



A-10 DEMONSTRATION TEAM

OUR MISSION

THE AIR COMBAT COMMAND A-10C THUNDERBOLT II DEMONSTRATION TEAM, STATIONED OUT OF DAVIS-MONTHAN AIR FORCE BASE, ARIZONA, BRINGS THE AIRCRAFT TO AIR SHOWS AROUND THE COUNTRY TO SHOWCASE THE UNIQUE COMBAT CAPABILITIES OF THE A-10 "WARTHOG." THEY PERFORM PRECISION AERIAL MANEUVERS WHILE HIGHLIGHTING THE MISSION AND PROFESSIONALISM OF THE MEN AND WOMEN OF THE UNITED STATES AIR FORCE. ADDITIONALLY, THE TEAM BRINGS ATTENTION TO THE AIR FORCE'S PROUD HISTORY BY FLYING FORMATIONS WITH HISTORICAL AIRCRAFT IN THE AIR FORCE HERITAGE FLIGHT

BACKGROUND

THE A-10 DEMO TEAM ORIGINALLY CONSISTED OF TWO EAST AND WEST COUNTERPARTS BEFORE BOTH WERE DEACTIVATED IN 2011. THE A-10 FLEW IN HERITAGE FLIGHT FORMATIONS IN 2012 AND 2017 BEFORE REACTIVATING AS A SINGLE-SHIP DEMONSTRATION FOR 2018.

THE TEAM CONSISTS OF ONE PILOT, ONE SUPERINTENDENT, A NONCOMMISSIONED OFFICER-IN-CHARGE, FOUR CREW CHIEFS, AN AVIONICS SYSTEMS SPECIALIST, AEROSPACE PROPULSION SYSTEMS SPECIALIST. AND A PUBLIC AFFAIRS SPECIALIST.



BIOGRAPHY



UNITED STATES AIR FORCE

MASTER SGT ANDREW K. RINGQUIST

Master Sergeant Andrew K. Ringquist is Air Combat Command's A-10C Thunderbolt II Demonstration Team Superintendent. As the Superintendent, he is responsible for all air show coordination and aircraft maintenance performed on the demonstration aircraft, which enables the showcasing of the A-10C Thunderbolt II to over seven million people at air shows around the world. He is currently assigned to the A-10C Thunderbolt II Demonstration Team, 355th Fighter Wing, Davis-Monthan AFB, Tucson, AZ.

Master Sgt. Ringquist was born September 29, 1983 in Fergus Falls, Minnesota. He graduated from Fergus Falls High School in 2002. He enlisted in the United States Air Force on July 09, 2002.

EDUCATION

2007: Airmen Leadership School

2015: Non-Commissioned Officer Academy In-Residence

2019: Senior Non-Commissioned Officer Academy by Correspondence

ILS. AIR FORCE

ASSIGNMENTS

- 1. September 2002-December 2002: Technical School Student, Sheppard AFB, TX
- 2. January 2003-February 2003: Technical School Student, Luke AFB, AZ
- 3. March 2003-September 2005: Assistant Dedicated Crew Chief, 77th AMU Shaw AFB, SC (F-16)
- 3. September 2005-October 2006: Assistant Dedicated Crew Chief, 51st AMXS Osan AB, Korea (F-16)
- 4. October 2007-October 2009: Dedicated Crew Chief, 52nd AMXS Spangdahlem AB, Germany (F-16)
- 5. October 2009-July 2011: Dedicated Crew Chief, 9th AMXS Beale AFB, CA (RQ-4)
- 6. July 2011-August 2013: Unit Deployment Manager 9th AMXS, Beale AFB, CA
- 7. August 2013-July 2014: : Dedicated Crew Chief, 9th AMXS Beale AFB, CA (U-2)
- 7. July 2014-July 2017: Flight Line Expediter, 9th AMXS Beale AFB, CA (U-2)
- 9. August 2017-December 2018: Doc Chief 355th EMS, Davis-Monthan AFB, AZ
- 10. January 2019-October 2019: Section Chief 355th EMS, Davis-Monthan AFB, AZ
- 11. October 2019-Present: A-10C Thunderbolt II Demonstration Team Superintendent, Davis-Monthan, AFB, AZ

MAJOR AWARDS AND DECORATIONS

Air Force Commendation Medal with 2 Oak Leaf Clusters Air Force Achievement Medal with 1 Oak Leaf Clusters Meritorious Unit Award with 2 Oak Leaf Clusters AF Outstanding Unit Award with 1 Oak Leaf Clusters National Defense Service Medal Nuclear Deterrence Operations Service Medal

EFFECTIVE DATES OF PROMOTION

SENIOR AIRMAN December 2005 STAFF SERGEANT December 2007 TECH SERGEANT October 2014 MASTER SERGEANT September 2019



A-10C THUNDERBOLT II FACT SHEET

THE A-10 THUNDERBOLT II HAS EXCELLENT MANEUVERABILITY AT LOW AIR SPEEDS AND ALTITUDE, AND IS A HIGHLY ACCURATE AND SURVIVABLE WEAPONS-DELIVERY PLATFORM. THE AIRCRAFT CAN LOITER NEAR BATTLE AREAS FOR EXTENDED PERIODS OF TIME AND OPERATE IN LOW CEILING AND VISIBILITY CONDITIONS. THE WIDE COMBAT RADIUS AND SHORT TAKEOFF AND LANDING CAPABILITY PERMIT OPERATIONS IN AND OUT OF LOCATIONS NEAR

FEATURES

FRONT LINES.

