

**Guide to the
Edward S. Forman Collection**

Collection number: 2005/060

Sacramento Archives and Museum Collection Center

DESCRIPTIVE SUMMARY

Title

Edward S. Forman Collection

Collection number

2005/060

Creator

Edward S. Forman

Extent

2.5 linear feet

Repository

Sacramento Archives and Museum Collection Center

551 Sequoia Pacific Boulevard

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Abstract

The collection is 2.5 linear feet in size and contains correspondence, publications, newsclippings, black and white photographs, 16mm film, a scrapbook, and artifacts relating to the professional career of engineer Edward S. Forman. Divided into six series, the collection is organized chronologically within subject file folders. Forman worked at Cal Tech, Hughes Aircraft, and Lockheed. He was one of the founders of Aerojet Engineering Corporation.

ADMINISTRATIVE INFORMATION

Access

Collection is open for research.

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Preferred citation

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Sacramento Archives and Museum Collection Center.

Acquisition information

Acquired in August 2005 from Lynn Forman Maginnis, daughter of Edward S. Forman.

Processing history

Processed in September 2005 by Dylan J. McDonald. Finding aid prepared in October 2005 by Dylan J. McDonald.

BIOGRAPHY

Edward Seymour Forman was born in Gillespie, Illinois on December 3, 1912. His father was an electrical engineer and moved the family west during Forman's adolescence. An avid science fiction reader, Forman dreamed of flying and space travel. At age 15, Forman began with a friend, John W. Parsons, to research rocketry and conduct experiments. In 1928 they began testing in an area behind Devils Gate Dam in Arroyo Seco, near Pasadena, California. After graduating from the California Institute of Technology (Cal Tech), Forman continued his rocket experiments with Parsons. Working on both solid and liquid rocket systems proved costly, prompting them to approach Cal Tech in 1934 for technical and financial support. Originally turned down, later they established a relationship with Frank J. Malina who assisted with the design and machining of parts at Cal Tech. They developed and fired their first liquid rocket in October 1936. Hoping to attract additional financial support, Forman and Parsons published newspaper and magazine accounts of their work. Eventually Forman was hired by Cal Tech to design and manage the Jet Propulsion Laboratory (JPL), a 3 ½ acre off-campus testing facility. JPL received federal funds to test both liquid and solid rockets. Instrumental in the design and development of JATO (jet assisted take-off) rocket boosters for military planes, Forman and five others at JPL founded Aerojet Engineering Corporation in 1942. After three years as a vice president and production manager at Aerojet, Forman left the company and over the next few years worked various engineering positions. In 1949 he began at Hughes Aircraft, which eventually took him to Tucson, Arizona. Forman then transferred to Lockheed Missiles and Space Company in 1958, working for a time at the Santa Cruz Test Base.

SCOPE AND CONTENT OF COLLECTION

The collection is 2.5 linear feet in size and contains correspondence, publications, newspaper clippings, black and white photographs, 16mm film, a scrapbook, and artifacts relating to the professional career of engineer Edward S. Forman. Divided into six series, the collection is organized chronologically within subject file folders.

Series I includes biographical information about Forman's early rocket experiments from newspaper and magazine articles, many found in a scrapbook. Of note are the photographs of early launch attempts with John Parsons, and their original rocket test stand motor.

Series II contains documents and publications during Forman's time with Cal Tech, the GLACIT Program, and the Jet Propulsion Laboratory building JATOs. This series contains several films which show the test firing of various rockets and the take-offs of planes aided by JATOs (see Appendix A).

Series III has numerous photographs and reports produced by Aerojet Engineering Corporation during their research and development of various rockets for the U.S. military. Of note is a piece of an airplane wing from a fatal JATO experiment. The wing is annotated by Forman, describing the incident (see Appendix B).

Series IV deals with an explosives company Forman helped found, Vulcan Powder Company.

Series V and VI include employee newsletters and photographs from Hughes Aircraft and Lockheed.

Container List

	Series I	Personal; 1909-1972	13ff
Box 1	Folder 1	.001 Bio and Resume; 1958-1969	
	Folder 2	.002 Correspondence; 1938-1953	
	Folder 3	.003 Newsclippings – Career; 1938-1970	
	Folder 4	.004 Newsclippings – General; 1909-1972	
	Folder 5	.005-.009 Photographs; n.d.	
	Folder 6	.010 Publications; 1948-1970	
	Folder 7	.011-.012 Rocket Loans; 1938-1971	
	Folder 8	.013-.014 Scrapbook (Photocopy); 1938-1956	
	Folder 9	.015 Scrapbook – Articles; 1938-1940	
	Folder 10	.016 Scrapbook – Correspondence; 1939-1942	
	Folder 11	.017 Scrapbook – Newsclippings; 1938-1942	
	Folder 12	.018 Scrapbook – Newsletters and Bulletins; 1939-1956	
	Folder 13	.019-.030 Scrapbook – Photographs; ca. 1938	
	Series II	Cal Tech – Jet Propulsion Laboratory; 1938-1969	5ff
	Folder 14	.031 Correspondence; 1966-1969	
	Folder 15	.032 Documents; 1940-1942	
	Folder 16	.033-.037 Films; 1941-1942	
	Folder 17	.038 Publications; 1940-1968	
	Folder 18	.039 Reports; 1938-1941	
	Series III	Aerojet Engineering Incorporated; 1941-1968	14ff
	Folder 19	.040 Correspondence; 1942-1957	
	Folder 20	.041 Lectures; 1942-1943	
Box 2	Folder 21	.042 Lectures – Aerojet Training Program; May 1943	
	Folder 22	.043 Legal and Financial; 1942-1943	
	Folder 23	.044-.092 Photographs; 1941-1968	
	Folder 24	.093 Publications; 1945	
	Folders 25-30	.094-.099 Reports; 1942-1944	
	Folder 31	.100-.101 Research; 1941-1943	
	Folder 32	.102 Travel; 1943-1944	
	Series IV	Vulcan Powder Company; 1946-1947	3ff
	Folder 33	.103 Articles of Incorporation and Minutes; 1946	
	Folder 34	.104 Correspondence; 1946-1947	
	Folder 35	.105 Proposal; ca. 1946	

