



CASE STUDY

How a Tier-1 Brake Manufacturer Reduced Warranty Costs by 15% in 90 Days

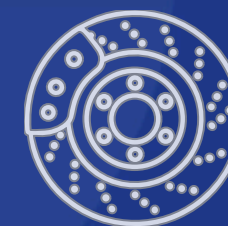
A definitive look at how item-level traceability eliminated counterfeit fraud and protected margins in the automotive supply chain.



INDUSTRY
Automotive Components
Braking Systems




REGION
India
Nationwide Network



15%

Reduction in Warranty
Costs

 Achieved in **90 Days**

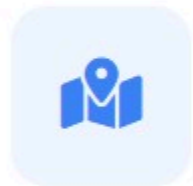
Company Overview & Context

CLIENT PROFILE



Tier-1 Manufacturer

A leading brake systems supplier serving multiple global OEMs and a vast aftermarket network.



Region: India

Operating in a high-complexity market with a fragmented distribution chain and thousands of dealer touchpoints.



Scale & Scope

High-volume production environment where manual serial checking is operationally impossible.

The Strategic Context

📈 TREND OBSERVED

**Rising warranty
payouts quarter-over-
quarter**

✅ QUALITY AUDIT

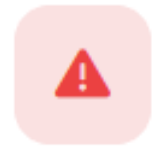
**Stable plant quality
metrics (No defects
found)**

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"We were paying more in warranty claims every month, yet our factory audits showed perfect quality scores. We knew something was wrong in the field, but we couldn't see it."

— Supply Chain Director

Executive Summary

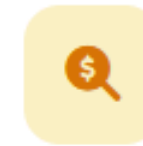


01 THE PROBLEM

Rising Warranty Costs

Warranty payouts increased quarter-over-quarter despite stable quality metrics.

✖ Quality audits showed normal results



02 THE DISCOVERY

Hidden Counterfeits

Audit revealed a critical visibility gap in reverse logistics.

18%

of returned parts were counterfeit.



03 THE SOLUTION

Item-Level Traceability

- ✓ Unique digital identity per part
- ✓ Dealer-level verification
- ✓ No workflow disruption



04 THE RESULT

90-Day Impact

-15%

Warranty payouts

Rising Warranty Costs, No Clear Root Cause

The Worrying Trend

Leadership noticed warranty payouts increasing quarter-over-quarter despite internal data showing stable production quality.

Operational Reality



Paper-Based Claims

Warranty validation relied on manual documentation and batch-level checks.



Traceability Black Hole

Once parts left authorized distribution, visibility stopped completely.



Automatic Approvals

The OEM absorbed costs to avoid disputes, assuming all returns were genuine.

Cost vs. Quality Divergence

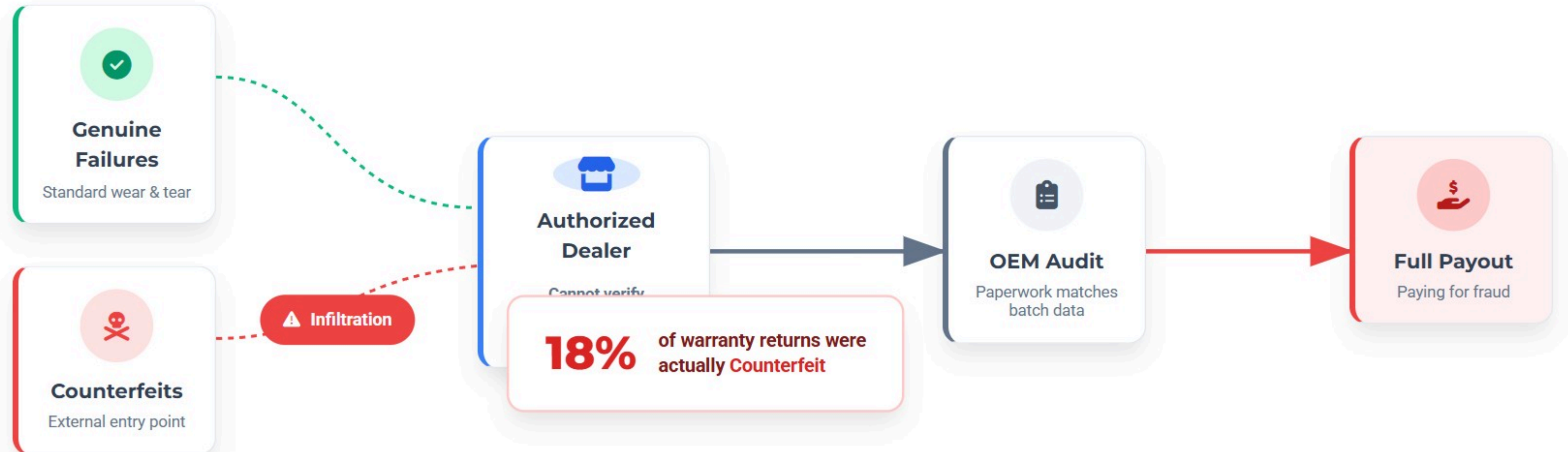
Last 4 Quarters



Fig 1.1: Warranty payouts surging while plant defect rate remains flat.

