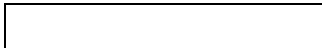




*Industry dynamics in the global PMA parts  
and aero-engine repairs business*

**By: Jim Miccio, Managing Director-Engineering,**

**United Services, Division of United Airlines**



# Historical Perspective

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- Market Competition
- Impact of Deregulation
- Low cost airlines

# A Different Formula

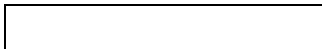
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- Airline Business Models Changed
- New airline market niche
- Dynamics to stay competitive

# PMA Parts Are Changing MRO Industry

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- PMA parts are cost effective
- Safe alternative part source to Type Certificate Holder (TC) and Original Equipment Manufacturer (OEM) parts
- Offer choices for the Airlines, Customers and MRO stations



# Cost Control

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- Financial pressures on industry today have driven airlines world wide to reduce maintenance costs
- Engine maintenance can be more than 50% of the overall aircraft maintenance costs
- Global leverage to limit price increases

# Cost Control

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- PMA Acceptance in the Industry
- Worldwide market outlook for PMA parts
- DER repairs support the new business models

# United Services Implements LEAN

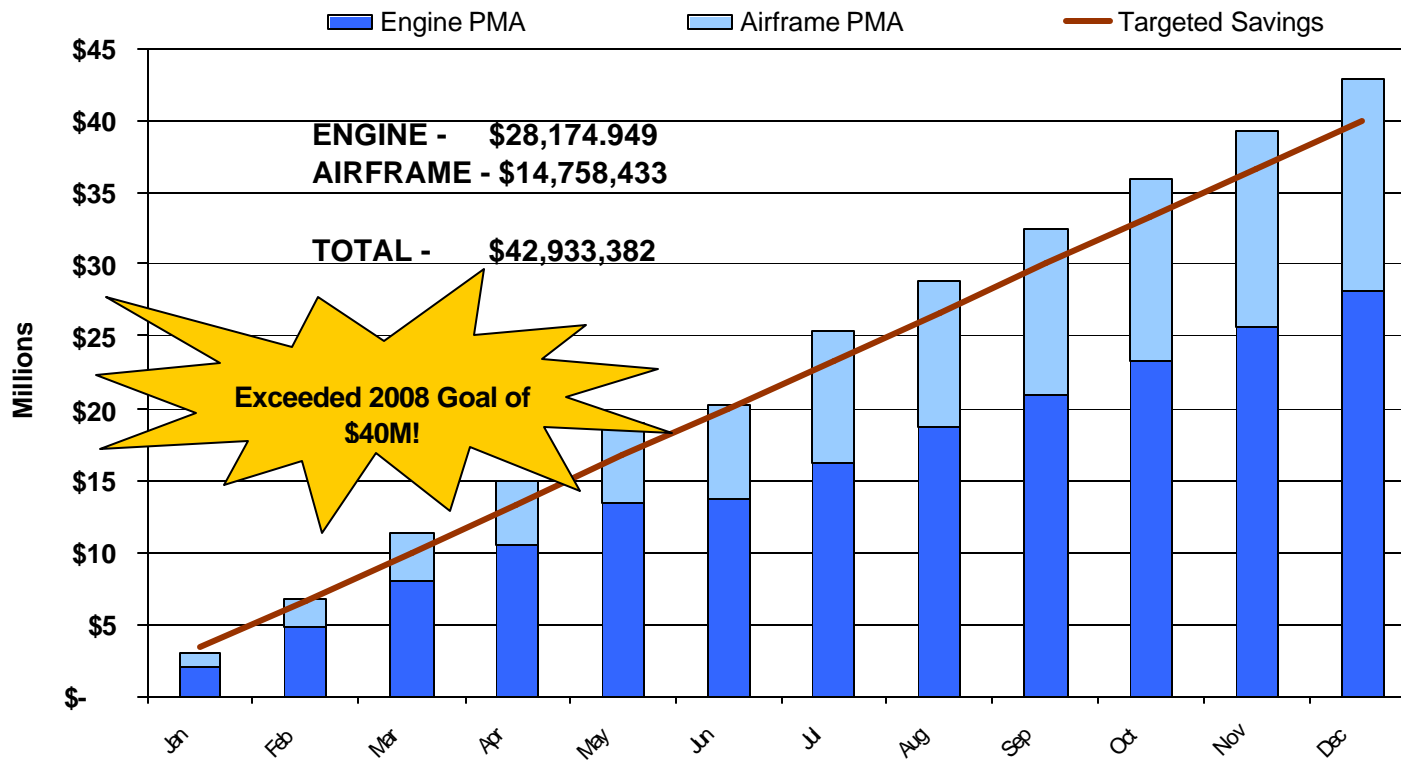
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In November 2006, United Services created a Lean cell by applying and deploying Lean principles, concepts and methods

