



2023
VFA-125
NAVY TAILHOOK LEGACY &
TACTICAL AIRSHOW FLIGHT PROFILE
DEMONSTRATION TEAM
Support Manual
NAS Lemoore
Lemoore, CA

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Section 1 - Introduction

Congratulations! Your Air Show has been selected as a performance site for the F-35C Lightning II Legacy Flight and/or the F-35C Tactical Airshow Flight Profile by VFA-125's Demonstration Team. The purpose of this document is to provide you and your Air Show with the information and requirements needed to host the Team. We look forward to working with you and hope to help make your event a success. Please reach out early to the overall Demonstration coordinator LT Blake "Puddin'" Rademaker for further coordination as required.

Contact Information

2023 DEMO Team Commander and Pilot

LT Blake "Puddin'" Rademaker / Blake.E.Rademaker.mil@us.navy.mil

**Specific Air Show Points of Contact will be passed upon initial contact*

Mailing Address

VFA-125 Rough Raiders
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Phone

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Website

<https://www.public.navy.mil/airfor/VFA125/Pages/default.aspx>

Section 2 - Information/Personnel Requirements

Information Requirements

The Air Show Information Sheet (Attachment 2) contains information needed by the Demonstration Team. Please send it as soon as possible, but **no later than 30 days before your Air Show**. Additionally, please provide the team with a detailed schedule of your Air Show. It should list all of the scheduled events and performance times from opening until closing.

Personnel Requirements

The VFA-125 Demonstration Team may bring up to 2 F-35C Lightning II aircraft (Primary/Spare) with a total of 3 pilots. Expect the aircraft to arrive the day prior to the practice Air Show and return after the final performance (either the same day at the conclusion of the show, or the following morning.) Other arrangements may be made by coordinating with the team.

Maintenance Personnel

- (1) The Demonstration team regularly requires 6-8 maintenance personnel at each show. The team will notify you if more than 8 personnel are required.
- (2) The Demo team requires that the show pay for roundtrip air transportation for all maintenance support personnel and one ground safety observer pilot. Flight reservations should be made to depart/return from Fresno, CA airport (identifier: KFAT). Arrival days are normally the day prior to the practice show, while departure date/times are after the F-35C aircraft have departed the local area. Please arrange for pickup and drop-off of maintenance personnel at your local airport or a rental car pick-up/drop-off for the applicable arrival/departure times.
- (3) For shows within 300 miles of Lemoore, CA, there is the possibility for maintenance personnel to drive to and from the show site. Please coordinate with the DEMO team representative to arrange a local Lemoore, CA rental for the maintenance team if the driving option is utilized.

Section 3 - Lodging/Transportation

Lodging

The Air Show should furnish lodging for all members of the Demonstration Team using the following guidelines:

- (1) Provide up to 10 individual non-smoking rooms at the performer hotel for the Lightning II team (3 for aircrew and up to 7 for maintainers). The team may also require additional rooms due to other circumstances/requirements for your show.
- (2) The team would prefer not to split into Officer/Enlisted quarters at military locations in order to maintain team integrity.
- (3) Reserve rooms under the "**VFA-125 Demonstration Team**" name as team members may change at the last minute and confusion may arise if rooms are reserved under individual names.
- (4) Should the team's aircraft experience a malfunction, they may be forced to stay longer than planned. In that case, the team would require the rooms for as long as required to repair the jet.

Transportation

Please provide the team with a total of 4 vehicles - 2 large SUVs/Minivans/Pickup truck & 2 sedans, plus 1 golf cart for show site movements (if required). Vehicles assigned for team use should be available for the duration of their stay, to include the contingency of a continued stay due to aircraft maintenance problems. Additionally, please ensure that team members are covered by insurance while driving the courtesy vehicles.

