



The PMA WAR

A Four sided Battle Royale with Three Victors!

*A look into how the OEMs analyze the
impacts due to PMA*

DERS Group Svc LLC

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Managing Member
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About the Instructor

Tracy R. Ourhaan – (818) 620 8444



- Education
 - **BSME - University of Miami**
 - **MBA – Nova Southeastern**
- Patent – 5,192,192 Turbine Engine Airfoil Blade and Vane Cap Cooling
- Principal DERS Group Svc LLC, 2004
 - **FAA DER-T Parts 23, 25 & 33, Chart B & E Full Authority,**
 - Special Functions: Major Alteration; Major Repair; PMA Identity Findings.
 - **30 Years in Aviation**
 - P&W, Honeywell, Parker Hannifin, GE, Gulfstream, Spirit AeroSystems, ITT Aerospace Controls, Zodiac, Rexnord, Timco.
 - Specialties:
 - Engines & Engine Components,
 - Powerplant Installations,
 - Mechanical Systems & Accessories: APU, ECS, ,Combustion, Fuel Controls, Hydraulic & Pneumatic Actuation.
 - Component Repairs: Hot Section, Valves, Pumps, ATS, ACMSStarters, Interior Seating Systems, Flammability & Dynamic Testing.
 - Certification Capabilities: Major Changes to TC, New STCs, ASTCs, TSOs, PMAs, DER Repairs and Alterations, ISO Compliance, PC and RS Establishment, Design, Development, and Test Engineering Services..
 - Business Capabilities: Strategy Creation Surrounding PMA and DER activities, Growth ID, Pricing, for OEMs and Independent Repair Facilities



The Warriors

- Economic Drivers and Reactions
- The 6σ Approach
 - **Define, Measure, Analyze, Innovate, Control**
 - RCCA – Root Cause Corrective Action
 - Five Whys!
 - Measure - The Spares Revenue Stream
 - Analyze - Why the OEMs are so frustrated
 - Innovate/Improve - Psychology of an 18mo. Longevity – Gap Closure
 - Control

The Warriors

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OEMs

General
Electric

Pratt &
Whitney

Rolls Royce

Honeywell

Boeing

Sub-Tier Suppliers

Parker

Eaton

Meggitt

ITT Aerospace

PMA Houses

AAR

Able

Heico

Wencor

ACS

Belac (Chromalloy JV)

Extex

Growth Industries

Jet Parts Engineering

PMA Sales LLC

Seal Dynamics

Timken Aerospace

Airlines

United

Delta

American

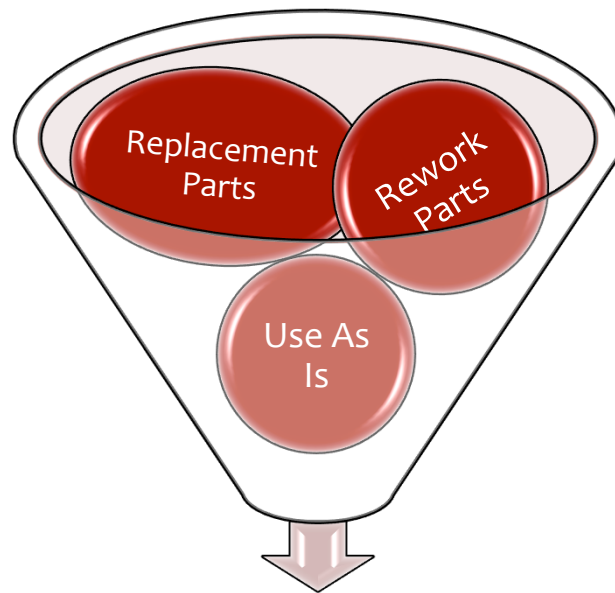
Lufthansa
Technics

Economics of a WAR

- Airlines
 - Threatened with Survival, the Airlines seek to reduce overall MRO costs.
- PMA House
 - Encouraged by the Airlines, the PMA Houses attack the OEMs.
- Sub-Tier Suppliers
 - Encouraged by their Business Model, the Sub-Tiers attack the mother ship while attempting to blocking the PMA Houses.
- OEMs
 - Driven by Business Metrics, the OEMs implement their Strategic Plan.

