

Environmental Management

Strengthening Environmental Management That Addresses Globalization

Basic Policy

At Toyota Auto Body, we have set environmental management as one of our most important issues and we are progressing in addressing environmental issues through various technological innovations in car manufacturing. In addition, we are actively promoting efforts and cooperating with affiliated companies and consolidated subsidiary businesses in Japan and abroad.

FY2008 was the third year since we initiated our fourth Toyota Auto Body Environment Action Plan (Activities between FY2006 through FY2010). We are making definite progress in following our plan. In order to address gradually expanding globalization, we are strengthening domestic and overseas environmental management and also further coordinating environmental management with society.

Action Item

- Strengthen consolidated environmental management
- Progress further in coordinating activities with customers
- Achieve environmental education
- Promote new business that contributes to improving the environment
- Reduce life cycle environmental burden by active participation toward Toyota's Eco-VAS
- Contribute toward building a recycle-oriented society (Details on page 70 of this report)
- Mutually communicate and disclose environmental information
- Efforts toward activities that obey laws
- Progress status for FY2008 environmental efforts



Activity Status

Strengthening Consolidated Environmental Management

In order to progress steadily with environmental efforts in domestic and overseas entities, in 2000 we started a Toyota Auto Body Group Production Environment Committee as a domestic entity, and we are promoting the implementation of management auditing and also sharing activities and information.

Toyota Auto Body Group activities expanded from FY2006 with the number of overseas entities increasing steadily. We also received ISO14001 approval, and similar to Law Abiding Activities and Global Warming Prevention Activities begun in FY2006, we began auditing by Toyota Auto Body.

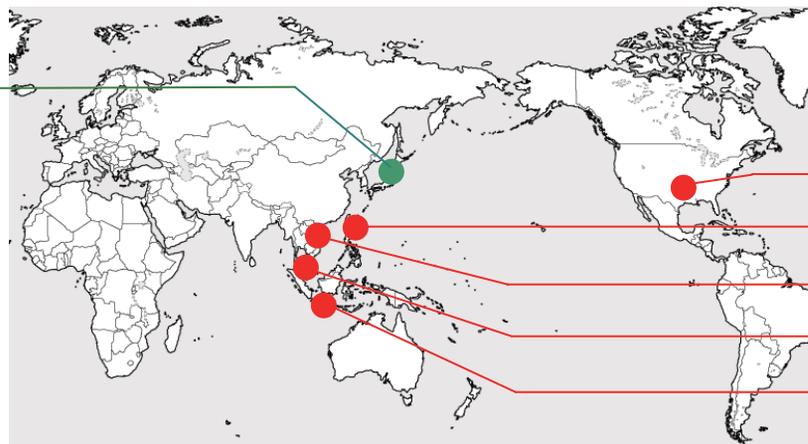


[Toyota Body Seiko Co., Ltd. (Aichi Prefecture, Takahama City) Environmental risk auditing of merged sewage treatment tanks]

Locations of Toyota Auto Body Group Entities

Domestic entities

- Production entities (8)
- Non-production entities (6)



Overseas production entities

- America (1 entity under construction)
- Taiwan (1 entity)
- Thailand (2 entity)
- Malaysia (1 entity)
- Indonesia (2 entities)

*Refer to page 56 of this report for companies that are part of the Toyota Auto Body consolidated environmental management

Strengthening Consolidated Environmental Management

■ Topics

■ Gifu Auto Body Co., Ltd. in (Kakamigahara City, Gifu Prefecture) Was Designated as an Excellent Kakamigahara City Environmental Action Business.

In May 2008, Gifu Auto Body Co., Ltd, a 100% Toyota Auto Body wholly-owned company, applied to the “Office for Active Countermeasures for the Environment and Waste” and was awarded a Certificate of Approval from the mayor for being an “Excellent Environmental Action Business.”

*In FY2008, a total of 22 businesses were approved.