Section 4 - Operations

Airfield Diagram

Air Show organizers shall provide the Demonstration Team with a diagram of their airfield/show site. For remote shows, the team requires a diagram of the show site as well as the airfield from which the aircraft will stage. The airfield diagram should depict the following:

- (1) Show center location, coordinates and elevation
- (2) The complete aerobatic box and boundaries of the waived airspace
- (3) The entire show line and crowd line (with distance between them) and any secondary crowd lines
- (4) Aircraft parking location and coordinates
- (5) Magnetic (MAG) bearing of the runway, depiction of Magnetic North and the scale of the diagram
- (6) Access routes to show center and aircraft parking
- (7) Overhead imagery of the airfield and surrounding area

Show Line

- (1) The Lightning II Demonstration requires a category I/II aerobatic box in order to complete the show. The show line should be an absolute straight path over the ground, located 1,500/1,000 feet in front of the crowd. If the crowd line is other than a straight line, the show line must be 1,500/1,000 feet from the closest spectator area. The Demonstration Team will use this line as the primary reference for all maneuvers.
- (2) In addition, for the Heritage Flight Demonstration, a 500ft show line will be used for several fly-by passes. This should be clearly depicted on the diagram.
- (3) All markers used to define the show line should be large, highly visible and easily identifiable.
- (4) Over water show line - For demonstrations flown over water, an artificial show line must be defined by fixed markers as described above. Additionally, please ensure arrangements are made to keep non-participants from entering the aerobatic box during the demonstration.

Show Center

- (1) Show center is the location which the pilot uses to center each maneuver during the demonstration. Show center should be marked by a large, highly visible and easily identifiable object.

Aircraft Parking

- (1) Please coordinate parking with the senior maintenance representative when they arrive. The team prefers to park as close as safety/security permits to the crowd line so the crowd can see the aircrew and maintenance team at work. The spare demonstration aircraft cannot be used as a static display aircraft and should be parked in the same location as the primary demonstration jet.
- (2) Ensure the parking area has proper weight bearing capacity (a fully fueled aircraft weighs approximately 55,000 lbs.). If you are in doubt, contact the respective Demonstration Team.
- (3) Provide hangar space for aircraft in the event of severe weather (lightning, hail, etc.), maintenance of aircraft or security concerns.
- (4) The parking area and all taxiways/runways the team uses must be free of foreign objects. It is mandatory that all surfaces (runways/taxiways/ramps) be thoroughly swept before the team's arrival.

Demonstration Specifics

- (1) The demonstration portion of our show lasts approximately 12-15 minutes. It is imperative that no other events be scheduled during this time to include departures/landings unless specifically briefed and approved by the aircrew.
- (2) The preferred time slot for the Demonstration is between 1200 and 1500. Any time outside of this should be coordinated with the team beforehand. Additionally, if the Legacy Team is flying, the specific time and order of each event should be coordinated with their team as well.
- (3) If the Thunderbirds are performing at your Air Show, the Tactical Demonstration Team cannot fly within 15 minutes of their scheduled pre-show start time. (This is a Thunderbirds requirement, NOT TACDEMO)
- (4) The aircraft must be on deck two hours prior to scheduled sunset. Twilight shows must be approved by higher headquarters and must be coordinated with the team lead at least 30 days prior to the event.
- (5) The morning prior to the practice is an ideal time for any Public Affairs events or tours.

Weather

- (1) One of the following shows will be flown depending on the prevailing weather conditions:
 - a. Legacy & Airshow Flight Profile Demonstration -
1,500' ceiling / 5NM visibility
 - b. 360 deg defined horizon.

General Information

- (1) The team will not exceed the speed of sound during their demonstration.
- (2) If you plan to use a 500' show line for civilian performers, the single ship demonstration team aircraft must be parked at least 300' from the 500' show line to avoid over flight of their aircraft.
- (3) To accommodate friends and family members, the team may request reserved seats/access to the VIP areas for Demonstration Team guests.
- (4) Please ensure that the Demonstration Team has easy access to meals and drinks during the Air Show.

Section 5 - FAA Waiver/NOTAMS

Airspace Requirements

- (1) Demonstration Team aerobatic maneuvers require the following airspace:
 - a. 5NM radius from show center
 - b. SFC-15,000' AGL
- (2) Legacy Demonstration
 - a. 5NM radius from show center
 - b. Surface-5,000' AGL

FAA Waiver

- (1) A waiver from the Federal Aviation Administration is required for the aerobatic maneuvers performed by the Lightning II during both the practice and actual Air Show (Both Tactical and Legacy Demonstrations).
- (2) In order for the team to perform at your Air Show, you must request a waiver to the following FAA regulations:
 - a. 91.117(a) - Aircraft speed in excess of 250 knots below 10,000'