- PMA approval cycle time was reduced by 90%
- United Services' PMA Lean cell is mining future savings opportunities through next higher assemblies and customer requests

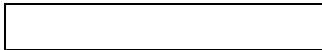
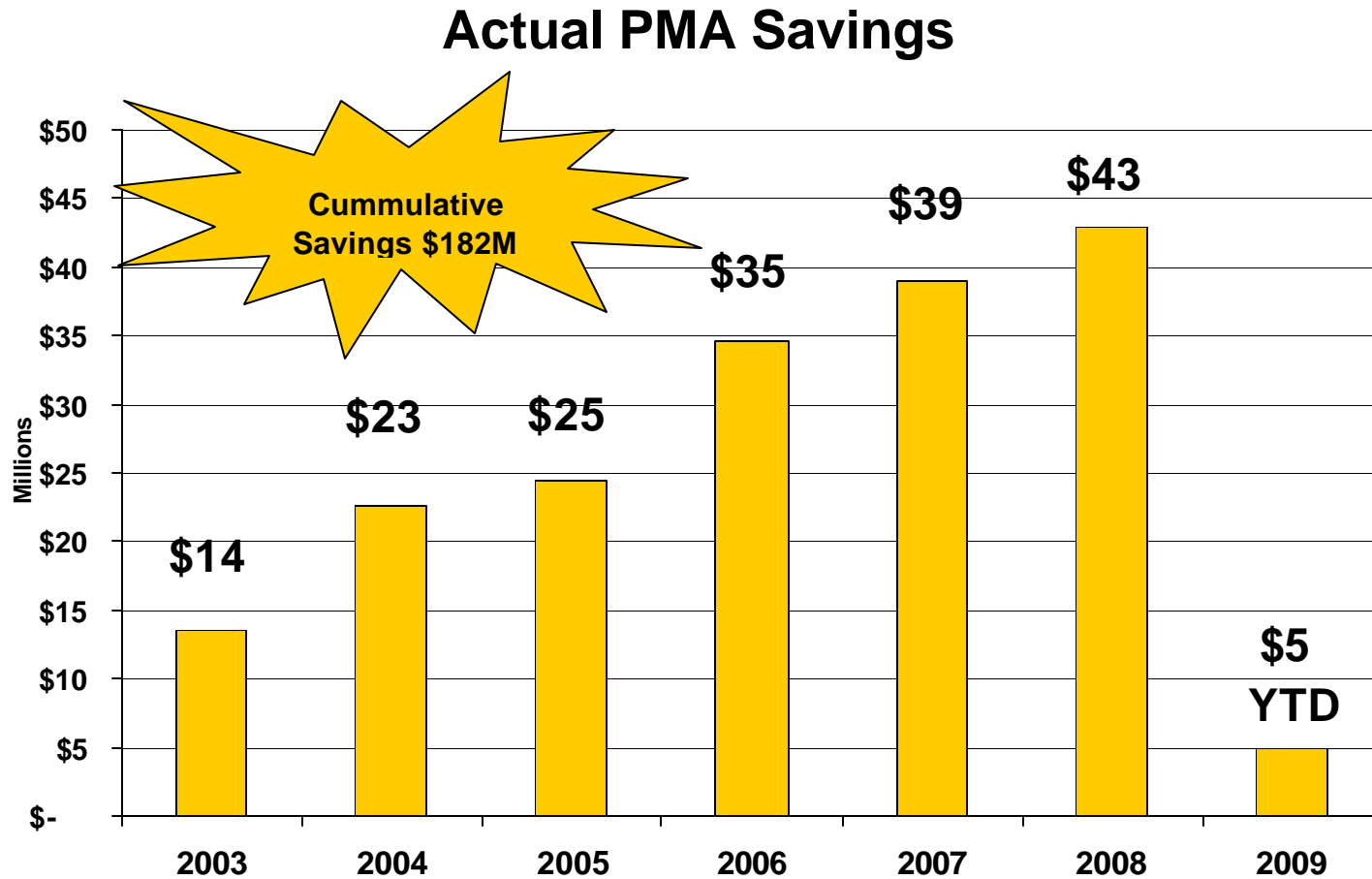
# 2008 PMA Savings

## PMA Actual Savings (Includes previous and 2008 approved parts)





# PMA Savings Timeline



# Conclusion

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- United Services embraces PMAs as part of its business strategy
- Acceptance of PMA parts is growing worldwide.
- United Services looks forward to working with more PMA vendors

Thank You

