



VERAE

IMEI Asset History Reports

Combined Executive Summary · Billing Guide · Timestamping Invoice

Lab demonstration · 20 October 2026

Confidential — internal sample pack

Document type	Combined summary of three IMEI Carfax PDFs + stamp billing guide + lifecycle invoices
Rate card	API / individual — credits ≈ US cents
Environment	ns1 Verae substrate lab · digests-only seal + versioned metadata
Generated (UTC)	2026-10-20T09:23:31Z
Source folder	docs/imei-lifecycle/

“Pay when the chain writes. Read Carfax history for free. Invoice every lifecycle stamp.”

This single document merges the prior billing explanation and the timestamping invoice pack: how Verae meters first seals, seals with metadata, existing-digest lookups, restamps, and restamp-with-additional-metadata — then bills each lifecycle transaction with running totals for Report 1, Report 3, and the 50-customer fleet.

1. Executive summary

Verae tracks each handset by **digest = SHA-256(IMEI)**. The digest is sealed on chain; lifecycle events are append-only metadata. Stamp billing meters **chain writes** — not retail phone/service prices (those remain separate customer or nonprofit FMV lines).

- **Report 1** — live ns1 seal IMEI 356938032484611 (VeraePhone A1); customer device+service \$169.65; recycled; prove/verify sealer Seven.
- **Report 2** — 50 customers; Wounded Warriar Mobile tax-credit FMV **\$15,315.62** (17 / 34%); customer TCO charged **\$20,745.74**; 8 recycled.
- **Report 3** — IMEI 359291081006720 (Eden Miller, iPhone 18 Pro Max, WWM); TCO \$0; tax-credit FMV **\$1,388.70**.
- **Stamp SKUs** — first digests-only 10; first with metadata 15; restamp digests-only 5; restamp+metadata 15; existing/readonly & verify 0.
- **Timestamping invoice (Model A)** — Report 1 = **\$0.90**; Report 3 = **\$0.75**; Fleet 50 full lifecycle = **\$38.70**. Model B (seal once) = \$0.10 / device or \$5.00 fleet.

Customers	WWM	TCO charged	Tax-credit FMV	Fleet stamp A
50	17	\$20,745.74	\$15,315.62	\$38.70 / 3870 cr

Strategic reading: identity integrity (one seal per IMEI digest) is separate from the business narrative (versioned metadata) and from commercial treatment (paid retail, promos, or WWM FMV). Verae charges stamp credits when the chain writes; Carfax history reads are free.

Table of contents

1. Executive summary	preceding section
Table of contents	this page
2. How the tracking model works	identity · seal · history · re-query
3. Verae timestamp billing transactions	rate card · types A–E
3.1–3.6 Transaction types A–E detail	seal · metadata · readonly · restamp
3.7–3.8 Quote matrix & report mapping	SKU matrix → Reports 1–3
4. Timestamping invoice — Report 1	per-event costs · running totals · Models A & B
5. Timestamping invoice — Report 3	IMEI 359291081006720 · WWM
6. Timestamping invoice — Report 2 fleet	50-device rollup · stage running totals
7. Summary of total timestamping costs	grand totals · retail vs stamp
8. Report catalog	Reports 1–3 descriptions
9. How the three reports relate	comparison table
10. Artifact index	file paths
11. Disclaimer	lab sample notice

2. How the tracking model works

Layer	Mechanism	Billing implication
Identity	digest = SHA-256(IMEI); multihash sha256-<digest>	Subject of stamp SKUs
Seal	verae.substrate.pack → sealer → verae.ts.completed; prove/verify	Types A/B first write; D/E on restamp
History	Append-only meta_history versions (lifecycle JSON)	Narrative store; reads are type C @ 0
Re-query	Pack existing digest, restamp=false → existing receipt	timestamp-readonly @ 0

Lifecycle schema **verae.asset.phone.lifecycle/v1**: manufactured → shipped_to_distributor → sold_to_customer → activated → service_billed_prepaid → (optional) returned_for_recycling.

3. Verae timestamp billing transactions

Verae separates **device/service retail billing** from **timestamp billing** (API metering when a digest is sealed, looked up, or restamped). Reference: **channel = api**, **segment = individual** (credits ≈ US cents).

