Bombardier Learjet

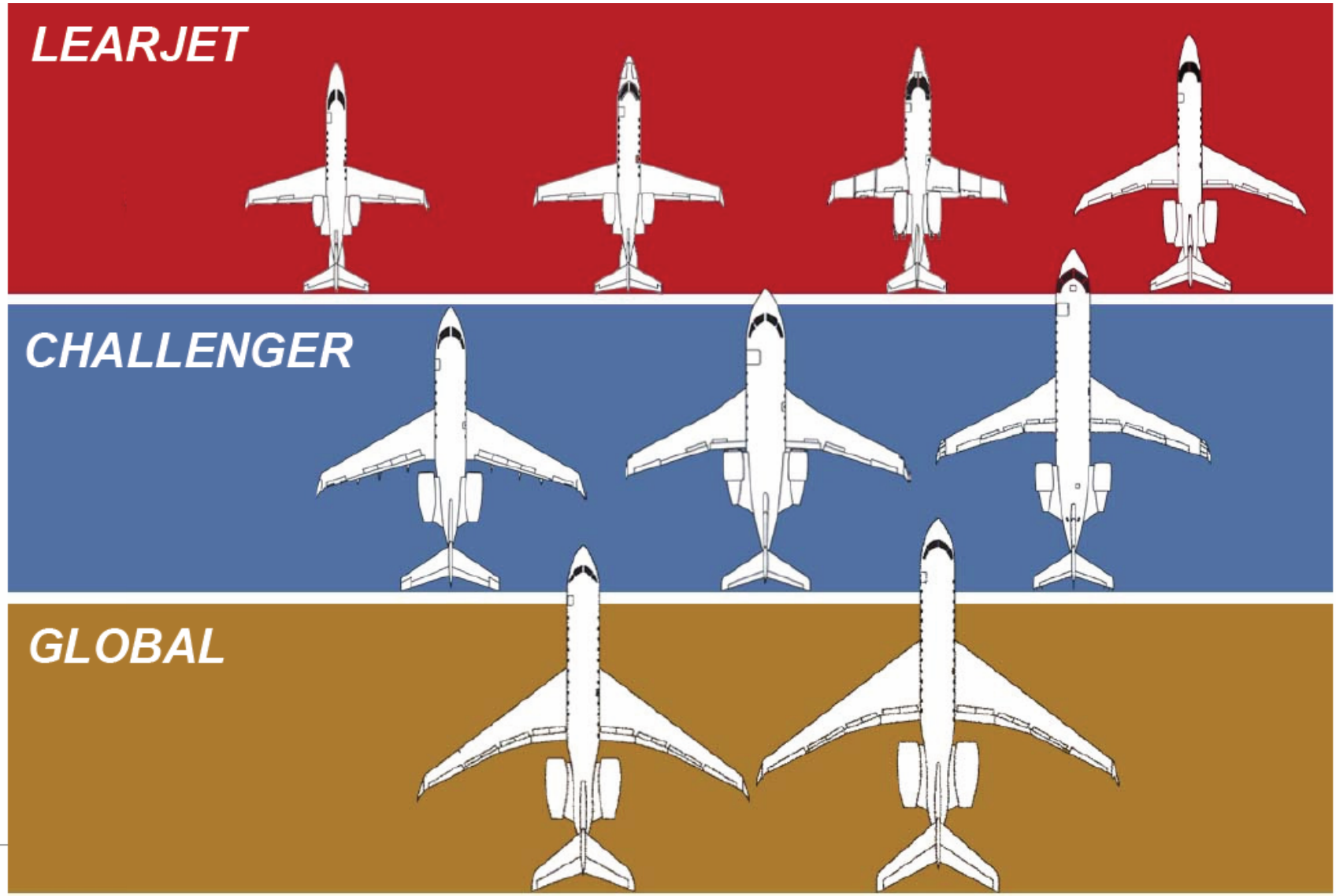
March 4, 2010

BOMBARDIER

Welcome to Bombardier Learjet

BOMBARDIER

Bombardier Business Aircraft has the Industries Broadest Product Portfolio



BOMBARDIER

Bombardier Aerospace U.S. Presence (over 4,060 employees nationwide)

- Bombardier Owned Service Center
- Bombardier Parts Depot
- Bombardier Authorized Service Facilities
- Bombardier Learjet and Service Center

