Mandatory waiver reason

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Select "Others" without text		Expected	Error shown	
Actual	pos-bcrs-waiver-reason-required.png		Related video	VID-06	

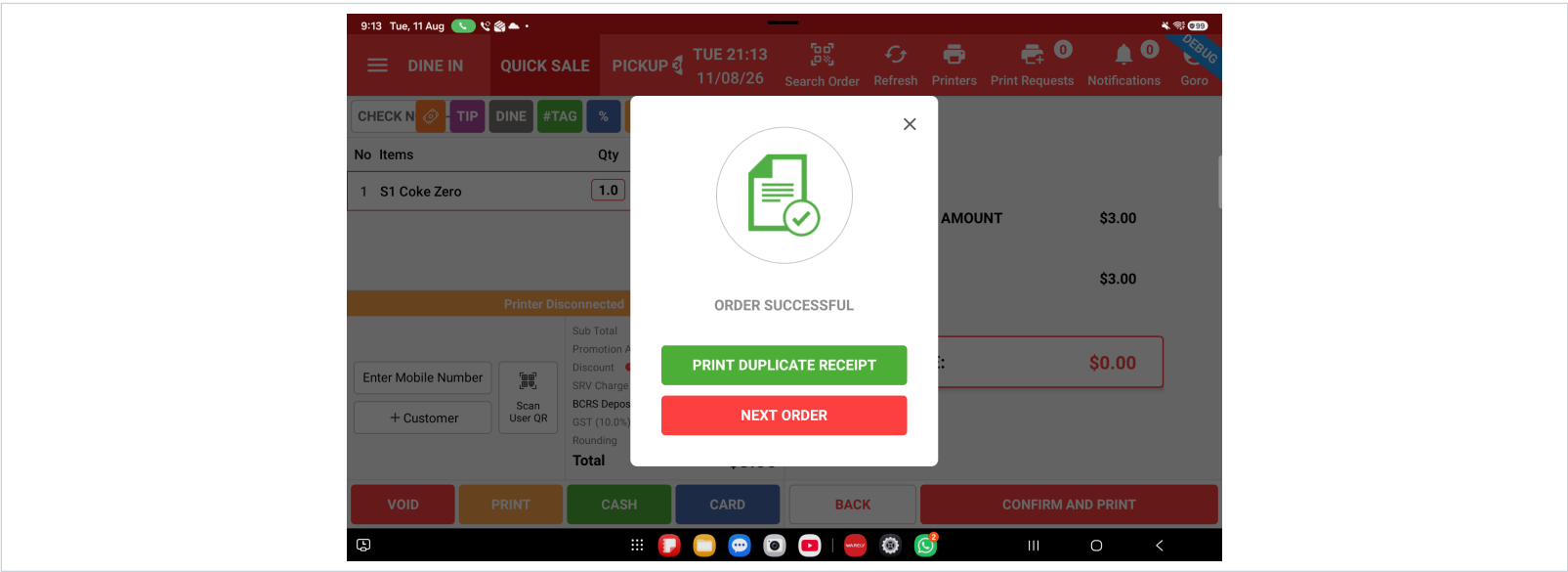


Evidence ID EV-TC-20
EV-TC-20-01 | SHA-256 9892A3E8B553082F559184752A1596A94A1EA62857A5F43E57C38AEB425764E1

TC_21 | Waiver persistence

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Complete order		Expected	Waiver saved	
Actual	Sale 9967958 and order/history evidence retain waiver		Related video	VID-06	

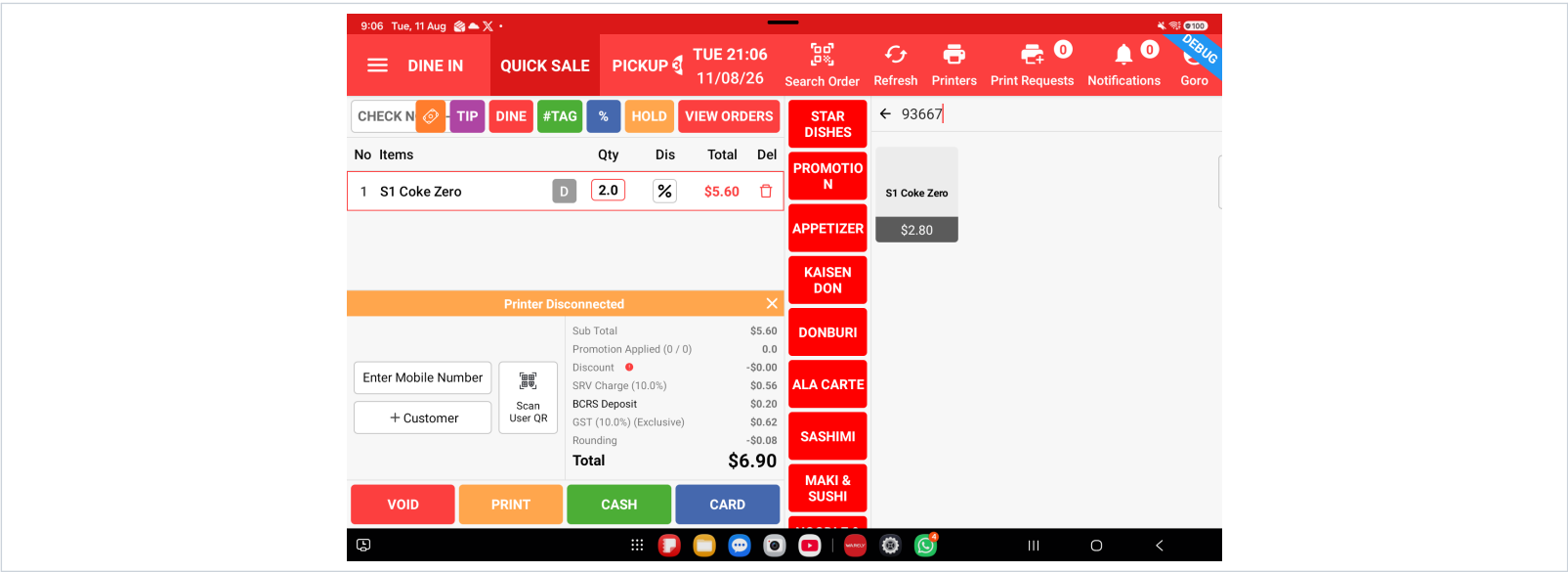


Evidence ID EV-TC-21
EV-TC-21-01 | SHA-256 A89966F5F028DB6A4AE398F11576B9593564858796CB6C808A85CC9E4E0A6893

TC_22 | Waiver then add item

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Apply waiver, add item		Expected	Deposit recalculated	
Actual	pos-bcrs-waiver-invalidated-add.png; deposit recalculated		Related video	VID-06	

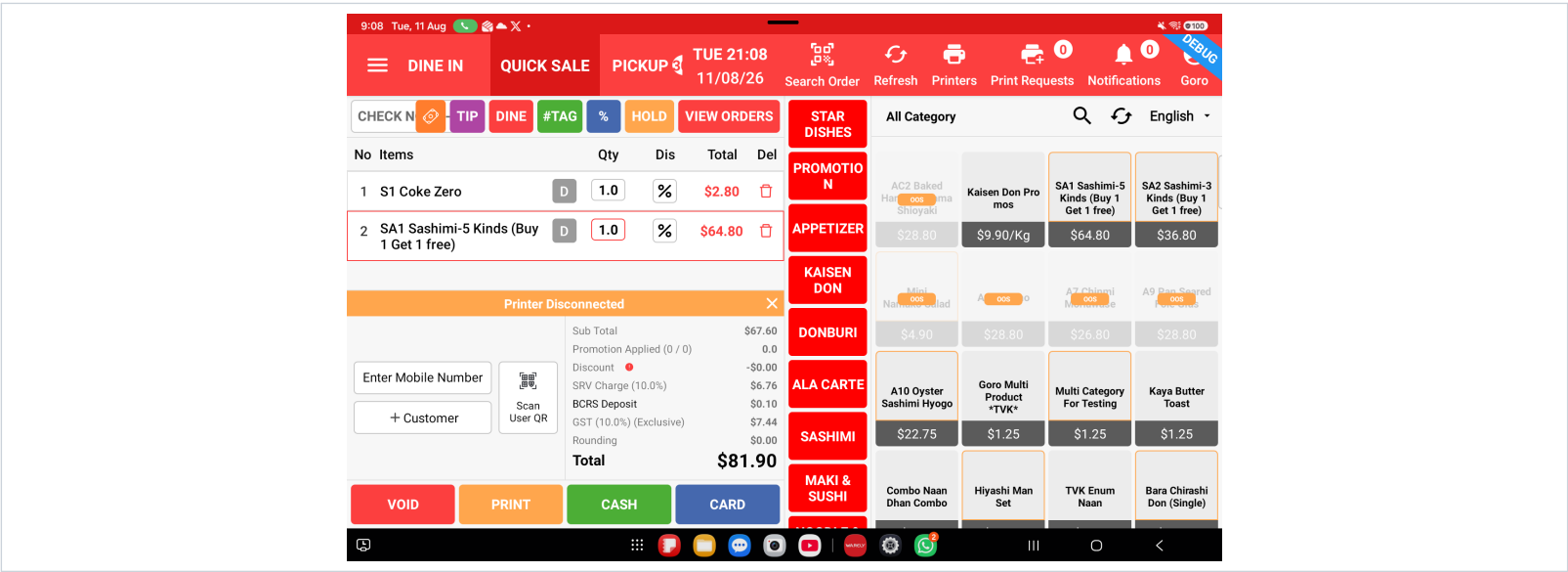


Evidence ID EV-TC-22
QA-TC-22-01 | SHA-256 3E60ACED2203BA6E5DE5F9A52AE261FF60950424FFAC75EBF497F5D313BA3F1

TC_23 | Deposit row display

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Add BCRS item		Expected	Row visible	
Actual	pos-bcrs-mixed-cart.png		Related video	VID-06	

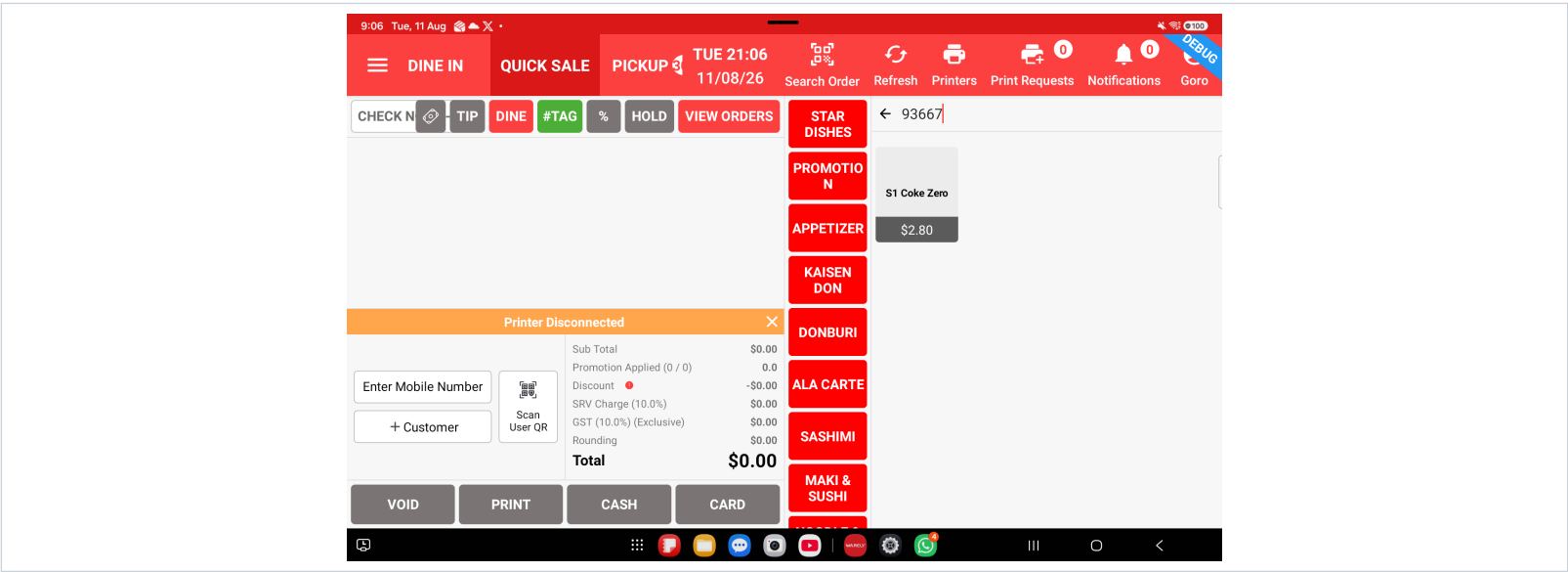


Evidence ID EV-TC-23
EV-TC-23-01 | SHA-256 698C5201F1AE82B6232E1FDF82859A7B8A633041A6BA6925D1D7960A9F8D4FA4

TC_24 | Remove deposit row

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Remove item		Expected	Row removed	
Actual	pos-bcrs-row-removed.png		Related video	VID-06	

