



**Environmental Fact Sheet
2008**

Contact: Julie Kerr
DENSO International America
Phone: 248-372-8260
julie_kerr@denso-diam.com

Bridgette LaRose
DENSO International America
Phone: 248-372-8266
bridgette_larose@denso-diam.com

DENSO's Environmental Efforts in North America

DENSO's environmental efforts permeate every facet of its global business from management, initial R&D, product development, manufacturing, distribution and disposal, to its employees and communities in which it operates.

Automobiles continue to be an essential part of people's daily lives – 800 million are in operation today. But, automobiles do have some negative impact on the environment. DENSO believes helping reducing that impact is one of its most important responsibilities. To do this, DENSO has dedicated its worldwide resources to help create an “advanced automotive society,” a society where automobiles co-exist in harmony with the environment.

North American Environmental Policy

To conduct business in a manner that is consistent with environmental preservation and harmony with society.

To implement this policy, DENSO commits to the following principles:

- DENSO will operate as an environmentally responsible citizen.
- DENSO will seek to prevent pollution and to ensure that its operations comply with relevant environmental laws and regulations and other related environmental obligations.
- DENSO will implement an environmental management system that includes objectives and targets, periodic review and a commitment to continuous improvement.
- DENSO will communicate this policy to all DENSO North American employees and make it available to others upon request.

EcoVision Environmental Action Plan

DENSO's environmental action plan is organized into four categories:

1. **Eco Products:** DENSO will develop light-weight and energy-efficient products to help improve the environment. With all of its products, DENSO will reduce its use of resources; control and reduce environmentally hazardous substances, and integrate environmental planning in the product design stage.
2. **Eco Factory:** DENSO will work to reduce the environmental impact of its manufacturing facilities (including manufacturing and distribution) through reduced water use, reduced carbon dioxide emissions; emissions, landfill waste, and hazardous substance emissions.

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- 3. Eco Management:** DENSO group companies will develop environmental action plans and reinforce environmental partnerships with suppliers through activities, such as developing green procurement guidelines and promoting the purchase of environmentally friendly products.
- 4. Eco Friendly:** DENSO will contribute to a better society by encouraging and supporting employee environmental activities; proactive information disclosure and communication with stakeholders; environmental education, and environmental and social contributions.

Eco Management in North America

ISO 14001 Certification

- DENSO is ISO 14001 certified in environmental management, with goals to minimize harmful effects on the environment through its activities, and achieve awareness and improvement in environmental issues.
- **Companies Certified in ISO 14001:** All existing U.S. DENSO sites had been certified by the year 2000. DENSO was one of the first companies in the U.S. to become certified in 1998.

Eco Products Manufactured in North America

Preserving Clean Air

- Monolithic Carrier - Helps reduce or oxidize harmful emissions, such as hydrocarbons, carbon monoxide and nitrogen oxides.
- Air Flow Meter – Measures the flow rate of air into the intake manifold, resulting in the correct air-fuel ratio for efficient combustion.

Promoting Recycling

- HVAC Unit – The plastic case on the HVAC unit manufactured at DENSO Manufacturing Michigan, Inc. (DMMI), is molded with in-house recycled material. A titanium-based process provides corrosion resistance for the evaporator rather than hexavalent chromium, an environmentally hazardous substance. Lead solder was eliminated from processing operations by a raw material switch from copper to aluminum.
- Starter – The die cast process reuses 90 percent of internal scrap aluminum.
- Alternator – A redesigned segment conductor produces a smaller, lighter alternator requiring less use of raw materials.

Reducing Hazardous Substances

- The instrument cluster and air conditioning panel are manufactured without the anti-corrosive hexavalent chromium, an environmentally hazardous substance that can leak into the ground water table if a product containing the metal is not disposed of properly.
- The fan motor and windshield wiper system are manufactured with lead-free electrical brushes.

Helping Prevent Global Warming

- Fuel Injector – Atomizing capability dispenses fuel in precise quantities and allows for better mixing with air, increasing fuel efficiency.
- Spark Plug – Tough metal alloys applied to the tip of the plug ensure proper ignition, even during idling, with less fuel consumption and less noise.

Fuel Efficiency/Exhaust Emissions

- DENSO is working to produce new technologies and products that meet exhaust emissions regulations and standards.
- As Congress is passing legislation to improve fuel efficiency standards, DENSO is also working to improve energy efficiency of automotive components, supporting the development of clean-energy vehicles and developing products, such as the development of the anti-idling function, that help prevent global warming and resource depletion.

Eco Factory Initiatives

Landfill Waste Reduction Activities

DENSO's North American locations have been working to reduce landfill waste by 75 percent since 1999. They are achieving the reductions by practicing the principles of reduce, reuse and recycle. Some activities undertaken are:

- Increasing waste segregation to increase amounts recycled
- Replacing hand towels with electric hand dryers
- Participating in programs to eliminate junk mail
- Creation of recycle teams to identify more recycling opportunities

DENSO Manufacturing Mexico, S.A. de C.V.: The Apodaca, Mexico, location installed a Red Worm compost, which helps eliminate landfill waste by disposing 3.5 tons of organic trash per week.

- The worms convert the organic waste into a nutrient-rich soil, which yields 18 tons of fertilizer per year. The fertilizer is given to employees for gardening, as well as to local municipalities.

American Industrial Manufacturing Services, Inc.: The Murrieta, Calif., location disassembles used starters and alternators into component parts. The parts are then remanufactured, assembled and tested to become near-new products. Currently, 90 percent of final products sold from this location is remanufactured content.

