

Dassault's Falcon 5X Reinvents the Business Jet Experience

*New 5,200 nm Twinjet Will Feature Largest Cabin Cross Section,
Next Generation Digital Flight Controls, Advanced Engines*

(Las Vegas, Nevada, October 21, 2013): Dassault Aviation today unveiled the Falcon 5X, an all-new twinjet with the largest cross section and the most advanced fly-by-wire flight control system in business aviation.

“With the Falcon 5X, Dassault has expanded the limits of what is possible in a business jet,” said Eric Trappier, Chairman and CEO of Dassault Aviation. “This new aircraft will offer an incredibly spacious and comfortable cabin with handling qualities and airport performance unmatched by any other large business jet. And this, while maintaining the traditional hallmarks of high performance, industry leading efficiency and robust design that have come to define the Dassault Falcon brand over the past 50 years.”

With eight passengers, the Falcon 5X will have a range of 5,200 nm at M.80. It will be powered by brand-new, innovative 11,450-lb thrust Snecma Silvercrest engines – the most efficient powerplant in business aviation. The combination of sophisticated aerodynamics and ultra-efficient engines will permit the Falcon 5X to be as much as 50% more fuel efficient than competitors' aircraft, with corresponding savings in operating economy.

The Falcon 5X is expected to have a balanced field length of about 5,250 feet/1600 meters (MTOW, ISA, SL) and an approach speed of about 105 kts at typical landing weight. It will be capable of landing at 95% of its Max Take Off Weight, offering an unprecedented degree of flexibility.

The Falcon 5X will also feature the newest generation of Dassault's award winning EASy flight deck.

First flight is expected in the first quarter of 2015 with EASA and FAA certifications before the end of 2016.

Refreshing experience in the industry leading cabin

Largest cabin cross section on the market

“When designing the Falcon 5X, we interacted extensively with our customers to determine their cabin needs,” said Eric Trappier. “The industry has moved in a direction of wider cabins which, of course, has allowed Dassault to offer industry leading functionality, space and comfort in the Falcon 5X. One of the measures of an international business jet is how the passenger feels upon arrival. There is simply more space, which will create a better sense of well-being for the passengers.”

The Falcon 5X has been designed to offer a totally new cabin experience. The cabin will be 6 ft 6 in (1.98 m) high – the tallest in the industry - and 8 ft 6 in (2.58 m) wide. The extra width will permit a 5-inch wider aisle, allowing for easier movement between cabin sections and more pleasant passenger interaction. It will also offer more space for individual seating, affording passengers greater privacy when desired, especially in the aft cabin on overnight flights.

The Falcon 5X cabin will be nearly 39 feet (11.80 m) long (excluding the cockpit and baggage compartment) and will comfortably accommodate up to 16 passengers. It will feature three distinct lounges that Falcon owners will be able to customize to their own needs and tastes.

Contemporary, harmonious, well equipped interior

Every element of the Falcon 5X cabin has been rethought and restyled, resulting in a contemporary and harmonious look that reinforces the high level of comfort Falcon owners expect. The Dassault Interior Design Studio was involved from the earliest stages of the development program. A high design priority was to create flowing, uninterrupted lines to enhance the feeling of space. To achieve this goal, the design team's main task was to de-clutter the cabin. The new lean and light cabin seat design is emblematic of this concept. Dassault designers paid attention to every detail, creating hidden compartments for electronic devices and electrical chargers and designing LED signage that is invisible when not illuminated.

More natural light will flood the cabin thanks to 28 windows that are significantly larger than on previous Falcons. The galley will even feature a 'sky light' – another industry first –, providing additional brightness in a part of the cabin that is usually devoid of natural light.

The cabin will be equipped with FalconCabinHD+ the most innovative cabin management system available. The system, developed in cooperation with Rockwell Collins, utilizes the latest fiber optic network to distribute crisp, high-definition audio and video content throughout the cabin. It gives passengers total control of the cabin systems in one easy-to-use solution.