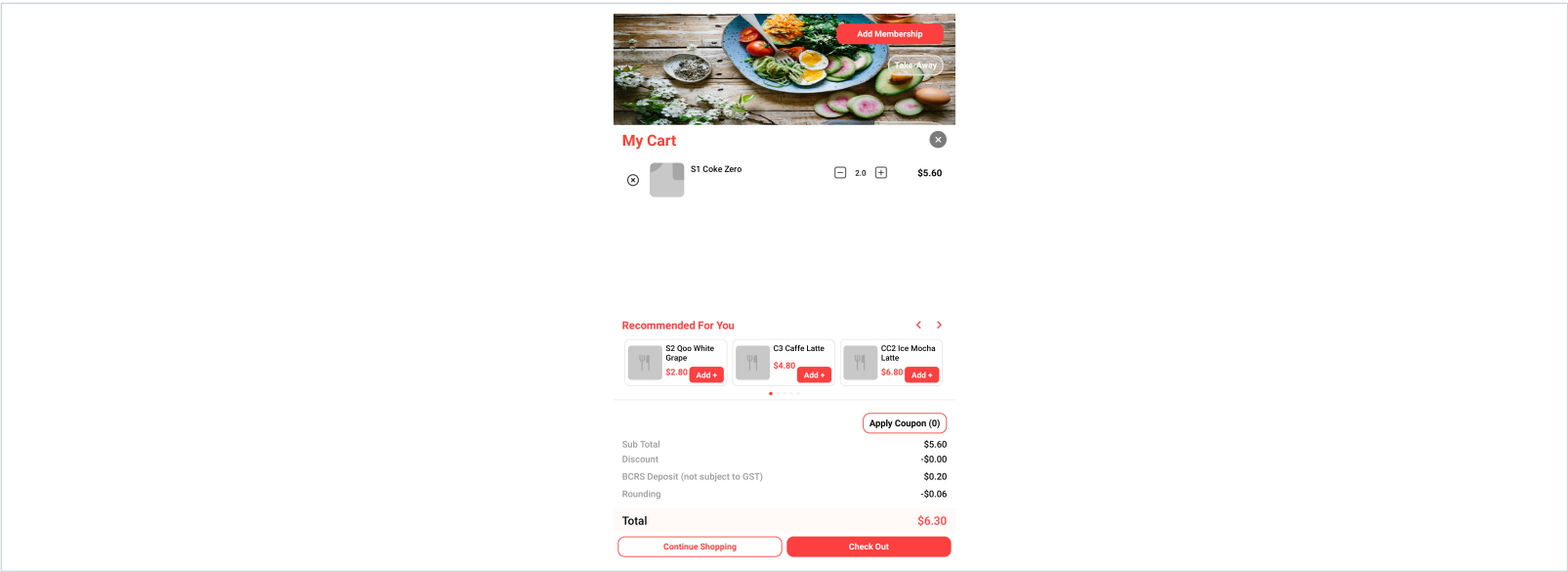


Evidence ID EV-TC-24
QA-TC-24-01 | SHA-256 66244396D69C2ECB44E478B27F088D0AEB11F52E77C8167210491DC00C7FE8FC

TC_25 | Cart quantity update

PASS

Execution	Android Kiosk / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Modify qty		Expected	Deposit updates	
Actual	Kiosk quantity 2 showed S\$0.20 in kiosk-bcrs-qty2.png		Related video	Not applicable - still image / automated evidence	

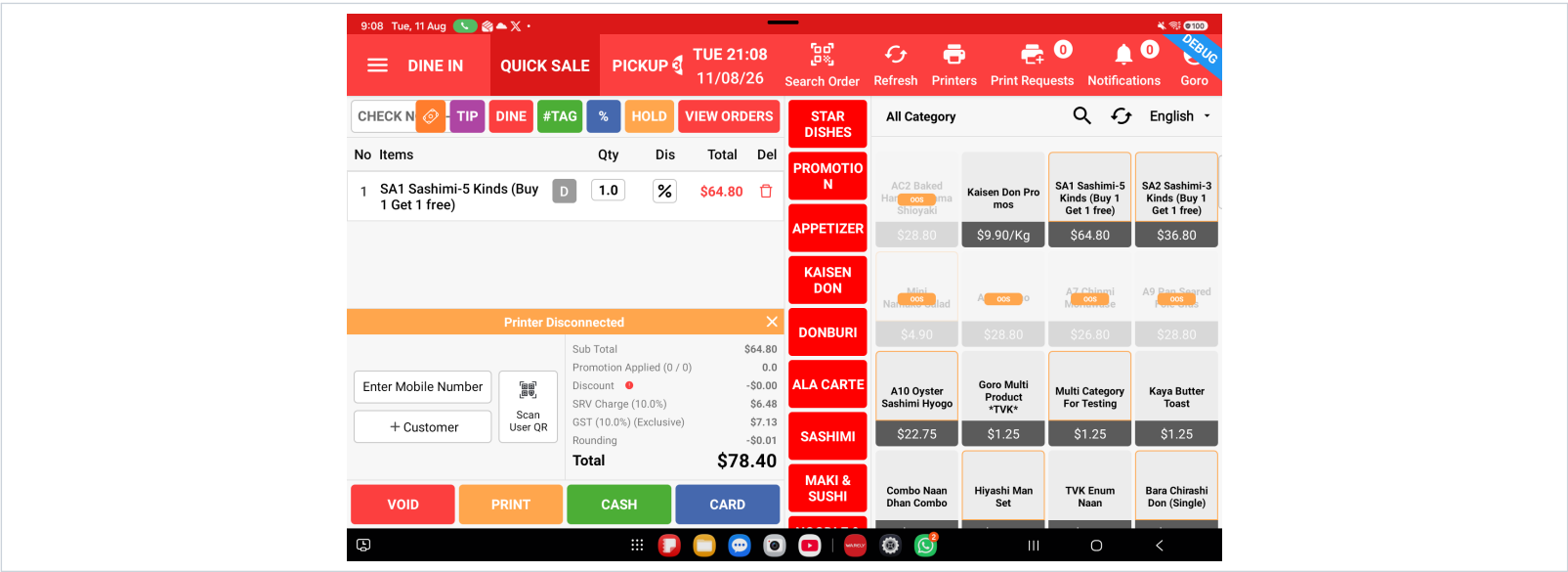


Evidence ID EV-TC-25
EV-TC-25-01 | SHA-256 0824616BC72A28C895FBA9C1BA112F58072F75EB3F4BCE75DDC86F581DB03539

TC_26 | Mixed removal

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Remove only BCRS item		Expected	Deposit cleared	
Actual	pos-bcrs-mixed-eligible-removed.png; deposit cleared		Related video	VID-06	

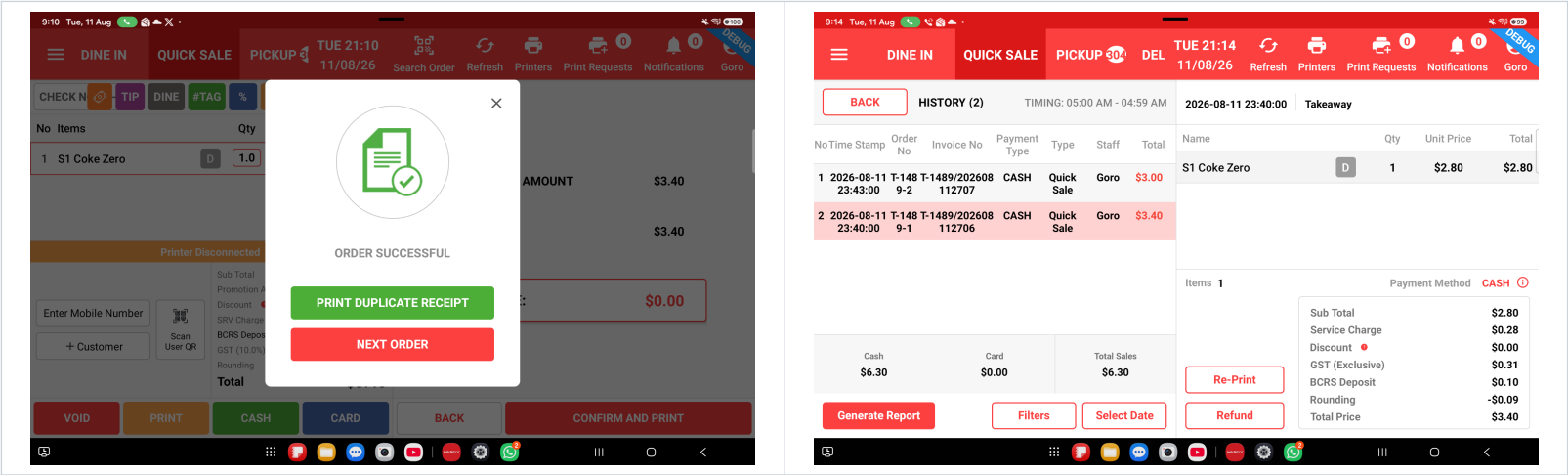


Evidence ID EV-TC-26
EV-TC-26-01 | SHA-256 5EF450921E15D65E1E8293B41A821D4316B00806E28AB8C2CB39AC8748829928

TC_27 | Normal POS order

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Place order		Expected	Deposit included	
Actual	Corrected physical sales 9967960, 9967962, 9967964		Related video	VID-08	

