



Engineering, Operations & Technology
Boeing Research & Technology
Product Standards Office

Research & Technology

Similar Prices for Similar Parts

A Case Study at Boeing

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Do You Want to Save Money on Parts the Easy Way?

- You can save a lot of money on what you spend on duplicate or similar parts



- Without renumbering or cross-referencing everything in your catalog



- By leveraging your spending power in the marketplace



Boeing has Grown Through Merger and Acquisition

- Many products have very long lives
- Some standards created 70 years ago are still being used on production programs today



The World's Largest Private Collection of Part Standards

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Product Standards Office

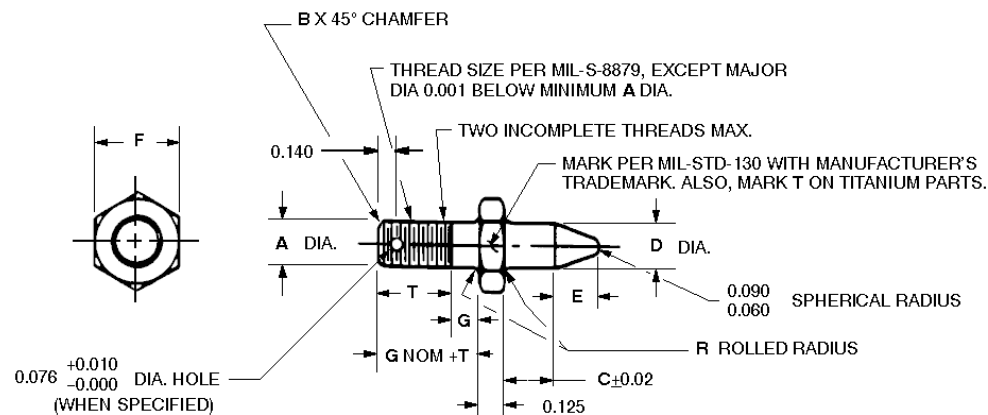
• Boeing	11,000
• McDonnell Aircraft	7,500
• Douglas Aircraft	15,500
• MD Astronautics	2,600
• Vertol Helicopter	2,500
• Hughes Helicopter	1,400
• Hughes Satellite	6,000
• <u>Autonetics</u>	<u>46,500</u>
• Total	93,000



- Plus Rockwell and North American Aircraft programs
- Plus all the military and industry part standards
- About 2,000,000 discrete procured part numbers

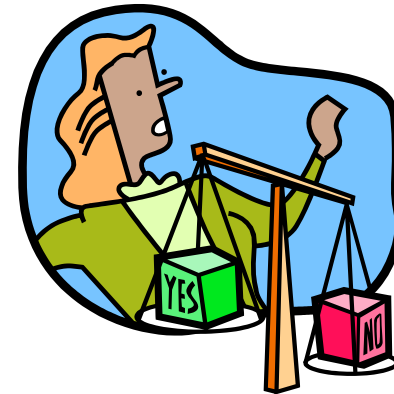
Duplicate Examples

- 175 different part numbers for 1/4" flat washers
- 63 part numbers for a particular configuration of a circular connector receptacle
- 500 part numbers for 1000 Ohm wirewound resistors
- 3300 flat steel washer part numbers used from 112 part standards
- We have four different specs for this part



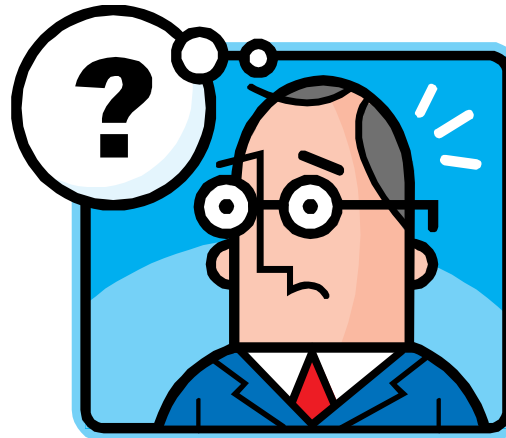
You Just Can't Eliminate the Inherited Duplication

- **We know there are duplicates but we can't change the part numbers**
- **Differences in spec requirements**
- **Differences in qualified sources**
- **Cannot mix inventories**
- **Cannot put parts qualified to one spec on an aircraft requiring parts qualified to another spec**
- **Customer impact and cost in all the change orders eats away the savings**



Looking at our Parts Purchasing from a Higher Level

- **Different divisions of the company negotiating their own prices with different suppliers**
- **Different divisions competing against each other for preference and priority at the same suppliers**
- **No attempt to leverage what other buyers in Boeing were trying to do**
- **We were still several different companies**



Strategic Supplier Management

- **Organize the supply base by commodity**
- **Eliminate marginal and weak performers and focus on the best in class**
- **Analyze our procurement by commodity at the enterprise level**
- **Five year forecasts**
- **Negotiate exclusive pricing agreements for 5 years**
- **Local buyers place purchase orders against the corporate pricing agreement**

- **By itself, this strategy reduced confusion, cut transaction costs for us and our suppliers, and reduced prices due to competition for large volume agreements**



Similar Prices for Similar Parts

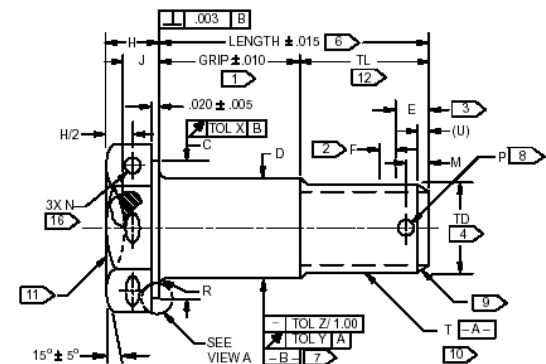
- **A lot of prices were bid on historical prices paid which included small lot set-up fees and small quantity hassle premiums**
- **Teams of engineers were brought in to analyze similarity in purchase parts**
- **The engineers confirmed cases where some physical difference could drive higher costs and cases where the parts were so similar that the prices should reflect that similarity**



Real Savings

- Over the history of the program, savings have been realized in the range of 5% to 10% of SOW value
- Since 2002 we have seen a 15:1 ROI on the cost of managing parts suppliers this way
- Just paying less for the same parts we were going to buy anyway

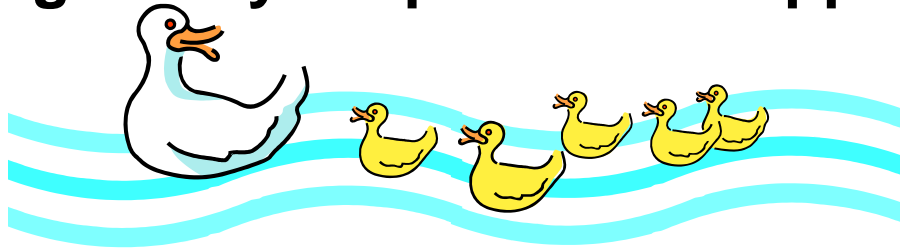
- This fastener is similar to an NAS
- We were paying more than \$20
- Now we pay less than \$2
- And we need more than 4500 pieces



- All savings have been validated by Corporate Audit

Recipe for Savings

- **Organize your parts and suppliers by commodity**



- **Exchange exclusive long term purchasing agreements for best possible pricing**



- **Have engineering review any anomalies in pricing to support procurement negotiations**

