Ruminations, Myths and Unreliable Facts
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Alternative Supply Chain Representation


Counterfeiters
(Circle 8, Bolgia 10)

The 9 Circles of Hell from Dante’s Divine Comedy
Ruminations, Myths and Unreliable Facts

• Only obsolete and hard-to-find parts are counterfeited.

• Counterfeits do not find their way into the supply chain via OEM or CM “excess inventory”.

• Counterfeits do not find their way into the supply chain via authorized distributors.

• Authorized Distributors perform inspection / verification of “returns for convenience” that will detect counterfeits.

• OCMs and distributors know who their customers are and can, therefore, limit the type of customer they support.

• OCMs will provide support to users for purchases from authorized distributors.
Case Study

OCM ➔ Authorized Distributors ➔ OEM or CM
Case Study (continued)

“Returns for Convenience”  
( parts from original shipment )

OCM  
Authorized Distributors  
OEM or CM  

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Case Study (continued)

"Returns for Convenience" (parts NOT from original shipment)

OCM → Authorized Distributors → OEM or CM

OEM or CM → Counterfeiter
Case Study (continued)

Customer ("Consigned Materiel")

Part Distributor

Value Added Service Provider

Contract Manufacturer
Case Study (continued)

Customer
("Consigned Materiel")

Contract
Manufacturer

Part
Distribution

Value Added
Services
Another Scenario

Product (Active, EOL, Excess, WIP, Wafer/Die), and IP

Stock Rotation Accounting Data

Authorized Aftermarket Supplier

Date code expired finished-goods product

Subsequent Demand

Stock Rotation

Authorized Distributors

OEM or CM

OCM
Purchases from Distribution

- Purchases from Authorized Distribution (AD)
- Purchases from Independent Distribution

Case Study (continued)

Purchases from Distribution

- Purchases from Authorized Distribution (AD)
- Purchases from AD consisting of "RMA Returns"
- Purchases from Independent Distribution
More Myths and Unreliable Facts

• Current surface examination methods using aggressive solvents will reveal evidence of resurfacing and remarking.

• Decap is not necessary to reveal counterfeits.

• Simple electrical tests will detect counterfeits.

• Counterfeits can be detected by testing the next higher assembly or system.
Case Study

NO Secondary Coating

FIB Deposited Carbon Layer
650 nm

Sputtered Gold Particles
50 nm

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Case Study (continued)
What me worry?

“If clones are the same as the genuine part, why should I be concerned?” …

1. A “clone” could, in theory, be identical in function and work in the application, but its quality and reliability is unknown.

2. A “clone” may be very close in function, but fail performance parameters that may not be detected until the equipment containing the part is used in the field.

3. A “clone” is a reversed engineered device and, therefore, presents a potential opportunity for its creator to add unwanted features.
Summary – Ruminations, Myths and Unreliable Facts

• Only obsolete and hard-to-find parts are counterfeited.
• Counterfeits do not find their way into the supply chain via OEM or CM “excess inventory”.
• Counterfeits do not find their way into the supply chain via authorized distributors.
• Authorized Distributors perform inspection / verification of “returns for convenience” that will detect counterfeits.
• OCMs and distributors know who their customers are and can, therefore, limit the type of customer they support.
• OCMs will provide support to users for purchases from authorized distributors.
• Current surface examination methods using aggressive solvents will reveal evidence of resurfacing and remarking.
• Decap is not necessary to reveal counterfeits.
• Simple electrical tests will detect counterfeits.
• Counterfeits can be detected by testing the next higher assembly or system.