BOMBARDIER

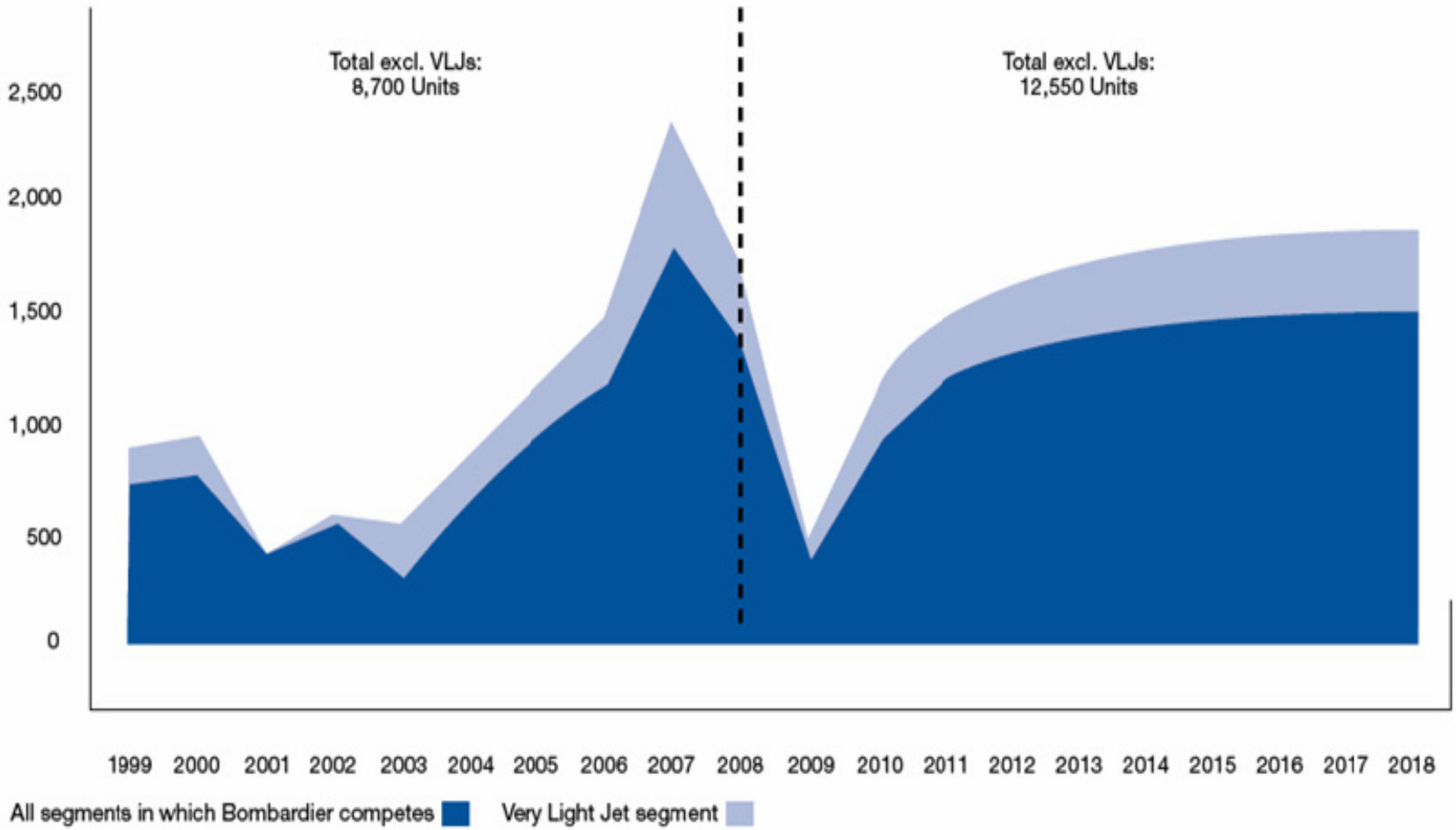
Bombardier Learjet Products and Facility

Learjet 85

- **Wichita, Kansas facility (Over 2000 Employees)**
  - Learjet Operations and HQ
  - Bombardier Aircraft Services (BAS)
  - Bombardier Flight Test Center (BFTC)
  - Learjet Customer Service & Support (CS&S)
  - Bombardier Parts Logistics & CRC (PL)
- **Coming Soon, *LEARJET 85***
  - Final assembly
  - Interior completions
  - Flight testing
  - Customer delivery

