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## Defense Maintenance Symposium

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# Southwest Airlines – A snapshot of our operations

## Fleet

- 193 Classic 737s
- 357 B737-700s
- Fleet additions in 2012
  - 33 B737-800s
  - 88 AirTran B717s
  - 52 AirTran B737-700s

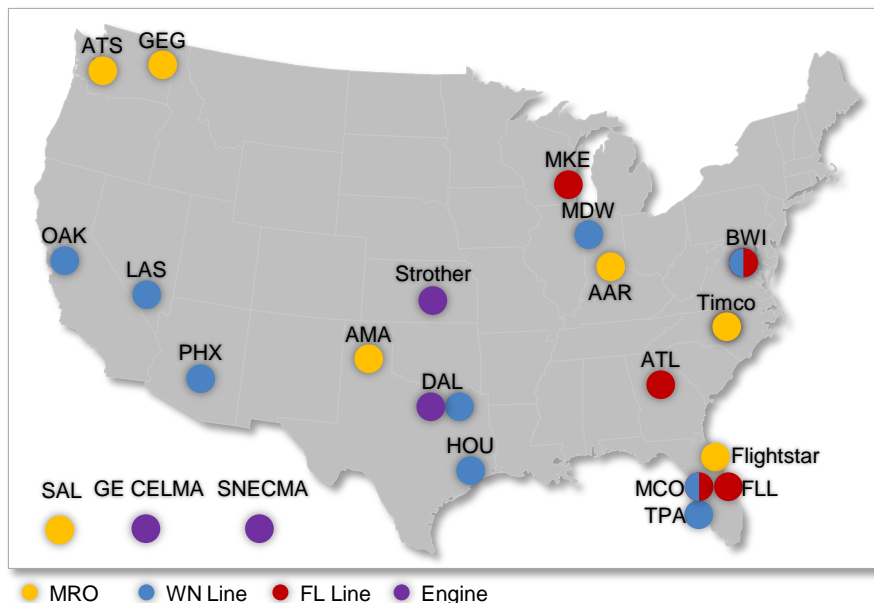
## Service & Network

- Point-to-point network model
- 72 cities served in 37 states
- More than 3,400 flights daily
- Nearly 90 million passengers annually

## Southwest M&E

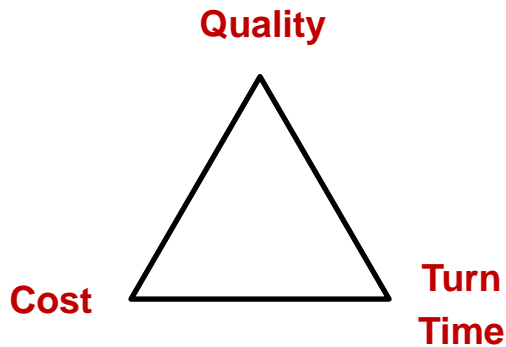
- 3,250 Employees
- 12 line stations across WN/FL combined airline
  - 9 WN, 5 FL (2 common sites)
- 31 lines of heavy airframe maintenance
  - 4 lines (10%) performed internally (heavy and C Check)
- Engine overhaul 100% outsourced; approx 125 removals per year
- Component maintenance almost 100% outsourced; nearly 350 vendors across WN/FL

### Engine and Airframe Maintenance Footprint



# Southwest Airlines Maintenance Overview

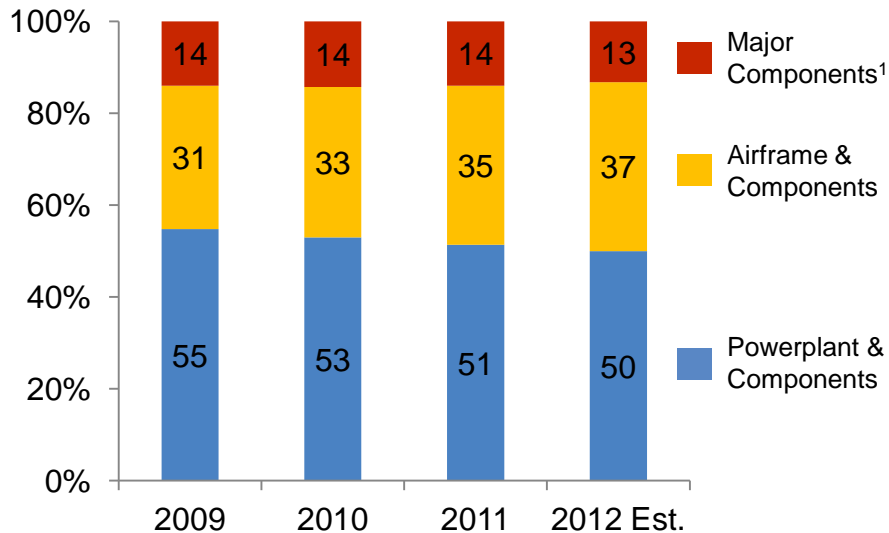
## Southwest Airlines' Maintenance Philosophy