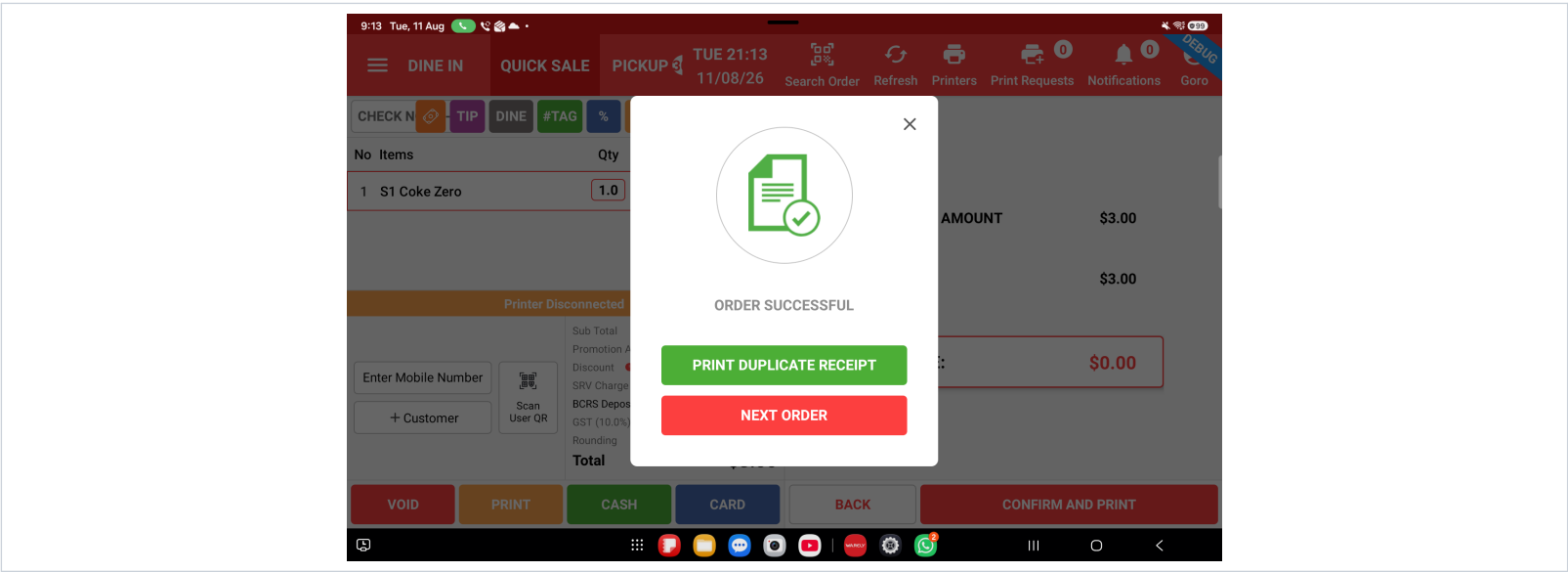


Evidence ID EV-TC-27
EV-TC-27-01 | SHA-256 015A3417A8E91886D274BF3A0D8E22913F7BAD6D8F3D3523EB8D381F142AB34C
EV-TC-27-02 | SHA-256 C9548675B8B8EEA31CFB2A1F10C862F3636675B9C637590C24E93C59BB5FFA49

TC_28 | Waiver order

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Apply waiver		Expected	Deposit removed	
Actual	9967958; pos-waiver-order-complete.png		Related video	Not applicable - still image / automated evidence	

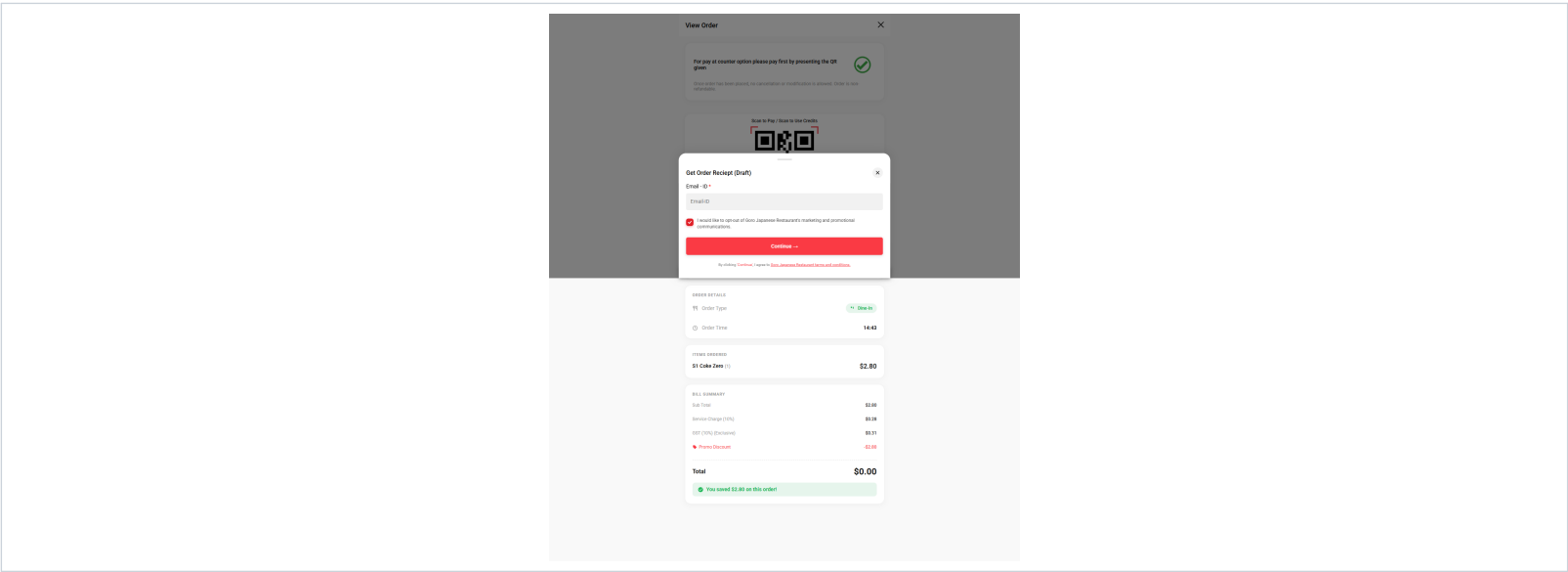


Evidence ID EV-TC-28
EV-TC-28-01 | SHA-256 A89966F5F028DB6A4AE398F11576B9593564858796CB6C808A85CC9E4E0A6893

TC_29 | RRFS order

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	RRFS dine-in		Expected	Deposit = 0	
Actual	QR dine-in 9967924		Related video	VID-12	

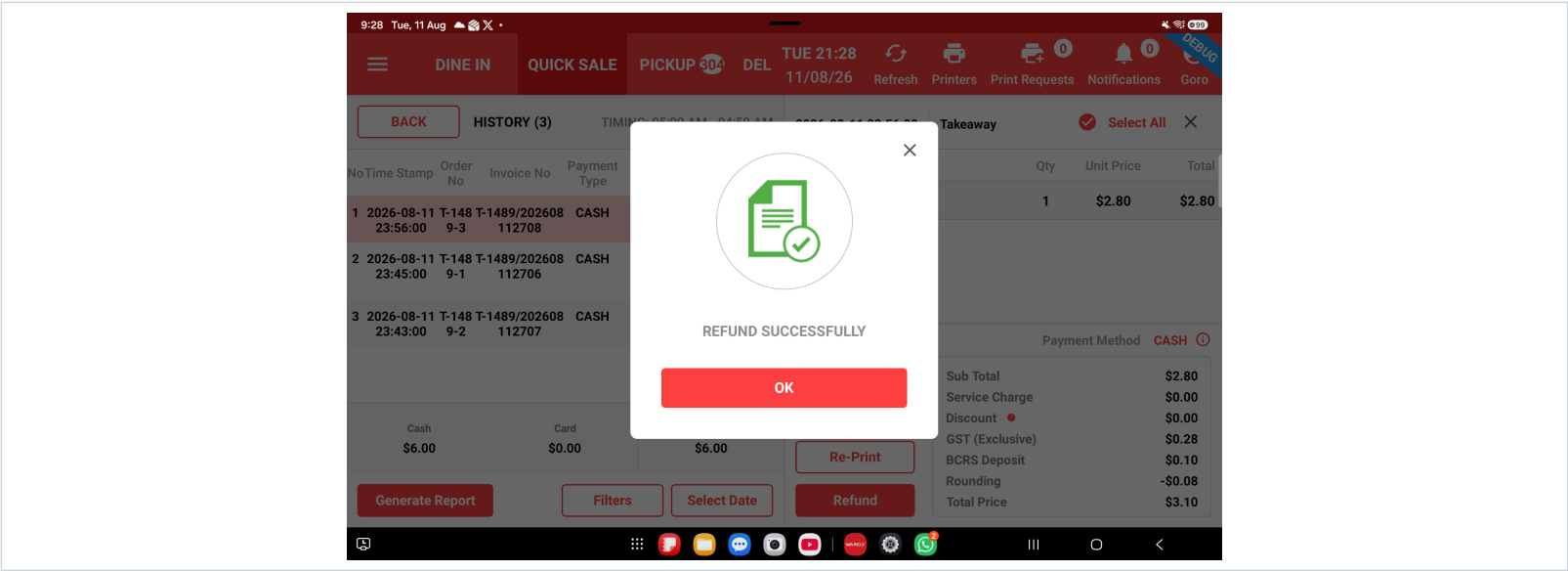


Evidence ID EV-TC-29
QA-TC-29-01 | SHA-256 B3C48A47E7E242774C351FC93805E29BE6BD0104F74AB7C3625DA2A43E16EDB2

TC_30 | Full refund

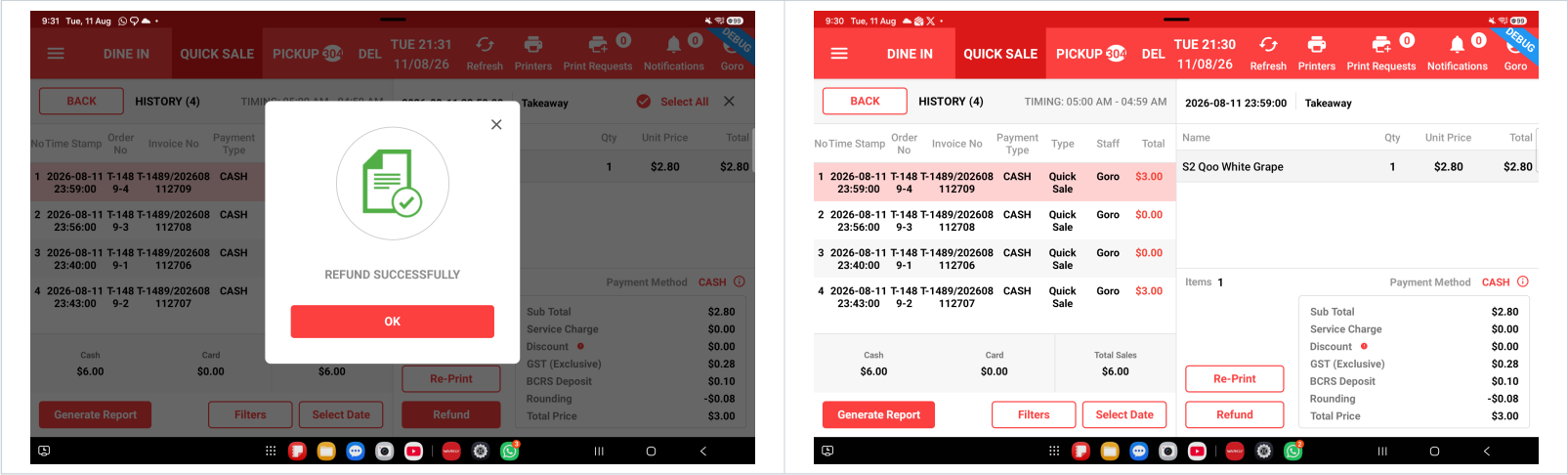
PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Refund item		Expected	Item + deposit refunded	
Actual	Sale 9967960 produced return 9967961 and ledger 11; the item and S\$0.10 deposit were refunded.		Related video	VID-11	