Business Jet Industry 10-Year Orders Outlook

Orders (units), calendar years, 1999-2018

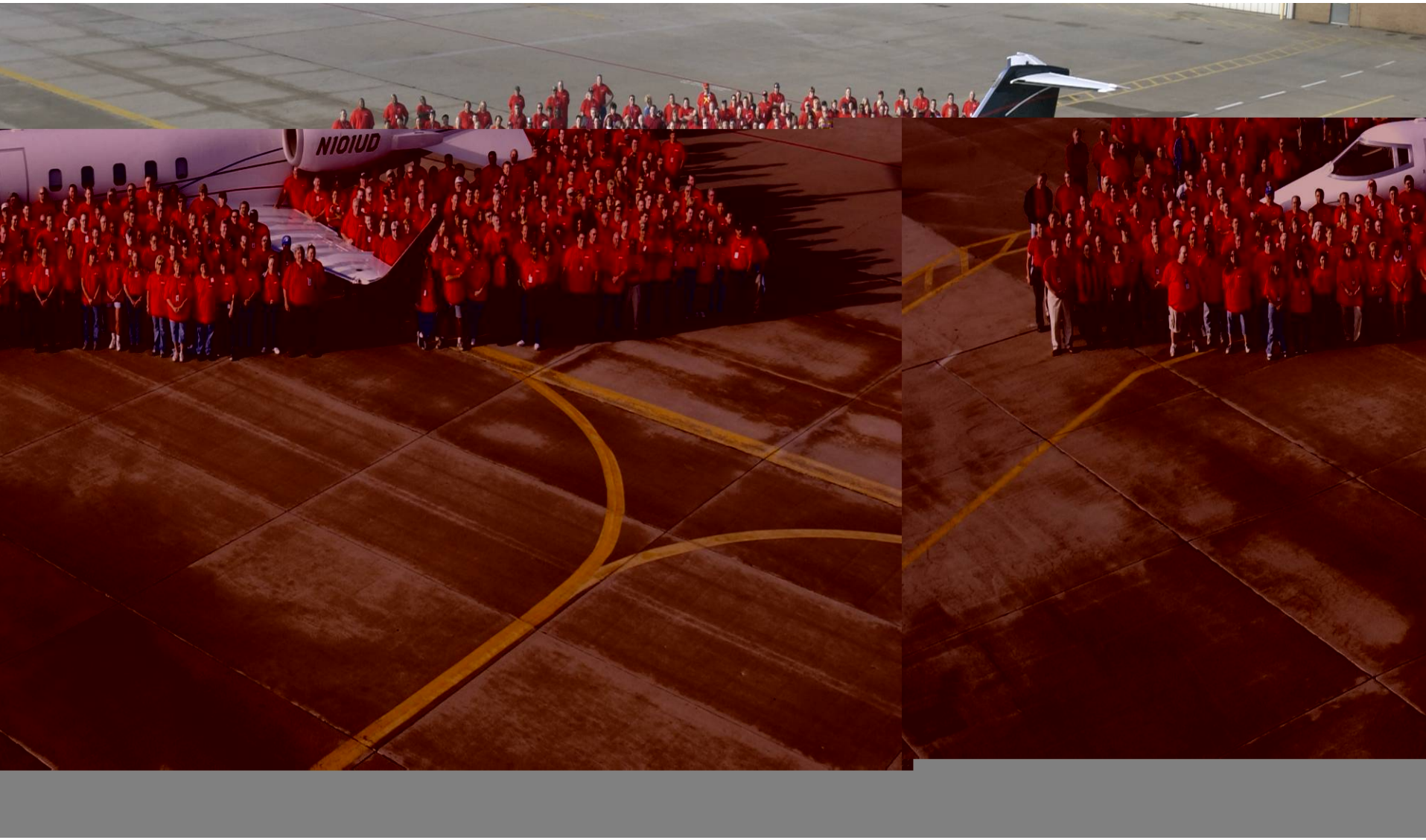


Source: Bombardier Forecasting Model. Very Light Jets include CJ1+, CJ2+, Mustang, Premier I, Phenom 100 and Eclipse 500. Excludes ACJ & BBJ.

BOMBARDIER

PROGRESS
IS
EVERYTHING
BOMBARDIER
LEARJET 85

Learjet Facility – Wichita, Kansas



Learjet (lēr'•jet'), n. **1.** the original fighter-bred business jet. **2.** the world-famous family of aircraft bearing the same name. **3.** long considered the leaders in the light jet category, renowned for their legendary performance (speed, handling, time-to-climb, operating ceiling). Synonymous with: a passion for innovation and perfection; the real deal; pushing the envelope; unconventional style. See **jet set**.

BOMBARDIER
LEARJET

Bombardier Strategic Transformation – Learjet

2009 Annual Accomplishment Award

ALS Presentation

BOMBARDIER

Sustainable Business Performance

On-Time Delivery, ODIs, overtime and attendance

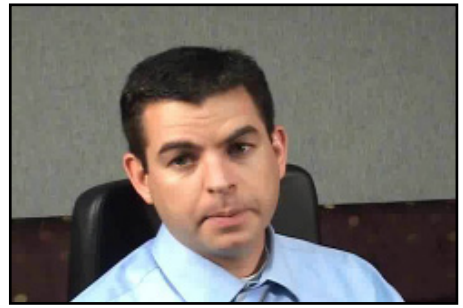
Significant improvements over the last two years

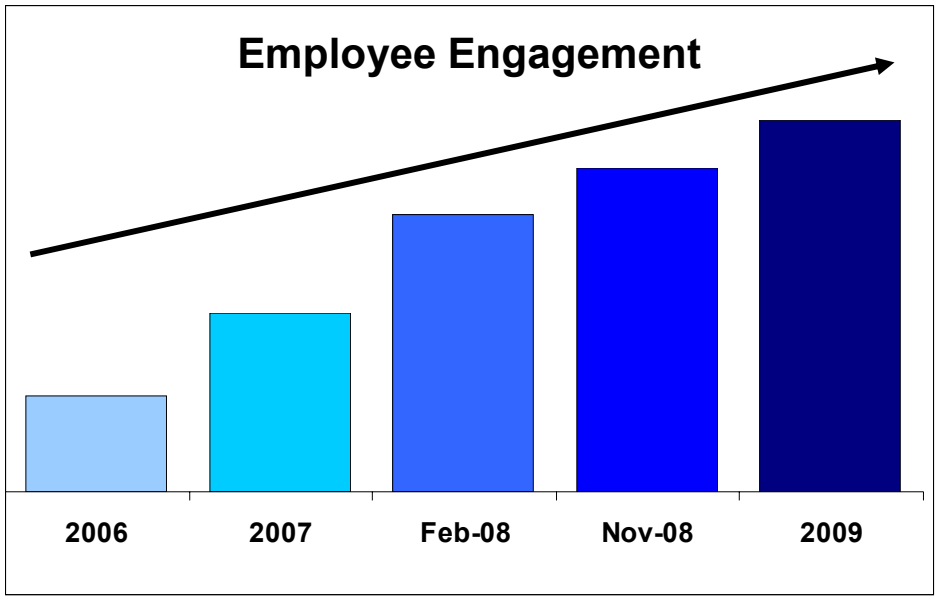
- **On-Time deliveries improved significantly over the last two years reaching over 90% in FY10**
- **Outstanding Delivery Items (ODIs) reduced by 40%**
- **Perfect Customer Survey scores increased by 80%**
- **Overtime hours worked decreased by 85%**
- **Attendance also improved during this period**

BOMBARDIER

Safe and Rewarding Workplace

Engagement and Improved Health & Safety

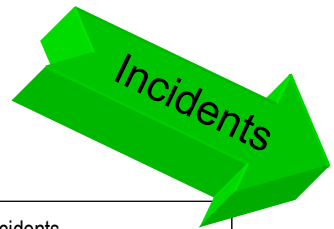


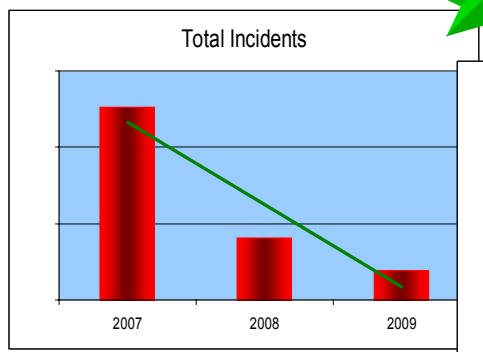


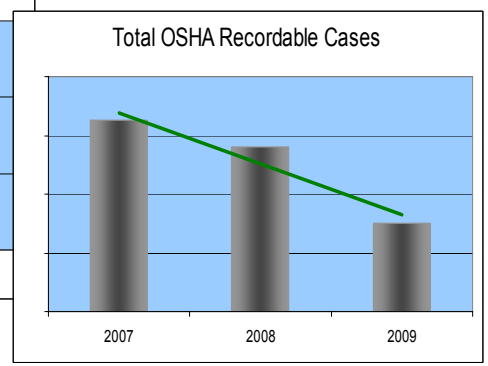
"The proof is here . . . it works! 38% reduction in severity and frequency"

