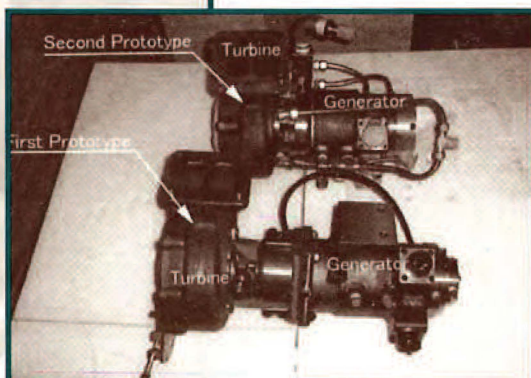
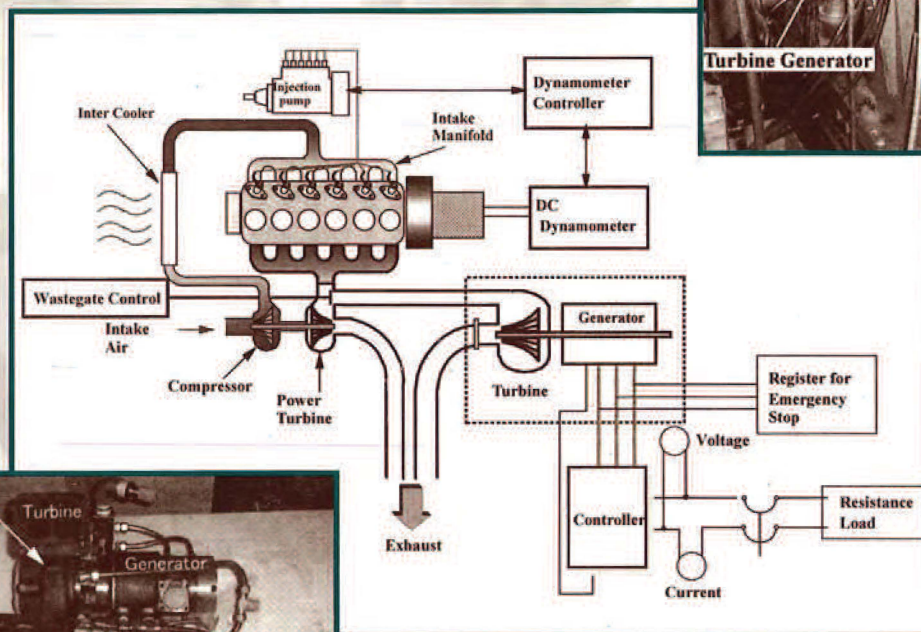
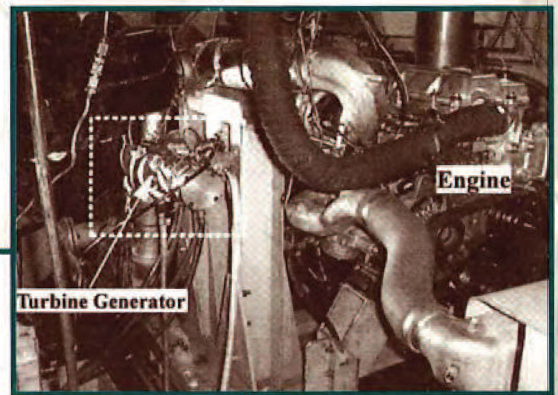


Technology for Electric and Hybrid Vehicles



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SP-1331



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PREFACE

This Special Publication, Technology for Electric and Hybrid Vehicles (SP-1331), is a collection of papers from the "Electric Vehicle Technology" and "Engines and Fuel Technology for Hybrid Vehicles" sessions of the 1998 SAE International Congress and Exposition.

Hybrid vehicles are now a reality in Japan, and they could soon be coming to the United States. The heart of the Toyota Prius hybrid vehicle is its fuel-efficient engine and unique transmission, coupled with a limited-range battery. The hybrid vehicle's advantage is its ability to run the engine at its "sweet spot" to minimize emissions of criteria pollutants or minimize energy consumption and CO2 production, depending on the control strategy. The key technical measure of success for a hybrid vehicle is a well designed engine--electrical-battery system that is matched to the load demand.

The papers from the "Engines and Fuel Technology for Hybrid Vehicles" session focus on leading-edge engine design, engine management, and fuel strategies for low emission, high mileage hybrid cars and commercial vehicles.

The papers from the "Electric Vehicle Technology" session focus on hybrid vehicle control technology, energy storage, and management for hybrid vehicles and simulation development.

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Ford Research Laboratory

Frank Stodolsky
Argonne National Laboratory

Session Organizers

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