Evidence ID EV-TC-30
EV-TC-30-01 | SHA-256 1A258901895D9FC2F94FE2702C66583C2F82B7BA4251F60BF76285F2FFB884AE

TC_31 Deposit-only refund					PASS	
Execution	Android POS / Backend		Classification	PASS-LIVE	Priority	High
Procedure	Select "No container"			Expected	Only deposit refunded	
Actual	Sale 9967962 produced return 9967963 and ledger 12; only S\$0.10 was refunded and item quantity_returned stayed zero.			Related video	VID-07	

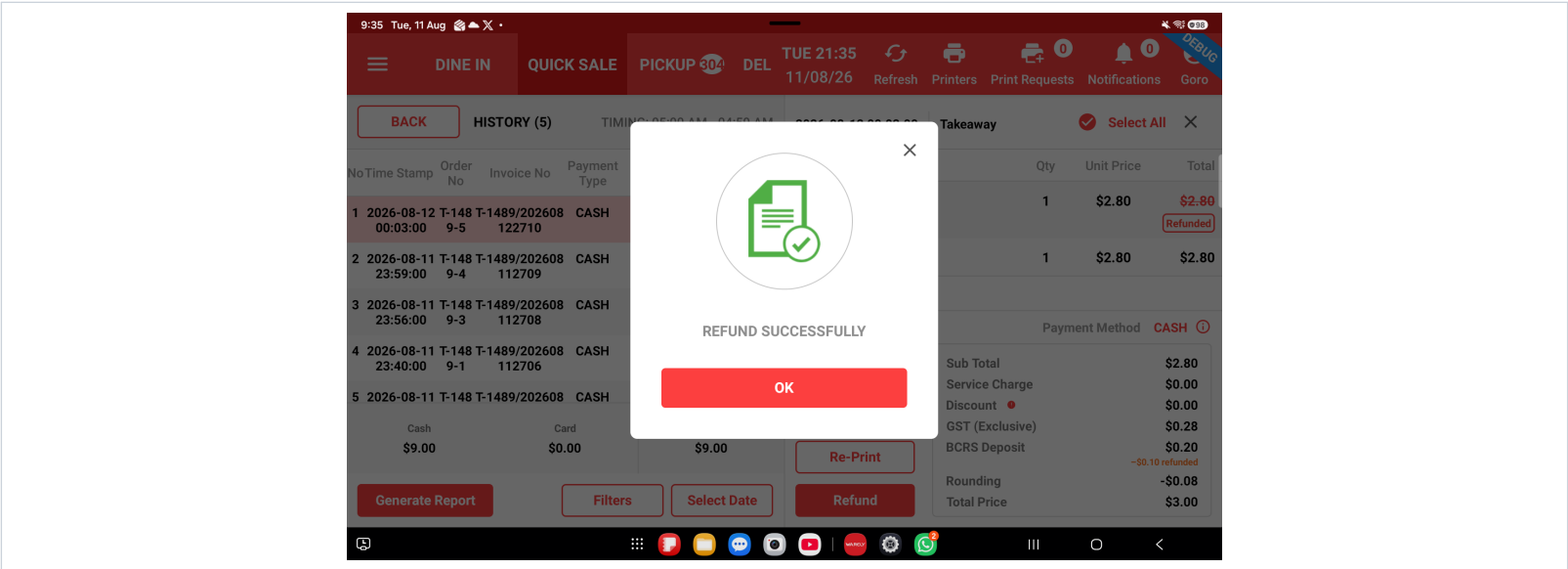


Evidence ID EV-TC-31
EV-TC-31-01 | SHA-256 60F77424A80ACDBB1EB2E8E43E9FF24184E827319D9AA79C100978D91AA2A0E1
EV-TC-31-02 | SHA-256 E67B9D6C10022AF6843E849E6026AFF765364B7C55B2F78F6117B90E4C472188

TC_32 | Wrong-charge refund

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Select error reason		Expected	Deposit refunded	
Actual	Wrong-charge correction created ledger 14 for S\$0.10 without changing item quantity_returned.		Related video	VID-10	

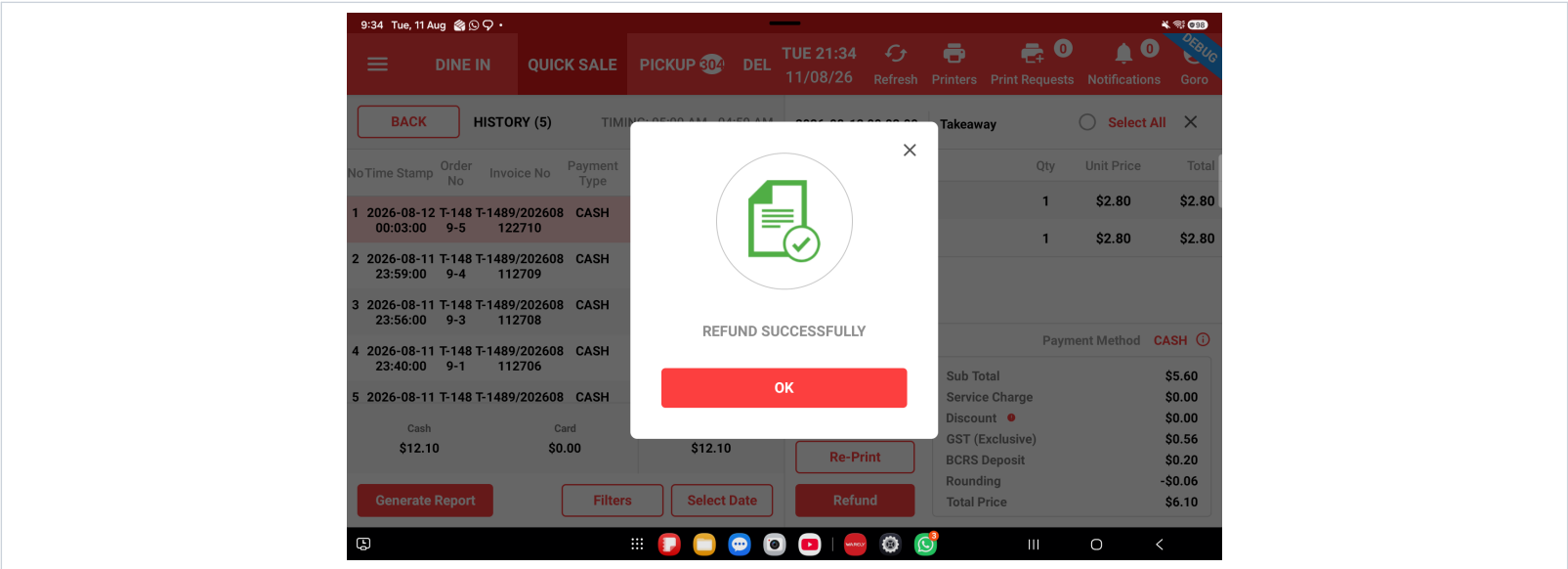


Evidence ID EV-TC-32
EV-TC-32-01 | SHA-256 A941F3050580C5D79AE159E08A0623EE2C16869C7FA588C223C82D1BEA1D160E

TC_33 | Partial refund

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Refund some items		Expected	Correct deposit refund	
Actual	Partial refund created return 9967965 and ledger 13 for the selected eligible line and S\$0.10 deposit.		Related video	VID-10	



Evidence ID EV-TC-33
EV-TC-33-01 | SHA-256 E4FDD0A33FF42B5A25B3F20A735F2213D842F08EFB3D5DEE4E2EBDEEA500332A

TC_34 | Over-refund

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Critical
Procedure	Refund extra		Expected	Error shown	
Actual	S\$0.20 against S\$0.10 rejected		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_34 Over-refund guard

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "refund above remaining deposit", "http_status": 200, "response": {"errorMessage": "BCRS deposit refund exceeds the remaining refundable amount."}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

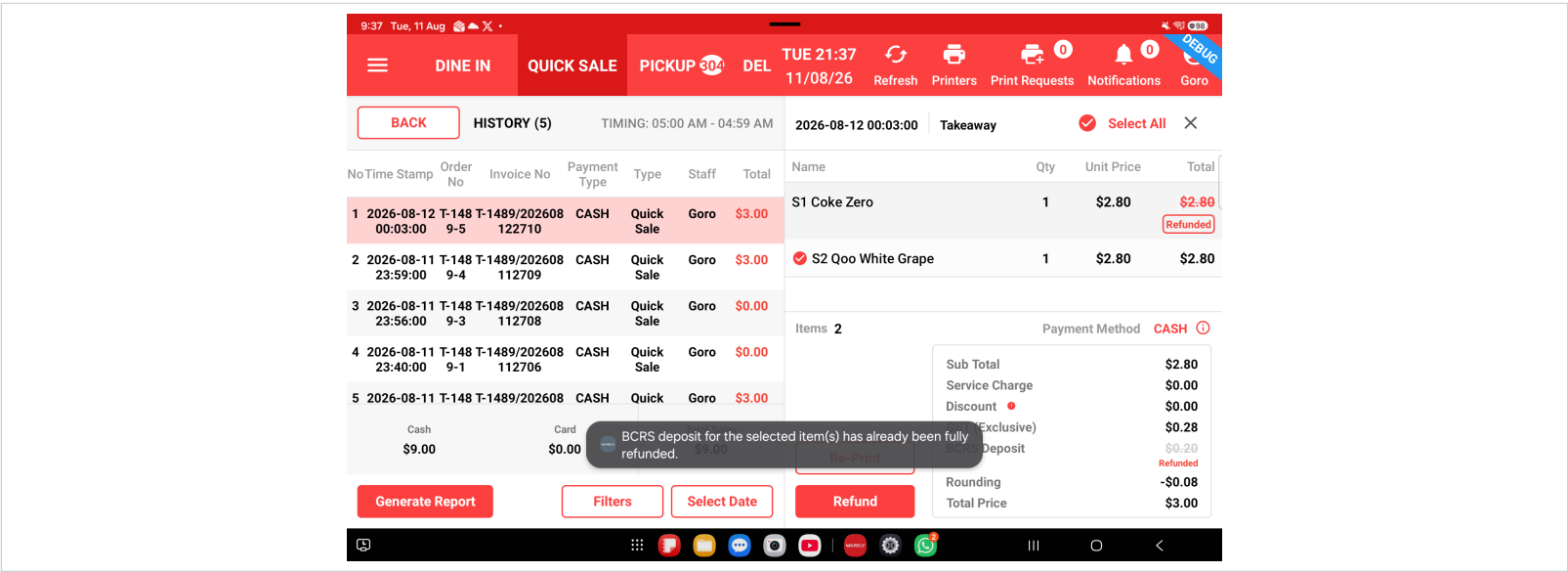
Source integrity: 4EA9A898B55F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-34
EV-TC-34-01 | SHA-256 698B108681436AF675052BB9C14131502F4C116C6406F33D743DAE5040DE82A8

TC_35 | Double refund

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Critical
Procedure	Refund twice		Expected	Second blocked	
Actual	Repeat attempt blocked; no new ledger		Related video	VID-10	