Jean-Francois Dube
Director Health Safety & Environment

Our Employee Engagement has improved over the last four surveys







BOMBARDIER

Amazing Customer Experience

Customer Survey Results

GALLUP

Learjet – 4.27
Two Years Best in Class

"Returning the plant as a Sales Tool"

Ed Thomas
Regional Vice President
US Sales, Central

PROFESSIONAL PILOT 43rd YEAR

Top 4	Overall Avg
1 Gulfstream	8.37
2 Cessna	8.14
3 Dassault	7.76
4 Bombardier	7.61
Learjet	7.71
Challenger & Global	7.53

Every Category Improved

AIN 2009 PRODUCT SUPPORT SURVEY

Overall Average Ratings of Newer and Older Aircraft Combined
(in order of 2009 ratings)

The chart below provides the overall average rating of each manufacturer when the newer and older aircraft scores are combined. This gives OEMs and readers a glimpse of a manufacturer's overall support ratings for all its products. The chart is broken down by jets and turboprops, as the level of service and support can vary widely between the two segments.	Overall Average 2009	Overall Average 2008	Rating Change from '08 to '09	% Change
JETS				
Gulfstream (Astra through G550)	8.04	N/A*	N/A*	N/A*
Boeing (BBJ)	7.80	7.47	0.33	4.47%
Cessna (Citation)	7.65	7.64	0.01	0.17%
Dassault (Falcon)	7.38	7.43	-0.05	-0.69%
Sabreliner	7.27	7.62	-0.35	-4.56%
Bombardier (Learjet)	7.26	6.81	0.45	6.66%
Embraer (Legacy 600)	7.22	6.82	0.40	5.80%
Hawker Beechcraft (Hawker)	7.19	7.01	0.18	2.58%
Bombardier (Challenger)	7.16	6.97	0.19	2.75%
Hawker Beechcraft (Premier I, Diamond, Beechjet 400A, Hawker 400XP)	7.04	7.26	-0.22	-3.09%
Bombardier (Global Express/XRS, Global 5000)	6.73	6.56	0.17	2.62%

Learjet Most Improved

BOMBARDIER

AES Transformation Highlights

Where Our Journey Started

Teams are defining what world class looks like for each function and for key processes.

Working As A Team

Focus on Our Customers

BOMBARDIER

Our Story in Pictures

BOMBARDIER

AES…
Improving the Entire Business Cycle. . .

Annual Accomplishment Award 2009

- ***Internal prestigious award recognizing remarkable efforts resulting in sustained improvements for Employees, Customers & Business***
- ***In line with 3 Business Priorities and desired Leadership Attributes***

In the End It's All About Our Customers!!

BOMBARDIER

77 total projects submitted – Overall award going to Learjet.

Testimonial…

Personal Perspective

"Having traveled to the Learjet factory for 30 years. . . I have never seen it in better condition. Just walking through the factory inspires me, and makes me very proud to be part of the Bombardier Business Aircraft family. And, I can see that same Pride in all the Learjet employees today. . . "

Impact to our Customer

"They are captivated by the story of Learjet's transformation . . . Impressed by the scale of the process, and the speed with which the transformation has occurred. In an industry not necessarily known for pioneering organizational practices, they find themselves taking lessons from Learjet."

United Way Laid Off Worker Center

Extending our Award to the Community

BOMBARDIER

2009 Carefund / United Way Results

	2006	2007	2008	2009 Campaign Goal	2009 Results	2009 Goal Status
Participation	40%	45%	49%	53%	56%	EXCEEDED
Total Contributions	$340,800	$388,300	$400,700	$415,000	$469,500	EXCEEDED

Outstanding Response!

Learjet employees again demonstrate their strength, commitment & leadership within our community through their giving to support those in need

LIVE UNITED

United Way

BOMBARDIER

BOMBARDIER

Learjet 85 Program Overview

March 4, 2010

BOMBARDIER

The *Learjet 85* is Defining the Future of Learjet

The Bombardier Business Aircraft Market Segment

Learjet 85 integrates into a comprehensive product portfolio

BOMBARDIER

Performance Summary

High Speed Cruise (@43,000ft, 31,200 lb cruise weight, ISA)	M0.82	(470 KTAS)
Long Range Cruise (@45,000ft, 31,200 lb cruise weight, ISA)	M0.78	(448 KTAS)
4 Passenger Range (2 crew, LRC with NBAA IFR 100 nm fuel reserves)	3,000 NM	(5,556 km)
Initial Cruise Altitude (SL, ISA, MTOW)	43,000 ft	(13,106 m)
Maximum Cruise Altitude	49,000 ft	(14,935 m)
Takeoff Distance (MTOW, SL, ISA) (± 5%)	4,800 ft	(1,463 m)
Landing Distance (MLW, SL, ISA) (± 5%)	2,700 ft	(823 m)

The *Learjet 85* development is progressing to deliver the superior performance expected from a *Learjet*