DEFINE

Root Cause - MRO of a Product



Overhauled Product

Replacement
% of OEM Catalog

Rework Part
% of OEM Catalog

PMA 65%

Sub-Tier 75%

OEM 100%

Major Repair /
Alteration 55%

Minor / Book
Repair 25%



DEFINE Root

Airline Cost = MRO Price
OEM Cost = MRO Cost (parts & labor)
Ind. MRO Price = ~75% of OEM Price

OEM Cost Split = 30% Parts, 70% Labor (Rework & Assy)

- Profit from Parts = >85%
- Profit from Labor = 0%

Ind. MRO Cost Split = 20% Parts, 40% Rework, 40% Labor

- Profit from Parts = 15%
- Profit from Rework = 45%
- Profit from Labor = 28%

+

- OEM Profit from Parts = 97%

+

- PMA Profit from Parts = 77%

Overhauled Product



The OEM Five WHYs

Why are we losing Spare Part Sales?

Well John, it's because PMA Houses are eroding our business.

Why are PMA Houses eroding our business and attacking us?

Well John, it is because the Airlines are not happy with only one option for serviceable parts and don't understand that we have to charge this much because OUR Customers demand that we sell for less than our cost.

Why don't Airlines just ask us to reduce our prices for Spare Parts, don't they understand we are their friends?

Come-on John, be serious. It's because they figured out that competition is the only way we will pay attention and lower our prices.

Why don't we lower our Prices?

Really? Really? You don't know why? Because if we do that, we can't keep our jobs and it would require us to rewrite our entire Bible on how to continuously ~~Screw the Customer~~ Grow our Business Profitably.

So, why don't we Analyze the Data and Develop Strategies to Circumvent the Alternate Source Suppliers, Gain back Control of our Business and Return to our Fat, Dumb and Happy, Old Way of Life?

Good thinking John, good thinking!

Measure The Spares Revenue Stream

OEM Sale via MRO

- Profit from Parts = >85%
- Profit from Labor = 0%
- **Gross Profit = 50% (\$50,000)**
- +
- OEM Profit from Parts = 97%
(2/3 of the 20%) (**\$7,000**)

- +
- PMA Profit from Parts = 77%
(1/3 of the 20%) (**\$2,500**)

Independent MRO

- Profit from Parts = 15%
- Profit from Rework = 45%
- Profit from Labor = 28%
- **Gross Profit = 32% (\$24,000)**
- +
- OEM Profit from Parts = 97%
(2/3 of the 20%) (**\$7,000**)
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- PMA Profit from Parts = 77%
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Airlines Perceived Benefit = \$25,000.

OEM Perceived Loss in Opportunity = \$100,000

PMA Perceived Benefit = \$3,400

Measure The Spares Revenue Stream

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Independent MRO

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Airlines Actual Benefit = \$25,000.

OEM Actual Loss = \$93K Rev. \$43K GM (46% GM)

