



Smithsonian

National Museum of American History Kenneth E. Behring Center

Guide to the General Motors EV1 Records

NMAH.AC.0912

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Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	General Motors EV1 Records
Date:	1990-2005 (bulk 1993-1999)
Identifier:	NMAH.AC.0912
Creator:	General Motors Corporation
Extent:	3 Cubic feet (7 boxes, 2 oversize folders)
Language:	English .
Summary:	This collection documents the design, testing, production and promotion of the first zero-emission electric car produced by a major car company, the General Motors EV1. The materials include photographs, promotional booklets and marketing, press coverage, and publications, as well as design details and specifications, describing the process by which this ambitious and controversial vehicle was produced and released to the public in the mid- to late 1990s. This collection would be of interest to researchers in the areas of innovative design, automobile marketing, environmental initiatives, and the automotive industry.

Administrative Information

Acquisition Information

Collection donated in 2006 by Jill Banaszynski, General Motors Corporation; Patrick M. Bouchard, General Motors Corporation; Loran D. Brooks; Dan Brouns; Linda Ludek Brouns; Ray Buttacavoli; Laurel Castiglione, General Motors Corporation; Dennis H. Davis, General Motors Corporation; Robert E. DeGrandchamp; James N. Ellis; Hesham Ezzat, Marty M. Freedman, General Motors Corporation; Jamie Grover, Saturn Corporation; Steve M. Kunder, General Motors Corporation; Michael Kutcher, General Motors Corporation; Linda J. Lamar, General Motors Corporation; Kuen Leung, General Motors Corporation; Thomas M. Lobkovich; Joanne Mabrey, General Motors Corporation; Joseph F. Mercurio, General Motors Corporation; William L. Shepard, General Motors Corporation; Steven Tarnowsky; Lance Turner, General Motors Corporation.

Related Materials

Related artifacts were donated to the Division of Work and Industry. See accession 2005.0061 and 2006.031-.034.

Processing Information

Collection processed by Sarah Hedlund, intern; supervised by Alison Oswald, archivist, 2016.

Preferred Citation

General Motors EV1 Records, 1990-2005, Archives Center, National Museum of American History.

Restrictions

Collection is open for research but is stored off-site and special arrangements must be made to work with it. Contact the Archives Center for information at archivescenter@si.edu or 202-633-3270.

Conditions Governing Use

Collection items available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions. Other intellectual property rights may apply. Archives Center cost-recovery and use fees may apply when requesting reproductions.

Biographical / Historical

The General Motors EV1 is considered one of the most technologically advanced vehicles produced in the twentieth century and was the most energy-efficient car in the world at the time of its premiere. Manufactured for the consumer market by GM in 1997, EV1 featured many engineering innovations in aerodynamics, electric drive systems, electronic controls, and hydraulic braking, and was propelled by a rechargeable lead-acid battery pack, producing zero emissions. It was issued twenty-three patents for its advanced features, as well as winning several awards and competitions, including the electric vehicle world land speed record in 1994.

In early 1990, partly based on a boast by departing president of GM Roger Smith that electric vehicle technology was a reality, the state of California mandated that the major auto makers produce two percent of their vehicles emissions-free by 1998. Between 1990, when the barely-functional prototype car Impact debuted at the Los Angeles Auto Show, and 1994, when a fleet of fifty Impacts were premiered across the nation in the prEView Drive Program, a team of engineers worked on design, manufacture, and proof of concept vehicles that would eventually develop into the EV1: the first zero-emissions car to be released to consumers. The car's components were manufactured in several stages and locations: the assembly plant was in the Craft Centre in Lansing, Michigan; the motors were produced by Delco Remy in Anderson, Indiana; the battery pack, consisting of thirty-two 10-volt lead-acid batteries was produced by Delco Remy at their plant in Muncie, Indiana; and the power inverter and magnetic battery charger were constructed by Hughes Aircraft in Torrance, California. The finished car emitted zero pollutants, could accelerate from 0-60 mph in eight seconds, and had a range of eighty miles between charges. During 1995, the manufacturing process was refined, and the EV1 was announced in 1996 at both the Los Angeles and Detroit Auto Shows. The following year it became available to consumers through the Saturn division of GM marketing. However, due to concerns about parts and maintenance for the life of the car, GM only offered it on three-year lease programs, never for sale outright.

Though the EV1 did relatively well in the California and Arizona markets its first year, the 1999 EV1 Generation II showed a significant decline in consumer interest. The lease-only option was not appealing to many, and the limited range of the car, combined with a lack of publicly available charging stations, was a significant deterrent. Despite initial plans to expand the fleet of EVs by producing an S10 pickup truck with the new technology, and enthusiastic support from EV1's small but loyal customer base, GM stopped production on EVs altogether before the year 2000. When the last lease ran out in 2003, the fleet was recalled into storage, and except for a few that were donated to museums and universities for engineering programs and design study, the remaining EV1 vehicles were crushed and recycled in 2005.