Series V Hughes Aircraft Company; 1950-1955 3ff

Folder 36 .106 Documents; 1954

Folder 37 .107-.137 Photographs; 1950-1955

Folder 38 .138 Publications; 1952-1955

Series VI Lockheed Missiles and Space Company; 1960-1968 2ff

Folder 39 .139-.183 Photographs; ca. 1960

Folder 40 .184 Publications; 1968

Box 3 **Oversize Material** (.012, .014, .101)

Appendix A

Series II – Cal Tech-Jet Propulsion Laboratory Films (all moved to 35:082)

.033 “The Jet Propulsion Research Project,” 1942

The color print is approximately 12 minutes and 30 seconds (400’) long, with titles and credits. It is in good condition.

Summary: Jet Propulsion Lab test site, showing buildings and grounds; personnel conducting experiments and rocket test firing. Test flights of Ercoupe single engine plane assisted by JATOs at March Field, CA probably in August 6-23, 1941; test flights of A-20A bomber assisted by JATOs at Muroc, CA in April 9-24, 1942. Film includes credits of project personnel and a large group shot at airstrip.

.034 “Flight Test of the Ercoupe Airplane without and with Auxiliary Jet Propulsion at March Field, CA – August 6-23, 1941”

The Kodachrome original is approximately 8 minutes (290’) long. The film has minor abrasions and cement splices, which are likely to fail and should be repaired. Therefore, view the .035 color print of same film. Perforations are okay.

Summary: Jet Propulsion Lab test site, showing buildings and grounds; personnel conducting experiments and rocket test firing. Test flights of Ercoupe single engine plane assisted by JATOs at March Field, CA in August 6-23, 1941; numerous take-off shots. Several views of military men and men in suits talking, as well as mechanics working on the plane.

.035 “Flight Test of the Ercoupe Airplane without and with Auxiliary Jet Propulsion at March Field, CA – August 6-23, 1941”

The color workprint is approximately 7 minutes and 45 seconds (275’) long. The film is in good condition. **View this film instead of .034.**

Summary: Jet Propulsion Lab test site, showing buildings and grounds; personnel conducting experiments and rocket test firing. Test flights of Ercoupe single engine plane assisted by JATOs at March Field, CA in August 6-23, 1941; numerous take-off shots. Several views of military men and men in suits talking, as well as mechanics working on the plane.

.036 JATO Historical Footage, ca. 1941

The Kodachrome original is approximately 6 minutes and 15 seconds (225’) long. The film has minor abrasions and cement splices, which are likely to fail and should be repaired. Therefore, view the .037 color print of same film. Perforations are okay.

Summary: Jet Propulsion Lab test site, showing buildings and grounds; personnel conducting experiments and rocket test firing. Test flights of Ercoupe single engine plane assisted by JATOs probably at March Field, CA in August 6-23, 1941; numerous take-off shots with and without JATOs. Shots of JATOs being prepared and installed onto Ercoupe.

.037 JATO Historical Footage, ca. 1941

The color workprint is approximately 6 minutes and 15 seconds (225') long. The film is in good condition. **View this film instead of .036.**

Summary: Jet Propulsion Lab test site, showing buildings and grounds; personnel conducting experiments and rocket test firing. Test flights of Ercoupe single engine plane assisted by JATOs probably at March Field, CA in August 6-23, 1941; numerous take-off shots with and without JATOs. Shots of JATOs being prepared and installed onto Ercoupe.

Appendix B

Series III – Aerojet Engineering Incorporated Research

.101 Artifact has the following written on it:

A PIECE OF BELLY CENTER SECTION FROM INTERSTATE AIRPLANE DAMAGED BY 2 AEROJET UNITS 8AS1000 THAT SLIPPED OUT OF THE MOUNTING RACKS. ONE UNIT IMBEDDING ITSELF IN THE GASOLINE TANK, THE OTHER UNIT GOING THRU THE PROPELLER AND FLYING THRU A HANGAR 125 YARDS AWAY. ONE PROPELLER TIP SHATTERED THE RIGHT LEG OF NAVY INSPECTOR KLEIN. NO OTHERS WERE INJURED. THIS WAS THE FIRST ACCIDENT TO OCCUR WHERE AEROJET UNITS WERE INVOLVED. ACCIDENT OCCURRED 6 P.M. NOV. 1, 1943.

ED. S. FORMAN

P.S. MR. KLEIN DIED AT 4:00 A.M. THE FOLLOWING MORNING.