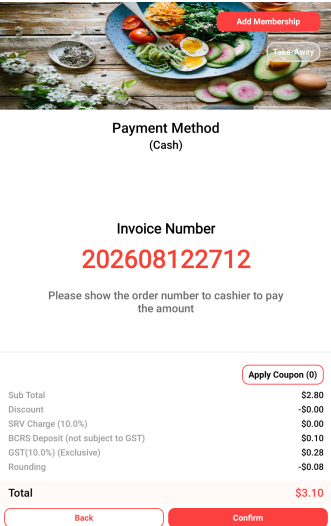
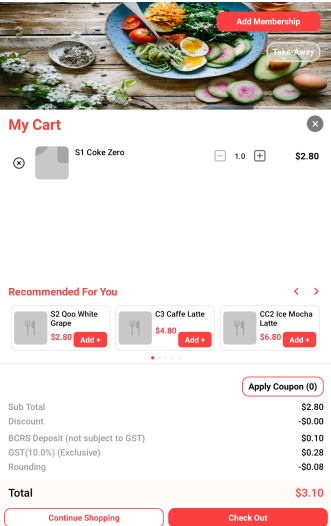


Evidence ID EV-TC-35
EV-TC-35-01 | SHA-256 E218E8BDF6C0CD1E09BD8245F7F85B5F4D17E3A40A47A2576A7745BE399CC187

TC_36 | Kiosk deposit

PASS

Execution	Android Kiosk / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Add item		Expected	Deposit shown	
Actual	Physical kiosk receipt and writer transaction 9967967 both show final S\$3.10 and deposit S\$0.10.		Related video	VID-02, VID-04, VID-05	

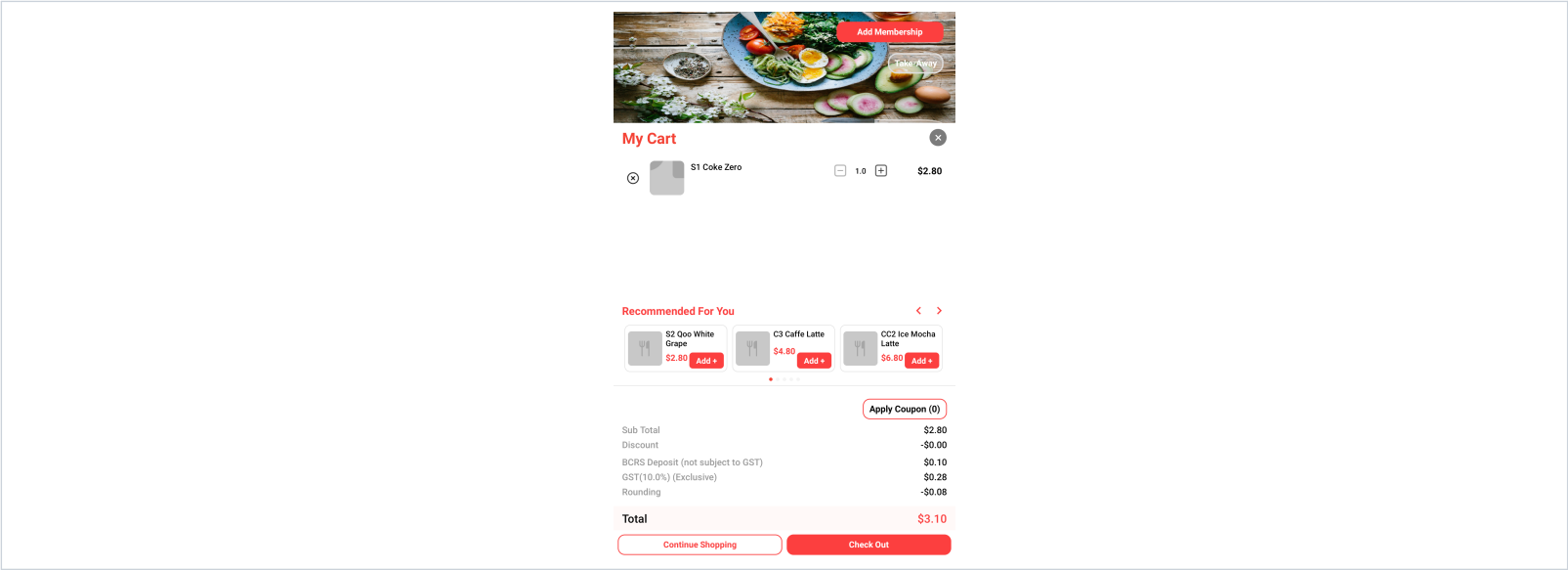


Evidence ID EV-TC-36
EV-TC-36-01 | SHA-256 1B133EB804D111D0921C527FA9A55C96DBF51CE80587ABC478C2BD205F4F1A35
EV-TC-36-02 | SHA-256 A83C095BAFC1DBBEE64C290A78A51A0B32B6D179210809BF5E1D6069AB133620

TC_37 | No kiosk waiver

PASS

Execution	Android Kiosk / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Try waiver		Expected	Not allowed	
Actual	Physical kiosk has no waiver action; payload sends waiver false		Related video	VID-02	

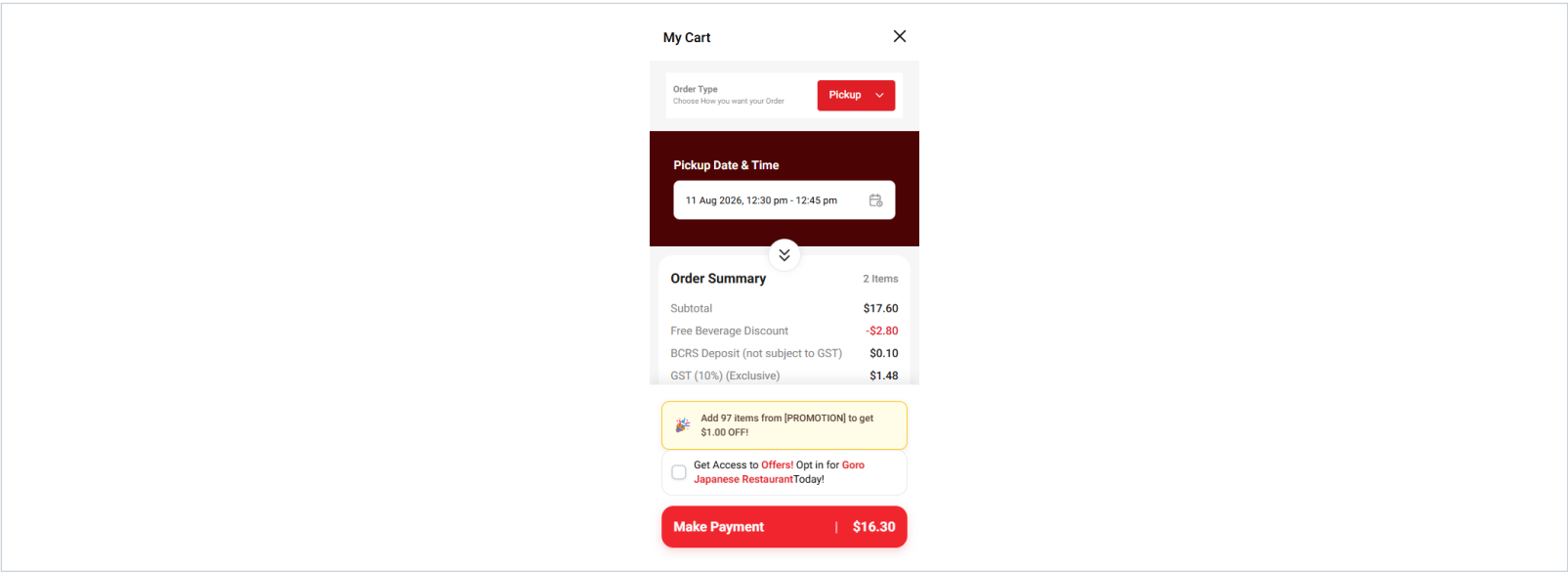


Evidence ID EV-TC-37
EV-TC-37-01 | SHA-256 1B133EB804D111D0921C527FA9A55C96DBF51CE80587ABC478C2BD205F4F1A35

TC_38 | QR deposit

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Add via QR		Expected	Deposit shown	
Actual	Pickup UI/request showed S\$0.10		Related video	VID-13	

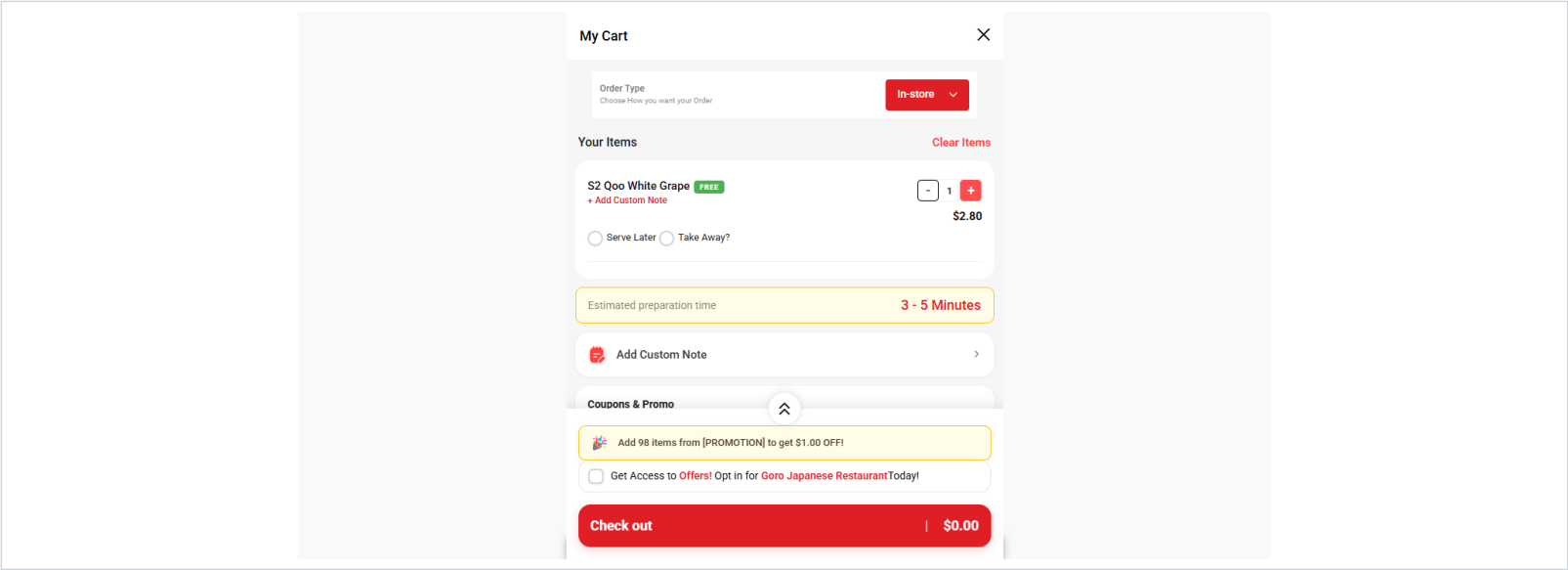


Evidence ID EV-TC-38
EV-TC-38-01 | SHA-256 EBC343E15426BA71B3C46C5C46D0488887A070055B351E19502E61289957780C

TC_39 | RRFS QR

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	High
Procedure	Dine-in QR		Expected	Deposit not charged	
Actual	Dine-in UI and writer charged zero customer deposit		Related video	VID-12	



Evidence ID EV-TC-39
EV-TC-39-01 | SHA-256 DB397AAD4822CA65DCF82E4137AD3F2C29D50A679679021B42100ED854D19890

TC_40 BCRS report section					PASS	
Execution	Backend / Admin / Server		Classification	PASS-LIVE	Priority	High
Procedure	Generate report			Expected	Section visible	
Actual	Historical details and reports show BCRS			Related video	VID-01	
Action 07/24/2026 15:29 T-1479/202607242683 Walk-In Customer Refund						