【Certificate of Approval (Left) and display sticker】



【Certificate of Approval Ceremony on May 18, 2008】

Activity
Status

Strengthening Coordination Activities With Business Partners

Environmental efforts must be coordinated with our business partners, not only the Toyota Auto Body Group. In March 2007, Toyota Auto Body requested items concerning business activities of each partner for edited and appended environmental action items in the The Green Purchasing Guideline. This request follows a previous request for items concerning environmentally friendly delivery parts.



Please view our home page for details of the Toyota Auto Body Group Green Purchasing Guideline. (Currently, only a Japanese version of this document can be viewed)

<http://www.toyota-body.co.jp/csr/environment/guideline/index.html>



【Green Purchasing Guideline
(Revised in March 2007)】

■ Environmental Exchanges With Waste Disposal Companies

Toyota Auto Body is promoting periodic exchanges and refresher education for each waste disposal company and companies that cooperate with us on a daily basis in production activities by handling parts, delivering raw materials, and shipping. Opinions are exchanged on information and environmental trends in society in addition to having the companies understand the environmental efforts of Toyota Auto Body.



【An outstanding shipping company driver receives an award at a refresher education session for one of our shipping companies.】

Activity
Status

Achieving Environmental Education

It is important to continuously and steadily improve environmental awareness. In setting environmental education as one of the pillars of personnel development at Toyota Auto Body, we are aiming to have employees be aware of the environment in the workplace and at home.

- Stratified education (Entering employees, newly appointed managerial staff)
- Environmental E-learning Education for all employees
- Environmental lecture meetings
- Environmental improvement Case Example Presentation Meeting

■ Topics

On Environment Day on June 5th 2008, weather forecaster Kaoru Kawai was invited to lecture on the theme of “Global Warming and Our Living From the Viewpoint of Meteorology.”

Ms. Kawai gave actual examples of abnormal weather in recent years in a relaxed atmosphere while speaking about the close relationship between global warming and recent phenomenon of intense rain, which in Japanese has come to be called a “sudden downpour.” Ms. Kawai also posed questions to the audience about how our climate will be in 50 to 100 years from now.



lecturer : Kaoru Kawai

Activity Status

Promoting New Operations That Contribute to Environmental Improvements

Promoting Development and Commercialization of Environmental Products

In looking to the next generation of vehicles, we at Toyota Auto Body are making efforts in technical developments and commercialization by developing environmental products such as fuel cell batteries and motor power source control units for very small eco-cars which limit global warming, and plant materials we researched to stabilize CO₂ emissions.

Electrical Vehicle (EV) Elemental Technology and Fuel Cell Battery Development

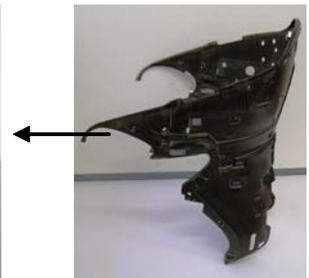
In aiming to establish small electric vehicles (EV) as next generation environmental technology, we are developing a rechargeable which uses a lithium battery system first in our small mini-car COMS. We are also making efforts to develop vehicle bodies made from plant materials, and also small, high-performance fuel cell battery systems.



[COMS BP (Bio-plastic vehicle)]



[i-REAL]



[Upper frame made from plant materials]

The very small electric vehicle COMS BP, with its body made from plant materials, was displayed at the Toyota Auto Body booth at the Tokyo Motor Show in October 2007. Also at Chubu Centrair International Airport, another vehicle that uses plant materials, the i-REAL, is being used to show practicality of this kind of vehicle.

Developing Plant Material Technology

We are advancing even further in developing technology to be used in products by commercializing outer body panels on next generation vehicles which are now used on part of the Dakar Rally entry vehicle, the Toyota Land Cruiser 200.



Parts partially using materials derived from plants such as the rear door and back door (Natural PP + plant fiber)

[2009 Dakar Rally entry vehicle]

Activity
Status

Promoting New Operations That Contribute to Environmental improvement

■ Achieving Environmentally Related Operations

Other than the main business of manufacturing vehicles, Toyota Auto Body is actively introducing environmentally related operations such as environmental analysis businesses and waste recycling businesses through our group companies. We are also contributing to environmental preservation activities for local communities and self-governing agencies.