Cabin sound levels will be as low as in the Falcon 7X – among the quietest in aviation and offer a very comfortable cabin pressurization level of 3,900 ft (1,188 m) at 41,000 ft (12,497 m).

Continued legacy of true Falcon performance

The Falcon 5X will be equipped with a pair of advanced Snecma Silvercrest high-bypass engines developed with the exacting requirements of the Falcon 5X in mind. Delivering 11,450 lbs (5,095 daN) of thrust each and featuring a best-in-class bypass ratio (6). These engines will permit a significant reduction in fuel consumption, maintenance cost, NOx emissions and community noise.

Silvercrest engines will be equipped with a sophisticated in-flight health monitoring system, known as ForeVision™, that will automatically transmit onboard data to Snecma support hubs for analysis, using advanced algorithms to detect anomalies in-flight. This technology, previously available only on commercial airliners, will be the first installed on a business jet. Moreover, the Silvercrest will have no hard-time inspection limits. Maintenance will be "on-condition by design" for longer on-wing intervals and reduced maintenance time and expense.

The new generation Silvercrest engine was the logical choice to power the Falcon 5X. It will bring to business aviation best-in-class technologies derived from Snecma's long-standing experience in military aviation and its role as General Electric's partner in the best-selling CFM56 commercial engine.

The Falcon 5X will be equipped with an all-new ultra-efficient wing optimized through extensive use of computational fluid dynamics and wind tunnel testing. The wing will feature a 33° swept angle and a unique curved trailing edge and will increase buffet margin by 15% without impacting weight or flexibility, improving safety. The 5X wing provides the highest lift/drag ratio of any Falcon airfoil.

The aircraft will be capable of operating at approaches up to 6 degrees, allowing it to serve challenging airports like London City Airport that are normally inaccessible to large cabin business jets.

Typical Falcon 5X City Pairs (8 pax, M.80, 85% Annual Winds, NBAA Reserves)

- New York and Moscow
- Johannesburg and Geneva
- Hong Kong and Moscow
- London and Miami
- Sao Paulo and Chicago
- Shanghai and Sydney

The Falcon 5X will also be able to perform an impressive list of one leg missions (8 pax, M.80, 85% Annual Winds, NBAA Reserves) such as Los Angeles to London City, Paris to Hong Kong or Beijing, Shanghai to Seattle or New York to Tel Aviv.

Rethinking digital flight controls for optimal performance

A new Digital Flight Control System on the 5X will command all flight control surfaces, including slats and flaps. Each control surface will be multi-functional in order to ensure peak performance at all times.

“With the advanced Digital Flight Control System on the Falcon 5X, the traditional functionality of each flight control surface has been totally rethought,” said Philippe Deleume, Chief Test Pilot for Dassault. “For example, an aileron on the Falcon 5X can function as an aileron but also as an airbrake, depending on the situation.”

The Falcon 5X will also be the first aircraft in business aviation to use flaperons. Flaperons are active high-speed deflection control surfaces that can act both as flaps or ailerons. Their design and philosophy comes directly from Dassault’s military heritage.

Integrated into the Digital Flight Control System, the flaperons will always operate in active mode and will enhance roll authority. However, their benefits will be most apparent on approach—especially during approaches with a steep descent profile. In those situations, the flaperons will act much like a traditional flap because they will increase drag while maintaining a high lift coefficient.

“A pilot will be able to fly a steep approach angle without increasing the approach speed. Even on normal approaches, flaperons will help maintain optimum control while providing good forward visibility,” said Deleume.

Steering control has also been integrated into the system, allowing for better controllability on the ground and improved transition during takeoff and landing.

Next generation cockpit

The Falcon 5X will be equipped with the third generation of Dassault's award winning EASy interactive cockpit, including a new FMS and two Electronic Flight Bags integrated into the front instrument panel. Among the enhancements will be a larger, new-generation Elbit Systems HUD providing wider views and capable of showing combined EVS and SVS data. The cockpit will also be capable of accommodating dual HUDs.