THUNDERBOLT IIS HAVE NIGHT VISION IMAGING SYSTEMS, OR NVIS, GOGGLE COMPATIBLE SINGLE-SEAT COCKPITS FORWARD OF THEIR WINGS AND A LARGE BUBBLE CANOPY WHICH PROVIDES PILOTS ALL-AROUND VISION. THE PILOTS ARE PROTECTED BY TITANIUM ARMOR THAT ALSO PROTECTS PARTS OF THE FLIGHT-CONTROL SYSTEM. THE REDUNDANT PRIMARY STRUCTURAL SECTIONS ALLOW THE AIRCRAFT TO ENJOY BETTER SURVIVABILITY DURING CLOSE AIR SUPPORT THAN DID PREVIOUS AIRCRAFT. THE AIRCRAFT CAN SURVIVE DIRECT HITS FROM ARMOR-PIERCING AND HIGH EXPLOSIVE PROJECTILES UP TO 23MM. THEIR SELF-SEALING FUEL CELLS ARE PROTECTED BY INTERNAL AND EXTERNAL FOAM. MANUAL SYSTEMS BACK UP THEIR REDUNDANT HYDRAULIC FLIGHT-CONTROL SYSTEMS. THIS PERMITS PILOTS TO FLY AND LAND WHEN HYDRAULIC POWER IS LOST.

FEATURES (CONT.)

THE A-10 HAS RECEIVED MANY UPGRADES OVER THE YEARS, IN 1978, THE AIRCRAFT RECEIVED THE PAVE PENNY LASER RECEIVER POD. WHICH SENSED REFLECTED LASER RADIATION FROM A LASER DESIGNATOR, PAVE PENNEY HAS NOW BEEN DISCONTINUED IN FAVOR MORE CAPABLE ADVANCED TARGETING PODS. THE A-10 BEGAN RECEIVING AN INERTIAL NAVIGATION SYSTEM IN 1980. LATER. THE LOW-ALTITUDE SAFETY AND TARGETING ENHANCEMENT (LASTE) UPGRADE PROVIDED COMPUTERIZED WEAPON-AIMING EQUIPMENT. AN AUTOPILOT, AND A GROUND-COLLISION WARNING SYSTEM, IN 1999, AIRCRAFT BEGAN TO RECEIVE GLOBAL POSITIONING SYSTEM NAVIGATION SYSTEMS AND A NEW MULTI-FUNCTION DISPLAY. IN 2005. THE ENTIRE A-10 FLEET BEGAN RECEIVING THE PRECISION ENGAGEMENT UPGRADES THAT INCLUDE AN IMPROVED FIRE CONTROL SYSTEM (FCS). ELECTRONIC COUNTERMEASURES (ECM), UPGRADED COCKPIT DISPLAYS, THE ABILITY TO DELIVER SMART BOMBS. MOVING MAP DISPLAY. HANDS ON THROTTLE AND STICK. DIGITAL STORES MANAGEMENT, LITENING AND SNIPER ADVANCED TARGETING POD INTEGRATION, SITUATIONAL AWARENESS DATA LINK OR SADL. VARIABLE MESSAGE FORMAT. OR VMF. GPS-GUIDED WEAPONS, AND UPGRADED DC POWER. THE ENTIRE A-10 FLEET HAS BEEN PRECISION ENGAGEMENT MODIFIED AND NOW CARRIES THE A-10C DESIGNATION.





FEATURES (CONT.)

THE THUNDERBOLT II CAN BE SERVICED AND OPERATED FROM AUSTERE BASES WITH LIMITED FACILITIES NEAR BATTLE AREAS. MANY OF THE AIRCRAFT'S PARTS ARE INTERCHANGEABLE LEFT AND RIGHT, INCLUDING THE ENGINES, MAIN LANDING GEAR AND VERTICAL STABILIZERS. AVIONICS EQUIPMENT INCLUDES MULTI-BAND COMMUNICATIONS; GLOBAL POSITIONING SYSTEM AND INERTIAL NAVIGATIONS SYSTEMS; INFRARED AND ELECTRONIC COUNTERMEASURES AGAINST AIR-TO-AIR AND AIR-TO-SURFACE THREATS. AND, IT HAS A HEADS-UP DISPLAY TO DISPLAY FLIGHT AND WEAPONS DELIVERY INFORMATION.