BOMBARDIER

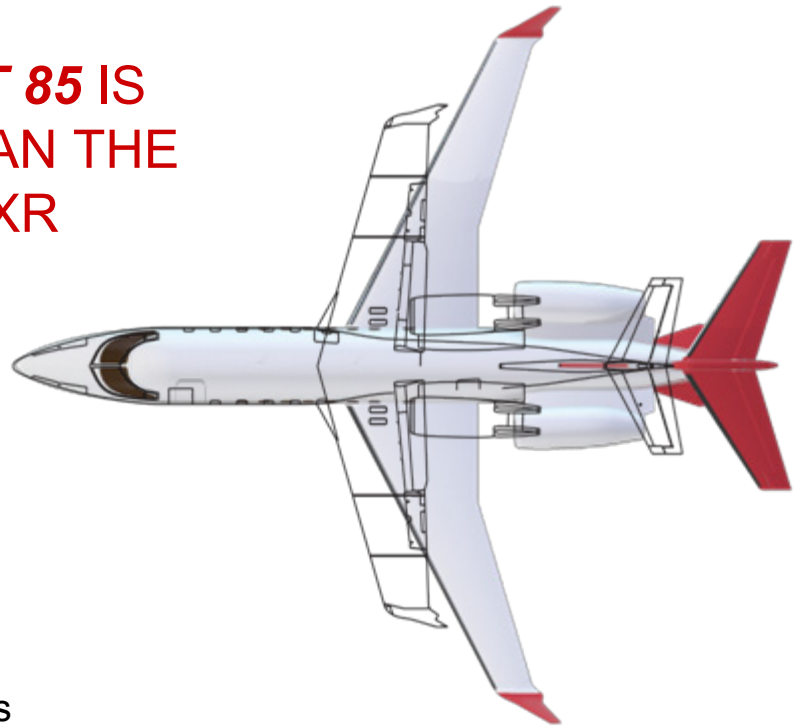
Learjet 85 At A Glance

- First clean sheet *Learjet* design in over a decade
- Composite Part 25 certified business jet
- Legendary performance customers expect from a *Learjet*
- Utilizing new proven technologies
- Currently entering Detail Definition Phase of the program
- 2013 Entry into Service

The largest, fastest and longest range *Learjet* ever

External Comparison to the Learjet 60XR

- THE ***LEARJET 85*** IS 42% LARGER THAN THE LEARJET 60XR



Wingspan
61.48 ft (18.74 m)

MTOW

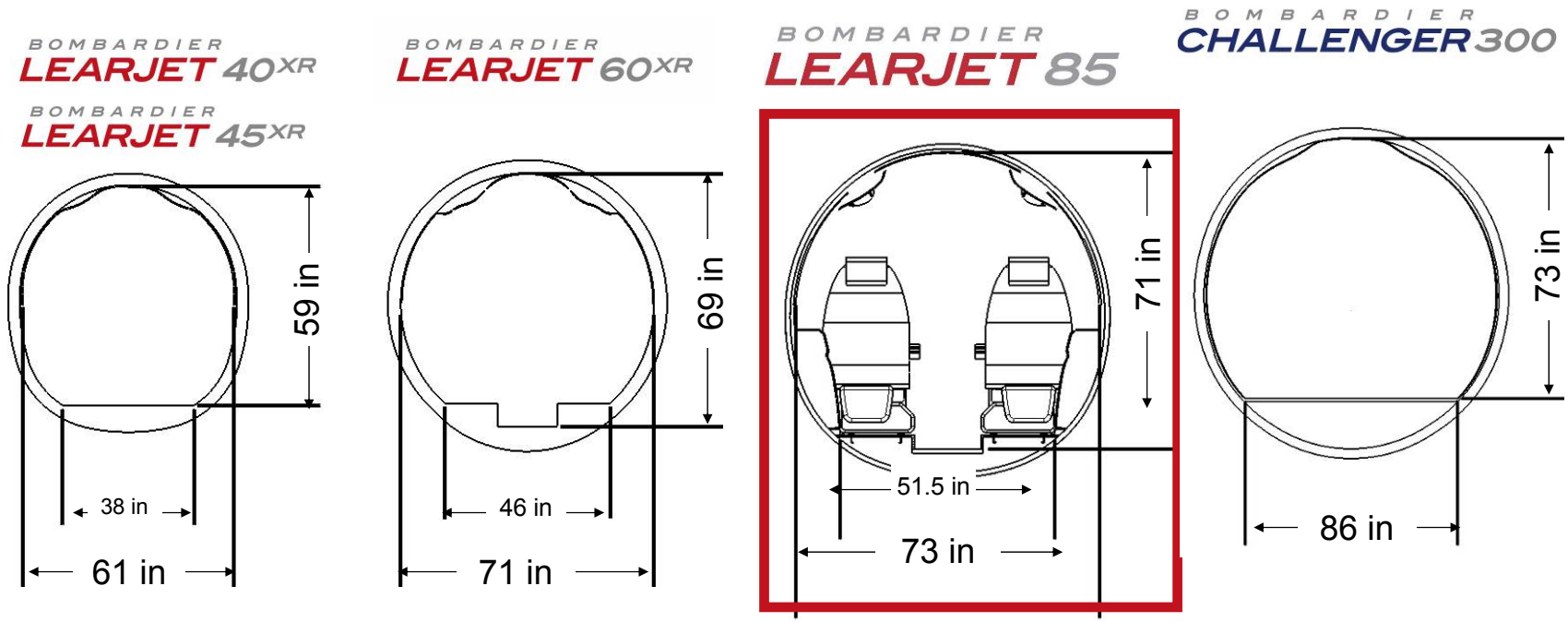
LEARJET 85 = 33,500 lbs

LEARJET 60XR = 23,500 lbs

Length
68.15 ft (20.77 m)