3.1 Rate card — stamp SKUs

SKU	Credits	USD	When it applies
timestamp	10	\$0.10	First chain seal — digests only
timestamp-metadata	15	\$0.15	First chain seal that includes metadata
timestamp-re	5	\$0.05	Explicit restamp — digests only
timestamp-metadata-update	15	\$0.15	Explicit restamp that also submits metadata
timestamp-readonly	0	\$0.00	Digest already on chain; restamp=false — existing receipt
timestamp-verify	0	\$0.00	Prove / verify an existing receipt
timestamp-scope-public	0	\$0.00	Public/global scope marker (no added charge)

3.2 Type A — First timestamp (digests only)

IMEI digest submitted for the first time with **no metadata** (restamp=false). Verae writes the digest and returns a new receipt. **Bill**: timestamp = **10 credits**. Used for Report 1's ns1 digests-only pack and Model B fleet seals.

3.3 Type B — Timestamp with metadata

First seal request **includes metadata** with the digest. Chain write plus initial metadata. **Bill**: timestamp-metadata = **15 credits**. If manufacture metadata rides the same first stamp request, Type B applies instead of Type A.

3.4 Type C — Existing digest / Carfax read (no charge)

Digest already on chain; client submits again with **restamp=false**. Returns the **pre-existing timestamp receipt** — no new stamp. **Bill**: timestamp-readonly = **0**. Verified in lab: existing=n, accepted=0 for full sealed corpus re-submit.

3.5 Type D — Restamp (digests only)

Digest on chain; client sets **restamp=true** without metadata. Additional chain write. **Bill:** timestamp-re = **5 credits**. Use case: re-affirm identity without changing the metadata story.

3.6 Type E — Restamp with additional metadata

Digest on chain; **restamp=true** and additional/updated metadata (sold, activated, billed, recycled). **Bill:** timestamp-metadata-update = **15 credits**. Lab Carfax often used Type A once then append-only meta_history (Model B). Model A invoices assume each lifecycle event is stamp+metadata (Type B then Type E).

3.7 Side-by-side quote matrix

Scenario	On chain?	restamp	Metadata	SKU	Credits
First timestamp (digests only)	No	false	No	timestamp	10
First timestamp with metadata	No	false	Yes	timestamp-metadata	15
Existing receipt / Carfax read	Yes	false	No/Yes	timestamp-readonly	0
Restamp digests only	Yes	true	No	timestamp-re	5
Restamp + additional metadata	Yes	true	Yes	timestamp-metadata-update	15

3.8 How this maps onto the IMEI reports

Report moment	Stamp billing treatment
Report 1 — first seal of IMEI digest	Type A @ 10 (lab digests-only) or Type B @ 15 if meta on first stamp
Report 1 — six lifecycle metadata versions	Model B: meta_history @ 0 stamp. Model A: Type E @ 15 per later event
Report 1 — re-submit sealed digests	Type C @ 0 (verified existing=n, accepted=0)
Reports 2/3 — first seal per IMEI	Type A @ 10 or Type B @ 15 at manufacture
Reports 2/3 — later lifecycle events	Meta versions (free to read) or Type E @ 15 if restamp+meta on stamp API
Device \$49.95 / service / WWM FMV	Retail / nonprofit commercial billing — separate from Verae stamp SKUs

Rule of thumb: Pay Verae stamp credits when the chain writes. Do not pay stamp credits to read a Carfax history or receive an existing receipt.

4. Timestamping invoice — Report 1 (single device)

IMEI 356938032484611 · VeraePhone A1 · digest ee9a4857...57a1

Model A — Commercial stamp API: each lifecycle event stamped with metadata (first = timestamp-metadata; later = timestamp-metadata-update).

#	Event date	Lifecycle transaction	SKU	Credits	USD	Running total
1	2026-03-24	manufactured First seal + manufacture metadata	timestamp-metadata	15	\$0.15	15 cr / \$0.15
2	2026-04-23	shipped_to_distributor Restamp + warehouse metadata	timestamp-metadata-update	15	\$0.15	30 cr / \$0.30
3	2026-05-23	sold_to_customer Restamp + sale metadata	timestamp-metadata-update	15	\$0.15	45 cr / \$0.45
4	2026-05-24	activated Restamp + activation metadata	timestamp-metadata-update	15	\$0.15	60 cr / \$0.60
5	2026-05-25	service_billed_prepaid Restamp + billing metadata	timestamp-metadata-update	15	\$0.15	75 cr / \$0.75
6	2026-10-15	returned_for_recycling Restamp + recycling metadata	timestamp-metadata-update	15	\$0.15	90 cr / \$0.90
—	on demand	Carfax / existing lookup	timestamp-readonly	0	\$0.00	90 cr / \$0.90
—	on demand	Prove / verify	timestamp-verify	0	\$0.00	90 cr / \$0.90
INVOICE TOTAL — Model A (stamp+meta lifecycle)				90	\$0.90	\$0.90

4.1 Alternate — Model B (lab as-built on ns1)

As actually run for Report 1: one digests-only seal, then append-only metadata versions via meta ingest. Re-submits and verify are free.