PMA Actual Benefit = \$3,400 Rev. \$2,600 GM

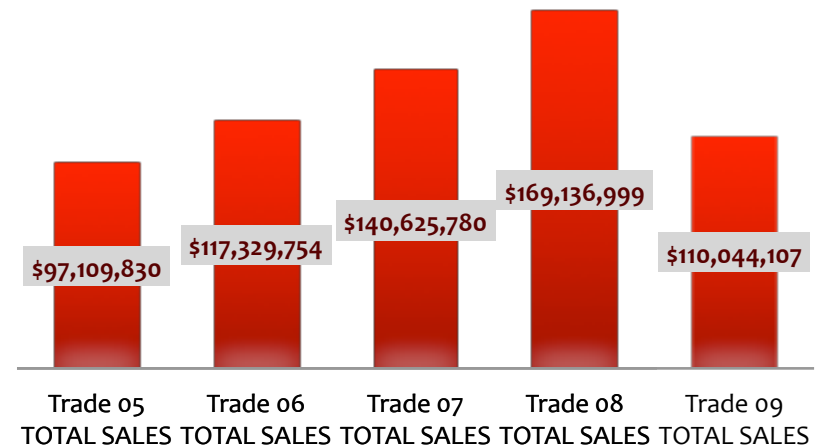
So what happens when a PMA hits the streets?

Analyze

Why the OEMs are so frustrated

- Corporate initiatives drive YoY metrics for increasing spares revenues and margins.
- MRO is seen as a necessary evil and treated as a Cost Center at less than acceptable margins. (Bastard step child)
- Institute Clueless Strategy #1 for Gap Closure.
- Can't Win for losing!

OEM Revenues all parts



It's time for a Quarter End Sale!

Discount! Discount! But Wait....

“We don't Discount our Parts”



So what happens when a PMA hits the streets?

Analyze Why the OEMs are so frustrated

- Corporate for increased margins.
- MRO is seen as acceptable
- Institute Closure.
- Can't Win for losing

15% of OEM Sales are from End Units

Based on \$150M OEM Spare Parts Sales

- 1% of the Part Numbers make up 50% of OEM Sales.
- 2% of the Part Numbers make up 70% of OEM Sales.
- <6% of the Part Numbers make up 85% of OEM Sales.

The OEMs are Vulnerable, but Prevented from Reacting to Threats Challenges due to Cultural Behaviors.

It's time for a Quarter End Sale!

Discount! Discount! But Wait....

“We don't Discount our Parts”



Innovate/Improve Psychology of an 18mo. Longevity – Gap Closure

- Strategic Pricing (Core Process/Market Basket) + \$22M
- Forward Stocking / Storefront – 8 x \$2M + \$16M
- Pipeline of Product Improvement + \$12M
- PBH 2 x \$6M ea. + \$12M
- Fire Sale - Excess and Obsolete + \$8M
- LTA +\$40M over 5 years + \$8M
- RWN @ Rework Price Campaign + \$4.5M
- Bundling/NHA + \$2M
- IP Protection – minus \$1M
- Strategic Layoff – 20/40/60 Plan



Size of Gap:

\$70M to par + 8% YoY = \$85M

Opportunities to close the Gap:
\$83.5M

S4&T!, I need a **S T R E T C H** Goal.

I've Got It! I'll sell off my Oldest and Most Lucrative Product Line to the Competition and make the numbers look like it's a Great Deal for the Company.

- RWN @ Rework Price Campaign + \$4.5M
- Bundling/NHA + \$2M
- IP Protection – minus \$1M
- Strategic Layoff – 20/40/60 Plan



Size of Gap:
 $\$70\text{M to par} + 8\% \text{ YoY} = \85M

Opportunities to close the Gap:
 $\$83.5\text{M}$

S4&T!, I need a S T R E T C H Goal.

PL Target Sell Price: $\$150\text{M}$

Value on Books: $\$0$

10 year Projected Value shown to Management:
 $\$200\text{M}$

Actual value over the next 10 years $\$700\text{M}$

Make the Year Sale: December 28th for $\$82\text{M}$



Size of Gap:

\$70M to par

Making my Numbers for the Year:

Bonus \$50,000

Selling my Company Down the River
w/o a Paddle:

Promotion

Forgetting to include the fact that
after the PL Sale, MRO has to Buy
Spare Parts to Repair those Products
under Contract at Full Catalog Price
from the Competitor:

Priceless

10 year Project

Actual value over 700M

Make the Year Sale: December 28th for \$82M

Control

The Cows have Left the Barn!