THE THUNDERBOLT II CAN EMPLOY A WIDE VARIETY OF CONVENTIONAL MUNITIONS, INCLUDING GENERAL PURPOSE BOMBS, CLUSTER BOMB UNITS, LASER GUIDED BOMBS, JOINT DIRECT ATTACK MUNITIONS OR JDAM, WIND CORRECTED MUNITIONS DISPENSER OR WCMD, AGM-65 MAVERICK AND AIM-9 SIDEWINDER MISSILES, ROCKETS, ILLUMINATION FLARES, AND THE GAU-8/A 30MM CANNON, CAPABLE OF FIRING 3,900 ROUNDS PER MINUTE TO DEFEAT A WIDE VARIETY OF TARGETS INCLUDING TANKS.

BACKGROUND

THE FIRST PRODUCTION A-10A WAS DELIVERED TO DAVIS-MONTHAN AIR FORCE BASE, ARIZ., IN OCTOBER 1975. THE UPGRADED A-10C REACHED INITIAL OPERATION CAPABILITY IN SEPTEMBER 2007. SPECIFICALLY DESIGNED FOR CLOSE AIR SUPPORT, ITS COMBINATION OF LARGE AND VARIED ORDNANCE LOAD, LONG LOITER TIME, ACCURATE WEAPONS DELIVERY, AUSTERE FIELD CAPABILITY, AND SURVIVABILITY HAS PROVEN INVALUABLE TO THE UNITED STATES AND ITS ALLIES. THE AIRCRAFT HAS PARTICIPATED IN OPERATIONS DESERT STORM, SOUTHERN WATCH, PROVIDE COMFORT, DESERT FOX, NOBLE ANVIL, DENY FLIGHT, DELIBERATE GUARD. ALLIED FORCE. ENDURING FREEDOM AND IRAQI FREEDOM.



GENERAL CHARACTERISTICS

- <u>PRIMARY FUNCTION:</u> CLOSE AIR SUPPORT,
 AIRBORNE FORWARD AIR CONTROL, COMBAT
 SEARCH AND RESCUE
- CONTRACTOR: FAIRCHILD REPUBLIC CO.
- <u>POWER PLANT:</u> TWO GENERAL ELECTRIC TF34-GE-100 TURBOFANS
- THRUST: 9,065 POUNDS EACH ENGINE
- WINGSPAN: 57 FEET, 6 INCHES (17.42 METERS)
- LENGTH: 53 FEET, 4 INCHES (16.16 METERS)
- HEIGHT: 14 FEET, 8 INCHES (4.42 METERS)
- WEIGHT: 29,000 POUNDS (13,154 KILOGRAMS)
- MAXIMUM TAKEOFF WEIGHT: 51,000 POUNDS (22,950 KILOGRAMS) FUEL CAPACITY: 11,000 POUNDS (7,257 KILOGRAMS)
- PAYLOAD: 16,000 POUNDS (7,257 KILOGRAMS)
- SPEED: 450 NAUTICAL MILES PER HOUR (MACH 0.75)
- RANGE: 2580 MILES (2240 NAUTICAL MILES)
- <u>CEILING:</u> 45,000 FEET (13,636 METERS)

- ARMAMENT: ONE 30 MM GAU-8/A SEVEN-BARREL
- GATLING GUN: UP TO 16,000 POUNDS (7,200 KILOGRAMS) OF MIXED ORDNANCE ON EIGHT UNDER-WING AND THREE UNDER-FUSELAGE PYLON STATIONS, INCLUDING 500 POUND (225 KILOGRAMS) MK-82 AND 2,000 POUNDS (900 KILOGRAMS) MK-84 SERIES LOW/HIGH DRAG BOMBS, INCENDIARY CLUSTER BOMBS, COMBINED EFFECTS MUNITIONS, MINE DISPENSING MUNITIONS, AGM-65 MAVERICK MISSILES AND LASER-GUIDED/ELECTRO-OPTICALLY GUIDED BOMBS; INFRARED COUNTERMEASURE FLARES; ELECTRONIC COUNTERMEASURE CHAFF; JAMMER PODS; 2.75-INCH (6.99 CENTIMETERS) ROCKETS; ILLUMINATION FLARES AND AIM-9 SIDEWINDER MISSILES.
- CREW: ONE
- <u>UNIT COST:</u> \$18.8 MILLION



A-10C THUNDERBOLT II CONTACT LIST

A-10 DEMO TEAM PUBLIC AFFAIRS

SENIOR AIRMAN KRISTINE LEGATE
KRISTINE.LEGATE@US.AF.MIL
A10DEMOTEAM@GMAIL.COM
(520) 228-1953 | (520) 228-3406

DAVIS-MONTHAN 355 WING PUBLIC AFFAIRS

355WGPA@US.AF.MIL (520) 228-3406

AIR COMBAT COMMAND PUBLIC AFFAIRS

ACCPA.OPERATIONS@US.AF.MIL (757) 764-5007

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