The legacy of the EV1 remains in most of the hybrid fuel-electric vehicles and fuel-cell technology produced in the twenty-first century. It vaulted General Motors into the lead for development of advanced technology vehicles, beginning the long and ongoing effort to reduce US dependence on foreign oil as well as addressing the environmental issues caused by gasoline-powered engines.

Scope and Contents

This collection contains materials relating to General Motors's development, promotion, and production of the EV1, the first commercially-available zero-emission electric vehicle, between 1990 and 2005. Included are design diagrams, photographs, and internal communication, but the vast majority of items are publicity materials such as press releases, newspaper and magazine coverage, and promotional material for auto shows.

Due to the nature of the donation (twenty-three separate donors from the original EV1 design team) there is some duplication of materials throughout the collection, though efforts were made to keep duplicates to a minimum.

Arrangement

This collection is arranged into six series.

Series 1: Design, Testing, and Production Materials, 1991-1997

Series 2: Event Photographs, 1993-1994, 2000

Series 3: Press Coverage Materials, 1991-2005

Series 4: Product Promotion Materials, 1990-2002

Series 5: Publications, 1994, 1996-1999

Series 6: Post-Production Materials, 1999, 2002, 2004-2005

Names and Subject Terms

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

Subjects:

Automobiles, Electric

Types of Materials:

Advertisements -- 20th century
Audiovisual materials
Catalogs
Correspondence -- 20th century
Diagrams
Magazines (periodicals) -- 20th century
Photographs -- 1950-2000
Photographs -- 20th century
Posters -- 20th century
Press releases
Reports

Container Listing

Series 1: Design, Testing, and Production Materials, 1991 - 1997

Scope and Contents: This series focuses on the internal workings of the GM EV1 team, including a new employee orientation handbook, prototype drawings of the Proof-of-Concept vehicle "Impact," design specifications, and internal correspondence between team members, as well as photos and video of the vehicles being built and later tested at the proving grounds.

Box 1, Folder 1	New Employee Orientation Handbook, 1991
Box 1, Folder 2	Mind Maps used to direct EV1 Project team goals, [1991-1995]
Box 1, Folder 3	Internal Documents from Durability & Design Engineer, 1993-1995
Box 1, Folder 4	Spec Drawings of Vehicle Layout, [1993-1995] 4 Drawings (visual works)
Box 1, Folder 5	Interior Culture and Design Materials, 1993 - 1997
Box 1, Folder 6	Letter and EV1 promotional material sent to Steve Kunder (GM Proving Grounds) from John Dabels, Director of Market Development, 1993 February 11
Box 1, Folder 7	Early Proof of Concept (POC) body structure (photos), circa 1993 5 Photographs (8 in x 10 in)
Box 1, Folder 8	EV1 Prototype: build/assembly, circa 1994 15 Photographs (8 in x 10 in)
Box 1, Folder 9	Prototype: Engineering Plan and photos of build team, [1993-1994] 15 Photographs (8 in x 10 in)
Box 1, Folder 10	Impact Durability Test Team binder with photos: Milford and Desert Proving Grounds, 1993-1994
Box 1, Folder 11	EVP Structural Durability video, undated 1 Videocassettes (VHS) (Total Running Time 8:47)
Box 1, Folder 12	Preproduction Impact at test facilities: wind tunnel, EMC chamber, crash test, undated 12 Slides (photographs)
Map-folder 2	Preproduction Impact at testing facilities, undated 1 Photograph (mounted; 30 in x 20 in)
Box 1, Folder 13	Diagrams of component exterior parts (Color-coded), undated

Box 2, Folder 1 Video: "96 Year in Review," 1996
1 Videocassettes (VHS)

Box 2, Folder 2 [Test Facility, 1997](#)
9 Photographs (3 in x 5 in)

Map-folder 1 Artistic rendering of the general assembly line flow and body shop install process for EV1 at the Lansing Craft Centre, undated
1 Poster (72 in x 33 in)

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Series 2: Event Photographs, 1993 - 1994, 2000 - 2000

Scope and Contents: This series contains photo documentation of the EV1, including promotional photographs of the finished product and concept art based on the vehicle, as well as photographic documentation of important events, such as the introduction of the EV1 to an engineering team in the People's Republic of China, the build team at the Indianapolis Technology Center, and the winning team with "Impact" at the World Land Speed Records.