■ Waste Recycling Business (TABMEC Co., Ltd.)

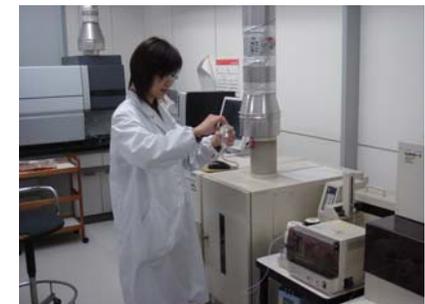
At TABMEC Co., Ltd, a 100% wholly-owned Toyota Auto Body company, we are promoting our waste recycling business as an environment-related business. In addition, from FY2008, we have been coordinating with a home appliance maker and administering and handling our Solar Photovoltaic Generation System for homes and businesses. In naming this business the Earth Eco-Project, we are contributing to preventing global warming, an issue that will continue into our future.

■ Environmental Analysis Business (Inatec Co., Ltd.)

In October of 2000, Inatec Co., Ltd. became a separate and independent company from Toyota Auto Body and became approved by Mie Prefecture as an environmental measurement certifying business. In February of 2004, Inatec became a designated survey organization based on the Soil Contamination Countermeasure Law of the Environment Ministry to perform surveys of rivers and streams and also water and soil. Inatec also contributes to environmental conservation activities of the community and industry through surveys and analysis of SOCs for the Toyota Auto Body Group and each of its businesses.



[An image of a Solar Photovoltaic Generation System for homes]



[Water analysis at Inatec Co., Ltd.]

Activity Status

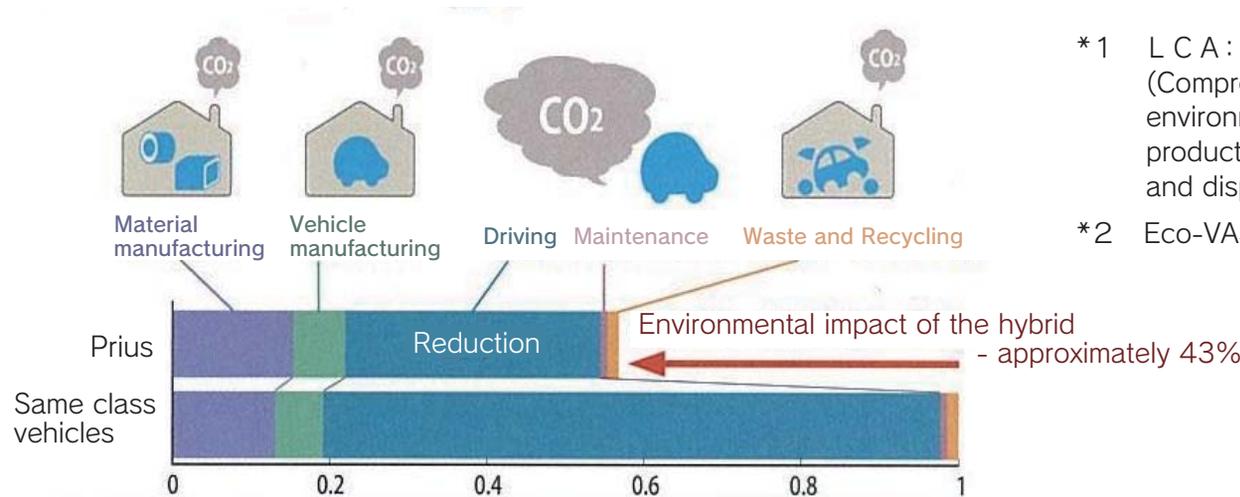
Reducing Life-Cycle Environment Burden Through Eco-VAS

The Toyota Environmental Assessment System (Eco-VAS) implements comprehensive environmental assessment of all processes of vehicle development from production and use through to disposal.