BOMBARDIER

Bombardier Product Line Cross Section Comparison



- THE ***LEARJET 85*** FITS WELL WITHIN THE BOMBARDIER BUSINESS AIRCRAFT PORTFOLIO

Program Progress Summary

- ✓ The program is exiting the Joint Definition Phase and is 90% entered into Detail Definition Phase
- ✓ Completed 3 out of 6 Technology Readiness Phases to identify and prove out our material and manufacturing process
- ✓ Systems design, installation & integration on target
- ✓ Operations planning underway for factory readiness in Wichita and Mexico.
  - ✓ Mexico currently fabricating prototype composite components
  - ✓ Building construction underway
- ✓ We have partnered with NIAR for structural and material testing
- ✓ Actively engaging customers throughout the design process, robust communication plan for the media & suppliers

Program is progressing to plan

BOMBARDIER

Significant Program Milestones

2009

2013

JDP Exit

Preliminary Design Review

Technology Readiness

Structural Design Validation

Critical Design Review

First Flight

FAA & EASA Certification

First Customer Deliveries

49,000’

40,000’

30,000’

20,000’

10,000’

BOMBARDIER

Learjet 85 Mockup Tour

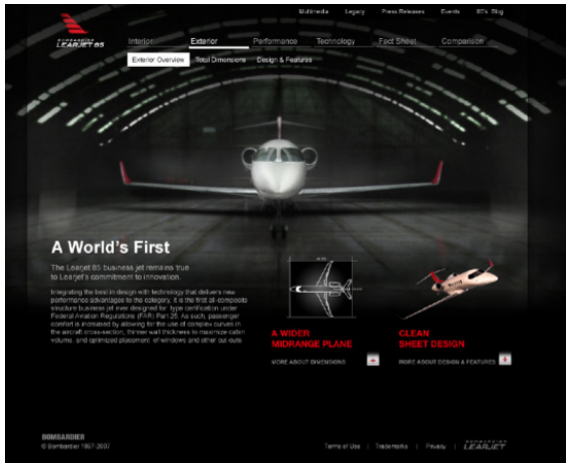
- May 4-6 EBACE – Geneva, Switzerland
- May 13-23 Cannes Film Festival
- Jul 6-9 CBAA – Calgary
- Oct 19-21 NBAA – Atlanta, GA
- Dec 7-9 MEBA – Dubai (tentative)

BOMBARDIER

Learjet 85 Has a Robust Marketing and Communication Plan

Website

Learjet85.com



Videos

Air shows

Mock-up

BOMBARDIER

Team Now Positioned Across Four Sites

- *Montreal Responsibilities:*
  - Structural design center
  - System installation design

- *Wichita Responsibilities:*
  - Structural and systems installation design and aircraft integration / certification
  - Flight test, final line and customer support

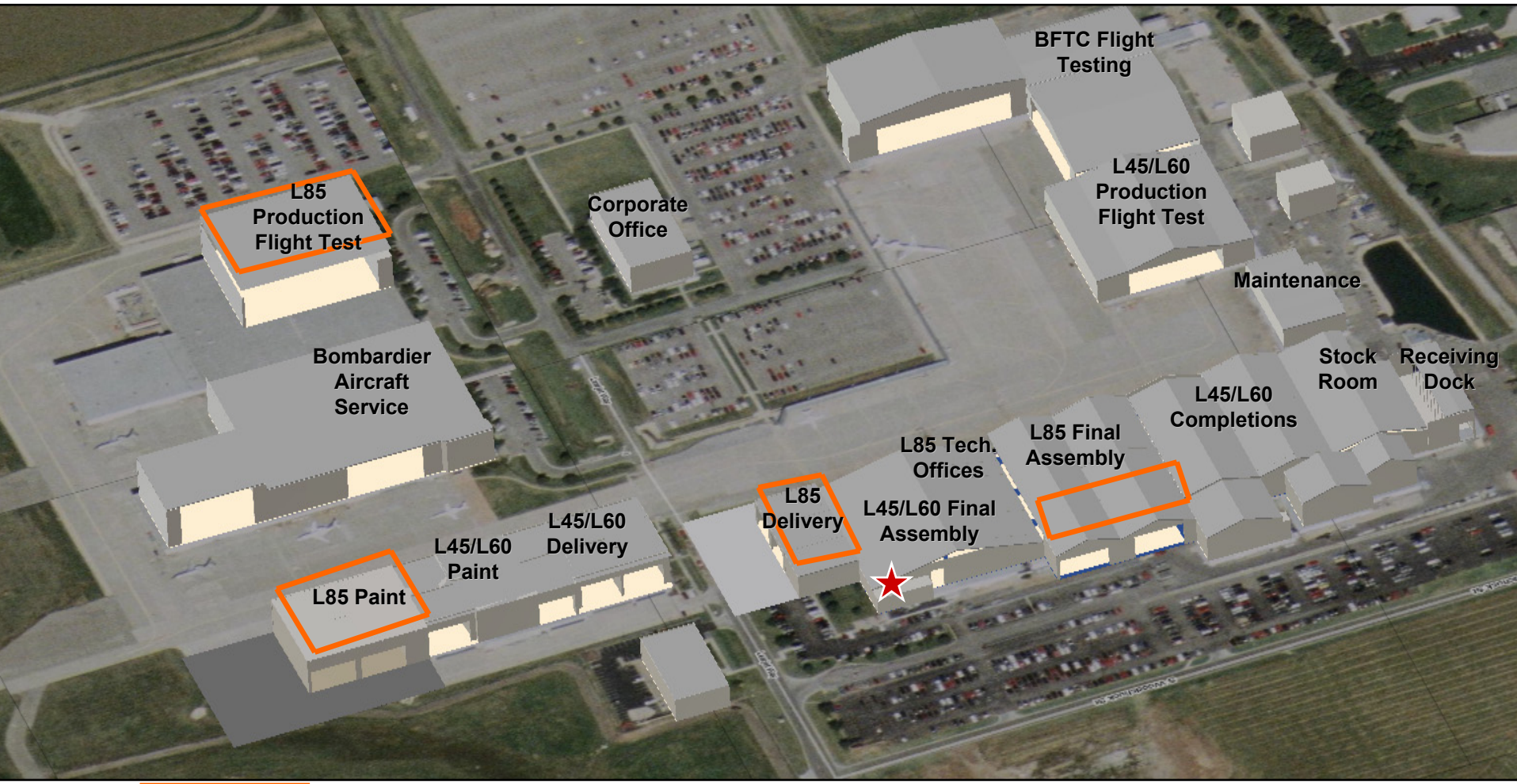
- *Queretaro Responsibilities:*
  - Composite structures and electrical harness mfg.
  - Sub-assembly systems instl.

