



# ENVIRONMENTAL FEATURES



- 1** The removal of lead from the ELPO steel protection system that prevents corrosion resulted in over a 3.5 tonne reduction in the use of lead for an entire model year.
- 2** The Electric Power Steering System (EPS) eliminates the use of hydraulic fluid and pump used in previous generations of GM vehicles. This reduces the weight of the vehicle and reduces the load on the engine reducing fuel consumption.
- 3** Utilizing an Oil Life Monitoring System (OLS), oil life is dramatically increased compared to fixed oil change intervals. Over the life of an entire model year, savings can add up to over 2.8 million litres.
- 4** The Onboard Refueling Vapor Recovery (ORVR) system is used on the Chevrolet HHR to reduce emissions and save fuel that might otherwise evaporate into the environment without being utilized for combustion. The system prevents the release of over 1.8 million kilograms of gasoline into the atmosphere over the lifetime of one model year of vehicles. That equates to over 2.8 million litres saved.
- 5** For one model year, over 11,110 tonnes of polymeric parts are now marked for recycling, making recovery of those parts easier at the vehicles' end-of-life. This initiative greatly increases the potential for landfill avoidance.
- 6** The wheel liners and engine splash shields on the Chevrolet HHR consist of post-industrial recycled material. For one model year over 284 tonnes of recycled material is used which reduces energy consumption and waste going to landfill.

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These Environmental Features apply only to the 2006 Chevrolet HHR.



# RAMOS ARIZPE, MEXICO COMPLEX

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### Our Ramos Arizpe Facility

- The HHR is built at the Ramos Arizpe Complex.
- Ramos Arizpe Complex has received the following honors:
  - In 2004 the President of Mexico, Vicente Fox, recognized GMM Ramos Arizpe and Silao facilities with the Environmental Excellence Award for their achievements and GM Mexico's commitment to the environment
  - Ramos Arizpe Complex was recognized by receiving the International Stockholm 2001 Industry Water Conservation award
  - In 1999 achieved and have maintained an ISO 14001 Environmental Management System (EMS) certification, which is an international voluntary set of environmental standards

### Process

- At this facility, an artificial lagoon was built to store treated wastewater. Today, this lagoon has become an independent ecosystem housing fish and local duck species and serves as a host for other migrating birds and land species.
- Implementation of a special water conservation technology in 1999 has increased the efficiency of well water utilization by 25%.
- An innovative system to treat and reuse wastewater was implemented in 1999, allowing a reduction of water withdrawal by approximately 10%.
- Conversion to a lead free cathodic paint in 2003 eliminated a hazardous waste stream.
- In 2003, chromium was eliminated from the phosphate body preparation for paint.
- Special high temperature equipment was installed to reduce air emissions from the painting operation.

### We Recycle

- GM Mexico operations recycle 98.3% of their hazardous and non-hazardous wastes either through traditional recycling or through utilizing these materials as alternative fuels.
- All GM Mexico facilities eliminated the disposal of hazardous wastes in landfills beginning in August 2003.
- Ramos Arizpe Complex reduced non hazardous waste landfilled 44% to 557 tonnes from 2000 to 2004.
- Ramos Arizpe plastic recycling program increased 65% in 2004 compared to average values of the previous four years.
- In 2004, Ramos Arizpe recycled 4,034 tonnes of cardboard, 3,705 tonnes of wood pallets, 225 tonnes of plastics, and 28,141 tonnes of metal. These recycling efforts conserved over 131,500 trees, 85,170 litres of gasoline and enough metal to produce over 25,500 vehicles.
- New recycling efforts include materials such as production foam, food cans from cafeterias, and plastic packaging separators.

### Our People

- GM Ramos Arizpe is an active participant in the local community. The plant's environmental engineers participate yearly in the State Environmental Fair, sharing experiences, and mentoring activities for children concerning environmental protection on a play and learn basis.
- Gabriela Medellín, Yeni Gaona, Leticia Gallegos, Dolores Valle and Roman Gutierrez, left to right respectively, are the team members that lead Ramos Arizpe Complex environmental performance; Gabriela is the Environmental Coordinator at the facility. Their goal is to protect human health and the environment at the Ramos Arizpe Complex in their day-to-day activities. Their work includes monitoring the emission control equipment, waste management, wastewater discharges, and assisting with construction projects to assure that environmental considerations are incorporated into plant and equipment designs. All of these issues are framed by GMM's environmental management system ISO 14001, named SIGA.

**CHEVROLET**



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