Box 2, Folder 3	Beauty Shots and Concept Art, undated 40 Slides (photographs)
Box 2, Folder 4	EV1 Beauty shots, undated 2 Photographs (8 in x 10 in)
Box 2, Folder 5	Beijing: GM Impact team with engineers from People's Republic of China, 1994 1 Photograph (8 in x 10 in)
Map-folder 2	Beijing: Vice Premier Zou Jiahua test drives an Impact at the Tongji Proving Grounds in the People's Republic of China, 1994 November 1 Photograph (mounted; 30 in x 20 in)
Box 2, Folder 6	Impact team at the World Land Speed Record (photo and program), 1994 1 Photograph (8 in x 10 in)
Box 2, Folder 7	EV1 POC Class project at Lindborn Elementary School, undated 17 Photographic prints
Box 2, Folder 8	Ride Review Media Event, 1993 September 53 Photographs (3 in x 5 in)
Box 2, Folder 9	GM Advanced Technology vehicles team at Indianapolis Technical Center, 2000 1 Photograph (8 in x 10 in)
Map-folder 2	Multiple-Signed photo of EV1 for Joanne, undated 1 Photograph (mounted; 36 in x 24 in)

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Series 3: Press Coverage Materials, 1991 - 2005

Scope and Contents: This series contains published articles about the EV1 in newspapers, magazines, and web sources, as well as radio transcripts and press releases. The material has been arranged in chronological order where possible, though some segments were printed from earlier source material or collected in a way that prevented collation.

Box 2, Folder 10	Newspaper articles, 1995 December 22
Box 2, Folder 11	Newspaper articles, 1996 January-1996 December
Box 2, Folder 12	Newspaper articles, 1997 January-1997 December
Box 2, Folder 13	Newspaper articles, 1998 January-1998 December
Box 2, Folder 14	Newspaper articles, 2005 March
Box 2, Folder 15	Magazine articles, 1993, undated
Box 2, Folder 16	Magazine articles, 1996 January-1996 November
Box 2, Folder 17	Magazine articles, 1997 January-1997 December
Box 2, Folder 18	Magazine articles, 2003 April, 1998
Box 2, Folder 19	EV1-related news and press releases (collection), 1991-1996
Box 2, Folder 20	Radio news and interview transcripts, 1996 January-1997 January
Box 2, Folder 21	Press releases/Reuters, 1996-1997
Box 2, Folder 22	Product reviews/descriptions, 1997
Box 3, Folder 1	Web: interviews, reviews, history, 1996-1998
Box 3, Folder 2	Web: CNN.com/SCI-TECH, 1996-2001
Box 3, Folder 3	Web: news article downloads, 2001, 2005, undated
Box 3, Folder 4	Web: Electric Auto Association (EAA), undated
Box 3, Folder 5	Web: EVI Chronicles, undated
Box 3, Folder 6	Web: EV1 Charge Across America event, 1998 May 12-1998 June 2

Box 3, Folder 7

Web: EV Charger news, 2003 June 6

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Series 4: Product Promotion Materials, 1990 - 2002

Scope and Contents: The largest portion of the collection, this series contains many different phases of promotional materials about the EV1 in its different stages, such as brochures, specification cards, pamphlets, folders of collected information, media packets, and souvenirs, including a commemorative booklet with brushed-aluminum cover. This type of material would have been available at auto shows and media events to promote the vehicle and introduce it to the public.

Box 3, Folder 8	GM Impact promo folder (a), 1990
Box 3, Folder 9	GM Impact promo folder (b), 1993
Box 3, Folder 10	Impact teaser booklet, circa 1990
Box 3, Folder 11	prEView Drive: employee handbook for use with test drivers, 1993
Box 3, Folder 12	Impact prEView Drive Program photo cards and specifications, 1993-1994
Box 3, Folder 13	Impact prototype press packet, 1993
Box 3, Folder 14	Impact Land Speed Record Setting photo card with specifications, 1994
Box 3, Folder 15	Impact mounted promo shot, undated 1 Copy print (mounted; 8 in x 10 in)
Box 3, Folder 16	GM Electric/Advanced Technology Vehicle product specifications/media material, 1994-1999
Box 3, Folder 17	General Motors Annual Report (EV1 on the cover), 1995
Box 4, Folder 1	EV1 Teaser booklet, 1996
Box 4, Folder 2	EV1 Electric: product specification photo cards and promo shots, 1999, undated
Box 4, Folder 3	EV1 Electric: cutaway images of component parts, undated
Box 4, Folder 4	EV1 Promo cards, 1996
Box 4, Folder 5	EV1 Electric: product brochure card, 1996
Map-folder 2	EV1 Electric: product posters, 1996 2 Posters (26 in x 19 in)
Box 4, Folder 6	EV1 Electric ad booklet: cardboard folder presentation, 1996
Box 4, Folder 7	EV1 Electric ad booklet: product launch souvenir with brushed aluminium cover, 1996