Evidence ID EV-TC-40
EV-TC-40-01 | SHA-256 85B2D14DC9C70342403575FA8EC40B30415A6D9F545D59DADB51A05F35D7FBE2

TC_41 Revenue excludes deposit					PASS	
Execution	Backend / Admin / Server		Classification	PASS-LIVE	Priority	Critical
Procedure	Verify totals			Expected	Deposit NOT included	
Actual	All Sales, Report 607, Sales by Receipt, and Product Sell verified			Related video	VID-01	
AT Yssel Salad 1 ALCORNOL - T-Buffet ALCORNOL - TWK Extra Noun KARSEN DON - AT Yssel Salad 1 - - CT Long Black - - Grain Salmon - - Korean Beefing - - Total: Showing 1 to 7 of 7 entries (showed from 56 total entries)			CO0001 Walk-In Customer T-1479/202607242683 2026/07/24 \$143.65			

Evidence ID EV-TC-41
EV-TC-41-01 | SHA-256 6891A2D6F92A2D4B56F4AE14E98C23AEFD291E14622190F45E0746EDB2ED8229
EV-TC-41-02 | SHA-256 01904DC8C38B8031763424344224B7055E369387B87C02AB9F9EF72ABD5BB328

PASS

Execution	Backend / Admin / Server	Classification	PASS-LIVE	Priority	High
Procedure	Check report		Expected	Claim shown	
Actual	Historical report and transaction evidence verified		Related video	VID-01	

Item	Item	Item	Cost
20272407-03	07-28	Quantity	Name
1	A1	Sales	Disc
1	Yatal	Disc	Disc
3	T-Shirt	\$ 8.80	0 -
3	TVK	\$ 112.50	0 -
3	Enum	\$ 3.75	0 -
4	Namen	\$ 18.60	0 -
4	Add	\$ 18.60	0 -
12	T-1479020	2026-	

[illegible]

EV-TC-42-01 | SHA-256 651D0385DDF17CAF8ACBEE76A51A441A2B88D06FF37947805417AF907684AA7D
EV-TC-42-02 | SHA-256 8002DB4571FFDD99DCF70AC3FDC5E8E006AB23AD38007D23628BC453C8944DDA

TC_43 | Business OFF + location ON

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Medium
Procedure	Add item		Expected	No deposit	
Actual	Both flags are required		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_43 Both enablement flags required

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "business disabled clears deposit", "result": "ACCEPTED", "after": {"deposit": 0, "rrfs_claim": 0}}

{"case": "location disabled clears deposit", "result": "ACCEPTED", "after": {"deposit": 0, "rrfs_claim": 0}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

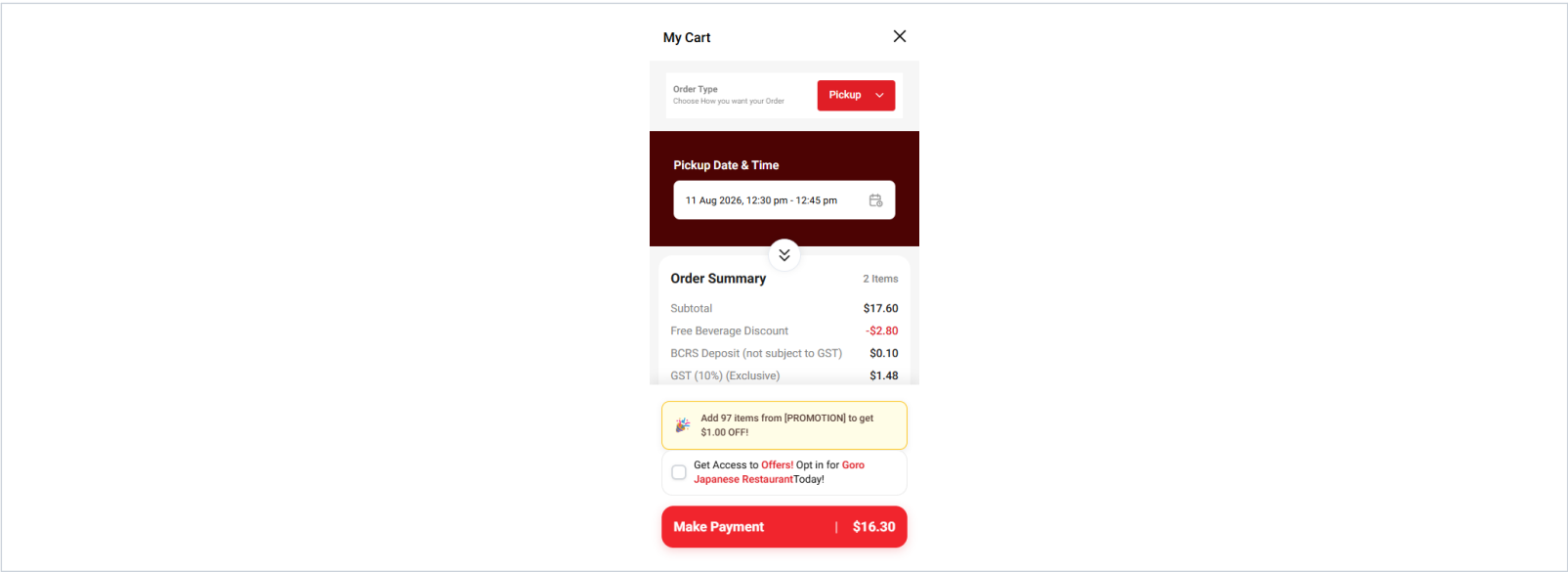
Source integrity: 4EA9A89B855F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-43
EV-TC-43-01 | SHA-256 FA61C05D2F98E55364E2B05FDCA8A67F54319DA15F3D06F78E0F81CB2BFB6297

TC_44 | GST on deposit

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Add item		Expected	GST NOT applied on deposit	
Actual	Separate deposit did not increase taxable GST		Related video	VID-13	

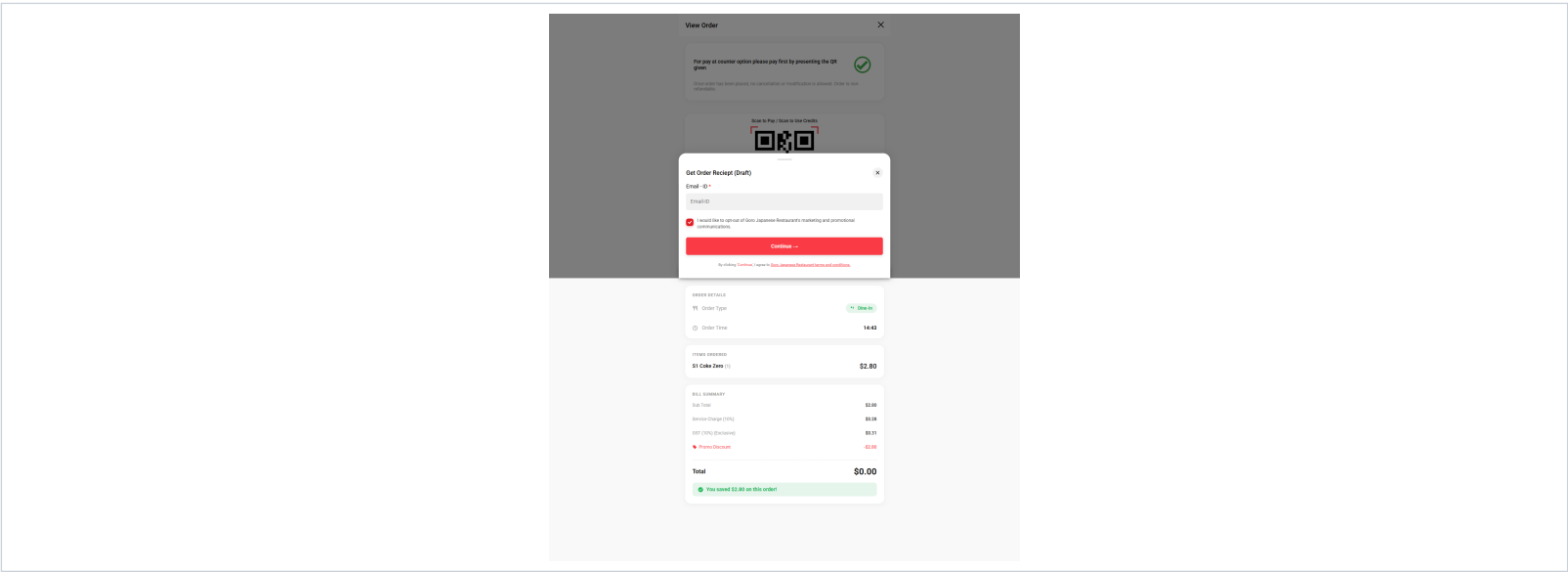


Evidence ID EV-TC-44
EV-TC-44-01 | SHA-256 EBC343E15426BA71B3C46C5C46D0488887A070055B351E19502E61289957780C

TC_45 | RRFS wrong charge

PASS

Execution	QR Ordering / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Dine-in		Expected	Deposit = 0	
Actual	Fixed location fallback verified in 9967924		Related video	VID-12	



Evidence ID EV-TC-45
EV-TC-45-01 | SHA-256 B3C48A47E7E242774C351FC93805E29BE6BD0104F74AB7C3625DA2A43E16EDB2

TC_46 | Refund more than paid

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Medium
Procedure	Try extra refund		Expected	Blocked	
Actual	Remaining-deposit guard rejected request		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_46 Refund more than paid

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "refund above remaining deposit", "http_status": 200, "response": {"errorMessage": "BCRS deposit refund exceeds the remaining refundable amount."}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

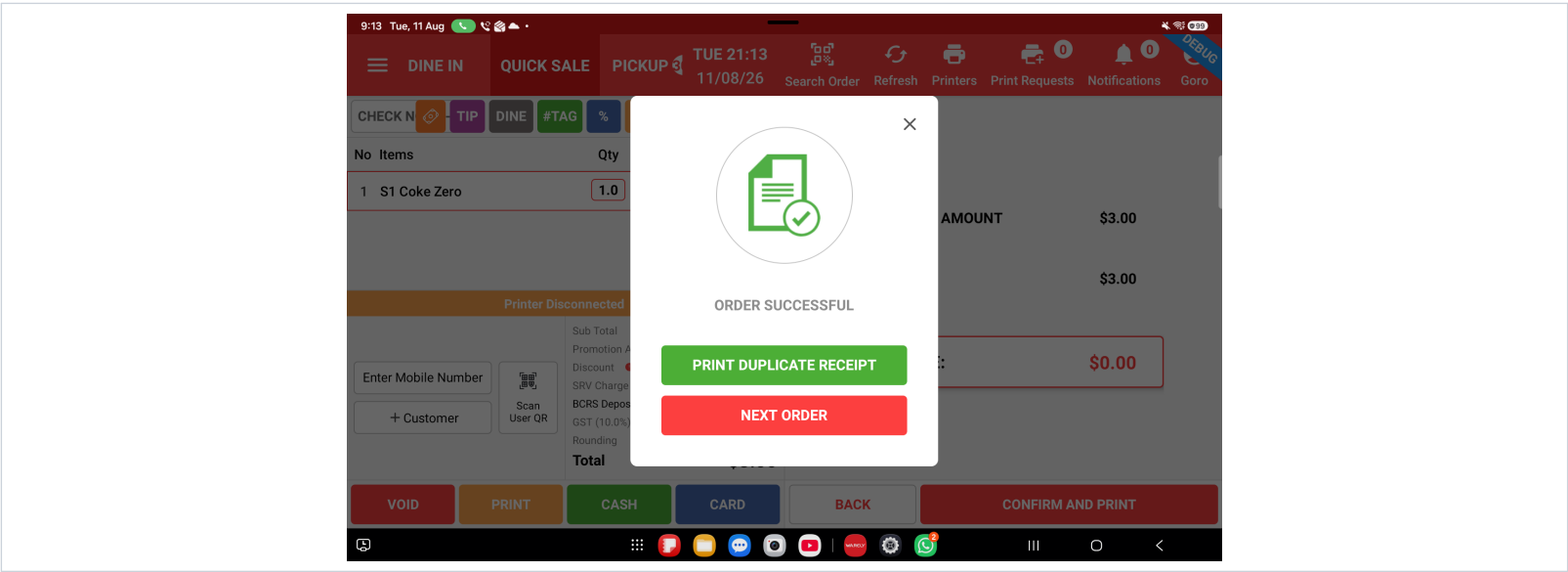
Source integrity: 4EA9A89B855F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-46
EV-TC-46-01 | SHA-256 DCBDFCE5132DE85F1BDB2859D73F7692EA9224336123A16C4ACE8C42AA77A832