### Guiding Principles

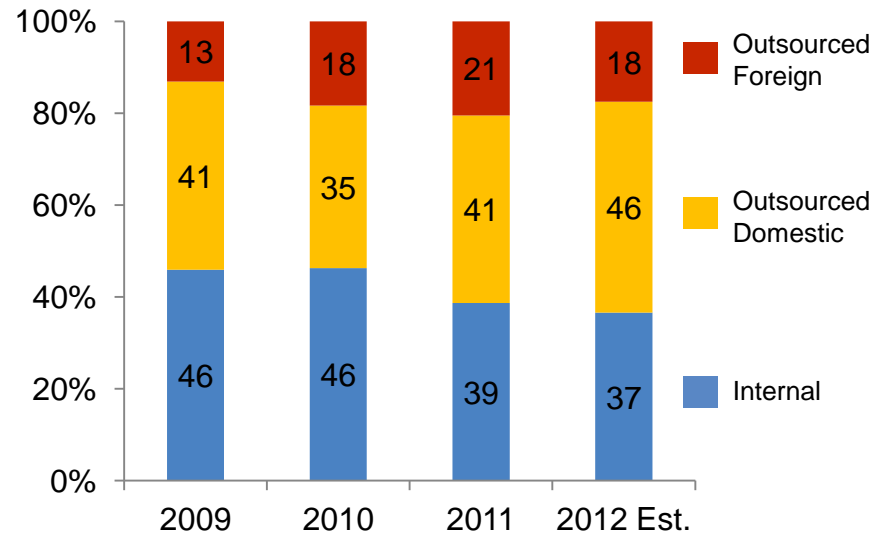
- Focus on line maintenance
- Outsource heavy maintenance
- Lean on suppliers for infrastructure
- Continuous improvement on speed, efficiency, and productivity

## Mx Spend Allocation – By Category



1: Avionics, APU, Wheels, Tires, Brakes, Other

## Mx Spend Allocation – Internal vs. Outsourced



# Maintenance Value Drivers and Selection Criteria

## Powerplant

### Service Requirements

- Turn time guarantees
- Technical support for manufacturer defects or performance issues

### Contractual Considerations

- Typically longer-term contracts (10+ years)
- Cost per hour deals which transfer risk to MRO
- Deal structures which mirror forecasted engine removal volume

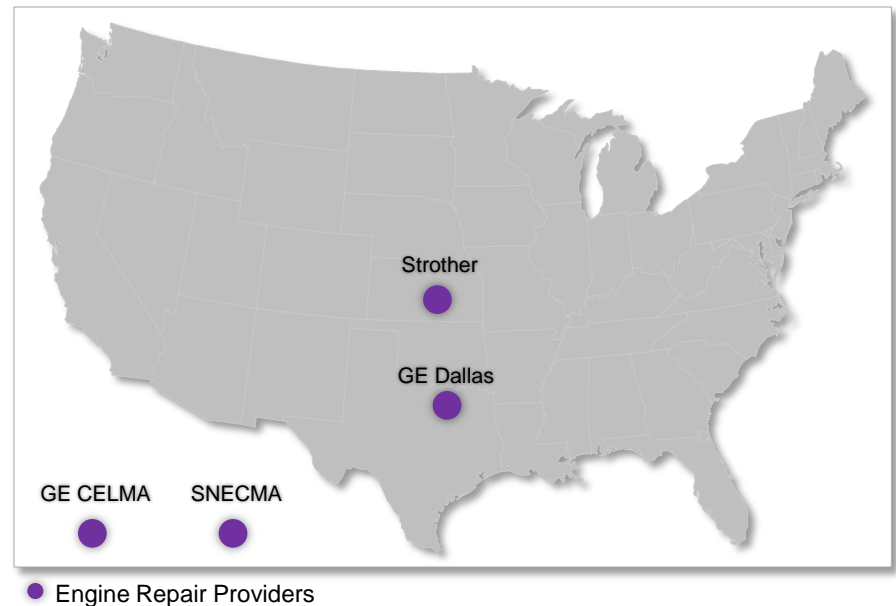
### Value-Added and Other Considerations