#	When	Transaction	SKU	Credits	USD	Running total
1	2026-03-24	manufactured (digests-only seal) First chain seal, no meta on pack	timestamp	10	\$0.10	10 cr / \$0.10
1b	2026-10-20	meta v1...v6 append (ingest) Meta history writes — \$0 stamp	timestamp-readonly	0	\$0.00	10 cr / \$0.10
—	2026-10-20	re-submit sealed digests existing=n, accepted=0	timestamp-readonly	0	\$0.00	10 cr / \$0.10
—	2026-10-20	prove / verify receipt Receipt check	timestamp-verify	0	\$0.00	10 cr / \$0.10
INVOICE TOTAL — Model B (lab as-built)				10	\$0.10	\$0.10

Delta: Model A charges \$0.90 for a six-event stamped story; Model B charges \$0.10 when metadata is appended after a single digests-only seal.

5. Timestamping invoice — Report 3 (IMEI 359291081006720)

Eden Miller · Apple iPhone 18 Pro Max · Wounded Warriar Mobile — five lifecycle events (no recycling). Commercial Model A.

#	Event date	Lifecycle transaction	SKU	Credits	USD	Running total
1	2026-03-20	manufactured First seal + manufacture metadata	timestamp-metadata	15	\$0.15	15 cr / \$0.15
2	2026-04-10	shipped_to_distributor Restamp + warehouse metadata	timestamp-metadata-update	15	\$0.15	30 cr / \$0.30
3	2026-04-15	sold_to_customer (WWM) Restamp + nonprofit issuance	timestamp-metadata-update	15	\$0.15	45 cr / \$0.45
4	2026-04-17	activated Restamp + activation metadata	timestamp-metadata-update	15	\$0.15	60 cr / \$0.60
5	2026-04-18	service_billed_prepaid Restamp + prepaid/sponsor metadata	timestamp-metadata-update	15	\$0.15	75 cr / \$0.75
—	on demand	Existing lookup / verify	timestamp-readonly	0	\$0.00	75 cr / \$0.75
INVOICE TOTAL — Report 3 Model A				75	\$0.75	\$0.75

Retail/nonprofit lines remain separate: phone FMV \$1,299.00 + service FMV \$89.70 = tax-credit \$1,388.70; customer TCO \$0.00. Timestamping = **\$0.75** Model A (or \$0.10 Model B).

6. Timestamping invoice — Report 2 fleet rollup (50 devices)

Each of 50 IMEIs is sealed once at minimum. Lifecycle metadata may follow Model A (per-event restamp+meta) or Model B (seal once + meta append). Timestamping layer only.

Fleet scenario	Assumption	Credits	USD
B — Digests-only first seal × 50	One timestamp @ 10 per IMEI; metadata via ingest; reads @ 0	500	\$5.00
B+ — First seal with metadata × 50	One timestamp-metadata @ 15 per IMEI at manufacture	750	\$7.50
A — Full lifecycle stamp+meta	42 devices × 5 events (75 cr) + 8 recycled × 6 events (90 cr)	3870	\$38.70
On-demand Carfax reads / verify	timestamp-readonly / timestamp-verify	0	\$0.00

6.1 Fleet Model A — running total by event stage

Stage	Devices	Unit cr	Stage cr	Stage USD	Running total
Manufactured (first seal+meta)	50	15	750	\$7.50	750 / \$7.50
Shipped to warehouse (restamp+meta)	50	15	750	\$7.50	1500 / \$15.00
Sold / issued (restamp+meta)	50	15	750	\$7.50	2250 / \$22.50
Activated (restamp+meta)	50	15	750	\$7.50	3000 / \$30.00
Service billed prepaid (restamp+meta)	50	15	750	\$7.50	3750 / \$37.50
Returned for recycling (restamp+meta)	8	15	120	\$1.20	3870 / \$38.70
FLEET INVOICE TOTAL — Model A			3870	\$38.70	\$38.70

7. Summary of total timestamping costs

Verae stamp credits only (api/individual). Retail handset/service and WWM tax-credit FMV are excluded.