- b. 91.117(b) - Aircraft speeds in an airport traffic area
 - c. 91.119(b) - Minimum safe altitudes over congested areas (Military teams with approved maneuver package only)
 - d. 91.119(c) - Minimum safe altitudes over congested areas, except not closer than 500' to persons
 - e. 91.127 - Operating on or in the vicinity of an airport
 - f. 91.129 - Operations at airports with operating control towers (when appropriate)
 - g. 91.155 - Buffer zone around clouds
 - h. 91.303 - Definition of aerobatic flight
 - i. 91.303(c) - Aerobatic flight within a federal airway
 - j. 91.303(e) - Aerobatic flight below an altitude of 1,500' above the surface
- (3) Note: Positioning turns for high performance aircraft operated by North American Demonstration Teams, regardless of the angle of bank or pitch attitude, but only as necessary to complete the turn, are not considered to be Air Show aerobatic maneuvers.
- (4) At a minimum, waiver time for the practice and demonstration must begin 5 minutes before scheduled takeoff and extend for 30 minutes. Although the actual demonstration only lasts approximately 10 minutes, the additional time is requested to allow flexibility for possible maintenance problems or weather conditions. Please ensure the required time blocks are accurately reflected on the waiver request.

Notice to Air Missions (NOTAMs)

- (1) Your airfield must be closed for the total time issued on the waiver for both the practice and actual aerial demonstration. This time includes closure to airlines at commercial or joint-use airfields.
- (2) Ensure a NOTAM is issued at least 48 hours in advance for both practice and actual demonstration waivers. Be sure to provide a NOTAM not only for airfield closing, but to include the closure requirement of 5NM from show center and 15,000' AGL or 5,000' AGL (Legacy) for practice or demonstration. Additionally, some show sites may require a TFR to be in place during the Air Show.

Hazards

- (1) Please provide the demonstration crew with a sectional chart and advise of any hazards in the local area that are not readily apparent to transient aircraft. This information must be provided to the team prior to their arrival at your show site.

Runway Barriers

- (1) For airfields with runways less than 8000ft, E-28 or BAK-12 arresting gear should be on site. If not available, an airfield with E-28 or BAK-12 arresting gear must be within 80nm.

Local Airports

- (1) Please make sure you contact all airports within a 5NM radius of your airfield to ensure they are shutdown during the time periods specified in the FAA waiver.

Section 6 - Maintenance/Security Requirements

Fuel Requirements

- (1) Aircraft require JP-5, JP-8, Jet-A or Jet-A+. The Demonstration Team will require approximately 1,500 gallons of fuel per demonstration.
- (2) Military sites - Fuel will be purchased using the DOD fuel card for each respective aircraft.
- (3) Civilian sites - Navy regulations only allow the demonstration teams to pay the current government rate for fuel. It is essential that you communicate this requirement to your fuel provider. Any additional cost for fuel above the government rate will be the responsibility of the Air Show.

Maintenance Equipment Requirements

- (1) The following maintenance equipment is required:
 - a. One 50 pound HALON or CO2 fire extinguisher
 - b. Universal tow bar
 - c. Tow vehicle
 - d. Nitrogen cart

Aircraft Security

- (1) Military installations
 - a. Security for demonstration aircraft will be in accordance with DOD directives.
- (2) Civilian installations
 - a. Arrange for around-the-clock protection of demonstration aircraft from arrival until departure through local civilian law enforcement agency. No one is authorized to be on or around our aircraft without a Demonstration Team member escort.
 - b. Throughout all periods when Demonstration Team personnel are not present, the following requirements must be met:
 - i. Aircraft will be surrounded by a rope or raised barrier at least 30 feet from aircraft and an armed security patrol must provide constant observation of the aircraft.
 - ii. After sunset, lighting must be provided to illuminate the aircraft and nearby ramp area.