Eco-VAS manages the volume of SOC usage and recoverability of exhaustive resource consumption volume, atmospheric polluting substances, and global warming gases in the entire life cycle and also manages at the stage of fuel efficiency, gas emissions, and noise at the stage of vehicle use.

In FY2008, Life Cycle Assessment (LCA) was implemented by Eco-VAS for the new model Prius, which decreased life cycle CO₂ emissions volume by 43% compared to vehicles in the same class.

■ LCA Evaluation of the New Model Prius (A CO₂ example)



* 1 L C A : Life Cycle Assessment
(Comprehensive assessment based on the environmental impact of materials, vehicle production, vehicle driving, maintenance, and disposal)

* 2 Eco-VAS : Eco-Vehicle Assessment System

(Reference : From the new model Prius product catalog)

Activity
Status

Achieving Mutual Communication and Disclosure of Environmental Information

Our Toyota Auto Body home page introduces the status of our efforts concerning the environment in order for our many stakeholders to understand our environment efforts.

In addition, we are continuing to hold opinion exchanges for coexisting with our communities and we are also holding regular community discussion meetings with members of local residents in communities in which our operations are located (Kariya and Toyota cities in Aichi Prefecture and Inabe City in Mie Prefecture).



Information on topics concerning environmental conservation, environmental data from different offices, and the status of our environmental efforts are on our company website. Viewing these topics will be highly informative.
<http://www.toyota-body.co.jp/csr/index.html>



[Toyota Auto Body home page
(Contributions to the environment and society)]



[Listening to a Dakar Rally entry vehicle explanation at a community discussion meeting at our head office and in the Fujimatsu community. <Community officials>]

Activity
Status

Law-Abiding Activity Efforts

In looking to have no complaints or abnormalities, we are aiming toward prevention by implementing thorough company-wide analysis of the causes, which includes not only actual examples of what has occurred, but also case examples of causes of “abnormal events and serious complaints.” Also, our efforts to eliminate risk concerning organic chemical substances involves continuous activities for management of underground water, PCB*, and dioxin.

■ Abnormalities and Complaints

In March of 2009, an incident occurred in which the pH value of emissions of water used by the community exceeded legal standards at our Fujimatsu Plant. Release of water was immediately stopped, a report was made with the authorities concerned, and proper neutralization measures were taken. A lack of confirmation during work on a plant holiday was found to be the cause. We installed equipment to continuously monitor abnormalities and a thorough system of confirmation within the company when work is being performed.

■ Underground Water Management

Every year, Toyota Auto Body executes a self-initiated underground water survey.

Previously, in certain facilities, concentrations of substances were detected to exceed environmental standards even though those substances had never been used in the past. These substances were thought to have flown into our facilities, which we reported and explained to members of the community and government. At all of our other facilities, environmental standard levels are being met.

■ PCB and Dioxin Management

From FY2006, Toyota Auto Body began requesting waste disposal companies from outside our company to dispose of equipment containing polychlorinated biphenyl (PCB). Already, 91 pieces of equipment have been disposed of, and the remaining three condensers are being stored and managed properly. For remaining equipment of concern that contains dioxin emissions, combustion furnaces at the Yoshiwara Plant were removed and decommissioned. The concentration of dioxin had become below 1/1000th of the legal standard.

■ FY2008 Underground Water Measurement Results at the Kariya and Fujimatsu plants

	Environmental Standard	Measurement Value (mg/l)	
		Fujimatsu	Kariya
Tetrachloroethylene	0.01	0.024	—
Tetrachloro-carbon	0.002	0.012	—
Trichloroethylene	0.03	0.033	0.006
1,1 dichloroethylene	0.02	—	0.026

Activity Status

Progressive Status of FY2008 Environmental Efforts (1 / 2)

The main items of progress for the FY2010 Target Activities established in the fourth Toyota Auto Body Environmental Action Plan are as follows:

- (1) Energy and Global Warming : Despite severe decreases in production numbers of vehicles, we were able to achieve the total prospective target for production, and hereafter we are continuing efficient production efforts with reduced energy losses.
- (2) Resource Recycling : We are steadily addressing vehicle recycle laws in Japan and abroad. We are promoting development of recycling technology and improved dismantlement in aiming further to stabilize the rate of recyclability.
- (3) Substances Of Concern (SOC) : In looking to abolish the four SOCs, we have completed the switch to not use the four SOCs in vehicle production in Japan and abroad. In addition, we are progressing toward implementing the new chemical substance REACH regulations.