- *UK Responsibilities*:
  - Composite structures detail design
  - Systems installation design

Fully integrated program across four sites

BOMBARDIER

Wichita Facility Expansion Requirements

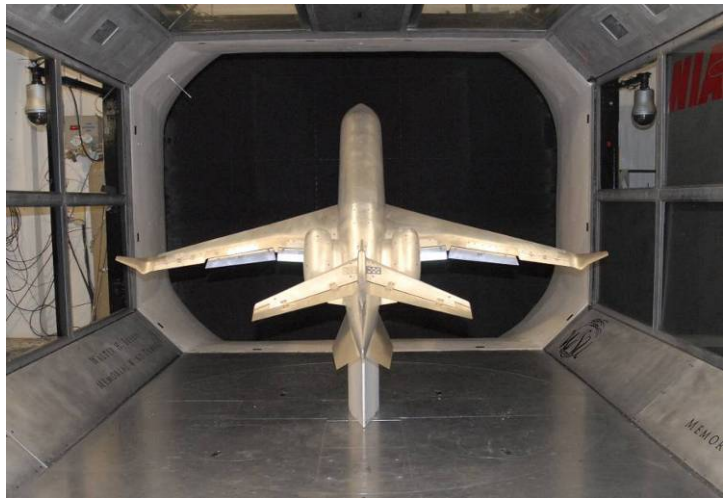


New Buildings/Expansion for Learjet 85 Program

BOMBARDIER

NIAR Integration Into The Learjet 85 Program

National Institute for Aviation Research



- Supports our Structural activities
- Role:
  - Composite Council membership
  - Material testing
  - Wind tunnel testing
  - Static and Fatigue testing

