



Smithsonian

National Air and Space Museum

Helicopter Aerial Refueling Test Photographs and Reports [Eastman]

Jessamyn Lloyd

2015

National Air and Space Museum Archives
14390 Air & Space Museum Parkway
Chantilly, VA 20151
NASMRefDesk@si.edu
<https://airandspace.si.edu/archives>

Table of Contents

Collection Overview	1
Administrative Information	1
Biographical / Historical.....	1
Scope and Contents.....	2
Arrangement.....	2
Names and Subjects	2
Container Listing	4

Collection Overview

Repository:	National Air and Space Museum Archives
Title:	Helicopter Aerial Refueling Test Photographs and Reports [Eastman]
Date:	Circa 1960s to 2003
Identifier:	NASM.2015.0032
Creator:	Eastman, William Donald "Don", Jr.
Extent:	0.39 Cubic feet (1 box)
Language:	English .
Summary:	William Donald "Don" Eastman, Jr. (b. 1932) was the first pilot to demonstrate the feasibility of air-to-air refueling of helicopters as well as the first to actually perform aerial refueling of a helicopter during his time as a pilot with the United States Air Force. This collection consists of approximately 0.39 cubic feet of material relating to Lieutenant Colonel William Donald "Don" Eastman Jr.'s career as Test Director and Project Pilot for helicopter aerial refueling tests with the United States Air Force including photographs, news clippings, and publications.

Administrative Information

Acquisition Information

Lt. Col. William Donald "Don" Eastman, Jr., Gift, 2015, NASM.2015.0032

Processing Information

Arranged and described (2015) and encoded (2020) by Jessamyn Lloyd.

Preferred Citation

Helicopter Aerial Refueling Test Photographs and Reports [Eastman], NASM.2015.0032, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access.

Conditions Governing Use

Material is subject to Smithsonian Terms of Use. Should you wish to use NASM material in any medium, please submit an Application for Permission to Reproduce NASM Material, available at [Permissions Requests](#)

Biographical / Historical

William Donald "Don" Eastman, Jr. (b. 1932) was the first pilot to demonstrate the feasibility of air-to-air refueling of helicopters as well as the first to actually perform aerial refueling of a helicopter during his

time as a pilot with the United States Air Force. Eastman served as Test Director and Project Pilot for all helicopter aerial refueling tests and the first practicability demonstrations, using the probe and drogue system, were conducted on December 15, 1965. The first successful transfer of fuel using this system occurred on December 14, 1966. For this work, Eastman received the US Air Force Systems Command Primus Award. Eastman was also a combat pilot in Vietnam, flying 77 missions and performing 13 aircrew rescues, receiving the Distinguished Flying Cross for his contributions. Eastman served as the project test pilot for numerous programs and was also involved in acquisition of various aircraft and equipment for the Air Force. Upon his retirement as a lieutenant colonel in 1973, Eastman had flown over 8000 hours and qualified in 52 different aircraft, including 23 helicopters. After retiring from the military, Eastman entered the Civil Service as an engineer manager and supervisor until retiring in 1995.

Scope and Contents

This collection consists of approximately 0.39 cubic feet of material relating to Lieutenant Colonel William Donald "Don" Eastman Jr.'s career as Test Director and Project Pilot for helicopter aerial refueling tests with the United States Air Force. There is a folder of photographs and news clippings regarding aerial refueling and other flight tests. The photographs are 8 by 10 inch prints and are a mixture of black and white and color photography. Many have been captioned by Eastman. Aircraft pictured in this folder include the Lockheed KC-130 Hercules; Sikorsky (S-61R) CH-3C Jolly Green Giant; Lockheed HC-130P (MC-130P) Combat Shadow; Sikorsky (S-61R) HH-3E Jolly Green Giant; and the Sikorsky (S-65A) HH-53B Super Jolly. There is also a folder of photographs entitled, "Helicopter History" which shows a variety of aircraft models including the Kellett XR-3 Autogiro; McCulloch MC-4; Sikorsky (VS-316B) XR-6A; Seibel YH-24 Sky Hawk; Kellett XR-10 (XH-10); Kellett XR-8; Sikorsky (VS-316A, S-48) R-4B (H-4B); Rotor-Craft XR-11 Dragonfly; Piasecki H-25A Army Mule; Hiller YH-32 (Hiller HJ-1) Hornet; McDonnell XV-1 Convertiplane (XL-25, XH-35); Sikorsky (S-52-2) YH-18A; American Helicopter XH-26 Jet Jeep; Kaman HH-43B (H-43B) Huskie; Sikorsky (VS-317, S-51) XR-5; Piasecki YH-16 Transporter; Hughes XH-17 Flying Crane; Sikorsky (S-55) YH-19 Chickasaw; Cessna (CH-1B) YH-41 Seneca; Bell XUH-1 (XH-40) Iroquois (Huey); McDonnell XH-20 Little Henry; Hughes TH-55A; Bell XV-3; Hiller X-18 Propelloplane (model); Bell T/UH-1F (H-48) Iroquois (Huey); Sikorsky (S-65A) YCH-53A Sea Stallion; Bell XH-15; Sikorsky VS-300, 1st Configuration; Fokker T-2 (F.IV); Doman YH-31 (LZ-5); Platt-Lepage XR-1; Bell 47; Hiller H-23 Raven; Bell XH-12 (XR-12); Piasecki H-21 Workhorse; Sikorsky (S-58) H-34A (CH-34A) Choctaw; and the Sikorsky (S-56) H-37A (CH-37A) Mojave. This folder also includes aerial photographs of McCook Field and Wright Field and an image of the Sikorsky VS-300 Rotor Test Stand. Also in the collection are three flight test reports, authored by Eastman. They are entitled, "CH-3C Helicopter Aerial Retrieval System" (Test date June 9, 1965); "Aerial Refueling Tests on the HH-3E and HC-130P" (Test date April 29, 1966); and "HH-53B Aerial Refueling Flight Test" (Test date March 2, 1967). The collection also includes a copy of Eastman's master's thesis paper, entitled, "Helicopter Power Reduction in an Aerial Refueling Mode of Flight" (1969); a copy of the June 2003 issue of National Aviation Hall of Fame's *Heroes & Legends* magazine which features a profile on Eastman; and a copy of a certificate of nomination for Eastman as a candidate for enshrinement in the National Aviation Hall of Fame.