CO₂ Emissions Reduction Activities

DENSO's North American locations have been working to reduce CO₂ emissions by 18 percent since 2004. They are achieving the reductions by:

- Conducting energy audits
- Increasing the amount of natural lighting
- Eliminating unnecessary lights
- Replacing existing lights with more energy efficient models
- Improving efficiency of compressed air systems

DENSO Manufacturing Michigan, Inc.: The Battle Creek, Mich., location implemented a process which captures and re-circulates wasted furnace heat to other areas of the plant. This project has reduced the need for burners from 37 to between two and five. The location has reduced its natural gas consumption by more than 33 million cubic feet.

Water Consumption Reduction Activities

DENSO's North American locations have been working to reduce water consumption by 50 percent since 1999. They are achieving the reductions by:

- Utilizing automatic faucets, toilets and waterless urinals
- Reducing lawn sprinkling activities
- Reuse of waste water for irrigation

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DENSO Manufacturing Athens, Inc.: The Athens, Tenn., location determined they needed to use only two of the plant's seven cooling towers to support HVAC chiller units during the

winter months. By shutting three towers down during the winter and maintaining two towers on standby, the plant has reduced water consumption by 3 million gallons per year.

Eco Friendly Initiatives

In addition to complying with the legal regulations of operating regions worldwide, DENSO is committed to ensuring a positive relationship with its community and environment. For example, six U.S. DENSO locations participated in an electronics recycling day where employees brought in their unwanted electronics and other household goods to be disposed of properly. Other examples include:

DENSO International America, Inc. (DIAM):

- DIAM organizes a corporate team to participate in the annual Rouge River Cleanup and also sponsors The Rouge Education Program, encouraging environmental education and conservation of the Rouge Watershed.
 - In 2008, 100 DIAM employees, with 30 friends and family members, participated in Rouge Rescue, removing five log-jams and about 5,310 pounds of garlic mustard, which is considered an invasive plant.
- DIAM is a partner in The Greening of Detroit, dedicated to urban reforestation and tree planting.

Associated Fuel Pump Systems Corporation (AFCO):

- Hosted the South Carolina Wildlife Federation's Habitat Steward Training Workshop and environmental team.
- AFCO employees and their families converted a half-acre area of AFCO's front lawn into a wildlife habitat garden.
 - The garden was designed specifically to attract and shelter birds, butterflies and other wildlife.
 - All materials used in the garden, from the plant varieties chosen to the mulch used, were selected based on their ability to attract, feed and shelter wildlife.

DENSO Manufacturing Tennessee, Inc. (DMTN):

In 2007, DMTN led organizational efforts for the first waste-free event in the community working with three local environmental groups focused on land, water and air. The groups combined efforts for a full day of roadside and creek-bed cleanups with 850 community members collecting eight tons of trash from waterways and roadways. Their day was followed by an evening celebration with educational booths and festivities focusing on environmental education. It was a waste-free event and DMTN hosted a booth explaining the company's environmental achievements. DMTN also gave away coloring books to children that displayed ways they too can be helpful to the environment.

DENSO Manufacturing Athens Tennessee, Inc. (DMAT):

- Sponsored Athens Arts Council Art of Recycling Competition and assisted with school field trips to the final exhibit.
- Performer Level Member in Tennessee Pollution Prevention Partnership.
- Support Keep McMinn Beautiful recycling and education activities in the community.
- Held electronics and household goods collection event at DMAT in conjunction with Goodwill Industries.

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DENSO Manufacturing Michigan, Inc. (DMMI):

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- 2008 major corporate sponsor of Calhoun County's Household Hazardous Waste Collection, helping educate the public about items that require special handling and where they can be disposed.
- 2007-2008 Adopt-a-Highway Cleanup effort where groups of employees and their family members volunteer three times per year.
- 2008 Do Your Part! Program - an interactive website allowing employees to calculate, monitor and track their household carbon footprint and what they can do to reduce it.
- In 2008, Monarch Watch certified DMMI's Wildflower garden a Monarch Migratory Waystation.
- DMMI gives environmental tours to outside groups and schools.

DENSO Manufacturing Canada, Inc.: Supports Environmental Week and Park Clean up.

DENSO Manufacturing Mexico, S.A. de C.V.: The Apodaca facility hosts tours for local students to learn about its innovative worm farm, greenhouse pond and waste water treatment plant, and zero emissions strategies.

DENSO Wireless Systems America, Inc.: Fifteen percent of employees participate in carpooling and use of public transportation to get to and from the Carlsbad, Calif., facility.

DENSO Environment Committee

Established in 1992, DENSO's Environment Committee evaluates and designs company-wide policies and objectives that relate to environmental protection.

Environment Committee Policies: Reinforcing environmental management, environment-friendly development and design, achieving clean factories and promotion of external environmental action alliances.

About DENSO

DENSO Corporation, headquartered in Kariya, Aichi prefecture, Japan, is a leading global supplier of advanced automotive technology, systems and components. Worldwide, the company employs approximately 119,000 people in 32 countries and regions, including Japan. Consolidated global sales for the fiscal year ended March 31, 2008 totaled US\$40.2 billion.

In the Americas, DENSO employs more than 17,000 people with consolidated sales totaling US\$8.3 billion for the fiscal year ended March 31, 2008.

(Notes)

U.S. dollar amounts have been translated, for convenience only, at the rate of 106.42 yen = US\$1, the approximate exchange rate prevailing in the Tokyo Foreign Exchange Market on June 30, 2008. Billion is used in the American sense of one thousand million.

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