The Fourth Environmental Action Plan (Through FY2010 activities)		FY2008 Action Status	Direction for FY2009
Energy and Global Warming	Development and Design	<ul style="list-style-type: none"> ● Changes to interior materials and use of high-strength steel sheets · Achieved new model Prius weight reduction target (Toyota Auto Body Development) 	<ul style="list-style-type: none"> · Expanding use of high-strength steel sheets, and promoting development of weight reduction technologies such as structural modulation
	Production and Logistics	<ul style="list-style-type: none"> ● Introduced new technologies and reduced energy during non-operation · CO2 emissions volume (5% increase compared to 1990) · Per sales unit (10% decrease compared to FY2003) ● Shipping between plants and implementing efficient activities within the plants · Logistics CO2 emissions volume (10% decrease compared to FY2003) ● Mutual introduction of energy conservation case examples · Global CO2 per sales unit (8% decrease compared to FY2003) · Global CO2 per sales unit (31% decrease) 	<ul style="list-style-type: none"> · With production numbers decreasing, further thoroughness in eliminating energy losses in aiming to be more efficient · Limit CO2 emissions volume by improving shipping efficiency further for loading efficiency, etc. · Setting forth of activities stemming from the introduction of case examples at each of our companies in Japan and abroad

Activity Status

Progress Status of FY2008 Environmental Efforts (2 / 2)

The Fourth Environmental Action Plan (Through FY2010 activities)		Progress Status of FY2008 Environmental Efforts	Direction for FY2009	
Resource Recycling	Development and Design	3) Promote vehicle recycle design · Vehicle development that allows easy dismantlement and recycling	<ul style="list-style-type: none"> ● Reduced dismantlement time and use of eco-plastics · Achieved new model Prius recycle target 	<ul style="list-style-type: none"> · Steadily promote plans to develop recycling technologies that include improving dismantling of hybrid vehicles
	Production and Logistics	4) Promote effective use of resources · Per sales unit (3% decrease compared to FY2003) · Logistics packaging material volume (5% decrease compared to FY2003) 5) Reduce water consumption · Volume per vehicle unit (20% decrease maintained compared to FY1995)	<ul style="list-style-type: none"> ● Use of press steel and reduced defects · Per sales unit (30% decrease) ● Changed material quality and simplified structures · Logistics packaging material volume (6% decrease) ● Comprehensive water-use management · Volume per vehicle unit (31% decrease) 	<ul style="list-style-type: none"> · Plans progressing with activities to reduce waste substances · Continue improving packaging specifications through coordination with our suppliers · Continue water conservation activities
Substances Of Concern (SOC)	Development and Design	6) Reduction and management of SOCs · Complete elimination of the four SOCs · Reduce vehicle interior VOCs	<ul style="list-style-type: none"> ● Switched from use of SOCs in vehicles manufactured abroad · Completed eliminated SOCs from vehicles produced in Japan and abroad · Achieved SOCs target for new model Prius 	<ul style="list-style-type: none"> · Plans progressing with REACH regulations · Achieve switching over target for all vehicles manufactured in the future
	Production and Logistics	7) Reduce VOC emissions volume · VOC emissions volume per body painting area (60% decrease compared to FY1998) 8) Reduce substances subject to PRTR · Total emissions volume (60% decrease compared to FY1998)	<ul style="list-style-type: none"> ● Introduced water-borne paints · VOC emissions volume per painting area (60% decrease) ● Improved recyclability of cleaning solvents · Total emissions volume (61% decrease) 	<ul style="list-style-type: none"> · Improve paint adhesive efficiency in conjunction with plant refurbishment · Reduce cleaning solvents volume and continue improvement activities for recovering cleaning solvents