Arrangement

Collection is arranged by type of material.

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

Aeronautics
Helicopters
Helicopters -- Flight testing
Helicopters -- Refueling
Lockheed HC-130P (MC-130P) Combat Shadow
Lockheed KC-130 Hercules Family
Sikorsky (S-61R) CH-3C Jolly Green Giant
Sikorsky (S-65A) HH-53B Super Jolly

Types of Materials:

Newspaper clippings
Photographs

Names:

United States. Air Force

Container Listing

Images

NASM-9A12157: [Lockheed KC-130 Hercules Family; Sikorsky \(S-61R\) CH-3C Jolly Green Giant; Miscellaneous, Operations, Aerial Refueling, December 15, 1965](#)

Notes: View taken from the point of view of the Sikorsky (S-61R) CH-3C Jolly Green Giant of the first helicopter aerial refueling connection in history. Part of a Lockheed KC-130 Hercules can be seen at top right. The connection was made near Marine Corps Air Station Cherry Point, North Carolina on December 15, 1965. William Donald Eastman piloted the Sikorsky (S-61R) CH-3C Jolly Green Giant. This connection was a feasibility test, using the conventional probe and drogue system, and no fuel was transferred.

NASM-9A12158: [Lockheed KC-130 Hercules Family; Sikorsky \(S-61R\) CH-3C Jolly Green Giant; Miscellaneous, Operations, Aerial Refueling, December 15, 1965](#)

Notes: View, taken from another aircraft, of a Lockheed KC-130 Hercules (A/C No. BH 8891) connected by conventional probe and drogue system to a Sikorsky (S-61R) CH-3C Jolly Green Giant (A/C No. 12580) during the first helicopter aerial refueling connection in history. The connection was made near Marine Corps Air Station Cherry Point, North Carolina on December 15, 1965. William Donald Eastman piloted the Sikorsky (S-61R) CH-3C Jolly Green Giant. This connection was a feasibility test and no fuel was transferred.

NASM-9A12159: [Lockheed HC-130H Hercules, USAF; Sikorsky \(S-61R\) CH-3C Jolly Green Giant; Gemini Project, General, 1966-1970, March 8, 1966](#)

Notes: View, taken from another aircraft, of a Lockheed HC-130H Hercules (A/C No. 50966) leading a Sikorsky (S-61R) CH-3C Jolly Green Giant which is carrying a Gemini capsule during range testing, March 8, 1966.

NASM-9A12160: [Lockheed HC-130P \(MC-130P\) Combat Shadow; Sikorsky \(S-65A\) HH-53B Super Jolly; Miscellaneous, Operations, Aerial Refueling, circa June 1967](#)

Notes: View, taken from another aircraft, of a Lockheed HC-130P (MC-130P) Combat Shadow (A/C No. 50994) and a Sikorsky (S-65A) HH-53B Super Jolly connected during aerial refueling testing, taken over New York Sound, circa June 1967.

NASM-9A12161: [Sikorsky \(S-61R\) CH-3C Jolly Green Giant](#)

Notes: Right side view, taken from another aircraft, of a U.S. Air Force Sikorsky (S-61R) CH-3C Jolly Green Giant (A/C No. 12579) in flight. The aircraft was used for climatic testing.