TC_47 | Waiver not saved

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Apply waiver		Expected	Saved in order	
Actual	9967958 proves waiver and reason persistence		Related video	Not applicable - still image / automated evidence	



Evidence ID EV-TC-47
EV-TC-47-01 | SHA-256 A89966F5F028DB6A4AE398F11576B9593564858796CB6C808A85CC9E4E0A6893

TC_48 | Invalid pack value

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Medium
Procedure	Set pack=0		Expected	Error / no deposit	
Actual	Backend requires integer >= 1; clients clamp defensively		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_48 Invalid pack rejected

PASS

Evidence source

ProductController.php

1165:

1166: if (\$request->input('is_bcrs_eligible') == 1) {

1167: \$request->validate([

1168: 'bcrs_containers_per_pack' => 'required|integer|min:1',

1169:], [

1170: 'bcrs_containers_per_pack.min' => 'Containers per pack must be at least 1 for a BCRS-eligible product.',

1171:]]);

Verification: eligible pack must be an integer with minimum value 1.

Source integrity: F18533006E4343F682934375FFC678BFB3EFDA3067DF671A

Evidence ID EV-TC-48
EV-TC-48-01 | SHA-256 42928809B9FDD86EF5E7D8E357A36E6964B15B4919F785A6B6E6595E5B8625FC

TC_49 | Negative quantity

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Medium
Procedure	Reduce below 0		Expected	Not allowed	
Actual	Server rejected it; client calculator returned zero		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_49 Negative quantity

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "negative eligible quantity", "result": "REJECTED", "exception":

"App\\Exceptions\\PurchaseSellMismatch", "message": "BCRS item quantity cannot be negative."}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

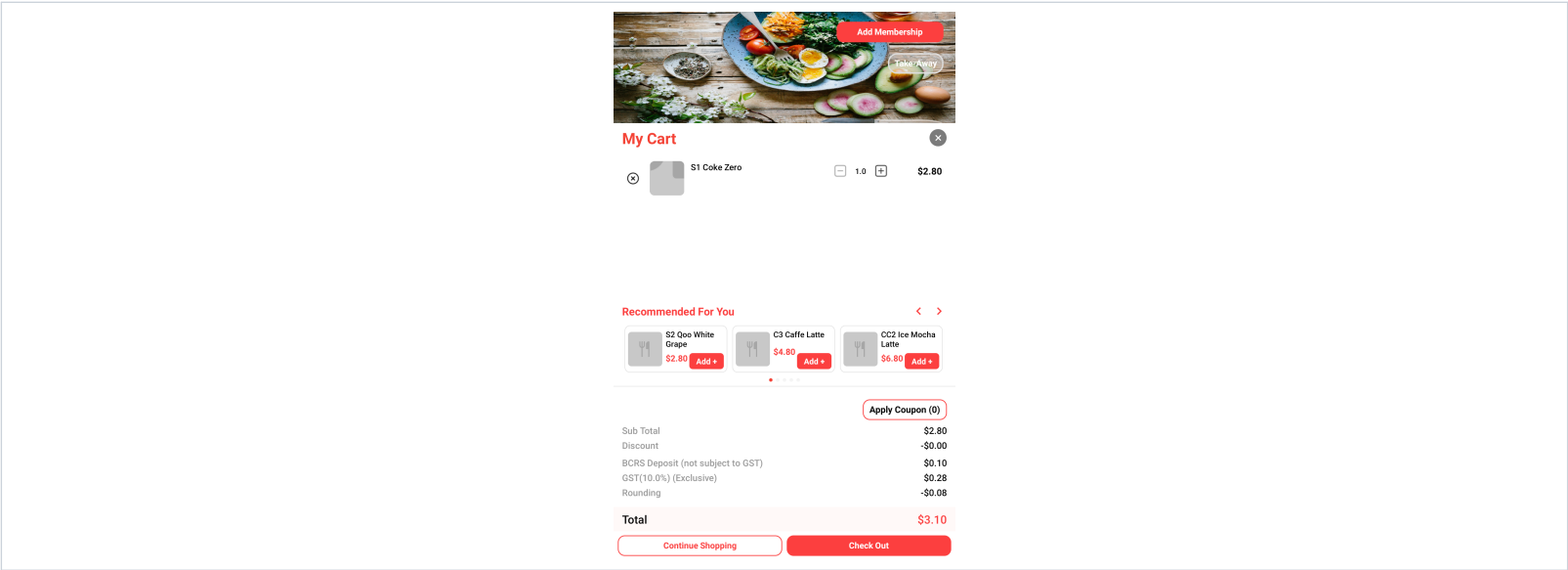
Source integrity: 4EA9A89B855F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-49
EV-TC-49-01 | SHA-256 B680E80FA8E329749EFAB9F2151E5C6A82DFBF1143C6B934BA5EC92C31E53F47

TC_50 | Product change/no sync

PASS

Execution	Android Kiosk / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Change product, no sync		Expected	Old data used	
Actual	During a guarded server eligibility change, the unsynchronized kiosk continued using its cached S\$0.10 metadata; the product row was restored exactly.		Related video	VID-02	

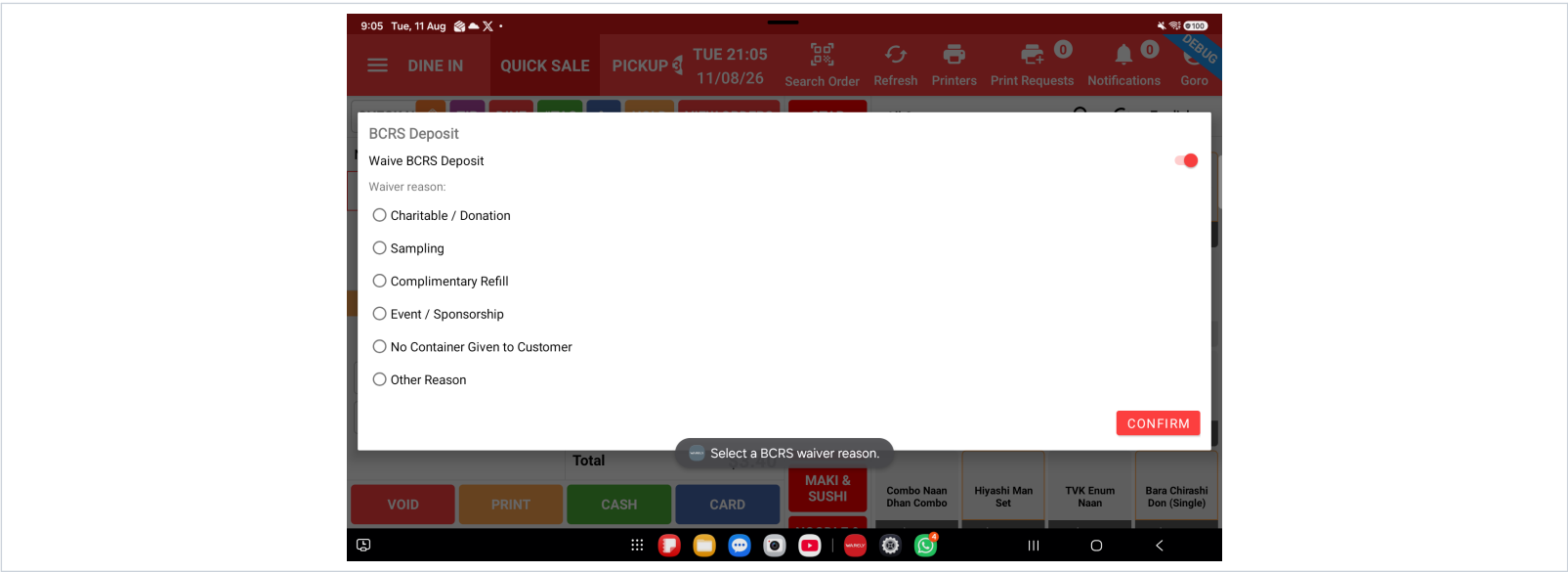


Evidence ID EV-TC-50
EV-TC-50-01 | SHA-256 1B133EB804D111D0921C527FA9A55C96DBF51CE80587ABC478C2BD205F4F1A35

TC_51 | Waiver without reason

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Apply waiver		Expected	Error	
Actual	Physical POS blocked blank custom reason		Related video	Not applicable - still image / automated evidence	

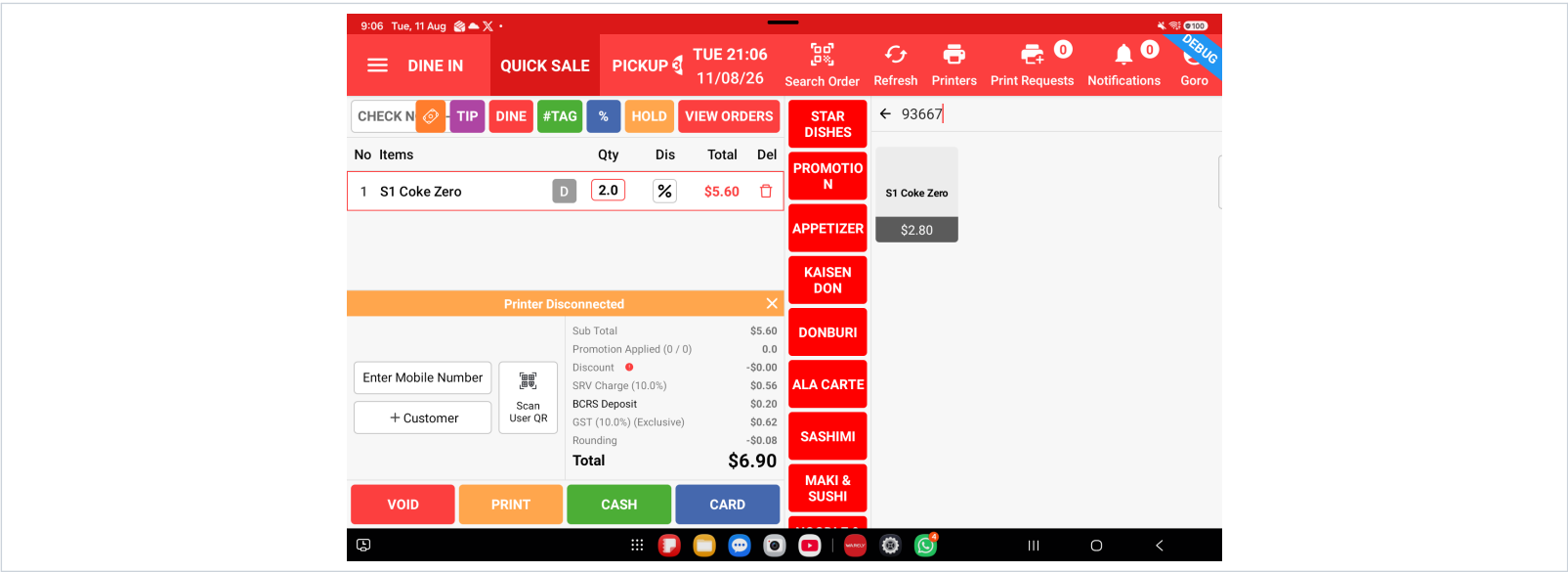


Evidence ID EV-TC-51
EV-TC-51-01 | SHA-256 9892A3E8B553082F559184752A1596A94A1EA62857A5F43E57C38AEB425764E1

TC_52 | Add after waiver

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Add item after waiver		Expected	Deposit recalculated	
Actual	Physical add invalidated waiver and restored deposit		Related video	Not applicable - still image / automated evidence	