The Falcon 5X will be able to see farther than previous Falcons thanks to the new Honeywell RDR 4000 radar. The new radar system will allow hazardous weather and the vertical definition of thunderstorms to be seen from the cockpit at distances of up to 320 miles and will provide pilots with a more accurate depiction of hazardous areas.

The cockpit will offer more space and storage room, too. It will be equipped with more comfortable crew seats offering greater legroom and a recline angle of up to 130 degrees. With four large windshields providing a 30% increase in window area for enhanced visibility, pilots will easily be able to see each wingtip from their seats.

New technology simplifies maintenance, improves availability

Maintainability experts were involved in the Falcon 5X design process from the beginning. As a result, processes to enhance reliability and lengthen maintenance intervals became design priorities, and new technologies were integrated into the aircraft to achieve the highest level of diagnostic capability within the industry.

In accordance with the latest MSG3 standards, Falcon 5X maintenance intervals will be extended, thereby improving aircraft availability. The 5X will be guaranteed for 800 hours or 12 months between inspections – intervals 30% longer than previous-generation aircraft. Maintenance programs will also be customized to operators' profiles.

In its pursuit of the highest level of reliability, the aircraft will benefit from new endurance testing methods: Highly Accelerated Life Tests (HALT) and Highly Accelerated Stress Screening (HASS). These testing procedures expose equipment and systems to extremes of vibration, humidity, temperature, pressure changes and other in-flight phenomena to verify their reliability over time. Reliability testing will be supplemented by an additional 200 hours of in-flight endurance testing prior to certification.

The Falcon 5X will feature an on-board real-time self diagnosis system dubbed FalconScan that will set a new standard for the industry. Where previous Falcons incorporated onboard diagnostics to monitor hundreds of parameters, the 5X system will connect to all onboard computers and monitor more than 10,000 parameters.

The ultimate benefit is an aircraft that can analyze data and detect faulty equipment thanks to patented algorithms. Operators, even in remote locations, will be able to autonomously troubleshoot the aircraft, identify needed parts, if any, and coordinate the quickest possible remedy.

FalconBroadcast will provide real-time notification of in-flight events and maintenance status via satellite, making it possible to begin troubleshooting while the aircraft is still in the air.

Production already underway

Production of the first structural components began earlier this year and assembly of the first aircraft fuselage section is set to start at Dassault's Argenteuil facility, in France, in the next coming weeks.

Final assembly will take place next year at the company's Bordeaux-Merignac facility in France and cabin completion at Dassault's completion facility in Little Rock, Arkansas, where a major expansion project will get underway shortly to accommodate the expected increase in demand from the new twinjet.

Note for the Editors

Dassault Falcon is the recognized global brand for Dassault business jets which are designed, manufactured and supported by Dassault Aviation and Dassault Falcon Jet Corp.

About Dassault Aviation

Dassault Aviation is a leading aerospace company with a presence in over 80 countries across five continents. It produces the Rafale fighter jet as well as the complete line of Falcon. The company employs a workforce of over 11,000 and has assembly and production plants in both France and the United States and service facilities around the globe. Since the rollout of the first Falcon 20 in 1963, over 2,250 Falcon jets have been delivered. The family of Falcon jets currently in production includes the tri-jets—the Falcon 900LX and the 7X—as well as the twin-engine 2000LX, 2000LXS and Falcon 2000S.

About Dassault Falcon Jet

Dassault Falcon Jet Corp., is a wholly owned U.S. subsidiary of Dassault Aviation, France. Dassault Falcon Jet markets and supports the Falcon family of business jets throughout North America, South America and the Pacific Rim countries of Asia, including the People's Republic of China.

Press Contacts

Dassault Aviation (Saint-Cloud, France)

Vadim Feldzer Tel. +33 1 47 11 44 13

Marie-Alexandrine Fouillard Tel. +33 1 47 11 64 23

Dassault Falcon Jet (Teterboro Airport, USA)

Andrew Ponzoni Tel. +1 201 541 45 88

Grant Kielczewski Tel. +1 201 541 46 79

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