

US EPA ARCHIVE DOCUMENT

EPA and Chrysler to Jointly Design and Evaluate a Hydraulic Hybrid Minivan



EPA and Chrysler have formed a partnership to explore applying EPA's Hydraulic Hybrid Vehicle (HHV) technology to light-duty vehicles. A joint EPA and Chrysler engineering team are designing a series HHV drivetrain, for evaluation and demonstration in a Chrysler minivan.

Partnership Details

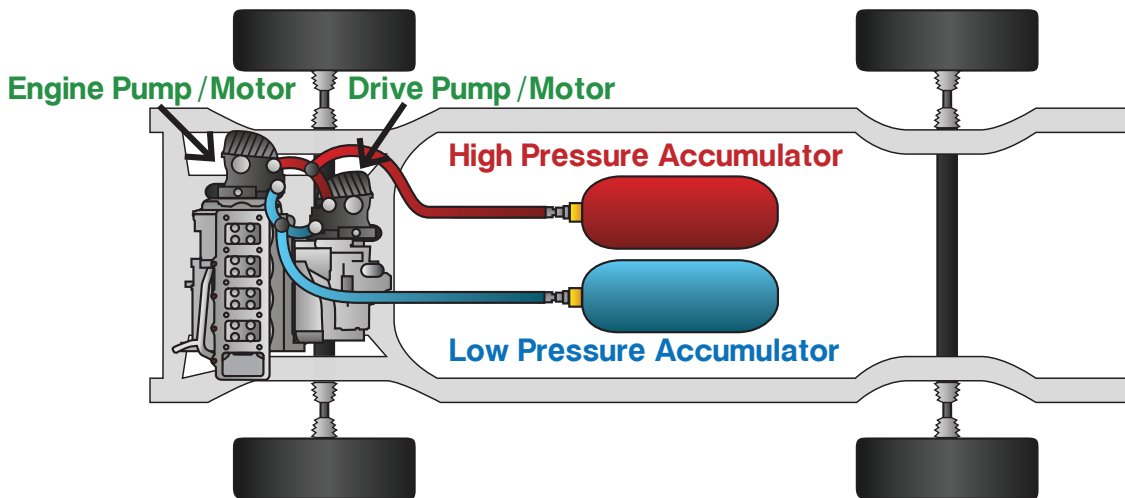
The partnership is a Cooperative Research and Development Agreement (CRADA) in which both organizations will closely collaborate on design and evaluation of the demonstration vehicle. EPA will focus on incorporating its HHV technology into the prototype development vehicle. Chrysler will focus on controls, packaging and driver sensitivities for smooth and quiet hybrid operation.

Partnership Goals:

- Assess HHV technology potential in a light-duty passenger vehicle
 - Reduce Greenhouse Gases by 25% (30-35% overall fuel economy improvement)
 - Improve city fuel economy by up to 60%
 - Similar performance from the project's 4cyl HHV as the current V-6 production minivan
- Characterize and solve the challenges unique to applying HHV technology to personal vehicles
 - Fit the hybrid system within the tight confines of a minivan platform
 - Identify enablers to meet driver expectations for car levels of safety, smoothness and refinement
- Demonstrate greenhouse gas (GHG) emissions reductions

Advantages of Hydraulic Hybrid Vehicles (HHVs):

- Hybridization with potential for faster payback due to low cost, and greater regenerative efficiency than Hybrid Electric Vehicles (HEVs)
- Applicable to many popular vehicles in the marketplace



- Simple & effective American-made technology

Project Vehicle Development Timeline:

- Completion of design and build is scheduled for November 2011
- Completion of evaluation and testing is scheduled for July 2012

The technical organizations that contributed to the development of the hydraulic hybrid minivan are:

CHRYSLER



FEV



EPA United States Environmental Protection Agency