Invoice scope	Model	Credits	USD	Notes
Report 1 — IMEI 356938032484611	A stamp+meta (6 events)	90	\$0.90	Full Carfax stamped
Report 1 — same device	B lab as-built	10	\$0.10	1× digests-only seal
Report 3 — IMEI 359291081006720	A stamp+meta (5 events)	75	\$0.75	WWM beneficiary story
Report 3 — same device	B lab-style	10	\$0.10	1× digests-only seal
Report 2 — fleet 50	B digests-only seals	500	\$5.00	50 × timestamp @ 10
Report 2 — fleet 50	B+ seal with metadata	750	\$7.50	50 × timestamp-metadata @ 15
Report 2 — fleet 50	A full lifecycle stamp+meta	3870	\$38.70	5 or 6 events / device
History lookups / verify (all)	readonly / verify	0	\$0.00	No chain write
SAMPLE PACK — recommended commercial total	Fleet Model A	3870	\$38.70	If every fleet lifecycle event is stamped with metadata

7.1 Combined view — device retail vs timestamping

Layer	Report 1	Report 3 (WWM)	Report 2 fleet
Customer / sponsor device+service	\$169.65 charged	\$0 charged · \$1,388.70 FMV credit	\$20,745.74 charged · \$15,315.62 WWM FMV
Verae timestamping Model A	\$0.90	\$0.75	\$38.70
Verae timestamping Model B	\$0.10	\$0.10	\$5.00

8. Report catalog

8.1 Report 1 — Live lab single-device Carfax

File: IMEI-Lifecycle-Carfax.pdf · 9 pages

Live ns1 seal + real meta_history for IMEI 356938032484611 (VeraePhone A1). Prove/verify sealer Seven. Sale \$49.95 + prepaid \$119.70 = \$169.65. Recycled RMA-998271. Stamp: Model A \$0.90; Model B \$0.10. Contents: cover + receipt; timeline with timestamp IDs; billing; per-version metadata JSON; prove/verify appendix.

8.2 Report 2 — Fifty-customer fleet & tax credit

File: IMEI-Fleet-50-Carfax.pdf · 29 pages · fleet50-data.json

50 customers; Oct 2026 unlocked retail phones. Mix: 17 Wounded Warrior Mobile, 11 free phone, 11 free service, 11 standard. Warehouse DIST-LAX-03; recycling RECYCLE-MFG-OR-01 (8). Tax-credit FMV \$15,315.62. Customer TCO charged \$20,745.74. Stamp: Model A \$38.70; Model B \$5.00.

Benefit class	Count	Meaning
Wounded Warrior Mobile	17	Free phone + free prepaid service; FMV for tax credit
Free phone only	11	Handset \$0; customer pays prepaid service
Free service only	11	Customer pays retail handset; service waived
Standard paid	11	Customer pays retail handset + prepaid service

8.3 Report 3 — Single fleet IMEI deep dive

File: IMEI-359291081006720-Carfax.pdf · 5 pages

Eden Miller (cust_050), WWM, Apple iPhone 18 Pro Max. Retail FMV \$1,299 + service FMV \$89.70; customer TCO \$0; tax-credit FMV \$1,388.70. Stamp: Model A \$0.75; Model B \$0.10. Same Carfax shape as Report 1 with nonprofit economics.

9. How the three reports relate

Dimension	Report 1	Report 2	Report 3
Scope	1 phone	50 phones	1 from fleet
Live chain seal	Yes (ns1)	Sample	Sample
Paid customer	Yes (\$169.65)	Mixed	No (\$0)
Nonprofit / tax credit	No	17 / \$15,315.62	\$1,388.70
Recycling	Yes (1)	Yes (8)	No
Stamp Model A	\$0.90	\$38.70	\$0.75
Stamp Model B	\$0.10	\$5.00	\$0.10
Pages	9	29	5

10. Artifact index

Artifact	Path
This combined summary	docs/imei-lifecycle/Verae-IMEI-Reports-Summary.pdf
Report 1 PDF	docs/imei-lifecycle/IMEI-Lifecycle-Carfax.pdf
Report 2 PDF	docs/imei-lifecycle/IMEI-Fleet-50-Carfax.pdf
Report 2 data	docs/imei-lifecycle/fleet50-data.json
Report 3 PDF	docs/imei-lifecycle/IMEI-359291081006720-Carfax.pdf
Report 3 data	docs/imei-lifecycle/IMEI-359291081006720-data.json
ns1 copies	~/verae-perf-corpus/experiments/imei-lifecycle/

11. Disclaimer

Lab demonstration. Stamp credits reflect the api/individual stamp-billing quote engine and are illustrative invoices for this sample pack — not production customer invoices. Report 1 includes a live ns1 seal (Model B as-built). Reports 2–3 use sample data with Oct 2026 retail references. Retail and WWM FMV lines are separate from Verae stamp SKUs. Nonprofit name as specified: Wounded Warrior Mobile. Not audited financials or filed tax forms.

Verae · Timestamped truth for physical assets
Document generated 2026-10-20T09:23:31Z