Section 7 - Recruiting/Public Appearances

Recruiting

- (1) The following ideas are some of the various ways to help us with our Navy recruiting effort and to allow the public more access to the Demonstration Team:
 - a. Since recruiting is at the heart of the Demonstration Team's mission, please contact your nearest Navy Recruiter as soon as possible and inform them of the planned Lightning II demonstration. Some possible recruiting options include meeting with local Navy Recruiting personnel, providing space for a recruiting display booth, and arranging for enlistments/reenlistments.
 - b. Feel free to invite media representatives to the practice demonstration, but please do not advertise the practice as an official demonstration.
 - c. Practices are excellent for hosting groups, which would otherwise have difficulty seeing the actual demonstrations (physically challenged, elderly, etc.). Please notify the aircrew if you plan for any special groups to attend the practice and you would like them to meet the Demonstration Team.

Public Appearances

- (1) All public appearances must be coordinated with the Demonstration Team before their arrival. Please provide the following information for each public appearance relations event:
 - a. Name of Event - Visit to school, hospital, dinner, interview, etc.
 - b. Location of Event and Date/Time
 - c. Host/Hostess/Sponsor - Identify the individual or organization sponsoring the event and include their phone numbers
 - d. Description - A brief description of what the event sponsor/host would like the team to do while at the event.
 - e. VIPs/Dignitaries Attending - Mayor, civic dignitaries, military officials, etc.
 - f. Attire - Required dress for the event (military uniform, flight suit, civilian dress, etc.).
 - g. Time of Event - As stated earlier, the morning prior to the afternoon practice session is the best time for PR events.

Attachment 1 - Requirements Checklist

Section 1 - Information/Personnel Requirements

- () Air Show Information Sheet - Attachment 2 - Sent to team
- () Schedule of events sent to team
- () Commercial airline tickets for maintainers purchased by Air Show and itinerary sent to team

Section 2 - Lodging/Transportation

- () Hotel reservations for up to 10 non-smoking rooms for Lightning II demo team members
- () 4 rental cars reserved (2 vans, 2 sedans)

Section 3 - Operations

- () Airfield diagram with the described information sent to team
- () Show line/center marked as described to include over water shows
- () FOD free ramp space reserved for 2 aircraft near crowd line, if able, rated to ~55,000lb gross weight
- () Hangar space available for use, if needed
- () Practice times scheduled prior to show (2 periods / 15 min minimum); please coordinate details with demo representative
- () F-35C Lightning II Demonstration between 1200-1500
- () 15 minutes (high/Medium show), 13 minutes (low show), 10 minutes (Legacy) available for performance day.
- () VIP access/reserved seating for team member guests (if requested)

Section 4 - FAA Waiver/NOTAMS

- () Waivered airspace for 5NM from show center, SFC-15,000' AGL (5,000 AGL: Legacy), with Approved CATEGORY I/II aerobatics box.
- () FAA waiver meets all described requirements
- () NOTAM/TFR requested for practice and show times
- () Team informed of any local area hazards
- () Arresting gear available within 80NM of show site (unless previously coordinated)
- () Local airports notified

Section 5 - Maintenance/Security Requirements

- () Required fuel available
- () Civilian fuel provider notified of contract fuel price requirement
- () Described maintenance equipment available
- () Security arrangements made and requirements met for civilian sites

Section 6 - Recruiting/Public Appearances

- () Local Navy Recruiter notified of demonstration
- () Any special group meetings arranged with team
- () Team notified of any scheduled public appearances/media requirements

Air Show Director Signature

Phone Number

Date

Attachment 2 - Air Show Information Sheet

Air Show Information

Airfield Name _____
Military Base OPS or Civilian FBO Phone _____
Security POK _____
Air Show Title _____
Air Show Website Address _____
Air Show Director Name _____
Air Show Director Phone/Email _____

Air Show Demo Coordinator Name _____
Air Show Demo Coordinator Phone/Email _____

Air Boss Name _____
Air Boss Phone/Email _____
Housing/Transportation Coordinator Name _____
Housing/Transportation Coordinator Phone/Email _____

Date/Time of Practice Air Show _____
Thunderbirds/Snow Birds Performance Time _____

Demo Team Required Information

Aircraft Arrival Date/Time _____
Aircraft Departure Date/Time _____
Point of Contact for Maintenance Personnel _____

Maintenance Personnel Arrival/Pickup Date/Time _____

Maintenance Personnel Departure/Drop-off Date/Time _____

Lodging Reservation Number and Hotel Phone _____