BOMBARDIER

Customer Continuous Input to Design via Focus Groups

Interior

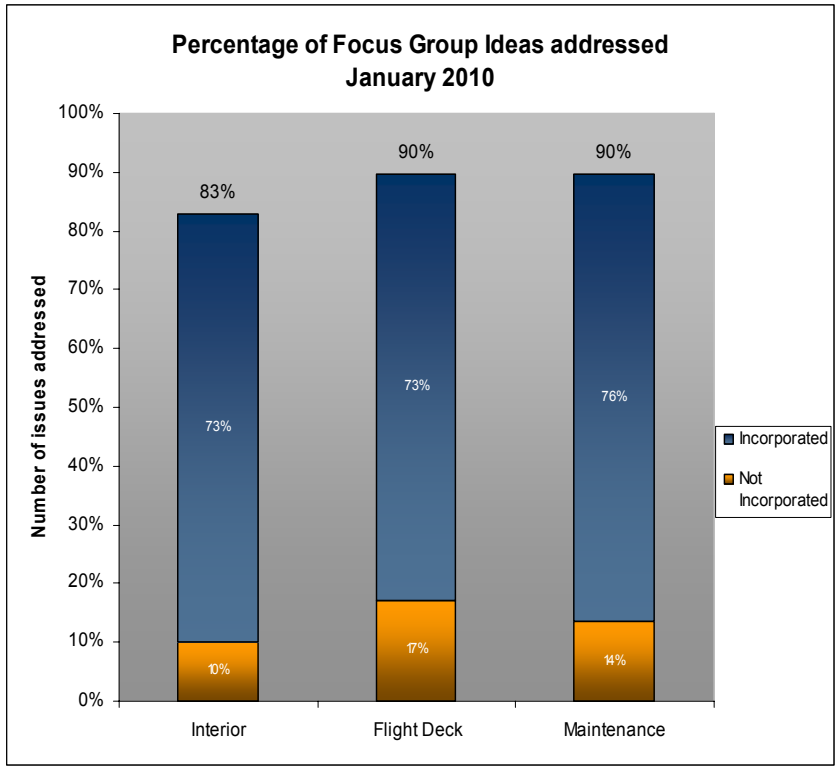
- Floorplan layout
- Interior styling

Maintainability

- Maintenance philosophy
- Lessons learned
- Repair procedures

Cockpit

- Layout and ergonomics
- Pilots situational awareness
- Aircraft performance

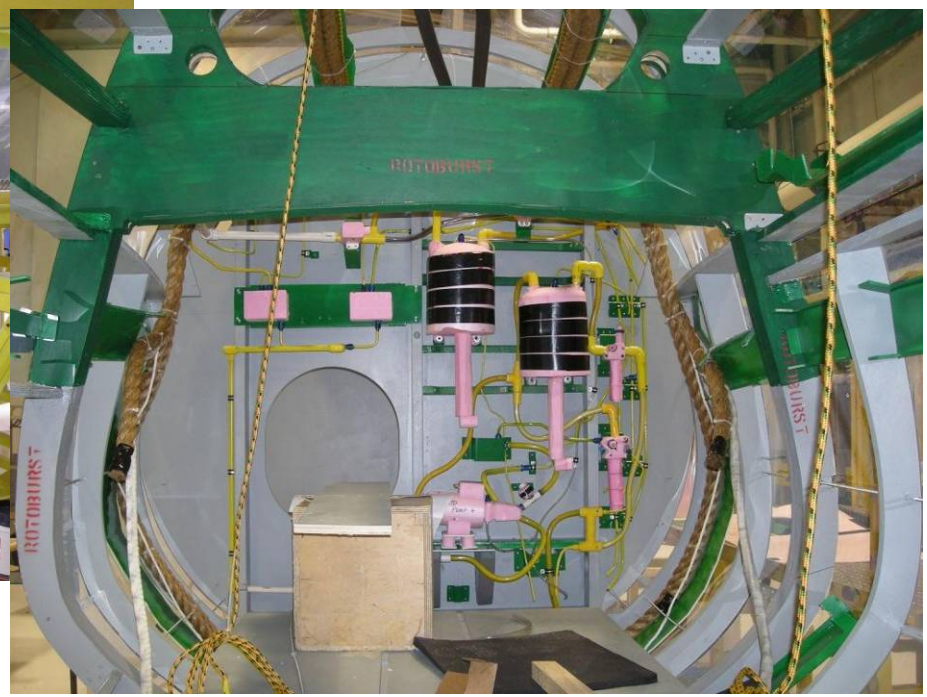


Great progress in incorporating focus group ideas into design

Focus groups meet routinely via NBAA, regularly scheduled Webcast meetings

BOMBARDIER

Aft Fuselage Mockup In Progress



Production mock up allows early resolution of ergonomic issues and evolving the installation design

BOMBARDIER

New Learjet 85 Mexico Facility Construction Progressing

Foundation complete – February
Steelwork completion – March
Roof completion - April
Final beneficial occupancy - June

STEEL COLUMN ERECTION OPERATIONS

BOMBARDIER

Learjet 85 –Mexico Manufacturing Center

Lean Manufacturing principles applied in Learjet 85 building layout

L85 Fuselage & H-Stab	1st Building	162,500 sq ft
L85 Wing Assembly	MA 1	18,500 sq ft
L85 Wing Sub Assy	El Marques	17,750 sq ft

Grand Total for Learjet 85 Mexico 198,750 sq ft

BOMBARDIER

Applying a Total Life Cycle View to DfE

Design For the Environment

End of Service

Re-cycling

Service

Longer inspection Intervals.
Simpler structural repairs.
Higher reliability.

Design

•Selection of Materials
•Manufacturing Processes
•State-of-art engine
•Banned materials
•Improved Aerodynamics

Manufacturing

•Lower CO2 NMVM emissions
•Chromic free
•Lower hazard waste
•Lower energy to produce

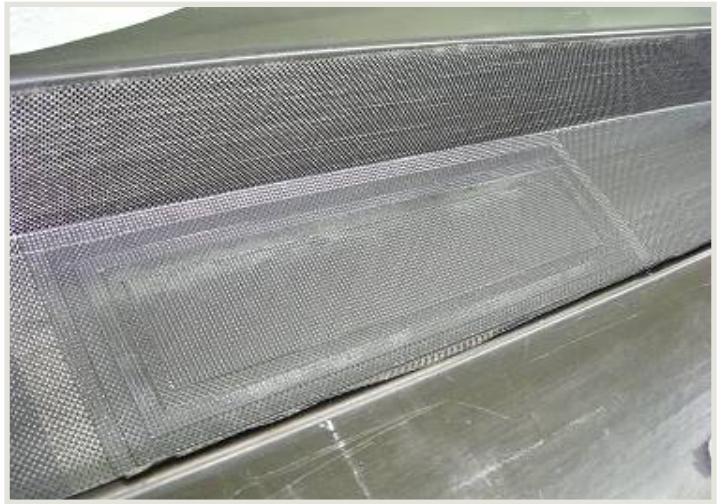
BOMBARDIER

“Proof of Concept” Prototypes

Validated our manufacturing process using existing “Global Express” fuselage molds

BOMBARDIER

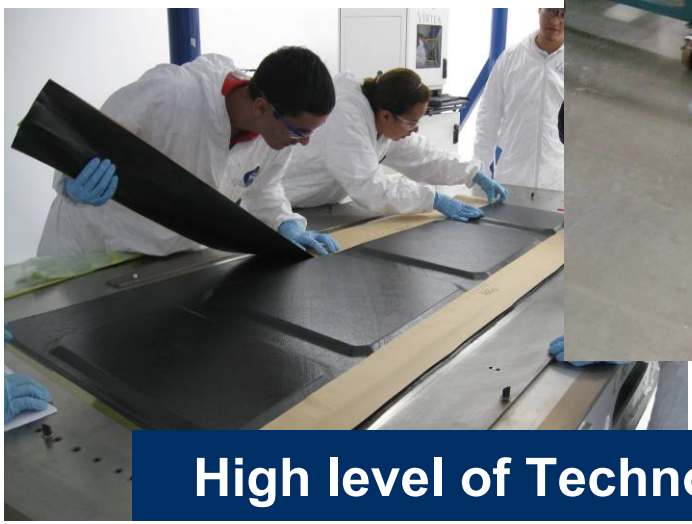
Manufacturing Trials of Composite Parts



Examples of hand lay up, core/ply and monolithic composite parts

BOMBARDIER

Technology Readiness-
El Marques: Training and Testing



High level of Technology Readiness testing continues

BOMBARDIER

Major Mold Tooling in the Build Process

BOMBARDIER

Summary

- **The Learjet 85 is uniquely positioned to be the segment leader for the upper mid-size category, providing an integrated product plan in a comprehensive Bombardier product line-up.**

- **The clean sheet design, incorporating latest technologies, is defining the future of Learjet for strong viability in the future as a market leading producer of business jet aircraft.**

- **Technology Readiness is a parallel learning and testing activity to product development, to implement new proven technologies to the platform. NIAR is a critical aspect of this activity.**

- **The Learjet 85 Program continues to plan with full company support and a solid focus on execution.**

THANK YOU!

BOMBARDIER