Box 4, Folder 8	EV1 Electric license plate frame filler, undated
Box 4, Folder 9	Video: EV1 magazine ads by Riney & Partners Advertising, 1996 December 5 1 Videocassettes (VHS)
Box 4, Folder 10	Video: "General Motors Advanced Technology Vehicles," 1990-2001 1 Videocassettes (VHS)
Box 4, Folder 11	Hughes Power Control Systems (HPCS) brochure, 1993
Box 4, Folder 12	GM Electric Vehicle historical summary, circa 1996
Box 4, Folder 13	Saturn/GM/Chevrolet press release with annual report and photos, 1996
Box 5, Folder 1	Media information binder (1), 1996
Box 5, Folder 2	Media information binder (2), 1996
Box 5, Folder 3	Media information binder (3a), 1996
Box 5, Folder 4	Media information binder (3b), 1996 40 Slides (photographs) 43 Photographs
Box 6, Folder 1	Speech (in published booklet) by Robert Purcell, Jr., Executive Director: GM Advanced Technology Vehicles, at the University of Michigan management briefing, Traverse City, Michigan, 1997 August
Box 6, Folder 2	EV1 FAQ brochure, 1998
Box 6, Folder 3	GM Product Brochure: "Driving the Next Generation", 1998 January
Box 6, Folder 4	GM Products Packet, 1998
Box 6, Folder 5	EV1 Gen-II: brochure, lease information, 1999
Box 6, Folder 6	GM Environmental Initiatives booklet, 1999 October
Box 6, Folder 7	GM Technology: strategy brochure, circa 2000
Box 6, Folder 8	GM Alternative Fuels product brochure, 2001
Box 6, Folder 9	GM Environmental Brochure: "Let's Clear the Air," 2002

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Series 5: Publications, 1994 - 1994, 1996 - 1999

Scope and Contents: This series includes the owners' handbooks published for the 1997 and 1999 EV1 (as well as a handbook for a 1998 model that was never produced), and a 1997 Parts and Illustrations catalog. Also included are full issues of magazines that contain cover stories on EV1, some GM-published material (newsletter issues and a children's book promoting the electric car), as well as a multi-signed copy of *The Car That Could*, by Michael Shnayerson, documenting "the inside story of GM's revolutionary electric vehicle."

Box 6, Folder 10	EV1 Owners Handbook, 1997
Box 6, Folder 11	EV1 Owners Handbook (car not produced), 1998
Box 6, Folder 12	EV1 Owners Handbook, plus charging supplement information, 1999
Box 7, Folder 1	EV1 Parts and Illustration catalog, 1997
Box 7, Folder 2	Popular Science magazine: review of EV1, 1994 January
Box 7, Folder 3	Popular Mechanics magazine: review of EV1, 1997 January-February
Box 7, Folder 4	EVolution (the official publication of GM Advanced Technology Vehicles) Special Issue and Update issue, 1997, 1999
Box 7, Folder 5	Daniel and His Electric Car, by Ann Hegnauer, US Department of Education/GM publications, undated
Box 7, Folder 6	Plugged In, (a GM publication for kids) Volume 1, Number 1, 1997
Box 7, Folder 7	Multiple-signed copy of <i>The Car That Could</i> , by Michael Shnayerson that belonged to Dan Brouns, Lead Project Engineer, 1996

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Series 6: Post-Production Materials, 2004 - 2005, 1999 - 1999, 2002 - 2002

Scope and Contents: This small series contains items related to communication between GM and consumers of the EV1, including correspondence, updated information on accessories, a screen-saver (on CD-ROM), and a few retrospective articles. Also contains the informational binder produced as an accompaniment to the EV1 vehicle donation to Smithsonian, which includes all EV1 specifications, history of development, care and maintenance, and promotional material, some of which is not found elsewhere in the collection.

Box 7, Folder 8 EV1 Frequently Asked Questions, undated

Box 7, Folder 9 EV1 Electric: screensaver, 1999
1 Electronic discs (CD)

Box 7, Folder 10 Communication from GM to EV1 consumers, 2002 March 15, 2002 February 11,
2002 February 7

Box 7, Folder 11 EV1-Compatible Convenience charger information, undated

Box 7, Folder 12 EV1 informational binder (1): accompaniment to the EV1 vehicle donation to
Smithsonian. Includes all EV1 specifications, history of development, care and
maintenance, and promotional material, 2005 February 9

Box 7, Folder 13 EV1 informational binder (2): accompaniment to the EV1 vehicle donation to
Smithsonian. Includes all EV1 specifications, history of development, photos, and
promotional material, 2005 February 9
10 Slides (photographs)

Box 7, Folder 14 EV1 Retrospective/Specifications, 2004

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