Evidence ID EV-TC-52
QA-TC-52-01 | SHA-256 3E60ACED2203BA6E5DE5F9A52AE261FF60950424FFAC75EBF497F5D313BA3F1

TC_53 | Refund non-BCRS item

PASS

Execution	Backend / Admin / Server	Classification	PASS-AUTO	Priority	Medium
Procedure	Refund item		Expected	No deposit refund	
Actual	Backend rejected deposit allocation to product 93678		Related video	Not applicable - still image / automated evidence	

WARELYPOS | AUTOMATED EVIDENCE

TC_53 Non-BCRS refund allocation

PASS

Evidence source

bcrs-server-validation-result.json

{"case": "deposit refund allocated to non-BCRS item", "http_status": 200, "response": {"errorMessage": "The selected BCRS items do not cover the requested deposit refund."}}

executed_at_utc=2026-08-11T07:14:55+00:00

transaction_fixture=9967924

all_changes_rolled_back=True

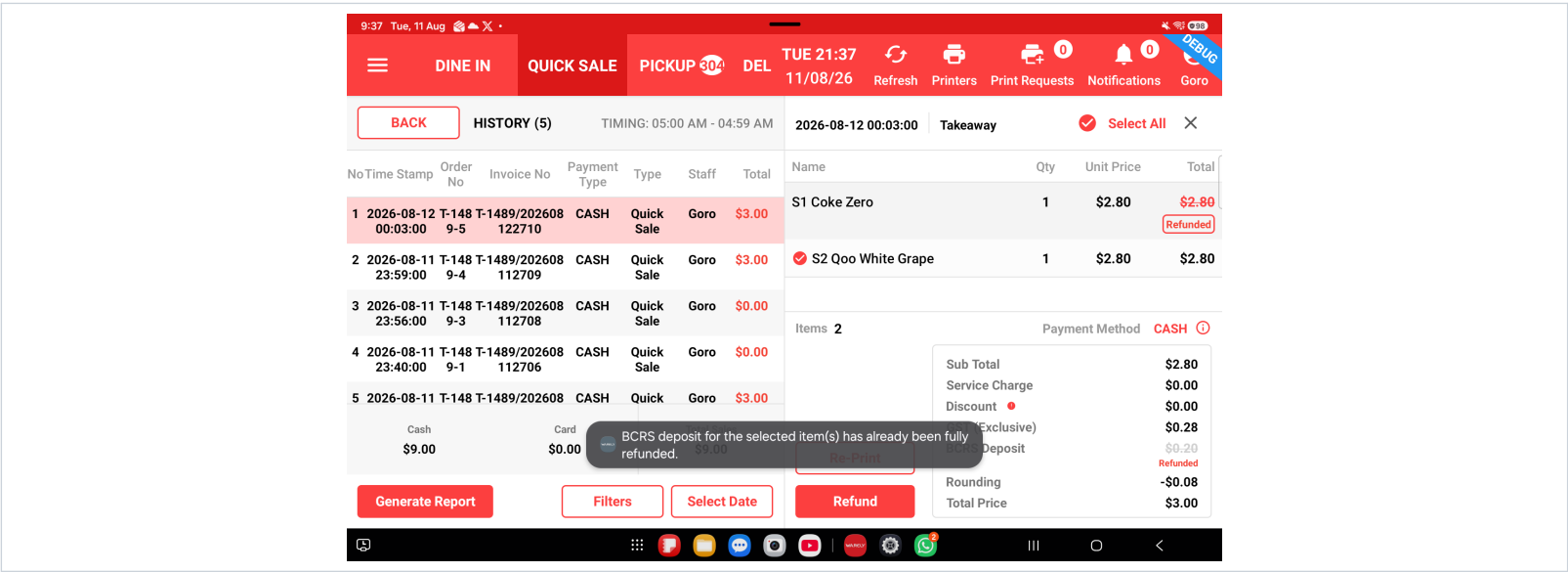
Source integrity: 4EA9A898B55F4A88E8546A3CB50F977A7977FD52617E5FAC

Evidence ID EV-TC-53
EV-TC-53-01 | SHA-256 87ABF62FF2BA1ED2FEFBB0AEDCA1C261385F189A23D99EA6C55A0E20646DE08F

TC_54 | Duplicate refund

PASS

Execution	Android POS / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Trigger twice		Expected	One blocked	
Actual	Physical repeat attempt blocked; no second ledger		Related video	VID-10	

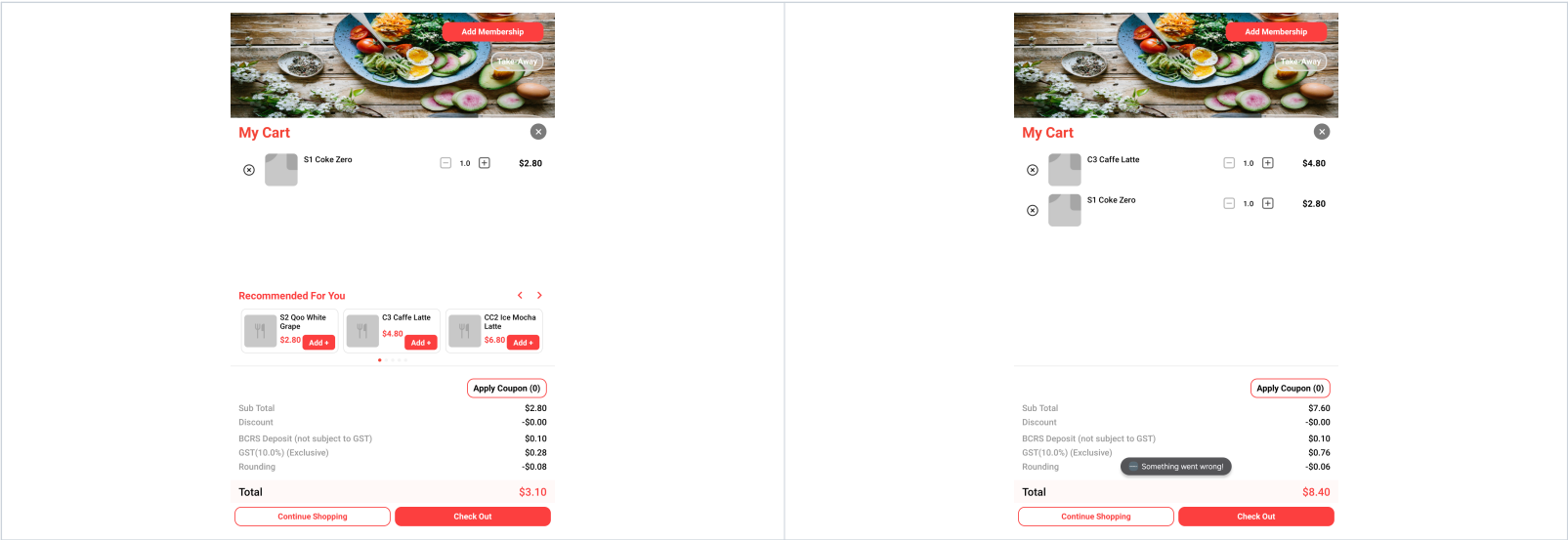


Evidence ID EV-TC-54
QA-TC-54-01 | SHA-256 E218E8BDF6C0CD1E09BD8245F7F85B5F4D17E3A40A47A2576A7745BE399CC187

TC_55 | Offline mode

PASS

Execution	Android Kiosk / Backend	Classification	PASS-LIVE	Priority	Medium
Procedure	Disable internet		Expected	Works correctly	
Actual	With Wi-Fi disabled, local BCRS remained correct, submit failed safely, the cart stayed intact, and no transaction newer than 9967967 was inserted.		Related video	VID-03	



Evidence ID EV-TC-55
EV-TC-55-01 | SHA-256 1B133EB804D111D0921C527FA9A55C96DBF51CE80587ABC478C2BD205F4F1A35
EV-TC-55-02 | SHA-256 99BF09E468B960284DF17BC4BBA34597A37D402B9E4E584FE7FBBDD5E07910CE5

8. Build, deployment and integrity evidence

Artifact / component	Validation	Integrity / state
POS debug APK	Five focused refund tests and debug assemble passed	warelypos-Dev-2026.08.11.23.50.apk SHA-256 8FE4B4BB896AD6FAC08E34CF1960E47DD2CA088400058A66FC89C6456BF94036
Kiosk debug APK	Corrected debug rebuild passed in 47 seconds	kiosk-dev-2026.08.12.00.22.apk SHA-256 03D32956052DA6CF5DD29C1594D0C592B326FBB0438D8EB3D6E8B442FDB0317C
Backend	Exact-file SCP, PHP syntax/cache checks, PHP-FPM and nginx active	TakeawayController local/remote SHA-256 5FB875EC6AC0D5DFB642CF9EC81D10400C319C74F1B8BBB96EA9B1A1AB317BFD
QR	Exact-file SCP, production build, PM2 online	Order page local/remote SHA-256 86EF41E44F5CA363367537966F2DA34ECE03833C57FD250F4732EECA09F5B87E
Resource control	Android builds serialized with one Gradle worker; no concurrent mobile/QR build	Final sampled CPU below 5%; no Gradle daemon left running

Rollback references

Backend initial	RB-BE-20260811-053054
Backend pre-reapply	RB-BE-20260811-070649
Paginated catalog	RB-BE-20260811-153337
QR	RB-QR-20260811-053054
TC_50 product fixture	RB-TC50-20260811-163256

9. Limitations, residual risk and sign-off

Item	Disposition
PDF video playback	Inline rich-media playback is viewer-dependent, so this PDF retains visible still evidence for every case. The companion private QA portal provides native playback for all 13 recordings.
Environment	This is a development-environment sign-off. Production release, migration and change-window approval remain separate.
Pre-existing warnings	Compiler/deprecation warnings were pre-existing and non-blocking; builds completed successfully.
Retained test artifacts	Pre-fix transactions 9967959 and 9967966 remain as controlled evidence in development.
Source control	No files were staged, committed or pushed. Later commits must use Surendra K (Technical Manager) as author.

FINAL DEVELOPMENT QA DECISION	PASS
Basis	55 / 55 unique cases passed; 13 defects resolved; 0 blocked; 0 reviewed-only.
Prepared by	Surendra K (Technical Manager) - 12 August 2026
Internal QA review	Name: _____ Decision: _____ Date: _____

End of report