

Development and qualification of sophisticated sensor and communications systems requires the ability to test them in the air. Lockheed Martin's Flight Operation Services provides engineering flight testing and support across a wide range of platforms -- from Lockheed Martin-owned systems to proprietary platforms for private customers. We collaborate with customers to help them test, refine, validate and certify new technology under a wide range of conditions. The data gained is used to both finalize program development, as well as to outline risk mitigation activities.

Our facility in Goodyear, Arizona has 16,000 feet which includes dedicated hangar space and an engineering lab. Test capabilities include:

- Synthetic Aperture Radar (SAR) and Moving Target Indication (MTI) radars
- Electro-optical, infrared and ultraviolet sensors
- Missile guidance packages
- Smart munitions (seeker and data link systems)
- Communications payloads

Lockheed Martin's team has extensive experience with every aspect of flight testing, from program initiation, where program planning and budgeting skills are needed; through aircraft modification and instrumentation, where mechanical, electrical and electronics expertise is a must; to ground and flight test planning and conduct, where troubleshooting and test result evaluation are key. With every test event, the team leverages our 50 years history of providing customers with an outstanding test experience.

WE'RE ENGINEERING A
BETTER TOMORROW

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Lockheed Martin
Flight Operations
Goodyear, Arizona

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FLIGHT OPERATIONS SERVICES – GOODYEAR, ARIZONA

Lockheed Martin Flight Operations in Goodyear, Arizona has supported flight test programs on a wide variety of aircraft, from single engine Cessna 182 and 207, to C-135, P-3 and SR-71. We provide end-to-end flight testing support:

- Engineering design and fabrication – including pod design and fabrication of required platform and strongback structures
- Aircraft modification – including integrating interior and exterior systems in adherence with electrical and structural requirements
- Equipment installation – including centerline mounts, wing pods and fuselage enclosures
- Integration and flight test – including test plan development and execution.

Lockheed Martin also has a fleet available to support customers, including two Sabreliner 60 series business jets and a Piper Navajo Chieftain. Our aircraft are rated as experimental, which enables many configuration changes to support engineering flight test requirements.

- The Sabreliner aircraft can be equipped with centerline pods attached to the underside of the aircraft.
- Both the Sabreliner and Piper aircraft can support periodic radar and other airborne Intelligence, Surveillance, and Reconnaissance (ISR) sensor or communications development programs.



N-265-60 (Sabreliner 60)

- Performance:
 - Max speed: 356 knots IAS, 0.818 Mach
 - Cruise speed: 375-425 knots TAS
 - Stall speed: 100 knots IAS
 - Max operating altitude: 41,000 ft. MSL without external pod in range
 - Max mission duration, 2.5 hours
- Navigation Aids: GPS, VOR, ADF
- Aircraft electrical system
 - 440 AMPS available to engineering payload
 - DC system 28 volts
 - AC system (Power from DC BUS)
- Empty cabin volume (excludes cockpit): Approximately 378 cubic feet
- FAA certification: Special airworthiness certification (experimental / research and development)
- Configuration: This two-pilot/eight passenger executive jet aircraft has been modified to carry engineering package with two pilots and up to four engineering aircrew members.

Piper Navajo Chieftain

- Performance:
 - Max air speed: 185 KIAS
 - Cruise speed: 160 KIAS
 - Stall speed: 74 KIAS
 - Max operating altitude: 24,000 ft. MSL
 - Max mission duration: 6 hours
- Navigation aids: GPS, VOR, ADF
- Centerline pod capable
- Aircraft nose payload bay
- Engineering payload capacity:
 - 700 lbs. (not including personnel)
 - Payloads are assumed to be operated by two 250 lb. engineers
- Engineering payload electrical capacity: 100 amps available for 28 volts DC
- AC system (power from DC BUS): 24 amps available 115 volts 60 Hz with a 25 amp 28 volt DC combo.
- Empty cabin volume (excludes cockpit): Approximately 150 cubic feet including baggage area.
- FAA certification: Special airworthiness certification (experimental / research and development)
- Configuration: This two-pilot/four-passenger executive jet aircraft has been modified to carry engineering package with one or two pilots and up to two engineering aircrew members.