- Accessible spares or rotatable exchange pool to ensure serviceable engine availability
- Strong financial backing given program start-up costs
- Supply base diversification for risk mitigation

### Continuous Improvement Focus

- Maximize time on-wing
- Minimum build requirements
- Minimize cost over the cycle

### Powerplant Maintenance Footprint



# Maintenance Value Drivers and Selection Criteria

## Airframe (Heavy Maintenance)

### Service Requirements

- Quality and span time are top priority

### Contractual Considerations

- Pricing competitiveness under total cost perspective
- Typically shorter-term contracts
- “Nose-to-tail” agreements favored by vendors

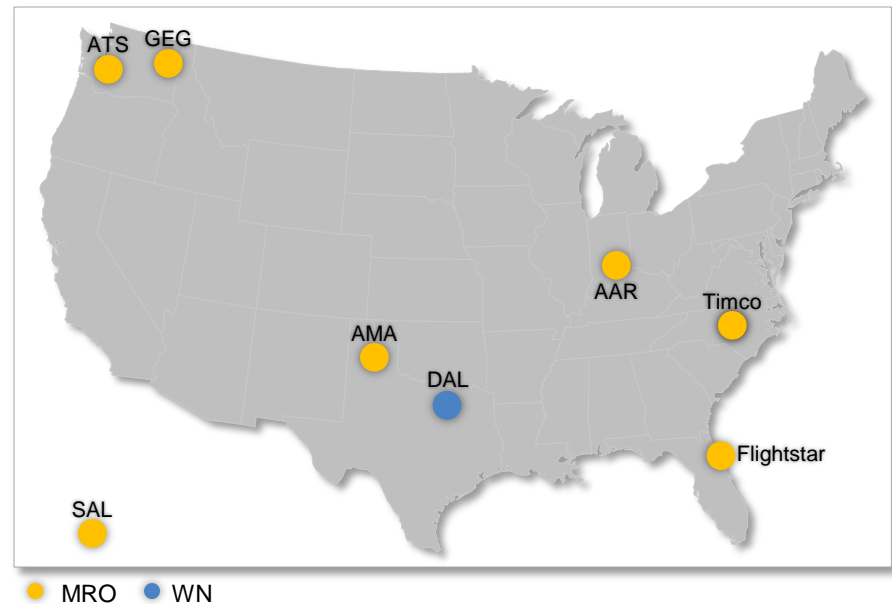
### Value-Added and Other Considerations

- Location (fit with network to minimize ferrying impact)
- Internal labor contract implications
- Safety and compliance performance

### Continuous Improvement Focus

- Decrease overall span time
- Improve parts routing and component TAT during check (reduces wait time/low productivity during check)
- Reduce re-work and improve compliance

### Airframe Heavy Maintenance Footprint



# Maintenance Value Drivers and Selection Criteria

## Component

### Service Requirements

- Turn time
- Reliability

### Contractual Considerations

- Typically shorter-term contracts
- Repair service pricing
- Favor CPH or CPL deal structures to smooth expenses and transfer risk to vendor
- Warranty strength

### Value-Added and Other Considerations

- Rotable exchange or spares pool access

### Continuous Improvement Focus

- Increase MTBR
- Value-added services such as vendor-owned inventory
- Standardization of components

### Component Maintenance Locations

Top 10 Vendors

| Vendor              | Locations  |
|---------------------|--|
| GE                  | Washington, Florida, New Jersey, Massachusetts   |
| Honeywell           | Ohio, Minnesota, Washington, Alabama, Oklahoma, Pennsylvania, Maine, Tennessee, Texas, Arizona, Canada, UK |
| Goodyear            | Arizona, Georgia   |
| BF Goodrich         | Florida, Washington  |
| Triumph Group       | Arkansas, Kansas, Texas, North Carolina, California, Ohio  |
| AAR                 | New York, Florida  |
| Aero Controls, Inc  | Washington   |
| Messier Services    | Arizona  |
| United Technologies | Mexico   |
| Aircraft Tooling    | Texas  |