No Part-Level Identity in the Field

THE WARRANTY RETURN BLIND SPOT



THE KEY INSIGHT

*"If the part couldn't be traced, it was **paid**."*



Without item-level serialization, rejecting claims risked damaging dealer relationships.

ARVO Item-Level Serialization



Unique Digital Identity

Every brake component receives a non-cloneable serialized ID (QR/DataMatrix) linked to production data.



Instant Verification

Dealers scan the part using a standard smartphone app. No specialized scanners required.



Warranty Linking

Claims system automatically checks: "Is this ID genuine?" before allowing submission.

SYSTEM WORKFLOW



Production

ID Created



Dealer Scan

Field Capture



ARVO Verify

Cloud Validation



Warranty Decision

Instant Approval

Approved

Operational Impact:

Zero Friction Deployment



No New Hardware

Utilized existing dealer smartphones



Minimal Training

Intuitive "Scan & Go" interface



No Slowdowns

Verification takes < 2 seconds

Results in 90 Days

FINANCIAL OUTCOME

-15%

Reduction in total warranty payouts achieved within the first quarter.



100%

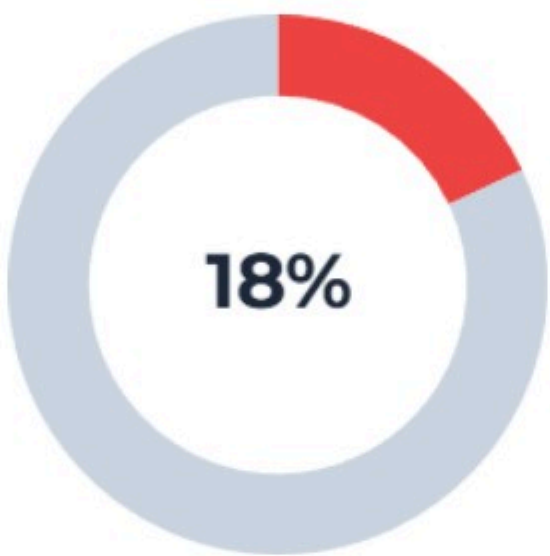
Elimination of payments for counterfeit claims



Positive ROI

Program paid for itself in < 3 months

Operational Outcomes



Warranty Return Composition

Counterfeit (Rejected)	18%
Genuine (Processed)	82%

**Counterfeit parts were identified at dealer level, preventing entry into reverse logistics.*

Experience & Efficiency

CLAIM APPROVAL SPEED



DEALER FEEDBACK

⚡ Zero added friction to workflow

📄 Faster credit for genuine claims





🛡️ Increased trust in OEM process

Why This Worked

THE OLD APPROACH

Reliance on Process

Attempting to control costs through administrative hurdles.

-  Better Paperwork
-  Tighter Policies
-  More Random Audits
-  ~~Real Visibility~~

“





We assume this is genuine.



THE ARVO SOLUTION

Reliance on Visibility

Controlling costs through absolute identity verification.

-  Verifiable Digital Identity
-  Instant Scan Validation
-  Data-Backed Decisions
-  Total Supply Chain Visibility

“

We can prove it.

The Cost of Invisibility

**"If you can't trace it,
you'll end up paying for it
."**



Beyond Quality Issues

Warranty costs don't rise solely because of product failures or manufacturing defects.



Exploiting the Blind Spot

Costs rise because counterfeit and unverified parts exploit visibility gaps in the supply chain.

— PATH FORWARD: MAKE PART-LEVEL IDENTITY THE GATE FOR WARRANTY —

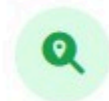
Stop Paying for Failures You Didn't Create

Get Your **ROI** Calculator **Today!**



Quantify Avoidable Spend

Understand exactly how much of your warranty budget is wasted on fraud.



Identify Entry Points

Pinpoint where non-genuine parts are leaking into your reverse logistics flow.



Validate in 90 Days

Run a low-risk pilot on select product lines to prove the ROI.



Download the **ROI Calculator**

Let's analyze your warranty data to uncover hidden cost-saving opportunities.

Download Now!

 Visit us at onearvoventures.com

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