X-59 Quiet Supersonic Technology X-Plane
Silencing the Sonic Boom
SUPPORTING NASA’S MISSION TO SILENCE THE SONIC BOOM

For more than a decade, Lockheed Martin Skunk Works® and NASA have partnered to solve one of the most persistent challenges of supersonic flight – the sonic boom. Lockheed Martin Skunk Works is leading the design, build and flight test of the X-59 Quiet Supersonic Technology X-plane demonstrator. The technology demonstrator will be flown over populated areas to provide U.S. and international regulators with statistically valid data required to help approve new rules that could allow quiet commercial supersonic flight over land, which could bring us one step closer to quiet supersonic travel for passengers around the globe.

The X-59 is an experimental supersonic aircraft shaped to reduce the loudness of a sonic boom reaching the ground to that of a gentle thump. The X-plane accomplishes this by tailoring the volume and lift distribution to separate the shocks and expansions associated with supersonic flight. The resulting supersonic “heartbeat” is dramatically quieter than the disruptive N-wave boom generated by today’s supersonic aircraft. We look forward to supporting NASA in the effort to obtain the data regulators will need to make informed decisions on appropriate sonic boom levels in the quest to remove the prohibition on supersonic over land flight.

---

**X-59 CONFIGURATION**

- Max Design Gross Weight: 24,300 lbs
- Empty Weight: 15,000 lbs
- Fuel: 8,000 lbs
- Payload: 600 lbs
- Design Mach: 1.4
- Loudness: <75 PLdB
- Engine: 1xF414-GE-100
- Landing Gear: F-16 Blk25 NLG, F-16 Blk25 MLG

---

© 2019 Lockheed Martin Corporation FG19-00608_012